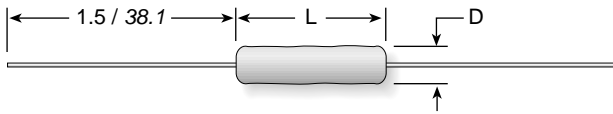


# 20 Series

## Vitreous Enamel Conformal Axial Lead Wirewound Resistors 5% Tolerance Standard



Dimensions (in. / mm)						
Series	Wattage	Ohms	Length*	Diam.*	Voltage	Lead ga.
21	1	0.1-3.2K	0.406 / 10.3	0.156 / 4.0	75	24
22	2	0.1-4.4K	0.406 / 10.3	0.219 / 5.6	65	20
23	3	0.1-10K	0.500 / 12.7	0.220 / 5.6	135	20
25	5	0.1-28K	1.000 / 25.4	0.276 / 7.0	330	20
27	7	0.1-62K	1.250 / 31.8	0.394 / 10.0	450	20
20	10	0.1-100K	1.844 / 46.8	0.394 / 10.0	720	20

12.5 watt size available on special order  
\*For units below 1Ω, add 15% to body diameter, 10% to body length.

The 20 Series axial lead resistors are both durable and economical. They have all the electrical attributes of the more expensive 90 Series resistors, including an all-welded construction.

They offer the durability of a lead free conformal vitreous enamel coating and are ideal for computer, communications and industrial applications in which cost, quality and reliability are key considerations.

### FEATURES

- Rugged vitreous enamel coating withstands high humidity and temperature cycling.
- Durable construction, recommended for industrial applications where reliability is paramount.
- All-welded construction.
- Flame resistant lead free vitreous enamel coating.

### SPECIFICATIONS

#### Material

**Coating:** Conformal lead free vitreous enamel.

**Core:** Ceramic.

**Terminals:** Solder-coated axial lead.

#### Derating

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

#### Electrical

**Tolerance:** ±5% standard. Other tolerances available.

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

#### Overload:

Under 7 watts: 5 times rated wattage for 5 seconds.  
7 watts and over: 10 times rated wattage for 5 seconds.

