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: ±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	0.010-75K	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	±1% and ±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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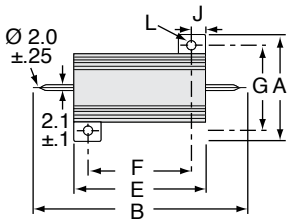
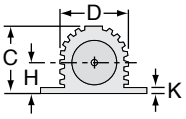
DIMENSIONS

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

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

RoHS Compliant

805 N F 5R0 E

Series	Tolerance	Ohms
805 = 5 Watt	F = 1%	R005= 0.005Ω
810 = 10 watt	J = 5%	R10 = 0.1Ω
825 = 25 watt		1R0 = 1.0Ω
850 = 50 watt		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.