

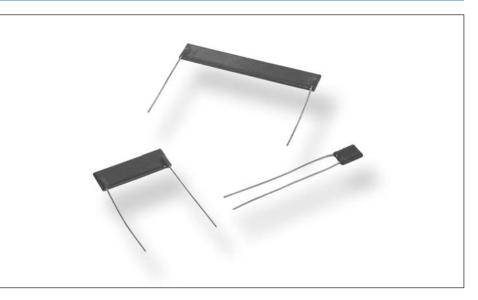
Type HB Series

Key Features

- Up to 15kV Element Voltage
 - Unique specification for the most demanding applications
- High Ratio of Size to Power
 - The solution to your PCB population problems
- 1kW to 1GW
 - Coupled with 1% tolerance gives ultimate design flexibility
- Established Product with Proven Reliability
- Low Inductance
 For the fastest switching speeds

Applications

- High Voltage
- Voltage Divider
- Surge
- Filter
- Balancing
- Inrush Limiting



TE Connectivity (TE) is a leading supplier of standard and custom designed high value/high voltage resistors for high voltage, industrial, control, medical and general-purpose use. The HB is a tough epoxy coated high voltage resistor, with axial or radial leads, values up to 1G Ohm and an operational voltage to 20kV as standard and 30kV to order. The resistors are made from quality materials for optimum reliability and stability. TE can test resistors to conform to relevant international, MIL or customer specifications. TE is happy to advise on the use of resistors for high frequency applications and to supply information for high voltage use.

Characteristics - Electrical

	HBA	HB1	HB3		
Power Dissipation - Power @ 20°C (W):	0.8	2.0	4.0		
@ 70°C:	0.4	1.0	2.0		
Ohmic Value - Min (Ohms):	1K	10K	10K		
Max:	120M	1G	1G		
Resistance Tolerance (%) (Tighter By Request):	1%, 2%,	5% 1%, 2%,	5% 1%, 2%, 5%		
Maximum Working Voltage - DC or ACrms (Volts):	1kV	7.5kV	/ 15kV		
Insulation Resistance - Epoxy Coated, @500V dc (Ohms	s): >10 ⁶ ΜΩ	2 >10 ⁶ M0	Ω >10 ⁶ MΩ		
Load Stability - 1000hr's @ 70°C (%):	±0.5%	±0.5%	5% ±0.5%		
Temp. Rapid Change55°C to 125°C for 5 cycles (ΔR):	±0.1%	±0.1%	±0.1%		
Endurance - 1000 Hours @ 200°C (ΔR):	<=2%	<=2%	<=2%		
Resistance to Soldering Heat - 350°C for 3.5seconds (Δ	R): 0.05%	0.05%	0.05%		
Temperature Coefficient (ppm/°C):	±100ppm/	/°C ±100ppm	pm/°C ±100ppm/°C		
(±20ppm/°C available to special order)					
Voltage Coefficient:	Negligible up	o to 100K	Negligible up to 200k		
	Increasing to 0.02ppm/Volt at 800K		Increasing to		
		privion at oool	0.01ppm/Volt at 1M0		
	Increasing to 1.0ppm/Volt at 5M0 1.0ppm Increasing to 2.0ppm/Volt at 50M 2.0ppm/ Increasing to 8.0ppm/Volt at 1000M 8.0ppm/		Increasing to		
			1.0ppm/Volt at 10M		
			Increasing to		
			2.0ppm/Volt at 100M		
			Increasing to		
			8.0ppm/Volt at 1000N		
······································	-55 to 125	-55 to 125	-55 to 125		
Long Term Damp Heat (%):	0.25%	0.25%	0.25%		
(Steady state 56 Days 95% RH at 40°C)					
Noise (Quantech) Dependent	-20dB (0.1µ V/V) at lower values				
on Resistor Type and Value:	+10dB (3.3 μ V/V) at higher values				
Encapsulation:	Epoxy coating (Optional)				
Solvent Resistance:	Print will withstand the action of all				
	commonly used industrial solvents.				
Lead Material:	Tinned copper wire				
Lead Length:	Minimum 20mm				
Lead Diameter:	Nominal 0.6 ± 0.05mm				

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. For email, phone or live chat, go to: $\ensuremath{\textbf{te.com/help}}$

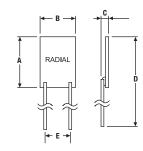


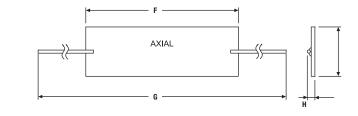
High Value / High Voltage Resistors

Type HB Series

Dimensions -Type HBA, HB1 & HB3 (Radial)

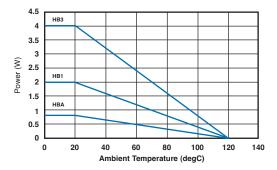
Type HB1 & HB3 (Axial)



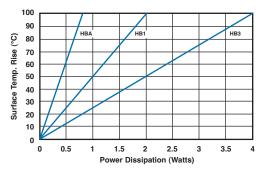


Туре		Α	В	С	D	E	F	G	н	1
НВА	Uncoated	10.2	7	1.75	60.2	5.0	-	-	-	_
	Epoxy Coated	12.5	8	2.6	60.5	5.0	-	-	-	_
HB1	Uncoated	8.4	26	1.5	33.8	22.9	26	66	1.5	8.4
	Epoxy Coated	10.4	26.5	3.0	35.8	22.9	26.3	66	3	9.2
HB3	Uncoated	8.4	51.1	1.5	33.8	48.3	51.1	91.1	1.5	8.4
	Epoxy Coated	10.4	52	3.0	35.8	48.3	53.5	91.1	3	9.6

Derating Curve



Surface Temperature Rise



How to Order

HB 3		1K0	J	z	R	E	
Common Part	Power Rating	Resistance Value	Tolerance	Temp. Coefficient	Lead Style	Coating Styles	
HB- High Value / High Voltage Resistor	@ 70°C A - 0.4W 1 - 1.0W	1Kohm (1000Ω) 1K0 1Mohm	F - 1% G - 2%	of Resistance Z - 100ppm	R - Radial Leads A - Axial Leads (HB1, HB3 only for	E - Epoxy Blue Coating	
	3 - 2.0W	(100000Ω) 1M0	J - 5%		Axial Leads)		

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