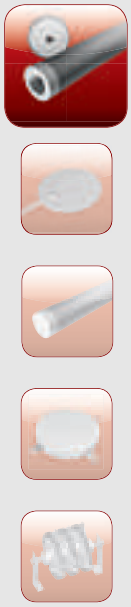
HVR INTERNATIONAL GmbH

LINEAR - SILICON METAL RESISTORS



- High Surge Energy Rating
- 100% Active Material
- High Voltage Withstand
- Air / Oil / SF6 Environments
- Advanced Ampacity
- Custom Solutions Readily Available

The HVR Silico resistors have high power dissipation and high energy absorption. They are manufactured mainly as rods and tubes with varying sizes. The Silico Resistors may be connected in series or parallel for various fields of application.

Typical applications are:

- High frequency Laser pulse application
- Capacitor discharge
- Non-inductive, non-capacitive as a load dump in amplifier applications
- Generators and wind turbines as load dump
- Snubber Application
- Dummy load
- Overvoltage protection

TECHNICAL SPECIFICATIONS Standard Series

Outside Dia. Do (mm)	Inside Dia. Di (mm)	Max. Length (mm)	Max. Volume (cm^3)	Max. Watts @ 20°C	Max. Joules @ 20°C (1)	Tau (s)
10	0	200	56,5	88	9077	103
18	0	200	508,9	158	29409	186
25	13	200	716,3	334	43568	130
50	36	600	5673,7	2270	345107	152

Other diameters on request available

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TECHNICAL SPECIFICATIONS Special Series

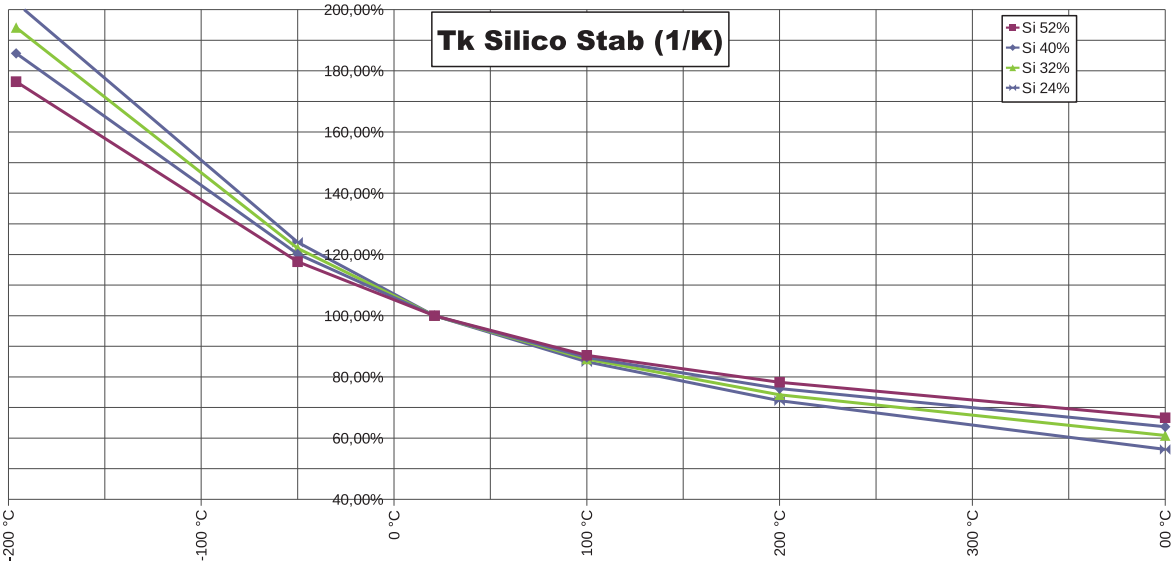
Outside Dia. Do (mm)	Inside Dia. Di (mm)	Max. Length (mm)	Max. Volume (cm^3)	Max. Watts @ 20°C	Max. Joules @ 20°C (1)	Tau (s)
25	0	400	1963,5	440	113459	258
25	13	400	1432,6	669	87137	130
30	0	600	4241,2	792	245072	309
30	8	600	3939,6	1003	239626	239

Physical / Mechanical Parameters:

Dimension Range Style:	Outside Diameter (Do)	10 to 50 mm
	Inside Diameter (Di)	0 to 36 mm
	Length (L)	50 to 600 mm
Density:	1,9 g / cm^3 to 2,0 g / cm^3	
Assembly Mounting:	variety of clamps (Please ask for Spec.-Sheet)	
Terminations:	Flame sprayed metallisation.	
	Standard metallization is aluminium. Also available is brass, chopper and zinc.	

Electrical Parameters:

Resistor range:	0,1 … 500 Ω/cm	
Max. pulse residual Voltage (2):	4,3 x $^{1,2}\sqrt{(\log(R \times A \times l))}$ kV/cm	
Operating Temperature Range:	- 40 ... 350°C at full load	- 40 ... 370°C at zero load
	Tested in liquid nitrogen in corporation with Georg-Simon-Ohm University	
Typ. Temp. Coefficient:	-0,000136 … -0,000952 %/ K	
Specific Heat Capacity Approx.:	922 J/ (kg x K)	
Thermal Conductivity:	0,00424 W/ (cm^2 x K)	
Inductance:	This is negligible (nH) and the resistors may be described as non-inductive	



The 196°C test was done together with Prof. Dr. Ebert from Georg-Simon-Ohm University.

For further electrical or physical / mechanical details such as U/I characteristic curve or other additional information please contact us.

(1) $\triangle t = 330K$

(2) = 8/20µs pulse wave

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