



AUTOMOTIVE
GRADE

BOURNS

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	± 150 ppm/°C
TCR Resistance Alloy***	< 50 ppm/°C
Thermal EMF (μ V/K)	< 0.25 for 50 $\mu\Omega$
Resistance Tolerance	± 5 %

** Terminal temperature

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

Additional Information

Click these links for more information:



Environmental Characteristics

Characteristic	Test Condition	Δ TR 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.

How to Order

Model _____	CSM 2F - 6918 - L050 J 0 1
No. of Terminals & Style _____	
Size (Metric) _____	
Resistance Code (Milliohms) _____	
"L" Represents Decimal Point	
L050 = 50 MicroOhms	
L100 = 100 MicroOhms	
Resistance Tolerance	± 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

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

Specifications are subject to change without notice.

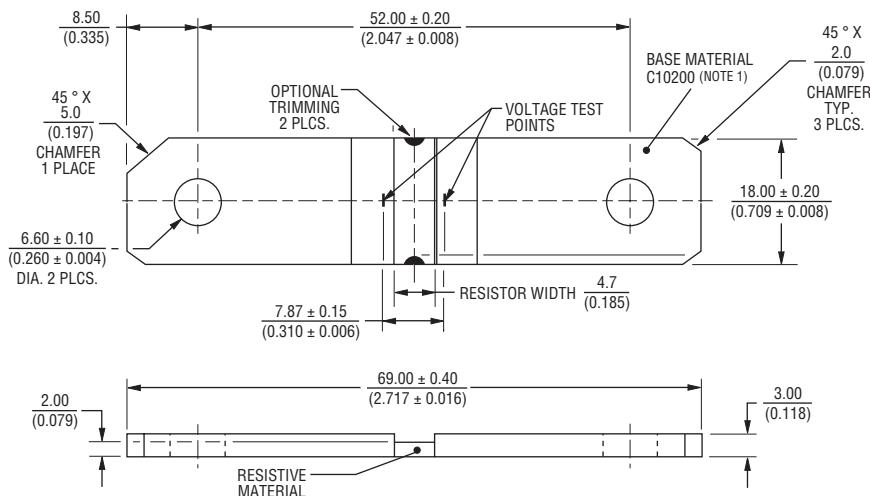
Users should verify actual device performance in their specific applications.

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

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Product Dimensions



NOTES:

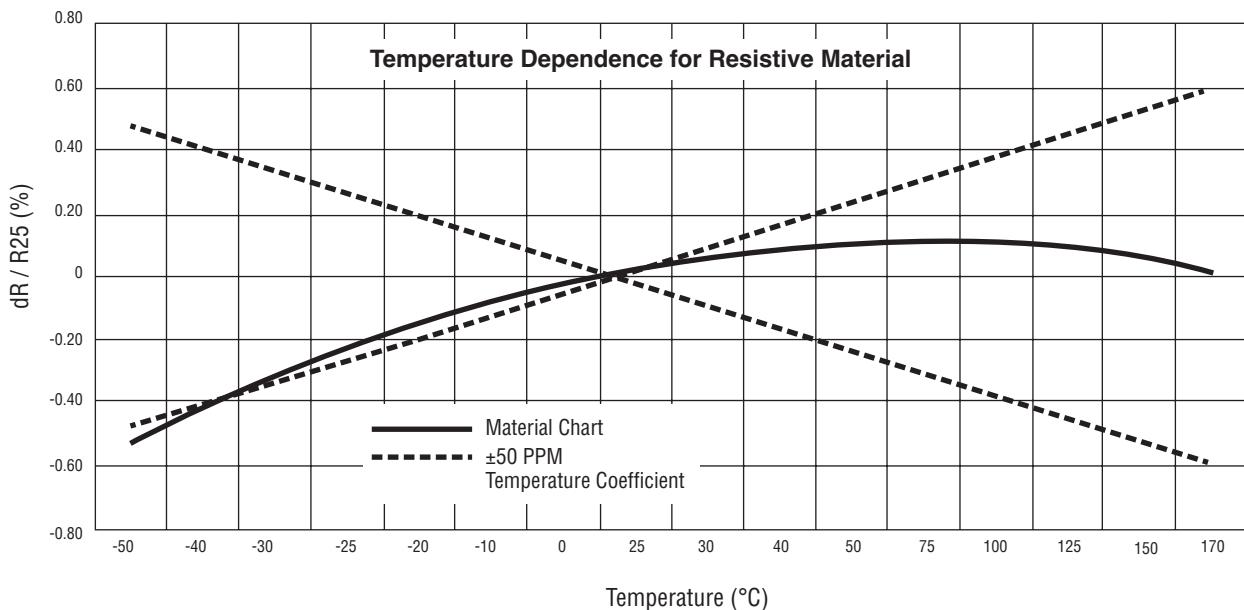
1. Tinned Terminals: 100 % Sn, RoHS Complaint, JESD201 Class-2, ST200 Process, 2.5 -8 micrometers, Ni underplate 1.5- 4 micrometers.
2. Base Material Copper: C10200 Temper 1/2 Hard.

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

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

UNLESS OTHERWISE NOTED

TCR Curves



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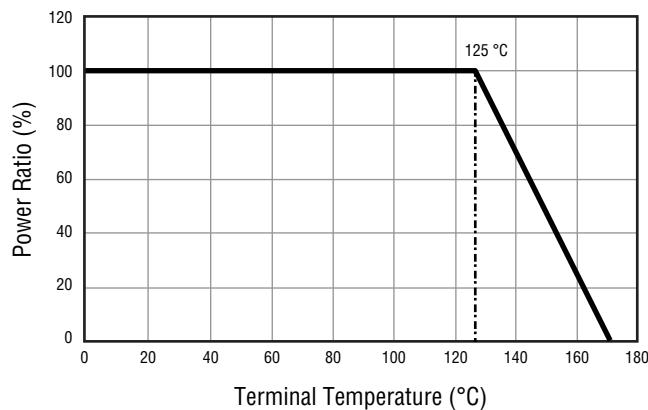
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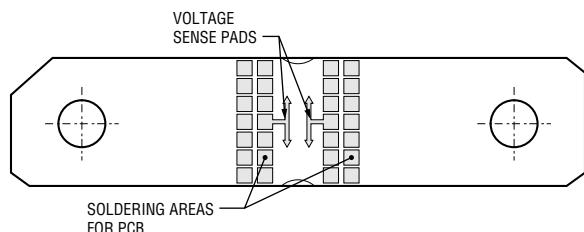
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Power Derating Curve



Reference Pad for SMD Mounting



General Specifications

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

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.)

BOURNS®

Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

Europe: Tel: +36 88 885 877 • Email: eurocus@bourns.com

Mexico: Tel: +52 614 478 0400 • Email: mexicus@bourns.com

The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

www.bourns.com

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