

Features

- EB welded metal strip
- Very high power
- Excellent long term stability
- Low resistance, low TCR
- Low thermal EMF
- RoHS compliant*

Applications

- Current sensing
- Voltage division
- Battery management systems
- Power modules
- Frequency converters
- Industrial

Model CSS2H-2512 Series Current Sense Resistor

Electrical Characteristics

Characteristic	Model CSS2H-2512 Series	
	Resistance Range / Power Rating @70 °C** / Power Rating @130 °C**	CSS2H-2512R-L300x
	CSS2H-2512R-L500x	0.5 mΩ / 6 W / 3 W
	CSS2H-2512R-1L00x	1.0 mΩ / 5 W / 3 W
	CSS2H-2512K-2L00x	2.0 mΩ / 5 W / 3 W
	CSS2H-2512K-3L00x	3.0 mΩ / 4 W / 2 W
Operating Temperature Range	-55 to +170 °C	
TCR - Resistive Alloy***	≤+50 PPM/°C (20~60 °C)	
Resistance Tolerance	±1 %, ±5 %	

** Terminal temperature.

*** For full TCR range, refer to TCR curve.

Environmental Characteristics

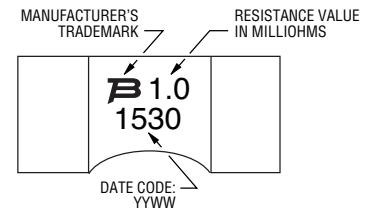
Characteristic	Test Condition	ΔR Max.
Thermal Shock	-55 to +150 °C / 100 Cycles	0.50 %
Resistance to Soldering Heat	+260 °C / 10 Seconds	0.50 %
High Temperature Exposure	+170 °C / 100 Hours	1.00 %
Low Temperature Storage	-65 °C / 24 Hours	0.10 %
Biased Humidity Test	+85 °C, 85 %R.H., 100 Hours	0.50 %
Moisture Resistance	10 Days with Cold Shock, No Load	0.20 %
Mechanical Shock	100 g, 6 ms half sine	0.20 %
Vibration, High Frequency	20 g, 10-2000 Hz	0.20 %
Load Life	1000 Hours Derated Curve at 130 °C	1.00 %

How to Order

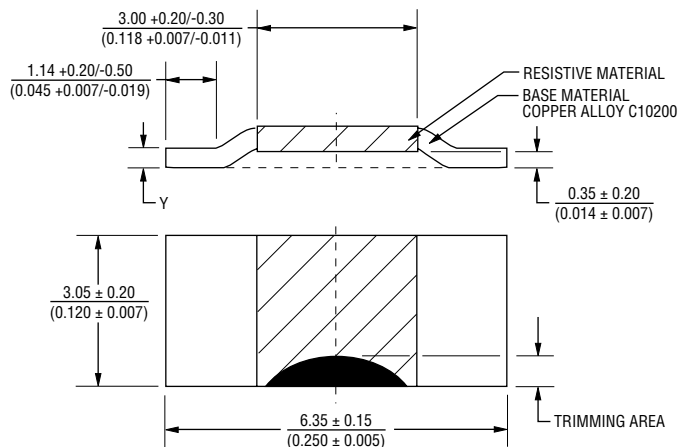
CSS 2H - 2512 R - L500 J

Model _____
 No. of Terminals & Style _____
 Size _____
 Material Type _____
 (See Part Number Table)
 Resistance Code (milliohms) _____
 "L" represents decimal point
 (examples: L500 = .500 milliohms;
 1L00 = 1.00 milliohms)
 Resistance Tolerance _____
 F = ±1 %
 J = ±5 %
 Packaging size _____
 Blank = Standard 13 " reel
 E = Mini 7 " reel

Typical Part Marking



Product Dimensions



Part Number	Dimension Y
CSS2H-2512R-L300x	$\frac{1.20 \pm 0.1}{(0.047 \pm 0.004)}$
CSS2H-2512R-L500x	$\frac{0.84 \pm 0.1}{(0.033 \pm 0.004)}$
CSS2H-2512R-1L00x	$\frac{0.42 \pm 0.1}{(0.016 \pm 0.004)}$
CSS2H-2512K-2L00x	
CSS2H-2512K-3L00x	

