

Type TE Series

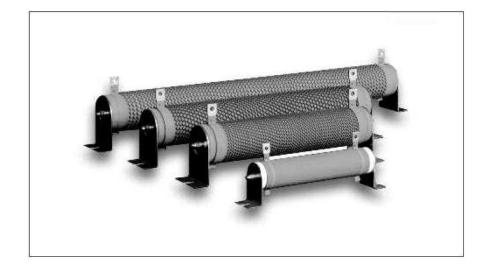
Key Features

Up to 2500W Power rating in free air

Flameproof construction – UL94V coating

RoHS compliant

Custom terminations / leads available



Applications

Large electrical and production machinery

Load test simulation

Motor start / stop cycles

Dynamic braking

Equipment discharge

TE Connectivity is a leading supplier of standard and custom-designed power resistors for industrial, control and general- purpose applications.

The TE range of flameproof coated tubular ceramic core resistors use both standard and edge wound (corrugated) winding methods to improve power handling capability. Designed for heavy duty machinery, electrical equipment, motor control etc. requiring stability and reliability.

Characteristics - Electrical

Power rating @70°C in free air	50W – 2500W (see table)
Resistance range	See table
Selection series	E12
Tolerance	±5% ±10%
Temperature Coefficient of	<20Ω ±400PPM/°C
resistance	≥20Ω ±300PPM/°C
Operating temperature range	-55 ~ +155°C
Short term overload	3 x rated power / 5 seconds
Dielectric strength	2500VAC Min.
Insulation resistance	DC500V 20MΩ min.



Specifications – Electrical

Power	Resistance Value	Tolerance	Appearance
Rating			
50W	R10 ~ 2K7	±5% ±10%	Smooth
60W	R10 ~ 2K7	±5% ±10%	Smooth
80W	R10 ~ 2K7	±5% ±10%	Smooth
100W	1R0 ~ 2K7	±5% ±10%	Smooth
120W	1R0 ~ 2K7	±5% ±10%	Smooth
150W	1R0 ~ 2K7	±5% ±10%	Smooth
200W	1R0 ~ 9R1	±5% ±10%	Ribbed
20000	10R ~ 2K7	±5% ±10%	Smooth
300W	1R0 ~ 9R1	±5% ±10%	Ribbed
30000	10R ~ 2K7	±5% ±10%	Smooth
400W	1R0 ~ 15R	±5% ±10%	Ribbed
40000	16R ~ 2K7	±5% ±10%	Smooth
500W	1R0 ~ 20R	±5% ±10%	Ribbed
30000	21R ~ 2K7	±5% ±10%	Smooth
600W	1R0 ~ 20R	±5% ±10%	Ribbed
60000	21R ~ 2K7	±5% ±10%	Smooth
750W	1R0 ~ 75R	±5% ±10%	Ribbed
73000	76R ~ 2K7	±5% ±10%	Smooth
1000W	1R0 ~ 100R	±5% ±10%	Ribbed
100000	101R ~ 2K7	±5% ±10%	Smooth
1200W	1R0 ~ 100R	±5% ±10%	Ribbed
120000	101R ~ 2K7	±5% ±10%	Smooth
1500W	1R0 ~ 120R	±5% ±10%	Ribbed
130044	121R ~ 2K7	±5% ±10%	Smooth
2000W	1R0 ~ 120R	±5% ±10%	Ribbed
2000 00	121R ~ 2K7	±5% ±10%	Smooth
2500W	1R0 ~ 120R	±5% ±10%	Ribbed
2300VV	121R ~ 2K7	±5% ±10%	Smooth

Voltage rating:

Resistors shall have a rated direct-current (DC) continuous working voltage or an approximate sine-wave root-mean-square (RMS) alternating-current (AC) continuous working voltage at commercial line frequency and waveform corresponding to the power rating, as determined from the following formula:

 $RCWV = VP \times R$

Where: RCWV = Rated DC or RMS AC continuous working voltage at commercial-line frequency and waveform (volt)

