

Features

- EB welded metal strip
- Very high power
- Excellent long term stability
- Low resistance, low TCR
- Low thermal EMF
- RoHS compliant* and halogen free**
- AEC-Q200 compliant

Applications

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

Model CSS4J-4026 Series Current Sense Resistor

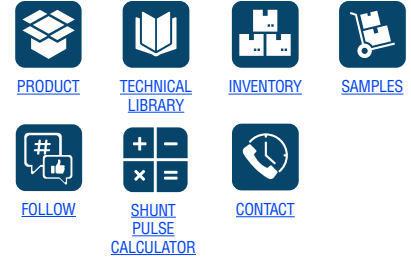
Electrical Characteristics

Characteristic	Model CSS4J-4026 Series	
Resistance Range / Power Rating @70 °C ¹	CSS4J-4026R-L200x	0.2 mΩ / 11 W
	CSS4J-4026R-L300x	0.3 mΩ / 10 W
	CSS4J-4026R-L500x	0.5 mΩ / 10 W
	CSS4J-4026R-1L00x	1.0 mΩ / 8 W
	CSS4J-4026K-2L00x	2.0 mΩ / 6 W
	CSS4J-4026K-3L00x ³	3.0 mΩ / 5 W
	CSS4J-4026K-5L00x ³	5.0 mΩ / 4 W
Operating Temperature Range	-55 to +170 °C	
TCR - Resistive Alloy ²	±50 PPM/°C (20~60 °C)	
Temperature Coefficient	CSS4J-4026R-L200x	±150 PPM/°C
	CSS4J-4026R-L300x	±100 PPM/°C
	CSS4J-4026R-L500x	±100 PPM/°C
	CSS4J-4026R-1L00x	±75 PPM/°C
	CSS4J-4026K-2L00x	±75 PPM/°C
	CSS4J-4026K-3L00x ³	±75 PPM/°C
	CSS4J-4026K-5L00x ³	±75 PPM/°C
Inductance	Material type R: < 3 nH Material type K: < 5 nH	
Resistance Tolerance	±1 %, ±5 %	

¹ Terminal temperature ² For full TCR range, refer to TCR curve
³ CSS4J-4026K-3L00x and -5L00x are available upon request - contact factory

Additional Information

Click these links for more information:



How to Order

CSS 4J - 4026 R - 1L00 F

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

Environmental Characteristics

Characteristic	Test Condition	ΔR Max.
Thermal Shock	-55 to +150 °C / 2000 Cycles	0.50 %
Short Time Overload	5 Times Rated Power for 5 Second Duration	0.50 %
Resistance to Soldering Heat	+260 °C / 10 Seconds	0.50 %
High Temperature Exposure	+170 °C / 2000 Hours	1.00 %
Low Temperature Storage	-65 °C / 24 Hours	0.10 %
Biased Humidity Test	+85 °C, 85 % R.H., 1000 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	2000 Hours, Max. Load, Terminal Temperature 130 °C	1.00 %
Solderability	J-STD-002	95 % Coverage Min.
ESD	AEC-Q200-002, 25 kV	0.25 %
Board Flex	60 Sec. Min. Holding Time	0.25 %
Moisture Sensitivity Level		Level 1

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
 ** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

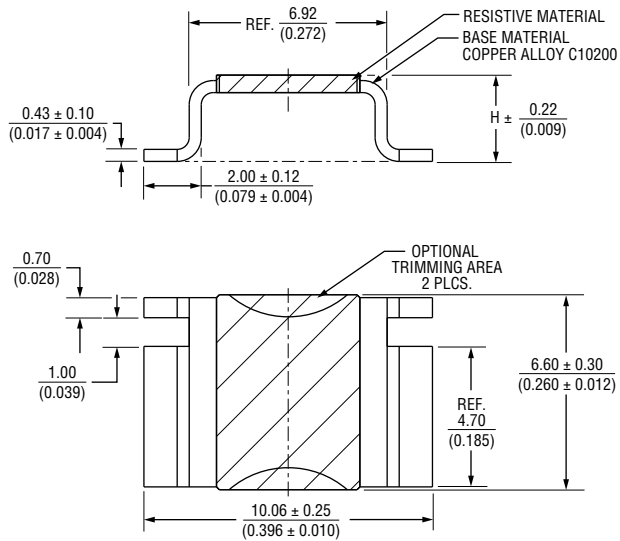
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 Users should verify actual device performance in their specific applications.
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Model CSS4J-4026 Series Current Sense Resistor

