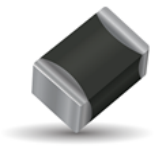
VG181231P650TP

(1812, 31Vdc, 3.7J, 800A, 2600pF, Ni/Sn Term)

Glass Encapsulated TransGuard® Multilayer Varistors

for Industrial and General applications



The Glass Encapsulated TransGuard® multilayer varistors provide bi-directional overvoltage protection as well as EMI/RFI attenuation in a single SMT package. Glass encapsulation extends the range into high energy applications and in addition provides enhanced resistance against harsh environment or process such as acidic environment, salts or chlorite flux.

Electrical Characteristics

Operating Temperature	-55 to +125°C

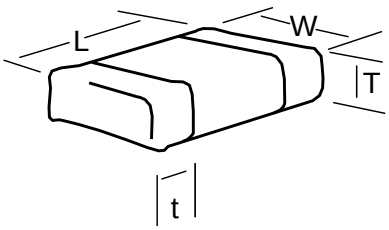
Case Size	V_W (DC)	V_W (AC)	V_B	V_C	I_{VC}	I_L	E_T	PP	I_P	Cap	Cap Tol
EIA	Vdc	Vac	V	V	A	µA	J	W	A	pF	-
1812	31	25	39.0±10%	65	5	15	3.7	2800	800	2600	+100/-50%

V_W(DC)	DC Working Voltage [V]	PP	Peak Power Rating [W, 10x1000µS]
V_W(AC)	AC Working Voltage [V]	E_t	Transient Energy Rating [J, 10x1000µS]
V_B	Typical Breakdown Votage [V @ 1mA_{DC}]	I_P	Peak Current Rating [A, 8x20µS]
V_C	Clamping Voltage [V @ I_{VC}]	Cap	Typical capacitance [pF] @1kHz and 0.5VRMS
I_{VC}	Test Current for V_C [A, 8x20µs]	Cap tol	Capacitance tolerance from typical value
I_L	Maximum leakage current at the working voltage [µA]		

Dimensions

mm (inches)

Size (EIA)	Length (L)	Width (W)	Thickness (T)	Terminal (t)
1812	4.50±0.30	3.20±0.30	2 max	1.00 max
	(0.177±0.012)	(0.126±0.012)	(0.080 max)	(0.039 max)



