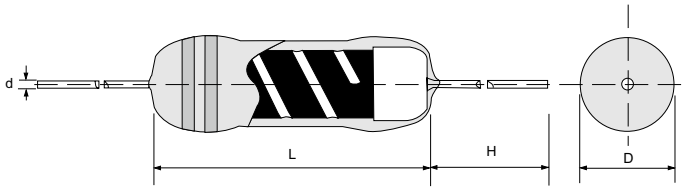
CSR
Current Sense Resistor

Quality • Reliability
Cost-Down via Innovation



Features

- Using our proprietary HeatSinker™ technology, CSR series offers a better reliability than regular low-ohm resistors.
- Lead-free tin plated deoxygenized copper wire provides stable value of resistor during operation.
- Flame-proof coating available.
- Products meet RoHS requirements and do not contain substances of very high concern identified by European Chemicals Agency

DIMENSIONS

Type	Body Length (L, mm)	Body Diameter (D, mm)	Lead Wire Length (H, mm)	Lead Wire Diameter (d, mm)	Net Weight Per 1000Pcs
CSR20	3.20 ± 1.0	1.9 ± 0.2	28 ± 3.0	0.45 ± 0.02	145 Grams
CSR25	6.50 ± 1.0	2.4 ± 0.2	26 ± 3.0	0.55 ± 0.03	220 Grams
CSR207	6.50 ± 1.0	2.4 ± 0.2	26 ± 3.0	0.55 ± 0.03	220 Grams
CSR51	9.00 ± 1.0	3.2 ± 0.2	26 ± 3.0	0.60 ± 0.03	340 Grams
CSR100	11.0 ± 1.0	4.5 ± 0.5	26 ± 3.0	0.70 ± 0.03	600 Grams
CSR200	13.5 ± 1.0	5.0 ± 0.5	30 ± 3.0	0.80 ± 0.03	1050 Grams
CSR300	15.5 ± 1.0	5.5 ± 0.5	30 ± 3.0	0.80 ± 0.03	1200 Grams
CSR400	19.0 ± 1.0	6.0 ± 0.5	30 ± 3.0	0.80 ± 0.03	1620 Grams
CSR500	19.0 ± 1.0	8.0 ± 0.5	30 ± 3.0	0.80 ± 0.03	3100 Grams

GENERAL SPECIFICATIONS

Type	Power Rating (at 70°C)	Maximum Working Voltage	Maximum Overload Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
CSR20	1/4W	200V	400V	68mΩ	510mΩ	±1%~5%	E-24/E-96
CSR25	1/3W	200V	400V	68mΩ	510mΩ	±1%~5%	E-24/E-96
CSR207	3/5W	200V	400V	68mΩ	510mΩ	±1%~5%	E-24/E-96
CSR51	1/2W	250V	500V	68mΩ	510mΩ	±1%~5%	E-24/E-96
CSR100	1W	250V	500V	68mΩ	510mΩ	±1%~5%	E-24/E-96
CSR200	2W	300V	600V	68mΩ	510mΩ	±1%~5%	E-24/E-96
CSR300	3W	350V	700V	68mΩ	510mΩ	±1%~5%	E-24/E-96
CSR400	4W	350V	700V	68mΩ	510mΩ	±1%~5%	E-24/E-96
CSR500	5W	500V	1000V	68mΩ	510mΩ	±1%~5%	E-24/E-96

Special sizes, values, and specifications not listed available on special order.

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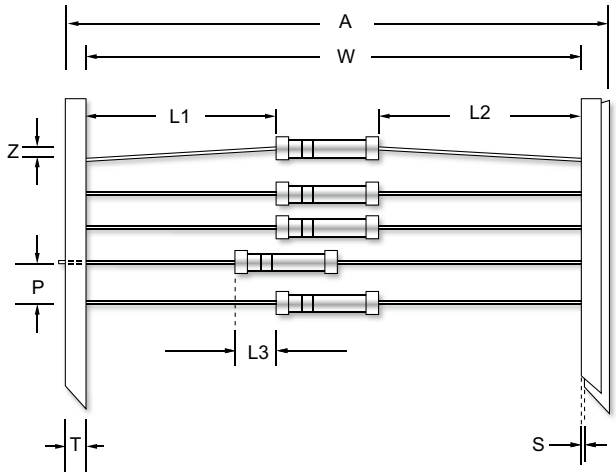
TAPING/PACKING SPECIFICATIONS



Unit (mm)

