

Radial Leaded +150°C Automotive Multilayer Varistors

for Automotive, Industrial and General applications

To view data online visit:

SpiCAT



**AEC-Q200
Qualified**

KYOCERA AVX Radial +150°C Varistors are designed for durability in harsh and high temperature environments or applications where leaded component is preferred. These components, based on reliable multilayer varistor technology, provide bi-directional overvoltage protection and EMI filtering in radial leaded configuration and also offer excellent resistance against harsh environment, vibrations and shocks. This allows designers to combine the circuit protection and EMI/RFI attenuation function into a single highly reliable device.

Electrical Characteristics

Operating Temperature -55 to +125°C

Case Size	V _W (DC)	V _W (AC)	V _B	V _C	I _{VC}	I _L	E _T	E _{LD}	PP	I _P	Cap	Cap Tol	V _{JUMP}
EIA	Vdc	Vac	V	V	A	μA	J	J (10x)	W	A	pF	-	V (5min)
VR15	48	34	100.0±10%	150	1	10	2	3.5	1500	250	275	+100/-50%	48

P _{DISS}
W
0.04

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_{VC}]

I_{VC} Test Current for V_C [A, 8x20μs]

I_L Maximum leakage current at the working voltage [μA]

E_t Transient Energy Rating [J, 10x1000μs]

E_{LD} Load Dump Energy (x10) [J]

PP Peak Power Rating [W, 10x1000μs]

I_P Peak Current Rating [A, 8x20μs]

Cap Typical capacitance [pF] @1kHz and 0.5VRMS

Cap tol Capacitance tolerance from typical value

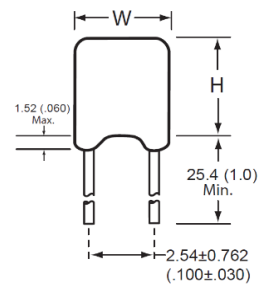
V_{JUMP} Jump start voltage [V, 5min]

P_{DISS} Max Power Dissipation [W]

Dimensions

mm (inches)

Style	Width (L)	Height (W)	Thickness (T)	Lead Spacing	Lead Diameter
VR15	4.32 Max	3.81 Max	3.175 Max	2.54	0.508
	(0.220) Max	(0.200) Max	(0.125) Max	(0.100)	(0.020)



