

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: $\pm 0.5\% \Delta R$
- 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	$\pm 1\%$ 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 1 Ω : ± 90 ppm/°C; 1 to 9.99 Ω : ± 50 ppm/°C; 10 Ω and over: ± 20 ppm/°C.
Dielectric withstanding voltage	5W and 10W rating, 1000 VAC; 25 and 50W ratings, 2250 VAC.

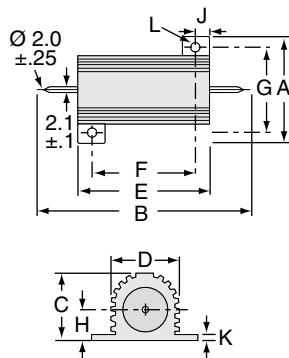
(continued)

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Axial Terminal Wirewound, 1% Tolerance

DIMENSIONS

mm/in.



Dimensions have changed
as of August 2015

	A max.	B max.	C ±0.25mm	D max.	E ±0.3mm	F ±0.3mm	G ±0.3mm	H max.	J max.	K max.	L ±0.25mm
805	16.5 / 0.65"	30.0 / 1.18"	8.25 / 0.32"	8.5 / 0.33"	15.80 / 0.62"	11.3 / 0.44"	12.4 / 0.49"	4.5 / 0.18"	2.4 / 0.09"	1.8 / 0.07"	2.4 / 0.09"
810	21.0 / 0.83"	36.5 / 1.44"	10.72 / 0.42"	11.2 / 0.44"	19.80 / 0.78"	14.3 / 0.56"	15.9 / 0.63"	5.5 / 0.22"	2.8 / 0.11"	1.8 / 0.07"	2.4 / 0.09"
825	28.0 / 1.10"	51.0 / 2.01"	14.35 / 0.56"	14.2 / 0.56"	27.20 / 1.07"	18.3 / 0.72"	19.8 / 0.78"	7.7 / 0.30"	5.2 / 0.20"	2.6 / 0.10"	3.2 / 0.13"
850	28.0 / 1.10"	72.5 / 2.85"	14.35 / 0.56"	14.2 / 0.56"	49.00 / 1.93"	39.7 / 1.56"	21.4 / 0.84"	8.4 / 0.33"	5.2 / 0.20"	2.6 / 0.10"	3.2 / 0.13"

ORDERING INFORMATION

Ohmic value	Part No.	Wattage	Ohmic value	Part No.	Wattage	Ohmic value	Part No.	Wattage
Prefix >	Suffix >	5 10 25 50	Prefix >	Suffix >	5 10 25 50	Prefix >	Suffix >	5 10 25 50
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 NF5R0E

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

✓ = 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.

September 2006:
The 89 Series is no
longer offered as
Mil. Spec.