

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.

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

SPECIFICATIONS

Material

Housing: Metal, anodized aluminum.

Internal Coating: Silicone.

Core: Ceramic.

Terminals: Solder-coated axial.

Derating: Linearly from 100% @ +25°C to 0% @ +275°C.

Electrical

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.

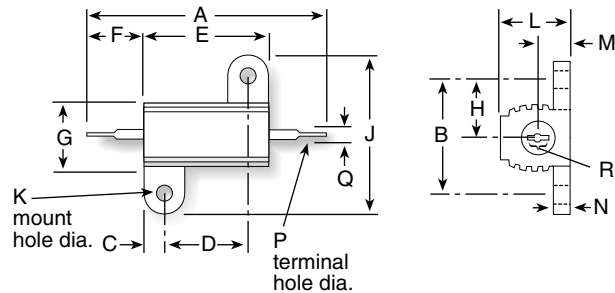
Dielectric withstanding voltage:

5W and 10W rating, 1000 VAC;
25 and 50W ratings, 2250 VAC.



89 Series

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



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

	5 watt	10 watt	25 watt	50 watt
Series (Industrial)	805	810	825	850
Dimensions				
Dim. A (in. ± 0.062 / mm ± 1.57)	1.125 / 28.59	1.375 / 34.93	1.938 / 49.23	2.781 / 70.64
Dim. B (in. ± 0.010 / mm ± 0.25)	0.490 / 12.45	0.625 / 15.88	0.781 / 19.84	0.844 / 21.44
Dim. C (in. ± 0.031 / mm ± 0.79)	0.078 / 1.98	0.094 / 2.39	0.172 / 4.37	0.188 / 4.78
Dim. D (in. ± 0.010 / mm ± 0.25)	0.444 / 11.28	0.562 / 14.28	0.719 / 18.26	1.562 / 39.68
Dim. E (in. ± 0.062 / mm ± 1.57)	0.600 / 15.24	0.750 / 19.05	1.062 / 26.98	1.938 / 49.23
Dim. F (in. ± 0.062 / mm ± 1.57)	0.266 / 6.76	0.312 / 7.93	0.438 / 11.13	0.438 / 11.13
Dim. G (in. ± 0.062 / mm ± 1.57)	0.334 / 8.48	0.438 / 11.13	0.531 / 13.49	0.594 / 15.09
Dim. H (in. ± 0.031 / mm ± 0.79)	0.245 / 6.22	0.312 / 7.93	0.391 / 9.93	0.422 / 10.72
Dim. J (in. ± 0.031 / mm ± 0.79)	0.646 / 16.41	0.812 / 20.63	1.094 / 27.79	1.156 / 29.36
Dim. K (in. ± 0.005 / mm ± 0.13)	0.093 / 2.36	0.094 / 2.39	0.125 / 3.18	0.125 / 3.18
Dim. L (in. ± 0.031 / mm ± 0.79)	0.320 / 8.13	0.406 / 10.31	0.562 / 14.28	0.625 / 15.88
Dim. M (in. ± 0.062 / mm ± 1.57)	0.133 / 3.38	0.203 / 5.16	0.281 / 7.14	0.312 / 7.92
Dim. N (in. ± 0.031 / mm ± 0.79)	0.065 / 1.65	0.094 / 2.39	0.094 / 2.39	0.094 / 2.39
Dim. P (in. ± 0.005 / mm ± 0.13)	0.050 / 1.27	0.085 / 2.16	0.085 / 2.16	0.085 / 2.16
Q min AWG	16	12	12	12
Dim. R (in., min/mm, min)	0.085/ 2.16	0.140/ 3.56	0.140/ 3.56	0.140/ 3.56

ORDERING INFORMATION

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

805NF5R0E

Series	Tolerance	Ohms	RoHS
805 = 5 Watt	F = 1%	R005 = 0.005Ω	Compliant
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 PART NUMBERS

Wattage						Wattage						Wattage					
Ohmic value	Part No.	5	10	25	50	Ohmic value	Part No.	5	10	25	50	Ohmic value	Part No.	5	10	25	50
Prefix ▶	Suffix ▼	805F	810F	825F	850F	Prefix ▶	Suffix ▼	805F	810F	825F	850F	Prefix ▶	Suffix ▼	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			✦	

✓ = 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.

Check product availability at www.ohmite.com