Type	A Max.	L1-L2 (Max.)	L3 (Max.)	P ±0.5	S (Max.)	T ±0.5	W ±1.5	Z (Max.)
CSR20	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
CSR25	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
CSR207	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
CSR51	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
CSR100	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
CSR200	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2
CSR300	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2
CSR400	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2
CSR500	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2

Type No.	Packing	CSR20/25/207	CSR51	CSR100	CSR200	CSR300	CSR400	CSR500
Minimum Packing QTY (pcs)	Ammo pack	5000	2000	1000	500	500	500	400

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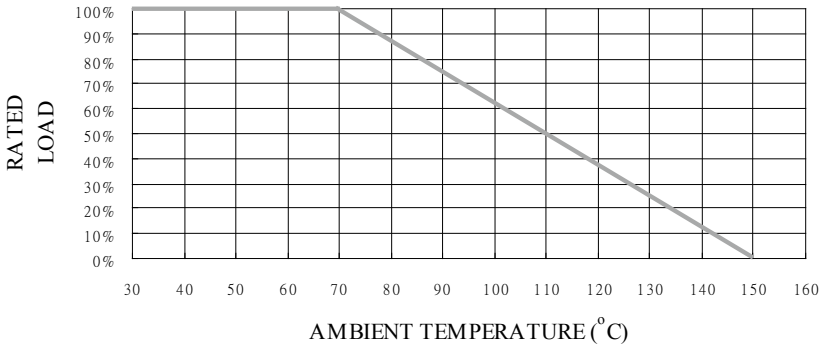
POWER DERATING CURVE



PART NUMBER

Example: CSR100JR330TKZTB1K0

CSR100	J	R330	TKZ	TB1K0
Type	Tolerance*	Resistance	TCR	Packaging
	F (1%) G (2%) J (5%)	0.33Ω **4-character code** containing - 3 significant digits 1 letter multiplier OHM MULTIPLIER R = 1 K = 10^3 M = 10^6 G = 10^9	**3-character code** TKZ = Default Product Temperature Coefficient. Information of typical product temperature coefficient can be found in the Technical Summary section of the datasheet.**	**5-character code** TB = Tape Box (pieces per box) CSR20/25/207 5K0 = 5,000 CSR51 2K0 = 2,000 CSR100 1K0 = 1,000 CSR200/300/400 500 = 500 CSR500 400 = 400

*** Listed values may not be applicable to all resistance values. Please check with us before placing order.**
**** For the availabilities of non-default temperature coefficient, please check with us. Reference for TCR letter codes can be found in section (4) of Part Number Construction in the Appendices.**

TECHNICAL SUMMARY

Characteristics	Limits	
Dielectric Withstanding Voltage, VAC or DC	CSR20 CSR25/207 CSR51 CSR100/200/300/400/500	300 500 700 1000
Temperature Coefficient, PPM /°C*	±100, ± 200, ± 300	
Operating Temperature Range,°C	-55 ~ +150	
Insulation Resistance, MΩ	>10^4	

*** Not applicable to all resistance values. Please check with us regarding the PPM of specific resistance value(s).**

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PERFORMANCE SPECIFICATIONS

Characteristics	Test Conditions	Limits
Short Time Overload	**IEC 60115-1 4.13** 5 seconds 2.5x rated voltage (not over max. overload voltage)	±1%, 2%: ±0.75% ±5%: ±2%
Load Life In Humidity	**IEC 60115-1 4.24** 56 days rated load (not over max. working voltage) at (40±2)°C and (93±3)% relative humidity	±3%
Load Life	**IEC 60115-1 4.25.1** Rated load (not over max. working voltage) 1,000 hours with 1.5 hours ON, 0.5 hours OFF, at (70±2)°C	±3%
Resistance To Soldering Heat	**IEC 60115-1 4.18.2** Leads immersed till 3mm from the body in (260±5)°C solder for 10±1 seconds	±1%
Solderability	**IEC 60115-1 4.17.2** Solder area covered after (235±3)°C/(2±0.2) seconds with flux applied	95% min.coverage
Vibration	**IEC 60115-1 4.22** Six hours in each parallel and axial direction with a simple harmonic motion having an amplitude of 0.75mm and 10 to 500 Hz.	±1%
Thermal Endurance	**IEC 60115-1 4.25.3** 1000 hours at 150°C without load	±1%
Thermal Shock	**IEC 60115-1 4.19** -55°C 30minutes, +150°C 30minutes, 5 cycles	±2%