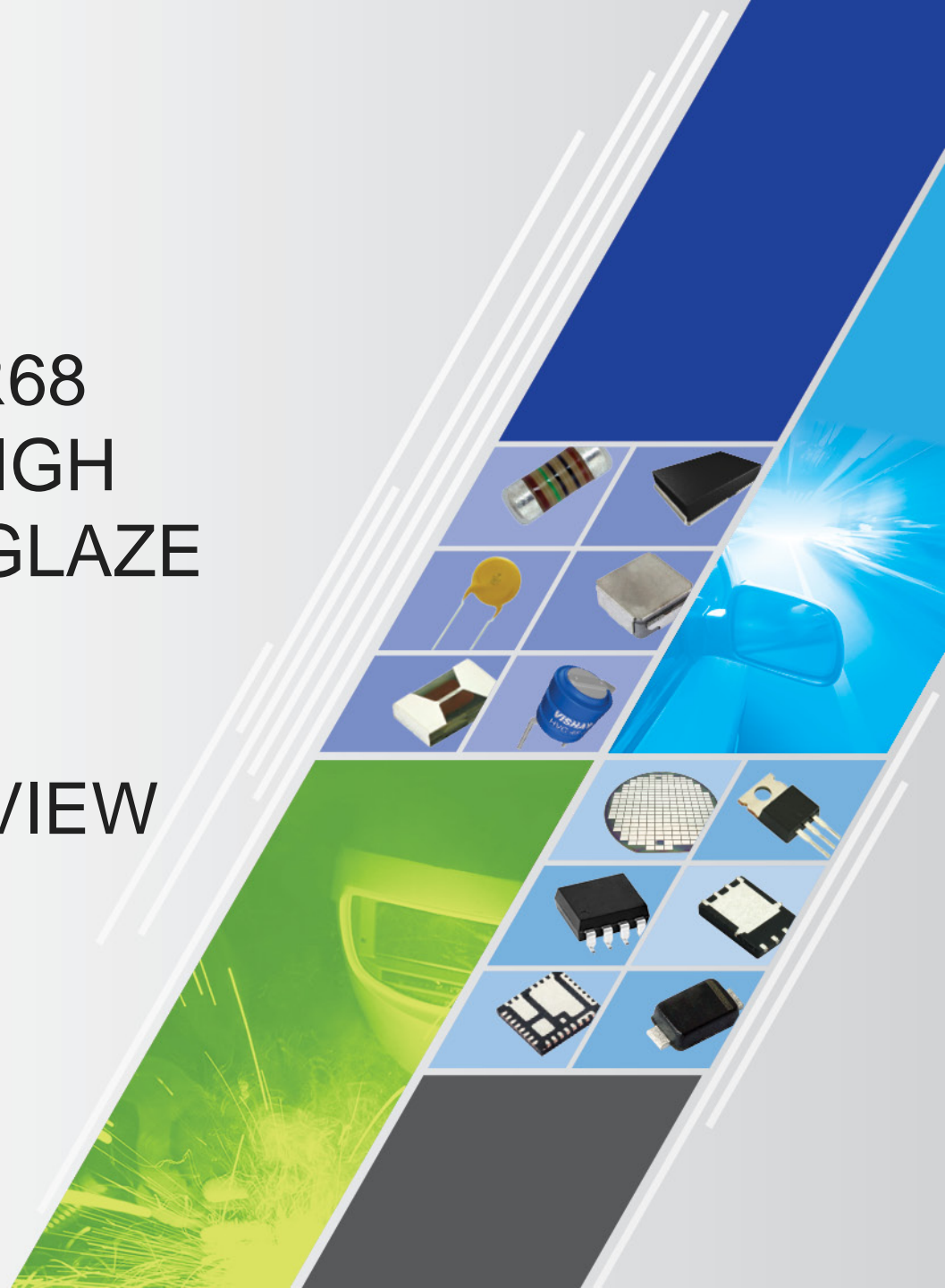




VR25, VR37, VR68 HIGH OHMIC / HIGH VOLTAGE METAL GLAZE RESISTOR

PRODUCT OVERVIEW

A **WORLD OF**
SOLUTIONS





MAIN FEATURES OF THE VR25, VR37, VR68 SERIES

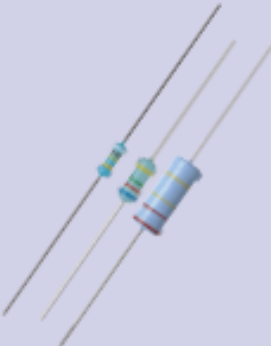


- Three sizes: VR25 (0207), VR37 (0309), and VR68 (0718)
- Rated power, P_{70} : 0.25W, 0.5W, 1W
- Resistance range and tolerance: 100K Ω to 68M Ω , 1%, 5% and 10%
- AEC-Q200 qualified (VR25, VR37)
- UL Approved (UL1676, file no: E171160, VR37 and VR68)
- Meet the safety requirements of: IEC 60065, EN 60065, VDE 0860, CQC China (VR37, VR68)
- Meets flammability requirements according to IEC-60115-1, 4.35
- High Ohmic value up to 68M Ω
- High pulse loading capability (maximum 10 kV)
- Offered with different termination style: radial taping (VR25), Z-Bend (VR25, VR37)
- RoHS compliant
- Halogen free



The VR25/VR37/VR68 High Ohmic / High Voltage Metal Glaze Leaded Resistor series from Vishay is a good choice for applications requiring high resistance, high stability, and high reliability at high voltage. High-reliability applications will benefit from AEC-Q200 qualification (VR25, VR37), making this product series an ideal selection where reliability is required. This metal glaze series offers different termination style, such as radial taping for VR25. This product series is RoHS compliant, Halogen free, meets flammability requirements as per IEC standard, and is UL1676 approved for VR37 and VR68.

