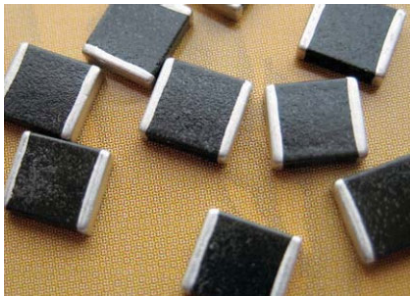
Glass Encapsulated TransGuard®



GENERAL DESCRIPTION

The Glass Encapsulated TransGuard multilayer varistors are zinc oxide (ZnO) based ceramic semiconductor devices with non-linear, bi-directional V-I characteristics.

They have the advantage of offering bi-directional overvoltage protection as well as EMI/RFI attenuation in a single SMT package.

The additional glass encapsulation is designed for specific customer requirements for enhanced acid-resistance against harsh environment or process such as acidic environment, salts or chlorite flux process.

GENERAL CHARACTERISTICS

Operating Temperature: -55ºC to 125ºC

FEATURES

- Bi-Directional protection
- EMI/RFI attenuation in off-state
- Multi-strike capability
- Sub 1nS response to ESD strike
- Glass Encapsulated

APPLICATIONS

- Various Applications where Glass Encapsulation is Needed for Harsh Environment / Acid-Resistance
- Proffesional / Industrial / Commercial Applications
- IC Protection, DC motor protection
- Relays, Controllers, Sensors
- Smart Grids
- Alarms and more

HOW TO ORDER

V	G	1812	16	P	400	R	P
Varistor	**Glass Encapsulated Chip**	**Case Size** 1210 1812 2220	**Working Voltage** 16 = 16Vdc 22 = 22Vdc 38 = 38Vdc 65 = 65Vdc	**Energy Rating** S = 2.0J P = 2.7-3.0J U = 4.0-5.0J Y = 7.2-12J	**Clamping Voltage** 400 = 42V 440 = 44V 770 = 77V 131 = 135V	**Package** D = 7" reel R = 7" reel T = 13" reel	**Termination** P = Ni/Sn plated

PHYSICAL DIMENSIONS: mm (inches)

Size (EIA)	Length (L)	Width (W)	Max Thickness (T)	Land Length (t)
1210	3.20±0.20 (0.126±0.008)	2.49±0.20 (0.098±0.008)	1.70 (0.067)	0.14 max. (0.045 max.)
1812	4.50±0.30 (0.177±0.012)	3.20±0.30 (0.126±0.012)	2.00 (0.079)	1.00 max. (0.040 max.)
2220	5.70±0.40 (0.224±0.016)	5.00±0.40 (0.197±0.016)	2.50 (0.098)	1.00 max. (0.040 max.)

ELECTRICAL CHARACTERISTICS

PN	$V_{W\,DC}$	$V_{W\,AC}$	V_B	V_C	I_{VC}	I_L	E_T	I_P	Cap	Freq
VG181216P400	16	11	24.5±10%	42	5	10	2.9	1000	5000	K
VG222016Y400	16	11	24.5±10%	42	10	10	7.2	1500	13000	K
VG121022R440	22	17	27±10%	44	2.5	10	1.7	400	1600	K
VG121038S770	38	30	47.0±10%	77	2.5	15	2	400	1000	K
VG181238U770	38	30	47.0±10%	77	5	15	4.2	800	1300	K
VG222038Y770	38	30	47.0±10%	77	10	15	12	2000	4200	K
VG121065P131	65	50	82.0±10%	135	2.5	15	2.7	350	600	K

V_{WDC} DC Working Voltage [V]

V_{WAC} AC Working Voltage [V]

V_B Min-Max Breakdown Votage [V @ $1mA_{DC}$, 25°C]

V_C Clamping Votage [V @ I_{VC}]

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

I_L Max. leakage current at the working volt. [µA, 25°C]

E_T Transient Energy Rating [J, 10x1000µs]

I_P Peak Current Rating [A, 8x20µS]

Cap Typ. capacitance [pF] @ Freq specified and $0.5V_{RMS}$, 25°C, K = 1kHz,M = 1MHz

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AVX:
VG121038S770DP VG181216P400DP VG121022R440DP VG222016Y400DP VG181238U770DP VG222038Y770DP VG121065P131DP