Termination

Ni wires/100% Sn plated



**RoHS
COMPLIANT**

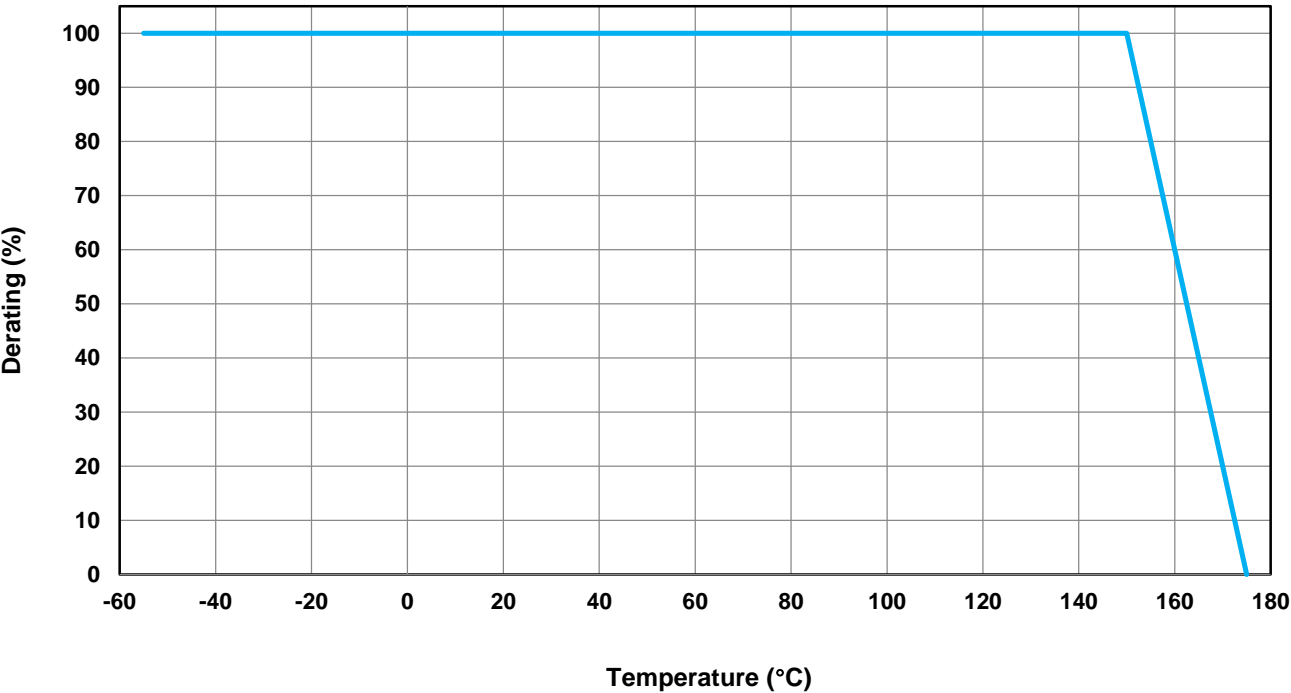
MSL 1

Pb Free 260°C

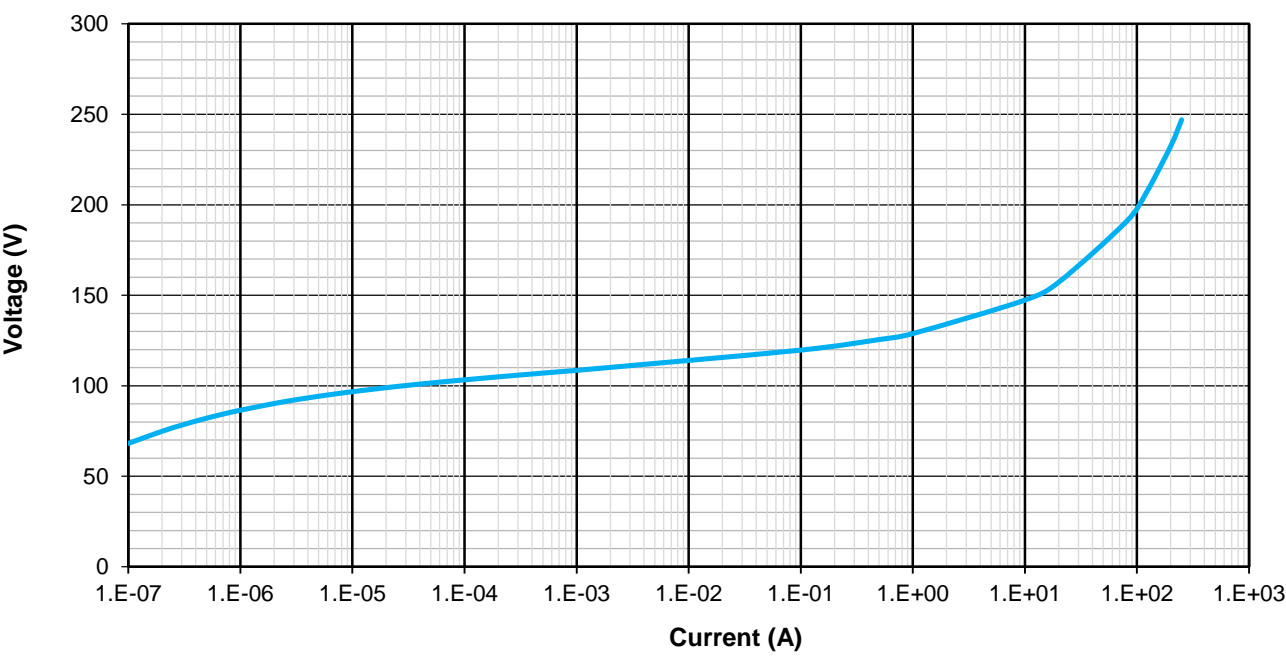
How to order (Packaging options)

