



Features

- Thick film technology
- Power rating of 2 watts at 70 °C
- RoHS compliant*

Applications

- Power supplies
- Stepper motor drives

CRM2512 - Pulse Resistant Power Resistor

Electrical Characteristics

Characteristic	Model CRM2512 (0.110 to 0.91 Ω)	Model CRM2512 (0 Ω, 1.0 Ω to 1.0 MΩ)
Power Rating @ 70 °C	2 W	
Operating Temp. Range	-55 °C to +155 °C	
Derated to Zero Load at	+155 °C	
Maximum Working Voltage	1349 mV	300 V
Maximum Overload Voltage	2698 mV	600 V
Insulation Resistance	> 1000 MΩ	
Resistance Range	0.110 - 0.91 Ω (E24 Values)	0 Ω, 1.0 - 1 MΩ (E24 Values) 1 Ω - 9.1 Ω (E96 Values) 10 Ω - 1 MΩ (E96 Values)
Resistance Tolerance	±1 % & ±5 %	±5 % ±1 %
Temperature Coefficient	±100 PPM/°C	±200 PPM/°C ±100 PPM/°C

Notes:

(1) CRM2512 2 W loading with total solder pad and trace size of 300 mm².

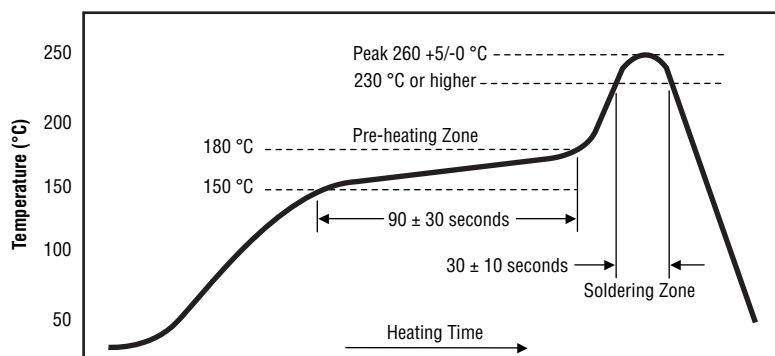
(2) $E = (PxR)^{1/2}$

E: Working Voltage (V); P: Rated Power (W); R: Resistance Value (Ω)

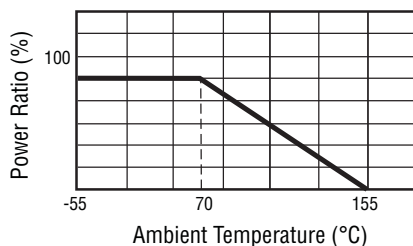
(3) Jumper (0 Ω): Rated current 6 A maximum with 300 mm² pad.

For Standard Values Used in Capacitors, Inductors, and Resistors, [click here](#).

Soldering Profile



Derating Curve



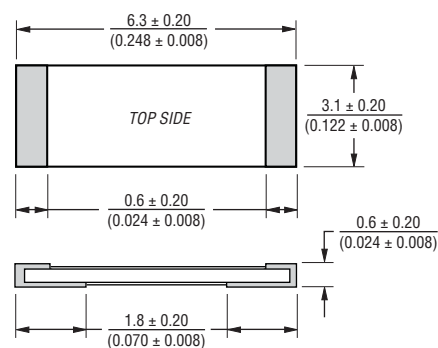
General Information

The Bourns® CRM2512 Series is a thick- film power resistor with a rating of 2 watts in a standard 2512 chip format. This product has a very wide resistance range making it suitable for different applications in power supply circuits including current sensing and inrush current limiting.

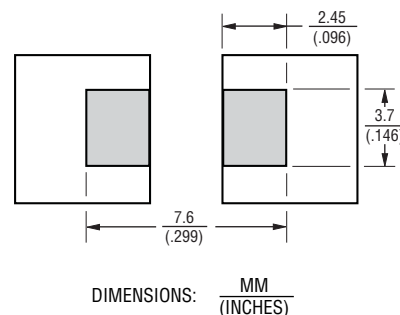
Characteristic Data

Test	ΔR Max.
Load Life (1000 hours)	
1 % Tolerance	< 1 %
5 % Tolerance	< 3 %
Short Term Overload	
1 % Tolerance	< 1 %
5 % Tolerance	< 2 %
Thermal Shock	
1 % Tolerance	< 0.5 %
5 % Tolerance	< 1 %

