

High Voltage Resistors

HVR Type

High Voltage Style



INTRODUCTION

The HVR Series High Voltage Resistors are manufactured using vacuum sputtering system to deposit multiple layers of Metal Glaze and passive materials onto a carefully treated high grade ceramic substrate, the resistors are coated with layers of grey lacquer.

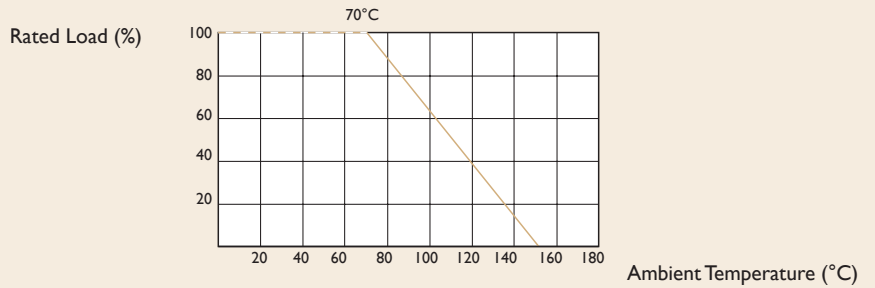
FEATURES

Power Rating : 1/6W, 1/4W, 1/2W, 1W, 2W

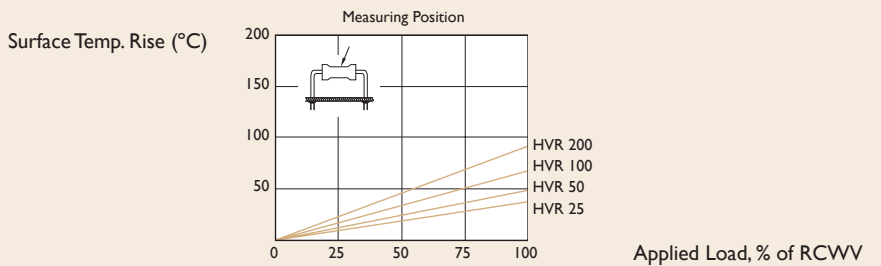
Resistance Tolerance : $\pm 5\%$

T.C.R: $\pm 200\text{ppm}/^\circ\text{C}$

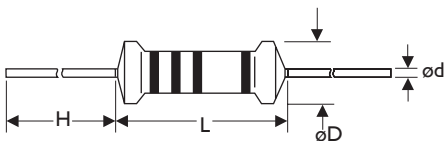
DERATING CURVE



HOT-SPOT TEMPERATURE



DIMENSIONS



Unit : mm

STYLE	DIMENSION			
	L	øD	H	ød
HVR-25	6.3±0.5	2.4±0.3	28±2.0	0.6±0.05
HVR-50	9.0±0.5	3.3±0.3	26±2.0	0.6±0.05
HVR100	11.5±1.0	4.5±0.5	35±2.0	0.8±0.05
HVR200	15.5±1.0	5.0±0.5	33±2.0	0.8±0.05



Note :

ELECTRICAL CHARACTERISTICS

STYLE	HVR-25	HVR-50	HVR100	HVR200
Power Rating at 70°C	1/4W	1/2W	1W	2W
Maximum Working Voltage	1600V	2000V	2500V	2500V
Maximum Overload Voltage	2000V	2500V	3000V	3000V
Dielectric Withstanding Voltage	700V	700V	700V	700V
Open Temp. Range	-55°C to +155°C			
Tolerance Range	±1%, ±5%			
Standard Value Range	100K~10MΩ for E24 series value			
Temperature Coefficient	±200 ppm /°C			

Resistance range for standard resistance, below or over this resistance on request

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD	APPRAISE
Short Time Overload	JIS-C-5202 5.5	2.5 Times RCWV for 5 Seconds ±(2%+0.05Ω)
Dielectric Withstanding Voltage	JIS-C-5202 5.7	in V-Block for 60 Seconds by Type
Temperature Coefficient of Resistance	JIS-C-5202 5.2	-55°C to +155°C by Type
Insulation Resistance	JIS-C-5202 5.6	in V-Block >10000MΩ
Solderability	JIS-C-5202 6.5	235±5°C for 5±0.5 Seconds 95% Min. Coverage
Resistance to Solvent	JIS-C-5202 6.9	IPA for 1 Min. with Ultrasonic No Deterioration of Coatings and Markings
Terminal Strength	Direct Load for 10 Sec. in The Direction of The Terminal Leads ≥2.5kg (24.5N)	
Pulse Overload	JIS-C-5202 5.8	4 Times RCWV 10000 Cycles (1 Sec. on , 25 Sec. off) ±(1%+0.05Ω)
Load Life in Humidity	JIS-C-5202 7.9	40±2°C, 90~95% RH at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off) ±(5.0%+0.05Ω)
Load Life	JIS-C-5202 7.10	70°C at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off) ±(5.0%+0.05Ω)
Temperature Cycling	JIS-C-5202 7.4	-55°C→Room Temp.→+155°C→Room Temp. for 5 Cycles ±(1.0%+0.05Ω)
Resistance to Soldering Heat	JIS-C-5202 6.4	350°C±10°C for 3±0.5 Seconds ±(1.0%+0.05Ω)

* Rated Continuous Working Voltage (RCWV)= $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$