VR20	AT	48	S	151	R	T
Style	Automotive Series +150°C	Working Voltage	Energy Rating	Clamping Voltage	Leads	Packaging
		48 = 48Vdc	S = 2J	151 = 150V	R = RoHS Compliant	Blank = Bulk (1000pcs) TR1 = T&R Standard 1 (3000pcs) TR2 = T&R Standard 2 (3000pcs)

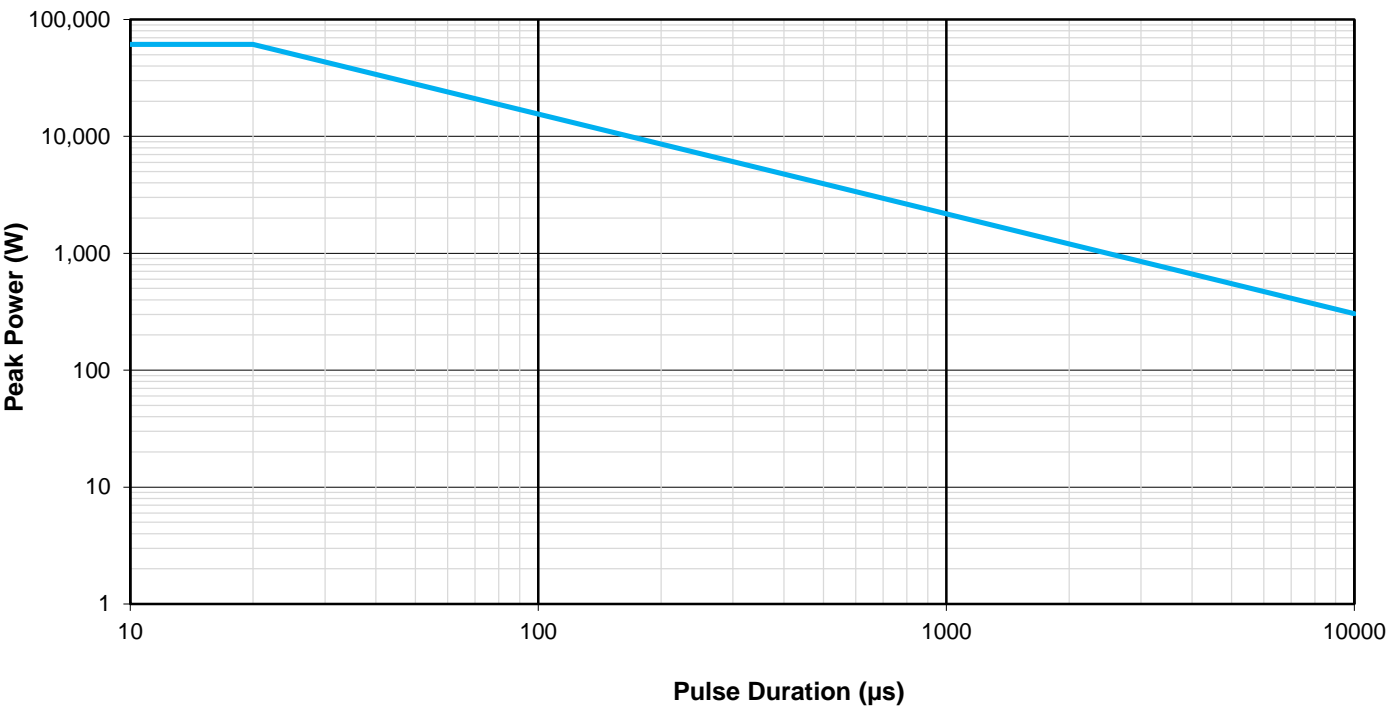
Typical Energy Derating Curve (Transient Energy, Peak Current, Power)



Voltage / Current Characteristics



Power Derating



NOTICE: Specifications are subject to change without notice. All statements, information and data given herein are believed to be accurate and reliable, but are presented without guarantee or responsibility of any kind, expressed or implied. Specifications are typical and may not apply to all applications.