

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-6918 Series Current Sense Resistor w/Bare Copper Terminals

Electrical Characteristics

Characteristic	Model CSM2F-6918 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 μH	< 5 μH
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	$\Delta\text{TR Max.}$
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 - 6918 - 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 (52 pcs. per tray)

Surface Finishing _____
 0 = Bare Copper Terminals



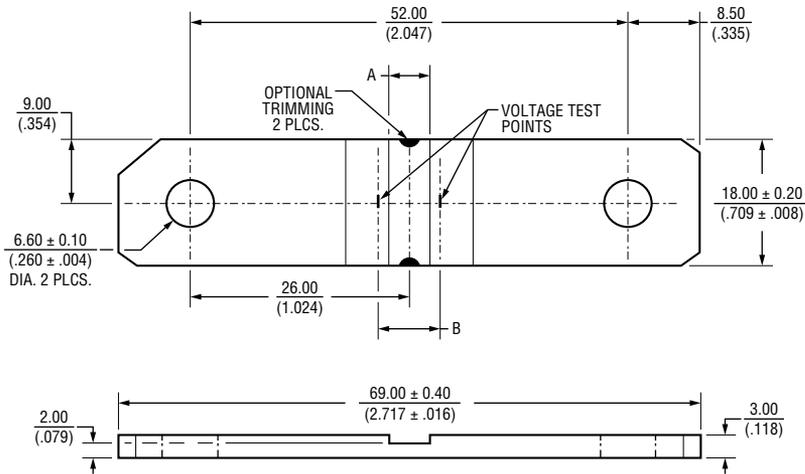
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
 Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

Model CSM2F-6918 Series Current Sense Resistor w/Bare Copper Terminals



Product Dimensions



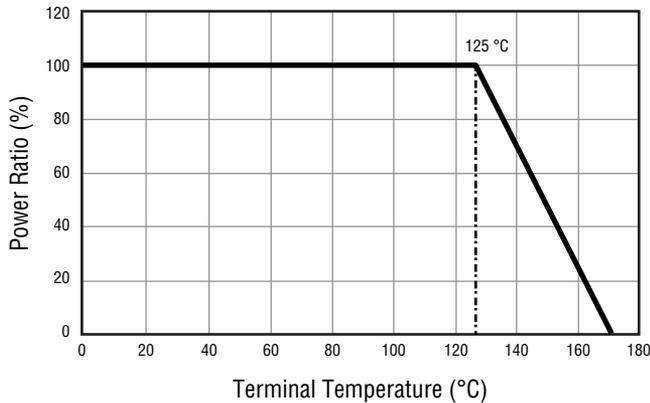
Part Number	Dim A	Dim B
CSM2F-6918-L050J00	$\frac{4.70}{(.185)}$	$\frac{7.87}{(.310)}$
CSM2F-6918-L100J00	$\frac{9.40}{(.370)}$	$\frac{12.57}{(.495)}$
CSM2F-6918-L200J00	$\frac{20.0}{(.787)}$	$\frac{23.18}{(.990)}$

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

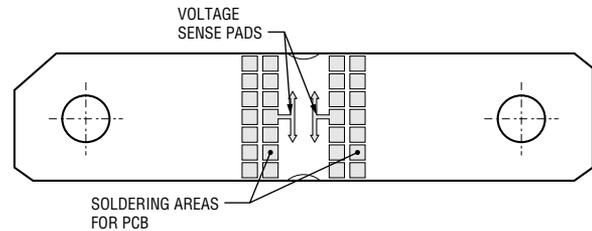
TOLERANCES: $\frac{0.25}{(.010)}$

UNLESS OTHERWISE NOTED

Power Derating Curve



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

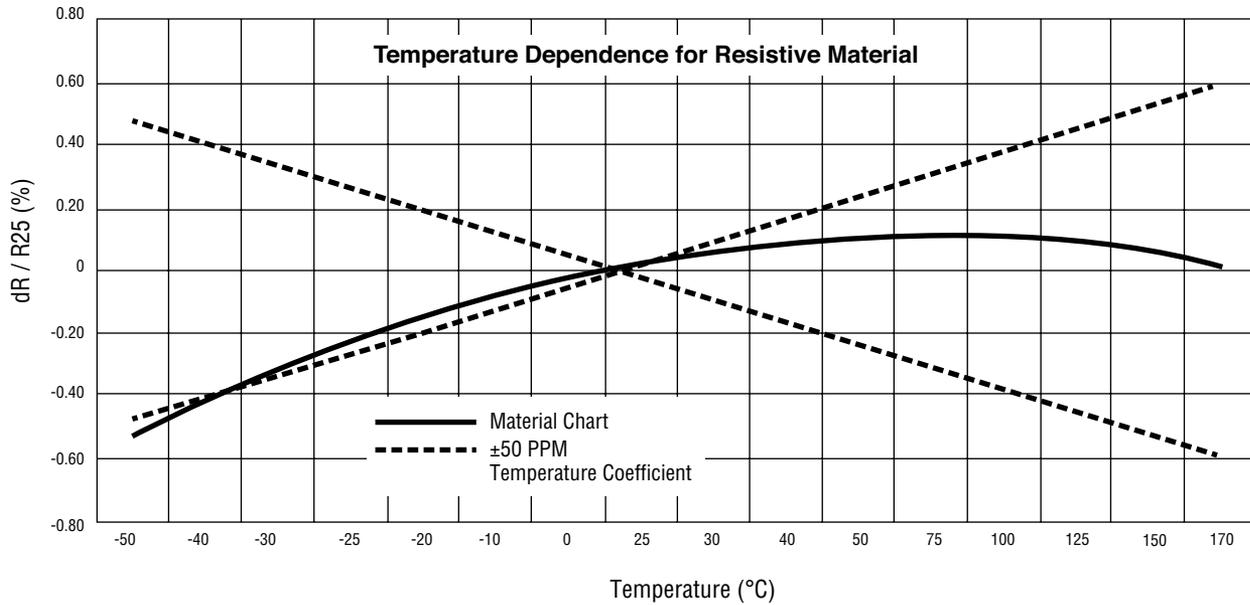
Bulk Pack..... 50 pcs. per plastic bag
 100 pcs. per box
 Tray Pack 52 pcs. per high impact polystyrene tray
 260 pcs. per box
 Size..... 246 mm x 246 mm (9.685 in. x 9.685 in.)

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Users should verify actual device performance in their specific applications.

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TCR Curves



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