

## Features

- Bare copper terminals
- Up to 36 W permanent power
- High pulse power rating
- Maximum fastening torque: 10 Nm
- AEC-Q200 compliant
- RoHS compliant\* / lead free
- Customized versions available

## Applications

- Battery management systems
- Current sensing for hybrid and electric vehicles
- Current sensing in bus bars
- Current sensing in welding equipment
- Frequency converters

## Model CSM2F-6918 Series Current Sense Resistor w/Bare Copper Terminals

### Electrical Characteristics

Characteristic	Model CSM2F-6918 Series
Resistance Range / Power Rating @ 70 °C**	50 $\mu\Omega$ / 36 W 100 $\mu\Omega$ / 36 W 200 $\mu\Omega$ / 36 W
Operating Temperature Range	-40 °C ~ +170 °C
TCR on Test Points (+20 °C to +130 °C)	$\pm 100$ ppm/°C for 50 $\mu\Omega$ $\pm 50$ ppm/°C for 100 $\mu\Omega$ and 200 $\mu\Omega$
TCR Resistance Alloy***	< 50 ppm/°C
Inductance $\mu$ H	< 5 $\mu$ H
Resistance Tolerance	$\pm 5$ %

\*\* Terminal temperature

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

### Additional Information

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### Environmental Characteristics

Characteristic	Test Condition	$\Delta$ TR Max.
Thermal Shock	-55 °C to +150 °C / 1000 cycles	$\pm 0.5$ %
High Temperature Exposure	+170 °C / 1000 hours	$\pm 1.0$ %
Low Temperature Storage	-65 °C / 1000 hours	$\pm 0.5$ %
Biased Humidity Test	+85 °C, 85 % RH, 10 % bias, 1000 hours	$\pm 0.5$ %
Mechanical Shock	100 g, 6 milliseconds, 5 pulses	$\pm 0.5$ %
Vibration, High Frequency	10-2000 Hz in 1 minute, 3 directions, 12 hours	$\pm 0.5$ %
Load Life	+125 °C / 2000 hours at maximum current rating	$\pm 1.0$ %
Solderability*	J-STD-002	95 % coverage min.

\* Limited to dipping terminals

### How to Order

CSM 2F - 6918 - L050 J 0 0

Model	
No. of Terminals & Style	
Size (Metric)	
Resistance Code (Milliohms)	
"L" Represents Decimal Point	
L050 = 50 MicroOhms	
Resistance Tolerance	
J = $\pm 5$ %	
Packaging	
0 = Bulk Pack (50 pcs. per bag)	
T = Tray Pack (52 pcs. per tray)	
Surface Finishing	
0 = Bare Copper Terminals	



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

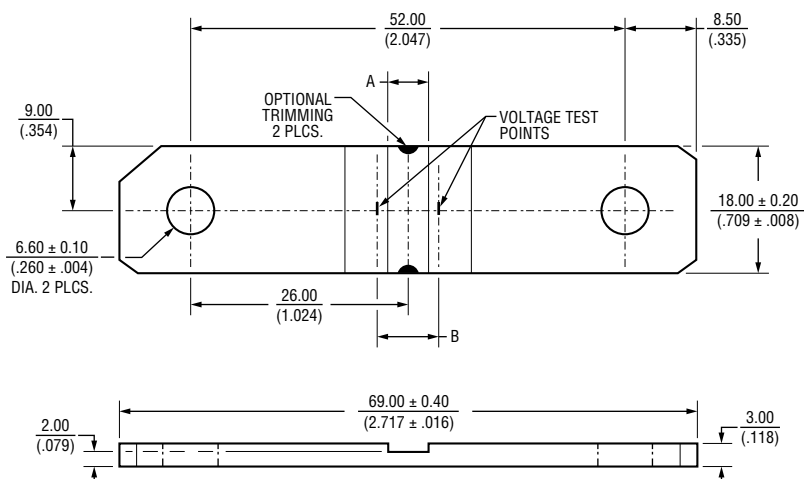
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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# Model CSM2F-6918 Series Current Sense Resistor w/Bare Copper Terminals

