

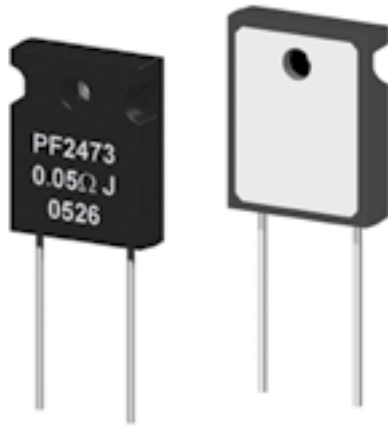


**THE DATASHEET OF
NCA9535PW-Q100J**



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)
- Excellent Pulse Handling
- Isolated Back Plate

SPECIFICATIONS

Type	Power Rating		Thermal Resistance	Resistance Range ³		Tolerances	Temperature Coefficients
	Heatsink ¹	Free Air ²		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 $\geq 10\Omega$) $\pm 100\text{ppm}/^\circ\text{C}$ (0.1Ω ≤ R < 10Ω) $\pm 250\text{ppm}/^\circ\text{C}$ (R < 0.1Ω)
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 $\geq 10\Omega$) $\pm 100\text{ppm}/^\circ\text{C}$ (0.1Ω ≤ R < 10Ω) $\pm 250\text{ppm}/^\circ\text{C}$ (R < 0.1Ω)

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

Specification	Value	
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	PF2472 11.7nH / PF2473 12.3nH	
Insulation Resistance	>1000 Meg-Ohm	
Terminal Finish	Tin Plated Copper	
Mass	6.3g	
Flammability Rating	94-V0	
Environmental Performance	ΔR	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

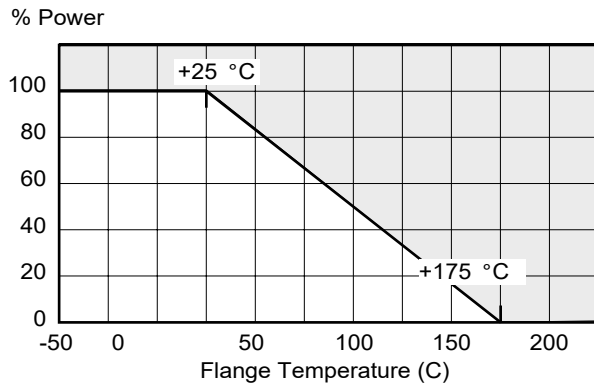
PF2470 Series

TO-247 Power Film Resistors



SPECIFICATIONS (continued)

Power Derating



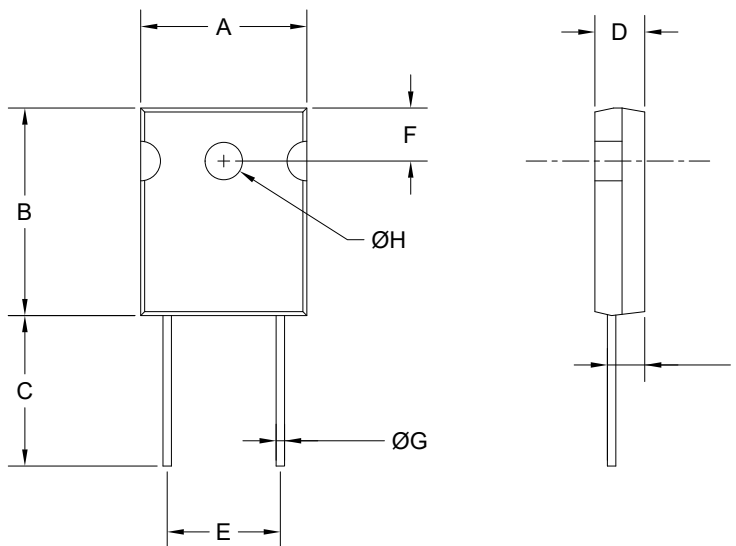
Power Rating Notes -

The PF2470 Series Thin Film Resistors must be attached to a suitable heatsink. The maximum internal resistor temperature is 175°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)



Dimension	mm	tolerance ±	Inches	tolerance ±
A	16.0	0.2	0.63	0.008
B	20.0	0.5	0.787	0.02
C*	14.5	0.5	0.571	0.02
D	4.8	0.2	0.189	0.008
E	10.9	0.1	0.429	0.004
F	5.1	0.5	0.201	0.02
G	0.8	0.05	0.032	0.002
H	3.6	0.1	0.142	0.004
I	3.6	0.2	0.142	0.008

* Custom lead lengths available. Contact factory.

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.

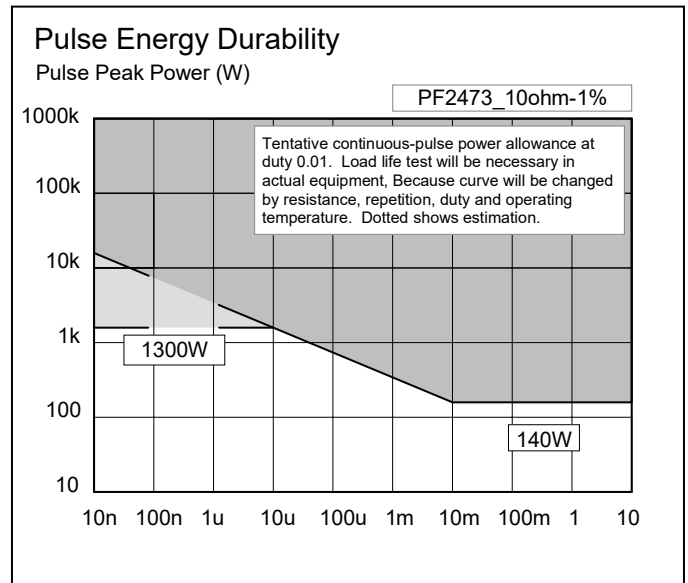
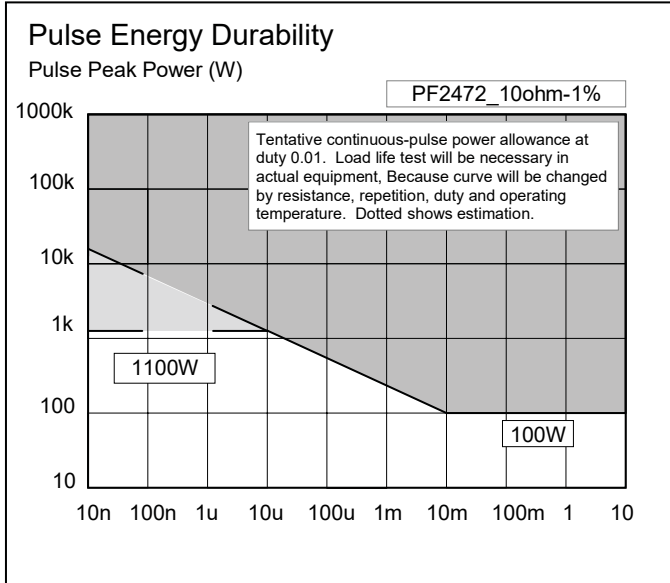
Ordering Information

Part Description: Part Type - Resistance - Tolerance

Example: PF2472 10 Ohm 1%

PF2470 Series

TO-247 Power Film Resistors



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