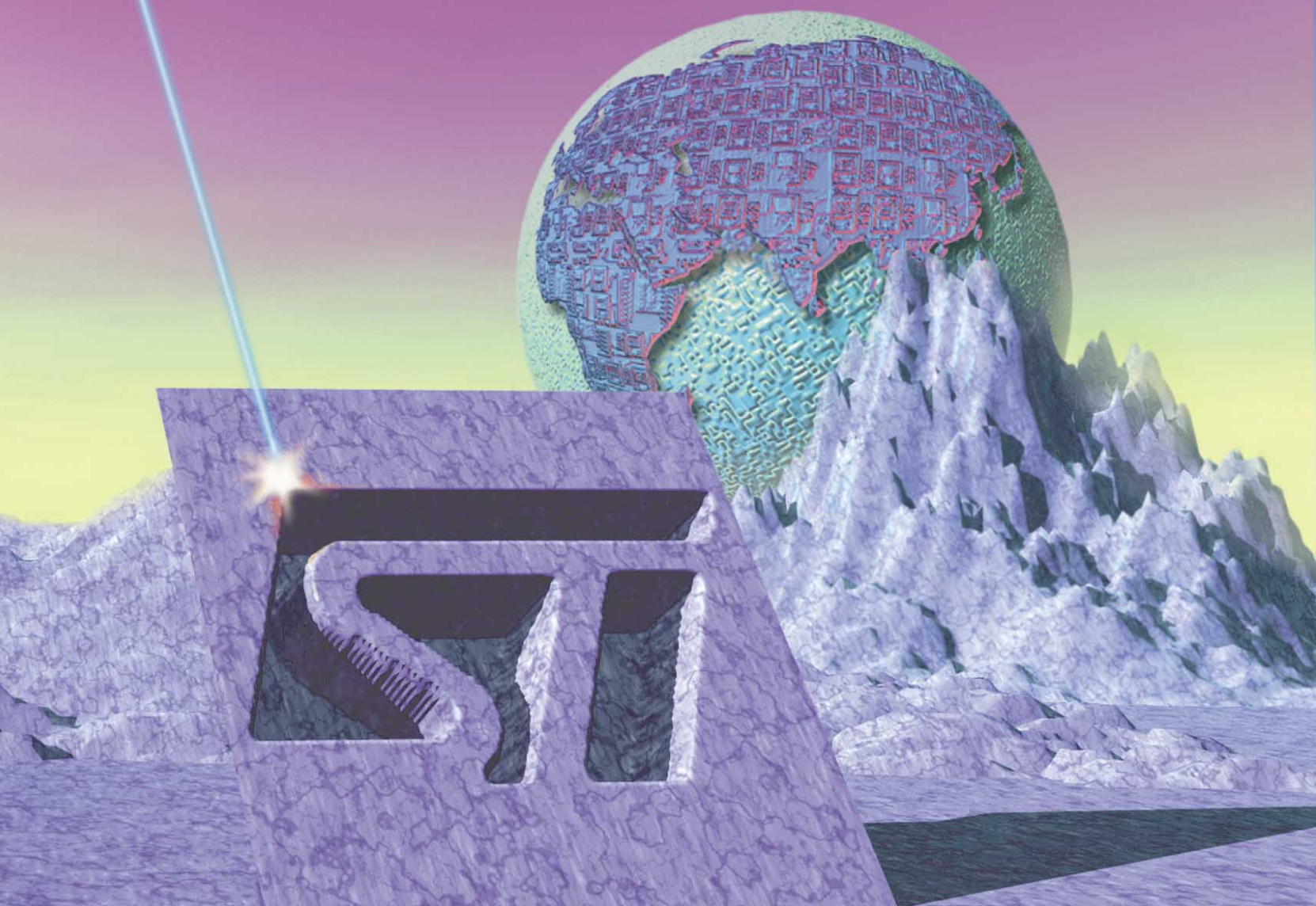


STMicroelectronics



Anglia

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Sandall Road, Wisbech,
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PRODUCT RANGE

DIODES

SIGNAL, Schottky
ZENER
RECTIFIER
TRANSIENT VOLTAGE SUPPRESSION

REGULATORS

FIXED VOLTAGE
ADJUSTABLE VOLTAGE
VOLTAGE REFERENCE

THYRISTORS

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ST7 FAMILY



MEMORY

EPROM
EEPROM
FLASH
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HEATSINKS

SEMICONDUCTOR
from Redpoint Thermalloy

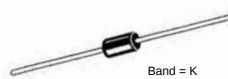
GENERAL DATA

PACKAGE DIMENSIONS
POWER PACKAGE PERFORMANCE
GLOSSARY

Silicon schottky barrier diodes suitable for applications where a low forward voltage is required. The range consists of general purpose and UHF/ultra-fast types with a choice of either axial lead or surface mount package.



DO35



DO41



DO201AD

GENERAL PURPOSE

 $T_J = 25^\circ\text{C}$

Device No. & Anglia Order Code Taped	V_{RRM} (V)	I_F (mA)	$I_R^* @ V_R$		$V_F^* @ I_F$		$C @ V_R$ $f = 1\text{MHz}$		Dynamic Parameter		Package
			max. (μA)	(V)	max. (V)	(mA)	typ. (pF)	(V)	at	at	
BAT42	30	200	0.5	25	0.4 0.65 1	10 50 200	7	1	$t_{rr} < 5\text{ns}$	10mA	DO35
BAT43	30	200	0.5	25	0.33 0.45 1	2 15 200	7	1	$\eta < 80\%$	45MHz	
BAT47	20	350	4	10	0.3 0.5 1	0.1 30 300	12	1	$t_{rr} < 10\text{ns}$	10mA	
BAT48	40	350	2	10	0.3 0.5 1	0.1 50 500	12	1	$t_{rr} < 10\text{ns}$	10mA	
BAT41	100	100	0.1	50	0.45 1	1 200	2	1	—	—	
BAT46	100	150	2	50	0.25 0.45 1	0.1 10 250	6	1	—	—	
BAT49	80	500	200	80	0.32 0.42 1	10 100 1000	35	5	—	—	DO41
BYV10-40	40	1000	500	40	0.55 0.85	1000 3000	220	0	—	—	
BYV10-60	60	1000	500	60	0.7 1	1000 3000	40	5	—	—	
1N5817	20	1000	1000	20	0.45 0.75	1 3	—	—	—	—	
1N5818	30	1000	1000	30	0.55 0.875	1 3	—	—	—	—	
1N5819	40	1000	1000	40	0.6 0.9	1 3	—	—	—	—	
1N5820	20	3000	2000	20	0.475 0.85	3 9.4	—	—	—	—	DO201AD
1N5821	30	3000	2000	30	0.5 0.9	3 9.4	—	—	—	—	
1N5822	40	3000	2000	40	0.525 0.95	3 9.4	—	—	—	—	

 η = Detection efficiency* = Pulse test : BAT/BYV - I_R & V_F $t_p \leq 300\mu\text{s}$, $\delta < 2\%$ 1N58xx- I_R $t_p = 5\text{ms}$, $\delta < 2\%$, V_F $t_p = 380\mu\text{s}$, $\delta < 2\%$

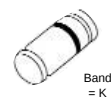
UHF & ULTRA - FAST

 $T_A = 25^\circ\text{C}$

Device No. & Anglia Order Code Taped	V_{RRM} (V)	I_F (mA)	$I_R^* @ V_R$		$V_F^* @ I_F$		$C @ V_R$ $f = 1\text{MHz}$		Dynamic Parameter		Package
			max. (μA)	(V)	max. (V)	(mA)	typ. (pF)	(V)	at	at	
1N5711	70	15	0.2	50	0.41	1	2	0	$\tau < 100\text{ps}$	5mA	DO35
1N6263	60	15	0.2	50	0.41	1	2.2	0	$\tau < 100\text{ps}$	5mA	

 τ = Minority carrier file time (Krakauer method)* = Pulse test $t_p \leq 300\mu\text{s}$, $\delta < 2\%$

SURFACE MOUNT



MINIMELF/ MELF



SOT23

GENERAL PURPOSE

 $T_J = 25^{\circ}\text{C}$

Device No. & Anglia Order Code Tape & Reel	V_{RRM} (V)	I_F (mA)	$I_R^* @ V_R$		$V_F^* @ I_F$		$C @ V_R$ $f = 1\text{MHz}$		Dynamic Parameter	at	Package
			max. (μA)	(V)	max. (V)	(mA)	typ. (pF)	(V)			
TMMBAT42	30	200	0.55	25	0.4 0.65 1	10 50 200	7	1	$t_{rr} < 5\text{ns}$	10mA	MINIMELF
TMMBAT43	30	200	0.5	25	0.33 0.45 1	2 15 200	7	1	$\eta > 80\%$	45MHz	
TMMBAT48	40	350	2	10	0.5 0.75 0.9	50 200 500	12	1	$t_{rr} < 10\text{ns}$	10mA	
TMMBAT41	100	100	0.1	50	0.45 1	1 200	2	1	—	—	
TMMBAT46	100	150	2	50	0.25 0.45 1	0.1 10 250	6	1	—	—	
TMBAT49	80	500	200	80	0.32 0.42 1	10 100 1000	35	5	—	—	MELF
TMBYV10-40	40	1000	500	40	0.55 0.85	1000 3000	220	0	—	—	
TMBYV10-60	60	1000	500	60	0.7 1	1000 3000	40	5	—	—	

 η = Detection efficiency* = Pulse test $t_p \leq 300\mu\text{s}$, $\delta < 2\%$

UHF & ULTRA - FAST

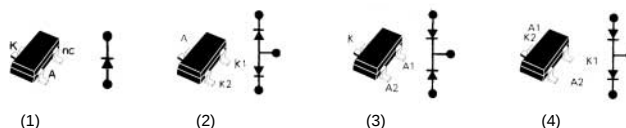
 $T_A = 25^{\circ}\text{C}$

Device No. & Anglia Order Code Tape & Reel	V_{RRM} (V)	I_F (mA)	$I_R^* @ V_R$		$V_F^* @ I_F$		$C @ V_R$ $f = 1\text{MHz}$		Dynamic Parameter	at	Marking	Circuit Config.	Package
			max. (μA)	(V)	max. (V)	(mA)	max. (pF)	(V)					
TMM6263	60	15	0.2	50	0.41	1	2.2	0	$\tau < 100\text{ps}$	5mA	—	—	MINIMELF
BAR18	70	15	0.2	50	0.41	1	2	0	$\tau < 100\text{ps}$	5mA	D76	1	SOT23
BAR42	30	100	0.5	25	0.4	10	7#	1	$t_{rr} < 5\text{ns}$	10mA	D94	1	
BAR43	30	100	0.5	25	0.33	2	7#	1	$t_{rr} < 5\text{ns}$	10mA	D95	1	
BAT54	30	500	1	30	0.4	10	10	1	$t_{rr} < 5\text{ns}$	10mA	D86	1	
BAS70-06	70	15	0.2	50	0.41	1	2	0	$\tau < 100\text{ps}$	5mA	D98	2	
BAR43A	30	100	0.5	25	0.33	2	7#	1	$t_{rr} < 5\text{ns}$	10mA	DB1	2	
BAS70-05	70	15	0.2	50	0.41	1	2	0	$\tau < 100\text{ps}$	5mA	D97	3	
BAR43C	30	100	0.5	25	0.33	2	7#	1	$t_{rr} < 5\text{ns}$	10mA	DB2	3	
BAT54C	30	500	1	30	0.4	10	10	1	$t_{rr} < 5\text{ns}$	10mA	D87	3	
BAS70-04	70	15	0.2	50	0.41	1	2	0	$\tau < 100\text{ps}$	5mA	D96	4	
BAR43S	30	100	0.5	25	0.33	2	7#	1	$t_{rr} < 5\text{ns}$	10mA	DA5	4	

= Typical value

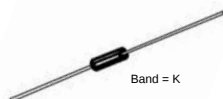
 τ = Minority carrier file time (Kraukauer method)* = Pulse test $t_p \leq 300\mu\text{s}$, $\delta < 2\%$

Circuit Configuration

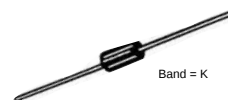
PACKAGE
DIMENSIONSrefer to General Data section
shown later in this shortform

SUPPLIED IN FULL REELS ONLY

Two ranges of axial lead zener diodes offering a choice of power rating and regulated voltage. A 2 Watt range is also available in surface mount.



F126



CB417

2 Watt

 $V_F \leq 1.2V$ ($I_F = 0.5A$, $T_A = 25^\circ C$)

Nominal Voltage (V)	Device No. & Anglia Order Code		V_{ZT} @ I_{ZT}^*		I_{ZT}^*	R_{ZK} @ I_{ZK}	αV_Z	I_R @ V_R		I_{ZM}	I_{ZSM}^{**}	Package
	Taped	Tape & Reel	min. (V)	max. (V)	(mA)	max. (Ω)	typ. ($10^{-4}/^\circ C$)	max. (μA)	(V)	$T_L = 55^\circ C$ (mA)	(A)	
5.1	BZV47C5V1	BZV47C5V1RL	4.8	5.4	100	5	1	5	1	370	7.8	F126
5.6	BZV47C5V6	BZV47C5V6RL	5.2	6	100	2	2.5	5	1	330	7.1	
6.2	BZV47C6V2	BZV47C6V2RL	5.8	6.6	100	2	3.2	5	1	300	6.4	
7.5	BZV47C7V5	BZV47C7V5RL	7	7.9	100	2	4.5	5	2	250	5.4	
10	BZV47C10	BZV47C10RL	9.4	10.6	50	4	5.5	5	7.6	185	4	
12	BZV47C12	BZV47C12RL	11.4	12.7	50	7	6.5	1	9.1	155	3.3	
15	BZV47C15	BZV47C15RL	13.8	15.6	50	10	7	1	11.4	130	2.7	
18	BZV47C18	BZV47C18RL	16.8	19.1	25	15	7.5	0.5	13.7	105	2.2	
20	BZV47C20	BZV47C20RL	18.8	21.2	25	15	7.5	0.5	15.2	94	2	
22	BZV47C22	BZV47C22RL	20.8	23.3	25	15	8	0.5	16.7	86	1.8	
24	BZV47C24	BZV47C24RL	22.8	25.6	25	15	8	0.5	18.2	78	1.7	
27	BZV47C27	BZV47C27RL	25.1	28.9	25	15	8.5	0.5	20.5	69	1.5	
30	BZV47C30	BZV47C30RL	28	32	25	15	8.5	0.5	22.8	62	1.3	
36	BZV47C36	BZV47C36RL	34	38	10	40	8.5	0.5	27.4	52	1.1	
39	BZV47C39	BZV47C39RL	37	41	10	40	9	0.5	29.6	48	1	
47	BZV47C47	BZV47C47RL	44	50	10	45	9	0.5	35.7	40	0.85	
68	BZV47C68	BZV47C68RL	64	72	10	80	9	0.5	51.7	27	0.59	
100	BZV47C100	BZV47C100RL	94	106	5	200	9	0.5	76	18	0.4	
150	BZV47C150	BZV47C150RL	138	156	5	300	9.5	0.5	114	12.8	0.27	
200	BZV47C200	BZV47C200RL	188	212	5	350	9.5	0.5	152	9.4	0.2	

* Pulse test $t_p \leq 50ms$, $\delta < 2\%$ ** Rectangular waveform ($t_p = 10ms$)

5 Watt

 $V_F \leq 1.2V$ ($I_F = 0.5A$, $T_A = 25^\circ C$)

Nominal Voltage (V)	Device No. & Anglia Order Code		V_{ZT} @ I_{ZT}^*	I_{ZT}^*	R_{ZK} @ I_{ZK}	αV_Z	I_R @ V_R		I_{ZM}	I_{ZSM}^{**}	Package
	Taped	Tape & Reel	nom. (V)	(mA)	max. (Ω)	typ. ($10^{-4}/^\circ C$)	max. (μA)	(V)	$T_A = 75^\circ C$ (mA)	(A)	
3.9	1N5335B	1N5335BRL	3.9	320	2	-5	50	1	1220	18.8	CB417
5.6	1N5339B	1N5339BRL	5.6	220	1	2.5	1	2	865	13.1	
6.8	1N5342B	1N5342BRL	6.8	175	1	4	10	5.2	700	10.8	
8.2	1N5344B	1N5344BRL	8.2	150	1.5	4.8	10	6.2	580	8.9	
10	1N5347B	1N5347BRL	10	125	2.0	5.5	5	7.6	475	7.3	
12	1N5349B	1N5349BRL	12	100	2.5	6.5	2	9.1	395	10.1	
15	1N5352B	1N5352BRL	15	75	2.5	7	1	11.5	315	8.1	
18	1N5355B	1N5355BRL	18	65	2.5	7.5	0.5	13.7	264	6.7	
24	1N5359B	1N5359BRL	24	50	3.5	8	0.5	18.2	198	5	
27	1N5361B	1N5361BRL	27	50	5	8.5	0.5	20.6	176	4.5	
30	1N5363B	1N5363BRL	30	40	8	8.5	0.5	22.8	158	4	
36	1N5365B	1N5365BRL	36	30	11	9	0.5	27.4	132	3.4	
39	1N5366B	1N5366BRL	39	30	14	9	0.5	29.7	122	3.1	
150	1N5383B	1N5383BRL	150	8	330	9.5	0.5	114	31.6	0.81	
200	1N5388B	1N5388BRL	200	5	480	10	0.5	152	23.6	0.6	

* Pulse test $t_p \leq 50ms$, $\delta < 2\%$ ** Rectangular waveform ($t_p = 10ms$)



SURFACE MOUNT



Band = K

SMA

2 Watt

 $V_F \leq 1.2V$ ($I_F = 0.5A$, $T_A = 25^\circ C$)

Nominal Voltage (V)	Device No. & Anglia Order Code Tape & Reel	V_{ZT} @ I_{ZT}^*		I_{ZT}^*	R_{ZK} @ I_{ZK}	αV_Z	I_R @ V_R		I_{ZM}	I_{ZSM}^{**}	Package
		min. (V)	max. (V)	(mA)	max. (Ω)	typ. ($10^{-4}/^\circ C$)	max. (μA)	(V)	$T_L = 115^\circ C$ (mA)	(A)	
5.1	SM2Z5V1	4.8	5.4	100	5	1	5	1	370	7.8	SMA
5.6	SM2Z5V6	5.2	6	100	2	2.5	5	1	330	7.1	
6.2	SM2Z6V2	5.8	6.6	100	2	3.2	5	1	300	6.4	
7.5	SM2Z7V5	7	7.9	100	2	4.5	5	2	250	5.4	
10	SM2Z10	9.4	10.6	50	4	6	1	8.3	170	3.6	
12	SM2Z12	11.4	12.7	50	7	6.5	1	9.1	155	3.3	
15	SM2Z15	13.8	15.6	50	10	7	1	11.4	130	2.7	
18	SM2Z18	16.8	19.1	25	15	7.5	0.5	13.7	105	2.2	
20	SM2Z20	18.8	21.2	25	15	7.5	0.5	15.2	94	2	
22	SM2Z22	20.8	23.3	25	15	8	0.5	16.7	86	1.8	
24	SM2Z24	22.8	25.6	25	15	8	0.5	18.2	78	1.6	
27	SM2Z27	25.1	28.9	25	15	8.5	0.5	20.5	69	1.4	
30	SM2Z30	28	32	25	15	8.5	0.5	22.8	62	1.1	
36	SM2Z36	34	38	10	40	8.5	0.5	27.4	52	0.9	
39	SM2Z39	37	41	10	40	9	0.5	29.6	48	1	
47	SM2Z47	44	50	10	45	9	0.5	35.7	40	0.7	
68	SM2Z68	64	72	10	80	9	0.5	47.1	30	0.64	
100	SM2Z100	94	106	5	200	9	0.5	76	18	0.4	
150	SM2Z150	138	156	5	300	9.5	0.5	114	12.8	0.15	
200	SM2Z200	188	212	5	350	9.5	0.5	152	9.4	0.12	

* Pulse test $t_p \leq 50ms$, $\delta < 2\%$ ** Rectangular waveform ($t_p = 10ms$)

SUPPLIED IN FULL REELS ONLY

PACKAGE
DIMENSIONSrefer to General Data section
shown later in this shortform

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An extensive series of rectifier diodes offering a wide choice of ratings over five categories of product. Available in a variety of packages including surface mount.

FAST RECOVERY

I_F 1A $\rightarrow$ 10A
 V_{RRM} 80V $\rightarrow$ 1000V
 t_{rr} max. 300ns $\rightarrow$ 50ns
page 7

GENERAL PURPOSE

I_F 6A $\rightarrow$ 35A
 V_{RRM} 200V $\rightarrow$ 1000V
page 7

ULTRA - FAST

I_F 1A $\rightarrow$ 2 x 100A
 V_{RRM} 200V $\rightarrow$ 1000V
 t_{rr} max. 170ns $\rightarrow$ 30ns
pages 8 - 9

TURBOSWITCH™

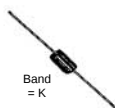
I_F 1A $\rightarrow$ 2 x 60A
 V_{RRM} 600V $\rightarrow$ 1200V
 t_{rr} max. 115ns $\rightarrow$ 50ns
pages 10 - 11

POWER SCHOTTKY

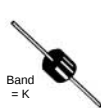
I_F 1A $\rightarrow$ 2 x 120A
 V_{RRM} 15V $\rightarrow$ 100V
pages 12 - 13



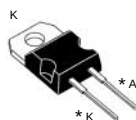
F126



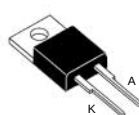
DO201AD



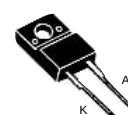
AG



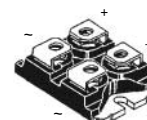
TO220AC



TO220AC
isolated



ISOWATT220AC



ISOTOP

FAST RECOVERY

I _F (AV)	V _{RRM}	Device No. & Anglia Order Code		V _F @ I _F		I _R @ V _{RRM}	t _{rr}	I _{FSM}	Package
(A)	(V)	Taped	Tape & Reel	max. (V)	(A)	max. (mA)	max. (ns)	(A)	
1	80	PLQ08	PLQ08RL	1.1	1	0.01	50	20	F126
	100	PLQ1	PLQ1RL	1.1	1	0.01	50	20	
	600	BYT11-600	BYT11-600RL	1.3	1	0.02	100	35	
	800	BYT11-800	BYT11-800RL	1.3	1	0.02	100	35	
	1000	BYT11-1000	BYT11-1000RL	1.3	1	0.02	100	35	
3	100	PFR851	PFR851RL	1.25	1	0.01	150	150	DO201AD
	200	PFR852	PFR852RL	1.25	1	0.01	150	150	
	400	PFR854	PFR854RL	1.25	1	0.01	150	150	
	600	PFR856	PFR856RL	1.25	1	0.01	200	150	
	600	BYT13-600	BYT13-600RL	1.3	3	0.02	150	100	
	800	BYT13-800	BYT13-800RL	1.3	3	0.02	150	100	
	1000	BYT13-1000	BYT13-1000RL	1.3	3	0.02	150	100	
		Device No. & Anglia Order Code							
6	600	BYT71F-600		1.4	6	1	300	90	ISOWATT220AC
	800	BYT71F-800		1.4	6	1	300	90	
6	600	BYT71-600		1.4	6	1	300	90	TO220AC
	800	BYT71-800		1.4	6	1	300	90	
10	400	BY233-400		1.5	8	1	150	100	
	600	BY233-600		1.5	8	1	150	100	
	800	ESM765-800		1.4	10	1	300	120	
10	800	ESM765PI-800		1.4	10	1	300	120	TO220AC isolated

* BY233 pin connections are reverse of those shown above

t_{rr} measured at - BY, BYT, ESM: $I_F = 1A$, $dI_F/dt = -15A/\mu s$, $V_R = 30V$

PFR: $I_F = 1A$, $dI_F/dt = -25A/\mu s$, $V_R = 30V$

PLQ: $I_F = 1A$, $dI_F/dt = -50A/\mu s$, $V_R = 30V$

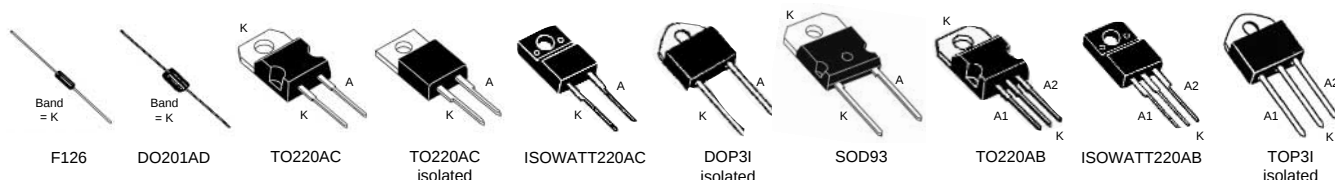
GENERAL PURPOSE

I_F (AV) (A)	V_{RRM} (V)	Device No. & Anglia Order Code		$V_F @ I_F$		$I_R @ V_{RRM}$ max. (mA)	I_{FSM} (A)	Package
				max. (V)	(A)			
6	200	BY214-200		1.2	20	0.25	400	AG
	400	BY214-400		1.2	20	0.25	400	
	600	BY214-600		1.2	20	0.25	400	
	800	BY214-800		1.2	20	0.25	400	
	1000	BY214-1000		1.2	20	0.25	400	
10	800	BY239L-800		1.45	30	0.5	140	TO220AC
35	600	BF3506TV		1.3	35	0.2	300	ISOTOP – bridge config.
	1000	BF3510TV		1.3	35	0.2	300	

* BY239L pin connections are reverse of those shown above

RECOMMENDED
HEATSINKS
see Heatsink section
later in this shortform

**PACKAGE
DIMENSIONS**
refer to General Data section
shown later in this shortform



ULTRA-FAST

I _F (AV)	V _{RRM}	Device No. & Anglia Order Code		V _F @ I _F		I _R @ V _{RRM}	t _{rr}	I _{FSM}	Package	
(A)	(V)	Taped	Tape & Reel	max. (V)	(A)	max. (mA)	max. (ns)	(A)		
1	400	BYT01-400	BYT01-400RL	1.4	1	0.5	55	30	F126	
1.5	200	BYW100-200	BYW100-200RL	0.85	1.5	0.5	35	50		
2	200	STSR220	STSR220RL	0.8	2	0.5	35	70		
3	200	STPR320	STPR320RL	0.99	3	0.5	30	30		
3	200	BYW98-200	BYW98-200RL	0.85	3	0.5	35	70	DO201AD	
3	400	BYT03-400	BYT03-400RL	1.4	3	0.5	55	60		
		Device No. & Anglia Order Code								
5	200	STPR520D		0.99	5	0.5	30	50	TO220AC	
8	200			0.99	8	0.6	30	80		
8	200			BYW29-200	0.85	5	0.6	35		80
8	400			BYT08P-400	1.4	8	2.5	75		100
8	1000			BYT08P-1000	1.9	8	2	155		50
10	200			BYW80-200	0.85	7	1	35		100
12	200			STPR1220D	0.99	12	0.8	30		120
12	1000			BYT12P-1000	1.8	12	2.5	155		75
15	200			STPR1520D	0.99	15	1	30		150
15	200			BYW81P-200	0.85	12	1.5	40		200
8	400	BYT08PI-400		1.4	8	2.5	75	100	TO220AC isolated	
8	1000			BYT08PI-1000	1.8	8	2	155		50
10	200			BYW80PI-200	0.85	7	1	75		100
12	1000			BYT12PI-1000	1.8	12	2.5	155		75
15	200			BYW81PI-200	0.85	12	1.5	40		200
5	200	STPR520F		0.99	5	0.5	30	50	ISOWATT220AC	
8	200			STPR820F	0.99	8	0.6	30		80
8	200			BYW29F-200	0.85	5	0.6	35		80
10	200			BYW80F-200	0.85	7	1	35		100
12	200			STPR1220F	0.99	12	0.8	30		120
25	200	BYW77PI-200		0.85	20	2.5	50	500	DOP3I isolated	
30	400			BYT30PI-400	1.4	30	6	50		350
30	1000			BYT30PI-1000	1.8	30	5	165		200
25	200	BYW77P-200		0.85	20	2.5	50	500	SOD93	
30	400			BYT30P-400	1.4	30	6	50		350
30	1000			BYT30P-1000	1.8	30	5	165		200
60	400			BYT60P-400	1.4	60	10	50		550
60	1000			BYT60P-1000	1.8	60	6	170		400
2 x 3	200	STPR620CT		0.99	3	0.5	30	30	TO220AB	
2 x 5	200			STPR1020CT	0.99	5	0.5	30		50
2 x 8	200			STPR1620CT	0.99	8	0.6	30		80
2 x 8	400			BYT16P-400	1.4	8	2.5	75		100
2 x 10	200			BYW51-200	0.85	8	1	35		100
2 x 12	200			STPR2420CT	0.99	12	0.8	30		120
2 x 3	200	STPR620CF		0.99	3	0.5	30	30	ISOWATT220AB	
2 x 5	200			STPR1020CF	0.99	5	0.5	30		50
2 x 10	200			BYW51F-200	0.85	8	1	35		100
2 x 15	200	BYW99PI-200		0.85	12	1.5	40	200	TOP3I isolated	
2 x 30	200			BYV52PI-200	0.85	20	2.5	50		500

All ratings are per diode.

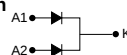
 t_{rr} measured at - STPR : $I_F = 0.5A$, $I_{rr} = 0.25A$, $I_R = 1A$ STSR, BYV, BYW : I_F , $dI_F/dt = -50A/\mu s$, $V_R = 30V$ BYT : $I_F = 1A$, $dI_F/dt = -15A/\mu s$, $V_R = 30V$

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

TO220AB, ISOWATT220AB & TOP3I isolated

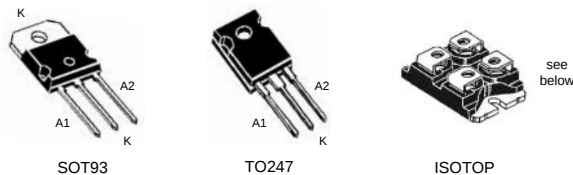
Circuit Configuration



continued on next page

PACKAGE
DIMENSIONS

refer to General Data section
shown later in this shortform



ULTRA-FAST

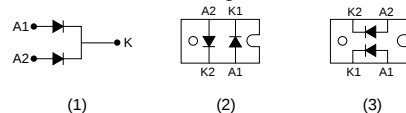
continued

I_F (AV) (A)	V_{RRM} (V)	Device No. & Anglia Order Code		$V_F @ I_F$		$I_R @ V_{RRM}$ max. (mA)	t_{rr} max. (ns)	I_{FSM} (A)	Circuit Config.	Package
				max. (V)	(A)					
2 x 15 2 x 30	200 200	BYW99P-200 BYV52-200		0.85 0.85	12 20	1.5 2.5	40 50	200 500	1 1	SOT93
2 x 12.5 2 x 15	200 200	STPR2520CW BYW99W-200		1 0.85	12.5 12	0.8 1.5	30 40	120 200	1 1	TO247
2 x 30 2 x 30 2 x 30 2 x 30 2 x 50 2 x 50 2 x 60 2 x 60 2 x 60 2 x 100 2 x 100	400 1000 400 1000 200 200 400 400 1000 200 400	BYT230PIV-400 BYT230PIV-1000 BYT231PIV-400 BYT231PIV-1000 BYV54V-200 BYV541V-200 BYT260PIV-400 BYT261PIV-400 BYT261PIV-1000 BYV255V-200 BYT200PIV-400		1.4 1.8 1.4 1.8 0.85 0.85 1.4 1.4 1.8 0.85 1.4	30 30 30 30 50 50 60 60 60 100 100	6 5 6 5 5 5 6 6 6 10 12	100 165 100 165 60 60 100 100 170 80 100	350 200 350 200 1000 1000 600 600 400 1600 600	2 2 3 3 2 3 2 3 3 2 2	ISOTOP

All ratings are per diode.

t_{rr} measured at - STPR : $I_F = 0.5A$, $I_{rr} = 0.25A$, $I_R = 1A$
 BYV, BYW : I_F , $dI_F/dt = -50A/\mu s$, $V_R = 30V$
 BYT : $I_F = 1A$, $dI_F/dt = -15A/\mu s$, $V_R = 30V$

Circuit Configuration



SURFACE MOUNT



SMB



SMC



DPAK



D2PAK

ULTRA-FAST

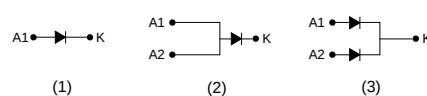
I_F (AV) (A)	V_{RRM} (V)	Device No. & Anglia Order Code		$V_F @ I_F$		$I_R @ V_{RRM}$ max. (mA)	t_{rr} max. (ns)	I_{FSM} (A)	Circuit Config.	Package
		Stick	Tape & Reel	max. (V)	(A)					
1 2 1	200 200 400	— — —	SMBYW01-200 SMBYW02-200 SMBYT01-400	0.71 0.85 1.4	1 2 1	0.4 0.5 0.5	35 35 60	60 50 30	— — —	SMB
3 4	400 200	— —	SMBYT03-400 SMBYW04-200	1.4 0.85	3 4	0.5 0.5	60 35	60 70	— —	SMC
3 4	400 200	BYT3400B BYW4200B	BYT3400B-TR BYW4200B-TR	1.4 0.85	3 4	0.5 0.5	60 35	60 70	1 1	DPAK
2 x 5	200	STPR1020CB	STPR1020CB-TR	0.85	5	0.5	35	70	3	
8 25 30	200 200 400	BYW29G-200 BYW77G-200 BYT30G-400	BYW29G-200-TR BYW77G-200-TR BYT30G-400-TR	0.85 0.85 1.4	5 20 30	0.6 2.5 6	35 50 50	80 200 350	1 2 2	D2PAK
2 x 5 2 x 8 2 x 10	200 200 200	STPR1020CG STPR1620CG BYW51G-200	STPR1020CG-TR STPR1620CG-TR BYW51G-200-TR	0.99 0.99 0.85	5 8 8	0.5 0.6 1	30 30 35	50 80 100	3 3 3	

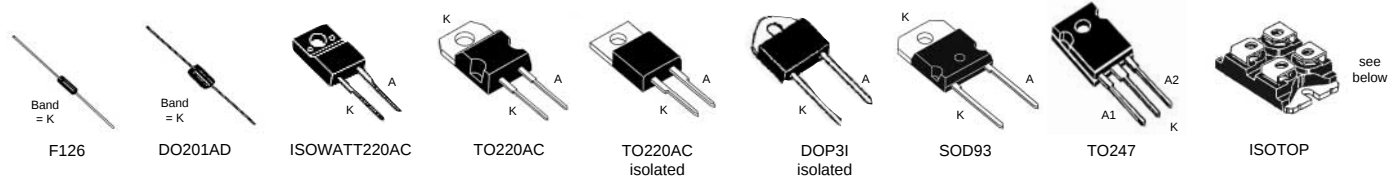
All ratings are per diode.

t_{rr} measured at - STPR : $I_F = 0.5A$, $I_{rr} = 0.25A$, $I_R = 1A$
 BYW : I_F , $dI_F/dt = -50A/\mu s$, $V_R = 30V$
 BYT : $I_F = 1A$, $dI_F/dt = -15A/\mu s$, $V_R = 30V$

SUPPLIED IN FULL STICKS/REELS ONLY

Circuit Configuration

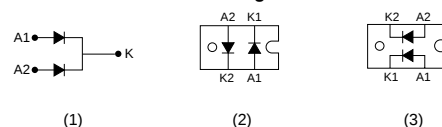



TURBOSWITCH™

I_F (AV) (A)	V_{RRM} (V)	Device No. & Anglia Order Code	V_F @ I_F		I_R max. @ 80% V_{RRM} (mA)	t_{rr} max. (ns)	I_{FRM} (A)	Circuit Config.	Package
1	600	STTA106	max. (V)	(A)				—	F126
4	600	STTA406	1.5	1	0.75	50	22	—	DO201AD
5	600	STTA506F	1.5	5	2	50	65	—	ISOWATT220AC
5	1200	STTA512F	2	5	2	95	75	—	
5	600	STTA506D	1.5	5	2	50	65	—	TO220AC
5	1200	STTA512D	2	5	2	95	75	—	
8	600	STTA806D	1.5	8	4	52	120	—	
8	1200	STTA812D	2	8	4	100	120	—	
12	600	STTA1206D	1.5	12	5	55	140	—	
12	1200	STTA1212D	2	12	5	100	140	—	
8	600	STTA806DI	1.5	8	4	52	120	—	TO220AC isolated
8	1200	STTA812DI	2	8	4	100	120	—	
12	600	STTA1206DI	1.5	12	5	55	120	—	
15	1200	STTA1512PI	1.9	15	6	105	300	—	DOP3I isolated
20	600	STTA2006PI	1.5	20	6	60	270	—	
30	600	STTA3006PI	1.5	30	8	65	300	—	
15	1200	STTA1512P	1.9	15	6	105	300	—	SOD93
20	600	STTA2006P	1.5	20	6	60	270	—	
25	1200	STTA2512P	1.9	25	8	110	300	—	
30	600	STTA3006P	1.5	30	8	65	300	—	
60	600	STTA6006P	1.5	60	12	80	450	—	
2 x 15	600	STTA3006CW	1.6	15	5	65	100	1	TO247
2 x 25	1200	STTA5012TV1	1.85	25	8	110	300	3	ISOTOP
2 x 25	1200	STTA5012TV2	1.85	25	8	110	300	2	
2 x 30	600	STTA6006TV1	1.5	30	8	65	300	3	
2 x 30	600	STTA6006TV2	1.5	30	8	65	300	2	
2 x 45	1200	STTA9012TV1	1.85	45	12	115	900	3	
2 x 45	1200	STTA9012TV2	1.85	45	12	115	900	2	
2 x 60	600	STTA12006TV1	1.5	60	12	80	450	3	
2 x 60	600	STTA12006TV2	1.5	60	12	80	450	2	

All ratings are per diode. V_F and I_R measured at $T_J = 125^\circ\text{C}$.

t_{rr} measured at $I_F = 1\text{A}$, $dI_F/dt = -50\text{A}/\mu\text{s}$, $V_R = 30\text{V}$.

Circuit Configuration


(1)

(2)

(3)

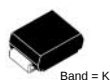
RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

SURFACE MOUNT



SMB



SMC



DPAK



D²PAK

TURBOSWITCH™

I _F (A)	V _{RRM} (V)	Device No. & Anglia Order Code		V _F @ I _F		I _R max. @ 80% V _{RRM} (mA)	t _{rr} max. (ns)	I _{FRM} (A)	Package
		Stick	Tape & Reel	max. (V)	(A)				
1	600	—	STTA106U	1.5	1	0.75	50	22	SMB
1	600	—	STTB106U	1.2	1	0.3	95	49	
1	1200	—	STTA112U	1.5	1	0.3	115	22	
2	600	—	STTA206S	1.5	2	1.2	50	50	SMC
2	1200	—	STTA212S	1.5	2	0.4	115	50	
3	600	STTA306B	STTA306B-TR	1.5	3	1.2	95	110	DPAK
3	1200	STTA312B	STTA312B-TR	1.7	3	0.4	115	120	
5	600	STTA506B	STTA506B-TR	1.5	5	2	50	120	
5	1200	STTA512B	STTA512B-TR	2	5	2	95	120	
8	600	STTA806G	STTA806G-TR	1.5	8	4	52	120	D ² PAK
8	1200	STTA812G	STTA812G-TR	2	8	4	100	120	
12	600	STTA1206G	STTA1206G-TR	1.5	12	5	55	140	

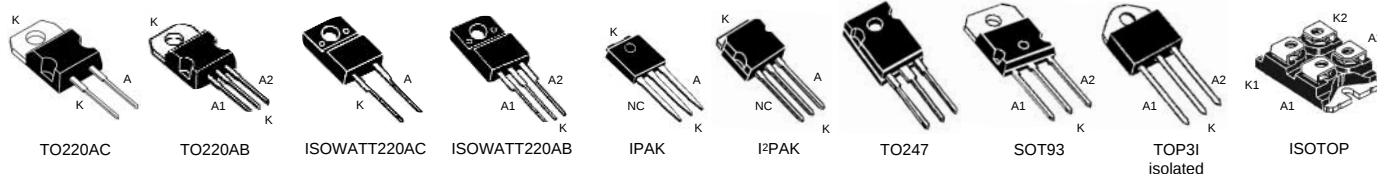
V_F and I_R measured at T_j = 125°C.

t_{rr} measured at I_F = 1A, dI_F/dt = -50A/μs, V_R = 30V.

SUPPLIED IN FULL STICKS/REELS ONLY

PACKAGE DIMENSIONS

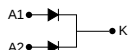
refer to General Data section shown later in this shortform



POWER SCHOTTKY

V_{RRM} (V)	$I_F (AV)$ (A)	Device No. & Anglia Order Code	$V_F @ I_F$		$I_R @ V_{RRM}$ max. (mA)	I_{FSM} (A)	Package
			max. (V)	(A)			
15	20	STPS20L15D	0.33	19	670	310	TO220AC
	2 x 20	STPS40L15CW	0.33	19	670	310	TO247
	2 x 40	STPS80L15TV	0.33	40	—	700	ISOTOP
	2 x 60	STPS120L15TV	0.31	60	—	1200	ISOTOP
25	10	STPS10L25D	0.35	10	400	200	TO220AC
	15	STPS15L25D	0.35	15	640	200	TO220AC
	2 x 10	STPS20L25CT	0.35	10	400	200	TO220AB
30	8	STPS8L30D	0.5	8	50	80	TO220AC
	2 x 15	STPS30L30CT	0.37	15	600	220	TO220AB
40	3	STPS340D	0.57	3	10	75	TO220AC
	3	STPS340F	0.57	3	10	75	ISOWATT220AC
	2 x 3	STPS640CT	0.57	3	10	75	TO220AB
	2 x 3	STPS640CF	0.57	3	10	75	ISOWATT220AB
	2 x 5	STPS10L40CT	0.46	5	30	150	TO220AB
	2 x 5	STPS10L40CF	0.46	5	30	150	ISOWATT220AB
	2 x 8	STPS16L40CT	0.45	8	50	180	TO220AB
	2 x 8	STPS16L40CF	0.45	8	50	180	ISOWATT220AB
	2 x 10	STPS20L40CT	0.5	10	50	180	TO220AB
	2 x 10	STPS20L40CF	0.5	10	50	180	ISOWATT220AB
	2 x 10	STPS20L40CW	0.5	10	50	180	TO247
	2 x 15	STPS30L40CT	0.5	15	75	220	TO220AB
	2 x 15	STPS30L40CW	0.5	15	75	220	TO247
	2 x 20	STPS40L40CT	0.49	20	100	200	TO220AB
	2 x 20	STPS40L40CW	0.49	20	100	200	TO247
	2 x 30	STPS60L40CW	0.5	30	130	300	TO247
45	7.5	STPS745D	0.57	7.5	15	150	TO220AC
	7.5	STPS745F	0.57	7.5	15	150	ISOWATT220AC
	10	STPS1045B-1	0.57	10	—	75	IPAK
	10	STPS1045D	0.57	10	15	180	TO220AC
	10	STPS1045F	0.57	10	15	180	ISOWATT220AC
	15	STPS1545D	0.57	15	40	220	TO220AC
	15	STPS1545F	0.57	15	40	220	ISOWATT220AC
	2 x 7.5	STPS1545CT	0.57	7.5	15	150	TO220AB
	2 x 7.5	STPS1545CF	0.57	7.5	15	150	ISOWATT220AB
	2 x 10	STPS2045CT	0.57	10	15	180	TO220AB
	2 x 10	STPS2045CF	0.57	10	15	180	ISOWATT220AB
	2 x 15	STPS3045CT	0.57	15	40	220	TO220AB
	2 x 15	STPS3045CP	0.57	15	40	220	SOT93
	2 x 15	STPS3045CPI	0.57	15	40	220	TOP31 isolated
	2 x 15	STPS3045CW	0.57	15	40	220	TO247
	2 x 20	STPS4045CP	0.63	20	40	220	SOT93
	2 x 20	STPS4045CW	0.63	20	40	220	TO247
	2 x 30	STPS6045CP	0.63	30	80	400	SOT93
	2 x 30	STPS6045CPI	0.63	30	80	400	TOP31 isolated
	2 x 30	STPS6045CW	0.63	30	80	400	TO247
	2 x 60	STPS12045TV	0.67	60	150	700	ISOTOP
	2 x 80	STPS16045TV	0.69	80	150	900	ISOTOP
	2 x 120	STPS24045TV	0.67	120	300	1500	ISOTOP
60	2 x 10	STPS2060CT	0.67	10	33	200	TO220AB
	2 x 15	STPS3060CW	0.7	15	25	220	TO247
100	5	STPS5H100B-1	0.61	5	4.5	75	IPAK
	8	STPS8H100G-1	0.58	8	6	250	I2PAK
	8	STPS8M100F	0.64	8	6	250	ISOWATT220AC
	2 x 10	STPS20H100CT	0.64	10	6	250	TO220AB
	2 x 40	STPS80H100TV	0.65	40	25	700	ISOTOP
	2 x 80	STPS160H100TV	0.68	80	50	1000	ISOTOP

All ratings are per diode.

TO220AB, ISOWATT220AB, TO247, SOT93 & TOP31 isolated
Circuit Configuration

ISOTOP Circuit Configuration



SURFACE MOUNT



Band = K
SMA



Band = K
SMB



Band = K
SMC



A2/NC
DPAK



A2/NC
D2PAK

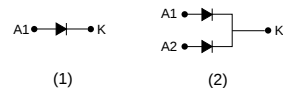
POWER SCHOTTKY

V_{RRM} (V)	I_F (AV) (A)	Device No. & Anglia Order Code		V_F @ I_F		I_R @ V_{RRM} max. (mA)	I_{FSM} (A)	Circuit Config.	Package
		Stick	Tape & Reel	max. (V)	(A)				
15	20	STPS20L15G	STPS20L15G-TR	0.33	19	670	310	1	D2PAK
25	2	—	STPS2L25U	0.375	2	15	75	—	SMB
	3	—	STPS3L25S	0.35	3	—	30	—	SMC
	5	STPS5L25B	STPS5L25B-TR	0.35	5	175	75	1	DPAK
	10	STPS10L25G	STPS10L25G-TR	0.35	10	400	200	1	D2PAK
	15	STPS15L25G	STPS15L25G-TR	0.35	15	640	200	1	D2PAK
	2 x 10	STPS20L25CG	STPS20L25CG-TR	0.35	10	400	200	2	D2PAK
30	1	—	STPS1L30A	0.3	1	20	75	—	SMA
	1	—	STPS1L30U	0.3	1	20	75	—	SMB
	1	—	STPS130A	0.46	1	10	45	—	SMA
	1	—	STPS130U	0.46	1	10	45	—	SMB
	2	—	STPS2L30A	0.375	2	15	75	—	SMA
	8	STPS8L30B	STPS8L30B-TR	0.4	8	50	80	1	DPAK
40	2 x 15	STPS30L30CG	STPS30L30CG-TR	0.37	15	600	220	2	D2PAK
	1	—	STPS1L40A	0.42	1	20	60	—	SMA
	1	—	STPS1L40U	0.42	1	20	60	—	SMB
	1	—	STPS140A	0.5	1	2	60	—	SMA
	1	—	STPS140U	0.5	1	2	60	—	SMB
	3	—	STPS340U	0.57	3	10	75	—	SMB
45	3	—	STPS340S	0.57	3	10	75	—	SMC
	3	STPS340B	STPS340B-TR	0.57	3	10	75	1	DPAK
	2 x 3	STPS640CB	STPS640CB-TR	0.57	3	10	75	2	DPAK
	2 x 5	STPS10L40CG	STPS10L40CG-TR	0.46	5	30	150	2	D2PAK
	2 x 15	STPS30L40CG	STPS30L40CG-TR	0.5	15	75	220	2	D2PAK
	7.5	STPS745G	STPS745G-TR	0.57	7.5	15	150	1	D2PAK
60	10	STPS1045B	STPS1045B-TR	0.57	10	15	75	1	DPAK
	30	STPS3045G	STPS3045G-TR	0.63	30	80	200	1	D2PAK
	2 x 7.5	STPS1545CG	STPS1545CG-TR	0.57	7.5	15	150	2	D2PAK
	2 x 10	STPS2045CG	STPS2045CG-TR	0.57	10	15	180	2	D2PAK
	2 x 15	STPS3045CG	STPS3045CG-TR	0.57	15	40	220	2	D2PAK
	1	—	STPS160A	0.57	1	4	75	—	SMA
100	1	—	STPS160U	0.57	1	4	75	—	SMB
	3	STPS360B	STPS360B-TR	0.59	3	10	50	1	DPAK
	2 x 3	STPS660CB	STPS660CB-TR	0.59	3	10	50	2	DPAK
	1	—	STPS1H100A	0.62	1	0.5	50	—	SMA
	1	—	STPS1H100U	0.62	1	0.5	50	—	SMB
	2	—	STPS2H100A	0.68	2	—	75	—	SMA
100	2	—	STPS2H100U	0.62	2	—	75	—	SMB
	3	STPS3100B	STPS3100B-TR	0.59	3	10	50	1	DPAK
	5	STPS5H100B	STPS5H100B-TR	0.61	5	4.5	75	1	DPAK
	8	STPS8H100G	STPS8H100G-TR	0.64	10	6	250	1	D2PAK
	2 x 3	STPS6100CB	STPS6100CB-TR	0.59	3	10	50	2	DPAK
	2 x 10	STPS20H100CG	STPS20H100CG-TR	0.64	10	6	250	2	D2PAK

All ratings are per diode.

V_F and I_R measured at $T_J = 125^\circ\text{C}$, except for 15V Series measured at $T_J = 100^\circ\text{C}$.

Circuit Configuration



SUPPLIED IN FULL STICKS/REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

A comprehensive range of unidirectional and bidirectional transient voltage suppressors, offering high energy absorption capabilities ranging from 400W to 5kW. Designed to protect voltage sensitive components, these semiconductor devices provide a very fast response time and excellent clamping ability. Housed in standard axial leaded or chip packages, they are ideal for the protection of products such as integrated circuits and MOS devices. N.B. Unidirectional types are suitable for d.c. applications whilst bidirectional are suitable for a.c. applications.

TRANSIL™

**AXIAL LEAD**

400W → 5kW
 V_{RM} 5.8V → 376V

pages 15 - 17

**SURFACE MOUNT**

400W → 1kW
 V_{RM} 5V → 188V

pages 18 - 20

LOW VOLTAGE

V_{RM} 3.3V, 5V & DUAL 5V/12V
AXIAL or SMD

page 21

ASD™

DATALINE PROTECTION
LOAD DUMP PROTECTION
BUS TERMINATION

pages 22 - 23

TRANSIL[™]

400W

F126

I_{FSM} = 30A

Max. Cont. Voltage (V _{RM}) (V)	Breakdown Voltage (V _{BR} *) min. max. (V) (V)		Device No. & Anglia Order Code Taped		I _{RM} @ V _{RM} max. (μA)	V _{CL} @ I _{PP} 10/1000μs max. (V) (A)		Package
			Unidirectional	Bidirectional				
5.8	6.45	7.14	BZW04-5V8	BZW04-5V8B	1000	10.5	38	F126
6.4	7.13	7.88	BZW04-6V4	BZW04-6V4B	500	11.3	35.4	
8.5	9.5	10.5	BZW04-8V5	BZW04-8V5B	10	14.5	27.6	
10.2	11.4	12.6	BZW04-10	BZW04-10B	5	16.7	24	
12.8	14.3	15.8	BZW04-13	BZW04-13B	5	21.2	19	
15.3	17.1	18.9	BZW04-15	BZW04-15B	1	25.2	16	
18.8	20.9	23.1	BZW04-19	BZW04-19B	1	30.6	13	
20.5	22.8	25.2	BZW04-20	BZW04-20B	1	33.2	12	
23.1	25.7	28.4	BZW04-23	BZW04-23B	1	37.5	10.7	
25.6	28.5	31.5	BZW04-26	BZW04-26B	1	41.5	9.6	
28.2	31.4	34.7	BZW04-28	BZW04-28B	1	45.7	8.8	
30.8	34.2	37.8	BZW04-31	BZW04-31B	1	49.9	8	
33.3	37.1	41.0	BZW04-33	BZW04-33B	1	53.9	7.4	
40.2	44.7	49.4	BZW04-40	BZW04-40B	1	64.8	6.2	
47.8	53.2	58.8	BZW04-48	BZW04-48B	1	77	5.2	
58.1	64.6	71.4	BZW04-58	BZW04-58B	1	92	4.3	
70.1	77.9	86.1	BZW04-70	BZW04-70B	1	113	3.5	
85.5	95	105	BZW04-85	BZW04-85B	1	137	2.9	
102	114	126	BZW04-102	BZW04-102B	1	165	2.4	
128	143	158	BZW04-128	BZW04-128B	1	207	2	
154	171	189	BZW04-154	BZW04-154B	1	246	1.6	
171	190	210	BZW04-171	BZW04-171B	1	274	1.5	
188	209	231	BZW04-188	BZW04-188B	1	328	1.4	
213	237	263	BZW04-213	BZW04-213B	1	344	1.5	
256	285	315	BZW04-256	BZW04-256B	1	414	1.2	
273	304	336	BZW04-273	BZW04-273B	1	438	1.2	
299	332	368	BZW04-299	BZW04-299B	1	482	0.9	
342	380	420	BZW04-342	BZW04-342B	1	548	0.9	
376	418	462	BZW04-376	BZW04-376B	1	603	0.8	

* Pulse test tp ≤ 50ms, δ < 2%

UL497B Recognized file # E81734

 TAPE & REEL
 AVAILABLE TO
 SPECIAL ORDER
PACKAGE
DIMENSIONS
 refer to General Data section
 shown later in this shortform

AXIAL LEAD

continued overleaf > > >

600W



F126

 $I_{FSM} = 100A$ TRANSIL[™]

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V) max. (V)		Device No. & Anglia Order Code Taped		I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 10/1000 μs max. (V) (A)		Package
			Unidirectional	Bidirectional				
5.8	6.45	7.14	BZW06-5V8	BZW06-5V8B	1000	10.5	57	F126
6.4	7.13	7.88	BZW06-6V4	BZW06-6V4B	500	11.3	53	
8.5	9.5	10.5	BZW06-8V5	BZW06-8V5B	10	14.5	41	
10.2	11.4	12.6	BZW06-10	BZW06-10B	5	16.7	36	
12.8	14.3	15.8	BZW06-13	BZW06-13B	5	21.2	28	
15.3	17.1	18.9	BZW06-15	BZW06-15B	1	25.2	24	
18.8	20.9	23.1	BZW06-19	BZW06-19B	1	30.6	19.6	
20.5	22.8	25.2	BZW06-20	BZW06-20B	1	33.2	18	
23.1	25.7	28.4	BZW06-23	BZW06-23B	1	37.5	16	
25.6	28.5	31.5	BZW06-26	BZW06-26B	1	41.5	14.5	
28.2	31.4	34.7	BZW06-28	BZW06-28B	1	45.7	13.1	
30.8	34.2	37.8	BZW06-31	BZW06-31B	1	49.9	12	
33.3	37.1	41.0	BZW06-33	BZW06-33B	1	53.9	11.1	
40.2	44.7	49.4	BZW06-40	BZW06-40B	1	64.8	9.3	
47.8	53.2	58.8	BZW06-48	BZW06-48B	1	77	7.8	
58.1	64.6	71.4	BZW06-58	BZW06-58B	1	92	6.5	
70.1	77.9	86.1	BZW06-70	BZW06-70B	1	113	5.3	
85.5	95	105	BZW06-85	BZW06-85B	1	137	4.4	
102	114	126	BZW06-102	BZW06-102B	1	165	3.6	
128	143	158	BZW06-128	BZW06-128B	1	207	2.9	
154	171	189	BZW06-154	BZW06-154B	1	246	2.4	
171	190	210	BZW06-171	BZW06-171B	1	274	2.2	
188	209	231	BZW06-188	BZW06-188B	1	328	2	
213	237	263	BZW06-213	BZW06-213B	1	344	2	
256	285	315	BZW06-256	BZW06-256B	1	414	1.6	
273	304	336	BZW06-273	BZW06-273B	1	438	1.6	
299	332	368	BZW06-299	BZW06-299B	1	482	1.6	
342	380	420	BZW06-342	BZW06-342B	1	548	1.3	
376	418	462	BZW06-376	BZW06-376B	1	603	1.3	

TAPE & REEL
AVAILABLE TO
SPECIAL ORDER

600W



CB417

 $I_{FSM} = 100A$ 

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V) max. (V)		Device No. & Anglia Order Code Taped		I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 10/1000 μs max. (V) (A)		Package
			Unidirectional	Bidirectional				
5.8	6.45	7.14	P6KE6V8A	P6KE6V8CA	1000	10.5	57	CB417
6.4	7.13	7.88	P6KE7V5A	P6KE7V5CA	500	11.3	53	
8.5	9.5	10.5	P6KE10A	P6KE10CA	10	14.5	41	
10.2	11.4	12.6	P6KE12A	P6KE12CA	5	16.7	36	
12.8	14.3	15.8	P6KE15A	P6KE15CA	1	21.2	28	
15.3	17.1	18.9	P6KE18A	P6KE18CA	1	25.2	24	
18.8	20.9	23.1	P6KE22A	P6KE22CA	1	30.6	20	
20.5	22.8	25.2	P6KE24A	P6KE24CA	1	33.2	18	
23.1	25.7	28.4	P6KE27A	P6KE27CA	1	37.5	16	
25.6	28.5	31.5	P6KE30A	P6KE30CA	1	41.5	14.5	
28.2	31.4	34.7	P6KE33A	P6KE33CA	1	45.7	13.1	
30.8	34.2	37.8	P6KE36A	P6KE36CA	1	49.9	12	
33.3	37.1	41.0	P6KE39A	P6KE39CA	1	53.9	11.1	
40.2	44.7	49.4	P6KE47A	P6KE47CA	1	64.8	9.3	
47.8	53.2	58.8	P6KE56A	P6KE56CA	1	77	7.8	
58.1	64.6	71.4	P6KE68A	P6KE68CA	1	92	6.5	
70.1	77.9	86.1	P6KE82A	P6KE82CA	1	113	5.3	
85.5	95	105	P6KE100A	P6KE100CA	1	137	4.4	
102	114	126	P6KE120A	P6KE120CA	1	165	3.6	
128	143	158	P6KE150A	P6KE150CA	1	207	2.9	
154	171	189	P6KE180A	P6KE180CA	1	246	2.4	
171	190	210	P6KE200A	P6KE200CA	1	274	2.2	
188	209	231	P6KE220A	P6KE220CA	1	328	2	
213	237	263	P6KE250A	P6KE250CA	1	344	2	
256	285	315	P6KE300A	P6KE300CA	1	414	1.6	
299	332	368	P6KE350A	P6KE350CA	1	482	1.6	
342	380	420	P6KE400A	P6KE400CA	1	548	1.3	
376	418	462	P6KE440A	P6KE440CA	1	603	1.3	

TAPE & REEL
AVAILABLE TO
SPECIAL ORDER* Pulse test $t_p \leq 50ms$, $\delta < 2\%$ 

UL497B Recognized file # E81734

TRANSIL™

1.5kW



CB429

I_{FSM} = 200A

Max. Cont. Voltage (V _{RM}) (V)	Breakdown Voltage (V _{BR} *)		Device No. & Anglia Order Code				I _{RM} @ V _{RM}		V _{CL} @ I _{PP} 10/1000µs		Package
	min. (V)	max. (V)	Unidirectional		Bidirectional		max. (µA)		max. (V)	(A)	
			Taped	Tape & Reel	Taped	Tape & Reel					
5.8	6.45	7.14	1.5KE6V8A	1.5KE6V8ARL	1.5KE6V8CA	1.5KE6V8CARL	1000		10.5	143	CB429
6.4	7.13	7.88	1.5KE7V5A	1.5KE7V5ARL	1.5KE7V5CA	1.5KE7V5CARL	500		11.3	132	
8.5	9.5	10.5	1.5KE10A	1.5KE10ARL	1.5KE10CA	1.5KE10CARL	10		14.5	100	
10.2	11.4	12.6	1.5KE12A	1.5KE12ARL	1.5KE12CA	1.5KE12CARL	5		16.7	90	
12.8	14.3	15.8	1.5KE15A	1.5KE15ARL	1.5KE15CA	1.5KE15CARL	1		21.2	71	
15.3	17.1	18.9	1.5KE18A	1.5KE18ARL	1.5KE18CA	1.5KE18CARL	1		25.2	59.5	
18.8	20.9	23.1	1.5KE22A	1.5KE22ARL	1.5KE22CA	1.5KE22CARL	1		30.6	49	
20.5	22.8	25.2	1.5KE24A	1.5KE24ARL	1.5KE24CA	1.5KE24CARL	1		33.2	45	
23.1	25.7	28.4	1.5KE27A	1.5KE27ARL	1.5KE27CA	1.5KE27CARL	1		37.5	40	
25.6	28.5	31.5	1.5KE30A	1.5KE30ARL	1.5KE30CA	1.5KE30CARL	1		41.5	36	
28.2	31.4	34.7	1.5KE33A	1.5KE33ARL	1.5KE33CA	1.5KE33CARL	1		45.7	33	
30.8	34.2	37.8	1.5KE36A	1.5KE36ARL	1.5KE36CA	1.5KE36CARL	1		49.9	30	
33.3	37.1	41.0	1.5KE39A	1.5KE39ARL	1.5KE39CA	1.5KE39CARL	1		53.9	28	
40.2	44.7	49.4	1.5KE47A	1.5KE47ARL	1.5KE47CA	1.5KE47CARL	1		64.8	23.2	
47.8	53.2	58.8	1.5KE56A	1.5KE56ARL	1.5KE56CA	1.5KE56CARL	1		77	19.5	
53	58.9	65.1	1.5KE62A	1.5KE62ARL	1.5KE62CA	1.5KE62CARL	1		85	17.7	
58.1	64.6	71.4	1.5KE68A	1.5KE68ARL	1.5KE68CA	1.5KE68CARL	1		92	16.3	
70.1	77.9	86.1	1.5KE82A	1.5KE82ARL	1.5KE82CA	1.5KE82CARL	1		113	13.3	
85.5	95	105	1.5KE100A	1.5KE100ARL	1.5KE100CA	1.5KE100CARL	1		137	11	
102	114	126	1.5KE120A	1.5KE120ARL	1.5KE120CA	1.5KE120CARL	1		165	9.1	
128	143	158	1.5KE150A	1.5KE150ARL	1.5KE150CA	1.5KE150CARL	1		207	7.2	
154	171	189	1.5KE180A	1.5KE180ARL	1.5KE180CA	1.5KE180CARL	1		246	6.1	
171	190	210	1.5KE200A	1.5KE200ARL	1.5KE200CA	1.5KE200CARL	1		274	5.5	
188	209	231	1.5KE220A	1.5KE220ARL	1.5KE220CA	1.5KE220CARL	1		328	4.6	
213	237	263	1.5KE250A	1.5KE250ARL	1.5KE250CA	1.5KE250CARL	1		344	5	
256	285	315	1.5KE300A	1.5KE300ARL	1.5KE300CA	1.5KE300CARL	1		414	5	
299	332	368	1.5KE350A	1.5KE350ARL	1.5KE350CA	1.5KE350CARL	1		482	4	
342	380	420	1.5KE400A	1.5KE400ARL	1.5KE400CA	1.5KE400CARL	1		548	4	
376	418	462	1.5KE440A	1.5KE440ARL	1.5KE440CA	1.5KE440CARL	1		603	3.5	

A low voltage (5V) Transil is shown on page 21



AG

5kW

I_{FSM} = 500A

Max. Cont. Voltage (V _{RM}) (V)	Breakdown Voltage (V _{BR} *)		Device No. & Anglia Order Code		I _{RM} @ V _{RM}		V _{CL} @ I _{PP} 10/1000µs		Package
	min. (V)	max. (V)	Unidirectional	Bidirectional	max. (µA)		max. (V)	(A)	
			Taped						
10	11.1	13.6	BZW50-10	BZW50-10B	5		18.8	266	AG
12	13.3	16.3	BZW50-12	BZW50-12B	5		22	227	
15	16.6	20.4	BZW50-15	BZW50-15B	5		26.9	186	
18	20	24.4	BZW50-18	BZW50-18B	5		32.2	155	
22	24.4	29.8	BZW50-22	BZW50-22B	5		39.4	127	
27	30	36.6	BZW50-27	BZW50-27B	5		48.3	103	
33	36.6	44.7	BZW50-33	BZW50-33B	5		59	85	
39	43.3	53	BZW50-39	BZW50-39B	5		69.4	72	
47	52	63.6	BZW50-47	BZW50-47B	5		83.2	60.1	
56	62.2	76	BZW50-56	BZW50-56B	5		99.6	50	
68	75.6	92.4	BZW50-68	BZW50-68B	5		121	41	
82	91	111	BZW50-82	BZW50-82B	5		145	34	
100	111	136	BZW50-100	BZW50-100B	5		179	28	
120	133	163	BZW50-120	BZW50-120B	5		215	23	
150	166	204	BZW50-150	BZW50-150B	5		269	19	
180	200	244	BZW50-180	BZW50-180B	5		322	16	

TAPE & REEL
AVAILABLE TO
SPECIAL ORDERPACKAGE
DIMENSIONSrefer to General Data section
shown later in this shortform* Pulse test t_p ≤ 50ms, δ < 2%

UL497B Recognized file # E81734

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SMA

SURFACE MOUNT

TRANSIL™

400W

 $I_{FSM} = 40A$

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V)	Device No. & Anglia Order Code Tape & Reel		I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 10/1000 μs max. (V) (A)		Package
		Unidirectional	Bidirectional				
5	6.4	SMAJ5.0A	SMAJ5.0CA	800	9.2	43.5	SMA
6	6.7	SMAJ6.0A	SMAJ6.0CA	800	10.3	38.8	
6.5	7.2	SMAJ6.5A	SMAJ6.5CA	500	11.2	35.7	
7.5	8.3	SMAJ7.5A	SMAJ7.5CA	100	12.9	31	
8.5	9.4	SMAJ8.5A	SMAJ8.5CA	10	14.4	27.7	
9	10	SMAJ9.0A	SMAJ9.0CA	5	15.4	26	
10	11.1	SMAJ10A	SMAJ10CA	5	17	23.5	
11	12.2	SMAJ11A	SMAJ11CA	5	18.2	22	
12	13.3	SMAJ12A	SMAJ12CA	5	19.9	20.1	
13	14.4	SMAJ13A	SMAJ13CA	1	21.5	18.6	
15	16.7	SMAJ15A	SMAJ15CA	1	24.4	16.4	
17	18.9	SMAJ17A	SMAJ17CA	1	27.6	14.5	
18	20	SMAJ18A	SMAJ18CA	1	29.2	13.7	
20	22.2	SMAJ20A	SMAJ20CA	1	32.4	12.3	
22	24.4	SMAJ22A	SMAJ22CA	1	35.5	11.2	
24	26.7	SMAJ24A	SMAJ24CA	1	38.9	10.3	
26	28.9	SMAJ26A	SMAJ26CA	1	42.1	9.5	
28	31.1	SMAJ28A	SMAJ28CA	1	45.4	8.8	
30	33.3	SMAJ30A	SMAJ30CA	1	48.4	8.3	
33	36.7	SMAJ33A	SMAJ33CA	1	53.3	7.5	
36	40	SMAJ36A	SMAJ36CA	1	58.1	6.9	
40	44.4	SMAJ40A	SMAJ40CA	1	64.5	6.2	
43	47.8	SMAJ43A	SMAJ43CA	1	69.4	5.7	
48	53.3	SMAJ48A	SMAJ48CA	1	77.4	5.2	
51	56.7	SMAJ51A	SMAJ51CA	1	82.4	4.9	
54	60	SMAJ54A	SMAJ54CA	1	87.1	4.6	
58	64.4	SMAJ58A	SMAJ58CA	1	93.6	4.3	
64	71.1	SMAJ64A	SMAJ64CA	1	103	3.9	
70	77.8	SMAJ70A	SMAJ70CA	1	113	3.5	
75	83.3	SMAJ75A	SMAJ75CA	1	121	3.3	
78	86.7	SMAJ78A	SMAJ78CA	1	126	3.2	
85	94.4	SMAJ85A	SMAJ85CA	1	137	2.9	
90	100	SMAJ90A	SMAJ90CA	1	146	2.7	
100	111	SMAJ100A	SMAJ100CA	1	162	2.5	
110	122	SMAJ110A	SMAJ110CA	1	177	2.3	
130	144	SMAJ130A	SMAJ130CA	1	209	1.9	
136	152	SMAJ136A	SMAJ136CA	1	219	1.8	
145	161	SMAJ145A	SMAJ145CA	1	234	1.7	
154	171	SMAJ154A	SMAJ154CA	1	246	1.6	
170	189	SMAJ170A	SMAJ170CA	1	275	1.4	
188	209	SMAJ188A	SMAJ188CA	1	328	1.4	

* Pulse test $t_p \leq 50ms$, $\delta < 2\%$

SUPPLIED IN FULL REELS ONLY

PACKAGE
DIMENSIONSrefer to General Data section
shown later in this shortform



SURFACE MOUNT

continued



SMB

TRANSIL™

 $I_{FSM} = 100A$

600W

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V)	Device No. & Anglia Order Code Tape & Reel		I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 10/1000 μs max. (V) (A)		Package
		Unidirectional	Bidirectional				
5	6.4	SMBJ5.0A	SMBJ5.0CA	800	9.2	68	SMB
6	6.7	SMBJ6.0A	SMBJ6.0CA	800	10.3	61	
6.5	7.2	SMBJ6.5A	SMBJ6.5CA	500	11.2	56	
7.5	8.3	SMBJ7.5A	SMBJ7.5CA	100	12.9	46	
8.5	9.4	SMBJ8.5A	SMBJ8.5CA	5	14.4	41.7	
9	10	SMBJ9.0A	SMBJ9.0CA	5	15.4	40	
10	11.1	SMBJ10A	SMBJ10CA	5	17	37	
11	12.2	SMBJ11A	SMBJ11CA	5	18.2	34	
12	13.3	SMBJ12A	SMBJ12CA	5	19.9	31	
13	14.4	SMBJ13A	SMBJ13CA	1	21.5	29	
15	16.7	SMBJ15A	SMBJ15CA	1	24.4	25.1	
17	18.9	SMBJ17A	SMBJ17CA	1	27.6	22.8	
18	20	SMBJ18A	SMBJ18CA	1	29.2	21.5	
20	22.2	SMBJ20A	SMBJ20CA	1	32.4	19.4	
22	24.4	SMBJ22A	SMBJ22CA	1	35.5	17.7	
24	26.7	SMBJ24A	SMBJ24CA	1	38.9	16	
26	28.9	SMBJ26A	SMBJ26CA	1	42.1	14.9	
28	31.1	SMBJ28A	SMBJ28CA	1	45.4	13.8	
30	33.3	SMBJ30A	SMBJ30CA	1	48.4	13	
33	36.7	SMBJ33A	SMBJ33CA	1	53.3	11.8	
36	40	SMBJ36A	SMBJ36CA	1	58.1	10.8	
40	44.4	SMBJ40A	SMBJ40CA	1	64.5	9.7	
43	47.8	SMBJ43A	SMBJ43CA	1	69.4	9.0	
48	53.3	SMBJ48A	SMBJ48CA	1	77.4	8.1	
51	56.7	SMBJ51A	SMBJ51CA	1	82.4	7.6	
54	60	SMBJ54A	SMBJ54CA	1	87.1	7.2	
58	64.4	SMBJ58A	SMBJ58CA	1	93.6	6.7	
64	71.1	SMBJ64A	SMBJ64CA	1	103	6.1	
70	77.8	SMBJ70A	SMBJ70CA	1	113	5.5	
75	83.3	SMBJ75A	SMBJ75CA	1	121	5.2	
78	86.7	SMBJ78A	SMBJ78CA	1	126	5	
85	94.4	SMBJ85A	SMBJ85CA	1	137	4.6	
90	100	SMBJ90A	SMBJ90CA	1	146	4.3	
100	111	SMBJ100A	SMBJ100CA	1	162	3.8	
110	122	SMBJ110A	SMBJ110CA	1	177	3.5	
130	144	SMBJ130A	SMBJ130CA	1	209	3	
136	152	SMBJ136A	SMBJ136CA	1	219	2.7	
145	161	SMBJ145A	SMBJ145CA	1	234	2.6	
154	171	SMBJ154A	SMBJ154CA	1	246	2.4	
170	189	SMBJ170A	SMBJ170CA	1	275	2.2	
188	209	SMBJ188A	SMBJ188CA	1	328	2	

600W

 $I_{FSM} = 100A$ 

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V)	Device No. & Anglia Order Code Tape & Reel		I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 10/1000 μs max. (V) (A)		Package
		Unidirectional	Bidirectional				
5.8	6.45	SM6T6V8A	SM6T6V8CA	1000	10.5	57	SMB
6.4	7.13	SM6T7V5A	SM6T7V5CA	500	11.3	53	
8.5	9.5	SM6T10A	SM6T10CA	10	14.5	41	
10.2	11.4	SM6T12A	SM6T12CA	5	16.7	36	
12.8	14.3	SM6T15A	SM6T15CA	1	21.2	28	
15.3	17.1	SM6T18A	SM6T18CA	1	25.2	24	
18.8	20.9	SM6T22A	SM6T22CA	1	30.6	20	
20.5	22.8	SM6T24A	SM6T24CA	1	33.2	18	
23.1	25.7	SM6T27A	SM6T27CA	1	37.5	16	
25.6	28.5	SM6T30A	SM6T30CA	1	41.5	14.5	
28.2	31.4	SM6T33A	SM6T33CA	1	45.7	13.1	
30.8	34.2	SM6T36A	SM6T36CA	1	49.9	12	
33.3	37.1	SM6T39A	SM6T39CA	1	53.9	11.1	
43.6	48.5	SM6T51A	SM6T51CA	1	70.1	8.6	
58.1	64.6	SM6T68A	SM6T68CA	1	92	6.5	
85.5	95	SM6T100A	SM6T100CA	1	137	4.4	
128	143	SM6T150A	SM6T150CA	1	207	2.9	
171	190	SM6T200A	SM6T200CA	1	274	2.2	
188	209	SM6T220A	SM6T220CA	1	301	2	

* Pulse test $t_p \leq 50ms$, $\delta < 2\%$

UL497B Recognized file # E81734

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SURFACE MOUNT

continued overleaf >>>>

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SURFACE MOUNT

TRANSIL[™]

1.5kW

SMC (DO213AC)

SMC

I_{FSM} = 200A

Max. Cont. Voltage (V _{RM})	Breakdown Voltage (V _{BR} *) min.	Device No. & Anglia Order Code Tape & Reel		I _{RM} @ V _{RM} max. (μA)	V _{CL} @ I _{PP} 10/1000μs		Package
		Unidirectional	Bidirectional		max. (V)	(A)	
5	6.4	SMCJ5.0A	SMCJ5.0CA	800	9.2	171	SMC (DO213AC)
6	6.7	SMCJ6.0A	SMCJ6.0CA	800	10.3	152	
6.5	7.2	SMCJ6.5A	SMCJ6.5CA	500	11.2	140	
7.5	8.3	SMCJ7.5A	SMCJ7.5CA	100	12.9	122	
8.5	9.4	SMCJ8.5A	SMCJ8.5CA	5	14.4	105	
9	10	SMCJ9.0A	SMCJ9.0CA	5	15.4	102	
10	11.1	SMCJ10A	SMCJ10CA	5	17	92	
11	12.2	SMCJ11A	SMCJ11CA	5	18.2	86	
12	13.3	SMCJ12A	SMCJ12CA	5	19.9	79	
13	14.4	SMCJ13A	SMCJ13CA	1	21.5	73	
15	16.7	SMCJ15A	SMCJ15CA	1	24.4	64	
17	18.9	SMCJ17A	SMCJ17CA	1	27.6	57	
18	20	SMCJ18A	SMCJ18CA	1	29.2	53	
20	22.2	SMCJ20A	SMCJ20CA	1	32.4	48	
22	24.4	SMCJ22A	SMCJ22CA	1	35.5	44	
24	26.7	SMCJ24A	SMCJ24CA	1	38.9	40	
26	28.9	SMCJ26A	SMCJ26CA	1	42.1	47	
28	31.1	SMCJ28A	SMCJ28CA	1	45.4	37	
30	33.3	SMCJ30A	SMCJ30CA	1	48.4	32	
33	36.7	SMCJ33A	SMCJ33CA	1	53.3	29	
36	40	SMCJ36A	SMCJ36CA	1	58.1	27	
40	44.4	SMCJ40A	SMCJ40CA	1	64.5	24	
43	47.8	SMCJ43A	SMCJ43CA	1	69.4	22	
48	53.3	SMCJ48A	SMCJ48CA	1	77.4	20	
51	56.7	SMCJ51A	SMCJ51CA	1	82.4	19	
54	60	SMCJ54A	SMCJ54CA	1	87.1	18	
58	64.4	SMCJ58A	SMCJ58CA	1	93.6	16	
64	71.1	SMCJ64A	SMCJ64CA	1	103	15	
70	77.8	SMCJ70A	SMCJ70CA	1	113	13.9	
75	83.3	SMCJ75A	SMCJ75CA	1	121	13	
78	86.7	SMCJ78A	SMCJ78CA	1	126	12.5	
85	94.4	SMCJ85A	SMCJ85CA	1	137	11.5	
90	100	SMCJ90A	SMCJ90CA	1	146	10.7	
100	111	SMCJ100A	SMCJ100CA	1	162	9.7	
110	122	SMCJ110A	SMCJ110CA	1	177	8.9	
130	144	SMCJ130A	SMCJ130CA	1	209	7.5	
136	152	SMCJ136A	SMCJ136CA	1	219	6.8	
145	161	SMCJ145A	SMCJ145CA	1	234	6.4	
154	171	SMCJ154A	SMCJ154CA	1	246	6.1	
170	189	SMCJ170A	SMCJ170CA	1	275	5.7	
188	209	SMCJ188A	SMCJ188CA	1	328	4.6	

1.5kW

I_{FSM} = 200A

Max. Cont. Voltage (V _{RM})	Breakdown Voltage (V _{BR} *) min.	Device No. & Anglia Order Code Tape & Reel		I _{RM} @ V _{RM} max. (μA)	V _{CL} @ I _{PP} 10/1000μs		Package
		Unidirectional	Bidirectional		max. (V)	(A)	
5.8	6.45	SM15T6V8A	SM15T6V8CA	1000	10.5	143	SMC
6.4	7.13	SM15T7V5A	SM15T7V5CA	500	11.3	132	
8.5	9.5	SM15T10A	SM15T10CA	10	14.5	103	
10.2	11.4	SM15T12A	SM15T12CA	5	16.7	90	
12.8	14.3	SM15T15A	SM15T15CA	5	21.2	71	
15.3	17.1	SM15T18A	SM15T18CA	5	25.2	59.5	
18.8	20.9	SM15T22A	SM15T22CA	5	30.6	49	
20.5	22.8	SM15T24A	SM15T24CA	5	33.2	45	
23.1	25.7	SM15T27A	SM15T27CA	5	37.5	40	
25.6	28.5	SM15T30A	SM15T30CA	5	41.5	36	
28.2	31.4	SM15T33A	SM15T33CA	5	45.7	33	
30.8	34.2	SM15T36A	SM15T36CA	5	49.9	30	
33.3	37.1	SM15T39A	SM15T39CA	5	53.9	28	
58.1	64.6	SM15T68A	SM15T68CA	5	92	16.3	
85.5	95	SM15T100A	SM15T100CA	5	137	11	
128	143	SM15T150A	SM15T150CA	5	207	7.2	
171	190	SM15T200A	SM15T200CA	5	274	5.5	
188	209	SM15T220A	SM15T220CA	5	328	4.6	

* Pulse test tp ≤ 50ms, δ < 2% UL497B Recognized file # E81734

SUPPLIED IN FULL REELS ONLY

LOW VOLTAGE

TRANSIL™

1.5kW



CB429

 $I_{FSM} = 200A$ 

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V)	Device No. & Anglia Order Code		Description	I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 10/1000 μs max. (V) (A)		Package
		Taped	Tape & Reel					
5	6	1N5908	1N5908RL	5V logic circuit protection (TTL and CMOS). Low clamping voltage/high current level	300	7.6 8.0 8.5	30 60 120	CB429

SURFACE MOUNT



600W



SMB

SMC

 $I_{FSM} = 50A$

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V)	Device No. & Anglia Order Code		Description	I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 10/1000 μs max. (V) (A)		Package
		Tape & Reel	Unidirectional					
3.3	4.1	SMLVT3V3		3.3V circuit protection for MOS and low voltage IC's. Low clamping voltage/fast response	200	7.3	50	SMB

1.5kW

 $I_{FSM} = 200A$ 

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V)	Device No. & Anglia Order Code		Description	I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 10/1000 μs max. (V) (A)		Package
		Tape & Reel	Unidirectional					
5	6	SM5908		5V logic circuit protection (TTL and CMOS). Low clamping voltage/high current level	300	7.6 8.0 8.5	30 60 120	SMC

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ASD™



SO8

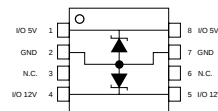
DUAL LOW VOLTAGE

Applications : Disk drive protection. Computer peripheral protection.

