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Features

- Up to 50 W permanent power
- High pulse power rating
- Maximum fastening torque: 10 Nm
- Tinned terminals
- Customized versions available
- AEC-Q200 and RoHS* compliant

Applications

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

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Model CSM2F-7036 Series Current Sense Resistor

Electrical Characteristics

Characteristic	Model CSM2F-7036 Series
Resistance Range / Power Rating @ 70 °C**	50 MicroOhms / 50 Watts
Operating Temperature Range	-40 °C to +170 °C
TCR on Test Points	±150 PPM/°C
TCR Resistance Alloy***	< 50 PPM/°C
Thermal EMF (μV/K)	< 0.25 for 50 MicroOhms
Resistance Tolerance	±1 %, ±5 %

*** Terminal temperature*
**** For full TCR range, refer to TCR curve.*

How to Order

CSM 2F - 7036 - L050 J 01

- Model
- No. of Terminals & Style
- Size (Metric)
- Resistance Code (Milliohms)
  "L" Represents Decimal Point
  L050 = 50 MicroOhms
- Resistance Tolerance
  F = ±1 %
  J = ±5 %
- Packaging
  01 = Bulk Pack (50 pcs. per bag)
  T1 = Tray Pack (28 pcs. per tray)

Environmental Characteristics

Characteristic	Test Condition	ΔTR Max.
Thermal Shock	-55 to +150 °C / 1000 cycles	±1.0 %
Resistance to Soldering Heat	+260 °C / 10 seconds	±0.5 %
High Temperature Exposure	+170 °C / 1000 hours	±1.5 %
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	1000 hours at max. load, derated at 125 °C	±1.0 %
Solderability	J-STD-002	95 % coverage min.
Short time Overload	5 times rated power for 5 seconds	±0.5 %

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

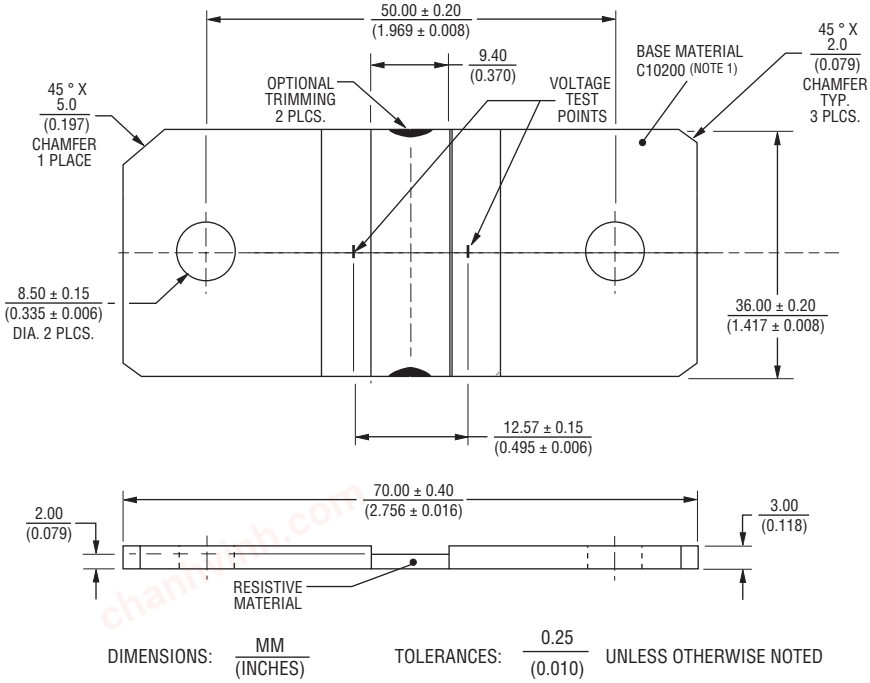
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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Model CSM2F-7036 Series Current Sense Resistor

