



BOURNS®

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 & Fully Tinned Terminals

Electrical Characteristics

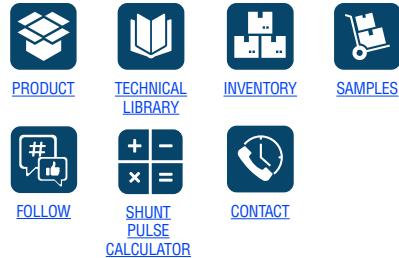
Characteristic	Model CSM2F-6918 with Sense Pins
Resistance Range / Power Rating @ 125 °C**	50 $\mu\Omega$ / 36 W 100 $\mu\Omega$ / 36 W 200 $\mu\Omega$ / 36 W
Operating Temperature Range	-40 °C ~ +170 °C
TCR on Test Points (+20 °C to +130 °C)	±200 ppm/°C for 50 $\mu\Omega$ ±150 ppm/°C for 100 $\mu\Omega$ 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.

* Limited to dipping terminals

How to Order

Model	CSM 2F - 6918 - L050 J 2 2
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	
2 = Fully Tinned Terminals and Resistive Element	
Plated Sense Pins	

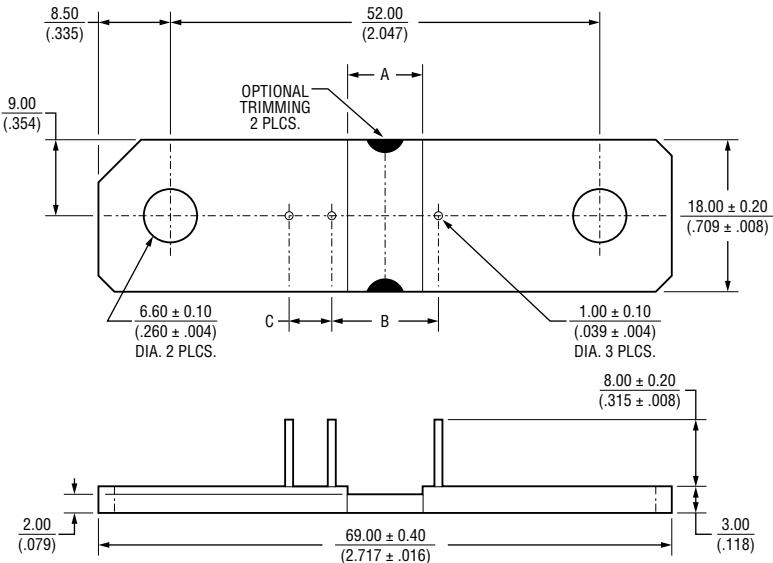
* RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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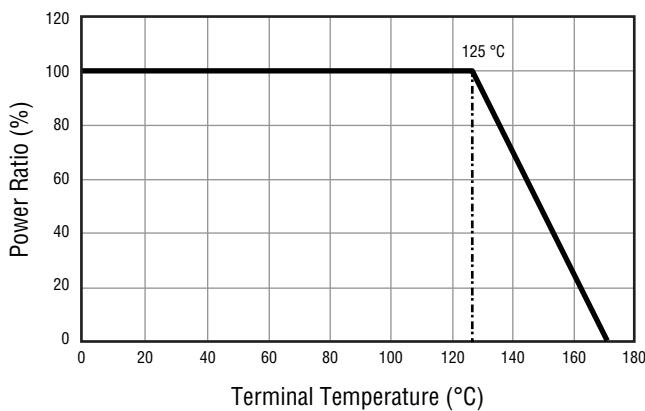


CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant. See www.P65Warnings.ca.gov

Product Dimensions

Part Number	Dim A	Dim B	Dim C
CSM2F-6918-L050J22	4.70 (.185)	7.87 (.310)	—
CSM2F-6918-L100J22	9.40 (.370)	12.57 (.495)	—
CSM2F-6918-L200J22	20.0 (.787)	23.18 (.913)	—
CSM2F-6918-L050J32	4.70 (.185)	7.87 (.310)	5.59 (.220)
CSM2F-6918-L100J32	9.40 (.370)	12.57 (.495)	5.59 (.220)
CSM2F-6918-L200J32	20.0 (.787)	23.18 (.913)	5.59 (.220)

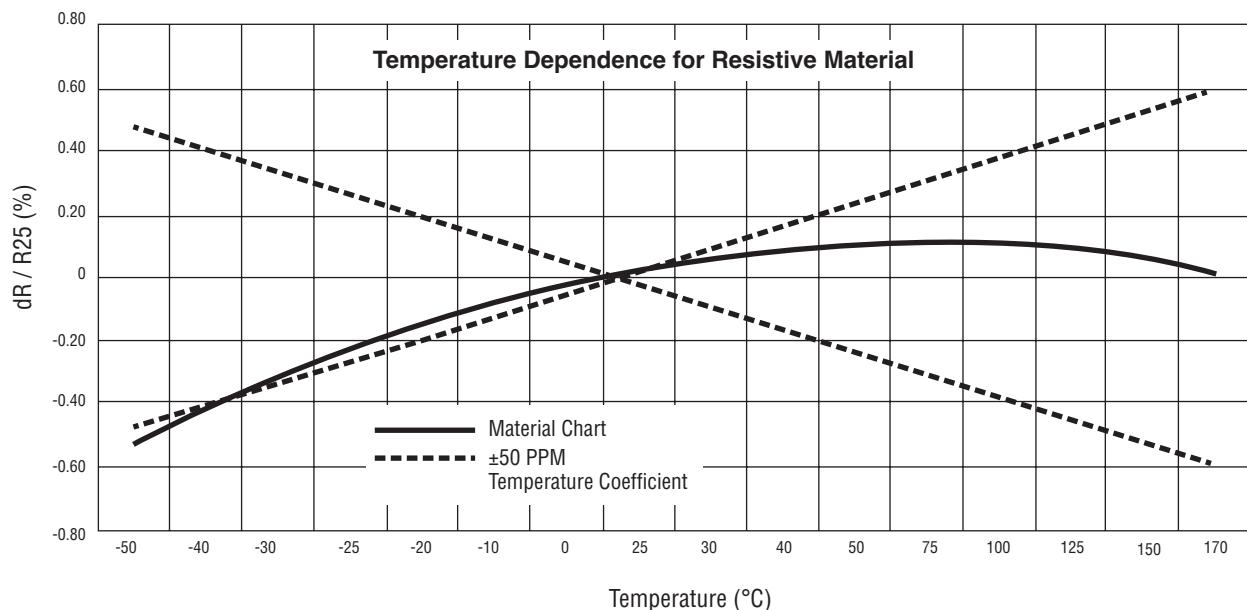
Note: plated sense pins: Nickel barrier and 100% Sn.

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$ **Power Derating Curve****General Specifications**

Moisture Sensitivity Level 1
 ESD Classification Level 6
 per AEC-Q200-002,
 $\geq 25,000$ 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**BOURNS®****Americas:** Tel: +1 951-781-5500 • Email: americus@bourns.com**Mexico:** Tel: +52-614-478-0400 • Email: mexicus@bourns.com**Asia:** Tel: +886-2-2562-4117 • Email: asiacus@bourns.com**EMEA:** Tel: +36 88 885 877 • Email: europus@bourns.comwww.bourns.com

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