

samtec

Board Interface Guide



HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE

Sudden Circuits

End-to-End Solutions:

In-house design, analysis and manufacturing of high speed connectors, circuits and subsystems.

High Speed Interfaces:

Wide variety of high speed/high density connectors and flex circuit assemblies.

High speed variety with signal integrity up to 10GHz including:

- Low Profile
- Elevated
- Edge Mount
- Right Angle
- Cable Assemblies
- Single-Ended
- Differential Pair

QSTRIP™
up to 2.33 GHz

pgs. 19-29

QPAIRS™
up to 10 GHz

QUP™

SamArray™
HIGH DENSITY INTERCONNECTS

pgs. 59-65

High Density options for up to 1200 I/Os per interface including:

- Choice of .025" (0.64mm), .050" (1.27mm) and 2mm (0.0787") pitch
- Soldered and solderless systems

FLEXITY™

Flex Circuitry:

A unique combination of flex circuit design and construction expertise, connector expertise and Signal Integrity expertise.

pgs. 277-281

Flex Design/Build Expertise

- Standard data links and custom flex circuits
- Double-sided, multi-layer, high speed, shielded and complex single-sided

Connector Expertise

- Full line of high speed, high density and micro interconnects
- Unmatched application specific interconnect capabilities
- Designs for hot bar or ZIF/LIF termination to the board

Signal Integrity Expertise

- In-house SI services for optimum design of conductor routing and terminations
- Full line of high speed connector termination options
- Custom system analysis capability from flex circuit and terminations to complete systems

Signal Integrity Services:

Integrated services for selection, development, simulation and testing of high speed systems.

Signal Integrity Center

A comprehensive, user friendly web site for high-speed connector models, reports, drawings and searches.

Signal Integrity Group

Signal Integrity Engineering Support

For questions on applications that cannot be obtained from the Signal Integrity Center, Samtec's Signal Integrity Group offers person-to-person SI engineering support.

Custom Signal Integrity Services

Application specific design, modeling and testing services.

For the ultimate in Signal Integrity Services, Samtec offers design, modeling and testing of your circuits, subsystems or complete system.

**SIGNAL
INTEGRITY
DIVISION**

pgs. 28-29



Micro/Board-to-Board

Micro Pitch and One Piece

- Low profile and skyscraper designs
- Micro Blade & Beam on 0,50mm (.0197"), .025" (0,635mm) and 0,80mm (.0315") pitch
- Micro Pin & Socket on 0,80mm (.0315") and 1mm (.0197") pitch
- One Piece systems for low profile, micro rugged and solderless applications

pgs. 83-88

Flexible Board-to-Board

- Flex Stack on .050" (1,27mm), 2mm (.0787") and .100" (2,54mm) pitch
- Standard headers and sockets
- Low Profile and Skyscraper
- PC104 and PC104+
- Right Angle for perpendicular and coplanar applications
- Shrouded systems for micro-rugged applications

pgs. 115-122

RISE UP
up to 3.5 GHz

MICRO CARD

Micro Card

- Micro Edge Card Sockets
- MSA Transceiver Interfaces
- High Speed Interface Cards
- Mini Edge Card Sockets
- Micro Bay
- Smart Card
- Flex Card

pgs. 243-250

FLEX STACK

HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

Rugged Insulators

High Reliability & High Cycle Contacts

- 

- Tuning Fork Phosphor Bronze contact
- Highest retention contact system due to robust yet cost effective design

-

- High shock/high vibration applications with mechanical board connections
- Superior alignment/less skew
- No bent pins

-

- Shrouded systems on .100" (2,54mm), 2,00mm (.079") and .050" (1,27mm) pitch for blind mating

- Shrouded systems on .100" (2,54mm), 2,00mm (.079") and .050" (1,27mm) pitch for blind mating

ALIGN & LAUNCH

- ## Align & Latch
- Systems available on .025" (0,635mm), .050" (1,27mm), 2mm (079"), .100" (2,54mm) and .165" (4,19mm)

- Friction locks increase unmating force by two to five times that of standard systems
- Latching systems prevent accidental unmating

- Tiger Eye & Tiger Buy contacts
- Blind mating & self mating
- Solder lock terminations
- .050" (1,27mm), 2mm (.079") and .100" (2,54mm) systems



- 2mm (.079") and .050" (1,27mm) pitch systems
- Socket & plug configurations
- Shrouded ejector headers for mating
- Matched impedance micro coax
- Match impedance on flex circuits
- Rugged Tiger Eye systems on flex circuits
- High Speed blade & beam on 0,8mm (.0315") pitch with latches
- Flex jumpers for mating with one-piece interfaces and mini-edge card sockets

pgs. 275-283



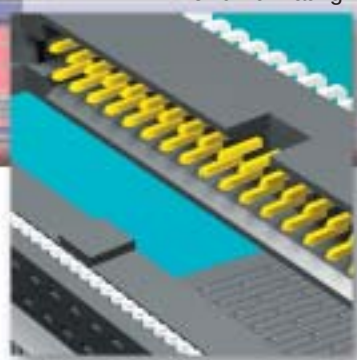
TIGER
BALM

- Rugged screw down board termination
- Ultra low profile to elevated designs on 1mm (.0394") pitch
- No bent pins
- One-piece power

- Guide posts for blind mating
- 0,80mm (.0315") & 1mm (.0394") pitch systems
- High Speed edge-mount blade & beam
- Mini Edge Card sockets (vertical and horizontal)
- Micro Bay Card Guide systems

- Systems designed for high cycle & high reliability
- Combination power and signal
- Edge Card power interfaces
- Isolated power pin systems

pgs. 211-215



Cable

Flex Design/Build Expertise

- Standard data links and custom flex
- Double-sided and Multi-layer
- High Speed and Shielded
- Complex single-sided
- Custom Flex Circuits

pgs. 280-281

Connector Expertise

- Full line of high speed, high density and micro interconnects
- Unmatched application specific interconnect capabilities
- Designs for hot bar or ZIF/LIF termination to the board
- ZIF/LIF Flex Circuits and Connectors
- Flex-Lock Connectors

pgs. 278-279

Signal Integrity Expertise

- In-house SI services for optimum design of conductor routing and terminations
- Full line of high speed connector termination options
- Custom system analysis capability from flex circuit and terminations to complete systems

pgs. 28-29

**SIGNAL
INTEGRITY
DIVISION**

High Speed Systems

- Mini Coax Cable
- Shielded IDC
- Shielded Flex Jumpers
- Signal Integrity Services Division for design, testing and support

pgs. 276-277

Micro Rugged/IDC

- Choice of .100" (2,54mm), 2mm (.0787") and .050" (1,27mm) pitches
- Low Profile
- Single and Double Row
- Ejector Headers with Locking Caps
- Sockets and Plugs
- Wide variety of pin counts
- Discrete Wire Align & Latch



pgs. 282-283

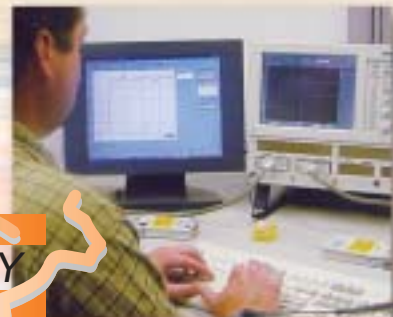
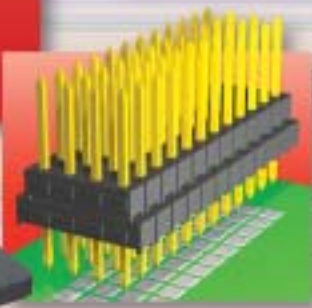
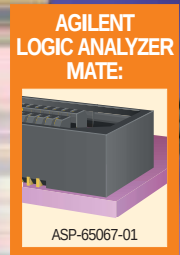
Application Specific

HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
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SOCKET/REFERENCE

High Speed/ High Density

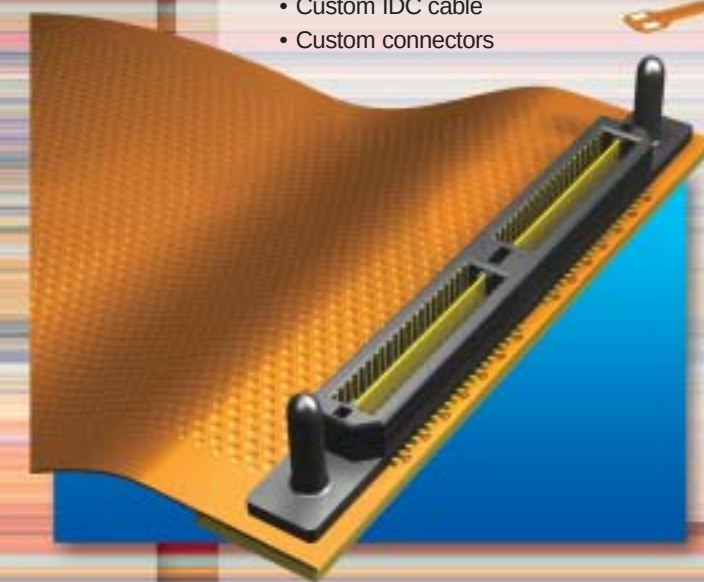
- Custom differential pair configurations
- Ferrite shielding
- Paste In-Hole (PIH) designs
- Modified Standards
- LGA interfaces
- Custom Signal Integrity Services



SIGNAL
INTEGRITY
DIVISION

Cable

- High Data Rate cable
- Custom Flex cable
- Custom IDC cable
- Custom connectors



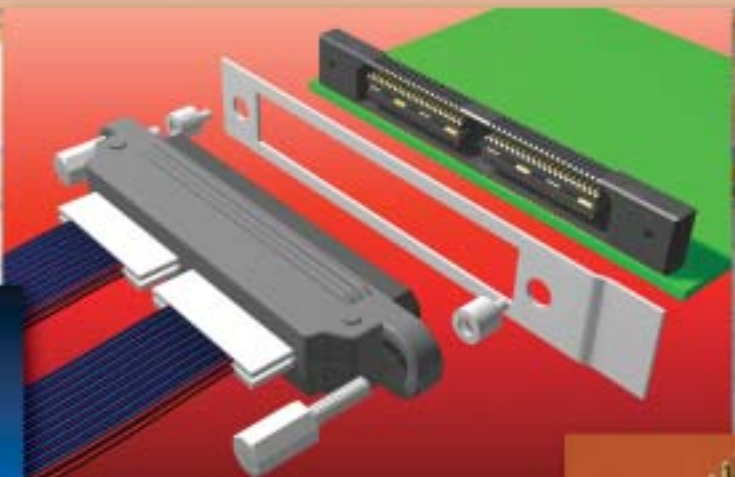
One-Piece and Micro Card

- Interstitial designs
- Battery contacts
- Special features
- Elevated designs
- Special edge mount
- Card rail modifications



Micro Rugged/ Power

- Modified standards
- "Power Blades"

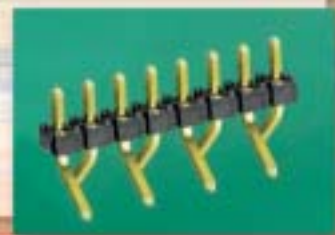
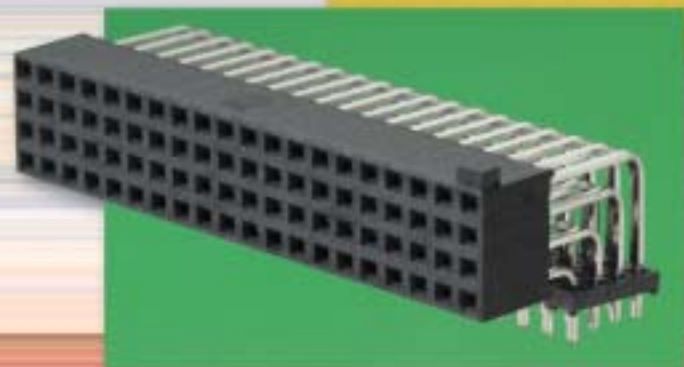
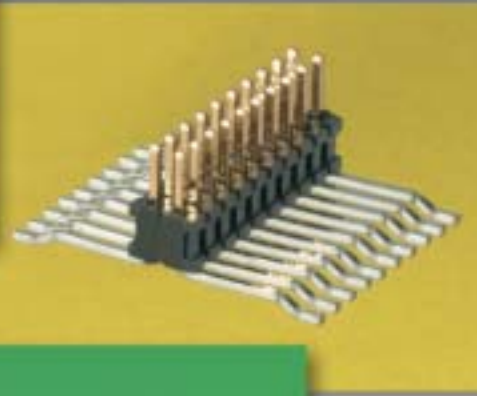


[More Application Specific >](#)

Application Specific

Pin Modifications

- Hot pluggable
- Special crimps
- Modified footprints
- Unusual angles
- Special jumpers
- Varied pin height
- Elevated right angles
- Opposing bends
- Multiple polarization/ selectively loaded
- Adaptors



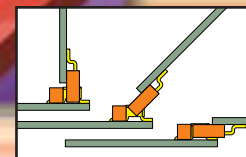
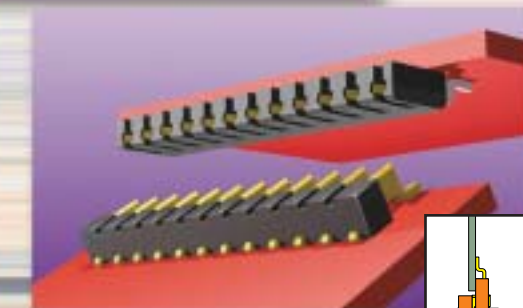
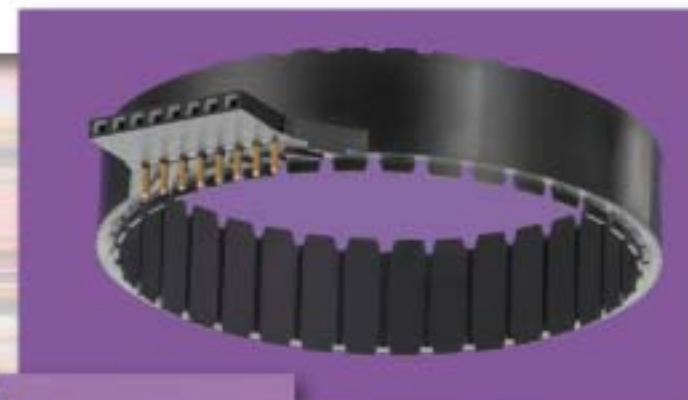
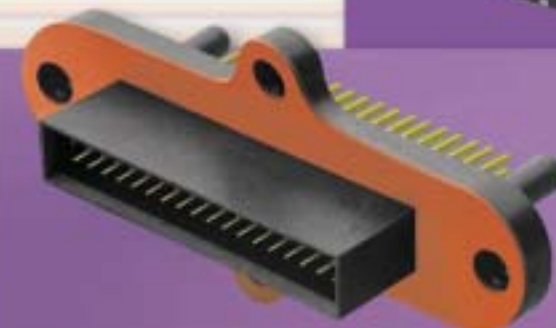
Body Modifications

- Custom material
- Molded pick-and-place pads
- Shrouds
- Modified alignment pin size and position
- Screen printing
- Multiple stacked bodies
- Hardware enhancements for ease of placement and mechanical stability



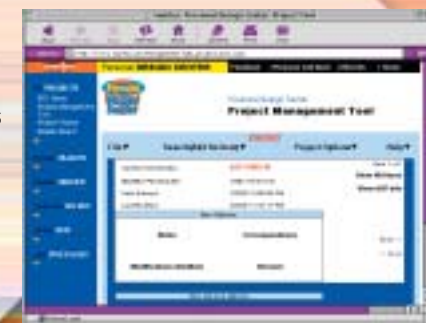
Custom Connectors

- "Hinged" Connectors
- Special pins
- Custom molding
- Automotive



Personal Design Center

- Customer Specific Web Site
- Import, view and print drawings on line
- Modify ("redline") standard product prints to your specifications
- Work with Samtec Applications Engineer on-line
- Maintain and view a log of all previous correspondence, prints and technical data
- Check project status, sample availability, ship dates, material status, etc., in real time
- Find product series that best suits your application



Special Plating

- Custom metals and alloys
- Special thicknesses
- Selective plating



Testing & Development

- SMT lab for processing studies
- Stereolithography for mechanical studies
- Quick-turn prototype capabilities
- In-house mold design and fabrication
- Quick change tooling for every modification



Sudden Information

Product Searches

- By part number
- By picture
- By word description
- By series
- By board stacking
- By cross reference



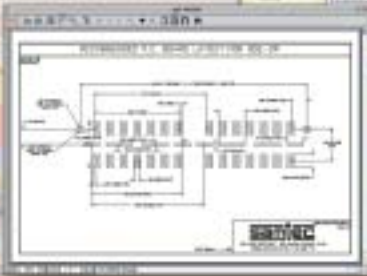
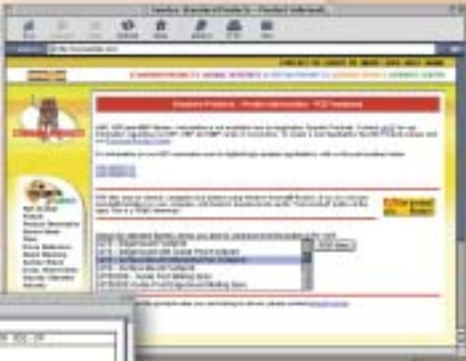
Build-a-Part Number

- Automatically validate part numbers
- Order samples on-line
- Sample Shopping Cart
- Sudden Samples ship within 24 hours via express service



Product Specs

- Engineering prints
- PCB footprints
- PDF catalog pages
- Lead coplanarity specifications



Personal Call Back

- Immediate reply from a Samtec Customer Service Representative, or Signal Integrity Group
- Choose either phone or private one-on-one chat
- Pick from one of Samtec's worldwide service facilities



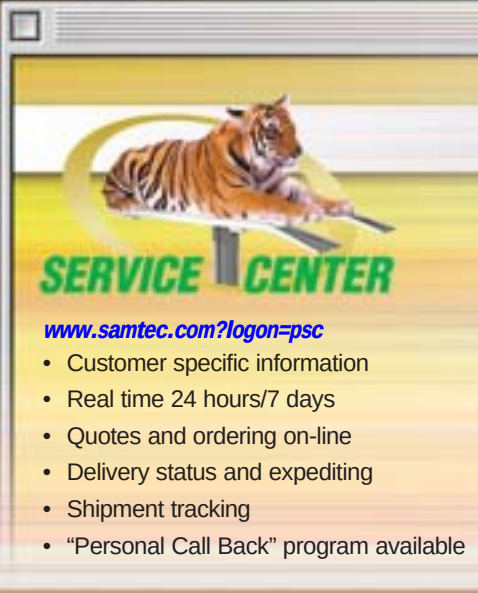
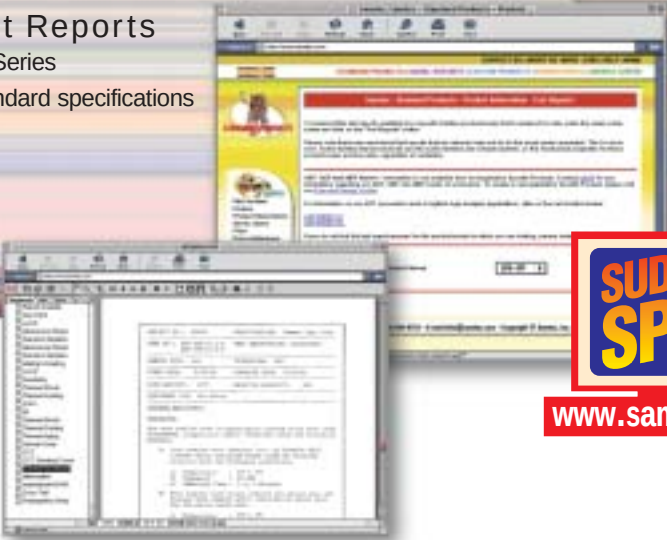
Flex Processing

- Design options and recommendations
- Processing literature on-line



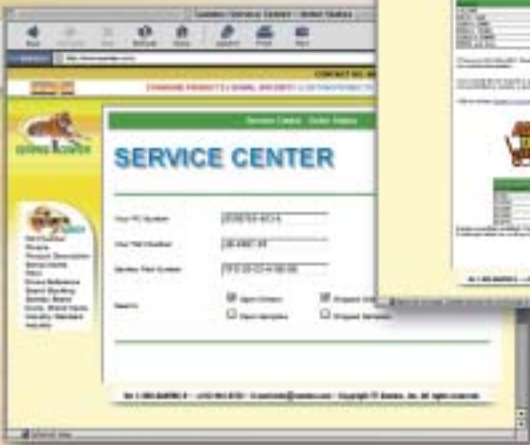
Test Reports

- By Series
- Standard specifications



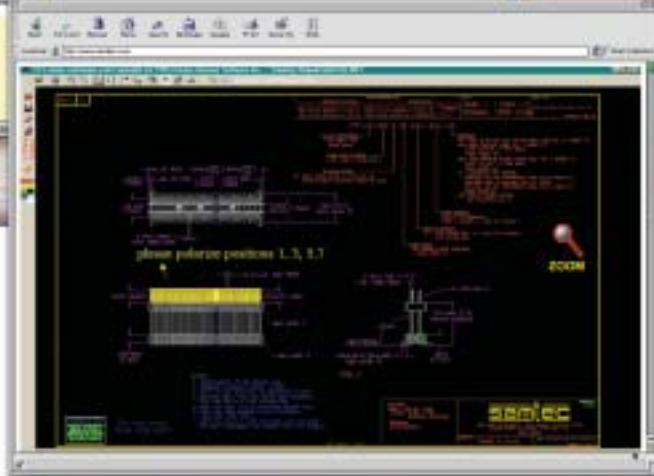
www.samtec.com?logon=psc

- Customer specific information
- Real time 24 hours/7 days
- Quotes and ordering on-line
- Delivery status and expediting
- Shipment tracking
- "Personal Call Back" program available



www.samtec.com?logon=pcd

- Project Management System
- For standard and modified connectors
- Create modified connectors on-line by "redlining" prints
- "Personal Call Back" program available



Sudden Service



Popular connectors
shipped in three days.

www.samtec.com/sudden_service/lead_time_inquiry.asp

Samples shipped
within 24 hours of order.

www.samtec.com/sudden_service/samples/samples.asp



SIGNAL INTEGRITY GROUP

In-house staff of engineers and a full capabilities electrical test lab to field your questions and recommend specific Samtec High Speed interfaces.

www.samtec.com/signal_integrity/capabilities/support/signal_integrity_group.asp

In-house staff of engineers available to field interconnect processing questions, assist you in improving the processing and manufacturability of boards and lowering their total applied cost.

www.samtec.com/standard_products/processing_information/ipg.asp



Customer specific web sites so you can find out everything about your orders...

Pricing • Delivery • Order Status
Quote Inquiry • Order Entry • Expediting

www.samtec.com?logon=psc

Your personal design center to find the best product for your application and to create-a-part by "redlining" (modifying) prints on-line.

www.samtec.com?logon=fdc

CUSTOM
PRODUCTS



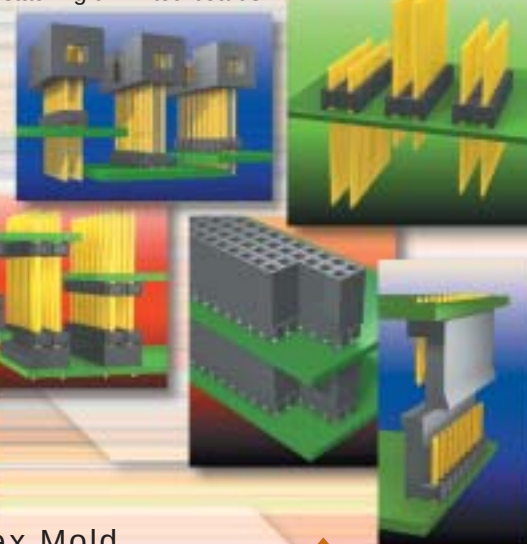
Flexible Design Solutions

Flexible design solutions from sockets and contacts to moldings and shrouds, and application specific and processing solutions.

FLEX STACK

Flex Stack

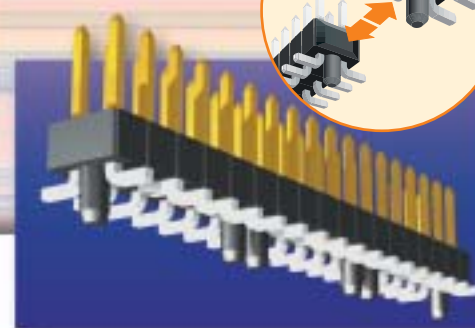
- Position bodies in .005" (0,13mm) increments
- Stack three boards
- Bottom entry
- Self-nesting sockets for stacking unlimited boards



FLEX MOLD

Flex Mold

- Cost effectively add processing features
- Molded or Modular Add-On
- Alignment Pins
- Pick & Place Pads
- Shrouds
- Solder Locks



FLEX CONTACT

Blade-and-Beam

- Micro pitch
- Mating/alignment "friendly"
- Cost effective



Tiger Claw

- Pass-through
- Ultra low profile
- Dual wipe contact



Tiger Eye

- High reliability
- High mating cycles
- Multi-finger contact



Tiger Buy

- High retention
- Cost effective
- Tuning fork contact



Z Beam

- High density
- Solderless

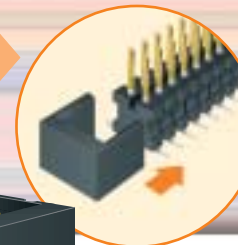
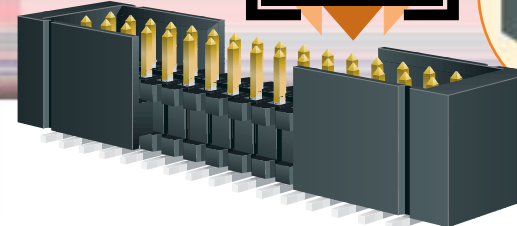
Tiger Beam

- Best cost
- Reliable performance
- Post and beam contact

Flex Shroud

- End Shrouds
- Locking Clips
- Ejector Latches
- Guide Posts
- Board Locks

FLEX SHROUD



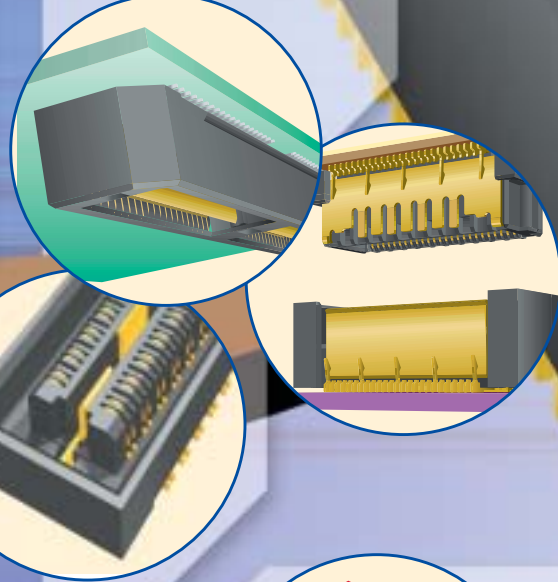
HIGH SPEED

Applications

- Blade Servers
- Routers
- Hubs
- Switches
- Network systems
- High end computers
- Test & diagnostic
- Accelerator Boards
- Wireless
- Broadband
- RAID
- System Controllers
- Control Platforms

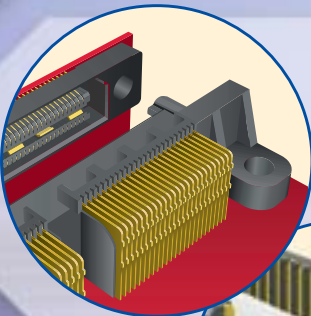
Signal/Ground Flexibility

- Surface mount ground plane
- Differential Pair or Single Ended
- Hot pluggable/Fully shielded



Termination Flexibility

- Surface Mount
- Right Angle
- Edge Mount
- Mixed Technology
- Coax Cable
- Flex Cable



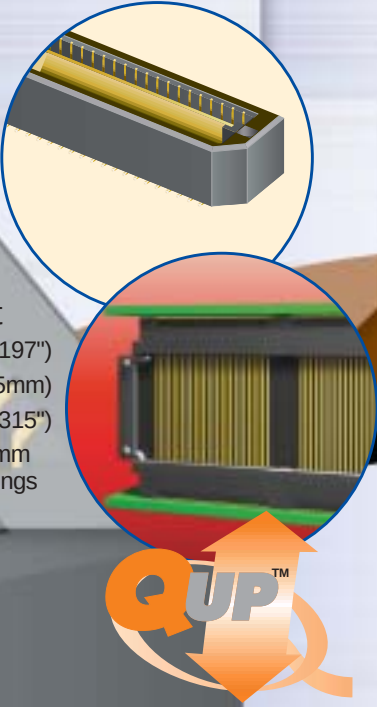
Signal Integrity Services

- Internet Design Tool
- EE support and advice
- Custom design and testing services



Choice of Pitch & Height

- 0,50mm (.0197")
- .025" (0,635mm)
- 0,80mm (.0315")
- 5mm to 30mm board spacings



HIGH

APPLICATIONS

Low Profile Q-Strip™ to 2.33 GHz	20
Elevated, Shrouded, Mixed Technology	21
Q-Pairs™ to 10 GHz	22
Right Angle & Edge Mount	23
Elevated High Speed	24-25
High Speed Cable & Data Links	26-27
Signal Integrity Services	28-29

STANDARD PRODUCTS

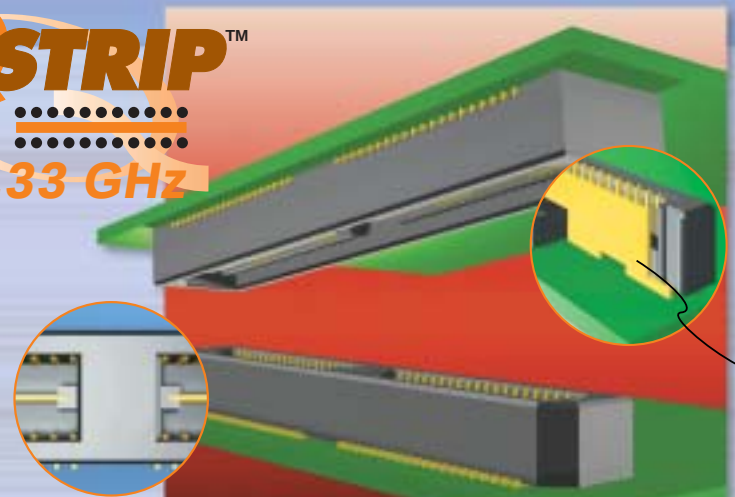
0,5mm Pitch (QTH, QSH)	30-33
.025" (0,635mm) Pitch (QTS, QSS, MIT, MIS)	34-35, 42-43
0,8mm Pitch (QTE, QSE)	44-49
Elevated High Speed (QUP8, QB8, HSEC8, HSC8)	50-55
Flex Circuit Assemblies (HFEM)	56
Shielded IDC Assemblies (RCSD, RCMD)	57
Coax Cable Assemblies (EQCD)	58

SPRINGS

HIGH SPEED BOARD STACKING



QSTRIP™
up to
2.33 GHz



0,80mm (.0315") Pitch

- Up to 200 signal pins
- Mated heights from 5mm to 30mm
- Single ended and differential pair
- Edge mount connector sets
- Guide post options

QTE/QSE



pgs. 44-49

Solid ground plane can also be used for power up to 3 amps with no change in electrical performance

.025" (0,635mm) Pitch

- Up to 250 signal pins
- Mated heights to 16mm
- Edge mount & right angle designs
- Shielded designs available

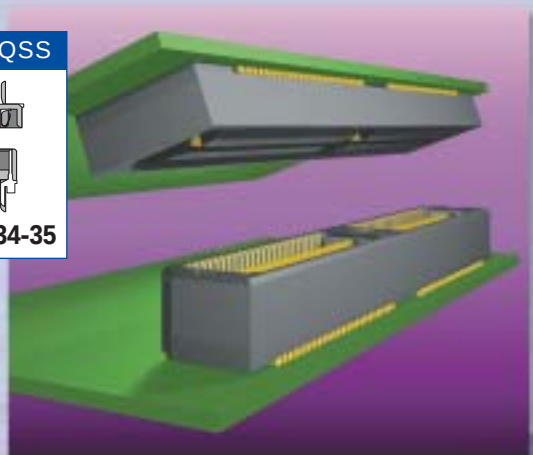
QTE/QSE (5,03mm Stack)	Near End Crosstalk		Prop. Delay	Rated at 5%	Rated at 10%
Single Ended	~5% @ 1.20 GHz	~9% @ 1.75GHz	35.0pS	1.2GHz	2.33 GHz
Differential Pair	~3% @ 2.33 GHz	~4.25% @ 5.00 GHz	35.0pS	2.33 GHz	5.00 GHz
QTE/QSE (5,03mm Stack)	Impedance Mismatch (Ω)				
Single Ended	64.0 to 50.0 @ 50pS	56.2 to 50.0 @ 100pS	52.9 to 50.0 @ 250pS	51.6 to 50.0 @ 500pS	
Differential Pair	104.5 to 87.1 @ 50pS	102.3 to 92.2 @ 100pS	101.6 to 96.4 @ 250pS	101.6 to 98.7 @ 500pS	
11,03mm Stack	Rated at 5%	Rated at 10%	22mm Stack	Rated at 5%	Rated at 10%
Single Ended	350 MHz	440 MHz	Single Ended	220 MHz	460 MHz
Differential Pair	875 MHz	2.30 GHz	Differential Pair	<350 MHz	350 MHz

For Complete Test Report see pg. 319 or logon to www.samtec.com?QSE

QTS/QSS



pgs. 34-35



QSTRIP™
up to
1.75 GHz

0,50mm (.0197") Pitch

- Up to 300 signal pins
- Mated heights from 5mm to 30mm
- Single ended and differential pair

QTH/QSH



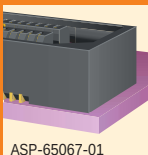
pgs. 30-33

QTH/QSH (5,03mm Stack)	Near End Crosstalk		Prop. Delay	Rated at 5%	Rated at 10%
Single Ended	~5.25% @ 775MHz	~10% @ 1.75GHz	42.8pS	775MHz	1.75 GHz
Differential Pair	~0.8% @ 585 MHz	~1.1% @ 1 GHz	42.8pS	585 MHz	1 GHz
QTH/QSH (5,03mm Stack)	Impedance Mismatch (Ω)				
Single Ended	50.0 to 43.5 @ 100pS	50.0 to 48.1 @ 250pS	50.0 to 48.9 @ 500pS	50.0 to 49.1 @ 750pS	
Differential Pair	100.0 to 87.6 @ 250pS	100.0 to 93.6 @ 500pS	100.0 to 95.9 @ 750pS	100.0 to 97.1 @ 1nS	

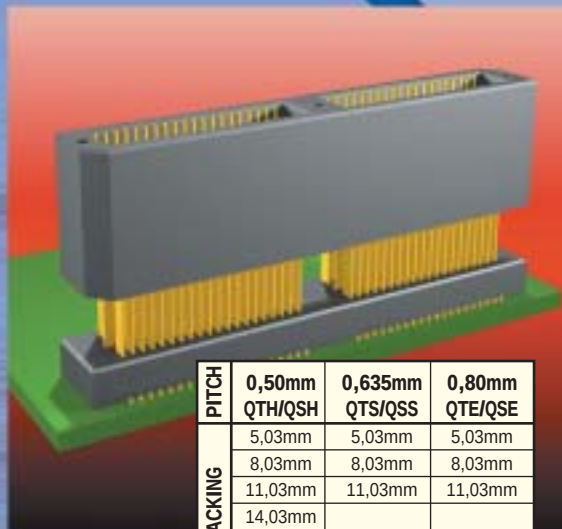
For Complete Test Report see pg. 319 or logon to www.samtec.com?QSH



AGILENT LOGIC
ANALYZER MATE:
(See page 316)



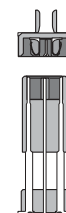
ASP-65067-01



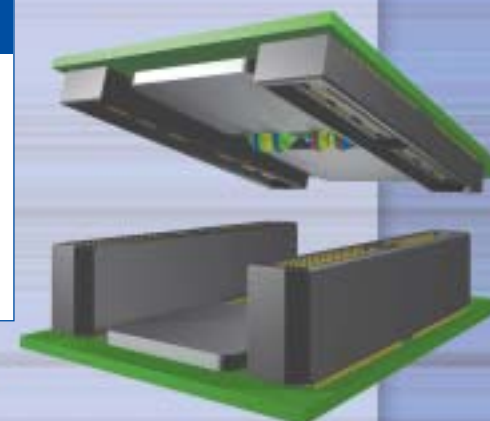
Elevated

- 5mm through 30mm board spacing
- 0,50mm, 0,635mm and 0,80mm pitch

QTE/QTS/QTH
QSE/QSS/QSH



pgs. 30-49



BOARD STACKING	0,50mm	0,635mm	0,80mm
	QTH/QSH	QTS/QSS	QTE/QSE
5,03mm	5,03mm	5,03mm	5,03mm
8,03mm	8,03mm	8,03mm	8,03mm
11,03mm	11,03mm	11,03mm	11,03mm
14,03mm			
16mm		16mm	16mm
19mm			19mm
22mm			22mm
25mm			25mm
30mm			30mm

Mixed Technology Footprint

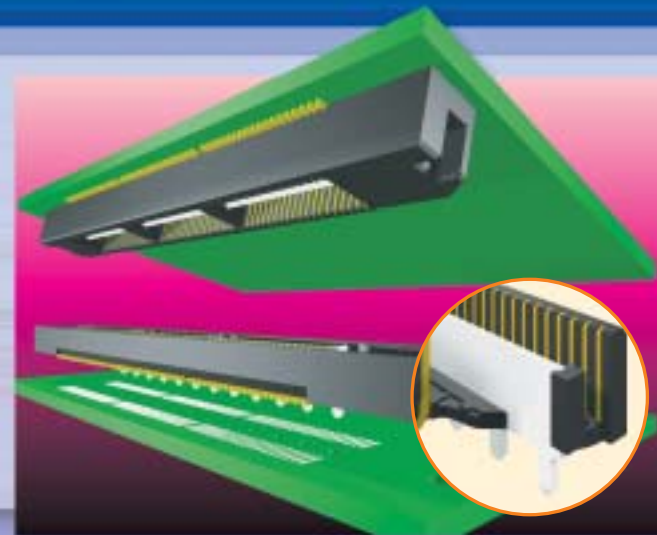
- Discrete ground plane every (12,70mm) .500" soldered to plated through-holes for added PCB retention
- 76 signal lines per linear inch (266 total)
- Choice of six mated heights: 5mm, 8mm, 11mm, 16mm, 18,75mm and 22mm
- Tray packaging available as standard option

MIT/MIS

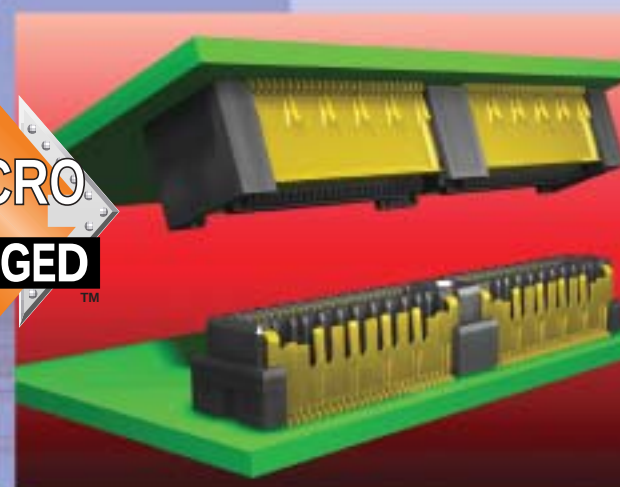
.025"
(0,635mm) Pitch



pgs. 42-43



**MICRO
RUGGED™**



Shielded Option

- EMI Shielding attached to board via selected signal pins
- Dual stage hot pluggable: Shield and ground planes first, then signal pins
- .025" (0,635mm) pitch
- Up to 130 I/Os
- Edge mount available

QMSS
QFSS

.025"
(0,635mm) Pitch



pgs. 36-38

HIGH SPEED VARIETY



QTH/QSH

0,50mm
(.0197") Pitch



pgs. 32-33

Standard Differential Pairs

- Optimized for 100Ω applications
- 0,80mm (.0315") and 0,50mm (.0197") pitch system available now
- Mated heights from 5mm (.197") to 22mm (.866")

QTH/QSH (0,50mm)	Near End Crosstalk		Prop. Delay	Rated at 5%	Rated at 10%
5,03mm Stack Height	0.62% @ 700 MHz	1.08% @ 1.40 GHz	39.0pS	700 MHz	1.33 GHz
	Impedance Mismatch (Ω)				
	100.0 to 74.4 @ 50pS	100.0 to 78.9 @ 100pS	100.0 to 89.4 @ 250pS	100.0 to 95.0 @ 500pS	

For complete Test Report see pg. 319 or logon to www.samtec.com?QSH-DP

QTE/QSE (0,80mm)	Near End Crosstalk		Prop. Delay	Rated at 5%	Rated at 10%
5,03mm Stack Height	~1.75% @ 6.4 GHz	~2% @ 10.00 GHz	35.0pS	6.40 GHz	10 GHz
	Impedance Mismatch (Ω)				
	111.6 to 88.0 @ 30pS	103.6 to 94.0 @ 50pS	98.8 to 98.2 @ 100pS	100.0 to 99.6 @ 250pS	

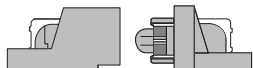
For complete Test Report see pg. 319 or logon to www.samtec.com?QSE-DP

Application Specific Differential Pairs

- Mix and match differential pairs with standard signal pins for partitioned pairs
- Edge mount differential pairs allow perpendicular and horizontal systems

QTS/QSS

.025" (0,635mm) Pitch



pgs. 40-41

Right Angle

- .025" (0,635mm) pitch
- PCB mounting holes
- Guide Posts
- Up to 200 I/Os
- Locking screw option in design

APPLICATIONS



PERPENDICULAR

APPLICATIONS



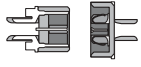
HORIZONTAL

Edge Mount

- 0,635mm (.025") and 0,80mm (.0315") pitch
- Accepts 1,60mm (.062") PCB
- Guide posts available
- Up to 250 I/Os

QTE/QSE

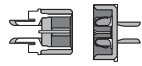
0,80mm
(.0315") Pitch



pgs. 48-49

QTS/QSS

0,635mm
(.025") Pitch



pg. 39

APPLICATIONS



PERPENDICULAR

APPLICATIONS



HORIZONTAL

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

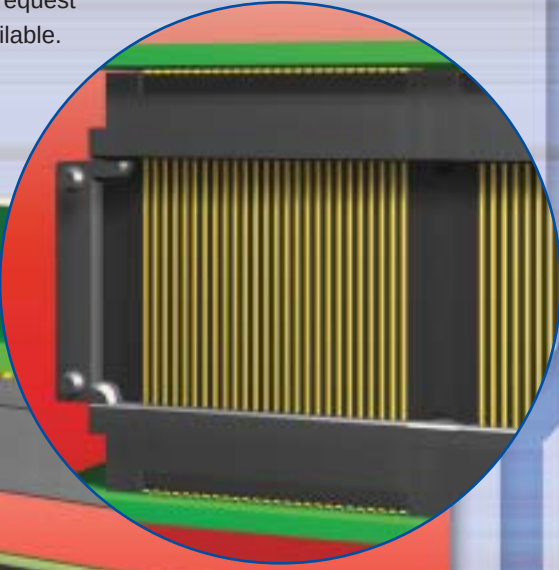
SOCKET/
REFERENCE

ELEVATED HIGH SPEED



High Speed Elevated Stacking

- Parallel high speed boards mate with two modified Q-Strips™
- Ground plane embedded in high speed boards
- “Engineered Electrical System” provides excellent electrical performance in elevated board stacking applications
- Change stacking height via PCBs is quicker and less expensive than modifying traditional connector system
- 19mm and 30mm standard stack height. Application specific heights on request
- Application specific latches available. Call Samtec.



QB8
0,80mm
(.0315") Pitch

pg. 51

QUP8
0,80mm
(.0315") Pitch

pg. 50

High Speed Elevated Flexibility

- 25mm standard board spacings
- Mates with vertical, right angle and edge mount sockets
- Choice of high speed (HSEC8 Series) or standard (MEC8 Series) sockets
- Single-ended or differential pair signal routing
- 50 or 70 Single Ended I/Os
- 33 or 46 Differential Pair I/Os
- Other sizes available. Call Samtec



HSEC8
0,80mm
(.0315") Pitch

pgs. 52-53

MEC8
0,80mm
(.0315") Pitch

pg. 253

APPLICATIONS

HORIZONTAL

MEC8
0,80mm
(.0315") Pitch

pg. 54

APPLICATIONS

PARALLEL

MEC8 Mated With HSC8			
CONFIGURATION (25mm Stack)	FREQUENCY RATING	IMPEDANCE	NEXT
Single Ended	2.5 GHz	50Ω±10%	9.6%
Differential Pair	3.5 GHz	100Ω±10%	2.4%

APPLICATIONS

PERPENDICULAR

HSC8
0,80mm
(.0315") Pitch

pg. 55

MEC8
0,80mm
(.0315") Pitch

pg. 252

HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

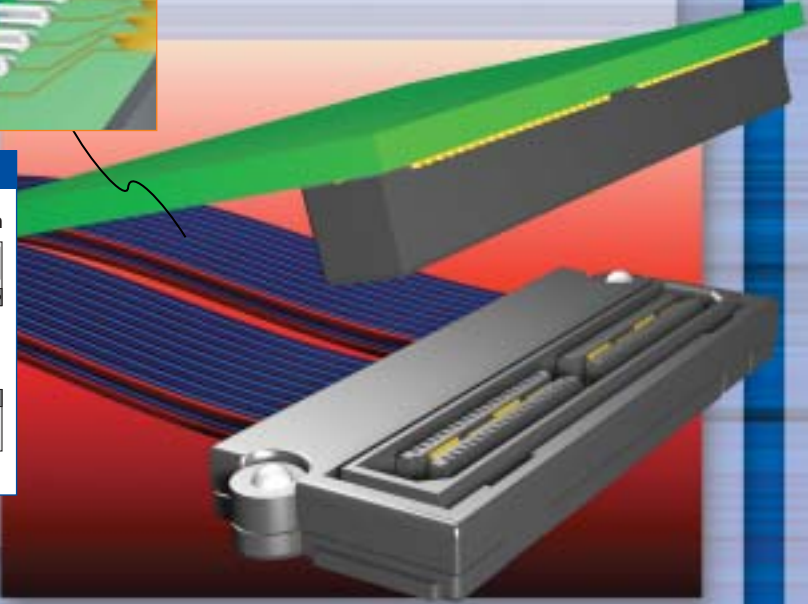
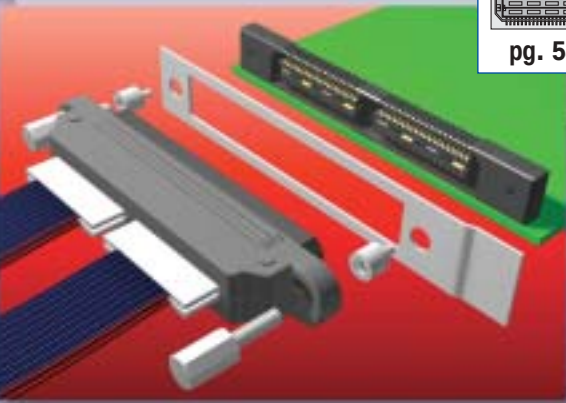
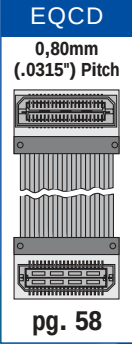
HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

HIGH SPEED CABLE



High Speed Coax Cable Assemblies

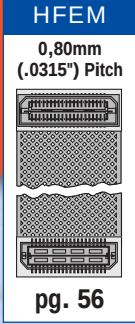
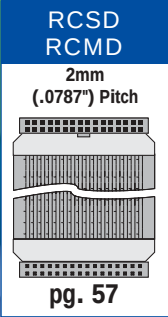
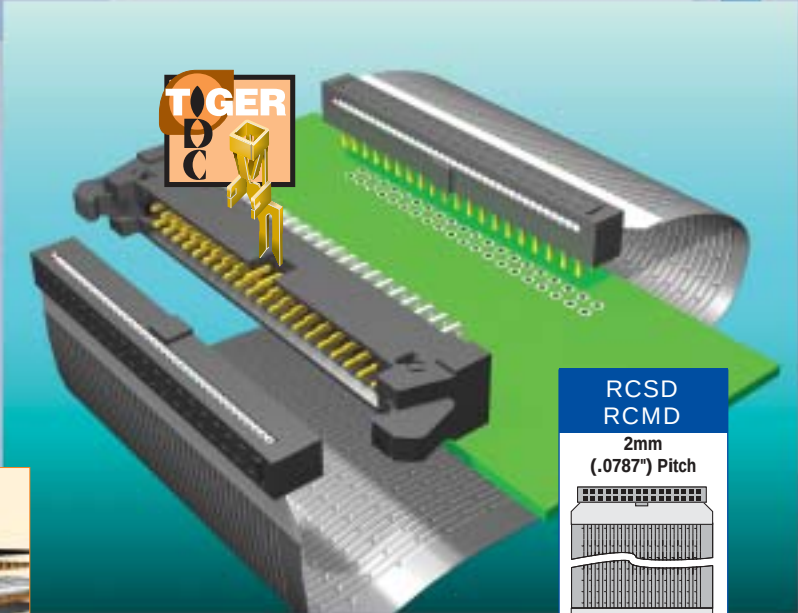
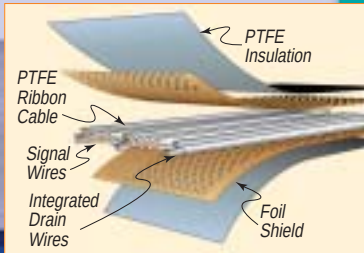
- 38 AWG Miniature coax ribbon cable
- Edge mount or vertical
- 50Ω and 100Ω systems
- 0,80mm pitch, 0,50mm pitch in design
- Application Specific designs for other pitches available
- Application Specific micro-rugged designs available



High Speed Shielded IDC Assemblies

- Made with Gore RIBBON-AX® cable*
- 2x10, 2x20, 2x22 and 2x25 position standard
- Sockets, terminals and combinations
- BeCu Tiger IDC Contact for highest reliability
- Mating ejector headers available

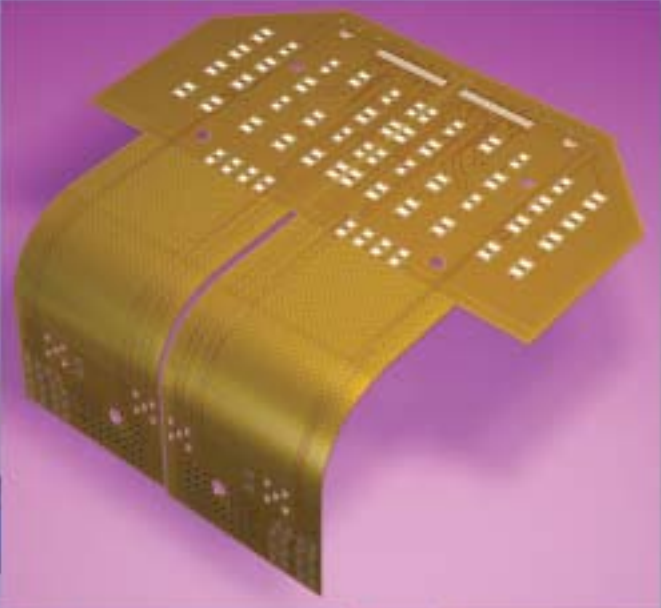
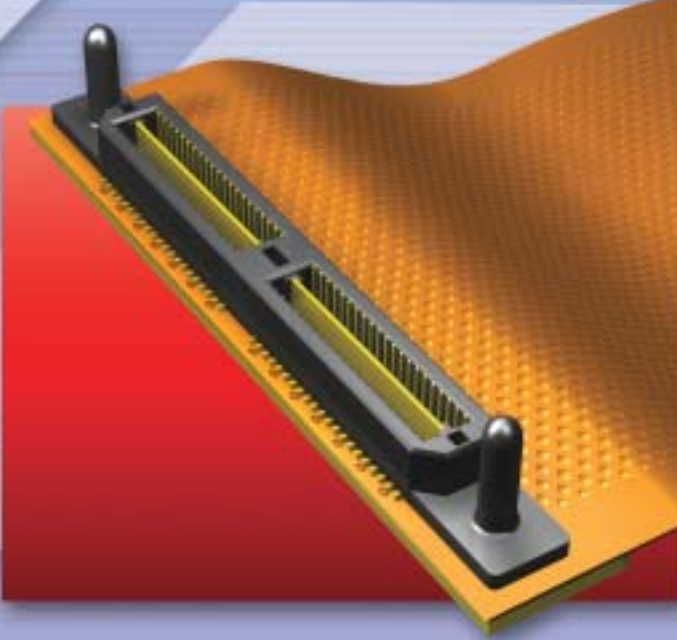
*RIBBON-AX® is a Registered Trademark of W.L. Gore Associates



HFEM - XXX - T - 05.00 - DP SPECIFICATIONS		
Environment	Differential signal transmission 100 ps signal rise time (10-90%)	
Bandwidth	> 6 Gb/sec per pair > 90 Gb/sec per bank	
Impedance	100 Ohms +/- 10%	
NEXT	<1.5%	
FEXT	<1.0%	
Propagation Delay*	Shortest path: 750 ps +/- 30 ps Longest path: 830 ps +/- 30 ps	
Insertion Loss (Longest Path)	500 MHz	-0.7 dB
	1.0 GHz	-1.2 dB
	1.5 GHz	-1.3 dB
	2.0 GHz	-2.2 dB
	2.5 GHz	-2.2 dB
	3.0 GHz	-2.5 dB
	3.5 GHz	-3.4 dB
* Contact sig@samtec.com for path length map.		

Modified Flex Data Links

- Micro Rugged features such as alignment pins, hold downs, etc.
- Special pin routing
- Reverses, daisy chains, etc.
- Non-standard length and breakouts



Sudden Circuits

- End-to-end solutions: In-house design, analysis and manufacturing of high speed connectors, circuits and subsystems.
- High speed interfaces: Wide variety of high speed/high density connectors and flex circuit assemblies.
- Signal Integrity Services: Integrated services for selection, development, simulation and testing of high speed systems.
- Samtec Sudden Service: Information, samples and delivery.

SIGNAL INTEGRITY SERVICES

Integrated services for selection, development, simulation and testing of high speed systems

Samtec's Signal Integrity Services Division provides services at three levels:

- Signal Integrity Center (Internet Design Tool)
- Signal Integrity Group (EE support and advice)
- Signal Integrity Division (Custom services integrating Samtec's SI team with your team)

All three levels of service are provided within the following boundaries:

Boundary 1

Models of mated connector components (no PCB footprint or routing)

Boundary 2

Models of mated connector components soldered to boards with Samtec recommended PCB footprint

Boundary 3

Models of connector components with Samtec recommended "final inch" PCB trace routing to the connector

Boundary 4

Design, modeling and testing of your subsystem including Samtec mated connector components, traces through PCBs, cabling, other devices and multiple connectors

Boundary 5

Design, modeling and testing of your full system or subsystem including the PCB and all passive and active component

SIGNAL INTEGRITY CENTER

www.samtec.com/signal_integrity

A comprehensive, user friendly web site for high-speed connector models, reports, drawings and searches



Simulations

- SPICE, IBIS models
- S-parameter data
- Isolated mating connector sets and connectors on optimized PCB layouts



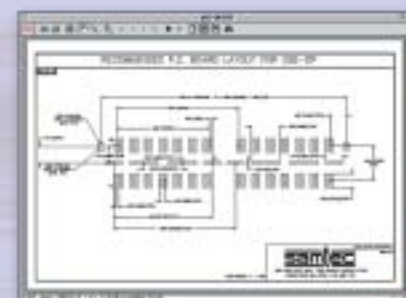
Test Reports

- High Speed characterization
- Time & Frequency Domain test data
- Mechanical test data
- Isolated mating connector sets and connectors on optimized PCB layouts



Product Search

- By Frequency
- By Rise Time
- By Data Rate
- By Description
- By Series
- By Board Spacing



Design Considerations

- Prints
- Catalog Pages
- Material Specifications
- Processing Guidelines
- Order Samples On-line
- Recommended PCB Footprints

SIGNAL INTEGRITY GROUP

Signal Integrity Engineering Support

For questions on applications that cannot be obtained from the Signal Integrity Center, Samtec's Signal Integrity Group offers person-to-person SI engineering support.

- EE customer interface
- In-house staff
- Interpret test data, performance results, capabilities
- PCB layout, trace & routing assistance
- Connector ground pin assignment assistance
- Call 1-800-726-8329 or +812-944-6733 extension 2330
- North American & Korean facilities
- E-mail: sig@samtec.com or signalintegritygroup@samtec.com



CUSTOM SIGNAL INTEGRITY SERVICES

Application specific design, modeling & testing service

For the ultimate in Signal Integrity Services, Samtec offers design, modeling and testing of your circuits, subsystems or complete system.

Confidently accelerate your product's development by adding Samtec's highly qualified engineers to your team. You choose the depth of involvement and the breadth of services that make sense for your project, whether we enter:

- Early in the concept phase supporting your effort with layout and component strategies
- Midway through the design phase supplying customized simulation models to better optimize performance and enhance signal integrity, or
- During the project's closing development stages of test and verification, bringing our Signal Integrity expertise to bare once prototypes are in hand.

Specific electrical engineering services are tailored to your needs and products, so nothing is wasted,

especially valuable time. Simulation models will be available in Single-line, Single-pair and Multi-line versions. Models can be supplied as:

- HSPICE (.sp)
- PSPICE (.cir)
- Cadence SPECCTRAQuest (.dml)
- Mentor ICX (.mmf)
- IBIS Interconnect Specification
- S-Parameter (Touchstone)
- Others on request

Transmission-line or lumped element models can be created to predict eye-patterns and other SI-related effects.

For customers requiring more advanced design services PCB design support will be available. Samtec's support ranges from recommending solder pad footprints to laying out complete system circuits.



SUDDEN SERVICE

Please contact a Samtec Signal Integrity Engineer at 1-800-726-8329 or +812-944-6733 extension 2330 or via email at sig@samtec.com or signalintegritygroup@samtec.com for more information.

**SIGNAL
INTEGRITY
DIVISION**

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

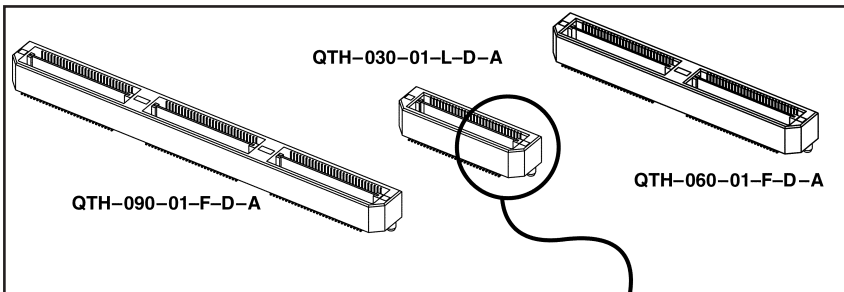
BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE



0,50mm HI-SPEED HEADER QTH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QTH

Insulator Material:
Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Current Rating:
Contact: 1.25A @ 80°C
Ground Plane: 9.5A @ 80°C

Operating Temp Range:
-65°C to +125°C

Plating:
Au over 50μ" (1,27μm) Ni

Voltage Rating:
125 VAC mated with QSH & 5mm Stack Height



Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
QSH



Configuration (5,03mm Stack)	Near End Crosstalk	Prop. Delay	Rated at 5%	Rated at 10%
Single Ended	~5.25% @ 775 MHz	~10% @ 1.75 GHz	42.8pS	775 MHz
Differential Pair	~0.8% @ 585 MHz	~1.1% @ 1 GHz	42.8pS	585 MHz
Configuration (5,03mm Stack)	Impedance Mismatch (Ω)			
Single Ended	50.0 to 43.5 @ 100pS	50.0 to 48.1 @ 250pS	50.0 to 48.9 @ 500pS	50.0 to 49.1 @ 750pS
Differential Pair	100.0 to 87.6 @ 250pS	100.0 to 93.6 @ 500pS	100.0 to 95.9 @ 750pS	100.0 to 97.1 @ 1nS

For complete Test Report logon to www.samtec.com?QTH

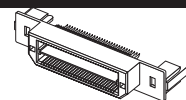
STACK HEIGHTS

LEAD STYLE	MATED HEIGHT WITH QSH
-01	(5,03) .198
-02	(8,03) .316
-03	(11,03) .434
-09	(14,03) .552
-04	(16,00) .630
-05	(19,00) .748
-06	(22,00) .866
-07	(25,00) .984
-08	(30,00) 1,181

Processing conditions will affect mated height.

APPLICATION SPECIFIC

Edge Mount.
Contact Samtec Interconnect Processing Group:
www.samtec.com/standard_products/processing_information/ipg.asp



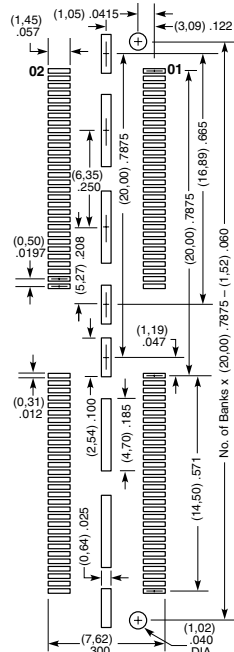
Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max (030-060)
(0,15mm) .006" max (090-150)

Suggested Paste Thickness:
For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?QTH for recommended PCB layout.



QTH
NO. OF POSITIONS PER ROW
LEAD STYLE
PLATING OPTION
D
A
OTHER OPTION

-030, -060, -090, -120, -150
 (60 total positions per bank)

Specify LEAD STYLE from chart.

-F
 = Gold Flash on Signal Pins and Ground Plane

-L
 = 10μ" (0,25μm) Gold on Signal Pins and Ground Plane

-K
 = (7,00mm) .275" DIA Polyimide film Pick & Place Pad
 (Not available on lead style -05, -06, -07 and -08)

-TR
 = Tape & Reel
 (-090 positions maximum)
 Not available on lead style -05, -06, -07 and -08

-TY
 = Tray Packaging

LEAD STYLE	A
-01	(4,27) .168
-02	(7,26) .286
-03	(10,26) .404
-04	(15,24) .600
-05	(18,24) .718
-06	(21,23) .836
-07	(24,23) .954
-08	(29,23) 1,151
-09	(13,27) .523

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC FRANCE • Tel: 01 60 95 06 60 • Fax: 01 60 95 06 61

SAMTEC ITALY • Tel: 39 039 6890337 • Fax: 39 039 6890315

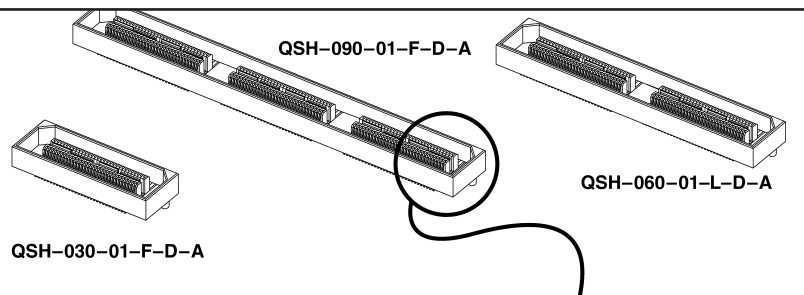
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SAMTEC CHINA • Tel: 86-21-5385-4089 • Fax: 86-21-5385-4047

SAMTEC JAPAN • Tel: 81-424-42-8318 • Fax: 81-424-42-8319

SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



0,50mm HI-SPEED SOCKET QSH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/QSH

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Contacts: 1.25A @ 80°C

Ground Plane: 9.5A @ 80°C

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Voltage Rating:

125 VAC mated with QTH & 5mm Stack Height

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (030-060)

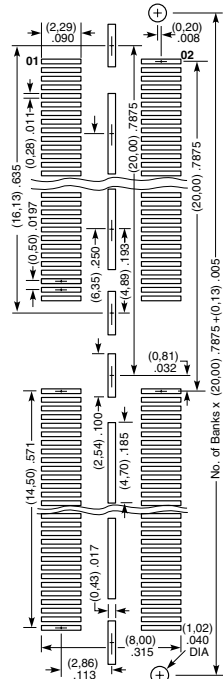
(0,15mm) .006" max (090-150)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/QSH for recommended PCB layout.



Mates with:
QTH



Blade and beam design

Integral ground plane

Configuration (5,03mm Stack)	Near End Crosstalk	Prop. Delay	Rated at 5%	Rated at 10%
Single Ended	~5.25% @ 775 MHz	~10% @ 1.75 GHz	42.8pS	775 MHz
Differential Pair	~0.8% @ 585 MHz	~1.1% @ 1 GHz	42.8pS	585 MHz
Configuration (5,03mm Stack)	Impedance Mismatch (Ω)			
Single Ended	50.0 to 43.5 @ 100pS	50.0 to 48.1 @ 250pS	50.0 to 48.9 @ 500pS	50.0 to 49.1 @ 750pS
Differential Pair	100.0 to 87.6 @ 250pS	100.0 to 93.6 @ 500pS	100.0 to 95.9 @ 750pS	100.0 to 97.1 @ 1nS

For complete Test Report logon to www.samtec.com/QSH

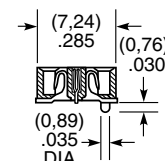
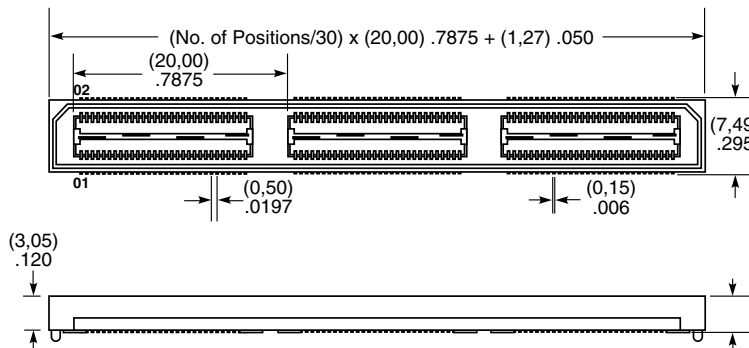
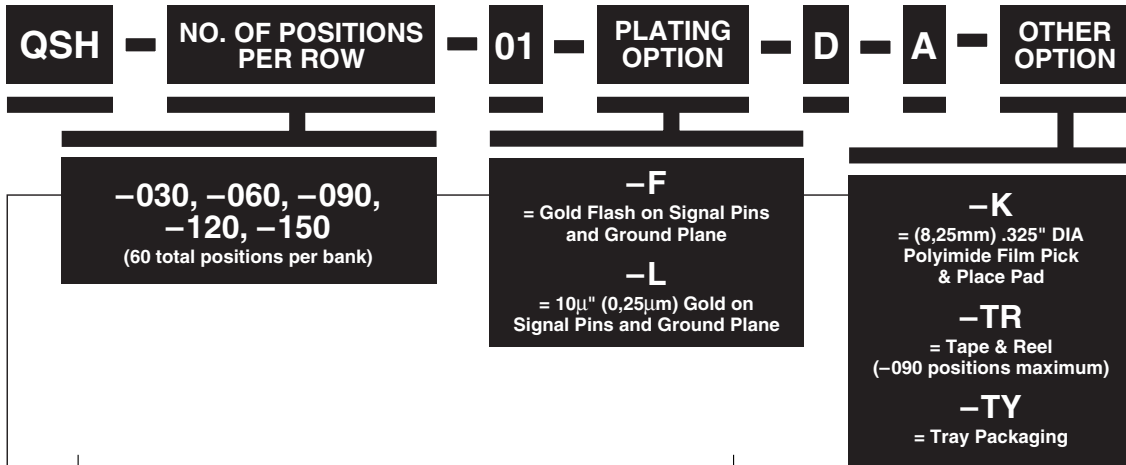
STACK HEIGHTS

LEAD STYLE	MATED HEIGHT WITH QTH
-01	(5,03) .198
-02	(8,03) .316
-03	(11,03) .434
-09	(14,03) .552
-04	(16,00) .630
-05	(19,00) .748
-06	(22,00) .866
-07	(25,00) .984
-08	(30,00) 1.181

Processing conditions will affect mated height.

APPLICATION SPECIFIC

Edge Mount.
Contact Samtec
Interconnect Processing
Group: www.samtec.com/standard_products/processing_information/ipg.asp



APPLICATION SPECIFIC

30μ" (0,76μm) Gold and Guide Posts available. Call Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

WWW.SAMTEC.COM

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SAMTEC ITALY • Tel: 39 039 6890337 • Fax: 39 039 6890315

SAMTEC ASIA PACIFIC • Tel: 65 6745-5955 • Fax: 65 6841-1502

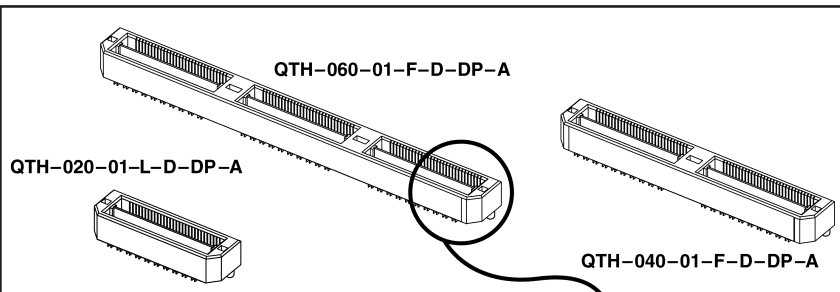
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SAMTEC JAPAN • Tel: 81-424-42-8318 • Fax: 81-424-42-8319

SAMTEC TAIWAN • Tel: 886-02-2364-6077 • Fax: 886-02-2367-9531

SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



0,50mm DIFFERENTIAL PAIR QTH (-DP) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QTH-DP

Insulator Material:

Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

Contacts: 1.25A @ 80°C

Ground Plane: 9.5A @ 80°C

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Voltage Rating:

125 VAC mated with QSH-DP

& 5mm Stack Height



Mates with:
QSH (-DP)

APPLICATION SPECIFIC

"Partitionable" - combine differential & single-ended banks in same connector. Call Samtec ASP Group. *Differential*

Integral ground plane

(0,50mm)
.0197" pitch

QPAIRS™
up to **1.33 GHz**

STACK HEIGHT

LEAD STYLE	STANDARD MATED HEIGHT
-01	(5,03) .198

Processing conditions will affect mated height.

Alignment Pin

APPLICATION SPECIFIC OPTION

- 30μ" (0,76μm) Gold
- 8,03mm, 11,03mm, 14,03mm, 16mm, 19mm, 22mm, 25mm and 30mm stack height.
- Edge Mount (Contact Samtec Interconnect Processing Group)
- Guide Posts

Configuration	Near End Crosstalk	Prop. Delay	Rated at 5%	Rated at 10%
5,03mm Stack Height	0.62% @ 700 MHz	1.08% @ 1.40 GHz	39,0pS	700 MHz
	Impedance Mismatch (Ω)			
	100.0 to 74.4 @ 50pS	100.0 to 78.9 @ 100pS	100.0 to 89.4 @ 250pS	100.0 to 95.0 @ 500pS

For complete Test Report logon to www.samtec.com?QTH-DP

Processing:

Max Processing Temp:

230°C for 60 seconds

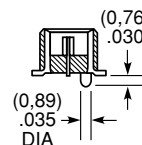
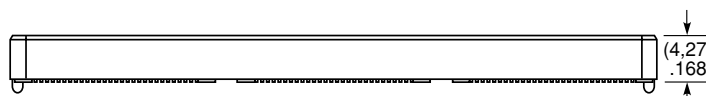
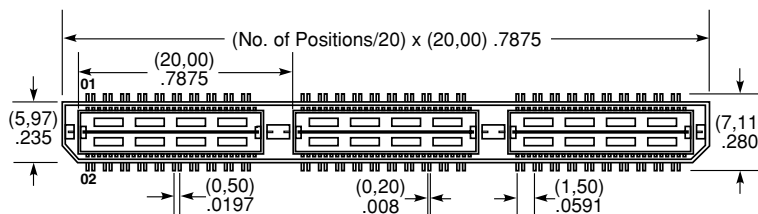
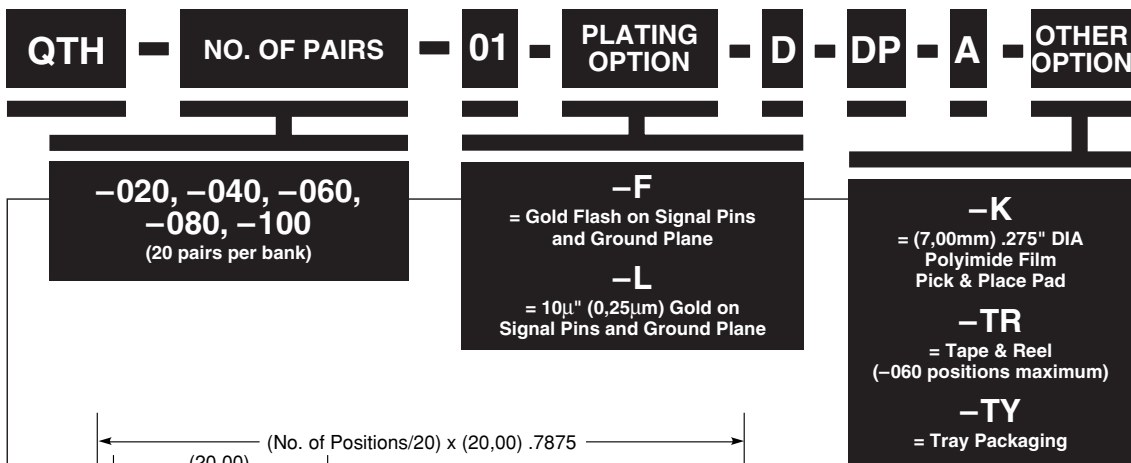
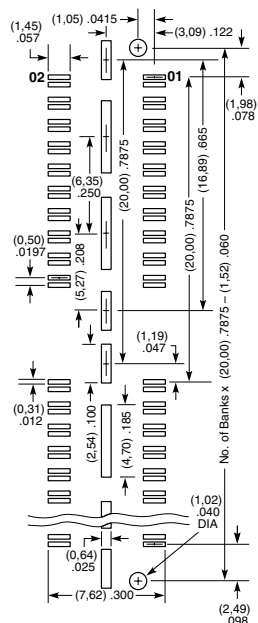
SMT Lead Coplanarity:

(0,10mm) .004" max (020-060)

(0,15mm) .006" max (080-100)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?QTH-DP for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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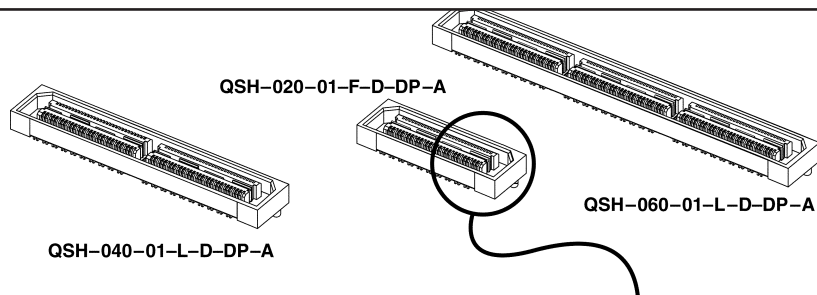
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0,50mm DIFFERENTIAL PAIR QSH (-DP) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QSH-DP

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Contacts: 1.25A @ 80°C

Ground Plane: 9.5A @ 80°C

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Voltage Rating:

125 VAC mated with QTH-DP

& 5mm Stack Height

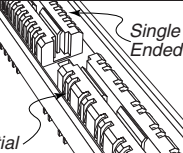


Mates with:
QTH (-DP)



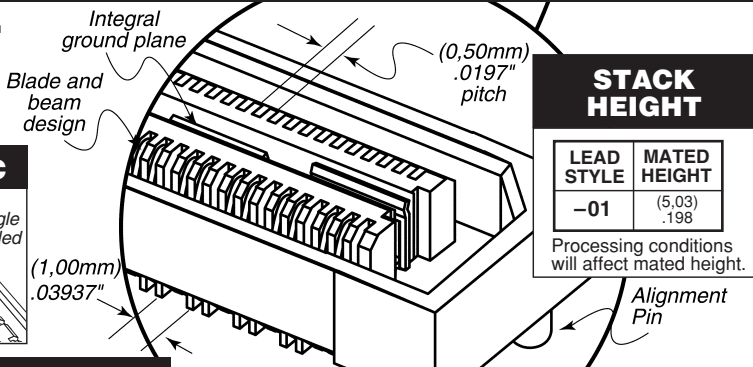
APPLICATION SPECIFIC

"Partitionable" - combine differential & single-ended banks in same connector
Call Samtec.
ASP Group. Differential



APPLICATION SPECIFIC OPTION

- 30μ" (0,76μm) Gold
- 8,03mm, 11,03mm, 14,03mm, 16mm, 19mm, 22mm, 25mm and 30mm stack height.
- Edge Mount (Contact Samtec Interconnect Processing Group)
- Guide Posts



STACK HEIGHT

LEAD STYLE	MATED HEIGHT
-01	(5,03) .198

Processing conditions will affect mated height.

Configuration	Near End Crosstalk	Prop. Delay	Rated at 5%	Rated at 10%
5,03mm Stack Height	0.62% @ 700 MHz	1.08% @ 1.40 GHz	39.0pS	700 MHz
	Impedance Mismatch (Ω)			
	100.0 to 74.4 @ 50pS	100.0 to 78.9 @ 100pS	100.0 to 89.4 @ 250pS	100.0 to 95.0 @ 500pS

For complete Test Report logon to www.samtec.com?QSH-DP

Processing:

Max Processing Temp:

230°C for 60 seconds

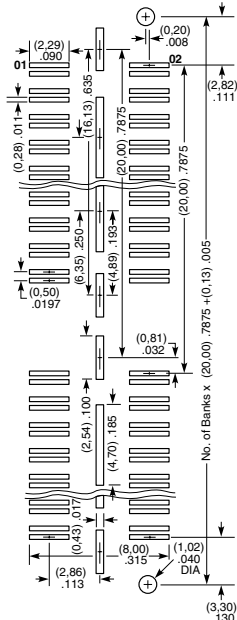
SMT Lead Coplanarity:

(0,10mm) .004" max (020-060)

(0,15mm) .006" max (080-100)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?QSH-DP for recommended PCB layout.

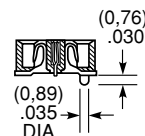
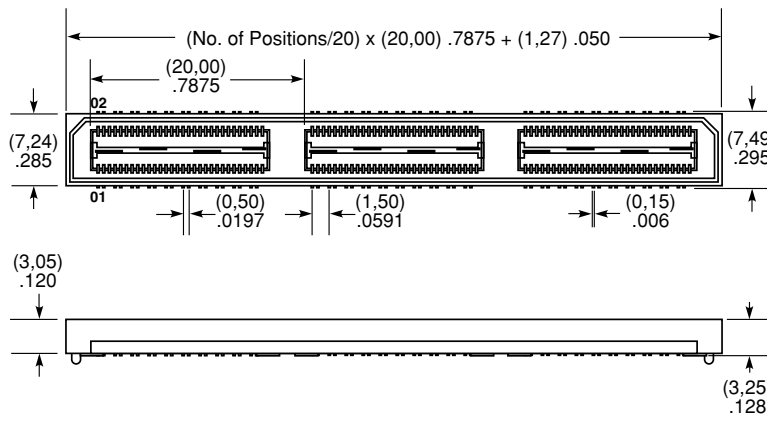


QSH - **NO. OF PAIRS** - **01** - **PLATING OPTION** - **D** - **DP** - **A** - **OTHER OPTION**

-020, -040, -060, -080, -100
(20 pairs per bank)

-F
= Gold Flash on Signal Pins and Ground Plane
-L
= 10μ" (0,25μm) Gold on Signal Pins and Ground Plane

-K
= (8,25mm) .325" DIA Polyimide Film Pick & Place Pad
-TR
= Tape & Reel (-060 positions maximum)
-TY
= Tray Packaging



Due to technical progress, all designs, specifications and components are subject to change without notice.

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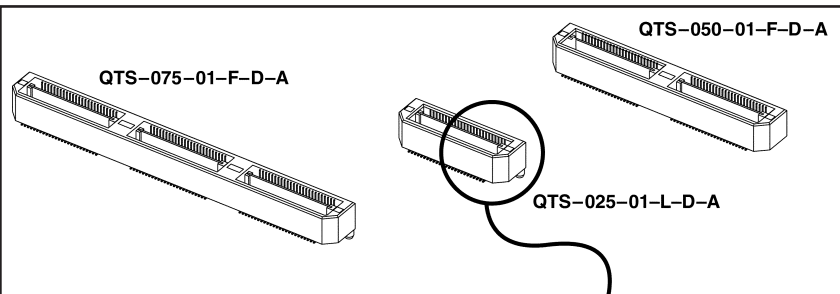
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0,635mm HI-SPEED HEADER QTS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/QTS

Insulator Material:

Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze

Current Rating:

Contacts: 1.6A @ 80°C

Ground Plane: 7.9A @ 80°C

Operating Temp:

-65°C to +125°C

Plating:

Au over 50µ" (1,27µm) Ni

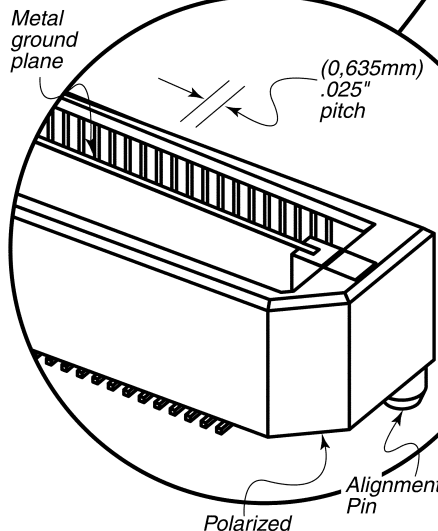
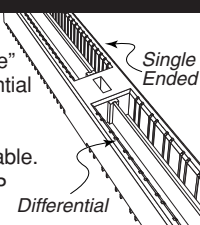
Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
QSS



APPLICATION SPECIFIC OPTION

Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available. Call Samtec ASP Group.



STACK HEIGHTS

LEAD STYLE	MATED HEIGHT WITH QSS
-01	(5,03) .198
-02	(8,03) .316
-03	(11,03) .434
-04	(16,00) .630

Processing conditions will affect mated height.

APPLICATION SPECIFIC OPTION

30µ" (0,76µm) Gold.
Call Samtec.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (025-075)

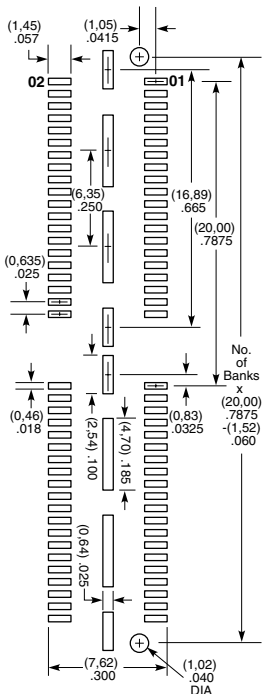
(0,15mm) .006" max (100-125)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/QTS for recommended PCB layout.



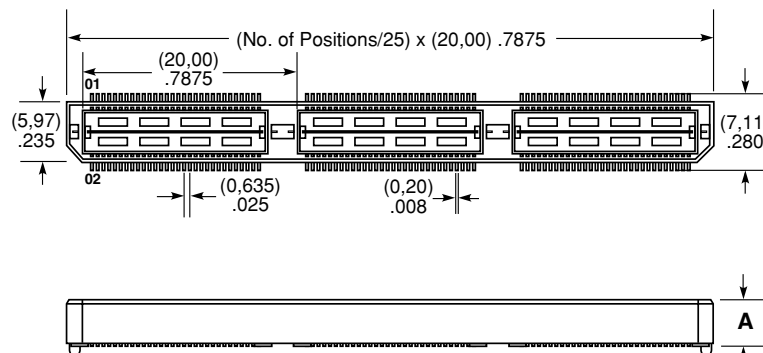
QTS - **NO. OF POSITIONS PER ROW** - **BODY STYLE** - **PLATING OPTION** - **D** - **A** - **OTHER OPTION**

-025, -050, -075, -100, -125
(50 total positions per bank)

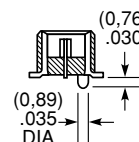
Specify LEAD STYLE from chart.

-F
= Gold Flash on Signal Pins and Ground Plane
-L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane

-K
= (7,00mm) .275" DIA Polyimide film Pick & Place Pad
-TR
= Tape & Reel (-075 positions maximum)
-TY
= Tray Packaging



LEAD STYLE	A
-01	(4,27) .168
-02	(7,26) .286
-03	(10,26) .404
-04	(15,24) .600



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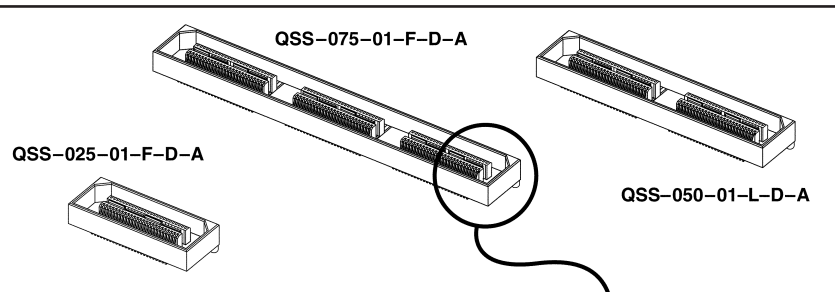
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0,635mm HI-SPEED SOCKET QSS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/QSS

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Contacts: 1.6A @ 80°C

Ground Plane: 7.9A @ 80°C

Operating Temp:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
QTS

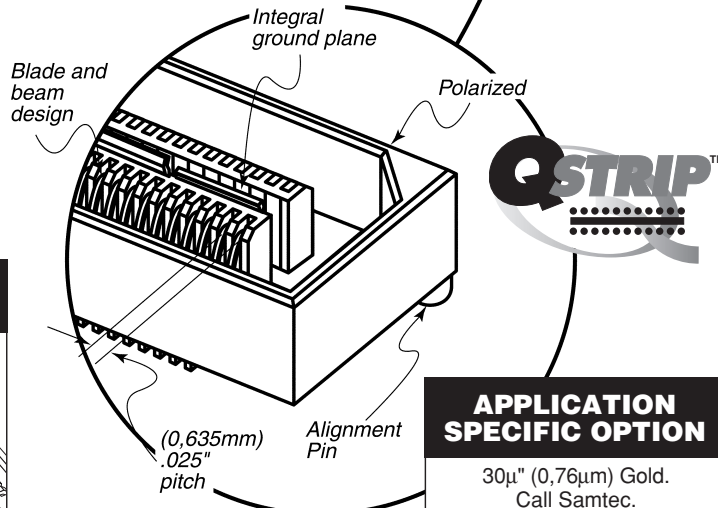
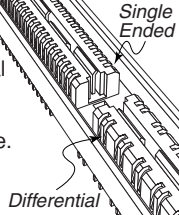
APPLICATIONS



APPLICATION SPECIFIC OPTION

Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available.

Call Samtec ASP Group.



APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold.
Call Samtec.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (025-075)

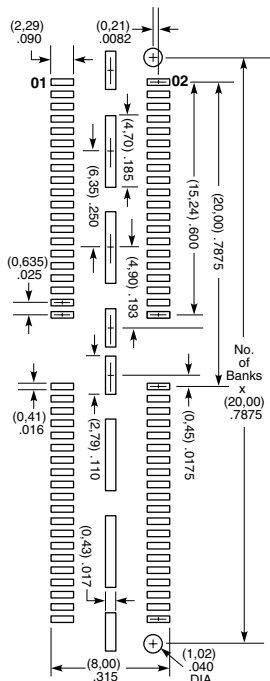
(0,15mm) .006" max (100-125)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/QSS for recommended PCB layout.

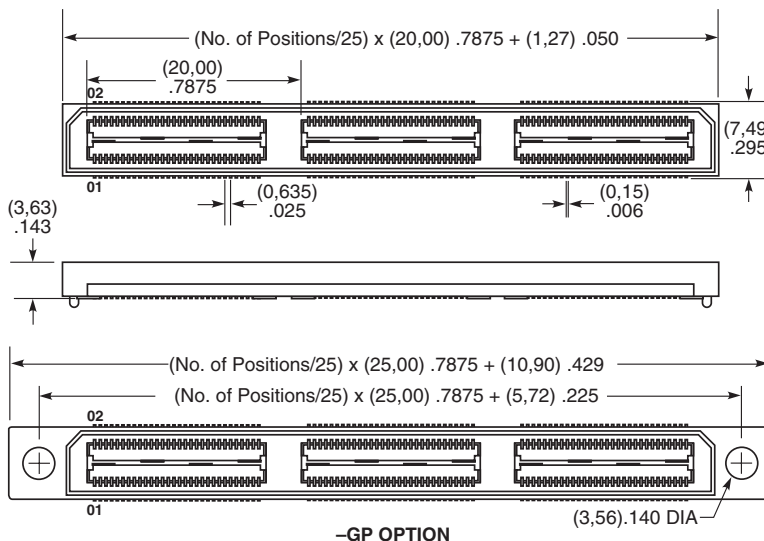


QSS - **NO. OF POSITIONS PER ROW** - **01** - **PLATING OPTION** - **D** - **A** - **OTHER OPTION**

-025, -050, -075, -100, -125
(50 total positions per bank)

-F
= Gold Flash on Signal Pins and Ground Plane
-L
= 10μ" (0,25μm) Gold on Signal Pins and Ground Plane

-GP
= Guide Holes
-K
= (8,25mm) .325" DIA Polyimide Film Pick & Place Pad
-TR
= Tape and Reel (-075 positions maximum)
-TY
= Tray Packaging



Due to technical progress, all designs, specifications and components are subject to change without notice.

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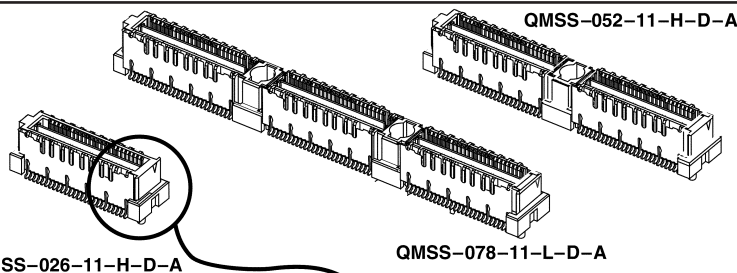
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0,635mm SHIELDED HEADER QMSS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QMSS

Insulator Material:

Liquid Crystal
Polymer

Terminal, Ground Plane & Shield Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni
(Tin on Ground Plane Tail)

Note: Some lengths, styles and options are non-standard, non-returnable.

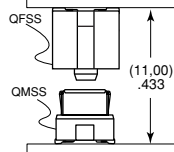
Mates with:
QFSS



APPLICATION SPECIFIC OPTION

Headers without
Alignment Pins.
Call Samtec.

APPLICATION



EMI shield
attached to board
via selected
signal pins

Standard shield
grounding is GSSSSG.
Application Specific
options available

(0,635mm)
.025"
pitch

MICRO
RUGGED™

SIGNAL
INTEGRITY
DIVISION

Contact Samtec
Signal Integrity Group
for test data

Processing:

Max Processing Temp:

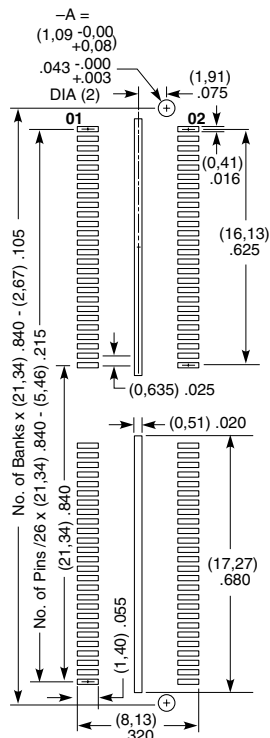
230°C for 60 seconds

SMT Lead Coplanarity:

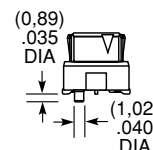
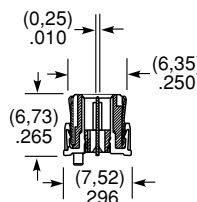
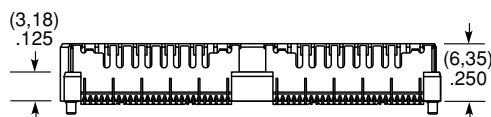
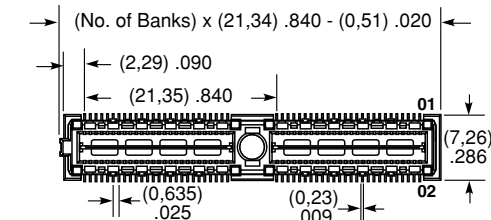
(0,10mm) .004" max (026-078)
(0,15mm) .006" max (104)
lead coplanarity

Suggested PCB Layouts:

For reference only. Please
contact Samtec or go to
www.samtec.com?QMSS
for recommended PCB layout.



QMSS	NO. OF PINS PER ROW	11	PLATING OPTION	D	A	OPTION
-026, -052, -078, -104 (52 total pins per bank)			-L = 10μ" (0,25μm) Gold on Signal Pins, Shield and Ground Plane -H = 30μ" (0,76μm) Gold on Signal Pins, 10μ" (0,25μm) Gold on Shield and Ground Plane (Gold flash on Signal Pin tails, Tin on Ground Plane tails)		-GP = Guide Post -K = (5,50mm) .217" DIA Polyimide film Pick & Place Pad	



Due to technical progress, all designs, specifications and components are subject to change without notice.

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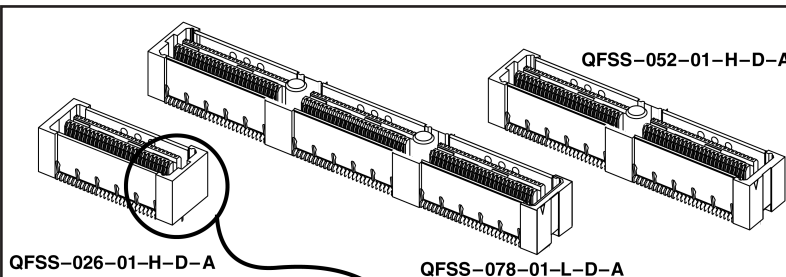
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0,635mm SHIELDED SOCKET QFSS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/QFSS

Insulator Material:

Liquid Crystal

Polymer

Contact, Ground

Plane & Shield Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni
(Tin on Ground Plane tails)

Note: Some lengths, styles and options are non-standard, non-returnable.

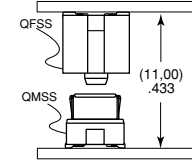
Mates with:
QMSS



APPLICATION SPECIFIC OPTION

Headers without Alignment Pins.
Call Samtec.

APPLICATION



Hot pluggable
(Shield & Ground Plane first, then signal pins)

Standard shield grounding is GSSSSG.
Application Specific options available

MICRO
RUGGED™

SIGNAL
INTEGRITY
DIVISION

Contact Samtec
Signal Integrity Group
for test data

Processing:

Max Processing Temp:

230°C for 60 seconds

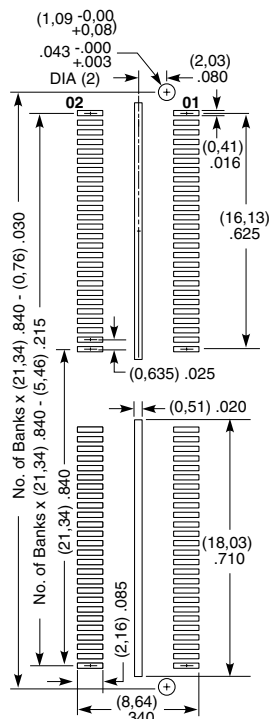
SMT Lead Coplanarity:

(0,10mm) .004" max (026-078)

(0,15mm) .006" max (104)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/QFSS for recommended PCB layout.



QFSS

NO. OF PINS PER ROW

01

PLATING OPTION

D

A

OTHER OPTION

-026, -052, -078, -104
(52 total pins per bank)

-L

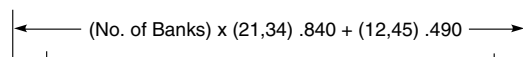
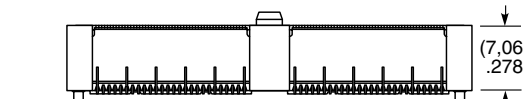
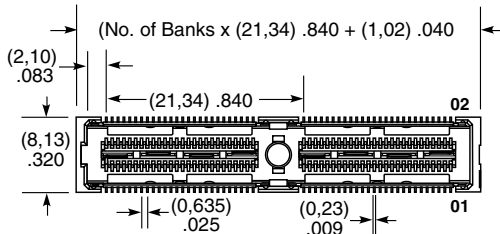
= 10μ" (0,25μm) Gold on Signal Pins,
Shield and Ground Plane

-H

= 30μ" (0,76μm) Gold on Signal Pins,
10μ" (0,25μm) Gold on Shield
and Ground Plane

(Gold flash on Signal Pin tails,
Tin on Ground Plane tails)

-GP
= Guide
Holes



-GP OPTION

Due to technical progress, all designs, specifications and components are subject to change without notice.

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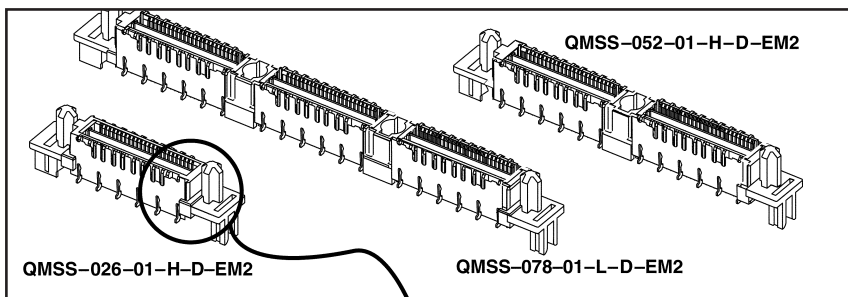
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0,635mm SHIELDED HEADER QMSS (-EM) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QMSS-EM

Insulator Material:

Liquid Crystal
Polymer

Terminal, Ground Plane & Shield Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni
(Tin on Ground Plane Tails)

Note: Some lengths,
styles and options are
non-standard, non-returnable.

Mates with:
QFSS



EMI shield attached
to board via selected
signal pins

Standard shield
grounding is GSSSSG.
Application Specific
options available

Solder clip for
added strength

**SIGNAL
INTEGRITY
DIVISION**

Contact Samtec
Signal Integrity Group
for test data

Processing:

Max Processing Temp:

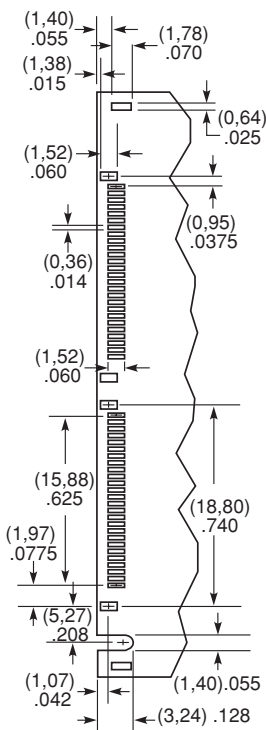
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (026-078)
(0,15mm) .006" max (104)
lead coplanarity

Suggested PCB Layouts:

For reference only. Please
contact Samtec or go to
www.samtec.com?QMSS-EM
for recommended PCB layout.



QMSS

NO. OF PINS
PER ROW

01

PLATING
OPTION

D

EM2

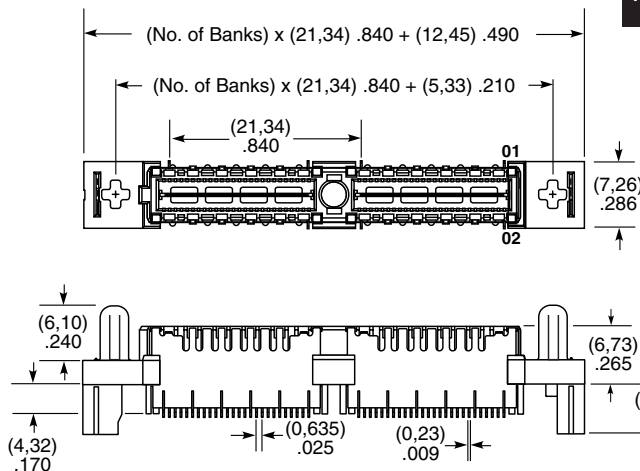
-026, -052, -078, -104
(52 total pins per bank)

-L

= 10μ" (0,25μm) Gold on Signal Pins,
Shield and Ground Plane

-H

= 30μ" (0,76μm) Gold on Signal Pins,
10μ" (0,25μm) Gold on Shield and Ground Plane



Due to technical progress, all designs, specifications and components are subject to change without notice.

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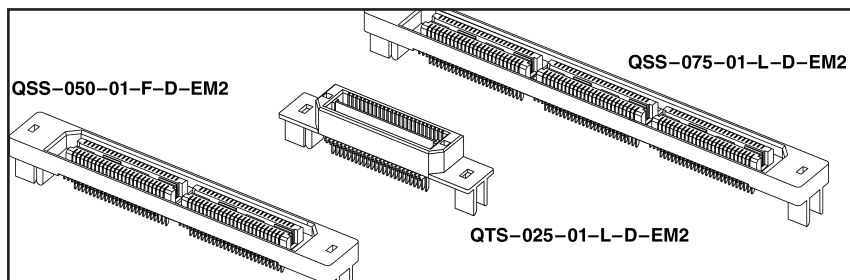
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0,635mm EDGE MOUNT QTS (-EM), QSS (-EM) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QTS-EM or www.samtec.com?QSS-EM

Insulator Material:

Liquid Crystal
Polymer



Terminal Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

230°C for 60 seconds

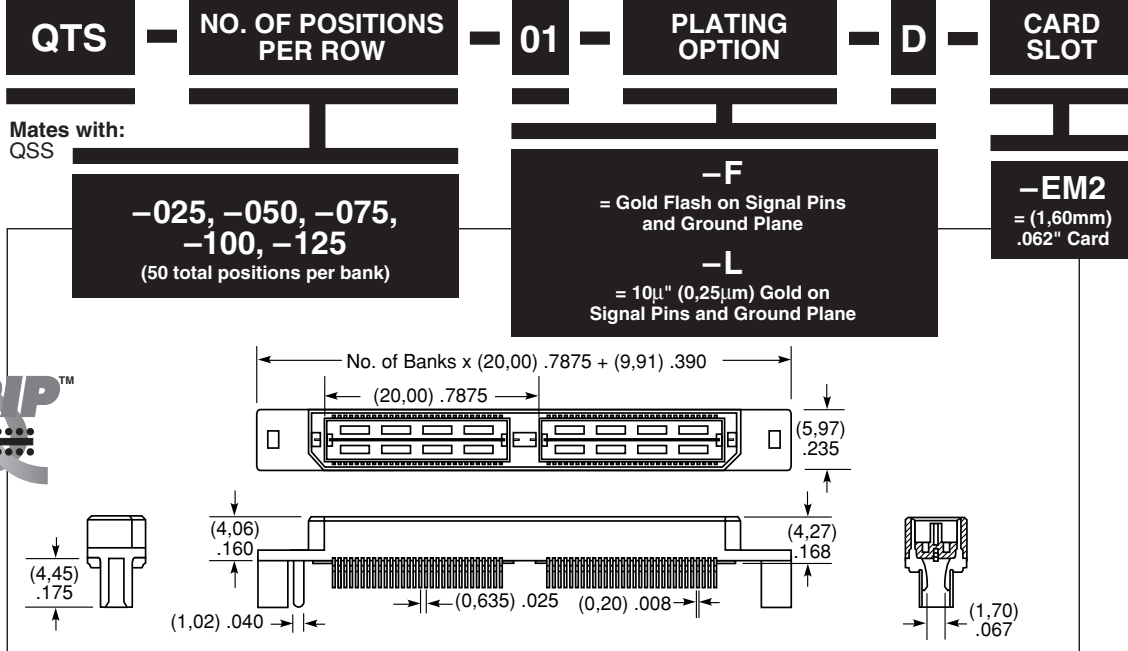
Plating: Au over 50µ"

(1,27µm) Ni



APPLICATION SPECIFIC OPTION

30µ" (0,76µm) Gold and Tray Packaging. Call Samtec.



APPLICATION SPECIFIC OPTION

Single Ended
Differential

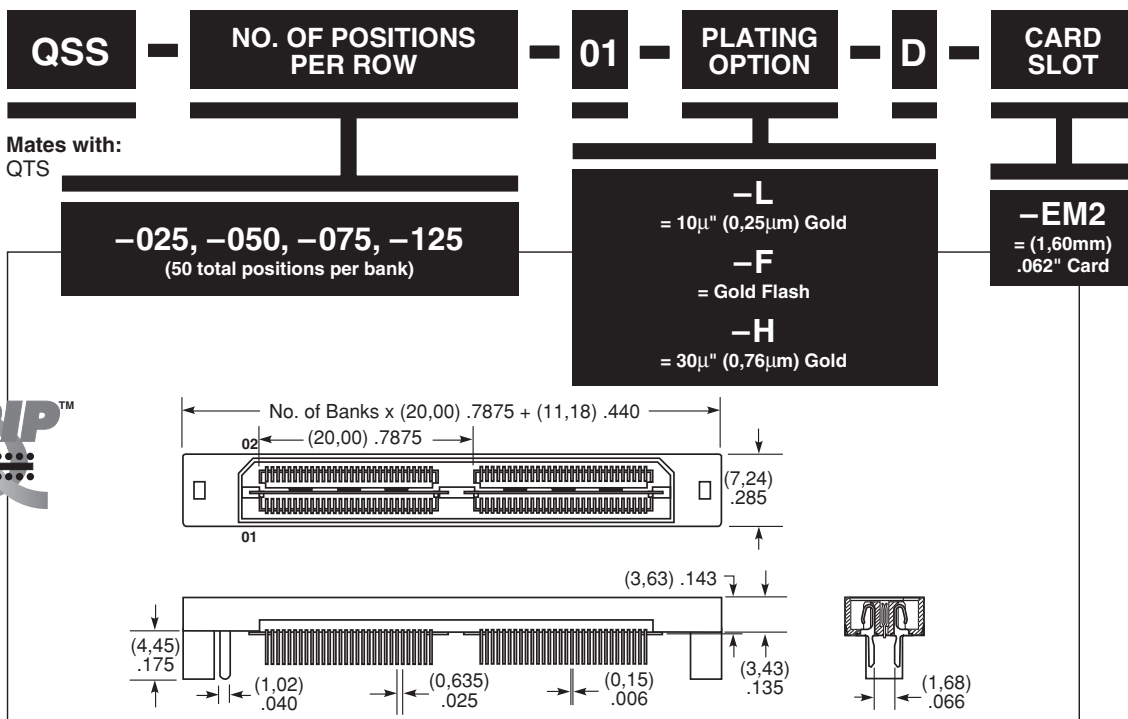
Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available. Call Samtec ASP Group.



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Please contact Samtec Interconnect Processing Group at www.samtec.com/standard_products/processing_information/ipg.asp



Due to technical progress, all designs, specifications and components are subject to change without notice.

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QTS-050-01-F-D-RA

QTS-025-01-F-D-RA

0,635mm HI-SPEED HEADER QTS (-RA) SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com/QTS-RA

Insulator Material:

Liquid Crystal
Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

Plating:

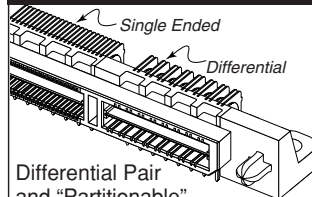
Au over 50µ" (1,27µm) Ni

Note: Some lengths,
styles and options are
non-standard, non-returnable.

Mates with:
QSS (-GP),
QSS (-RA)



APPLICATION SPECIFIC OPTION



Differential Pair
and "Partitionable"
(combine differential &
single-ended banks in same
connector) available.

Call Samtec ASP Group.

Right
Angle

APPLICATIONS



HORIZONTAL



PERPENDICULAR

Guide Post

APPLICATION SPECIFIC OPTION

30µ" (0,76µm) Gold
and Tray Packaging
Call Samtec.

Processing:

Max Processing Temp:

230°C for 60 seconds

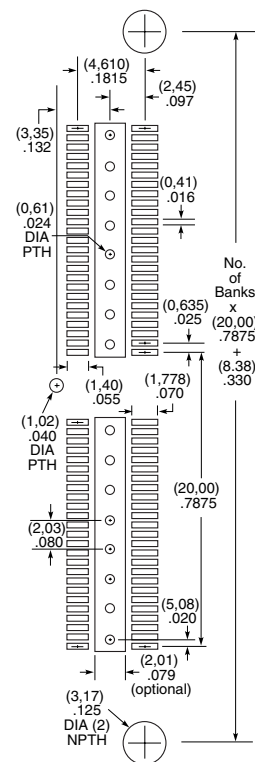
SMT Lead Coplanarity:

(0,10mm) .004" max (025-075)

(0,15mm) .006" max (100)

Suggested PCB Layouts:

For reference only. Please
contact Samtec or go to
www.samtec.com/QTS-RA
for recommended PCB layout.



QTS

NO. OF POSITIONS
PER ROW

01

PLATING
OPTION

D

RA

OTHER
OPTION

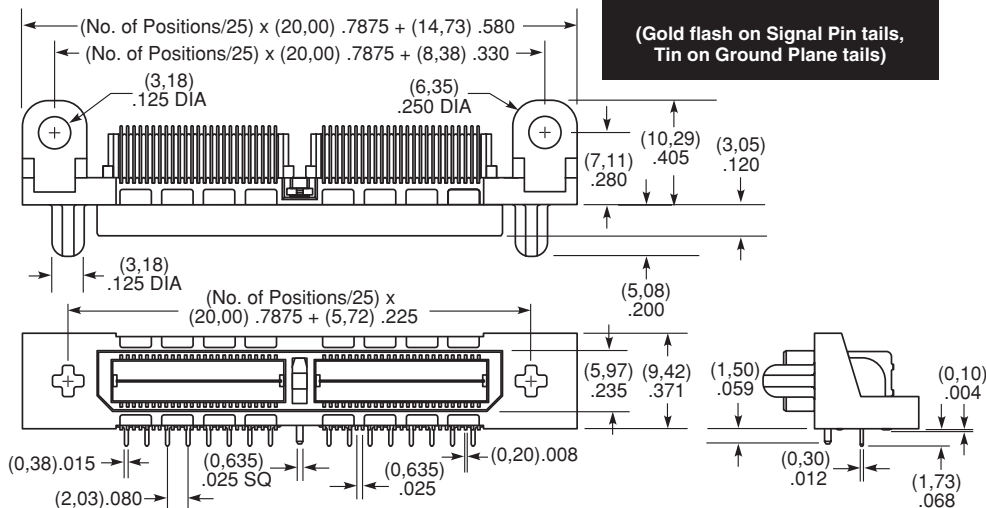
-025, -050, -075, -100
(50 total positions per bank)

-F
= Gold Flash on Signal Pins and
Ground Plane

-L
= 10µ" (0,25µm) Gold on Signal Pins
and Ground Plane

(Gold flash on Signal Pin tails,
Tin on Ground Plane tails)

-WT
= Weld Tab
(Not
available on
25 positions)



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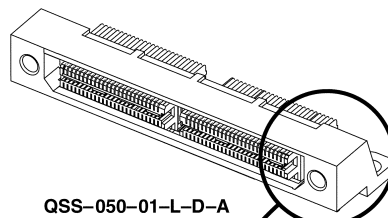
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QSS-050-01-L-D-A



QSS-025-01-L-D-A

0,635mm HI-SPEED SOCKET QSS(-RA) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QSS-RA

Insulator Material:

Liquid Crystal Polymer



Contact Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Mates with:
QTS (-RA)



Right Angle

PCB mounting holes

(0,635mm)
.025" pitch

Alignment hole

APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold and Tray Packaging.
Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

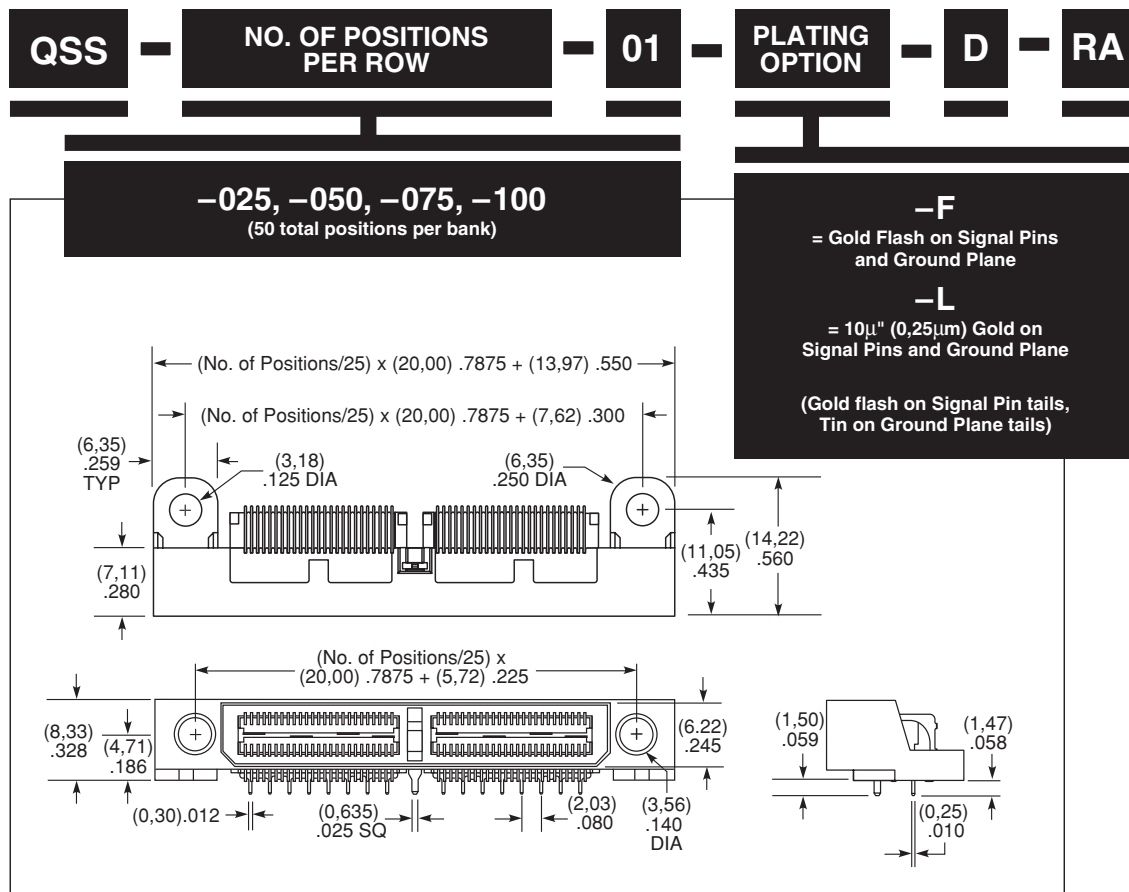
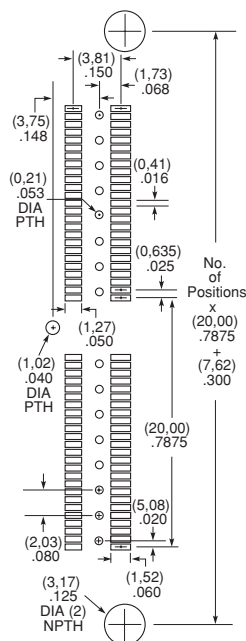
SMT Lead Coplanarity:

(0,10mm) .004" max (025-075)

(0,15mm) .006" max (100)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?QSS-RA.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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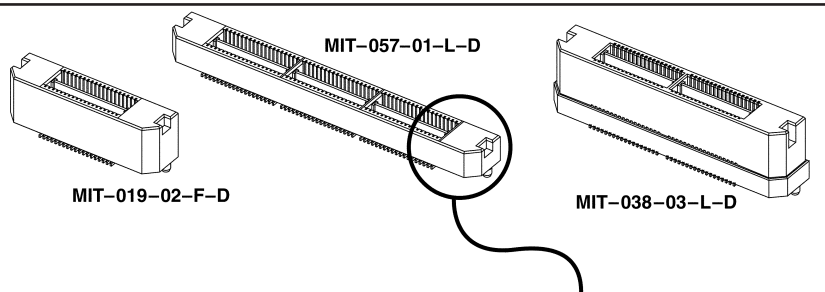
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0,635mm HI-SPEED HEADER MIT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MIT

Insulator Material:

Liquid Crystal
Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Contacts: 1.6A @ 80°C

Ground Plane: 8.7A @ 80°C

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni



Mates with:
MIS



APPLICATION SPECIFIC

30μ" (0,76μm) Gold.
Call Samtec

SIGNAL INTEGRITY REPORT

<http://www.samtec.com/ftp/pub/testrpt/mitmisel.pdf>

Discrete ground plane
with through-hole leads
(not press-fit, requires
paste over hole)

(0,64mm)
.025"
pitch

76 signal lines
per linear inch

Choice of 6
mated heights

APPLICATION SPECIFIC OPTION

Differential
Pair and
"Partitionable"
(combine
differential &
single-ended
banks in same
connector)
available.
Call Samtec ASP Group.

Single
Ended
Differential

Body polarized for
correct mating

Processing:

Max Processing Temp:

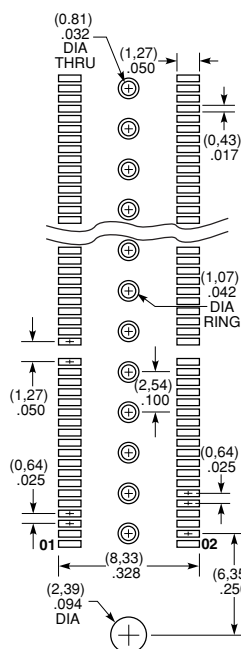
230°C for 60 seconds

SMT Lead Coplanarity:

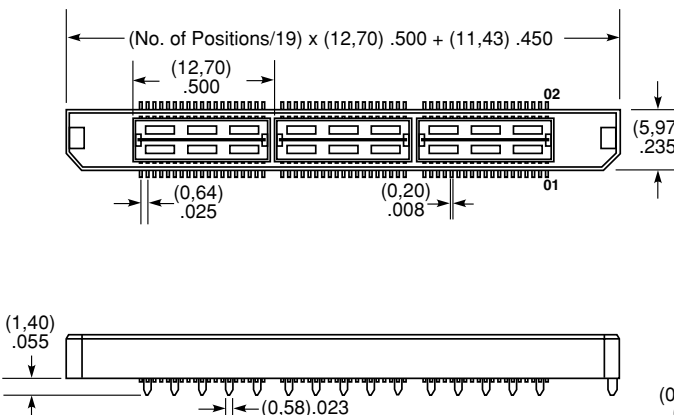
(0,10mm) .004" max (019-076)
(0,15mm) .006" max (095-133)

Suggested PCB Layouts:

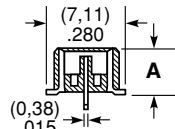
For reference only. Please
contact Samtec or go to
www.samtec.com?MIT for
recommended PCB layout.



MIT	NO. OF POSITIONS PER ROW	LEAD STYLE	PLATING OPTION	D	OTHER OPTION
	-019, -038, -057, -076, -095, -114, -133 (38 total positions per bank)	Specify LEAD STYLE from chart below.	-F = Gold Flash on Signal Pins and Ground Plane -L = 10μ" (0,25μm) Gold on Signal Pins and Ground Plane		-K = (7,00mm) .275" DIA Polyimide film Pick & Place Pad -TR = Tape & Reel (-076 positions maximum) Not available on lead styles -05 & -06 -TY = Tray Packaging



LEAD STYLE	A
-01	(4,27) .168
-02	(7,26) .286
-03	(10,26) .404
-04	(15,24) .600
-05	(17,98) .708
-06	(21,21) .835



STACK HEIGHTS

LEAD STYLE	MATED HEIGHT WITH MIS
-01	(5,00) .197
-02	(8,00) .315
-03	(11,00) .433
-04	(16,00) .630
-05	(18,75) .738
-06	(22,00) .866

Processing conditions will
affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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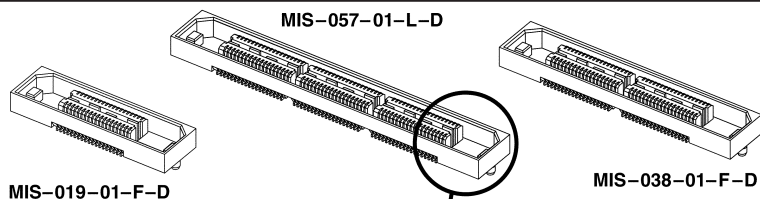
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0,635mm HI-SPEED SOCKET MIS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MIS

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Contacts: 1.6A @ 80°C

Ground Plane: 8.7A @ 80°C

Operating Temp Range: -65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni



Mates with:
MIT



APPLICATION SPECIFIC

30μ" (0,76μm) Gold.
Call Samtec

SIGNAL INTEGRITY REPORT

<http://www.samtec.com/ftp/pub/testrpt/mitmisel.pdf>

Discrete ground plane with through-hole leads (not press-fit, requires paste over hole)

Up to 266 signal leads

(0,64mm) .025" pitch

Polarized

APPLICATION SPECIFIC OPTION

Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available.
Call Samtec ASP Group.

Single Ended

Differential

Processing:

Max Processing Temp:

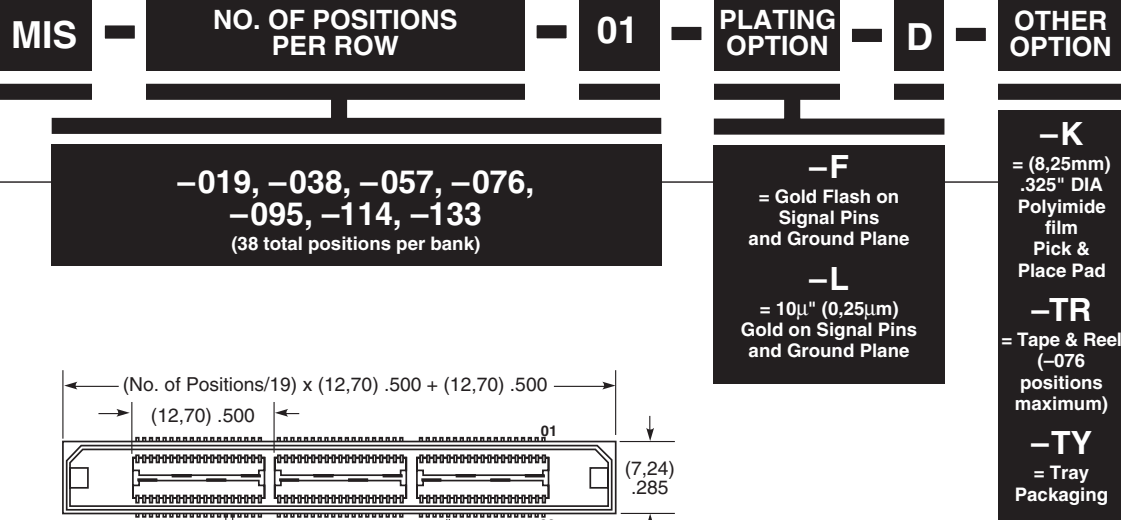
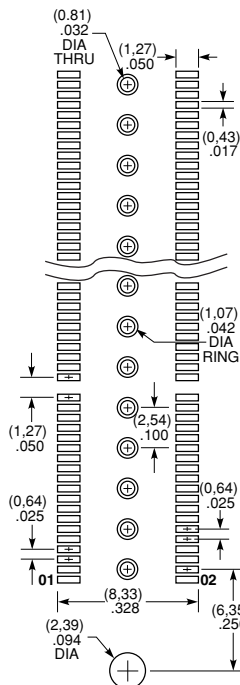
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (019-076)
(0,15mm) .006" max (095-133)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?MIS for recommended PCB layout.



STACK HEIGHTS

LEAD STYLE	MATED HEIGHT WITH MIT
-01	(5,00) .197
-02	(8,00) .315
-03	(11,00) .433
-04	(16,00) .630
-05	(18,75) .738
-06	(22,00) .866

Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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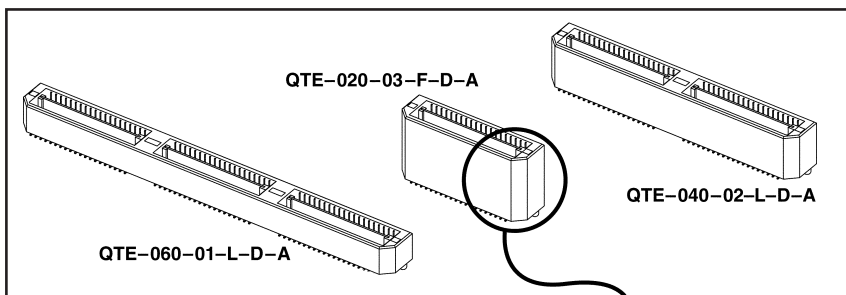
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0,80mm HI-SPEED HEADER QTE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QTE

Insulator Material:

Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

Contacts: 2A @ 80°C

Ground Plane: 9.5A @ 80°C

Operating Temp Range:

-65°C to +125°C

Voltage Rating:

225 VAC mated with QSE

& 5mm Stack Height

Plating:

Au over 50μ" (1,27μm) Ni



Mates with:
QSE

Configuration (5,03mm Stack)	Near End Crosstalk		Prop. Delay	Rated at 5%	Rated at 10%
Single Ended	~5% @ 1.20 GHz	~9% @ 2.33 GHz	35.0pS	1.2GHz	2.33 GHz
Differential Pair	~3% @ 2.33 GHz	~4.25% @ 5.00 GHz	35.0pS	2.33GHz	5.00 GHz
Configuration (5,03mm Stack)	Impedance Mismatch (Ω)				
Single Ended	64.0 to 50.0 @ 50pS	56.2 to 50.0 @ 100pS	52.9 to 50.0 @ 250pS	51.6 to 50.0 @ 500pS	
Differential Pair	104.5 to 87.1 @ 50pS	102.3 to 92.2 @ 100pS	101.6 to 96.4 @ 250pS	101.6 to 98.7 @ 500pS	
11,03mm Stack	Rated at 5%	Rated at 10%	22mm Stack	Rated at 5%	Rated at 10%
Single Ended	350 MHz	440 MHz	Single Ended	220 MHz	460 MHz
Differential Pair	875 MHz	2.30 GHz	Differential Pair	<350 MHz	350 MHz

For complete Test Reports logon to www.samtec.com?QTE

Metal ground plane

QSTRIP™
up to
2.33 GHz

APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold and -GP-TY.
Call Samtec.

Polarized
Alignment Pin

QTE

NO. OF POSITIONS PER ROW

LEAD STYLE

PLATING OPTION

D

A

OTHER OPTION

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

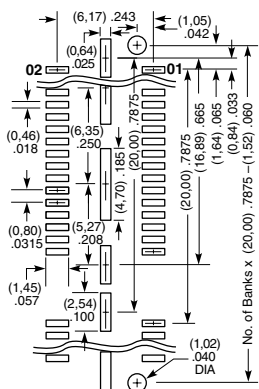
SMT Lead Coplanarity:

(0,10mm) .004" max (020-060)

(0,15mm) .006" max (080-100)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?QTE for recommended PCB layout.



-020, -040, -060,
-080, -100
(40 total positions per bank)

Specify
LEAD
STYLE
from
chart.

-F
= Gold Flash
on Signal
Pins and
Ground Plane

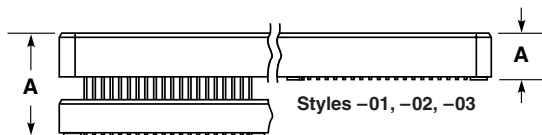
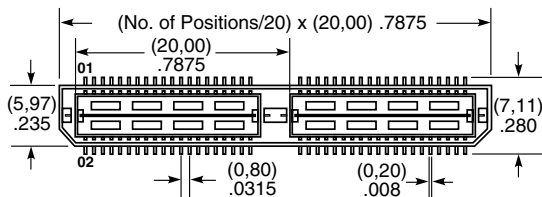
-L
= 10μ" (0,25μm)
Gold on
Signal Pins
and Ground
Plane

-GP
= Guide Posts
(Style -01 only)

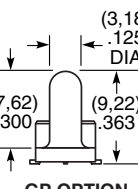
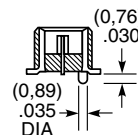
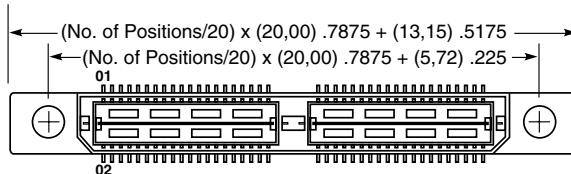
-K
= (7,00mm) .275" DIA Polyimide
Film Pick & Place Pad

-TR
= Tape & Reel Packaging
(-060 positions maximum; -040
positions maximum with -GP)
Styles -05, -06, -07, -08
not available

-TY
= Tray Packaging
(Style -GP not available)



Styles -04, -05, -06, -07, -08



LEAD STYLE	A	HEIGHT WITH QSE
-01	(4,27) .168	(5,03) .198
-02	(7,26) .286	(8,03) .316
-03	(10,26) .404	(11,03) .434
-04	(15,34) .604	(16,00) .630
-05	(18,33) .722	(19,00) .748
-06	(21,33) .840	(22,00) .866
-07	(24,23) .954	(25,00) .984
-08	(29,23) 1.151	(30,00) 1.181

Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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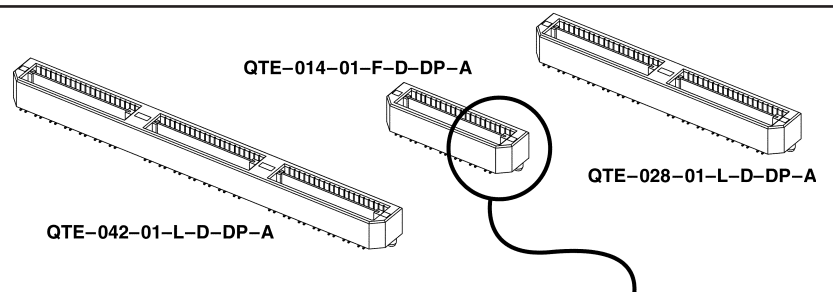
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0,80mm DIFFERENTIAL PAIRS QTE (-DP) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/QTE-DP

Insulator Material:

Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze



Current Rating:

Contacts: 2A @ 80°C

Ground Plane: 9.5A @ 80°C

Operating Temp Range:

-65°C to +125°C

Voltage Rating:

225 VAC mated with QSE (-DP)

& 5mm Stack Height

Plating:

Au over 50µ" (1,27µm) Ni

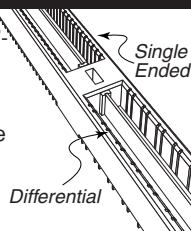
Mates with:
QSE (-DP)



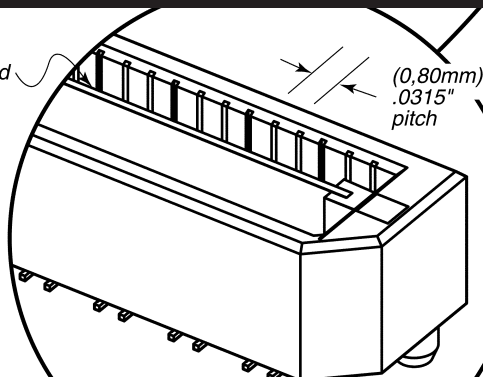
APPLICATION SPECIFIC OPTION

"Partitionable" combine differential & single-ended banks in same connector.

Call Samtec ASP Group.



Metal ground plane



STACK HEIGHT CAPABILITY

LEAD STYLE WITH QSE (-DP)	HEIGHT
-01	(5,03) .198

Processing conditions will affect mated height.

8,03mm, 11,03mm, 16,00mm, 19,00mm and 22,00mm Stack Height Capability.

APPLICATION SPECIFIC OPTION

30µ" (0,76µm) Gold and Guide Posts available. Call Samtec.

Configuration	Near End Crosstalk	Prop. Delay	Rated at 5%	Rated at 10%
5,03mm Stack Height	~1.75% @ 6.40 GHz	~2% @ 10.00 GHz	35.0pS	6.40 GHz
	Impedance Mismatch (Ω)			
	111.6 to 88.0 @ 30pS	103.6 to 94.0 @ 50pS	98.8 to 98.2 @ 100pS	100.0 to 99.6 @ 250pS

For complete Test Report logon to www.samtec.com/QTE-DP

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

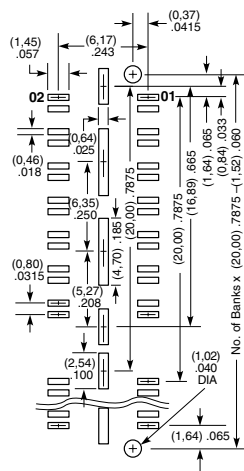
SMT Lead Coplanarity:

(0,10mm).004" max (014-042)

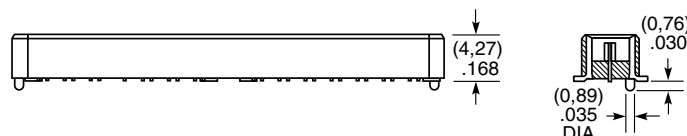
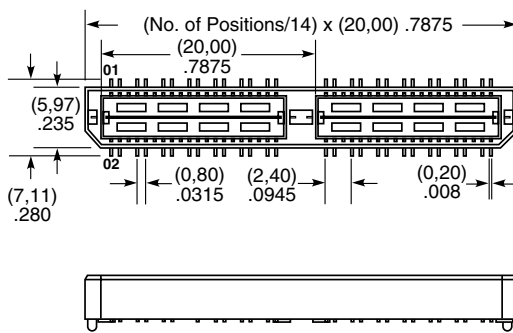
(0,15mm).006" max (056-070)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/QTE-DP for recommended PCB layout.



QTE	NO. OF PAIRS	01	PLATING OPTION	D	DP	A	OTHER OPTION
-014, -028, -042, -056, -070 (14 pairs per bank)			-F = Gold Flash on Signal Pins and Ground Plane -L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane		-K = (7,00mm) .276" DIA Polyimide Film Pick & Place Pad -TR = Tape & Reel Packaging (-042 positions maximum) -TY = Tray Packaging		



Due to technical progress, all designs, specifications and components are subject to change without notice.

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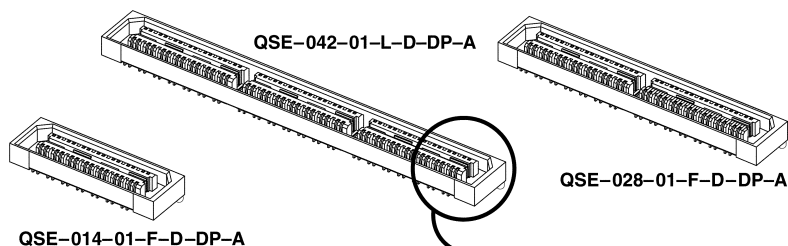
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0,80mm DIFFERENTIAL PAIRS QSE (-DP) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QSE-DP

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Contacts: 2A @ 80°C

Ground Plane: 9.5A @ 80°C

Operating Temp Range:

-65°C to +125°C

Voltage Rating:

225 VAC mated with QTE(-DP)

& 5mm Stack Height

Plating:

Au over 50µ" (1,27µm) Ni



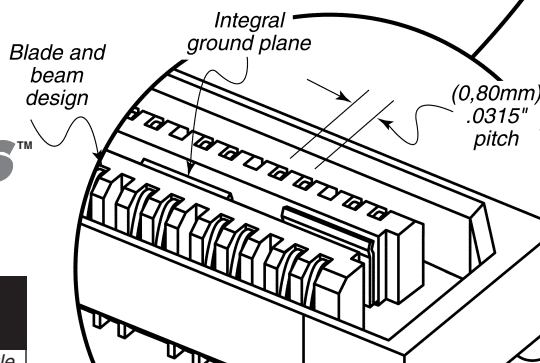
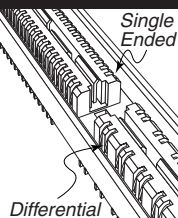
Mates with:
QTE (-DP)



APPLICATION SPECIFIC OPTION

"Partitionable" combine differential & single-ended banks in same connector.

Call Samtec ASP Group.



STACK HEIGHT CAPABILITY

QTE LEAD STYLE	HEIGHT WITH QTE(-DP)
-01	(5,03) .198

Processing conditions will affect mated height.
8,03mm, 11,03mm, 16,00mm, 19,00mm and 22,00mm Stack Height Capability.

APPLICATION SPECIFIC OPTION

30µ" (0,76µm) Gold and Guide Posts available. Call Samtec.

Configuration	Near End Crosstalk	Prop. Delay	Rated at 5%	Rated at 10%
5,03mm Stack Height	~1.75% @ 6.40 GHz	~2% @ 10.00 GHz	35.0pS	6.40 GHz
	Impedance Mismatch (Ω)			
	111.6 to 88.0 @ 30pS	103.6 to 94.0 @ 50pS	98.8 to 98.2 @ 100pS	100.0 to 99.6 @ 250pS

For complete Test Report logon to www.samtec.com?QSE-DP

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

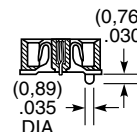
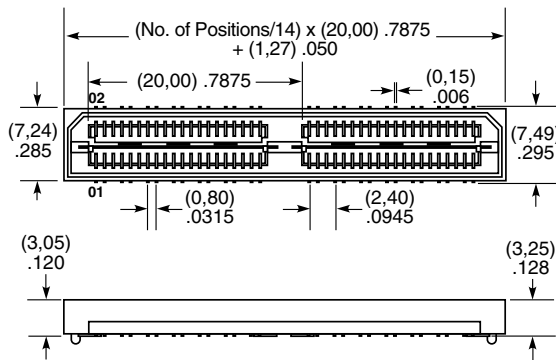
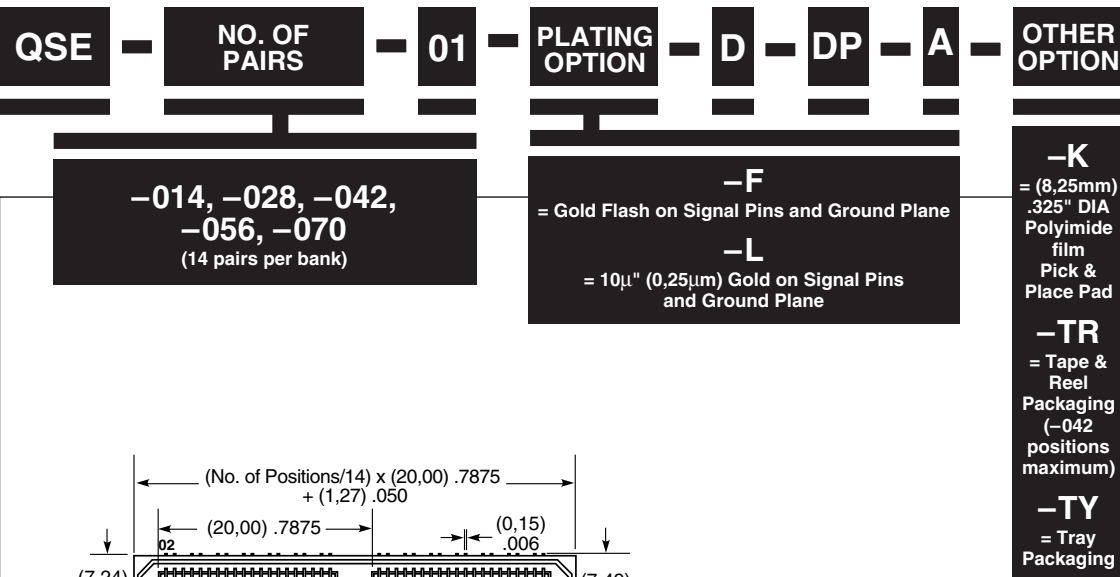
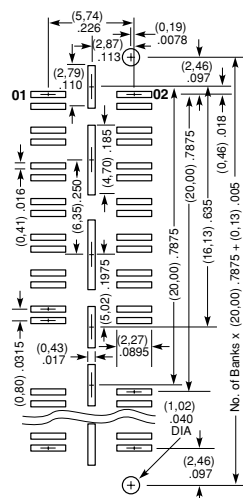
SMT Lead Coplanarity:

(0,10mm).004" max (014-042)

(0,15mm).006" max (056-070)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?QSE-DP for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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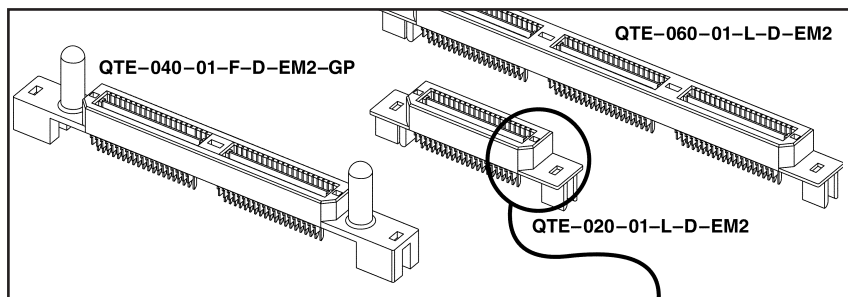
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0,80mm HI-SPEED HEADER QTE (-EM) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QTE-EM

Insulator Material:

Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

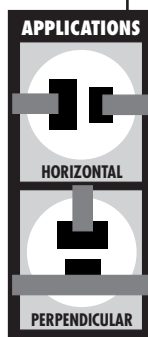
Plating:

Au over 50μ" (1,27μm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

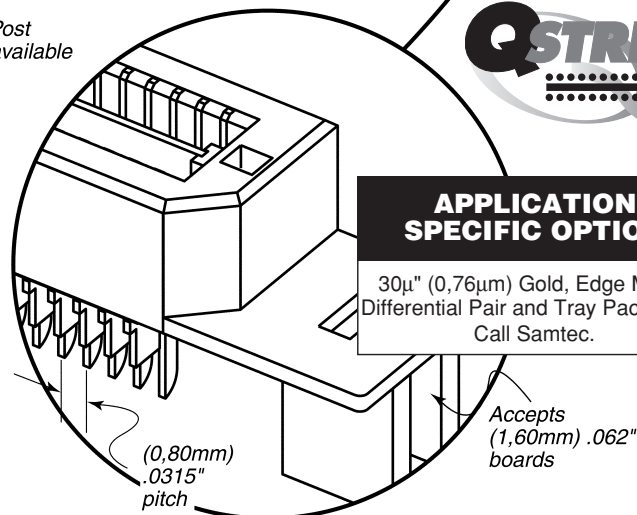
Mates with:
QSE

Guide Post
option available



APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold, Edge Mount
Differential Pair and Tray Packaging.
Call Samtec.



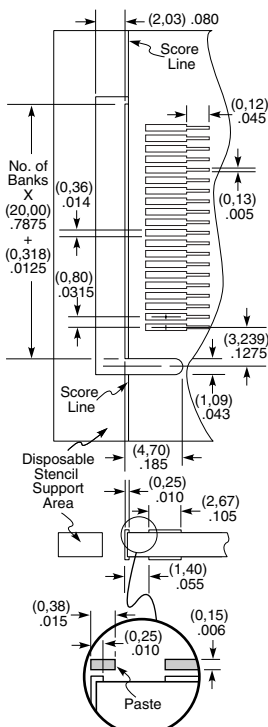
Processing:

Max Processing Temp:

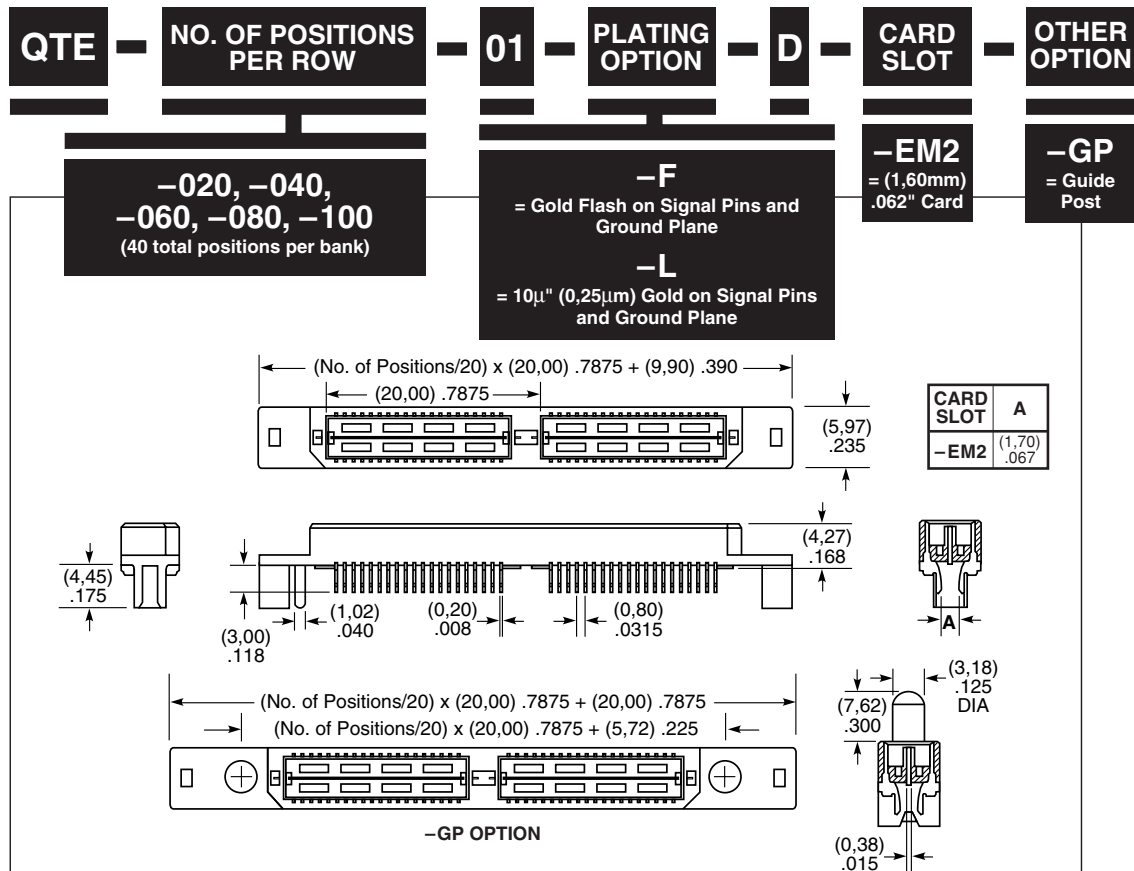
230°C for 60 seconds

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?QTE-EM for recommended PCB layout.



Please contact Samtec Interconnect Processing Group at www.samtec.com/standard_products/processing_information/ipp.asp



Due to technical progress, all designs, specifications and components are subject to change without notice.

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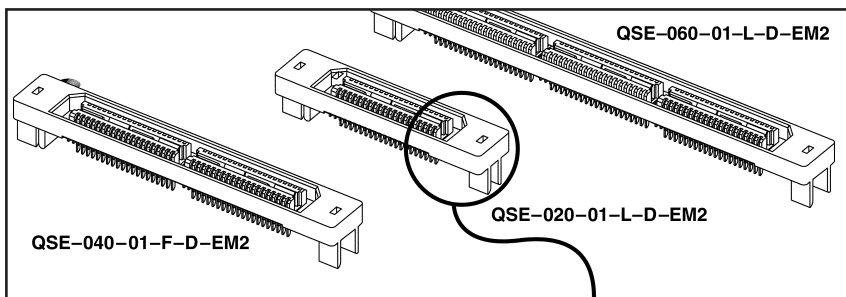
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0,80mm EDGE MOUNT SOCKET QSE (-EM) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QSE-EM

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

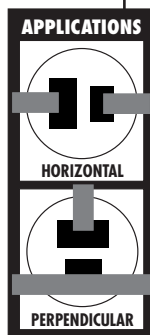
Plating:

Au over 50μ" (1,27μm) Ni



Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
QTE



Integral ground plane

(0,80mm)
.0315" pitch

Accepts
(1,60mm) .062" pcb thickness



APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold, Edge Mount, Differential Pair and Tray Packaging. Call Samtec.

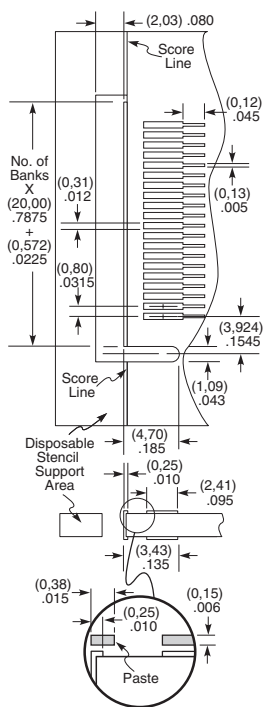
Processing:

Max Processing Temp:

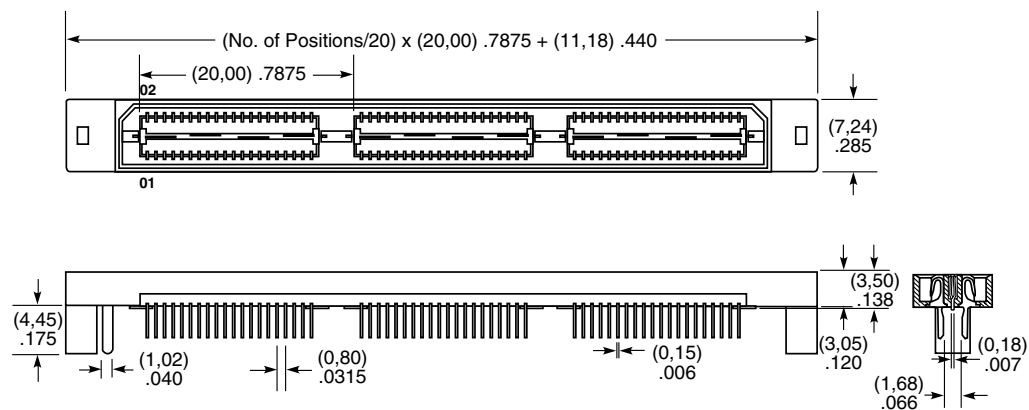
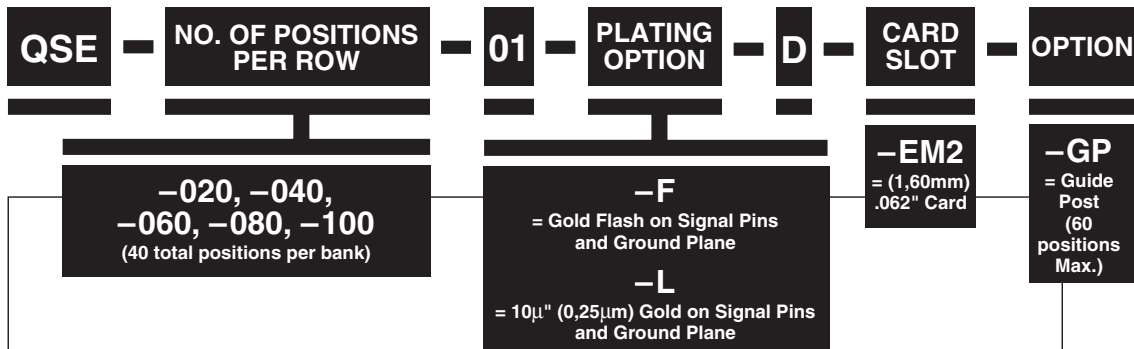
230°C for 60 seconds

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?QSE-EM for recommended PCB layout.



Please contact Samtec Interconnect Processing Group at www.samtec.com/standard_products/processing_information/ipg.asp



Due to technical progress, all designs, specifications and components are subject to change without notice.

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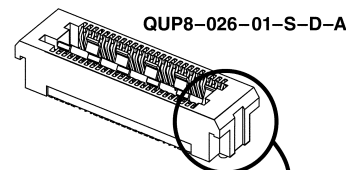
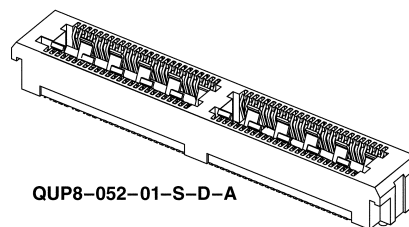
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0,80mm HIGH SPEED SOCKET QUP8 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QUP8

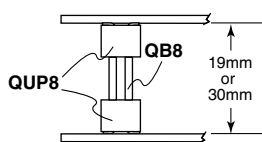
Insulator Material:
Liquid Crystal Polymer
Contact:
BeCu
Current Rating:
Testing Now!
Operating Temp:
-65°C to +125°C
Plating:
Au or Sn over
50μ" (1,27μm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

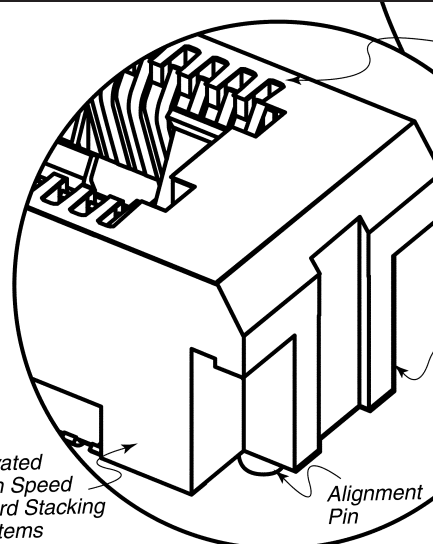
Mates with:
QB8



APPLICATIONS



Elevated High Speed Board Stacking Systems



Engineered electrical system mates with high speed boards (QB8 series)

MICRO RUGGED

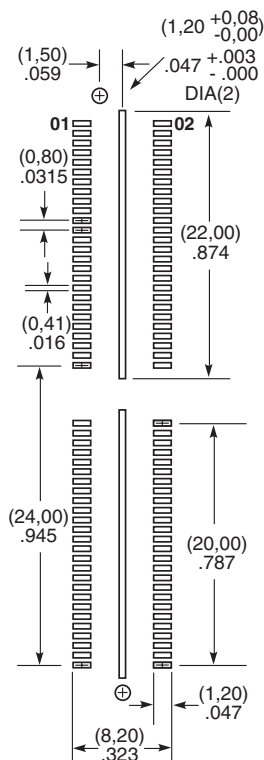
Change Stack height with PCBs instead of changing connection systems

SIGNAL INTEGRITY DIVISION

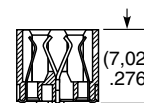
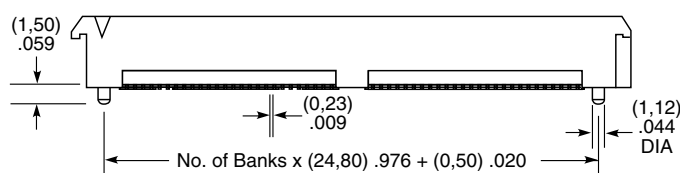
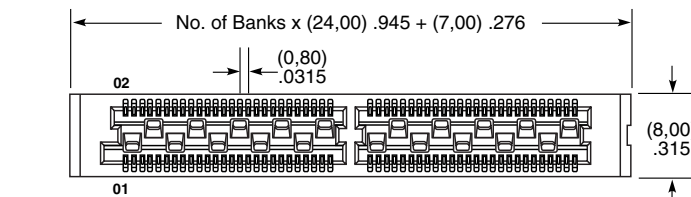
Contact Samtec Signal Integrity Group for test data

Processing:

Max Processing Temp:
230°C for 60 seconds
SMT Lead Coplanarity:
(0,10mm) .004" max (26-78)
(0,15mm) .006" max (104)
Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?QUP8 for recommended PCB layout.



QUP8	NO. OF PINS PER ROW	01	PLATING OPTION	D	A	OPTION
	-026, -052, -078, -104 (52 total pins per bank)		-S = 30μ" (0,76μm) Gold on contacts, 10μ" (0,25μm) Gold on Ground Plane, Tin on Signal and Ground Plane tails			-K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad



Due to technical progress, all designs, specifications and components are subject to change without notice.

WWW.SAMTEC.COM

QB8-052-30-D-050-N

QB8-026-30-D-050-N

HIGH SPEED JUMP CARD

QB8 SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com?QB8

Conductor:

Copper

Contact Area:

Hard Gold Plated

30μ" (0.76μm)

Insulator:

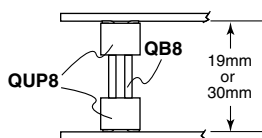
PBT

Impedance Mismatch:

50Ω ± 10%

Mates with:
QUP8

APPLICATION



Parallel high
speed boards

Ground plane
embedded in boards

**MICRO
RUGGED™**

Application Specific
Latch option available.
Call Samtec

**SIGNAL
INTEGRITY
DIVISION**

Contact Samtec
Signal Integrity Group
for test data

Mates with modified
Q-Strips™ (QUP8 Series)

QB8

NO. OF PINS
PER ROW

STACK
HEIGHT

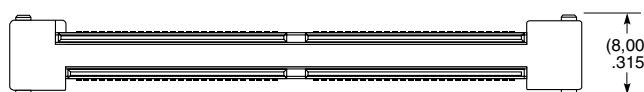
D

050

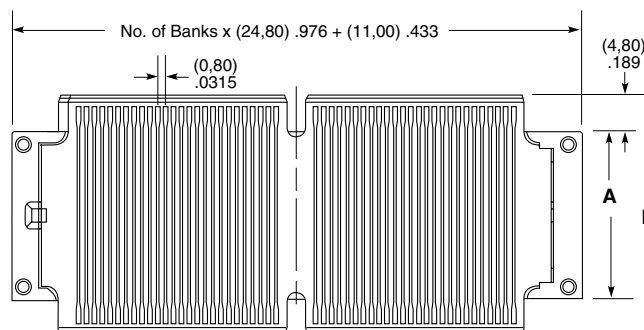
N

-026, -052, -078, -104
(52 total pins per bank)

-19, -30



STACK HEIGHT	A	B
-19	(4.90) .193	(14.50) .571
-30	(15.90) .626	(25.50) 1.00



Note: Some sizes, styles and
options are non-standard,
non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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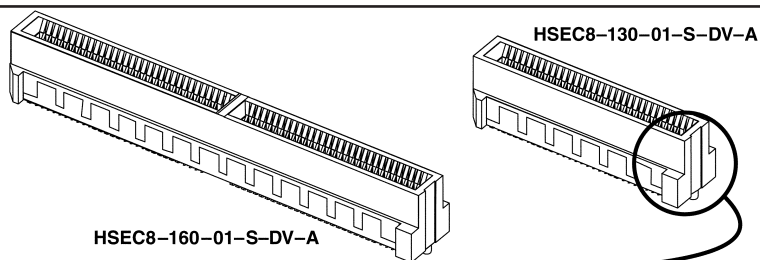
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0,80mm HI-SPEED SOCKET HSEC8 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HSEC8

Insulator Material:
Black Liquid Crystal Polymer

Contact:

BeCu

Current Rating:

Testing Now!

Operating Temp:

-65°C to +125°C

Plating:

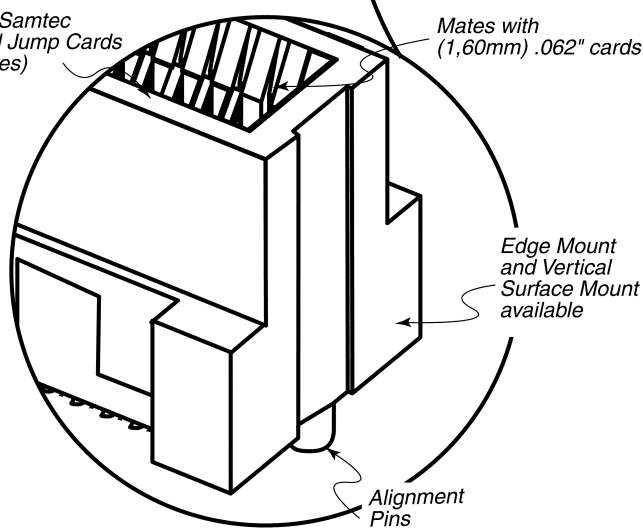
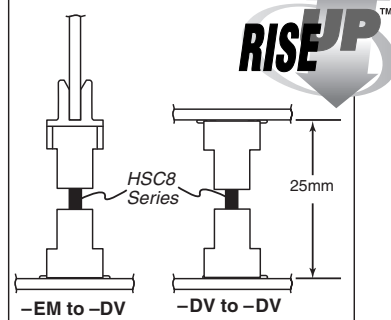
Au over 50µ" (1,27µm) Ni or Sn

Mates with:
1,6mm thick cards,
HSC8

Mates with Samtec
High Speed Jump Cards
(HSC8 Series)

Mates with
(1,60mm) .062" cards

APPLICATIONS



Note: Some lengths, styles and options are non-standard, non-returnable.

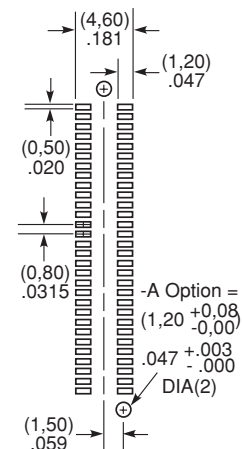
Processing:

Max Processing Temp:
230°C for 60 seconds

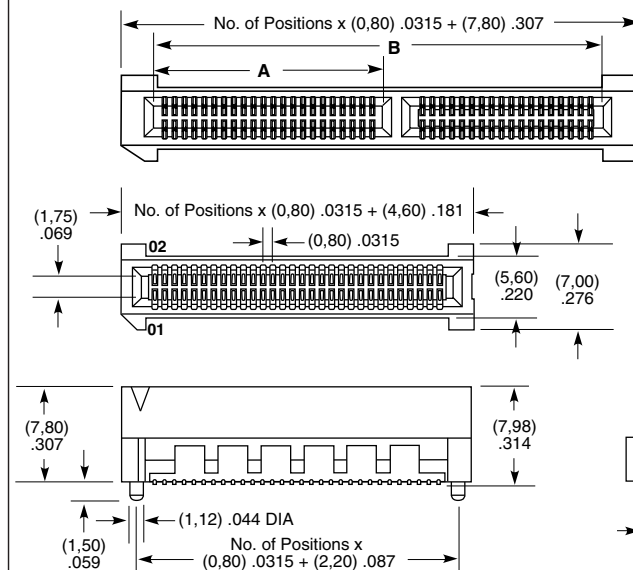
SMT Lead Coplanarity:
(0,10mm) .004" max (10-60)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?HSEC8 for recommended PCB layout.



HSEC8	1	NO. OF POSITIONS	CARD THICKNESS	PLATING OPTION	DV	OTHER OPTION
		10, 20, 30, 40, 50, 60	-01 = (1,60mm) .062" thick card	-S = 30µ" (0,76µm) Gold on contacts, Tin on tails		-A = Alignment Pin -K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad



NO. OF POSITIONS	A	B
40	(18,90) .744	(36,60) 1.441
50	(22,90) .902	(44,60) 1.756
60	(26,90) 1.059	(52,60) 2.071

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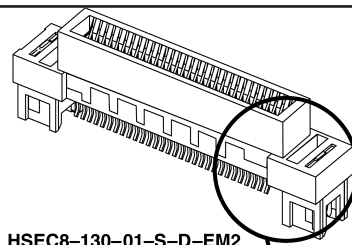
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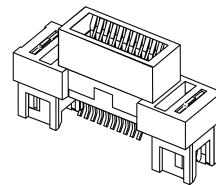
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HSEC8-130-01-S-D-EM2



HSEC8-110-01-S-D-EM2

0,80mm HI-SPEED SOCKET HSEC8 (-EM) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HSEC8-EM

Insulator Material:

Liquid Crystal Polymer

Contact:

BeCu

Current Rating:

Testing Now!

Operating Temp:

-65°C to +125°C

Plating:

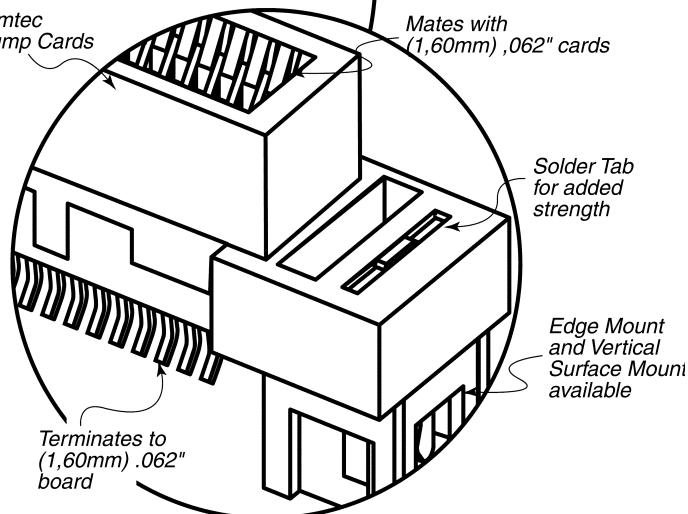
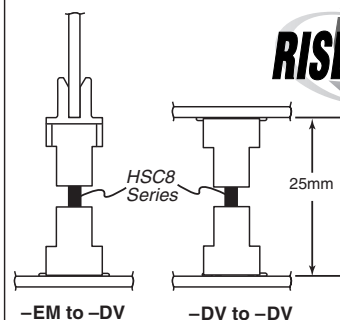
Au over 50μ" (1,27μm) Ni or Sn

Mates with:
1,6mm thick card, HSC8

*Mates with Samtec
High Speed Jump Cards
(HSC8 Series)*

*Mates with
(1,60mm) .062" cards*

APPLICATIONS



Note: Some lengths, styles and options are non-standard, non-returnable.

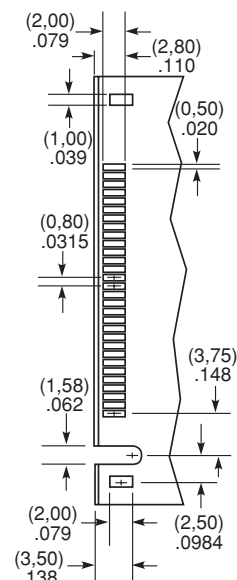
Processing:

Max Processing Temp:

230°C for 60 seconds

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?HSEC8-EM for recommended PCB layout.

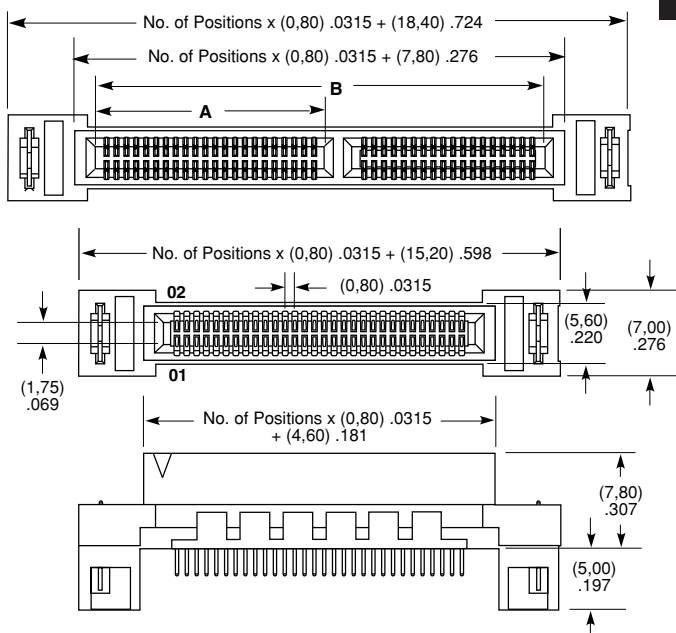


HSEC8 - 1 NUMBER OF POSITIONS - 01 - PLATING OPTION - D - EM2

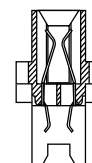
10, 20, 30, 40, 50, 60

-S

= 30μ" (0,76μm) Gold on contacts, Tin on tails



NO. OF POSITIONS	A	B
40	(18,90) .744	(36,60) 1.441
50	(22,90) .902	(44,60) 1.756
60	(26,90) 1.059	(52,60) 2.071



Due to technical progress, all designs, specifications and components are subject to change without notice.

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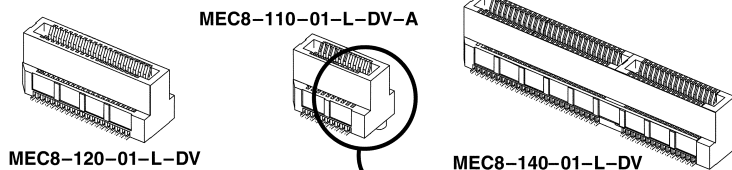
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MICRO EDGE-CARD SOCKET MEC8 (-DV) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MEC8-DV

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C

Plating:

Au or Sn over 50μ" (1.27μm) Ni

Current Rating:

1.7A @ 80°C ambient

Voltage Rating:

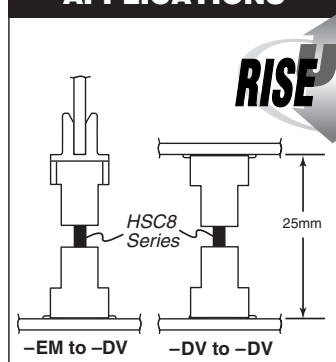
400 VAC

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:

(1,00mm) .0394" or (1,60mm) .062" thick cards, HSC8

APPLICATIONS



Mates with (1,00mm) .0394" or (1,60mm) .062" thick card

Variety of lead counts

Edge Mount and Right Angle available

Optional Alignment Pins

(0,80mm) .0315" pitch

MEC8 Mated With HSC8			
CONFIGURATION (25mm Stack)	FREQ. RATING	IMPEDANCE	NEXT
Single Ended	2.5 GHz	50Ω±10%	9.6%
Differential Pair	3.5 GHz	100Ω±10%	2.4%

Processing:

Max Processing Temp:

230°C for 60 seconds

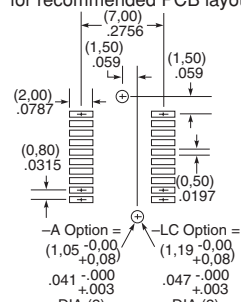
SMT Lead Coplanarity:

(0,10mm) .004" max (10-50)

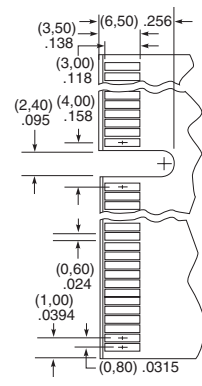
(0,15mm) .006" max (60-70)

Suggested PCB Layouts:

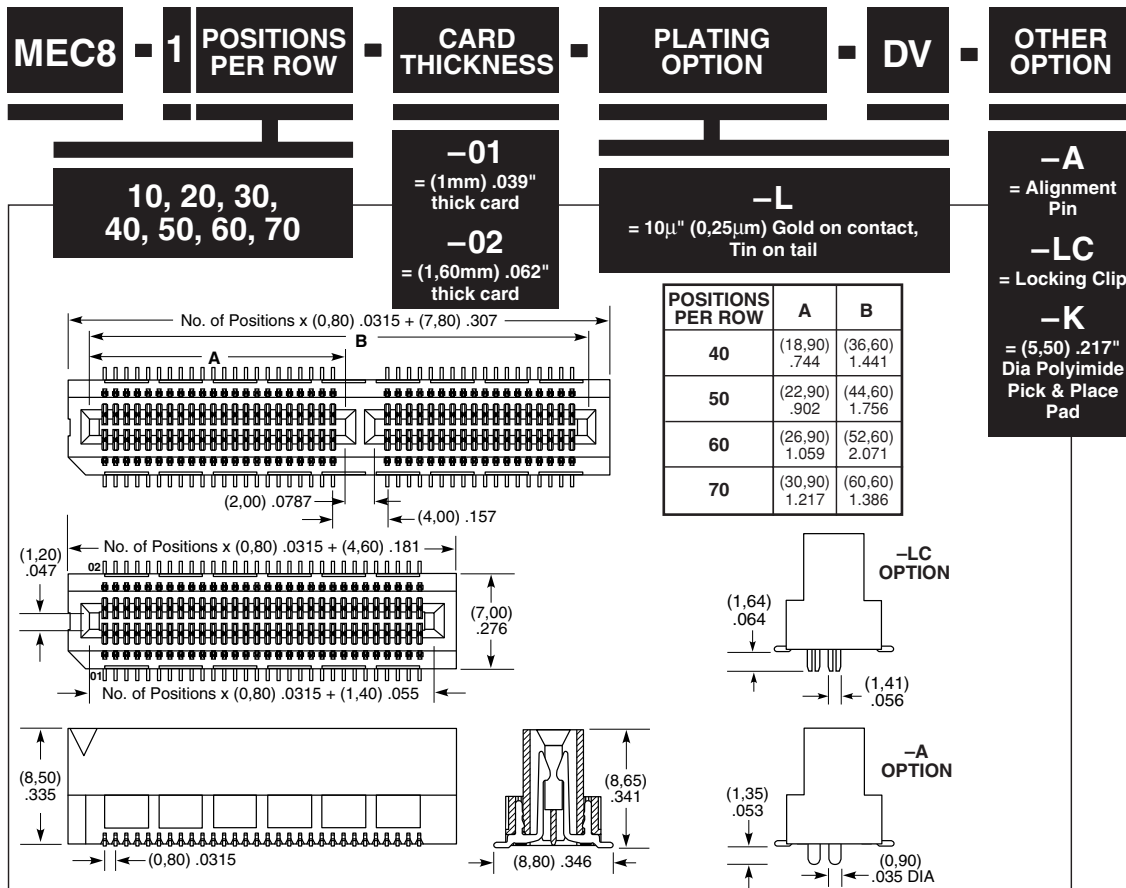
For reference only. Please contact Samtec or go to www.samtec.com?MEC8-DV for recommended PCB layout.



SFP BOARD LAYOUT



SFP CARD LAYOUT



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HSC8-050-01-25-SE

HSC8-070-01-25-DP

0,80mm HI-SPEED JUMPCARD HSC8 SERIES

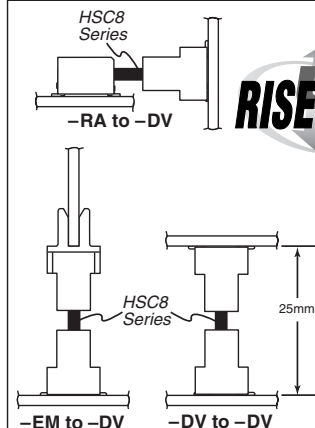
SPECIFICATIONS

For complete specifications see www.samtec.com?HSC8

Conductor:
1/2 oz Copper
Contact Area:
Hard Gold Plated
Insulator:
FR-4
Impedance Mismatch:
-SE: $50\Omega \pm 10\%$
-DP: $100\Omega \pm 10\%$
Frequency Rating:
-SE: 2.5 GHz
-DP: 3.5 GHz
Near End Crosstalk:
-SE: 9.6%
-DP: 2.4%

Mates with:
MEC8, HSEC8

APPLICATIONS



25mm standard
board spacing.
Customs available.

Application Specific
cards available

Hard Gold
plated pads

Single Ended or
Differential Pair
signal routing

MEC8 Mated With HSC8			
CONFIGURATION (25mm Stack)	FREQ. RATING	IMPEDANCE	NEXT
Single Ended	2.5 GHz	$50\Omega \pm 10\%$	9.6%
Differential Pair	3.5 GHz	$100\Omega \pm 10\%$	2.4%

NO. OF POSITIONS PER SIDE	-SE TOTAL SIGNAL LINES	-DP TOTAL SIGNAL PAIRS
-050	50	33
-070	70	46

HSC8

NUMBER OF
POSITIONS PER SIDE

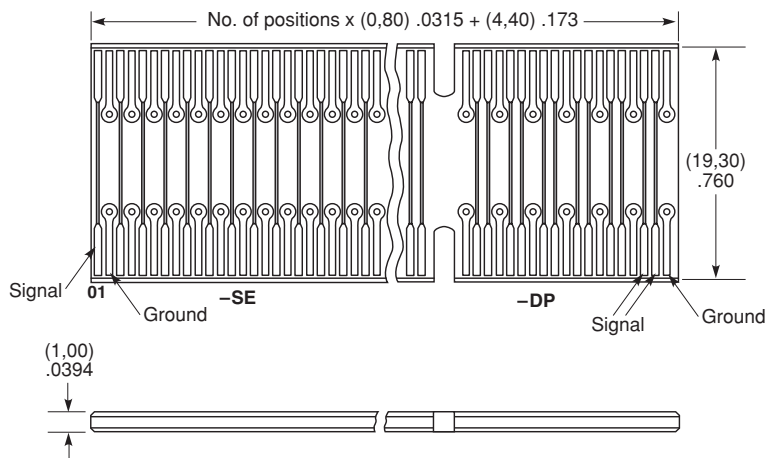
01

25

SIGNAL
ROUTING

-050, -070

-SE
= Single Ended
-DP
= Differential Pair



Note: Some sizes, styles and options are non-standard, non-returnable.

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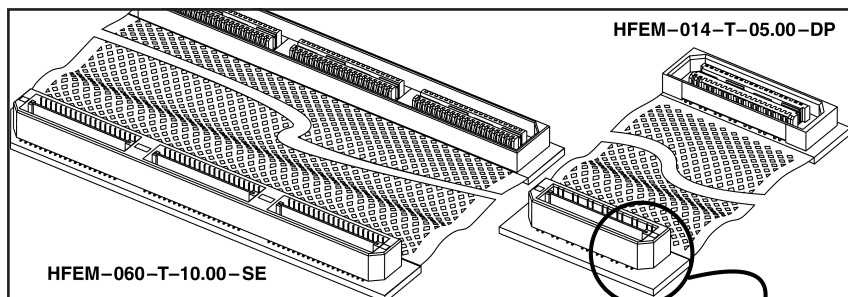
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HIGH SPEED DATA LINK HFEM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/HFEM

Terminal:

QTE Series

Socket:

QSE Series

Cable:

1 oz. rolled annealed copper

Base Film:

1 mil Polyimide

Adhesive:

FR (DuPont)

Stiffener:

FR-4 glass epoxy

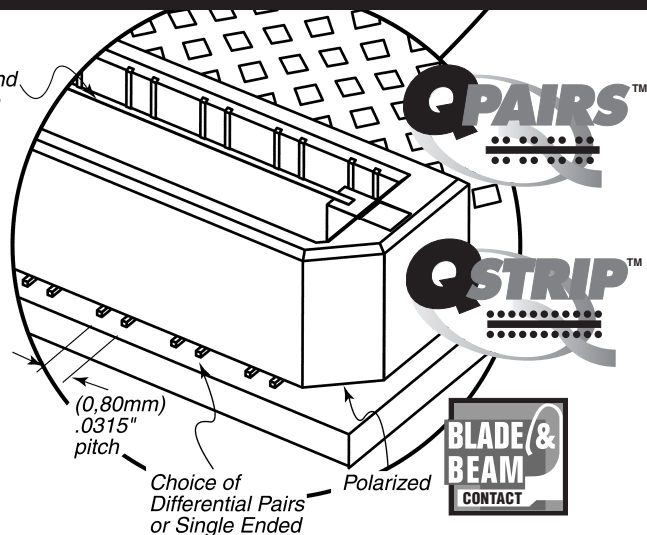
Mates with:
QTE, QSE

HFEM-XXX-T-05.00-DP SPECIFICATIONS

Environment	Differential signal transmission 100 ps signal rise time (10-90%)
Bandwidth	> 6 Gb/sec per pair > 90 Gb/sec per bank
Impedance	100 Ohms +/- 10%
NEXT	<1.5%
FEXT	<1.0%
Propagation Delay*	Shortest path: 750 ps +/- 30 ps Longest path: 830 ps +/- 30 ps
Insertion Loss (Longest Path)	500 MHz: -0.7 dB 1.0 GHz: -1.2 dB 1.5 GHz: -1.3 dB 2.0 GHz: -2.2 dB 2.5 GHz: -2.2 dB 3.0 GHz: -2.5 dB 3.5 GHz: -3.4 dB

* Contact sig@samtec.com for path length map.

Metal
Ground
Plane



HFEM

SIGNAL
PINS

T

OVERALL
LENGTH

SIGNAL
OPTION

–014, –028, –042

= Number of Pairs (for –DP)

–060

= Number of Pins per row (for –SE)

–03.00

= (76,20mm) 3.00"
(–014 only)

–05.00

= (127,0mm) 5.00"
(–014, –028, –042 only)

–10.00

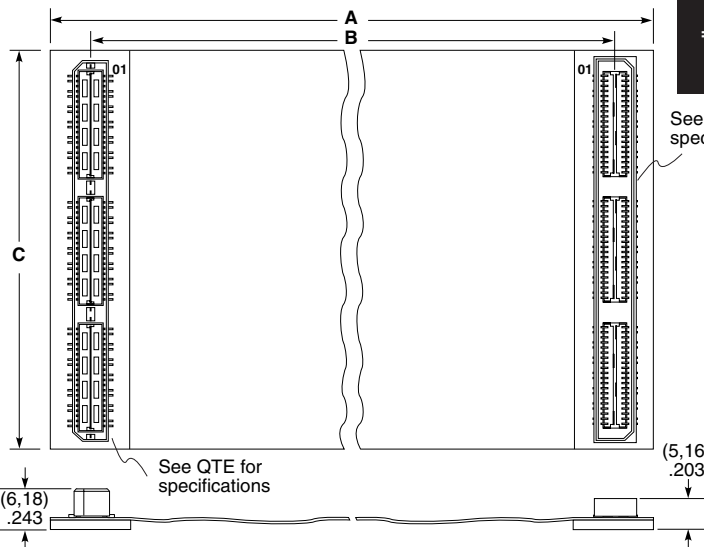
= (254,0mm) 10.00"
(–014, –042 and
–060 only)

–DP

= Differential
Pairs
(–014, –028 and
–042 only)

–SE

= Single Ended
(–060 only)



See QSE for
specifications

OVERALL LENGTH	A	B
–03.00	(76,20) 3.00	(64,52) 2.54
–05.00	(127,00) 5.00	(115,32) 4.54
–10.00	(254,00) 10.00	(242,32) 9.54

SIGNAL PINS	C
–014	(23,50) .925
–028	(43,50) 1.71
–042/–060	(63,50) 2.50

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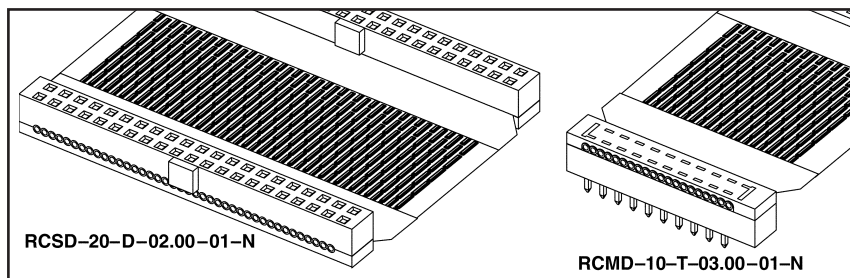
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2mm SHIELDED/HIGH SPEED RCSD, RCMD

SPECIFICATIONS

For complete specifications see www.samtec.com?RCSD or www.samtec.com?RCMD

Insulator Material:
Black Glass Filled Polyester
Terminal (RCMD):
Phosphor Bronze
Contact (RCSD):
BeCu

Current Rating:
0.5A

Operating Temp Range:
-40°C to +105°C

Terminal Plating:

Sn over 50µ" (1.27µm) Ni
Contact Plating:
30µ" (0.76µm) Au on contact area; Sn on balance, over 50µ" (1.27µm) Ni

Wire:
30 AWG
Made with Gore RIBBON-AX® Cable

TYPE
STRIP

NO. PINS
PER ROW

END
OPTION

OVERALL
LENGTH

01

N

-10, -20,
-22, -25

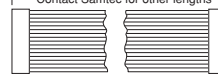
(Call for other sizes)

Mates with:
RCSD: TMM, TMMH, STMM,
MMT, TW, MTMM, EHT
RCMD: SMM, MMS

-“XX”

= Assembled Length
(02.00, 05.00 and 10.00.
Call for other sizes)

Assembled Length
in INCHES (±1/8")
Contact Samtec for other lengths

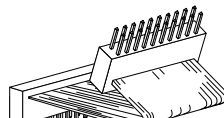
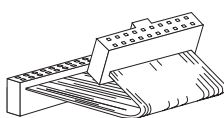


-N

= Notch
Polarization
on socket
(Leave blank
for RCMD
without
Transfer End)

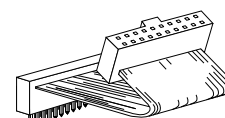
-D

=Double End

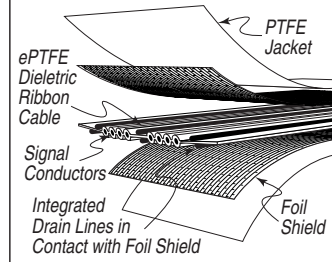


-T

=Transfer End
(Requires RCMD)



CABLE CROSS-SECTION



POLARIZING KEY

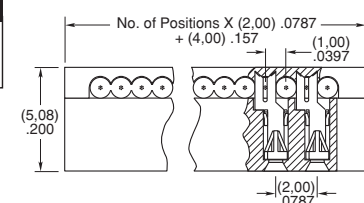
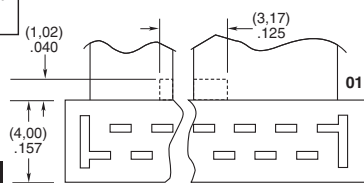
Specify PK-07
for polarizing key.

Note: RCSD & RCMD Series assemblies are non-standard, non-returnable.

RIBBON-AX is a registered trademark of W.L. Gore Associates

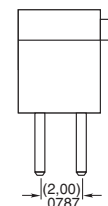
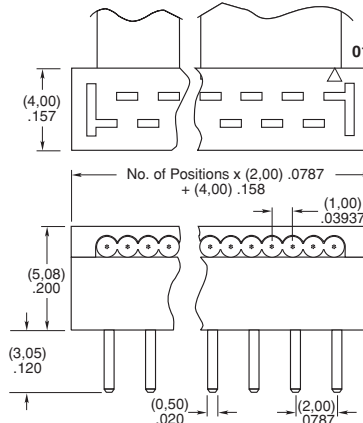
RCSD

= Socket Strip



RCMD

= Terminal Strip



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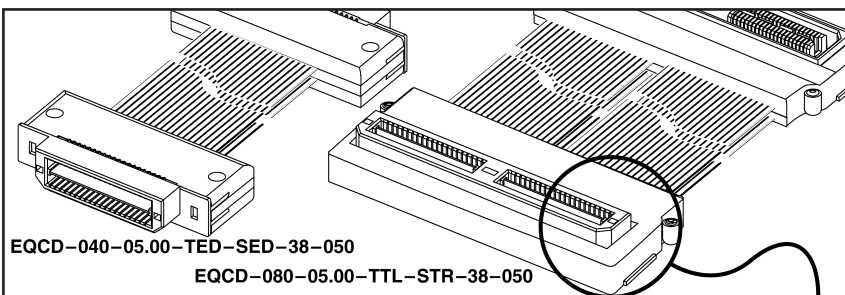
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SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745

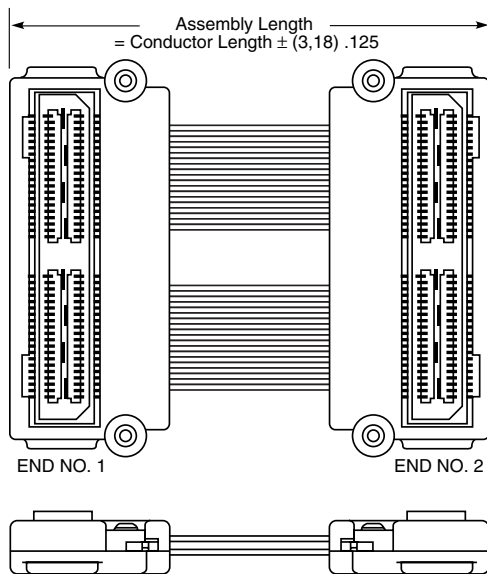
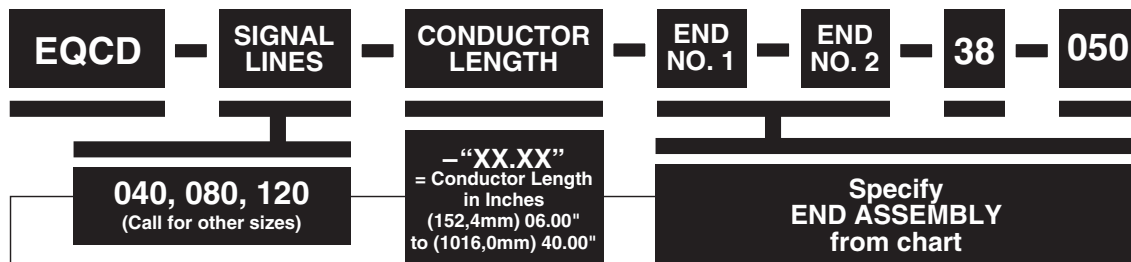
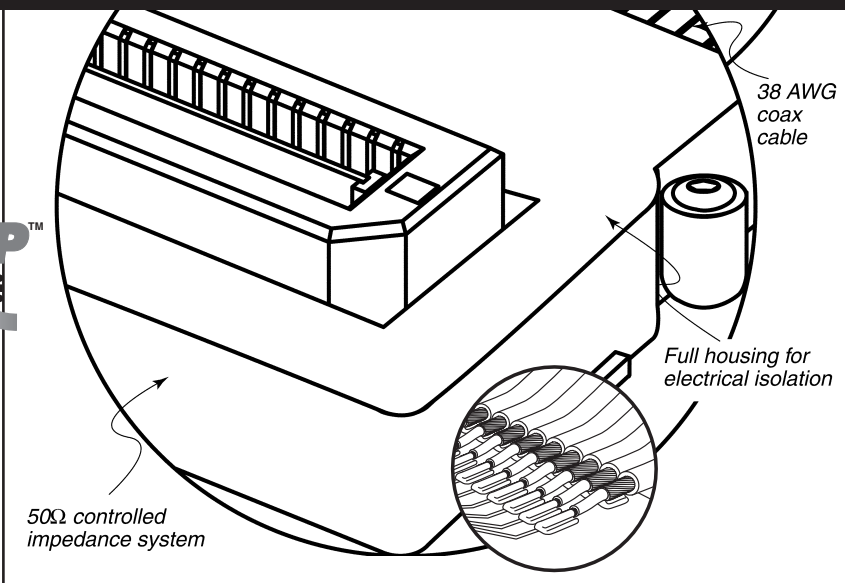


HI-SPEED CABLE ASSEMBLY EQCD SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com/EQCD

Mates with:
QTE, QSE



END ASSEMBLY	SURFACE MOUNT TERMINATION	END ASSEMBLY	EDGE MOUNT TERMINATION
TTR	(QTE)	TEU	(QTE)
TTL	(QTE)	TED	(QTE)
TBR	(QTE)	SEU	(QSE)
TBL	(QTE)	SED	(QSE)
STR	(QSE)		
STL	(QSE)		
SBR	(QSE)		
SBL	(QSE)		

Gender = T or S (Terminal or Socket)
Orientation = T, E or B (Top, Edge or Bottom)
Notch = R, L, U or D = (Right, Left, Up or Down)

Note:
This Series is non-standard,
non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

WWW.SAMTEC.COM

HIGH DENSITY

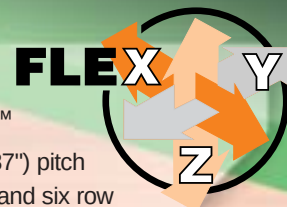
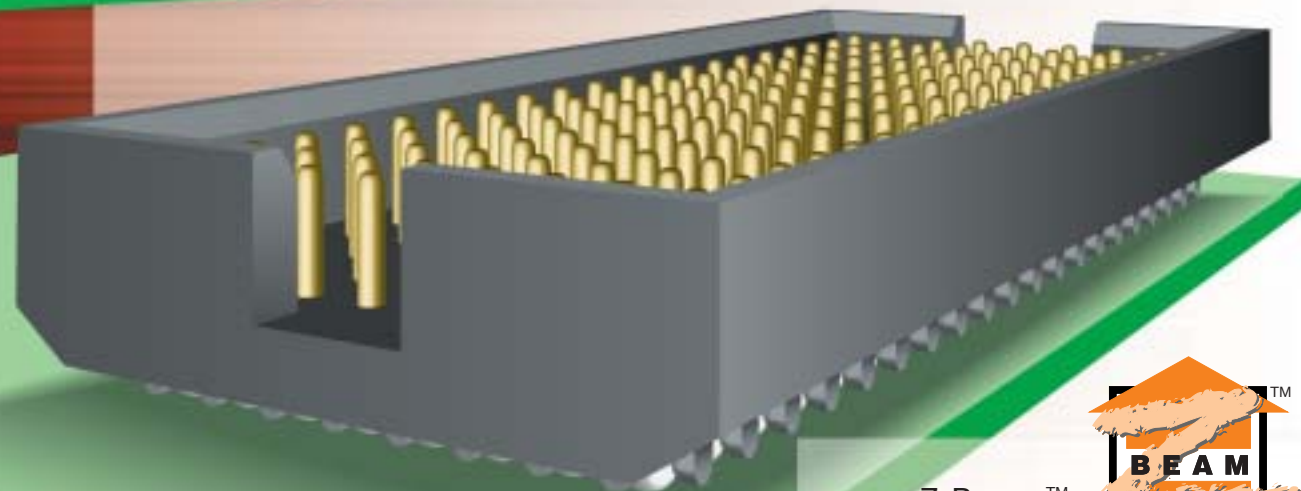
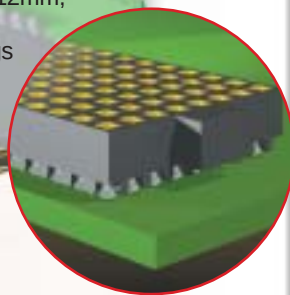
DESIGN FLEXIBILITY

- Number of rows of pins
- Number of pins per row
- Profile of the mated connector set
- Choice of pitch

SamArray™

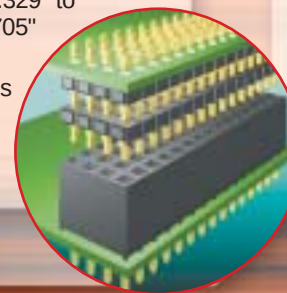


- .050" (1,27mm) pitch
- Five, eight and ten row designs
- Up to 500 pins
- 5mm, 7mm, 9mm and 12mm, 19mm and 25mm board-to-board spacings
- High speed through high I/Os



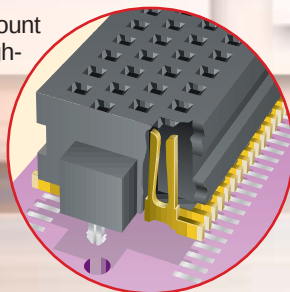
FleXYZ™

- 2mm (.0787") pitch
- Four, five, and six row designs
- Up to 300 pins
- Board spacings from (8,35mm) .329" to (43,31) 1.705"
- PC 104+ applications



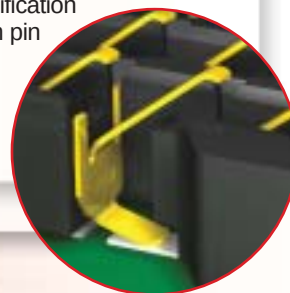
Quad Row

- 0,635mm pitch
- Four row design
- Up to 200 pins
- Board spacings from 6mm to 12mm
- Surface mount and through-hole



Z-Beam™

- One-Piece solderless interface
- Board Stacking
- .050" (1,27mm) pitch
- Choice of standard pin counts
- Easy modification for custom pin counts



HIGH

DENSITY

APPLICATIONS

SamArray™	60
Z-Beam™	61
Data Links	62
FOURRAY™	63
FleXYZ™	56-57

STANDARD PRODUCTS

.050" (1,27mm) Pitch SamArray™	
Standard Solder Ball Termination (YFS, YFT, YFW)	66-68

One-Piece Z-Beam™ Interface

Solderless Interfaces (GFZ)	70
-----------------------------	----

Data Links

SamArray™ (YFTDL)	69
Z-Beam™ (GFZDL)	71

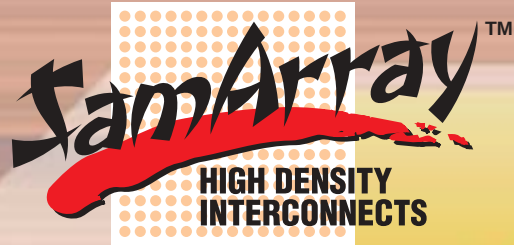
FOURRAY™

SMT Sockets and Headers (SOLC, TOLC, ROLC, MOLC)	72-74
Through-Hole Sockets and Headers (FOLC, MOLC)	75-77

2,00mm (.079") Pitch FleXYZ

Headers and Stackers (YTT, YTW)	78-79
Sockets (YTS, YTQ)	80
Elevated Sockets (YTE)	81
Shrouded Header (TMMS)	82

HIGH DENSITY ARRAYS

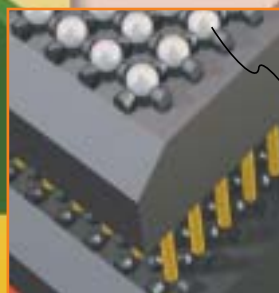
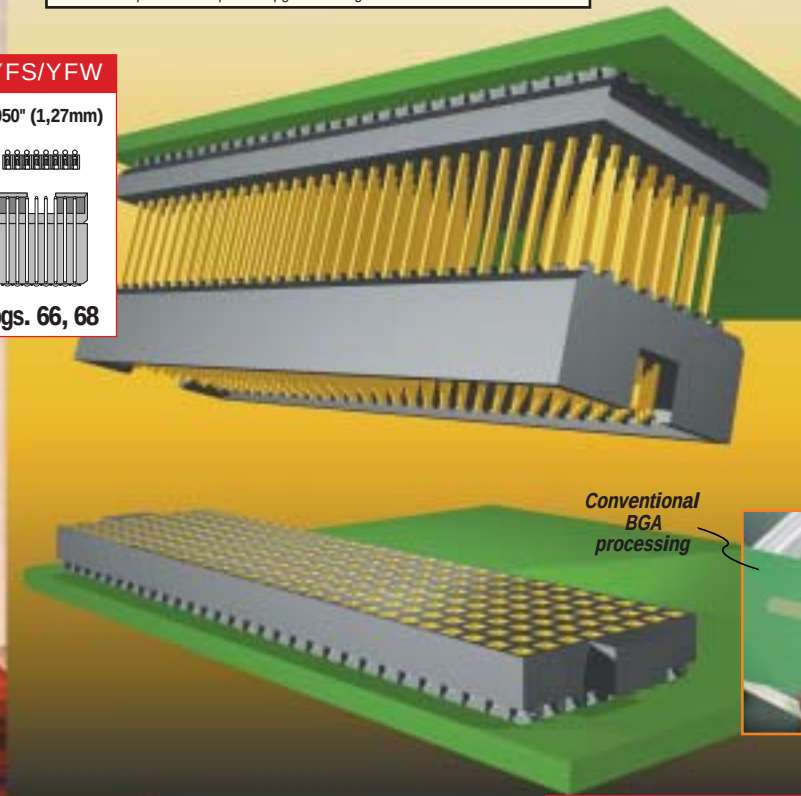


- .050" (1,27mm) Pitch
- Up to 500 pins
 - Headers, stackers and sockets
 - Tiger Eye Contact for highest reliability
 - 5, 8 and 10 row
 - 5mm (YFS/YFT) and 7mm, 9mm, 12mm, 19mm and 25mm (YFS/YFW) board spacings

YFS/YFT (5,08mm Height)	Near End Crosstalk		Prop. Delay	Rated at 5%	Rated at 10%
Single Ended	-1.2% @ 400pS	3.42% @ 100pS	32.9pS	875 MHz	3.2 GHz
Differential Pair	-4.5% @ 80pS	-7% @ 40pS	32.9pS	4.38 GHz	8.75 GHz
YFS/YFT (5,08mm Height)	Impedance Mismatch (Ω)				
Single Ended	65.1 to 50.0 @ 30pS	55.4 to 50.0 @ 100pS	51.7 to 50.0 @ 500pS		
Differential Pair	113.2 to 100.0 @ 30pS	102.3 to 92.2 @ 100pS	100.7 to 100.0 @ 500pS		
For Complete Test Report see pg. 318 or logon to www.samtec.com?YFS					

YFS/YFW
.050" (1,27mm)

pgs. 66, 68



Solder ball termination

YFS/YFT
.050" (1,27mm)

pgs. 66, 67



Conventional BGA processing

TEST RESULTS

Passed 20 year mixed flowing gas testing.
Go to: <http://www.samtec.com/ftppub/testrpt/yfsyftqu.pdf>



One-Piece Solderless Interfaces



- Board Stacking
- Module-to-Board
- LGA Interfaces
- Solderless Interconnects
- No solder pad delamination
- Minimizes Coefficient of Thermal Expansion (CTE) issues
- No solder joint reliability issues
- No bent pins
- No rework costs
- Allows field upgrade/exchange
- High density (400 I/Os)
- Low profile and high density for high speed signal/ground flexibility
- Custom pin counts available

Mounting Options

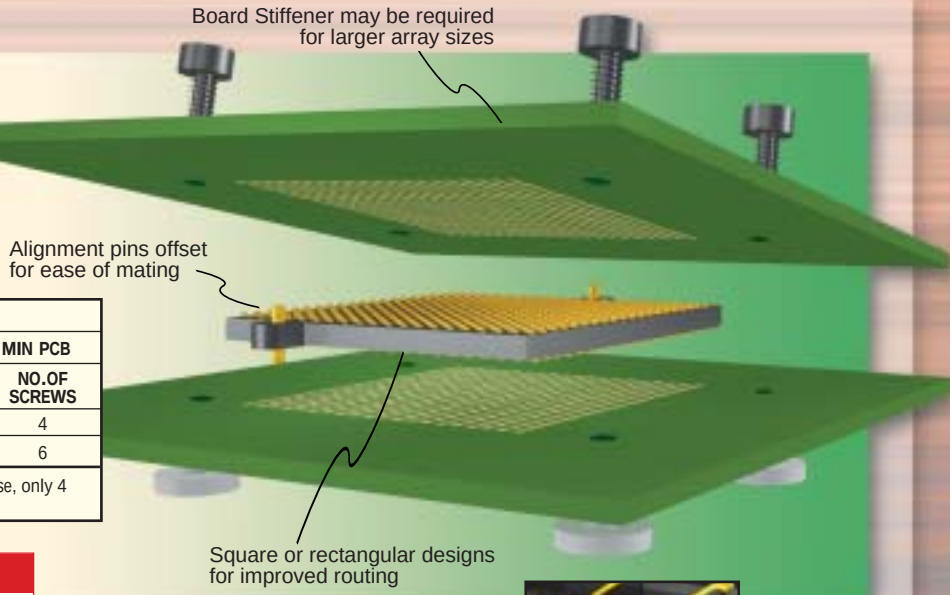
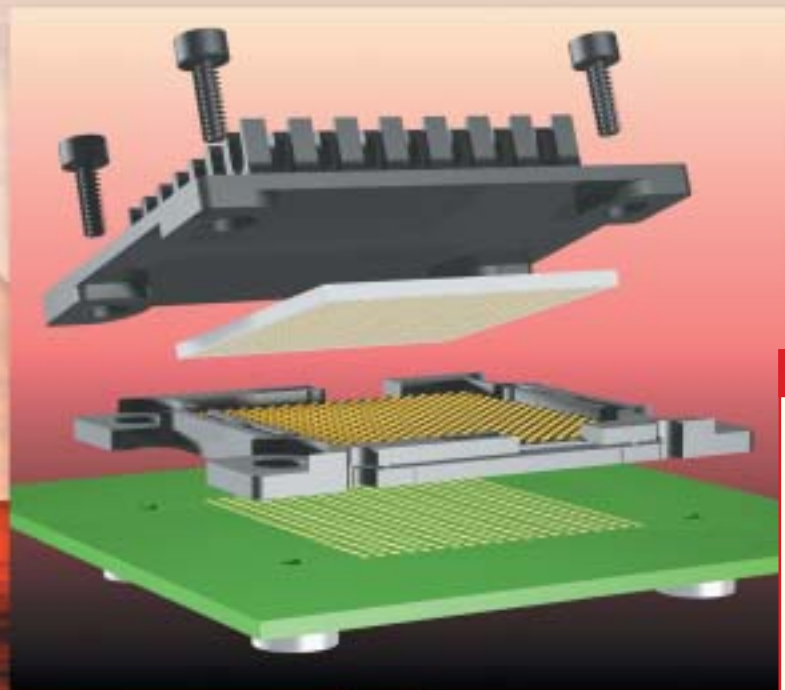
- Alignment Pins
- Frames
- Screw hole or inserts

STIFFENER APPLICATIONS				
(1,60mm) .062" MIN PCB			(2,40mm) .093" MIN PCB	
GRID SIZE	STIFFENER REQUIRED	NO. OF SCREWS	STIFFENER REQUIRED	NO. OF SCREWS
20x10	NO*	6	NO*	4
40x10	NO*	10	NO*	6

* Stiffeners may be used for all grid sizes shown. In that case, only 4 screws will be needed for most applications.

