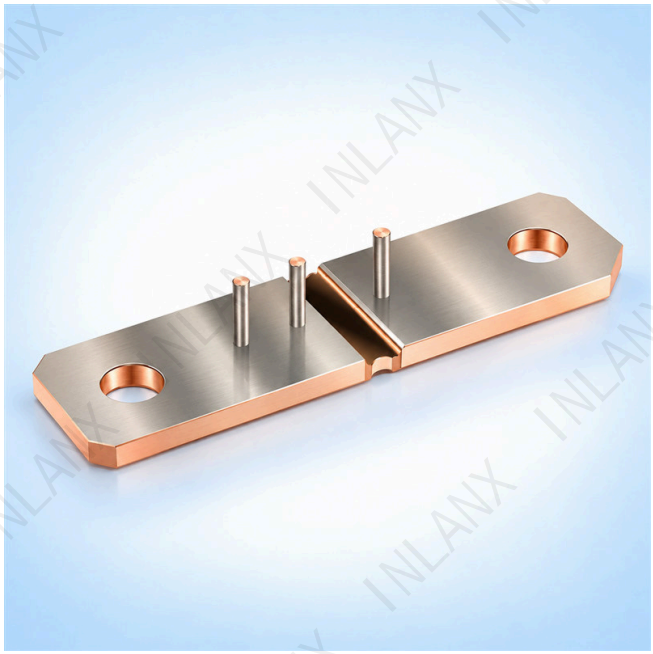
CSM2F-6918 Shunt Resistor with Sense Pins

Features

- 36 W continuous at 125°C terminal temperature
- High pulse power; maximum torque 25 Nm
- Inductance <5 nH
- Tinned terminals and plated sense pins
- RoHS and AEC-Q200 compliant



Applications

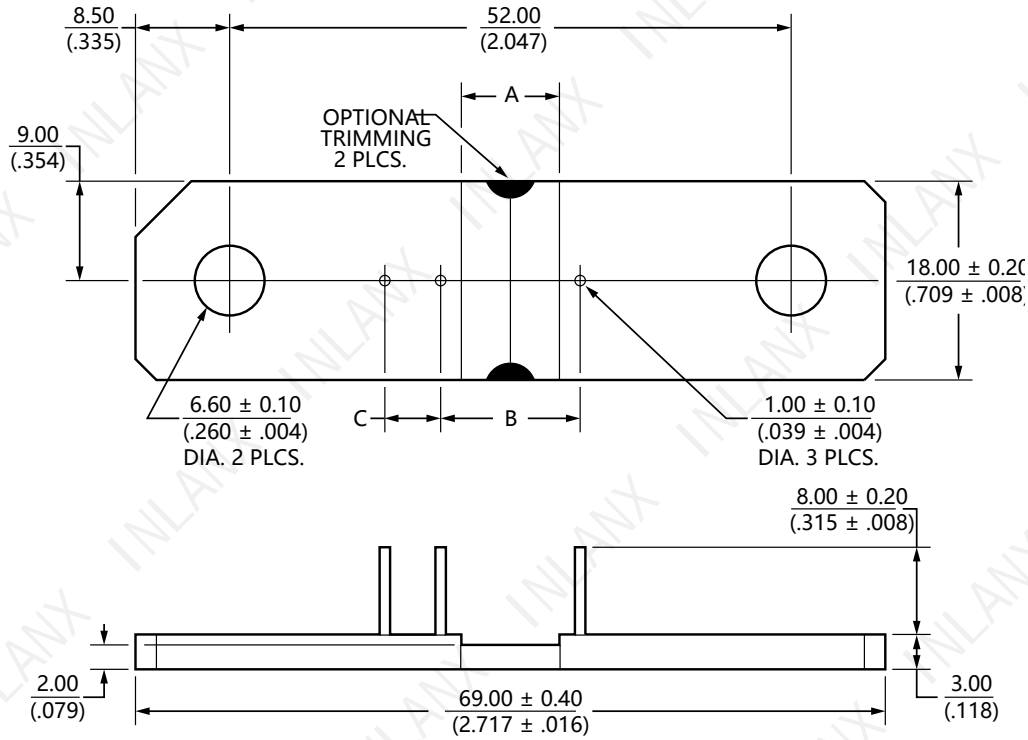
Battery management, hybrid/EV current sensing, bus bars, welding equipment and frequency converters.

