

# StaticGuard

## AVX Multilayer Ceramic Transient Voltage Suppressors ESD Protection for CMOS, Bi Polar and SiGe Based Systems



### GENERAL INFORMATION

- Typical ESD failure voltage for CMOS and/or Bi Polar is  $\geq 200V$ .
- 15kV ESD pulse (air discharge) per IEC 1000-4-2, Level 4, generates  $< 20$  millijoules of energy.
- Low capacitance ( $< 200pF$ ) is required for high-speed data transmission.
- Low leakage current ( $I_L$ ) is necessary for battery operated equipment.

### StaticGuard

AVX Part Number	Working Voltage (DC)	Working Voltage (AC)	Clamping Voltage	Test Current For $V_c$	Maximum Leakage Current	Transient Energy Rating	Peak Current Rating	Typical Cap	Case Size	Elements
VC04LC18V500_ _	$\leq 18.0$	$\leq 14.0$	50	1	10	0.02	15	40	0402	1
VC06LC18X500_ _	$\leq 18.0$	$\leq 14.0$	50	1	10	0.05	30	50	0603	1
VC08LC18A500_ _	$\leq 18.0$	$\leq 14.0$	50	1	10	0.10	30	80	0805	1
VC12LC18A500_ _	$\leq 18.0$	$\leq 14.0$	50	1	10	0.10	30	200	1206	1
VA10LC18A500_ _	$\leq 18.0$	$\leq 14.0$	50	1	10	0.10	30	200	Axial	1

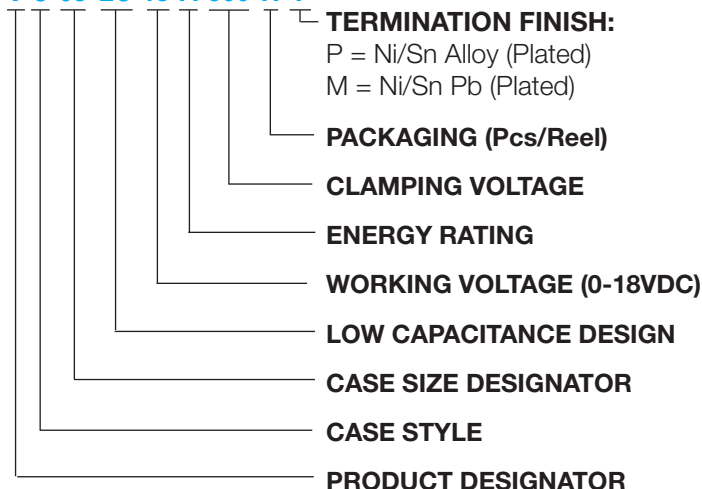
Termination/Lead Finish Code  
Packaging Code

- $V_w$ (DC) DC Working Voltage (V)  
 $V_w$ (AC) AC Working Voltage (V)  
 $V_c$  Clamping Voltage (V @  $I_{vc}$ )  
 $I_{vc}$  Test Current for  $V_c$  (A,  $8 \times 20\mu S$ )  
 $I_L$  Maximum Leakage Current at the Working Voltage ( $\mu A$ )  
 $E_T$  Transient Energy Rating (J,  $10 \times 1000\mu S$ )  
 $I_p$  Peak Current Rating (A,  $8 \times 20\mu S$ )  
 Cap Typical Capacitance (pF) @ frequency specified and 0.5 V