GFZ
.050" (1,27mm)

pg. 70



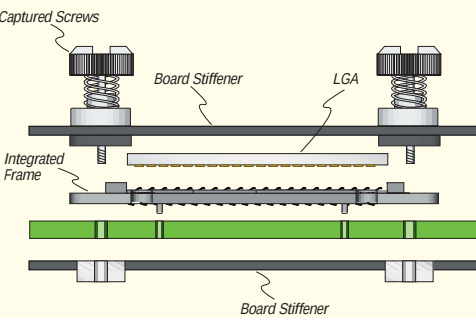
Board Stiffener may be required for larger array sizes

Alignment pins offset for ease of mating

Square or rectangular designs for improved routing



LGA APPLICATION



HIGH DENSITY DATA LINKS

High Density/High Reliability

- High reliability Tiger Eye Contacts
- Mate High Density connectors with minimal skew and alignment concerns
- Target connectors on boards soldered with conventional BGA processes
- Modify for other pins or cable lengths
- For complete specifications see www.samtec.com?YFTDL



YFTDL

pg. 69



High Density Compression

- Ideal for test probes or other temporary connections
- High Density Right Angle
- Controlled impedance flex routing
- For complete specifications see www.samtec.com?GFZDL

GFZDL

pg. 71

FOUR-ROW SYSTEMS



Surface Mount

- Up to 200 pins
- .025" (0,635mm) pitch
- Choice of mated heights:
 - .250" (6,35mm)
 - .315" (8,00mm)
 - .394" (10,00mm)
 - .472" (12,00mm)

MOLC ROLC

.025 (0,635mm)

TIGER EYE CONTACT

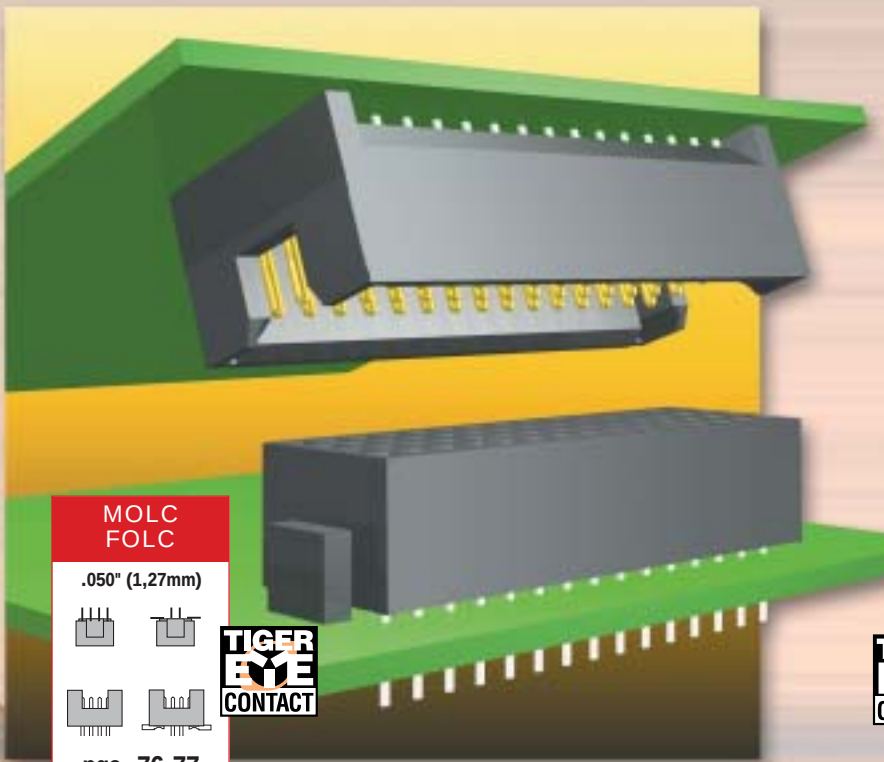
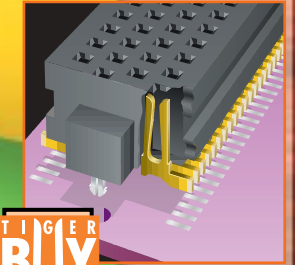
pgs. 74-75

TOLC SOLC

.025 (0,635mm)

TIGER BUY CONTACT

pgs. 72-73



Through-Hole & Mixed Technology

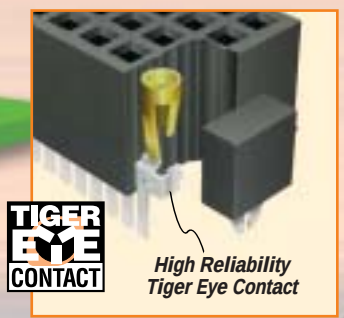
- .050" (1,27mm) pitch
- SMT available
- Choice of mated heights:
 - .250" (6,35mm)
 - .305" (7,75mm)
 - .450" (11,50mm)

MOLC FOLC

.050" (1,27mm)

TIGER EYE CONTACT

pgs. 76-77



HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

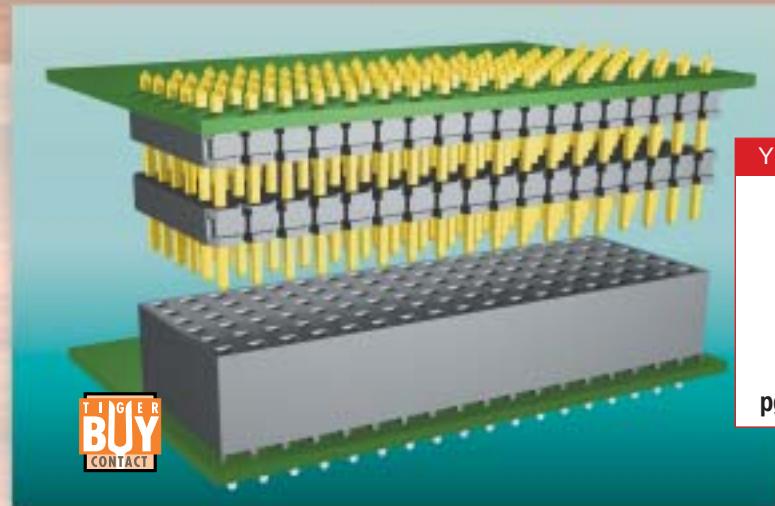
HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

FLEX-Y-Z

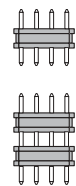


2,00mm (.0787")
FlexYZ

- Up to 300 pins
- Headers, stackers and sockets
- 4, 5 and 6 row designs
- Right Angle and Shrouded options

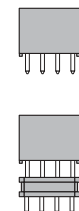


YTT/YTW



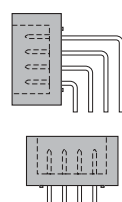
pgs. 78-79

YTS/YTQ
YTE



pgs. 80-81

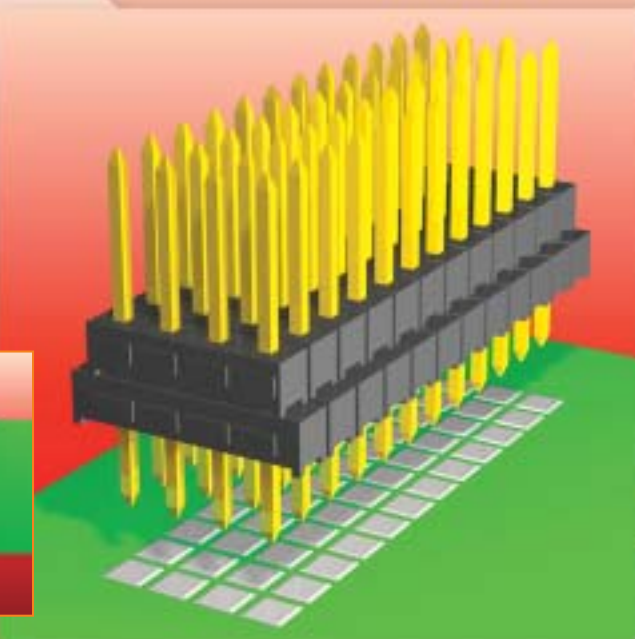
TMMS



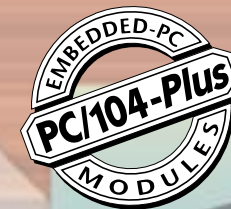
pg. 82

Paste In-Hole (PIH) Options Available

- Call Samtec Interconnect Processing Group for special body design for PIH processing
- Eliminate need for wave soldering and preforms
- Not suitable for stack-through applications due to contamination of lead with solder

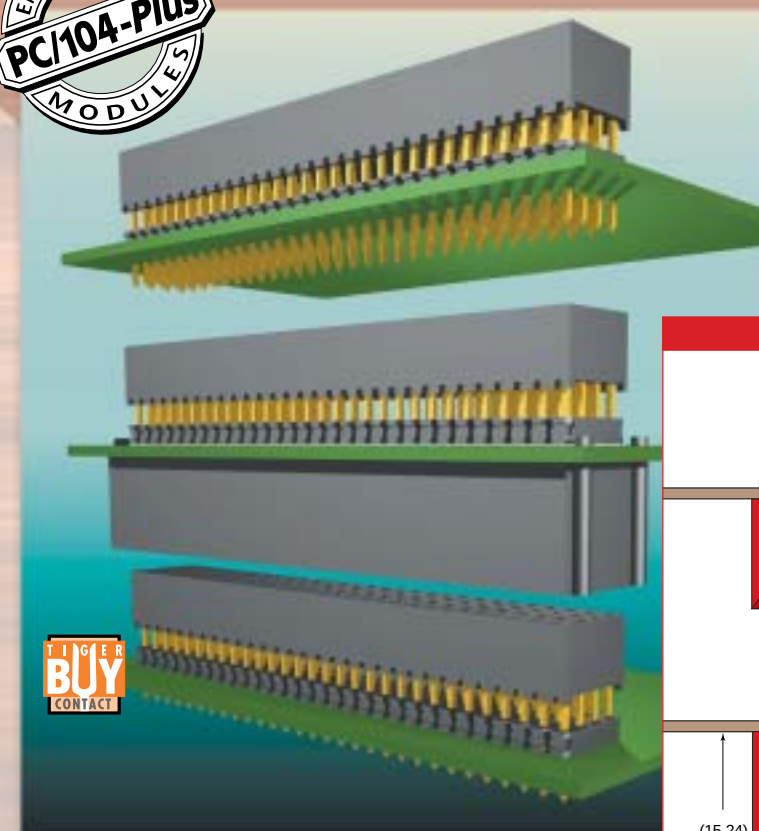


PC 104+



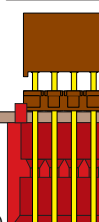
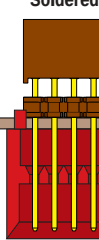
PC104+ Application Choices

- 2mm pitch
- 0,50mm (.020") square tails allow self-nesting sockets
- Choice of soldered or press-fit terminations
- Optional tail shrouds available



ESQT

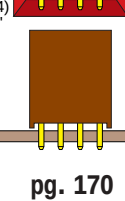
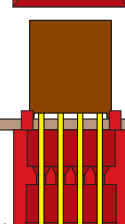
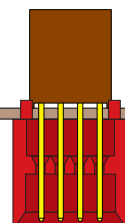
Soldered



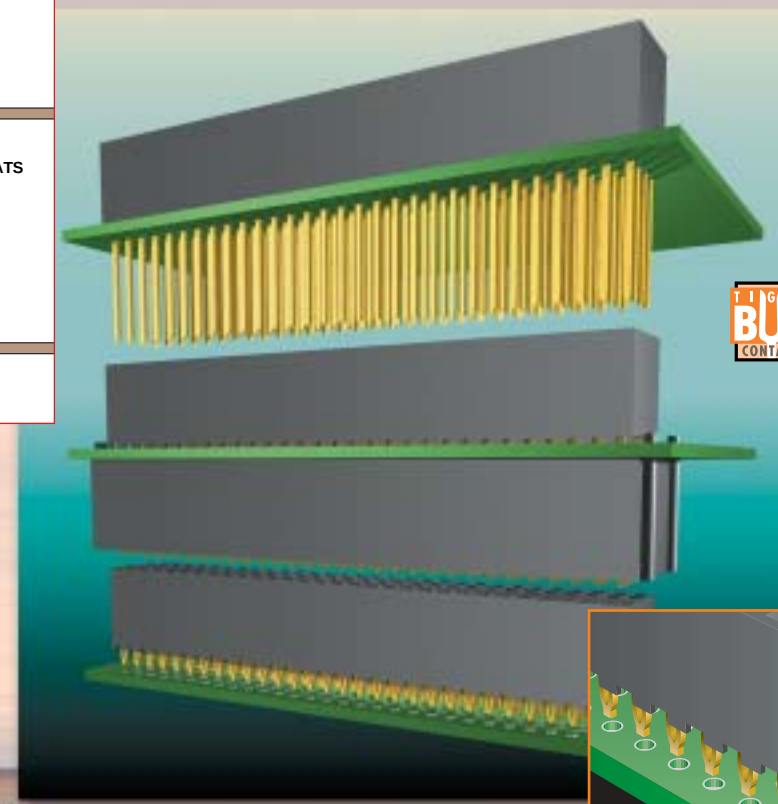
pg. 170

PTHF

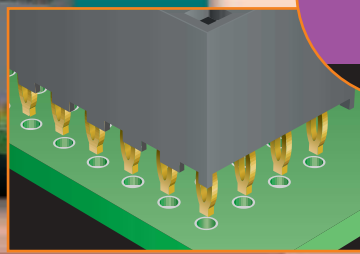
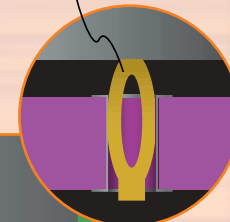
Press Fit



pg. 170



Press fit for high density applications



HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

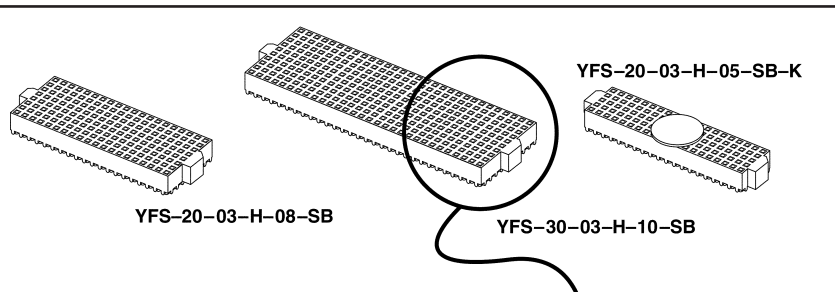
MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

samtec



HI-DENSITY SOCKET YFS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?YFS

Insulator Material: Black Liquid Crystal Polymer

Contact Material: Phosphor Bronze

Current Rating: 2A @ 80°C ambient

Operating Temp Range: -65°C to +125°C

Plating: Au over 50µ" (1,27µm) Ni

Contact Resistance: 10 mΩ max

Working Voltage: 275 VAC when mated with YFT

Mated Cycles: 200 with YFT

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
YFT, YFW



High reliability
Tiger-Eye
contacts

(1,27mm) .050"
micro pitch

TEST RESULTS

Passed 20 year mixed
flowing gas testing.
Go to: <http://www.samtec.com/ftp/pub/testrpt/yfsytqu.pdf>

Polarized
notches

APPLICATION SPECIFIC OPTION

30, 40 & 50 positions also
available in 5 & 8 rows.
3 & 6 rows also available.

Call Samtec.

Configuration	Near End Crosstalk	Prop. Delay	Rated at 5%	Rated at 10%
Single Ended	~1.2% @ 400pS	3.42% @ 100pS	32.9pS	875 MHz
Differential Pair	~4.5% @ 80pS	~7% @ 40pS	32.9pS	4.38 GHz
Configuration	Impedance Mismatch (Ω)			
Single Ended	65.1 to 50.0 @ 30pS	55.4 to 50.0 @ 100pS	51.7 to 50.0 @ 500pS	
Differential Pair	113.2 to 100.0 @ 30pS	102.3 to 100.0 @ 100pS	100.7 to 100.0 @ 500pS	

For complete Test Report logon to www.samtec.com?YFS

Processing:

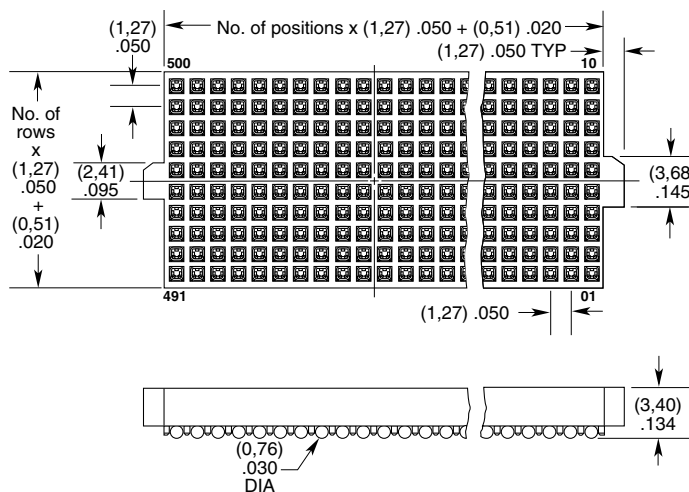
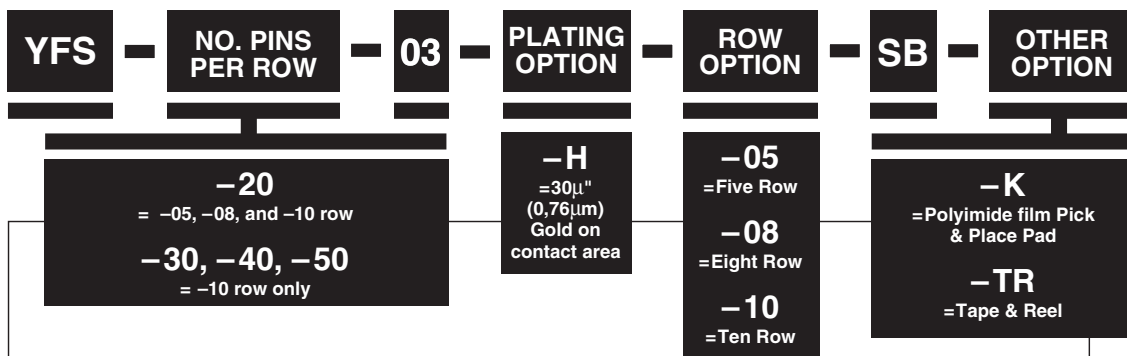
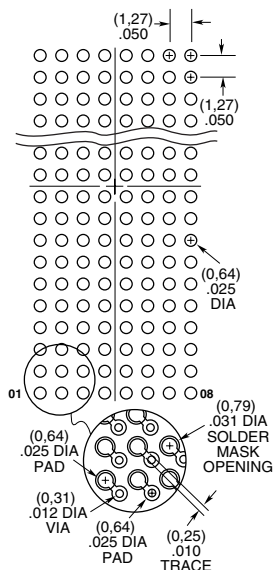
Max Processing Temp: 230°C for 60 seconds

Typical Processing:

- Water soluble paste compound
- (0,15mm to 0,20mm) .006" to .008" paste thickness
- 1:1 aperture
- Mask or plug vias
- Process like a BGA
- X-ray inspection as required

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?YFS for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC UK • Tel: 01236 739292 • Fax: 01236 727113

SAMTEC GERMANY • Tel: +49 (0) 89 / 89460-0 • Fax: +49 (0) 89 / 89460-299

SAMTEC ASIA PACIFIC • Tel: 65 6745-5955 • Fax: 65 6841-1502

SAMTEC FRANCE • Tel: 01 60 95 06 60 • Fax: 01 60 95 06 61

SAMTEC ITALY • Tel: 39 039 6890337 • Fax: 39 039 6890315

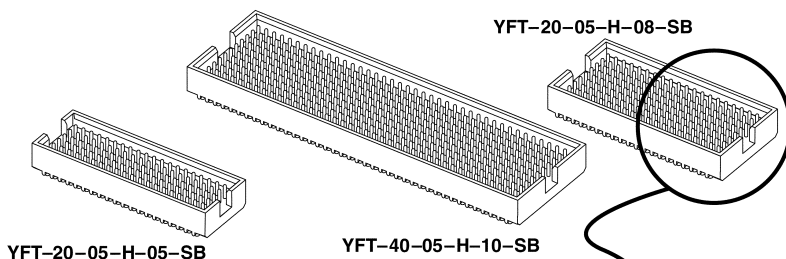
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SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

SAMTEC JAPAN • Tel: 81-424-42-8318 • Fax: 81-424-42-8319

SAMTEC TAIWAN • Tel: 886-02-2364-6077 • Fax: 886-02-2367-9531

SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



HI-DENSITY HEADER YFT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?YFT

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50µ" (1,27µm) Ni

Working Voltage:

275 VAC when mated with YFS

Mated Cycles:

200 with YFS

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
YFS



Three, five,
six, eight
or ten rows

Configuration	Near End Crosstalk			Rated at 5%	Rated at 10%
Single Ended	~1.2% @ 400pS	3.42% @ 100pS	32.9pS	875 MHz	3.2 GHz
Differential Pair	~4.5% @ 80pS	~7% @ 40pS	32.9pS	4.38 GHz	8.75 GHz
Configuration	Impedance Mismatch (Ω)				
Single Ended	65.1 to 50.0 @ 30pS	55.4 to 50.0 @ 100pS	51.7 to 50.0 @ 500pS		
Differential Pair	113.2 to 100.0 @ 30pS	102.3 to 100.0 @ 100pS	100.7 to 100.0 @ 500pS		

For complete Test Report logon to www.samtec.com?YFT

(1,27mm)
.050"
pitch

TEST RESULTS

Passed 20 year mixed
flowing gas testing.
Go to: <http://www.samtec.com/ftp/pub/testrpt/yfsyftqu.pdf>

Low profile
(5,00mm) .197"
mated height

APPLICATION SPECIFIC OPTION

30, 40 & 50 positions also
available in 5 & 8 rows.
3 & 6 rows also available.
Call Samtec.

Processing:

Max Processing Temp:

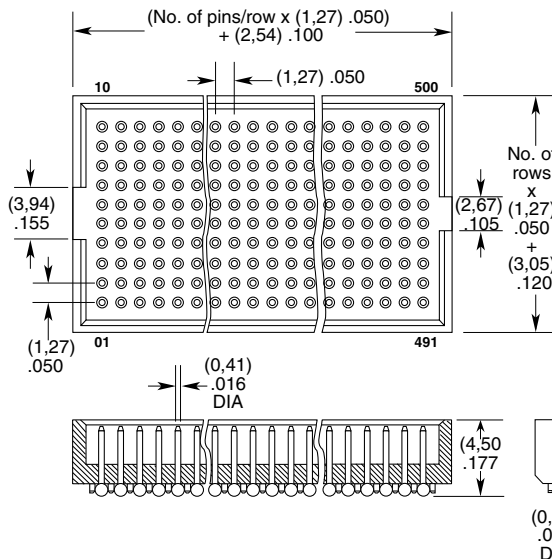
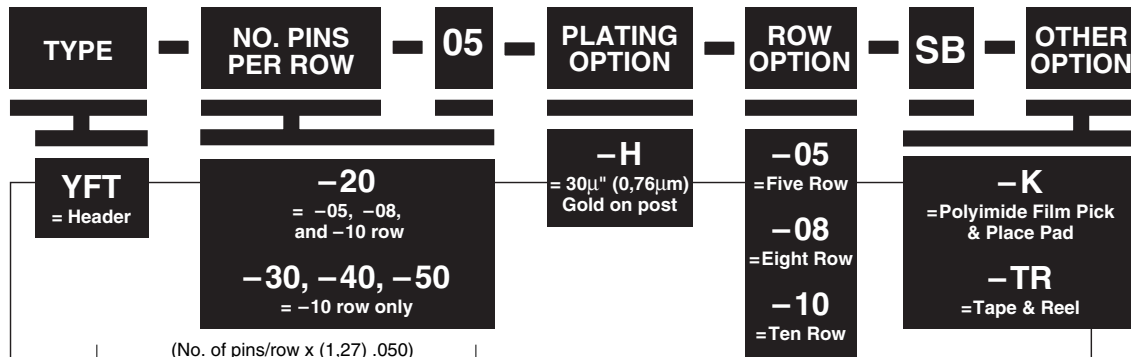
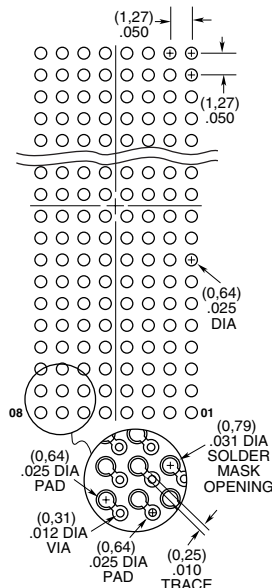
230°C for 60 seconds

Typical Processing:

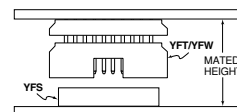
- Water soluble paste compound
- (0,15mm to 0,20mm) .006" to .008" paste thickness
- 1:1 aperture
- Mask or plug vias
- Process like a BGA
- X-ray inspection as required

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?YFT for recommended PCB layout.



STACK HEIGHTS



HEADER/STACKER	MATED HEIGHT
YFT-05	(5,00) .197
YFW-07*	(7,00) .276
YFW-09*	(9,00) .354
YFW-12*	(12,00) .472
YFW-19*	(19,00) .748
YFW-25*	(25,00) .984

Processing conditions will affect mated height.

* See YFW Series for specifications

Due to technical progress, all designs, specifications and components are subject to change without notice.

WWW.SAMTEC.COM

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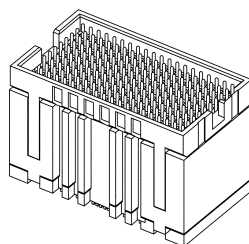
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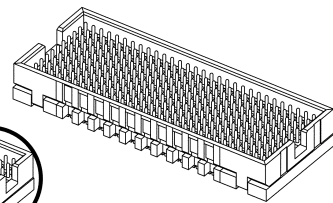
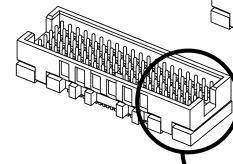
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YFW-20-25-H-10-SB

YFW-20-07-H-05-SB



YFW-30-07-H-10-SB

HI-DENSITY STACKER YFW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?YFW

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50µ" (1,27µm) Ni

Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

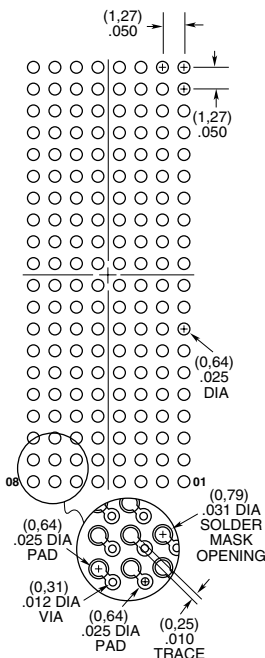
230°C for 60 seconds

Typical Processing:

- Water soluble paste compound
- (0,15mm to 0,20mm) .006" to .008" paste thickness
- 1:1 aperture
- Mask or plug vias
- Process like a BGA
- X-ray inspection as required

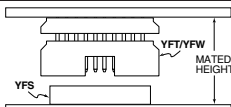
Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?YFW for recommended PCB layout.



Mates with:
YFS

STACK HEIGHTS



HEADER/STACKER	MATED HEIGHT
YFT-05*	(5,00) .197
YFW-07	(7,00) .276
YFW-09	(9,00) .354
YFW-12	(12,00) .472
YFW-19	(19,00) .748
YFW-25	(25,00) .984

Processing conditions will affect mated height.

* See YFT Series for specifications

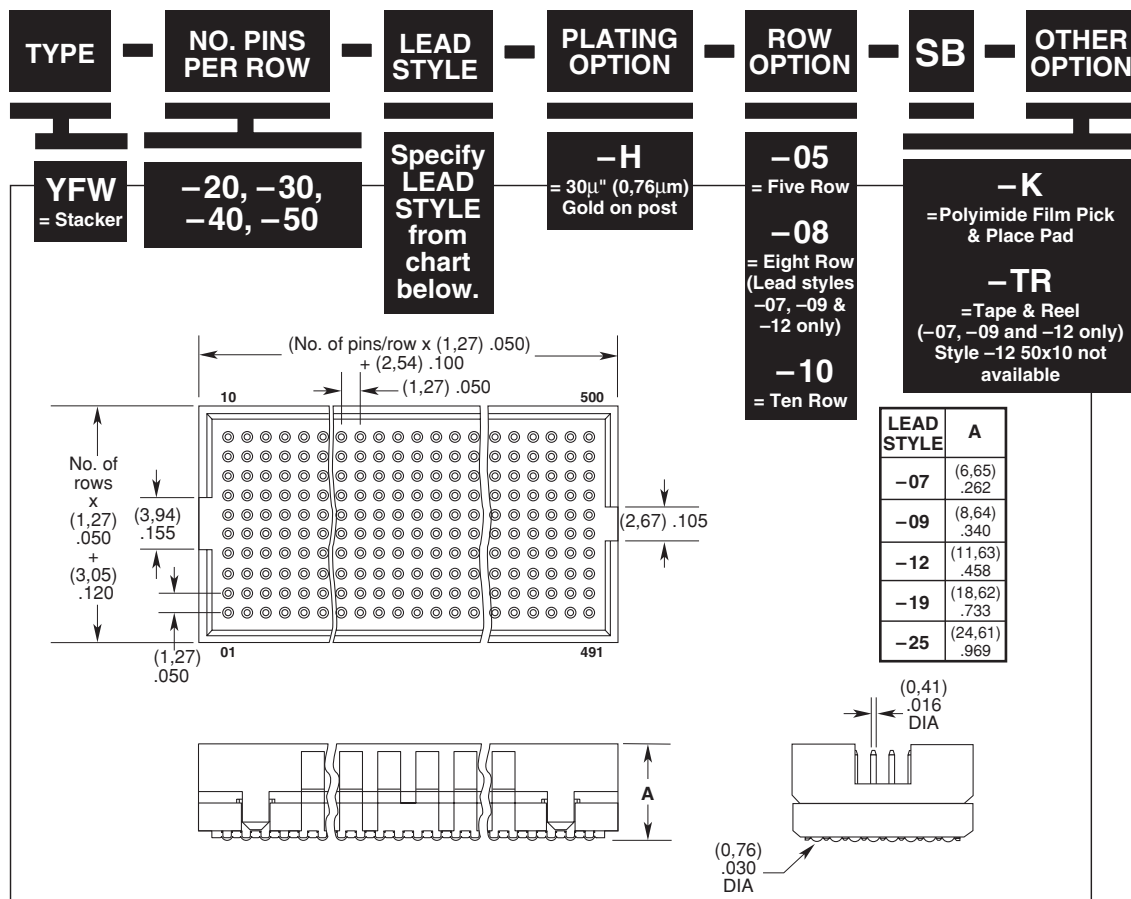


5, 8 or 10 row

Choice of board stack heights

(1,27mm) .050" pitch

Polarized



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YFTDL-20-T-08-05.00

YFTDL-20-T-05-03.00

HIGH DENSITY DATA LINK YFTDL SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com?YFTDL

Header:

YFT Series

Socket:

YFS Series

Cable:

1 oz. rolled annealed copper

Base Film:

1 mil Polyimide

Adhesive:

FR (DuPont)

Stiffener:

FR-4 glass epoxy

Mates with:
YFT, YFS

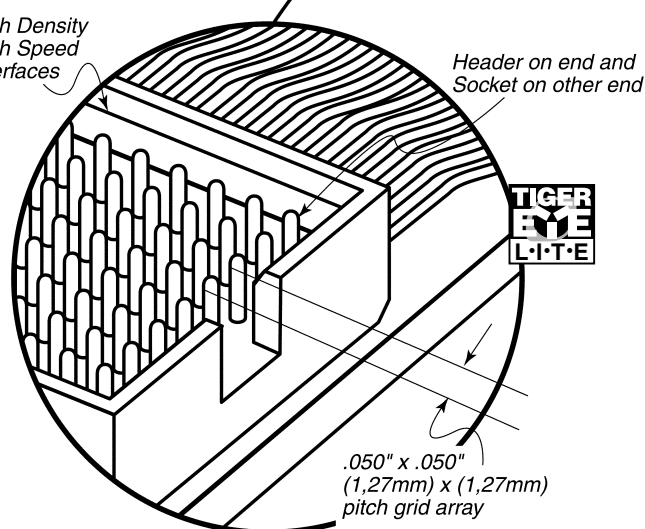


APPLICATION SPECIFIC OPTION

Other sizes available.
Call Samtec.

High Density
High Speed
Interfaces

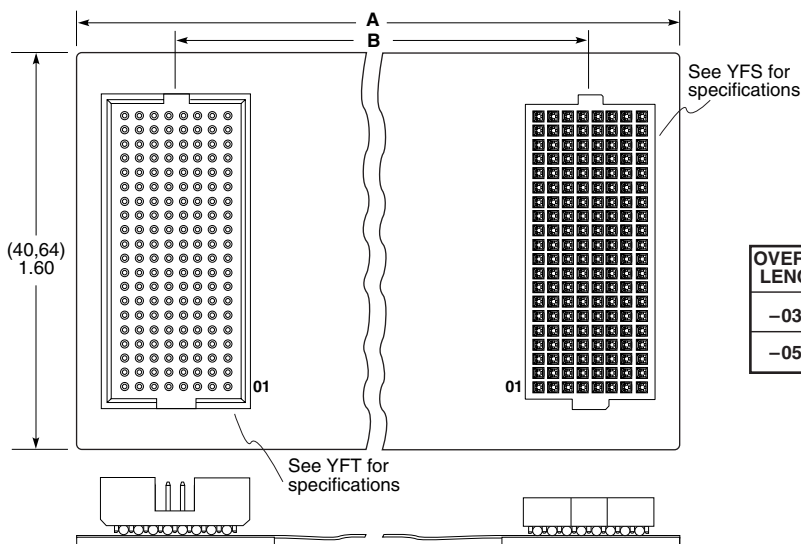
Header on end and
Socket on other end



TIGER
EYE
LITE

.050" x .050"
(1,27mm) x (1,27mm)
pitch grid array

YFTDL	NO. PINS PER ROW	T	NO. OF ROWS	OVERALL LENGTH
	-20		-05 = (76,2mm) 3.00" OAL only -08 = (127,0mm) 5.00" OAL only	-03.00 = (76,2mm) 3.00" (05 row only) -05.00 = (127,0mm) 5.00" (08 row only)

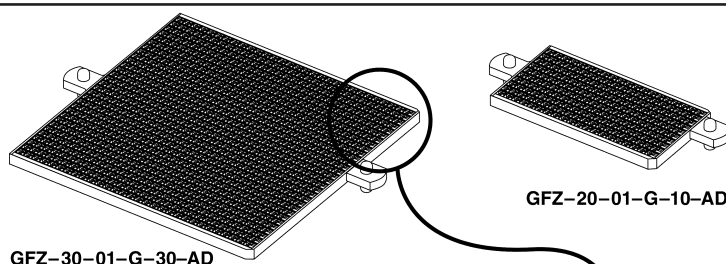


OVERALL LENGTH	A	B
-03.00	(76,20) 3,00	(57,15) 2,25
-05.00	(127,00) 5,00	(107,95) 4,25

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

WWW.SAMTEC.COM



SOLDERLESS INTERFACE GFZ SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?GFZ

Insulator Material:

Liquid Crystal Polymer

Contact Material:

BeCu

Current Rating:

Testing Now!

Plating:

Au over 50μ" (1,27μm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

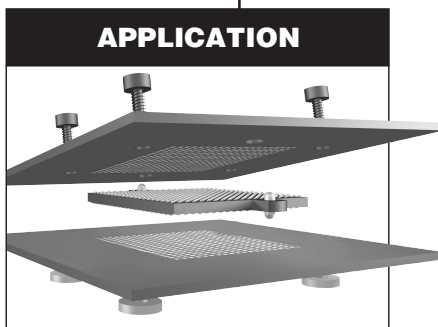
Lead Coplanarity:

Dual Compression system

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?GFZ for recommended PCB layout.

APPLICATION



APPLICATION SPECIFIC OPTIONS

Other grid sizes.
No alignment option.
Integrated frame for LGA.
Call Samtec.



Dual spring action for solderless connection

Low profile

Compression Tail

(1,27mm) .050" pitch grid

Alignment Pin

GFZ

POSITIONS PER ROW

01

PLATING OPTION

NUMBER OF ROWS

AD

-20, -30, -40

(See chart for available callouts)

-G

= 30μ" (0,76μm) Gold

-10, -30

(See chart for available callouts)

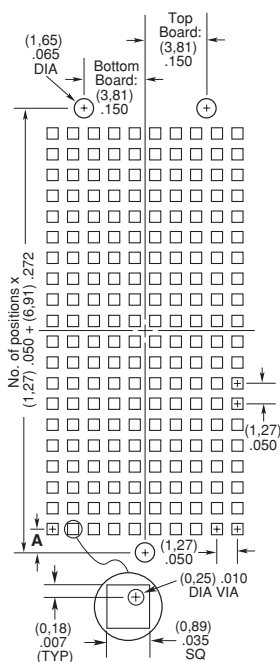
AVAILABLE PART NUMBERS

POSITIONS PER ROW	NUMBER OF ROWS	TOTAL PINS	PART NUMBER
20	10	200	GFZ-20-01-G-10-AD
40	10	400	GFZ-40-01-G-10-AD
30	30	900	GFZ-30-01-G-30-AD

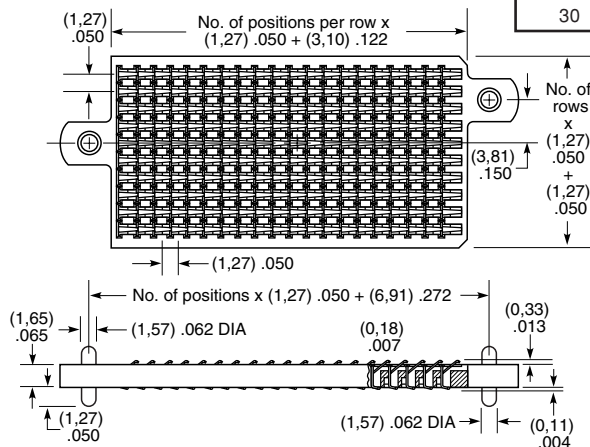
APPLICATIONS

(1,60mm) .062" MIN PCB			(2,40mm) .093" MIN PCB	
GRID SIZE	STIFFENER REQUIRED?	NO. OF SCREWS	STIFFENER REQUIRED?	NO. OF SCREWS
20x10	NO*	6	NO*	4
40x10	NO*	10	NO*	6
30x30	YES	4	YES	4

* Stiffeners may be used for all grid sizes shown. In that case, only 4 screws will be needed for most applications.



BOARD	A
BOTTOM	(3,30) .130
TOP	(4,09) .161



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GFZDL-20-10-05.00

GFZDL-30-10-05.00

SOLDERLESS DATA LINK GFZDL SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/GFZDL

Insulator Material:

Liquid Crystal Polymer

Contact Material:

BeCu

Plating:

30μ" (0.76μm) Gold

over 50μ" (1.27μm) Nickel

Cable:

1 oz. rolled annealed copper

Base Film:

1 mil Polyimide

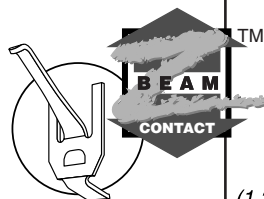
Adhesive:

FR (DuPont)

Stiffener:

FR-4 glass epoxy

Note: Some lengths, styles and options are non-standard, non-returnable.

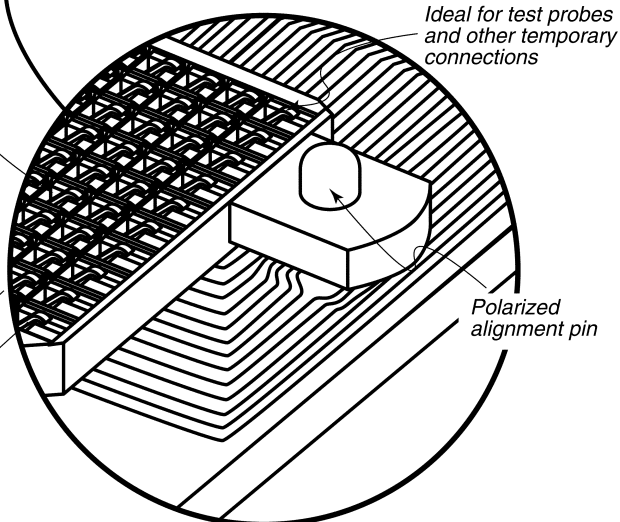


Dual spring action for solderless connection

(1.27mm x 1.27mm)
.050" x .050"
pitch grid array

APPLICATION SPECIFIC OPTIONS

Other sizes available.
Call Samtec.



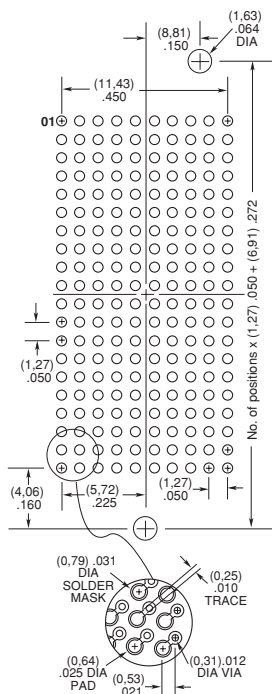
Ideal for test probes and other temporary connections

Polarized alignment pin

Processing:

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/GFZDL for recommended PCB layout.



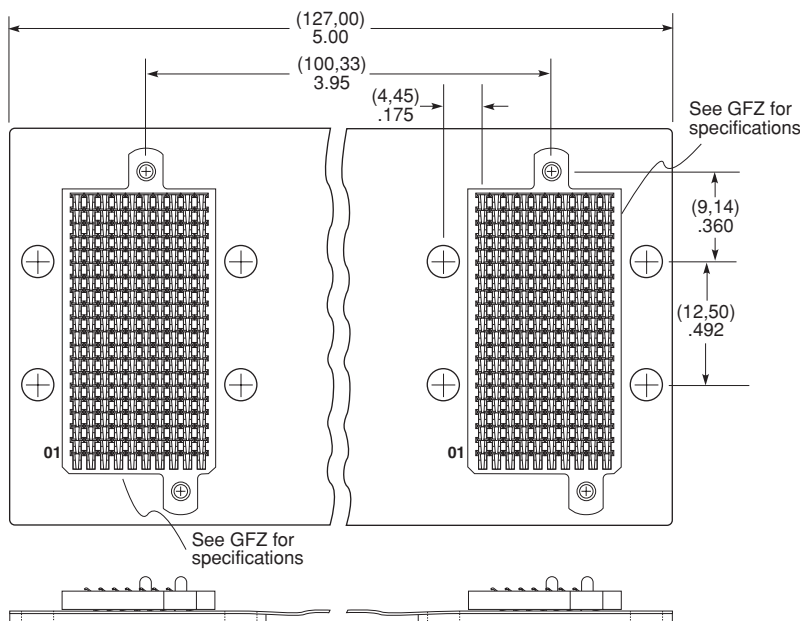
GFZDL

POSITIONS PER ROW

NO. OF ROWS

OVERALL LENGTH

-20, -30

-10
= Ten Rows-05.00
= (127.0mm)
5.00"

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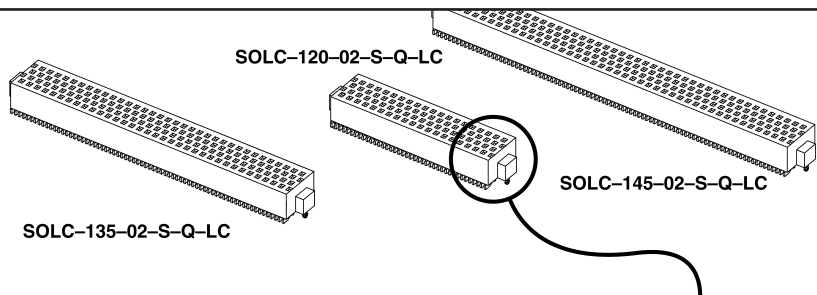
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Surface
SMT
Mount

QUAD ROW SOCKET SOLC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SOLC

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

2.5A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1.27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(1.68mm) .066" to

(3.61mm) .142" with

(0.38mm) .015" wipe

Insertion Force:

2.0oz (0.56N) average

Normal Force:

75 grams (0.74N) average

Withdrawal Force:

1.5oz (0.42N) average

Max Cycles:

100+



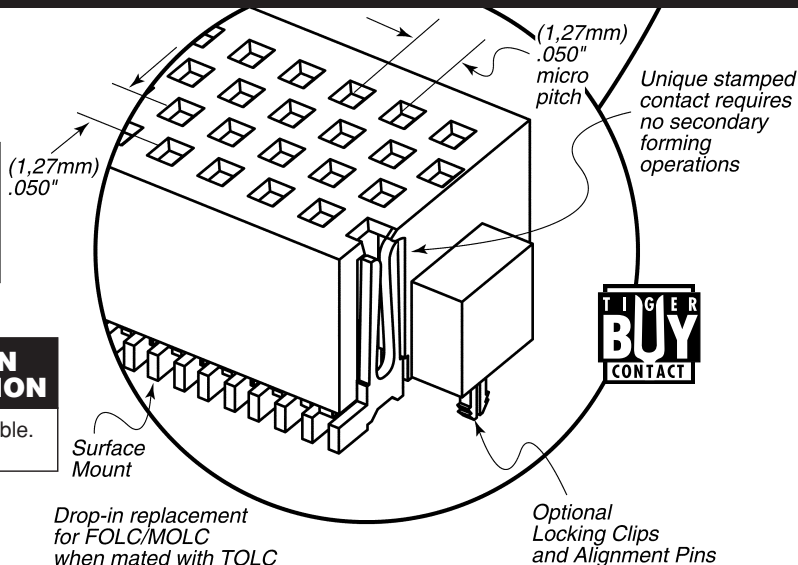
Mates with:
TOLC



APPLICATION SPECIFIC OPTION

Alignment pins available.
Call Samtec.

Note:
Some sizes, styles and options are non-standard, non-returnable.



Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0.10mm) .004" max (05-35)

(0.15mm) .006" max (40-50)

Suggested Paste Thickness:

For most applications add

(0.05mm) .002" to max SMT

lead coplanarity

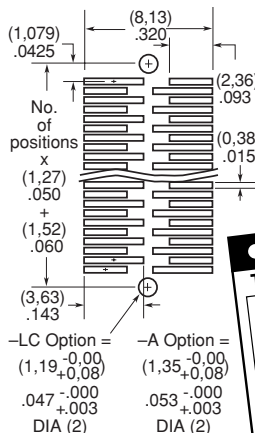
Suggested PCB Layouts:

For reference only. Please

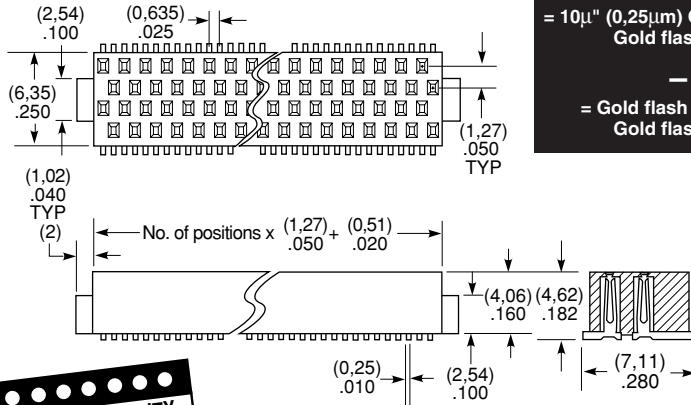
contact Samtec or go to

www.samtec.com?SOLC for

recommended PCB layout.

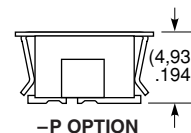
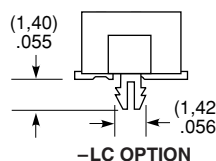
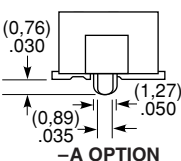


SOLC	1	NO. PINS PER ROW	02	PLATING OPTION	Q	OPTION
05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)			-S = 30μ" (0.76μm) Gold on contact, Gold flash on tail		-A = Alignment Pin	
			-L = 10μ" (0.25μm) Gold on contact, Gold flash on tail		-LC = Locking Clip	
			-F = Gold flash on contact, Gold flash on tail		-K = (7.00mm) .276" DIA Polyimide film Pick & Place Pad	
					-P = Pick & Place Pad	
					-TR = Tape & Reel	



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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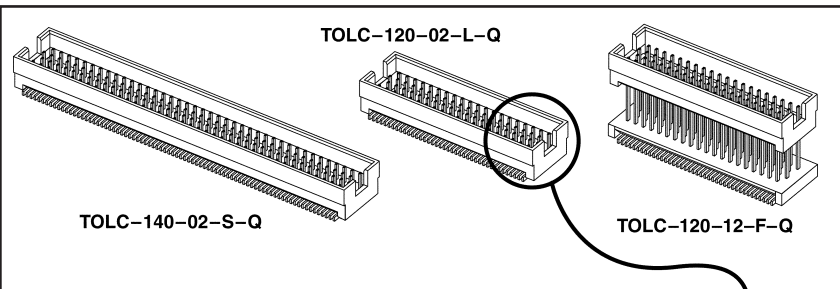
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Surface
SMT
Mount

QUAD ROW TERMINAL TOLC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TOLC

Insulator Material:

Black Liquid
Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

2.5A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50µ" (1,27µm) Ni



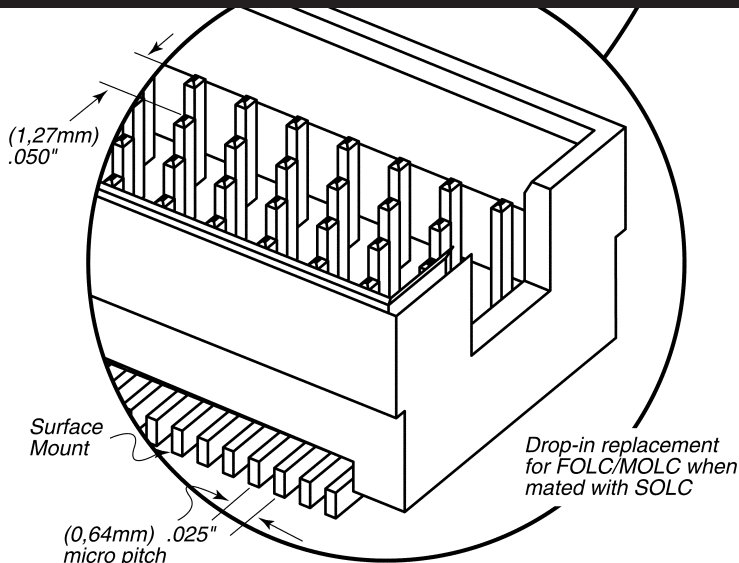
Mates with:
SOLC



APPLICATION SPECIFIC OPTION

Alignment pins available.
Call Samtec.

Note:
Some sizes, styles and options are non-standard, non-returnable.



Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (05-30)

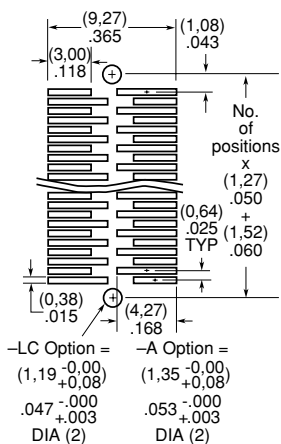
(0,15mm) .006" max (35-50)

Suggested Paste Thickness:

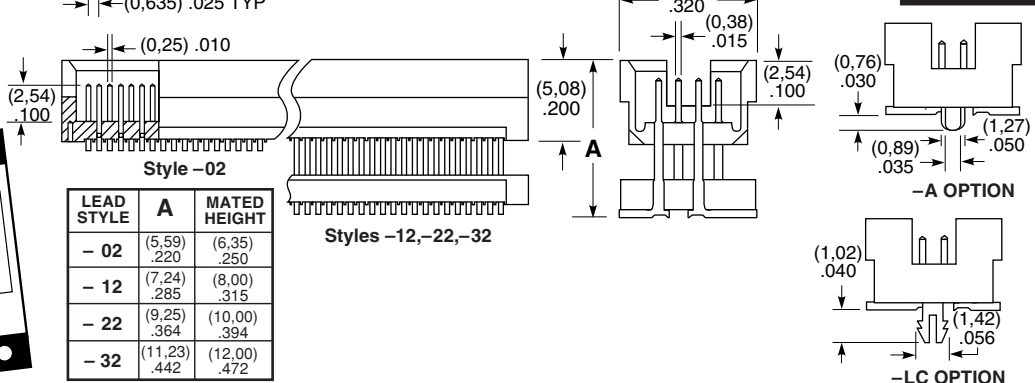
For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?TOLC for recommended PCB layout.



TOLC	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	Q	OPTION
05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)			Specify LEAD STYLE from chart	-S = 30µ" (0,76µm) Gold on post, Gold flash on tail -L = 10µ" (0,25µm) Gold on post, Gold flash on tail -F = Gold flash on post, Gold flash on tail		-A = Alignment Pin -LC = Locking Clip -K = (9,00mm) .354" DIA Polyimide film Pick & Place Pad -TR = Tape & Reel



LEAD STYLE	A	MATED HEIGHT
- 02	(5,59) .220	(6,35) .250
- 12	(7,24) .285	(8,00) .315
- 22	(9,25) .364	(10,00) .394
- 32	(11,23) .442	(12,00) .472

TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

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Surface
SMT
Mount

T/H
Page 76

.050" x .050" SOCKETS ROLC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?ROLC

Insulator Material:
Black Liquid Crystal Polymer



Contact Material: BeCu

Current Rating:
1A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

Plating:

Au or Sn over

50µ" (1,27µm) Ni

Contact Resistance:
15 mΩ max

Insertion Depth:
(3,30mm) .130" to

(4,06mm) .160"

Insertion Force:
Standard= 5.0oz (1,39N) avg;

LIF= 2.0oz (0,56N) avg.

Normal Force:
Standard= 70 grams

(0,69N) avg; LIF= 40 grams

(0,39N) avg.

Withdrawal Force:
Standard= 4oz (1,11N) avg;

LIF= 1.5oz (0,42N) avg.

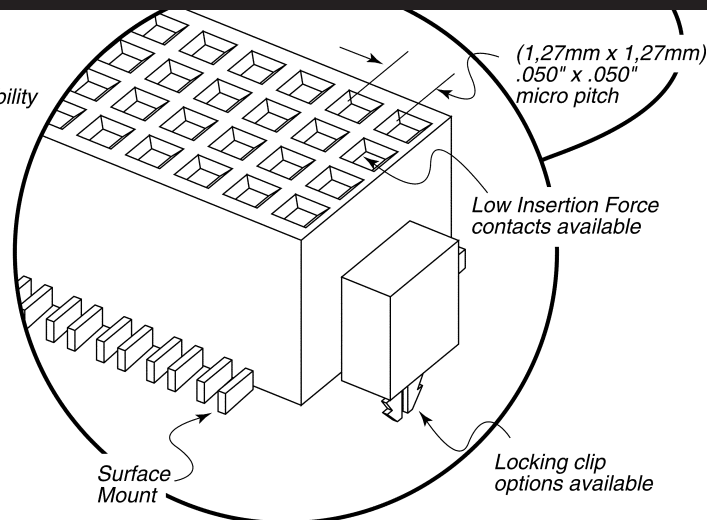
Max Cycles:
100 with 30µ" (0,76µm) Au

Mates with:
MOLC



High reliability
Tiger-Eye
contacts

Note: Some sizes, styles and options are non-standard, non-returnable.



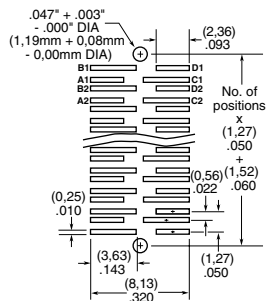
Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,15mm) .006" max

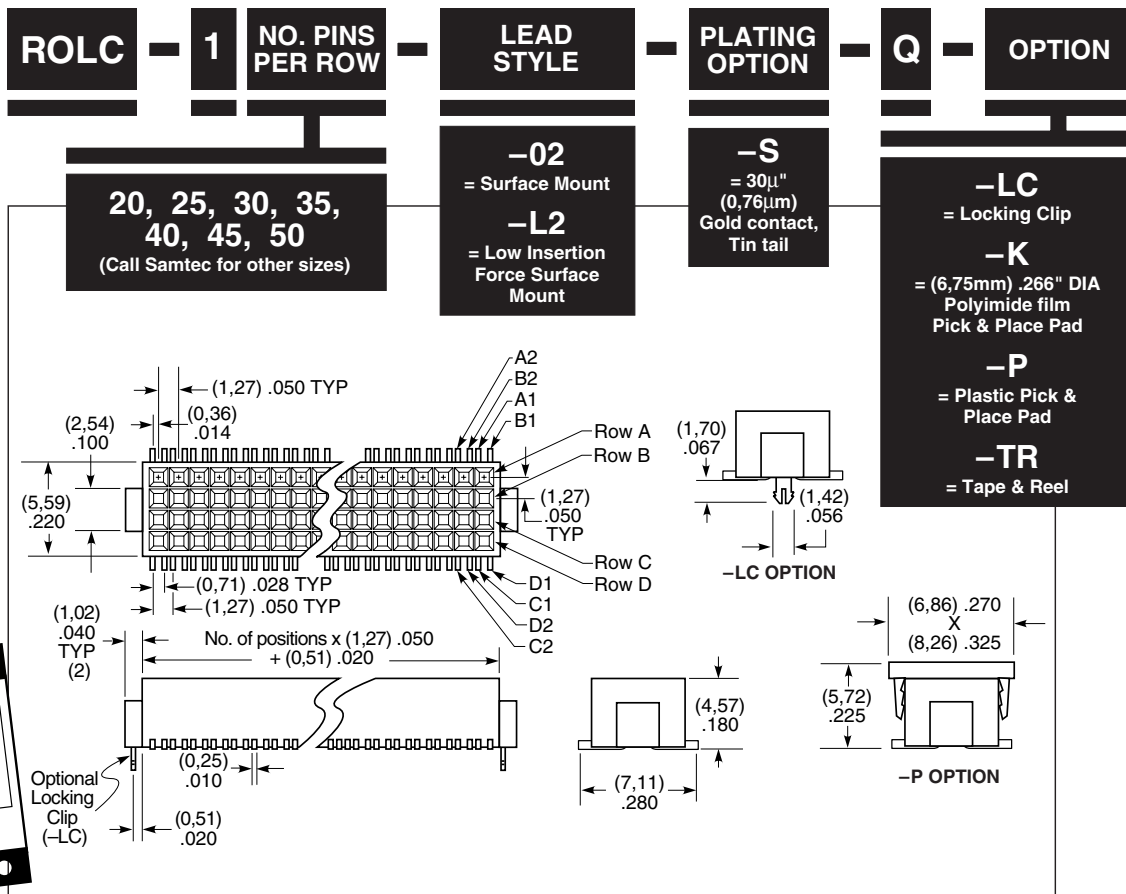
Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?ROLC for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
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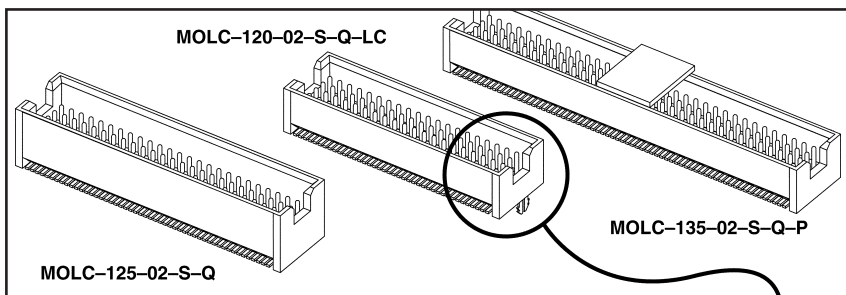
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Surface
SMT
Mount

T/H
Page 77

.050" x .050" HEADERS MOLC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MOLC

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

1A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

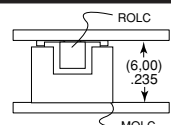
Au or Sn over 50μ" (1,27μm) Ni



Mates with:
ROLC



APPLICATIONS



Ultra high density
four row design

Surface
Mount

Available with optional
pick-and-place pads

.050" x .050"
(1,27mm x 1,27mm)
micro pitch

Locking clip option

Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

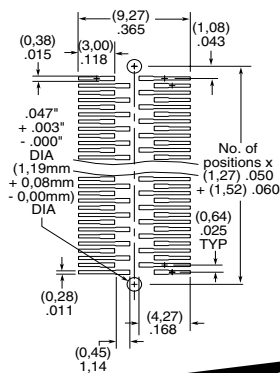
Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:

(0,15mm) .006" max (30-50)
(0,10mm) .004" max (20-25)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?MOLC for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.

MOLC

1

**NO. PINS
PER ROW**

**LEAD
STYLE**

**PLATING
OPTION**

Q

OPTION

**20, 25, 30, 35,
40, 45, 50**
(Call Samtec for other sizes)

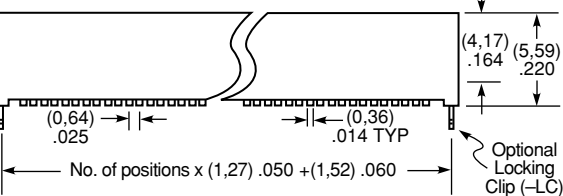
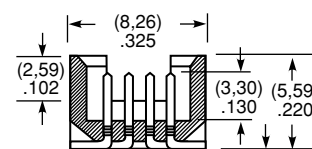
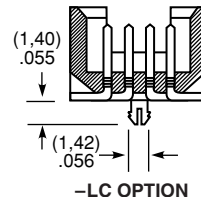
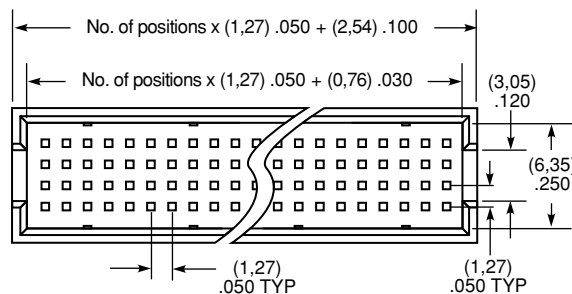
-02
= Surface
Mount

-S
= 30μ" (0,76μm)
Gold post,
Tin tail

-LC
= Locking Clip

-P
= Pick & Place Pad

-TR
= Tape & Reel



Due to technical progress, all designs, specifications and components are subject to change without notice.

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.050" x .050" SOCKETS FOLC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FOLC

Insulator Material:

Black Liquid Crystal Polymer



Contact Material:

BeCu

Current Rating:

1A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au, PdNi or Sn over

50μ" (1.27μm) Ni

Contact Resistance:

15 mΩ max

Insertion Depth:

(3.30mm) .130" to

(4.06mm) .160"

Insertion Force:

Standard= 5.0oz (1.39N) avg;

LIF= 2.0oz (0.56N) avg.

Normal Force:

Standard= 70 grams

(0.69N) avg; LIF= 40 grams

(0.39N) avg.

Withdrawal Force:

Standard= 4oz (1.11N) avg;

LIF= 1.5oz (0.42N) avg.

Max Cycles:

100 with 30μ" (0.76μm) Au

Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

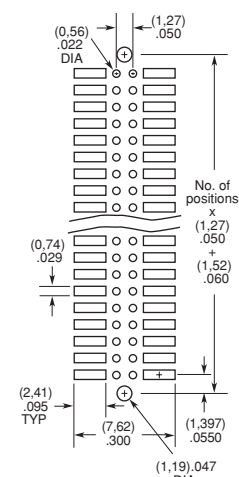
230°C for 60 seconds

SMT Lead Coplanarity:

(0.15mm) .006" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?FOLC for recommended PCB layout.



Mates with:
MOLC

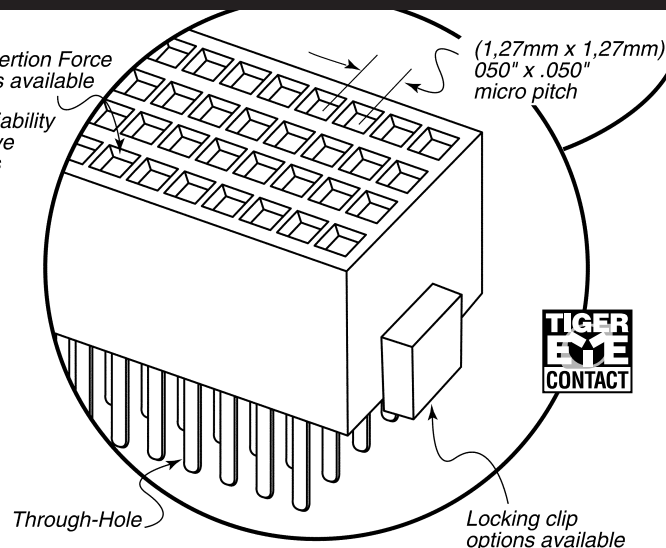


APPLICATION SPECIFIC OPTION

Alignment pins available.
Call Samtec.

Low Insertion Force contacts available

High reliability Tiger-Eye contacts



FOLC

1

NO. PINS PER ROW

LEAD STYLE

PLATING OPTION

Q

OPTION

20, 25, 30, 35,
40, 45, 50
(Call Samtec for other sizes)

-01 & -04

= Through-Hole

-M1 & -M2

= Mixed Technology

-L1 & -L4

= Low Insertion Force Through-Hole

-S

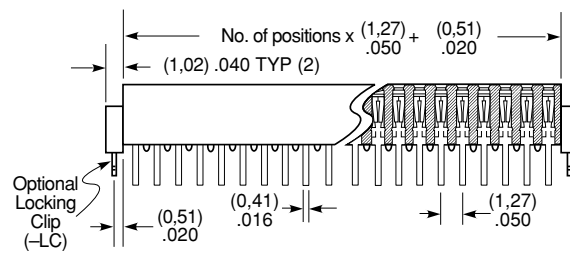
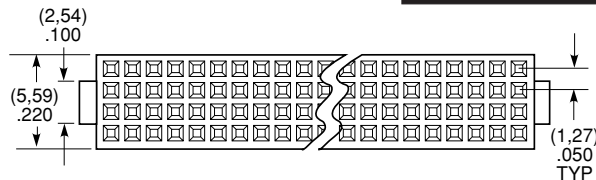
= 30μ" (0.76μm) Gold contact, Tin tail

-P

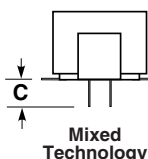
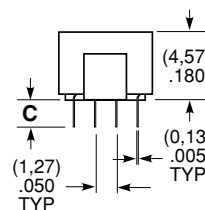
= Gold flash over 30μ" (0.76μm) PdNi contact, Tin tail (-01 & -04 only)

-LC

= Locking Clip



LEAD STYLE	C
-01, -M1	(1.91) .075
-04, -M2	(3.04) .120



Due to technical progress, all designs, specifications and components are subject to change without notice.

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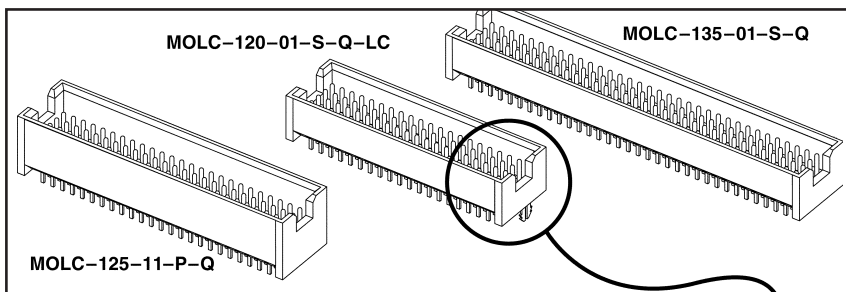
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Through
T/H
Hole

SMT
Page 75

.050" x .050" HEADERS MOLC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MOLC

Insulator Material:

Black Liquid
Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

1A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Au, PdNi or Sn over
50µ" (1,27µm) Ni



Mates with:
FOLC



Ultra-high density
four row design

Through-hole

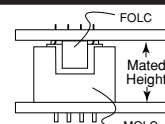
APPLICATION SPECIFIC OPTION

Alignment pins available.
Call Samtec.

(1,27mm x 1,27mm)
.050" x .050"
micro pitch

Locking clip option

APPLICATIONS



LEAD STYLE	MATED HEIGHT
MOLC	FOLC
-01	(5,97) .235
-11	(7,75) .305
-31	(11,43) .450

Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

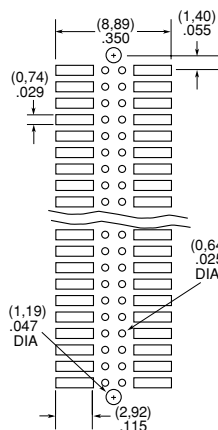
SMT Lead Coplanarity:

(0,10mm) .004" max (20-25)

(0,15mm) .006" max (30-50)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?MOLC for recommended PCB layout.



MOLC

1

**NO. PINS
PER ROW**

**LEAD
STYLE**

**PLATING
OPTION**

Q

OPTION

**20, 25, 30, 35,
40, 45, 50**
(Call Samtec for other sizes)

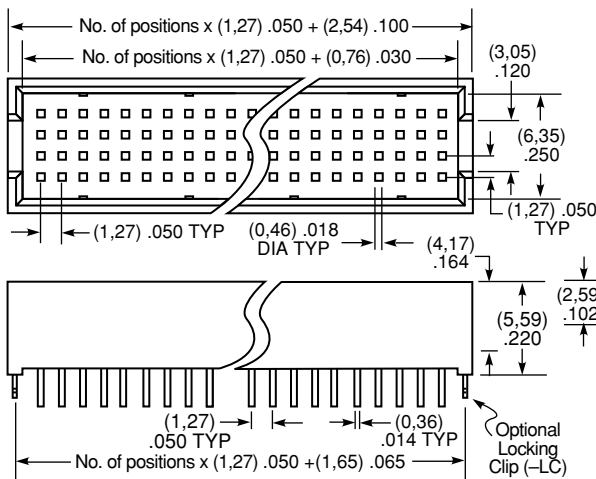
—"X"1
= Through-hole
(Specify from chart)

-M1
= Mixed
Technology

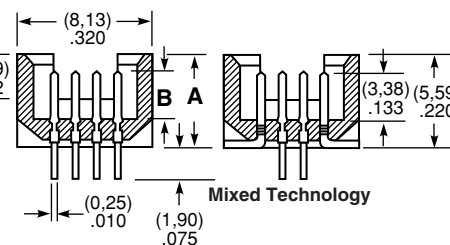
-S
= 30µ" (0,76µm) Gold post,
Tin tail

-P
= Gold flash over
30µ" (0,76µm) PdNi post,
Tin tail
(Through-hole only)

-LC
= Locking
Clip



LEAD STYLE	A	B
-01	(5,59) .220	(3,38) .133
-11	(7,34) .289	(3,66) .144
-31	(11,05) .435	



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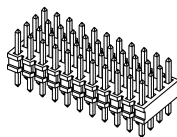
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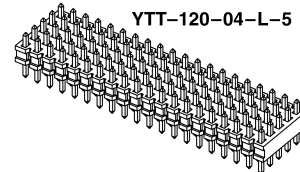
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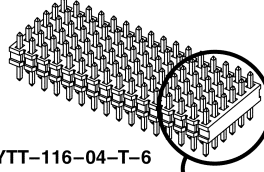
YTT-110-01-G-Q



YTT-120-04-L-5



YTT-116-04-T-6



2mm HI-DENSITY HEADER YTT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/YTT

Insulator Material:
Black Liquid Crystal Polymer



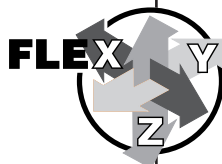
Terminal Material:
Phosphor Bronze

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Max Processing Temp:
230°C for 60 seconds

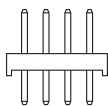
Plating:
Sn or Au over 50µ" (1,27µm) Ni

Mates with:
YTQ, YTS, YTE

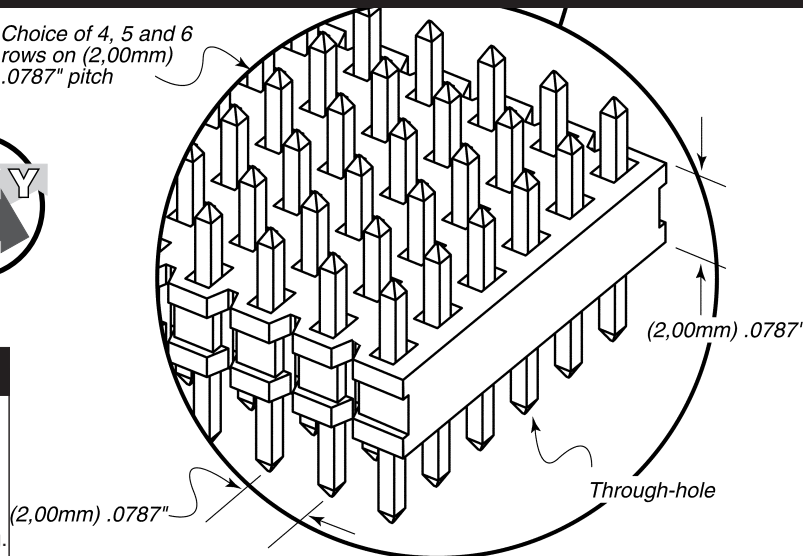


Choice of 4, 5 and 6 rows on (2,00mm) .0787" pitch

ALSO AVAILABLE



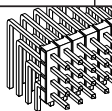
Paste In Hole (PIH) processing.
Contact Samtec ASP Group.



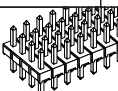
Note:
Some lengths, styles and options are non-standard, non-returnable.

Also Available

Right Angle Four Row
See TMM Series.



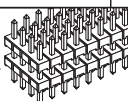
Low Profile Four Row
See TMM Series.



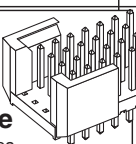
2mm Shunt
See 2SN Series.



Elevated
See YTW Series.



Shrouded Four Row Vertical & Right Angle
See TMMS Series.

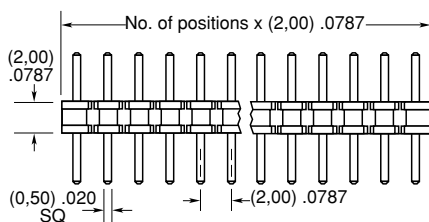
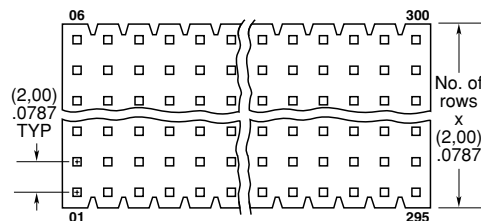


YTT - 1 NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - ROW OPTION - OTHER OPTIONS

02 thru 50

Specify LEAD STYLE from chart

LEAD STYLE	A	B	C
-01	(7,67) .302	(3,20) .126	(2,46) .097
-04	(6,45) .255	(1,91) .075	(2,57) .101



-G
= 20µ" (0,51µm)
Gold on contact area,
Gold flash on tail

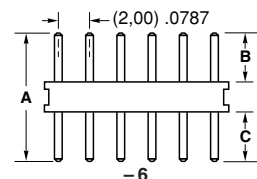
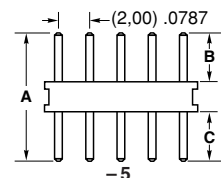
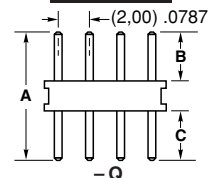
-S
= 30µ" (0,76µm)
Gold on contact area,
Tin on tail

-L
= 10µ" (0,25µm)
Gold on contact area,
Tin on tail

-F
= Gold flash on contact area,
Tin on tail

-T
= Tin

-Q
= Four Row
-5
= Five Row
-6
= Six Row



- "XXX"
= Polarized Position
Specify position of omitted pin

Due to technical progress, all designs, specifications and components are subject to change without notice.

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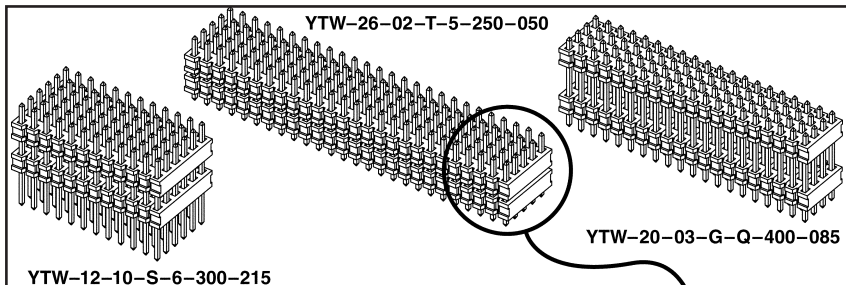
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2mm HI-DENSITY STACKER YTW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?YTW

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze

Current Rating:
3A @ 80°C ambient

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

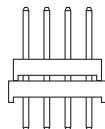
Max Processing Temp:
230°C for 60 seconds

Plating:
Sn or Au over 50µ"
(1,27µm) Ni

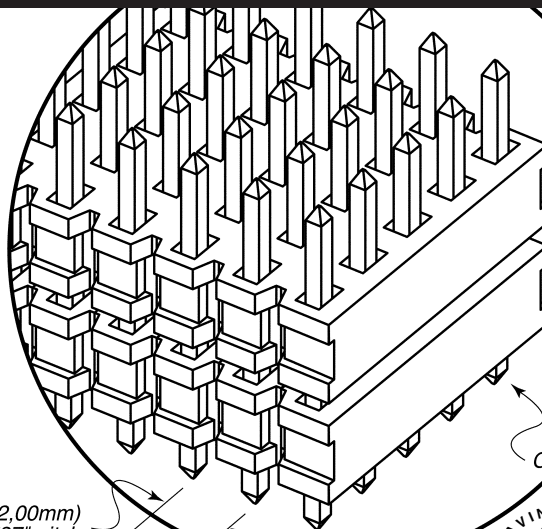
Mates with:
YTQ, YTS, YTE



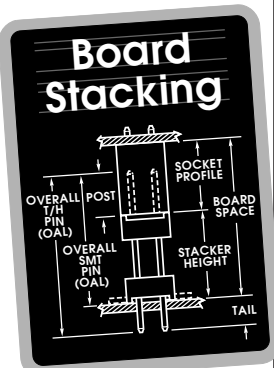
ALSO AVAILABLE



Paste In Hole (PIH) processing.
Contact Samtec ASP Group.



Choice of 4, 5 or 6 row



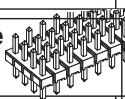
Note:
This Series is non-standard,
non-returnable.

Also Available

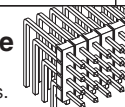
2mm Shunt
See 2SN Series.



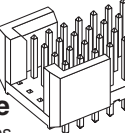
Low Profile
See YTT &
TMM Series.



Right Angle Four Row
See TMM Series.



Shrouded Four Row Vertical & Right Angle
See TMMS Series.



YTW	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	STACKER HEIGHT	TAIL SPEC
	02 thru 50	Specify LEAD STYLE from chart below.	-G = 20µ" (0,51µm) Gold contact area, Gold flash on tail -S = 30µ" (0,76µm) Gold contact area, Tin on tail (Style -01 & -02 not available) -L = 10µ" (0,25µm) Gold contact area, Tin on tail -T Tin	-Q = Four Row -5 = Five Row -6 = Six Row	-“XXX” = Stacker Height In inches (0,13mm) .005" increments Example: -250 = (6,35mm) .250"	-“XXX” = Tail Length In inches (0,13mm) .005" increments Example: -150 = (3,81mm) .150"

LEAD STYLE	OAL
-01	(8,20) .323
-02	(9,60) .377
-03	(13,60) .535
-04	(14,10) .555
-05	(15,10) .594
-06	(17,10) .673
-07	(19,10) .751
-09	(11,60) .456
-10	(15,60) .614
-11	(10,08) .397

ROW OPTION	STACKER HEIGHT
-Q	(3,05) .120 MIN
-5 & -6	(4,06) .160 MIN

Due to technical progress, all designs, specifications and components are subject to change without notice.

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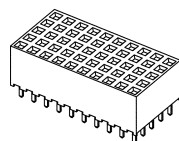
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SAMTEC JAPAN • Tel: 81-424-42-8318 • Fax: 81-424-42-8319

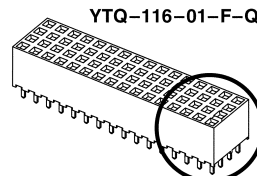
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SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

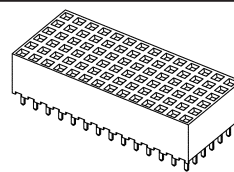
SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



YMQ-110-01-L-5



YMQ-116-01-F-Q



YTS-114-01-F-6

2mm HI-DENSITY SOCKET YTS, YMQ SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?YTS or www.samtec.com?YMQ

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +105°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Sn or Au over 50µ" (1.27µm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(2.62mm) .103" to (5.03mm) .198"

Max Cycles:

100 with 10µ" (0.25µm) Au



Mates with:
YTT, YTW, YTE, TMMS



Choice of four, five or six row

(2,00mm) .0787" pitch

(6,35mm) .250"

(2,00mm) .0787" TYP

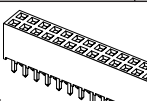
CURRENT RATING	
AMBIENT TEMP	Mated with YTT
20°C	5.5A
40°C	5A
60°C	4A
80°C	3A

Note: Some lengths, styles and options are non-standard, non-returnable.

Also Available

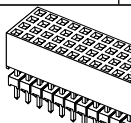
1, 2, & 3 Row

See SQW & SQT Series.



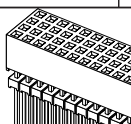
Elevated

See YTE Series.



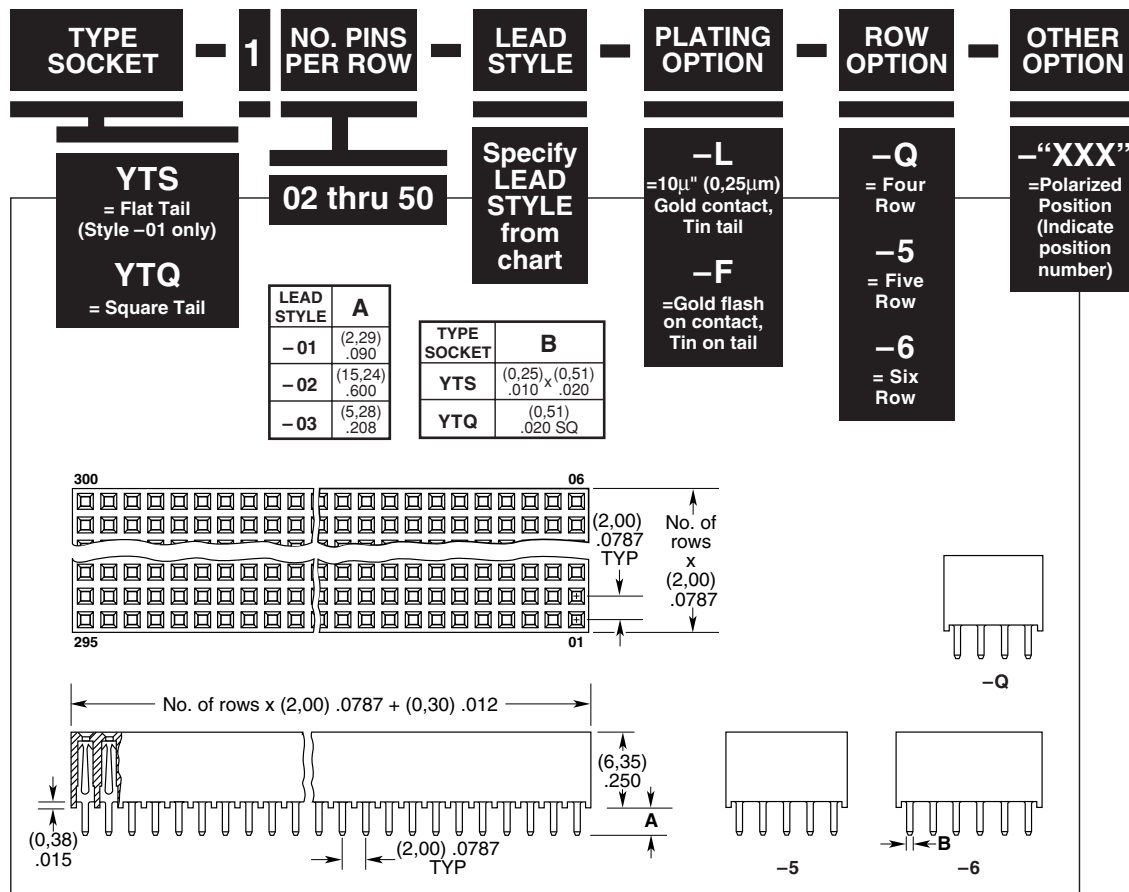
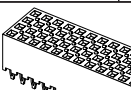
PC104+ Sockets

See ESQT-368 Series.



Press Fit

See PTHF Series.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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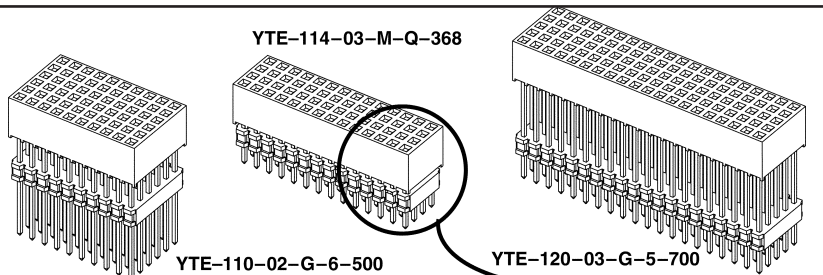
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2mm HI-DENSITY SOCKET YTE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?YTE

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

Operating Temp Range:

-65°C to +105°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Sn or Au over 50μ" (1,27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(2,62mm) .103" to (5,03mm) .198" with (0,38mm) .015" wipe

Max Cycles:

100 with 10μ" (0,25μm) Au

Insertion Force:

1.8oz (0,50N) avg

Withdrawal Force:

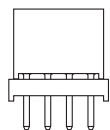
1.0oz (0,28N) avg



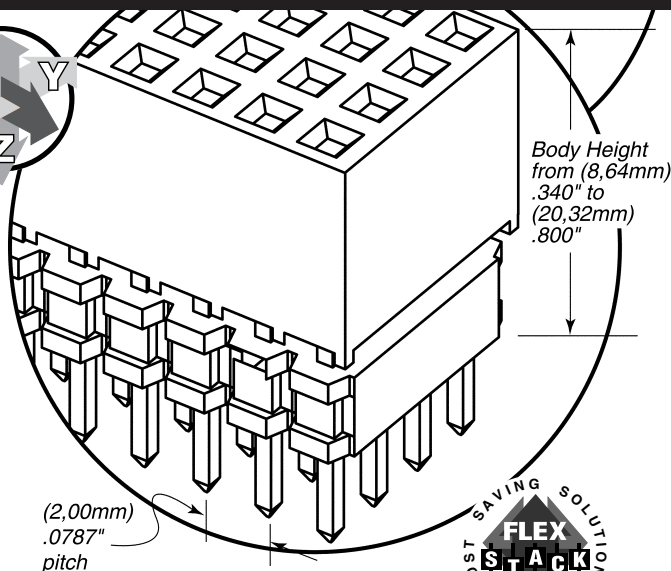
Mates with:
YTT, YTW, YTE



ALSO AVAILABLE



Paste In Hole (PIH) processing.
(Not recommended for self-nesting.)
Contact Samtec ASP Group.



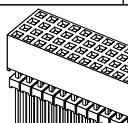
YTE	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	BODY HEIGHT	OTHER OPTION
02 thru 50			Specify LEAD STYLE from chart	-G = 20μ" (0,51μm) Gold (Recommended for self-nesting) -M = 20μ" (0,51μm) Gold on contact, Tin on tail -L = 10μ" (0,25μm) Gold on contact, Tin on tail -F = Gold flash on contact, Tin on tail		-"XXX" = Body Height (in inches) (8,64mm) .340" min. for -Q (9,53mm) .375" min. for -5 & -6 -Q = Quad Row -5 = Five Row -6 = Six Row	-"XXX" = Polarized Position (Indicate position number)

Note:
This Series is non-standard,
non-returnable.

Also Available

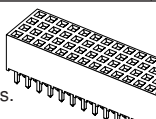
PC104+ Sockets

See ESQT-368 Series.



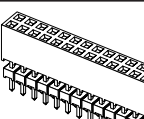
Low Profile

See YTS & YTQ Series.



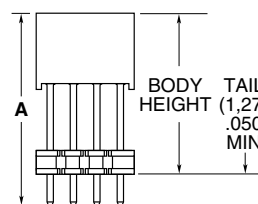
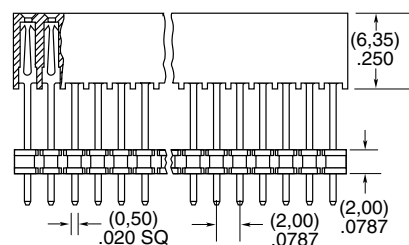
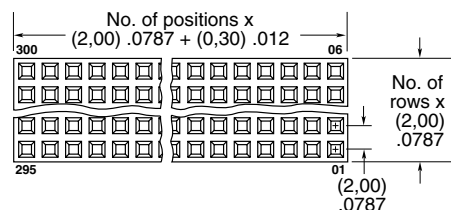
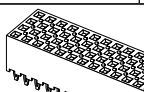
1, 2, & 3 Row

See ESQT Series.



Press Fit

See PTHF Series.



LEAD STYLE	A	MAX TAIL	MAX BODY HEIGHT
-02	(21,59) .850	(13,72) .540	(20,32) .800
-03	(11,63) .458	(3,76) .148	(10,36) .408

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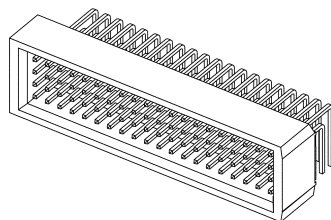
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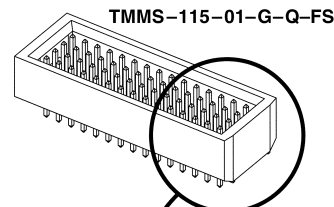
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TMMS-120-01-T-Q-RA-FS



TMMS-115-01-G-Q-FS

2mm QUAD ROW SHROUDED TMMS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TMMS

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Plating:
Sn or Au over 50μ"
(1,27μm) Ni

Max Processing Temp:
230°C for 60 seconds

Mates with:
YTQ, YTS, YTE, ESQT



APPLICATION SPECIFIC OPTION

Alignment Pin available.
Call Samtec.

Vertical or
Right Angle
option

Fully shrouded

(2,00mm)
.0787"
pitch

TMMS - 1 NO. PINS PER ROW - 01 - PLATING OPTION - Q - OPTION - FS

05, 10, 15, 20, 30, 40 & 50

-G

= 20μ" (0,51μm)
Gold on contact area
Gold flash on tail

-S

= 30μ" (0,76μm)
Gold on contact area,
Tin on tail

-L

= 10μ" (0,25μm)
Gold on contact area,
Tin on tail

-F

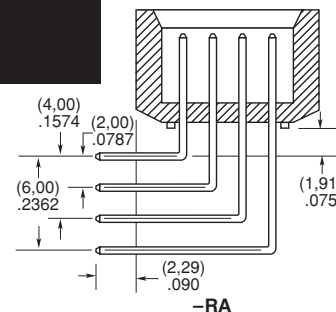
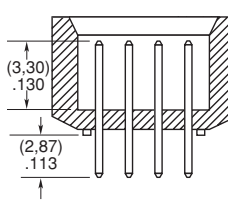
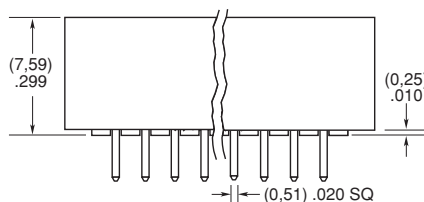
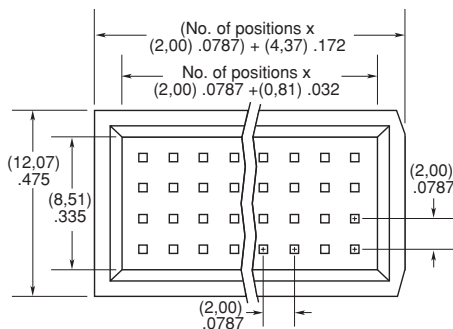
= Gold flash on contact area,
Tin on tail

-T

= Tin

-RA

= Right Angle



Note:
Some lengths, styles and
options are non-standard,
non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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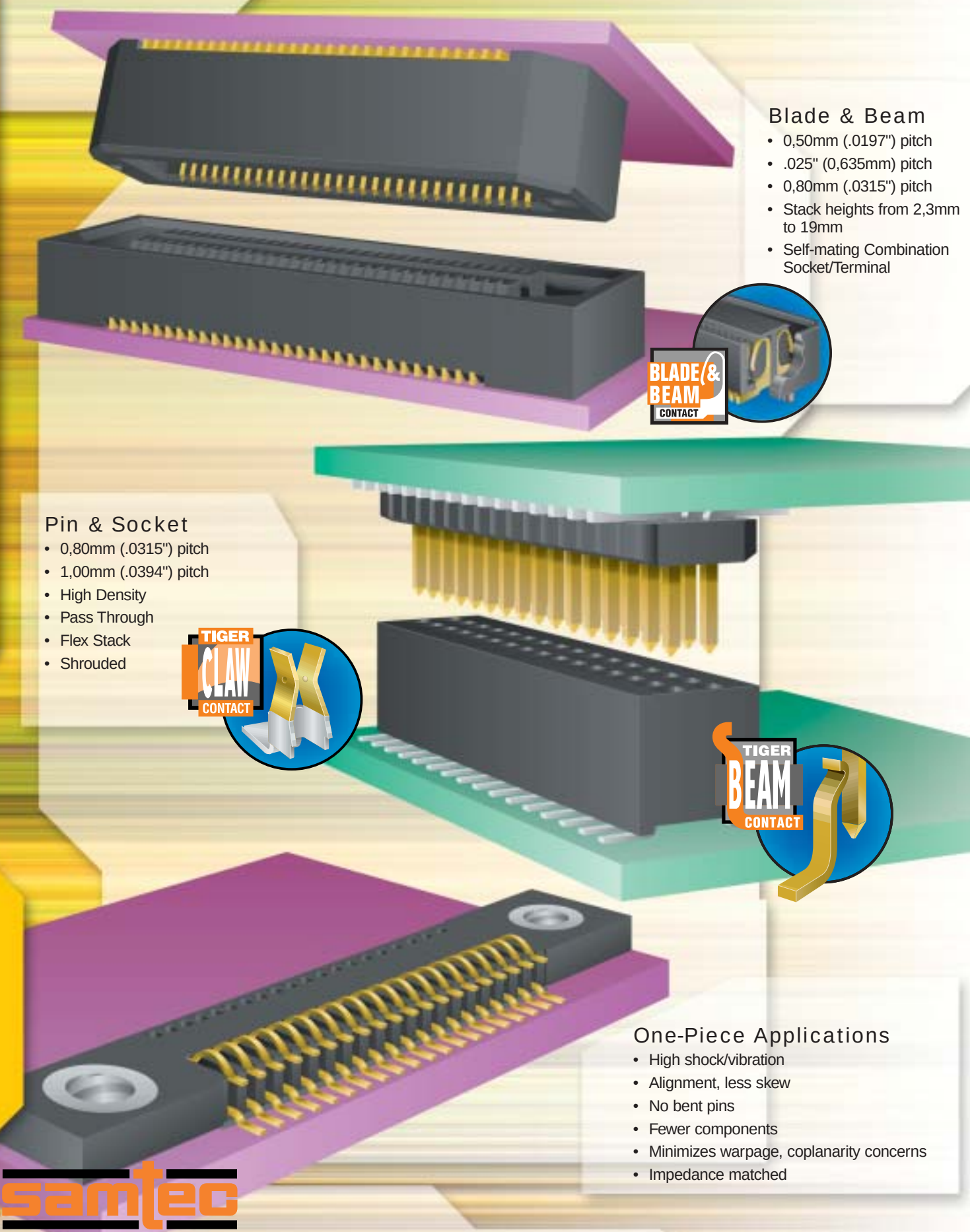
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MICRO & ONE-PIECE



Blade & Beam

- 0,50mm (.0197") pitch
- .025" (0,635mm) pitch
- 0,80mm (.0315") pitch
- Stack heights from 2,3mm to 19mm
- Self-mating Combination Socket/Terminal



Pin & Socket

- 0,80mm (.0315") pitch
- 1,00mm (.0394") pitch
- High Density
- Pass Through
- Flex Stack
- Shrouded



One-Piece Applications

- High shock/vibration
- Alignment, less skew
- No bent pins
- Fewer components
- Minimizes warpage, coplanarity concerns
- Impedance matched

MICRO

PITCH

APPLICATIONS

Micro Blade & Beam	84-85
Micro Pin & Socket	86-87
One-Piece Interfaces	89

STANDARD PRODUCTS

One-Piece

Solderless (GFZ)	89
1mm Pitch (FSI, SEI, SEL)	90-93
(2,54mm) .100" Pitch (SIB)	94
One-Piece Power (OPP)	95

Blade & Beam

Low Profile 0,5mm Pitch (LTH, LSH)	96-97
0,50mm Pitch Blade & Beam (BTH, BSH)	98-99
0,635mm Pitch Blade & Beam (BTS, BSS)	100
0,635mm Pitch Socket/Terminal (LSS)	101
0,80mm Pitch Blade & Beam (BTE, BSE)	102-104

Pin & Socket

0,80mm Pitch Headers, Stackers & Sockets (AW, FTE, CLE)	105-107
1mm Polarized Connectors (BKS, BKT)	108-109
1mm Pitch Headers (FTMH, FTM)	110-111
1mm Pitch Stackers (MW)	112
1mm Pitch Sockets (CLM, MLE)	113-114

ONE PIECE
INTERFACES

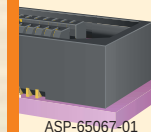
MICRO BLADE & BEAM

samtec

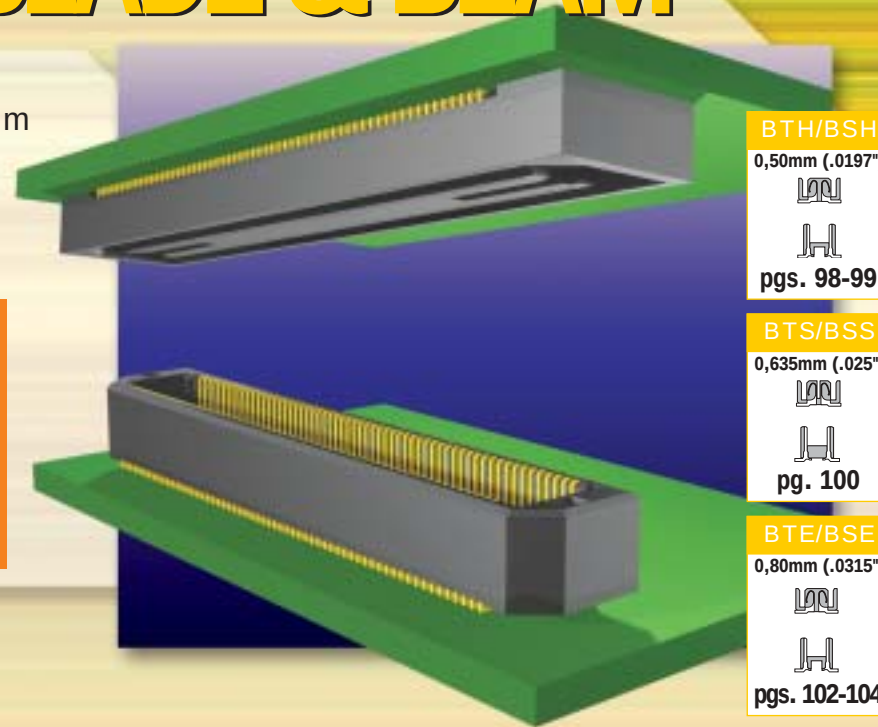
Basic Blade & Beam

- Low Profile
- Edge Mount
- Elevated
- Self-Mating

AGILENT
E5378A LOGIC
ANALYZER MATE:
See page 316



ASP-65067-01



BTH/BSH
0,50mm (.0197")



pgs. 98-99

BTS/BSS
0,635mm (.025")



pg. 100

BTE/BSE
0,80mm (.0315")



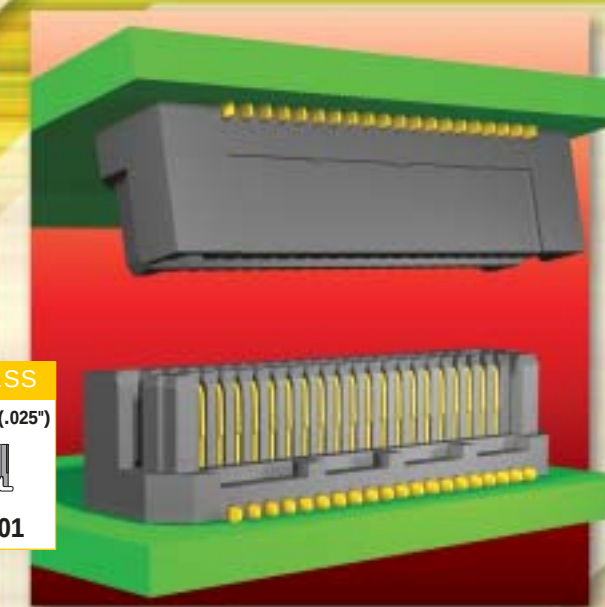
pgs. 102-104

LSS/LSS

0,635mm (.025")



pg. 101



Hermaphroditic

- One connector for both boards
- 6mm, 9mm and 12mm mated heights
- Shrouded and keyed with audible click upon mating

APPLICATIONS

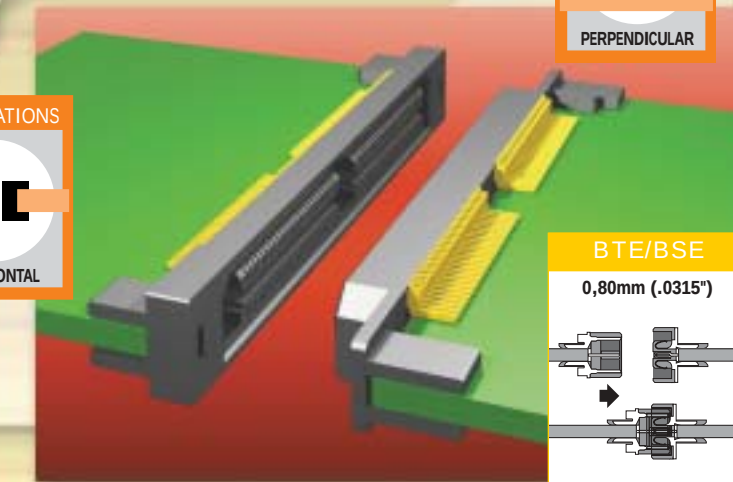


PERPENDICULAR

APPLICATIONS



HORIZONTAL



BTE/BSE

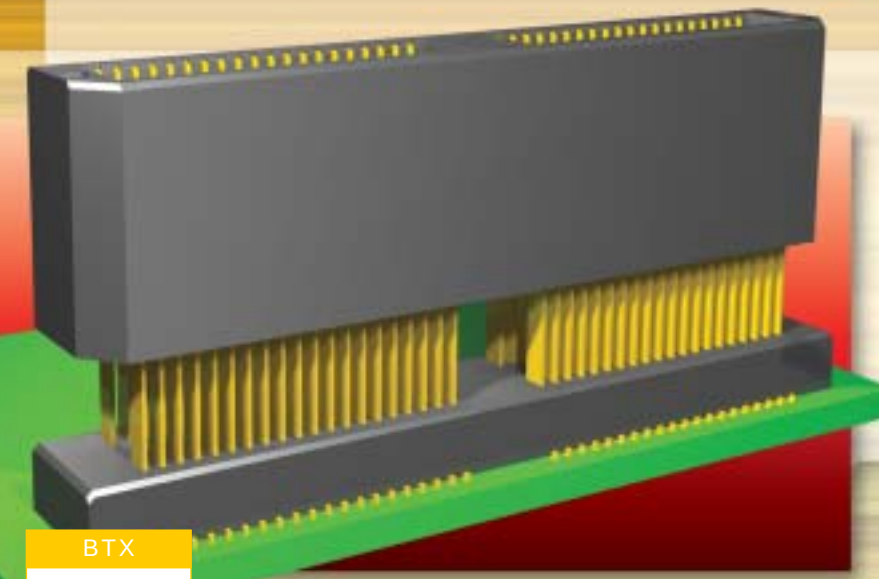
0,80mm (.0315")



pg. 104

Elevated

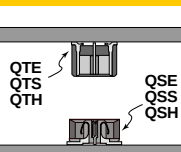
- Mated heights up to 30mm (1.181")
- Choice of three pitches:
0,5mm (.0197")
0,635mm (.025")
0,80mm (.0315")



Edge Mount

- 0,8mm pitch
- Suitable for perpendicular and coplanar applications
- Terminates to 1,60mm (0.62") boards

QTX/QSX



QTE
QTS
QTH

QSE
QSS
QSH

QSTRIP™
up to
2.33 GHz

High Speed

- Single-Ended
- Differential Pairs
- Right Angle and Edge Mount

QPAIRS™
up to
10 GHz

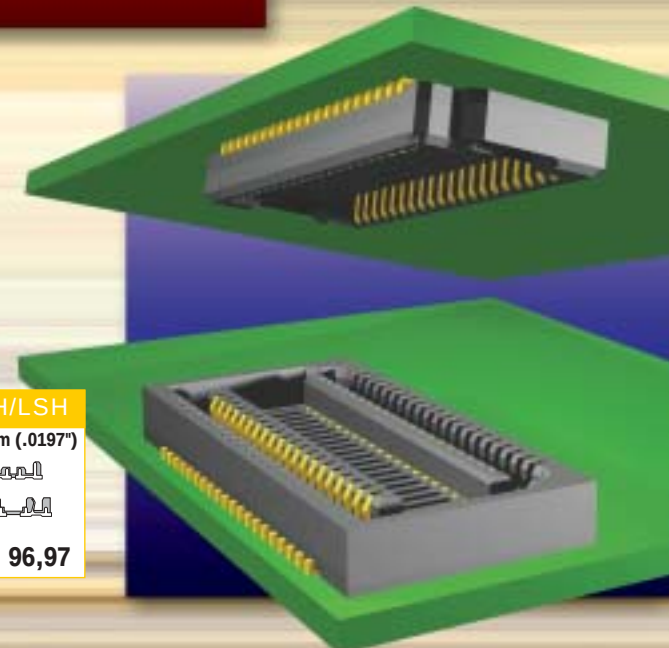
Low Profile

- Low 2,3mm profile
- 20 to 100 I/Os
- Polarized
- 0,5mm pitch

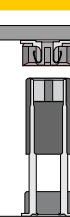
LTH/LSH
0,50mm (.0197")



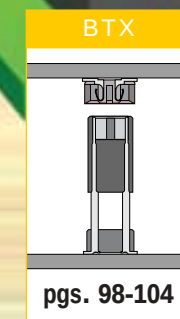
pgs. 96,97



BTX



pgs. 98-104



HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE

MICRO PIN & SOCKET

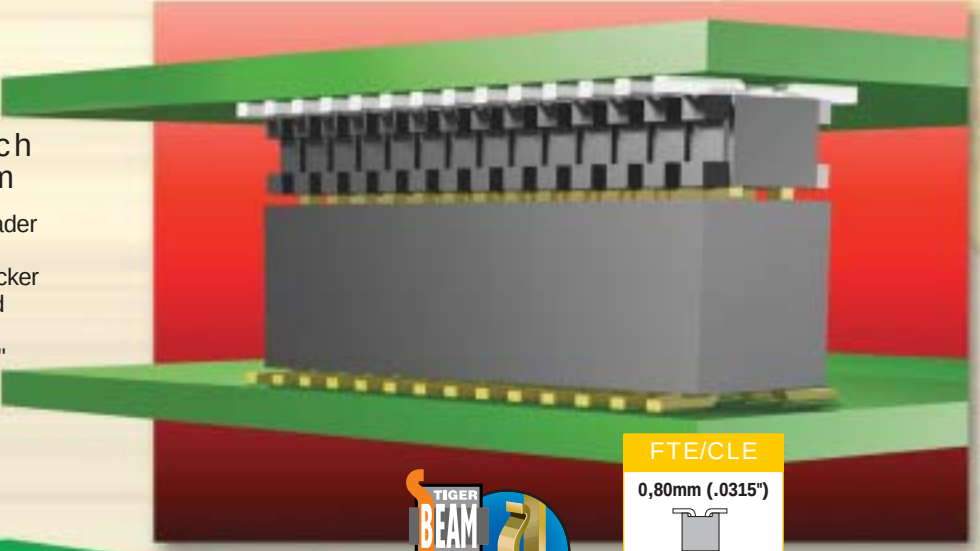


HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

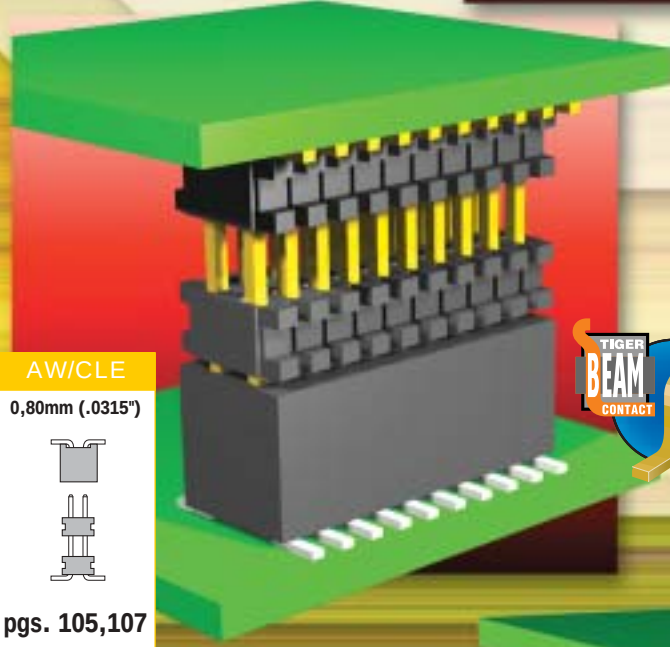
HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

0,8mm Pitch Tiger Beam

- Low profile header (FTE) and skyscraper stacker (AW) for mated heights to (9,14mm) .360"
- End shrouds available



FTE/CLE
0,80mm (.0315")
pgs. 106-107

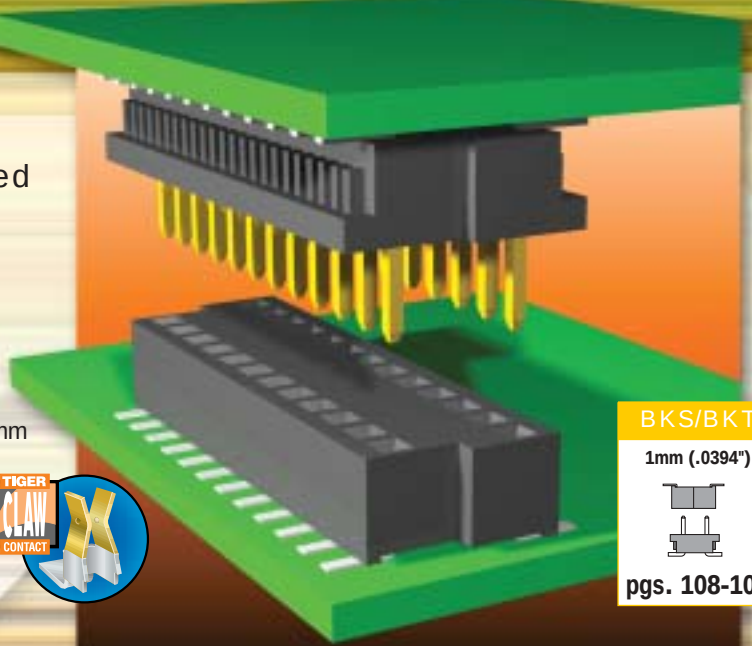


AW/CLE
0,80mm (.0315")
pgs. 105,107

FLEX STACK

1mm Pitch Polarized Connector Set

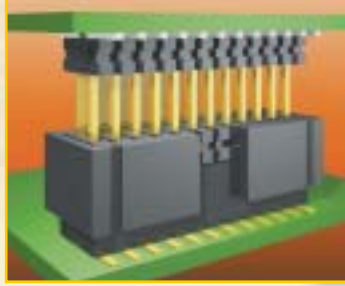
- Replace blade-and-leaf style connector with pin and socket system
- Tiger Claw contacts
- Choice of five mated board heights: 4,14mm, 4,50mm, 5,00mm, 6,00mm and 7,00mm
- Surface mount
- End shrouds available



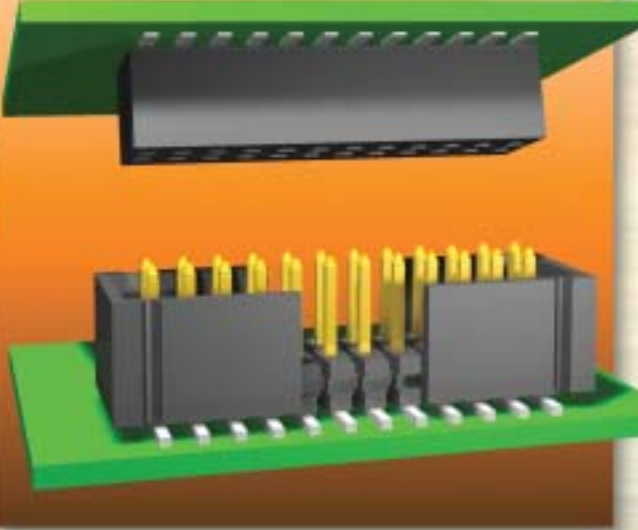
BKS/BKT
1mm (.0394")
pgs. 108-109

1mm Pitch Connector Sets

- Suitable for pass-through applications with (1,27mm) .050" mated height
- Skyscraper heights to (9,27mm) .356"
- Mated profiles as low as (3,48mm) .137"
- Shrouded headers & stackers for alignment and blind mating
- Tiger Beam & Tiger Claw Contacts



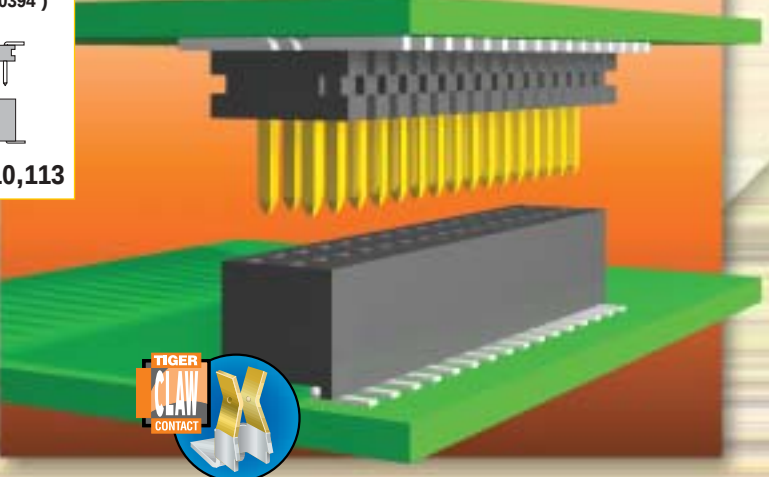
FTMH/MW
1mm (.0394")
pgs. 110-112



FTMH/MLE
1mm (.0394")
pgs. 110,114



FTMH/CLM
1mm (.0394")
pgs. 110,113



ONE-PIECE INTERFACES

APPLICATION	FEATURE
High shock/vibration	Robust design and mechanical hold-down options
Cost reduction	Handling/processing only one component
Quality improvement	Superior performance and reliability compared to elastomers
Flexible MCM interfaces	Choice of profile, pitch, lead count and configuration

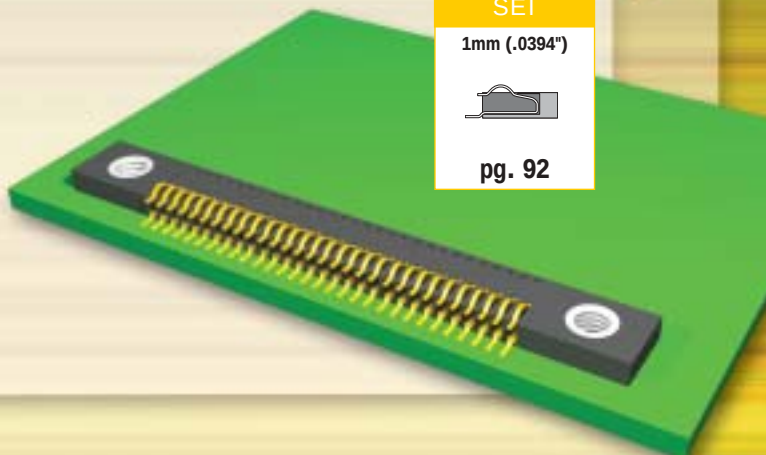
Micro Pitch

- 1mm pitch
- Low profile: (0,64mm) .025" (SEL) (1,27mm) .050" (SEL) (1,65mm) .065" (SEI)
- Elevated profile: 3mm, 6mm, and 10mm designs (FSI)
- Available with or without screw mount features



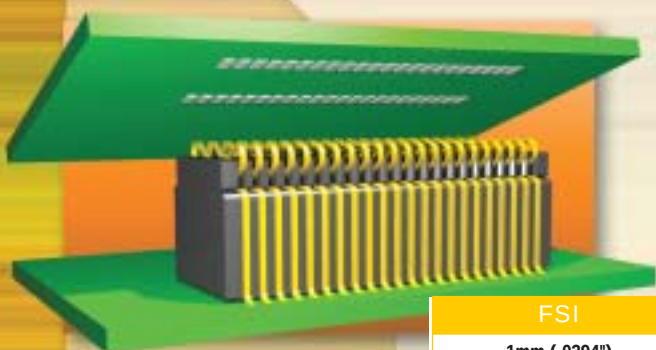
SEL
1mm (.0394")

pg. 93



SEI
1mm (.0394")

pg. 92

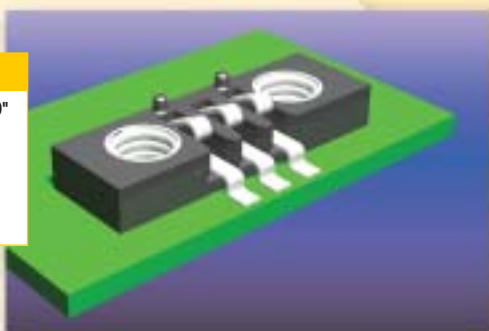


FSI
1mm (.0394")

pgs. 90-91

OPP
(2,54mm) .100"

pg. 95



(2,54mm) .100" Pitch

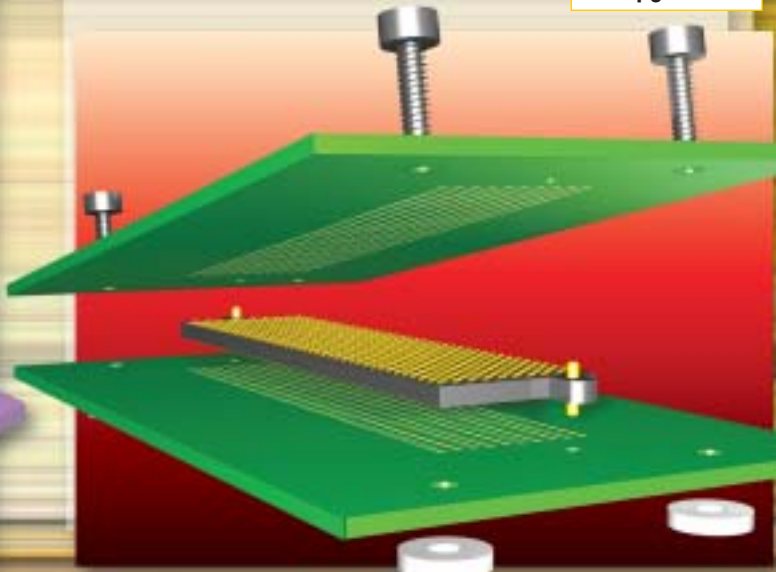
- (3,81mm) .150" profile
- Available with or without screw mount features
- (1,27mm) .050" contact deflection
- Signal (SIB) or Power (OPP) applications

Solderless Board Interfaces

- For detailed information see high density (page 61) interconnect applications
- Ideal for board stacking, module-to-board and LGA interfaces
- (1,27mm) .050" pitch; Low Profile

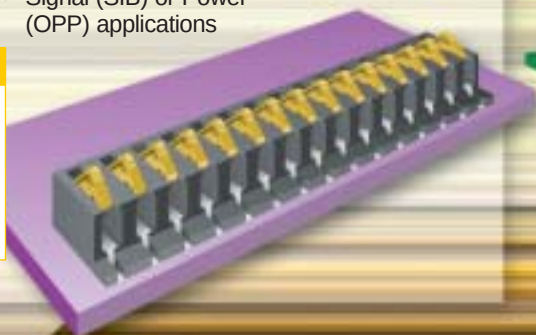
GFZ
(1,27mm) .050"

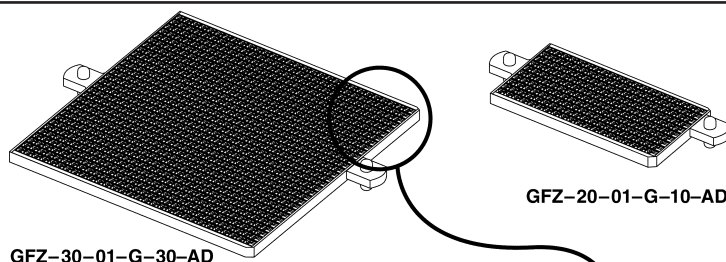
pg 89



SIB
(2,54mm) .100"

pg. 94





SOLDERLESS INTERFACE GFZ SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?GFZ

Insulator Material:
Liquid Crystal Polymer

Contact Material:
BeCu

Current Rating:
Testing Now!

Plating:
Au over 50μ" (1,27μm) Ni

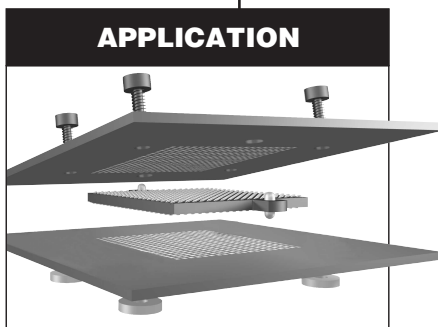
Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Lead Coplanarity:

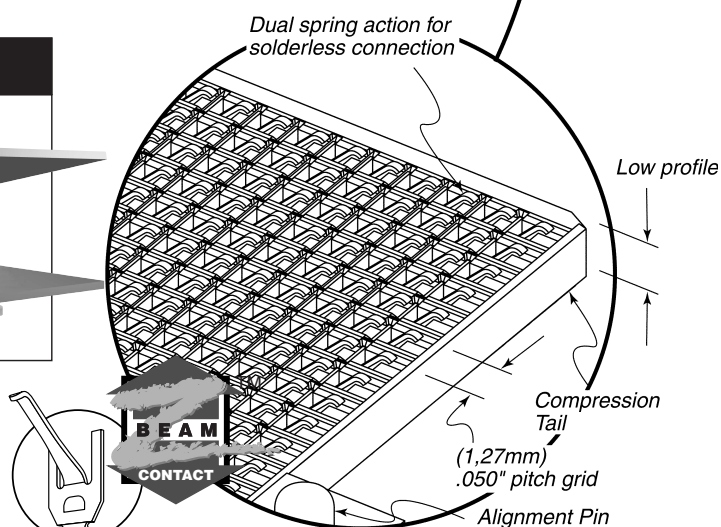
Dual Compression system
Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?GFZ for recommended PCB layout.

APPLICATION



APPLICATION SPECIFIC OPTIONS

Other grid sizes.
No alignment option.
Integrated frame for LGA.
Call Samtec.



GFZ

POSITIONS
PER ROW

01

PLATING
OPTIONNUMBER
OF ROWS

AD

-20, -30, -40

(See chart for available callouts)

-G

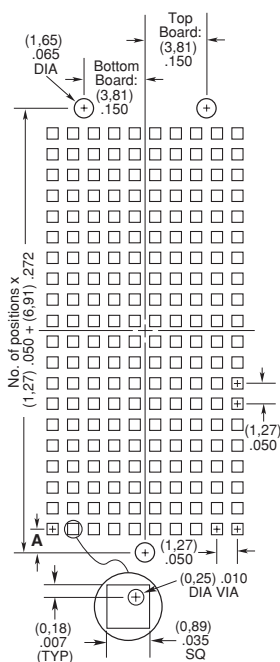
= 30μ" (0,76μm)
Gold

-10, -30

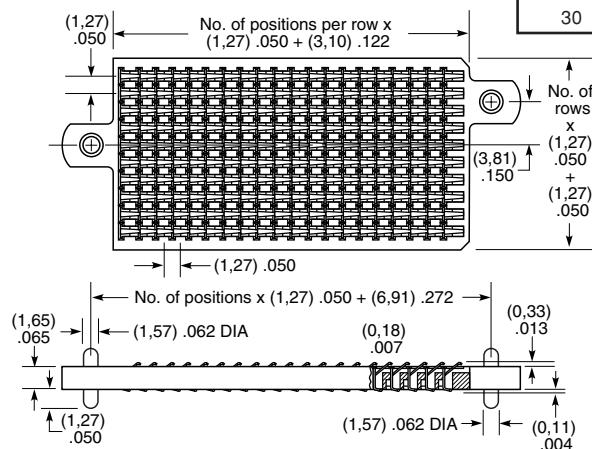
(See chart for available callouts)

AVAILABLE PART NUMBERS

POSITIONS PER ROW	NUMBER OF ROWS	TOTAL PINS	PART NUMBER
20	10	200	GFZ-20-01-G-10-AD
40	10	400	GFZ-40-01-G-10-AD
30	30	900	GFZ-30-01-G-30-AD



BOARD	A
BOTTOM	(3,30) .130
TOP	(4,09) .161



APPLICATIONS

(1,60mm) .062" MIN PCB			(2,40mm) .093" MIN PCB	
GRID SIZE	STIFFENER REQUIRED?	NO. OF SCREWS	STIFFENER REQUIRED?	NO. OF SCREWS
20x10	NO*	6	NO*	4
40x10	NO*	10	NO*	6
30x30	YES	4	YES	4

* Stiffeners may be used for all grid sizes shown. In that case, only 4 screws will be needed for most applications.

* Stiffeners may be used for all grid sizes shown. In that case, only 4 screws will be needed for most applications.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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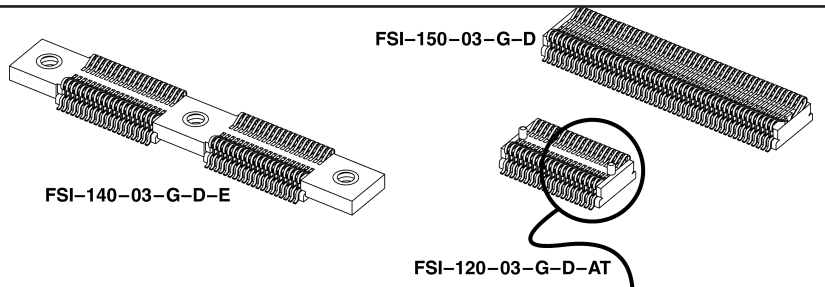
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samtec



Surface
SMT
Mount

ONE-PIECE INTERFACE FSI SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FSI

Insulator Material:

Liquid Crystal
Polymer



Contact Material:

Phosphor Bronze

Current Rating:

1A @ 80 ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50µ" (1,27µm) Ni

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (05-35)

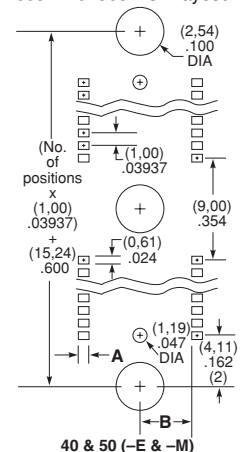
(0,15mm) .006" max (40-50)

Compression Board:

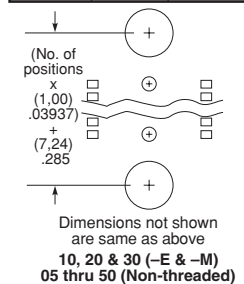
Gold Pads required

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?FSI for recommended PCB layout.



	SOLDER BOARD	MATING BOARD
A	(1,14) .045	(3,56) .140
B	(4,14) .163	(0,89) .035



ALSO AVAILABLE

Low profile see SEI & SEL series.
(2,54mm) .100" pitch
see SIB series.

Choice of
board stacking
profiles

(1,00mm)
.03937"

Optional
Alignment pins

Short version
or optional
threaded inserts

Note: Some lengths, styles and options are non-standard, non-returnable.

FSI - 1 PINS PER ROW	BODY HEIGHT	PLATING OPTION	D - INSERT OPTION	ALIGNMENT OPTION	OTHER OPTION
10, 20, 30, 40 & 50 (Screw Option) 05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Short Version)	-03 = 3,00mm	-G = 10µ" (0,25µm) Gold	Leave blank for Short Version (No screw down inserts or holes) -E = #2-56 x 1/16" screw thread -M = 2,00mm x 0,40mm screw thread	Leave blank for no Alignment Pin -AT = Alignment Pin Top Side -AB = Alignment Pin Bottom Side -AD = Alignment Pin Dual Side	-K = Polyimide Film Pick & Plane Pad -TR = Tape & Reel Packaging

Short Version

Insert Option (10, 20 & 30 pins/row)

Insert Option (40 & 50 pins/row)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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Surface
SMT
Mount

ONE-PIECE INTERFACE FSI SERIES

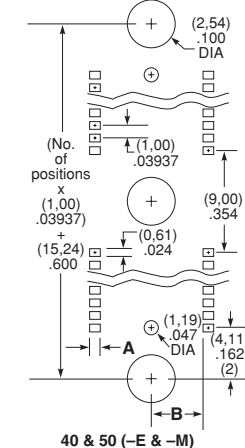
SPECIFICATIONS

For complete specifications see www.samtec.com?FSI

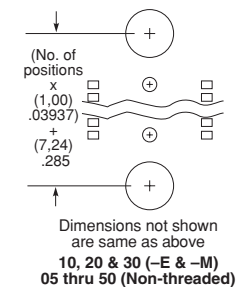
Insulator Material: Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Current Rating: 1A @ 80 ambient
Operating Temp Range: -65°C to +125°C
Plating: Au over 50µ" (1,27µm) Ni

Processing:

Max Processing Temp: 230°C for 60 seconds
SMT Lead Coplanarity: (0,10mm) .004" max (05-35)
(0,15mm) .006" max (40-50)
Compression Board: Gold Pads required
Suggested PCB Layouts: For reference only. Please contact Samtec or go to www.samtec.com?FSI for recommended PCB layout.



	SOLDER BOARD	MATING BOARD
A	(1,14) .045	(3,56) .140
B	(4,39) .173	(1,14) .045



ALSO AVAILABLE

Low profile see SEI & SEL series.
(2,54mm) .100" pitch see SIB series.

Note: Some lengths, styles and options are non-standard, non-returnable.

Choice of board stacking profiles

Optional Alignment pins

(1,00mm) .03937"

Short version or optional threaded inserts

FSI - 1 PINS PER ROW	BODY HEIGHT	PLATING OPTION	D - INSERT OPTION	ALIGNMENT OPTION	OTHER OPTION
10, 20, 30, 40 & 50 (Screw Option) 05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Short Version)	-06 = 6,00mm -10 = 10,00mm	-L = 10µ" (0,25µm) Gold on contact, Tin on tail	-E = #2-56 x 1/16" screw thread -M = 2,00mm x 0,40mm screw thread	Leave blank for no Alignment Pin -AT = Alignment Pin Top Side -AB = Alignment Pin Bottom Side -AD = Alignment Pin Dual Side	-K = (8,00mm) .315" DIA Polyimide Film Pick & Place Pad (40 & 50 position with threaded insert option only) -P = Plastic Pick & Place Pad (5,08mm) .200" x (12,45mm) .490" (40 & 50 not available with -E or -M) -TR = Tape & Reel Packaging

BODY HEIGHT	B
-06	(6,00) .236
-10	(10,00) .394

Short Version

Insert Option (10, 20 & 30 pins/row)

Insert Option (40 & 50 pins/row)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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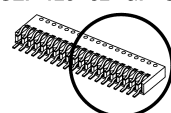
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SEI-110-02-GF-S-AT



SEI-120-02-GF-S



SEI-130-02-G-S-E

Surface
SMT
Mount

ONE-PIECE INTERFACE SEI SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SEI

Insulator Material:

Liquid Crystal
Polymer



Contact Material:

Phosphor Bronze

Current Rating:

1A @ 80°C ambient

Contact Deflection:

(0,46mm) .018" nominal

Operating Temp Range:

-65°C to +105°C

Plating:

Au over 50µ" (1,27µm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

Phosphor
Bronze
contact

Optional
alignment pins &
mounting screw
thread inserts

Low profile
(1,65mm) .065"

(1,00mm) .03937"
micro pitch

Processing:

Max Processing Temp:

230°C for 60 seconds

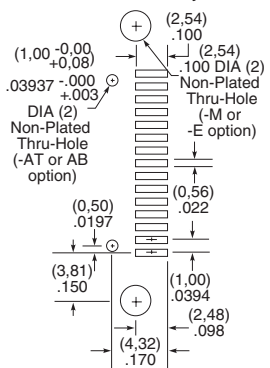
SMT Lead Coplanarity:

(0,10mm) .004" max (05-25)

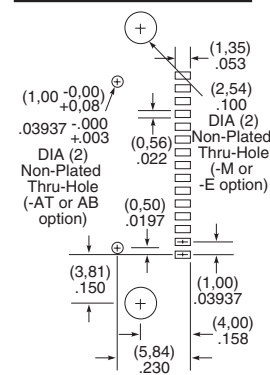
(0,15mm) .006" max (30)

Suggested PCB Layouts:

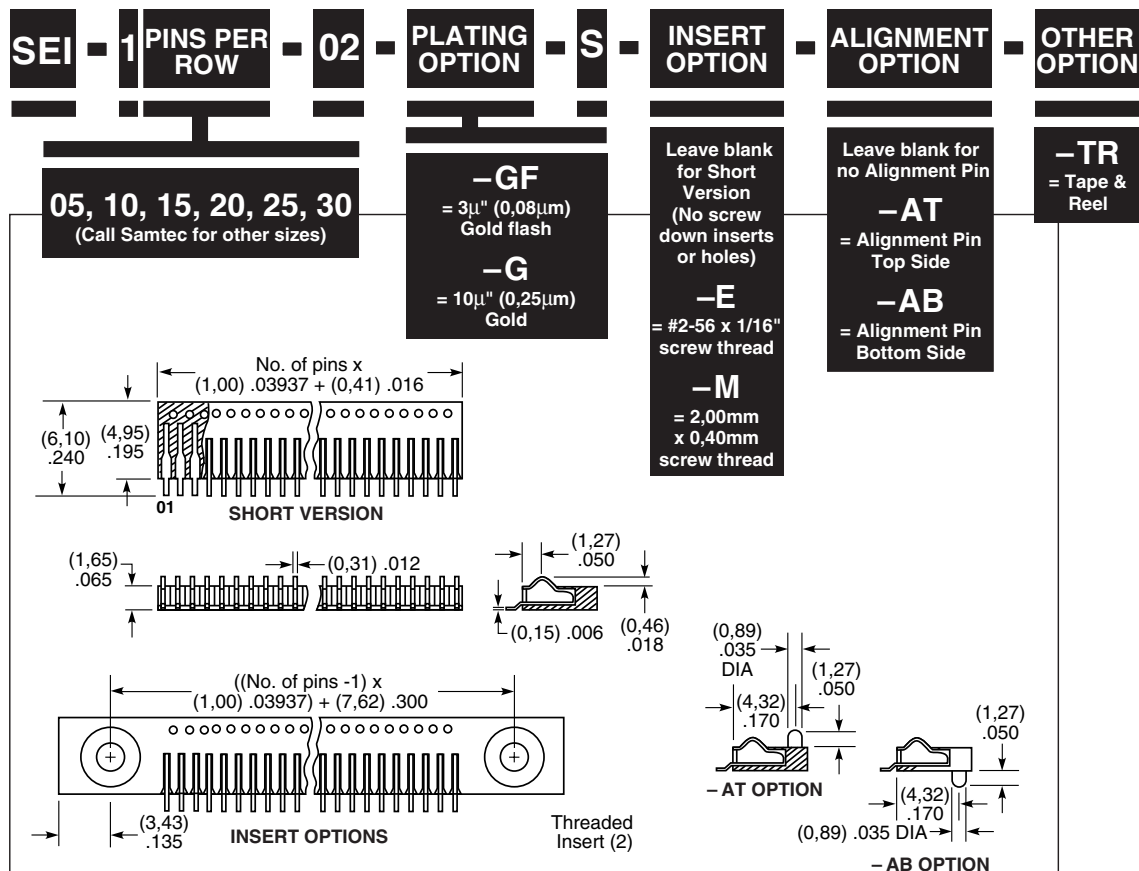
For reference only. Please contact Samtec or go to www.samtec.com?SEI for recommended PCB layout.



COMPRESSION BOARD PADS (Gold Pads Required)



SOLDER BOARD PADS (Tin or Tin/Lead Plated)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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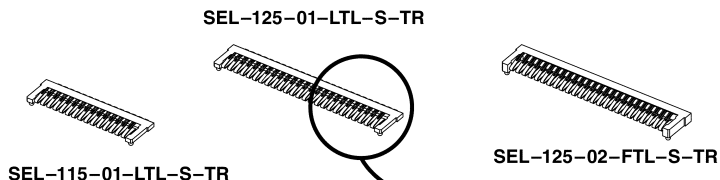
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ONE-PIECE LOW PROFILE SEL SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SEL

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating: 1A @ 80°C

Mating Force:

50g (0.49N) per contact

Voltage Rating:

60VAC

Cycles:

100 Min

Contact Deflection:

(0.84mm) .033" nominal

Operating Temp Range:

-65°C to +105°C

Plating:

Au over 50μ" (1.27μm) Ni

Large deflection

Low profile

(1.00mm)
.039"
pitch

Choice of
two heights

Processing:

Max Processing Temp:

230°C for 60 seconds

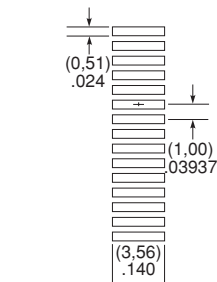
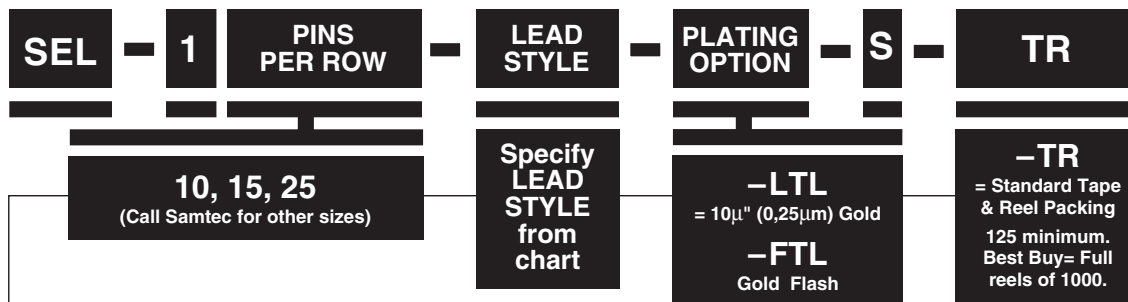
SMT Lead Coplanarity:

(0.10mm) .004" max

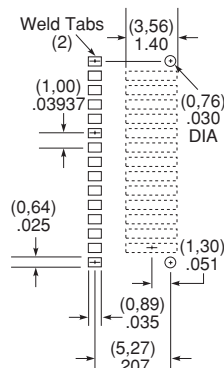
Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?SEL for recommended PCB layout.

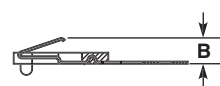
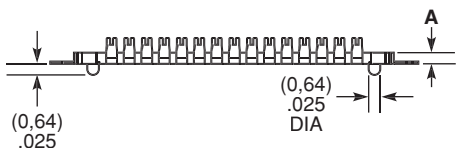
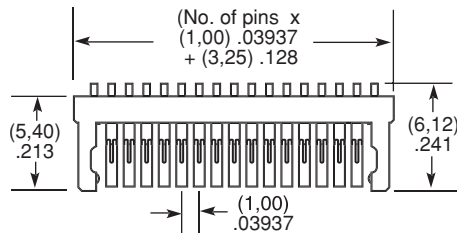
Note: Some lengths, styles and options are non-standard, non-returnable.



COMPRESSION BOARD PADS (Gold Pads Required)



SOLDER BOARD PADS (Tin or Tin/Lead Plated)



LEAD STYLE	A	B
-01	(0.64) .025	(1.47) .058
-02	(1.27) .050	(2.11) .083

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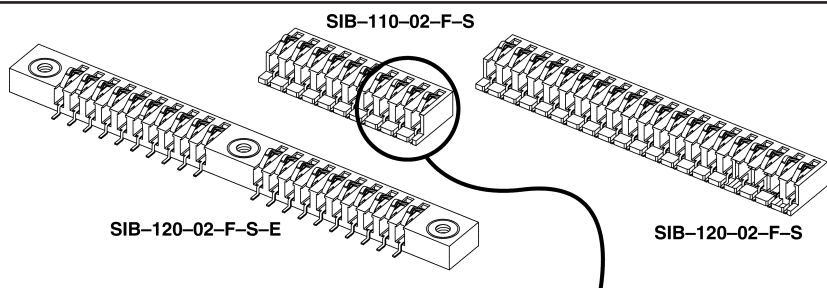
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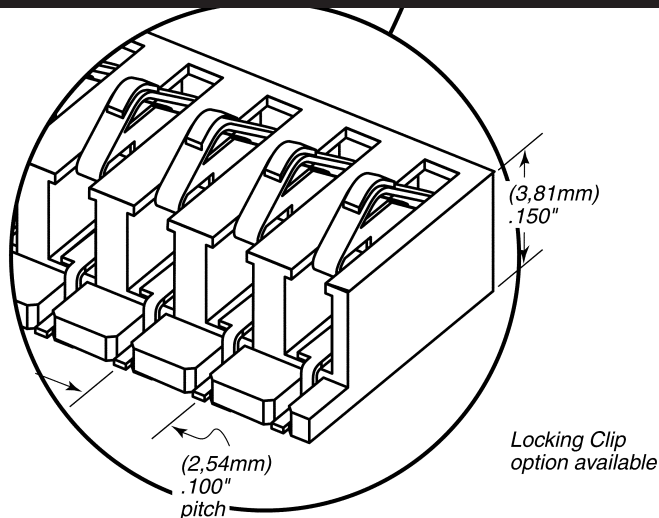


ONE-PIECE INTERFACE SIB SERIES

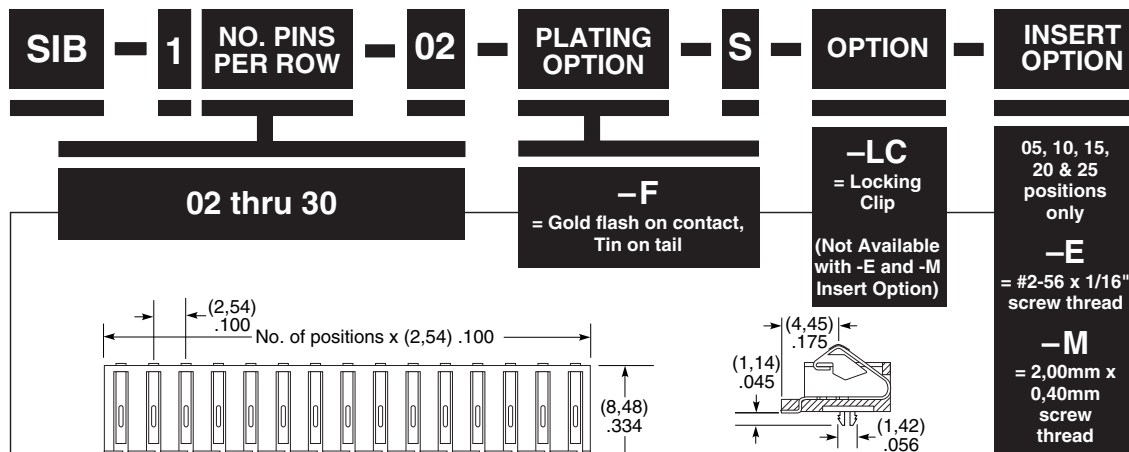
SPECIFICATIONS

For complete specifications see www.samtec.com?SIB

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Current Rating:
1A @ 80°C ambient
Operating Temp Range:
-65°C to +125°C
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Normal Force:
111 grams (1,09N) per contact

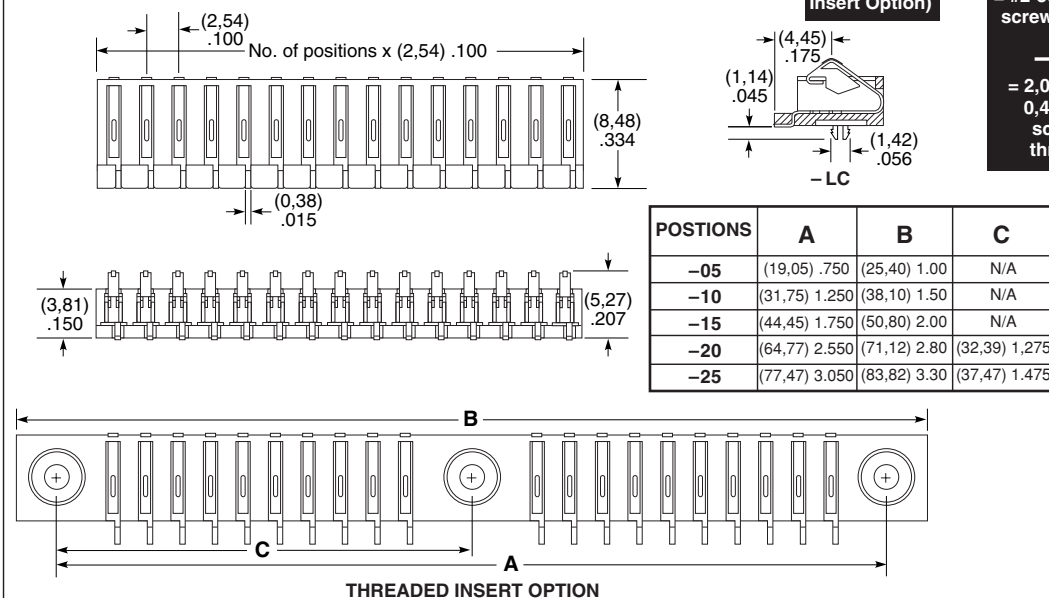
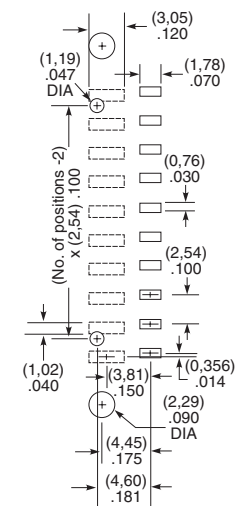


Note: Some sizes, styles and options are non-standard, non-returnable.



Processing:

Max Processing Temp:
230°C for 60 seconds
SMT Lead Coplanarity:
(0,10mm) .004" max
Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?SIB for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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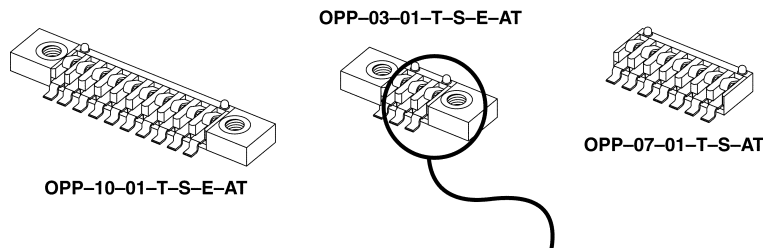
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ONE-PIECE INTERFACE OPP SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?OPP

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu
Operating Temp Range:
-65°C to +105°C
Current Rating:
5A @ 75°C ambient
Plating:
Sn over 50µ" (1,27µm) Ni

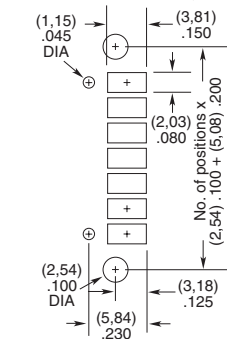
Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

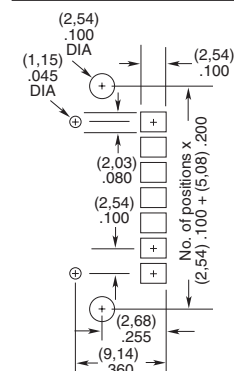
Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,15mm) .006" max

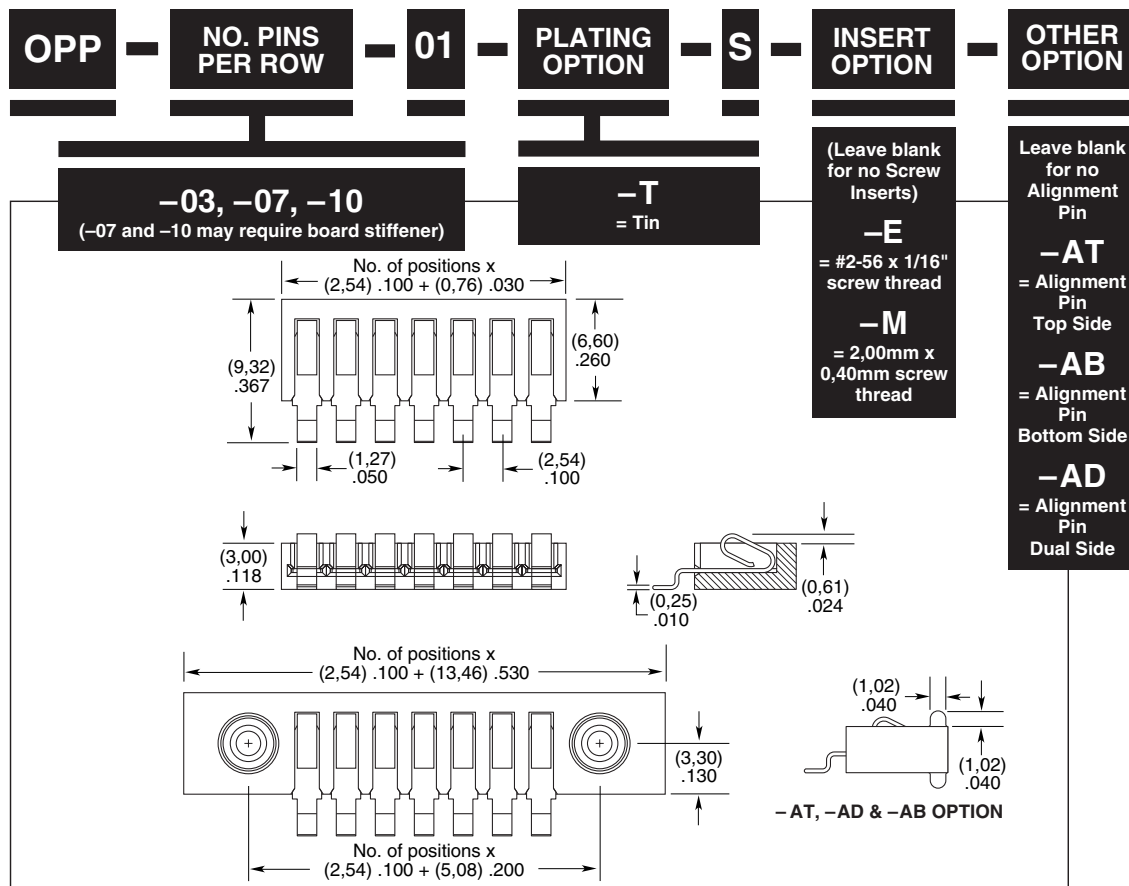
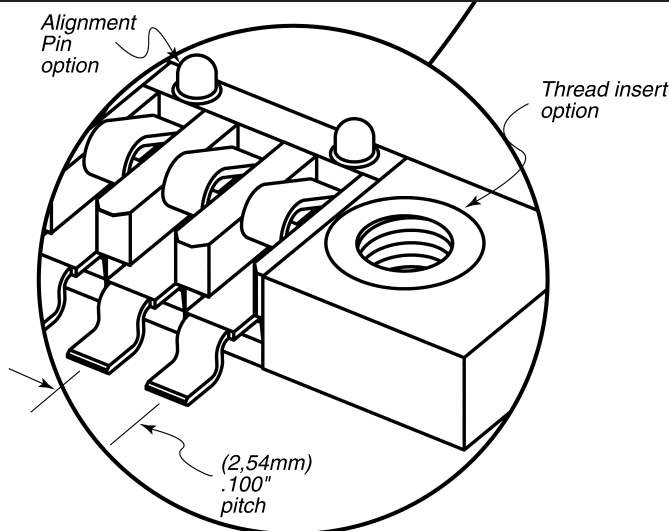
Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?OPP for recommended PCB layout.



COMPRESSION BOARD PADS



SOLDER BOARD PADS (Tin or Tin/Lead Plated)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC ITALY • Tel: 39 039 6890337 • Fax: 39 039 6890315

SAMTEC ASIA PACIFIC • Tel: 65 6745-5955 • Fax: 65 6841-1502

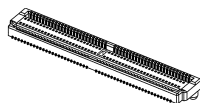
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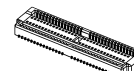
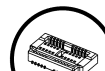
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LTH-050-01-G-D-A

LTH-010-01-G-D-A



LTH-030-01-G-D-A

LOW PROFILE 0,5mm HEADER LTH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?LTH

Insulator Material:

Liquid Crystal

Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

1.5A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni



Mates with:
LSH

STACK HEIGHT

LEAD STYLE	MATED HEIGHT WITH LSH
-01	(2,31) .091

LTH/LSH	500 MHz	1 GHz
Impedance (Ω)	50.2	59.3
Crosstalk (dB)	-30.7	-21.1
Propagation Delay (pS)	55	55

50 Ω System. 4:1 Signal to Ground ratio.

See www.samtec.com for complete test results.

Note: All measurements are at discrete points and do not represent linearity.

Phosphor Bronze terminal

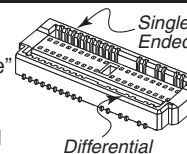
(0,50mm)
.01969"
pitch

Polarized

Alignment Pin

APPLICATION SPECIFIC OPTION

Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available. Call Samtec ASP Group.



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

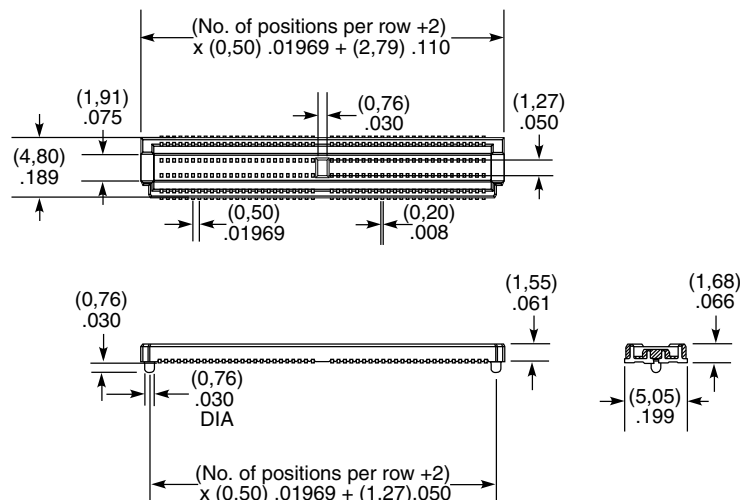
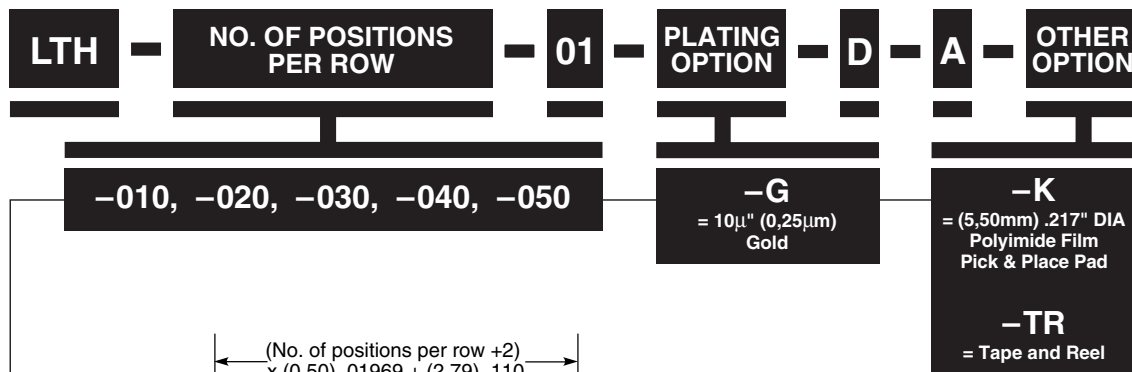
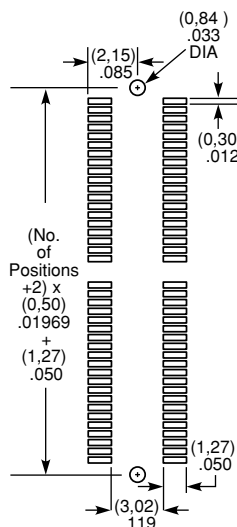
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm).004" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?LTH for recommended PCB layout.



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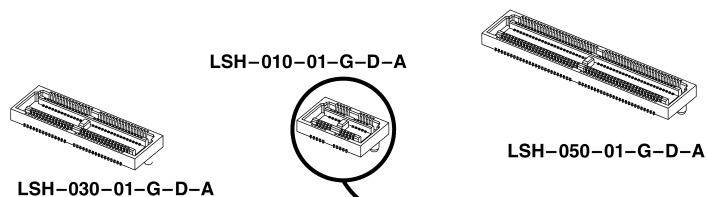
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LOW PROFILE 0,5mm SOCKET LSH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?LSH

Insulator Material:

Liquid Crystal Polymer

Contact Material:

BeCu

Current Rating:

1.5A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni



Mates with:
LTH

STACK HEIGHT

LEAD STYLE	MATED HEIGHT WITH LTH
-01	(2,31) .091

LTH/LSH	500 MHz	1 GHz
Impedance (Ω)	50.2	59.3
Crosstalk (dB)	-30.7	-21.1
Propagation Delay (pS)	55	55

50 Ω System. 4:1 Signal to Ground ratio.

See www.samtec.com for complete test results.

Note: All measurements are at discrete points and do not represent linearity.

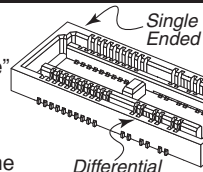
BeCu contact

Polarized

(0,50mm)
.01969
pitch

APPLICATION SPECIFIC OPTION

Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available. Call Samtec ASP Group.



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

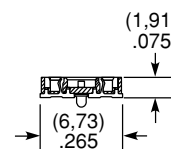
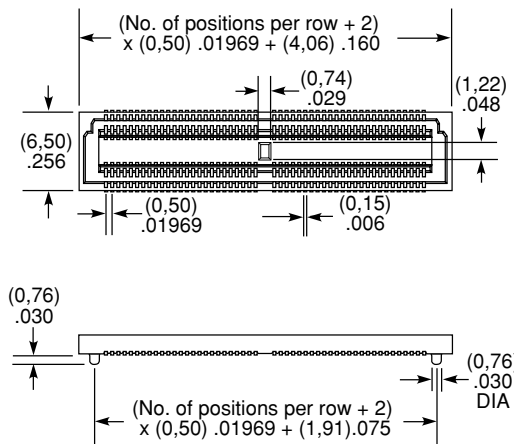
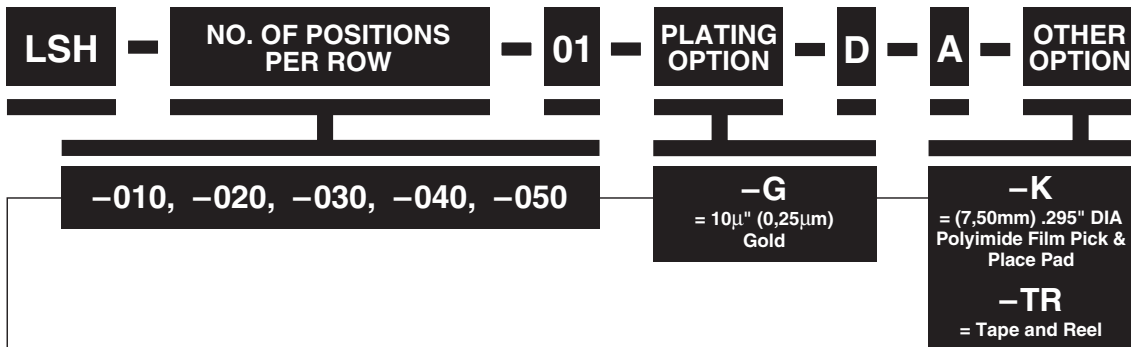
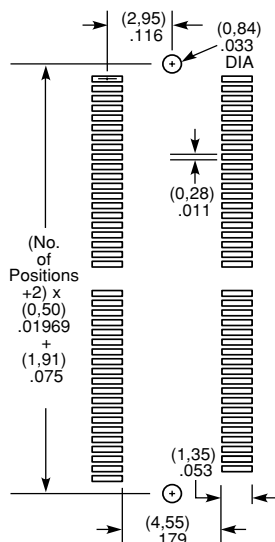
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm).004" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?LSH for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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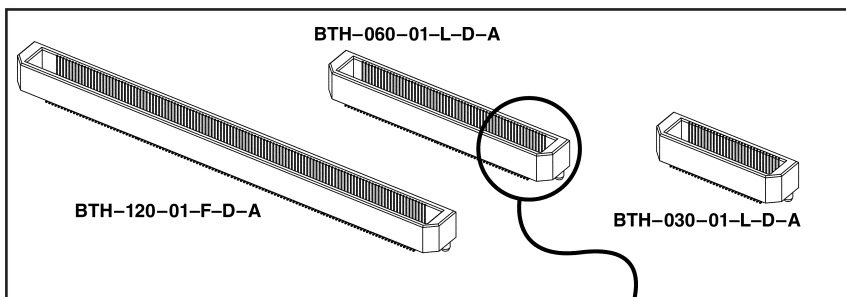
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0,50mm MICRO HEADER BTH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/BTH

Insulator Material:

Liquid Crystal
Polymer



Terminal Material:

Phosphor Bronze

Current Rating:
1.25A @ 80°C ambient &
5mm Stack Height

Operating Temp Range:
-65°C to +125°C

Voltage Rating:
125 VAC mated with BSH
& 5mm Stack Height

Plating:
Au over 50μ" (1,27μm) Ni

Note: Some lengths,
styles and options are
non-standard, non-returnable.

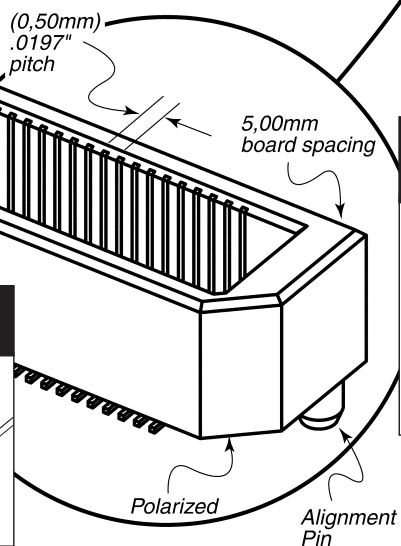
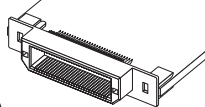
Mates with:
BSH

APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold available.
Call Samtec.

APPLICATION SPECIFIC

Edge Mount
header capability.
Contact Samtec
Interconnect
Processing Group.
www.samtec.com/standard_products/processing_information/ipg.asp



STACK HEIGHT CAPABILITY

LEAD STYLE	STANDARD MATED HEIGHT
-01	(5,00) .197

8mm, 11mm, 16mm,
19mm and 22mm
Stack Height Capability.
Call Samtec for availability.

Processing:

Max Processing Temp:

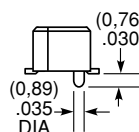
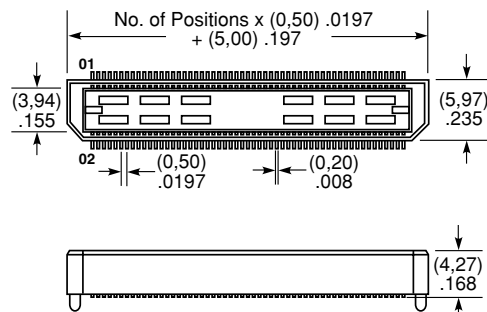
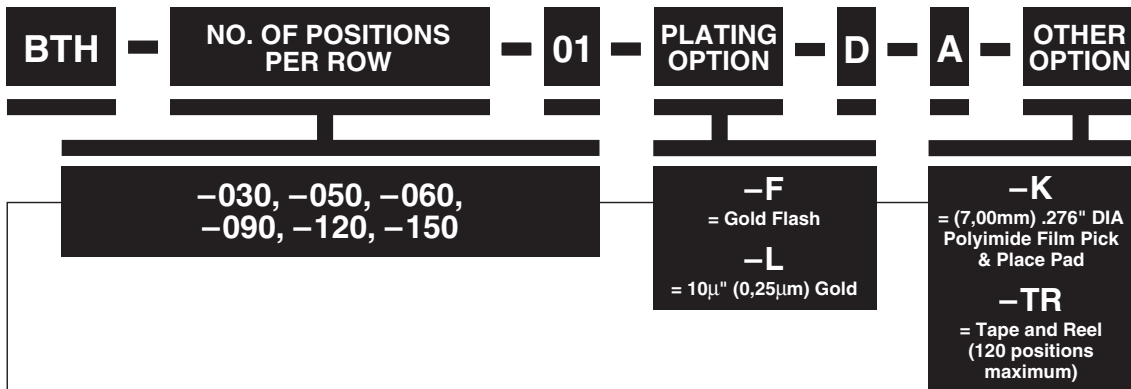
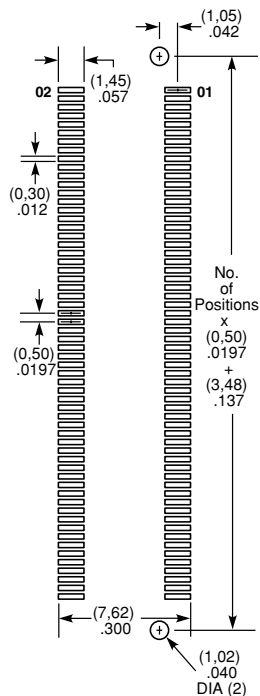
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm).004" max (030-090)
(0,15mm).006" max (120-150)

Suggested PCB Layouts:

For reference only. Please
contact Samtec or go to
www.samtec.com/BTH for
recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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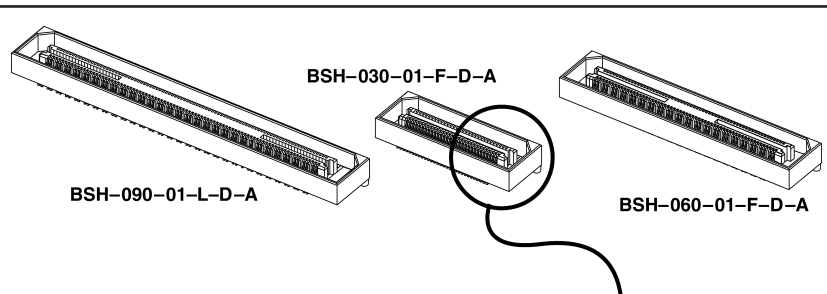
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0,50mm MICRO SOCKET BSH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?BSH

Insulator Material:

Liquid Crystal
Polymer

Contact Material:

Phosphor Bronze

Current Rating:

1.25A @ 80°C ambient & 5mm Stack Height

Operating Temp Range:

-65°C to +125°C

Voltage Rating:

125 VAC mated with BTH & 5mm Stack Height

Plating:

Au over 50μ" (1,27μm) Ni



Mates with:
BTH

AGILENT LOGIC ANALYZER TEST POINT CONNECTOR

Specify: ASP-65067-01

STACK HEIGHT CAPABILITY

LEAD STYLE	STANDARD MATED HEIGHT
-01	(5,00) .197

8mm, 11mm, 16mm, 19mm and 22mm Stack Height Capability. Call Samtec for availability.

APPLICATION SPECIFIC

Edge Mount socket capability. Contact Samtec Interconnect Processing Group. www.samtec.com/standard_products/processing_information/ipg.asp

APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold available. Call Samtec.

Processing:

Max Processing Temp:

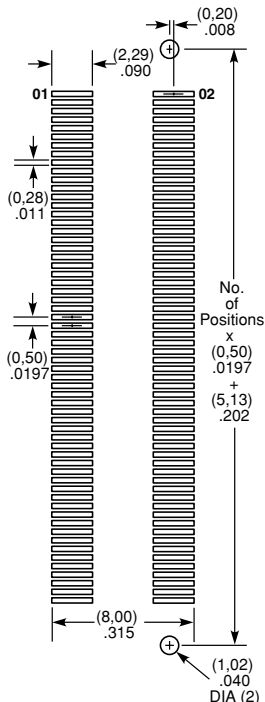
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm).004" max (030-090)
(0,15mm).006" max (120-150)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?BSH for recommended PCB layout.

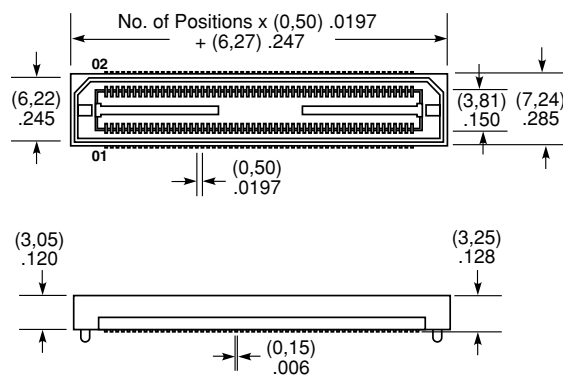


BSH - **NO. OF POSITIONS PER ROW** - **01** - **PLATING OPTION** - **D** - **A** - **OTHER OPTION**

-030, -050, -060, -090, -120, -150

-F
= Gold Flash
-L
= 10μ" (0,25μm) Gold

-TR
= Tape and Reel (120 positions maximum)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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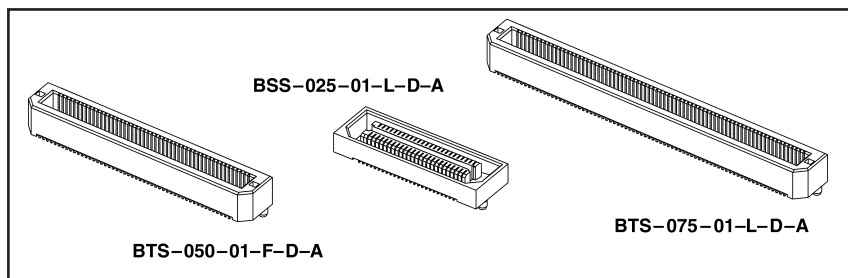
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0,635mm PITCH MICRO BTS, BSS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?BTS or www.samtec.com?BSS

Insulator Material:

Liquid Crystal
Polymer



Terminal Material (BTS):

Phosphor Bronze

Contact Material (BSS):

Phosphor Bronze

Current Rating:

1.6A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Au over 50μ" (1,27μm) Ni

SMT Lead Coplanarity:

(0,10mm) .004" max

STACK HEIGHT

LEAD STYLE	STANDARD MATED HEIGHT
-01	(5,00) .197

BTS - **NO. OF POSITIONS PER ROW** - **01** - **PLATING OPTION** - **D** - **A** - **OTHER OPTION**

Mates with: BSS

-025, -050, -075, -100, -125, -150

-F
= Gold Flash

-L
= 10μ" (0,25μm) Gold

-K
= (7,00mm) .275" DIA Polyimide Film Pick & Place Pad

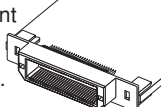
-TR
= Tape & Reel (~100 positions maximum)

APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold available.
Call Samtec.

EDGE MOUNT CAPABILITY

Edge Mount capability.
Call for availability.



BSS - **NO. OF POSITIONS PER ROW** - **01** - **PLATING OPTION** - **D** - **A** - **OTHER OPTION**

Mates with: BTS

-025, -050, -075, -100, -125, -150

-F
= Gold Flash

-L
= 10μ" (0,25μm) Gold

-TR
= Tape & Reel (~100 positions maximum)

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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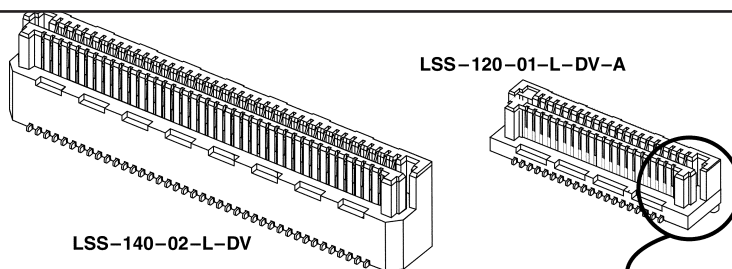
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.025" (0,635mm) TERMINAL/SOCKET LSS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?LSS

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Au over 50μ" (1,27μm) Ni

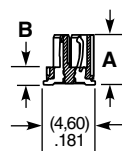
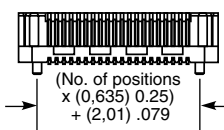
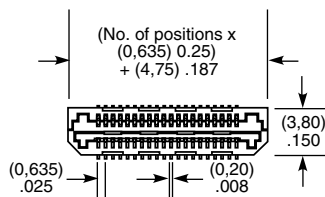
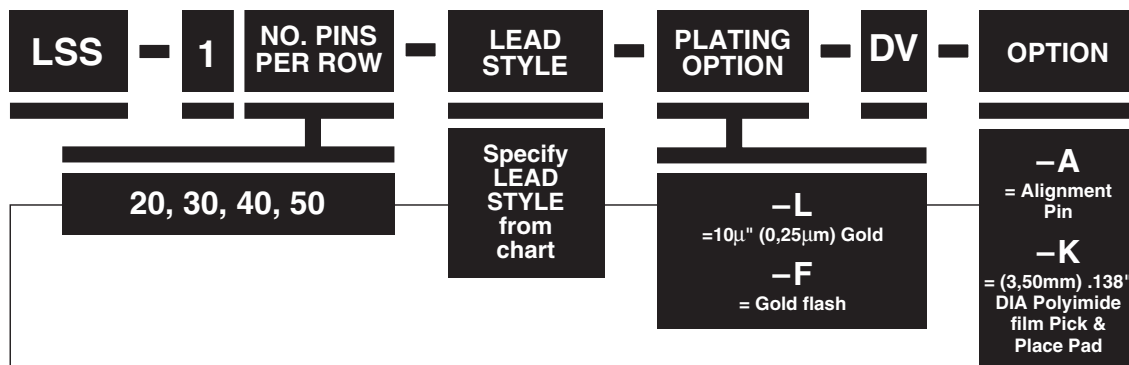
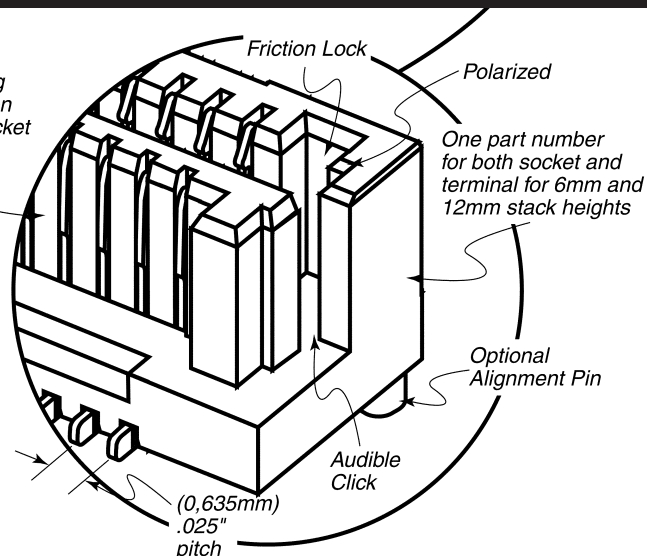
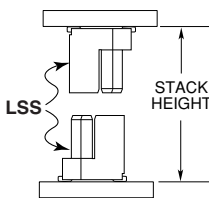
SMT Lead Coplanarity:

(0,10mm).004" max

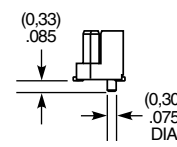
Mates with:
LSS

APPLICATION

LEAD STYLE	STACK HEIGHT
-01 & -01	(6,00) .024
-01 & -02	(9,00) .354
-02 & -02	(12,00) .472



LEAD STYLE	A	B
-01	(4,45) .175	(1,55) .047
-02	(7,45) .293	(4,55) .179



-A OPTION

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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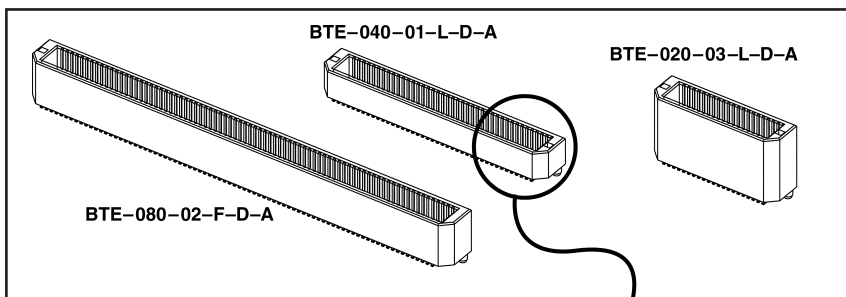
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0,80mm BASIC HEADER BTE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?BTE

Insulator Material:

Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

mated with BSE

& 5mm Stack Height

Operating Temp Range:

-65°C to +125°C

Voltage Rating:

225 VAC mated with BSE

& 5mm Stack Height

Plating:

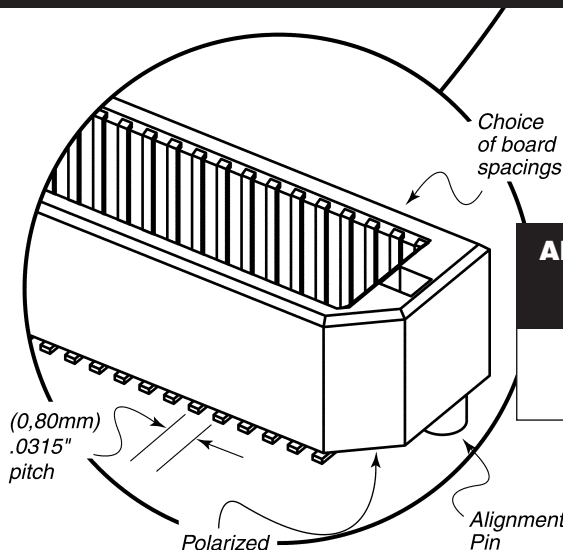
Au over 50μ" (1,27μm) Ni

Mates with:
BSE

STACK HEIGHT CAPABILITY

LEAD STYLE	MATED HEIGHT WITH BSE
-01	(5,00) .197
-02	(8,00) .315
-03	(11,00) .433
-04	(16,10) .634
-05	(19,10) .752

22,10mm, 25mm and 30mm stack height capability. Call for availability.



APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold available. Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (020-080)

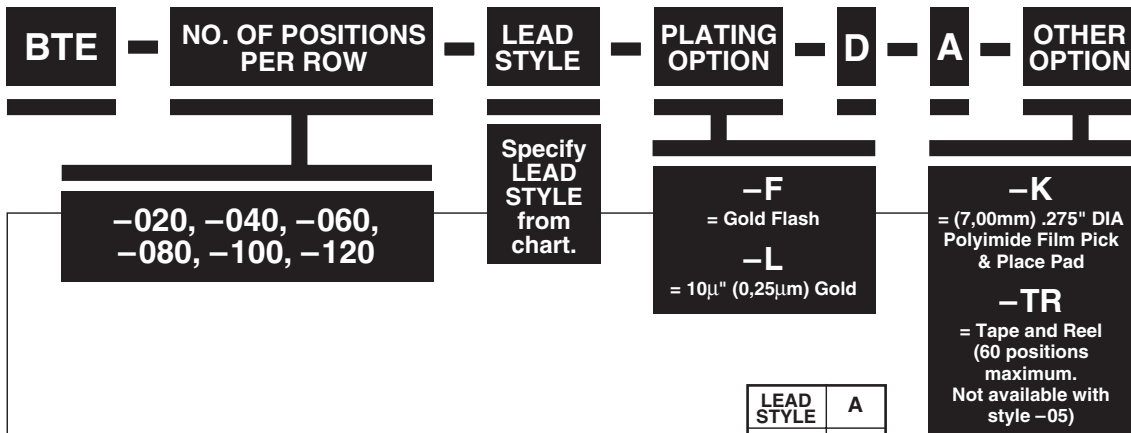
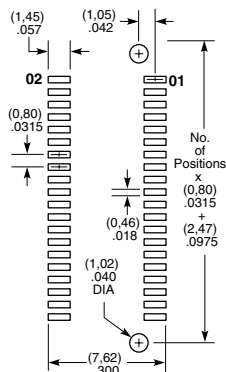
(0,15mm) .006" max (100-120)

Suggested Paste Thickness:

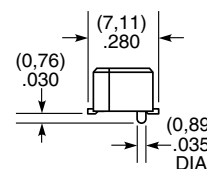
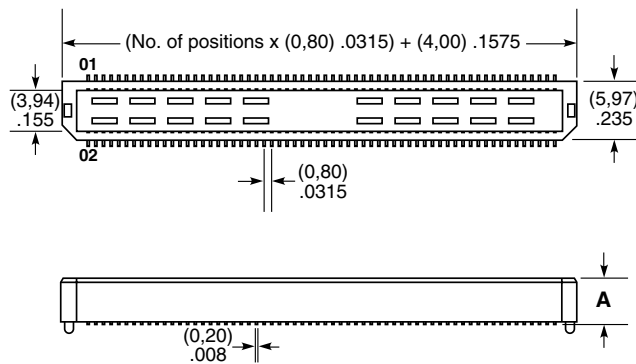
For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?BTE for recommended PCB layout.



LEAD STYLE	A
-01	(4,27) .168
-02	(7,21) .284
-03	(10,26) .404
-04	(15,24) .600
-05	(18,24) .718



Due to technical progress, all designs, specifications and components are subject to change without notice.

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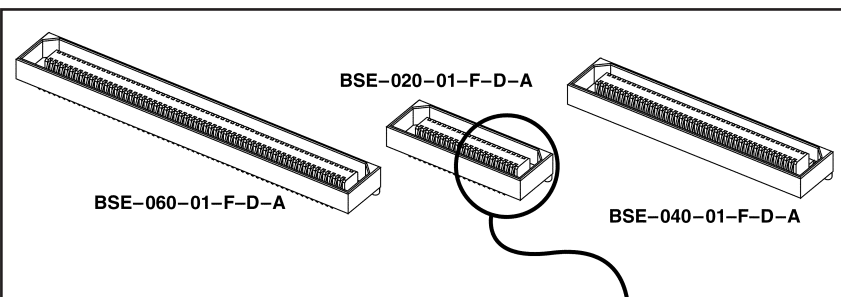
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0,80mm BASIC SOCKET BSE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/BSE

Insulator Material:

Liquid Crystal
Polymer



Contact Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient mated with BTE & 5mm Stack Height

Operating Temp Range:

-65°C to +125°C

Voltage Rating:

225 VAC mated with BTE & 5mm Stack Height

Plating:

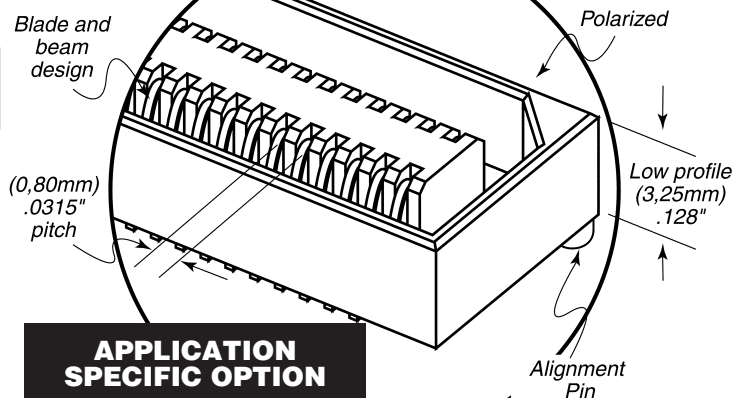
Au over 50μ" (1,27μm) Ni

Mates with:
BTE

STACK HEIGHT CAPABILITY

LEAD STYLE	MATED HEIGHT WITH BTE
-01	(5,00) .197
-02	(8,00) .315
-03	(11,00) .433
-04	(16,10) .634
-05	(19,10) .752

22,10mm, 25mm and 30mm stack height capability. Call for availability.



APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold and available. Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (020-080)

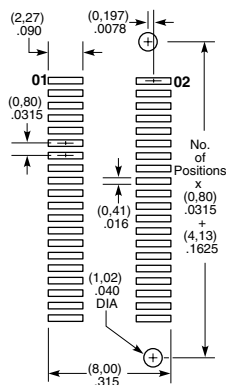
(0,15mm) .006" max (100-120)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/BSE for recommended PCB layout.

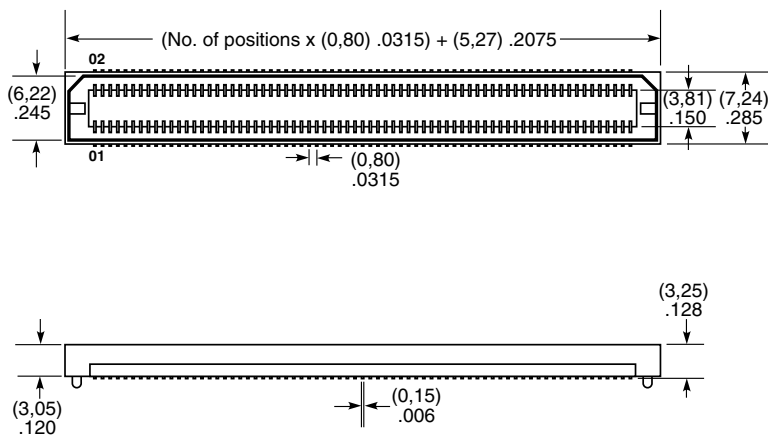


BSE - **NUMBER OF POSITIONS PER ROW** - **01** - **PLATING OPTION** - **D** - **A** - **OTHER OPTION**

-020, -040, -060,
-080, -100, -120

-F
= Gold Flash
-L
= 10μ" (0,25μm) Gold

-TR
= Tape and Reel
(80 positions maximum)



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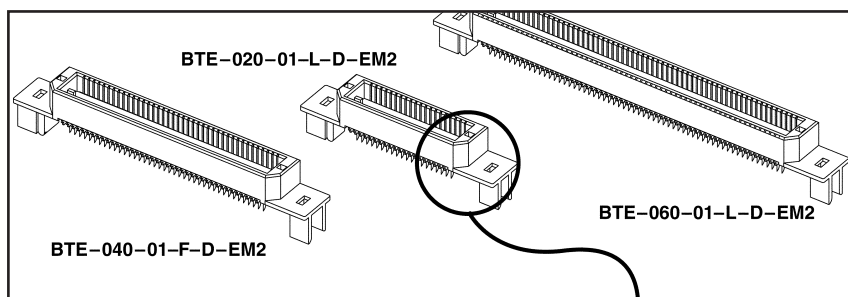
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0,80mm EDGE MOUNT HEADER BTE (-EM) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?BTE-EM

Insulator Material:

Liquid Crystal

Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

Plating:

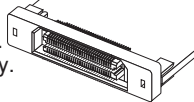
Au over 50μ" (1,27μm) Ni



Mates with:
BSE

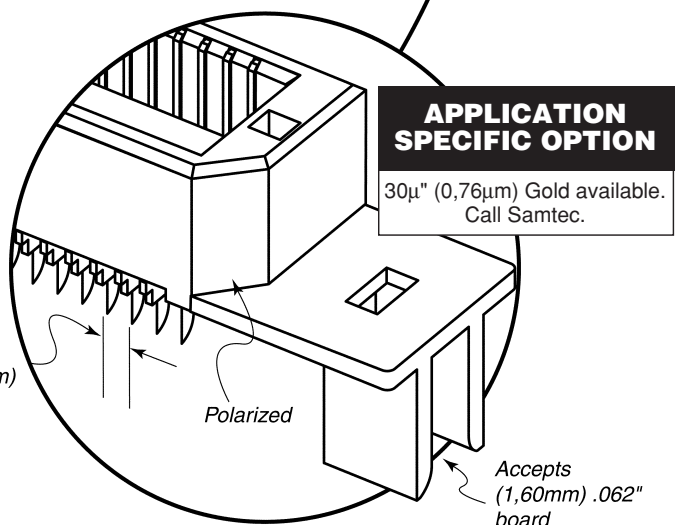
EDGE MOUNT CAPABILITY

Edge Mount
Socket capability.
Call for availability.



APPLICATION SPECIFIC OPTION

30μ" (0,76μm) Gold available.
Call Samtec.



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

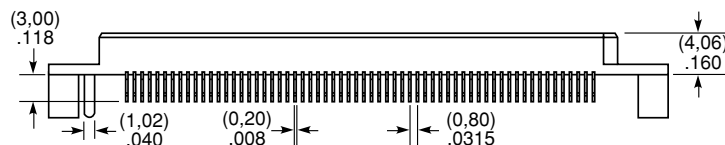
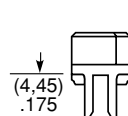
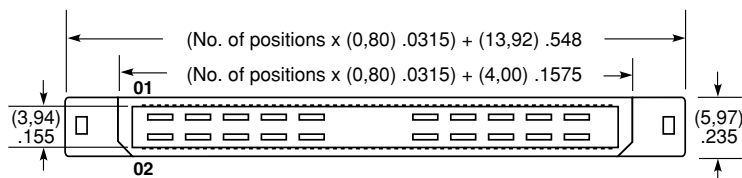
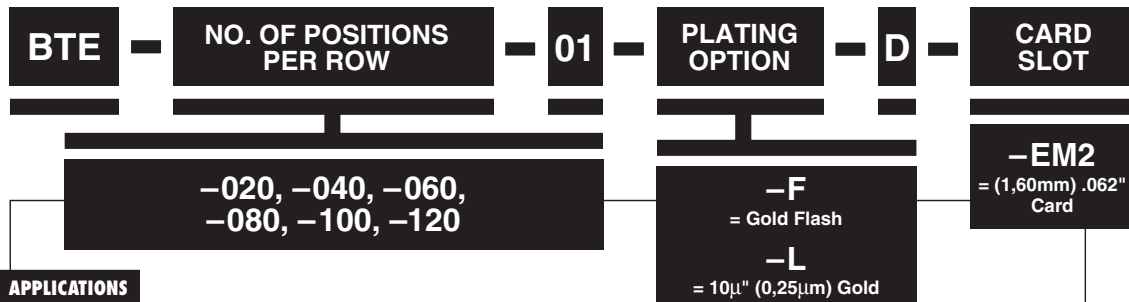
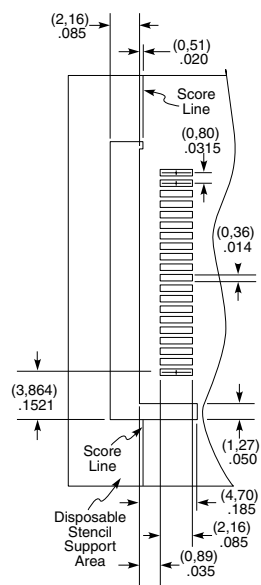
SMT Lead Coplanarity:

(0,10mm).004" max (020-040)

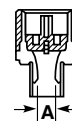
(0,15mm).006" max (060-100)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?BTE-EM for recommended PCB layout.



