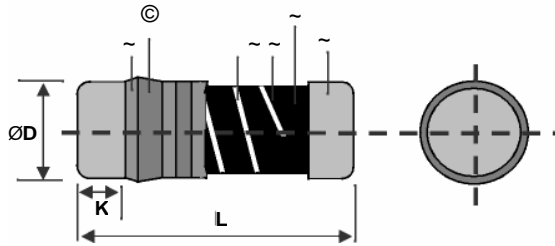
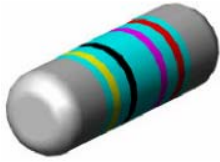


Metal Film Precision Resistor - CSR Series

Construction



~	Insulation Coating	Ⓜ	Electrode Cap
Ⓜ	Trimming Line	Ⓜ	Resistor Layer
Ⓜ	Ceramic Rod	Ⓜ	Marking

Features

- Excellent overall stability
- Tight tolerance down to $\pm 0.1\%$
- Extremely low TCR down to ± 10 PPM/ $^{\circ}$ C
- High power rating up to 1 Watts

Applications

- Automotive
- Telecommunication
- Medical Equipment

Dimensions

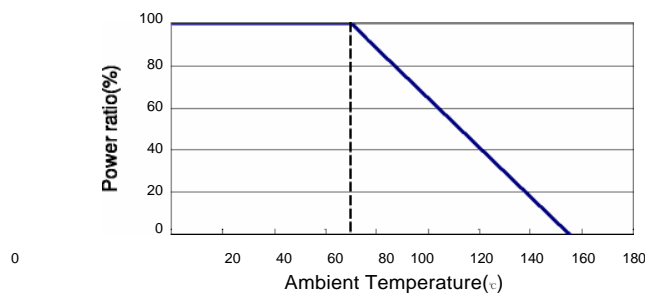
Unit: mm

Type	L	ØD	K mi n.	Weight (g) (1000pcs)	Packaging	
					180mm 7"	330mm 13"
CSR0204	3.50 \pm 0.2	1.40 \pm 0.15	0.5	18.7	3000EA	–
CSR0207	5.90 \pm 0.2	2.20 \pm 0.20	0.5	80.9	2000EA	–

Part Numbering

Product Type	Dimensions (LxctD)	Resistance Tolerance	Packaging Code	TCR (PPM/ $^{\circ}$ C)	Power Rating	Resistance
CSR	0204: 3.5x1.4 0207: 5.9x2.2	B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$ F: $\pm 1\%$	T: Taping Reel B: Bulk	B: ± 10 N: ± 15 C: ± 25 D: ± 50	T: 1W U: 1/2W V: 1/4W	0100: 10fI 1000: 100fI 2201: 2200fI 1001: 1KfI 1004: 1MfI

Derating Curve



■ Standard Electrical Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range				TCR (PPM/°C)
					±0.1%	±0.25%	±0.5%	±1%	
0204	1/4W	-55 ~ +155°C	200V	400V	1000-20K0		100-20K0		±10
					1000-100K0		100-100K0		±15
					1000-270K0	100-330K0	4.70-560K0	4.70-1 M0	±25
					1000-270K0	10-330K0	10-1 M0	10-10M0	±50
0207	1/2W	-55 ~ +155°C	300V	500V	1000-20K0		100-20K0		±10
					1000-100K0		100-100K0		±15
					1000-400K0	100-400K0	100-560K0	100-560K0	±25
					1000-400K0	10-330K0	10-1 M0	10-5.1 M0	±50

■ High Power Rating Electrical Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range				TCR (PPM/°C)
					±0.1%	±0.25%	±0.5%	±1%	
0207	1W	-55 ~ +155°C	350V	700V	1000-100K0		100-100K0		±15
					1000-100K0	4.70 - 1M0	4.70 - 1M0	4.70-560K0	±25
					1000-100K0	100 - 1M0	10 - 1M0	10 - 2.2M0	±50

■ Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	+20/-15/+20/+100/+20°C
Short Time Overload	AR±0.5%	RCWV*2.5 or Max. overload voltage for 5 seconds
Endurance	ΔR±2%	70°C, Max working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	ΔR±2%	40.2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Dry Heat	AR±2%	at +155°C for 1000 hrs
Solderability	95%min. coverage	245.5°C for 3 seconds
Resistance to Soldering Heat	AR±0.5%	260±5°C for 10 seconds

■ Reference Standards: JIS-C 5201-1

■ Storage Temperature: 25±3°C; Humidity < 80%RH