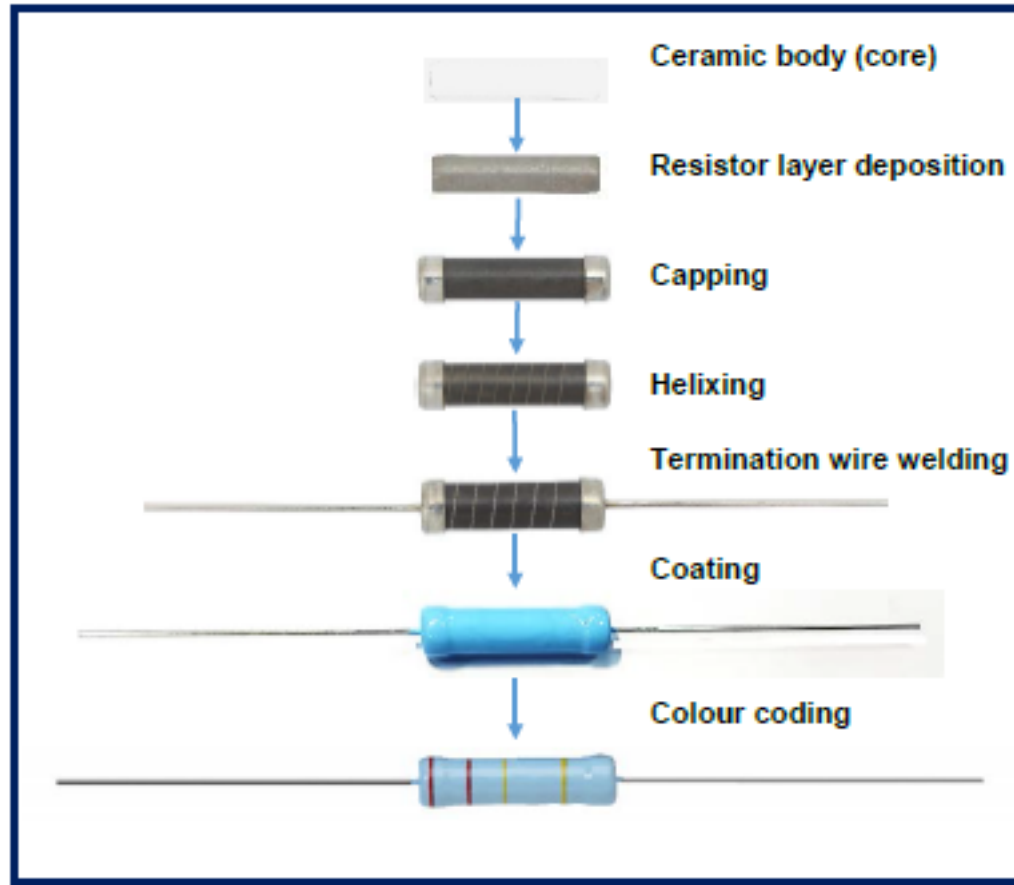


MAIN FEATURES OF THE VR25, VR37, VR68 SERIES

Metal Glaze Resistors						
Product	Model	Power (W)	Resistance Range	TCR ppm/°C	Tolerance (%)	Features
VRxx High Voltage 	VR25, AEC-Q200	0.25	100 kΩ to 22 MΩ	± 200	± 1 / ± 5 / ± 10	<ul style="list-style-type: none">• Very high operating voltage: 1600 V in 0207 (VR25), 10 kV for VR68• High pulse load capability up to 10 kV• Resistance value up to 68 MΩ• AEC-Q200 qualified (VR25, VR37)• Compliance to safety requirements of IEC 60065, EN 60065; VDE 0860; UL1676; CQC (VR37, VR68)