Termination

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

RoHS COMPLIANT

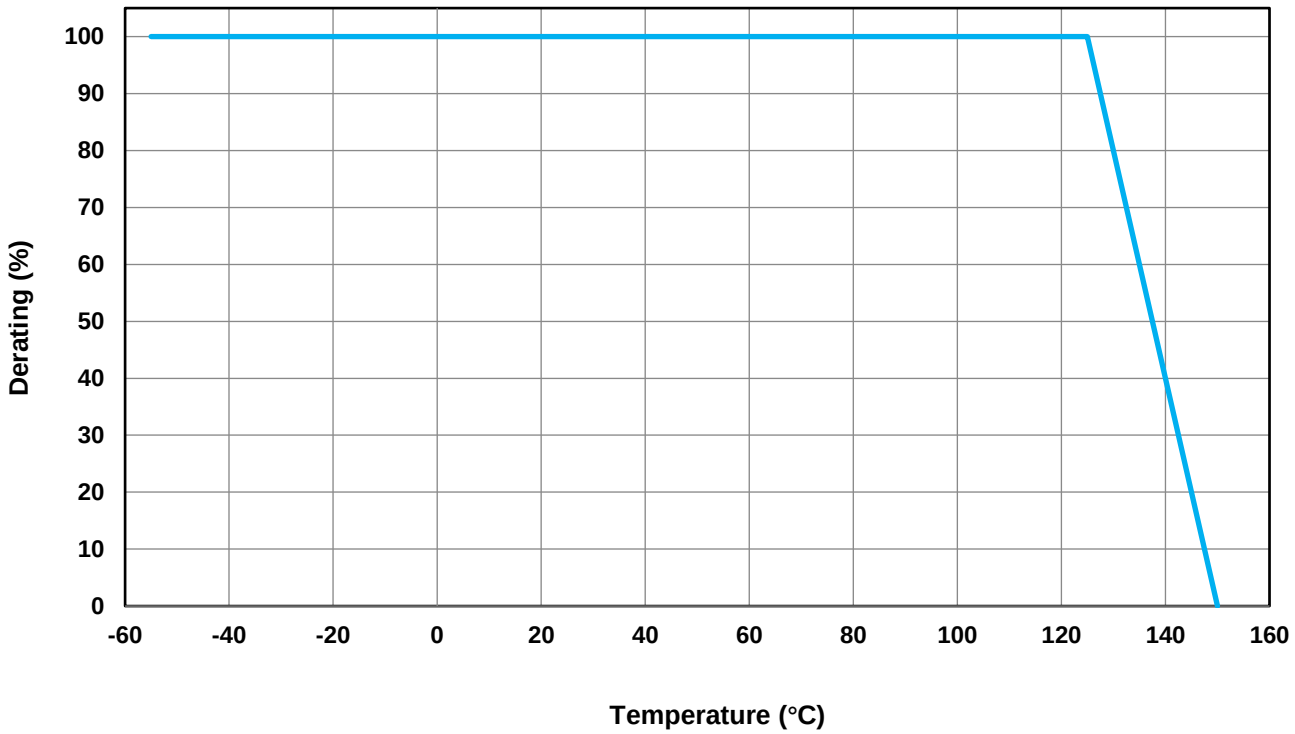
MSL 1

Pb Free 260°C

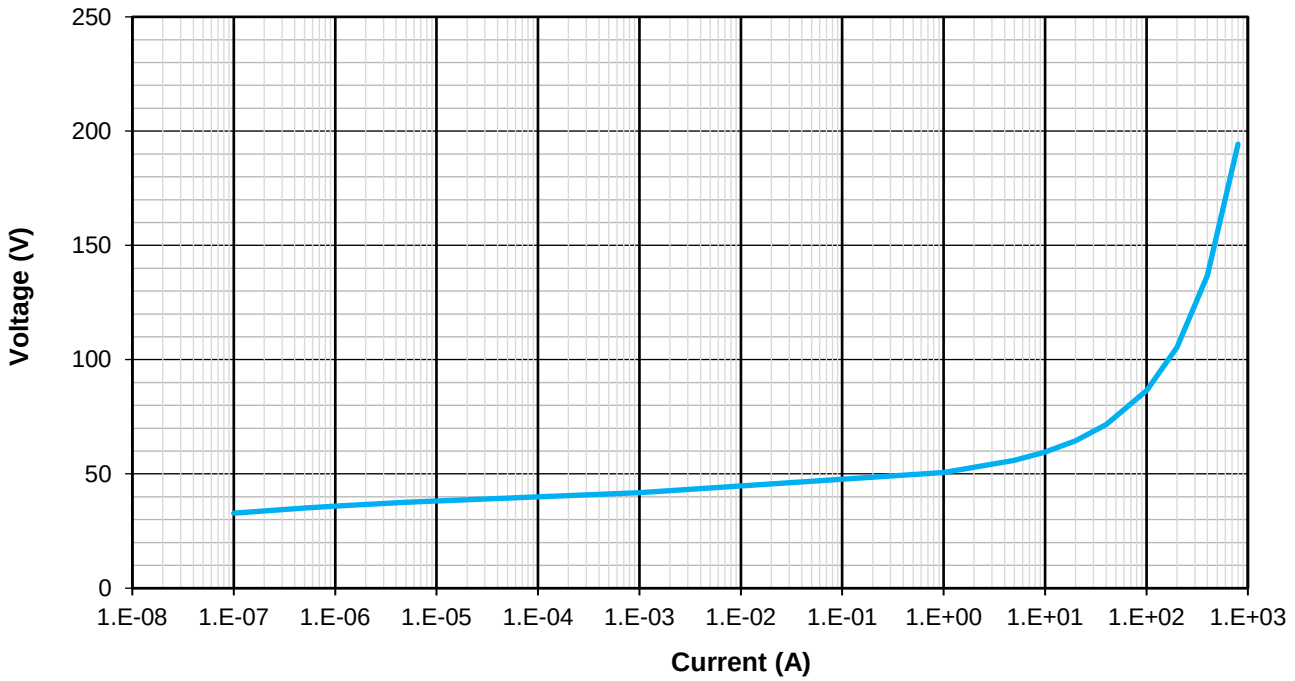
How to order (Packaging options)