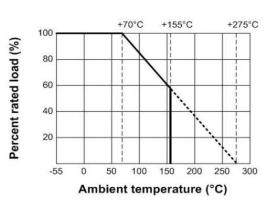
P = Power Rating (watt)

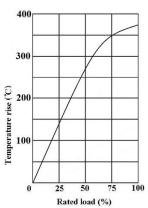
R = Nominal Resistance (ohm)



Derating Curve

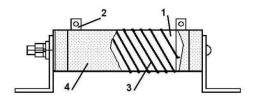
Temperature Rise Chart



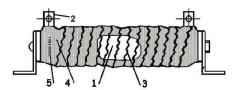


Construction:

Smooth:

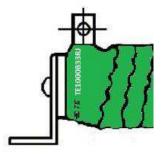


Ribbed:



No.	Name	Material	Material Generic Name
1	Basic Body	Rod Type Ceramics	Al ₂ O ₃ , SiO ₂
2	Terminal	Tin plated terminal cap	Fe: 73%, Mn: 21%, C: 5%
3	Resistance Wire	Ni-Cr or Cu-Ni Alloy	Ni-Cr or Cu-Ni Alloy
4	Coating	Insulated and non-flame paint (Color: Green)	Non-Flame paint UL94V
5	Marking	Marking Ink	

Marking



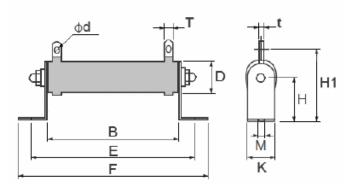


Environmental Characteristics:

Characteristics	Limits	Test Methods
		(JIS C 5201-1)
Temperature	<20Ω : ± 400 PPM/°C Max.	Natural Resistance change per temperature degree
Coefficient	≥20Ω : ± 300 PPM/°C Max.	centigrade.
		R ₂ -R ₁
		x10 ⁶ (PPM/°C)
		$R_1(t_2-t_1)$
		R ₁ : Resistance value at room temperature (t ₁)
		R ₂ : Resistance value at room temperature +100°C (t ₂)
		(Sub-clause 4.8)
Short term	\pm (2% + 0.05Ω) Max. with no	Permanent resistance change after the application of a
overload	evidence of mechanical	potential of 3 x RCWV for 5 seconds
	damage	(Sub-clause 4.13
Terminal	No evidence of mechanical	Direct load :
Strength	damage	Resistance to a 2.5 kgs direct load for 10 secs. in the
_	_	direction of the longitudinal axis of the terminal leads
		Twist Test :
		Terminal leads shall be bent through 90° at a point of
		about 6mm from the body of the resistor and shall be
		rotated through 360° about the original axis of the bent
		terminal in alternating direction for a total of 3 rotations
		(Sub-clause 4.16)
Solderability	95 % coverage Min.	The area covered with a new smooth, clean, shiny and
		continuous surface free from concentrated pinholes.
		Test temp. of solder: 245°C ± 3°C
		Dwell time in solder : 2 ~ 3 seconds
		(Sub-clause 4.17)
Soldering Temp.	Electrical Characteristics shall	Terminals immersed into solder bath to 3.2 ~ 4.8mm
Reference	be satisfied without distinct	from the body. Permanent resistance change shall be
	deformation in appearance.	checked.
	(95% coverage Min.)	Mayo coldering condition (2 guales may)
		Wave soldering condition (2 cycles max.)
		Pre-heat: 100 ~ 120 °C, 30 ± 5sec. Suggested solder temp.: 235 ~ 255 °C, 10 sec. (max.)
		Peak temp.: 260 °C
		reak temp 200 C
		Hand soldering condition:
		Hand Soldering bit temp. : 380 ± 10 °C
		Dwell time in solder : 3 +1/-0 sec.
Resistance to	Resistance change rate	Permanent resistance change when terminals immersed
soldering heat	±(1%+0.05Ω) with no	to 3.2 ~ 4.8mm from body in 350°C ±10°C solder for
	evidence of mechanical	3±0.5 seconds
	damage	Sub-clause 4.18
Load life in	Resistance change rate	Resistance change after 1,000 hours (1.5 hours "on", 0.5
humidity	±(5%+ 0.05Ω) Max. with no	hour "off") at RCWV in a humidity test chamber
	evidence of mechanical	controlled at 40 °C± 2 °C and 90 to 95 % relative
	damage	humidity
		(Sub-clause 4.24.2.1)
Load Life	Resistance change rate	Permanent resistance change after 1,000 hours
	\pm (5%+ 0.05 Ω) Max. with no	operating at RCWV with duty cycle of (1.5 hours "on",
	evidence of mechanical	0.5 hour "off") at 70°C ± 2°C ambient
	damage	(Sub-clause 4.25.1)



