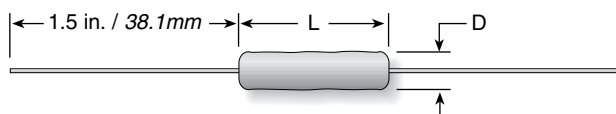


**Lead Free Vitreous Enamel Molded
Axial Term. Wirewound, 5% Tolerance Standard**



Series	Wattage*	Ohms	Dimensions (in. / mm)		Voltage	Lead ga.
			Length	Diam.		
91	1.5	0.1Ω-3.6K	0.452 / 11.5	0.140 / 3.6	150	24
92	2.25	0.1Ω-3.5K	0.405 / 10.3	0.219 / 5.6	85	20
93	3.25	0.1Ω-10.5K	0.577 / 14.7	0.234 / 5.9	200	20
95	5.0	0.1Ω-25K	0.968 / 24.6	0.234 / 5.9	495	20
90	11.0	0.1Ω-91K	1.796 / 45.6	0.343 / 8.7	1080	20

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

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.

ORDERING INFORMATION

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

RoHS Compliant

91NJR10E

90 Series
Series-Lead
Free Vitreous
Enamel Molded
Axial Term.
Wirewound

Wattage
1 = 1.5W
2 = 2.25W
3 = 3.25W
5 = 5W
0 = 11W

Tolerance
J = 5%

Resistance Value
1R0 = 1.0Ω
10R = 10.0Ω
250 = 250Ω
1K0 = 1,000Ω
4K0 = 4,000Ω
51K = 51,000Ω

When you need the highest quality wirewound axial terminal 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 next page).

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.

- RoHS compliant; add “E” suffix to part number to specify.

SPECIFICATIONS

Material

Coating: Molded lead free vitreous enamel.

Core: Ceramic.

Terminals: Solder-coated copper clad axial. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu

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

Electrical

Tolerance: $\pm 5\%$
(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 9.99Ω: ±100 ppm/°C
10Ω and over: ±30 ppm/°C

Dielectric withstanding voltage:

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

STANDARD PART NUMBERS FOR 90 SERIES

Wattage								
Ohmic value	Part No.	1.5	2.25	3.25	5	11		
Prefix	Suffix	91J	92J	93J	95J	90J		
1	—1R0	✓	✓	✓	✓	✓		
1.1	—1R1	✓	✱	✱	✱	✱		
1.2	—1R2	✓	✓	✓	✓	✓		
1.3	—1R3	✱	✓	✓	✱	✓		
1.5	—1R5	✓	✓	✓	✓	✓		
1.6	—1R6	✱	✱	✱	✱	✱		
1.8	—1R8	✓	✱	✱	✓	✓		
2	—2R0	✓	✓	✓	✓	✓		
2.2	—2R2	✓	✓	✓	✓	✓		
2.4	—2R4	✓	✱	✓	✓	✓		
2.7	—2R7	✓	✓	✓	✓	✓		
3	—3R0	✓	✓	✓	✓	✓		
3.3	—3R3	✓	✓	✓	✓	✓		
3.6	—3R6	✱	✱	✱	✓	✱		
3.9	—3R9	✓	✓	✓	✓	✓		
4	—4R0	✓	✓	✓	✓	✓		
4.3	—4R3	✱	✓	✱	✓	✓		
4.7	—4R7	✓	✓	✓	✓	✓		
5	—5R0	✓	✓	✓	✓	✓		
5.1	—5R1	✱	✓	✱	✱	✱		
5.6	—5R6	✓	✓	✓	✓	✓		
6.2	—6R2	✱	✓	✓	✓	✓		
6.8	—6R8	✓	✱	✓	✓	✓		
7.5	—7R5	✱	✓	✓	✓	✓		
8.2	—8R2	✱	✓	✓	✓	✓		
9.1	—9R1	✱	✱	✓	✓	✱		
10	—10R	✓	✓	✓	✓	✓		
11	—11R	✱	✱	✱	✓	✓		
12	—12R	✓	✓	✓	✓	✓		
13	—13R	✱	✱	✓	✓	✱		
15	—15R	✓	✓	✓	✓	✓		
16	—16R	✓	✱	✓	✓	✓		
18	—18R	✓	✓	✓	✓	✓		
20	—20R	✓	✓	✓	✓	✓		

Wattage								
Ohmic value	Part No.	1.5	2.25	3.25	5	11		
Prefix	Suffix	91J	92J	93J	95J	90J		
22	—22R	✓	✓	✓	✓	✓		
24	—24R	✱	✱	✓	✓	✓		
25	—25R	✱	✓	✓	✓	✓		
27	—27R	✓	✓	✓	✓	✓		
30	—30R	✓	✓	✓	✓	✓		
33	—33R	✓	✱	✓	✓	✓		
35	—35R	✓	✱	✓	✓	✓		
36	—36R	✓	✓	✱	✓	✱		
39	—39R	✓	✓	✓	✓	✓		
40	—40R	✱	✓	✓	✓	✓		
43	—43R	✱	✓	✓	✓	✓		
47	—47R	✓	✓	✓	✓	✓		
50	—50R	✓	✓	✓	✓	✓		
51	—51R	✱	✱	✓	✓	✱		
56	—56R	✓	✓	✓	✓	✓		
62	—62R	✓	✓	✓	✓	✓		
68	—68R	✓	✓	✓	✓	✓		
75	—75R	✓	✓	✓	✓	✓		
82	—82R	✓	✓	✓	✓	✓		
91	—91R	✓	✱	✓	✓	✓		
100	—100	✓	✓	✓	✓	✓		
110	—110	✓	✓	✓	✓	✓		
120	—120	✓	✓	✓	✓	✓		
130	—130	✱	✓	✓	✓	✓		
150	—150	✓	✓	✓	✓	✓		
160	—160	✓	✱	✓	✓	✓		
180	—180	✓	✓	✓	✓	✓		
200	—200	✓	✓	✓	✓	✓		
220	—220	✓	✓	✓	✓	✓		
240	—240	✱	✱	✓	✓	✓		
250	—250	✓	✓	✓	✓	✓		
270	—270	✓	✓	✓	✓	✓		
300	—300	✓	✓	✓	✓	✓		
330	—330	✓	✓	✓	✓	✓		

