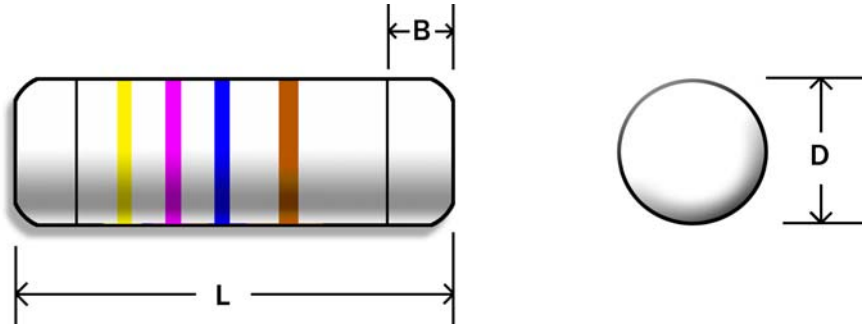
CSM- Current Sense MELF Resistor

Features

Inherited characteristics of MELF resistor, CSM series offers better mechanical and electrical robustness than flat-plate chip resistor for longer stability of your power circuit. This series is a SMD component to enable efficient PCB layout and mounting, too.



Dimensions

Type	Body Length (L)	Body Diameter (D)	Soldering Spot (B)	Net Weight Per 1000 pcs
CSM204	3.45 ±0.1mm	1.35 ±0.1 mm	0.6 mm min.	17 grams
CSM52	5.90 ±0.2mm	2.20 ±0.1 mm	1.0 mm min.	66 grams
CSM101	5.90 ±0.2 mm	2.20 ±0.1 mm	1.0 mm min.	66 grams
CSM201	8.50 ±1.0 mm	3.00 ±0.2 mm	1.3 mm min.	186 grams
CSM301	10.5 ±1.0 mm	4.00 ±0.5 mm	1.6 mm min.	446 grams

General Specifications

Type	Power Rating (at 70℃)	Max. Working Voltage	Max. Overload Voltage	Resistance Range Min.	Resistance Range Max.	Resistance Tolerance	Standard Resistance Value
CSM204	1/4W	200V	400V	1mΩ	510mΩ	±1%~5%	E-24/E-96
CSM52	1/2W	250V	500V	1mΩ	510mΩ	±1%~5%	E-24/E-96
CSM101	1W	250V	500V	1mΩ	510mΩ	±1%~5%	E-24/E-96
CSM201	2W	300V	600V	1mΩ	510mΩ	±1%~5%	E-24/E-96
CSM301	3W	350V	700V	1mΩ	510mΩ	±1%~5%	E-24/E-96

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

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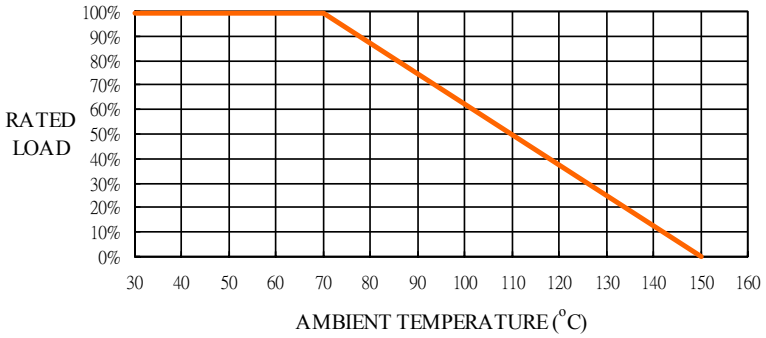
POWER DERATING CURVE



Technical Summary:

Characteristics	Limits
Dielectric Withstanding Voltage, VAC or DC	CSM204: 200 CSM52, CSM101: 500 CSM201, CSM301: 700
Temperature Coefficient, PPM /℃	±100, 200, 300
Operating Temperature Range, ℃	-55 ~ +150
Insulation Resistance, MΩ	$>10^4$
Voltage Coefficient, PPM / V	<25

Performance Specifications

Tests Characteristics	Test Conditions	Limits
Short Time Overload	IEC 60115-1 4.13 5 seconds 2.5x rated voltage (not over max. overload voltage) : CSM204/ 52 2 seconds 2.5x rated voltage (not over max. overload voltage) : CSM101/ 201/ 301	±1%, 2%: ±0.75% ±5%: ±2%
Load Life In Humidity	IEC 60115-1 4.24 56 days at 40°C and 93% relative humidity	±3%
Load Life 1,000 hours	IEC 60115-1 4.25.1 Rated load 1.5 hours ON, 0.5 hours OFF, at 70°C	±3%
Resistance To Soldering Heat	IEC 60115-1 4.18 10 seconds at 260°C solder bath temperature	±1%
Solderability	MIL-STD-202 Method 208 Solder area covered after 230±5°C/5±0.5 seconds w/ flux applied	95% Min.
Vibration	MIL-STD-202 Method 204 Six hours in each parallel and axial direction w/ a simple harmonic motion having an amplitude of 1.52mm and 10 to 20,000 Hz.	±1%
Terminal Endurance	IEC 60115-1 4.25.3 1000 hours at 125°C without load	±1%
Thermal Shock	IEC 60115-1 4.19 -55°C 30minutes, +125°C 30minutes, 5 cycles	±2%

Ordering Information

Type	Tolerance	Temperature Coefficient	Resistance Value	Packaging	Special Request (Optional)
CSM204 CSM52	F (1%) G (2%) J (5%)	TK300	10K	B TR	LV (Low value)

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