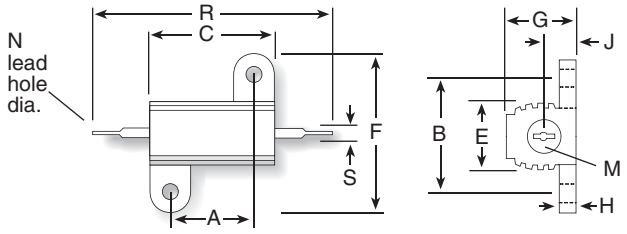
89 Series

Metal-Mite® MIL-R-18546 Approved Aluminum Housed Axial Lead Wirewound Resistors 1% Tolerance



The 89 Series are high-performance axial-lead type resistors. These molded-construction metal-housed resistors are available in higher power ratings than standard axial-lead 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, allowing the units to exceed the power ratings set by MIL specifications. Use the 89 Series resistors with the confidence that they meet or exceed MIL-R-18546 specifications.

FEATURES

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

SPECIFICATIONS

Material

Housing: Metal, anodized aluminum.

Internal Coating: Silicone.

Core: Ceramic.

Terminals: Solder-coated axial lead.

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

Electrical

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.

Series	Wattage	Ohms	Dimensions (in. / *mm*) Length	Height	Width	Voltage
805 (RE60G)	5	0.10-25K	1.125 / *28.58*	0.320 / *8.13*	0.646 / *16.41*	210
810 (RE65G)	10	0.10-50K	1.375 / *34.93*	0.390 / *9.91*	0.800 / *20.32*	320
825 (RE70G)	25	0.005-75K	1.938 / *49.23*	0.546 / *13.87*	1.080 / *27.43*	520
850 (RE75G)	50	0.005-100K	2.781 / *70.64*	0.610 / *15.49*	1.140 / *28.96*	1170

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

Dim. (in. ±.010/*mm ±.254*)	5 watt	10 watt	25 watt	50 watt
Dim. A	0.444/*11.28*	0.562/*14.27*	0.719/*18.26*	1.563/*39.70*
Dim. B	0.490/*12.45*	0.625/*15.88*	0.781/*19.84*	0.844/*21.44*
Dim. C	0.600/*15.24*	0.750/*19.05*	1.062/*26.97*	1.968/*49.99*
Dim. E	0.334/ *8.48*	0.420/*10.67*	0.550/*13.97*	0.630/*16.00*
Dim. F	0.646/*16.41*	0.800/*20.32*	1.080/*27.43*	1.140/*28.96*
Dim. G	0.320/ *8.13*	0.390/ *9.91*	0.546/*13.87*	0.610/*15.49*
Dim. H	0.060/ *1.52*	0.075/ *1.90*	0.088/ *2.24*	0.088/ *2.24*
Dim. J	0.156/ *3.90*	0.183/ *4.65*	0.231/ *2.54*	0.260/ *2.54*
Dim. M	0.085/ *2.16*	0.140/ *3.56*	0.140/ *3.56*	0.140/ *3.56*
Dim. N	0.050/ *1.27*	0.086/ *2.18*	0.086/ *2.18*	0.086/ *2.18*
Dim. R	1.125/*28.58*	1.375/*34.93*	1.938/*49.23*	2.781/*70.64*
S min AWG	16	12	12	12
Diam. S (mm)	*1.29*	*2.05*	*2.05*	*2.05*

STOCK PART NUMBERS FOR STANDARD RESISTANCE VALUES

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				✣

✚ = Most popular stock values
✔ = Stock values
✣ = Non-stock 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.