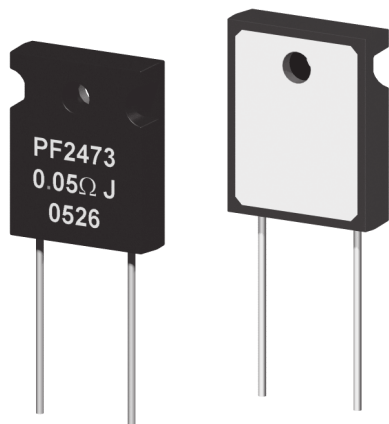


# PF2470 Series

TO-247 Power Film Resistors



- TO-247 Housing
- Rated Power to 140 Watts
- Resistances from 0.02 to 51K Ohms
- High Stability Film Resistance Elements
- Resistance Tolerance to  $\pm 1\%$
- Low Inductance ( <50nH )
- Isolated Back Plate

## SPECIFICATIONS

Type	Power Rating		Thermal Resistance	Resistance Range <sup>3</sup>		Tolerances	Temperature Coefficients
	Heatsink <sup>1</sup>	Free Air <sup>2</sup>		Min	Max		
PF2473	140W	5W	0.9°C/W	0.02Ω	51KΩ	$\pm 1\%$ ( $R \geq 0.10\Omega$ ) $\pm 5\%$	$\pm 50\text{ppm}/^\circ\text{C}$ ( $R \geq 10\Omega$ ) $\pm 100\text{ppm}/^\circ\text{C}$ ( $0.1\Omega \leq R < 10\Omega$ ) $\pm 250\text{ppm}/^\circ\text{C}$ ( $R < 0.1\Omega$ )
PF2472	100W	3W	1.3°C/W	0.02Ω	51KΩ	$\pm 1\%$ ( $R \geq 0.10\Omega$ ) $\pm 5\%$	$\pm 50\text{ppm}/^\circ\text{C}$ ( $R \geq 10\Omega$ ) $\pm 100\text{ppm}/^\circ\text{C}$ ( $0.1\Omega \leq R < 10\Omega$ ) $\pm 250\text{ppm}/^\circ\text{C}$ ( $R < 0.1\Omega$ )

- <sup>1</sup> Power rating based on 25°C Flange Temperature  
<sup>2</sup> Power rating based on 25°C Ambient Temperature  
<sup>3</sup> Consult Factory for Higher or Lower Values

Specification	Value	
Temperature Range	-55°C to +155°C	
Dielectric Strength	2500 VAC	
Max. Operating Voltage	700 V or $\sqrt{P \cdot R}$ , whichever is less	
Inductance	PF2472 11.7nH / PF2473 12.3nH	
Insulation Resistance	>1000 Meg-Ohm	
Environmental Performance	$\Delta R$	Test Conditions
Load Life	$\pm 1\% + 0.05\Omega$	25°C, 90 min ON, 30 min OFF, 1000 hr
Humidity Resistance	$\pm 1\% + 0.05\Omega$	40°C, 90-95% RH, DC 0.1W, 1000 hr
Temperature Cycle	$\pm 0.25\% + 0.05\Omega$	-55°C for 30 min, +155°C for 30 min, 1000 hr
Solder Heat	$\pm 0.1\% + 0.05\Omega$	+350°C, 3s
Vibration	$\pm 0.25\% + 0.05\Omega$	IEC60068-2-6



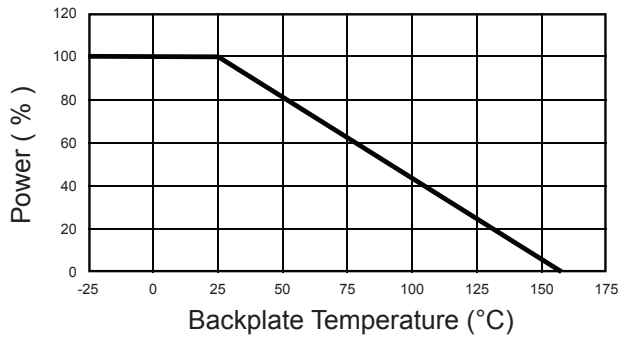
# PF2470 Series

TO-247 Power Film Resistors



## SPECIFICATIONS (continued)

Power Derating Curve



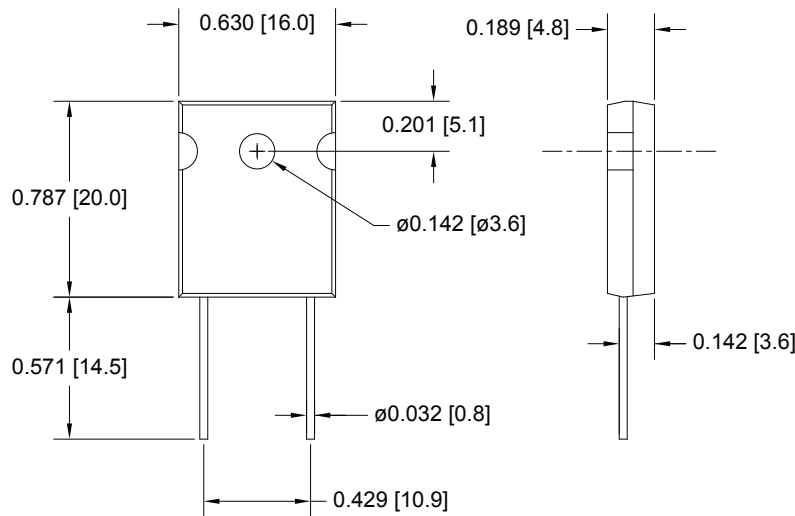
### Power Rating Notes -

The PF2470 Series Thin Film Resistors must be attached to a suitable heatsink. The maximum internal resistor temperature is 155°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 ( °C/W )  
 $R_{\theta R}$  = Thermal Resistance of Resistor ( °C/W )  
 $T_{MAX}$  = Maximum Temperature of Resistor  
 $T_A$  = Ambient Temperature of Heatsink ( °C )  
 $P$  = Power Through Resistor ( W )



### Mounting Notes -

The PF2470 Series Thin Film Resistors must be attached to a suitable heatsink. Mount resistor using thermal grease to a clean, flat surface. Use a compression washer to provide 150 to 300 pounds ( 665 to 1330N ) of mounting force. Torque mounting screw to 8 in-lbs ( 0.9 N-m ).

Back plate is isolated from both pins.

## Ordering Information

Part Description: Part Type - Resistance - Tolerance  
Example: PF2472 10 Ohm 1%



