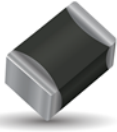


## UltraGuard Multilayer Varistors

for Industrial and General applications



AVX UltraGuard multilayer varistors provide bi-directional overvoltage protection as well as EMI/RFI attenuation in a single SMT package with very low leakage  $\leq 1\mu\text{A}$ . AVX MLVs are zinc oxide (ZnO) based ceramic semiconductor devices with non-linear voltage-current characteristics (bi-directional) similar to back-to-back zener diodes with added advantage of greater current and energy handling capabilities, very fast turn-on time, multiple strikes capabilities as well as EMI/RFI attenuation in the off-state.

## Electrical Characteristics

Operating Temperature -55 to +125°C

Case Size	V <sub>W</sub> (DC)	V <sub>W</sub> (AC)	V <sub>B</sub>	V <sub>C</sub>	I <sub>VC</sub>	I <sub>L</sub>	E <sub>T</sub>	PP	I <sub>P</sub>	Cap	Cap Tol
EIA	Vdc	Vac	V	V	A	$\mu\text{A}$	J	W	A	pF	-
1206	10	7.1	23	42	1	1	0.4	300	150	900	+100/-50%

V<sub>W</sub>(DC) DC Working Voltage [V]

V<sub>W</sub>(AC) AC Working Voltage [V]

V<sub>B</sub> Typical Breakdown Voltage [V @ 1mA<sub>DC</sub>]

V<sub>C</sub> Clamping Voltage [V @ I<sub>VC</sub>]

I<sub>VC</sub> Test Current for V<sub>C</sub> [A, 8x20 $\mu\text{s}$ ]

I<sub>L</sub> Maximum leakage current at the working voltage [ $\mu\text{A}$ ]

E<sub>t</sub> Transient Energy Rating [J, 10x1000 $\mu\text{s}$ ]

PP Peak Power Rating [W, 10x1000 $\mu\text{s}$ ]

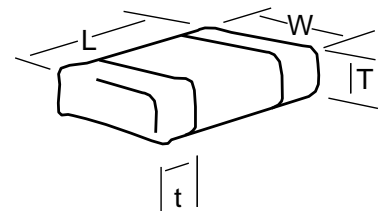
I<sub>P</sub> Peak Current Rating [A, 8x20 $\mu\text{s}$ ]

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

Cap tol Capacitance tolerance from typical value

## Dimensions

mm (inches)				
Size (EIA)	Length (L)	Width (W)	Thickness (T)	Terminal (t)
1206	3.20±0.20	1.60±0.20	1.02 max	0.94 max
	(0.126±0.008)	(0.063±0.008)	(0.040 max)	(0.037 max)



## Termination

Ni barrier/100% Sn plated termination for lead free soldering.



