

Features

- Bare copper terminals
- 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 w/Bare Copper Terminals

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)	± 100 ppm/°C for 50 $\mu\Omega$ ± 50 ppm/°C for 100 $\mu\Omega$ and 200 $\mu\Omega$
TCR Resistance Alloy***	< 50 ppm/°C
Inductance μ H	< 5 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 / 1000 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.

* Limited to dipping terminals

How to Order

CSM 2F - 8518 - L050 J 0 0

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	
0 = Bare Copper Terminals	



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

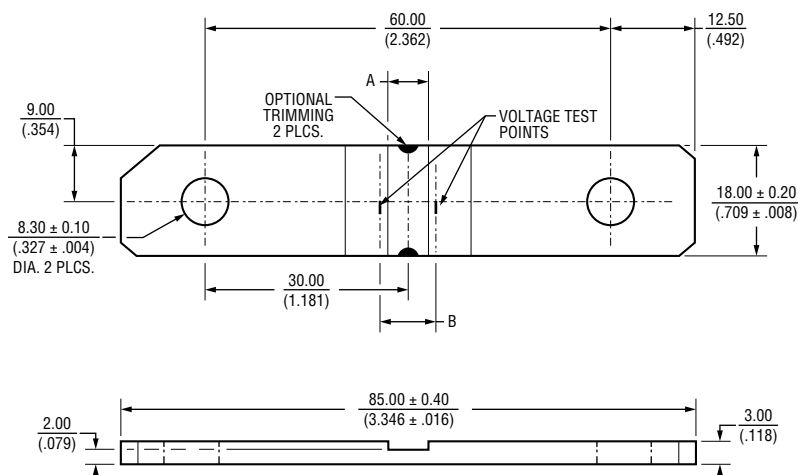
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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Model CSM2F-8518 Series Current Sense Resistor w/Bare Copper Terminals

BOURNS®

Product Dimensions



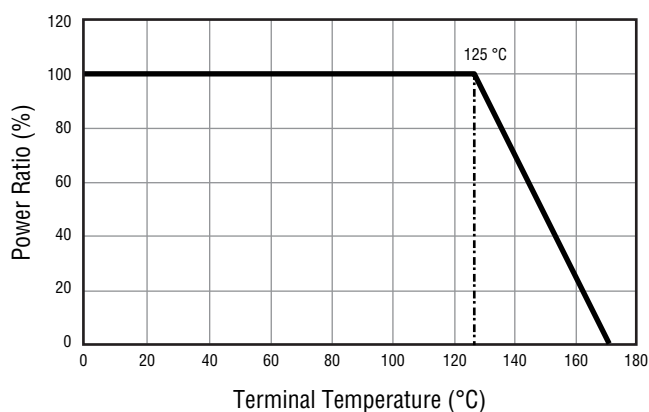
Part Number	Dim A	Dim B
CSM2F-8518-L050J00	$\frac{4.70}{(.185)}$	$\frac{7.87}{(.310)}$
CSM2F-8518-L100J00	$\frac{9.40}{(.370)}$	$\frac{12.57}{(.495)}$
CSM2F-8518-L200J00	$\frac{20.0}{(.787)}$	$\frac{23.18}{(.990)}$

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

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

UNLESS OTHERWISE NOTED

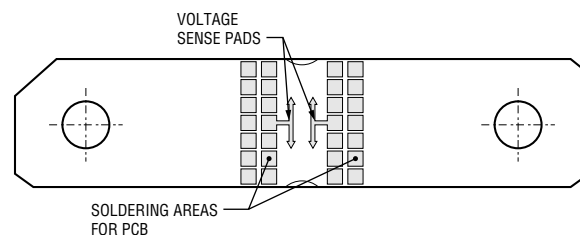
Power Derating Curve



General Specifications

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

Reference Pad for SMD Mounting



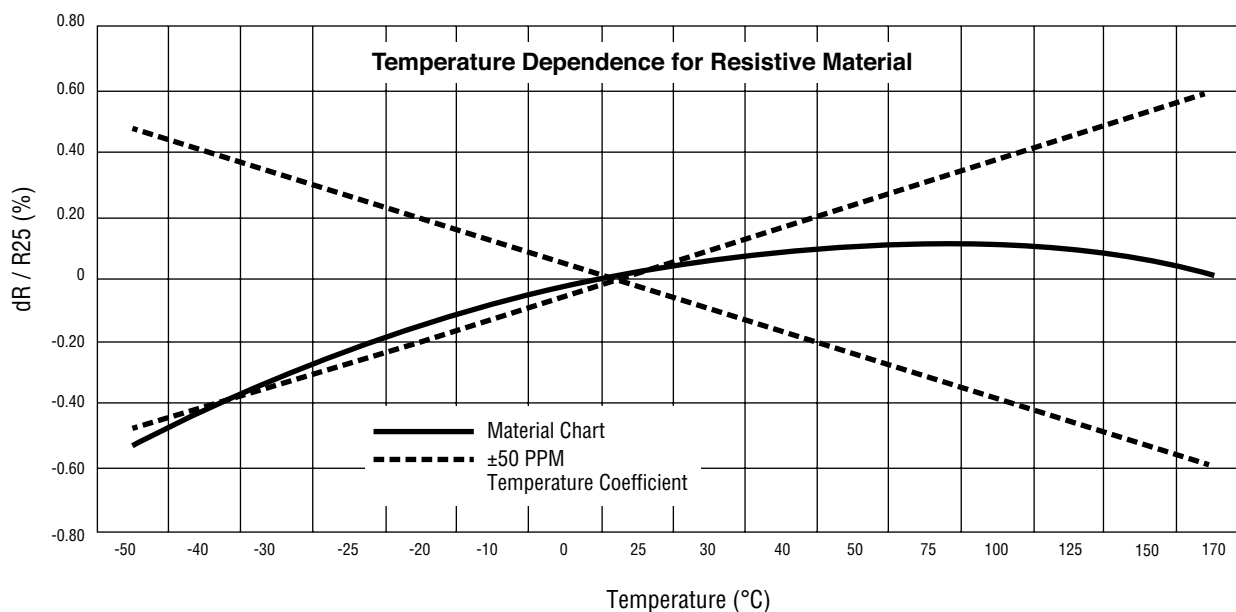
Packaging Specifications

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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