

TCS8440T Current Sensing Resistors

These components are four-terminal, bus-bar, metal strip current shunts. Assembled using electron beam welding. They also feature excellent long term stability, less than 100ppm/°C TCR. Applications include : Battery charging current control of automotive electronics, current detection in precise power sources, constant current sources, industrial power conversion circuits, HEVs, fuel cells and constant electronic loads.



GENERAL SPECIFICATIONS

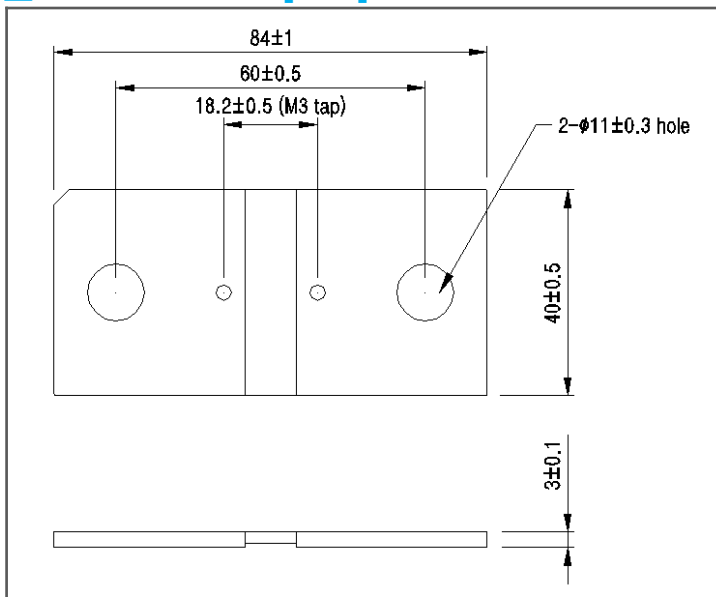
| Model | *Power Rating (*At terminal temp.≤140°C) | Resistance | Continuous current (*At terminal temp.≤140°C) | Resistance Tolerance |
|----------|---|------------|--|----------------------|
| TCS8440T | Up to 36 [W] | 0.05 [mΩ] | 840 [A] | J [±5%] |

* Referred to power derating curve.

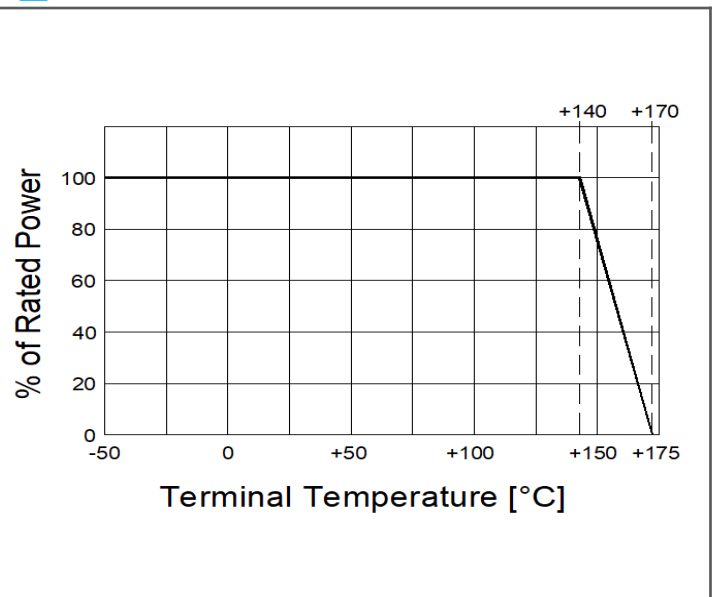
CHARACTERISTICS

| Test | Condition | | | |
|---------------------------|----------------------------------|---|--|--|
| Operating Temperature | -40°C~+170°C | | | |
| Temperature Coefficient | (+20°C and +60°C) Max.±100ppm/°C | | | |
| High temperature exposure | ΔR≤±1.0% | +125°C, 1000hrs. | | |
| Temperature cycle | ΔR≤±1.0% | -55°C(30min.) to +125°C(30min.) 1000cycles, 1min. Max. transition time. | | |
| Resistance to solvent | ΔR≤±1.0% | OKEM Clean or equivalent | | |
| Vibration | ΔR≤±0.5% | 10-2000Hz, 5g's for 20min., 12cycles each of 3orientations | | |
| Operational Life | ΔR≤±1.0% | Rated power, 1.5hrs "On", 0.5hrs "Off", for 1000hrs. (TA=20°C, Terminal temp.≤70°C) | | |

DIMENSIONS [mm]



DERATING CURVE



ORDERING PROCEDURE EXAMPLE

| | | | |
|---------|-----------------------------|------------------|-----------|
| TCS8536 | T | 0.05mΩ | J |
| Model # | Tap type Voltage sensing | Resistance Value | Tolerance |