



Features

- Up to 36 W permanent power
- High pulse power rating
- Maximum fastening torque: 25 Nm
- Customized versions available
- RoHS compliant* / lead free
- AEC-Q200 compliant

Applications

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

CSM2F-6918 Series – Shunt Resistor with Sense Pins & Bare Copper Terminals

Electrical Characteristics

Characteristic	Model CSM2F-6918 with Sense Pins
Resistance Range / Power Rating @ 125 °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	< 5 nH
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

CSM 2F - 6918 - L050 J 2 0

Model _____

No. of Terminals & Style _____

Size (Metric) _____

Resistance Code (Milliohms) _____

“L” Represents Decimal Point
L050 = 50 MicroOhms

Resistance Tolerance _____

J = ± 5 %

Number of Pins _____

2 or 3

Surface Finishing _____

0 = Bare Copper Terminals
Plated Sense Pins

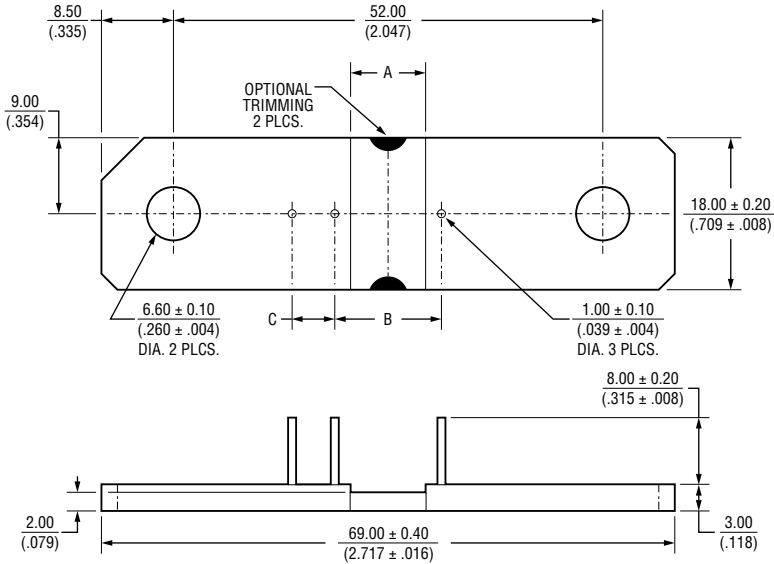


WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*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.

Product Dimensions

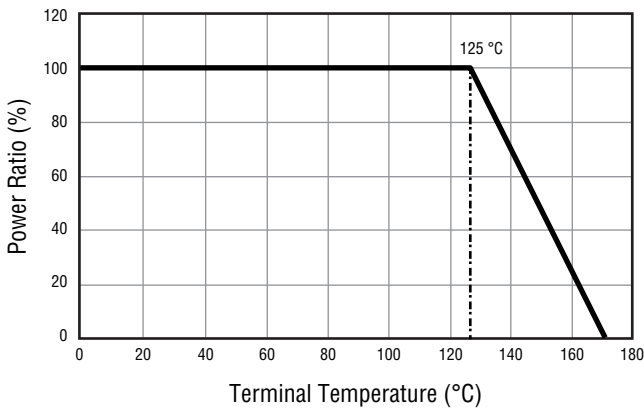


Part Number	Dim A	Dim B	Dim C
CSM2F-6918-L050J20	4.70 (.185)	7.80 (.307)	—
CSM2F-6918-L100J20	9.40 (.370)	12.50 (.492)	—
CSM2F-6918-L200J20	20.0 (.787)	23.10 (.909)	—
CSM2F-6918-L050J30	4.70 (.185)	7.80 (.307)	5.59 (.220)
CSM2F-6918-L100J30	9.40 (.370)	12.50 (.492)	5.59 (.220)
CSM2F-6918-L200J30	20.0 (.787)	23.10 (.909)	5.59 (.220)

Note: plated sense pins: Nickel barrier and 100% Sn.

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

Power Derating Curve



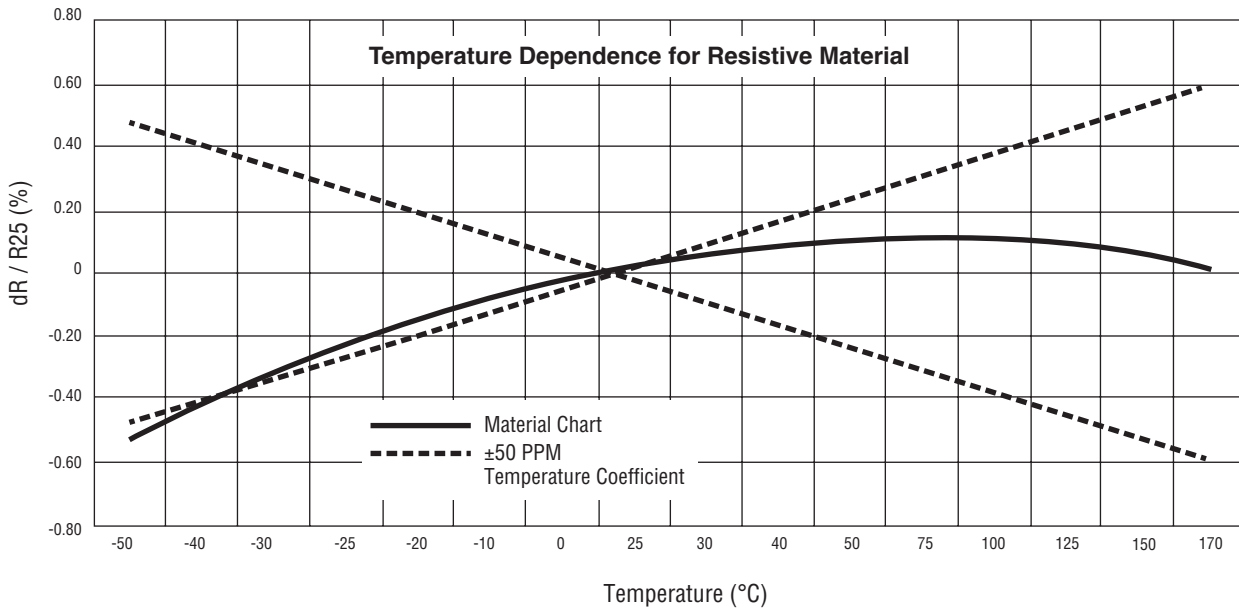
General Specifications

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

Packaging Specifications

Tray Pack 30 pcs. per high impact polystyrene tray
 210 pcs. per box
 Size 460 mm x 320 mm (18.110 in. x 12.598 in.)

TCR Curves



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