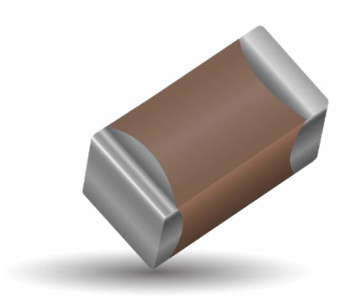
StaticGuard Automotive Series

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: -55ºC to 125ºC
- Working Voltage: ≤ 18Vdc
- 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	AS	06	LC	18	X	500	R	P
Varistor Chip	**Series** AS = Automotive	**Case Size** 04 = 0402 06 = 0603 08 = 0805	**Low Cap Design**	**Working Voltage** 18 = 18.0VDC	**Energy Rating** A = 0.10 Joules V = 0.02 Joules X = 0.05 Joules	**Clamping Voltage** 150 = 18V 200 = 22V 300 = 32V 400 = 42V 500 = 50V	**Packaging** (PCS/REEL) D = 1,000 R = 4,000 T = 10,000 W = 0402 10000	**Termination** P = Ni/Sn

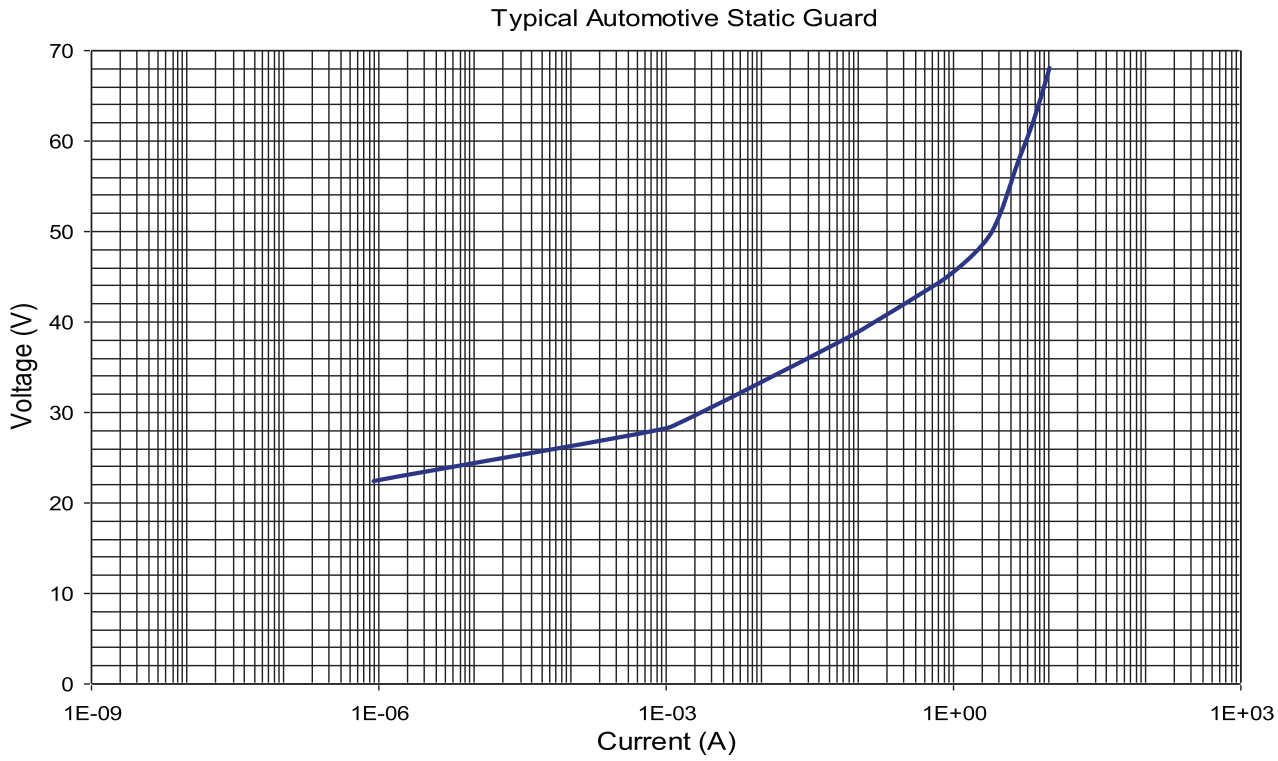
RoHS COMPLIANT

ELECTRIAL CHARACTERISTICS

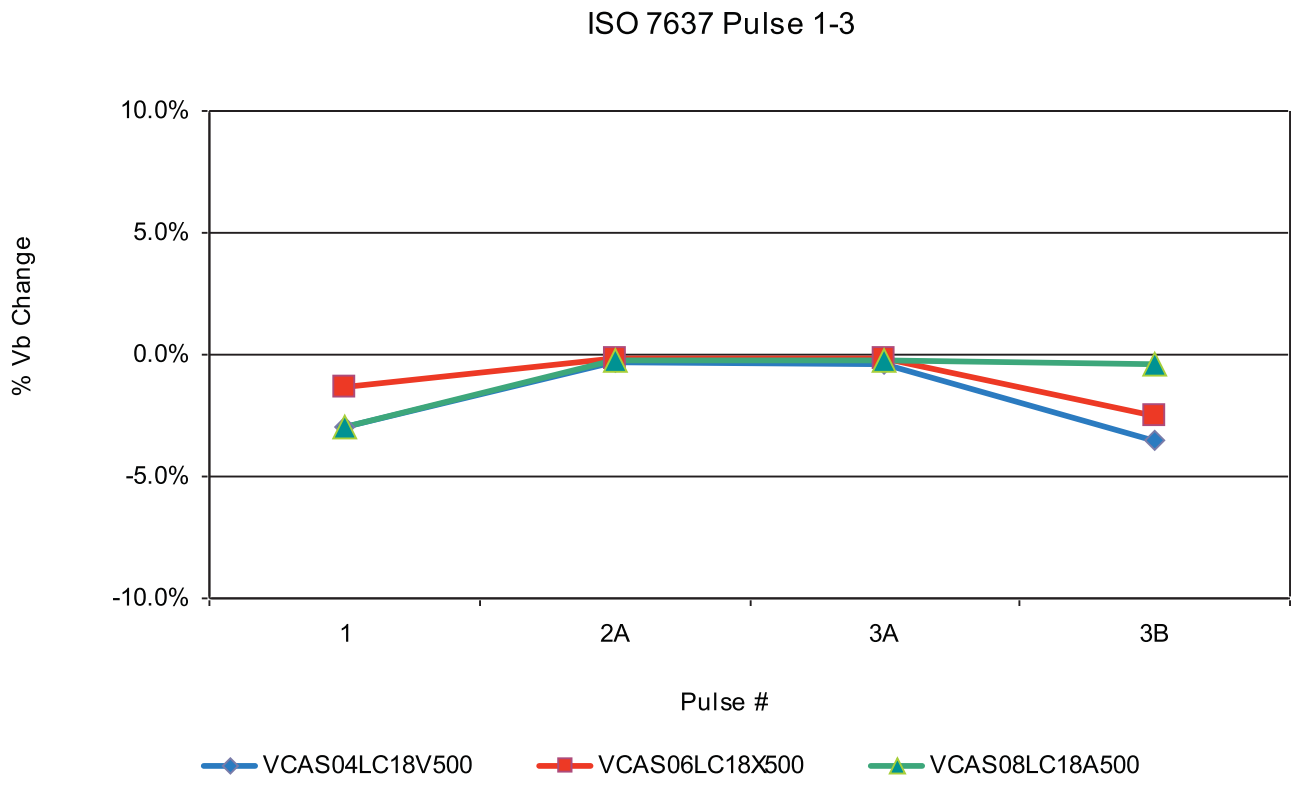
Part Number	VW (DC)	VW (AC)	VB	VC	IVC	IL	ET	IP	Cap	Freq	VJUMP	PDISS	Size
VCAS04LC18V500	≤18.0	≤14.0	25-40	50	1	10	0.02	15	40	M	27.5	0.0004	0402
