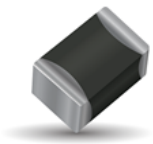
VGAS181242U900DP

(1812, 42Vdc, 4J, 500A, 1200pF, Ni/Sn Term)

Glass Encapsulated TransGuard® Automotive Multilayer Varistors

for Automotive applications



AEC-Q200 Qualified

The Glass Encapsulated TransGuard® Automotive Series 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	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)
1812	42	35	56.0±10%	90	5	15	4	6	3010	500	1200	+100/-50%	48

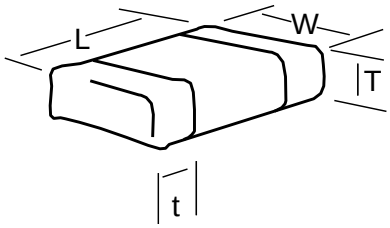
P_{DISS}
W
0.015

V_W(DC)	DC Working Voltage [V]	PP	Peak Power Rating [W, 10x1000µS]
V_W(AC)	AC Working Voltage [V]	I_P	Peak Current Rating [A, 8x20µS]
V_B	Typical Breakdown Votage [V @ 1mA$_{DC}$]	Cap	Typical capacitance [pF] @1kHz and 0.5VRMS
V_C	Clamping Voltage [V @ I_{VC}]	Cap tol	Capacitance tolerance from typical value
I_{VC}	Test Current for V_C [A, 8x20µs]	V_{JUMP}	Jump start voltage [V, 5min]
I_L	Maximum leakage current at the working voltage [µA]	P_{DISS}	Max Power Dissipation [W]
E_t	Transient Energy Rating [J, 10x1000µS]		

