

## 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<br>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

Click these links for more 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



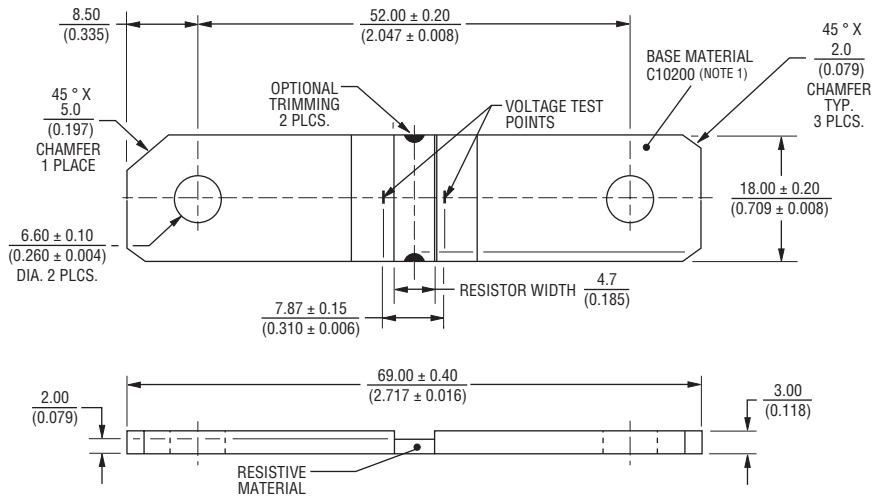
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
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# Model CSM2F-6918 Series Current Sense Resistor w/Tinned Terminals



## Product Dimensions



### NOTES:

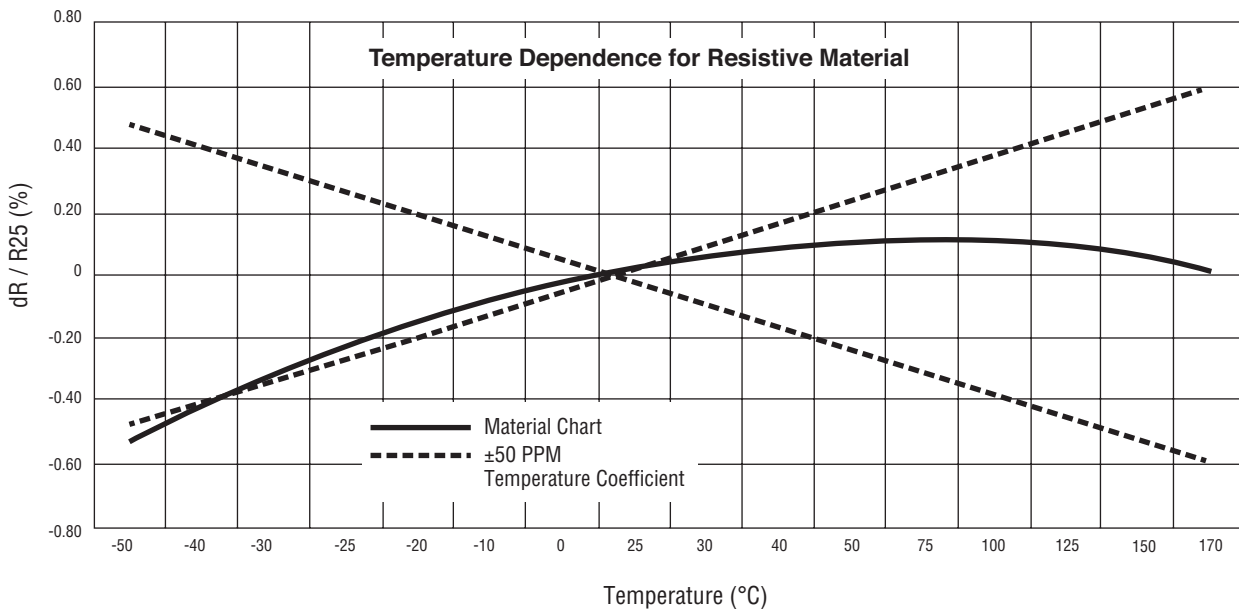
1. Tinned Terminals: 100 % Sn, RoHS Complaint, JESD201 Class-2, ST200 Process, 2.5 -8 micrometers, NI underplate 1.5- 4 micrometers.
2. Base Material Copper: C10200 Temper 1/2 Hard.

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

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

UNLESS OTHERWISE NOTED

## TCR Curves

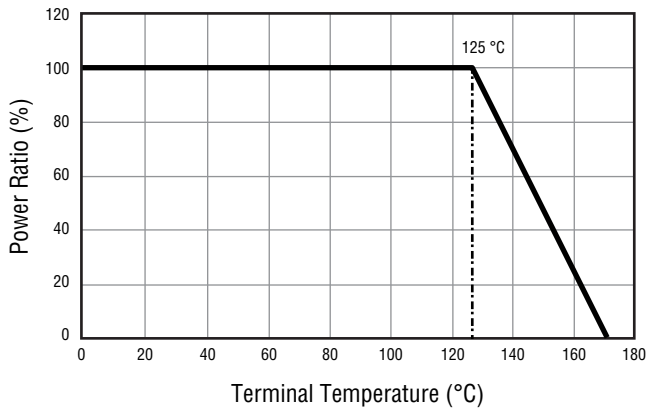


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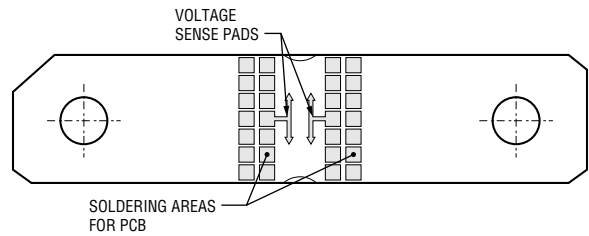
**Power Derating Curve**



**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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