



## Features

- Tinned terminals
- Up to 50 W permanent power
- High pulse power rating
- Maximum fastening torque: 10 Nm
- 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

## Model CSM2F-7036 Series Current Sense Resistor w/Tinned Terminals

### Electrical Characteristics

Characteristic	Model CSM2F-7036 Series
Resistance Range / Power Rating @ 70 °C**	25 $\mu\Omega$ / 50 W 50 $\mu\Omega$ / 50 W
Operating Temperature Range	-40 °C to +170 °C
TCR on Test Points	$\pm 150$ ppm/°C
TCR Resistance Alloy***	< 50 ppm/°C
Thermal EMF ( $\mu\text{V/K}$ )	< 0.25 for 50 $\mu\Omega$
Resistance Tolerance	$\pm 5$ %

\*\* Terminal temperature

\*\*\* For full TCR range, refer to TCR curve.

### Additional Information

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### Environmental Characteristics

Characteristic	Test Condition	$\Delta\text{TR Max.}$
Thermal Shock	-55 to +150 °C / 1000 cycles	$\pm 1.0$ %
Resistance to Soldering Heat	+260 °C / 10 seconds	$\pm 0.5$ %
High Temperature Exposure	+170 °C / 1000 hours	$\pm 1.5$ %
Low Temperature Storage	-65 °C / 24 hours	$\pm 0.5$ %
Biased Humidity Test	+85 °C, 85 % RH, 10 % bias, 1000 hours	$\pm 0.5$ %
Mechanical Shock	100 g, 6 milliseconds, 5 pulses	$\pm 0.5$ %
Vibration, High Frequency	10-2000 Hz in 1 minute, 3 directions, 12 hours	$\pm 0.5$ %
Load Life	1000 hours at max. load, derated at 70 °C	$\pm 1.0$ %
Solderability	J-STD-002	95 % coverage min.

### How to Order

CSM 2F - 7036 - L050 J 0 1

Model \_\_\_\_\_

No. of Terminals & Style \_\_\_\_\_

Size (Metric) \_\_\_\_\_

Resistance Code (Milliohms) \_\_\_\_\_  
 "L" Represents Decimal Point  
 L025 = 25 MicroOhms  
 L050 = 50 MicroOhms

Resistance Tolerance \_\_\_\_\_  
 J =  $\pm 5$  %

Packaging \_\_\_\_\_  
 0 = Bulk Pack (50 pcs. per bag)  
 T = Tray Pack (28 pcs. per tray)

Surface Finishing \_\_\_\_\_  
 1 = Tinned Terminals



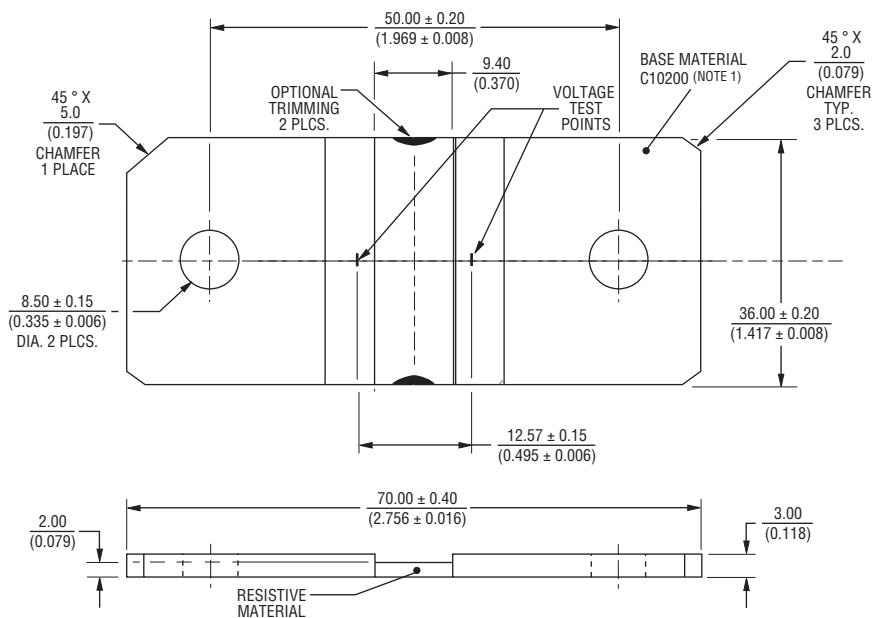
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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



