

1. Scope :

This specification is applies to Low Value Power Metal Strip Chip Resistors for use current detection.

2. Application :

Computer
Automotive
AC Adapter
Power supply
Battery pack
Battery charger
DC-DC converter
Printer equipment

**3. Product code system :**

EX:

C S R	1	R 0 1 0	F	T R
(1)	(2)	(3)	(4)	(5)

(1) Product code

Product series code

(2) Power rating

1= 1 watt, 2= 2 watts

(3) Resistance

Resistance range: 1m to 50m

R010: 10m

(4) Resistance tolerance

F=± 1%; G=± 2%

(5) Packaging code

TR: Taping and reel

BK: Bulk

4. Rating :

	Power Rating	Resistance Range (Ω)	T.C.R. (X 10 ⁻⁶ /K)	Dielectric Withstanding Voltage	Rated Ambient Temperature	Operating Temperature
CSR1	1W	1m ~ 50m	50	500	70	-55 ~ 170
CSR2	2W					

* Rated voltage = $\sqrt{P R}$ or maximum working voltage, whichever is lower.

4.1. Rated Voltage :

Resistors shall have a rated direct-current (DC) continuous working voltage or approximate sine-wave root-mean-square (RMS) alternating-current (AC) continuous working voltage at commercial-line frequency and waveform corresponding to the power rating as determined from the following formula:

$$E = \sqrt{P R}$$

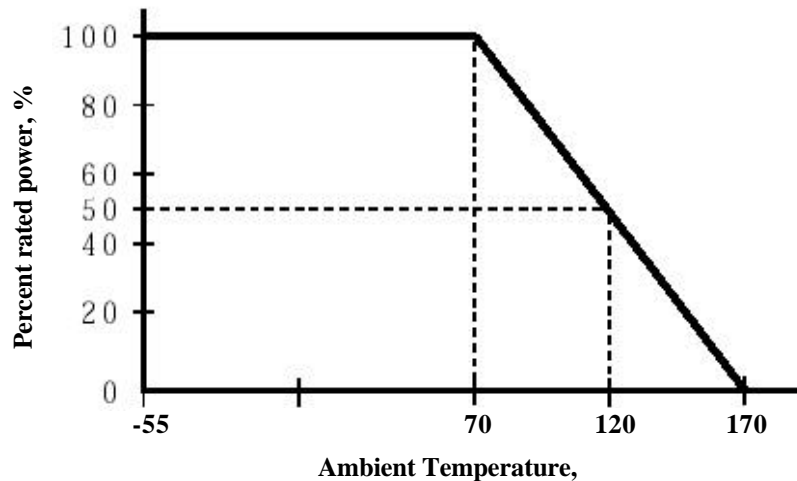
E: Rated Voltage [V]

P: Rated Power [W]

R: Nominal resistance [Ω]

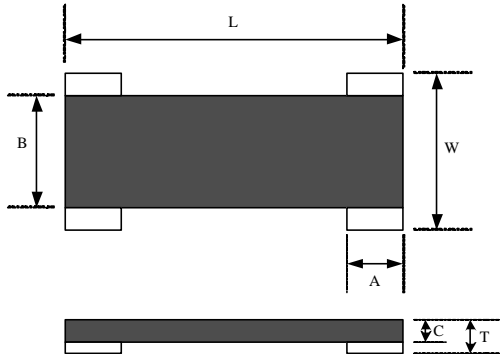
4.2. Power derating curve :

For temperature in excess of 70 °C, the load shall be derated in accordance with the following figure.



5. Dimensions :

5.1. Dimensions

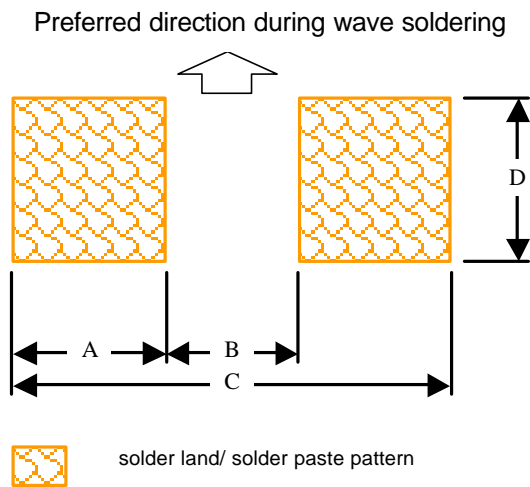


unit: mm		
Symbol	Dimension	Tolerance
L	6.3	± 0.3
W	3.2	± 0.3
T	0.65	± 0.2
A	0.8	± 0.2
B	2.5	± 0.2
C	0.5	± 0.2

