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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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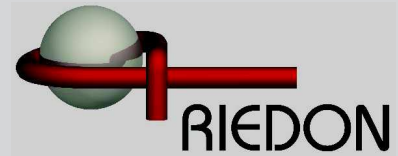
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# PF2270 Series

Power Film Resistors



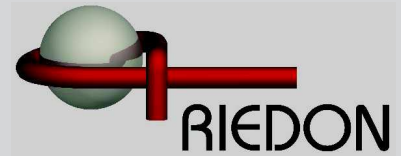
- Resistances from 0.1 Ohms to 1M Ohms
- Power Rating to 600 Watts
- Resistance Tolerances to  $\pm 1\%$
- TCR of  $\pm 100\text{ppm/C}$
- TO-227 (TO-238) Housing
- M4x5mm Screws Included
- Isolated Back Plate

## SPECIFICATIONS

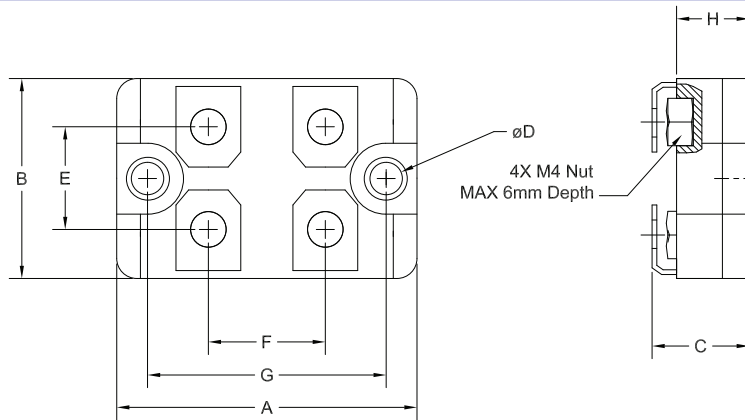
Type	PF2272	PF2274	PF2276
Power Rating (with heatsink)	200 W	300 W	600 W
Power Rating (without heatsink)	5 W	5 W	5 W
Additional Lead Configurations	Y / Z	Y / Z	Y / Z
Resistance Range	0.1 to 1M Ohms (0.1 to 1 Ohm only available Terminal Z)	0.1 to 1M Ohms (0.1 to 1 Ohm only available Terminal Z)	50 to 1K Ohms (0.1 to 1 Ohm only available Terminal Z)
Resistance Values	E12 ( Plus 2 Ohm and 5 Ohm )		
Thermal Resistance	0.35 °C/W	0.32 °C/W	0.11 °C/W
Tolerances	5% ( 1% optional )		
Temperature Coefficient	$\pm 100\text{ ppm/}^\circ\text{C}$		
Operating Temperature	-55°C to 155°C		
Inductance	14 nH		
MAX Continuous Voltage	$\sqrt{P * R}$		
MAX Continuous Current	100A		
Isolation Voltage	2500VAC		
Load Life ( 25°C, 90m ON, 30m OFF, 1000hr )	$\pm 1\%$		
Humidity ( 40°C, 90-95% RH, DC0.1W, 1000hr )	$\pm 1\%$		
Temp. Cycle ( -55°C 30m, 120°C 30m, 20X )	$\pm 1\%$		
Vibration ( 0.75mm, 100m/s <sup>2</sup> , 10-54Hz, 10X, XYZ )	$\pm 0.25\%$		
Insulation Resistance	> 1000 MegOhm		
Flammability	UL94 V-0		
Substrate	AIO	Alumina / Cu Flange	AlN
Weight (grams)	20	30	30
Torque	Terminals: 1.0 Nm Max / 0.6 Nm Recommended Mounting: 1.6 Nm Max / 1 Nm Recommended		

# PF2270 Series

Power Film Resistors



## SPECIFICATIONS (continued)



Dimension	mm	( ± mm )	inches	( ± inches )
A	38.0	0.2	1.50	0.008
B	25.0	0.2	0.98	0.008
C*	11.8	0.4	0.465	0.016
D	4.2	0.1	0.165	0.008
E	13.0	0.3	0.512	0.012
F	15.0	0.4	0.591	0.016
G	30.0	0.1	1.181	0.004
H	10.0	0.2	0.394	0.008

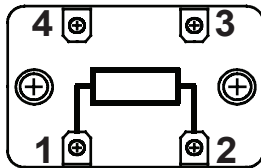
### Mounting Notes -

The PF2270 Series Power 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 ). Torque termination screws to 5 in-lbs ( 0.6 N-m).

Back plate is isolated from both pins.

