HVR

Cylindrical High-Resistance High-Voltage Resistors

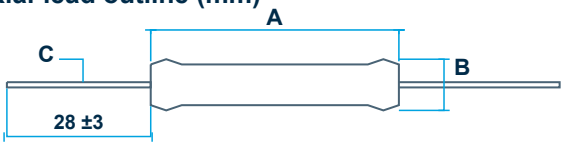


Markings identify the samples shown. Use the selection table for type codes.

Features and applications

Non-inductive design with high precision and low TCR.
Uses include X-ray systems, HV generators and supplies, precision dividers, power systems, electron microscopes, CRT displays and automotive electronics.

Axial-lead outline (mm)



Dimensions, electrical ratings and resistance

HVR size	20	26	32	39	52	78	103	122	154
A (mm)	20.20	26.90	33.00	39.50	52.10	77.70	102.9	123.7	153.7
B (mm)	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
C (mm)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Pf (W)	2.5	3.7	4.5	5.2	7.5	11	12	15	20
Pc (W)	-	1.0	-	1.5	2.0	3.0	4.0	5.0	6.0
Pw (W)	5	7	9	11	15	20	25	30	50
Pf (kV)	4.8	6.4	8.0	12.8	16	24	32	40	45
Pc (kV)	-	4.0	-	6.0	10	15	20	25	30
Pw (kV)	4.8	6.4	8.0	12.8	16	24	32	40	45
Pf min. (Ω)	200	250	300	400	500	900	1.2 k	1.5 k	2 k
Pf max. (Ω)	1 G	1 G	1.5 G	1.5 G	2.5 G	4 G	6 G	8 G	10 G
Pc min. (Ω)	-	100 k	-	150 k	200 k	300 k	400 k	500 k	600 k
Pc max. (Ω)	-	250 M	-	400 M	500 M	700 M	1 G	1 G	1 G
Pw min. (Ω)	200	250	300	400	500	900	1.2 k	1.5 k	2 k
Pw max. (Ω)	1 G	1 G	1.5 G	1.5 G	2.5 G	4 G	6 G	8 G	10 G

A dash indicates the source does not list that grade for the size.

Grades and performance

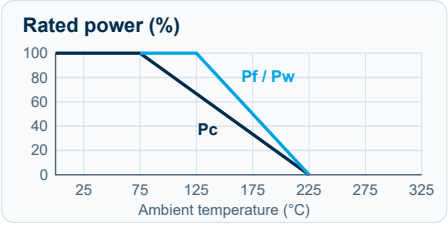
Item	Professional Pf	Precision Pc	Power Pw
Features	General-purpose HV, wide range	Voltage sensing, low TCR	High power density
Tolerance	±1%, ±5%, ±10%	±1%, 0.5%	±5%, ±10%
TCR (ppm/°C)	±100	±25 / ±50	±100
Stability	±0.5%	±0.25%	±0.5%

General characteristics

Item	Specification
Load life	125 °C, 1000 h
Insulation resistance	10 GΩ
Coating	High-temperature silicone resin or epoxy encapsulation
Overload	5 s, ΔR ≤0.5%. Pf/Pc: 5Pe, ≤1.5× max. working voltage. Pw: 1.5Pe.
Thermal shock and moisture	Thermal shock ΔR ≤0.25%. Moisture resistance ΔR ≤0.4%.

Pe is rated power.

Power derating



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