CARD SLOT	A
-EM2	(1,70) .067



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AW-40-03-G-D-230-075

AW-10-03-G-D-130-175

AW-50-03-G-D-130-175

Surface
SMT
Mount

(0,80mm) .0315" STACKER AW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?AW

Insulator Material:

Top: Black LCP

Bottom: Natural LCP

Terminal Material:

Phosphor Bronze

Current Rating:

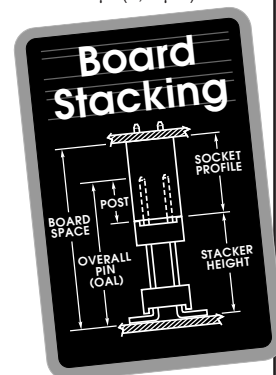
.75A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50µ" (1,27µm) Ni



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (05-40)

(0,15mm) .006" max (41-90)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?AW for recommended PCB layout.

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Suggested PCB Layouts:

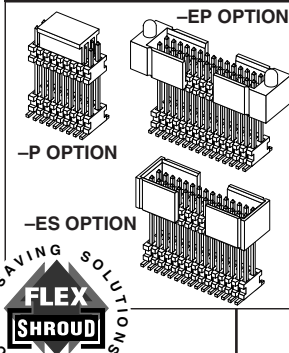
For reference only. Please contact Samtec or go to www.samtec.com?AW for recommended PCB layout.

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?AW for recommended PCB layout.

Mates with:
CLE

OPTIONS



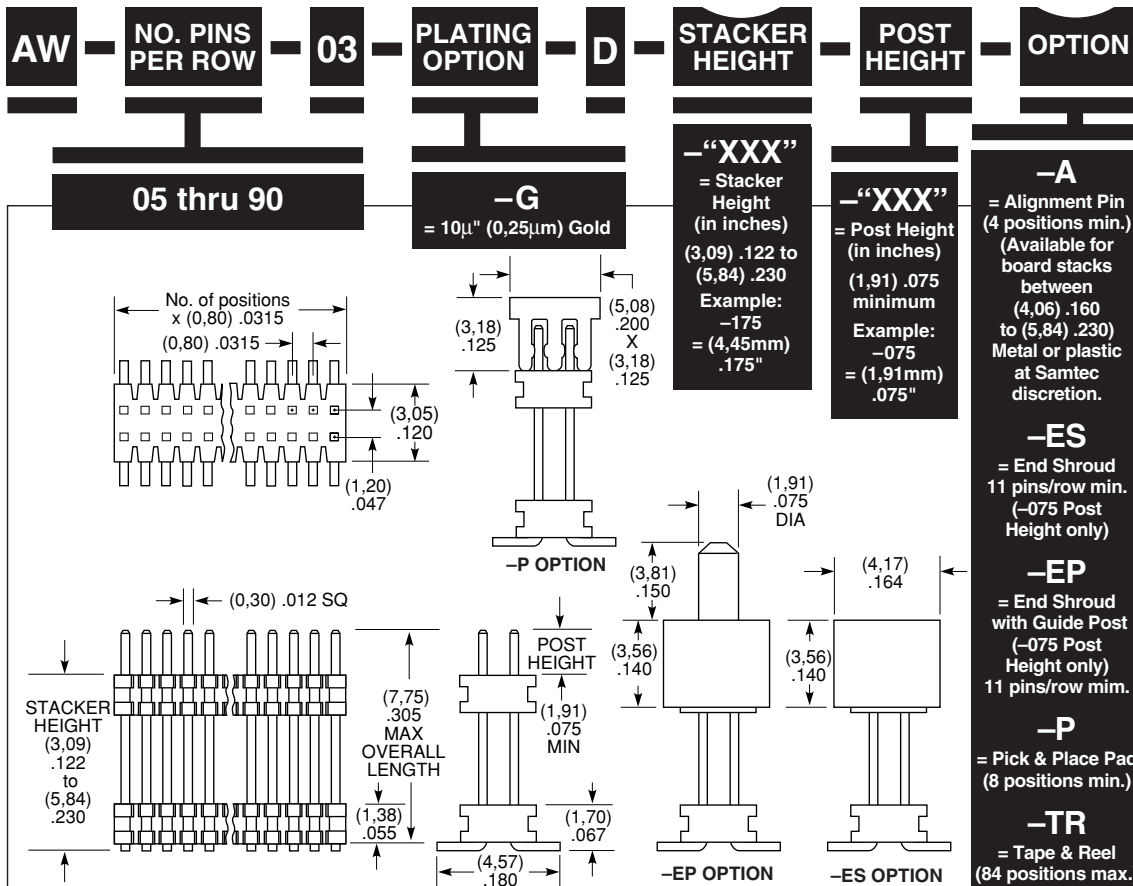
Choice of post heights and board space

Surface Mount

(0,80mm) .0315" micro pitch

Ideal for high density skyscrapers

Optional End Shrouds for blind mating



Due to technical progress, all designs, specifications and components are subject to change without notice.

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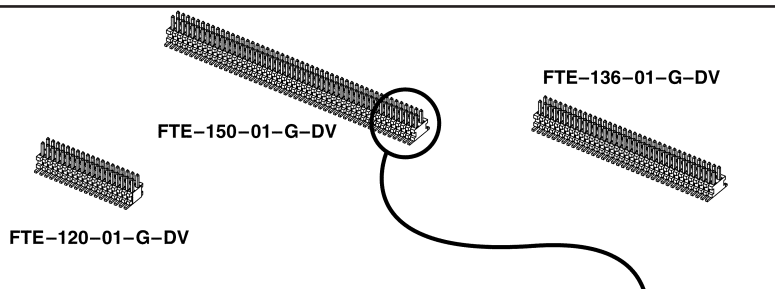
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Surface
SMT
Mount

(0,80mm) .0315" HEADER FTE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FTE

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

.75A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Impedance:

51Ω average @ 500 MHz

(system @ 50Ω)

Propagation Delay:

49.5pS @ 100pS

Cross Talk:

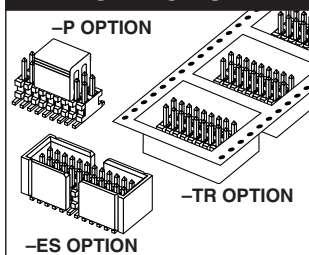
-18.8 dB G/S/S/G

@ 1.0 GHz



Mates with:
CLE

OPTIONS



Choice of post heights

Surface Mount

(0,80mm) .0315" micro pitch

Optional End Shrouds for blind mating

Low profile (1,70mm) .067"

APPLICATION SPECIFIC OPTION

End shrouds with board locks and Gold flash plating available. Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

-DV Lead Coplanarity:

(0,10mm) .004" max

-DH Lead Coplanarity:

(0,10mm) .004" max (05-25)

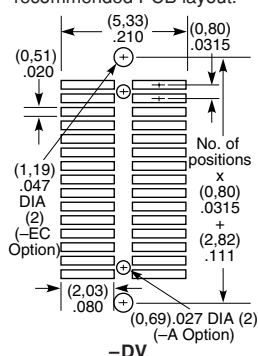
(0,15mm) .006" max (26-50)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?FTE for recommended PCB layout.



FTE	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	TAIL OPTION	FLEX-SHROUD OPTIONS	OTHER OPTION
05 thru 90	Specify LEAD STYLE from chart	-G = 10μ" (0,25μm) Gold on post, Gold flash on balance	-DV = Dual Vertical -DH = Dual Horizontal (50 pos. max.)	Style -01 -DV only (11 pins/row min.) -ES = End Shroud -EC = End Shroud with Locking Clips -EP = End Shroud with Guide Posts	-A = Alignment Pin (5 pos. min.) Metal or plastic at Samtec discretion (-DV only) -K = (2,50mm) .098" DIA Polyimide Film Pick & Place Pad (-DH only) -P = Plastic Pick & Place Pad (8 pos. min.) -DV only -TR = Tape & Reel Packaging	

LEAD STYLE	A
-01	(1,90) .075
-02	(4,45) .175

OPTION	Z
-ES	(1,57) .062
-EC	(4,11) .162
-EP	(5,51) .217

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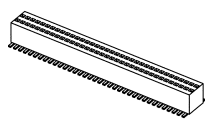
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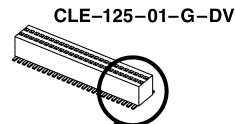
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CLE-136-01-G-DV



CLE-108-01-G-DV



CLE-125-01-G-DV

Surface
SMT
Mount

(0,80mm) .0315" SOCKET CLE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?CLE

Insulator Material:

Black Liquid Crystal Polymer



Contact Material:

Beryllium Copper

Current Rating:

.75A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Contact Resistance:

15mΩ max (initial)

Insertion Depth:

Top Entry = (1,73mm) .068"

to (3,18mm) .125" with

(0,38mm) .015" wipe, or

pass-through

Bottom Entry = (3,23mm)

.127" minimum plus

board thickness

Insertion Force:

2.0oz (0,56N)

Normal Force:

75 grams (0,73N)

Withdrawal Force:

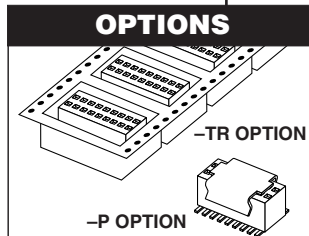
1.2oz (0,33N)

Max Cycles:

100 with 10μ" (0,25μm) Au

Mates with:
FTE, AW

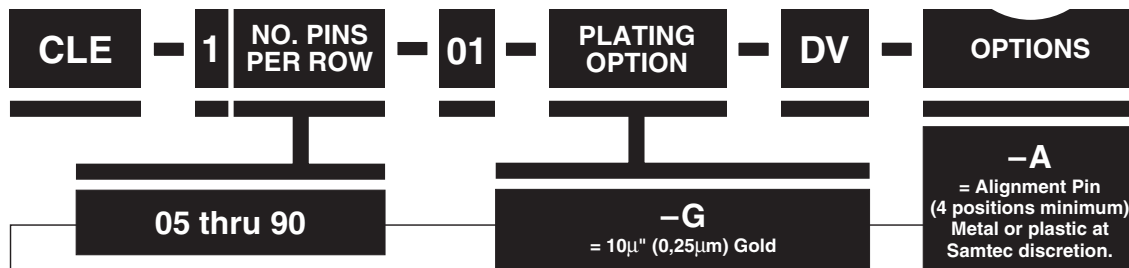
OPTIONS



Ideal for
pass-through
applications

(0,80mm) .0315"
micro pitch

Surface
Mount



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (05-65)

(0,15mm) .006" max (66-90)

Suggested Paste

Thickness:

For most applications add

(0,05mm) .002" to max SMT

lead coplanarity

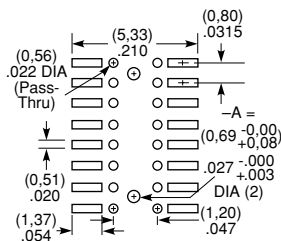
Suggested PCB Layouts:

For reference only. Please

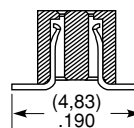
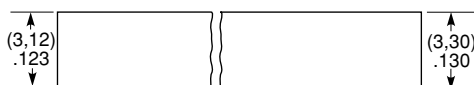
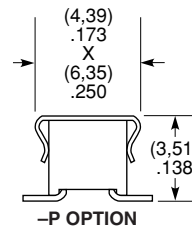
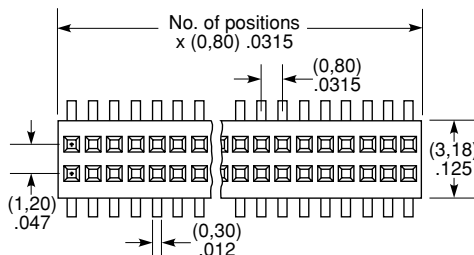
contact Samtec or go to

www.samtec.com?CLE for

recommended PCB layout.



Board fixturing may be required to assure proper alignment for pass-through applications.



-A

= Alignment Pin
(4 positions minimum)
Metal or plastic at
Samtec discretion.

-K

= (3,50mm) .138" DIA
Polyimide film
Pick & Place Pad
(8 positions minimum)

-P

= Metal Pick &
Place Pad
(8 positions minimum)

-TR

= Tape & Reel
Packaging

TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications
and ordering information.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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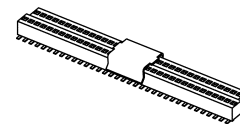
samtec



BKS-109-01-L-V



BKS-125-01-L-V



BKS-169-01-L-V-P

Surface
SMT
Mount

1mm POLARIZED SOCKET BKS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?BKS

Insulator Material:

Black Liquid Crystal Polymer



Contact Material:

Phosphor Bronze

Current Rating:

1.5A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Contact Resistance:

15 mΩ max

Insertion Depth:

(1,40mm) .055" minimum

Insertion Force:

1.5oz (0,42N) average

Normal Force:

40 grams (0,39N) average

Withdrawal Force:

.75oz (0,20N) average

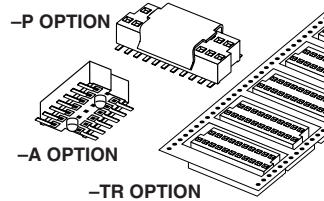
Max Cycles:

100 with 10μ" (0,25μm) Au

Mates with:
BKT



OPTIONS



Note: Some sizes, styles and options are non-standard, non-returnable.

High reliability
Tiger-Claw contacts

(1,00mm) .03937" micro pitch

Polarization for positive mating

Replaces blade-and-leaf style connectors with pin and socket system

Surface Mount

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

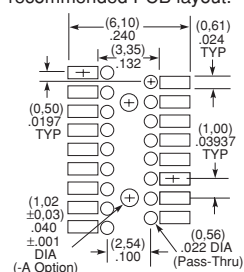
(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?BKS for recommended PCB layout.



Board fixturing may be required to assure proper alignment for pass-through applications.

TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.

BKS

- 1

NO. OF POSITIONS

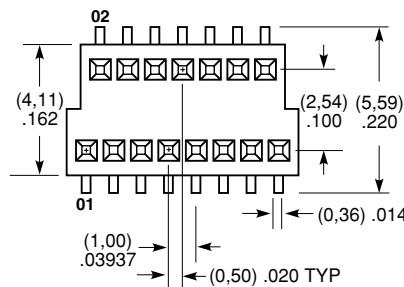
- 01

PLATING OPTION

- V

OPTIONS

07 thru 69
(Odd lead counts only)



(0,50) .0197 x
No. of positions
+ .032 (0,81)



- L
= Pre-plated 10μ" (0,25μm) Gold contact, Tin on tail

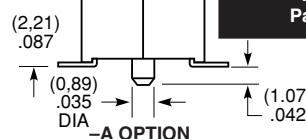
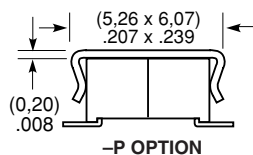
- F
= Pre-plated Gold flash on contact, Tin on tail



-A
= Alignment Pin (Metal or plastic at Samtec discretion) (11 positions minimum)

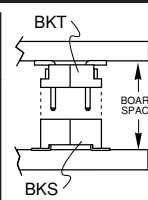
-P
= Pick and Place Pad (13 positions minimum) Not always necessary for auto placement. See Flex Processing.

-TR
= Tape & Reel Packaging



APPLICATIONS

Terminal Strip	Socket Strip	Board Space
BKT-1XX-01-X-V	BKS-1XX-01-X-V	(4,14) .163
BKT-1XX-02-X-V	BKS-1XX-01-X-V	(4,50) .177
BKT-1XX-03-X-V	BKS-1XX-01-X-V	(5,00) .197
BKT-1XX-04-X-V	BKS-1XX-01-X-V	(6,00) .236
BKT-1XX-05-X-V	BKS-1XX-01-X-V	(7,00) .276



Due to technical progress, all designs, specifications and components are subject to change without notice.

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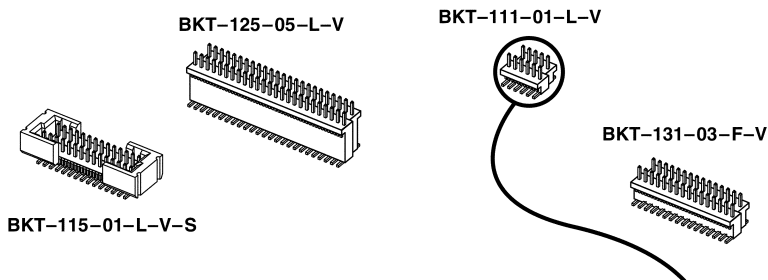
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Surface
SMT
Mount

1mm POLARIZED HEADER BKT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/BKT

Insulator Material:

Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze

Current Rating:

1.5A @ 80°C ambient

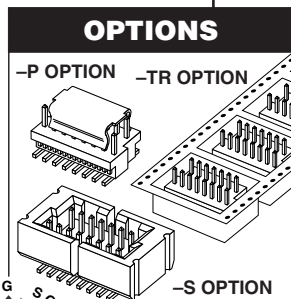
Operating Temp Range:

-65°C to +125°C

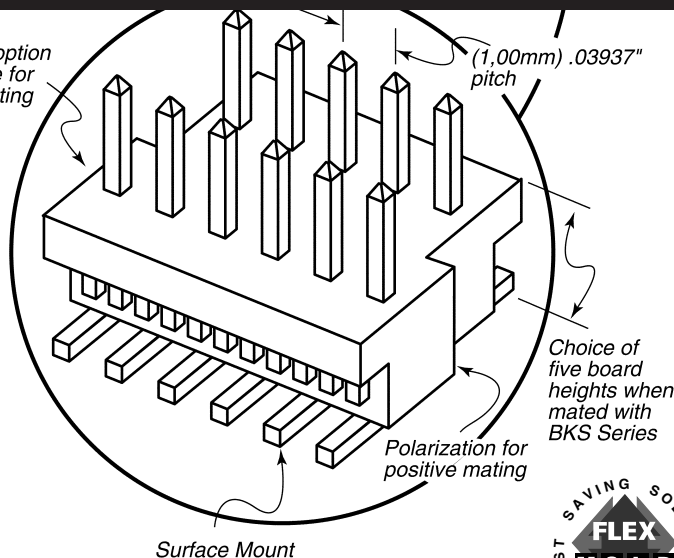
Plating:

Au or Sn over 50µ" (1,27µm) Ni

Mates with:
BKS



Shroud option available for blind mating



Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

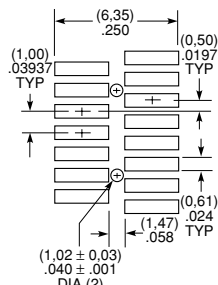
(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/BKT for recommended PCB layout.



BKT	1	NO. OF POSITIONS	BASE HEIGHT	PLATING OPTION	V	OPTIONS																		
07 thru 69 (Odd lead counts only)																								
<table border="1"> <thead> <tr> <th>BODY STYLE</th> <th>BASE HEIGHT H</th> <th>BOARD SPACE (mated with BKS)</th> </tr> </thead> <tbody> <tr> <td>-01</td> <td>(1,93) .076</td> <td>(4,14) .163</td> </tr> <tr> <td>-02</td> <td>(2,29) .090</td> <td>(4,50) .177</td> </tr> <tr> <td>-03</td> <td>(2,79) .110</td> <td>(5,00) .197</td> </tr> <tr> <td>-04</td> <td>(3,78) .149</td> <td>(6,00) .236</td> </tr> <tr> <td>-05</td> <td>(4,80) .189</td> <td>(7,00) .276</td> </tr> </tbody> </table>							BODY STYLE	BASE HEIGHT H	BOARD SPACE (mated with BKS)	-01	(1,93) .076	(4,14) .163	-02	(2,29) .090	(4,50) .177	-03	(2,79) .110	(5,00) .197	-04	(3,78) .149	(6,00) .236	-05	(4,80) .189	(7,00) .276
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Due to technical progress, all designs, specifications and components are subject to change without notice.

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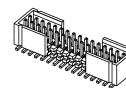
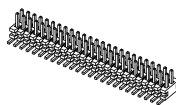
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FTMH-125-02-L-DV



FTMH-116-02-F-DV-ES

Surface
SMT
Mount

1mm MICRO HEADERS FTMH, FTM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FTMH or www.samtec.com?FTM

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze

Current Rating:
1.5A @ 80°C ambient

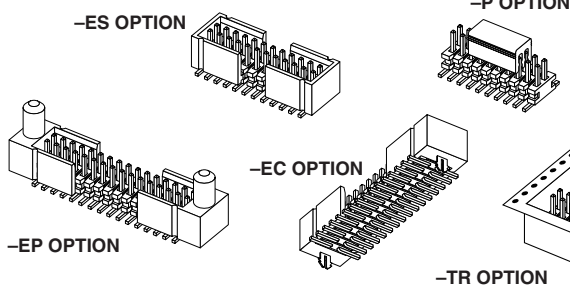
Operating Temp Range:
-65°C to +125°C

Plating: Sn or Au over 50µ" (1,27µm) Ni

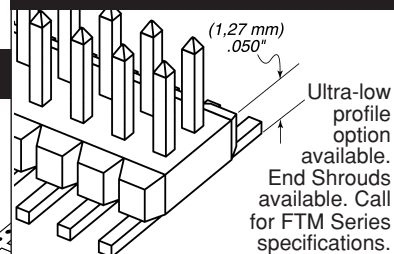
Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
CLM, MLE

OPTIONS



ALSO AVAILABLE



Ultra-low profile option available. End Shrouds available. Call for FTM Series specifications.

APPLICATION SPECIFIC OPTION

End shrouds with board locks available. Molded end shrouds available for 05 through 08 positions. Call Samtec.

Processing:

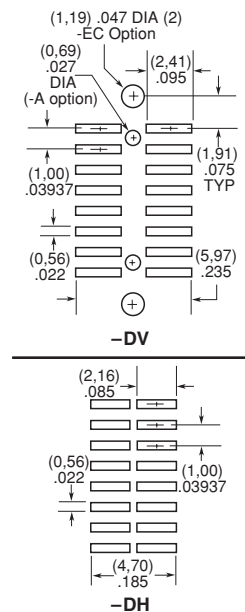
Max Processing Temp:
230°C for 60 seconds

-DV Lead Coplanarity:
(0,10mm) .004" max

-DH Lead Coplanarity:
(0,10mm) .004" max (05-25)
(0,15mm) .006" max (26-50)

Suggested Paste Thickness:
For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?FTMH or www.samtec.com?FTM for recommended PCB layout.



TYPE STRIP

1

NO. PINS PER ROW

LEAD STYLE

FTMH = Standard Strip
FTM = Low Profile Strip

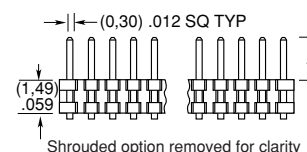
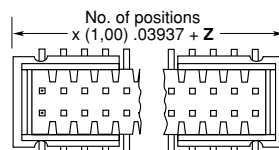
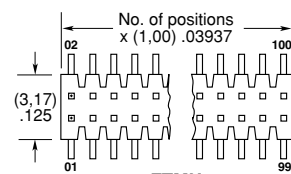
05 thru 50

-02

= (1,91) .075" Post
(Mates with MLE)

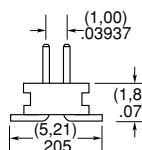
-03

= (1,65) .065" Post
(Mates with CLM)

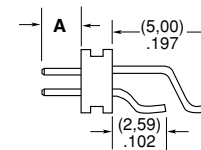


LEAD STYLE	A
-02	(1,91) .075
-03	(1,65) .065

OPTION	Z
-ES	(1,57) .062
-EC	(4,06) .160
-EP	(5,49) .216



-DV OPTION



-DH OPTION

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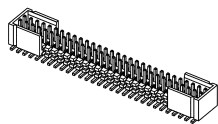
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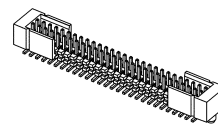
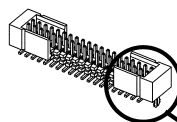
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FTMH-110-02-L-DV-P

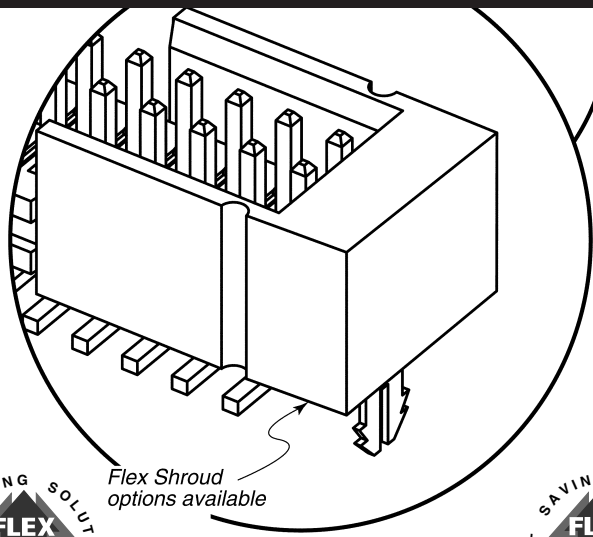
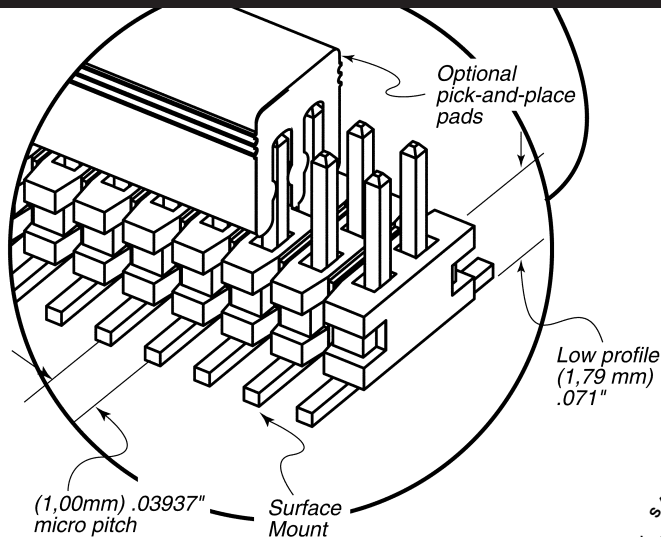


FTMH-130-02-L-DV-ES

FTMH-120-02-F-DV-EC



FTMH-128-02-L-DV-EP



PLATING OPTION

-F

= Gold flash on post, Tin on tail

-L

= 10μ" (0,25μm) Gold on post, Tin on tail

ROW OPTION

-DV

= Dual Vertical

-DH

= Dual Horizontal (FTMH only)

FLEX SHROUD OPTIONS (FTMH -DV only) 9 pins/row minimum

-ES

= End Shroud

-EC

= End Shroud with Locking Clip

-EP

= End Shroud with Guide Post (Use only when mating with CLM)

OTHER OPTIONS

-A

= Alignment Pin (3 positions minimum) Metal or plastic at Samtec discretion (FTMH -DV only)

-K

= (2,50mm) .098" DIA Polyimide Film Pick & Place Pad (-DH only)

-M

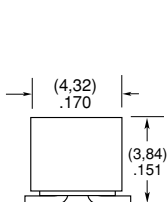
= Metal Pick & Place Pad (-DV only) (8 positions minimum)

-P

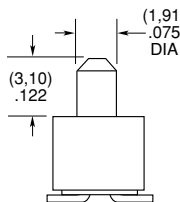
= Plastic Pick & Place Pad (-DV only) (7 positions minimum)

-TR

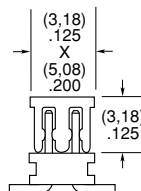
= Tape & Reel



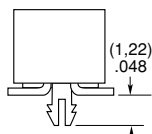
-ES OPTION



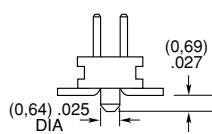
-EP OPTION



-P OPTION



-EC OPTION



-A OPTION

Due to technical progress, all designs, specifications and components are subject to change without notice.

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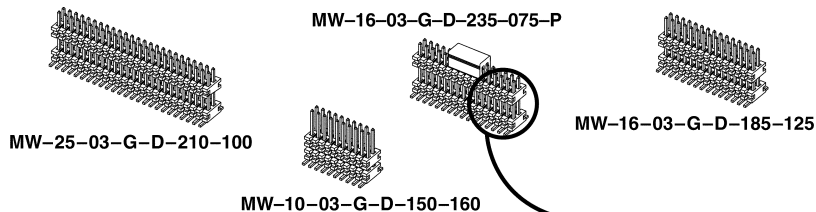
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Surface
SMT
Mount

(1,00mm) .0394" STACKER MW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MW

Insulator Material:

Top: Black LCP

Bottom: Natural LCP

Terminal Material:

Phosphor Bronze

Current Rating:

1.5A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

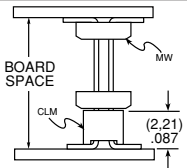
Sn or Au over
50μ" (1,27μm) Ni



Mates with:
CLM, MLE

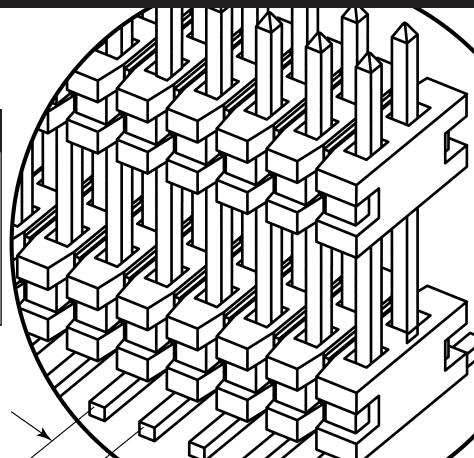
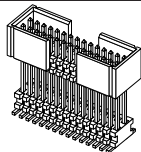
APPLICATIONS

EXAMPLES		BOARD SPACE
Lead Style	CLM	
MW		
-163-065	-02	(6,35) .250
-233-065		(8,13) .320



APPLICATION SPECIFIC OPTION

Alignment pins, end shrouds, and end shrouds with guide posts available. Call Samtec.

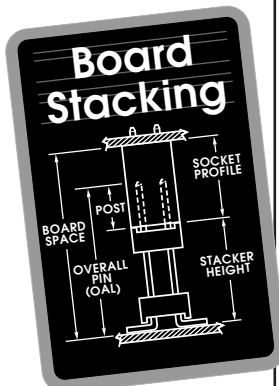


Available with optional end shrouds and pick-and-place pads

(1,00mm) .03937" micro pitch

FLEX STACKS
COST SAVING SOLUTIONS

Surface Mount



Note: This Series is non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (02-30)

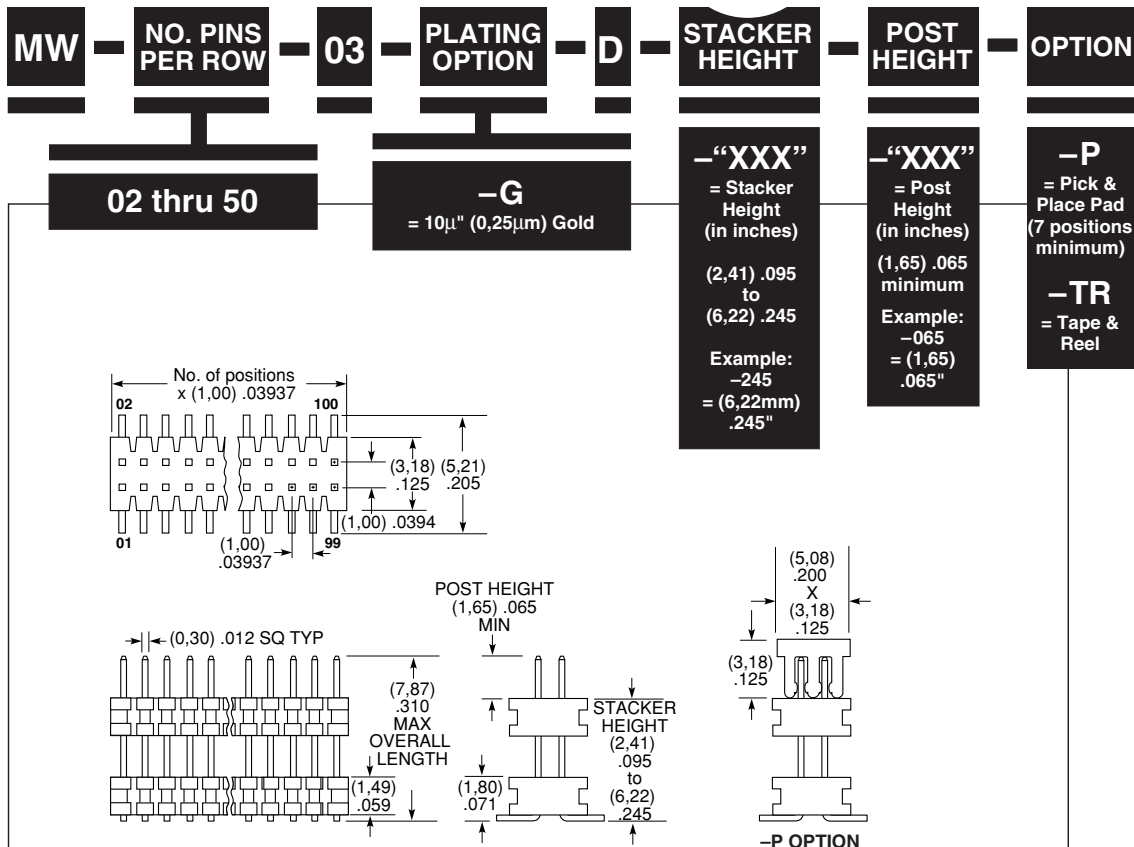
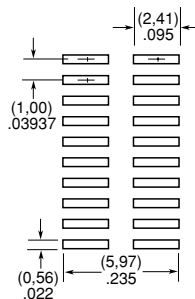
(0,15mm) .006" max (31-50)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?MW for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



CLM-115-02-L-D

CLM-125-02-F-D

Surface
SMT
Mount

LOW PROFILE SOCKET CLM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?CLM

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Phosphor Bronze

Current Rating:

1.5A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

Plating:

Au over 50μ" (1,27μm) Ni

Contact Resistance:

15 mΩ max

Insertion Depth:

Top Entry = (1,40mm) .055"

min, Bottom Entry = (2,21mm)

.087" minimum (Add board thickness for correct post OAL)

Insertion Force:

1.5oz (0,42N) average

Normal Force:

40 grams (0,39N) average

Withdrawal Force:

.75oz (0,21N) average

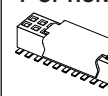
Max Cycles:

100 with 10μ" (0,25μm) Au

Mates with:
FTM, FTMH, MW

OPTIONS

-P OPTION



-TR OPTION

APPLICATION SPECIFIC OPTION

Polarized option and alignment pins available. Call Samtec.



High reliability
Tiger-Claw
contacts

Available with optional
pick-and-place pads

Low profile
(2,21mm) .087"

Surface
mount

(1,00mm) .03937"

micro pitch

Suitable for
pass-through
applications

CLM

-

1

NO. PINS
PER ROW

-

02

PLATING
OPTION

-

D

OPTIONS

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (02-25)

(0,15mm) .006" max (26-50)

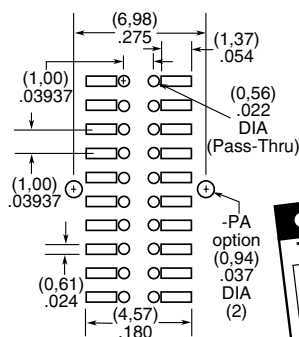
Suggested PCB Layouts:

For reference only. Please

contact Samtec or go to

www.samtec.com?CLM for

recommended PCB layout.



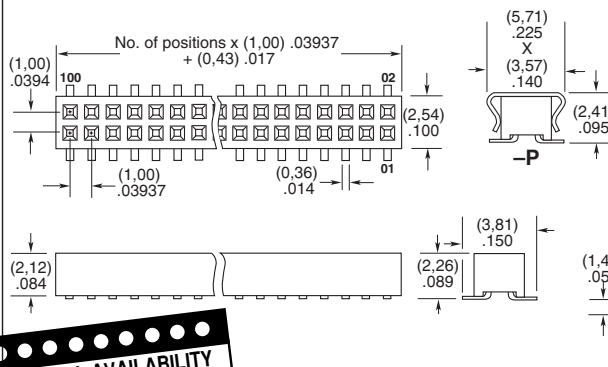
Board fixturing may be required to assure proper alignment for pass-through applications.

TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.

02 thru 50



PIN/ROW	A
04-15	(3,56) .140
16-50	(7,11) .280

-F

= Pre-plated
Gold flash on contact,
Tin on tail

-L

= Pre-plated
10μ" (0,25μm)
Gold on contact,
Tin on tail

-BE

= Bottom Entry
(Required for
bottom entry
applications)

-K

= (3,50mm) .138"
DIA Polyimide film
Pick & Place Pad
(7 positions
minimum)

-P

= Pick & Place Pad
(7 positions
minimum)
Not always
necessary for
auto placement.
See Flex
Processing.

-PA

= Pick & Place Pad
with integral
Alignment Pin

-TR

= Tape & Reel



Due to technical progress, all designs, specifications and components are subject to change without notice.

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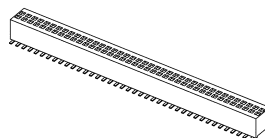
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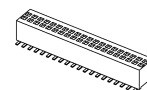
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MLE-115-01-G-DV



MLE-120-01-G-DV

MLE-140-01-G-DV

Surface
SMT
Mount

1mm STANDARD SOCKET MLE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MLE

Insulator Material:

Black Liquid Crystal Polymer



Contact Material:

Beryllium Copper

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 10μ" (0,25μm) Ni

Insertion Depth:

(1,63mm) .064" to (3,18mm) .125" with (0,38mm) .015" wipe, pass-through, or (2,44mm) .096" minimum for bottom entry

Insertion Force:

2.70oz (0,75N) average

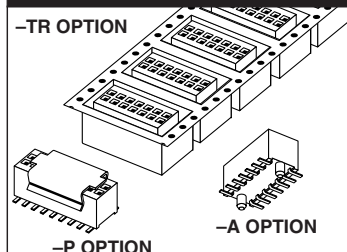
Withdrawal Force:

0.50oz (0,14N) average

Mates with:
FTM, FTMH,
MW



OPTIONS



Tiger Beam
contact

Ideal for
pass-through
applications

Surface
Mount

(1,00mm) .03937"
micro pitch

Available with optional
pick-and-place pads



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (02-26)

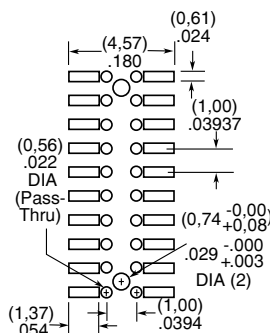
(0,15mm) .006" max (27-50)

Suggested Paste Thickness:

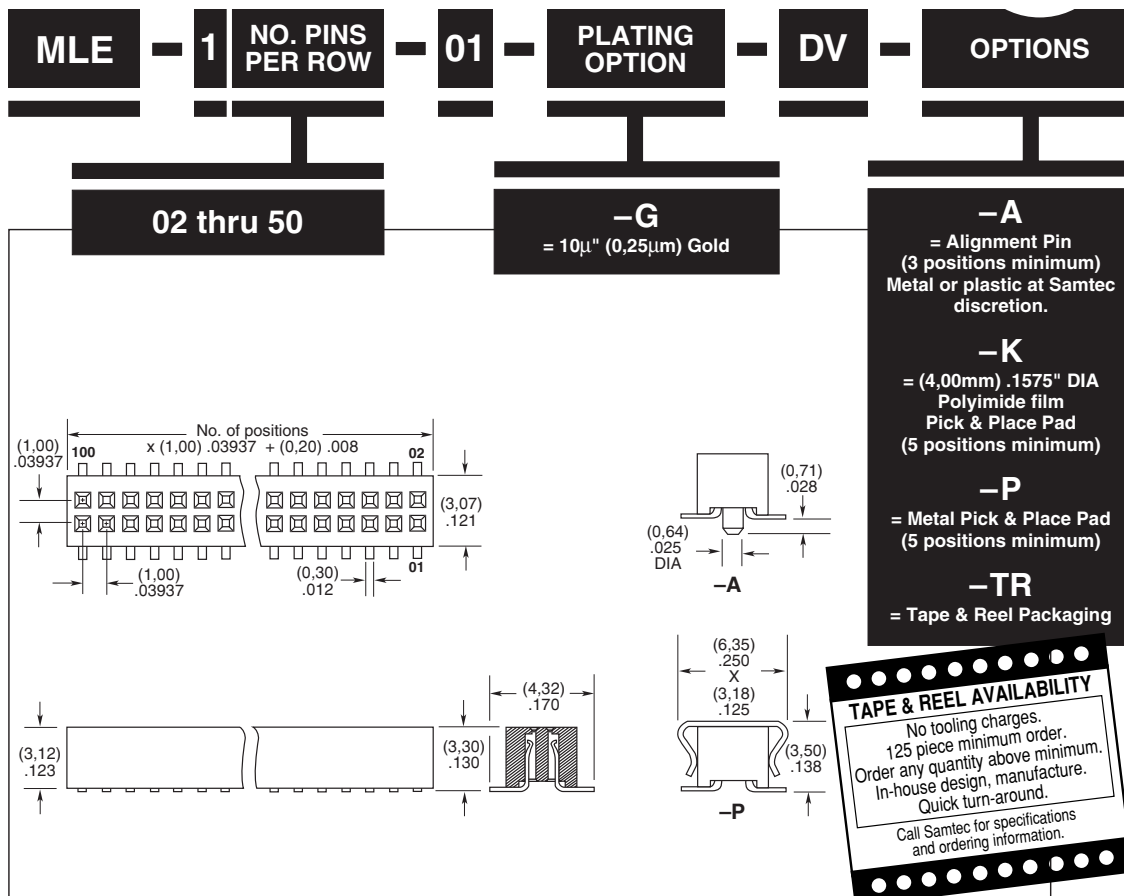
For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?MLE for recommended PCB layout.



Board fixturing may be required to assure proper alignment for pass-through applications.



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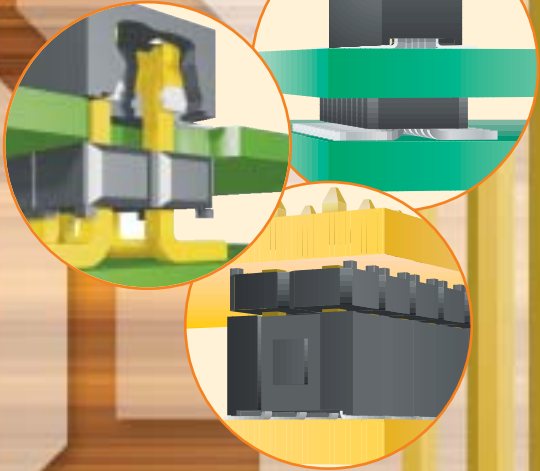
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BOARD-TO-BOARD

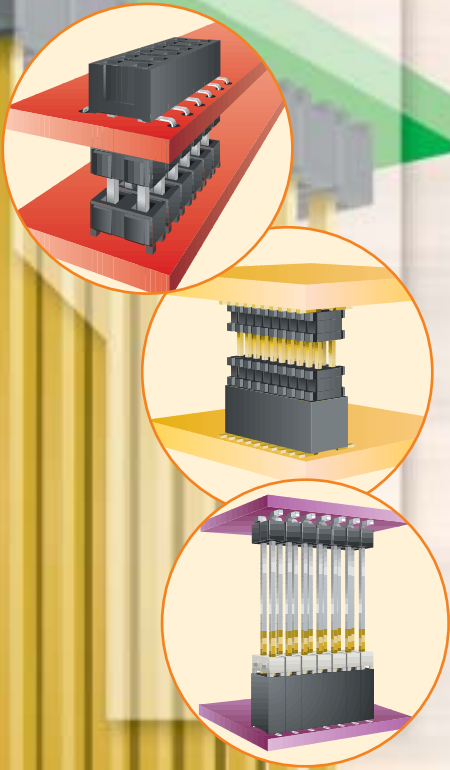
Low Profile

- Pass-Through
- Choice of pitches
- Through-Hole & Surface Mount
- Flex Shroud for Blind Mating
- Blade & Beam
- Pin & Socket



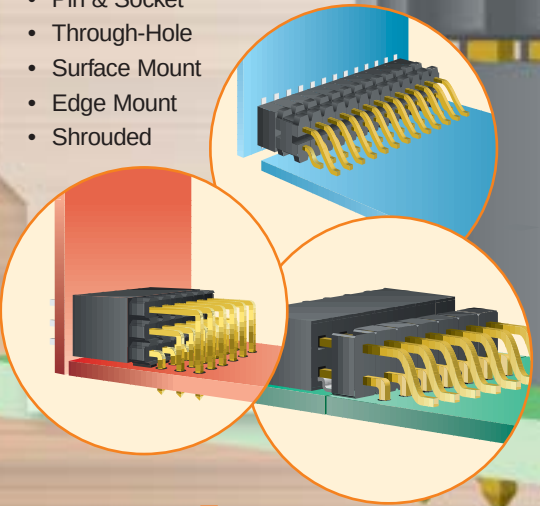
Skyscrapers

- Flex Stack
- PC104 & PC104+
- Interactive Selector
- Choice of pitches
- Through-Hole & Surface Mount



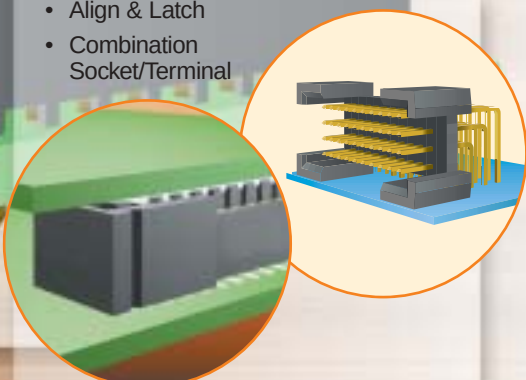
Right-Angle

- Perpendicular Board Mating
- Coplanar Board Mating
- Blade & Beam
- Pin & Socket
- Through-Hole
- Surface Mount
- Edge Mount
- Shrouded



Shrouded

- Flex Shroud
- Molded to Position
- Ejector Headers
- Align & Latch
- Combination Socket/Terminal



BOARD

TO

BOARD

APPLICATIONS

Flexible Board Stacking	116
Headers & Sockets	117
Low Profile Board Stacking	118
Shrouded Headers & Stackers	119
Skyscrapers	120
PC104 & PC104+	121
Right-Angle Applications	122

STANDARD PRODUCTS

.050" (1,27mm) Pitch	123-143
.050" x .100" (1,27mm x 2,54mm) Pitch	144-154
2mm (.0787") Pitch	155-178
.100" (2,54mm) Pitch	179-210

FLEXIBLE STACKING

Flexible Headers, Stackers and Sockets

- Any pin length
- Any board spacing
- Any plating
- Choice of 26 terminals
- Choice of five pitches

**FLEX
STACK**

STACKERS		
PITCH	T/H	SMT
.100" (2,54mm)	ZW	HW
2mm (.0787")	TW	TW
.050" x .100" (1,27mm x 2,54mm)	DWM	HDWM
.050" (1,27mm)	FW	FW
1mm (.0394")		MW
0,80mm (.0315")		AW

SOCKETS	
PITCH	SOCKET
2,54mm (.100")	ESQ
2mm (.0787")	ESQT

HEADERS	
PITCH	HEADER
2,54mm (.100")	MTSW
2mm (.0787")	MTMM
.050" x .100" (1,27mm x 2,54mm)	MTMS

SHROUDED STACKERS	
PITCH	SHROUDED STACKER
.100" (2,54mm)	ZSS
2mm (.0787")	ZLTMM
.050" x .100" (1,27mm x 2,54mm)	ZML
.050" (1,27mm)	FW
1mm (.0394")	MW
0,80mm (.0315")	AW

Board Stacking Solutions

Samtec has the industry's most flexible selection of interconnects for board stacking. Samtec makes it easy to specify board-to-board interconnects with an interactive Board Stacking Selector at www.samtec.com



HEADERS & SOCKETS **samtec**

.050" (1,27mm) Pitch

- Choice of .050" x .050" or .050" x .100" systems
- Through-Hole and Surface Mount
- Flex Shroud available
- Low Profile and Skyscraper systems
- Pass-Through sockets available

FTSH
.050" (1,27mm) Socket Strip

pgs. 132-134

CLP FLE
.050" (1,27mm) Socket Strip

pgs. 140,142

TMS MTMS
.050" (1,27mm) X
.100" (2,54mm)

pgs. 144-145

SLM SMS
.050" (1,27mm) X
.100" (2,54mm)

pgs. 152-153

FTR
.050" (1,27mm) X
.100" (2,54mm)

pg. 150

RSM
.050" (1,27mm) X
.100" (2,54mm)

pg. 151

2mm (.0787") Pitch

- Through-Hole, Surface Mount and Press Fit tail options
- Modified standard post heights
- Precision Tiger-Eye (four contact point) contacts available
- Shrouded systems for positive mating

TMMH PTT/PTF
2mm (.0787") Press Fit Headers & Sockets

pgs. 156,169

SQT SQW
2mm (.0787") Socket Strips

pgs. 172-173

MMS
2mm (.0787") Socket Strips

pg. 176

SMM
2mm (.0787") Socket Strips

pg. 177

.100" (2,54mm) Pitch

- Through-Hole and Surface Mount
- Modified standard post heights
- Pass-Through and Bottom Mount Sockets

TSM
.100" (2,54mm) Surface Mount Terminals

pg. 182

TSW MTSW
.100" (2,54mm) Standard & Modified Terminals

pgs. 180, 184

SSW SSQ
.100" (2,54mm) Standard Sockets

pgs. 194-195

SSM/SSW HLE
Surface Mount

pgs. 196-198

BCS
.100" (2,54mm) Pass Through Sockets

pg. 200

BSW
.100" (2,54mm) Bottom Mount Sockets

pg. 202

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

LOW PROFILE

SHROUDED



HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

Stamped and Formed

- Pass-Through Tiger Claw and Tiger Beam contacts for profiles as low as 3,5mm on .050" pitch and 1,5mm on 2mm and .100" pitch
- Though-Hole and Surface Mount lead styles
- Shrouded and Micro Pitch Systems available

TMM TMMH
2mm (.0787")

pgs. 156-162

TLE CLT
2mm (.0787")

pgs. 174-175

FTSH FTS
.050" (1,27mm)

pgs. 132-134

CLP FLE
.050" (1,27mm)

pgs. 140,142

TLW MTLW
.100" (2,54mm)

pg. 186

HLE
.100" (2,54mm)

pg. 199

SLW,CES
.100" (2,54mm)

pg. 203

Machined

- High reliability sockets and terminals
- Profiles down to (3,89mm) .153"

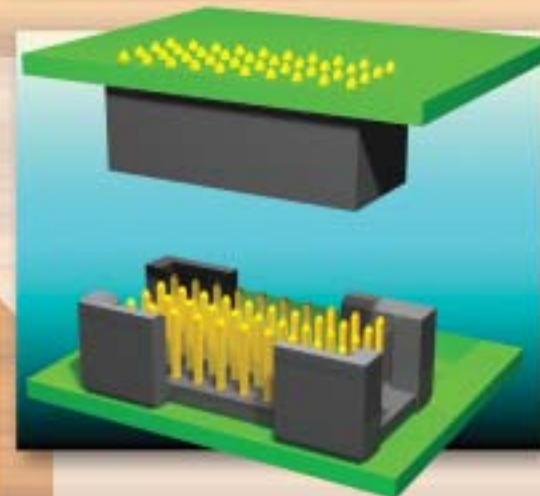
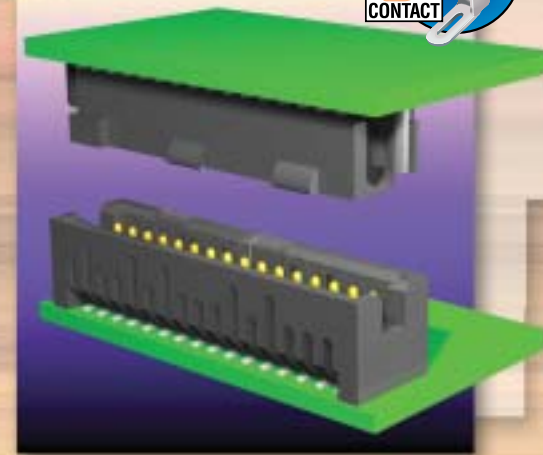
BBL/BDL
.100" (2,54mm)

pg. 208

SL/SDL
.100" (2,54mm)

pg. 205

MICRO RUGGED



Headers & Stackers

- Common sizes molded to position and stocked for quick delivery
- Flex Shroud system on 2mm and .100" pitch provides quick turnaround on unusual sizes
- Surface Mount and Through-Hole
- Systems for IDC cable mating and board stacking

FTSH FW
.050" (1,27mm)

pgs. 132-134
138-139

TSH/TW
2mm (.0787")

pgs. 164,
166-167

ZSS/TSS ZST/TST TSSH
.100" (2,54mm)

pgs. 187-189

TFM SFM
Connector Set

pgs. 124-127

SFMC
Socket

pg. 143

TFML SFML
Latching Connector

pgs. 130-131

TFC SFC
Low Cost Set

pgs. 128-129

Tiger Eye System

- High reliability three-finger BeCu sockets
- Standard and cost-saving designs
- Friction latching system for higher withdrawal forces
- Shrouded, polarized and keyed for micro-rugged applications

Combination Socket/Terminal

- Self mating system reduces inventory costs with fewer components
- Choice of three pitches
- Shrouded with audible click when properly mated

LST
.100" (2,54mm)

pg. 191

LS2
2mm (.0787")

pg. 178

LSS
.025" (0,64mm)

pg. 101

Ejector Headers

- Micro Rugged ejectors for IDC mating on three pitches
- Through-Hole, Surface Mount and Right-Angle applications
- Polarized for proper mating
- See cable section for locking caps and more information

EHT
2mm (.079")

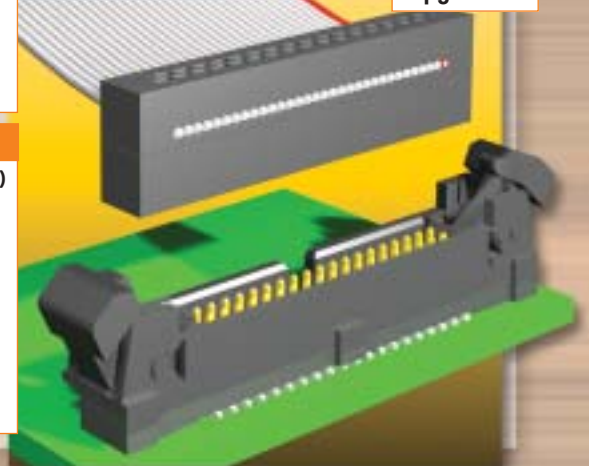
pg. 165

EHF
.050" (1,27mm)

pg. 136

EJH
.100" (2,54mm)

pg. 190



SKYSCRAPER

samtec

Stamped and Formed

- Pass-Through contacts for stacking three or more boards
- Through-Hole and Surface Mount lead styles
- Choice of four standard pitches
- Shrouded and Micro Pitch Systems available

FLE
TIGER BEAM CONTACT
.050" (1,27mm)
pg. 142

FW
.050" (1,27mm)
pgs. 138-139

DW/EW HW/ZW
.100" (2,54mm)
pgs. 192-193

ESW ESQ
.100" (2,54mm)
pg. 201

DWM HDWN
.050" x .100" (1,27mm x 2,54mm)
pgs. 146-147

SLM SMS
.050" x .100" (1,27mm x 2,54mm)
TIGER BUY CONTACT
pgs. 152-153

TW
2mm (.0787")
pgs. 166-167

ESQT PTHF
2mm (.0787")
pgs. 170-171

SS SD
.100" (2,54mm)
pg. 206

ESS ESD
.100" (2,54mm)
pg. 207

BBS BBD
.100" (2,54mm)
pg. 208

Machined

- High reliability sockets and terminals
- Board spacings to (34,67mm) 1.365"

PC104 & PC104+

- .100" (2,54mm) pitch and 2,00mm (.0787") pitch systems
- Through-hole and Press Fit

ESQT
2mm Soldered
ATS
(15,24) .600"
pg. 170

PTHF
2mm Press Fit
ATS
(15,24) .600"
pg. 170

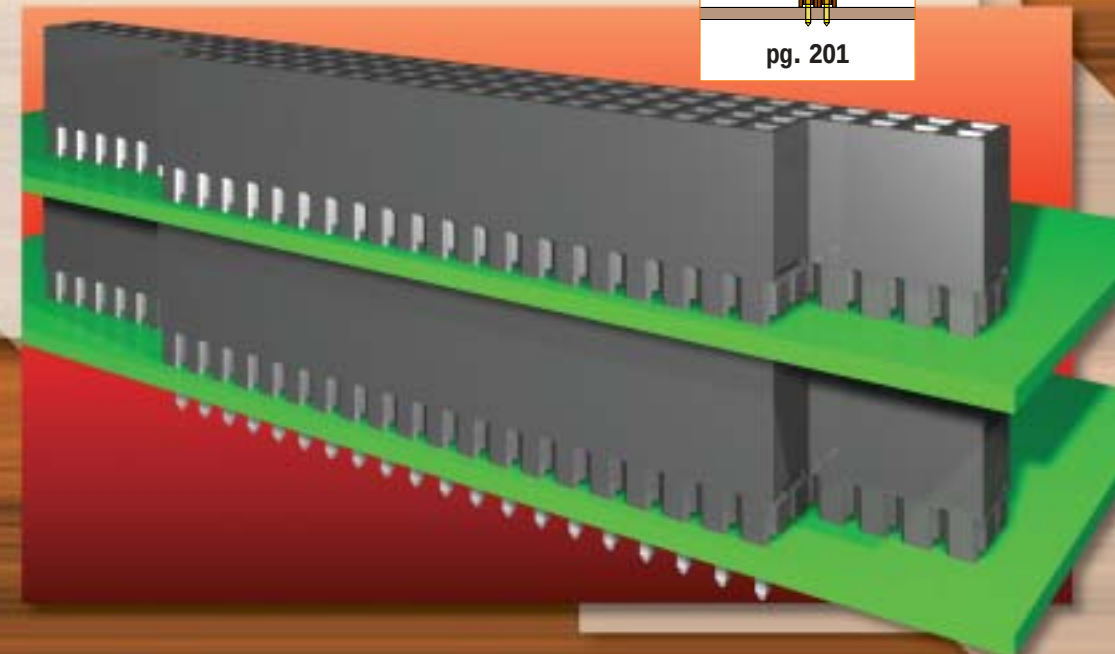
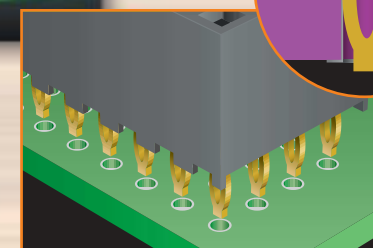
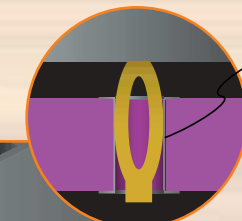
ESQ
.100" (2,54mm)
ESQ
pg. 201

SELF
NEST

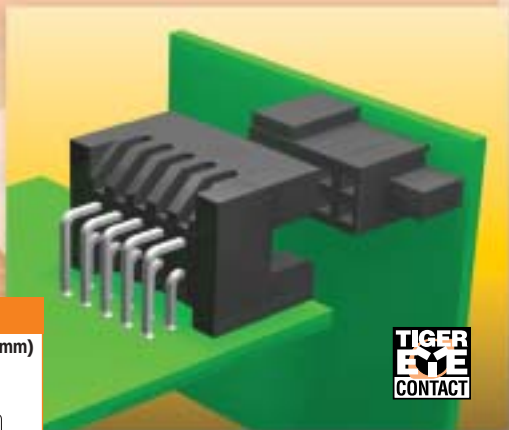
EMBEDDED-PC
PC/104-Plus
MODULES

EMBEDDED-PC
PC/104-Plus
MODULES

EMBEDDED-PC
PC/104
MODULES



RIGHT ANGLE



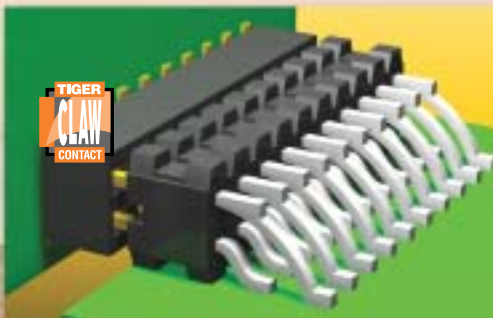
TFM
 .050" (1,27mm)

 pg. 127

**TIGER
EYE
CONTACT**

Perpendicular & Coplanar

- Systems on .050" (1,27mm), 2mm (.0787") and .100" (2,54mm) pitch
- Surface mount & through-hole
- Shrouded options
- Hot pluggable options
- Single row, double row & high density designs



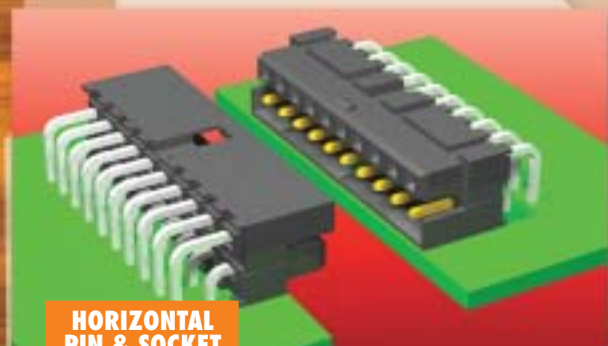
**TIGER
CLAW
CONTACT**

HPT/FTSH
 .050"
 (1,27mm)

 pgs. 132-135

**SFMH
FSH**
 .050"
 (1,27mm)

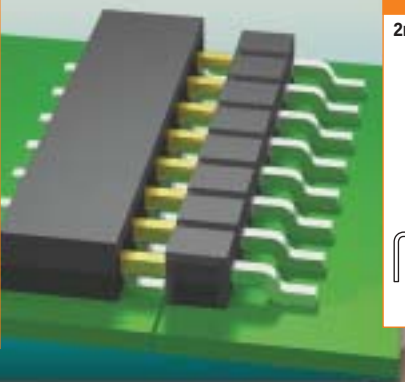
 pgs.
 137,141



HORIZONTAL PIN & SOCKET



.050" (1,27mm) Pitch
 FSH/SFMH
 FTSH-DH/CLP-DH
 2mm (.0787") Pitch
 TSH/MMS
 TMMH-RA/SQT-RA
 TMM-RA/SQT-RA
 MMT/MMS
 .100" (2,54mm) Pitch
 TSW-RA/BCS-HE
 TSM/SSM
 TSSH/SSM



LS2
 2mm (.0787")

 pg. 178

**TMM, TMMH
MMT**
 2mm (.0787")

 pgs. 156-163

**TMMS
TSH**
 2mm (.0787")

 pgs. 82, 164

**SQT
MMS**
 2mm (.0787")

 pgs. 173,176
**TIGER
BUY
CONTACT**

**TSW
TSM**
 .100" (2,54mm)

 pgs. 180-183

**TSS
TSSH**
 .100" (2,54mm)

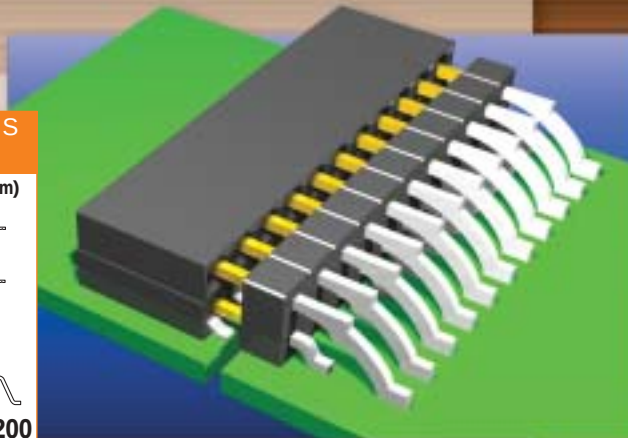
 pgs. 187-189

**SSW
SSQ**
 .100" (2,54mm)

 pgs. 194-195
**TIGER
BUY
CONTACT**

**SSM/BCS
SMH**
 .100" (2,54mm)

 pgs. 197-200



HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE

.050" PITCH

BOARD

TO

(1,27mm) .050" Pitch

Shrouded Connectors (SFM, TFM)	124-127
Cost Savings Connector Set (SFC, TFC)	128-129
Locking Sockets & Headers (SFML, TFML)	130-131
Standard Headers (FTSH)	132-134
Hot Pluggable Headers (HPT)	135
Shrouded Headers (EHF, FSH)	136-137
Board Stackers (FW)	138-139
Low Profile Sockets (CLP)	140
Horizontal SMT Sockets (SFMH)	141
Standard Sockets (FLE, SFMC)	142-143

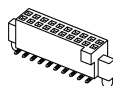
BOARD

(1,27mm x 2,54mm) .050" x .100" Pitch

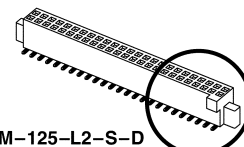
Standard Headers (HTMS, TMS)	144
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SFM-110-02-S-D-A



SFM-125-L2-S-D



Surface
SMT
Mount

T/H
Page 126

.050" x .050" SOCKETS SFM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFM

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Tiger Eye= BeCu
Tiger Eye LITE= Phosphor Bronze



Current Rating:
2A @ 80°C ambient

Voltage Rating:
350 VAC mated with TFM

Operating Temp Range:
-65°C to +125°C

Plating:
Au over 50μ" (1,27μm) Ni

Contact Resistance:
15 mΩ max

Insertion Depth:
.120" (3,05mm) to .160" (4,06mm)

Insertion Force:
Standard= 2.5oz (0,69N) avg;
LITE= 2.0oz (0,56N) avg.

Withdrawal Force:
Standard= 2.0oz (0,56N) avg;
LITE= 1.5oz (0,42N) avg.

Max Cycles:
Tiger Eye= 100 with 10μ" (0,25μm) Au

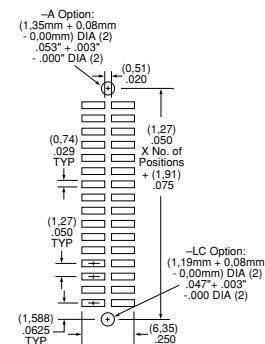
Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
.004" (0,10mm) max (05-25)
.006" (0,15mm) max (30-50)

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?SFM for recommended PCB layout.



Mates with:
TFM, FTS (LIF), FW (LIF), FTSH (LIF)



APPLICATIONS



Lower cost Phosphor Bronze contact for applications where Beryllium Copper is not needed.

High reliability
Tiger-Eye contacts

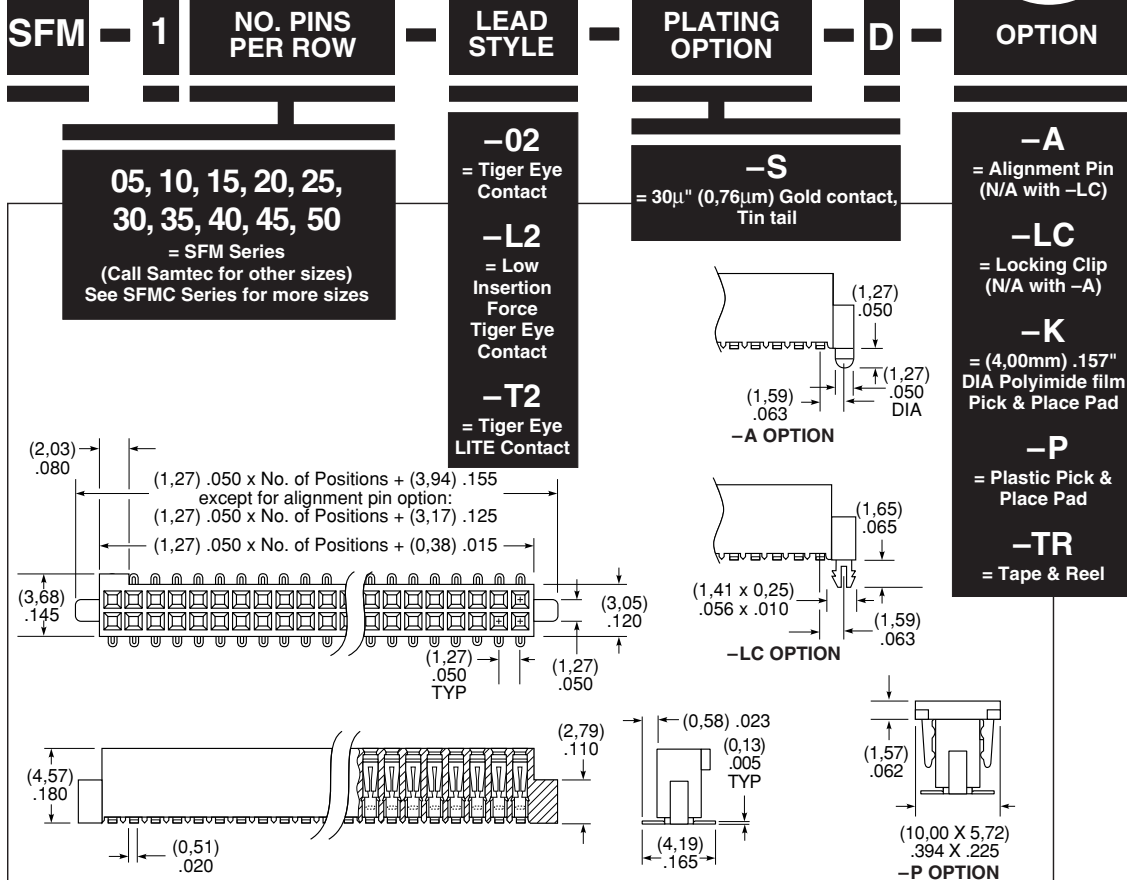
Available with optional
pick-and-place pads

Slotted SMT tails

Choice of alignment pin
or locking clip options

APPLICATION SPECIFIC OPTION

Single row available.
Call Samtec.



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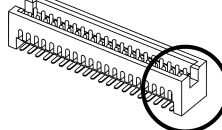
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TFM-120-02-S-D



TFM-105-02-S-D



Surface
SMT
Mount

T/H
Page 127

.050" x .050" HEADERS TFM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TFM

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze

Current Rating:
2A @ 80°C ambient

Voltage Rating:
350 VAC mated with SFM

Operating Temp Range:
-65°C to +125°C

Plating:
Au over 50µ" (1,27µm) Ni

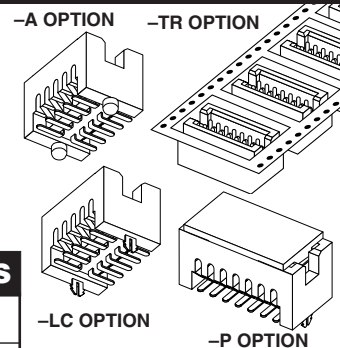
APPLICATIONS

LEAD STYLE	MATED HEIGHT
TFM SFM	
-02	(6,35) .250
-12	(8,13) .320
-22	(9,91) .390
-32	(11,81) .465

Note:
Some sizes, styles and options are non-standard, non-returnable.

Mates with:
SFM, SFMC

OPTIONS



Shrouded body for blind mating

(1,27mm x 1,27mm)
.050" x .050"
micro pitch

Choice of four body heights

APPLICATION SPECIFIC OPTION

Single row available.
Call Samtec.

Surface Mount

Alignment pin or locking clip options available

COST SAVING SOLUTIONS
FLEX
MOLD

Processing:

Max Processing Temp:

230°C for 60 seconds

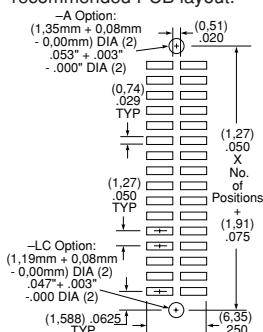
SMT Lead Coplanarity:

(0,10mm) .004" max (05-25)

(0,15mm) .006" max (30-50)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?TFM for recommended PCB layout.



TFM - 1 NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - D - OPTION

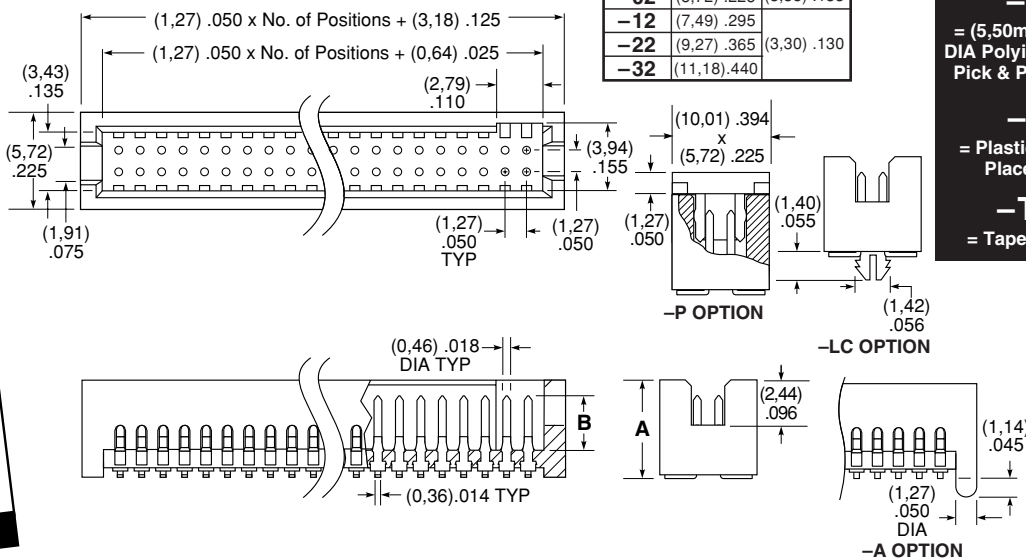
05, 10, 15, 20, 25,
30, 35, 40, 45, 50
(Call Samtec for other sizes)

Specify
LEAD
STYLE
from
chart

-S
= 30µ" (0,76µm) Gold post,
Tin tail

-A
= Alignment Pin
(N/A with -LC)
-LC
= Locking Clip
(N/A with -A)
-K
= (5,50mm) .216"
DIA Polyimide Film
Pick & Place Pad
-P
= Plastic Pick &
Place Pad
-TR
= Tape & Reel

LEAD STYLE	A	B
-02	(5,72) .225	(3,38) .133
-12	(7,49) .295	
-22	(9,27) .365	(3,30) .130
-32	(11,18) .440	



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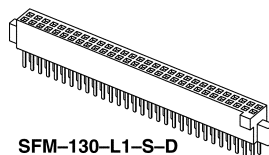
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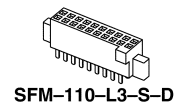
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SFM-120-03-S-D



SFM-110-L3-S-D



.050" x .050" SOCKETS SFM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFM

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Tiger Eye= BeCu
Tiger Eye LITE= Phosphor Bronze



Current Rating:
2A @ 80°C ambient

Voltage Rating:
350 VAC mated with TFM

Operating Temp Range:
-65°C to +125°C

Plating:
Au over 50μ" (1,27μm) Ni

Contact Resistance:
15 mΩ max

Insertion Depth:
(3,05mm) .120" to
(4,06mm) .160"

Insertion Force:

Standard= 2.5oz (0,69N) avg;

LITE= 2.0oz (0,56N) avg.

LIF= 1.5oz (0,42N) avg.

Normal Force:

Standard= 132g (1,29N) avg;

LIF= 90g (0,88N) avg.

Withdrawal Force:

Standard= 2.0oz (0,56N) avg;

LITE= 1.5oz (0,42N) avg.

LIF= 1.5oz (0,42N) avg.

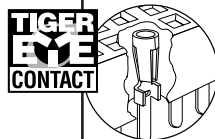
Max Cycles:

Tiger Eye= 100 with 10μ"

(0,25μm) Au

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
TFM, FTS (LIF), FW(LIF),
FTSH (LIF)



APPLICATIONS



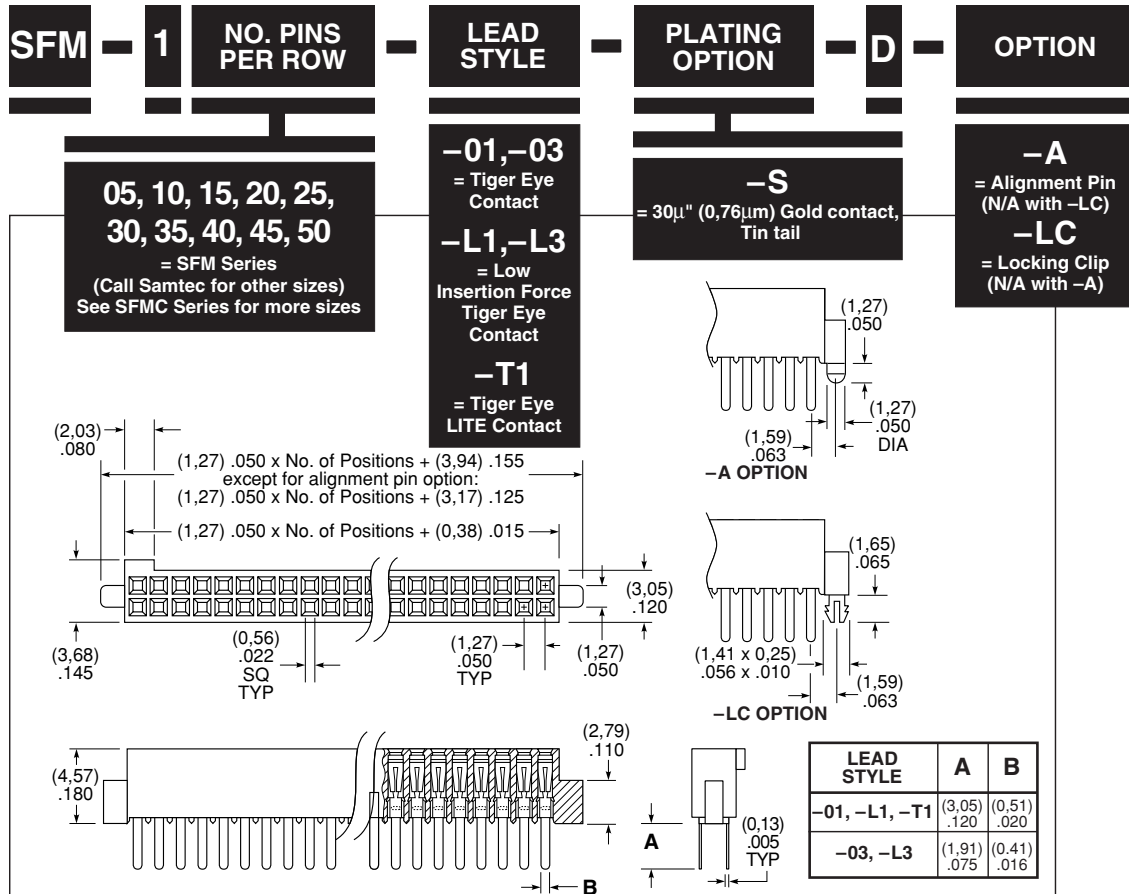
Lower cost Phosphor Bronze contact for applications where Beryllium Copper is not needed.

(1,27mm)
.050" pitch

Low insertion force pin available

APPLICATION SPECIFIC OPTION

Single row available.
Call Samtec.



Processing:
Max Processing Temp:
230°C for 60 seconds



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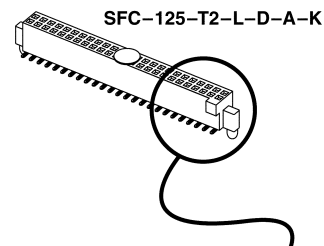
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SFC-110-T1-L-D



COST SAVINGS SOCKET SFC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFC

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Phosphor Bronze



Current Rating:
2A @ 80°C ambient

Voltage Rating:
350 VAC mated with TFC

Operating Temp Range:
-65°C to +125°C

Plating:

Au or Sn over 50µ" (1,27µm) Ni

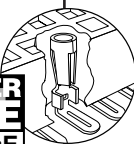
Contact Resistance:
15 mΩ max

Insertion Depth:
(3,05mm) .120" to (4,06mm) .160"

Insertion Force:
2.5oz (0,69N) avg.

Withdrawal Force:
1.5oz (0,42N) avg.

Mates with:
TFC



High reliability
Tiger-Eye Lite
contacts

(1,27mm x 1,27mm)
.050" x .050"
micro pitch

Polarized

Slotted SMT tails

Alignment
pin option

Note: Some sizes, styles and options are non-standard, non-returnable.

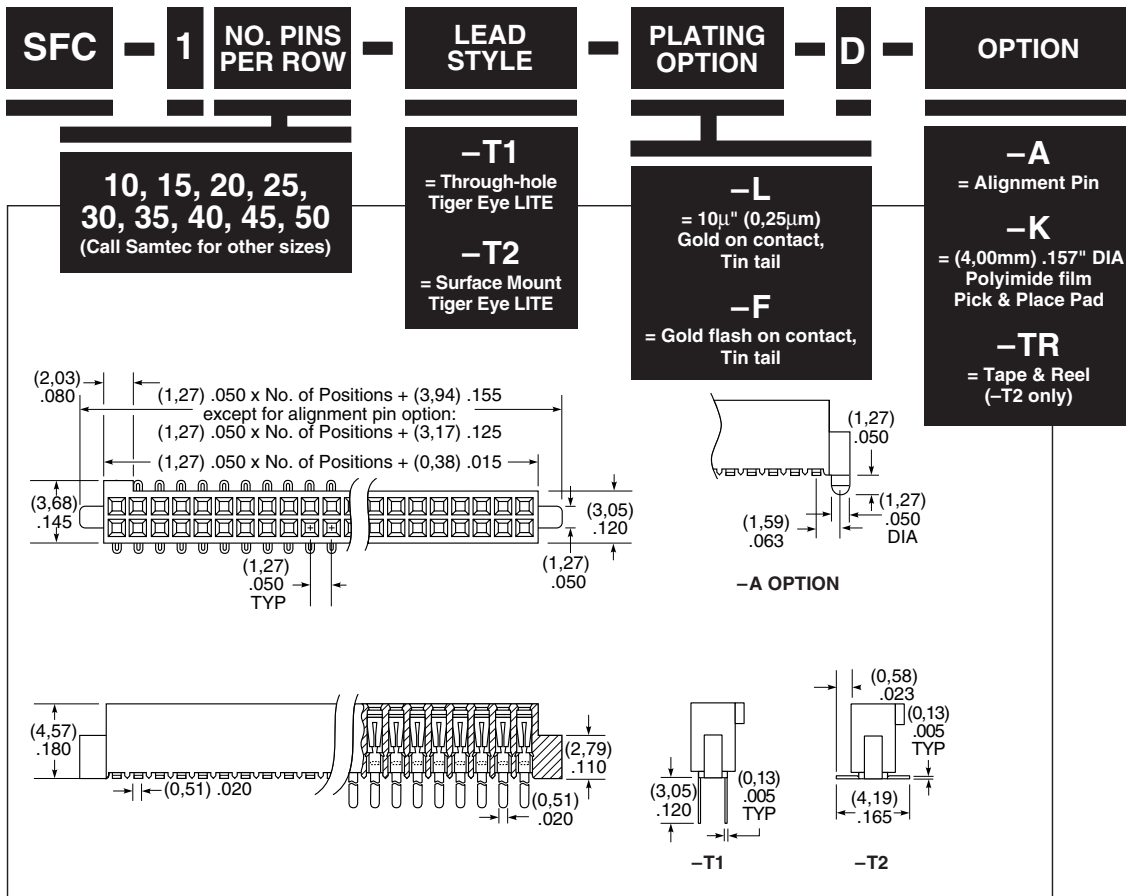
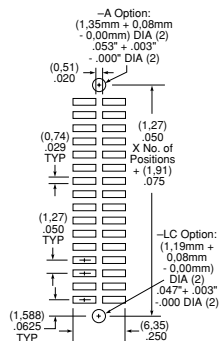
Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max (10-25)

(0,15mm) .006" max (30-50)

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?SFC for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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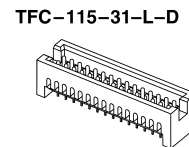
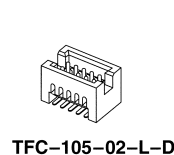
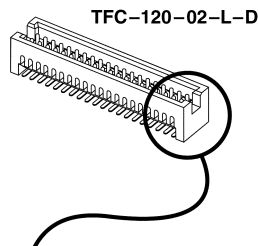
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COST SAVINGS HEADER TFC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TFC

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze

Current Rating:
2A @ 80°C ambient

Voltage Rating:
350 VAC mated with SFC

Operating Temp Range:
-65°C to +125°C

Plating:
Au or Sn over
50µ" (1,27µm) Ni



Mates with:
SFC

STACK HEIGHTS

LEAD STYLE	TFC	SFC	MATED HEIGHT
-01		-T1	(5,97) .235
-11		-T1	(7,75) .305
-21		-T1	(9,53) .375
-31		-T1	(11,43) .450
-02		-T2	(6,35) .250
-12		-T2	(8,13) .320
-22		-T2	(9,91) .390
-32		-T2	(11,81) .465

Shrouded body for blind mating

(1,27mm x 1,27mm)
.050" x .050"
micro pitch

Choice of eight body heights

Surface Mount or Through-Hole

Alignment pin option available

Note:

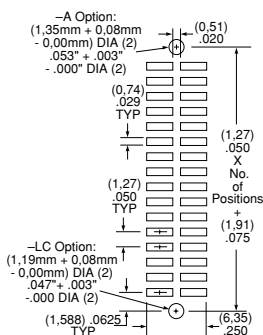
Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max (10-25)
(0,15mm) .006" max (30-50)

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?TFC for recommended PCB layout.



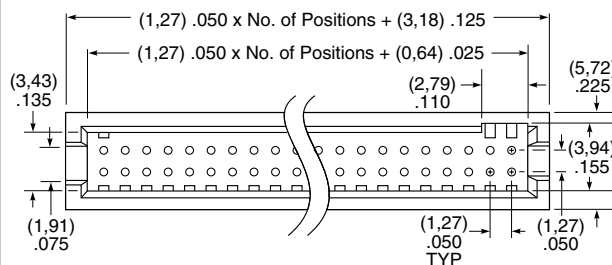
TFC - 1 NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - D - OPTION

10, 15, 20, 25,
30, 35, 40, 45, 50
(Call Samtec for other sizes)

-X1
= Through-Hole
-X2
= Surface Mount

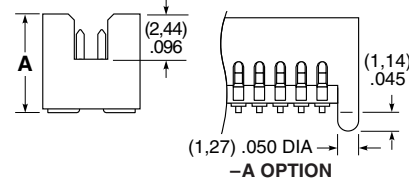
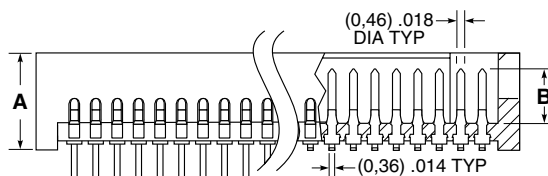
-L
= 10µ" (0,25µm)
Gold on contact,
Tin tail
-F
= Gold flash on contact,
Tin tail

-A
= Alignment Pin
-K
= (6,75mm) .266"
DIA Polyimide film
Pick & Place Pad
-TR
= Tape & Reel
(-X2 only)



TH LEAD STYLE	A	B
-01	(5,59) .220	(3,38) .133
-11	(7,37) .290	(3,30) .130
-21	(9,14) .360	(3,30) .130
-31	(11,05) .435	(3,30) .130

SMT LEAD STYLE	A	B
-02	(5,72) .225	(3,38) .133
-12	(7,49) .295	(3,30) .130
-22	(9,27) .365	(3,30) .130
-32	(11,18) .440	(3,30) .130



TAPE & REEL AVAILABILITY

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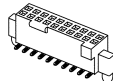
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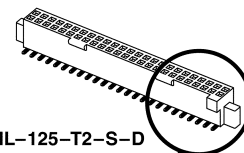
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SFML-110-T2-S-D-A



SFML-125-T2-S-D



LOCKING SOCKET SFML SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFML

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Phosphor Bronze

Current Rating:
2A @ 80°C ambient

Voltage Rating:
350 VAC mated with TFML

Operating Temp Range:
-65°C to +125°C

Plating:
Au over 50µ" (1,27µm) Ni

Contact Resistance:
15 mΩ max

Insertion Depth:
(3,05mm) .120" to
(4,06mm) .160"

Insertion Force:
2.5oz (0,69N) avg.

Unmating Force:
Withdrawal force per contact=

1.5oz (0,42N) average;

Incremental unmating force

with latching mechanism:

10-20 pins/row (One Latch)

increases withdrawal force

by 4 x average;

25 & 30 pins/row (Two Latches)

increases withdrawal force

by 3 x average;

35-50 pins/row (Three

Latches) increases

withdrawal force by 1.7 x

average

Max Cycles:

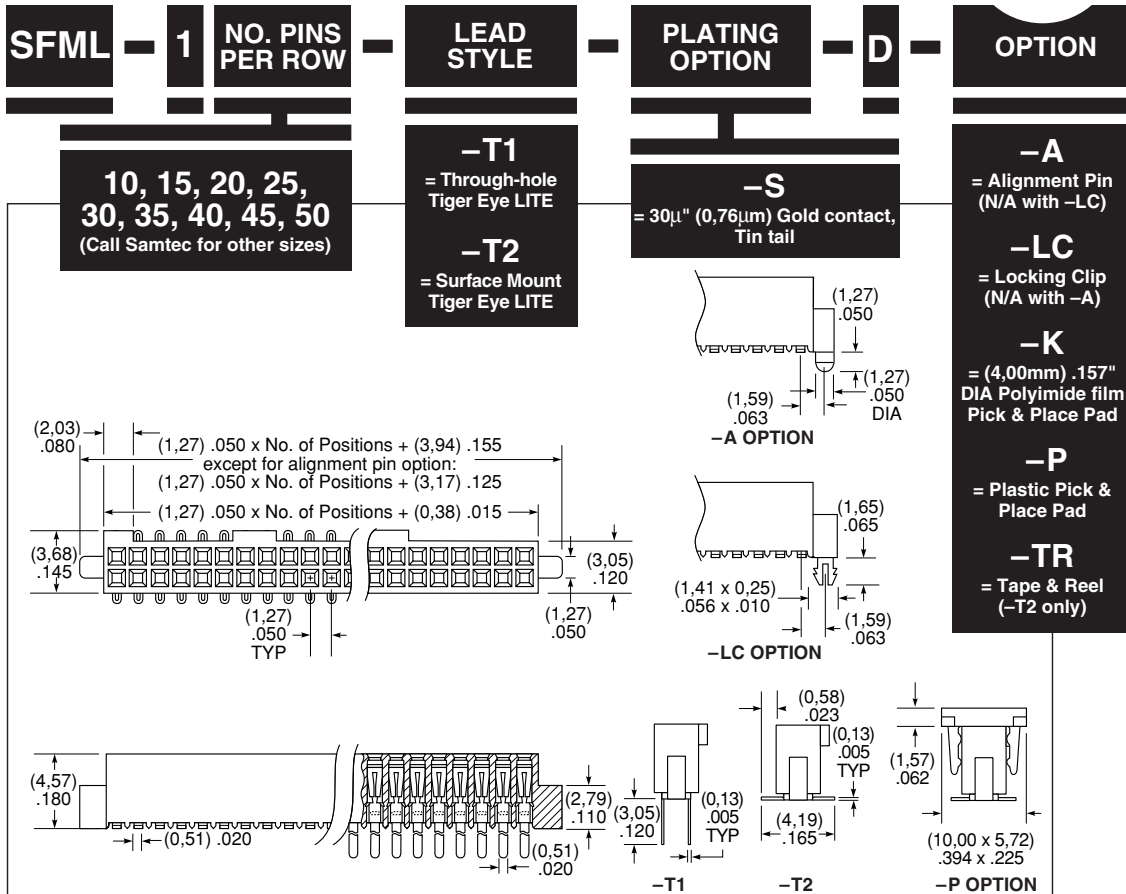
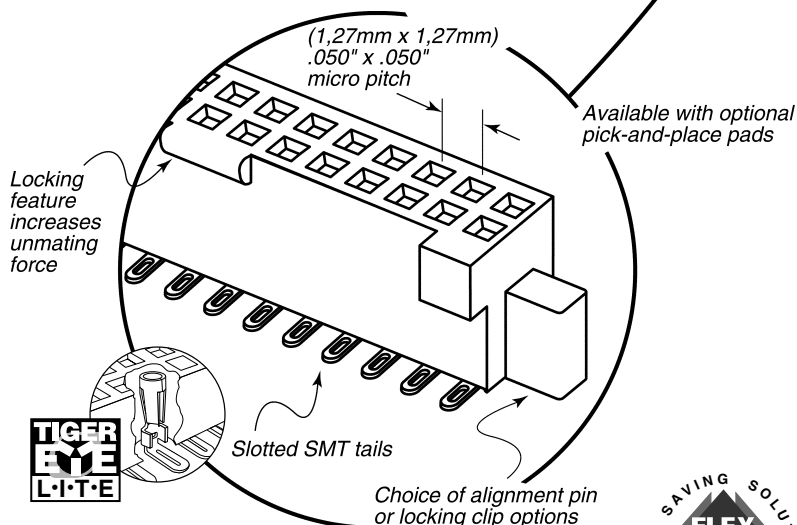
100 with 10µ" (0,25µm) Au

Note: Some sizes, styles and

options are non-standard,

non-returnable.

Mates with:
TFML



Due to technical progress, all designs, specifications and components are subject to change without notice.

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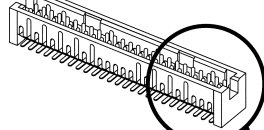
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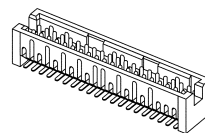
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TFML-125-02-S-D



TFML-120-02-S-D



LOCKING HEADER TFML SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TFML

Insulator Material:

Black Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Voltage Rating:

350 VAC mated with SFML

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50µ" (1,27µm) Ni

Locking Features:

10-20 = One Latch

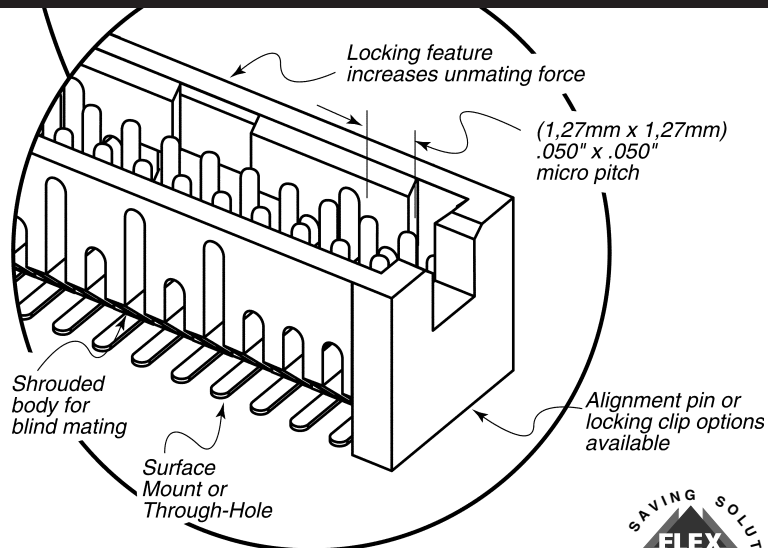
25 & 30 = Two Latches

35-50 = Three Latches

Note:

Some sizes, styles and options are non-standard, non-returnable.

Mates with:
SFML



Processing:

Max Processing Temp:

230°C for 60 seconds

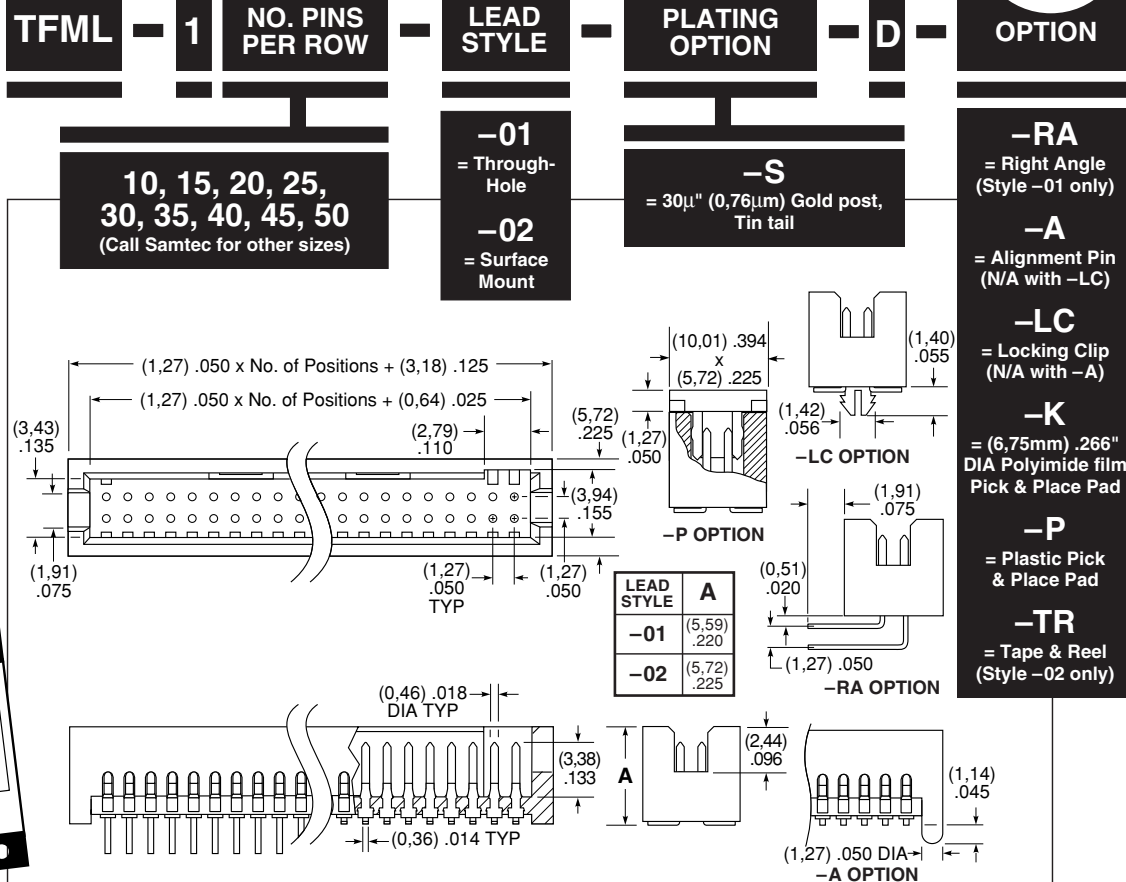
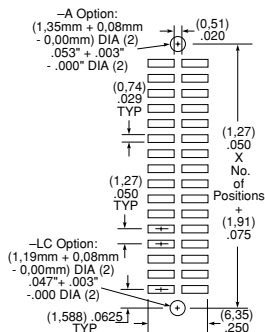
SMT Lead Coplanarity:

(0,10mm) .004" max (10-25)

(0,15mm) .006" max (30-50)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?TFML for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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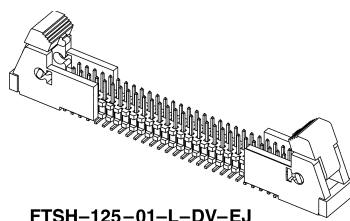
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FTSH-125-01-L-DV-EJ



FTSH-110-01-L-DV

FTSH-120-02-F-DV

Surface
SMT
Mount

T/H
Page 134

.050" MICRO HEADER FTSH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FTSH

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze

Current Rating:
1.75A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

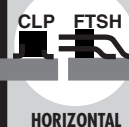
Plating:
Sn or Au over 50µ" (1,27µm) Ni

Note:
See SFM/TFM for positive alignment feature.

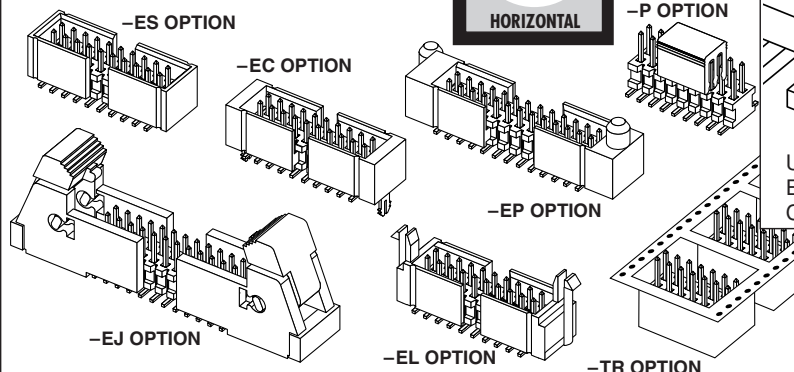
Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
FFSD, CLP, FLE, SFMC, SFMH

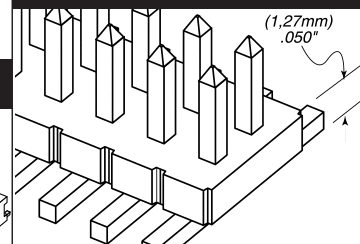
APPLICATIONS



OPTIONS



ALSO AVAILABLE



Ultra-low profile option available.
End Shrouds available.
Call for FTS Series specifications.

APPLICATION SPECIFIC OPTION

Molded pick-and-place pads, latches, single row option and straddle mount leads available.
Call Samtec.

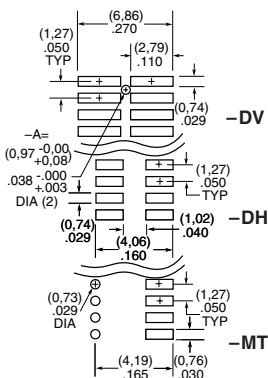
Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max (02-25)
(0,15mm) .006" max (26-50)

Suggested Paste Thickness:
For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?FTSH for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

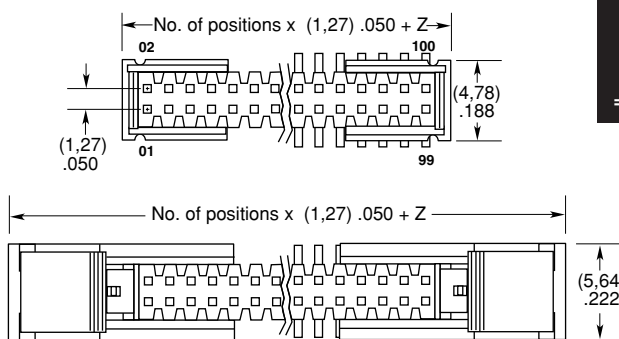
FTSH

1

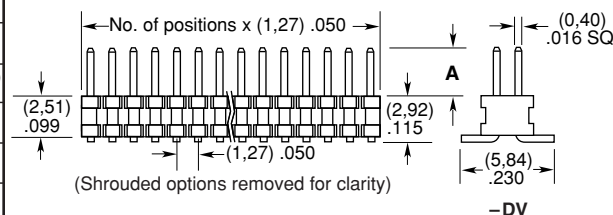
NO. PINS PER ROW

LEAD STYLE

02 thru 50

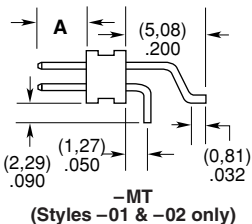
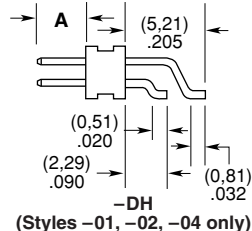


OPTION	Z
-ES	(1,55) .061
-EJ	(15,77) .621
-EC	(3,33) .131
-EP	(5,87) .231
-EL	(6,53) .257



LEAD STYLE	A
-01	(3,05) .120
-02	(1,91) .075
-03	(1,65) .065
-04	(3,81) .150

- 01**
= (3,05) .120" Post (Mates with FFSD, FLE)
- 02**
= (1,91) .075" Post (Mates with FLE)
- 03**
= (1,65) .065" Post (Mates with CLP -DV)
- 04**
= (3,81) .150" Post (Mates with SFMC, SFMH)



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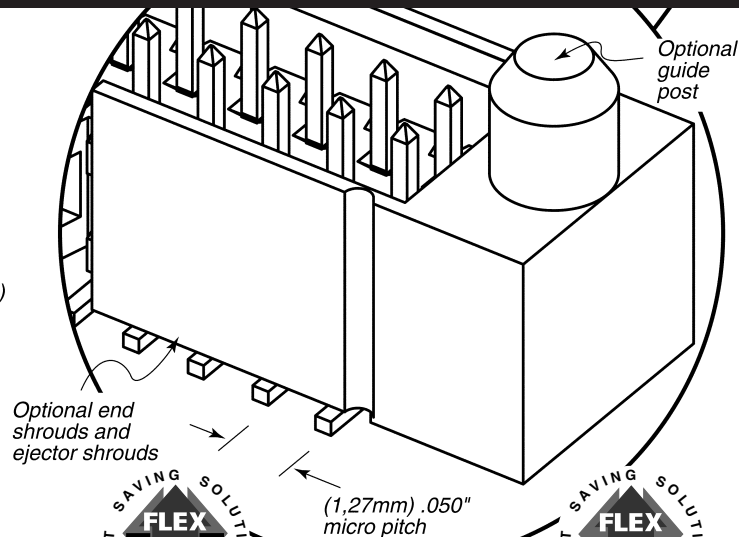
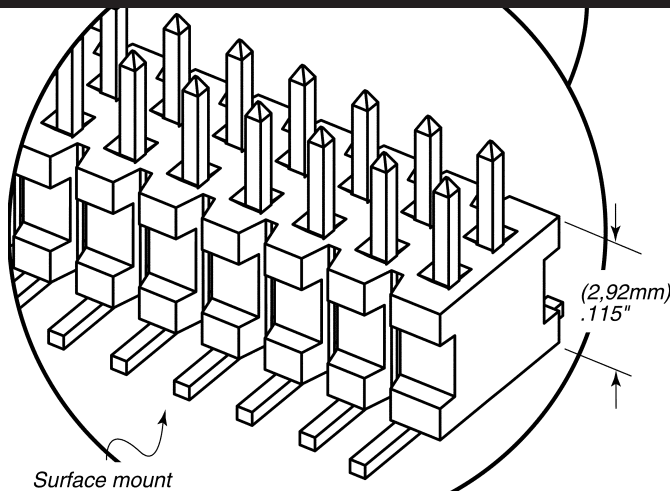
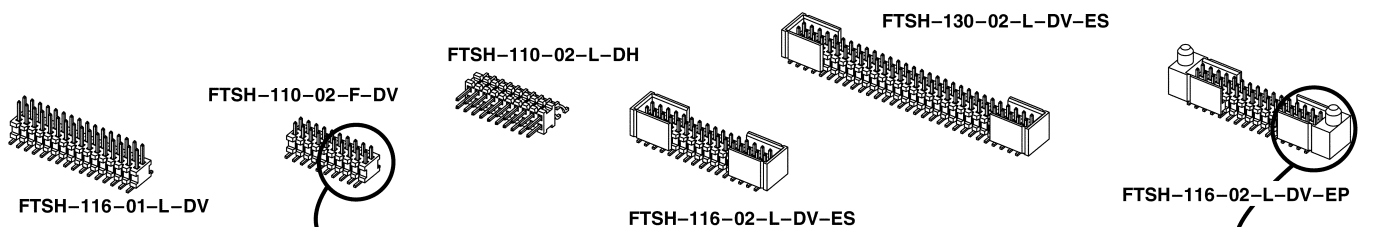
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PLATING OPTION

-L

= 10μ" (0,25μm) Gold on post, Tin on tail

-F

= Gold flash on post, Tin on tail

TAIL OPTION

-DV

= Double Vertical

-DH

= Double Horizontal (Styles -01, -02 & -04 only)

-MT

= Mixed Technology (Styles -01 & -02 only)

FLEX SHROUD OPTIONS

(Style -02 & -03 only, -DH not available)
9 pins/row minimum

-ES

= End Shroud

-EC

= End Shroud with Locking Clip

-EP

= End Shroud with Guide Post

-EL

= End Shroud with Board Lock (Boards are positively locked and cannot be unmated)

-EJ

= Ejector Shroud (Style -01 only)
-DH & -MT not available
10 pins/row minimum
25 pins/row maximum

OTHER OPTIONS

-K

= Keying Shroud
(For mating with FFSD Styles -01 only, 05, 10, 13, 17, 20 & 25 pins/row only, 13, 17, 20 & 25 only with shrouds)

-A

= Alignment Pin
Not available with -K (-DV 3 positions min.) (-DH 5 positions min.) (Metal or plastic at Samtec discretion)

-C

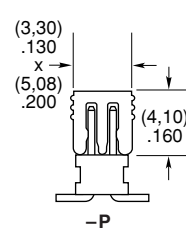
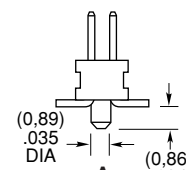
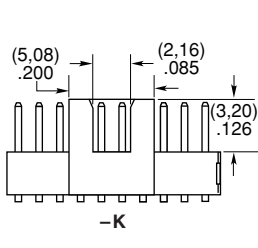
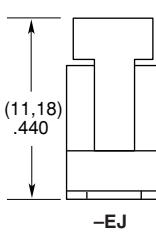
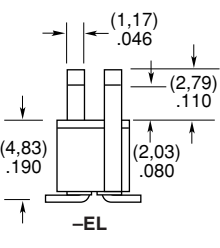
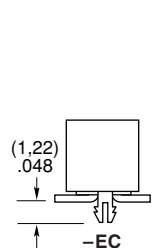
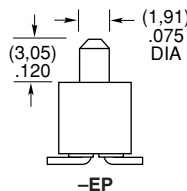
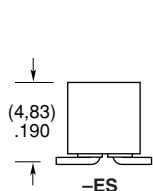
= (4,00mm) .157" DIA Polyimide film Pick & Place Pad (-DH only)

-P

= Pick & Place Pad (-DV 4 positions min.) (-DH & -MT not available)

-TR

= Tape & Reel Packaging (Tail option -DV & -DH only)
Flex Shroud options not available except -ES & -EJ



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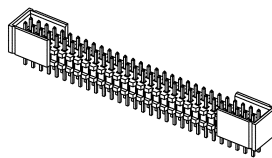
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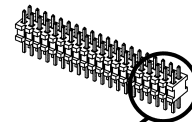
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FTSH-130-02-L-D-ES



FTSH-120-02-F-D



FTSH-110-01-L-D-RA



Through
T/H
Hole

SMT
Page 132

.050" MICRO HEADER FTSH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FTSH

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze



Current Rating:

1.75A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Note:

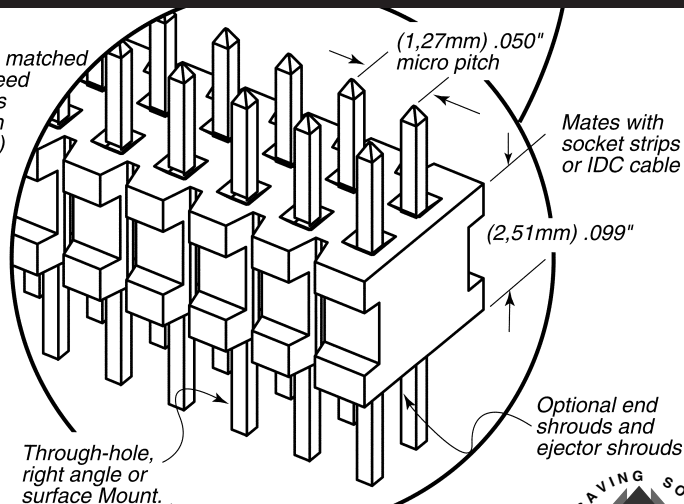
See SFM/TFM for positive alignment feature.

Mates with:
FFSD, CLP, FLE

Impedance matched for high speed applications (Mated with CLP series)

APPLICATION SPECIFIC OPTION

Molded pick-and-place pads and single row option available. Call Samtec.



Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:
Max Processing Temp:
230°C for 60 seconds



SUDDEN SPECS!

www.samtec.com

FTSH - 1 NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - D - TAIL OPTION - OTHER OPTIONS

02 thru 50

Specify LEAD STYLE from chart

-L = 10µ" (0,25µm) Gold on post, Tin on tail

-F = Gold flash on post, Tin on tail

-RA = Right Angle

-ES = End Shroud (Style -02 & -03) 9 pins/row min.

-EP = End Shroud with Guide Post (Style -02 & -03) 9 pins/row min.

-EL = End Shroud with Board Lock (Style -02 & -03) 9 pins/row min.

-EJ = Ejector Shroud (Style -01 only) 10 pins/row minimum 25 pins/row max. -RA not available

-K = Keying Shroud (For mating with FFSD) Styles -01 only, 05, 10, 13, 17, 20 & 25 pins/row only, 13, 17, 20 & 25 only with shrouds)

Dimensions and Lead Styles:

No. of positions x (1,27) .050 + Z₁₀₀

(1,27) .01 .050

(4,78) .188

(0,40) .016 SQ

(3,43) .135

(2,29) .090

(1,27) .050

(11,18) .440

(2,79) .110

(1,17) .046

(2,03) .080

(3,05) .120

(1,91) .075 DIA

(5,08) .200

(2,16) .085

(3,20) .126

(2,29) .090

(2,29) .090

(1,27) .050

Lead Style Dimensions:

(2,51) .099

(1,27) .050

(Shrouded options removed for clarity)

LEAD STYLE	A	OPTION	Z
-01	(3,05) .120	-ES	(1,55) .061
-02	(1,91) .075	-EJ	(15,77) .621
-03	(1,65) .065	-EP	(5,87) .231
-04	(3,81) .150	-EL	(6,53) .257

Due to technical progress, all designs, specifications and components are subject to change without notice.

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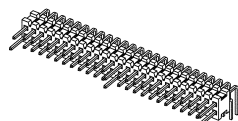
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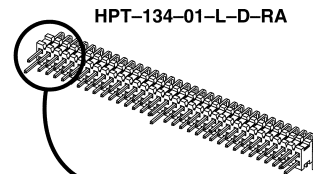
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HPT-125-01-S-D-RA



HPT-134-01-L-D-RA

Through
T/H
Hole

HOT PLUGGABLE HEADER HPT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HPT

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze

Current Rating:
1.75A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Compact Flash & PCMCIA Compatible

APPLICATION SPECIFIC OPTION

Other pin counts and post heights available. Call Samtec.

Extended power and ground pins for first-mate-last-break applications

Right Angle Through-Hole for robust functionality

SMT Processing compatible insulators

(1,27mm x 1,27mm)
.050" x .050"
micro pitch

HPT

-

1

NO. PINS PER ROW

-

01

PLATING OPTION

-

D

RA

25, 34

(Call Samtec for other sizes)

-L

= 10µ" (0,25µm) Gold on contact,
Tin on tail

-S

= 30µ" (0,76µm) Gold on contact,
Tin on tail

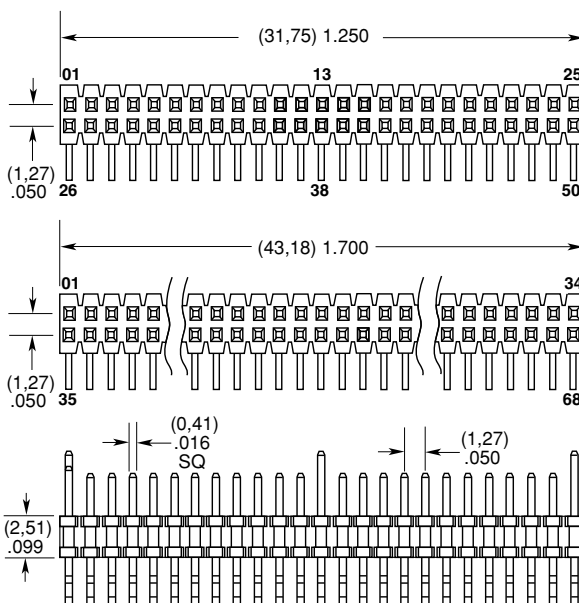
Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:
Max Processing Temp:
230°C for 60 seconds



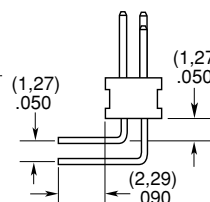
SUDDEN SPECS!

www.samtec.com



NO. PINS PER ROW	POSITION NO.	A
25	25, 26	(3,50) .138
	01, 13, 38, 50	(5,00) .197
	ALL OTHERS	(4,25) .167
34	01, 17, 34, 35, 51, 68	(5,00) .197
	36, 67	(3,50) .138
	ALL OTHERS	(4,25) .167

2 x 25 position is Compact Flash compatible.
2 x 34 position is PCMCIA compatible.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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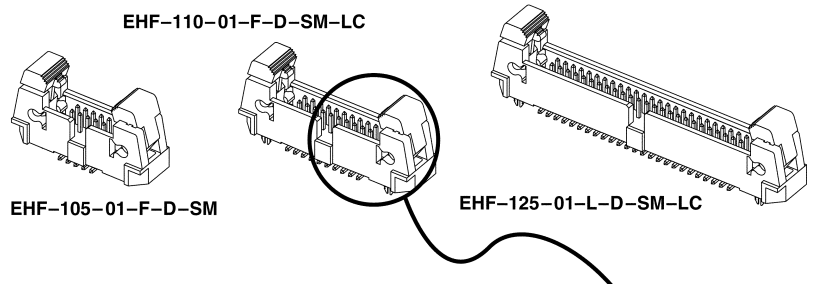
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.050" (1,27mm) EJECTOR HEADER EHF, ECF SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?EHF

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Current Rating:

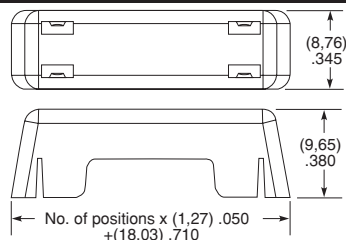
1.75A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Mates with:
FFSD

EJECTOR HEADER CAP (Locks FFSD cable to EHF header)

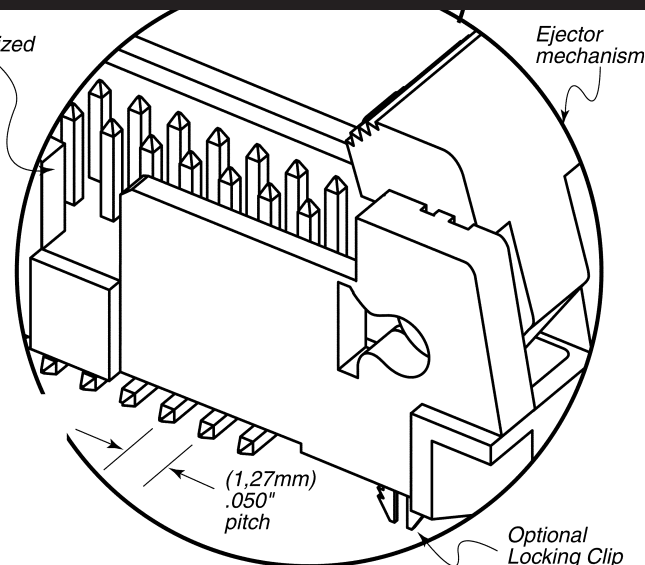


ECF — **NO. PINS PER ROW**

05, 08, 10, 13, 17, 20, 25

Polarized

Ejector mechanism



Optional Locking Clip

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

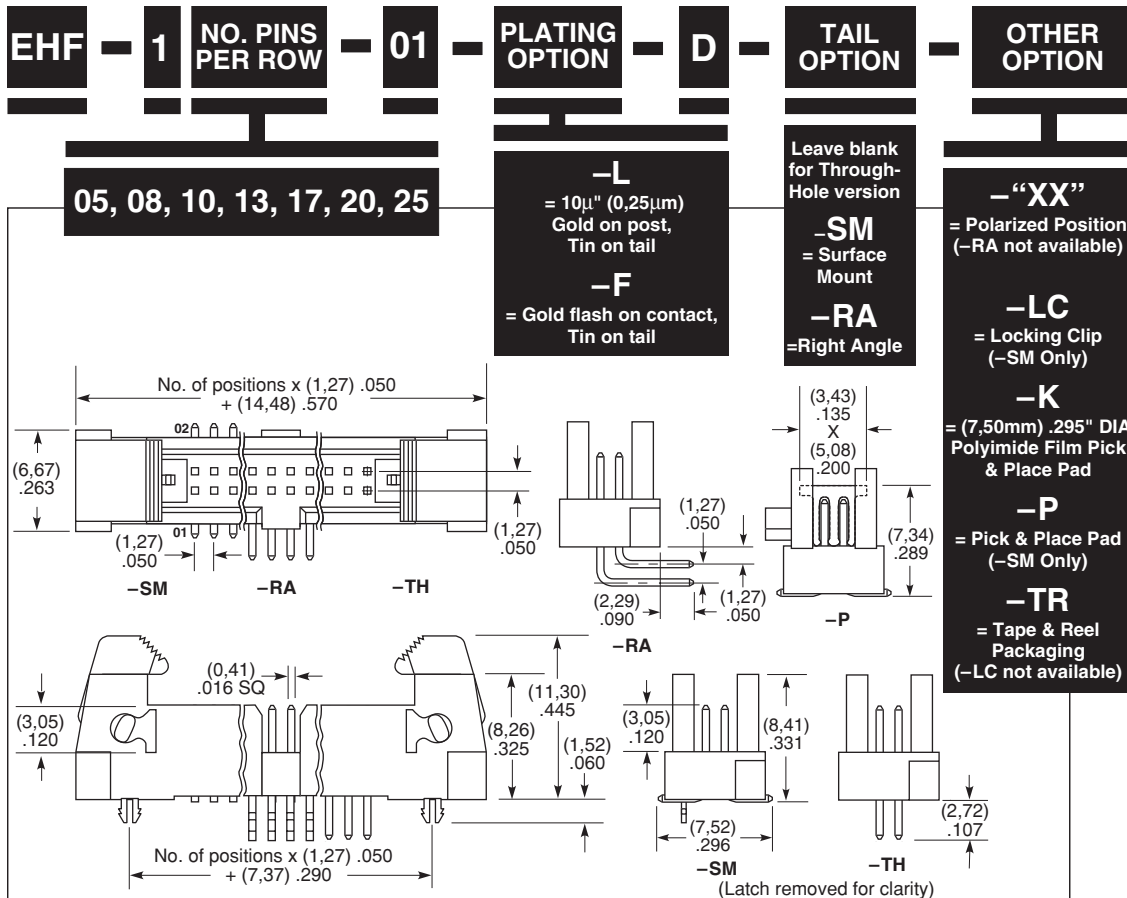
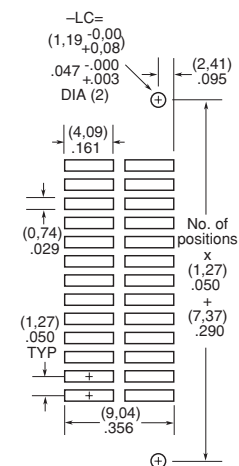
SMT Lead Coplanarity:

(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?EHF for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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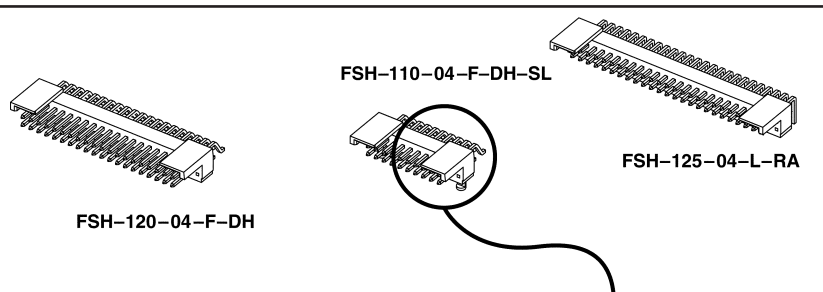
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.050" SHROUDED HEADER FSH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FSH

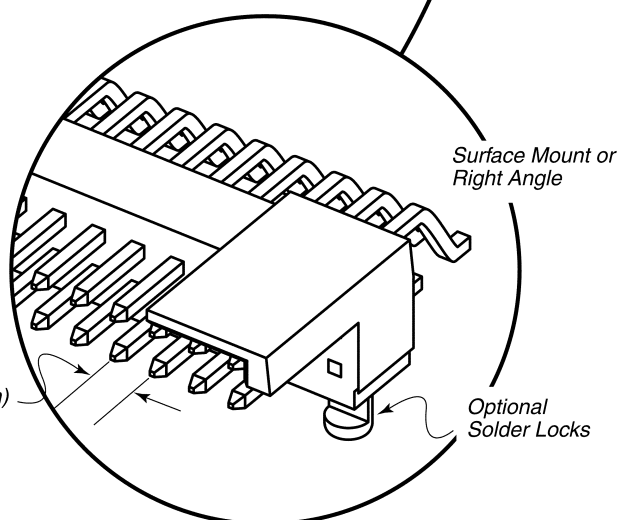
Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Current Rating:
1.75A @ 80°C ambient
Operating Temp Range:
-65°C to +125°C
Plating:
Sn or Au over 50µ"
(1,27µm) Ni

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
SFMH

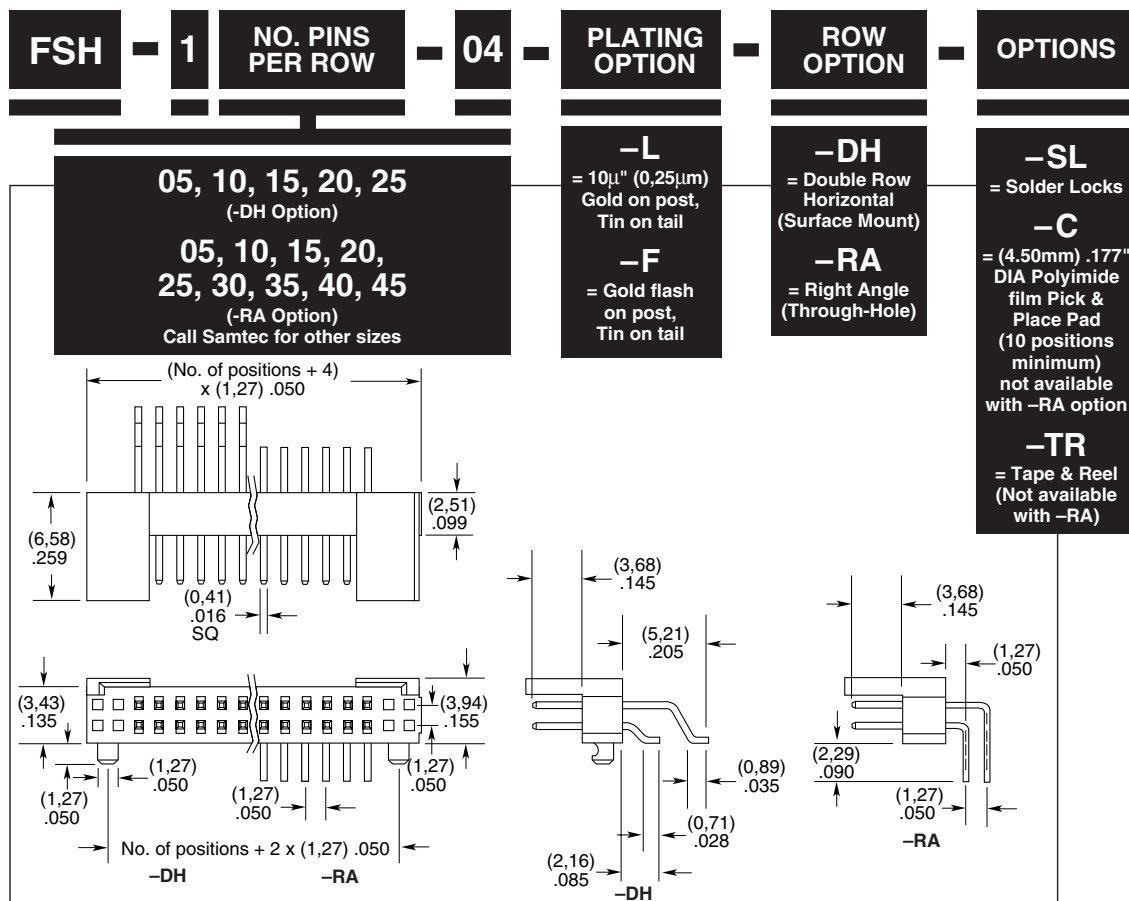
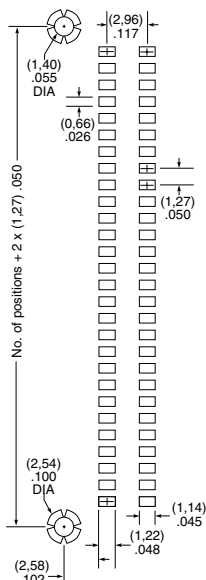


(1,27mm)
.050"
pitch



Processing:

Max Processing Temp:
230°C for 60 seconds
SMT Lead Coplanarity:
(0,15mm) .006" max
Suggested Paste Thickness:
For most applications add
(0,05mm) .002" to max SMT
lead coplanarity
Suggested PCB Layouts:
For reference only. Please
contact Samtec or go to
www.samtec.com?FSH for
recommended PCB layout.



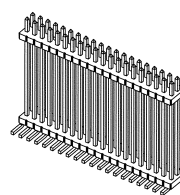
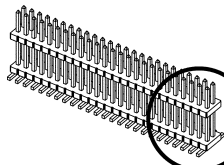
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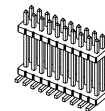


FW-25-03-G-D-163-120



FW-20-05-G-D-500-075

FW-10-03-G-D-233-075



Surface
SMT
Mount

.050" BOARD STACKER FW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FW

Insulator Material:

Black Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze

Current Rating:

1.75A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

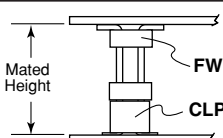
Plating:

Sn or Au over 50µ" (1,27µm) Ni



Mates with:
CLP, FFSD, FLE

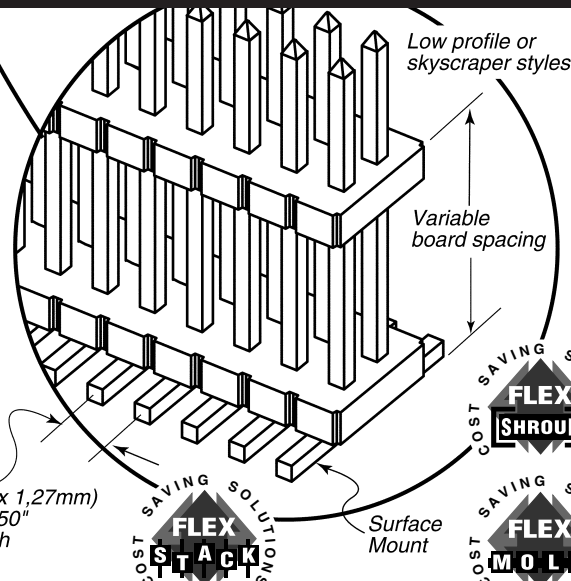
APPLICATIONS



Lead Style	Mated Height
FW	CLP
FW-XX-03-X-X-233-065	(8,13) .320
FW-XX-03-X-X-303-065	(9,91) .390

APPLICATION SPECIFIC OPTION

Single row option available.
Call Samtec.



Processing:

Max Processing Temp:

230°C for 60 seconds

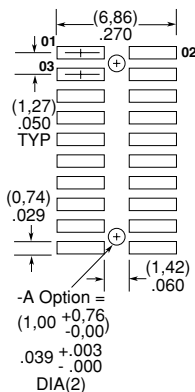
SMT Lead Coplanarity:

(0,10mm) .004" max (02-30)

(0,15mm) .006" max (31-50)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?FW for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

FW	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	D	STACKER HEIGHT	POST HEIGHT	OPTION
	02 thru 50	Specify LEAD STYLE from chart	-G = 10µ" (0,25µm) Gold on post, Gold flash on tail -L = 10µ" (0,25µm) Gold on post, Tin on tail -F = Gold flash on post, Tin on tail		"XXX" = Stacker Height (in inches) Example: -250 = (6,35mm) .250"	"XXX" = Post Height (in inches) (1,65mm) .065" minimum Example: -065 = (1,65mm) .065"	-ES = End Shroud (-075 post height only. Mate only with CLP.) (5,46mm) .215" to (15,49mm) .610" stacker height only 9 pins/row min. -EP = End Shroud with Guide Post (-075 post height only. Mate only with CLP.) (5,46mm) .215" to (15,49mm) .610" stacker height only 9 pins/row min. -A = Alignment Pin (3 positions min.) (5,46mm) .215" to (15,75mm) .620" stacker height only -P = Pick & Place Pad (5 positions min.) -TR = Tape & Reel (Post+Board Space = (17,46mm) .6875 max.)

LEAD STYLE	STACKER HEIGHT	STACKER + POST
-03	(5,46) .215 to (8,51) .335	(7,11) .280 to (10,16) .400
-05	(8,64) .340 to (15,49) .610	(10,29) .405 to (17,15) .675

Due to technical progress, all designs, specifications and components are subject to change without notice.

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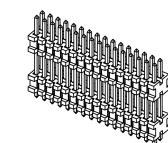
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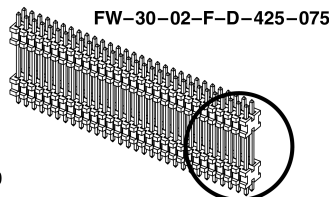
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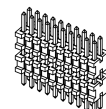
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FW-16-01-L-D-350-100



FW-30-02-F-D-425-075



FW-10-04-F-D-250-100



.050" BOARD STACKER FW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FW

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze



Current Rating:
1.75A @ 80°C ambient
Operating Temp Range:
-65°C to +125°C

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Mates with:
CLP, FFSD, FLE

APPLICATION SPECIFIC OPTION

Single row option available.
Call Samtec.

Low profile and skyscraper styles

Variable board spacing

(1,27mm)
.050" pitch

COST SAVING SOLUTIONS
FLEX STACK

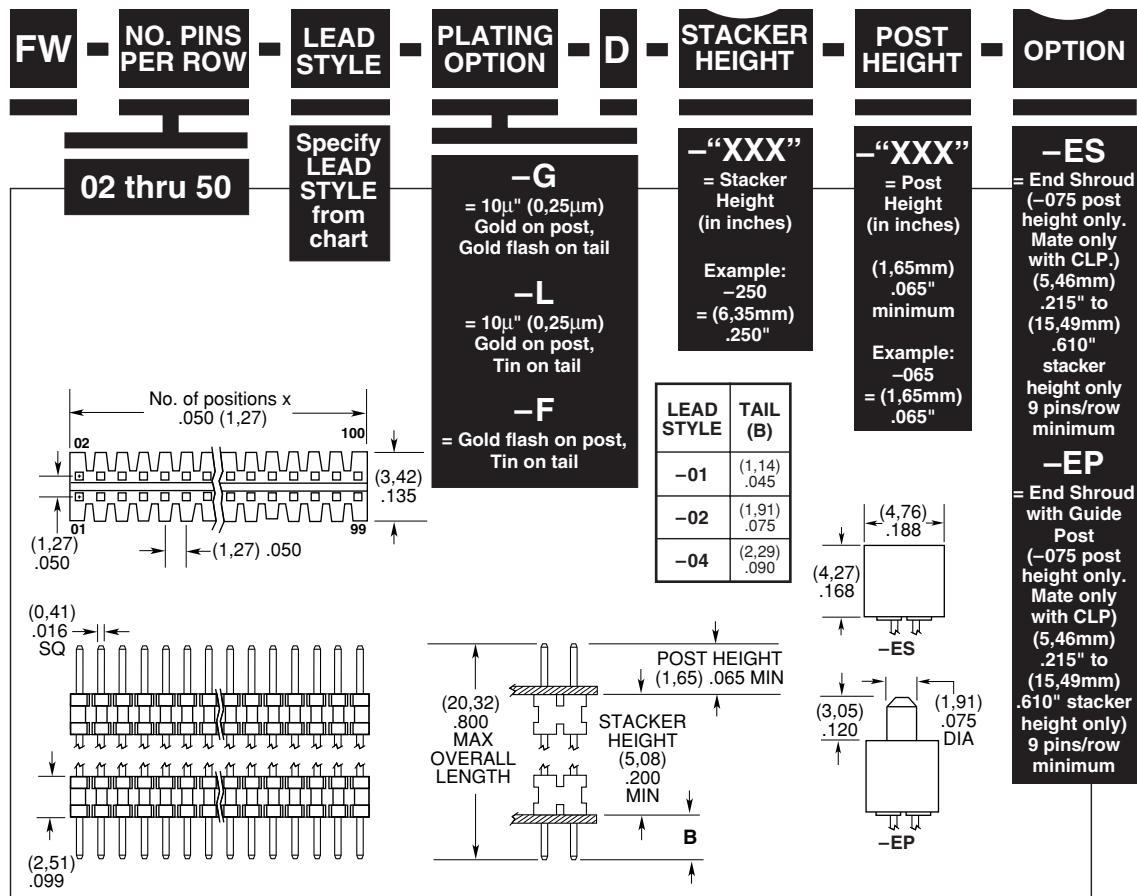
COST SAVING SOLUTIONS
FLEX SHROUD

Note: This Series is non-standard, non-returnable.

Processing:
Max Processing Temp:
230°C for 60 seconds



www.samtec.com



Due to technical progress, all designs, specifications and components are subject to change without notice.

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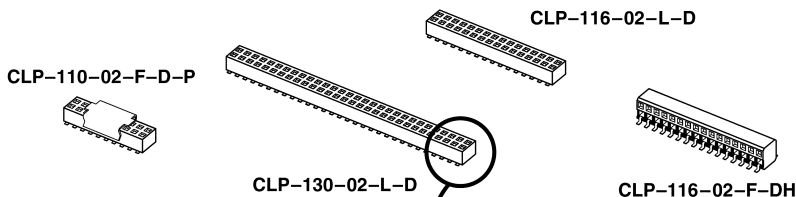
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Surface
SMT
Mount

LOW PROFILE SOCKETS CLP SERIES



SPECIFICATIONS

For complete specifications see www.samtec.com?CLP

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

1.75A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 50µ" (1,27µm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

Top Entry = (1,40mm) .055"

minimum, Bottom Entry = (2,21mm) .087"

minimum plus board thickness

DH Entry = (2,31mm) .091"

to (2,67mm) .105"

Insertion Force:

3.8oz (1,05N) average

Normal Force:

60 grams (0,59N) average

Withdrawal Force:

2oz (0,56N) average

Max Cycles:

100 with 10µ" (0,25µm) Au

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
FTSH, FTS, FW

APPLICATIONS



APPLICATION SPECIFIC OPTION

Alignment pins and single row option available. Call Samtec.

High reliability
Tiger-Claw contacts

(1,27mm x 1,27mm)
.050" x .050"
micro pitch

Low Profile
(2,21mm) .087"

Surface Mount

Suitable for pass-through applications



CLP - 1 NO. PINS PER ROW - 02 - PLATING OPTION - ROW OPTION - OTHER OPTION

02 thru 50

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (02-35)

(0,15mm) .006" max (36-50)

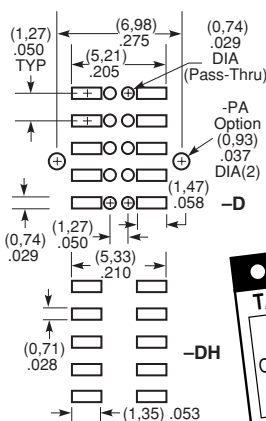
Suggested PCB Layouts:

For reference only. Please

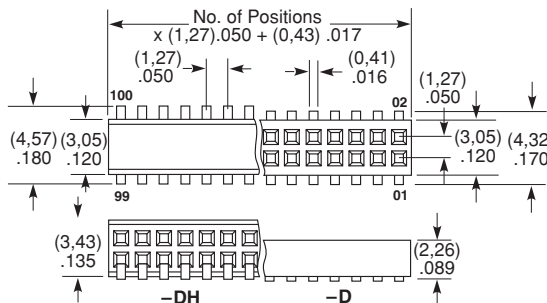
contact Samtec or go to

www.samtec.com?CLP for

recommended PCB layout.



Board fixturing may be required to assure proper alignment for pass-through applications.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

-G
(Best Cost Option)
= 10µ" (0,25µm) Gold
(-D only)

-L
= Pre-plated
(0,25µm) 10µ" Gold on contact, Tin on tail

-F
= Pre-plated Gold flash on contact, Tin on tail

-D
= Double Row

-DH
= Double Horizontal (Requires FTSH or FSH -01 lead style)

-BE
= Bottom Entry (Required for bottom entry applications)

-K
= (4,00mm) .157" DIA Polyimide film Pick & Place Pad (5 positions min.)

-P
= Pick & Place Pad (5 positions min. -D only)

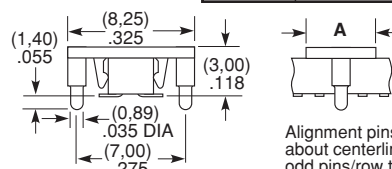
(Not always necessary for auto placement. See Flex Processing.)

-PA
= Pick & Place Pad with Alignment Pin (-D only)

-TR
= Tape & Reel



PIN/ROW	A
04-15	(3,56) .140
16-50	(7,11) .280



-PA OPTION

Alignment pins are located about centerline of the part. If odd pins/row then on middle position. If even then between middle two positions.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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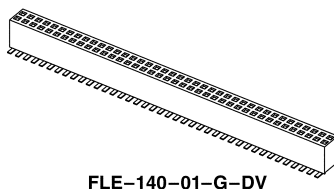
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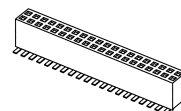
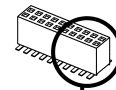
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FLE-140-01-G-DV

FLE-110-01-G-DV



FLE-120-01-G-DV

.050" (1,27mm) PITCH SOCKETS FLE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FLE

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Phosphor Bronze



Current Rating:
1.75A @ 80°C ambient
Operating Temp Range:
-65°C to +125°C

Plating:
Au over 50μ" (1.27μm) Ni

SMT Lead Coplanarity:
(0,10mm) .004" max

Contact Resistance:
15mΩ max

Insertion Depth:
(1,83mm) .072" to (4,37mm) .172" or pass-through

Insertion Force:
1.5oz (0,42N)

Normal Force:
100 grams (0,98N)

Withdrawal Force:
1.5oz (0,42N)

Max Cycles:
100+

Mates with:
FTSH, FTS, FW



Tiger Beam contact

Ideal for pass-through applications

Surface Mount

(1,27mm) .050" micro pitch

Available with optional pick-and-place pads



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

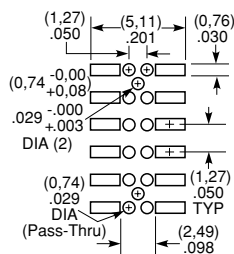
SMT Lead Coplanarity:
(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?FLE for recommended PCB layout.

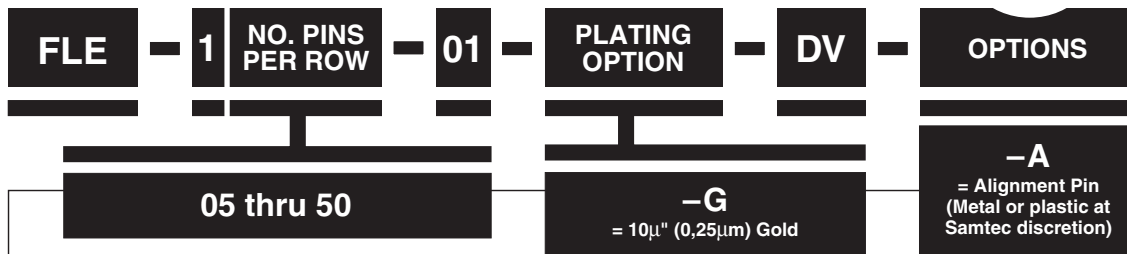


Board fixturing may be required to assure proper alignment for pass-through applications.

TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.



-A

= Alignment Pin (Metal or plastic at Samtec discretion)

-K

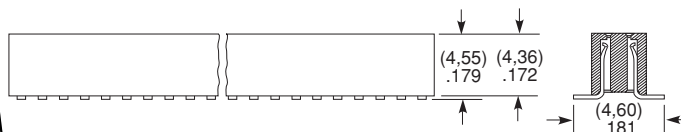
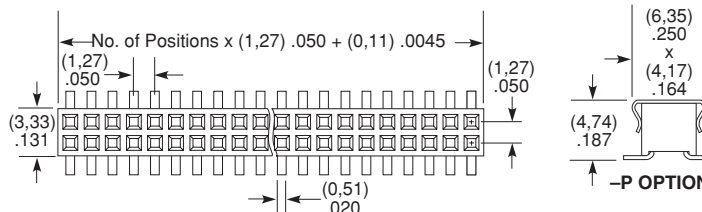
= (4,25mm) .167" DIA Polyimide film Pick & Place Pad (5 Positions minimum)

-P

= Metal Pick & Place Pad (5 Positions minimum)

-TR

= Tape & Reel Packaging



Due to technical progress, all designs, specifications and components are subject to change without notice.

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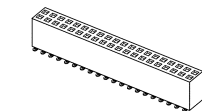
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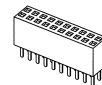
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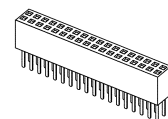
SFMC-120-T2-S-D



SFMC-110-T1-S-D



SFMC-106-T2-S-D



SFMC-118-T1-S-D

.050" (1,27mm) PITCH SOCKETS SFMC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFMC

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Tiger Eye= BeCu
Tiger Eye LITE= Phosphor Bronze



Current Rating:
2A @ 80°C ambient
Operating Temp Range:
-65°C to +125°C

Plating:
Au over 50μ" (1,27μm) Ni

Contact Resistance:
15 mΩ max

Insertion Depth:
(3,05mm) .120" to (4,06mm) .160"

Insertion Force:
Standard= 2.5oz (0,69N) avg;
LITE= 2.0oz (0,56N) avg.
LIF= 1.5oz (0,42N) avg.

Normal Force:
Standard= 132g (1,29N) avg;
LIF= 90g (0,88N) avg.

Withdrawal Force:
Standard= 2.0oz (0,56N) avg;
LITE= 1.5oz (0,42N) avg.
LIF= 1.5oz (0,42N) avg.

Max Cycles:
Tiger Eye= 100 with 10μ" (0,25μm) Au

Mates with:
TFM, FTSH(LIF),
FW(LIF)



High reliability
Tiger-Eye
contacts

Any number of
positions from
2 through 50

Slotted SMT tails

Available with optional
pick-and-place pads

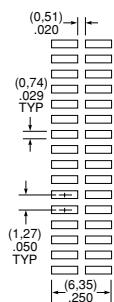
Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max (02-26)
(0,15mm) .006" max (27-50)

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?SFMC for recommended PCB layout.



SFMC	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	D	OPTION
02 thru 50			-01, -03 = Through-hole -L1, -L3 = Low Insertion Force Through-hole -02 = Surface Mount -L2 = Low Insertion Force Surface Mount -T1 = Through-hole Tiger Eye LITE -T2 = Surface Mount Tiger Eye LITE	-S = 30μ" (0,76μm) Gold on contact, Tin on tail	-K = (4,00mm) .157 DIA Polyimide film Pick & Place Pad (4 positions minimum) -P = Plastic Pick & Place Pad (5 positions minimum) -TR = Tape & Reel	

LEAD STYLE	A	B
-01, -L1, -T1	(3,05) .120	(0,51) .020
-03, -L3	(1,91) .075	(0,41) .016

Due to technical progress, all designs, specifications and components are subject to change without notice.

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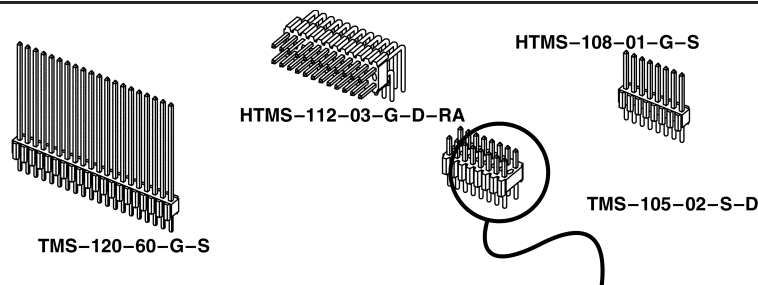
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(1,27mm) .050" HEADER TMS, HTMS, SNM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TMS or www.samtec.com?HTMS

Insulator Material:

Black Liquid Crystal Polymer or Nylon 4/6

Terminal Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Au or Sn over 50µ" (1,27µm) Ni



Important Note:

Style -.02 does not mate with SMS Series.

Style -.02 with -S plating should not be mated with SLM Series.

SNM

For complete specifications see www.samtec.com?SNM

Same as HTMS except:

Insulator Material:

Black Glass Filled Polyester

Max Processing Temp:

Not recommended for IR/VF

Contact Resistance:

10 mΩ max

Lead Size accepted:

(0,46mm) .018" SQ

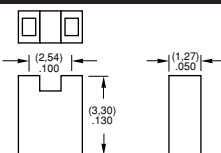
Insertion Depth:

(3,43mm) .135" minimum

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
SMS, SLM, RSM

MICRO SHUNT SNM SERIES



Part No.	Plating
SNM-100-BK-T	Tin
SNM-100-BK-G	10µ" (0,25µm) Gold

Thirteen terminal styles

Ideal for board stacking

.050" x .100" (1,27mm x 2,54mm) pitch

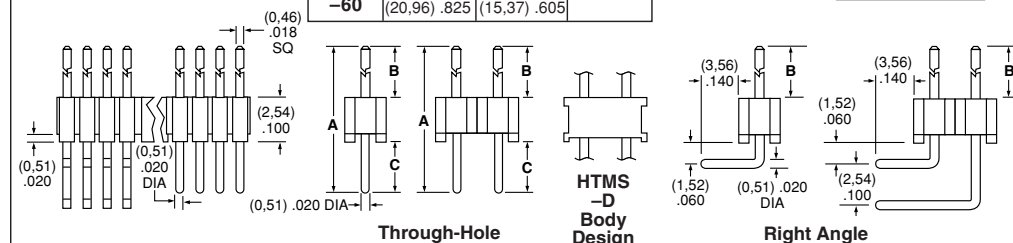
Choice of through-hole and right angle.

See FTR Series for Surface Mount

TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	OPTION
TMS = Standard		01 thru 50	Specify LEAD STYLE from chart	-G = 10µ" (0,25µm) Gold on post, Gold flash on tail	-S = Single Row	-RA = Right Angle
HTMS = High Temp				-S = 30µ" (0,76µm) Gold on post, Tin on tail	-D = Double Row	-“XXX” = Polarized Position Specify position of omitted pin

T/H LEAD STYLE	A	B	C
-01	(11,43) .450	(5,84) .230	(3,05) .120
-02	(8,13) .320	(2,54) .100	
-21	(12,83) .505	(5,84) .230	(4,45) .175
-51	(10,41) .410	(4,83) .190	
-52	(10,80) .425	(5,21) .205	
-53	(12,83) .505	(7,24) .285	
-54	(14,10) .555	(8,51) .335	
-55	(15,49) .610	(9,91) .390	(3,05) .120
-56	(15,88) .625	(10,29) .405	
-57	(16,51) .650	(10,92) .430	
-58	(17,91) .705	(12,32) .485	
-59	(19,18) .755	(13,59) .535	
-60	(20,96) .825	(15,37) .605	

RA LEAD STYLE	B
-01	(5,84) .230
-02	(2,54) .100
-03	(3,18) .125



Processing:

Max Processing Temp:
230°C for 60 seconds



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Due to technical progress, all designs, specifications and components are subject to change without notice.

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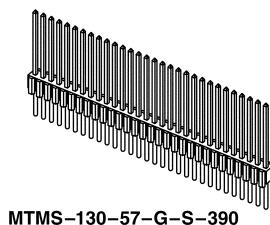
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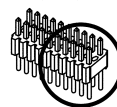
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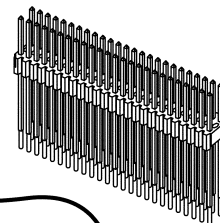


MTMS-130-57-G-S-390

MTMS-110-02-S-D-100



MTMS-125-60-G-D-230



MODIFIED HEADER MTMS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MTMS or www.samtec.com?HMTMS

Insulator Material:

Black Liquid Crystal Polymer or Nylon 4/6

Terminal Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

-65°C to +105°C with Tin

-65°C to +125°C with Gold

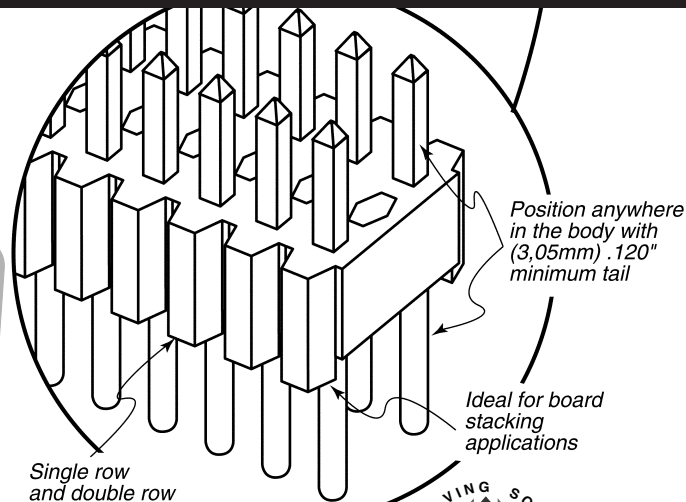
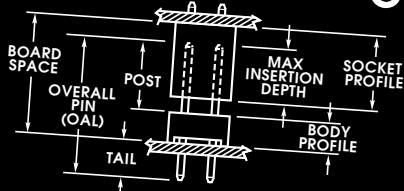
Plating:

Au or Sn over 50µ" (1,27µm) Ni



Mates with:
SMS, SLM, RSM

Board Stacking



Note: This Series is non-standard, non-returnable.

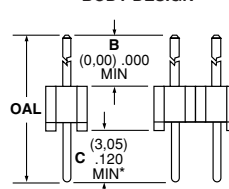
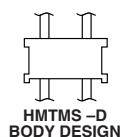
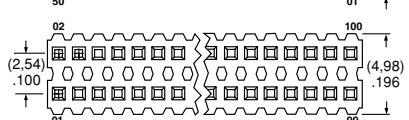
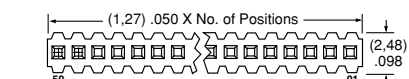
Processing:

Max Processing Temp:
230°C for 60 seconds



www.samtec.com

TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	POST HEIGHT	OPTION
		01 thru 50	Specify LEAD STYLE from chart	-G = 10µ" (0,25µm) Gold on post, Gold flash on tail -S = 30µ" (0,76µm) Gold on post, Tin on tail	-S = Single Row -D = Double Row	-“XXX” = “B” Dimension (Specify Post Height in inches (0,13mm) .005" increments)	-“XXX” = Polarized Position (Specify position of omitted pin)
		MTMS = Modified Standard HMTMS = Modified High Temp					



Tail DIA is .020" (0,51mm) for min .120" (3,05mm).
Balance of tail is .018" (0,46mm) SQ.

LEAD STYLE	OAL	B (Maximum when C = .120 (3,05))
-01	(11,43) .450	(5,84) .230
-02	(8,13) .320	(2,54) .100
-25*	(8,38) .330	(3,18) .125
-51	(10,41) .410	(4,83) .190
-52	(10,80) .425	(5,21) .205
-53	(12,83) .505	(7,24) .285
-54	(14,10) .555	(8,51) .335
-55	(15,49) .610	(9,91) .390
-56	(15,88) .625	(10,29) .405
-57	(16,51) .650	(10,92) .430
-58	(17,91) .705	(12,32) .485
-59	(19,18) .755	(13,59) .535
-60	(20,96) .825	(15,37) .605

*Style -25 tail C=.105 (2,67) min is available.

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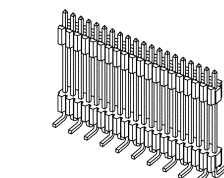
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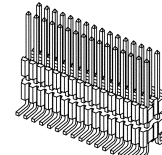
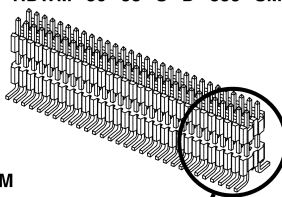
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HDWM-20-59-G-S-535-SM

HDWM-30-53-S-D-355-SM



HDWM-16-57-G-D-280-SM

Surface
SMT
Mount

BOARD STACKER HDWM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HDWM

Insulator Material:

Top: Black LCP

Bottom: Natural LCP



Terminal Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

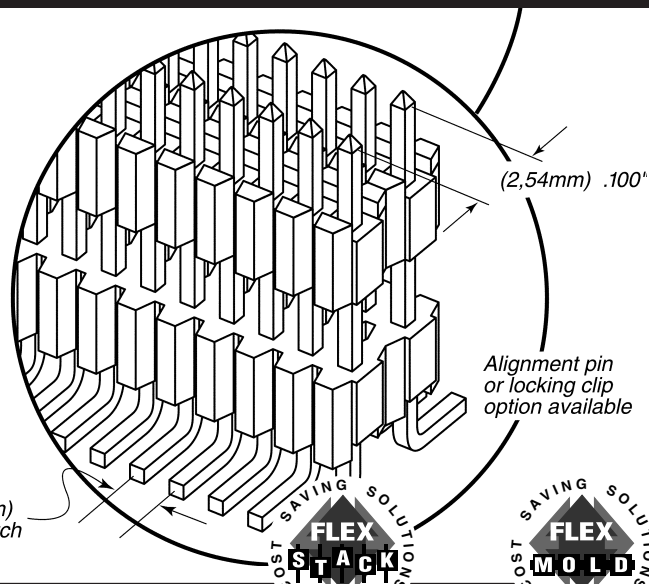
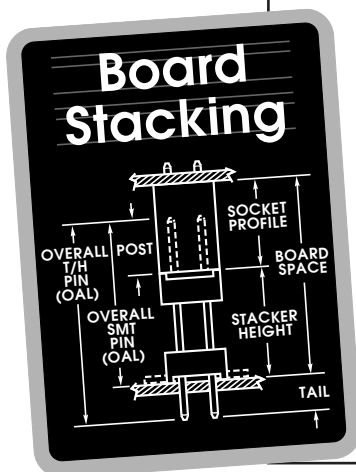
-65°C to +105°C with Tin

-65°C to +125°C with Gold

Plating:

Au or Sn over 50μ" (1,27μm) Ni

Mates with:
SMS, SLM, RSM



Alignment pin or locking clip option available

SAVING SOLUTIONS
FLEX STACK

SAVING SOLUTIONS
FLEX MOLD

Note: This Series is non-standard, non-returnable.

Processing:

Max Processing Temp:

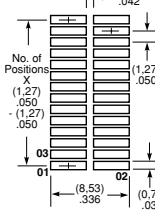
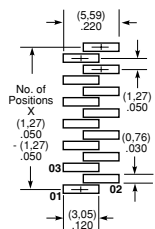
230°C for 60 seconds

SMT Lead Coplanarity:

.006" (0,15mm) max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?HDWM for recommended PCB layout.



HDWM - **NO. PINS PER ROW** - **LEAD STYLE** - **PLATING OPTION** - **ROW OPTION** - **STACKER HEIGHT** - **SM** - **OTHER OPTION**

02 thru 40

Specify
**LEAD
STYLE**
from
chart

-G
= 10μ" (0,25μm)
Gold
on post,
Gold flash
on tail

-S
= 30μ" (0,76μm)
Gold
on post,
Tin on tail

-S
= Single
Row

-D
= Double
Row

-“XXX”
= Stacker
Height
Example:
-250 =
(6,35mm)
.250"

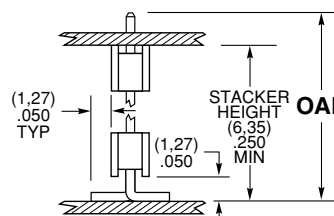
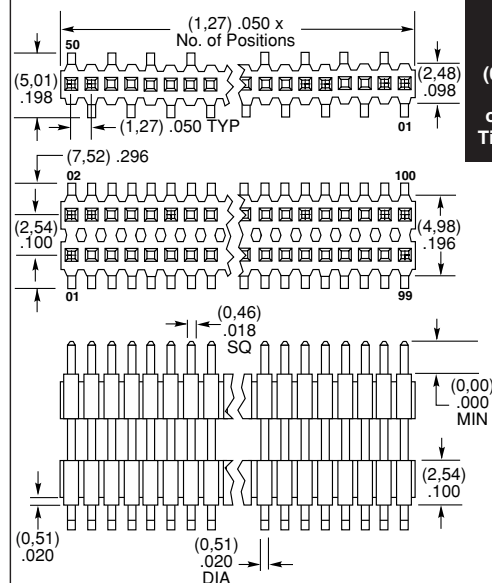
-“XXX”
= Polarized

-A
= Alignment Pin
6 positions minimum
-D only.
Metal or plastic at
Samtec's discretion

-LC
= Locking Clip
5 positions minimum.
-D only

-P
= Pick & Place Pad

LEAD STYLE	OAL
-01	(8,38) .330
-53	(9,78) .385
-54	(11,05) .435
-55	(12,45) .490
-56	(12,83) .505
-57	(13,46) .530
-58	(14,86) .585
-59	(15,62) .615



Due to technical progress, all designs, specifications and components are subject to change without notice.

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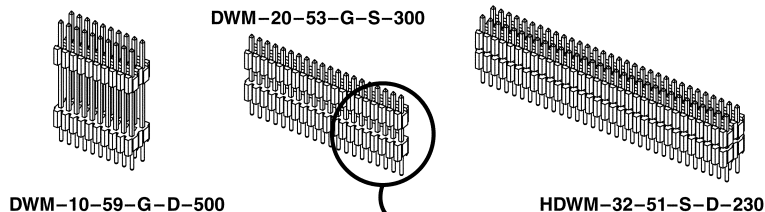
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BOARD STACKER DWM, HDWM SERIES

SPECIFICATIONS

DWM

For complete specifications see www.samtec.com?DWM

Insulator Material:

Top: Black LCP

Bottom: Natural LCP

Terminal Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

-65°C to +105°C with Tin

-65°C to +125°C with Gold

Plating:

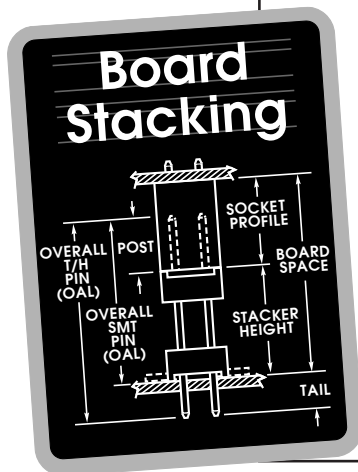
Au or Sn over 50μ" (1,27μm) Ni

HDWM

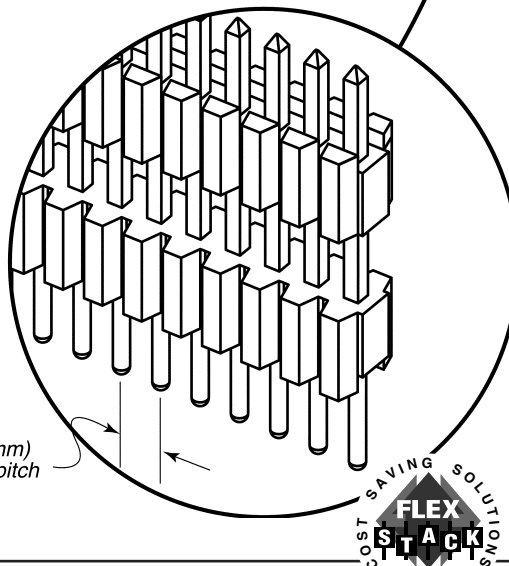
For complete specifications see www.samtec.com?HDWM

Same as DWM except not CSA rated.

Mates with:
SMS, SLM, RSM



(1,27mm)
.050" pitch



COST SAVING SOLUTIONS
FLEX STACKS

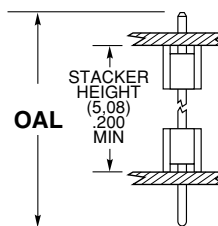
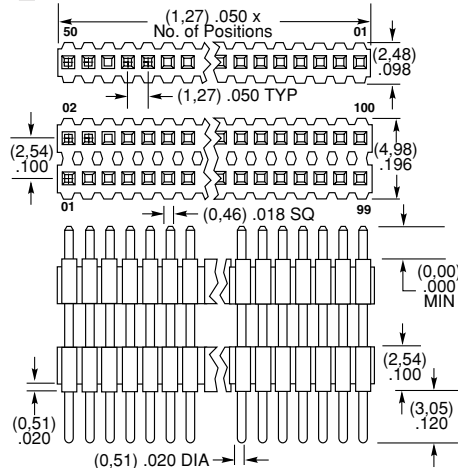
TYPE STRIP	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	STACKER HEIGHT	OTHER OPTION
	01 thru 50	Specify LEAD STYLE from chart	-G = 10μ" (0,25μm) Gold on post, Gold flash on tail -S = 30μ" (0,76μm) Gold on post, Tin on tail	-S = Single Row -D = Double Row	"XXX" = Stacker Height Example: -250 = (6,35mm) .250"	"XXX" = Polarized Position Specify position of omitted pin

Note: These Series are non-standard, non-returnable.

Processing:
Max Processing Temp:
230°C for 60 seconds



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LEAD STYLE	OAL
-01	(11,43) .450
-51	(10,41) .410
-52	(10,80) .425
-53	(12,83) .505
-54	(14,10) .555
-55	(15,49) .610
-56	(15,88) .625
-57	(16,51) .650
-58	(17,91) .705
-59	(19,18) .755
-60	(20,96) .825
-61	(26,67) 1.050

Due to technical progress, all designs, specifications and components are subject to change without notice.

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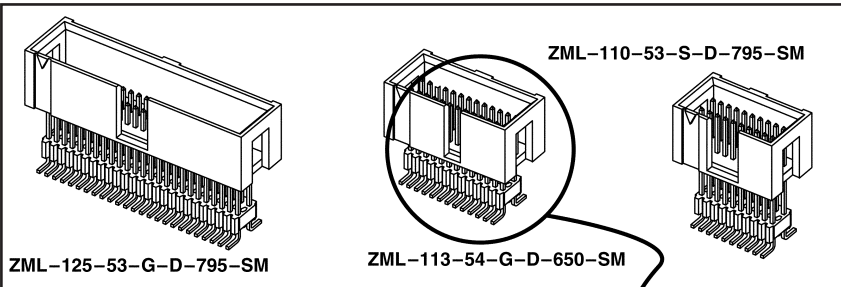
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Surface
SMT
Mount

(1,27mm) .050" STACKER ZML SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?ZML

Insulator Material:

Top: Black LCP

Bottom: Natural LCP

Terminal Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

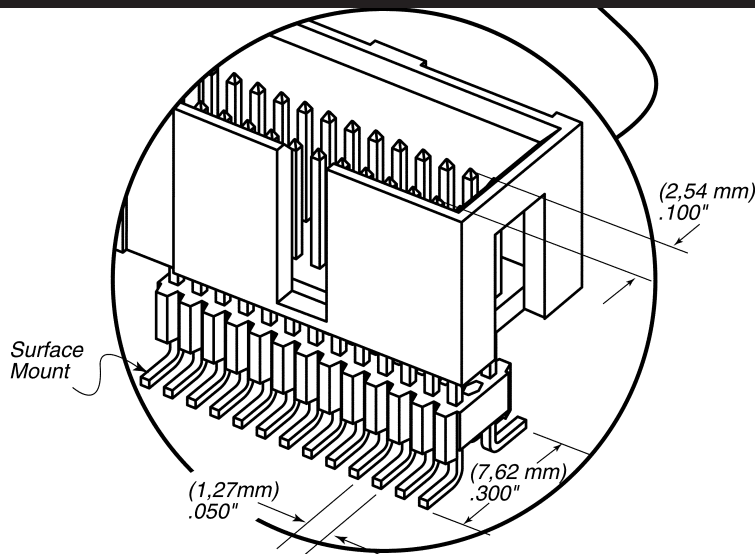
Plating:

Sn or Au over 50µm

(1,27µm) Ni



Mates with:
SMS, RSM



Note: This Series is non-standard, non-returnable.

ZML - **1** **NO. PINS PER ROW** - **LEAD STYLE** - **PLATING OPTION** - **D** - **BODY HEIGHT** - **SM**

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

05-20 = (0,10mm) .004" max

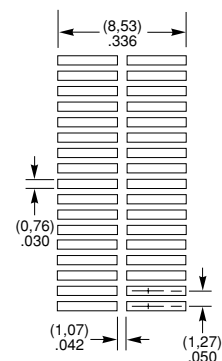
25-40 = (0,15mm) .006" max

Suggested Paste Thickness:

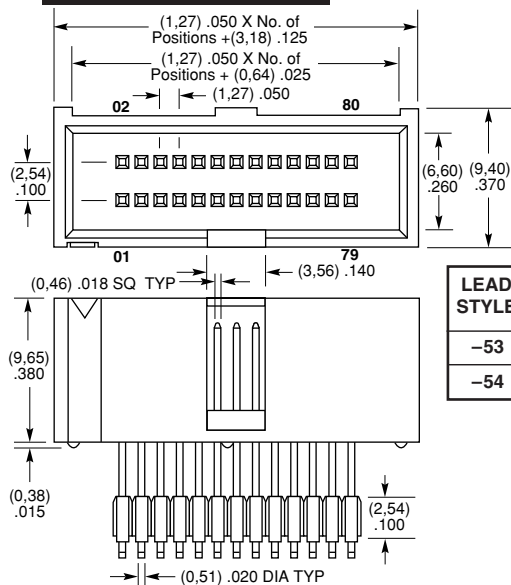
For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?ZML for recommended PCB layout.



**05, 08, 10,
13, 17, 20, 25,
30, 32, 36, 40**
(Call Samtec for other sizes)



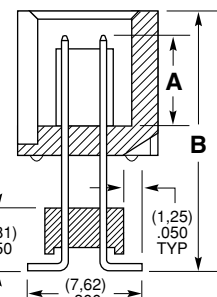
Specify
LEAD
STYLE
from
chart

-G
= 10µm (0,25µm) Gold on post,
Gold flash on tail

-S
= 30µm (0,76µm) Gold on post,
Tin on Tail

-“XXX”
= Body Height
(Specify board space “B”
in inches from lead
style charts.)

LEAD STYLE	POST HEIGHT (A)	BODY HEIGHT (B)
-53	(3,05) .120	(13,46) .530 to (20,19) .795
-54	(5,84) .230	(13,46) .530 to (17,40) .685



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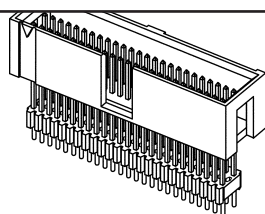
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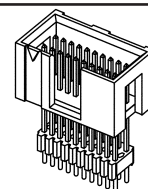
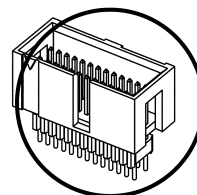
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ZML-125-04-G-D

ZML-113-02-G-D



ZML-110-03-S-D



(1,27mm) .050" STACKER ZML SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?ZML

Insulator Material:

Top: Black LCP

Bottom: Natural LCP

Terminal Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

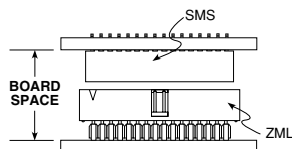
Plating:

Sn or Au over 50μ" (1,27μm) Ni

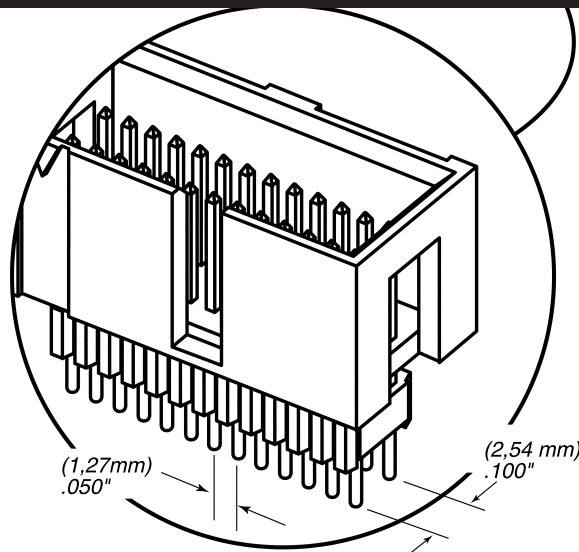


Mates with:
SMS, RSM

APPLICATIONS



APPLICATIONS	BOARD SPACE
ZML Style -01 mated with SMS	(13,72) .540
ZML Style -02 mated with SMS	(15,11) .595
ZML Style -03 mated with SMS	(17,53) .690
ZML Style -04 mated with SMS	(20,57) .810



ZML

1

NO. PINS
PER ROWLEAD
STYLEPLATING
OPTION

D

05, 08, 10, 13, 17,
20, 25, 30, 32, 36, 40
(Call Samtec for other sizes)

Specify
LEAD
STYLE
from
chart

—G
= 10μ" (0,25μm) Gold on post,
Gold flash on tail

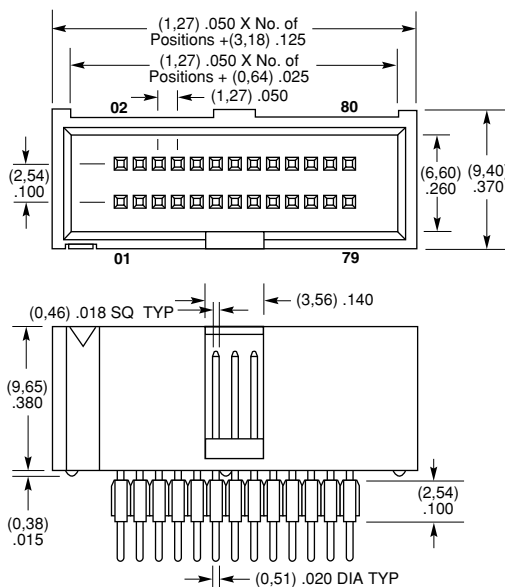
—S
= 30μ" (0,76μm) Gold on post,
Tin on Tail

Note: This Series is non-standard, non-returnable.

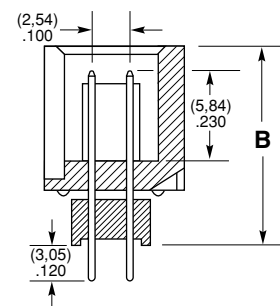
Processing:
Max Processing Temp:
230°C for 60 seconds



www.samtec.com



LEAD STYLE	BODY HEIGHT (B)
-01	(12,83) .505
-02	(14,22) .560
-03	(16,64) .655
-04	(19,69) .775



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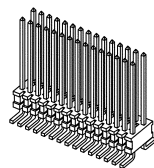
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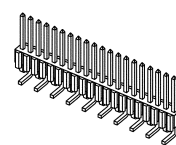
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FTR-115-52-G-D



FTR-120-02-S-S



FTR-130-02-S-D

Surface
SMT
Mount

(1,27mm) .050" HEADER FTR SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FTR

Insulator Material:

Black Liquid Crystal Polymer or Nylon 4/6



Terminal Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Au or Sn over

50µ" (1,27µm) Ni

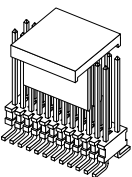
Important Note: Style -02 with -S plating should not be mated with SLM

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
RSM, SMS, SLM

OPTIONS

-P OPTION



Single and double row

Micro pitch
(1,27mm) .050"

Available with optional pick-and-place pad

(2,54mm) .100"



Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (02-20)

(0,15mm) .006" max (21-40)

Suggested Paste

Thickness:

For most applications add

(0,05mm) .002" to max SMT

lead coplanarity

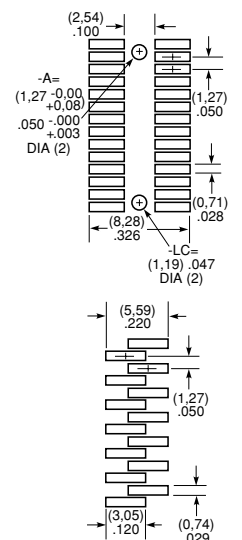
Suggested PCB Layouts:

For reference only. Please

contact Samtec or go to

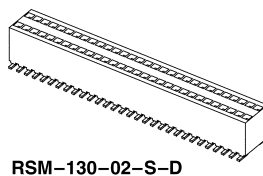
www.samtec.com?FTR for

recommended PCB layout.



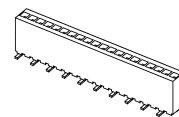
FTR	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	OPTION
02 thru 40			Specify LEAD STYLE from chart	-G =10µ" (0,25µm) Gold on post, Gold flash on tail -S =30µ" (0,76µm) Gold on post, Tin on tail	-S = Single Row -D = Double Row	-“XXX” = Polarized -A = Alignment Pin (5 positions minimum -D only) (Metal or plastic at Samtec discretion) -LC = Locking Clip (6 positions min. -D only) -P = Plastic Pick & Place Pad (-D= 5 positions minimum) (-S= 8 positions minimum) -TR = Tape & Reel (Required for 5 and 6 positions)

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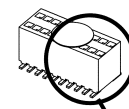


RSM-130-02-S-D

RSM-120-02-L-S



RSM-110-02-S-D-K



Surface
SMT
Mount

(1,27mm) .050" SOCKET RSM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?RSM

Insulator Material:

Black Liquid Crystal Polymer

Current Rating:

1A

Operating Temp Range:

-65°C to +125°C

Plating:

Au, or Sn over 50µ" (1,27µm) Ni

Contact Resistance:

10 mΩ max

Lead Size Accepted:

(0,46mm) .018" SQ

Insertion Depth:

Top Entry = (2,64mm) .104"

to (5,84mm) .230" with

(0,38mm) .015" wipe, or

pass-through.

Bottom Entry = (5,49mm)

.216" minimum (Add

board thickness for correct

post OAL)

Insertion Force:

3.5oz (0,97N) avg

Withdrawal Force:

1.5oz (0,42N) avg

Note: Some sizes, styles and

options are non-standard,

non-returnable.

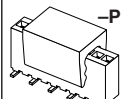
Mates with:

FTR, HTMS, HDWM,

DWM, TML, ZML, TMS

OPTIONS

-P OPTION



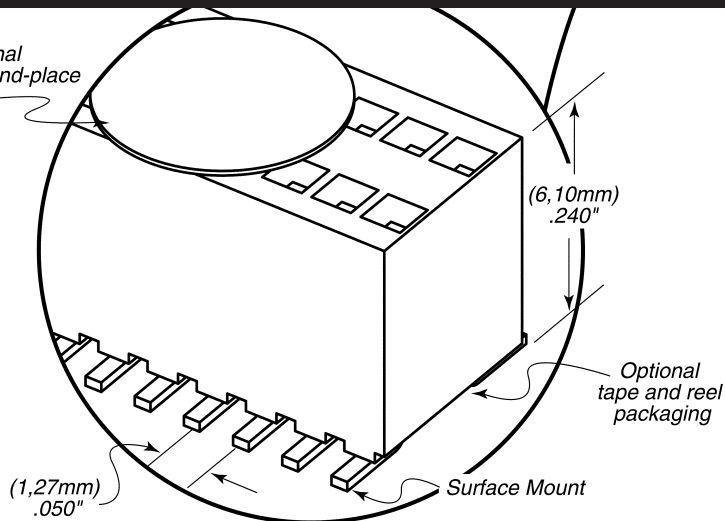
-TR OPTION



APPLICATION SPECIFIC OPTION

Locking clips available.
Call Samtec.

Optional
pick-and-place
pad



Optional
tape and reel
packaging

RSM

1

NO. PINS
PER ROW

-

02

-

PLATING
OPTION

-

ROW
OPTION

-

OPTION

02 thru 36

-S

= 30µ" (0,76µm)

Gold on contact,

Tin on tail

-L

= 10µ" (0,25µm)

Gold on contact,

Tin on tail

-S

= Single

Row

-D

= Double

Row

-K

= (6,25mm)

.246" DIA

Polyimide film

Pick &

Place Pad

(5 positions

minimum

for -D)

(7 positions

minimum

for -S)

-P

= Plastic

Pick &

Place Pad

(-D = 5

positions

minimum

-S = 6

positions

minimum)

-TR

= Tape &

Reel

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max

Suggested Paste

Thickness:

For most applications add

(0,05mm) .002" to max SMT

lead coplanarity

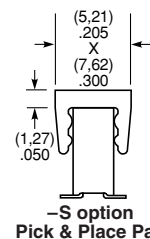
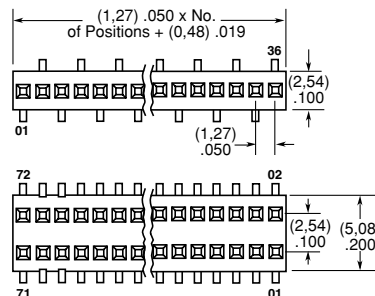
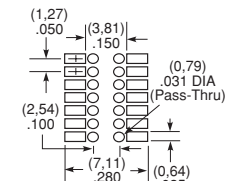
Suggested PCB Layouts:

For reference only. Please

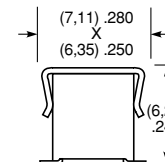
contact Samtec or go to

www.samtec.com?RSM

for recommended PCB layout.



-S option
Pick & Place Pad



-D option
Pick & Place Pad

TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications
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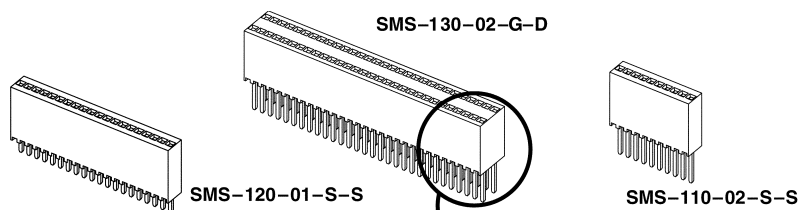
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(1,27mm) .050" SOCKET SMS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SMS

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Phosphor Bronze
Current Rating:
1A



Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Max Processing Temp:
230°C for 60 seconds

Plating:

Au or Sn over 50µ" (1,27µm) Ni

Contact Resistance:
10 mΩ max

Contact Retention in Body:
3 lbs (13,35N)

Insertion Depth:
(3,43mm) .135" to (6,35mm) .250" with (0,38mm) .015" wiper

Insertion Force:
8 oz (2,22N) avg

Withdrawal Force:
6 oz (1,67N) avg



Mates with:
HTMS, TMS, MTMS, DWM, HDWM, FTR, TML, ZML



Tiger-Buy contacts

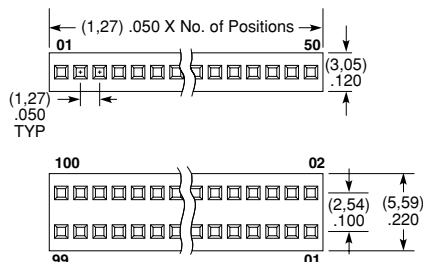
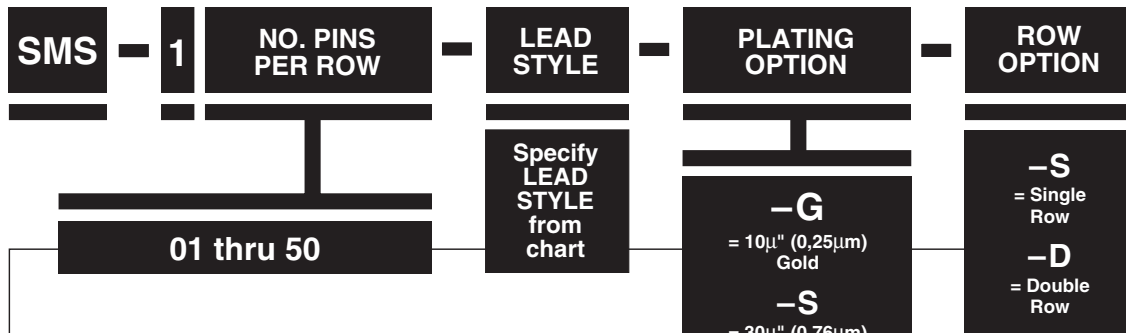
Elevated profile for skyscraper applications

(1,27mm) .050"

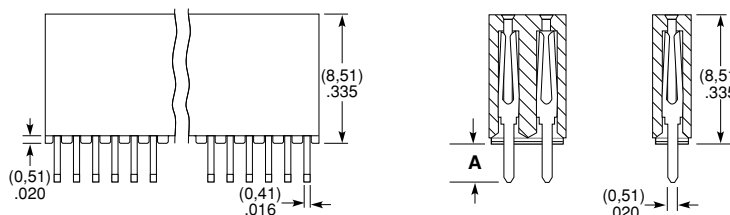
(8,51mm) .335"

Choice of tail lengths

(2,54mm) .100"



LEAD STYLE	A
-01	(2,54) .100
-02	(4,83) .190



Note: Some lengths, styles and options are non-standard, non-returnable.

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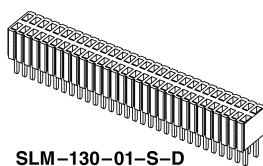
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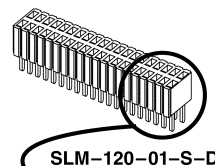
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SLM-110-01-G-S



(1,27mm) .050" SOCKET SLM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SLM

Insulator Material:

Black Glass Filled Polyester



Contact Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Plating:

Au or Sn over 50μ" (1,27μm)

Ni or 100μ" (2,54μm) Cu

Contact Resistance:

10 mΩ max

Insertion Depth:

(2,03mm) to (3,05mm)

.080" to .120"

Insertion Force:

8oz (2,22N) avg.

Withdrawal Force:

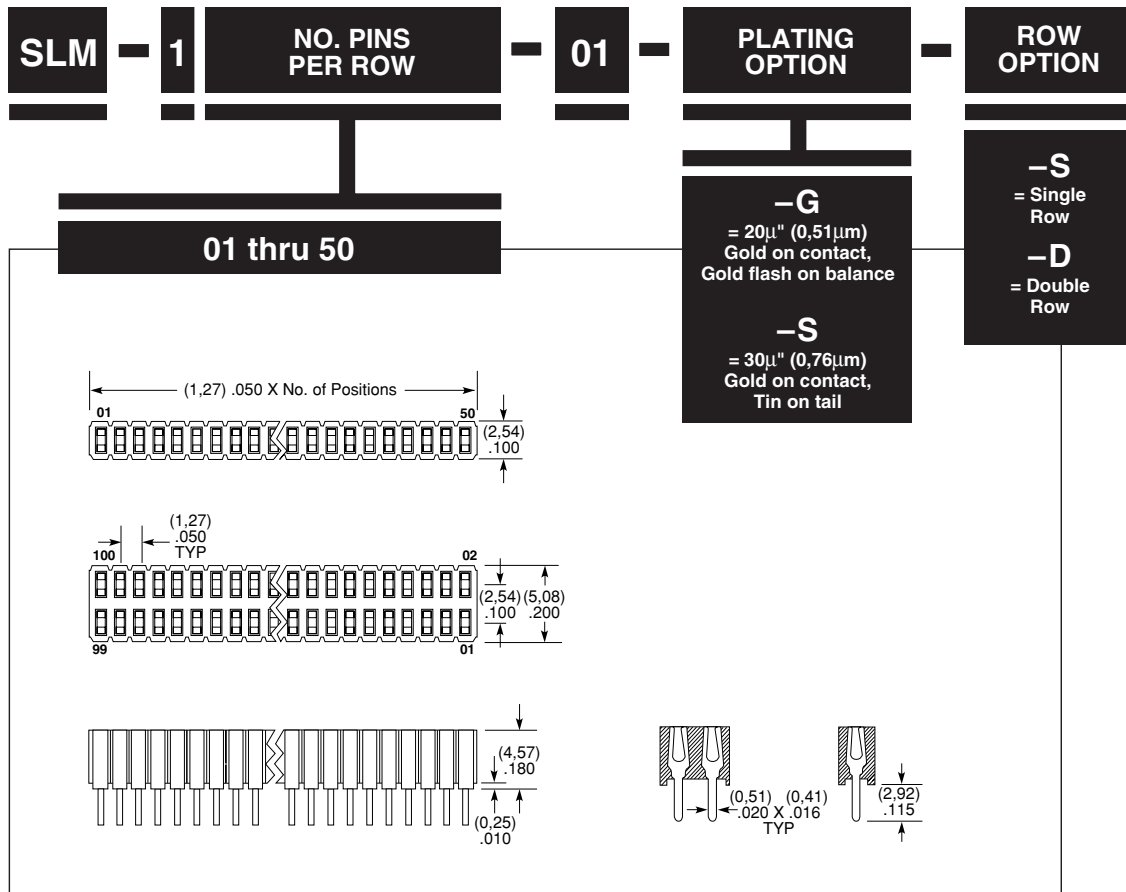
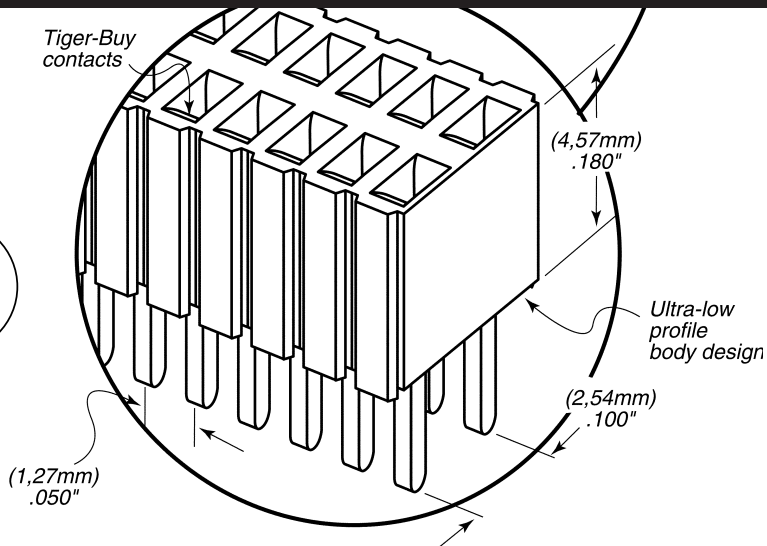
6oz (1,67N) avg.

Mates with:

HTMS, TMS, MTMS,
DWM, HDWM, FTR



Tiger-Buy
contacts



Note: Some lengths, styles and options are non-standard, non-returnable.

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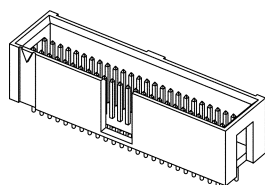
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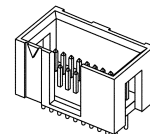
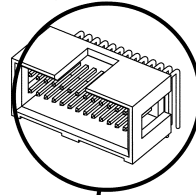
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TML-125-02-G-D

TML-113-02-S-D-RA



TML-110-01-G-D

SHROUDED HEADER TML SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TML

Insulator Material:

Black LCP

Insulation Resistance:

5000 MΩ min

Terminal Material:

Phosphor Bronze

Current Rating:

1A

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

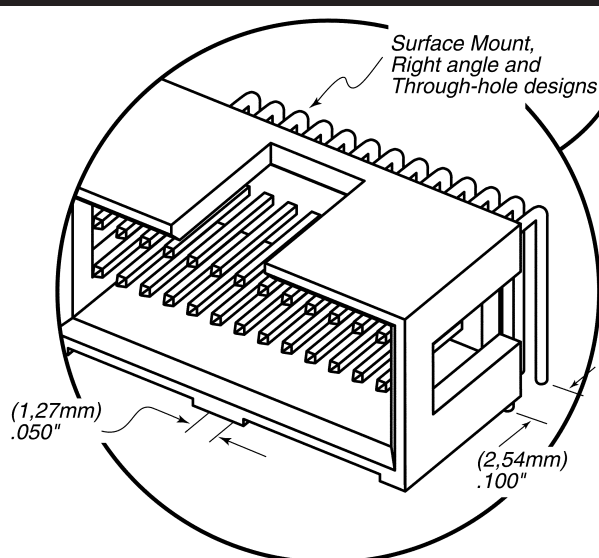
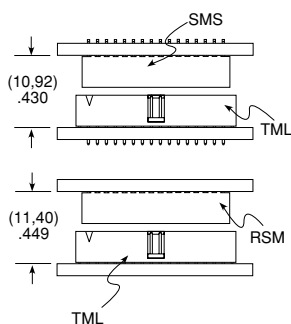
Plating:

Sn or Au over 50μ" (1.27μm) Ni



Mates with:
SMS, RSM

APPLICATIONS



Note:

Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

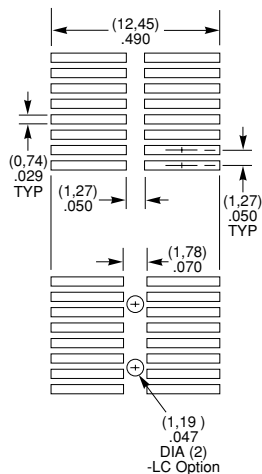
(0,15mm) .006" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?TML for recommended PCB layout.



TML	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	D	TAIL OPTION	OTHER OPTION							
-05, -08, -10, -13, -17, -20, -25, -30, -32, -36, -40 (Call Samtec for other sizes)			Specify LEAD STYLE from chart	-G = 10μ" (0,25μm) Gold on post, Gold flash on tail -S = 30μ" (0,76μm) Gold on post, Tin on tail	-RA = Right Angle -SM = Surface Mount (For locking clip add -LC)	-“XXX” = Polarized position. Specify position of omitted pin								
			<table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>POST HEIGHT (A)</th> </tr> </thead> <tbody> <tr> <td>-01</td> <td>(3,05) .120</td> </tr> <tr> <td>-02</td> <td>(5,84) .230</td> </tr> <tr> <td>-03</td> <td>(4,32) .170</td> </tr> </tbody> </table>	LEAD STYLE	POST HEIGHT (A)	-01	(3,05) .120	-02	(5,84) .230	-03	(4,32) .170			
LEAD STYLE	POST HEIGHT (A)													
-01	(3,05) .120													
-02	(5,84) .230													
-03	(4,32) .170													

Due to technical progress, all designs, specifications and components are subject to change without notice.

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2mm PITCH

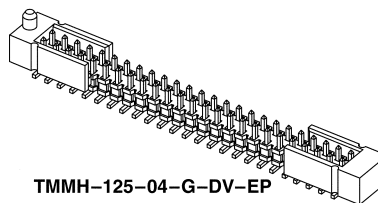
Standard Headers (TMMH)	156-159
Low Profile Headers (TMM)	160-161
Modified Headers (MTMM)	162
Horizontal Surface Mount Headers (MMT)	163
Shrouded Headers (TSH, EHT)	164-165
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Press Fit Headers & Sockets (PTT, PTF)	169
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Low Profile Sockets (TLE, CLT)	174-175
Box Style Sockets (MMS)	176
High Reliability Sockets (SMM)	177
Combination Socket/Terminal (LS2)	178

BOARD

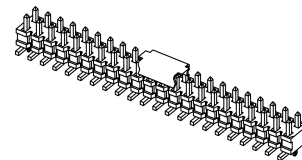
TO

BOARD

POPULAR CONNECTORS



TMMH-125-04-G-DV-EP



TMMH-122-04-T-DV-LC-M

Surface
SMT
Mount

T/H
Page 158

2mm FLEX SHROUD HEADER

SPECIFICATIONS

For complete specifications
see www.samtec.com?TMMH

Insulator Material:

Black Liquid Crystal

Polymer

Terminal Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Sn or Au over 50μ" (1,27μm) Ni

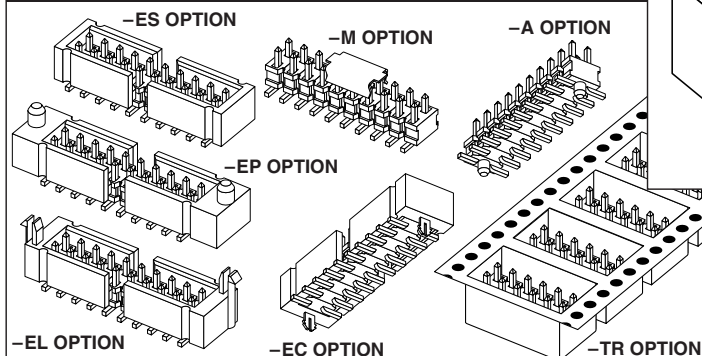
Voltage Rating:

500 VAC mated with SQW

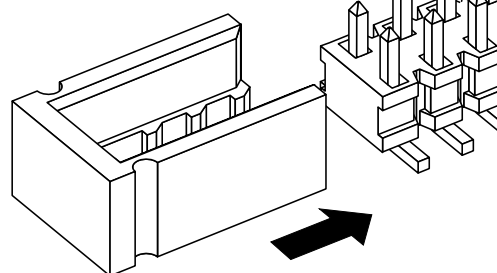


Mates with:
CLT, SQT, SQW, ESQT,
TLE, SMM, MMS, TCSD

OPTIONS

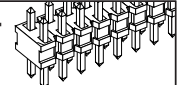


FLEX SHROUD



ALSO AVAILABLE

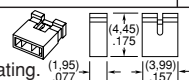
Through-Hole



2mm Shunt

Specify 2SN-BK-G for

2mm shunt with Gold plating.



CURRENT RATING		
AMBIENT TEMP	Mated with	
	SQT	CLT
20°C	5.5A	4.8A
40°C	5A	4.4A
60°C	4A	3.6A
80°C	3A	3A

Note:

Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max

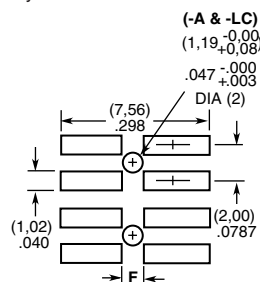
Suggested Paste

Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?TMMH for recommended PCB layout.



