

### **Features**

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

### **Applications**

- Current sensing
- Voltage division
- Power modules
- Frequency converters
- Industrial

# Model CSI4J-4026 Series Current Sense Resistor

### **Electrical Characteristics**

Characteristic	Model CSI4J-4026 Series <sup>2</sup>		
Resistance Range / Power Rating @70 °C¹	CSI4J-4026R-L200x <sup>3</sup>	0.2 mΩ / 11 W	
	CSI4J-4026R-L300x	0.3 mΩ / 10 W	
	CSI4J-4026R-L500x	0.5 mΩ / 10 W	
	CSI4J-4026R-1L00x	1.0 mΩ / 8 W	
	CSI4J-4026K-2L00x	2.0 mΩ / 6 W	
Operating Temperature Range	-55 to +170 °C		
TCR - Resistive Alloy <sup>2</sup>	±50 PPM/°C (20~60 °C)		
Temperature Coefficient	CSI4J-4026R-L200x <sup>3</sup>	±150 PPM/°C	
	CSI4J-4026R-L300x	±100 PPM/°C	
	CSI4J-4026R-L500x	±100 PPM/°C	
	CSI4J-4026R-1L00x	±75 PPM/°C	
	CSI4J-4026K-2L00x	±75 PPM/°C	
Inductance	Material type R: < 3 nH Material type K: < 5 nH		
Resistance Tolerance	±1 %, ±2 %, ±5 %		

<sup>&</sup>lt;sup>1</sup>Terminal temperature <sup>2</sup>For full TCR range, refer to TCR curve

### **Additional Information**

Click these links for more information:











TECHNICAL INVENTORY SAMPLES LIBRARY

### **How to Order**

CSI 4J - 4026 R - L500 J				
No. of Terminals & Style —				
Size —				
Material Type ————————————————————————————————————				
Resistance Code (milliohms)  "L" represents decimal point (examples: L500 = .500 milliohms; 1L00 = 1.00 milliohm)				
Resistance Tolerance				

 $F = \pm 1 \%$ 

 $G = \pm 2 \%$ 

 $J = \pm 5 \%$ 

### **Environmental Characteristics**

Characteristic	Test Condition	∆TR Max.
Thermal Shock	-55 to +150 °C / 1000 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 / 1000 Hours	1.00 %
Low Temperature Storage	-65 °C / 24 Hours	0.10 %
Moisture Resistance	10 Days with Cold Shock, No Load	0.20 %
Mechanical Shock	100 g, 6 ms half sine	0.20 %
Vibration, High Frequency	5 g, 10-2000 Hz	0.20 %
Load Life	1000 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 %



### **WARNING Cancer and Reproductive Harm**

www.P65Warnings.ca.gov

<sup>&</sup>lt;sup>3</sup>Tinned copper <sup>4</sup>Other resistance values are available upon request - contact factory

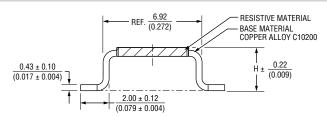
RoHS Directive 2015/863, Mar 31, 2015 and Annex.

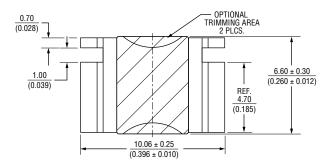
<sup>\*\*</sup> Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (CI) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (CI) content is 1500 ppm or less.

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# **BOURNS**®

### **Product Dimensions**

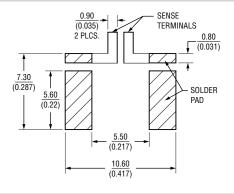




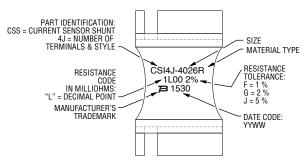
Part Number	Dimension H max.	Alloy
CSI4J-4026R-L200x	4.00 (0.157)	Cu-Mn
CSI4J-4026R-L300x	3.44 (0.135)	Cu-Mn
CSI4J-4026R-L500x	3.04 (0.120)	Cu-Mn
CSI4J-4026R-1L00x	2.70 (0.106)	Cu-Mn
CSI4J-4026K-2L00x	2.93 (0.115)	Fe-Cr

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

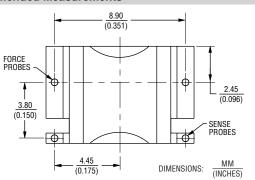
### **Recommended Pad Layout**



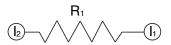
### **Typical Part Marking**



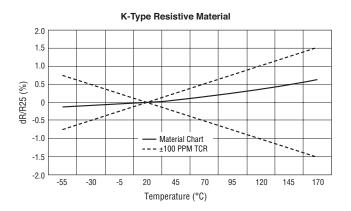
### **Recommended Measurements**

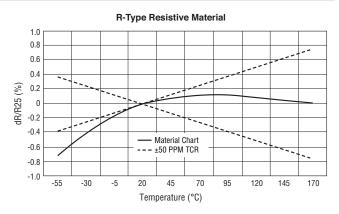


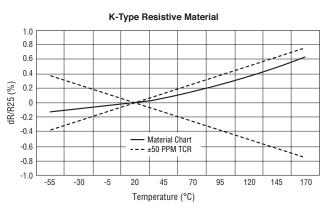
### **Electrical Schematic**

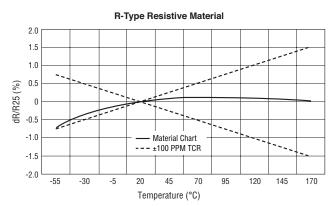


### **TCR Curves**

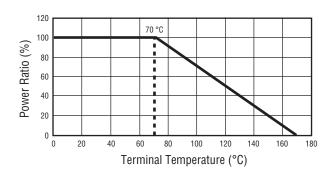






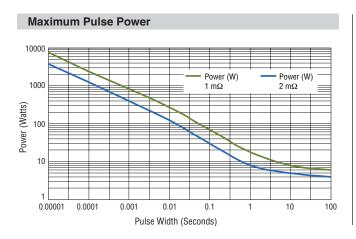


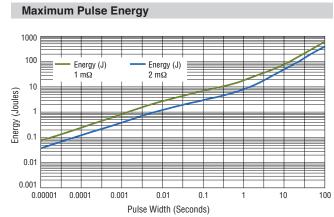
### **Terminal Temperature Derating Curve**



# **Model CSI4J-4026 Series Current Sense Resistor**

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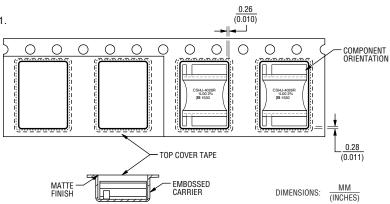


### **Packaging Specifications**

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

Standard Reel Size: 13 inches Tape Width: 16 mm

Quantity: 1,500 pcs. per reel



# **BOURNS**®

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REV. 11/23

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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