### PART NUMBER IDENTIFICATION

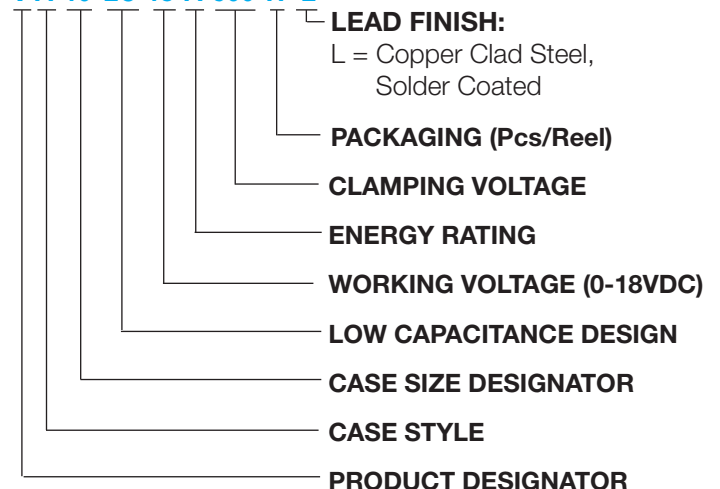
#### Chips

VC08LC18A500RP



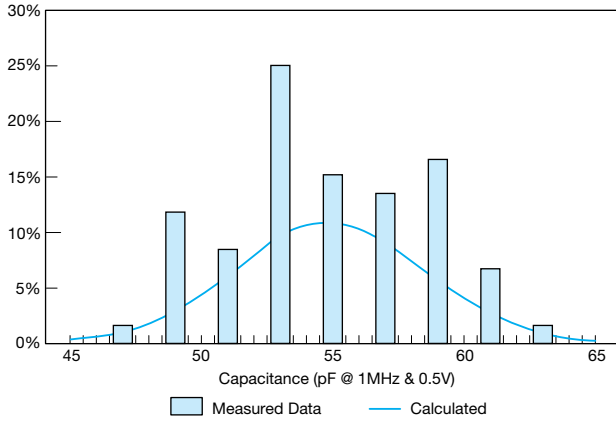
#### Axials

VA10LC18A500RL

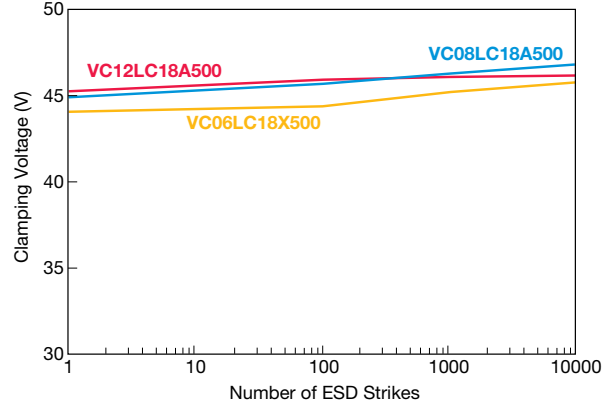


### TYPICAL PERFORMANCE DATA

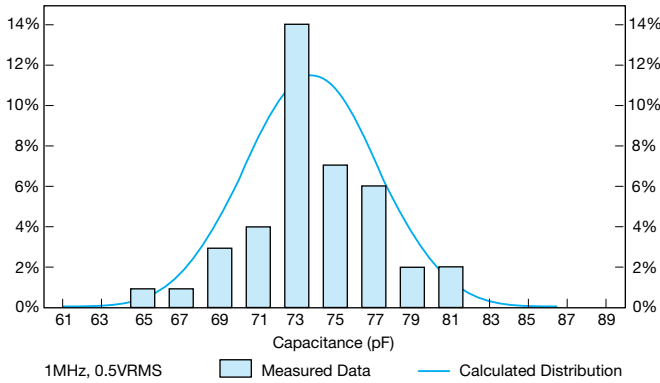
VC06LC18X500 Capacitance Histogram



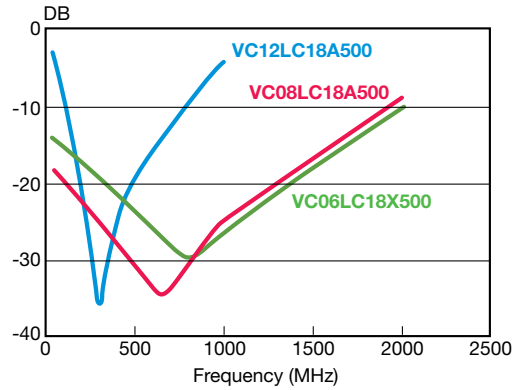
StaticGuard ESD RESPONSE  
IEC 1000-4-2 (8 Kv Contact Discharge)



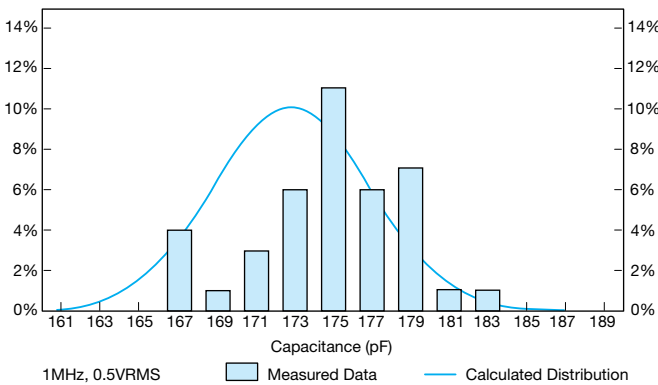
VC08LC18A500 Capacitance Histogram



StaticGuard S21



VC12LC18A500 Capacitance Histogram



VI Curves - StaticGuard Products

