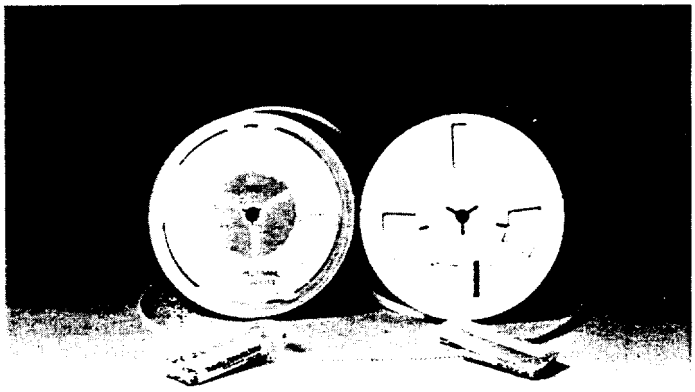
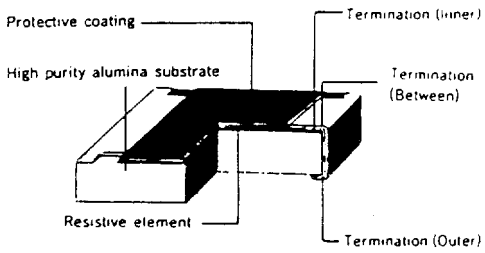
612-248 TO 844.

CHIP RESISTORS

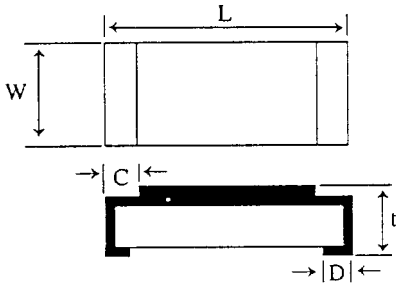
TYPE CR, Z



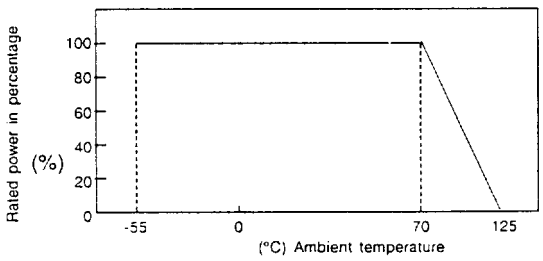
Construction



Dimensions and Power Rating



Derating Curve



CR CHIP RESISTORS

Type	Power Rating (W)	Max. Working Voltage(V)	Max. Overload Voltage(V)	Tolerance (%)	Resistance Range(Ω)	T.C.R. (ppm/°C)	Note	Dimension (mm) L	W	C	D	t
CR 16	0.063	50	100	±5	10 ~ 1M	EIAJ-RC -2690	–	1.6±0.2	0.8±0.2	0.3±0.2	0.3±0.2	0.4~0.55
				±10	4.7 ~ 1M							
CR 10	0.1	100	200	±1	100 ~ 1M	±100	★★	$2.0^{+0.2}_{-0.1}$	$1.25^{+0.2}_{-0.1}$	0.4±0.2	$0.3^{+0.2}_{-0.1}$	0.4~0.55
				±2	10 ~ 1M	EIAJ-RC -2690						
				±5	4.7 ~ 3.3M							
CR 6	0.167			±10	2.2 ~ 20M							
				±20	1 ~ 20M							
CR 8	0.125	200	400	±1	100 ~ 1M	±100		$3.2^{+0.10}_{-0.15}$	$1.6^{+0.1}_{-0.15}$	0.45±0.25	$0.4^{-0.2}_{-0.1}$	0.5~0.65
				±2	10 ~ 1M	EIAJ-RC -2690						
				±5	4.7 ~ 3.3M							
CR 4	0.25			±10	2.2 ~ 10M							
				±20	1 ~ 20M							

Z CHIP JUMPER (ZERO OHM)

Type	Rated current	Resistance	Overload
Z 16	1A	< 50mΩ	5A 1sec
Z 21	1A	< 50mΩ	5A 1sec
Z 32	2A	< 50mΩ	10A 1sec

☆ Rated voltage : $\sqrt{P \cdot R}$ P=Rated power (W) R=Nominal resistance (Ω) This value should be less than the value listed above.
★★M (20%) version can be supplied with 'no-trimming'.