Max. Cont. Voltage (V_{RM}) (V)	Breakdown Voltage (V_{BR}^*) min. (V)	Device No. & Anglia Order Code		Description	I_{PP} max. 8/20 μs (A)	I_{RM} @ V_{RM} max. (μA)	V_{CL} @ I_{PP} 8/20 μs max. (V) (A)		Package
		Stick	Unidirectional						
5/12	6.8/13.6	DDP6V8		Potential to protect two different voltages on a single chip. 5V/12V capability	12	50	10/20	3	SO8

SO8 Circuit Configuration

SUPPLIED IN FULL STICKS ONLY



PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

* Pulse test $t_p \leq 50ms$, $\delta < 2\%$ UL497B Recognized file # E81734

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ASD™

Application Specific Discretes™

These are devices that have been specifically designed and manufactured for a particular function or application.

Benefits include a smaller component count resulting in less board space, reduced insertion cost and enhanced reliability.



SURFACE MOUNT

HIGH SPEED DATALINE PROTECTION



SO8

APPLICATIONS : Protection of logic side of ISDN S-interfaces. Protection of I/O lines of microcontrollers. Signal conditioning.

Array Function	Device No. & Anglia Order Code		V _{RRM} (V)	V _{FP} @ I _{PP} 8/20µs		I _{PP} T _A = 25°C 8/20µs (A)	I _R @ V _R = 15V T _A = 25°C max. (µA)	V _F @ I _F		C max. (pF)	Package
				max. (V)	(A)			max. (V)	(mA)		
8 Diodes	DA108S1	DA108S1RL	18	9	12	12	2	1.2	50	35	SO8
12 Diodes	DA112S1	DA112S1RL	18	12	12	12	2	1.2	50	35	
	DALC112S1	DALC112S1RL	18	9	12	12	2	1.3	50	7 (typ)	

All ratings are per diode.

BUS TERMINATION: RCD NETWORK



SSOP20

APPLICATIONS : Signal reflection and distortion avoidance in PC and workstation computers and dataline analysers.

Network Function	Device No. & Anglia Order Code		R (Ω)	C (pF)	D (Schottky)						V _{PP} (kV)	Package
					V _{RRM} (V)	I _F (mA)	I _R @ V _{RRM} 25°C (µA)	70°C (µA)	V _F max. 1mA (V)	16mA (V)		
16 RCD Line Terminations	RCD16-47B6	RCD16-47B6RL	47 ±10%	33 ±10%	7.5	50	1	10	0.5	1	2	SSOP20

DATALINE PROTECTION (EOS)



SO8



SO20

TRANSIL™



APPLICATIONS : Bidirectional – Differential data transmission line protection. RS-232, RS-422, RS-423, RS-485.

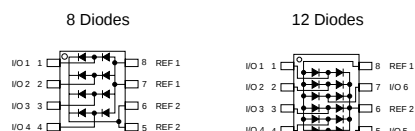
Unidirectional – Data transmission line protection. Unipolar signal up to 5.5V. Bipolar signal in the ±2.5V range.

Array Function	Device No. & Anglia Order Code		I _{PP} 8/20µs (A)	I _{RM} @ V _{RM}		V _{BR} @ I _R		V _{CL} @ I _{PP} 8/20µs		C @ V _{RM} 0V bias (nF)	Package
				max. (µA)	(V)	min. (V)	(mA)	max. (V)	(A)		
Bidirectional 4 Transils	ITA6V5B1	ITA6V5B1RL	40	10	5	6.5	1	10	10	0.75	SO8
	ITA10B1	ITA10B1RL	40	4	8	10	1	15	10	0.57	
	ITA18B1	ITA18B1RL	40	4	15	18	1	25	10	0.35	
	ITA25B1	ITA25B1RL	40	4	24	25	1	33	10	0.3	
Bidirectional 8 Transils	ITA6V5B3	ITA6V5B3RL	40	10	5	6.5	1	9.5	10	1.1	SO20
	ITA10B3	ITA10B3RL	40	4	8	10	1	13	10	0.8	
	ITA18B3	ITA18B3RL	40	4	15	18	1	23	10	0.5	
	ITA25B3	ITA25B3RL	40	4	24	25	1	31	10	0.45	
Unidirectional 6 Transils	ITA6V1U1	ITA6V1U1RL	40	10	5	6.1	1	10	10	1.5	SO8

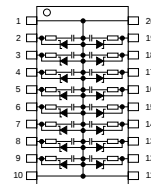
All ratings are per diode.

Circuit Configurations

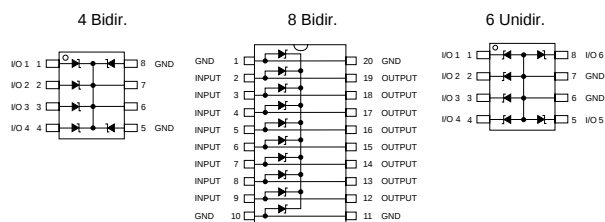
HIGH SPEED DATALINE PROTECTION



BUS TERMINATION : RCD NETWORK



DATALINE PROTECTION (EOS)



SUPPLIED IN FULL STICKS/REELS ONLY

ASD™ continued



DATALINE PROTECTION (ESD)



SOT23

SOT23-5L

SOT23-6L

APPLICATIONS : Transient overvoltage protection in ESD sensitive equipment e.g. computers, printers and communication systems. RS-232 I/O port protection.

Array Function	Device No. & Anglia Order Code		I_{RM} @ V_{RM}		V_{BR} @ I_R			R_d	C @ V_{RM} 0V bias	Package
	Stick	Tape & Reel	max. (μA)	(V)	min. (V)	max. (V)	(mA)	(Ω)	(pF)	
Unidirectional 2 Transils	—	ESDA6V1L	20	5.25	6.1	7.2	1	0.35	140	SOT23
	—	ESDA14V2L	5	12	14.2	15.8	1	0.65	90	
4 Transils	—	ESDA6V1SC5	20	5.25	6.1	7.2	1	0.4	70	SOT23-5L SOT23-6L SOT23-5L SOT23-6L
	—	ESDA6V1SC6	20	5.25	6.1	7.2	1	0.35	75	
	—	ESDA14V2SC5	5	12	14.2	15.8	1	0.65	100	
	—	ESDA14V2SC6	5	12	14.2	15.8	1	0.65	100	
6 Transils	ESDA6V1U1	ESDA6V1U1RL	2	5	6.1	7.2	1	0.5	100	SO8
18 Transils	ESDA6V1S3	ESDA6V1S3RL	2	5	6.1	7.2	1	0.5	100	SO20 SSOP20
	ESDA6V2S6	ESDA6V2S6RL	2	5	6.1	7.2	1	0.5	100	
Bidirectional 6 Transils	ESDA25B1	ESDA25B1RL	2	24	25	30	1	1.5	15	SO8
18 Transils	ESDA25DB3	ESDA25DB3RL	2	24	25	30	1	0.5	50	SO20

All ratings are per diode.



AG



Power SO10



LOAD DUMP PROTECTION

APPLICATIONS : Sensitive circuit protection in automotive systems e.g. car entertainment, instrumentation and on-board computers.

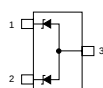
Device No. & Anglia Order Code		I_{RM} @ V_{RM}			V_{BR}^* @ I_R $T_C = 25^{\circ}C$ LOAD DUMP			V_{CL}^* @ I_{PP} $T_C = 25^{\circ}C$ 1ms expo		C @ V_{RM} $V_R = 0V$ $F = 1MHz$	Package
		max.			min.	max.		max.			
		$T_C = 25^{\circ}C$ (μA)	$T_C = 85^{\circ}C$ (μA)	(V)	(V)	(V)	(mA)	(V)	(A)	(nF)	
Unidirectional Tape / Stick	Tape & Reel										
LDP24AS	LDP24ASRL	50	300	24	25	32	1	38	40	8	AG Power SO10
LDP24M	LDP24MRL	10	100	24	25	32	1	38	30	8	

* Pulse test $t_p \leq 50\text{ms}$, $\delta < 2\%$

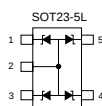
Circuit Configurations

DATALINE PROTECTION (ESD)

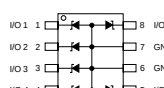
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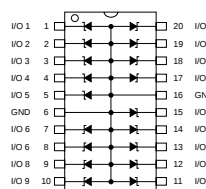
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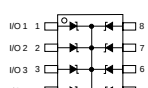
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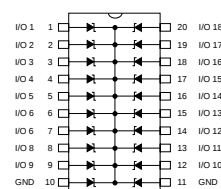
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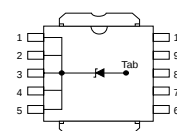


18 Bidir.



LOAD DUMP PROTECTION

Power SO10



SMD PARTS – SUPPLIED IN FULL STICKS/REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

An extensive range of fixed or adjustable voltage regulators available in a wide variation of output currents and voltages. The majority of regulators may be obtained in either conventional or surface mount formats, all encompassing relevant integral protection such as current limiting, thermal overload, short circuit or safe area integrity. The product range is finally complemented by the inclusion of a series of voltage reference.

FIXED VOLTAGE, POSITIVE

General Purpose **100mA** → **3A**
Low Dropout **50mA** → **1.5A**

pages 25 - 30

FIXED VOLTAGE, NEGATIVE

General Purpose **100mA** → **1.5A**

page 31

SMD, FIXED VOLTAGE, POSITIVE

General Purpose **100mA** → **1.5A**
Low Dropout **50mA** → **1.5A**

pages 32 - 38

SMD, FIXED VOLTAGE, NEGATIVE

General Purpose **100mA** → **1.5A**

page 39

ADJUSTABLE VOLTAGE

Positive **100mA** → **5A**
Negative **1.5A**
SMD Positive **150mA** → **800mA**

page 40

VOLTAGE REFERENCE

2.5V & **2.5 to 36V**
1.24 to 6V
Leaded & SMD

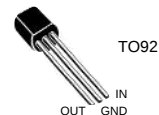
page 41

POSITIVE

100mA Output

● L78L Series ●

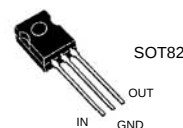
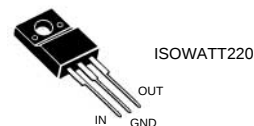
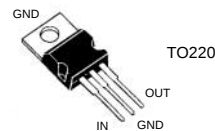
Voltage	Volt. Tol.	Device No. & Anglia Order Code Loose	Tape & Reel	Operating Temp. Range (°C)	Package
5V	4%	L78L05ACZ L78L05ABZ	L78L05ACZTR L78L05ABZTR	0 to 125 - 40 to 125	TO92
6V	4%	L78L06ACZ L78L06ABZ	L78L06ACZTR L78L06ABZTR	0 to 125 - 40 to 125	
8V	4%	L78L08ACZ L78L08ABZ	L78L08ACZTR L78L08ABZTR	0 to 125 - 40 to 125	
9V	4%	L78L09ACZ L78L09ABZ	L78L09ACZTR L78L09ABZTR	0 to 125 - 40 to 125	
12V	4%	L78L12ACZ L78L12ABZ	L78L12ACZTR L78L12ABZTR	0 to 125 - 40 to 125	
15V	4%	L78L15ACZ L78L15ABZ	L78L15ACZTR L78L15ABZTR	0 to 125 - 40 to 125	



500mA Output

● L78M Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
5V	2%	L78M05ABV	- 40 to 125	TO220
	4%	L78M05CV	0 to 125	TO220
	4%	L78M05CP	0 to 125	ISOWATT220
	4%	L78M05CX	0 to 125	SOT82
6V	2%	L78M06ABV	- 40 to 125	TO220
	4%	L78M06CV	0 to 125	TO220
	4%	L78M06CP	0 to 125	ISOWATT220
	4%	L78M06CX	0 to 125	SOT82
8V	2%	L78M08ABV	- 40 to 125	TO220
	4%	L78M08CV	0 to 125	TO220
	4%	L78M08CP	0 to 125	ISOWATT220
	4%	L78M08CX	0 to 125	SOT82
9V	2%	L78M09ABV	- 40 to 125	TO220
	4%	L78M09CV	0 to 125	TO220
	4%	L78M09CP	0 to 125	ISOWATT220
	4%	L78M09CX	0 to 125	SOT82
10V	2%	L78M10ABV	- 40 to 125	TO220
	4%	L78M10CV	0 to 125	TO220
	4%	L78M10CP	0 to 125	ISOWATT220
	4%	L78M10CX	0 to 125	SOT82
12V	2%	L78M12ABV	- 40 to 125	TO220
	4%	L78M12CV	0 to 125	TO220
	4%	L78M12CP	0 to 125	ISOWATT220
	4%	L78M12CX	0 to 125	SOT82
15V	2%	L78M15ABV	- 40 to 125	TO220
	4%	L78M15CV	0 to 125	TO220
	4%	L78M15CP	0 to 125	ISOWATT220
	4%	L78M15CX	0 to 125	SOT82
18V	2%	L78M18ABV	- 40 to 125	TO220
	4%	L78M18CV	0 to 125	TO220
	4%	L78M18CP	0 to 125	ISOWATT220
	4%	L78M18CX	0 to 125	SOT82
20V	2%	L78M20ABV	- 40 to 125	TO220
	4%	L78M20CV	0 to 125	TO220
	4%	L78M20CP	0 to 125	ISOWATT220
	4%	L78M20CX	0 to 125	SOT82
24V	2%	L78M24ABV	- 40 to 125	TO220
	4%	L78M24CV	0 to 125	TO220
	4%	L78M24CP	0 to 125	ISOWATT220
	4%	L78M24CX	0 to 125	SOT82



RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

PACKAGE
DIMENSIONS

refer to General Data section
shown later in this shortform

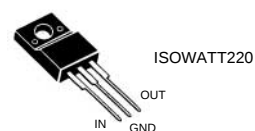
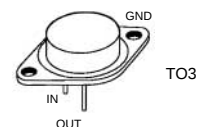
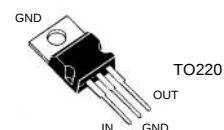
POSITIVE

continued overleaf > > >

POSITIVE

continued

1.5A Output		● L78 Series ●		
Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
5V	2%	L7805ACV	0 to 125	TO220
	2%	L7805ABV	-40 to 125	TO220
	4%	L7805CT	0 to 125	TO3
	4%	L7805CV	0 to 125	TO220
	4%	L7805CP	0 to 125	ISOWATT220
6V	2%	L7806ACV	0 to 125	TO220
	2%	L7806ABV	-40 to 125	TO220
	4%	L7806CT	0 to 125	TO3
	4%	L7806CV	0 to 125	TO220
	4%	L7806CP	0 to 125	ISOWATT220
8V	2%	L7808ACV	0 to 125	TO220
	2%	L7808ABV	-40 to 125	TO220
	4%	L7808CT	0 to 125	TO3
	4%	L7808CV	0 to 125	TO220
	4%	L7808CP	0 to 125	ISOWATT220
8.5V	4%	L7885CT	0 to 125	TO3
	4%	L7885CV	0 to 125	TO220
9V	2%	L7809ACV	0 to 125	TO220
	2%	L7809ABV	-40 to 125	TO220
	4%	L7809CT	0 to 125	TO3
	4%	L7809CV	0 to 125	TO220
	4%	L7809CP	0 to 125	ISOWATT220
12V	2%	L7812ACV	0 to 125	TO220
	2%	L7812ABV	-40 to 125	TO220
	4%	L7812CT	0 to 125	TO3
	4%	L7812CV	0 to 125	TO220
	4%	L7812CP	0 to 125	ISOWATT220
15V	2%	L7815ACV	0 to 125	TO220
	2%	L7815ABV	-40 to 125	TO220
	4%	L7815CT	0 to 125	TO3
	4%	L7815CV	0 to 125	TO220
	4%	L7815CP	0 to 125	ISOWATT220
18V	2%	L7818ACV	0 to 125	TO220
	2%	L7818ABV	-40 to 125	TO220
	4%	L7818CT	0 to 125	TO3
	4%	L7818CV	0 to 125	TO220
	4%	L7818CP	0 to 125	ISOWATT220
20V	2%	L7820ACV	0 to 125	TO220
	2%	L7820ABV	-40 to 125	TO220
	4%	L7820CT	0 to 125	TO3
	4%	L7820CV	0 to 125	TO220
	4%	L7820CP	0 to 125	ISOWATT220
24V	2%	L7824ACV	0 to 125	TO220
	2%	L7824ABV	-40 to 125	TO220
	4%	L7824CT	0 to 125	TO3
	4%	L7824CV	0 to 125	TO220
	4%	L7824CP	0 to 125	ISOWATT220



RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

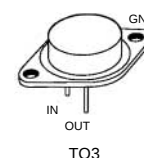
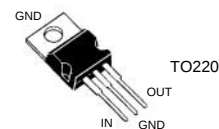
POSITIVE

continued

2A Output

● L78S Series ●

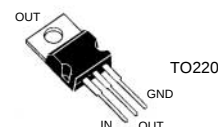
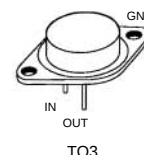
Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
5V	4%	L78S05CT L78S05CV	0 to 150	TO3 TO220
7.5V	4%	L78S75CT L78S75CV	0 to 150	TO3 TO220
9V	4%	L78S09CT L78S09CV	0 to 150	TO3 TO220
10V	4%	L78S10CT L78S10CV	0 to 150	TO3 TO220
12V	4%	L78S12CT L78S12CV	0 to 150	TO3 TO220
15V	4%	L78S15CT L78S15CV	0 to 150	TO3 TO220
18V	4%	L78S18CT L78S18CV	0 to 150	TO3 TO220
24V	4%	L78S24CT L78S24CV	0 to 150	TO3 TO220



3A Output

● LMx23 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
5V	6%	LM123K LM223K	- 55 to 150 - 25 to 150	TO3
	4%	LM323K LM323T	0 to 125	TO3 TO220



PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

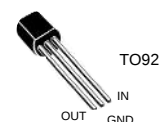
POSITIVE (low dropout)
shown overleaf > > >

POSITIVE

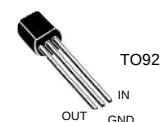
continued

LOW DROPOUT

50mA Output		Dropout Voltage 0.2V typ.			● LD2979 Series ●
Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package	
2.85V	2%	LD2979Z28	– 40 to 125	TO92*	
3V	2%	LD2979Z30			
3.2V	2%	LD2979Z32			
3.3V	2%	LD2979Z33			
3.8V	2%	LD2979Z38			
5V	2%	LD2979Z50			



100mA Output		Dropout Voltage 0.2V typ.			● LE Series ●
Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package	
1.25V	1% 2%	LE12ABZ LE12CZ	– 40 to 125	TO92*	
2.5V	1% 2%	LE25ABZ LE25CZ			
2.7V	1% 2%	LE27ABZ LE27CZ			
3V	1% 2%	LE30ABZ LE30CZ			
3.3V	1% 2%	LE33ABZ LE33CZ			
3.5V	1% 2%	LE35ABZ LE35CZ			
4V	1% 2%	LE40ABZ LE40CZ			
4.5V	1% 2%	LE45ABZ LE45CZ			
4.7V	1% 2%	LE47ABZ LE47CZ			
5V	1% 2%	LE50ABZ LE50CZ			
5.2V	1% 2%	LE52ABZ LE52CZ			
5.5V	1% 2%	LE55ABZ LE55CZ			
6V	1% 2%	LE60ABZ LE60CZ			
8V	1% 2%	LE80ABZ LE80CZ			
12V	1% 2%	LE120ABZ LE120CZ			



* Tape & Box and Tape & Reel available to special order

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

POSITIVE

continued

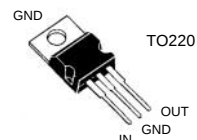
LOW DROPOUT

250mA Output

Dropout Voltage 0.4V typ.

● **L4931 Series** ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
2.7V	1% 2%	L4931ABV27 L4931CV27	- 40 to 125	TO220
3V	1% 2%	L4931ABV30 L4931CV30		
3.3V	1% 2%	L4931ABV33 L4931CV33		
3.5V	1% 2%	L4931ABV35 L4931CV35		
4V	1% 2%	L4931ABV40 L4931CV40		
4.7V	1% 2%	L4931ABV47 L4931CV47		
5V	1% 2%	L4931ABV50 L4931CV50		
8V	1% 2%	L4931ABV80 L4931CV80		
12V	1% 2%	L4931ABV120 L4931CV120		

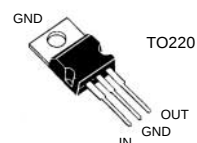


500mA Output

Dropout Voltage 0.45V typ.

● **LF Series** ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
2.5V	1% 2%	LF25ABV LF25CV	- 40 to 125	TO220
2.7V	1% 2%	LF27ABV LF27CV		
3V	1% 2%	LF30ABV LF30CV		
3.3V	1% 2%	LF33ABV LF33CV		
3.5V	1% 2%	LF35ABV LF35CV		
4V	1% 2%	LF40ABV LF40CV		
4.7V	1% 2%	LF47ABV LF47CV		
5V	1% 2%	LF50ABV LF50CV		
5.2V	1% 2%	LF52ABV LF52CV		
6V	1% 2%	LF60ABV LF60CV		
8V	1% 2%	LF80ABV LF80CV		
8.5V	1% 2%	LF85ABV LF85CV		
9V	1% 2%	LF90ABV LF90CV		
12V	1% 2%	LF120ABV LF120CV		



PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

POSITIVE (low dropout)
continued overleaf > > >

POSITIVE

continued

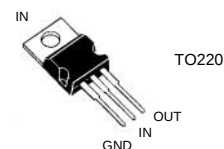
LOW DROPOUT

800mA Output

Dropout Voltage 1V typ.

● LD1117 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
2.5V	1% 2%	LD1117V25 LD1117V25C	0 to 125	TO220
2.85V	1% 2%	LD1117V28 LD1117V28C		
3V	1% 2%	LD1117V30 LD1117V30C		
3.3V	1% 2%	LD1117V33 LD1117V33C		
5V	1% 2%	LD1117V50 LD1117V50C		

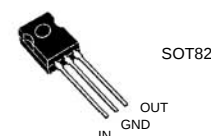
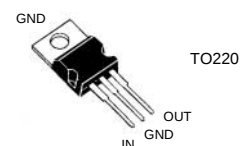


1A Output

Dropout Voltage 0.45V typ.

● L4941 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
5V	2%	L4941BV L4941BX	- 40 to 150	TO220 SOT82

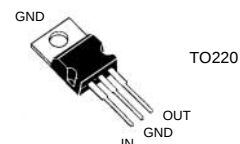


1.5A Output

Dropout Voltage 0.5V typ.

● L4940 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
5V	2%	L4940V5	- 40 to 150	TO220
8.5V	2%	L4940V85		
10V	2%	L4940V10		
12V	2%	L4940V12		

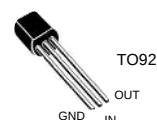
RECOMMENDED
HEATSINKSsee Heatsink section
later in this shortform

NEGATIVE

100mA Output

● L79L Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
5V	4% 8%	L79L05ACZ L79L05CZ	0 to 125	TO92*
6V	4% 8%	L79L06ACZ L79L06CZ		
8V	4% 8%	L79L08ACZ L79L08CZ		
9V	4% 8%	L79L09ACZ L79L09CZ		
12V	4% 8%	L79L12ACZ L79L12CZ		
15V	4% 8%	L79L15ACZ L79L15CZ		

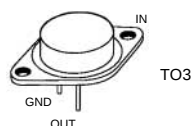
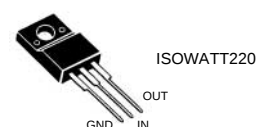
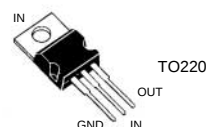


* Tape & Box and Tape & Reel available to special order

1.5A Output

● L79 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
5V	2% 4% 4% 4%	L7905ACV L7905CT L7905CV L7905CP	0 to 150	TO220 TO3 TO220 ISOWATT220
5.2V	2% 4% 4%	L7952ACV L7952CT L7952CV	0 to 150	TO220 TO3 TO220
6V	2% 4% 4% 4%	L7906ACV L7906CT L7906CV L7906CP	0 to 150	TO220 TO3 TO220 ISOWATT220
8V	2% 4% 4% 4%	L7908ACV L7908CT L7908CV L7908CP	0 to 150	TO220 TO3 TO220 ISOWATT220
12V	2% 4% 4% 4%	L7912ACV L7912CT L7912CV L7912CP	0 to 150	TO220 TO3 TO220 ISOWATT220
15V	2% 4% 4% 4%	L7915ACV L7915CT L7915CV L7915CP	0 to 150	TO220 TO3 TO220 ISOWATT220
18V	2% 4% 4% 4%	L7918ACV L7918CT L7918CV L7918CP	0 to 150	TO220 TO3 TO220 ISOWATT220
20V	2% 4% 4% 4%	L7920ACV L7920CT L7920CV L7920CP	0 to 150	TO220 TO3 TO220 ISOWATT220
24V	2% 4% 4% 4%	L7924ACV L7924CT L7924CV L7924CP	0 to 150	TO220 TO3 TO220 ISOWATT220



PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

SURFACE MOUNT

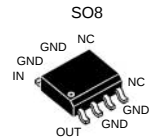
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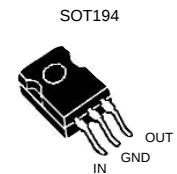
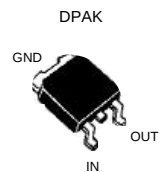
POSITIVE

SURFACE MOUNT

100mA Output		● L78L Series ●			
Voltage	Volt. Tol.	Device No. & Anglia Order Code Stick Tape & Reel	Operating Temp. Range (°C)	Package	
5V	4%	L78L05ACD	L78L05ACD13TR	0 to 125	SO8
	4%	L78L05ABD	L78L05ABD13TR	-40 to 125	
	8%	L78L05CD	L78L05CD13TR	0 to 125	
6V	4%	L78L06ACD	L78L06ACD13TR	0 to 125	
	4%	L78L06ABD	L78L06ABD13TR	-40 to 125	
	8%	L78L06CD	L78L06CD13TR	0 to 125	
8V	4%	L78L08ACD	L78L08ACD13TR	0 to 125	
	4%	L78L08ABD	L78L08ABD13TR	-40 to 125	
	8%	L78L08CD	L78L08CD13TR	0 to 125	
9V	4%	L78L09ACD	L78L09ACD13TR	0 to 125	
	4%	L78L09ABD	L78L09ABD13TR	-40 to 125	
	8%	L78L09CD	L78L09CD13TR	0 to 125	
12V	4%	L78L12ACD	L78L12ACD13TR	0 to 125	
	4%	L78L12ABD	L78L12ABD13TR	-40 to 125	
	8%	L78L12CD	L78L12CD13TR	0 to 125	
15V	4%	L78L15ACD	L78L15ACD13TR	0 to 125	
	4%	L78L15ABD	L78L15ABD13TR	-40 to 125	
	8%	L78L15CD	L78L15CD13TR	0 to 125	



500mA Output		● L78M Series ●			
Voltage	Volt. Tol.	Device No. & Anglia Order Code Stick Tape & Reel	Operating Temp. Range (°C)	Package	
5V	2%	L78M05ACDT	L78M05ACDT-TR	0 to 125	DPAK
	2%	L78M05ABDT	L78M05ABDT-TR	-40 to 125	DPAK
	4%	L78M05CDT	L78M05CDT-TR	0 to 125	DPAK
	4%	L78M05CS	L78M05CS13TR	0 to 125	SOT194
6V	2%	L78M06ACDT	L78M06ACDT-TR	0 to 125	DPAK
	2%	L78M06ABDT	L78M06ABDT-TR	-40 to 125	DPAK
	4%	L78M06CDT	L78M06CDT-TR	0 to 125	DPAK
	4%	L78M06CS	L78M06CS13TR	0 to 125	SOT194
8V	2%	L78M08ACDT	L78M08ACDT-TR	0 to 125	DPAK
	2%	L78M08ABDT	L78M08ABDT-TR	-40 to 125	DPAK
	4%	L78M08CDT	L78M08CDT-TR	0 to 125	DPAK
	4%	L78M08CS	L78M08CS13TR	0 to 125	SOT194
9V	2%	L78M09ACDT	L78M09ACDT-TR	0 to 125	DPAK
	2%	L78M09ABDT	L78M09ABDT-TR	-40 to 125	DPAK
	4%	L78M09CDT	L78M09CDT-TR	0 to 125	DPAK
	4%	L78M09CS	L78M09CS13TR	0 to 125	SOT194
10V	2%	L78M10ACDT	L78M10ACDT-TR	0 to 125	DPAK
	2%	L78M10ABDT	L78M10ABDT-TR	-40 to 125	DPAK
	4%	L78M10CDT	L78M10CDT-TR	0 to 125	DPAK
	4%	L78M10CS	L78M10CS13TR	0 to 125	SOT194
12V	2%	L78M12ACDT	L78M12ACDT-TR	0 to 125	DPAK
	2%	L78M12ABDT	L78M12ABDT-TR	-40 to 125	DPAK
	4%	L78M12CDT	L78M12CDT-TR	0 to 125	DPAK
	4%	L78M12CS	L78M12CS13TR	0 to 125	SOT194
15V	2%	L78M15ACDT	L78M15ACDT-TR	0 to 125	DPAK
	2%	L78M15ABDT	L78M15ABDT-TR	-40 to 125	DPAK
	4%	L78M15CDT	L78M15CDT-TR	0 to 125	DPAK
	4%	L78M15CS	L78M15CS13TR	0 to 125	SOT194
18V	2%	L78M18ACDT	L78M18ACDT-TR	0 to 125	DPAK
	2%	L78M18ABDT	L78M18ABDT-TR	-40 to 125	DPAK
	4%	L78M18CDT	L78M18CDT-TR	0 to 125	DPAK
	4%	L78M18CS	L78M18CS13TR	0 to 125	SOT194
20V	2%	L78M20ACDT	L78M20ACDT-TR	0 to 125	DPAK
	2%	L78M20ABDT	L78M20ABDT-TR	-40 to 125	DPAK
	4%	L78M20CDT	L78M20CDT-TR	0 to 125	DPAK
	4%	L78M20CS	L78M20CS13TR	0 to 125	SOT194
24V	2%	L78M24ACDT	L78M24ACDT-TR	0 to 125	DPAK
	2%	L78M24ABDT	L78M24ABDT-TR	-40 to 125	DPAK
	4%	L78M24CDT	L78M24CDT-TR	0 to 125	DPAK
	4%	L78M24CS	L78M24CS13TR	0 to 125	SOT194



SUPPLIED IN FULL STICKS/REELS ONLY



POSITIVE

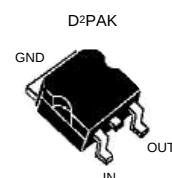
continued

SURFACE MOUNT

1.5A Output

● L78 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code Stick	Tape & Reel	Operating Temp. Range (°C)	Package
5V	2%	L7805ACD2T	L7805ACD2T-TR	0 to 125	D ² PAK
	2%	L7805ABD2T	L7805ABD2T-TR	-40 to 125	
	4%	L7805CD2T	L7805CD2T-TR	0 to 125	
6V	2%	L7806ACD2T	L7806ACD2T-TR	0 to 125	
	2%	L7806ABD2T	L7806ABD2T-TR	-40 to 125	
	4%	L7806CD2T	L7806CD2T-TR	0 to 125	
8V	2%	L7808ACD2T	L7808ACD2T-TR	0 to 125	
	2%	L7808ABD2T	L7808ABD2T-TR	-40 to 125	
	4%	L7808CD2T	L7808CD2T-TR	0 to 125	
9V	2%	L7809ACD2T	L7809ACD2T-TR	0 to 125	
	2%	L7809ABD2T	L7809ABD2T-TR	-40 to 125	
	4%	L7809CD2T	L7809CD2T-TR	0 to 125	
12V	2%	L7812ACD2T	L7812ACD2T-TR	0 to 125	
	2%	L7812ABD2T	L7812ABD2T-TR	-40 to 125	
	4%	L7812CD2T	L7812CD2T-TR	0 to 125	
15V	2%	L7815ACD2T	L7815ACD2T-TR	0 to 125	
	2%	L7815ABD2T	L7815ABD2T-TR	-40 to 125	
	4%	L7815CD2T	L7815CD2T-TR	0 to 125	



SUPPLIED IN FULL STICKS/REELS ONLY

With ST's continuous product improvement programme and innovative device introductions, this shortform can only provide an in-sight into their product portfolio at the time of publication. Should the device specification you require not be shown please contact our Sales Department for the latest details.



PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

POSITIVE (low dropout)
shown overleaf > > >



POSITIVE

continued

SURFACE MOUNT

LOW DROPOUT

50mA Output

Ultra Low Dropout Voltage 0.12V typ. with Inhibit Function

● LD2980 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code Tape & Reel	Operating Temp. Range (°C)	Package
2.85V	0.5%	LD2980ABM28	-25 to 125	SOT23-5L
	1%	LD2980CM28		
3V	0.5%	LD2980ABM30		
	1%	LD2980CM30		
3.2V	0.5%	LD2980ABM32		
	1%	LD2980CM32		
3.3V	0.5%	LD2980ABM33		
	1%	LD2980CM33		
3.8V	0.5%	LD2980ABM38		
	1%	LD2980CM38		
5V	0.5%	LD2980ABM50		
	1%	LD2980CM50		



50mA Output

Dropout Voltage 0.2V typ. with Inhibit Function

● LD2979 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code Tape & Reel	Operating Temp. Range (°C)	Package
2.85V	2%	LD2979M28	- 25 to 125	SOT23-5L
3V	2%	LD2979M30		
3.2V	2%	LD2979M32		
3.3V	2%	LD2979M33		
3.8V	2%	LD2979M38		
5V	2%	LD2979M50		

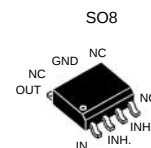


100mA Output

Dropout Voltage 0.2V typ. with Inhibit Function

● LK Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code Stick	Order Code Tape & Reel	Operating Temp. Range (°C)	Package
2V	3%	LK115D20	LK115D20-TR	- 40 to 125	SO8
2.5V	3%	LK115D25	LK115D25-TR		
3V	3%	LK115D30	LK115D30-TR		
3.3V	3%	LK115D33	LK115D33-TR		
4V	3%	LK115D40	LK115D40-TR		
4.7V	3%	LK115D47	LK115D47-TR		
4.85V	3%	LK115D48	LK115D48-TR		
5V	3%	LK115D50	LK115D50-TR		
5.5V	3%	LK115D55	LK115D55-TR		



SUPPLIED IN FULL STICKS/REELS ONLY



POSITIVE

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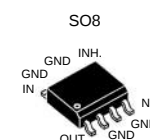
SURFACE MOUNT

LOW DROPOUT

100mA Output		Dropout Voltage 0.2V typ. with Inhibit Function		● LD2981 Series ●
Voltage	Volt. Tol.	Device No. & Anglia Order Code Tape & Reel	Operating Temp. Range (°C)	Package
2.85V	0.75% 1.25%	LD2981ABM28 LD2981CM28	- 40 to 125	SOT23-5L
3V	0.75% 1.25%	LD2981ABM30 LD2981CM30		
3.2V	0.75% 1.25%	LD2981ABM32 LD2981CM32		
3.3V	0.75% 1.25%	LD2981ABM33 LD2981CM33		
3.8V	0.75% 1.25%	LD2981ABM38 LD2981CM38		
4.85V	0.75% 1.25%	LD2981ABM48 LD2981CM48		
5V	0.75% 1.25%	LD2981ABM50 LD2981CM50		



100mA Output		Dropout Voltage 0.2V typ. with Inhibit Function		● LE Series ●	
Voltage	Volt. Tol.	Device No. & Anglia Order Code Stick	Tape & Reel	Operating Temp. Range (°C)	Package
1.25V	1% 2%	LE12ABD LE12CD	LE12ABD-TR LE12CD-TR	- 40 to 125	SO8
2.5V	1% 2%	LE25ABD LE25CD	LE25ABD-TR LE25CD-TR		
2.7V	1% 2%	LE27ABD LE27CD	LE27ABD-TR LE27CD-TR		
3V	1% 2%	LE30ABD LE30CD	LE30ABD-TR LE30CD-TR		
3.3V	1% 2%	LE33ABD LE33CD	LE33ABD-TR LE33CD-TR		
3.5V	1% 2%	LE35ABD LE35CD	LE35ABD-TR LE35CD-TR		
4V	1% 2%	LE40ABD LE40CD	LE40ABD-TR LE40CD-TR		
4.5V	1% 2%	LE45ABD LE45CD	LE45ABD-TR LE45CD-TR		
4.7V	1% 2%	LE47ABD LE47CD	LE47ABD-TR LE47CD-TR		
5V	1% 2%	LE50ABD LE50CD	LE50ABD-TR LE50CD-TR		
5.2V	1% 2%	LE52ABD LE52CD	LE52ABD-TR LE52CD-TR		
5.5V	1% 2%	LE55ABD LE55CD	LE55ABD-TR LE55CD-TR		
6V	1% 2%	LE60ABD LE60CD	LE60ABD-TR LE60CD-TR		
8V	1% 2%	LE80ABD LE80CD	LE80ABD-TR LE80CD-TR		
12V	1% 2%	LE120ABD LE120CD	LE120ABD-TR LE120CD-TR		



PACKAGE
DIMENSIONS

refer to General Data section
shown later in this shortform

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POSITIVE (low dropout)
continued overleaf > > >



POSITIVE

continued

SURFACE MOUNT

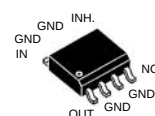
LOW DROPOUT

250mA Output

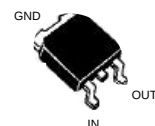
Dropout Voltage 0.4V typ. with Inhibit Function on SO8 and PPAK ● L4931 Series ●

Voltage	Volt. Tol.	Device No. & Anglia Stick	Order Code Tape & Reel	Operating Temp. Range (°C)	Package
2.5V	1%	L4931ABD25	L4931ABD25-TR	- 40 to 125	SO8
	1%	L4931ABDT25	L4931ABDT25-TR		DPAK
	1%	L4931ABPT25	L4931ABPT25-TR		PPAK
	2%	L4931CD25	L4931CD25-TR		SO8
	2%	L4931CDT25	L4931CDT25-TR		DPAK
	2%	L4931CPT25	L4931CPT25-TR		PPAK
2.7V	1%	L4931ABD27	L4931ABD27-TR	- 40 to 125	SO8
	1%	L4931ABDT27	L4931ABDT27-TR		DPAK
	1%	L4931ABPT27	L4931ABPT27-TR		PPAK
	2%	L4931CD27	L4931CD27-TR		SO8
	2%	L4931CDT27	L4931CDT27-TR		DPAK
	2%	L4931CPT27	L4931CPT27-TR		PPAK
3V	1%	L4931ABD30	L4931ABD30-TR	- 40 to 125	SO8
	1%	L4931ABDT30	L4931ABDT30-TR		DPAK
	1%	L4931ABPT30	L4931ABPT30-TR		PPAK
	2%	L4931CD30	L4931CD30-TR		SO8
	2%	L4931CDT30	L4931CDT30-TR		DPAK
	2%	L4931CPT30	L4931CPT30-TR		PPAK
3.3V	1%	L4931ABD33	L4931ABD33-TR	- 40 to 125	SO8
	1%	L4931ABDT33	L4931ABDT33-TR		DPAK
	1%	L4931ABPT33	L4931ABPT33-TR		PPAK
	2%	L4931CD33	L4931CD33-TR		SO8
	2%	L4931CDT33	L4931CDT33-TR		DPAK
	2%	L4931CPT33	L4931CPT33-TR		PPAK
3.5V	1%	L4931ABD35	L4931ABD35-TR	- 40 to 125	SO8
	1%	L4931ABDT35	L4931ABDT35-TR		DPAK
	1%	L4931ABPT35	L4931ABPT35-TR		PPAK
	2%	L4931CD35	L4931CD35-TR		SO8
	2%	L4931CDT35	L4931CDT35-TR		DPAK
	2%	L4931CPT35	L4931CPT35-TR		PPAK
4V	1%	L4931ABD40	L4931ABD40-TR	- 40 to 125	SO8
	1%	L4931ABDT40	L4931ABDT40-TR		DPAK
	1%	L4931ABPT40	L4931ABPT40-TR		PPAK
	2%	L4931CD40	L4931CD40-TR		SO8
	2%	L4931CDT40	L4931CDT40-TR		DPAK
	2%	L4931CPT40	L4931CPT40-TR		PPAK
4.7V	1%	L4931ABD47	L4931ABD47-TR	- 40 to 125	SO8
	1%	L4931ABDT47	L4931ABDT47-TR		DPAK
	1%	L4931ABPT47	L4931ABPT47-TR		PPAK
	2%	L4931CD47	L4931CD47-TR		SO8
	2%	L4931CDT47	L4931CDT47-TR		DPAK
	2%	L4931CPT47	L4931CPT47-TR		PPAK
5V	1%	L4931ABD50	L4931ABD50-TR	- 40 to 125	SO8
	1%	L4931ABDT50	L4931ABDT50-TR		DPAK
	1%	L4931ABPT50	L4931ABPT50-TR		PPAK
	2%	L4931CD50	L4931CD50-TR		SO8
	2%	L4931CDT50	L4931CDT50-TR		DPAK
	2%	L4931CPT50	L4931CPT50-TR		PPAK
8V	1%	L4931ABD80	L4931ABD80-TR	- 40 to 125	SO8
	1%	L4931ABDT80	L4931ABDT80-TR		DPAK
	1%	L4931ABPT80	L4931ABPT80-TR		PPAK
	2%	L4931CD80	L4931CD80-TR		SO8
	2%	L4931CDT80	L4931CDT80-TR		DPAK
	2%	L4931CPT80	L4931CPT80-TR		PPAK
12V	1%	L4931ABD120	L4931ABD120-TR	- 40 to 125	SO8
	1%	L4931ABDT120	L4931ABDT120-TR		DPAK
	1%	L4931ABPT120	L4931ABPT120-TR		PPAK
	2%	L4931CD120	L4931CD120-TR		SO8
	2%	L4931CDT120	L4931CDT120-TR		DPAK
	2%	L4931CPT120	L4931CPT120-TR		PPAK

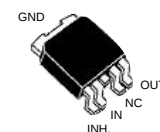
SO8



DPAK



PPAK



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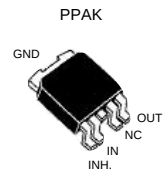
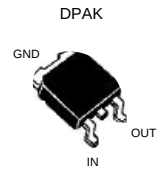
POSITIVE

continued

SURFACE MOUNT

LOW DROPOUT

500mA Output		Dropout Voltage 0.45V typ. with Inhibit Function on PPAK			● LF Series ●
Voltage	Volt. Tol.	Device No. & Anglia Order Code Stick Tape & Reel	Operating Temp. Range (°C)	Package	
2.5V	1%	LF25ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF25ABPT			
	2%	LF25CDT			
	2%	LF25CPT			
2.7V	1%	LF27ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF27ABPT			
	2%	LF27CDT			
	2%	LF27CPT			
3V	1%	LF30ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF30ABPT			
	2%	LF30CDT			
	2%	LF30CPT			
3.3V	1%	LF33ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF33ABPT			
	2%	LF33CDT			
	2%	LF33CPT			
3.5V	1%	LF35ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF35ABPT			
	2%	LF35CDT			
	2%	LF35CPT			
4V	1%	LF40ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF40ABPT			
	2%	LF40CDT			
	2%	LF40CPT			
4.7V	1%	LF47ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF47ABPT			
	2%	LF47CDT			
	2%	LF47CPT			
5V	1%	LF50ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF50ABPT			
	2%	LF50CDT			
	2%	LF50CPT			
5.2V	1%	LF52ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF52ABPT			
	2%	LF52CDT			
	2%	LF52CPT			
6V	1%	LF60ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF60ABPT			
	2%	LF60CDT			
	2%	LF60CPT			
8V	1%	LF80ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF80ABPT			
	2%	LF80CDT			
	2%	LF80CPT			
8.5V	1%	LF85ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF85ABPT			
	2%	LF85CDT			
	2%	LF85CPT			
9V	1%	LF90ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF90ABPT			
	2%	LF90CDT			
	2%	LF90CPT			
12V	1%	LF120ABDT	- 40 to 125	DPAK PPAK DPAK PPAK	
	1%	LF120ABPT			
	2%	LF120CDT			
	2%	LF120CPT			



PACKAGE
DIMENSIONS

refer to General Data section
shown later in this shortform

SUPPLIED IN FULL STICKS/REELS ONLY

POSITIVE (low dropout)
continued overleaf > > >



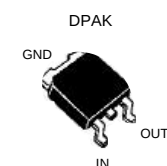
POSITIVE

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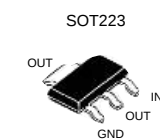
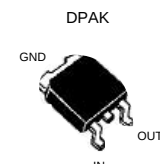
SURFACE MOUNT

LOW DROPOUT

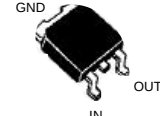
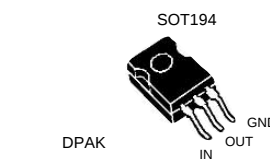
500mA Output		Dropout Voltage 0.4V typ. with Inhibit Function on SO8			● KF Series ●
Voltage	Volt. Tol.	Device No. & Anglia Stick	Order Code Tape & Reel	Operating Temp. Range (°C)	Package
2.5V	2%	KF25BD KF25BDT	KF25BD-TR KF25BDT-TR	- 40 to 125	SO8 DPAK
2.7V	2%	KF27BD KF27BDT	KF27BD-TR KF27BDT-TR	- 40 to 125	SO8 DPAK
3V	2%	KF30BD KF30BDT	KF30BD-TR KF30BDT-TR	- 40 to 125	SO8 DPAK
3.3V	2%	KF33BD KF33BDT	KF33BD-TR KF33BDT-TR	- 40 to 125	SO8 DPAK
4V	2%	KF40BD KF40BDT	KF40BD-TR KF40BDT-TR	- 40 to 125	SO8 DPAK
4.7V	2%	KF47BD KF47BDT	KF47BD-TR KF47BDT-TR	- 40 to 125	SO8 DPAK
5V	2%	KF50BD KF50BDT	KF50BD-TR KF50BDT-TR	- 40 to 125	SO8 DPAK
6V	2%	KF60BD KF60BDT	KF60BD-TR KF60BDT-TR	- 40 to 125	SO8 DPAK
8V	2%	KF80BD KF80BDT	KF80BD-TR KF80BDT-TR	- 40 to 125	SO8 DPAK
8.5V	2%	KF85BD KF85BDT	KF85BD-TR KF85BDT-TR	- 40 to 125	SO8 DPAK
12V	2%	KF120BD KF120BDT	KF120BD-TR KF120BDT-TR	- 40 to 125	SO8 DPAK



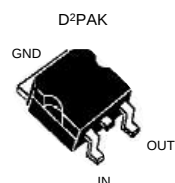
800mA Output		Dropout Voltage 1V typ.			● LD1117 Series ●
Voltage	Volt. Tol.	Device No. & Anglia Stick	Order Code Tape & Reel	Operating Temp. Range (°C)	Package
2.85V	1% 1% 2% 2%	LD1117DT28 LD1117S28 LD1117DT28C LD1117S28C	LD1117DT28-TR LD1117S28-TR LD1117DT28C-TR LD1117S28C-TR	0 to 125	DPAK SOT223 DPAK SOT223
3V	1% 1% 2% 2%	LD1117DT30 LD1117S30 LD1117DT30C LD1117S30C	LD1117DT30-TR LD1117S30-TR LD1117DT30C-TR LD1117S30C-TR	0 to 125	DPAK SOT223 DPAK SOT223
3.3V	1% 1% 2% 2%	LD1117DT33 LD1117S33 LD1117DT33C LD1117S33C	LD1117DT33-TR LD1117S33-TR LD1117DT33C-TR LD1117S33C-TR	0 to 125	DPAK SOT223 DPAK SOT223
5V	1% 1% 2% 2%	LD1117DT50 LD1117S50 LD1117DT50C LD1117S50C	LD1117DT50-TR LD1117S50-TR LD1117DT50C-TR LD1117S50C-TR	0 to 125	DPAK SOT223 DPAK SOT223



1A Output		Dropout Voltage 0.45V typ.			● L4941 Series ●
Voltage	Volt. Tol.	Device No. & Anglia Stick	Order Code Tape & Reel	Operating Temp. Range (°C)	Package
5V	2%	L4941BS L4941BDT L4941D2T	L4941BS13TR L4941BDT-TR L4941D2T-TR	- 40 to 150	SOT194 DPAK D ² PAK



1.5A Output		Dropout Voltage 0.5V typ.			● L4940 Series ●
Voltage	Volt. Tol.	Device No. & Anglia Stick	Order Code Tape & Reel	Operating Temp. Range (°C)	Package
5V	2%	L4940D2T5	L4940D2T5-TR	- 40 to 150	D ² PAK
8.5V	2%	L4940D2T85	L4940D2T85-TR		
10V	2%	L4940D2T10	L4940D2T10-TR		
12V	2%	L4940D2T12	L4940D2T12-TR		



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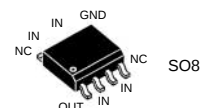
NEGATIVE

SURFACE MOUNT

100mA Output

● L79L Series ●

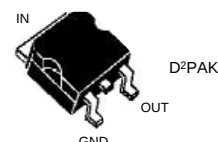
Voltage	Volt. Tol.	Device No. & Anglia Order Code Stick Tape & Reel	Operating Temp. Range (°C)	Package
5V	4% 8%	L79L05ACD L79L05CD	0 to 125	SO8
6V	4% 8%	L79L06ACD L79L06CD		
8V	4% 8%	L79L08ACD L79L08CD		
9V	4% 8%	L79L09ACD L79L09CD		
12V	4% 8%	L79L12ACD L79L12CD		
15V	4% 8%	L79L15ACD L79L15CD		



1.5A Output

● L79L Series ●

Voltage	Volt. Tol.	Device No. & Anglia Order Code Stick Tape & Reel	Operating Temp. Range (°C)	Package
5V	4% 8%	L7905ACD2T L7905CD2T	0 to 125	D ² PAK
6V	4% 8%	L7906ACD2T L7906CD2T		
8V	4% 8%	L7908ACD2T L7908CD2T		
9V	4% 8%	L7909ACD2T L7909CD2T		
12V	4% 8%	L7912ACD2T L7912CD2T		
15V	4% 8%	L7915ACD2T L7915CD2T		



SUPPLIED IN FULL STICKS/REELS ONLY

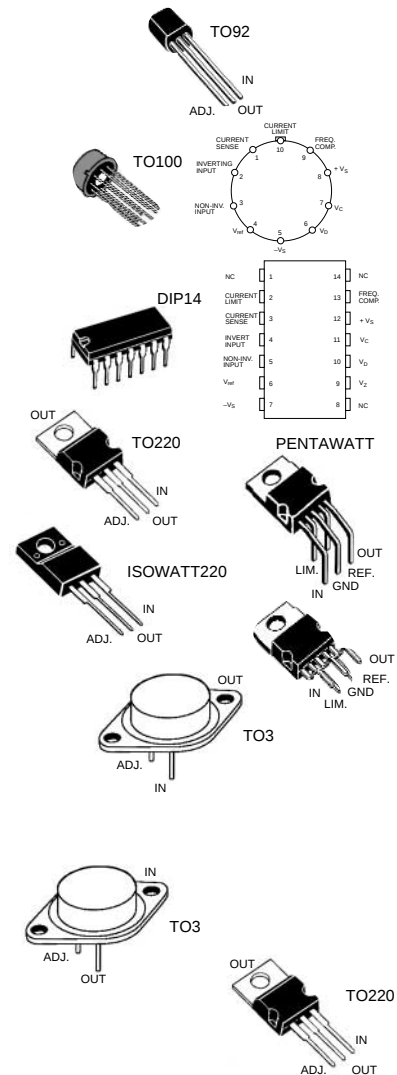
PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

POSITIVE		Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
Current	Output Voltage			
100mA	1.2 to 37V	LM217LZ LM317LZ	- 40 to 125 0 to 125	TO92
150mA	2 to 37V	LM723CH LM723CN	0 to 70	TO100 DIP14
500mA	1.2 to 37V	LM217MT LM317MT	- 40 to 125 0 to 125	TO220
800mA	1.25 to 15V *	LD1117V	0 to 125	
1.5A	1.2 to 37V	LM117K LM217K LM317K	- 55 to 150 - 25 to 150 0 to 125	TO3
		LM217T LM317T	- 25 to 150 0 to 125	TO220
		LM317P	0 to 125	ISOWATT220
2A	2.85 to 36V	L200CH L200CV	- 25 to 150	PENTAWATT (H) PENTAWATT (V)
3A	1.2 to 32V	LM150K LM250K LM350K	- 55 to 150 - 25 to 150 0 to 150	TO3
5A	1.2 to 32V	LM138K LM238K LM338K	- 55 to 150 - 25 to 150 0 to 150	

* Low Dropout Voltage, 1V typ.

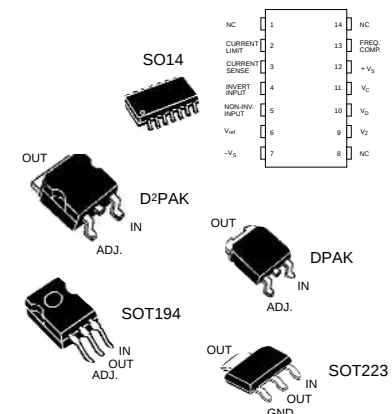
NEGATIVE		Device No. & Anglia Order Code	Operating Temp. Range (°C)	Package
Current	Output Voltage			
1.5A	1.2 to 37V	LM137K LM237K LM337K	- 55 to 150 - 25 to 150 0 to 125	TO3
		LM237SP LM337SP	- 25 to 150 0 to 125	TO220



SURFACE MOUNT

POSITIVE		Device No. & Anglia Order Code		Operating Temp. Range (°C)	Package
Current	Output Voltage	Stick	Tape & Reel		
150mA	2 to 37V	LM723CD	—	0 to 70	SO14
500mA	1.2 to 37V	LM217D2T LM317D2T	LM217D2T-TR LM317D2T-TR	- 25 to 150 0 to 125	D ² PAK
		LM217MDT LM317MDT	LM217MDT-TR LM317MDT-TR	- 40 to 125 0 to 125	DPAK
		LM317MS	LM317MS13TR	0 to 125	SOT194
800mA	1.25 to 15V *	LD1117DT LD1117S	LD1117DT-TR LD1117S-TR	0 to 125	DPAK SOT223

* Low Dropout Voltage, 1V typ.



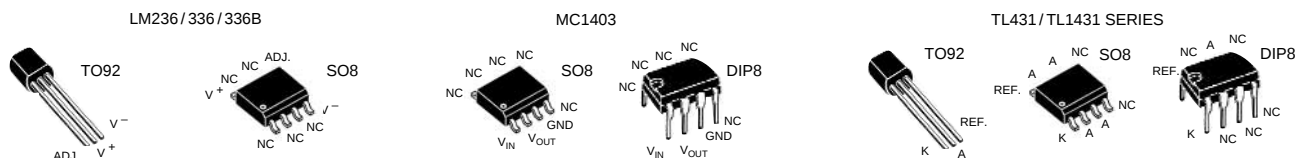
SUPPLIED IN FULL STICKS/REELS ONLY

RECOMMENDED
HEATSINKS
see Heatsink section
later in this shortform

2.5V & 2.5 to 36V

Type	Function	Oper. Temp. Range (°C)	Device No. & Anglia Order Code			
			LEADED TO92 package 		SURFACE MOUNT SO8 package 	
			LOOSE	TAPE & BOX	STICK	TAPE & REEL
LM236	2.5V Shunt Volt. Ref. 2%	– 25 to 85	LM236Z	–	–	–
LM336	2.5V Shunt Volt. Ref. 4%	0 to 70	LM336Z	–	LM336D	LM336DT
LM336B	2.5V Shunt Volt. Ref. 2%	0 to 70	LM336BZ	–	LM336BD	LM336BDT
MC1403*	2.5V Precision Serial Volt. Ref. 1%	0 to 70	–	–	MC1403D	MC1403DT
TL431AC	2.5V to 36V Prog. Shunt V. Ref. 1%	0 to 70	TL431ACZ	TL431ACZ-AP	TL431ACD	TL431ACDT
TL431AI	2.5V to 36V Prog. Shunt V. Ref. 1%	– 40 to 85	TL431AIZ	TL431AIZ-AP	TL431AID	TL431AIDT
TL431C*	2.5V to 36V Prog. Shunt V. Ref. 2%	0 to 70	TL431CZ	TL431CZ-AP	TL431CD	TL431CDT
TL431I	2.5V to 36V Prog. Shunt V. Ref. 2%	– 40 to 85	TL431IZ	TL431IZ-AP	TL431ID	TL431IDT
TL1431AC	2.5V to 36V Prog. Shunt V. Ref. 0.25%	– 20 to 70	TL1431ACZ	TL1431ACZ-AP	TL1431ACD	TL1431ACDT
TL1431AI	2.5V to 36V Prog. Shunt V. Ref. 0.25%	– 40 to 105	TL1431AIZ	TL1431AIZ-AP	TL1431AID	TL1431AIDT
TL1431C	2.5V to 36V Prog. Shunt V. Ref. 0.4%	– 20 to 70	TL1431CZ	TL1431CZ-AP	TL1431CD	TL1431CDT
TL1431I	2.5V to 36V Prog. Shunt V. Ref. 0.4%	– 40 to 105	TL1431IZ	TL1431IZ-AP	TL1431ID	TL1431IDT

* Also available in Dual In-Line package (DIP8), Device No. & Anglia Order Code : Type No. with N suffix.



1.24 to 6V

Type	Function	Oper. Temp. Range (°C)	Device No. & Anglia Order Code	
			LEADED TO92 package 	SURFACE MOUNT SOT23-5L package
			LOOSE	TAPE & REEL
TS431AI	1.24 to 6V Prog. Shunt V. Ref 1%	– 40 to 85	TS431AIZ	TS431AIL
TS431I	1.24 to 6V Prog. Shunt V. Ref 2%	– 40 to 85	TS431IZ	TS431IL



SMD PARTS – SUPPLIED IN FULL STICKS/REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

S.C.R's, diacs and triacs in a wide range of industry standard conventional and SMD packages. The standard products suit general purpose switching and phase control, the sensitive S.C.R's allow direct drive from microcontrollers and the snubberless triacs offer high switching performance without the need for RC protection. The range is completed with a series of Application Specific Discretes (ASD™).

S.C.R's

STANDARD 4A → 50A / 50V → 1200V
SENSITIVE 0.8A → 4A / 100V → 800V
FAST 3.5A / 400V
MODULES 50A → 85A / 800V → 1400V
pages 43 - 46

SMD S.C.R's

STANDARD 8A → 25A / 400V → 800V
SENSITIVE 0.2A → 12A / 100V → 800V
pages 47 - 48

DIACS

AXIAL V_{BO} 32V → 40V
SMD V_{BO} 32V
page 49

TRIACS

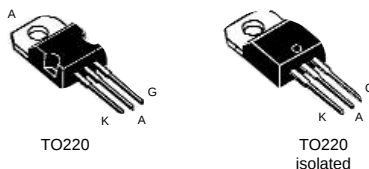
STANDARD 0.8A → 45A / 400V → 800V
LOGIC LEVEL 0.8A → 12A / 400V → 800V
SNUBBERLESS 4A → 40A / 400V → 1400V
pages 50 - 57

SMD TRIACS

STANDARD 1A / 400V → 800V
LOGIC LEVEL 1A → 4A / 400V → 800V
SNUBBERLESS 4A → 25A / 400V → 800V
pages 58 - 59

ASD™

LIGHTING CONTROL
IGNITION CONTROL
FIRE LIGHTER CONTROL
AC LINE SWITCH ARRAY
pages 60 - 61



STANDARD

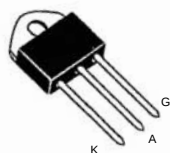
T_J (max.) = 110°C

$I_{T(RMS)}$ @ T_C	V_{RRM}	Device No. & Anglia Order Code	I_{TSM}	$T_J = 25^\circ C$						dv/dt T_J max.	di/dt	Package
				V_{GT} max. (V)	I_{GT} max. (mA)	I_H max. (mA)	V_{TM} @ I_{TM}	I_{TM}	V_{TM} (V)	min. (V/ μs)	max. (A/ μs)	
4	115	200 400 600 800 1000 TYN204 TYN404 TYN604 TYN804 TYN1004	60	1.5	15	30	1.8	8	200	100		TO220
6	110	50 400 600 800 1000 TYN056 TYN406 TYN606 TYN806 TYN1006	70	1.5	15	30	1.6	12	200	50		
8	105	50 100 200 400 600 800 1000 TYN058 TYN108 TYN208 TYN408 TYN608 TYN808 TYN1008	80	1.5	15	30	1.8	16	200	50		
	100	50 400 600 800 1000 TXN058 TXN408 TXN608 TXN808 TXN1008	80	1.5	15	30	1.8	16	200	50		TO220 isolated
10	100	50 100 200 400 600 800 1000 TYN0510 TYN110 TYN210 TYN410 TYN610 TYN810 TYN1010	100	1.5	15	30	1.6	20	200	50		TO220
12	90	50 100 200 400 600 800 1000 TYN0512 TYN112 TYN212 TYN412 TYN612 TYN812 TYN1012	120	1.5	15	30	1.6	24	200	100		
	80	50 400 600 800 1000 TXN0512 TXN412 TXN612 TXN812 TXN1012	120	1.5	15	30	1.6	24	200	100		TO220 isolated
16	95	50 400 600 800 TYN0516 TYN416 TYN616 TYN816	160	1.5	25	40	1.6	32	500	100		TO220
25	95	200 400 600 800 1000 1200 TYN225 TYN425 TYN625 TYN825 TYN1025 TYN1225	250	1.5	40	50	1.6	50	500	100		

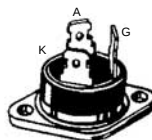
RECOMMENDED
HEATSINKS
see Heatsink section
later in this shortform

PACKAGE
DIMENSIONS
refer to General Data section
shown later in this shortform

continued on next page



TOP3I
isolated



RD91
isolated

STANDARD

continued

$T_J (\text{max.}) = 125^\circ\text{C}$

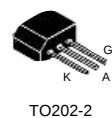
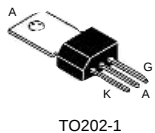
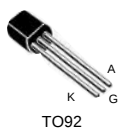
$I_{T(RMS)}$ @ T_C (A)	T_C (°C)	V_{RRM} (V)	Device No. & Anglia Order Code	I_{TSM} (A)	$T_J = 25^\circ\text{C}$					dv/dt T_J max. min. (V/ μ s)	di/dt max. (A/ μ s)	Package
					V_{GT} max. (V)	I_{GT} max. (mA)	I_H max. (mA)	V_{TM} (V)	I_{TM} (A)			
30	80	200	BTW68-200	400	1.5	50	75	2.1	60	500	100	TOP3I isolated
		400	BTW68-400							500		
		600	BTW68-600							500		
		800	BTW68-800							500		
		1000	BTW68-1000							250		
		1200	BTW68-1200							250		
40	75	200	BTW67-200	500	1.5	80	150	2	80	500	100	RD91 isolated
		400	BTW67-400							500		
		600	BTW67-600							500		
		800	BTW67-800							500		
		1000	BTW67-1000							250		
		1200	BTW67-1200							250		
50	70	200	BTW69-200	500	1.5	80	150	1.9	100	500	100	TOP3I isolated
		400	BTW69-400							500		
		600	BTW69-600							500		
		800	BTW69-800							500		
		1000	BTW69-1000							250		
		1200	BTW69-1200							250		

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

**PACKAGE
DIMENSIONS**

refer to General Data section
shown later in this shortform



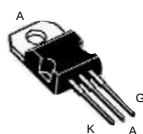
SENSITIVE GATE

T_J (max.) = 125°C

I _{T(RMS)} @ T _C (A)	V _{RRM} (V)	Device No. & Anglia Order Code	I _{TSM} (A)	T _J = 25°C							dv/dt T _J max.	di/dt	Package
				V _{GT} max. (V)	I _{GT} min. (μA)		I _H max. (mA)	V _{TM} @ I _{TM} (V) (A)		min. (V/μs)	max. (A/μs)		
0.8	55 (T _L)	100 200 300 400	P0109AA P0109BA P0109CA P0109DA	7	0.8	–	1	5	1.93	1.6	25	30	TO92*
		100 200 300 400	P0118AA P0118BA P0118CA P0118DA	7	0.8	0.5	5	5	1.93	1.6	30	30	
		100 200 300 400	P0111AA P0111BA P0111CA P0111DA	7	0.8	4	25	5	1.93	1.6	50	30	
		100 200 300 400	P0115AA P0115BA P0115CA P0115DA	7	0.8	15	50	5	1.93	1.6	100	30	
		100 200 300 400	P0102AA P0102BA P0102CA P0102DA	7	0.8	–	200	5	1.93	1.6	25	30	
1.25	60 (T _L)	200 400 600 800	X0205BA X0205DA X0205MA X0205NA	22.5	0.8	20	50	5	1.45	2.5	15 (typ.)	30	
		200 400 600 800	X0203BA X0203DA X0203MA X0203NA	22.5	0.8	20	200	5	1.45	2.5	20 (typ.)	30	
		200 400 600 800	X0202BA X0202DA X0202MA X0202NA	22.5	0.8	–	200	5	1.45	2.5	15 (typ.)	30	
4	90	200 400 600 800	X0405BE X0405DE X0405ME X0405NE	30	0.8	20	50	5	1.8	8	15 (typ.)	50	TO202-1
		200 400 600 800	X0403BE X0403DE X0403ME X0403NE	30	0.8	20	200	5	1.8	8	20 (typ.)	50	
		200 400 600 800	X0402BE X0402DE X0402ME X0402NE	30	0.8	–	200	5	1.8	8	15 (typ.)	50	
		200 400 600 800	X0405BF X0405DF X0405MF X0405NF	30	0.8	20	50	5	1.8	8	15 (typ.)	50	TO202-2
		200 400 600 800	X0403BF X0403DF X0403MF X0403NF	30	0.8	20	200	5	1.8	8	20 (typ.)	50	
		200 400 600 800	X0402BF X0402DF X0402MF X0402NF	30	0.8	–	200	5	1.8	8	15 (typ.)	50	

* Tape & Reel available to special order

THYRISTORS (S.C.R.'S) continued overleaf >>>>

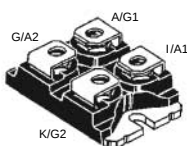


TO220

FAST

$T_J (\text{max.}) = 125^\circ\text{C}$

$I_{T(RMS)} @ T_C$		V_{RRM}	Device No. & Anglia Order Code	I_{TSM}	$T_J = 25^\circ\text{C}$					dv/dt $T_J \text{ max.}$	tq	Package
(A)	($^\circ\text{C}$)	(V)			V_{GT} max. (V)	I_{GT} max. (mA)	I_H max. (mA)	$V_{TM} @ I_{TM}$		min. (V/ μs)	max. (μs)	
3.5	85	400	TR03-400T	20	1.2	1.5	5	2.2	10	20	15	TO220



see below

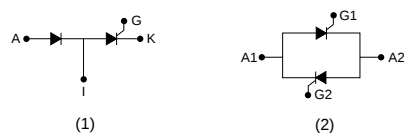
ISOTOP

MODULES

$T_J (\text{max.}) = 125^\circ\text{C}$

$I_{T(RMS)} @ T_C$		V_{RRM}	Device No. & Anglia Order Code	Config.	I_{TSM}	$T_J = 25^\circ\text{C}$					dv/dt $T_J \text{ max.}$	di/dt	Package
(A)	($^\circ\text{C}$)	(V)				V_{GT} max. (V)	I_{GT} max. (mA)	I_H max. (mA)	$V_{TM} @ I_{TM}$		min. (V/ μs)	max. (A/ μs)	
50	85	800 1000 1200	MDS35-800 MDS35-1000 MDS35-1200	1	400	1.5	50	80	1.7	80	500	100	ISOTOP
55	80	800 1200 1400	MSS40-800 MSS40-1200 MSS40-1400	2	400	1.5	50	80	1.7	80	500	100	
70	85	800 1000 1200	MDS50-800 MDS50-1000 MDS50-1200	1	600	1.5	50	80	1.75	110	500	100	
	80	800 1200 1400	MSS50-800 MSS50-1200 MSS50-1400	2	600	1.5	50	80	1.7	100	500	100	
85	85	800 1000 1200	MDS80-800 MDS80-1000 MDS80-1200	1	680	1.5	150	80	1.75	170	500	100	

ISOTOP Circuit Configuration



RECOMMENDED
HEATSINKS
see Heatsink section
later in this shortform

SURFACE MOUNT



$T_J (\text{max.}) = 125^\circ\text{C}$

STANDARD

$I_{T(RMS)}$ @ T_C		V_{RRM}	Device No. &  Order Code		I_{TSM}	$T_J = 25^{\circ}C$					dv/dt T_J max.	di/dt	Package
(A)	$(^{\circ}C)$	(V)	Stick	Tape & Reel	(A)	V_{GT}	I_{GT}	I_H	V_{TM} @ I_{TM}		min. (V/ μ s)	max. (A/ μ s)	
						max. (V)	max. (mA)	max. (mA)	(V)	(A)			
8	110	400 600 800	TN805-400B TN805-600B TN805-800B	TN805-400B-TR TN805-600B-TR TN805-800B-TR	70	1.5	5	25	1.6	16	50	100	DPAK
		400 600 800	TN815-400B TN815-600B TN815-800B	TN815-400B-TR TN815-600B-TR TN815-800B-TR	70	1.5	15	50	1.6	16	100	100	
12	105	600	TN1215-600B	TN1215-600B-TR	115	1.5	15	40	1.6	24	200	—	D ² PAK
	110	400 600 800	TN1215-400G TN1215-600G TN1215-800G	TN1215-400G-TR TN1215-600G-TR TN1215-800G-TR	120	1.3	15	30	1.5	24	200	100	
16	110	400 600 800	TN1625-400G TN1625-600G TN1625-800G	TN1625-400G-TR TN1625-600G-TR TN1625-800G-TR	190	1.3	25	40	1.5	32	500	100	
25	110	400 600 800	TN2540-400G TN2540-600G TN2540-800G	TN2540-400G-TR TN2540-600G-TR TN2540-800G-TR	300	1.3	40	50	1.5	50	500	100	

SUPPLIED IN FULL STICKS/REELS ONLY

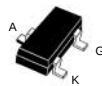
PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