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

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

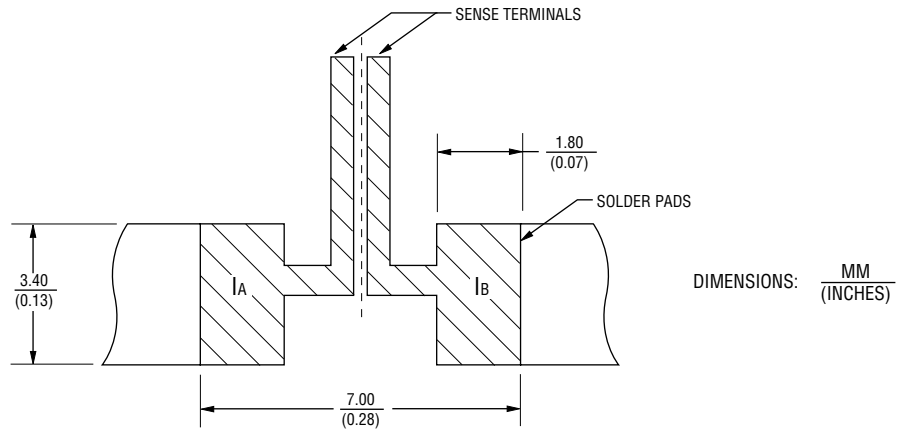
Specifications are subject to change without notice.

