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 prefered. 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: -55ºC to +125ºC
- Working Voltage: 18-48Vdc

FEATURES

- 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	AS	18	F	390	R	TR2
AVX Style VR20	**Series** AS = Automotive	**Voltage** 18 = 18V 26 = 26V 48 = 48V	**Energy** F = 0.7J H = 1.2J J = 1.6J	**Clamping Voltage** 390 = 42V 540 = 54V 560 = 60V 101 = 100V	**Leads** R = RoHS Compliant	**Packaging** Blank = Bulk TR1 = T&R Standard 1 TR2 = T&R Standard 2

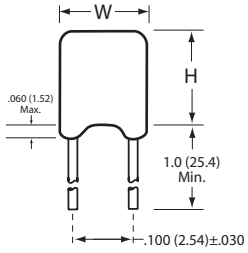
RoHS COMPLIANT

ELECTRICAL CHARACTERISTICS

AVX Part Number	$V_{W\,DC}$	$V_{W\,AC}$	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	15	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 Votage [V @ 1mA$_{DC}$]
V_C	Clamping Voltage [V @ I_{IV}]
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

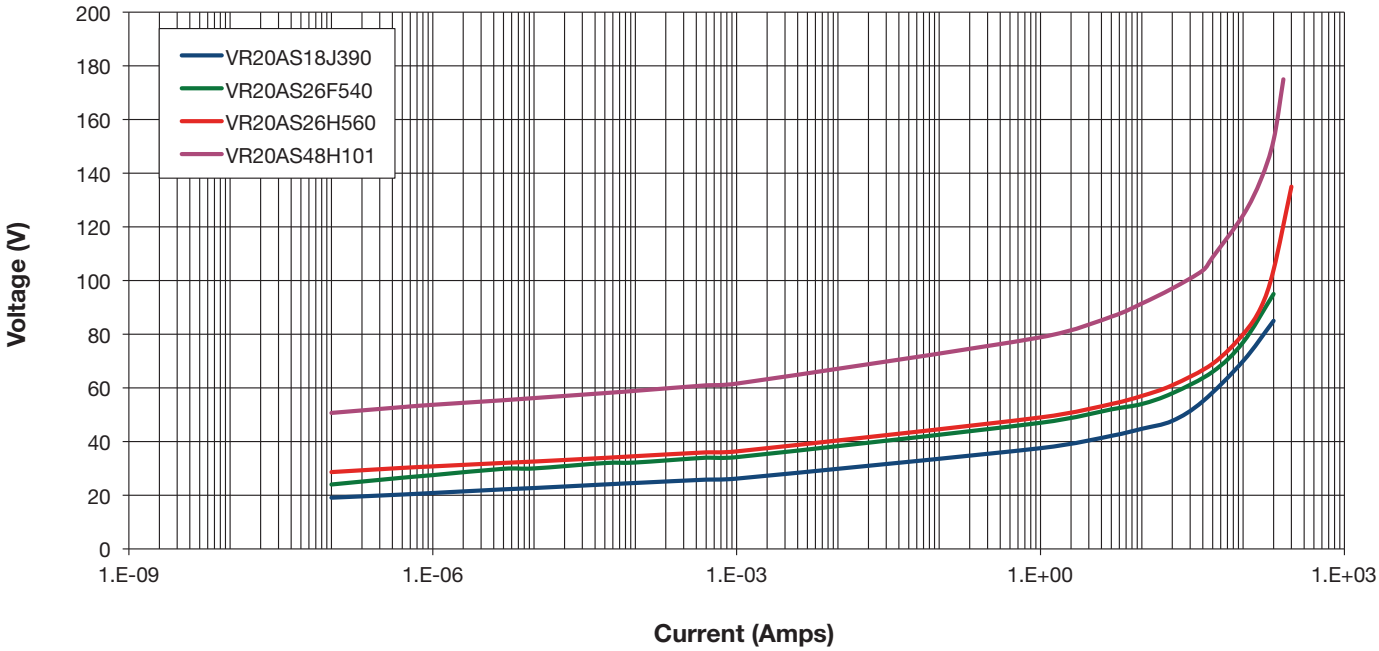


mm (inches)

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

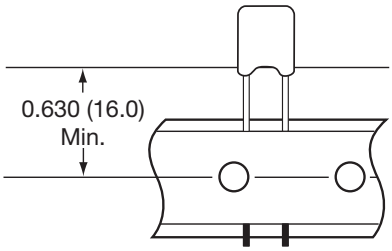
Typical Voltage Current Characteristics



TAPE & REEL PACKAGING OPTIONS

TR1

Tape & Reel Standard 1



TR2

Tape & Reel Standard 2