

**BOURNS®**

## Features

- Formerly a Riedon™ product
- Resistances from 0.1 to 20K ohms
- Power rating to 100 watts
- Resistance tolerances to  $\pm 1\%$
- High stability film resistance elements
- Back plate isolated from both pins
- Low inductance
- Excellent pulse handling
- TO-247 housing
- RoHS compliant\*

## PF2472 Series – Riedon™ TO-247 Power Resistors by Bourns

### Electrical Characteristics

Characteristic	Model
	PF2472
Power Rating (with heat sink) <sup>1</sup>	100 W
Power Rating (without heat sink) <sup>2</sup>	3 W
Thermal Resistance	1.3 °C/W
Resistance Range <sup>3</sup>	0.1 (min.) to 20K (max.) ohms
Tolerances	$\pm 1\%$ $\pm 5\%$
Temperature Coefficient	$\pm 200 \text{ PPM/}^\circ\text{C}$ ( $R \ge 20 \Omega$ ) $\pm 300 \text{ PPM/}^\circ\text{C}$ ( $0.1 \Omega \le R < 20 \Omega$ )

#### Notes:

1. Power rating based on 25 °C flange temperature
2. Power rating based on 25 °C ambient temperature.
3. Consult factory for higher or lower values.

### Environmental Performance

Specification	$\Delta R$	Test Conditions
Load Life	$\pm 1\% + 0.05 \Omega$	25 °C, 90 min. on, 30 min. off, 1000 hrs.
Humidity Resistance	$\pm 1\% + 0.05 \Omega$	40 °C, 90-95 % RH, DC 0.1 W, 1000 hrs.
Temperature Cycle	$\pm 0.25\% + 0.05 \Omega$	-55 °C for 30 min., +155 °C for 30 min., 5 cycles
Solder Heat	$\pm 0.1\% + 0.05 \Omega$	+350 °C, 3 s.
Vibration	$\pm 0.25\% + 0.05 \Omega$	0.35 mm or 50 m/s <sup>2</sup> , 10 Hz-500 Hz-10 Hz 2 hr/axis

### Additional Information

Click these links for more information:



### General Specifications

Temperature Range.....	-55 °C to +175 °C
Dielectric Strength .....	2500 VAC
Max. Operating Voltage .....	700 V or $\sqrt{P} \cdot R$ , whichever is less
Inductance .....	50 nH
Insulation Resistance ...	>1000 megohms
Terminal Finish .....	Tin-plated copper
Mass .....	6.3 g
Flammability Rating .....	94-V0



### 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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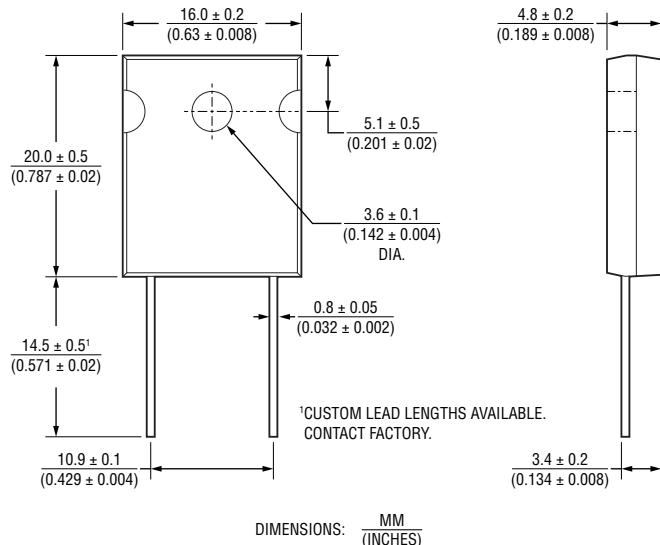
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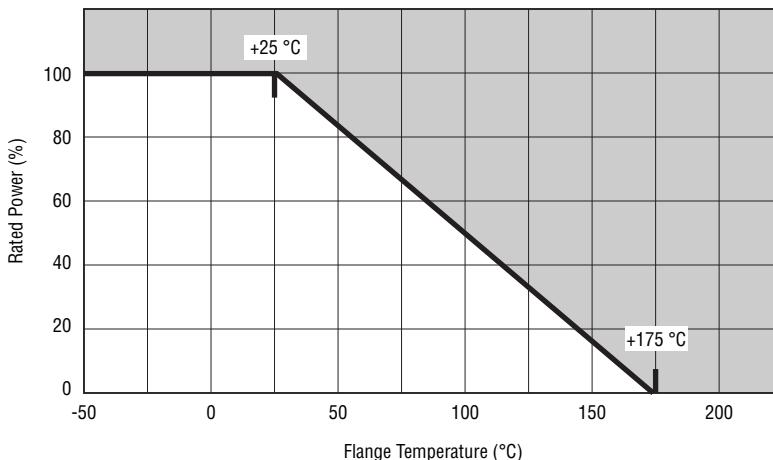
# PF2472 Series – Riedon™ TO-247 Power Resistors by Bourns

**BOURNS®**

## Product Dimensions



## Derating Curve



## Power Rating Notes

The PF2472 Series Power Resistors must be attached to a suitable heat sink. The maximum internal resistor temperature is 175 °C.

To specify an appropriate heat sink use the following formula:

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

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

## How to Order

PF2472 - 1R J 1

Model  PF2472

Resistance Code

For values <1K Ω,  
 "R" represents decimal point  
 (Example: 0R1 = 0.1 Ω);  
 For values 1K-10K Ω,  
 "K" represents decimal point  
 (Example 1K = 1K Ω,  
 1K5 = 1.5K Ω)

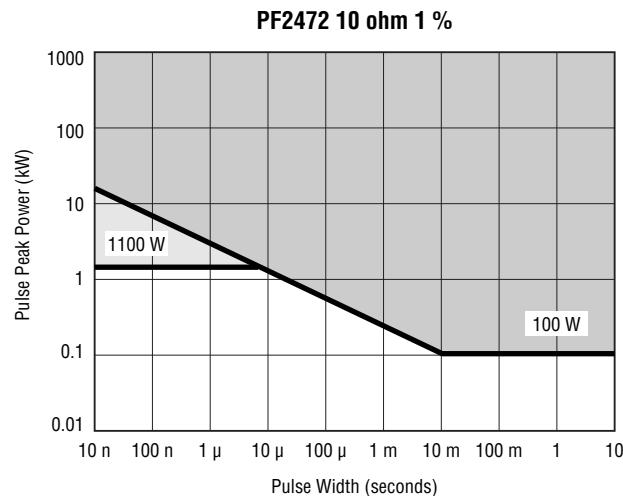
Tolerance   
 $F = \pm 1\%$   
 $J = \pm 5\%$

Internal Use

## Packaging Specifications

Tube ..... 25 pcs. per tube

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**Pulse Durability**

Tentative continuous pulse power allowance at duty 0.01. Load life test will be necessary in actual equipment because curve may be changed by resistance, repetition, duty, and operating temperature.

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