RoHS  
COMPLIANT

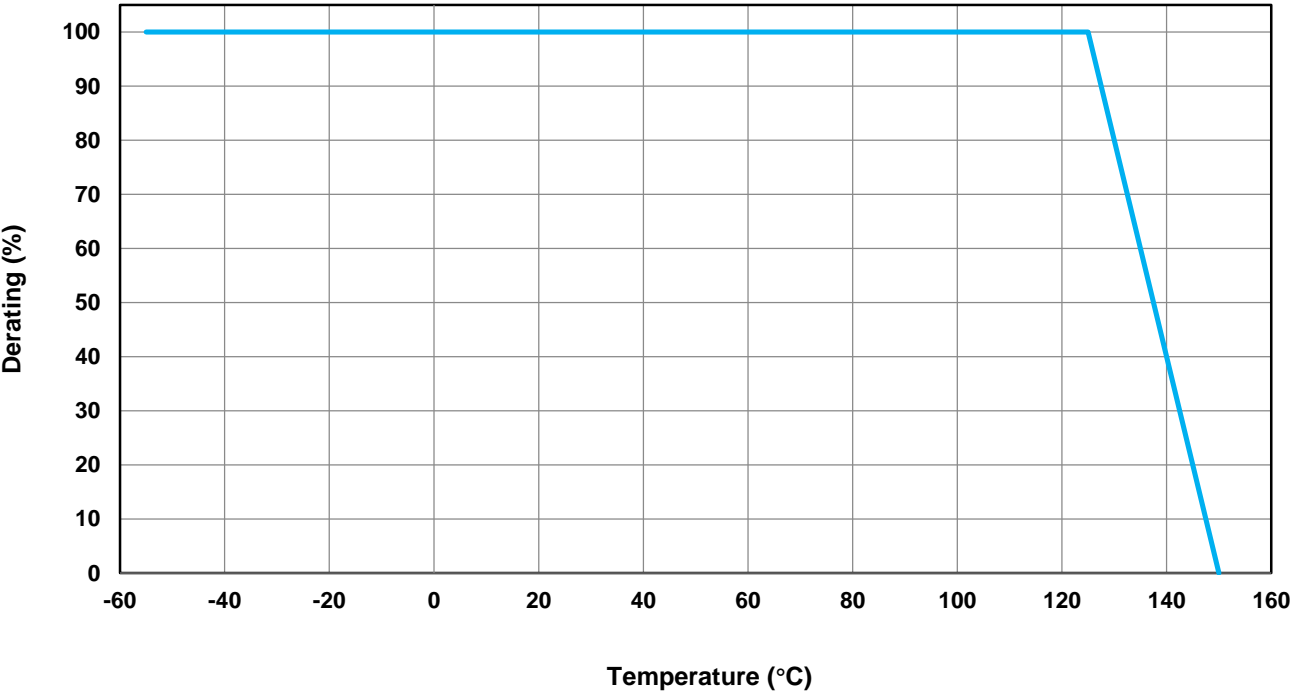
MSL 1

Pb Free 260°C

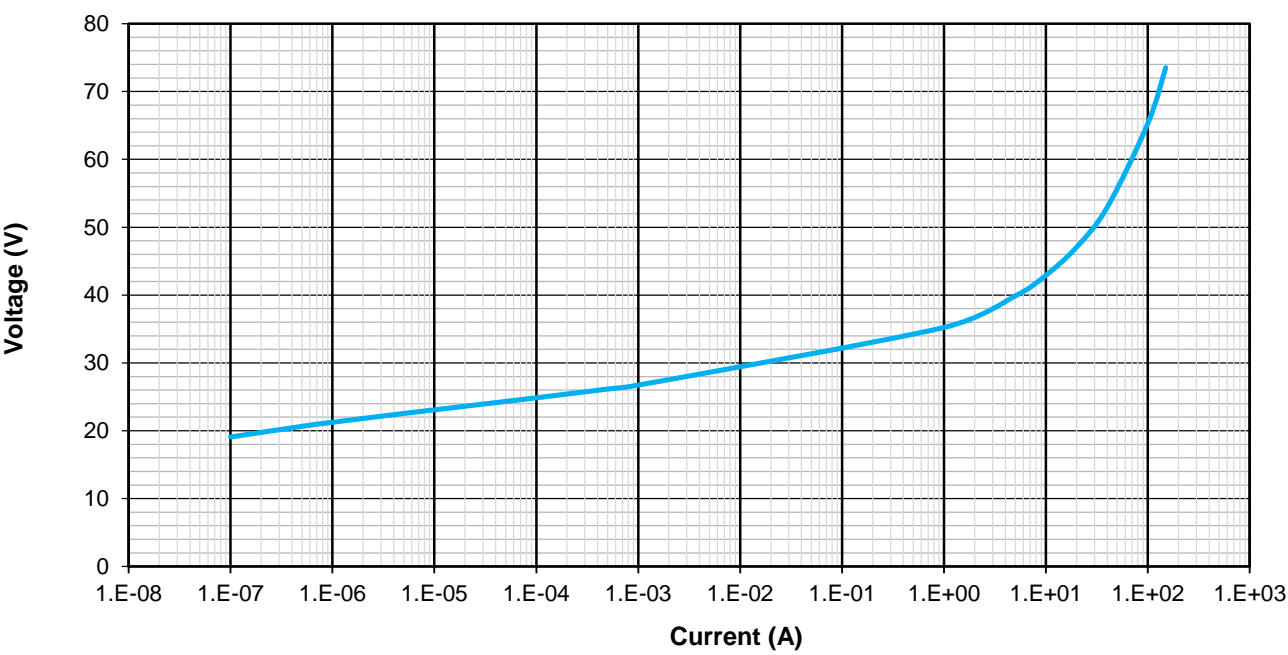
How to order (Packaging options)

<b>VC</b>	<b>UG</b>	<b>12</b>	<b>0100</b>	<b>H</b>	<b>1</b>	<b>R</b>	<b>P</b>
Varistor Chip	Low Leakage	Case Size	Working Voltage	Capacitance	No of Elements	Packaging	Termination
			0100 = 10Vdc	H = High	1 = 1 element	# # #	P = Ni/Sn

