

1.0±0.15

T1

0.157±0.004
(4.0±0.1)

0.079±0.004
(2.0±0.05)

P0 (Pitch Tolerance over any 10 pitches is ±0.2mm)

ØD

1.0max

T2

A

B

E

F

W

P

P

Direction of Feeding

(Dotted lines for CR10 only)

Plastic (Embossed)

Paper (Punched)

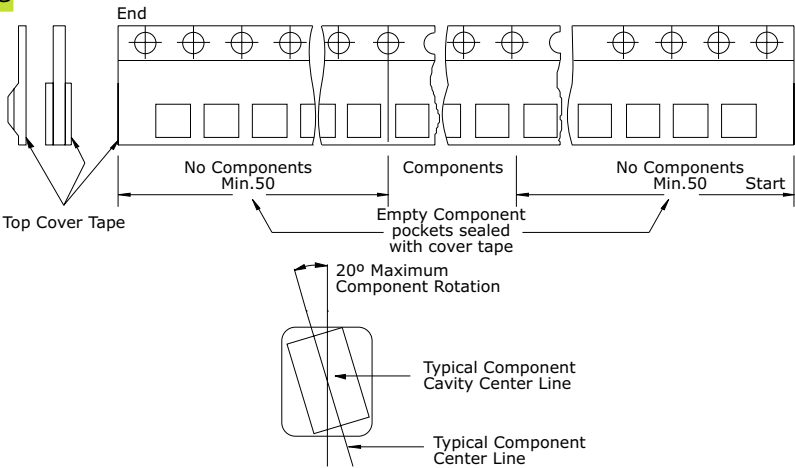
Inches (Millimeters)					
DIMENSIONS	A	B	W	E	F
CR 10 (0402)	0.045±0.004 (1.15±0.10)	0.026±0.004 (0.65±0.10)	0.315±0.008 (8.00±0.20)	0.069±0.004 (1.75±0.10)	0.138±0.002 (3.50±0.05)
CR 16 (0603)	0.075±0.004 (1.90±0.10)	0.043±0.004 (1.10±0.10)	0.315±0.008 (8.00±0.20)	0.069±0.004 (1.75±0.10)	0.138±0.002 (3.50±0.05)
CR 21 (0805)	0.094±0.004 (2.40±0.10)	0.065±0.004 (1.65±0.10)	0.315±0.008 (8.00±0.20)	0.069±0.004 (1.75±0.10)	0.138±0.002 (3.50±0.05)
CR 32 (1206)	0.138±0.004 (3.50±0.10)	0.075±0.004 (1.90±0.10)	0.315±0.008 (8.00±0.20)	0.069±0.004 (1.75±0.10)	0.138±0.002 (3.50±0.05)
CR 40 (1210)	0.138±0.004 (3.50±0.10)	0.110±0.004 (2.80±0.10)	0.315±0.008 (8.00±0.20)	0.069±0.004 (1.75±0.10)	0.138±0.002 (3.50±0.05)
CR 46 (1218)	0.192±0.008 (4.9±0.20)	0.136±0.008 (3.45±0.20)	0.472±0.004 (12.00±0.10)	0.068±0.008 (1.75±0.10)	0.216±0.002 (5.50±0.05)
CR 50 (2010)	0.213±0.008 (5.40±0.20)	0.114±0.008 (2.90±0.20)	0.472±0.004 (12.0±0.10)	0.069±0.004 (1.75±0.10)	0.217±0.002 (5.50±0.05)
CR 63 (2512)	0.272±0.008 (6.60±0.20)	0.142±0.008 (3.60±0.20)	0.472±0.004 (12.00±0.10)	0.069±0.004 (1.75±0.10)	0.217±0.002 (5.50±0.05)
Inches (Millimeters)					
DIMENSIONS	T1	T2	P	D	
CR 10 (0402)	-	0.018±0.004 (0.45±0.10)	0.079±0.002 (2.00±0.05)	0.059 ^{+0.004} ₋₀ (1.50 ^{+0.10} ₋₀)	
CR 16 (0603)	-	0.024±0.004 (0.60±0.10)	0.157±0.004 (4.00±0.10)	0.059 ^{+0.004} ₋₀ (1.50 ^{+0.10} ₋₀)	
CR 21 (0805)	-	0.030±0.004 (0.75±0.10)	0.157±0.004 (4.00±0.10)	0.059 ^{+0.004} ₋₀ (1.50 ^{+0.10} ₋₀)	
CR 32 (1206)	-	0.030±0.004 (0.75±0.10)	0.157±0.004 (4.00±0.10)	0.059 ^{+0.004} ₋₀ (1.50 ^{+0.10} ₋₀)	
CR 40 (1210)	-	0.030±0.004 (0.75±0.10)	0.157±0.004 (4.00±0.10)	0.059 ^{+0.004} ₋₀ (1.50 ^{+0.10} ₋₀)	
CR 46 (2018)	0.008±0.004 (0.20±0.120)	-	0.157±0.004 (4.00±0.10)	0.068±0.008 (1.50 ^{+0.10} ₋₀)	
CR 50 (2010)	0.008±0.004 (0.20±0.10)	-	0.157±0.004 (4.0±0.10)	0.059 ^{+0.004} ₋₀ (1.50 ^{+0.10} ₋₀)	
CR 63 (2512)	0.008±0.004 (0.20±0.10)	-	0.315±0.004 (4.00±0.10)	0.059 ^{+0.004} ₋₀ (1.50 ^{+0.10} ₋₀)	

