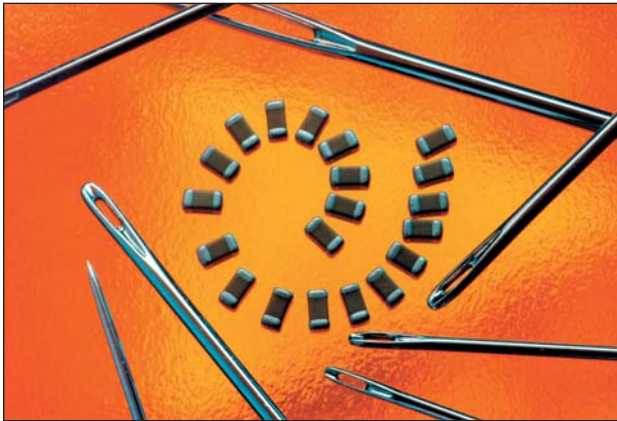


StaticGuard Automotive Series

Multilayer Varistors for Automotive Applications



GENERAL DESCRIPTION

The StaticGuard Automotive Series are low capacitance versions of the TransGuard and are designed for general ESD protection of CMOS, Bi-Polar, and SiGe based systems. The low capacitance makes these products suitable for use in automotive CAN and LIN bus communication lines as well as other high speed data transmission applications requiring low capacitance protection.

GENERAL CHARACTERISTICS

- Operating Temperature: -55°C to 125°C
- Working Voltage: $\leq 18\text{Vdc}$
- Case Size: 0402, 0603, 0805

FEATURES

- AEC Q200 Qualified
- ISO 7637 Pulse 1-3 capability
- Meet 27.5Vdc Jump Start requirements
- Multi-strike capability
- Sub 1nS response to ESD strike

APPLICATIONS

- CAN BUS
- LIN BUS
- CMOS
- Module interfaces
- Switches
- Sensors
- Camera modules
- Datalines
- Capacitance sensitive applications and more

HOW TO ORDER

| | | | | | | | | |
|--|--|---|---|--|--|---|---|--|
| VC ↓ Varistor Chip | AS ↓ Series AS = Automotive | 06 ↓ Case Size 04 = 0402 06 = 0603 08 = 0805 | LC ↓ Low Cap Design | 18 ↓ Working Voltage 18 = 18.0VDC | X ↓ Energy Rating A = 0.10 Joules V = 0.02 Joules X = 0.05 Joules | 500 ↓ Clamping Voltage 150 = 18V 200 = 22V 300 = 32V 400 = 42V 500 = 50V | R ↓ Packaging (PCS/REEL) D = 1,000 R = 4,000 T = 10,000 W = 0402 10000 | P ↓ Termination P = Ni/Sn |
|--|--|---|---|--|--|---|---|--|



ELECTRIAL CHARACTERISTICS

| AVX PN | V _W (DC) | V _W (AC) | V _B | V _C | I _{VC} | I _L | E _T | I _P | Cap | Freq | V _{JUMP} | P _{DISS} | Size |
|----------------|---------------------|---------------------|----------------|----------------|-----------------|----------------|----------------|----------------|-----|------|-------------------|-------------------|------|
| VCAS04LC18V500 | ≤ 18.0 | ≤ 14.0 | 25-40 | 50 | 1 | 10 | 0.02 | 15 | 40 | M | 27.5 | 0.0004 | 0402 |
| VCAS06LC18X500 | ≤ 18.0 | ≤ 14.0 | 25-40 | 50 | 1 | 10 | 0.05 | 30 | 50 | M | 27.5 | 0.001 | 0603 |
| VCAS08LC18A500 | ≤ 18.0 | ≤ 14.0 | 25-40 | 50 | 1 | 10 | 0.1 | 30 | 80 | M | 27.5 | 0.002 | 0805 |

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]

