

- TCR to $\pm 2\text{ppm}/^\circ\text{C}$
- 0.001 to 20 Ohm
- Power Rating to 40Watt
- Resistance Tolerances to $\pm 0.1\%$
- Very Low Inductive
- Excellent Long Term Stability
- Package Style 2321 4 Terminal
- Foil Technology



Applications: Power Modules, Current Monitoring, Frequency Converters, Switch Mode Power Supplies

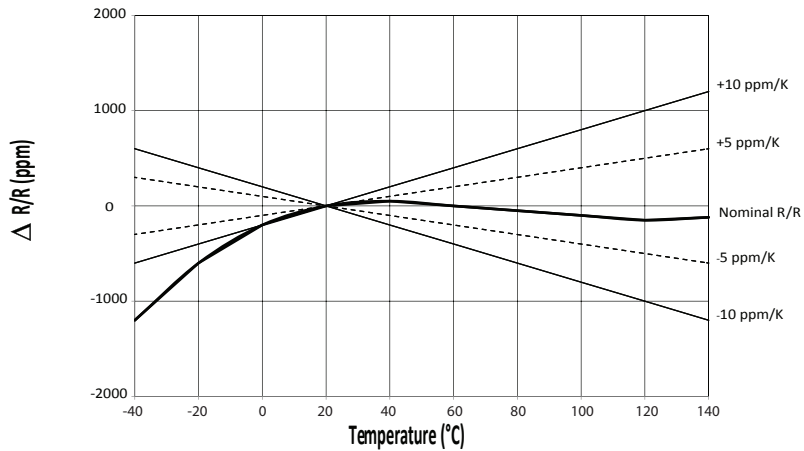
SPECIFICATIONS

| Type | PCS |
|--|---|
| Resistance Range | 0.001 to 20 Ohm |
| Power rating (70°C) | 3 W |
| Power Rating with Heat Sink | 40W |
| Tolerances: from 0.001 Ohm from 0.01 Ohm | .5% / 1% / 2% / 5% 0.1% / 0.25% / 0.5% / 1% / 2% / 5% |
| Thermal Resistance | 2.0 C/W |
| Stability (2000h) | 0.1% / 0.2% / 0.5% (depends on stress) |
| Temperature Coefficient Standard (N) Option 1 (M) Option 2 (L) upon request for selected values | $\pm 10\text{ppm}/^\circ\text{C}$ (20 to 60°C) $\pm 5\text{ppm}/^\circ\text{C}$ (20 to 60°C) $\pm 2\text{ppm}/^\circ\text{C}$ (20 to 60°C) other specifications upon request |
| Isolation Voltage | 300 VDC |
| Max. Current | 150 A |
| Thermal EMF | < 1 $\mu\text{V}/\text{K}$ |
| Operating Temperature Range | -40 to 130°C |
| Resistor Material | CuMnSn-Foil |
| Substrate | Anodized aluminium |
| Connector Material | Cu / tinned |
| Housing | Epoxy |
| Terminals | 4 |
| Max Torque | 0.8 Nm |

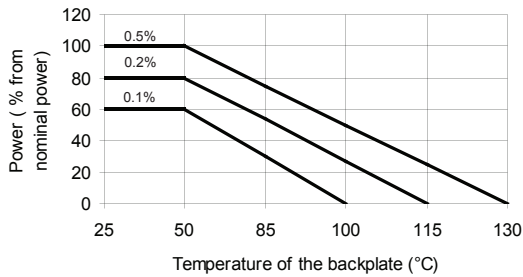
Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR
 PCS 10 Ohms 1% 10PPM

Temperature Coefficient



Derating



Power Rating Notes -

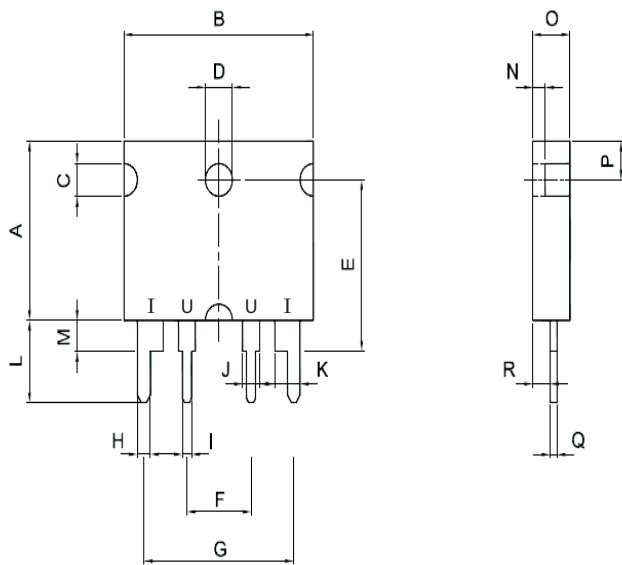
The PCS Series Resistors must be attached to a suitable heat-sink. The maximum internal resistor temperature is 130°C.

To specify an appropriate heatsink use the following formula :

$$R_{\theta H} = \frac{T_{MAX} - (P * R_{\theta R}) - T_A}{P}$$

Where: $R_{\theta H}$ = Thermal Resistance of Heatsink (K/W)
 $R_{\theta R}$ = Thermal Resistance of Resistor (K/W)
 T_{MAX} = Maximum Temperature of Resistor
 T_A = Ambient Temperature of Heatsink (°C)
 P = Power Through Resistor (W)

Dimensions



I = Current
 U = Voltage

| Dimension | mm | tol. (±mm) | inches | tol. (±inches) |
|-----------|-------|------------|--------|----------------|
| A | 17.25 | ±0.2 | 0.68 | ±0.008 |
| B | 22.30 | ±0.2 | 0.88 | ±0.008 |
| C | 3.20 | ±0.1 | 0.13 | ±0.004 |
| D | Ø3.20 | ±0.1 | Ø0.13 | ±0.004 |
| E | 16.75 | ±0.008 | 0.66 | ±0.2 |
| F | 7.62 | ±0.008 | 0.30 | ±0.2 |
| G | 17.78 | ±0.008 | 0.70 | ±0.2 |
| H | 1.50 | ±0.2 | 0.06 | ±0.008 |
| I | 1.10 | ±0.008 | 0.04 | ±0.2 |
| J | 2.00 | ±0.004 | 0.08 | ±0.1 |
| K | 3.00 | ±0.004 | 0.12 | ±0.1 |
| L | 8.00 | ±0.008 | 0.31 | ±0.2 |
| M | 3.00 | ±0.008 | 0.12 | ±0.2 |
| N | 1.50 | ±0.004 | 0.06 | ±0.1 |
| O | 4.50 | ±0.004 | 0.18 | ±0.1 |
| P | 3.75 | ±0.008 | 0.15 | ±0.2 |
| Q | 0.80 | ±0.1 | 0.03 | ±0.004 |
| R | 2.10 | ±0.008 | 0.08 | ±0.2 |