



Features

- Mn/Cu alloy resistor
- Power rating at 70 °C: 2 W, 3 W
- Inductance less than 5 nH
- Low EMF
- RoHS compliant*
- AEC-Q200 compliant

Applications

- Power supplies
- Stepper motor drives
- Battery packs
- White goods
- Input amplifiers

CRE2512 - High Power Current Sense Chip Resistor

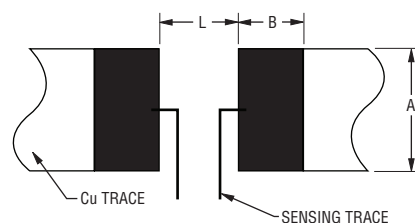
Electrical Characteristics

Characteristic	CRE2512	
Power Rating @ 70 °C	2 W	3 W
Metal Strip Alloy	Mn/Cu	
Operating Temperature Range	-55 °C to +170 °C	
Derated to Zero Load at	+170 °C	
Maximum Working Current	$(P / R)^{1/2}$	
Insulation Resistance	> 100 megohms	
Resistance Range	1 mΩ ~ 9 mΩ	
Resistance Tolerance	±1 %	
Temperature Coefficient	±50 PPM/°C	

Performance Characteristics

Test	Conditions	Specification
Thermal Shock	-55 °C to + 150 °C, 1000 Cycles, 15 minutes	$\Delta R < \pm 0.5 \%$
Short Time Overload	5 X Rated Power for 5 seconds	$\Delta R < \pm 0.5 \%$
Low Temperature Storage	-55 °C for 24 hours	$\Delta R < \pm 0.5 \%$
High Temperature Exposure	1000 hours @ + 170 °C	$\Delta R < \pm 1.0 \%$
Bias Humidity	+ 85 °C, 85 % RH, 10 % Bias, 1000 hours	$\Delta R < \pm 0.5 \%$
Mechanical Shock	100 g's for 6 milliseconds, 5 pulses	$\Delta R < \pm 0.5 \%$
Vibration	Frequency varied 10 to 2000 KHz in one minute, 3 directions, 12 hours	$\Delta R < \pm 0.5 \%$
Load Life	1000 hours at rated power at +70 °C, 1.5 hours on, 0.5 hours off	$\Delta R < \pm 1.0 \%$
Resistance to Solder Heat	+260 °C Solder, 10-12 second dwell, 25 mm/second emergence	$\Delta R < \pm 0.5 \%$
Moisture Resistance	MIL-STD-202 Method 106, 0 % power (7a and 7b not required)	$\Delta R < \pm 0.5 \%$

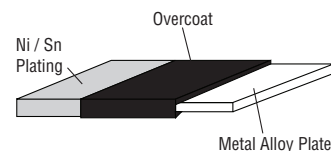
Recommended Solder Pad Layout



Model	Dimension		
	A	B	L
CRE2512-R001 ~ CRE2512-R004	4.0 (.0157)	3.1 (0.122)	1.3 (0.052)
CRE2512-R005 ~ CRE2512-R009	4.0 (.0157)	2.1 (0.083)	4.1 (0.161)

DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Construction

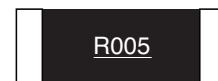


Typical Part Marking

CRE2512-R001 ~
CRE2512-R004



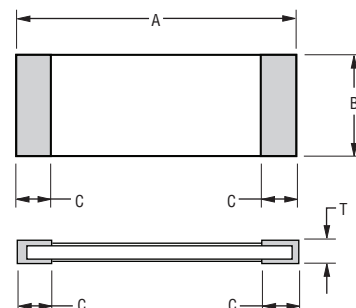
CRE2512-R005 ~
CRE2512-R009



Product Dimensions

Model	Dimension			
	A	B	C	T
CRE2512-R001 ~ CRE2512-R004	6.40 ± 0.20 (0.252 ± 0.008)	3.2 ± 0.20 (0.126 ± 0.008)	2.00 ± 0.20 (0.079 ± 0.008)	0.70 ± 0.20 (0.0276 ± 0.008)
CRE2512-R005 ~ CRE2512-R009	6.40 ± 0.20 (0.252 ± 0.008)	3.2 ± 0.20 (0.126 ± 0.008)	0.90 ± 0.20 (0.035 ± 0.008)	0.70 ± 0.20 (0.0276 ± 0.008)

DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$



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

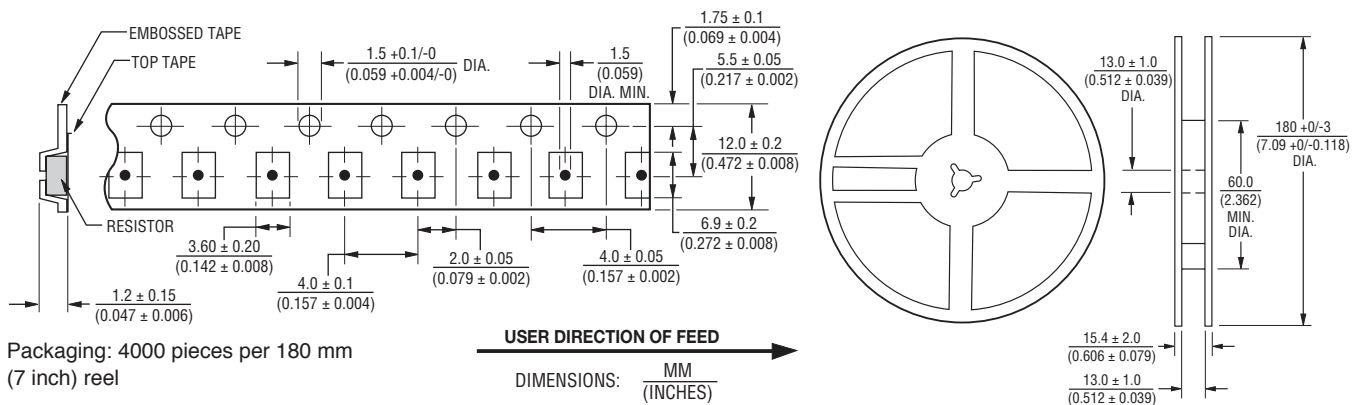
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

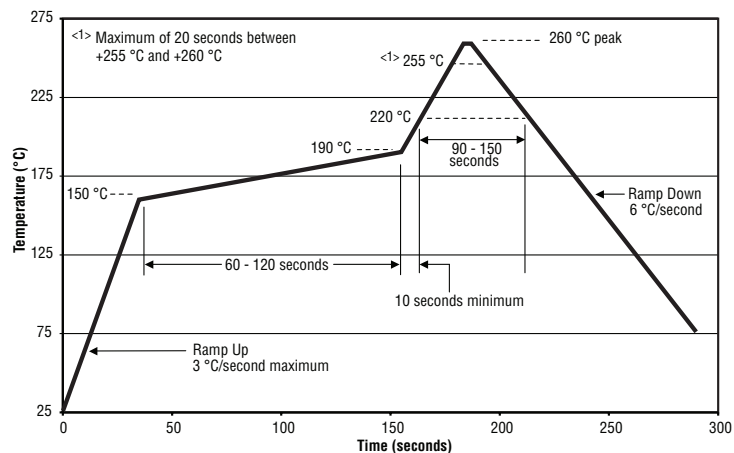
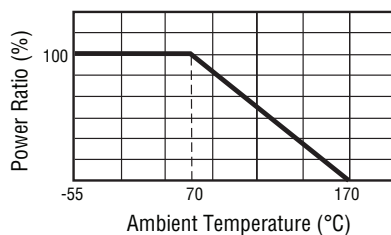
Users should verify actual device performance in their specific applications.

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BOURNS®



Code	R Value	Code	R Value
R001	0.0010	R006	0.0060
R002	0.0020	R007	0.0070
R003	0.0030	R008	0.0080
R004	0.0040	R009	0.0090
R005	0.0050		



CRE 2512 - F Z - R001 E - 2

Model _____
CRE = Precision Chip Resistor

Size _____
2512 = 2512 Size

Resistance Tolerance _____
F = $\pm 1\%$

TCR _____
Z = ± 50 PPM/ $^{\circ}$ C

Resistance Value _____
"R" (decimal point) followed by three significant digits (example: R004 = 0.0040 ohm)

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

Power Rating _____
2 = 2 Watts
3 = 3 Watts

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Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

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moschip.ru_9