

Radial Leaded Automotive Varistors



Radial Leaded TransGuard®



GENERAL DESCRIPTION

AVX Radial Leaded Multi-Layer Varistors are AEC-Q200 Qualified and are designed for durability in harsh environments or applications where leaded component is preferred. The MLV advantage is bi-directional transient voltage protection and 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 +125°C
- Working Voltage:
18-48Vdc

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

- Harsh environment
- Inductive switching
- DC Motors
- Water pump
- Fuel pump
- Relays and more

HOW TO ORDER

VR20
AVX Style
VR20

AS
Series
AS = Automotive

18
Voltage
18 = 18V
26 = 26V
48 = 48V

F
Energy
F = 0.7J
H = 1.2J
J = 1.6J

390
Clamping Voltage
390 = 42V
540 = 54V
560 = 60V
101 = 100V

R
Leads
R = RoHS
Compliant

TR2
Packaging
Blank = Bulk
TR1 = T&R Standard 1
TR2 = T&R Standard 2



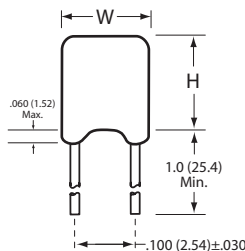
ELECTRICAL CHARACTERISTICS

AVX Part Number	V _{WDC}	V _{WAC}	V _B	V _C	I _{VC}	I _L	E _T	E _{LD}	I _P	Cap	Freq	V _{JUMP}	P _{DISS}
VR20AS18J390	18.0	13.0	25.5±10%	42	5	10	1.6	3	500	3100	K	27.5	0.030
VR20AS26F540	26.0	18.0	33.0±10%	54	1	10	0.7	1.5	200	600	K	27.5	0.008
VR20AS26H560	26.0	18.0	34.5±10%	60	5	10	1.2	3	300	1200	K	27.5	0.018
VR20AS48H101	48.0	34.0	62.0±10%	100	1	10	1.2	—	250	500	K	48	0.022

V_{W(DC)} DC Working Voltage [V]
V_{W(AC)} AC Working Voltage [V]
V_B Typical Breakdown Voltage [V @ 1mA_{DC}]
V_C Clamping Voltage [V @ I_C]
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

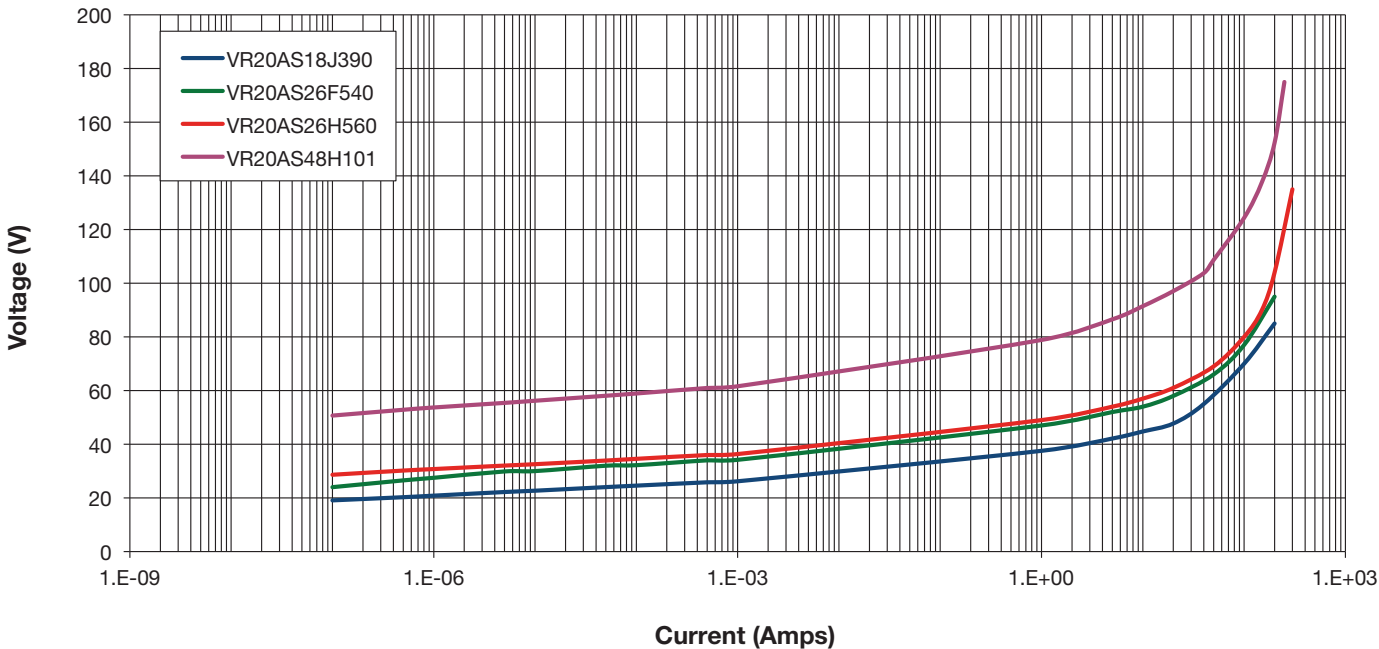


mm (inches)					
AVX Style	Width (W)	Height (H)	Thickness (T)	Lead Spacing	Lead Diameter
VR20	5.59 Max (0.220)	5.08 Max (0.200)	3.175 Max (0.125)	2.54 (0.100)	0.508 (0.020)



TYPICAL PERFORMANCE CURVES

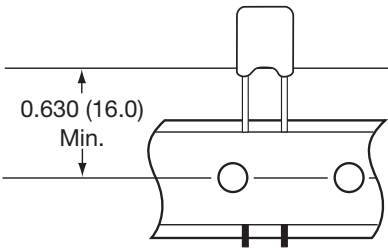
Typical Voltage Current Characteristics



TAPE & REEL PACKAGING OPTIONS

TR1

Tape & Reel Standard 1



TR2

Tape & Reel Standard 2