SMD THYRISTORS (S.C.R.'s)

continued overleaf > > >

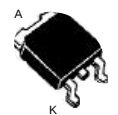
SURFACE MOUNT continued



SOT23



SOT223



DPAK

SENSITIVE GATE

T_J (max.) = 125°C

I _{T(RMS)} @ T _C		V _{RRM}	Device No. & <i>Anglia</i> Order Code		I _{TSM}	T _J = 25°C						dv/dt T _J max.	di/dt	Package
(A)	(°C)	(V)	Stick	Tape & Reel	(A)	V _{GT} max. (V)	I _{GT} min. (μA)	max. (μA)	I _H max. (mA)	V _{TM} @ I _{TM} (V) (A)		min. (V/μs)	max. (A/μs)	
0.2	25 (T _A)	100	—	P0109AL	7	0.8	—	1	5	1.3	0.4	25	30	SOT23
		200	—	P0109BL										
		300	—	P0109CL										
		400	—	P0109DL										
		100	—	P0111AL	7	0.8	4	25	5	1.3	0.4	50	30	
		200	—	P0111BL										
		300	—	P0111CL										
		400	—	P0111DL										
		100	—	P0102AL	7	0.8	—	200	5	1.3	0.4	25	30	
		200	—	P0102BL										
		300	—	P0102CL										
		400	—	P0102DL										
0.8	70 (T _A)	100	—	P0109AN	7	0.8	—	1	5	1.95	1.6	25	30	SOT223
		200	—	P0109BN										
		300	—	P0109CN										
		400	—	P0109DN										
		100	—	P0111AN	7	0.8	4	25	5	1.95	1.6	50	30	
		200	—	P0111BN										
		300	—	P0111CN										
		400	—	P0111DN										
		100	—	P0102AN	7	0.8	—	200	5	1.95	1.6	25	30	
		200	—	P0102BN										
		300	—	P0102CN										
		400	—	P0102DN										
1.4	90(T _{TAB})	200	—	X0205BN	22.5	0.8	20	50	5	1.5	2.8	15 (typ.)	30	SOT223
		400	—	X0205DN										
		600	—	X0205MN										
		800	—	X0205NN										
		200	—	X0203BN	22.5	0.8	20	200	5	1.5	2.8	20 (typ.)	30	
		400	—	X0203DN										
		600	—	X0203MN										
		800	—	X0203NN										
		200	—	X0202BN	22.5	0.8	—	200	5	1.5	2.8	15 (typ.)	30	
		400	—	X0202DN										
		600	—	X0202MN										
		800	—	X0202NN										
4	90	400 600	TS420-400B TS420-600B	TS420-400B-TR TS420-600B-TR	30	0.8	—	200	5	1.8	8	5	50	DPAK
8	85	400 600	TS820-400B TS820-600B	TS820-400B-TR TS820-600B-TR	70	0.8	—	200	5	1.6	16	5	50	
12	100	600	TS1220-600B	TS1220-600B-TR	110	0.8	—	200	5	1.6	24	5	50	

SUPPLIED IN FULL STICKS/REELS ONLY

AXIAL LEAD



DO35

T_J (max.) = 125°C

Breakover Voltage (V)			Device No. & Anglia Order Code	Breakover Voltage Symmetry dV max. (V)	Breakover Current I_{BO} max. (μA)	dV between 0 and 10mA min. (V)	Package
min.	nom.	max.					
28	32	36	Taped DB3 DB3TG DB4	±3	100	5	DO35
30	32	34		±2	15	5	
35	40	45		±3	100	5	

SURFACE MOUNT



MINIMELF

T_J (max.) = 125°C

Breakover Voltage (V)			Device No. & Anglia Order Code	Breakover Voltage Symmetry dV max. (V)	Breakover Current I_{BO} max. (μA)	dV between 0 and 10mA min. (V)	Package
min.	nom.	max.					
28	32	36	Tape & Reel TMMDB3 TMMDB3TG	±3	100	5	MINIMELF
30	32	34		±2	15	5	

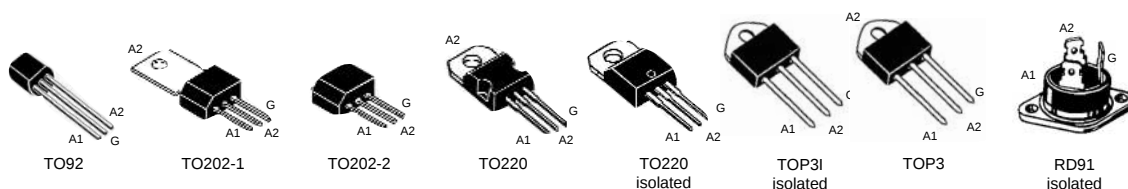
SUPPLIED IN FULL REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

TRIACS

shown overleaf > > >



STANDARD

$I_{T(RMS)}$ @ T_C	V_{RRM}	Device No. & <i>Anglia</i> Order Code	I_{TSM}	I_{GT}				I_H	V_{TM} @ I_{TM}		$(dv/dt)_c$ @ T_J max.	dv/dt @ T_J max.	Package	
				I ++	II +-	III --	IV -+							
				max. (mA)					max. (mA)	V_{TM} (V)				I_{TM} (A)
(A)	(°C)	(V)	(A)					(mA)	(V)	(A)	min. (V/μs)	min. (V/μs)		
0.8	70 (T_L)	400 600 700 800	Z0110DA Z0110MA Z0110SA Z0110NA	8	25	25	25	25	1.5	1.1	5	100	TO92*	
4	75	400 600 700 800	Z0410DE Z0410ME Z0410SE Z0410NE	20	25	25	25	25	2	5.5	5	200	TO202-1	
		400 600 700 800	Z0410DF Z0410MF Z0410SF Z0410NF	20	25	25	25	25	2	5.5	5	200	TO202-2	
6	105	400 600 700	BTB06-400C BTB06-600C BTB06-700C	60	25	25	25	50	25	1.65	8.5	5	100	TO220
		400 600 700	BTB06-400B BTB06-600B BTB06-700B	60	50	50	50	100	50	1.65	8.5	10	250	
	100	400 600 700	BTA06-400C BTA06-600C BTA06-700C	60	25	25	25	50	25	1.65	8.5	5	100	TO220 isolated
		400 600 700	BTA06-400B BTA06-600B BTA06-700B	60	50	50	50	100	50	1.65	8.5	10	250	
8	95	400 600 700	BTB08-400C BTB08-600C BTB08-700C	80	25	25	25	50	25	1.75	11	5	100	TO220
		400 600 700	BTB08-400B BTB08-600B BTB08-700B	80	50	50	50	100	50	1.75	11	10	250	
	90	400 600 700	BTA08-400C BTA08-600C BTA08-700C	80	25	25	25	50	25	1.75	11	5	100	TO220 isolated
		400 600 700	BTA08-400B BTA08-600B BTA08-700B	80	50	50	50	100	50	1.75	11	10	250	
10	95	400 600 700	BTB10-400C BTB10-600C BTB10-700C	100	25	25	25	50	25	1.5	14	5	100	TO220
		400 600 700 800	BTB10-400B BTB10-600B BTB10-700B BTB10-800B	100	50	50	50	100	50	1.5	14	10	250	
	90	400 600 700	BTA10-400C BTA10-600C BTA10-700C	100	25	25	25	50	25	1.5	14	5	100	TO220 isolated
		400 600 700 800	BTA10-400B BTA10-600B BTA10-700B BTA10-800B	100	50	50	50	100	50	1.5	14	10	250	

* Tape & Reel available to special order

RECOMMENDED
HEATSINKS
see Heatsink section later in this shortform

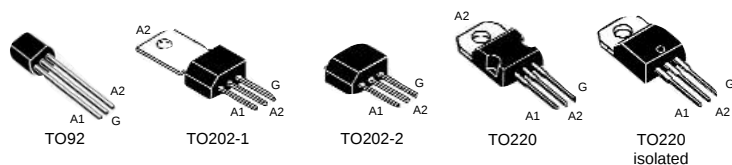
PACKAGE DIMENSIONS
refer to General Data section shown later in this shortform

continued on next page

STANDARD
continued

I _{T(RMS)} (A)	@ T _C (°C)	V _{RRM} (V)	Device No. & Anglia Order Code	I _{TSM} (A)	I _{GT}				I _H max. (mA)	V _{TM} (V)	@ I _{TM} (A)	(dv/dt) _c @ T _J max. min. (V/μs)	dv/dt @ T _J max. min. (V/μs)	Package
					I ++	II +-	III --	IV -+						
					max. (mA)									
12	95	400 600 700 800 BTB12-400C BTB12-600C BTB12-700C BTB12-800C	120	25	25	25	50	25	1.5	17	5	100	TO220	
		400 600 700 800 BTB12-400B BTB12-600B BTB12-700B BTB12-800B	120	50	50	50	100	50	1.5	17	10	250		
		90	400 600 700 800 BTA12-400C BTA12-600C BTA12-700C BTA12-800C	120	25	25	25	50	25	1.5	17	5	100	TO220 isolated
			400 600 700 800 BTA12-400B BTA12-600B BTA12-700B BTA12-800B	120	50	50	50	100	50	1.5	17	10	250	
	16	90	600 800 BTB16-600C BTB16-800C	160	25	25	25	50	25	1.6	22.5	5	100	TO220
			400 600 700 800 BTB16-400B BTB16-600B BTB16-700B BTB16-800B	160	50	50	50	100	50	1.6	22.5	10	250	
80		600 800 BTA16-600C	160	25	25	25	50	25	1.6	22.5	5	100	TO220 isolated	
		400 600 700 800 BTA16-400B BTA16-600B BTA16-700B BTA16-800B	160	50	50	50	100	50	1.6	22.5	10	250		
25	80	400 600 700 800 BTB24-400B BTB24-600B BTB24-700B BTB24-800B	200	50	50	50	100	50	1.8	35	10	250	TO220	
		90	400 600 700 800 BTA26-400B BTA26-600B BTA26-700B BTA26-800B	250	50	50	50	100	80	1.7	35	10	250	TOP3I isolated
	400 600 700 800 BTA26-400A BTA26-600A BTA26-700A BTA26-800A		250	100	100	100	150	100	1.7	35	10	250		
	30	90	400 600 700 BTB26-400B BTB26-600B BTB26-700B	250	50	50	50	100	80	1.7	35	10	250	TOP3
80		400 600 700 800 BTA25-400B BTA25-600B BTA25-700B BTA25-800B	250	50	50	50	100	80	1.8	42	10	250	RD91 isolated	
		400 600 700 800 BTA25-400A BTA25-600A BTA25-700A BTA25-800A	250	100	100	100	150	100	1.8	42	10	250		
40	75	400 600 700 800 BTA41-400B BTA41-600B BTA41-700B BTA41-800B	300	50	50	50	100	80	1.8	60	10	250	TOP3I isolated	
		400 600 700 800 BTA41-400A BTA41-600A BTA41-700A BTA41-800A	300	100	100	100	150	100	1.8	60	10	250		
		RD91 isolated	400 600 700 800 BTA40-400B BTA40-600B BTA40-700B	300	50	50	50	100	80	1.8	60	10	250	
			400 600 700 800 BTA40-400A BTA40-600A BTA40-700A BTA40-800A	300	100	100	100	150	100	1.8	60	10	250	
45	85	400 600 700 800 BTB41-400B BTB41-600B BTB41-700B BTB41-800B	300	50	50	50	100	80	1.8	60	10	250	TOP3	

LOGIC LEVEL TRIACS shown overleaf >>>>



LOGIC LEVEL

T_j (max.) = 125°C except BTA/B : 110°C

I _{T(RMS)} @ T _c		V _{RRM} (V)	Device No. & Anglia Order Code	I _{TSM} (A)	I _{GT}				I _H max. (mA)	I _L typ. (mA)	V _{TM} @ I _{TM}		dv/dt T _J max.	Package
(A)	(°C)				I ++	II +-	III --	IV -+			(V)	(A)	min. (V/μs)	
					max. (mA)									
0.8	70 (T _L)	400 600 700 800	Z0103DA Z0103MA Z0103SA Z0103NA	8	3	3	3	5	7	7	1.5	1.1	10	TO92*
		400 600 700 800	Z0107DA Z0107MA Z0107SA Z0107NA	8	5	5	5	7	10	10	1.5	1.1	20	
		400 600 700 800	Z0109DA Z0109MA Z0109SA Z0109NA	8	10	10	10	10	10	10	1.5	1.1	50	
4	75	400 600 700 800	Z0402DE Z0402ME Z0402SE Z0402NE	20	3	3	3	3	3	3	2	5.5	10	TO202-1
		400 600 700 800	Z0405DE Z0405ME Z0405SE Z0405NE	20	5	5	5	5	5	5	2	5.5	20	
		400 600 700 800	Z0409DE Z0409ME Z0409SE Z0409NE	20	10	10	10	10	10	10	2	5.5	100	
		400 600 700 800	Z0402DF Z0402MF Z0402SF Z0402NF	20	3	3	3	3	3	3	2	5.5	10	TO202-2
		400 600 700 800	Z0405DF Z0405MF Z0405SF Z0405NF	20	5	5	5	5	5	5	2	5.5	20	
		400 600 700 800	Z0409DF Z0409MF Z0409SF Z0409NF	20	10	10	10	10	10	10	2	5.5	100	
	95	400 600 700	BTB04-400T BTB04-600T BTB04-700T	40	5	5	5	5	15	10	1.65	5.5	10 typ.	TO220
		400 600 700	BTB04-400D BTB04-600D BTB04-700D	40	5	5	5	10	15	10	1.65	5.5	10 typ.	
		400 600 700	BTB04-400S BTB04-600S BTB04-700S	40	10	10	10	10	25	20	1.65	5.5	10	
		400 600 700	BTB04-400A BTB04-600A BTB04-700A	40	10	10	10	25	25	20	1.65	5.5	10	
	90	400 600 700	BTA04-400T BTA04-600T BTA04-700T	40	5	5	5	5	15	10	1.65	5.5	10 typ.	TO220 isolated
		400 600 700	BTA04-400D BTA04-600D BTA04-700D	40	5	5	5	10	15	10	1.65	5.5	10 typ.	
		400 600 700	BTA04-400S BTA04-600S BTA04-700S	40	10	10	10	10	25	20	1.65	5.5	10	
400 600 700		BTA04-400A BTA04-600A BTA04-700A	40	10	10	10	25	25	20	1.65	5.5	10		

* Tape & Reel available to special order

continued on next page

LOGIC LEVEL

continued

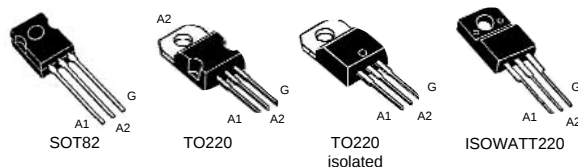
 T_J (max.) = 110°C

I _{T(RMS)} @ T _C		V _{RRM}	Device No. & <i>Anglia</i> Order Code	I _{TSM}	I _{GT}				I _H	I _L	V _{TM} @ I _{TM}		dv/dt T _J max.	Package
(A)	(°C)				I ++	II +-	III --	IV -+			(V)	(A)	min. (V/μs)	
					max. (mA)									
6	90	400 600 700	<i>BTB06-400T</i> <i>BTB06-600T</i> <i>BTB06-700T</i>	60	5	5	5	5	15	10	1.65	8.5	10 typ.	TO220
		400 600 700	<i>BTB06-400D</i> <i>BTB06-600D</i> <i>BTB06-700D</i>	60	5	5	5	10	15	10	1.65	8.5	10 typ.	
		400 600 700	<i>BTB06-400S</i> <i>BTB06-600S</i> <i>BTB06-700S</i>	60	10	10	10	10	25	20	1.65	8.5	10	
		400 600 700	<i>BTB06-400A</i> <i>BTB06-600A</i> <i>BTB06-700A</i>	60	10	10	10	25	25	20	1.65	8.5	10	
	85	400 600 700	<i>BTA06-400T</i> <i>BTA06-600T</i> <i>BTA06-700T</i>	60	5	5	5	5	15	10	1.65	8.5	10 typ.	TO220 isolated
		400 600 700	<i>BTA06-400D</i> <i>BTA06-600D</i> <i>BTA06-700D</i>	60	5	5	5	10	15	10	1.65	8.5	10 typ.	
		400 600 700	<i>BTA06-400S</i> <i>BTA06-600S</i> <i>BTA06-700S</i>	60	10	10	10	10	25	20	1.65	8.5	10	
		400 600 700	<i>BTA06-400A</i> <i>BTA06-600A</i> <i>BTA06-700A</i>	60	10	10	10	25	25	20	1.65	8.5	10	
8	80	400 600 700	<i>BTB08-400S</i> <i>BTB08-600S</i> <i>BTB08-700S</i>	80	10	10	10	10	25	20	1.75	11	10	TO220
		400 600 700	<i>BTB08-400A</i> <i>BTB08-600A</i> <i>BTB08-700A</i>	80	10	10	10	25	25	20	1.75	11	10	
	75	400 600 700	<i>BTA08-400S</i> <i>BTA08-600S</i> <i>BTA08-700S</i>	80	10	10	10	10	25	20	1.75	11	10	TO220 isolated
		400 600 700	<i>BTA08-400A</i> <i>BTA08-600A</i> <i>BTA08-700A</i>	80	10	10	10	25	25	20	1.75	11	10	

RECOMMENDED
HEATSINKSsee Heatsink section
later in this shortformPACKAGE
DIMENSIONSrefer to General Data section
shown later in this shortform

LOGIC LEVEL, SNUBBERLESS TRIACS

shown overleaf > > >



LOGIC LEVEL, SNUBBERLESS

$T_J \text{ (max.)} = 110^\circ\text{C}$

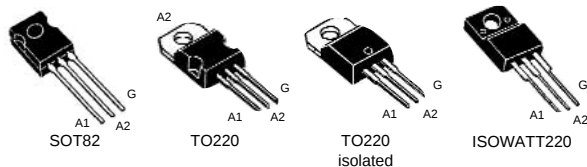
$I_{T(RMS)}$ @ T_C		V_{RRM}	Device No. & <i>Anglia</i> Order Code	I_{TSM}	I_{GT}			I_H	V_{TM}	@ I_{TM}	$(di/dt)_c$ @ T_J max.	dv/dt @ T_J max.	Package	
(A)	(°C)	(V)			(A)	I ++	II +-							III --
						max. (mA)								max. (mA)
4	110	400 600	<i>T405-400D</i> <i>T405-600D</i>	30	5	5	5	10	1.75	5.5	1.8	5	SOT82	
		400 600 700 800	<i>T410-400D</i> <i>T410-600D</i> <i>T410-700D</i> <i>T410-800D</i>	30	10	10	10	15	1.75	5.5	2.7	50		
		400 600	<i>T405-400T</i> <i>T405-600T</i>	30	5	5	5	10	1.75	5.5	1.8	5	TO220	
		400 600 700 800	<i>T410-400T</i> <i>T410-600T</i> <i>T410-700T</i> <i>T410-800T</i>	30	10	10	10	15	1.75	5.5	2.7	50		
		400 600	<i>T405-400W</i> <i>T405-600W</i>	30	5	5	5	10	1.75	5.5	1.8	5	ISOWATT220	
		400 600 700 800	<i>T410-400W</i> <i>T410-600W</i> <i>T410-700W</i> <i>T410-800W</i>	30	10	10	10	15	1.75	5.5	2.7	50		
6	90	400 600 700	<i>BTB06-400TW</i> <i>BTB06-600TW</i> <i>BTB06-700TW</i>	60	5	5	5	15	1.75	8.5	2.7	20	TO220	
		400 600 700	<i>BTB06-400SW</i> <i>BTB06-600SW</i> <i>BTB06-700SW</i>	60	10	10	10	25	1.75	8.5	3.5	50		
	80	400 600 700	<i>BTA06-400TW</i> <i>BTA06-600TW</i> <i>BTA06-700TW</i>	60	5	5	5	15	1.75	8.5	2.7	20	TO220 isolated	
		400 600 700	<i>BTA06-400SW</i> <i>BTA06-600SW</i> <i>BTA06-700SW</i>	60	10	10	10	25	1.75	8.5	3.5	50		
8	80	400 600 700	<i>BTB08-400TW</i> <i>BTB08-600TW</i> <i>BTB08-700TW</i>	80	5	5	5	15	1.75	11	3.5	20	TO220	
		400 600 700	<i>BTB08-400SW</i> <i>BTB08-600SW</i> <i>BTB08-700SW</i>	80	10	10	10	25	1.75	11	4.5	50		
	75	400 600 700	<i>BTA08-400TW</i> <i>BTA08-600TW</i> <i>BTA08-700TW</i>	80	5	5	5	15	1.75	11	3.5	20	TO220 isolated	
		400 600 700	<i>BTA08-400SW</i> <i>BTA08-600SW</i> <i>BTA08-700SW</i>	80	10	10	10	25	1.75	11	4.5	50		
12	75	400 600 700	<i>BTB12-400SW</i> <i>BTB12-600SW</i> <i>BTB12-700SW</i>	120	10	10	10	25	1.75	17	5.3	50	TO220	
	70	400 600 700	<i>BTA12-400SW</i> <i>BTA12-600SW</i> <i>BTA12-700SW</i>	120	10	10	10	25	1.75	17	5.3	50	TO220 isolated	

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

**PACKAGE
DIMENSIONS**

refer to General Data section
shown later in this shortform

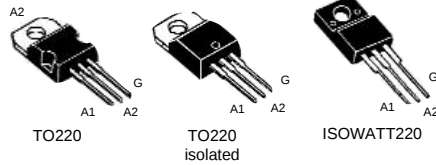


SNUBBERLESS

$T_J \text{ (max.)} = 125^\circ\text{C}$

I _{T(RMS)} @ T _C	V _{RRM}	Device No. & <i>Anglia</i> Order Code	I _{TSM}	I _{GT}			I _H	V _{TM}	@ I _{TM}	(di/dt) _c @ T _J max.	dv/dt @ T _J max.	Package
				I ++	II +-	III --						
				max. (mA)								
(A)	(°C)	(V)	(A)	max. (mA)			max. (mA)	(V)	(A)	min. (A/ms)	min. (V/μs)	
4	110	400 600 700 800 <i>T435-400D T435-600D T435-700D T435-800D</i>	30	35	35	35	35	1.75	5.5	4.4	250	SOT82
		400 600 700 800 <i>T435-400T T435-600T T435-700T T435-800T</i>	30	35	35	35	35	1.75	5.5	4.4	250	TO220
	100	400 600 700 800 <i>T435-400W T435-600W T435-700W T435-800W</i>	30	35	35	35	35	1.75	5.5	4.4	250	ISOWATT220
6	105	400 600 700 <i>BTB06-400CW BTB06-600CW BTB06-700CW</i>	60	35	35	35	35	1.75	8.5	3.5	250	TO220
		400 600 700 800 <i>BTB06-400BW BTB06-600BW BTB06-700BW BTB06-800BW</i>	60	50	50	50	50	1.75	8.5	5	500	
	100	400 600 700 <i>BTA06-400CW BTA06-600CW BTA06-700CW</i>	60	35	35	35	35	1.75	8.5	3.5	250	TO220 isolated
		400 600 700 800 <i>BTA06-400BW BTA06-600BW BTA06-700BW BTA06-800BW</i>	60	50	50	50	50	1.75	8.5	5	500	
		400 600 700 <i>T620-400W T620-600W T620-700W</i>	75	20	20	20	35	1.5	8.5	3.3	200	ISOWATT220
		400 600 700 <i>T630-400W T630-600W T630-700W</i>	75	30	30	30	50	1.5	8.5	3.3	300	
8	95	400 600 700 <i>BTB08-400CW BTB08-600CW BTB08-700CW</i>	80	35	35	35	35	1.75	11	4.5	250	TO220
		400 600 700 800 <i>BTB08-400BW BTB08-600BW BTB08-700BW BTB08-800BW</i>	80	50	50	50	50	1.75	11	7	500	
	90	400 600 700 <i>BTA08-400CW BTA08-600CW BTA08-700CW</i>	80	35	35	35	35	1.75	11	4.5	250	TO220 isolated
		400 600 700 800 <i>BTA08-400BW BTA08-600BW BTA08-700BW BTA08-800BW</i>	80	50	50	50	50	1.75	11	7	500	
	95	400 600 700 800 <i>T820-400W T820-600W T820-700W T820-800W</i>	100	20	20	20	35	1.5	11	4.5	200	ISOWATT220
		400 600 700 800 <i>T830-400W T830-600W T830-700W T830-800W</i>	100	30	30	30	50	1.5	11	4.5	300	

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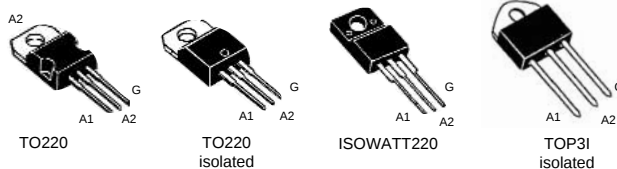
SNUBBERLESS

continued

$T_J (\text{max.}) = 125^\circ\text{C}$

I _{T(RMS)} @ T _C (A)	V _{RRM} (V)	Device No. & Anglia Order Code	I _{TSM} (A)	I _{GT}			I _H max. (mA)	V _{TM} @ I _{TM} (V) (A)	(di/dt) _c @ T _J max. min. (A/ms)	dv/dt @ T _J max. min. (V/μs)	Package		
				I ++	II +-	III --							
				max. (mA)									
10	100	400 600 700 BTB10-400CW BTB10-600CW BTB10-700CW	100	35	35	35	35	1.65	14	5.5	250	TO220	
		400 600 700 800 BTB10-400BW BTB10-600BW BTB10-700BW BTB10-800BW	100	50	50	50	50	1.65	14	9	500		
	90	400 600 700 BTB10-400CW BTB10-600CW BTB10-700CW	100	35	35	35	35	1.65	14	5.5	250	TO220 isolated	
		400 600 700 800 BTB10-400BW BTB10-600BW BTB10-700BW BTB10-800BW	100	50	50	50	50	1.65	14	9	500		
		400 600 700 T1020-400W T1020-600W T1020-700W	125	20	20	20	35	1.5	14	5.3	200	ISOWATT220	
		400 600 700 T1030-400W T1030-600W T1030-700W	125	30	30	30	50	1.5	14	5.3	300		
	12	95	400 600 700 BTB12-400CW BTB12-600CW BTB12-700CW	120	35	35	35	35	1.6	17	6.5	250	TO220
			400 600 700 800 BTB12-400BW BTB12-600BW BTB12-700BW BTB12-800BW	120	50	50	50	50	1.6	17	12	500	
85		400 600 700 BTB12-400CW BTB12-600CW BTB12-700CW	120	35	35	35	35	1.6	17	6.5	250	TO220 isolated	
		400 600 700 800 BTB12-400BW BTB12-600BW BTB12-700BW BTB12-800BW	120	50	50	50	50	1.6	17	12	500		
		400 600 700 T1220-400W T1220-600W T1220-700W	155	20	20	20	35	1.5	17	6.5	200	ISOWATT220	
		400 600 700 T1230-400W T1230-600W T1230-700W	155	30	30	30	50	1.5	17	6.5	300		
16		90	400 600 700 800 BTB16-400CW BTB16-600CW BTB16-700CW BTB16-800CW	160	35	35	35	35	1.6	22.5	8.5	250	TO220
			400 600 700 800 BTB16-400BW BTB16-600BW BTB16-700BW BTB16-800BW	160	50	50	50	50	1.6	22.5	14	500	
	80	400 600 700 800 BTA16-400CW BTA16-600CW BTA16-700CW BTA16-800CW	160	35	35	35	35	1.6	22.5	8.5	250	TO220 isolated	
		400 600 700 800 BTA16-400BW BTA16-600BW BTA16-700BW BTA16-800BW	160	50	50	50	50	1.6	22.5	14	500		

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SNUBBERLESS

continued

$T_J (\text{max.}) = 125^\circ\text{C}$

$I_{T(RMS)}$ @ T_c		V_{RRM}	Device No. & Anglia Order Code	I_{TSM}	I_{GT}			I_H	V_{TM} @	I_{TM}	$(di/dt)_c$ @ T_J max.	dv/dt @ T_J max.	Package
(A)	(°C)	(V)			I ++	II +-	III --						
					max. (mA)								
16	75	400 600 700	T1620-400W T1620-600W T1620-700W	190	20	20	20	35	1.5	22.5	9	200	ISOWATT220
		400 600 700	T1630-400W T1630-600W T1630-700W	190	30	30	30	50	1.5	22.5	9	300	
20	90	400 600 700	BTB20-400CW BTB20-600CW BTB20-700CW	200	35	35	35	50	1.7	28	11	250	TO220
		400 600 700	BTB20-400BW BTB20-600BW BTB20-700BW	200	50	50	50	75	1.7	28	18	500	
	70	400 600 700	BTA20-400CW BTA20-600CW BTA20-700CW	200	35	35	35	50	1.7	28	11	250	TO220 isolated
		400 600 700	BTA20-400BW BTA20-600BW BTA20-700BW	200	50	50	50	75	1.7	28	18	500	
25	85	400 600 700 800	BTB24-400CW BTB24-600CW BTB24-700CW BTB24-800CW	250	35	35	35	50	1.8	35	13	250	TO220
		400 600 700 800	BTB24-400BW BTB24-600BW BTB24-700BW BTB24-800BW	250	50	50	50	75	1.8	35	22	500	
		400 600 700 800	BTA24-400CW BTA24-600CW BTA24-700CW BTA24-800CW	250	35	35	35	50	1.8	35	13	250	TO220 isolated
		400 600 700 800	BTA24-400BW BTA24-600BW BTA24-700BW BTA24-800BW	250	50	50	50	75	1.8	35	22	500	
		400 600 700 800	BTA26-400CW BTA26-600CW BTA26-700CW BTA26-800CW	250	35	35	35	50	1.8	35	13	250	TOP3I isolated
		400 600 700 800	BTA26-400BW BTA26-600BW BTA26-700BW BTA26-800BW	250	50	50	50	75	1.8	35	26	500	
		600 800 1000 1200 1400	TPDV625 TPDV825 TPDV1025 TPDV1225 TPDV1425	230	150	150	150	50	1.8	35	88	500	
40	75	600 800 1000 1200 1400	TPDV640 TPDV840 TPDV1040 TPDV1240 TPDV1440	350	200	200	200	50	1.8	60	142	500	TOP3I isolated

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

PACKAGE
DIMENSIONS

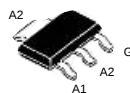
refer to General Data section
shown later in this shortform

SURFACE MOUNT TRIACS

shown overleaf >>>>



SURFACE MOUNT

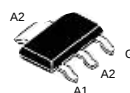


SOT223

STANDARD

T_J (max.) = 110°C

I _{T(RMS)} @ T _{TAB}	V _{RRM}	Device No. & Anglia Order Code	I _{TSM}	I _{GT}				I _H	V _{TM} @ I _{TM}		dv/dt @ T _J max. min. (V/μs)	Package
				I ++	II + -	III - -	IV - +		(V)	(A)		
				(A)	(°C)	Tape & Reel	(A)	max. (mA)				
1	90	400 600 700 800 Z0110DN Z0110MN Z0110SN Z0110NN	8	25	25	25	25	25	1.8	1.4	100	SOT223



SOT223

LOGIC LEVEL

T_J (max.) = 110°C

I _{T(RMS)} @ T _{TAB}	V _{RRM}	Device No. & Anglia Order Code	I _{TSM}	I _{GT}				I _H	V _{TM}	@ I _{TM}	dv/dt @ T _J max.	Package	
				I ++	II +-	III --	IV - +						
				(A)	(°C)	Tape & Reel	(A)	max. (mA)					max. (mA)
1	90	400	Z0103DN Z0103MN Z0103SN Z0103NN	8	3	3	3	5	7	1.8	1.4	10	SOT223
		600											
		700											
		800											
		400	Z0107DN Z0107MN Z0107SN Z0107NN	8	5	5	5	7	10	1.8	1.4	20	
		600											
		700											
		800											
		400	Z0109DN Z0109MN Z0109SN Z0109NN	8	10	10	10	10	1.8	1.4	50		
600													
700													
800													

SUPPLIED IN FULL REELS ONLY

SURFACE MOUNT

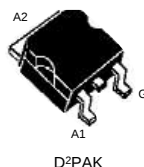
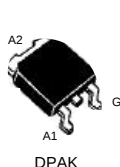
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LOGIC LEVEL, SNUBBERLESS

$T_J (\text{max.}) = 125^\circ\text{C}$

$I_{T(RMS)}$ @ T_C	V_{RRM}	Device No. & Anglia Order Code		I_{TSM}	I_{GT}			I_H	V_{TM} @ I_{TM}		$(di/dt)_c$ @ T_J max.	dv/dt @ T_J max.	Package	
					I ++	II +-	III --		V	A				
					max. (mA)									max. (mA)
(A)	(°C)	(V)	Stick	Tape & Reel	(A)						(A/ms)	min. (V/μs)		
4	95	400	T405-400B	T405-400B-TR	30	5	5	5	10	1.75	5.5	1.8	5	DPAK
		600	T405-600B	T405-600B-TR										
		700	T405-700B	T405-700B-TR										
	110	400	T410-400B	T410-400B-TR	30	10	10	10	15	1.75	5.5	2.7	30	
		600	T410-600B	T410-600B-TR										
		700	T410-700B	T410-700B-TR										
		800	T410-800B	T410-800B-TR										



SNUBBERLESS

$T_J (\text{max.}) = 110^\circ\text{C}$ except T435 series: 125°C

$I_{T(RMS)}$ @ T_C		V_{RRM}	Device No. & Anglia Order Code		I_{TSM}	I_{GT}			I_H	V_{TM} @ I_{TM}		$(di/dt)_c$ @ T_J max.	dv/dt @ T_J max.	Package					
(A)	(°C)	(V)				Stick	Tape & Reel	(A)		I ++	II + -	III - -	max. (mA)		max. (mA)	(V)	(A)	min. (A/ms)	min. (V/μs)
										max. (mA)									
4	110	400 600 700 800	T435-400B T435-600B T435-700B T435-800B	T435-400B-TR T435-600B-TR T435-700B-TR T435-800B-TR	30	35	35	35	35	1.75	5.5	4.4	250	DPAK					
8	110	600	T810-600B	T810-600B-TR	85	10	10	10	15	1.5	11	2.7	50						
			T835-600B	T835-600B-TR	85	35	35	35	35	1.5	11	4.5	500						
		400 600	T835-400G T835-600G	T835-400G-TR T835-600G-TR	80	35	35	35	35	1.5	11	4.5	500	D ² PAK					
12	105	400 600	T1235-400G T1235-600G	T1235-400G-TR T1235-600G-TR	120	35	35	35	35	1.5	17	6.5	500						
16	105	400 600	T1635-400G T1635-600G	T1635-400G-TR T1635-600G-TR	160	35	35	35	35	1.5	22.5	8.5	500						
20	90	400 600	T2035-400G T2035-600G	T2035-400G-TR T2035-600G-TR	200	35	35	35	50	1.5	28	11	500						
25	85	400 600	T2535-400G T2535-600G	T2535-400G-TR T2535-600G-TR	250	35	35	35	50	1.5	35	13	500						

SUPPLIED IN FULL STICKS/REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

ASD™

Application Specific Discretes™

These are devices that have been specifically designed and manufactured for a particular function or application. Benefits include a smaller component count resulting in less board space, reduced insertion cost and enhanced reliability.

FLUORESCENT LIGHTING CONTROL

STARLIGHT KIT

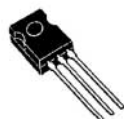


SO14



PENTAWATT HV (TL5)

Lamp Power Range (W)	Device No. & Anglia Order Code		Description	Operating Temp. Range (°C)	Package
	Driver	ASD			
36 to 58	EFS1ACD –	– EFS11-TL5	Fully optimised fluorescent lamp ignition system to directly replace glow starter switch. The driver controls the ASD and lamp power up process. The ASD is a bi-directional switch controlling preheat stage and lamp ignition	5 to 75	SO14 PENTAWATT HV
18 to 70	EFS2ACD –	– EFS21-TL5		–20 to 75	SO14 PENTAWATT HV
18 to 125	EFS3ACD –	– EFS31-TL5		–40 to 85	SO14 PENTAWATT HV



SOT82



SOT194



TO220

STARTLIGHT

I _{T(RMS)} @ T _C = 95°C (A)	V _{RRM} (V)	Device No. & Anglia Order Code		Description	I _{TSM} (A)	V _{BR} T _J = 25°C (V)		I _{GT} 67% V _{RRM} max. (mA)	dv/dt T _J = 25°C min. (V/μs)	Oper. Temp. Range (°C)	Package
		Leaded	SMD			min.	max.				
2	400	TN22-1500D – TN22-1500T	– TN22-1500K –	Fluorescent tube starter switch	20	1200	1500	1.5	500	–40 to 110	SOT82 SOT194 TO220
2	400	TN22-1600D – TN22-1600T	– TN22-1600K –		20	1000	1600	1.5	500	–40 to 110	SOT82 SOT194 TO220



SOT23



TO92

FLUORESCENT STARTER

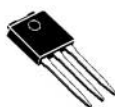
I _{T(RMS)} @ T _A		V _{RRM}	Device No. & Anglia Order Code	Description	I _{TSM}	I _{RRM} @ T _J max.	T _J = 25°C					dv/dt 67% V _{RRM} T _J max. min. (V/μs)	di/dt max. (A/μs)	Package
(A)	(°C)						I _{GT}		I _H max. (mA)	V _{TM} @ I _{TM}				
							min. (μA)	max. (μA)		(V)	(A)			
0.2	25	100	P0130AL	High sensitivity fluorescent tube starter switch	7	0.1	0.1	1	5	1.3	0.4	25	30	SOT23
0.8	55 (T _L)	100	P0130AA		7	0.1	0.1	1	5	1.25	0.5	25	30	TO92

SMD PARTS – SUPPLIED IN FULL STICKS/ REELS ONLY

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

ASD™ continued



IPAK



DPAK

LIGHT IGNITION CONTROL

I_T (RMS) @ $T_A = 90^\circ\text{C}$ (A)	V_{DRM} (V)	Device No. & Anglia Order Code	Description	I_{TRM} (A)	V_{BO} (V) min. max.	I_{BO} @ V_{BO} max. (μA)	Operating Temp. Range ($^\circ\text{C}$)	Package
1	180	LIC01-195I LIC01-195B	Specially designed for high voltage pulse generation circuits such as light ignitors for high pressure sodium lamps, lamp flashing circuits and metal halide lamps	50	195 230	500	- 20 to 125	IPAK DPAK
1	180	LIC01-215I LIC01-215B		50	215 255	500	- 20 to 125	IPAK DPAK



SOT82



TO92

FIRE LIGHTER CONTROL

I _{TRM} @ t _p		V _{RRM}	Device No. & Anglia Order Code	Description	Comments	Operating Temp. Range (°C)	Package
(A)	(μs)	(V)					
150	10	200	FLC01-200D	Dedicated thyristor circuits for capacitance discharge ignition applications	pin 3 - N/C	0 to 120	SOT82
			FLC02-200D		pin 3 - gate connect	0 to 90	
240	10	200	FLC10-200D		high power version	0 to 120	
75	10	65	FLC21-65A	Dedicated thyristor circuits for capacitance discharge ignition applications (A.C. or D.C. operation)	pin 2 - N/C	– 30 to 120	TO92
		135	FLC21-135A				
		65	FLC22-65A		pin 2 - gate connect	– 30 to 120	
		135	FLC22-135A				



DIP8

ENGINE IGNITION CONTROL

THYRISTOR			DIODES			Device No. & Anglia Order Code	Description	Operating Temp. Range ($^\circ\text{C}$)	Package
I_{TRM} @ t_p (A) (μs)	V_{DRM} (V)		I_{FRM} @ t_p (A) (μs)	V_{RRM} (V)					
100	20	400	1/100	20	25/400	ICC03-400B2	Combined thyristor/ diode circuit for capacitance discharge ignition systems on small engines	- 40 to 150	DIP8



DIP20

A.C. LINE SWITCH ARRAY

Array Function	I_T (RMS)	V_{RRM}	Device No. & <i>Anglia</i> Order Code	Description	I_{TSM}	I_{GT}		$\frac{dv}{dt}$ 67% V_{RRM} T_J max. min. (V/ μ s)	Operating Temp. Range (°C)	Package
	(A)	(V)			(A)	II	III			
						max. (mA)				
4 Bidirectional A.C. Switches	0.2	500	<i>ACS402-5SB4</i>	Switching circuits for inductive loads such as solenoids, valves, relays and micromotors.	5	10	10	500	0 to 110	DIP20

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

SMD PARTS – SUPPLIED IN FULL STICKS ONLY

A comprehensive range of high quality transistors designed to fulfil the vast majority of industrial requirements. The portfolio features industry standard Power MOSFETS which include a series of logic level devices, Power BIPOLAR which are available as standard, darlington or as specialised products and a wide selection of SIGNAL transistors. The flagships of the range are the space and assembly cost saving VIPer™ vertical intelligent Power MOSFETS, the high integrity OMNIFET autoprotected Power MOSFETS and the single/multi-channel high side drivers, all under the VIPower group heading.

VIPer™ **VIPower™**

Vertical Intelligent Power MOSFETS
Development Kits
pages 63 - 64

OMNIFET™
Autoprotected Power MOSFETS
pages 65 - 66

HIGH SIDE DRIVERS
Single & Multi-Channel
pages 67 - 68
Leaded & SMD

POWER MOSFETS
Standard & Logic Level
Leaded & SMD
pages 69 - 73

POWER BIPOLAR

Insulated Gate Bipolar Transistors (IGBT)
General Purpose: Standard & Darlington
Switching Transistors & Darlington
Fast Switching/SMPS, Electronic Ignition
Electronic Lighting, Horizontal Deflection
Leaded & SMD
pages 74 - 81

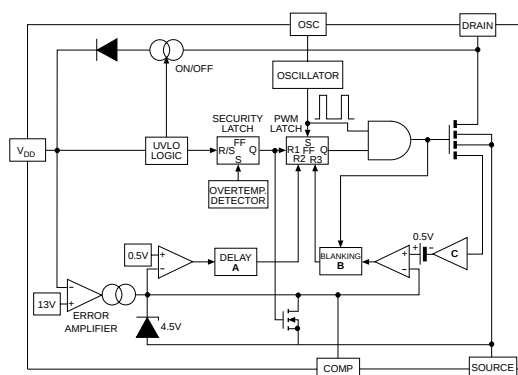
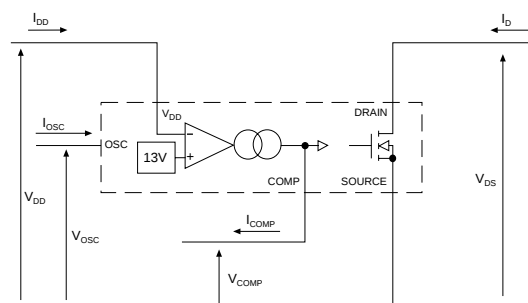
SMALL SIGNAL

General Purpose
Low Level/Low Noise
Fast & Ultra-Fast Switching
Low & Medium Current, Medium Power
High Voltage, Video Amp, RGB Output
Leaded & SMD
pages 82 - 85

Vertical Intelligent, POWER MOSFETS
VIPer™
VIPer™ 100/50/20: SMPS I.C.'s

The VIPer™ series of dedicated SMPS primary I.C.'s combines a state-of-the-art PWM circuit, together with a Vertical Power MOSFET. Suitable for primary or secondary regulation, the VIPer™ uses approximately 50% fewer components than an equivalent discrete circuit.

- Adjustable switching frequency to 200kHz
- Soft start and shut down control
- Undervoltage lock-out
- Overtemperature protection
- Current mode control
- Automatic burst mode operation
- Integrated start-up supply
- Low stand-by current
- Adjustable current limitation

Block Diagram (100/50/20 Series)

Current and Voltage Conventions (100/50/20 Series)


SERIES INDEX	VIPER 100	VIPER 50	VIPER 20
A	14µs	14µs	1.7µs
B	300ns	300ns	250ns
C	1V/A	2V/A	6V/A

VIPer™ 31: Battery Charger I.C.

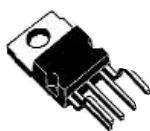
The VIPer™31 battery charger primary I.C. is designed for use in circuits with constant current and voltage output characteristics. Offering an output capability up to 30W, the device utilises primary regulation eliminating the need for an optocoupler between primary and secondary sections. Additional features include burst mode operation allowing the device to operate in a no load condition with input power as low as 1W.

- Selectable switching frequency up to 150kHz
- Automatic burst mode operation in stand-by condition
- Avalanche rugged
- Overtemperature protection
- Soft start and shut down control
- Undervoltage lock-out with hysteresis
- Overvoltage protection
- Low stand-by current
- Demagnetisation control

VIPer continued overleaf >>>>

Vertical Intelligent, POWER MOSFETS continued

VIPer™



PENTAWATT HV (vert.)



SMD Power SO10



DIP8

VIPer Series

V_{DS} (V)	$R_{DS(on)}$ (Ω)	I_{out} (A)	V_{DD} (V)	Device No. & Anglia Order Code	Package
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100W Power Capability

620	2.5	3	10 – 15	VIPER100	PENTAWATT HV
				VIPER100SP	Power SO10
700	3.3	3	10 – 15	VIPER100A	PENTAWATT HV
				VIPER100ASP	Power SO10

50W Power Capability

620	5	1.5	10 – 15	VIPER50	PENTAWATT HV
				VIPER50SP	Power SO10
700	6.6	1.5	10 – 15	VIPER50A	PENTAWATT HV
				VIPER50ASP	Power SO10

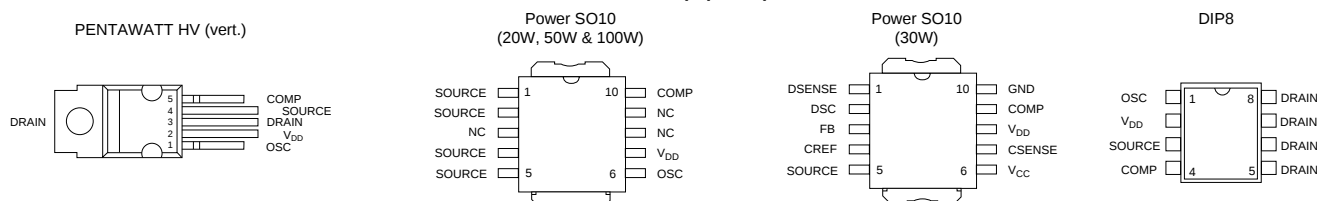
30W Power Capability

600	6.5	1	10 – 35	VIPER31SP	Power SO10
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20W Power Capability

400	8.7	1.3	10 – 15	VIPER20B	PENTAWATT HV
				VIPER20BSP	Power SO10
620	16	0.5	10 – 15	VIPER20	PENTAWATT HV
				VIPER20DIP	DIP8
				VIPER20SP	Power SO10
700	18	0.5	10 – 15	VIPER20A	PENTAWATT HV
				VIPER20ADIP	DIP8
				VIPER20ASP	Power SO10

Connection Diagrams (top view)



SMD PARTS – SUPPLIED IN FULL STICKS ONLY

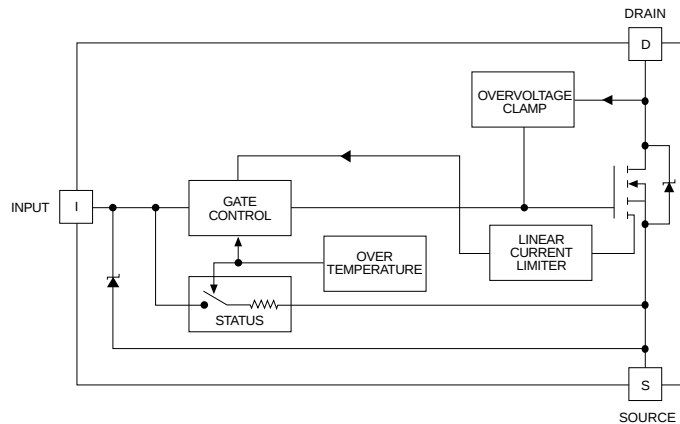
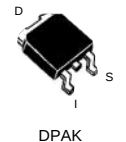
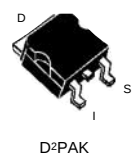
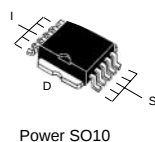
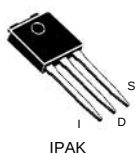
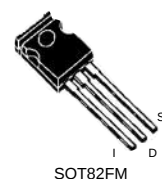
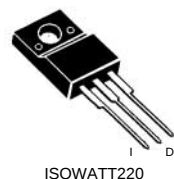
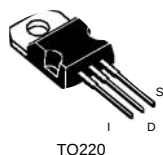
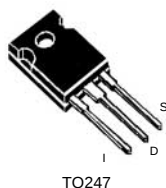
VIPer Development Kits

	Device No. & Anglia Order Code
VIPer100 Standard Kit comprising: 1 x Standard demo board 1 x CD design software	VIPERKITBD
Set Top Box Kit comprising: 1 x Set top box demo board 1 x CD design software	VIPERKITSTB
CD Design Software	VIPERKITCD

OMNIFET autoprotected, POWER MOSFETS
OMNIFET™

The 'OMNIFET' range of fully autoprotected Power MOSFETS are monolithic devices manufactured using STMicroelectronics Vertical Intelligent Power MOS Technology. Designed to replace standard Power MOSFETS in D.C. to 50kHz applications, the components feature built-in thermal shutdown, linear current limitation and overvoltage clamp protection for protecting the chip in harsh environments. Fault feedback can be detected by monitoring the voltage at the input pin.

- Linear current limitation
- Short-circuit protection
- Diagnostic feedback
- Compatible with standard Power MOSFET
- Thermal shut down
- Integrated clamp
- ESD protection
- Standard packages

Block Diagram

Packages


RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

**PACKAGE
DIMENSIONS**

refer to General Data section
shown later in this shortform

OMNIFET continued overleaf >>>>

OMNIFET autoprotected, POWER MOSFETS

OMNIFET™

V _{clamp} (V)	R _{DS(on)} (Ω)	I _{lim} (A)	P _{tot} (W)	Device No. & Anglia Order Code	Package
42	0.012	100	208	VNW100N04	TO247
	0.012	50	208	VNW50N04	
	0.02	49	125	VNP49N04	TO220
	0.035	28	83	VNP28N04	
	0.07	14	50	VNP14N04	
	0.14	7	31	VNP7N04	
	0.02	49	40	VNP49N04FI	ISOWATT220
	0.035	28	34	VNP28N04FI	
	0.07	14	31	VNP14N04FI	
	0.14	7	24	VNP7N04FI	
	0.07	14	9.5	VNK14N04FM	SOT82FM
	0.14	7	9	VNK7N04FM	
60	0.3	10	42	VNP10N06	TO220
	0.3	10	35	VND10N06-1	IPAK
	0.3	10	27	VNP10N06FI	ISOWATT220
	0.3	10	9	VNK10N06FM	SOT82FM
70	0.028	35	125	VNP35N07	TO220
	0.05	20	83	VNP20N07	
	0.1	10	50	VNP10N07	
	0.2	5	31	VNP5N07	
	0.028	35	40	VNP35N07FI	ISOWATT220
	0.05	20	34	VNP20N07FI	
	0.1	10	31	VNP10N07FI	
	0.2	5	24	VNP5N07FI	
	0.1	10	9.5	VNK10N07FM	SOT82FM
	0.2	5	9	VNK5N07FM	
	0.2	5	60	VND5N07-1	IPAK



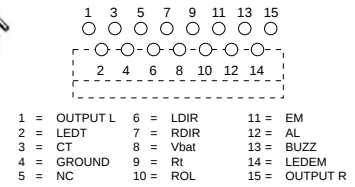
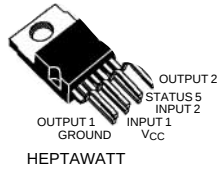
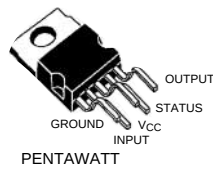
SURFACE MOUNT

V _{clamp} (V)	R _{DS(on)} (Ω)	I _{lim} (A)	P _{tot} (W)	Device No. & Anglia Order Code Stick	Package
42	0.02	49	125	VNV49N04	Power SO10
	0.035	28	83	VNV28N04	
	0.07	14	50	VNV14N04	
	0.02	49	125	VNB49N04	D ² PAK
	0.035	28	83	VNB28N04	
	0.07	14	50	VNB14N04	
	0.14	7	60	VND7N04	DPAK
60	0.3	10	35	VND10N06	
70	0.028	35	125	VNV35N07	Power SO10
	0.05	20	83	VNV20N07	
	0.1	10	50	VNV10N07	
	0.028	35	125	VNB35N07	D ² PAK
	0.05	20	83	VNB20N07	
	0.1	10	50	VNB10N07	
	0.2	5	60	VND5N07	DPAK

SUPPLIED IN FULL STICKS ONLY

HIGH SIDE DRIVERS

A range of monolithic devices manufactured using STMicroelectronics Vertical Intelligent Power MOS Technology. Designed for driving resistive or inductive loads with one side grounded.


Single Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _{out} (A)	V _{CC} (V)	P _{tot} (W)	Device No. & Anglia Order Code	Package
40	0.06	20	6 – 26	82	VN16B	PENTAWATT
45	0.05	2.8	10 – 36	internally limited	VN540	
60	0.03	45	7 – 26	108	VN30N	
	0.05	28	12 – 30	60	VN220	
	0.05	23	5.5 – 26	48	VN21	
	0.18	13	7 – 26	56	VN05N	
	0.18	12	5 – 36	52	VN05H	
	0.4	6	7 – 26	29	VN02N	
	0.4	6	5 – 36	28	VN02H	

Single Channel ISO

V _{DSS} (V)	R _{DS(on)} (Ω)	I _{out} (A)	V _{CC} (V)	P _{tot} (W)	Device No. & Anglia Order Code	Package
60	0.03	31	5.5 – 26	54	VN31	PENTAWATT
	0.18	9	5.5 – 26	27	VN06	
	0.5	4	5.5 – 26	14	VN03	

Dual Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _{out} (A)	V _{CC} (V)	P _{tot} (W)	Device No. & Anglia Order Code	Package
40	2 x 0.1	14	6 – 26	75	VND10B	HEPTAWATT
	2 x 0.2	9	6 – 26	59	VND05B	
60	2 x 0.07	15	6 – 18	internally limited	VN410	MULTIWATT-15

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

**PACKAGE
DIMENSIONS**

refer to General Data section
shown later in this shortform

HIGH SIDE DRIVERS

continued overleaf > > >

HIGH SIDE DRIVERS

continued



SURFACE MOUNT



SO8



Power SO10



Power SO20



SO28

Single Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _{out} (A)	V _{CC} (V)	P _{tot} (W)	Device No. & Anglia Order Code Stick	Package
40	0.05	5	5 – 36	internally limited	VN690	SO8
	0.06	20	6 – 26	82	VN16BSP	
45	0.01	45	5 – 36	90	VN610SP	Power SO10
	0.02	25	5.5 – 36	112	VN460SP	
	0.05	2.8	10 – 36	internally limited	VN540SP	
60	0.03	45	7 – 26	108	VN30NSP	
	0.05	33	7 – 26	100	VN20NSP	
	0.05	23	5.5 – 26	48	VN21SP	
	0.18	13	7 – 26	56	VN05NSP	
	0.18	12	5 – 36	52	VN05HSP	
	0.4	6	7 – 26	29	VN02NSP	
	0.4	6	5 – 36	28	VN02HSP	
	0.4	6	7 – 36	28	VN02ANSP	
	0.4	6	7 – 36	28	VN02ANSP	

Single Channel ISO

V _{DSS} (V)	R _{DS(on)} (Ω)	I _{out} (A)	V _{CC} (V)	P _{tot} (W)	Device No. & Anglia Order Code Stick	Package
60	0.03	31	5.5 – 26	54	VN31SP	Power SO10
	0.18	9	5.5 – 26	27	VN06SP	
	0.5	4	5.5 – 26	14	VN03SP	

Dual Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _{out} (A)	V _{CC} (V)	P _{tot} (W)	Device No. & Anglia Order Code Stick	Package
40	2 x 0.03	15	5.5 – 26	internally limited	VN640SP	Power SO10
	2 x 0.1	14	6 – 26	75	VND10BSP	
	2 x 0.2	9	6 – 26	59	VND05BSP	
45	2 x 0.03	15	5 – 36	90	VN600SP	

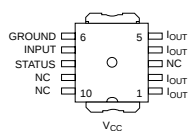
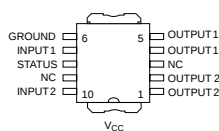
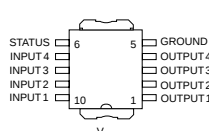
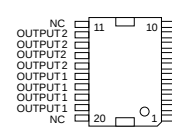
Triple Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _{out} (A)	V _{CC} (V)	P _{tot} (W)	Device No. & Anglia Order Code Stick	Package
45	2 x 0.04, 1 x 0.3	5	5.5 – 36	internally limited	VN450	Power SO20

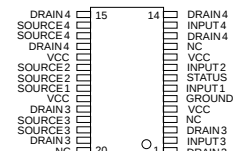
Quad Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _{out} (A)	V _{CC} (V)	P _{tot} (W)	Device No. & Anglia Order Code Stick	Package
40	4 x 0.06	10	5 – 36	89	VN660SP	Power SO10
	0.135	14	6 – 26	internally limited	VN771P	SO28
	0.14	14	6 – 26	internally limited	VN771	
	0.24	9	6 – 26	100	VN770	
	0.27	9	6 – 26	internally limited	VN770P	
60	4 x 0.2	1	10 – 36	internally limited	VN330SP	Power SO10
	4 x 0.2	1	10 – 36	internally limited	VN340SP	

Connection Diagrams (top view)

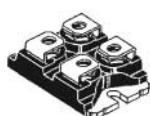
Power SO10
(Single)Power SO10
(Dual)Power SO10
(Quad)

Power SO20

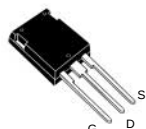


SO28

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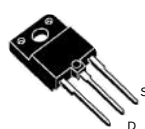
ISOTOP



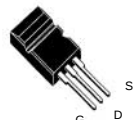
MAX247



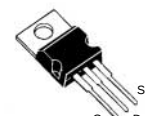
TO247



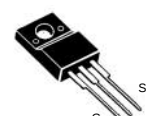
ISOWATT218



MAX220



TO220



ISOWATT220
TO220FP

STANDARD

N Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _D (A)	P _{tot} (W)	Device No. & Anglia Order Code	Package
50	0.04	36	120	BUZ11	TO220
	0.055	27	90	BUZ11A	
	0.07	20	80	BUZ10	
	0.1	18	80	BUZ71	
	0.12	16	70	BUZ71A	
60	0.004	250	450	STE250N06	ISOTOP
	0.01	80	180	STW80NE06-10	TO247
	0.01	80	150	STP80NE06-10	TO220
	0.014	60	150	STP60N06-14	
	0.016	60	150	STP60NE06-16	
	0.022	55	130	STP55NE06	
	0.028	45	110	STP45NE06	
	0.04	36	100	STP36NE06	
	0.05	30	105	STP30N06	
	0.050	30	90	STP30NE06	
	0.085	20	80	STP20N06	
	0.085	20	65	STP20NE06	
	0.12	16	60	STP16NE06	
	0.15	14	56	MTP3055E	
	0.022	30	45	STP55NE06FI	ISOWATT220
	0.015	35	40	STP60NE06-16FP	TO220FP
	0.022	30	35	STP55NE06FP	
	0.028	25	35	STP45NE06FP	
	0.04	20	35	STP36NE06FP	
	0.085	13	30	STP20NE06FP	
	0.12	11	30	STP16NE06FP	
80	0.028	50	150	STP50NE08	TO220
	0.007	180	450	STE180N10	ISOTOP
100	0.025	60	200	STW60N10	TO247
	0.035	59	200	STW50N10	
	0.028	50	140	STP50NE10	TO220
	0.035	45	150	STP45N10	
	0.06	33	150	STP33N10	
	0.077	30	150	IRF540	
	0.12	20	105	STP20N10	
	0.1	20	85	STP20NE10	
	0.16	16	90	IRF530	
	0.25	11	70	BUZ72A	
	0.27	10	70	IRF520	
	0.035	24	45	STP45N10FI	ISOWATT220
	0.077	16	45	IRF540FI	
	0.16	10	40	IRF530FI	
	0.27	7	35	IRF520FI	
200	0.019	110	450	STE110NA20	ISOTOP
	0.032	60	300	STY60NA20	MAX247
	0.065	38	180	STW38NB20	TO247
	0.08	34	180	STW34NB20	
	0.06	36	160	STU36NB20	MAX220
	0.18	19	125	STP19NB20	TO220
	0.18	18	125	IRF640	
	0.4	10	100	IRF630	
	0.4	10	85	STP10NB20	
	0.8	6	70	IRF620	
250	0.8	4	30	IRF620FI	ISOWATT220
	0.18	10	35	STP19NB20FP	TO220FP
	0.4	6	30	STP10NB20FP	
	0.25	16	100	STP16NB25	TO220
	1	6	75	STP6NB25	

continued on next page

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

PACKAGE
DIMENSIONS

refer to General Data section
shown later in this shortform

MAX220 / MAX247 & ISOWATT220 / TO220FP
see General Data section for performance details

STANDARD continued

N Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _D (A)	P _{tot} (W)	Device No. & Anglia Order Code	Package
300	0.4	12	125	STP12NB30	TO220
	0.9	7	85	STP7NB30	
	0.4	6.5	35	STP12NB30FP	TO220FP
	0.9	4	30	STP7NB30FP	
400	0.26	18.4	190	STW18NB40	TO247
	0.3	10	70	STH16NA50FI	ISOWATT218
	0.55	10.7	125	STP11NB40	TO220
	0.55	10	125	IRF740	
	0.9	7	100	STP7NB40	
	1	5.5	100	IRF730	
	1.8	4.7	80	STP5NB40	
	0.55	6	40	STP11NB40FP	TO220FP
	0.9	4	35	STP7NB40FP	
	1.8	3.1	35	STP5NB40FP	
500	0.085	53	460	STE53NA50	ISOTOP
	0.13	38	400	STE38NB50	
	0.135	38	400	STE38NA50	
	0.13	34	300	STY34NB50	MAX247
	0.27	20	250	STW20NB50	TO247
	0.27	20	250	IRFP460	
	0.36	14.6	190	STW15NB50	
	0.4	14.6	190	STW15NA50	
	0.4	14	190	IRFP450	
	0.6	11.6	170	STW12NA50	
	0.36	9.3	80	STH15NB50FI	ISOWATT218
	0.33	15.6	160	STU16NB50	MAX220
	0.6	10.2	145	STU10NA50	
	0.85	8.6	125	STP9NB50	TO220
	0.85	8	125	IRF840	
	1.5	5.8	100	STP6NB50	
	1.5	4.5	100	IRF830	
	2.8	3.8	80	STP4NB50	
	3	2.5	80	IRF820	
	4	2.8	75	STP2NA50	
	0.85	4.5	45	STP8NA50FI	ISOWATT220
	4	2	35	STP2NA50FI	
	0.85	4.9	40	STP9NB50FP	TO220FP
	1.5	3.4	35	STP6NB50FP	
	2.8	2.5	35	STP4NB50FP	
600	0.135	40	460	STE40NA60	ISOTOP
	0.24	25	300	STY25NA60	MAX247
	0.4	16	250	STW16NA60	TO247
	0.54	13	180	STW13NB60	
	0.8	10	160	STW10NB60	
	0.8	9.5	160	STW9NA60	
	1	8	150	STW8NA60	
	1	5	60	STH8NA60FI	ISOWATT218
	0.45	12.6	160	STU13NB60	MAX220
	0.8	9	145	STU9NA60	
	0.75	9	125	STP9NB60	TO220
	1.2	7.2	125	STP7NB60	
	1.2	6.2	125	IRFBC40	
	2	5	100	STP5NB60	
	2.2	3.6	100	IRFBC30	
	3.6	3.3	80	STP3NB60	
	0.75	5.2	40	STP9NB60FP	TO220FP
	1.2	4.1	40	STP7NB60FP	
	2	3	35	STP5NB60FP	
	3.6	2.2	35	STP3NB60FP	

continued on next page

MAX220 / MAX247 & ISOWATT220 / TO220FP
see General Data section for performance details

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform

**PACKAGE
DIMENSIONS**

refer to General Data section
shown later in this shortform

STANDARD

continued

N Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _D (A)	P _{tot} (W)	Device No. & Anglia Order Code	Package
800	1	9.1	190	STW9NA80	TO247
	1.5	7.2	175	STW8NA80	
	1.9	6.5	160	STW7NB80	
	2.2	5.4	150	STW6NA80	
	1	5.9	80	STH9NA80FI	ISOWATT218
	1.5	4.5	70	STH8NA80FI	
	1.9	4	60	STH7NA80FI	
	2.2	3.4	60	STH6NA80FI	
	1	8.3	160	STU8NA80	MAX220
	1.5	6.5	145	STU7NA80	
	1.9	5.7	125	STP6NB80	TO220
	2.2	4.7	125	STP5NA80	
	3	4	110	STP4NA80	
	4.1	3.5	100	STP4NB80	
	4.5	3.1	100	STP3NA80	ISOWATT220
	2.2	2.8	45	STP5NA80FI	
	4.5	2	40	STP3NA80FI	TO220FP
	1.9	5.7	40	STP6NB80FP	
	3.3	4	35	STP4NB80FP	
	6.5	2.6	35	STP3NB80FP	
900	0.3	26	450	STE26NA90	ISOTOP
	0.54	16	300	STY16NA90	MAX247
	1.3	7	190	STW7NA90	TO247
	2	6	160	STW6NA90	
	2.5	5.6	160	STW5NB90	
	1.3	4.7	70	STH7NA90FI	ISOWATT218
	2.5	3.5	60	STH5NA90FI	
	1.3	7.3	160	STU7NA90	MAX220
	2	5.8	145	STU6NA90	
	2.5	5	125	STP5NB90	TO220
	4	3.6	100	STP4NA90	
	5.3	3	100	STP3NA90	
1000	4	2.4	45	STP4NA90FI	ISOWATT220
	5.3	1.9	40	STP3NA90FI	
	2.5	5	40	STP5NB90FP	TO220FP
	0.375	24	450	STE24NA100	ISOTOP
	0.77	15	300	STE15NA100	MAX247
	0.75	15	300	STY15NA100	
	—	advance information	—	STW7NB100	TO247
	3.5	4.6	150	STW5NA100	
	6	6	180	STU6NA100	MAX220
	4.4	3.8	125	STP4NB100	TO220
	5	3.5	110	STP3NA100	
	4.4	2.1	40	STP4NB100FP	TO220FP

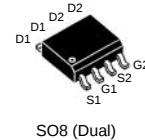
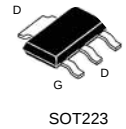
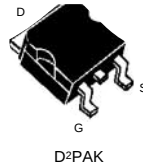
LOGIC LEVEL

N Channel

V _{DSS} (V)	R _{DS(on)} (Ω)	I _D (A)	P _{tot} (W)	Device No. & Anglia Order Code	Package
30	0.006	80	150	STP80NE03L-06	TO220
	0.01	60	120	STP60NE03L-10	
	0.02	40	80	STP40NE03L-20	
	0.045	30	90	STP30NE03L	
	0.06	22	60	STP22NE03L	
60	0.016	60	150	STP60NE06L-16	TO220
	0.022	55	130	STP55NE06L	
	0.028	50	150	STP50NE06L	
	0.028	45	110	STP45NE06L	
	0.055	32	105	STP32NE06L	
	0.055	30	90	STP30NE06L	
	0.085	21	80	STP21NE06L	
	0.085	20	65	STP20NE06L	
	0.12	16	60	STP16NE06L	
	0.15	15	70	STP15NE06L	
	0.022	28	35	STP55NE06LFP	TO220FP
	0.028	25	35	STP45NE06LFP	
	0.055	17	30	STP30NE06LFP	
	0.085	10	30	STP20NE06LFP	
	0.12	11	30	STP16NE06LFP	
100	0.025	50	140	STP50NE10L	TO220
	0.12	20	105	STP20N10L	
	0.16	16	90	STP16N10L	



SURFACE MOUNT



STANDARD

N Channel

V_{DS} (V)	$R_{DS(on)}$ (Ω)	I_D (A)	P_{tot} (W)	Device No. & Anglia Order Code Stick	Tape & Reel	Package
30	0.06	4	2.5	—	STN4NE03	SOT223
60	0.01	80	150	STB80NE06-10	STB80NE06-10T4	D2PAK
	0.016	60	150	STB60NE06-16	STB60NE06-16T4	
	0.022	55	130	STB55NE06	STB55NE06T4	
	0.030	30	50	STD30NE06	STD30NE06T4	DPAK
	0.04	20	50	STD20NE06	STD20NE06T4	
	—	advance information	—	STD19NE06	STD19NE06T4	
	0.085	17	55	STD17N06	STD17N06T4	
	0.085	16	45	STD16NE06	STD16NE06T4	
	0.12	12	35	STD12NE06	STD12NE06T4	
	0.12	3	2.5	—	STN3NE06	SOT223
	2 x 0.23	2	2	STS2DNE60	—	SO8
80	0.024	50	150	STB50NE08	STB50NE08T4	D2PAK
100	0.027	50	150	STB50NE10	STB50NE10T4	
	0.035	45	150	STB45N10	STB45N10T4	
100	0.1	16	55	STD16NE10	—	DPAK
	0.27	9	45	STD9N10	STD9N10T4	
	0.27	2	2.5	—	STN2N10	SOT223
200	0.18	19	125	STB19NB20	STB19NB20T4	D2PAK
	0.4	7	55	STD7NB20	STD7NB20T4	DPAK
	0.8	5	45	STD5N20	STD5N20T4	
	1.5	4	40	STD4N20	STD4N20T4	
	1.5	1	3	—	STN1N20	SOT223
	0.25	16	100	STB16NB25	STB16NB25T4	D2PAK
250	1	4	45	STD4NB25	STD4NB25T4	DPAK
	0.9	5	55	STD5NB30	STD5NB30T4	
	1.6	1.6	45	STD3NB30	STD3NB30T4	
400	0.55	10.7	125	STB11NB40	STB11NB40T4	D2PAK
	0.99	7	100	STB7NB40	STB7NB40T4	
	—	advance information	—	STB5NB40	STB5NB40T4	
	1.8	3.7	50	STD4NB40	STD4NB40T4	DPAK
500	3.6	2.2	40	STD2NA40	STD2NA40T4	
	0.85	8.6	125	STB9NB50	STB9NB50T4	D2PAK
	1.5	5.8	100	STB6NB50	STB6NB50T4	
	2.8	3	50	STD3NB50	STD3NB50T4	DPAK
	3	2.7	50	STD3NA50	STD3NA50T4	
	4	2.2	45	STD2NA50	STD2NA50T4	
600	1.2	7.2	125	STB7NB60	STB7NB60T4	D2PAK
	2	5	100	STB5NB60	STB5NB60T4	
	3.6	3.3	80	STB3NB60	STB3NB60T4	
	3.6	3	80	STD3NB60	STD3NB60T4	DPAK
	3.6	2.6	50	STD2NB60	STD2NB60T4	
	4	2.3	50	STD2NA60	STD2NA60T4	
800	1.9	5.7	125	STB6NA80	STB6NA80T4	D2PAK
	3.3	4	100	STB4NB80	STB4NB80T4	
	4.5	3.1	100	STB3NA80	STB3NA80T4	
	20	0.2	2.9	—	STN1NB80	SOT223

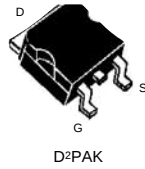
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PACKAGE
DIMENSIONSrefer to General Data section
shown later in this shortform

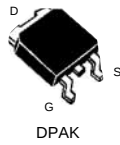


SURFACE MOUNT

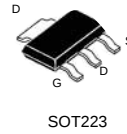
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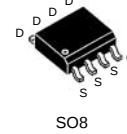
D²PAK



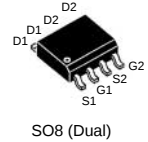
DPAK



SOT223



SO8



SO8 (Dual)

N Channel

LOGIC LEVEL

V _{DSS} (V)	R _{DS(on)} (Ω)	I _D (A)	P _{tot} (W)	Device No. & Anglia Order Code		Package
				Stick	Tape & Reel	
30	0.006	80	150	STB80NE03L-06	STB80NE03L-06T4	D²PAK
	0.01	60	120	STB60NE03L-10	STB60NE03L-10T4	
	0.02	40	80	STB40NE03L-20	STB40NE03L-20T4	
	0.02	20	50	STD20NE03L	STD20NE03LT4	DPAK
	0.05	17	35	STD17NE03L	STD17NE03LT4	
	0.06	4	2.5	—	STN4NE03L	SOT223
	0.01	12	2.5	STS12NF30L	—	SO8
	0.025	7	2.5	STS7NF30L	—	
	2 x 0.025	6	2	STS6DNF30L	—	
60	0.016	60	150	STB60NE06L-16	STB60NE06L-16T4	D²PAK
	0.022	55	130	STB55NE06L	STB55NE06LT4	
	0.03	30	50	STD30NE06L	STD30NE06LT4	DPAK
	0.085	17	35	STD17NE06L	STD17NE06LT4	
	0.085	16	45	STD16NE06L	STD16NE06LT4	
	0.12	12	35	STD12NE06L	STD12NE06LT4	
	0.12	3	2.5	—	STN3NE06L	SOT223
	2 x 0.08	3	2	STS3DNE60L	—	SO8
100	0.025	50	150	STB50NE10L	STB50NE10LT4	D²PAK
	0.036	45	150	STB45N10L	STB45N10LT4	
	0.16	12	50	STD12N10L	STD12N10LT4	DPAK
	0.27	9	45	STD9N10L	STD9N10LT4	
	0.27	2	2.7	—	STN2N10L	SOT223

SUPPLIED IN FULL STICKS/REELS ONLY

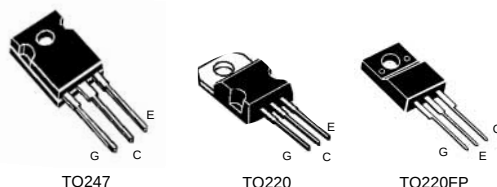
With ST's continuous product improvement programme and innovative device introductions, this shortform can only provide an in-sight into their product portfolio at the time of publication. Should the device specification you require not be shown please contact our Sales Department for the latest details.



IGBT

Insulated Gate Bipolar Transistors

Combine the easy drive characteristics of MOSFETS with the low saturation voltage and high current capability of BIPOLAR.



