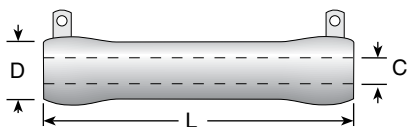


270 Series

Vitreous Enamel Power



See page 36
for mounting
hardware

FEATURES

- Terminals suitable for soldering or bolt connection
- High wattage applications
- Rugged lead free vitreous enamel coating
- Flame resistant coating
- All-welded construction
- RoHS compliant available
- "Fast on" option – see terminal 538, page 37

SPECIFICATIONS

Material

Coating: Lead free vitreous enamel. Very large models (750 watts and up) are supplied in Silicone Ceramic. Also available in low-cost Centohm coating; Consult factory.

Core: Tubular ceramic.

Terminals: Solder coated radial lug. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu

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

Electrical

Tolerance:

±5% 1Ω and over (J)
±10% under 1Ω (K)

Power rating: Based on 25°C free air rating.

Overload: 10 times rated wattage for 5 seconds.

Temperature coefficient:

1 to 20Ω: ±400 ppm/°C.
Above 20Ω: ±260 ppm/°C

Dielectric withstanding voltage:

1000 VAC: 12 to 100 watt rating.
3000 VAC: 175 to 225 watt rating (Measured from terminal to mounting bracket)

To calculate max. amps: use the formula $\sqrt{P/R}$

Series	Wattage	Ohms	Dimensions (in. / mm)			Core Code	Voltage	Standard Terminal
			L	D	C			
L12	12	0.1-51K	1.75 / 44.4	0.313 / 7.94	0.188 / 4.76	D	565	57
L25	25	0.15-100K	2.0 / 50.8	0.562 / 14.3	0.313 / 7.94	K	625	40
L50	50	0.38-260K	4.0 / 101.6	0.562 / 14.3	0.313 / 7.94	K	1625	40
L100	100	0.23-101K	6.5 / 165.1	0.750 / 19.1	0.50 / 12.7	M	2845	40
L175	175	0.13-101K	8.5 / 215.9	1.125 / 28.6	0.75 / 19.1	P	3595	46
L225	225	0.16-129K	10.5 / 266.7	1.125 / 28.6	0.75 / 19.1	P	4595	46
L500	500	0.38-218K	12.0 / 304.8	2.50 / 63.5	1.75 / 44.5	S	4970	45
L1000	1000	0.69-392K	20.0 / 508.0	2.50 / 63.5	1.75 / 44.5	S	8900	45

Non-Inductive versions available; Other sizes available; Also available in low cost Centohm or Silicone coating; Consult Ohmite.
* Maximum Voltage is based on Ohm's Law $[V=\sqrt{P \cdot R}]$ as limited by the resistance value of specified product

Select 270 Type fixed resistors for applications requiring wattage ratings from 12 to 1000 watts.

The 270 Type resistors are equipped with lug terminals suitable for soldering or sturdy bolt connection. When secure mounting is required, the hollow core of these resistors permit fastening with spring-type brackets, thru bolts or thru bolts with slotted-steel brackets.

Suitable for rugged applications, the 270 Type resistors feature all-welded construction and durable lead free vitreous enamel coating. Mounting brackets not included with resistors.

ORDERING INFO

Non-Inductive		RoHS Compliant	
F = Fast on (optional)	Blank = Standard	N = Non-inductive	
L 25 J 100 E			
Series	Wattage	Tolerance	Ohms
Blank = Vitreous		J = 5%	1R0 = 1 Ω
C = Centohm		K = 10%	250 = 250 Ω
S = Silicone			1K0 = 1,000 Ω
			25K = 25,000 Ω
			25K5 = 25,500 Ω

MADE-TO-ORDER PARTS

Non-Inductive		RoHS Compliant	
Blank = Standard	N = Non-inductive	See "Core and Terminal Selection"	
270 50 K 40 5 R 00 J E			
Coating	Wattage	Ohms	Tolerance
270 = Vitreous		R500 = 0.500 Ω	J = 5%
470 = Silicone Ceramic		1R00 = 1 Ω	K = 10%
		250R = 250 Ω	
		1K00 = 1,000 Ω	
		25K0 = 25,000 Ω	
		25K5 = 25,500 Ω	

Terminal Type See "Resistor Terminals for Tubular Cores"

See website for custom core and terminal info

Power limitations for high resistance values: When resistance exceeds the resistance values listed, derate the Power Rating by 25% to improve reliability:

Power rating	Resistance value	No power derating necessary for ratings higher than 100W.
12W	3,900Ω	
25W	12,000Ω	
50W	35,000Ω	
100W	75,000Ω	

STANDARD PART NUMBERS FOR 270 SERIES

Ohmic value		Wattage		Wattage		Wattage		Wattage	
12 Watt		12 Watt		25		50		100	
Ohmic value	Part No.	Ohmic value	Part No.	Ohmic value	Part No.	Ohmic value	Part No.	Ohmic value	Part No.
0.51	L12JKR51E	180	L12J180E	25	L25J	50	L50J	100	L100J
1	L12J1R0E	270	L12J270E					175	L175J
3.3	L12J3R3E	330	L12J330E					225	L225J
4.7	L12J4R7E	390	L12J390E					500	L500J
10	L12J10RE	470	L12J470E					1000	L1000J
12	L12J12RE	560	L12J560E						
15	L12J15RE	1000	L12J1K0E						
22	L12J22RE	1200	L12J1K2E						
27	L12J27RE	1500	L12J1K5E						
33	L12J33RE	2200	L12J2K2E						
47	L12J47RE	2700	L12J2K7E						
68	L12J68RE	4700	L12J4K7E						
82	L12J82RE	10000	L12J10KE						
100	L12J100E	18000	L12J18KE						
150	L12J150E	22000	L12J22KE						
		51000	L12J51KE						

✓ = Standard values; check availability using the worldwide inventory search at www.ohmite.com

Red outlined values supplied in Silicone-Ceramic coatings instead of vitreous enamel.