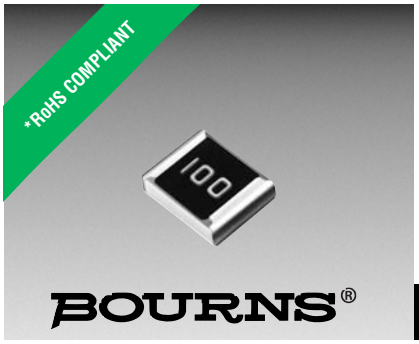


Features

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

Applications

- Current sensing
- Power supplies
- Stepper motor drives
- Snubber resistor for flyback power supplies

CRM2512 - High Power Current Sense Chip Resistors

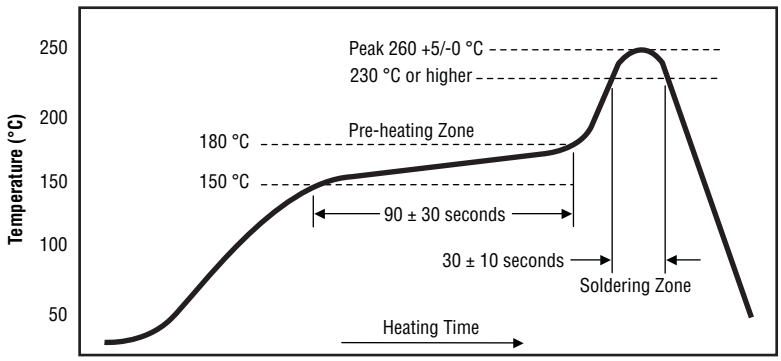
Electrical Characteristics

Characteristic	Model CRM2512		
	(0.047 to 0.91 Ω)	(0 Ω,1 Ω to 1 M Ω)	
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	0.047 - 0.91 Ω (E24 Values)	0 Ω, 1.0 - 1 MΩ (E24 Values)	1 Ω - 1 MΩ (E96 + E24 Values)
Resistance Tolerance	±1 % & ±5 %	±5 %	±1 %
Temperature Coefficient	±100 PPM/°C	±200 PPM/°C	±100 PPM/°C
Zero Ohm Jumper <0.02 Ω Max. Rated Current	6A		

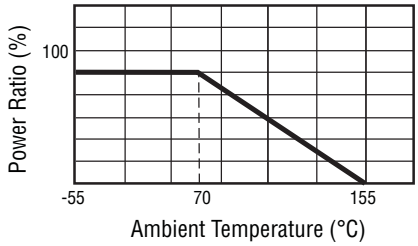
Notes:
(1) CRM2512 2 W loading with total solder pad and trace size of 300 mm².
(2) $E = (PxR)^{1/2}$
E: Working Voltage (V); P: Rated Power (W); R: Resistance Value (Ω)
(3) Jumper (0 Ω): Rated current 6 A maximum with 300 mm² pad. Temperature coefficient is not applicable.

For Standard Values Used in Capacitors, Inductors, and Resistors, click here.

Soldering Profile



Derating Curve



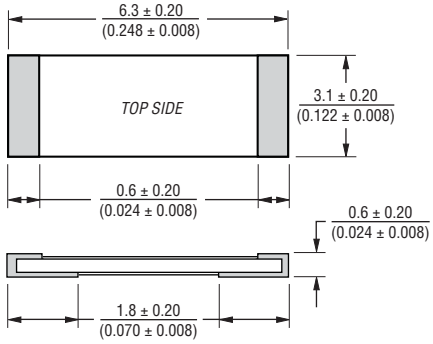
General Information

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 current limiting.

