

PFM Series

100 Watt Power Film Miniature Resistors



- **Smaller than a TO-227!**
- **Resistances from 0.1 Ohms to 51K Ohms**
- **Non-inductive design**
- **Moisture Resistant Encapsulation**
- **Flying Lead Terminations**
- **Isolated Back Plate**

Applications: harmonic filters, snubbers, surge protection, dummy load, gate resistor, dumping resistor, power supplies, high frequency amplifiers

SPECIFICATIONS

Type	PFM100
Power Rating (with suitable heatsink) *	100 W
Resistance Range	0.1 to 51K Ohms
Resistance Values	E24 + 250, 400, & 500
Thermal Resistance	0.5 °C/W
Tolerances	5%
Temperature Coefficient	±100 ppm/°C
Operating Temperature	-55°C to 155°C
MAX Continuous Voltage	$\sqrt{P * R}$ or 1000v maximum
MAX Continuous Current	100A
Isolation Voltage	5000VAC
Load Life (continuous 1000hr)	±1%
Humidity (60°C, 90-95% RH, DC0.1W, 1000hr)	±1%
Temp. Cycle (-55°C 30m, 155°C 30m, 5X)	±1%
Vibration (0.75mm, 100m/s ² , 10-54Hz, 10X, XYZ)	±0.5%
Insulation Resistance	> 1000 MegOhm
Resistor Body Flammability	UL94 V-0
Substrate	AIO
Terminations	300mm, 18ga (0.75mm ²) silicone coated flying leads
Weight (grams)	14
Mounting Torque	1.6 Nm Max / 1 Nm Recommended

ORDERING INFORMATION

Part Description: Type - Resistance - Tolerance

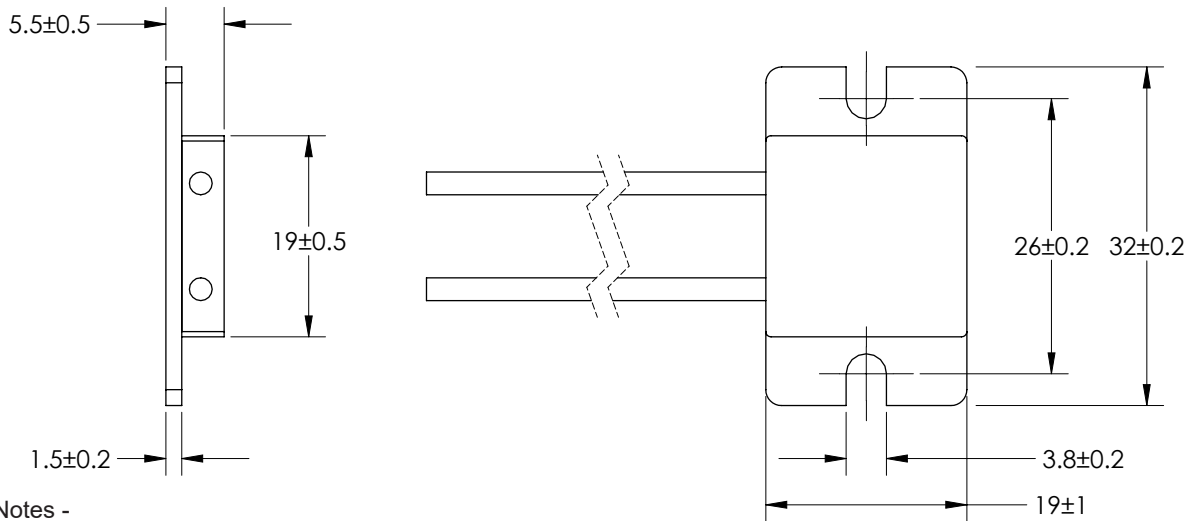
Example: PFM100 0.5 OHM 5%

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SPECIFICATIONS (continued)



Mounting Notes -

The PFM Series Power Film Miniature Resistors must be attached to a suitable heatsink. Mount resistor using thermal grease to a clean, flat surface. Use compression washers 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.

* Power Rating Notes -

The PFM Series Power Film Miniature Resistors must be attached to a suitable heatsink. The maximum resistor flange 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)

Pulse Energy Notes -

Tentative continuous-pulse power allowance at duty 0.01. Load life test will be necessary in actual equipment. Because curve will be changed by resistance, pulse repetition, duty and operating temperature.

