

PFU Series

1000 W & 800 W

High Power Resistors / High Voltage Resistors



End of Life:
12/31/2022

- High Power Density
- 0.5 Ohm to 1 Mohm
- Very Low Inductance
- Moisture resistant encapsulation
- Vibraton Proof



Applications: *Power Supplies, Motor Controls, Snubber Resistors, Load Banks, and Robotics*

SPECIFICATIONS

Type	PFU 800	PFU 1000	Conditions
Rated Power	-	1000	At Flange Temperature -55 to +75 °C
	800	-	At Flange Temperature -55 to +90 °C
Short Time Overload	1200	1200	5 Seconds mounted on cooler
Thermal Resistance	0.10 °C / W		From Resistor to Flange
Resistance Range	0.5 ohm to 1 Mohm		Maximum power is limited per Ohm's law. V^2/R for example at 1Mohm power is limited to 25 watts
Nominal Resistance	E24+		E24, additionally 2.5, 5.0 and 8.0
TCR	+/- 100 PPM/K (A)		1 ohm to 1 Mohm, +/- 200PPM/°C < 1 ohm , for -55 to +155 °C
Tolerance	+/- 5% (J)		
Operation Temperature	-55 to +175 °C		At Resistor Element Surface
Max Applied Voltage	$V = \sqrt{P \cdot R}$ (5,000V Max)		P Rated Power (W), R - resistance value (ohm), V - voltage (V)
Insulation Voltage	5,000 V-50Hz	5,000 V-50Hz	60 seconds between Terminals and Flange. Leak current below 0.5 mA
Partial Discharge Voltage	5,000 V-30KHz	5,000 V-50KHz	Starting Voltage Zero Count
Capacitance	73 pF		Terminal to Flange
Inductance	108 nH		Terminal to Terminal
Capacitance	25 pF		Terminal to Terminal
Creep Distance	42 mm		
Air Distance	14 mm		
Load Life	ΔR +/- 0.40%		Continuous Power 1000 hours
Humidity	ΔR +/- 0.25%		60 °C, 90 to 95% RH, DC 0.1W, 1000 hours
Temperature Cycle	ΔR +/- 0.20%		-55 °C, 30 min, +155 °C 30 min, 5 cycles
Insulation Resistance	Over 1G ohm		Between terminals and flange, DC 1000V
Vibration	ΔR +/- 0.25%		See Note below
Flammability	UL94V-0		For Resistor Body
Weight	160 grams	168 grams	

Note: IEC60068 2-6 displacement 0.75 mm or acceleration 100m/J² 10Hz to 54Hz sweep, 10 cycles X,Y,Z direction

