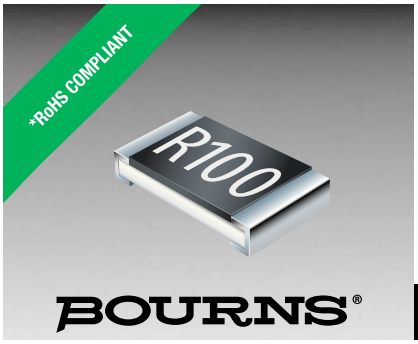
THE DATASHEET OF

CRM2512-FX-1004ELF



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

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.

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

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	3017 mV	600 V		
Insulation Resistance	> 1000 MΩ			
Resistance Range	0.047 - 0.91 Ω (E24 Values)	1 Ω - 9.76 Ω (E96 + E24 Values)	10 Ω - 1 MΩ (E96 + E24 Values)	0 Ω, 1.0 - 1 MΩ (E24 Values)
Resistance Tolerance	±1 % & ±5 %	±1 %	±1 %	±5 %
Temperature Coefficient	±100 PPM/°C	±100 PPM/°C, ±200 PPM/°C	±100 PPM/°C	±200 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 mm^2.
(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 mm^2 pad. Temperature coefficient is not applicable.
For Standard Values Used in Capacitors, Inductors, and Resistors, click here.

Environmental Characteristics

Moisture Sensitivity Level 1

Characteristic Data

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

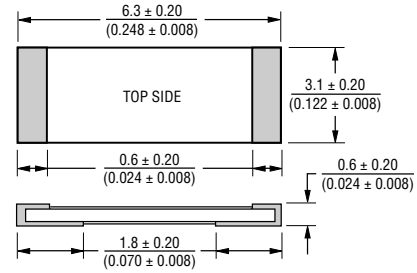
WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

CRM2512 - High Power Current Sense Chip Resistors

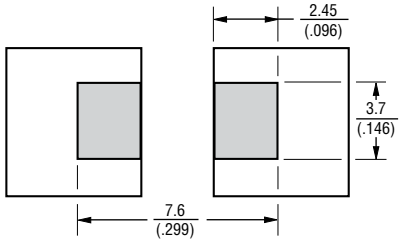
BOURNS®

Product Dimensions



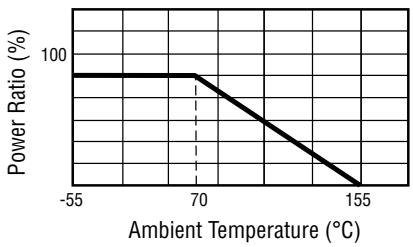
FOR RESISTANCE VALUES LOWER THAN 1 OHM

Recommended Solder Pad Layout



DIMENSIONS: MM / (INCHES)

Derating Curve



How to Order

CRM 2512 - F X - R100 E LF

Model
(CRM = Precision Chip Resistor)

Size
2512 = 2512 Size

Resistance Tolerance
- F = ±1 %
- J = ±5 %

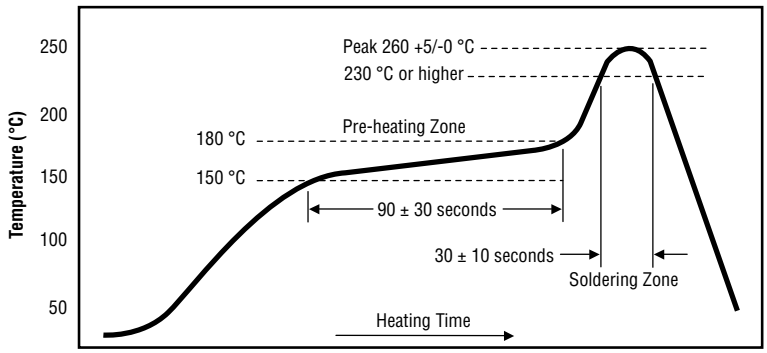
TCR (PPM/°C - See Electrical Characteristics chart)
- W = ±200 PPM/°C
- X = ±100 PPM/°C
- / = Jumper

