

## 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)

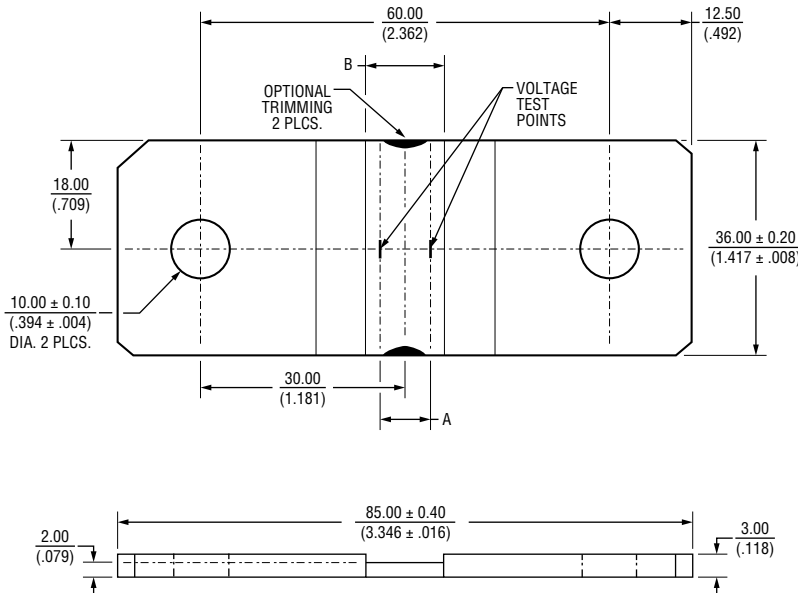
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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



Product Dimensions



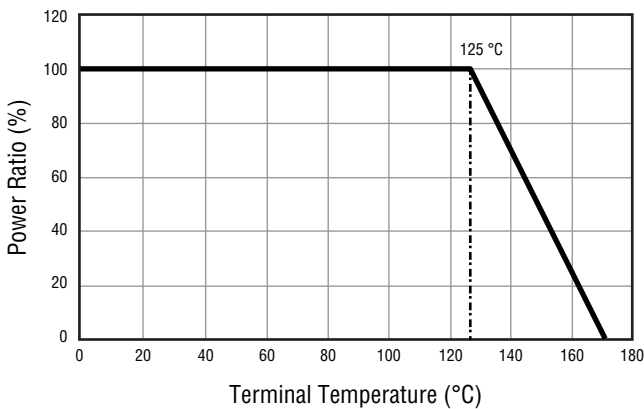
Part Number	Dim A	Dim B
CSM2F-8536-L025J00	$\frac{4.70}{(.185)}$	$\frac{7.87}{(.310)}$
CSM2F-8536-L050J00	$\frac{9.40}{(.370)}$	$\frac{12.57}{(.495)}$
CSM2F-8536-L100J00	$\frac{20.0}{(.787)}$	$\frac{23.18}{(.990)}$

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

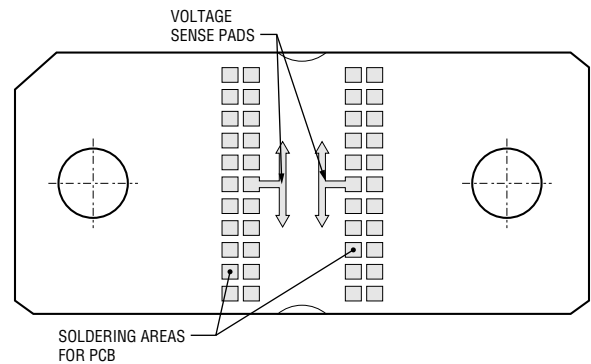
TOLERANCES:  $\frac{0.25}{(.010)}$

UNLESS OTHERWISE NOTED

Power Derating Curve



Reference Pad for SMD Mounting



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.)

General Specifications

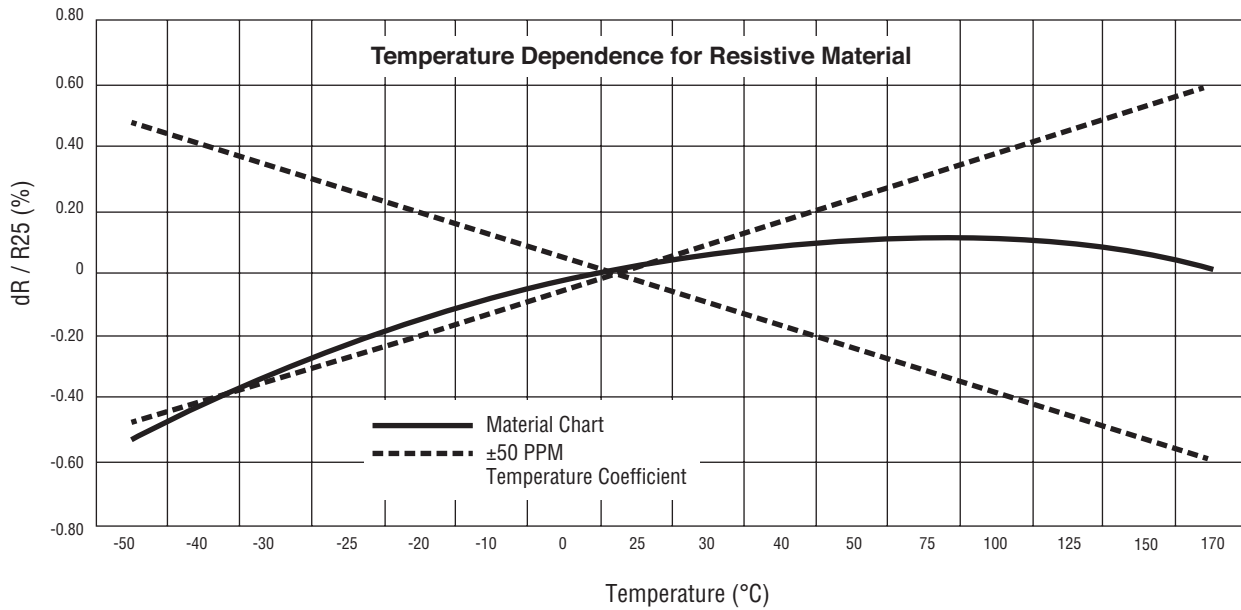
Moisture Sensitivity Level.....	1
ESD Classification.....	Level 6 per AEC-Q200-02, ≥ 25,000 V air discharge

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TCR Curves



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