

Features

- Fully tinned terminals and resistive element
- Up to 36 W permanent power
- High pulse power rating
- Maximum fastening torque: 10 Nm
- AEC-Q200 compliant
- RoHS compliant* / lead free
- Customized versions available

Applications

- Battery management systems
- Current sensing for hybrid and electric vehicles
- Current sensing in bus bars
- Current sensing in welding equipment
- Frequency converters

Model CSM2F-8518 Series Current Sense Resistor / Fully Tinned

Electrical Characteristics

Characteristic	Model CSM2F-8518 Series
Resistance Range / Power Rating @ 70 °C**	50 $\mu\Omega$ / 36 W 100 $\mu\Omega$ / 36 W 200 $\mu\Omega$ / 36 W
Operating Temperature Range	-40 °C ~ +170 °C
TCR on Test Points (+20 °C to +130 °C)	± 200 ppm/°C for 50 $\mu\Omega$ ± 150 ppm/°C for 100 $\mu\Omega$ and 200 $\mu\Omega$
TCR Resistance Alloy***	< 50 ppm/°C
Inductance μ H	< 12 μ H
Resistance Tolerance	± 5 %

** Terminal temperature

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

Additional Information

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Environmental Characteristics

Characteristic	Test Condition	Δ TR Max.
Thermal Shock	-55 °C to +150 °C / 1000 cycles	± 0.5 %
High Temperature Exposure	+170 °C / 1000 hours	± 1.0 %
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	+125 °C / 2000 hours at maximum current rating	± 1.0 %
Solderability*	J-STD-002	95 % coverage min.
ESD	25 KV \pm polarity	± 0.5 %

* Limited to dipping terminals

How to Order

CSM 2F - 8518 - L050 J 0 2

Model _____

No. of Terminals & Style _____

Size (Metric) _____

Resistance Code (Milliohms) _____

"L" Represents Decimal Point
L050 = 50 MicroOhms

Resistance Tolerance _____

J = ± 5 %

Packaging _____

0 = Bulk Pack (50 pcs. per bag)
T = Tray Pack (30 pcs. per tray)

Surface Finishing _____

2 = Fully Tinned Terminals and Resistive Element



**WARNING Cancer
and Reproductive Harm**
www.P65Warnings.ca.gov

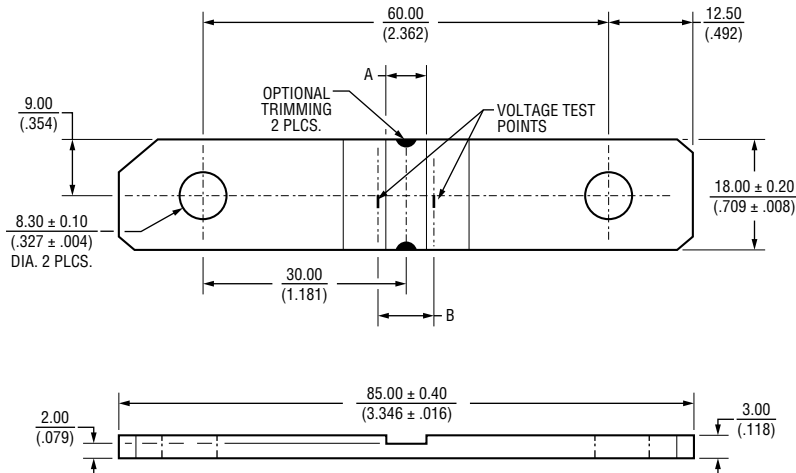
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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Model CSM2F-8518 Series Current Sense Resistor / Fully Tinned

BOURNS®

Product Dimensions



Part Number	Dim A	Dim B
CSM2F-8518-L050J02	4.70 (.185)	7.87 (.310)
CSM2F-8518-L100J02	9.40 (.370)	12.57 (.495)
CSM2F-8518-L200J02	20.0 (.787)	23.18 (.990)

