# TGHG Series

## Precision Current Sense Resistors

The TGHG Series uses state of the art technology to provide highly reliable, non inductive performance. This resistor is ideal for many current monitoring and controls applications.

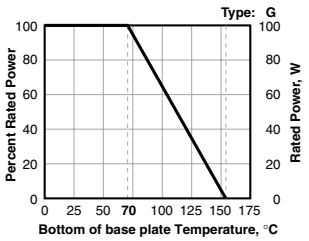
### FEATURES

- Resistance values beginning at 0.5mΩ
- Non Inductive
- Four terminal Kelvin connection
- SOT 227 Package
- Four terminals to isolate measurement path from current flow path
- Accuracy in a high power package

### CHARACTERISTICS

| | |
|---|---|
| **Heat Sink** | Nickel-plated copper |
| **Terminal Nuts** | American standard 303 stainless steel |
| **Standard Resistance Values** | 0.5mΩ-1Ω, others on request |
| **Resistance Tolerances** | 0.5% (0.0005 thru 0.022Ω), 1%, 5% |
| **Temperature Coefficient** | referenced to 25°C, ΔR taken at -15°C and +105°C, <60ppm/°C; <500ppm/°C for resistance range 27mΩ-49mΩ) |
| **Power Rating** | 100W at 70°C case temperature; 50Amp permanent (higher on request) |
| **Dielectric strength** | 1000VDC, higher value on request |
| **Heat Resistance** | $R_{th}$ <0.56K/W |
| **Protection class** | acc. to IEC 950/CSA22.2 950/M -89 and EN 60950.88:2 |
| **Working Temp. Range** | -55°C to +155°C |
| **Max. Torque for Contacts** | 1.3Nm 8 (static) |
| **Max Torque for Base Plate** | 1.5 Nm (static) |

### Derating




Best results can be reached by using a thermal transfer compound with a heat conductivity of better than 1W/mK

**THIS PRODUCT IS DESIGNED FOR USE WITH PROPER HEATSINKING.**

Maximum base plate temperature of the resistor must be monitored and kept within specified limits to establish the power rating. Best technique is to attach a thermocouple to the side of the base plate of the resistor. Temperature of plastic housing or heat sink cannot be used to establish rating of the resistor.

(continued)

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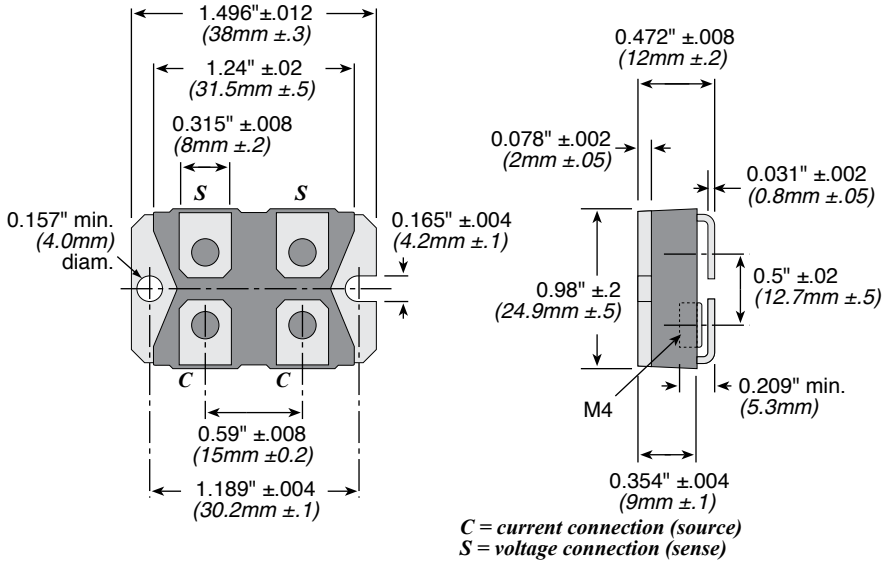
## DIMENSIONS




*C = current connection (source)*
*S = voltage connection (sense)*

## ORDERING INFORMATION

**Configuration**
C = current sense

**E = RoHS compliant**

**T G H G C R 0 2 0 0 F E**

| TGH = series | Wattage | Resistance Value | Tolerance |
|---|---|---|---|
| | G = 100W | Example: R0200=0.02 ohms | D= 0.5%<br>F= 1%<br>J= 5% |

### Standard part numbers

| Ohms | 100 Watt TGHG |
|---|---|
| 0.00050 | TGHGCR0005FE |
| 0.00100 | TGHGCR0010FE |
| 0.00200 | TGHGCR0020FE |
| 0.00500 | TGHGCR0050FE |
| 0.01000 | TGHGCR0100FE |
| 0.01500 | TGHGCR0150FE |
| 0.02000 | TGHGCR0200FE |
| 0.02500 | TGHGCR0250FE |
| 0.05000 | TGHGCR0500FE |
| 0.0750 | TGHGCR0750FE |
| 0.1000 | TGHGCR1000FE |