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Product Dimensions

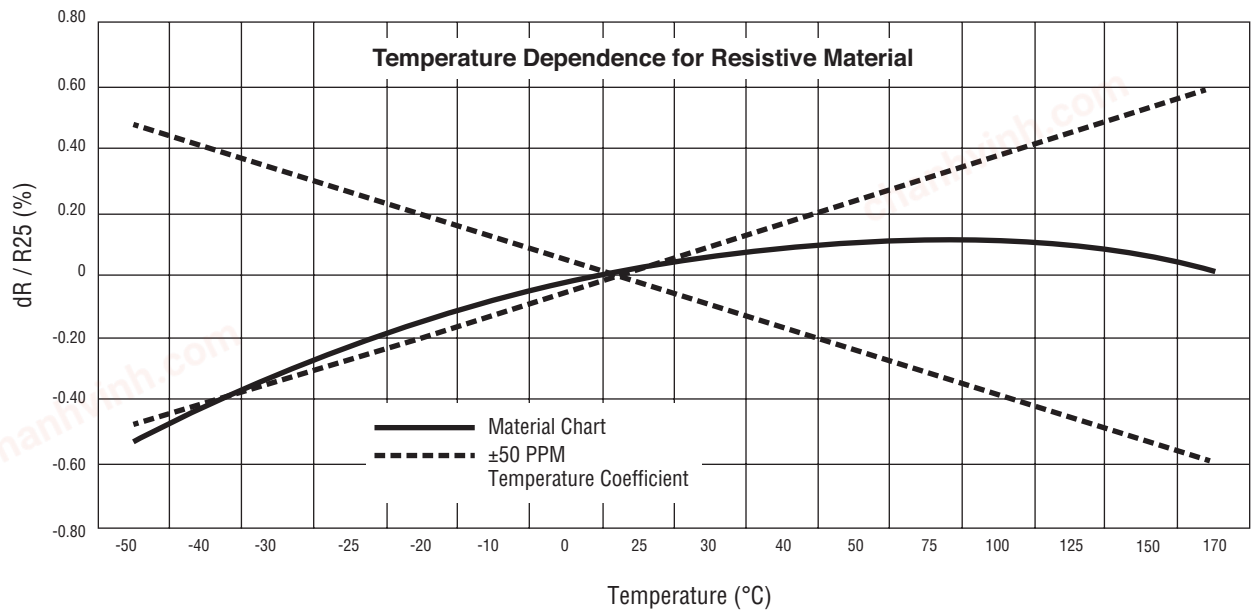


DIMENSIONS: MM / (INCHES) TOLERANCES: 0.25 / (0.010) UNLESS OTHERWISE NOTED

NOTES:

1. Tinned Terminals: 100 % Sn, RoHS Complaint, JESD201 Class-2, ST200 Process, 2.5 -8 micrometers, NI underplate 1.5- 4 micrometers.
2. Base Material Copper: C10200 Temper 1/2 Hard.

TCR Curves



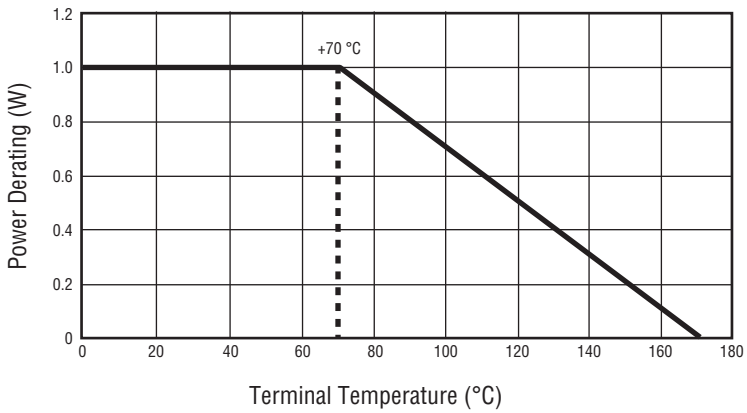
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Model CSM2F-7036 Series Current Sense Resistor

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Power Derating Curve



General Specifications

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

Packaging Specifications

Standard Bulk Pack
..... 50 pcs. per plastic bag;
100 pcs. per box
Tray Pack ..... 28 pcs. per high impact
polysterene tray;
140 pcs. per box

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