VG	1812	31	P	650	T	P
Varistor Glass Encapsulated	Case Size	Working Voltage	Energy Rating	Clamping Voltage	Packaging	Termination
		31 = 31Vdc	P = 3.7J	650 = 65V	D = 7" reel (1,000pcs) T = 13" reel (4,000pcs)	P = Ni/Sn

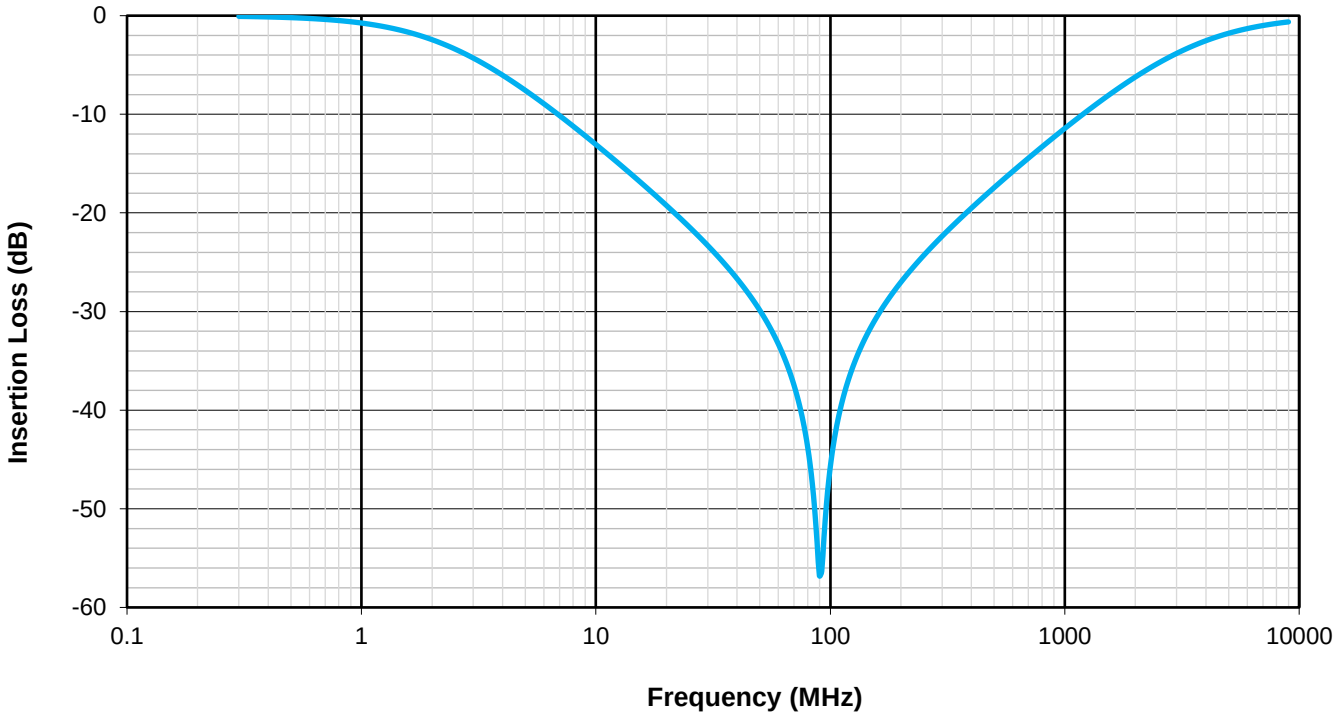
Typical Energy Derating Curve (Transient Energy, Peak Current, Power)