V_{CES} (V)	I_C (cont) @100°C (A)	P_{tot} (W)	Device No. & Anglia Order Code		$V_{CE(sat)}$ max. (A)	I_{CM} (pulsed) (V)	t_r typ. (ns)	t_f typ. (ns)	Comments (see below)	Package
600	20	150	STGW20NB60H		2.8	160	70	75		TO247
		150	STGW20NB60HD		2.8	160	70	75	A	
		125	STGP20NB60H		2.8	160	70	75		
	10	125	STGP10NB60L		1.95	100	1900	1500	B	TO220
		80	STGP10NB60S		1.7	80	1200	1900	C	
		80	STGP7NB60H		2.8	56	48	20		
	7	80	STGP7NB60HD		2.8	56	48	20	A	
		35	STGP7NB60HDFP		2.8	56	48	20	A	TO220FP

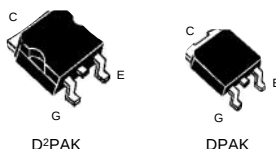
A = Fitted with anti-parallel Turboswitch™

B = Logic Level threshold voltage

C = Minimum on-voltage drop for low frequency applications (<1kHz)



SURFACE MOUNT



V_{CES} (V)	I_C (cont) @100°C (A)	P_{tot} (W)	Device No. & Anglia Order Code		$V_{CE(sat)}$ max. (A)	I_{CM} (pulsed) (V)	t_r typ. (ns)	t_f typ. (ns)	Comments (see below)	Package
Clamped	10	125	STGB10NB37LZ	STGB10NB37LZT4	1.8	60	340	1500	D	D²PAK
600	10	125	STGB10NB60L	STGB10NB60LT4	1.95	100	1900	1500	B	
	7	80	STGB7NB60HD	STGB7NB60HDT4	2.8	56	48	20	A	
		55	STGD7NB60H	STGD7NB60HT4	2.8	56	48	20		DPAK
		55	STGD7NB60S	STGD7NB60ST4	1.6	60	460	1200	C	

A = Fitted with anti-parallel Turboswitch™

B = Logic Level threshold voltage

C = Minimum on-voltage drop for low frequency applications (<1kHz)

D = Collector gate zener for precise clamping.
Gate emitter zener for ESD protection

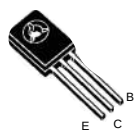
SUPPLIED IN FULL STICKS/REELS ONLY

RECOMMENDED
HEATSINKS

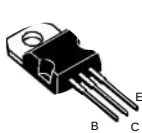
see Heatsink section
later in this shortform

**PACKAGE
DIMENSIONS**

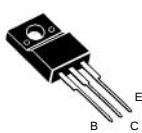
refer to General Data section
shown later in this shortform



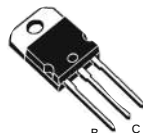
SOT32



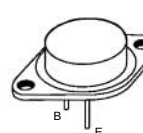
TO220



TO220FP



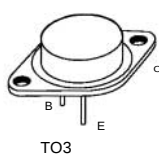
TO218



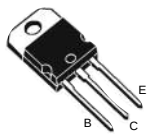
TO3

GENERAL PURPOSE

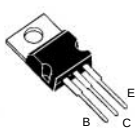
V _{CEO} (V)	V _{CBO} V _{CES} (V)	I _C (A)	P _{tot} (W)	Device No. & Anglia Order Code		h _{FE} @I _C /V _{CE(sat)}			V _{CE} @I _C /I _B			Package
				NPN	PNP	min.	(A)	(V)	(V)	(A)	(mA)	
22	22	4	36	BD433	BD434	50	2	1	0.5	2	200	SOT32
25	40	5	15	—	MJE210	70	0.5	1	0.3	0.5	50	
30	40	7	40	—	2N6111	30	4	3	1	3	300	TO220
32	32	4	36	BD435	BD436	50	2	1	0.5	2	200	SOT32
40	40	4	40	MJE521	—	40	1	1	—	—	—	
	50	15	75	—	2N6489	20	5	4	1.3	5	500	
	50	30	150	2N3771	—	15	15	4	2	15	1500	TO3
45	45	10	50	—	D45H5	40	4	1	1	8	400	TO220
	45	8	50	—	BD534	25	2	2	0.8	2	200	
	45	8	15	BD533FP	BD534FP	25	2	2	0.8	2	200	TO220FP
	45	4	36	BD437	BD438	40	2	1	0.6	2	200	SOT32
	45	2	25	—	BD234	25	1	2	0.6	1	100	
45	1.5	12.5	BD135	BD136	40	0.15	2	0.5	0.5	50		
60	60	12	75	BD707	BD708	15	4	4	1	4	400	TO220
	60	8	50	BD535	BD536	25	2	2	0.8	2	200	
	60	6	65	TIP41A	TIP42A	15	3	4	1.5	6	600	
	60	3	40	TIP31A	TIP32A	25	1	4	1.2	3	375	
	60	1	30	TIP29A	TIP30A	15	1	4	0.7	1	125	
	70	15	75	2N6487	2N6490	20	5	4	1.3	5	500	
	70	10	75	MJE3055T	MJE2955T	20	4	4	1.1	4	400	
	70	3	40	BD241A	BD242A	25	1	4	1.2	3	600	
	60	4	40	2N5191	—	25	1.5	2	0.6	1.5	150	SOT32
	60	4	36	BD439	BD440	25	2	1	0.8	2	200	
	60	2	25	BD235	BD236	25	1	2	0.6	1	100	
	60	1.5	12.5	BD137	BD138	40	0.15	2	0.5	0.5	50	
	100	15	90	TIP3055	TIP2955	20	4	4	1.1	4	400	TO218
	100	20	150	2N3772	—	15	10	4	2	15	1500	TO3
	100	15	115	2N3055	MJ2955	20	4	4	1.1	4	400	
70	80	7	40	—	2N6107	30	3	4	1	3	300	TO220
80	80	25	200	2N5886	2N5884	35	3	4	1	15	1500	TO3
	80	25	125	—	TIP36B	25	1.5	4	1.8	15	1500	TO218
	80	15	90	BD909	BD910	15	5	4	1	5	500	TO220
	80	12	75	BD709	BD710	15	4	4	1	4	400	
	80	8	50	BD537	BD538	15	2	2	0.8	2	200	
	80	6	65	BD243B	BD244B	15	3	4	1.5	6	1000	
	80	6	65	TIP41B	TIP42B	15	3	4	1.5	6	600	
	80	3	40	—	TIP32B	25	1	4	1.2	3	375	
	90	15	75	2N6488	—	20	5	4	1.3	5	500	
	90	3	40	BD241B	BD242B	25	1	4	1.2	3	600	TO220FP
	100	10	60	BDY90P	—	50	5	5	0.5	5	500	
	90	3	15	BD241BFP	BD242BFP	25	1	4	1.2	3	600	
	80	4	40	2N5192	2N5195	20	1.5	2	0.6	1.5	150	SOT32
	80	4	36	BD441	BD442	15	2	1	0.8	2	200	
	80	3	30	BD179	—	40	0.15	2	0.8	1	100	
	80	1.5	12.5	BD139	BD140	40	0.15	2	0.5	0.5	50	
	80	1.5	12.5	BD139-10	BD140-10	63	0.15	2	0.5	0.5	50	
	100	3	12.5	MJE182	MJE172	12	1.5	1	0.9	1.5	150	
	100	2	25	BD237	BD238	25	1	2	0.6	1	100	
90	100	30	200	MJ802	MJ4502	25	7.5	2	0.8	7.5	750	TO3
100	15	125	BDW51C	BDW52C	20	5	4	1	5	500		
100	100	25	125	TIP35C	TIP36C	25	1.5	4	1.8	15	1500	TO218
	140	10	80	TIP33C	TIP34C	20	3	4	1	3	300	
	100	15	90	BD911	BD912	15	5	4	1	5	500	TO220
	100	12	75	BD711	BD712	15	4	4	1	4	400	
	100	6	65	TIP41C	TIP42C	15	3	4	1.5	6	600	
	100	6	65	BD243C	BD244C	15	3	4	1.5	6	1000	
	100	3	40	TIP31C	TIP32C	25	1	4	1.2	3	375	
	100	1	30	TIP29C	TIP30C	15	1	4	0.7	1	125	
	115	3	40	BD241C	BD242C	25	1	4	1.2	3	600	
	115	2	30	BD239C	BD240C	15	1	4	0.7	1	200	



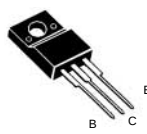
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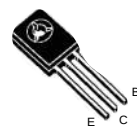
TO218



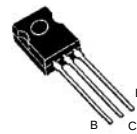
TO220



TO220FP



SOT32



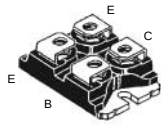
SOT82

GENERAL PURPOSE DARLINGTONS

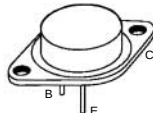
V_{CEO} (V)	V_{CBO} V_{CES} (V)	I_C (A)	P_{tot} (W)	Device No. & Anglia Order Code		$h_{FE} @ I_C/V_{CE(sat)}$			$V_{CE} @ I_C/I_B$			Package
				NPN	PNP	min.	(A)	(V)	(V)	(A)	(mA)	
60	60	12	150	—	2N6050	750	2	3	3	4	40	TO3
	60	8	80	TIP100	TIP105	1000	3	4	2	3	6	TO220
	60	8	70	—	TIP135	1000	4	4	2	4	16	
	60	5	65	TIP120	TIP125	1000	3	3	2	3	12	
	60	2	50	TIP110	TIP115	1000	2	4	2.5	2	8	
	60	5	65	—	SGS125	1000	3	3	2	3	12	SOT82
	60	4	40	BD677	BD678	750	1.5	3	2.5	1.5	30	SOT32
60	60	4	40	BD677A	BD678A	750	2	3	2.8	2	40	
80	80	25	130	SGSD100	SGSD200	300	20	3	1.75	10	40	TO218
	80	10	125	TIP141	—	1000	5	4	3	10	40	
	80	12	80	BDW93B	BDW94B	750	5	3	2	5	20	TO220
	80	10	70	BDX33B	BDX34B	750	3	3	2.5	3	6	
	80	10	65	2N6388	—	1000	5	3	2	5	10	
	80	8	80	—	TIP106	1000	3	4	2	3	6	
	80	8	70	TIP131	—	1000	4	4	2	4	16	
	80	8	60	BDX53B	BDX54B	750	3	3	2	3	12	
	80	5	65	TIP121	TIP126	1000	3	3	2	3	12	
	80	8	25	BDX53BFP	—	750	3	3	2	3	12	TO220FP
	80	10	150	MJ3001	MJ2501	1000	5	3	2	5	20	TO3
	80	4	40	—	2N6036	750	2	3	2	2	8	SOT32
	80	4	40	BD679	BD680	750	1.5	3	2.5	1.5	30	
	80	4	40	BD679A	BD680A	750	2	3	2.8	2	40	
	80	4	40	MJE802	—	100	4	3	3	4	40	
90	90	30	200	MJ11014	MJ11013	1000	20	5	4	30	300	TO3
100	100	20	160	2N6284	2N6287	750	10	3	3	20	200	
	100	16	150	MJ4035	MJ4032	1000	10	3	4	16	80	
	100	12	150	2N6059	—	750	6	3	3	12	120	
	100	12	120	BDX87C	BDX88C	1000	5	3	2	6	24	
	100	15	130	BDW83C	—	750	6	3	4	15	150	TO218
	100	10	125	TIP142	TIP147	1000	5	4	3	10	40	
	100	15	75	TIP142T	TIP147T	1000	5	4	3	10	40	TO220
	100	12	80	BDW93C	BDW94C	750	5	3	2	5	20	
	100	10	70	BDX33C	BDX34C	750	3	3	2.5	3	6	
	100	8	80	TIP102	TIP107	1000	3	4	2	3	6	
	100	8	70	TIP132	TIP137	1000	4	4	2	4	16	
	100	8	60	BDX53C	BDX54C	750	3	3	2	3	12	
	100	5	65	TIP122	TIP127	1000	3	3	2	3	12	
	100	2	50	TIP112	TIP117	1000	1	4	2.5	2	8	
	100	12	30	BDW93CFP	BDW94CFP	750	5	3	2	5	20	TO220FP
	100	5	25	TIP122FP	TIP127FP	1000	3	3	2	3	12	
	100	6	60	—	BD336	750	3	3	2	3	12	SOT32
	100	4	40	BD681	BD682	750	1.5	3	2.5	1.5	30	SOT82
120	120	30	200	MJ11016	—	1000	20	5	4	30	300	TO3
160	160	8	60	BDX53F	BDX54F	500	2	5	2	2	10	TO220

PACKAGE DIMENSIONS

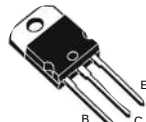
refer to General Data section shown later in this shortform



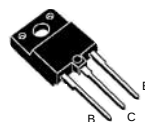
ISOTOP



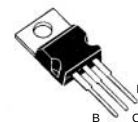
TO3



TO218



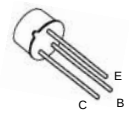
ISOWATT218



TO220



SOT32



TO39

SWITCHING TRANSISTORS & DARLINGTONS

V_{CE0} (V)	V_{CBO} V_{CES} (V)	I_C (A)	P_{tot} (W)	Device No. Anglia & Order Code NPN	$V_{CE(sat)}$ @ I_C / I_B			t_s (μ s)	t_f (μ s)	Package
					(V)	(A)	(A)			
60	120	80	250	BUV18	1.5	80	8	1.1	0.25	TO3
	120	30	150	BUW48	1.4	40	4	1.65	0.5	TO218
	120	5	5	BFX34	1	5	0.5	—	—	TO39
80	100	5	10	2N5154	1.5	5	0.5	—	—	
	160	30	150	BUW49	1.2	30	3	1.65	0.5	TO218
90	150	20	140	2N5038	2.5	20	5	1.5	0.5	TO3
	160	25	125	BUW89	0.9	15	1.5	1.4	0.7	TO218
	180	14	85	BUV26	1.5	12	1.2	2	0.35	TO220
100	100	5	6	2N5339	1.2	5	0.5	2	0.2	TO39
	100	1	10	2N5681	1	0.5	0.05	—	—	
	120	10	60	BDY90	1.5	10	1	1.3	0.2	TO3
120	120	1	10	2N5682	1	0.5	0.05	—	—	TO39
	150	120	175	ESM2012DV	2	100	1	2	0.3	ISOTOP
	240	12	85	BUV27	0.7	4	0.4	2	0.15	TO220
125	200	100	250	BUT30V	1.5	100	10	2	0.2	ISOTOP
	200	40	200	BUT70	0.9	70	7	0.2	0.35	TO218
	250	25	150	BUW50	0.9	20	2	1.7	0.3	
	250	20	125	BUW90	0.9	11	1.1	1.7	0.3	
	160	50	250	BUV20	0.6	25	2.5	1.2	0.3	TO3
	160	25	150	BUX10	0.6	10	1	1.2	0.3	
	160	20	120	BUX40	1.6	15	1.88	1	0.4	
	200	70	350	BUR50S	1	35	2	2	0.5	
	200	50	300	BUT100	0.9	100	10	2	0.2	
	200	50	250	BUT90	0.9	70	7	2	0.3	
150	330	8	60	BU807	1.5	5	0.05	0.55	0.2	TO220
	330	7	60	BU407	1	5	0.5	—	—	
	330	7	60	BU407D	1	5	0.65	—	—	
200	250	3	10	BUY49S	0.2	0.5	0.05	—	—	TO39
	250	40	250	BUV21	0.6	12	1.2	1.8	0.4	TO3
	300	60	350	BUR51	1	30	2	2	0.6	
	300	50	250	BUV61	1.2	40	5	2.4	0.25	
	400	10	85	BUV28	1.5	6	0.6	1.5	0.25	TO220
	400	8	60	BU806	1.5	5	0.05	0.55	0.2	
	400	7	60	BU406	1	5	0.5	—	—	
250	300	40	350	BUX22	1.5	20	2.5	2	0.5	TO3
	300	20	150	BUX12	1	5	0.5	2	0.5	
	300	1	10	2N3440	0.5	0.05	0.004	—	—	TO39
	350	60	350	BUR52	1	25	2	2	0.6	TO3
	350	1	40	TIP47	1	1	0.2	—	—	TO220
300	350	0.3	15	MJE3440	0.5	0.05	0.004	—	—	SOT32
	300	0.5	20.8	MJE340	—	—	—	—	—	
	400	140	300	BUT232V	1.9	70	7	5	0.4	ISOTOP
	400	100	225	ESM3030DV	2.2	85	2.4	3.5	0.6	
	400	80	250	BUT32V	0.9	40	4	3	0.4	
	400	67	150	ESM2030DV	2.2	56	1.6	3	0.6	
350	400	1	40	TIP48	1	1	0.2	—	—	TO220
	375	0.5	20	2N5657	2.5	0.25	0.025	—	—	SOT32
	450	1	40	TIP49	1	1	0.2	—	—	TO220
	450	1	10	2N3439	0.5	0.05	0.004	—	—	TO39

continued on next page

SWITCHING TRANSISTORS & DARLINGTONS

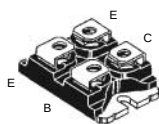
continued

V_{CE0} (V)	V_{CBO} V_{CES} (V)	I_C (A)	P_{tot} (W)	Device No. & Anglia Order Code NPN	$V_{CE(sat)}$ @ I_C / I_B			t_s (μ s)	t_f (μ s)	Package
					(V)	(A)	(A)			
400	700	1.5	40	ST13003	1	1	0.25	4	0.7	SOT32
	800	10	100	BUX80	3	8	2.5	3.5	0.5	TO3
	850	15	55	BUV48FI	1.5	10	2	5	0.4	ISOWATT218
	500	1	40	TIP50	1	1	0.2	—	—	TO220
	600	7	75	BU810	2.5	4	0.2	1.5	0.4	
	700	12	100	MJE13009	1.6	8	1.6	3	0.7	
	700	8	80	ST13007	1.5	5	1	2.5	0.1	
	700	4	75	ST13005	1	4	1	2.5	0.2	
	850	8	80	MJE13007A	1.5	5	1	3	0.7	
	850	5	70	BUV46	1.5	2.5	0.5	3	0.8	
	850	30	250	BUX98	1.5	20	4	3	0.8	TO3
	850	15	175	BUX48	1.5	10	2	5	0.4	
	850	15	175	2N6547	1.5	10	2	—	—	
	1000	10	100	BUY69A	3.3	8	2.5	1.7	0.3	
450	600	84	250	ESM6045DV	2	70	4	5.5	0.5	ISOTOP
	600	60	175	ESM5045DV	2	50	2.8	5	0.5	
	600	42	150	ESM4045DV	2	35	2	5	0.5	
	600	24	125	ESM3045DV	2	20	1.2	4	0.4	
	850	50	250	BUV298V	1.2	32	6.4	4.5	0.4	
	1000	30	150	BUV98V	1.5	20	4	5	0.4	
	850	45	300	BUX348	0.9	30	6	4.5	0.4	TO3
	850	30	200	BUX98P	0.9	20	4	4.5	0.4	TO218
	1000	24	200	BUX98AP	1.2	16	3.2	3	0.8	
	1000	15	125	BUV48A	1.5	10	2	3	0.8	
	1000	72	250	ESM6045AV	2	60	2.4	6	0.6	ISOTOP
	1000	50	250	BUV298AV	1.2	32	6.4	4.5	0.4	
	1000	30	150	BUV98AV	1.5	16	3.2	5	0.4	
	1000	30	250	BUX98A	1.5	16	3.2	3	0.8	TO3
	1000	15	175	BUX48A	1.5	10	2	3	0.8	
700	1000	15	55	BUV48AFI	1.5	8	1.6	3	0.8	ISOWATT218
	1000	0.5	40	BUX87	1	0.2	0.02	4.5	0.5	SOT32
	1000	5	83	BUT11A	1.5	2.5	0.5	4	0.8	TO220
	1000	5	70	BUV46A	1.5	2	0.4	3	0.8	
	1200	15	125	BUV48C	1.5	6	1.5	3	0.8	TO218
	1200	30	250	BUX98C	1.5	12	3	3	0.8	TO3
	1200	15	175	BUX48C	1.5	6	1.5	6	0.6	
	1200	15	55	BUV48CFI	1.5	6	1.5	6	0.6	ISOWATT218

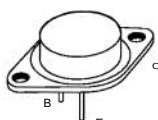
V_{CE0} (V)	V_{CBO} V_{CES} (V)	I_C (A)	P_{tot} (W)	Device No. & Anglia Order Code PNP	$V_{CE(sat)}$ @ I_C / I_B			Package
					(V)	(A)	(A)	
60	65	5	5	BSS44	1	5	0.5	TO39
120	120	1	10	2N5680	1	0.5	0.05	
200	200	1	10	2N5415	2.5	0.05	0.005	
300	300	0.5	20	MJE350	—	—	—	SOT32
	350	1	10	2N5416	2.5	0.05	0.005	TO39

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform



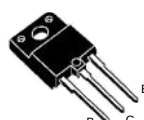
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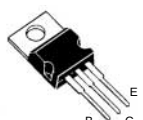
TO3



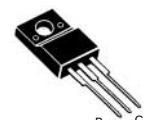
TO218



ISOWATT218



TO220



ISOWATT220
TO220FP



SOT32

FAST SWITCHING / SMPS

V_{CE0} (V)	V_{CBO} V_{CES} (V)	I_C (A)	P_{tot} (W)	Device No. & Anglia Order Code NPN	$V_{CE(sat)}$ @ I_C / I_B			t_s max. (μs)	t_f max. (μs)	Package
					(V)	(A)	(A)			
400	850	15	55	SGSIF461	1.5	10	2	2.3	0.5	ISOWATT218
450	850	30	200	BUF420M	0.5	20	2	2	0.1	TO3
	850	30	200	BUF420	0.5	20	2	2	0.1	TO218
	850	15	125	BUF410	0.5	10	2	1.8	0.1	
	1000	30	200	BUF420A	0.5	20	2	2	0.1	
	1000	15	125	BUF410A	0.5	10	2	1.8	0.1	
	1000	80	270	BUF460AV	2	60	12	5	0.2	ISOTOP
	1000	7.5	80	BUF405A	0.5	5	1	1.8	0.1	TO220
	1000	7.5	40	BUF405AFI	0.5	5	1	1.8	0.1	ISOWATT220
	1000	0.5	40	BUX87	1	0.2	0.02	4.5 typ.	0.5 typ.	SOT32
500	1000	5	28	BUL310FP	1.1	3	0.6	1.9	0.16	TO220FP
600	1200	7	50	SGSIF444	1.5	3.5	0.7	3.5	0.4	ISOWATT218
	1200	7	40	SGSIF344	1.5	3.5	0.7	3.5	0.4	ISOWATT220
	1200	7	85	SGSF344	1.5	3.5	0.7	3.5	0.4	TO220
	1200	4	70	SGSF324	1.5	1.75	0.35	4.5	0.35	
700	1500	6	44	BUH315	1.5	3	0.75	2.4	0.2	ISOWATT218

ELECTRONIC IGNITION

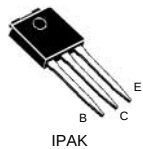
V_{CE0} (V)	V_{CBO} V_{CES} (V)	I_C (A)	P_{tot} (W)	Device No. & Anglia Order Code NPN	h_{FE} @ I_C / V_{CE}			$V_{CE(sat)}$ @ I_C / I_B			Package
					min.	(A)	(V)	(V)	(A)	(A)	
350	350/500	15	180	BU941Z	300	5	10	1.8	10	0.25	TO3
	350/500	15	155	BU941ZP	300	5	10	1.8	10	0.25	TO218
	350/500	15	150	BU941ZT	300	5	10	1.8	10	0.25	TO220
	350/500	15	65	BU941ZPFI	300	5	10	1.8	10	0.25	ISOWATT218
	350/500	15	55	BU941ZTFI	300	5	10	1.8	10	0.25	ISOWATT220
400	450	6	60	BU911	20	4	1.8	1.8	2.5	0.05	TO220
	500	15	150	BU941T	300	5	10	1.8	10	0.25	
	500	10	125	BU931T	300	5	10	1.8	8	0.1	
	500	15	65	BU941PFI	300	5	10	1.8	10	0.25	ISOWATT218
	500	15	60	BU931PFI	300	5	10	1.8	8	0.1	
	500	15	180	BU941	300	5	10	1.8	10	0.25	TO3
	500	15	175	BU931	300	5	10	1.8	8	0.1	
	500	15	155	BU941P	300	5	10	1.8	10	0.25	TO218
	500	15	135	BU931P	300	5	10	1.8	8	0.1	

PACKAGE DIMENSIONS

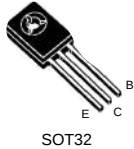
refer to General Data section
shown later in this shortform

POWER BIPOLAR

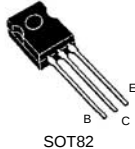
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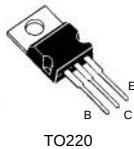
IPAK



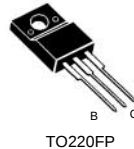
SOT32



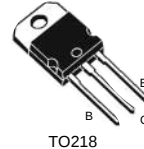
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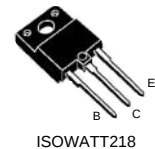
TO220



TO220FP



TO218



ISOWATT218

ELECTRONIC LIGHTING

V _{CEO} (V)	V _{CES} (V)	I _C (A)	P _{tot} (W)	Device No. & Anglia Order Code NPN	Compact Fluorescent Lamps	TYPICAL APPLICATION			Package
						Industrial Lamp Ballasts		Halogen Lamp Transformers	
						push pull	half bridge		
400	700 [†]	4	35	BULD128D-1	up to 23W	—	up to 40W	up to 30W	IPAK
	700	2	20	BULD118-1	up to 13W	—	up to 20W	—	
	700 [†]	2	20	BULD118D-1	up to 13W	—	up to 20W	—	
	700	2	45	BULT118	up to 13W	—	up to 20W	—	SOT32
	700	12	110	BUL87	—	—	—	up to 200W	TO220
	700	10	100	BUL67	—	—	—	up to 150W	
	700	8	85	BUL57	—	up to 140W*	up to 140W	—	
	700 [†]	4	70	BUL128D	up to 23W	—	up to 40W	up to 30W	
	700	4	70	BUL128	up to 23W	—	up to 40W	—	
	800	5	80	BUL138	—	up to 80W*	up to 80W	—	
	800	5	70	BUL381	>23W	up to 80W*	up to 80W	—	
	800 [†]	5	70	BUL381D	>23W	up to 80W*	up to 80W	—	
	800	5	70	BUL382	>23W	up to 80W*	up to 80W	—	
	850	8	90	BUL59	—	—	—	up to 150W	
	700	4	25	BUL128FP	up to 23W	—	up to 40W	—	TO220FP
	800	5	25	BUL138FP	—	up to 80W*	up to 80W	—	
450	800 [†]	5	60	BULK38D	—	—	—	up to 50W	SOT82
	800 [†]	8	85	BUL58D	—	—	—	up to 105W	TO220
	800 [†]	5	80	BUL38D	—	—	—	up to 75W	
	850 [†]	5	80	BUL49D	—	—	—	up to 75W	
	850 [†]	5	70	BUL39D	—	—	—	up to 50W	
	1000	10	100	BUL510	—	—	—	up to 150W	
500	1000	15	125	BUL810	—	—	—	up to 300W	TO218
	1000	5	75	BUL310	—	—	up to 120W	—	TO220
	1000	5	28	BUL310FP	—	—	up to 120W	—	TO220FP
600	1300	3	60	BUL213	—	up to 90W	up to 90W**	—	TO220
800	1600	6	110	BUL416	—	up to 200W**	—	—	TO220
	1600	4	90	BUL216	—	up to 130W**	—	—	

[†] Integrated free wheeling diode

* 120V A.C. mains

** 277V A.C. mains

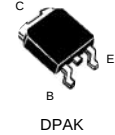
HORIZONTAL DEFLECTION

V _{CEO} (V)	V _{CBO} (V)	I _C (A)	P _{tot} (W)	Device No. & Anglia Order Code NPN	TYPICAL APPLICATION		Package
					Colour Television screen size	Monitor size/type/frequency	
700	1500	8	30	BUH515FP	up to 25"	14"/SVGA /<50kHz	TO220FP
	1400 [†]	8	52	BU808DFI	up to 21"	—	ISOWATT218
	1500	10	57	THD200FI	>25"	15"/Multisync/>64kHz	
	1500	8	50	THD277HI	up to 25"	14"/SVGA/<50kHz	
	1500 [†]	8	50	BUH515D	up to 25"	—	
	1500	8	50	BUH515	up to 25"	14"/SVGA /<50kHz	
	1500 [†]	8	50	BU508DFI	up to 25"	—	
	1500	8	50	BU508AFI	up to 25"	—	
	1500	8	50	S2000AFI	up to 25"	—	
	1500 [†]	6	44	BUH315D	up to 17"	—	
	1500	6	44	BUH315	up to 17"	—	
	1500	16	200	BUH1215	—	21"/Multisync/>64kHz	TO218
	1500	14	160	BUH1015	>25"	17"/Multisync/>64kHz	

[†] Integrated free wheeling diode

RECOMMENDED
HEATSINKS

see Heatsink section
later in this shortform


SURFACE MOUNT

GENERAL PURPOSE

V_{CE0}	V_{CBO} V_{CES}	I_C (cont)	P_{tot}	Device No. & Anglia Order Code Tape & Reel		h_{FE} @ I_C/V_{CE}			$V_{CE(sat)}$ @ I_C/I_B			Package
(V)	(V)	(A)	(W)	NPN	PNP	min.	(A)	(V)	(V)	(A)	(A)	
25	40	5	12.5	MJD200T4	MJD210T4	45	2	1	0.75	2	0.2	DPAK
60	70	10	20	MJD3055T4	MJD2955T4	20	4	4	1.1	4	0.4	
80	80	15	20	STD909T4	STD910T4	15	5	4	1	5	0.5	
80	80	3	15	MJD31BT4	MJD32BT4	10	3	4	1.2	3	0.375	
100	100	3	15	MJD31CT4	MJD32CT4	10	3	4	1.2	3	0.375	

GENERAL PURPOSE DARLINGTONS

V_{CE0}	V_{CBO} V_{CES}	I_C (cont)	P_{tot}	Device No. & Anglia Order Code Tape & Reel		h_{FE} @ I_C/V_{CE}			$V_{CE(sat)}$ @ I_C/I_B			Package
(V)	(V)	(A)	(W)	NPN	PNP	min.	(A)	(V)	(V)	(A)	(A)	
100	100	5	20	MJD122T4	MJD127T4	1000	4	4	2	4	0.016	DPAK
100	100	2	20	MJD112T4	MJD117T4	1000	2	3	2	2	0.008	

SWITCHING

V_{CE0}	V_{CBO} V_{CES}	I_C (cont)	P_{tot}	Device No. & Anglia Order Code Tape & Reel		h_{FE} @ I_C/V_{CE}			$V_{CE(sat)}$ @ I_C/I_B			Package
(V)	(V)	(A)	(W)	NPN	PNP	min.	(A)	(V)	(V)	(A)	(A)	
250	350	1	15	MJD47T4	—	10	1	10	1	1	0.2	DPAK
300	300	0.5	15	MJD340T4	MJD350T4	30	0.05	10	—	—	—	

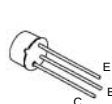
FAST SWITCHING / SMPS

V_{CE0}	V_{CBO} V_{CES}	I_C (cont)	P_{tot}	Device No. & Anglia Order Code Tape & Reel		h_{FE} @ I_C/V_{CE}			$V_{CE(sat)}$ @ I_C/I_B			Package
(V)	(V)	(A)	(W)	NPN	PNP	min.	(A)	(V)	(V)	(A)	(A)	
400	500	1	15	MJD50T4	—	30	0.3	10	1	1	0.2	DPAK

SUPPLIED IN FULL REELS ONLY

PACKAGE DIMENSIONS

 refer to General Data section
shown later in this shortform



TO18



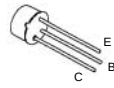
TO39

GENERAL PURPOSE

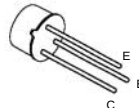
V_{CE0} V_{CER}^* (V)	$h_{FE} @ I_C$		Device No. & Anglia Order Code NPN	$V_{CE(sat)} @ I_C/I_B$		f_T min. (MHz)	t_s t_{off}^* (ns)	P_{tot} (mW)	Package
	min./max.	(mA)		max. (V)	(mA)				
30	100/300	150	2N2222	1.6	500/50	250	225	500	TO18
40	100/300	150	2N2222A	1	500/50	250	225	500	
80	40/—	150	2N720A	5	150/15	50	—	500	
80	100/300	150	2N3700	0.5	500/50	100 typ.	—	500	
30	40/—	150	BFY51	0.35	150/15	50	300 typ.	800	TO39
30	100/300	150	2N2219	1.6	500/50	250	225	800	
35	30/—	150	BFY50	0.2	150/15	60	300 typ.	800	
40	100/300	150	2N2219A	1	500/50	300	225	800	
50*	40/120	150	2N1613	1.5	150/15	60	—	800	
50	40/250	500	2N5321	0.8	500/50	50	800*	1000	
50*	100/300	150	2N1711	1.5	150/15	70	—	800	
60	40/250	100	BC141	0.35 typ.	500/50	50	850*	650	
60	63/160	100	BC141-10	0.35 typ.	500/50	50	850*	650	
60	100/250	100	BC141-16	0.35 typ.	500/50	50	850*	650	
65	40/120	150	2N2102	0.5	150/15	60	30*	1000	
75	30/130	500	2N5320	0.5	500/50	50	800*	1000	
80	40/120	150	2N1893	1.5	150/15	50	—	800	
80	100/300	150	2N3019	0.5	500/50	100	—	800	

V_{CE0} (V)	$h_{FE} @ I_C$		Device No. & Anglia Order Code PNP	$V_{CE(sat)} @ I_C/I_B$		f_T min. (MHz)	t_s t_{off}^* (ns)	P_{tot} (mW)	Package
	min./max.	(mA)		max. (V)	(mA)				
40	100/300	150	2N2907	0.4	150/15	200	80	400	TO18
60	100/300	150	2N2907A	0.4	150/15	200	80	400	
40	100/230	150	2N2905	0.4	150/15	200	80	600	TO39
50	40/250	500	2N5323	1.2	500/50	50	—	1000	
60	40/250	100	BC161	0.35 typ.	500/50	50	650*	650	
60	63/160	100	BC161-10	0.35 typ.	500/50	50	650*	650	
60	100/250	100	BC161-16	0.35 typ.	500/50	50	650*	650	
60	100/300	150	2N2905A	0.4	150/15	200	80	600	
75	30/130	500	2N5322	0.7	500/50	50	1000*	1000	
80	100/300	100	2N4033	0.5	500/50	150	350	800	

RECOMMENDED
HEATSINKS
see Heatsink section
later in this shortform



TO18



TO39

LOW LEVEL, LOW NOISE

V_{CE0} (V)	$h_{FE} @ I_C$		Device No. & Anglia Order Code NPN	$V_{CE(sat)} @ I_C/I_B$		f_T min. (MHz)	NF max. (dB)	P_{tot} (mW)	Package
	min./max.	(mA)		max. (V)	(mA)				
20	110/800	2	BC108	0.6	100/5	100	10	300	TO18
20	200/450	2	BC108B	0.6	100/5	100	10	300	
20	420/800	2	BC108C	0.6	100/5	100	10	300	
45	110/450	2	BC107	0.6	100/5	100	10	300	
45	110/220	2	BC107A	0.6	100/5	100	10	300	
45	200/450	2	BC107B	0.6	100/5	100	10	300	

V_{CE0} (V)	$h_{FE} @ I_C$		Device No. & Anglia Order Code PNP	$V_{CE(sat)} @ I_C/I_B$		f_T min. (MHz)	NF max. (dB)	P_{tot} (mW)	Package
	min./max.	(mA)		max. (V)	(mA)				
45	125/500	2	BC177	0.25	10/0.5	200 typ.	10	300	TO18
45	125/260	2	BC177A	0.25	10/0.5	200 typ.	10	300	
45	240/500	2	BC177B	0.25	10/0.5	200 typ.	10	300	

FAST AND ULTRA-FAST SWITCHING

V_{CE0} (V)	$h_{FE} @ I_C$		Device No. & Anglia Order Code NPN	$V_{CE(sat)} @ I_C/I_B$		f_T min. (MHz)	t_s t_{off}^* (ns)	P_{tot} (mW)	Package
	min./max.	(mA)		max. (V)	(mA)				
15	40/120	10	BSX20	0.6	100/10	500	13	360	TO18
15	40/120	10	2N2369	0.25	10/1	500	13	360	
15	40/120	10	2N2369A	0.2	10/1	500	13	360	
50	60/150	100	2N4014	0.52	500/50	300	60*	360	
50	60/150	100	2N3725	0.52	500/50	300	60*	800	TO39

HIGH VOLTAGE

V_{CE0} (V)	$h_{FE} @ I_C$		Device No. & Anglia Order Code NPN	$V_{CE(sat)} @ I_C/I_B$		f_T min. (MHz)	P_{tot} (mW)	Package
	min./max.	(mA)		max. (V)	(mA)			
180	30/ –	10	BC394	0.3	10/1	50	400	TO18
160	25/ –	30	BF257	1	30/6	90 typ.	5000	TO39
250	25/ –	30	BF258	1	30/6	90 typ.	5000	
300	25/ –	30	BF259	1	30/6	90 typ.	5000	

V_{CE0} (V)	$h_{FE} @ I_C$		Device No. & Anglia Order Code PNP	$V_{CE(sat)} @ I_C/I_B$		f_T min. (MHz)	P_{tot} (mW)	Package
	min./max.	(mA)		max. (V)	(mA)			
150	40/ –	10	BFW43	0.5	10/1	60	400	TO18
180	50/ –	10	BC393	0.3	10/1	50	400	

PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

SURFACE MOUNT

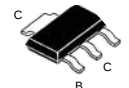
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SURFACE MOUNT



SOT23



SOT223

GENERAL PURPOSE

V_{CE0} (V)	V_{CBO} V_{CES}^* (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel NPN	$h_{FE} @ I_C/V_{CE}$			$V_{CE(sat)} @ I_C/I_B$			f_T min.* (MHz)	P_{tot} (mW)	Package
				min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
45 80	50* 80	500	BCX19 SOA06	100/600 50/-	100 100	1 1	0.62 0.25	500 100	50 10	200 100*	350 350	SOT23

V_{CE0} (V)	V_{CBO} V_{CES}^* (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel PNP	$h_{FE} @ I_C/V_{CE}$			$V_{CE(sat)} @ I_C/I_B$			f_T min. (MHz)	P_{tot} (mW)	Package
				min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
32 45 80	32 50* 80	100 500 500	BCW30 BCX17 SOA56	215/500 100/600 50/-	2 100 100	5 1 1	0.3 0.62 0.25	10 500 100	0.5 50 10	150 100 50*	300 350 350	SOT23

LOW CURRENT

V_{CE0} (V)	V_{CBO} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel NPN	$h_{FE} @ I_C/V_{CE}$			$V_{CE(sat)} @ I_C/I_B$			f_T min. (MHz)	P_{tot} (mW)	Package
				min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
12 15 15	20 40 40	200 200 200	BSV52 SO2369 SO2369A	40/120 40/120 40/120	10 10 10	1 1 0.35	0.4 0.25 0.5	50 30 100	5 3 10	400 400 500	200 200 200	SOT23

MEDIUM CURRENT SWITCHING

V_{CE0} (V)	V_{CBO} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel NPN	$h_{FE} @ I_C/V_{CE}$			$V_{CE(sat)} @ I_C/I_B$			f_T min. (MHz)	P_{tot} (mW)	Package
				min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
30 40	60 75	800 800	SO2222 SO2222A	100/300 100/300	150 150	10 10	0.4 0.3	150 150	15 15	250 300	350 350	SOT23

V_{CE0} (V)	V_{CBO} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel PNP	$h_{FE} @ I_C/V_{CE}$			$V_{CE(sat)} @ I_C/I_B$			f_T min. (MHz)	P_{tot} (mW)	Package
				min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
40 60	60 60	800 800	SO2907 SO2907A	40/120 100/300	150 150	10 10	0.4 0.4	150 150	15 15	200 200	350 350	SOT23

MEDIUM POWER

V_{CE0} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel NPN	$h_{FE} @ I_C/V_{CE}$			$V_{CE(sat)} @ I_C/I_B$			f_T min.* (MHz)	P_{tot} (W)	Package
			min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
30 40 60 60 60 80 80 80	800 800 1000 1000 1000 1000 1000 1000	STZT2222 STZT2222A BCP55 BSP40 BSP41 BCP56 BSP42 BSP43	100/300 100/300 40/250 40/120 100/300 40/250 40/120 100/300	150 150 150 100 100 150 100 100	10 10 2 5 5 2 5 5	1.6 1.6 0.5 0.5 0.5 0.5 0.5 0.5	500 500 500 500 500 500 500 500	50 50 50 50 50 50 50 50	250* 300* 130 100* 100* 130 100* 100*	1.5 1.5 2 2 2 2 2 2	SOT223

V_{CE0} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel PNP	$h_{FE} @ I_C/V_{CE}$			$V_{CE(sat)} @ I_C/I_B$			f_T min.* (MHz)	P_{tot} (W)	Package
			min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
40 60 60 60 60 80 80 80	800 800 1000 1000 1000 1000 1000 1000	STZT2907 STZT2907A BCP52 BSP30 BSP31 BCP53 BSP32 BSP33	100/300 100/300 40/250 40/120 50/300 40/250 40/120 50/300	150 150 150 100 100 150 100 100	10 10 2 5 5 2 5 5	0.4 0.4 0.5 0.5 0.5 0.5 0.5 0.5	150 150 500 500 500 500 500 500	15 15 50 50 50 50 50 50	200 200 50 100* 100* 50 100* 100*	1.5 1.5 2 2 2 2 2 2	SOT223

SUPPLIED IN FULL REELS ONLY

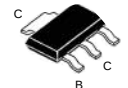


SURFACE MOUNT

continued



SOT23



SOT223

HIGH VOLTAGE

V_{CEO} (V)	V_{CBO} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel NPN	h_{FE} @ I_C/V_{CE}			$V_{CE(sat)}$ @ I_C/I_B			f_T min. (MHz)	P_{tot} (mW)	Package
				min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
300	300	100	SO642	40/ –	30	10	500	20	2	50	310	SOT23

V_{CEO} (V)	V_{CBO} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel PNP	h_{FE} @ I_C/V_{CE}			$V_{CE(sat)}$ @ I_C/I_B			f_T min. (MHz)	P_{tot} (mW)	Package
				min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
150	160	600	SO5401	60/240	10	5	0.5	50	5	100	200	SOT23
300	300	100	SO692	40/ –	10	10	0.5	20	2	50	310	

HIGH VOLTAGE AND VIDEO AMPLIFIER

V_{CEO} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel NPN	h_{FE} @ I_C/V_{CE}			$V_{CE(sat)}$ @ I_C/I_B			f_T min. (MHz)	P_{tot} (W)	Package
			min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
300	100	STZTA42	40/ –	10	10	0.5	20	2	50	2	SOT223

V_{CEO} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel PNP	h_{FE} @ I_C/V_{CE}			$V_{CE(sat)}$ @ I_C/I_B			f_T min. (MHz)	P_{tot} (W)	Package
			min./max.	(mA)	(V)	max. (V)	(mA)	(mA)			
160	600	STZT5401	60/240	10	5	0.5	50	5	100	1.5	SOT223
300	100	STZTA92	40/ –	10	10	0.5	20	2	50	2	

RGB VIDEO OUTPUT

V_{CEO} (V)	V_{CBO} V_{CES} (V)	I_C (mA)	Device No. & Anglia Order Code Tape & Reel NPN	max. (V)	$V_{CE(sat)}$ @ I_C/I_B		P_{tot} (W)	Package
					(mA)	(mA)		
160	160	300	BF457	1	50	10	12.5	SOT223
200	200	100	VT120	–	–	–	8.4	
250	250	300	BF458	1	50	10	12.5	
300	300	300	BF459	1	50	10	12.5	

SUPPLIED IN FULL REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

Linear I.C.'s in a broad series of popular configurations and values. The operational amplifiers are available as single, dual, triple or quad devices to suit a wide range of applications. Comparators are obtainable in single, dual or quad and 555/556 timers in single or dual configurations. All linear devices can be supplied in both conventional and SMD mounting options.

OPERATIONAL AMPLIFIERS

GENERAL PURPOSE (Single/Dual/Quad)
LOW NOISE (Dual/Quad)
LOW POWER (Single/Dual/Quad)
RAIL TO RAIL (Single/Dual/Quad)
HIGH SPEED (Single/Dual/Triple/Quad)
PRECISION (Single/Dual/Quad)
MIXED PARTS (Single/Dual/Quad)

pages 87 - 97

COMPARATORS

BIPOLAR (Single/Dual/Quad)
CMOS (Single/Dual/Quad)

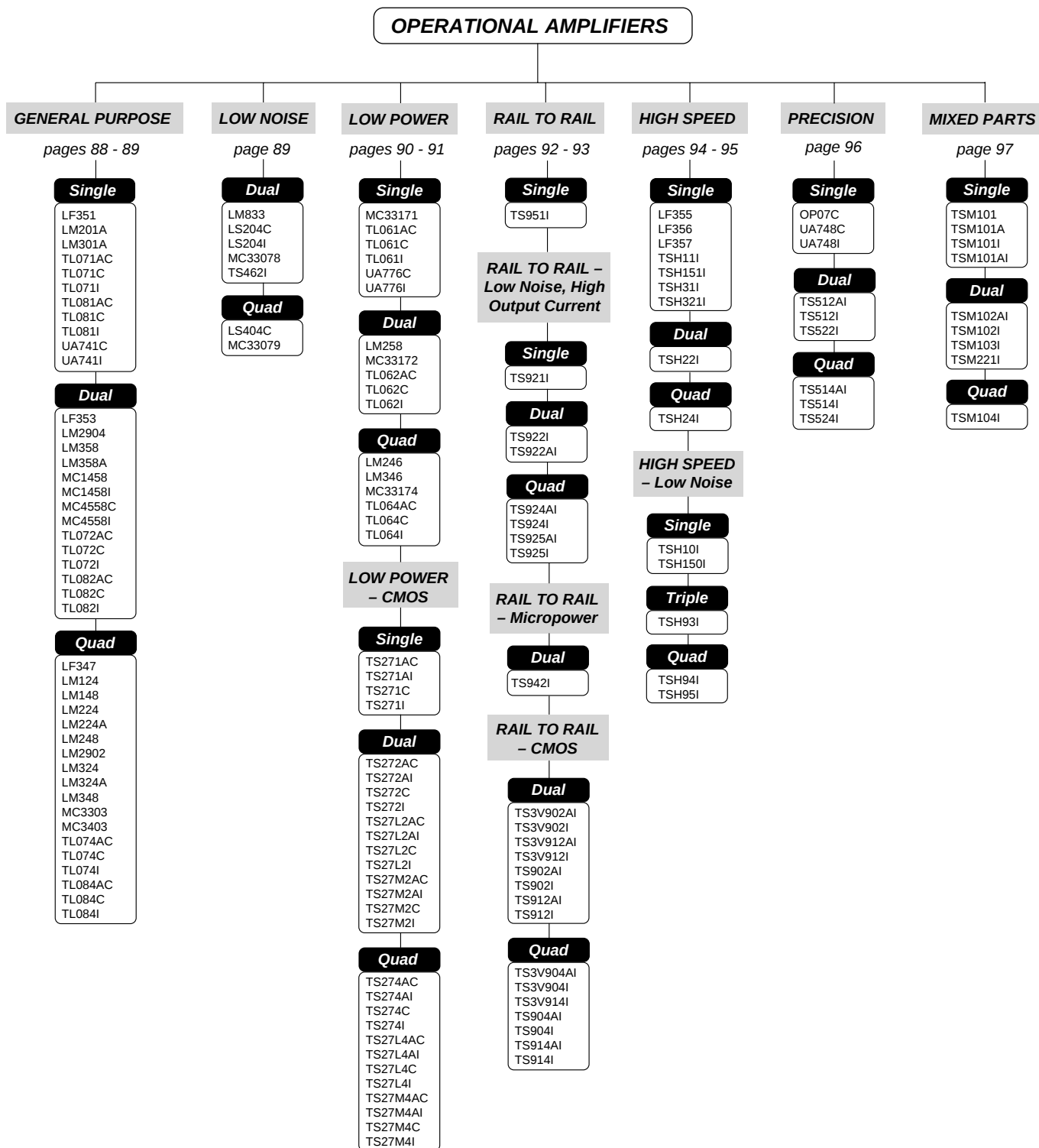
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TIMERS

BIPOLAR (Single/Dual)
CMOS (Single/Dual)

page 100

The family tree shown below helps identify and categorise the diverse range of Operational Amplifiers listed on the following pages.



Package types : Dual In-line (DIP) or Surface Mount (SO) throughout.

N.B. TSSOP is also available on many Op. Amps [PT device no. suffix] – please contact our Sales Dept for latest details.

OPERATIONAL AMPLIFIERS
GENERAL PURPOSE
Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	TAPE & REEL
BIPOLAR						
LM201A	Low Offset - External Frequency Compensation Amplifier	- 40 to 105	8	LM201AN	LM201AD	LM201ADT
LM301A	Low Offset - External Frequency Compensation Amplifier	0 to 70	8	LM301AN	LM301AD	LM301ADT
UA741C	General Purpose Amplifier	0 to 70	8	UA741CN	UA741CD	UA741CDT
UA741I	General Purpose Amplifier	- 40 to 105	8	UA741IN	UA741ID	UA741IDT
J-FET						
LF351	Wide Bandwidth Amplifier	0 to 70	8	LF351N	LF351D	LF351DT
TL071AC	Low Noise - Low Input Offset Voltage Amplifier	0 to 70	8	TL071ACN	TL071ACD	TL071ACDT
TL071C	Low Noise Amplifier	0 to 70	8	TL071CN	TL071CD	TL071CDT
TL071I	Low Noise Amplifier	- 40 to 105	8	TL071IN	TL071ID	TL071IDT
TL081AC	General Purpose - Low Input Offset Voltage Amplifier	0 to 70	8	TL081ACN	TL081ACD	TL081ACDT
TL081C	General Purpose Amplifier	0 to 70	8	TL081CN	TL081CD	TL081CDT
TL081I	General Purpose Amplifier	- 40 to 105	8	TL081IN	TL081ID	TL081IDT

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	TAPE & REEL
BIPOLAR						
LM2904	Single Power Supply Amplifier	- 40 to 105	8	LM2904N	LM2904D	LM2904DT
LM358	Single Power Supply Amplifier	0 to 70	8	LM358N	LM358D	LM358DT
LM358A	Single Power Supply - Low Input Offset Voltage Amplifier	0 to 70	8	LM358AN	LM358AD	LM358ADT
MC1458	General Purpose - Internal Frequency Compensation Amplifier	0 to 70	8	MC1458N	MC1458D	MC1458DT
MC1458I	General Purpose - Internal Frequency Compensation Amplifier	- 40 to 105	8	MC1458IN	MC1458ID	MC1458IDT
MC4558C	Wide Bandwidth Amplifier	0 to 70	8	MC4558CN	MC4558CD	MC4558CDT
MC4558I	Wide Bandwidth Amplifier	- 40 to 105	8	MC4558IN	-	-
J-FET						
LF353	Wide Bandwidth Amplifier	0 to 70	8	LF353N	LF353D	LF353DT
TL072AC	Low Noise - Low Input Offset Voltage Amplifier	0 to 70	8	TL072ACN	TL072ACD	TL072ACDT
TL072C	Low Noise Amplifier	0 to 70	8	TL072CN	TL072CD	TL072CDT
TL072I	Low Noise Amplifier	- 40 to 105	8	TL072IN	TL072ID	TL072IDT
TL082AC	General Purpose - Low Input Offset Voltage Amplifier	0 to 70	8	TL082ACN	TL082ACD	TL082ACDT
TL082C	General Purpose Amplifier	0 to 70	8	TL082CN	TL082CD	TL082CDT
TL082I	General Purpose Amplifier	- 40 to 105	8	TL082IN	TL082ID	TL082IDT

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

OPERATIONAL AMPLIFIERS

GENERAL PURPOSE

continued

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
BIPOLAR						
LM124	General Purpose - Single Power Supply Amplifier	- 55 to 125	14	LM124N	-	-
LM148	Quad 741 - Low Supply Current Drain Amplifier	- 55 to 125	14	-	LM148D	LM148DT
LM224	General Purpose - Single Power Supply Amplifier	- 40 to 105	14	LM224N	LM224D	LM224DT
LM224A	General Purpose - Single Power Supply - Low Input Offset Voltage Amplifier	- 40 to 105	14	LM224AN	-	-
LM248	Quad 741 - Low Supply Current Amplifier	- 40 to 105	14	LM248N	LM248D	LM248DT
LM2902	Single Power Supply Amplifier	- 40 to 105	14	LM2902N	LM2902D	LM2902DT
LM324	General Purpose - Single Power Supply Amplifier	0 to 70	14	LM324N	LM324D	LM324DT
LM324A	General Purpose - Single Power Supply - Low Input Offset Voltage Amplifier	0 to 70	14	LM324AN	LM324AD	LM324ADT
LM348	Quad 741 - Low Supply Current Amplifier	0 to 70	14	LM348N	LM348D	LM348DT
MC3303	Single Power Supply - Class AB Output Stage Amplifier	- 40 to 105	14	MC3303N	MC3303D	MC3303DT
MC3403	Single Power Supply - Class AB Output Stage Amplifier	0 to 70	14	MC3403N	MC3403D	MC3403DT
J-FET						
LF347	Wide Band Amplifier	0 to 70	14	LF347N	LF347D	LF347DT
TL074AC	Low Noise - Low Input Offset Voltage Amplifier	0 to 70	14	TL074ACN	TL074ACD	TL074ACDT
TL074C	Low Noise Amplifier	0 to 70	14	TL074CN	TL074CD	TL074CDT
TL074I	Low Noise Amplifier	- 40 to 105	14	TL074IN	TL074ID	TL074IDT
TL084AC	General Purpose - Low Input Offset Voltage Amplifier	0 to 70	14	TL084ACN	TL084ACD	TL084ACDT
TL084C	General Purpose Amplifier	0 to 70	14	TL084CN	TL084CD	TL084CDT
TL084I	General Purpose Amplifier	- 40 to 105	14	TL084IN	TL084ID	TL084IDT

LOW NOISE

See also Rail to Rail – Low Noise and High Speed – Low Noise

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
BIPOLAR						
LM833	Low Noise Amplifier	- 40 to 105	8	LM833N	LM833D	LM833DT
LS204C	High Performance Amplifier	0 to 70	8	LS204CN	LS204CD	LS204CDT
LS204I	High Performance Amplifier	- 40 to 105	8	LS204IN	LS204ID	LS204IDT
MC33078	Low Noise Amplifier	- 40 to 105	8	MC33078N	MC33078D	MC33078DT
TS462I	High Output Swing - Low Noise Amplifier	- 20 to 70	8	TS462IN	TS462ID	TS462IDT

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
BIPOLAR						
LS404C	High Performance Amplifier	0 to 70	14	LS404CN	LS404CD	LS404CDT
MC33079	Low Noise Amplifier	- 40 to 105	14	MC33079N	MC33079D	MC33079DT

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY

OPERATIONAL AMPLIFIERS

LOW POWER

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
BIPOLAR MC33171 UA776C UA776I	Low Power - Single Supply Amplifier Programmable - High Input Impedance Amplifier Programmable - High Input Impedance Amplifier	- 40 to 105 0 to 70 - 40 to 105	8 8 8	<i>MC33171N</i> <i>UA776CN</i> <i>UA776IN</i>	<i>MC33171D</i> <i>UA776CD</i> <i>UA776ID</i>	<i>MC33171DT</i> <i>UA776CDT</i> <i>UA776IDT</i>
J-FET TL061AC TL061C TL061I	Low Power - Low Input Offset Voltage Amplifier Low Power Amplifier Low Power Amplifier	0 to 70 0 to 70 - 40 to 105	8 8 8	<i>TL061ACN</i> <i>TL061CN</i> <i>TL061IN</i>	<i>TL061ACD</i> <i>TL061CD</i> <i>TL061ID</i>	<i>TL061ACDT</i> <i>TL061CDT</i> <i>TL061IDT</i>

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
BIPOLAR LM258 MC33172	Low Power - Single Power Supply Amplifier Low Power - Single Supply Amplifier	- 40 to 105 - 40 to 105	8 8	<i>LM258N</i> <i>MC33172N</i>	<i>LM258D</i> <i>MC33172D</i>	<i>LM258DT</i> <i>MC33172DT</i>
J-FET TL062AC TL062C TL062I	Low Power - Low Input Offset Voltage Amplifier Low Power Amplifier Low Power Amplifier	0 to 70 0 to 70 - 40 to 105	8 8 8	<i>TL062ACN</i> <i>TL062CN</i> <i>TL062IN</i>	<i>TL062ACD</i> <i>TL062CD</i> <i>TL062ID</i>	<i>TL062ACDT</i> <i>TL062CDT</i> <i>TL062IDT</i>

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
BIPOLAR LM246 LM346 MC33174	Programmable - Wide Power Supply Range Amplifier Programmable - Wide Power Supply Range Amplifier Low Power - Single Supply Amplifier	- 40 to 105 0 to 70 - 40 to 105	16 16 14	<i>LM246N</i> <i>LM346N</i> <i>MC33174N</i>	<i>LM246D</i> <i>LM346D</i> <i>MC33174D</i>	<i>LM246DT</i> <i>LM346DT</i> <i>MC33174DT</i>
J-FET TL064AC TL064C TL064I	Low Power - Low Input Offset Voltage Amplifier Low Power Amplifier Low Power Amplifier	0 to 70 0 to 70 - 40 to 105	14 14 14	<i>TL064ACN</i> <i>TL064CN</i> <i>TL064IN</i>	<i>TL064ACD</i> <i>TL064CD</i> <i>TL064ID</i>	<i>TL064ACDT</i> <i>TL064CDT</i> <i>TL064IDT</i>

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

OPERATIONAL AMPLIFIERS

LOW POWER – CMOS

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package (TUBE)	SURFACE MOUNT SO package (STICK) (TAPE & REEL)	
TS271AC	Programmable Supply Current - Low Offset Voltage Amplifier	0 to 70	8	TS271ACN	TS271ACD	TS271ACDT
TS271AI	Programmable Supply Current - Low Offset Voltage Amplifier	-40 to 125	8	TS271AIN	TS271AID	TS271AIDT
TS271C	Programmable Supply Current - Low Cost Amplifier	0 to 70	8	TS271CN	TS271CD	TS271CDT
TS271I	Programmable Supply Current - Low Cost Amplifier	-40 to 125	8	TS271IN	TS271ID	TS271IDT

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package (TUBE)	SURFACE MOUNT SO package (STICK) (TAPE & REEL)	
TS272AC	High Speed - Low Offset Voltage Amplifier	0 to 70	8	TS272ACN	TS272ACD	TS272ACDT
TS272AI	High Speed - Low Offset Voltage Amplifier	-40 to 125	8	TS272AIN	TS272AID	TS272AIDT
TS272C	High Speed - Low Cost Amplifier	0 to 70	8	TS272CN	TS272CD	TS272CDT
TS272I	High Speed - Low Cost Amplifier	-40 to 125	8	TS272IN	TS272ID	TS272IDT
TS27L2AC	Low Supply Current - Low Offset Voltage Amplifier	0 to 70	8	TS27L2ACN	TS27L2ACD	TS27L2ACDT
TS27L2AI	Low Supply Current - Low Offset Voltage Amplifier	-40 to 125	8	TS27L2AIN	TS27L2AID	TS27L2AIDT
TS27L2C	Low Supply Current - Low Cost Amplifier	0 to 70	8	TS27L2CN	TS27L2CD	TS27L2CDT
TS27L2I	Low Supply Current - Low Cost Amplifier	-40 to 125	8	TS27L2IN	TS27L2ID	TS27L2IDT
TS27M2AC	Medium Supply Current - Low Offset Voltage Amplifier	0 to 70	8	TS27M2ACN	TS27M2ACD	TS27M2ACDT
TS27M2AI	Medium Supply Current - Low Offset Voltage Amplifier	-40 to 125	8	TS27M2AIN	TS27M2AID	TS27M2AIDT
TS27M2C	Medium Supply Current - Low Cost Amplifier	0 to 70	8	TS27M2CN	TS27M2CD	TS27M2CDT
TS27M2I	Medium Supply Current - Low Cost Amplifier	-40 to 125	8	TS27M2IN	TS27M2ID	TS27M2IDT

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package (TUBE)	SURFACE MOUNT SO package (STICK) (TAPE & REEL)	
TS274AC	High Speed – Low Offset Voltage Amplifier	0 to 70	14	TS274ACN	TS274ACD	TS274ACDT
TS274AI	High Speed – Low Offset Voltage Amplifier	-40 to 125	14	TS274AIN	TS274AID	TS274AIDT
TS274C	High Speed – Low Cost Amplifier	0 to 70	14	TS274CN	TS274CD	TS274CDT
TS274I	High Speed – Low Cost Amplifier	-40 to 125	14	TS274IN	TS274ID	TS274IDT
TS27L4AC	Low Supply Current – Low Offset Voltage Amplifier	0 to 70	14	TS27L4ACN	TS27L4ACD	TS27L4ACDT
TS27L4AI	Low Supply Current – Low Offset Voltage Amplifier	-40 to 125	14	TS27L4AIN	TS27L4AID	TS27L4AIDT
TS27L4C	Low Supply Current – Low Cost Amplifier	0 to 70	14	TS27L4CN	TS27L4CD	TS27L4CDT
TS27L4I	Low Supply Current – Low Cost Amplifier	-40 to 125	14	TS27L4IN	TS27L4ID	TS27L4IDT
TS27M4AC	Medium Supply Current – Low Offset Voltage Amplifier	0 to 70	14	TS27M4ACN	TS27M4ACD	TS27M4ACDT
TS27M4AI	Medium Supply Current – Low Offset Voltage Amplifier	-40 to 125	14	TS27M4AIN	TS27M4AID	TS27M4AIDT
TS27M4C	Medium Supply Current – Low Cost Amplifier	0 to 70	14	TS27M4CN	TS27M4CD	TS27M4CDT
TS27M4I	Medium Supply Current – Low Cost Amplifier	-40 to 125	14	TS27M4IN	TS27M4ID	TS27M4IDT

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OPERATIONAL AMPLIFIERS

RAIL TO RAIL

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package SMD STICK TAPE & REEL	
TS951I*	Rail to Rail - Low Power Amplifier	- 20 to 125	8	TS951IN	TS951ID	TS951IDT

*Also available in SOT23-5L package, Device No. & Anglia Order Code : Type No. with LT suffix

RAIL TO RAIL – Low Noise, High Output Current

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package SMD STICK TAPE & REEL	
TS921I	Rail to Rail - High Output Current Amplifier	- 40 to 125	8	TS921IN	TS921ID	TS921IDT

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package SMD STICK TAPE & REEL	
TS922AI	Rail to Rail - High Current - Low Input Offset Voltage Amplifier	- 40 to 125	8	TS922AIN	TS922AID	-
TS922I	Rail to Rail - High Current Amplifier	- 40 to 125	8	TS922IN	TS922ID	-

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package SMD STICK TAPE & REEL	
TS924AI	Rail to Rail - High Current - Low Input Offset Voltage Amplifier	- 40 to 125	14	TS924AIN	TS924AID	-
TS924I	Rail to Rail - High Current Amplifier	- 40 to 125	14	TS924IN	TS924ID	-
TS925AI	Rail to Rail - High Current - Low Imp. Offset Amp. with Standby	- 40 to 125	16	TS925AIN	TS925AID	-
TS925I	Rail to Rail - High Current Amplifier with Standby	- 40 to 125	16	TS925IN	TS925ID	-

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OPERATIONAL AMPLIFIERS

RAIL TO RAIL – Micropower

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  STICK SMD TAPE & REEL	
TS942I	3V Rail to Rail - Micropower Amplifier	– 40 to 85	8	TS942IN	TS942ID	–

RAIL TO RAIL – CMOS

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  STICK SMD TAPE & REEL	
TS902AI	Rail to Rail - Low Offset Voltage Amplifier - with Standby	– 40 to 125	14	TS902AIN	TS902AID	–
TS902I	Rail to Rail Amplifier - with Standby	– 40 to 125	14	TS902IN	TS902ID	–
TS912AI	Rail to Rail - Low Offset Voltage Amplifier	– 40 to 125	8	TS912AIN	TS912AID	–
TS912I	Rail to Rail Amplifier	– 40 to 125	8	TS912IN	TS912ID	–
TS3V902AI	3V Rail to Rail - Low Offset Voltage Amp. - with Standby	– 40 to 125	14	TS3V902AIN	TS3V902AID	–
TS3V902I	3V Rail to Rail Amplifier - with Standby	– 40 to 125	14	TS3V902IN	TS3V902ID	–
TS3V912AI	3V Rail to Rail - Low Offset Voltage Amplifier	– 40 to 125	8	TS3V912AIN	TS3V912AID	–
TS3V912I	3V Rail to Rail Amplifier	– 40 to 125	8	TS3V912IN	TS3V912ID	–

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  STICK SMD TAPE & REEL	
TS904AI	Rail to Rail - Low Offset Voltage Amplifier - with Standby	– 40 to 125	16	TS904AIN	TS904AID	–
TS904I	Rail to Rail Amplifier - with Standby	– 40 to 125	16	TS904IN	TS904ID	–
TS914AI	Rail to Rail - Low Offset Voltage Amplifier	– 40 to 125	14	TS914AIN	TS914AID	–
TS914I	Rail to Rail Amplifier	– 40 to 125	14	TS914IN	TS914ID	–
TS3V904AI	3V Rail to Rail - Low Offset Voltage Amp. - with Standby	– 40 to 125	16	TS3V904AIN	TS3V904AID	–
TS3V904I	3V Rail to Rail Amplifier - with Standby	– 40 to 125	16	TS3V904IN	TS3V904ID	–
TS3V914I	3V Rail to Rail Amplifier	– 40 to 125	14	TS3V914IN	TS3V914ID	–

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PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

OPERATIONAL AMPLIFIERS
HIGH SPEED
Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package SMD STICK TAPE & REEL	
CMOS						
TSH11I	High Speed 120MHz Amplifier - MOS Input	- 40 to 105	8	<i>TSH11IN</i>	<i>TSH11ID</i>	—
TSH151I	High Speed 150MHz Amplifier - MOS Input	- 40 to 105	8	<i>TSH151IN</i>	<i>TSH151ID</i>	—
TSH31I	High Speed 280MHz Amplifier - MOS Input	- 40 to 105	8	<i>TSH31IN</i>	<i>TSH31ID</i>	—
TSH321I	High Speed 300MHz Amplifier - MOS Input	- 40 to 105	8	<i>TSH321IN</i>	<i>TSH321ID</i>	—
J-FET						
LF355	High Performance - Low Supply Current Amplifier	0 to 70	8	<i>LF355N</i>	<i>LF355D</i>	<i>LF355DT</i>
LF356	High Performance - Wide Band Amplifier	0 to 70	8	<i>LF356N</i>	<i>LF356D</i>	<i>LF356DT</i>
LF357	High Performance - Wide Band Decompensated Amplifier	0 to 70	8	<i>LF357N</i>	<i>LF357D</i>	<i>LF357DT</i>

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package SMD STICK TAPE & REEL	
TSH22I	25MHz Amplifier - Bipolar Input Single Supply 3 to 30V	- 40 to 125	8	<i>TSH22IN</i>	<i>TSH22ID</i>	—

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package SMD STICK TAPE & REEL	
TSH24I	2.5MHz Amplifier - Bipolar Input Single Supply 3 to 30V	- 40 to 125	14	<i>TSH24IN</i>	<i>TSH24ID</i>	—

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OPERATIONAL AMPLIFIERS

HIGH SPEED – Low Noise

Single

Type	Function	Operating Temp. Range (°C)	Pins	package  TUBE	SMD  STICK	SMD  TAPE & REEL
TSH10I	High Speed 140MHz Amplifier	– 40 to 105	8	TSH10IN	TSH10ID	–
TSH150I	High Speed 150MHz Amplifier - Bipolar Input	– 40 to 105	8	TSH150IN	TSH150ID	–

Triple

Triple				Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package   STICK TAPE & REEL	
Type	Function	Operating Temp. Range (°C)	Pins	TSH93IN	TSH93ID	—
TSH93I	High Speed 150MHz Low Power Amplifier	– 40 to 105	14			

Quad

Quad				Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  STICK  TAPE & REEL	
Type	Function	Operating Temp. Range (°C)	Pins			
TSH94I	150MHz Amplifier - with Standby	– 40 to 125	16	TSH94IN	TSH94ID	–
TSH95I	150MHz Amplifier - with Dual Standby	– 40 to 125	16	TSH95IN	TSH95ID	TSH95IDT

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

OPERATIONAL AMPLIFIERS
PRECISION
Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  STICK	SURFACE MOUNT SO package  TAPE & REEL
OP07C	Very Low Offset Amplifier	– 40 to 105	8	OP07CN	–	–
UA748C	Precision - Low Offset Amplifier	0 to 70	8	UA748CN	UA748CD	UA748CDT
UA748I	Precision - Low Offset Amplifier	– 40 to 105	8	UA748IN	UA748ID	UA748IDT

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  STICK	SURFACE MOUNT SO package  TAPE & REEL
TS512AI	High Speed Precision - Low Offset Amplifier	– 40 to 125	8	TS512AIN	TS512AID	–
TS512I	High Speed Precision Amplifier	– 40 to 125	8	TS512IN	TS512ID	–
TS522I	Precision Low Noise Amplifier	– 40 to 105	8	TS522IN	TS522ID	–

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  STICK	SURFACE MOUNT SO package  TAPE & REEL
TS514AI	High Speed Precision - Low Offset Amplifier	– 40 to 125	14	TS514AIN	TS514AID	–
TS514I	High Speed Precision Amplifier	– 40 to 125	14	TS514IN	TS514ID	–
TS524I	Precision Low Noise Amplifier	– 40 to 125	14	TS524IN	TS524ID	–

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY

OPERATIONAL AMPLIFIERS

MIXED PARTS

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
TSM101A	Voltage and Current Controller 1%	- 20 to 80	8	TSM101ACN	TSM101ACD	TSM101ACDT
TSM101	Voltage and Current Controller 2%	- 20 to 80	8	TSM101CN	TSM101CD	TSM101CDT
TSM101AI	Voltage and Current Controller 1%	- 40 to 105	8	TSM101AIN	TSM101AID	TSM101AIDT
TSM101I	Voltage and Current Controller 2%	- 40 to 105	8	TSM101IN	TSM101ID	TSM101IDT

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
TSM102AI	Dual Op Amp, Dual Comparator & Adjustable Voltage Reference 0.4%	- 40 to 105	16	TSM102AIN	TSM102AID	TSM102AIDT
TSM102I	Dual Op Amp, Dual Comparator & Adjustable Voltage Reference 1%	- 40 to 105	16	TSM102IN	TSM102ID	TSM102IDT
TSM103I	Dual Op Amp & Voltage Reference	- 40 to 105	8	TSM103IN	TSM103ID	TSM103IDT
TSM221I	Dual Rail to Rail Op Amp & Dual Comparator	- 40 to 105	14	TSM221IN	TSM221ID	TSM221IDT

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
TSM104I	Quad Op Amp & Adjustable Voltage Reference	- 40 to 105	16	TSM104IN	TSM104ID	TSM104IDT

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

COMPARATORS

BIPOLAR

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
LM211	Low Input Current - Single Power Supply Voltage Comparator	– 40 to 105	8	LM211N	LM211D	LM211DT
LM311	Low Input Current - Single Power Supply Voltage Comparator	0 to 70	8	LM311N	LM311D	LM311DT

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
LM219	High Speed - Single Supply Operation Comparator	– 40 to 105	14	LM219N	LM219D	LM219DT
LM2903	Low Offset Voltage Comparator	– 40 to 105	8	LM2903N	LM2903D	LM2903DT
LM293	Low Offset Voltage Comparator	– 40 to 105	8	LM293N	LM293D	LM293DT
LM319	High Speed - Single Supply Operation Comparator	0 to 70	14	LM319N	LM319D	LM319DT
LM393	Low Offset Voltage Comparator	0 to 70	8	LM393N	LM393D	LM393DT

Quad

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
LM239AN	Very Low Offset Voltage Comparator	– 40 to 105	14	LM239AN	–	–
LM239	Low Offset Voltage Comparator	– 40 to 105	14	LM239N	LM239D	LM239DT
LM2901	Low Offset Voltage Comparator	– 40 to 105	14	LM2901N	LM2901D	LM2901DT
LM339A	Very Low Offset Voltage Comparator	0 to 70	14	LM339AN	LM339AD	LM339ADT
LM339	Low Offset Voltage Comparator	0 to 70	14	LM339N	LM339D	LM339DT

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N.B. TSSOP is also available on many Comparators [PT device no. suffix] – please contact our Sales Dept for latest details.

COMPARATORS

CMOS

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code
TS391I	Low Power Comparator	– 40 to 125	5	SURFACE MOUNT  SOT23-5L package  TAPE & REEL
				TS391ILT

Dual

Dual				Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  STICK TAPE & REEL	
Type	Function	Operating Temp. Range (°C)	Pins			
TS372C	Low Power Comparator	0 to 70	8	TS372CN	TS372CD	TS372CDT
TS372I	Low Power Comparator	– 40 to 125	8	TS372IN	TS372ID	TS372IDT
TS393C	Micropower Comparator	0 to 70	8	TS393CN	TS393CD	TS393CDT
TS393I	Micropower Comparator	– 40 to 125	8	TS393IN	TS393ID	TS393IDT
TS3702C	Micropower - Push Pull Output Comparator	0 to 70	8	TS3702CN	TS3702CD	TS3702CDT
TS3702I	Micropower - Push Pull Output Comparator	– 40 to 125	8	TS3702IN	TS3702ID	TS3702IDT
TS3V393I	3V Micropower Comparator	– 40 to 125	8	TS3V393IN	TS3V393ID	TS3V393IDT
TS3V3702I	3V Micropower - Push Pull Output Comparator	– 40 to 125	8	TS3V3702IN	TS3V3702ID	TS3V3702IDT

Quad

Quad				Device No. & Anglia Order Code		
Type	Function	Operating Temp. Range (°C)	Pins	DUAL IN-LINE DIP package 	SURFACE MOUNT	
				TUBE	SO package  STICK 	TAPE & REEL 
TS339C	Micropower Comparator	0 to 70	14	TS339CN	TS339CD	TS339CDT
TS339I	Micropower Comparator	– 40 to 125	14	TS339IN	TS339ID	TS339IDT
TS374C	Low Power Comparator	0 to 70	14	TS374CN	TS374CD	TS374CDT
TS374I	Low Power Comparator	– 40 to 125	14	TS374IN	TS374ID	TS374IDT
TS3704C	Micropower - Push Pull Output Comparator	0 to 70	14	TS3704CN	TS3704CD	TS3704CDT
TS3704I	Micropower - Push Pull Output Comparator	– 40 to 125	14	TS3704IN	TS3704ID	TS3704IDT
TS3V339I	3V Micropower Comparator	– 40 to 125	14	TS3V339IN	TS3V339ID	–
TS3V3704I	3V Micropower - Push Pull Output Comparator	– 40 to 125	14	TS3V3704IN	TS3V3704ID	–

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PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

TIMERS

BIPOLAR

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package (TUBE)	SURFACE MOUNT SO package (STICK)	(TAPE & REEL)
NE555 SA555	Astable or Monostable Operation Timer Astable or Monostable Operation Timer	0 to 70 – 40 to 105	8 8	NE555N SA555N	NE555D SA555D	NE555DT SA555DT

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package (TUBE)	SURFACE MOUNT SO package (STICK)	(TAPE & REEL)
NE556 SA556	Two Independant 555 Timing Circuits Timer Two Independant 555 Timing Circuits Timer	0 to 70 – 40 to 105	14 14	NE556N SA556N	NE556D SA556D	NE556DT SA556DT

CMOS

Single

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package (TUBE)	SURFACE MOUNT SO package (STICK)	(TAPE & REEL)
TS555C TS555I TS3V555ID	Low Power Timer Low Power Timer 3V Low Power Timer	0 to 70 – 40 to 125 – 40 to 125	8 8 8	TS555CN TS555IN TS3V555IN	TS555CD TS555ID TS3V555ID	TS555CDT TS555IDT –

Dual

Type	Function	Operating Temp. Range (°C)	Pins	Device No. & Anglia Order Code		
				DUAL IN-LINE DIP package (TUBE)	SURFACE MOUNT SO package (STICK)	(TAPE & REEL)
TS556C TS556I TS3V556I	Low Power Timer Low Power Timer 3V Low Power Timer	0 to 70 – 40 to 125 – 40 to 125	14 14 14	TS556CN TS556IN TS3V556IN	TS556CD TS556ID TS3V556ID	TS556CDT TS556IDT –

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PACKAGE
DIMENSIONSrefer to General Data section
shown later in this shortform

An extensive series of digital logic functions covering three supply voltages and offering a wide arrangement of configurations and operational preferences. The general purpose 4000B devices are complemented by the 74HC/HCT ranges which offer direct compatibility yet superior performance. The latest evolution AC/ACT/VHC/VHCT families further advance the technology with improvements in noise immunity, switching speed, lower power consumption and higher output current. Finally, the low voltage LCX/LVQ/LVX/VCX series additionally offer such benefits as 5V tolerant inputs and outputs, power down input protection and live insertion/withdrawal.