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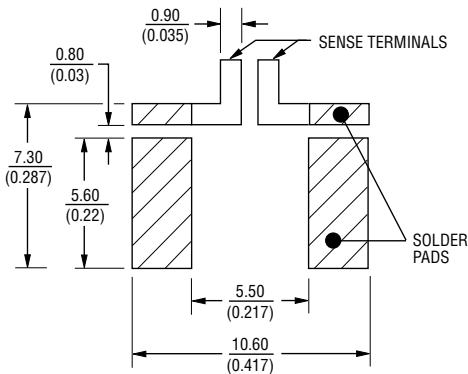
Product Dimensions



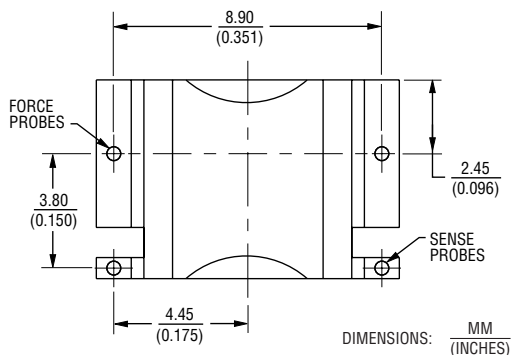
Part Number	Dimension H max.	Alloy
CSS4J-4026R-L200x	4.00 (0.157)	Cu-Mn
CSS4J-4026R-L300x	3.44 (0.135)	Cu-Mn
CSS4J-4026R-L500x	3.04 (0.120)	Cu-Mn
CSS4J-4026R-1L00x	2.70 (0.106)	Cu-Mn
CSS4J-4026K-2L00x	2.93 (0.115)	Fe-Cr
CSS4J-4026K-3L00x	2.75 (0.108)	Fe-Cr
CSS4J-4026K-5L00x	2.63 (0.104)	Fe-Cr

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

Recommended Pad Layout

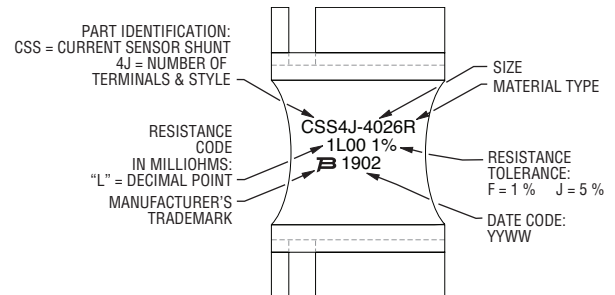


Recommended Measurements



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

Typical Part Marking



Electrical Schematic



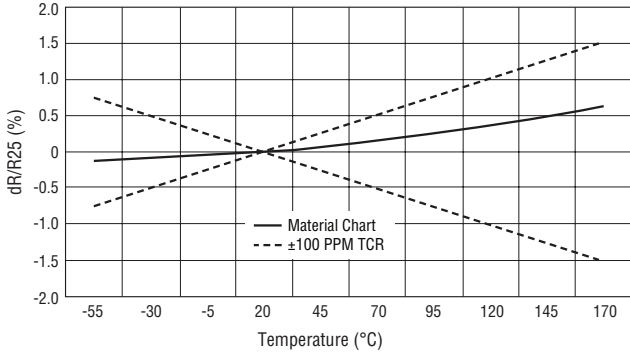
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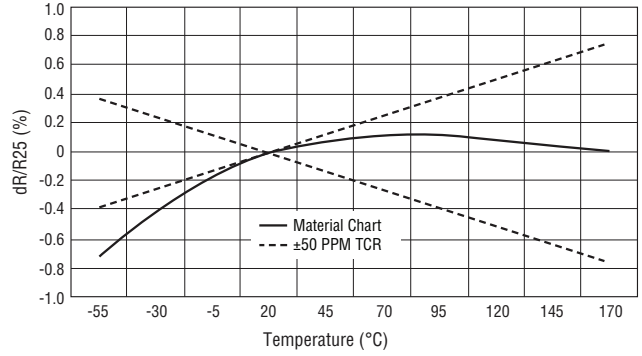


