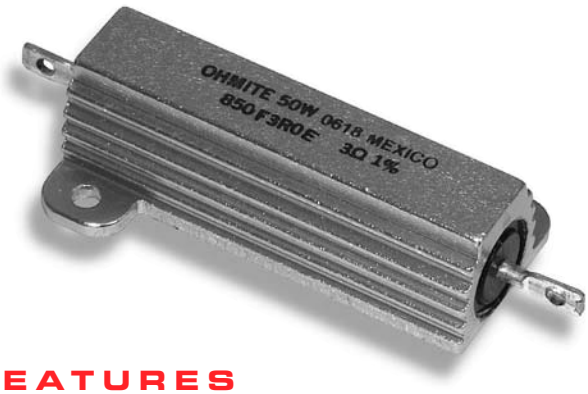
89 Series

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	0.005-75K	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	±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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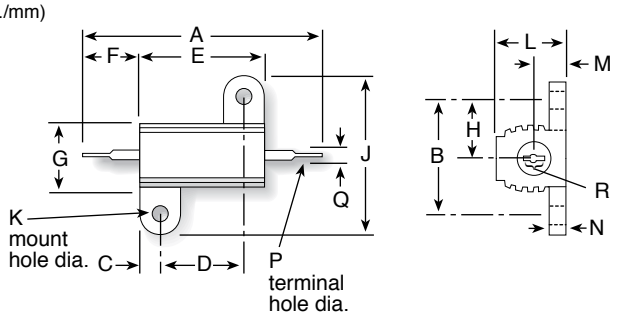
Axial Terminal Wirewound, 1% Tolerance

DIMENSIONS

(in./mm)



	5 watt	10 watt	25 watt	50 watt
Series (Industrial)	**805**	**810**	**825**	**850**
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)

805 N F 5R0 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

RoHS Compliant

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

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	✔	✔	✔	✔

Ohmic value	Part No. Prefix ➤ Suffix ▼	Wattage 5 (805F)	10 (810F)	25 (825F)	50 (850F)
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	✣	✔	✔	✔

Ohmic value	Part No. Prefix ➤ Suffix ▼	Wattage 5 (805F)	10 (810F)	25 (825F)	50 (850F)
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				✣

✔ = 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.