



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



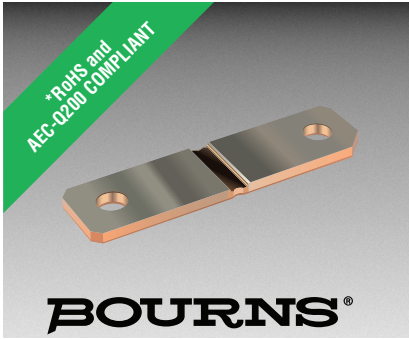
## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





## 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 %

## BOURNS®

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

Specifications are subject to change without notice.

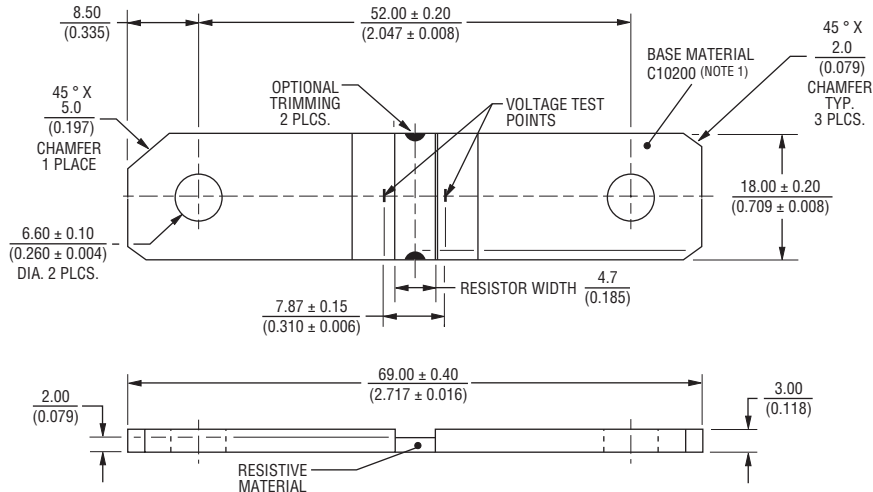
Users should verify actual device performance in their specific applications.

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# Model CSM2F-6918 Series Current Sense Resistor

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## Product Dimensions

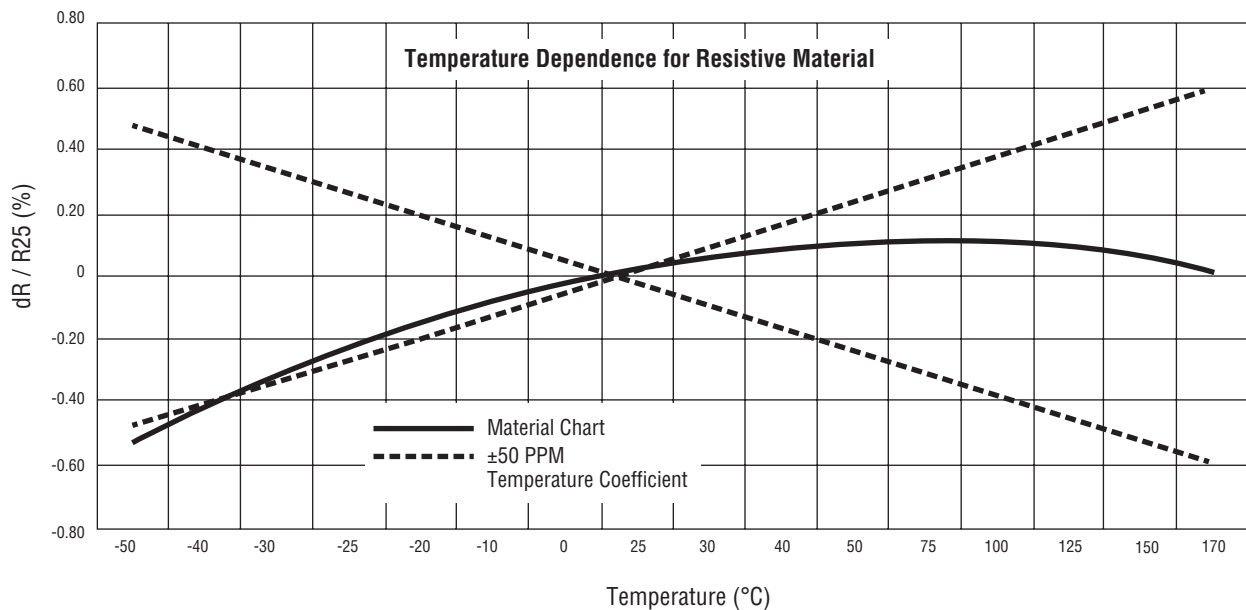


### NOTES:

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.

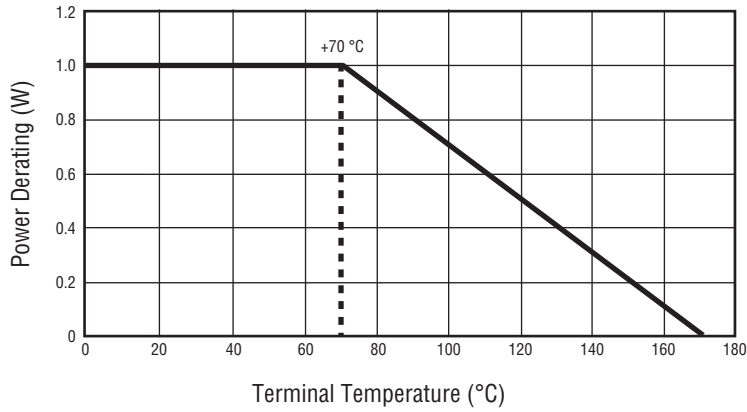
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# Model CSM2F-6918 Series Current Sense Resistor

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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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