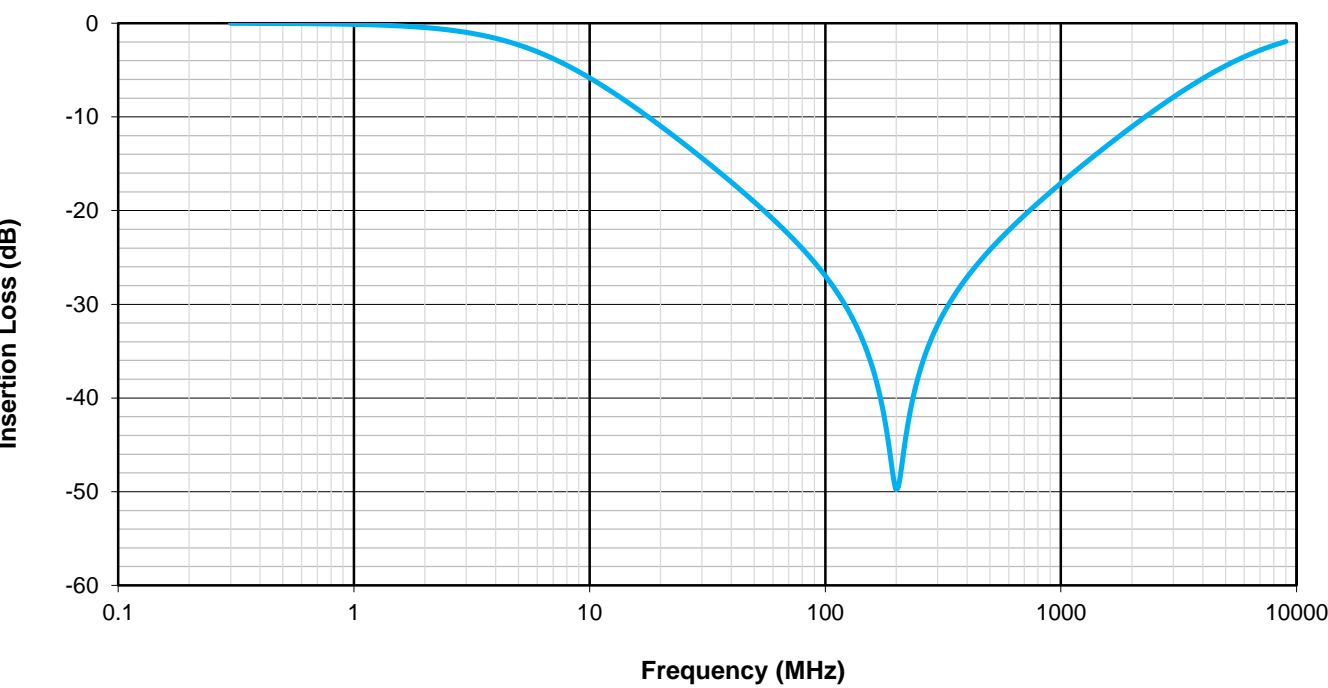
Typical Energy Derating Curve (Transient Energy, Peak Current, Power)



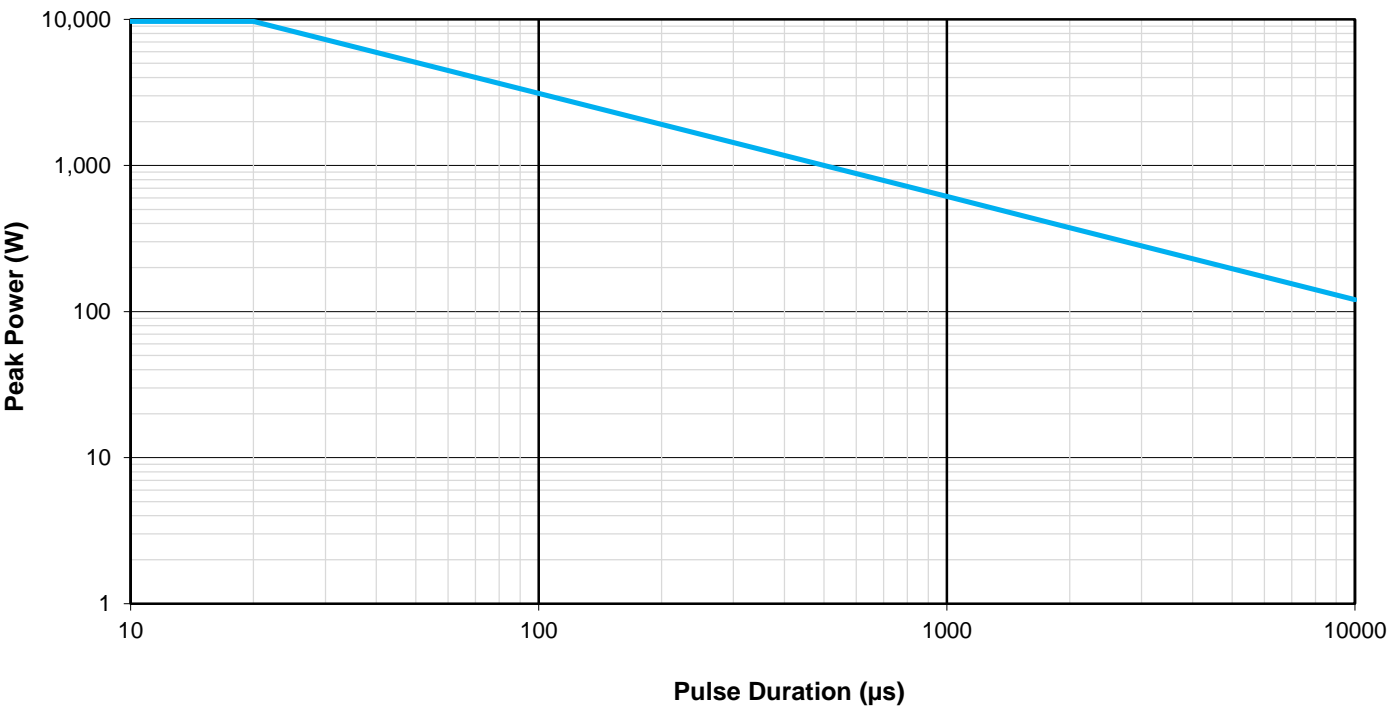
Voltage / Current Characteristics



S21 Characteristics



Power Derating



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