5.0V
CMOS LOGIC
4000B Series
74HC/HCT Series HIGH SPEED
74AC/ACT Series ADVANCED HIGH SPEED
74VHC/VHCT Series LOW NOISE, VERY HIGH SPEED

pages 102 - 111

3.3V
LOW VOLTAGE, CMOS LOGIC
74LCX Series HIGH SPEED
74LVQ Series LOW NOISE, VERY HIGH SPEED
74LVX Series LOW NOISE, VERY HIGH SPEED

pages 112 - 114

1.8V
VERY LOW VOLTAGE, CMOS LOGIC
74VCX Series HIGH SPEED

page 115



74HC/HCT Series HIGH SPEED CMOS

5.0V

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage HC Series	V _{CC}	2 to 6	V
HCT Series		4.5 to 5.5	V
Input Voltage	V _I	0 to V _{CC}	V
Operating Temperature	T _A	- 40 to +85	C

Two established families of high speed CMOS logic, compatible with 4000B CMOS (74HC series) and 74LS TTL (74HCT series) yet offering superior performance.

Type	Function	Pins	Device No. & Anglia Order Code		
			DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SMD  STICK	SURFACE MOUNT SMD  TAPE & REEL
74HC00	Quad 2-Input NAND Gate	14	M74HC00B1R	M74HC00M1R	M74HC00RM13TR
74HCT00	Quad 2-Input NAND Gate	14	M74HCT00B1R	M74HCT00M1R	M74HCT00RM13TR
74HC02	Quad 2-Input NOR Gate	14	M74HC02B1R	M74HC02M1R	M74HC02RM13TR
74HCT02	Quad 2-Input NOR Gate	14	M74HCT02B1R	M74HCT02M1R	M74HCT02RM13TR
74HC03	Quad 2-Input NAND (Open Drain)	14	M74HC03B1R	M74HC03M1R	M74HC03RM13TR
74HC04	Hex Inverter	14	M74HC04B1R	M74HC04M1R	M74HC04RM13TR
74HCT04	Hex Inverter	14	M74HCT04B1R	M74HCT04M1R	M74HCT04RM13TR
74HCU04	Hex Inverter (Single Stage)	14	M74HCU04B1R	M74HCU04M1R	M74HCU04RM13TR
74HC05	Hex Inverter (Open Stage)	14	M74HC05B1R	M74HC05M1R	M74HC05RM13TR
74HC07	Hex Buffer	14	M74HC07B1R	M74HC07M1R	M74HC07RM13TR
74HC08	Quad 2-Input AND Gate	14	M74HC08B1R	M74HC08M1R	M74HC08RM13TR
74HCT08	Quad 2-Input AND Gate	14	M74HCT08B1R	M74HCT08M1R	M74HCT08RM13TR
74HC09	Quad 2-Input AND Gate (Open Drain)	14	M74HC09B1R	M74HC09M1R	M74HC09RM13TR
74HC10	Triple 3-Input NAND Gate	14	M74HC10B1R	M74HC10M1R	M74HC10RM13TR
74HCT10	Triple 3-Input NAND Gate	14	M74HCT10B1R	M74HCT10M1R	M74HCT10RM13TR
74HC11	Triple 3-Input AND Gate	14	M74HC11B1R	M74HC11M1R	M74HC11RM13TR
74HC14	Hex Schmitt Inverter	14	M74HC14B1R	M74HC14M1R	M74HC14RM13TR
74HCT14	Hex Schmitt Inverter	14	M74HCT14B1R	M74HCT14M1R	M74HCT14RM13TR
74HC20	Dual 4-Input NAND Gate	14	M74HC20B1R	M74HC20M1R	M74HC20RM13TR
74HC21	Dual 4-Input AND Gate	14	M74HC21B1R	M74HC21M1R	M74HC21RM13TR
74HC27	Triple 3-Input NOR Gate	14	M74HC27B1R	M74HC27M1R	M74HC27RM13TR
74HCT27	Triple 3-Input NOR Gate	14	M74HCT27B1R	M74HCT27M1R	M74HCT27RM13TR
74HC30	8-Input NAND Gate	14	M74HC30B1R	M74HC30M1R	M74HC30RM13TR
74HCT30	8-Input NAND Gate	14	M74HCT30B1R	M74HCT30M1R	M74HCT30RM13TR
74HC32	Quad 2-Input OR Gate	14	M74HC32B1R	M74HC32M1R	M74HC32RM13TR
74HCT32	Quad 2-Input OR Gate	14	M74HCT32B1R	M74HCT32M1R	M74HCT32RM13TR
74HC42	BCD to Decimal Decoder	16	M74HC42B1R	M74HC42M1R	M74HC42RM13TR
74HC51	Dual 2-Wide 2-Input/3-Input AND-OR Inv. Gate	14	M74HC51B1R	M74HC51M1R	M74HC51RM13TR
74HC73	Dual J-K Flip-Flop with Clear	14	M74HC73B1R	M74HC73M1R	M74HC73RM13TR
74HC74	Dual D-Type Flip-Flop with Preset and Clear	14	M74HC74B1R	M74HC74M1R	M74HC74RM13TR
74HCT74	Dual D-Type Flip-Flop with Preset and Clear	14	M74HCT74B1R	M74HCT74M1R	M74HCT74RM13TR
74HC75	4-Bit D-Type Latch	16	M74HC75B1R	M74HC75M1R	M74HC75RM13TR
74HCT75	4-Bit D-Type Latch	16	M74HCT75B1R	M74HCT75M1R	M74HCT75RM13TR
74HC76	Dual J-K Flip-Flop with Preset and Clear	16	M74HC76B1R	M74HC76M1R	M74HC76RM13TR
74HC77	4-Bit D-Type Latch	14	M74HC77B1R	M74HC77M1R	M74HC77RM13TR
74HC85	4-Bit Magnitude Comparator	16	M74HC85B1R	M74HC85M1R	M74HC85RM13TR
74HC86	Quad Exclusive OR Gate	14	M74HC86B1R	M74HC86M1R	M74HC86RM13TR
74HCT86	Quad Exclusive OR Gate	14	M74HCT86B1R	M74HCT86M1R	M74HCT86RM13TR
74HC107	Dual J-K Flip-Flop with Clear	14	M74HC107B1R	M74HC107M1R	M74HC107RM13TR
74HC109	Dual J-K Flip-Flop with Preset and Clear	16	M74HC109B1R	M74HC109M1R	M74HC109RM13TR
74HC112	Dual J-K Flip-Flop with Preset and Clear	16	M74HC112B1R	M74HC112M1R	M74HC112RM13TR
74HC113	Dual J-K Flip-Flop with Preset	14	M74HC113B1R	M74HC113M1R	M74HC113RM13TR
74HC123	Dual Retriggerable Monostable Multivibrator	16	M74HC123B1R	M74HC123M1R	M74HC123RM13TR
74HC125	Quad Bus Buffer (3-State)	14	M74HC125B1R	M74HC125M1R	M74HC125RM13TR
74HCT125	Quad Bus Buffer (3-State)	14	M74HCT125B1R	M74HCT125M1R	M74HCT125RM13TR
74HC126	Quad Bus Buffer (3-State)	14	M74HC126B1R	M74HC126M1R	M74HC126RM13TR
74HCT126	Quad Bus Buffer (3-State)	14	M74HCT126B1R	M74HCT126M1R	M74HCT126RM13TR
74HC131	3 to 8 Line Decoder Latch	16	M74HC131B1R	M74HC131M1R	M74HC131RM13TR
74HC132	Quad 2-Input Schmitt NAND Gate	14	M74HC132B1R	M74HC132M1R	M74HC132RM13TR
74HC133	13-Input NAND Gate	16	M74HC133B1R	M74HC133M1R	M74HC133RM13TR
74HC137	3 to 8 Line Decoder Latch (Inv.)	16	M74HC137B1R	M74HC137M1R	M74HC137RM13TR
74HCT137	3 to 8 Line Decoder Latch (Inv.)	16	M74HCT137B1R	M74HCT137M1R	M74HCT137RM13TR
74HC138	3 to 8 Line Decoder (Inv.)	16	M74HC138B1R	M74HC138M1R	M74HC138RM13TR
74HCT138	3 to 8 Line Decoder (Inv.)	16	M74HCT138B1R	M74HCT138M1R	M74HCT138RM13TR
74HC139	Dual 2 to 4 Line Decoder/Demultiplexer	16	M74HC139B1R	M74HC139M1R	M74HC139RM13TR
74HCT139	Dual 2 to 4 Line Decoder/Demultiplexer	16	M74HCT139B1R	M74HCT139M1R	M74HCT139RM13TR
74HC147	10 to 4 Line Priority Encoder	16	M74HC147B1R	M74HC147M1R	M74HC147RM13TR
74HC148	8 to 3 Line Priority Encoder	16	M74HC148B1R	M74HC148M1R	M74HC148RM13TR
74HC151	8-Channel Multiplexer	16	M74HC151B1R	M74HC151M1R	M74HC151RM13TR
74HC153	Dual 4-Channel Multiplexer	16	M74HC153B1R	M74HC153M1R	M74HC153RM13TR
74HC154	4 to 16 Line Decoder/Demultiplexer	24	M74HC154B1R	M74HC154M1R	M74HC154RM13TR
74HC155	Dual 2 to 4 Line Decoder/3 to 8 Line Decoder	16	M74HC155B1R	M74HC155M1R	M74HC155RM13TR
74HC157	Quad 2-Channel Multiplexer	16	M74HC157B1R	M74HC157M1R	M74HC157RM13TR
74HCT157	Quad 2-Channel Multiplexer	16	M74HCT157B1R	M74HCT157M1R	M74HCT157RM13TR

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continued on next page

74HC/HCT Series HIGH SPEED CMOS *continued*

			Device No. & Anglia Order Code		
Type	Function	Pins	DUAL IN-LINE DIP package  TUBE	SURFACE MOUNT SO package  SMD STICK TAPE & REEL	
74HC158	Quad 2-Channel Multiplexer (Inv.)	16	M74HC158B1R	M74HC158M1R	M74HC158RM13TR
74HCT158	Quad 2-Channel Multiplexer (Inv.)	16	M74HCT158B1R	M74HCT158M1R	M74HCT158RM13TR
74HC160	Synchronous Decade Counter with Async. Clear	16	M74HC160B1R	M74HC160M1R	M74HC160RM13TR
74HCT160	Synchronous Decade Counter with Async. Clear	16	M74HCT160B1R	M74HCT160M1R	M74HCT160RM13TR
74HC161	Synchronous Binary Counter with Async. Clear	16	M74HC161B1R	M74HC161M1R	M74HC161RM13TR
74HCT161	Synchronous Binary Counter with Async. Clear	16	M74HCT161B1R	M74HCT161M1R	M74HCT161RM13TR
74HC162	Synchronous Decade Counter with Sync. Clear	16	M74HC162B1R	M74HC162M1R	M74HC162RM13TR
74HCT162	Synchronous Decade Counter with Sync. Clear	16	M74HCT162B1R	M74HCT162M1R	M74HCT162RM13TR
74HC163	Synchronous Binary Counter with Sync. Clear	16	M74HC163B1R	M74HC163M1R	M74HC163RM13TR
74HCT163	Synchronous Binary Counter with Sync. Clear	16	M74HCT163B1R	M74HCT163M1R	M74HCT163RM13TR
74HC164	8-Bit SIPO Shift Register	14	M74HC164B1R	M74HC164M1R	M74HC164RM13TR
74HCT164	8-Bit SIPO Shift Register	14	M74HCT164B1R	M74HCT164M1R	M74HCT164RM13TR
74HC165	8-Bit PISO Shift Register	16	M74HC165B1R	M74HC165M1R	M74HC165RM13TR
74HCT165	8-Bit PISO Shift Register	16	M74HCT165B1R	M74HCT165M1R	M74HCT165RM13TR
74HC166	8-Bit PISO Shift Register	16	M74HC166B1R	M74HC166M1R	M74HC166RM13TR
74HCT166	8-Bit PISO Shift Register	16	M74HCT166B1R	M74HCT166M1R	M74HCT166RM13TR
74HC173	Quad D-Type Register (3-State)	16	M74HC173B1R	M74HC173M1R	M74HC173RM13TR
74HC174	Hex D-Type Flip-Flop with Clear	16	M74HC174B1R	M74HC174M1R	M74HC174RM13TR
74HCT174	Hex D-Type Flip-Flop with Clear	16	M74HCT174B1R	M74HCT174M1R	M74HCT174RM13TR
74HC175	Quad D-Type Flip-Flop with Clear	16	M74HC175B1R	M74HC175M1R	M74HC175RM13TR
74HC181	Arithmetic Logic Unit Function Generator	24	M74HC181B1R	M74HC181M1R	M74HC181RM13TR
74HC182	Function Look Ahead Carry Generator	16	M74HC182B1R	M74HC182M1R	M74HC182RM13TR
74HC190	BCD Asynchronous Up/Down Counter	16	M74HC190B1R	M74HC190M1R	M74HC190RM13TR
74HC191	4-Bit Synchronous Binary Up/Down Counter	16	M74HC191B1R	M74HC191M1R	M74HC191RM13TR
74HC192	Synchronous Up/Down Decade Counter	16	M74HC192B1R	M74HC192M1R	M74HC192RM13TR
74HC193	Synchronous Up/Down Binary Counter	16	M74HC193B1R	M74HC193M1R	M74HC193RM13TR
74HC194	4-Bit PIPO Shift Register	16	M74HC194B1R	M74HC194M1R	M74HC194RM13TR
74HC195	4-Bit PIPO Shift Register	16	M74HC195B1R	M74HC195M1R	M74HC195RM13TR
74HC221	Dual Monostable Multivibrator	16	M74HC221B1R	M74HC221M1R	M74HC221RM13TR
74HC237	3 to 8 Line Decoder Latch	16	M74HC237B1R	M74HC237M1R	M74HC237RM13TR
74HC238	3 to 8 Line Decoder	16	M74HC238B1R	M74HC238M1R	M74HC238RM13TR
74HC240	Octal Bus Buffer (3-State/Inverted)	20	M74HC240B1R	M74HC240M1R	M74HC240RM13TR
74HCT240	Octal Bus Buffer (3-State/Inverted)	20	M74HCT240B1R	M74HCT240M1R	M74HCT240RM13TR
74HC241	Octal Bus Buffer (3-State)	20	M74HC241B1R	M74HC241M1R	M74HC241RM13TR
74HCT241	Octal Bus Buffer (3-State)	20	M74HCT241B1R	M74HCT241M1R	M74HCT241RM13TR
74HC242	Quad Bus Transceiver (3-State/Inverted)	14	M74HC242B1R	M74HC242M1R	M74HC242RM13TR
74HC243	Quad Bus Transceiver (3-State)	14	M74HC243B1R	M74HC243M1R	M74HC243RM13TR
74HC244	Octal Bus Buffer (3-State)	20	M74HC244B1R	M74HC244M1R	M74HC244RM13TR
74HCT244	Octal Bus Buffer (3-State)	20	M74HCT244B1R	M74HCT244M1R	M74HCT244RM13TR
74HC245	Octal Bus Transceiver (3-State)	20	M74HC245B1R	M74HC245M1R	M74HC245RM13TR
74HCT245	Octal Bus Transceiver (3-State)	20	M74HCT245B1R	M74HCT245M1R	M74HCT245RM13TR
74HC251	8-Channel Multiplexer (3-State)	16	M74HC251B1R	M74HC251M1R	M74HC251RM13TR
74HC253	Dual 4-Channel Multiplexer (3-State/Inverted)	16	M74HC253B1R	M74HC253M1R	M74HC253RM13TR
74HC257	Quad 2-Channel Multiplexer (3-State)	16	M74HC257B1R	M74HC257M1R	M74HC257RM13TR
74HCT257	Quad 2-Channel Multiplexer (3-State)	16	M74HCT257B1R	M74HCT257M1R	M74HCT257RM13TR
74HC258	Quad 2-Channel Multiplexer (3-State/Inverted)	16	M74HC258B1R	M74HC258M1R	M74HC258RM13TR
74HCT258	Quad 2-Channel Multiplexer (3-State/Inverted)	16	M74HCT258B1R	M74HCT258M1R	M74HCT258RM13TR
74HC259	8-Bit Addressable Latch	16	M74HC259B1R	M74HC259M1R	M74HC259RM13TR
74HC266	Quad Exclusive NOR Gate with Open Drain	14	M74HC266B1R	M74HC266M1R	M74HC266RM13TR
74HC273	Octal D-Type Flip-Flop with Clear	20	M74HC273B1R	M74HC273M1R	M74HC273RM13TR
74HCT273	Octal D-Type Flip-Flop with Clear	20	M74HCT273B1R	M74HCT273M1R	M74HCT273RM13TR
74HC279	Quad S-R Latch	16	M74HC279B1R	M74HC279M1R	M74HC279RM13TR
74HC280	9-Bit Parity Generator	14	M74HC280B1R	M74HC280M1R	M74HC280RM13TR
74HC283	4-Bit Binary Full Adder	16	M74HC283B1R	M74HC283M1R	M74HC283RM13TR
74HC292	Programmable Divider/Timer	16	M74HC292B1R	M74HC292M1R	M74HC292RM13TR
74HC294	Programmable Divider/Timer	16	M74HC294B1R	M74HC294M1R	M74HC294RM13TR
74HC298	Quad 2-Channel Multiplexer Register	16	M74HC298B1R	M74HC298M1R	M74HC298RM13TR
74HC299	8-Bit PIPO Shift Register (3-State)	20	M74HC299B1R	M74HC299M1R	M74HC299RM13TR
74HC323	8-Bit PIPO Shift Register (3-State)	20	M74HC323B1R	M74HC323M1R	M74HC323RM13TR
74HC352	Dual 4-Channel Multiplexer (Inverted)	16	M74HC352B1R	M74HC352M1R	M74HC352RM13TR
74HC353	Dual 4-Channel Multiplexer (3-State/Inverted)	16	M74HC353B1R	M74HC353M1R	M74HC353RM13TR
74HC354	8-Channel Multiplexer/Register (3 State)	20	M74HC354B1R	M74HC354M1R	M74HC354RM13TR
74HC356	8-Channel Multiplexer/Register (3-State)	20	M74HC356B1R	M74HC356M1R	M74HC356RM13TR
74HC365	Hex Bus Buffer (3-State)	16	M74HC365B1R	M74HC365M1R	M74HC365RM13TR
74HC366	Hex Bus Buffer (3-State/Inverted)	16	M74HC366B1R	M74HC366M1R	M74HC366RM13TR
74HC367	Hex Bus Buffer (3-State)	16	M74HC367B1R	M74HC367M1R	M74HC367RM13TR
74HCT367	Hex Bus Buffer (3-State)	16	M74HCT367B1R	M74HCT367M1R	M74HCT367RM13TR
74HC368	Hex Bus Buffer (3-State/Inverted)	16	M74HC368B1R	M74HC368M1R	M74HC368RM13TR
74HCT368	Hex Bus Buffer (3-State/Inverted)	16	M74HCT368B1R	M74HCT368M1R	M74HCT368RM13TR
74HC373	Octal D-Type Latch (3-State)	20	M74HC373B1R	M74HC373M1R	M74HC373RM13TR
74HCT373	Octal D-Type Latch (3-State)	20	M74HCT373B1R	M74HCT373M1R	M74HCT373RM13TR

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continued on next page

74HC/HCT Series HIGH SPEED CMOS

continued

Type	Function	Pins	Device No. & Anglia Order Code		
			DUAL IN-LINE	SURFACE MOUNT	
			DIP package  TUBE	SMD  STICK	SO package  TAPE & REEL
74HC374	Octal D-Type Flip-Flop (3-State)	20	M74HC374B1R	M74HC374M1R	M74HC374RM13TR
74HCT374	Octal D-Type Flip-Flop (3-State)	20	M74HCT374B1R	M74HCT374M1R	M74HCT374RM13TR
74HC375	Quad D-Type Latch	16	M74HC375B1R	M74HC375M1R	M74HC375RM13TR
74HC377	Octal D-Type Flip-Flop	20	M74HC377B1R	M74HC377M1R	M74HC377RM13TR
74HC386	Quad Exclusive OR Gate	14	M74HC386B1R	M74HC386M1R	M74HC386RM13TR
74HC390	Dual Decade Counter	16	M74HC390B1R	M74HC390M1R	M74HC390RM13TR
74HC393	Dual Binary Counter	14	M74HC393B1R	M74HC393M1R	M74HC393RM13TR
74HCT393	Dual Binary Counter	14	M74HCT393B1R	M74HCT393M1R	M74HCT393RM13TR
74HC423	Dual Monostable Multivibrator with Clear	16	M74HC423B1R	M74HC423M1R	M74HC423RM13TR
74HC533	Octal D-Type Latch (3-State/Inverted)	20	M74HC533B1R	M74HC533M1R	M74HC533RM13TR
74HCT533	Octal D-Type Latch (3-State/Inverted)	20	M74HCT533B1R	M74HCT533M1R	M74HCT533RM13TR
74HC534	Octal D-Type Flip-Flop (3-State/Inverted)	20	M74HC534B1R	M74HC534M1R	M74HC534RM13TR
74HCT534	Octal D-Type Flip-Flop (3-State/Inverted)	20	M74HCT534B1R	M74HCT534M1R	M74HCT534RM13TR
74HC540	Octal Bus Buffer (3-State/Inverted)	20	M74HC540B1R	M74HC540M1R	M74HC540RM13TR
74HCT540	Octal Bus Buffer (3-State/Inverted)	20	M74HCT540B1R	M74HCT540M1R	M74HCT540RM13TR
74HC541	Octal Bus Buffer (3-State)	20	M74HC541B1R	M74HC541M1R	M74HC541RM13TR
74HCT541	Octal Bus Buffer (3-State)	20	M74HCT541B1R	M74HCT541M1R	M74HCT541RM13TR
74HC563	Octal D-Type Latch (3-State/Inverted)	20	M74HC563B1R	M74HC563M1R	M74HC563RM13TR
74HCT563	Octal D-Type Latch (3-State/Inverted)	20	M74HCT563B1R	M74HCT563M1R	M74HCT563RM13TR
74HC564	Octal D-Type Flip-Flop (3-State/Inverted)	20	M74HC564B1R	M74HC564M1R	M74HC564RM13TR
74HCT564	Octal D-Type Flip-Flop (3-State/Inverted)	20	M74HCT564B1R	M74HCT564M1R	M74HCT564RM13TR
74HC573	Octal D-Type Latch (3-State)	20	M74HC573B1R	M74HC573M1R	M74HC573RM13TR
74HCT573	Octal D-Type Latch (3-State)	20	M74HCT573B1R	M74HCT573M1R	M74HCT573RM13TR
74HC574	Octal D-Type Flip-Flop (3-State)	20	M74HC574B1R	M74HC574M1R	M74HC574RM13TR
74HCT574	Octal D-Type Flip-Flop (3-State)	20	M74HCT574B1R	M74HCT574M1R	M74HCT574RM13TR
74HC590	8-Bit Binary Counter Register (3-State)	16	M74HC590B1R	M74HC590M1R	M74HC590RM13TR
74HC592	8-Bit Binary Counter with Input Register	16	M74HC592B1R	M74HC592M1R	M74HC592RM13TR
74HC593	8-Bit Binary Counter with Input Register (3-State)	20	M74HC593B1R	M74HC593M1R	M74HC593RM13TR
74HC595	8-Bit Shift Register Output Latch (3-State)	16	M74HC595B1R	M74HC595M1R	M74HC595RM13TR
74HC597	8-Bit Latch Shift Register	16	M74HC597B1R	M74HC597M1R	M74HC597RM13TR
74HC620	Octal Bus Transceiver (3-State/Inverted)	20	M74HC620B1R	M74HC620M1R	M74HC620RM13TR
74HC623	Octal Bus Transceiver (3-State)	20	M74HC623B1R	M74HC623M1R	M74HC623RM13TR
74HC640	Octal Bus Transceiver (3-State/Inverted)	20	M74HC640B1R	M74HC640M1R	M74HC640RM13TR
74HCT640	Octal Bus Transceiver (3-State/Inverted)	20	M74HCT640B1R	M74HCT640M1R	M74HCT640RM13TR
74HC643	Octal Bus Transceiver (3-State)	20	M74HC643B1R	M74HC643M1R	M74HC643RM13TR
74HCT643	Octal Bus Transceiver (3-State)	20	M74HCT643B1R	M74HCT643M1R	M74HCT643RM13TR
74HC646	Octal Bus Transceiver Register (3-State)	24	M74HC646B1R	M74HC646M1R	-
74HCT646	Octal Bus Transceiver Register (3-State)	24	M74HCT646B1R	M74HCT646M1R	-
74HC648	Octal Bus Transceiver Register (3-State/Inverted)	24	M74HC648B1R	M74HC648M1R	-
74HCT648	Octal Bus Transceiver Register (3-State/Inverted)	24	M74HCT648B1R	M74HCT648M1R	-
74HC651	Octal Bus Transceiver Register (3-State/Inverted)	24	M74HC651B1R	M74HC651M1R	-
74HCT651	Octal Bus Transceiver Register (3-State/Inverted)	24	M74HCT651B1R	M74HCT651M1R	-
74HC652	Octal Bus Transceiver Register	24	M74HC652B1R	M74HC652M1R	-
74HCT652	Octal Bus Transceiver Register	24	M74HCT652B1R	M74HCT652M1R	-
74HC670	4-Word x 4-Bit Register File (3-State)	16	M74HC670B1R	M74HC670M1R	M74HC670RM13TR
74HC688	8-Bit Equality Comparator	20	M74HC688B1R	M74HC688M1R	M74HC688RM13TR
74HCT688	8-Bit Equality Comparator	20	M74HCT688B1R	M74HCT688M1R	M74HCT688RM13TR
74HC690	Decade Counter Register (3-State)	20	M74HC690B1R	M74HC690M1R	M74HC690RM13TR
74HC691	4-Bit Binary Counter Register (3-State)	20	M74HC691B1R	M74HC691M1R	M74HC691RM13TR
74HC692	Decade Counter Register (3-State)	20	M74HC692B1R	M74HC692M1R	M74HC692RM13TR
74HC693	4-Bit Binary Counter Register (3-State)	20	M74HC693B1R	M74HC693M1R	M74HC693RM13TR
74HC696	U/D Decade Counter Register (3-State)	20	M74HC696B1R	M74HC696M1R	M74HC696RM13TR
74HC697	U/D 4-Bit Binary Counter/Register (3-State)	20	M74HC697B1R	M74HC697M1R	M74HC697RM13TR
74HC698	U/D Decade Counter Register (3-State)	20	M74HC698B1R	M74HC698M1R	M74HC698RM13TR
74HC699	U/D 4-Bit Binary Counter/Register (3-State)	20	M74HC699B1R	M74HC699M1R	M74HC699RM13TR
74HC4002	Dual 4-Input NOR Gate	14	M74HC4002B1R	M74HC4002M1R	M74HC4002RM13TR
74HC4016	Quad Bilateral Switches	14	M74HC4016B1R	M74HC4016M1R	M74HC4016RM13TR
74HC4017	Decade Counter/Divider	16	M74HC4017B1R	M74HC4017M1R	M74HC4017RM13TR
74HC4020	14-Stage Binary Counter	16	M74HC4020B1R	M74HC4020M1R	M74HC4020RM13TR
74HC4022	Octal Counter/Divider	16	M74HC4022B1R	M74HC4022M1R	M74HC4022RM13TR
74HC4024	7-Stage Binary Counter	14	M74HC4024B1R	M74HC4024M1R	M74HC4024RM13TR
74HC4028	BCD to Decimal Decoder	16	M74HC4028B1R	M74HC4028M1R	M74HC4028RM13TR

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74HC/HCT Series HIGH SPEED CMOS *continued*

Type	Function	Pins	Device No. & Anglia Order Code		
			DUAL IN-LINE DIP package TUBE	SURFACE MOUNT SO package STICK	SURFACE MOUNT SO package TAPE & REEL
74HC4040	12-Stage Binary Counter	16	M74HC4040B1R	M74HC4040M1R	M74HC4040RM13TR
74HC4049	Hex Buffer/Converter (Inverted)	16	M74HC4049B1R	M74HC4049M1R	M74HC4049RM13TR
74HC4050	Hex Buffer/Converter	16	M74HC4050B1R	M74HC4050M1R	M74HC4050RM13TR
74HC4051	Single 8-Channel Analog Multiplexer/Demultiplexer	16	M74HC4051B1R	M74HC4051M1R	M74HC4051RM13TR
74HC4052	Dual 4-Channel Analog Multiplexer/Demultiplexer	16	M74HC4052B1R	M74HC4052M1R	M74HC4052RM13TR
74HC4053	Triple 4-Channel Analog Multiplexer/Demultiplexer	16	M74HC4053B1R	M74HC4053M1R	M74HC4053RM13TR
74HC4060	14-Stage Binary Counter/Oscillator	16	M74HC4060B1R	M74HC4060M1R	M74HC4060RM13TR
74HC4066	Quad Bilateral Switch	14	M74HC4066B1R	M74HC4066M1R	M74HC4066RM13TR
74HC4072	Dual 4-Input OR Gate	14	M74HC4072B1R	M74HC4072M1R	M74HC4072RM13TR
74HC4075	Triple 3-Input OR Gate	14	M74HC4075B1R	M74HC4075M1R	M74HC4075RM13TR
74HC4078	8-Input NOR/OR Gate	14	M74HC4078B1R	M74HC4078M1R	M74HC4078RM13TR
74HC4094	8-Bit SIPO Shift Register Latch (3-State)	16	M74HC4094B1R	M74HC4094M1R	M74HC4094RM13TR
74HC4316	Quad Bilateral Switches	16	M74HC4316B1R	M74HC4316M1R	M74HC4316RM13TR
74HC4351	Analog Multiplexer	20	M74HC4351B1R	M74HC4351M1R	M74HC4351RM13TR
74HC4352	Analog Multiplexer	20	M74HC4352B1R	M74HC4352M1R	M74HC4352RM13TR
74HC4353	Analog Multiplexer	20	M74HC4353B1R	M74HC4353M1R	M74HC4353RM13TR
74HC4511	BCD to 7-Segment L/D/D (LED)	16	M74HC4511B1R	M74HC4511M1R	M74HC4511RM13TR
74HC4514	4 to 16 Line Decoder Latch	24	M74HC4514B1R	M74HC4514M1R	M74HC4514RM13TR
74HC4515	4 to 16 Line Decoder Latch (Inverted)	24	M74HC4515B1R	M74HC4515M1R	M74HC4515RM13TR
74HC4518	Dual Decade Counter	16	M74HC4518B1R	M74HC4518M1R	M74HC4518RM13TR
74HC4520	Dual 4-Bit Binary Counter	16	M74HC4520B1R	M74HC4520M1R	M74HC4520RM13TR
74HC4538	Dual Monostable Multivibrator	16	M74HC4538B1R	M74HC4538M1R	M74HC4538RM13TR
74HC4543	BCD to 7-Segment L/D/D (LCD)	16	M74HC4543B1R	M74HC4543M1R	M74HC4543RM13TR
74HCT7007	Hex Buffer	14	M74HCT7007B1R	M74HCT7007M1R	M74HCT7007RM13TR
74HC7240	Octal Bus Buffer	20	M74HC7240B1R	M74HC7240M1R	M74HC7240RM13TR
74HC7241	Octal Bus Buffer	20	M74HC7241B1R	M74HC7241M1R	M74HC7241RM13TR
74HC7244	Octal Bus Buffer	20	M74HC7244B1R	M74HC7244M1R	M74HC7244RM13TR
74HC7245	Octal Bus Buffer	20	M74HC7245B1R	M74HC7245M1R	M74HC7245RM13TR
74HCT7259	8-Bit Addressable Latch/Decoder/Relays Driver (Open Drain, Inverting Output)	16	M74HCT7259B1R	M74HCT7259M1R	M74HCT7259RM13TR
74HC7266	Quad Exclusive NOR Gate	14	M74HC7266B1R	M74HC7266M1R	M74HC7266RM13TR
74HC7292	Programmable Divider/Timer	16	M74HC7292B1R	M74HC7292M1R	M74HC7292RM13TR
74HC7294	Programmable Divider/Timer	16	M74HC7294B1R	M74HC7294M1R	M74HC7294RM13TR
74HC7640	Bidirectional Octal Bus Buffer	20	M74HC7640B1R	M74HC7640M1R	M74HC7640RM13TR
74HC7643	Bidirectional Octal Bus Buffer	20	M74HC7643B1R	M74HC7643M1R	M74HC7643RM13TR
74HC7645	Bidirectional Octal Bus Buffer	20	M74HC7645B1R	M74HC7645M1R	M74HC7645RM13TR
74HC40102	Dual BCD Programmable Down Counter	16	M74HC40102B1R	M74HC40102M1R	M74HC40102RM13TR
74HC40103	8-Bit Binary Programmable Down Counter	16	M74HC40103B1R	M74HC40103M1R	M74HC40103RM13TR

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74H1 Series SINGLE GATE HCMOS

5.0V

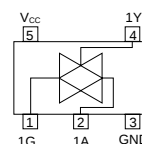
Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage	V _{CC}	2 to 12	V
Input Voltage	V _I	0 to V _{CC}	V
Operating Temperature	T _A	- 40 to +85	°C

A single bilateral switch ($\frac{1}{4}$ 4066) housed in a SOT23-5L package.

Type	Function	Device No. & Anglia Order Code	
		SURFACE MOUNT SOT23-5L package TAPE & REEL	74H1G66
74H1G66	Single Bilateral Switch		

Pin-out (top view)



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PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

4000B Series CMOS

shown overleaf > > >

4000B Series CMOS

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	3 to 18	V
Input Voltage	V_I	0 to V_{CC}	V
Operating Temperature	T_A	-40 to +85	C

A family of well established CMOS logic offering low power consumption, high noise immunity and a wide supply voltage range.

Type	Function	Pins	Device No. & Anglia Order Code		
			DUAL IN-LINE DIP package TUBE	SURFACE MOUNT STICK TAPE & REEL	
4000B	Dual 3-Input NOR Gate plus Inverter	14	HCF4000BEY	HCF4000BM1	HCF4000M013TR
4001B	Quad 2-Input NOR Gate	14	HCF4001BEY	HCF4001BM1	HCF4001M013TR
4002B	Dual 4-Input NOR Gate	14	HCF4002BEY	HCF4002BM1	HCF4002M013TR
4006B	18-Stage Static Shift Register	14	HCF4006BEY	HCF4006BM1	HCF4006M013TR
4007UB	Dual Complementary Pair plus Inverter	14	HCF4007UBEY	HCF4007UBM1	HCF4007UM013TR
4008B	4-bit Full Adder	16	HCF4008BEY	HCF4008BM1	HCF4008M013TR
4009UB	Hex Buffer/Converter Inverting	16	HCF4009UBEY	HCF4009UBM1	HCF4009UM013TR
4010B	Hex Buffer/Converter Non-Inverting	16	HCF4010BEY	HCF4010BM1	HCF4010M013TR
4011B	Quad 2-Input NAND Gate	14	HCF4011BEY	HCF4011BM1	HCF4011M013TR
4012B	Dual 4-Input NAND Gate	14	HCF4012BEY	HCF4012BM1	HCF4012M013TR
4013B	Dual D Flip-Flop	14	HCF4013BEY	HCF4013BM1	HCF4013M013TR
4014B	8-Stage Static Shift Register	16	HCF4014BEY	HCF4014BM1	HCF4014M013TR
4015B	Dual 4-Stage Static Shift Register	16	HCF4015BEY	HCF4015BM1	HCF4015M013TR
4016B	Quad Bilateral Switch	14	HCF4016BEY	HCF4016BM1	HCF4016M013TR
4017B	Decade Counter/Divider	16	HCF4017BEY	HCF4017BM1	HCF4017M013TR
4018B	Presettable Divide-by-N counter	16	HCF4018BEY	HCF4018BM1	HCF4018M013TR
4019B	Quad AND/OR Select Gate	16	HCF4019BEY	HCF4019BM1	HCF4019M013TR
4020B	14-Stage Binary/Ripple Counter	16	HCF4020BEY	HCF4020BM1	HCF4020M013TR
4021B	8-Stage Static Shift Register	16	HCF4021BEY	HCF4021BM1	HCF4021M013TR
4022B	Divide-By-8 Counter/Divider	16	HCF4022BEY	HCF4022BM1	HCF4022M013TR
4023B	Triple 3-Input NAND Gate	14	HCF4023BEY	HCF4023BM1	HCF4023M013TR
4024B	7-Stage Binary/Ripple Counter	14	HCF4024BEY	HCF4024BM1	HCF4024M013TR
4025B	Triple 3-Input NOR Gate	14	HCF4025BEY	HCF4025BM1	HCF4025M013TR
4026B	Decade Coun./Div. 7-Segment Display Driver	16	HCF4026BEY	HCF4026BM1	HCF4026M013TR
4027B	Dual J-K Master-Slave Flip-Flop	16	HCF4027BEY	HCF4027BM1	HCF4027M013TR
4028B	BCD to Decimal Decoder	16	HCF4028BEY	HCF4028BM1	HCF4028M013TR
4029B	Presettable Up/Down Counter	16	HCF4029BEY	HCF4029BM1	HCF4029M013TR
4030B	Quad Exclusive OR Gate	14	HCF4030BEY	HCF4030BM1	HCF4030M013TR
4031B	64-Stage Static Shift Register	16	HCF4031BEY	-	-
4032B	Triple Serial Adder	16	HCF4032BEY	HCF4032BM1	HCF4032M013TR
4033B	Decade Coun./Div. 7-Segment Display Driver	16	HCF4033BEY	HCF4033BM1	HCF4033M013TR
4034B	8-Stage Static Bidirectional Bus Register	24	HCF4034BEY	HCF4034BM1	-
4035B	4-Stage Parallel I/O Shift Register	16	HCF4035BEY	HCF4035BM1	HCF4035M013TR
4038B	Triple Serial Adder	16	HCF4038BEY	HCF4038BM1	HCF4038M013TR
4040B	12-Stage Binary/Ripple Counter	16	HCF4040BEY	HCF4040BM1	HCF4040M013TR
4041UB	Quad True/Complement Buffer	14	HCF4041UBEY	HCF4041UBM1	HCF4041UM013TR
4042B	Quad Clocked D Latch	16	HCF4042BEY	HCF4042BM1	HCF4042M013TR
4043B	Quad NOR R/S Latch (3-State)	16	HCF4043BEY	HCF4043BM1	HCF4043M013TR
4044B	Quad NAND R/S Latch (3-State)	16	HCF4044BEY	HCF4044BM1	HCF4044M013TR
4045B	21-Stage Counter	16	HCF4045BEY	HCF4045BM1	HCF4045M013TR
4046B	Micropower Phase Locked Loop	16	HCF4046BEY	HCF4046BM1	-
4047B	Monostable/Astable Multivibrator	14	HCF4047BEY	HCF4047BM1	HCF4047M013TR
4048B	Multifunction Expandable 8-Input Gate	16	HCF4048BEY	HCF4048BM1	HCF4048M013TR
4049UB	Hex Inverting Buffer/Converter	16	HCF4049UBEY	HCF4049UBM1	HCF4049UM013TR
4050B	Hex Non-Inverting Buffer/Converter	16	HCF4050BEY	HCF4050BM1	HCF4050M013TR
4051B	Single 8-Channel Analog Multiplexer/Demultiplexer	16	HCF4051BEY	HCF4051BM1	HCF4051M013TR
4052B	Dual 4-Channel Analog Multiplexer/Demultiplexer	16	HCF4052BEY	HCF4052BM1	HCF4052M013TR
4053B	Triple 2-Channel Analog Multiplexer/Demultiplexer	16	HCF4053BEY	HCF4053BM1	HCF4053M013TR
4054B	4-Segment Display Driver	16	HCF4054BEY	HCF4054BM1	HCF4054M013TR
4055B	BCD to 7-Segment Decoder/Driver	16	HCF4055BEY	HCF4055BM1	HCF4055M013TR
4056B	BCD to 7-Segment Decoder/Driver	16	HCF4056BEY	HCF4056BM1	HCF4056M013TR
4060B	14-Stage Counter/Driver and Oscillator	16	HCF4060BEY	HCF4060BM1	HCF4060M013TR
4063B	4-Bit Magnitude Comparator	16	HCF4063BEY	HCF4063BM1	HCF4063M013TR
4066B	Quad Bilateral Switch	14	HCF4066BEY	HCF4066BM1	HCF4066M013TR
4067B	Single 16-Channel Analog Multiplexer/Demultiplexer	24	HCF4067BEY	HCF4067BM1	-
4068B	8-Input NAND/AND Gate	14	HCF4068BEY	HCF4068BM1	HCF4068M013TR
4069UB	Hex Inverter	14	HCF4069UBEY	HCF4069UBM1	HCF4069UM013TR
4070B	Quad Exclusive OR Gate	14	HCF4070BEY	HCF4070BM1	HCF4070M013TR
4071B	Quad 2-Input OR Gate	14	HCF4071BEY	HCF4071BM1	HCF4071M013TR
4072B	Dual 4-Input OR Gate	14	HCF4072BEY	HCF4072BM1	HCF4072M013TR
4073B	Triple 3-Input AND Gate	14	HCF4073BEY	HCF4073BM1	HCF4073M013TR

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continued on next page

4000B Series CMOS

continued

Type	Function	Pins	Device No. & Anglia Order Code		
			DUAL IN-LINE DIP package 	SURFACE MOUNT SO package 	
			(TUBE)	(STICK)	(TAPE & REEL)
4075B	Triple 3-Input OR Gate	14	HCF4075BEY	HCF4075BM1	HCF4075M013TR
4076B	4-Bit D-Type Register	16	HCF4076BEY	HCF4076BM1	HCF4076M013TR
4077B	Quad Exclusive NOR Gate	14	HCF4077BEY	HCF4077BM1	HCF4077M013TR
4078B	8-Input NOR/OR Gate	14	HCF4078BEY	HCF4078BM1	HCF4078M013TR
4081B	Quad 2-Input AND Gate	14	HCF4081BEY	HCF4081BM1	HCF4081M013TR
4082B	Dual 4-Input AND Gate	14	HCF4082BEY	HCF4082BM1	HCF4082M013TR
4085B	Dual 2-Wide 2-Input AND-OR-Inverter Gate	14	HCF4085BEY	HCF4085BM1	HCF4085M013TR
4086B	Expand. 4-Wide 2-Input AND-OR Inverter Gate	14	HCF4086BEY	HCF4086BM1	HCF4086M013TR
4089B	Binary Rate Multiplexer	16	HCF4089BEY	—	—
4093B	Quad 2-Input NAND Schmitt Trigger	14	HCF4093BEY	HCF4093BM1	HCF4093M013TR
4094B	8-Stage Shift-AND-Store Bus Register	16	HCF4094BEY	HCF4094BM1	HCF4094M013TR
4095B	Gated J-K Master-Slave Flip-Flop	14	HCF4095BEY	HCF4095BM1	HCF4095M013TR
4096B	Gated J-K Master-Slave Flip-Flop	14	HCF4096BEY	HCF4096BM1	HCF4096M013TR
4097B	Differential 8-Channel Analog Multiplexer/Demultiplexer	24	HCF4097BEY	HCF4097BM1	—
4098B	Dual Monostable Multivibrator	16	HCF4098BEY	HCF4098BM1	HCF4098M013TR
4099B	8-Bit Addressable Latch	16	HCF4099BEY	HCF4099BM1	HCF4099M013TR
4502B	Strobed Hex Inverter/Buffer	16	HCF4502BEY	HCF4502BM1	HCF4502M013TR
4503B	Hex Buffer (3-State Non-Inverting)	16	HCF4503BEY	HCF4503BM1	HCF4503M013TR
4504B	Hex TTL or CMOS to CMOS Level Shifter	16	HCF4504BEY	HCF4504BM1	HCF4504M013TR
4508B	Dual 4-Bit Latch (3-State Outputs)	24	HCF4508BEY	HCF4508BM1	—
4510B	Presetable 4-Bit BCD Up/Down Counter	16	HCF4510BEY	—	—
4511B	BCD to 7-Segment Latch-Decoder/Driver	16	HCF4511BEY	HCF4511BM1	HCF4511M013TR
4512B	8-Channel Data Selector with 3-State Output	16	HCF4512BEY	HCF4512BM1	HCF4512M013TR
4514B	4-Bit Latch/4 to 16 Line Decoder (Out. High)	24	HCF4514BEY	HCF4514BM1	—
4515B	4-Bit Latch/4 to 16 Line Decoder (Out. Low)	24	HCF4515BEY	HCF4515BM1	—
4516B	Presetable 4-Bit Binary Up/Down Counter	16	HCF4516BEY	HCF4516BM1	HCF4516M013TR
4517B	Dual 64-Stage Static Shift Register	16	HCF4517BEY	—	—
4518B	Dual BCD Up Counter	16	HCF4518BEY	HCF4518BM1	HCF4518M013TR
4519B	4-Bit AND/OR Selector	16	HCF4519BEY	HCF4519BM1	HCF4519M013TR
4520B	Dual Binary Up Counter	16	HCF4520BEY	HCF4520BM1	HCF4520M013TR
4521B	24-Stage Frequency Divider	16	HCF4521BEY	HCF4521BM1	HCF4521M013TR
4522B	Programmable BCD Divide-by-N Counter	16	HCF4522BEY	HCF4522BM1	HCF4522M013TR
4527B	BCD Rate Multiplier	16	HCF4527BEY	—	—
4529B	Dual 4-Channel or Single 8-Channel Analog Data Selector	16	HCF4529BEY	—	—
4532B	8-Input Priority Encoder	16	HCF4532BEY	HCF4532BM1	HCF4532M013TR
4536B	Programmable Timer	16	HCF4536BEY	—	—
4538B	Dual Precision Monostable Multivibrator	16	HCF4538BEY	HCF4538BM1	HCF4538M013TR
4541B	Programmable Timer	14	HCF4541BEY	HCF4541BM1	HCF4541M013TR
4543B	BCD to 7 Segment Latch/Decoder/Driver	16	HCF4543BEY	HCF4543BM1	HCF4543M013TR
4555B	Dual 1 of 4 Decoder/Demultiplexer (Out. High)	16	HCF4555BEY	HCF4555BM1	HCF4555M013TR
4556B	Dual 1 of 4 Decoder/Demultiplexer (Out. Low)	16	HCF4556BEY	HCF4556BM1	HCF4556M013TR
4560B	NBCD Adder	16	HCF4560BEY	HCF4560BM1	HCF4560M013TR
4566B	Industrial Time-Base Generator	16	HCF4566BEY	HCF4566BM1	HCF4566M013TR
4572B	Hex Gate	16	HCF4572BEY	HCF4572BM1	HCF4572M013TR
4585B	4-Bit Magnitude Comparator	16	HCF4585BEY	HCF4585BM1	HCF4585M013TR
4724B	8-Bit Addressable Latch	16	HCF4724BEY	—	—
40100B	32-Stage Static Left/Right Shift Register	16	HCF40100BEY	HCF40100BM1	HCF40100M013TR
40101B	9-Bit Parity Generator/Checker	14	HCF40101BEY	HCF40101BM1	HCF40101M013TR
40102B	Presetable 2-Decade BCD Down Counter	16	HCF40102BEY	—	—
40103B	Presetable 8-Bit Binary Down Counter	16	HCF40103BEY	—	—
40104B	4-Bit Bidirectional Universal Shift Register	16	HCF40104BEY	—	—
40105B	4-Bit x 16-Word	16	HCF40105BEY	—	—
40106B	Hex Schmitt Trigger	14	HCF40106BEY	HCF40106BM1	HCF40106M013TR
40107B	Dual 2-Input NAND Buffer/Driver	8	HCF40107BEY	HCF40107BM1	HCF40107M013TR
40108B	4 x 4 Multiplier Register	24	HCF40108BEY	HCF40108BM1	—
40109B	Quad Low to High Voltage Level Shifter	16	HCF40109BEY	HCF40109BM1	HCF40109M013TR
40110B	Decade Up Down Counter/Dec./Latch/Driver	16	HCF40110BEY	—	—
40147B	10 to 4 Line BCD Priority Encoder	16	HCF40147BEY	HCF40147BM1	HCF40147M013TR
40160B	Decade Counter/Asynchronous Clear	16	HCF40160BEY	HCF40160BM1	HCF40160M013TR
40161B	Binary Counter/Asynchronous Clear	16	HCF40161BEY	HCF40161BM1	HCF40161M013TR
40162B	Decade Counter/Synchronous Clear	16	HCF40162BEY	HCF40162BM1	HCF40162M013TR
40163B	Binary Counter/Synchronous Clear	16	HCF40163BEY	HCF40163BM1	HCF40163M013TR
40174B	Hex D Flip-Flop	16	HCF40174BEY	HCF40174BM1	HCF40174M013TR
40181B	4-Bit Arithmetic Logic Unit	24	HCF40181BEY	—	—
40182B	Look-Ahead Carry Generator	16	HCF40182BEY	HCF40182BM1	HCF40182M013TR
40192B	Presetable 4-Bit BCD Up/Down Counter	16	HCF40192BEY	HCF40192BM1	HCF40192M013TR
40193B	Presetable 4-Bit Binary Up/Down Counter	16	HCF40193BEY	HCF40193BM1	HCF40193M013TR
40194B	4-Bit Bidirectional Universal Shift Register	16	HCF40194BEY	—	—
40208B	4 x 4 Multipoint Register	24	HCF40208BEY	HCF40208BM1	—
40257B	Quad 2-Line to 1-Line Data Selector/Multiplexer	16	HCF40257BEY	HCF40257BM1	HCF40257M013TR

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY

5.0V CMOS Logic Families

Comparison Table

74 Series FAMILY	Switching Speed	Output Current	Maximum Input Voltage	Power Down Protection	PAGES
<i>HC/HCT</i>	23ns	±4/6mA	V _{CC}	NO	102 - 105
<i>AC/ACT</i>	7.5ns	±24mA	V _{CC}	NO	109
<i>VHC/VHCT</i>	8.5ns	±8mA	V _{CC}	YES*	110 - 111

* VHCT only

3.3V CMOS Logic Families

Comparison Table – shown on page 113

1.8V CMOS Logic Family

Full range shown on page 115

PACKAGE DIMENSIONS

 refer to General Data section
shown later in this shortform

74AC/ACT Series ADVANCED HIGH SPEED CMOS

5.0V

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage AC Series	V_{CC}	2 to 6	V
ACT Series		4.5 to 5.5	V
Input Voltage	V_I	0 to V_{CC}	V
Operating Temperature	T_A	-40 to +85	C

Offers the following advantages over standard 74HC/HCT :

- Faster switching speed
- Lower power consumption
- Higher output current

See page 108 for data comparison.

			Device No. & Anglia Order Code		
Type	Function	Pins	DUAL IN-LINE	SURFACE MOUNT	
			DIP package TUBE	SMD STICK	SO package TAPE & REEL
74AC00	Quad 2-Input NAND Gate	14	74AC00B	74AC00M	74AC00MTR
74ACT00	Quad 2-Input NAND Gate	14	74ACT00B	74ACT00M	74ACT00MTR
74AC02	Quad 2-Input NOR Gate	14	74AC02B	74AC02M	74AC02MTR
74ACT02	Quad 2-Input NOR Gate	14	74ACT02B	74ACT02M	74ACT02MTR
74AC04	Hex Inverter	14	74AC04B	74AC04M	74AC04MTR
74ACT04	Hex Inverter	14	74ACT04B	74ACT04M	74ACT04MTR
74AC08	Quad 2-Input AND Gate	14	74AC08B	74AC08M	74AC08MTR
74ACT08	Quad 2-Input AND Gate	14	74ACT08B	74ACT08M	74ACT08MTR
74AC10	Triple 3-Input NAND Gate	14	74AC10B	74AC10M	74AC10MTR
74ACT10	Triple 3-Input NAND Gate	14	74ACT10B	74ACT10M	74ACT10MTR
74AC11	Triple 3-Input NAND Gate	14	74AC11B	74AC11M	74AC11MTR
74ACT11	Triple 3-Input NAND Gate	14	74ACT11B	74ACT11M	74ACT11MTR
74AC14	Hex Schmitt Inverter	14	74AC14B	74AC14M	74AC14MTR
74ACT14	Hex Schmitt Inverter	14	74ACT14B	74ACT14M	74ACT14MTR
74AC20	Dual 4-Input NAND Gate	14	74AC20B	74AC20M	74AC20MTR
74ACT20	Dual 4-Input NAND Gate	14	74ACT20B	74ACT20M	74ACT20MTR
74AC32	Quad 2-Input OR Gate	14	74AC32B	74AC32M	74AC32MTR
74ACT32	Quad 2-Input OR Gate	14	74ACT32B	74ACT32M	74ACT32MTR
74AC74	Dual D-Type Flip-Flop with Preset and Clear	14	74AC74B	74AC74M	74AC74MTR
74ACT74	Dual D-Type Flip-Flop with Preset and Clear	14	74ACT74B	74ACT74M	74ACT74MTR
74AC86	Quad Exclusive OR Gate	14	74AC86B	74AC86M	74AC86MTR
74ACT86	Quad Exclusive OR Gate	14	74ACT86B	74ACT86M	74ACT86MTR
74AC125	Quad Bus Buffer (3-State)	14	74AC125B	74AC125M	74AC125MTR
74ACT125	Quad Bus Buffer (3-State)	14	74ACT125B	74ACT125M	74ACT125MTR
74AC138	3 to 8 Line Decoder (Inverted)	16	74AC138B	74AC138M	74AC138MTR
74ACT138	3 to 8 Line Decoder (Inverted)	16	74ACT138B	74ACT138M	74ACT138MTR
74AC157	Quad 2-Channel Multiplexer	16	74AC157B	74AC157M	74AC157MTR
74ACT157	Quad 2-Channel Multiplexer	16	74ACT157B	74ACT157M	74ACT157MTR
74AC158	Quad 2-Channel Multiplexer	16	74AC158B	74AC158M	74AC158MTR
74ACT158	Quad 2-Channel Multiplexer	16	74ACT158B	74ACT158M	74ACT158MTR
74AC161	Synchronous Presettable 4-Bit Counter	16	74AC161B	74AC161M	74AC161MTR
74ACT161	Synchronous Presettable 4-Bit Counter	16	74ACT161B	74ACT161M	74ACT161MTR
74AC163	Synchronous Presettable 4-Bit Counter	16	74AC163B	74AC163M	74AC163MTR
74ACT163	Synchronous Presettable 4-Bit Counter	16	74ACT163B	74ACT163M	74ACT163MTR
74AC174	Hex D-Type Flip-Flop with Clear	16	74AC174B	74AC174M	74AC174MTR
74ACT174	Hex D-Type Flip-Flop with Clear	16	74ACT174B	74ACT174M	74ACT174MTR
74AC240	Octal Bus Buffer (3-State/Inverted)	20	74AC240B	74AC240M	74AC240MTR
74ACT240	Octal Bus Buffer (3-State/Inverted)	20	74ACT240B	74ACT240M	74ACT240MTR
74AC244	Octal Bus Buffer (3-State)	20	74AC244B	74AC244M	74AC244MTR
74ACT244	Octal Bus Buffer (3-State)	20	74ACT244B	74ACT244M	74ACT244MTR
74AC245	Octal Bus Transceiver (3-State)	20	74AC245B	74AC245M	74AC245MTR
74ACT245	Octal Bus Transceiver (3-State)	20	74ACT245B	74ACT245M	74ACT245MTR
74AC257	Quad 2-Channel Multiplexer (3-State)	16	74AC257B	74AC257M	74AC257MTR
74ACT257	Quad 2-Channel Multiplexer (3-State)	16	74ACT257B	74ACT257M	74ACT257MTR
74AC273	Octal D-Type Flip-Flop with Clear	20	74AC273B	74AC273M	74AC273MTR
74ACT273	Octal D-Type Flip-Flop with Clear	20	74ACT273B	74ACT273M	74ACT273MTR
74AC299	8-Bit PIPO Shift Register with Asynchronous Clear	20	74AC299B	74AC299M	74AC299MTR
74ACT299	8-Bit PIPO Shift Register with Asynchronous Clear	20	74ACT299B	74ACT299M	74ACT299MTR
74AC373	Octal D-Type Latch (3-State)	20	74AC373B	74AC373M	74AC373MTR
74ACT373	Octal D-Type Latch (3-State)	20	74ACT373B	74ACT373M	74ACT373MTR
74AC374	Octal D-Type Flip-Flop (3-State)	20	74AC374B	74AC374M	74AC374MTR
74ACT374	Octal D-Type Flip-Flop (3-State)	20	74ACT374B	74ACT374M	74ACT374MTR
74AC573	Octal D-Type Latch (3-State)	20	74AC573B	74AC573M	74AC573MTR
74ACT573	Octal D-Type Latch (3-State)	20	74ACT573B	74ACT573M	74ACT573MTR
74AC574	Octal D-Type Flip-Flop (3-State)	20	74AC574B	74AC574M	74AC574MTR
74ACT574	Octal D-Type Flip-Flop (3-State)	20	74ACT574B	74ACT574M	74ACT574MTR

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY

74VHC/VHCT Series CMOS

shown overleaf >>>>

74VHC/VHCT Series LOW NOISE, VERY HIGH SPEED CMOS

5.0V

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage VHC Series	V _{CC}	2 to 5.5	V
VHCT Series		4.5 to 5.5	V
Input Voltage	V _I	0 to V _{CC}	V
Operating Temperature	T _A	– 40 to +85	°C

Offers the following advantages over standard 74HC/HCT :

- Faster switching speed
- Lower power consumption
- Lower noise
- Power down input protection
- Power down output protection (VHCT only)

See page 108 for data comparison.

			Device No. & Anglia Order Code			
Type	Function	Pins	SURFACE MOUNT			
			TSSOP package	SMD		SO package
			(STICK)	(TAPE & REEL)	(STICK)	(TAPE & REEL)
74VHC00	Quad 2-Input NAND Gate	14	74VHC00T	74VHC00TTR	74VHC00M	74VHC00MTR
74VHCT00	Quad 2-Input NAND Gate	14	74VHCT00AT	74VHCT00ATTR	74VHCT00AM	74VHCT00AMTR
74VHC02	Quad 2-Input NOR Gate	14	74VHC02T	74VHC02TTR	74VHC02M	74VHC02MTR
74VHCT02	Quad 2-Input NOR Gate	14	74VHCT02AT	74VHCT02ATTR	74VHCT02AM	74VHCT02AMTR
74VHC03	Quad 2-Input NAND (Open Drain)	14	74VHC03T	74VHC03TTR	74VHC03M	74VHC03MTR
74VHCT03	Quad 2-Input NAND (Open Drain)	14	74VHCT03AT	74VHCT03ATTR	74VHCT03AM	74VHCT03AMTR
74VHC04	Hex Inverter	14	74VHC04T	74VHC04TTR	74VHC04M	74VHC04MTR
74VHCT04	Hex Inverter	14	74VHCT04AT	74VHCT04ATTR	74VHCT04AM	74VHCT04AMTR
74VHC05	Hex Inverter (Single Stage)	14	74VHC05T	74VHC05TTR	74VHC05M	74VHC05MTR
74VHCT05	Hex Inverter (Open Stage)	14	74VHCT05AT	74VHCT05ATTR	74VHCT05AM	74VHCT05AMTR
74VHC08	Quad 2-Input AND Gate	14	74VHC08T	74VHC08TTR	74VHC08M	74VHC08MTR
74VHCT08	Quad 2-Input AND Gate	14	74VHCT08AT	74VHCT08ATTR	74VHCT08AM	74VHCT08AMTR
74VHC14	Hex Schmitt Trigger	14	74VHC14T	74VHC14TTR	74VHC14M	74VHC14MTR
74VHCT14	Hex Schmitt Trigger	14	74VHCT14AT	74VHCT14ATTR	74VHCT14AM	74VHCT14AMTR
74VHC20	Dual 4-Input NAND Gate	14	74VHC20T	74VHC20TTR	74VHC20M	74VHC20MTR
74VHCT20	Dual 4-Input NAND Gate	14	74VHCT20AT	74VHCT20ATTR	74VHCT20AM	74VHCT20AMTR
74VHC27	Triple 3-Input NOR Gate	14	74VHC27T	74VHC27TTR	74VHC27M	74VHC27MTR
74VHCT27	Triple 3-Input NOR Gate	14	74VHCT27AT	74VHCT27ATTR	74VHCT27AM	74VHCT27AMTR
74VHC32	Quad 2-Input OR Gate	14	74VHC32T	74VHC32TTR	74VHC32M	74VHC32MTR
74VHCT32	Quad 2-Input OR Gate	14	74VHCT32AT	74VHCT32ATTR	74VHCT32AM	74VHCT32AMTR
74VHC74	Dual D-Type Flip-Flop	14	74VHC74T	74VHC74TTR	74VHC74M	74VHC74MTR
74VHCT74	Dual D-Type Flip-Flop	14	74VHCT74AT	74VHCT74ATTR	74VHCT74AM	74VHCT74AMTR
74VHC86	Quad Exclusive OR Gate	14	74VHC86T	74VHC86TTR	74VHC86M	74VHC86MTR
74VHCT86	Quad Exclusive OR Gate	14	74VHCT86AT	74VHCT86ATTR	74VHCT86AM	74VHCT86AMTR
74VHC123A	Dual Retrigger Mono Multivibrator	16	74VHC123AT	74VHC123ATTR	74VHC123AM	74VHC123AMTR
74VHC125	3-State Quad Bus Buffer	14	74VHC125T	74VHC125TTR	74VHC125M	74VHC125MTR
74VHCT125	3-State Quad Bus Buffer	14	74VHCT125AT	74VHCT125ATTR	74VHCT125AM	74VHCT125AMTR
74VHC126	3-State Quad Bus Buffer	14	74VHC126T	74VHC126TTR	74VHC126M	74VHC126MTR
74VHCT126	3-State Quad Bus Buffer	14	74VHCT126AT	74VHCT126ATTR	74VHCT126AM	74VHCT126AMTR
74VHC132	Quad 2-Input Schmitt NAND Gate	14	74VHC132T	74VHC132TTR	74VHC132M	74VHC132MTR
74VHCT132	Quad 2-Input Schmitt NAND Gate	14	74VHCT132AT	74VHCT132ATTR	74VHCT132AM	74VHCT132AMTR
74VHC138	Inverting 3 to 8 Line Decoder	16	74VHC138T	74VHC138TTR	74VHC138M	74VHC138MTR
74VHCT138	Inverting 3 to 8 Line Decoder	16	74VHCT138AT	74VHCT138ATTR	74VHCT138AM	74VHCT138AMTR
74VHC139	Dual 2 to 4 Line Decoder/Demultiplexer	16	74VHC139T	74VHC139TTR	74VHC139M	74VHC139MTR
74VHCT139	Dual 2 to 4 Line Decoder/Demultiplexer	16	74VHCT139AT	74VHCT139ATTR	74VHCT139AM	74VHCT139AMTR
74VHC157	Quad 2-Channel Multiplexer	16	74VHC157T	74VHC157TTR	74VHC157M	74VHC157MTR
74VHCT157	Quad 2-Channel Multiplexer	16	74VHCT157AT	74VHCT157ATTR	74VHCT157AM	74VHCT157AMTR
74VHC174	Hex D-Type Flip-Flop with Clear	16	74VHC174T	74VHC174TTR	74VHC174M	74VHC174MTR
74VHCT174	Hex D-Type Flip-Flop with Clear	16	74VHCT174AT	74VHCT174ATTR	74VHCT174AM	74VHCT174AMTR
74VHC238	3 to 8 Line Decoder	16	74VHC238T	74VHC238TTR	74VHC238M	74VHC238MTR
74VHCT238	3 to 8 Line Decoder	16	74VHCT238AT	74VHCT238ATTR	74VHCT238AM	74VHCT238AMTR
74VHC240	Inverting Octal Bus Buffer (3-State)	20	74VHC240T	74VHC240TTR	74VHC240M	74VHC240MTR
74VHCT240	Inverting Octal Bus Buffer (3-State)	20	74VHCT240AT	74VHCT240ATTR	74VHCT240AM	74VHCT240AMTR
74VHC244	Octal Bus Buffer (3-State)	20	74VHC244T	74VHC244TTR	74VHC244M	74VHC244MTR
74VHCT244	Octal Bus Buffer (3-State)	20	74VHCT244AT	74VHCT244ATTR	74VHCT244AM	74VHCT244AMTR
74VHC245	Octal Bus Transceiver (3-State)	20	74VHC245T	74VHC245TTR	74VHC245M	74VHC245MTR
74VHCT245	Octal Bus Transceiver (3-State)	20	74VHCT245AT	74VHCT245ATTR	74VHCT245AM	74VHCT245AMTR

continued on next page

SUPPLIED IN FULL STICKS/REELS ONLY

74VHC/VHCT Series LOW NOISE, VERY HIGH SPEED CMOS

continued

Type	Function	Pins	Device No. & Anglia Order Code			
			SURFACE MOUNT			
			TSSOP package   (STICK)	 (TAPE & REEL)	SO package   (STICK)	 (TAPE & REEL)
74VHC257	Quad-Channel Multiplexer (3-State)	16	74VHC257T	74VHC257TTR	74VHC257M	74VHC257MTR
74VHCT257	Quad-Channel Multiplexer (3-State)	16	74VHCT257AT	74VHCT257ATTR	74VHCT257AM	74VHCT257AMTR
74VHC273	Octal D-Type Flip-Flop with Clear	20	74VHC273T	74VHC273TTR	74VHC273M	74VHC273MTR
74VHCT273	Octal D-Type Flip-Flop with Clear	20	74VHCT273AT	74VHCT273ATTR	74VHCT273AM	74VHCT273AMTR
74VHC373	Octal D-type Latch (3-State)	20	74VHC373T	74VHC373TTR	74VHC373M	74VHC373MTR
74VHCT373	Octal D-type Latch (3-State)	20	74VHCT373AT	74VHCT373ATTR	74VHCT373AM	74VHCT373AMTR
74VHC374	Octal D-type Flip-Flop (3-State)	20	74VHC374T	74VHC374TTR	74VHC374M	74VHC374MTR
74VHCT374	Octal D-type Flip-Flop (3-State)	20	74VHCT374AT	74VHCT374ATTR	74VHCT374AM	74VHCT374AMTR
74VHC541	Octal Bus Buffer (3-State)	20	74VHC541T	74VHC541TTR	74VHC541M	74VHC541MTR
74VHCT541	Octal Bus Buffer (3-State)	20	74VHCT541AT	74VHCT541ATTR	74VHCT541AM	74VHCT541AMTR
74VHC573	Octal D-type Latch (3-State)	20	74VHC573T	74VHC573TTR	74VHC573M	74VHC573MTR
74VHCT573	Octal D-type Latch (3-State)	20	74VHCT573AT	74VHCT573ATTR	74VHCT573AM	74VHCT573AMTR
74VHC574	Octal D-type Flip-Flop (3-State)	20	74VHC574T	74VHC574TTR	74VHC574M	74VHC574MTR
74VHCT574	Octal D-type Flip-Flop (3-State)	20	74VHCT574AT	74VHCT574ATTR	74VHCT574AM	74VHCT574AMTR

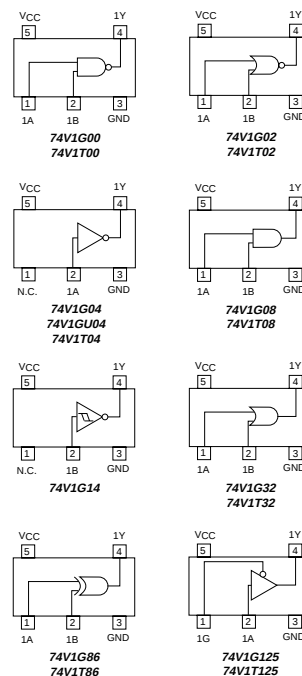
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74V1 Series SINGLE GATE VHC/VHCT**5.0V****Recommended Operating Conditions**

Parameter	Symbol	Value	Unit
Supply Voltage V1G Series	V_{CC}	2 to 5.5	V
V1T Series		4.5 to 5.5	V
Input Voltage	V_I	0 to V_{CC}	V
Operating Temperature	T_A	-40 to +85	C

A range of single gate logic devices of the VHC/VHCT family housed in a SOT23-5L package.

Type	Function	Device No. & Anglia Order Code
		SURFACE MOUNT
		SOT23-5L package   (TAPE & REEL)
74V1G00	Single 2-Input NAND Gate	74V1G00
74V1T00	Single 2-Input NAND Gate	74V1T00
74V1G02	Single 2-Input NOR Gate	74V1G02
74V1T02	Single 2-Input NOR Gate	74V1T02
74V1G04	Single Inverter	74V1G04
74V1GU04	Single Inverter (Single Stage)	74V1GU04
74V1T04	Single Inverter	74V1T04
74V1G08	Single 2-Input AND Gate	74V1G08
74V1T08	Single 2-Input AND Gate	74V1T08
74V1G14	Single Schmitt Inverter	74V1G14
74V1G32	Single 2-Input OR Gate	74V1G32
74V1T32	Single 2-Input OR Gate	74V1T32
74V1G86	Single Exclusive OR Gate	74V1G86
74V1T86	Single Exclusive OR Gate	74V1T86
74V1G125	Single Bus Buffer (3-State)	74V1G125
74V1T125	Single Bus Buffer (3-State)	74V1T125

Pin-outs (top view)

SUPPLIED IN FULL REELS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

74LCX & 74LVQ Series LOW VOLTAGE CMOS

shown overleaf >>>>

74LCX Series LOW VOLTAGE HIGH SPEED CMOS

3.3V

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage	V _{CC}	2 to 3.6	V
Input Voltage	V _I	0 to 5V	V
Operating Temperature	T _A	– 40 to +85	°C

A range of low voltage logic offering :

- 3.3V supply voltage
- 5V tolerant inputs & outputs
- Fast switching speed
- Power down input protection
- High output current

Ideal for mixed 3.3V/5.0V applications. **3.3V ↔ 5.0V**

See page 113 for data comparison.

Type	Function	Pins	Device No. & Anglia Order Code			
			SURFACE MOUNT			
			TSSOP package  SMD (STICK)	TSSOP package  SMD (TAPE & REEL)	SO package  SMD (STICK)	SO package  SMD (TAPE & REEL)
74LCX00	Quad 2-Input NAND Gate with 5V Tolerant Input	14	74LCX00T	74LCX00TTR	74LCX00M	74LCX00MTR
74LCX02	Quad 2-Input NOR Gate with 5V Tolerant Input	14	74LCX02T	74LCX02TTR	74LCX02M	74LCX02MTR
74LCX04	Hex Inverter with 5V Tolerant Input	14	74LCX04T	74LCX04TTR	74LCX04M	74LCX04MTR
74LCX08	Quad 2-Input AND Gate with 5V Tolerant Input	14	74LCX08T	74LCX08TTR	74LCX08M	74LCX08MTR
74LCX14	Hex Schmitt Inverter with 5V Tolerant Input	14	74LCX14T	74LCX14TTR	74LCX14M	74LCX14MTR
74LCX32	Quad 2-Input OR Gate with 5V Tolerant Input	14	74LCX32T	74LCX32TTR	74LCX32M	74LCX32MTR
74LCX74	Dual D-Type Flip-Flop with Preset and Clear With 5V Tolerant Input	14	74LCX74T	74LCX74TTR	74LCX74M	74LCX74MTR
74LCX86	Quad Exclusive OR Gate with 5V Tolerant Input	14	74LCX86T	74LCX86TTR	74LCX86M	74LCX86MTR
74LCX125	Quad Bus Buffer with 5V Tolerant Input and Output (3-State)	14	74LCX125T	74LCX125TTR	74LCX125M	74LCX125MTR
74LCX240	Octal Bus Buffer with 5V Tolerant Input and Output (3-State/Inverted)	20	74LCX240T	74LCX240TTR	74LCX240M	74LCX240MTR
74LCX244	Octal Bus Buffer with 5V Tolerant Input and Output (3-State)	20	74LCX244T	74LCX244TTR	74LCX244M	74LCX244MTR
74LCX245	Octal Bus Transceiver with 5V Tolerant Input and Output (3-State)	20	74LCX245T	74LCX245TTR	74LCX245M	74LCX245MTR
74LCX373	Octal D-Type Latch with 5V Tolerant Input and Output (3-State)	20	74LCX373T	74LCX373TTR	74LCX373M	74LCX373MTR
74LCX374	Octal D-Type Flip-Flop with 5V Tolerant Input and Output (3-State)	20	74LCX374T	74LCX374TTR	74LCX374M	74LCX374MTR
74LCX573	Octal D-Type Latch with 5V Tolerant Input and Output (3-State)	20	74LCX573T	74LCX573TTR	74LCX573M	74LCX573MTR
74LCX574	Octal D-Type Flip-Flop with 5V Tolerant Input and Output (3-State)	20	74LCX574T	74LCX574TTR	74LCX574M	74LCX574MTR
74LCX646	Octal Bus Transceiver/Register with 5V Tolerant Input and Output (3-State)	24	74LCX646T	74LCX646TTR	74LCX646M	74LCX646MTR
74LCX652	Octal Bus Transceiver/Register with 5V Tolerant Input and Output (3-State/Inverted)	24	74LCX652T	74LCX652TTR	74LCX652M	74LCX652MTR
74LCX16240	16-Bit Bus Buffer with 5V Tolerant Input and Output (3-State/Inverted)	48	74LCX16240T	74LCX16240TTR	–	–
74LCX16240A	16-Bit Bus Buffer with 5V Tolerant Input and Output (3-State/Inverted)	48	74LCX16240AT	74LCX16240ATTR	–	–
74LCX16244	16-Bit Bus Buffer with 5V Tolerant Input and Output (3-State)	48	74LCX16244T	74LCX16244TTR	–	–
74LCX16244A	16-Bit Bus Buffer with 5V Tolerant Input and Output (3-State)	48	74LCX16244AT	74LCX16244ATTR	–	–
74LCX16245	16-Bit Bus Transceiver with 5V Tolerant Input and Output (3-State)	48	74LCX16245T	74LCX16245TTR	–	–
74LCX16245A	16-Bit Bus Transceiver with 5V Tolerant Input and Output (3-State)	48	74LCX16245AT	74LCX16245ATTR	–	–
74LCX16373	16-Bit D-Type Latch with 5V Tolerant Input and Output (3-State)	48	74LCX16373T	74LCX16373TTR	–	–
74LCX16373A	16-Bit D-Type Latch with 5V Tolerant Input and Output (3-State)	48	74LCX16373AT	74LCX16373ATTR	–	–
74LCX16374	16-Bit D-Type Flip-Flop with 5V Tolerant Input and Output (3-State)	48	74LCX16374T	74LCX16374TTR	–	–
74LCX16374A	16-Bit D-Type Flip-Flop with 5V Tolerant Input and Output (3-State)	48	74LCX16374AT	74LCX16374ATTR	–	–

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PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

74LVQ Series LOW VOLTAGE, LOW NOISE HIGH SPEED CMOS

3.3V

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	1.2 to 3.6	V
Input Voltage	V_I	0 to V_{CC}	V
Operating Temperature	T_A	-40 to +85	C

A range of low voltage logic offering :

- 3.3V supply voltage
- Fast switching speed
- Low power consumption
- Very low noise
- High output current

See below for data comparison.

