

AUTOMOTIVE
GRADE

BOURNS®

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-6918 Series Current Sense Resistor / Fully Tinned

Electrical Characteristics

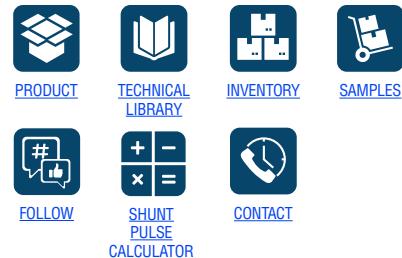
Characteristic	Model CSM2F-6918 Series
Resistance Range / Power Rating @ 70 °C**	50 $\mu\Omega$ / 36 W 100 $\mu\Omega$ / 36 W 200 $\mu\Omega$ / 36 W
Operating Temperature Range	-40 °C ~ +170 °C
TCR on Test Points (+20 °C to +130 °C)	±200 ppm/°C for 50 $\mu\Omega$ ±150 ppm/°C for 100 $\mu\Omega$ and 200 $\mu\Omega$
TCR Resistance Alloy***	< 50 ppm/°C
Inductance	< 12 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 / 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 ± polarity	±0.5 %

* Limited to dipping terminals

How to Order

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

No. of Terminals & Style _____

Size (Metric) _____

Resistance Code (Milliohms) _____

"L" Represents Decimal Point
L050 = 50 MicroOhms
L100 = 100 MicroOhms
L200 = 200 MicroOhms

Resistance Tolerance
J = ±5 %

Packaging
0 = Bulk Pack (50 pcs. per bag)
T = Tray Pack (52 pcs. per tray)

Surface Finishing
2 = Fully Tinned Terminals and Resistive Element

* 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.

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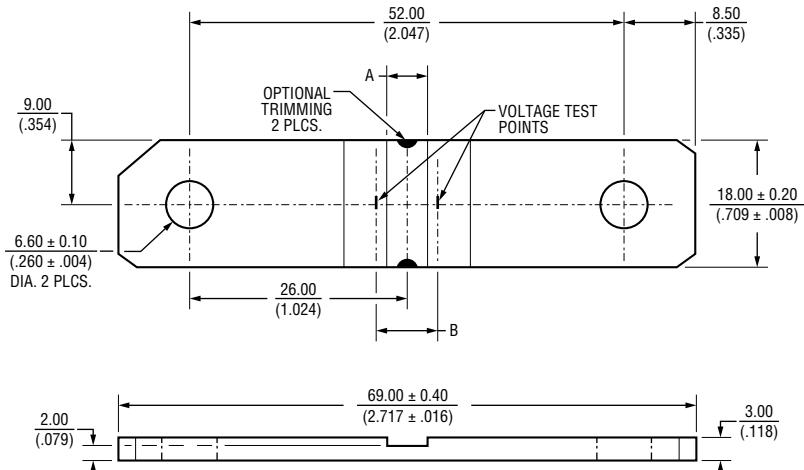


CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant. See www.P65Warnings.ca.gov

Model CSM2F-6918 Series Current Sense Resistor / Fully Tinned

BOURNS®

Product Dimensions



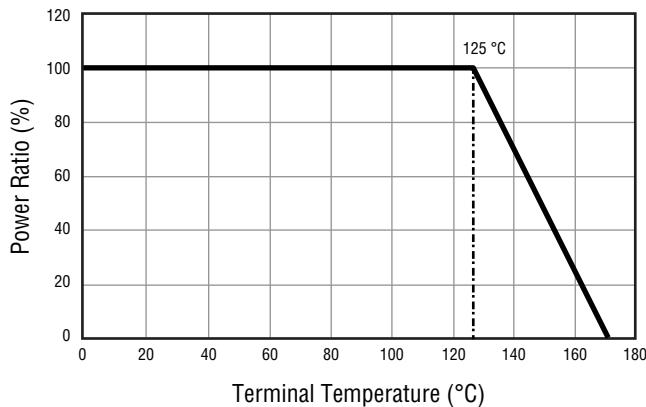
Part Number	Dim A	Dim B
CSM2F-6918-L050J02	4.70 (.185)	7.87 (.310)
CSM2F-6918-L100J02	9.40 (.370)	12.57 (.495)
CSM2F-6918-L200J02	20.0 (.787)	23.18 (.990)

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

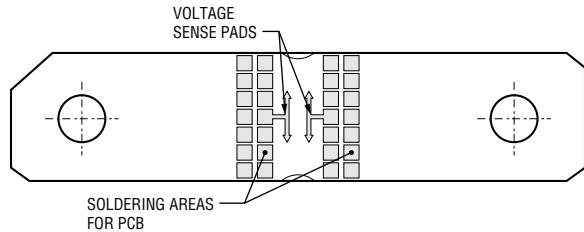
TOLERANCES: $\frac{0.25}{(.010)}$

UNLESS OTHERWISE NOTED

Power Derating Curve



Reference Pad for SMD Mounting



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.)

General Specifications

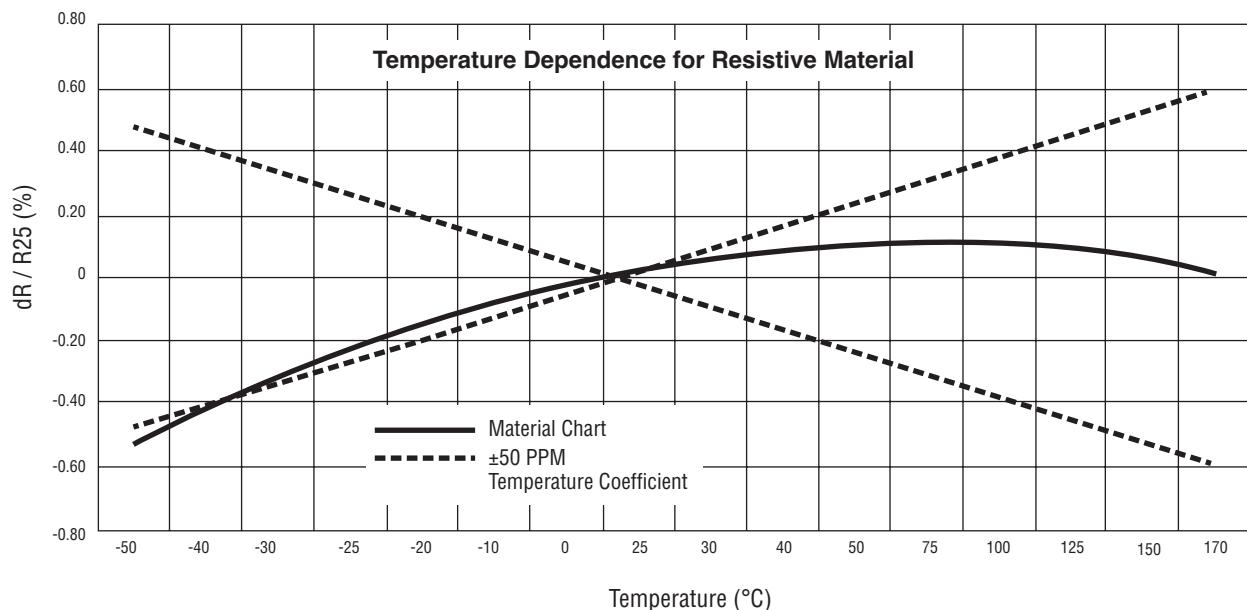
Moisture Sensitivity Level	1
ESD Classification	Level 6
	per AEC-Q200-002, ≥ 25,000 V air discharge	

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TCR Curves

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