



## Features

- Fully tinned terminals and resistive element
- Up to 50 W permanent power
- High pulse power rating
- Maximum fastening torque: 10 Nm
- AEC-Q200 compliant
- RoHS compliant\* / lead free
- Customized versions available

## Applications

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

## Model CSM2F-7036 Series Current Sense Resistor / Fully Tinned

### Electrical Characteristics

Characteristic	Model CSM2F-7036 Series
Resistance Range / Power Rating @ 70 °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)	$\pm 200$ ppm/°C for 25 $\mu\Omega$ $\pm 150$ ppm/°C for 100 $\mu\Omega$ and 200 $\mu\Omega$
TCR Resistance Alloy***	< 50 ppm/°C
Inductance	< 12 nH
Resistance Tolerance	$\pm 5$ %

\*\* Terminal temperature

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

### Additional Information

Click these links for more information:



[PRODUCT](#) [TECHNICAL LIBRARY](#) [INVENTORY](#) [SAMPLES](#) [CONTACT](#)

### Environmental Characteristics

Characteristic	Test Condition	$\Delta$ TR Max.
Thermal Shock	-55 °C to +150 °C / 1000 cycles	$\pm 0.5$ %
High Temperature Exposure	+170 °C / 1000 hours	$\pm 1.0$ %
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	+125 °C / 2000 hours at maximum current rating	$\pm 1.0$ %
Solderability*	J-STD-002	95 % coverage min.
ESD	25 KV $\pm$ polarity	$\pm 0.5$ %

\* Limited to dipping terminals

### How to Order

CSM 2F - 7036 - L050 J T 2

Model \_\_\_\_\_

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

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

Resistance Code (Milliohms) \_\_\_\_\_

“L” Represents Decimal Point  
L025 = 25 MicroOhms  
L050 = 50 MicroOhms  
L100 = 100 MicroOhms

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

Packaging \_\_\_\_\_  
0 = Bulk Pack (50 pcs. per bag)  
T = Tray Pack (30 pcs. per tray)

Surface Finishing \_\_\_\_\_  
2 = Fully Tinned Terminals and Resistive Element



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

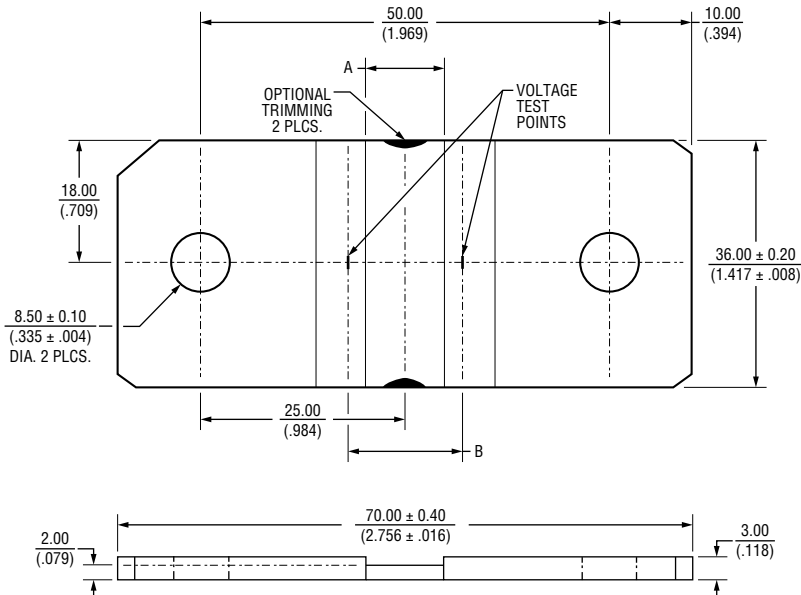
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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# Model CSM2F-7036 Series Current Sense Resistor / Fully Tinned



## Product Dimensions



Part Number	Dim A	Dim B
CSM2F-7036-L025J02	$\frac{4.70}{(.185)}$	$\frac{7.87}{(.310)}$
CSM2F-7036-L050J02	$\frac{9.40}{(.370)}$	$\frac{12.57}{(.495)}$
CSM2F-7036-L100J02	$\frac{20.0}{(.787)}$	$\frac{23.18}{(.990)}$

