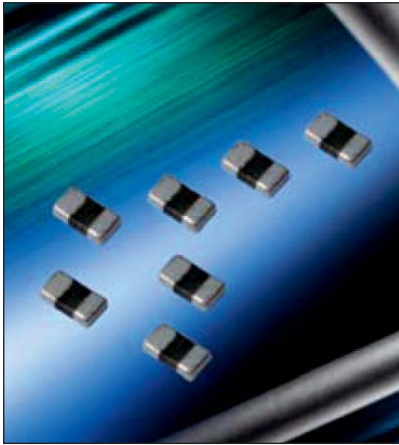


# Miniature 0201 MLV

## AVX Multilayer Ceramic Transient Voltage Suppressors

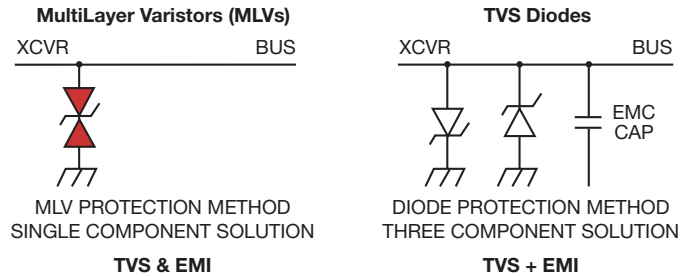
### ESD Protection for any Circuit with Board Space Constraints



### GENERAL DESCRIPTION

AVX 0201 Multi-Layer Varistors are designed for circuits where board space is a premium. 0201 MLV offer bi-directional ESD protection in the smallest package available today. The added advantage is EMI/RFI attenuation. 0201 MLV can replace 2 diodes and the EMC capacitor for a one chip solution.

The miniature size and one chip solution team to offer designers the best in ESD protection and EMI filtering in one ultra compact device.



### GENERAL CHARACTERISTICS

Operating Temperature: -55°C to +125°C

- Working Voltage: 3.5Vdc - 16Vdc
- Case Size: 0201

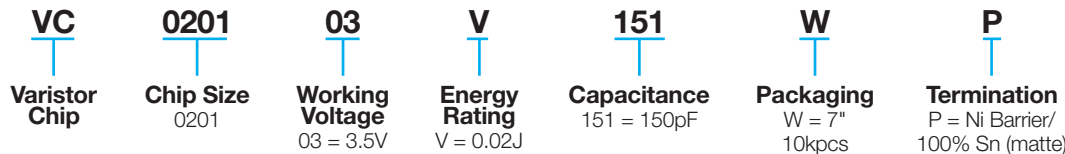
### APPLICATIONS

- Cell phone
- PDA
- Camera modules
- Embedded components
- Hearing aid
- Any circuit with space constraints

### FEATURES

- Capacitance 15pF to 150pF
- Low  $V_B$  Version
- Bi-Directional protection
- Fastest response time to ESD strikes
- Multi-strike capability
- Ultra compact 0201 case size

### HOW TO ORDER



AVX Part Number	$V_W$ (DC)	$V_W$ (AC)	$V_B$	$V_C$	$I_{VC}$	$I_L$	$E_T$	$I_P$	Cap
VC020103V101WP	3.5	2.0	4.76 min 8.84 max	14max	1	50	0.02	10	100pF ±30%
VC020103V121WP	3.5	2.0	4.76 min 8.84 max	14max	1	50	0.02	10	125pF ±30%
VC020103V151WP	3.5	2.0	4.76 min 8.84 max	14max	1	50	0.02	10	150pF ±30%
VC020105T150WP	5.6	4.0	10.0 min 15.6 max	35max	1	50	0.01	2	15pF ±30%
VC020105T330WP	5.6	4.0	10.0 min 15.6 max	35max	1	50	0.01	4	33pF ±30%
VC020105T500WP	5.6	4.0	10.0 min 15.6 max	35max	1	50	0.01	5	50pF ±30%
VC020105T101WP	5.6	4.0	10.0 min 15.6 max	35max	1	50	0.01	5	100pF ±30%
VC020105V101WP	5.6	4.0	6.4 min 9.6 max	17max	1	50	0.02	4	100pF ±30%
VC020107V101WP	7.0	5.6	9.6 min 14.4 max	20max	1	50	0.02	5	100pF ±30%
VC020116T150WP	16	11	21.7 min 29.3 max	45max	1	50	0.01	1	15pF ±30%

