

Type TE Series

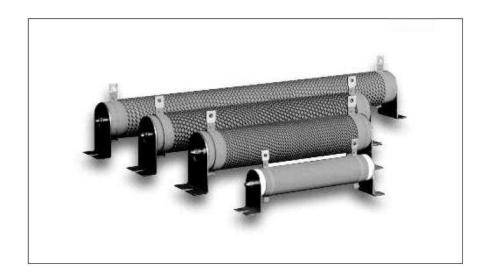
Key Features

Up to 2500W Power rating in free air

Flameproof construction – UL94V coating

RoHS compliant

Custom terminations / leads available



Applications

Large electrical and production machinery

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

Load test simulation

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.

Motor start / stop cycles

Dynamic braking

Equipment discharge

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.



High Power Wire Wound Resistor

Specifications – Electrical

Power	Resistance	Tolerance	Dielectric	Appearance
Rating	Value		Strength	
50W	R10 ~ 2K7	±5% ±10%	500VAC	Smooth
60W	R10 ~ 2K7	±5% ±10%	500VAC	Smooth
80W	R10 ~ 2K7	±5% ±10%	500VAC	Smooth
100W	1R0 ~ 2K7	±5% ±10%	500VAC	Smooth
120W	1R0 ~ 2K7	±5% ±10%	500VAC	Smooth
150W	1R0 ~ 2K7	±5% ±10%	500VAC	Smooth
200W	1R0~9R1	±5% ±10%	300VAC	Ribbed
20000	10R ~ 2K7	±5% ±10%	500VAC	Smooth
300W	1R0~9R1	±5% ±10%	300VAC	Ribbed
30000	10R ~ 2K7	±5% ±10%	500VAC	Smooth
400W	1R0 ~ 15R	±5% ±10%	300VAC	Ribbed
40000	16R ~ 2K7	±5% ±10%	500VAC	Smooth
500W	1R0 ~ 20R	±5% ±10%	300VAC	Ribbed
30000	21R ~ 2K7	±5% ±10%	500VAC	Smooth
600W	1R0 ~ 20R	±5% ±10%	300VAC	Ribbed
00000	21R ~ 2K7	±5% ±10%	500VAC	Smooth
750W	1R0 ~ 75R	±5% ±10%	300VAC	Ribbed
73000	76R ~ 2K7	±5% ±10%	500VAC	Smooth
1000W	1R0 ~ 100R	±5% ±10%	300VAC	Ribbed
10000	101R ~ 2K7	±5% ±10%	500VAC	Smooth
1200W	1R0 ~ 100R	±5% ±10%	300VAC	Ribbed
120000	101R ~ 2K7	±5% ±10%	500VAC	Smooth
1500W	1R0 ~ 120R	±5% ±10%	300VAC	Ribbed
130000	121R ~ 2K7	±5% ±10%	500VAC	Smooth
2000W	1R0 ~ 120R	±5% ±10%	300VAC	Ribbed
2000 00	121R ~ 2K7	±5% ±10%	500VAC	Smooth
2500W	1R0 ~ 120R	±5% ±10%	300VAC	Ribbed
2300 00	121R ~ 2K7	±5% ±10%	500VAC	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:

 $RCWV = VP \times R$

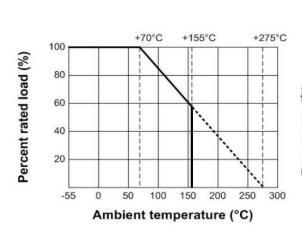
Where: RCWV = Rated DC or RMS AC continuous working voltage at commercial-line frequency and waveform (volt)

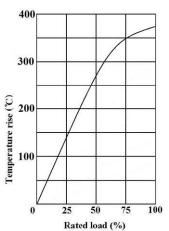
P = Power Rating (watt)

R = Nominal Resistance (ohm)

Derating Curve

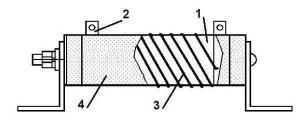
Temperature Rise Chart



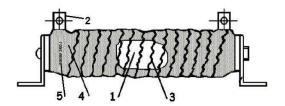


Construction:

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	Ni-Cr or Cu-Ni Alloy	Ni-Cr or Cu-Ni Alloy
	Wire		
4	Coating	Insulated and non-flame	Non-Flame paint UL94V
		paint	
		(Color: Green)	
5	Marking	Marking Ink	



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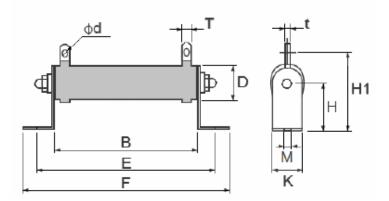
Environmental Characteristics:

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)
		$R_1(t_2-t_1)$
		B. Besistance value at room tomporature (t.)
		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	±(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
Overload	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
0.		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.)	Managed design and the 12 and a second
		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	\pm (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
	±(5%+ 0.05Ω) 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
1	damage	(Sub-clause 4.25.1)



High Power Wire Wound Resistor

Dimensions:



Power	Dimension										
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

How To Order

TE
Common
Part
TE – High
Power
Wirewound
Resistor

50			
Power Rating			
50	50W		
60	60W		
80	80W		
100	100W		
	etc.		

В
Mounting
A – No Bracket
B – With Bracket
(standard)

1K0			
Resista	nce Value		
100R	ι - 100Ω		
1K0 -	- 1000Ω		
10K -	10,000Ω		

J		
Tolerance		
J - ±5%		
K - ±10%		

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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 VK100NA-50 40/70MJ2K00BE L75J1K0E VK100NA250 L100J150E-MT1 L50J500E-MT1 SL130J100K-12

HSC1004R0F F30J20R HSC1008R0F HSX25R22J L100J40K CL65J10R HSW600 47R J HSW600 1R J L12NJ20R 75342-400 HSW600

22R J VRH320 1K K VRH320 100R K 968.15 110M C E HSW600 4R7 J 40/70MJ230R0HE L25J500E-MT1 1-2176247-6 1-2176248-5 2
2176248-0 1-2176249-3 C1500K12R FST02515E50R00KEE3 AG5NFR68E AG12NFR68E AG12NFR47E AG12NFR56E AG12NFR33E

CL25J39R AG12NFR22E 850J220E AG12NFR10E CL225J30K 810F7R7E LN100J75RE D50K100-B L225J6K0E 21025K538-5R0KE

LN80J30R C300KR75E D50K25R-B LN80J14R