

- TO-220 Housing
- Rated Power 10 Watts
- Resistances from 0.5 to 150K Ohms
- High Stability Foil Resistance Elements
- Resistance Tolerance to  $\pm 0.02\%$
- Operating Temperature  $-55^{\circ}\text{C}$  to  $+155^{\circ}\text{C}$
- Low Inductance ( $<50\text{nH}$ ) and Thermal EMF



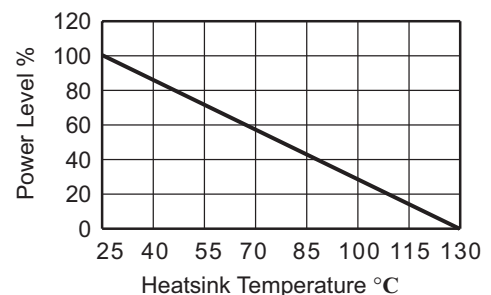
Riedon's TO-220 precision foil resistors satisfy demanding applications for high accuracy and stable power resistors housed in the convenient TO-220 case. The PF1220's Nichrome foil resistance element makes a wide resistance range available. It is bonded to an  $\text{Al}_2\text{O}_3$  substrate ensuring excellent power dissipation and stability. Careful choice of materials and rugged construction ensure a reliable component, and the very small tolerance and temperature coefficient provide high precision in difficult applications.

## SPECIFICATIONS

<b>Resistance Range</b>	- 0.5 to 150K Ohms ( 100 Ohm Max. for 4-Terminal )
<b>Free Air Power Rating</b>	- 1.5 Watts ( $T_{\text{ambient}}=70^{\circ}\text{C}$ )
<b>Power Rating on Heatsink</b>	- 10 Watts ( $T_{\text{heatsink}}=25^{\circ}\text{C}$ )
<b>Thermal Resistance</b>	- $10.8^{\circ}\text{C/W}$
<b>Temperature Coefficient</b>	- $\pm 1\text{ppm}/^{\circ}\text{C}$ ( $+20^{\circ}\text{C}$ to $+60^{\circ}\text{C}$ ) $\pm 3\text{ppm}/^{\circ}\text{C}$ ( $-55^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ ) $\pm 5\text{ppm}/^{\circ}\text{C}$ ( $-55^{\circ}\text{C}$ to $+155^{\circ}\text{C}$ )
<b>Stability</b>	- 0.01%
<b>Thermal EMF</b>	- $< 1\mu\text{V}/^{\circ}\text{C}$
<b>Proof Voltage</b>	- 1KVDC
<b>Maximum Current</b>	- 25 A
<b>Operating Temperature</b>	- $-55^{\circ}\text{C}$ to $+155^{\circ}\text{C}$
<b>Resistance Element</b>	- Nichrome Foil
<b>Substrate</b>	- $\text{Al}_2\text{O}_3$
<b>Housing</b>	- Epoxy or PPS
<b>Leads</b>	- Cu, Tinned, 2 or 4 pin

Resistance	Tolerances Available ( $\pm\%$ )
0.5 to $<10\Omega$	0.1, 0.25, 0.5, 1
$\geq 10$ to $<50\Omega$	0.05, 0.1, 0.25, 0.5, 1
$\geq 50\Omega$	0.02, 0.05, 0.1, 0.25, 0.5, 1

**PF1220 Power Derating Curve**

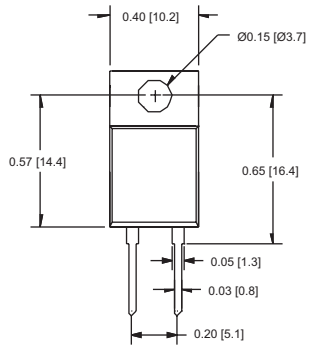


### Ordering information:

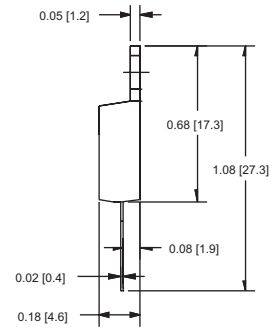
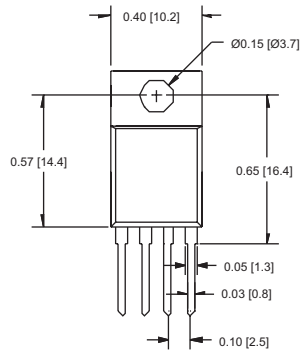
Part Number - Resistance - Tolerance - TCR  
 Example: **PF1220 0.5 Ohm 0.1% 5ppm**

**Dimensions**

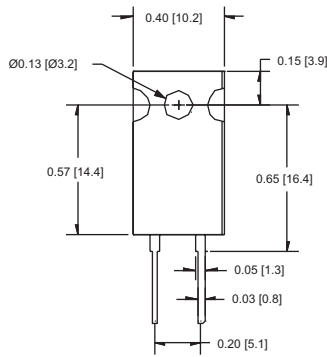
**PF1220**



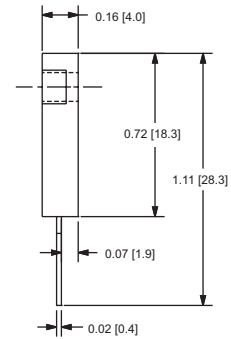
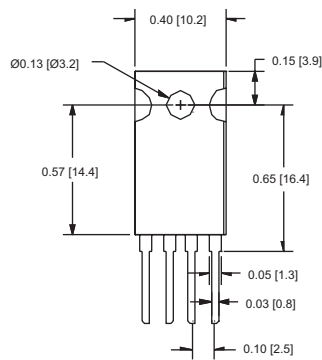
**PF1220-4**



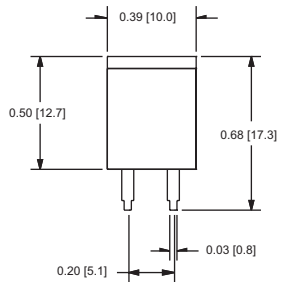
**PF1221**



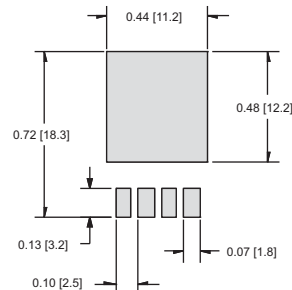
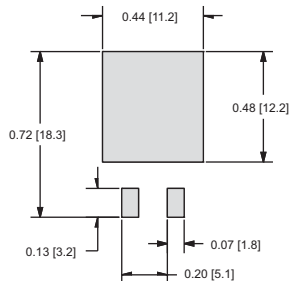
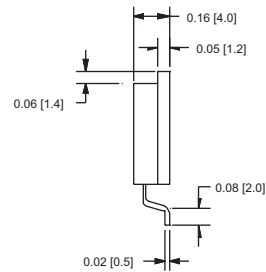
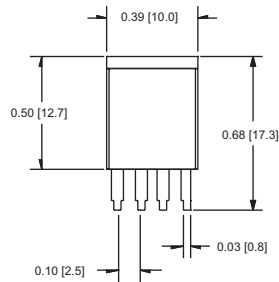
**PF1221-4**



**PF1220S**



**PF1220S-4**



**Solder Pad Layouts**