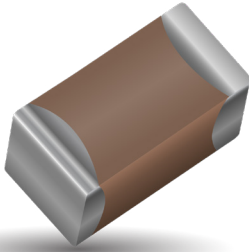


# StaticGuard Automotive Series

## 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	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



### ELECTRICAL CHARACTERISTICS

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

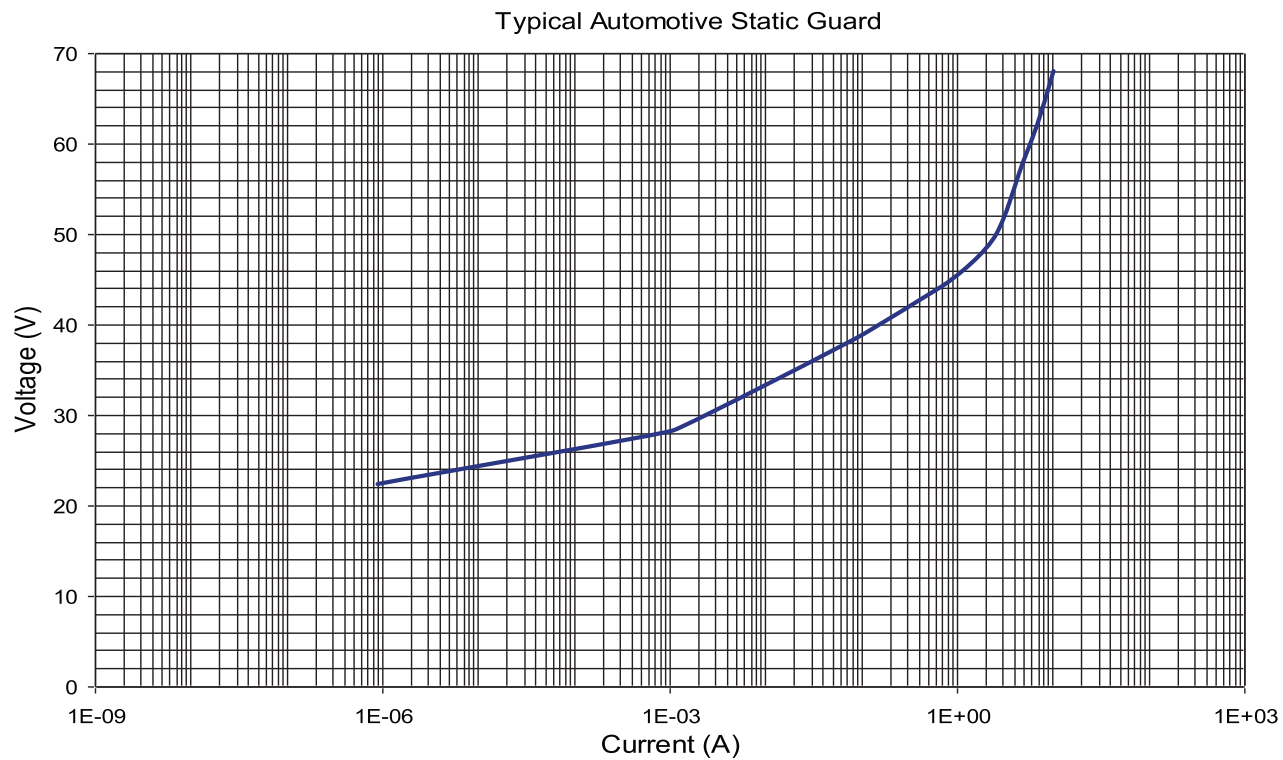
$V_W(\text{DC})$	DC Working Voltage [V]	$E_T$	Transient Energy Rating [J, 10x1000 $\mu\text{s}$ ]
$V_W(\text{AC})$	AC Working Voltage [V]	$I_P$	Peak Current Rating [A, 8x20 $\mu\text{s}$ ]
$V_B$	Typical Breakdown Voltage [V @ 1mA DC, 25°C]	Cap	Typical capacitance [pF] @ frequency specified and 0.5V <sub>RMS</sub> , 25°C, M = 1MHz, K = 1kHz
$V_C$	Clamping Voltage [V @ I <sub>VC</sub> ]	$V_{\text{Jump}}$	Jump Start [V, 5 min]
$I_{VC}$	Test Current for VC [A, 8x20 $\mu\text{s}$ ]	$P_{\text{DISS}}$	Power Dissipation [W]
$I_L$	Maximum leakage current at the working voltage, 25°C [ $\mu\text{A}$ ]		