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

Model CSS2H-2512 Series Current Sense Resistor

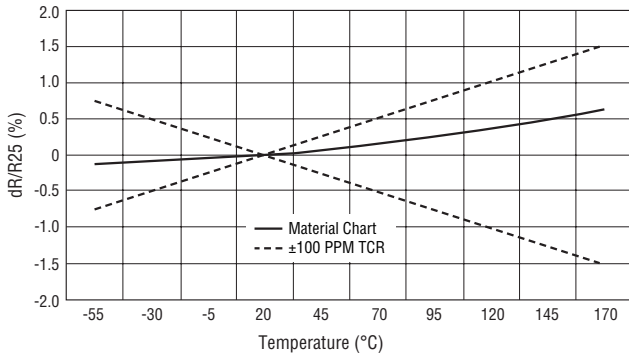
BOURNS®

Recommended Pad Layout

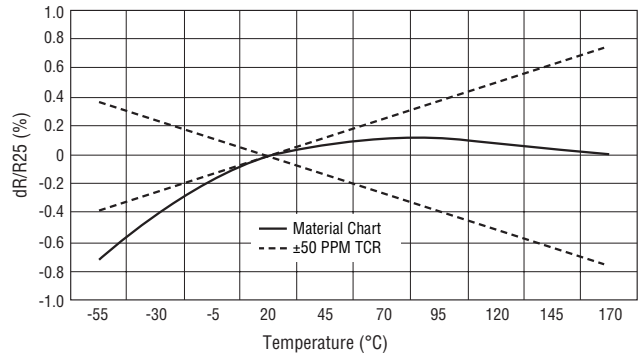


TCR Curves

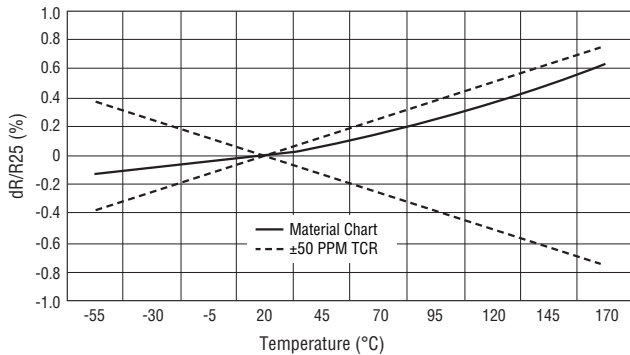
K-Type Resistive Material



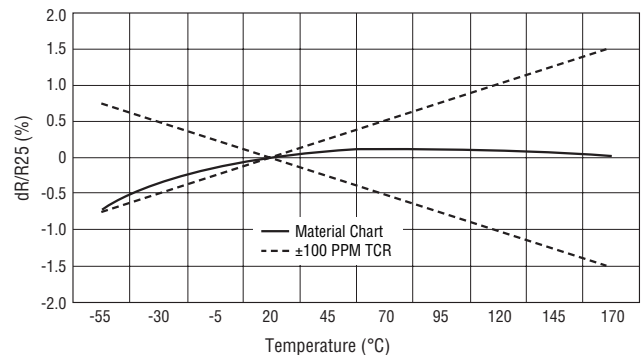
R-Type Resistive Material



K-Type Resistive Material



R-Type Resistive Material

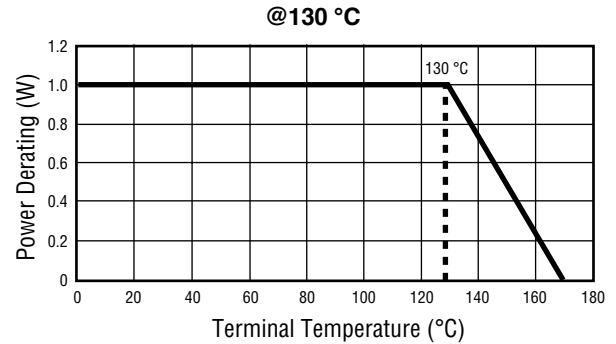
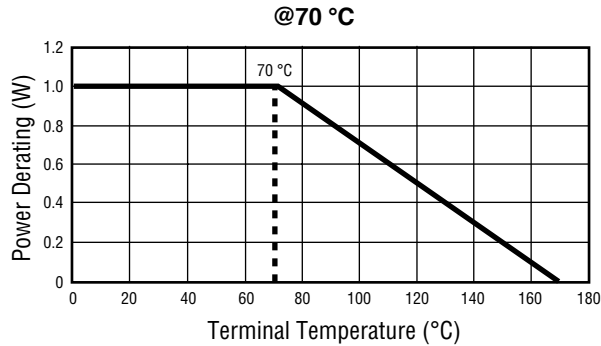


Specifications are subject to change without notice. The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

Model CSS2H-2512 Series Current Sense Resistor

BOURNS®

Power Derating Curves

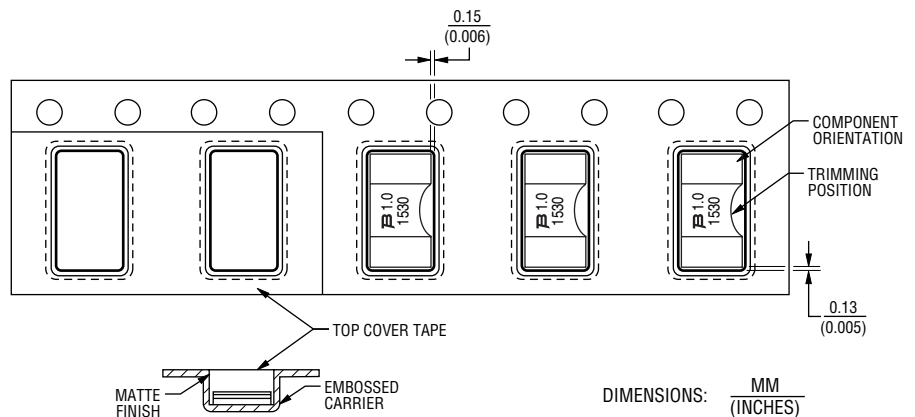


Packaging Specifications

Components packaged per EIA-481.

Standard Reel Size: 13 inches
 Tape Width: 12 mm
 Quantity: 3,000 pcs. per reel

Mini-Reel Size: 7 inches
 Tape Width: 12 mm
 Quantity: 1,000 pcs. per reel



BOURNS®

Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 520 390 • Email: eurocus@bourns.com

The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

www.bourns.com

REV. 08/16

Specifications are subject to change without notice.

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