VCAS06LC18X500	≤18.0	≤14.0	25-40	50	1	10	0.05	30	50	M	27.5	0.001	0603
VCAS08LC18A500	≤18.0	≤14.0	25-40	50	1	10	0.1	30	80	M	27.5	0.002	0805

V_W(DC)	DC Working Voltage [V]	E_T	Transient Energy Rating [J, 10x1000µS]
V_W(AC)	AC Working Voltage [V]	I_P	Peak Current Rating [A, 8x20µS]
V_B	Typical Breakdown Votage [V @ 1mADC, 25°C]	Cap	Typical capacitance [pF] @ frequency specified and 0.5V_{RMS}, 25°C, M = 1MHz, K = 1kHz
V_C	Clamping Voltage [V @ IIVC]	V_{Jump}	Jump Start [V, 5 min]
I_{VC}	Test Current for VC [A, 8x20µs]	P_{DISS}	Power Dissipation [W
I_L	Maximum leakage current at the working voltage, 25°C [µA]		

VOLTAGE/CURRENT CHARACTERISTICS

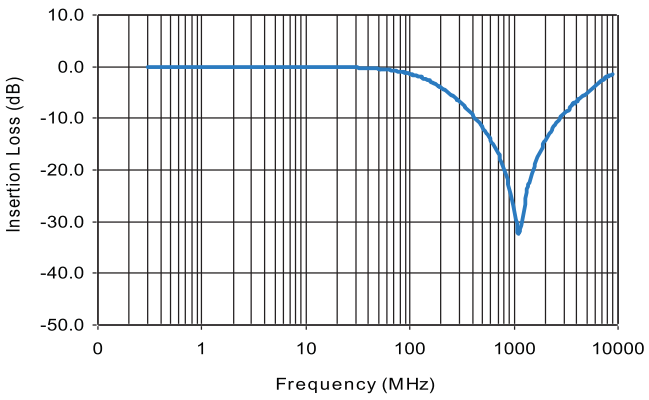


ELECTRICAL TRANSIENT CONDUCTION

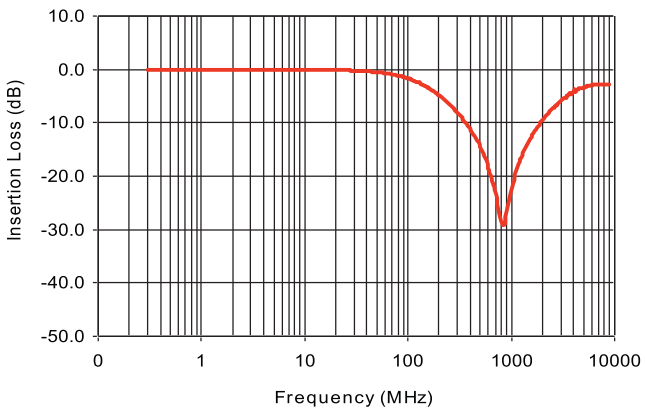


VOLTAGE/CURRENT CHARACTERISTICS

VCAS04LC18V500



VCAS06LC18X500



VCAS08LC18A500