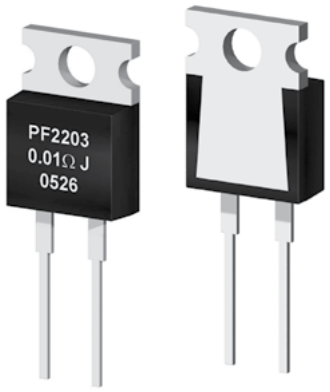
PF2200 Series

TO-220 Power Thin Film Resistors



RoHS compliant

- **TO-220 Housing**
- **Rated Power to 50 Watts**
- **Resistances from 0.02 to 51K Ohms**
- **High Stability Film Resistance Elements**
- **Resistance Tolerance to ±0.1%**
- **TCR to ±5ppm/°C**
- **Low Inductance (<10nH)**
- **Isolated Mounting Tab**

SPECIFICATIONS

Type	Power Rating Heatsink[1]	Power Rating Free Air[2]	Thermal Resistance	Resistance Range[3] Min	Resistance Range[3] Max	Tolerances	Temperature Coefficients
PF2205	50W	1W	2.3°C/W	0.02Ω	51KΩ	±1% (R≥0.1Ω) ±5%	±50ppm/°C (R≥10Ω) ±100ppm/°C (0.1Ω ≤ R < 10Ω) ±250ppm/°C (R < 0.1Ω)
PF2203	35W	1W	3.3°C/W	0.02Ω	51KΩ	±1% (R≥0.1Ω) ±5%	±50ppm/°C (R≥10Ω) ±100ppm/°C (0.1Ω ≤ R < 10Ω) ±250ppm/°C (R < 0.1Ω)
PF2202	20W	1W	5.9°C/W	0.02Ω	220Ω	±1% (R≥0.1Ω) ±5%	±50ppm/°C (R≥10Ω) ±100ppm/°C (0.1Ω ≤ R < 10Ω) ±250ppm/°C (R < 0.1Ω)
	10W	1W		220Ω	51KΩ	±1%, ±5%	±50ppm/°C
PF2201	10W	0.5W	3.3°C/W	1Ω	51KΩ	±0.1%	±5ppm/°C (R ≥ 5Ω) ±25ppm/°C (R< 5Ω)

[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

Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR
Example: PF2203 0.5 Ohm 1% 100ppm

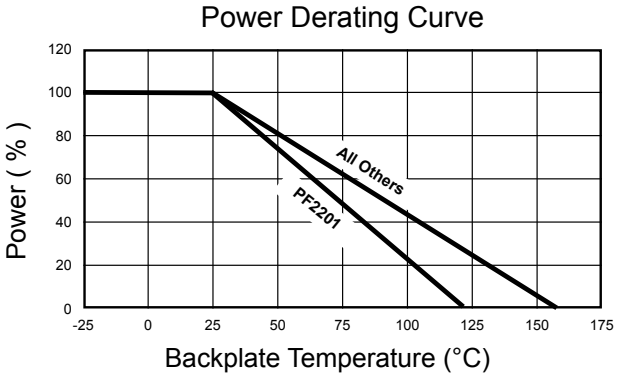
Riedon Inc. 300 Cypress Avenue Alhambra CA 91801 ☎ (626) 284-9901 (626) 284-1704
www.riedon.com

PF2200 Series

TO-220 Power Thin Film Resistors

SPECIFICATIONS (continued)

Specification	Value	
Maximum Current	25A	
Temperature Range	-55°C to +155°C : PF2202, PF2203, PF2205 -55°C to +120°C : PF2201	
Dielectric Strength	2000 VAC	
Max. Operating Voltage	$\sqrt{P*R}$ (500V MAX)	
Insulation Resistance	>1000 Meg-Ohm	
Inductance	<10nH (At the Standoff)	
Environmental Performance	**ΔR**	**Test Conditions**
Load Life	±1% + 0.05Ω	25°C, 90 min ON, 30 min OFF, 1000 hr
Humidity Resistance	±1% + 0.05Ω	40°C, 90-95% RH, DC 0.1W, 1000 hr
Temperature Cycle	±0.25% + 0.05Ω	-55°C for 30 min, +155°C for 30 min, 1000 hr
Solder Heat	±0.1% + 0.05Ω	+350°C, 3s
Vibration	±0.25% + 0.05Ω	IEC60068-2-6



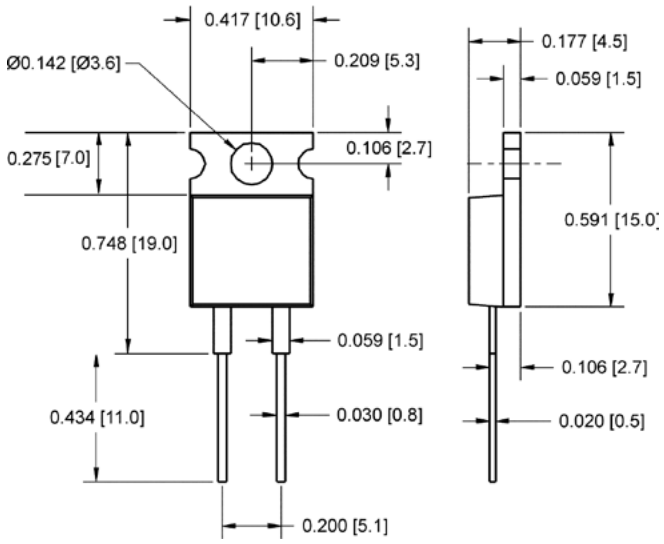
Power Rating Notes -

The PF2200 Series Thin Film Resistors must be attached to a suitable heatsink. Without a heatsink the maximum power rating is 1W (1/2W for the PF2201). The maximum internal resistor temperature is 155°C (120°C for the PF2201).

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 (°C)
T_A = Ambient Temperature of Heatsink (°C)
P = Power Through Resistor (W)



Mounting Notes -

The PF2200 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).

Mounting tab is isolated from both pins.

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