

Radial Leaded High Temperature Automotive **AVX**

150°C Rated Radial Leaded TransGuard®



GENERAL DESCRIPTION

AVX High Temperature Multi-Layer Varistors are designed for underhood applications. Products have been tested, qualified, and specified to 150°C. The Radial Leaded TransGuard is built for durability in harsh environments. The MLV advantage is EMI/RFI attenuation in the off state. This allows designers to combine the circuit protection and EMI/RFI attenuation function into a single highly reliable device.

GENERAL CHARACTERISTICS

- Operating Temperatures:
-55°C to +150°C
- Working Voltage:
14-48Vdc

FEATURES

- Rated at 150°C
- AEC Q200 qualified
- ESD rated to 25kV (HBM ESD Level 6)
- EMI/RFI attenuation in off state
- Excellent current and energy handling

APPLICATIONS

- Under hood
- Down Hole Drilling
- DC Motors
- Relays
- Inductive Loads
- High Temperature/Harsh environment and more

HOW TO ORDER

VR15	AT	18	A	650	R	TR2
AVX Style	Series	Voltage	Energy	Clamping Voltage	Leads	Packaging
VR15 VR20	AT = 150°C Automotive	14 = 14V 18 = 18V 26 = 26V 48 = 48V	A = 0.1J D = 0.4J S = 2.0J	580 = 60V 650 = 67V 101 = 100V 151 = 150V	R = RoHS Compliant	Blank = Bulk TR1 = T&R Standard 1 TR2 = T&R Standard 2



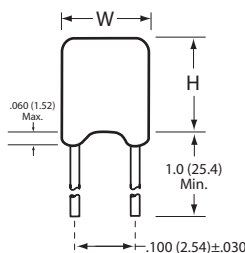
ELECTRICAL CHARACTERISTICS

AVX Part Number	V _{WDC}	V _{WAC}	V _B	V _C	I _{VC}	I _L	ET	ELD	IP	Cap	Freq	V _{JUMP}	P _{DISS}
VR15AT14A580	14.0	10.0	34.5±10%	60	1	10	0.1	0.15	30	120	K	27.5	0.002
VR15AT18A650	18.0	13.0	41.0±10%	67	1	10	0.1	0.15	30	90	M	29	0.002
VR20AT26D101	26.0	18.0	62.0±10%	100	1	10	0.4	1.5	100	225	K	48	0.008
VR20AT48S151	48.0	34.0	100.0±10%	150	1	10	2.0	3.5	250	275	K	48	0.040

V _{WDC}	DC Working Voltage [V]
V _{WAC}	AC Working Voltage [V]
V _B	Typical Breakdown Voltage [V @ 1mA _{DC}]
V _C	Clamping Voltage [V @ I _V]
I _{VC}	Test Current for V _C
I _L	Maximum leakage current at the working voltage [μA]

E _t	Transient Energy Rating [J, 10x1000μS]
E _{LD}	Load Dump Energy (x10) [J]
I _p	Peak Current Rating [A, 8x20μS]
Cap	Typical capacitance [pF] @ frequency specified and 0.5V _{RMS}
V _{JUMP}	Jump Start (V)
P _{DISS}	Power Dissipation (W)

PHYSICAL DIMENSIONS



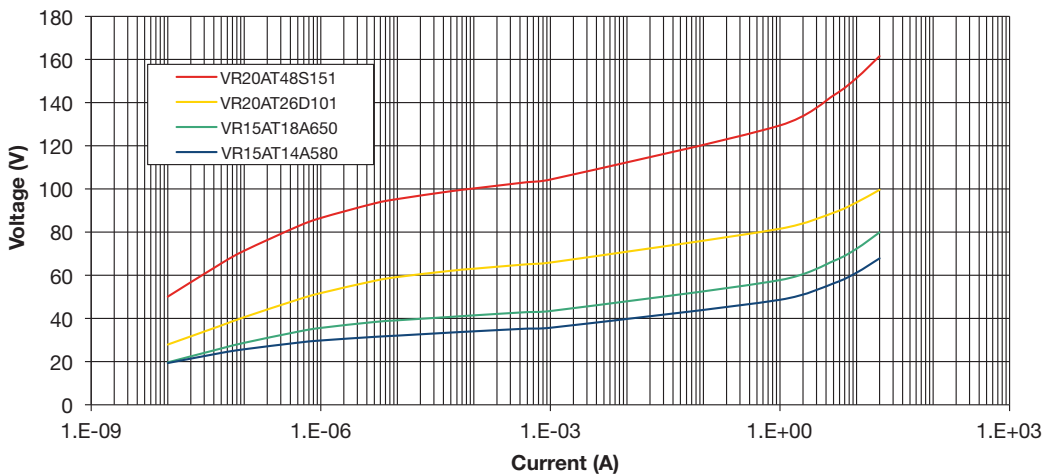
mm (inches)					
AVX Style	Width (W)	Height (H)	Thickness (T)	Lead Spacing	Lead Diameter
VR15	4.32 Max. (0.170)	3.81 Max. (0.150)	2.54 Max. (0.100)	2.54 (0.100)	0.508 (0.020)
VR20	5.59 Max (0.220)	5.08 Max (0.200)	3.175 Max (0.125)	2.54 (0.100)	0.508 (0.020)

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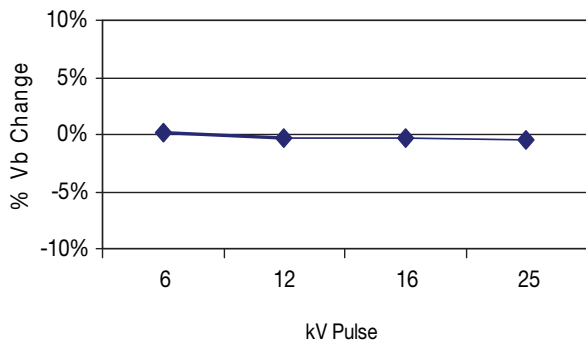
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TYPICAL PERFORMANCE CURVES

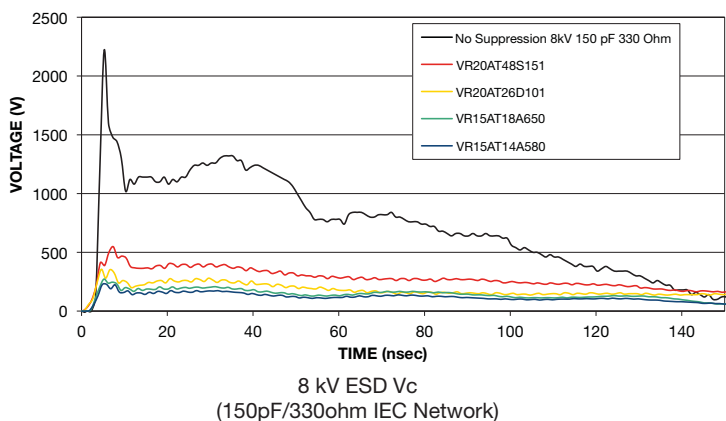
Typical Voltage Current Characteristics



AEC-Q200-002 ESD Characteristics



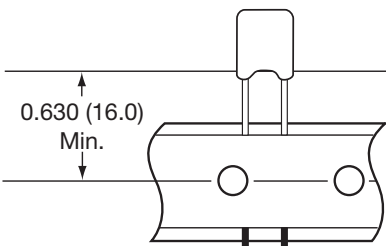
ESD Wave Absorption Characteristics



TAPE & REEL PACKAGING OPTIONS

TR1

Tape & Reel Standard 1



TR2

Tape & Reel Standard 2