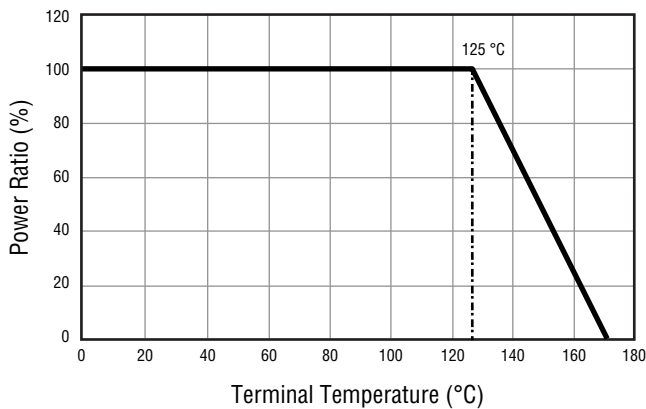
Note: Fully plated with nickel barrier and 100% Sn.

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

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

UNLESS OTHERWISE NOTED

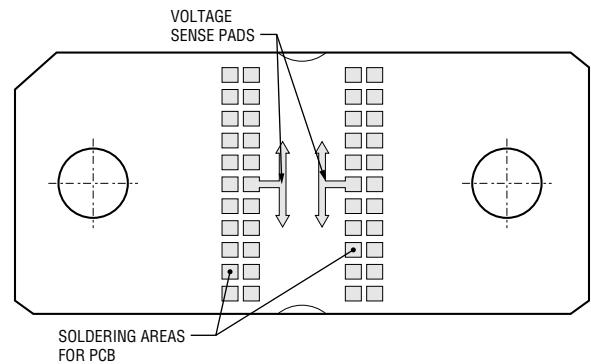
## Power Derating Curve



## General Specifications

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

## Reference Pad for SMD Mounting



## Packaging Specifications

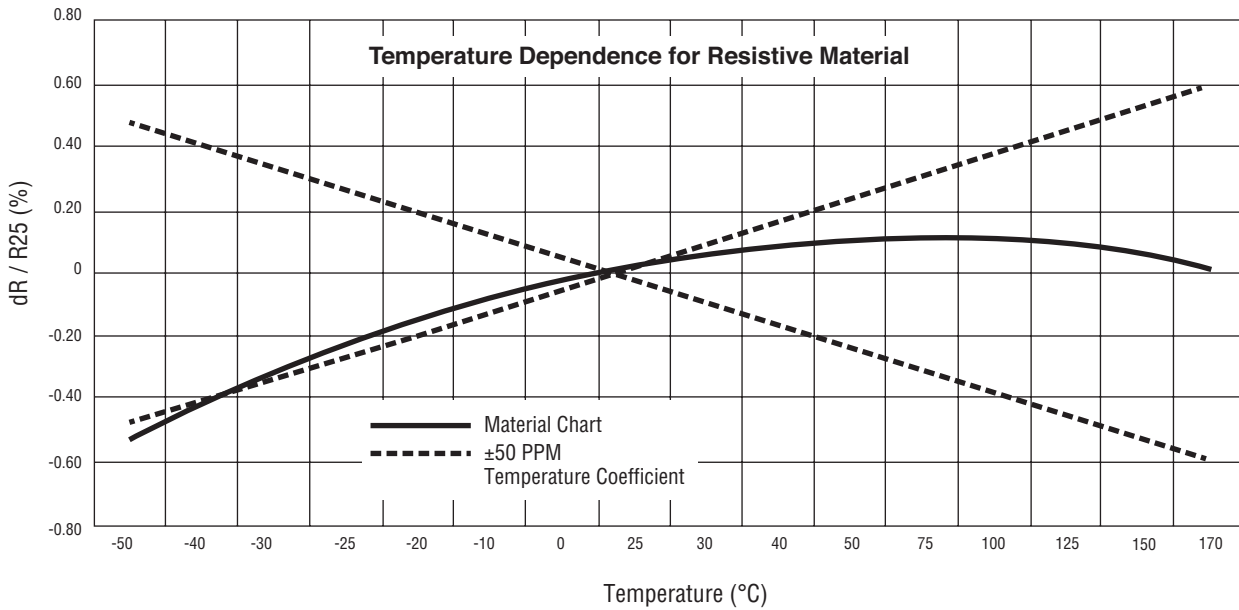
Bulk Pack.....50 pcs. per plastic bag  
 100 pcs. per box  
 Tray Pack ..... 30 pcs. per high impact polystyrene tray  
 150 pcs. per box  
 Size..... 235 mm x 225 mm (9.252 in. x 8.858 in.)

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TCR Curves



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