CHIP RESISTOR NETWORKS

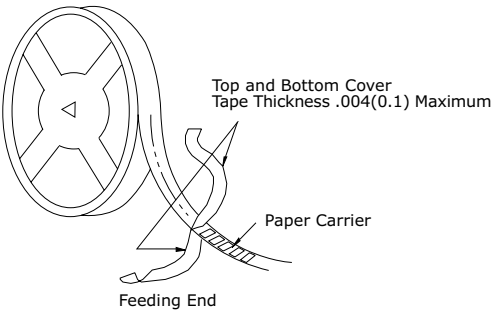
(Millimeters)										
DIMENSION		A	B	W	E	F	T1	T2	P	D
YCN 10	2	1.2± 0.1	1.85± 0.2	8.0± 0.2	1.75± 0.1	3.50± 0.05	-	0.45± 0.1	2.0± 0.1	1.50± 0.1
	4	2.2± 0.1	1.20± 0.1	8.0± 0.2	1.75± 0.1	3.50± 0.05	-	0.45± 0.1	2.0± 0.1	1.50± 0.1
YCN 16	2	1.9± 0.2	1.9± 0.2	8.0± 0.2	1.75± 0.1	3.50± 0.05	-	0.60± 0.2	4.0± 0.1	1.50± 0.1
	4	3.5± 0.1	2.00± 0.2	8.0± 0.2	1.75± 0.1	3.50± 0.05	-	0.75± 0.2	4.0± 0.1	1.50± 0.1

