



## Features

- Up to 36 W permanent power
- High pulse power rating
- Maximum fastening torque: 10 Nm
- Tinned terminals
- 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

### Electrical Characteristics

Characteristic	Model CSM2F-6918 Series
Resistance Range / Power Rating @ 70 °C**	50 MicroOhms / 36 Watts
Operating Temperature Range	-40 °C to +170 °C
TCR on Test Points	±150 PPM/°C
TCR Resistance Alloy***	< 50 PPM/°C
Thermal EMF (µV/K)	< 0.25 for 50 MicroOhms
Resistance Tolerance	±5 %

\*\* Terminal temperature

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

### How to Order

**CSM 2F - 6918 - L050 J 01**

Model \_\_\_\_\_

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

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

Resistance Code (Milliohms) \_\_\_\_\_  
 "L" Represents Decimal Point  
 L050 = 50 MicroOhms

Resistance Tolerance \_\_\_\_\_  
 J = ±5 %

Packaging \_\_\_\_\_  
 01 = Bulk Pack (50 pcs. per bag)  
 T1 = Tray Pack (52 pcs. per tray)

### Environmental Characteristics

Characteristic	Test Condition	ΔTR Max.
Thermal Shock	-55 to +150 °C / 1000 cycles	±1.0 %
Resistance to Soldering Heat	+260 °C / 10 seconds	±0.5 %
High Temperature Exposure	+170 °C / 1000 hours	±1.5 %
Low Temperature Storage	-65 °C/ 24 hours	±0.5 %
Biased Humidity Test	+85 °C, 85 % RH, 10 % bias, 1000 hours	±0.5 %
Mechanical Shock	100 g, 6 milliseconds, 5 pulses	±0.5 %
Vibration, High Frequency	10-2000 Hz in 1 minute, 3 directions, 12 hours	±0.5 %
Load Life	1000 hours at max. load, derated at 70 °C	±1.0 %
Solderability	J-STD-002	95 % coverage min.
Short Time Overload	5 times rated power for 5 seconds	±0.5 %

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

Specifications are subject to change without notice.

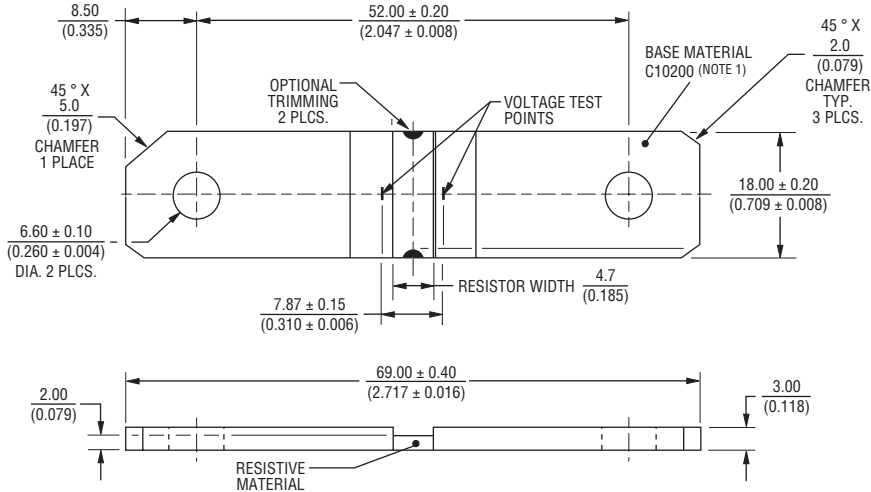
Users should verify actual device performance in their specific applications.

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# Model CSM2F-6918 Series Current Sense Resistor

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## Product Dimensions

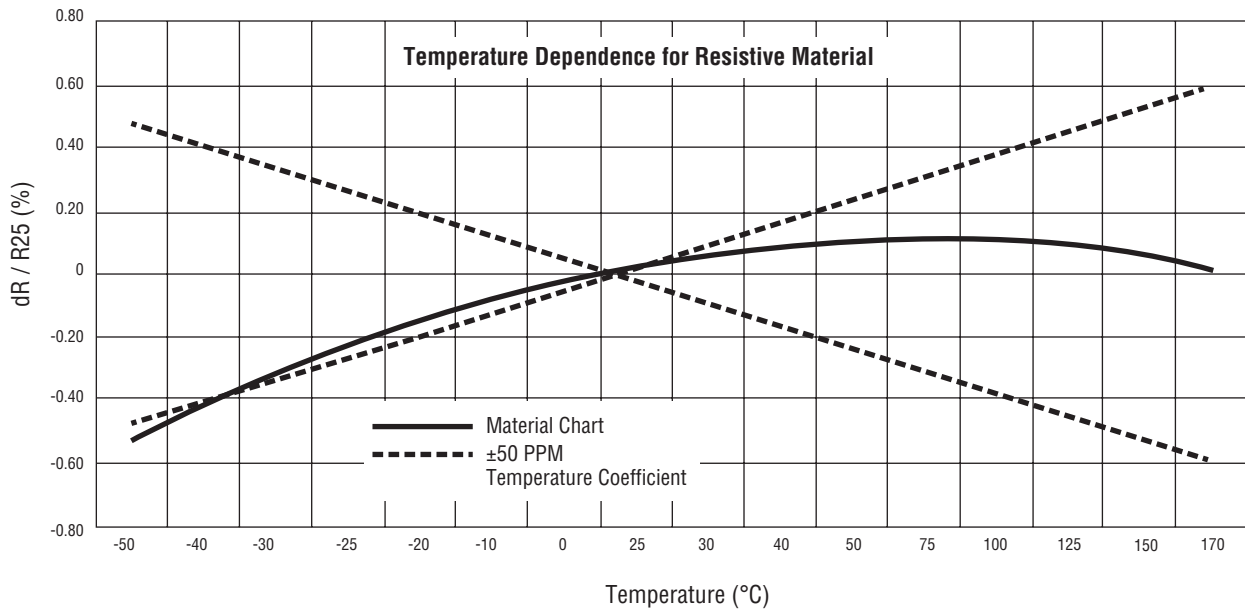


### NOTES:

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:  $\frac{0.25}{(0.010)}$  UNLESS OTHERWISE NOTED

## TCR Curves



Specifications are subject to change without notice.

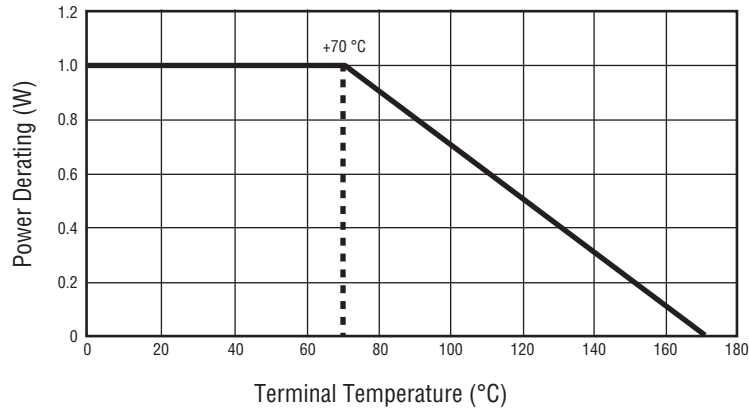
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# Model CSM2F-6918 Series Current Sense Resistor

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## Power Derating Curve



## General Specifications

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

## Packaging Specifications

Standard Bulk Pack  
..... 50 pcs. per plastic bag;  
100 pcs. per box  
Tray Pack ..... 52 pcs. per high impact  
polystyrene tray;  
260 pcs. per box

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