## Product Dimensions



### NOTES:

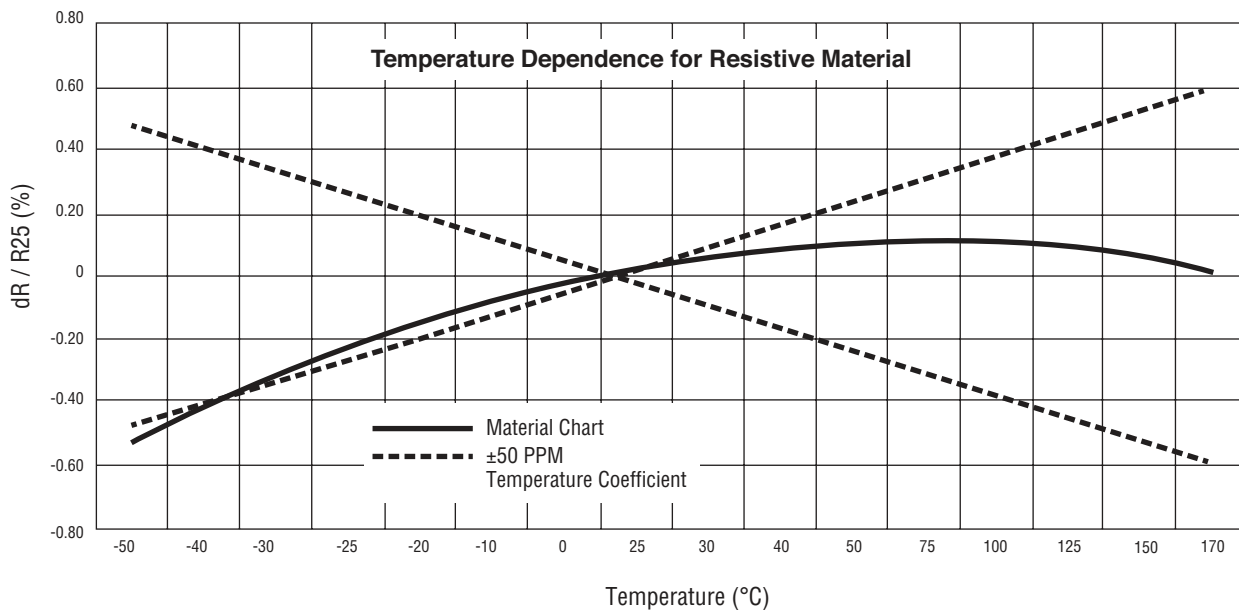
1. Tinned Terminals: 100 % Sn, RoHS Complaint, JESD201 Class-2, ST200 Process, 2.5 -8 micrometers, NI underplate 1.5- 4 micrometers.
2. Base Material Copper: C10200 Temper 1/2 Hard.

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

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

UNLESS OTHERWISE NOTED

## TCR Curves

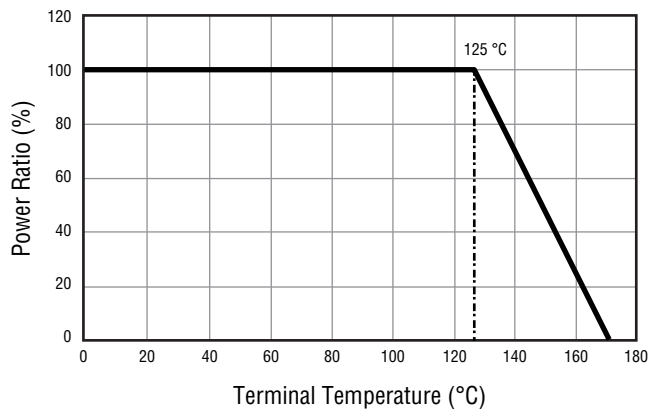


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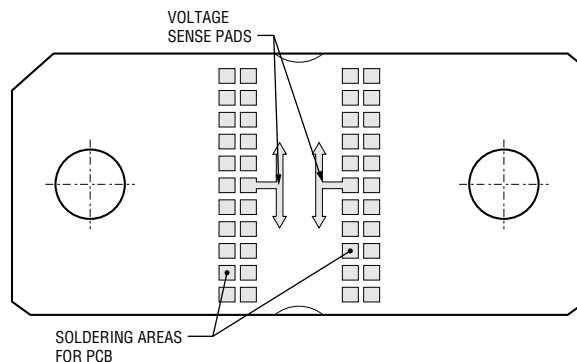
**Power Derating Curve**



**Packaging Specifications**

Bulk Pack.....50 pcs. per plastic bag  
 100 pcs. per box  
 Tray Pack .....28 pcs. per high impact polystyrene tray  
 140 pcs. per box  
 Size..... 235 mm x 225 mm (9.252 in. x 8.858 in.)

**Reference Pad for SMD Mounting**



**General Specifications**

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

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