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

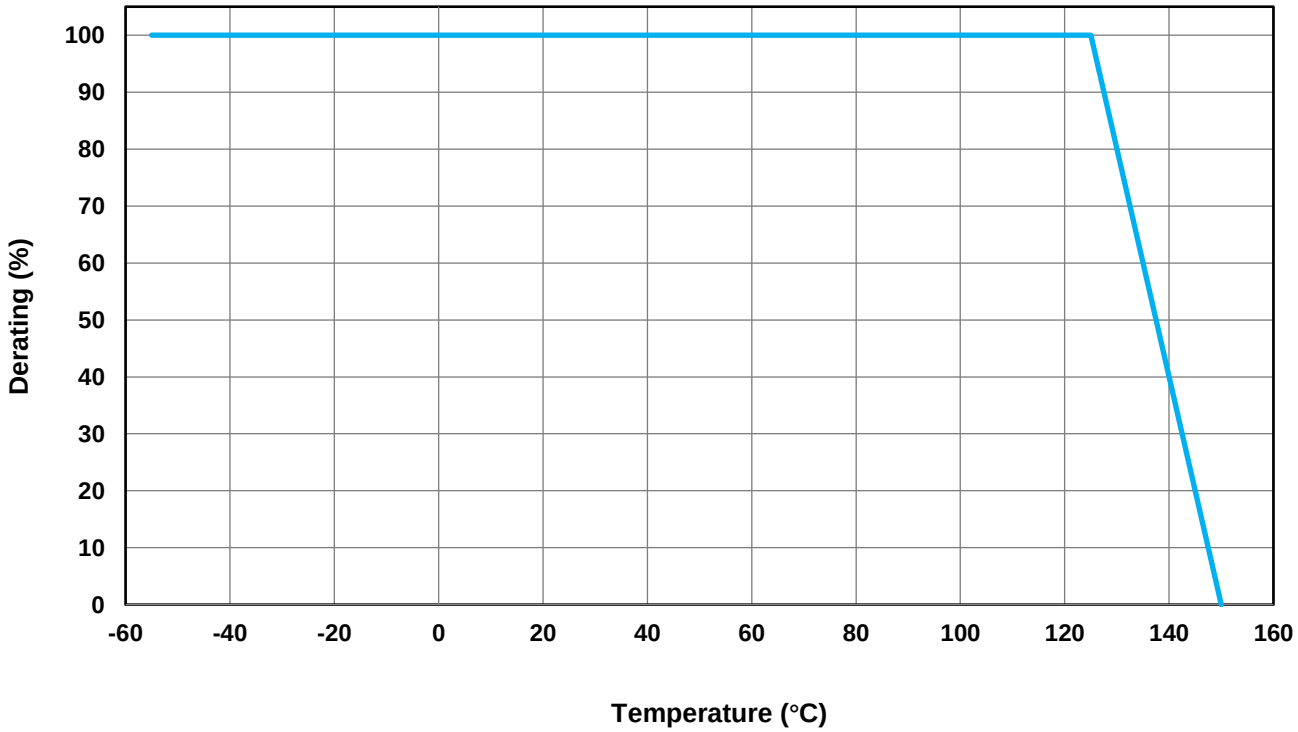
MSL 1

Pb Free 260°C

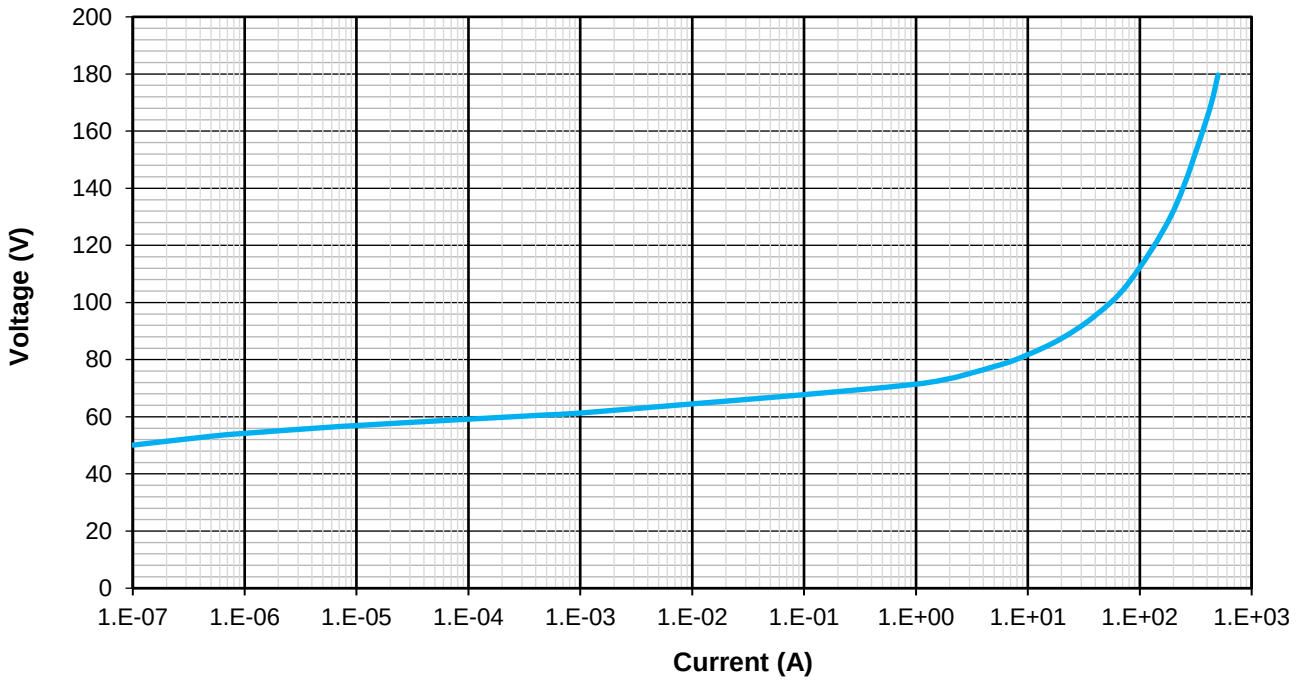
How to order (Packaging options)

VGAS	1812	42	U	900	D	P
Varistor Glass encaps. Automotive Series	Case Size	Working Voltage	Energy Rating	Clamping Voltage	Packaging	Termination
		42 = 42Vdc	U = 4J	900 = 90V	D = 7“ reel (1,000pcs) T = 13“ reel (4,000pcs)	P = Ni/Sn

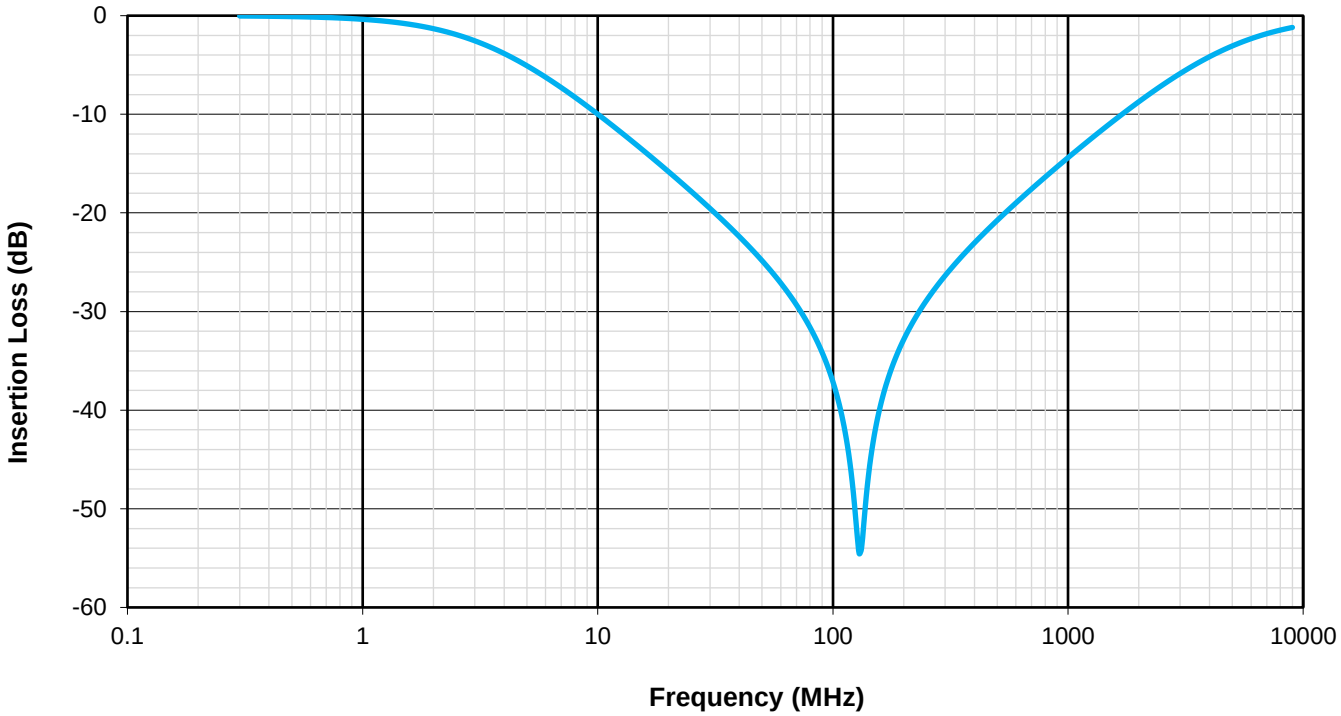
Typical Energy Derating Curve (Transient Energy, Peak Current, Power)