Wattage								
Ohmic value	Part No.	1.5	2.25	3.25	5	11		
Prefix	Suffix	91J	92J	93J	95J	90J		
350	—350	✓	✓	✓	✓	✱		
360	—360	✓	✓	✓	✓	✱		
390	—390	✓	✓	✓	✓	✓		
400	—400	✓	✓	✓	✓	✓		
430	—430	✓	✓	✓	✓	✱		
450	—450	✱	✓	✓	✱	✱		
470	—470	✓	✓	✓	✓	✓		
500	—500	✓	✓	✓	✓	✓		
510	—510	✱	✓	✓	✓	✱		
560	—560	✓	✓	✓	✓	✓		
600	—600	✓	✱	✓	✓	✓		
620	—620	✓	✱	✓	✱	✱		
680	—680	✓	✓	✓	✓	✓		
700	—700	✱	✓	✓	✓	✱		
750	—750	✓	✓	✓	✓	✓		
800	—800	✓	✱	✓	✓	✓		
820	—820	✓	✱	✓	✓	✓		
900	—900	✱	✱	✓	✓	✓		
910	—910	✓	✱	✓	✓	✱		
1,000	—1K0	✓	✓	✓	✓	✓		
1,100	—1K1	✱	✓	✓	✱	✱		
1,200	—1K2	✓	✓	✓	✓	✓		
1,300	—1K3	✓	✓	✓	✓	✓		
1,400	—1K4	✱	✓	✱	✱	✓		
1,500	—1K5	✓	✓	✓	✓	✓		
1,600	—1K6	✱	✱	✓	✓	✓		
1,800	—1K8	✓	✓	✓	✓	✓		
2,000	—2K0	✓	✓	✓	✓	✓		
2,200	—2K2	✓	✓	✓	✓	✓		
2,400	—2K4	✓	✓	✓	✓	✱		
2,500	—2K5	✓	✓	✓	✓	✓		
2,700	—2K7	✱	✓	✓	✓	✓		
3,000	—3K0	✓	✓	✓	✓	✓		
3,300	—3K3	✓	✓	✓	✓	✓		

Wattage								
Ohmic value	Part No.	3.25	5	11				
Prefix	Suffix	93J	95J	90J				
3,500	—3K5	✓	✓	✓				
3,600	—3K6	✓	✓	✓				
3,900	—3K9	✓	✓	✓				
4,000	—4K0	✓	✓	✓				
4,300	—4K3	✱	✓	✓				
4,500	—4K5	✓	✓	✓				
4,700	—4K7	✓	✓	✓				
5,000	—5K0	✓	✓	✓				
5,100	—5K1	✱	✓	✓				
5,600	—5K6	✓	✓	✓				
6,000	—6K0	✓	✓	✓				
6,200	—6K2	✓	✓	✱				
6,800	—6K8	✓	✓	✓				
7,000	—7K0	✓	✓	✓				
7,500	—7K5	✓	✓	✓				
8,000	—8K0	✓	✓	✓				
8,200	—8K2	✓	✓	✓				
9,000	—9K0	✓	✓	✱				
9,100	—9K1	✓	✓	✱				
10,000	—10K	✓	✓	✓				
11,000	—11K	✓	✱	✱				
12,000	—12K	✓	✓	✓				
13,000	—13K	✓	✓	✓				
14,000	—14K	✓	✓	✓				
15,000	—15K	✓	✓	✓				
16,000	—16K	✓	✓	✱				
17,000	—17K	✱	✱	✱				
18,000	—18K	✓	✓	✓				
20,000	—20K	✓	✓	✓				
22,000	—22K	✓	✓	✓				
24,000	—24K	✱	✱	✓				
25,000	—25K	✓	✓	✓				
27,000	—27K	✓	✓	✓				
30,000	—30K	✓	✓	✓				
33,000	—33K	✓	✓	✓				
35,000	—35K	✓	✓	✓				
36,000	—36K	✓	✓	✓				
39,000	—39K	✓	✓	✓				
40,000	—40K	✓	✓	✓				
43,000	—43K	✓	✓	✓				
45,000	—45K	✓	✓	✱				
47,000	—47K	✓	✓	✓				
50,000	—50K	✓	✓	✓				
51,000	—51K	✓	✓	✱				

✓ = 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

FEATURES

- Prevents severe vibration or mechanical shock to resistor
- Increases 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
- Sold in bags of ten (10)



Mounting Clip For 90 Series

STANDARD PART NUMBERS FOR 90 SERIES MOUNTING CLIP

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	✚ = Most popular standard values
✓ 5902	2.25	0.35 / 8.890	0.217 / 5.500	0.275 / 6.980	2	0.156 / 3.969	0.71 / 1.803	✓ = Standard values
✚ 5904	3.25	0.50 / 12.700	0.257 / 6.500	0.319 / 8.103	2	0.250 / 6.350	0.093 / 2.362	✚ = Non-standard values subject to minimum handling charge per item
✚ 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	