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: ≤ 18Vdc
- Case Size: 0402, 0603, 0805

FEATURES

- AEC Q200 Qualified
- ISO 7637 Pulse 1-3 capability
- Meet 27.5Vdc Jump Start requirements

R

- 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







Size 04 = 040206 = 0603

08 = 0805

LC 18 **Low Cap** Design

Working Voltage 18 = 18.0VDC

V = 0.02 Joules

Energy Rating A = 0.10 Joules X = 0.05 Joules

X

Clamping Voltage 150 = 18V 200 = 22V

500

300 = 32V 400 = 42V 500 = 50V

Packaging (PCS/REEL)

D = 1,000

R = 4,000T = 10,000W = 040210000

Cap

Termination

P = Ni/Sn

ELECTRIAL CHARACTERISTICS

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

V_w(DC) DC Working Voltage [V] V_w(AC) AC Working Voltage [V]

Typical Breakdown Votage [V @ 1mADC, 25°C]

Clamping Voltage [V @ IIVC] Test Current for VC [A, 8x20µs]

Maximum leakage current at the working

voltage, 25°C [µA]

 $E_{\scriptscriptstyle T}$ Transient Energy Rating [J, 10x1000µS] Peak Current Rating [A, 8x20µS]

Typical capacitance [pF] @ frequency specified

and $0.5V_{RMS}$, 25° C, M = 1MHz, K = 1kHz

Jump Start [V, 5 min] Power Dissipation [W

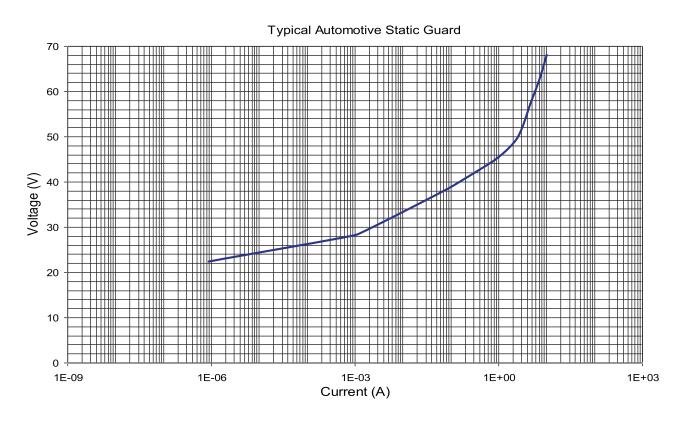
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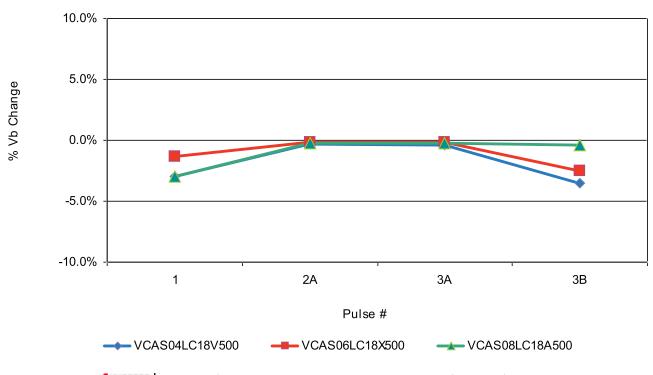


VOLTAGE/CURRENT CHARACTERISTICS



ELECTRICAL TRANSIENT CONDUCTION

ISO 7637 Pulse 1-3



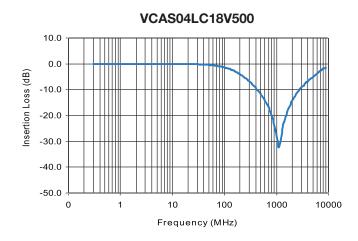
KYDEER3 | The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

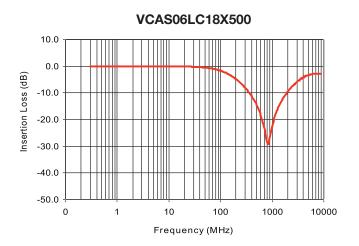
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VOLTAGE/CURRENT CHARACTERISTICS





VCAS08LC18A500 10.0 0.0 Insertion Loss (dB) -10.0 -20.0 -30.0 -40.0 -50.0 0 10 100 1000 10000 Frequency (MHz)