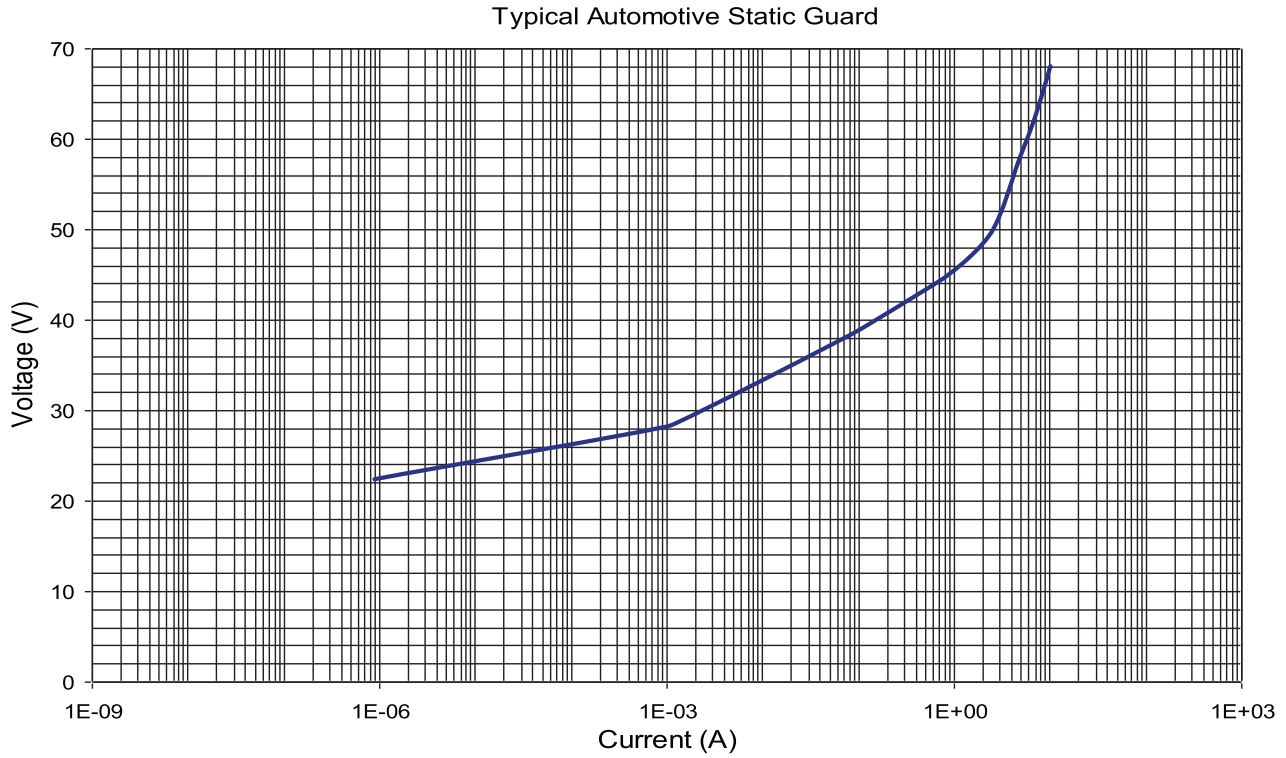
E_T Transient Energy Rating [J, 10x1000µs]
I_P Peak Current Rating [A, 8x20µs]
Cap Typical capacitance [pF] @ frequency specified and 0.5V_{RMS}, 25°C, M = 1MHz, K = 1kHz
V_{JUMP} Jump Start [V, 5 min]
P_{DISS} Power Dissipation [W]

