

When you need the highest quality wirewound axial lead resistors available, choose Ohmite's 90 Series resistors.

They are manufactured by a unique process that molds the vitreous enamel over the resistive element, helping to ensure consistent dimensions. This uniformity permits 90 Series resistors to be mounted in clips, creating a heat-sinking benefit (See Page 18).

The durable vitreous enamel coating, which is totally lead free, permits the 90 Series resistors to maintain a hard coating while operating at high temperatures. Mechanical integrity is enhanced by the all-welded construction.

FEATURES

- Molded Construction provides consistent shape and size (Permits mounting in clips which extends power rating).
- Meets MIL-R-26 requirements for insulated resistors.
- All-welded construction.
- Flame resistant lead free vitreous enamel coating.
- Higher ratings in smaller sizes.
- Heat sink mounting clips available.

SPECIFICATIONS

Material

Coating: Molded leadfree vitreous enamel.

Core: Ceramic.

Terminals: Solder-coated copper clad axial lead.

Derating : Linearly from 100% @ +25°C to 0% @ +350°C.

Electrical

Tolerance: ±5% (other tolerances available).

Power rating: Based on 25°C free air rating. (other wattages available*).

Maximum ohmic values: See chart.

Overload:

Under 11 watts: 5 times rated wattage for 5 seconds.
11 watts: 10 times rated wattage for 5 seconds.

Temperature coefficient:

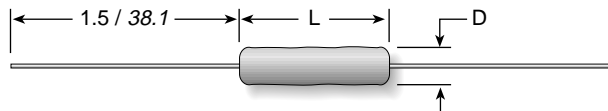
1 to 9.99 ohms: ±100 ppm/°C
10 ohms and over: ±30 ppm/°C

Dielectric withstanding voltage:

500 VAC: 1 watt rating
1000 VAC: 2, 3, 5 and 11 watt rating.

ATTENTION! ENAMEL COLOR CHANGE
Commencing October 15th, 2000, the Ohmite 90 Series Resistor will convert from white enamel to black.
Details at www.ohmite.com.

Lead Free Vitreous Enamel Molded Axial Lead Wirewound Resistors
5% Tolerance Standard



Series	Wattage*	Ohms	Dimensions (in. / mm)		Voltage	Lead ga.
			Length	Diam.		
91	1.5	0.1Ω-6.6K	0.437 / 11.1	0.150 / 3.6	150	24
92	2.25	0.1Ω-6.5K	0.390 / 9.9	0.219 / 5.6	85	20
93	3.25	0.1Ω-22K	0.562 / 14.3	0.234 / 5.9	200	20
95	5.0	0.1Ω-53K	0.953 / 24.2	0.234 / 5.9	495	20
90	11.0	0.1Ω-187K	1.796 / 45.6	0.343 / 8.7	1080	20

15 watt available on special order

Non-inductive types available on special order

* 2x power ratings by using heat-sink mounting clips shown on page 18.

Note: Due to space restrictions, parts are stamped with wattage ratings reduced to the nearest whole number. The actual wattage ratings are as published in this catalog.

STOCK PART NUMBERS FOR STANDARD RESISTANCE VALUES

Wattage		Wattage		Wattage		Wattage		Wattage	
Ohmic value	Part No. Prefix > Suffix <	Ohmic value	Part No. Prefix > Suffix <	Ohmic value	Part No. Prefix > Suffix <	Ohmic value	Part No. Prefix > Suffix <	Ohmic value	Part No. Prefix > Suffix <
1	1R0	22	22R	350	350	3,500	3K5	13,000	13K
1.1	1R1	24	24R	360	360	3,600	3K6	14,000	14K
1.2	1R2	25	25R	390	390	3,900	3K9	15,000	15K
1.3	1R3	27	27R	400	400	4,000	4K0	16,000	16K
1.5	1R5	30	30R	430	430	4,300	4K3	17,000	17K
1.6	1R6	33	33R	450	450	4,500	4K5	18,000	18K
1.8	1R8	35	35R	470	470	4,700	4K7	20,000	20K
2	2R0	36	36R	500	500	5,000	5K0	22,000	22K
2.2	2R2	39	39R	510	510	5,100	5K1	24,000	24K
2.4	2R4	40	40R	560	560	5,600	5K6	25,000	25K
2.7	2R7	43	43R	600	600	6,000	6K0	27,000	27K
3	3R0	47	47R	620	620	6,200	6K2	30,000	30K
3.3	3R3	50	50R	680	680	6,800	6K8	33,000	33K
3.6	3R6	51	51R	700	700	7,000	7K0	35,000	35K
3.9	3R9	56	56R	750	750	7,500	7K5	36,000	36K
4	4R0	62	62R	800	800	8,000	8K0	39,000	39K
4.3	4R3	68	68R	820	820	8,200	8K2	40,000	40K
4.7	4R7	75	75R	900	900	9,000	9K0	43,000	43K
5	5R0	82	82R	910	910	9,100	9K1	45,000	45K
5.1	5R1	91	91R	1,000	1K0	10,000	10K	47,000	47K
5.6	5R6	100	100	1,100	1K1	11,000	11K	50,000	50K
6.2	6R2	110	110	1,200	1K2	12,000	12K	51,000	51K
6.8	6R8	120	120	1,300	1K3				
7.5	7R5	120	120	1,300	1K3				
8.2	8R2	130	130	1,400	1K4				
9.1	9R1	150	150	1,500	1K5				
10	10R	160	160	1,600	1K6				
11	11R	180	180	1,800	1K8				
12	12R	200	200	2,000	2K0				
13	13R	220	220	2,200	2K2				
15	15R	240	240	2,400	2K4				
16	16R	250	250	2,500	2K5				
18	18R	270	270	2,700	2K7				
20	20R	300	300	3,000	3K0				
		330	330	3,300	3K3				

⊕ = 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.

Mounting Clip

For 90 Series resistor



- Prevent severe vibration or mechanical shock to resistor
- Increase resistor wattage up to 100% when mounted on metal surface (1.5 sq. in. by 0.040 in. thick min. per watt dissipated)
- Holes in clip base permit fastening to chassis surface with machine screws, eyelets or rivets

STOCK PART NUMBERS

Part No.	Resistor rating (watts)	Clip length (in./mm)	Clip width (in./mm)	Clip height (in./mm)	No. of holes	Hole centers (in./mm)	Hole diameter (in./mm)
✓ 5900	1.5	0.40 / 10.319	0.150 / 3.810	0.250 / 6.350	1		0.71 / 1.803
✓ 5902	2.25	0.35 / 8.890	0.217 / 5.500	0.275 / 6.980	2	0.156 / 3.969	0.71 / 1.803
⊕ 5904	3.25	0.50 / 12.700	0.257 / 6.500	0.319 / 8.103	2	0.250 / 6.350	0.093 / 2.362
⊕ 5906	5.0	0.90 / 22.860	0.237 / 6.019	0.284 / 7.214	2	0.400 / 10.160	0.103 / 2.616
⊕ 5908	11.0	1.75 / 44.450	0.333 / 8.458	0.377 / 9.576	2	0.800 / 20.320	0.103 / 2.616
✓ 5905	6.5	0.90 / 22.860	0.333 / 8.458	0.377 / 9.576	2	0.500 / 12.700	0.093 / 2.362

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