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PFU Series

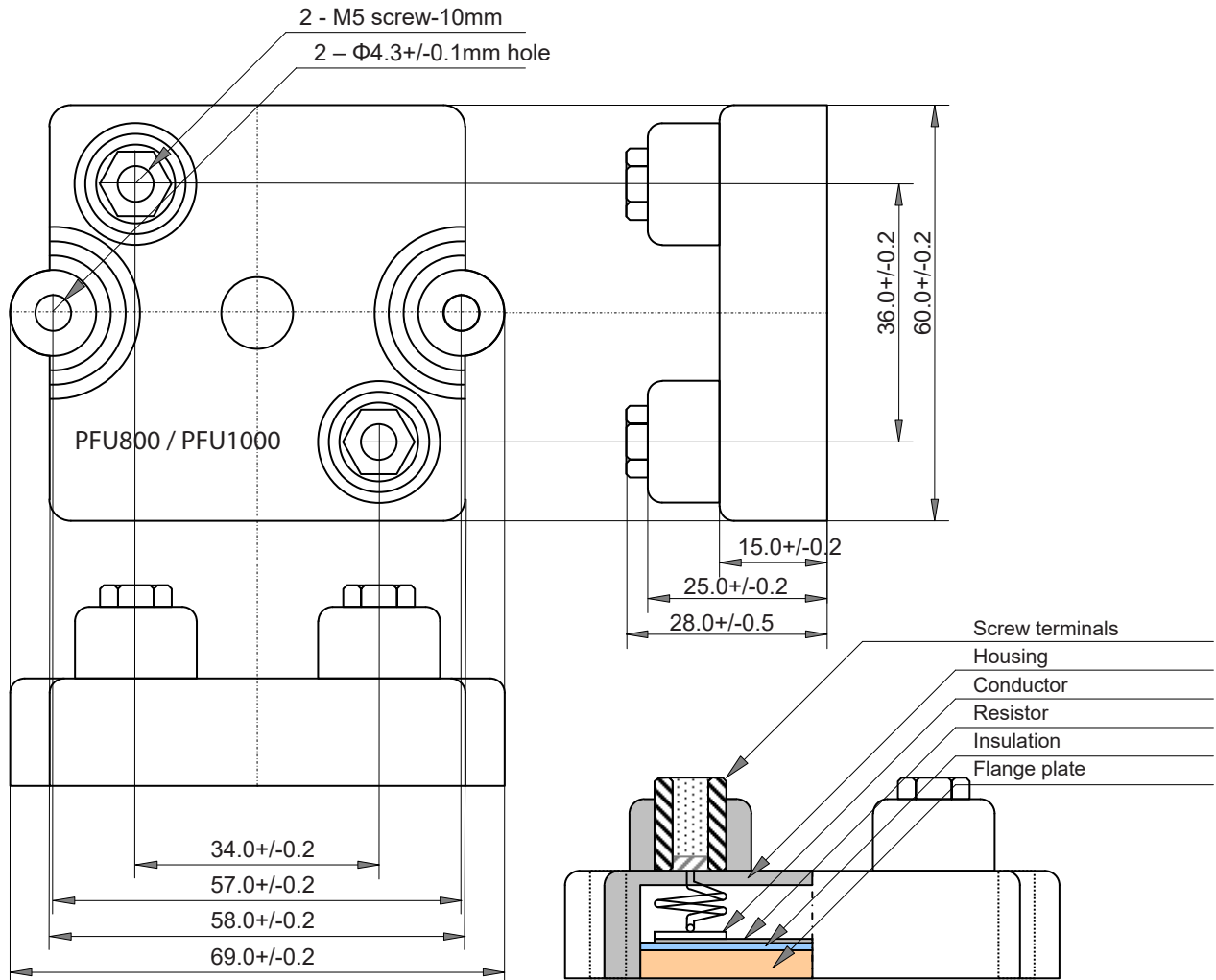
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SPECIFICATIONS (continued)

Dimensions and Structure (mm)



Recommended: Mounting Torque: 1.8Nm (M4)
 Contact Torque: 2.0 Nm (M5)

Power Rating Notes -

The PFU Series Power Film Resistors must be attached to a suitable heatsink. The maximum internal resistor temperature is 175°C. **Liquid Cooling highly recommended.**

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)

PFU Series

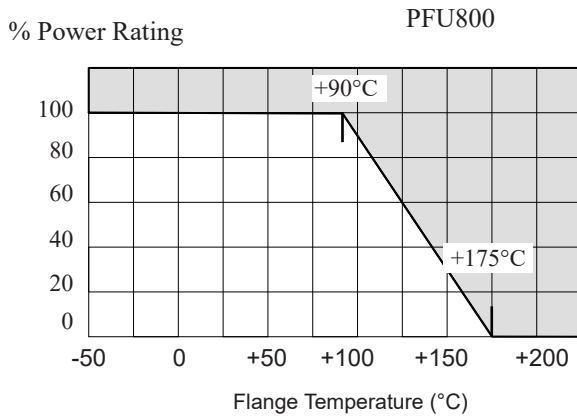
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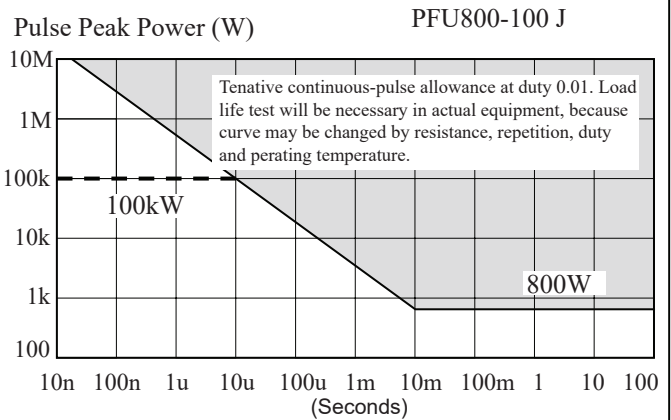