32

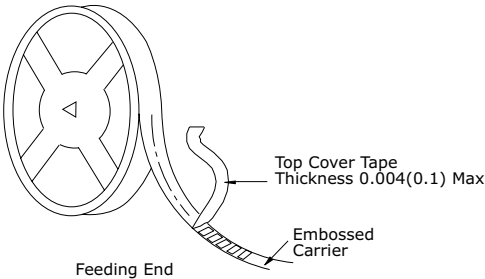
TAPE PACKING



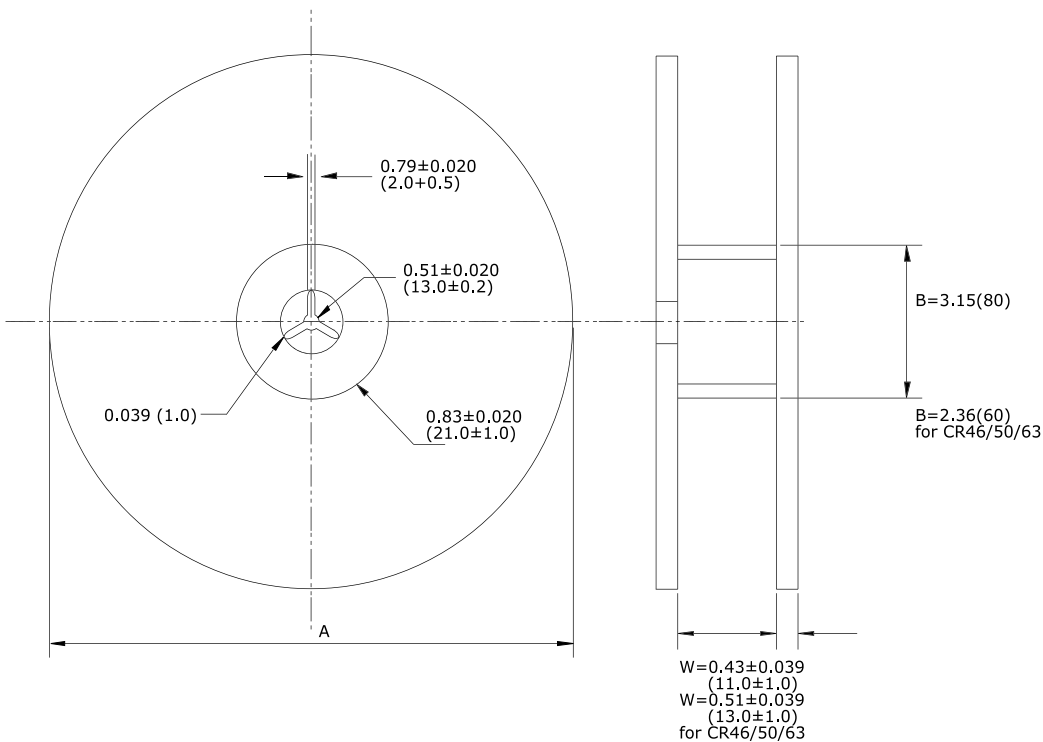
PAPER CARRIER



EMBOSSSED PLASTIC CARRIER



REEL DIMENSIONS



PACKING QUANTITY

Thick Film Chip Resistors

Reels (Diameter A)	Component / Reel		
	Paper Carrier		Embossed Plastic Carrier
	CR 10	CR 16/21/32/40	CR 46/50/63
7" (178± 2.0mm)	10000	5000	4000
10" (254± 2.0mm)	-	10000	-
13" (330± 2.0mm)	-	20000	-

PACKING QUANTITY

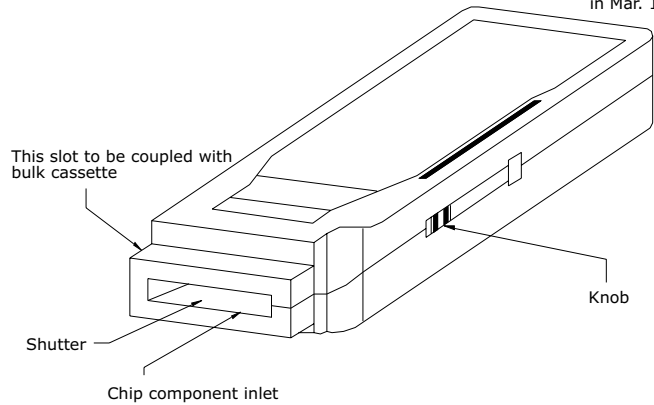
Thick Film Chip Resistors Networks

Reels (Diameter A)	Component / Reel	
	Paper Carrier	
	YCN 10 2R, 4R	YCN16 2R, 4R
7" (178± 2.0mm)	10000	5000



BULK CASSETTE PACKING

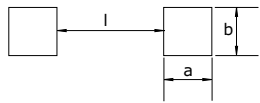
Dimension of Bulk Case
110(L)x36(W)x12(T)mm
Bulk case was standardized
in Mar. 1992 (EIAJ ET-7201)



PACKING QUANTITY IN BULK CASSETTE

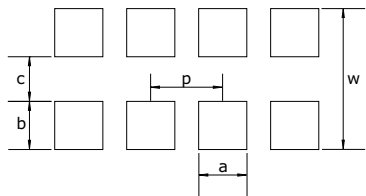
Chip Type	Chip Dimensions	Quantity (pcs)
CR 10 (0402)	1.0 x 0.5 x 0.35mm	50000
CR 16 (0603)	1.6 x 0.8 x 0.45mm	25000
CR 21 (0805)	2.0 x 1.25 x 0.50mm	10000
CR 32 (1206)	3.1 x 1.6 x 0.55mm	5000

SOLDERING PAD DIMENSION



Thick Film Chip Resistor

Type	Reflow Soldering			Wave Soldering		
	a	b	l	a	b	l
0402	0.4	0.9	0.5	-	-	-
0603	1.0	1.2	1.0	0.9	0.9	1.0
0805	1.4	1.65	1.2	0.9	1.3	1.3
1206	1.4	2.0	2.2	1.1	1.7	2.3
1210	1.4	2.9	2.2	1.1	2.5	2.2
1218	1.4	5.3	1.9	1.25	4.8	1.9
2010	1.5	2.9	3.9	1.2	2.5	3.9
2512	1.5	3.6	5.2	1.2	3.2	5.2



Thick Film Chip Resistor Network

No. of Resistors	Reflow Soldering & Wave Soldering					
	c	w	d	p	a	b
2						
4	0.8	3.1	0.36	0.8	0.44	1.15