Type	Function	Pins	Device No. & Anglia Order Code			
			SURFACE MOUNT		SO package	
			TSSOP package SMD STICK	TSSOP package SMD TAPE & REEL	SO package SMD STICK	SO package SMD TAPE & REEL
74LVQ00	Quad 2-Input NAND Gate	14	74LVQ00T	74LVQ00TTR	74LVQ00M	74LVQ00MTR
74LVQ02	Quad 2-Input NOR Gate	14	74LVQ02T	74LVQ02TTR	74LVQ02M	74LVQ02MTR
74LVQ04	Hex Inverter	14	74LVQ04T	74LVQ04TTR	74LVQ04M	74LVQ04MTR
74LVQ08	Quad 2-Input AND Gate	14	74LVQ08T	74LVQ08TTR	74LVQ08M	74LVQ08MTR
74LVQ14	Hex Schmitt Inverter	14	74LVQ14T	74LVQ14TTR	74LVQ14M	74LVQ14MTR
74LVQ32	Quad 2-Input OR Gate	14	74LVQ32T	74LVQ32TTR	74LVQ32M	74LVQ32MTR
74LVQ74	Dual D-Type Flip-Flop with Preset and Clear	14	74LVQ74T	74LVQ74TTR	74LVQ74M	74LVQ74MTR
74LVQ86	Quad Exclusive OR Gate	14	74LVQ86T	74LVQ86TTR	74LVQ86M	74LVQ86MTR
74LVQ125	Quad Bus Buffer (3-State)	14	74LVQ125T	74LVQ125TTR	74LVQ125M	74LVQ125MTR
74LVQ138	3 to 8 Line Decoder (Inverted)	16	74LVQ138T	74LVQ138TTR	74LVQ138M	74LVQ138MTR
74LVQ157	Quad 2-Channel Multiplexer	16	74LVQ157T	74LVQ157TTR	74LVQ157M	74LVQ157MTR
74LVQ174	Hex D-Type Flip-Flop with Clear	16	74LVQ174T	74LVQ174TTR	74LVQ174M	74LVQ174MTR
74LVQ240	Octal Bus Buffer (3-State/Inverted)	20	74LVQ240T	74LVQ240TTR	74LVQ240M	74LVQ240MTR
74LVQ241	Octal Bus Buffer (3-State)	20	74LVQ241T	74LVQ241TTR	74LVQ241M	74LVQ241MTR
74LVQ244	Octal Bus Buffer (3-State)	20	74LVQ244T	74LVQ244TTR	74LVQ244M	74LVQ244MTR
74LVQ245	Octal Bus Transceiver (3-State)	20	74LVQ245T	74LVQ245TTR	74LVQ245M	74LVQ245MTR
74LVQ273	Octal D-Type Flip-Flop with Clear	20	74LVQ273T	74LVQ273TTR	74LVQ273M	74LVQ273MTR
74LVQ373	Octal D-Type Latch (3-State)	20	74LVQ373T	74LVQ373TTR	74LVQ373M	74LVQ373MTR
74LVQ374	Octal D-Type Flip-Flop (3-State)	20	74LVQ374T	74LVQ374TTR	74LVQ374M	74LVQ374MTR
74LVQ573	Octal D-Type Latch (3-State)	20	74LVQ573T	74LVQ573TTR	74LVQ573M	74LVQ573MTR
74LVQ574	Octal D-Type Flip-Flop (3-State)	20	74LVQ574T	74LVQ574TTR	74LVQ574M	74LVQ574MTR
74LVQ4066	Quad 2-Input NAND Gate	14	74LVQ4066T	74LVQ4066TTR	74LVQ4066M	74LVQ4066MTR

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3.3V

CMOS Logic Families

Comparison Table

74 Series FAMILY	Switching Speed	Output Current	5V Input Tolerance	5V Output Tolerance	Power Down Protection	Output Switching Noise	PAGE
LCX	6.5ns	±24mA	YES	YES	YES	±0.8V	112
LVQ	9.5ns	±12mA	NO	NO	NO	±0.4V	113
LVX	11ns	±4mA	YES	NO	NO	±0.3V	114

1.8V

CMOS Logic Family

shown on page 115

74LVX Series LOW VOLTAGE CMOS

shown overleaf > > >



01945 47 47 47



01945 47 48 49



E-mail: sales@angliac.co.uk

74LVX Series LOW VOLTAGE, LOW NOISE HIGH SPEED CMOS

3.3V

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage	V _{CC}	2 to 3.6	V
Input Voltage	V _I	0 to 5.5V	V
Operating Temperature	T _A	- 40 to +85	C

A range of low voltage logic offering :

- 3.3V supply voltage
- 5V tolerant inputs
- Fast switching speed
- Very low noise
- Power down input protection

Suitable for mixed 3.3V/5.0V applications.

3.3V ↔ 5.0V

See page 113 for data comparison.

Type	Function	Pins	Device No. & Anglia Order Code			
			SURFACE MOUNT			
			TSSOP package   STICK	TSSOP package   TAPE & REEL	SO package   STICK	SO package   TAPE & REEL
74LVX00	Quad 2-Input NAND Gate	14	74LVX00T	74LVX00TTR	74LVX00M	74LVX00MTR
74LVX02	Quad 2-Input NOR Gate	14	74LVX02T	74LVX02TTR	74LVX02M	74LVX02MTR
74LVX03	Quad 2-Input NAND Gate (Open Drain)	14	74LVX03T	74LVX03TTR	74LVX03M	74LVX03MTR
74LVX04	Hex Inverter	14	74LVX04T	74LVX04TTR	74LVX04M	74LVX04MTR
74LVXU04	Hex Inverter (Single Stage)	14	74LVXU04T	74LVXU04TTR	74LVXU04M	74LVXU04MTR
74LVX05	Hex Inverter (Open Stage)	14	74LVX05T	74LVX05TTR	74LVX05M	74LVX05MTR
74LVX08	Quad 2-Input AND Gate	14	74LVX08T	74LVX08TTR	74LVX08M	74LVX08MTR
74LVX14	Hex Schmitt Trigger	14	74LVX14T	74LVX14TTR	74LVX14M	74LVX14MTR
74LVX20	Dual 4-Input NAND Gate	14	74LVX20T	74LVX20TTR	74LVX20M	74LVX20MTR
74LVX27	Triple 3-Input NOR Gate	14	74LVX27T	74LVX27TTR	74LVX27M	74LVX27MTR
74LVX32	Quad 2-Input OR Gate	14	74LVX32T	74LVX32TTR	74LVX32M	74LVX32MTR
74LVX74	Dual D-Type Flip-Flop	14	74LVX74T	74LVX74TTR	74LVX74M	74LVX74MTR
74LVX86	Quad Exclusive OR Gate	14	74LVX86T	74LVX86TTR	74LVX86M	74LVX86MTR
74LVX123A	Dual Retrigger Mono Multivibrator	16	74LVX123AT	74LVX123ATTR	74LVX123AM	74LVX123AMTR
74LVX125	Quad Bus Buffer (3-State)	14	74LVX125T	74LVX125TTR	74LVX125M	74LVX125MTR
74LVX126	Quad Bus Buffer (3-State)	14	74LVX126T	74LVX126TTR	74LVX126M	74LVX126MTR
74LVX132	Quad 2-Input Schmitt NAND Gate	14	74LVX132T	74LVX132TTR	74LVX132M	74LVX132MTR
74LVX138	Inverting 3 to 8 Line Decoder	16	74LVX138T	74LVX138TTR	74LVX138M	74LVX138MTR
74LVX139	Dual 2 to 4 Line Decoder/Demultiplexer	16	74LVX139T	74LVX139TTR	74LVX139M	74LVX139MTR
74LVX157	Quad 2-Channel Multiplexer	16	74LVX157T	74LVX157TTR	74LVX157M	74LVX157MTR
74LVX174	Hex D-Type Flip-Flop with Clear	16	74LVX174T	74LVX174TTR	74LVX174M	74LVX174MTR
74LVX238	3 to 8 Line Decoder	16	74LVX238T	74LVX238TTR	74LVX238M	74LVX238MTR
74LVX240	Inverting Octal Bus Buffer (3-State)	20	74LVX240T	74LVX240TTR	74LVX240M	74LVX240MTR
74LVX244	Octal Bus Buffer (3-State)	20	74LVX244T	74LVX244TTR	74LVX244M	74LVX244MTR
74LVX245	Octal Bus Transceiver (3-State)	20	74LVX245T	74LVX245TTR	74LVX245M	74LVX245MTR
74LVX257	Quad-Channel Multiplexer (3-State)	16	74LVX257T	74LVX257TTR	74LVX257M	74LVX257MTR
74LVX273	Octal D-Type Flip-Flop with Clear	20	74LVX273T	74LVX273TTR	74LVX273M	74LVX273MTR
74LVX373	Octal D-Type Latch (3-State)	20	74LVX373T	74LVX373TTR	74LVX373M	74LVX373MTR
74LVX374	Octal D-Type Flip-Flop (3-State)	20	74LVX374T	74LVX374TTR	74LVX374M	74LVX374MTR
74LVX541	Octal Bus Buffer (3-State)	20	74LVX541T	74LVX541TTR	74LVX541M	74LVX541MTR
74LVX573	Octal D-Type Latch (3-State)	20	74LVX573T	74LVX573TTR	74LVX573M	74LVX573MTR
74LVX574	Octal D-Type Flip-Flop (3-State)	20	74LVX574T	74LVX574TTR	74LVX574M	74LVX574MTR

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PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

74VCX Series VERY LOW VOLTAGE HIGH SPEED CMOS

1.8V

Recommended Operating Conditions

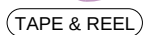
Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	1.8 to 3.6	V
Input Voltage	V_I	0 to 3.6	V
Operating Temperature	T_A	- 40 to +85	C

A range of advanced 0.35µm CMOS technology logic offering :

- 1.8V supply voltage
- 3.3V tolerant inputs & outputs
- Fast switching speed
- Support live insertion & withdrawal
- High output current

Ideal for mixed 1.8V/3.3V applications.

1.8V ↔ 3.3V

Type	Function	Pins	Device No. & Anglia Order Code	
			SURFACE MOUNT	
			  	 
74VCX16244	16-Bit Bus Buffer (3-State)	48	74VCX16244T	74VCX16244TTR
74VCX16245	16-Bit Bus Transceiver (3-State)	48	74VCX16245T	74VCX16245TTR
74VCX16373	16-Bit D-Type Latch (3-State)	48	74VCX16373T	74VCX16373TTR
74VCX16374	16-Bit D-Type Flip-Flop (3-State)	48	74VCX16374T	74VCX16374TTR
74VCX162244	16-Bit Bus Buffer + Serial Resistor (3-State)	48	74VCX162244T	74VCX162244TTR

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With ST's continuous product improvement programme and innovative device introductions, this shortform can only provide an in-sight into their product portfolio at the time of publication. Should the device specification you require not be shown please contact our Sales Department for the latest details.



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Designed to operate within the exacting demands of specific industrial applications, STMicroelectronics offer a broad range of dedicated products. The section briefly comprises Drivers, PWM Controllers, Regulators, Supervisors, Amplifiers and supplementary devices such as LED Drivers and Proximity Detectors.

MOTOR DRIVERS

UNIPOLAR STEPPER MOTOR DRIVERS
BIPOLAR STEPPER MOTOR DRIVERS
BRUSHLESS MOTOR DRIVERS
D.C. MOTOR DRIVERS

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SOLENOID/POWER DRIVERS

SOLENOID DRIVERS
POWER DRIVERS
POWER TRANSISTOR DRIVERS

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CONTROL & SUPERVISION

PWM CONTROLLERS
D.C. - D.C. CONVERTERS
REGULATORS
VOLTAGE SUPERVISORS

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AMPLIFIERS

AUDIO AMPLIFIERS
R.F. AMPLIFIERS

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OTHERS

POWER FACTOR CORRECTORS
SUPPLEMENTARY DEVICES
inc. LINE DRIVERS/RECEIVERS, CURRENT SOURCES,
TEMPERATURE SENSORS, LED DRIVERS, CIRCUIT
BREAKERS & PROXIMITY DETECTORS

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DIP



MULTIWATT



SO



Power SO



PLCC

UNIPOLAR STEPPER MOTOR DRIVERS

			Device No. & Anglia Order Code			
Type	Function		LEADED (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
L297	Stepper Motor Controller		L297	DIP20	L297D	SO20
L702	Quad Darlington Switch		L702B L702N	DIP16 MULTIWATT-11	—	—
L6223	DMOS Programmable High Speed Unipolar Stepper Motor Driver		L6223	DIP20	—	—
L6506	Stepper Motor Current Controller		L6506	DIP18	L6506D	SO20
ULN206x ULN207x	50V Quad Darlington Switch	5V Logic Inputs. Integral Diodes. Common Emitters	ULN2064B	DIP16	—	—
		6 - 15V CMOS/PMOS Inputs. Integral Diodes. Common Emitters	ULN2066B		—	—
		5V Logic Inputs. Integral Diodes. Common Emitters. Pre-Driver	ULN2068B		—	—
		6 - 15V CMOS/PMOS Inputs. Integral Diodes. Common Emitters. Pre-Driver	ULN2070B		—	—
		5V Logic Inputs. Isolated Outputs	ULN2074B		—	—
		6 - 15V CMOS/PMOS Inputs. Isolated Outputs	ULN2076B		—	—
	80V Quad Darlington Switch	5V Logic Inputs. Integral Diodes. Common Emitters	ULN2065B	DIP16	—	—
		6 - 15V CMOS/PMOS Inputs. Integral Diodes. Common Emitters	ULN2067B		—	—
		5V Logic Inputs. Integral Diodes. Common Emitters. Pre-Driver	ULN2069B		—	—
		6 - 15V CMOS/PMOS Inputs. Integral Diodes. Common Emitters. Pre-Driver	ULN2071B		—	—
		5V Logic Inputs. Isolated Outputs	ULN2075B		—	—
		6 - 15V CMOS/PMOS Inputs. Isolated Outputs	ULN2077B		—	—

BIPOLAR STEPPER MOTOR DRIVERS

			Device No. & Anglia Order Code			
Type	Function		DUAL IN-LINE (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
L297	Stepper Motor Controller		L297	DIP20	L297D	SO20
L298	Dual Full Bridge Driver		L298N	MULTIWATT-15	—	—
L620x	DMOS Full Bridge Driver	1A 1.5A 4A	— L6202 L6203	— DIP18 MULTIWATT-11	L6201 — L6201PS	SO20 — Power SO20
	DMOS Dual Full Bridge Driver		L6204	DIP20	L6204D	SO28
L6210	Dual Schottky Diode Bridge		L6210	DIP16	—	—
L6219	Stepper Motor Driver		L6219 —	DIP24 —	L6219D L6219DS	PLCC44 SO24
L6258	PWM Controlled – High Current DMOS Universal Motor Driver		—	—	L6258	Power SO36
L6506	Stepper Motor Current Controller		L6506	DIP18	L6506D	SO20
L6590	Fully Integrated Power Supply		L6590	DIP8	L6590D	SO16W
PBL3717	1A Stepper Motor Driver – Phase Control		PBL3717A	DIP16	—	—
TEA3717	1A Stepper Motor Driver – Unstabilised Motor Supply Voltage		TEA3717DP	DIP16	—	—
TEA3718	1.5A Stepper Motor Driver – Unstabilised Motor Supply Voltage		TEA3718SDP	DIP16	—	—
	1.5A Stepper Motor Driver – Unstabilised Motor Supply Voltage. Alarm		TEA3718DP	DIP16	—	—
	1.5A Stepper Motor Driver – Unstabilised Motor Supply Voltage. Alarm		TEA3718SP	MULTIWATT-15	—	—
	1.5A Stepper Motor Driver – Unstabilised Motor Supply Voltage. Pre-Alarm		—	—	TEA3718SFP	SO20

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MOTOR DRIVERS
continued overleaf > > >



DIP



Power SO



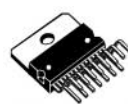
QFP



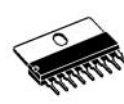
PLCC



PENTAWATT



MULTIWATT



SIP



SO

BRUSHLESS MOTOR DRIVERS

Type	Function	Device No. & Anglia Order Code			
		LEADED (TUBE)	Package & Pins	SURFACE MOUNT (STICK) 	Package & Pins
L6234	Three Phase Motor Driver	L6234	DIP20	L6234PD	Power SO20
L6237	5V Spindle Motor Driver	—	—	L6237	QFP64
L6238	12V Sensorless Spindle Motor Controller	—	—	L6238S	PLCC44
		—	—	L6238SQA	QFP44
		—	—	L6238SQT	QFP64

D.C. MOTOR DRIVERS

Type	Function	Rating* (A)	Device No. & Anglia Order Code			
			LEADED (TUBE)	Package & Pins	SURFACE MOUNT (STICK) 	Package & Pins
L149	Linear Driver	4	L149V	PENTAWATT	—	—
L165	Power Operational Amplifier	3	L165V	PENTAWATT	—	—
L272	Dual Power Operational Amplifier	1	L272 L272M	DIP16 DIP8	L272D —	SO16 —
L292	Switch-Mode Driver for DC Motors	2	L292	MULTIWATT-15	—	—
L293B	Push-Pull Four Channel Driver	1	L293B	DIP16	—	—
L293C	Push-Pull Four Channel/Dual H-Bridge Driver	0.6	L293C	DIP20	—	—
L293D	Push-Pull Four Channel Driver with Internal Clamp Diodes	0.6	L293D	DIP16	—	—
L293E	Push-Pull Four Channel Driver with External Resistor Connection	1	L293E	DIP20	—	—
L298	Dual Full Bridge Driver	2	L298N	MULTIWATT-15	—	—
L2720	Low Drop Dual Power Operational Amplifier	1	L2720	DIP16	—	—
L2722	Low Drop Dual Power Operational Amplifier	1	L2722	DIP8	—	—
L2724	Low Drop Dual Power Operational Amplifier	1	L2724	SIP9	—	—
L2726	Low Drop Dual Power Operational Amplifier	1	—	—	L2726	SO20
L620x	DMOS Full Bridge Driver	1	—	—	L6201	SO20
		1.5	L6202	DIP18	—	—
	DMOS Dual Full Bridge Driver	4	L6203	MULTIWATT-11	L6201PS	Power SO20
L6242	Voice Coil Motor Driver	0.5	L6204	DIP20	L6204D	SO28
		1	—	—	L6242	SO20

* Per channel where applicable

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PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform



MULTIWATT



DIP



SIP



QFP



SO



Power SO

SOLENOID DRIVERS

Type	Function	Rating* (A)	Device No. & Anglia Order Code			
			LEADED (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
L98SI	Octal Serial Solenoid Driver	1	—	—	L98SI	Power SO20
L294	Switch-Mode Solenoid Driver	4	L294	MULTIWATT-11	—	—
L295	Dual Switch Mode Solenoid Driver	2.5	L295	MULTIWATT-15	—	—
L601	Darlington Array. General Purpose	0.4	L601C	DIP18	—	—
L602	Darlington Array. 14-25V PMOS	0.4	L602C	DIP18	—	—
L603	Darlington Array. 5V TTL	0.4	L603C	DIP18	—	—
L604	Darlington Array. 6-15V CMOS	0.4	L604C	DIP18	—	—
L611	Quad 100V DMOS Switch with TTL Input and Enable	1.5	L6114	DIP20	—	—
		3	L6115	MULTIWATT-15	—	—
L702	Quad Darlington Switch	2	L702B	DIP16	—	—
			L702N	MULTIWATT-11	—	—
L4992	Triple Output Power Supply Controller	-0.15 to +0.15	—	—	L4992	QFP32
L6220	50V Quad Darlington Switch. 2 Inv/2 Non-Inv with TTL Input and Inhibit	1.8	L6220	DIP16	—	—
			L6220N	MULTIWATT-15	—	—
L6221	50V Quad Darlington Switch. 4 Non-Inv with TTL Input and Enable	1.8	L6221A	DIP16	—	—
			L6221N	MULTIWATT-15	—	—
L6221C	60V Quad Darlington Switch. 4 Non-Inv with TTL Input and Enable	1.8	L6221C	DIP16	L6221CD	SO20
			L6221CN	MULTIWATT-15	—	—
L6353	Smart Driver for Power MOS and IGBT	8**	L6353	DIP16	L6353D	SO16
L6370	High-Side Driver Industrial Intelligent Power Switch	2.5	L6370D	MULTIWATT-11	L6370L	Power SO20
L6376	High-Side Driver Quad Intelligent Power Switch	0.5	L6376	DIP20	L6376D	Power SO20
L6377	High-Side Driver Intelligent Power Switch	0.5	L6377	DIP8	L6377D	SO14
TDE1707	Intelligent Power Switch. Proximity Detector Driver	0.5	—	—	TDE1707FP	SO8
TDE1737	Interface Circuit – Relay and Lamp Driver	1	TDE1737DP	DIP8	TDE1737FP	SO14
TDE1747	Interface Circuit – Relay and Lamp Driver. S/C Protection	1	TDE1747DP	DIP8	TDE1747FP	SO14
TDE1767	50V Interface Circuit – Relay and Lamp Driver. Alarm O/P	1.2	TDE1767DP	DIP8	—	—
TDE1767A	60V Interface Circuit – Relay and Lamp Driver. Alarm O/P. I _{SC} = 700mA	1.3	TDE1767ADP	DIP8	—	—
TDE1787	50V Interface Circuit – Relay and Lamp Driver. Alarm O/P	1.2	TDE1787DP	DIP8	—	—
TDE1787A	60V Interface Circuit – Relay and Lamp Driver. Alarm O/P. I _{SC} = 380mA	1.3	TDE1787ADP	DIP8	—	—
TDE1798	Intelligent Power Switch. Universal Load Driver	0.5	TDE1798DP	DIP8	—	—
TDE1897	High-Side Driver Industrial Intelligent Power Switch with Diagnostics	0.5	TDE1897CDP	DIP8	TDE1897CFP	SO20
TDE1898C	High-Side Driver Industrial Intelligent Power Switch with Diagnostics. Open Load Detection Current = 1 to 6mA	0.5	TDE1898CDP	DIP8	TDE1898CFP	SO20
			TDE1898CSP	SIP9	—	—
TDE1898R	High-Side Driver Industrial Intelligent Power Switch with Diagnostics. Open Load Detection Current = 0.5 to 9.5mA	0.5	TDE1898RDP	DIP8	TDE1898RFP	SO20
			TDE1898RSP	SIP9	—	—
TDE3237	Intelligent Power Switch. Lamp, Relay and Stepper Motor Driver	0.5	TDE3237DP	DIP8	TDE3237FP	SO14
TDF1778	Dual Source Driver. Universal Load	2.5	TDF1778SP	MULTIWATT-11	—	—

* Per channel where applicable

** Peak current

continued on next page

SUPPLIED IN FULL TUBES/STICKS ONLY

SOLENOID DRIVERS continued

Type	Function	Rating* (A)	Device No. & Anglia Order Code				
			LEADED	Package & Pins	SURFACE MOUNT		Package & Pins
			TUBE		STICK	TAPE & REEL	
ULN2001	Seven Darlington Array. -20 to 85°C. General Purpose DTL, TTL, PMOS, CMOS	0.5	ULN2001A	DIP16	ULN2001D1	ULN2001D1013TR	SO16
ULN2002	Seven Darlington Array. -20 to 85°C. 14-25V PMOS	0.5	ULN2002A	DIP16	ULN2002D1	ULN2002D1013TR	SO16
ULN2003	Seven Darlington Array. -20 to 85°C. 5V TTL, CMOS	0.5	ULN2003A	DIP16	ULN2003D1	ULN2003D1013TR	SO16
ULN2004	Seven Darlington Array. -20 to 85°C. 6-15V CMOS, PMOS	0.5	ULN2004A	DIP16	ULN2004D1	ULN2004D1013TR	SO16
ULN2801	Eight Darlington Array. -20 to 85°C. General Purpose PMOS, CMOS	0.5	ULN2801A	DIP18	—	—	—
ULN2802	Eight Darlington Array. -20 to 85°C. 14-25V PMOS	0.5	ULN2802A	DIP18	—	—	—
ULN2803	Eight Darlington Array. -20 to 85°C. 5V TTL, CMOS	0.5	ULN2803A	DIP18	—	—	—
ULN2804	Eight Darlington Array. -20 to 85°C. 6-15V CMOS, PMOS	0.5	ULN2804A	DIP18	—	—	—
ULN2805	Eight Darlington Array. -20 to 85°C. Standard/Schottky TTL	0.5	ULN2805A	DIP18	—	—	—
ULQ2001	Seven Darlington Array. -40 to 105°C. General Purpose DTL, TTL, PMOS, CMOS	0.5	ULQ2001A	DIP16	ULQ2001D1	ULQ2001D1013TR	SO16
ULQ2002	Seven Darlington Array. -40 to 105°C. 14-25V PMOS	0.5	ULQ2002A	DIP16	ULQ2002D1	ULQ2002D1013TR	SO16
ULQ2003	Seven Darlington Array. -40 to 105°C. 5V TTL, CMOS	0.5	ULQ2003A	DIP16	ULQ2003D1	ULQ2003D1013TR	SO16
ULQ2004	Seven Darlington Array. -40 to 105°C. 6-15V CMOS, PMOS	0.5	ULQ2004A	DIP16	ULQ2004D1	ULQ2004D1013TR	SO16
ULQ2801	Eight Darlington Array. -40 to 105°C. General Purpose PMOS, CMOS	0.5	ULQ2801A	DIP18	—	—	—
ULQ2802	Eight Darlington Array. -40 to 105°C. 14-25V PMOS	0.5	ULQ2802A	DIP18	—	—	—
ULQ2803	Eight Darlington Array. -40 to 105°C. 5V TTL, CMOS	0.5	ULQ2803A	DIP18	—	—	—
ULQ2804	Eight Darlington Array. -40 to 105°C. 6-15V CMOS, PMOS	0.5	ULQ2804A	DIP18	—	—	—

* Per channel where applicable

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY



DIP



SO

POWER DRIVERS

			Device No. & Anglia Order Code			
Type	Function	Rating (A)	LEADED (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
L6384	High-Voltage Half Bridge Driver	0.65	L6384	DIP8	L6384D	SO8
L6385	High-Voltage High and Low Side Driver. $V_{CC} = 3V$	0.65	L6385	DIP8	L6385D	SO8
L6386	High-Voltage High and Low Side Driver. $V_{CC} = 4V$	0.65	L6386	DIP14	L6386D	SO14
L6569	High Voltage Half Bridge Driver with Oscillator and Bootstrap	0.27	L6569	DIP8	L6569D	SO8
	High Voltage Half Bridge Driver with Oscillator	0.27	L6569A	DIP8	L6569AD	SO8
L6571	High Voltage Half Bridge Driver with Oscillator. $t_d = 1.65\mu s$	0.27	L6571A	DIP8	L6571AD	SO8
	High Voltage Half Bridge Driver with Oscillator. $t_d = 0.94\mu s$	0.27	L6571B	DIP8	L6571BD	SO8
L6574	CFL/TL Ballast Driver Preheat and Dimming	0.45	L6574	DIP16	L6574D	SO16

POWER TRANSISTOR DRIVERS

			Device No. & Anglia Order Code			
Type	Function		LEADED (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
L6380	High Voltage High Side Driver. Current/Voltage Mode Operation		L6380	DIP8	L6380D	SO8
L6381	High Voltage High Side Driver. Voltage Mode Operation		L6381	DIP8	L6381D	SO8
TD300I	MOSFET and IGBT Triple Driver with Comparator and Op-Amp. 13-16V		TD300IN	DIP14	TD300ID	SO14
TD310I	MOSFET and IGBT Triple Driver with Comparator and Op-Amp. 4-16V		TD310IN	DIP16	TD310ID	SO16

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PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform



DIP



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QFP

PWM CONTROLLERS

Type	Function			Device No. & Anglia Order Code			
				LEADED (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
L4990	Primary Controller	17V Startup Voltage		L4990	DIP16	L4990D	–
		9V Startup Voltage		L4990A	DIP16	L4990AD	–
L4992	Triple Output Power Supply Controller			–	–	L4992	–
L5991	Primary Controller with Standby	16V Startup Voltage		L5991	DIP16	L5991D	–
		9V Startup Voltage		L5991A	DIP16	L5991AD	–
L5993	Constant Power Controller			L5993	DIP16	L5993D	–
L5995	Accurate 4-Bit Programmable Power Supply Controller for Mobile CPU			–	–	L5995	–
SG2524	Regulating Pulse Width Monitor	–25 to 85°C		SG2524N	DIP16	SG2524P	–
SG2525	Regulating Pulse Width Monitor. Soft Start	–25 to 85°C		SG2525AN	DIP16	SG2525AP	–
SG3524	Regulating Pulse Width Monitor	0 to 70°C		SG3524N	DIP16	SG3524P	–
SG3525	Regulating Pulse Width Monitor. Soft Start	0 to 70°C		SG3525AN	DIP16	SG3525AP	–
		UVLO (V on/off)	Duty (%)				
UC2842	Current Mode PWM Controller. –25 to 85°C	17/11	100	UC2842N	DIP8	UC2842D	UC2842D013TR
UC2842A	High Performance Current Mode PWM Controller. Double Pulse Suppression. –25 to 85°C	17/11	100	UC2842AN	DIP8	UC2842AD1	UC2842AD1013TR
UC2842B	High Performance Current Mode PWM Controller. –25 to 85°C	17/11	100	UC2842BN	DIP8	UC2842BD1	UC2842BD1013TR
UC2843	Current Mode PWM Controller. –25 to 85°C	9/8.2	100	UC2843N	DIP8	UC2843D	UC2843D013TR
UC2843A	High Performance Current Mode PWM Controller. Double Pulse Suppression. –25 to 85°C	9/8.2	100	UC2843AN	DIP8	UC2843AD1	UC2843AD1013TR
UC2843B	High Performance Current Mode PWM Controller. –25 to 85°C	9/8.2	100	UC2843BN	DIP8	UC2843BD1	UC2843BD1013TR
UC2844	Current Mode PWM Controller. –25 to 85°C	17/11	50	UC2844N	DIP8	UC2844D	UC2844D013TR
UC2844A	High Performance Current Mode PWM Controller. Double Pulse Suppression. –25 to 85°C	17/11	50	UC2844AN	DIP8	UC2844AD1	UC2844AD1013TR
UC2844B	High Performance Current Mode PWM Controller. –25 to 85°C	17/11	50	UC2844BN	DIP8	UC2844BD1	UC2844BD1013TR
UC2845	Current Mode PWM Controller. –25 to 85°C	9/8.2	50	UC2845N	DIP8	UC2845D	UC2845D013TR
UC2845A	High Performance Current Mode PWM Controller. Double Pulse Suppression. –25 to 85°C	9/8.2	50	UC2845AN	DIP8	UC2845AD1	UC2845AD1013TR
UC2845B	High Performance Current Mode PWM Controller. –25 to 85°C	9/8.2	50	UC2845BN	DIP8	UC2845BD1	UC2845BD1013TR
UC3842	Current Mode PWM Controller. 0 to 70°C	17.5/11.5	100	UC3842N	DIP8	UC3842D	UC3842D013TR
UC3842A	High Performance Current Mode PWM Controller. Double Pulse Suppression. 0 to 70°C	17.5/11.5	100	UC3842AN	DIP8	UC3842AD1	UC3842AD1013TR
UC3842B	High Performance Current Mode PWM Controller. 0 to 70°C	17.5/11.5	100	UC3842BN	DIP8	UC3842BD1	UC3842BD1013TR

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DIP



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QFP

PWM CONTROLLERS *continued*

Type	Function	UVLO (V on/off)	Duty (%)	Device No. & Anglia Order Code				
				LEADED	Package & Pins	SURFACE MOUNT		Package & Pins
				(TUBE)		(STICK)	(TAPE & REEL)	
UC3843	Current Mode PWM Controller. 0 to 70°C	9/8.2	100	UC3843N	DIP8	UC3843D	UC3843D013TR	SO14
UC3843A	High Performance Current Mode PWM Controller. Double Pulse Suppression. 0 to 70°C	9/8.2	100	UC3843AN	DIP8	UC3843AD1	UC3843AD1013TR	SO8
UC3843B	High Performance Current Mode PWM Controller. 0 to 70°C	9/8.2	100	UC3843BN	DIP8	UC3843BD1	UC3843BD1013TR	SO8
UC3844	Current Mode PWM Controller. 0 to 70°C	17.5/11.5	50	UC3844N	DIP8	UC3844D	UC3844D013TR	SO14
UC3844A	High Performance Current Mode PWM Controller. Double Pulse Suppression. 0 to 70°C	17.5/11.5	50	UC3844AN	DIP8	UC3844AD1	UC3844AD1013TR	SO8
UC3844B	High Performance Current Mode PWM Controller. 0 to 70°C	17.5/11.5	50	UC3844BN	DIP8	UC3844BD1	UC3844BD1013TR	SO8
UC3845	Current Mode PWM Controller. 0 to 70°C	9/8.2	50	UC3845N	DIP8	UC3845D	UC3845D013TR	SO14
UC3845A	High Performance Current Mode PWM Controller. Double Pulse Suppression. 0 to 70°C	9/8.2	50	UC3845AN	DIP8	UC3845AD1	UC3845AD1013TR	SO8
UC3845B	High Performance Current Mode PWM Controller. 0 to 70°C	9/8.2	50	UC3845BN	DIP8	UC3845BD1	UC3845BD1013TR	SO8



DIP



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D.C. - D.C. CONVERTERS

Type	Function	Device No. & Anglia Order Code				
		LEADED	Package & Pins	SURFACE MOUNT		Package & Pins
		(TUBE)		(STICK)	(TAPE & REEL)	
MC34063AC	DC - DC Converter Control Circuit. 0 to 70°C	MC34063ACN	DIP8	MC34063ACD	MC34063ACD-TR	SO8
MC34063AB	DC - DC Converter Control Circuit. - 40 to 85°C	MC34063ABN	DIP8	MC34063ABD	MC34063ABD-TR	SO8
ST662AC	Converts 5V to 12V, 30mA for Flash Memory Programming Circuit. 0 to 70°C	ST662ACN	DIP8	ST662ACD	ST662ACD-TR	SO8
ST662AB	Converts 5V to 12V, 30mA for Flash Memory Programming Circuit. - 40 to 85°C	ST662ABN	DIP8	ST662ABD	ST662ABD-TR	SO8
ST755C	Adjustable Inverting, Negative Output, Current-Mode PWM Regulator. - 40 to 85°C	ST755CN	DIP8	ST755CD	ST755CD-TR	SO8

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PACKAGE DIMENSIONS

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PENTAWATT



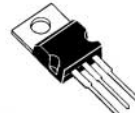
MULTIWATT



HEPTAWATT



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TO220



TO92



SO

REGULATORS

			Device No. &  Order Code				
Type	Function		Rating (A)	LEADED 	Package & Pins	SURFACE MOUNT  	Package & Pins
L200	Adjustable Voltage and Current Regulator		2	L200CV L200CH	PENTAWATT PENTAWATT*	— —	— —
L296	High Current Switching Regulator	Soft Start. SCR Control Circuit	4	L296 L296HT	MULTIWATT-15 MULTIWATT-15*	— —	— —
		Soft Start. External Programmable Limiting Current. SCR Control Circuit	4	L296P L296PHT	MULTIWATT-15 MULTIWATT-15*	— —	— —
L4936	Dual Multifunction Voltage Regulator		0.05/0.5	L4936N	MULTIWATT-11	—	—
L4937	Dual Multifunction Voltage Regulator		0.05/0.5	L4937N	HEPTAWATT	—	—
L4938	Dual Multifunction Voltage Regulator		0.05/0.5	L4938N	DIP16	—	—
L4955	Ultra Low Drop Regulator	1.26V Adjustable Output	5	L4955	HEPTAWATT	—	—
		3.3V Fixed Output		L4955V3.3	TO220	—	—
		5.1V Fixed Output		L4955V5.1	TO220	—	—
		12V Fixed Output		L4955V12	TO220	—	—
L4956	Low Drop 5A Linear Regulator		5	L4956	HEPTAWATT	—	—
L4957	Ultra Low Drop Regulator. 1.26V Adjustable Output		5	L4957	TO220	—	—
L4960	Power Switching Regulator		2.5	L4960 L4960H	HEPTAWATT HEPTAWATT*	— —	— —
L4962	Power Switching Regulator		1.5	L4962/A L4962E/A L4962EH/A	DIP16 HEPTAWATT HEPTAWATT*	— — —	— — —
L4963	Power Switching Regulator. Reset and Power Fail Output		1.5	L4963W	DIP18	L4963D	SO20
L4964	Step Down High Current Switching Regulator		4	L4964	MULTIWATT-15	—	—
L4970	Step Down Power Switching Regulator		10	L4970A	MULTIWATT-15	—	—
L4971	Step Down Power Switching Regulator		1.5	L4971	DIP8	L4971D	SO16W
L4972	Step Down Power Switching Regulator. Reset and Power Fail Output		2	L4972A	DIP20	L4972AD	SO20
L4973	Step Down Power Switching Regulator	3.3V Fixed Output 5.1V Fixed Output	3.5	L4973V3.3 L4973V5.1	DIP18 DIP18	L4973D3.3 L4973D5.1	SO20 SO20
L4974	Step Down Power Switching Regulator. Reset and Power Fail		3.5	L4974A	DIP20	—	—
L4975	Step Down Power Switching Regulator		5	L4975A	MULTIWATT-15	—	—
L4976	Step Down Power Switching Regulator		1	L4976	DIP8	L4976D	SO16W
L4977	Step Down Power Switching Regulator		7	L4977A	MULTIWATT-15	—	—
L4978	Step Down Power Switching Regulator		2	L4978	DIP8	L4978D	SO16W
L5971	Step Down Power Switching Regulator		1.5	L5971	DIP8	L5971D	SO16W
PB137	13.7V Voltage Regulator for Battery Charger		1.5	PB137ACV	TO220	—	—

* Horizontal mounting

VOLTAGE SUPERVISORS

		Device No. &  Order Code				
Type	Function	LEADED	Package & Pins	 SURFACE MOUNT		Package & Pins
		(TUBE)		(STICK)	(TAPE & REEL)	
LPR30	Low Drop Regulator Drive for External N-Channel Power MOSFET	LPR30N	DIP8	LPR30D	LPR30D-TR	SO8
TL7700AC	Supply Voltage Supervisor. Sense Input/Threshold Voltage = −0.3 to 6V/2.58V	TL7702ACP/A	DIP8	TL7702ACD1/A	—	SO8
	Supply Voltage Supervisor. Sense Input/Threshold Voltage = −0.3 to 10V/4.6V	TL7705ACP/A	DIP8	TL7705ACD1/A	—	SO8
TS831	Micropower Voltage Supervisor. Reset Active Low. Threshold Voltage = 4.5V	TS831-4IZ	TO92 	TS831-4ID	TS831-4IDT	SO8
	Micropower Voltage Supervisor. Reset Active Low. Threshold Voltage = 4.33V	TS831-5IZ	TO92 	TS831-5ID	TS831-5IDT	SO8
TS836	Micropower Voltage Supervisor. Reset Active High	TS836-4IZ	TO92 	TS836-4ID	TS836-4IDT	SO8

* Supplied loose. Tape & Reel available to special order.

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PENTAWATT (V)



PENTAWATT (H)



MULTIWATT



CLIPWATT



SO

AUDIO AMPLIFIERS

Type	Function	Device No. & Anglia Order Code			
		LEADED (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
TBA820	1.2W Audio Amplifier	TBA820M	DIP8	—	—
TDA1905	5W Audio Amplifier with Muting	TDA1905	DIP16	—	—
TDA2002	8W Car Radio Audio Amplifier	TDA2002V TDA2002H	PENTAWATT(V) PENTAWATT(H)	— —	— —
TDA2003	10W Car Radio Audio Amplifier	TDA2003V TDA2003H	PENTAWATT(V) PENTAWATT(H)	— —	— —
TDA2004	10 + 10W Stereo Amplifier for Car Radio	TDA2004A	MULTIWATT-11	—	—
TDA2005	20W Bridge Amplifier for Car Radio	TDA2005M	MULTIWATT-11	—	—
TDA2006	12W Audio Amplifier	TDA2006V TDA2006H	PENTAWATT(V) PENTAWATT(H)	— —	— —
TDA2009	10 + 10W Stereo Amplifier	TDA2009A	MULTIWATT-11	—	—
TDA2030	14W Hi-Fi Audio Amplifier	TDA2030V TDA2030H	PENTAWATT(V) PENTAWATT(H)	— —	— —
TDA2030A	18W Hi-Fi Amplifier and 35W Driver	TDA2030AV TDA2030AH	PENTAWATT(V) PENTAWATT(H)	— —	— —
TDA2040	20W Hi-Fi Audio Power Amplifier	TDA2040V	PENTAWATT(V)	—	—
TDA2050	35W Hi-Fi Audio Power Amplifier	TDA2050V TDA2050H	PENTAWATT(V) PENTAWATT(H)	— —	— —
TDA2051	40W Hi-Fi Audio Power Amplifier	TDA2051V TDA2051H	PENTAWATT(V) PENTAWATT(H)	— —	— —
TDA2052	60W Hi-Fi Audio Power Amplifier with Mute/Stand-By	TDA2052	HEPTAWATT	—	—
TDA2822	Dual Power Amplifier	TDA2822	DIP16	—	—
TDA2822D	Dual Low Voltage Power Amplifier	—	—	TDA2822D	SO8
TDA2822M	Dual Low Voltage Power Amplifier	TDA2822M	DIP8	—	—
TDA7231A	1.6W Audio Amplifier	TDA7231A	DIP8	—	—
TDA7233	1W Audio Amplifier with Muting	TDA7233	DIP8	TDA7233D	SO8
TDA7250	60W Hi-Fi Dual Audio Driver	TDA7250	DIP20	—	—
TDA7256	30W Bridge Fully Protected Amplifier for Car Radio	TDA7256	MULTIWATT-11	—	—
TDA7263	12 + 12W Stereo Amplifier with Muting	TDA7263 TDA7263M	CLIPWATT-11 MULTIWATT-11	— —	— —
TDA7294	100V-100W DMOS Audio Amplifier with Mute/Stand-By	TDA7294V	MULTIWATT-15	—	—

R.F. AMPLIFIERS

Type	Function	Device No. & Anglia Order Code	
		SURFACE MOUNT (STICK)	Package & Pins
TSH690I	40MHz to 1GHz Amplifier	TSH690ID	SO8
TSH691I	Low Cost 40MHz to 1GHz Amplifier	TSH691ID	SO8

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PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform



DIP



SO



TO92



PLCC

POWER FACTOR CORRECTORS

Type	Function	Device No. & Anglia Order Code			
		LEADED TUBE	Package & Pins	SURFACE MOUNT STICK 	Package & Pins
L4981A	Power Factor Corrector – Fixed Frequency	L4981A	DIP20	L4981AD	SO20
L4981B	Power Factor Corrector – Modulated Frequency	L4981B	DIP20	L4981BD	SO20
L6560	Power Factor Corrector	L6560	DIP8	L6560D	SO8
		L6560A	DIP8	L6560AD	SO8
L6561	Power Factor Corrector	L6561	DIP8	L6561D	SO16W

SUPPLEMENTARY DEVICES

Type	Function	Device No. & Anglia Order Code			
		LEADED TUBE	Package & Pins	SURFACE MOUNT STICK 	Package & Pins
L93PI	Quad Low Side Driver	–	–	L93PI	SO20
L5170	Octal Line Driver	L5170A	DIP28	L5170D	PLCC28
L6374	Industrial Quad Line Driver	L6374DP	DIP20	L6374FP	SO20
LM134	Three Terminal Adjustable Current Source. – 55 to 125°C	LM134Z	TO92 ♦	LM134D	SO8
LM135	Precision Temperature Sensor. – 55 to 150°C	LM135Z	TO92 ♦	LM135D	SO8
LM234	Three Terminal Adjustable Current Source. – 5 to 100°C	LM234Z	TO92 ♦	LM234D	SO8
LM235	Precision Temperature Sensor. – 40 to 100°C	LM235Z	TO92 ♦	LM235D	SO8
LM334	Three Terminal Adjustable Current Source. 0 to 70°C	LM334Z	TO92 ♦	LM334D	SO8
LM335	Precision Temperature Sensor. – 40 to 100°C	LM335	TO92 ♦	LM335D	SO8
M5450	34 Output, LED Display Driver with Enable	M5450B7	DIP40	–	–
M5451	35 Output, LED Display Driver	M5451B7	DIP40	M5451Q	PLCC44
M5480	23 Segment, 3 Digit LED Driver	M5480B7	DIP28	–	–
M5481	14 Segment, 2 Digit LED Driver	M5481B7	DIP20	–	–
M5482	15 Segment, 2 Digit LED Driver	M5482B7	DIP20	–	–
MC1488	RS232C Quad Line Driver	MC1488P	DIP16	MC1488D1	SO14
MC1489	Quad Line Receiver	MC1489P	DIP14	MC1489D1	SO14
	Quad Line Receiver	MC1489AP	DIP14	MC1489AD1	SO14
TD230	Electronic Circuit Breaker	TD230IN	DIP8	T230ID	SO16
TDA0161	Proximity Detector	TDA0161DP	DIP8	TDA0161FP	SO8

♦ Supplied loose. Tape & Reel available to special order.

SUPPLIED IN FULL TUBES/STICKS ONLY

PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

ST6 FAMILY

Overview
One Time Programmable (OTP) Devices
Development Tools : Starter Kits & Software
and UV Erasable (EPROM) Devices
pages 128 - 130



page 131

ST7 FAMILY

Overview
One Time Programmable (OTP) Devices
Development Tools : Starter Kits & Software
and UV Erasable (EPROM) Devices
pages 132 - 134

Also Available :

6800/68000 FAMILY

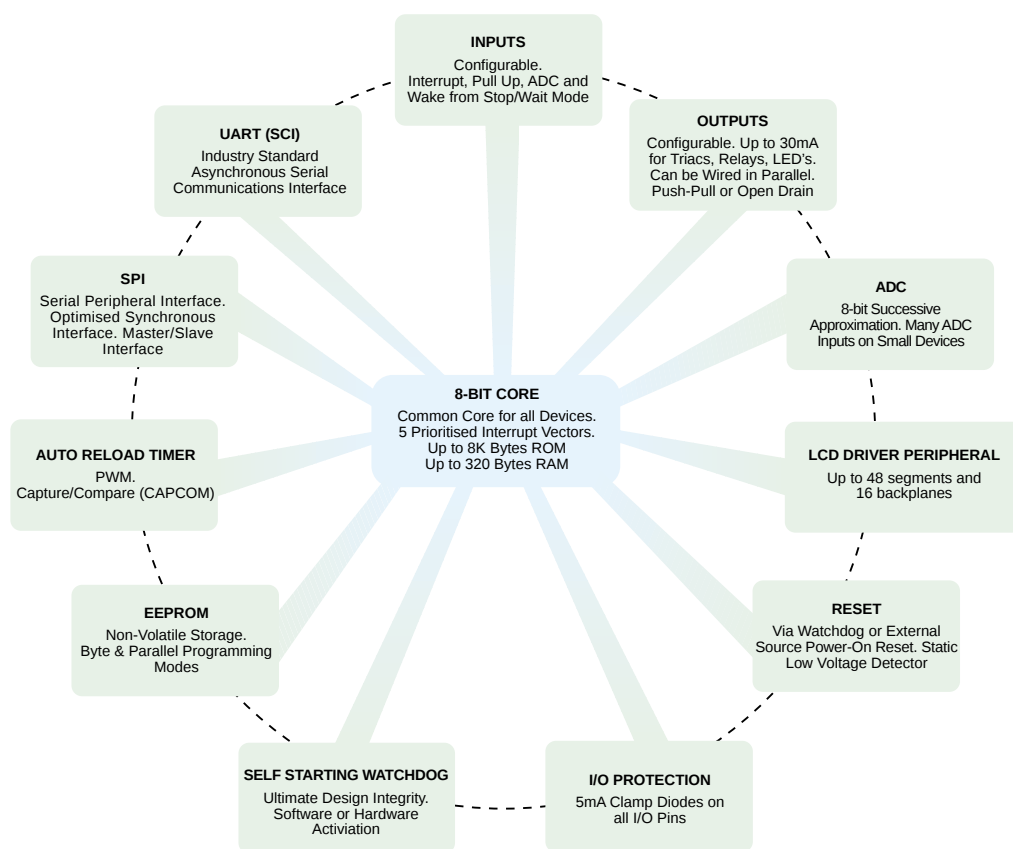
6800 Series 8-bit NMOS MPU's and Peripherals
68000 Series 16-bit MPU Peripherals
please contact our Sales Dept for details

ST6

Overview

A family of single chip 8-bit CMOS microcontrollers which offer an ideal entry into embedded design. Combines economy and performance with very high noise immunity and a wide range of on-chip peripherals. One time programmable (OTP) devices are listed together with UV erasable (EPROM) versions for development purposes. For high volume production, FASTROM and ROM products are available.

- Small to medium complexity applications
- Led and SMD options
- Wide range of on-board peripherals (ADC, RAM, ROM, SPI, SCI, EEPROM, I/O, timers, UART, PWM, CAPCOM etc.)
- Very EMC tolerant
- Smooth running safeguards (e.g., WDT, LVD, internal oscillator, OSG and POR)
- Good economy/performance
- Low power consumption modes
- Full range of development tools including starter kits





ST6

One Time Programmable (OTP) Devices



DIP



SDIP



SO



QFP

Up to 8K Bytes ROM • Up to 320 Bytes RAM • Up to 128 Bytes EEPROM
Up to 36 I/Os • 8 and 16-bit Timers • ADC, SPI, UART
Internal Oscillator • High Noise Immunity

OTP Type	Program ROM (Bytes)	Data RAM (Bytes)	EEPROM (Bytes)	A/D Inputs 8-bit	Timers 8-bit	Serial Interface	I/Os (High Current)	Device No. & Anglia Order Code			
								DUAL IN-LINE TUBE	Package & Pins	SURFACE MOUNT STICK	Package & Pins

ST620X, ST621X, ST622X • ADC (except 03/08) •

Starter Kit available (ST622XB - KIT/UK)

ST62T00C	1K	64	—	4	1	—	9 (3)	ST62T00CB6	DIP16	ST62T00CM6	SO16
ST62T01C	2K	64	—	4	1	—	9 (3)	ST62T01CB6	DIP16	ST62T01CM6	SO16
ST62T03C	1K	64	—	—	1	—	9 (3)	ST62T03CB6	DIP16	ST62T03CM6	SO16
ST62T08C	1K	64	—	—	1	—	12 (4)	ST62T08CB6	DIP20	ST62T08CM6	SO20
ST62T09C	1K	64	—	4	1	—	12 (4)	ST62T09CB6	DIP20	ST62T09CM6	SO20
ST62T10C	2K	64	—	8	1	—	12 (4)	ST62T10CB6	DIP20	ST62T10CM6	SO20
ST62T15C	2K	64	—	16	1	—	20 (4)	ST62T15CB6	DIP28	ST62T15CM6	SO28
ST62T18C	8K	192	—	7	1 + 1AR	UART	12 (8)	ST62T18CB6	DIP20	ST62T18CM6	SO20
ST62T20C	4K	64	—	8	1	—	12 (4)	ST62T20CB6	DIP20	ST62T20CM6	SO20
ST62T25C	4K	64	—	16	1	—	20 (4)	ST62T25CB6	DIP28	ST62T25CM6	SO28
ST62T28C	8K	192	—	12	1 + 1AR	SPI + UART	20 (8)	ST62T28CB6	DIP28	ST62T28CM6	SO28

Additional Features : Watchdog, ADC, direct LED or Triac driving via high current I/O's, LVD, Internal Oscillator, OSG

ST623X • ADC • EEPROM • SPI • UART • PWM •

Starter Kit available (ST623X - KIT/UK)

ST62T30B	8K	192	128	16	1 + 1AR(16-bit)	SPI + UART	20 (4)	ST62T30BB6	DIP28	ST62T30BM6	SO28
ST62T32B	8K	192	128	21	1 + 1AR(16-bit)	SPI + UART	30 (9)	ST62T32BB6	SDIP42	ST62T32BQ6	QFP52
ST62T35B	8K	192	128	24	1 + 1AR(16-bit)	SPI + UART	36 (12)	—	—	ST62T35BQ6	QFP52

Additional Features : Watchdog, ADC, direct LED or Triac driving via high current I/O's, Internal Oscillator, OSG, Auto-reload Timer for CAPCOM and PWM

ST624X • ADC • EEPROM • SPI • LCD •

Starter Kit available (ST624XB - KIT/UK)

45 x 4 LCD Segment											
ST62T40B	8K	216	128	12	2	SPI	24 (4)	—	—	ST62T40BQ6	QFP80
40 x 4 LCD Segment											
ST62T42B	8K	216	128	6	2	SPI	18 (4)	—	—	ST62T42BQ6	QFP64
24 x 4 LCD Segment											
ST62T45B	4K	140	128	7	2	SPI	18 (4)	—	—	ST62T45BQ6	QFP52
27 x 4 LCD Segment											
ST62T46B	4K	140	128	8	2	SPI	20 (4)	ST62T46BB6	SDIP56	—	—

Additional Features : Watchdog, ADC, direct LED or Triac driving via high current I/O's, PSS, 32kHz Oscillator, LCD Driver

ST625X, ST626X • ADC • EEPROM (except 5x) • SPI • PWM •

Starter Kit available (ST626XB - KIT/UK)

ST62T52B	2K	128	—	4	1 + 1AR	—	9 (5)	ST62T52BB6	DIP16	ST62T52BM6	SO16
ST62T53B	2K	128	—	7	1 + 1AR	SPI	13 (6)	ST62T53BB6	DIP20	ST62T53BM6	SO20
ST62T55B	4K	128	—	13	1 + 1AR	SPI	21 (8)	ST62T55BB6	DIP28	ST62T55BM6	SO28
ST62T60B	4K	128	128	7	1 + 1AR	SPI	13 (6)	ST62T60BB6	DIP20	ST62T60BM6	SO20
ST62T62B	2K	128	64	4	1 + 1AR	—	9 (5)	ST62T62BB6	DIP16	ST62T62BM6	SO16
ST62T63B	2K	128	64	7	1 + 1AR	SPI	13 (6)	ST62T63BB6	DIP20	ST62T63BM6	SO20
ST62T65B	4K	128	128	13	1 + 1AR	SPI	21 (8)	ST62T65BB6	DIP28	ST62T65BM6	SO28

Additional Features : Watchdog, ADC, direct LED or Triac driving via high current I/O's, Internal Oscillator, OSG, Auto-reload Timer for CAPCOM and PWM

ST628X • ADC • EEPROM • SPI • UART • LCD •

48 x 16 LCD Dot Matrix											
ST62T80B	8K	320	128	12	1 + 1AR	SPI + UART	22 (10)	—	—	ST62T80BQ6	QFP100
40 x 16 LCD Dot Matrix											
ST62T85B	8K	288	128	8	1 + 1AR	SPI + UART	12 (4)	—	—	ST62T85BQ6	QFP80

Additional Features : Watchdog, ADC, direct LED or Triac driving via high current I/O's, PSS, 32kHz Oscillator, LCD Driver

SUPPLIED IN FULL TUBES/STICKS ONLY

DEVELOPMENT TOOLS

shown overleaf > > >

N.B. SSOP package is also available on certain OTP devices - please contact our Sales Dept for details.

☎ 01945 47 47 47 • 📠 01945 47 48 49 • 💻 E-mail: sales@angliac.co.uk

ST6

Development Tools

Starter Kits

Starter kits combine an evaluation board with a low cost programmer and hardware emulator. They come complete with cables and a power supply. Each kit is supplied with full documentation and a 'ST62onCD' disk which includes application notes, data sheets, starter kit user guides, programming manual, training course and development software (including assembler, linker and simulator/emulator). The CD is also available separately (see Software section).

Description	Device No. & Anglia Order Code
Starter Kit for ST620X, ST621X and ST622X Starter Kit for ST623X Starter Kit for ST624X Starter Kit for ST625X and ST626X	ST622XC-KIT/UK ST623X-KIT/UK ST624XB-KIT/UK ST626XB-KIT/UK

A complete range of emulators and programmers are also available. Please contact our Technical Support team to discuss your requirements.

Software

Realizer® is a schematic based software design tool, with on-screen simulation, allowing the use of virtual tools i.e. oscilloscope logic probes, pulse and data generators. It creates final executable code, ready for programming into a microcontroller.

Description	Device No. & Anglia Order Code
Realizer Software for PC C-Compiler Software for PC ST62onCD	ST-REALIZER/PC ST6-SWC/PC CD ST6MICRO

UV Erasable (EPROM) Devices

A range of re-programmable EPROM's designed to reduce the amount of devices required for development, debugging and prototyping. Each EPROM features the maximum memory size and peripherals of the relevant OTP versions.



DIP (UV)



SDIP (UV)



QFP (UV)

OTP Versions Covered	UV Type	Device No. & Anglia Order Code			
		DUAL IN-LINE	Package & Pins	SURFACE MOUNT SMD	Package & Pins
ST62T00C, ST62T01C, ST62T03C	ST62E01C	ST62E01CF1	DIP16	—	—
ST62T08C, ST62T09C, ST62T10C, ST62T20C	ST62E20C	ST62E20CF1	DIP20	—	—
ST62T15C, ST62T25C	ST62E25C	ST62E25CF1	DIP28	—	—
ST62T18C	ST62E18C	ST62E18CF1	DIP20	—	—
ST62T28C	ST62E28C	ST62E28CF1	DIP28	—	—
ST62T30B	ST62E30B	ST62E30BF1	DIP28	—	—
ST62T32B	ST62E32B	ST62E32BF1	SDIP42	ST62E32BG1	QFP52
ST62T35B	ST62E35B	—	—	ST62E35BG1	QFP52
ST62T40B	ST62E40B	—	—	ST62E40BG1	QFP80
ST62T42B	ST62E42B	—	—	ST62E42BG1	QFP64
ST62T45B	ST62E45B	—	—	ST62E45BG1	QFP52
ST62T46B	ST62E46B	ST62E46BF1	SDIP56	—	—
ST62T52B, ST62T62B	ST62E62B	ST62E62BF1	DIP16	—	—
ST62T53B, ST62T60B, ST62T63B	ST62E60B	ST62E60BF1	DIP20	—	—
ST62T55B, ST62T65B	ST62E65B	ST62E65BF1	DIP28	—	—
ST62T80B	ST62E80B	—	—	ST62E80BG1	QFP100
ST62T85B	ST62E85B	—	—	ST62E85BG1	QFP80

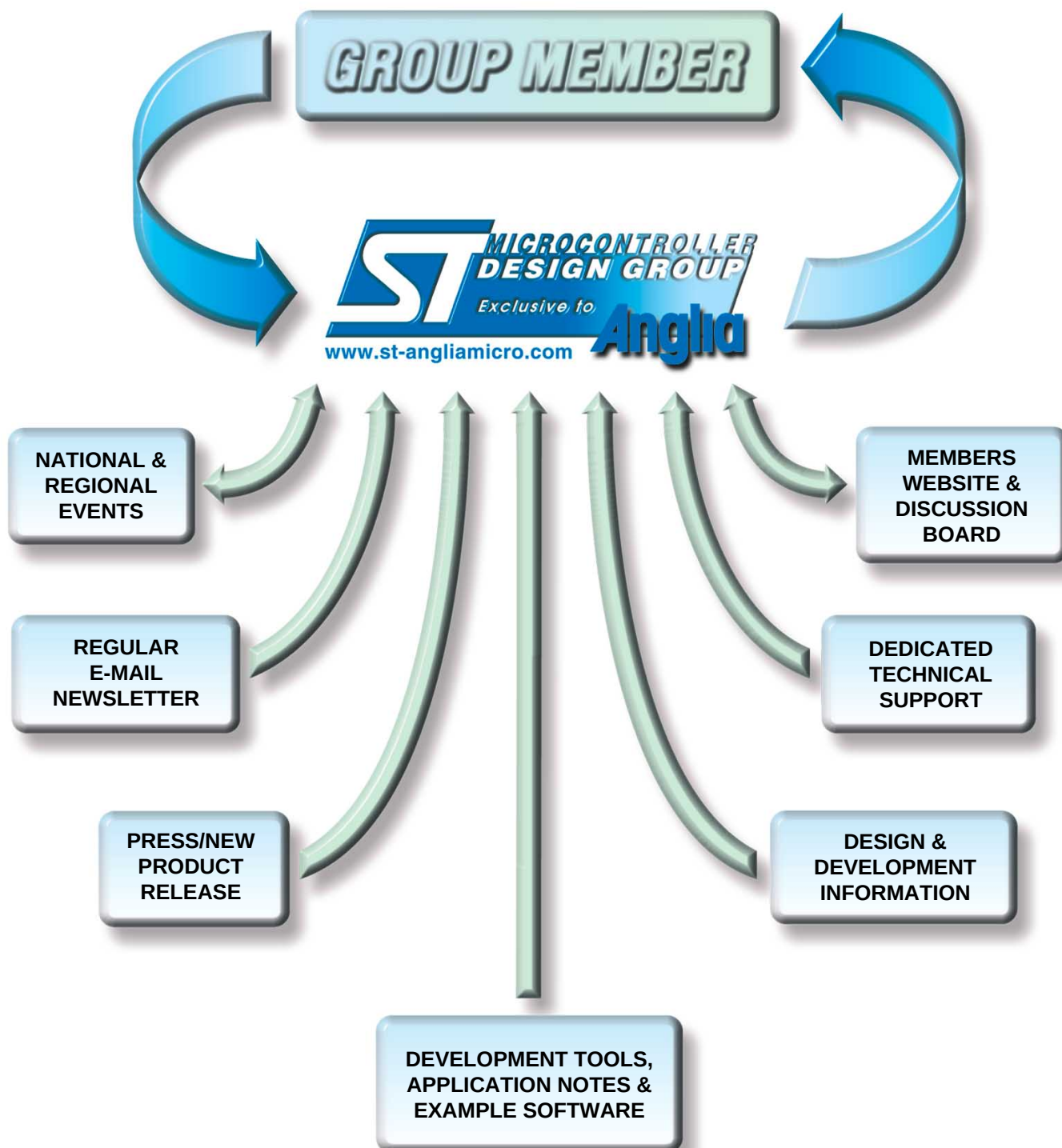
PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform



Anglia is proud to announce a major development in the support given to design and project engineers involved in embedded microcontroller projects. The ST Microcontroller Design Group is exclusive to Anglia, and offers members a comprehensive range of technical and practical benefits through a formula of design partnership and interactive communication. With dedicated application and technical support, information on the latest ST products and regular events throughout the UK, designers will have access to an enormous database of microcontroller knowledge and experience.

To discover how Anglia and STMicroelectronics can assist your organisation from project concept to final design, please contact our Technical Support team and gain a real microcontroller design advantage.

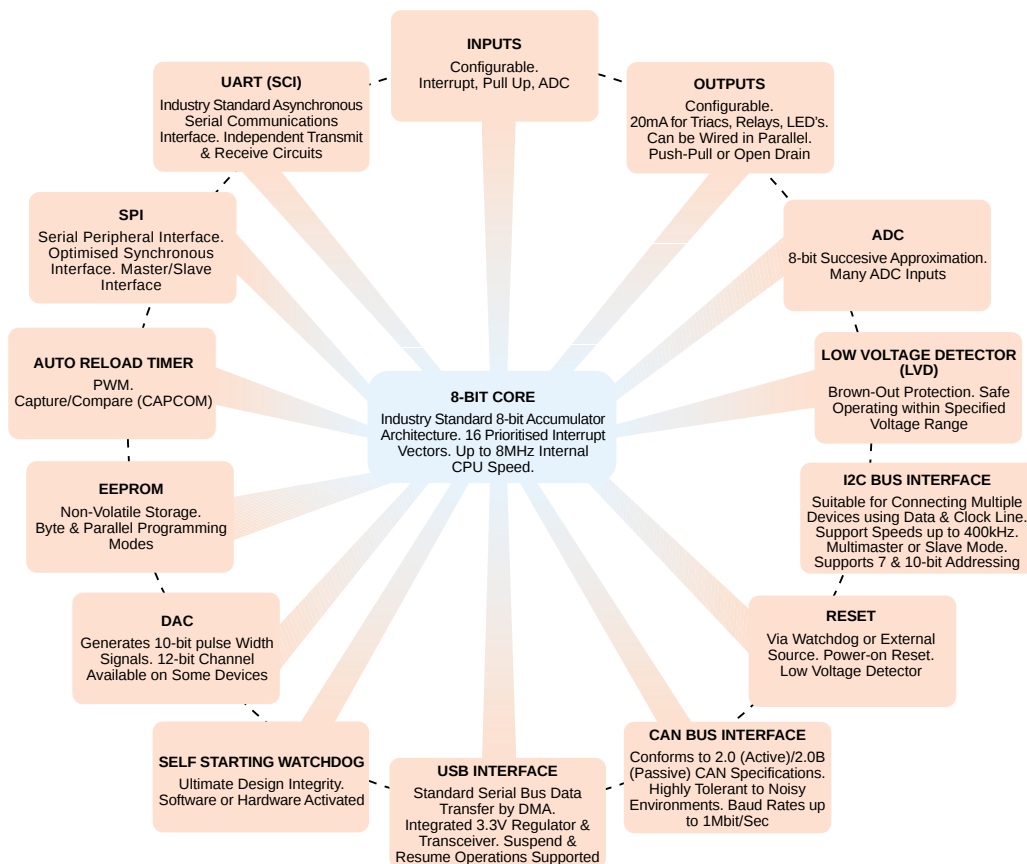


ST7

Overview

Providing a combination of leading system design and outstanding quality, the ST7 family offers significant benefits to both industrial and consumer applications. Based upon industry standard 8-bit architecture enhanced for high-level language programming, the ST7 is available with a wide range of on-chip peripherals. One Time Programmable (OTP) devices are listed together with UV erasable (EPROM) versions for development purposes. For high volume production, FASTROM and ROM products are available.

- Medium complexity applications
- Leaded and SMD options
- Fast instruction cycle time
- Industrial standard architecture (8-bit)
- Wide range of on-chip peripherals (ADC, DAC, RAM, ROM, I²C, SPI, SCI, EPROM, I/O, timers, UART, PWM, CAPCOM, CAN & USB etc.)
- Good economy/performance
- Very EMC tolerant
- Smooth running safeguards (e.g., WDT, LVD and POR)
- Full range of development tools including starter kits





ST7 FAMILY

MICROCONTROLLERS

ST7

One Time Programmable (OTP) Devices



SDIP

SO

TQFP

Up to 32K Bytes ROM • Up to 1K Bytes RAM
Up to 256 Bytes EEPROM • Up to 44 I/Os • 16-bit Timers
ADC, SPI, I²C, SCI, PWM, CAN, USB • High Noise Immunity

OTP Type	Program ROM (Bytes)	Data RAM (Bytes)	EEPROM (Bytes)	A/D Inputs 8-bit	Timers 8-bit	Serial Interface	I/Os (High Current)	Device No. & Anglia Order Code			
								DUAL IN-LINE (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins

ST72101/121 • SPI • SCI* • LVD* • Starter Kit available (STMDT1 - KIT/UK & STMDT2 - KIT/UK)

ST72T101G1	4K	256	—	—	1	SPI	22 (4)	ST72T101G1B6	SDIP32	ST72T101G1M6	SO28
ST72T101G2	8K	256	—	—	1	SPI	22 (4)	ST72T101G2B6	SDIP32	ST72T101G2M6	SO28
ST72T121J2*	8K	384	—	—	2	SPI + SCI	32 (4)	ST72T121J2B6	SDIP42	ST72T121J2T6	TQFP44
ST72T121J4*	16K	512	—	—	2	SPI + SCI	32 (4)	ST72T121J4B6	SDIP42	ST72T121J4T6	TQFP44
ST72T121J2S*	8K	384	—	—	2	SPI + SCI	32 (4)	ST72T121J2B6S	SDIP42	ST72T121J2T6S	TQFP44
ST72T121J4S*	16K	512	—	—	2	SPI + SCI	32 (4)	ST72T121J4B6S	SDIP42	ST72T121J4T6S	TQFP44

ST72212/213 • ADC • SPI • Starter Kit available (STMDT1 - KIT/UK)

ST72T212G2	8K	256	—	6	2	SPI	22 (4)	ST72T212G2B6	SDIP32	ST72T212G2M6	SO28
ST72T213G1	4K	256	—	6	1	SPI	22 (4)	ST72T213G1B6	SDIP32	ST72T213G1M6	SO28

ST72311 • ADC • SPI • SCI • PWM • LVD* • Starter Kit available (STMDT2 - KIT/UK)

ST72T311J2	8K	384	—	6	2	SPI + SCI	32 (4)	ST72T311J2B6	SDIP42	ST72T311J2T6	TQFP44
ST72T311J4	16K	512	—	6	2	SPI + SCI	32 (4)	ST72T311J4B6	SDIP42	ST72T311J4T6	TQFP44
ST72T311J2S*	8K	384	—	6	2	SPI + SCI	32 (4)	ST72T311J2B6S	SDIP42	ST72T311J2T6S	TQFP44
ST72T311J4S*	16K	512	—	6	2	SPI + SCI	32 (4)	ST72T311J4B6S	SDIP42	ST72T311J4T6S	TQFP44
ST72T311N2	8K	384	—	8	2	SPI + SCI	44 (4)	ST72T311N2B6	SDIP56	ST72T311N2T6	TQFP64
ST72T311N4	16K	512	—	8	2	SPI + SCI	44 (4)	ST72T311N4B6	SDIP56	ST72T311N4T6	TQFP64
ST72T311N6	32K	1024	—	8	2	SPI + SCI	44 (4)	ST72T311N6B6	SDIP56	ST72T311N6T6	TQFP64
ST72T311N2S*	8K	384	—	8	2	SPI + SCI	44 (4)	ST72T311N2B6S	SDIP56	ST72T311N2T6S	TQFP64
ST72T311N4S*	16K	512	—	8	2	SPI + SCI	44 (4)	ST72T311N4B6S	SDIP56	ST72T311N4T6S	TQFP64

ST72331 • ADC • EEPROM • SPI • SCI • LVD* • Starter Kit available (STMDT2 - KIT/UK)

ST72T331J2	8K	384	256	6	2	SPI + SCI	32 (4)	ST72T331J2B6	SDIP42	ST72T331J2T6	TQFP44
ST72T331J4	16K	512	256	6	2	SPI + SCI	32 (4)	ST72T331J4B6	SDIP42	ST72T331J4T6	TQFP44
ST72T331J2S*	8K	384	256	6	2	SPI + SCI	32 (4)	ST72T331J2B6S	SDIP42	ST72T331J2T6S	TQFP44
ST72T331J4S*	16K	512	256	6	2	SPI + SCI	32 (4)	ST72T331J4B6S	SDIP42	ST72T331J4T6S	TQFP44
ST72T331N2	8K	384	256	8	2	SPI + SCI	44 (4)	ST72T331N2B6	SDIP56	ST72T331N2T6	TQFP64
ST72T331N4	16K	512	256	8	2	SPI + SCI	44 (4)	ST72T331N4B6	SDIP56	ST72T331N4T6	TQFP64
ST72T331N6	32K	1024	256	8	2	SPI + SCI	44 (4)	ST72T331N6B6	SDIP56	ST72T331N6T6	TQFP64
ST72T331N2S*	8K	384	256	8	2	SPI + SCI	44 (4)	ST72T331N2B6S	SDIP56	ST72T331N2T6S	TQFP64
ST72T331N4S*	16K	512	256	8	2	SPI + SCI	44 (4)	ST72T331N4B6S	SDIP56	ST72T331N4T6S	TQFP64

ST72272/371/372 • ADC • DAC • I²C • SCI* • PWM • Starter Kit available (STMDT4 - KIT/UK)

ST72T272K2	8K	384	—	4	1	I ² C	24 (4)	ST72T272K2B6	SDIP32	ST72T272K2M6	SO34
ST72T272K4	16K	512	—	4	1	I ² C	24 (4)	ST72T272K4B6	SDIP32	ST72T272K4M6	SO34
ST72T372J4	16K	512	—	4	1	I ² C	30 (6)	ST72T372J4B6	SDIP42	ST72T372J4T6	TQFP44
ST72T371N4*	16K	512	—	8	1	I ² C + SCI	39 (8)	ST72T371N4B6	SDIP56	ST72T371N4T6	TQFP64

ST72251 • ADC • I²C • SPI • Starter Kit available (STMDT1 - KIT/UK)

ST72T251G1	4K	256	—	6	2	I ² C + SPI	22 (8)	ST72T251G1B6	SDIP32	ST72T251G1M6	SO28
ST72T251G2	8K	256	—	6	2	I ² C + SPI	22 (8)	ST72T251G2B6	SDIP32	ST72T251G2M6	SO28

ST72512 • ADC • SPI • CAN • Starter Kit available (STMDT3 - KIT/UK)

ST72T512N2	8K	384	—	8	1	SPI	44 (8)	ST72T512N2B6	SDIP56	ST72T512N2T6	TQFP64
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ST72511/531 • ADC • DAC • EEPROM[†] • SPI • SCI • PWM • CAN • Starter Kit available (STMDT3 - KIT/UK)

ST72T511R4	16K	512	—	8	2	SPI + SCI	44 (8)	—	—	ST72T511R4T6	TQFP64
ST72T511R6	32K	1024	—	8	2	SPI + SCI	44 (8)	—	—	ST72T511R6T6	TQFP64
ST72T531R4 [†]	16K	512	256	8	2	SPI + SCI	44 (4)	—	—	ST72T531R4T6	TQFP64
ST72T531R6 [†]	32K	1024	256	8	2	SPI + SCI	44 (4)	—	—	ST72T531R6T6	TQFP64

ST72532 • ADC • EEPROM • SPI • CAN • Starter Kit available (STMDT3 - KIT/UK)

ST72T532N2	8K	384	256	8	1	SPI	44 (4)	ST72T532N2B6	SDIP56	ST72T532N2T6	TQFP64
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ST72671 • ADC • DAC • I²C • SCI • PWM • USB • Starter Kit available (STMDT4 - KIT/UK)

ST72T671N4	16K	512	—	8	1	I ² C + SCI	34 (8)	ST72T671N4B6	SDIP56	ST72T671N4T6	TQFP64
ST72T671N6	32K	1024	—	8	1	I ² C + SCI	34 (8)	ST72T671N6B6	SDIP56	ST72T671N6T6	TQFP64

SUPPLIED IN FULL TUBES/STICKS ONLY

DEVELOPMENT TOOLS shown overleaf >>>

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ST7

Development Tools

Starter Kits

Starter kits combine a low cost programmer and simulator. They come complete with cables and a power supply. Each kit is supplied with full documentation and a 'ST7onCD' disk which includes application notes, data sheets, starter kit user guides, programming manual, training course and development software (including assembler, linker and simulator).

Description	Device No. & Anglia Order Code
Starter Kit for ST72101, ST72212, ST72213, ST72251	ST7MDT1-KIT/UK
Starter Kit for ST72121, ST72311, ST72331	ST7MDT2-KIT/UK
Starter Kit for ST722511, ST72512, ST72531, ST7532	ST7MDT3-KIT/UK
Starter Kit for ST72272, ST72371, ST72372, ST72671	ST7MDT4-KIT/UK

A complete range of emulators and programmers are also available. Please contact our Technical Support team to discuss your requirements.

Software

Realizer® is a schematic based software design tool, with on-screen simulation, allowing the use of virtual tools i.e. oscilloscope logic probes, pulse and data generators. It creates final executable code, ready for programming into a microcontroller.

Description	Device No. & Anglia Order Code
Realizer Software for PC C-Compiler Software for PC ST7onCD	ST-REALIZER/PC ST7-SWCHI/PC CD ST7MICRO

UV Erasable (EPROM) Devices

A range of re-programmable EPROM's designed to reduce the amount of devices required for development, debugging and prototyping. Each EPROM features the maximum memory size and peripherals of the relevant OTP versions.



