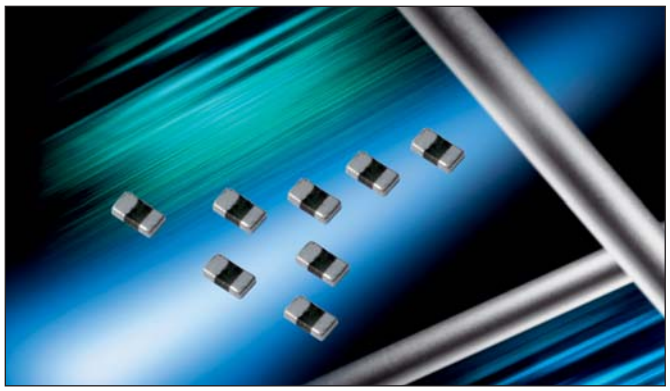
AntennaGuard/SPV

AVX Multilayer Ceramic Transient Voltage Suppressors
ESD Protection for any Circuit Sensitive to Capacitance

GENERAL DESCRIPTION

AVX offers ultra-low capacitance ESD protection in the Sub 1pF range for use in circuits that are sensitive to capacitance. The Sub pF Varistor (SPV) is available in 0.8pF and 0.4pF capacitance values in a compact 0402 low profile package. SPV devices provide excellent response time to ESD strikes to protect sensitive circuits from over voltage conditions.

The development of new information processing technologies call for ever increasing digital system speeds. Higher speeds necessitate the use of ultra-low capacitance values in order to minimize signal distortion.



FEATURES

- High Reliability
- Capacitance <1pF
- Bi-Directional protection
- Fastest response time to ESD strikes
- Multi-strike capability
- Low insertion loss
- Low profile 0402 case size

APPLICATIONS

- Antennas
- Optics
- HDMI
- RF circuits
- FlexRay
- Portable devices
- Analog sensors
- Any circuit sensitive to capacitance

HOW TO ORDER

VC	H4	AG	10	0R8	M	A	T	W	A
Varistor Chip	**Chip Size** Thin 0402	**Varistor Series** AntennaGuard	**Working Voltage** 10 = 10V 15 = 15V	**Capacitance** 0R8 = 0.8pF 0R4 = 0.47pF	**Tolerance** M = ±20%	**N/A**	**Termination** T = Ni/Sn Alloy	**Reel Size** W = 7"	**Reel Quantity** A = 10k

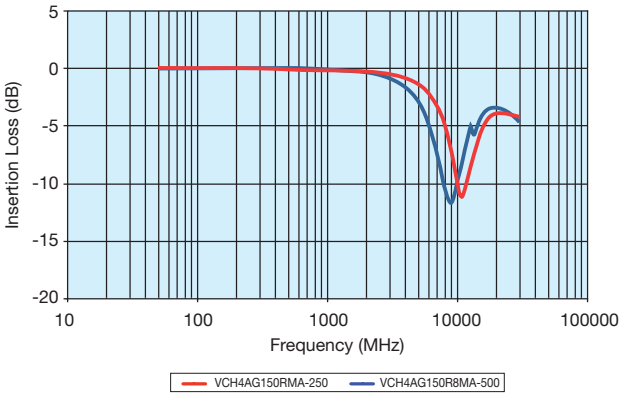
ANTENNAGUARD CATALOG PART NUMBERS/ELECTRICAL VALUES

AVX Part Number	V_W (DC)	V_B	I_L	Cap	Cap Tolerance	3db Freq (MHz)	Case Size
VCH4AG100R8MA	≤10	125	<10 nA	0.8	±20%	5800	LP 0402
VCH4AG150R8MA	≤15	125	<10 nA	0.96 pF Max	Max	5800	LP 0402
VCH4AG150R4MA	≤15	135	<100 nA	0.47 pF Max	±20%	6700	LP 0402

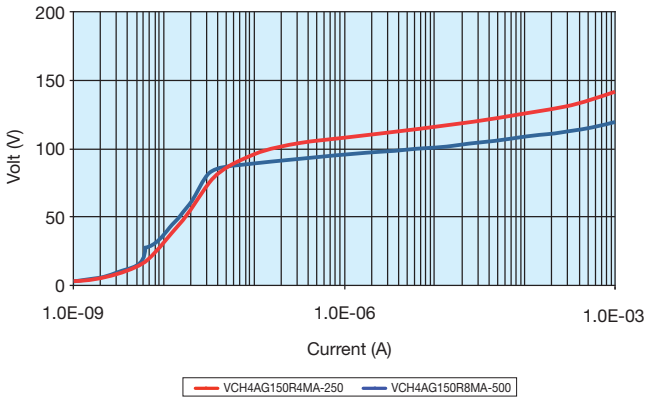
V_W(DC) DC Working Voltage (V)
V_B Typical Breakdown Voltage (V @ 1mA$_{DC}$)
I_L Typical leakage current at the working voltage
Cap Typical capacitance (pF) @ frequency specified and 0.5V$_{RMS}$
Freq Frequency at which capacitance is measured (M = 1MHz)

RoHS COMPLIANT

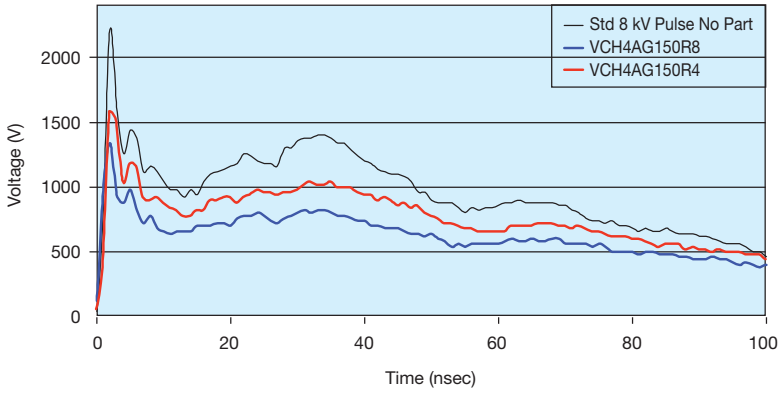
S21 Transmission Characteristics -SPV

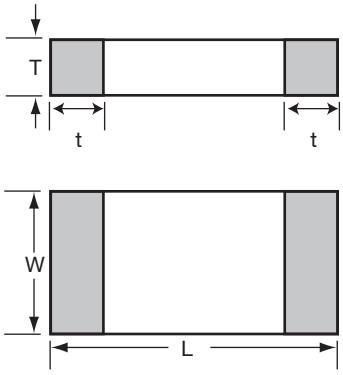


V/I Curve - SPV



ESD Wave Absorption Characteristics





mm (inches)

Size (EIA)	0402
Length (L)	1.00 ±0.10 (0.040 ± 0.004)
Width (W)	0.50 ±0.10 (0.020 ±0.004)
Max Thickness (T)	0.35 (0.014)
Terminal (t)	0.25±0.15 (0.010±0.006)