Product Dimensions



Recommended Solder Pad Layout



*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

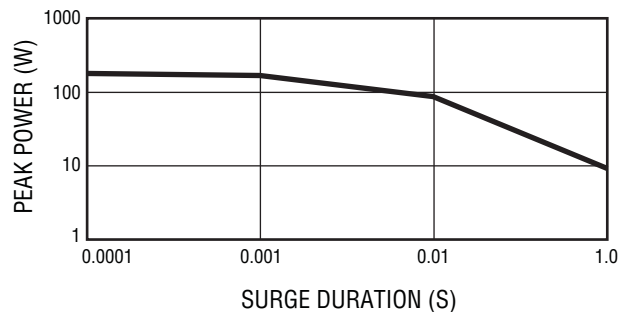
Users should verify actual device performance in their specific applications.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

CRM2512 - Pulse Resistant Power Resistor

BOURNS®

Pulse Load Characteristics (R > 1 Ohm)



How to Order

CRM 2512 - F X - R100 E LF

Model _____
(CRM = Precision Chip Resistor)

Size _____
2512 = 2512 Size

Resistance Tolerance _____
• F = $\pm 1\%$
• J = $\pm 5\%$

TCR (PPM/ $^{\circ}$ C - See Electrical Characteristics chart) _____
• W = ± 200 PPM/ $^{\circ}$ C
• X = ± 100 PPM/ $^{\circ}$ C

Resistance Value _____
R < 1 ohm (1 % or 5 % Tolerance: "R" (decimal point) followed by three significant digits (example: R100 = 0.100 ohm)
1% Tolerance:
<100 ohms "R" represents decimal point (example: 24R3 = 24.3 ohms)
 ≥ 100 ohms First three digits are significant, fourth digit represents number of zeros to follow (example: 8252 = 82.5K ohms)
5% Tolerance:
<10 ohms "R" represents decimal point (example: 4R7 = 4.7 ohms)
 ≥ 10 ohms First two digits are significant, third digit represents number of zeros to follow (example: 474 = 470K ohms)

Packaging _____
• E = 4000 pieces on 180 mm (7 inch) reel

Termination _____
• LF = Tin-plated (RoHS Compliant)

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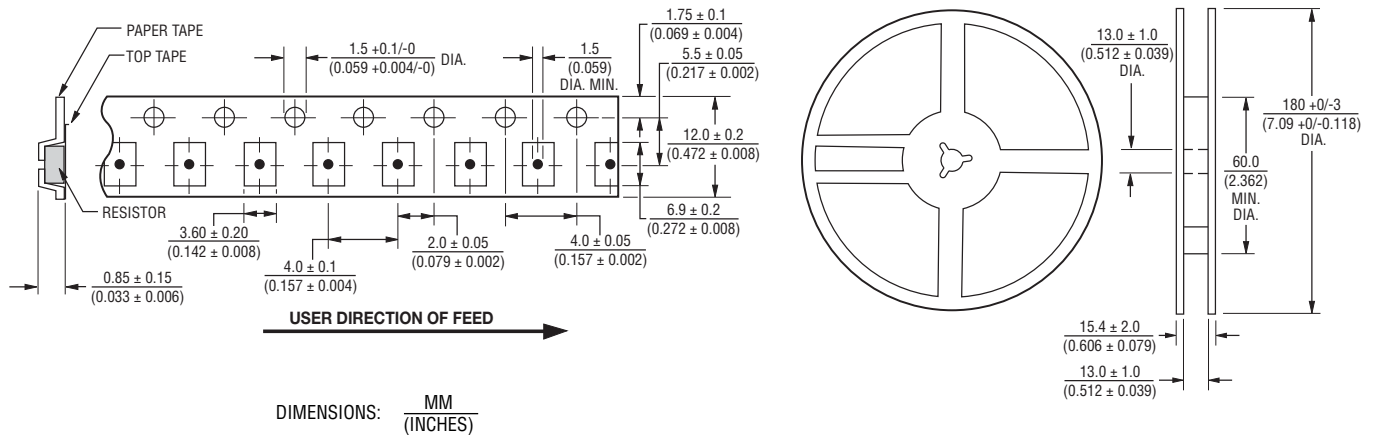
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Packaging Dimensions (Conforms to EIA RS-481A)



REV. 03/13

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