**BOURNS®**

## Product Dimensions



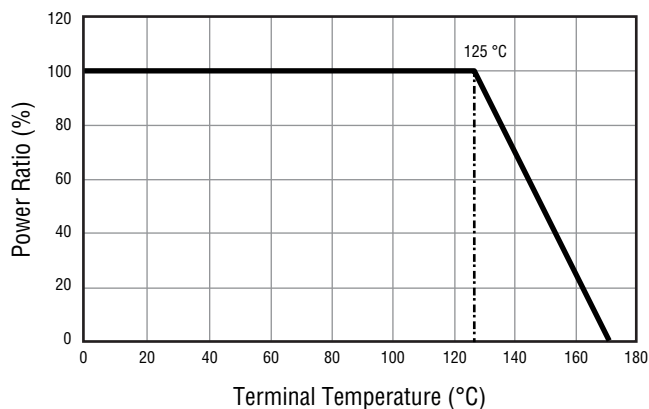
Part Number	Dim A	Dim B
CSM2F-6918-L050J00	4.70 (.185)	7.87 (.310)
CSM2F-6918-L100J00	9.40 (.370)	12.57 (.495)
CSM2F-6918-L200J00	20.0 (.787)	23.18 (.990)

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

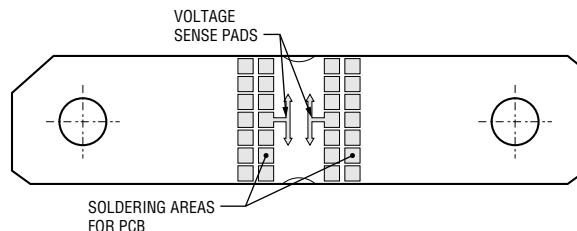
TOLERANCES:  $\frac{0.25}{(.010)}$

UNLESS OTHERWISE NOTED

## Power Derating Curve



## Reference Pad for SMD Mounting



## General Specifications

Moisture Sensitivity Level.....1  
ESD Classification..... Level 6  
per AEC-Q200-002,  
≥ 25,000 V air discharge

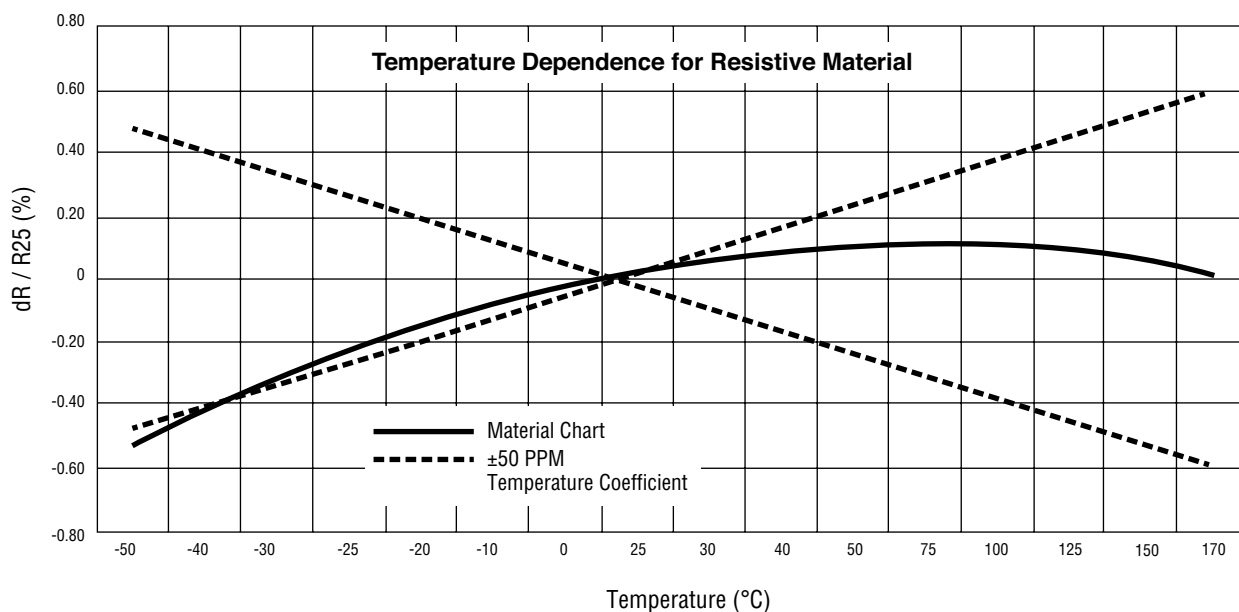
## Packaging Specifications

Bulk Pack.....50 pcs. per plastic bag  
100 pcs. per box  
Tray Pack ..... 52 pcs. per high impact polystyrene tray  
260 pcs. per box  
Size..... 246 mm x 246 mm (9.685 in. x 9.685 in.)

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