

Features

- Up to 50 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-7036 Series – Shunt Resistor with Sense Pins & Fully Tinned Terminals

Electrical Characteristics

Characteristic	Model CSM2F-7036 with Sense Pins	
Resistance Range / Power Rating @ 125 °C**	$25~\mu\Omega$ / $50~W$ $50~\mu\Omega$ / $50~W$ $100~\mu\Omega$ / $50~W$	
Operating Temperature Range	-40 °C ~ +170 °C	
TCR on Test Points (+20 °C to +130 °C)	± 200 ppm/°C for 25 $\mu\Omega$ ± 150 ppm/°C for 50 $\mu\Omega$ and 100 $\mu\Omega$	
TCR Resistance Alloy***	< 50 ppm/°C	
Inductance	< 12 nH	
Resistance Tolerance	±5 %	

Terminal temperature

Environmental Characteristics

Additional Information

Click these links for more information:









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	
	CSM 2F - 7036 - L100 J 2 2
Model	
No. of Terminals & Style —	
Size (Metric) —	
Resistance Code (Milliohms) "L" Represents Decimal Point L100 = 100 MicroOhms	
Resistance Tolerance J = ±5 %	
Number of Pins — 2 or 3	
Surface Finishing —	

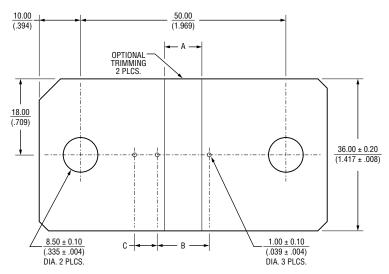
2 = Fully Tinned Terminals and Resistive Element Plated Sense Pins



^{***} For full TCR range, refer to TCR curve.

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Product Dimensions



Part Number	Dim A	Dim B	Dim C
CSM2F-7036-L025J22	4.70 (.185)	7.87 (.310)	_
CSM2F-7036-L050J22	9.40 (.370)	12.57 (.495)	_
CSM2F-7036-L100J22	<u>20.0</u> (.787)	23.18 (.913)	_
CSM2F-7036-L025J32	4.70 (.185)	7.87 (.310)	5.59 (.220)
CSM2F-7036-L050J32	9.40 (.370)	12.57 (.495)	5.59 (.220)
CSM2F-7036-L100J32	<u>20.0</u> (.787)	23.18 (.913)	5.59 (.220)

Note: Fully plated: Nickel barrier and 100% Sn.

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

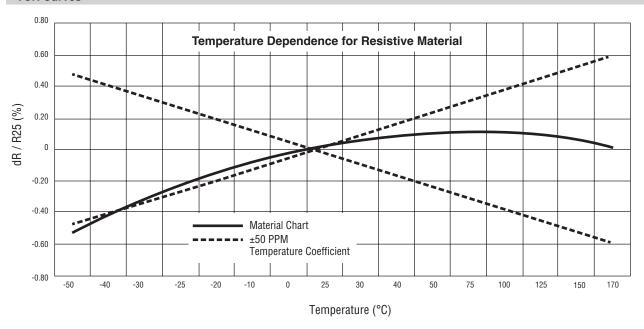


Power Derating Curve 120 125 °C 100 Power Ratio (%) 80 60 40 20 0 40 20 100 140 160 0 180 Terminal Temperature (°C)

General	Specifications

Packaging Specifications

TCR Curves



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