#### Temperature coefficient:

1 to 9.99 ohms: ±50 ppm/°C  
10 ohms and over: ±30 ppm/°C

### STOCK PART NUMBERS FOR STANDARD RESISTANCE VALUES

Ohmic value	Part No. Prefix Suffix	Wattage						Ohmic value	Part No. Prefix Suffix	Wattage						Ohmic value	Part No. Prefix Suffix	Wattage					
		1	2	3	5	7	10			1	2	3	5	7	10			1	2	3	5	7	10
0.10	—R10			✓	✓		✓	62	—62R	✦	✦	✓	✓	✦	✦	1,800	—1K8	✓	✓	✓	✦	✦	✦
0.13	—R13			✓	✓		✓	68	—68R	✓	✓	✓	✓	✦	✓	2,000	—2K0	✦	✓	✦	✓	✦	✓
0.15	—R15			✓	✓		✓	75	—75R	✓	✓	✓	✓	✦	✓	2,200	—2K2	✓	✓	✓	✓	✦	✓
0.20	—R20			✓	✓		✓	82	—82R	✓	✓	✓	✓	✦	✓	2,500	—2K5	✦	✓	✓	✦	✦	✦
0.25	—R25			✓	✓		✓	100	—100	✦	✦	✦	✦	✓	✓	2,700	—2K7	✓	✓	✓	✦	✦	✓
0.30	—R30			✓	✓		✓	120	—120	✓	✓	✦	✓	✦	✓	3,000	—3K0	✓	✓	✦	✓	✦	✓
0.33	—R33			✓	✓		✓	125	—125	✓	✦	✓	✓	✓	✓	3,300	—3K3			✓	✓	✦	✦
0.50	—R50			✓	✓		✓	150	—150	✓	✦	✦	✦	✓	✓	3,500	—3K5			✓	✓	✦	✦
0.75	—R75			✓	✓		✓	180	—180	✓	✓	✦	✦	✦	✓	3,900	—3K9			✓	✓	✦	✦
1	—1R0	✦	✦	✦	✦	✓	✓	200	—200	✦	✓	✓	✓	✓	✓	4,000	—4K0	✦	✓	✓	✦	✦	✓
1.5	—1R5	✓	✓	✓	✓	✓	✓	220	—220	✦	✓	✓	✓	✦	✓	4,500	—4K5			✓	✓	✦	✦
2	—2R0	✦	✓	✓	✦	✦	✓	225	—225	✓	✦	✦	✦	✦	✦	4,700	—4K7			✓	✓	✦	✓
2.2	—2R2	✓	✓	✓	✓	✦	✓	250	—250	✓	✓	✓	✓	✦	✓	5,000	—5K0			✓	✦	✓	✓
3	—3R0	✓	✓	✓	✓	✓	✓	270	—270	✦	✓	✓	✓	✦	✓	6,000	—6K0			✓	✓	✓	✓
4	—4R0	✓	✦	✓	✓	✦	✓	300	—300	✓	✓	✓	✓	✓	✓	6,800	—6K8			✓	✓	✦	✦
5	—5R0	✓	✓	✓	✦	✦	✦	330	—330	✦	✓	✓	✓	✦	✓	7,000	—7K0			✓	✓	✦	✦
7.5	—7R5	✦	✓	✓	✓	✦	✓	350	—350	✓	✓	✦	✦	✦	✓	7,500	—7K5			✓	✓	✦	✓
10	—10R	✓	✓	✓	✓	✦	✓	390	—390	✓	✦	✦	✦	✦	✓	8,000	—8K0			✓	✓	✦	✓
12	—12R	✦	✦	✓	✓	✓	✓	400	—400	✦	✓	✓	✓	✓	✓	9,000	—9K0			✓	✦	✦	✦
15	—15R	✓	✦	✓	✦	✓	✦	450	—450	✦	✦	✦	✓	✓	✓	10,000	—10K			✦	✦	✦	✦
18	—18R	✓	✦	✓	✓	✦	✓	470	—470	✦	✓	✓	✓	✦	✓	12,000	—12K				✓	✦	✓
20	—20R	✓	✓	✓	✓	✦	✓	500	—500	✓	✓	✦	✓	✓	✓	13,000	—13K				✦	✦	✓
22	—22R	✓	✓	✓	✓	✦	✓	560	—560	✓	✓	✓	✓	✦	✓	15,000	—15K				✦	✦	✦
25	—25R	✦	✓	✓	✓	✓	✓	600	—600	✓	✓	✦	✓	✓	✓	17,000	—17K				✦	✦	✦
27	—27R	✓	✓	✓	✓	✦	✦	680	—680	✓	✦	✓	✓	✦	✓	20,000	—20K				✦	✓	✦
30	—30R	✦	✓	✓	✓	✦	✓	750	—750	✓	✓	✓	✓	✦	✓	22,000	—22K				✦	✦	✦
33	—33R	✓	✓	✓	✓	✓	✓	800	—800	✓	✦	✓	✓	✦	✓	25,000	—25K				✓	✦	✓
35	—35R	✦	✦	✦	✓	✦	✦	820	—820	✓	✓	✓	✓	✦	✓	30,000	—30K					✦	✦
39	—39R	✓	✓	✓	✦	✓	✓	900	—900	✦	✓	✓	✓	✦	✓	33,000	—33K					✦	✦
40	—40R	✓	✦	✓	✓	✦	✓	1,000	—1K0	✦	✦	✦	✦	✦	✓	35,000	—35K					✦	✦
47	—47R	✦	✓	✓	✓	✦	✓	1,100	—1K1	✦	✦	✓	✓	✦	✓	40,000	—40K					✓	✓
50	—50R	✓	✓	✓	✦	✓	✓	1,200	—1K2	✓	✓	✦	✓	✓	✓	50,000	—50K					✦	✦
56	—56R	✦	✓	✓	✓	✦	✦	1,500	—1K5	✦	✓	✦	✓	✓	✓							✦	✦

✦ = 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.