

## Features

- Tinned terminals
- Up to 36 W permanent power
- High pulse power rating
- Maximum fastening torque: 10 Nm
- Customized versions available
- AEC-Q200 and RoHS\* compliant

## Applications

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

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

### Electrical Characteristics

Characteristic	Model CSM2F-6918 Series
Resistance Range / Power Rating @ 70 °C**	50 $\mu\Omega$ / 36 W 100 $\mu\Omega$ / 36 W
Operating Temperature Range	-40 °C to +170 °C
TCR on Test Points	$\pm 150$ ppm/°C
TCR Resistance Alloy***	< 50 ppm/°C
Thermal EMF ( $\mu\text{V/K}$ )	< 0.25 for 50 $\mu\Omega$
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	$\Delta\text{TR Max.}$
Thermal Shock	-55 to +150 °C / 1000 cycles	$\pm 1.0$ %
Resistance to Soldering Heat	+260 °C / 10 seconds	$\pm 0.5$ %
High Temperature Exposure	+170 °C / 1000 hours	$\pm 1.5$ %
Low Temperature Storage	-65 °C / 24 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	1000 hours at max. load, derated at 70 °C	$\pm 1.0$ %
Solderability	J-STD-002	95 % coverage min.

### How to Order

CSM 2F - 6918 - L050 J 0 1

Model \_\_\_\_\_

No. of Terminals & Style \_\_\_\_\_

Size (Metric) \_\_\_\_\_

Resistance Code (Milliohms) \_\_\_\_\_

“L” Represents Decimal Point  
L050 = 50 MicroOhms  
L100 = 100 MicroOhms

Resistance Tolerance \_\_\_\_\_

J =  $\pm 5$  %

Packaging \_\_\_\_\_

0 = Bulk Pack (50 pcs. per bag)  
T = Tray Pack (52 pcs. per tray)

Surface Finishing \_\_\_\_\_

1 = Tinned Terminals



**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant.

See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

Specifications are subject to change without notice.

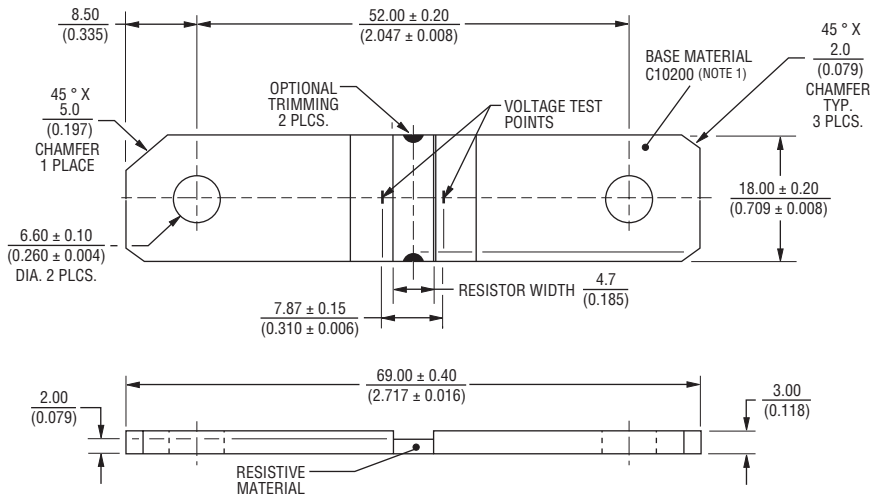
Users should verify actual device performance in their specific applications.