SDIP (UV)

OTP Versions Covered	UV Type	Device No. & Anglia Order Code	
		DUAL IN-LINE	Package & Pins
ST72T101G1, ST72T101G2	ST72E251G2	ST72E251G2D0	SDIP32
ST72T121J2, ST72T121J4	ST72E311J4	ST72E311J4D0	SDIP42
ST72T121J2S, ST72T121J4S	ST72E311J4S	ST72E311J4D0S	SDIP42
ST72T212G2, ST72T213G1	ST72E251G2	ST72E251G2D0	SDIP32
ST72T251G1, ST72T251G2			
ST72T272K2, ST72T272K4	ST72E272K4	ST72E272K4D0	SDIP32
ST72T311J2, ST72T311J4	ST72E311J4	ST72E311J4D0	SDIP42
ST72T311J2S, ST72T311J4S	ST72E311J4S	ST72E311J4D0S	SDIP42
ST72T311N2, ST72T311N4	ST72E311N4	ST72E311N4D0	SDIP56
ST72T311N2S, ST72T311N4S	ST72E311N4S	ST72E311N4D0S	SDIP56
ST72T331J2, ST72T331J4	ST72E331J4	ST72E331J4D0	SDIP42
ST72T331J2S, ST72T331J4S	ST72E331J4S	ST72E331J4D0S	SDIP42
ST72T331N2, ST72T331N4	ST72E331N4	ST72E331N4D0	SDIP56
ST72T331N2S, ST72T331N4S	ST72E331N4S	ST72E331N4D0S	SDIP56
ST72T371N4	ST72E671N6	ST72E671N6D0	SDIP56
ST72T671N4, ST72T671N6			

Please contact our Technical Support team regarding OTP versions not listed.

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

A collection of leading edge memories created to fulfil the vast majority of contemporary applications. The range briefly consists of UV and OTP EPROM's with access times down to 70ns, serial and parallel EEPROM's up to 256Kb and FLASH memories up to 16Mb including single chip FLASH/EEPROM devices. An innovative range of Non-Volatile RAM's (NVRAM) with variants utilising Real Time Clock functions and battery back up (including SMD versions with separate SNAPHAT® battery/crystal modules), completes the section.

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EEPROM

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FLASH

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Dual 3V/12V Operation
Dual 5V/12V Operation
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NVRAM

Zerpower®
Timekeeper™
Controllers
SNAPHAT® Modules
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FDIP



DIP



PLCC



TSOP



SO

UV & OTP, 2.7V to 3.6V Operation

						Device No. & Anglia Order Code			
Size	Type	Description	Prog.	Speed (ns)	Operating Temp. Range (°C)	DUAL IN-LINE (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
256Kb	M27W256	256Kb (32K x 8), CMOS	UV	90	- 40 to 85	M27W256-90F6	FDIP28	—	—
				100		M27W256-100F6	FDIP28	—	—
			OTP	90	- 40 to 85	M27W256-90B6	DIP28	M27W256-90K6	PLCC32
				100		M27W256-100B6	DIP28	M27W256-100K6 M27W256-100N6	TSOP28 PLCC32 TSOP28
512Kb	M27W512	512Kb (64K x 8), CMOS	OTP	100	- 40 to 85	—	—	M27W512-100K6	PLCC32
				120		—	—	M27W512-100N6	TSOP28
				—		—	—	M27W512-120K6	PLCC32
				—		—	—	M27W512-120N6	TSOP28
1Mb	M27W101	1Mb (128K x 8), CMOS	OTP	80	- 40 to 85	—	—	M27W101-80K6	PLCC32
				100		—	—	M27W101-80N6	TSOP32
				—		—	—	M27W101-100K6	PLCC32
				—		—	—	M27W101-100N6	TSOP32
	M27W102	1Mb (64K x 16), CMOS	OTP	80	- 40 to 85	—	—	M27W102-80K6	PLCC44
				100		—	—	M27W102-80N6	TSOP40
				—		—	—	M27W102-100K6	PLCC44
				—		—	—	M27W102-100N6	TSOP40
2Mb	M27W201	2Mb (256K x 8), CMOS	OTP	80	- 40 to 85	—	—	M27W201-80K6	PLCC32
				100		—	—	M27W201-80N6	TSOP32
				—		—	—	M27W201-100K6	PLCC32
				—		—	—	M27W201-100N6	TSOP32
4Mb	M27W401	4Mb (512K x 8), CMOS	OTP	80	- 40 to 85	—	—	M27W401-80K6	PLCC32
				100		—	—	M27W401-80N6	TSOP32
				—		—	—	M27W401-100K6	PLCC32
				—		—	—	M27W401-100N6	TSOP32
	M27W402	4Mb (256K x 16), CMOS	OTP	100	- 40 to 85	—	—	M27W402-100K6	PLCC44
				120		—	—	M27W402-100N6	TSOP40
				—		—	—	M27W402-120K6	PLCC44
				—		—	—	M27W402-120N6	TSOP40
8Mb	M27W800	8Mb (1M x 8/512K x 16), CMOS	OTP	120	- 40 to 85	—	—	M27W800-120K6	PLCC44
				150		—	—	M27W800-120M6	SO44
				—		—	—	M27W800-150K6	PLCC44
				—		—	—	M27W800-150M6	SO44
	M27W801	8Mb (1M x 8), CMOS	OTP	80	- 40 to 85	—	—	M27W801-80K6	PLCC32
				100		—	—	M27W801-80N6	TSOP32
				—		—	—	M27W801-100K6	PLCC32
				—		—	—	M27W801-100N6	TSOP32
16Mb	M27W160	16Mb (1M x 8/512K x 16), CMOS	OTP	120	- 40 to 85	—	—	M27W160-120M6	SO44
				150		—	—	M27W160-150M6	SO44
32Mb	M27W322	32Mb (2M x 16), CMOS	UV	120	- 40 to 85	M27W322-120F6	FDIP42	—	—
				150		M27W322-150F6	FDIP42	—	—

3V operation also available. Please contact our Sales Dept for details

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**PACKAGE
DIMENSIONS**

refer to General Data section
shown later in this shortform



EPROM

MEMORY



FDIP



DIP



PLCC



TSOP

UV & OTP, 5V Operation

						Device No. & Anglia Order Code			
Size	Type	Description	Prog.	Speed (ns)	Operating Temp Range (°C)	DUAL IN-LINE TUBE	Package & Pins	SURFACE MOUNT STICK SMD	Package & Pins
16Kb	M2716	16Kb (2K x 8), NMOS	UV	350	0 to 70	M2716-1F1	FDIP24	—	—
				450		M2716F1	FDIP24	—	—
32Kb	M2732A	32Kb (2K x 8), NMOS	UV	200	0 to 70	M2732A-2F1	FDIP24	—	—
				250	— 40 to 85	M2732AF1	FDIP24	—	—
64Kb	M2764A	64Kb (8K x 8), NMOS	UV	200	0 to 70	M2764A-2F1	FDIP28	—	—
				250	— 40 to 85	M2764AF1	FDIP28	—	—
				200		M2764A-2F6	FDIP28	—	—
	M27C64A	64Kb (8K x 8), CMOS	UV	100	0 to 70	M27C64A-10F1	FDIP28	—	—
				150		M27C64A-15F1	FDIP28	—	—
				200		M27C64A-20F1	FDIP28	—	—
				250		M27C64A-25F1	FDIP28	—	—
	128Kb	M27128A	128Kb (16K x 8), NMOS	UV	200	0 to 70	M27128A-2F1	FDIP28	—
250					M27128AF1	FDIP28	—	—	
256Kb	M27256	256Kb (32K x 8), NMOS	UV	200	0 to 70	M27256-2F1	FDIP28	—	—
				250	M27256F1	FDIP28	—	—	
	M27C256B	256Kb (32K x 8), CMOS	UV	100	0 to 70	M27C256B-10F1	FDIP28	—	—
				120	— 40 to 85	M27C256B-12F1	FDIP28	—	—
					M27C256B-12F6	FDIP28	—	—	
				150	0 to 70	M27C256B-15F1	FDIP28	—	—
			OTP	100	0 to 70	—	—	M27C256B-10C1	PLCC32
				—		—	M27C256B-10N1	TSOP28	
				120	— 40 to 85	—	—	M27C256B-12C1	PLCC32
					—	—	—	—	M27C256B-12N1
				150	0 to 70	—	—	M27C256B-12C6	PLCC28
					— 40 to 85	—	—	—	M27C256B-15C1
				—	—	M27C256B-15N1	TSOP28		
				—	—	—	—	—	—
512Kb	M27512	512Kb (64K x 8), NMOS	UV	200	0 to 70	M27512-2F1	FDIP28	—	—
				250	M27512F1	FDIP28	—	—	
	M27C512	512Kb (64K x 8), CMOS	UV	90	0 to 70	M27C512-90F1	FDIP28	—	—
				100	— 40 to 85	M27C512-90F6	FDIP28	—	—
					0 to 70	M27C512-10F1	FDIP28	—	—
				120	— 40 to 85	M27C512-12F1	FDIP28	—	—
					M27C512-12F6	FDIP28	—	—	
				150	0 to 70	M27C512-15F1	FDIP28	—	—
					— 40 to 85	M27C512-15F6	FDIP28	—	—
				OTP	70	0 to 70	—	—	M27C512-70C1
			— 40 to 85		—	—	—	M27C512-70C6	PLCC32
			90		0 to 70	M27C512-90B1	DIP28	M27C512-90C1	PLCC32
					— 40 to 85	M27C512-90B6	DIP28	M27C512-90C6	PLCC32
			100		0 to 70	M27C512-10B1	DIP28	M27C512-10C1	PLCC32
			120		— 40 to 85	M27C512-12B1	DIP28	M27C512-12C1	PLCC32
					—	—	M27C512-12C6	PLCC32	
			150		0 to 70	M27C512-15B1	DIP28	M27C512-15C1	PLCC32
					— 40 to 85	M27C512-15B6	DIP28	M27C512-15C6	PLCC32

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UV & OTP, 5V Operation continued

						Device No. & Anglia Order Code			
Size	Type	Description	Prog.	Speed (ns)	Operating Temp Range (°C)	DUAL IN-LINE	Package & Pins	SURFACE MOUNT	Package & Pins
						(TUBE)		(STICK)	
1Mb	M27C1001	1Mb (128K x 8), CMOS	UV	70	0 to 70	M27C1001-70F1	FDIP32	—	—
				90		M27C1001-90F1	FDIP32	—	—
				100		M27C1001-10F1	FDIP32	—	—
				120	- 40 to 85	M27C1001-12F1	FDIP32	—	—
						M27C1001-12F6	FDIP32	—	—
			OTP	70	0 to 70	M27C1001-70B1	DIP32	M27C1001-70C1	PLCC32
				90	- 40 to 85	M27C1001-90B1	DIP32	M27C1001-90C1	PLCC32
				100		—	—	M27C1001-90C6	PLCC32
				120	0 to 70	M27C1001-10B1	DIP32	M27C1001-10C1	PLCC32
					- 40 to 85	M27C1001-12B1	DIP32	M27C1001-12C1	PLCC32
	M27C1024	1Mb (64K x 16), CMOS	UV	70	0 to 70	M27C1024-70F1	FDIP40	—	—
				90		M27C1024-90F1	FDIP40	—	—
				100		M27C1024-10F1	FDIP40	—	—
				120		M27C1024-12F1	FDIP40	—	—
2Mb	M27C2001	2Mb (256K x 8), CMOS	UV	70	0 to 70	M27C2001-70F1	FDIP32	—	—
				90		M27C2001-90F1	FDIP32	—	—
				100		M27C2001-10F1	FDIP32	—	—
				120	- 40 to 85	M27C2001-10F6	FDIP32	—	—
						M27C2001-12F1	FDIP32	—	—
			OTP	70	0 to 70	M27C2001-12F6	FDIP32	—	—
				90	- 40 to 85	M27C2001-15F1	FDIP32	—	—
				100		—	—	M27C2001-70C1	PLCC32
				120	0 to 70	—	—	M27C2001-90C1	PLCC32
					- 40 to 85	—	—	M27C2001-10C1	PLCC32
	M27C1024	1Mb (64K x 16), CMOS	OTP	70	0 to 70	—	—	M27C1024-70C1	PLCC44
				90	- 40 to 85	—	—	M27C1024-90C1	PLCC44
				100		—	—	M27C1024-10C1	PLCC44
				120	0 to 70	—	—	M27C1024-12C1	PLCC44
2Mb	M27C2001	2Mb (256K x 8), CMOS	UV	70	0 to 70	M27C2001-70F1	FDIP32	—	—
				90		M27C2001-90F1	FDIP32	—	—
				100		M27C2001-10F1	FDIP32	—	—
				120	- 40 to 85	M27C2001-10F6	FDIP32	—	—
						M27C2001-12F1	FDIP32	—	—
			OTP	70	0 to 70	M27C2001-12F6	FDIP32	—	—
				90	- 40 to 85	M27C2001-15F1	FDIP32	—	—
				100		—	—	M27C2001-70C1	PLCC32
				120	0 to 70	—	—	M27C2001-90C1	PLCC32
					- 40 to 85	—	—	M27C2001-10C1	PLCC32
	M27C1024	1Mb (64K x 16), CMOS	OTP	70	0 to 70	—	—	M27C2001-10C6	PLCC32
				90	- 40 to 85	—	—	M27C2001-12C1	PLCC32
				100		—	—	M27C2001-12C6	PLCC32
				120	0 to 70	—	—	M27C2001-15C1	PLCC32

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PACKAGE DIMENSIONS

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EPROM

MEMORY

UV & OTP, 5V Operation

continued

						Device No. & Anglia Order Code			
Size	Type	Description	Prog.	Speed (ns)	Operating Temp Range (°C)	DUAL IN-LINE (TUBE)	Package & Pins	SURFACE MOUNT (STICK) 	Package & Pins
4Mb	M27C405	4Mb (512K x 8), CMOS	OTP	90	0 to 70	—	—	M27C405-90K1	PLCC32
				120		—	—	M27C405-90N1	TSOP32
	M27C4001	4Mb (512K x 8), CMOS	UV	70	0 to 70	M27C4001-70F1	FDIP32	—	—
				90		M27C4001-90F1	FDIP32	—	—
				100		M27C4001-10F1	FDIP32	—	—
				120	— 40 to 85	M27C4001-12F1	FDIP32	—	—
				150	0 to 70	M27C4001-12F6	FDIP32	—	—
				150	0 to 70	M27C4001-15F1	FDIP32	—	—
			OTP	70	0 to 70	—	—	M27C4001-70C1	PLCC32
				90		—	—	M27C4001-90C1	PLCC32
				100		—	—	M27C4001-10C1	PLCC32
				120	— 40 to 85	M27C4001-12B1	DIP32	M27C4001-10N1	TSOP32
				120	— 40 to 85	—	—	M27C4001-12C1	PLCC32
				150	0 to 70	—	—	M27C4001-12C6	PLCC32
				150	0 to 70	—	—	M27C4001-12N1	TSOP32
				150	0 to 70	—	—	M27C4001-15C1	PLCC32
	M27C4002	4Mb (256K x 16), CMOS	UV	70	0 to 70	M27C4002-70F1	FDIP40	—	—
				90		M27C4002-90F1	FDIP40	—	—
				100		M27C4002-10F1	FDIP40	—	—
				120	— 40 to 85	M27C4002-10F6	FDIP40	—	—
				120	0 to 70	M27C4002-12F1	FDIP40	—	—
				150	— 40 to 85	M27C4002-12F6	FDIP40	—	—
			OTP	70	0 to 70	—	—	M27C4002-70C1	PLCC44
				90		—	—	M27C4002-90C1	PLCC44
				100		—	—	M27C4002-10C1	PLCC44
				120	— 40 to 85	—	—	M27C4002-10C6	PLCC44
				120	0 to 70	—	—	M27C4002-12C1	PLCC44
				150	— 40 to 85	—	—	M27C4002-12C6	PLCC44
				150	0 to 70	—	—	M27C4002-15C1	PLCC44
				150	0 to 70	—	—	M27C4002-15C1	PLCC44
8Mb	M27C800	8Mb (1Mb x 8/512K x 16), CMOS	UV	100	0 to 70	M27C800-100F1	FDIP42	—	—
				120		M27C800-120F1	FDIP42	—	—
			OTP	100	0 to 70	—	—	M27C800-100K1	PLCC44
				120	— 40 to 85	—	—	M27C800-100M6	SO44
	M27C801	8Mb (1Mb x 8), CMOS	UV	100	0 to 70	M27C801-100F1	FDIP42	—	—
				120	— 40 to 85	M27C801-100F6	FDIP42	—	—
				120	0 to 70	M27C801-120F1	FDIP42	—	—
				150	— 40 to 85	M27C801-120F6	FDIP42	—	—
			OTP	100	0 to 70	—	—	M27C801-100K1	PLCC32
				120	— 40 to 85	—	—	M27C801-100N1	TSOP32
				120	— 40 to 85	—	—	M27C801-120K1	PLCC32
				150	0 to 70	—	—	M27C801-120K6	PLCC32
				150	0 to 70	—	—	M27C801-120N1	TSOP32
				150	0 to 70	—	—	M27C801-150K1	PLCC32
				150	0 to 70	—	—	M27C801-150N1	TSOP32
16Mb	M27C160	16Mb (2Mb x 8/1Mb x 16), CMOS	UV	100	0 to 70	M27C160-100F1	FDIP42	—	—
				120	— 40 to 85	M27C160-100F6	FDIP42	—	—
				150	0 to 70	M27C160-120F1	FDIP42	—	—
			OTP	100	0 to 70	—	—	M27C160-100M1	SO44
				120	— 40 to 85	—	—	M27C160-120M1	SO44
32Mb	M27C322	32Mb (2Mb x 16), CMOS	UV	80	0 to 70	M27C322-80F1	FDIP42	—	—
				100		M27C322-100F1	FDIP42	—	—

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DIP



SO

Serial, Microwire

Operating Temperature Range -40 to 85°C

				Device No. & Anglia Order Code				
Size	Type	Description	Operating Voltage (V)	DUAL IN-LINE	Package & Pins	SURFACE MOUNT		Package & Pins
				(TUBE)		(STICK)	(TAPE & REEL)	
256b	M93C06	256Kb (32 x 8/16 x 16) 1MHz. 10ms Write	4.5 to 5.5	M93C06-BN6	DIP8	M93C06-MN6	M93C06-MN6T	SO8
1Kb	M93C46	1Kb (128 x 8/64 x 8) 1MHz. 10ms Write	4.5 to 5.5	M93C46-BN6	DIP8	M93C46-MN6	M93C46-MN6T	SO8
	M93S46	1Kb (128 x 8/64 x 8) 1MHz. 10ms Write, Write Protection	2.5 to 5.5	M93S46-WBN6	DIP8	M93S46-WMN6	M93S46-WMN6T	SO8
			4.5 to 5.5	M93S46-BN6	DIP8	M93S46-MN6	M93S46-MN6T	SO8
2Kb	M93C56	2Kb (256 x 8/128 x 16) 1MHz. 10ms Write	4.5 to 5.5	M93C56-BN6	DIP8	M93C56-MN6	M93C56-MN6T	SO8
	M93S56	2Kb (256 x 8/128 x 16) 1MHz. 10ms Write, Write Protection	2.5 to 5.5	M93S56-WBN6	DIP8	M93S56-WMN6	M93S56-WMN6T	SO8
			4.5 to 5.5	M93S56-BN6	DIP8	M93S56-MN6	M93S56-MN6T	SO8
4Kb	M93C66	4Kb (512 x 8/256 x 16) 1MHz. 10ms Write	2.5 to 5.5	M93C66-WBN6	DIP8	M93C66-WMN6	M93C66-WMN6T	SO8
			4.5 to 5.5	M93C66-BN6	DIP8	M93C66-MN6	M93C66-MN6T	SO8
	M93S66	4Kb (512 x 8/256 x 16) 1MHz. 10ms Write, Write Protection	2.5 to 5.5	M93S66-WBN6	DIP8	M93S66-WMN6	M93S66-WMN6T	SO8
			4.5 to 5.5	M93S66-BN6	DIP8	M93S66-MN6	M93S66-MN6T	SO8
16Kb	M93C86	16Kb (2K x 8/1K x 16) 1MHz. 10ms Write	2.5 to 5.5	M93C86-WBN6	DIP8	M93C86-WMN6	M93C86-WMN6T	SO8
			4.5 to 5.5	M93C86-BN6	DIP8	M93C86-MN6	M93C86-MN6T	SO8

1.8V to 5.5V operating voltage also available. Please contact our Sales Dept for details

Serial, Microwire I²C Bus

Operating Temperature Range -40 to 85°C

				Device No. & Anglia Order Code				
Size	Type	Description	Operating Voltage (V)	DUAL IN-LINE	Package & Pins	SURFACE MOUNT		Package & Pins
				(TUBE)		(STICK)	(TAPE & REEL)	
1Kb	M24C01	1Kb (128 x 8) 400kHz. 10ms Write, Write Control	2.5 to 5.5	M24C01-WBN6	DIP8	M24C01-WMN6	M24C01-WMN6T	SO8
			4.5 to 5.5	M24C01-BN6	DIP8	M24C01-MN6	M24C01-MN6T	SO8
2Kb	M24C02	2Kb (256 x 8) 400kHz. 10ms Write, Write Control	2.5 to 5.5	M24C02-WBN6	DIP8	M24C02-WMN6	M24C02-WMN6T	SO8
			4.5 to 5.5	M24C02-BN6	DIP8	M24C02-MN6	M24C02-MN6T	SO8
4Kb	M24C04	4Kb (512 x 8) 400kHz. 10ms Write, Write Control	2.5 to 5.5	M24C04-WBN6	DIP8	M24C04-WMN6	M24C04-WMN6T	SO8
			4.5 to 5.5	M24C04-BN6	DIP8	M24C04-MN6	M24C04-MN6T	SO8
8Kb	M24C08	8Kb (1K x 8) 400kHz. 10ms Write, Write Control	2.5 to 5.5	M24C08-WBN6	DIP8	M24C08-WMN6	M24C08-WMN6T	SO8
			4.5 to 5.5	M24C08-BN6	DIP8	M24C08-MN6	M24C08-MN6T	SO8
16Kb	M24C16	16Kb (2K x 8) 400kHz. 10ms Write, Write Control	2.5 to 5.5	M24C16-WBN6	DIP8	M24C16-WMN6	M24C16-WMN6T	SO8
			4.5 to 5.5	M24C16-BN6	DIP8	M24C16-MN6	M24C16-MN6T	SO8
32Kb	M24C32	32Kb (4K x 8) 400kHz. 10ms Write, Write Control	1.8 to 3.6	—	—	M24C32-RMN6	M24C32-RMN6T	SO8
			2.5 to 5.5	M24C32-WBN6	DIP8	M24C32-WMN6	M24C32-WMN6T	SO8
			—	—	—	M24C32-WMW6	M24C32-WMW6T	SO8W
64Kb	M24C64	64Kb (8K x 8) 400kHz. 10ms Write, Write Control	4.5 to 5.5	M24C32-BN6	DIP8	M24C32-MN6	M24C32-MN6T	SO8
			—	—	—	M24C32-MW6	M24C32-MW6T	SO8W
			—	—	—	—	—	—
64Kb	M24C64	64Kb (8K x 8) 400kHz. 10ms Write, Write Control	1.8 to 3.6	—	—	M24C64-RMN6	M24C64-RMN6T	SO8
			2.5 to 5.5	M24C64-WBN6	DIP8	M24C64-WMN6	M24C64-WMN6T	SO8
			—	—	—	M24C64-WMW6	M24C64-WMW6T	SO8W
128Kb	M24128	128Kb (16K x 8) 400kHz. 10ms Write, Write Control	4.5 to 5.5	M24C64-BN6	DIP8	M24C64-MN6	M24C64-MN6T	SO8
			—	—	—	M24C64-MW6	M24C64-MW6T	SO8W
			—	—	—	—	—	—
128Kb	M24128	128Kb (16K x 8) 400kHz. 10ms Write, Write Control	2.5 to 5.5	M24128-WBN6	DIP8	M24128-WMN6	M24128-WMN6T	SO8
			—	—	—	M24128-WMW6	M24128-WMW6T	SO8W
256Kb	M24256	256Kb (32K x 8) 400kHz. 10ms Write, Write Control	4.5 to 5.5	M24128-BN6	DIP8	M24128-MN6	M24128-MN6T	SO8
			—	—	—	M24128-MW6	M24128-MW6T	SO8W
256Kb	M24256	256Kb (32K x 8) 400kHz. 10ms Write, Write Control	2.5 to 5.5	M24256-WBN6	DIP8	M24256-WMW6	M24256-WMW6T	SO8W
			4.5 to 5.5	M24256-BN6	DIP8	M24256-MW6	M24256-MW6T	SO8W

TSSOP package also available. Please contact our Sales Dept for details

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY



EEPROM

MEMORY



DIP



SO

Serial, SPI

Operating Temperature Range -40 to 85°C

Size	Type	Description	Operating Voltage (V)	Device No. & Anglia Order Code				
				DUAL IN-LINE	Package & Pins	SURFACE MOUNT		Package & Pins
				(TUBE)		(STICK)	(TAPE & REEL)	
1Kb	ST95010	1Kb (128 x 8) 2MHz, 10ms Write, Write Protection, Positive Clock	4.5 to 5.5	ST95010B6	DIP8	ST95010M6	ST95010M6TR	SO8
	ST95011	1Kb (128 x 8) 2MHz, 10ms Write, Write Protection, Negative Clock	4.5 to 5.5	ST95011B6	DIP8	ST95011M6	ST95011M6TR	SO8
2Kb	ST95020	2Kb (256 x 8) 2MHz, 10ms Write, Write Protection, Positive Clock	4.5 to 5.5	ST95020B6	DIP8	ST95020M6	ST95020M6TR	SO8
	ST95021	2Kb (256 x 8) 2MHz, 10ms Write, Write Protection, Negative Clock	4.5 to 5.5	ST95021B6	DIP8	ST95021M6	ST95021M6TR	SO8
4Kb	ST95040	4Kb (512 x 8) 2MHz, 10ms Write, Write Protection, Positive Clock	4.5 to 5.5	ST95040B6	DIP8	ST95040M6	ST95040M6TR	SO8
	ST95041	4Kb (512 x 8) 2MHz, 10ms Write, Write Protection, Negative Clock	4.5 to 5.5	ST95041B6	DIP8	ST95041M6	ST95041M6TR	SO8
8Kb	ST95P08	8Kb (1K x 8) 1MHz, 10ms Write, Write Protection, Positive Clock	2.5 to 5.5	—	DIP8	ST95P08WM6	ST95P08WM6TR	SO8
			4.5 to 5.5	ST95P08B6		ST95P08M6	ST95P08M6TR	

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With ST's continuous product improvement programme and innovative device introductions, this shortform can only provide an in-sight into their product portfolio at the time of publication. Should the device specification you require not be shown please contact our Sales Department for the latest details.

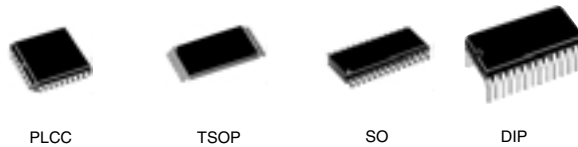


PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

Parallel EEPROM shown overleaf > > >

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Parallel, 2.7 to 3.6V Operation

					Device No. &  Order Code					
Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	DUAL IN-LINE	Package & Pins	 SURFACE MOUNT 		Package & Pins	
					(TUBE)		(STICK)	(TAPE & REEL)		
64Kb	M28C64	64Kb (8K x 8), 3ms Write, Ready – Busy Output, SDP	120	– 40 to 85	–	–	M28C64-12WKA6	M28C64-12WKA6TR	PLCC32	
					–	–	M28C64-12WMS6	M28C64-12WMS6T	SO28	
					–	–	M28C64-12WNS6	M28C64-12WNS6T	TSOP28	
			150		–	–	M28C64-15WKA6	M28C64-15WKA6TR	PLCC32	
					–	–	M28C64-15WMS6	M28C64-15WMS6T	SO28	
					–	–	M28C64-15WNS6	M28C64-15WNS6T	TSOP28	
256Kb	M28256	256Kb (32K x 8), 150ns, 5ms Write, SDP	150	– 40 to 85	–	–	M28256-15WNS6	M28256-15WNS6T	TSOP28	

Parallel, 4.5 to 5.5V Operation

					Device No. & Anglia Order Code				
Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	DUAL IN-LINE	Package & Pins	SURFACE MOUNT		Package & Pins
					(TUBE)		(STICK)	(TAPE & REEL)	
16Kb	M28C16	16Kb (2K x 8), 5ms Write	150	– 40 to 85	–	–	M28C16-15KA6	M28C16-15KA6T	PLCC32
					–	–	M28C16-15NS6	M28C16-15NS6T	TSOP28
	M28C17	16Kb (2K x 8), 5ms Write, Ready – Busy Output	150	– 40 to 85	–	–	M28C17-15KA6	M28C17-15KA6T	PLCC32
					–	–	M28C17-15NS6	M28C17-15NS6T	TSOP28
64Kb	M28C64	64Kb (8K x 8), 3ms Write, Ready – Busy Output, SDP	120	– 40 to 85	–	–	M28C64-12KA6	M28C64-12KA6T	PLCC32
					–	–	M28C64-12MS6	M28C64-12MS6T	SO28
					–	–	M28C64-12NS6	M28C64-12NS6T	TSOP28
	M28C64C	64Kb (8K x 8), 5ms Write, Ready – Busy Output	150	0 to 70	M28C64C-150P1	DIP28	M28C64C-150K1	M28C64C-150K1TR	PLCC32
				– 40 to 85	M28C64C-150P6	DIP28	M28C64C-150K6	M28C64C-150K6TR	PLCC32
				0 to 70	–	–	M28C64C-150MS1	M28C64C-150MS1TR	SO28
				– 40 to 85	–	–	M28C64C-150MS6	M28C64C-150MS6TR	SO28
			200	0 to 70	–	–	M28C64C-150N1	M28C64C-150N1TR	TSOP32
				– 40 to 85	–	–	M28C64C-150N6	M28C64C-150N6TR	TSOP32
				0 to 70	M28C64C-200P1	DIP28	M28C64C-200K1	M28C64C-200K1TR	PLCC32
				– 40 to 85	M28C64C-200P6	DIP28	M28C64C-200K6	M28C64C-200K6TR	PLCC32
				0 to 70	–	–	M28C64C-200MS1	M28C64C-200MS1TR	SO28
				– 40 to 85	–	–	M28C64C-200MS6	M28C64C-200MS6TR	SO28
256Kb	M28256	256Kb (32K x 8), 150ns, 5ms Write, SDP	150	– 40 to 85	–	–	M28256-15NS6	M28256-15NS6T	TSOP28

SUPPLIED IN FULL TUBES/STICKS OR REELS ONLY



FLASH

MEMORY



PLCC



TSOP



SO

3V Operation

					Device No. & Anglia Order Code	
Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	SURFACE MOUNT	Package & Pins
					STICK	
4Mb	M29W040	4Mb (512K x 8), Block Erase	100	0 to 70	<i>M29W040-100K1</i> <i>M29W040-100N1</i> <i>M29W040-120K1</i> <i>M29W040-120N1</i> <i>M29W040-120K6</i> <i>M29W040-120N6</i>	PLCC32
			120			– 40 to 85
						TSOP32
	M29W400T	4Mb (512K x 8/256K x 16), Block Erase, Top Box		100	0 to 70	<i>M29W400T-100M1</i> <i>M29W400T-100N1</i> <i>M29W400T-120M1</i> <i>M29W400T-120N1</i> <i>M29W400T-120M6</i> <i>M29W400T-120N6</i>
			120	– 40 to 85		
				TSOP48		
	M29W400B	4Mb (512K x 8/256K x 16), Block Erase, Bottom Boot		100	0 to 70	<i>M29W400B-100M1</i> <i>M29W400B-100N1</i> <i>M29W400B-120M1</i> <i>M29W400B-120N1</i> <i>M29W400B-120M6</i> <i>M29W400B-120N6</i>
			120	– 40 to 85		
				TSOP48		
	M29W004T	4Mb (512K x 8), Block Erase, Top Boot		120	0 to 70	<i>M29W004T-120N1</i> <i>M29W004T-120N6</i>
			– 40 to 85		TSOP40	
	M29W004B	4Mb (512K x 8), Block Erase, Bottom Boot	120	0 to 70	<i>M29W004B-120N1</i> <i>M29W004B-120N6</i>	TSOP40
				– 40 to 85		TSOP40
8Mb	M29W800T	8Mb (1M x 8/512K x 16), Block Erase, Top Boot	100	0 to 70	<i>M29W800T-100M1</i> <i>M29W800T-100N1</i>	SO44 TSOP48
	M29W800B	8Mb (1M x 8/512K x 16), Block Erase, Bottom Boot	100	0 to 70	<i>M29W800B-100M1</i> <i>M29W800B-100N1</i>	SO44 TSOP48
	M29W008T	8Mb (1M x 8), Block Erase, Top Boot	100	0 to 70	<i>M29W008T-100N1</i>	TSOP40
	M29W008B	8Mb (1M x 8), Block Erase, Bottom Boot	100	0 to 70	<i>M29W008B-100N1</i>	TSOP40

1Mb, 2Mb, 16Mb memories and Tape & Reel packaging also available. Please contact our Sales Dept for details

SUPPLIED IN FULL STICKS ONLY

PACKAGE DIMENSIONS

refer to General Data section
shown later in this shortform

FLASH continued overleaf > > >

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5V Operation

					Device No. & <i>Anglia</i> Order Code								
Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	DUAL IN-LINE	Package & Pins	SURFACE MOUNT	Package & Pins					
					(TUBE)		(STICK)						
1Mb	M29F100T	1Mb (128K x 8/64K x 16), Block Erase, Top Boot	90	0 to 70	—	—	<i>M29F100T-90M1</i>	SO44					
				— 40 to 85	—	—	<i>M29F100T-90M6</i>	SO44					
				0 to 70	—	—	<i>M29F100T-90N1</i>	TSOP48					
				— 40 to 85	—	—	<i>M29F100T-90N6</i>	TSOP48					
			120	0 to 70	—	—	<i>M29F100T-120M1</i>	SO44					
				— 40 to 85	—	—	<i>M29F100T-120M6</i>	SO44					
				0 to 70	—	—	<i>M29F100T-120N1</i>	TSOP48					
				— 40 to 85	—	—	<i>M29F100T-120N6</i>	TSOP48					
	M29F100B	1Mb (128K x 8/64K x 16), Block Erase, Bottom Boot	90	0 to 70	—	—	<i>M29F100B-90M1</i>	SO44					
				— 40 to 85	—	—	<i>M29F100B-90M6</i>	SO44					
				0 to 70	—	—	<i>M29F100B-90N1</i>	TSOP48					
				— 40 to 85	—	—	<i>M29F100B-90N6</i>	TSOP48					
			120	0 to 70	—	—	<i>M29F100B-120M1</i>	SO44					
				— 40 to 85	—	—	<i>M29F100B-120M6</i>	SO44					
				0 to 70	—	—	<i>M29F100B-120N1</i>	TSOP48					
				— 40 to 85	—	—	<i>M29F100B-120N6</i>	TSOP48					
	M29F102B	1Mb (64K x 16), Block Erase, Bottom Boot	70	0 to 70	— —	— —	<i>M29F102B-70K1</i> <i>M29F102B-70N1</i>	PLCC44 TSOP40					
	M29F105B	1Mb (64K x 16), Block Erase, Bottom Boot	70	0 to 70	—	—	<i>M29F105B-70N1</i>	TSOP40					
2Mb	M29F200T	2Mb (256K x 8/128K x 16), Block Erase, Top Boot	70	0 to 70	— — —	— — —	<i>M29F200T-70M1</i> <i>M29F200T-70N1</i> <i>M29F200T-90M1</i>	SO44 TSOP48 SO44					
				90	— 40 to 85 0 to 70 — 40 to 85	— — —	— — —	<i>M29F200T-90M6</i> <i>M29F200T-90N1</i> <i>M29F200T-90N6</i>	SO44 TSOP48 TSOP48				
			120		0 to 70 — 40 to 85 0 to 70 — 40 to 85	— — — —	— — — —	<i>M29F200T-120M1</i> <i>M29F200T-120M6</i> <i>M29F200T-120N1</i> <i>M29F200T-120N6</i>	SO44 SO44 TSOP48 TSOP48				
				M29F200B	2Mb (256K x 8/128K x 16), Block Erase, Bottom Boot	70	0 to 70	— — —	— — —	<i>M29F200B-70M1</i> <i>M29F200B-70N1</i> <i>M29F200B-90M1</i>	SO44 TSOP48 SO44		
							90	— 40 to 85 0 to 70 — 40 to 85	— — —	— — —	<i>M29F200B-90M6</i> <i>M29F200B-90N1</i> <i>M29F200B-90N6</i>	SO44 TSOP48 TSOP48	
						120		0 to 70 — 40 to 85 0 to 70 — 40 to 85	— — — —	— — — —	<i>M29F200B-120M1</i> <i>M29F200B-120M6</i> <i>M29F200B-120N1</i> <i>M29F200B-120N6</i>	SO44 SO44 TSOP48 TSOP48	
			M29F002T				2Mb (256K x 8), Block Erase, Top Boot	70	0 to 70	— —	— —	<i>M29F002T-70K1</i> <i>M29F002T-70N1</i>	PLCC32 TSOP32
										<i>M29F002T-90P1</i> —	DIP32 —	<i>M29F002T-90K1</i> <i>M29F002T-90N1</i>	PLCC32 TSOP32
	90	— —						— —		<i>M29F002T-120P1</i> —	DIP32 —	<i>M29F002T-120K1</i> <i>M29F002T-120N1</i>	PLCC32 TSOP32
		120				— —		— —		— —	— —	— —	
	M29F002B					2Mb (256K x 8), Block Erase, Bottom Boot		70		0 to 70	— —	— —	<i>M29F002B-70K1</i> <i>M29F002B-70N1</i>
		<i>M29F002B-90P1</i> —		DIP32 —	<i>M29F002B-90K1</i> <i>M29F002B-90N1</i>						PLCC32 TSOP32		
		90	— —	— —	— —		— —	— —					

continued on next page

SUPPLIED IN FULL TUBES/STICKS ONLY



FLASH

MEMORY

5V Operation

continued

Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	Device No. & Anglia Order Code			
					DUAL IN-LINE (TUBE)	Package & Pins	SURFACE MOUNT (STICK) 	Package & Pins
4Mb	M29F040	4Mb (512K x 8), Block Erase	70	0 to 70	—	—	M29F040-70K1	PLCC32
				— 40 to 85	—	—	M29F040-70K6	PLCC32
				0 to 70	—	—	M29F040-70N1	TSOP32
				— 40 to 85	—	—	M29F040-70N6	TSOP32
			90	0 to 70	—	—	M29F040-90K1	PLCC32
				— 40 to 85	—	—	M29F040-90K6	PLCC32
				0 to 70	—	—	M29F040-90N1	TSOP32
				— 40 to 85	—	—	M29F040-90N6	TSOP32
			120	0 to 70	—	—	M29F040-120K1	PLCC32
				— 40 to 85	—	—	M29F040-120K6	PLCC32
				0 to 70	—	—	M29F040-120N1	TSOP32
				— 40 to 85	—	—	M29F040-120N6	TSOP32
	M29F400T	4Mb (512K x 8/256K x 16), Block Erase, Top Boot	70	0 to 70	—	—	M29F400T-70M1	SO44
				— 40 to 85	—	—	M29F400T-70N1	TSOP48
			90	— 40 to 85	—	—	M29F400T-90M1	SO44
				0 to 70	—	—	M29F400T-90M6	SO44
				— 40 to 85	—	—	M29F400T-90N1	TSOP48
				— 40 to 85	—	—	M29F400T-90N6	TSOP48
			120	0 to 70	—	—	M29F400T-120M1	SO44
				— 40 to 85	—	—	M29F400T-120M6	SO44
				0 to 70	—	—	M29F400T-120N1	TSOP48
				— 40 to 85	—	—	M29F400T-120N6	TSOP48
	M29F400B	4Mb (512K x 8/256K x 16), Block Erase, Bottom Boot	70	0 to 70	—	—	M29F400B-70M1	SO44
				— 40 to 85	—	—	M29F400B-70N1	TSOP48
			90	— 40 to 85	—	—	M29F400B-90M1	SO44
				0 to 70	—	—	M29F400B-90M6	SO44
				— 40 to 85	—	—	M29F400B-90N1	TSOP48
				— 40 to 85	—	—	M29F400B-90N6	TSOP48
			120	0 to 70	—	—	M29F400B-120M1	SO44
				— 40 to 85	—	—	M29F400B-120M6	SO44
				0 to 70	—	—	M29F400B-120N1	TSOP48
				— 40 to 85	—	—	M29F400B-120N6	TSOP48

8Mb, 16Mb memories and SMD Tape & Reel packaging also available. Please contact our Sales Dept for details



TSOP

FLASH+™

Single Chip FLASH and EEPROM

Size	Type	Description	Speed (ns)	Operating Temp Range (°C)	Operating Voltage (V)	Device No. & Anglia Order Code	
						SURFACE MOUNT (STICK) 	Package & Pins
4Mb	M39432	4Mb Flash, 256K EEPROM Single Chip Combination	120	0 to 70	3 to 3.6	M39432-12VNC1	TSOP40
					2.7 to 3.6	M39432-12WNC1	
			150	0 to 70	3 to 3.6	M39432-15VNC1	
					2.7 to 3.6	M39432-15WNC1	
			200	0 to 70	3 to 3.6	M39432-20VNC1	
					2.7 to 3.6	M39432-20WNC1	
			250	0 to 70	3 to 3.6	M39432-25VNC1	
					2.7 to 3.6	M39432-25WNC1	

2Mb, 8Mb memories, single chip FLASH / SRAM combination and Tape & Reel packaging also available. Please contact our Sales Dept for details

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FLASH

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TSOP

Dual 3V/12V Operation

Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	Device No. & Anglia Order Code	
					SURFACE MOUNT (STICK) 	Package & Pins
2Mb	M28W231	2Mb (256K x 8), Block Erase, Top Boot	100	0 to 70	M28W231-100N1	TSOP40
	M28W201	2Mb (256K x 8), Chip Erase	200	0 to 70	M28W201-200N1	TSOP32



DIP



PLCC



TSOP

Dual 5V/12V Operation

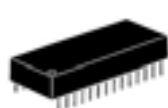
					Device No. & Anglia Order Code			
Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	DUAL IN-LINE TUBE	Package & Pins	SURFACE MOUNT STICK 	Package & Pins
256Kb	M28F256	256Kb (32K x 8), Bulk Erase	90	0 to 70	M28F256-90B1	DIP32	M28F256-90C1	PLCC32
			120		M28F256-12B1	DIP32	M28F256-12C1	PLCC32
			150		M28F256-15B1	DIP32	M28F256-15C1	PLCC32
				- 40 to 85	M28F256-15B6	DIP32	M28F256-15C6	PLCC32
512Kb	M28F512	512Kb (64K x 8), Bulk Erase	90	0 to 70	M28F512-90B1	DIP32	M28F512-90C1	PLCC32
			120		M28F512-12B1	DIP32	M28F512-12C1	PLCC32
			150	- 40 to 85	M28F512-12B6	DIP32	M28F512-12C6	PLCC32
				0 to 70	M28F512-15B1	DIP32	M28F512-15C1	PLCC32
				- 40 to 85	M28F512-15B6	DIP32	M28F512-15C6	PLCC32
1Mb	M28F101	1Mb (128K x 8), Bulk Erase	90	0 to 70	-	-	M28F101-90K1	PLCC32
			100		-	-	M28F101-90N1	TSOP32
					M28F101-100P1	DIP32	M28F101-100K1	PLCC32
			120		-	-	M28F101-100N1	TSOP32
				- 40 to 85	M28F101-120P1	DIP32	M28F101-120K1	PLCC32
				0 to 70	-	-	M28F101-120K6	PLCC32
				- 40 to 85	-	-	M28F101-120N1	TSOP32
			150	-	-	M28F101-120N6	TSOP32	
				0 to 70	M28F101-150P1	DIP32	M28F101-150K1	PLCC32
			M28F102	1Mb (64K x 16), Bulk Erase	90	0 to 70	-	-
	100	-			-		M28F102-90K1	PLCC44
		-			-		M28F102-90N1	TSOP40
	120	-			-		M28F102-100K1	PLCC44
		-			-		M28F102-100N1	TSOP40
	-	-			M28F102-120K1		PLCC44	
	-	-	M28F102-120N1	TSOP40				
2Mb	M28F201	2Mb (256K x 8), Bulk Erase	70	0 to 70	-	-	M28F201-70K1	PLCC32
			90		-	-	M28F201-70N1	TSOP32
					-	-	M28F201-90K1	PLCC32
			120		-	-	M28F201-90N1	TSOP32
					-	-	M28F201-120K1	PLCC32
			-		-	M28F201-120N1	TSOP32	

SMD Tape & Reel packaging also available. Please contact our Sales Dept for details

SUPPLIED IN FULL TUBES/STICKS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform



CDIP



SOH



MDIP



MLDIP

Zeropower®

- Integrated ultra low power SRAM
- 5V operation
- Power-fail control circuit
- Automatic power-fail chip deselect and write protection
- Integral battery back-up (Dual In-Line versions)
- Clip-on battery back-up (SMD versions)
- Unlimited write cycles

					Device No. & Anglia Order Code			
Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	DUAL IN-LINE	Package & Pins	SURFACE MOUNT	Package & Pins
					(TUBE)		(STICK)	
16Kb	M48Z02	16Kb (2K x 8), V _{CC} /V _{PPD} +10,-5% Maximum 10 Year Battery	70	0 to 70	M48Z02-70PC1	CDIP24	—	—
			150		M48Z02-150PC1	CDIP24	—	—
			200		M48Z02-200PC1	CDIP24	—	—
	M48Z12	16Kb (2K x 8), V _{CC} /V _{PPD} +/-10% Maximum 10 Year Battery	70	0 to 70	M48Z12-70PC1	CDIP24	—	—
			150		M48Z12-150PC1	CDIP24	—	—
			200		M48Z12-200PC1	CDIP24	—	—
64Kb	M48Z08	64Kb (8K x 8), V _{CC} /V _{PPD} +10,-5% Maximum 11 Year Battery	100	0 to 70	M48Z08-100PC1	CDIP28	—	—
	M48Z18	64Kb (8K x 8), V _{CC} /V _{PPD} +/-10% Maximum 11 Year Battery*	100	0 to 70	M48Z18-100PC1	CDIP28	M48Z18-100MH1	SOH28
				-40 to 85	M48Z18-100PC6	CDIP28	—	—
	M48Z58	64Kb (8K x 8), V _{CC} /V _{PPD} +10,-5% Maximum 10 Year Battery	70	0 to 70	M48Z58-70PC1	CDIP28	—	—
	M48Z58Y	64Kb (8K x 8), V _{CC} /V _{PPD} +/-10% Maximum 10 Year Battery*	70	0 to 70	M48Z58Y-70PC1	CDIP28	M48Z58Y-70MH1	SOH28
	M48Z59	64Kb (8K x 8), V _{CC} /V _{PPD} +10,-5% Maximum 10 Year Battery, Reset Output	70	0 to 70	M48Z59-70PC1	CDIP28	—	—
256Kb	M48Z35	256Kb (32K x 8), V _{CC} /V _{PPD} +10,-5% Maximum 10 Year Battery	70	0 to 70	M48Z35-70PC1	CDIP28	—	—
	M48Z35Y	256Kb (32K x 8), V _{CC} /V _{PPD} +/-10% Maximum 10 Year Battery*	70	0 to 70	M48Z35Y-70PC1	CDIP28	M48Z35Y-70MH1	SOH28
1Mb	M48Z128	1Mb (128K x 8), V _{CC} /V _{PPD} +10,-5% Maximum 10 Year Battery	70	0 to 70	M48Z128-70PM1	MDIP32	—	—
			85		M48Z128-85PM1	MDIP32	—	—
			120		M48Z128-120PM1	MDIP32	—	—
	M48Z128Y	1Mb (128K x 8), V _{CC} /V _{PPD} +/-10% Maximum 10 Year Battery	70	0 to 70	M48Z128Y-70PM1	MDIP32	—	—
			85		M48Z128Y-85PM1	MDIP32	—	—
			120		M48Z128Y-120PM1	MDIP32	—	—
4Mb	M48Z512A	4Mb (512K x 8), V _{CC} /V _{PPD} +10,-5% Maximum 10 Year Battery	70	0 to 70	M48Z512A-70PM1	MDIP32	—	—
			85		M48Z512A-85PM1	MDIP32	—	—
	M48Z512AY	4Mb (512K x 8), V _{CC} /V _{PPD} +/-10% Maximum 10 Year Battery	70	0 to 70	M48Z512AY-70PM1	MDIP32	—	—
			85		M48Z512AY-85PM1	MDIP32	—	—
16Mb	M48Z2M1	16Mb (2M x 8), V _{CC} /V _{PPD} +10,-5% Maximum 10 Year Battery	70	0 to 70	M48Z2M1-70PL1	MLDIP36	—	—
	M48Z2M1Y	16Mb (2M x 8), V _{CC} /V _{PPD} +/-10% Maximum 10 Year Battery	70	0 to 70	M48Z2M1Y-70PL1	MLDIP36	—	—

* Separate SNAPHAT® battery module required for SOH versions, see page 150

SUPPLIED IN FULL TUBES/STICKS ONLY

Timekeeper™

shown overleaf > > >

☎ 01945 47 47 47 • 📠 01945 47 48 49 • 💻 E-mail: sales@angliac.co.uk



CDIP



DIP



SO



SOH

Timekeeper™

- Integrated ultra low power SRAM and real time clock
- Automatic power-fail chip deselect and write protection
- Integral battery back-up/crystal (Dual In-Line versions except DIP8)
- Clip-on battery back-up/crystal (Surface Mount SOH versions)
- Unlimited write cycles

					Device No. & Anglia Order Code			
Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	DUAL IN-LINE (TUBE)	Package & Pins	SURFACE MOUNT (STICK) 	Package & Pins
512b	MK41T56	512b (64 x 8), 5V +/-10%, I2C Serial Bus	—	0 to 70	MK41T56N00	DIP8	MK41T56S00	SO8
			—	– 40 to 85	—	—	MKI41T56S00	SO8
	M41T11	512b (64 x 8), 2V to 5V, I2C Serial Bus, Y2K Compliant	—	– 40 to 85	—	—	M41T11M6	SO8
1Kb	M48T86	1Kb (128 x 8), 5V +/-10%, Alarms, Battery Low Flag, AM/PM	—	0 to 70	M48T86PC1	CDIP24	M48T86MH1	SOH28
16Kb	M48T02	16Kb(2K x 8), 5V +/-10%, Maximum 10 Year Battery	70	0 to 70	M48T02-70PC1	CDIP24	—	—
			150		M48T02-150PC1	CDIP24	—	—
			200		M48T02-200PC1	CDIP24	—	—
	M48T12	16Kb(2K x 8), 5V +/-10%, Maximum 10 Year Battery	70	0 to 70	M48T12-70PC1	CDIP24	—	—
			150		M48T12-150PC1	CDIP24	—	—
			200		M48T12-200PC1	CDIP24	—	—
64Kb	M48T08	64Kb(8K x 8), 5V +/-10%, Max. 10 Year Battery, Power Fail Interrupt	100	0 to 70	M48T08-100PC1	CDIP24	—	—
			150		M48T08-150PC1	CDIP24	—	—
	M48T18	64Kb(8K x 8), 5V +/-10%, Max. 10 Year Battery*, Power Fail Interrupt	100	0 to 70	M48T18-100PC1	CDIP28	M48T18-100MH1	SOH28
			150		M48T18-150PC1	CDIP28	—	—
	M48T58	64Kb(8K x 8), 5V +/-10%, Maximum 7 Year Battery	70	0 to 70	M48T58-70PC1	CDIP28	—	—
	M48T58Y	64Kb(8K x 8), 5V +/-10%, Maximum 7 Year Battery*	70	0 to 70	M48T58Y-70PC1	CDIP28	M48T58Y-70MH1	SOH28
	M48T59	64Kb(8K x 8), 5V +/-10%, Max. 7 Year Battery, Watchdog, Reset O/p, Alarm, Battery Low Flag	70	0 to 70	M48T59-70PC1	CDIP28	—	—
			70		M48T59Y-70PC1	CDIP28	M48T59Y-70MH1	SOH28
	M48T559Y	64Kb(8K x 8), 5V +/-10%, Max. 7 Year Battery*, Watchdog, Reset O/p, Alarm, Battery Low Flag, Add/Data M/Plex	70	0 to 70	—	—	M48T559Y-MH1	SOH28

* Separate SNAPHAT® battery/crystal module required for SOH versions, see page 150

continued on next page

Timekeeper® controllers see page 150

SUPPLIED IN FULL TUBES/STICKS ONLY

Timekeeper™ continued

					Device No. & Anglia Order Code			
Size	Type	Description	Speed (ns)	Operating Temp. Range (°C)	DUAL IN-LINE (TUBE)	Package & Pins	SURFACE MOUNT (STICK)	Package & Pins
256Kb	M48T35	256Kb(32K x 8), 5V +/-5%, Maximum 10 Year Battery	70	0 to 70	M48T35-70PC1	CDIP28	—	—
	M48T35Y	256Kb(32K x 8), 5V +/-10%, Maximum 10 Year Battery*	70	0 to 70	M48T35Y-70PC1	CDIP28	M48T35Y-70MH1	SOH28
	M48T37Y	256Kb(32K x 8), 5V +/-10%, Max. 7 Year Battery*, Watchdog, Reset O/p, Alarm, Battery Low Flag, Wake-up	70	0 to 70	—	—	M48T37Y-70MH1	SOH44
	M48T37V	256Kb(32K x 8), 3.3V +/-10%, Max. 7 Year Battery*, Watchdog, Reset O/p, Alarm, Battery Low Flag, Wake-up	70	0 to 70	—	—	M48T37V-70MH1	SOH44
	M48T39Y	256Kb(32K x 8), 5V +/-10%, Max. 10 Year Battery, Watchdog, Reset O/p, Alarm, Battery Low Flag, Wake-up, AM/PM	100 150	0 to 70	M48T39Y-100PM1 M48T39Y-150PM1	MDIP32 MDIP32	— —	— —
1Mb	M48T128Y	1Mb(128K x 8), 5V +/-10%, Maximum 10 Year Battery	70	0 to 70	M48T128Y-70PM1	MDIP32	—	—
	M48T128V	1Mb(128K x 8), 3.3V +/-10%, Maximum 10 Year Battery	85	0 to 70	M48T128V-85PM1	MDIP32	—	—
	M48T129Y	1Mb(128K x 8), 5V +/-10%, Max. 10 Year Battery, Watchdog, Reset O/p, Alarm, Battery Low Flag, Wake-up, Century	70	0 to 70	M48T129Y-70PM1	MDIP32	—	—
	M48T129V	1Mb(128K x 8), 3.3V +/-10%, Max. 10 Year Battery, Watchdog, Reset O/p, Alarm, Battery Low Flag, Wake-up, Century	85	0 to 70	M48T129V-85PM1	MDIP32	—	—
4Mb	M48T512Y	4Mb(512K x 8), 5V +/-10%, Maximum 10 Year Battery	70	0 to 70	M48T512Y-70PM1	MDIP32	—	—
	M48T512V	4Mb(512K x 8), 3.3V +/-10%, Maximum 10 Year Battery	85	0 to 70	M48T512V-85PM1	MDIP32	—	—
	M48T513Y	4Mb(512K x 8), 5V +/-10%, Max. 10 Year Battery, Watchdog, Reset O/p, Alarm, Battery Low Flag, Wake-up, Century	70	0 to 70	M48T513Y-70PL1	MLDIP36	—	—
	M48T513V	4Mb(512K x 8), 3.3V +/-10%, Max. 10 Year Battery, Watchdog, Reset O/p, Alarm, Battery Low Flag, Wake-up, Century	85	0 to 70	M48T513V-85PL1	MLDIP36	—	—

* Separate SNAPHAT® battery/crystal module required for SOH versions, see page 150

SUPPLIED IN FULL TUBES/STICKS ONLY

PACKAGE DIMENSIONS

refer to General Data section shown later in this shortform

CONTROLLERS & SNAPHAT® BATTERIES

shown overleaf > > >



SOH

CONTROLLERS

- Supplies battery back-up for 1Mb to 16Mb of low power SRAM
- Lower system cost compared to a discrete solution
- Allows easy upgrade of low power SRAM density
- Replaceable SNAPHAT module provides virtually unlimited life
- Avoids exposure of battery and crystal to high temperature solder reflow

Size	Type	Description	Device No. & Anglia Order Code	
			SURFACE MOUNT STICK	Package & Pins
1Mb to 4Mb	M40Z111	NVRAM Controller, 5V +/-10%, Selectable Power-Fail Deselect Voltage, Controls 1Mb or 4Mb LPSRAM	M40Z111MH1	SOH28
	M40Z111V	NVRAM Controller, 3V +/-10% or 3.3V +/-10%, Selectable Power-Fail Deselect Voltage, Controls 1Mb or 4Mb LPSRAM	M40Z111VMH1	SOH28
1Mb to 16Mb	M40Z300	NVRAM Controller, 5V +/-10%, Selectable Power-Fail Deselect Voltage, Controls up to Four 1Mb or 4Mb LPSRAMs, Reset Output, Battery Low Output	M40Z300MH1	SOH28
	M40Z300V	NVRAM Controller, 3V +/-10% or 3.3V +/-10%, Selectable Power-Fail Deselect Voltage, Controls up to Four 1Mb or 4Mb LPSRAMs, Reset Output, Battery Low Output	M40Z300VMH1	SOH28
1Mb to 4Mb	M48T201Y	TIMEKEEPER Controller (x8), 70ns, 5V +/-10%, Watchdog, Reset Output, Alarms, Battery Low Flag, Wake-Up, Push-Button Reset, Square Wave, Century, Y2K Compliant	M48T201Y-70MH1	SOH44
	M48T201V	TIMEKEEPER Controller (x8), 85ns, 3.3V +/-10%, Same Features as M48T201Y Above	M48T201V-85MH1	SOH44

Separate SNAPHAT® battery module required, see below

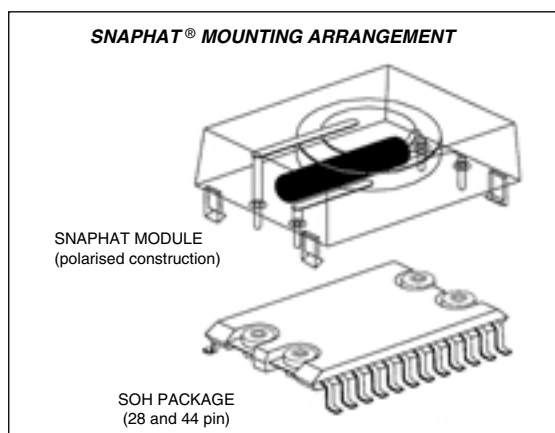


SH

SNAPHAT® MODULES for SOH package ZEROPOWER, TIMEKEEPER and CONTROLLERS

Capacity	Type	Description	Device No. & Anglia Order Code	
			STICK	Package
49mAh	M4Z28BR00SH1	Lithium Battery for ZEROPOWER® & NVRAM Controllers	M4Z28-BR00SH1	SH
130mAh	M4Z32BR00SH1		M4Z32-BR00SH1	
49mAh	M4T18BR12SH1	Lithium Battery and Crystal for M48T18 TIMEKEEPER® only	M4T18-BR12SH1	
49mAh	M4T28BR12SH1	Lithium Battery and Crystal for TIMEKEEPER® & TIMEKEEPER Controllers excluding M48T18	M4T28-BR12SH1	
130mAh	M4T32BR12SH1		M4T32-BR12SH1	

SUPPLIED IN FULL STICKS ONLY



PACKAGE DIMENSIONS
refer to General Data section shown later in this shortform

A broad range of high quality heatsinks from **Redpoint Thermalloy**. Covers a wide variety of package types and includes the MAX series of innovative heatsink designs. Finish is black anodised unless otherwise stated.

MAX220 & MAX247 package
pages 152 - 153

SOT32 package
page 154

TO3 package
pages 154-155

TO92 package
page 155

TO39 package
page 155

TO202 package
for use with TO202-1
page 155

TO218 & TO247 package
also covers DOP3(I), ISOWATT218, SOD93
SOT93 and TOP3(I)
pages 156-157

TO220 package
also covers HEPTAWATT, ISOWATT220 and PENTAWATT
pages 158-162

plus
HEATSINK COMPOUND page 162
SEMICONDUCTOR MOUNTINGS page 162

MAX220 & MAX247 package



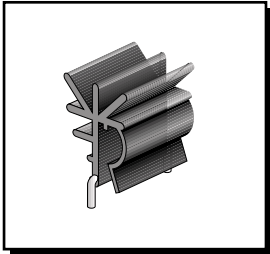
MAX220



MAX247

A range of innovative heatsinks for the STMicroelectronics MAX220™ and MAX247™ power transistor packages. Utilise novel clip solutions to obtain optimum performance.

MAXHF20

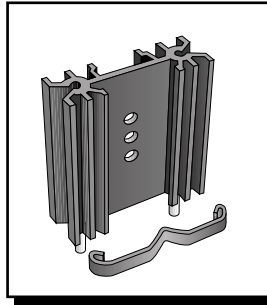


Extruded clip-on heatsinks, with tinned p.c.b. pins, to fit a single **MAX220** package.

Thermal resistance **13.1°C/W**
Size (mm) 28 x 20 x 20
Pitch 21

Manf. Part No.
& **Anglia**
Order Code
MAXHF20

MAXSW38



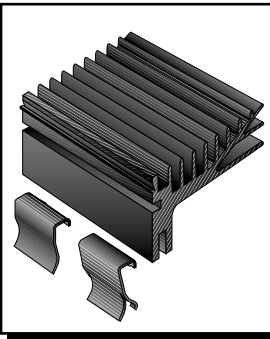
A compact, vertical mounting extruded heatsink with solderable fixing pins. Designed to accommodate a single **MAX220** package using the device retaining clip, available separately.

Thermal resistance **10.2°C/W**
Size (mm) 34.5 x 12.5, H. 38
Pitch 25.4

Type
Heatsink
Device retaining clip

Manf. Part No.
& **Anglia**
Order Code
MAXSW38
MAX5901

MAXKL



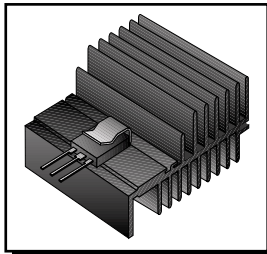
High power dissipation, extruded heatsinks designed to accommodate one or more **MAX220** packages via clips, available separately. Shaped to minimise board space by overhanging adjacent components. Additional threaded slot in base aids assembly. Choice of length.

Size (mm) H. 28 x 50

Type	Th. Res.
50mm length	5.2°C/W
150mm length	2.9°C/W
Device retaining clip (10mm wide)	
Device retaining clip (19mm wide)	

Manf. Part No.
& **Anglia**
Order Code
MAXKL50-1
MAXKL150-1
MAX94
MAX97

MAX36



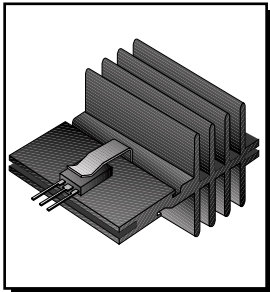
High power dissipation, extruded heatsinks designed to accommodate one or more **MAX220** packages via clips, available separately. To aid multiple device mounting, the clips are available in four widths. Additional threaded slot in base aids assembly. Choice of length.

Size (mm) H. 80 x 48

Type	Th. Res.
50mm length	2.1°C/W
100mm length	1.1°C/W
150mm length	0.9°C/W
Device retaining clip (10mm wide)	
Device retaining clip (12mm wide)	
Device retaining clip (16mm wide)	
Device retaining clip (23mm wide)	

Manf. Part No.
& **Anglia**
Order Code
MAX36-50
MAX36-100
MAX36-150
MAX01
MAX02
MAX03
MAX04

MAXKP



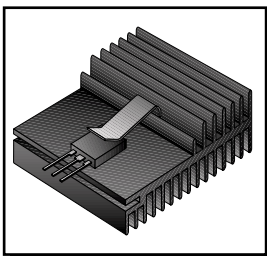
High power dissipation, extruded heatsinks designed to accommodate one or more **MAX220** packages via clips, available separately. Additional threaded slot in base aids assembly. Choice of length.

Size (mm) H. 61.5 x 31.7

Type	Th. Res.
50mm length	4.8°C/W
150mm length	2.6°C/W
Device retaining clip (10mm wide)	
Device retaining clip (19mm wide)	

Manf. Part No.
& **Anglia**
Order Code
MAXKP50-1
MAXKP150-1
MAX94
MAX97

MAX54



High power dissipation, extruded heatsinks designed to accommodate one or more **MAX220** packages via clips, available separately. To aid multiple device mounting the clips are available in four widths. Additional threaded slot in base aids assembly. Choice of length.

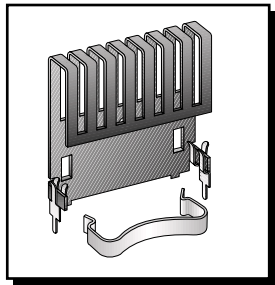
Size (mm) H. 60 x 27

Type	Th. Res.
50mm length	3.1°C/W
100mm length	1.6°C/W
150mm length	1.3°C/W
Device retaining clip (10mm wide)	
Device retaining clip (12mm wide)	
Device retaining clip (16mm wide)	
Device retaining clip (23mm wide)	

Manf. Part No.
& **Anglia**
Order Code
MAX54-50
MAX54-100
MAX54-150
MAX01
MAX02
MAX03
MAX04

MAX220 & MAX247 package *continued*

MAX6263



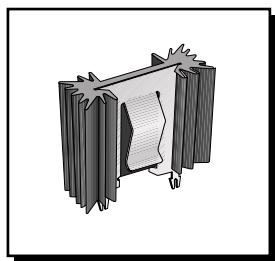
Vertical mounting heatsink, with tinned p.c.b. pins, to fit a single **MAX220** or **MAX247** package.
Suitable device retaining clip available separately.

Thermal resistance **8.8°C/W**
Size (mm) 44.5 x 10.2, H. 45
Pitch 43

Type
Heatsink
Device retaining clip

**Manf. Part No.
& Anglia
Order Code**
MAX6263
MAX101

MAX6608, 6609, 6610, 6611

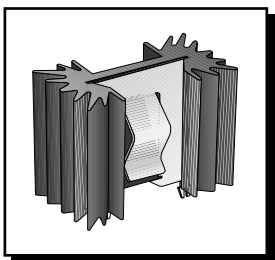


Compact, vertical mounting extruded heatsinks with solderable fixing pins.
Designed to accommodate either a single **MAX220** or **MAX247** package with device retaining clip supplied. Choice of height.

Size (mm) W. 34.9 x 12.7
Pitch 25.4

Type	Th. Res.	Manf. Part No. & Anglia Order Code
MAX220		
30mm height	11.4°C/W	MAX6608-CL05
38mm height	9.0°C/W	MAX6609-CL05
51mm height	6.7°C/W	MAX6610-CL05
63mm height	5.4°C/W	MAX6611-CL05
MAX247		
30mm height	11.4°C/W	MAX6608-CL06
38mm height	9.0°C/W	MAX6609-CL06
51mm height	6.7°C/W	MAX6610-CL06
63mm height	5.4°C/W	MAX6611-CL06

MAX6618B, 6619B, 6620B, 6621B

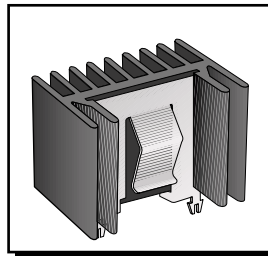


A range of vertical mounting extruded heatsinks with solderable fixing pins.
Designed to accommodate either a single **MAX220** or **MAX247** package with device retaining clip supplied. Choice of height.

Size (mm) W. 41.9 x 25.4
Pitch 25.4

Type	Th. Res.	Manf. Part No. & Anglia Order Code
MAX220		
30mm height	7.6°C/W	MAX6618B-CL05
38mm height	6.0°C/W	MAX6619B-CL05
51mm height	4.5°C/W	MAX6620B-CL05
63mm height	3.6°C/W	MAX6621B-CL05
MAX247		
30mm height	7.6°C/W	MAX6618B-CL06
38mm height	6.0°C/W	MAX6619B-CL06
51mm height	4.5°C/W	MAX6620B-CL06
63mm height	3.6°C/W	MAX6621B-CL06

MAX6691B, 6692B, 6693B, 6694B

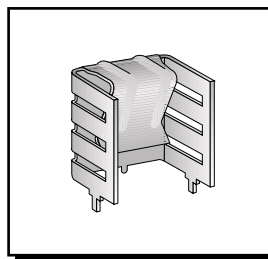


A range of vertical mounting extruded heatsinks, with solderable fixing pins, which offer excellent thermal characteristics.
Designed to accommodate either a single **MAX220** or **MAX247** with device retaining clip supplied. Choice of height

Size (mm) W. 41 x 25.4
Pitch 25.4

Type	Th. Res.	Manf. Part No. & Anglia Order Code
MAX220		
31mm height	6.7°C/W	MAX6691B-CL05
37mm height	5.6°C/W	MAX6692B-CL05
44mm height	4.7°C/W	MAX6693B-CL05
51mm height	4.1°C/W	MAX6694B-CL05
MAX247		
31mm height	6.7°C/W	MAX6691B-CL06
37mm height	5.6°C/W	MAX6692B-CL06
44mm height	4.7°C/W	MAX6693B-CL06
51mm height	4.1°C/W	MAX6694B-CL06

MAX7130



A copper clip-on heatsink with tinned p.c.b. pins, to fit a single **MAX220** or **MAX247** package. Solderable finish.

Thermal resistance **23.1°C/W**
Size (mm) H. 26 x 16
Pitch 25.4

**Manf. Part No.
& Anglia
Order Code**
MAX7130

RECENT INTRODUCTION



ML516
(to fit **MAX220**)

ML524
(to fit **MAX247**)

- Choice of length
- Choice of finish
- Available with solderable pins
- With or without standoffs

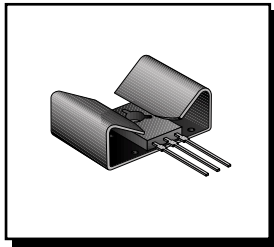
Please contact our Sales Dept
for details

further Heatsinks overleaf > > >

SOT32 package



PF730, PF732



Clip-on heatsinks, with additional bolt hole, to fit a single **SOT32** package. Choice of finish with solderable type having additional fixing tags.

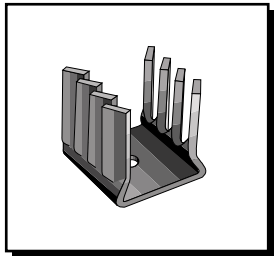
Thermal resistance **35.8°C/W**
Size (mm) 19.7 x 13.2 x 8.1
Pitch 17.9 (PF732)

Finish

Black anodised
Solderable (+ tags)

Manf. Part No.
& **Anglia**
Order Code
PF730
PF732

TV4, TV46, TV102



Twisted vane heatsinks pre-drilled to accommodate a single **SOT32** etc package. Choice of height.

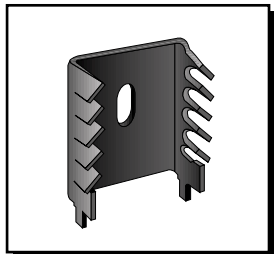
Size (mm) 22 max. x 19

Height (Th. Res.)

19mm (21.6°C/W)
13mm (27.1°C/W)
11mm (29.9°C/W)

Manf. Part No.
& **Anglia**
Order Code
TV4
TV46
TV102

TV1500, TV1505



Twisted vane heatsinks with a slotted hole to accommodate a variety of plastic packages including **SOT32**. Available with or without fixing tags.

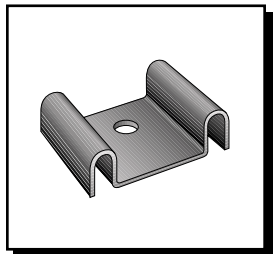
Size (mm) 30 max. x 12.7, H. 30.2
Pitch 24.1 (TV1505)

Type (Th. Res.)

With tags (17.0°C/W)
Without tags (14.2°C/W)

Manf. Part No.
& **Anglia**
Order Code
TV1505
TV1500

220SA



Pre-drilled to accommodate a single **SOT32** package. Suitable for vertical or horizontal mounting.

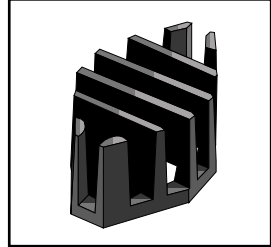
Thermal resistance **21.2°C/W**
Size (mm) 28 x 19 x 9.4

Manf. Part No.
& **Anglia**
Order Code
220SA

TO3 package



PF523, PF526, PF527



Space saving clamp-over heatsinks to fit a single **TO3** package. Choice of height.

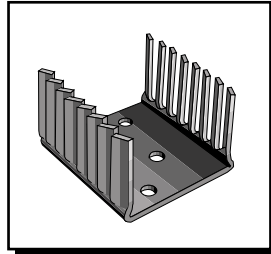
Size (mm) 40.8 x 26.9

Height (Th. Res.)

12.5mm (10.1°C/W)
19mm (8.9°C/W)
25mm (7.4°C/W)

Manf. Part No.
& **Anglia**
Order Code
PF523
PF526
PF527

TV3, TV41, TV42



Twisted vane heatsinks pre-drilled to accommodate a single **TO3** package. Choice of height.

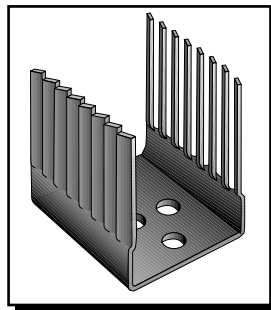
Size (mm) 42 max. x 38

Height (Th. Res.)

25mm (7.2°C/W)
19mm (7.7°C/W)
13mm (9.0°C/W)

Manf. Part No.
& **Anglia**
Order Code
TV3
TV42
TV41

TV66

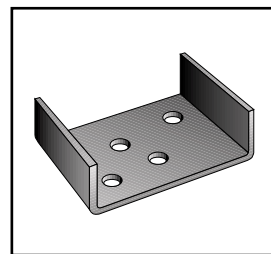


High power dissipation, twisted vane heatsink pre-drilled to accommodate a single **TO3** package.

Thermal resistance **4.3°C/W**
Size (mm) 47 x 43
Height 50

Manf. Part No.
& **Anglia**
Order Code
TV66

3SA-15



Pre-drilled to accommodate a single **TO3** package.

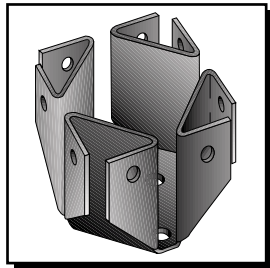
Thermal resistance **11.8°C/W**
Size (mm) 44.5 x 31.5 x 14

Manf. Part No.
& **Anglia**
Order Code
3SA-15

TO3 package continued on next page > > >

TO3 package *continued*

7002B-2



High power dissipation heatsink pre-drilled to accommodate a single **TO3** package.

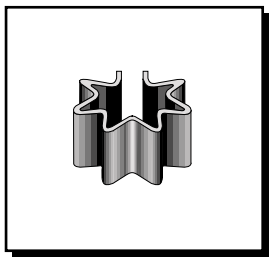
Thermal resistance **5.1°C/W**
Size (mm) 46.5 x 46.5
Height 33.3

Manf. Part No.
& **Anglia**
Order Code
7002B-2

TO39 package



5F series



Extruded push-on heatsinks to fit a single **TO39** package.
Choice of height.

Size (mm) 16 dia.

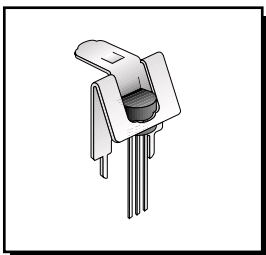
Height (Th. Res.)
6.3mm (62.2°C/W)
12.7mm (45.2°C/W)
25.4mm (30.7°C/W)

Manf. Part No.
& **Anglia**
Order Code
5F-2
5F
5F-6

TO92 package



92F



Clip-on brass heatsink, with integral fixing tags, to fit a single **TO92** package.
May be inverted for free standing use.
Natural finish.

