

## Features

- Bare copper terminals
- 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-8536 Series Current Sense Resistor w/Bare Copper Terminals

### Electrical Characteristics

Characteristic	Model CSM2F-8536 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)	$\pm 150$ ppm/°C for 25 $\mu\Omega$ and 50 $\mu\Omega$
TCR Resistance Alloy***	< 50 ppm/°C
Inductance $\mu\text{H}$	< 5 $\mu\text{H}$
Resistance Tolerance	$\pm 5$ %

\*\* Terminal temperature

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

### Additional Information

Click these links for more information:



### Environmental Characteristics

Characteristic	Test Condition	$\Delta\text{TR Max.}$
Thermal Shock	-55 °C to +150 °C / 1000 cycles	$\pm 1.0$ %
High Temperature Exposure	+170 °C / 1000 hours	$\pm 1.0$ %
Low Temperature Storage	-65 °C / 1000 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.

\* Limited to dipping terminals

### How to Order

CSM 2F - 8536 - L050 J T 0

Model \_\_\_\_\_

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

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

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

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

Packaging \_\_\_\_\_  
 0 = Bulk Pack (50 pcs. per bag)  
 T = Tray Pack (15 pcs. per tray)

Surface Finishing \_\_\_\_\_  
 0 = Bare Copper Terminals



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

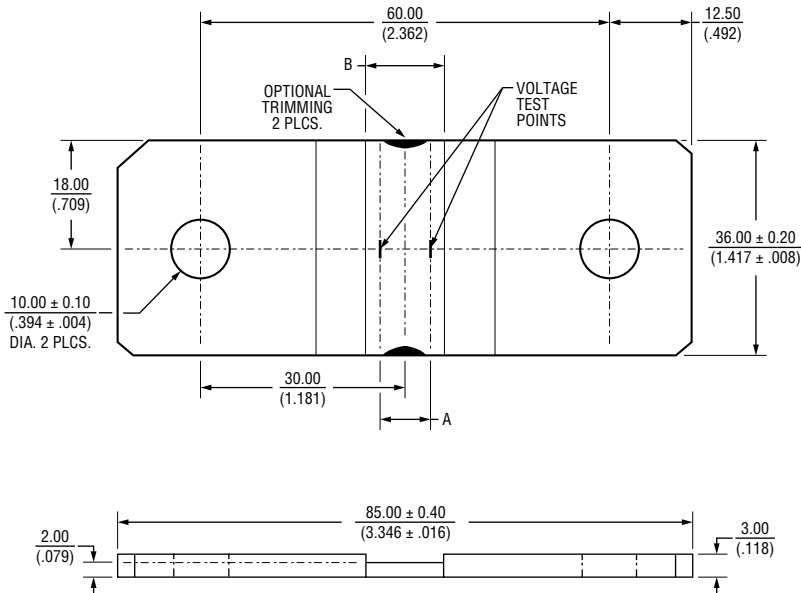
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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Model CSM2F-8536 Series Current Sense Resistor w/Bare Copper Terminals



Product Dimensions



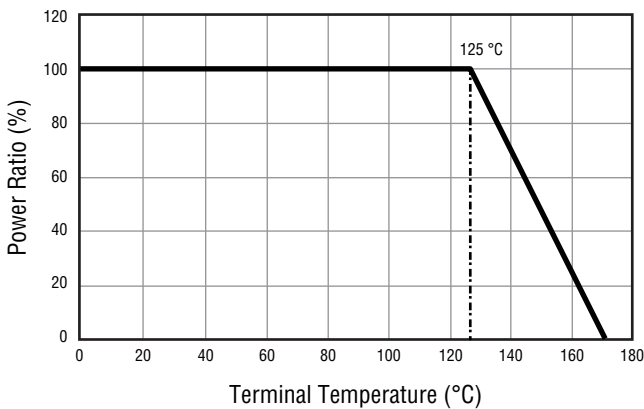
Part Number	Dim A	Dim B
CSM2F-8536-L025J00	$\frac{4.70}{(.185)}$	$\frac{7.87}{(.310)}$
CSM2F-8536-L050J00	$\frac{9.40}{(.370)}$	$\frac{12.57}{(.495)}$
CSM2F-8536-L100J00	$\frac{20.0}{(.787)}$	$\frac{23.18}{(.990)}$