OPTION	F
NONE	(0,97) .038
-A	(1,14) .045
-LC	(1,14) .045

TMMH

1

NO. PINS
PER ROWLEAD
STYLEPLATING
OPTION

03 thru 50

Specify
LEAD STYLE
from chart

OPTION	Z
-ES	(2,92) .115
-EC	(4,70) .185
-EP & -EPC	(6,10) .240
-EL & -EBC	(4,45) .175

LEAD STYLE	A	MATES WITH
-01	(3,20) .126	SQT, SQW, ESQT, TLE, SMM, MMS, TCSD
-04	(1,91) .075	
-05	(1,65) .065	CLT

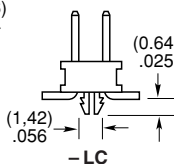
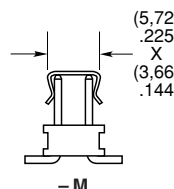
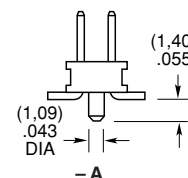
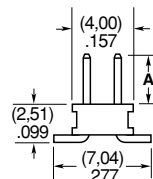
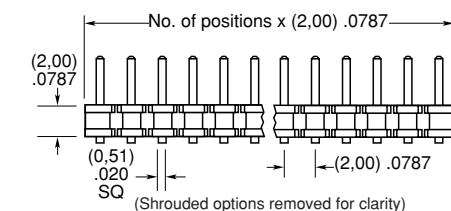
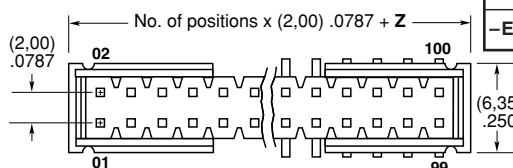
-G
=20μ" (0,51μm)
Gold on post
Gold flash on tail

-S
=30μ" (0,76μm)
Gold on post,
Tin on tail

-L
=10μ" (0,25μm)
Gold on post,
Tin on tail

-F
= Gold flash
on post,
Tin on tail

-T
=Tin



Due to technical progress, all designs, specifications and components are subject to change without notice.

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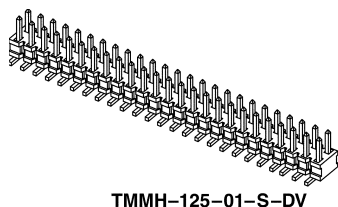
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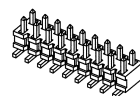
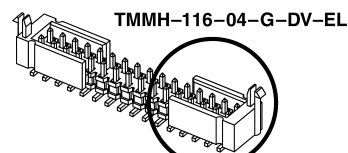
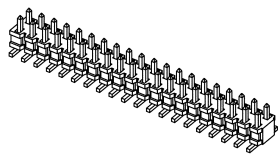
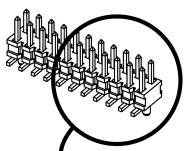
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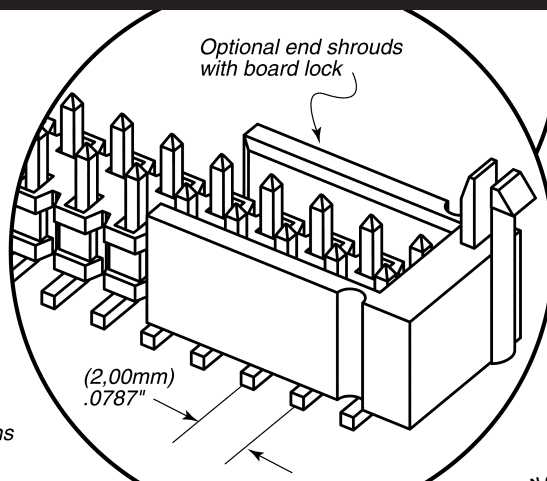
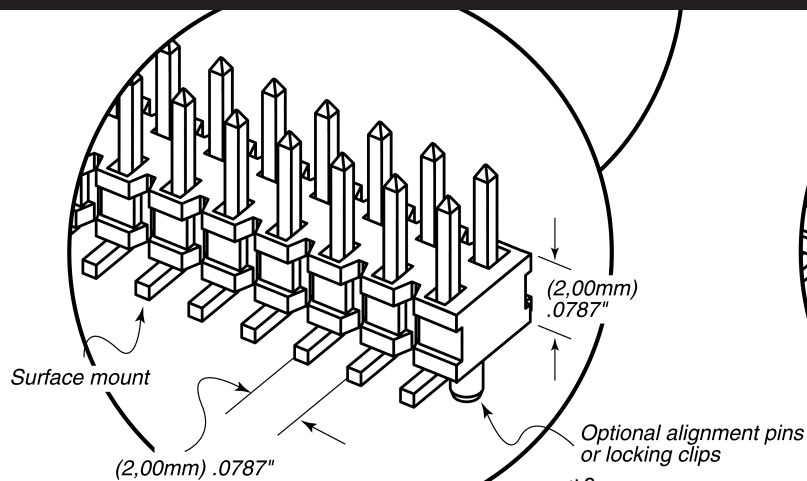
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TMMH-110-01-T-DV-A



TMMH SERIES



DV

FLEX SHROUD OPTIONS

OTHER OPTIONS

All Flex Shroud options require 9 pins/row minimum
(For board-to-board interfaces. Will not mate with TCSD)

-ES

= End Shroud
(For best cost also see TSH Series)

-EC

= End Shroud with Locking Clip
(For best cost also see TSH Series)

-EP

= End Shroud with Guide Post

-EL

= End Shroud with Board Lock
(Boards are positively locked and cannot be unmated)

-EBC

= End Shroud with Board Lock and Locking Clip
(Boards are positively locked and cannot be unmated)

-EPC

= End Shroud with Guide Post and Locking Clip

-“XXX”

= Polarized Position
Specify position of omitted pin

-LC

= Locking Clip
(10 positions minimum)

-A

= Alignment Pin
(3 positions minimum)

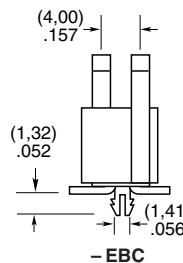
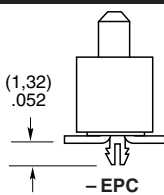
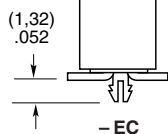
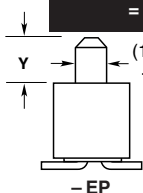
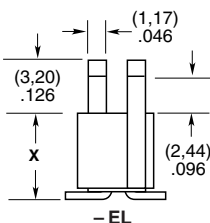
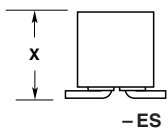
-M

= Pick & Place Pad
(5 positions minimum)

-TR

= Tape & Reel Packaging
(Flex Shroud options not available except -ES, -EP & -EL)

LEAD STYLE	X	Y
-01	(5,84) .230	(4,45) .175
-04 & -05	(4,50) .177	(3,02) .119



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.

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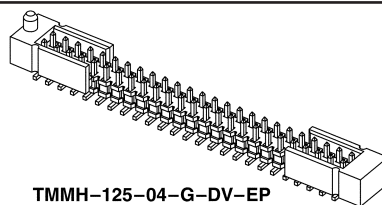
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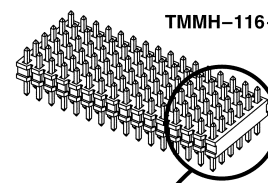
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TMMH-125-04-G-DV-EP



TMMH-116-04-T-6



2mm FLEXIBLE HEADER

SPECIFICATIONS

For complete specifications see www.samtec.com?TMMH

Insulator Material:

Black Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Max Processing Temp:

230°C for 60 seconds

Plating:

Sn or Au over 50μ" (1,27μm) Ni

Voltage Rating:

500 VAC mated with SQW

CURRENT RATING		
AMBIENT TEMP	Mated with	
	SQT	CLT
20°C	5.5A	4.8A
40°C	5A	4.4A
60°C	4A	3.6A
80°C	3A	3A

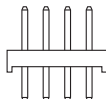
Note:

Some lengths, styles and options are non-standard, non-returnable.

Mates with:
CLT, SQT, SQW, ESQT,
TLE, SMM, MMS, TCSD



ALSO AVAILABLE



Paste In Hole (PIH) processing.
Contact Samtec ASP Group.

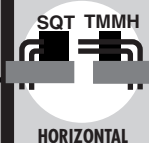
Choice of 2, 3, 4, 5 and
6 rows on (2,00mm)
.0787" pitch

(2,00mm) .0787"

Through-hole

(2,00mm) .0787"

APPLICATIONS



TMMH

1

NO. PINS
PER ROW

LEAD
STYLE

PLATING
OPTION

03 thru 50

Specify
LEAD STYLE
from chart

—G
= 20μ" (0,51μm)
Gold on
contact area
Gold flash on tail

—S
= 30μ" (0,76μm)
Gold on
contact area,
Tin on tail

—L
= 10μ" (0,25μm)
Gold on
contact area,
Tin on tail

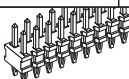
—F
= Gold flash
on contact area,
Tin on tail

—T
= Tin

Also Available

Press Fit

See PTT Series.



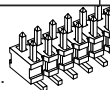
2mm Shunt

See 2SN Series.



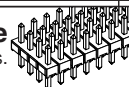
Surface Mount

See previous page.



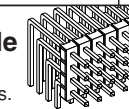
Low Profile

See TMM Series.



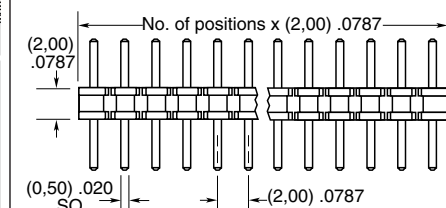
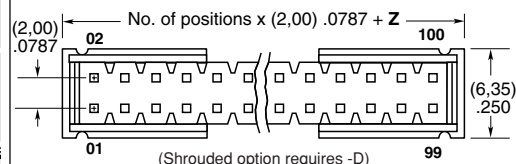
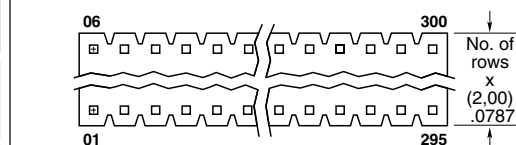
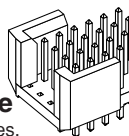
Right Angle Four Row

See TMM Series.



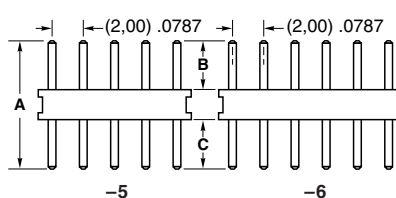
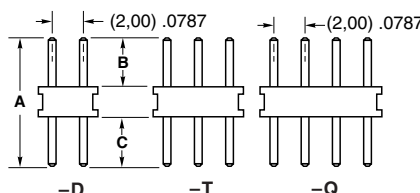
Shrouded Four Row Vertical & Right Angle

See TMMS Series.



OPTION	Z
—ES	(2,92) .115
—EC	(4,70) .185
—EP & —EPC	(6,10) .240
—EL & —EBC	(4,45) .175

LEAD STYLE	A	B	C
—01	(7,67) .302	(3,20) .126	(2,46) .097
—04	(6,45) .255	(1,91) .075	(2,57) .101
—05	(5,94) .234	(1,65) .065	(2,29) .090



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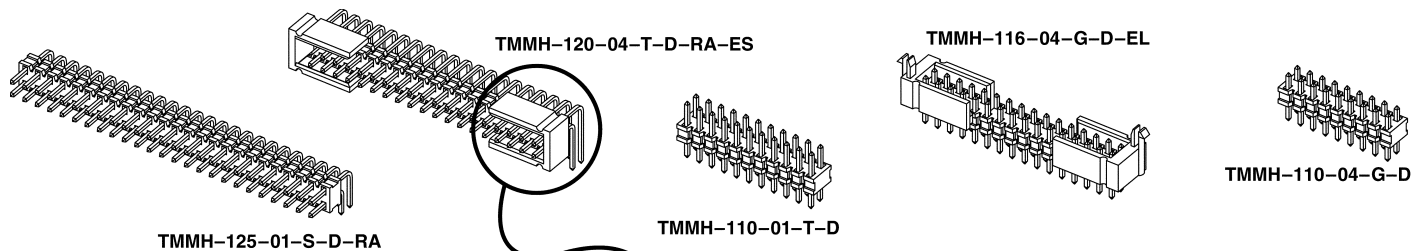
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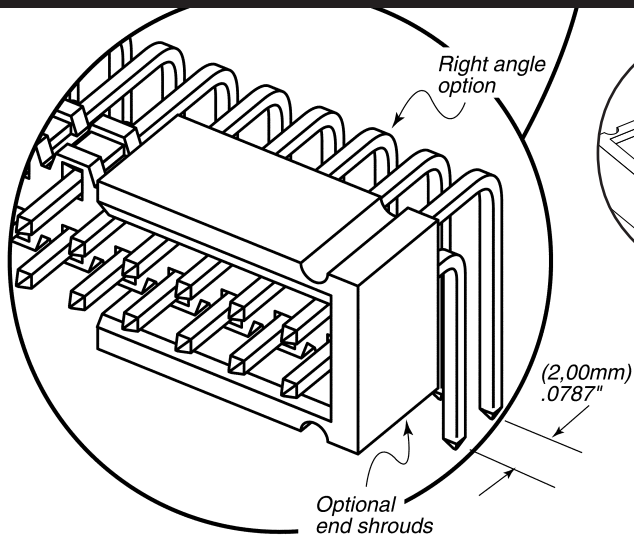
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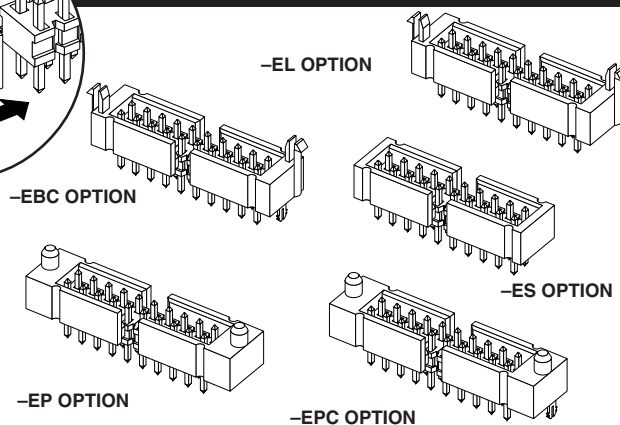
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TMMH SERIES



FLEX SHROUD OPTIONS

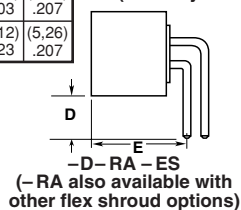
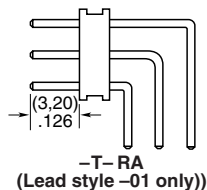
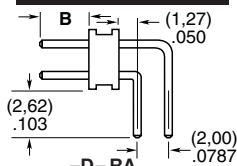


ROW OPTION

- D**
= Double Row
(Required for
Flex Shroud
option)
- T**
= Triple Row
- Q**
= Four Row
- 5**
= Five Row
- 6**
= Six Row

TAIL OPTION

- RA**
= Right Angle
(Double & Triple
Row only)
(-ES, -EP, -EL
Double Row only)
(-EC, -EBC and -EPC
not available)



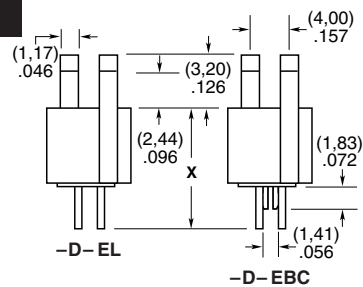
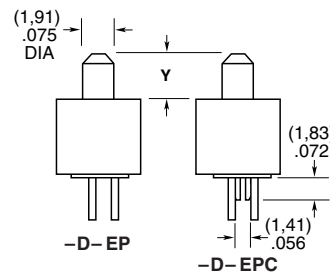
FLEX SHROUD OPTIONS

Flex Shroud requires -D row & 9 pins/row minimum
(For board-to-board interfaces. Will not mate with TCSD)

- ES**
= End Shroud
- EC**
= End Shroud with Locking Clip
- EP**
= End Shroud with Guide Post
- EL**
= End Shroud with Board Lock
(Boards are positively locked and cannot be unmated)
- EBC**
= End Shroud with Board Lock and Locking Clip
(Boards are positively locked and cannot be unmated)
- EPC**
= End Shroud with Guide Post and Locking Clip

OTHER OPTIONS

- “XXX”**
= Polarized Position
Specify position of omitted pin



LEAD STYLE	D	E
-01	(2,34) .092	(6,60) .260
-04	(2,62) .103	(5,26) .207
-05	(3,12) .123	(5,26) .207

LEAD STYLE	X	Y
-01	(5,84) .230	(4,45) .175
-04 & -05	(4,50) .177	(3,02) .119

Due to technical progress, all designs, specifications and components are subject to change without notice.

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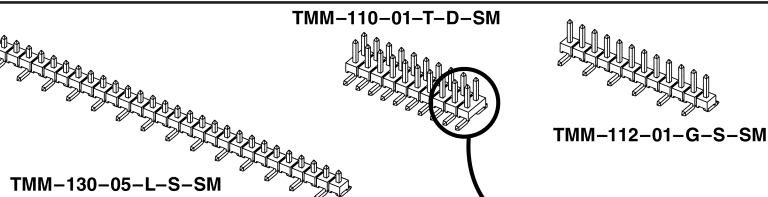
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Surface
SMT
Mount

2mm HEADER TMM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TMM

Insulator Material:

Black Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze



Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Sn or Au over 50μ" (1,27μm) Ni

Voltage Rating:

500 VAC mated with SQW

CURRENT RATING

AMBIENT TEMP	Mated with	
	SQT	CLT
20°C	5.5A	4.8A
40°C	5A	4.4A
60°C	4A	3.6A
80°C	3A	3A

Note:

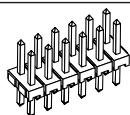
Some lengths, styles and options are non-standard, non-returnable.

Mates with:

CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD

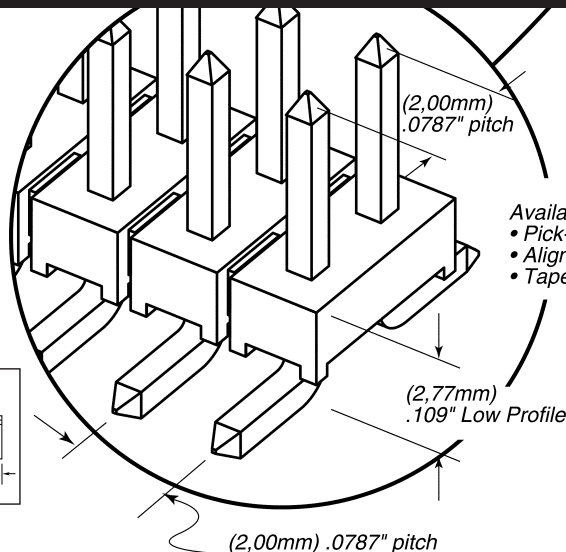
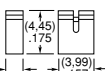
ALSO AVAILABLE

Through Hole



2mm Shunt

Specify 2SN-BK-G for 2mm shunt with Gold plating.



Available with optional

- Pick-and-place pads
- Alignment pins
- Tape & reel packaging



Processing:

Max Processing Temp:

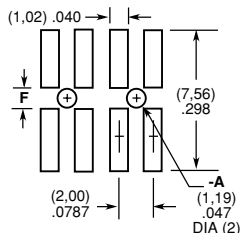
230°C for 60 seconds

SMT Lead Coplanarity:

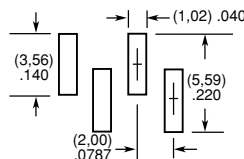
(0,15mm) .006" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?TMM for recommended PCB layout.



OPTION	F
NONE	(0,97) .038
-A	(1,14) .045



TMM	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	SM	OTHER OPTION
02 thru 40			Specify Lead Style from chart below.	-G = 20μ" (0,51μm) Gold on contact area Gold flash on tail -S = 30μ" (0,76μm) Gold on contact area, Tin on tail -L = 10μ" (0,25μm) Gold on contact area, Tin on tail -T = Tin	-S = Single Row -D = Double Row	-“XXX” = Polarized Position Specify position of omitted pin -A = Alignment Pin (Metal or plastic at Samtec's discretion) (5 positions minimum) (-D only) -M = Metal Pick & Place Pad (4 positions minimum) (-D only) -P = Pick & Place Pad (3 positions minimum) -TR = Tape & Reel Pkg. (3 positions minimum)	

LEAD STYLE	A	MATES WITH
-01	(3,20) .126	SQT, SQW, ESQT, TLE, SMM, MMS, TCSD
-04	(1,91) .075	
-05	(1,65) .065	CLT
-06	(4,27) .168	CLT-BE

Due to technical progress, all designs, specifications and components are subject to change without notice.

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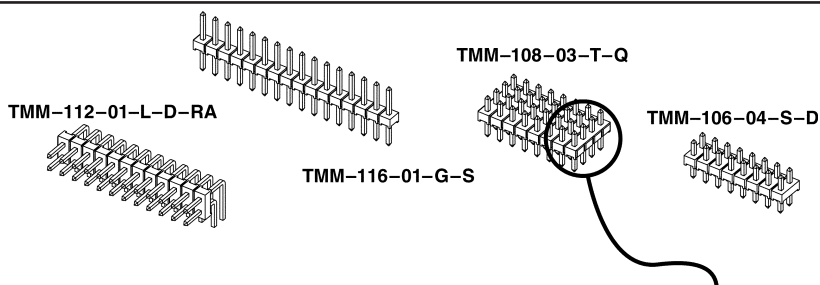
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2mm LOW PROFILE TMM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TMM

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze



Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Max Processing Temp:
230°C for 60 seconds

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Voltage Rating:
500 VAC mated with SQW

CURRENT RATING

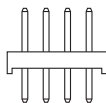
AMBIENT TEMP	Mated with	
	SQT	CLT
20°C	5.5A	4.8A
40°C	5A	4.4A
60°C	4A	3.6A
80°C	3A	3A

Note:

Some lengths, styles and options are non-standard, non-returnable.

Mates with:
CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD

ALSO AVAILABLE



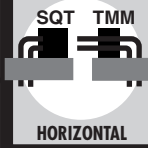
Paste In Hole (PIH) processing.
Contact Samtec ASP Group.

Single, double and quad row

Ultra-low profile
(1,50mm) .059"

Choice of five lead styles

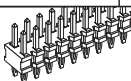
APPLICATIONS



Also Available

Press Fit

See PTT Series.



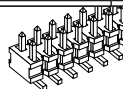
2mm Shunt

See 2SN Series.



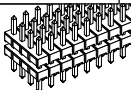
Surface Mount

See TMM Series.



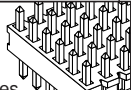
Elevated

See TW Series.



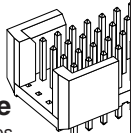
High Density

See TMMH Series.



Shrouded Four Row Vertical & Right Angle

See TMMS Series.



TMM

1

NO. PINS PER ROW

01 thru 50

LEAD STYLE

Specify Lead Style from chart below.

PLATING OPTION

-G
= 20µ" (0,51µm)
Gold post on contact area, Gold on tail

-S
= 30µ" (0,76µm)
Gold on contact area, Tin on tail

-L
= 10µ" (0,25µm)
Gold on contact area, Tin on tail

-T
= Tin

ROW OPTION

-S
= Single Row

-D
= Double Row

-Q
= Four Row

OTHER OPTION

-RA & -RE
= Right Angle (Lead Style -01 only)

-“XXX”
= Polarized Position Specify position of omitted pin

LEAD STYLE CHART

LEAD STYLE	A	B	C
-01	(8,20) .323	(3,20) .126	(3,50) .138
-02	(8,20) .323	(3,70) .146	(3,00) .118
-03	(4,00) .158	(2,70) .106	
-04	(5,69) .224	(1,91) .075	(2,29) .090
-05	(5,43) .214	(1,65) .065	

Dimensions and Lead Styles

OPTION D

OPTION	D
-RA	(1,27) .050
-RE	(3,56) .140

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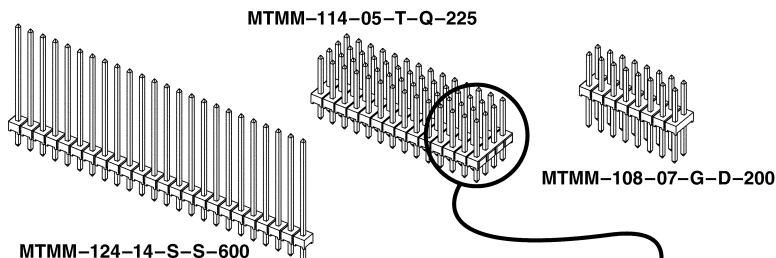
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POPULAR CONNECTORS



Through
T/H
Hole

MODIFIED HEADER MTMM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MTMM

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Max Processing Temp:

230°C for 60 seconds

Plating:

Sn or Au over 50µm (1,27µm) Ni



FILE NO. E111594

Mates with:

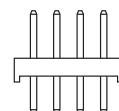
CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD

4
ROW

Choice of single, double or quad row

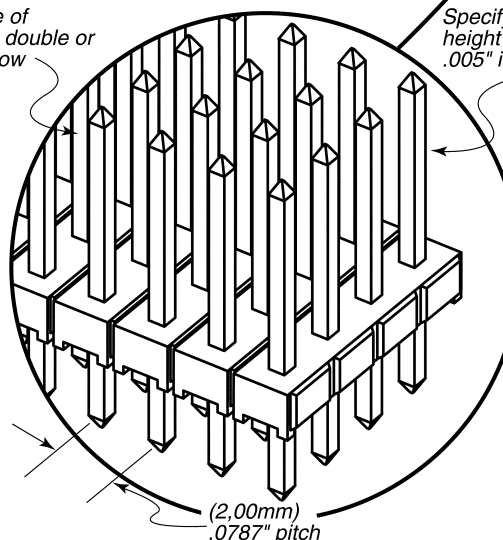
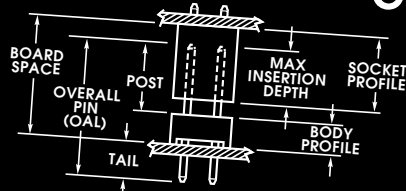
Specify post height in (0, 13mm) .005" increments

ALSO AVAILABLE



Paste In Hole (PIH) processing. Contact Samtec ASP Group.

Board Stacking



SAVING SOLUTIONS
FLEX
STACKS

MTMM	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	POST HEIGHT	OPTION
01 thru 50			Specify LEAD STYLE from chart.	-G = 20µm (0,51µm) Gold post Gold flash on tail -S = 30µm (0,76µm) Gold post, Tin on tail -T = Tin	-S = Single Row -D = Double Row -Q = Quad Row	-“XXX” = Post Height in inches (0,13mm) .005" increments Example: -070 = (1,78mm) .070"	-“XXX” = Polarized Position Specify position of omitted pin
							-S & -Q -D

LEAD STYLE	OAL
-02	(6,48) .255
-03	(7,67) .302
-04	(8,20) .323
-05	(9,58) .377
-06	(10,08) .397
-07	(11,58) .456
-08	(12,09) .476
-09	(13,59) .535
-10	(14,10) .555
-11	(15,09) .594
-12	(15,60) .614
-13	(17,09) .673
-14	(19,08) .751
-15	(21,08) .830

Note: This Series is non-standard, non-returnable.

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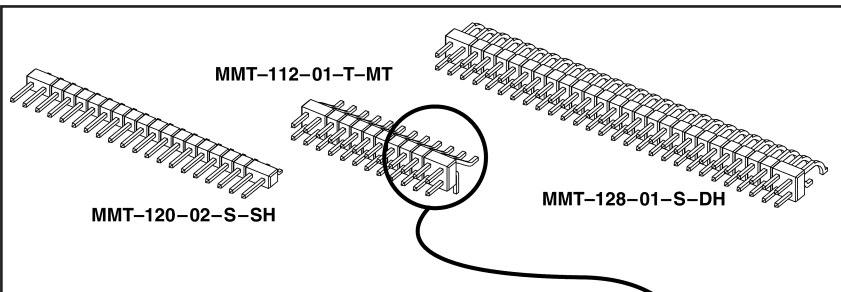
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Surface
SMT
Mount

2mm HORIZONTAL MMT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MMT

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze

Current Rating:
3A @ 80°C ambient

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Plating:
Au or Sn over
50µ" (1,27µm) Ni

Mates with:
CLT, SQT, SQW, ESQT,
TLE, SMM, MMS, TCSD



APPLICATION SPECIFIC OPTIONS

Alignment pins, locking clips, and molded pick-and-place pads available. Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Available with optional pick-and-place pads

Single or double row

(2,00mm)
.0787" pitch

See TMM Series for vertical 2mm SMT

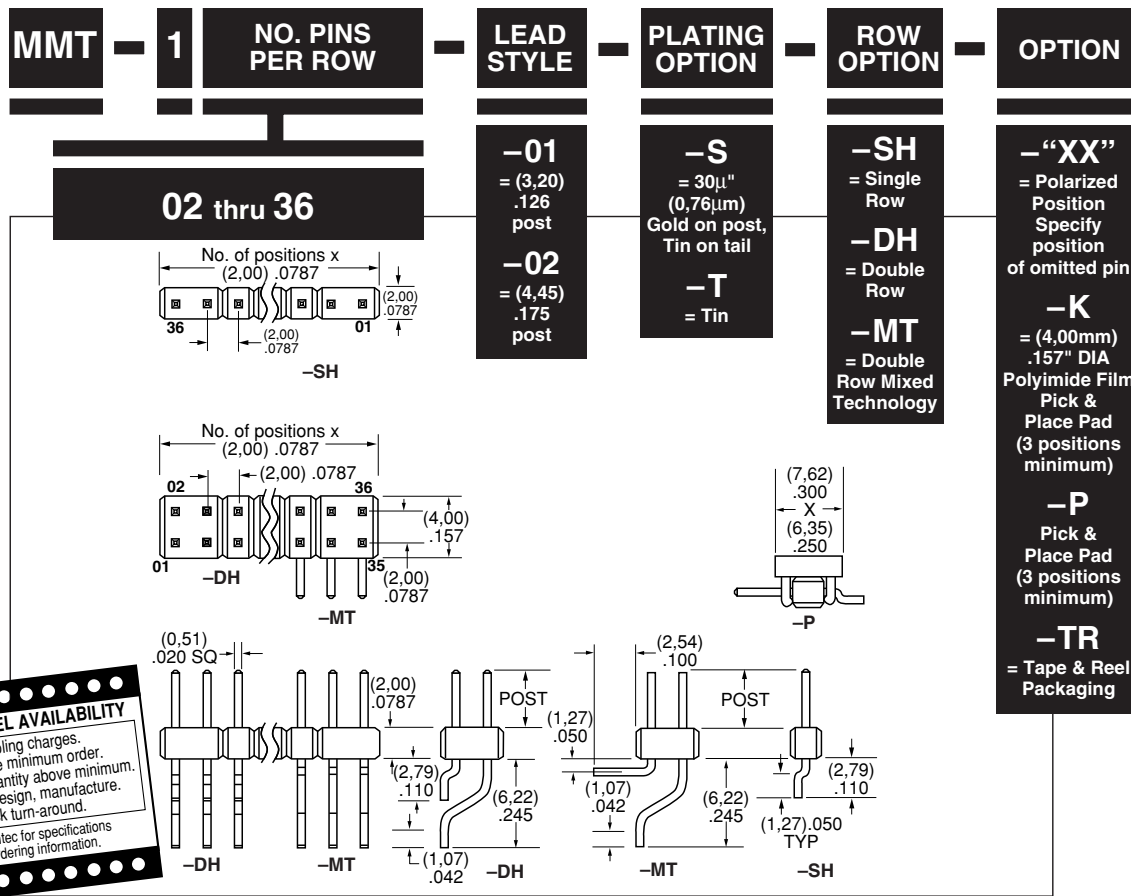
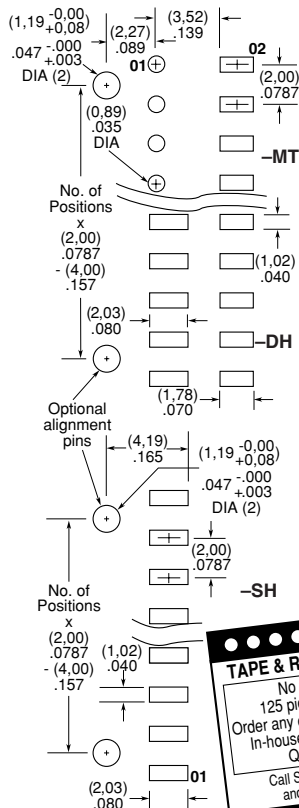
Surface Mount and Mixed Technology options

Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max (02-25)
(0,15mm) .006" max (26-36)

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?MMT for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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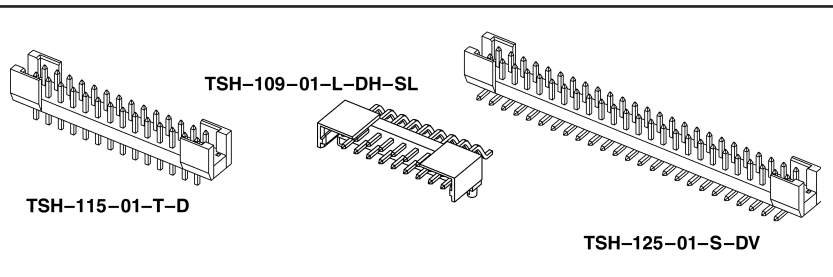
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2mm SHROUDED HEADERS TSH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TSH

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Sn or Au over 50µ"

(1,27µm) Ni



Note:

Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max

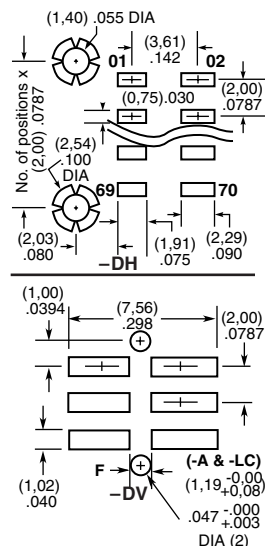
Suggested PCB Layouts:

For reference only. Please

contact Samtec or go to

www.samtec.com?TSH for

recommended PCB layout.



OPTION	F
NONE	(0,97) .038
-A	(1,14) .045
-LC	(1,14) .045

TSH	1	NO. PINS PER ROW	01	PLATING OPTION	ROW OPTION	OTHER OPTION
				-S = 30µ" (0,76µm) Gold on post, Tin on tail		-LC = Locking Clip (-DV only)
				-L = 10µ" (0,25µm) Gold on post, Tin on tail		-A = Alignment Pin (-DV only)
				-F = Gold flash on post, Tin on tail		-SL = Solder Locks (-DH only)
				-T = Tin		-K = (4,50mm) .177" DIA Film Pick & Place Pad (10 positions minimum) (-DH only)

APPLICATIONS



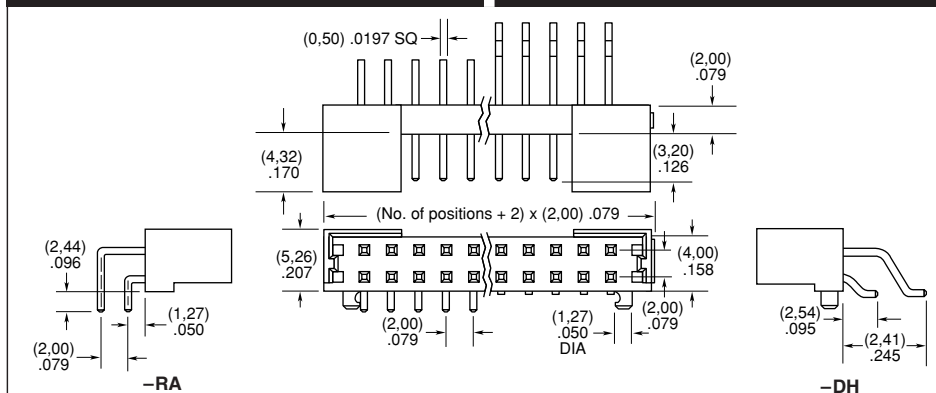
HORIZONTAL

-RA

= Right Angle Through-Hole

-DH

= Horizontal Surface Mount

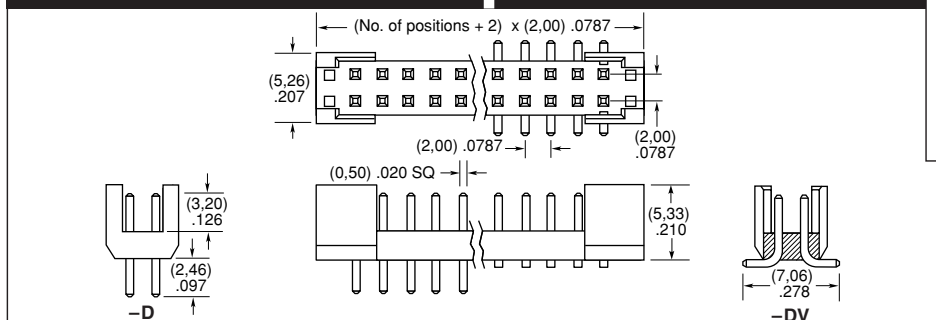


-D

= Vertical Through-Hole

-DV

= Vertical Surface Mount



ALSO AVAILABLE

Short posts for mating with low profile sockets. Four-row shrouded also available. See TMMS Series.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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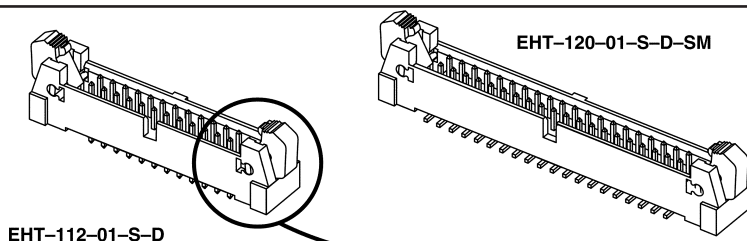
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2mm EJECTOR HEADER EHT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?EHT

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

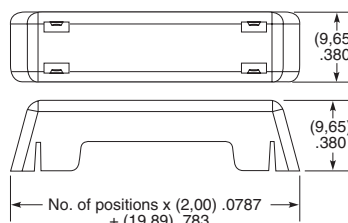
Sn or Au over 50µ" (1,27µm) Ni



Mates with:
TCSD, RCSD

Ten standard sizes mate with common 2mm IDC cable assemblies

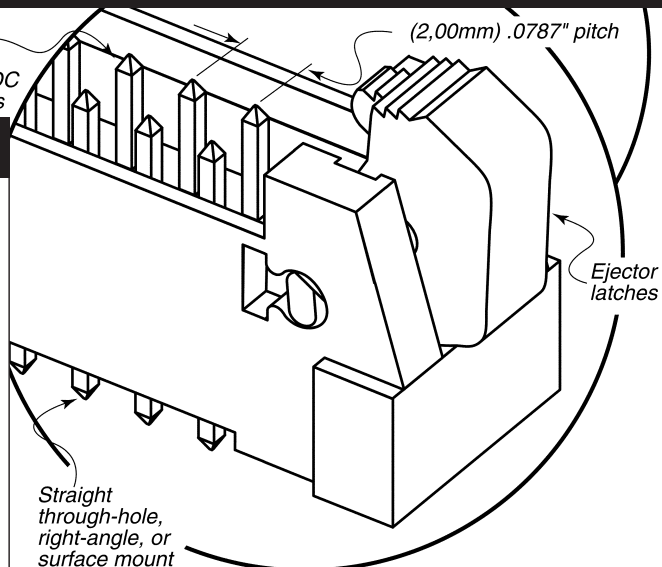
EJECTOR HEADER CAP (Locks TCSD/RCSD cable to EHT header)



EC2

NO. PINS PER ROW

05, 08, 10, 12, 13,
15, 17, 20, 22, 25



Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

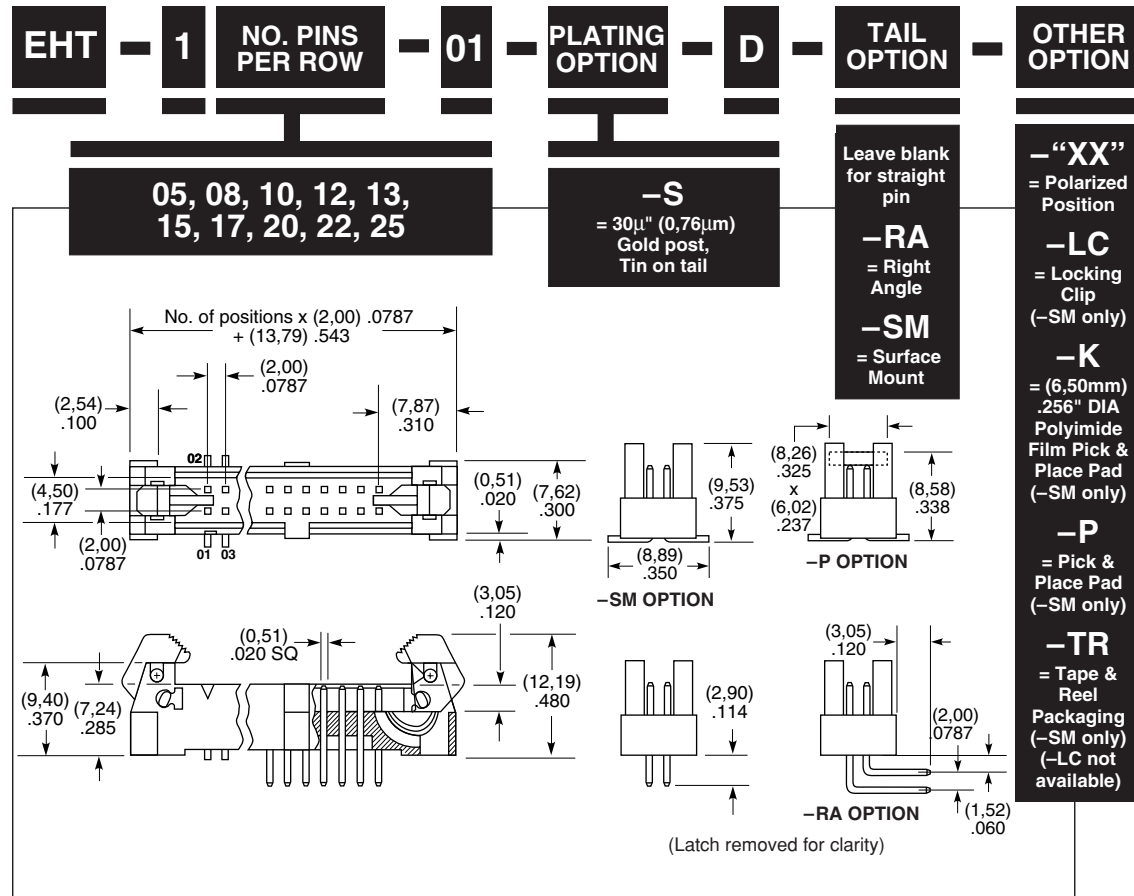
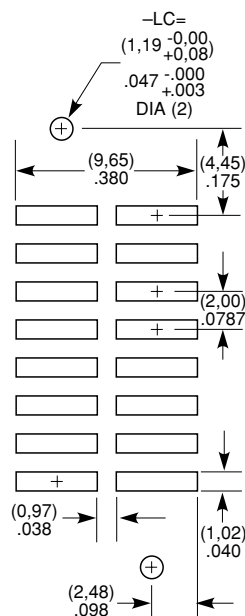
(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?EHT for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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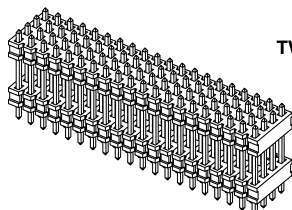
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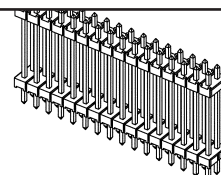
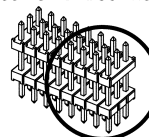
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TW-20-03-G-Q-400-085

TW-08-09-G-T-250-205



TW-16-06-S-D-500-100



2mm BOARD STACKER TW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TW

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze

Current Rating:
3A @ 80°C ambient

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

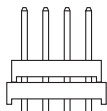
Max Processing Temp:
230°C for 60 seconds

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Mates with:
CLT, SQT, SQW, ESQT,
TLE, SMM, MMS, TCSD

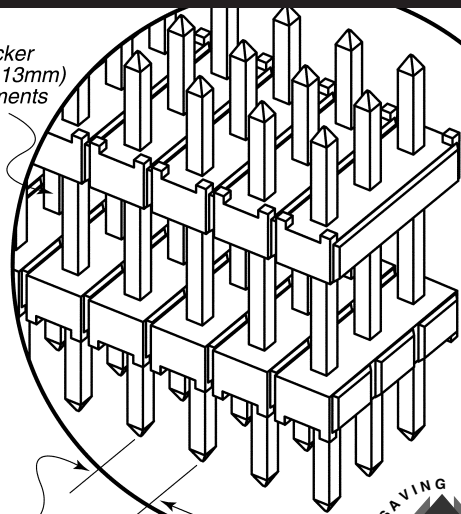


ALSO AVAILABLE



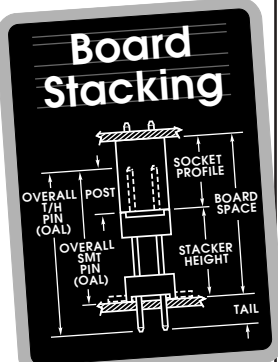
Paste In Hole (PIH) processing.
Contact Samtec ASP Group.

Specify stacker height in (0, 13mm) .005" increments



Choice of one through six rows

(2,00mm) .0787" pitch



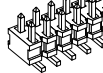
Note: This Series is non-standard, non-returnable.

Also Available

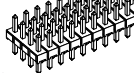
2mm Shunt
See 2SN Series.



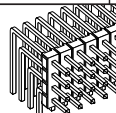
Surface Mount
See previous page.



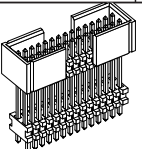
Low Profile
See TMM Series.



Right Angle
See TMM Series.



Shrouded Double Row
See ZL TMM Series.



TW	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	STACKER HEIGHT	TAIL SPEC																										
	02 thru 50	Specify LEAD STYLE from chart below.	-G = 20μ" (0,51μm) Gold contact area Gold flash on tail -S = 30μ" (0,76μm) Gold contact area, Tin on tail (Style -01 & -02 not available) -L = 10μ" (0,25μm) Gold contact area, Tin on tail -T = Tin	-S = Single Row -D = Double Row -T = Triple Row -Q = Four Row -5 = Five Row -6 = Six Row	-“XXX” = Stacker Height In inches (0,13mm) .005" increments Example: -250 = (6,35mm) .250" <table><thead><tr><th>LEAD STYLE</th><th>OAL</th></tr></thead><tbody><tr><td>-01</td><td>(8,20) .323</td></tr><tr><td>-02</td><td>(9,60) .377</td></tr><tr><td>-03</td><td>(13,60) .535</td></tr><tr><td>-04</td><td>(14,10) .555</td></tr><tr><td>-05</td><td>(15,10) .594</td></tr><tr><td>-06</td><td>(17,10) .673</td></tr><tr><td>-07</td><td>(19,10) .751</td></tr><tr><td>* -08</td><td>(21,10) .830</td></tr><tr><td>-09</td><td>(11,60) .456</td></tr><tr><td>-10</td><td>(15,60) .614</td></tr><tr><td>-11</td><td>(10,08) .397</td></tr><tr><td>* -12</td><td>(28,19) 1.110</td></tr></tbody></table> * Style -08 & -12 = S & D only	LEAD STYLE	OAL	-01	(8,20) .323	-02	(9,60) .377	-03	(13,60) .535	-04	(14,10) .555	-05	(15,10) .594	-06	(17,10) .673	-07	(19,10) .751	* -08	(21,10) .830	-09	(11,60) .456	-10	(15,60) .614	-11	(10,08) .397	* -12	(28,19) 1.110	-“XXX” = Tail Length In inches (0,13mm) .005" increments Example: -150 = (3,81mm) .150" -“XXX” = Polarized Position Specify position to be removed
LEAD STYLE	OAL																															
-01	(8,20) .323																															
-02	(9,60) .377																															
-03	(13,60) .535																															
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* -12	(28,19) 1.110																															
				<table><tr><th>ROW OPTION</th><th>STACKER HEIGHT</th></tr><tr><td>-S & -D, -Q</td><td>(3,05) .120 MIN</td></tr><tr><td>-T, -5, -6</td><td>(4,06) .160 MIN</td></tr></table>	ROW OPTION	STACKER HEIGHT	-S & -D, -Q	(3,05) .120 MIN	-T, -5, -6	(4,06) .160 MIN																						
ROW OPTION	STACKER HEIGHT																															
-S & -D, -Q	(3,05) .120 MIN																															
-T, -5, -6	(4,06) .160 MIN																															

Due to technical progress, all designs, specifications and components are subject to change without notice.

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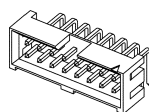
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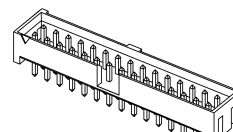
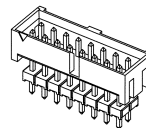
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LTMM-108-02-G-D-RA

ZLTM-108-75-S-D-285



STMM-115-02-G-D

2mm SHROUDED STACKER STMM, LTMM, ZSTMM, ZLTM

SPECIFICATIONS

For complete specifications see www.samtec.com?STMM, www.samtec.com?LTMM, www.samtec.com?ZSTMM or www.samtec.com?STMM

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Current Rating:
3A @ 80°C ambient

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Plating:
Sn or Au over 50µ"
(1,27µm) Ni



FILE NO. E111594

Note: This Series is non-standard, non-returnable.

Processing:

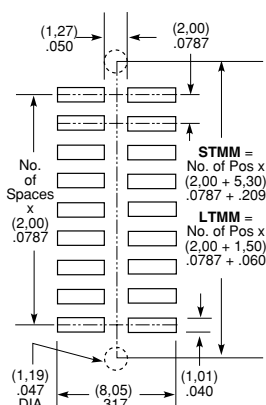
Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?STMM, www.samtec.com?LTMM, www.samtec.com?ZSTMM or www.samtec.com?STMM for recommended PCB layout.



TYPE STRIP

1

NO. PINS PER ROW

LEAD STYLE

PLATING OPTION

D

BODY HEIGHT

OTHER OPTION

Mates with:
SQT, SQW, ESQT, SMM, TCSD

STMM
= Cable Strip

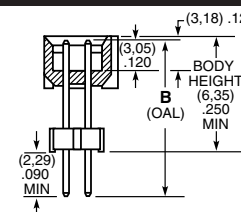
LTMM
= Connector Strip

ZSTMM
= Elevated Cable Strip

ZLTM
= Elevated Connector Strip

-02

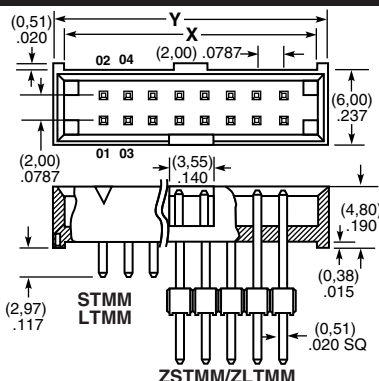
= STMM & LTMM
Specify ZSTMM & ZLTM from chart



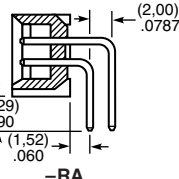
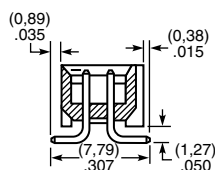
LEAD STYLE	B (OAL)	MAX BODY HEIGHT
-75	(9,58) 0.377	(7,42) 0.292
-62	(10,08) 0.397	(7,92) 0.312
-65	(10,49) 0.413	(8,33) 0.328
-73	(12,09) 0.476	(9,93) 0.391
-63	(14,10) 0.555	(11,94) 0.470
-66	(15,09) 0.594	(12,93) 0.509
-69	(15,60) 0.614	(13,44) 0.529
-74	(17,09) 0.673	(14,94) 0.588
-70	(17,60) 0.693	(15,44) 0.608
-71	(21,08) 0.830	(18,92) 0.745
-72	(21,62) 0.851	(19,46) 0.766

05, 08, 10, 12, 15, 17, 20, 22, 25

(Call Samtec for other sizes)



TYPE STRIP	X	Y
LTMM ZLTM	(2,00) .0787 x No. of Positions + (0,61) .024	(2,00) .0787 x No. of Positions + (2,39) .094
STMM ZSTMM	(2,00) .0787 x No. of Positions + (4,39) .173	(2,00) .0787 x No. of Positions + (6,17) .243



-RA

-G

= 20µ" (0,51µm)
Gold post, Gold flash on tail

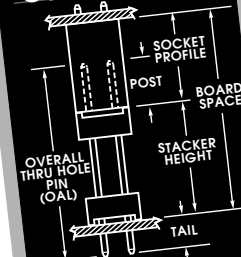
-S

= 30µ" (0,76µm) Gold post,
Tin on tail

-T

= Tin

Board Stacking



Due to technical progress, all designs, specifications and components are subject to change without notice.

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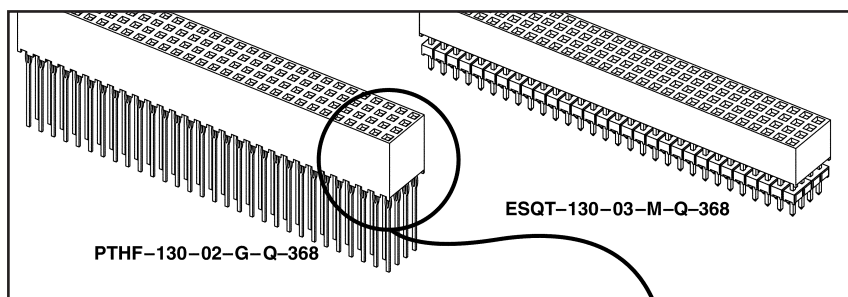
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PC/104+ SOCKETS ESQT (-368), PTHF SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?ESQT or www.samtec.com?PTHF

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au or Sn over

50μ" (1.27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(2.62mm) .103" to

(5.03mm) .198"

Insertion Force:

4oz (1.11N) average

Normal Force:

60 grams (0.59N) average

Withdrawal Force:

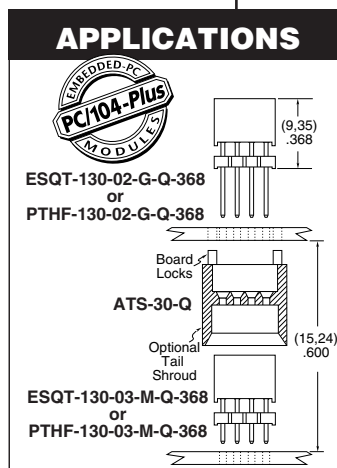
3oz (0.83N) average

Max Cycles:

100 with 10μ" (0.25μm) Au



Mates with:
ESQT, PTHF



Four row

Tiger Buy Contact



Stackthrough and Non-Stackthrough tail lengths

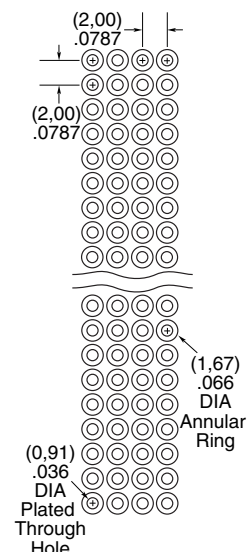
Press Fit or Solder Tails

Note: Some lengths, styles and options are non-standard, non-returnable.

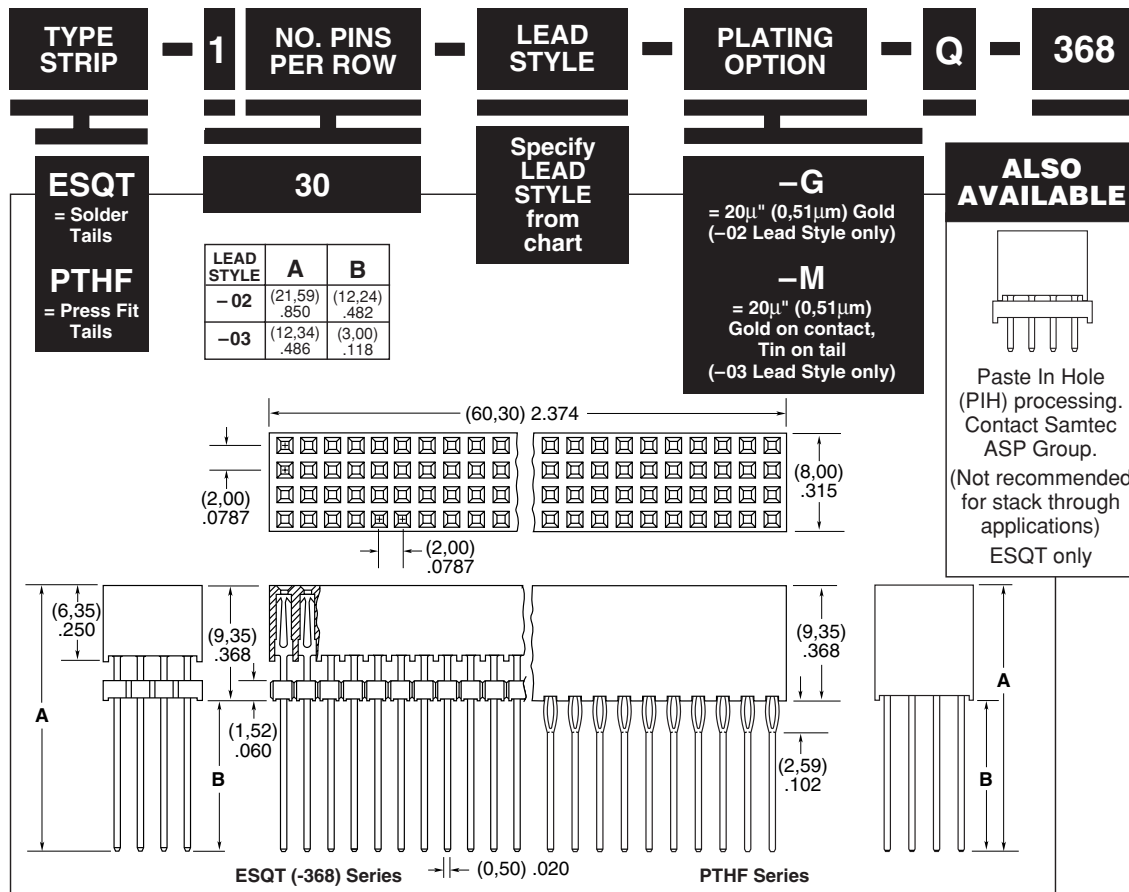
Processing:

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?PTHF for recommended PCB layout.



PTHF Tail option



Due to technical progress, all designs, specifications and components are subject to change without notice.

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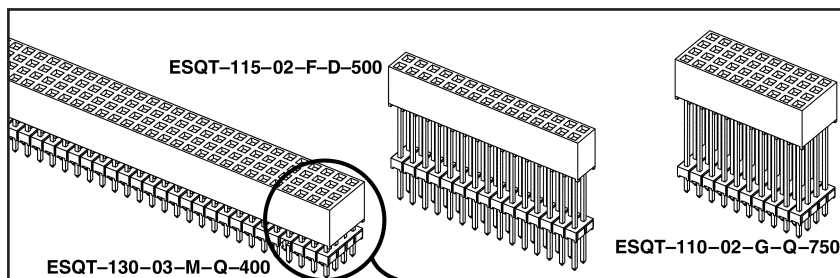
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samtec



Through T/H Hole 2mm ELEVATED SOCKET ESQT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?ESQT

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over

50μ" (1.27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(2.62mm) .103" to

(5.03mm) .198" with

(0.38mm) .015" wiper

Max Cycles:

100 with 10μ" (0.25μm) Au

Insertion Force:

4oz (1.11N) avg

Withdrawal Force:

3oz (0.83N) avg

Max Processing Temp:

230°C for 60 seconds

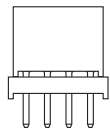


Mates with:

TMMH, TMM, MTMM, MMT, TW, FTW, LTMM, ZLTMM, ESQT

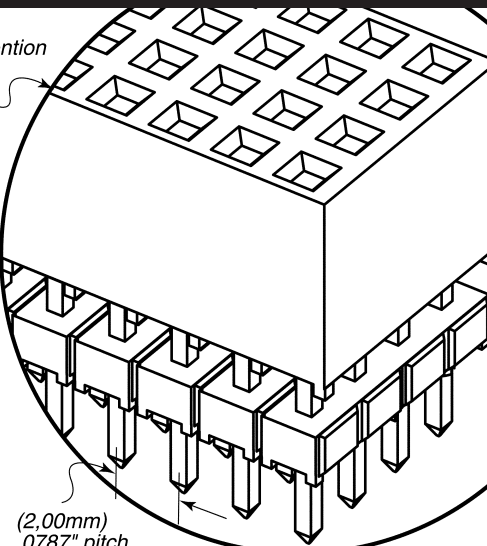


ALSO AVAILABLE



Paste In Hole (PIH) processing. Contact Samtec ASP Group. (Not recommended for stack through applications)

High Retention Contacts

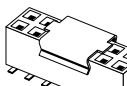


Note:
This Series is non-standard, non-returnable.

Also Available

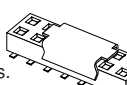
Surface Mount

See SQW and TLE Series.



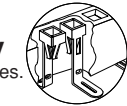
Low Profile

See CLT Series.



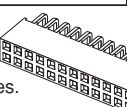
High Reliability

See SMM Series.



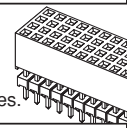
Right Angle

See SQW Series.



PC104+ Sockets

See ESQT-368 and PTHF Series.



ESQT	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	BODY HEIGHT
02 thru 50			Specify LEAD STYLE from chart	-G = 20μ" (0.51μm) Gold (Recommended for self-nesting) -M = 20μ" (0.51μm) Gold on contact, Tin on tail -L = 10μ" (0.25μm) Gold on contact, Tin on tail -F = Gold flash on contact, Tin on tail	-S = Single Row -D = Double Row -T = Triple Row -Q = Quad Row -5 = Five Row -6 = Six Row	- "XXX" = Body Height (in inches) (7.87mm) .310" minimum for -S, -D, -Q (9.53mm) .375" minimum for -T, -5, -6

No. of positions x (2,00) .0787 + (0.30) .012

300 06

(2,00) No. of rows x (2,00) .0787 TYP

295 01

(6,35) .250

(1,52) .060

(0,50) .020 SQ

(2,00) .0787

A

BODY HEIGHT

TAIL (1,27) .050 MIN

LEAD STYLE	A	MAX TAIL	MAX BODY HEIGHT
-02	(21,59) .850	(13,72) .540	(20,32) .800
-03	(11,63) .458	(3,76) .148	(10,36) .408

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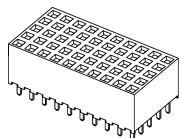
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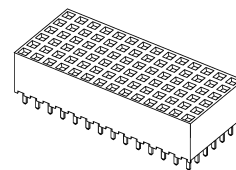
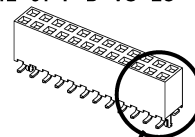
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SQW-110-01-L-5

SQW-112-01-F-D-VS-LC



SQW-114-01-F-6

2mm TIGER BUY SOCKET SQW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SQW

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Voltage Rating:

500 VAC mated with TMM or TMMH

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 50µ" (1,27µm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(2,62mm) .103" to (5,03mm) .198" with (0,38mm) .015" wiper

Insertion Force:

1.8oz (0,50N) avg

Withdrawal Force:

1.0oz (0,28N) avg

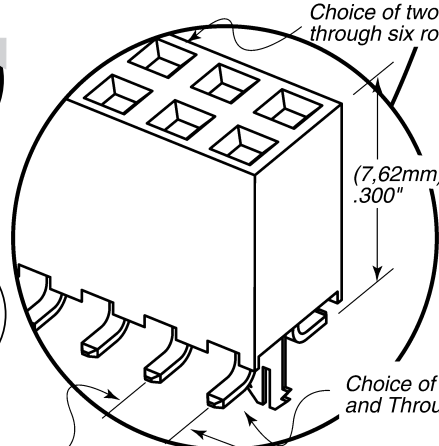
Max Cycles:

100 with 10µ" (0,25µm) Au

Mates with:

TMMH, TMM, MTMM, MMT, TW

CURRENT RATING	
AMBIENT TEMP	Mated with TMMH
20°C	5.5A
40°C	5A
60°C	4A
80°C	3A



(2,00mm) .0787" pitch

Choice of two through six rows

Choice of Surface Mount and Through Hole



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

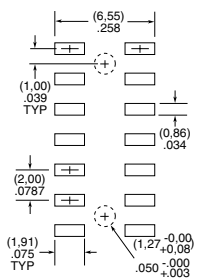
230°C for 60 seconds

SMT Lead Coplanarity:

(0,15mm) .006" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?SQW for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

SQW	1	NO. PINS PER ROW	01	PLATING OPTION	ROW OPTION	OPTION
02 thru 50			-L = 10µ" (0,25µm) Gold contact, Tin tail -F = Gold flash on contact, Tin on tail		-D = Double Row -D-VS = Double Row Surface Mount -T = Triple Row -Q = Four Row -5 = Five Row -6 = Six Row	-"XXX" = Polarized Position -D-VS only options: -A = Alignment Pin (5 positions minimum) Metal or plastic at Samtec discretion. -LC = Locking Clip (5 positions minimum) -K = (4,25mm) .167" DIA Polyimide Film Pick & Place Pad (4 positions minimum) -P = Pick & Place Pad (4 positions minimum) -TR = Tape & Reel Packaging (4 thru 28 positions only)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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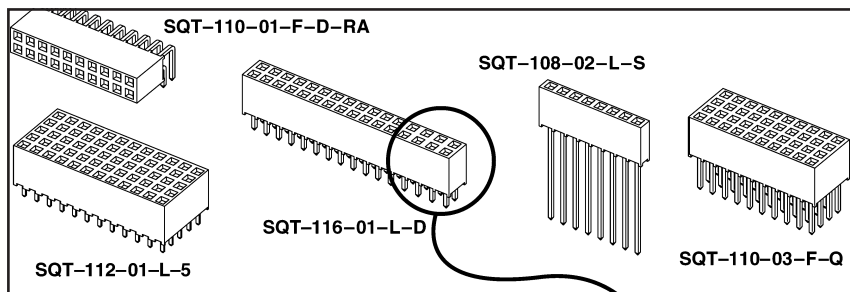
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2mm SQ TAIL SOCKET SQT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SQT

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 50µ" (1,27µm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(2,62mm) .103" to

(5,03mm) .198"

Insertion Force:

4oz (1,11N) average

Normal Force:

60 grams (0,59N) average

Max Processing Temp:

230°C for 60 seconds

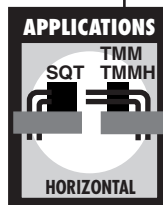
Withdrawal Force:

3oz (0,83N) average

Max Cycles:

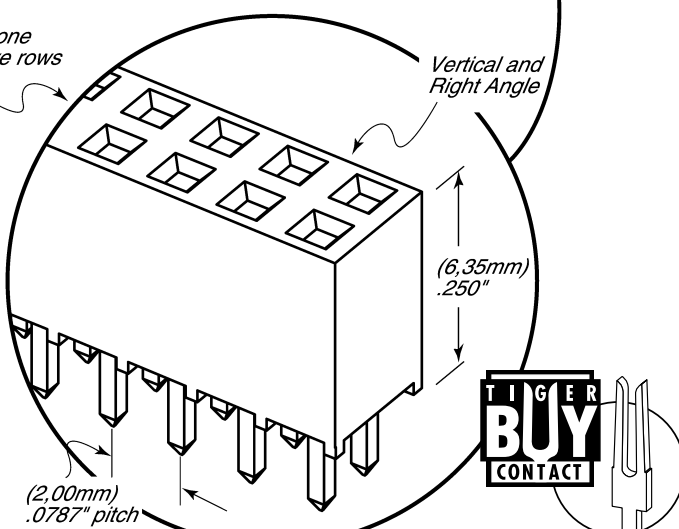
100 with 10µ" (0,25µm) Au

Mates with:
TMMH, TMM, MTMM,
MMT, TW, LTMM,
ZLTMM, ESQT



Choice of one through five rows

Vertical and Right Angle



CURRENT RATING	
AMBIENT TEMP	Mated with TMM/TMMH
20°C	5.5A
40°C	5A
60°C	4A
80°C	3A

Note: Some lengths, styles and options are non-standard, non-returnable.

Also Available

Elevated
See ESQT Series.

Surface Mount
See SQW and TLE Series.

Low Profile
See CLT Series.

High Reliability
See SMM Series.

Press Fit
See PTF Series.

SQT	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	OTHER OPTION
02 thru 50			Specify LEAD STYLE from chart	-L = 10µ" (0,25µm) Gold contact, Tin tail -F = Gold flash on contact, Tin on tail	-S = Single Row -D = Double Row -T = Triple Row -Q = Four Row -5 = Five Row	-RA = Right Angle (-Q & -5 Row not available) (Lead Style -01 only) -“XXX” = Polarized Position (Indicate position number)

LEAD STYLE	A
-01	(2,29) .090
-02	(15,24) .600
-03	(5,28) .208

No. of rows x (2,00) .0787 + (0,30) .012

(0,38) .015 (2,00) .0787 TYP (6,35) .250

(2,29) .090 (1,27) .050 (2,00) .0787

-RA OPTION
(-Q & -5 not available)

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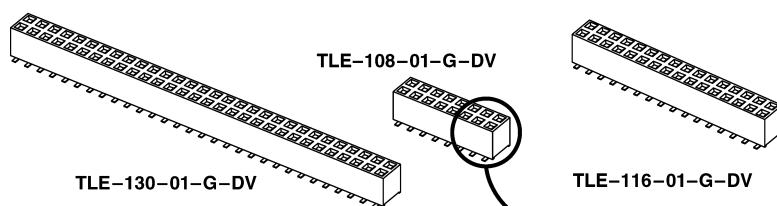
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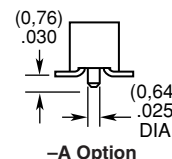
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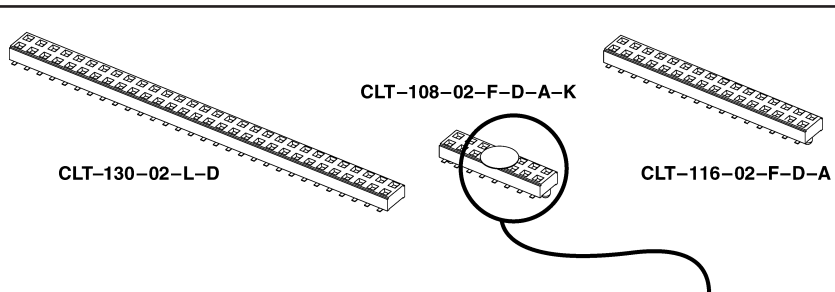


Surface
SMT
Mount

2mm STANDARD SOCKET TLE SERIES



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2mm LOW PROFILE CLT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?CLT

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 50µ" (1,27µm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

Top Entry= (1,40mm) .055" minimum

Bottom Entry= (2,57mm) .101" minimum

(add board thickness for correct post OAL)

Insertion Force:

1.8oz (0,50N) avg

Withdrawal Force:

.6oz (0,17N) avg

Max Cycles:

100 with 10µ" (0,25µm) Au

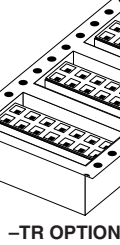
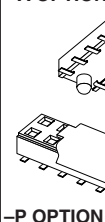
Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
TMM, TMMH,
MTMM, MMT,
TW, FTW



OPTIONS

-A OPTION



-P OPTION

-TR OPTION

Tiger Claw contacts

Available with optional Pick-and-Place pads

Suitable for pass-through applications

Low profile (2,21mm) .087"

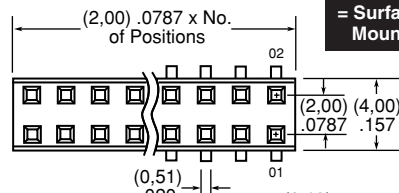
(2,00mm) .0787" pitch

Available with optional alignment pins



CLT - 1 NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - D - OTHER OPTIONS

02 thru 50



-01 = Through-hole
-02 = Surface Mount

-G = 10µ" (0,25µm) Gold
-L = Pre-plated 10µ" (0,25µm) Gold on contact, Tin tail
-F = Pre-plated Gold flash on contact, Tin tail

All options require Style -02

-BE = Bottom Entry (Required for bottom entry applications)

-A = Alignment Pin (3 positions minimum) (Metal or plastic at Samtec's discretion)

-K = (5,00mm) .197" DIA Polyimide Film Pick & Place Pad (04 thru 50 only)

-P = Pick & Place Pad (4 positions minimum) (Not always necessary for auto placement)

-TR = Tape & Reel Packaging

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (02-25)

(0,15mm) .006" max (26-34)

(0,20mm) .008" max (35-50)

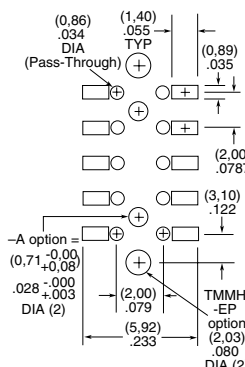
Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?CLT for recommended PCB layout.

Board fixturing may be required to assure proper alignment for pass-through applications.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.

*Processing Note:

For Pass-through application drill PCB on (2,22) .0874 row spacing & (1,22) .048 DIA holes

Due to technical progress, all designs, specifications and components are subject to change without notice.

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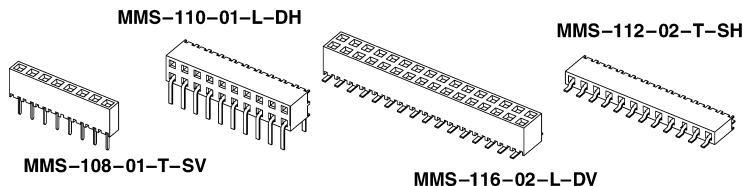
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2mm BOX SOCKET MMS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MMS

Insulator Material:
Black Liquid Crystal Polymer

Contact Material:
Phosphor Bronze

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Max Processing Temp:
230°C for 60 seconds

Plating: Sn or Au over 50µ" (1,27µm) Ni

Contact Resistance:
10 mΩ max

Insertion Depth:
DH= (2,13mm) .084" to (2,79mm) .110" with (0,38mm) .015" wipe
SH= (2,13mm) .084" minimum with (0,38mm) .015" wipe or pass-through
Top Entry DV/SV= (2,13mm) .084" to (4,32mm) .170" with (0,38mm) .015" wipe
Bottom Entry DV/SV= (4,27) .168" minimum (Add board thickness for correct post OAL)

Note: Some lengths, styles and options are non-standard, non-returnable.

MMS	1	NO. PINS PER ROW	01	PLATING OPTION	ROW OPTION	OTHER OPTION
02 thru 40				-L = 10µ" (0,25µm) Gold contact, Tin tail -T = Tin	-SV = Single Vertical -SH = Single Horizontal -DV = Double Vertical -DH = Double Horizontal	-“XX” = Polarized Position

APPLICATION SPECIFIC OPTIONS

Locking clips and Through-hole pass-through options available. Call Samtec.

SPECIFICATIONS

For complete specifications see www.samtec.com?MMS

Insulator Material:
Black Liquid Crystal Polymer

Contact Material:
Phosphor Bronze

Current Rating:
2A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Max Processing Temp:
230°C for 60 seconds

Plating: Sn or Au over 50µ" (1,27µm) Ni

SMT Lead Coplanarity:
-SH (02-20) & -SV/-DV (02-40) = (0,10mm) .004" max
Contact Resistance:
10 mΩ max

Insertion Depth:
DH= (2,13mm) .084" to (2,79mm) .110" with (0,38mm) .015" wipe
SH= (2,13mm) .084" minimum with (0,38mm) .015" wipe or pass-through
Top Entry DV/SV= (2,13mm) .084" to (4,32mm) .170" with (0,38mm) .015" wipe
Bottom Entry DV/SV= (4,27) .168" minimum (Add board thickness for correct post OAL)

Insertion Force:
3.7oz (1,03N) avg

Withdrawal Force:
2.2oz (0,61N) avg

MMS	1	NO. PINS PER ROW	02	PLATING OPTION	ROW OPTION	OTHER OPTION
02 thru 40				-L = 10µ" (0,25µm) Gold contact, Tin tail -T = Tin	-SV = Single Vertical -SH = Single Horizontal -DV = Double Vertical -DH = Double Horizontal	-“XX” = Polarized Position -K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad (-SV & -DV only) (-SV= 3 pos. min.) (-DV= 4 pos. min.) -M = Metal Pick & Place Pad (4 positions min.) (-DV only) -P = Plastic Pick & Place Pad (4 positions min.) (-SV & -DV only) -TR = Tape & Reel Packaging

Due to technical progress, all designs, specifications and components are subject to change without notice.

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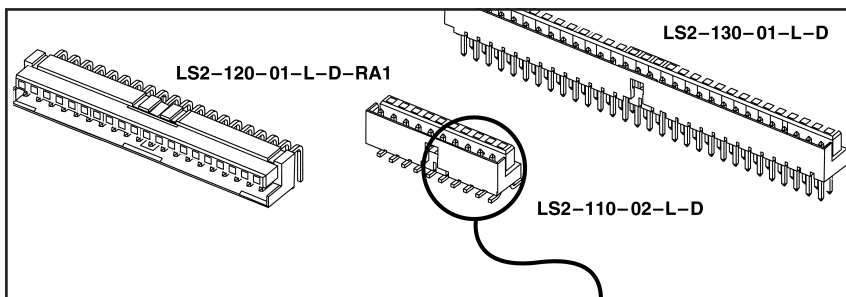
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2mm TERMINAL/SOCKET LS2 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?LS2

Insulator Material:
Liquid Crystal Polymer



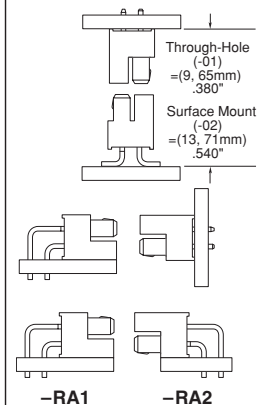
Contact Material:
Phosphor Bronze
Current Rating:
Testing Now!

Operating Temp Range:
-65°C to +125°C

Plating:
Au or Sn over 50μ" (1,27μm) Ni

Mates with:
LS2

APPLICATION



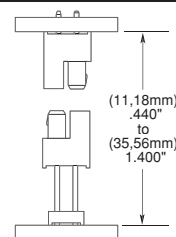
Shrouded Terminals

Align & Latch

Polarized



APPLICATION SPECIFIC



Call Samtec for elevated board stacking applications.

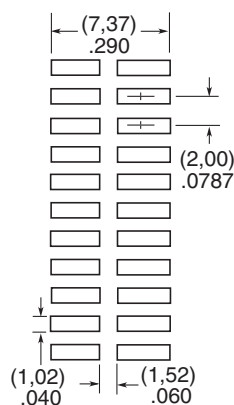
Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,15mm) .006" max

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?LS2 for recommended PCB layout.



LS2	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	D	TAIL OPTION	OPTION
		05, 10, 15, 20, 25, 30	-01 = Through-Hole -02 = Surface Mount	-F = Gold flash on contact, Tin on tail -L = 10μ" (0,25μm) Gold on contact, Tin on tail -S = 30μ" (0,76μm) Gold on contact, Tin on tail		-01 only -RA1 = Right Angle (Shroud Down) -RA2 = Right Angle (Shroud Up)	-K = (6,30mm) .248" DIA Polyimide Film Pick & Place Pad (-02 only)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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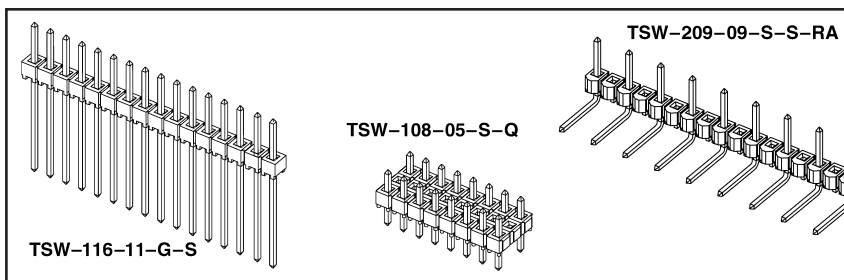
.100" PITCH

BOARD

TO

BOARD

Standard & Hi-Temp Headers (TSW, HTSW)	180-181
Surface Mount Headers (TSM)	182-183
Modified Headers (MTSW, HMTSW)	184-185
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Machined Terminals (BBS, BBD, BBL, BDL, BHS, TS, TD)	208-209
Other (2,54mm) .100" Pitch	210



.025"sq TERMINAL STRIPS TSW SERIES

Mates with:

SSW, SSQ, ESW, ESQ,
BCS, BSW, IDSD, IDSS,
CES, SLW

SPECIFICATIONS

For complete specifications
see www.samtec.com?TSW

TSW

Insulator Material:

Black Glass Filled
Polyester

Terminal Material:

Phosphor Bronze

Operating Temp

Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Plating:

Au or Sn over 50µ" (1.27µm) Ni

Voltage Rating:

550 VAC mated with SSW;

500 VAC mated with

BCS or ESQ;

450 VAC -RA/-RE mated with

BCS or SSM



SPECIFICATIONS

For complete specifications
see www.samtec.com?HTSW

HTSW

Same as TSW

except:

Insulator Material:

Natural Liquid Crystal

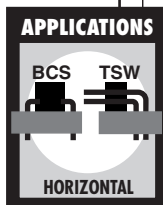
Polymer

Max Processing Temp:

230°C for 30 to 60 seconds



CURRENT RATING	
AMBIENT TEMPERATURE	TSW mated with SSW
20°C	7A
40°C	6A
60°C	4A
80°C	3A



Note: Some lengths, styles and options are non-standard, non-returnable.

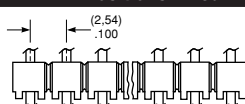
TYPE STRIP

TSW = Standard Strip

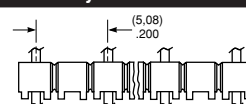
HTSW = Hi-Temp Strip

PIN CENTERS

-1 = .100" (2.54mm) Centers, All Positions Filled

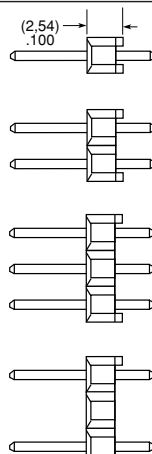
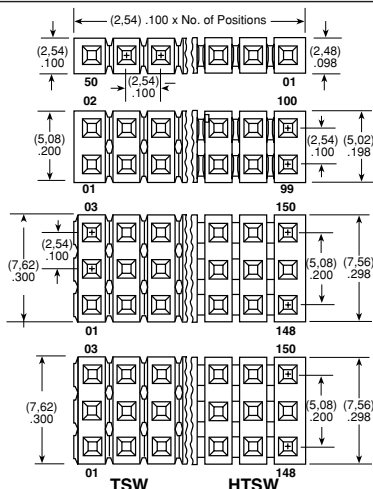


-2 = .200" (5.08 mm) Centers, Every Other Position Filled



NO. PINS PER ROW

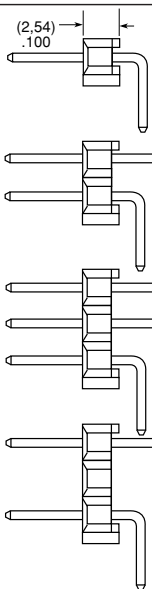
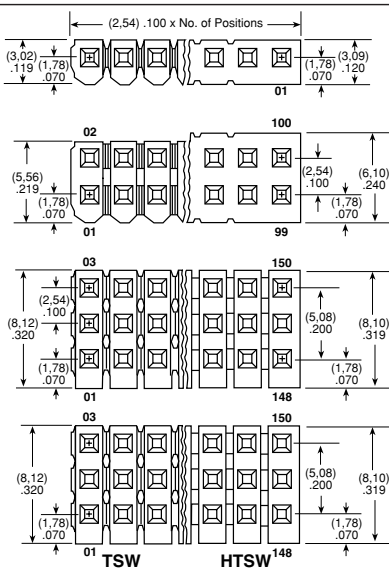
Straight Pin Versions



-S
-D
-T
-Q

01 thru 50
= .100" (2.54mm)
Center Version

Right Angle Versions



-S
-D
-T
-Q

02 thru 25
= .200" (5.08mm)
Center Version

Due to technical progress, all designs, specifications and components are subject to change without notice.

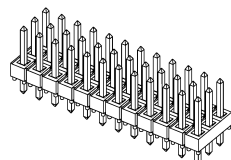
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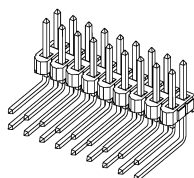
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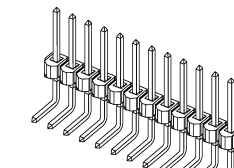
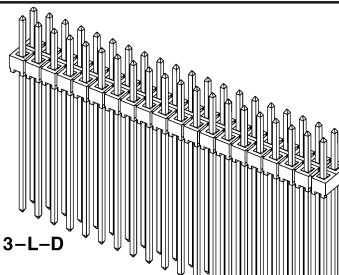


TSW-112-07-G-T

TSW-109-09-S-D-RA



TSW-120-13-L-D



TSW-112-16-T-S-RE

LEAD STYLE**PLATING OPTION****ROW OPTION****OTHER OPTIONS****ALSO AVAILABLE****-G**

= 10 μ m (0,25 μ m) Gold on contact area,
Gold flash on balance

-F

= Gold flash on contact area,
Tin on tail

-L

= 10 μ m (0,25 μ m) Gold on contact area,
Tin on tail

-S

= 30 μ m (0,76 μ m) Gold on contact area,
Tin on tail

-T

= Tin



-S
= Single
Row

-D
= Double
Row

-T
= Triple
Row

-Q
= Double
Row
(5,08mm)
.200"
row
space

-RA or -RE
= Right Angle

-LL

Two leads per strip crimped
in opposite directions on or
near centerline. See charts
for available styles. N/A
with single row 1 or 2
positions. Recommended
hole size (1,02mm
 $\pm$ 0,03mm) .040" $\pm$.001"

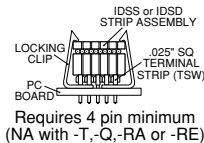
-LA
= -RA Option
with -LL Option

-“XXX”

= Polarized Position

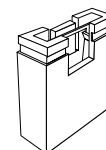
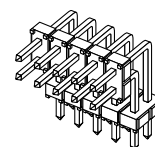
-LC

= Locking Clip
(Styles -08 thru
-13 & -22 only)



Requires 4 pin minimum
(N/A with -T, -Q, -RA or -RE)

Elevated Right
Angle option.
Call Samtec.



Shunts See
SNT Series

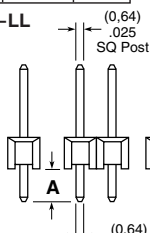
Straight Pin Versions

(Specify “LEAD STYLE” from chart)

STYLE	A	B	C
* -05	(3,30) .130	(8,51) .335	(2,67) .105
* -06	(2,41) .095	(7,62) .300	(2,67) .105
* -07	(2,54) .100	(10,92) .430	
* -08	(5,08) .200	(13,46) .530	
-09	(10,16) .400	(18,54) .730	(5,84) .230
-10	(12,70) .500	(21,08) .830	
-11	(15,24) .600	(23,62) .930	
-12	(17,78) .700	(26,16) .1,030	
-13	(22,86) .900	(31,24) .1,230	
* -14	(2,79) .110	(13,46) .530	(8,13) .320
* -15		(18,54) .730	(13,21) .520
* -16	(7,87) .310		(8,13) .320
* -17	(2,79) .110	(21,08) .830	(15,74) .620

STYLE	A	B	C
* -18		(23,62) .930	(18,29) .720
* -19	(2,79) .110	(26,16) .1,030	(20,83) .820
* -20		(31,24) .1,230	(25,91) .1,020
* -21		(36,32) .1,430	(30,99) .1,220
* -22	(7,62) .300	(16,00) .630	(5,84) .230
* -23	(2,92) .115	(11,30) .445	(6,73) .265
* -24		(12,15) .480	(6,73) .265
* -25	(5,33) .210	(16,00) .630	(8,13) .320
* -26	(3,20) .126	(11,58) .456	
* -27	(25,40) .1,000	(33,78) .1,330	(5,84) .230
-28	(20,32) .800	(28,70) .1,130	
-29	(23,11) .910	(33,78) .1,330	(8,13) .320
-30	(18,03) .710	(28,70) .1,130	
-41+	(0,89) .035	(9,27) .365	(5,84) .230
-42+	(1,27) .050	(11,94) .470	(8,13) .320

*Available with -LL
(Locking Lead)
Option



Specify -07 for
best mate with
IDXX Series
IDC Cable

**Except: Style -26 (0,46) .018 DIA Tail

+ Style -41 & -42
available with
HTSW only.

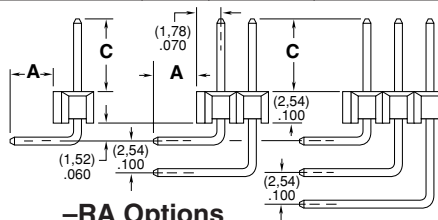
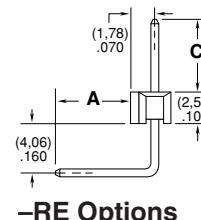
Right Angle Versions

(Specify “LEAD STYLE” from chart)

-RA LEAD STYLE	SINGLE (-S) A	C	DOUBLE (-D) A	TRIPLE (-T & -Q) A
* -08	(2,29) .090		(2,29) .090	(2,29) .090
* -09	(7,37) .290		(7,37) .290	(7,37) .290
-10	(9,91) .390	(5,84) .230	(9,91) .390	(9,91) .390
-11	(12,45) .490		(12,45) .490	(12,45) .490
-12	(14,99) .590		(14,99) .590	(14,99) .590
-13	(20,07) .790		(20,07) .790	N/A
* -16	(5,08) .200	(8,13) .320	(5,08) .200	(5,08) .200
-21	(25,15) .990	(5,84) .230	N/A	N/A
* -22	(4,83) .190		(4,83) .190	(4,83) .190
* -25	(2,54) .100	(8,13) .320	(2,54) .100	(2,54) .100
-27	(22,61) .890	(5,84) .230	N/A	N/A
-28	(17,53) .690		(17,53) .690	N/A
-29	(20,32) .800	(8,13) .320	N/A	N/A
-30	(15,24) .600		(15,24) .600	

-RE LEAD STYLE	SINGLE A	C
-09	(4,83) .190	
-10	(7,37) .290	
-11	(9,91) .390	(5,84) .230
-12	(12,45) .490	
-13	(17,53) .690	
-16	(2,54) .100	(8,13) .320
-21	(22,61) .890	
-22	(2,29) .090	(5,84) .230
-27	(20,07) .790	
-28	(14,99) .590	

*Available with -LA
(Locking Lead)
Option

**-RA Options****-RE Options**

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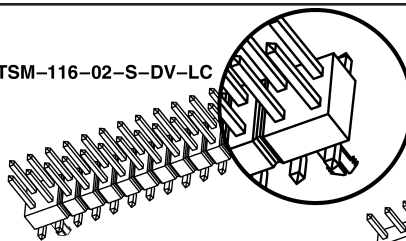
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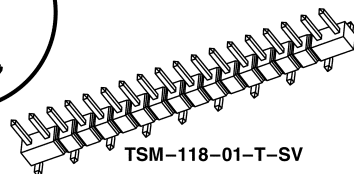
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TSM-116-02-S-DV-LC



TSM-118-01-T-SV



Surface
SMT
Mount

.025"sq TERMINAL STRIPS^{TSM} SERIES

Mates with:

SSW, SSQ, SSM, BSW,
ESW, ESQ, BCS, SLW,
CES, IDSS, IDSD, HLE

SPECIFICATIONS

For complete specifications
see www.samtec.com?TSM

Insulator Material:
Black Liquid Crystal
Polymer



Terminal Material:
Phosphor Bronze
Operating Temp
Range:

-65°C to +105°C with Tin;
-65°C to +125°C with Gold
Max Processing Temp:
230°C for 60 seconds

Plating:

Au or Sn over
50µ" (1,27µm) Ni
-DH/-SH

SMT Lead Coplanarity:
(0,15mm) .006" max (02-36)
-DV/-SV

SMT Lead Coplanarity:
(0,10mm) .004" max (02-05)
(0,13mm) .005" max (06-10)
(0,15mm) .006" max (11-36)

Voltage Rating:

475 VAC -SV/-DV mated with
BCS or SSM

AMBIENT TEMPERATURE	CURRENT RATING
20°C	7A
40°C	6A
60°C	4A
80°C	3A

APPLICATIONS

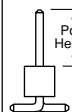
SSM TSM

HORIZONTAL

Note: Some lengths,
styles and options are
non-standard, non-returnable.

TSM	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION
		02 thru 36			

-01 = .230" (5,84mm) Post Height (Mates with SSW, BCS, SSM, IDSS, IDSD)
-02 = .320" (8,13mm) Post Height (Mates with SSM -DH)
-03 = .420" (10,67mm) Post Height (For Bottom Mount & Pass Through)
-04 = .120" (3,05mm) Post Height (Mates with SLW, CES, HLE)

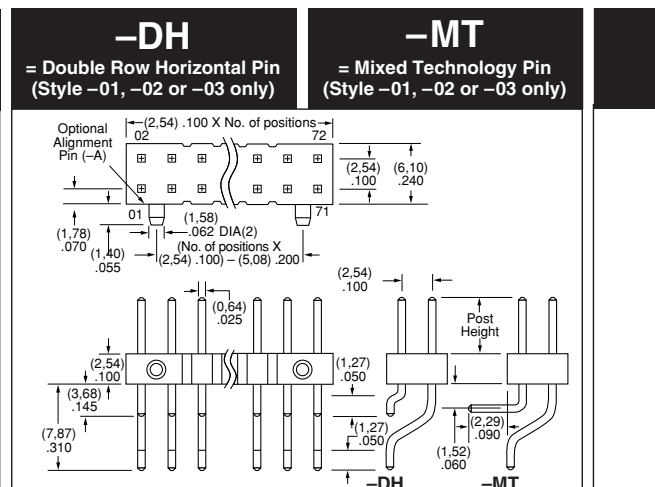
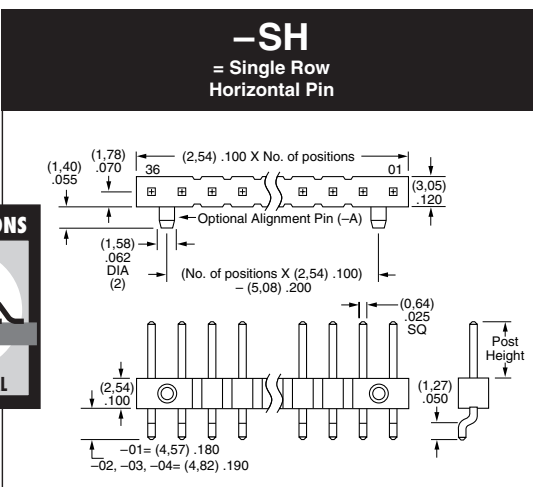
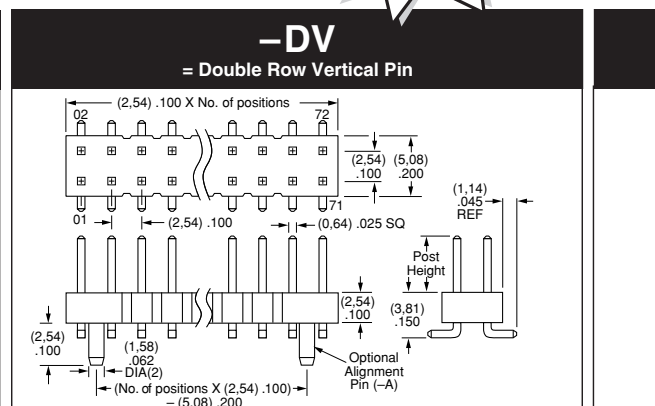
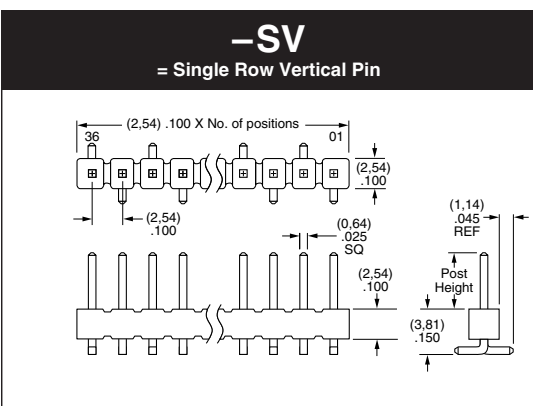


-S = 30µ" (0,76µm) Gold on post,
Tin on tail

-L = 10µ" (0,25µm) Gold on post,
Tin on tail

-T = Tin

Edge Mount
available.
Call Samtec.



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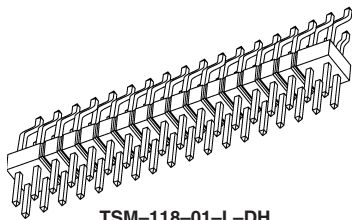
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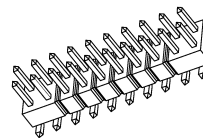
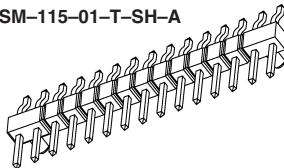
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TSM-118-01-L-DH

TSM-115-01-T-SH-A



TSM-110-01-T-DV



OTHER OPTIONS

–“XXX”
= Polarized Position

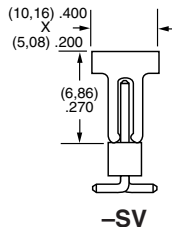
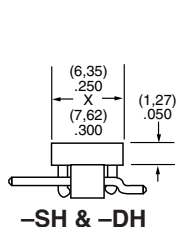
–K
= (6.50mm) .256" DIA Polyimide Film Pick & Place Pad (–SH & –DH only)

–LC
= Locking Clip (Not available with –TV or –TM) (3 positions minimum)

–A
= Alignment Pin Metal or plastic at Samtec discretion N/A with –TV or –TM. (02 positions minimum)

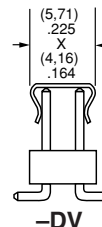
–P

= Plastic Pick & Place Pad (4 positions minimum without –TR) (2 & 3 positions available with –TR)



–M

= Metal Pick & Place Pad (4 positions minimum without –TR) (2 & 3 positions available with –TR) Styles –01 & –04 only



–TR

= Tape & Reel Packaging (04-22 positions for –SV) (04-28 positions for –DV) (30 positions max. for –SH) (2 & 3 positions available only with –P & –M) Not available with –MT

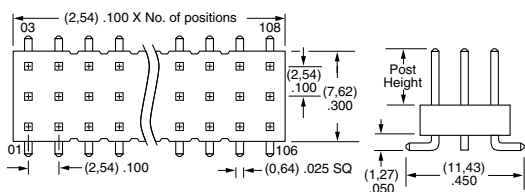
TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

–TV

= Triple Row Vertical Surface Mount (Style –01 only)

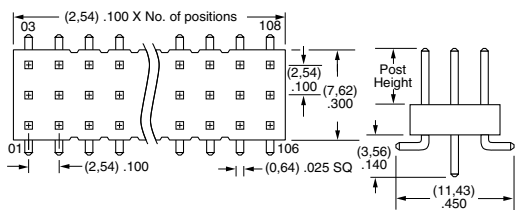
02 thru 30 positions only



–TM

= Triple Row Vertical Mixed Technology (Style –01 only)

02 thru 30 positions only

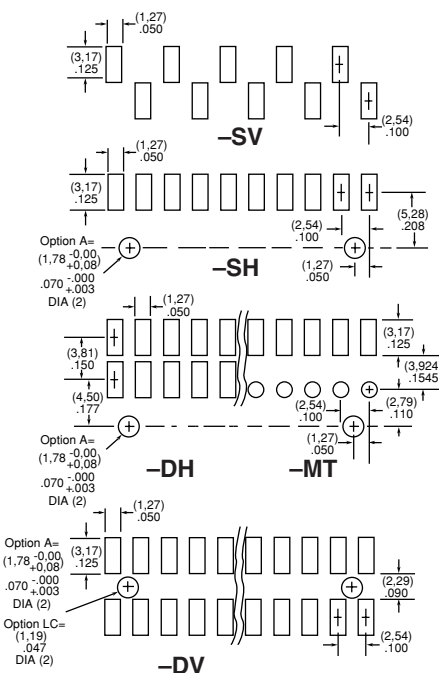


APPLICATION SPECIFIC OPTIONS

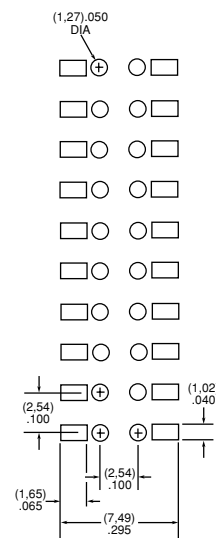
Edge Mount, Locking Clips for –SV, molded Pick-and-Place Pads, Solder Locks and Shrouds for –DH, and plastic Pick-and-Place Pads for –DV available. Call Samtec.

SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec or go to www.samtec.com?TSM



SSM Series (Pass-Through Application)



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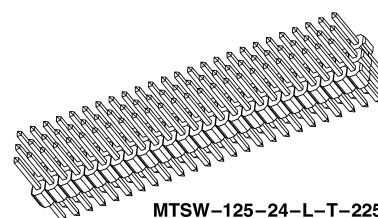
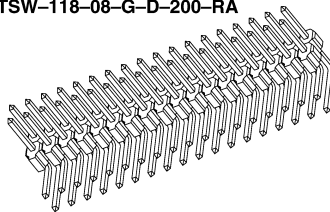
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MTSW-118-08-G-D-200-RA



MTSW-125-24-L-T-225



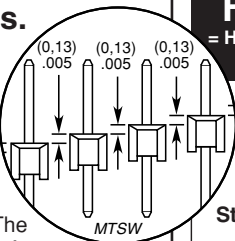
MODIFIED .025"sq TERMINAL

Mates with:

SSW, SSQ, ESW, ESQ,
BCS, BSW, IDSS, IDSD,
CES, SLW, HLE

Modified .025" strips permit custom post heights.

Samtec's MTSW offers the greatest product flexibility in the industry. The "M" stands for Modified. You tell us the post height you need and we'll deliver it.



SPECIFICATIONS

For complete specifications see www.samtec.com?MTSW

MTSW

Insulator Material:
Black Glass Filled Polyester



Terminal Material:
Phosphor Bronze



Current Rating:
3 amp continuous

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin
Plating: Au or Sn
over 50µ" (1,27µm) Ni

SPECIFICATIONS

For complete specifications see www.samtec.com?HMTSW

HMTSW

Same as MTSW except:



Insulator Material:
Natural Liquid Crystal Polymer



Max Processing Temp:
230°C for 60 seconds

Note:

These Series are non-standard, non-returnable.

TYPE STRIP

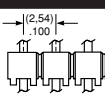
MTSW
= Modified Strip

HMTSW
= Hi-Temp Modified Strip

PIN PITCH

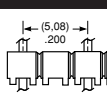
-1

= (2,54mm)
.100" Pitch



-2

= (5,08mm)
.200" Pitch

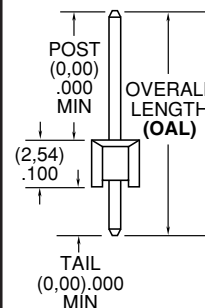


NO. PINS PER ROW

LEAD STYLE

SPECIFY "LEAD STYLE" FROM CHART

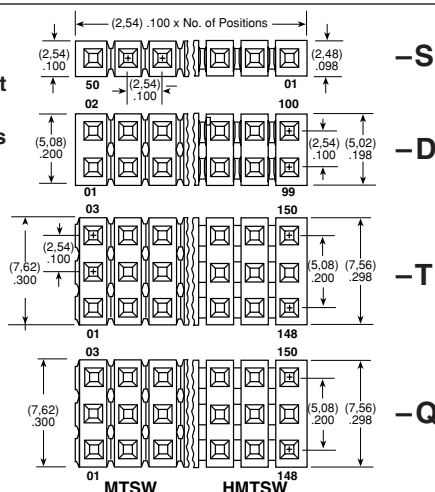
LEAD STYLE	OAL
-06	(7,62) .300
-07	(10,92) .430
-08	(13,46) .530
-09	(18,54) .730
-10	(21,08) .830
-11	(23,62) .930
-12	(26,16) 1,030
-13	(31,24) 1,230
-21	(36,32) 1,430
-22	(41,40) 1,630
-23	(46,48) 1,830
-24	(51,56) 2,030
-27	(61,70) 2,430
-28	(66,78) 2,630



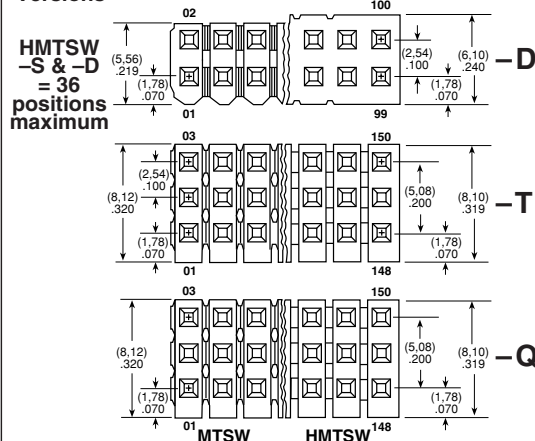
01 thru 50
= (2,54mm)
.100" Center Version

02 thru 25
= (5,08mm)
.200" Center Version

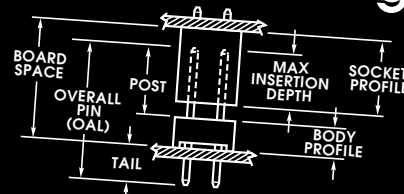
Straight Pin Versions



Right Angle Versions



Board Stacking



Due to technical progress, all designs, specifications and components are subject to change without notice.

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MTSW-126-09-S-S-430-RA

MTSW-203-11-T-T-740

MTSW-112-12-G-Q-730-RA

MTSW-110-27-G-D-990

MTSW-125-07-T-S-100

STRIPS

MTSW & HMTSW SERIES

PLATING OPTION

-G

=10μ" (0,25μm) Gold on contact area,
Gold flash on balance

-L

=10μ" (0,25μm) Gold on contact area,
Tin on tail

-S

=30μ" (0,76μm) Gold on contact area,
Tin on tail

-T

Tin



ROW OPTION

-S

= Single

-D

= Double

-T

= Triple

-Q

= Double Row
.200" (5,08mm)
row space

POST HEIGHT

OTHER OPTION

POLARIZED OPTION

-“XXX”

= Polarized
(Specify ‘XXX’ as
position number)

-RA or -RE = Right Angle

-LL

= Locking Lead
(N/A with -RE)
N/A in single row 1 or 2
positions. Available on
tails from (2,29) .090" to
(10,16) .400" only



Two leads per strip
crimped in opposite
directions on or near
centerline. See TSW
for availability.

-LA = -RA Option with -LL Option
(Maximum “C” = (13,46) .530

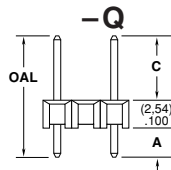
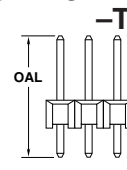
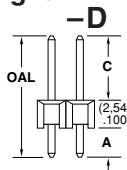
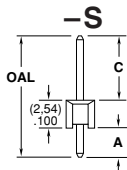


-“XXXX” = “C” Dimension (Specify post height in INCHES - .005" (0,13mm) increments)

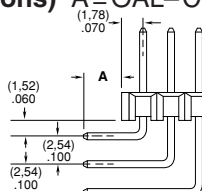
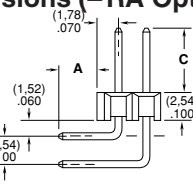
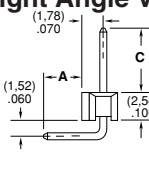
FOR A = (2,29) .090				
LEAD STYLE	OAL	C MAXIMUM STRAIGHT	C MAXIMUM w/RA	C MAXIMUM w/RE
-06	(7,62) .300	(2,79) .110	N/A	N/A
-07	(10,92) .430	(6,10) .240	(3,30) .130	N/A
-08	(13,46) .530	(8,64) .340	(5,84) .230	(3,30) .130
-09	(18,54) .730	(13,72) .540	(10,92) .430	(8,38) .330
-10	(21,08) .830	(16,26) .640	(13,46) .530	(10,92) .430
-11	(23,62) .930	(18,80) .740	(16,00) .630	(13,46) .530
-12	(26,16) 1.030	(21,34) .840	(18,54) .730	(16,00) .630
* -13	(31,24) 1.230	(26,42) 1.040	(23,62) .930	(21,08) .830
* -21	(36,32) 1.430	(31,50) 1.240	(28,70) 1.130	(26,16) 1.030
-22	(16,00) .630	(11,18) .440	(8,38) .330	(5,84) .230
* -23	(11,30) .445	(6,48) .255	(3,68) .145	N/A
* -24	(12,19) .480	(7,37) .290	(4,57) .180	N/A
* -27	(33,78) 1.330	(28,96) 1.140	(26,16) 1.030	(23,62) .930
* -28	(28,70) 1.130	(23,88) .940	(21,08) .830	(18,54) .730

* Styles -21, -23, -24, -27
not available with -D Right Angle
Styles -13, -21, -23, -24, -27, -28
not available with -T or -Q Right Angle

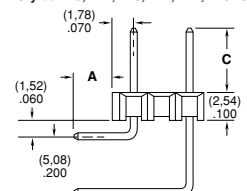
Straight Pin Versions $A = OAL - C - \frac{(2,54)}{.100}$



Right Angle Versions (-RA Options) $A = OAL - C - \frac{(5,33)}{.210}$

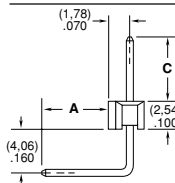


Styles -21, -23, -24, -27 N/A with -D
Styles -13, -21, -23, -24, -27, -28 N/A with -T or -Q



Right Angle Versions
(-RE Options) Single Row Only

$A = OAL - C - \frac{(7,87)}{.310}$



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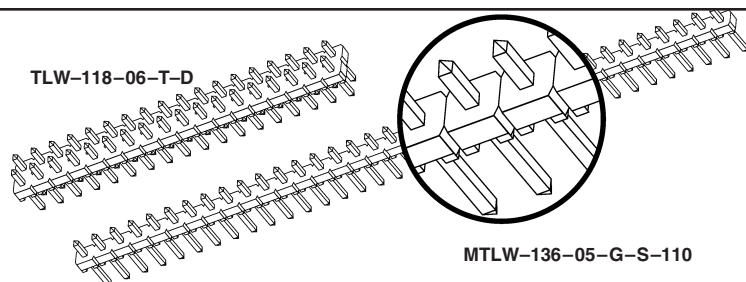
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TLW-118-06-T-D



MTLW-136-05-G-S-110

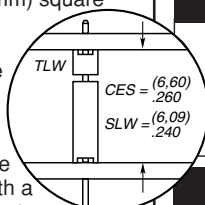


LOW PROFILE HEADER TLW, MTLW SERIES

Mates with:
BSW, CES, SLW, HLE

FEATURES

These headers provide the ultimate low profile .025" (0,64mm) square post board stacking system. The high quality Phosphor Bronze terminals are available with a standard short post height (TLW Series) for mating with low profile sockets, or the post height can be Modified (MTLW Series) to accommodate IDC assemblies and other applications.



TLW

1

NO. PINS PER ROW

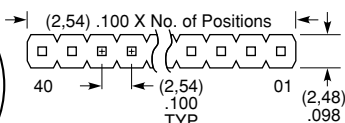
LEAD STYLE

PLATING OPTION

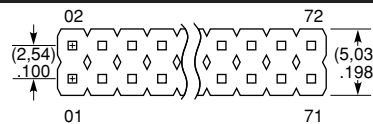
ROW OPTION

OTHER OPTION

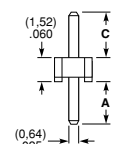
01 thru 40
= Single Row



01 thru 36
= Double Row



Specify
"LEAD STYLE"
from chart



LEAD STYLE	A	C
-05	(4,32) .170	(2,67) .105
-06	(3,43) .135	(2,67) .105

-S
= Single Row

-D
= Double Row

- "XX"
= Polarized Position

Specify position for omitted pin.

-RA
= Right Angle

Call for Specifications

-G
= 10μ" (0,25μm)

Gold on post,
Gold flash on tail

-T
= Tin



SPECIFICATIONS

For complete specifications
www.samtec.com?TLW or
see www.samtec.com?MTLW

Insulator Material:
Black Liquid Crystal
Polymer



Terminal Material:
Phosphor Bronze
Current Rating:
3A

Operating Temp Range:
-65°C to +105°C with Tin
-65°C to +125°C with Gold
Max Processing Temp:
230°C for 60 seconds

Plating:
Au or Sn over
50μ" (1,27mm) Ni

MTLW

1

NO. PINS PER ROW

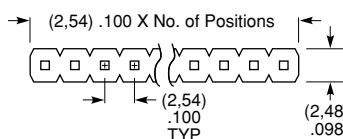
LEAD STYLE

PLATING OPTION

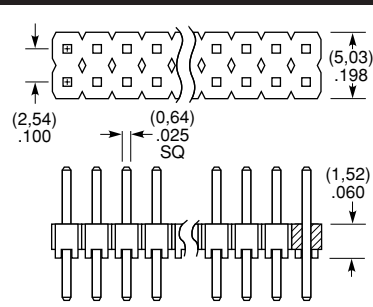
ROW OPTION

POST HEIGHT

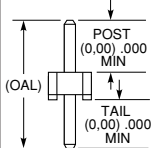
01 thru 40
= Single Row



01 thru 36
= Double Row



Specify
"LEAD STYLE"
from chart



LEAD STYLE	OAL
-05	(8,51) .335
-06	(7,62) .300
-07	(10,92) .430
-08	(13,46) .530
-09	(18,54) .730
-10	(21,08) .830
-22	(16,00) .630
-23	(11,30) .445
-24	(12,19) .480

-S
= Single Row

-D
= Double Row

- "XXX"
= Post Height
Dimension
(In inches)

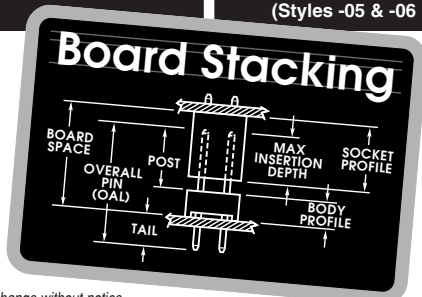
-G
= 10μ" (0,25μm)
Gold on post,
Gold flash on tail

-S
= 30μ" (0,76μm) Gold on post,
Tin on tail
(Styles -05 & -06 N/A)

-T
= Tin

-L
= 10μ" (0,25μm) Gold on post,
Tin on tail
(Styles -05 & -06 N/A)

Note:
Some lengths, styles and
options are non-standard,
non-returnable. MTLW
Series is non-standard,
non-returnable.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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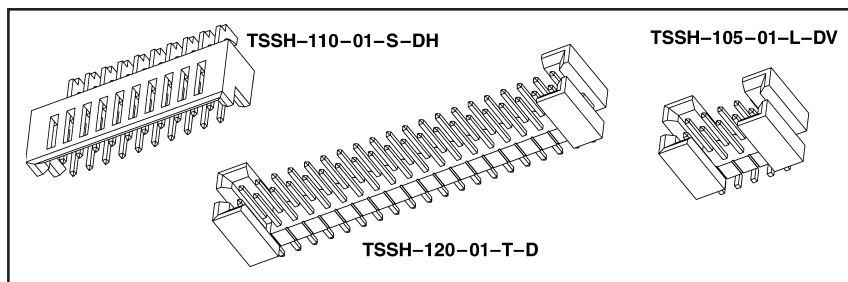
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.025"sq SHROUDED HEADER TSSH SERIES

Mates with:

SSW, SSQ, SSM,
ESQ, ESW, BCS

Important Note:

This Series will only mate
with SSW, SSQ &
SSM Series

SPECIFICATIONS

For complete specifications
see www.samtec.com?TSSH

Insulator Material:
Black Liquid Crystal
Polymer



Terminal Material:
Phosphor Bronze

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Max Processing Temp:
230°C for 60 seconds

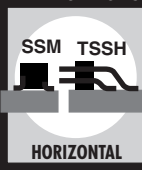
Plating:

Au or Sn over
50µ" (1,27µm) Ni

SMT Lead Coplanarity:

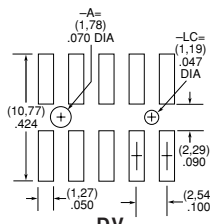
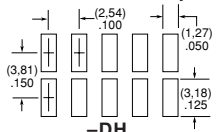
(0,20mm) .008" max (-DH)
(0,20mm) .008" max (-DV)

APPLICATIONS

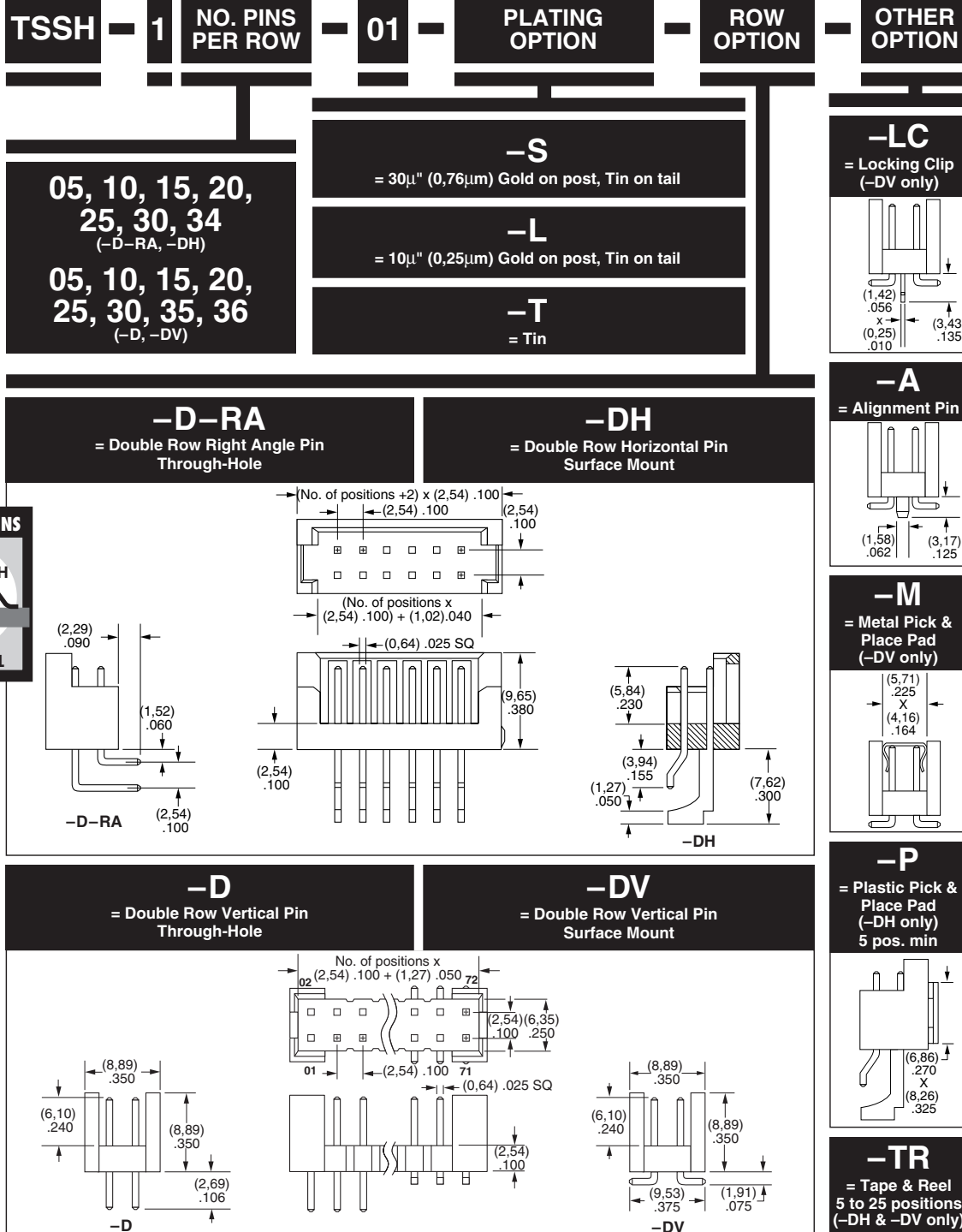


SUGGESTED PCB LAYOUTS

For reference only. Please
contact Samtec or go to
www.samtec.com?TSSH
for recommended PCB layout.



Note: Some lengths,
styles and options are
non-standard, non-returnable.



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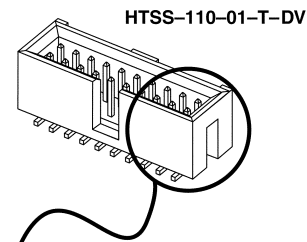
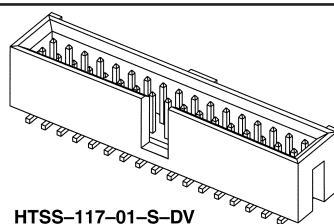
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Surface
SMT
Mount

SHROUDED HEADER HTSS, HTST SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HTSS or www.samtec.com?HTST

Insulator Material:

Natural LCP

Terminal Material:

Phosphor Bronze

Current Rating:

3A

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Plating:

Au or Sn over

50μ" (1,27μm) Ni

SMT Lead Coplanarity:

.006" (0,15mm)

HTSS mates with:
SSW, SSQ, ESW, ESQ,
SSM, BCS, IDSD

HTST mates with:
IDSD

Board Stacking
and IDC
Cable Option

High Temp
Plastic Body

(2,54mm)
.100" pitch

Surface Mount
Termination

TYPE STRIP	1	NO. PINS PER ROW	01	PLATING OPTION	DV									
HTSS = High Temp Top Shrouded Connector Strip HTST = High Temp Top Shrouded Cable Strip		05, 07, 08, 10, 12, 13, 15, 17, 20, 25, 32, 36 (Call Samtec for other sizes.)		- S = 30μ" (0,76μm) Gold on contact area, Tin on tail - L = 10μ" (0,25μm) Gold on contact area, Tin on tail - T = Tin										
<table border="1"> <thead> <tr> <th>TYPE STRIP</th> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>HTSS</td> <td>(2,54) .100 x No. of Pins + (1,27) .050</td> <td>(2,54) .100 x No. of Pins + (3,81) .150</td> </tr> <tr> <td>HTST</td> <td>(2,54) .100 x No. of Pins + (5,08) .200</td> <td>(2,54) .100 x No. of Pins + (7,62) .300</td> </tr> </tbody> </table>						TYPE STRIP	X	Y	HTSS	(2,54) .100 x No. of Pins + (1,27) .050	(2,54) .100 x No. of Pins + (3,81) .150	HTST	(2,54) .100 x No. of Pins + (5,08) .200	(2,54) .100 x No. of Pins + (7,62) .300
TYPE STRIP	X	Y												
HTSS	(2,54) .100 x No. of Pins + (1,27) .050	(2,54) .100 x No. of Pins + (3,81) .150												
HTST	(2,54) .100 x No. of Pins + (5,08) .200	(2,54) .100 x No. of Pins + (7,62) .300												

Applications:

- SSW, SSM, ESW, ESQ or BCS: Slim body to prevent misalignment
- PCB: Board Stacking
- IDSD: Cable
- HTST: Extra space to clear cable assembly

Note: Some lengths, styles and options are non-standard, non-returnable.

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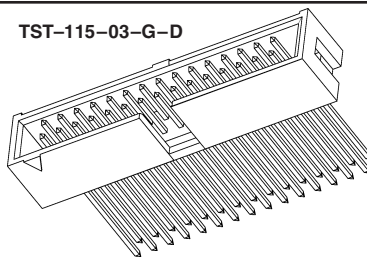
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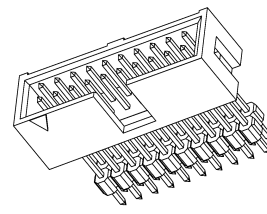
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TST-115-03-G-D



ZSS-110-03-S-D-715



SHROUDED HEADER TSS, TST, ZSS, ZST SERIES

Mates with:
SSW, SSQ, SSM, ESW,
ESQ, BCS, IDSD

TYPE
STRIP

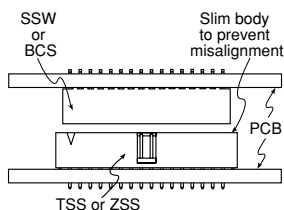
1

NO. PINS
PER ROWLEAD
STYLEPLATING
OPTION

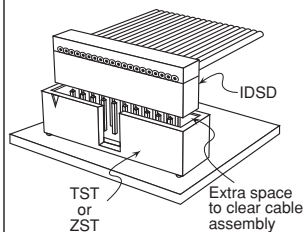
D

OTHER
OPTION

APPLICATIONS



Board Stacking



Cable

TSS

= Top Shrouded
Connector Strip

TST

= Top Shrouded
Cable Strip

ZSS

= Elevated
Connector Strip

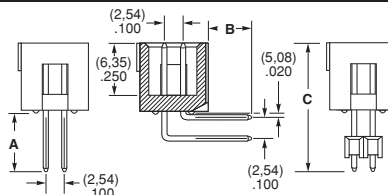
ZST

= Elevated
Cable Strip

APPLICATION SPECIFIC OPTION

Single row available.
Call Samtec.

Specify "LEAD STYLE" from chart



LEAD STYLE	TSS/TST STRAIGHT TAIL LENGTH (A)	TSS/TST RIGHT ANGLE TAIL LENGTH (B)	ZSS/ZST OVERALL LENGTH (C)
-01	(2,92) .115	—	(16,00) .630
-02	(4,19) .165	—	(18,54) .730
-03	(14,35) .565	—	(21,08) .830
-04	—	(3,30) .130	(23,62) .930
-05	—	(5,84) .230	(26,16) 1.030
-06	—	—	(28,70) 1.130
-07	—	—	(31,24) 1.230
-08	—	—	(33,78) 1.330
-09	—	—	(36,32) 1.430

- RA

= Right Angle
(TSS, TST only)

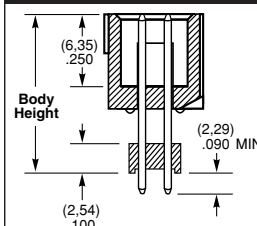
- LL

= Locking Lead (Requires
.090" (2,29mm) min. tail)

- LA

= -RA Option
with -LL Option
(TSS, TST only)

- "XXXX"

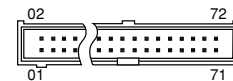
= Body Height
(ZSS, ZST only)

LEAD STYLE	MAX. BODY HEIGHT
-01	.540 (13,72)
-02	.640 (16,26)
-03	.740 (18,80)
-04	.840 (21,34)
-05	.940 (23,88)
-06	1.040 (26,42)
-07	1.140 (28,96)
-08	1.240 (31,50)
-09	1.340 (34,04)

For board stacking height add
.085" (2,16mm) when mated with
SSW series.Example: ZST-1XX-01-X-X-465
mated with SSW = (13,97mm)
.550" board space

- "XX"

= Polarized Position



SPECIFICATIONS

For complete specifications
see www.samtec.com?TSS,
www.samtec.com?TST,
www.samtec.com?ZSS or
www.samtec.com?ZST

Insulator Material:
Black Glass Filled
Polyester

Insulation Resistance:
5000 MΩ min

Terminal Material:
Phosphor Bronze
Current Rating:
3A

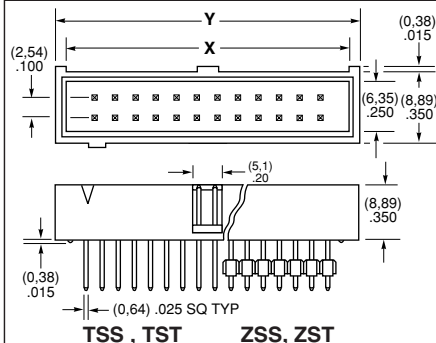
Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Plating:
Au or Sn over
50μ" (1,27μm) Ni
Flamability Rating:
UL 94V-O

Withstanding Voltage:
1000 VRMS

Note: Some lengths, styles
and options are non-standard,
non-returnable. ZSS, ZST are
non-standard, non-returnable.

05, 07, 08, 10, 12, 13,
15, 17, 20, 25, 32, 36
(Call Samtec for other sizes.)



TSS, TST ZSS, ZST

TYPE STRIP	X	Y
TSS ZSS	(2,54) .100 X No. of Positions + (1,27) .050	(2,54) .100 X No. of Positions + (3,81) .150
TST ZST	(2,54) .100 X No. of Positions + (5,08) .200	(2,54) .100 X No. of Positions + (7,62) .300

Due to technical progress, all designs, specifications and components are subject to change without notice.

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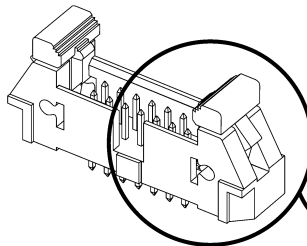
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EJH-107-01-F-D-TH



EJH-120-01-S-D-SM

EJECTOR HEADER EJH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?EJH

Insulator Material:

Liquid Crystal
Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

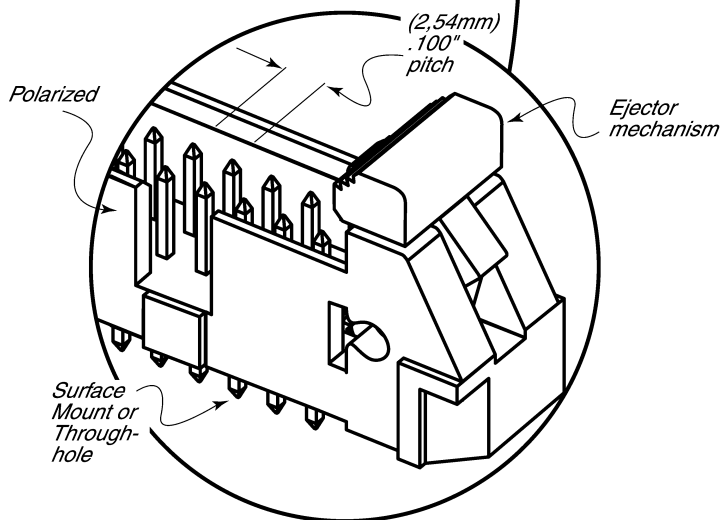
Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 50µ"
(1,27µm) Ni

Mates with:
IDSD



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

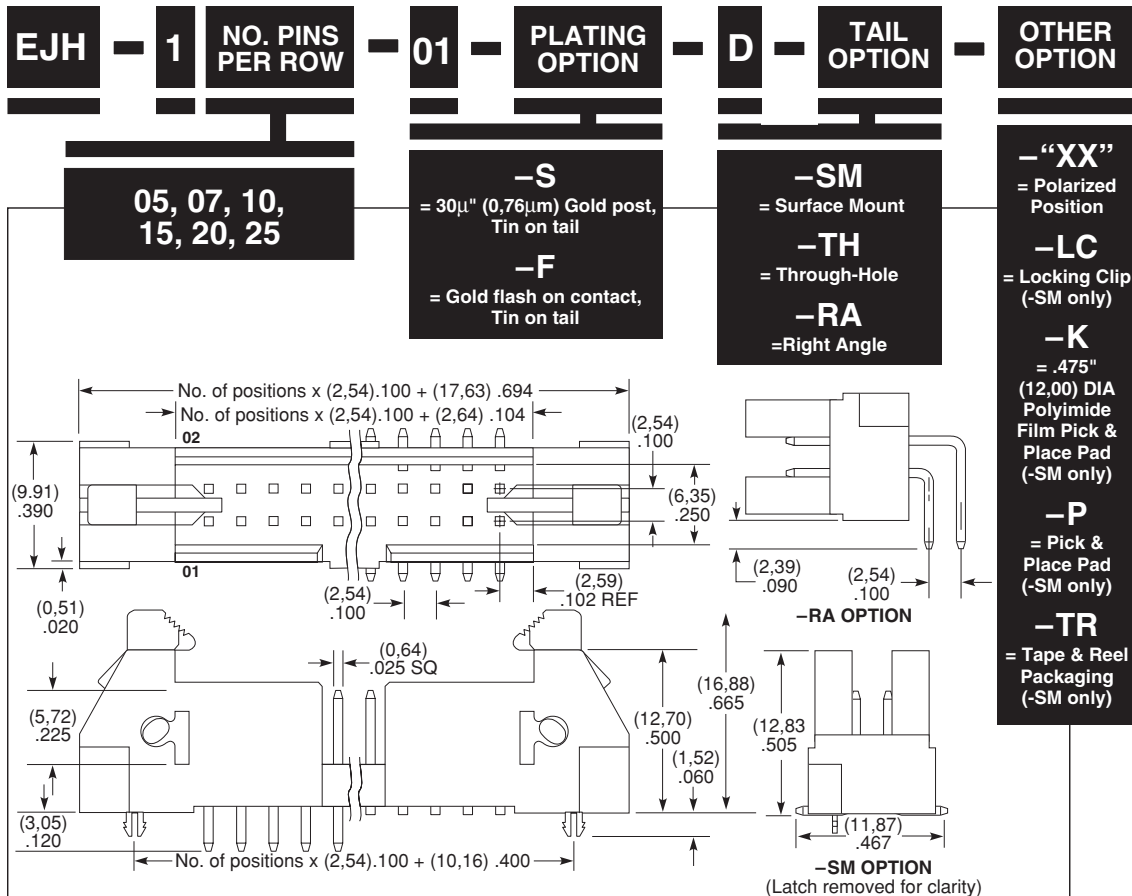
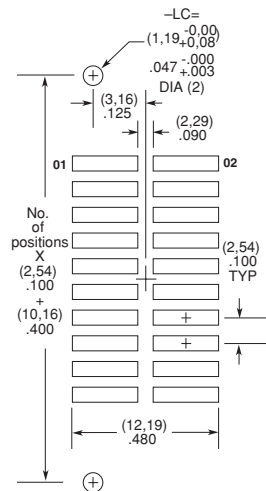
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?EJH for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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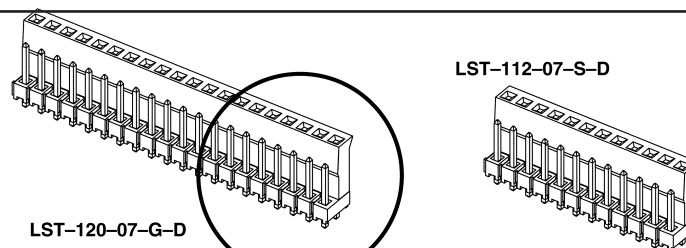
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.100" (2,54mm) SOCKET/TERMINAL LST, HLST SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?LST or www.samtec.com?HLST

Insulator Material:

Standard: Black
Glass Filled Polyester
High Temp: Top (Socket)
Black LCP;
Bottom (Terminal)
Natural LCP

Terminal Material:

Phosphor Bronze

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Plating:

Au or Sn over 50μ" (1,27μm) Ni

Insertion Depth:

(3,68 mm) .145" to (6,35 mm) .250"

Insertion Force:

6oz (1,67N) avg

Withdrawal Force:

4oz (1,11N) avg

Cycles:

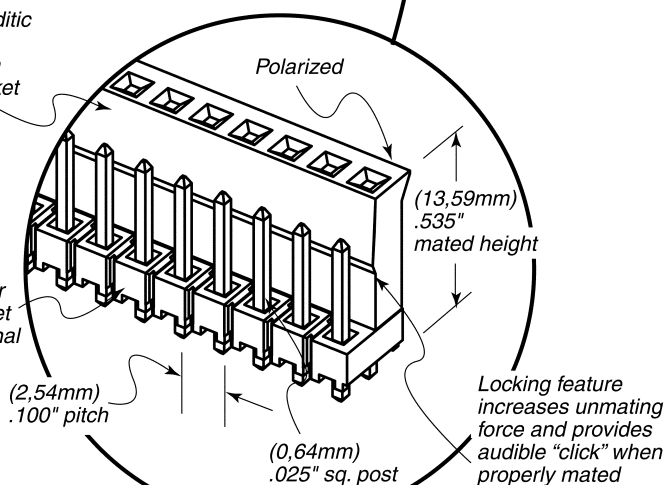
100 with 10μ" (0,25μm) Au

Mates with:
LST, HLST



Hermaphroditic self-mating combination header/socket system

One part number for both socket and terminal



Note: Some lengths, styles and options are non-standard, non-returnable.

Also Available

Right Angle

Call Samtec.

Elevated

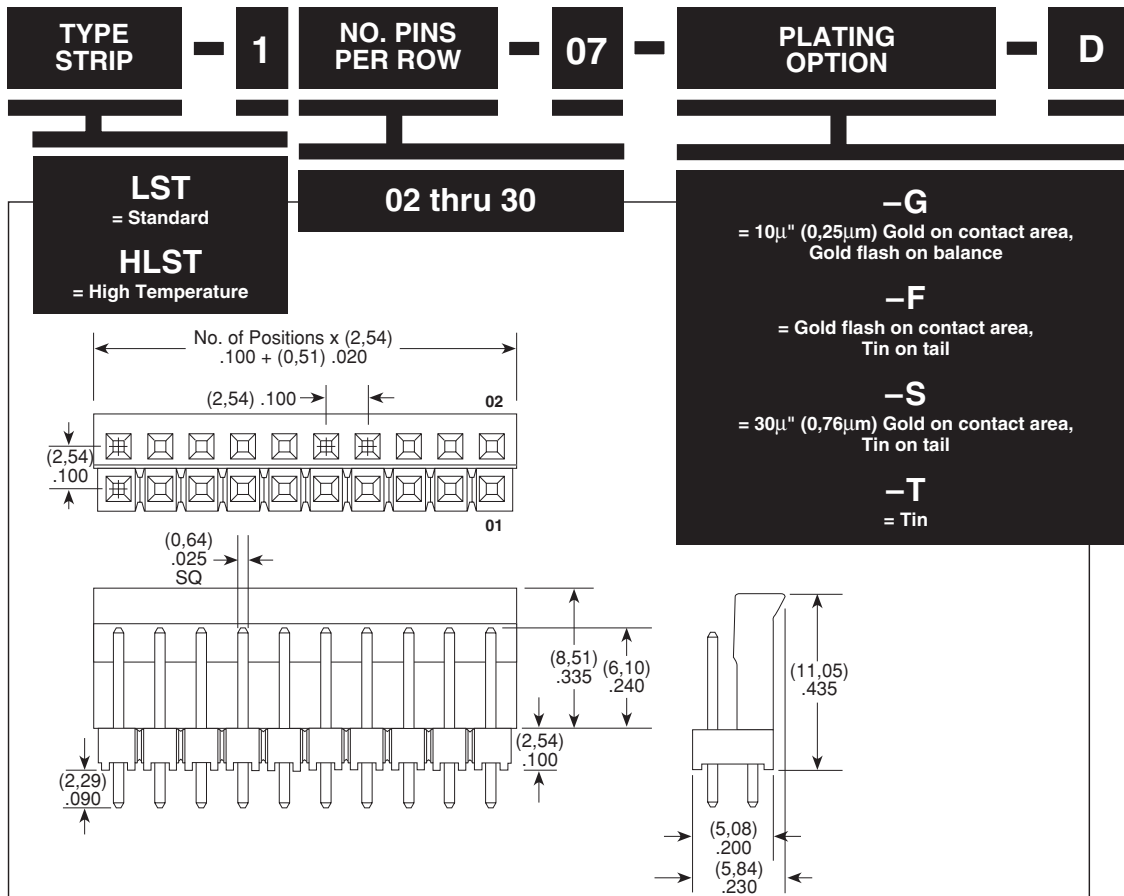
Call Samtec.

Surface Mount

Call Samtec.

Edge Mount

Call Samtec.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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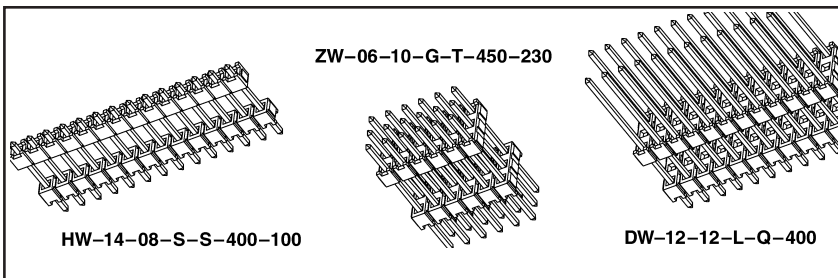
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Except ZW 3 days.



BOARD STACKER DW, EW, ZW & HW SERIES



Mates with:

SSW, SSQ, ESW, ESQ,
CES, SLW, BSW, BCS,
SSM, IDSS, IDSD, HLE

SPECIFICATIONS

For complete specifications
see www.samtec.com?DW,
www.samtec.com?EW or
www.samtec.com?ZW

Insulator Material:
Black Glass Filled
Polyester



Terminal Material:
Phosphor Bronze



Operating Temp

Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Plating:

Au or Sn over
50μ" (1,27μm) Ni

SPECIFICATIONS

For complete specifications
see www.samtec.com?HW

Same as ZW except:
Insulator Material:
Natural Liquid Crystal
Polymer



**Max Processing
Temp:**

230°C for 60 seconds



TYPE STRIP

NO. PINS PER ROW

LEAD STYLE

PLATING OPTION

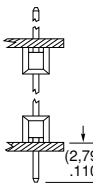
ROW OPTION

STACKER HEIGHT

OTHER OPTIONS

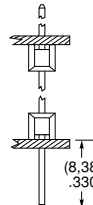
DW

= (2,79mm)
.110" Tail



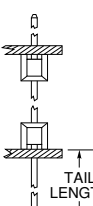
EW

= (8,38mm)
.330" Tail



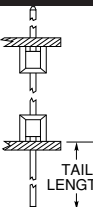
ZW

= Custom Tail



HW

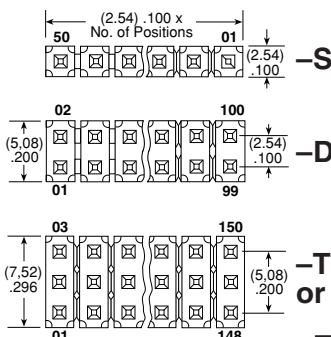
= High Temp
Custom Tail



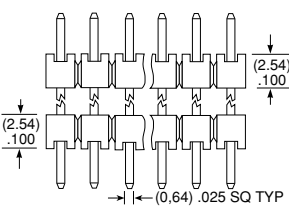
Specify LEAD STYLE from chart

LEAD STYLE	OAL
-07	(10,92).430
-08	(13,46).530
-09	(18,54).730
-10	(21,08).830
-11	(23,62).930
-12	(26,16) 1.030
-13	(31,24) 1.230
-14	(36,32) 1.430
-15	(16,00).630
-16	(11,30).445
-17	(12,19).480
-19	(33,78) 1.330
-20	(28,70) 1.130

01 thru 50



-Q*
= Same as
-T except
middle row
of pins
missing.



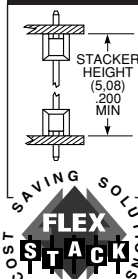
-S
= Single
Row

-D
= Double
Row

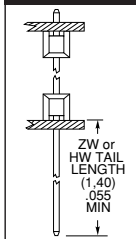
-T
= Triple
Row

-Q
= Double
Row .200"
(5,08mm)
row space

-“XXX”
= Stacker
Height



-“XXX”
= ZW or HW
Tail Length



-LL
= Locking
Lead
(Shortest
dimension
between the
tail and the
post is the
end that will
be crimped.
Available
on tails from
(2,29) .090" to
(10,16) .400"
only.)
Single row, 01
& 02 positions
& -Q row not
available

-“XXX”
= Polarized

Specify omitted
pin position

-G
= 10μ" (0,25μm) Gold on contact
area of longer tail,
Gold flash on balance

-F
= Gold flash on contact,
Tin on tail

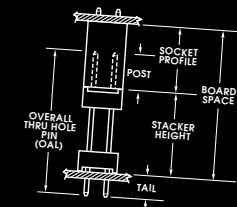
-L
= 10μ" (0,25μm) Gold on contact
area of longer tail,
Tin on tail

-S
= 30μ" (0,76μm) Gold on contact
area of longer tail,
Tin on tail

-T
= Tin

Board Stacking

Board Space
= Socket Profile
= Stacker Height



Due to technical progress, all designs, specifications and components are subject to change without notice.

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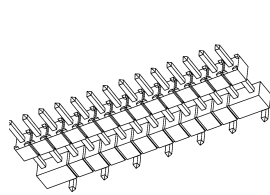
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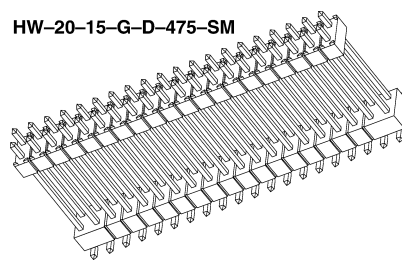
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HW-14-08-S-S-350-SM

HW-20-15-G-D-475-SM



Surface
SMT
Mount

BOARD STACKER HW SERIES

Mates with:

SSW, SSQ, ESW, ESQ,
CES, SLW, BSW, BCS,
SSM, IDSS, IDSD, HLE

SPECIFICATIONS

For complete specifications
see www.samtec.com?HW

Insulator Material:

Top: Natural LCP

Bottom: Black LCP

Terminal Material:

Phosphor Bronze

Current Rating:

3A continuous

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Max Processing Temp:

230°C for 60 seconds

Plating:

Au or Sn over

50μ" (1,27μm) Ni

SMT Lead Coplanarity:

(0,15mm) .006" max

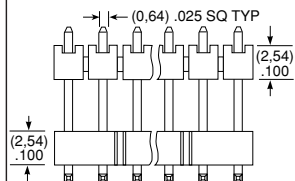
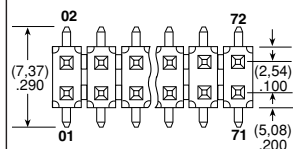
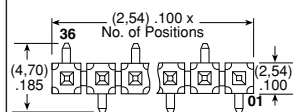


APPLICATION SPECIFIC OPTION

Locking Clip available with
double row -SM.
Call Samtec.

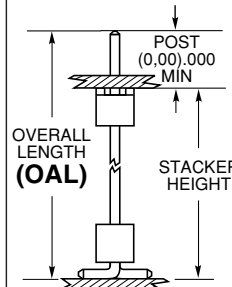
HW - **NO. PINS PER ROW** - **LEAD STYLE** - **PLATING OPTION** - **ROW OPTION** - **STACKER HEIGHT** - **SM** - **OTHER OPTIONS**

01 thru 36



Specify LEAD STYLE from chart

LEAD STYLE	OAL (SMT)
-08	(11,81) .465
-09	(16,89) .665
-10	(19,43) .765
-11	(21,97) .865
-12	(24,51) .965
-15	(14,35) .565
-16	(9,65) .380
-17	(10,54) .415
-20	(27,05) 1.065



Note: These Series are
non-standard, non-returnable.

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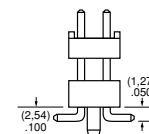
"XX"

= Polarized

Specify omitted
pin position

-A

= Alignment Pin



Double row only
(Metal or plastic at
Samtec discretion)

-TR

= Tape & Reel Packaging
(27 positions Max.)
(Not Available on Lead
Styles 10, 11, 12 & 20)

-G

= 10μ" (0,25μm) Gold on contact
area of longer tail,
Gold flash on balance

-F

= Gold flash on contact,
Tin on tail

-L

= 10μ" (0,25μm) Gold on contact
area of longer tail,
Tin on tail

-S

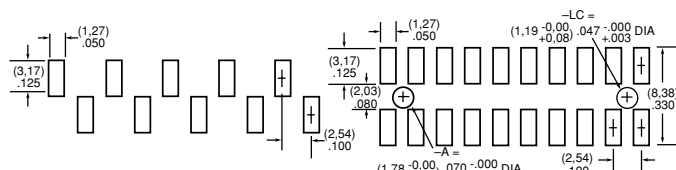
= 30μ" (0,76μm) Gold on contact
area of longer tail,
Tin on tail

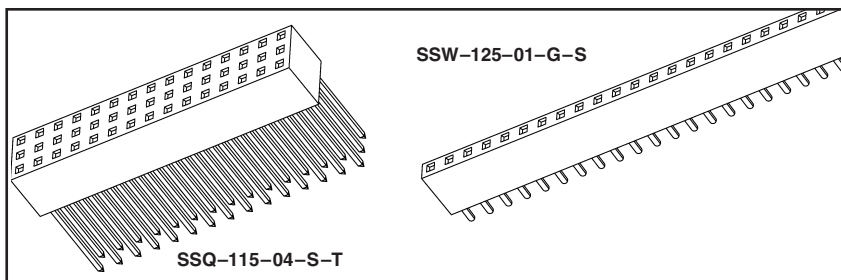
-T

= Tin

SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec or go to www.samtec.com?HW





SOCKET STRIP SSW & SSQ SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SSW or www.samtec.com?SSQ

Insulator Material:

Black Liquid Crystal Polymer (-S & -D) or Black High Temperature Thermoplastic (-T)

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Plating:

Au or Sn over

50μ" (1.27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(3.68 mm) .145" to

(6.35 mm) .250"

Insertion Force:

(-S plating)

Standard= 6oz (1.67N) avg

((0.64mm) .025" SQ pin);

SSW Low Insertion Force=

3oz (0.83N) avg

SSQ Low Insertion Force=

3.3oz (0.92N) avg

Normal Force:

Standard= 125grams (4.4N)

Withdrawal Force:

(-S plating)

Standard= 5oz (1.39N) avg

((0.64mm) .025" SQ pin);

SSW Low Insertion Force=

2.6oz (0.72N) avg

SSQ Low Insertion Force=

2.9oz (0.81N) avg

Max Cycles:

100 with 10μ" (0.25μm) Au

Voltage Rating:

550 VAC mated with TSW

Mates With:

TSW, MTSW, MTLW,

EW, ZW, TSS, ZSS,

TSM, TSSH



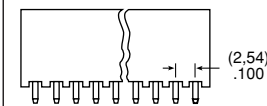
TYPE STRIP

SSW = Solder Tail

SSQ = Square Tail

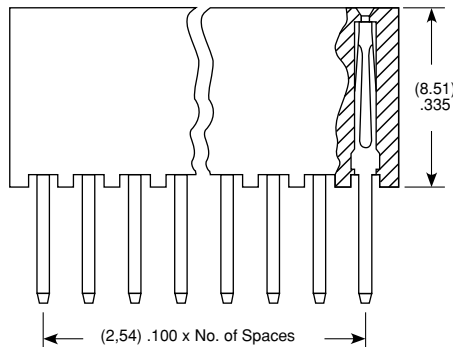
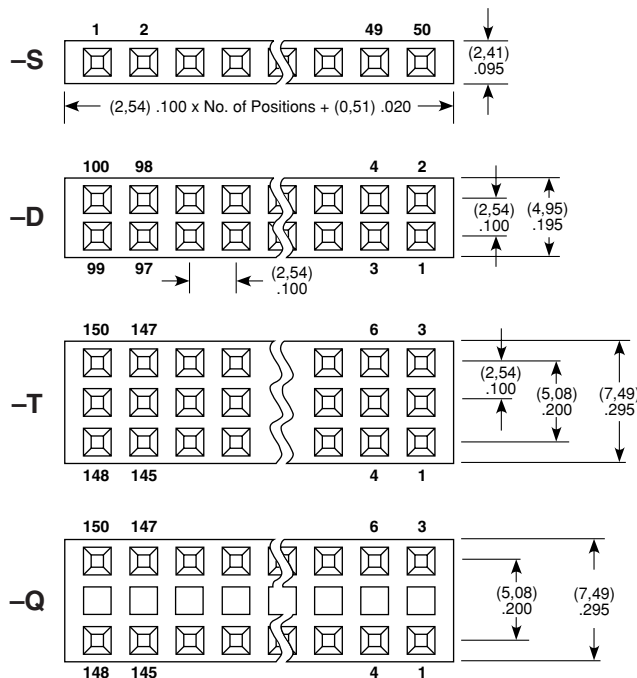
PIN CENTERS

-1 = (2,54mm) .100" Centers



NO. PINS PER ROW

01
thru
50



CURRENT RATING	
AMBIENT TEMPERATURE	SSW mated with TSW
20°C	5.5A
40°C	5A
60°C	4A
80°C	3A

Note:
Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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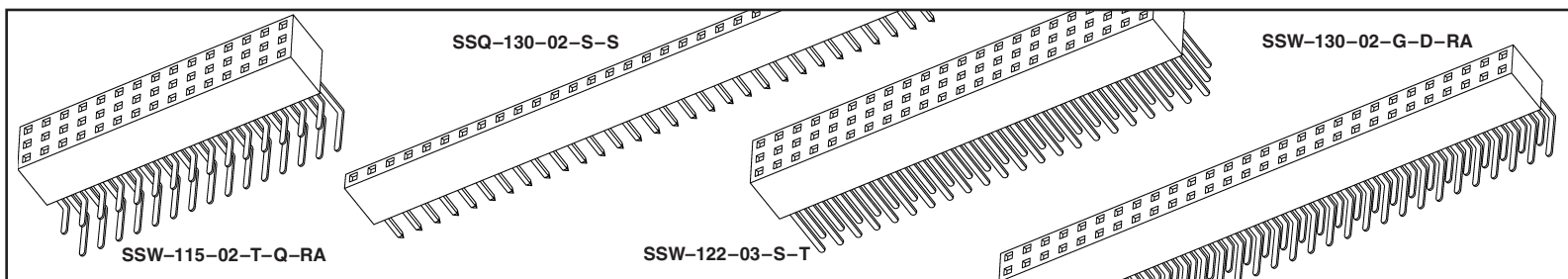
SAMTEC CHINA • Tel: 86-21-5385-4089 • Fax: 86-21-5385-4047

SAMTEC JAPAN • Tel: 81-424-42-8318 • Fax: 81-424-42-8319

SAMTEC TAIWAN • Tel: 886-02-2364-6077 • Fax: 886-02-2367-9531

SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

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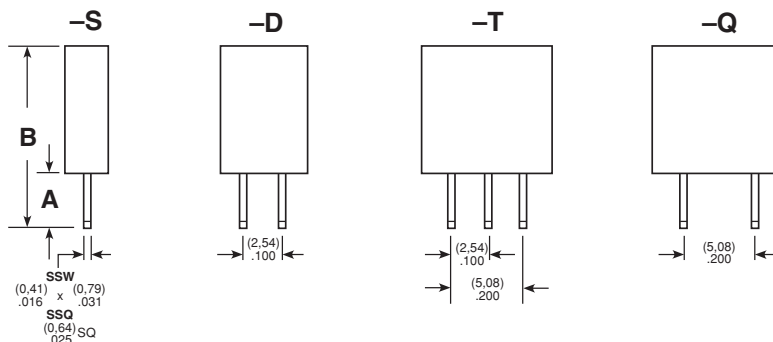
LEAD STYLE	PLATING OPTION	ROW OPTION	TAIL OPTION	OTHER OPTION
-G = 20μ" (0,51μm) Gold on contact, Gold flash on tail -F = Gold flash on contact, Tin on tail -S = 30μ" (0,76μm) Gold on contact, Tin tail -T = Tin on contact and tail (Tin N/A on LIF contacts)		-S = Single Row -D = Double Row -T = Triple Row -Q = Double Row = .200" (5,08mm) row space (Outer rows filled only)	-RA = Right Angle (Leave blank for straight pin)	-LL = Locking Lead Two leads per strip crimped in opposite directions on or near centerline. Available on tails from (2,29) .090" to (7,87) .310" only. N/A with single row 1 or 2 positions. -“XXX” = Polarized (Specify “xxx” as position number)

Straight Pin Versions (Specify “LEAD STYLE” from chart)

LEAD STYLE		SINGLE DOUBLE OR TRIPLE	
Standard Insertion Force	Low Insertion Force*	A	B
-01	-21	(2,64) .104	(11,05) .435
-02	-22	(4,93) .194	(13,34) .525
-03	-23	(10,00) .394	(18,42) .725
-04	-24	(14,83) .584	(23,24) .915
-06**	N/A	(3,00) .118	(11,50) .453

* LIF N/A with Tin Plating

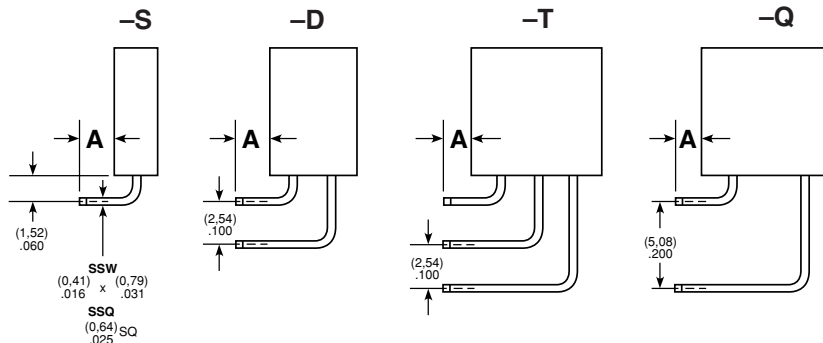
**Style -06 N/A with SSQ



Right Angle Versions (Specify “LEAD STYLE” from chart)

LEAD STYLE		SINGLE	DOUBLE	TRIPLE
Standard Insertion Force	Low Insertion Force*	(-S & -P)	(-D)	(-T & -Q)
-02	-22	(2,54) .100	(2,54) .100	(2,54) .100
-03	-23	(7,62) .300	(7,62) .300	N/A
-04	-24	(12,45) .490	N/A	N/A

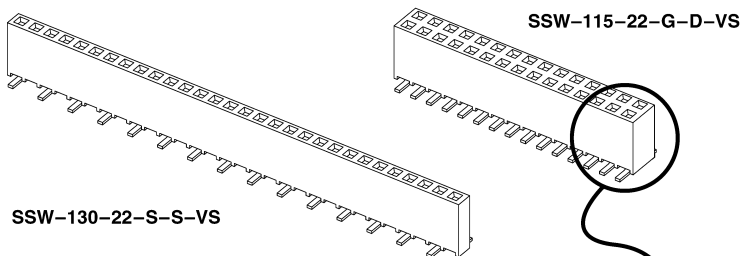
* LIF N/A with Tin Plating



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Surface
SMT
Mount

T/H
Page 194

.025"sq SMT SOCKET SSW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SSW

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Current Rating:

3A continuous

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Plating:

Au or Sn over

50μ" (1,27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(3,68mm) .145" to

(6,35mm) .250"

Insertion Force:

3oz (0,83N) avg

Withdrawal Force:

2.6oz (0,72N) avg

Max Cycles:

100 with 10μ" (0,25μm) Au

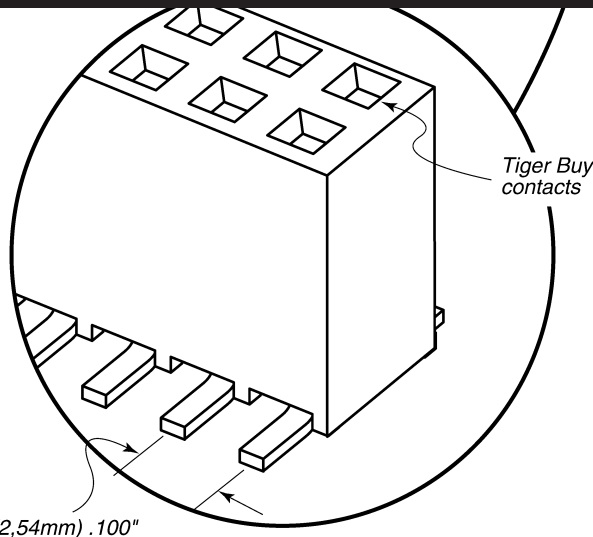
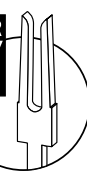
Note: Some lengths, styles and options are non-standard, non-returnable.

Mates With:

TSW, MTSW, MTLW,

EW, ZW, TSS,

ZSS, TSM, TSSH



Tiger Buy contacts

(2,54mm) .100"

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add

(0,05mm) .002" to max SMT

lead coplanarity

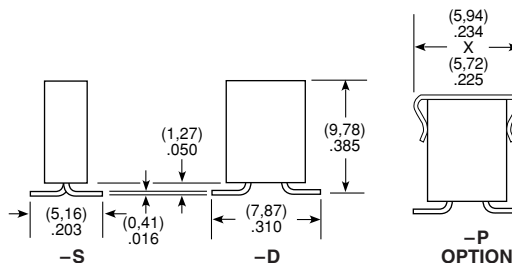
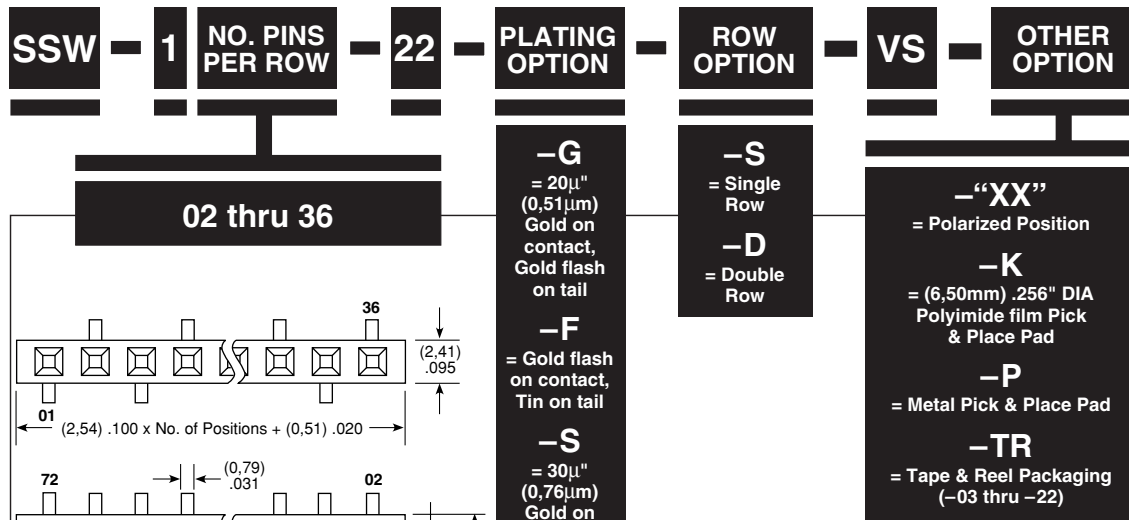
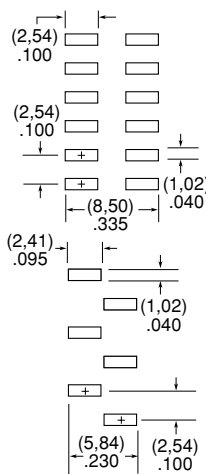
Suggested PCB Layouts:

For reference only. Please

contact Samtec or go to

www.samtec.com?SSW for

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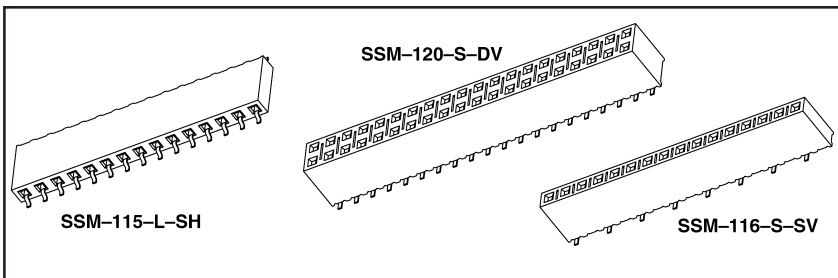
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Surface
SMT
Mount

.025"sq SMT SOCKET SSM SERIES



Mates with:

TSW, MTSW, TST,
TSS, ZST, ZSS, DW,
EW, ZW, TSM

SPECIFICATIONS

For complete specifications
see www.samtec.com?SSM
Insulator Material:

Black Liquid Crystal
Polymer



Contact Material:
Phosphor Bronze



Current Rating:
3A @ 80°C ambient (-DV/-SV
mated with TSM-DV)
4A @ 80°C ambient (-DH/-SH
mated with TSW-D)

Voltage Rating:
475 VAC (-SV/-DV mated
with TSW)
450 VAC (-SH/-DH mated
with TSM)

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Max Processing Temp:
230°C for 60 seconds
Plating: Au, PdNi or Sn over
50μ" (1,27μm) Ni

-DH Coplanarity:
Less than 28 positions
(0.15mm) .006" max
More than 27 positions
(0.20mm) .008" max

-SH, -SV, -DV Coplanarity:
(0.15mm) .006" max

Contact Resistance:
10 mΩ max

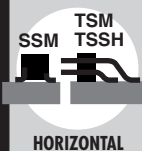
Insertion Depth:
SV/DV is (4,34mm) .171" to
(7,24mm) .285" or pass
through from top; (5,56mm)
.219" plus board thickness
minimum from bottom;
SH/DH is (4,34mm) .171" to
(6,35mm) .250"

Insertion Force:
5oz (1,39N) average

Normal Force:
125 grams (1,21N) average

Withdrawal Force:
2oz (0,56N) average

APPLICATIONS



Note: Some lengths,
styles and options are
non-standard, non-returnable.

SSM - 1

**NO. PINS
PER ROW**

**PLATING
OPTION**

**ROW
OPTION**

**OTHER
OPTION**

02 thru 36

APPLICATION SPECIFIC OPTION

Alignment Pin available.
Call Samtec.

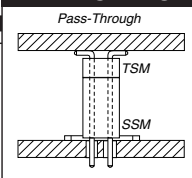
-S

= 30μ" (0,76μm) Gold
on contact,
Tin on tail

-L

= 10μ" (0,25μm) Gold
on contact,
Tin on tail

APPLICATION

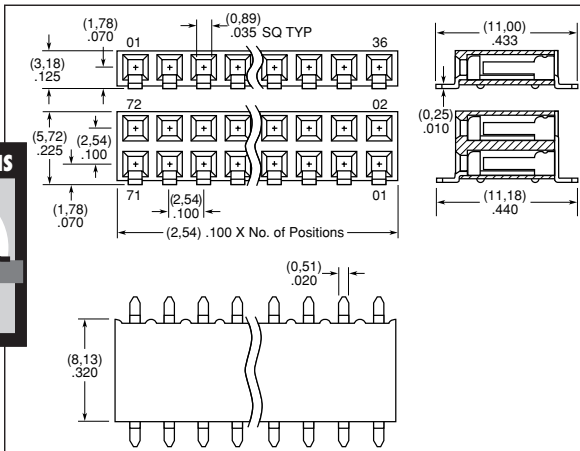
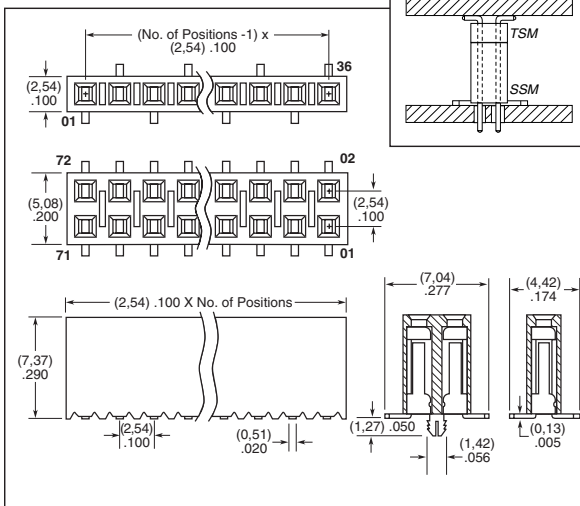


-SV
= Single
Row
Vertical
Pin

-DV
= Double
Row
Vertical
Pin

-SH
= Single
Row
Horizontal
Pin

-DH
= Double
Row
Horizontal
Pin



-BE

= Bottom Entry
(-DV & -SV only)

-“XXX”

= Polarized Position
(-BE not available)

-LC

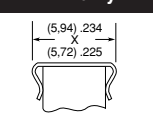
= Locking
Clip

-K

= (6,50mm) .256" DIA
Polyimide film
Pick & Place Pad
(5 positions min.)
-DV & -SV only

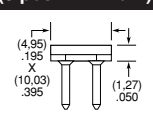
-M

= Metal Pick &
Place Pad
(5 positions min.)
-DV only



-P

= Plastic Pick &
Place Pad
(-DV & -SV only)
(5 pos. minimum)

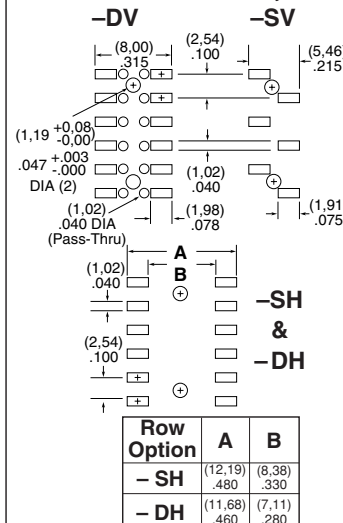


-TR

= Tape & Reel Packaging
(29 positions max.)

SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec
or go to www.samtec.com?SSM for
recommended PCB layout.



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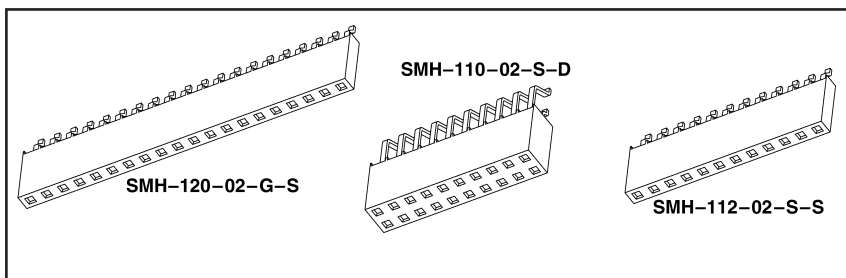
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.025^{sq} SMT SOCKET SMH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SMH

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Current Rating:

3A continuous

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Max Processing Temp:

230°C for 60 seconds

Plating:

Au or Sn over

50μ" (1,27μm) Ni

SMT Lead Coplanarity:

(0,15mm) .006" max (02-24)

(0,20mm) .008" max (25-36)

Contact Resistance:

10 mΩ max

Insertion Depth:

(3,68mm) .145" to

(6,35mm) .250"

Insertion Force:

3oz (0,83N) avg

Withdrawal Force:

2,6oz (0,72N) avg

Max Cycles:

100 with 10μ" (0,25μm) Au

Suggested Paste

Thickness:

For most applications add

(0,05mm) .002" to max SMT

lead coplanarity



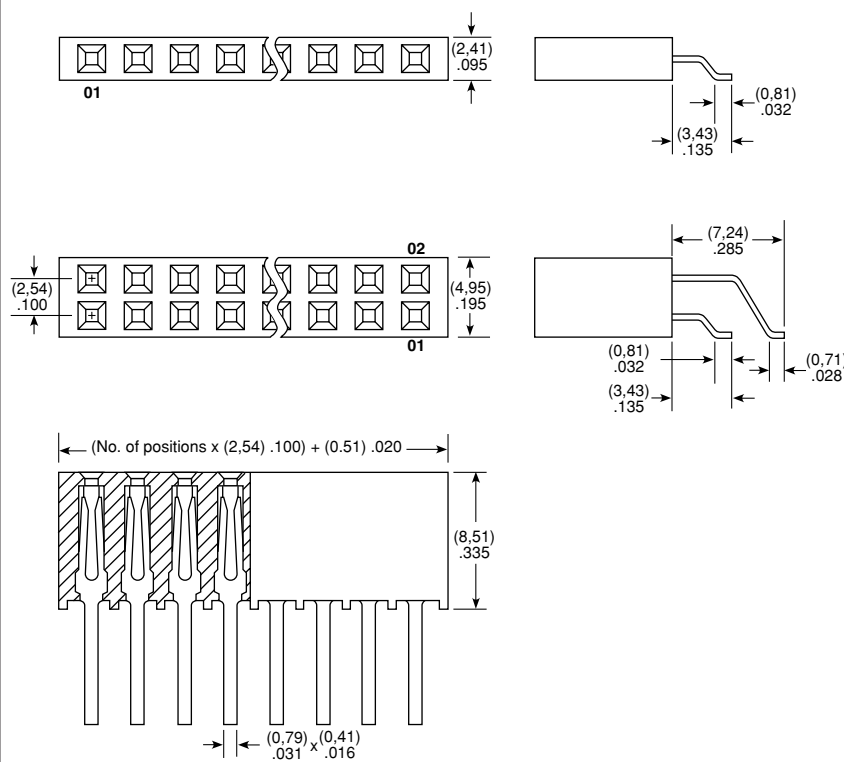
SMH	1	NO. PINS PER ROW	02	PLATING OPTION	ROW OPTION	OTHER OPTION
				-G = 20μ" (0,51μm) Gold on contact, Gold flash on tail	-S = Single Row	-“XXX” = Polarized Position
				-S = 30μ" (0,76μm) Gold on contact, Tin tail	-D = Double Row	-TR = Tape & Reel Packaging (02-29 positions only)
				-T = Tin tail		

Mates With:

TSW, MTSW, MTLW,
EW, ZW, TSS, ZSS, TSM

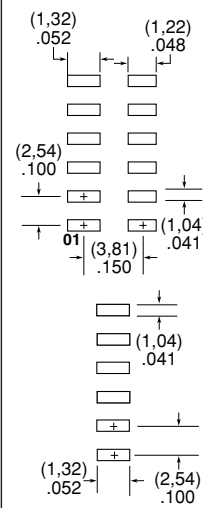


02 thru 36



SUGGESTED PCB LAYOUTS

For reference only.
Please contact
Samtec or go to
www.samtec.com?SMH
for recommended
PCB layout.



Note: Some lengths, styles and options are non-standard, non-returnable.

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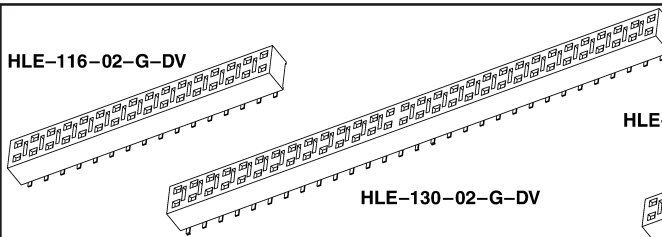
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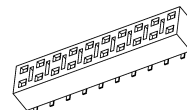
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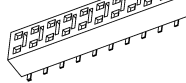
HLE-116-02-G-DV



HLE-110-02-G-DV-A



HLE-130-02-G-DV



.025"_{SQ} SOCKET HLE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HLE

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

BeCu

Current Rating:

2.5A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Au over 50μ" (1,27μm) Ni

SMT Lead Coplanarity:

(0,10mm) .004" max (02-20)

(0,15mm) .006" max (21-50)

Insertion Depth:

(1,78mm) .070" to

(3,43mm) .135", pass-

through, or (2,59mm) .102"

min for bottom entry

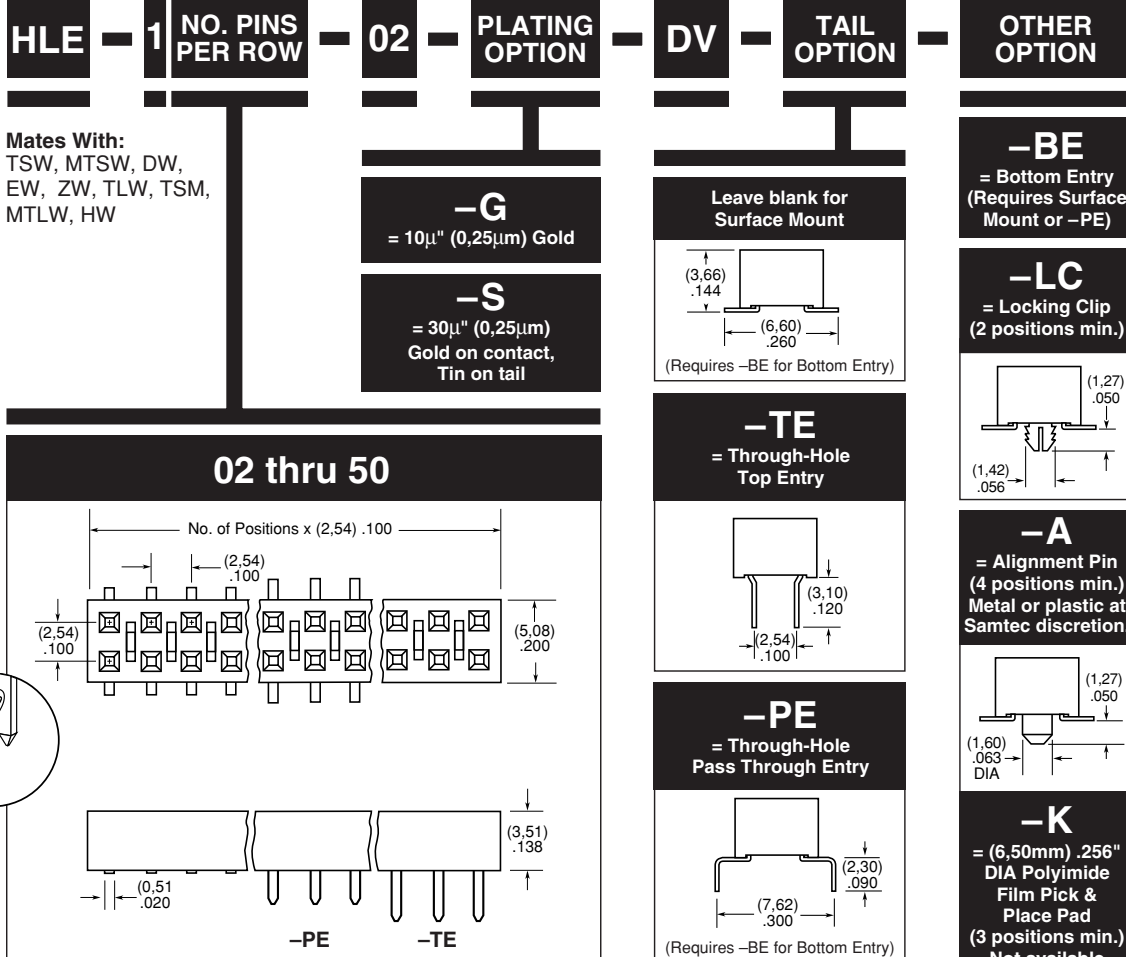
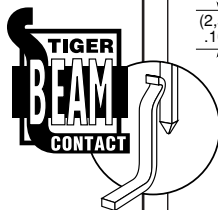
Suggested Paste

Thickness:

For most applications add

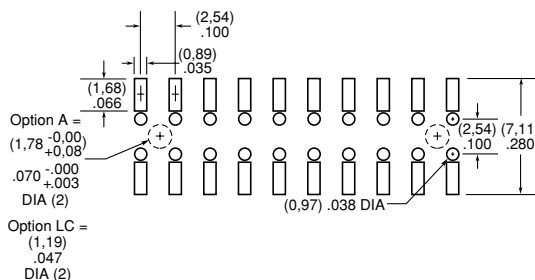
(0,05mm) .002" to max SMT

lead coplanarity



SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec or go to www.samtec.com?HLE for recommended PCB layout.



Note: Some lengths, styles and options are non-standard, non-returnable.

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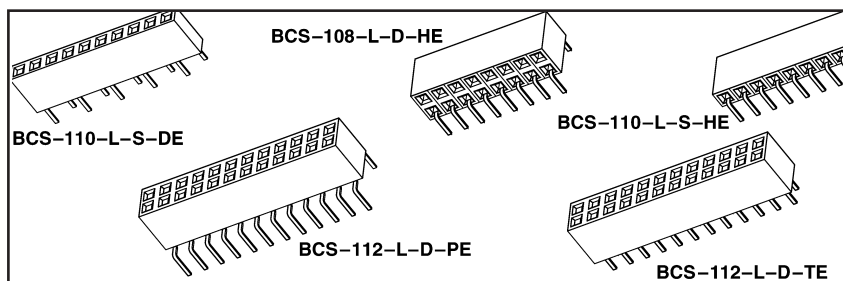
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POPULAR CONNECTORS



BOX CONNECTOR STRIPS BCS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?BCS

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

(-TE/-DE/-PE mated with TSM)

4A @ 80°C ambient

(-HE mated with TSW-D)

Voltage Rating:

475 VAC

(-TE/-DE/-PE mated with TSM)

450 VAC

(-HE mated with TSW)

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

260°C for 10 seconds and 230°C for 30 to 60 seconds

Plating:

Au, PdNi or Sn over 50µ" (1,27µm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(4,34mm) to (6,55mm)

.171" to .285" from top, (5,64mm) .222" plus board thickness minimum from bottom.

-HE is (4,34mm) .171" to (6,35mm) .250"

Insertion Force:

5oz (1,39N) avg (.025" (0,64mm) SQ pin)

Withdrawal Force:

3oz (0,83N) avg (.025" (0,64mm) SQ pin)



BCS

1

NO. PINS PER ROW

PLATING OPTION

ROW OPTION

ENTRY OPTION

OTHER OPTION

-L

= 10µ" (0,25µm)
Gold on Contact,
Tin on tail

-S

= Single

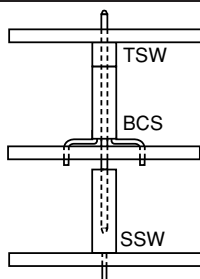
-D

= Double

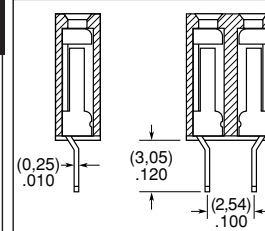
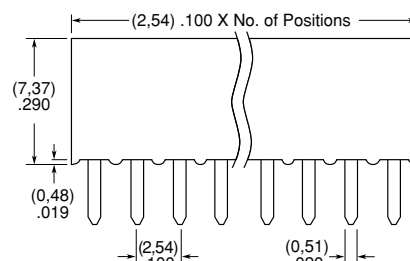
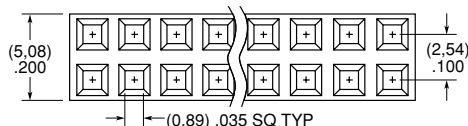
-“XX”

= Polarized
Position
(-BE not available)

APPLICATION

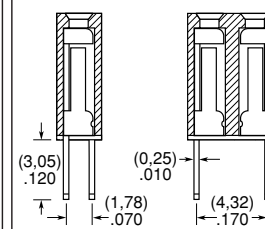


01 thru 50



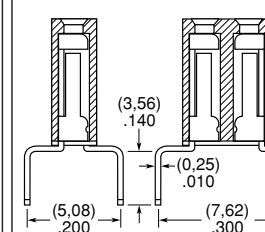
-TE

= Top Entry



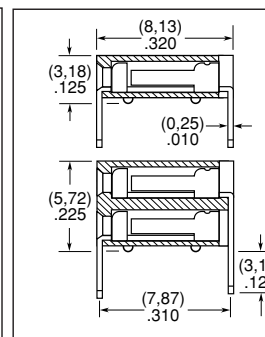
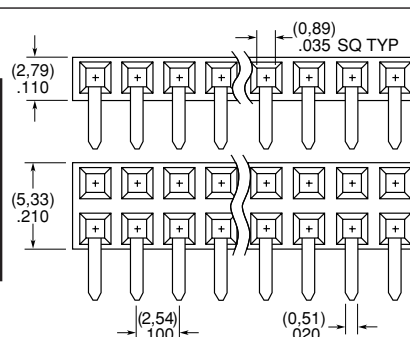
-DE

= Top Entry
(For Bottom Entry specify -DE-BE)
Cannot be used with plated through-holes



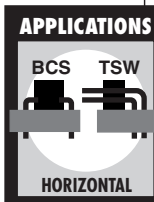
-PE

= Pass Through Entry
(For Bottom Entry specify -PE-BE)



-HE

= Horizontal Entry



Note: Some lengths, styles and options are non-standard, non-returnable.

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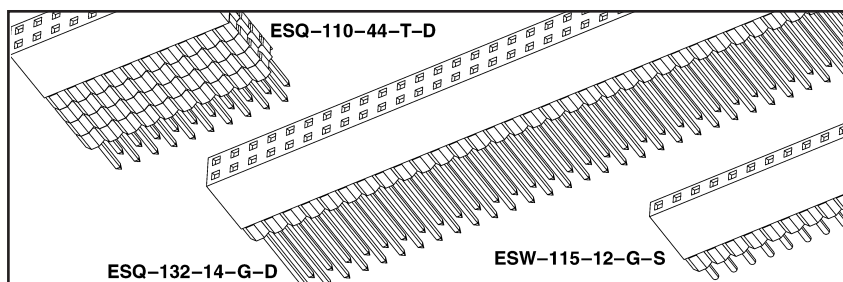
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ELEVATED SOCKETS ESW & ESQ SERIES

Mates with:
TSW, MTSW, EW,
MTLW, TSS, ZSS,
TSM, DW, ZW, HW

SPECIFICATIONS

For complete specifications
see www.samtec.com?ESW
or www.samtec.com?ESQ

Insulator Material:
Black Glass Filled
Polyester

Contact Material:
Phosphor Bronze

Current Rating:
3A continuous

Voltage Rating:
550 VAC mated with
TSW or ESQ

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Plating:

Au or Sn over
50μ" (1,27μm) Ni

Contact Resistance:
10 mΩ max

Insertion Depth:
(3,68mm) .145" to
(6,35mm) .250"

Insertion Force:
(-S plating)

Standard = 6oz (1,67N) avg
(0,64mm) .025" SQ pin);
ESW Low Insertion Force=

3oz (0,83N) avg

ESQ Low Insertion Force=

3.3oz (0,92N) avg

Normal Force:

Standard = 125 grams (4,4N)

Withdrawal Force:
(-S plating)

Standard = 5oz (1,39N) avg
(0,64mm) .025" SQ pin);

ESW Low Insertion Force=

2.6oz (0,72N) avg

ESQ Low Insertion Force=

2.9oz (0,81N) avg

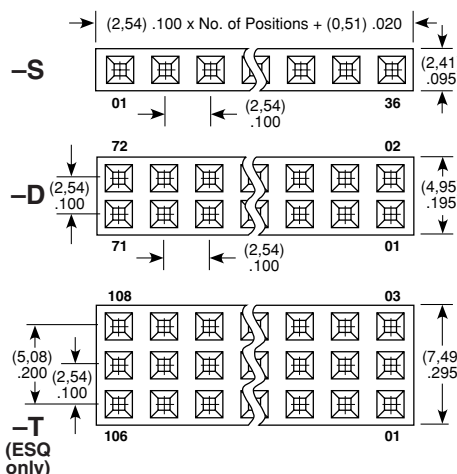
Max Cycles:

100 with 10μ" (0,25μm) Au



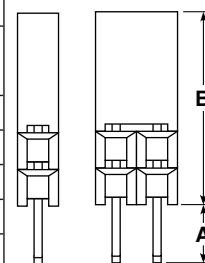
TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	OTHER OPTION
ESW = Solder Tail						
ESQ = Square Tail						
				-G = 20μ" (0,51μm) Gold Contact, Gold Flash on Balance	-S = Single Row	-LL = Locking Lead
				-T = 200μ" (5,08μm) Tin Contact and Tail (N/A w/LIF contact)	-D = Double Row	
				-S = 30μ" (0,76μm) Gold on Contact area, Tin on Tail	-T = Triple Row (ESQ only)	Two leads per strip crimped. N/A with single row 1 or 2 positions.
						-"XXX" = Polarized

01 thru 36

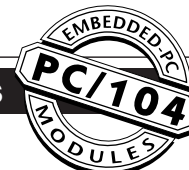


Specify LEAD STYLE from chart below.

STANDARD INSERTION FORCE	LOW INSERTION FORCE	A	B
- 12	- 37	(2,29) .090	(11,05) .435
- 13	- 38	(7,36) .290	
- 23	- 48	(4,83) .190	(13,59) .535
- 33	- 58	(2,29) .090	(16,13) .635
- 14	- 39	(12,19) .480	(11,05) .435
- 24	- 49	(9,65) .380	(13,59) .535
- 34	- 59	(7,11) .280	(16,13) .635
- 44	- 69	(4,57) .180	(18,67) .735



APPLICATIONS



PC/104 J1/P1 "Stackthrough" Connectors	
Standard Insertion Force	ESQ-132-14-G-D
Low Insertion Force	ESQ-132-39-G-D
PC/104 J1 "Non-Stackthrough" Connectors	
Standard Insertion Force	ESQ-132-12-G-D
Low Insertion Force	ESQ-132-37-G-D
PC/104 J2/P2 "Stackthrough" Connectors	
Standard Insertion Force	ESQ-120-14-G-D
Low Insertion Force	ESQ-120-39-G-D

PC/104 is a trademark of the PC/104 Consortium.

Note: Some lengths,
styles and options are
non-standard, non-returnable.

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SLW-120-01-T-S

CES-115-01-T-S

SLW-110-01-T-D

CES-125-01-T-D



LOW PROFILE STRIPS

SLW, CES
SERIES

Mates with:
TLW, TSW, MTLW,
MTSW, EW, ZW

SPECIFICATIONS

For complete specifications
see www.samtec.com?SLW

Insulator Material:
Black Glass Filled
Polyester



Contact Material:
Phosphor Bronze

Current Rating: 1 A

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Plating:

Au or Sn over

50μ" (1,27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(2,16mm) .085" to
(2,92mm) .115"

Insertion Force:

(3,34N) 12oz avg

(0,64mm) .025" SQ pin

Withdrawal Force:

(1,67N) 6 oz avg

(0,64mm) .025" SQ pin

Note: Some lengths,
styles and options are
non-standard, non-returnable.

SLW

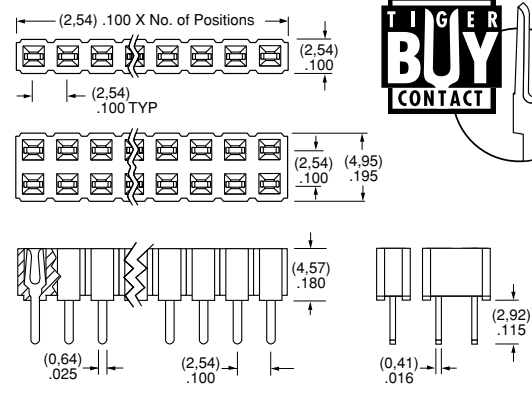
1

NO. PINS
PER ROW

01

PLATING
OPTIONROW
OPTION

01 thru 50



-S

= 30μ" (0,76μm) Gold Contact,
Tin tail

-G

= 20μ" (0,51μm) Gold contact,
Gold flash on balance

-T

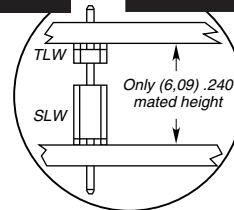
= Tin

-S

= Single
Row

-D

= Double
Row



Mates with:
TLW, TSW, MTLW,
MTSW, EW, ZW, DW

SPECIFICATIONS

For complete specifications
see www.samtec.com?CES

Insulator Material:
Black Glass Filled
Polyester



Contact Material:
Phosphor Bronze

Current Rating:

1 A

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Plating: Au or Sn over
50μ" (1,27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(2,62mm) .103" to

(4,06mm) .160"

Insertion Force:

(2,22N) 8 oz avg (0,64mm)

.025" SQ pin

Withdrawal Force:

(1,11N) 4 oz avg

(0,64mm) .025" SQ pin

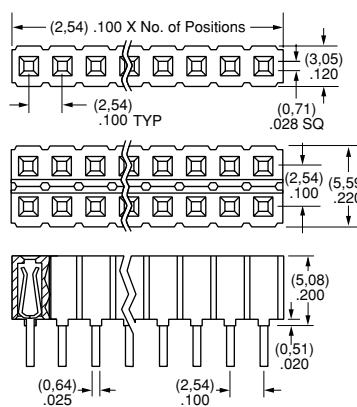
Note: Some lengths,
styles and options are
non-standard, non-returnable.

CES

1

NO. PINS
PER ROWLEAD
STYLEPLATING
OPTIONROW
OPTIONRA
OPTION

01 thru 50

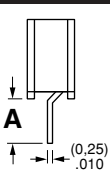


-01

= (3,05) .120
"A" Dim.

-02

= (5,46) .215
"A" Dim.



-S

= 30μ" (0,76μm) Gold contact,
Tin tail

-G

= 20μ" (0,51μm) Gold contact,
Gold flash on balance

-T

= Tin

-S

= Single
Row

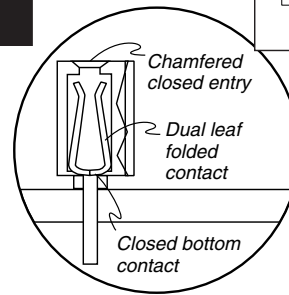
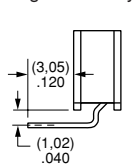
-D

= Double
Row

-RA

= Right Angle
version

Style -02 only
Single Row only



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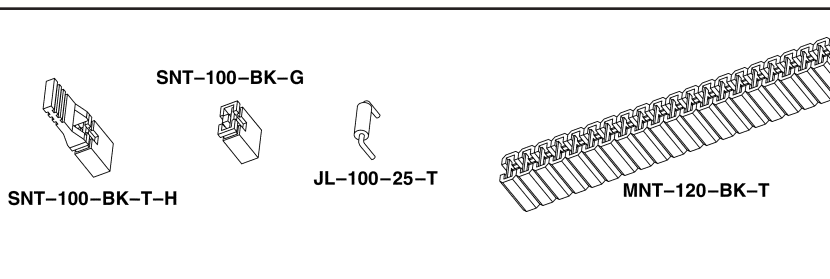
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SHUNTS & JUMPERS SNT, MNT, JL, PK, SNM & 2SN SERIES

SPECIFICATIONS

SNT

For complete specifications see www.samtec.com?SNT

Insulator Material:

Glass Filled Polyester

Contact Material:

Phosphor Bronze

Current Rating:

2.5A

Operating Temp Range:

-40°C to +90°C

Contact Resistance:

5 mΩ max

Insertion Depth:

(4,32mm) .170" min.

Insertion Force:

33oz (9,17N) average

Withdrawal Force:

27oz (7,51N) average

MNT

For complete specifications see www.samtec.com?MNT

Same as SNT except

not UL rated

Current Rating:

2A @ 80°C ambient

Working Voltage:

675 VAC

SNT/MNT mates with:

TSW, MTSW, TLW, DW,

EW, ZW, HW, TSM

2SN

For complete specifications see www.samtec.com?2SN

Same as SNT

2SN mates with:

TMMH, TMM, MTMM,

MMT, TW, LTMM,

ZLTM, TMSH,

TSH, EHT

SNM

For complete specifications see www.samtec.com?SNM

Same as SNT except:

Contact Resistance: 10 mΩ max

Lead Size accepted:

(0,46mm) .018" SQ

Insertion Depth:

(3,43mm) .135" minimum

SNM mates with:

TMS, MTMS, DWM

JL

For complete specifications see www.samtec.com?JL

Insulator Material:

White Teflon per

MIL-T-16878 Type E

Insulation Resistance:

>10⁸ ohm-cm

Terminal Material:

Tinned 22 ga Copper

Current Rating:

1.6 amp @ 60°C

Plating:

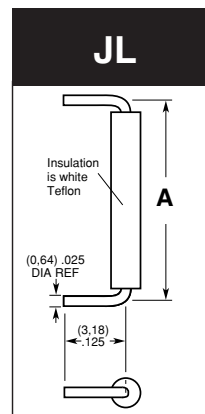
Ag per MIL-QQW-343

SNT	100	BODY COLOR	PLATING OPTION	HANDLE OPTION
		-BK = Black	-G = 10μ" (0,25μm) Gold	-H = Handle (Black Only)
		-OR = Orange	-H = 30μ" (0,76μm) Gold on Contact, Gold Flash on Balance	
		-RD = Red	-T = Tin	
		-BL = Blue		
		-YW = Yellow		

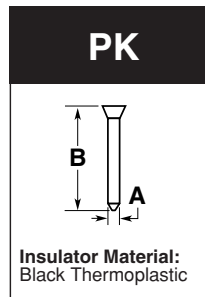
MNT	1	NO. OF POSITIONS	BODY COLOR	PLATING OPTION
		02 thru 20	-BK = Black	-G = 10μ" (0,25μm) Gold
			-T = Tin	

Note:
Some lengths, styles and options are non-standard, non-returnable.