Electrical Characteristics

Characteristic	Model CSM2F-6918 with Sense Pins
Resistance Range / Power Rating @ 125 °C**	50 µΩ / 36 W 100 µΩ / 36 W
Operating Temperature Range	-40 ℃ ~ +170 ℃
TCR on Test Points (+20 °C to +130 °C)	±150 ppm/°C for 50 µΩ and 100 µΩ
TCR Resistance Alloy***	< 50 ppm/°C
Inductance	< 5 nH
Resistance Tolerance	±5 %

**Power rating refers to terminal temperature. ***Refer to the TCR curve for the full temperature range.

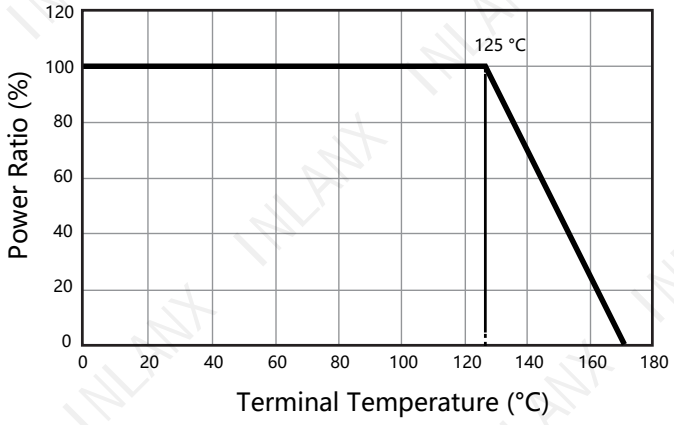
Mechanical Dimensions • mm (inch)

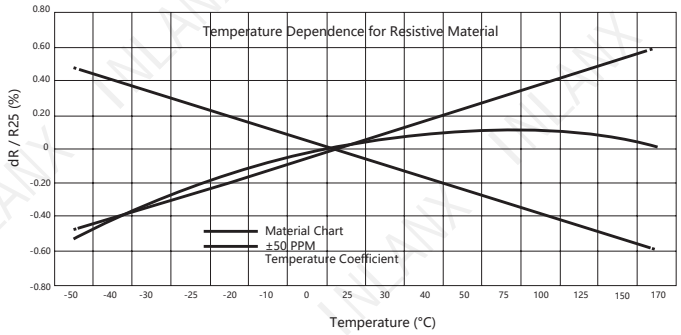


Part Number	A mm (inch)	B mm (inch)	C mm (inch)
CSM2F-6918-L050J21	4.70 (.185)	7.80 (.307)	—
CSM2F-6918-L100J21	9.40 (.370)	12.50 (.492)	—
CSM2F-6918-L050J31	4.70 (.185)	7.80 (.307)	5.59 (.220)
CSM2F-6918-L100J31	9.40 (.370)	12.50 (.492)	5.59 (.220)

Sense-pin plating: nickel barrier and 100% tin.

Power Derating & TCR





Environmental & Reliability Characteristics

Characteristic	Test Condition	DTR 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.

*Solderability test applies only to dipping terminals.

Ordering Information

Example: CSM2F -6918 -L050 J 2 1. L represents the decimal point; L050 = 50 μΩ; J = ±5%; 2 or 3 sense pins; finish 1 = tinned terminals and plated sense pins.

Packaging & General Specifications

High-impact polystyrene tray: 30 pcs/tray, 210 pcs/box; 460×320 mm (18.110×12.598 in). Moisture sensitivity level 1; ESD level 6, ≥25,000 V air discharge per AEC-Q200-002. Source revision 01/26.