Type designation

CR	8	101	J	T
Type	Power Rating	Resistance	Tolerance	Packing

16	0.063
10	0.1
6	0.167
8	0.125
4	0.25

E – 24
E – 96

F	± 1%
G	± 2%
J	± 5%
K	± 10%
M	± 20%

T	Face-up taping (This means regular taping being used now.)

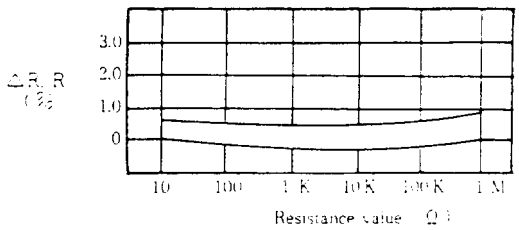
CHIP RESISTORS

Characteristic

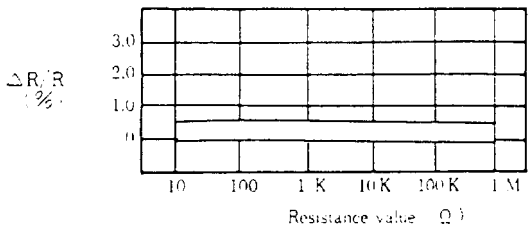
Item	Specifications	Test method
Operating temp. range	– 55°C ~ 125°C	
T.C.R.	R<10Ω : ±500ppm/°C 10Ω<R<1MΩ : ±200ppm/°C R>1MΩ : ±500ppm/°C	Room temperature + 100°C
Temperature cycling	less than ± (1% + 0.1Ω)	– 55°C ~ 125°C
Short time overload	± (1% + 0.1Ω)	Rated voltage X 2.5 for 5 seconds
Moisture storage	less than ± (3.0% + 0.1Ω)	40°C 90 ~ 95%RH
Moisture load life	less than ± (3.0% + 0.1Ω)	40°C 90 ~ 95%RH
Load life	less than ± (3% + 0.1Ω)	70°C for 1000 hours
Vibration	less than ± (1% + 0.1Ω)	Low frequency, 3 directions, 2 hours each
Solderability	to be covered more than 95%	230°C for 3 seconds
Resistance to soldering heat	± (2% + 0.1Ω)	260°C for 10 seconds
Terminal strength	less than ± (1% + 0.1Ω)	500g

Characteristic data

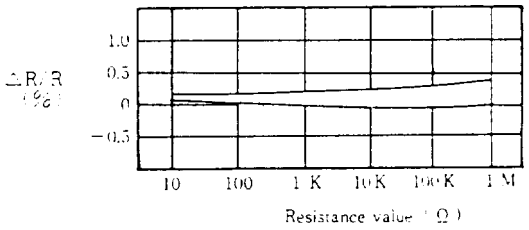
Load life 1000Hr



Moisture load life 1000Hr

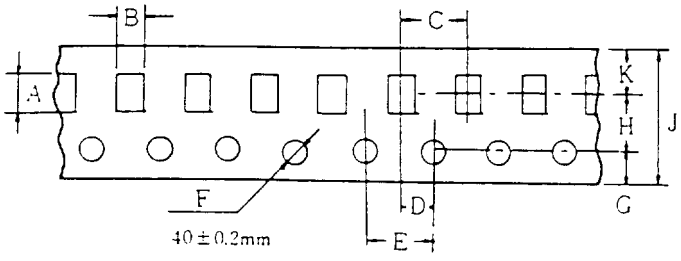


Short time overload



Packaging

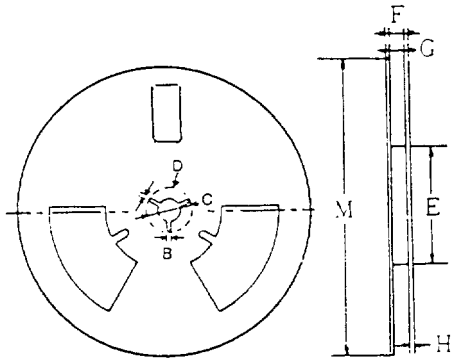
● Taping



Accumulated dimensional tolerance 40 ±0.2mm (mm)

