



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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!



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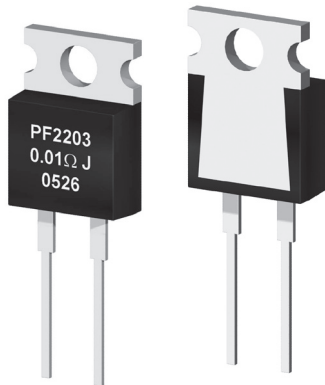
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



PF2200 Series

TO-220 Power Thin Film Resistors

In Stock at
DIGI-KEY



- TO-220 Housing
- Rated Power to 50 Watts
- Resistances from 0.02 to 51K Ohms
- High Stability Film Resistance Elements
- Resistance Tolerance to $\pm 1\%$
- Low Inductance (<50nH)
- Isolated Mounting Tab

SPECIFICATIONS

Type	Power Rating		Thermal Resistance	Resistance Range ³		Tolerances	Temperature Coefficients
	Heatsink ¹	Free Air ²		Min	Max		
PF2205	50W	1W	2.3°C/W	0.02Ω	51KΩ	$\pm 1\%$ ($R \geq 0.1\Omega$) $\pm 5\%$	$\pm 50\text{ppm}/^\circ\text{C}$ ($R \geq 10\Omega$) $\pm 100\text{ppm}/^\circ\text{C}$ ($0.1\Omega \leq R < 10\Omega$) $\pm 250\text{ppm}/^\circ\text{C}$ ($R < 0.1\Omega$)
PF2203	35W	1W	3.3°C/W	0.02Ω	51KΩ	$\pm 1\%$ ($R \geq 0.1\Omega$) $\pm 5\%$	$\pm 50\text{ppm}/^\circ\text{C}$ ($R \geq 10\Omega$) $\pm 100\text{ppm}/^\circ\text{C}$ ($0.1\Omega \leq R < 10\Omega$) $\pm 250\text{ppm}/^\circ\text{C}$ ($R < 0.1\Omega$)
PF2202	20W	1W	5.9°C/W	0.02Ω	220Ω	$\pm 1\%$ ($R \geq 0.1\Omega$) $\pm 5\%$	$\pm 50\text{ppm}/^\circ\text{C}$ ($R \geq 10\Omega$) $\pm 100\text{ppm}/^\circ\text{C}$ ($0.1\Omega \leq R < 10\Omega$) $\pm 250\text{ppm}/^\circ\text{C}$ ($R < 0.1\Omega$)
	10W	1W		220Ω	51KΩ	$\pm 1\%$, $\pm 5\%$	$\pm 50\text{ppm}/^\circ\text{C}$

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

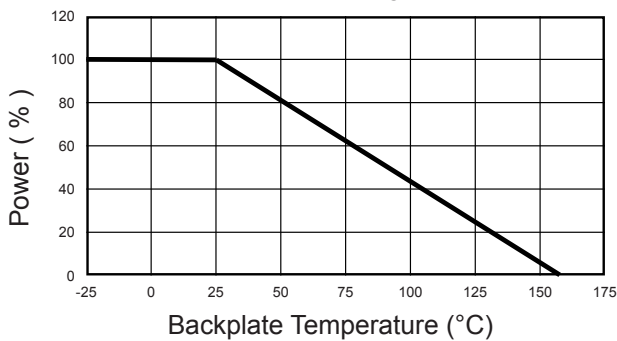
Ordering Information

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

SPECIFICATIONS (continued)

Specification	Value	
Maximum Current	25A	
Temperature Range	-55°C to +155°C : PF2202, PF2203, PF2205	
Dielectric Strength	2000 VAC	
Max. Operating Voltage	500 V	
Insulation Resistance	>1000 Meg-Ohm	
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

Power Derating Curve



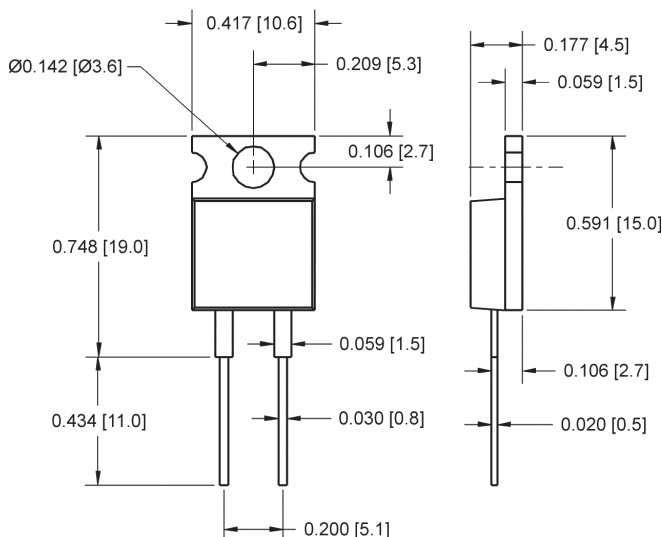
Power Rating Notes -

The PF2200 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 :

$$R_{0H} = \frac{T_{MAX} - (P \times R_{0R}) - T_A}{P}$$

Where: R_{0H} = Thermal Resistance of Heatsink (°C/W)
 R_{0R} = 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 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.