High Value / High Voltage Resistor

Type HVR Series

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Tyco Electronics is a leading European supplier of high specification power resistors for specialist applications. The HVR range consists of high power, high voltage resistors capable of operating up to 50kV (continuous) and dissipating 50W in air or 100W oil. The thick film resistor element is designed to minimise inductance and capacitance giving optimum performance at MHz frequencies, and resistance to high voltage surges.

The resistors are made from quality materials for optimum reliability and stability. Tyco Electronics can test resistors to conform to relevant international, MIL or customer specifications.

Tyco Electronics is happy to advise on the use of resistors for pulse applications and to supply information for high voltage use and low-ohmic value, alternative mountings and termination type.

Key Features

- **Highly Versatile Product**
  - **Resistance values from 2kΩ to 1GΩ and a range of mounting options**
- **50 kV Continuous Operating Voltage**
  - **Unique specification for the most demanding applications**
- **Low Inductance and Capacitance**
  - **For high frequency applications into the MHz range**
- **Established Product**
  - **High stability with proven reliability**

Applications

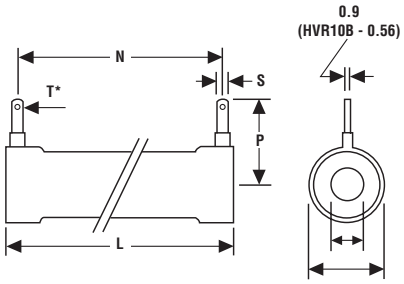
- **High Frequency Switching (MHz)**
- **Balancing**
- **Voltage Divider**
- **High Voltage**

Characteristics - Electrical

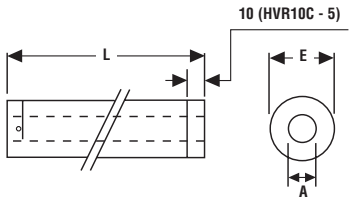
	HVR10	HVR20	HVR30	HVR50
Ohmic Value Min (Ω):	2k0	2k0	2k0	2k0
Max:	1G0	1G0	1G0	1G0
Resistor Tolerance - Standard (%):	10%	10%	10%	10%
Options (R<400M):	5%, 1%	5%, 1%	5%, 1%	5%, 1%
Power Dissipation at 20°C (W):	5W	15W	25W	50W
At 70°C:	3W	10W	15W	25W
In Oil at 20°C:	10W	30W	50W	100W
Continuous Operating Voltage Max (V):	10kV	20kV	30kV	50kV
Temperature Coefficient of Resistance 20°C to 70°C (ppm/°C):	< ±300ppm/°C	< ±300ppm/°C	< ±300ppm/°C	< 300ppm/°C
Voltage Coefficient of Resistance - V > 100V (%):	< ±2%	< ±2%	< ±2%	< ±2%
Stability ΔR - 1000h Load Life (%)	< ±2%	< ±2%	< ±2%	< ±2%

Dimensions

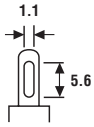
Style B

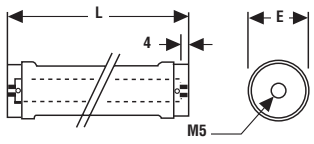


Style C



Style D





Style B

Type	A	E	L	N	P	S	T
HVR10	6.3	12.0	60.0	53.2	18.2	28	-
HVR20	10.0	22.6	120.0	109.0	27.0	4.8	2.4
HVR30	17.5	30.6	120.0	109.0	34.0	6.3	3.1
HVR50	17.5	30.6	240.0	229.0	34.0	6.3	3.1

Style C

Type	A	E	L	N	P	S	T
HVR10	6.3	10.5	60.0	-	-	-	-
HVR20	10.0	20.2	120.0	-	-	-	-
HVR30	17.5	28.2	120.0	-	-	-	-
HVR50	17.5	28.2	240.0	-	-	-	-

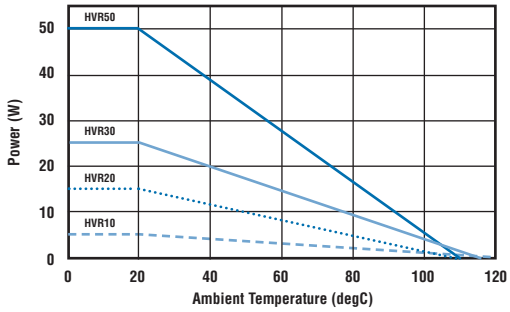
Style D

Type	A	E	L	N	P	S	T
HVR10	6.3	10.0	70.0	-	-	-	-
HVR20	10.0	21.5	140.0	-	-	-	-
HVR30	17.5	30.0	140.0	-	-	-	-
HVR50	17.5	30.0	260.0	-	-	-	-

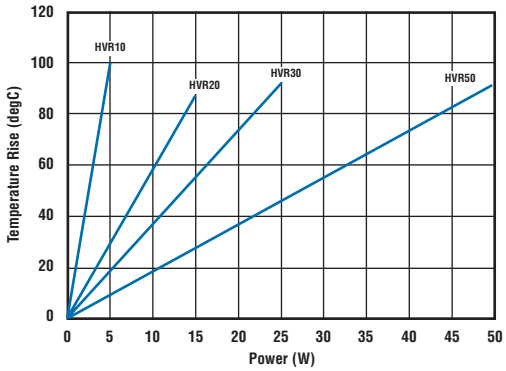
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Derating Curve



Surface Temperature Rise



How to Order

HVR	10	B	2K	J
Common Part	**Voltage Rating**	**Terminal Style**	**Resistance Value**	**Tolerance**
HVR- Aluminium Housed Power Resistor	10 - 10kV 20 - 20kV 30 - 30kV 50 - 50kV	B - Steel Lugs C - Silver Ferrule D - Tapped Brass Ferule	2kΩ (2000Ω) 2K 1MΩ ($1x10^6$Ω) 1M0 1GΩ ($1x10^9$Ω) 1G0	F - 1% G - 2% E - 3% J - 5% K - 10%

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

TE Connectivity:

1-794222-0 141991-2 1743455-2 SBCHE154R7K 3430B2F51RTDF CPF0402B37K4E1 CRGCQ2010J3K3 MPT100C18RF SBCHE64R7K 175977-2 2834055-1 ROX05SJ18R SMW73R0JT 2005330-1 650075-000 936348-1 RH73H2A40MKTN 1903112-2 1969656-1 2-292161-3 3631B101LL 917696-1 U5254-000005-030PA 1393431-1 3-1393225-0 2310537-1 2380312-2 TE50BR39J 1-962915-1 2377783-2