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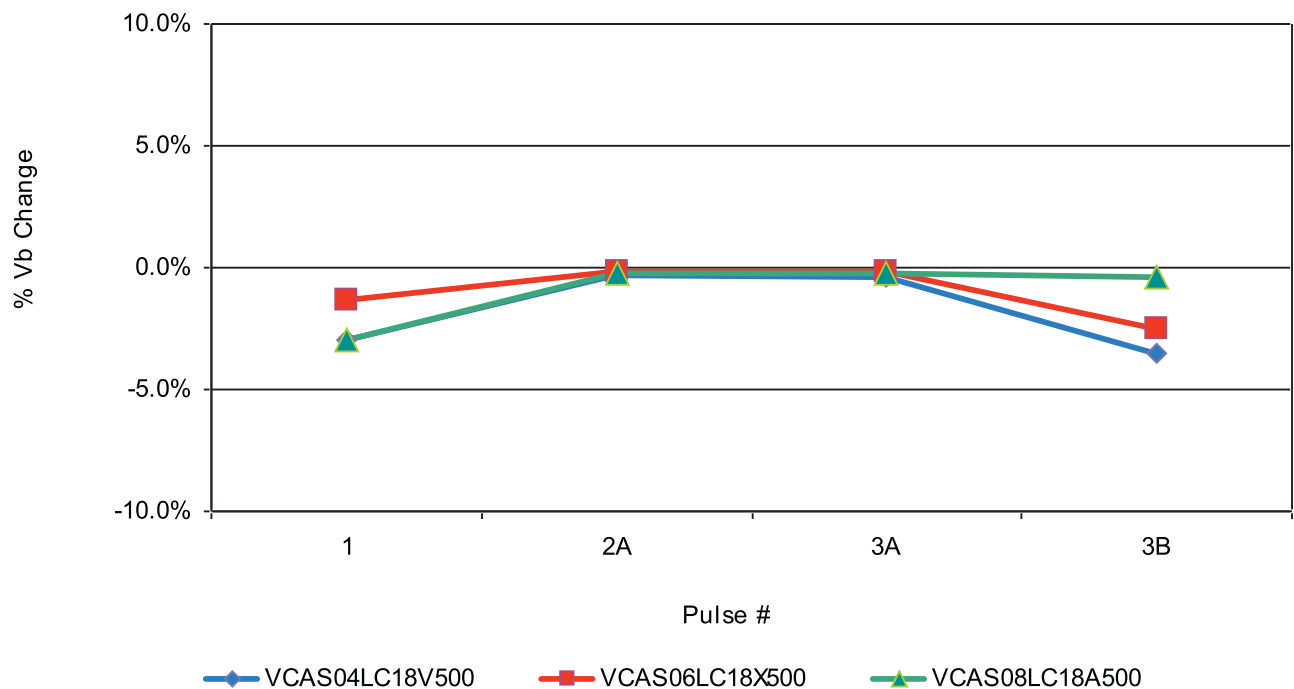


### VOLTAGE/CURRENT CHARACTERISTICS



### ELECTRICAL TRANSIENT CONDUCTION

ISO 7637 Pulse 1-3

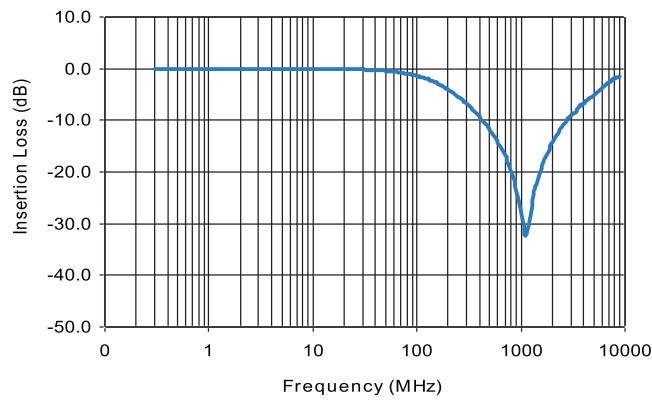


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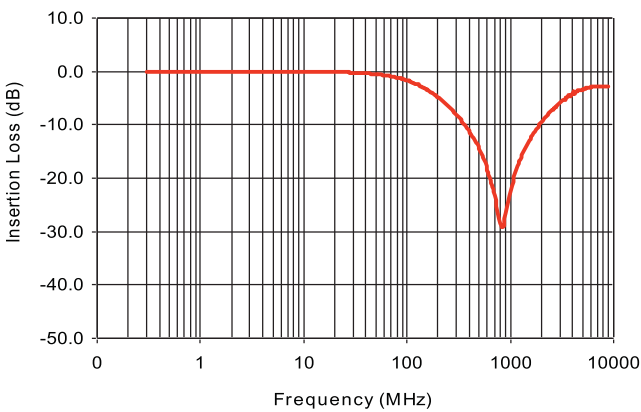


VOLTAGE/CURRENT CHARACTERISTICS

VCAS04LC18V500



VCAS06LC18X500



VCAS08LC18A500