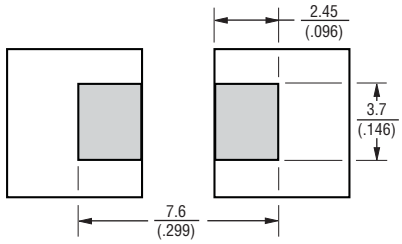
Characteristic Data

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



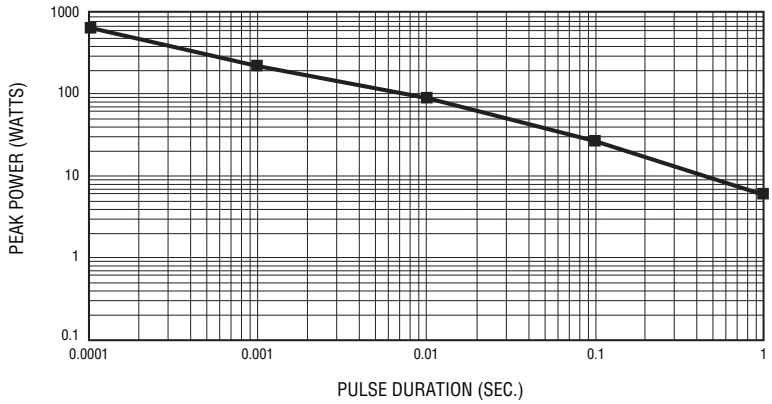
Recommended Solder Pad Layout



DIMENSIONS: MM / (INCHES)

*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.

Pulse Load Characteristics



How to Order

CRM 2512 - F X - R100 E LF

Model
(CRM = Precision Chip Resistor)

Size
2512 = 2512 Size

Resistance Tolerance
- F = ±1 %.....Use with "X" TCR code
- J = ±5 %.....Use with "W" TCR code for values from 1 ohm through 1 megohm
  Use with "X" TCR code for values from 0.047 ohm through 0.91 ohm
  Use with "/" TCR code for 0 ohm (Jumper)

TCR (PPM/°C - See Electrical Characteristics chart)
- W = ±200 PPM/°C
- X = ±100 PPM/°C
- / = Jumper

Resistance Value
- 1 % or 5 % Tolerance:
  R <1 ohm.....“R” represents 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)*
  0 ohm Jumper .....“000”

Packaging
- E = 4000 pieces per 180 mm (7 inch) reel

Termination
- LF = Tin-plated (RoHS Compliant)

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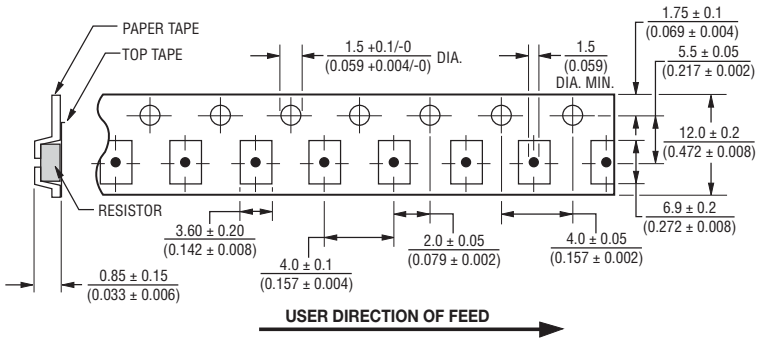
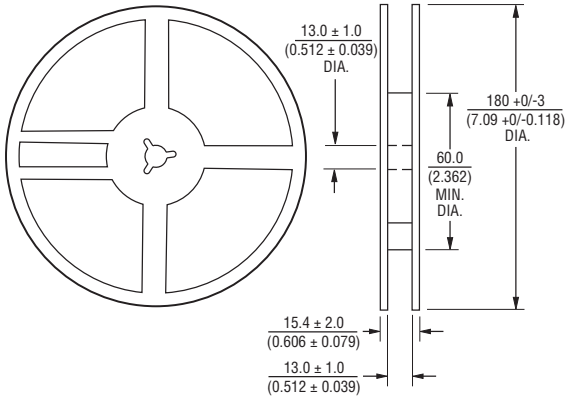
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Packaging Dimensions (Conforms to EIA RS-481A)





DIMENSIONS: MM / (INCHES)

REV. 05/15

Specifications are subject to change without notice.
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Стандарт Электрон Связь

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