Type	A	B	C	D	E	F	G	H	J	K
CR 16 Z 16	1.9 ±0.2	1.1 ±0.2	4.0 ±0.1	2.0 ±0.05	4.0 ±0.1	1.5 +0.1 –0	1.75 ±0.1	3.5 ±0.05	8.0 ±0.3	2.75
CR 10 CR 6 Z 21	2.4 ±0.2	1.65 ±0.2	4.0 ±0.1	2.0 ±0.05	4.0 ±0.1	1.5 +0.1 –0	1.75 ±0.1	3.5 ±0.05	8.0 ±0.3	2.75
CR 8 CR 4 Z 32	3.57 +0.1 –0.15	2.0 +0.1 –0.15	4.0 ±0.1	2.0 ±0.05	4.0 ±0.1	1.5 +0.1 –0	1.75 ±0.1	3.5 ±0.05	8.0 ±0.3	2.75

Tape Reel dimensions

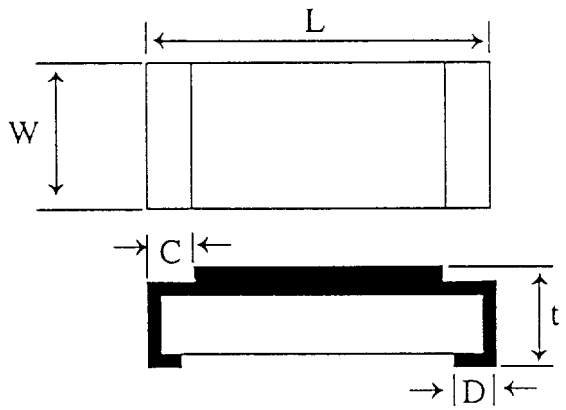


(mm)

B	C	D	E	F	G	H	M
2.5 ±0.5	13.0 ±0.5	31.0 ±0.8	80.0 ±0.2	10.0 +1.0 –0.5	9.0 +1.0 –0.5	0.8 ±0.15	178 ±2

Our High Quality Thick Film Chip Resistors

GENERAL SPECIFICATION



A. CHIP RESISTORS

DIMENSION IN MM

TYPE	WATTS	IMPERIAL SIZE	METRIC SIZE	L	W	C	D	t
CR 16	1/16	0603	1608	1.6 ± 0.2	0.8 ± 0.2	0.3 ± 0.2	0.3 ± 0.2	0.4 ~ 0.55
CR 10	1/10	0805	2125	$2.0^{+0.2}_{-0.1}$	$1.25^{+0.2}_{-0.1}$	0.4 ± 0.2	$0.3^{+0.2}_{-0.1}$	0.4 ~ 0.55
CR 6	1/6							
CR 8	1/8	1206	3216	$3.2^{+0.1}_{-0.15}$	$1.6^{+0.1}_{-0.15}$	0.45 ± 0.25	$0.4^{+0.2}_{-0.1}$	0.5 ~ 0.65
CR 4	1/4							

B. CHIP JUMPER (ZERO OHM)

a. Z 16
(1.6 x 0.8mm)

b. Z 21
(2.0 x 1.25mm)

c. Z 32
(3.2 x 1.6mm)

C. CHIP JUMPER (LOW IMPEDANCE)

a. CJ 16
(1.6 x 0.8mm)

b. CJ 21
(2.0 x 1.25mm)

c. CJ 32
(3.2 x 1.6mm)