SPECIFICATIONS (continued)

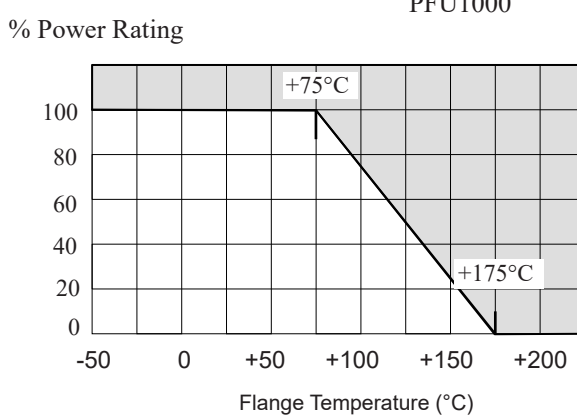
Derating Curve



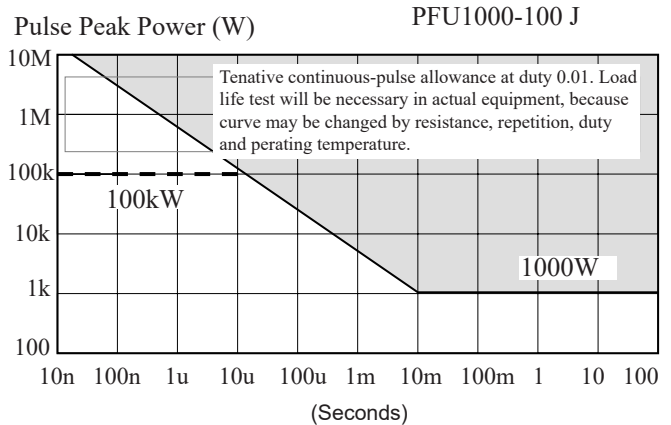
Pulse Energy Durability



Derating Curve



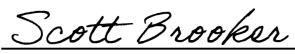
Pulse Energy Durability



Ordering Information

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

PFU800 10 Ohms 5%

<h1>Riedon Product Change Notice Form</h1>		Riedon PCN Number: 2022-02
		Page Number: 1 of 1
Submitted By: RIEDON, INC. 300 Cypress Avenue Alhambra, CA 91801		Customers: Various
Prepared By: Owen Makin	email: owen@riedon.com	Date Prepared: 23 September 2022
Customer Part Number(s) & Description(s): N/A	Riedon Part Number(s) & Description(s): PFU Series in all values.	
Description of Change: End of Life (EOL) notification for the Riedon PFU series of power film resistors. Riedon will not offer an alternative part.		
Reason For EOL: Ageing manufacturing equipment Non-availability of raw materials		
Effective Date of Change: Last time buy date of December 31, 2022. Orders after that date will not be accepted		
Part Characteristics Affected: Not applicable –no alternative Riedon part suggested.	Supportive Documentation Attached? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Qualification Testing Performed/To be Performed: Not applicable – no alternative Riedon part suggested.	<input checked="" type="checkbox"/> Change is Permanent <input type="checkbox"/> Change is for Fixed Quantity <input type="checkbox"/> Change applies to Customer PO:	
Does the change affect the components ability to comply with REACH or RoHS requirements? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (if YES, describe in detail):	 <hr/> Scott Brooker, Quality Engineer	