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

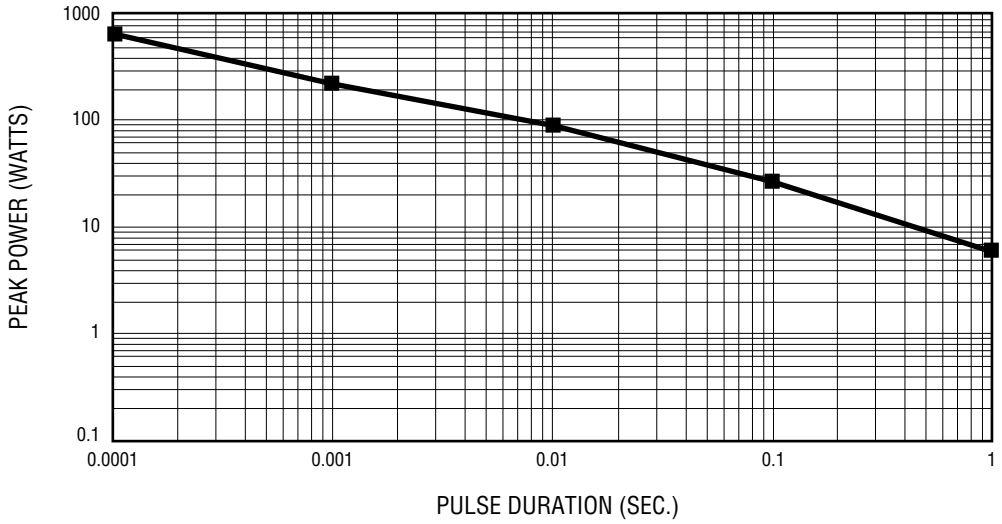
Termination
- LF = Tin-plated (RoHS Compliant)

Soldering Profile

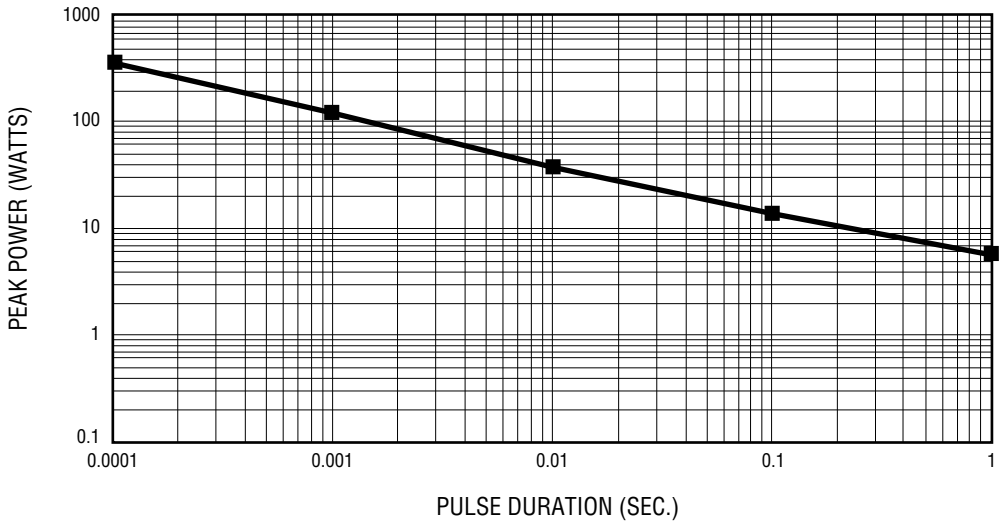


Pulse Load Characteristics

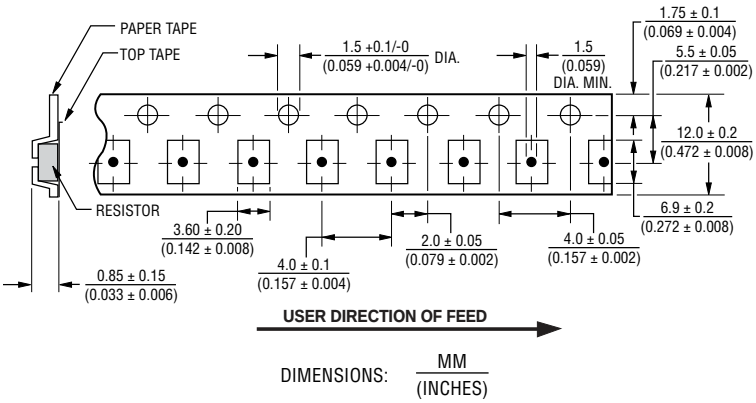
Resistance Values ≥1 Ohm

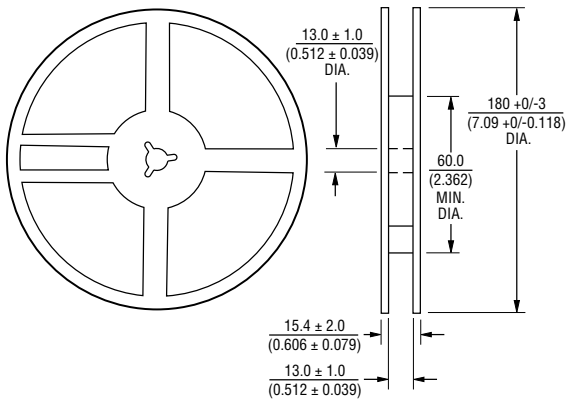


Resistance Values <1 Ohm



Packaging Dimensions (Conforms to EIA RS-481A)





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