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

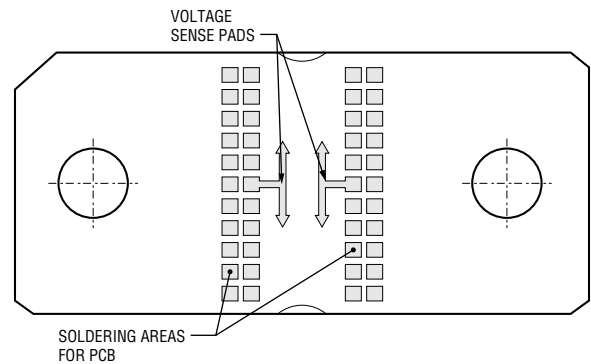
TOLERANCES:  $\frac{0.25}{(.010)}$

UNLESS OTHERWISE NOTED

Power Derating Curve



Reference Pad for SMD Mounting



General Specifications

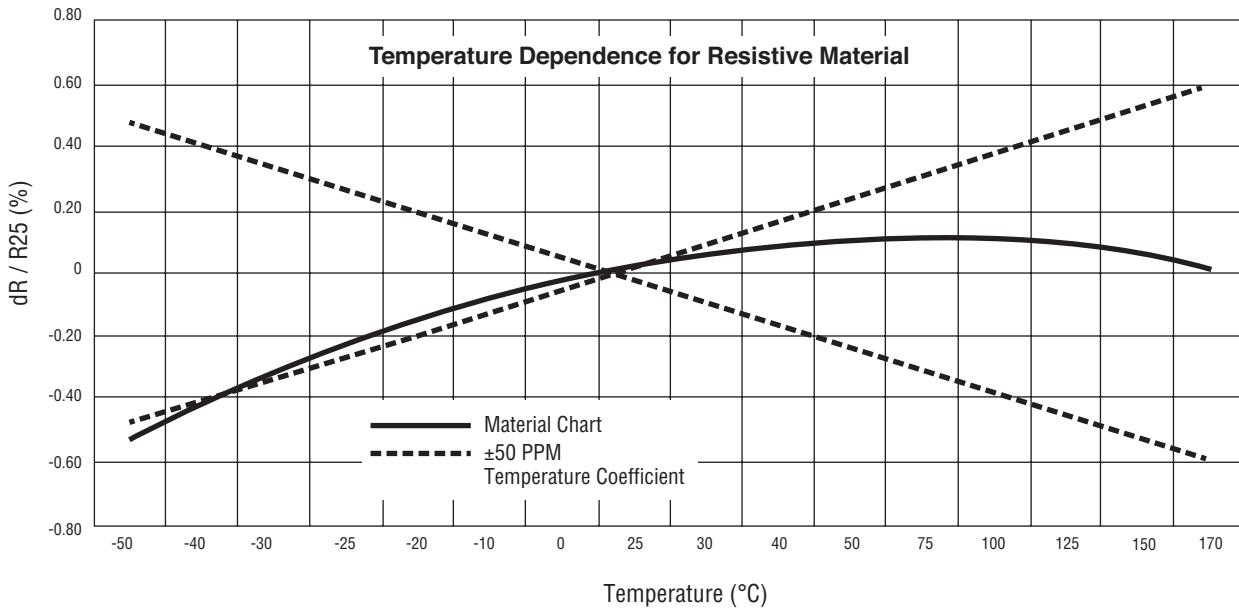
Moisture Sensitivity Level ..... 1  
 ESD Classification ..... Level 6  
 per AEC-Q200-002,  
 ≥ 25,000 V air discharge

Packaging Specifications

Bulk Pack.....50 pcs. per plastic bag  
 100 pcs. per box  
 Tray Pack ..... 15 pcs. per high impact polystyrene tray  
 105 pcs. per box  
 Size.....300 mm x 246 mm (11.811 in. x 9.685 in.)

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TCR Curves



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