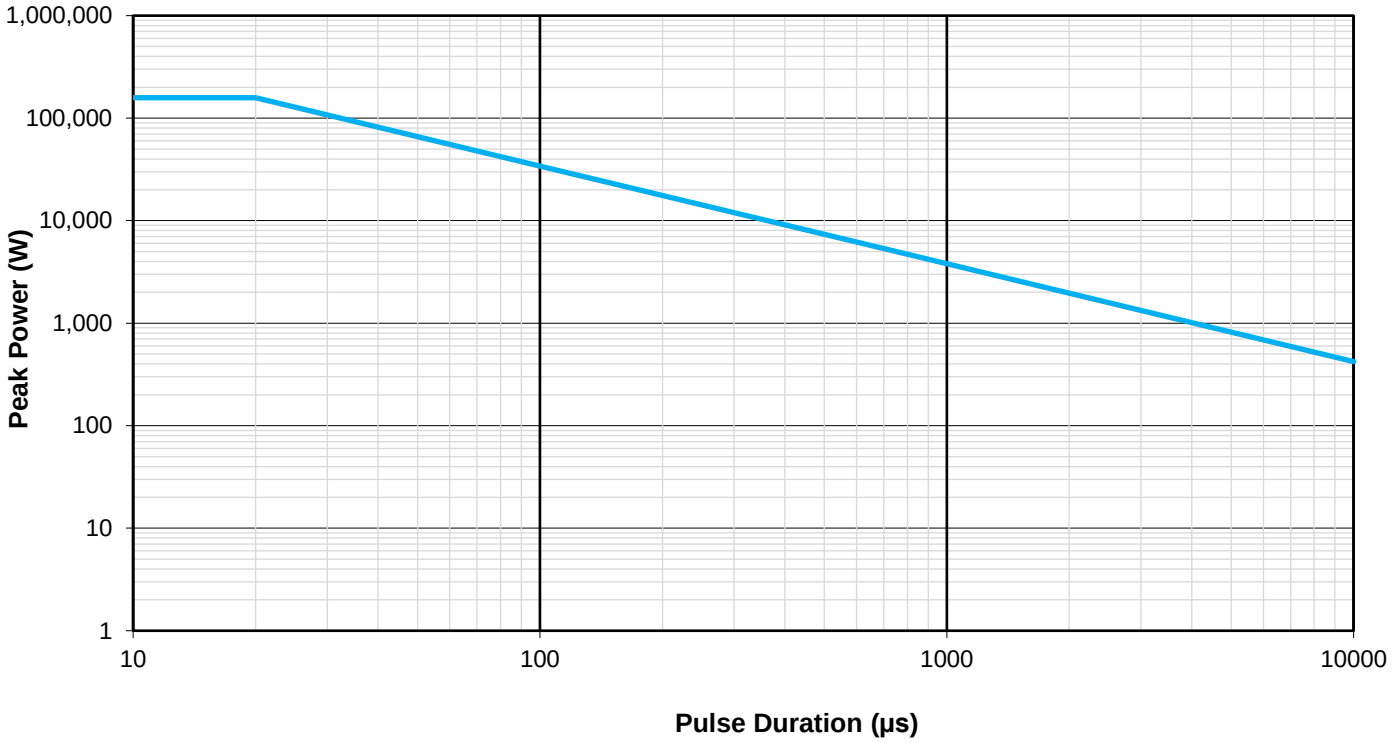
Voltage / Current Characteristics



S21 Characteristics



Power Derating



NOTICE: Specifications are subject to change without notice. All statements, information and data given herein are beleived 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.