

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 battery management systems
- Current sensing in bus bars
- Current sensing in welding equipment
- Frequency converters

Model CSM2F-8518 Series Current Sense Resistor w/Tinned Terminals

Electrical Characteristics

Characteristic	Model CSM2F-8518 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 for 50 $\mu\Omega$ ± 125 ppm/°C for 100 $\mu\Omega$
TCR Resistance Alloy***	< 50 ppm/°C
Thermal EMF (μ V/K)	< 0.25 for 50 $\mu\Omega$ < 1.50 for 100 $\mu\Omega$
Resistance Tolerance	± 5 %

** Terminal temperature

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

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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, derated at 70 °C	± 1.0 %
Solderability	J-STD-002	95 % coverage min.

How to Order

CSM 2F - 8518 - 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 = ± 5 %

Packaging _____
0 = Bulk Pack (50 pcs. per bag)
T = Tray Pack (32 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.

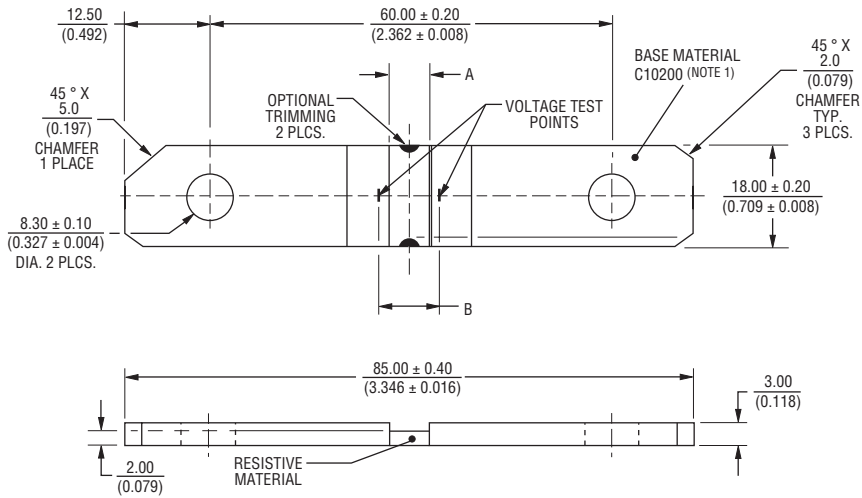
Users should verify actual device performance in their specific applications.

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Model CSM2F-8518 Series Current Sense Resistor w/Tinned Terminals

BOURNS®

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.

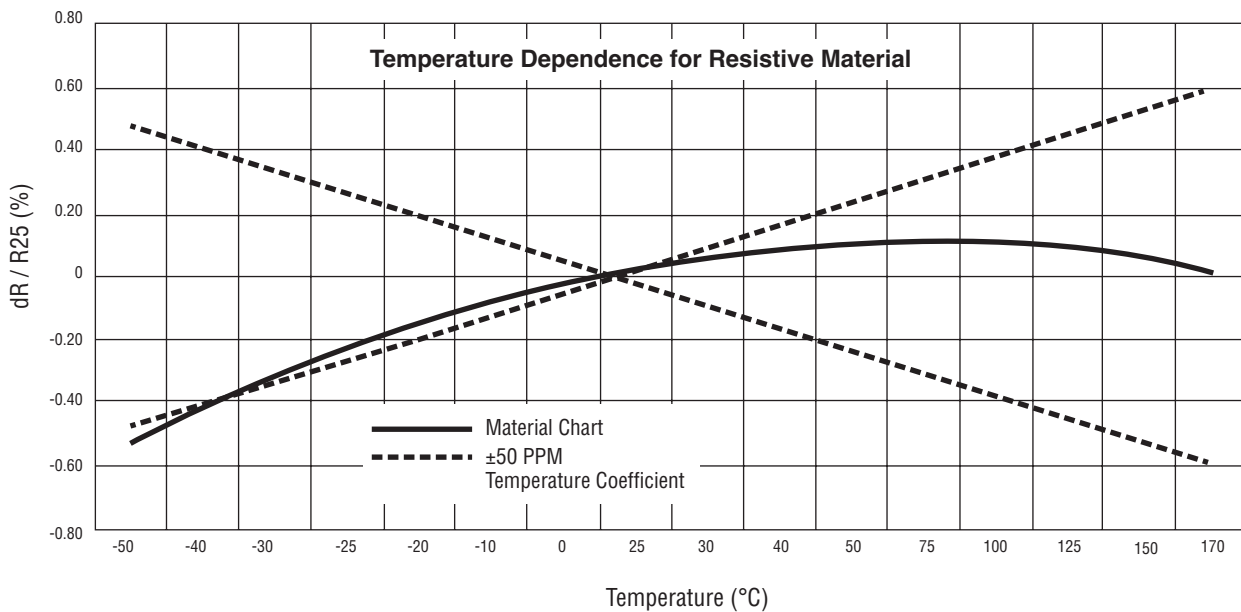
Part Number	Dim A	Dim B
CSM2F-8518-L050Jxx	4.70 (.185)	7.87 (.310)
CSM2F-8518-L100Jxx	9.40 (.370)	12.57 (.495)

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

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

UNLESS OTHERWISE NOTED

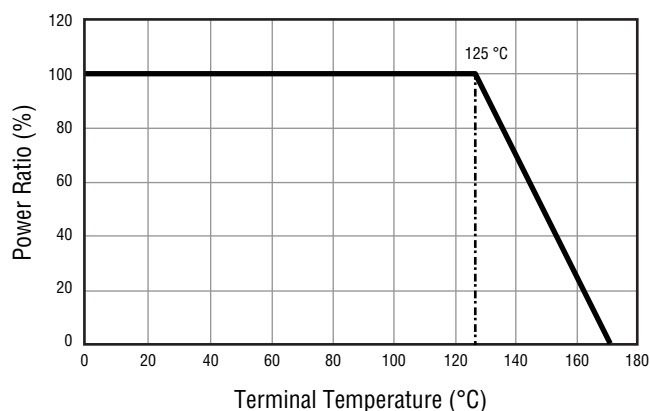
TCR Curves



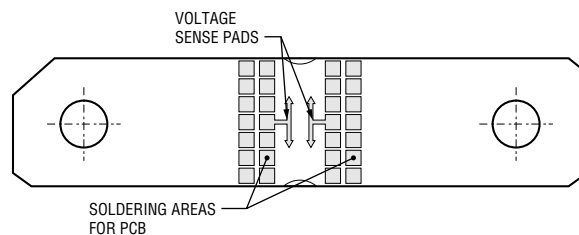
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Power Derating Curve**Packaging Specifications**

Bulk Pack.....50 pcs. per plastic bag
 100 pcs. per box
 Tray Pack32 pcs. per high impact polystyrene tray
 224 pcs. per box
 Size.....246 mm x 246 mm (9.685 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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