Thermal resistance **36.1°C/W**
Size (mm) 13.8 x 13.7 x 11.4
Pitch 10.2

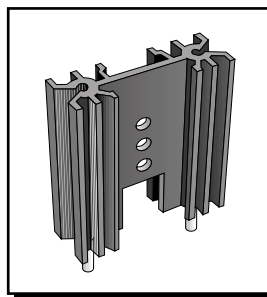
Manf. Part No.
& **Anglia**
Order Code
92F

TO202 package



*Suitable for use with **TO202-1***

SW series



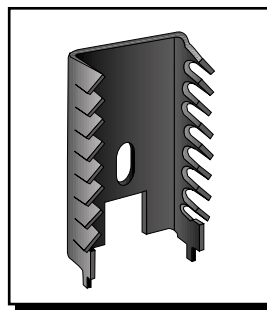
Compact, vertical mounting, extruded heatsinks with solderable fixing pins.
Designed to accommodate a variety of plastic power devices including **TO202**.
Choice of height.

Size (mm) W. 34.5 x 12.5
Pitch 25.4

Height (Th. Res.)
25mm (11.4°C/W)
38mm (10.2°C/W)

Manf. Part No.
& **Anglia**
Order Code
SW25-6
SW38-6

TV71

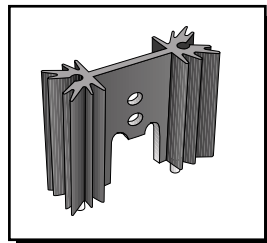


Tall twisted vane heatsink with integral fixing tags and a slotted hole to accommodate a variety of plastic packages including **TO202**.

Thermal resistance **13.5°C/W**
Size (mm) 30 max. x 12.7, H. 45
Pitch 25.4

Manf. Part No.
& **Anglia**
Order Code
TV71

6098B



Compact, vertical mounting, extruded heatsink with solderable fixing pins.
Pre-drilled to accommodate a single **TO202** package.

Thermal resistance **14.0°C/W**
Size (mm) 34.9 x 12.7, H. 25.4
Pitch 25.4

Manf. Part No.
& **Anglia**
Order Code
6098B

further Heatsinks overleaf >>>>

TO218 & TO247 package

Also covers *DOP3(I)*, *ISOWATT218*, *SOD93*, *SOT93* and *TOP3(I)*

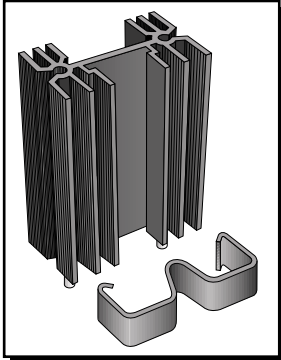


TO218



TO247

BW series



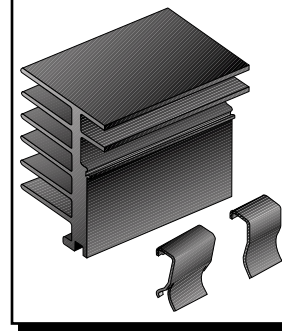
Compact, high power dissipation, vertical mounting, extruded heatsinks with solderable fixing pins. Designed to accommodate plastic power devices such as **TO218/TO247** etc.
Choice of height and holes.
Device retaining clip available separately.

Size (mm) W. 35 x 25.4
Pitch 25.4

Type	Holes	Th. Res.
38mm height	None	7.3°C/W
38mm height	1	7.3°C/W
50mm height	None	5.9°C/W
50mm height	1	5.9°C/W
63mm height	None	4.7°C/W
63mm height	1	4.7°C/W
Device retaining clip	—	—

Manf. Part No. & Anglia Order Code
BW38-2
BW38-4
BW50-2
BW50-4
BW63-2
BW63-4
6801

KM series



High power dissipation, extruded heatsinks designed to accommodate one or more **TO218/TO247** packages via a clip retaining feature (clips available separately). Shaped to minimise board space, with a threaded slot provided to aid assembly. Choice of length.

Size (mm) H. 45 x 30

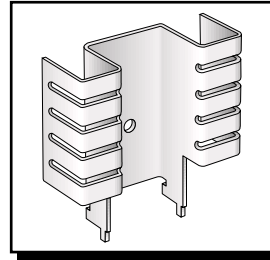
Type	Th. Res.
50mm length	4.8°C/W
75mm length	3.7°C/W
100mm length	3.3°C/W
150mm length	2.7°C/W
Device retaining clip (with legs)	4473
Device retaining clip (without legs*)	4597

Manf. Part No.
& Anglia
Order Code

KM50-1
KM75-1
KM100-1
KM150-1

* space saving clip

PF185, PF187



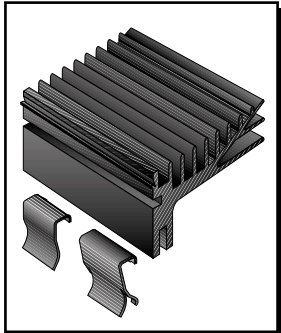
High power dissipation heatsinks, with integral fixing tags, pre-drilled to accommodate a single **TO218/TO247** package.
Choice of finish.

Thermal resistance **8.7°C/W**
Size (mm) 51 x 41.2 x 19
Pitch 25.4

Finish
Solderable
Black anodised

Manf. Part No.
& Anglia
Order Code
PF185
PF187

KL series



High power dissipation, extruded heatsinks designed to accommodate one or more **TO218/TO247** packages via clips (available separately) or a threaded slot. Shaped to minimise board space by overhanging adjacent components.
Additional threaded slot in base aids assembly.
Choice of length.

Size (mm) H. 28 x 50

Type	Th. Res.
50mm length	5.2°C/W
75mm length	4.3°C/W
100mm length	3.4°C/W
150mm length	2.9°C/W

Device retaining clip (with legs) **4473**
Device retaining clip (without legs*) **4597**

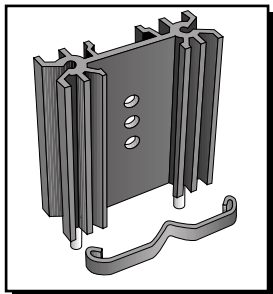
* space saving clip

Manf. Part No.
& Anglia
Order Code

KL50-1
KL75-1
KL100-1
KL150-1

TO218 & TO247 package *continued*

SW series



A range of compact, vertical mounting, extruded heatsinks with solderable fixing pins. Designed to accommodate a variety of plastic power devices including **TO218/TO247**.

Choice of height and holes.
Device retaining clip available separately.

Size (mm) W. 34.5 x 12.5
Pitch 25.4

Type	Holes	Th. Res.
25mm height	None	11.4°C/W
25mm height	2	11.4°C/W
38mm height	None	10.2°C/W
38mm height	3	10.2°C/W
50mm height	None	8.8°C/W
50mm height	3	8.8°C/W
63mm height	None	7.0°C/W
63mm height	3	7.0°C/W
Device retaining clip	—	—

Manf. Part No.
& **Anglia**
Order Code

SW25-2
SW25-4

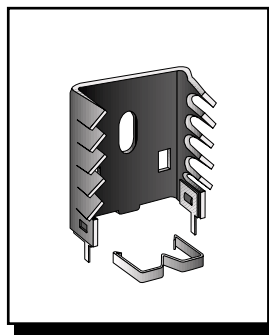
SW38-2
SW38-4

SW50-2
SW50-4

SW63-2
SW63-4

5901

5900PB



Twisted vane heatsink with rugged, solderable tags and a slotted hole to accommodate a variety of plastic packages including **TO218/TO247**.

Has facility to accept device retaining clip, available separately.
Black pre-anodised finish (bare edges).

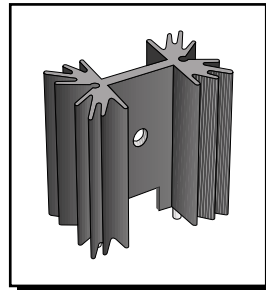
Thermal resistance **17.0°C/W**
Size (mm) 30 max. x 12.7, H. 30.2
Pitch 24.1

Type
Heatsink only
Device retaining clip

Manf. Part No.
& **Anglia**
Order Code

5900PB
7701

6298B



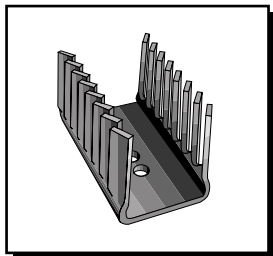
Compact, high power dissipation, vertical mounting, extruded heatsink with solderable fixing pins. Pre-drilled to accommodate a single **TO218/TO247** package.

Thermal resistance **3.9°C/W**
Size (mm) 41.9 x 25.4, H. 38.1
Pitch 25.4

Manf. Part No.
& **Anglia**
Order Code

6298B

TV40

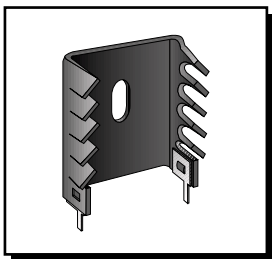


Twisted vane heatsink pre-drilled to accommodate a variety of plastic packages including **TO218/TO247**.

Thermal resistance **9.9°C/W**
Size (mm) 38 x 28 max.
Height 22

Manf. Part No.
& **Anglia**
Order Code
TV40

TV265

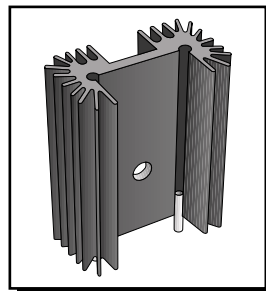


Twisted vane heatsink with rugged, solderable tags and a slotted hole to accommodate a variety of plastic packages including **TO218/TO247**.

Thermal resistance **13.0°C/W**
Size (mm) 30 max. x 12.7, H. 45
Pitch 25.4

Manf. Part No.
& **Anglia**
Order Code
TV265

6396B, 6398B, 6399B, 6400B



Compact, high power dissipation, vertical mounting, extruded heatsinks with solderable fixing pins. Pre-drilled to accommodate a single **TO218/TO247** package.
Choice of height.

Size (mm) W. 41.9 x 25.4
Pitch 25.4

Height (Th. Res.)
25.4mm (5.6°C/W)
38.1mm (4.4°C/W)
50.8mm (3.3°C/W)
63.5mm (2.7°C/W)

Manf. Part No.
& **Anglia**
Order Code

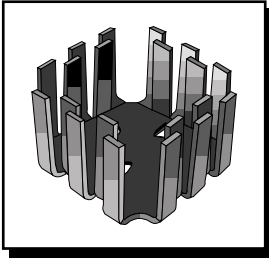
6396B
6398B
6399B
6400B

further Heatsinks overleaf >>>>

TO220 package

Also covers **HEPTAWATT**, **ISOWATT220** and **PENTAWATT**.

AV17

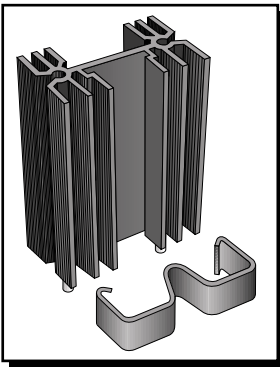


Pre-drilled to accommodate **two TO220** packages.

Thermal resistance **6.1°C/W**
Size (mm) 48 x 48
Height 25.4

Manf. Part No.
& **Anglia**
Order Code
AV17

BW series



Compact, high power dissipation, vertical mounting, extruded heatsinks with solderable fixing pins. Designed to accommodate plastic power devices such as **TO220**.

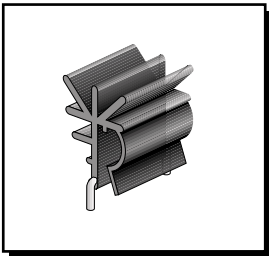
Choice of height and holes.
Device retaining clip available separately.

Size (mm) W. 35 x 25.4
Pitch 25.4

Type	Holes	Th. Res.
38mm height	None	7.3°C/W
38mm height	1	7.3°C/W
50mm height	None	5.9°C/W
50mm height	1	5.9°C/W
63mm height	None	4.7°C/W
63mm height	1	4.7°C/W
Device retaining clip	—	—

Manf. Part No.
& **Anglia**
Order Code
BW38-2
BW38-4
BW50-2
BW50-4
BW63-2
BW63-4
6801

HF20, HF35



Extruded clip-on heatsinks, with tinned p.c.b. pins, to fit a single **TO220** package. Choice of length.

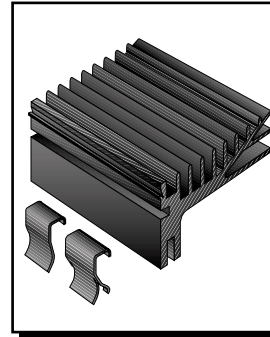
Size (mm) H. 28 x 20
Pitch 21 (HF20)
36 (HF35)

Length (Th. Res.)
20mm (13.1°C/W)
35mm (11.1°C/W)

Manf. Part No.
& **Anglia**
Order Code
HF20
HF35



KL series



High power dissipation, extruded heatsinks designed to accommodate one or more **TO220** packages via clips (available separately) or a threaded slot. Shaped to minimise board space by overhanging adjacent components. Additional threaded slot in base aids assembly. Choice of length.

Size (mm) H. 28 x 50

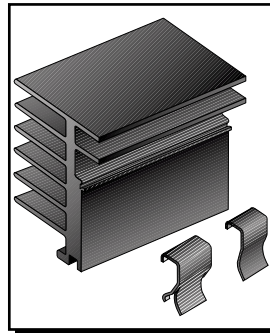
Type	Th. Res.
50mm length	5.2°C/W
75mm length	4.3°C/W
100mm length	3.4°C/W
150mm length	2.9°C/W
Device retaining clip (with legs)	4426
Device retaining clip (without legs*)	4525

Manf. Part No.
& **Anglia**
Order Code

KL50-1
KL75-1
KL100-1
KL150-1
4426
4525

* space saving clip

KM series



High power dissipation, extruded heatsinks designed to accommodate one or more **TO220** packages via a clip retaining feature (clips available separately). Shaped to minimise board space, with a threaded slot provided to aid assembly. Choice of length.

Size (mm) H. 45 x 30

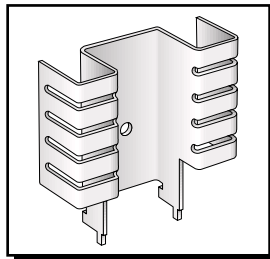
Type	Th. Res.
50mm length	4.8°C/W
75mm length	3.7°C/W
100mm length	3.3°C/W
150mm length	2.7°C/W
Device retaining clip (with legs)	4426
Device retaining clip (without legs*)	4525

Manf. Part No.
& **Anglia**
Order Code

KM50-1
KM75-1
KM100-1
KM150-1

* space saving clip

PF185, PF187



High power dissipation heatsinks, with integral fixing tags, pre-drilled to accommodate a single **TO220** package. Choice of finish.

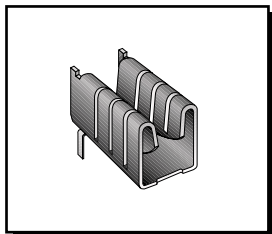
Thermal resistance **8.7°C/W**
Size (mm) 51 x 41.2 x 19

Finish
Solderable
Black anodised

Manf. Part No.
& **Anglia**
Order Code
PF185
PF187

TO220 package continued

PF432, PF433, PF434, PF436



Compact clip-on heatsinks, to fit a single **TO220** package. Available with or without a solderable fixing tag. Choice of right angle (R/A) or straight tag and its position.
Black pre-anodised finish (bare edges).

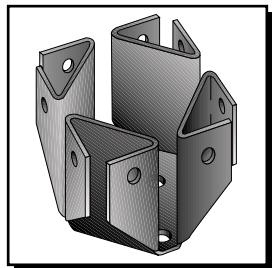
Thermal resistance **25.3°C/W**
Size (mm) 19.5 x 12.7
Height 12.7

Manf. Part No.
& **Anglia**
Order Code

Type
With R/A edge fixing tag (as illus.)
With R/A central fixing tag
With straight central fixing tag
Without fixing tag

PF436
PF434
PF432
PF433

PF692

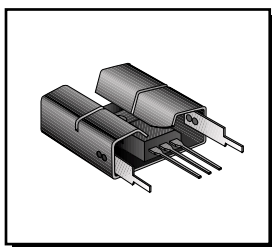


High power dissipation heatsink pre-drilled to accommodate **two TO220** packages.

Thermal resistance **5.1°C/W**
Size (mm) 46.5 x 46.5
Height 33.3

Manf. Part No.
& **Anglia**
Order Code
PF692

PF720, PF723



Clip-on heatsinks, with additional bolt hole, to fit a single **TO220** package. Black enamel paint finish. Available with or without solderable fixing tags.

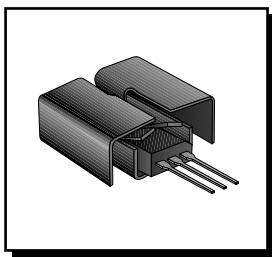
Thermal resistance **28.9°C/W**
Size (mm) 20 x 19.7 x 8.1
Pitch 18.3 (PF723)

Manf. Part No.
& **Anglia**
Order Code

Type
With fixing tags
Without fixing tags

PF723
PF720

PF745

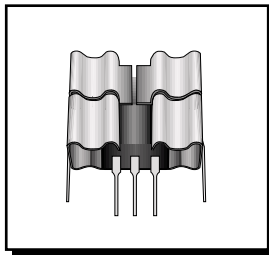


Clip-on heatsink, with additional bolt hole, to fit a single **TO220** package. Suitable for horizontal (normal) or vertical mounting.

Thermal resistance **23.1°C/W**
Size (mm) 21.8 x 19.1 x 10

Manf. Part No.
& **Anglia**
Order Code
PF745

PF750, PF751, PF758



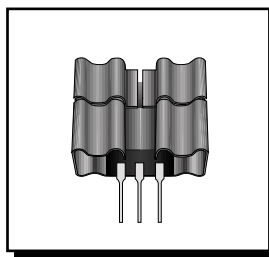
Clip-on heatsinks, with integral fixing tags and additional bolt hole, to fit a single **TO220** package.
Choice of finish and height.

Size (mm) 22 x 11
Pitch 22

Finish	Height (Th. Res.)
Solderable	24mm (17.3°C/W)
Solderable	19mm (20.3°C/W)
Red anodised	19mm (20.6°C/W)

Manf. Part No.
& **Anglia**
Order Code
PF758
PF750
PF751

PF752

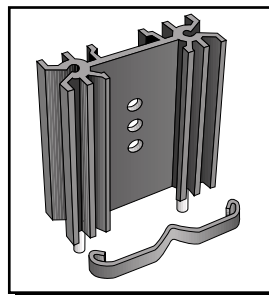


Clip-on heatsink, with additional bolt hole, to fit a single **TO220** package.

Thermal resistance **23.7°C/W**
Size (mm) 22 x 19 x 11

Manf. Part No.
& **Anglia**
Order Code
PF752

SW series



A range of compact, vertical mounting, extruded heatsinks with solderable fixing pins. Designed to accommodate a variety of plastic power devices including **TO220**. Choice of height and holes. Device retaining clip available separately.

Size (mm) W. 34.5 x 12.5
Pitch 25.4

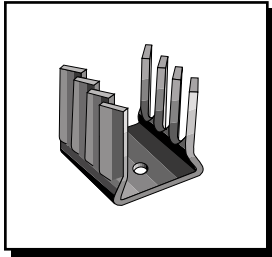
Type	Holes	Th. Res.
25mm height	None	11.4°C/W
25mm height	2	11.4°C/W
38mm height	None	10.2°C/W
38mm height	3	10.2°C/W
50mm height	None	8.8°C/W
50mm height	3	8.8°C/W
63mm height	None	7.0°C/W
63mm height	3	7.0°C/W
Device retaining clip	—	—

Manf. Part No.
& **Anglia**
Order Code
SW25-2
SW25-4
SW38-2
SW38-4
SW50-2
SW50-4
SW63-2
SW63-4
5901

TO220 package
continued overleaf > > >

TO220 package *continued*

TV5, TV47, TV58



Twisted vane heatsinks pre-drilled to accommodate a single **TO220** package. Choice of height.

Size (mm) 22 max. x 19

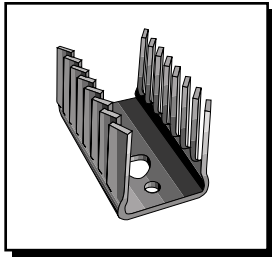
Height (Th. Res.)

19mm (21.6°C/W)
13mm (27.1°C/W)
11mm (29.9°C/W)

Manf. Part No.
& **Anglia**
Order Code

TV5
TV47
TV58

TV21



Twisted vane heatsink pre-drilled to accommodate a single **TO220** package.

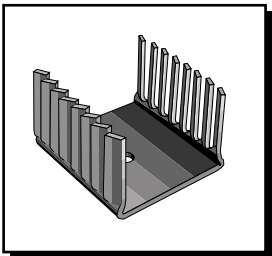
Thermal resistance **9.9°C/W**

Size (mm) 38 x 28 max.
Height 22

Manf. Part No.
& **Anglia**
Order Code

TV21

TV35, TV100, TV101



Twisted vane heatsinks pre-drilled to accommodate **one** or **two** **TO220** packages. Choice of height.

Size (mm) 42 max. x 38

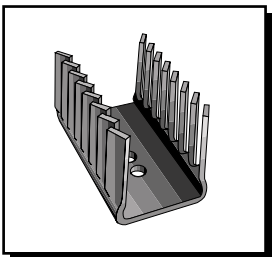
Height (Th. Res.)

25mm (7.2°C/W)
19mm (7.7°C/W)
13mm (9.0°C/W)

Manf. Part No.
& **Anglia**
Order Code

TV35
TV101
TV100

TV40



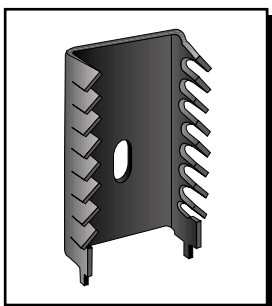
Twisted vane heatsink pre-drilled to accommodate a variety of plastic packages including **TO220**.

Thermal resistance **9.9°C/W**
Size (mm) 38 x 28 max.
Height 22

Manf. Part No.
& **Anglia**
Order Code

TV40

TV65



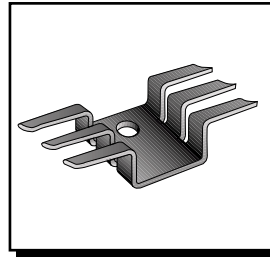
Tall twisted vane heatsinks with integral fixing tags and a slotted hole to accommodate a variety of plastic packages including **TO220**.

Thermal resistance **13.5°C/W**
Size (mm) 30 max. x 12.7, H. 45
Pitch 25.4

Manf. Part No.
& **Anglia**
Order Code

TV65

TV96, TV97



Twisted vane heatsinks pre-drilled to accommodate a single **TO220** package. Gull wing design combines good thermal ratings with a low height. Choice of wing span.

Size (mm) 17.8 x H. 10.2 max.

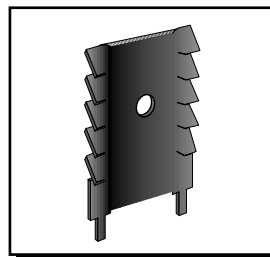
Span (Th. Res.)

31.7mm (24.0°C/W)
44.4mm (20.0°C/W)

Manf. Part No.
& **Anglia**
Order Code

TV96
TV97

TV125



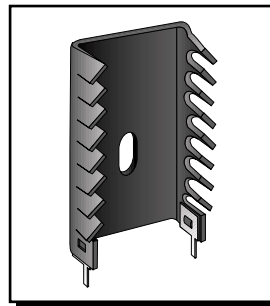
Slim twisted vane heatsink with integral fixing tags, pre-drilled to accommodate a single **TO220** package. Occupies minimum board space.

Thermal resistance **27.0°C/W**
Size (mm) 22.3 x 4, H. 31.8
Pitch 17.8

Manf. Part No.
& **Anglia**
Order Code

TV125

TV265



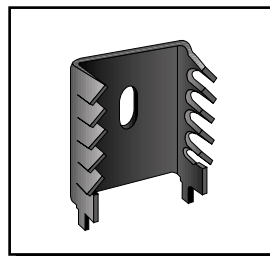
Twisted vane heatsink with rugged, solderable tags and a slotted hole to accommodate a variety of plastic packages including **TO220**.

Thermal resistance **13.0°C/W**
Size (mm) 30 max. x 12.7, H. 45
Pitch 25.4

Manf. Part No.
& **Anglia**
Order Code

TV265

TV1500, TV1505



Twisted vane heatsinks with a slotted hole to accommodate a variety of plastic packages including **TO220**. Available with or without fixing tags.

Size (mm) 30 max. x 12.7, H. 30.2
Pitch 24.1 (TV1505)

Type (Th. Res.)

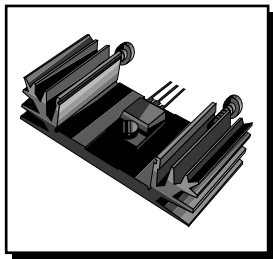
With tags (17.0°C/W)
Without tags (14.2°C/W)

Manf. Part No.
& **Anglia**
Order Code

TV1505
TV1500

TO220 package *continued*

1.25GY-50

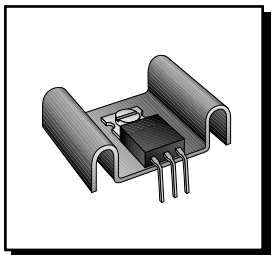


Extruded heatsink pre-drilled to accommodate a single **TO220** package. Suitable for vertical or horizontal mounting. Central groove prevents device rotation.

Thermal resistance **6.8°C/W** (horizontal)
8.8°C/W (vertical)
Size (mm) 60 x 32 x 16

Manf. Part No.
& **Anglia**
Order Code
1.25GY-50

220SA

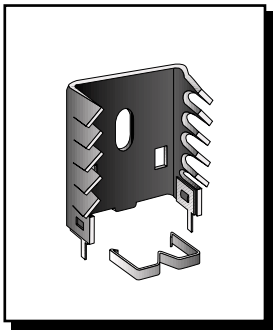


Pre-drilled to accommodate a single **TO220** package. Suitable for vertical or horizontal mounting.

Thermal resistance **21.2°C/W**
Size (mm) 28 x 19 x 9.4

Manf. Part No.
& **Anglia**
Order Code
220SA

5900PB



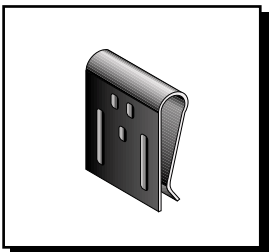
Twisted vane heatsink with rugged, solderable tags and a slotted hole to accommodate a variety of plastic packages including **TO220**. Has facility to accept device retaining clip, available separately. Black pre-anodised finish (bare edges).

Thermal resistance **17.0°C/W**
Size (mm) 30 max. x 12.7, H. 30.2
Pitch 24.1

Type
Heatsink only
Device retaining clip

Manf. Part No.
& **Anglia**
Order Code
5900PB
7701

6043PB

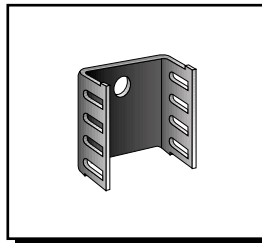


Clip-on heatsink to fit a single **TO220** package. Black pre-anodised finish (bare edges).

Thermal resistance **23.0°C/W**
Size (mm) 25.4 x 20.3 x 6.8

Manf. Part No.
& **Anglia**
Order Code
6043PB

6073PB

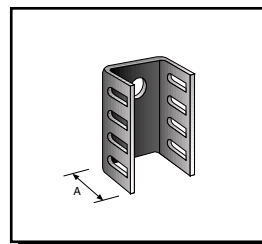


Low cost heatsink pre-drilled to accommodate a single **TO220** package. Black pre-anodised finish (bare edges).

Thermal resistance **21.0°C/W**
Size (mm) 19.1 x 19.1 x 9.5

Manf. Part No.
& **Anglia**
Order Code
6073PB

6079B, 6084B



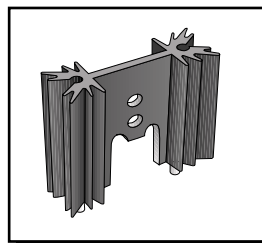
Compact heatsinks pre-drilled to accommodate a single **TO220** package. Choice of depth (ref. A).

Size (mm) 19.1 x 13.2

Depth A (Th. Res.)
12.7mm (21.0°C/W)
8.4mm (22.5°C/W)

Manf. Part No.
& **Anglia**
Order Code
6079B
6084B

6098B

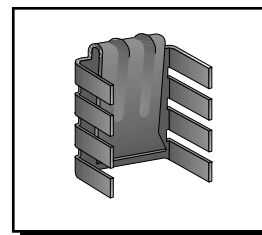


Compact, vertical mounting, extruded heatsink with solderable fixing pins. Pre-drilled to accommodate a single **TO220** package.

Thermal resistance **14.0°C/W**
Size (mm) 34.9 x 12.7, H. 25.4
Pitch 25.4

Manf. Part No.
& **Anglia**
Order Code
6098B

6238B



Clip-on heatsink to fit a single **TO220** package.

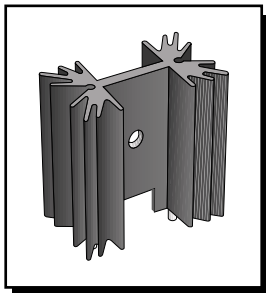
Thermal resistance **13.6°C/W**
Size (mm) 25.5 x 15.5, H. 29.4

Manf. Part No.
& **Anglia**
Order Code
6238B

TO220 package
continued overleaf > > >

TO220 package *continued*

6298B

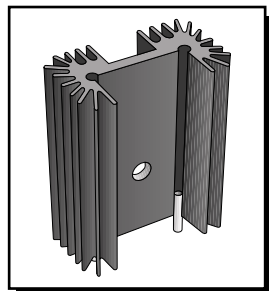


Compact, high power dissipation, vertical mounting, extruded heatsink with solderable fixing pins. Pre-drilled to accommodate a single **TO220** package.

Thermal resistance **3.9°C/W**
Size (mm) 41.9 x 25.4, H. 38.1
Pitch 25.4

Manf. Part No.
& **Anglia**
Order Code
6298B

6396B, 6398B, 6399B, 6400B



Compact, high power dissipation, vertical mounting, extruded heatsinks with solderable fixing pins. Pre-drilled to accommodate a single **TO220** package. Choice of height.

Size (mm) W.41.9 x 25.4
Pitch 25.4

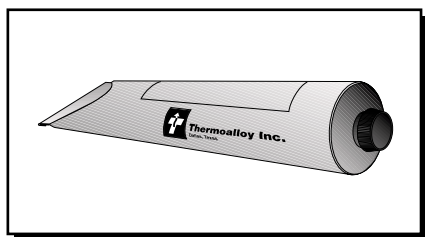
Height (Th. Res.)
25.4mm (5.6°C/W)
38.1mm (4.4°C/W)
50.8mm (3.3°C/W)
63.5mm (2.7°C/W)

Manf. Part No.
& **Anglia**
Order Code
6396B
6398B
6399B
6400B

HEATSINK COMPOUND

Thermalcote™

A superior thermally-loaded silicone-based grease for use with all heatsinks. Improves the transfer of thermal energy between mating surfaces approximately 15 times better than air and more than 4 times better than unloaded silicone grease. It is non-toxic, extremely stable, and neither cakes nor runs over the wide operating temperature range. Supplied in 57g (2oz) tubes.



Specification

Colour	Opaque white
Thermal conductivity	0.765W/m°C
Dielectric strength (1.27mm gap)	11.8kV/mm
Specific gravity	1.6
Operating temperature range	-40 to 204°C
Cleaning solvent	Mineral spirits or turpentine
Shelf life	Indefinite (unopened)

Manf. Part No.
& **Anglia**
Order Code
250

57g tube

SEMICONDUCTOR MOUNTINGS

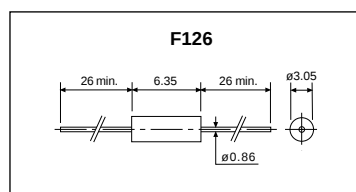
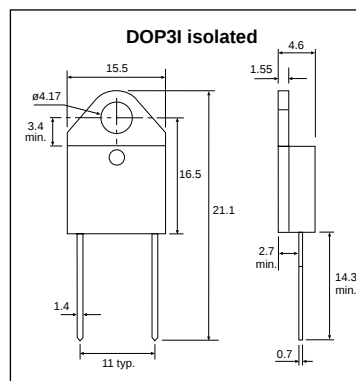
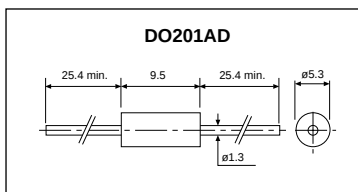
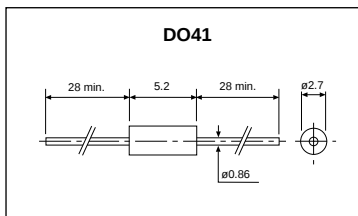
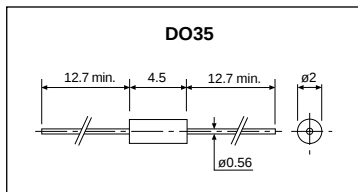
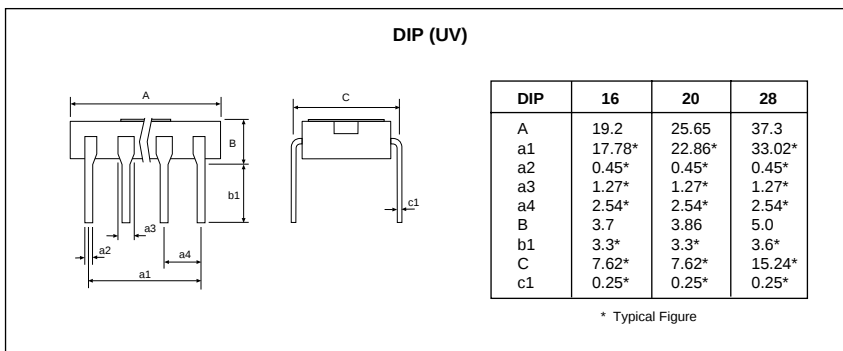
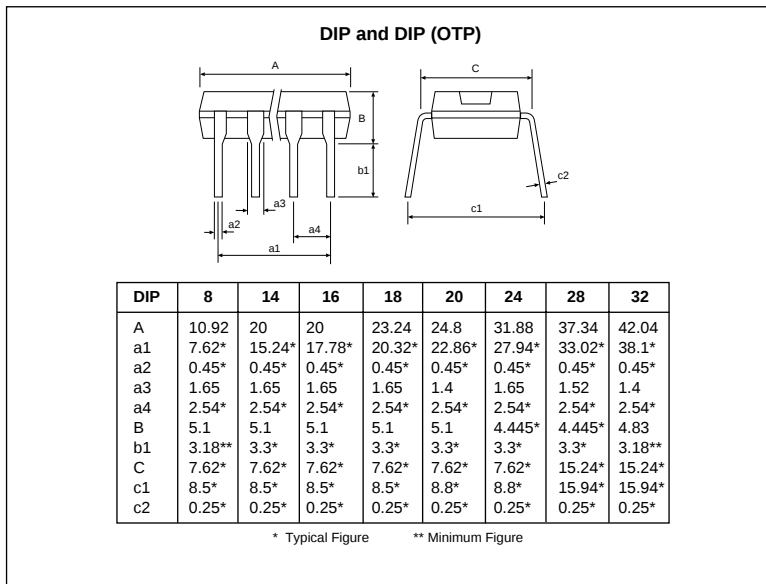
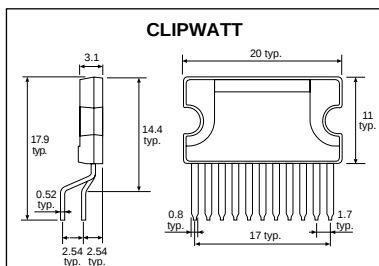
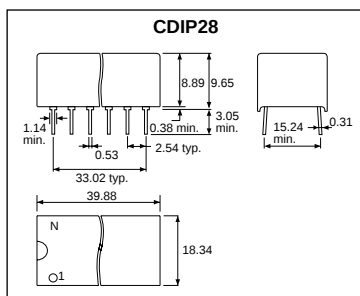
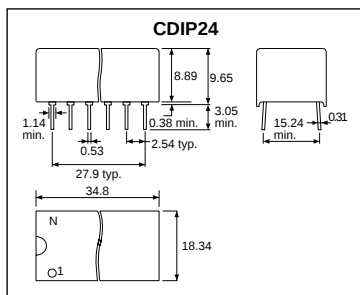
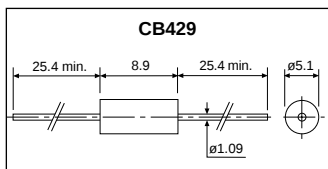
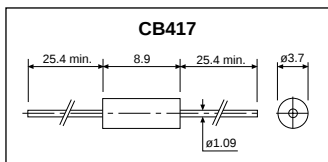
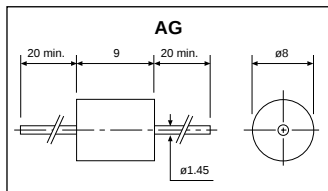
To complement our series of heatsinks a wide range of mountings is also available :

- SILICONE WASHERS
- MICA WASHERS
- BUSHES
- PADS

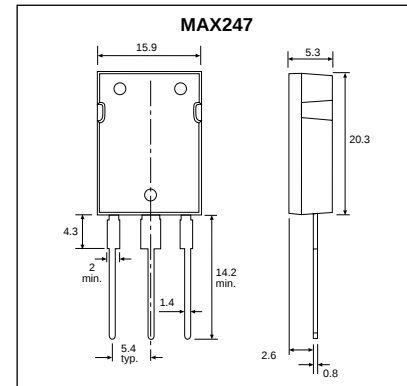
Please contact our Sales Dept
for details

The following simplified package drawings provide details of the more significant dimensions and are separated into Leaded and Surface Mount.

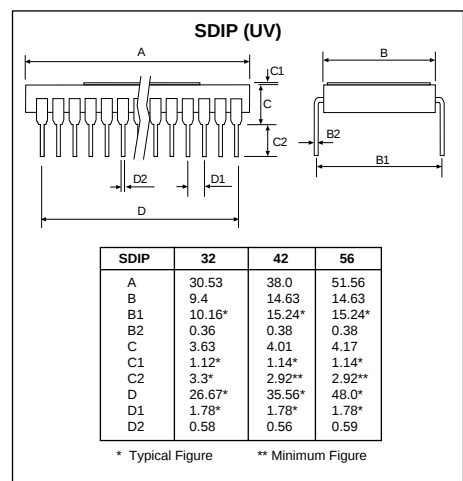
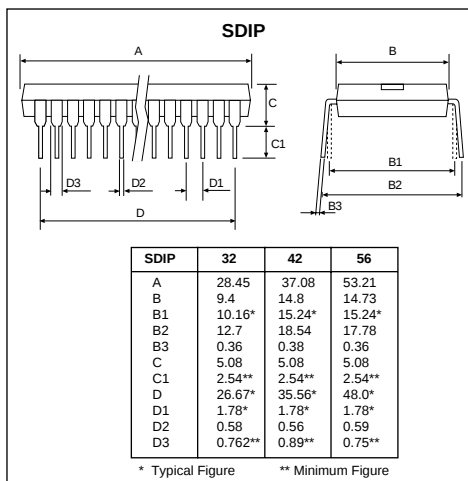
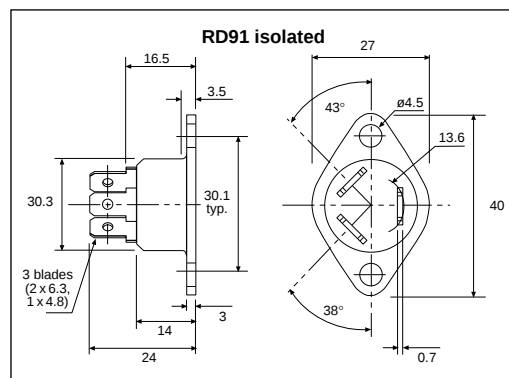
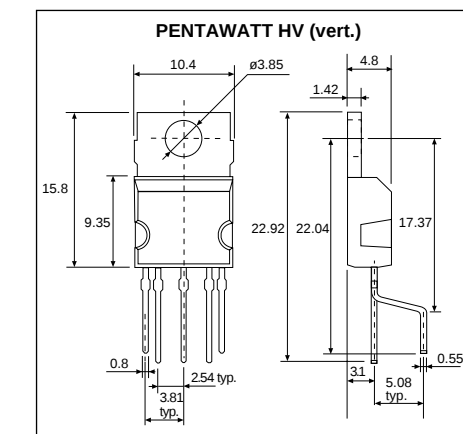
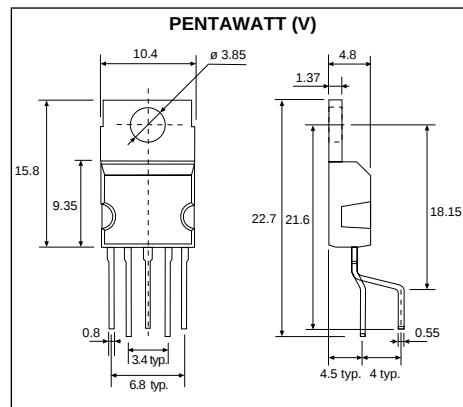
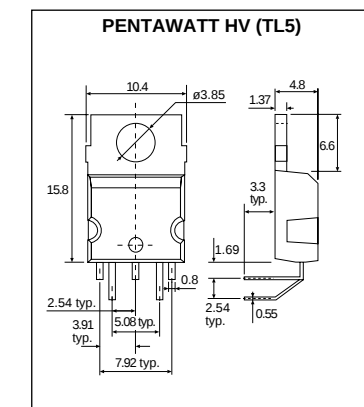
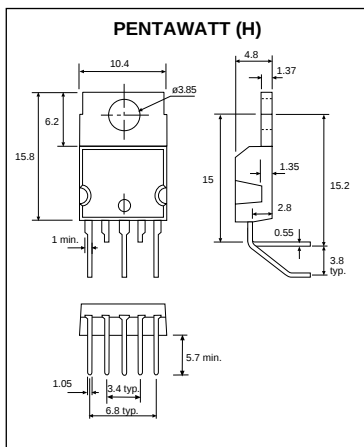
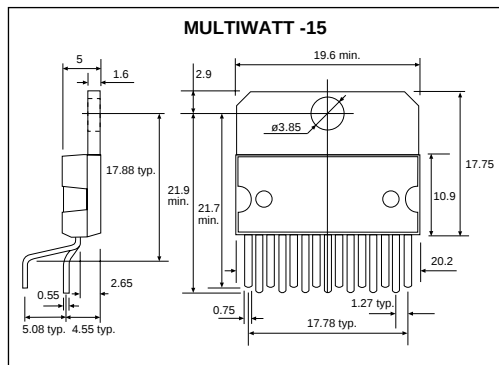
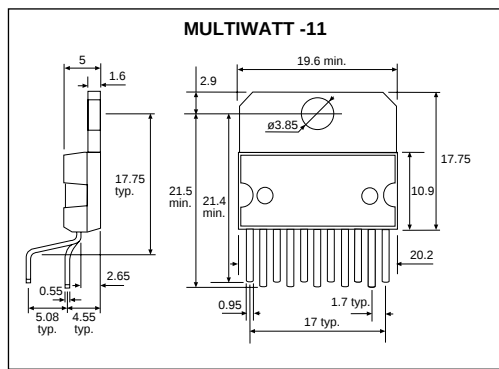
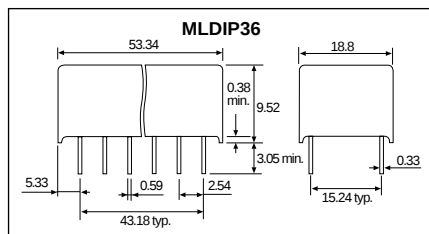
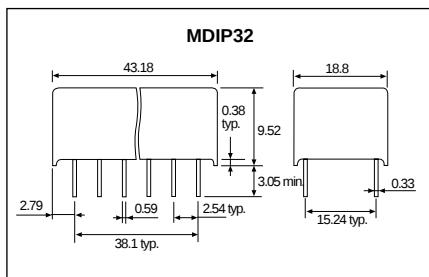
LEADED



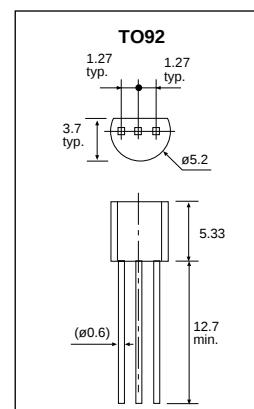
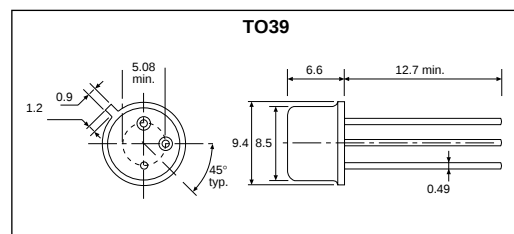
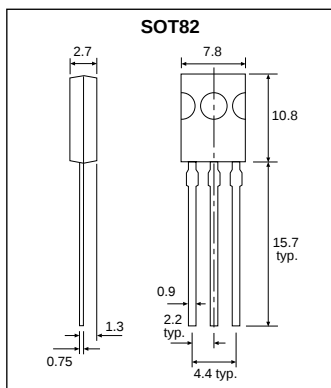
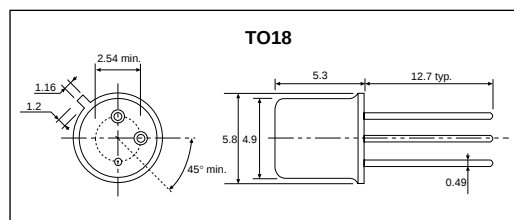
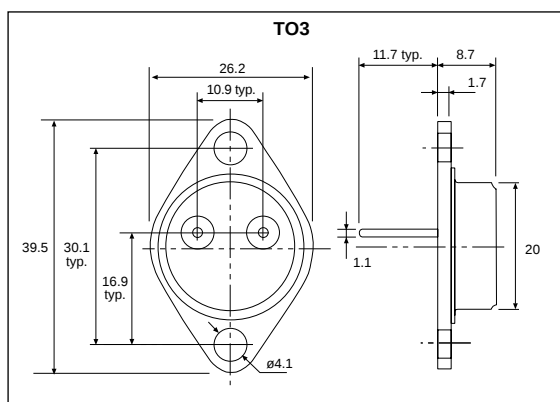
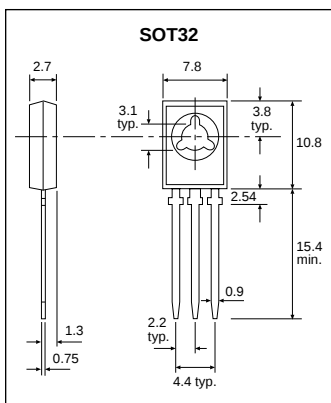
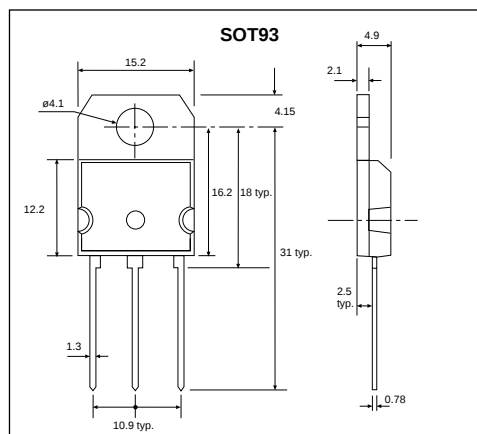
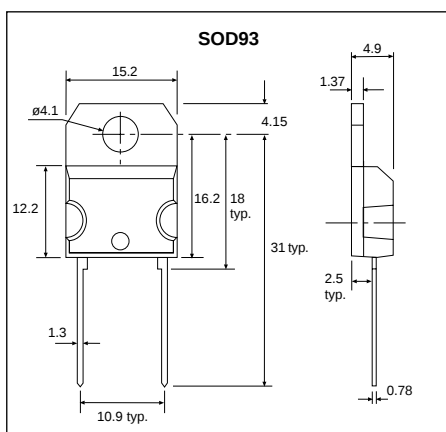
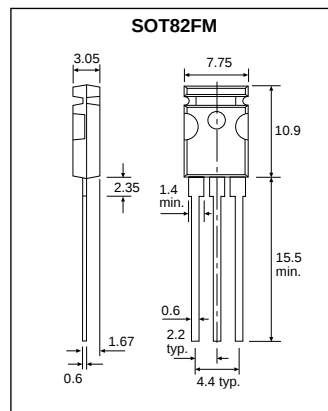
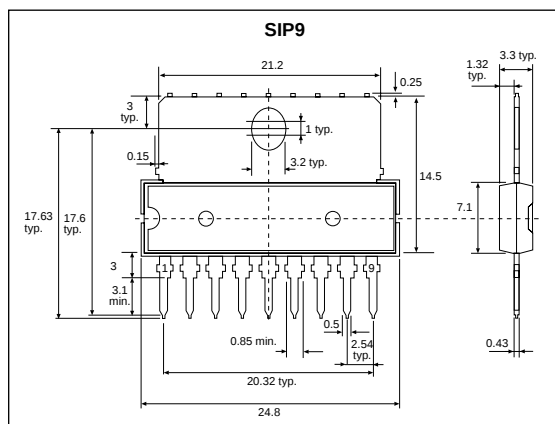
All dimensions are metric (mm) and are maximum unless otherwise stated



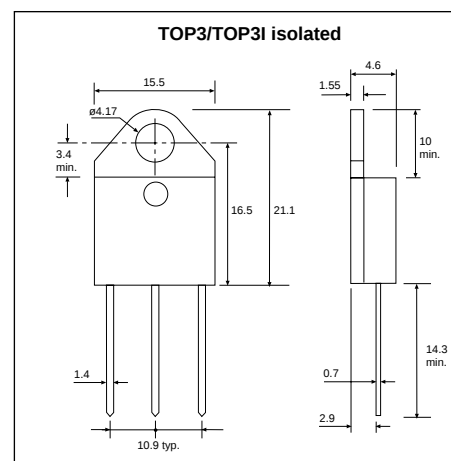
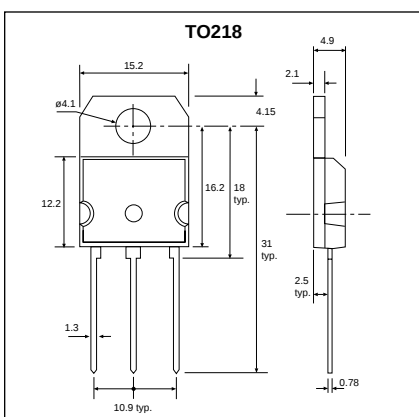
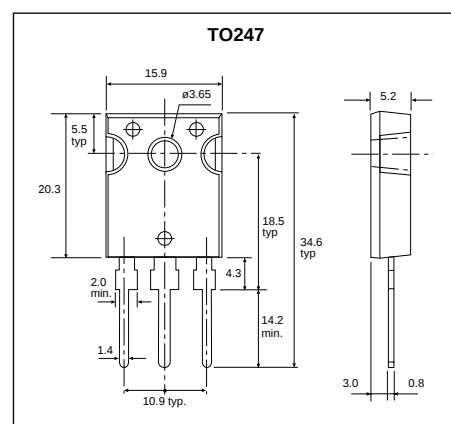
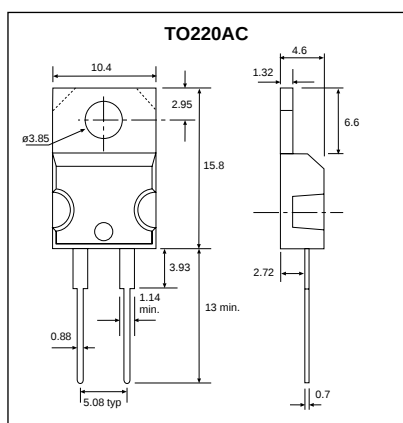
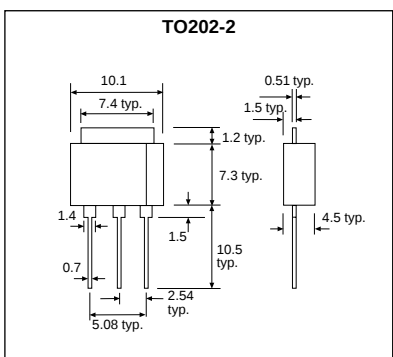
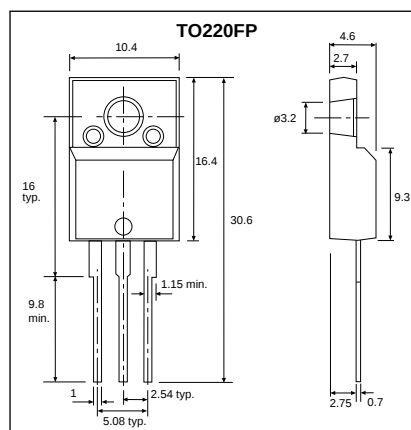
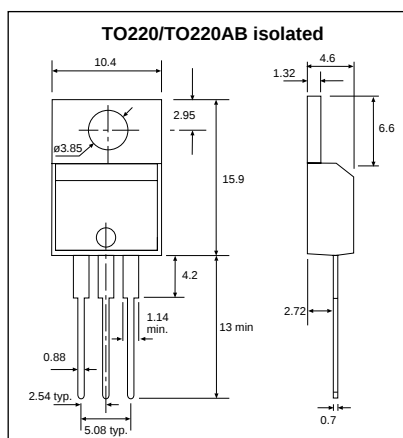
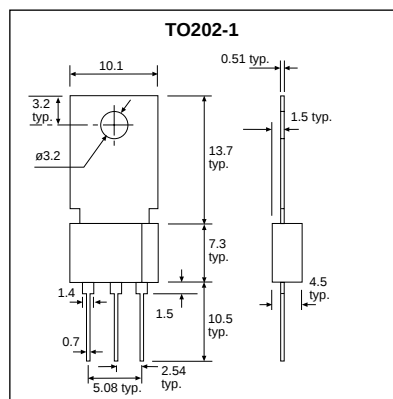
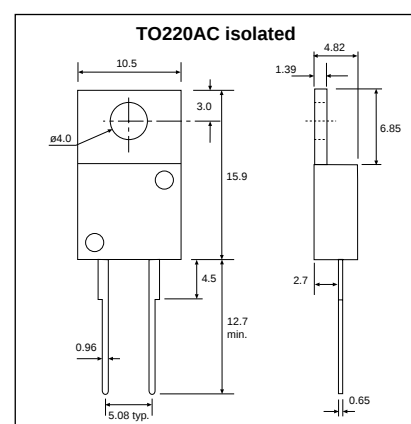
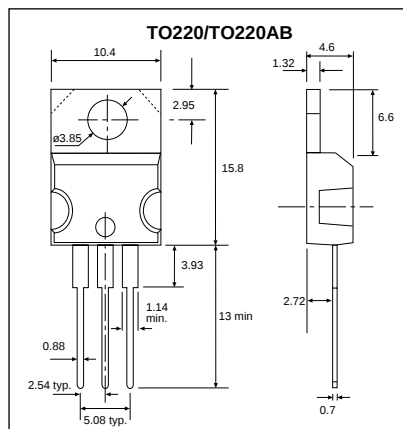
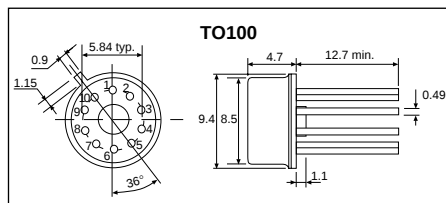
ST/9901



All dimensions are metric (mm) and are maximum unless otherwise stated



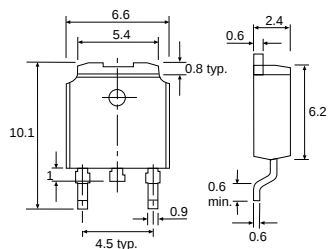
All dimensions are metric (mm) and are maximum unless otherwise stated



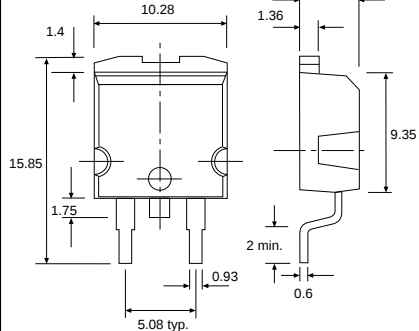
All dimensions are metric (mm) and are maximum unless otherwise stated

SURFACE MOUNT

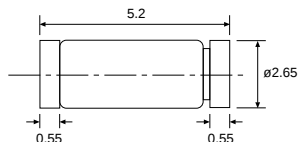
DKPAK



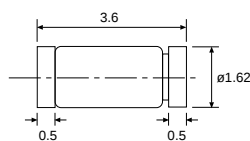
D²PAK



MELF

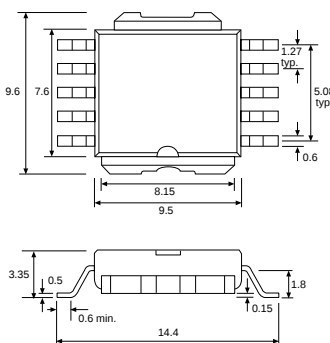


MINIMELF

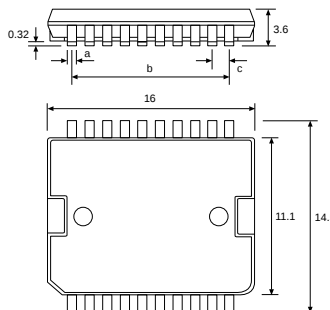


SMD

Power SO10



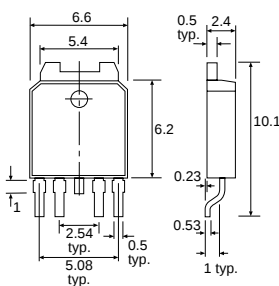
Power SO20/36



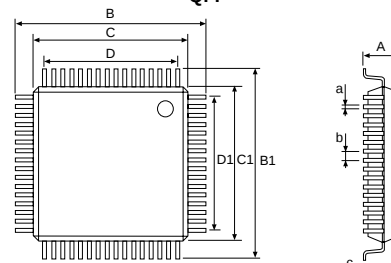
Power SO	20	36
a	0.53	0.38
b	11.43*	11.05*
c	1.27*	0.65*

* Typical Figure

PPAK



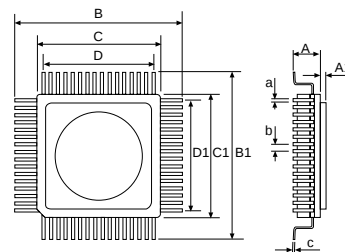
QFP



QFP	32	44	52	64	80	100
A	1.85	3.4	3.4	3.4	3.4	3.4
B	9.2	17.45	17.45	17.45	23.45	23.45
B1	9.2	17.45	17.45	17.45	17.45	17.45
C	7.3	14.1	14.1	14.1	20.1	20.1
C1	7.3	14.1	14.1	14.1	14.1	14.1
D	5.6*	10.0*	12.0*	12.0*	18.4*	18.85
D1	5.6*	10.0*	12.0*	12.0*	12.0*	12.35*
a	0.45	0.5	0.5	0.45	0.45	0.38
b	0.8*	1.0*	1.0*	0.8*	0.8*	0.65*
c	0.23	0.23	0.23	0.23	0.23	0.23

* Typical Figure

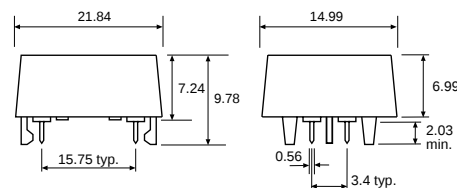
QFP (UV)



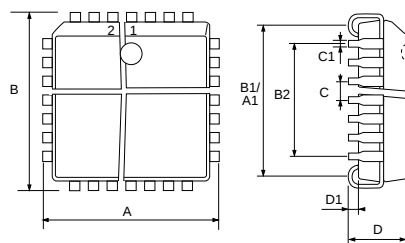
QFP	52	64	80	100
A	3.27	3.27	3.24	3.24
A1	0.96*	0.96*	1.17*	1.17*
B	17.75	17.75	24.45	24.45
B1	17.75	17.75	18.45	18.45
C	14.37	14.37	20.43	20.43
C1	14.37	14.37	14.39	14.39
D	12.0*	12.0*	18.4*	18.85*
D1	12.0*	12.0*	12.0*	12.35*
a	0.5	0.45	0.45	0.38
b	1.0*	0.8*	0.8*	0.65*
c	0.23	0.23	0.23	0.23

* Typical Figure

SH



PLCC

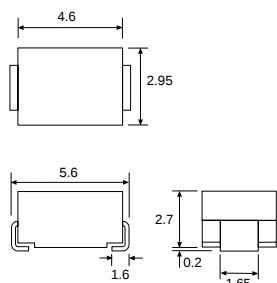


PLCC	28	32	44
A	12.57	12.57	17.65
A1	10.92	10.92	16
B	12.57	15.11	17.65
B1	10.92	13.46	16
B2	7.62*	8.89*	12.7*
C	1.27*	1.27*	1.27*
C1	0.53	0.53	0.53
D	4.57	3.56	4.57
D1	0.51**	0.38	0.68*

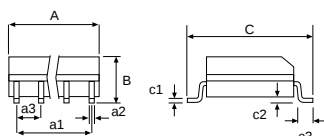
* Typical Figure ** Minimum Figure

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SMA



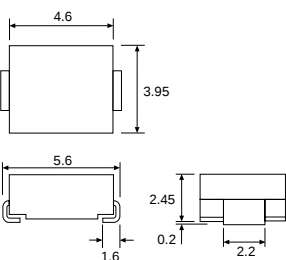
SO



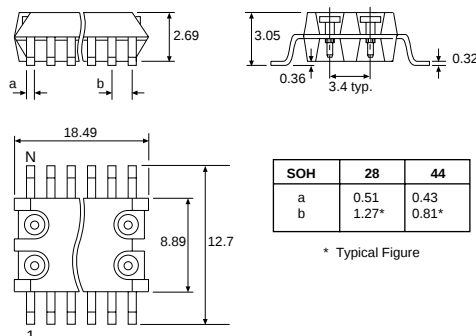
SO	8	8W	14	16	16W	20	24	28	34	44
A	5	5.35	8.75	10	10.5	13	15.6	18.1	18.06	28.3
a1	3.81*	3.81*	7.62*	8.89*	8.89*	11.43*	13.97*	16.51*	16.32*	26.67*
a2	0.48	0.45	0.46	0.46	0.49	0.49	0.51	0.49	0.48	0.5
a3	1.27*	1.27*	1.27*	1.27*	1.27*	1.27*	1.27*	1.27*	1.02*	1.27*
B	1.75	2.03	1.75	1.75	2.65	2.65	2.65	2.65	2.64	2.62
C	6.2	8.1	6.2	6.2	10.65	10.65	10.65	10.65	10.41	16.1
c1	0.25	0.2*	0.25	0.25	0.32	0.32	0.32	0.32	0.32	0.25
c2	0.25	0.25	0.25	0.25	0.3	0.3	0.3	0.3	0.29	0.23
c3	1.27	0.8	1.27	1.27	1.27	1.27	1.27	1.27	1.02	0.8*

* Typical Figure

SMB



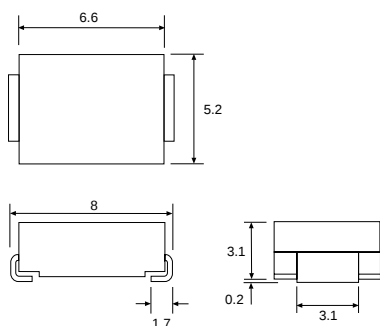
SOH



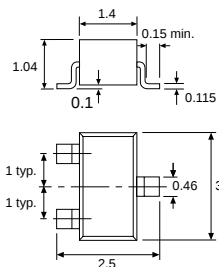
SOH	28	44
a	0.51	0.43
b	1.27*	0.81*

* Typical Figure

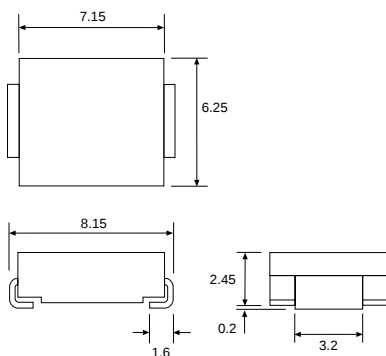
SMC



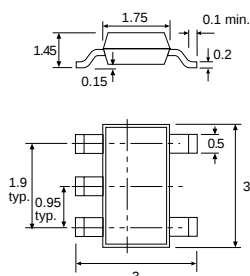
SOT23



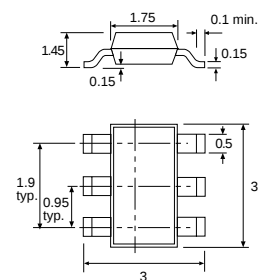
SMC (DO213AC)



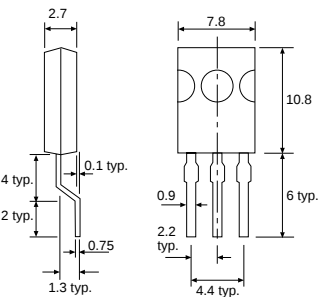
SOT23-5L



SOT23-6L

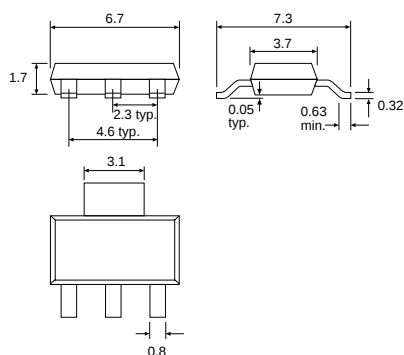


SOT194

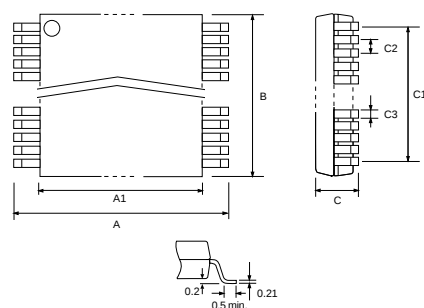


All dimensions are metric (mm) and are maximum unless otherwise stated

SOT223



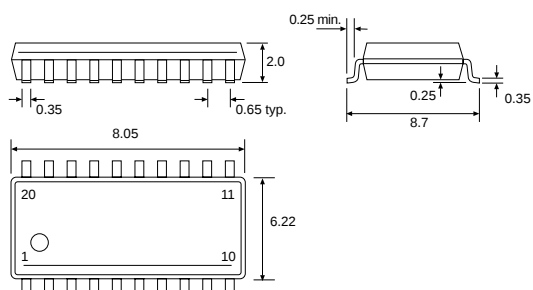
TSOP



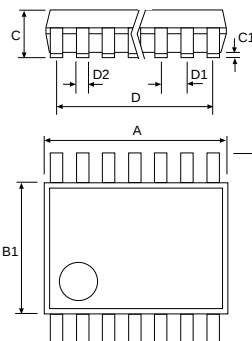
TSOP	28	32	40	48
A	13.6	20.2	14.2	20.2
A1	11.9	18.5	12.5	18.5
B	8.1	8.1	10.1	12.1
C	1.25	1.2	1.2	1.2
C1	7.15*	7.5*	9.5*	11.5*
C2	0.55*	0.5*	0.5*	0.5*
C3	0.27	0.27	0.27	0.27

* Typical Figure

SSOP20



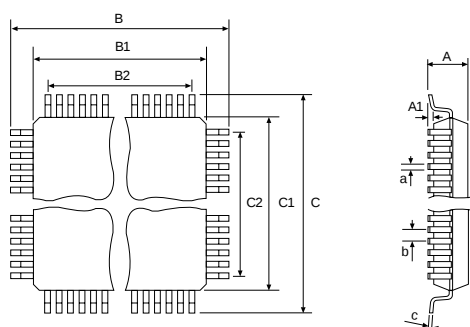
TSSOP



TSSOP	14	16	20	24	48
A	5.1	5.1	6.6	7.9	12.6
B	6.5	6.5	6.5	6.5	8.25
B1	4.48	4.48	4.48	4.48	6.2
C	1.1	1.1	1.1	1.1	1.1
C1	0.2	0.2	0.2	0.2	0.2
D	3.9	4.55	5.85	7.15	11.5
D1	0.65*	0.65*	0.65*	0.65*	0.5*
D2	0.3*	0.3*	0.3*	0.3*	0.27*

* Typical Figure

TQFP



TQFP	44	64
A	1.6	1.6
A1	0.15	0.15
B	12*	12*
B1	10*	10*
B2	8*	7.5*
C	12*	12*
C1	10*	10*
C2	8*	7.5*
a	0.45	0.28
b	0.8*	0.5*
c	0.2	0.2

* Typical Figure

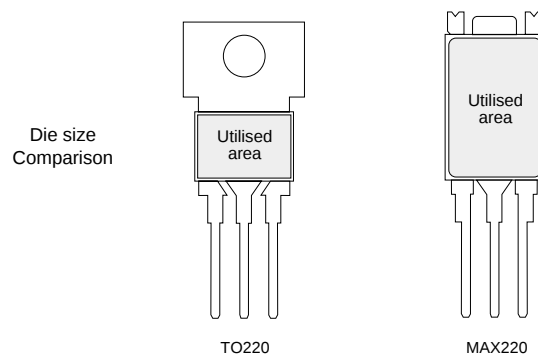
All dimensions are metric (mm) and are maximum unless otherwise stated

MAX220/MAX247

- Industry standard footprint/lead spacing
- Require less P.C.B. space
- Higher current/power capability
- Smaller heatsink requirement

The MAX220/MAX247 packages, exclusive to STMicroelectronics, mark a revolution in the design and manufacture of power transistors. Offering the same footprint and lead spacing as conventional industry standard TO220 and TO218/247 devices, the MAX power packages accommodate a much larger die. Designed for clip mounting, they utilise the screw hole mounting area traditionally employed, to house a larger piece of silicon. The larger die capacity allows P.C.B. space saving capabilities by replacing larger packages. Alternatively, the replacement of a conventional device, of similar specification, can significantly reduce power dissipation and therefore heatsink requirements by means of the greatly reduced on-resistance.

N.B. A range of suitable heatsinks is shown on pages 152 - 153.



TO220FP

- Directly compatible with ISOWATT220
- Fully isolated
- Highly cost effective
- UL recognised

Recent improvements in manufacturing processes and design have resulted in the evolution of a new class of power package. The TO220FP (Full Plastic) represents a highly cost effective isolated version of the industry standard TO220 and fully compatible with the existing ISOWATT220 package. The key to the TO220FP's cost effectiveness is the use of a modified mono-thickness 0.5mm lead frame, compared to the ISOWATT220's bi-thickness 1.27mm lead frame. Although the smaller copper mass of the lead frame increases the junction-to-case thermal resistance of the package, this does not have a significant application penalty. In most applications the value does not greatly contribute to the overall junction-to-ambient thermal resistance, which is largely dependant on the customer's thermal design.



Package	Frame	Outline	Electrical Isolation	UL Classification	Thermal Res. (j-c)
TO220FP	Mono-thickness: Frame = 0.5mm Leads = 0.5mm	Identical to ISOWATT220	1500V a.c.	Compliant	Typically higher than ISOWATT220
ISOWATT220	Bi-thickness: Frame = 1.27mm Leads = 0.35mm	Identical to TO220FP	1500V a.c.	Recognised	Typically lower than TO220

The alphabetical list below provides a description of the various symbols and less familiar abbreviations used in the tables throughout this shortform.

AR	Auto reload (timer)	POR	Power on reset
ASD	Application specific discretes	PSS	Power supply safeguard
αV_Z	Regulation voltage variation	P_{tot}	Total power dissipation
b	bit	PWM	Pulse width modulation
B	Byte	R_d	Dynamic resistance
C	Capacitance	$R_{DS(on)}$	Static drain-source on resistance
CAN	Controller area network	R_{ZK}	Small signal resistance in the breakdown knee region
CAPCOM	Capture/compare	SCI	Serial communication interface
δ	Pulse duty cycle	SDP	Software data protection
di/dt	Critical rate of rise of on-state current	SMPS	Switch mode power supply
(di/dt) _c	Critical rate of decrease of commutating on-state current	SPI	Serial peripheral interface
dI _F /dt	Rate of decrease of forward current	T_A	Ambient temperature
dv/dt	Critical rate of rise of off-state voltage	T_C	Case temperature
(dV/dt) _c	Critical rate of rise of commutating off-state voltage	t_d	Delay time
EOS	Electrical overstress	t_f	Fall time
f	Frequency	T_J	Junction temperature
f_T	Transition frequency	T_L	Lead temperature
h_{FE}	Common emitter, static value of the forward current transfer ratio	t_{off}	Turn-off time
I_B	Base current	t_p	Pulse width
I_{BO}	Breakover current	t_q	Turn-off time
I_C	Collector current	t_r	Rise time
I_{CM}	Collector peak current	t_{rr}	Reverse recovery time
I_D	Drain current	t_s	Setting or storage time
I_F	Continuous DC forward current	T_{TAB}	Tab temperature
$I_{F(AV)}$	Average forward current	USB	Universal serial bus
I_{FRM}	Repetitive peak on-state current	UVLO	Under voltage lock-out
I_{FSM}	Surge non-repetitive forward current	V_{BO}	Breakover voltage
IGBT	Insulated gate bipolar transistor	V_{BR}	Breakdown voltage
I_{GT}	Gate trigger current	V_{CBO}	Collector-base voltage with emitter open
I_H	Holding current	V_{CC}	Supply voltage
I_L	Latching current	V_{CE}	Collector-emitter voltage
I_{lim}	Current limit	$V_{CE(sat)}$	Collector-emitter saturation voltage
I/O	Input/output	V_{CEO}	Collector-emitter voltage with base open
I_{out}	Output current	V_{CER}	Collector-emitter voltage with specified resistance between emitter and base
I_{PP}	Surge non-repetitive reverse current	V_{CES}	Collector-emitter voltage with emitter short circuited to base
I_R	Continuous reverse current	V_{CL}	Clamping voltage
I_{RM}	Peak reverse current	V_{clamp}	Drain clamping voltage
I_{rr}	Test point of reverse recovery time on reverse recovery current	V_{DD}	Supply voltage
I_{RRM}	Repetitive peak reverse current	V_{DRM}	Repetitive forward off-state voltage
$I_{T(RMS)}$	RMS on-state current	V_{DSS}	Continuous drain-source voltage
I_{TM}	Peak on-state current	V_F	Forward voltage
I_{TRM}	Repetitive peak on-state current	V_{FP}	Transient peak forward voltage
I_{TSM}	Non-repetitive surge peak on-state current	V_{GT}	Gate trigger voltage
I_{ZK}	Regulation current in breakdown knee region	V_i	Input voltage of a specified circuit
I_{ZM}	Peak regulation current	V_{PFD}	Power-fail deselect voltage
I_{ZSM}	Surge non-repetitive on-state current	V_{PP}	Maximum electrostatic discharge
I_{ZT}	Regulation voltage test current	V_R	Continuous reverse voltage
LVD	Low voltage detect	V_{RM}	Maximum recommended stand-off voltage
NC or N/C	No connection	V_{RRM}	Repetitive reverse off-state voltage
NF	Noise figure	V_{TM}	Peak on-state voltage drop
OSG	Oscillator safeguard	V_{ZT}	Test continuous reverse voltage
OTP	One time programmable	WDT	Watchdog timer
		Y2K	Year 2000 compatible