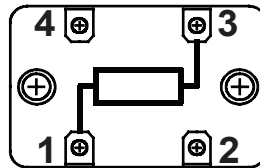
\*0.25 mm tolerance available (-T)

### Terminal Configuration & Schematics



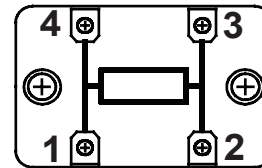
#### STANDARD

PF2272  
PF2274  
PF2276



#### Y

PF2272Y  
PF2274Y  
PF2276Y



#### Z

PF2272Z  
PF2274Z  
PF2276Z

Note: Style Z is not a true 4-terminal measurement  
Current can be applied to any pins

### Power Rating Notes -

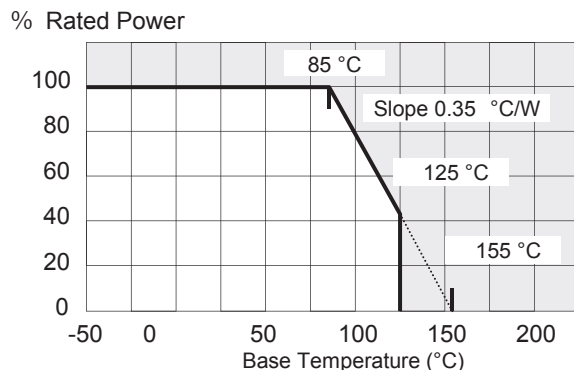
The PF2270 Series Power Film Resistors must be attached to a suitable heatsink. The maximum internal resistor temperature is 155°C.

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 ( 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 )

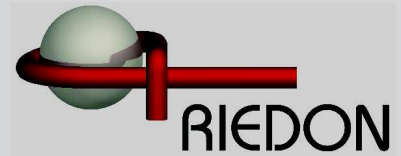
### PF2270 Series Power Derating Curve



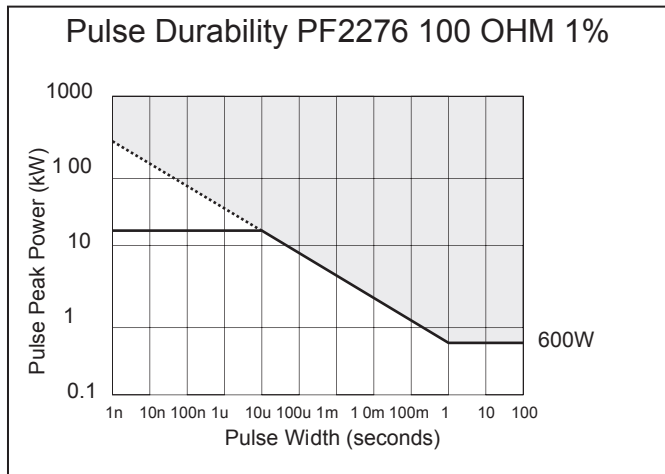
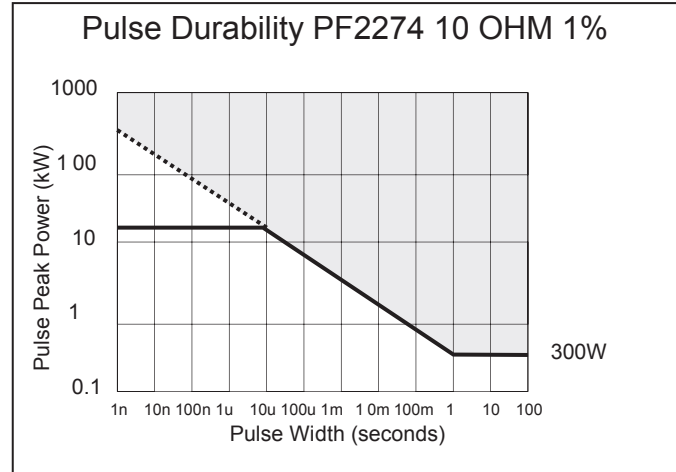
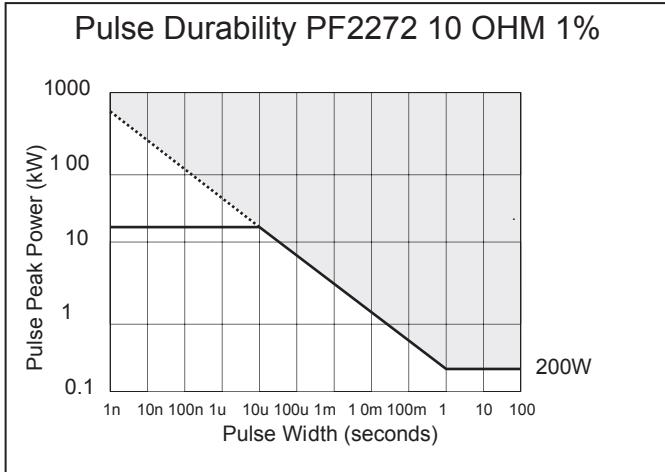


# PF2270 Series

Power Film Resistors



## SPECIFICATIONS (continued)



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. Dotted line shows estimation.

## Ordering Information

**Part Description: Part Type - Terminal Style - Resistance - Tolerance**

**PF2274Y 10 Ohms 5%**

Part Type
PF 2272
PF 2274
PF 2276

Terminal Style
(*)
Y
Z

Resistance
0.1 to 100K Ohms
50 to 1K Ohms

Tolerance
5 %
(**)

(\*) For standard terminal style omit letter  
 (\*\*) 1% Tolerance Optional