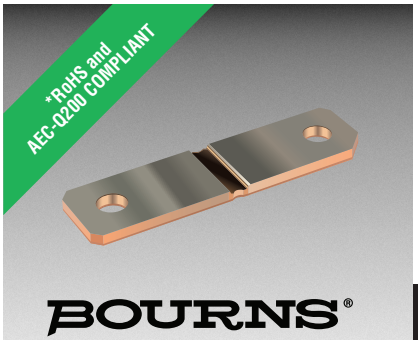



## Features

- 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

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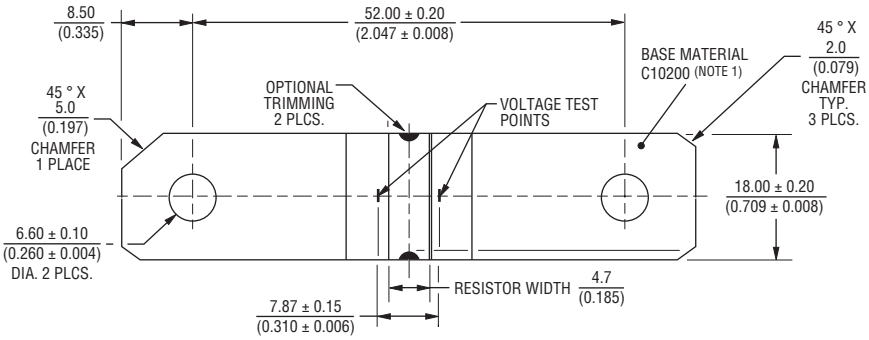
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*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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# Model CSM2F-6918 Series Current Sense Resistor

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## Product Dimensions

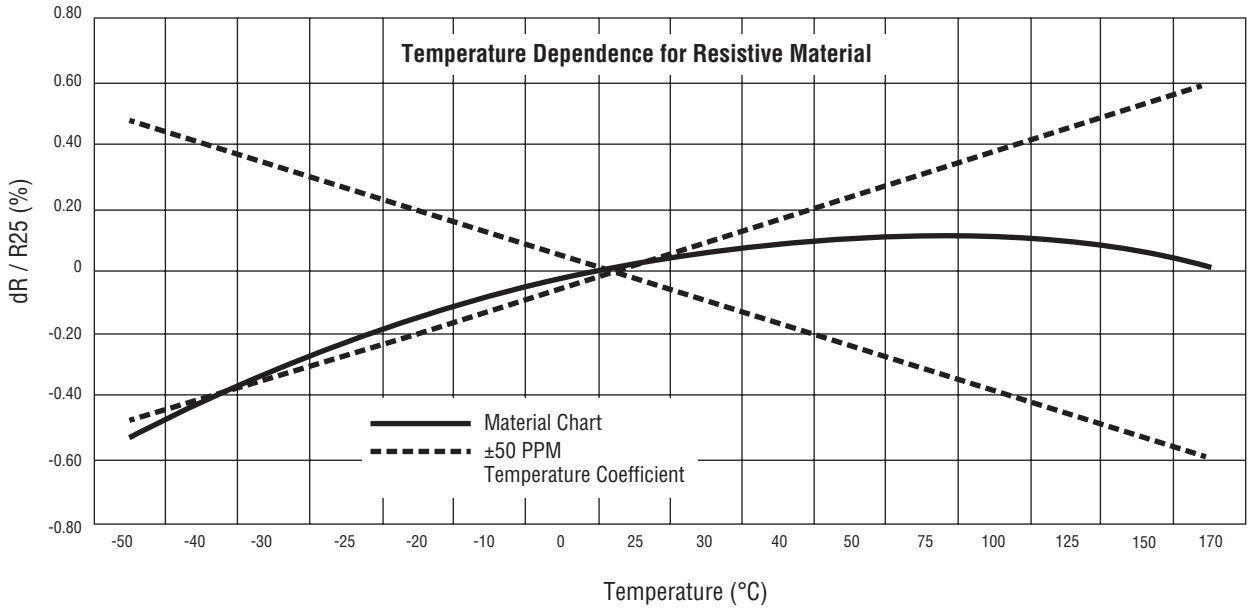



DIMENSIONS: MM (INCHES) TOLERANCES: 0.25 (0.010) UNLESS OTHERWISE NOTED

NOTES:

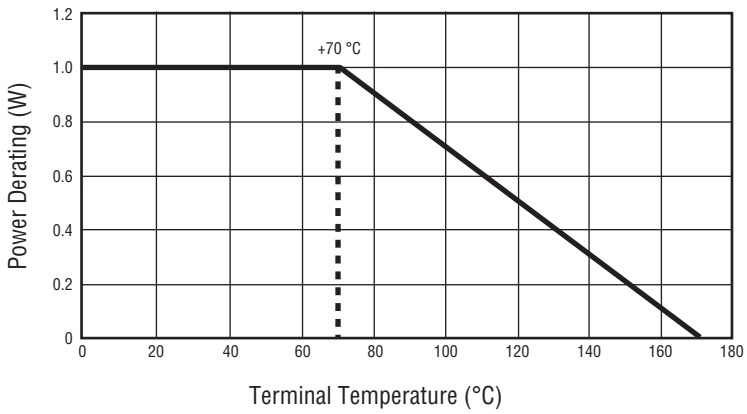
1. Tinned Terminals: 100 % Sn, RoHS Complaint, JESD201 Class-2, ST200 Process, 2.5 -8 micrometers, NI underplate 1.5- 4 micrometers.
2. Base Material Copper: C10200 Temper 1/2 Hard.

## TCR Curves




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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
polysterene tray;
260 pcs. per box



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