



BOURNS®

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 μ H	< 5 μ H
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	ΔTR 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

Model _____ **CSM 2F - 6918 - L050 J 0 0**

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

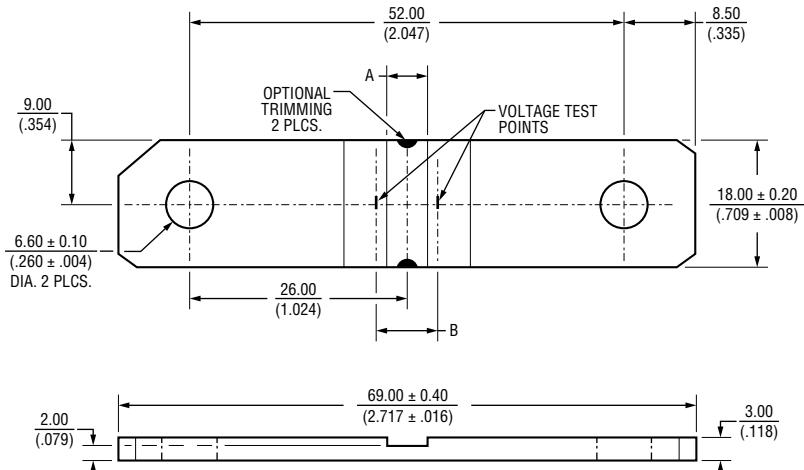
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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

BOURNS®

Product Dimensions



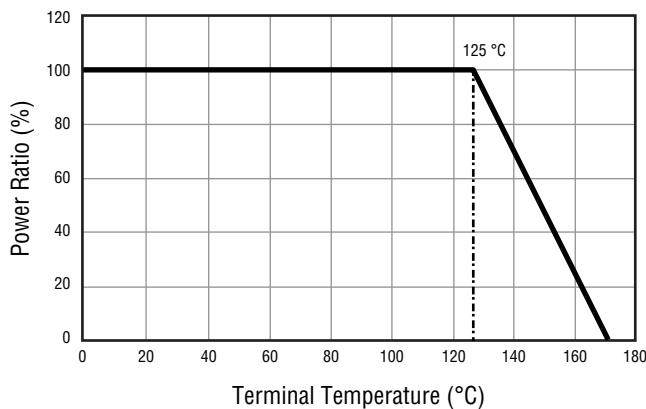
Part Number	Dim A	Dim B
CSM2F-6918-L050J00	4.70 (.185)	7.87 (.310)
CSM2F-6918-L100J00	9.40 (.370)	12.57 (.495)
CSM2F-6918-L200J00	20.0 (.787)	23.18 (.990)

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

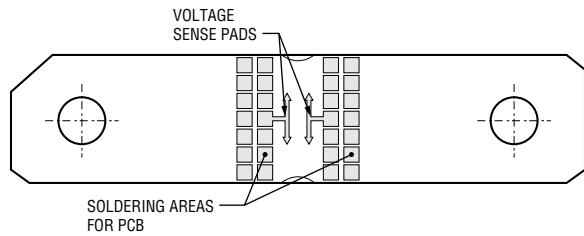
TOLERANCES: $\frac{0.25}{(.010)}$

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

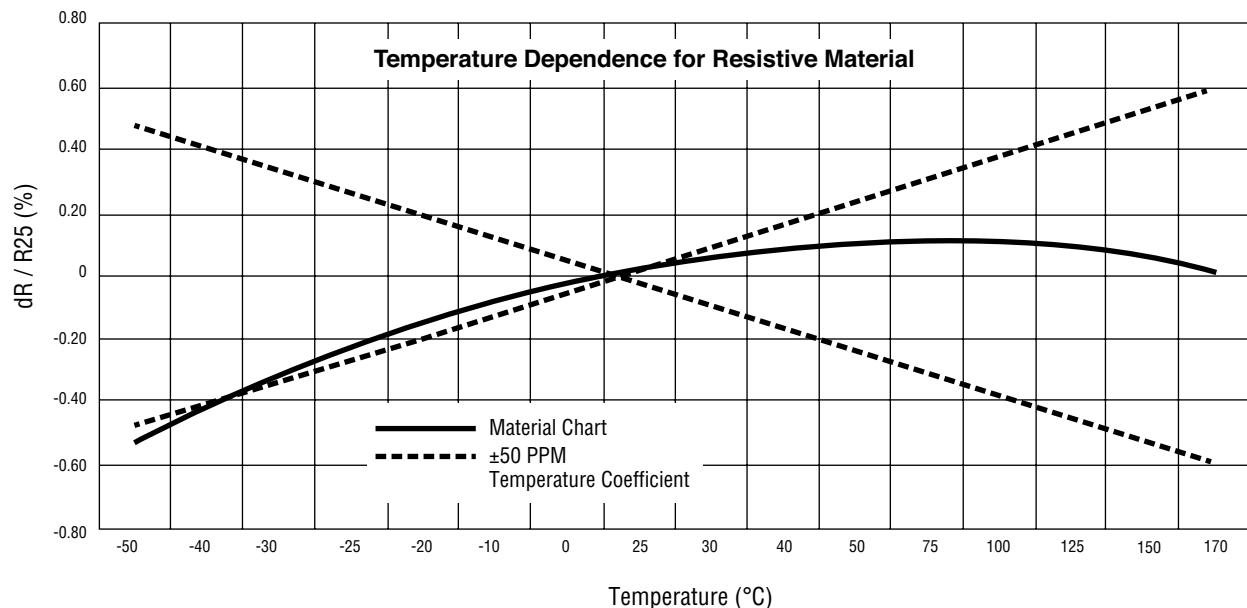
Packaging Specifications

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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TCR Curves**BOURNS®****Asia-Pacific:** Tel: +886-2 2562-4117 • Email: asiacus@bourns.com**EMEA:** Tel: +36 88 885 877 • Email: eurocus@bourns.com**The Americas:** Tel: +1-951 781-5500 • Email: americus@bourns.comwww.bourns.com

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