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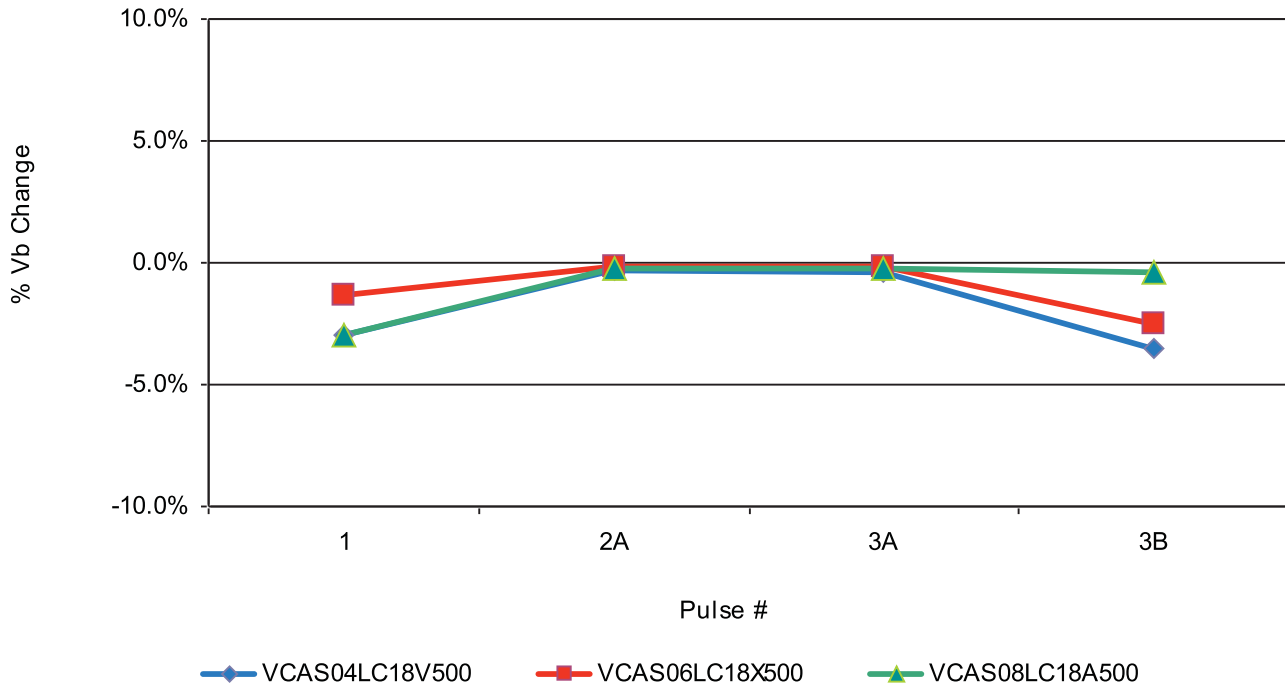


VOLTAGE/CURRENT CHARACTERISTICS



ELECTRICAL TRANSIENT CONDUCTION

ISO 7637 Pulse 1-3



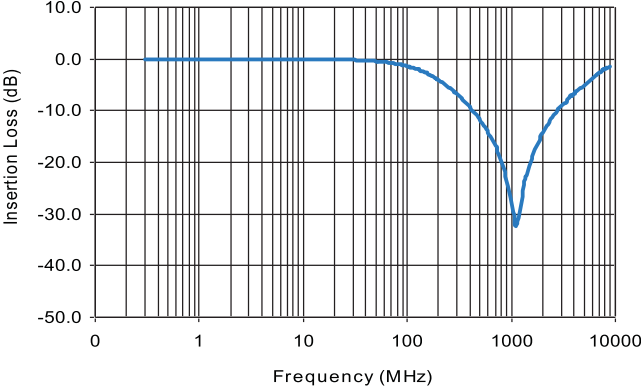
StaticGuard Automotive Series

Multilayer Varistors for Automotive Applications

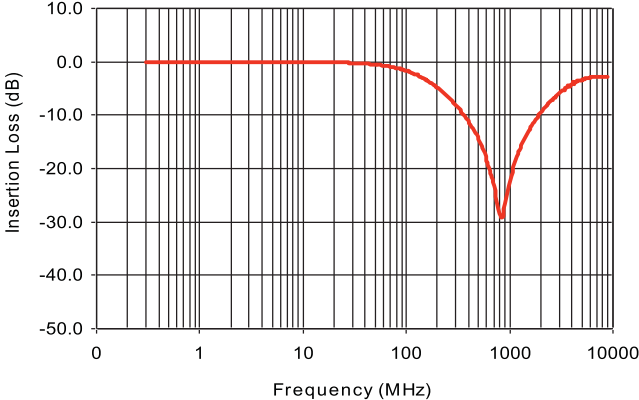


VOLTAGE/CURRENT CHARACTERISTICS

VCAS04LC18V500



VCAS06LC18X500



VCAS08LC18A500