2SN	SNM										
<table border="1"> <thead> <tr> <th>Part No.</th><th>Plating</th></tr> </thead> <tbody> <tr> <td>2SN-BK-G</td><td>10μ" (0,25μm) Gold</td></tr> </tbody> </table>	Part No.	Plating	2SN-BK-G	10μ" (0,25μm) Gold	<table border="1"> <thead> <tr> <th>Part No.</th><th>Plating</th></tr> </thead> <tbody> <tr> <td>SNM-100-BK-T</td><td>Tin</td></tr> <tr> <td>SNM-100-BK-G</td><td>10μ" (0,25μm) Gold</td></tr> </tbody> </table>	Part No.	Plating	SNM-100-BK-T	Tin	SNM-100-BK-G	10μ" (0,25μm) Gold
Part No.	Plating										
2SN-BK-G	10μ" (0,25μm) Gold										
Part No.	Plating										
SNM-100-BK-T	Tin										
SNM-100-BK-G	10μ" (0,25μm) Gold										



Part No.	A
JL-100-25-T	(2,54) .100
JL-250-25-T	(6,35) .250
JL-300-25-T	(7,62) .300
JL-400-25-T	(10,16) .400
JL-500-25-T	(12,70) .500
JL-600-25-T	(15,24) .600
JL-1000-25-T	(25,40) 1.000



Insulator Material:
Black Thermoplastic

Part No.	A	B
PK-01-06	(0,64) .025 SQ	(5,84) .230
PK-01-07	(0,51) .020 SQ	(3,18) .125

-06 polarizes:
SSW, SSQ, ESW, ESQ, IDSS, IDSD
-07 polarizes:
SSM, TCSD

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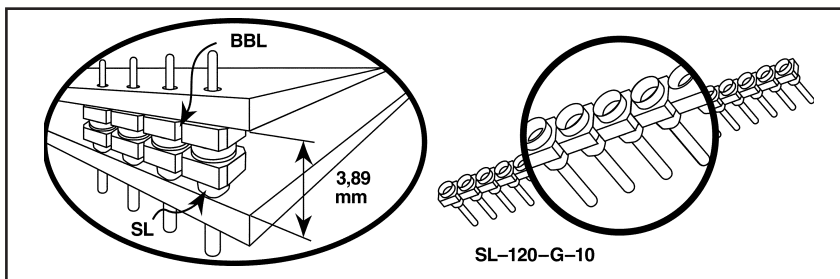
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POPULAR CONNECTORS



SL-120-G-10

LOW PROFILE SOCKET STRIPS SL & SDL SERIES

FEATURES

- Achieve low profile without sacrificing insertion depth!
- Choice of four precision screw machined lead styles
- Exceptionally low profile, down to (2,11mm) .083" off of board
- Mates with BBL or BDL for board stacking spaces down to (3,89mm) .153"

SPECIFICATIONS

For complete specifications see www.samtec.com?SL or www.samtec.com?SDL

Insulator Material: Black Glass Filled Polyester

Operating Temp Range: -65°C to +125°C with Gold
-65°C to +105°C with Tin

Contact/Shell Materials: BeCu/Brass

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: 1A

Contact Resistance: 10 mΩ max

Insertion Force: Standard = 9 oz (2,50N) avg, 16oz (4,45N) max

((0,43mm) .017" DIA probe)

Low Insertion Force = 2.5oz (0,70N) avg, 5.5oz (1,53N) max

((0,43mm) .017" DIA probe except Style 30 (0,46mm) .018" DIA probe)

Withdrawal Force:

Standard = 2.5oz (0,70N) avg, 1.5oz (0,42N) min

((0,43mm) .017" DIA probe except Style 30 is 2.0oz (0,56N) avg, .35oz (0,10N) min (0,46mm) .018" DIA probe)

Low Insertion Force = 2.0oz (0,56N) avg, 0.5oz min ((0,43mm) .017" DIA probe except Style 30 is 2.0oz (0,56N) avg, .35oz (0,10N) min (0,46mm) .018" DIA probe)

Note: Some lengths, styles and options are non-standard, non-returnable.

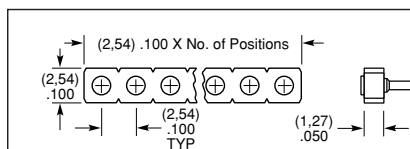
Mates with:
TS, TD, HTS, BBS, BBD,
BBL, BDL, BHS

SL

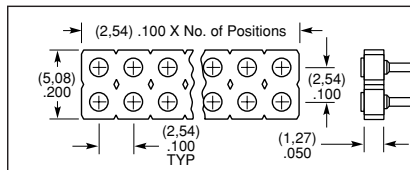
= Single Row Low Profile Socket Strip

SDL

= Double Row Low Profile Socket Strip



01
thru
32

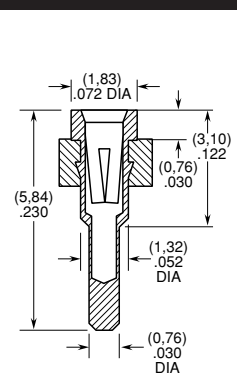


01
thru
36

Low Insertion Force (LIF) Available

-10

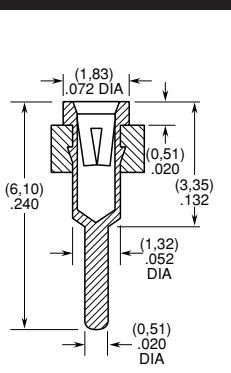
Low Profile
(Hollow Leg)
For LIF specify -30



Contact Length = (2,11mm) .083"
Lead DIA Accepted = (0,38mm) .015" to (0,51mm) .020"
Insertion Depth = (2,67mm) .105" to (4,32mm) .170"
Style 10 Component Part No. = SC-3P1
Style 30 Component Part No. = EZ-3P1

-11

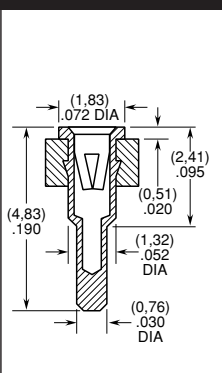
Low Profile
(Standard Mount)
For LIF specify -31



Contact Length = (1,58mm) .062"
Lead DIA Accepted = (0,41mm) .016" to (0,53mm) .021"
Insertion Depth = (2,03mm) .080" to (2,67mm) .105"
Style 11 Component Part No. = SC-4P1
Style 31 Component Part No. = EZ-4P1

-12

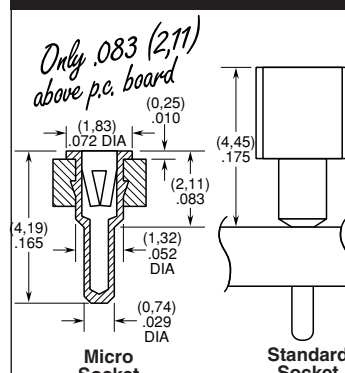
Micro-Socket
(Hollow Leg)
For LIF specify -32



Contact Length = (1,58mm) .062"
Lead DIA Accepted = (0,41mm) .016" to (0,51mm) .020"
Insertion Depth = (1,65mm) .065" to (3,81mm) .150"
Style 12 Component Part No. = SC-5P1
Style 32 Component Part No. = EZ-5P1

-19

Micro-Socket
(Hollow Leg)
For LIF specify -39



Contact Length = (1,58mm) .062"
Lead DIA Accepted = (0,41mm) .016" to (0,51mm) .020"
Insertion Depth = (1,65mm) .065" to (3,56mm) .140"
Style 19 Component Part No. = SC-8P1
Style 39 Component Part No. = EZ-8P1

Standard Socket
(Reference only. Not available with SL & SDL)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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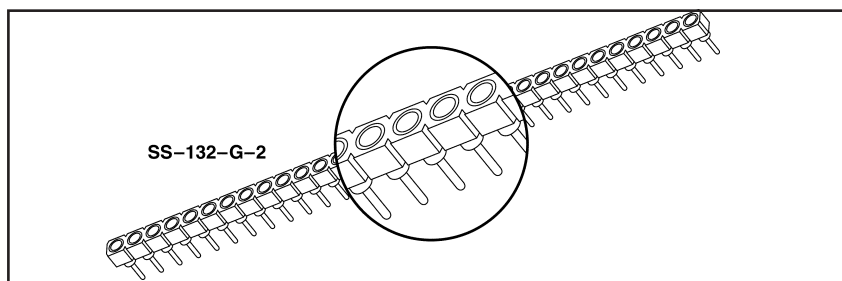
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SOCKET STRIPS SS, SD & HSS SERIES

Mates with:
TS, TD, HTS, BBS,
BBD, BBL, BDL, BHS,

SPECIFICATIONS

For complete specifications
see www.samtec.com?SS or
www.samtec.com?SD

SS, SD



Insulator Material:

Black Glass Filled

Polyester

Operating Temp Range:

-65°C to +125°C

Contact:

BeCu

Shell:

Brass except Styles 5A

Phosphor Bronze

Current Rating:

1A

Plating:

Au over 50µ" (1,27µm) Ni or

Sn over 50µ" (1,27µm) Ni

Contact Resistance:

10 mΩ max

Lead Size Range:

(0,38mm to 0,56mm) .015" to

.022" DIA and most IC leads

Insertion Force:

Standard=

9oz (2,50N) avg,

16oz (4,45N) max

Low Insertion Force=

2.5oz (0,70N) avg,

5.5oz (1,53N) max

Withdrawal Force:

Standard=

2.5oz (0,70N) avg,

1.5oz (0,42N) min

Low Insertion Force=

2.0oz (0,56N) avg,

0.35oz (0,10N) min

SPECIFICATIONS

For complete specifications
see www.samtec.com?HSS

HSS



Same as SS

except:

Insulator Material:

Black Liquid Crystal Polymer

Max Processing Temp:

230°C for 30 to 60 sec.

ALSO AVAILABLE

Other lead styles
available. Request
FactSheet.

Note:
Some lengths,
styles and options are
non-standard, non-returnable.

TYPE STRIP	1	NO. PINS PER ROW	PLATING OPTION	LEAD STYLE	OPTION	OTHER OPTION																			
		01 thru 32 = SS Series																							
		01 thru 36 = HSS & SD Series																							
			-G = 30µ" (0,76µm) Gold contact 10µ" (0,25µm) Gold shell																						
			-T = 30µ" (0,76µm) Gold contact, Tin shell																						
			-S = 10µ" (0,25µm) Gold contact, Tin shell (Styles 2 & 22 only)																						
			-TT = Tin contact and shell (Styles 1, 2, 18 and 21 only)																						
					-L = Locking Socket Add -L suffix for locking lead socket in end positions. Requires Style -2 or -22 and .035" ± .003 DIA board hole. Requires -T Plating Option	-N = Non Flush N/A Style -5A																			
				-1A, -1B or -1C For LIF specify -21A, -21B or -21C																					
				<table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>-1A or -21A</td> <td>(9,14) .360</td> </tr> <tr> <td>-1B or -21B</td> <td>(12,95) .510</td> </tr> <tr> <td>-1C or -21C</td> <td>(6,60) .260</td> </tr> </tbody> </table> Insertion Depth = .125" to .157" (3,18mm to 3,99mm) Style 1A Component Part No. = SC-1W1(2) Style 21A Component Part No. = EZ-1W1(2) Style 1B Component Part No. = SC-1W1(1) Style 21B Component Part No. = EZ-1W1(1) Style 1C Component Part No. = SC-1W1(3) Style 21C Component Part No. = EZ-1W1(3)	LEAD STYLE	Y	-1A or -21A	(9,14) .360	-1B or -21B	(12,95) .510	-1C or -21C	(6,60) .260													
LEAD STYLE	Y																								
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				-2, -22*, -5A, -7 or -38* *For LIF specify -22 or -38																					
				<table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>X DIA</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>-2 OR -22</td> <td>(0,51) .020</td> <td>(3,18) .125</td> <td>(7,62) .300</td> </tr> <tr> <td>-38</td> <td>(0,51) .020</td> <td>(4,57) .180</td> <td>(8,89) .350</td> </tr> <tr> <td>-7</td> <td>(0,64) .025</td> <td>(10,41) .410</td> <td>(15,24) .600</td> </tr> <tr> <td>-5A</td> <td>(0,89) .035</td> <td>(12,95) .510</td> <td>(17,86) .703</td> </tr> </tbody> </table> Locking lead available. See OPTION. Insertion Depth = .095" to .145" (2,41mm to 3,68mm) Style 2 Component Part No. = SC-1P1 Style 22 Component Part No. = EZ-1P1 Style 18 Component Part No. = SC-6P1 Style 38 Component Part No. = EZ-6P1 Option L Component Part No. = SC-1L1 or EZ-1L1 Insertion Depth = .095" to .138" (2,41mm to 3,51mm) Style 7 Component Part No. = SC-1P3 Insertion Depth = .125" to .157" (3,18mm to 3,99mm) Style 5A Component Part No. = SC-2P1	LEAD STYLE	X DIA	Y	Z	-2 OR -22	(0,51) .020	(3,18) .125	(7,62) .300	-38	(0,51) .020	(4,57) .180	(8,89) .350	-7	(0,64) .025	(10,41) .410	(15,24) .600	-5A	(0,89) .035	(12,95) .510	(17,86) .703	
LEAD STYLE	X DIA	Y	Z																						
-2 OR -22	(0,51) .020	(3,18) .125	(7,62) .300																						
-38	(0,51) .020	(4,57) .180	(8,89) .350																						
-7	(0,64) .025	(10,41) .410	(15,24) .600																						
-5A	(0,89) .035	(12,95) .510	(17,86) .703																						

Due to technical progress, all designs, specifications and components are subject to change without notice.

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ESS-120-T-05

ESS-118-G-28

ESD-115-G-03

ELEVATED SOCKET STRIPS

ESS, ESD SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?ESS or www.samtec.com?ESD

Insulator Material:

Black Glass Filled Polyester



Flammability Rating:

UL 94V-0

Insulation Resistance:

5000 MΩ min

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Dielectric With Standing Voltage:

1000 VRMS

Contact:

BeCu

Shell:

Brass

Plating:

Au or Sn over 50μ" (1.27μm) Ni

Current Rating:

1A

Contact Resistance:

10 mΩ max

Lead Size Range:

(0.38mm to 0.56mm) .015" to .022" DIA and most IC leads

Insertion Force:

Standard= 9oz (2.50N) avg,

16oz (4.45N) max

Low Insertion Force= 2.5oz (0.70N) avg, 5.5 oz (1.53N) max

Withdrawal Force:

Standard= 2.5oz (0.70N)

avg, 1.5oz (0.42N) min

Low Insertion Force= 2.0oz (0.56N) avg, 0.35oz (0.10N) max

Insertion Depth:

(3.18mm to 3.99mm)

.125" to .157"

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:

TS, TD, HTS, BBS,

BBD, BBL, BDL,

BHS, LBS

TYPE STRIP

1

NO. PINS PER ROW

PLATING OPTION

LEAD STYLE

ESS = Elevated Single Strip

ESD = Elevated Double Strip

-G

= 30μ" (0.76μm) Gold contact,
10μ" (0.25μm) Gold shell

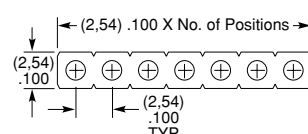
-T

= 30μ" (0.76μm) Gold contact,
Tin shell

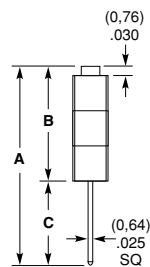
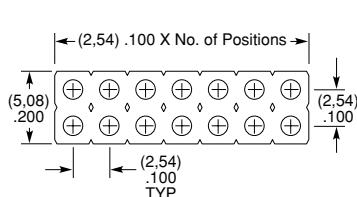
-TT

= Tin contact and shell
(LIF not available)

01 thru 32



01 thru 36



LEAD STYLE	A	B	C
03 or 23	(11,51) .453	(8,38) .330	(3,12) .123
04 or 24	(14,05) .553	(10,92) .430	(3,12) .123
05 or 25	(17,86) .703	(13,46) .530	(4,39) .173
06 or 26	(14,05) .553	(8,38) .330	(5,66) .223
07 or 27	(17,86) .703	(10,92) .430	(6,93) .273
08 or 28	(17,86) .703	(8,38) .330	(9,47) .373

LIF= Low Insertion Force

-03

For LIF specify -23

-04

For LIF specify -24

-05

For LIF specify -25

-06

For LIF specify -26

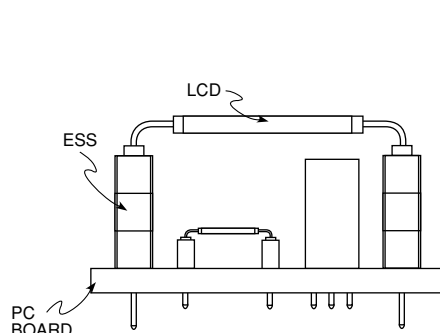
-07

For LIF specify -27

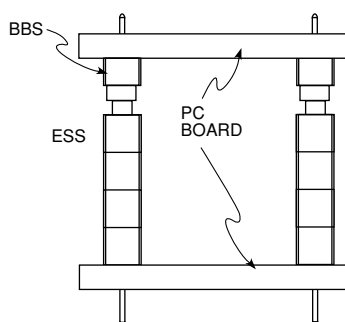
-08

For LIF specify -28

APPLICATIONS



Elevated Components



Board Stacking

Board Space		Terminal	Socket
Inch	Millimeter		
0.400	(10.16)	BXL-1XX-X-E	ESX-1XX-X-03
0.415	(10.54)	BXL-1XX-X-F	ESX-1XX-X-03
0.500	(12.70)	BXL-1XX-X-E	ESX-1XX-X-04
0.515	(13.08)	BXL-1XX-X-F	ESX-1XX-X-04
0.540	(13.72)	BBX-1XX-X-A	ESX-1XX-X-03
0.600	(15.24)	BXL-1XX-X-E	ESX-1XX-X-05
0.615	(15.62)	BXL-1XX-X-F	ESX-1XX-X-05
0.640	(16.26)	BBX-1XX-X-A	ESX-1XX-X-04
0.665	(16.89)	BBX-1XX-X-B	ESX-1XX-X-03
0.740	(18.80)	BBX-1XX-X-A	ESX-1XX-X-05
0.765	(19.43)	BBX-1XX-X-B	ESX-1XX-X-04
0.865	(21.97)	BBX-1XX-X-B	ESX-1XX-X-05
0.915	(23.24)	BBX-1XX-X-C	ESX-1XX-X-03
1.015	(25.78)	BBX-1XX-X-C	ESX-1XX-X-04
1.115	(28.32)	BBX-1XX-X-C	ESX-1XX-X-05
1.165	(29.59)	BBX-1XX-X-D	ESX-1XX-X-03
1.265	(32.13)	BBX-1XX-X-D	ESX-1XX-X-04
1.365	(34.67)	BBX-1XX-X-D	ESX-1XX-X-05

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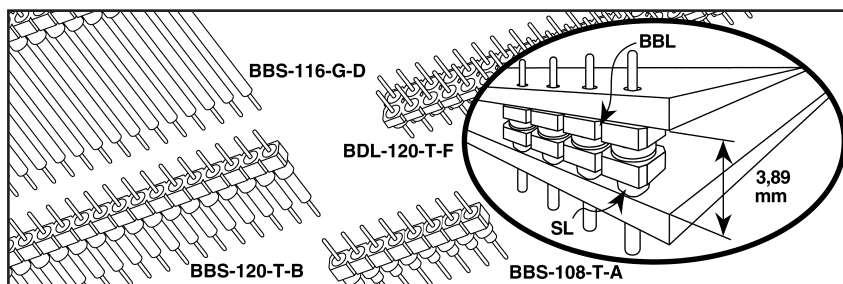
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INTERCONNECT STRIPS

BBS, BBL, BHS, BBD & BDL SERIES

Mates with:
SS, SD, HSS, SL, SDL,
ESS, ESD

FEATURES

- Low profile design achieves (3,89mm) .153" board spacings when mated with SL series
- Choice of precision machined (BXX Series) or coined (LBS Series) terminals
- Approach the reliability of a permanent connection with the flexibility of a separable connection

SPECIFICATIONS

For complete specifications see www.samtec.com?BBS,
www.samtec.com?BBD,
www.samtec.com?BBL or
www.samtec.com?BDL

BBS, BBD, BBL, BDL



Insulator Material:
Black Glass Filled Polyester
Temperature Range:
-65°C to +125°C
Terminal Material:
Phosphor Bronze or Brass
Plating:
Au or Sn over
50μ" (1,27μm) Ni
Current Rating:
1A

SPECIFICATIONS

For complete specifications see www.samtec.com?BHS

BHS

Same as BBS except:

Insulator Material:
Black Liquid Crystal Polymer
Max Processing Temp:
230°C for 30 to 60 seconds



Note:
Some lengths, styles and options are non-standard, non-returnable.

TYPE STRIP	1	NO. PINS PER ROW	PLATING OPTION	LEAD STYLE
BBS = Standard Single Row BBL = Low Profile Single Row BHS = High Temp Single Row BBD = Standard Double Row BDL = Low Profile Double Row	(2,54) .100 x No. of Positions (2,54) .100 TYP (1,27) .050 BBS BHS BBL BBD BDL BBL body available with Styles -E & -F only. BDL body available with Styles -E & -F only.	-G =20μ" (0,51μm) Gold -T =Tin	01 thru 32 = BBS & BBL 01 thru 36 = BBD, BDL & BHS	-A Z= (5,33) .210 -B Z= (8,51) .335 -C Z= (14,86) .585 -D Z= (21,21) .835 -G Z= (14,86) .585 -H Z= (21,21) .835 -E Z= (1,78) .070 -F Z= (2,16) .085
BBS and BHS Series BBD Series			BBS and BHS Series BBD Series	BBL Series BDL Series

Due to technical progress, all designs, specifications and components are subject to change without notice.

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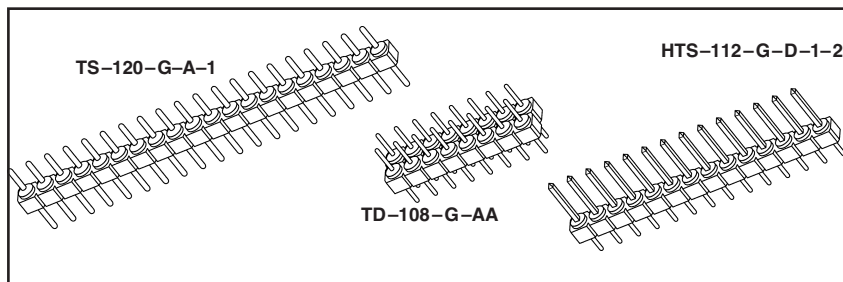
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TERMINAL STRIPS TS, TD & HTS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TS or www.samtec.com?TD

TS, TD

Insulator Material: Black Glass Filled Polyester
Terminal Material: Brass, except Style G is Phosphor Bronze
Operating Temp Range: -65°C to +125°C with Gold
 -65°C to +105°C with Tin
Dielectric Withstanding Voltage: 1000 VRMS
Plating: Au over 50μ" (1,27μm) Ni or Sn over 100μ" (2,54μm) Cu or 50μ" (1,27μm) Ni
Current Rating: 1A



SPECIFICATIONS

For complete specifications see www.samtec.com?HTS

HTS

Same as TS except:
Insulator Material: Black Liquid Crystal Polymer
Max Processing Temp: 230°C for 30 to 60 sec.



Mates with: SS, SD, HSS, SL, SDL, ESS, ESD

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE STRIP

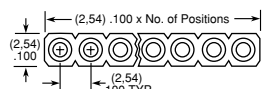
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NO. PINS PER ROW

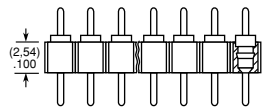
PLATING OPTION

LEAD STYLE

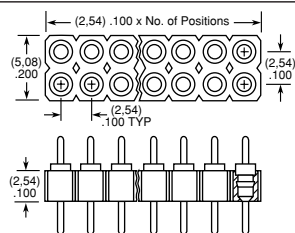
TS
= Single Row Terminal Strip



HTS
= Single Row High Temp Terminal Strip



TD
= Double Row Terminal Strip



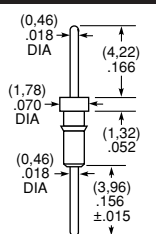
-G 20 μ" (0,51μm) Gold
Except -J & -L are 10μ" (0,25μm) Gold

-T = Tin

01 thru 32
= TS Series

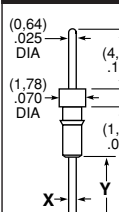
01 thru 36
= HTS & TD Series

-AA



Component No. = T-1R5-

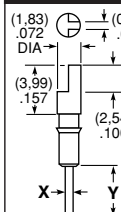
-A, -A-1, -A-2



-A Component No. = T-1R0-
-A-X Component No. = T-1R7

LEAD STYLE	X (DIA)	Y (±.015)
-A	(0,46) .018	(3,96) .156
-A-1	(0,64) .025	(5,33) .210
-A-2	(0,89) .035	(5,33) .210

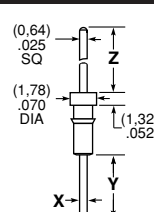
-C, -C-1, -C-2



-C Component No. = T-1R2-
-C-X Component No. = T-1R9-

LEAD STYLE	X (DIA)	Y (±.015)
-C	(0,46) .018	(3,96) .156
-C-1	(0,64) .025	(5,33) .210
-C-2	(0,89) .035	(5,33) .210

-D-1-1, -D-1-2, -D-2-2, -D-3-2, -D-4-2

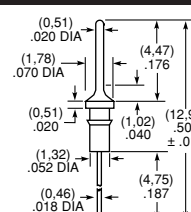


Component No. = T-1S4-

LEAD STYLE	X (DIA)	Y (±.015)	Z (±.015)
-D-1-1	(0,46) .018	(3,96) .156	(12,95) .510
-D-1-2	(0,46) .018	(3,96) .156	(12,95) .510
-D-2-2*	(0,64) .025	(5,33) .210	(7,87) .310
-D-3-2*	(0,89) .035	(5,33) .210	(7,87) .310
-D-4-2*	(1,14) .045	(5,33) .210	(7,87) .310

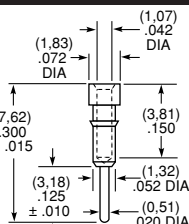
*-D-2-2, -D-3-2, -D-4-2
N/A with TD Series

-G-1



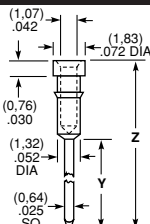
Component No. = T-1R5-

-J



Component No. = S-1P1-

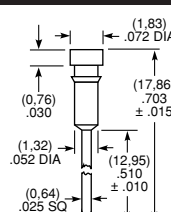
-L-1, -L-2, -L-3



Component No. = S-1W1

LEAD STYLE	Y (DIA)	Z (±.015)
-L-1	(12,95) .510	(17,86) .703
-L-2	(9,14) .360	(14,05) .553
-L-3	(6,60) .260	(11,51) .453

-M



Component No. = T-1S2-

Due to technical progress, all designs, specifications and components are subject to change without notice.

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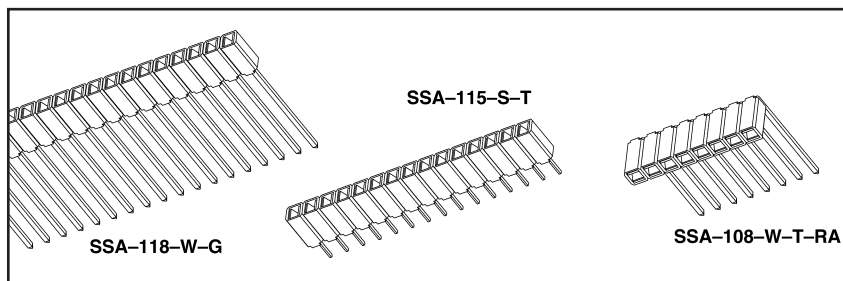
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LOW COST SOCKET STRIPS SSA SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SSA

Insulator Material:

Black PET Polyester

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩmin

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Heat Deflection Temp:

215°C @ 264 psi (1.8 MPa)

Dielectric Withstanding Voltage:

1000 VRMS

Contact Material:

Phosphor Bronze

Plating:

Au or Sn over 50μ" (1.27μm) Ni

Current Rating:

1A

Contact Resistance:

10 mΩ

Lead Size Range:

(0.38mm) .015" to (0.56mm) .022" DIA and most IC leads

Insertion Depth:

(1.27mm) .050" to (3.30mm) .130"

Insertion Force:

10 oz (2.78N) average

Withdrawal Force:

5 oz (1.39N) average

SSA

1

NO. OF POSITIONS

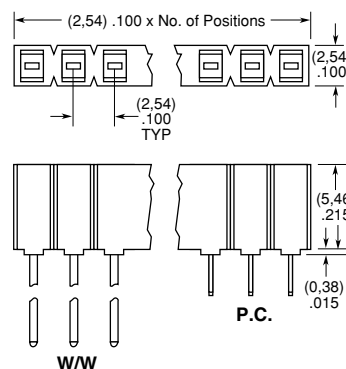
LEAD STYLE

PLATING OPTION

RA OPTION

Mates with:
TS, HTS, BBS,
BBL, BHS, LBS

01 thru 32



-S
= P.C.

(0.25)
.010
x
(0.56)
.022

(3.84)
.151

-W
= Wire Wrap

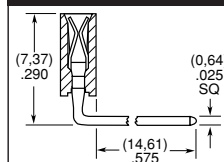
(0.64)
.025
SQ

(16.89)
.655

-G
= 10μ" (0.25μm)
Gold

-T
= Tin

-RA
= Right Angle



(Requires -W Lead Style)

High reliability
double side-wipe
contacts.

Snap-Strip
feature.

UL Rated 94 V-O
High Temp PET
Polyester Body.

Selectively plated
for lower contact
resistance.

Standoffs allow for
easy board cleaning.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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MICRO-RUGGED™ / POWER

Align & Latch

- Combination Socket/Terminal
- Tiger Eye Socket System
- High Speed Systems
- IDC & Discrete Wire Cable

ALIGN
&
LATCH

Rugged Power

- PowerMate™
- MiniMate™
- Discrete Wire
- Align & Latch

mini
MATE™

POWER
MATE™

MICRO
RUGGED™

One-Piece Power

- Single Element Interface
- PowerEdge™ Card Interface

POWER
EDGE™

Combination Power/Signal

- Headers & Sockets
- Power Plane
- Storage Combo Disk Drive Interfaces
- Micro Pitch

Headers, Stackers & Sockets

- 15 Amp Systems
- 7 Amp Systems
- 3 Amp Systems

samtec

MICRO RUGGED

& POWER TO BOARD

APPLICATIONS

Micro-Rugged Power	212
Headers, Stackers & Sockets	213
One-Piece Power	213
Combination Power/Signal	214-215
Align & Latch	216

STANDARD PRODUCTS

Rugged Power

PowerMate™ (IPBD, IPBT, IPBS)	217-219
MiniMate™ (IPD1, IPL1, IPT1, IPS1)	220-223

Combination Power/Signal

.100" (2,54mm) Pitch (HPMC, HPFC)	224-225
2mm Pitch (PCT2, PCS2)	226-227
Power Plane (QTT/QST)	228

Headers, Stackers & Sockets

15 Amp Systems (HPM, HPW, HPF)	230-231
7 Amp Systems (FWS, SW, PSS, FWJ, JW, FHP)	232-235

One-Piece Power

Single Element Interface (OPP)	236
PowerEdge™ Card Interface (PEC)	237

Align & Latch

Tiger Eye System (SFML, TFML)	238-239
Combination Socket/Terminal (LSS, LS2, LST)	240-242

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

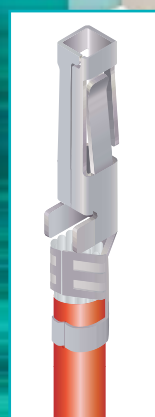
SOCKET/
REFERENCE

POWER-TO-BOARD

samtec



9A at 60°C ambient



PowerMate™

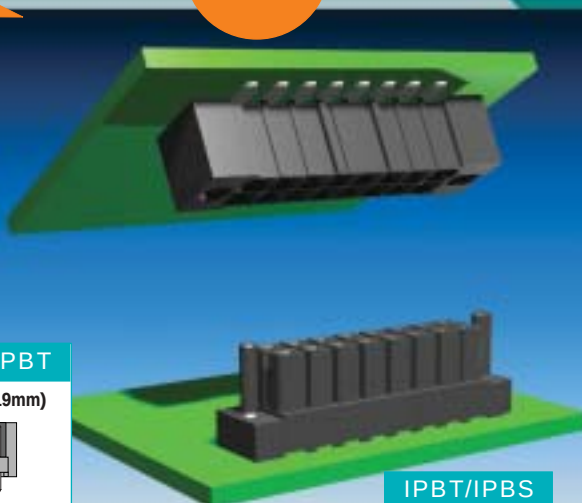
- 9A & 7A discrete wire systems
- 13A & 8A Board-to-Board systems
- Polarized
- Guide pins
- Latching systems



IPBD/IPBT
.165" (4,19mm)
pgs. 217-218

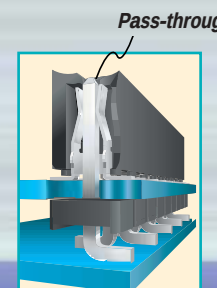
IPBT/IPBS
.165" (4,19mm)
pgs. 218-219

13A at 60°C ambient



15 Amp & 7 Amp Systems

- Headers, Stackers and Sockets
- Choice of .156" (3,96mm) and .200" (5,08mm) pitch



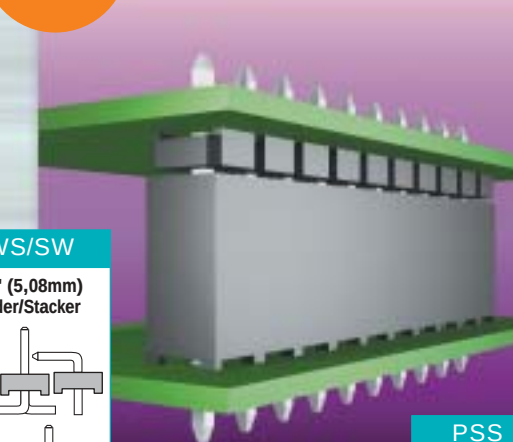
15A at 65°C ambient

HPM/HPW
.200" (5,08mm) Header/Socket
pg. 230

HPF
.200" (5,08mm) Socket
pg. 231

FWS/SW
.200" (5,08mm) Header/Stacker
pg. 232

7A at 65°C ambient



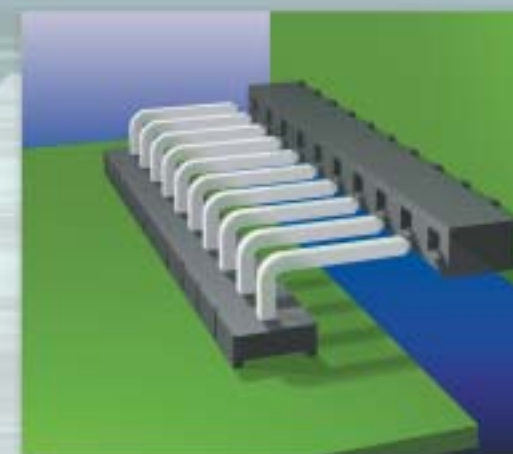
PSS
.200" (5,08mm) Socket
pg. 233

FWJ/JW
.156" (3,96mm)
pg. 234

FHP
.156" (3,96mm) Socket
pg. 235

Right Angle

- 7 Amp and 15 Amp systems
- .200" (5,08mm) and .156" (3,96mm) pitch

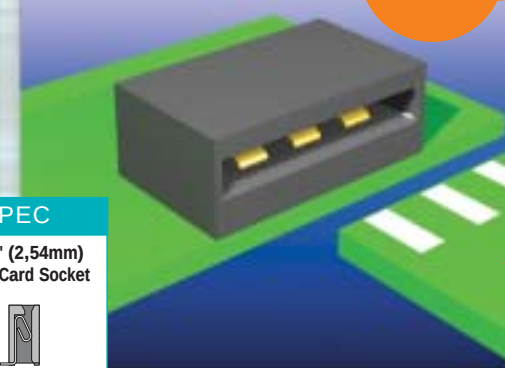


Edge Card

- Single unit connector system
- No connector required on card
- .100" (2,54mm) pitch

PEC
.100" (2,54mm) Edge Card Socket
pg. 237

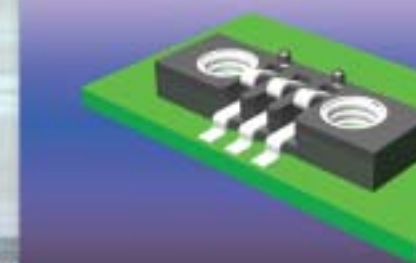
5A at 75°C ambient



One-Piece Interfaces

- Reduced component and processing cost
- No bent pins
- .100" (2,54mm) pitch

OPP
.100" (2,54mm) One-Piece Interface
pg. 236



3A at 70°C ambient

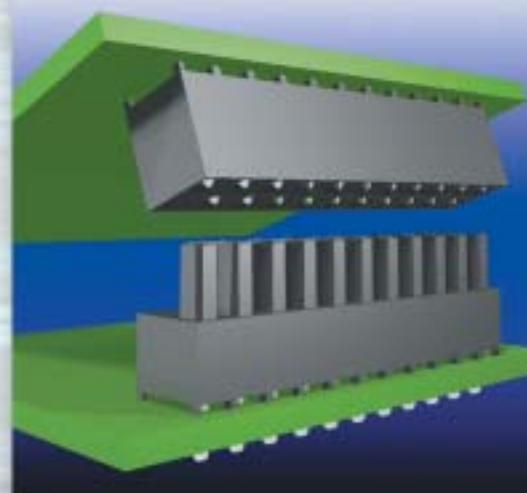


MiniMate™

- Isolated Power
- Double row
- .100" (2,54mm) pitch
- Polarized options
- Through-hole, right-angle and surface mount

IPL1/IPD1
.100" (2,54mm)
pgs. 220-221

IPT1/IPS1
.100" (2,54mm)
pgs. 222-223



ALIGN & LATCH

ALIGN & LATCH

POWER EDGE™

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

COMBINATION POWER / SIGNAL

samtec

Standard Headers & Sockets

- Up to 4 power terminals/sockets on (5,08mm) .200" pitch
- Up to 39 signal leads/sockets on (2,00mm) .0787" pitch
- Up to 24 signal leads/sockets on (2,54mm) .100" pitch
- Power Eye & Power Buy contacts



PCT2/PCS2

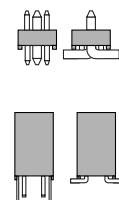
2mm (.0787")



pgs. 226-227

HPMC/HPFC

.100" (2,54mm)



pgs. 224-225



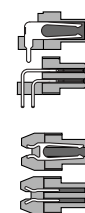
Direct Disk Drive to Board

- Mates with Fujitsu, IBM, Maxtor, Quantum, Seagate, Samsung IDE, EIDE, ATA, and Ultra ATA
- Wide SCSI also available
- Application Specific options available



SCID

Direct Disk Drive Storage Combo

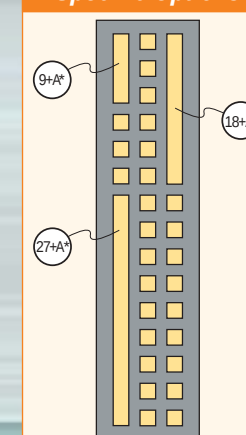


pgs. 264-265

Power/Signal Board Stackers

- 2mm pitch sockets and board stackers
- Three, four and five row designs
- Standard and custom power/ground plane and signal pin configurations (QTT/QST)
- Isolated and shrouded power banks for higher power (TPCM/TPCF)

QTT/QST Application Specific Options

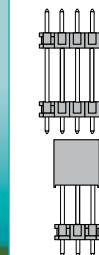


*@29°C temperature rise



QTT/QST

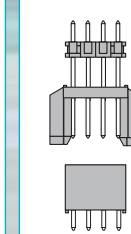
2mm (.0787")



pg. 228

TPCM/TPCF

2mm (.0787")



pg. 229

Micro Power

- Integral ground plane in high speed micro connectors can be used as a power plane
- Minimal impact on high speed characteristics
- 0,50mm (.0197"), 0,635mm (.025") and 0,80mm (.0315") pitch

QST/QTX

Micro Header & Socket



pgs. 30-51

ALIGN & LATCH SYSTEMS



Combination Socket/Terminal

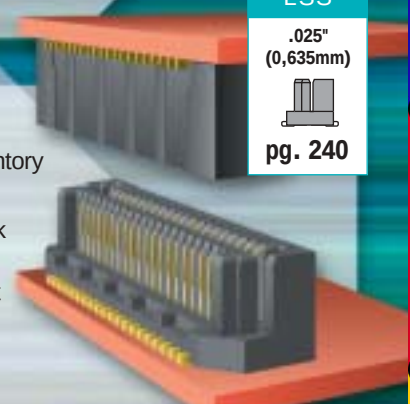
- Self-mating for reduced inventory
- Polarized and keyed
- Friction lock with audible click when properly mated
- Through-hole, surface mount and right angle
- Variety of stack heights
- Three pitches available

LSS

.025" (0,635mm)



pg. 240

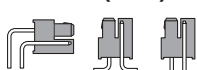


High Speed System

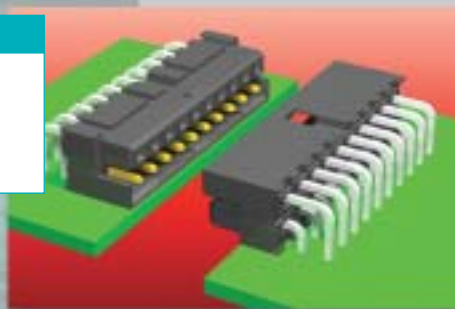
- .025" (0,635mm) Pitch
- EMI shielding
- Polarized and dual stage hot pluggable

LS2

2mm (.0787")

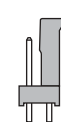


pg. 241

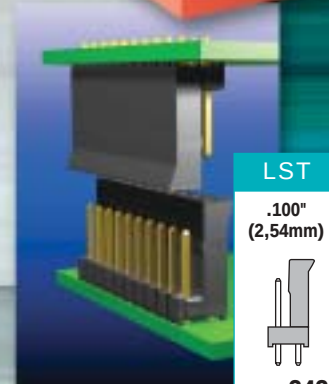


LST

.100" (2,54mm)



pg. 242

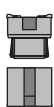


Tiger Eye System

- .050" (1,27mm) pitch
- High reliability Tiger Eye contacts
- Polarized and keyed
- Friction lock increases unmating force by up to 4 times standard socket

QFSS/QMSS

.025" (0,635mm)

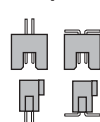


pgs. 36-37

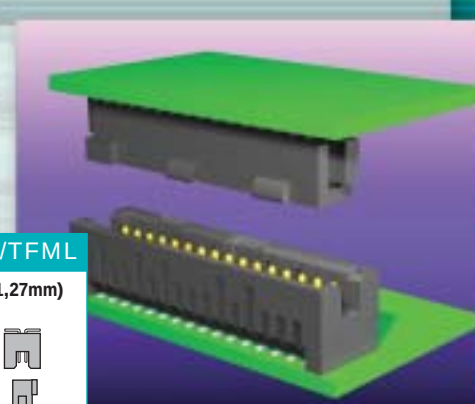


SFML/TFML

.050" (1,27mm)

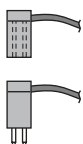


pgs. 238-239



FFSD
TCSD
IDSD

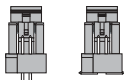
.050" (1,27mm)
2mm (.0787")
.100" (2,54mm)



pgs. 298,
300,304

EJH/EHT/EHF

.050" (1,27mm)
2mm (.0787")
.100" (2,54mm)



pgs. 297,303,306

Cable Systems

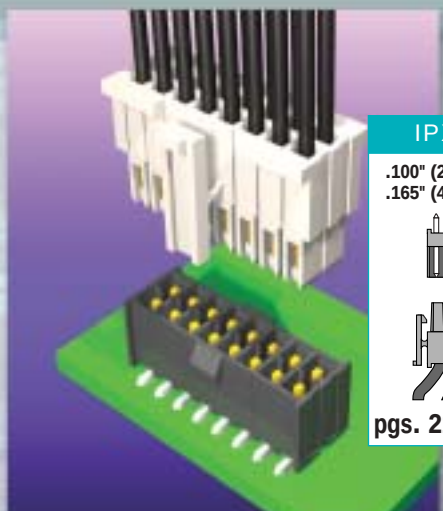
- Discrete wire power systems on two pitches
- IDC/Ejector Header systems on three pitches
- Ejector Caps available

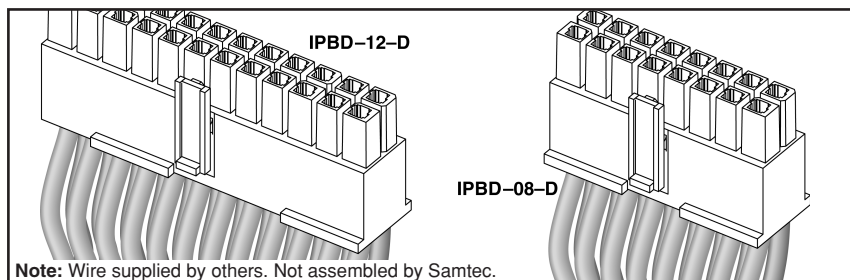
IPXX

.100" (2,54mm)
.165" (4,19mm)



pgs. 217-223





POWER CABLE CONNECTOR

IPBD SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?IPBD

Insulator Material:

Valox 457

Contact Material:

-SP= Phosphor Bronze

-HP= High Copper Alloy

Operating Temp Range:

-40°C to +105°C

Plating:

Sn over 50µ" (1,27µm) Ni

Wire:

18 or 20 AWG

IPBD

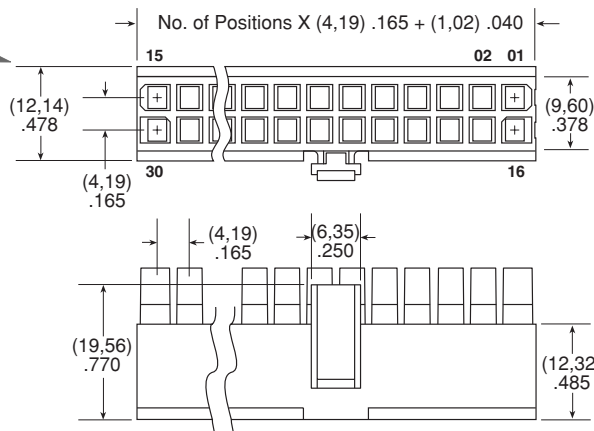
POSITIONS PER ROW

D

Mates with:
IPBT

02 thru 15

CURRENT RATINGS		
6 in Series, 2x3 (mated with IPBT)		
Ambient Temperature	-SP	-HP
20°C	10A	12A
40°C	9A	11A
60°C	7A	9A
80°C	5A	6.5A



(Requires C-169 contact and customer assembly)

C-169

01

LEAD STYLE

PLATING OPTION

Mates with:
Contact for IPBD

-SP

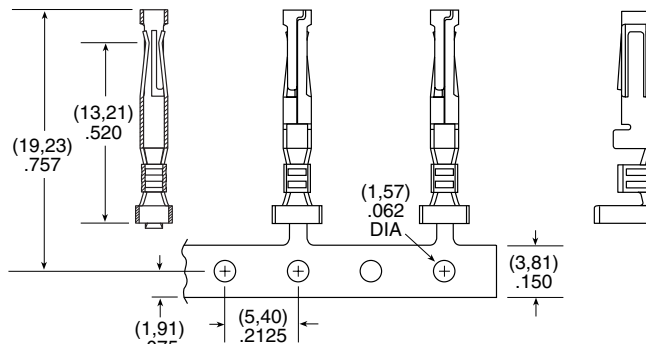
=Standard Power

-HP

=High Power

-T

= Tin



(Supplied in reels of 4000 contacts)

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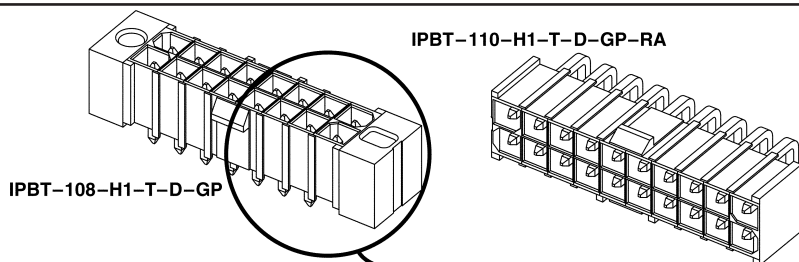
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POWER MATE HEADER IPBT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?IPBT

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

High Copper Alloy

Operating Temp Range:
-40°C to +105°C

Plating:

Sn over 50μ" (1,27μm) Ni

Mates with:
IPBS, IPBD

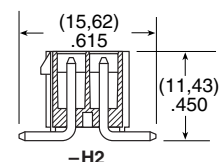
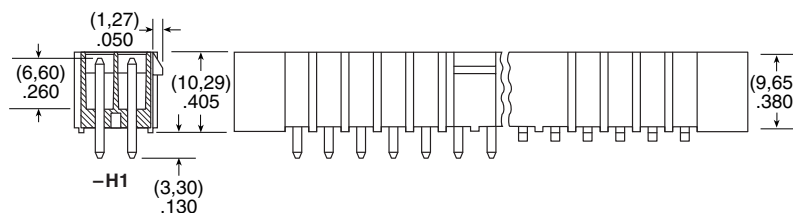
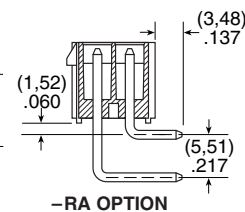
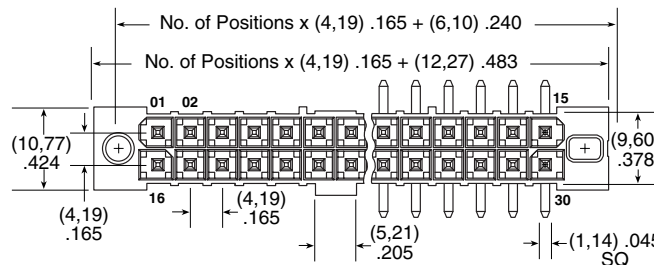
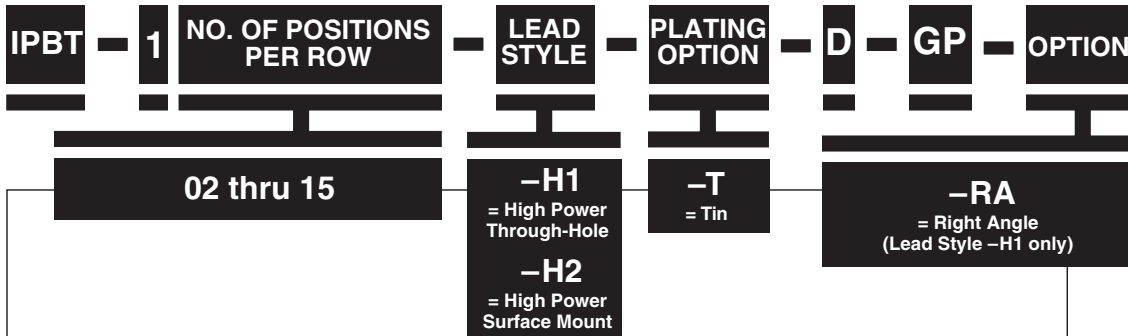
Latching mechanism for mating with IPBD Series

Individually shrouded pins

Polarized guide holes

POWER MATE™

CURRENT RATINGS				
6 in Series, 2x3				
Ambient Temperature	Mated With IPBS		Mated With IPBD (18 AWG standard)	
	-01 & -02	-H1 & -H2	-SP	-HP
20°C	11A	18A	10A	12A
40°C	10A	16A	9A	11A
60°C	8A	13A	7A	9A
80°C	6A	10A	5A	6.5A



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IPBS-108-01-T-D-GP

IPBS-105-H1-T-D-GP

POWER MATE SOCKET IPBS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?IPBS

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

-01= Phosphor Bronze

-H1= High Copper Alloy

Operating Temp Range:

-40°C to +105°C

Plating:

Sn over 50µ" (1,27µm) Ni

Mates with:
IPBT



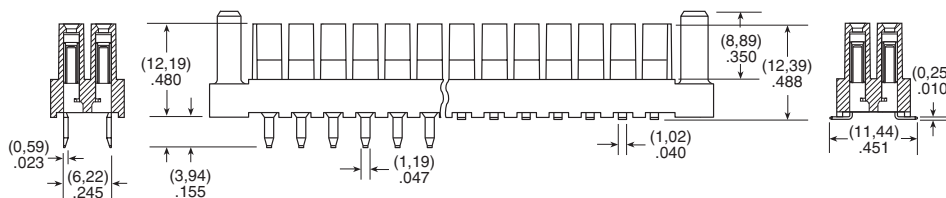
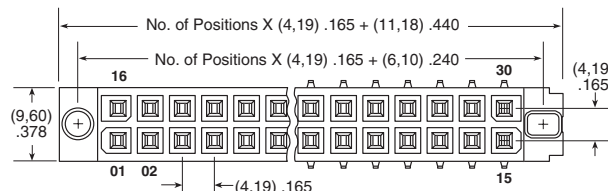
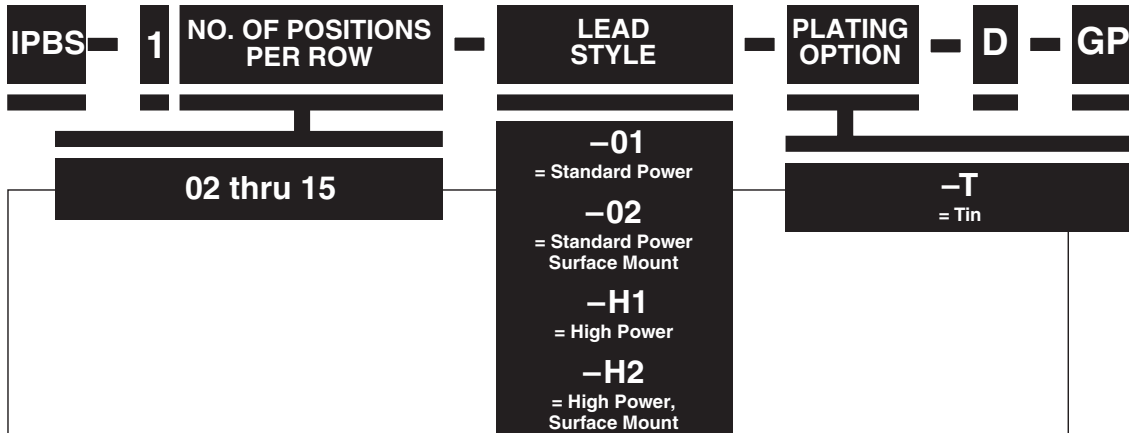
CURRENT RATINGS		
6 in Series, 2x3 (mated with IPBT)		
Ambient Temperature	-01 & -02	-H1 & -H2
20°C	11A	18A
40°C	10A	16A
60°C	8A	13A
80°C	6A	10A

(4,19mm)
.165"
pitch

Individually
shrouded contacts

Optional polarized
guide posts

Through-Hole



Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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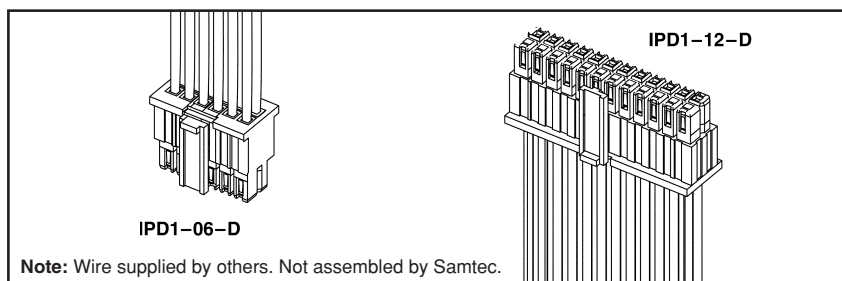
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MINI-POWER CONNECTOR IPD1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?IPD1

Insulator Material:

Nylon 66

Contact Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-40°C to +105°C

Plating:

Au or Sn over 50μ" (1,27μm) Ni



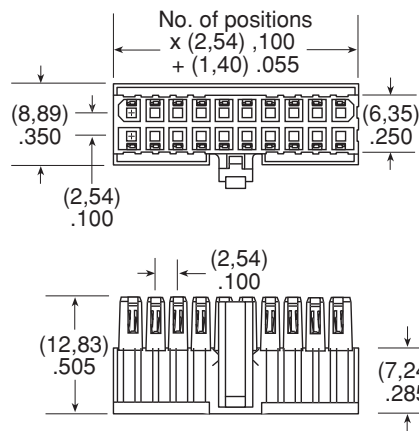
IPD1

POSITIONS PER ROW

D

Mates with:
IPL1

02 thru 25



(Requires C-179 contact and customer assembly)



C-179

01

PLATING OPTION

Mates with:
Contact for IPD1

—F

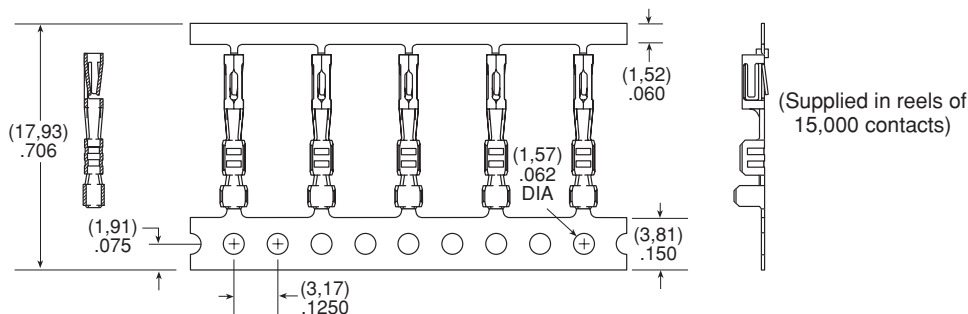
= Gold flash on contact, Tin on tail

—L

= 10μ" (0,25μm) Gold on contact, Tin on tail

—S

= 30μ" (0,76μm) Gold on contact, Tin on tail



Note: Some lengths, styles and options are non-standard, non-returnable.

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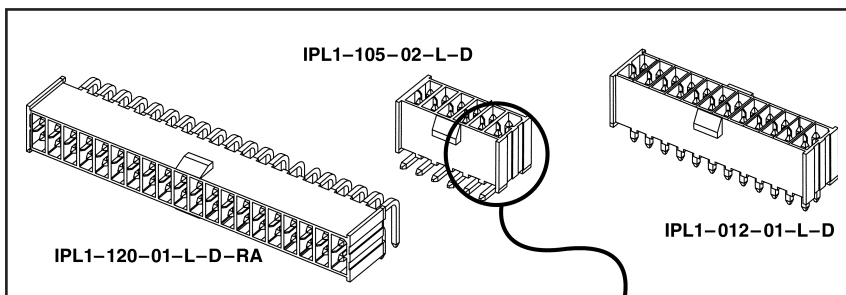
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MINI-POWER HEADER IPL1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?IPL1

Insulator Material:

Black LCP

Terminal Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 50µ" (1,27µm) Ni

Mates with:
IPD1



Mates with discrete wire cable assemblies (IPD1 Series)

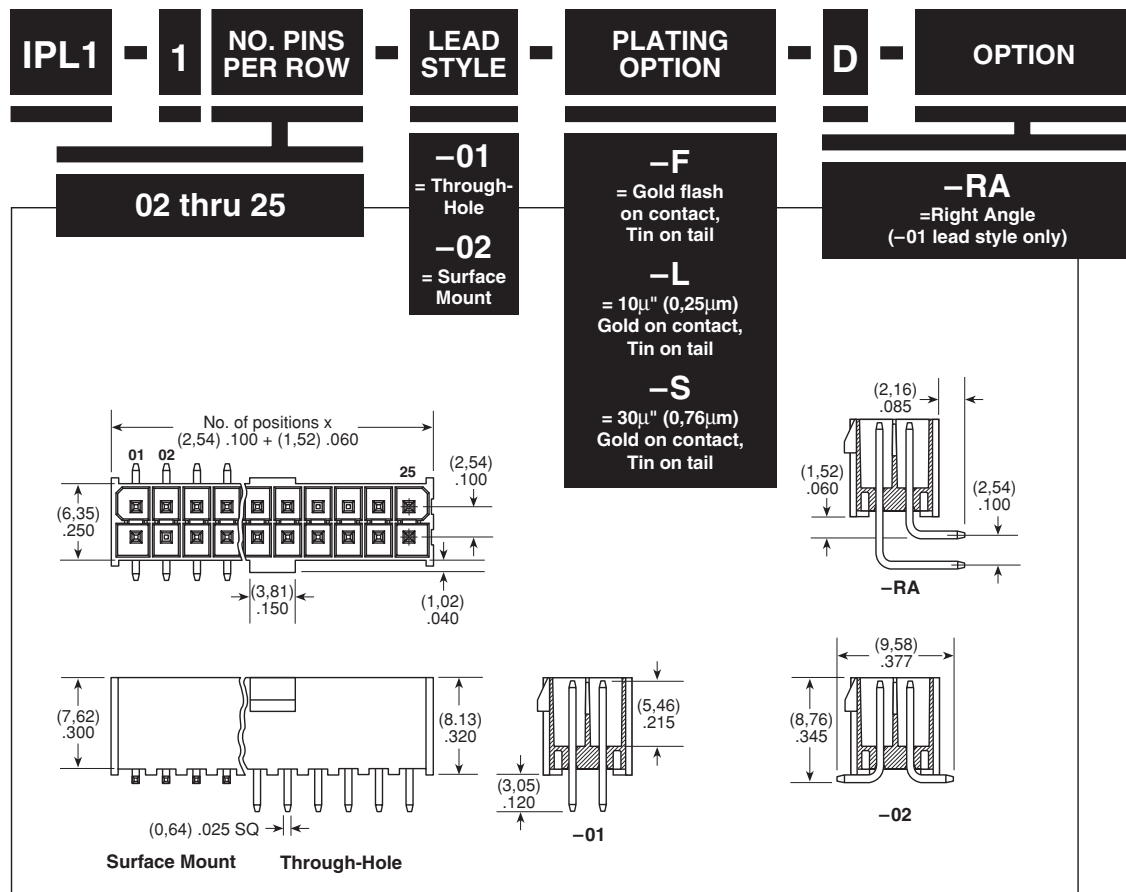
Polarized



Align & Latch

Surface Mount, Right Angle and Vertical Through-Hole

Note:
Some sizes, styles and options are non-standard, non-returnable.



Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max (02-05)

(0,13mm) .005" max (06-10)

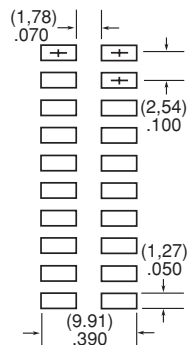
(0,15mm) .006" max (11-25)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?IPL1 for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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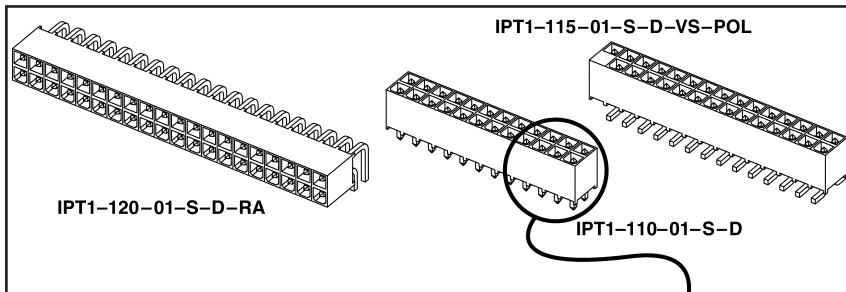
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3A

ISOLATED POWER HEADER IPT1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?IPT1

Insulator Material:

Black LCP

Terminal Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Sn or Au over 50µ"

(1.27µm) Ni

Voltage Rating:

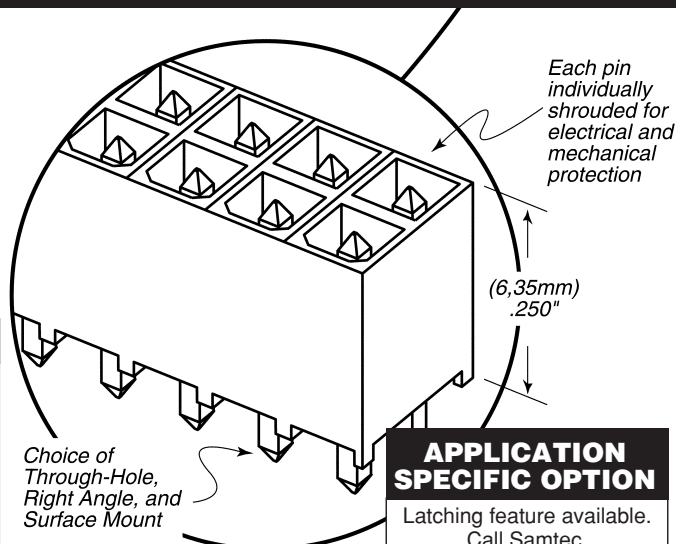
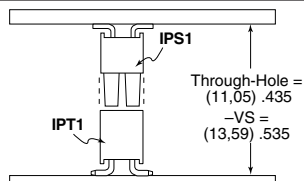
550 VAC mated with IPS1



Mates with:
IPS1

AMBIENT TEMPERATURE	CURRENT RATING
20°C	7A
40°C	6A
60°C	4A
80°C	3A

APPLICATION



APPLICATION SPECIFIC OPTION

Latching feature available. Call Samtec.

Note:

Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0.13mm) .005" max (05-10)

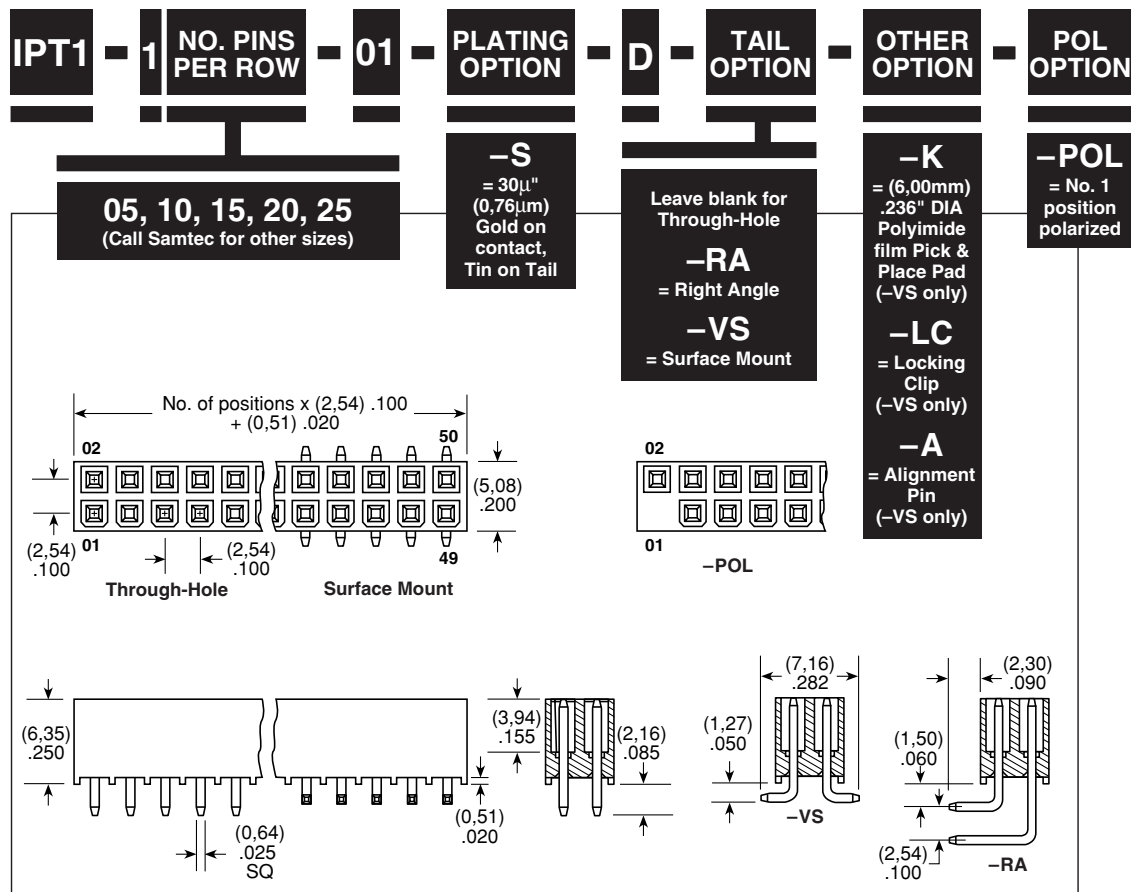
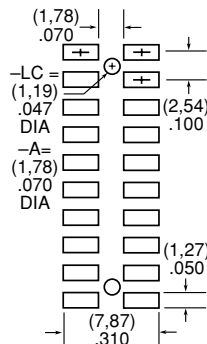
(0.15mm) .006" max (15-25)

Suggested Paste Thickness:

For most applications add (0.05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?IPT1 for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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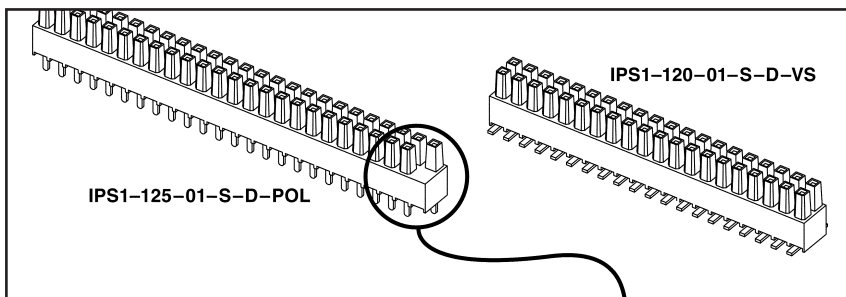
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3A

ISOLATED POWER SOCKET IPS1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?IPS1

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Sn or Au over 50µ"

(1,27µm) Ni

Insertion Force (SMT):

3.0oz (0,83N) avg

Withdrawal Force (SMT):

2.6oz (0,72N) avg

Insertion Force (T/H):

6.0oz (1,67N) avg

Withdrawal Force (T/H):

5.0oz (1,39N) avg

Voltage Rating:

550 VAC mated with IPT1

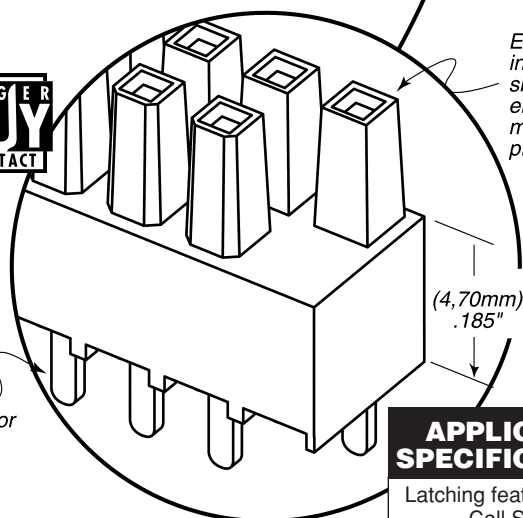


Mates with:
IPT1

AMBIENT TEMPERATURE	CURRENT RATING
20°C	7A
40°C	6A
60°C	4A
80°C	3A



Choice of
Through-Hole or
Surface Mount



Each contact
individually
shrouded for
electrical and
mechanical
protection

APPLICATION SPECIFIC OPTION

Latching feature available.
Call Samtec.

Note:
Some sizes, styles and
options are non-standard,
non-returnable.



05, 10, 15, 20, 25
(Call Samtec for other sizes)

-S
= 30µ"
(0,76µm)
Gold on
contact,
Tin on Tail

Leave blank for
Through-Hole
-VS
= Surface Mount
-RA
= Right Angle

-K
= (5,50mm)
.217" DIA
Polyimide
film Pick &
Place Pad
(-VS only)
-LC
= Locking
Clip
(-VS only)

-POL
= No. 1
position
polarized

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,13mm) .005" max (05-10)

(0,15mm) .006" max (15-25)

Suggested Paste

Thickness:

For most applications add

(0,05mm) .002" to max SMT

lead coplanarity

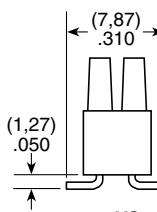
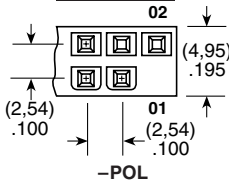
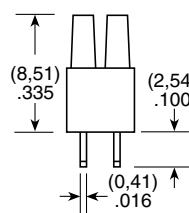
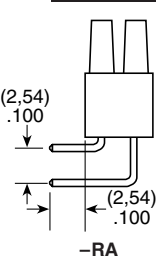
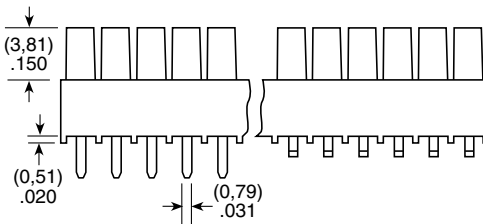
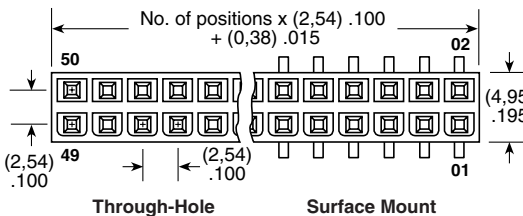
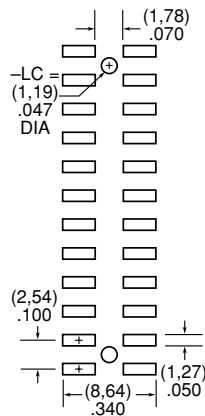
Suggested PCB Layouts:

For reference only. Please

contact Samtec or go to

www.samtec.com?IPS1 for

recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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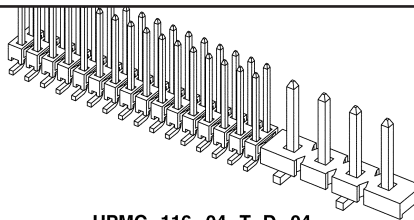
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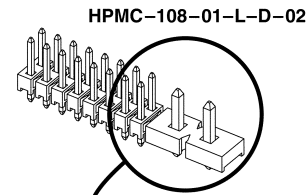
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HPMC-116-04-T-D-04



HPMC-108-01-L-D-02

15A

HI-POWER COMBO HEADER

HPMC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HPMC

Insulator Material:

Black Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze



Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Sn or Au over 50µ" (1,27µm)

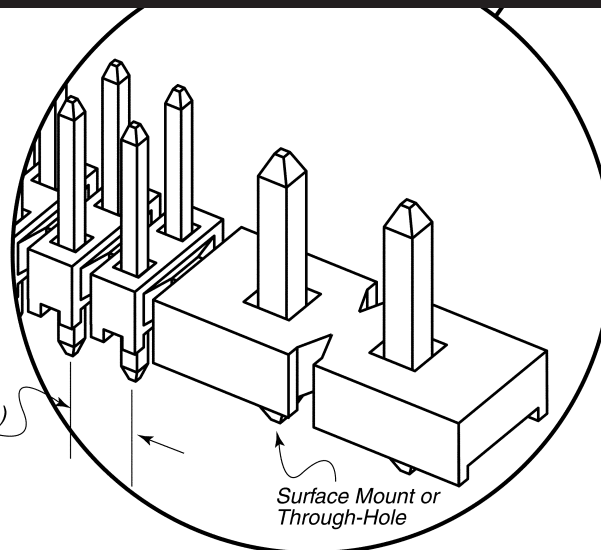
Ni on signal pins; Sn over 50µ" (1,27µm) Ni on power pins

Voltage Rating:

850 VAC mated with HPFC

Mates with:
HPFC

CURRENT RATINGS		
AMBIENT TEMPERATURE	POWER LEAD	SIGNAL LEAD
20°C	23A	7A
40°C	20A	6A
60°C	16A	4A
80°C	11A	3A



Note:
Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

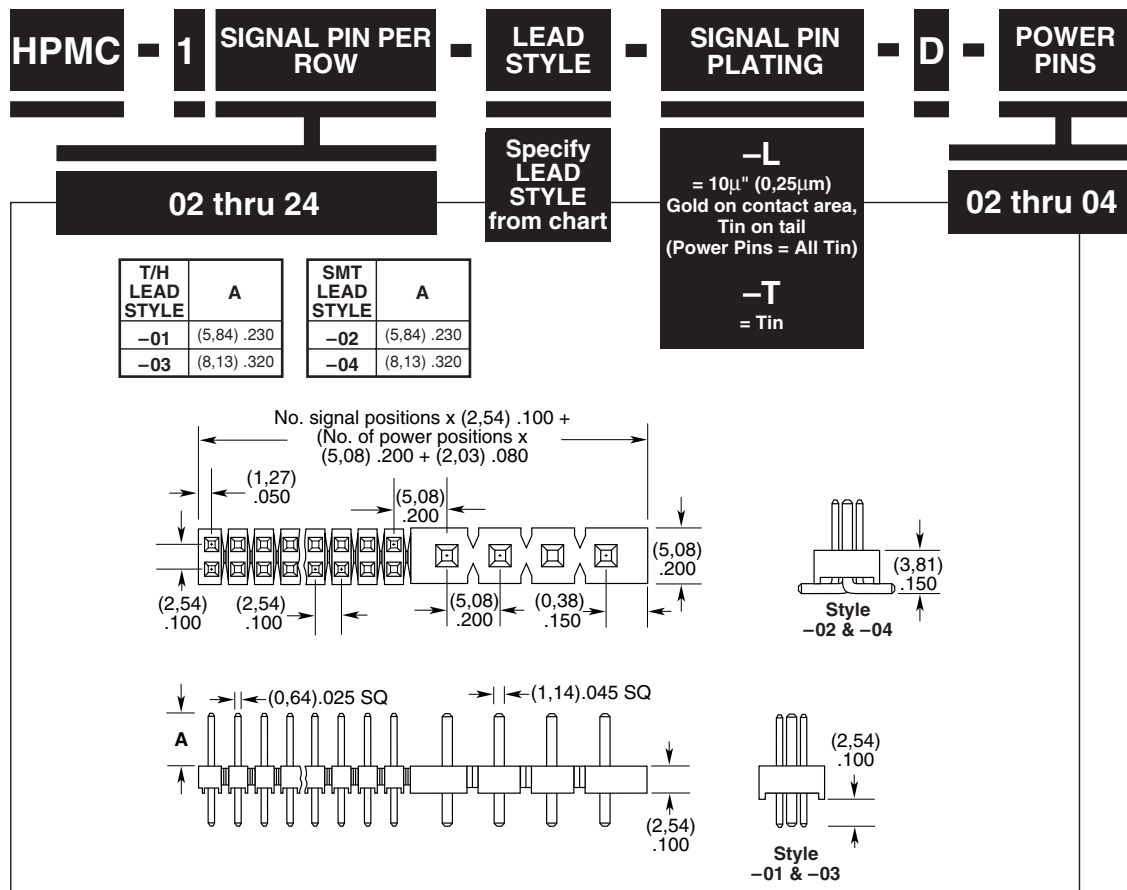
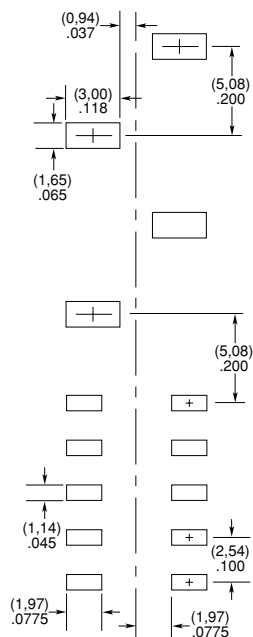
SMT Lead Coplanarity:

(0,15mm) .006" max (02-20)

(0,20mm) .008" max (21-24)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?HPMC for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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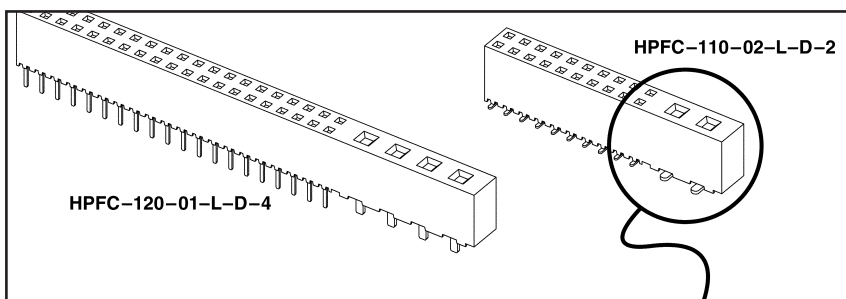
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15A

HI-POWER COMBO SOCKET HPFC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HPFC

Insulator Material:

Black Liquid Crystal Polymer



Signal Contact Material:

Phosphor Bronze



Power Contact Material:

BeCu

Operating Temp Range:

-65°C to +105°C

Plating:

Sn or Au over 50µ" (1,27µm)

Ni on signal pins; Sn over 50µ" (1,27µm) Ni on power pins

Contact Resistance:

10 mΩ max

Insertion Depth:

(3,68mm) .145" to

(8,26mm) .325"

Voltage Rating:

850 VAC mated with HPMC

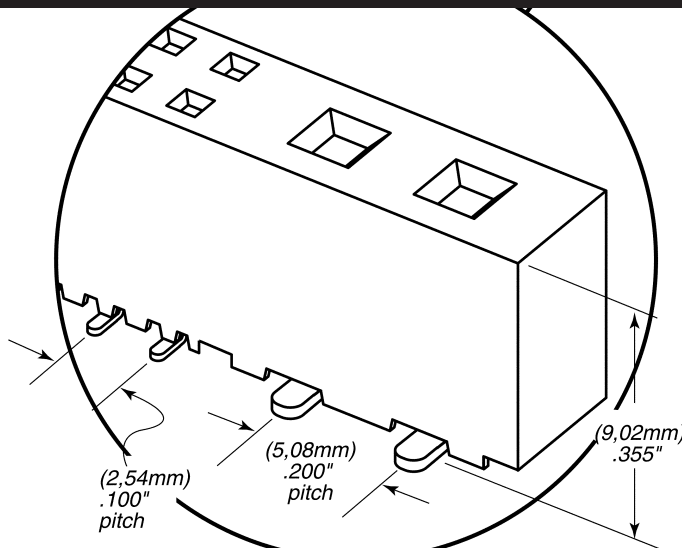
Mates with:
HPMC

POWER EYE

CONTACT
(15 Amps @
65°C ambient)



CURRENT RATINGS		
AMBIENT TEMPERATURE	POWER LEAD	SIGNAL LEAD
20°C	23A	7A
40°C	20A	6A
60°C	16A	4A
80°C	11A	3A



Note:

Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

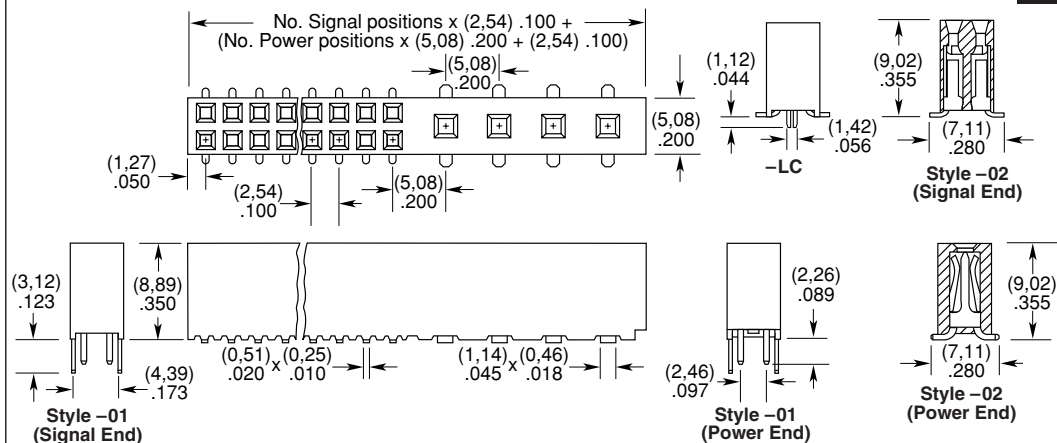
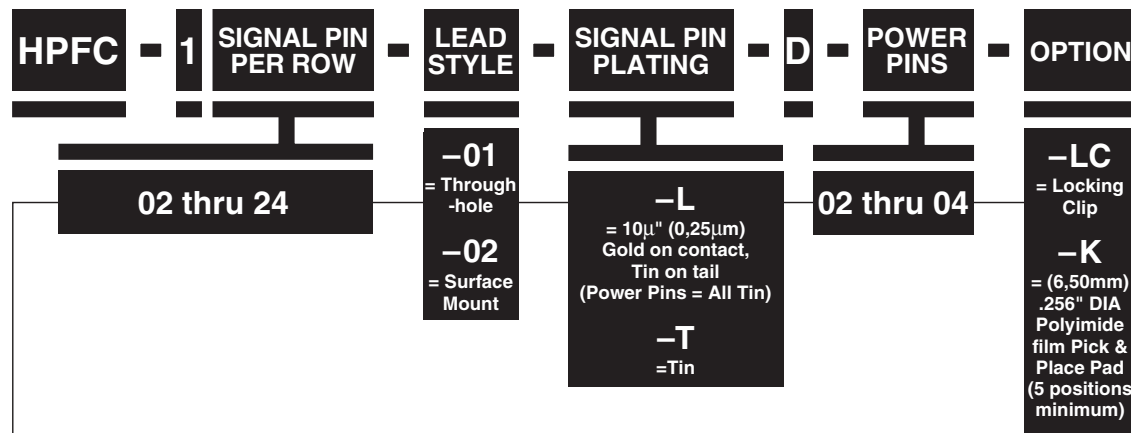
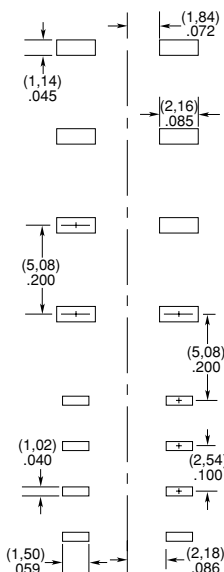
SMT Lead Coplanarity:

(0,15mm) .006" max (02-20)

(0,20mm) .008" max (21-24)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?HPFC for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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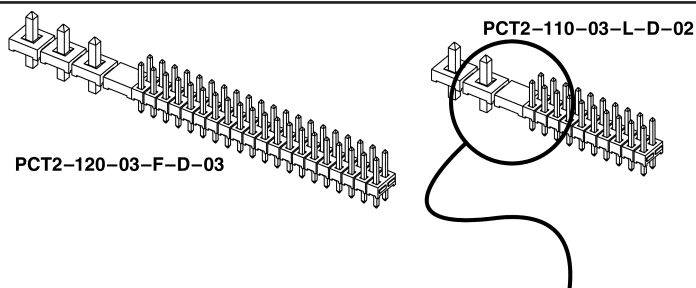
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7A

POWER COMBO HEADER PCT2 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?PCT2

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Sn or Au over 50μ"

(1,27μm) Ni on signal pins;

Sn over 50μ" (1,27μm) Ni on

power pins

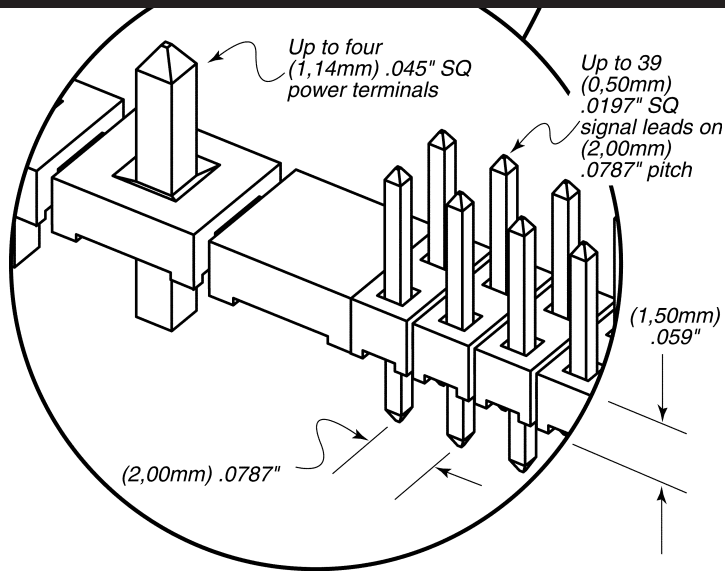
Voltage Rating:

500 VAC mated with PCS2



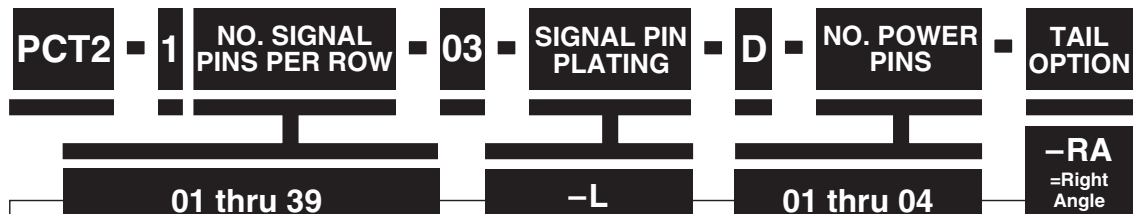
Mates with:
PCS2

CURRENT RATINGS		
AMBIENT TEMPERATURE	POWER LEAD	SIGNAL LEAD
20°C	13A	5.5A
40°C	11A	5A
60°C	8A	4A
80°C	6A	3A



Note:

Some lengths, styles and options are non-standard, non-returnable.

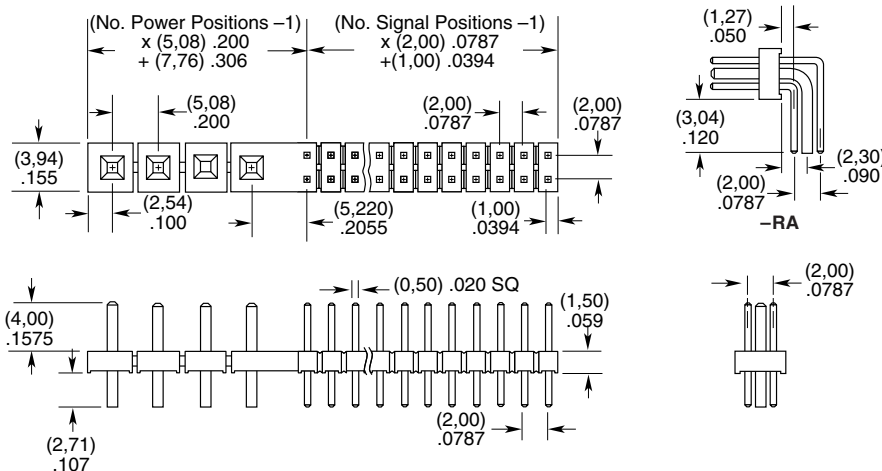


Processing:

Max Processing Temp:
230°C for 60 seconds



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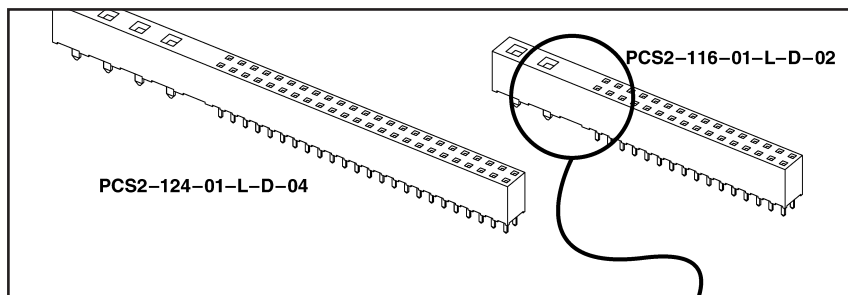
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7A

POWER COMBO SOCKET

PCS2
SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?PCS2

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

BeCu

Operating Temp Range:

-65°C to +105°C

Plating:

Sn or Au over 50μ" (1,27μm)

Ni on signal pins; Sn over 50μ" (1,27μm) Ni on power pins

Contact Resistance:

10 mΩ max

Insertion Depth:

(2,62mm) .103" to (5,03mm) .198" with (0,38mm) .015" wipe

Max Cycles:

100 with 10μ" (0,25μm) Au

Insertion Force:

28oz (7,78N) avg per power contact plus

1.8oz (0,50N) avg per signal contact

Withdrawal Force:

20oz (5,56N) avg per power contact plus

1.0oz (0,28N) avg per signal contact

Voltage Rating:

500 VAC mated with PCT2

Note:

Some lengths, styles and options are non-standard, non-returnable.



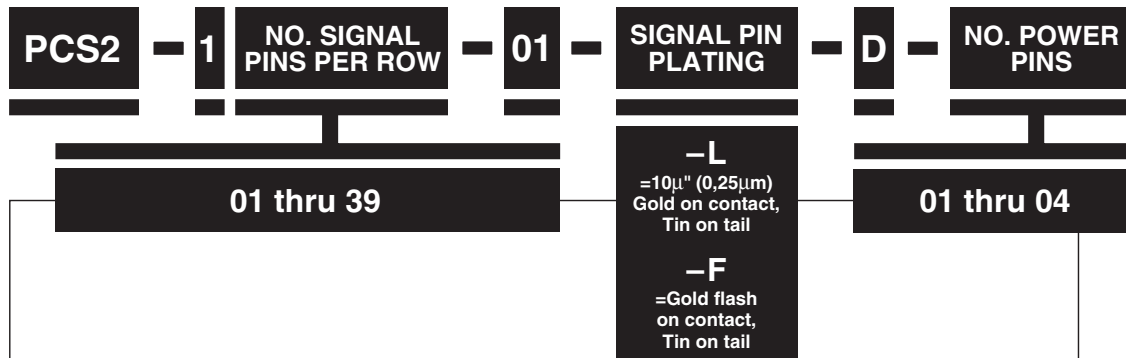
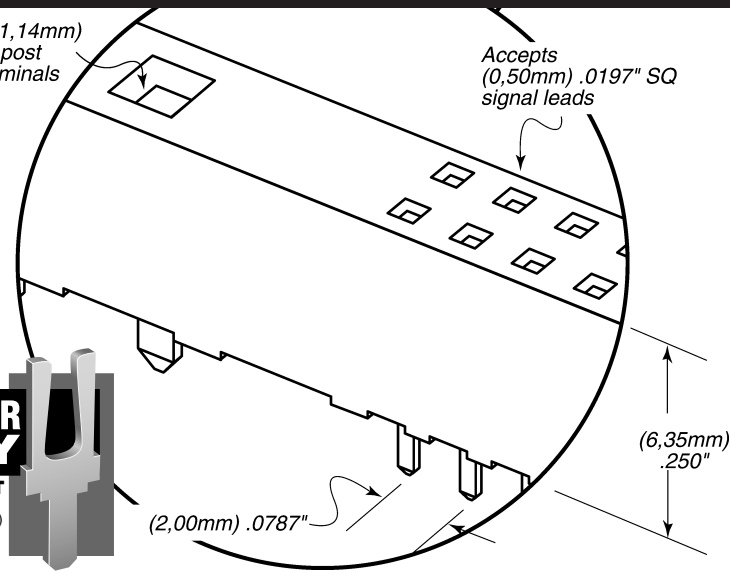
Mates with:
PCT2

CURRENT RATINGS		
AMBIENT TEMPERATURE	POWER LEAD	SIGNAL LEAD
20°C	13A	5.5A
40°C	11A	5A
60°C	8A	4A
80°C	6A	3A

Accepts (1,14mm) .045" SQ post power terminals

Accepts (0,50mm) .0197" SQ signal leads

POWER BUY
CONTACT
(7 Amps @ 70°C ambient)



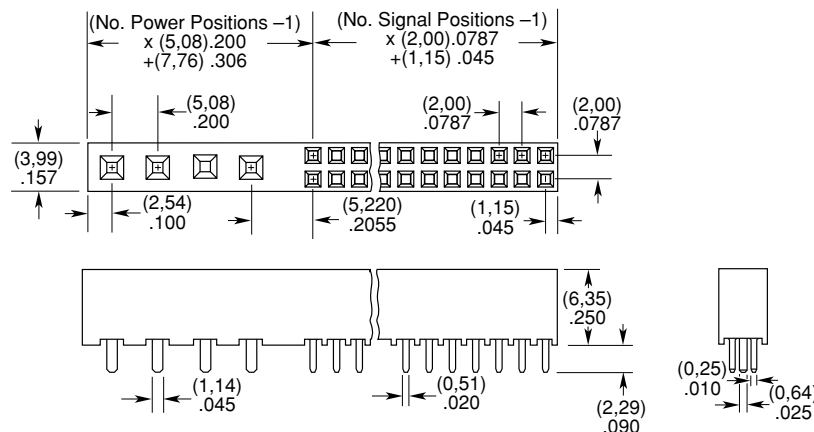
Processing:

Max Processing Temp:

230°C for 60 seconds



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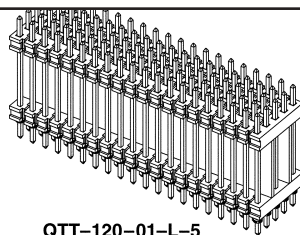
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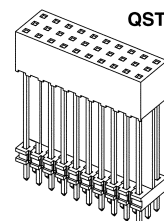
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QTT-120-01-L-5



QST-110-02-L-T

2mm POWER PLANE QTT, QST SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QTT or www.samtec.com?QST

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material (QTT):

Phosphor Bronze

Contact Material (QST):

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Max Processing Temp:

230°C for 60 seconds

Plating:

Sn or Au over 50µ" (1,27µm) Ni

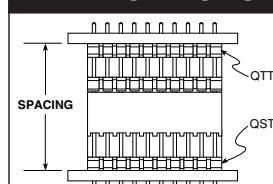
Impedance:

50Ω ±5% @ 170MHz

50Ω ±20% @ 253MHz

(system @ 50Ω)

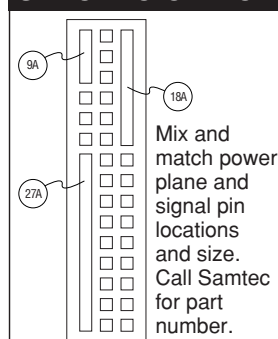
APPLICATIONS



TYPICAL BOARD SPACING

QTT	QST	SPACING
-01	-02	(19,71) .776
-02	-02	(21,72) .855
-03	-03	(27,51) 1.083
-04	-04	(32,31) 1.272

APPLICATION SPECIFIC OPTION



Mix and match power plane and signal pin locations and size. Call Samtec for part number.

Note:

Some lengths, styles and options are non-standard, non-returnable.

QTT - **1**

NO. PINS PER ROW

LEAD STYLE

PLATING OPTION

ROW OPTION

10 thru 50

Diagram showing pin positions and dimensions for QTT connector. Dimensions include (1,00) .0394, (2,00) .0787, (No. of positions - 1) x (2,00) .0787, (3,04) .120, (2,00) .0787, (0,50) .020 SQ, (2,29) .090, and A.

Specify LEAD STYLE from chart

LEAD STYLE	A
-01	(7,00) .276
-02	(9,00) .355
-03	(11,00) .433
-04	(13,00) .512

PLATING OPTION

- G** = 20µ" (0,51µm) Gold on contact area, Gold flash on tail
- S** = 30µ" (0,76µm) Gold on contact area, Tin on tail
- L** = 10µ" (0,25µm) Gold on contact area, Tin on tail
- F** = Gold flash on contact area, Tin on tail

ROW OPTION

- T** = Triple Row (Row 2 is Ground Plane)
- 5** = Five Row (Rows 2 and 4 are Ground Planes)

QST - **1**

NO. PINS PER ROW

LEAD STYLE

PLATING OPTION

ROW OPTION

10 thru 50

Diagram showing pin positions and dimensions for QST connector. Dimensions include (2,00) .07874 + (0,30) .012, (2,00) .07874, (2,00) .07874, (0,50) .020 SQ, (2,00) .07874, and A.

Specify LEAD STYLE from chart

LEAD STYLE	A	B
-01	(16,21) .638	(5,39) .212
-02	(12,70) .500	(3,18) .125
-03	(16,51) .650	(2,29) .090
-04	(19,30) .760	

PLATING OPTION

- G** = 20µ" (0,51µm) Gold on contact area, Gold flash on tail
- S** = 30µ" (0,76µm) Gold on contact area, Tin on tail
- L** = 10µ" (0,25µm) Gold on contact area, Tin on tail
- F** = Gold flash on contact area, Tin on tail

ROW OPTION

- T** = Triple Row (Row 2 is Ground Plane)
- 5** = Five Row (Rows 2 and 4 are Ground Planes)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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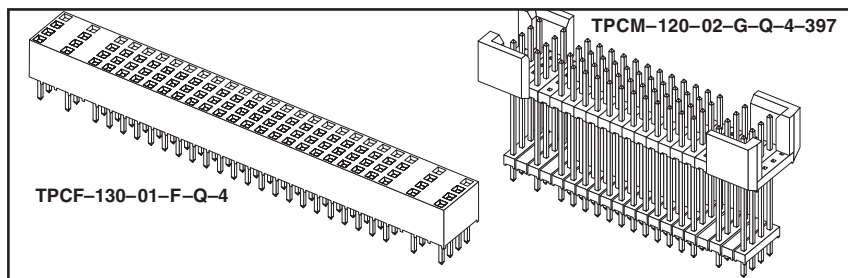
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2mm ISOLATED POWER TPCM, TPCF SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TPCM or www.samtec.com?TPCF

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material (TPCM):

Phosphor Bronze

Contact Material (TPCF):

Phosphor Bronze

Current Rating:

Signal Pins: 3A @

80°C ambient

Power Pins: Testing Now!

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Max Processing Temp:

230°C for 60 seconds

Plating:

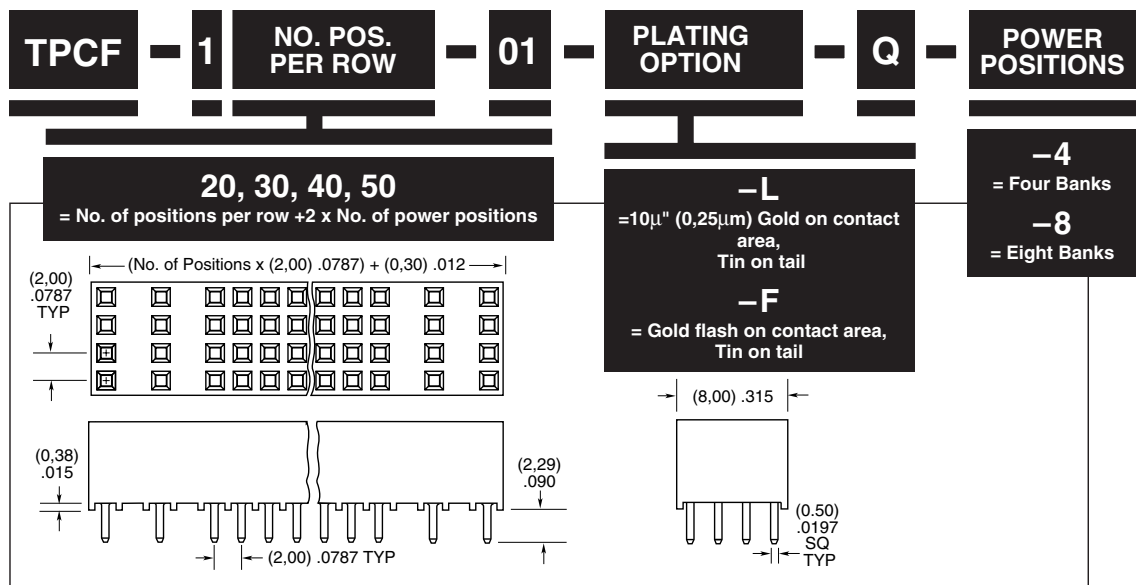
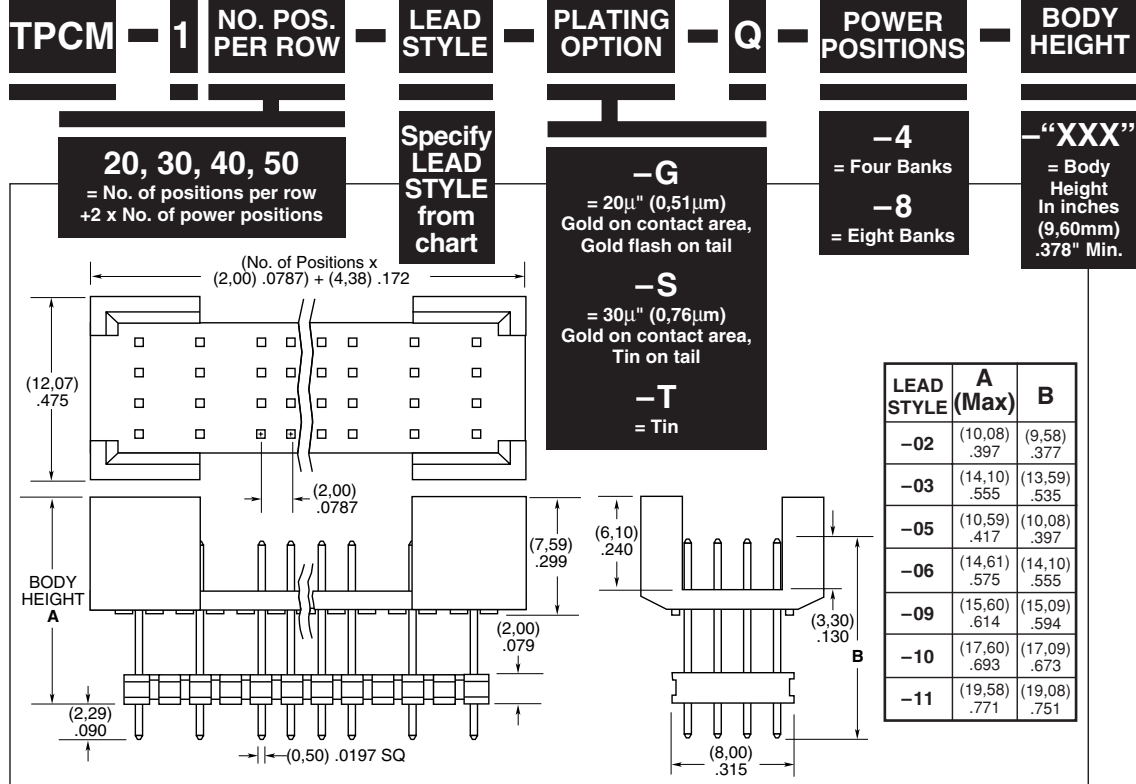
Sn or Au over 50μ" (1,27μm) Ni

Impedance:

50Ω ±5% @ 170MHz

50Ω ±20% @ 253MHz

(system @ 50Ω)



Note:
Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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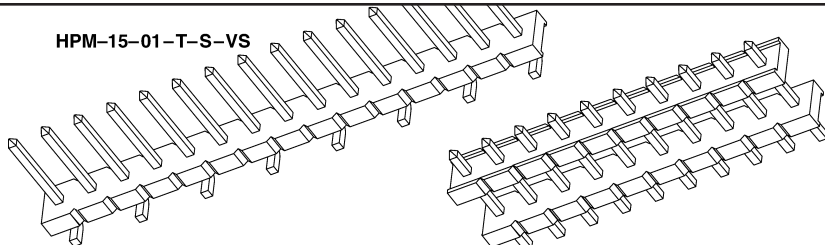
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HPM-15-01-T-S-VS



HPW-10-04-T-S-350-150

15A

HI-POWER .200" PITCH HPM & HPW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HPM

Insulator Material:

Natural Liquid Crystal

Terminal Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +105°C

Max Processing Temp:

230°C for 60 sec.

Plating:

Sn over 50µ" (1.27µm) Ni

SMT Lead Coplanarity:

(0.20mm) .008" max (02-16)

(0.25mm) .010" max (17-20)

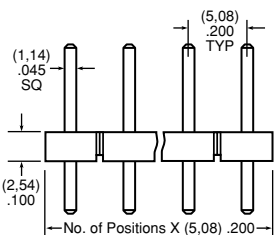
Voltage Rating:

500 VAC mated with HPF



Mates with:
PSS, HPF

02 thru 20



Note: Some lengths, styles and options are non-standard, non-returnable.

SPECIFICATIONS

For complete specifications see www.samtec.com?HPW

Insulator Material:

Natural Liquid Crystal

Terminal Material:

Phosphor Bronze

Max Processing Temp:

230°C for 60 sec.

Plating:

Sn over 50µ" (1.27µm) Ni

SMT Lead Coplanarity:

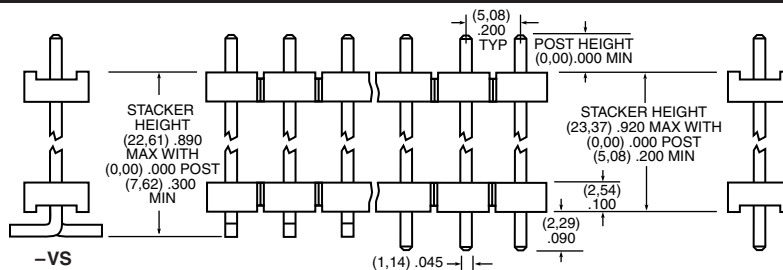
(0.20mm) .008" max (02-16)

(0.25mm) .010" max (17-20)



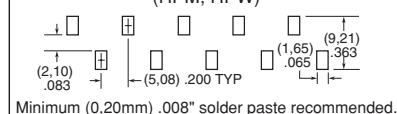
Mates with:
PSS, HPF

02 thru 20



For reference only. Please contact Samtec or go to www.samtec.com?HPM or www.samtec.com?HPW for recommended PCB layout.

(HPM, HPW)



Note: This Series is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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HPM

NO. PINS PER ROW

LEAD STYLE

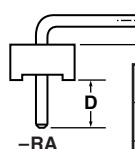
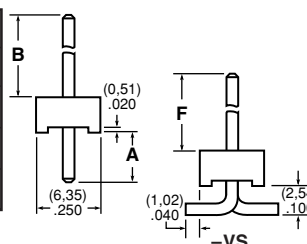
T

S

TAIL OPTION

Specify LEAD STYLE from chart below.

LEAD STYLE	A	B
-01	(4,57) .180	(11,94) .470
-02	(4,57) .180	(13,21) .520
-04	(4,09) .161	(21,06) .829
-05	(4,57) .180	(3,81) .150



LEAD STYLE	C	D
-02	(2,54) .100	(4,45) .175
-04	(4,95) .195	(3,96) .156

LEAD STYLE	F
-01	(10,72) .422
-02	(12,24) .482

Leave blank for Through-Hole

- RA
= Right Angle

-VS
= Surface Mount
(2 pins/row minimum)
Requires HPM

-VS-P
= Surface Mount with Pick & Place Pad
(3 Pos. min.)
(6,98mm) .275" min. post height

HPW

NO. PINS PER ROW

04

T

S

STACKER HEIGHT

POST HEIGHT

TAIL OPTION

- "XXX"

= Stacker Height (in inches)
(0.13mm) .005" increments

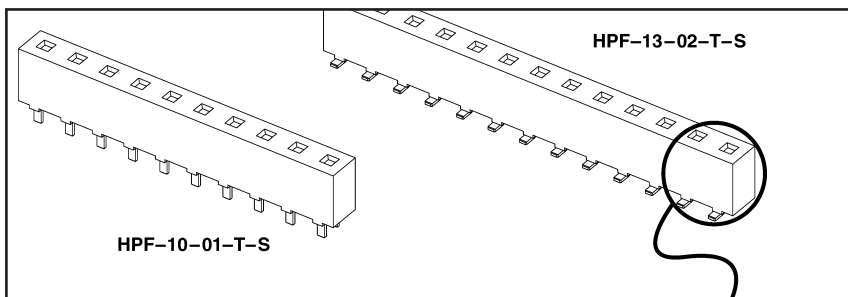
Example: -250 = (6,35mm) .250"

- "XXX"
= Post Height
(in inches)

Leave blank for Through-Hole

-VS
= Surface Mount
(2 pins/row minimum)

-VS-P
= Surface Mount with Pick & Place Pad
(3 Pos. min.)
(6,98mm) .275" max. post height



15A

HI-POWER .200" SOCKET HPF SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HPF

Insulator Material:

Black LCP

Contact Material:

BeCu

Max Processing Temp:

230°C for 60 sec.

Plating:

Sn over 50μ" (1,27μm) Ni

Insertion Depth:

(3,68mm) .145" to

(8,26mm) .325"

Voltage Rating:

500 VAC mated with HPM

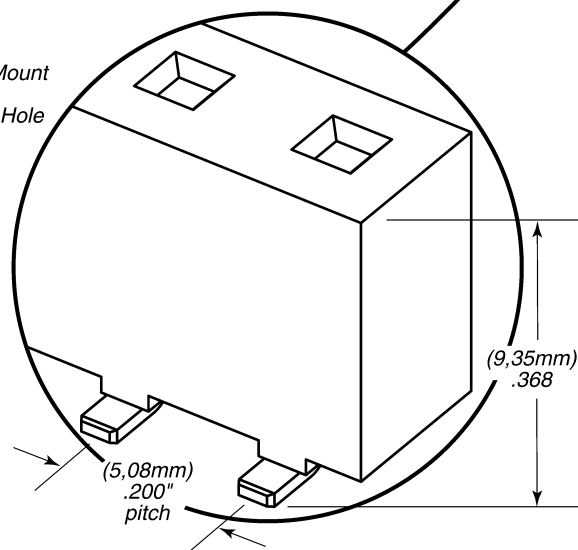
AMBIENT TEMPERATURE	CURRENT RATING
20°C	23A
40°C	20A
60°C	16A
80°C	11A

Mates with:
HPM, HPW

POWER EYE

CONTACT
(15 Amps @
65°C ambient)

Surface Mount
or
Through-Hole



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,15mm) .006" max (02-10)

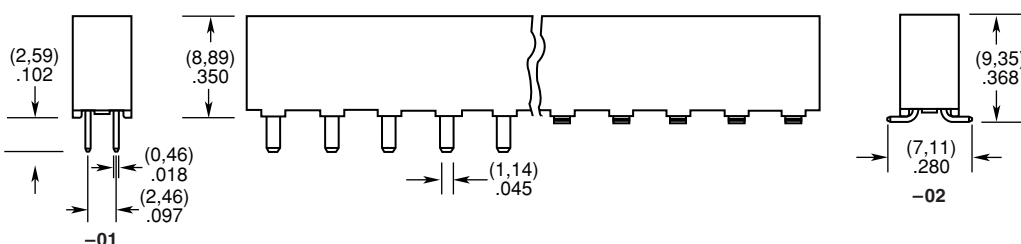
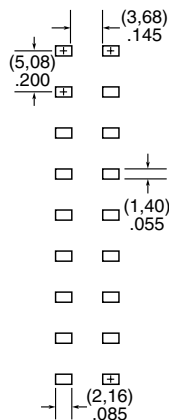
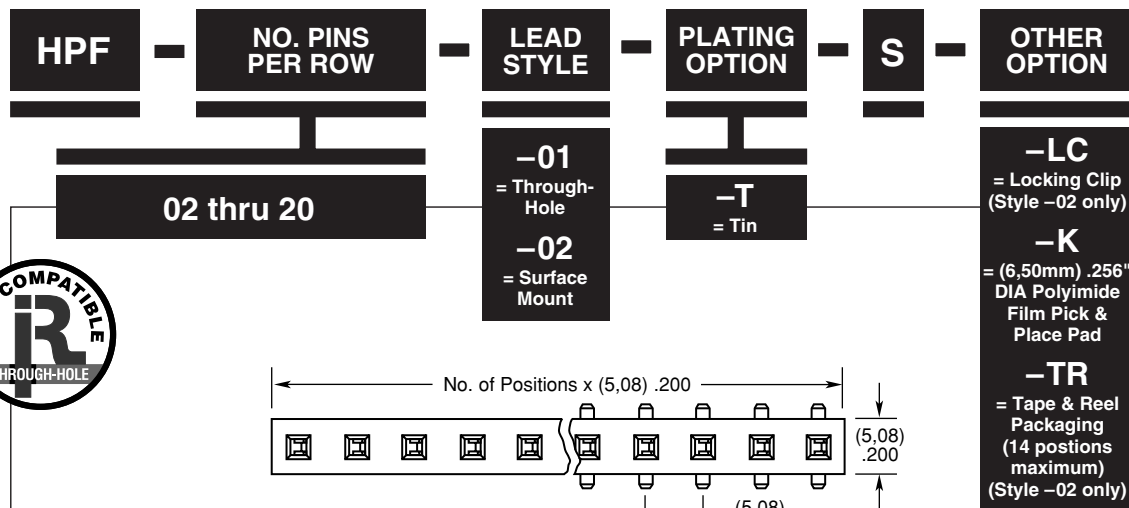
(0,20mm) .008" max (11-20)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?HPF for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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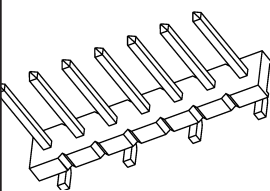
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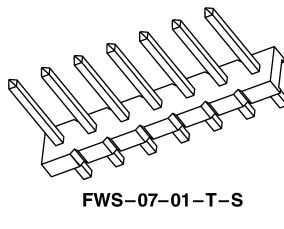
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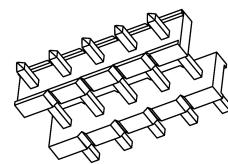
HFWS-07-01-T-S-VS



FWS-07-01-T-S



SW-05-04-T-S-350-150



15A

STANDARD .200" PITCH FWS, HFWS, SW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FWS

Insulator Material:
Black Glass Filled Polyester

Terminal Material:
Phosphor Bronze

Operating Temp Range:
-65°C to +105°C

Plating:
Sn over 50µ" (1.27µm) Ni

Voltage Rating:
500 VAC mated with PSS



HFWS

For complete specifications see www.samtec.com?HFWS

Same as FWS except:

Insulator Material:
Natural Liquid Crystal Polymer

Max Processing Temp:
230°C for 60 sec.

SMT Lead Coplanarity:
(0.20mm) .008" max (02-15)
(0.25mm) .010" max (16-20)



01 thru 20

AMBIENT TEMPERATURE	CURRENT RATING
20°C	23A
40°C	20A
60°C	16A
80°C	12A

TYPE STRIP

FWS

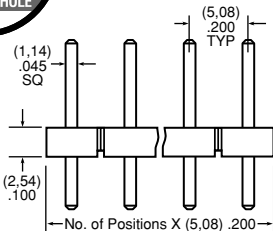
= Standard Header

HFWS

= High Temp Header

Mates with: PSS, HPF

Note: Some lengths, styles and options are non-standard, non-returnable.



NO. PINS PER ROW

LEAD STYLE

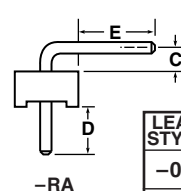
T

S

TAIL OPTION

Specify LEAD STYLE from chart below.

LEAD STYLE	A	B
-01	(4,57) .180	(11,94) .470
-02	(4,57) .180	(13,21) .520
-04	(4,09) .161	(21,06) .829
-05	(4,57) .180	(3,81) .150



LEAD STYLE	C	D	E
-02	(2,54) .100	(4,45) .175	(8,08) .318
-04	(4,95) .195	(3,96) .156	(13,82) .544

Leave blank for Through-Hole

- RA
= Right Angle

-VS
= Surface Mount (2 pins/row minimum) Requires HFWS

-VS -P
= Surface Mount with Pick & Place Pad (3 Pos. min.) (6,98mm) .275" min. post height

SPECIFICATIONS

For complete specifications see www.samtec.com?SW

Insulator Material:
Natural Liquid Crystal Polymer (-VS)

Black Glass Filled Polyester (TH)

Terminal Material:
Phosphor Bronze

Max Processing Temp:
230°C for 60 sec.

Plating:
Sn over 50µ" (1.27µm) Ni

SMT Lead Coplanarity:
(0.20mm) .008" max (02-16)
(0.25mm) .010" max (17-20)



Mates with:
PSS, HPF

Note: This Series is non-standard, non-returnable.

SW

NO. PINS PER ROW

04

T

S

STACKER HEIGHT

POST HEIGHT

TAIL OPTION

- "XXX"

= Stacker Height (in inches) (0,13mm) .005" increments

Example: -250 = (6,35mm) .250"

- "XXX"
= Post Height (in inches)

Leave blank for Through-Hole

-VS
= Surface Mount (2 pins/row minimum)

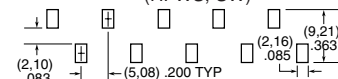
-VS -P
= Surface Mount with Pick & Place Pad (3 Pos. min.) (6,98mm) .275" min. post height

02 thru 20

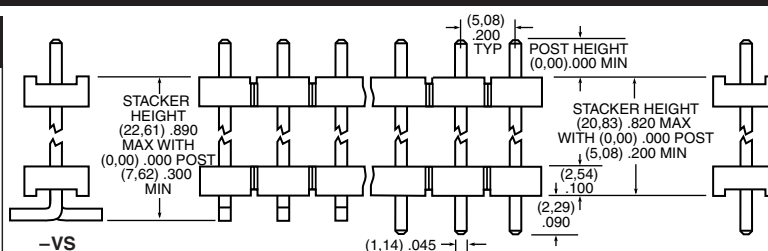
SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec or go to www.samtec.com?SW or HFWS for the recommended PCB layout.

(HFWS, SW)



Minimum (0,20mm) .008" solder paste recommended.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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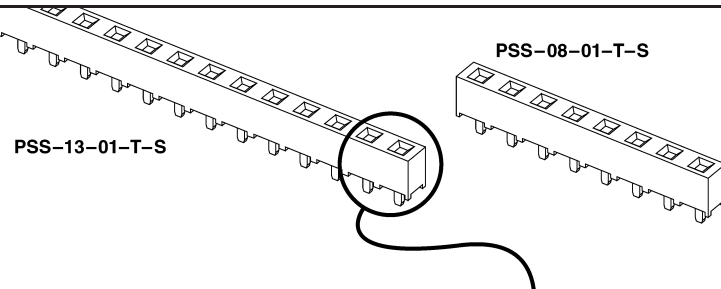
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7A

STANDARD .200" SOCKET PSS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?PSS

Insulator Material:

Black LCP

Max Processing Temp:

230°C for 60 sec.

Contact Material:

BeCu

Plating:

Sn over 50μ" (1,27μm) Ni

Insertion Depth:

(2,62mm) .103" to (5,03mm) .198"

Insertion Force:

28oz (7,78N) avg

Withdrawal Force:

20oz (5,56N) avg

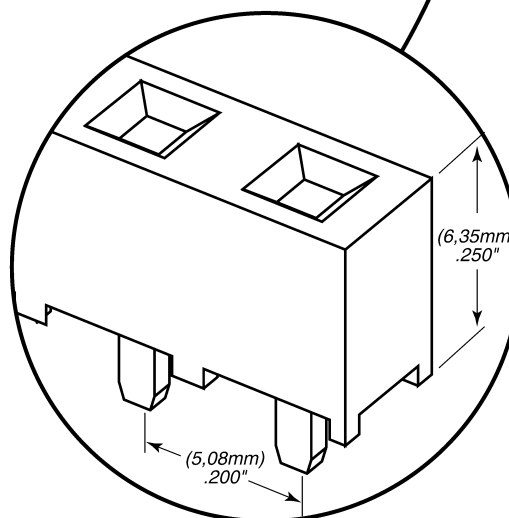
Voltage Rating:

500 VAC mated with FWS



POWER BUY

CONTACT
(7 Amps @ 70°C ambient)



AMBIENT TEMPERATURE	CURRENT RATING
20°C	13A
40°C	11A
60°C	8A
80°C	6A

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

(0,15mm) .006" max (02-14)

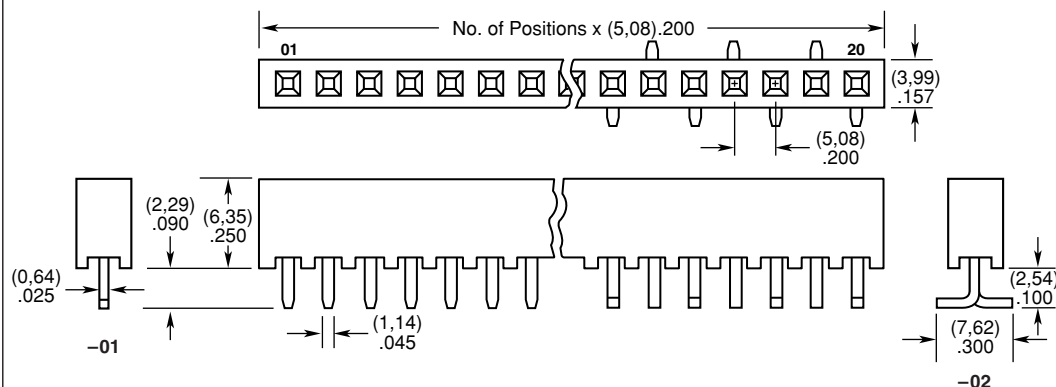
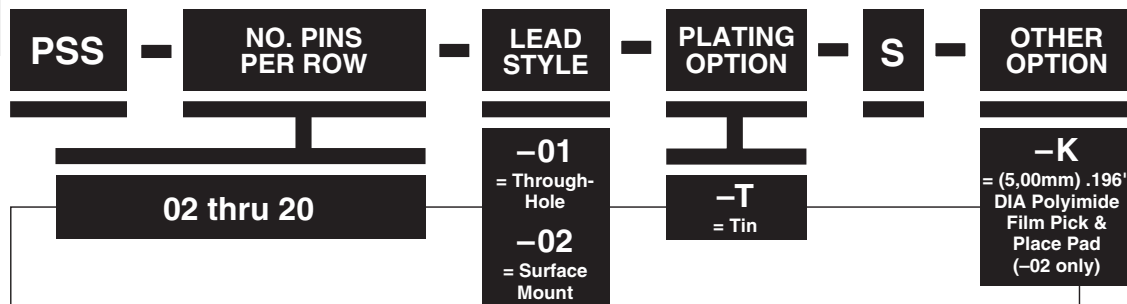
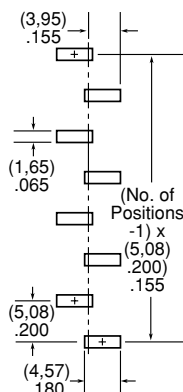
(0,20mm) .008" max (15-20)

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?PSS for recommended PCB layout.



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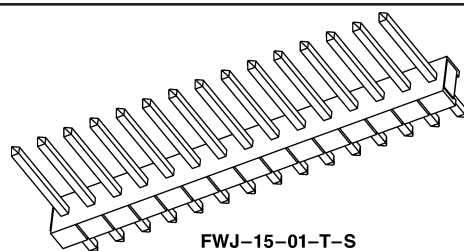
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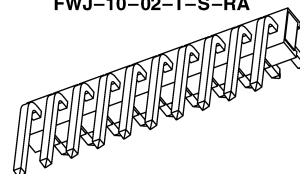
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FWJ-15-01-T-S

FWJ-10-02-T-S-RA



15A

.156" HEADER & STACKER FWJ, HFWJ, JW SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FWJ

Insulator Material:

Black Glass Filled Polyester

Operating Temp Range:

-65°C to +105°C

Terminal Material:

Phosphor Bronze

Plating:

Sn over 50µ" (1,27µm) Ni

HFWJ

For complete specifications see www.samtec.com?HFWJ

Same as FWJ except:

Insulator Material:

Natural Liquid Crystal

Polymer

Max Processing Temp:

230°C for 60 sec.

SMT Lead Coplanarity:

(0,20mm) .008" max (02-16)

(0,25mm) .010" max (17-24)



TYPE STRIP

FWJ

= Standard Header

HFWJ

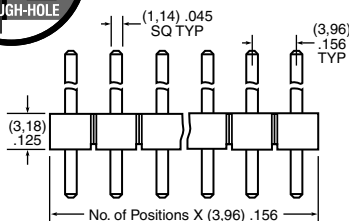
= High Temp Header

Mates with: FHP

Note: Some lengths, styles and options are non-standard, non-returnable.



01 thru 24



AMBIENT TEMPERATURE	CURRENT RATING
20°C	23A
40°C	18A
60°C	15A
80°C	11A

NO. PINS PER ROW

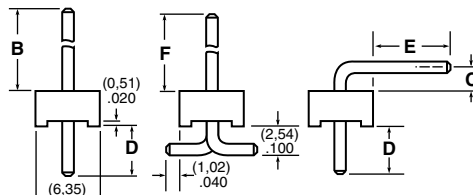
LEAD STYLE

T

S

TAIL OPTION

Specify LEAD STYLE from chart below.



LEAD STYLE	B	C	D	E	F
-01	(11,43) .450	N/A	(4,45) .175	N/A	(10,46) .412
-02	(12,70) .500	(2,54) .100	.175	(7,49) .295	(11,73) .462
-04	(20,55) .809	(4,95) .195	(3,96) .156	(13,56) .534	N/A
* -05	(3,81) .150	N/A	N/A	N/A	N/A

*FWJ Only

Leave blank for Through-Hole

- RA

= Right Angle (Style -01 not available)

-VS

= Surface Mount Requires HFWJ (2 pins/row minimum) Style -05 not available.

-VS -P

= Surface Mount with Pick & Place Pad (3 Pos. min.) (6,98mm) .275" min. post height

SPECIFICATIONS

For complete specifications see www.samtec.com?JW

Insulator Material:

Natural Liquid Crystal

Polymer

Max Processing Temp:

230°C for 60 sec.

Terminal Material:

Phosphor Bronze

Plating:

Sn over 50µ" (1,27µm) Ni

SMT Lead Coplanarity:

(0,20mm) .008" max (02-16)

(0,25mm) .010" max (17-24)



Mates with: FHP

Note: This Series is non-standard, non-returnable.

JW

NO. PINS PER ROW

04

T

S

STACKER HEIGHT

POST HEIGHT

TAIL OPTION

- "XXX"

= Stacker Height (in inches) (0,13mm) .005" increments

Example: -250 = (6,35mm) .250"

- "XXX"
= Post Height (in inches)

Leave blank for Through-Hole

-VS

= Surface Mount (2 pins/row minimum)

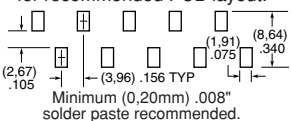
-VS -P

= Surface Mount with Pick & Place Pad (3 Pos. min.) (6,98mm) .275" min. post height

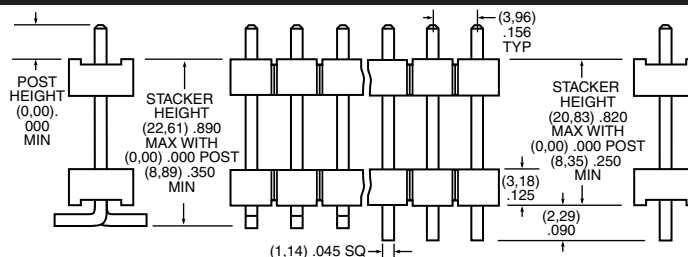
SUGGESTED PCB LAYOUTS

For reference only.

Please contact Samtec or go to www.samtec.com?HFWJ or JW for recommended PCB layout.



02 thru 24



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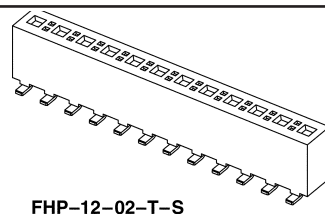
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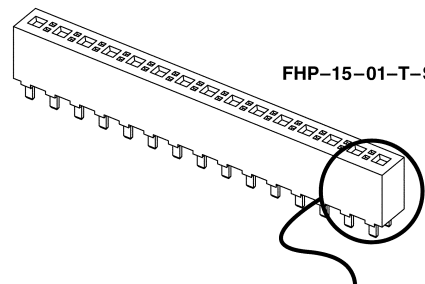
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FHP-12-02-T-S



FHP-15-01-T-S

15A

.156" PITCH SOCKET FHP SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FHP

Insulator Material:

Black LCP

Contact Material:

BeCu

Plating:

Sn over 50µ" (1.27µm) Ni

Insertion Depth:

(3.57mm) .140" to

(7.62mm) .300"



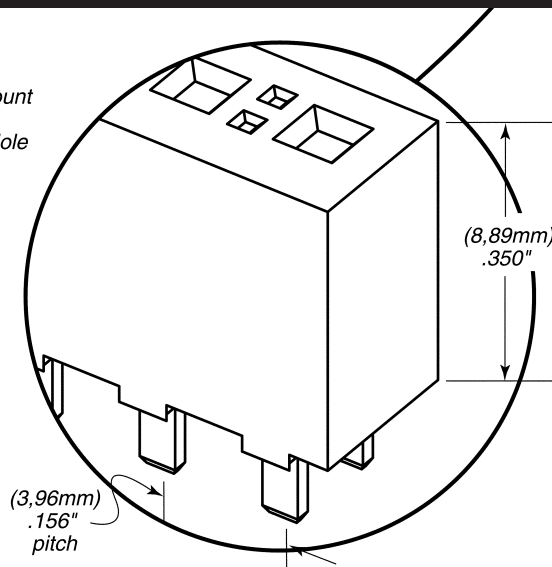
Mates with:
FWJ, HFWJ, JW

AMBIENT TEMPERATURE	CURRENT RATING
20°C	24A
40°C	21A
60°C	17A
80°C	13A

POWER EYE

CONTACT
(15 Amps @
70°C ambient)

Surface Mount
or
Through-Hole



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

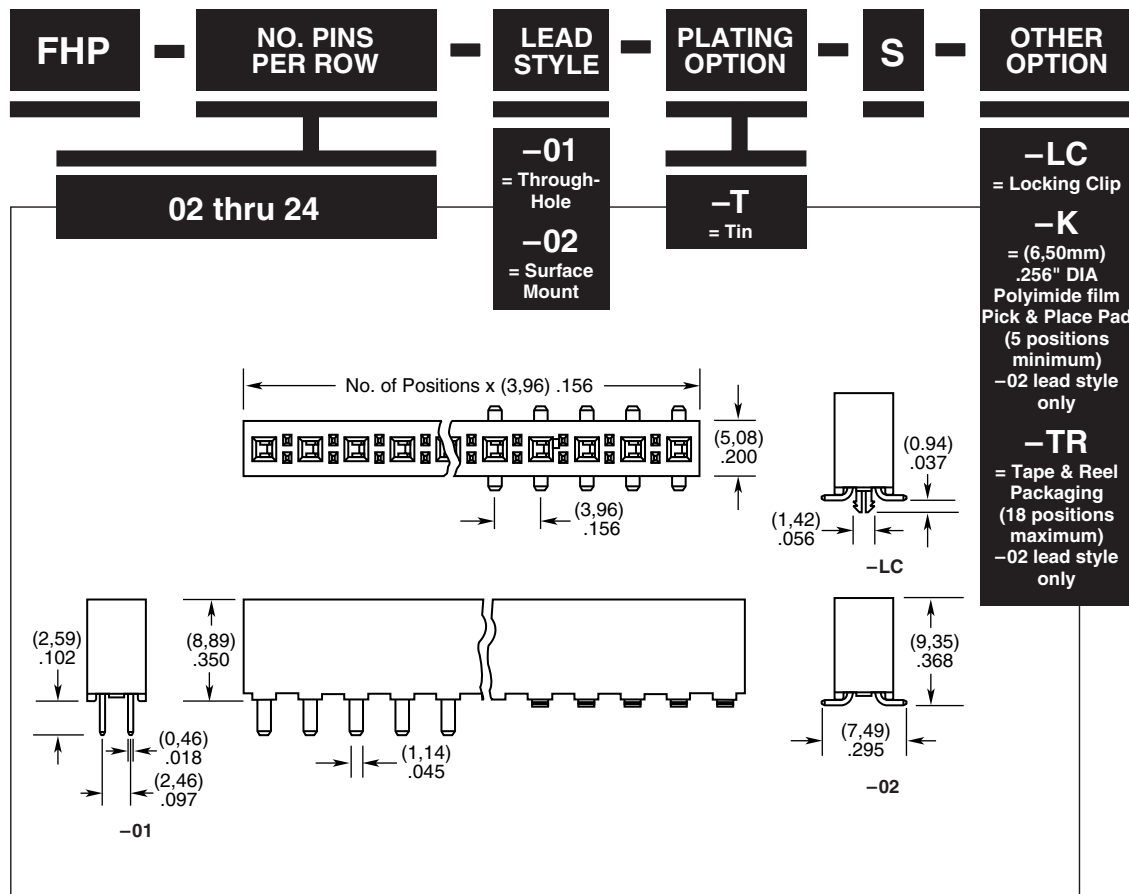
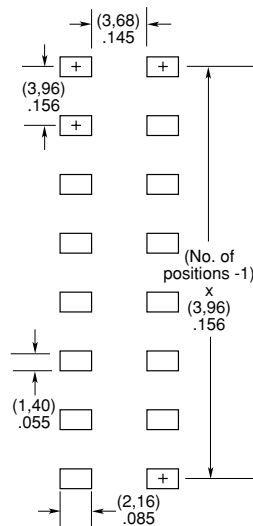
230°C for 60 seconds

SMT Lead Coplanarity:

(0.10mm) .004" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?FHP for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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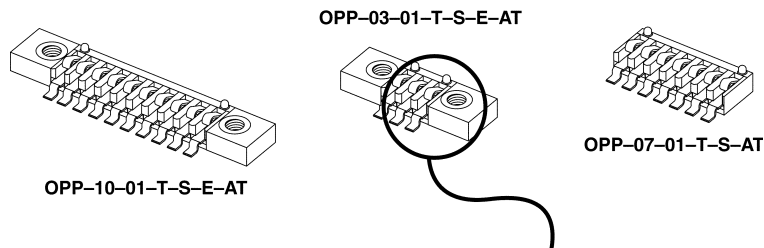
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ONE-PIECE INTERFACE OPP SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?OPP

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu
Operating Temp Range:
-65°C to +105°C
Current Rating:
5A @ 75°C ambient
Plating:
Sn over 50µ" (1,27µm) Ni

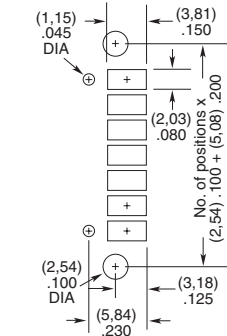
Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

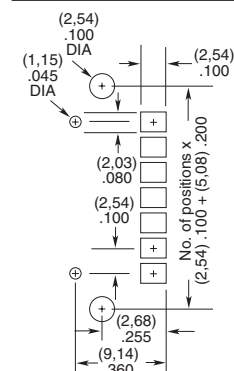
Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,15mm) .006" max

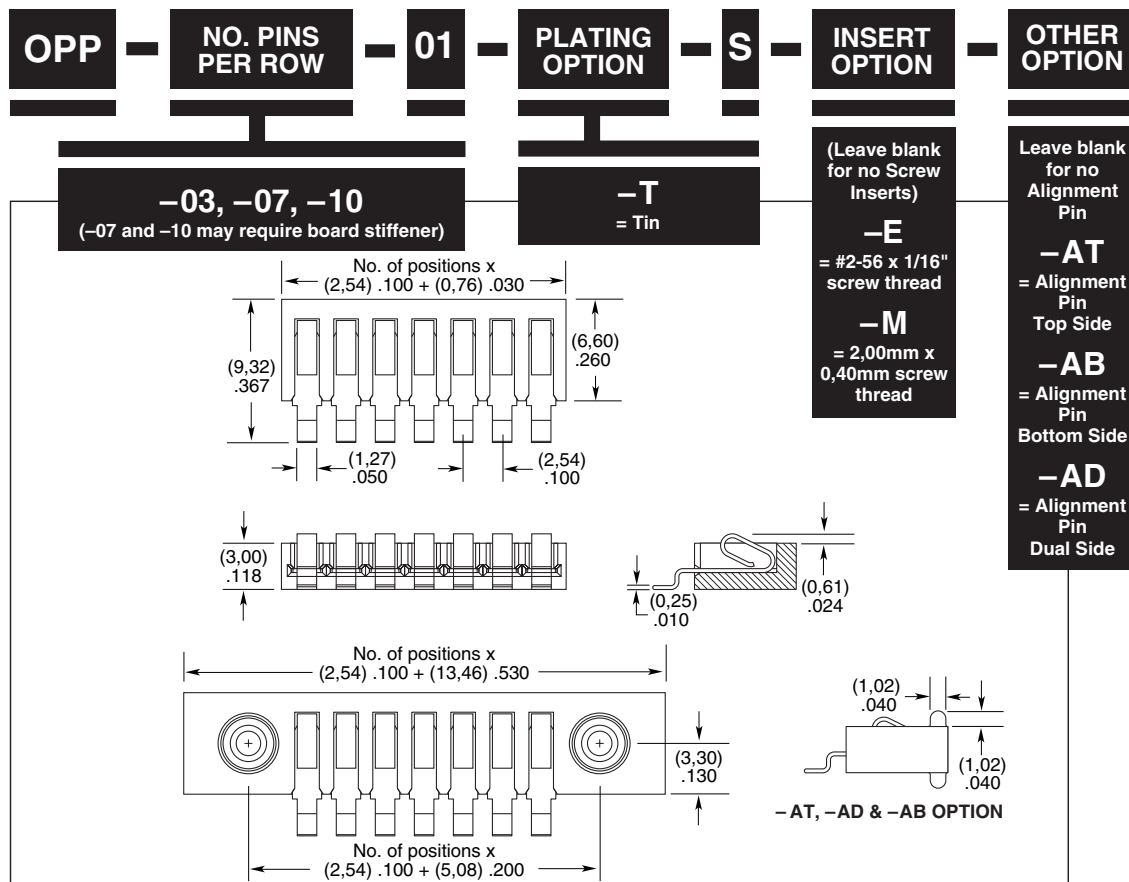
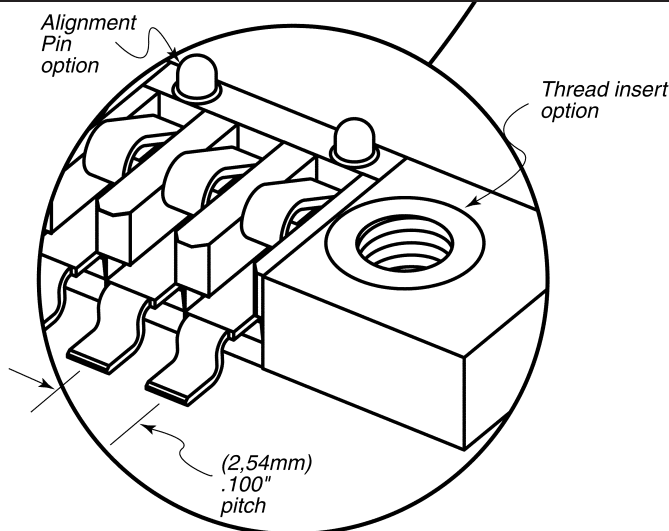
Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?OPP for recommended PCB layout.



COMPRESSION BOARD PADS



SOLDER BOARD PADS (Tin or Tin/Lead Plated)



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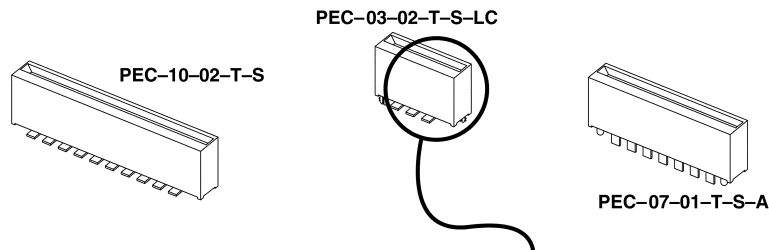
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POWER EDGE CARD PEC SERIES

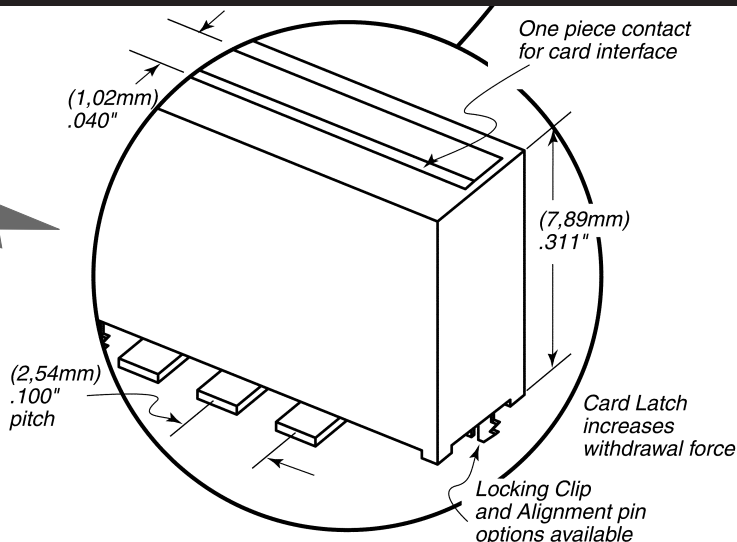
SPECIFICATIONS

For complete specifications see www.samtec.com?PEC

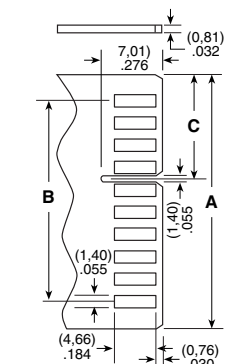
Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu
Current Rating:
5A @ 75°C ambient
Operating Temp Range:
-65°C to +105°C
Plating:
Sn over 50µ" (1,27µm) Ni

Processing:

Max Processing Temp:
230°C for 60 seconds
SMT Lead Coplanarity:
(0,10mm) .004" max
Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?PEC for recommended PCB layout.

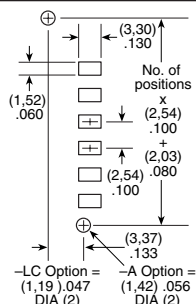


Note: Some sizes, styles and options are non-standard, non-returnable.



POSITION	A	B	C
-03	(11,18) .440	(5,08) .200	N/A
-07	(23,34) .840	(15,24) .600	(9,40) .370
-10	(28,96) .1140	(22,86) .900	(11,94) .470

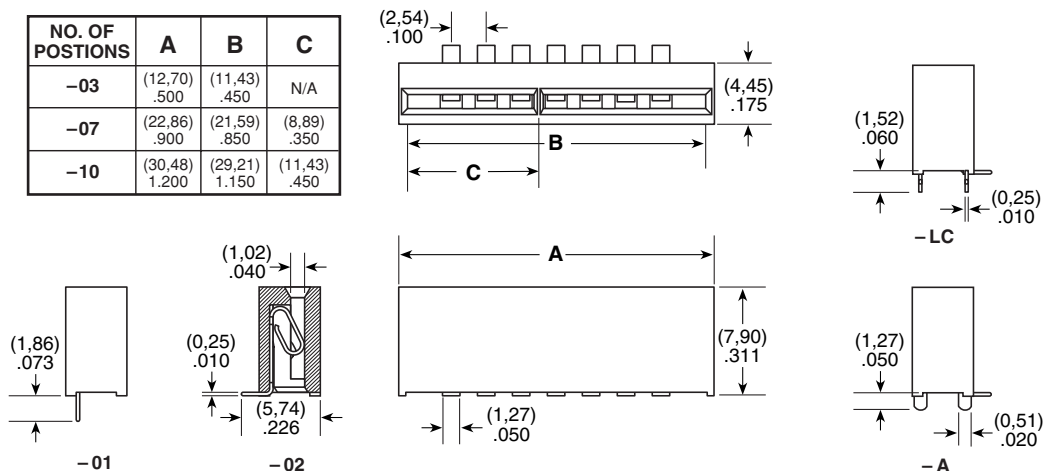
CARD LAYOUT



BOARD LAYOUT

PEC	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	S	OPTION
-03, -07, -10		-01 = Straight Tail -02 = Surface Mount	-T = Tin		-A = Alignment Pin -LC = Locking Clip

NO. OF POSITIONS	A	B	C
-03	(12,70) .500	(11,43) .450	N/A
-07	(22,86) .900	(21,59) .850	(8,89) .350
-10	(30,48) 1.200	(29,21) 1.150	(11,43) .450



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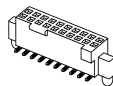
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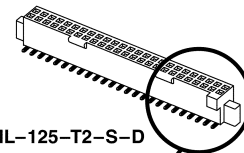
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SFML-110-T2-S-D-A



SFML-125-T2-S-D



LOCKING SOCKET SFML SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFML

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
Phosphor Bronze

Current Rating:
2A @ 80°C ambient

Voltage Rating:
350 VAC mated with TFML

Operating Temp Range:
-65°C to +125°C

Plating:
Au over 50µ" (1,27µm) Ni

Contact Resistance:
15 mΩ max

Insertion Depth:
(3,05mm) .120" to
(4,06mm) .160"

Insertion Force:
2.5oz (0,69N) avg.

Unmating Force:
Withdrawal force per contact=

1.5oz (0,42N) average;

Incremental unmating force

with latching mechanism:

10-20 pins/row (One Latch)

increases withdrawal force

by 4 x average;

25 & 30 pins/row (Two Latches)

increases withdrawal force

by 3 x average;

35-50 pins/row (Three

Latches) increases

withdrawal force by 1.7 x

average

Max Cycles:

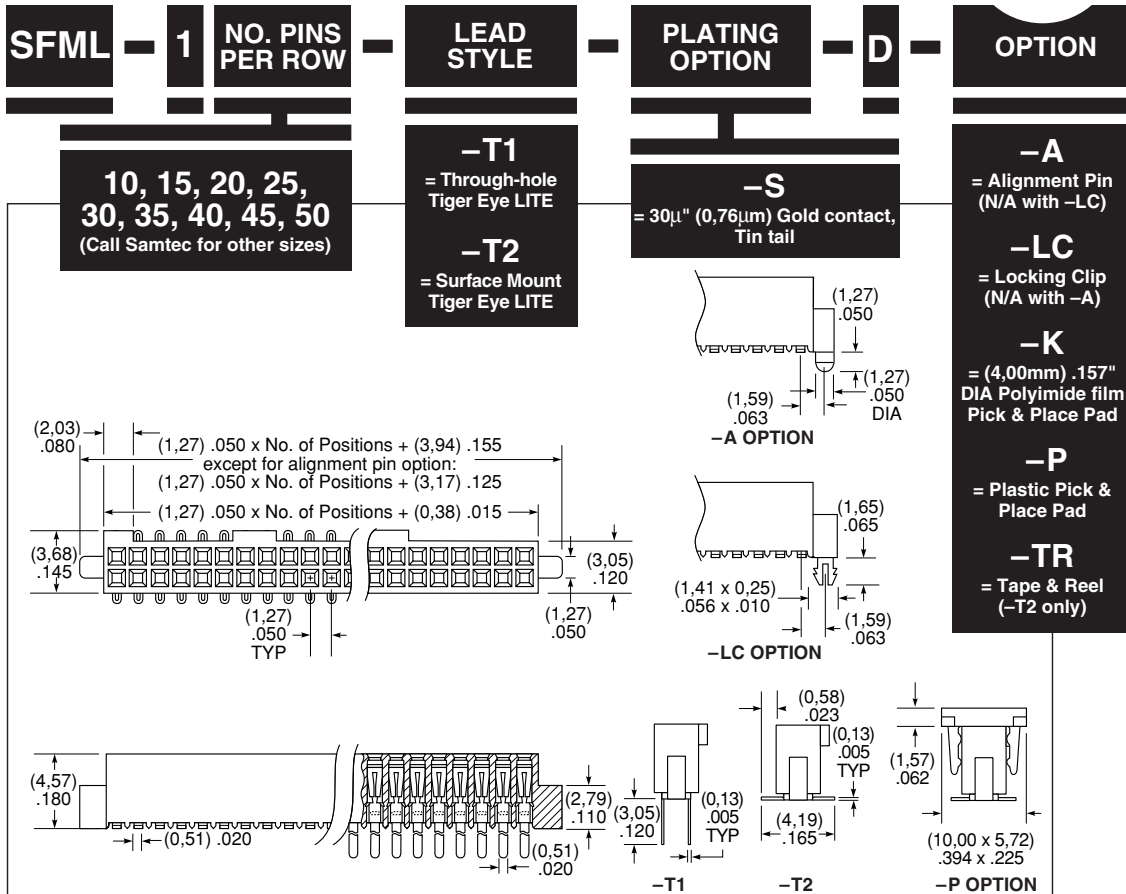
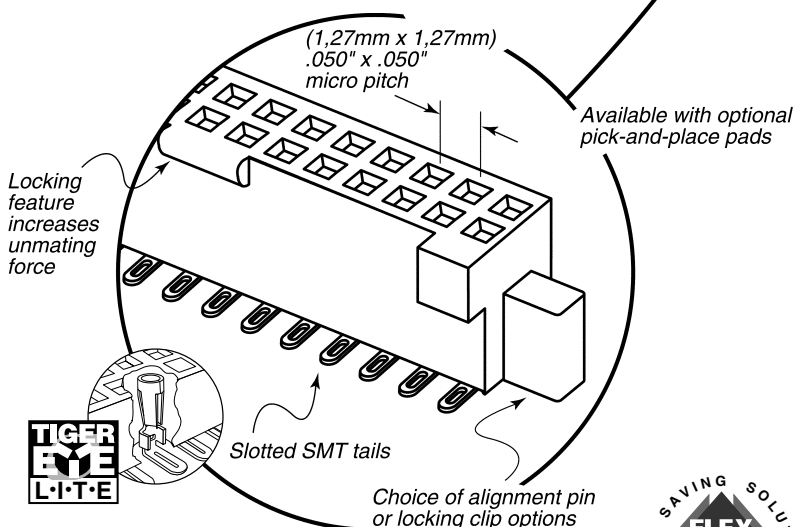
100 with 10µ" (0,25µm) Au

Note: Some sizes, styles and

options are non-standard,

non-returnable.

Mates with:
TFML



Due to technical progress, all designs, specifications and components are subject to change without notice.

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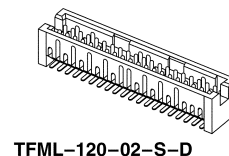
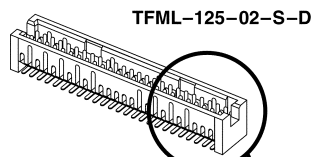
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LOCKING HEADER TFML SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?TFML

Insulator Material:

Black Liquid Crystal Polymer



Terminal Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Voltage Rating:

350 VAC mated with SFML

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50µ" (1,27µm) Ni

Locking Features:

10-20 = One Latch

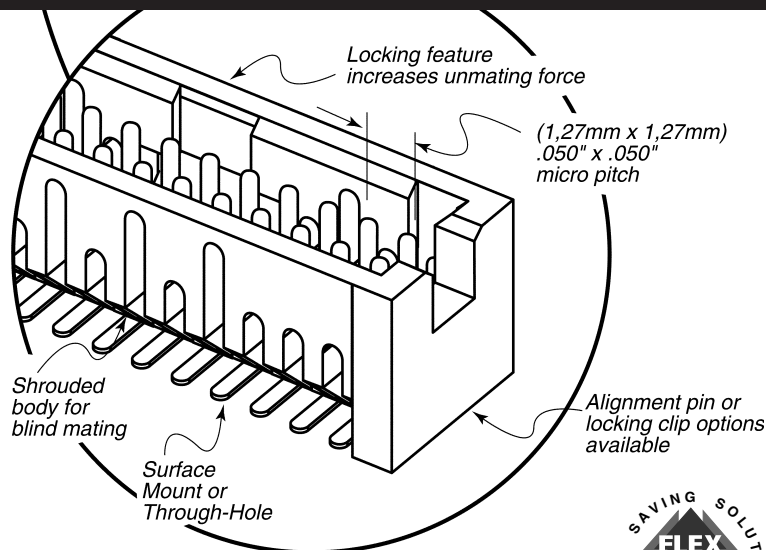
25 & 30 = Two Latches

35-50 = Three Latches

Note:

Some sizes, styles and options are non-standard, non-returnable.

Mates with:
SFML



Processing:

Max Processing Temp:
230°C for 60 seconds

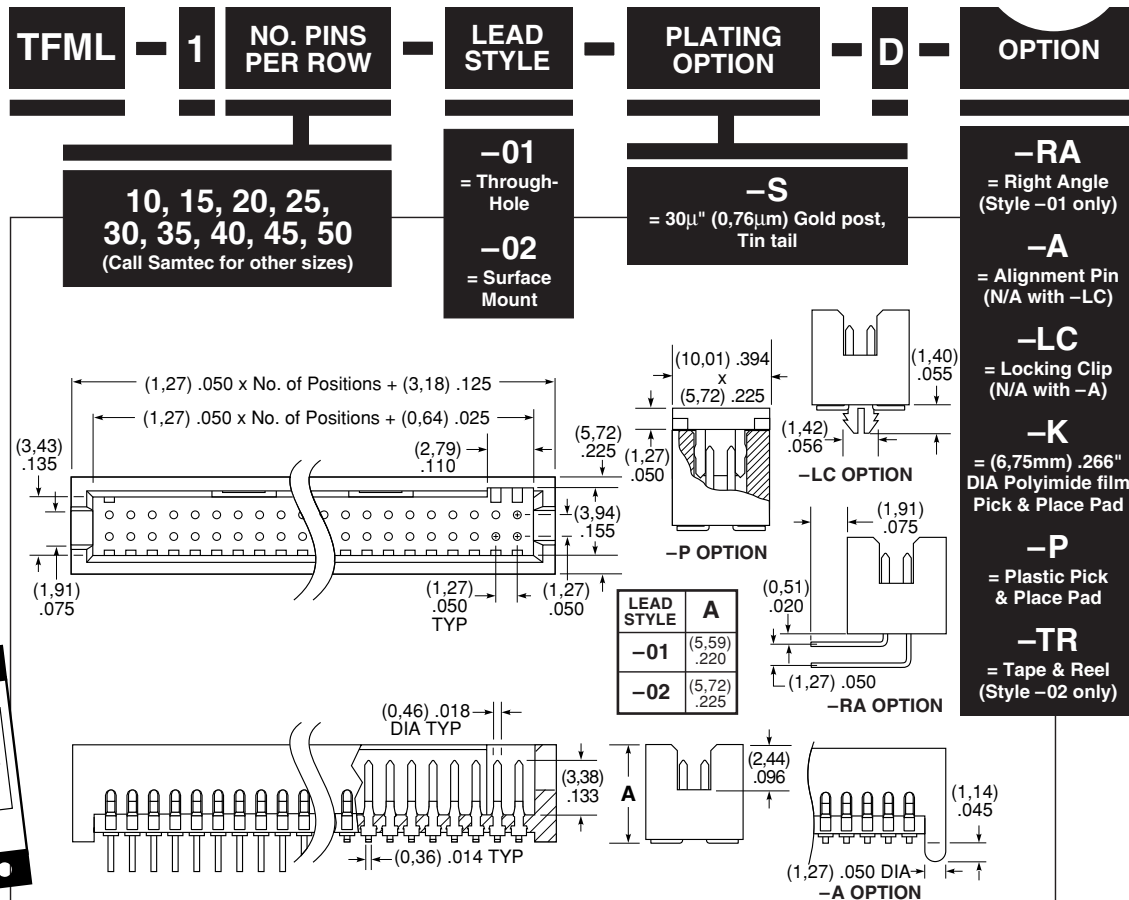
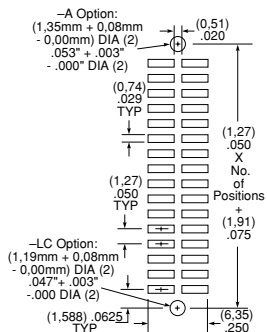
SMT Lead Coplanarity:

(0,10mm) .004" max (10-25)

(0,15mm) .006" max (30-50)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?TFML for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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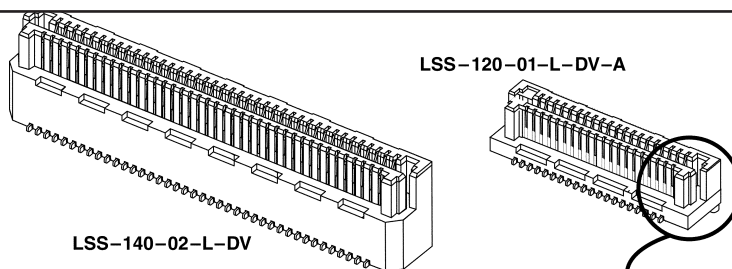
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.025" (0,635mm) TERMINAL/SOCKET LSS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?LSS

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Au over 50μ" (1,27μm) Ni

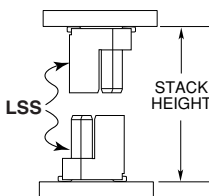
SMT Lead Coplanarity:

(0,10mm).004" max

Mates with:
LSS

APPLICATION

LEAD STYLE	STACK HEIGHT
-01 & -01	(6,00) .024
-01 & -02	(9,00) .354
-02 & -02	(12,00) .472



Self-mating
combination
header/socket

Friction Lock

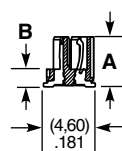
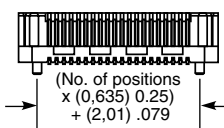
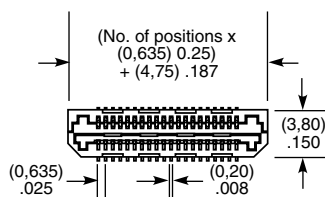
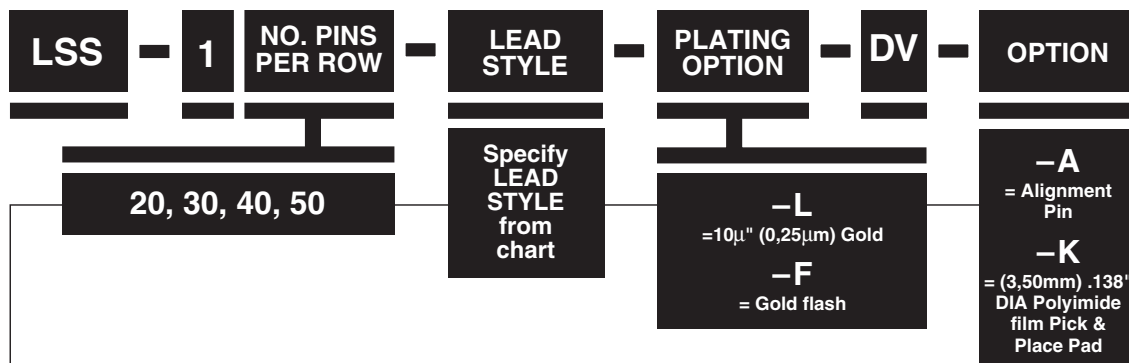
Polarized

One part number
for both socket and
terminal for 6mm and
12mm stack heights

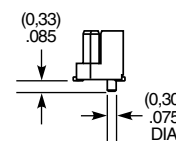
Optional
Alignment Pin

Audible
Click

(0,635mm)
.025"
pitch



LEAD STYLE	A	B
-01	(4,45) .175	(1,55) .047
-02	(7,45) .293	(4,55) .179



-A OPTION

Note: Some sizes, styles and options are non-standard, non-returnable.

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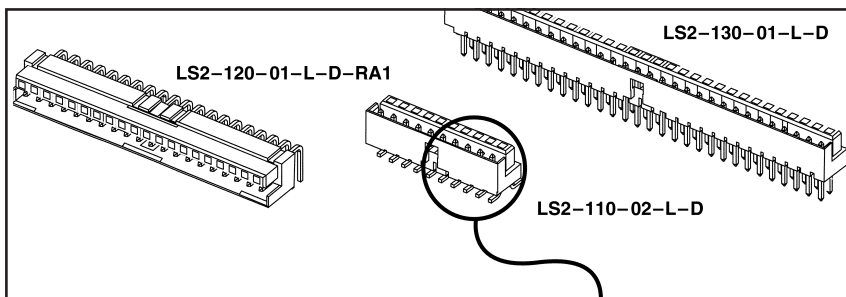
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2mm TERMINAL/SOCKET LS2 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?LS2

Insulator Material:
Liquid Crystal Polymer



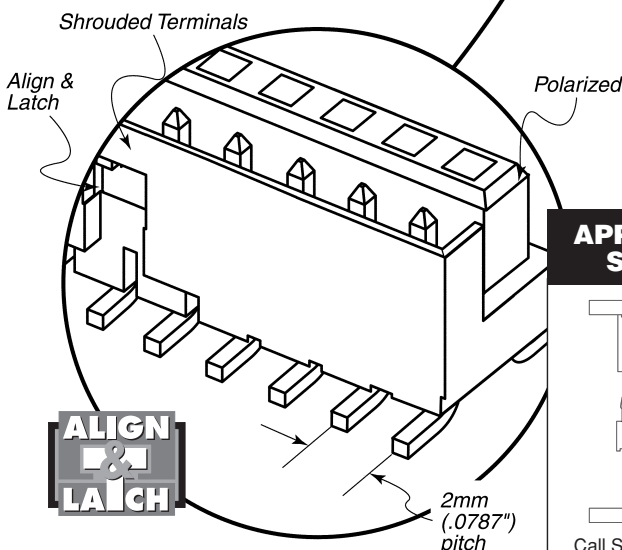
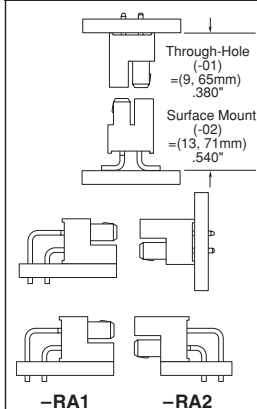
Contact Material:
Phosphor Bronze
Current Rating:
Testing Now!

Operating Temp Range:
-65°C to +125°C

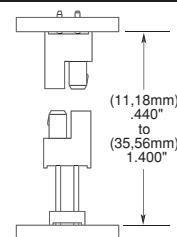
Plating:
Au or Sn over 50μ" (1,27μm) Ni

Mates with:
LS2

APPLICATION



APPLICATION SPECIFIC



Call Samtec for elevated board stacking applications.

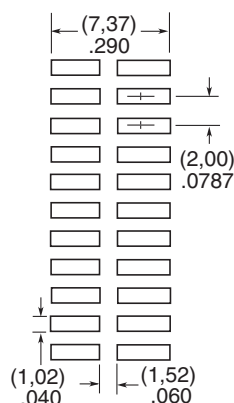
Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,15mm) .006" max

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?LS2 for recommended PCB layout.



LS2	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	D	TAIL OPTION	OPTION
		05, 10, 15, 20, 25, 30	-01 = Through-Hole -02 = Surface Mount	-F = Gold flash on contact, Tin on tail -L = 10μ" (0,25μm) Gold on contact, Tin on tail -S = 30μ" (0,76μm) Gold on contact, Tin on tail		-01 only -RA1 = Right Angle (Shroud Down) -RA2 = Right Angle (Shroud Up)	-K = (6,30mm) .248" DIA Polyimide Film Pick & Place Pad (-02 only)

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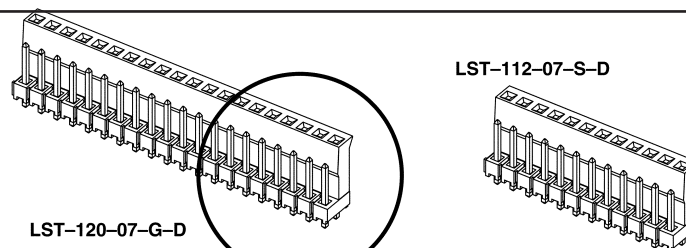
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.100" (2,54mm) SOCKET/TERMINAL LST, HLST SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?LST or www.samtec.com?HLST

Insulator Material:

Standard: Black
Glass Filled Polyester
High Temp: Top (Socket)
Black LCP;
Bottom (Terminal)
Natural LCP

Terminal Material:

Phosphor Bronze

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Plating:

Au or Sn over 50μ" (1,27μm) Ni

Insertion Depth:

(3,68 mm) .145" to (6,35 mm) .250"

Insertion Force:

6oz (1,67N) avg

Withdrawal Force:

4oz (1,11N) avg

Cycles:

100 with 10μ" (0,25μm) Au

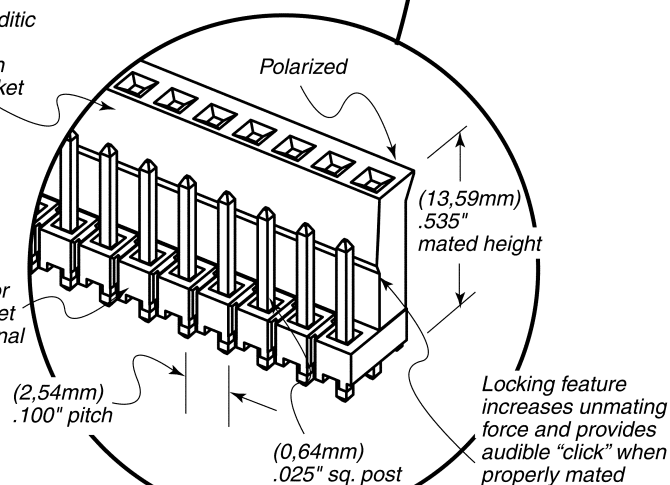


Mates with:
LST, HLST



Hermaphroditic self-mating combination header/socket system

One part number for both socket and terminal

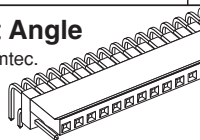


Note: Some lengths, styles and options are non-standard, non-returnable.

Also Available

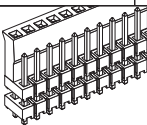
Right Angle

Call Samtec.



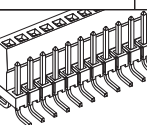
Elevated

Call Samtec.



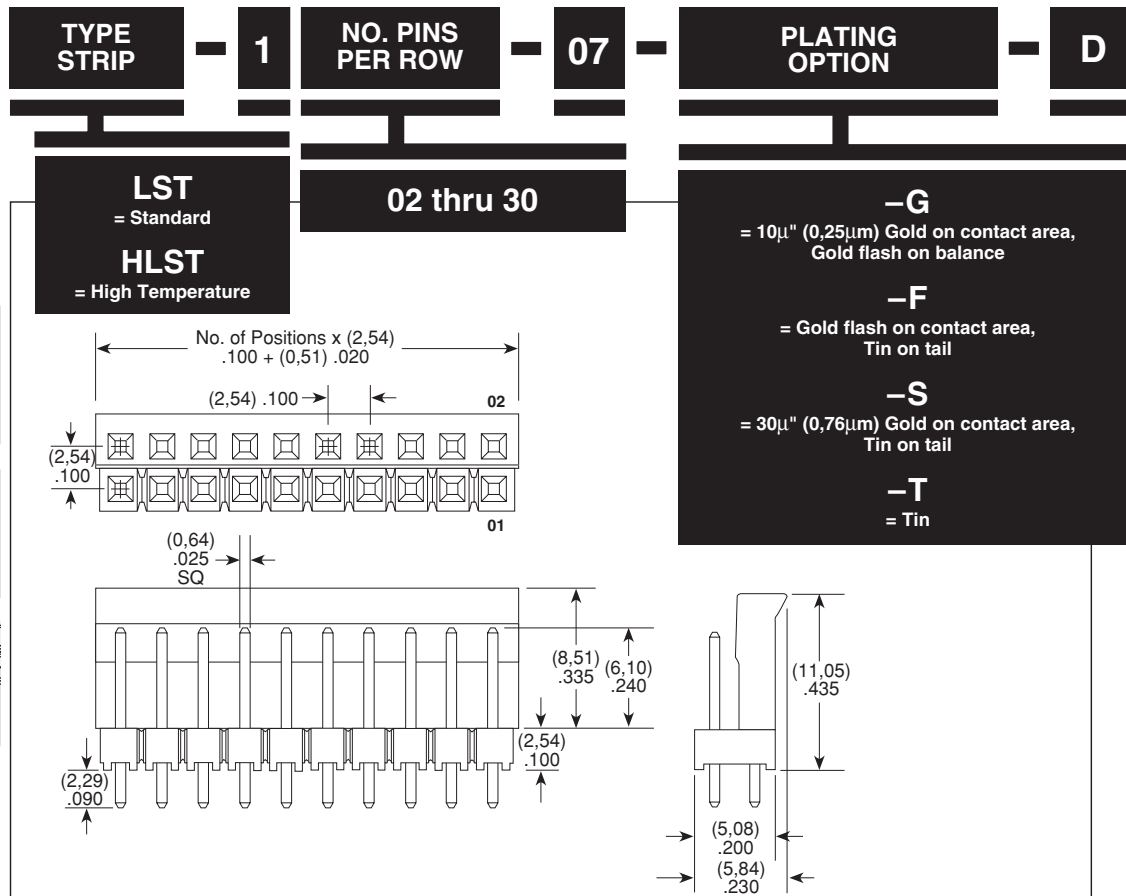
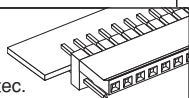
Surface Mount

Call Samtec.



Edge Mount

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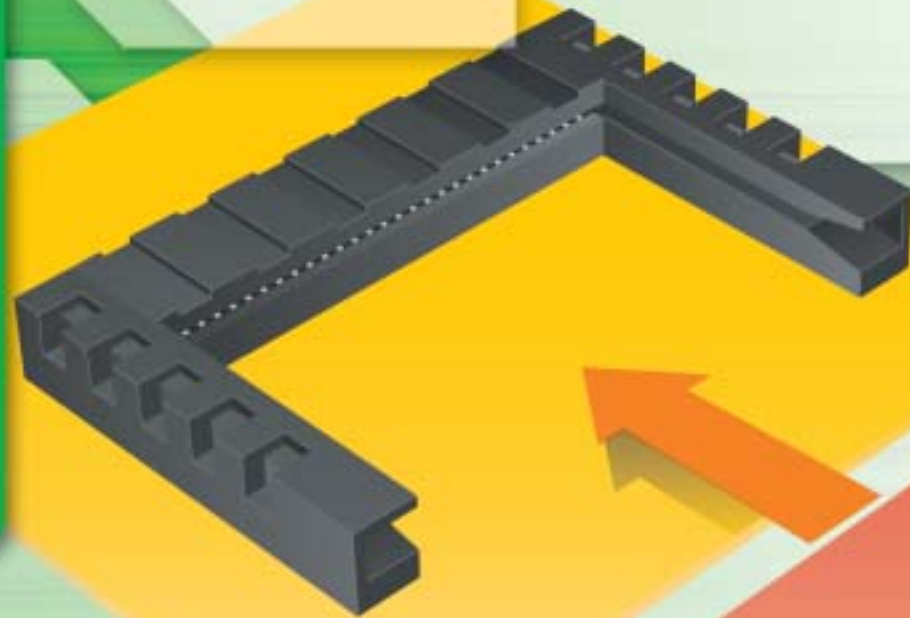
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MICRO CARD

Multiple Applications

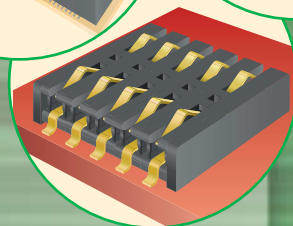
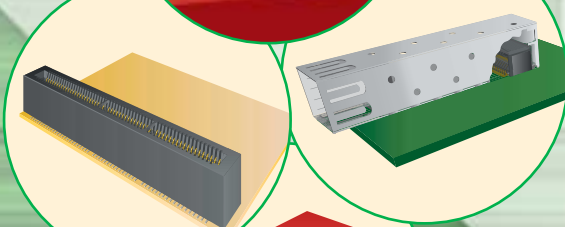
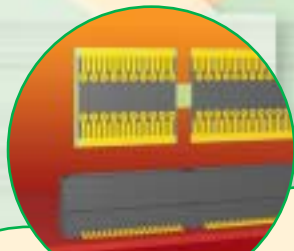
- Board-to-Board
- Upgrade Systems
- Data Storage
- Test/Debug Systems
- Configure Systems to Order
- Memory
- Add-on Boards

MICRO
CARD



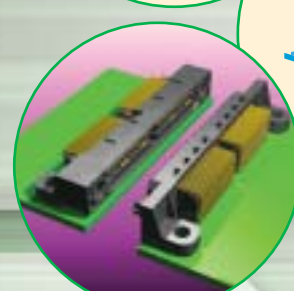
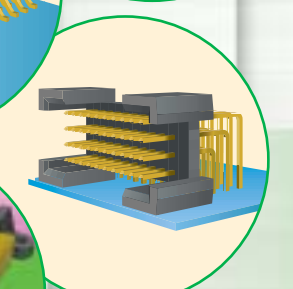
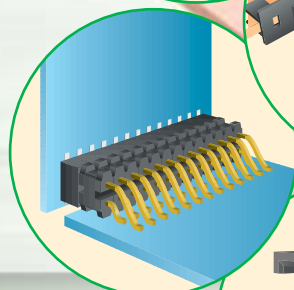
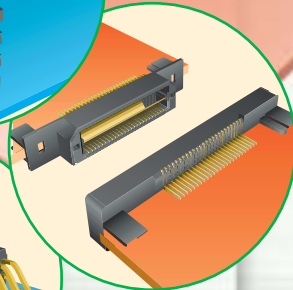
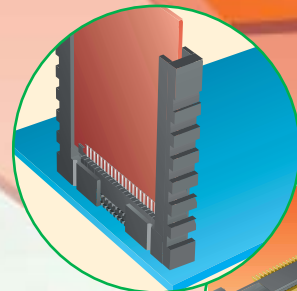
Single Element Systems

- Mini Edge Card
- Micro Edge Card
- Transceiver
- Smart Card
- High Speed Interface Cards



Two-Piece Systems

- Pin & Socket
- Blade & Beam
- Through-Hole
- Surface Mount
- Edge-Mount
- Right Angle
- High Density
- High Speed
- Shrouded



samtec

MICRO

APPLICATIONS

Micro Edge Card Sockets (0,8mm Pitch)	244
High Speed Jump Cards (0,8mm Pitch)	245
Mini Edge Card Sockets (1mm Pitch)	246
Micro Bay & Smart Card Interfaces	247
Right Angle & Edge Mount	248-249
Flex Card and Storage Combo Interfaces	250

STANDARD PRODUCTS

Micro Edge Card Sockets	
Sockets (MEC8, HSEC8, QUP8)	251-254, 256
High Speed Interface Cards (HSC8, QB8)	255, 257

Transceiver Interfaces

Transceiver Interface (MECT)	258
Transceiver Cage (SFPC, SFPK)	259

Mini Edge Card Interfaces

Mini Edge Card Sockets (MEC1)	260-262
Micro Bay Interfaces (MB1)	263
Smart Card Interfaces (SCC)	274

Disk Drive Interfaces

Storage Combo (SCID)	264-265
----------------------------	---------

Flex Card Interfaces

(1,27mm) Flexible System (FCF, EMF)	266-267
PCMCIA System (PCMT, PCMS)	268-269
Compact Flash System (CFT, CFS)	270-271
2mm Pitch Flexible System (FCT, EMT, SM2)	272-273

CARD

MICRO EDGE CARDS

ELEVATED HIGH SPEED

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

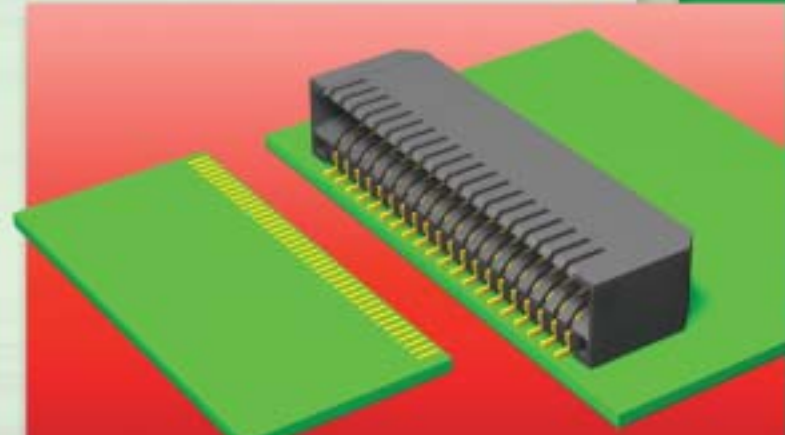
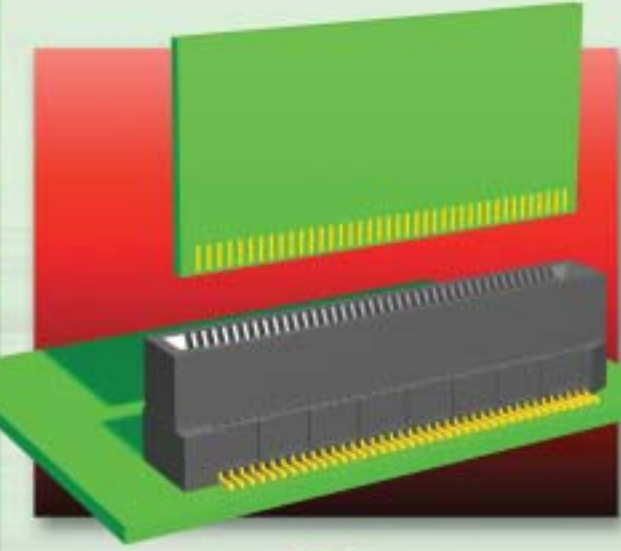
BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE



MEC8
0,80mm (.0315") Pitch



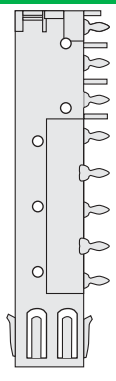
pgs. 251-253

HSEC8
0,80mm (.0315") Pitch


pg. 254

0,80mm Pitch

- Single unit connector system
- No connector required on card
- Right Angle, vertical and edge mount
- Removable, reusable data storage
- Mates with (0,80mm) .031" or (1,60mm) .062" thick cards
- From 20 to 140 I/Os

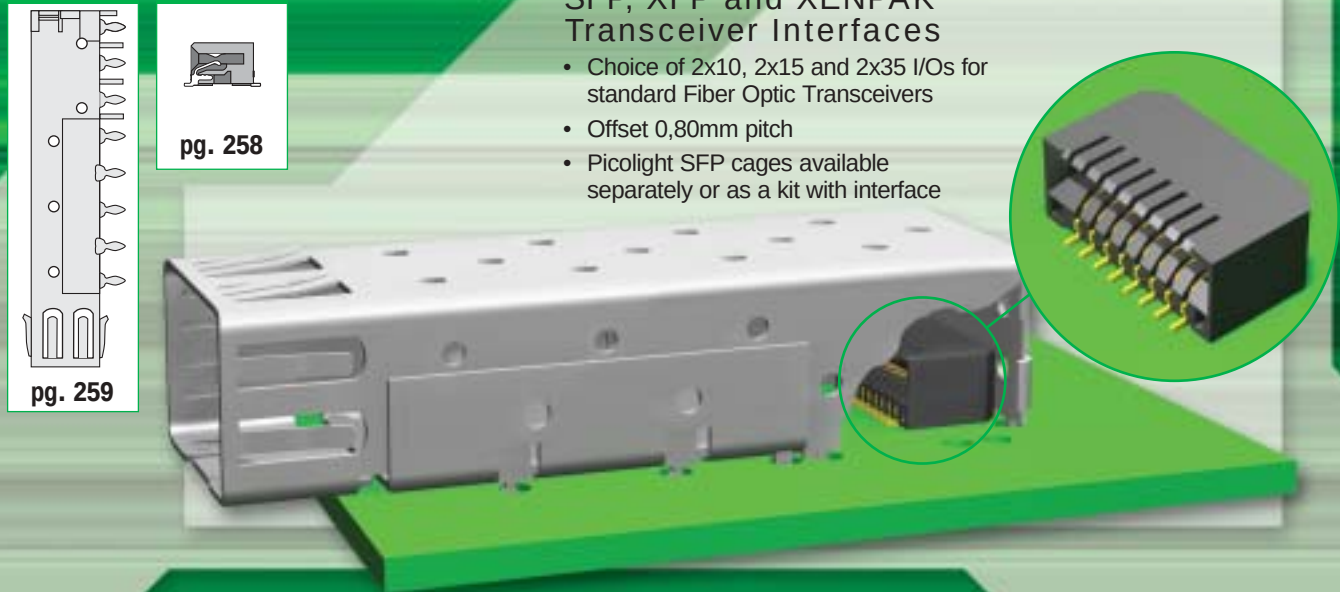
SFPC

pg. 259

MECT

pg. 258

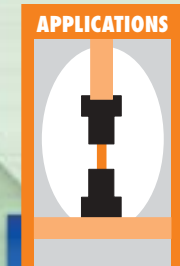
SFP, XFP and XENPAK Transceiver Interfaces

- Choice of 2x10, 2x15 and 2x35 I/Os for standard Fiber Optic Transceivers
- Offset 0,80mm pitch
- Picolight SFP cages available separately or as a kit with interface



Interface Cards

- High speed interface cards (HSC8 Series)
- 25mm standard board spacings
- Mates with vertical, right angle and edge mount sockets
- Choice of high speed (HSEC8 Series) or standard (MEC8 Series) sockets
- Single Ended or differential pair signal routing
- 50 or 70 Single Ended I/Os
- 33 or 46 Differential Pair I/Os



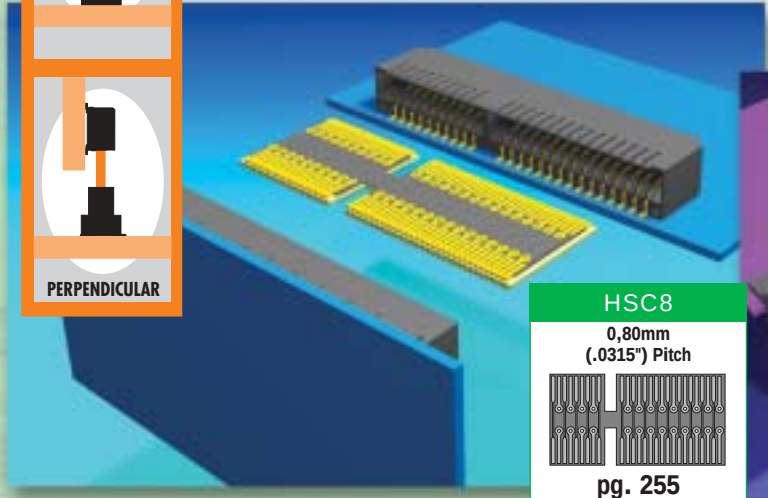
APPLICATIONS

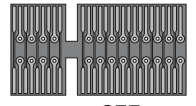
PARALLEL

PERPENDICULAR

MEC8 Mated With HSC8

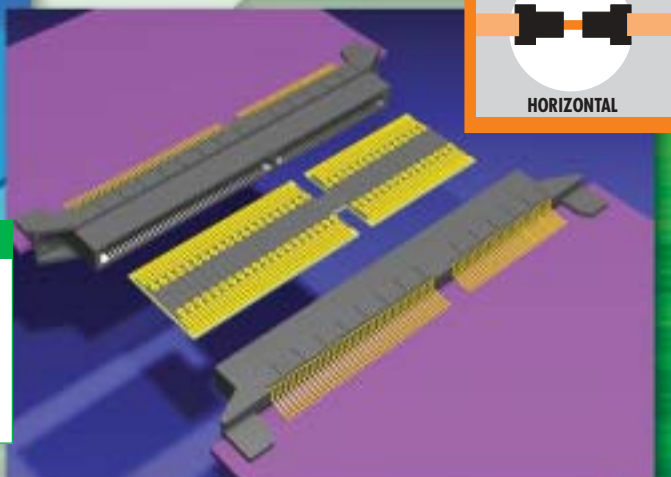
CONFIGURATION (25mm Stack)	FREQUENCY RATING	IMPEDANCE	NEXT
Single Ended	2.5 GHz	50Ω±10%	9.6%
Differential Pair	3.5 GHz	100Ω±10%	2.4%

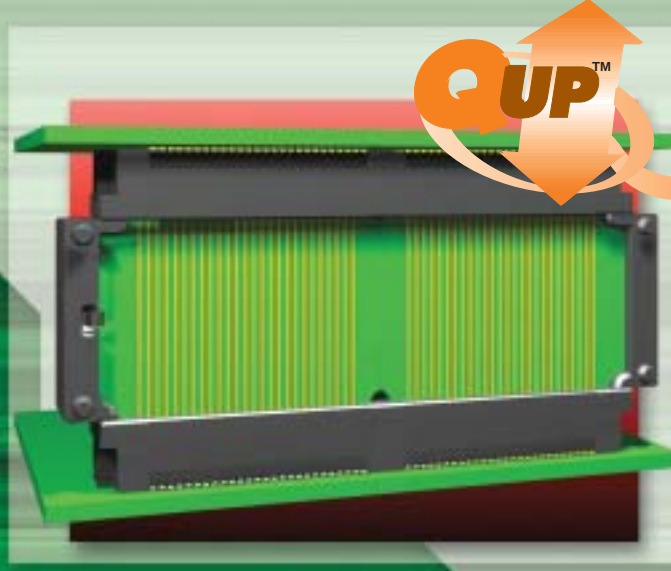


HSC8
0,80mm (.0315") Pitch

pg. 255

APPLICATIONS

HORIZONTAL

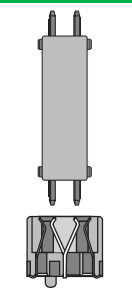




QUP

Elevated Q Stacking

- Parallel high speed boards mate with two modified Q-Strips™
- Ground plane embedded in high speed boards
- "Engineered Electrical System" provides excellent electrical performance in elevated board stacking applications
- Change stacking height via PCBs is quicker and less expensive than modifying traditional connector system
- 19mm and 30mm standard stack height. Application specific heights on request
- Application Specific latches available. Call Samtec.



QB8/QUP8
pgs. 256-257

MINI EDGE CARD SOCKETS



1mm Pitch

- Single unit connector system
- No connector required on card
- Right angle, vertical and edge mount
- Removable, reusable data storage
- Mates with (0,80mm) .031" or (1,60mm) .062" thick cards
- From 10 to 136 I/Os

MEC1
1,00mm
(.0394") Pitch

pg. 260

pg. 261-262

Micro Bay Card Guides

- 1mm (.0394") pitch
- Single unit connector system
- No connector required on card
- Solder locks for mechanical stability
- Low 5mm (.200") profile

MB1
1,00mm
(.0394") Pitch

pg. 263

Smart Card Connectors

- 3, 4 and 5 row designs
- .100" (2,54mm) pitch
- 3mm profile

SCC
.100"
(2,54mm) Pitch

pg. 274

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

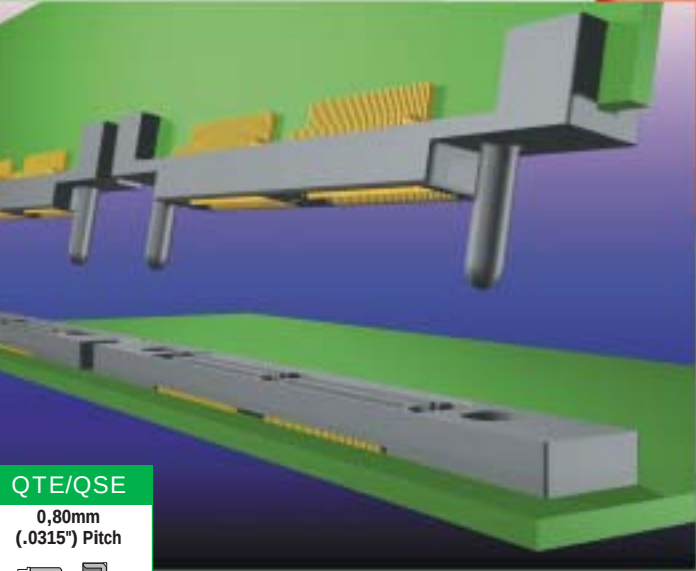
CABLE
INTERFACES

SOCKET/
REFERENCE

RIGHT-ANGLE & EDGE MOUNT

Perpendicular

- Choice of pitches
- Ultra-high density
- Surface mount or through-hole
- Shrouded options
- Choice of Blade & Beam or Pin-and-Socket
- High Speed and Basic Systems

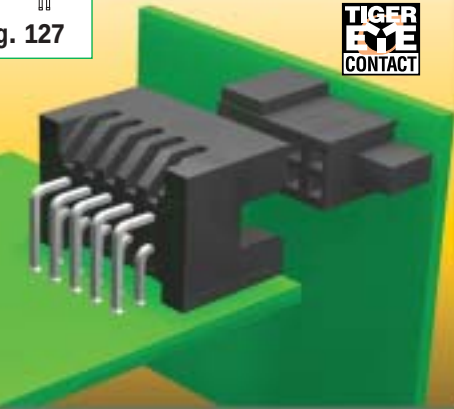


QTE/QSE
.080mm (.0315") Pitch
pgs. 48-49

Pin & Socket

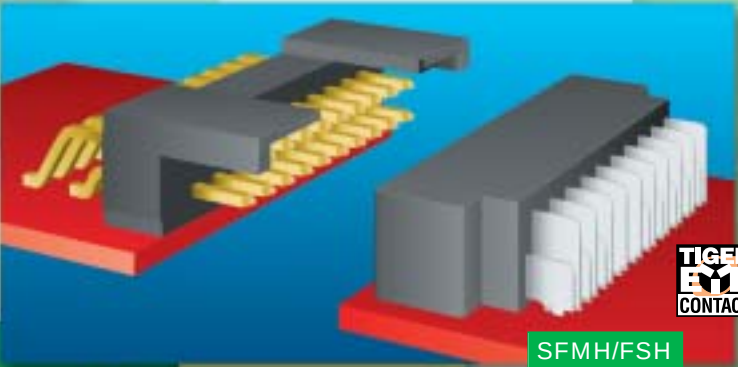
- Systems on .050" (1,27mm), 2mm (.0787") and .100" (2,54mm) pitch
- Surface mount & through-hole
- Shrouded options
- Hot pluggable options
- Single row, double row & high density designs

TFM
.050" (1,27mm) Pitch
pg. 127



Blade & Beam

- Systems for perpendicular & coplanar board interfaces
- 0,8mm and .025" (0,635mm) pitch
- Guide post and rugged board mating options



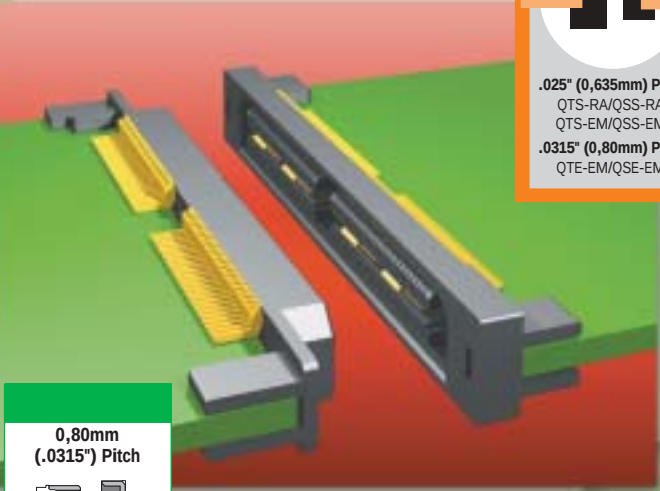
SFMH/FSH
.100" (2,54mm) Pitch
pgs. 137,141

HPT/FTSH
.100" (2,54mm) Pitch
pgs. 132-135

QTS/QSS
.025" (0,635mm) Pitch
pgs. 40-41

Coplanar "Pizza Box"

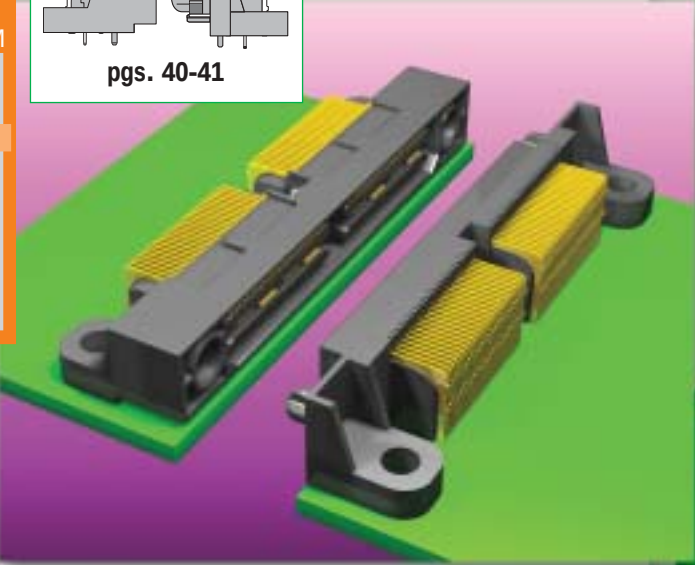
- Horizontal server rack applications
- Choice of pitches
- Through-hole, surface mount, mixed technology or edge mount
- High Speed and Basic Systems



0,80mm (.0315") Pitch
pgs. 48-49

HORIZONTAL BLADE & BEAM
.025" (0,635mm) Pitch
QTS-RA/QSS-RA
QTS-EM/QSS-EM
.0315" (0,80mm) Pitch
QTE-EM/QSE-EM

QTS/QSS
.025" (0,635mm) Pitch
pgs. 40-41



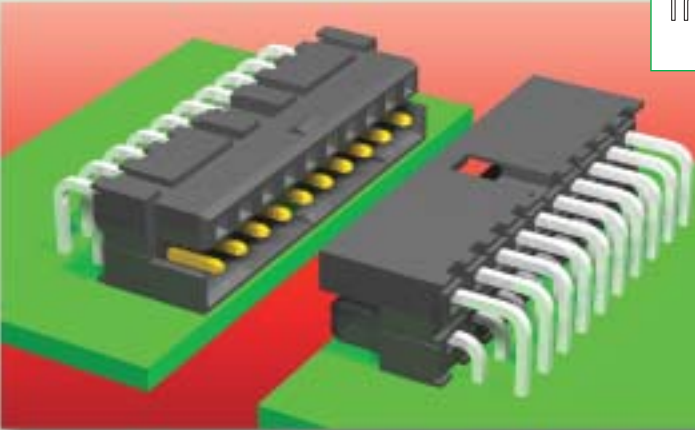
LS2
2mm (.0787")
pg. 178

TMMS/TSH
2mm (.0787")
pgs. 82,164

TMM/TMMH/MMT
2mm (.0787")
pgs. 156-163

SQT/MMS
2mm (.0787")
pgs. 173,176

HORIZONTAL PIN & SOCKET
.050" (1,27mm) Pitch
FSH/SFMH
FTSH-DH/CLP-DH
2mm (.0787") Pitch
TSH/MMS
TMMH-RA/SQT-RA
TMM-RA/SQT-RA
MMT/MMS
.100" (2,54mm) Pitch
TSW-RA/BCS-HE
TSM/SSM
TSSH/SSM

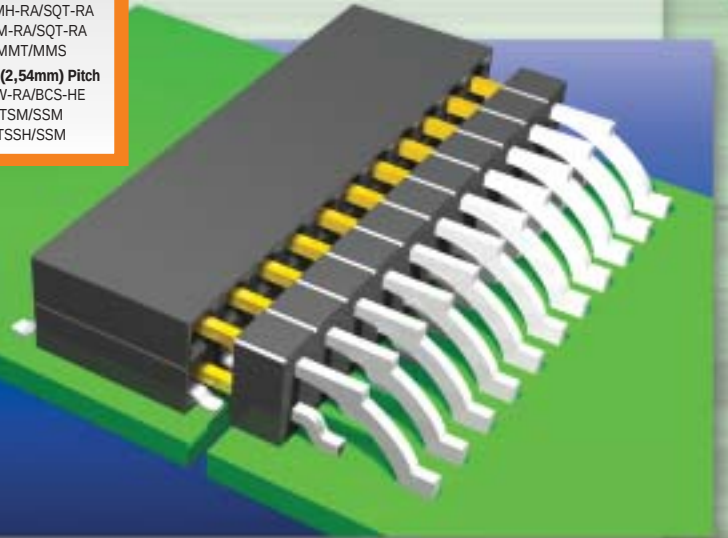


TSW/TSM
.100" (2,54mm)
pgs. 180-183

SSW/SSQ
.100" (2,54mm)
pgs. 194-195

TSS/TSSH
.100" (2,54mm)
pgs. 187-189

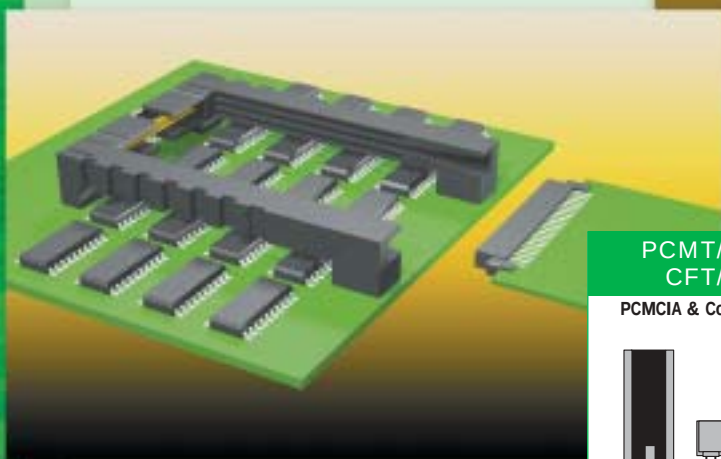
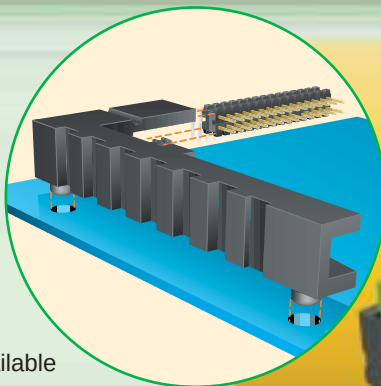
SSM/BCS SMH
.100" (2,54mm)
pgs. 197-200



FLEX CARD

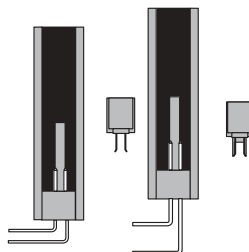
Flex Card System

- 2mm (.0787") and .050" (1,27mm) systems
- Vertical and horizontal
- Header with snap-on card guides for design flexibility
- Elevated design now available
- PCMCIA/Compact Flash compatible applications available
- Ideal for multiple add-on cards
- Solder locks for mechanical stability
- Any size from 40 to 100 contacts



PCMT/PCMS CFT/CFS

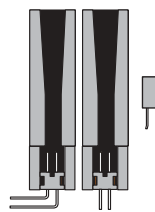
PCMCIA & Compact Flash



pgs. 268-271

FCF/EMF

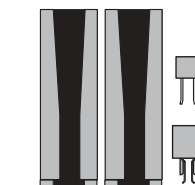
.050" (1,27mm) Flex Card



pgs. 266-267

FCT/EMT/SM2

2,00mm (.0787") Flex Card



pgs. 272-273

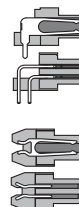
Storage Combo™

- Direct disk drive to board
- Mates with Fujitsu, IBM, Quantum, Seagate, Samsung IDE, EIDE, ATA and Ultra ATA
- Application Specific Options available



SCID

Disk Drive
Storage Combo



pgs. 264-265

HIGH
SPEED

HIGH
DENSITY

MICRO &
ONE-PIECE

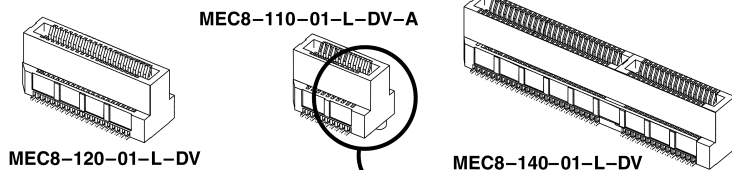
BOARD-TO-
BOARD

MICRO RUGGED
/POWER

MICRO
CARD

CABLE
INTERFACES

SOCKET/
REFERENCE



MICRO EDGE-CARD SOCKET MEC8 (-DV) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MEC8-DV

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C

Plating:

Au or Sn over 50μ" (1.27μm) Ni

Current Rating:

1.7A @ 80°C ambient

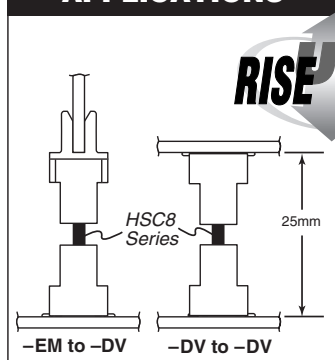
Voltage Rating:

400 VAC

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
(1,00mm) .0394" or
(1,60mm) .062" thick cards,
HSC8

APPLICATIONS



Mates with (1,00mm)
.0394" or (1,60mm)
.062" thick card

Variety of
lead counts

Edge Mount and
Right Angle available

Optional
Alignment Pins

(0,80mm)
.0315"
pitch

MEC8 Mated With HSC8			
CONFIGURATION (25mm Stack)	FREQ. RATING	IMPEDANCE	NEXT
Single Ended	2.5 GHz	50Ω±10%	9.6%
Differential Pair	3.5 GHz	100Ω±10%	2.4%

Processing:

Max Processing Temp:

230°C for 60 seconds

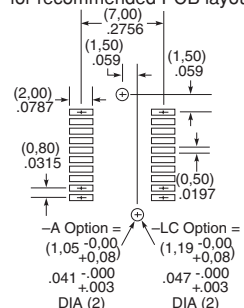
SMT Lead Coplanarity:

(0,10mm) .004" max (10-50)

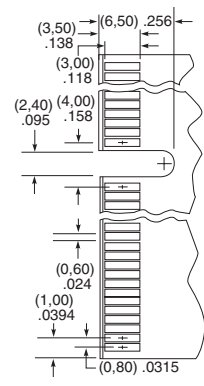
(0,15mm) .006" max (60-70)

Suggested PCB Layouts:

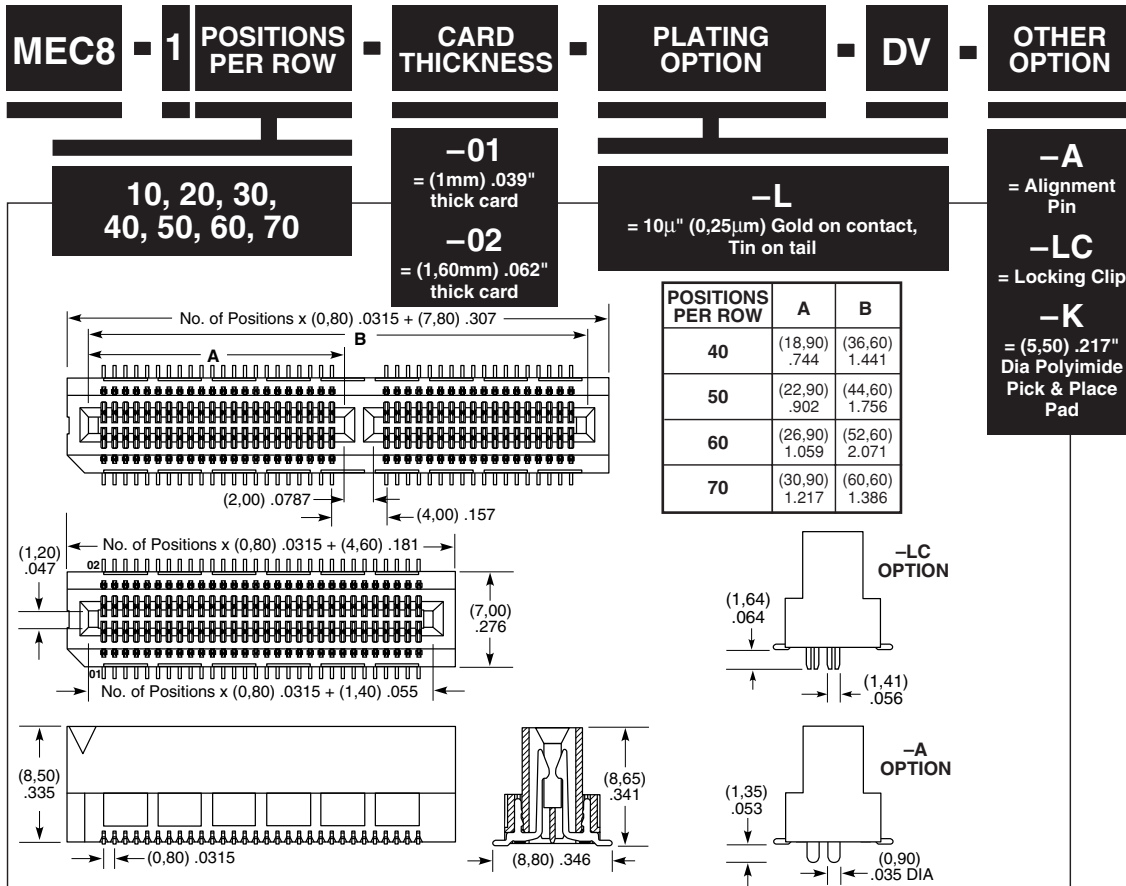
For reference only. Please contact Samtec or go to www.samtec.com?MEC8-DV for recommended PCB layout.