	VR37, AEC-Q200 	0.5	100 kΩ to 33 MΩ	± 200	± 1 / ± 5	
	VR68, 	1	100 kΩ to 68 MΩ	± 200	± 1 / ± 5	

The VR25 series is offered from 100KΩ to 22MΩ with 1%, 5% and 10% tolerances, VR37 from 100KΩ to 33MΩ with 1%, and 5% tolerances while the VR68 is available from 100KΩ to 68MΩ with 1% and 5% tolerances. The VR25, VR37 and VR68 are rated to 0.25W, 0.5W and 1W, with continuous working voltage of 1,600V, 3,500V and 10,000V, respectively.

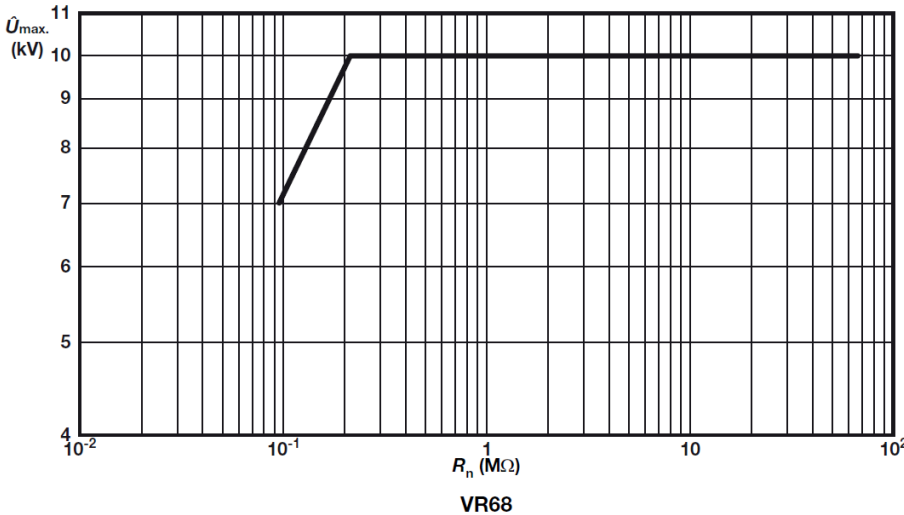
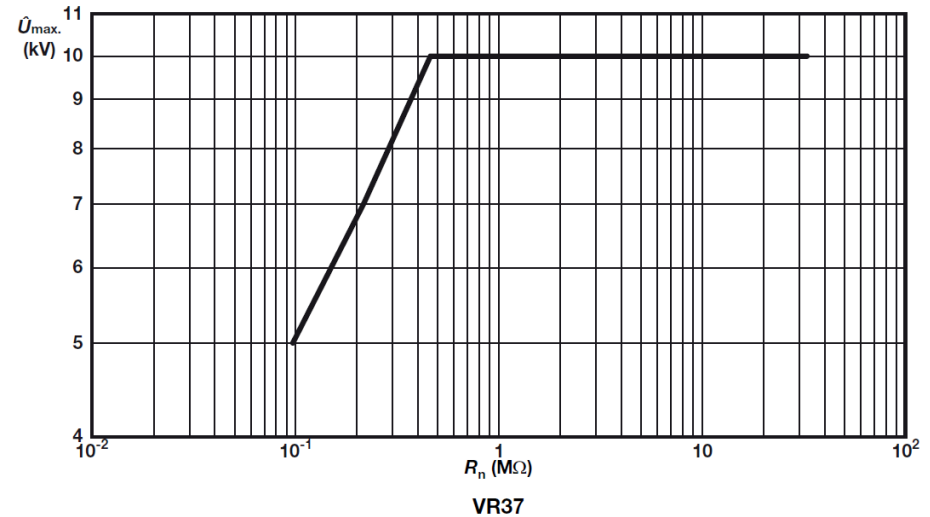
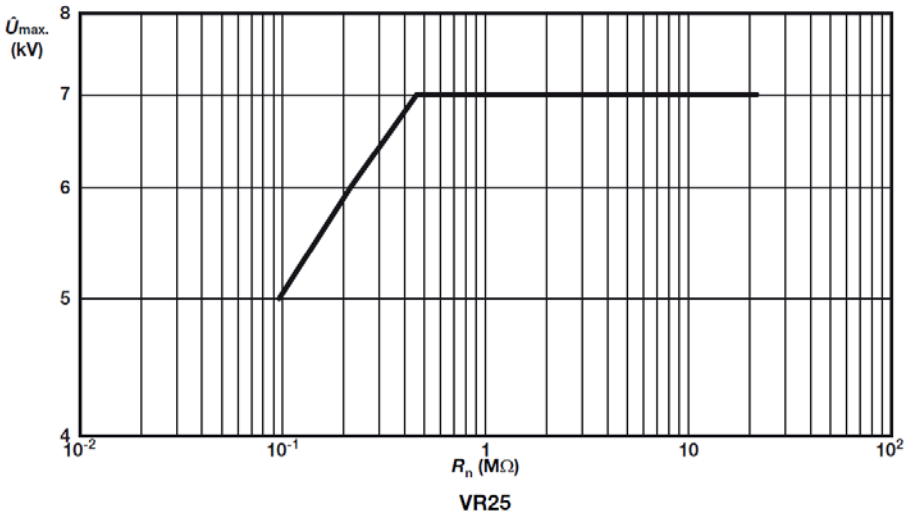
CONSTRUCTION OF VR25, VR37, VR68 SERIES



