

Glass Encapsulated TransGuard®



Multilayer Varistors



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.

These large case size parts extend TransGuard range into high energy applications. In addition the glass encapsulation provides enhanced resistance against harsh environment or process such as acidic environment, salts or chlorite flux.

GENERAL CHARACTERISTICS

- Operating Temperature: -55°C to 125°C
- Case Size: 1206-2220
- Working Voltage: 16-85Vdc
- Energy: 0.7-12J
- Peak Current: 200-2000A

FEATURES

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

APPLICATIONS

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

HOW TO ORDER

| V | G | 1812 | 16 | P | 400 | R | P |
|----------|-------------------------|------------------------------|--|---|--|--|------------------|
| Varistor | Glass Encapsulated Chip | Chip Size | Working Voltage | Energy Rating | Clamping Voltage | Package | Termination |
| | | 1206 1210 1812 2220 | 16 = 16Vdc 18 = 18Vdc 22 = 22Vdc 26 = 26Vdc 30 = 30Vdc 31 = 31Vdc 38 = 38Vdc 45 = 45Vdc 48 = 48Vdc 56 = 56Vdc 60 = 60Vdc 65 = 65Vdc 85 = 85Vdc | F = 0.7J H = 1.2J J = 1.5-1.6J R = 1.7J S = 2.0J P = 2.5-3.7J U = 4.0-5.0J Y = 6.5-12J | 390 = 40V 400 = 42V 440 = 44V 540 = 54V 560 = 60V 570 = 57V 620 = 67V 650 = 65V 770 = 77V 900 = 90V 101 = 100V 111 = 110V 121 = 120V 131 = 135V 161 = 165V | D = 7" reel R = 7" reel T = 13" reel | P = Ni/Sn plated |

PHYSICAL DIMENSIONS: mm (inches)

| Size (EIA) | Length (L) | Width (W) | Max Thickness (T) | Land Length (t) |
|------------|----------------------------|----------------------------|-------------------|---------------------------|
| 1206 | 3.20±0.20 (0.126±0.008) | 1.60±0.20 (0.063±0.008) | 1.70 (0.067) | 0.94 max. (0.037 max.) |
| 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.) |

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ELECTRICAL CHARACTERISTICS

| AVX PN | V _W (DC) | V _W (AC) | V _B | V _C | I _{VC} | I _L | E _T | I _P | Cap | Freq |
|--------------|---------------------|---------------------|----------------|----------------|-----------------|----------------|----------------|----------------|-------|------|
| VG120616K390 | 16 | 11 | 24.5±10% | 40 | 1 | 15 | 0.6 | 200 | 1100 | K |
| VG120616N390 | 16 | 11 | 24.5±10% | 40 | 1 | 15 | 1.1 | 300 | 1300 | K |
| VG181216P390 | 16 | 11 | 24.5±10% | 40 | 5 | 15 | 2.9 | 1000 | 7000 | K |
| 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 |
| VG120618D400 | 18 | 13 | 25.5±10% | 42 | 1 | 15 | 0.4 | 150 | 1200 | K |
| VG121018J400 | 18 | 13 | 25.5±10% | 42 | 5 | 15 | 1.6 | 500 | 2300 | K |
| VG181218P440 | 18 | 14 | 27.5±10% | 44 | 5 | 15 | 2.9 | 800 | 5000 | K |
| VG121022R440 | 22 | 17 | 27±10% | 44 | 2.5 | 15 | 1.7 | 400 | 1600 | K |
| VG120626F540 | 26 | 18 | 33.0±10% | 54 | 1 | 15 | 0.7 | 200 | 600 | K |
| VG121026H560 | 26 | 18 | 34.5±10% | 60 | 5 | 15 | 1.2 | 300 | 1200 | K |
| VG181226P570 | 26 | 23 | 35±10% | 57 | 5 | 15 | 3.0 | 600 | 3000 | K |
| VG222026Y570 | 26 | 23 | 35.0±10% | 57 | 10 | 15 | 6.8 | 1100 | 7000 | K |
| VG121030H620 | 30 | 21 | 41.0±10% | 67 | 5 | 15 | 1.2 | 280 | 1000 | K |
| VG181231P650 | 31 | 25 | 39±10% | 65 | 5 | 15 | 3.7 | 800 | 2600 | K |
| VG222031Y650 | 31 | 25 | 39.0±10% | 65 | 10 | 15 | 9.6 | 1200 | 6100 | 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 | 6300 | K |
| VG181245U900 | 45 | 35 | 56.0±10% | 90 | 5 | 15 | 4.0 | 500 | 1800 | K |
| VG121048H101 | 48 | 34 | 62.0±10% | 100 | 5 | 15 | 1.2 | 250 | 500 | K |
| VG181256U111 | 56 | 40 | 68.0±10% | 110 | 5 | 15 | 4.8 | 500 | 1100 | K |
| VG222056Y111 | 56 | 40 | 68.0±10% | 110 | 10 | 15 | 9 | 1000 | 2800 | K |
| VG121060J121 | 60 | 42 | 76.0±10% | 120 | 5 | 15 | 1.5 | 250 | 400 | K |
| VG121065P131 | 65 | 50 | 82.0±10% | 135 | 2.5 | 15 | 2.7 | 350 | 600 | K |
| VG181265U131 | 65 | 50 | 82.0±10% | 135 | 5 | 15 | 4.5 | 400 | 800 | K |
| VG222065Y131 | 65 | 50 | 82.0±10% | 135 | 10 | 15 | 6.5 | 800 | 3000 | K |
| VG181285U161 | 85 | 60 | 100±10% | 165 | 5 | 15 | 4.5 | 400 | 500 | K |

V_W(DC) DC Working Voltage [V]
V_W(AC) AC Working Voltage [V]
V_B Typical Breakdown Voltage [V @ 1mA_{DC}, 25°C]
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, 25°C [µA]

E_T Transient Energy Rating [J, 10x1000µs]
I_P Peak Current Rating [A, 8x20µs]
Cap Typical capacitance [pF] @ frequency specified and 0.5V_{RMS}, 25°C, M = 1MHz, K = 1kHz

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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