SFP BOARD LAYOUT



SFP CARD LAYOUT



Due to technical progress, all designs, specifications and components are subject to change without notice.

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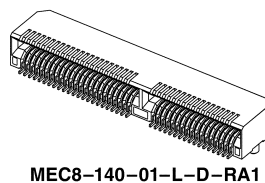
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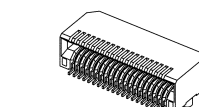
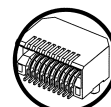
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MEC8-110-01-L-D-RA1



MEC8-120-01-L-D-RA1

MICRO EDGE-CARD SOCKET MEC8 (-RA) SERIES

SPECIFICATIONS

For complete specifications see
www.samtec.com?MEC8-RA

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C

Plating:

Au or Sn over 50µ" (1,27µm) Ni

Current Rating:

1.9A @ 80°C ambient

Voltage Rating:

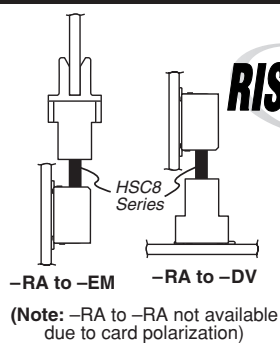
275 VAC



Mates with:

(1,00mm) .0394" or
(1,60mm) .062" thick cards,
HSC8

APPLICATIONS



20 to 100
IOs

Right Angle
(Vertical and
Edge Mount
configuration
available)

Accepts
(1,00mm)
.0394" and
(1,60mm)
.062" card

Alignment
Pin

(0,80mm) .031"
in-line pitch

MEC8 - 1 POSITIONS PER ROW - CARD THICKNESS - PLATING OPTION - D - RA1 - OTHER OPTION

10, 20, 30, 40, 50

-01
= (1mm) .039"
thick card
-02
= (1,60mm) .062"
thick card

-L
= 10µ" (0,25µm) Gold on contact,
Tin on tail

-TR
= Tape & Reel
Packaging

Note: Some sizes, styles and
options are non-standard,
non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

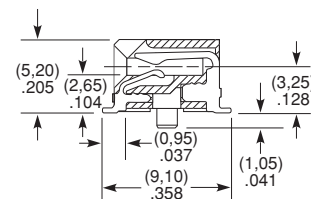
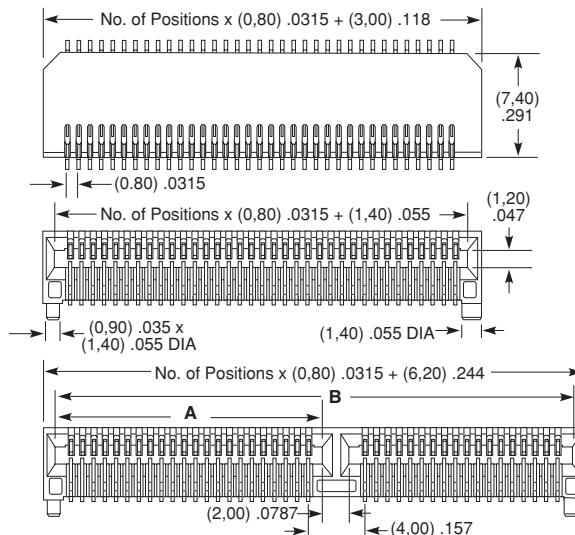
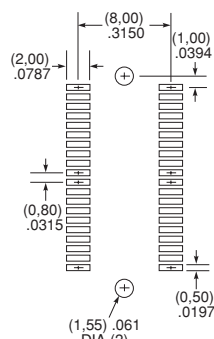
SMT Lead Coplanarity:

(0,10mm) .004" max (10-30)

(0,15mm) .006" max (40-50)

Suggested PCB Layouts:

For reference only. Please
contact Samtec or go to
www.samtec.com?MEC8-RA
for recommended PCB layout.



POSITIONS PER ROW	A	B
40	(18,90) .744	(36,60) 1.441
50	(22,90) .902	(44,60) 1.756

Due to technical progress, all designs, specifications and components are subject to change without notice.

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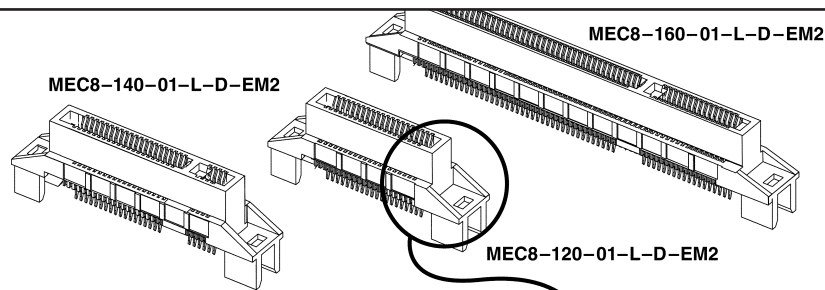
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MICRO EDGE-CARD SOCKET MEC8 (-EM) SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MEC8-EM

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Au or Sn over 50μ" (1,27μm) Ni

Current Rating:

1.6A @ 80°C ambient

Voltage Rating:

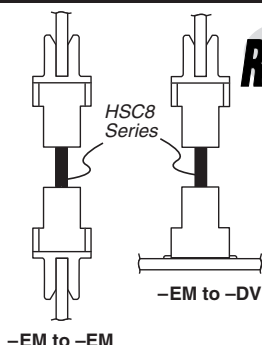
400 VAC



Mates with:

(1,00mm) .0394" or (1,60mm) .062" thick cards, HSC8

APPLICATIONS



Accepts (1,00mm) .0394" or (1,60mm) .062" card

(0,80mm) .031" pitch

Mounts on 1,60mm (.062" PCB edge

Edge Mount (Vertical and Right Angle configuration available)

MEC8

-

1 POSITIONS PER ROW

CARD THICKNESS

PLATING OPTION

-

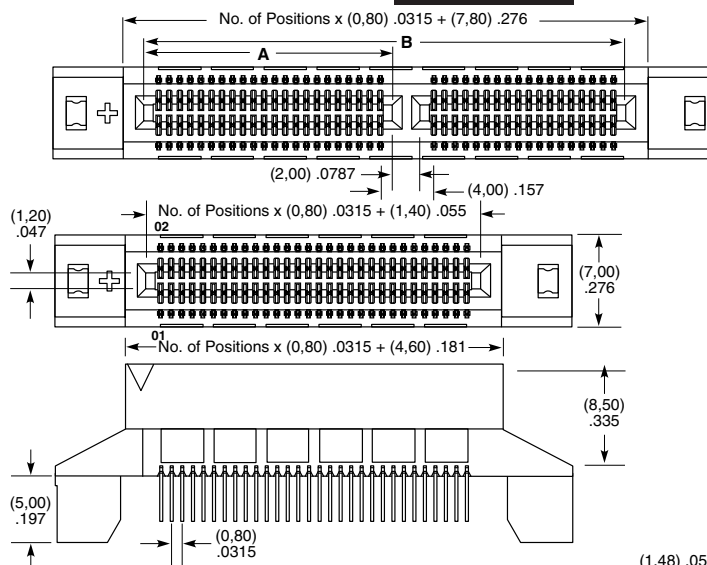
TAIL OPTION

10, 20, 30, 40, 50, 60, 70

-01 = (1mm) .039" thick card
-02 = (1,60mm) .062" thick card

-L = 10μ" (0,25μm) Gold on contact, Tin on tail

-EM2 = (1,60mm) .062" thick PCB



POSITIONS PER ROW	A	B
40	(18,90) .744	(36,60) 1.441
50	(22,90) .902	(44,60) 1.756
60	(26,90) 1.059	(52,60) 2.071
70	(30,90) 1.217	(60,60) 1.386

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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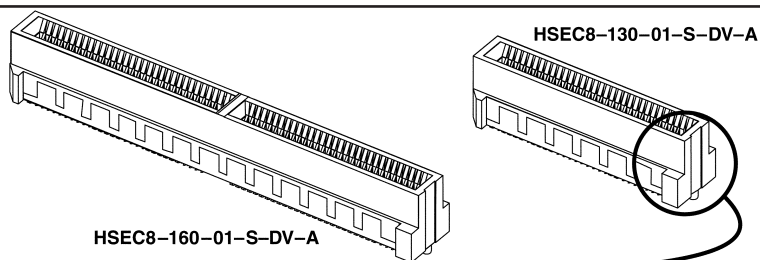
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0,80mm HI-SPEED SOCKET HSEC8 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/HSEC8

Insulator Material:
Black Liquid Crystal Polymer

Contact:

BeCu

Current Rating:

Testing Now!

Operating Temp:

-65°C to +125°C

Plating:

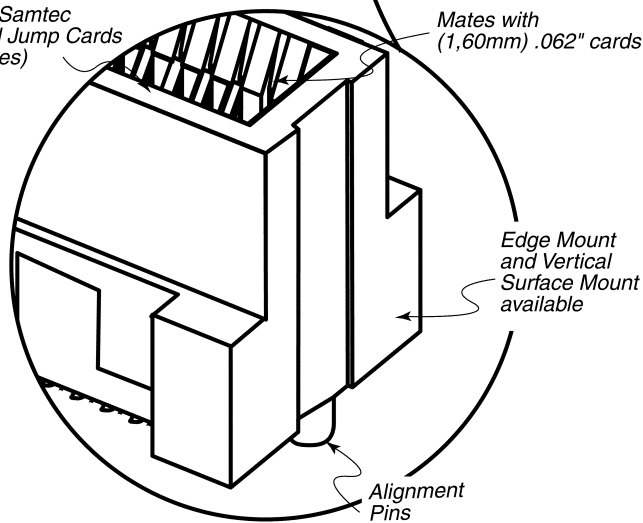
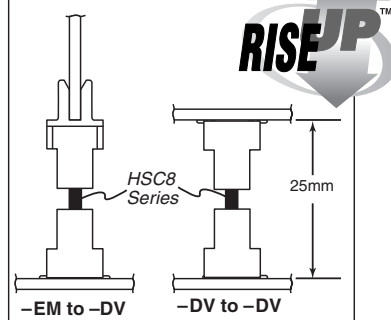
Au over 50μ" (1,27μm) Ni or Sn

Mates with:
1,6mm thick cards,
HSC8

Mates with Samtec
High Speed Jump Cards
(HSC8 Series)

Mates with
(1,60mm) .062" cards

APPLICATIONS



Note: Some lengths, styles and options are non-standard, non-returnable.

HSEC8	1	NO. OF POSITIONS	CARD THICKNESS	PLATING OPTION	DV	OTHER OPTION
		10, 20, 30, 40, 50, 60	-01 = (1,60mm) .062" thick card	-S = 30μ" (0,76μm) Gold on contacts, Tin on tails		-A = Alignment Pin -K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad

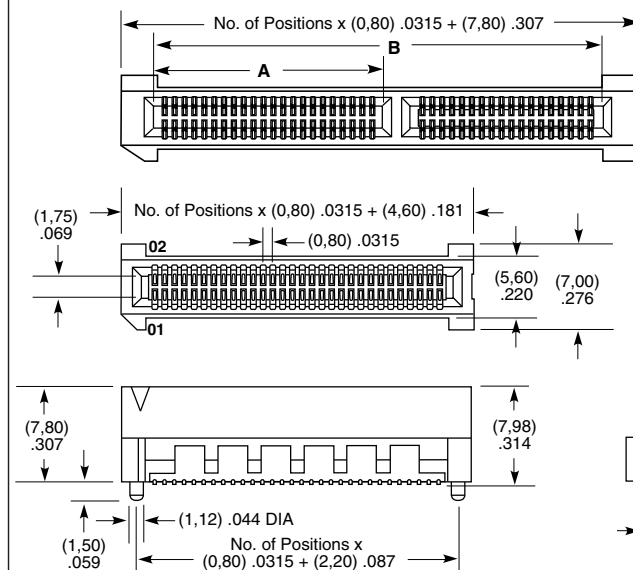
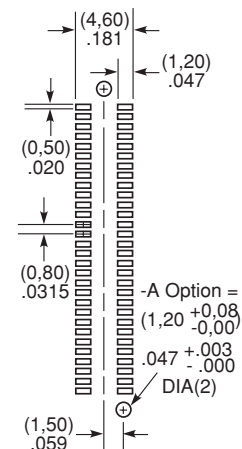
Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max (10-60)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/HSEC8 for recommended PCB layout.



NO. OF POSITIONS	A	B
40	(18,90) .744	(36,60) 1.441
50	(22,90) .902	(44,60) 1.756
60	(26,90) 1.059	(52,60) 2.071

Due to technical progress, all designs, specifications and components are subject to change without notice.

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HSC8-050-01-25-SE

HSC8-070-01-25-DP

0,80mm HI-SPEED JUMPCARD HSC8 SERIES

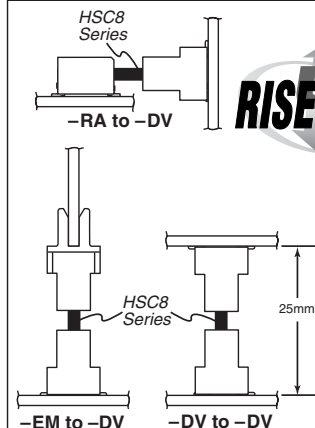
SPECIFICATIONS

For complete specifications see www.samtec.com?HSC8

Conductor:
1/2 oz Copper
Contact Area:
Hard Gold Plated
Insulator:
FR-4
Impedance Mismatch:
-SE: $50\Omega \pm 10\%$
-DP: $100\Omega \pm 10\%$
Frequency Rating:
-SE: 2.5 GHz
-DP: 3.5 GHz
Near End Crosstalk:
-SE: 9.6%
-DP: 2.4%

Mates with:
MEC8, HSEC8

APPLICATIONS



25mm standard
board spacing.
Customs available.

Application Specific
cards available

Hard Gold
plated pads

Single Ended or
Differential Pair
signal routing

MEC8 Mated With HSC8			
CONFIGURATION (25mm Stack)	FREQ. RATING	IMPEDANCE	NEXT
Single Ended	2.5 GHz	$50\Omega \pm 10\%$	9.6%
Differential Pair	3.5 GHz	$100\Omega \pm 10\%$	2.4%

NO. OF POSITIONS PER SIDE	-SE TOTAL SIGNAL LINES	-DP TOTAL SIGNAL PAIRS
-050	50	33
-070	70	46

HSC8

NUMBER OF
POSITIONS PER SIDE

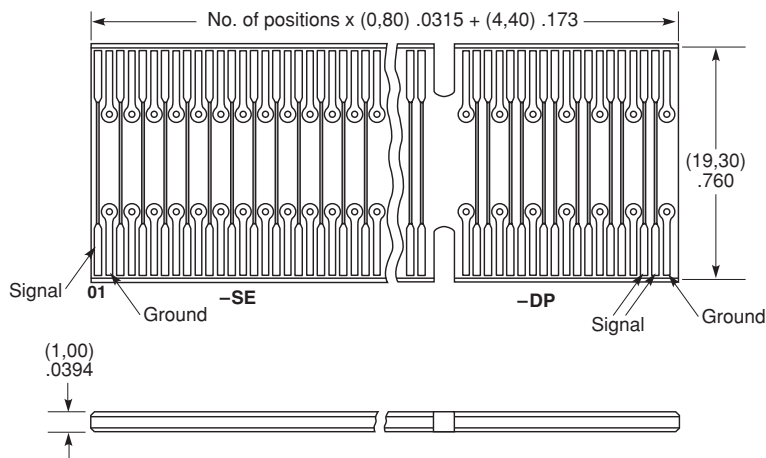
01

25

SIGNAL
ROUTING

-050, -070

-SE
= Single Ended
-DP
= Differential Pair



Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC ITALY • Tel: 39 039 6890337 • Fax: 39 039 6890315

SAMTEC ASIA PACIFIC • Tel: 65 6745-5955 • Fax: 65 6841-1502

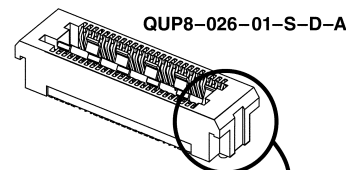
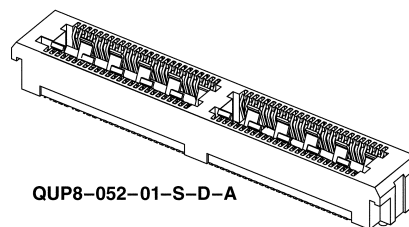
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0,80mm HIGH SPEED SOCKET QUP8 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?QUP8

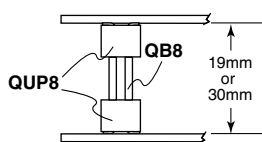
Insulator Material:
Liquid Crystal Polymer
Contact:
BeCu
Current Rating:
Testing Now!
Operating Temp:
-65°C to +125°C
Plating:
Au or Sn over
50μ" (1,27μm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
QB8



APPLICATIONS



Elevated High Speed Board Stacking Systems

Engineered electrical system mates with high speed boards (QB8 series)

MICRO RUGGED

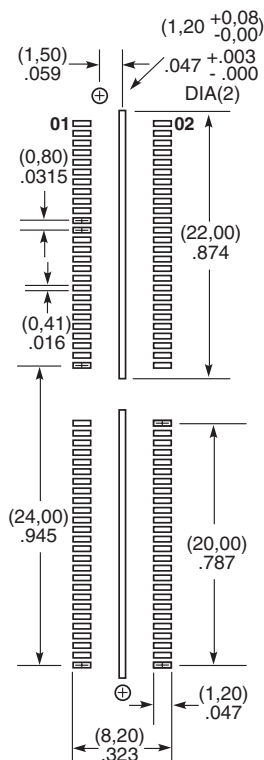
Change Stack height with PCBs instead of changing connection systems

SIGNAL INTEGRITY DIVISION

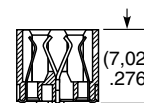
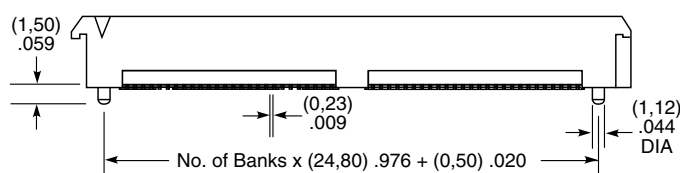
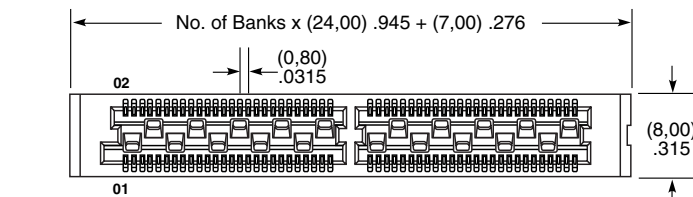
Contact Samtec Signal Integrity Group for test data

Processing:

Max Processing Temp:
230°C for 60 seconds
SMT Lead Coplanarity:
(0,10mm) .004" max (26-78)
(0,15mm) .006" max (104)
Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?QUP8 for recommended PCB layout.



QUP8	NO. OF PINS PER ROW	01	PLATING OPTION	D	A	OPTION
	-026, -052, -078, -104 (52 total pins per bank)		-S = 30μ" (0,76μm) Gold on contacts, 10μ" (0,25μm) Gold on Ground Plane, Tin on Signal and Ground Plane tails			-K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad



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QB8-052-30-D-050-N

QB8-026-30-D-050-N

HIGH SPEED JUMP CARD QB8 SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com?QB8

Conductor:

Copper

Contact Area:

Hard Gold Plated

30μ" (0.76μm)

Insulator:

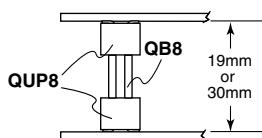
PBT

Impedance Mismatch:

50Ω ± 10%

Mates with:
QUP8

APPLICATION



Parallel high
speed boards

Ground plane
embedded in boards

**MICRO
RUGGED**

Application Specific
Latch option available.
Call Samtec

**SIGNAL
INTEGRITY
DIVISION**

Contact Samtec
Signal Integrity Group
for test data

Mates with modified
Q-Strips™ (QUP8 Series)

QB8

NO. OF PINS
PER ROW

STACK
HEIGHT

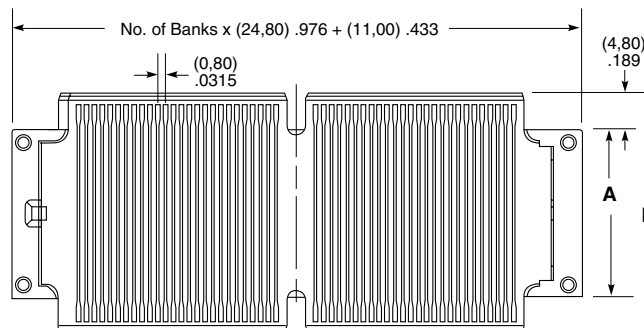
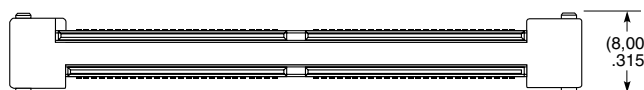
D

050

N

-026, -052, -078, -104
(52 total pins per bank)

-19, -30



STACK HEIGHT	A	B
-19	(4.90) .193	(14.50) .571
-30	(15.90) .626	(25.50) 1.00

Note: Some sizes, styles and
options are non-standard,
non-returnable.

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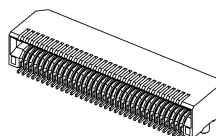
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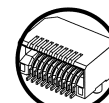
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MECT-135-01-M-D-RA1

MECT-110-01-M-D-RA1



TRANSCEIVER INTERFACES

MECT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MECT

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 100µ" (2.54µm) Ni

Current Rating:

Testing Now!

Voltage Rating:

Testing Now!

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:

SFP, XFP or XENPAK transceivers

(For MSA specifications see www.schelto.com)

Choice of two standard pin counts

2x10 position for Small Form Factor Pluggable (SFP) Fiber Optic Transceivers

2x35 and 2x15 position for XENPAK and XFP Transceivers

Alignment Pin

(0,80mm) .0315" pitch

Processing:

Max Processing Temp:

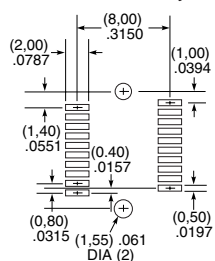
230°C for 60 seconds

SMT Lead Coplanarity:

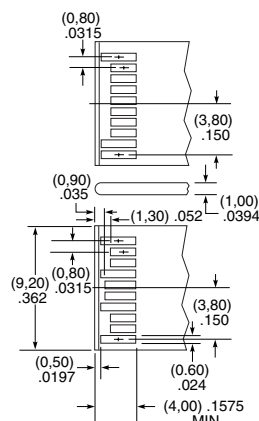
(0,10mm) .004" max (10-35)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?MECT for recommended PCB layout.

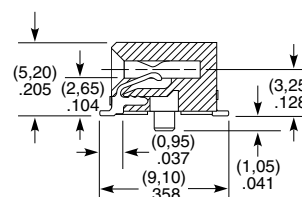
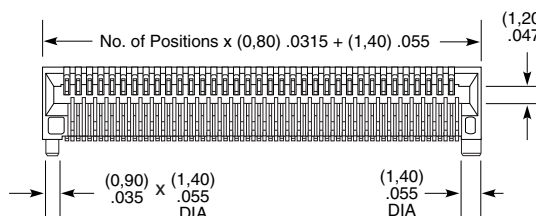
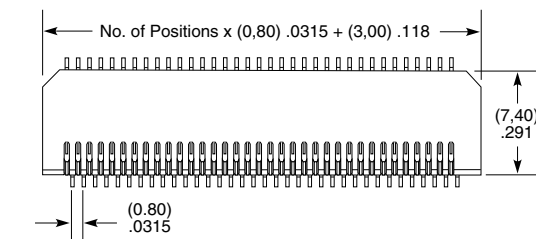


SFP BOARD LAYOUT



SFP CARD LAYOUT

MECT	1	POSITIONS PER ROW	CARD THICKNESS	PLATING OPTION	D	RA1	OTHER OPTION
		10, 15, 35	-01 = (1mm) .039" thick board	-M = 15µ" (0,38µm) Gold on contact, Tin on tail			-TR = Tape & Reel Packaging



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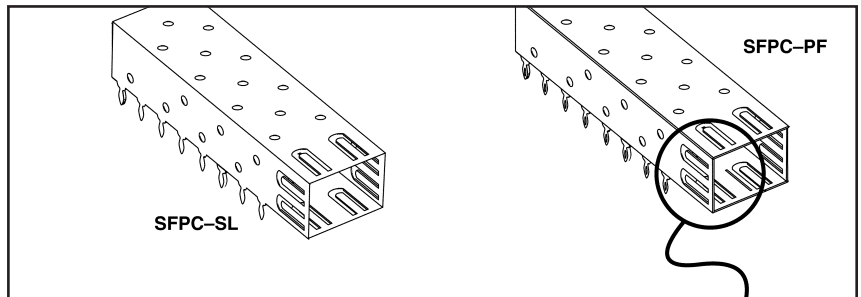
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PICOLIGHT SFP CAGE SFPC, SFPK SERIES

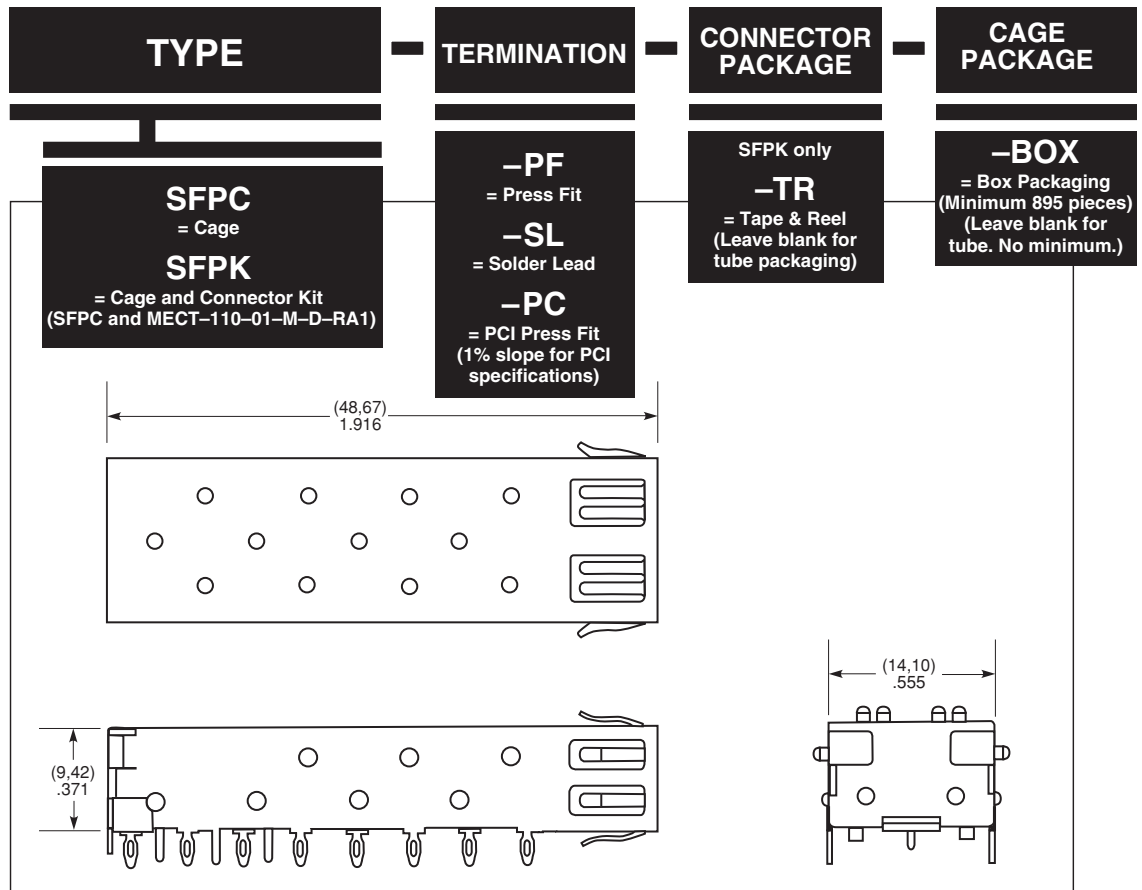
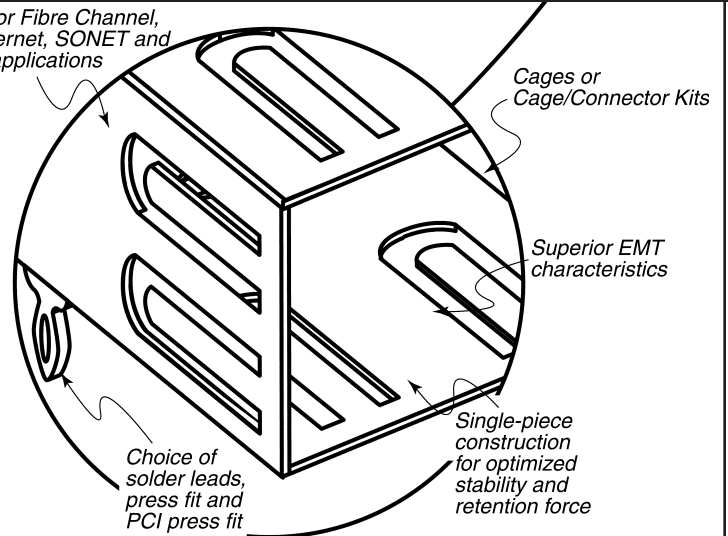
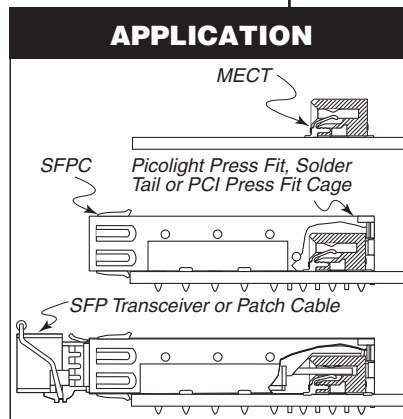
SPECIFICATIONS

For complete specifications see www.samtec.com?SFPC or www.samtec.com?SFPK

For SFP specifications see www.schelto.com/SFP

Use with:
MECT

Optimized for Fibre Channel,
Gigabit Ethernet, SONET and
other SFP applications

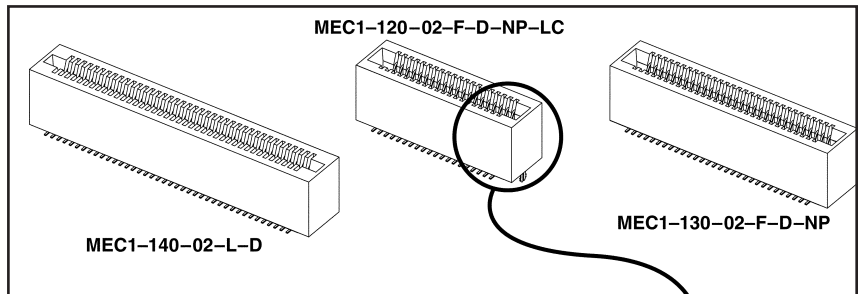


Note: Some sizes, styles and options are non-standard, non-returnable.

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MINI EDGE-CARD SOCKET MEC1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MEC1

Insulator Material:

Black LCP

Contact Material:

BeCu

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Sn or Au over 50μ"

(1,27μm) Ni

Current Rating:

2A @ 80°C ambient

Voltage Rating:

300 VAC

Insertion Depth:

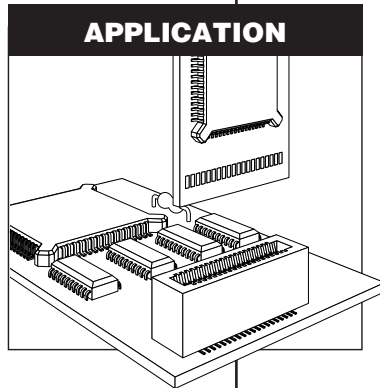
(5,84mm) .230" to

(8,13mm) .320"

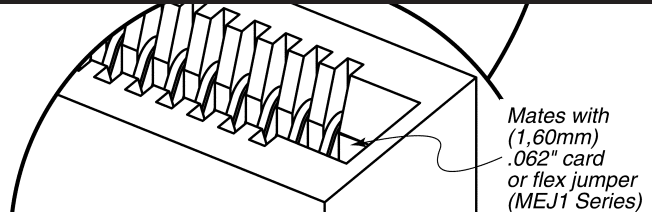
Mates with:

(1,60mm) .062" PCB,
MEJ1

APPLICATION



Note: Some sizes, styles and options are non-standard, non-returnable.

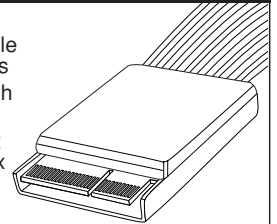


Mates with
(1,60mm)
.062" card
or flex jumper
(MEJ1 Series)

ALSO AVAILABLE

MEC1 Compatible Coax Assemblies

- 1-3 GHz for high speed I/Os
- Flexible, robust ribbonized coax
- Snap latching mechanism
- Call Samtec



Processing:

Max Processing Temp:

230°C for 60 seconds

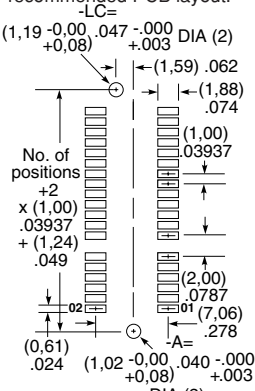
SMT Lead Coplanarity:

(0,10mm) .004" max (05-20)

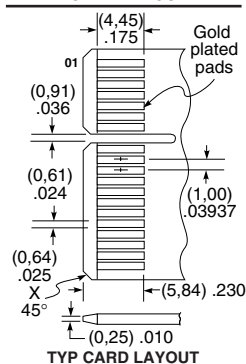
(0,15mm) .006" max (30-70)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?MEC1 for recommended PCB layout.



BOARD LAYOUT



TYP CARD LAYOUT



05, 08, 20, 30,
40, 50, 60, 70

-F
= Gold flash
on contact,
Tin on tail

-L
= 10μ"
(0,25μm)
Gold on contact,
Tin on tail

-S
= 30μ" (0,76μm)
Gold on contact,
Tin on tail

Leave blank
for polarized
version
-NP
= Non-polarized
(05 thru 30
positions/row
only)

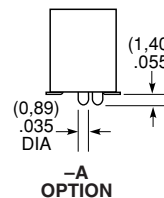
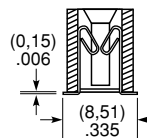
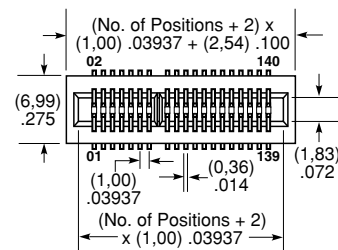
-LC
= Locking Clip

-A
= Alignment
Pin
Metal or plastic at
Samtec discretion.

-K
= (7,87mm)
.310" DIA
Polyimide film
Pick & Place
Pad

-TR
= Tape & Reel

POSITIONS PER ROW	POLARIZED POSITIONS
-05	3, 4
-08	5, 6
-20	15, 16
-30	21, 22
-40	31, 32
-50	41, 42
-60	51, 52, 63 & 64
-70	53, 54, 115 & 116



-A OPTION

-LC OPTION

Due to technical progress, all designs, specifications and components are subject to change without notice.

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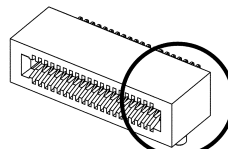
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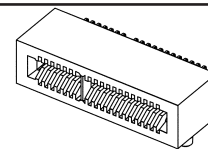
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MEC1-120-02-L-D-RA1-NP-SL



MEC1-120-02-S-D-RA1-SL



RIGHT-ANGLE CARD SOCKET MEC1 (-RA) SERIES

SPECIFICATIONS

For complete specifications see
www.samtec.com?MEC1-RA

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Current Rating:

1.1A @ 80°C for -01

1.5A @ 80°C for -02

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Au or Sn over 50µ"

(1.27µm) Ni

Insertion Depth:

(5.84mm) .230" to

(8.13mm) .320"

Important Note:

Samtec recommends that
pads on the mating board be
Gold plated.

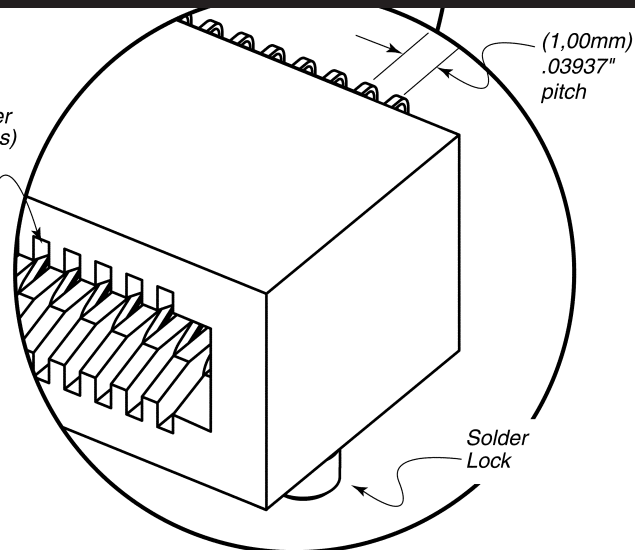
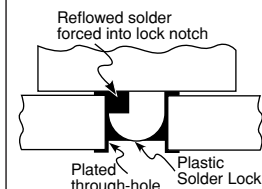
Note: Some sizes, styles and
options are non-standard,
non-returnable.

Mates with:
(1,60mm) .062" card
or flex jumper
(MEJ1 Series)

Mates with
(1,60mm)
.062" card
or flex jumper
(MEJ1 Series)

(1,00mm)
.03937" pitch

APPLICATIONS

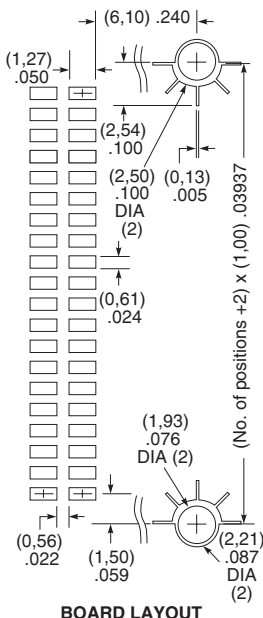


Processing:

Max Processing Temp:
230°C for 60 seconds

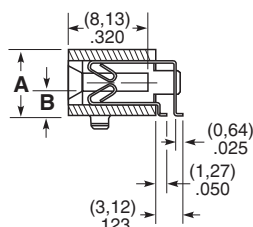
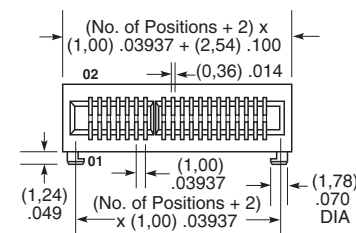
SMT Lead Coplanarity:
(0,10mm) .004" max (05-40)
(0,15mm) .006" max (50-70)

Suggested PCB Layouts:
For reference only. Please
contact Samtec or go to
www.samtec.com?MEC1-RA
for recommended PCB layout.



BOARD LAYOUT

MEC1	1	POSITIONS PER ROW	CARD SLOT	PLATING OPTION	D	BODY HEIGHT	OTHER OPTION	SL
		05, 08, 20, 30, 40, 50, 60, 70	-02 = (1,60mm) .062" thick Card	-F = Gold flash on contact, Tin on tail -L = 10µ" (0,25µm) Gold on contact, Tin on tail -S = 30µ" (0,76µm) Gold on contact, Tin on tail	-RA1 = Standard -RA2 = Elevated	Leave blank for polarized version -NP = Non-polarized (05 thru 30 positions/ row only)		



BODY HEIGHT	A	B
-RA1	(6,81) .268	(2,51) .099
-RA2	(8,99) .354	(4,67) .184

POSITIONS PER ROW	POLARIZED POSITIONS
-05	3, 4
-08	5, 6
-20	15, 16
-30	21, 22
-40	31, 32
-50	41, 42
-60	31, 32, 63 & 64
-70	53, 54, 115 & 116

Due to technical progress, all designs, specifications and components are subject to change without notice.

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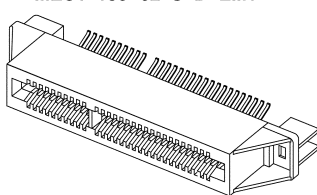
SAMTEC TAIWAN • Tel: 886-02-2364-6077 • Fax: 886-02-2367-9531

SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

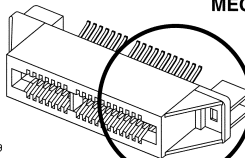
SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



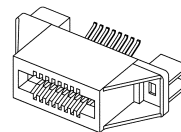
MEC1-130-02-S-D-EM1



MEC1-108-02-L-D-EM2-NP



MEC1-120-02-F-D-EM1



MINI EDGE-CARD SOCKET MEC1 (-EM) SERIES

SPECIFICATIONS

For complete specifications see
www.samtec.com?MEC1-EM

Insulator Material:

Black LCP

Contact Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Plating:

Au or Sn over 50μ"

(1,27μm) Ni

Insertion Depth:

(5,84mm) .230"

(8,13mm) .320"



Mates with:

(1,60mm) .062" card

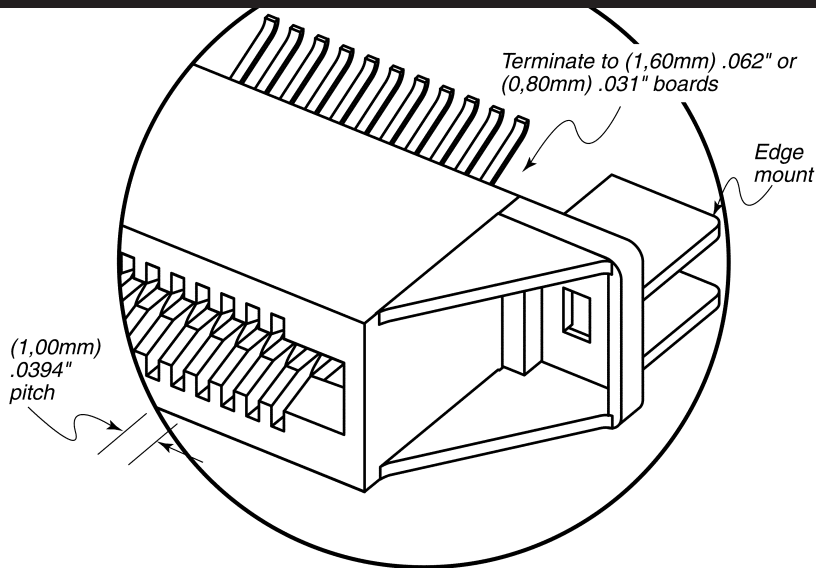
or flex jumper

(MEJ1 Series)

Important Note:

Samtec recommends that
pads on the mating board be
Gold plated.

Note: Some sizes, styles and
options are non-standard,
non-returnable.



Processing:

Max Processing Temp:

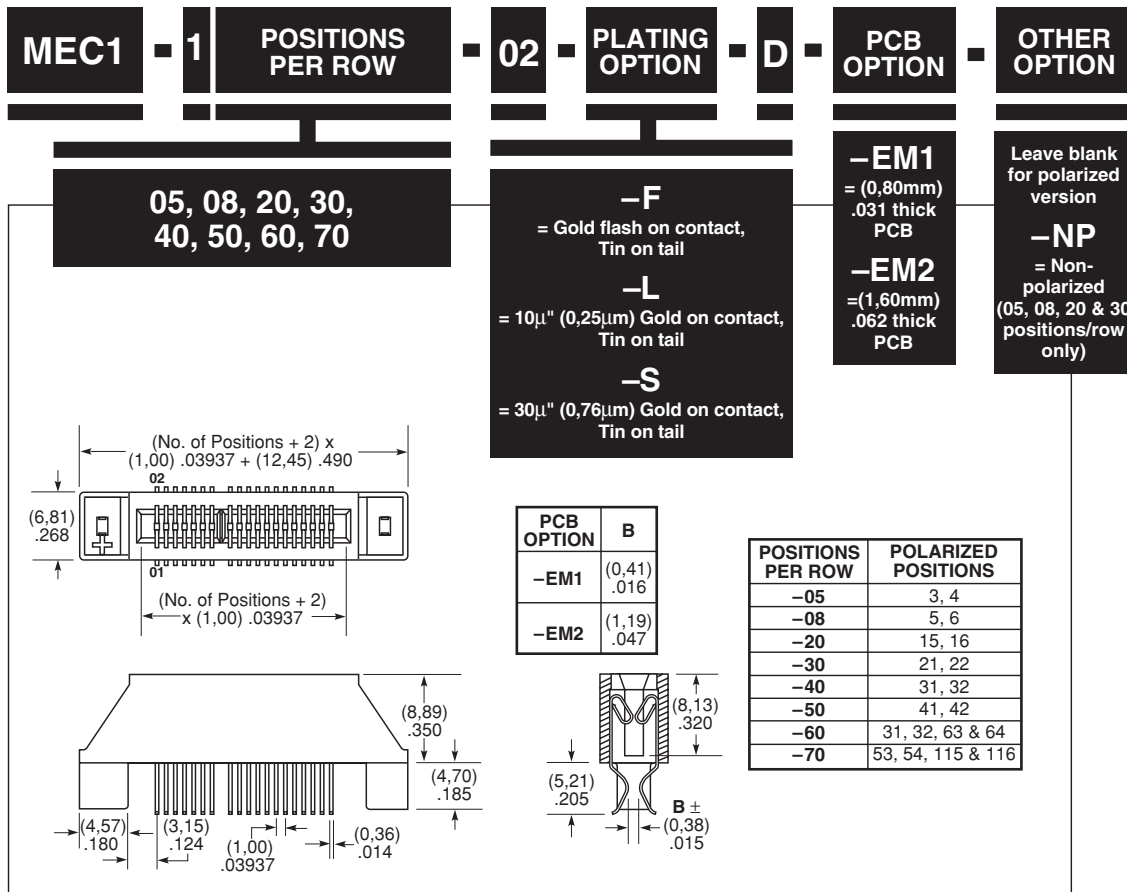
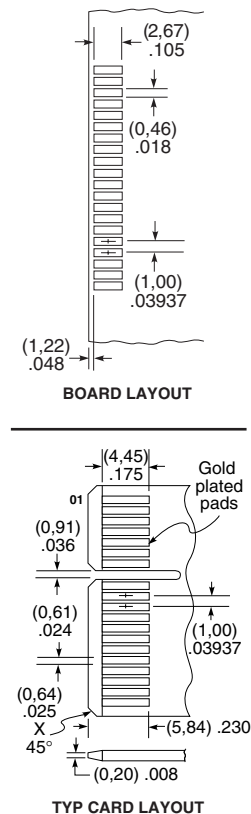
230°C for 60 seconds

Suggested PCB Layouts:

For reference only. Please

contact Samtec or go to

www.samtec.com?MEC1-EM
for recommended PCB layout.



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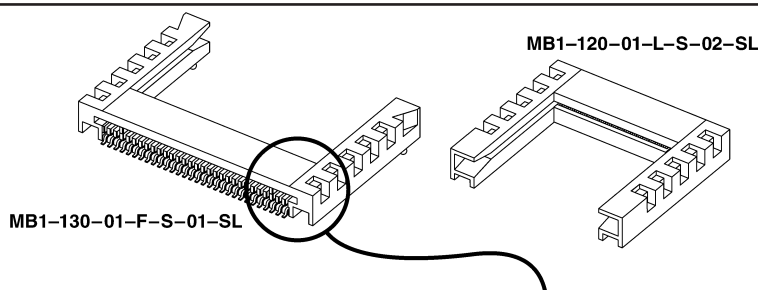
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1 mm MINI CARD GUIDE MB1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MB1

Insulator Material:

Black LCP

Contact Material:

BeCu

Operating Temp Range:

-65°C to +105°C with Tin;

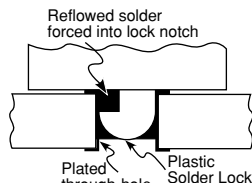
-65°C to +125°C with Gold

Plating: Sn or Au over 50µ (1,27µm) Ni



Mates with:
(0,80mm) .031" PCB,
(1,60mm) .062" PCB

APPLICATIONS



Important Note:
Samtec recommends that pads on the mating board be Gold plated.

Note:
Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

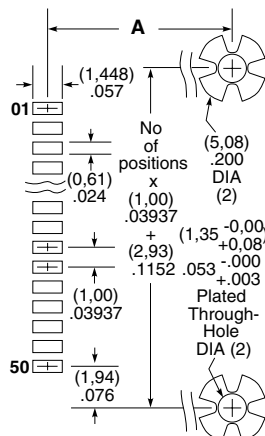
SMT Lead Coplanarity:

(0,10mm) .004" max (20-30)

(0,15mm) .006" max (40-50)

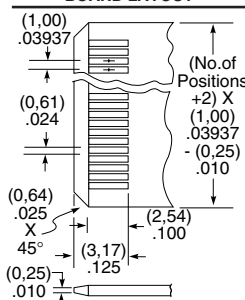
Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?MB1 for recommended PCB layout.

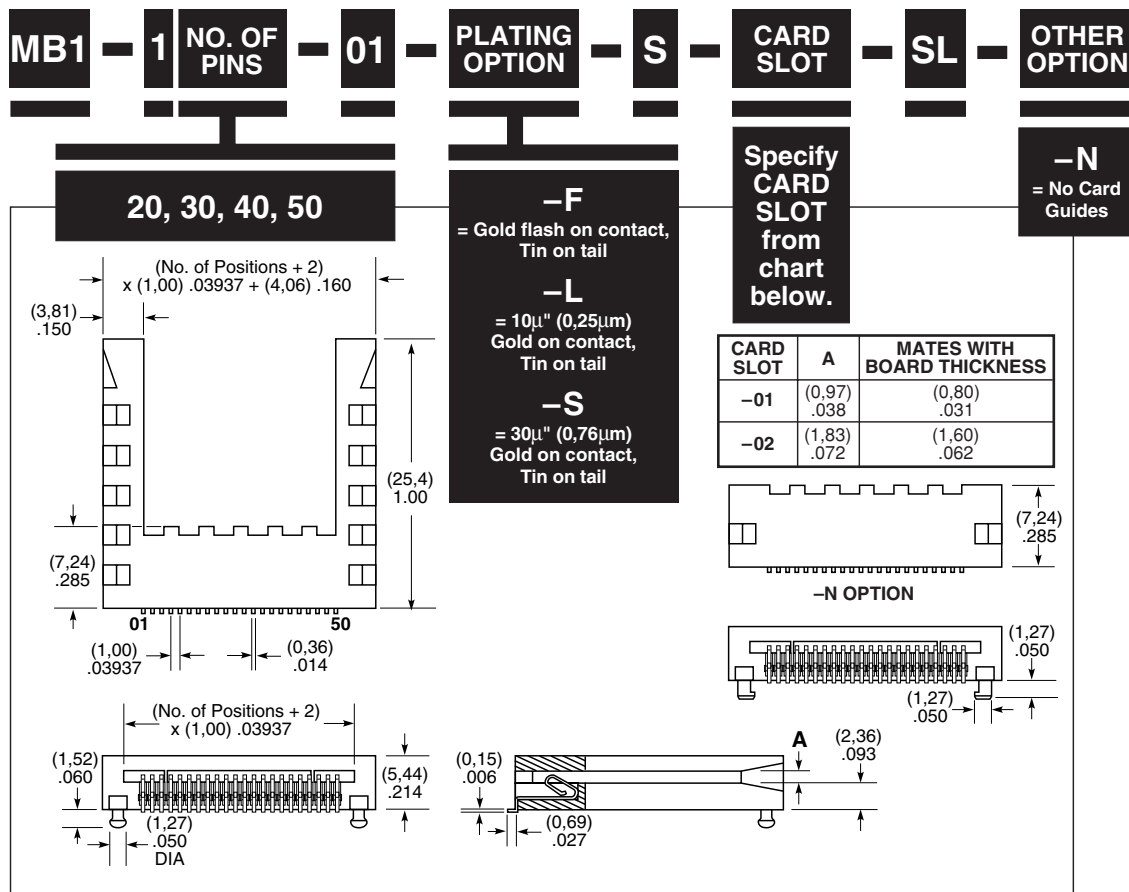


LEAD STYLE	A
With Card Guides	(23,94) .9425
-N	(4,837) .190
No Card Guides	

BOARD LAYOUT



TYP CARD LAYOUT



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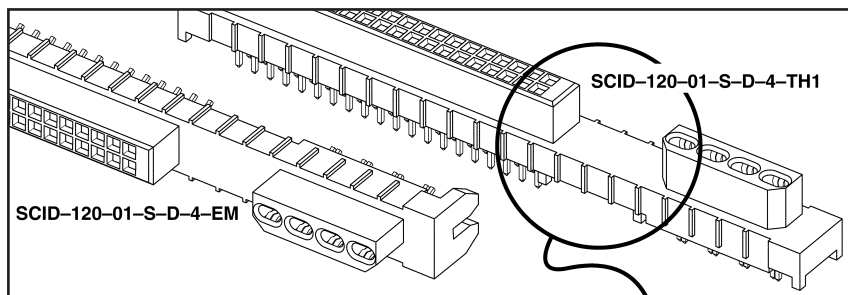
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IDE STORAGE COMBO^{SCID} SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SCID

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 50µ" (1,27µm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.



TESTING NOW: PRELIMINARY CURRENT RATINGS		
AMBIENT TEMPERATURE	SIGNAL PINS	POWER PINS
20°C	5.5A	13A
40°C	5A	11A
60°C	4A	8A
80°C	3A	6A

APPLICATIONS

Mates with Fujitsu, IBM, Quantum, Seagate and Samsung IDE, EIDE, ATA and Ultra ATA disk drive interfaces.

Call for Maxtor and Western Digital IDE interfaces.

Forty Tiger Buy signal contacts



Vertical, Right Angle and Edge Mount

Power pins on (5,08mm) .200" pitch

POWER BUY CONTACT
(7 Amps @ 70°C ambient)

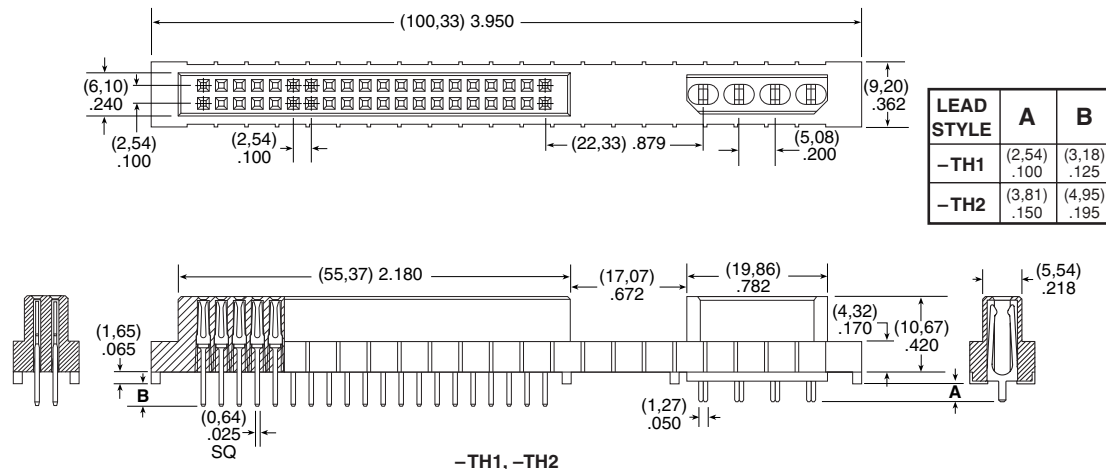
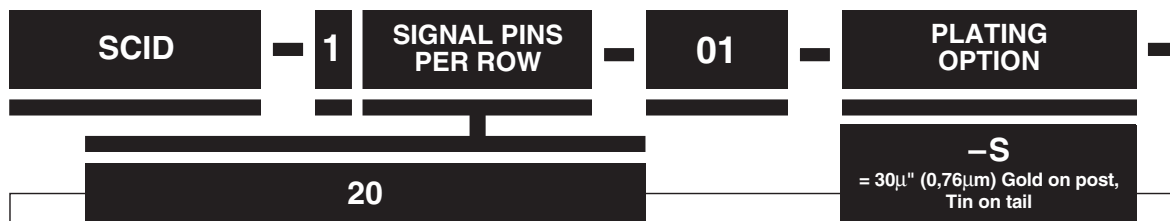
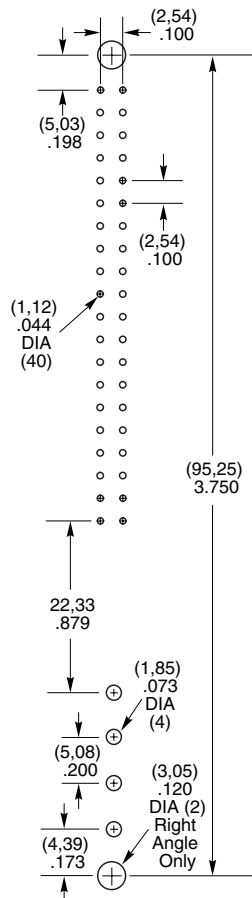
Processing:

Max Processing Temp:

250°C for 60 seconds

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?SCID for recommended PCB layout.



LEAD STYLE	A	B
-TH1	(2,54) .100	(3,18) .125
-TH2	(3,81) .150	(4,95) .195

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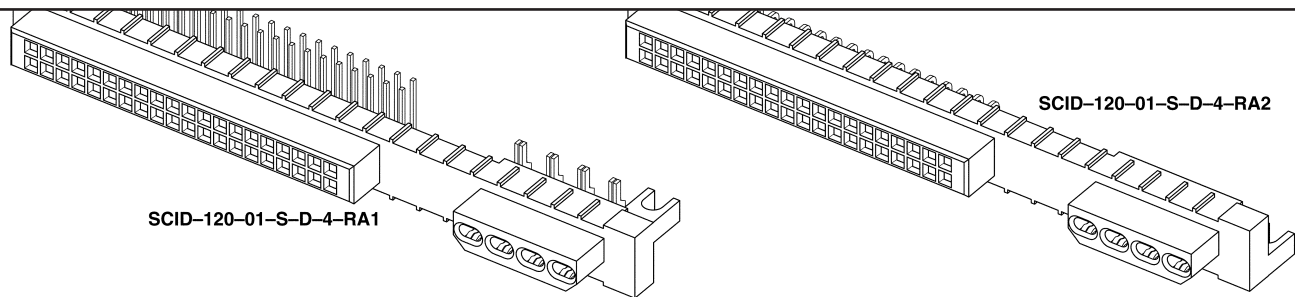
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ALSO AVAILABLE

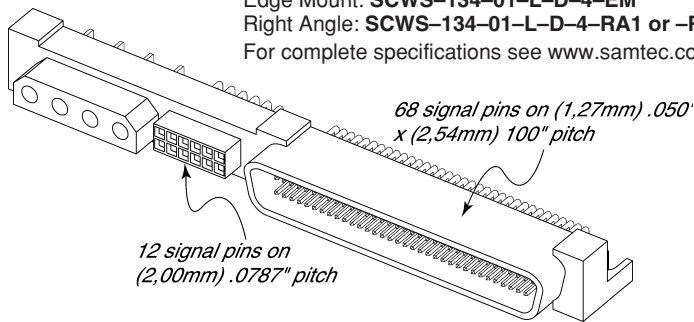
Wide SCSI Storage Combos:

Vertical: **SCWS-134-01-L-D-4-TH**

Edge Mount: **SCWS-134-01-L-D-4-EM**

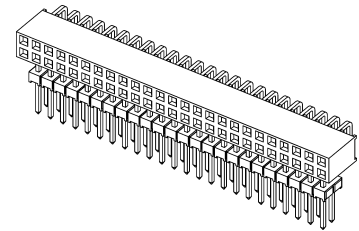
Right Angle: **SCWS-134-01-L-D-4-RA1** or **-RA2**

For complete specifications see www.samtec.com?SCWS



APPLICATION SPECIFIC OPTION:

NOTEBOOK 2.5" DISK DRIVE INTERFACE



Call for part number

D

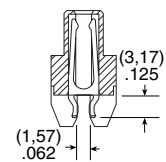
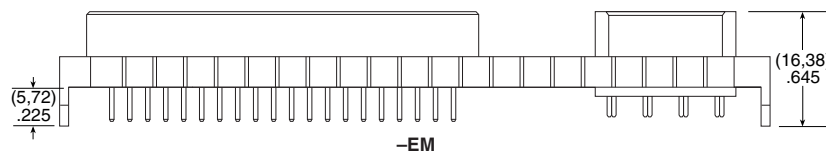
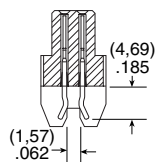
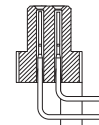
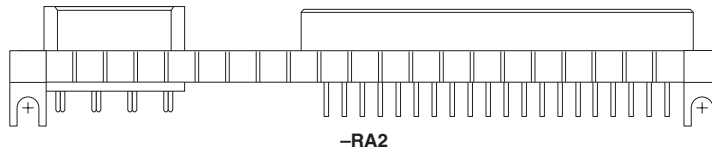
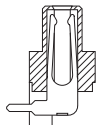
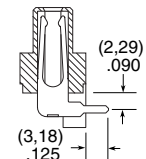
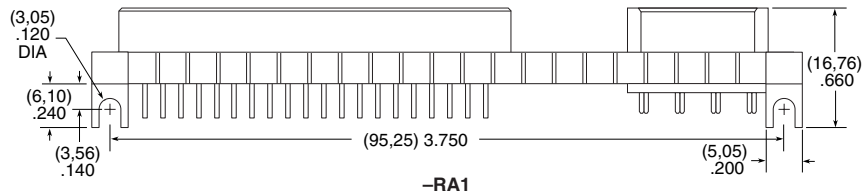
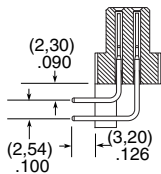
4

TAIL OPTIONS

-TH1, -TH2
= Vertical

-RA1, -RA2
= Right Angle

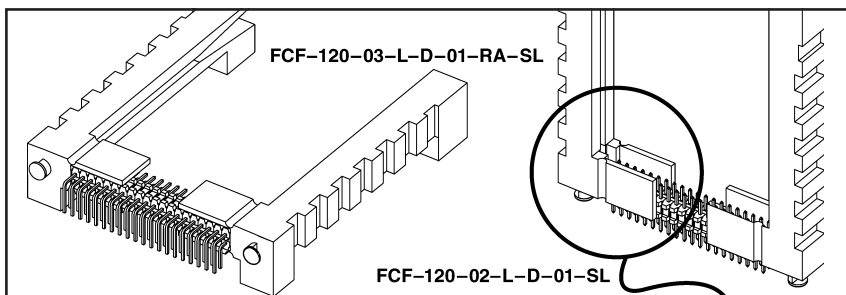
-EM
= Edge Mount



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.050" FLEX CARD TERMINAL FCF SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FCF

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Max Processing Temp:

230°C for 60 seconds

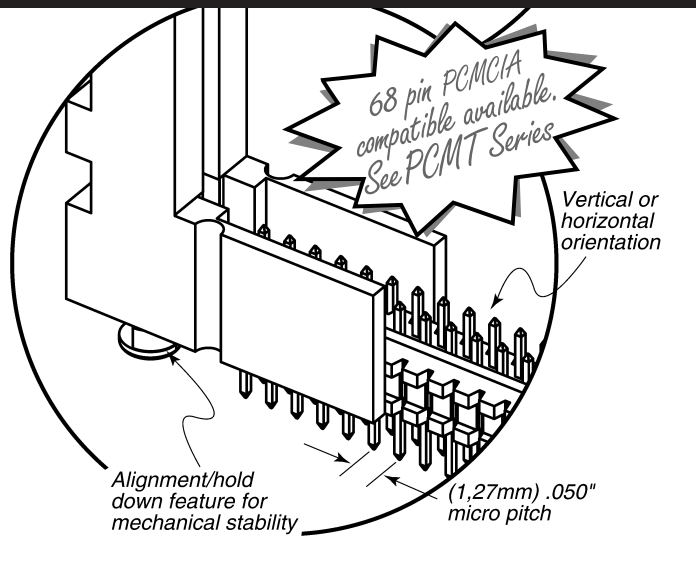
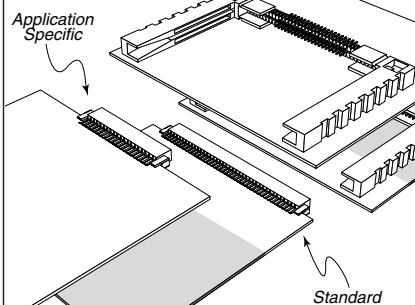
Plating: Sn or Au over 50µ" (1,27µm) Ni



Mates with:
EMF

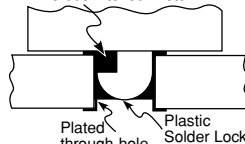
APPLICATION SPECIFIC OPTIONS

Other pin counts and card widths available. Call Samtec.



APPLICATIONS

Reflowed solder forced into lock notch



Note: Some lengths, styles and options are non-standard, non-returnable.

FCF - 1 NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - D - CARD SLOT - TAIL OPTION - SL

20, 30, 40 & 50
(Call Samtec for other sizes)

Specify LEAD STYLE from chart

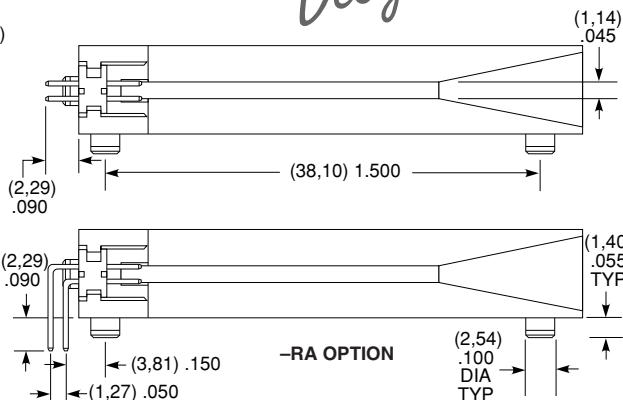
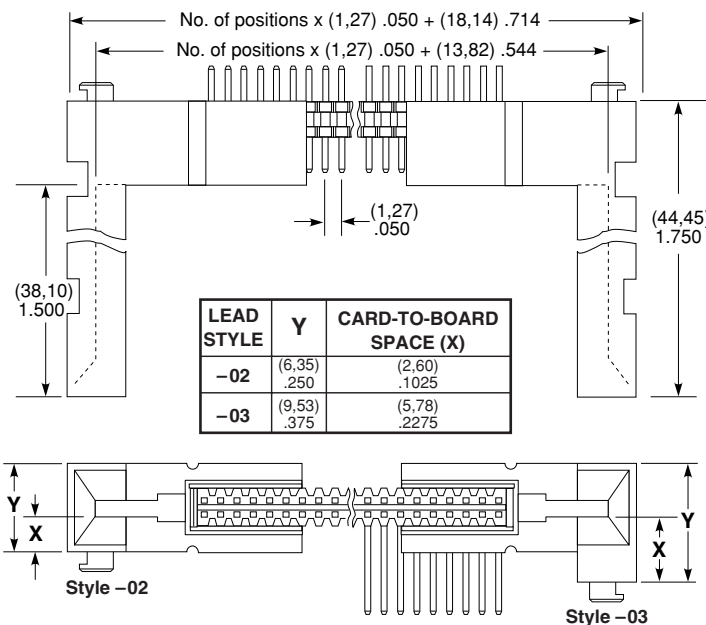
-L
= 10µ" (0,25µm)
Gold on post,
Tin on tail

-S
= 30µ" (0,76µm)
Gold on post,
Tin on tail

-01
= Accepts
(0,80mm)
.031" thick card

-RA
= Right Angle
(Leave blank for vertical version. Style -02 only)

New Elevated Design!



Due to technical progress, all designs, specifications and components are subject to change without notice.

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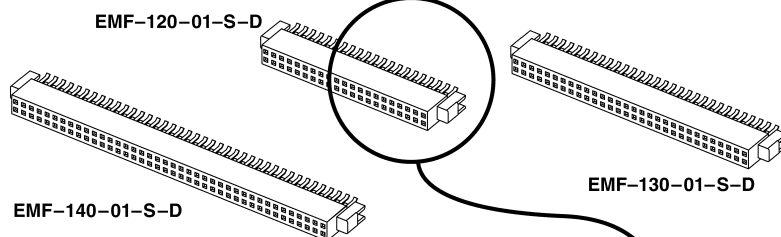
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EDGE MOUNT SOCKET STRIP EMF SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?EMF

Insulator Material:

Black Liquid Crystal Polymer



Contact Material:

BeCu

Current Rating:

1A

Operating Temp Range:

-65°C to +125°C

Plating:

Au or Sn over 50µ" (1.27µm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(3.05mm) .120"

to (4.06mm) .160"

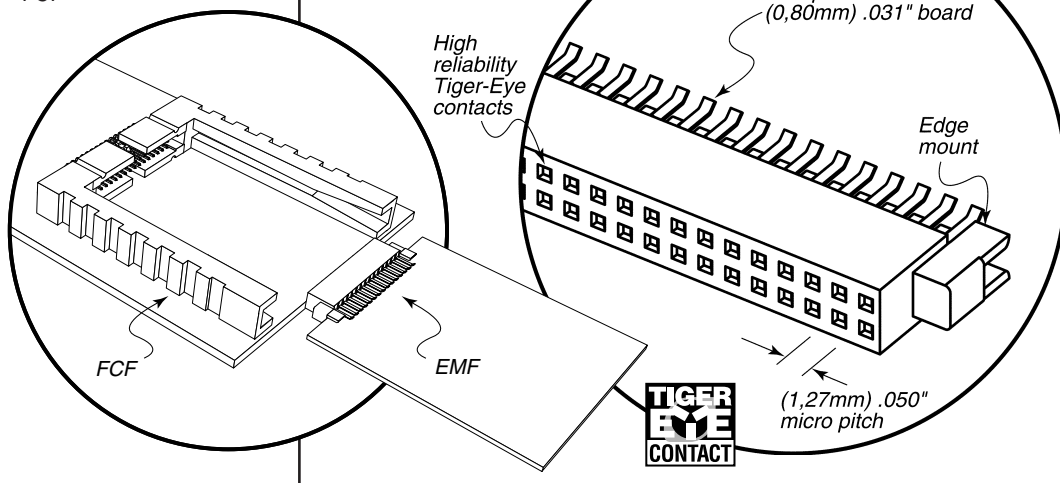
Insertion Force:

3.0oz (0.83N) avg.

Withdrawal Force:

2.0oz (0.56N) avg.

Mates with:
FCF



Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

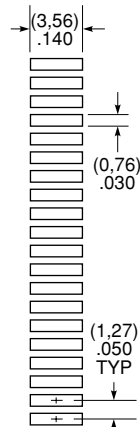
SMT Lead Coplanarity:

(0.10mm) .004" max (20)

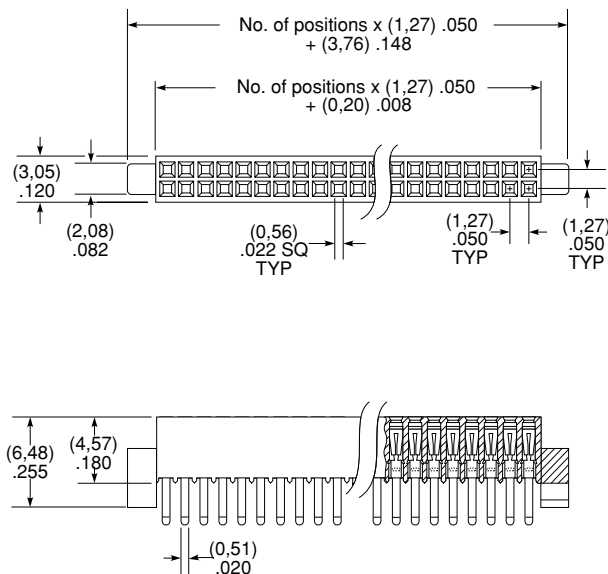
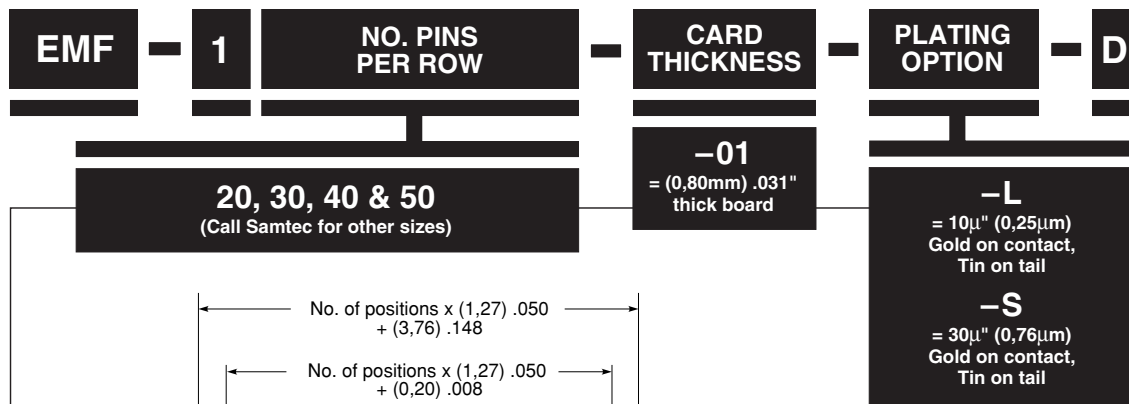
(0.15mm) .006" max (30-50)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?EMF for recommended PCB layout.



Both Sides of
P.C. Board



Due to technical progress, all designs, specifications and components are subject to change without notice.

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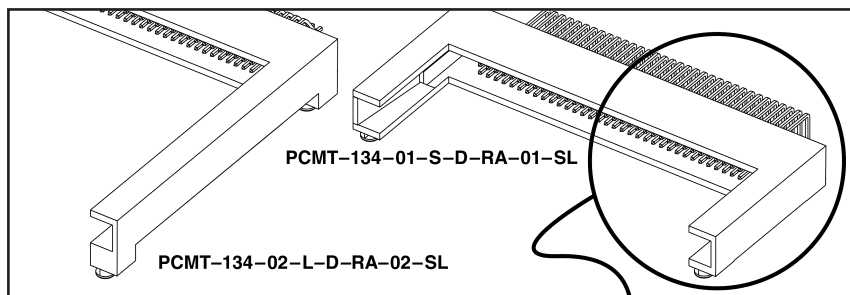
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PCMCIA HEADER PCMT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?PCMT

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Operating Temp Range:

-65°C to +105°C with Tin;

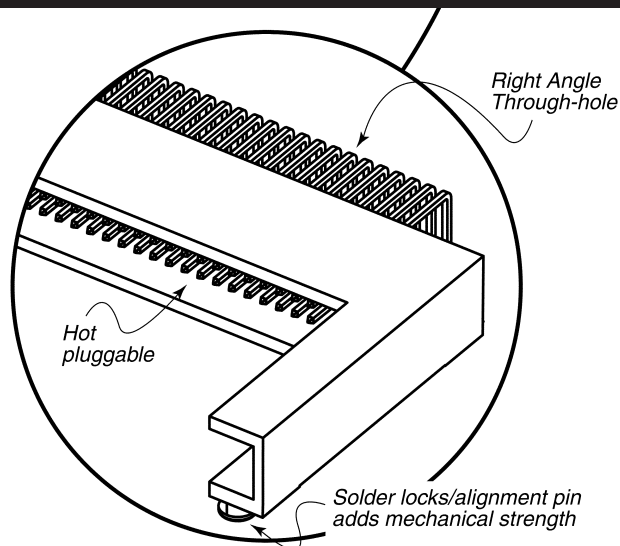
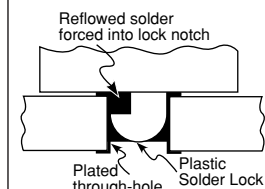
-65°C to +125°C with Gold

Plating:

Sn or Au over 50µ" (1,27µm) Ni

Mates with:
PCMS

APPLICATION



PCMT - 134 - LEAD STYLE - PLATING OPTION - D - RA - CARD LENGTH - SL

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

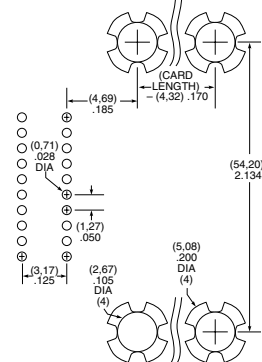
SMT Lead Coplanarity:

(0,15mm) .006" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?PCMT for recommended PCB layout.

Note: Pinout is not to PCMCIA specifications



Specify
LEAD
STYLE
from chart

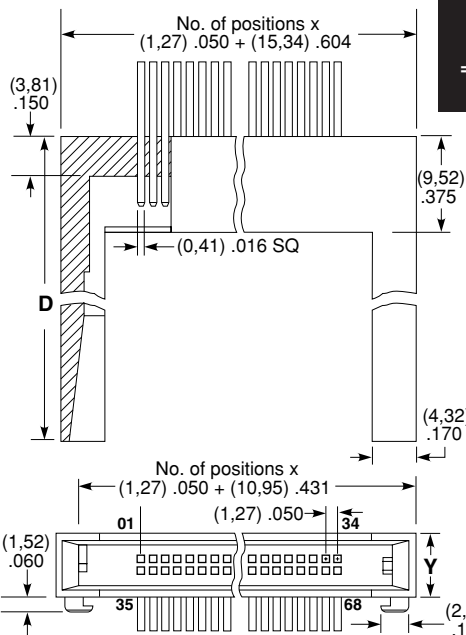
-L
=10µ" (0,25µm) Gold on post,
Tin on tail

-S
=30µ" (0,76µm) Gold on post,
Tin on tail

-01
=(25,40mm) 1.00" Card Length

-02
=(50,80mm) 2.00" Card Length

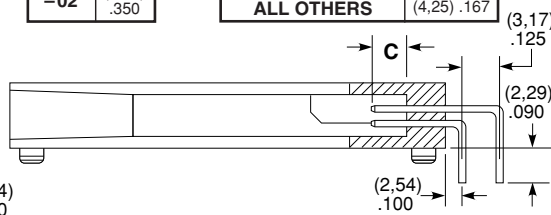
-03
=(76,20mm) 3.00" Card Length



CARD LENGTH	D
-01	(25,40) 1.00
-02	(50,80) 2.00
-03	(76,20) 3.00

LEAD STYLE	Y
-01	(6,35) .250
-02	(8,89) .350

POSITION NUMBER	C (POST)
01, 17, 34, 35, 51, 68	(5,00) .197
36, 67	(3,50) .138
ALL OTHERS	(4,25) .167



Due to technical progress, all designs, specifications and components are subject to change without notice.

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CFT-125-02-L-D-RA-02-SL

COMPACT FLASH HEADER CFT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?CFT

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

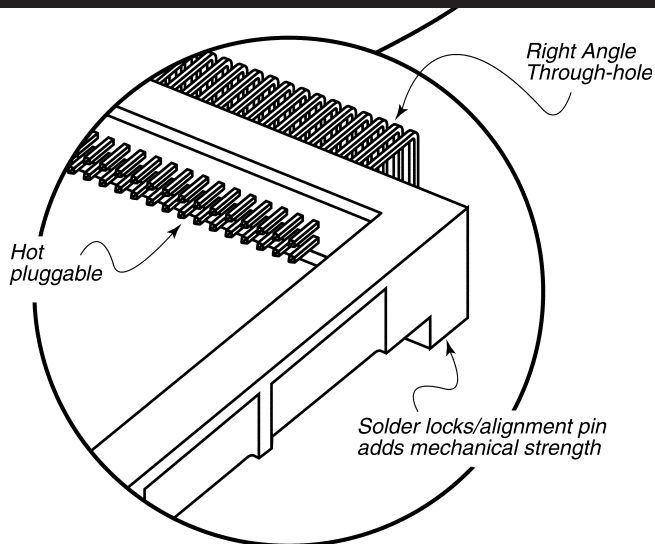
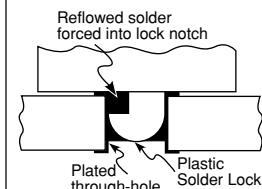
Current Rating:
2A @ 80°C ambient

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Mates with:
CFS

APPLICATION



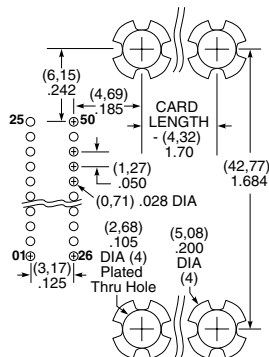
Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

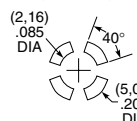
SMT Lead Coplanarity:
(0,15mm) .006" max

Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?CFT for recommended PCB layout.

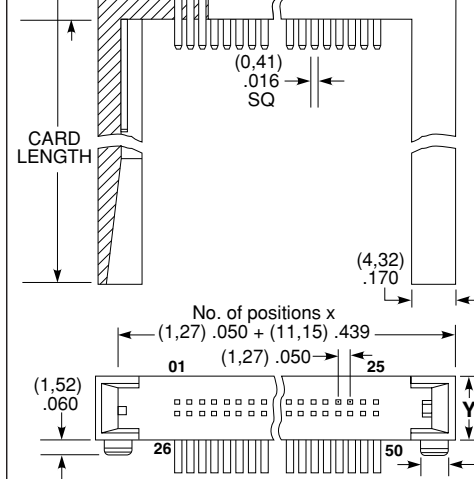


Suggested Stencil:

Your specific layout may vary

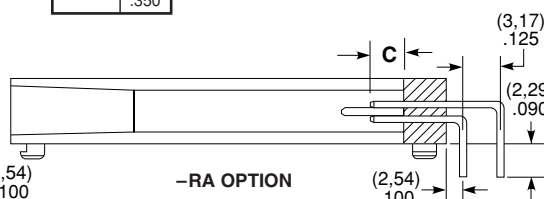


CFT	125	LEAD STYLE	PLATING OPTION	D	RA	CARD LENGTH	SL
		Specify LEAD STYLE from chart					
			-L = 10µ" (0,25µm) Gold on post, Tin on tail			-01 = (25,40mm) 1.00" Card Length	
			-S = 30µ" (0,76µm) Gold on post, Tin on tail			-02 = (50,80mm) 2.00" Card Length	



LEAD STYLE	Y
-01	(6,35) .250
-02	(8,89) .350

POSITION NUMBER	C (POST)
25, 26	(3,50) .138
01, 13, 38, 50	(5,00) .197
ALL OTHERS	(4,25) .167



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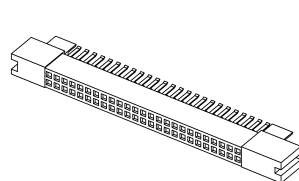
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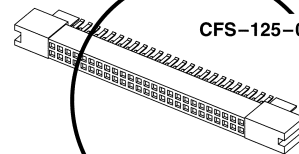
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CFS-125-02-L-D



CFS-125-01-L-D

COMPACT FLASH SOCKET CFS SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?CFS

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

BeCu

Current Rating:

1A

Operating Temp Range:

-65°C to +125°C

Plating:

Au or Sn over

50μ" (1,27μm) Ni

Contact Resistance:

10 mΩ max

Insertion Depth:

(3,05mm) .120" min

Insertion Force:

3.3oz (0,92N) avg.

Withdrawal Force:

2.5oz (0,70N) avg.

Mates with:
CFT



High reliability
Tiger Eye contacts

(1,27mm)
.050"
x
(1,27mm)
.050"
pitch

(0,80mm) .031" or
(1,60mm) .062"
card thickness

Edge mount
feature

Hot
pluggable

Note: Some sizes, styles and options are non-standard, non-returnable.

CFS

1

NO. PINS
PER ROW

25

CARD
THICKNESS-01
= (0,80mm) .031"
thick board-02
= (1,60mm) .062"
thick boardPLATING
OPTION-L
= 10μ" (0,25μm)
Gold on contact,
Tin on tail-S
= 30μ" (0,76μm)
Gold on contact,
Tin on tail

Processing:

Max Processing Temp:

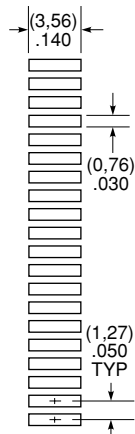
230°C for 60 seconds

SMT Lead Coplanarity:

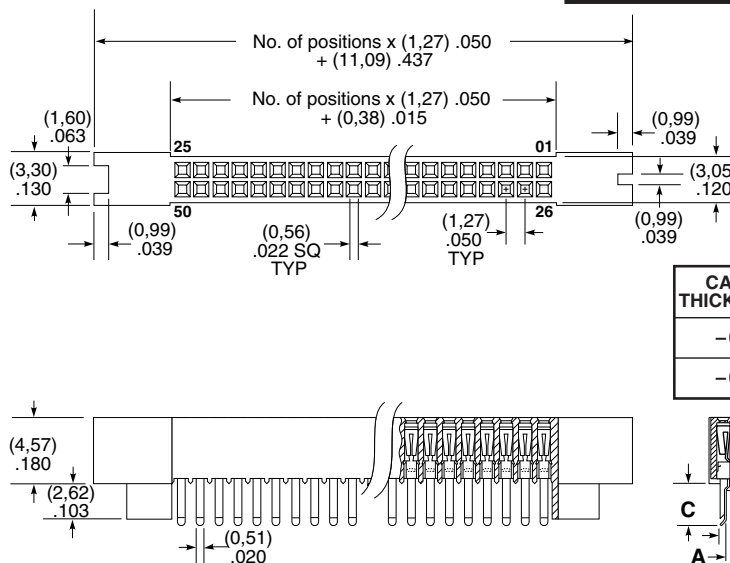
(0,10mm) .004" max

Suggested PCB Layouts:

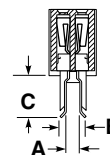
For reference only. Please contact Samtec or go to www.samtec.com?CFS or recommended PCB layout.



Both Sides of
P.C. Board



CARD THICKNESS	A	B	C
-01	(1,02) .040	(1,79) .070	(3,12) .123
-02	(1,70) .067	(2,46) .097	(2,77) .109



Due to technical progress, all designs, specifications and components are subject to change without notice.

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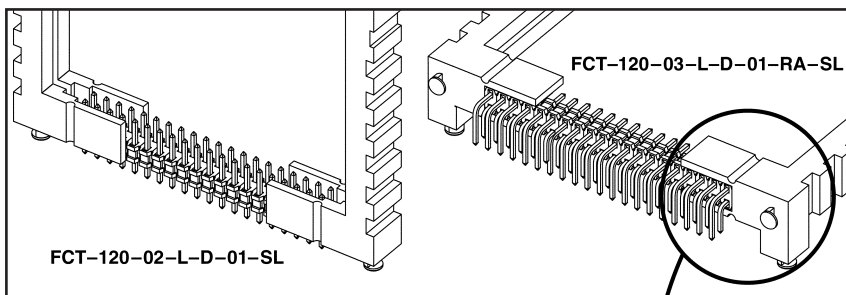
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2mm FLEX CARD TERMINAL FCT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FCT

Insulator Material:
Black Liquid Crystal Polymer



Terminal Material:
Phosphor Bronze
Current Rating:
3A @ 80°C ambient

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

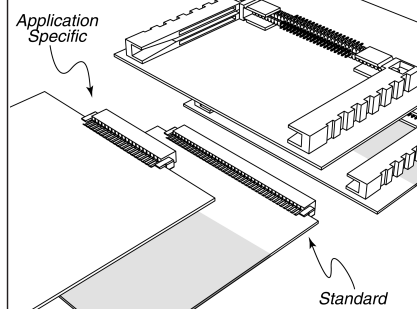
Max Processing Temp:
230°C for 60 seconds

Plating: Sn or Au over 50µ" (1,27µm) Ni

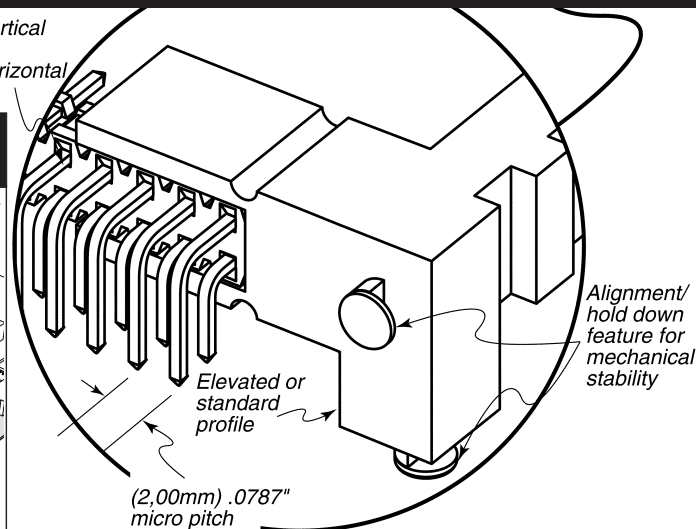
Mates with:
EMT, SM2

APPLICATION SPECIFIC OPTIONS

Other pin counts and card widths available. Call Samtec.

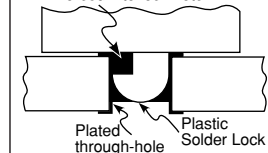


Vertical or horizontal



APPLICATIONS

Reflowed solder forced into lock notch



Note: Some lengths, styles and options are non-standard, non-returnable.

FCT - 1 NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - D - CARD SLOT - TAIL OPTION - SL

20, 30 & 40
(Call Samtec for other sizes)

Specify LEAD STYLE from chart

-L
= 10µ" (0,25µm)
Gold on post,
Tin on tail

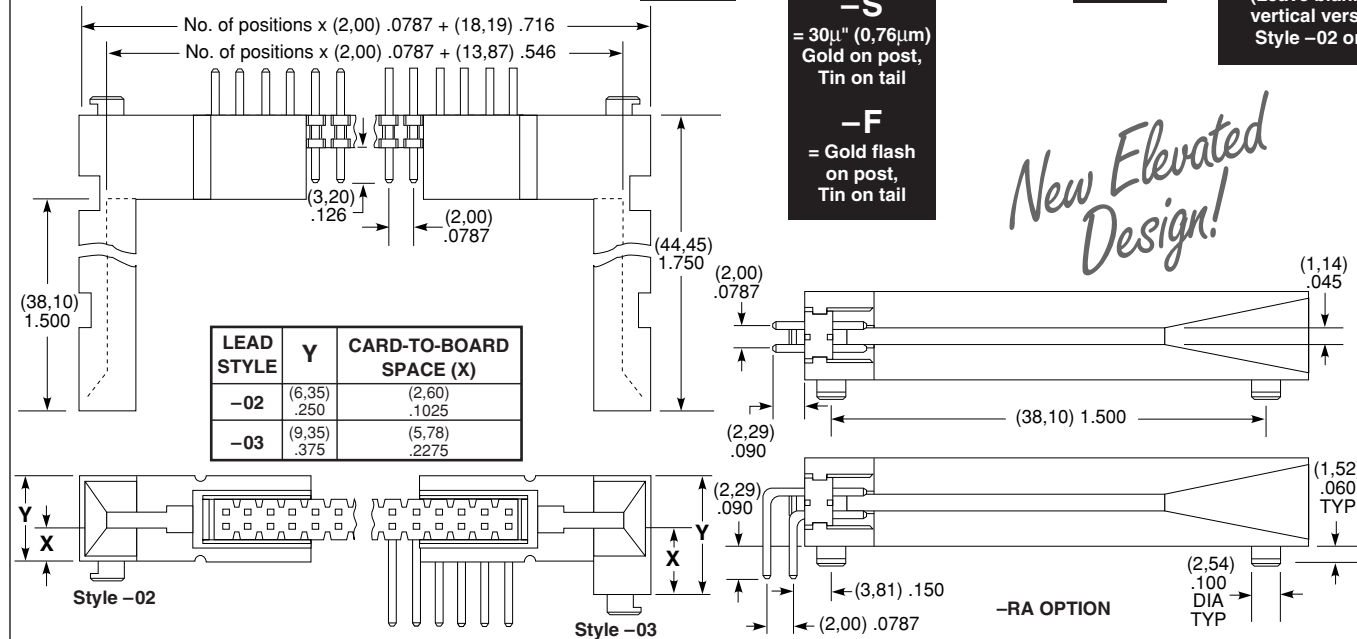
-S
= 30µ" (0,76µm)
Gold on post,
Tin on tail

-F
= Gold flash
on post,
Tin on tail

-01
= Accepts
(0,80mm)
.031"
thick card

-RA
= Right Angle
(Leave blank for
vertical version.
Style -02 only)

New Elevated Design!



Due to technical progress, all designs, specifications and components are subject to change without notice.

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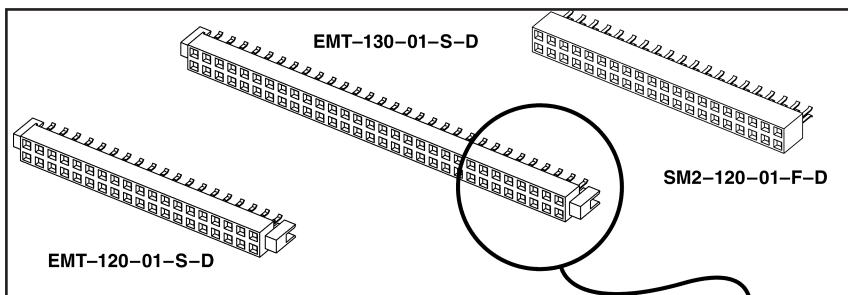
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EDGE MOUNT SOCKET STRIP EMT, SM2 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?EMT or www.samtec.com?SM2

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

EMT=BeCu

SM2=Phosphor Bronze

Current Rating:

3A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over

50μ" (1,27μm) Ni

Contact Resistance:

10 mΩ max

EMT Insertion Depth:

(3,05mm) .120"

to (3,30mm) .130"

EMT Insertion Force:

-01=1.5oz (0,44N) average

-51=2.5oz (0,70N) average

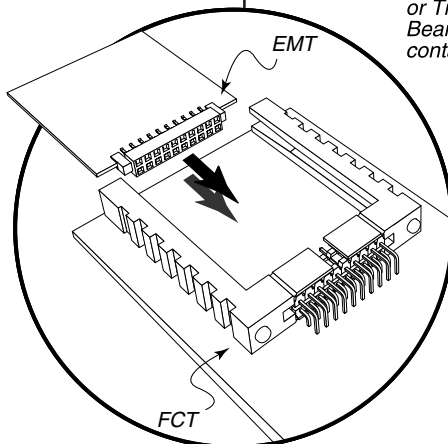
EMT Withdrawal Force:

-01=1.1oz (0,31N) average

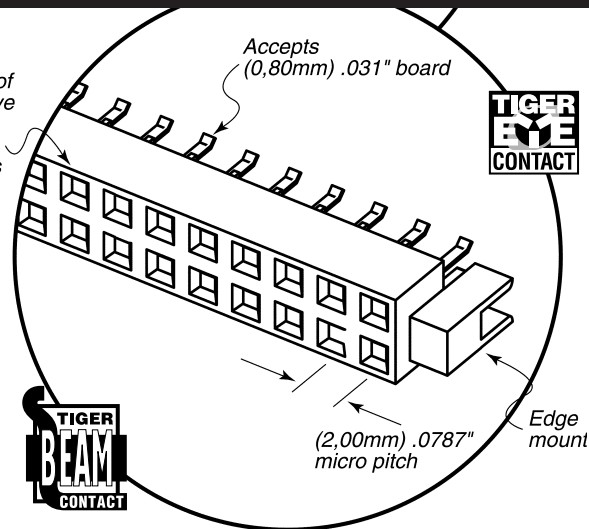
-51=1.5oz (0,44N) average



Mates with:
FCT



Choice of
Tiger-Eye
or Tiger
Beam
contacts



Note:
Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

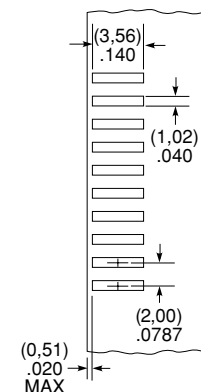
SMT Lead Coplanarity:

(0,10mm) .004" max (02-20)

(0,15mm) .006" max (30-50)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?EMT or www.samtec.com?SM2 for recommended PCB layout.



Both Sides of P.C. Board

TYPE STRIP	1	NO. PINS PER ROW	CARD THICKNESS	PLATING OPTION	D
EMT = Tiger Eye Contact		20, 30 & 40 = EMT Series	-01 = (0,80mm) .031" thick board (Low Insertion Force)	-L = 10μ" (0,25μm) Gold on contact, Tin on tail	
SM2 = Tiger Beam Contact		SM2 = 02 thru 50 = SM2 Series (Call Samtec for other sizes)	-51 = (0,80mm) .031" thick board (Standard Insertion Force) EMT only	-S = 30μ" (0,76μm) Gold on contact, Tin on tail (EMT only)	
				-F = Gold flash on contact, Tin on tail (SM2 only)	

Due to technical progress, all designs, specifications and components are subject to change without notice.

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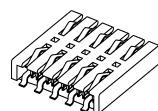
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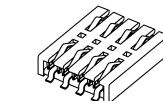
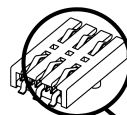
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SCC-105-02-S-D-AB

SCC-103-02-L-D-AB



SCC-104-02-L-D-AB

SMART CARD CONNECTOR SCC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SCC

Insulator Material:

Black Liquid Crystal Polymer



Contact Material:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-65°C to +125°C

Max Processing Temp:

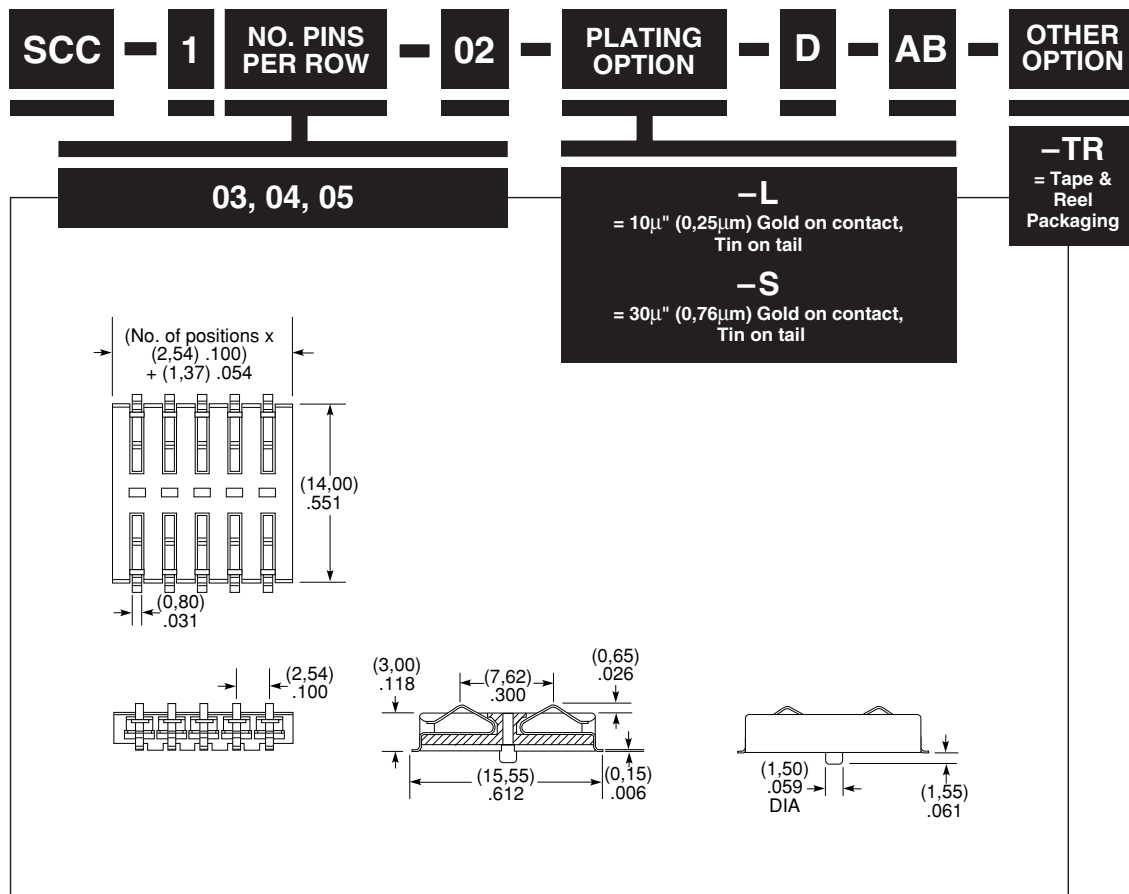
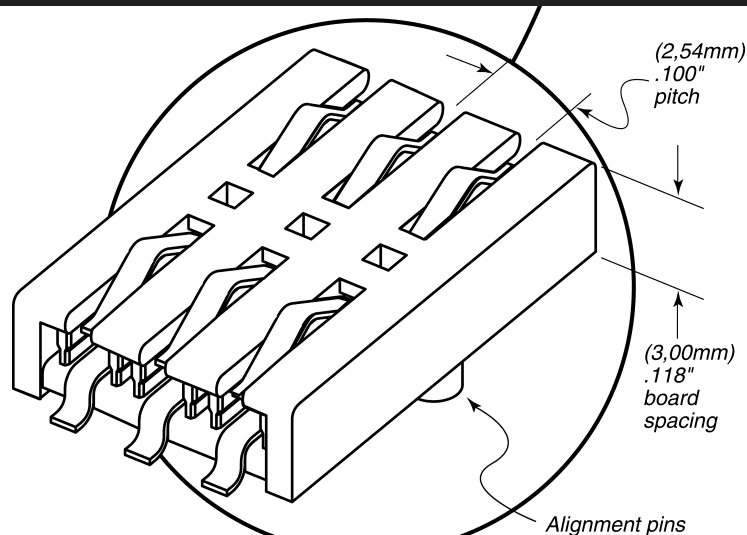
230°C for 60 seconds

Plating:

Au or Sn over 50μ" (1,27μm) Ni

SMT Lead Coplanarity:

(0,10mm) .004" max



Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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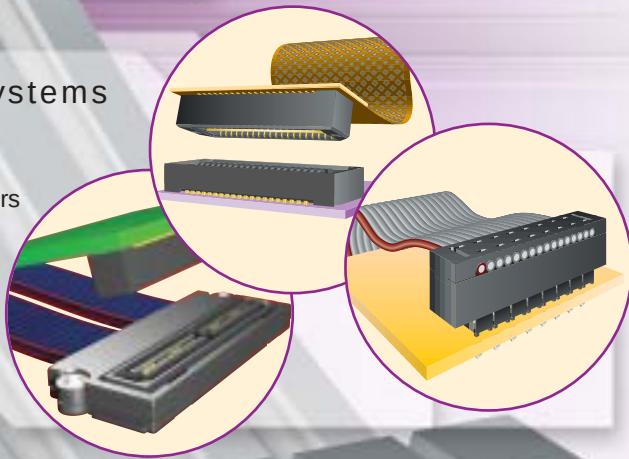
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CABLE INTERFACES

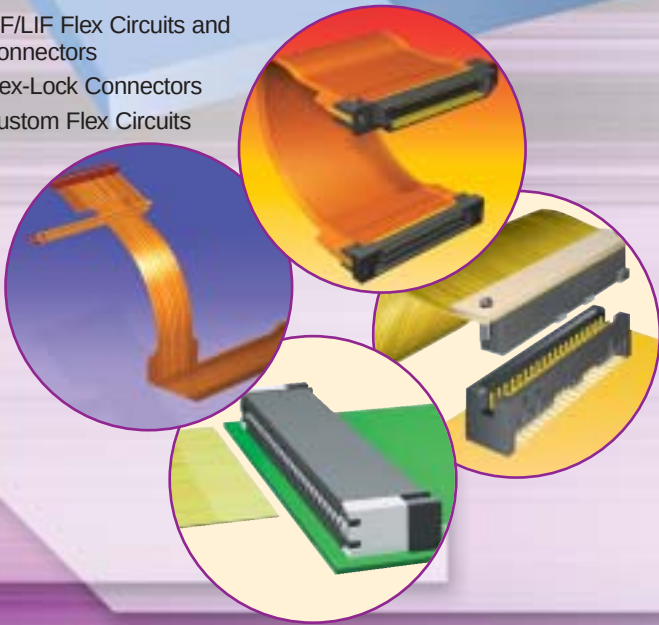
High Speed Systems

- Mini Coax Cable
- Shielded IDC
- Shielded Flex Jumpers



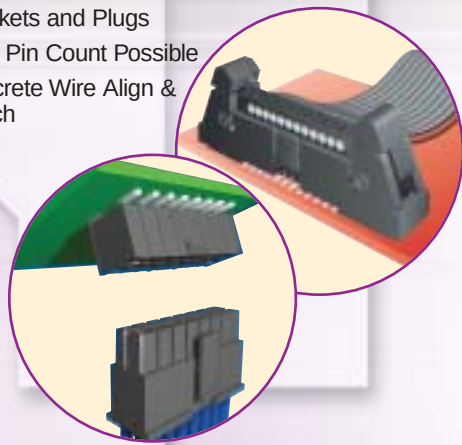
Flex Circuits

- Connector Terminated Data Links
- ZIF/LIF Flex Circuits and Connectors
- Flex-Lock Connectors
- Custom Flex Circuits



Micro Rugged/IDC

- Choice of three pitches
- Low Profile
- Single and Double Row
- Ejector Headers with Locking Caps
- Sockets and Plugs
- Any Pin Count Possible
- Discrete Wire Align & Latch



CABLE INTERFACES

APPLICATIONS

High Speed/High Density	.276-277
Standard Data Links	.278-279
Custom Flex Circuits	.280-281
Micro Rugged/IDC	.282-283

STANDARD PRODUCTS

High Speed

Mini Coax (EQCD)	.284
Shielded 2mm IDC (RCSD, RCMD)	.302
Flex Jumper (HFEM)	.285

Flex Data Links

Connectorized (YFTDL, GFZDL, TFMDL, BTHDL)	.286-289
0,5mm ZIF Flex (ZF5, FJH)	.290-291
1mm ZIF/LIF Flex (ZF1, FC1, FJ)	.292-295
Flex-Lock (SFLX, SFMX)	.296

Micro-Rugged/IDC

.100" (2,54mm) Pitch (EJH, IDXX)	.297-299
2mm Pitch (TCXD, RCXD, EHT)	.300-303
.050" (1,27mm) Pitch (FFXD, EHF)	.304-306

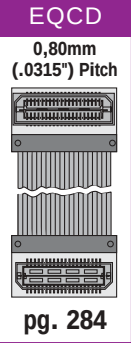
HIGH SPEED /HIGH DENSITY

High Speed Coax Cable Assemblies

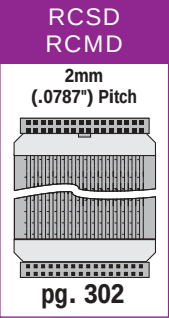
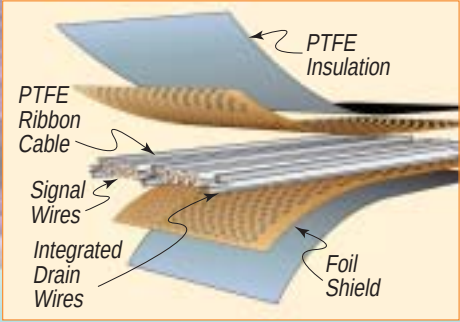
- 38 AWG Miniature coax ribbon cable
- Edge mount or vertical
- 50Ω and 100Ω systems
- 0,80mm pitch
- Application Specific designs for other pitches available
- Application Specific micro-rugged designs available



ASP-65067-01
(See page 316)



pg. 284

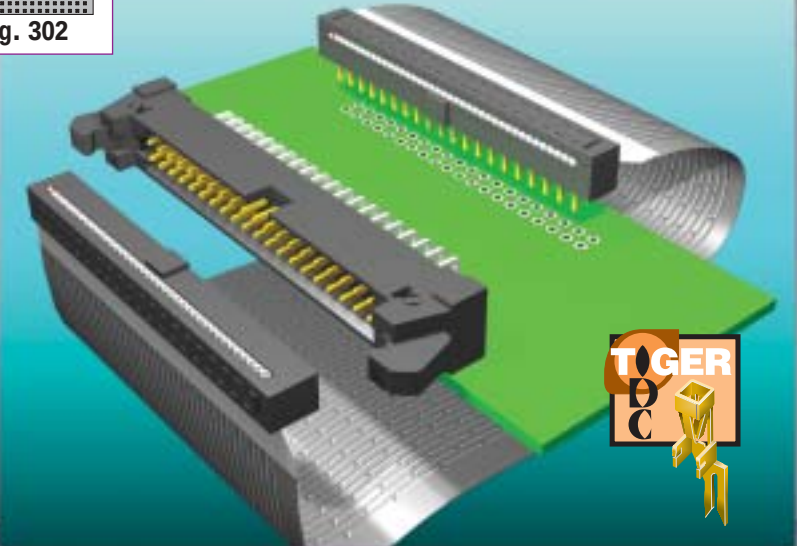


pg. 302

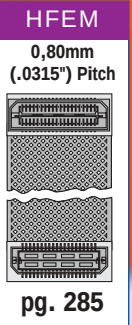
High Speed Shielded IDC Assemblies

- Made with Gore Ribbon-Ax® cable*
- 2x10, 2x20, 2x22 and 2x25 position standard
- Sockets, terminals and combinations
- BeCu Tiger IDC Contact for highest reliability
- Mating ejector headers available

*RIBBON-AX® is a Registered Trademark of W.L. Gore Associates



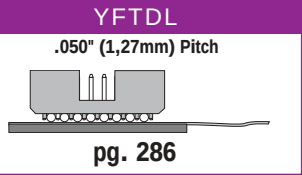
HFEM-XXX-T-05.00-DP SPECIFICATIONS		
Environment	Differential signal transmission 100 ps signal rise time (10-90%)	
Bandwidth	> 6 Gb/sec per pair > 90 Gb/sec per bank	
Impedance	100 Ohms +/- 10%	
NEXT	<1.5%	
FEXT	<1.0%	
Propagation Delay*	Shortest path: 750 ps +/- 30 ps Longest path: 830 ps +/- 30 ps	
Insertion Loss (Longest Path)	500 MHz	-0.7 dB
	1.0 GHz	-1.2 dB
	1.5 GHz	-1.3 dB
	2.0 GHz	-2.2 dB
	2.5 GHz	-2.2 dB
	3.0 GHz	-2.5 dB
* Contact sig@samtec.com for path length map.		



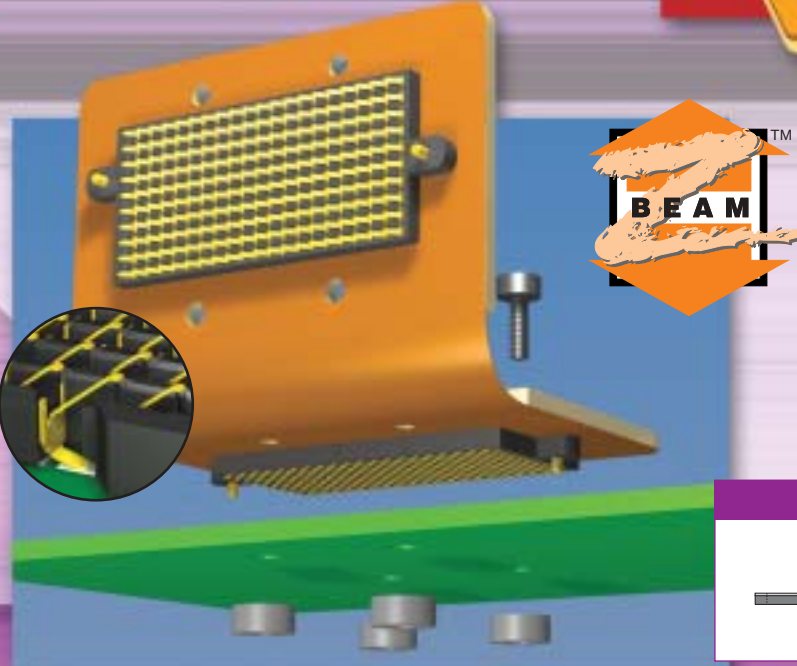
pg. 285

High Density/High Reliability

- High reliability Tiger Eye Contacts
- Mate High Density connectors with minimal skew and alignment concerns
- Target connectors on boards soldered with conventional BGA processes
- Modify for other pins or cable lengths
- For complete specifications see www.samtec.com?YFTDL

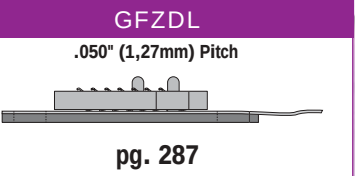


pg. 286



High Density Compression

- Ideal for test probes or other temporary connections
- Test boards without traditional connector
- Controlled impedance flex routing
- For complete specifications see www.samtec.com?GFZDL



pg. 287



Standard Flex Data Links

- Terminate with Single-Ended or Differential Pair High Speed connectors
- Controlled Impedance Shielded Flex Circuits
- Wide choice of mating connectors on 0,80mm pitch
- Easy customization of cable lengths, pin counts, guide posts, connector heights, etc
- For complete specifications see www.samtec.com?HFEM



STANDARD DATA LINKS

samtec

Edge Mount

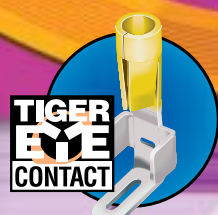
- Micro 0,5mm pitch
- "Flexible" edge mount design
- 2 x 50 mates with Agilent Logic Analyzers
- For complete specifications see www.samtec.com?BTHDL

BTHDL
0,50mm
(.0197") Pitch
pg. 289

TFMDL
.050" (1,27mm)
pg. 288

Tiger Eye Connector Sets

- High reliability Tiger Eye contacts
- Choice of standard or friction lock sockets
- Easy customization of cable lengths, pin counts, etc.
- For complete specifications see www.samtec.com?TFMDL



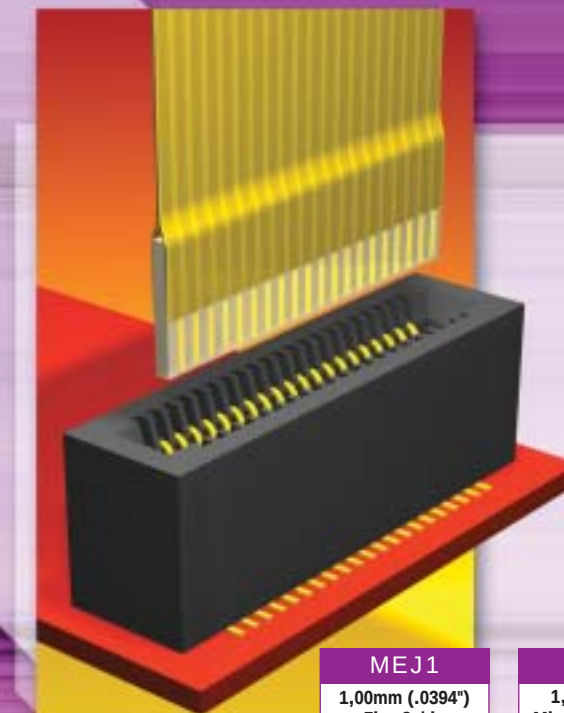
Application Specific Connectorized Data Links

- Wide variety of sockets and headers reflow soldered to flex
- Stiffener design and selective placement for rigidity/strength without losing inherent benefits of flex
- Long track record of reliable performance with traditional Samtec pin & socket connectors

Flex Lock/Latch Sockets

- Socket locks into stiffener behind flex circuit on cable
- High reliability Tiger Eye LITE contacts
- 20 to 100 I/Os

SFMX SFLX
Flex Socket
pg. 296

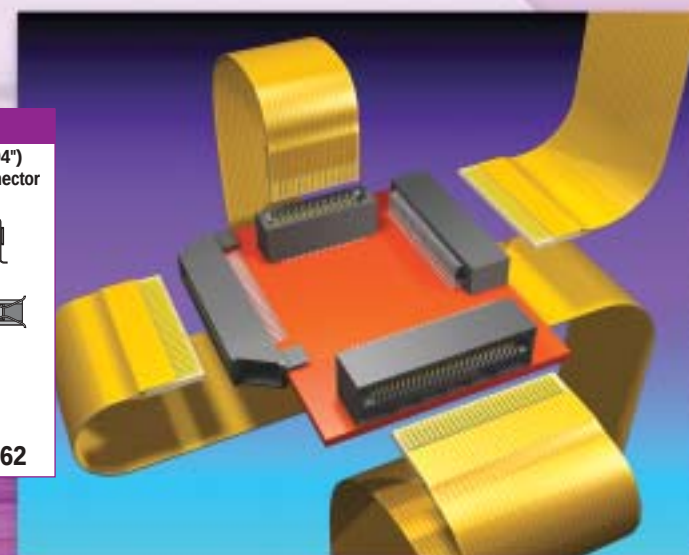


Mini Edge Card

- Double-Sided card interface for mating with mini edge card connectors on 1mm pitch
- Choice of vertical, horizontal and edge mount mating connectors
- Easy customization of cable lengths, pin counts, polarization, etc.
- For complete specifications see www.samtec.com?MEJ1

MEJ1
1,00mm (.0394")
Flex Cable
pg. 295

MEC1
1,00mm (.0394")
Micro Card Connector
pgs. 260-262



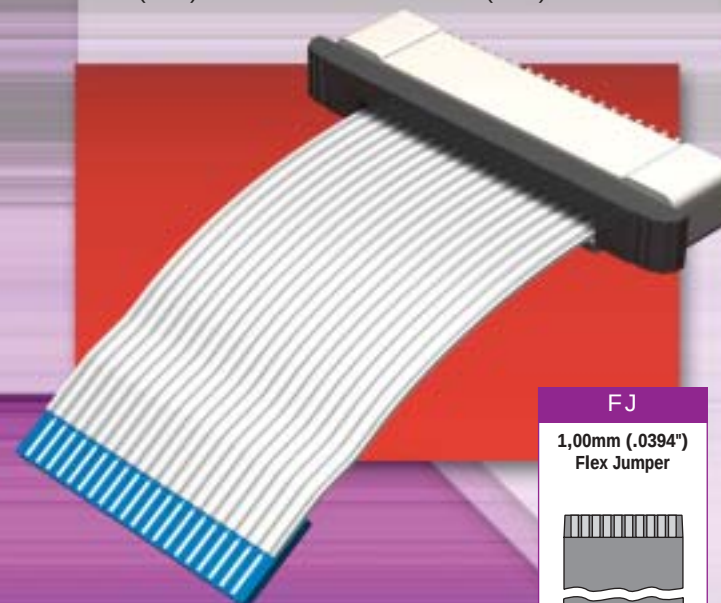
ZIF Flex Jumpers

- 1mm and 0,5mm pitch (FJ and FJH Series)
- Standard pin counts and lengths available from stock
- Easily modified for custom pin counts and lengths
- Mating ZIF (ZF1 and ZF5 Series) and LIF (FC1 Series) sockets for Samtec jumpers or other Flat Flex Cable (FFC) and Flexible Printed Circuit (FPC)

ZF5
0,50mm (.0197")
ZIF FPC Connects
pgs. 290

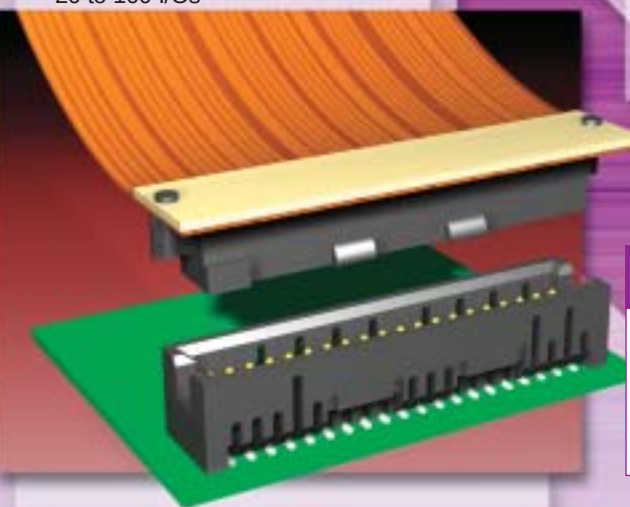
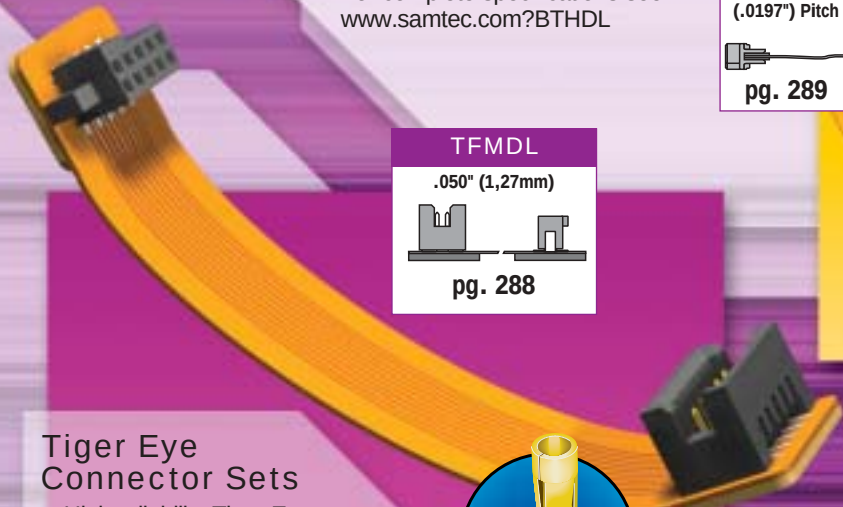
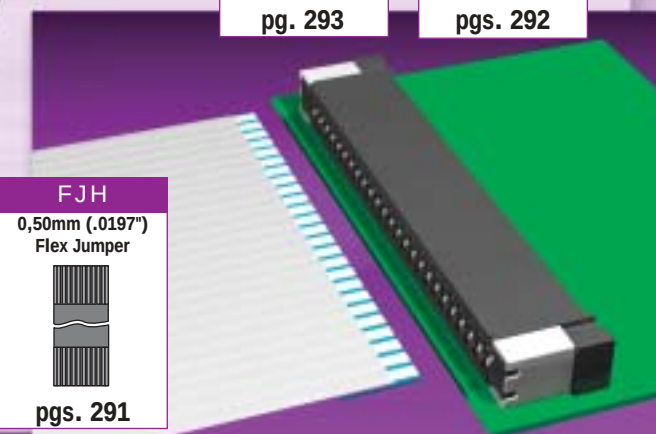
FC1
1,00mm (.0394")
Flex Cable Interconnect
pg. 293

ZF1
1,00mm (.0394")
ZIF FPC
pgs. 292



FJ
1,00mm (.0394")
Flex Jumper
pgs. 294

FJH
0,50mm (.0197")
Flex Jumper
pgs. 291



HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

CUSTOM FLEX

samtec

Flex Design/Build Expertise

- Double Sided & Multi-Layer
- Complex Single-Sided
- High speed, controlled impedance designs

Light weight

Complex single-sided

Fold Lines

Ability to fold and flex

Solid copper and cross-hatched copper shielding

SMT Pads, Vias

Copper Stiffener

Plated Through-Hole

Other component placement

Unsupported "Discreet" Fingers

Superior signal integrity versus traditional pin and socket connectors for boards that are far apart

Signal Integrity Expertise

- In-house Signal Integrity Services for optimum design of conductor routing and terminations
- Full Line of high speed connector termination options
- Custom system analysis capability from flex circuit and terminations to complete subsystems or small systems

High Temperature Applications

Signal Integrity Design Analysis

**SIGNAL
INTEGRITY
DIVISION**

Connector Expertise

- End-to-end solutions
- Thousands of standard connector termination options
- Flex Circuit design and manufacturing expertise
- Designs for hot bar or ZIF/LIF termination to the board
- Custom connector terminations

Daisy Chain

Eliminate traditional cables

Fold to fit application

Breakouts

Pitch Translators

Thousands of "connectorizing" options

Eliminate extra PCBs

"Connectorized" Flex

General Specifications

Panel Size:

- Standard: Up to 12" x 18" (304,8mm x 457,2mm)
- Larger By Request

Drilled Hole Size/Location:

- Non-Plated Thru Holes: .008" (0,20mm) minimum
- Plated Through Holes: .008" (0,20mm) minimum
- Hole-to-Hole: +/- .003" (0,08mm)

Layers:

- 4 Layers Maximum
- Solid and Cross-Hatched Etched Copper Shielding
- Silk Screened Silver Conductive Epoxy
- Pads Only Plating on Plated Layer

Line Width/Spaces:

- Line: $\geq .003"$ (0,08mm)
- Spaces: $\geq .003"$ (0,08mm)

Base Materials:

- Polyimide: .0005" to .005" (0,013mm – 0,127mm)
- All clads incorporate Flame Retardant Adhesive unless otherwise specified; Adhesiveless: By Request (Additional Lead Time Required)
- UL rated 94V-O

Conductors:

- 1/2 oz. Copper .0007" (0,018mm) thickness
- 1 oz. Copper .0014" (0,036mm) thickness
- 2 oz. Copper .0028" (0,071mm) thickness

Stiffeners:

- G10/FR4
- Polyimide
- Other Materials: By Request

Surface Finishes:

- Tin Plating
- Hard Gold over Nickel Plating
- Nickel Plating
- Hot Air Solder Level (HASL)

Solder Masks:

- Liquid Photo-Imagable
- Dry Film Photo-Imagable
- Polyimide .0005" to .005" (0,013mm to 0,127mm)
- Adhesive .001" to .002" (0,025mm to 0,051mm)

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

HIGH SPEED

HIGH DENSITY

MICRO & ONE-PIECE

BOARD-TO-BOARD

MICRO RUGGED /POWER

MICRO CARD

CABLE INTERFACES

SOCKET/REFERENCE

MICRO-RUGGED™ / IDC



FFSD
FFMD
.050"
(1,27mm) Pitch
pgs. 304-305

EHF
.050"
(1,27mm) Pitch
pg. 306



.050" (1,27mm) pitch IDC

- Low profile
- High performance Tiger Eye contacts
- Sockets & plugs
- Ejector headers (optional locking caps)

2mm (.0787") pitch IDC

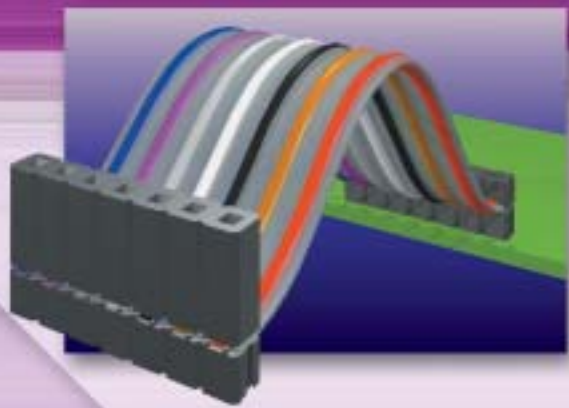
- Exceptionally low profile
- Sockets and plugs
- Tiger Eye contacts
- Ejector headers (optional locking cap)
- Standard and High Speed



TCSD
TCMD
2mm
(.0787") Pitch
pgs. 300-301

EHT
2mm
(.0787") Pitch
pg. 303

RCSD
RCMD
2mm
(.0787") Pitch
pg. 302



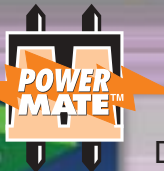
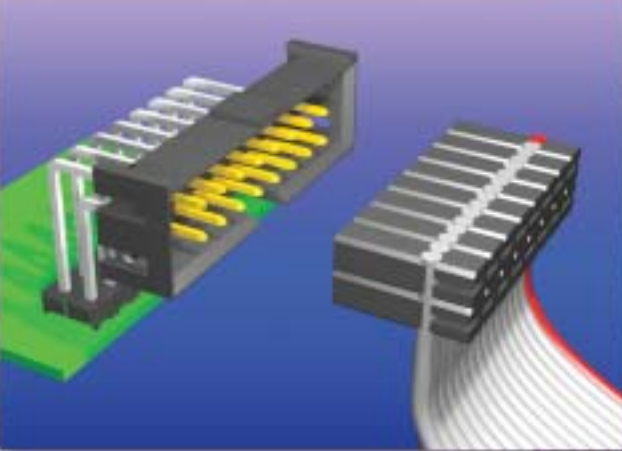
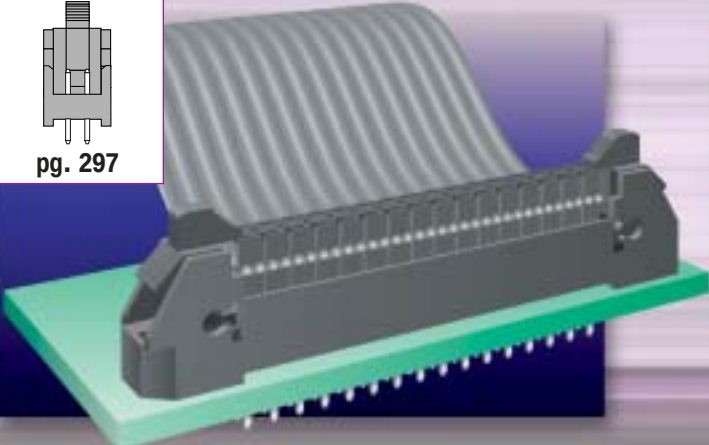
IDSX
IDMS
.100"
(2,54mm) Pitch
pgs. 298-299



.100" (2,54mm) pitch IDC

- Single and double row
- Locking cap/base saves real estate
- Low profile socket and terminal designs
- Any number of positions available
- World's largest variety of header, board stacker and socket options
- Surface mount and through-hole systems
- Low profile and elevated design options
- Ejector headers

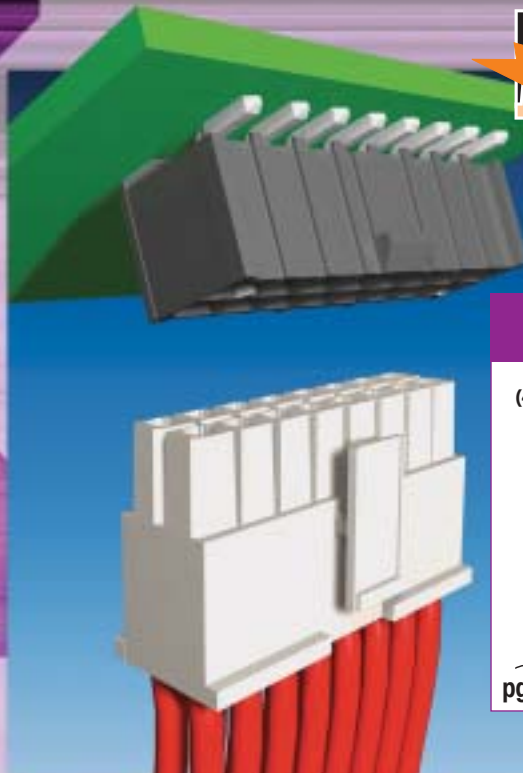
EJH
.100"
(2,54mm) Pitch
pg. 297



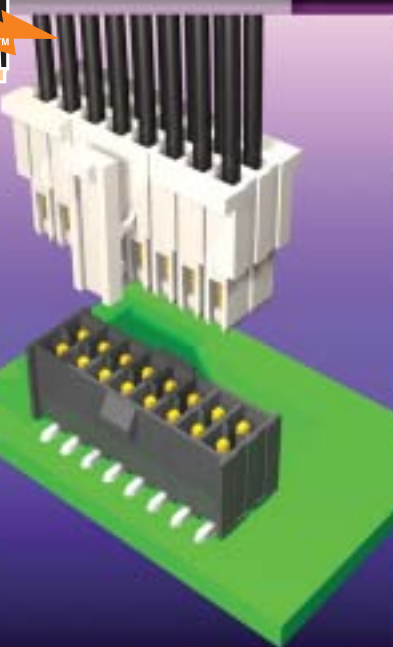
Discrete Wire

- Align & Latch
- .165" (4,19mm) and .100" (2,54mm) pitch
- Power & other discrete wire applications

IPBT
IPBD
.165"
(4,19mm) Pitch
pgs. 217-218

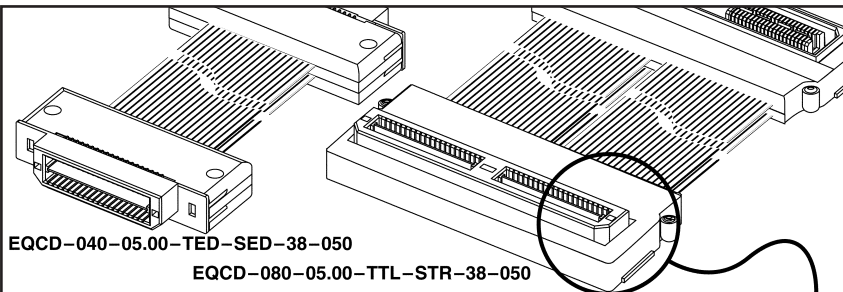


IPD1
IPL1
.100"
(2,54mm) Pitch
pgs. 220-221



HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

HIGH SPEED
HIGH DENSITY
MICRO & ONE-PIECE
BOARD-TO-BOARD
MICRO RUGGED /POWER
MICRO CARD
CABLE INTERFACES
SOCKET/REFERENCE

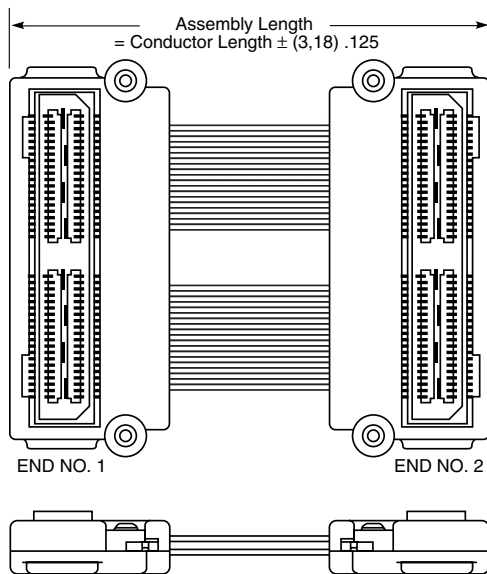
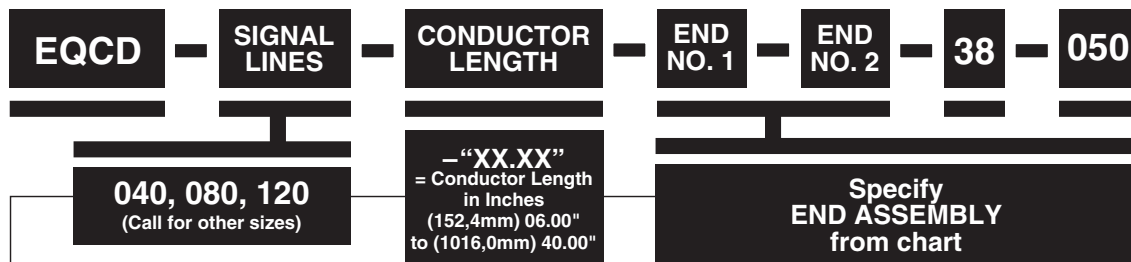
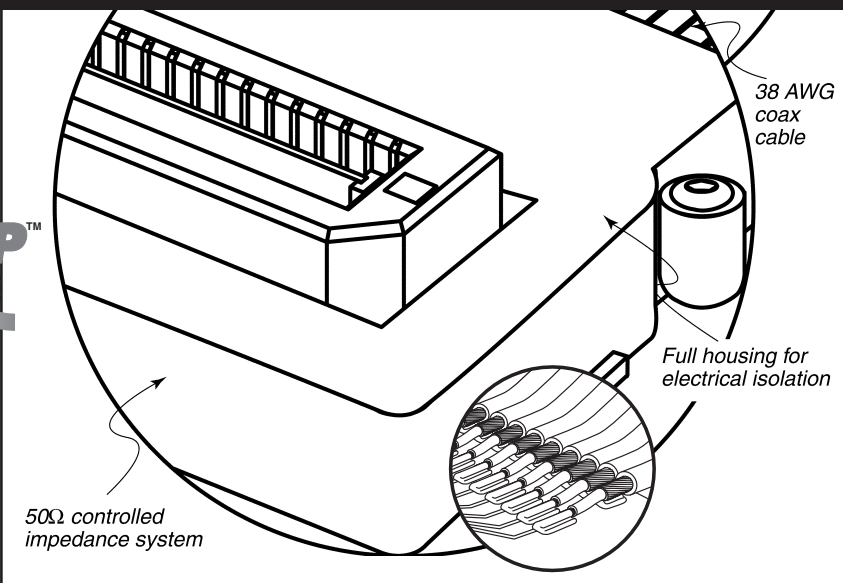


HI-SPEED CABLE ASSEMBLY EQCD SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com/EQCD

Mates with:
QTE, QSE



END ASSEMBLY	SURFACE MOUNT TERMINATION	END ASSEMBLY	EDGE MOUNT TERMINATION
TTR	(QTE)	TEU	(QTE)
TTL	(QTE)	TED	(QTE)
TBR	(QTE)	SEU	(QSE)
TBL	(QTE)	SED	(QSE)
STR	(QSE)		
STL	(QSE)		
SBR	(QSE)		
SBL	(QSE)		

Gender = T or S (Terminal or Socket)
Orientation = T, E or B (Top, Edge or Bottom)
Notch = R, L, U or D = (Right, Left, Up or Down)

Note:
This Series is non-standard,
non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC UK • Tel: 01236 739292 • Fax: 01236 727113

SAMTEC GERMANY • Tel: +49 (0) 89 / 89460-0 • Fax: +49 (0) 89 / 89460-299

SAMTEC FRANCE • Tel: 01 60 95 06 60 • Fax: 01 60 95 06 61

SAMTEC ITALY • Tel: 39 039 6890337 • Fax: 39 039 6890315

SAMTEC ASIA PACIFIC • Tel: 65 6745-5955 • Fax: 65 6841-1502

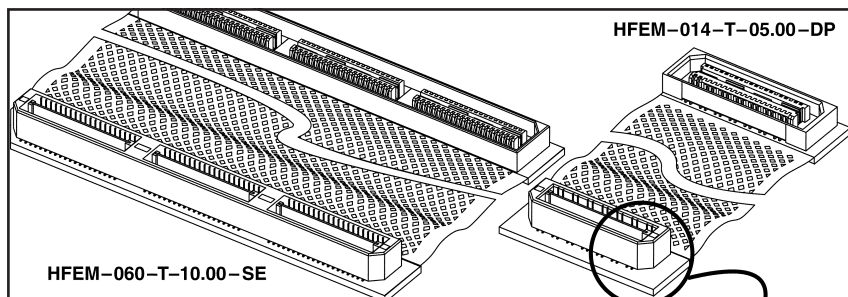
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SAMTEC TAIWAN • Tel: 886-02-2364-6077 • Fax: 886-02-2367-9531

SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



HIGH SPEED DATA LINK HFEM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/HFEM

Terminal:

QTE Series

Socket:

QSE Series

Cable:

1 oz. rolled annealed copper

Base Film:

1 mil Polyimide

Adhesive:

FR (DuPont)

Stiffener:

FR-4 glass epoxy

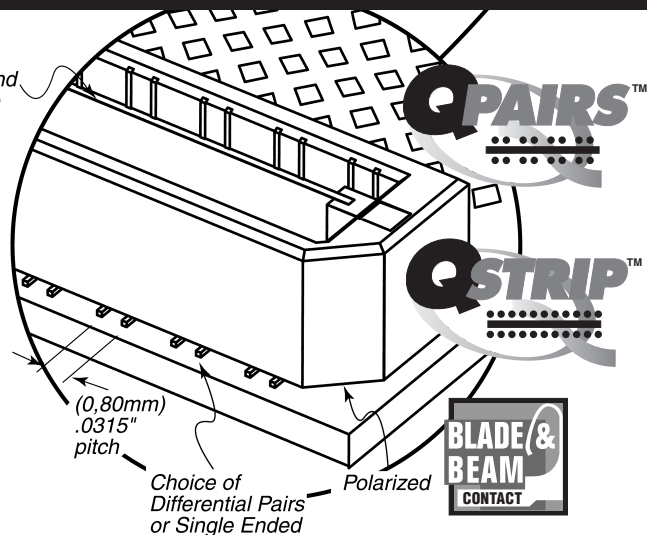
Mates with:
QTE, QSE

HFEM-XXX-T-05.00-DP SPECIFICATIONS

Environment	Differential signal transmission 100 ps signal rise time (10-90%)
Bandwidth	> 6 Gb/sec per pair > 90 Gb/sec per bank
Impedance	100 Ohms +/- 10%
NEXT	<1.5%
FEXT	<1.0%
Propagation Delay*	Shortest path: 750 ps +/- 30 ps Longest path: 830 ps +/- 30 ps
Insertion Loss (Longest Path)	500 MHz: -0.7 dB 1.0 GHz: -1.2 dB 1.5 GHz: -1.3 dB 2.0 GHz: -2.2 dB 2.5 GHz: -2.2 dB 3.0 GHz: -2.5 dB 3.5 GHz: -3.4 dB

* Contact sig@samtec.com for path length map.

Metal
Ground
Plane



HFEM

SIGNAL
PINS

T

OVERALL
LENGTH

SIGNAL
OPTION

–014, –028, –042

= Number of Pairs (for –DP)

–060

= Number of Pins per row (for –SE)

–03.00

= (76.20mm) 3.00"
(–014 only)

–05.00

= (127.0mm) 5.00"
(–014, –028, –042 only)

–10.00

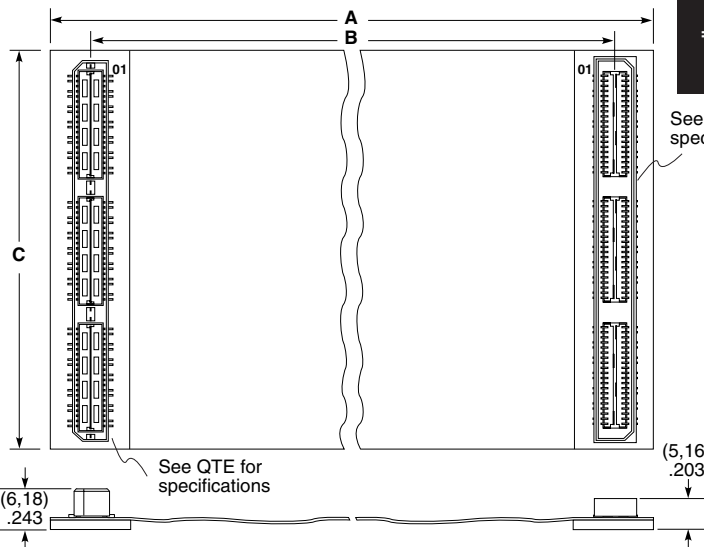
= (254.0mm) 10.00"
(–014, –042 and
–060 only)

–DP

= Differential
Pairs
(–014, –028 and
–042 only)

–SE

= Single Ended
(–060 only)



See QSE for specifications

OVERALL LENGTH	A	B
–03.00	(76,20) 3.00	(64,52) 2.54
–05.00	(127,00) 5.00	(115,32) 4.54
–10.00	(254,00) 10.00	(242,32) 9.54

SIGNAL PINS	C
–014	(23,50) .925
–028	(43,50) 1.71
–042/–060	(63,50) 2.50

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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YFTDL-20-T-08-05.00

YFTDL-20-T-05-03.00

HIGH DENSITY DATA LINK YFTDL SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com?YFTDL

Header:

YFT Series

Socket:

YFS Series

Cable:

1 oz. rolled annealed copper

Base Film:

1 mil Polyimide

Adhesive:

FR (DuPont)

Stiffener:

FR-4 glass epoxy

Mates with:
YFT, YFS

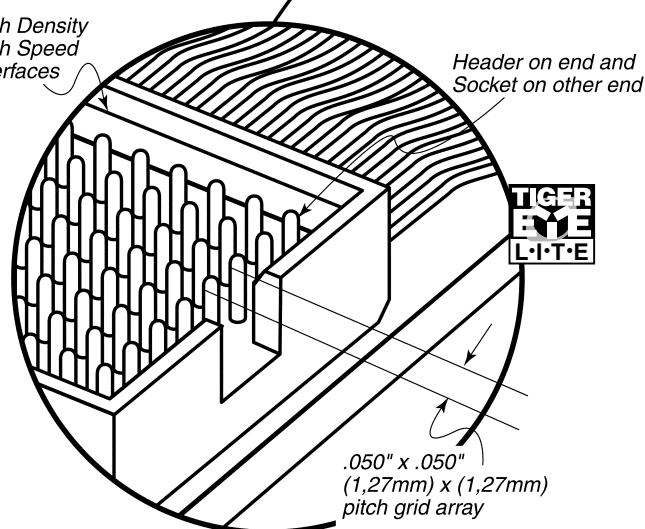


APPLICATION SPECIFIC OPTION

Other sizes available.
Call Samtec.

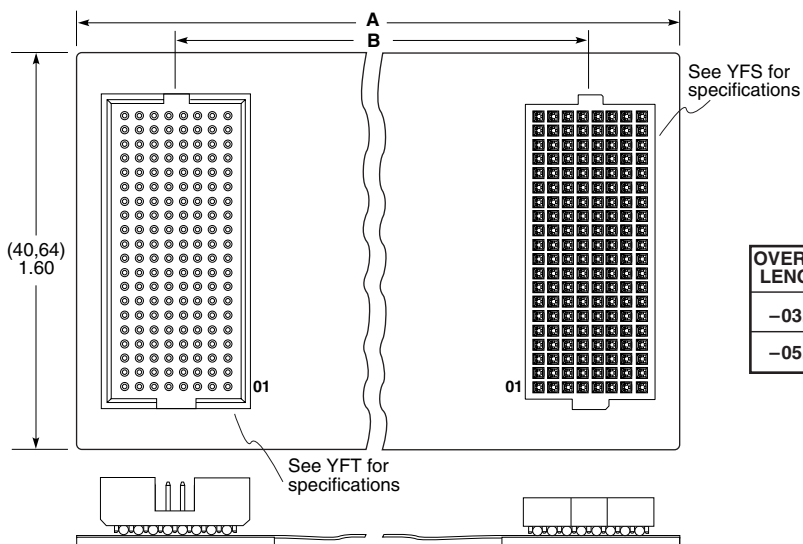
High Density
High Speed
Interfaces

Header on end and
Socket on other end



.050" x .050"
(1,27mm) x (1,27mm)
pitch grid array

YFTDL	NO. PINS PER ROW	T	NO. OF ROWS	OVERALL LENGTH
	-20		-05 = (76,2mm) 3.00" OAL only -08 = (127,0mm) 5.00" OAL only	-03.00 = (76,2mm) 3.00" (05 row only) -05.00 = (127,0mm) 5.00" (08 row only)



OVERALL LENGTH	A	B
-03.00	(76,20) 3,00	(57,15) 2,25
-05.00	(127,00) 5,00	(107,95) 4,25

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC HONG KONG • Tel: 852-26904858 • Fax: 852-26904842

SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



GFZDL-20-10-05.00

GFZDL-30-10-05.00

SOLDERLESS DATA LINK GFZDL SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/GFZDL

Insulator Material:

Liquid Crystal Polymer

Contact Material:

BeCu

Plating:

30μ" (0.76μm) Gold

over 50μ" (1.27μm) Nickel

Cable:

1 oz. rolled annealed copper

Base Film:

1 mil Polyimide

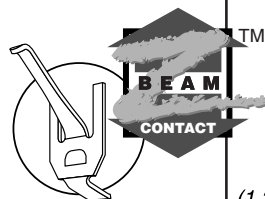
Adhesive:

FR (DuPont)

Stiffener:

FR-4 glass epoxy

Note: Some lengths, styles and options are non-standard, non-returnable.

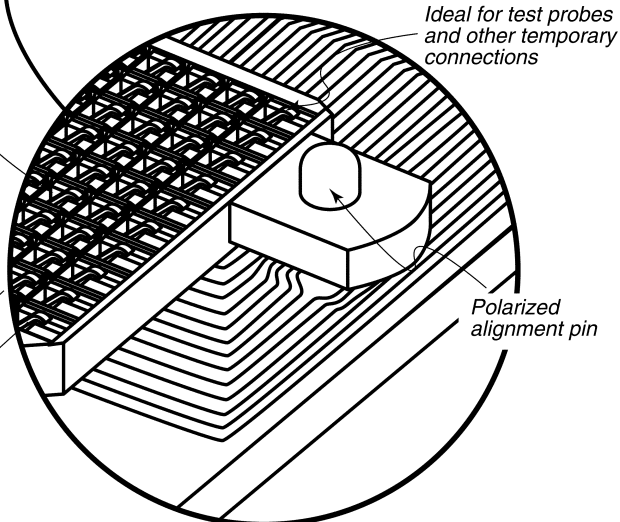


Dual spring action for solderless connection

(1.27mm x 1.27mm)
.050" x .050"
pitch grid array

APPLICATION SPECIFIC OPTIONS

Other sizes available.
Call Samtec.



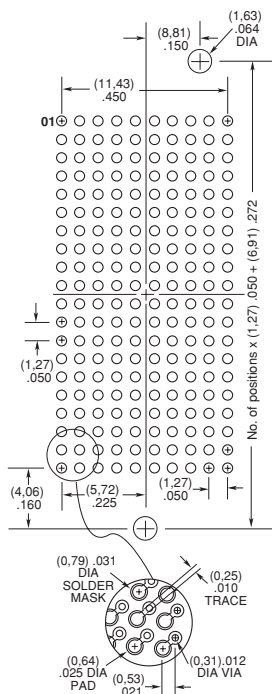
Ideal for test probes and other temporary connections

Polarized alignment pin

Processing:

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com/GFZDL for recommended PCB layout.



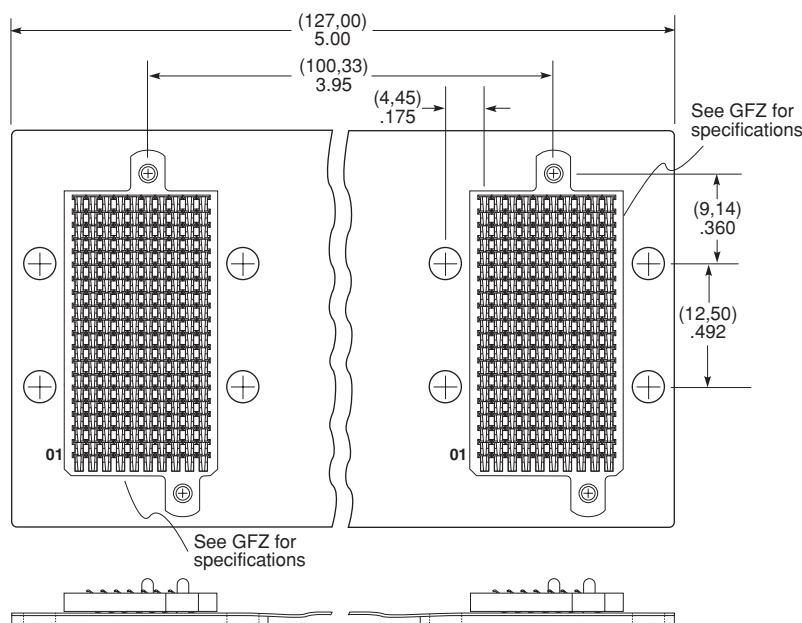
GFZDL

POSITIONS PER ROW

NO. OF ROWS

OVERALL LENGTH

-20, -30

-10
= Ten Rows-05.00
= (127.0mm)
5.00"

Due to technical progress, all designs, specifications and components are subject to change without notice.

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TFMDL-25-T-03.00

TFMDL-05-T-02.00

.050mm MICRO DATA LINK TFMDL SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com?TFMDL

Terminal:

TFM Series or TFML Series

Socket:

SFM Series or SFML Series

Cable:

1 oz. rolled annealed copper

Base Film:

1 mil Polyimide

Adhesive:

FR (DuPont)

Stiffener:

FR-4 glass epoxy

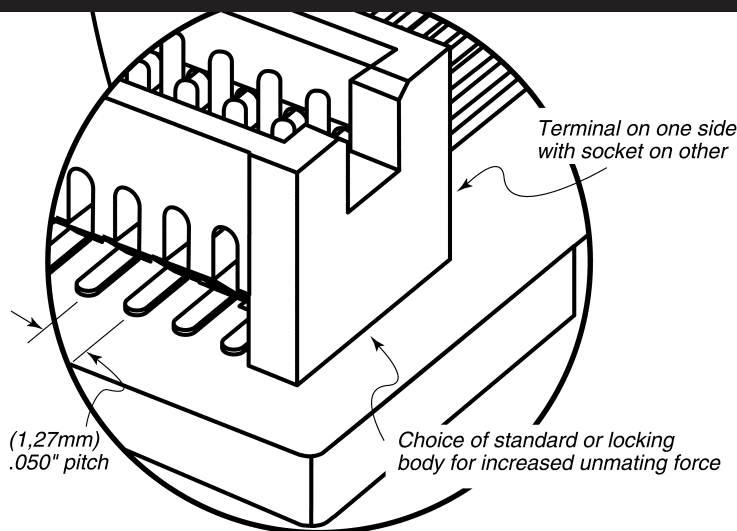
TFMDL Mates with:

SFM, TFM, SFML, TFML



APPLICATION SPECIFIC OPTION

Other sizes available.
Call Samtec.



TFMDL

NO. PINS
PER ROW

T

OVERALL
LENGTHOTHER
OPTION

-05

= (50,80mm) 2.00" length only

-25

= (76,20mm) 3.00" length only

-50

= (127,0mm) 5.00" length only

-02.00

= (50,80mm) 2.00"
(-05 only)

-03.00

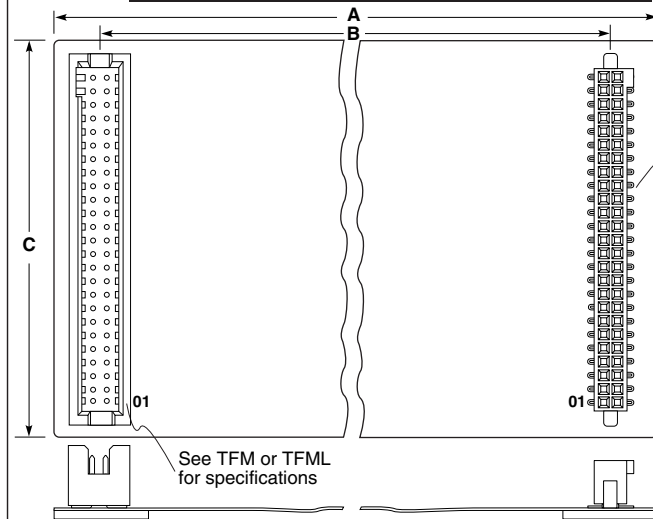
= (76,20mm) 3.00"
(-25 only)

-05.00

= (127,0mm) 5.00"
(-50 only)

-FL

= Friction Locks
(TFML/SFML Series)
Leave blank for
standard version
(TFM/SFM Series)



See SFM or SFML
for specifications

OVERALL LENGTH	A	B
-02.00	(50,80) 2.00	(41.91) 1.65
-03.00	(76,20) 3.00	(67.31) 2.65
-05.00	(127,00) 5.00	(118,11) 4.65

NO. PINS PER ROW	C
-05	(12,07) .475
-25	(37,47) 1.475
-50	(69,22) 2.725

Note: Some sizes, styles and
options are non-standard,
non-returnable.

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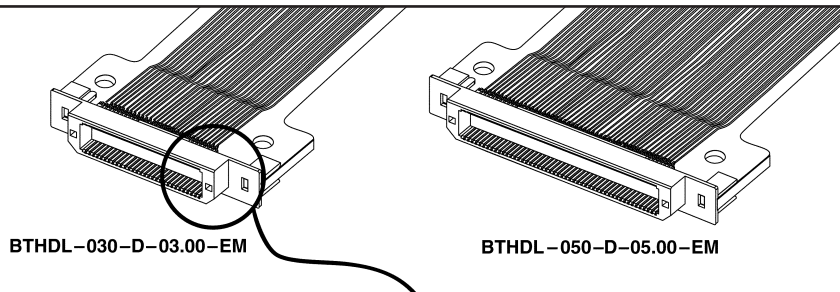
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EDGE MOUNT DATA LINK BTHDL SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?BTHDL

Terminal:
BTH(-EM) Series (Both Ends)
Cable:
1 oz. rolled annealed copper
(Top & Bottom)
Base Film:
1 mil Polyimide
Adhesive:
FR (DuPont)
Stiffener:
FR-4 glass epoxy

Mates with:
BSH

APPLICATION SPECIFIC OPTION

Other sizes available.
Call Samtec.

Blade and
Beam contact
design

2x50 style mates
with Agilent Logic
Analysis Probes -
Call Samtec



(0.50mm)
.0197"
pitch

Polarized

BTHDL

NO. PINS
PER ROW

D

OVERALL
LENGTH

EM

-030

= (76,20mm) 3.00" length only

-050

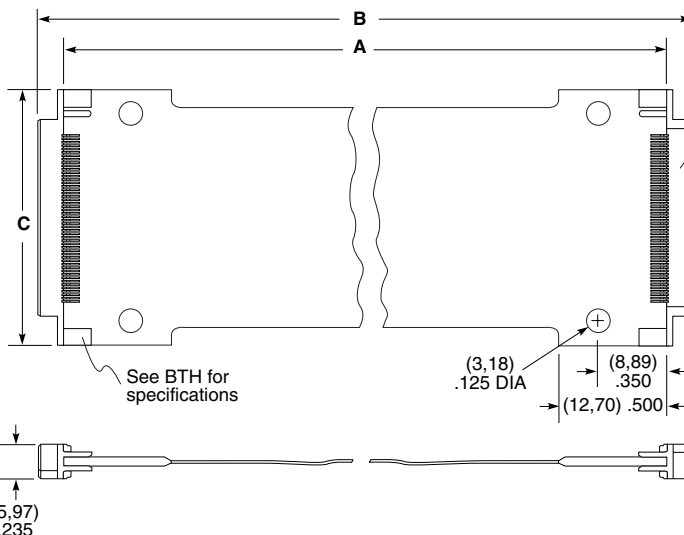
= (127,0mm) 5.00" length only

-03.00

= (76,20mm) 3.00"
(-030 only)

-05.00

= (127,0mm) 5.00"
(-050 only)



See BTH for
specifications

OVERALL LENGTH	A	B
-03.00	(76,20) 3.00	(84,33) 3.32
-05.00	(127,00) 5.00	(135,13) 5.32

NO. PINS PER ROW	C
-030	(29,91) 1.18
-050	(39,91) 1.57

Note: Some sizes, styles and options are non-standard, non-returnable.

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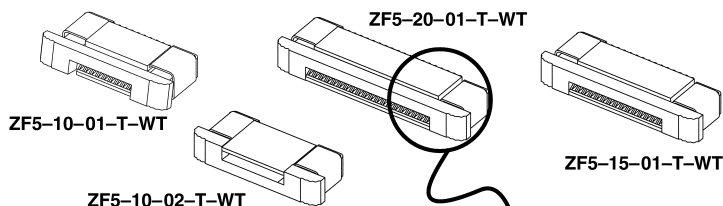
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0,50mm ZIF FPC/FFC SOCKET ZF5 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?ZF5

Insulator Material:

Liquid Crystal Polymer



Contact Material:

Phosphor Bronze

Weld Tab:

Brass

Operating Temp Range:

-65°C to +105°C

Plating:

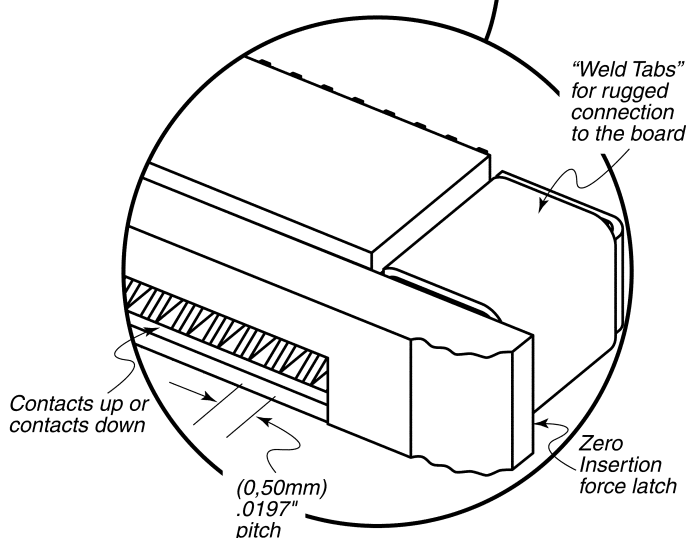
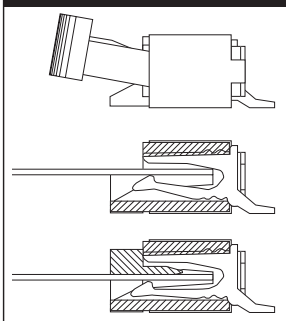
Tin/Lead over 50µ" (1,27µm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:

FJH and flex cable with stiffener thickness of (0,36mm) .014"

APPLICATION



Processing:

Max Processing Temp:

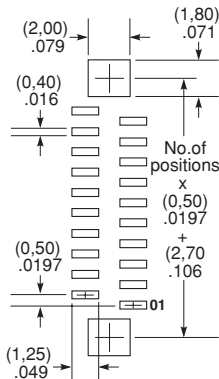
230°C for 60 seconds

SMT Lead Coplanarity:

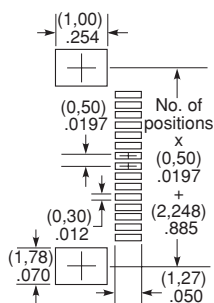
(0,10mm) .004" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?ZF5 for recommended PCB layout.

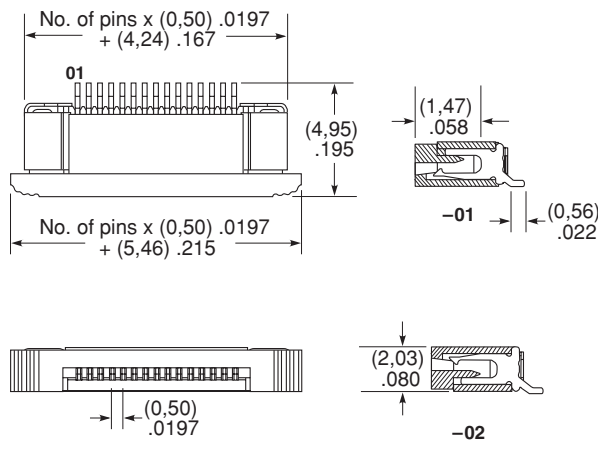


-01 & -02



-03

ZF5	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	WT	OPTION
	-10, -15, -18, -20, -22, -25, -30 (Call Samtec for other sizes.)	-01 = Contact Bottom -02 = Contact Top -03 = Vertical	-T = Tin/Lead	-WT = Weld Tab	-TR = Tape & Reel Packaging



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FJH-20-S-3.00-4

FJH-10-S-5.50-4

0,50 mm FPC JUMPER FJH SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com?FJH

Conductor:

Tin Plated Copper

Conductor

Resistance:

300Ω/km max

Insulation Resistance:

10MΩ/km min

(conductor-to-conductor)

Dielectric Test:

400 VAC during 1 minute

(conductor-to-conductor)

Temperature Rating:

-30°C to +80°C

Voltage Rating:

300 VAC

Flame Resistance:

VW-1 (UL 758)



Mates with:
ZF5

Single or
double ended

(0,50mm)
.0197"
pitch

(4,00mm)
.157"

FJH

NO. OF
POSITIONS

STYLE

OVERALL
LENGTHSTRIP
LENGTH

-10, -15, -20, -25

-S

= Single End

-D

= Double End

-R

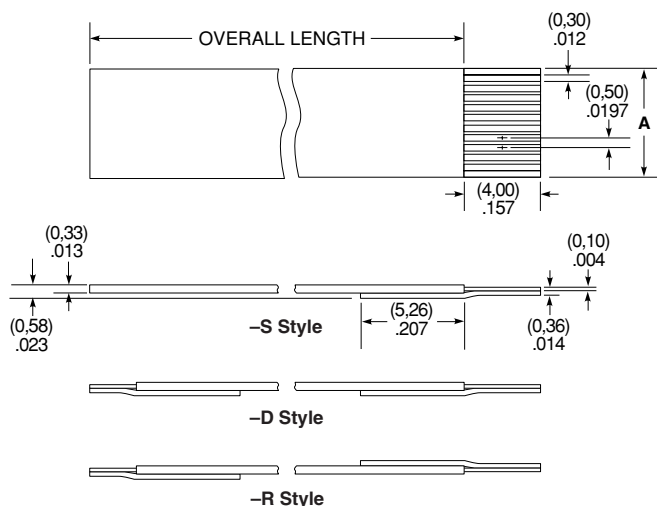
= Reversed End

-“XX”

= Specify
OVERALL LENGTH
in inches $\pm 1/8$ inch
(-D & -R = (50,80mm) 2.00"
minimum)
(-S = (63,50mm) 2.50"
minimum)

-4

= (4,00mm)
.157"



NO. OF POSITIONS	A
-10	(5,51) .217
-15	(8,00) .315
-20	(10,49) .413
-25	(13,00) .512

Note: Stiffener color will be
blue or black at Samtec's
discretion.

Note: Some sizes, styles and
options are non-standard,
non-returnable.

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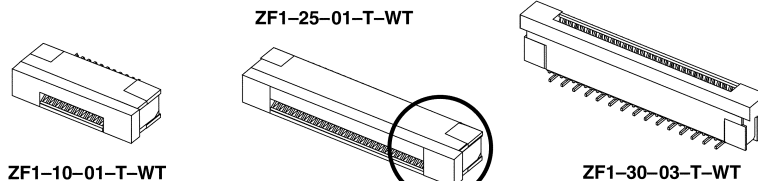
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1 mm ZIF FFC/FPC SOCKET ZF1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?ZF1

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Weld Tab:

Phosphor Bronze

Operating Temp Range:

-65°C to +105°C

Plating:

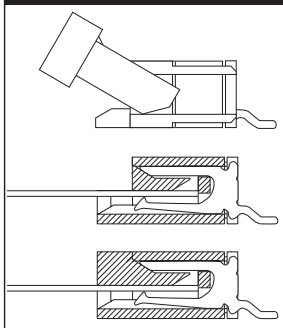
Tin/Lead over 40µ"
(1,02µm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

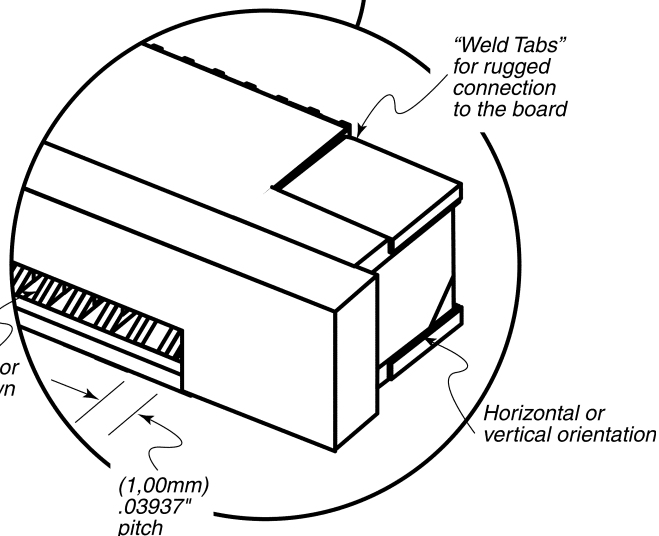
Mates with:

FJ and flex cable with contact/stiffener thickness of (0,30mm) .012"

APPLICATION



Contacts up or contacts down



Processing:

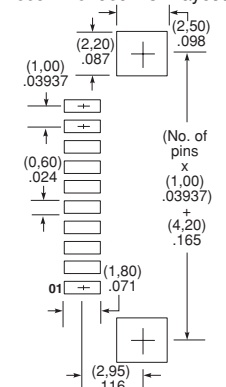
Max Processing Temp: 230°C for 60 seconds

SMT Lead Coplanarity:

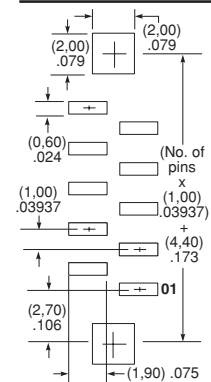
(0,10mm) .004" max

Suggested PCB Layouts:

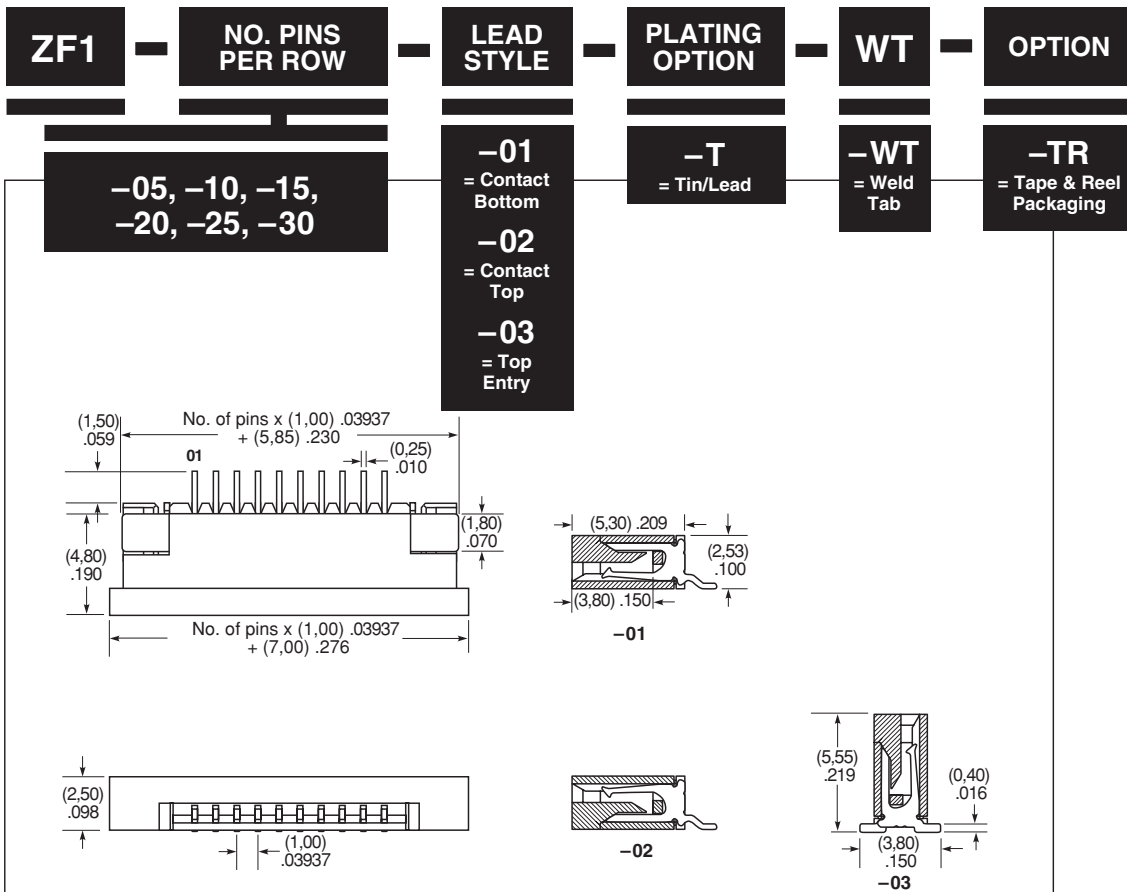
For reference only. Please contact Samtec or go to www.samtec.com?ZF1 for recommended PCB layout.



-01 & -02 Lead Styles



-03 Lead Style



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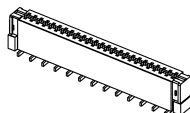
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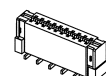
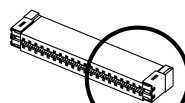
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FC1-25-01-T

FC1-20-02-T-WT



FC1-10-01-T

1 mm PITCH FFC/FPC SOCKET FC1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FC1

Insulator Material:

Liquid Crystal Polymer



Contact Material:

Phosphor Bronze

Current Rating:

2A @ 80° ambient

Operating Temp Range:

-65°C to +105°C

Plating:

Tin over 50µ" (1,27µm) Ni

Max Cycles: 25 with FJ

Mates with:

FJ and flex cable with contact/stiffener thickness of (0,30mm) .012"

Mates with:
FFC (Flat Flex Cable)
FPC (Flexible Printed Circuits)

Vertical and Horizontal styles

Optional Weld Tab

(1,00mm) .03937"

(5,16mm) .203"

Processing:

Max Processing Temp:

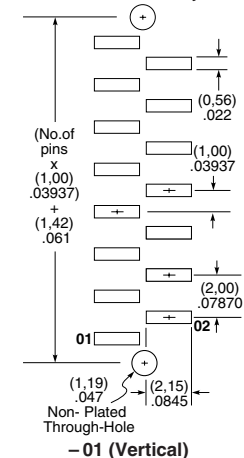
230°C for 60 seconds

SMT Lead Coplanarity:

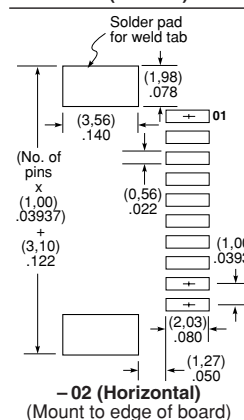
(0,10mm) .004" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?FC1 for recommended PCB layout.



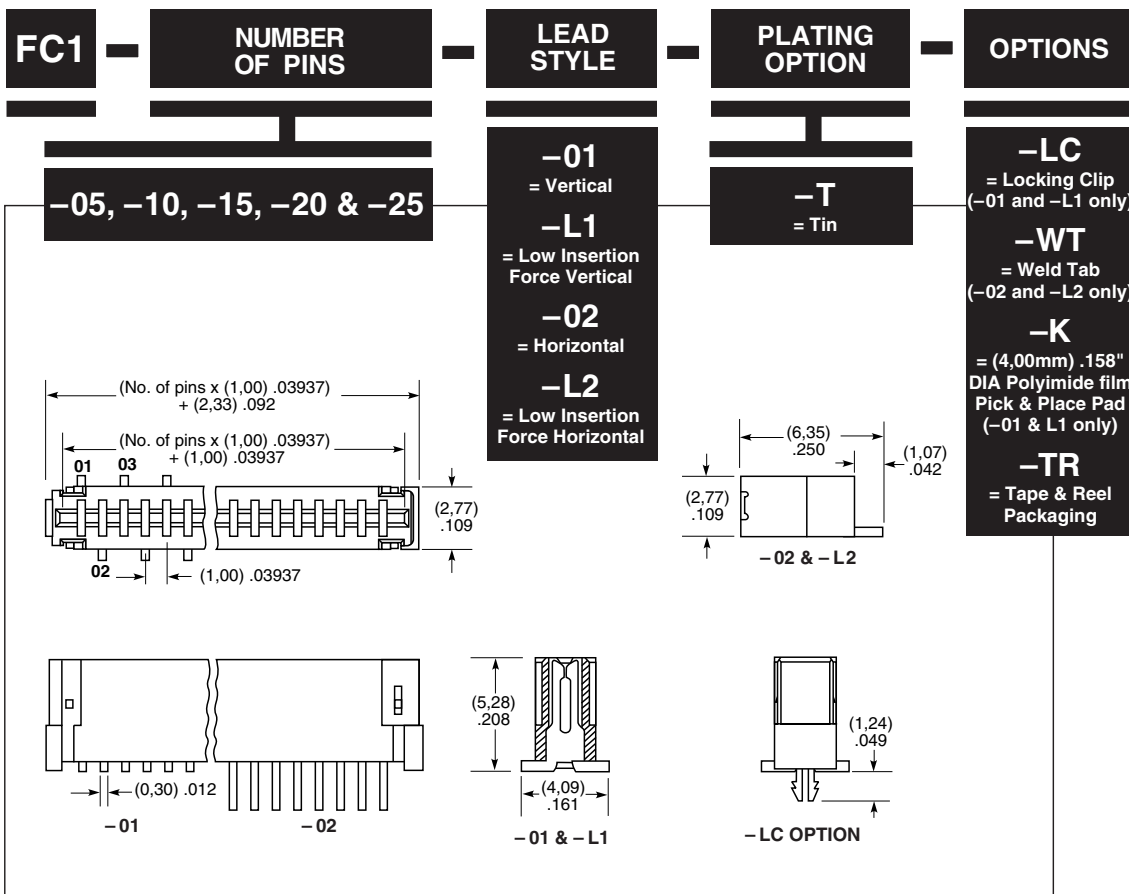
-01 (Vertical)



-02 (Horizontal)

(Mount to edge of board)

Note: Some lengths, styles and options are non-standard, non-returnable.



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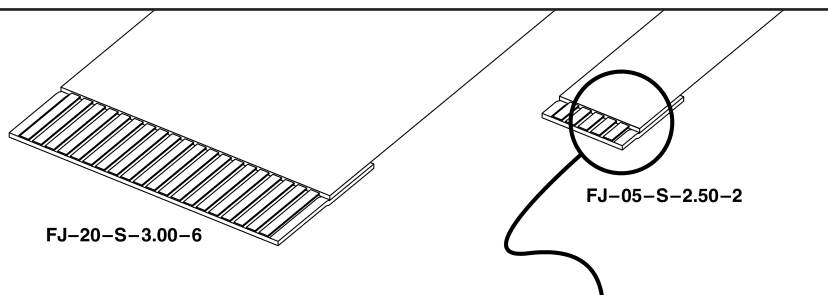
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FPC FLEX CABLE JUMPER FJ SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FJ

Conductor:

Tin Plated Copper

Conductor Resistance:

300Ω/km max

Insulation Resistance:

10MΩ/km min

(conductor-to-conductor)

Dielectric Test:

400 VAC during 1 minute

(conductor-to-conductor)

Temperature Rating:

-30°C to +80°C

Voltage Rating:

300 VAC

Flame Resistance:

VW-1 (UL 758)

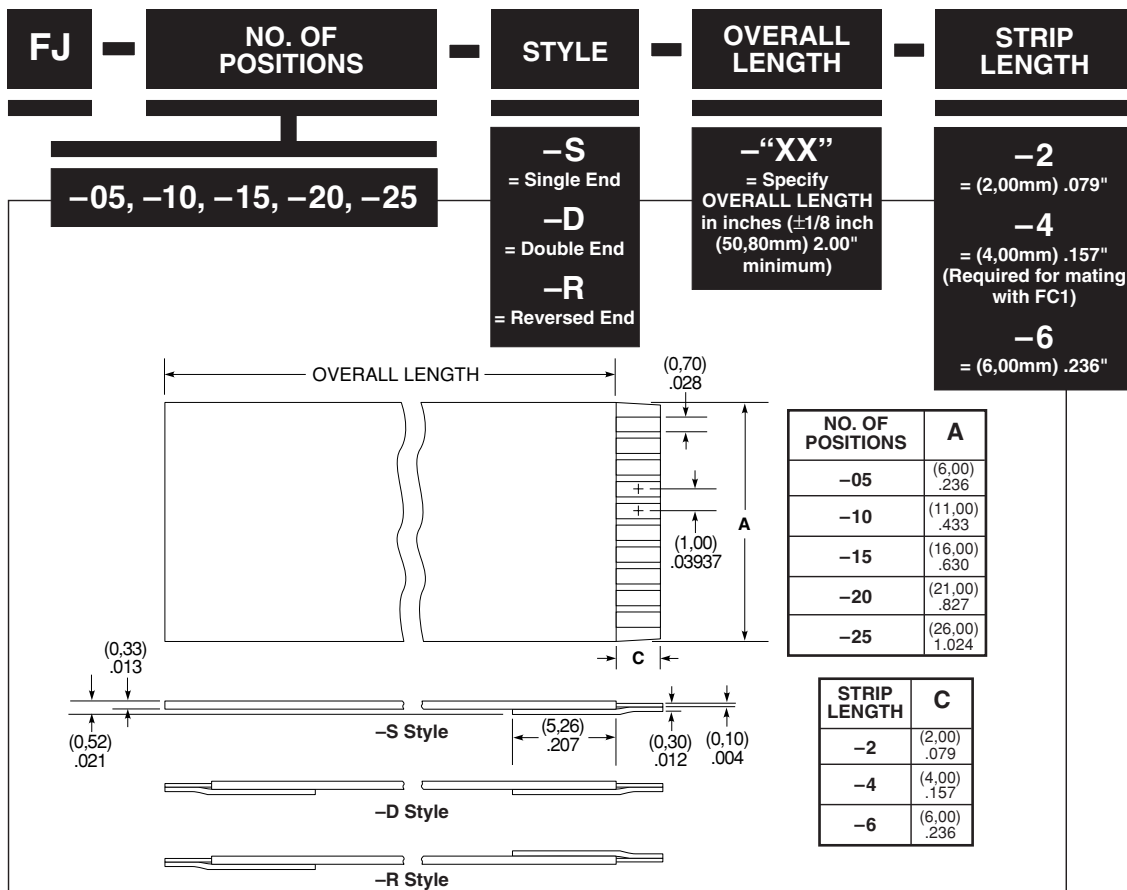


Mates with:
FC1, ZF1

Single or
double ended

(1,00mm)
.0394"
pitch

Variable
lengths



Note: Stiffener color will be blue or black at Samtec's discretion.

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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MEJ1-20-10.00

MEJ1-30-05.00

MINI-EDGE CARD DATA LINK MEJ1 SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?MEJ1

Conductor:

Tin Plated Copper

Conductor Resistance:

300Ω/km max

Insulation Resistance:

10MΩ/km min

(conductor-to-conductor)

Dielectric Test:

400 VAC during 1 minute

(conductor-to-conductor)

Temperature Rating:

-30°C to +80°C

Voltage Rating:

300 VAC

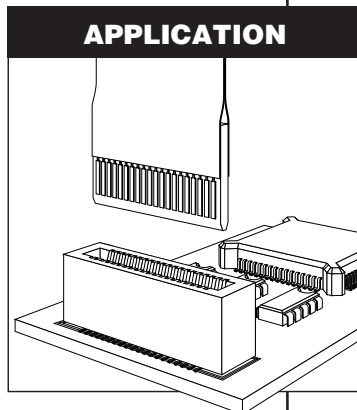
Flame Resistance:

VW-1 (UL 758)

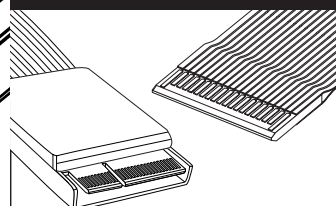


Mates with:
MEC1-NP

APPLICATION



APPLICATION SPECIFIC OPTIONS



Hot pluggable, polarized MEC1 compatible flexible robust ribbonized coax assemblies and snap latching mechanisms.

Call Samtec

MEJ1

NO. OF
PINS PER ROWOVERALL
LENGTH

-20

(Requires (254,0mm) 10.00" length)

-30

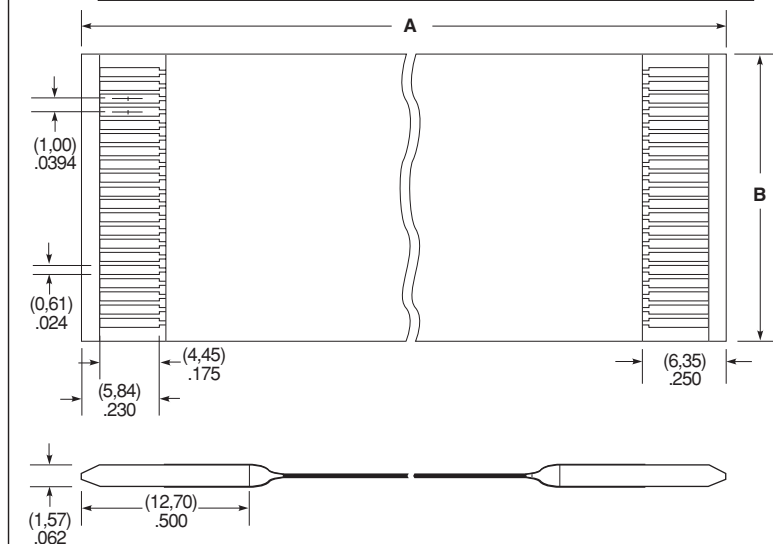
(Requires (127,0mm) 5.00" length)

-05.00

= (127,0mm) 5.00"

-10.00

= (254,0mm) 10.00"



NO. OF PINS	B
-20	(21,75) .856
-30	(31,75) 1.250

OVERALL LENGTH	A
-05.00	(127,0) 5.00
-10.00	(254,0) 10.00

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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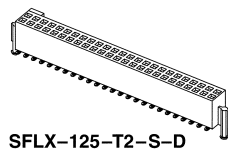
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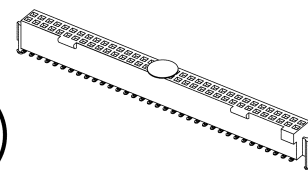
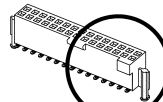
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SFMX-115-T2-S-D



SFMX-135-T2-S-D-K

FLEX LOCK/LATCH SOCKET SFMX, SFLX SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFMX or www.samtec.com?SFLX

Insulator Material:

Black Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Current Rating:

2A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

Au over 50μ" (1.27μm) Ni

Contact Resistance:

15 mΩ max

Insertion Depth:

(3.05mm) .120" to

(4.06mm) .160"

Insertion Force:

2.5oz (0.69N) avg.

Withdrawal Force:

2.0oz (0.57N) avg.

SFMX Unmating Force:

Withdrawal force per contact:

2.0oz (0.57N) avg;

Incremental unmating force

with latching mechanism:

10 & 15 pins/row (One Latch)

increases withdrawal force by

4 x avg; 20-30 pins/row (Two

Latches) increases withdrawal

force by 3 x avg;

35-50 pins/row (Three

Latches) increases

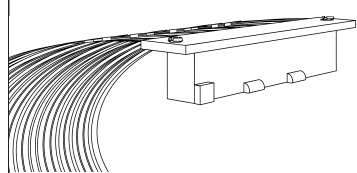
withdrawal force by 1.7 x avg

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:

TFML, TFM, FTSH

APPLICATIONS



Latching feature increases withdrawal force

Polyimide film pick-and-place pad available

(4.57mm) .180"

(1.27mm) .050"

Locks into stiffeners behind flex cable or circuit



TYPE STRIP

1

NO. PINS PER ROW

LEAD STYLE

PLATING OPTION

D

OPTION

SFLX

= Flex Lock (No latch)

SFMX

= Latching Flex Lock

10, 15, 20,
25, 30, 35,
40, 45, 50
(Call Samtec for other sizes)

-T2
= Tiger Eye LITE

-S
= 30μ" (0.76μm) Gold contact, Tin tail

-K
= (4.00mm) .157" DIA Polyimide film Pick & Place Pad

-P
= Plastic Pick & Place Pad (SFLX only)

-TR
= Tape & Reel

Processing:

Max Processing Temp:

230°C for 60 seconds

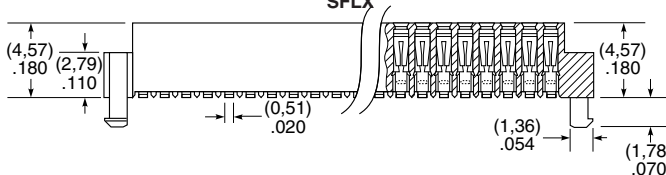
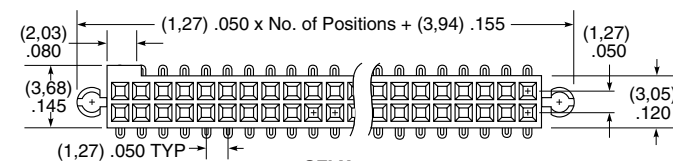
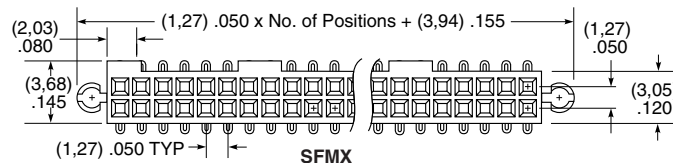
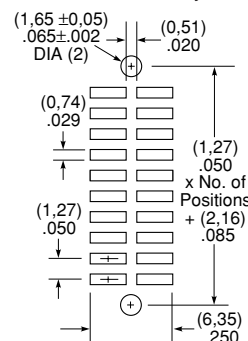
SMT Lead Coplanarity:

(0.10mm) .004" max (10-25)

(0.15mm) .006" max (30-50)

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?SFMX or www.samtec.com?SFLX for recommended PCB layout.



-P OPTION

Due to technical progress, all designs, specifications and components are subject to change without notice.