5.2. Marking :

Resistance and tolerance

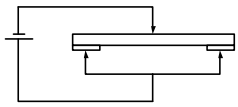
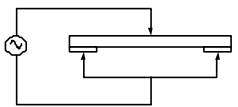
5.3. Recommended land pattern



Size	Footprint Dimensions (mm)				Placement Accuracy
	A	B	C	D	(mm)
2512	2.1	3.8	8.0	3.7	±0.25

6. Performance :

6.1. Electrical characteristics

No.	Test	Specification	Testing condition
1	Resistance	Within tolerance	@25
2	Temperature coefficient of resistance	±50ppm/	+25 ~ +125
3	Short time overload	R/R ±1.0%	5 times rated power for 5s
4	Insulation resistance	Above 10 ⁴ MO	Surface center to termination 500Vdc 
5	Withstanding voltage	No short, burning and arc	Surface center to termination 500Vac for 60s 

6.2. Mechanical characteristics

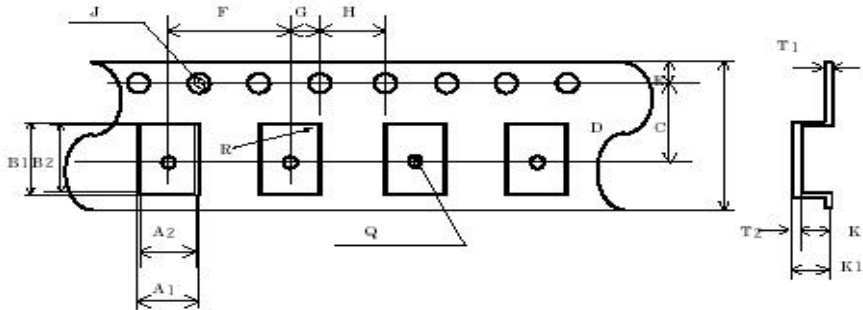
No.	Test	Specification	Testing condition
1	Resistance to soldering heat	R/R ±1.0% No visible damage	260 ±5 ; 10s ±s
2	Solderability	More than 95% of surface of the termination must be covered with new solder.	Immersed for 2 ±0.5s in a solder bath at 235 ±2
3	Resistance to solvent	No visible damage	IPA or H ₂ O ₂ followed by brushing in accordance with "MIL-STD-202F"

6.3. Environmental characteristics

No.	Test	Specification	Testing condition
1	Moisture resistance	R/R ±1.0%	MIL-STD-202, Method 106, 0% power, 7a and 7b no required
2	Temperature cycling	R/R ±1.0%	30 minutes at -55 and 30minutes at 150 ; 10cycles
3	Damp heat (steady state)	R/R ±2.0%	40 ±2 ; 90~95% RH 56days
4	Endurance (Rated load)	R/R ±2.0%	70 ±2 ; 1000 hours

7. Taping :

7.1. Dimensions of carrier tape

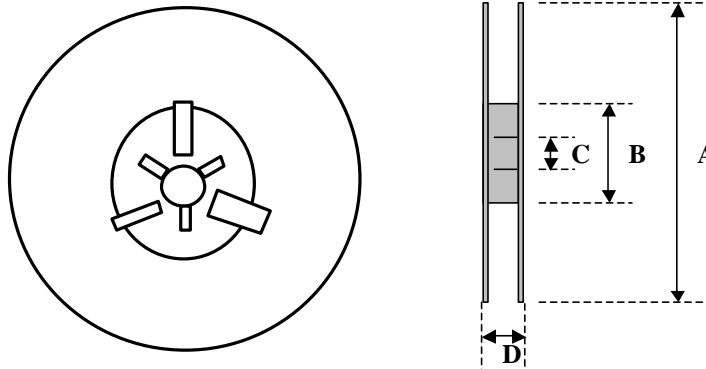


Unit : mm

A1 ±0.1	A2 ±0.1	B1 ±0.1	B2 ±0.1	C ±0.1	D ±0.1	E ±0.1	F ±0.1	G ±0.1	H ±0.1	J ±0.1	K1 ±0.1	K2 ±0.1	Q ±0.1	T1 ±0.05	T2 ±0.05
3.6	3.4	6.8	6.4	12.0	5.5	1.75	8.0	2.0	4.0	1.5	2.35	2.15	1.5	0.25	0.20

R=0.3 ° MAX

7.2. Dimensions of reel



Reel size	A	B	C	D	Taping Q'ty / reel
7"	180.0±3.0mm	60.0±2.0mm	13.0±0.5mm	16.0±1.5mm	1,000 pcs