A metal glazed film is deposited on a high grade ceramic body. After a helical groove has been cut in the resistive layer, tinned electrolytic copper wires are welded to the end-caps. The resistors are coated with a light blue lacquer which provides electrical, mechanical, and climatic protection.



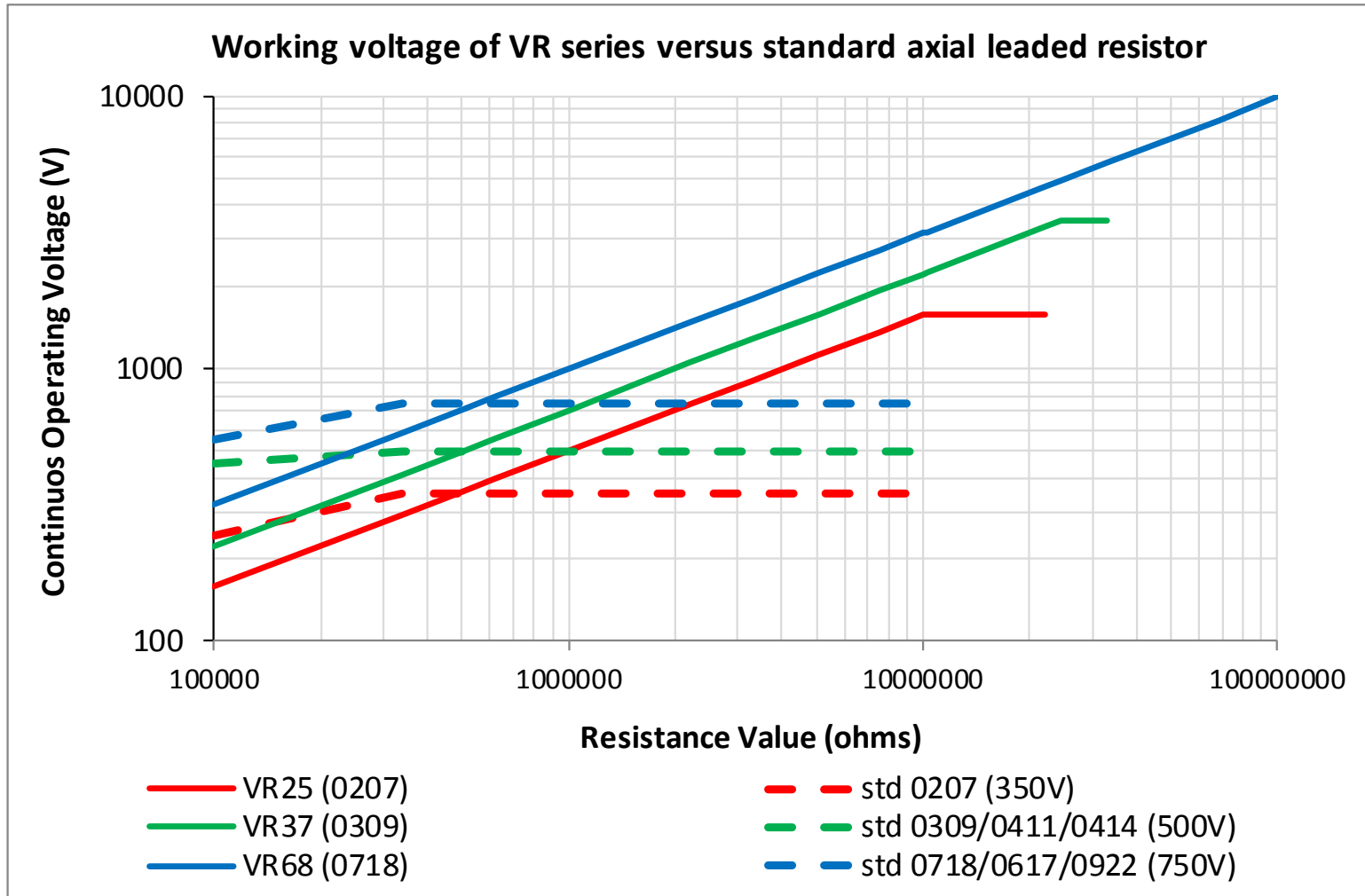
HIGH VOLTAGE FEATURES



- Maximum allowed peak pulse voltage in accordance with IEC 60065, 14.2
- 50 discharges from a 1nF capacitor charged to \hat{U}_{max} ; 12 discharges/min (drift $dR/R \leq 2\%$)

The peak voltage graphs above, as a function of the resistance value, show the pulsed high voltage capability for each VR resistor size, with capability up to 7kV for the VR25 and 10kV for VR37 and VR68, in accordance with IEC 60065 standard, clause 14.2, for a 1nF capacitor discharge test.

HIGH VOLTAGE FEATURES



The working voltage graph above, as a function of the resistance value, shows the working voltage of VR series versus standard axial leaded resistor with compared sizes: 0207, 0309 and 0718. It shows the benefit of extended resistance range and higher working voltage with the VR series that can handle a continuous working voltage up to 1,600V, 3,500V and 10,000V, while the standard axial leaded resistors can handle up to 350V, 500V and 750V, respectively.



APPLICATIONS



Alternative Energy

- Solar Inverters
- Wind Power



Consumer

- Ballast
- Home Appliances
- Monitors



Industrial

- Set Top Box
- Power Supply
- Traffic Light Module



Automotive

- Heater Control Module
- Head Lamps

These High Ohmic / High Voltage Metal Glaze resistor series are especially designed where high resistance, high stability, and high reliability at high voltage are required, including high humidity environment, white goods, and power supplies, besides other applications in the following market segments: alternative energy, industrial, consumer and automotive (VR25, VR37).

- VR
- VR
- VR2
- VR25
- VR250
- VR2500
- VR3
- VR37
- VR370
- VR3700
- VR6
- VR68
- VR680
- VR6800
- VR
- VR
- VR1
- VR10
- VR101
- VR4
- VR47
- VR470

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HVR25, HVR37 	 Enlarge	High Ohmic (up to 10 MΩ);/High Voltage (up to 3.5 kV) Film Leaded Resistors	Product Page All Product Information Product Datasheet Datasheet Other Product Information Product Literature (2) Customer Support Technical Questions Sales Contacts	RESISTORS, FIXED, METAL FILM
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