Dimensions:



Power					[Dimensio	n (mm)				
rating	B±2	E±5	F±3	D±2	H±1	H1±3	M±0.5	K±1	T±0.5	t±0.5	Ød ±0.5
50W	102	124	146	28	28	61	6.5	28	8	1.8	4.3
60W	102	124	146	28	28	61	6.5	28	8	1.8	4.3
80W	152	174	196	28	28	61	6.5	28	8	1.8	4.3
100W	182	204	226	28	28	61	6.5	28	8	1.8	4.3
120W	182	204	226	28	28	61	6.5	28	8	1.8	4.3
150W	195	217	239	40	41	81	8	40	10	1.8	5.5
200W	195	217	239	40	41	81	8	40	10	1.8	5.5
300W	282	304	326	40	41	81	8	40	10	1.8	5.5
400W	282	304	326	40	41	81	8	40	10	1.8	5.5
500W	316	338	360	50	45	101	8	50	16	1.8	6.5
600W	345	367	389	40	41	81	8	40	10	1.8	5.5
750W	316	338	360	50	45	101	8	50	16	1.8	6.5
1000W	300	325	350	60	60	119	8.5	60	15	2	6.5
1200W	415	440	465	60	60	119	8.5	60	15	2	6.5
1500W	415	440	465	60	60	119	8.5	60	15	2	6.5
2000W	510	535	560	60	60	119	8.5	60	15	2	6.5
2500W	600	625	650	60	60	119	8.5	60	15	2	6.5

Label

1-1879453-9 Lot no. 18010222 Qty: 1 Pcs.

How To Order

TE
Common
Part
TE – High
Power
Wirewound
Resistor

	50
Powe	r Rating
50	50W
60	60W
80	80W
100	100W
	etc.
-	

	В
I	Mounting
ı	
ſ	A – No Bracket
	B – With Bracket
١	(standard)
١	

1K0
Resistance Value
100D 100O
100R - 100Ω
1ΚΟ - 1000Ω
10K – 10,000Ω

J
Tolerance
J - ±5% K - ±10%

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Click to view similar products for Wirewound Resistors - Chassis Mount category:

Click to view products by TE Connectivity manufacturer:

Other Similar products are found below:

HD300HLR71J RER50F18R7RC02 RER50F7R50RC02 RER75F4991MC02 RH0055R000FC02W09 2-1623821-6 FVT200-500

RDSF010015R00JDBNI RER60F34R8RC02 RER60F51R1MC0230 RER65F1R50PC02 RER70F62R5PC02 VK100NA-200 VK100NA-50

VK100NA-750 40/70MJ2K00BE VP10FA-3K VP50KA-20K VPR10F1 VPR10F-13.5K VPR10F-4500 VPR10F-4.5K VPR10F-4K

VPR10F-700 VPR10F-7.5K VPR20H150 VPR5F-22.5K L75J1K0E VRH320 3K3 K RER65F2940PC02 RER75F1R00RC02

RER70F27R4P VPR5F-600 VPR5F250 VPR10F-8K VPR10F-6K VPR10F225 VPR10F-1.75K VPR10F-1.25K VPR10F-125 VPR10F10

VP50KA-12K VP50KA-100K VP25KA-5000 VK100NA250 VK100NA-15 620-5R00-FBW L100J150E-MT1 L50J500E-MT1 VPR10F-8.5K