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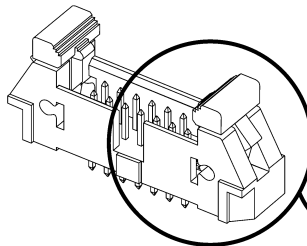
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EJH-107-01-F-D-TH



EJH-120-01-S-D-SM

EJECTOR HEADER EJH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?EJH

Insulator Material:

Liquid Crystal
Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

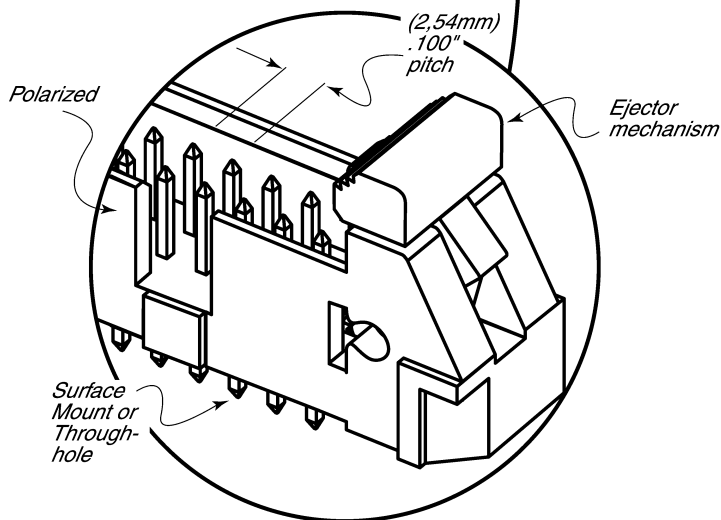
Operating Temp Range:

-65°C to +125°C

Plating:

Sn or Au over 50µ"
(1,27µm) Ni

Mates with:
IDSD



Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

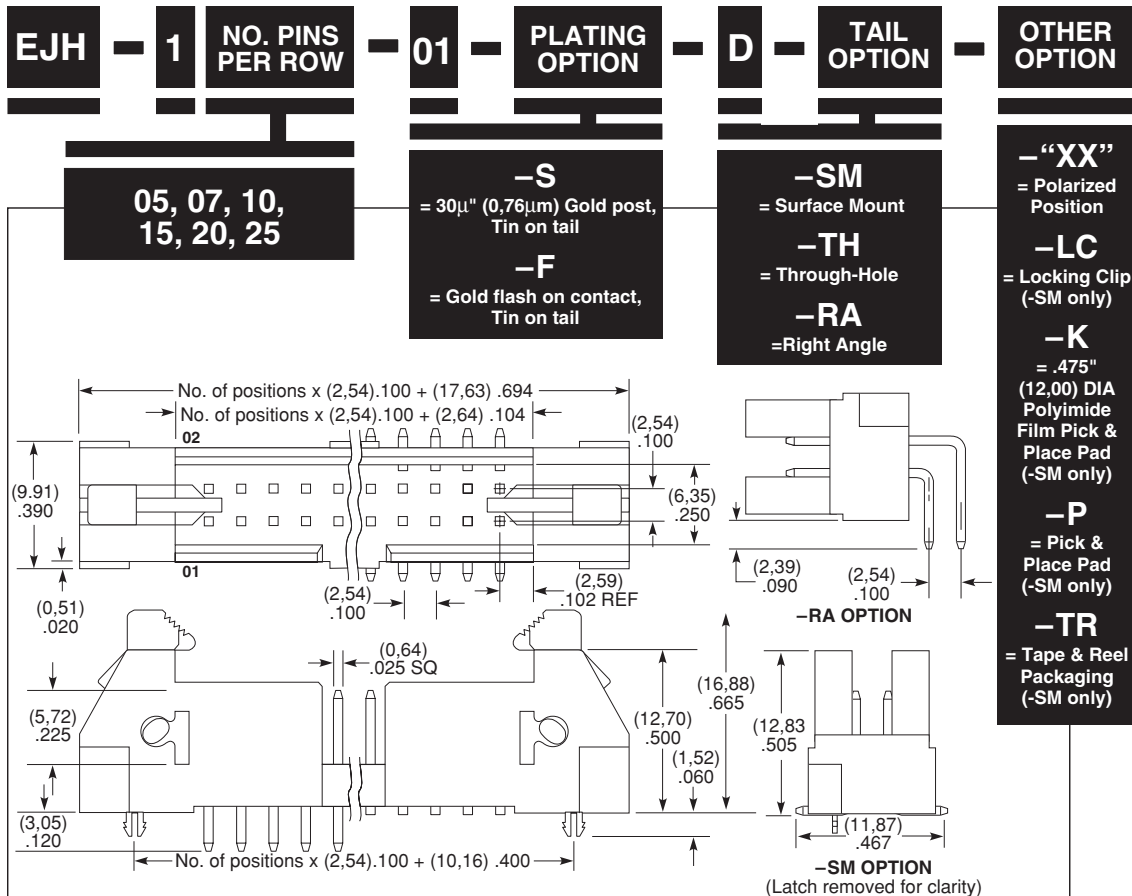
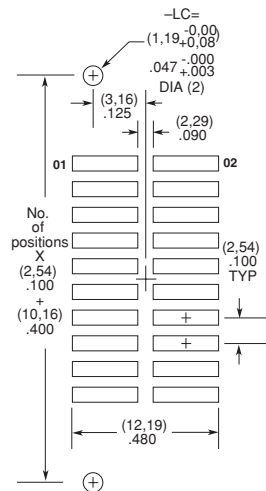
230°C for 60 seconds

SMT Lead Coplanarity:

(0,10mm) .004" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?EJH for recommended PCB layout.



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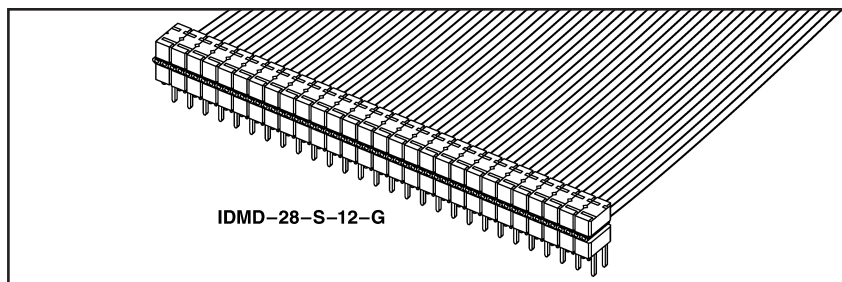
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.100" (2,54mm) IDC CABLE IDMS, IDMD, IDSS & IDSD SERIES

SPECIFICATIONS

IDSS, IDSD

For complete specifications see www.samtec.com?IDSS or www.samtec.com?IDSD

Insulator Material:

Black Glass Filled Polyester



Temperature Range:

-20°C to +105°C (Rainbow Cable)
-40°C to +105°C (Gray Cable)

Contact:

BeCu

Plating:

Au over 50μ" (1,27μm) Ni or Sn over 100μ" (2,54μm) Cu or 50μ" (1,27μm) Ni

Current Rating:

1A

Contact Resistance:

10 mΩ max

Lead Size Range:

(0,56mm) .022" SQ to (0,71mm) .028" SQ

Lead Insertion Depth:

(5,59mm) .220" to (6,22mm) .245"

Insertion Force:

4oz avg

((0,63mm) .025" SQ probe)

Withdrawal Force:

3oz avg

((0,63mm) .025" SQ probe)

Wire:

28 AWG 7/36 stranded Tinned Copper

Mates with:

TSW, MTSW, TSM, EJJ

IDM = Standard Tail Male Plug

IDS = Socket

TYPE STRIP

ROW OPTION

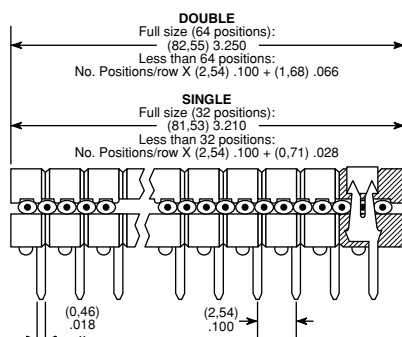
NO. PINS PER ROW

END ASSEMBLY

S = Single

D = Double
(Color coded cable N/A for 31 thru 36 pins/row. See -G option.)

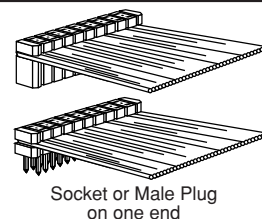
-02 thru -32



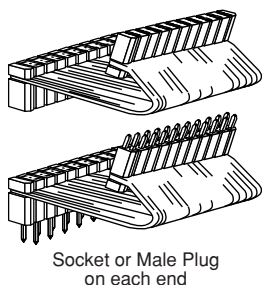
(For square or long tail see HCMX Series)

IDMS (Single) IDMD (Double)

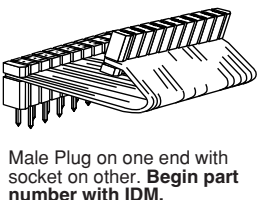
-S = Single End



-D = Double End



-T = Transfer End



SPECIFICATIONS

IDMS, IDMD

For complete specifications see www.samtec.com?IDMS or www.samtec.com?IDMD

Insulator Material:

Black Glass Filled Polyester



Temperature Range:

-20°C to +105°C (Rainbow Cable)
-40°C to +105°C (Gray Cable)

Terminal:

Phosphor Bronze

Plating:

Au over 50μ" (1,27μm) Ni or Sn over 100μ" (2,54μm) Cu or 50μ" (1,27μm) Ni

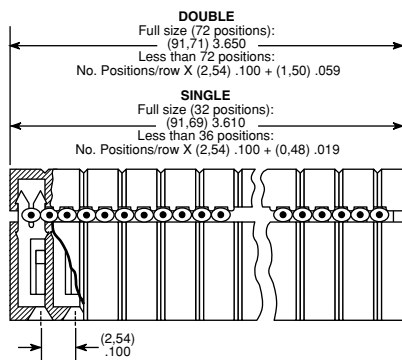
Current Rating:

1A

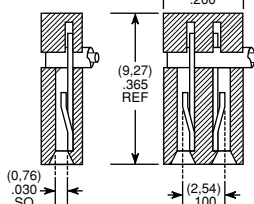
Wire:

28 AWG 7/36 stranded Tinned Copper

-02 thru -36



IDSS (Single) IDSD (Double)



Note:

This Series is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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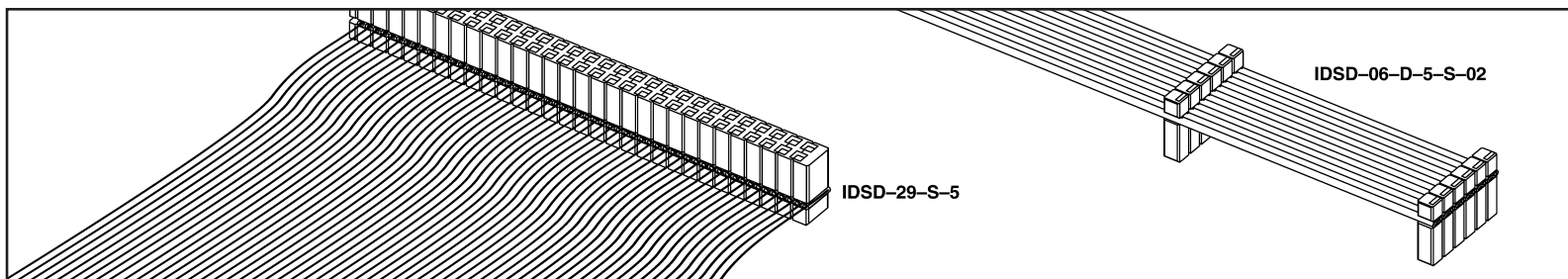
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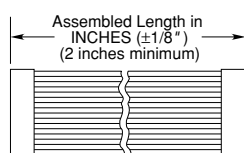
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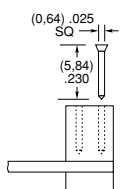
ASSEMBLED LENGTH

— “XX.XX”
= Assembled Length



OPTION

POLARIZING KEY



Optional polarizing key for use with IDSS & IDSD Series. Also polarizes SSW, SSQ, ESW & ESQ Series. Black High Temperature Thermoplastic

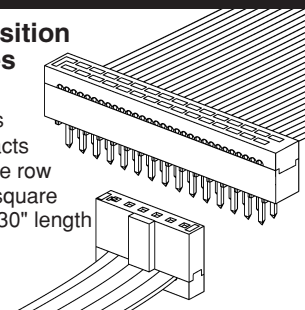
Order: Part Number PK-01-06

ALSO AVAILABLE

Molded-To-Position IDC Assemblies

- Low Profile
- Skinny side locks
- Dual beam contacts
- Single and double row
- (6,35mm) .025" square and (5,84mm) .230" length tail available

Call Samtec for HCXX Series.



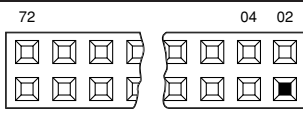
—T = Tin Plating
(Both ends)

—C = Tin IDM
= 10μm (0,25μm) Gold IDS
(-T End Assembly Required)

—A = 10μm (0,25μm) Gold IDM
= Tin IDS
(-T End Assembly Required)

Standard plating is selective gold over BeCu contact for IDS; Selective gold over phosphor bronze for IDM.

—P “XX”
= Polarized



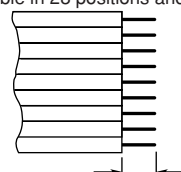
Specify “XX” as position. For Double the same position will be polarized on both ends. (Not available on IDM or EDM, unless Transfer, then only the socket is polarized)

—G
= Gray Cable

Specify -G for Gray cable. Gray cable has one red edge. IDSS uses .100" centerline cable. IDSD and IDMD uses .050" centerline cable. Cable is 28 AWG 7/36 copper wire. Standard cable is same as above except color coded.

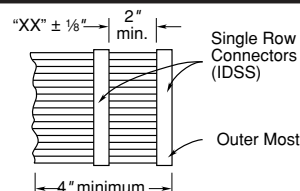
—ST “X”
= Stripped & Tinned

Specify Suffix from table. All dimensions are ± 1/16". Not available in 28 positions and higher.



—ST8	1/8" (3,18)
—ST4	1/4" (6,35)
—ST2	1/2" (12,70)
—ST3	3/8" (9,53)

—S “XX”
= Daisy Chain Single

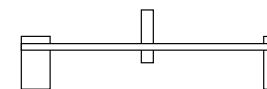


When mating double row connector with two single row connectors, the outer most single will be connected to Conductor #1 and the inside single to Conductor #2.

—R
= Reversed



—M
= Middle Reversed



Requires -SXX, -WXX or -DXX

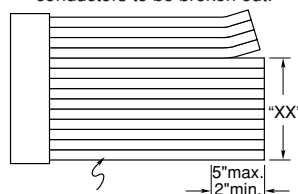
—O
= Outside Reversed



Requires -SXX, -WXX or -DXX

—B “XX”
= Breakout

Specify “XX” as number of conductors to be broken out.

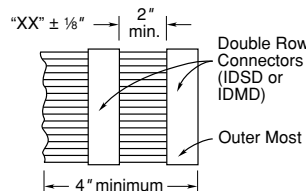


Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side.

—RW
= Reversed Wiring

#1 wire opposite position #1.

—D “XX”
= Daisy Chain, Double



—W “XX”
= Wiring Reversed
Daisy Chain, Single

Same as -S “XX” except outer strip connected to Conductor #2 and inside strip connected to Conductor #1.

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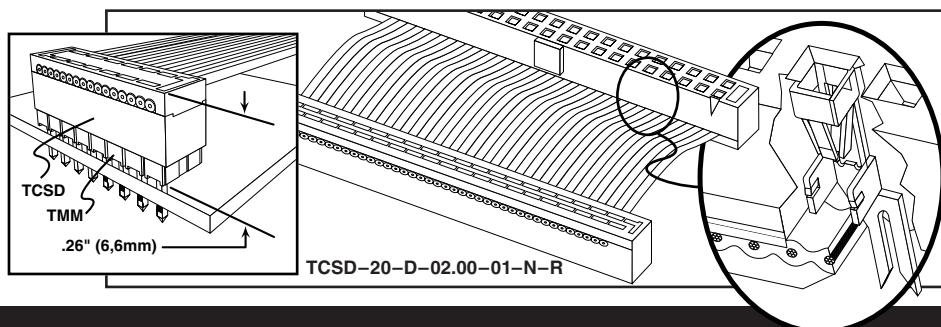
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2mm IDC CABLE STRIPS TCSD SERIES

Mates with:
TMM, TMMH, STMM,
MMT, TW, MTMM, EHT

FEATURES

- Low profile, only 5mm (.200") assembled height
- Four-finger contacts optimize normal, insertion and withdrawal forces
- Ask about our custom IDC design capabilities

SPECIFICATIONS

For complete specifications see www.samtec.com TCSD

Insulator Material:

Black Glass Filled Polyester

Contact:

BeCu

Current Rating:

1A

Operating Temp Range:

-40°C to +105°C

Plating:

Au or Sn over 50µ" (1,27µm) Ni

Lead Size Accepted:

(0,48mm) .019" to (0,53mm) .021"

Contact Resistance:

10 mΩ maximum

Insertion Depth:

(2,87mm) .113" to (3,17mm) .125"

Insertion Force:

2 oz. (0,56N) average

Withdrawal Force:

1.4 oz (0,39N) average

Wire:

28 AWG 7/36 Stranded, Tinned, Copper with Gray PVC Insulator



POLARIZING KEY

Specify PK-01-07 for polarizing key. Also polarizes SMM Series socket strips

TYPE STRIP	NO. PINS PER ROW	END OPTION	LENGTH	01	PLATING OPTION	N	OTHER OPTION
	-05, -08, -10, -12, -13, -15, -17, -20, -22, -25 (Call for other sizes)		-“XX.XX” = Assembled Length			-N = Notch Polarization	
		-S = Single End				-F = Gold flash on contact area, Tin on balance Leave blank for standard plating: 30µ" (0,76µm) Gold on contact area, Tin on balance	
		-D = Double End			-P “XX” = Position Polarization Specify “XX” as position number. Same position will be polarized on both ends.		-D “XX” = Daisy Chain
					-B “XX” = Breakout Specify “XX” as number of conductors to be broken out. Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side.		-R = Reversed
					-RW = Reverse Wiring Blue or black wire opposite position #1.		-M = Middle Reverse Requires -DXX
						-O = Outside Reverse Requires -DXX	

TCSD = Socket Strip

(1,02) .040
 (3,17) .125
 (4,00) .158
 (5,08) .200
 No. of Positions X (2,00) .0787 + (4,00) .157
 (1,00) .039
 (2,00) .0787
 (2,00) .0787

Note: TCSD Series assemblies are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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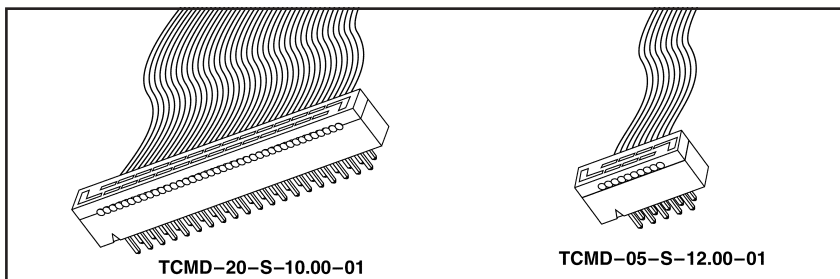
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2mm IDC CABLE STRIPS TCMD SERIES

Mates with:
SMM, MMS

FEATURES

- Low profile, only (5,00mm) .200" assembled height
- Ask about our custom IDC design capabilities

SPECIFICATIONS

For complete specifications see www.samtec.com?TCMD

Insulator Material:

Black Glass Filled Polyester

Terminal:

Phosphor Bronze

Current Rating:

1A

Plating:

Sn over 50μ" (1,27μm) Ni

Operating Temp Range:

-40°C to +105°C

Wire:

28 AWG 7/36 Stranded, Tinned, Copper with Gray PVC Insulator



TYPE STRIP	NO. PINS PER ROW	END OPTION	OVERALL LENGTH	01	TRANSFER OPTION	OTHER OPTION
	-05, -08, -10, -12, -13, -15, -17, -20, -22, -25 (Call for other sizes)		- "XX.XX" = Assembled Length		Leave blank for -S and -D End Options. For -T End Option Specify "-N" (Socket has notch polarization)	
		-S = Single End	-D = Double End		-P "XX" = Position Polarization Specify "XX" as position number. Requires Transfer End. Only Socket is polarized.	-D "XX" = Daisy Chain
		-T = Transfer End			-B "XX" = Breakout Specify "XX" as number of conductors to be broken out. Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side.	-R = Reversed
TCMD = Terminal Strip Dimensions: (4,00) .158, (5,08) .200, (3,05) .120, (0,50) .020 SQ, (2,00) .0787, (1,00) .03937 No. of Positions x (2,00) .0787 + (4,00) .158					-M = Middle Reverse	
				-RW = Reverse Wiring Blue or black wire opposite position #1.	-O = Outside Reverse	

Note: TCMD Series assemblies are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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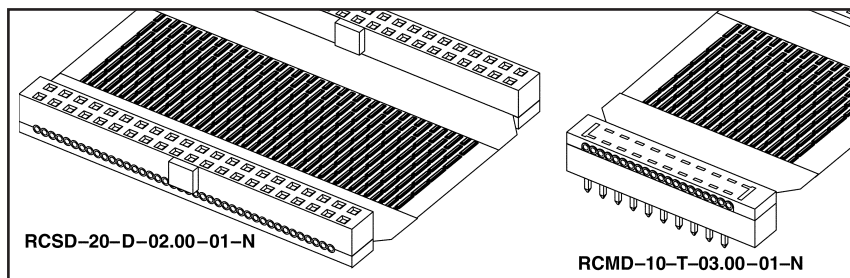
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RCSD-20-D-02.00-01-N

RCMD-10-T-03.00-01-N

2mm SHIELDED/HIGH SPEED RCSD, RCMD

SPECIFICATIONS

For complete specifications see www.samtec.com?RCSD or www.samtec.com?RCMD

Insulator Material:
Black Glass Filled Polyester
Terminal (RCMD):
Phosphor Bronze
Contact (RCSD):
BeCu

Current Rating:
0.5A

Operating Temp Range:
-40°C to +105°C

Terminal Plating:
Sn over 50µ" (1.27µm) Ni

Contact Plating:
30µ" (0.76µm) Au on contact area; Sn on balance, over 50µ" (1.27µm) Ni

Wire:
30 AWG
Made with Gore RIBBON-AX® Cable

TYPE
STRIP

NO. PINS
PER ROW

END
OPTION

OVERALL
LENGTH

01

N

-10, -20,
-22, -25

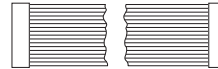
(Call for other sizes)

Mates with:
RCSD: TMM, TMMH, STMM,
MMT, TW, MTMM, EHT
RCMD: SMM, MMS

-“XX”

= Assembled Length
(02.00, 05.00 and 10.00.
Call for other sizes)

Assembled Length
in INCHES (±1/8")
Contact Samtec for other lengths

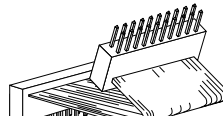
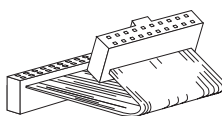


-N

= Notch
Polarization
on socket
(Leave blank
for RCMD
without
Transfer End)

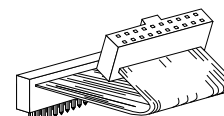
-D

=Double End

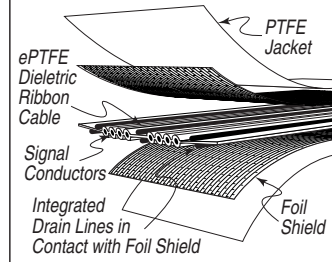


-T

=Transfer End
(Requires RCMD)



CABLE CROSS-SECTION



POLARIZING KEY

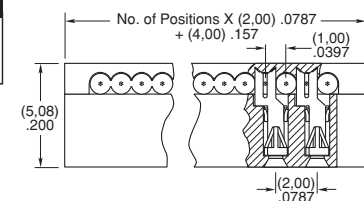
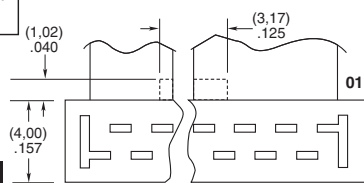
Specify PK-07
for polarizing key.

Note: RCSD & RCMD Series assemblies are non-standard, non-returnable.

RIBBON-AX is a registered trademark of W.L. Gore Associates

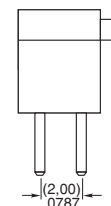
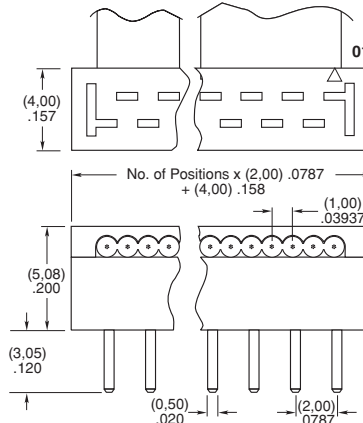
RCSD

= Socket Strip



RCMD

= Terminal Strip



Due to technical progress, all designs, specifications and components are subject to change without notice.

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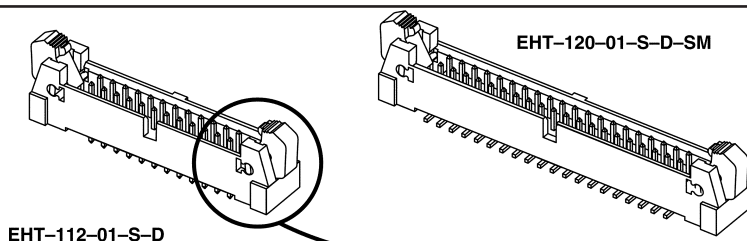
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2mm EJECTOR HEADER EHT SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?EHT

Insulator Material:

Black Liquid Crystal Polymer

Terminal Material:

Phosphor Bronze

Current Rating:

3A @ 80°C ambient

Operating Temp Range:

-65°C to +125°C

Plating:

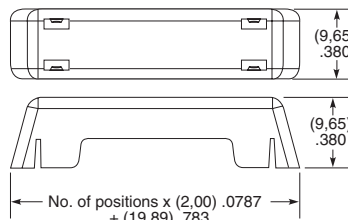
Sn or Au over 50µ" (1,27µm) Ni



Mates with:
TCSD, RCSD

Ten standard sizes mate with common 2mm IDC cable assemblies

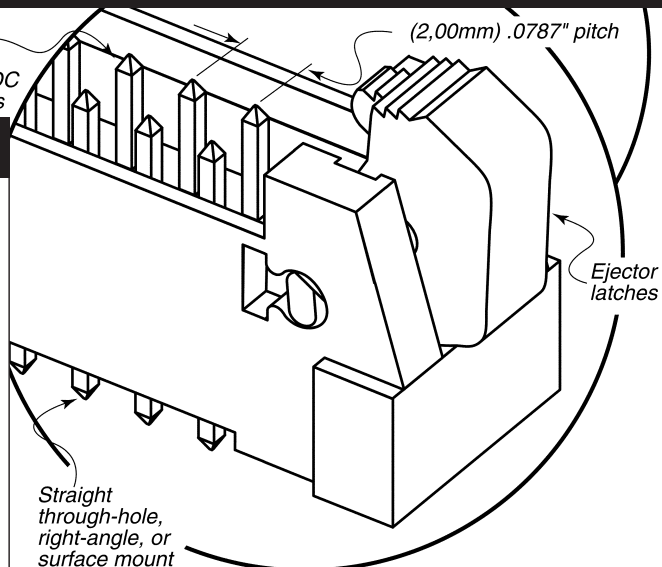
EJECTOR HEADER CAP (Locks TCSD/RCSD cable to EHT header)



EC2

NO. PINS PER ROW

05, 08, 10, 12, 13,
15, 17, 20, 22, 25



Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

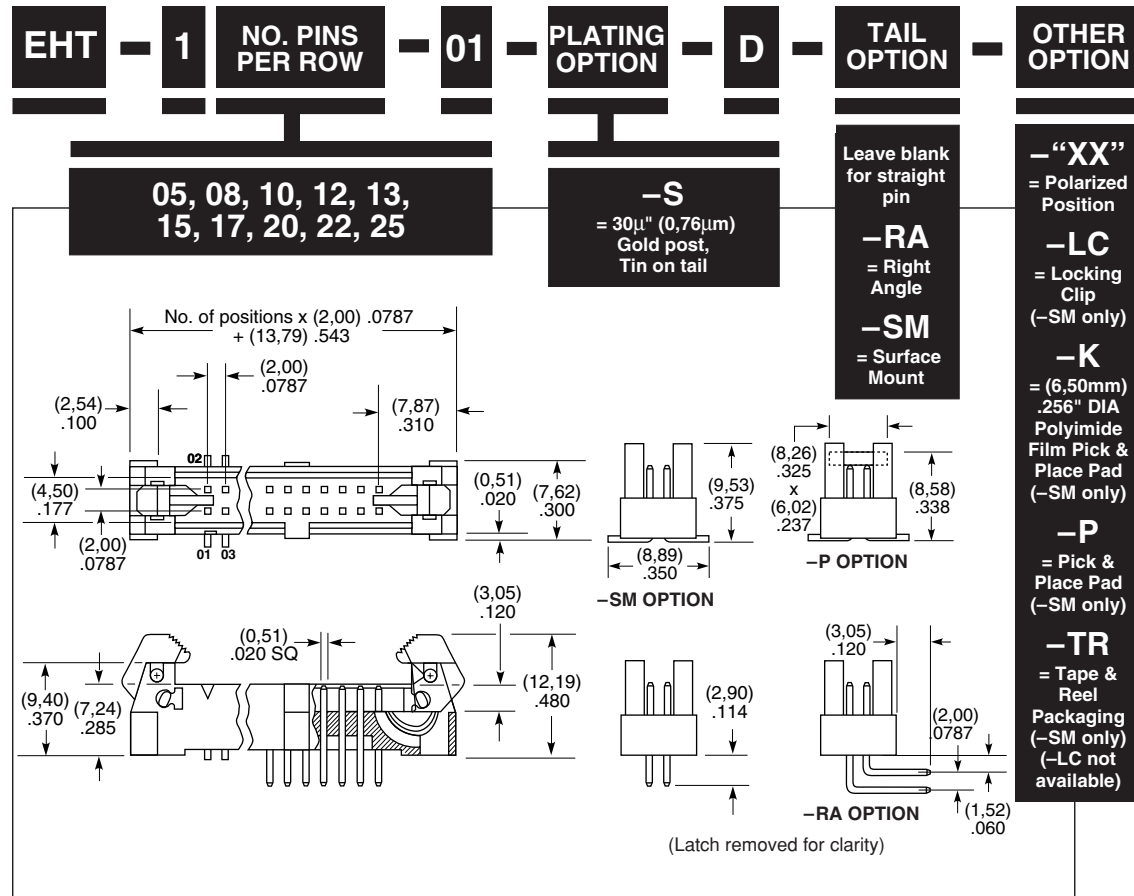
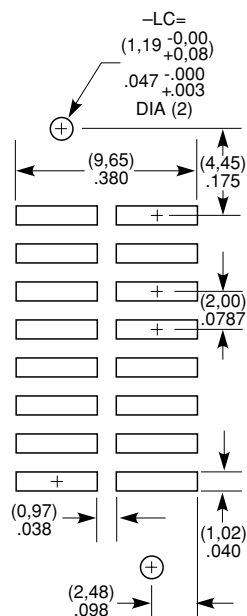
(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?EHT for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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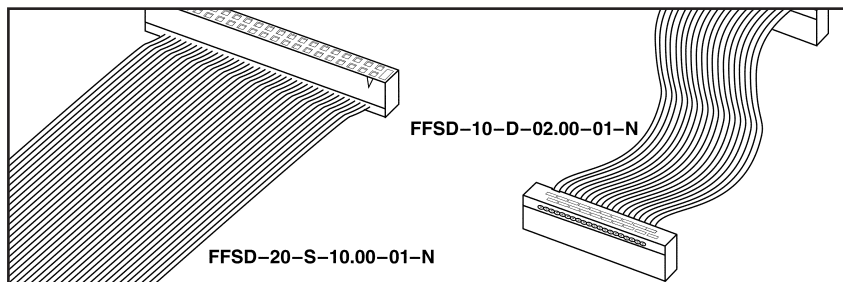
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.050" (1,27mm) CABLE STRIPS FFSD SERIES

Mates with:
FTS, FTSH, EHF

SPECIFICATIONS

For complete specifications
see www.samtec.com?FFSD

Insulator Material:

Black Glass Filled
Polyester

Contact:

BeCu

Current Rating:

0.5A

Operating Temp Range:

-40°C to +105°C

Plating:

10μ" (0,25μm) Au over 50μ"
(1,27μm) Ni on contact area;
Sn over 50μ" (1,27μm) Ni
on balance

Lead Size Accepted:

(0,41mm) .016" SQ

Contact Resistance:

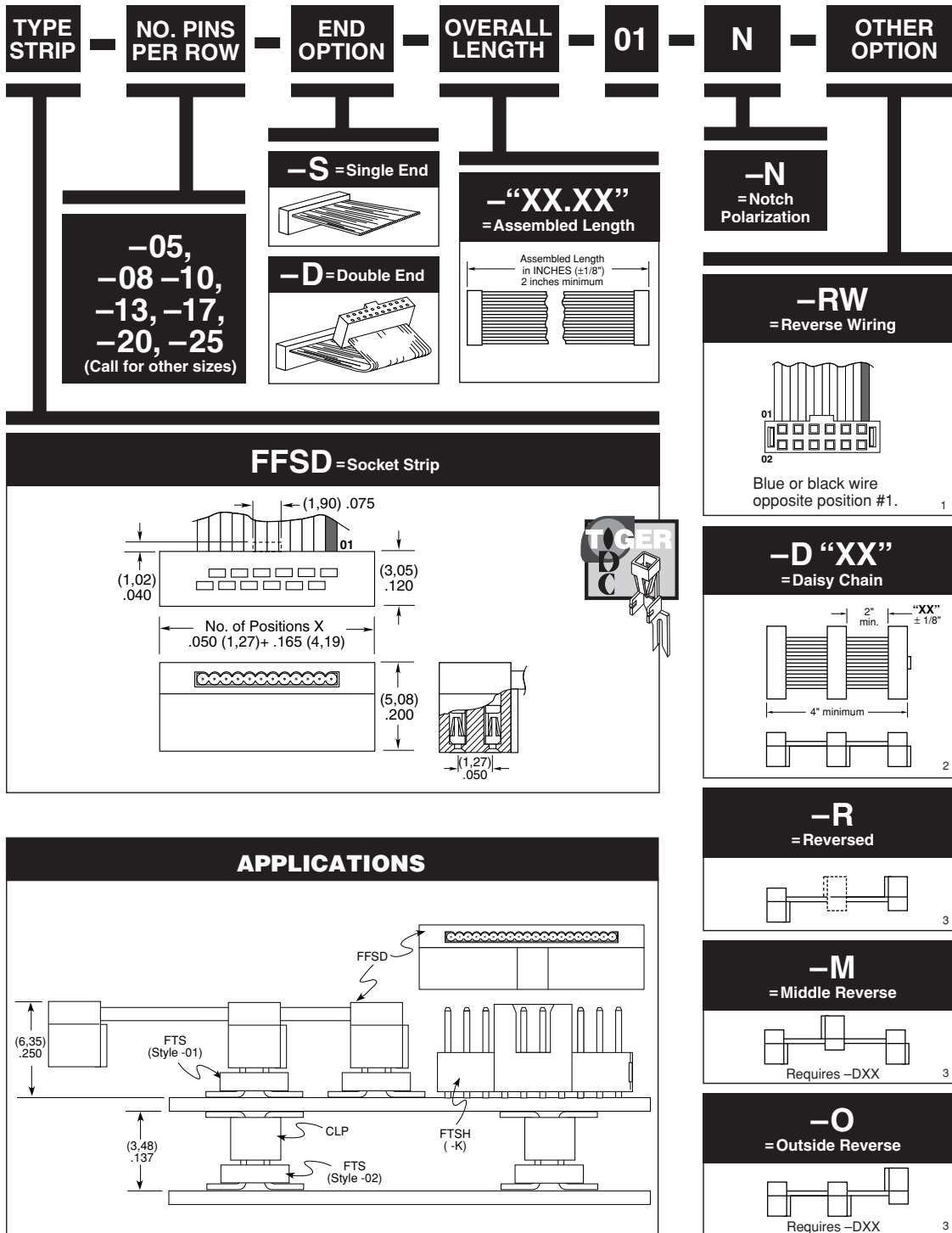
10 mΩ maximum

Insertion Depth:

(2,64mm) .104" to
(3,17mm) .125"

Wire:

30 AWG



Note: This Series is
non-standard, non-returnable.

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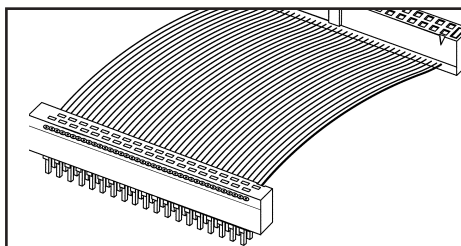
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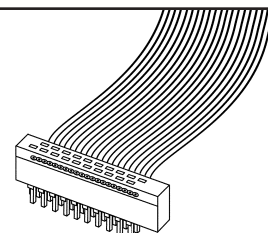
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FFMD-20-T-02.00-01-N-R



FFMD-10-S-10.00-01-RW

.050" (1,27mm) CABLE PLUG FFMD SERIES

Mates with:
FLE, SFMC

SPECIFICATIONS

For complete specifications
see www.samtec.com?FFMD

Insulator Material:

Black Glass Filled

Polyester

Terminal:

Phosphor Bronze

Current Rating:

Testing Now!

Operating Temp Range:

-40°C to +105°C

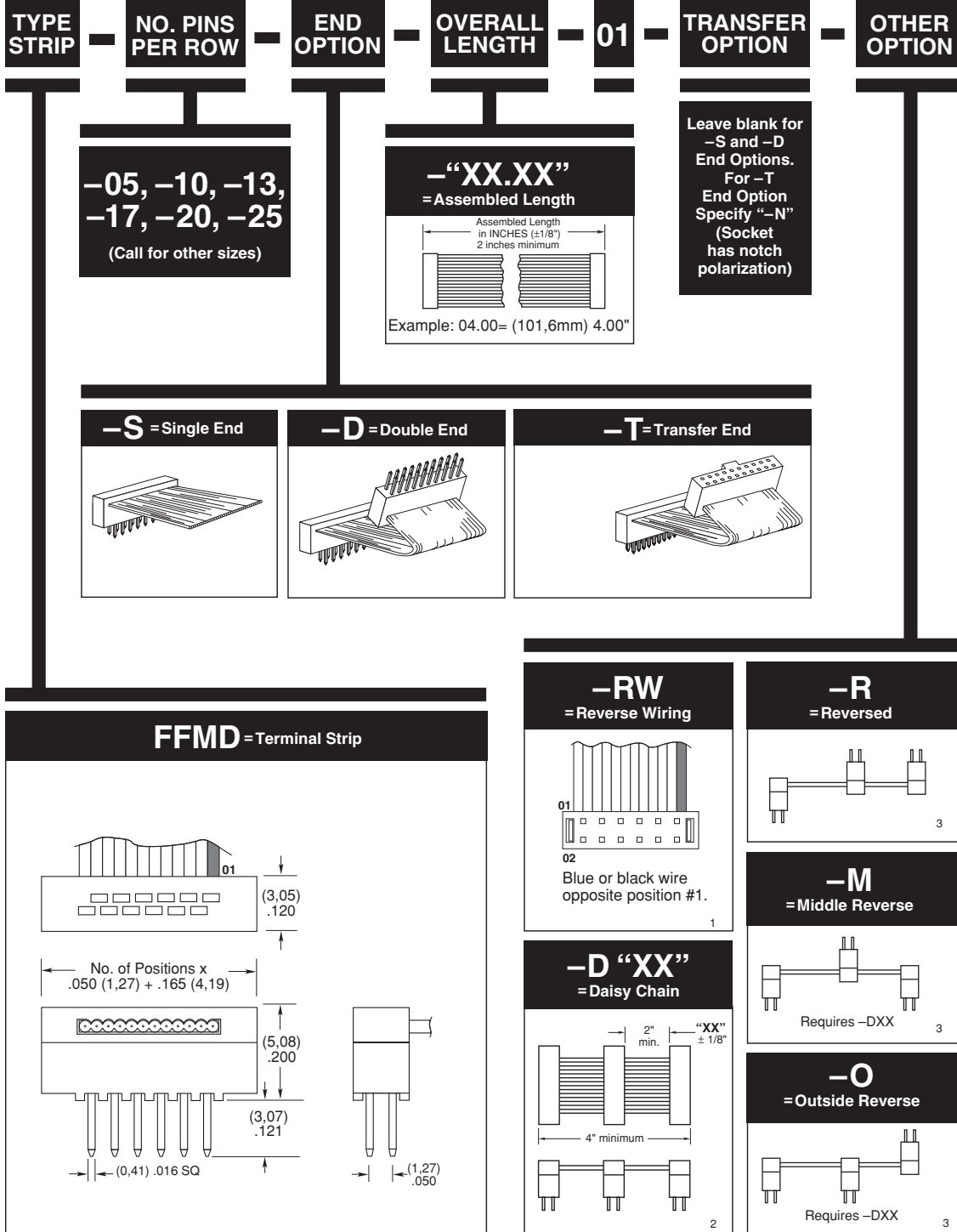
Plating:

10μ" (0,25μm) Au over 50μ"

(1,27μm) Ni

Wire:

30 AWG



Note: This Series is
non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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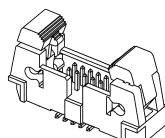
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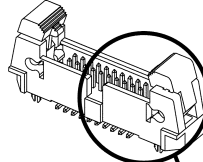
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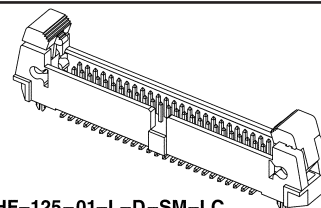
EHF-110-01-F-D-SM-LC



EHF-105-01-F-D-SM



EHF-125-01-L-D-SM-LC



.050" (1,27mm) EJECTOR HEADER EHF, ECF SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?EHF

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

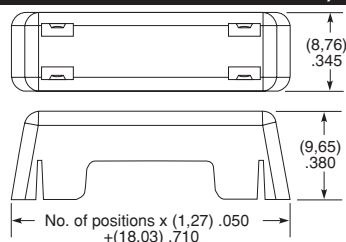
Current Rating:
1.75A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Mates with:
FFSD

EJECTOR HEADER CAP (Locks FFSD cable to EHF header)



ECF

NO. PINS PER ROW

05, 08, 10,
13, 17, 20, 25

Polarized

Ejector mechanism

(1,27mm)
.050" pitch

Optional Locking Clip

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:

230°C for 60 seconds

SMT Lead Coplanarity:

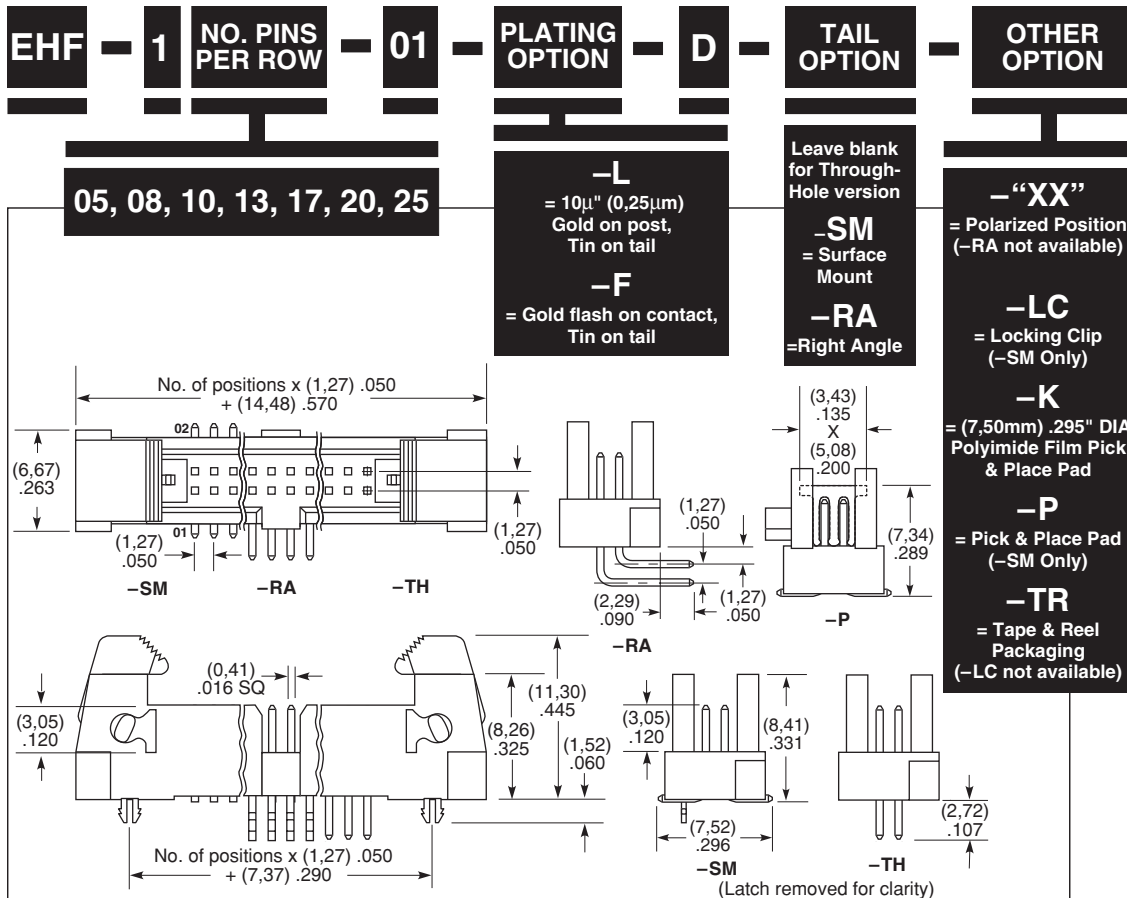
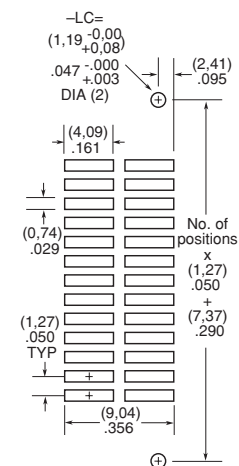
(0,10mm) .004" max

Suggested Paste Thickness:

For most applications add (0,05mm) .002" to max SMT lead coplanarity

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?EHF for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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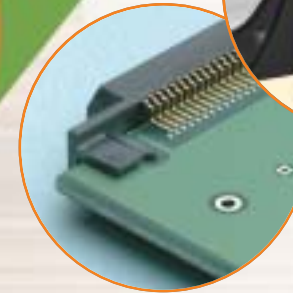
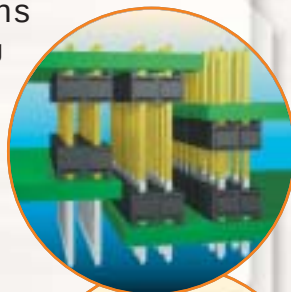
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SOCKETS / REFERENCE

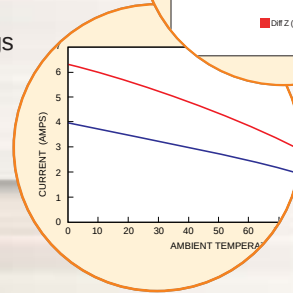
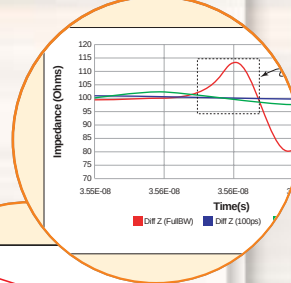
Applications

- Board Stacking
- Agilent Mates
- Processing Guidelines



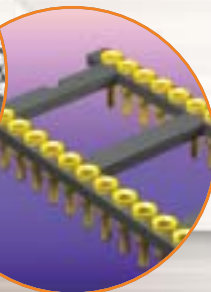
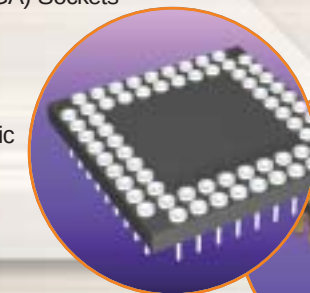
Specifications and Test Data

- SamArray™ Test Reports
- Q-Strip™ and Q-Pair™ Test Reports
- Power Ratings



Sockets and Adapters

- Pin Grid Array (PGA) Sockets
- IC Sockets (DIP)
- Adapter Plugs
- PLCC Sockets
- Application Specific



Sudden Information

- Visit www.samtec.com
- Full test reports
- Detailed processing guidelines
- Custom Service Center
- Product Design Center
- Signal Integrity Center
- Search Tools



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SOCKETS

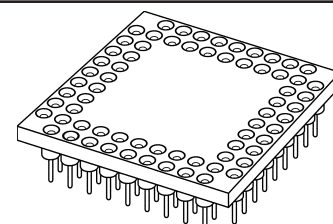
SOCKETS

Pin Grid Array Sockets (MPAS, MVAS, MHAS, MSAS)	308-309
IC Sockets & DIP Adaptors	310-313
PLCC Sockets (PLCC)	314

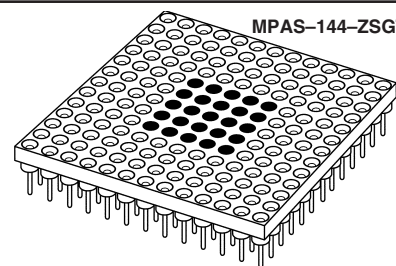
REFERENCE

Board Stacking Guide	315
Agilent Logic Analyzer Sockets	316
Edge Mount Processing Guidelines	317
SamArray™ Test Reports	318
Q-Pairs™ & Q-Strip™ Test Reports	319
General Specifications & Tests	320
Power Ratings	321
Index by Part Number	322

REFERENCE



MPAS-068-ZSGT-11



MPAS-144-ZSGT-13

PIN GRID ARRAY SOCKETS

MPAS, MVAS,
MHAS, MSAS

Mates with:
MPAT, MVAT, MHAT,
MSAT

SPECIFICATIONS

For complete specifications
see www.samtec.com?MPAS
or www.samtec.com?MVAS

MPAS, MVAS

Insulator Material:
Black Glass Filled
Polyester



Operating Temp Range:

-65°C to +105°C with Tin
-65°C to +125°C with Gold

Plating:

Au over 50μ" (1,27μm) Ni or
Sn over 100μ" (2,58μm) Cu or
50μ" (1,27μm) Ni

Current Rating: 1A

Contact: BeCu

Shell: Brass except Style K
Phosphor Bronze

Contact Resistance:
10mΩ max

Lead Size Range:

.015" (0,38mm) to .022"
(0,56mm) DIA except
Style ZL = .015" (0,38mm) to
.020" (0,51mm) DIA;
ZM = .016" (0,41mm) to
.021" (0,53mm) DIA;
ZN = .016" (0,41mm) to
.020" (0,51mm) DIA

Insertion Force:

Style ZU = 1.5oz (0,42N) max,
all others = 2.5 oz (0,69N)
avg, 5.5 oz (1,53N) max,
except Styles J & K =
9 oz (2,50N) avg, 16 oz
(4,45N) max

Withdrawal Force:

Style ZU = 1.5oz (0,42N) max,
all others 2.0 oz (0,56N) avg,
0.35 oz (0,97N) min except
Styles J & K = 2.5 oz (0,69N)
avg, 1.5 oz (0,42N) min

SPECIFICATIONS

For complete specifications
see www.samtec.com?MSAS

MSAS

Same as MPAS
except:

Insulator Material:
Black Liquid Crystal Polymer
Max Processing Temp:
230°C for 30 to 60 seconds



SPECIFICATIONS

For complete specifications
see www.samtec.com?MHAS

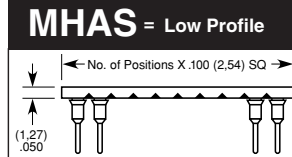
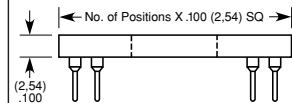
MHAS

Same as MPAS
except:

Insulator Material:
Black High Temp. Plastic



BODY STYLE	PIN COUNT	LEAD STYLE	PLATING OPTION	PIN OUT CODE	OPTION
MPAS = Standard Polyester MVAS = Open Body Polyester MSAS = Hi-Temp LCP Open Body	“XXX” = Total Number Of Filled Positions		GG = 30μ" (0,76μm) Gold Contact, 10μ" (0,25μm) Gold Shell GT = 30μ" (0,76μm) Gold Contact, Tin Shell TT = Tin Contact and Shell (Styles -ZS & ZW Only) ST = 10μ" (5,08μm) Gold Contact, Tin Shell (Style -ZS only)		-2 = (9,14).360 Wire-Wrap (-ZW Only) -3 = (6,60).260 Wire-Wrap (-ZW Only) -L = Locking Socket (-ZS Only)

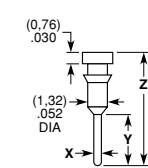


Note: Some sizes, styles and options are non-standard, non-returnable.



-ZS, -ZU, -ZA, -J, -K = Printed Circuit

Locking lead (-L) available. See OPTION.

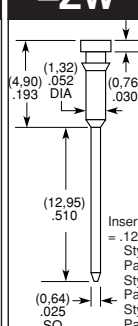


LEAD STYLE	X DIA	Y TAIL	Z OAL
-ZS, -ZU	(0,51) .020	(3,18) .125	(7,62) .300
-ZA	(0,51) .020	(4,57) .180	(8,89) .350
-J	(0,64) .025	(10,41) .410	(15,24) .600
-K	(0,89) .035	(12,95) .510	(17,86) .703

Insertion Depth = .095" to .145",
Style ZS Component Part No. = EZ-1P1
Style ZA Component Part No. = EZ-6P1
Option L Component Part No. = SC-1L1 or EZ-1L1
Insertion Depth = .095" to .138",
Style J Component Part No. = SC-1P3
Insertion Depth = .095" to .157",
Style K Component Part No. = SC-2P1

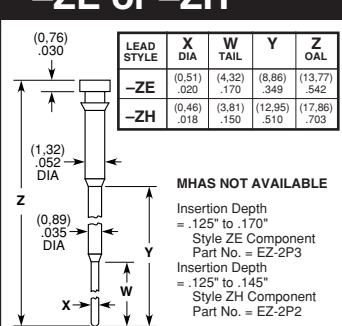
Styles J & K =
16 oz/pin insertion force

-ZW = Wire-Wrap



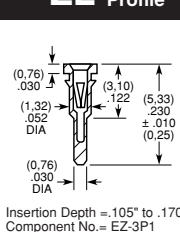
MHAS NOT AVAILABLE
Shorter w/w tail lengths available. See OPTION.
Insertion Depth = .125" to .157"
Style ZW Component Part No. = EZ-1W1(1)
Style ZW-2 Component Part No. = EZ-1W1(2)
Style ZW-3 Component Part No. = EZ-1W1(3)

-ZE or -ZH = Elevated

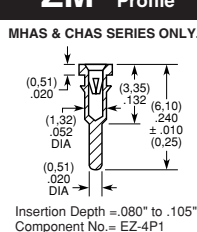


MHAS NOT AVAILABLE
Insertion Depth = .125" to .170",
Style ZE Component Part No. = EZ-2P3
Insertion Depth = .125" to .145",
Style ZH Component Part No. = EZ-2P2

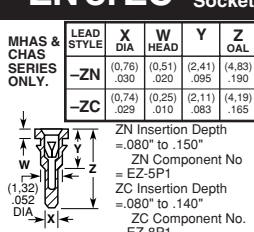
-ZL = Low Profile



-ZM = Low Profile

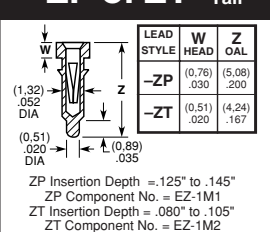


-ZN or ZC = Micro Socket



MHAS & CHAS SERIES ONLY.
LEAD STYLE X DIA W HEAD Y Z OAL
-ZN (0,76) .030 (0,51) .020 (2,41) .095 (4,83) .190
-ZC (0,74) .029 (0,25) .010 (2,11) .083 (4,19) .165
ZN Insertion Depth = .080" to .150"
ZN Component No. = EZ-5P1
ZC Insertion Depth = .080" to .140"
ZC Component No. = EZ-6P1

-ZP or ZT = Short Tail



LEAD STYLE W HEAD Y Z OAL
-ZP (0,76) .030 (5,08) .209
-ZT (0,51) .020 (4,24) .167
ZP Insertion Depth = .125" to .145"
ZP Component No. = EZ-1M1
ZT Insertion Depth = .080" to .105"
ZT Component No. = EZ-1M2

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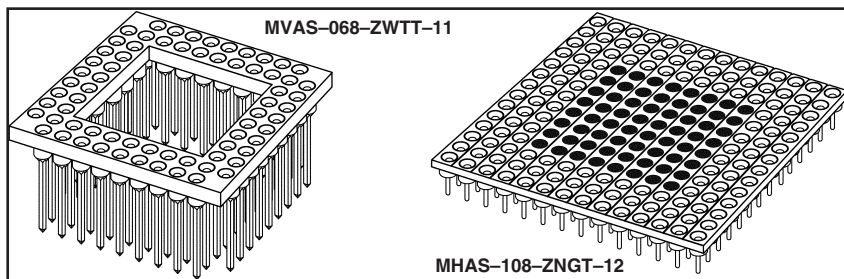
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**MORE STANDARD PIN-OUTS AVAILABLE.
CALL SAMTEC.**

-21 = 273 Pins MSAS only.	-18 = 191 Pins MSAS only.	-18 = 179 Pins MSAS only.	-17 = 240 Pins MVAS & MSAS not available.	-17 = 209 Pins MSAS not available.
-17 = 169 Pins 	-17 = 168 Pins 	-16 = 172 Pins MVAS & MSAS not available.	-16 = 156 Pins MSAS only.	-15 = 181 Pins MVAS not available.
-15 = 176 Pins MSAS not available.	-15B = 149 Pins MVAS & MSAS not available.	-15 = 145 Pins MVAS not available.	-14 = 132 Pins 	-13 = 169 Pins MVAS & MSAS not available.
-13B = 132 Pins MVAS & MSAS not available.	-13A = 124 Pins MVAS & MSAS not available.	-13A = 121 Pins MSAS not available.	-13 = 114 Pins 	-13 = 101 Pins
-13 = 088 Pins MSAS not available.	-11 = 085 Pins MVAS & MSAS not available.	-11C = 084 Pins MSAS not available.	-11 = 069 Pins MSAS not available.	-11 = 068 Pins
-10 = 084 Pins MVAS & MSAS not available.	-10 = 068 Pins MSAS not available.			

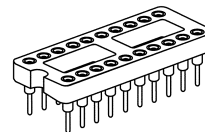
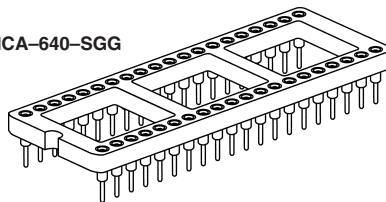
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ICA-640-SGG



ICA-320-STT

DIP SOCKETS ICA SERIES

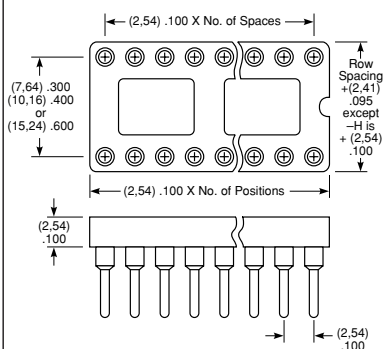
Mates with:
AP, APS, APO,
APA, APE

ICA

ROW SPACING &
NO. OF CONTACTSSTYLE
OPTIONPLATING
OPTIONOPTION
(Leave Blank for
Standard Version)

Specify from chart below

- Side & end stackable
- Great for auto insertion
- Open body design



* -322 has no cross bar on one end.

	Row Space	No. of Contacts
-308	.300 (7,62)	08
-314		14
-316		16
-318		18
-320		20
-322*		22
-324	.400 (10,16)	24
-328		28
-422		22
-624		24
-628	.600 (15,24)	28
-632		32
-640		40
-648		48

GG

= 30μ" (0,76μm)
Gold contact,
10μ" (0,25μm)
Gold Shell

GT

= 30μ" (0,76μm)
Gold contact,
Tin Shell

TT

= Tin contact
and shell
(-S, -ZS, -W,
-ZW only)

ST

= 10μ" (0,25μm)
Gold contact,
Tin shell (Styles -S
& -ZS only)

-2
= .360 (9,14)
Tail

**Wire-Wrap
Option**

Requires Style
-W or -ZW
Specify desired
suffix for shorter
Wire-Wrap tail.

-3
= .260 (6,60)
Tail

-L
= Locking
Socket

Requires Style
-S or -ZS

Requires GT
Plating Option

SPECIFICATIONS

For complete specifications
see www.samtec.com?ICA

Insulator Material:

Black Glass Filled
Polyester
except -328 is LCP
Flammability Rating:
UL 94V-O

Insulation Resistance:
5000 MΩ min

Temperature Range:
-65°C to +105°C with Tin
-65°C to +125°C with Gold.

Withstanding Voltage:
1000 VRMS

Contact: BeCu

Shell: Brass except style K

Phosphor Bronze

Plating: Au or Sn over 50μ" Ni

Current Rating: 1A

Contact Resistance:
10 mΩ max

Lead Size Range:
.015" to .022" (0,38mm to
0,56mm) DIA and most
IC leads

Insertion Force:
Standard = 9 oz avg, 16 oz
max; Low Insertion Force =
2.5 oz avg, 5.5 oz max

Withdrawal Force:
Standard = 2.5 oz avg, 1.5 oz
min; Low Insertion Force =
2.0 oz avg, 0.35 oz min

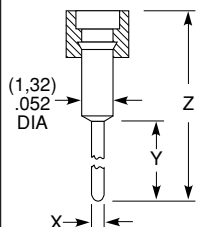
Note: Some sizes, styles and
options are non-standard,
non-returnable.



-S, -ZS, -ZA, -J, or -K

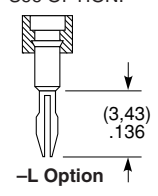
= Printed Circuit

-ZS & -ZA = Low Insertion Force



LEAD STYLE	X DIA	Y TAIL	Z
-S or -ZS	(0,51) .020	(3,18) .125	(7,62) .300
-ZA	(0,51) .020	(4,57) .180	(8,89) .350
-J	(0,64) .025	(10,41) .410	(15,24) .600
-K	(0,89) .035	(12,95) .510	(17,86) .703

Locking lead
available with -S
and -ZS.
See OPTION.

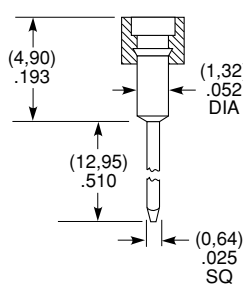


Insertion Depth = .095" (2,41) to .145" (3,68):
Style S Component Part No. = SC-1P1
Style ZS Component Part No. = EZ-1P1
Style ZA Component Part No. = EZ-6P1
Option L Component Part No. = SC-1L1 or EZ-1L1
Insertion Depth = .095" (2,41) to .138" (3,51)
Style J Component Part No. = SC-1P3
Insertion Depth = .125" (3,18) to .157" (3,99)
Style K Component Part No. = SC-2P1

-W, -ZW

= Wire-Wrap

ZW = Low Insertion Force



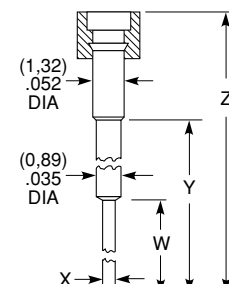
Shorter wire-wrap tail
lengths available.
See OPTION.

Insertion Depth = .125" (3,18) to .157" (3,99)
Style W Component Part No. = SC-1W1(1)
Style ZW Component Part No. = EZ-1W1(1)
Style W-2 Component Part No. = SC-1W1(2)
Style ZW-2 Component Part No. = EZ-1W1(2)
Style W-3 Component Part No. = SC-1W1(3)
Style ZW-3 Component Part No. = EZ-1W1(3)

-ZE or -ZH

= Elevated

Low Insertion Force



LEAD STYLE	X DIA	W TAIL	Y	Z
-ZE	(0,51) .020	(4,32) .170	(8,86) .349	(13,77) .542
-ZH	(0,46) .018	(3,81) .150	(12,95) .510	(17,86) .703

Insertion Depth = .125" (3,18) to .170" (4,32)
Style ZE Component Part No. = EZ-2P3
Insertion Depth = .125" (3,18) to .145" (3,68)
Style ZH Component Part No. = EZ-2P2

Due to technical progress, all designs, specifications and components are subject to change without notice.

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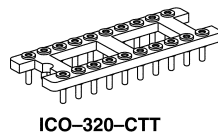
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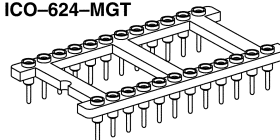
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ICO-320-CTT

ICO-624-MGT



LOW PROFILE DIP SOCKETS

ICO SERIES

Mates with:
APO, APA

ICO

ROW SPACING & NO. OF CONTACTS

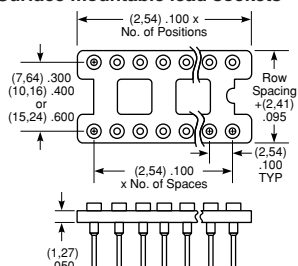
STYLE OPTION

PLATING OPTION

OPTION (Leave Blank for Standard Version)

Specify from chart below

- Low profile down to .083" (2,11mm) above printed circuit board
- Side & end stackable
- Open body design
- Surface mountable lead sockets



	Row Space	Contacts
-308	.300 (7,62)	08
-314		14
-316		16
-318		18
-320		20
-322	.400 (10,16)	22
-324		24
-422	.600 (15,24)	24
-628		28
-632		32
-640		40

GG

= 30μ" (0,76μm) Gold Contact,
10μ" (0,25μm) Gold Shell

GT

= 30μ" (0,76μm) Gold Contact,
Tin Shell

TT

= Tin Contact and Shell
(-C, -S, -ZS, -A,
-L, -M, -N, only)

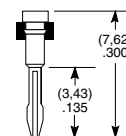
ST

= 10μ" (0,25μm) Gold Contact,
Tin Shell
(Styles -S & -ZS only)

-L

= Locking Socket

Requires
Style -S,
-ZS, -P,
or -ZP
and .035"
± .003"
(0,89mm
± 0,08)
board hole.



Requires GT
Plating Option

SPECIFICATIONS

For complete specifications
see www.samtec.com/ICO

Insulator Material:
Black Glass Filled
Polyester



Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ min

Temperature Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Withstanding Voltage:

1000 VRMS @ 60 Hz

Contact: BeCu

Shell: Brass except style K

Phosphor Bronze

Plating: Au or Sn over 50μ"

(1,27μm) Ni

Current Rating: 1A

Contact Resistance:

10 mΩ max

Lead Size Range:

.015" to .022" (0,38mm to

0,56mm) DIA and most IC

leads except C, L, M, and N

Insertion Force:

Standard = 9 oz avg, 16 oz

max; Low Insertion Force =

2.5 oz avg, 5.5 oz max

Withdrawal Force:

Standard = 2.5 oz avg, 1.5 oz

min; Low Insertion Force =

2.0 oz avg, 0.35 oz min

except Styles ZM and ZN =

2.0 oz avg, 0.5 oz min

Note:

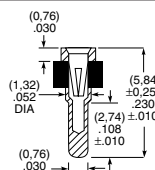
Some sizes, styles and

options are non-standard,

non-returnable.

-L

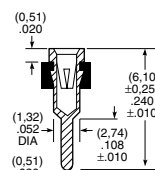
= Low Profile
For LIF Specify -ZL



Lead DIA Accepted
= .015" to .020"
(0,38mm to 0,51mm)

-M

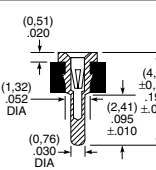
= Low Profile
For LIF Specify -ZM



Lead DIA Accepted
= .016" to .021"
(0,41mm to 0,53mm)

-N

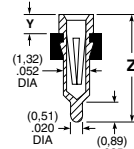
= Micro Socket
For LIF Specify -ZN



Lead DIA Accepted
= .016" to .020"
(0,41mm to 0,51mm)

-ZP or -ZT

= Short Tail
Low Insertion Force

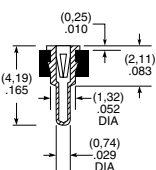


LEAD STYLE	Z	Y
-ZP	(5,20) .205	(0,76) .030
-ZT	(4,24) .167	(0,51) .020

Locking
lead (-L)
available.
See
OPTION.

-C

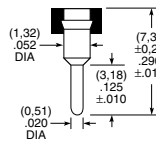
= Micro Socket
For LIF Specify -ZC



Lead DIA Accepted
= .016" to .020"
(0,41mm to 0,51mm)

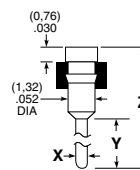
-F

= Flush Top



-S, -ZS, -ZA, -J, or -K

= Printed Circuit
-ZS & -ZA= Low Insertion Force



LEAD STYLE	X DIA	Y TAIL	Z
-S or -ZS	(0,51) .020	(3,18) .125	(7,62) .300
-ZA	(0,51) .020	(4,57) .180	(8,89) .350
-J	(0,64) .025	(10,41) .410	(15,24) .600
-K	(0,89) .035	(12,95) .510	(17,86) .703

Locking lead (-L) available.
See OPTION.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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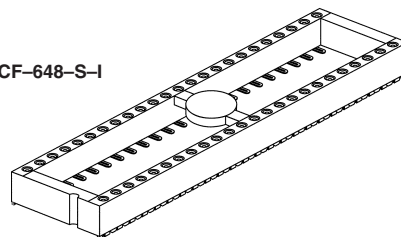
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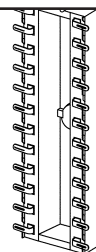
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ICF-648-S-I



ICF-324-S-O

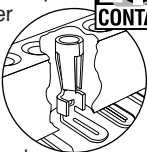


SURFACE MOUNT DIP SOCKET ICF SERIES

Surface mount sockets for IC packages!

These unique sockets have slotted tails to provide added adhesion to the solder paste and greater solder joint strength. The high temperature LCP body is ideal for vapor phase or infrared soldering.

Precision stamped three-finger micro contacts provide exceptional reliability and performance.



SPECIFICATIONS

For complete specifications see www.samtec.com?ICF

Insulator Material:
Black Liquid Crystal Polymer



Contact Material:
BeCu

Current Rating:
1A

Operating Temp Range:
-65°C to +125°C

Max Processing Temp:
230°C for 60 seconds

Plating: Au or Sn over 50µ" (1,27µm) Ni

Contact Resistance:
10 mΩ Max

Insertion Depth:
.100" (2,54mm)

to .150" (3,81mm)

Insertion Force:
5oz (1,39N) average

Withdrawal Force:
4oz (1,11N) average

SMT Lead Coplanarity:
.006" (0,15mm) max

Note:

Some sizes, styles and options are non-standard, non-returnable.

TYPE SOCKET

ICF
=Surface Mount IC Socket

ROW SPACING & NO. OF CONTACTS

PLATING OPTION

-S
=30µ" (0,76µm)
Gold on contact,
Tin on tail

-T
= Tin

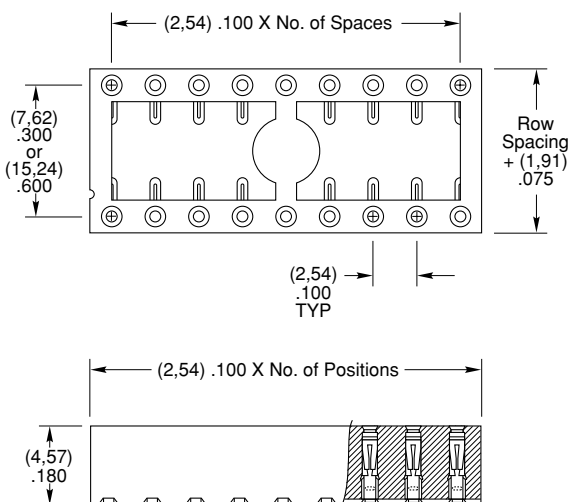
TAIL OPTION

OTHER OPTION

-TR
=Tape & Reel Packaging

Specify from chart below

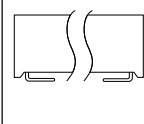
"-XXX"	Row Space	No. of Contacts
-308	.300 (7,62)	08
-314		14
-316		16
-318		18
-320		20
-322		22
-324		24
-328		28
-624	.600 (15,24)	24
-628		28
-632		32
-640		40
-648		48



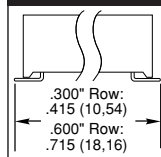
TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

-I
=Tails In

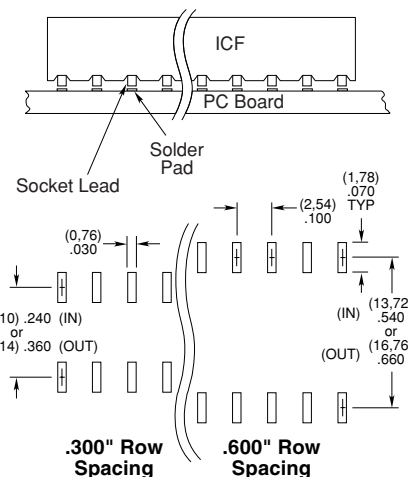


-O
=Tails Out



SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec or go to www.samtec.com?ICF for recommended PCB layout.



Due to technical progress, all designs, specifications and components are subject to change without notice.

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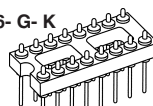
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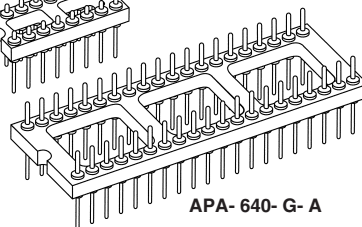
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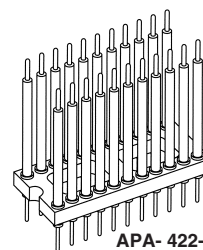
APA-316-G-K



APA-640-G-A



APA-422-T-Q



ADAPTOR PLUGS APA SERIES

Mates with:
ICO, ICA, CIC

FEATURES

- Side & end stackable
- Great for auto insertion
- Open body design

SPECIFICATIONS

For complete specifications
see www.samtec.com?APA

Insulator Material:

Black Glass Filled

Polyester

except -328 is LCP

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ min

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold.

Withstanding Voltage:

1000 VRMS

Terminal Material:

Brass except styles -M, -N, -

P and -Q are Phosphor

Bronze or Brass

Plating:

Au over 50μ" (1.27mm) Ni or

Sn over 100μ" (2.54mm) Cu

or 50μ" (1.27mm) Ni

Current Rating:

1 A

Terminal Retention in Body:

5 lbs (22,25N) against barb



FILE NO. E111594

APA

ROW SPACING & NO. OF PINS

PLATING OPTION

LEAD STYLE

Specify from chart below

	Row Space	No. of Pins
-308	.300 (7,62)	08
-314		14
-316		16
-318		18
-320		20
-322*		22
-324	.400 (10,16)	24
-328		28
-422	.600 (15,24)	22
-624		24
-628		28
-632		32
-640		40
-648		48

* -322 has no cross bar on one end.

-G

= 20μ" (0,58μm) Gold

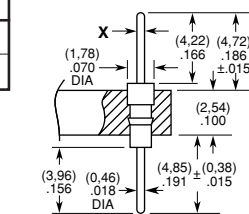
-T

= Tin

-A or -A1

= Round Pin

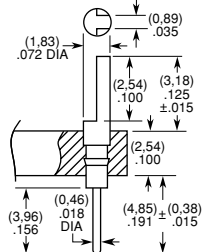
STYLE	X DIA
-A	(.64) .025
-A1	(.46) .018



Style A Component No. = T-1R0-
Style A1 Component No. = T-1R5-

-C

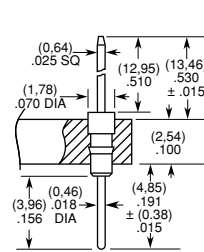
= Slotted Head



Component No. = T-1R2-

-D

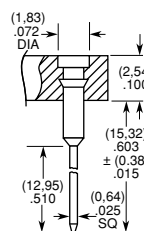
= Wire-Wrap



Component No. = T-1S4-1-1

-F

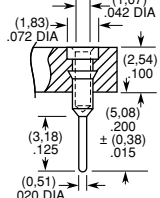
= Flat-head W.W.



Component No. = T-1S2-

-J

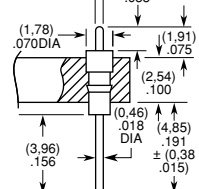
= Solder Shell



Component No. = S-1P1-

-K

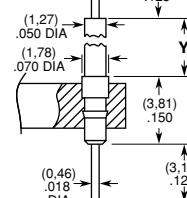
= Test Point



Component No. = T-1R15-

-M, -N, -P or -Q

= Interconnect Post



Component No. = T-1R14-

Not available
with -328 body.

STYLE	Y
-M	(1.52) .060
-N	(4.69) .185
-P	(11.05) .435
-Q	(17.40) .685

Note:

Some sizes, styles and
options are non-standard,
non-returnable.

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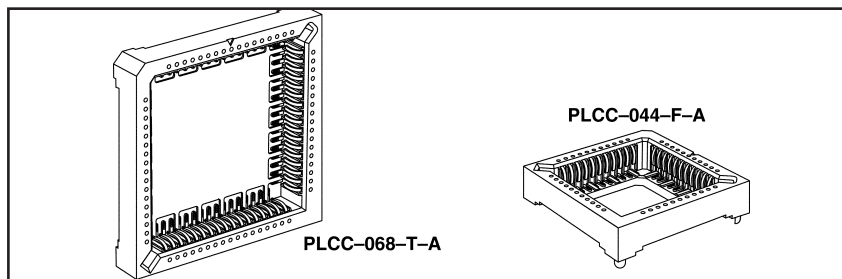
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CHIP CARRIER SOCKETS PLCC SERIES

FEATURES

- Same footprint as most common plastic leaded chip carriers.
- Unique PLCC Series contact design has a "slotted tail" for added adhesion of solder paste, and superior solder joint strength.
- PLCC Series contact provides exceptionally high retention by applying spring pressure downward on the chip carrier.
- "See through" design for solder fillet inspection.

For PLCC extractor tool order **Part No. PLC-EXR**

SPECIFICATIONS

For complete specifications see www.samtec.com?PLCC

Insulator Material:

Black Liquid

Crystal Polymer

Contact Material:

BeCu

Current Rating:

1A

Operating Temp Range:

-65°C to +105°C

Max Processing Temp:

230°C for 60 seconds

Plating:

Sn or Au over 50µ" (1,27µm) Ni

Contact Resistance:

10mΩ max

Lead Coplanarity:

Less than 52 leads=.006" (0,15mm) max;

52 leads and more=.008" (0,20 mm) max



PLCC

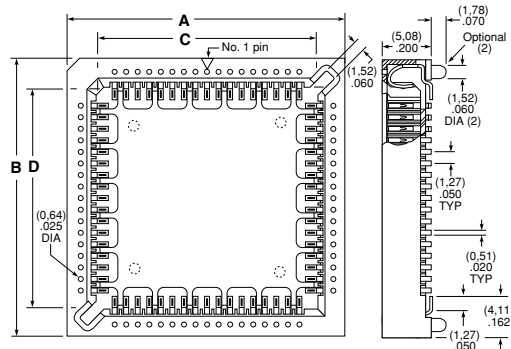
NO. OF CONTACTS

PLATING OPTION

ALIGNMENT PIN OPTION

PACKAGE OPTION

-020, -028, -032, -044, -052, -068, -084



* 32 position has .040" (1,00mm) DIA x .030" (0,76mm) high standoffs in corners.

NO. OF PINS	A	B	C	D
-020	.600 (15,24)	.600 (15,24)	.370 (9,40)	.370 (9,40)
-028	.700 (17,78)	.700 (17,78)	.470 (11,94)	.470 (11,94)
-032	.800 (20,32)	.800 (20,32)	.570 (14,48)	.570 (14,48)
-044	.900 (22,86)	.900 (22,86)	.670 (17,02)	.670 (17,02)
-052	1.000 (25,40)	1.000 (25,40)	.770 (19,56)	.770 (19,56)
-068	1.200 (30,48)	1.200 (30,48)	.970 (24,64)	.970 (24,64)
-084	1.400 (35,56)	1.400 (35,56)	1.170 (29,72)	1.170 (29,72)

-F
=Gold flash on contact, Tin on tail

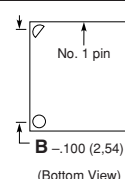
-T
= Tin

-N

=No Alignment Pins

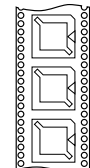
-A

=Alignment Pins

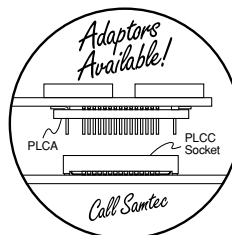


-TR

=Tape and Reel



Leave package option blank for packaging in a tube.

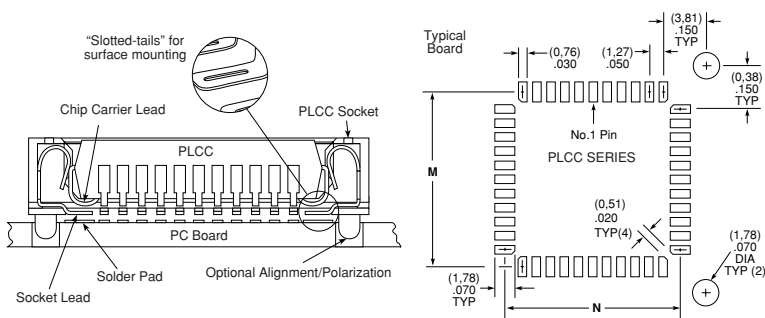


TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec or go to www.samtec.com?PLCC for recommended PCB layout.



NO. OF PINS	M	N
-020	(8,26).325	(8,26).325
-028	(10,79).425	(10,80).425
-032	(13,34).525	(10,80).425
-044	(15,88).625	(15,88).625
-052	(18,42).725	(18,42).725
-068	(23,50).925	(23,50).925
-084	(28,58)1.125	(28,58)1.125

Note:

Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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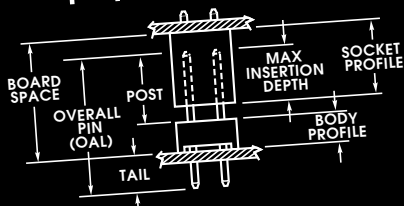
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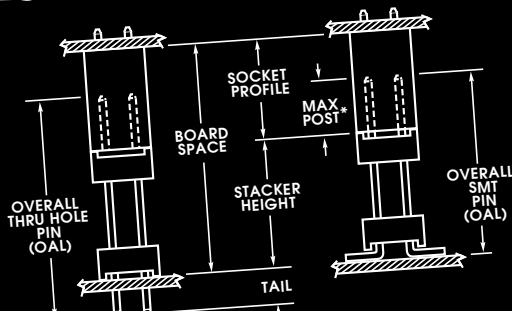
Do the math...

Board Stacking Stacker Application

Header Application



$$\begin{aligned} &\text{Board Space} \\ &- \text{Socket Profile} \\ &- \text{Body Profile (terminal)} \\ &+ \text{Max Insertion Depth} \\ &= \text{Post} \\ &+ \text{Body Profile} \\ &+ \text{Tail} \\ &= \text{Overall Pin (OAL)} \end{aligned}$$



$$\begin{aligned} &\text{Board Space} \\ &- \text{Socket Profile} \\ &= \text{Stacker Height} \\ &+ \text{Tail} \\ &+ \text{Max Post}^* \\ &= \text{Max Overall Pin (OAL)} \end{aligned}$$

$$\begin{aligned} &\text{Board Space} \\ &- \text{Socket Profile} \\ &= \text{Stacker Height} \\ &+ \text{Max Post}^* \\ &= \text{Max Overall Pin (OAL)} \end{aligned}$$

*MAX POST = Maximum insertion depth of socket. If OVERALL PIN is less than desired, be sure post will meet minimum insertion depth of socket.

...or NOT!

Go to http://www.samtec.com/search/board_stacking.asp
for interactive
Board Stacking
Selector

PART NUMBER CONVERSION

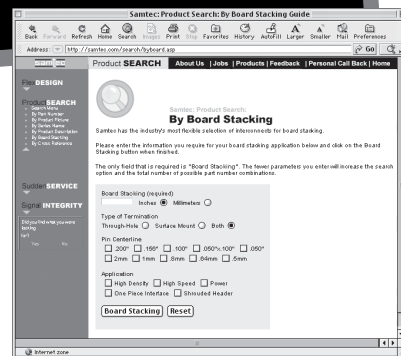
When Stacker Height, Post Height or Tail Length is specified in the part number use formula to convert from metric:

$$\text{Part Number} = \frac{\text{Length or Height in mm}}{0.0254}$$

Round to nearest whole number. See examples below.

Height (mm)	Height (inch)	Part Number	Height (mm)	Height (inch)	Part Number
0,00	.000	-000	16,00	.630	-630
0,25	.010	-010	17,00	.669	-669
0,50	.020	-020	18,00	.709	-709
0,75	.030	-030	19,00	.748	-748
1,00	.039	-039	20,00	.787	-787
1,50	.059	-050	21,00	.827	-827
2,00	.079	-079	22,00	.866	-866
3,00	.118	-118	23,00	.906	-906
4,00	.157	-157	24,00	.945	-945
5,00	.197	-197	25,00	.984	-984
6,00	.236	-236	26,00	1.024	-1024
7,00	.276	-276	27,00	1.063	-1063
8,00	.315	-315	28,00	1.102	-1102
9,00	.354	-354	29,00	1.142	-1142
10,00	.394	-394	30,00	1.181	-1181
11,00	.433	-433	31,00	1.220	-1220
12,00	.472	-472	32,00	1.260	-1260
13,00	.512	-512	33,00	1.299	-1299
14,00	.551	-551	34,00	1.339	-1339
15,00	.591	-591	35,00	1.378	-1378

NOTE: If product is only available with part numbers ending in "0" or "5" round to closest acceptable number, e.g. -395 = 10,03 mm.



PCB HOLE SIZES

Use chart to determine PCB hole sizes for common Samtec lead sizes.

LEAD SIZE	HOLE SIZE
(0,46) .018 DIA	(0,61) .024 DIA
(0,51) .020 DIA	(0,66) .026 DIA
(0,64) .025 DIA	(0,79) .031 DIA
(0,76) .030 DIA	(0,91) .036 DIA
(0,89) .035 DIA	(1,04) .041 DIA
(1,14) .045 DIA	(1,30) .051 DIA
(1,32) .052 DIA	(1,47) .058 DIA
(0,30) .012 SQ	(0,56) .022 DIA
(0,41) .016 SQ	(0,71) .028 DIA
(0,46) .018 SQ	(0,76) .030 DIA
(0,51) .020 SQ	(0,81) .032 DIA
(0,64) .025 SQ	(1,02) .040 DIA
(1,14) .045 SQ	(1,75) .069 DIA
(0,13) .005 x (0,41) .016	(0,56) .022 DIA
(0,20) .008 x (0,71) .028	(0,89) .035 DIA
(0,25) .010 x (0,36) .014	(0,56) .022 DIA
(0,25) .010 x (0,51) .020	(0,71) .028 DIA
(0,41) .016 x (0,51) .020	(0,79) .031 DIA
(0,41) .016 x (0,61) .024	(0,89) .035 DIA
(0,41) .016 x (0,79) .031	(1,04) .041 DIA

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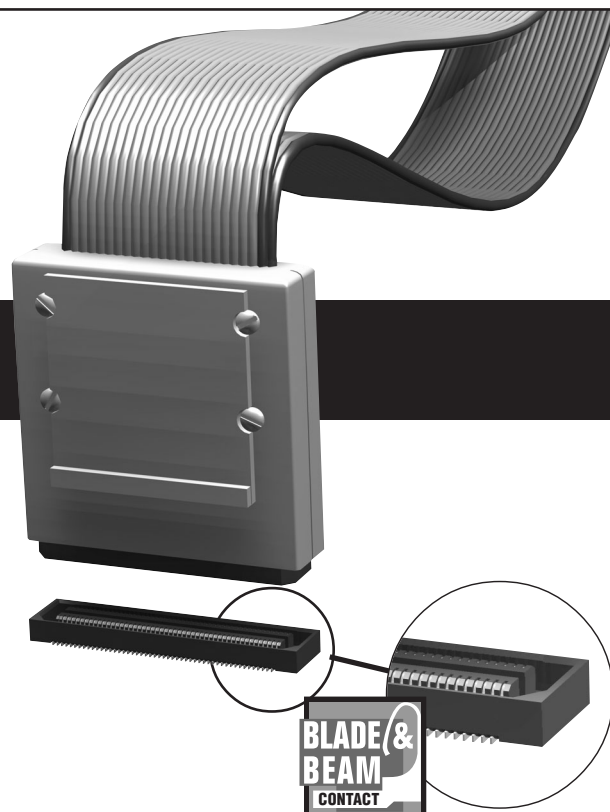
AGILENT MATES

Agilent Logic Analyzer Sockets

Samtec and Agilent have worked together to develop a new test point connector standard as an alternative to the 38-pin connectors which were exclusive to this application until now. Board designers may now design in Samtec's ASP-65067-01 100-pin connector as the test point interface. Benefits include:

- Less expensive, on average
- Free samples, shipped within 24 hours
- No minimum purchase required
- One to five day lead time for production orders
- Better electrical performance, per Agilent's test data
- No through-hole ground plane leads, for better routing flexibility

AGILENT LOGIC ANALYZER MATE:



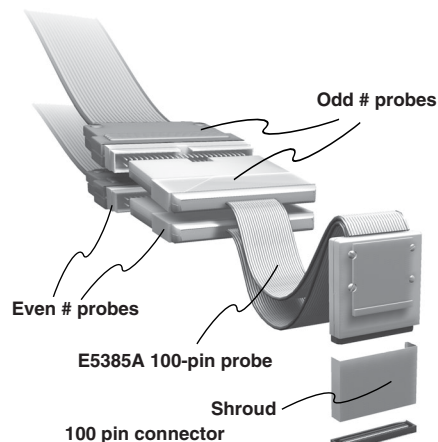
APPLICATION NOTES

Three different Agilent analysis probes are now available to allow any user to design in Samtec ASP-65067-01 test point connectors for use with any Agilent/HP logic analyzer model.

ALL OTHER AGILENT/HP APPLICATIONS

Model E5385A

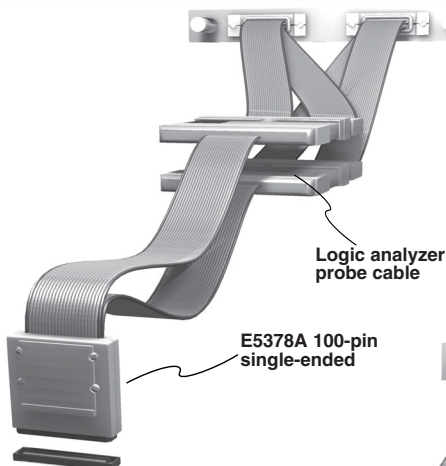
This model probe is used with all other Agilent/HP logic analyzers that require a test point connector and replaces Agilent probe #E5346A when a designer wants to switch from the 38-pin to Samtec's ASP-65067-01 in a new product or redesign of an existing application.



AGILENT 16760A APPLICATIONS

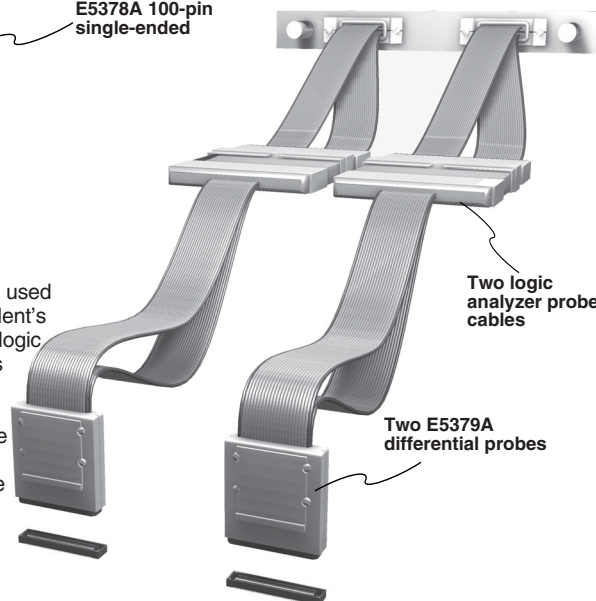
Single-Ended Model E5378A

This model probe is used specifically with Agilent's newest high speed logic analyzer 16760A. This probe requires one test point connector (per session) on the target board and is used in single-ended analysis.



Differential Model E5379A

This model probe is used specifically with Agilent's newest high speed logic analyzer 16760A as well. However, two probes and test point connectors are used per session because its purpose is to test differential signals.



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EM PROCESSING

Interconnect Processing Group

- Free Micro, SMT and Edge Mount board processing consulting service
- Help lower total applied cost of boards
- Help improve overall processing and manufacturability of boards
- Help resolve complex interconnect processing issues of concern



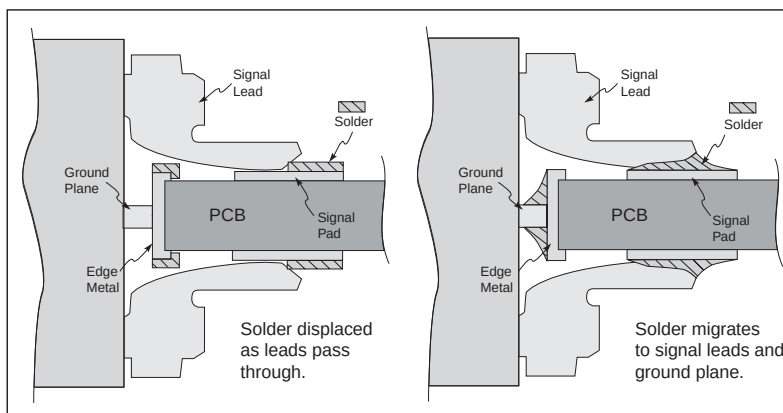
EDGE MOUNT PROCESSING OVERVIEW

Samtec's hi-speed Q-Strip™ and Q-Pairs™ edge mount interconnects can be used to connect PC boards (PCBs) populated on one or both sides of the board. Guidelines have been developed for Samtec's Q-Strip™ and Q-Pairs™ interconnect systems on .5mm, .635mm, and .8mm centerlines. Specifically, these guidelines are relevant for Samtec's QTH/QSH, QTS/QSS, and QTE/QSE series connectors with edge mount leads on .062" thick PC boards.

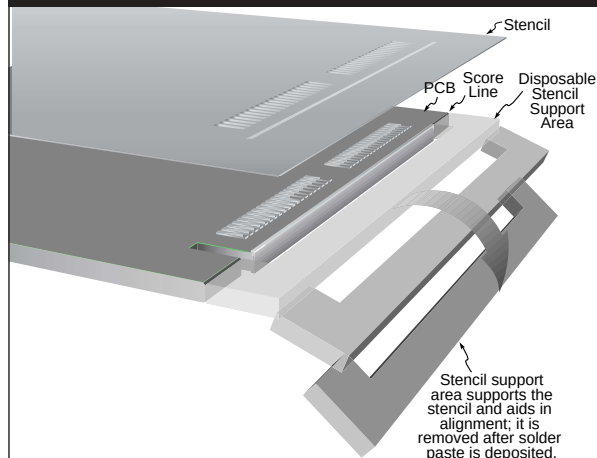
Other than the micro pitch signal leads, the integrated ground planes within these connectors can pose a challenge from a processing standpoint. The guidelines will provide step-by-step procedures to help ensure that acceptable solder joints are achieved for the integrated ground planes as well as the edge mount signal leads.

While we have made every attempt to cover most situations, these guidelines and suggestions should not be considered design requirements for all applications. Samtec highly recommends testing the Q-Strip™ and Q-Pairs™ edge mount interconnects on your boards and in your process to guarantee optimum results.

Three separate sets of processing guidelines are available: Single sided PC boards (SMT components populated on one side of PCB only), Dual sided PC boards using .8mm pitch connectors (SMT components populated on both sides of PCB), and Dual sided PC boards using .5mm and .635mm pitch connectors. Please go to www.samtec.com to download these detailed processing guidelines.



EDGE MOUNT PROCESSING GUIDELINE SUMMARY



(For detailed recommendations log on to: www.samtec.com)

- Add a stencil support area to the edge of the pcb that can be separated along score lines and disposed of after processing.
- Deposit paste on the lead pads and top side of the ground plane pad on the unpopulated board.
- It is not necessary to apply paste to the edge of the board as the solder will be drawn to this area during reflow.
- For dual sided boards place the other components and reflow without removing the stencil support.
- Deposit paste on the lead pads and top side of the ground plane pad on the other side of the board, populate it with components, remove stencil support and place connector on the edge.
- Reflow using standard SMT parameters in an IR forced convection oven.

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TEST REPORT



The following summarizes the results of a series of measurements which were developed to characterize the signal integrity characteristics of the SamArray™ system. An effort was made to evaluate assumed best-case and worst-case practical configurations. Performance in other configurations can be reasonably estimated by studying the configurations presented in this summary. Multiline SPICE models of these mated connectors can be used to evaluate other configurations.

Other components in a system in which this connector would typically be used in can have a significant impact on the observed effects of the connector; in addition, test boards and intermediate

test signal connections can cause significant masking of the connector's effects. Because of the great variety of board materials, routing schemes, compensation techniques, etcetera, much effort was made in these measurements to isolate the connector from the board effects.

Data is presented for several rise times that are typical of those encountered in current high-speed systems. For illustrative purposes, data is also provided at the "full bandwidth" of the laboratory instruments. For this test set up, this is assumed to be an equivalent of approximately a 30±5 picosecond signal rise time.

Determination of connector suitability for specific frequency and rise time applications:

The "Well Suited" applications are chosen at a maximum 5% cross talk, or 5% impedance mismatch limit, whichever is worse. Frequency domain limits are calculated from time domain

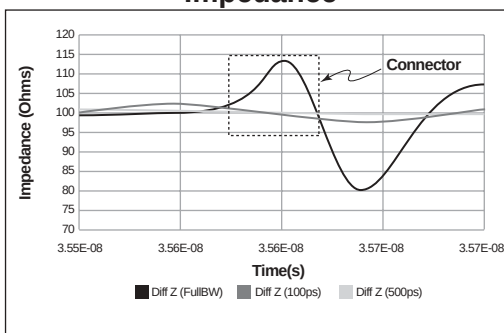
measurement through $0.35/T_r$, which approximates the half bandwidth power level for a sinusoidal signal. Note that this does not typically directly relate to the system clock frequency. At these frequencies, the connector should have minimal impact on system performance if standard signal integrity principles are followed in the system design.

It is assumed that the system impedance will be 100 ohms for differential applications, and 50 ohms for single-ended applications. Performance will be different in other impedance environments.

For complete test reports including test procedures and equipment, log on to www.samtec.com/signal/index.asp

DIFFERENTIAL RESULTS

Impedance



Signal Rise Time	30 ps	100 ps	500 ps
Z Max	113.2 Ω	102.3 Ω	100.7 Ω
Z Min	100.0 Ω	100.0 Ω	100.0 Ω

Cross Talk

G	G	G	G
G	D1	D2	G
G	G	G	G
G	M1	M2	G
G	G	G	G

Signal Rise Time	30 ps	100 ps	500 ps
NEXT	0.17%	0.08%	0.02%
FEXT	0.58%	0.04%	0.01%

G	G	G	G	G	G	G
G	D1	D2	G	M1	M2	G
G	G	G	G	G	G	G

Signal Rise Time	30 ps	100 ps	500 ps
NEXT	0.15%	0.047%	Undetectable
FEXT	0.41%	0.17%	0.04%

DIFFERENTIAL APPLICATIONS

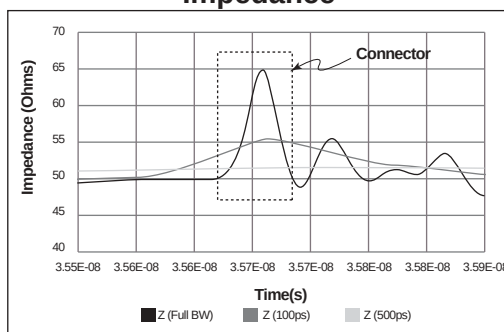
	System Bandwidth	Signal Rise Time
Well Suited	Up to 3.5 GHz	Slower than 100 ps
Use With Care	Up to 10 GHz	Slower than 35 ps

Propagation Delay

Differential	36.6 ps
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SINGLE-ENDED RESULTS

Impedance



Signal Rise Time	30 ps	100 ps	500 ps
Z Max	65.1Ω	55.4 Ω	51.7 Ω
Z Min	50.0Ω	50.0 Ω	50.0 Ω

Cross Talk

G	G	G	G	G
G	D	G	M	G
G	G	G	G	G

Signal Rise Time	30 ps	100 ps	500 ps
NEXT	0.52%	0.18%	0.04%
FEXT	0.74%	0.22%	0.06%

G	G	G	G
G	D	M	G
G	G	G	G

Rise Time	30 ps	100 ps	500 ps
NEXT	8.03%	4.09%	0.98%
FEXT	3.03%	0.71%	0.09%

G	G	M	G
G	D	G	G

Rise Time	30 ps	100 ps	500 ps
NEXT	2.12%	1.24%	0.32%
FEXT	0.95%	0.40%	0.11%

Propagation Delay

Single-Ended	32.9 ps
--------------	---------

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TEST REPORTS

High Speed Test Data

The following summarizes the results of a series of measurements which were developed to characterize the signal integrity characteristics of the Q-Strip™ and Q-Pairs™ systems. An effort was made to evaluate assumed best-case and worst-case practical configurations. Performance in other configurations can be reasonably estimated by studying the configurations presented in this summary. Multiline SPICE models of these mated connectors can be used to evaluate other configurations.

Other components in a system in which this connector would typically be used in can have a significant impact on the observed effects of the connector; in addition, test boards and intermediate test signal connections can cause significant masking of the connector's effects. Because of the great variety of board materials, routing schemes, compensation techniques, etcetera, much effort was made in these measurements to isolate the connector from the board effects.

Data is presented for several rise times that are typical of those encountered in current high-speed systems. For illustrative purposes, data is also provided at the "full bandwidth" of the laboratory instruments. For this test set up, this is assumed to be an equivalent of approximately a 30±5 picosecond signal rise time.

Determination of connector suitability for specific frequency and rise time applications:

The "Well Suited" applications are chosen at a maximum 5% cross talk, or 5% impedance mismatch limit, whichever is worse. Frequency domain limits are calculated from time domain measurement through 0.35/Tr, which approximates the half bandwidth power level for a sinusoidal signal. Note that this does not typically directly relate to the system clock frequency. At these frequencies, the connector should have minimal impact on system performance if standard signal integrity principles are followed in the system design.

It is assumed that the system impedance will be 100 ohms for differential applications, and 50 ohms for single-ended applications. Performance will be different in other impedance environments.

"Use with care" applications could necessitate the use of more advanced techniques in the system design. Special board materials, extra board layers, active signal processing, cross talk or impedance compensation, etc., could be required. Test data provided in this report is considered valid to the higher limit of these frequencies.



For complete test reports including test procedures and equipment, log on to www.samtec.com/signal/index.asp

.8mm Pitch Differential Applications 5mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 6.4 GHz	No faster than 55 pS
Use With Care (10%)	Up to 10 GHz	No faster than 35 pS

.8mm Pitch Differential Applications 11mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 540 MHz	No faster than 650 pS
Use With Care (10%)	Up to 1.40 GHz	No faster than 250 pS

.8mm Pitch Differential Applications 22mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 400 MHz	No faster than 900 pS
Use With Care (10%)	Up to 700 MHz	No faster than 500 pS

.5mm Pitch Differential Applications 5mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 700 MHz	No faster than 500 pS
Use With Care (10%)	Up to 1.33 GHz	No faster than 263 pS

.8mm Pitch Differential Applications 5mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 2.33 GHz	No faster than 150 pS
Use With Care (10%)	Up to 5 GHz	No faster than 70 pS

.8mm Pitch Differential Applications 11mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 875 MHz	No faster than 400 pS
Use With Care (10%)	Up to 2.3 GHz	No faster than 150 pS

.8mm Pitch Differential Applications 22mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 325 MHz	No faster than 1.1 nS
Use With Care (10%)	Up to 635 MHz	No faster than 550 pS

.5mm Pitch Differential Applications 5mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 585 MHz	No faster than 610 pS
Use With Care (10%)	Up to 1.0 GHz	No faster than 350 pS

.8mm Pitch Single-Ended Applications 5mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 1.2 GHz	No faster than 300 pS
Use With Care (10%)	Up to 2.33 GHz	No faster than 150 pS

.8mm Pitch Single-Ended Applications 11mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 350 MHz	No faster than 1 nS
Use With Care (10%)	Up to 440 MHz	No faster than 800 pS

.8mm Pitch Single-Ended Applications 22mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 220 MHz	No faster than 1.6 nS
Use With Care (10%)	Up to 460 MHz	No faster than 750 pS

.5mm Pitch Single-Ended Applications 5mm Stack		
Maximum Impedance Mismatch & Crosstalk	System Bandwidth	Signal Rise Time
Well Suited (5%)	Up to 775 MHz	No faster than 450 pS
Use With Care (10%)	Up to 1.75 GHz	No faster than 200 pS

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SPECIFICATIONS & TESTING

Specifications and Standard Test Procedures

Samtec products are subject to the following general specifications and standard test procedures.

QUALITY ASSURANCE

Quality program requirements	ISO 9000
UL File Number	E111594(N)
CSA File Number	LR 90871
Sampling procedures	MIL-STD-105
Quality assurance terms and definitions	MIL-STD-109
Calibration system requirements	MIL-STD-45662
Inspection system requirements	MIL-I-45208
Inspection equipment	MIL-I-45607B

INSULATOR

Specifications	
Molding plastics. Thermoplastic polyesters	MIL-M-24519
UL Flammability	UL 94 V0
UL Temperature index	UL 746B
Applied tests	
Dielectric Breakdown Voltage	ASTM D 149
AC Loss Characteristics	ASTM D 150
Impact Resistance of Plastics	ASTM D 256
DC Resistance	ASTM D 257
High-Voltage, Low-Current Arc Resistance	ASTM D 495
Water Absorption of Plastics	ASTM D 570
Test for Tensile Properties of Plastics	ASTM D 638
Deflection Temperature of Plastics	ASTM D 648
Compressive Properties of Plastics	ASTM D 695
Coefficient of Linear Thermal Expansion	ASTM D 696
Shear Strength of Plastics	ASTM D 732
Rockwell Hardness of Plastics	ASTM D 785
Flexural Properties of Plastics	ASTM D 790
Specific Gravity and Density of Plastics	ASTM D 792

CONTACT & TERMINAL

Specifications	
Brass	ASTM B16-85
Phosphor Bronze	ASTM B 139
Beryllium Copper	ASTM B 194
General specification for contacts	MIL-C-39029B
General specification for sockets	MIL-S-83505

OTHER SPECIFICATIONS

Insulation Resistance	5000M Ω min
Dielectric Withstanding Voltage	1000 VRMS @ 60 Hz
Flammability Rating	UL 94V-0

Note:

Products with specifications other than those listed above are noted on the individual product pages.

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PLATING

Specifications	
Gold	MIL-G-45204 Type 1 Grade C
Tin	MIL-T-10727
Under plating specifications	
Nickel	QQ-N-290
Copper	MIL-C-14550
Palladium Nickel	MIL-P-45209 Class 1.2
Applied tests	
Measuring metal and oxide coating thickness	ASTM-B487-79
Coating thickness (Beta Backscatter principle)	ASTM-B567
Coating thickness (X-ray Fluorescence)	ASTM-A-754-79

ASSEMBLY

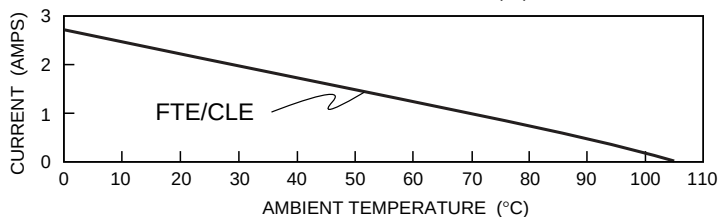
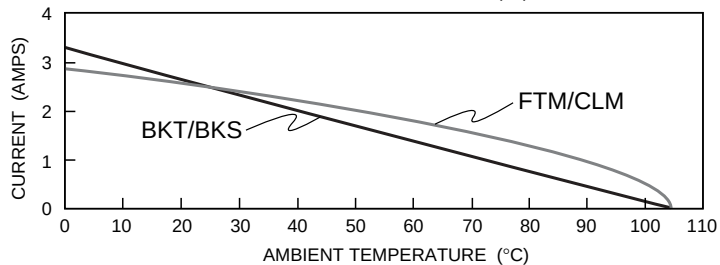
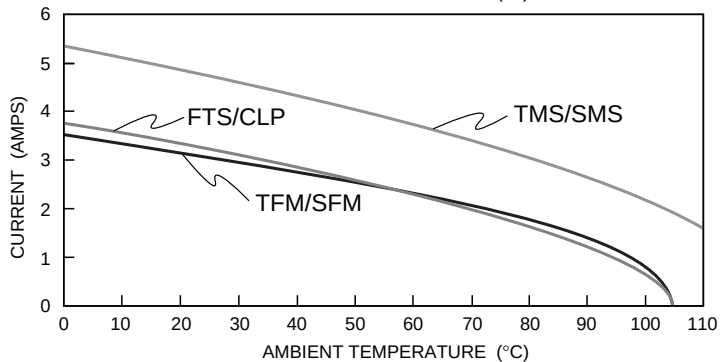
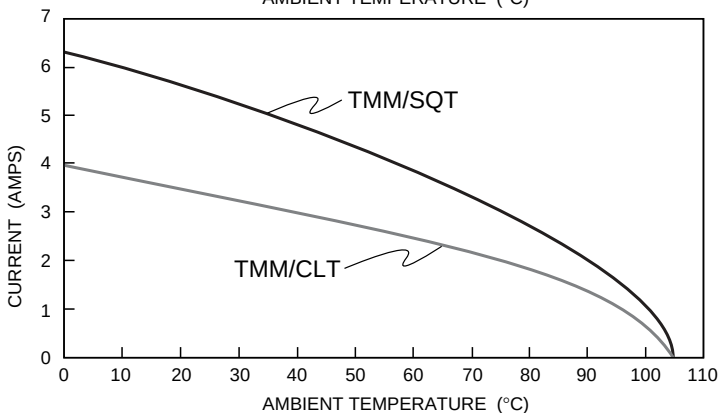
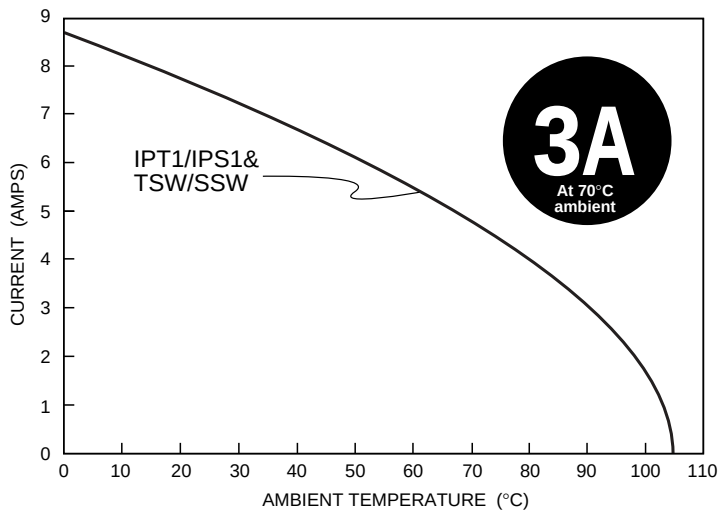
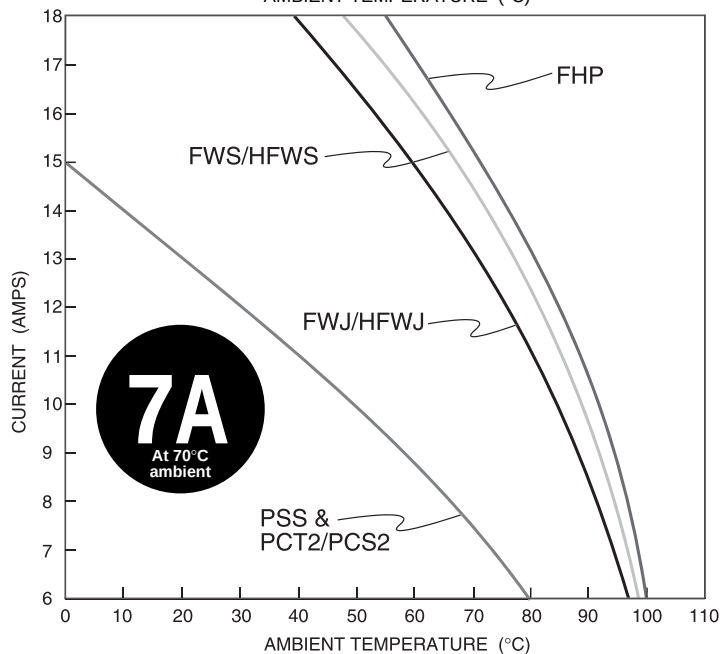
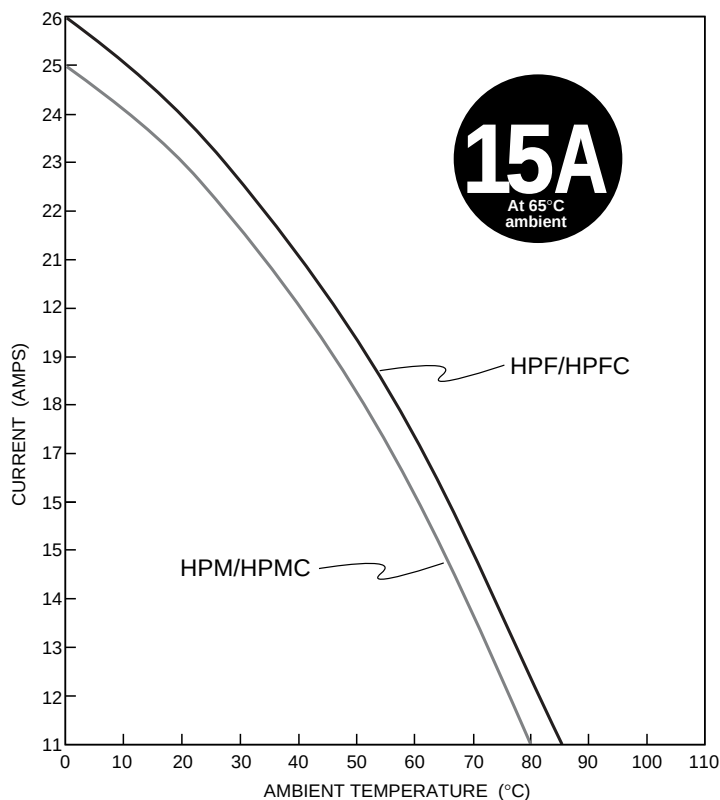
Testing specifications	
Test methods for electrical connectors	MIL-STD-1344 EIA-364 IEC-512 IEC-603
Test methods for electronic/electrical components	MIL-STD-202
Connections, electrical, solderless, wrapped	MIL-STD-1130B
Environmental Test Methods	MIL-STD-810
Sockets (lead, electronic components), general	MIL-S-83505
Sockets, plug-in electronic components, general	MIL-S-83734
Packaging specifications	
Connectors, preparation for delivery	MIL-C-55330
Identification marking of US military property	MIL-STD-130

SMT LEAD STRENGTH TEST DATA

Data given in (Newtons) pounds

Pitch	Terminal Socket	Pull Force Average	Pull Force Minimum	Test Results Shear Force Average	Shear Force Minimum	Calculated Unmating Force Average
(2,00mm) .0787"	TMM-125 CLT-125	(498) 112 (53) 12	(347) 78 (49) 11	(1126) 253 (263) 59	(1050) 236 (147) 33	(9) 2
(1,27mm) .050"	FTS-125 CLP-125	(267) 60 (80) 18	(111) 25 (49) 11	(1064) 239 (218) 49	(730) 164 (129) 29	(27) 6
(1,27mm) .050"	TFM-125 SFM-125	(249) 56 (218) 49	(205) 46 (182) 41	N/A N/A	N/A N/A	(58) 13 (22) 5 (LIF)
(1,00mm) .0394"	FTM-125 CLM-125	(125) 28 (71) 16	(71) 16 (53) 12	(708) 159 (182) 41	(610) 137 (129) 29	(9) 2
(1,00mm) .0394"	BKT-125 BKS-125	(107) 24 (38) 8	(49) 11 (27) 6	(449) 101 (352) 79	(392) 88 (276) 62	(9) 2

CURRENTS



For general reference only. Call Samtec for Test Reports with complete Conditions and Results.
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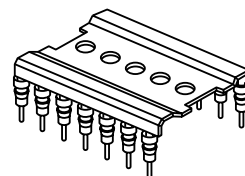
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ALC-624-NGG



DIP SOCKET CARRIERS ALC SERIES

Mates with:
APO, APA, APH

Aluminum Carriers for Direct Soldering to PC Boards

Samtec aluminum carriers are available in the most popular DIP lead counts for direct mounting of lead sockets to the printed circuit board. They are ideal for vapor phase, infrared and other high temperature soldering techniques. Low insertion force, six-finger contacts or standard insertion force four-finger contacts are available. Shell styles include ultra-low profile designs.

ALC

ROW SPACING & NO. OF CONTACTS

Specify from chart below

	Row Space	No. of Contacts
-314	(7,62) .300	14
-316		16
-318		18
-320		20
-324		24
-624	(15,24) .600	24
-628		28
-632		32
-640		40

STYLE OPTION

GG

= 30μ" (0,76μm) Gold Contact 10μ" (0,25μm) Gold Shell

GT

= 30μ" (0,76μm) Gold Contact, Tin Shell

TT

= Tin Contact and Shell (Styles -S, -ZS, -L, -M, -N only)

ST

= 10μ" (0,25μm) Gold Contact Tin Shell (Styles -S & -ZS only)

PLATING OPTION

OTHER OPTION

-L

= Locking Socket

Requires Style -S, -ZS, or -ZP and .035"±.003" board hole.

Requires GT Plating Option

Lead DIA Accepted = .015" to .022" (0,38mm to 0,56mm)

Insertion Depth = .095" to .150" (2,41mm to 3,81mm)

Component Part No. = SC-1L1 or EZ-1L1

Low Insertion Force (LIF) Contacts Available.

SPECIFICATIONS

For complete specifications see www.samtec.com?ALC

Insulator Material:

None

Carrier Material:

Aluminum

Contact: BeCu

Shell: Brass

Plating:

Au over 50μ" (1,27μm) Ni

or Sn over 100μ" (2,54μm)

Cu or 50μ" (1,27μm) Ni

Current Rating: 1 A

Contact Resistance:

10 mΩ min

Insertion Force:

Standard = 9 oz (2,50N)

avg, 16 oz (4,45N) max

Low Insertion Force =

2.5 oz (0,70N) avg, 5.5 oz

(1,53N) max

Withdrawal Force:

Standard = 2.5 oz (0,70N) avg,

1.5 oz (0,42N) min

Low Insertion Force = 2.0 oz

(0,56N) avg, 0.35 oz (0,10N)

min except Styles ZM & ZN =

2.0 oz (0,56N) avg, 0.5 oz

(0,14N) min

Note:

Some sizes, styles and options are non-standard, non-returnable.

-S = Standard Solder Tail For LIF Specify -ZS 	-ZD = Micro Socket Low Insertion Force 	-ZP = Short Tail Low Insertion Force
-L = Low Profile, Hollow Leg For LIF Specify -ZL 	-M = Low Profile, Standard Mount For LIF Specify -ZM 	-N = Low Profile, Micro Socket For LIF Specify -ZN

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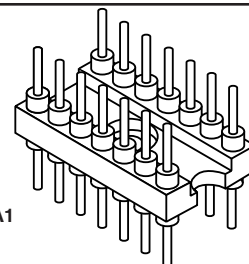
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AP-314-G-A1

SCREW MOUNT ADAPTOR PLUGS

Mates with:
IC, ICS, ICO,
ICA, ICE, ICH

Machined pin DIP adaptor plugs

DIP adaptor plugs are available in a wide variety of lead counts from 8 through 64 pins.

Samtec offers a choice of many terminal styles including solder, wire-wrap, solder pot, and others. Terminals can be gold or tin plated. AP & APS series adaptor plugs feature a UL rated G.F. polyester body with mounting holes.

Low cost stamped pin adaptor plugs and mating covers are also available from Samtec.

TYPE PLUG

AP
= Dip Adaptor
Plug

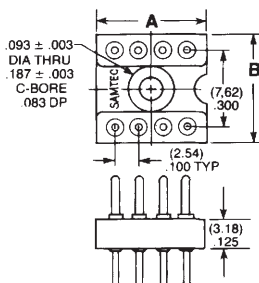
APS
= Dip Adaptor
Plug

ROW SPACING & NUMBER OF CONTACTS

-306 = .300 Row 06 Contacts
-308 = .300 Row 08 Contacts
-310 = .300 Row 10 Contacts

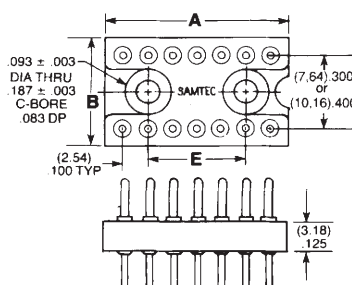
Part No.	A Length	B Width
AP or APS-306	(8,89).350	(10,16).400
AP or APS-308	(11,43).450	(10,16).400
*AP or *APS-310	(13,97).550	(10,16).400

* Mounting hole off center on 10 position.



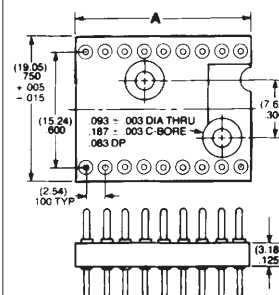
-314 = .300 Row 14 Contacts
-316 = .300 Row 16 Contacts
-318 = .300 Row 18 Contacts
-320 = .300 Row 20 Contacts
-324 = .300 Row 24 Contacts
-422 = .400 Row 22 Contacts
-424 = .400 Row 24 Contacts

Part No.	A LENGTH	B WIDTH	E MNT HOLES
AP or APS-314	(17,78).700	(10,16).400	(10,16).400
AP or APS-316	(20,32).800	(10,16).400	(12,70).500
AP or APS-318	(22,86).900	(10,16).400	(15,24).600
AP or APS-320	(25,40)1.000	(10,16).400	(17,78).700
AP or APS-324	(30,48)1.200	(10,16).400	(22,86).900
AP or APS-422	(27,94)1.100	(10,16).400	(20,32).800
AP-424	(30,48)1.200	(12,70).500	(22,86).900



-610 = .600 Row 10 Contacts
-614 = .600 Row 14 Contacts
-616 = .600 Row 16 Contacts
-618 = .600 Row 18 Contacts

Part No.	A Length
AP-610	(12,70).500
AP-614	(17,78).700
AP-616	(20,32).800
AP-618	(22,86).900



Specifications: AP & APS

Insulator Material: Black Glass Filled Polyester
Flammability Rating: UL 94V-O

Insulation Resistance: 5000 megohm @ 500 VDC
Temperature Range: -65°C to +125°C

Withstanding Voltage: 1000 VRMS @ 60 Hz

Terminal Material: Brass except styles -M, -N, -P and -Q are Phosphor Bronze

Plating: Au over 50µ" Ni or Sn over 100µ" Cu or 50µ" Ni

Current Rating: 1 amp continuous @ 100 VDC per contact
Terminal Retention in Body: 5 lbs. against barb

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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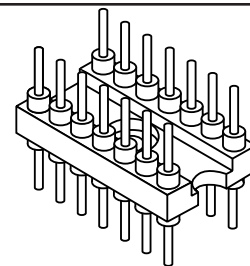
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AP-314-T-A

AP & APS SERIES

PLATING OPTION

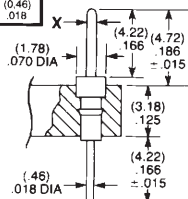
-G
= 20μ" Gold

-T
Tin

STYLE OPTION

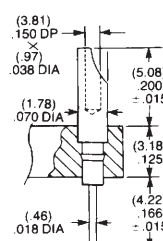
-A or -A1 = Round Pin

STYLE	X DIA
-A	(.064) .025
-A1	(.046) .018



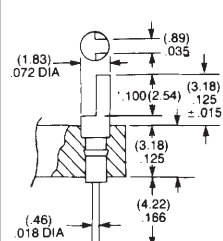
Style A Component No. = T-1R0-
Style A1 Component No. = T-1R5-

-B = Solder Pot



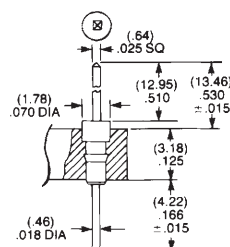
Component No. = T-1R1-

-C = Slotted Head



Component No. = T-1R2-

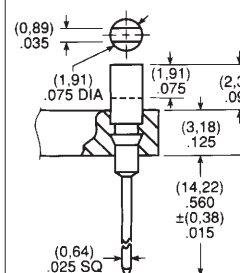
-D = Wire-Wrap



Component No. = T-1S4-1-1

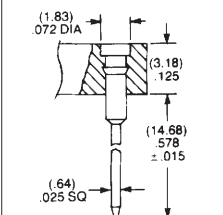
-E = Slot-head W.W.

(-648 N/A)



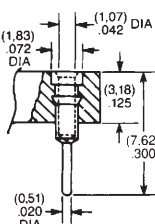
Component No. = T-1S5-

-F = Flat-head W.W.



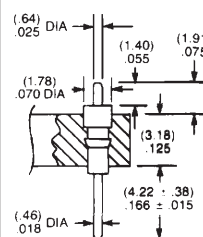
Component No. = T-1S2-

-J = Solder Shell



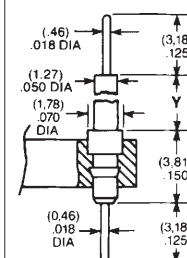
Component No. = S-1P1-

-K = Test Point



Component No. = T-1R15-

-M, -N, -P or -Q = Interconnect Post



Component No. = T-1R14-

STYLE	Y
-M	(1.52) .060
-N	(4.67) .185
-P	(11.95) .435
-Q	(17.40) .685

-624 = .600 Row 24 Contacts

-628 = .600 Row 28 Contacts

-632 = .600 Row 32 Contacts

-640 = .600 Row 40 Contacts

-940 = .900 Row 40 Contacts

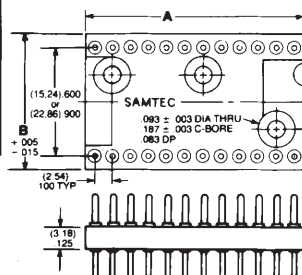
-950 = .900 Row 50 Contacts

-964 = .900 Row 64 Contacts

PART NO.	A LENGTH	B WIDTH
AP or APS-624	(30.48)1.200	(17.78).700
AP or APS-628	(35.56)1.400	(17.78).700
AP or APS-632	(40.64)1.600	(17.78).700
AP or APS-640	(50.80)2.000	(17.78).700
*AP-940		
*†AP-950	(63.50)2.500	(26.27)1.050
AP-964	(81.28)3.200	

*AP-940 and AP-950
are non-standard
non-returnable.

† Mounting hole off center on 50 positions



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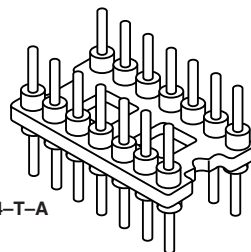
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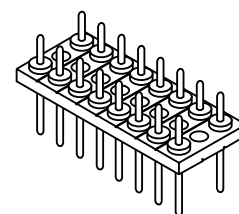
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APO-314-T-A



APH-316-T-H



LOW PROFILE ADAPTORS

APO & APH SERIES

Mates with:
ICO, ICA, CIC

SPECIFICATIONS

For complete specifications
see www.samtec.com?APO

Insulator Material:

Black Glass Filled

Polyester

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 megohm @ 500 VDC

Operating Temp Range:

-65°C to +125°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Terminal Material:

Brass

Plating:

Au over 50µ" (1,27µm) Ni

or Sn over 100µ" (2,54µm) Cu

or 50µ" Ni

Current Rating:

1 A



APO

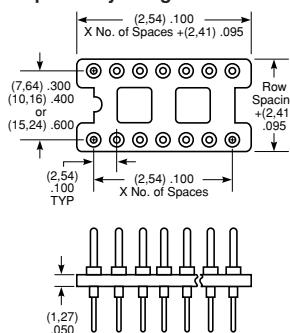
ROW SPACING & NO. OF CONTACTS

PLATING OPTION

LEAD STYLE

Specify from chart below

- Side & end stackable
- Open body design



	Row Space	No. of Contacts
-308		08
-314		14
-316		16
-318		18
-320		20
-324		24
-422	.300 (7,62)	22
-624	.400 (10,16)	24
-628	.600 (15,24)	28
-640		40

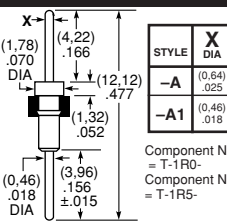
-G

= 20µ" (0,51µm) Gold

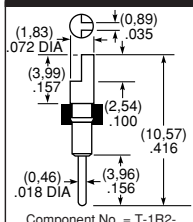
-T

= Tin

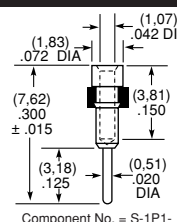
-A or -A1 = Round Pin



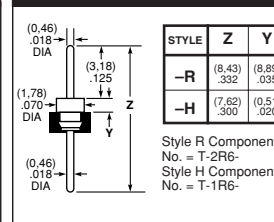
-C = Slotted Head



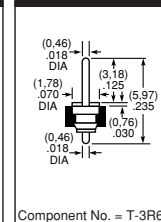
-J = Solder Shell



-R or -H = Low Profile



-T = Short Tail



Note:

Some sizes, styles and options are non-standard, non-returnable.

Mates with:
ICO, ICA, CIC

Features:

- Adaptor plugs for unusual centerline applications feature
- Low profile terminals
- Body will withstand most VP & IR soldering

SPECIFICATIONS

For complete specifications
see www.samtec.com?APH

Same as APO except:

Insulation Material:

Black Thermoplastic

Temperature Range:

-65°C to +140°C

Heat Deflection Temp:

215°C @ 264 psi

Note: This Series is

non-standard, non-returnable.



APH

ROW SPACE

NO. OF PINS

PLATING OPTION

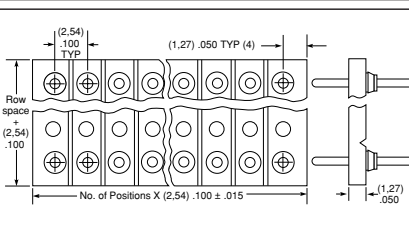
LEAD STYLE

Row Spacing
EXAMPLE:
-3 = .300 centers

-02
thru
-19

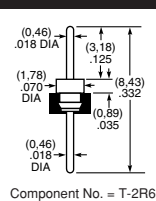
-G
= 20µ" (0,51µm) Gold

-T
= Tin

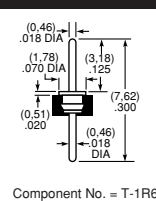


02
thru
40

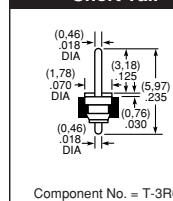
-R = Low Profile



-H = Low Profile



-T = Short Tail



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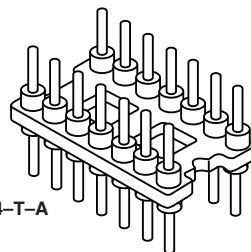
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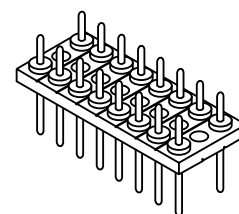
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APO-314-T-A



APH-316-T-H



LOW PROFILE ADAPTORS

APO & APH SERIES

Mates with:
ICO, ICA, CIC

SPECIFICATIONS

For complete specifications
see www.samtec.com?APO

Insulator Material:

Black Glass Filled

Polyester

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 megohm @ 500 VDC

Operating Temperature Range:

-65°C to +125°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Terminal Material:

Brass

Plating:

Au over 50µ" (1,27µm) Ni

or Sn over 100µ" (2,54µm) Cu

or 50µ" Ni

Current Rating:

1 A



APO

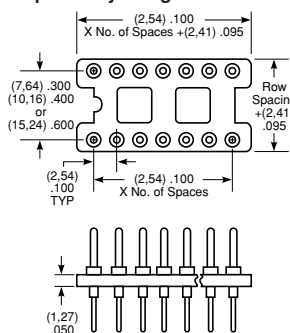
ROW SPACING & NO. OF CONTACTS

PLATING OPTION

LEAD STYLE

Specify from chart below

- Side & end stackable
- Open body design



	Row Space	No. of Contacts
-308		08
-314		14
-316		16
-318		18
-320		20
-324		24
-422	.300 (7,62)	22
-624	.400 (10,16)	24
-628	.600 (15,24)	28
-640		40

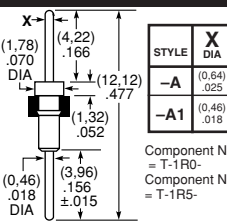
-G

= 20µ" (0,51µm) Gold

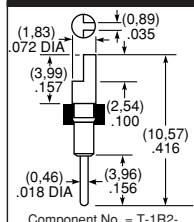
-T

= Tin

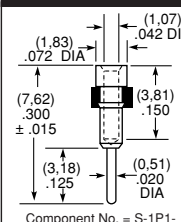
-A or -A1 = Round Pin



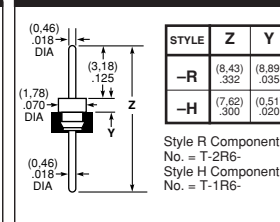
-C = Slotted Head



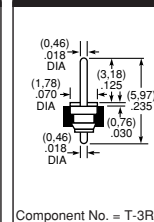
-J = Solder Shell



-R or -H = Low Profile



-T = Short Tail



Note:

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Mates with:
ICO, ICA, CIC

Features:

- Adaptor plugs for unusual centerline applications feature
- Low profile terminals
- Body will withstand most VP & IR soldering

SPECIFICATIONS

For complete specifications
see www.samtec.com?APH

Same as APO except:

Insulation Material:

Black Thermoplastic

Temperature Range:

-65°C to +140°C

Heat Deflection Temp:

215°C @ 264 psi

Note: This Series is

non-standard, non-returnable.



APH

ROW SPACE

NO. OF PINS

PLATING OPTION

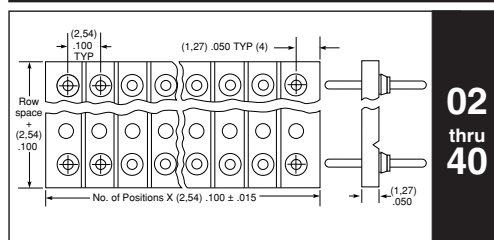
LEAD STYLE

Row Spacing
EXAMPLE:
-3 = .300 centers

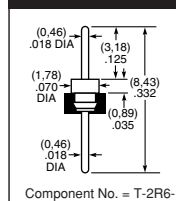
-02
thru
-19

-G
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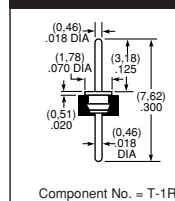
-T
= Tin



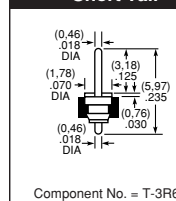
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-H
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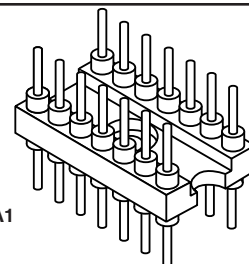
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DIP adaptor plugs are available in a wide variety of lead counts from 8 through 64 pins.

Samtec offers a choice of many terminal styles including solder, wire-wrap, solder pot, and others. Terminals can be gold or tin plated. AP & APS series adaptor plugs feature a UL rated G.F. polyester body with mounting holes.

Low cost stamped pin adaptor plugs and mating covers are also available from Samtec.

TYPE PLUG

AP
= Dip Adaptor
Plug

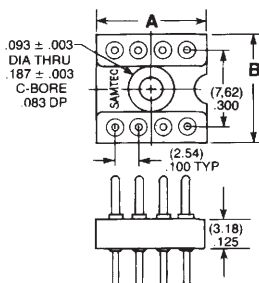
APS
= Dip Adaptor
Plug

ROW SPACING & NUMBER OF CONTACTS

-306	= .300 Row 06 Contacts
-308	= .300 Row 08 Contacts
-310	= .300 Row 10 Contacts

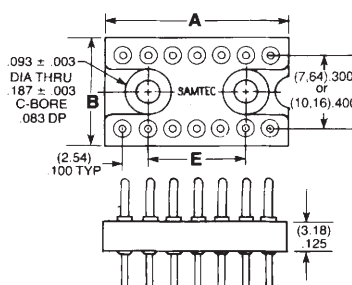
Part No.	A Length	B Width
AP or APS-306	(8,89).350	(10,16).400
AP or APS-308	(11,43).450	(10,16).400
*AP or *APS-310	(13,97).550	(10,16).400

* Mounting hole off center on 10 position.



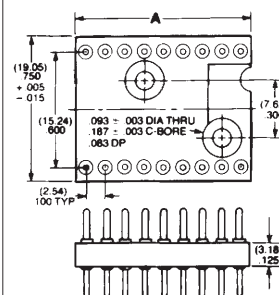
-314	= .300 Row 14 Contacts
-316	= .300 Row 16 Contacts
-318	= .300 Row 18 Contacts
-320	= .300 Row 20 Contacts
-324	= .300 Row 24 Contacts
-422	= .400 Row 22 Contacts
-424	= .400 Row 24 Contacts

Part No.	A LENGTH	B WIDTH	E MNT HOLES
AP or APS-314	(17,78).700	(10,16).400	(10,16).400
AP or APS-316	(20,32).800	(10,16).400	(12,70).500
AP or APS-318	(22,86).900	(10,16).400	(15,24).600
AP or APS-320	(25,40)1.000	(10,16).400	(17,78).700
AP or APS-324	(30,48)1.200	(10,16).400	(22,86).900
AP or APS-422	(27,94)1.100	(10,16).400	(20,32).800
AP-424	(30,48)1.200	(12,70).500	(22,86).900



-610	= .600 Row 10 Contacts
-614	= .600 Row 14 Contacts
-616	= .600 Row 16 Contacts
-618	= .600 Row 18 Contacts

Part No.	A Length
AP-610	(12,70).500
AP-614	(17,78).700
AP-616	(20,32).800
AP-618	(22,86).900



Specifications: AP & APS

Insulator Material: Black Glass Filled Polyester
Flammability Rating: UL 94V-O

Insulation Resistance: 5000 megohm @ 500 VDC
Temperature Range: -65°C to +125°C

Withstanding Voltage: 1000 VRMS @ 60 Hz

Terminal Material: Brass except styles -M, -N, -P and -Q are Phosphor Bronze

Plating: Au over 50µ" Ni or Sn over 100µ" Cu or 50µ" Ni

Current Rating: 1 amp continuous @ 100 VDC per contact
Terminal Retention in Body: 5 lbs. against barb

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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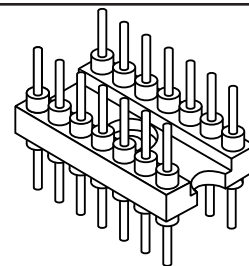
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AP-314-T-A

AP & APS SERIES

PLATING OPTION

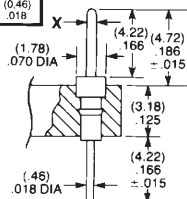
-G
= 20μ" Gold

-T
Tin

STYLE OPTION

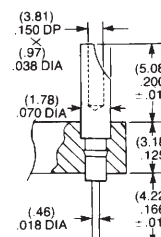
-A or -A1 = Round Pin

STYLE	X DIA
-A	(.064) .025
-A1	(.046) .018



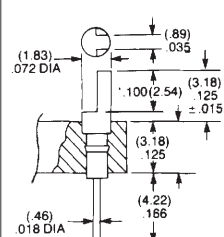
Style A Component No. = T-1R0-
Style A1 Component No. = T-1R5-

-B = Solder Pot



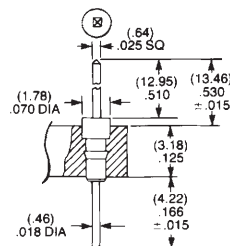
Component No. = T-1R1-

-C = Slotted Head



Component No. = T-1R2-

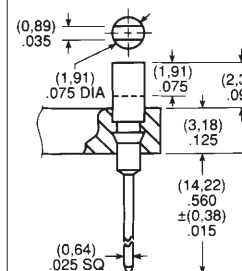
-D = Wire-Wrap



Component No. = T-1S4-1-1

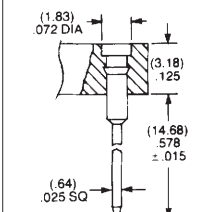
-E = Slot-head W.W.

(-648 N/A)



Component No. = T-1S5-

-F = Flat-head W.W.



Component No. = T-1S2-

-624 = .600 Row 24 Contacts

-628 = .600 Row 28 Contacts

-632 = .600 Row 32 Contacts

-640 = .600 Row 40 Contacts

-940 = .900 Row 40 Contacts

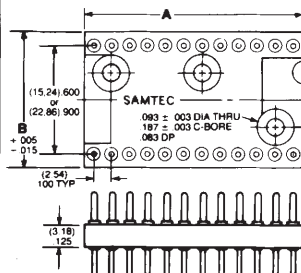
-950 = .900 Row 50 Contacts

-964 = .900 Row 64 Contacts

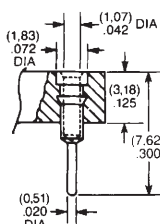
PART NO.	A LENGTH	B WIDTH
AP or APS-624	(30.48)1.200	(17.78) .700
AP or APS-628	(35.56)1.400	(17.78) .700
AP or APS-632	(40.64)1.600	(17.78) .700
AP or APS-640	(50.80)2.000	(17.78) .700
*AP-940		
*†AP-950	(63.50)2.500	(26.27)1.050
AP-964	(81.28)3.200	

*AP-940 and AP-950
are non-standard
non-returnable.

† Mounting hole off center on 50 positions

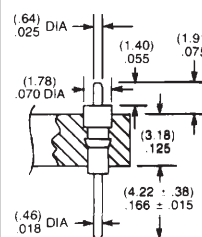


-J = Solder Shell



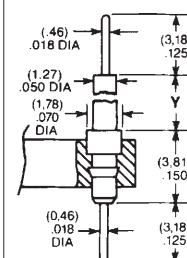
Component No. = S-1P1-

-K = Test Point



Component No. = T-1R15-

-M, -N, -P or -Q = Interconnect Post



Component No. = T-1R14-

STYLE	Y
-M	(1.52) .060
-N	(4.67) .185
-P	(11.95) .435
-Q	(17.40) .685

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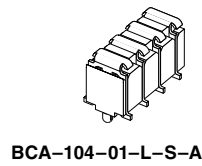
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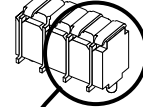
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BCA-104-01-L-S-A



BATTERY CONNECTOR

BCA SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com?BCA

Insulator Material:
Black Liquid Crystal
Polymer

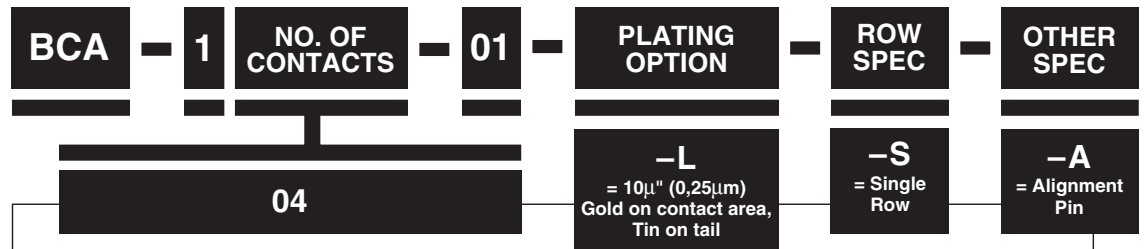
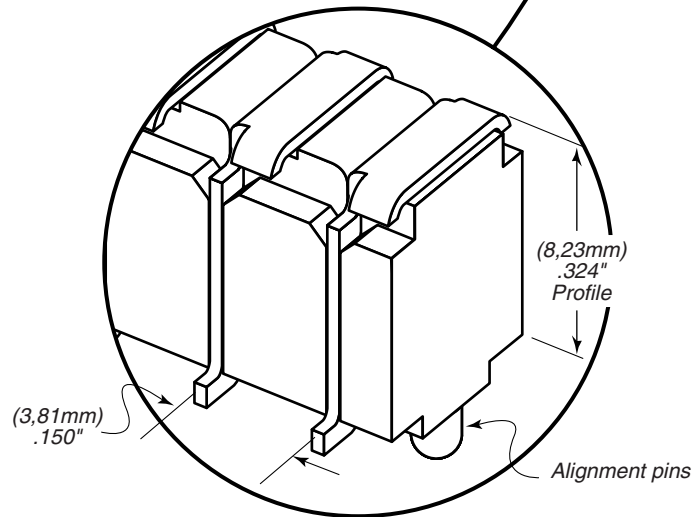


Contact Material:
Brass

Current Rating:
Testing Now!

Operating Temp Range:
-65°C to +125°C

Plating:
Au or Sn over 50μ"
(1,27μm) Ni



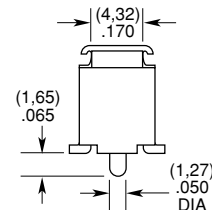
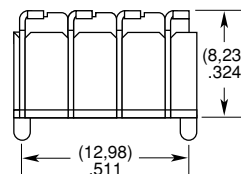
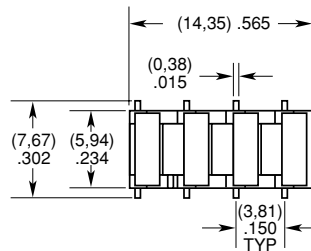
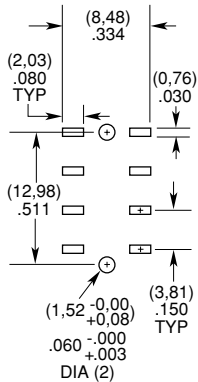
Note: Some sizes, styles and
options are non-standard,
non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds

SMT Lead Coplanarity:
(0,10mm) .004" max

Suggested PCB Layouts:
For reference only. Please
contact Samtec or go to
www.samtec.com?BCA
for recommended PCB layout.



-A OPTION

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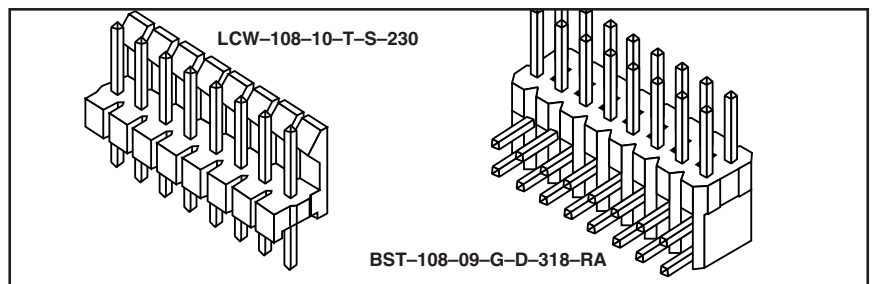
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.025"sq TERMINAL STRIPS LCW, BST SERIES

Mates with:
SSW, SSQ, ESW, ESQ,
IDSS (LCW), IDSD (BST)

SPECIFICATIONS

For complete specifications
see www.samtec.com?LCW
or www.samtec.com?BST

Insulator Material:
Black Glass Filled
Polyester



Flammability Rating:
UL 94V-O
Insulation Resistance:
5000 megohm @ 500 VDC
Operating Temp Range:
-65°C to 125°C with Gold
-65°C to 105°C with Tin
Withstanding Voltage:
1000 VRMS @ 60 Hz
Terminal Material:
Drawn Phosphor Bronze Wire
Plating: Au or Sn over 50µ"
(1,27µm) Ni
Current Rating: 3 A
Terminal Retention in Body:
3 lbs (13,35N)

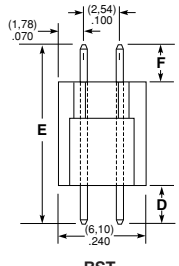
Note:
Some lengths, styles and
options are non-standard,
non-returnable.

TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	POST HEIGHT	OTHER OPTION
LCW =Friction Lock							
BST =Bottom Shroud							
01 thru 36							
			-G = Gold on Contact Area, Gold Flash on Balance			-XXX = "C" or "F" Specify post height from chart	-R "X" =Right Angle (Specify from chart)
			-T = Tin			-S =Single Row (LCW)	-LL =Locking Lead (Specify from chart)
			-S = Gold on Contact Area, Tin on Tail			-M =Locking Clip Removed From End Positions (LCW)	Two leads per strip crimped in opposite directions on or near centerline. (Tail length "A" = .300" or less) N/A with 1 or 2 positions
			-L = Gold on Contact Area, Tin on Tail			-D =Double Row (BST)	

Straight Pin Versions

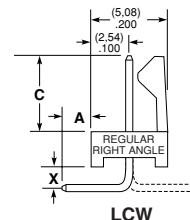
LCW				BST			
LEAD STYLE	TAIL A	OAL B	POST C	LEAD STYLE	TAIL D	OAL E	POST F
* -07	(2.54) .100	(10.92) .430		-09	(5.46) .215	(18.54) .730	
* -08	(5.08) .200	(13.46) .530		-10	(8.00) .315	(21.08) .830	
-09	(10.16) .400	(18.54) .730		-11	(10.54) .415	(23.62) .930	
-10	(12.70) .500	(21.08) .830		-12	(13.08) .515	(26.16) 1.030	
-11	(15.24) .600	(23.62) .930		-13	(18.16) .715	(31.24) 1.230	(5.84) .230
-12	(17.78) .700	(26.16) 1.030		-14	(23.24) .915	(36.32) 1.430	
-13	(22.86) .900	(31.24) 1.230	(5.84) .230	-15	(2.92) .115		
-14	(27.94) 1.100	(36.32) 1.430		-16	(3.81) .150		
* -15	(7.62) .300	(16.00) .630		* -17	(25.40) 1.000	(33.78) 1.330	
* -16	(2.92) .115	(11.30) .445		* -19	(20.32) .800	(28.70) 1.130	
* -17	(3.81) .150	(12.19) .480		* -20	(3.30) .130	(13.46) .530	
-18	(16.00) .630	(26.16) 1.030	(7.62) .300	-08	(8.38) .330	(18.54) .730	
-19	(23.62) .930	(31.24) 1.230		-09	(10.92) .430	(21.08) .830	
-20	(18.54) .730	(26.16) 1.030		-10	(13.46) .530	(23.62) .930	
				-11	(16.00) .630	(26.16) 1.030	
				-12	(21.08) .830	(31.24) 1.230	
				-13	(26.16) 1.030	(36.32) 1.430	
				-14	(31.24) 1.230	(41.30) 1.630	
				-15	(36.32) 1.430	(46.30) 1.830	
				-16	(41.30) 1.630	(51.30) 2.030	
				-17	(46.30) 1.830	(56.30) 2.230	
				-18	(51.30) 2.030	(61.30) 2.430	
				-19	(56.30) 2.230	(66.30) 2.630	
				-20	(61.30) 2.430	(71.30) 2.830	

*Available with
-LL (Locking Lead)
Option

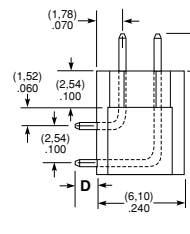


Right Angle Versions

LCW				BST			
LEAD STYLE	-RA -RR TAIL A	-RE TAIL A	-RP TAIL A	POST C	LEAD STYLE	TAIL D	POST F
-09	(6.60) .260	(4.06) .160	(7.62) .300		-08	(2.29) .090	
-10	(9.14) .360	(6.60) .260	(10.16) .400		-09	(7.37) .290	
-11	(11.68) .460	(9.14) .360	(12.70) .500		-10	(9.91) .390	
-12	(14.22) .560	(11.68) .460	(15.24) .600		-11	(12.45) .490	
-13	(16.76) .660	(14.22) .560	(17.78) .700	(5.84) .230	-12	(14.99) .590	(5.84) .230
-14	(19.30) .760	(16.76) .660	(20.32) .800		-13	(20.07) .790	
-15	(21.84) .860	(19.30) .760	(22.86) .900		-14	(25.14) .990	
-16	(24.38) .960	(21.84) .860	(25.40) 1.000		-15	(30.22) 1.190	
-17	(26.92) 1.060	(24.38) .960	(27.94) 1.100		-16	(35.30) 1.390	
-18	(29.46) 1.160	(26.92) 1.060	(30.48) 1.200		-17	(40.38) 1.590	
-19	(32.00) 1.260	(29.46) 1.160	(33.02) 1.300		-18	(45.46) 1.790	
-20	(34.54) 1.360	(32.00) 1.260	(35.56) 1.400		-19	(50.54) 1.990	
					-20	(55.62) 2.190	



*Available with
-LL (Locking Lead)
Option



Due to technical progress, all designs, specifications and components are subject to change without notice.

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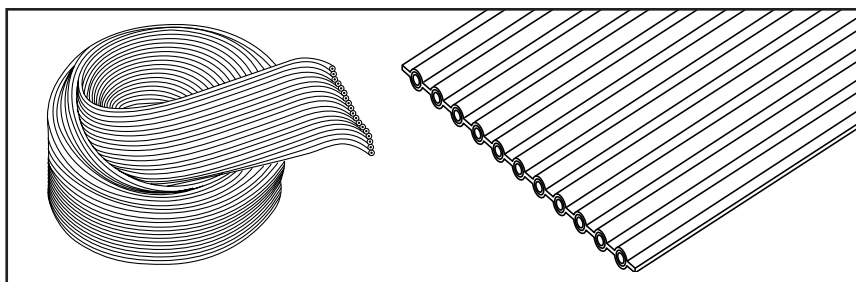
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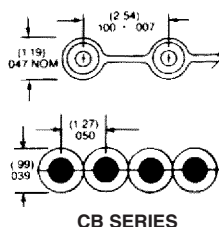
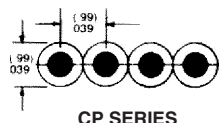
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High quality Samtec cable in large quantities or small.

Note: Some sizes, styles and options are non-standard, non-returnable.



ORDER		CONDUCTOR		INSULATION							
		PART NO.	NUMBER CONDUCTORS	GAUGE	VOLTAGE SPACING	TEMPERATURE RATING	INSULATION RATING	INSULATION COLOR	RESISTANCE	MATERIAL	LAMINATE
CP Series	FLAT BONDED RIBBON CABLE for CP & CS Series Soldered Cable Plugs & Cable Sockets	CP-8 CP-14 CP-16 CP-18 CP-20 CP-22 CP-24 CP-28 CP-40 CP-48 CP-64	8 14 16 18 20 22 24 28 40 48 64	26 AWG 7/34 Stranded Tinned Annealed Copper	.039	300V	105°C	Color Coded	>10 ¹⁰ ohms/ 10 ft. (3m)	.10" (.25) Nom Wall PVC UL Rated VW1	Clear PVC
	TWISTED PAIR for CP & CS Series Soldered Cable Plugs & Cable Sockets	CP-14-TP CP-16-TP CP-24-TP CP-40-TP CP-64-TP	14 16 24 40 64	26 AWG 7/34 Stranded Tinned Annealed Copper	.039	300V	105°C	Color Coded	>10 ¹⁰ ohms/ 10 ft. (3m)	.010" (.25) Nom Wall PVC	Clear PVC
CB Series	IDC CABLE for IDS & IDD Series IDC Cable Strips	CB-36-28-7/36-100-C CB-36-28-7/36-100-G CB-72-28-7/36-050-G	36 36 72	28 AWG 7/36 Tinned Copper	.100 .100 .050	300V	80°C	Color Coded Gray Gray	>10 ¹⁰ ohms/ 10 ft. (3m) minimum	PVC	Clear PVC NA NA
	IDC CABLE for IDCP Series IDC Cable Plugs	CB-14-28-7/36-050-C CB-16-28-7/36-050-C CB-24-28-7/36-050-C CB-40-28-7/36-050-C CB-14-28-7/36-050-G CB-16-28-7/36-050-G CB-24-28-7/36-050-G CB-40-28-7/36-050-G	14 16 24 40 14 16 24 40	28 AWG 7/36 Stranded Tinned Copper	.050	300V	80°C	Color Coded Color Coded Color Coded Color Coded Gray Gray Gray Gray	>10 ¹⁰ ohms/ 10 ft. (3m) minimum	PVC	Clear PVC Clear PVC Clear PVC Clear PVC NA NA NA NA

Due to technical progress, all designs, specifications and components are subject to change without notice.

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CUSTOM SOCKETS & ADAPTORS

Customize your PGA sockets and optimize your costs

Samtec offers the ultimate in PGA socket and adaptor flexibility. If you don't find the pin out among our most popular patterns, fax it to us and we will check it against the thousands of standards we stock.

Even if we don't stock it, customs are a specialty at Samtec. Choose from the many insulator types, lead socket and terminal styles, platings and grid sizes to build your own socket or adaptor. Fill in the part number and indicate your pattern and we'll quote price and delivery.

A choice of insulator types includes our standard Glass Filled Polyester, CPAX Series for solid body; a high temperature insulator, CSAX Series with Liquid Crystal Polymer insulator; and CHAX Series for low profile applications.

Specifications: CPAX

Same as MPAX

Specifications: CSAX HI-TEMP

Same as MSAX

Specifications: CHAX

Same as MHAX

Note:

These Series are non-standard, non-returnable.

BODY STYLE	PGA TYPE	PIN COUNT	LEAD STYLE	PLATING OPTION	GRID SIZE	PIN OUT CODE	OPTION
		-XXX = Total Number Of Filled Positions	Select socket styles from MXAS series.	Select socket plating from MXAS series.	-08 thru -17 = CPA Series		-2 =.360 (9,14µm) (-ZW only)
			Select terminals from MXAT series.	Select terminal plating from MXAT series.	-08 thru -24 = CSA Series		-3 =.260 (6,60µm) (-ZW only)
					-01 thru -20 = CHA Series		-L = Locking socket (-ZS only)
	-S = Socket -T = Terminal						

Note: oversized grids available!

CPA = Standard Polyester		MARK PIN OUT ON GRID (Leave part number blank, Samtec will determine.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
CSA = Hi-Temp Polymer (Closed Body)		<table border="1"> <tr> <th></th> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th><th>J</th><th>K</th><th>L</th><th>M</th><th>N</th><th>P</th><th>Q</th><th>R</th><th>S</th><th>T</th><th>U</th><th>V</th><th>W</th><th>X</th><th>Y</th><th>Z</th> </tr> <tr><td>1</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>2</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> 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Due to technical progress, all designs, specifications and components are subject to change without notice.

WWW.SAMTEC.COM

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CONTACT:

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DELIVERY:

CUSTOM SOCKETS & ADAPTORS

Customize your PGA sockets and optimize your costs

Samtec offers the ultimate in PGA socket and adaptor flexibility. If you don't find the pin out among our most popular patterns, fax it to us and we will check it against the thousands of standards we stock.

Even if we don't stock it, customs are a specialty at Samtec. Choose from the many insulator types, lead socket and terminal styles, platings and grid sizes to build your own socket or adaptor. Fill in the part number and indicate your pattern and we'll quote price and delivery.

A choice of insulator types includes our standard Glass Filled Polyester, CPAX Series for solid body; a high temperature insulator, CSAX Series with Liquid Crystal Polymer insulator; and CHAX Series for low profile applications.

Specifications: CPAX

Same as MPAX

Specifications: CSAX HI-TEMP

Same as MSAX

Specifications: CHAX

Same as MHAX

Note:

These Series are non-standard, non-returnable.

BODY STYLE	PGA TYPE	PIN COUNT	LEAD STYLE	PLATING OPTION	GRID SIZE	PIN OUT CODE	OPTION
		-XXX = Total Number Of Filled Positions	Select socket styles from MXAS series.	Select socket plating from MXAS series.	-08 thru -17 = CPA Series		-2 =.360 (9,14µm) (-ZW only)
			Select terminals from MXAT series.	Select terminal plating from MXAT series.	-08 thru -24 = CSA Series		-3 =.260 (6,60µm) (-ZW only)
					-01 thru -20 = CHA Series		-L = Locking socket (-ZS only)
	-S = Socket -T = Terminal						

Note: oversized grids available!

CPA = Standard Polyester		MARK PIN OUT ON GRID (Leave part number blank, Samtec will determine.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
CSA = Hi-Temp Polymer (Closed Body)		<table border="1"> <tr> <th></th> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th><th>J</th><th>K</th><th>L</th><th>M</th><th>N</th><th>P</th><th>Q</th><th>R</th><th>S</th><th>T</th><th>U</th><th>V</th><th>W</th><th>X</th><th>Y</th><th>Z</th> </tr> <tr><td>1</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>2</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> 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Due to technical progress, all designs, specifications and components are subject to change without notice.

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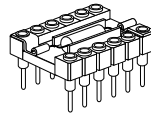
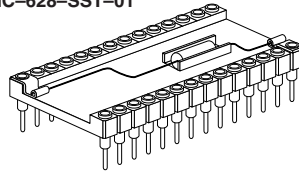
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CIC-628-SST-01



CIC-312-SGT-02

CAPACITOR/IC SOCKETS

CIC SERIES

Mates with:
APO, APA

High Reliability Capacitor/IC Sockets

Samtec high-reliability Capacitor/IC sockets have an internally mounted decoupling capacitor to eliminate noise.

Precision machined socket shells have either standard or low insertion force contacts. A unique clip provides gas-tight connection of capacitor leads to the lead socket. See test data section of catalog. Complete report from independent lab available on request.

SPECIFICATIONS

For complete specifications see www.samtec.com/CIC

Insulator Material:
Black Glass Filled Polyester



Flammability Rating:
UL 94V-O

Insulation Resistance:
5000 MΩ min

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Withstanding Voltage:
1000 VRMS

Contact: BeCu

Shell: Brass

Plating:
Au 50μ" (1,27μm) Ni
Current Rating:
1 A

Contact Resistance:
10 mΩ max

Socket Retention in Body:
5 lbs against barb

Insertion Force:

Standard = 9 oz (2,50N)
avg, 16 oz (4,45N) max
Low Insertion Force =
2.5 oz (0,70N) avg, 5.5 oz
(1,53N) max

Withdrawal Force:

Standard = 2.5 oz (0,70N)
avg, 1.5 oz (0,42N) min
Low Insertion Force =
2.0 oz (0,56N) avg, 0.35 oz
(0,19N) min

Note: Some sizes, styles and options are non-standard, non-returnable.

CIC - ROW SPACING & NO. OF CONTACTS - STYLE OPTION - PLATING OPTION - CAP SUFFIX - OTHER OPTION

-312 = .300 Row
12 Contacts

-314 = .300 Row
14 Contacts

-316 = .300 Row
16 Contacts

-318 = .300 Row
18 Contacts

-320 = .300 Row
20 Contacts

-322 = .300 Row
22 Contacts

-324 = .300 Row
24 Contacts

-624 = .600 Row
24 Contacts

-626 = .600 Row
26 Contacts

-628 = .600 Row
28 Contacts

-630 = .600 Row
30 Contacts

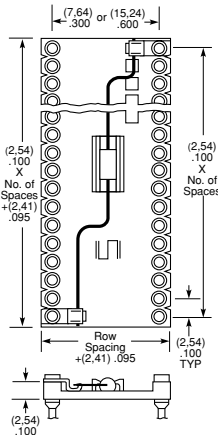
-632 = .600 Row
32 Contacts

-634 = .600 Row
34 Contacts

-636 = .600 Row
36 Contacts

-638 = .600 Row
38 Contacts

-640 = .600 Row
40 Contacts



Specify row spacing and number of contacts
First number is 10 times row spacing.
Second two numbers are number of contacts.

GG

= 30μ" (0,76μm)
Gold Contact,
10μ" (0,25μm)
Gold Shell

GT

= 30μ" (0,76μm)
Gold Contact,
Tin Shell

TT

= Tin Contact
and Shell

ST

= 10μ" (0,25μm)
Gold Contact,
Tin Shell

-01

= .01μf

-02

= .1μf

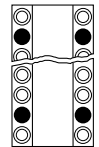
-05

= .33μf

-L

= Locking
Socket

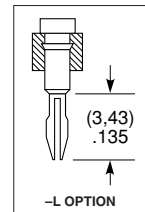
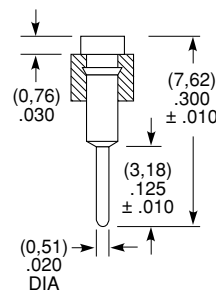
Requires
.040"±.003"
board hole.



Requires GT
Plating
Option

-S

= Standard Solder Tail
For LIF specify -ZS



Lead DIA Accepted = .015" (0,38mm) to .022" (0,56mm)
Insertion Depth = .095" (2,41mm) to .145" (3,68mm):
Style S Component Part No. = SC-1P1
Style ZS Component Part No. = EZ-1P1
Option L Component Part No. = SC-1L1 or EZ-1L1

Due to technical progress, all designs, specifications and components are subject to change without notice.

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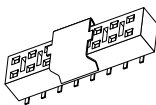
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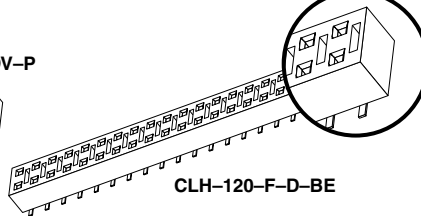
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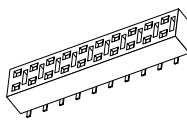
CLH-108-F-D-DV-P



CLH-120-F-D-BE



CLH-110-F-D-DV



Surface
SMT
Mount

LOW PROFILE SOCKET CLH SERIES

Mates with:
TSW, MTSW, HW, DW,
EW, ZW, TLW, TSM,
MTLW

SPECIFICATIONS

For complete specifications
see www.samtec.com?CLH

Insulator Material:
Black Liquid Crystal
Polymer



Contact Material:
Phosphor Bronze

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

Max Processing Temp:
230°C for 60 seconds

Plating:
Au or Sn over
50μ" (1,27μm) Ni

SMT Lead Coplanarity:
(0,10mm) .004" max

Contact Resistance:
10 mΩ max
Insertion Depth:
(2,67mm) .105" to
(3,43mm) .135"
plug from top, (3,18mm) .125"
min plus board thickness plug
from bottom

Insertion Force:
4.0oz (1,11N) average

Normal Force:
50 grams (0,48N)

Withdrawal Force:
1.1oz (0,31N) average

Max Cycles:
100 with 10μ" (0,25μm) Au



CLH

1

NO. PINS
PER ROWPLATING
OPTION

D

ENTRY
OPTIONOTHER
OPTION

APPLICATION SPECIFIC OPTION

Polarized option available.
Call Samtec.

—L = Pre-plated 10μ" (0,25μm)
Gold on contact,
Tin on tail

—F = Pre-plated Gold flash on contact,
Tin on tail

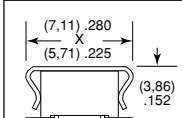
—S = Pre-plated 30μ" (0,76μm)
Gold on contact,
Tin on tail

—DV
= Top
Entry

—BE
= Bottom
Entry

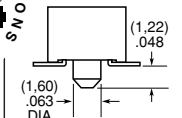
—K
(Best Cost Option)
= (6,50mm) .256"
DIA Polyamide film
Pick & Place Pad
(4 positions min.)

—P
= Pick & Place Pad
(4 positions
minimum)

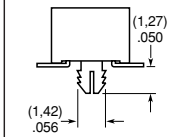


Not always
necessary for
auto placement.
See Flex
Processing.

—A
= Alignment Pin
(5 positions
minimum)

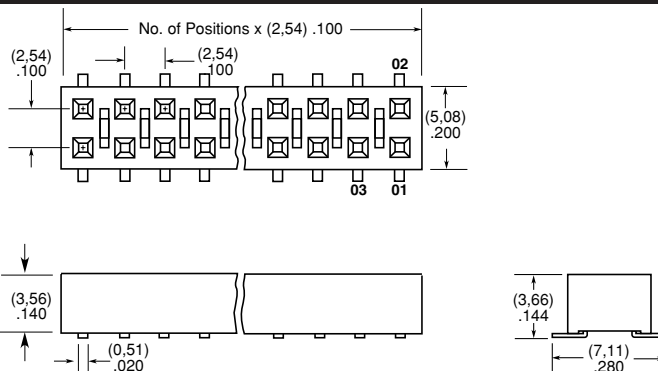


—LC
= Locking
Clip



—TR
= Tape & Reel
Packaging

02 thru 50



COST SAVING SOLUTIONS
**FLEX
PROCESSING**

COST SAVING SOLUTIONS
**FLEX
MOLD**

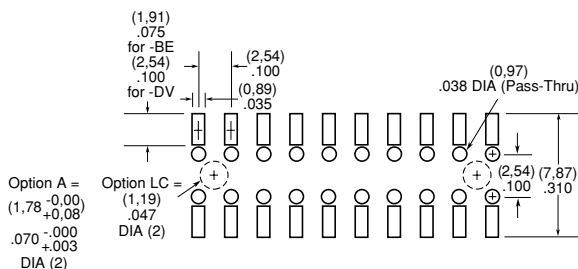
CURRENT RATING

AMBIENT TEMPERATURE	TSM mated with CLH
20°C	3.2A
40°C	2.8A
60°C	2.3A
80°C	1.6A

Note: Some lengths,
styles and options are
non-standard, non-returnable.

SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec or go to www.samtec.com?CLH
for recommended PCB layout.



Board fixturing may be required to assure proper
alignment for Pass-Through applications.

TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications
and ordering information.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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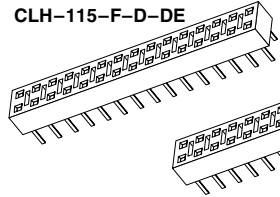
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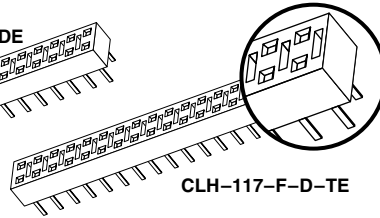
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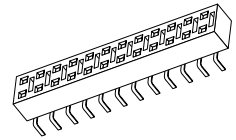
CLH-115-F-D-DE



CLH-117-F-D-TE



CLH-112-F-D-PE



LOW PROFILE SOCKET CLH SERIES

Mates with:
TSW, MTSW, DW, EW, ZW,
TLW, TSM, MTLW

SPECIFICATIONS

For complete specifications
see www.samtec.com?CLH

Insulator Material:

Black Liquid Crystal
Polymer

Contact Material:

Phosphor Bronze

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Max Processing Temp:

230°C for 60 seconds

Plating:

Au or Sn over

50μ" (1,27μm) Ni

SMT Lead Coplanarity:

(0,10mm) .004" max

Contact Resistance:

10 mΩ max

Insertion Depth:

(2,67mm) .105" to

(3,43mm) .135"

plug from top, (3,18mm)

.125" min plus board

thickness plug from bottom

Insertion Force:

4.0oz (1,11N) average

Normal Force:

50 grams (0,48N)

Withdrawal Force:

1.1oz (0,31N) average

Max Cycles:

100 with 10μ" (0,25μm) Au



FILE NO. E111594



CLH	1	NO. PINS PER ROW	PLATING OPTION	D	ENTRY OPTION
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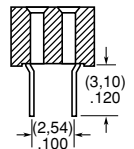
—L = Pre-plated 10μ" (0,25μm) Gold on contact,
Tin on tail

—F = Pre-plated Gold flash on contact,
Tin on tail

—S = Pre-plated 30μ" (0,76μm) Gold on contact,
Tin on tail

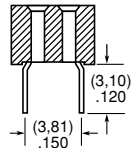
—TE

= Top Entry



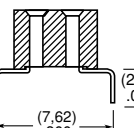
—DE

= Dual Entry
(Top or Bottom Entry)
Cannot be used with
plated through-holes
for bottom entry.

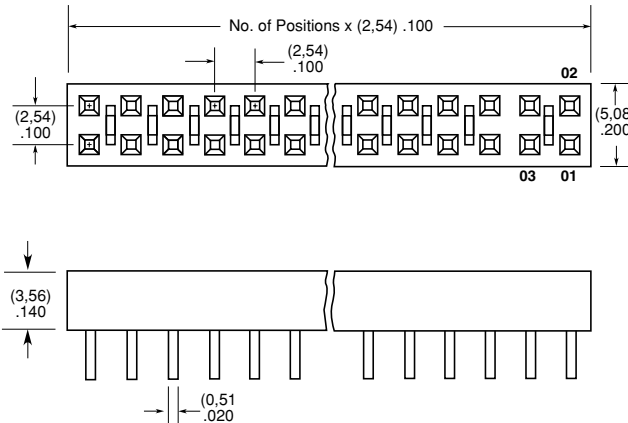


—PE

= Pass-Through
(Top or Bottom
Entry)



02 thru 50



CURRENT RATING

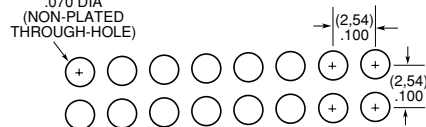
AMBIENT TEMPERATURE	DW mated with CLH
20°C	2.2A
40°C	2A
60°C	1.8A
80°C	1.2A

SUGGESTED PCB LAYOUTS

For reference only. Please contact Samtec or go to www.samtec.com?CLH for recommended PCB layout.

Board fixturing may be required to assure proper alignment for Pass-Through applications.

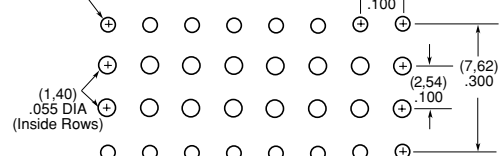
(1,79)
.070 DIA
(NON-PLATED
THROUGH-HOLE)



—DE

(0,89)
.035 DIA
(Outside Rows)

(1,40)
.055 DIA
(Inside Rows)



—PE

Note: Some lengths,
styles and options are
non-standard, non-returnable.

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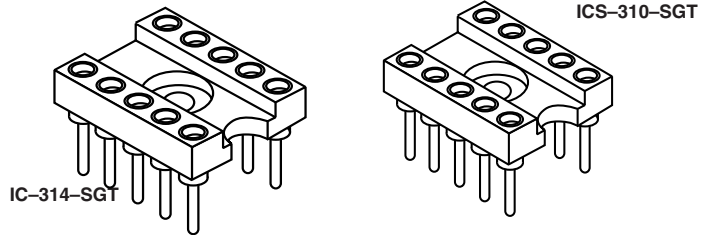
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SCREW MOUNT DIP SOCKETS

IC & ICS SERIES

Mates with:
AP, APS, APO,
APA, APE, APH

Highest reliability DIP sockets

IC and ICS series DIP sockets feature U.L. rated G.F. polyester body with mounting holes and use precision machined lead sockets for high reliability in the most demanding applications.

Specifications: IC & ICS



Insulator Material: Black Glass Filled Polyester
Flammability Rating: UL 94V-O

Insulation Resistance: 5000 megohm @ 500 VDC

Temperature Range: -65°C to +125°C

Withstanding Voltage: 1000 VRMS @ 60 Hz

Contact: BeCu

Shell: Brass except style K Phosphor Bronze

Plating: Au over 50µ" Ni or Sn over 100µ" Cu or 50µ" Ni

Current Rating: 1 amp continuous @ 100 VDC per contact

Contact Resistance: 10 milliohms @ 200 milliamp

Socket Retention in Body: 5 lbs against barb

Lead Size Range: .015" to .022" DIA and most IC leads

Insertion Force: Standard = 9 oz avg, 16 oz max (.017" DIA probe); Low Insertion Force = 2.5 oz avg, 5.5 oz max (.018" DIA probe)

Withdrawal Force: Standard = 2.5 oz avg, 1.5 oz min (after 12 insertions with .017" DIA probe); Low Insertion Force = 2.0 oz avg, 0.35 oz min (after 12 insertions with .018" DIA probe)

Note: Some sizes, styles and options are non-standard, non-returnable.

**TYPE
SOCKET**

**ROW SPACING &
NO. OF CONTACTS**

IC
= IC
Socket

ICS
= IC
Socket

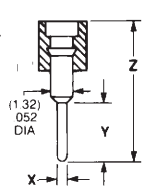
-S*, -A*, -J, or -K

= Printed Circuit

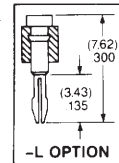
*For LIF Specify -ZS or -ZA

LEAD STYLE	X DIA	Y TAIL	Z
-S or -ZS	(0.51) .020	(3.18) .125	(7.62) .300
-A or -ZA	(0.51) .020	(4.57) .180	(8.89) .350
-J	(0.64) .025	(10.41) .410	(15.24) .600
-K	(0.89) .035	(12.95) .510	(17.86) .703

Locking lead
(-L) available.
See OPTION.



Style S, ZS, A, ZA & J Insertion Depth = .095" to .150"
Style S Component Part No. = SC-1P1
Style ZS Component Part No. = EZ-1P1
Style A Component Part No. = SC-6P1
Style ZA Component Part No. = EZ-6P1
Style J Component Part No. = SC-1P3
Option L Insertion Depth = .095" to .150"
Option L Component Part No. = SC-1L1 or EZ-1L1
Style K Insertion Depth = .125" to .170"
Style K Component Part No. = SC-2P1



Low Insertion Force (LIF) Contacts Available.

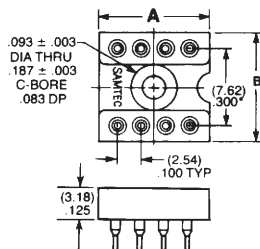
-306 = .300 Row 6 Contacts

-308 = .300 Row 8 Contacts

-310 = .300 Row 10 Contacts

Part No.	A Length	B Width
IC or ICS-306	(8.89) .350	(10.16) .400
IC or ICS-308	(11.43) .450	(10.16) .400
*IC or *ICS-310	(13.97) .550	(10.16) .400

* Mounting hole off center on 10 position.



-314 = .300 Row 14 Contacts

-316 = .300 Row 16 Contacts

-318 = .300 Row 18 Contacts

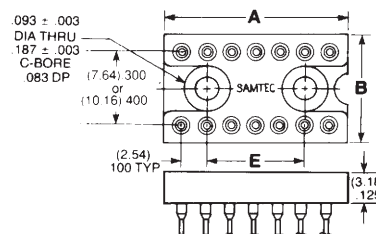
-320 = .300 Row 20 Contacts

-324 = .300 Row 24 Contacts

-422 = .400 Row 22 Contacts

-424 = .400 Row 24 Contacts

Part No.	A Length	B Width	E Mnt Holes
IC or ICS-314	(17.78) .700	(10.16) .400	(10.16) .400
IC or ICS-316	(20.32) .800	(10.16) .400	(12.70) .500
IC or ICS-318	(22.86) .900	(10.16) .400	(15.24) .600
IC or ICS-320	(25.40) 1.000	(10.16) .400	(17.78) .700
IC or ICS-324	(30.48) 1.200	(10.16) .400	(22.86) .900
IC or ICS-422	(27.94) 1.100	(10.16) .400	(20.32) .800
IC-424	(30.48) 1.200	(12.70) .500	(22.86) .900



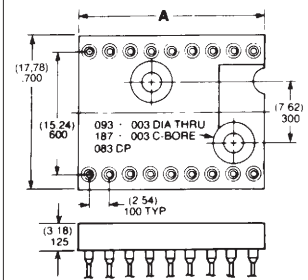
-610 = .600 Row 10 Contacts

-614 = .600 Row 14 Contacts

-616 = .600 Row 16 Contacts

-618 = .600 Row 18 Contacts

Part No.	A Length
IC-610	(12.70) .500
IC-614	(17.78) .700
IC-616	(20.32) .800
IC-618	(22.86) .900



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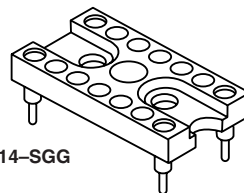
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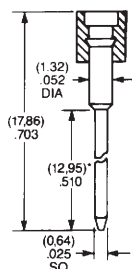


CO-314-SGG

LEAD STYLE

-W

= Wire-Wrap
For LIF Specify -ZW



Shorter
w/w tail
lengths
available.
See
OPTION.

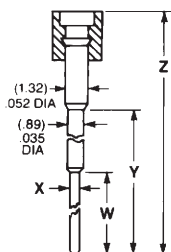
Insertion Depth
= .125" to .170"
Style W Component
Part No. = SC-1W1(1)
Style ZW Component
Part No. = EZ-1W1(1)
Style W-2 Component
Part No. = SC-1W1(2)
Style ZW-2 Component
Part No. = EZ-1W1(2)
Style W-3 Component
Part No. = SC-1W1(3)
Style ZW-3 Component
Part No. = EZ-1W1(3)

-E or -H

= Elevated
For LIF Specify -ZE or -ZH

LEAD STYLE	X DIA	W TAIL	Y	Z
-E or -ZE	(0.51) .020	(4.32) .170	(8.86) .349	(13.77) .543
-H or -ZH	(0.46) .018	(3.81) .150	(12.95) .510	(17.86) .703

Insertion Depth = .125" to .175"
Style E Component Part No. = SC-2P3
Style ZE Component Part No. = EZ-2P3
Style H Component Part No. = SC-2P2
Style ZH Component Part No. = EZ-2P2



PLATING OPTION

GG

= 30µ" Gold Contact
10µ" Gold Shell

GT

= 30µ" Gold Contact
Tin Shell

TT

= Tin Contact
and Shell
(-S, -ZS, -W, -ZW,
-A, -H only)

ST

= 10µ" Gold Contact
Tin Shell
(-S & -ZS only)

OPTION (Leave Blank for Standard Version)

-2

= (9.14) .360
Wire-Wrap
Tail

Wire-Wrap Option

Requires Style
-W or -ZW

-3

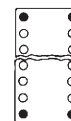
= (6.60) .260
Wire-Wrap
Tail

Specify desired
suffix for shorter
Wire-Wrap tail.

-L

= Locking
Socket

Requires Style
-S or -ZS
and .035"±.003"
board hole.



-624 = .600 Row / 24 Contacts

-628 = .600 Row / 28 Contacts

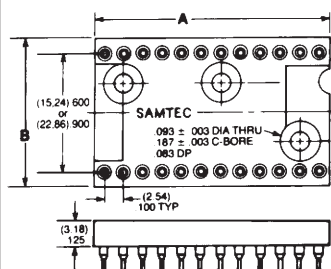
-632 = .600 Row / 32 Contacts

-640 = .600 Row / 40 Contacts

-940 = .900 Row / 40 Contacts

-950 = .900 Row / 50 Contacts

-964 = .900 Row / 64 Contacts



Part No.	A Length	B Width
IC or ICS-624	(30.48) 1.200	(17.78) .700
IC or ICS-628	(35.56) 1.400	(17.78) .700
IC or ICS-632	(40.64) 1.600	(17.78) .700
IC or ICS-640	(50.80) 2.000	(17.78) .700
*IC-940		
*IC-950	(63.50) 2.500	(26.27) 1.050
IC-964	(81.28) 3.200	

*IC-940 and IC-950
are non-standard
non-returnable.

†Mounting hole off center on 50 positions

CRYSTAL OSCILLATOR CO SERIES

SPECIFY PART NUMBER FROM CHART BELOW

Part Number	Termination Suffix*		Number of Contacts	Contact Finish	Shell Finish
	P.C.	W/W			
CO-314	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			
CO-316	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			
CO-624	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			

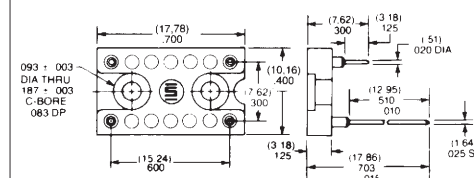
*For LIF contacts substitute -ZS for -S and -ZW for -W.

Crystal Oscillator

Accepts any component
leads from .015" to .022"
diameter. Low profile
with precision machined
lead sockets for high
retention and reliability.

Specifications: CO

Same as IC Series.

CO-314—
shown

OPTION (Leave Blank for Standard Version)

-2

= (9.14) .360
Wire-Wrap
Tail

Wire-Wrap Option

Requires Style
-W or -ZW

-3

= (6.60) .260
Wire-Wrap
Tail

Specify desired
suffix for shorter
Wire-Wrap tail.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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Customize your PGA sockets and optimize your costs

Even if we don't stock it, customs are a specialty at Samtec. Choose from the many insulator types, lead socket and terminal styles, platings and grid sizes to build your own socket or adaptor. Fill in the part number and indicate your pattern and we'll quote price and delivery.

A choice of insulator types includes our standard Glass Filled Polyester, CPAX Series for solid body; a high temperature insulator, CSAX Series with Liquid Crystal Polymer insulator; and CHAX Series for low profile applications.

Specifications: CPAX

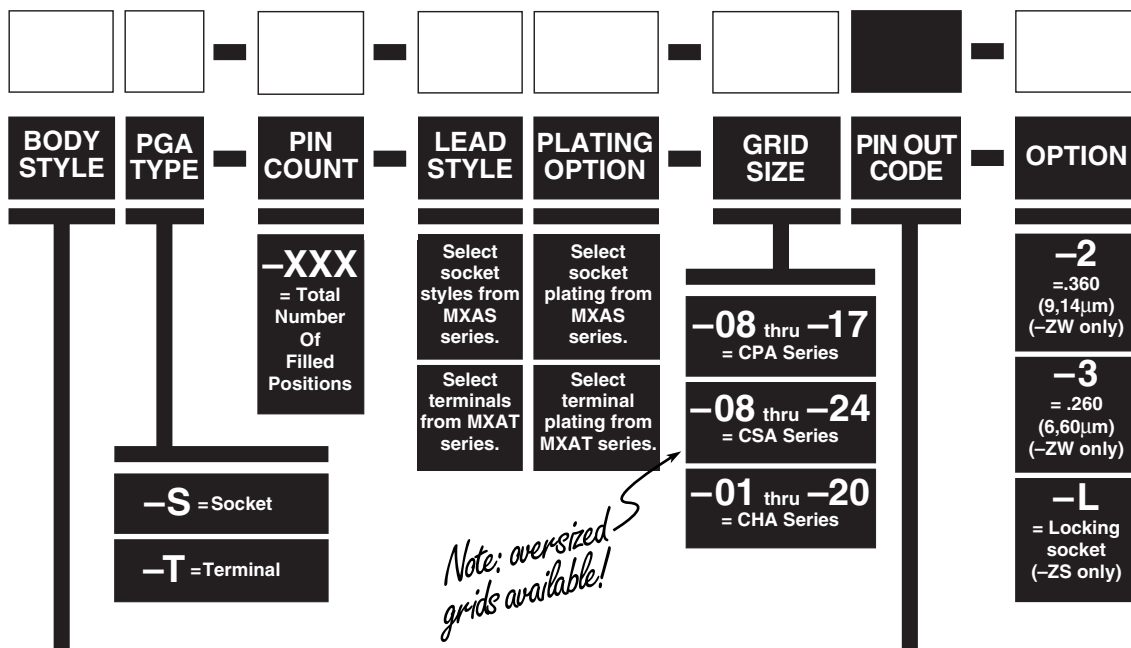
Same as MPAX

Specifications:

Same as MSAX

Specifications: CHAX

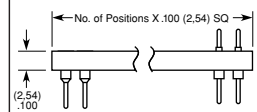
Same as MHAX



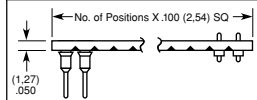
Note: oversized grids available!

CPA
=Standard Polyester

CSA
=Hi-Temp Polymer
(Closed Body)



CHA
= Low Profile



MARK PIN OUT ON GRID
(Leave part number blank, Samtec will determine.)

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
1	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
2	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
3	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
4	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
5	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
8	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
9	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
12	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
13	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
16	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
17	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
18	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
19	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
20	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
21	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
22	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
23	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
24	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

● = FILLED ○ = NOT FILLED

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Note:
These Series are
non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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DELIVERY:

CUSTOM SOCKETS & ADAPTORS

Customize your PGA sockets and optimize your costs

Samtec offers the ultimate in PGA socket and adaptor flexibility. If you don't find the pin out among our most popular patterns, fax it to us and we will check it against the thousands of standards we stock.

Even if we don't stock it, customs are a specialty at Samtec. Choose from the many insulator types, lead socket and terminal styles, platings and grid sizes to build your own socket or adaptor. Fill in the part number and indicate your pattern and we'll quote price and delivery.

A choice of insulator types includes our standard Glass Filled Polyester, CPAX Series for solid body; a high temperature insulator, CSAX Series with Liquid Crystal Polymer insulator; and CHAX Series for low profile applications.

Specifications: CPAX

Same as MPAX

Specifications: CSAX HI-TEMP

Same as MSAX

Specifications: CHAX

Same as MHAX

Note:

These Series are non-standard, non-returnable.

BODY STYLE	PGA TYPE	PIN COUNT	LEAD STYLE	PLATING OPTION	GRID SIZE	PIN OUT CODE	OPTION
		-XXX = Total Number Of Filled Positions	Select socket styles from MXAS series.	Select socket plating from MXAS series.	-08 thru -17 = CPA Series		-2 =.360 (9,14µm) (-ZW only)
			Select terminals from MXAT series.	Select terminal plating from MXAT series.	-08 thru -24 = CSA Series		-3 =.260 (6,60µm) (-ZW only)
					-01 thru -20 = CHA Series		-L = Locking socket (-ZS only)
	-S = Socket -T = Terminal						

Note: oversized grids available!

CPA = Standard Polyester		MARK PIN OUT ON GRID (Leave part number blank, Samtec will determine.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
CSA = Hi-Temp Polymer (Closed Body)		<table border="1"> <tr> <th></th> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th><th>J</th><th>K</th><th>L</th><th>M</th><th>N</th><th>P</th><th>Q</th><th>R</th><th>S</th><th>T</th><th>U</th><th>V</th><th>W</th><th>X</th><th>Y</th><th>Z</th> </tr> <tr><td>1</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>2</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> 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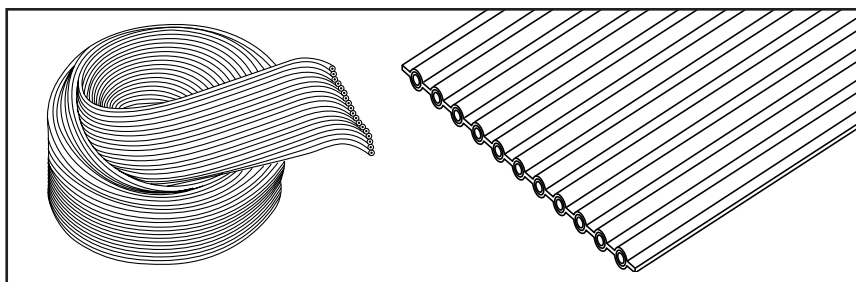
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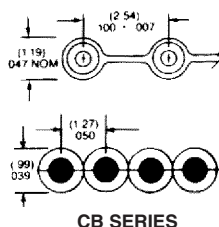
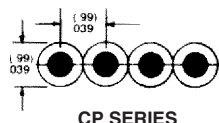
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High quality Samtec cable in large quantities or small.

Note: Some sizes, styles and options are non-standard, non-returnable.



ORDER		CONDUCTOR		INSULATION							
		PART NO.	NUMBER CONDUCTORS	GAUGE	VOLTAGE SPACING	TEMPERATURE RATING	INSULATION RATING	INSULATION COLOR	RESISTANCE	MATERIAL	LAMINATE
CP Series	FLAT BONDED RIBBON CABLE for CP & CS Series Soldered Cable Plugs & Cable Sockets	CP-8 CP-14 CP-16 CP-18 CP-20 CP-22 CP-24 CP-28 CP-40 CP-48 CP-64	8 14 16 18 20 22 24 28 40 48 64	26 AWG 7/34 Stranded Tinned Annealed Copper	.039	300V	105°C	Color Coded	>10 ¹⁰ ohms/ 10 ft. (3m)	.10" (.25) Nom Wall PVC UL Rated VW1	Clear PVC
	TWISTED PAIR for CP & CS Series Soldered Cable Plugs & Cable Sockets	CP-14-TP CP-16-TP CP-24-TP CP-40-TP CP-64-TP	14 16 24 40 64	26 AWG 7/34 Stranded Tinned Annealed Copper	.039	300V	105°C	Color Coded	>10 ¹⁰ ohms/ 10 ft. (3m)	.010" (.25) Nom Wall PVC	Clear PVC
CB Series	IDC CABLE for IDS & IDD Series IDC Cable Strips	CB-36-28-7/36-100-C CB-36-28-7/36-100-G CB-72-28-7/36-050-G	36 36 72	28 AWG 7/36 Tinned Copper	.100 .100 .050	300V	80°C	Color Coded Gray Gray	>10 ¹⁰ ohms/ 10 ft. (3m) minimum	PVC	Clear PVC NA NA
	IDC CABLE for IDCP Series IDC Cable Plugs	CB-14-28-7/36-050-C CB-16-28-7/36-050-C CB-24-28-7/36-050-C CB-40-28-7/36-050-C CB-14-28-7/36-050-G CB-16-28-7/36-050-G CB-24-28-7/36-050-G CB-40-28-7/36-050-G	14 16 24 40 14 16 24 40	28 AWG 7/36 Stranded Tinned Copper	.050	300V	80°C	Color Coded Color Coded Color Coded Color Coded Gray Gray Gray Gray	>10 ¹⁰ ohms/ 10 ft. (3m) minimum	PVC	Clear PVC Clear PVC Clear PVC Clear PVC NA NA NA NA

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CUSTOM SOCKETS & ADAPTORS

Customize your PGA sockets and optimize your costs

Samtec offers the ultimate in PGA socket and adaptor flexibility. If you don't find the pin out among our most popular patterns, fax it to us and we will check it against the thousands of standards we stock.

Even if we don't stock it, customs are a specialty at Samtec. Choose from the many insulator types, lead socket and terminal styles, platings and grid sizes to build your own socket or adaptor. Fill in the part number and indicate your pattern and we'll quote price and delivery.

A choice of insulator types includes our standard Glass Filled Polyester, CPAX Series for solid body; a high temperature insulator, CSAX Series with Liquid Crystal Polymer insulator; and CHAX Series for low profile applications.

Specifications: CPAX

Same as MPAX

Specifications: CSAX HI-TEMP

Same as MSAX

Specifications: CHAX

Same as MHAX

Note:

These Series are non-standard, non-returnable.

BODY STYLE	PGA TYPE	PIN COUNT	LEAD STYLE	PLATING OPTION	GRID SIZE	PIN OUT CODE	OPTION
		-XXX = Total Number Of Filled Positions	Select socket styles from MXAS series.	Select socket plating from MXAS series.	-08 thru -17 = CPA Series		-2 =.360 (9,14µm) (-ZW only)
			Select terminals from MXAT series.	Select terminal plating from MXAT series.	-08 thru -24 = CSA Series		-3 =.260 (6,60µm) (-ZW only)
					-01 thru -20 = CHA Series		-L = Locking socket (-ZS only)
	-S = Socket -T = Terminal						

Note: oversized grids available!

CPA = Standard Polyester		MARK PIN OUT ON GRID (Leave part number blank, Samtec will determine.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
CSA = Hi-Temp Polymer (Closed Body)		<table border="1"> <tr> <th></th> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th><th>J</th><th>K</th><th>L</th><th>M</th><th>N</th><th>P</th><th>Q</th><th>R</th><th>S</th><th>T</th><th>U</th><th>V</th><th>W</th><th>X</th><th>Y</th><th>Z</th> </tr> <tr><td>1</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>2</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> 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Due to technical progress, all designs, specifications and components are subject to change without notice.

WWW.SAMTEC.COM

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CUSTOM SOCKETS & ADAPTORS

Customize your PGA sockets and optimize your costs

Samtec offers the ultimate in PGA socket and adaptor flexibility. If you don't find the pin out among our most popular patterns, fax it to us and we will check it against the thousands of standards we stock.

Even if we don't stock it, customs are a specialty at Samtec. Choose from the many insulator types, lead socket and terminal styles, platings and grid sizes to build your own socket or adaptor. Fill in the part number and indicate your pattern and we'll quote price and delivery.

A choice of insulator types includes our standard Glass Filled Polyester, CPAX Series for solid body; a high temperature insulator, CSAX Series with Liquid Crystal Polymer insulator; and CHAX Series for low profile applications.

Specifications: CPAX

Same as MPAX

Specifications: CSAX HI-TEMP

Same as MSAX

Specifications: CHAX

Same as MHAX

Note:
These Series are non-standard, non-returnable.

BODY STYLE	PGA TYPE	PIN COUNT	LEAD STYLE	PLATING OPTION	GRID SIZE	PIN OUT CODE	OPTION
		-XXX = Total Number Of Filled Positions	Select socket styles from MXAS series.	Select socket plating from MXAS series.	-08 thru -17 = CPA Series		-2 = .360 (9,14µm) (-ZW only)
			Select terminals from MXAT series.	Select terminal plating from MXAT series.	-08 thru -24 = CSA Series		-3 = .260 (6,60µm) (-ZW only)
					-01 thru -20 = CHA Series		-L = Locking socket (-ZS only)
	-S = Socket -T = Terminal						

Note: oversized grids available!

CPA = Standard Polyester		MARK PIN OUT ON GRID (Leave part number blank, Samtec will determine.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
CSA = Hi-Temp Polymer (Closed Body)		<table border="1"> <tr> <th></th> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th><th>J</th><th>K</th><th>L</th><th>M</th><th>N</th><th>P</th><th>Q</th><th>R</th><th>S</th><th>T</th><th>U</th><th>V</th><th>W</th><th>X</th><th>Y</th><th>Z</th> </tr> <tr><td>1</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>2</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> 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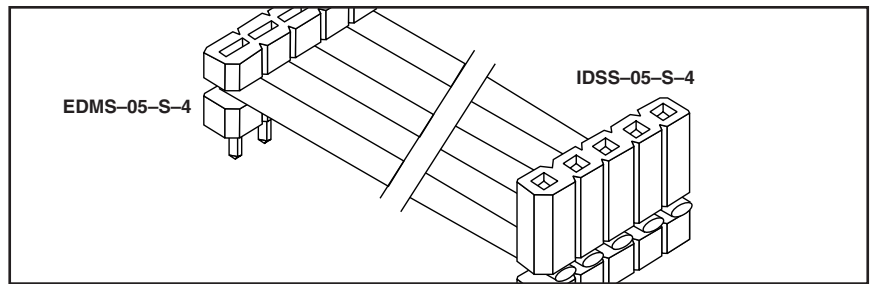
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IDC CABLE STRIPS

IDMS, IDMD, IDSS, IDSD EDMS & EDMD SERIES

Specifications: IDSS, IDSD

Insulator Material: Black Glass Filled Polyester
Temperature Range: -65°C to +80°C
Withstanding Voltage: 1000 VRMS @ 60 Hz
Contact: BeCu
Plating: Au over 50µ" (1,27µm) Ni or Sn over 100µ" (2,54µm) Cu or 50µ" (1,27µm) Ni
Current Rating: 1A
Contact Resistance: 10 mΩ max
Socket Retention in Body: 5lb (22,25N) against barb
Lead Size Range: .022" (0,56mm) SQ to .028" (0,71mm) SQ
Lead Insertion Depth: .185" (4,70mm) to .250" (6,35mm)
Insertion Force: 4 oz avg
 (.025" (0,63mm) SQ probe)
Withdrawal Force: 3 oz avg
 (.025" (0,63mm) SQ probe)
Wire: 28 AWG 7/36 stranded Tinned Copper

Specifications: IDMS, IDMD EDMS, EDMD

Insulator Material: Black Glass Filled Polyester
Temperature Range: -65°C to +80°C
Withstanding Voltage: 1000 VRMS @ 60 Hz
Contact: BeCu
Plating: Au over 50µ" (1,27µm) Ni or Sn over 100µ" (2,54µm) Cu or 50µ" (1,27µm) Ni
Current Rating: 1A
Terminal Retention in Body: 5lb (22,25N) against barb
Wire: 28 AWG 7/36 stranded Tinned Copper

Note:
This Series is non-standard, non-returnable.