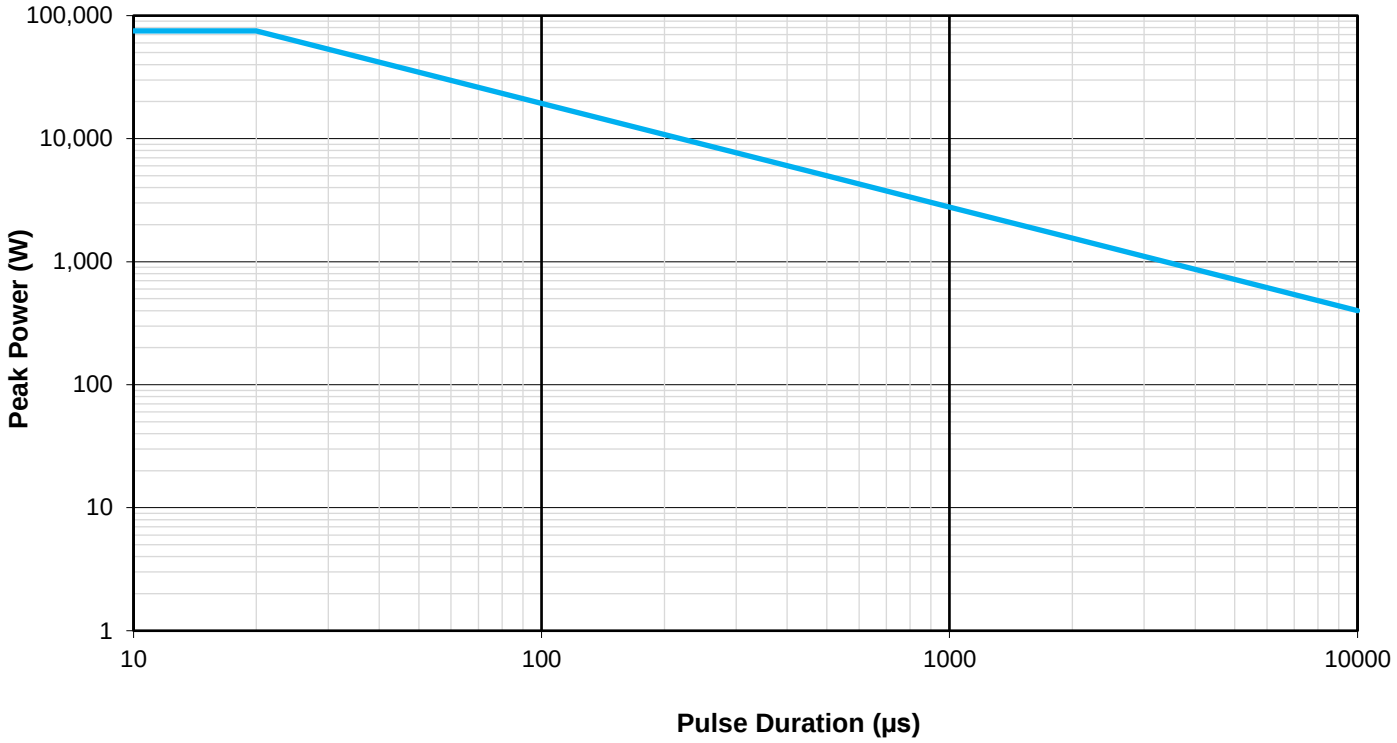
Voltage / Current Characteristics



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.