20 Series

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

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.
- RoHS compliant product available Jan. 2006 Add "E" suffix to part number to specify.

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.

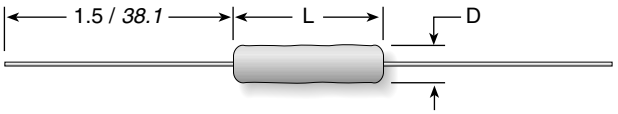
Electrical

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



Series	Wattage	Ohms	Dimensions (in. / mm) Length*	Diam.*	Max. Volt.**	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.

**Maximum Voltage is based on Ohm's Law [$V=\sqrt{W*R}$] as limited by the resistance value of specified product

ORDERING INFORMATION

RoHS Compliant

21JR10E

20 Series	Wattage	Tolerance	Resistance Value
Vitreous Enamel	1 = 1W	J = 5%	R10 = 0.10Ω
Axial Lead	2		1R0 = 1.0Ω
Wirewound	3		10R = 10.0Ω
	5		250 = 250Ω
	7		1K0 = 1,000Ω
	0 = 10W		4K5 = 4,500Ω
			50K = 50,000Ω

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.

STANDARD PART NUMBERS FOR STANDARD RESISTANCE VALUES

Ohmic value	Part No. Prefix ➤ Suffix ▼	Wattage 1 (21J)	2 (22J)	3 (23J)	5 (25J)	7 (27J)	10 (20J)
0.10	R10			✔	✔		✔
0.13	R13			✔	✔		✔
0.15	R15			✔	✔		✔
0.20	R20			✔	✔		✔
0.25	R25			✔	✔		✔
0.30	R30			✔	✔		✔
0.33	R33			✔	✔		✔
0.50	R50			✔	✔		✔
0.75	R75			✔	✔		✔
1	1R0	✙	✙	✙	✙	✔	✔
1.5	1R5	✔	✔	✔	✔	✔	✔
2	2R0	✙	✔	✔	✙	✣	✔
2.2	2R2	✔	✔	✔	✔	✣	✔
3	3R0	✔	✔	✔	✔	✔	✔
4	4R0	✔	✣	✔	✔	✣	✔
5	5R0	✔	✔	✔	✙	✣	✙
7.5	7R5	✙	✔	✔	✔	✣	✔
10	10R	✔	✔	✔	✔	✣	✔
12	12R	✣	✣	✔	✔	✣	✔
15	15R	✔	✣	✔	✣	✔	✙
18	18R	✔	✣	✔	✔	✣	✔
20	20R	✔	✔	✔	✔	✣	✔
22	22R	✔	✔	✔	✔	✣	✔
25	25R	✣	✔	✔	✔	✣	✔
27	27R	✔	✔	✔	✔	✣	✣
30	30R	✙	✔	✔	✔	✣	✔
33	33R	✔	✔	✔	✔	✔	✔
35	35R	✣	✣	✣	✔	✣	✣
39	39R	✔	✔	✔	✣	✣	✔
40	40R	✔	✣	✔	✔	✣	✔
47	47R	✙	✔	✔	✔	✣	✔
50	50R	✔	✔	✔	✙	✔	✔
56	56R	✣	✔	✔	✔	✣	✣
62	62R	✣	✣	✔	✔	✣	✙
68	68R	✔	✔	✔	✔	✣	✔
75	75R	✔	✔	✔	✔	✣	✔
82	82R	✔	✔	✔	✔	✣	✔
100	100	✙	✣	✙	✙	✔	✔
120	120	✔	✔	✙	✔	✣	✔
125	125	✣	✣	✔	✔	✔	✔
150	150	✔	✔	✙	✙	✣	✔
180	180	✔	✔	✔	✔	✣	✙
200	200	✙	✔	✔	✔	✔	✔
220	220	✙	✔	✔	✔	✣	✔
225	225	✣	✣	✣	✣	✣	✣
250	250	✔	✔	✔	✔	✣	✔
270	270	✙	✔	✔	✔	✣	✣
300	300	✔	✔	✔	✔	✣	✔
330	330	✙	✔	✔	✔	✣	✔
350	350	✣	✔	✣	✔	✣	✔
390	390	✔	✣	✔	✣	✣	✣
400	400	✣	✣	✔	✔	✣	✔
450	450	✣	✣	✣	✔	✣	✔
470	470	✙	✔	✔	✔	✣	✔
500	500	✔	✔	✙	✔	✔	✔
560	560	✔	✔	✔	✔	✣	✣
600	600	✔	✔	✙	✔	✣	✔
680	680	✔	✣	✔	✔	✣	✔
750	750	✔	✔	✔	✔	✣	✔
800	800	✔	✣	✔	✔	✣	✣
820	820	✔	✔	✔	✔	✣	✔
900	900	✣	✔	✔	✔	✣	✣
1,000	1K0	✙	✙	✙	✙	✔	✙
1,100	1K1	✣	✣	✔	✔	✣	✔
1,200	1K2	✔	✔	✙	✔	✣	✔
1,500	1K5	✙	✔	✙	✔	✣	✔
1,800	1K8	✔	✔	✔	✣	✣	✣
2,000	2K0	✣	✔	✙	✔	✣	✔
2,200	2K2	✔	✔	✔	✔	✣	✔
2,500	2K5	✙	✔	✔	✙	✣	✙
2,700	2K7	✔	✔	✔	✣	✣	✔
3,000	3K0	✔	✔	✙	✔	✣	✔
3,300	3K3			✔	✔	✣	✣
3,500	3K5			✣	✔	✣	✣
3,900	3K9			✔	✔	✣	✔
4,000	4K0			✙	✔	✣	✔
4,500	4K5			✣	✔	✣	✣
4,700	4K7			✔	✔	✣	✔
5,000	5K0			✔	✙	✔	✔
6,000	6K0			✔	✔	✔	✔
6,800	6K8			✔	✔	✣	✣
7,000	7K0			✔	✔	✣	✣
7,500	7K5			✔	✔	✣	✔
8,000	8K0			✔	✔	✣	✔
9,000	9K0			✔	✣	✣	✣
10,000	10K			✙	✙	✣	✔
12,000	12K				✔	✣	✔
13,000	13K					✣	✔
15,000	15K				✙	✣	✙
17,000	17K					✣	✣
20,000	20K				✙	✔	✔
22,000	22K				✙	✣	✣
25,000	25K				✔	✣	✔
30,000	30K						✙
33,000	33K						✣
35,000	35K						✣
40,000	40K						✔
50,000	50K						✙

✙ = Most popular standard values ✔ = 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.