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



## Product Dimensions



### NOTES:

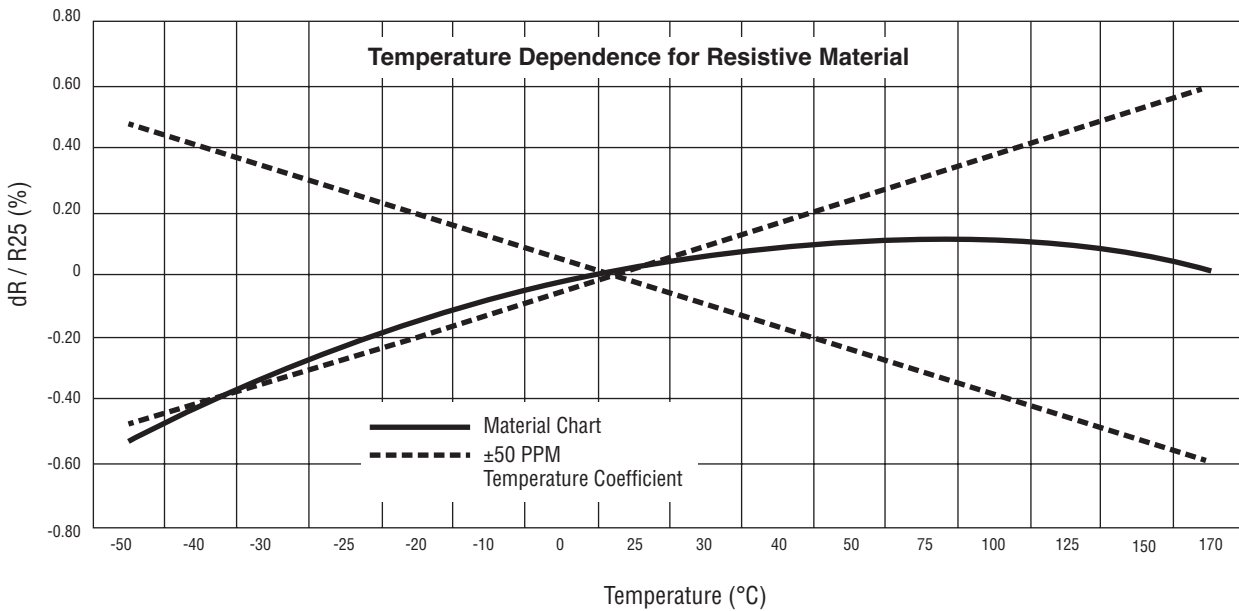
1. Tinned Terminals: 100 % Sn, RoHS Complaint, JESD201 Class-2, ST200 Process, 2.5 -8 micrometers, NI underplate 1.5- 4 micrometers.
2. Base Material Copper: C10200 Temper 1/2 Hard.

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

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

UNLESS OTHERWISE NOTED

## TCR Curves

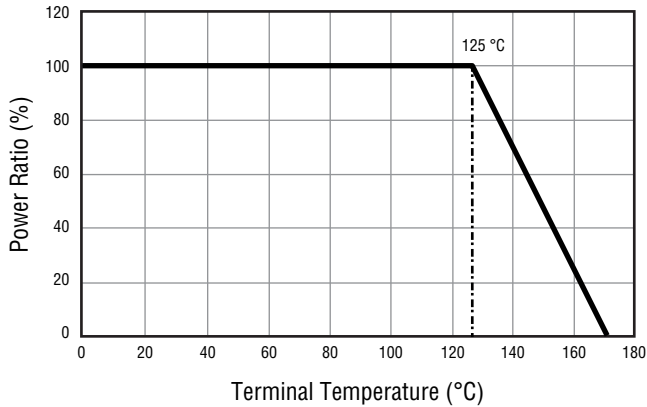


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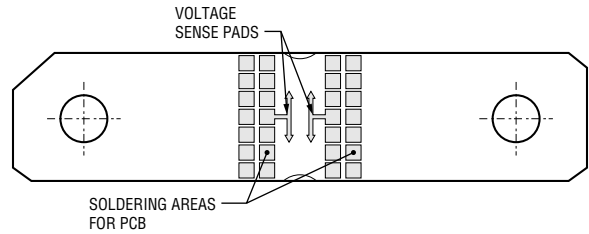
**Power Derating Curve**



**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.....300 mm x 246 mm (11.811 in. x 9.685 in.)

**Reference Pad for SMD Mounting**



**General Specifications**

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

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