TCR Curves

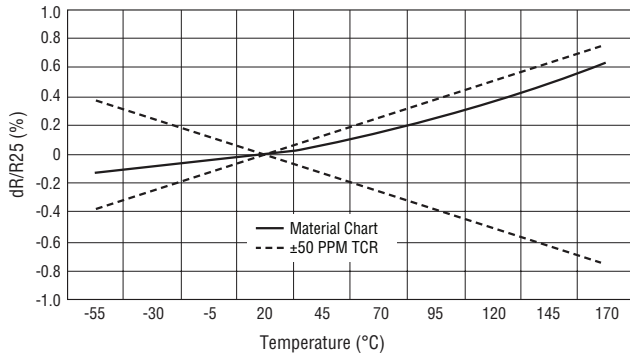
K-Type Resistive Material



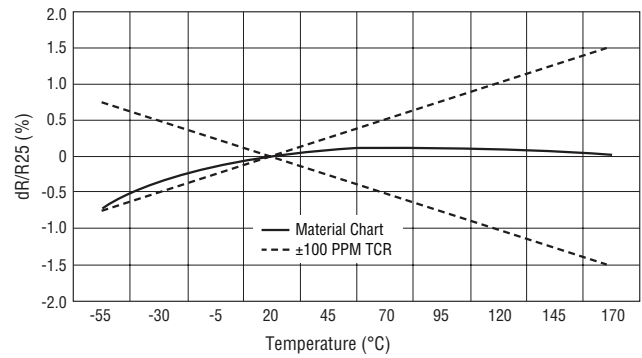
R-Type Resistive Material



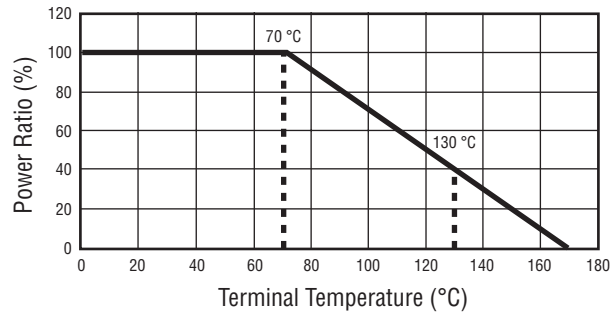
K-Type Resistive Material



R-Type Resistive Material



Terminal Temperature Derating Curve



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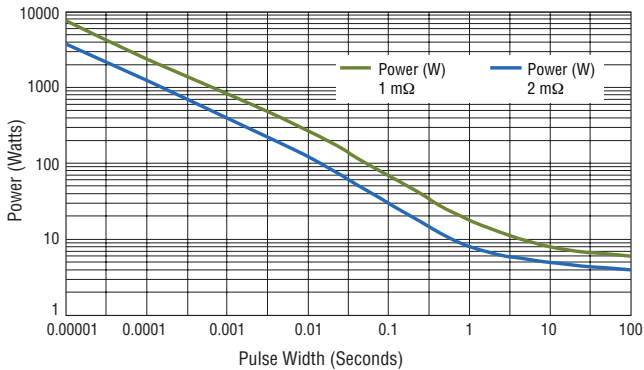
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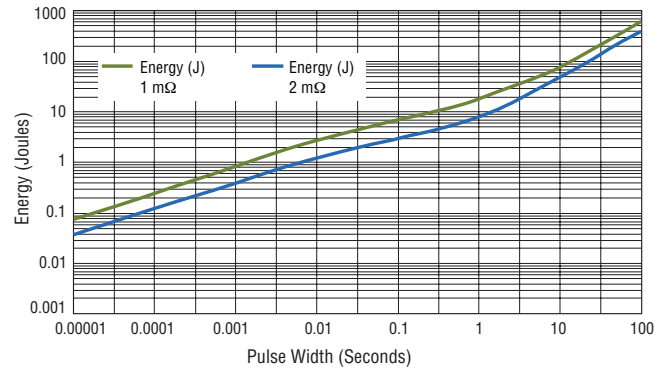
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Maximum Pulse Power



Maximum Pulse Energy

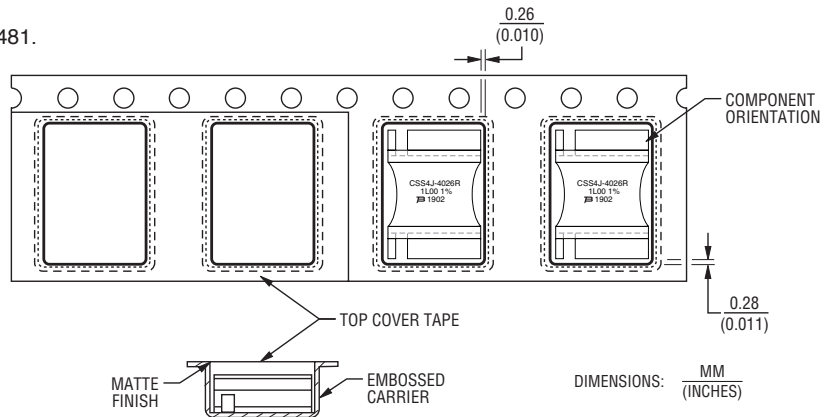


Packaging Specifications

Components packaged on plastic tape & reel per EIA-481.

Standard Reel Size: 13 inches
Tape Width: 16 mm
Quantity: 1,500 pcs. per reel

Mini-Reel Size: 7 inches
Tape Width: 16 mm
Quantity: 400 pcs. per reel



BOURNS®

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REV. 01/26

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