Mates with:
TSW, MTSW,
BST, LCW

IDM = Standard Tail Male Plug

EDM = Long Tail Male Plug

IDS = Socket

TYPE STRIP

ROW OPTION

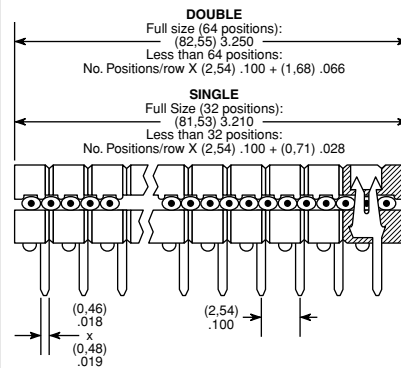
NO. PINS PER ROW

END ASSEMBLY

S = Single

D = Double
(Color coded cable
N/A for 31 thru 36
pins/row. See
-G option.)

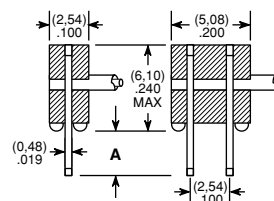
-02 thru -32



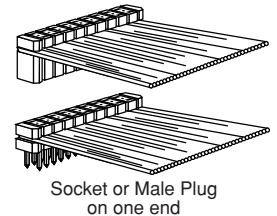
TYPE STRIP	A
IDM	(3,18) .125
EDM	(5,08) .200

**EDMS
IDMS
(Single)**

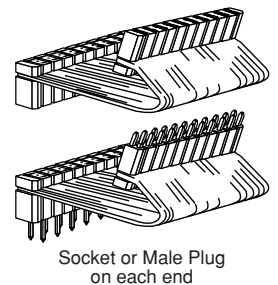
**EDMD
IDMD
(Double)**



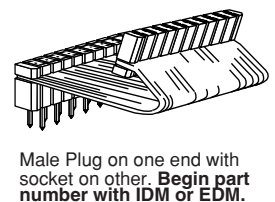
-S = Single End



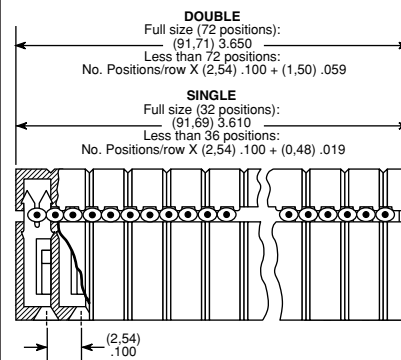
-D = Double End



-T = Transfer End

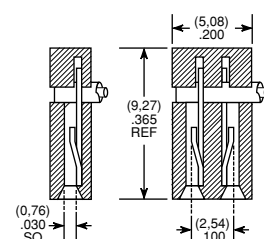


-02 thru -36



**IDSS
(Single)**

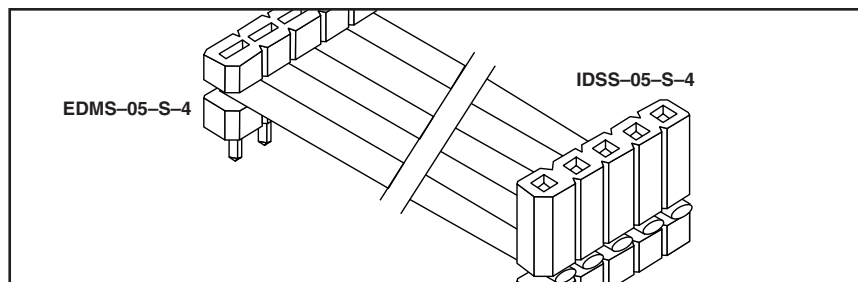
**IDSD
(Double)**



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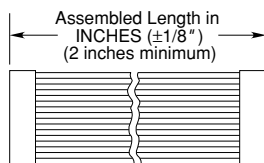
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IDC CABLE STRIPS

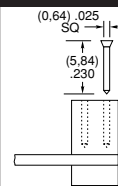
IDMS, IDMD, IDSS, IDSD EDMS & EDMD SERIES

ASSEMBLED LENGTH



OPTION

POLARIZING KEY



Optional polarizing key for use with IDSS & IDSD Series. Also polarizes SSW, SSQ, ESW & ESQ Series. Black High Temperature Thermoplastic
Order: Part Number PK-01

-T = Tin Plating
(Both ends)

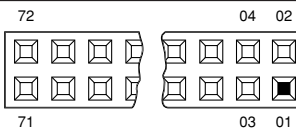
-C = Tin IDM/
10μ" (0,25μm) Gold IDS

-A = 10μ" (0,25μm) Gold IDM/
Tin IDS

Standard plating is selective gold over BeCu contact for IDS; Selective gold over phosphor bronze for IDM & EDM.

1

-P "XX"
= Polarized



Specify "XX" as position. For Double the same position will be polarized on both ends. (Not available on IDM or EDM, unless Transfer, then only the socket is polarized)

2

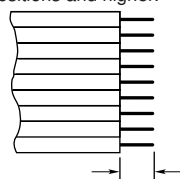
-G
= Gray Cable

Specify -G for Gray cable. Gray cable has one red edge. IDSS uses .100" centerline cable. IDSD and IDMD uses .050" centerline cable. Cable is 28 AWG 7/36 copper wire. Standard cable is same as above except color coded.

3

-ST "X"
= Stripped & Tinned

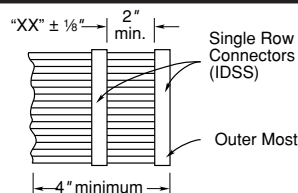
Specify Suffix from table. All dimensions are ± 1/16". Not available in 28 positions and higher.



-ST8	1/8" (3,18)
-ST4	1/4" (6,35)
-ST2	1/2" (12,70)
-ST3	3/8" (9,53)

4

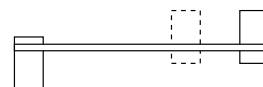
-S "XX"
= Daisy Chain Single



When mating double row connector with two single row connectors, the outer most single will be connected to Conductor #1 and the inside single to Conductor #2.

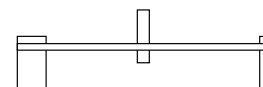
7

-R
= Reversed



8

-M
= Middle Reversed

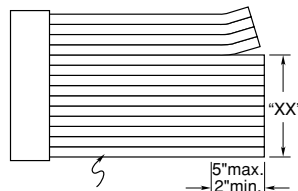


Requires -SXX, -WXX or -DXX

8

-B "XX"
= Breakout

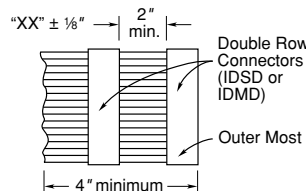
Specify "XX" as number of conducts to be broken out.



Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side.

5

-D "XX"
= Daisy Chain, Double



7

-W "XX"
= Wiring Reversed
Daisy Chain, Single

Same as -S "XX" except outer strip connected to Conductor #2 and inside strip connected to Conductor #1.

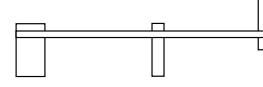
7

-RW
= Reversed Wiring

#1 wire opposite position #1.

6

-O
= Outside Reversed



Requires -SXX, -WXX or -DXX

8

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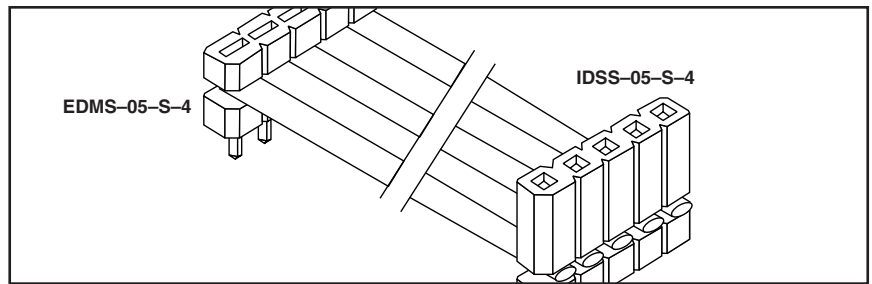
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IDC CABLE STRIPS

IDMS, IDMD, IDSS, IDSD
EDMS & EDMD SERIES

Specifications: IDSS, IDSD

Insulator Material: Black Glass Filled Polyester
Temperature Range: -65°C to +80°C
Withstanding Voltage: 1000 VRMS @ 60 Hz
Contact: BeCu
Plating: Au over 50µ" (1,27µm) Ni or Sn over 100µ" (2,54µm) Cu or 50µ" (1,27µm) Ni
Current Rating: 1A
Contact Resistance: 10 mΩ max
Socket Retention in Body: 5lb (22,25N) against barb
Lead Size Range: .022" (0,56mm) SQ to .028" (0,71mm) SQ
Lead Insertion Depth: .185" (4,70mm) to .250" (6,35mm)
Insertion Force: 4 oz avg
(.025" (0,63mm) SQ probe)
Withdrawal Force: 3 oz avg
(.025" (0,63mm) SQ probe)
Wire: 28 AWG 7/36 stranded Tinned Copper

Specifications: IDMS, IDMD EDMS, EDMD

Insulator Material: Black Glass Filled Polyester
Temperature Range: -65°C to +80°C
Withstanding Voltage: 1000 VRMS @ 60 Hz
Contact: BeCu
Plating: Au over 50µ" (1,27µm) Ni or Sn over 100µ" (2,54µm) Cu or 50µ" (1,27µm) Ni
Current Rating: 1A
Terminal Retention in Body: 5lb (22,25N) against barb
Wire: 28 AWG 7/36 stranded Tinned Copper

Note:
This Series is non-standard, non-returnable.

Mates with:
TSW, MTSW,
BST, LCW

IDM = Standard Tail Male Plug

EDM = Long Tail Male Plug

IDS = Socket

TYPE STRIP

ROW OPTION

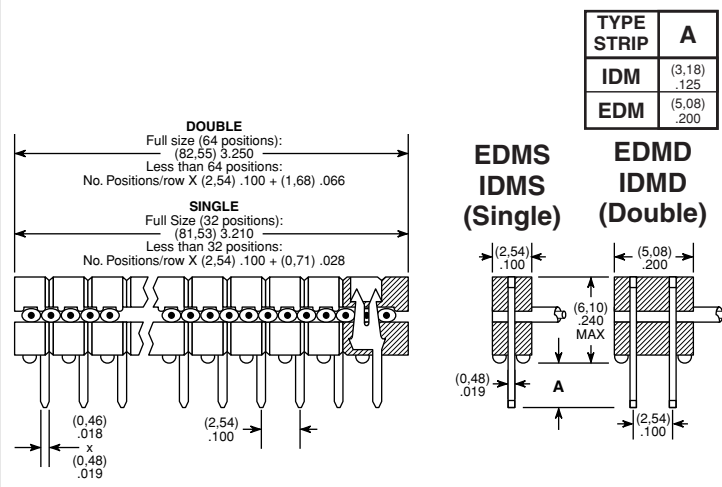
NO. PINS PER ROW

END ASSEMBLY

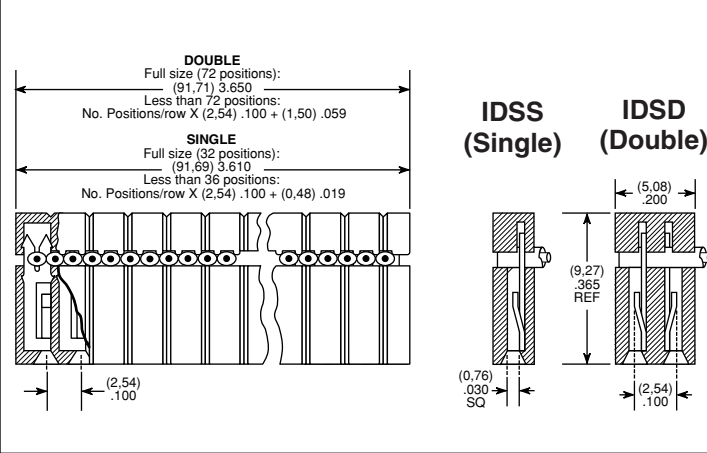
S = Single

D = Double
(Color coded cable
N/A for 31 thru 36
pins/row. See
-G option.)

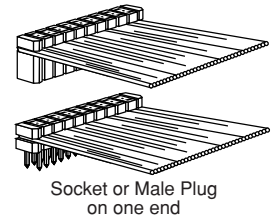
-02 thru -32



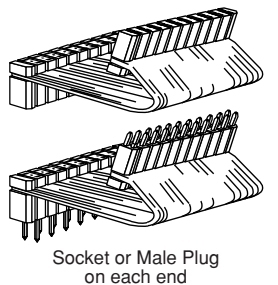
-02 thru -36



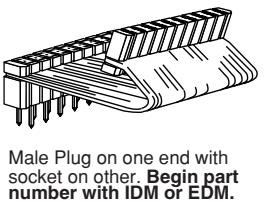
-S = Single End



-D = Double End



-T = Transfer End



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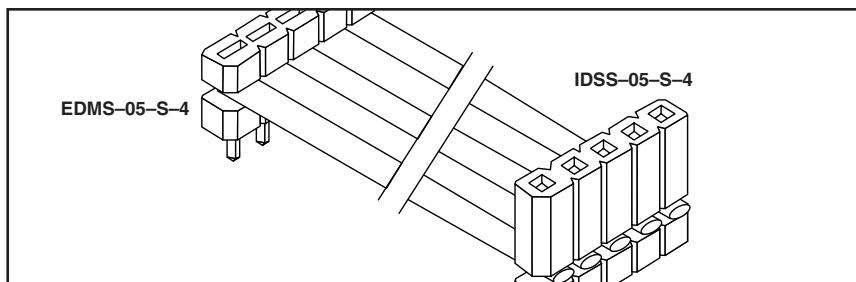
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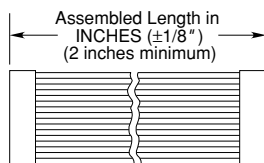
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IDC CABLE STRIPS

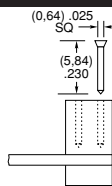
IDMS, IDMD, IDSS, IDSD EDMS & EDMD SERIES

ASSEMBLED LENGTH



OPTION

POLARIZING KEY



Optional polarizing key for use with IDSS & IDSD Series. Also polarizes SSW, SSQ, ESW & ESQ Series. Black High Temperature Thermoplastic
Order: Part Number PK-01

-T = Tin Plating
(Both ends)

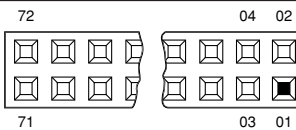
-C = Tin IDM/
10μ" (0,25μm) Gold IDS

-A = 10μ" (0,25μm) Gold IDM/
Tin IDS

Standard plating is selective gold over BeCu contact for IDS; Selective gold over phosphor bronze for IDM & EDM.

1

-P "XX"
= Polarized



Specify "XX" as position. For Double the same position will be polarized on both ends. (Not available on IDM or EDM, unless Transfer, then only the socket is polarized)

2

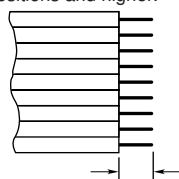
-G
= Gray Cable

Specify -G for Gray cable. Gray cable has one red edge. IDSS uses .100" centerline cable. IDSD and IDMD uses .050" centerline cable. Cable is 28 AWG 7/36 copper wire. Standard cable is same as above except color coded.

3

-ST "X"
= Stripped & Tinned

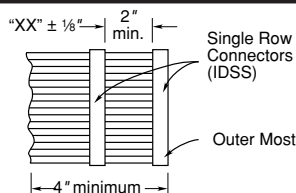
Specify Suffix from table. All dimensions are ± 1/16". Not available in 28 positions and higher.



-ST8	1/8" (3,18)
-ST4	1/4" (6,35)
-ST2	1/2" (12,70)
-ST3	3/8" (9,53)

4

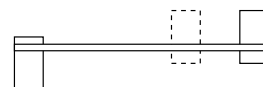
-S "XX"
= Daisy Chain Single



When mating double row connector with two single row connectors, the outer most single will be connected to Conductor #1 and the inside single to Conductor #2.

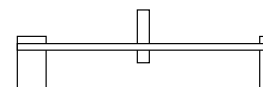
7

-R
= Reversed



8

-M
= Middle Reversed

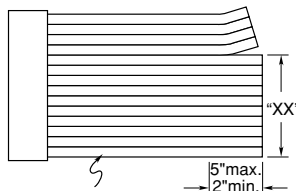


Requires -SXX, -WXX or -DXX

8

-B "XX"
= Breakout

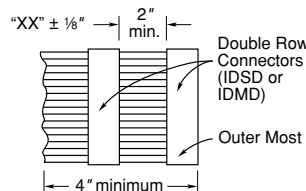
Specify "XX" as number of conducts to be broken out.



Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side.

5

-D "XX"
= Daisy Chain, Double



7

-W "XX"
= Wiring Reversed
Daisy Chain, Single

Same as -S "XX" except outer strip connected to Conductor #2 and inside strip connected to Conductor #1.

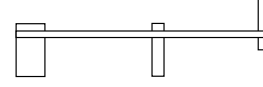
7

-RW
= Reversed Wiring

#1 wire opposite position #1.

6

-O
= Outside Reversed



Requires -SXX, -WXX or -DXX

8

Due to technical progress, all designs, specifications and components are subject to change without notice.

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Surface
SMT
Mount

.050" x .050" SOCKETS FOLC SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FOLC

Insulator Material:
Black Liquid Crystal Polymer



Contact Material: BeCu

Current Rating:
1A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

Plating:

Au or Sn over

50μ" (1,27μm) Ni

Contact Resistance:

15 mΩ max

Insertion Depth:

(3,30mm) .130" to

(4,06mm) .160"

Insertion Force:

Standard= 5.0oz (1,39N) avg;

LIF= 2.0oz (0,56N) avg.

Normal Force:

Standard= 70 grams

(0,69N) avg; LIF= 40 grams

(0,39N) avg.

Withdrawal Force:

Standard= 4oz (1,11N) avg;

LIF= 1.5oz (0,42N) avg.

Max Cycles:

100 with 10μ" (2,54μm) Au

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
MOLC

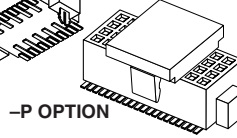


Low Insertion Force contacts available

High reliability Tiger-Eye contacts

OPTIONS

-LC OPTION

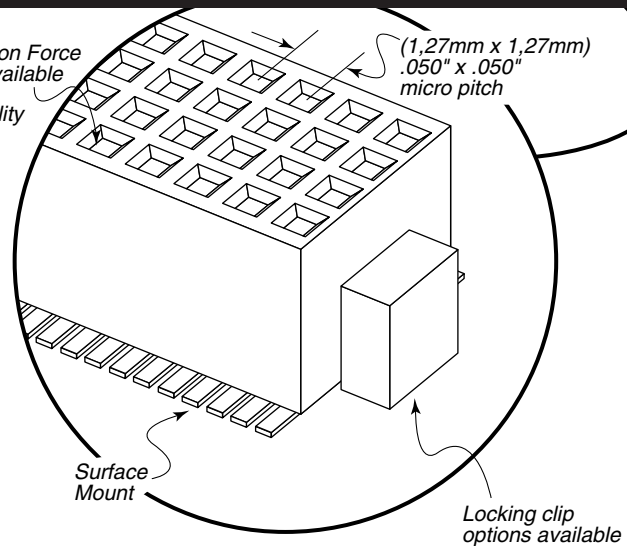


-P OPTION

APPLICATION SPECIFIC OPTION

Alignment pins available.
Call Samtec.

4
ROW



FOLC

1

NO. PINS PER ROW

LEAD STYLE

PLATING OPTION

Q

OPTION

20, 25, 30, 35, 40, 45, 50
(Call Samtec for other sizes)

-02
= Surface Mount

-L2
= Low Insertion Force Surface Mount

-S
= 30μ" (0,76μm) Gold contact, Tin tail

-LC
= Locking Clip

-K

(Best Cost Option)
= (6,75mm) .266" DIA Polyamide film Pick & Place Pad

-P

= Plastic Pick & Place Pad

-TR

= Tape & Reel

Processing:

Max Processing Temp:

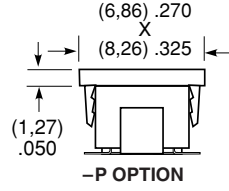
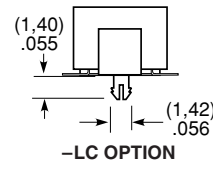
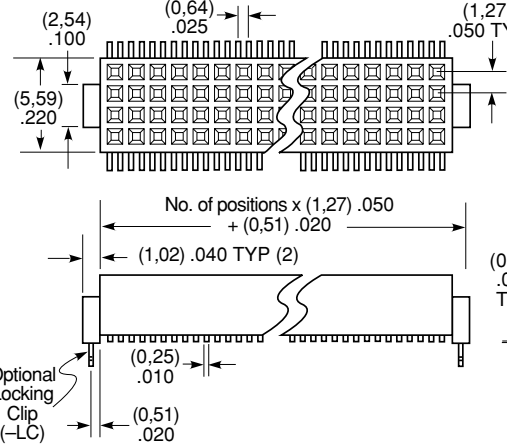
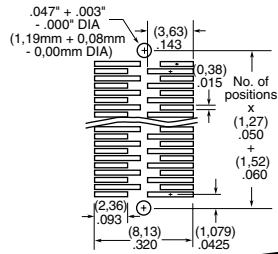
230°C for 60 seconds

SMT Lead Coplanarity:

(0,15mm) .006" max

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?FOLC for recommended PCB layout.



TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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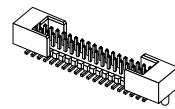
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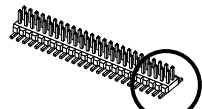
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FTM-125-02-F-SA

FTM-120-02-F



1mm MICRO STRIPS FTM SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?FTM

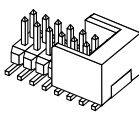
HI-TEMP

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Current Rating:
1.5A @ 80°C ambient
Operating Temp Range:
-65°C to +125°C
Max Processing Temp:
230°C for 60 seconds
Plating:
Sn or Au over 50µ"
(1.27µm) Ni
SMT Lead Coplanarity:
.004" (0.10mm) max

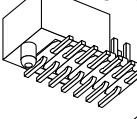
Mates with:
CLM, MLE

OPTIONS

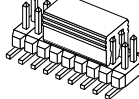
-S OPTION



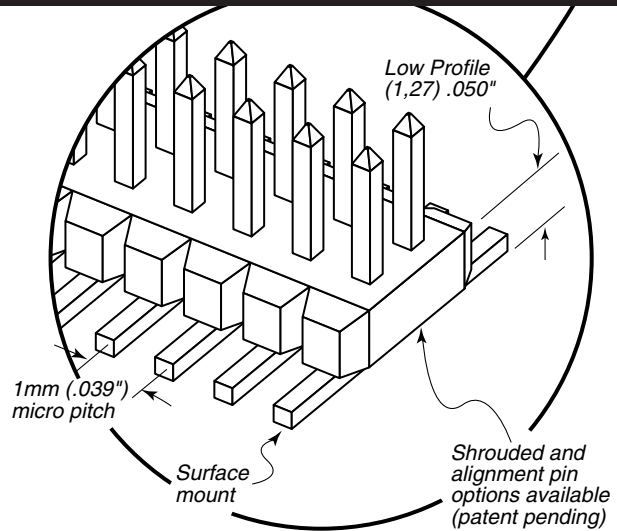
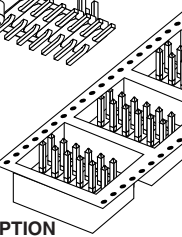
-SA OPTION



-P OPTION



-TR OPTION



Note: Some lengths, styles and options are non-standard, non-returnable.

FTM

1

NO. PINS PER ROW

LEAD STYLE

PLATING OPTION

DV

OTHER OPTION

02 thru 50

(except -S & -SA option = 04 thru 46)

-02
= .075 (1,91) Post
(Mates with MLE)

-03
= .065 (1,65) Post
(Mates with CLM)

-F
= Gold flash on post,
Tin on tail

-L
= 10µ" (0,25µm)
Gold on post,
Tin on tail

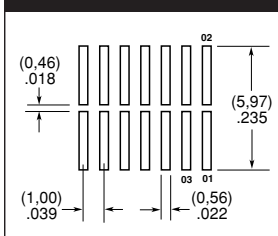
-S
= Shrouded
(04 through
46 positions)

-SA
= Shrouded with
Alignment Pins
(04 through
46 positions)

-P
= Pick & Place
Pad

-TR
= Tape & Reel

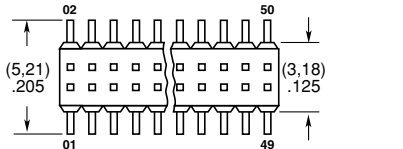
PCB LAYOUT



Surface Mount!

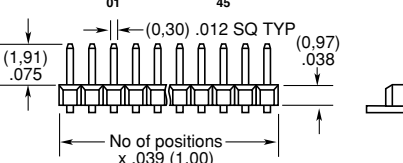
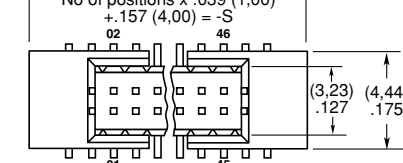
TAPE & REEL AVAILABILITY

No tooling charges.
125 piece minimum order.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications
and ordering information.



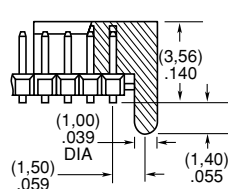
No of positions x .039 (1,00)
+ .276 (7,00) = -SA

No of positions x .039 (1,00)
+ .157 (4,00) = -S

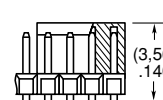


Shrouded options removed for clarity

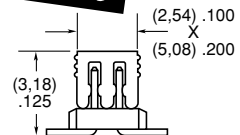
-SA OPTION



-S OPTION



-P OPTION



Due to technical progress, all designs, specifications and components are subject to change without notice.

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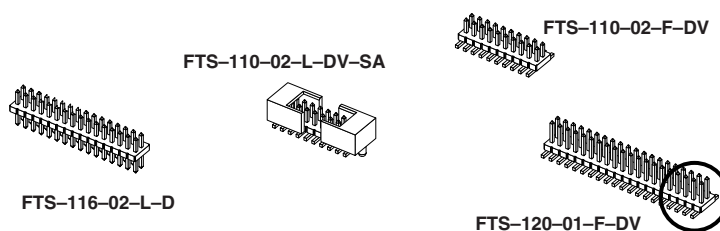
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.050" X .050" MICRO STRIPS FTS SERIES

SPECIFICATIONS

For complete specifications
see www.samtec.com?FTS

HI-TEMP

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Current Rating:
1.75A @ 80°C ambient

Operating Temp Range:
-65°C to +125°C

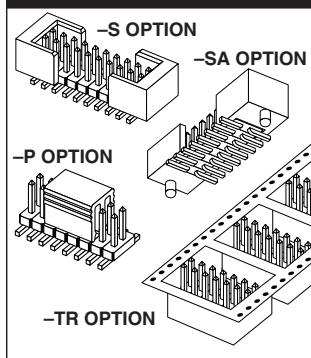
Max Processing Temp:
230°C for 60 seconds

Plating:
Sn or Au over 50µ"
(1.27µm) Ni

SMT Lead Coplanarity:
.004" (0.10mm) max

Mates with:
FFSD, CLP, FLE,
SFMC(LIF)

OPTIONS



Mates with
socket strips
or IDC cable

Low profile
(1,27mm) .050"

Surface
mount

Micro pitch
.050" x .050"
(1.27mm x 1.27mm)

Shrouded and alignment pin options available (patent pending)

Note: Some lengths, styles and options are non-standard, non-returnable.

FTS

1 NO. PINS PER ROW

LEAD STYLE

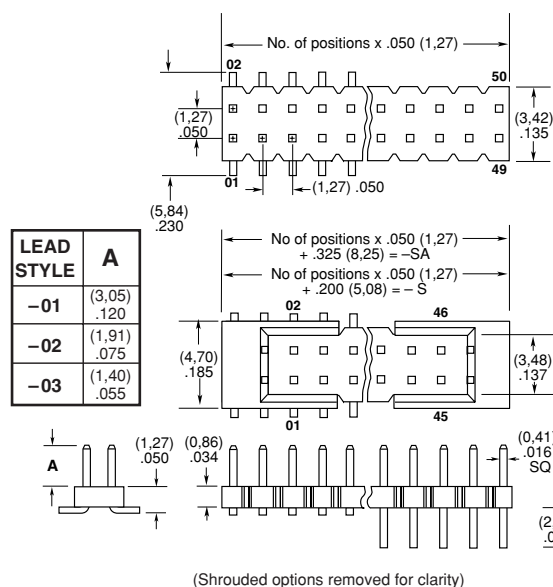
PLATING OPTION

ROW OPTION

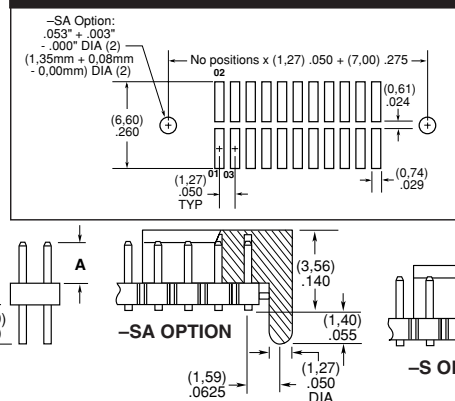
OTHER OPTION

02 thru 50

(except -S & -SA option = 05 thru 46)



PCB LAYOUT



-SA
= Shrouded with
Alignment Pin
(05 thru 46
positions. Style
-02 & -03 only.
-SV not available.)

-S
Shrouded
05 thru 46
itions. Style
-03 only. -SV
(available.)

-P
Pick & Place
5 positions
(minimum)
(-SV & -S
not available)

-TR
= Tape & Reel
(-SV & -DV only)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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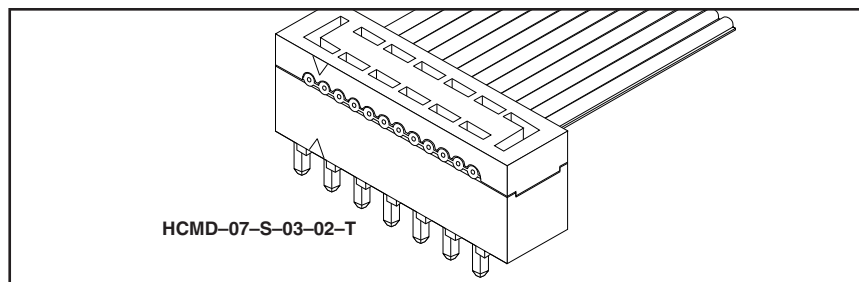
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.100" IDC CABLE STRIPS

HCMD, HCMS
HCSD, HCSS

Mates with:

TSW, MTSW, TST, EW,
BST, LCW, ZST, MTLW,
TSM

Features:

- Low Profile
- Skinny side locks
- Dual beam contacts
- Single & double row
- High temp insulator
- Odd lead counts
- Customs our specialty
- Easy assembly

Specifications: HCSD, HCSS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Temperature Range:

-65°C to +80°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Contact: Phosphor Bronze

Plating:

10μ" (0,25μm) on contact
area, 150μ" (3,81μm)

Sn on balance over
50μ" (1,27μm) Ni.

Current Rating: 1A

Contact Resistance:

10 mΩ max

Lead Size Range:

.024" (0,61mm) SQ to

.026" (0,66mm) SQ

Lead Insertion Depth:

.185" (4,70mm) to .250"

(6,35mm)

Insertion Force:

6 oz avg (1,67N) average with

.025" (0,64mm) SQ probe

Withdrawal Force:

3 oz avg (0,83N) average with

.025" (0,64mm) SQ probe

Wire: 28 AWG 7/36 stranded

Tinned Copper

Specifications: HCMD, HCMS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Temperature Range:

-65°C to +80°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Terminal: Phosphor Bronze

Plating:

Sn over 50μ" (1,27μm) Ni

Current Rating: 1A

Wire: 28 AWG 7/36 stranded

Tinned Copper

Note: IDC assemblies are
non-standard, non-returnable.

TYPE STRIP	ROW OPTION	NO. PINS PER ROW	END ASSEMBLY
HCM = Male Strip Also Available (5,84mm) .230" tail length specify Lead Style -02 instead of -01	S = Single	-05, -07, -08, -10, -12, -13, -15, -17, -20, -25, -30, -32, -36 (Call Samtec other sizes)	-S = Single End Socket or Male Plug on one end
	D = Double (Color coded cable N/A for 31 thru 36 pins/row. See -G option.)		-D = Double End Socket or Male Plug on each end
HCS = Socket Strip		-T = Transfer End Male Plug on one end with socket on other. Begin part number with HCM.	

Due to technical progress, all designs, specifications and components are subject to change without

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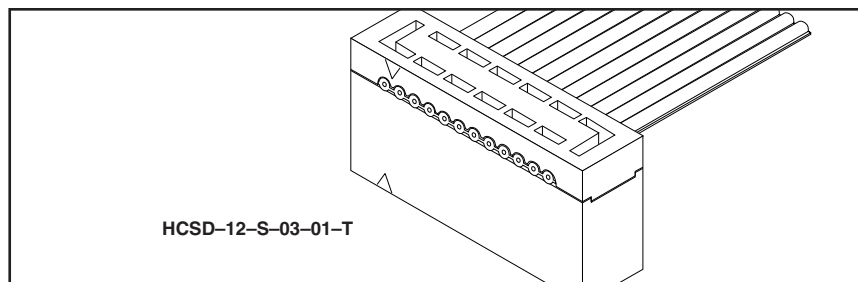
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.100" IDC CABLE STRIPS

HCMD, HCMS
HCSD, HCSS

ASSEMBLED LENGTH	01	PLATING OPTION	NOTCH POLARIZATION	OTHER OPTIONS
–“XX” = Assembled Length Assembled Length in INCHES ($\pm 1/8$) 2 inches minimum	–S = 10μ (0,25μm) Gold on contact area or tail, Tin on balance (Standard on HCSS & HCSD. Leave blank) –T = Tin (Standard on HCMS & HCMD. Leave blank)	–N = Notch Polarization Required for HCSS and HCSD. (Not available on HCMS or HCMD, unless Transfer, then only the socket is polarized.)		

–P “XX” = Position Polarization Single Double Specify “XX” as position. For Double the same position will be polarized on both ends. (Not available on HCM, unless Transfer, then only the socket is polarized) 1	–ST “X” = Stripped & Tinned Specify Suffix from table. All dimensions are $\pm 1/16$ (1,59mm). Not available in 28 positions and higher. <table border="1"> <tbody> <tr> <td>–ST8</td> <td>1/8" (3,18)</td> </tr> <tr> <td>–ST4</td> <td>1/4" (6,35)</td> </tr> <tr> <td>–ST2</td> <td>1/2" (12,70)</td> </tr> <tr> <td>–ST3</td> <td>3/8" (9,53)</td> </tr> </tbody> </table> 3	–ST8	1/8" (3,18)	–ST4	1/4" (6,35)	–ST2	1/2" (12,70)	–ST3	3/8" (9,53)	–S “XX” = Daisy Chain Single When mating double row connector with two single row connectors, the outer most single will be connected to Conductor #1 and the inside single to Conductor #2. 6	–R = Reversed 7
–ST8	1/8" (3,18)										
–ST4	1/4" (6,35)										
–ST2	1/2" (12,70)										
–ST3	3/8" (9,53)										
–G = Gray Cable Standard cable is color coded. Specify –G for Gray cable with one red edge. 2	–B “XX” = Breakout Specify “XX” as number of conductors to be broken out. Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side. 4	–D “XX” = Daisy Chain, Double 6	–M = Middle Reversed Requires –SXX, –WXX or –DXX 7								
	–RW = Reversed Wiring #1 wire opposite position #1 5	–W “XX” = Wiring Reversed Daisy Chain, Single Same as –S “XX” except outer strip connected to conductor #2 and inside strip connected to conductor #1. 6	–O = Outside Reversed Requires –SXX, –WXX or –DXX 7								

Due to technical progress, all designs, specifications and components are subject to change without notice.

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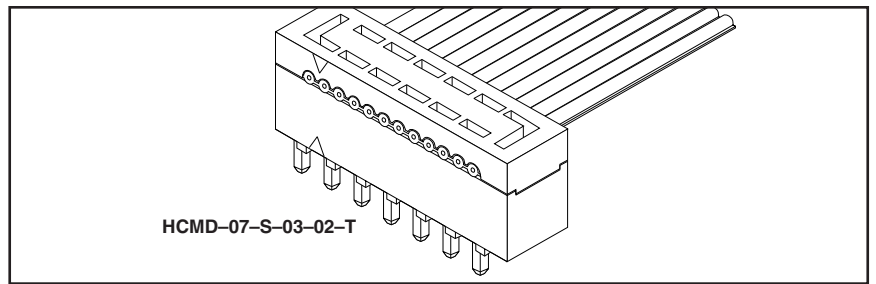
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.100" IDC CABLE STRIPS

HCMD, HCMS
HCSD, HCSS

Mates with:

TSW, MTSW, TST, EW,
BST, LCW, ZST, MTLW,
TSM

Features:

- Low Profile
- Skinny side locks
- Dual beam contacts
- Single & double row
- High temp insulator
- Odd lead counts
- Customs our specialty
- Easy assembly

Specifications: HCSD, HCSS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Temperature Range:

-65°C to +80°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Contact: Phosphor Bronze

Plating:

10μ" (0,25μm) on contact

area, 150μ" (3,81μm)

Sn on balance over

50μ" (1,27μm) Ni

Current Rating: 1A

Contact Resistance:

10 mΩ max

Lead Size Range:

.024" (0,61mm) SQ to

.026" (0,66mm) SQ

Lead Insertion Depth:

.185" (4,70mm) to .250"

(6,35mm)

Insertion Force:

6 oz avg (1,67N) average with

.025" (0,64mm) SQ probe

Withdrawal Force:

3 oz avg (0,83N) average with

.025" (0,64mm) SQ probe

Wire: 28 AWG 7/36 stranded

Tinned Copper

Specifications: HCMD, HCMS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Temperature Range:

-65°C to +80°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Terminal: Phosphor Bronze

Plating:

Sn over 50μ" (1,27μm) Ni

Current Rating: 1A

Wire: 28 AWG 7/36 stranded

Tinned Copper

Note: IDC assemblies are non-standard, non-returnable.

TYPE STRIP	ROW OPTION	NO. PINS PER ROW	END ASSEMBLY
	S = Single	-05, -07, -08, -10, -12, -13, -15, -17, -20, -25, -30, -32, -36 (Call Samtec other sizes)	
	D = Double (Color coded cable N/A for 31 thru 36 pins/row. See -G option.)		
HCM = Male Strip			
HCS = Socket Strip			
-S = Single End Socket or Male Plug on one end			
-D = Double End Socket or Male Plug on each end			
-T = Transfer End Male Plug on one end with socket on other. Begin part number with HCM.			

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HCSD-12-S-03-01-T

.100" IDC CABLE STRIPS

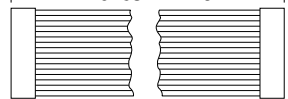
HCMD, HCMS
HCSD, HCSS

ASSEMBLED LENGTH

–“XX”

= Assembled Length

Assembled Length in INCHES ($\pm 1/8$ ")
2 inches minimum



01

PLATING OPTION

–S

10 μ " (0,25 μ m)
Gold on contact area or tail,
Tin on balance
(Standard on HCSS & HCSD.
Leave blank)

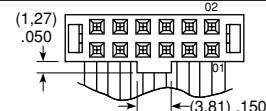
–T

Tin
(Standard on HCMS & HCMD.
Leave blank)

NOTCH POLARIZATION

–N

= Notch Polarization

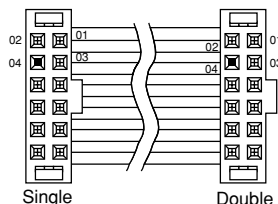


Required for HCSS and HCSD.
(Not available on HCMS or HCMD, unless
Transfer, then only the socket is polarized.)

OTHER OPTIONS

–P “XX”

= Position Polarization

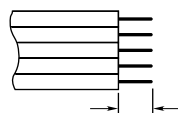


Specify “XX” as position. For
Double the same position will be
polarized on both ends. (Not
available on HCM, unless Transfer,
then only the socket is polarized)

–ST “X”

= Stripped & Tinned

Specify Suffix from table. All
dimensions are $\pm 1/16$ " (1,59mm). Not
available in 28 positions and higher.

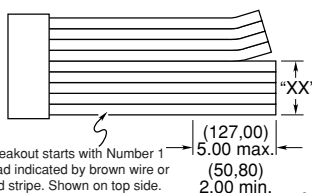


–ST8	1/8" (3,18)
–ST4	1/4" (6,35)
–ST2	1/2" (12,70)
–ST3	3/8" (9,53)

–B “XX”

= Breakout

Specify “XX” as number of
conducts to be broken out.



Breakout starts with Number 1
lead indicated by brown wire or
red stripe. Shown on top side.

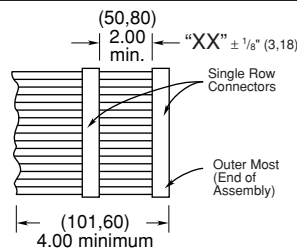
–RW

= Reversed Wiring

#1 wire opposite position #1

–S “XX”

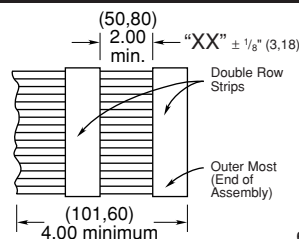
= Daisy Chain Single



When mating double row connector
with two single row connectors, the
outer most single will be connected
to Conductor #1 and the inside single
to Conductor #2.

–D “XX”

= Daisy Chain, Double



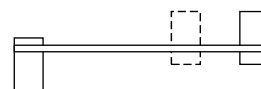
–W “XX”

= Wiring Reversed
Daisy Chain, Single

Same as –S “XX” except outer strip
connected to conductor #2 and inside
strip connected to conductor #1.

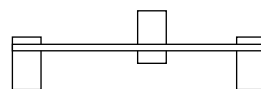
–R

= Reversed



–M

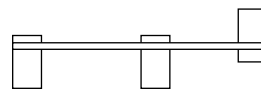
= Middle Reversed



Requires –SXX, –WXX or –DXX

–O

= Outside Reversed



Requires –SXX, –WXX or –DXX

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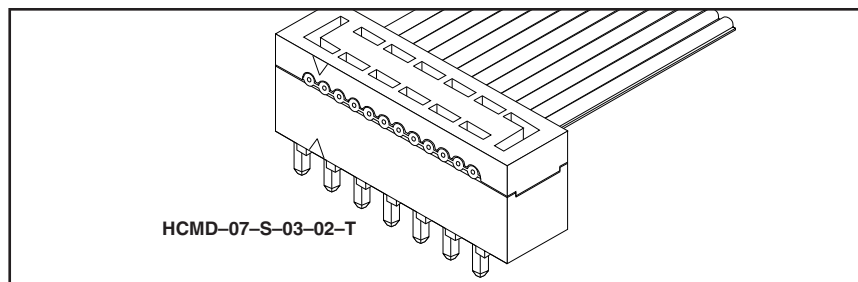
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.100" IDC CABLE STRIPS

HCMD, HCMS
HCSD, HCSS

Mates with:

TSW, MTSW, TST, EW,
BST, LCW, ZST, MTLW,
TSM

Features:

- Low Profile
- Skinny side locks
- Dual beam contacts
- Single & double row
- High temp insulator
- Odd lead counts
- Customs our specialty
- Easy assembly

Specifications: HCSD, HCSS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Temperature Range:

-65°C to +80°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Contact: Phosphor Bronze

Plating:

10μ" (0,25μm) on contact

area, 150μ" (3,81μm)

Sn on balance over

50μ" (1,27μm) Ni

Current Rating: 1A

Contact Resistance:

10 mΩ max

Lead Size Range:

.024" (0,61mm) SQ to

.026" (0,66mm) SQ

Lead Insertion Depth:

.185" (4,70mm) to .250"

(6,35mm)

Insertion Force:

6 oz avg (1,67N) average with

.025" (0,64mm) SQ probe

Withdrawal Force:

3 oz avg (0,83N) average with

.025" (0,64mm) SQ probe

Wire: 28 AWG 7/36 stranded

Tinned Copper

Specifications: HCMD, HCMS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Temperature Range:

-65°C to +80°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Terminal: Phosphor Bronze

Plating:

Sn over 50μ" (1,27μm) Ni

Current Rating: 1A

Wire: 28 AWG 7/36 stranded

Tinned Copper

Note: IDC assemblies are non-standard, non-returnable.

TYPE STRIP	ROW OPTION	NO. PINS PER ROW	END ASSEMBLY
	S = Single	-05, -07, -08, -10, -12, -13, -15, -17, -20, -25, -30, -32, -36 (Call Samtec other sizes)	
	D = Double (Color coded cable N/A for 31 thru 36 pins/row. See -G option.)		
HCM = Male Strip			
HCS = Socket Strip			
-S = Single End Socket or Male Plug on one end			
-D = Double End Socket or Male Plug on each end			
-T = Transfer End Male Plug on one end with socket on other. Begin part number with HCM.			

Due to technical progress, all designs, specifications and components are subject to change without

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HCSD-12-S-03-01-T

.100" IDC CABLE STRIPS

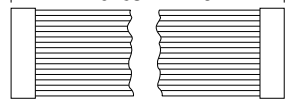
HCMD, HCMS
HCSD, HCSS

ASSEMBLED LENGTH

–“XX”

= Assembled Length

Assembled Length in INCHES ($\pm 1/8$ ")
2 inches minimum



01

PLATING OPTION

–S

10 μ " (0,25 μ m)
Gold on contact area or tail,
Tin on balance
(Standard on HCSS & HCSD.
Leave blank)

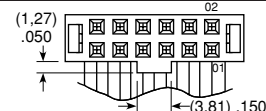
–T

Tin
(Standard on HCMS & HCMD.
Leave blank)

NOTCH POLARIZATION

–N

= Notch Polarization

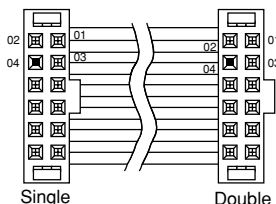


Required for HCSS and HCSD.
(Not available on HCMS or HCMD, unless
Transfer, then only the socket is polarized.)

OTHER OPTIONS

–P “XX”

= Position Polarization

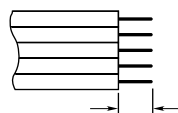


Specify “XX” as position. For
Double the same position will be
polarized on both ends. (Not
available on HCM, unless Transfer,
then only the socket is polarized)

–ST “X”

= Stripped & Tinned

Specify Suffix from table. All
dimensions are $\pm 1/16$ " (1,59mm). Not
available in 28 positions and higher.

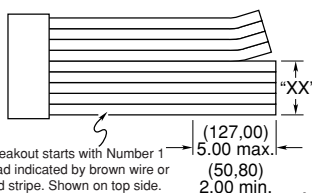


–ST8	1/8" (3,18)
–ST4	1/4" (6,35)
–ST2	1/2" (12,70)
–ST3	3/8" (9,53)

–B “XX”

= Breakout

Specify “XX” as number of
conducts to be broken out.



Breakout starts with Number 1
lead indicated by brown wire or
red stripe. Shown on top side.

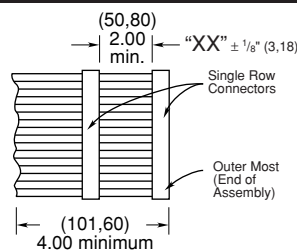
–RW

= Reversed Wiring

#1 wire opposite position #1

–S “XX”

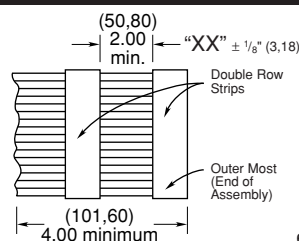
= Daisy Chain Single



When mating double row connector
with two single row connectors, the
outer most single will be connected
to Conductor #1 and the inside single
to Conductor #2.

–D “XX”

= Daisy Chain, Double



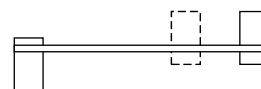
–W “XX”

= Wiring Reversed
Daisy Chain, Single

Same as –S “XX” except outer strip
connected to conductor #2 and inside
strip connected to conductor #1.

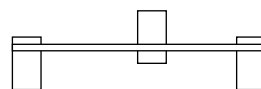
–R

= Reversed



–M

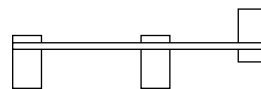
= Middle Reversed



Requires –SXX, –WXX or –DXX

–O

= Outside Reversed



Requires –SXX, –WXX or –DXX

Due to technical progress, all designs, specifications and components are subject to change without notice.

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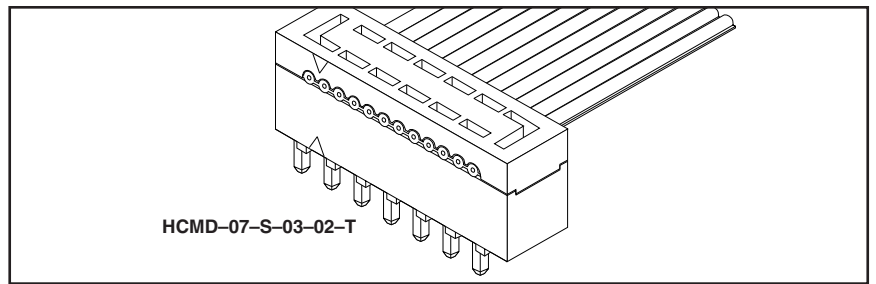
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.100" IDC CABLE STRIPS

HCMD, HCMS
HCSD, HCSS

Mates with:

TSW, MTSW, TST, EW,
BST, LCW, ZST, MTLW,
TSM

Features:

- Low Profile
- Skinny side locks
- Dual beam contacts
- Single & double row
- High temp insulator
- Odd lead counts
- Customs our specialty
- Easy assembly

Specifications: HCSD, HCSS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Temperature Range:

-65°C to +80°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Contact: Phosphor Bronze

Plating:

10μ" (0,25μm) on contact

area, 150μ" (3,81μm)

Sn on balance over

50μ" (1,27μm) Ni

Current Rating: 1A

Contact Resistance:

10 mΩ max

Lead Size Range:

.024" (0,61mm) SQ to

.026" (0,66mm) SQ

Lead Insertion Depth:

.185" (4,70mm) to .250"

(6,35mm)

Insertion Force:

6 oz avg (1,67N) average with

.025" (0,64mm) SQ probe

Withdrawal Force:

3 oz avg (0,83N) average with

.025" (0,64mm) SQ probe

Wire: 28 AWG 7/36 stranded

Tinned Copper

Specifications: HCMD, HCMS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Temperature Range:

-65°C to +80°C

Withstanding Voltage:

1000 VRMS @ 60 Hz

Terminal: Phosphor Bronze

Plating:

Sn over 50μ" (1,27μm) Ni

Current Rating: 1A

Wire: 28 AWG 7/36 stranded

Tinned Copper

Note: IDC assemblies are non-standard, non-returnable.

TYPE STRIP	ROW OPTION	NO. PINS PER ROW	END ASSEMBLY
	S = Single	-05, -07, -08, -10, -12, -13, -15, -17, -20, -25, -30, -32, -36 (Call Samtec other sizes)	
	D = Double (Color coded cable N/A for 31 thru 36 pins/row. See -G option.)		
HCM = Male Strip			
HCS = Socket Strip			
-S = Single End			
-D = Double End			
-T = Transfer End			

Due to technical progress, all designs, specifications and components are subject to change without

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HCSD-12-S-03-01-T

.100" IDC CABLE STRIPS

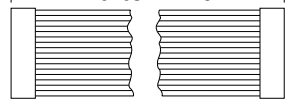
HCMD, HCMS
HCSD, HCSS

ASSEMBLED LENGTH

—“XX”

= Assembled Length

Assembled Length in INCHES ($\pm 1/8$ "
2 inches minimum



01

PLATING OPTION

—S

10 μ " (0,25 μ m)
Gold on contact area or tail,
Tin on balance
(Standard on HCSS & HCSD.
Leave blank)

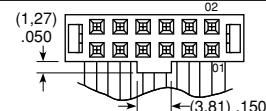
—T

Tin
(Standard on HCMS & HCMD.
Leave blank)

NOTCH POLARIZATION

—N

= Notch Polarization

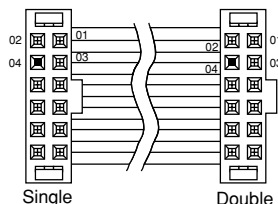


Required for HCSS and HCSD.
(Not available on HCMS or HCMD, unless
Transfer, then only the socket is polarized.)

OTHER OPTIONS

—P “XX”

= Position Polarization

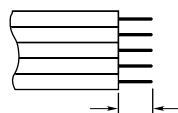


Specify “XX” as position. For
Double the same position will be
polarized on both ends. (Not
available on HCM, unless Transfer,
then only the socket is polarized)

—ST “X”

= Stripped & Tinned

Specify Suffix from table. All
dimensions are $\pm 1/16$ " (1,59mm). Not
available in 28 positions and higher.

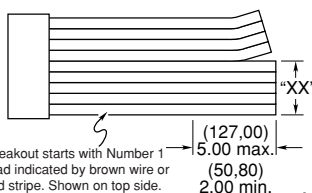


—ST8	1/8" (3,18)
—ST4	1/4" (6,35)
—ST2	1/2" (12,70)
—ST3	3/8" (9,53)

—B “XX”

= Breakout

Specify “XX” as number of
conducts to be broken out.



Breakout starts with Number 1
lead indicated by brown wire or
red stripe. Shown on top side.

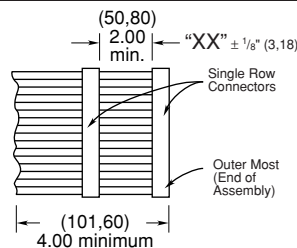
—RW

= Reversed Wiring

#1 wire opposite position #1

—S “XX”

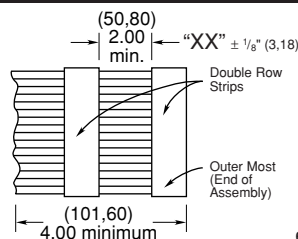
= Daisy Chain Single



When mating double row connector
with two single row connectors, the
outer most single will be connected
to Conductor #1 and the inside single
to Conductor #2.

—D “XX”

= Daisy Chain, Double



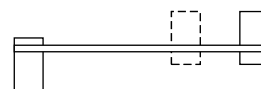
—W “XX”

= Wiring Reversed
Daisy Chain, Single

Same as —S “XX” except outer strip
connected to conductor #2 and inside
strip connected to conductor #1.

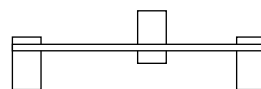
—R

= Reversed



—M

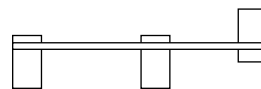
= Middle Reversed



Requires —SXX, —WXX or —DXX

—O

= Outside Reversed



Requires —SXX, —WXX or —DXX

Due to technical progress, all designs, specifications and components are subject to change without notice.

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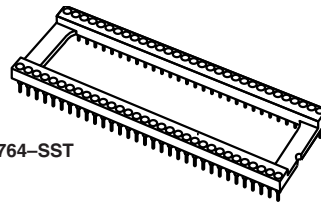
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HIC-764-SST

MICROPROCESSOR SOCKET HIC SERIES

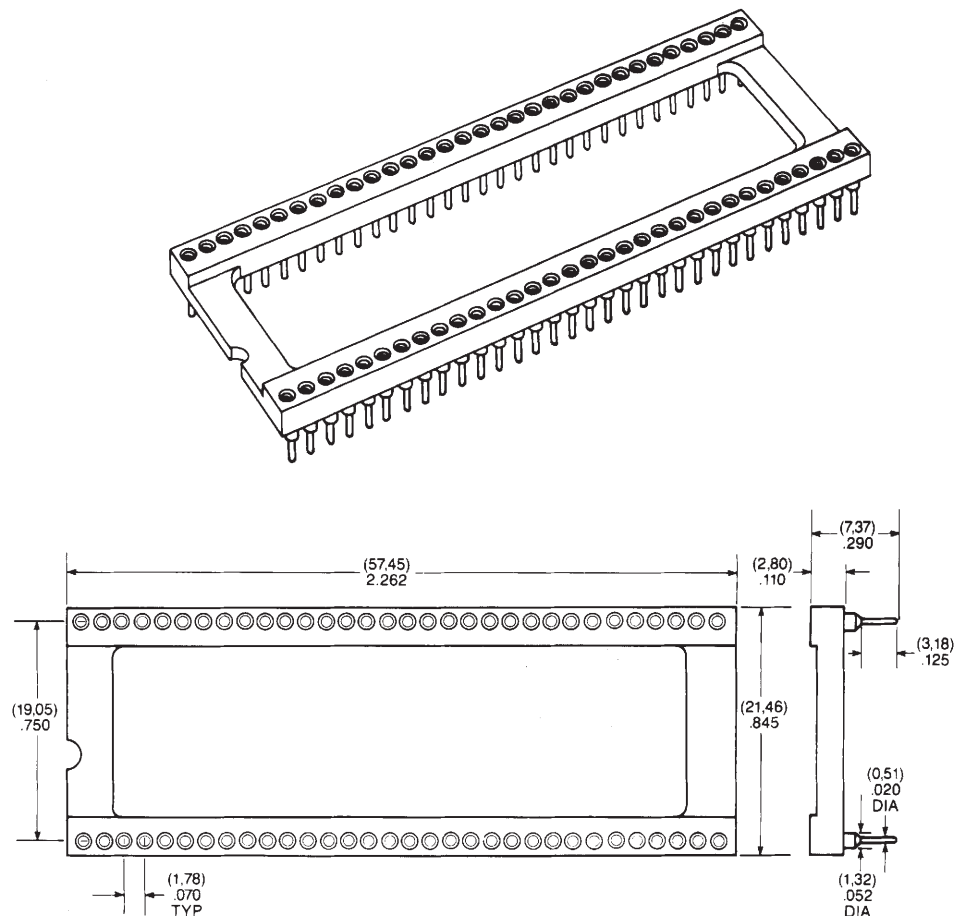
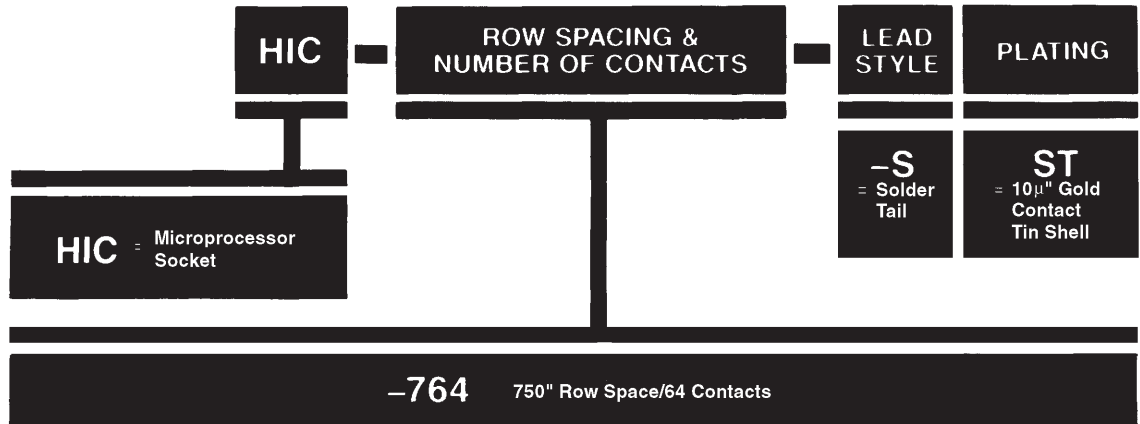
Highest Quality High Density Microprocessor Socket

Now you can order sockets for your microprocessors from the "Sudden Service Source" for your interconnect needs... Samtec. HIC sockets are designed for use with Hitachi and other microprocessors with leads on (1.78 mm) .070" centers. The open body construction aids in heat dissipation.

Specifications:

HIC
Insulation Material:
 Black Glass filled Polyester
Flammability Rating:
 UL 94V-O
Insulation Resistance:
 5000 megohm @ 500 VDC
Temperature Range:
 -65°C to +125°C
Withstanding Voltage:
 1000 VRMS @ 60 Hz
Contact:
 BeCu
Shell:
 Brass
Plating:
 Au over 50μ" Ni or Tin over 100μ" Cu or 50μ" Ni
Current Rating:
 1 amp continuous @ 100 VDC per contact
Contact Resistance:
 10 milliohms @ 200 milliamp
Socket Retention in Body:
 5 lbs against barb
Lead Size Range:
 .016" to .021" DIA and most IC leads
Insertion Force:
 9 oz avg, 16 oz max (.017" DIA probe);
Withdrawal Force:
 2.5 oz avg, 1.5 oz min (after 12 insertions with .017" DIA probe)

Note:
 Some sizes, styles and options are non-standard, non-returnable.



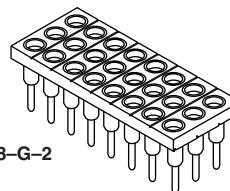
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HLS-308-G-2



CARRIER STRIPS

HLS & HLT SERIES

Mates with:

TS-1, HTS, BBS, BBL, BHS, BBD, BDL, LBS, HLT, TSB

Lead sockets "float" and "self-center" when this low profile carrier is soldered. Ideal for most VP or IR processes.

SPECIFICATIONS

For complete specifications see www.samtec.com?HLS

Same as SL-1 except:

Insulator Material:

Black High

Temperature Thermoplastic

Temperature Range:

-65°C to +140°C

Heat Deflection Temp:

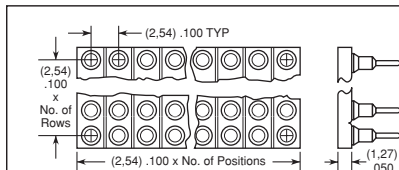
215°C @ 264 psi

Note:

This Series is non-standard, non-returnable.



HLS	NO. ROWS	NO. PINS PER ROW	PLATING OPTION	LEAD STYLE	OPTION
Total Pins = No. Rows x No. Pins Per Row -01 thru -20 (requires both digits)			-G = 30μ" (0,76μm) Gold Contact 10μ" (0,25μm) Gold Shell	-L = Locking Socket Requires Style -2 or -22 and .035" ± .003" DIA board hole.	
			-T = 30μ" (0,76μm) Gold Contact, Tin Shell		
			-S = 10μ" (0,25μm) Gold Contact, Tin Shell (Styles 2 & 22 only)		
			-TT = Tin Contact and Shell (Styles 2, 10, 11, 12, 18, 22, 30, 31 & 32 only)		



Total Pins = No. Rows x No. Pins Per Row

01 thru 20
(requires both digits)

Low Insertion Force (LIF) Available

-2 or -18 = Standard Socket For LIF specify -22 or -38 <table> <tr> <th>STYLE</th> <th>Y</th> <th>Z</th> </tr> <tr> <td>-2* or -22*</td> <td>(3.18) .125</td> <td>(7.62) .300</td> </tr> <tr> <td>-18 or -38</td> <td>(4.57) .180</td> <td>(8.89) .350</td> </tr> </table> *Locking Lead Available. See Option. Lead DIA Accepted = .015" to .022" Insertion Depth = .095" to .150" Style 2 Component Part No. = SC-1P1 Style 22 Component Part No. = EZ-1P1 Style 18 Component Part No. = SC-6P1 Style 38 Component Part No. = EZ-6P1	STYLE	Y	Z	-2* or -22*	(3.18) .125	(7.62) .300	-18 or -38	(4.57) .180	(8.89) .350	-3 = Body Only For LIF specify -23 Lead DIA Accepted = .015" to .022" Insertion Depth = .125" to .175" Style 3 Component Part No. = SC-1S1 Style 23 Component Part No. = EZ-1S1	-10 = Low Profile Hollow Leg For LIF specify -30 Lead DIA Accepted = .015" to .020" Insertion Depth = .105" to .170" Style 10 Component Part No. = SC-3P1 Style 30 Component Part No. = EZ-3P1	-11 = Low Profile Standard For LIF specify -31 Lead DIA Accepted = .016" to .021" Insertion Depth = .080" to .115" Style 11 Component Part No. = SC-4P1 Style 31 Component Part No. = EZ-4P1	-12 = Micro Socket For LIF specify -32 Lead DIA Accepted = .015" to .020" Insertion Depth = .080" to .150" Style 12 Component Part No. = SC-5P1 Style 32 Component Part No. = EZ-5P1	-14 or -15 = Short Tail For LIF specify -34 or -35 <table> <tr> <th>STYLE</th> <th>Z</th> </tr> <tr> <td>-14 or -34</td> <td>(5.08) .200</td> </tr> <tr> <td>-15 or -35</td> <td>(4.24) .167</td> </tr> </table> N/A Single Row Lead DIA Accepted = .015" to .022" Style 14/34 Insertion Depth = .125" to .150" Style 14 Component Part No. = SC-1M1 Style 34 Component Part No. = EZ-1M1 Style 15/35 Insertion Depth = .080" to .110" Style 15 Component Part No. = SC-1M2 Style 35 Component Part No. = EZ-1M2	STYLE	Z	-14 or -34	(5.08) .200	-15 or -35	(4.24) .167
STYLE	Y	Z																		
-2* or -22*	(3.18) .125	(7.62) .300																		
-18 or -38	(4.57) .180	(8.89) .350																		
STYLE	Z																			
-14 or -34	(5.08) .200																			
-15 or -35	(4.24) .167																			

Mates with:

SS-1, SD-1, HSS, SL, SDL, ESS, ESD, HLS

SPECIFICATIONS

For complete specifications see www.samtec.com?HLT

Same as HLS except:

Terminal Material:

Brass

Plating:

Au or Sn over

50μ" (1,27μm) Ni

Current Rating:

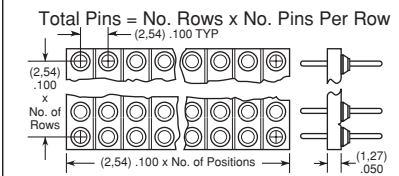
1A

Note:

This Series is non-standard, non-returnable.



HLT	NO. ROWS	NO. PINS PER ROW	PLATING OPTION	LEAD STYLE
-01 thru -20 (requires both digits)			-G = 20 μ" (0,51μm) Gold	-R
01 thru 20 (requires both digits)			-T = Tin	-H
				-T = Short Tail



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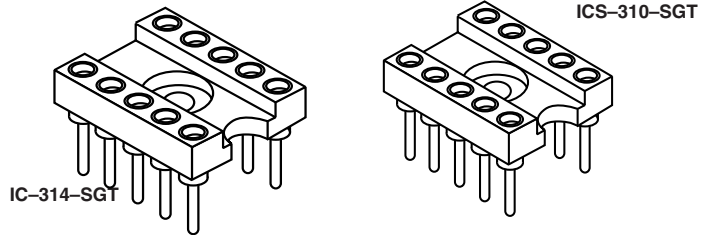
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SCREW MOUNT DIP SOCKETS

IC & ICS SERIES

Mates with:
AP, APS, APO,
APA, APE, APH

Highest reliability DIP sockets

IC and ICS series DIP sockets feature U.L. rated G.F. polyester body with mounting holes and use precision machined lead sockets for high reliability in the most demanding applications.

Specifications: IC & ICS



Insulator Material: Black Glass Filled Polyester
Flammability Rating: UL 94V-O

Insulation Resistance: 5000 megohm @ 500 VDC

Temperature Range: -65°C to +125°C

Withstanding Voltage: 1000 VRMS @ 60 Hz

Contact: BeCu

Shell: Brass except style K Phosphor Bronze

Plating: Au over 50µ" Ni or Sn over 100µ" Cu or 50µ" Ni

Current Rating: 1 amp continuous @ 100 VDC per contact

Contact Resistance: 10 milliohms @ 200 milliamp

Socket Retention in Body: 5 lbs against barb

Lead Size Range: .015" to .022" DIA and most IC leads

Insertion Force: Standard = 9 oz avg, 16 oz max (.017" DIA probe); Low Insertion Force = 2.5 oz avg, 5.5 oz max (.018" DIA probe)

Withdrawal Force: Standard = 2.5 oz avg, 1.5 oz min (after 12 insertions with .017" DIA probe); Low Insertion Force = 2.0 oz avg, 0.35 oz min (after 12 insertions with .018" DIA probe)

Note: Some sizes, styles and options are non-standard, non-returnable.

**TYPE
SOCKET**

**ROW SPACING &
NO. OF CONTACTS**

IC
= IC
Socket

ICS
= IC
Socket

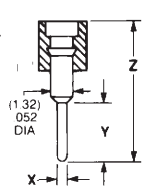
-S*, -A*, -J, or -K

= Printed Circuit

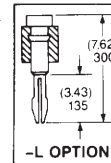
*For LIF Specify -ZS or -ZA

LEAD STYLE	X DIA	Y TAIL	Z
-S or -ZS	(0.51) .020	(3.18) .125	(7.62) .300
-A or -ZA	(0.51) .020	(4.57) .180	(8.89) .350
-J	(0.64) .025	(10.41) .410	(15.24) .600
-K	(0.89) .035	(12.95) .510	(17.86) .703

Locking lead
(-L) available.
See OPTION.



Style S, ZS, A, ZA & J Insertion Depth = .095" to .150"
Style S Component Part No. = SC-1P1
Style ZS Component Part No. = EZ-1P1
Style A Component Part No. = SC-6P1
Style ZA Component Part No. = EZ-6P1
Style J Component Part No. = SC-1P3
Option L Insertion Depth = .095" to .150"
Option L Component Part No. = SC-1L1 or EZ-1L1
Style K Insertion Depth = .125" to .170"
Style K Component Part No. = SC-2P1



Low Insertion Force (LIF) Contacts Available.

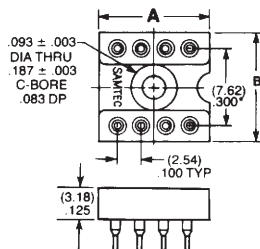
-306 = .300 Row 6 Contacts

-308 = .300 Row 8 Contacts

-310 = .300 Row 10 Contacts

Part No.	A Length	B Width
IC or ICS-306	(8.89) .350	(10.16) .400
IC or ICS-308	(11.43) .450	(10.16) .400
*IC or *ICS-310	(13.97) .550	(10.16) .400

* Mounting hole off center on 10 position.



-314 = .300 Row 14 Contacts

-316 = .300 Row 16 Contacts

-318 = .300 Row 18 Contacts

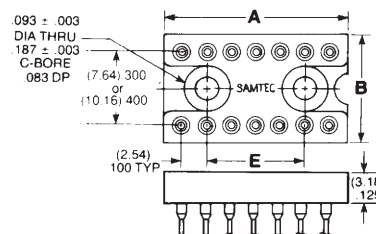
-320 = .300 Row 20 Contacts

-324 = .300 Row 24 Contacts

-422 = .400 Row 22 Contacts

-424 = .400 Row 24 Contacts

Part No.	A Length	B Width	E Mnt Holes
IC or ICS-314	(17.78) .700	(10.16) .400	(10.16) .400
IC or ICS-316	(20.32) .800	(10.16) .400	(12.70) .500
IC or ICS-318	(22.86) .900	(10.16) .400	(15.24) .600
IC or ICS-320	(25.40) 1.000	(10.16) .400	(17.78) .700
IC or ICS-324	(30.48) 1.200	(10.16) .400	(22.86) .900
IC or ICS-422	(27.94) 1.100	(10.16) .400	(20.32) .800
IC-424	(30.48) 1.200	(12.70) .500	(22.86) .900



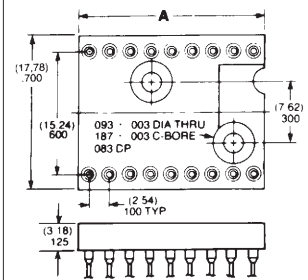
-610 = .600 Row 10 Contacts

-614 = .600 Row 14 Contacts

-616 = .600 Row 16 Contacts

-618 = .600 Row 18 Contacts

Part No.	A Length
IC-610	(12.70) .500
IC-614	(17.78) .700
IC-616	(20.32) .800
IC-618	(22.86) .900



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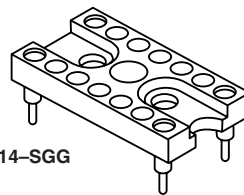
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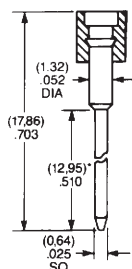


CO-314-SGG

LEAD STYLE

-W

= Wire-Wrap
For LIF Specify -ZW



Shorter
w/w tail
lengths
available.
See
OPTION.

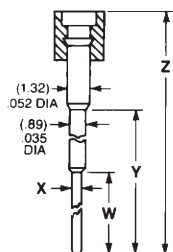
Insertion Depth
= .125" to .170"
Style W Component
Part No. = SC-1W1(1)
Style ZW Component
Part No. = EZ-1W1(1)
Style W-2 Component
Part No. = SC-1W1(2)
Style ZW-2 Component
Part No. = EZ-1W1(2)
Style W-3 Component
Part No. = SC-1W1(3)
Style ZW-3 Component
Part No. = EZ-1W1(3)

-E or -H

= Elevated
For LIF Specify -ZE or -ZH

LEAD STYLE	X DIA	W TAIL	Y	Z
-E or -ZE	(0.51) .020	(4.32) .170	(8.86) .349	(13.77) .543
-H or -ZH	(0.46) .018	(3.81) .150	(12.95) .510	(17.86) .703

Insertion Depth = .125" to .175"
Style E Component Part No. = SC-2P3
Style ZE Component Part No. = EZ-2P3
Style H Component Part No. = SC-2P2
Style ZH Component Part No. = EZ-2P2



PLATING OPTION

GG

= 30µ" Gold Contact
10µ" Gold Shell

GT

= 30µ" Gold Contact
Tin Shell

TT

= Tin Contact
and Shell
(-S, -ZS, -W, -ZW,
-A, -H only)

ST

= 10µ" Gold Contact
Tin Shell
(-S & -ZS only)

OPTION

(Leave Blank for
Standard Version)

-2

= (9.14) .360
Wire-Wrap
Tail

Wire-Wrap Option

Requires Style
-W or -ZW

-3

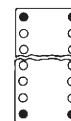
= (6.60) .260
Wire-Wrap
Tail

Specify desired
suffix for shorter
Wire-Wrap tail.

-L

= Locking
Socket

Requires Style
-S or -ZS
and .035"±.003"
board hole.



-624 = .600 Row / 24 Contacts

-628 = .600 Row / 28 Contacts

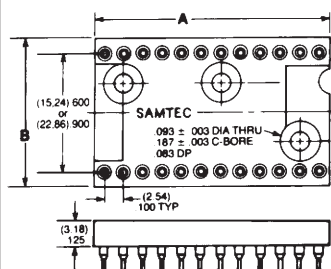
-632 = .600 Row / 32 Contacts

-640 = .600 Row / 40 Contacts

-940 = .900 Row / 40 Contacts

-950 = .900 Row / 50 Contacts

-964 = .900 Row / 64 Contacts



Part No.	A Length	B Width
IC or ICS-624	(30.48) 1.200	(17.78) .700
IC or ICS-628	(35.56) 1.400	(17.78) .700
IC or ICS-632	(40.64) 1.600	(17.78) .700
IC or ICS-640	(50.80) 2.000	(17.78) .700
*IC-940		
*IC-950	(63.50) 2.500	(26.27) 1.050
IC-964	(81.28) 3.200	

*IC-940 and IC-950
are non-standard
non-returnable.

†Mounting hole off center on 50 positions

CRYSTAL OSCILLATOR CO SERIES

SPECIFY PART NUMBER FROM CHART BELOW

Part Number	Termination Suffix*		Number of Contacts	Contact Finish	Shell Finish
	P.C.	W/W			
CO-314	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			
CO-316	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			
CO-624	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			

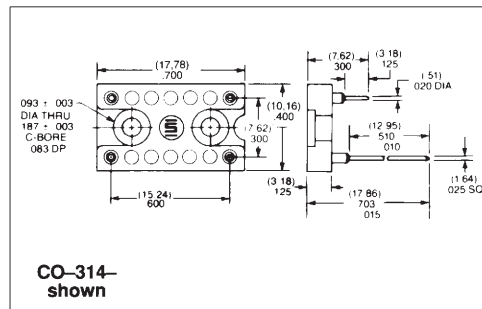
*For LIF contacts substitute -ZS for -S and -ZW for -W.

Crystal Oscillator

Accepts any component
leads from .015" to .022"
diameter. Low profile
with precision machined
lead sockets for high
retention and reliability.

Specifications: CO

Same as IC Series.

CO-314—
shown

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC JAPAN • Tel: 81-424-42-8318 • Fax: 81-424-42-8319

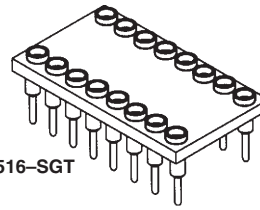
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samtec

ICH-516-SGT



DIP SOCKET CARRIERS ICH SERIES

Mates with:
AP, APS, APO, APH,
APA, APE

Hi-Temp DIP's Allow For Customized Row Spacing

Samtec ICH Series DIP sockets for unusual centerline applications feature lead sockets designed to float and self-center during soldering. This body will withstand most vapor phase and infrared soldering temperatures.

Specifications:

ICH
HI-TEMP



Same as ICO except:
Insulation Material:
Black High Temperature Thermoplastic
Temperature Range:
-65°C to +140°C
Heat Deflection Temp:
215°C @ 264 psi

TYPE CARRIER	ROW SPACE	NO. OF PINS	LEAD STYLE	PLATING OPTION	OPTION (Leave Blank for Standard Version)
ICH = Hi-Temp Polyester	-2 thru -19 = Row Spacing Row Spacing EXAMPLE: -3 = .300 centers	02 thru 40 = Total Number of Pins	GG = 30 μ " Gold Contact 10 μ " Gold Shell	-L = Locking Socket Requires Style -S, -ZS, -P or -ZP and .035"±.003" board hole.	
GT = 30 μ " Gold Contact Tin Shell	TT = Tin Contact and Shell (Styles -S, -ZS, -C, -A, -L, -M, -N only)				
ST = 10 μ " Gold Contact Tin Shell (Styles -S & -ZS only)					
Low Insertion Force (LIF) Contacts Available.					

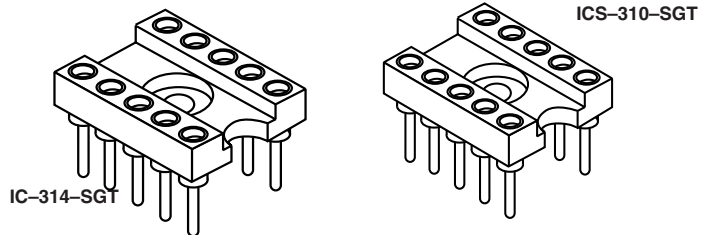
-S or -A = Printed Circuit For LIF Specify -ZS or -ZA <table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>Y TAIL</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>-S or -ZS</td> <td>(3.18) 125</td> <td>(7.62) 300</td> </tr> <tr> <td>-A or -ZA</td> <td>(4.57) 180</td> <td>(8.89) 350</td> </tr> </tbody> </table> Locking lead (-L) available. See OPTION.	LEAD STYLE	Y TAIL	Z	-S or -ZS	(3.18) 125	(7.62) 300	-A or -ZA	(4.57) 180	(8.89) 350	-B = Body Only For LIF Specify -ZB 	-P or -T = Short Tail For LIF Specify -ZP or -ZT N/A Single Row <table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>-P or -ZP</td> <td>(5.20) 205</td> </tr> <tr> <td>-T or -ZT</td> <td>(4.24) 167</td> </tr> </tbody> </table> Locking lead (-L) available. See OPTION.	LEAD STYLE	Z	-P or -ZP	(5.20) 205	-T or -ZT	(4.24) 167
LEAD STYLE	Y TAIL	Z															
-S or -ZS	(3.18) 125	(7.62) 300															
-A or -ZA	(4.57) 180	(8.89) 350															
LEAD STYLE	Z																
-P or -ZP	(5.20) 205																
-T or -ZT	(4.24) 167																
-L = Low Profile For LIF Specify -ZL 	-M = Low Profile For LIF Specify -ZM 	-N = Micro Socket For LIF Specify -ZN 															
-C = Micro Socket For LIF Specify -ZC 																	

Note:
This Series is non-standard,
non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SCREW MOUNT DIP SOCKETS

IC & ICS SERIES

Mates with:
AP, APS, APO,
APA, APE, APH

Highest reliability DIP sockets

IC and ICS series DIP sockets feature U.L. rated G.F. polyester body with mounting holes and use precision machined lead sockets for high reliability in the most demanding applications.

Specifications: IC & ICS



Insulator Material: Black Glass Filled Polyester
Flammability Rating: UL 94V-O

Insulation Resistance: 5000 megohm @ 500 VDC

Temperature Range: -65°C to +125°C

Withstanding Voltage: 1000 VRMS @ 60 Hz

Contact: BeCu

Shell: Brass except style K Phosphor Bronze

Plating:

Au over 50µ" Ni or Sn over 100µ" Cu or 50µ" Ni

Current Rating:

1 amp continuous @ 100 VDC per contact

Contact Resistance:

10 milliohms @ 200 milliamp

Socket Retention in Body: 5 lbs against barb

Lead Size Range:

.015" to .022" DIA and most IC leads

Insertion Force:

Standard = 9 oz avg, 16 oz max (.017" DIA probe); Low Insertion Force = 2.5 oz avg, 5.5 oz max (.018" DIA probe)

Withdrawal Force:

Standard = 2.5 oz avg, 1.5 oz min (after 12 insertions with .017" DIA probe); Low Insertion Force = 2.0 oz avg, 0.35 oz min (after 12 insertions with .018" DIA probe)

Note:

Some sizes, styles and options are non-standard, non-returnable.

TYPE
SOCKET

ROW SPACING &
NO. OF CONTACTS

IC
= IC
Socket

ICS
= IC
Socket

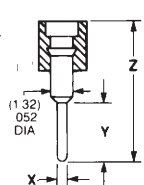
-S*, -A*, -J, or -K

= Printed Circuit

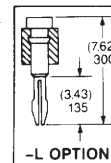
*For LIF Specify -ZS or -ZA

LEAD STYLE	X DIA	Y TAIL	Z
-S or -ZS	(0.51) .020	(3.18) .125	(7.62) .300
-A or -ZA	(0.51) .020	(4.57) .180	(8.89) .350
-J	(0.64) .025	(10.41) .410	(15.24) .600
-K	(0.89) .035	(12.95) .510	(17.86) .703

Locking lead
(-L) available.
See OPTION.



Style S, ZS, A, ZA & J Insertion Depth = .095" to .150"
Style S Component Part No. = SC-1P1
Style ZS Component Part No. = EZ-1P1
Style A Component Part No. = SC-6P1
Style ZA Component Part No. = EZ-6P1
Style J Component Part No. = SC-1P3
Option L Insertion Depth = .095" to .150"
Option L Component Part No. = SC-1L1 or EZ-1L1
Style K Insertion Depth = .125" to .170"
Style K Component Part No. = SC-2P1



Low Insertion Force (LIF) Contacts Available.

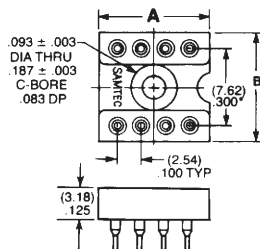
-306 = .300 Row 6 Contacts

-308 = .300 Row 8 Contacts

-310 = .300 Row 10 Contacts

Part No.	A Length	B Width
IC or ICS-306	(8.89) .350	(10.16) .400
IC or ICS-308	(11.43) .450	(10.16) .400
*IC or *ICS-310	(13.97) .550	(10.16) .400

* Mounting hole off center on 10 position.



-314 = .300 Row 14 Contacts

-316 = .300 Row 16 Contacts

-318 = .300 Row 18 Contacts

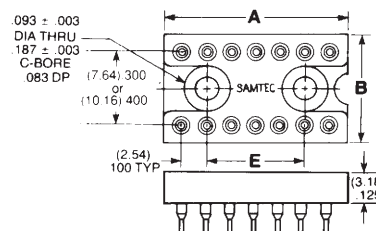
-320 = .300 Row 20 Contacts

-324 = .300 Row 24 Contacts

-422 = .400 Row 22 Contacts

-424 = .400 Row 24 Contacts

Part No.	A Length	B Width	E Mnt Holes
IC or ICS-314	(17.78) .700	(10.16) .400	(10.16) .400
IC or ICS-316	(20.32) .800	(10.16) .400	(12.70) .500
IC or ICS-318	(22.86) .900	(10.16) .400	(15.24) .600
IC or ICS-320	(25.40) 1.000	(10.16) .400	(17.78) .700
IC or ICS-324	(30.48) 1.200	(10.16) .400	(22.86) .900
IC or ICS-422	(27.94) 1.100	(10.16) .400	(20.32) .800
IC-424	(30.48) 1.200	(12.70) .500	(22.86) .900



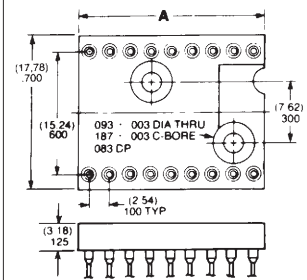
-610 = .600 Row 10 Contacts

-614 = .600 Row 14 Contacts

-616 = .600 Row 16 Contacts

-618 = .600 Row 18 Contacts

Part No.	A Length
IC-610	(12.70) .500
IC-614	(17.78) .700
IC-616	(20.32) .800
IC-618	(22.86) .900



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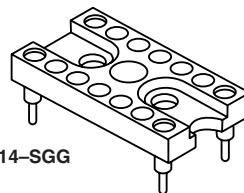
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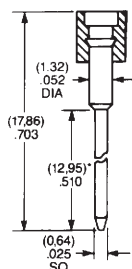


CO-314-SGG

LEAD STYLE

-W

= Wire-Wrap
For LIF Specify -ZW



Shorter
w/w tail
lengths
available.
See
OPTION.

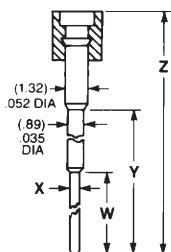
Insertion Depth
= .125" to .170"
Style W Component
Part No. = SC-1W1(1)
Style ZW Component
Part No. = EZ-1W1(1)
Style W-2 Component
Part No. = SC-1W1(2)
Style ZW-2 Component
Part No. = EZ-1W1(2)
Style W-3 Component
Part No. = SC-1W1(3)
Style ZW-3 Component
Part No. = EZ-1W1(3)

-E or -H

= Elevated
For LIF Specify -ZE or -ZH

LEAD STYLE	X DIA	W TAIL	Y	Z
-E or -ZE	(0.51) .020	(4.32) .170	(8.86) .349	(13.77) .543
-H or -ZH	(0.46) .018	(3.81) .150	(12.95) .510	(17.86) .703

Insertion Depth = .125" to .175"
Style E Component Part No. = SC-2P3
Style ZE Component Part No. = EZ-2P3
Style H Component Part No. = SC-2P2
Style ZH Component Part No. = EZ-2P2



PLATING OPTION

GG

= 30µ" Gold Contact
10µ" Gold Shell

GT

= 30µ" Gold Contact
Tin Shell

TT

= Tin Contact
and Shell
(-S, -ZS, -W, -ZW,
-A, -H only)

ST

= 10µ" Gold Contact
Tin Shell
(-S & -ZS only)

OPTION

(Leave Blank for
Standard Version)

-2

= (9.14) .360
Wire-Wrap
Tail

Wire-Wrap Option

Requires Style
-W or -ZW

-3

= (6.60) .260
Wire-Wrap
Tail

Specify desired
suffix for shorter
Wire-Wrap tail.

-L

= Locking
Socket

Requires Style
-S or -ZS
and .035"±.003"
board hole.



-624 = .600 Row / 24 Contacts

-628 = .600 Row / 28 Contacts

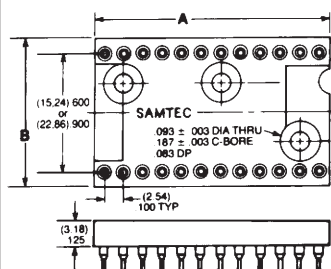
-632 = .600 Row / 32 Contacts

-640 = .600 Row / 40 Contacts

-940 = .900 Row / 40 Contacts

-950 = .900 Row / 50 Contacts

-964 = .900 Row / 64 Contacts



Part No.	A Length	B Width
IC or ICS-624	(30.48) 1.200	(17.78) .700
IC or ICS-628	(35.56) 1.400	(17.78) .700
IC or ICS-632	(40.64) 1.600	(17.78) .700
IC or ICS-640	(50.80) 2.000	(17.78) .700
*IC-940		
*IC-950	(63.50) 2.500	(26.27) 1.050
IC-964	(81.28) 3.200	

*IC-940 and IC-950
are non-standard
non-returnable.

†Mounting hole off center on 50 positions

CRYSTAL OSCILLATOR CO SERIES

SPECIFY PART NUMBER FROM CHART BELOW

Part Number	Termination Suffix*		Number of Contacts	Contact Finish	Shell Finish
	P.C.	W/W			
CO-314	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			
CO-316	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			
CO-624	-SGG	-WGG	4	Gold Gold Tin	Gold Tin Tin
	-SGT	-WGT			
	-STT	-WTT			

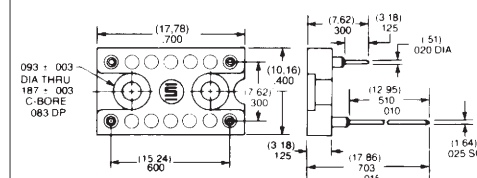
*For LIF contacts substitute -ZS for -S and -ZW for -W.

Crystal Oscillator

Accepts any component
leads from .015" to .022"
diameter. Low profile
with precision machined
lead sockets for high
retention and reliability.

Specifications: CO

Same as IC Series.



CO-314-
shown

OPTION

(Leave Blank for
Standard Version)

-2

= (9.14) .360
Wire-Wrap
Tail

Wire-Wrap Option

Requires Style
-W or -ZW

-3

= (6.60) .260
Wire-Wrap
Tail

Specify desired
suffix for shorter
Wire-Wrap tail.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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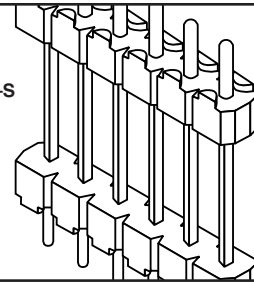
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LBS-106-B-G-S



INTERCONNECT STRIPS LBS SERIES

Mates with:
SS, SD, HSS, SL, SDL,
ESS, ESD

SPECIFICATIONS

For complete specifications
see www.samtec.com?LBS

Insulator Material:

Black High
Temperature
Thermoplastic

Flammability Rating:
UL 94V-O

Insulation Resistance:
5000 MΩ min

Operating Temp Range:
-65°C to +140°C

Heat Deflection Tem:
207°C @ 264 psi (1,8MPa)

Withstanding Voltage:
1000 VRMS

Terminal Material:
Coined Phosphor Bronze

Plating:
Au or Sn over 50μ" (1,27μm) Ni

Current Rating: 1A



Note:

Some lengths, styles and
options are non-standard,
non-returnable.

LBS

1

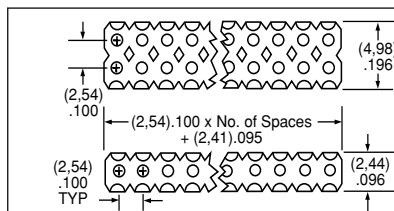
NO. PINS
PER ROWLEAD
STYLEPLATING
OPTIONROW
OPTION

-G
=10μ" (0,25μm)
Gold on Tails

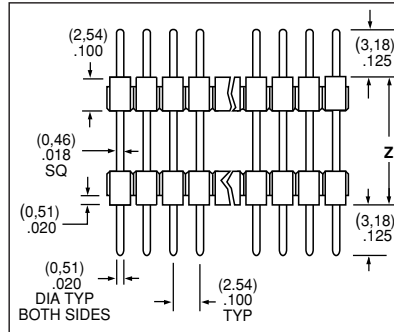
-S
=Single
Row

-T
=Tin

-D
=Double
Row



**01
thru
36**



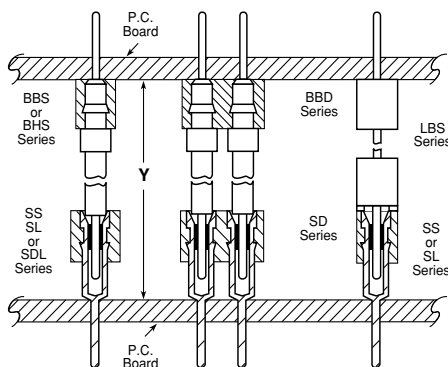
-A
Z= (5,33) .210

-B
Z= (8, 51) .335

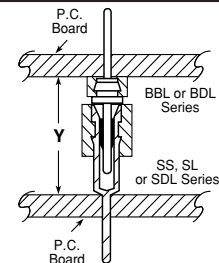
-C
Z= (14, 86) .585

-D
Z= (21, 21) .835

APPLICATIONS



STYLE	MATED WITH SERIES & STYLE	Y
-A	SL-1XX-X-12	.305 (7,75)
-A	SL-1XX-X-10	.332 (8,43)
-A	SL-1XX-X-11	.362 (9,19)
-A	SS-1XX-X-2	.385 (9,78)
-B	SL-1XX-X-12	.430 (10,92)
-B	SL-1XX-X-10	.457 (11,61)
-B	SL-1XX-X-11	.487 (12,37)
-B	SS-1XX-X-2	.510 (12,95)
-C or -G	SL-1XX-X-12	.680 (17,27)
-C or -G	SL-1XX-X-10	.707 (17,96)
-C or -G	SL-1XX-X-11	.737 (18,71)
-C or -G	SS-1XX-X-2	.760 (19,30)
-D or -H	SL-1XX-X-12	.930 (23,62)
-D or -H	SL-1XX-X-10	.957 (24,31)
-D or -H	SL-1XX-X-11	.987 (25,07)
-D or -H	SS-1XX-X-2	1.010 (25,65)



**BOARD
SPACINGS
DOWN
TO .153"
(3,99mm)**

STYLE	MATED WITH SERIES & STYLE	Y
-E	SL-1XX-X-19	.153 (3,89)
-E	SL-1XX-X-12	.165 (4,19)
-F	SL-1XX-X-19	.168 (4,27)
-F	SL-1XX-X-12	.180 (4,57)
-E	SL-1XX-X-10	.192 (4,88)
-F	SL-1XX-X-10	.207 (5,26)
-E	SL-1XX-X-11	.202 (5,13)
-F	SL-1XX-X-11	.217 (5,51)
-E	SS-1XX-X-2	.245 (6,22)
-F	SS-1XX-X-2	.260 (6,60)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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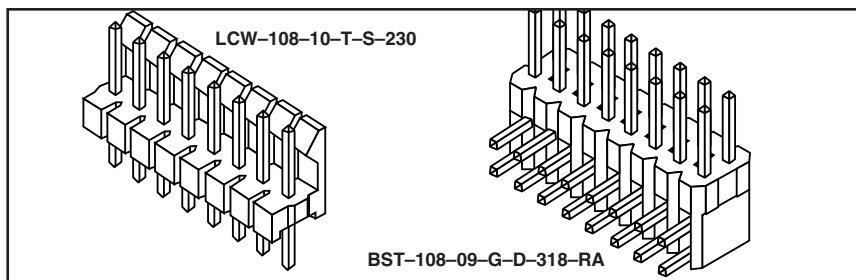
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.025"sq TERMINAL STRIPS LCW, BST SERIES

Mates with:
SSW, SSQ, ESW, ESQ,
IDSS (LCW), IDSD (BST)

SPECIFICATIONS

For complete specifications
see www.samtec.com?LCW
or www.samtec.com?BST

Insulator Material:
Black Glass Filled
Polyester



Flammability Rating:
UL 94V-O

Insulation Resistance:
5000 megohm @ 500 VDC

Operating Temp Range:
-65°C to 125°C with Gold

-65°C to 105°C with Tin

Withstanding Voltage:
1000 VRMS @ 60 Hz

Terminal Material:
Drawn Phosphor Bronze Wire

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: 3 A

Terminal Retention in Body:
3 lbs (13,35N)

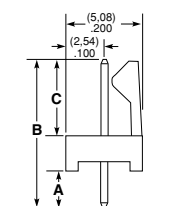
Note:

Some lengths, styles and
options are non-standard,
non-returnable.

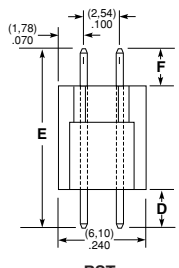
TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	POST HEIGHT	OTHER OPTION
LCW =Friction Lock							
BST =Bottom Shroud							
01 thru 36							
			-G = Gold on Contact Area, Gold Flash on Balance			-XXX = "C" or "F" Specify post height from chart	-R "X" =Right Angle (Specify from chart)
			-T = Tin			-S =Single Row (LCW)	-LL =Locking Lead (Specify from chart)
			-S = 30µ" (0,76µm) Gold on Contact Area, Tin on Tail			-M =Locking Clip Removed From End Positions (LCW)	Two leads per strip crimped in opposite directions on or near centerline. (Tail length "A" = .300" or less) N/A with 1 or 2 positions
			-L = 10µ" (0,25µm) Gold on Contact Area, Tin on Tail			-D =Double Row (BST)	

Straight Pin Versions

LCW			
LEAD STYLE	TAIL A	OAL B	POST C
* -07	(2,54) .100	(10,92) .430	
* -08	(5,08) .200	(13,46) .530	
-09	(10,16) .400	(18,54) .730	
-10	(12,70) .500	(21,08) .830	
-11	(15,24) .600	(23,62) .930	
-12	(17,78) .700	(26,16) 1,030	
-13	(22,86) .900	(31,24) 1,230	(5,84) .230
-14	(27,94) 1,100	(36,32) 1,430	
* -15	(7,62) .300	(16,00) .630	
* -16	(2,92) .115	(11,30) .445	
* -17	(3,81) .150	(12,19) .480	
-19	(25,40) 1,000	(33,78) 1,330	
-20	(20,32) .800	(28,70) 1,130	
* -08	(3,30) .130	(13,46) .530	
-09	(8,38) .330	(18,54) .730	
-10	(10,92) .430	(21,08) .830	
-11	(13,46) .530	(23,62) .930	
-12	(16,00) .630	(26,16) 1,030	(7,62) .300
-13	(21,08) .830	(31,24) 1,230	
-14	(26,16) 1,030	(36,32) 1,430	
* -15	(5,84) .230	(16,00) .630	
-19	(23,62) .930	(33,78) 1,330	
-20	(18,54) .730	(28,70) 1,130	



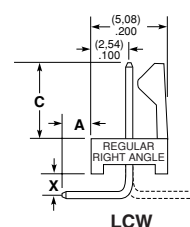
*Available with
-LL (Locking Lead)
Option



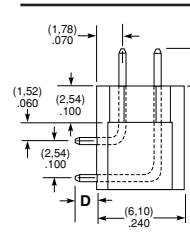
BST			
LEAD STYLE	TAIL D	OAL E	POST F
-09	(5,46) .215	(18,54) .730	
-10	(8,00) .315	(21,08) .830	
-11	(10,54) .415	(23,62) .930	
-12	(13,08) .515	(26,16) 1,030	
-13	(18,16) .715	(31,24) 1,230	(5,84) .230
-14	(23,24) .915	(36,32) 1,430	
-15	(2,92) .115	(16,00) .630	
-19	(20,70) .815	(33,78) 1,330	
-20	(15,62) .615	(28,70) 1,130	
-09	(3,23) .127	(18,54) .730	
-10	(5,77) .227	(21,08) .830	
-11	(8,31) .327	(23,62) .930	
-12	(10,85) .427	(26,16) 1,030	
-13	(15,93) .627	(31,24) 1,230	(8,08) .318
-14	(21,01) .827	(36,32) 1,430	
-19	(18,47) .727	(33,78) 1,330	
-20	(13,39) .527	(28,70) 1,130	

Right Angle Versions

LCW				
LEAD STYLE	-RA -RR TAIL A	-RE TAIL A	-RP TAIL A	POST C
-09	(6,60) .260	(4,06) .160	(7,62) .300	
-10	(9,14) .360	(6,60) .260	(10,16) .400	
-11	(11,68) .460	(9,14) .360	(12,70) .500	
-12	(14,22) .560	(11,68) .460	(15,24) .600	
-13	(19,30) .760	(16,76) .660	(20,32) .800	(5,84) .230
-14	(24,38) .960	(21,84) .860	(25,40) 1,000	
-15	(4,06) .160	(1,52) .060	(5,08) .200	
-19	(21,84) .860	(19,30) .760	(22,86) .900	
-20	(16,76) .660	(14,22) .560	(17,78) .700	
-09	(4,83) .190	(2,29) .090	(5,84) .230	
-10	(7,37) .290	(4,83) .190	(6,38) .330	
-11	(9,91) .390	(7,37) .290	(10,92) .430	
-12	(12,45) .490	(9,91) .390	(13,46) .530	
-13	(17,53) .690	(14,99) .590	(18,54) .730	(7,62) .300
-14	(22,61) .890	(20,07) .790	(23,62) .930	
-15	(2,29) .090	-	(3,30) .130	
-19	(20,07) .790	(17,53) .690	(21,08) .830	
-20	(14,99) .590	(12,45) .490	(16,00) .630	



REGULAR RIGHT ANGLE	
OPTION	X
-RA	(1,52) .060
-RE	(4,06) .160
-RP	(0,64) .025 MAX



BST		
LEAD STYLE	TAIL D	POST F
-08	(2,29) .090	
-09	(7,37) .290	
-10	(9,91) .390	
-11	(12,45) .490	
-12	(14,99) .590	(5,84) .230
-13	(20,07) .790	
-15	(4,83) .190	
-20	(17,53) .690	
-09	(5,08) .200	
-10	(7,62) .300	
-11	(10,16) .400	(8,08) .318
-12	(12,70) .500	
-13	(17,78) .700	
-20	(15,24) .600	

Due to technical progress, all designs, specifications and components are subject to change without notice.

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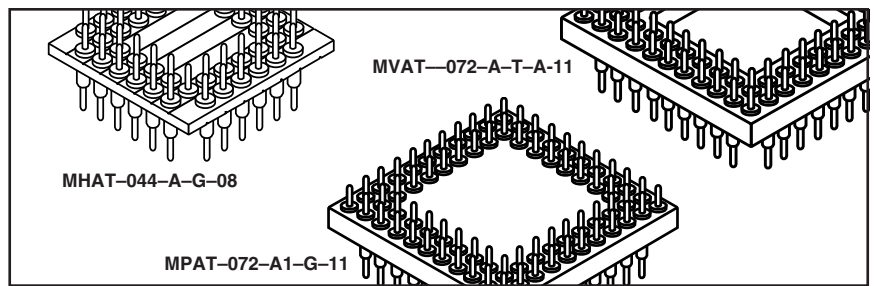
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PIN GRID ARRAY ADAPTORS MPAT, MVAT, MHAT, MSAT

Mates with:
MPAS, MVAS, MLAS,
MHAS, MSAS

Features:

- A choice of many different terminal styles and insulators makes it easy to find the adaptor for your application.
- Unique MHAT insulator that allows any array from 1 by 1 to 20 by 20.
- Irregular shapes are also available upon request.

Specifications:

MPAT, MVAT

Insulator Material:
Black Glass Filled Polyester
Flammability Rating:
UL 94V-O
Insulation Resistance:
5000 megohm @ 500 VDC
Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold.
Withstanding Voltage:
1000 VRMS @ 60 Hz
Terminal Material:
Brass or Phosphor Bronze
Plating:
Au or Sn over 50µ" Ni
Current Rating:
1 amp continuous
@ 100 VDC per contact
Terminal Retention in Body:
5 lbs against barb

Specifications:

MSAT HI-TEMP

Same as MPAT except:
Insulator Material:
Black Liquid Crystal Polymer
Max Processing Temp:
230°C for 30 to 60 seconds

Specifications:

MHAT

Same as MPAT except:
Insulator Material:
Black High Temperature Thermoplastic
Operating Temp Range:
-65°C to +170°C

Note:
These Series are non-standard, non-returnable.

BODY STYLE	PIN COUNT	LEAD STYLE	PLATING OPTION	GRID SIZE & PIN OUT CODE
MPAT = Standard Polyester MVAT = Open Body Polyester MSAT = Hi-Temp Open Body 	-XXX = Total Number Of Filled Positions		-G = 20µ" (0,51µm) Gold -T = Tin	

MPAT, MVAT & MSAT ONLY

-A or -A1 = Round Pin

STYLE	X DIA
-A	(0,64) .025
-A1	(0,46) .018

-A Component No. = T-1R0
-A1 Component No. = T-1R5

-J = Solder Shell

-J Component No. = S-1P1

-R = Standard Pin

-R Component No. = T-2R6

-H = Short Pin

-H Component No. = T-1R6

-D or -D1 = Wirewrap

STYLE	A
-D	(12,95) .510
-D1	(7,87) .310

-D Component No. = T-1S4-1-1
-D1 Component No. = T-1S4-1-2

-M, -N & -P = Extended Pin

Not available with MSAT.

LEAD STYLE	A
-M	(1,52) .060
-N	(4,70) .185
-P	(11,05) .435

-M Component No. = T-1R14-1
-N Component No. = T-1R14-2
-P Component No. = T-1R14-3

MHAT ONLY

-T = Extended Pin

-T Component No. = T-3R6

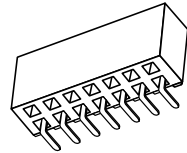
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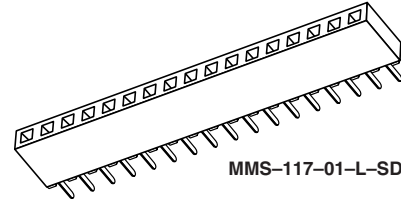
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MMS-107-01-L-DP



MMS-117-01-L-SD



2mm SOCKET STRIPS MMS-XD & -XP SERIES

Mates with:
TMM, MTMM, MMT,
LTMM, TW, TCMD

Features:

- Box style connectors on 2mm pitch
- High quality double beam contacts insure performance
- Four styles for pass-through/bottom entry applications
- LCP for high temperature reflow soldering

SPECIFICATIONS

For complete specifications see www.samtec.com?MMS

Insulator Material:
Black Liquid Crystal Polymer
Flammability Rating:
UL 94V-O

Insulation Resistance:
5000 MΩ min

Max Processing Temp:
230°C for 30 to 60 seconds

Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin

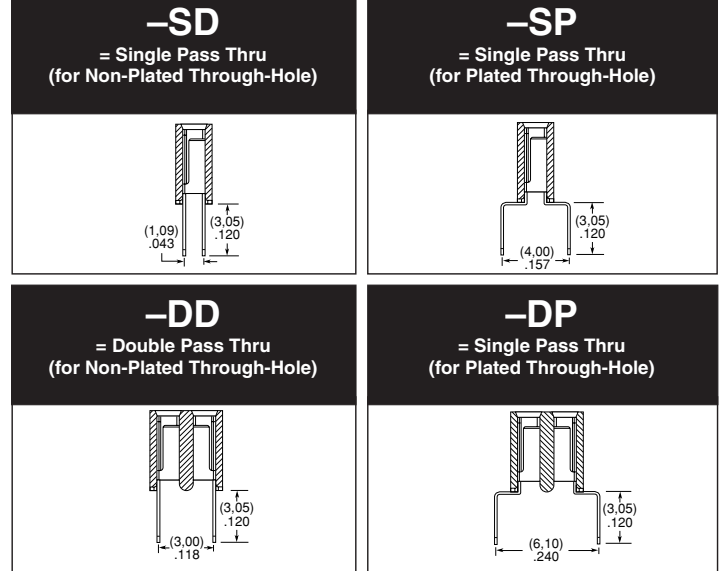
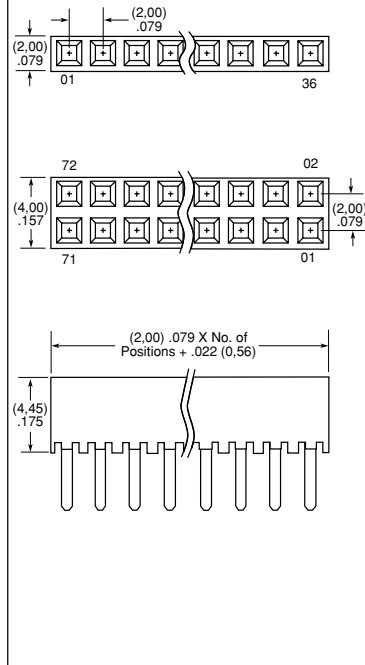
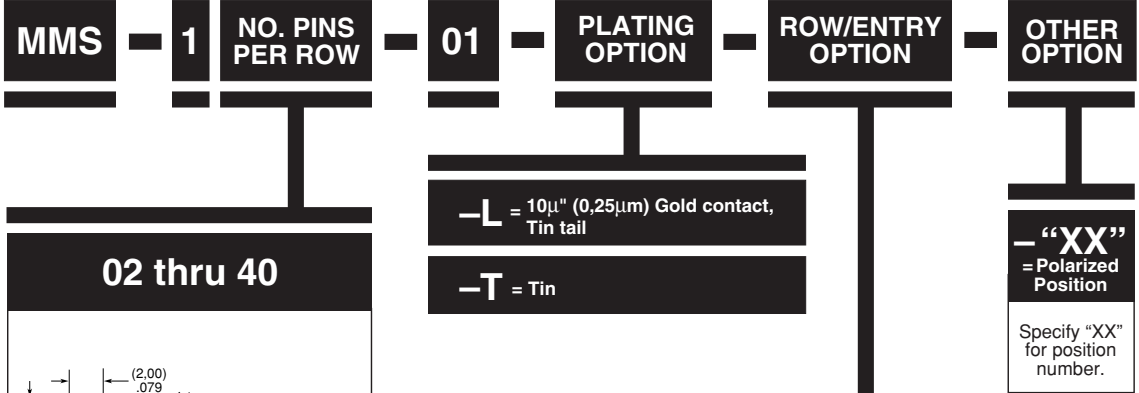
Withstanding Voltage:
600 VAC

Contact Material:
Phosphor Bronze

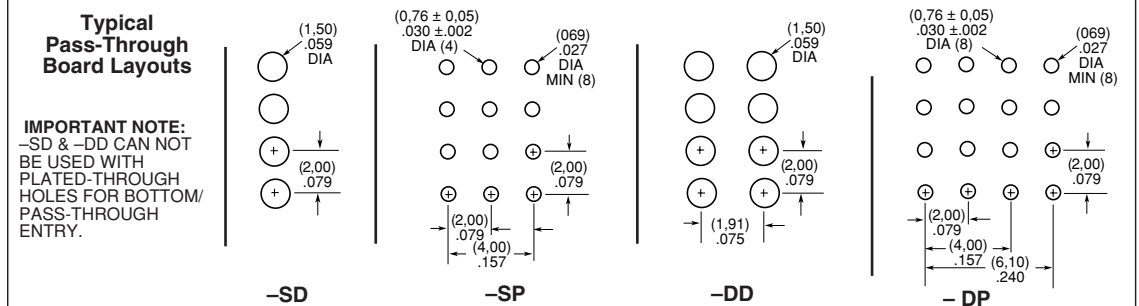
Plating:
Sn or Au over
50μ" (1,27μm) Ni

Contact Resistance:
10 mΩ max

Lead Size Range:
.019" (0,48mm) SQ
to .021" (0,53mm) SQ



PCB LAYOUTS



Note:
Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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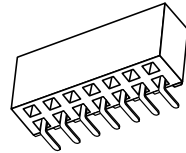
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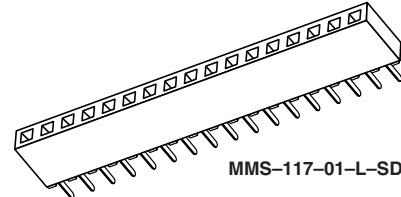
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MMS-107-01-L-DP



MMS-117-01-L-SD



2mm SOCKET STRIPS MMS-XD & -XP SERIES

Mates with:

TMM, MTMM, MMT,
LTMM, TW, TCMD

Features:

- Box style connectors on 2mm pitch
- High quality double beam contacts insure performance
- Four styles for pass-through/bottom entry applications
- LCP for high temperature reflow soldering

SPECIFICATIONS

For complete specifications see www.samtec.com?MMS

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ min

Max Processing Temp:

230°C for 30 to 60 seconds

Operating Temp Range:

-65°C to +125°C with Gold

-65°C to +105°C with Tin

Withstanding Voltage:

600 VAC

Contact Material:

Phosphor Bronze

Plating:

Sn or Au over

50μ" (1,27μm) Ni

Contact Resistance:

10 mΩ max

Lead Size Range:

.019" (0,48mm) SQ

to .021" (0,53mm) SQ

MMS

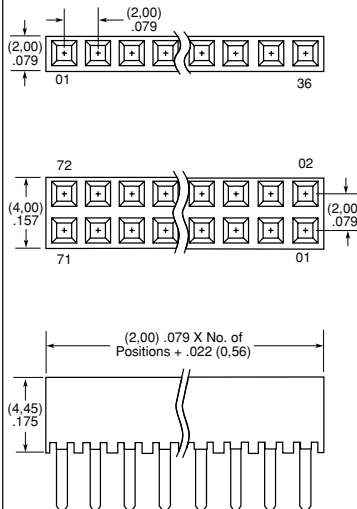
1

NO. PINS
PER ROW

01

PLATING
OPTIONROW/ENTRY
OPTIONOTHER
OPTION

02 thru 40



—L = 10μ" (0,25μm) Gold contact,
Tin tail

—T = Tin

—“XX”
= Polarized
Position

Specify “XX”
for position
number.

—SD

= Single Pass Thru
(for Non-Plated Through-Hole)

(1,09) .043 (3,05) .120

—SP

= Single Pass Thru
(for Plated Through-Hole)

(3,05) .120 (4,00) .157

—DD

= Double Pass Thru
(for Non-Plated Through-Hole)

(3,05) .120 (3,00) .118

—DP

= Single Pass Thru
(for Plated Through-Hole)

(3,05) .120 (6,10) .240

PCB LAYOUTS

Typical Pass-Through Board Layouts

IMPORTANT NOTE:
—SD & —DD CAN NOT
BE USED WITH
PLATED-THROUGH
HOLES FOR BOTTOM/
PASS-THROUGH
ENTRY.

(1,50)
.059
DIA

(2,00)
.079

—SD

(0,76 ± 0,05)
.030 ± .002
DIA (4)

(2,00)
.079 (4,00)
.157

—SP

(0,69)
.027
DIA
MIN (8)

(2,00)
.079 (1,91)
.075

—DD

(1,50)
.059
DIA

(2,00)
.079

—DP

(0,76 ± 0,05)
.030 ± .002
DIA (8)

(2,00)
.079 (4,00)
.157 (6,10)
.240

—DP

Note:

Some sizes, styles and
options are non-standard,
non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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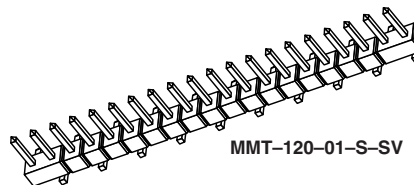
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MMT-120-01-S-SV

2mm SMT STRIPS

MMT-XV SERIES

Mates with:
SSM, MMS, TCSD,

Features:

- Single or double row
- Vertical or horizontal pin orientation. (See Full Line Catalog for horizontal specifications.)
- Alignment pins
- Locking clips
- Pick & Place Pads
- Polarization option
- Molded with high temperature Liquid Crystal Polymer for infrared or vapor phase reflow soldering.
- Mates with Samtec surface mount sockets, or with other Samtec high temperature through-hole sockets for mixed technology applications.

SPECIFICATIONS

For complete specifications see www.samtec.com?MMT

Insulator Material:
Black Liquid Crystal Polymer
Flammability Rating:
UL 94V-O

Insulation Resistance:
5000 MΩ min

Max Processing Temp:
230°C for 30 to 60 seconds

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold
Dielectric Withstanding Voltage:
600 VAC

Terminal Material:
Phosphor Bronze

Plating:
Au, PdNi or Sn over
50μ" (1,27μm) Ni

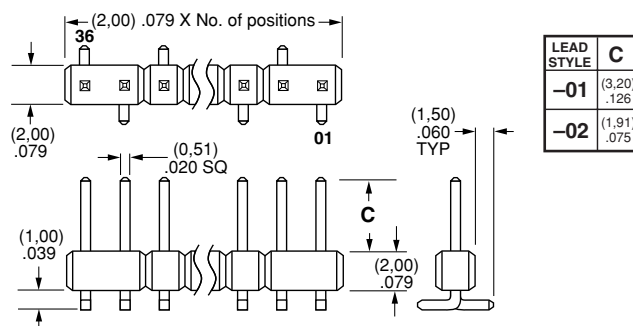
Lead Coplanarity:
.006" (0,15mm) max

Note:
Some lengths, styles and options are non-standard, non-returnable.

MMT	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	OPTION
		02 thru 36				
			-01 = (3,20) = .126 post	-S = 30μ" (0,76μm) Gold on post, Tin on tail		-XX = Polarized position
			-02 = (1,91) = .075 post	-T = (3,81μm) Tin		-TR = Tape & Reel Pkg
						-P = Removable Pick & Place Pad

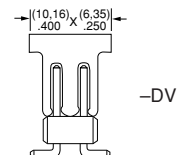
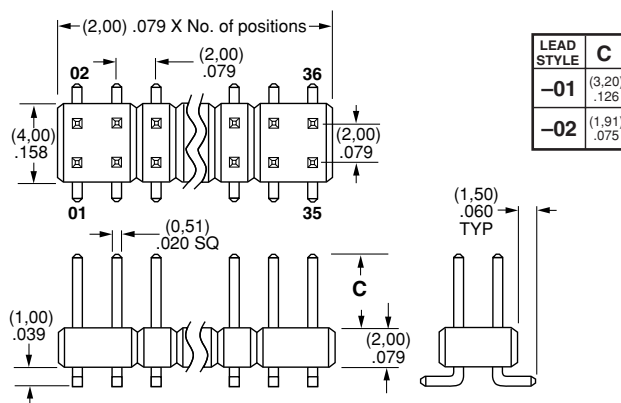
-SV

=Single Row Vertical Pin



-DV

=Double Row Vertical Pin



-DV



-SV

APPLICATION SPECIFIC OPTIONS

Alignment pins & locking clips available.
Call Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC FRANCE • Tel: 01 60 95 06 60 • Fax: 01 60 95 06 61

SAMTEC ITALY • Tel: 39 039 6890337 • Fax: 39 039 6890315

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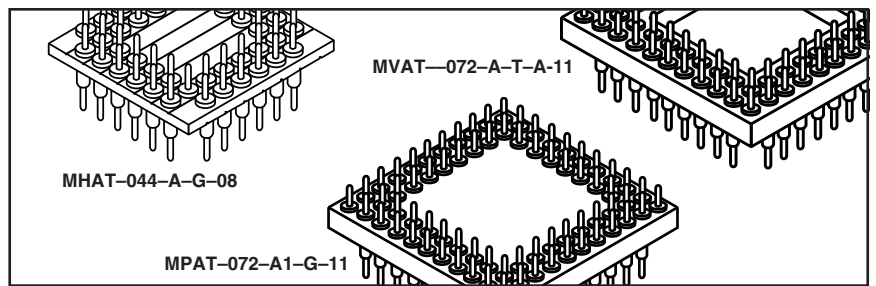
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SAMTEC ANZ • Tel: 613 9512 7747 • Fax: 613 9512 7745



PIN GRID ARRAY ADAPTORS MPAT, MVAT, MHAT, MSAT

Mates with:
MPAS, MVAS, MLAS,
MHAS, MSAS

Features:

- A choice of many different terminal styles and insulators makes it easy to find the adaptor for your application.
- Unique MHAT insulator that allows any array from 1 by 1 to 20 by 20.
- Irregular shapes are also available upon request.

Specifications:

MPAT, MVAT

Insulator Material:
Black Glass Filled Polyester
Flammability Rating:
UL 94V-O
Insulation Resistance:
5000 megohm @ 500 VDC
Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold.
Withstanding Voltage:
1000 VRMS @ 60 Hz
Terminal Material:
Brass or Phosphor Bronze
Plating:
Au or Sn over 50µ" Ni
Current Rating:
1 amp continuous
@ 100 VDC per contact
Terminal Retention in Body:
5 lbs against barb

Specifications:

MSAT HI-TEMP

Same as MPAT except:
Insulator Material:
Black Liquid Crystal Polymer
Max Processing Temp:
230°C for 30 to 60 seconds

Specifications:

MHAT

Same as MPAT except:
Insulator Material:
Black High Temperature Thermoplastic
Operating Temp Range:
-65°C to +170°C

Note:
These Series are non-standard, non-returnable.

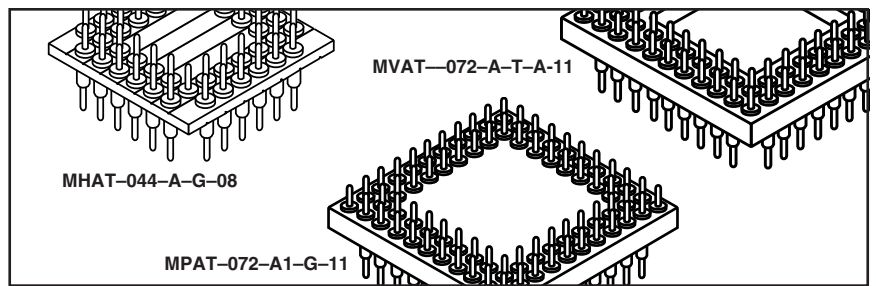
BODY STYLE	PIN COUNT	LEAD STYLE	PLATING OPTION	GRID SIZE & PIN OUT CODE
MPAT = Standard Polyester MVAT = Open Body Polyester MSAT = Hi-Temp Open Body 	-XXX = Total Number Of Filled Positions		-G = 20µ" (0,51µm) Gold	
MHAT = Low Profile 			-T = Tin	

MPAT, MVAT & MSAT ONLY		MHAT ONLY															
-A or -A1 = Round Pin <table border="1"> <tr> <th>STYLE</th> <th>X DIA</th> </tr> <tr> <td>-A</td> <td>(0,64) .025</td> </tr> <tr> <td>-A1</td> <td>(0,46) .018</td> </tr> </table> -A Component No. = T-1R0 -A1 Component No. = T-1R5	STYLE	X DIA	-A	(0,64) .025	-A1	(0,46) .018	-J = Solder Shell -J Component No. = S-1P1	-R = Standard Pin -R Component No. = T-2R6	-H = Short Pin -H Component No. = T-1R6								
STYLE	X DIA																
-A	(0,64) .025																
-A1	(0,46) .018																
-D or -D1 = Wirewrap <table border="1"> <tr> <th>STYLE</th> <th>A</th> </tr> <tr> <td>-D</td> <td>(12,95) .510</td> </tr> <tr> <td>-D1</td> <td>(7,87) .310</td> </tr> </table> -D Component No. = T-1S4-1-1 -D1 Component No. = T-1S4-1-2	STYLE	A	-D	(12,95) .510	-D1	(7,87) .310	-M, -N & -P = Extended Pin Not available with MSAT. <table border="1"> <tr> <th>LEAD STYLE</th> <th>A</th> </tr> <tr> <td>-M</td> <td>(1,52) .060</td> </tr> <tr> <td>-N</td> <td>(4,70) .185</td> </tr> <tr> <td>-P</td> <td>(11,05) .435</td> </tr> </table> -M Component No. = T-1R14-1 -N Component No. = T-1R14-2 -P Component No. = T-1R14-3	LEAD STYLE	A	-M	(1,52) .060	-N	(4,70) .185	-P	(11,05) .435	-T = Extended Pin -T Component No. = T-3R6	
STYLE	A																
-D	(12,95) .510																
-D1	(7,87) .310																
LEAD STYLE	A																
-M	(1,52) .060																
-N	(4,70) .185																
-P	(11,05) .435																

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Specifications:

MPAT, MVAT

Insulator Material:
Black Glass Filled Polyester
Flammability Rating:
UL 94V-O
Insulation Resistance:
5000 megohm @ 500 VDC
Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold.
Withstanding Voltage:
1000 VRMS @ 60 Hz
Terminal Material:
Brass or Phosphor Bronze
Plating:
Au or Sn over 50µ" Ni
Current Rating:
1 amp continuous
@ 100 VDC per contact
Terminal Retention in Body:
5 lbs against barb

Specifications:

MSAT HI-TEMP

Same as MPAT except:
Insulator Material:
Black Liquid Crystal Polymer
Max Processing Temp:
230°C for 30 to 60 seconds

Specifications:

MHAT

Same as MPAT except:
Insulator Material:
Black High Temperature Thermoplastic
Operating Temp Range:
-65°C to +170°C

Note:
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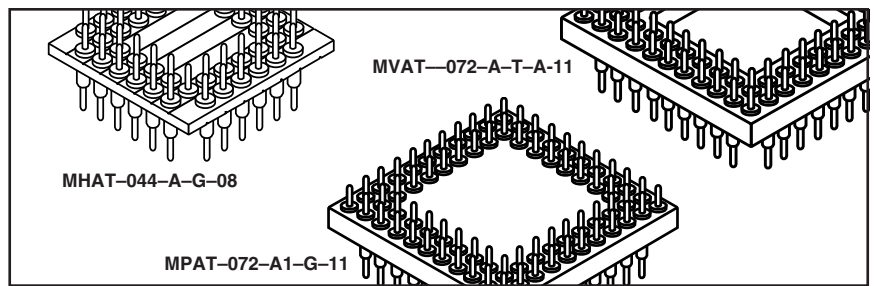
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STYLE	A																
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Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold.
Withstanding Voltage:
1000 VRMS @ 60 Hz
Terminal Material:
Brass or Phosphor Bronze
Plating:
Au or Sn over 50µ" Ni
Current Rating:
1 amp continuous
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Specifications:

MSAT HI-TEMP

Same as MPAT except:
Insulator Material:
Black Liquid Crystal Polymer
Max Processing Temp:
230°C for 30 to 60 seconds

Specifications:

MHAT

Same as MPAT except:
Insulator Material:
Black High Temperature Thermoplastic
Operating Temp Range:
-65°C to +170°C

Note:
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MHAT = Low Profile 				

MPAT, MVAT & MSAT ONLY

-A or -A1 =Round Pin

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-A1	(0,46) .018

-A Component No. = T-1R0
-A1 Component No. = T-1R5

-J =Solder Shell

-J Component No. = S-1P1

-R=Standard Pin

-R Component No. = T-2R6

-H =Short Pin

-H Component No. = T-1R6

-D or -D1=Wirewrap

STYLE	A
-D	(12,95) .510
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-D Component No. = T-1S4-1-1
-D1 Component No. = T-1S4-1-2

-M, -N & -P =Extended Pin

Not available with MSAT.

LEAD STYLE	A
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-N	(4,70) .185
-P	(11,05) .435

-M Component No. = T-1R14-1
-N Component No. = T-1R14-2
-P Component No. = T-1R14-3

MHAT ONLY

-T =Extended Pin

-T Component No. = T-3R6

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Surface
SMT
Mount

ONE-PIECE INTERFACE

OPC
SERIES

SPECIFICATIONS

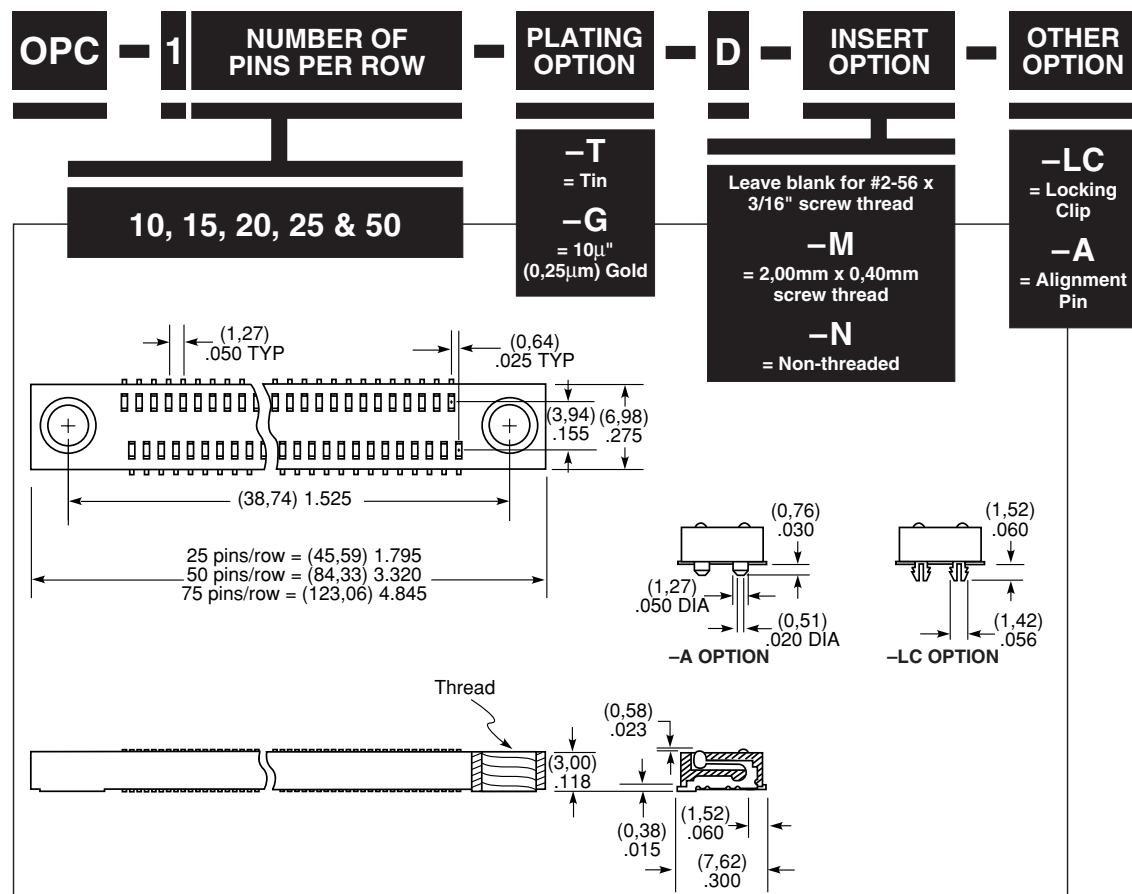
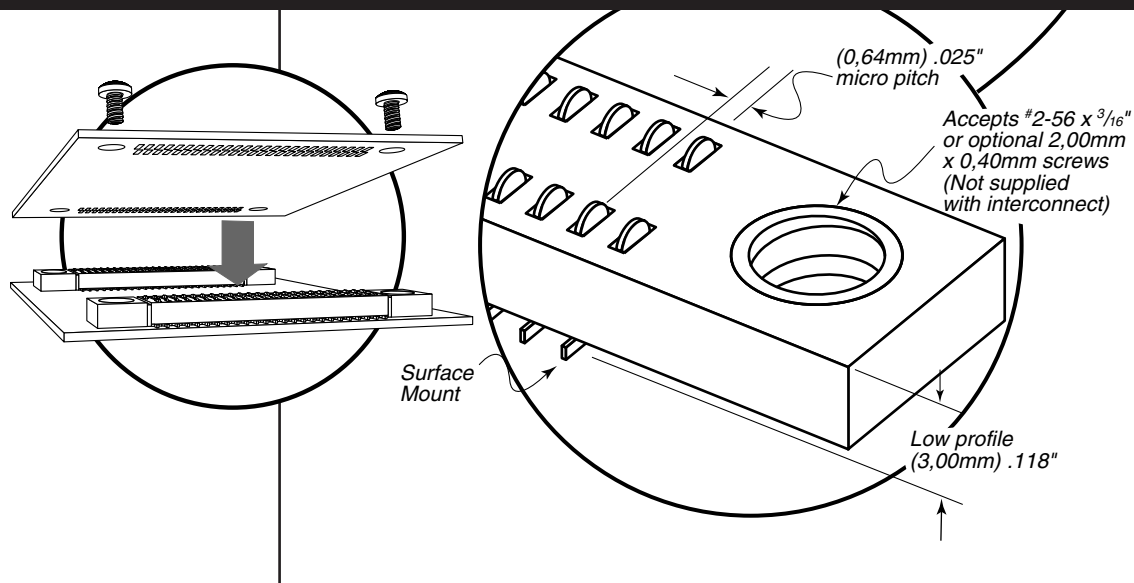
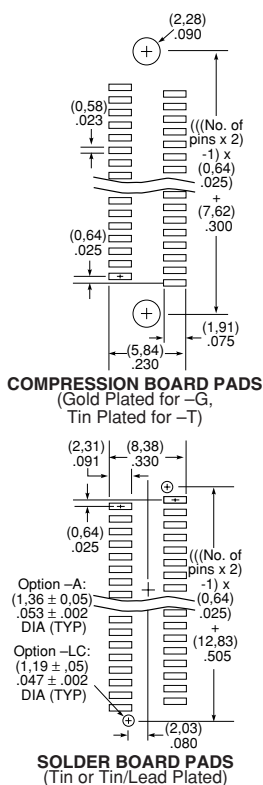
For complete specifications see www.samtec.com?OPC

Insulator Material:
Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Current Rating:
0.5A @ 80°C ambient
Contact Deflection:
(0,51mm) .020" nominal
Operating Temp Range:
-65°C to +105°C
Plating:
Sn over 50µ" (1,27µm) Ni

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds
SMT Lead Coplanarity:
.004" (0,10mm) max
Suggested PCB Layouts:
For reference only. Please contact Samtec or go to www.samtec.com?OPC for recommended PCB layout.



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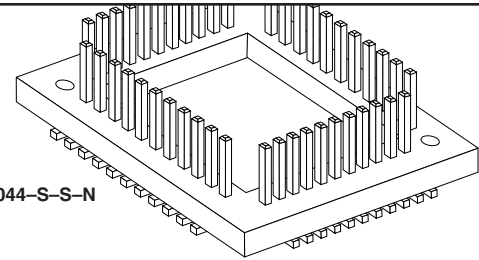
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PLCA-044-S-S-N



PLCC ADAPTORS PLCA SERIES

Adaptors Mate with Plastic Leaded Chip Carrier Sockets

Samtec PLCA Series adaptors use precision drawn, spring temper Phosphor Bronze wire for high reliability mating with most common PLCC sockets. These adaptors are available with a choice of surface mount or through hole tails and either full tin plating or selective plating with gold on the contact area of the terminal.

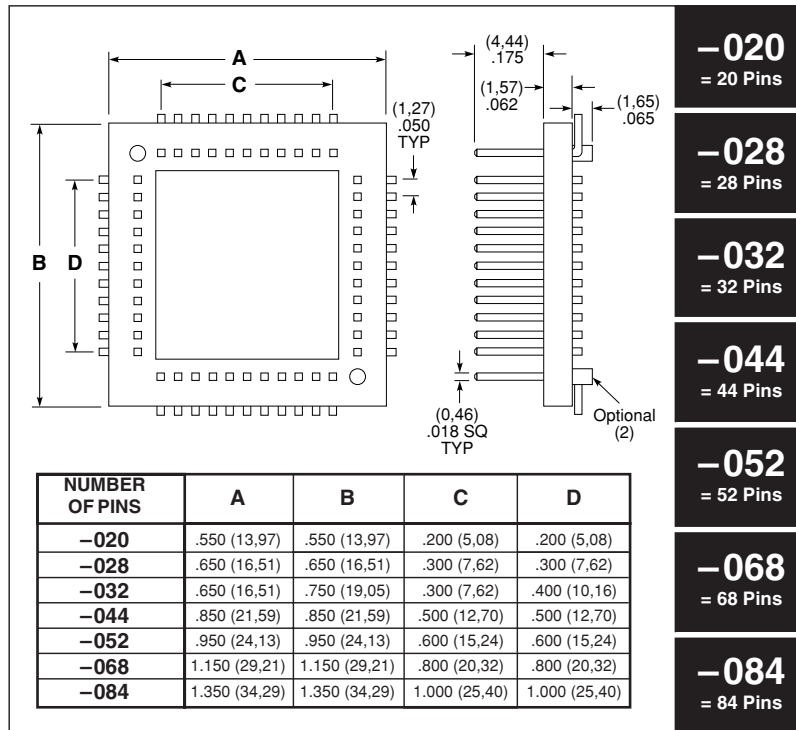
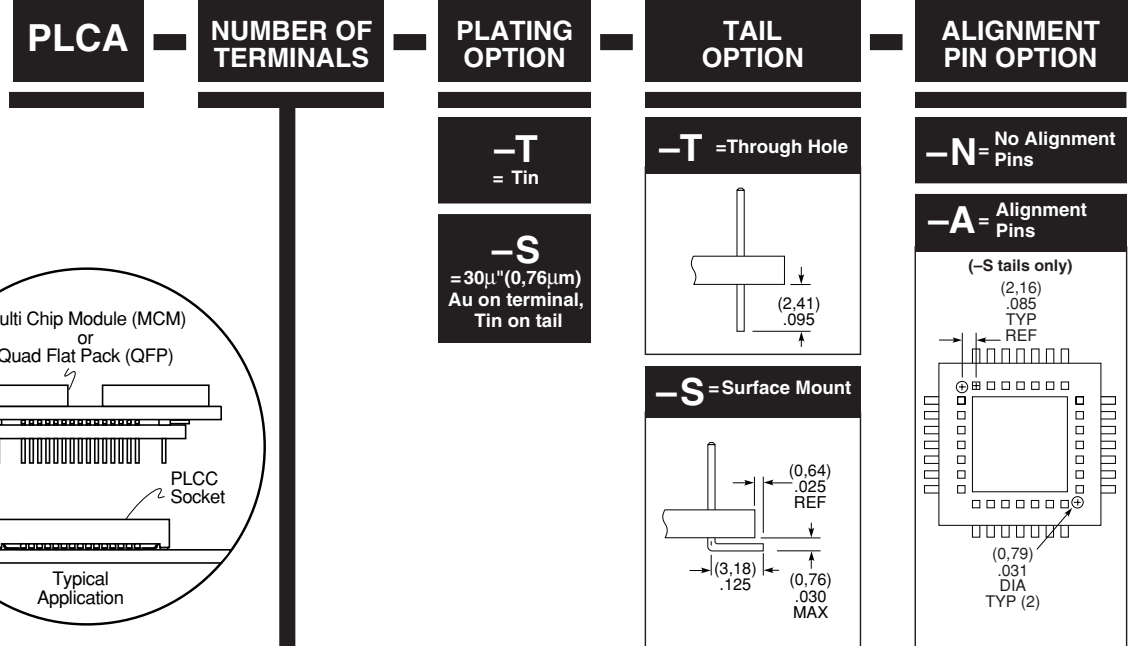
The insulator is FR-4 epoxy board, suitable for most infrared and vapor phase reflow soldering processes. It is available with or without alignment pins.

See our Full Line Catalog for a complete selection of Surface Mount PLCC sockets, and adaptors for Pin Grid Array and Dual In-Line Package sockets.

Specifications PLCA

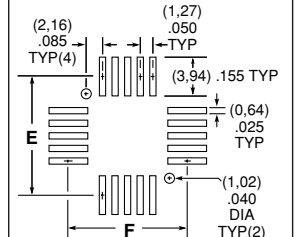
Insulator Material:
Natural FR-4 Epoxy Board
Flammability Rating:
UL94-VO
Insulation Resistance:
5000MΩ min
Dielectric Withstanding Voltage:
600 VAC
Max Processing Temp:
230°C for 30 to 60 seconds
Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold
Contact Material:
Phosphor Bronze
Plating: Sn (200μ" (5,08μm) nom, 150μ" (3,81μm) min) or Au over 50μ" (1,27μm) Ni
Current Rating: 1A
SMT Lead Coplanarity:
.006" (0,15mm) max

Note: Some sizes, styles and options are non-standard, non-returnable.



APPLICATIONS

TYPICAL BOARD LAYOUT



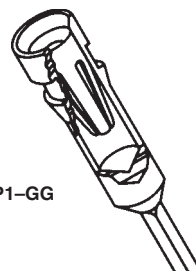
NUMBER OF PINS	E	F
-020	(12,07) .475	(12,07) .475
-028	(14,61) .575	(14,61) .575
-032	(17,15) .675	(14,61) .575
-044	(19,69) .775	(19,69) .775
-052	(22,23) .875	(22,23) .875
-068	(27,31) 1.075	(27,31) 1.075
-084	(32,39) 1.275	(32,39) 1.275

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SC-7P1-GG



STANDARD, LOW PROFILE &

Specifications: SC

Contact:

BeCu

Shell:

Brass

-GG Plating:

30μ" (0,76μm) Au over 50μ"
(1,27μm) Ni on contact; 10μ"
(0,25μm) Au over 50μ"
(1,27μm) Ni on shell

-GT Plating:

30μ" (0,76μm) Au over 50μ"
(1,27μm) Ni on contact; Sn
over 50μ" (1,27μm) Ni on shell

-TT Plating:

Sn over 50μ" (1,27μm) Ni
on contact; Sn over 50μ"
(1,27μm) Ni on shell

-ST Plating:

10μ" (0,25μm) Au over 50μ"
(1,27μm) Ni on contact; Sn
over 50μ" (1,27μm) Ni on shell

Current Rating:

1 A

Contact Resistance:

10 mΩ max

Insertion Force (SC):

9 oz (2,50N) avg, 16 oz
(4,45N) max

Withdrawal Force (SC):

2.5 oz (0,70N) avg, 1.5 oz
(0,42N) min

Insertion Force (EZ):

2.5 oz (0,70N) avg, 5.5
(1,53N) oz max

Withdrawal Force (EZ):

2.0 oz (0,56N) avg, 0.35 oz
(0,10mm) min

Lead DIA Accepted:

.015" to .022" (0,38mm to
0,56mm) and most IC leads

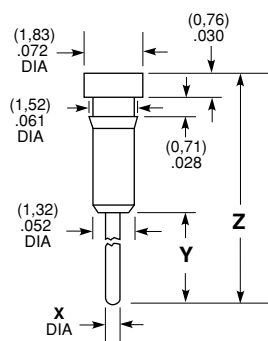
RECOMMENDED PC HOLE SIZE:

LEAD SIZE	HOLE SIZE
(0,46) .018 DIA	(0,61) .024 DIA
(0,51) .020 DIA	(0,66) .026 DIA
(0,64) .025 DIA	(0,79) .031 DIA
(0,76) .030 DIA	(0,91) .036 DIA
(0,89) .035 DIA	(1,04) .041 DIA
(1,14) .045 DIA	(1,30) .051 DIA
(1,32) .052 DIA	(1,47) .058 DIA
(0,46) .018 SQ	(0,76) .030 DIA
(0,64) .025 SQ	(1,02) .040 DIA
(1,14) .045 SQ	(1,75) .069 DIA
(0,20) .008 x (0,71) .028	(0,89) .035 DIA
(0,25) .010 x (0,51) .020	(0,71) .028 DIA
(0,41) .016 x (0,51) .020	(0,79) .031 DIA
(0,41) .016 x (0,61) .024	(0,89) .035 DIA
(0,41) .016 x (0,79) .031	(1,04) .041 DIA

Note:

Some sizes, styles and
options are non-standard,
non-returnable.

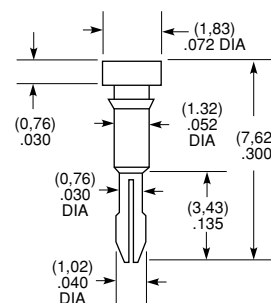
SC-1P1-, SC-6P1-, SC-1P3-, SC-2P1- EZ-1P1-, EZ-6P1-, SC-7P1



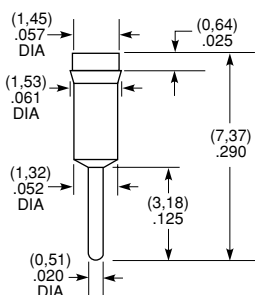
Part No.	X DIA	Y ±.010	Z ±.015
SC-1P1- EZ-1P1-	(0,51) .020	(3,18) .125	(7,62) .300
SC-6P1- EZ-6P1-	(0,51) .020	(4,57) .180	(8,89) .350
SC-1P3-	(0,64) .025	(10,41) .410	(15,24) .600
SC-2P1-	(0,89) .035	(12,95) .510	(17,86) .703
SC-7P1-	(0,51) .020	(7,06) .278	(11,25) .443

Insertion Depth (SC-1P1, SC-1L1, SC-6P1, SC-7P1)
= .95" to .145" (2,41mm to 3,68mm)
Insertion Depth (SC-2P1) = .125" to .157" (3,18mm to 3,99mm)
Insertion Depth (SC-1P3) = .095" to .138" (2,41mm to 3,51mm)
Plating Available (SC-1P1, SC-1L1) = GG, GT, TT, ST
Plating Available (SC-6P1, SC-2P1, SC-7P1) = GG, GT

SC-1L1- EZ-1L1-

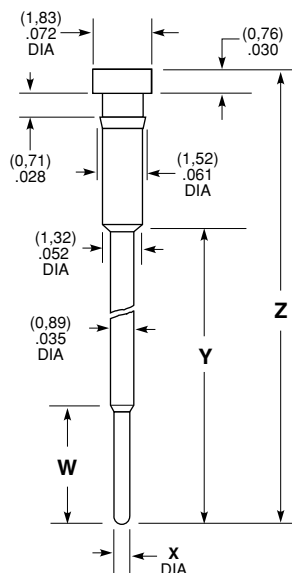


SC-1P2-



Insertion Depth = .095" to .145" (2,41mm to 3,68mm)
Plating Available = GG, GT

SC-2P3-, SC-2P2- EZ-2P3-, EZ-2P2-

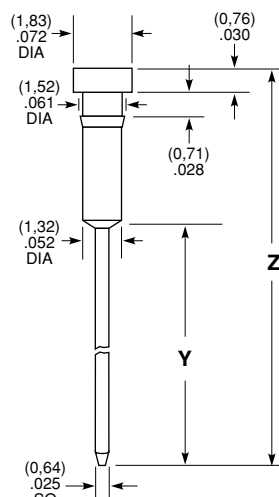


Plating Available = GG, GT

Part No.	X DIA	W ±.010	Y ±.015	Z ±.015
SC-2P3- EZ-2P3-	(0,51) .020	(4,32) .170	(8,86) .349	(13,77) .542
SC-2P2- EZ-2P2-	(0,46) .018	(3,81) .150	(12,95) .510	(17,86) .703

Insertion Depth (SC-2P2) =
.125" to .145" (3,18mm to 2,41mm)
Insertion Depth (SC-2P3) =
.125" to .170" (3,18mm to 4,32mm)

SC-1W1- EZ-1W1-



Part No.	Y ±.010	Z ±.015
SC-1W1-XX-1 EZ-1W1-XX-1	(12,95) .510	(17,86) .703
SC-1W1-XX-2 EZ-1W1-XX-2	(9,14) .360	(14,05) .553
SC-1W1-XX-3 EZ-1W1-XX-3	(6,60) .260	(11,51) .453

Insertion Depth =
.125" to .157" (3,18mm to 3,99mm)
Plating Available = GG, GT, TT

Due to technical progress, all designs, specifications and components are subject to change without notice.

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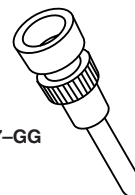
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SC-2P7-GG

SURFACE MOUNT SOCKETS SC, SK, SP SERIES

Specifications: SC, SP, SK

Contact:

BeCu

Shell:

Brass, except SK-5P1
Phosphor Bronze

-GG Plating:

30μ" (0.76μm) Au over 50μ"
(1.27μm) Ni on contact; 10μ"
(0.25μm) Au over 50μ"
(1.27μm) Ni on shell

-GT Plating:

30μ" (0.76μm) Au over 50μ"
(1.27μm) Ni on contact;
Sn over 50μ" (1.27μm) Ni
on shell

-TT Plating:

Sn over 50μ" (1.27μm) Ni
on contact; Sn over 50μ"
(1.27μm) Ni on shell

Current Rating: 1 A

Contact Resistance:

10 mΩ max

Insertion Force (SC):

9 oz (2.50N) avg, 16 oz
(4.45N) max (.017"
(0.43mm) DIA probe)

Withdrawal Force (SC):

2.5 oz (0.70N) avg, 1.5 oz
(0.42N) min (after 12
insertions with .017"
(0.43mm) DIA probe)

Insertion Force (EZ):

2.5 oz (0.70N) avg, 5.5
(1.53N) oz max (.018"
(0.46mm) DIA probe except
EZ-4P1 & EZ-5P1 with
.017" (0.43mm) DIA probe)

Withdrawal Force (EZ):

2.0 oz (0.56N) avg, 0.35 oz
(0.10N) min (after 12
insertions with .018"
(0.46mm) DIA probe except
EZ-4P1 & EZ-5P1 with
.017" (0.43mm) DIA probe)

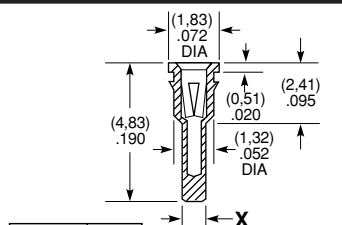
RECOMMENDED PC HOLE SIZE:

LEAD SIZE	HOLE SIZE
(0.46) .018 DIA	(0.61) .024 DIA
(0.51) .020 DIA	(0.66) .026 DIA
(0.64) .025 DIA	(0.79) .031 DIA
(0.76) .030 DIA	(0.91) .036 DIA
(0.89) .035 DIA	(1.04) .041 DIA
(1.14) .045 DIA	(1.30) .051 DIA
(1.32) .052 DIA	(1.47) .058 DIA
(0.46) .018 SQ	(0.76) .030 DIA
(0.64) .025 SQ	(1.02) .040 DIA
(1.14) .045 SQ	(1.75) .069 DIA
(0.20) .008 x (0.71) .028	(0.89) .035 DIA
(0.25) .010 x (0.51) .020	(0.71) .028 DIA
(0.41) .016 x (0.51) .020	(0.79) .031 DIA
(0.41) .016 x (0.61) .024	(0.89) .035 DIA
(0.41) .016 x (0.79) .031	(1.04) .041 DIA

Note:

Some sizes, styles and
options are non-standard,
non-returnable.

SC-5P1-, SC-9P1- EZ-5P1-, EZ-9P1-



Part No.	X DIA
SC-5P1- EZ-5P1-	(0.76) .030
SC-9P1-	(0.86) .034

Insertion Depth (SC-5P1) =

.080" to .150" (2.03mm to

3.81mm)

Insertion Depth (SC-9P1) =

.070" to .165" (1.78mm to

4.19mm)

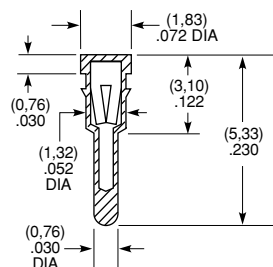
Lead DIA Accepted: .016" to

.020" (0.41mm to 0.51mm)

Plating Available (SC-5P1, EZ-5P1) = GG, GT, TT

Plating Available (SC-9P1) = GG, GT

SC-3P1- EZ-3P1-

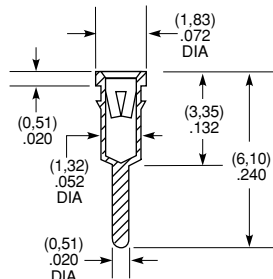


Insertion Depth = .105" to .170" (2.67mm to 4.32mm)

Lead DIA Accepted: .015" to .020" (0.38mm to 0.51mm)

Plating Available = GG, GT, TT

SC-4P1- EZ-4P1-

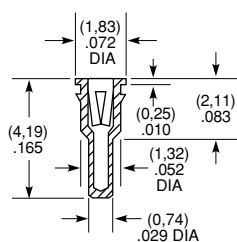


Insertion Depth = .080" to .105" (2.03mm to 2.67mm)

Lead DIA Accepted: .016" to .021" (0.41mm to 0.53mm)

Plating Available = GG, GT, TT

SC-8P1-

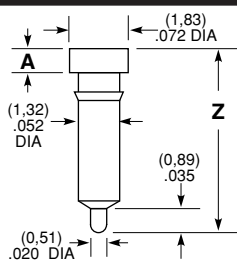


Insertion Depth = .085" to .140" (2.16mm to 3.56mm)

Lead DIA Accepted: .016" to .020" (0.41mm to 0.51mm)

Plating Available = GG, GT, TT

SC-1M1-, SC-1M2- EZ-1M1-, EZ-1M2-



Part No.	A	Z ±.010
SC-1M1- EZ-1M1-	(0.76) .030	(5.08) .200
SC-1M2- EZ-1M2-	(0.51) .020	(4.24) .167

Insertion Depth (SC-

1M1) = .095" to .145"

(2.41mm to 3.68mm)

Insertion Depth (SC-

1M2) = .080" to .105"

(2.03mm to 2.67mm)

Lead DIA Accepted:

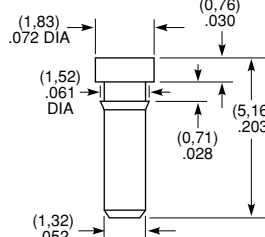
.016" to .021"

(0.41mm to 0.53mm)

Plating Available =

GG, GT

SC-1S1- EZ-1S1-

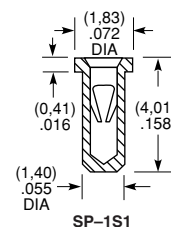


Insertion Depth = .125" to .157" (3.18mm to 3.99mm)

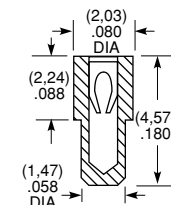
Lead DIA Accepted = .015" to .022" (0.38mm to 0.56mm)

Plating Available = GG, GT

SP-1S1-, SP-1S2-



SP-1S1



SP-1S2

Insertion Depth (SP-1S1) = .090" to .140" (2.29mm to

3.56mm)

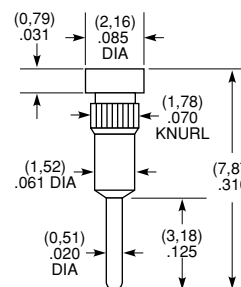
Insertion Depth (SP-1S2) = .090" to .150" (2.29mm to

3.81mm)

Lead DIA Accepted = .020" to .025" (0.51mm to 0.64mm)

Plating Available = GG, GT

SC-2P7-



Insertion Depth = .135" to .165" (3.43mm to 4.19mm)

Lead DIA Accepted = .025" to .030" (0.64mm to 0.76mm)

Plating Available = GG, GT, TT

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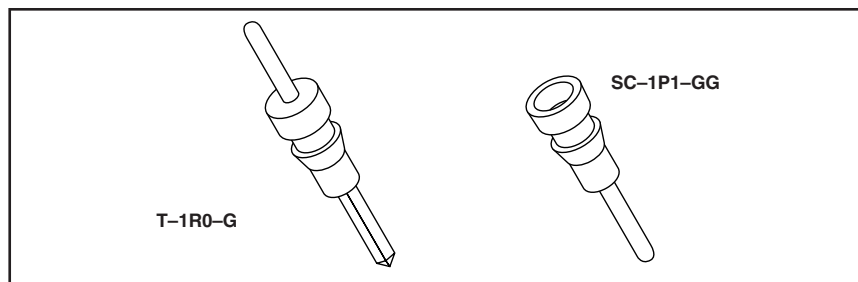
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LEAD SOCKETS & TERMINALS ^{SC}_{T, S}

Specifications: SC-1W3, 1P4, 2P4

Contact: BeCu Shell: Brass

-GG Plating:

20μ" (0,51μm) Au over 50μ" (1,27μm) Ni on contact, except SC-2P4 30μ" (0,76μm) Au; 10μ" Au over 50μ" (1,27μm) Ni on shell

-GT Plating:

20μ" (0,51μm) Au over 50μ" (1,27μm) Ni on contact, except SC-2P4 30μ" (0,76μm) Au; Sn over 50μ" (1,27μm) Ni on shell

Current Rating:

5 A

Contact Resistance:

10 mΩ max

Insertion Force:

6.5 oz (1,81N) avg, 13 oz (3,62N) max (.032" (0,81mm) DIA probe)

Withdrawal Force: 3 oz

(0,83N) avg, 2 oz (0,56N) min (.032" (0,81mm) DIA probe)

Specifications: SC-2P8, 2P9

Contact: BeCu

Shell: Brass

-GG Plating:

20μ" (0,51μm) Au over 50μ" (1,27μm) Ni on contact; 10μ" (0,25μm) Au over 50μ" (1,27μm) Ni on shell

-GT Plating:

20μ" (0,51μm) Au over 50μ" (1,27μm) Ni on contact; 200μ" (5,08μm) Sn over 50μ" (1,27μm) Ni on shell

Current Rating:

10 A

Contact Resistance:

10 mΩ max

Insertion Force: SC-2P9

=32 oz (8,90N) max (.050" (1,27mm) DIA probe); SC-2P8 =16 oz (4,45N) max (.040" (1,02mm) DIA probe)

Withdrawal Force: SC-2P9

2 oz (0,56N) min (.050" (1,27mm) DIA probe) SC-2P8 =4 oz (1,11N) min (.040" (1,02mm) DIA probe)

Specifications: T, S

-G Plating:

Au over 50μ" (1,27μm) Ni

-T Plating:

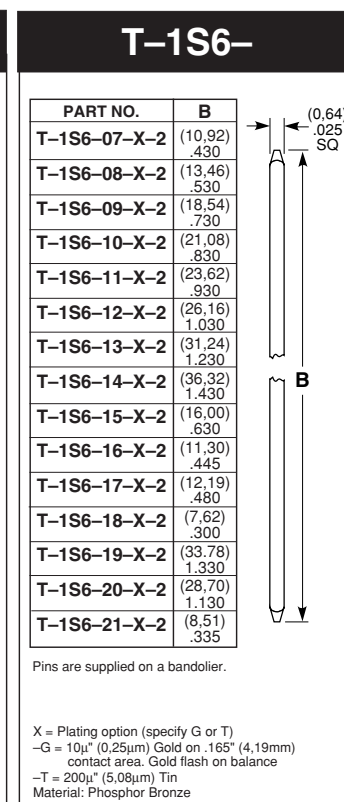
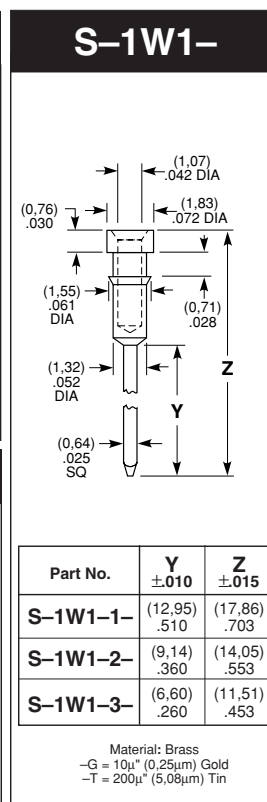
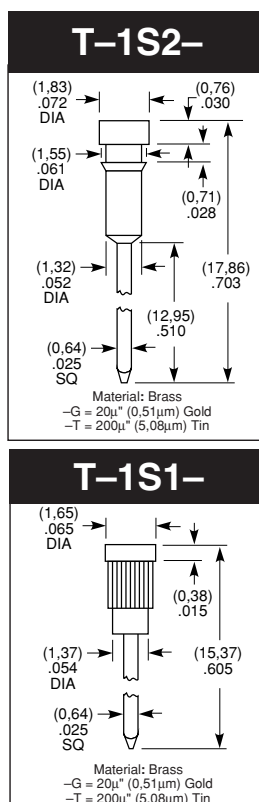
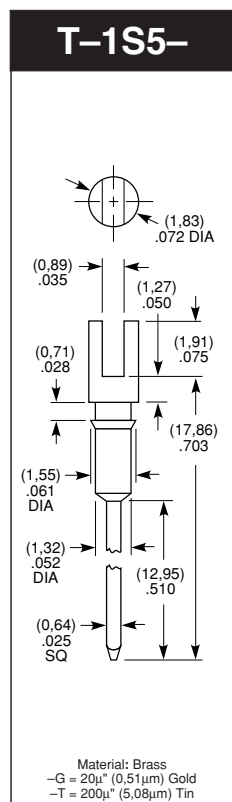
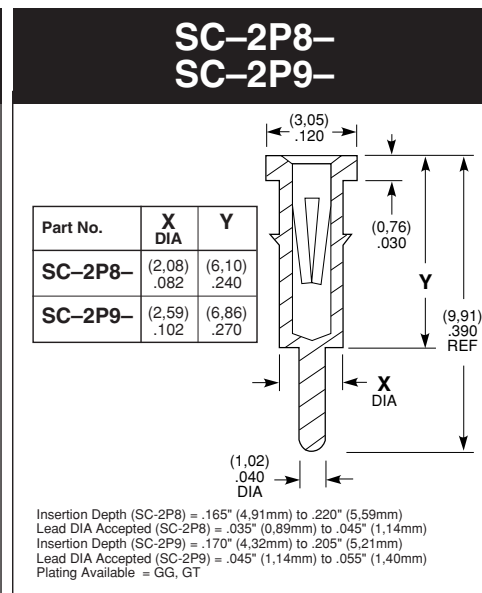
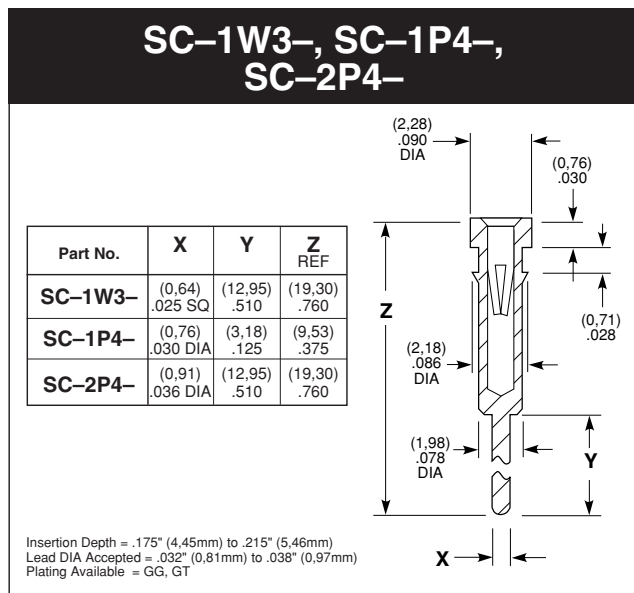
Sn over 50μ" (1,27μm) Ni or 100μ" (2,54μm) Cu

Current Rating:

1A except T-1S6 is 5A

Note:

Some sizes, styles and options are non-standard, non-returnable.



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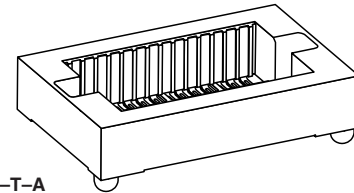
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SOJ-028-T-A

SOJ PACKAGE SOCKETS

SOJ SERIES

Features:

- SMT sockets for Small Outline JEDEC (SOJ) packages
- Unique contact design has a "slotted tail" for added adhesion of solder paste, and superior solder joint strength.
- Contact provides exceptionally high retention by applying spring pressure downward on the chip carrier.
- "See through" design for solder fillet inspection
- Optional alignment/polarization pins assure proper orientation of the connector

Specifications SOJ

Insulator Material:
Black Liquid Crystal Polymer

Flammability Rating:
UL94-V0

Insulation Resistance:
5000MΩ min

Dielectric Withstanding Voltage: 600 VAC

Max Processing Temp:
230°C for 30 to 60 seconds

Operating Temp Range:
-65°C to +105°C

Contact Material: BeCu

Plating: Sn or Au over 50μ" (1.27μm) Ni

Current Rating: 1A

Contact Resistance:
10mΩ max

Lead Coplanarity:
.006" (0.15mm) max

Note:
Some sizes, styles and options are non-standard, non-returnable.

SOJ	NUMBER OF CONTACTS	PLATING OPTION	ALIGNMENT PIN OPTION	PACKAGE OPTION
-028, -032, -040		-T = Tin	-N = No Alignment Pins	-TR = Tape and reel
			-A = Alignment Pins	Call for availability Leave package option blank for packaging in tubes.

Surface Mount!

APPLICATIONS

NO. OF PINS	B	C
-028	.650 (16,51)	.900 (22,86)
-032	.750 (19,05)	1.000 (25,40)
-040	.950 (24,13)	1.200 (30,48)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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TSF-110-02-T-D

TSF-126-02-T-S

SSF-118-02-S-D

SURFACE MOUNT STRIPS TSF, SSF SERIES

Mates with:

SS, SD, HSS, SL, SDL,
ESS, ESD, HLS, SSF

SPECIFICATIONS

For complete specifications
see www.samtec.com?TSF

Insulator Material:

Black Liquid Crystal Polymer

Flammability Rating:

UL 94V-O

Insulation Resistance:

5000 MΩ

Max Processing Temp:

230°C for 30 to 60 seconds

Operating Temp Range:

-65°C to +105°C with Tin;

-65°C to +125°C with Gold

Dielectric Withstanding Voltage:

600 VAC

Terminal Material:

Phosphor Bronze

Plating:

Au or Sn over

50μ" (1,27mm) Ni

Current Rating:

5A

Lead Coplanarity:

.006" (0,15mm) max (2-22)

.008" (0,20mm) max (23-29)

.010" (0,25mm) max (30-36)

Note:

Some sizes, styles and

options are non-standard,

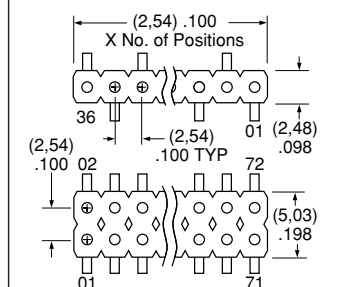
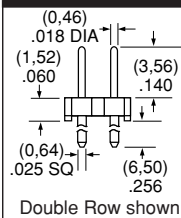
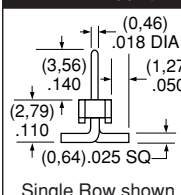
non-returnable.

TSF

1

NO. PINS
PER ROWLEAD
STYLEPLATING
OPTIONROW
OPTIONOTHER
OPTION

02 thru 36

-01 = Through
Hole-02 = Surface
Mount

-S
= 30μ" (0,76μm)
Au on post,
Tin on tail

-T
= Tin
(Not
recommended
for mating
with SSF)

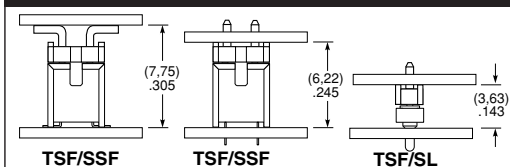
-S
= Single
Row

-D
= Double
Row

-“XX”
= Polarized
Position

Specify
position for
omitted pin.

APPLICATIONS



SPECIFICATIONS

For complete specifications
see www.samtec.com?SSF

Insulator Material:

Black PCT

Flammability Rating:

UL 94 V-O

Insulation Resistance:

5000 MΩ

Max Processing Temp:

230°C for 30 to 60 seconds

Operating Temp Range:

-65°C to +125°C

Plating:

Au or Sn over

50μ" (1,27μm) Ni

Current Rating:

1A

Contact Material:

BeCu

Contact Resistance:

10 mΩ max

Lead Size Range:

.017" (0,43mm) DIA to

.019" (0,48mm) DIA

Insertion Depth:

.100" (2,54mm) to .150" (3,81mm)

Insertion Force:

Standard = 5 oz (1,39N) avg;

LIF = 2.8 oz (0,78N) avg

Withdrawl Force:

Standard = 4 oz (1,11N) avg;

LIF = 1.6 oz (0,44N) avg

SMT Lead Coplanarity:

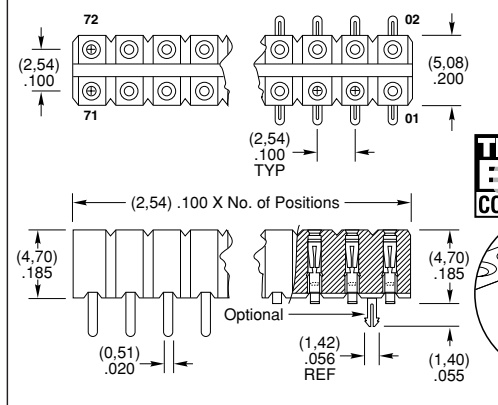
.006" (0,15mm) max

SSF

1

NO. PINS
PER ROWLEAD
STYLEPLATING
OPTIONROW
OPTIONOTHER
OPTION

02 thru 36



**TIGER
EYE
CONTACT**

-S
= 30μ" (0,76μm)
Au on contact,
Tin on tail

-01
= Through Hole

-L1
= Low Insertion
Force
Through Hole

-02
= Surface Mount

-L2
= Low Insertion
Force
Surface Mount

-D
= Double
Row

-LC
= Locking
Clip
(Style -02
only)

Mates with:
TS, TD, HTS,
BBS, BBD,
BBL, BDL,
BHS, LBS,
HLT, TSF

Due to technical progress, all designs, specifications and components are subject to change without notice.

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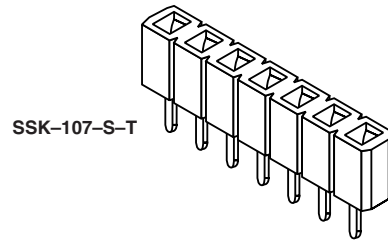
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LOW COST SOCKET STRIPS SSK SERIES

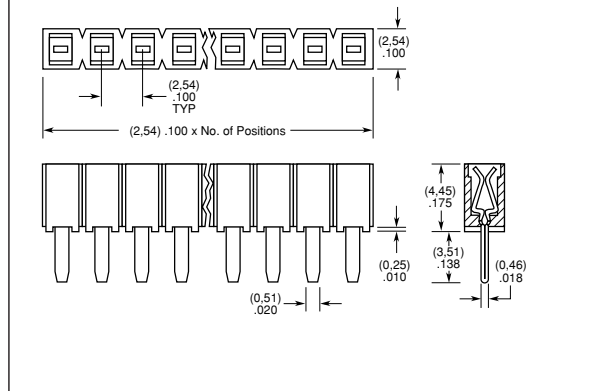
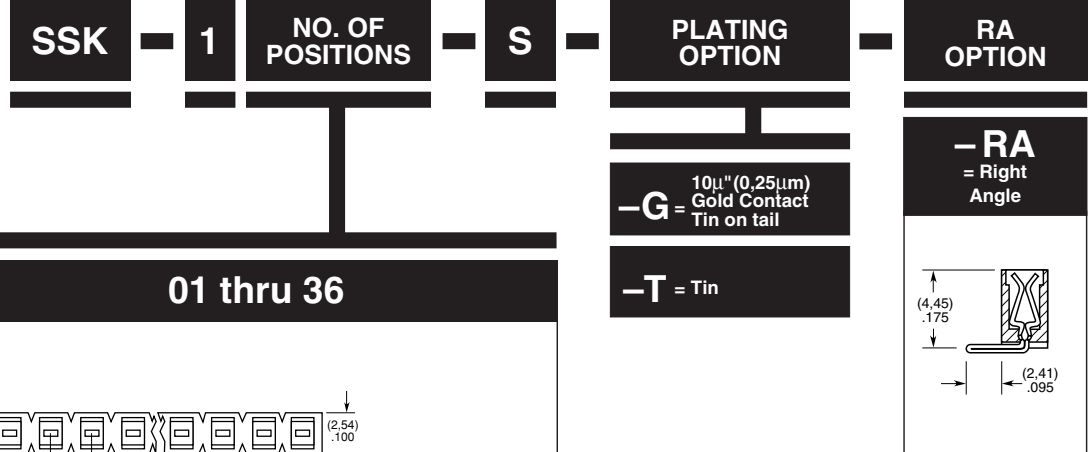
Mates with:
TS, HTS, BBS, BBL,
BHS, LBS

SPECIFICATIONS

For complete specifications
see www.samtec.com?SSK

HI-TEMP

Insulator Material:
Black PET Polyester
Flammability Rating:
UL 94V-O
Insulation Resistance:
5000 MΩ min
Operating Temp Range:
-65°C to +125°C with Gold
-65°C to +105°C with Tin
Heat Deflection Temp:
215°C @ 264 psi (1.8 MPa)
Dielectric Withstanding Voltage: 1000 VRMS
Contact Material:
Phosphor Bronze
Plating: Au or Sn over
50" (1.27μm) Ni
Current Rating: 1A
Contact Resistance: 10 mΩ
Lead Size Range:
.015" (0.38mm) to
.022" (0.56mm) DIA and
most IC leads
Insertion Depth:
.060" (1.52mm) to
.125" (3.18mm)
Insertion Force:
8 oz (2.22N) average
Withdrawal Force:
2 oz (0.56N) average



High reliability
double side-wipe
contacts.

Snap-Strip
feature.

UL Rated 94 V-O
High Temp PET
Polyester Body.

Selectively plated
for lower contact
resistance.

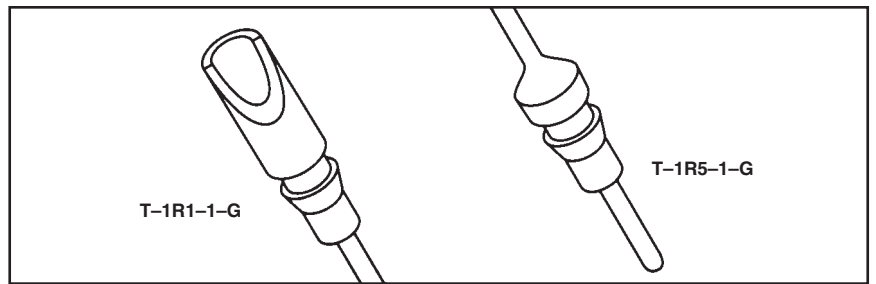
Standoffs allow for
easy board cleaning.

Note: Some lengths, styles
and options are non-
standard, non-returnable.

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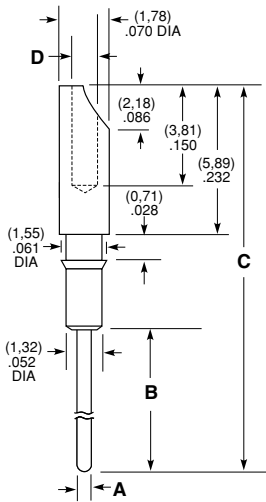
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MACHINED TERMINALS T, S SERIES

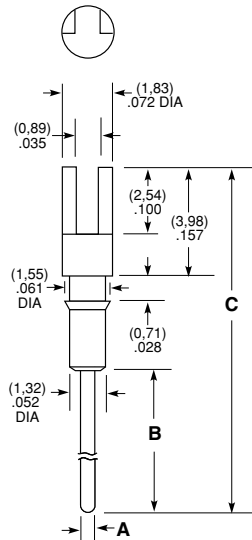
T-1R1- T-1R8-



Part No.	A DIA	B TAIL	C OAL	D DIA
T-1R1-	(0,46) .018	(3,96) .156	(12,47) .491	(0,97) .038
T-1R8-1-	(0,64) .025			(0,97) .038
T-1R8-2-	(0,89) .035	(5,33) .210	(13,84) .545	(1,07) .042
T-1R8-3-	(1,14) .045			(0,97) .038

Material: Brass

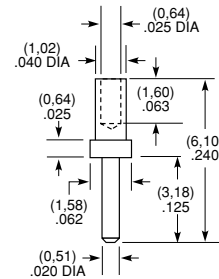
T-1R2- T-1R9-



Part No.	A DIA	B TAIL	C OAL
T-1R2-	(0,46) .018	(3,96) .156	(10,57) .416
T-1R9-1-	(0,64) .025		
T-1R9-2-	(0,89) .035	(5,33) .210	(11,94) .470
T-1R9-3-	(1,14) .045		

Material: Brass

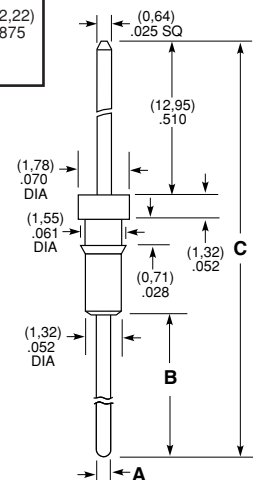
T-1R4-



Material: Brass

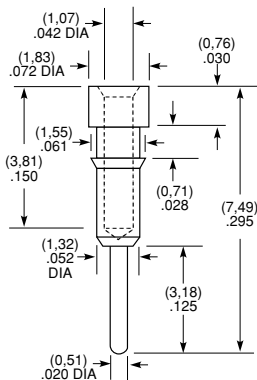
T-1S4-

Part No.	A DIA	B TAIL	C OAL
T-1S4-1-1-	(0,46) .018	(3,96) .156	20,85 .821
T-1S4-2-1-	(0,64) .025		
T-1S4-3-1-	(0,89) .035	(5,33) .210	(22,22) .875
T-1S4-4-1-	(1,14) .045		



Material: Brass

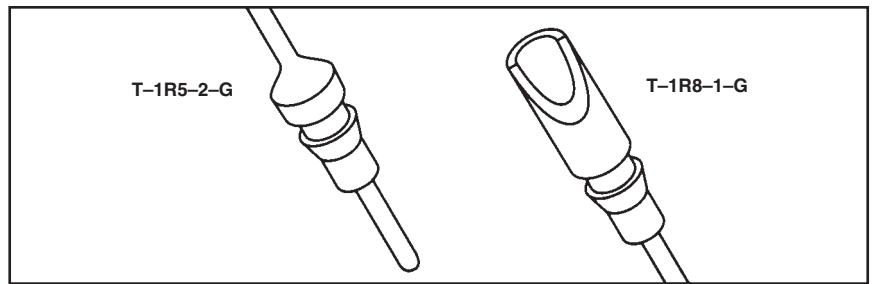
S-1P1-



Material: Brass

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MACHINED TERMINALS T, S SERIES

Mates with:
SC, SK, SP

Specifications: T, S

All T and S Series are available with a choice of Gold or Tin plating. Add -G or -T as a suffix to the part number shown.

-G Plating:
20μ" (0,51μm) Au over 50μ" (1,27μm) Ni, except T-1R10, T-1R11, T-1R7, T-1R8, T-1R9 and S-1P1 are 10μ" (0,25μm) Au

-T Plating:
Sn over 50μ" (1,27μm) Ni or 100μ" (2,54μm) Cu

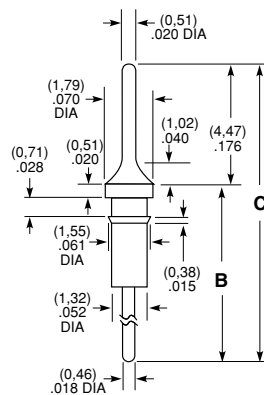
Current Rating:
1 A except T-1R10 and T-1R11 are 20 A

RECOMMENDED PC HOLE SIZE:

LEAD SIZE	HOLE SIZE
(0,46) .018 DIA	(0,61) .024 DIA
(0,51) .020 DIA	(0,66) .026 DIA
(0,64) .025 DIA	(0,79) .031 DIA
(0,76) .030 DIA	(0,91) .036 DIA
(0,89) .035 DIA	(1,04) .041 DIA
(1,14) .045 DIA	(1,30) .051 DIA
(1,32) .052 DIA	(1,47) .058 DIA
(0,46) .018 SQ	(0,76) .030 DIA
(0,64) .025 SQ	(1,02) .040 DIA
(1,14) .045 SQ	(1,75) .069 DIA
(0,20) .008 x (0,71) .028	(0,89) .035 DIA
(0,25) .010 x (0,51) .020	(0,71) .028 DIA
(0,41) .016 x (0,51) .020	(0,79) .031 DIA
(0,41) .016 x (0,61) .024	(0,89) .035 DIA
(0,41) .016 x (0,79) .031	(1,04) .041 DIA

Note:
Some sizes, styles and options are non-standard, non-returnable.

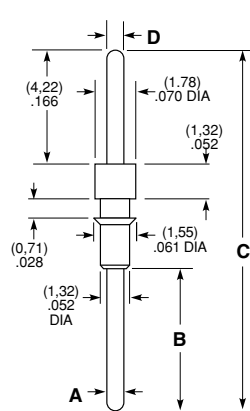
T-1R5-1- T-1R5-2-



Part No.	B TAIL	C OAL
T-1R5-1-	(4,75) .187	(12,85) .506
T-1R5-2-	(7,29) .287	(15,44) .608

Material: Phosphor Bronze

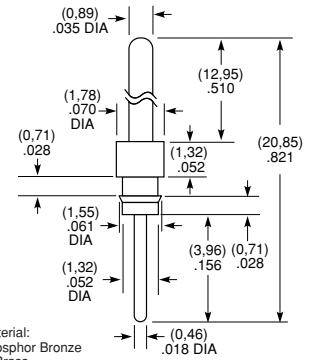
T-1R5- T-1R7-



Part No.	A DIA	B TAIL	C OAL	D DIA
T-1R5-	(0,46) .018	(3,96) .156	(12,12) .477	(0,46) .018
T-1R7-01	(0,64) .025			
T-1R7-02	(0,89) .035	(5,33) .210	(13,46) .530	(0,64) .025
T-1R7-03	(1,14) .045			

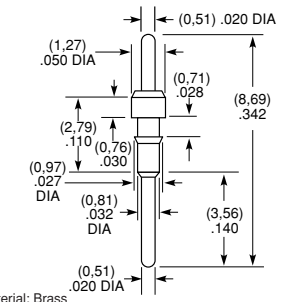
Material: Brass

T-1R12-



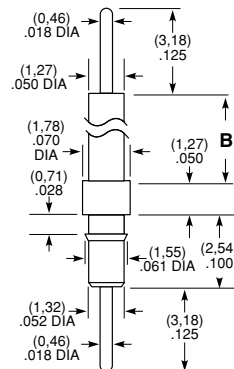
Material:
Phosphor Bronze
or Brass

T-1R13-



Material: Brass

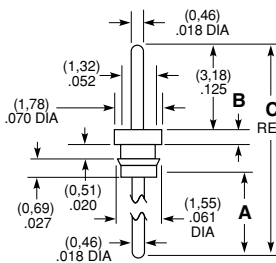
T-1R14-



Part No.	B
T-1R14-1-	(1,52) .060
T-1R14-2-	(4,70) .185
T-1R14-3-	(11,05) .435
T-1R14-4-	(17,40) .685

Material:
Phosphor Bronze
or Brass

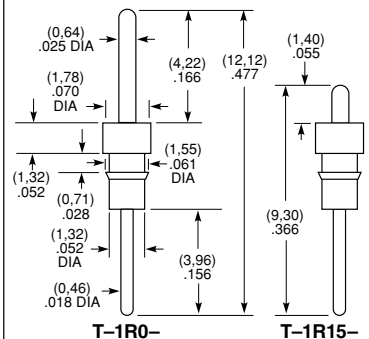
T-1R6- T-2R6- T-3R6-



Part No.	A TAIL	B HEAD	C OAL
T-1R6-	(2,74) .108	(0,51) .020	(7,62) .300
T-2R6-	(3,18) .125	(0,89) .035	(8,43) .332
T-3R6-	(0,89) .035	(0,76) .030	(5,97) .235

Material: Brass

T-1R0-, T-1R15-



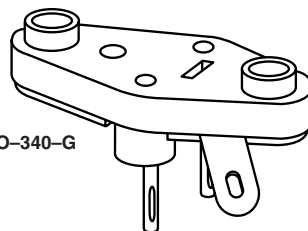
Material: Brass

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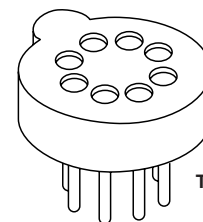
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TO-340-G



TO-520-GT



TRANSISTOR/TO SOCKETS TO SERIES

TO-3 Power Transistor Sockets

Quality sockets simplify transistor mounting, uses chassis as a heat sink. Integral mounting saddle is tapped for 6-32 NC screws. Body will not crack/chip during handling or under screw torque.

Specifications: TO-3

Same as IC Series except:

Insulator Material:

Black Polyphenylene Sulfide

Temperature Range:

-65°C to +170°C

Lead Size Range:

TO-340 is .032" to .040"

TO-360 is .056" to .062"

Lead Insertion Depth:

.075" to .240"

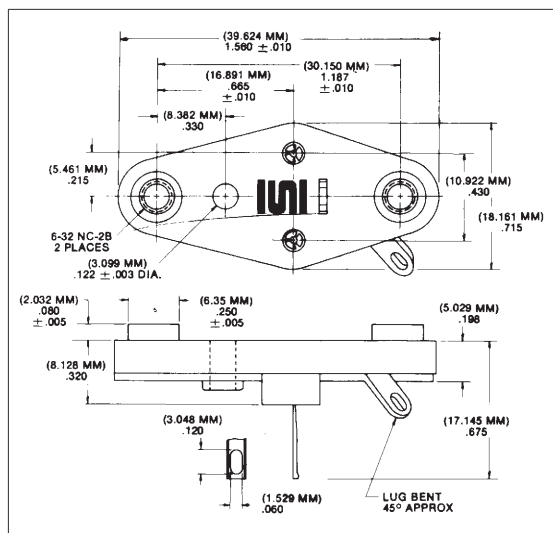
Insertion Force:

20 oz avg. (.038" DIA probe)

Withdrawal Force:

13 oz avg. (after 12 insertions with .038" DIA probe)

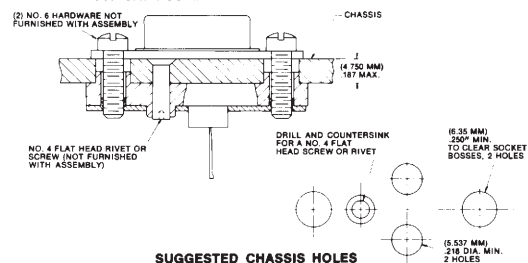
SPECIFY TO-3 PART NUMBER FROM THE CHART BELOW



Part Number	Lead Dia. Accepted	Contact Finish	Contact Material
TO-340-T	.032" to .040"	Tin	BeCu
TO-340-G	.032" to .040"	Gold	BeCu
TO-340B-T	.032" to .040"	Tin	Copper Alloy
TO-360-T	.056" to .062"	Tin	BeCu

Note: Some sizes, styles and options are non-standard, non-returnable.

TYPICAL ASSEMBLY APPLICATION



SUGGESTED CHASSIS HOLES

TO-5 Transistor and IC Sockets

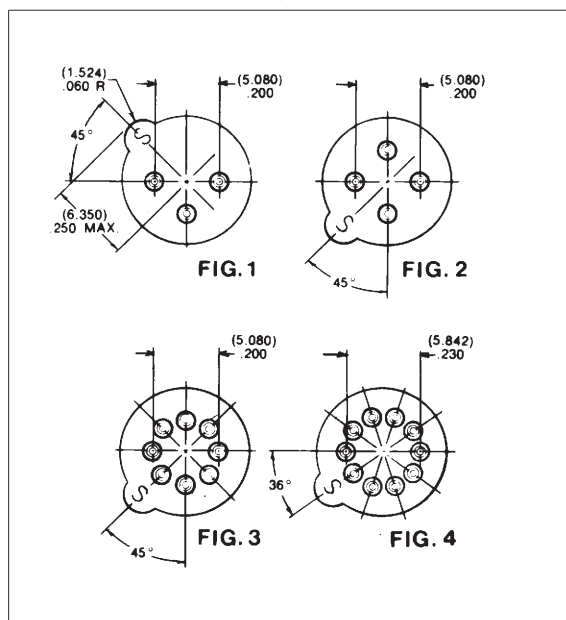
Sockets feature machined lead sockets to eliminate solder wicking and closed entry contact for easiest error-free component plug-in.

Choice of gold or tin plated brass shell with gold plated inner BeCu contact. Contacts accept most IC leads and round leads from .015" to .022" DIA. Wire-wrap, solder and solder-pot terminations are available with UL approved molded body featuring polarization, pin-contact identification and mounting holes.

Specifications: TO-5

Same as IC Series

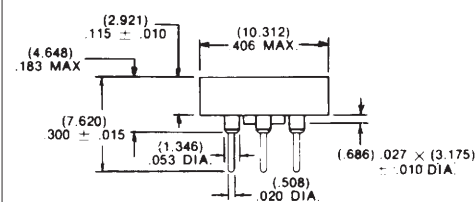
SPECIFY TO-5 PART NUMBER FROM THE CHART BELOW



Part No.	Figure	Pin Circle Diameter	No. of Contacts	Contact Finish	Shell Finish
TO-5320-GG*	1	.200	3	Gold	Gold
TO-5320-GT*	1	.200	3	Gold	Tin
TO-5420-GG*	2	.200	4	Gold	Gold
TO-5420-GT*	2	.200	4	Gold	Tin
TO-5820-GG	3	.200	8	Gold	Gold
TO-5820-GT	3	.200	8	Gold	Tin
TO-51023-GG	4	.230	10	Gold	Gold
TO-51023-GT	4	.230	10	Gold	Tin

*Wire-Wrap & Solder Pot Available
Add "-W" suffix for Wire-Wrap Terminal.
Add "-S" suffix for Solder Pot Terminal.

Note: Some sizes, styles and options are non-standard, non-returnable.



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TSF-110-02-T-D

TSF-126-02-T-S

SSF-118-02-S-D

SURFACE MOUNT STRIPS TSF, SSF SERIES

Mates with:

SS, SD, HSS, SL, SDL,
ESS, ESD, HLS, SSF

SPECIFICATIONS

For complete specifications
see www.samtec.com?TSF

Insulator Material:
Black Liquid Crystal Polymer
Flammability Rating:
UL 94V-O

Insulation Resistance:
5000 MΩ

Max Processing Temp:
230°C for 30 to 60 seconds

Operating Temp Range:
-65°C to +105°C with Tin;
-65°C to +125°C with Gold

Dielectric Withstanding Voltage: 600 VAC

Terminal Material:

Phosphor Bronze

Plating: Au or Sn over

50μ" (1,27mm) Ni

Current Rating: 5A

Lead Coplanarity:

.006" (0,15mm) max (2-22)

.008" (0,20mm) max (23-29)

.010" (0,25mm) max (30-36)

Note:

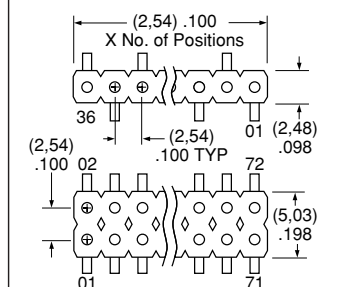
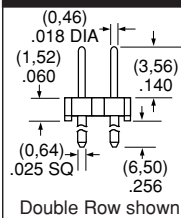
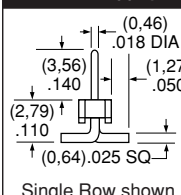
Some sizes, styles and
options are non-standard,
non-returnable.

TSF

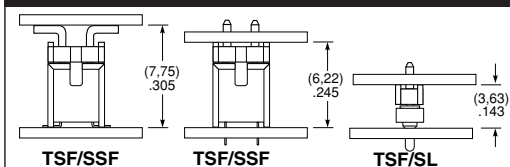
1

NO. PINS
PER ROWLEAD
STYLEPLATING
OPTIONROW
OPTIONOTHER
OPTION

02 thru 36

-01 = Through
Hole-02 = Surface
Mount-S
= 30μ" (0,76μm)
Au on post,
Tin on tail-T
= Tin
(Not
recommended
for mating
with SSF)-S
= Single
Row-D
= Double
Row-“XX”
= Polarized
PositionSpecify
position for
omitted pin.

APPLICATIONS



SPECIFICATIONS

For complete specifications
see www.samtec.com?SSF

Insulator Material:

Black PCT

Flammability Rating:

UL 94 V-O

Insulation Resistance:
5000 MΩ

Max Processing Temp:
230°C for 30 to 60 seconds

Operating Temp Range:
-65°C to +125°C

Plating: Au or Sn over
50μ" (1,27μm) Ni

Current Rating: 1A

Contact Material: BeCu

Contact Resistance:
10 mΩ max

Lead Size Range:

.017" (0,43mm) DIA to

.019" (0,48mm) DIA

Insertion Depth: .100"
(2,54mm) to .150" (3,81mm)

Insertion Force:

Standard = 5 oz (1,39N) avg;

LIF = 2.8 oz (0,78N) avg

Withdrawl Force:

Standard = 4 oz (1,11N) avg;

LIF = 1.6 oz (0,44N) avg

SMT Lead Coplanarity:

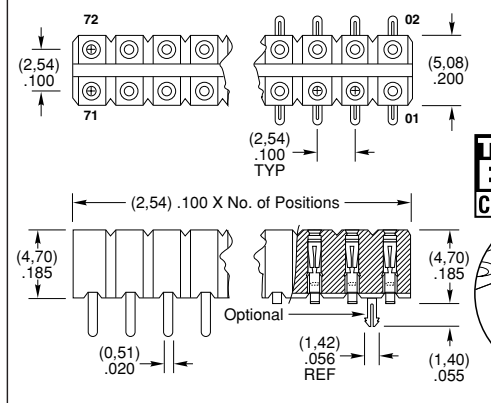
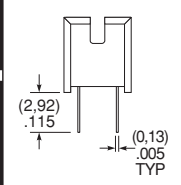
.006" (0,15mm) max

SSF

1

NO. PINS
PER ROWLEAD
STYLEPLATING
OPTIONROW
OPTIONOTHER
OPTION

02 thru 36

TIGER
EYE
CONTACT-01
= Through Hole-L1
= Low Insertion
Force
Through Hole-02
= Surface Mount-L2
= Low Insertion
Force
Surface Mount

Mates with:
TS, TD, HTS,
BBS, BBD,
BBL, BDL,
BHS, LBS,
HLT, TSF

Due to technical progress, all designs, specifications and components are subject to change without notice.

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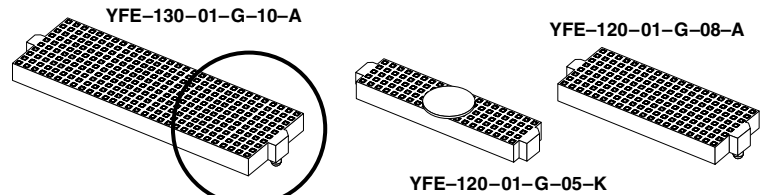
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HI-DENSITY SOCKET YFE SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com?YFE

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu

Current Rating:
2A @ 80°C ambient
Operating Temp Range:
-65°C to +125°C

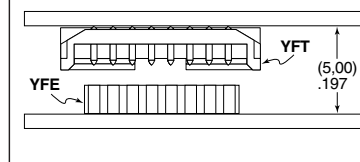
Plating:
Au over 50μ" (1,27μm) Ni
Contact Resistance:
10 mΩ max

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
YFT, YFW



APPLICATION



High reliability
Tiger-Eye
contacts

(1,27mm) .050"
micro pitch



Polarized
notches

Optional polarized
Alignment Pins

APPLICATION SPECIFIC OPTION

30, 40 & 50 positions also available in 5 & 8 rows.
Call Samtec.

Processing:

Max Processing Temp:
230°C for 60 seconds

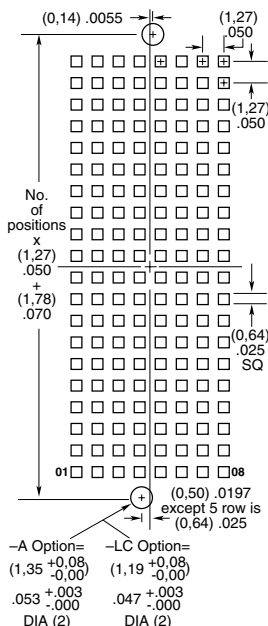
SMT Lead Coplanarity:
(0,15mm) .006" max

Typical Processing:

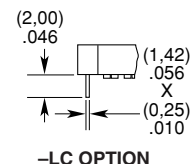
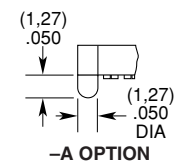
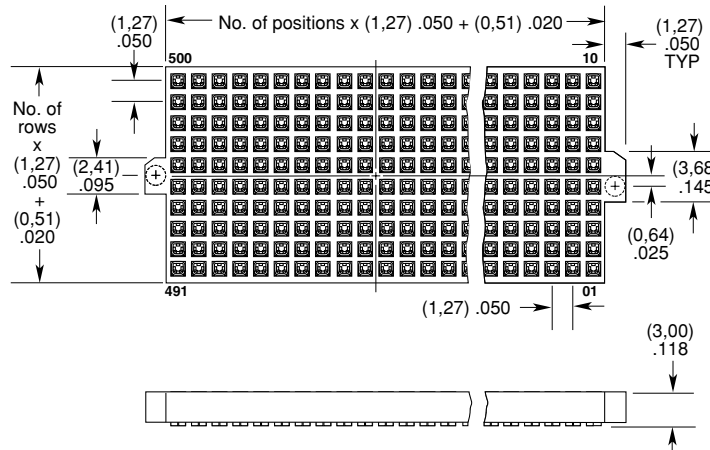
- Water soluble paste compound
- (0,15mm to 0,20mm) .006" to .008" paste thickness
- 1:1 aperture
- Mask or plug vias
- Process like a BGA
- X-ray inspection as required

Suggested PCB Layouts:

For reference only. Please contact Samtec or go to www.samtec.com?YFE for recommended PCB layout.



TYPE	NO. PINS PER ROW	01	PLATING OPTION	ROW OPTION	OTHER OPTION
YFE =Beryllium Copper Tiger Eye Contact	20 = -05, -08, and -10 row 30, 40, 50 = -10 row only		-G =20μ" (0,51μm) Gold on contact area	-05 =Five Row -08 =Eight Row -10 =Ten Row	-A =Alignment Pin -LC =Locking Clip -K =Polyamide film Pick & Place Pad -TR =Tape & Reel



Due to technical progress, all designs, specifications and components are subject to change without notice.

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Federal Supply Code: 55322

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