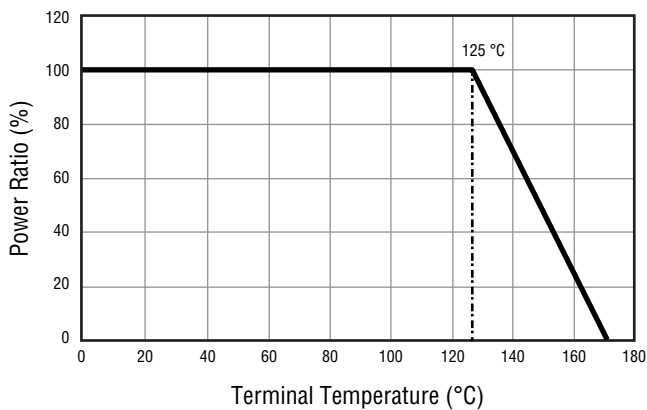
Note: Fully plated with nickel barrier and 100% Sn.

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

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

UNLESS OTHERWISE NOTED

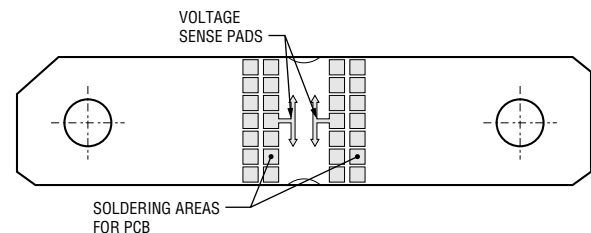
Power Derating Curve



General Specifications

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

Reference Pad for SMD Mounting



Packaging Specifications

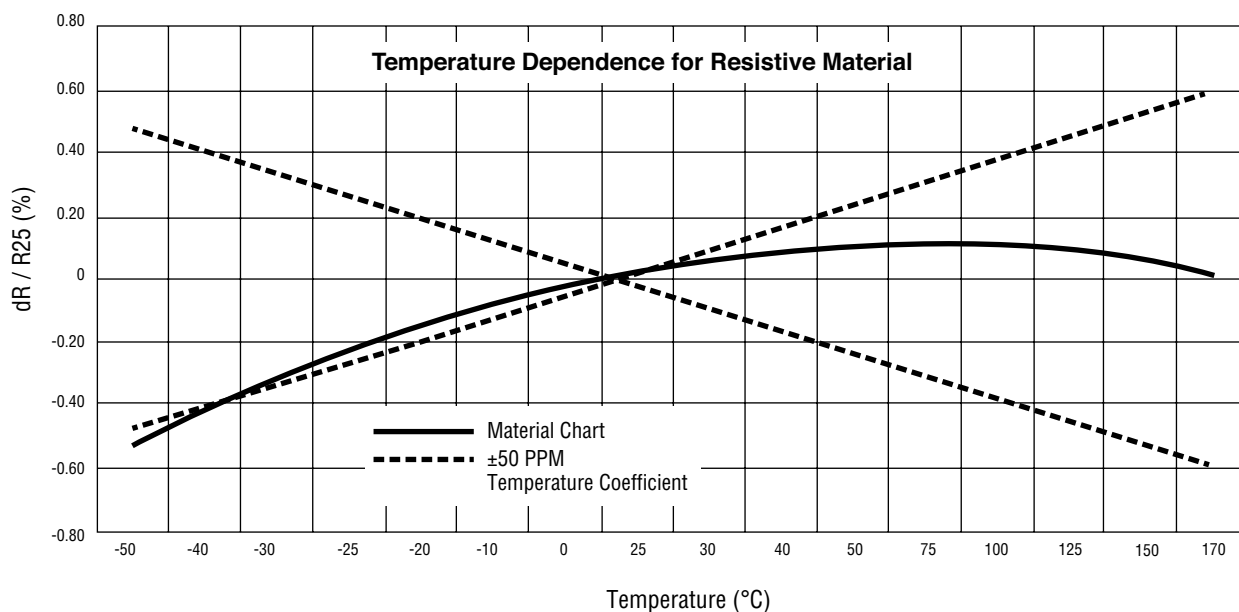
Bulk Pack 50 pcs. per plastic bag
100 pcs. per box
Tray Pack 32 pcs. per high impact polystyrene tray
224 pcs. per box
Size 246 mm x 246 mm (9.685 in. x 9.685 in.)

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TCR Curves

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