

89 Series

Metal-Mite® Aluminum Housed Axial Terminal Wirewound, 1% Tolerance



The 89 Series is a high-performance axial type resistor. These molded-construction metal-housed resistors are available in higher power ratings than standard axial resistors and are better suited to withstanding vibration, shock and harsh environmental conditions.

The 89 Series Metal-Mite® resistors are aluminum housed to maintain high stability during operation and to permit secure mounting to chassis surfaces.

The metal housing also provides heat-sinking capabilities.

FEATURES

- High Stability: $\pm 0.5\%$ ΔR
- High power to size ratio
- Metal housing allows chassis mounting and provides heat sink capability

SERIES SPECIFICATIONS

Series	Wattage	Ohms	Voltage
805	5	0.10-25K	210
810	10	0.10-50K	320
825	25	0.005-75K	520
850	50	0.005-100K	1170

Non-Inductive versions available. Insert "N" before tolerance code.
Example: 850NF560

CHARACTERISTICS

Housing	Metal, anodized aluminum
Internal Coating	Silicone
Core	Ceramic
Terminals	Solder-coated axial
Derating	Linearly from 100% @ +25°C to 0% @ +275°C.
Tolerance	$\pm 1\%$ and $\pm 5\%$ (other tolerances available).
Power rating	Rating is based on chassis mounting area and temperature stability. Proper heat sink as follows: 5W and 10W units, 4" x 6" x 2" x .040" Aluminum chassis; 25W units, 5" x 7" x 2" x .040" Aluminum chassis; 50W units, 12" x 12" x .059" Aluminum panel.
Maximum ohmic values	See chart.
Overload	5 times rated wattage for 5 seconds.
Temperature coefficient	Under 1Ω: ± 90 ppm/°C; 1 to 9.99Ω: ± 50 ppm/°C; 10Ω and over: ± 20 ppm/°C.
Dielectric withstanding voltage	5W and 10W rating, 1000 VAC; 25 and 50W ratings, 2250 VAC.

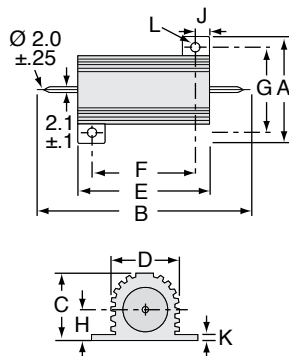
(continued)

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DIMENSIONS

(in./mm)



Dimensions have changed
as of August 2015

	A max.	B max.	C max.	D max.	E max.	F ±.3mm	G ±.3mm	H max.	J max.	K max.	L ±.25mm
805	0.65" / 16.5	1.18" / 30.0	0.35" / 8.8	0.33" / 8.5	0.63" / 15.9	0.44" / 11.3	0.49" / 12.4	0.18" / 4.5	0.09" / 2.4	0.07" / 1.8	0.09" / 2.4
810	0.83" / 21.0	1.44" / 36.5	0.43" / 11.0	0.44" / 11.2	0.78" / 19.9	0.56" / 14.3	0.63" / 15.9	0.22" / 5.5	0.11" / 2.8	0.07" / 1.8	0.09" / 2.4
825	1.10" / 28.0	2.01" / 51.0	0.58" / 14.8	0.56" / 14.2	1.07" / 27.3	0.72" / 18.3	0.78" / 19.8	0.30" / 7.7	0.20" / 5.2	0.10" / 2.6	0.13" / 3.2
850	1.10" / 28.0	2.85" / 72.5	0.58" / 14.8	0.56" / 14.2	1.93" / 49.1	1.56" / 39.7	0.84" / 21.4	0.33" / 8.4	0.20" / 5.2	0.10" / 2.6	0.13" / 3.2

ORDERING INFORMATION

Ohmic value	Wattage					Ohmic value	Wattage					Ohmic value	Wattage				
	Part No. Prefix ▶ Suffix ▼	5	10	25	50		Part No. Prefix ▶ Suffix ▼	5	10	25	50		Part No. Prefix ▶ Suffix ▼	5	10	25	50
		805F	810F	825F	850F			805F	810F	825F	850F			805F	810F	825F	850F
0.005 —R005				✓	✓	20 —20R	✓	✓			1,500 —1K5	✓	✓	✓	✓		
0.010 —R010				✓	✓	25 —25R	✓	✓			2,000 —2K0	✓	✓	✓	✓		
0.025 —R025				✓	✓	30 —30R	✕	✕			2,500 —2K5	✓	✓	✓	✓		
0.1 —R10				✓	✓	40 —40R	✓	✓			3,000 —3K0	✓	✓	✓	✓		
0.3 —R30				✓	✕	50 —50R	✓	✓			3,500 —3K5	✓	✓	✓	✓		
0.5 —R50				✓	✕	75 —75R	✓	✕			4,000 —4K0	✓	✓	✓			
0.7 —R70				✓	✕	100 —100	✓	✓			4,500 —4K5	✓	✓	✕			
1.0 —1R0	✓	✓		✓	✓	150 —150	✓	✓			5,000 —5K0	✓	✓	✓	✓		
1.5 —1R5	✕	✓		✓	✓	200 —200	✕	✕			6,000 —6K0	✓	✓	✓			
2.0 —2R0	✕	✓		✓	✓	250 —250	✓	✓			10,000 —10K	✓	✓	✓	✓		
3.0 —3R0	✓	✓		✓	✓	300 —300	✓	✕			15,000 —15K	✓	✓	✓	✕		
4.0 —4R0	✓	✓		✓	✓	400 —400	✕	✕			20,000 —20K	✓	✓	✓	✓		
5.0 —5R0	✓	✓		✓	✓	500 —500	✓	✕			25,000 —25K	✓	✓	✓	✓		
10.0 —10R	✓	✓		✓	✓	750 —750	✕	✓			50,000 —50K	✓	✓	✓	✓		
15.0 —15R	✓	✓		✓	✓	1,000 —1K0	✕	✓			75,000 —75K	✓	✓	✓	✓		
											100,000 —100K						

Non-Inductive Winding
Optional (blank = std. winding) RoHS Compliant

805 N F 5 R 0 E

Series: 805 = 5 Watt, 810 = 10 watt, 825 = 25 watt, 850 = 50 watt
Tolerance: F = 1%, J = 5%
Ohms: R005 = 0.005Ω, R10 = 0.1Ω, 1R0 = 1.0Ω, 250 = 250Ω, 1K0 = 1,000Ω, 1K5 = 1,500Ω, 25K = 25,000Ω

✓ = Standard values

✦ = Non-standard values subject to minimum handling charge per item

Shaded values involve very fine resistance wire and should not be used in critical applications without burn-in and/or thermal cycling.

As of September 2006,
the 89 Series is no longer
offered as Mil. Spec.