$V_W$ (DC) DC Working Voltage [V]

$V_W$ (AC) AC Working Voltage [V]

$V_B$  Breakdown Voltage [V @ 1mA DC]

$V_C$  Clamping Voltage [V @  $I_{VC}$ ]

$I_{VC}$  Test Current for VC [A, 8x20µS]

$I_L$  Maximum leakage current at the working voltage [µA]

$E_T$  Transient Energy Rating [J, 10x1000µS]

$I_P$  Peak Current Rating [A, 8x20µS]

Cap Capacitance [pF] @ 1KHz specified and 0.5VRMS



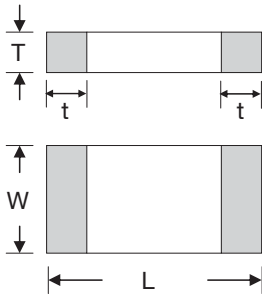
# Miniature 0201 MLV

AVX Multilayer Ceramic Transient Voltage Suppressors

ESD Protection for any Circuit with Board Space Constraints

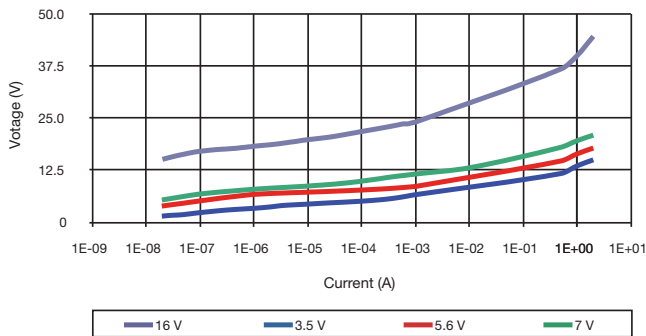


## PHYSICAL DIMENSIONS: mm (inches)

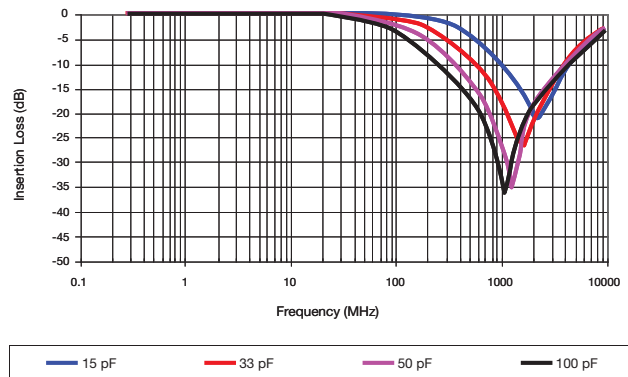


Size (EIA)	Length (L)	Width (W)	Max Thickness (T)	Terminal (t)
0201	0.60±0.03 (0.024±.001)	0.30±0.03 (0.011±0.001)	0.33 max. (0.013 max.)	0.15±0.05 (0.006±0.002)

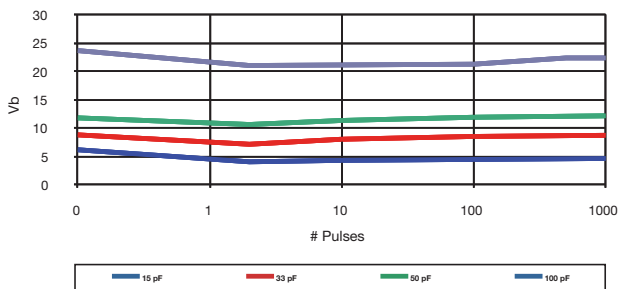
## VOLTAGE/CURRENT CHARACTERISTICS



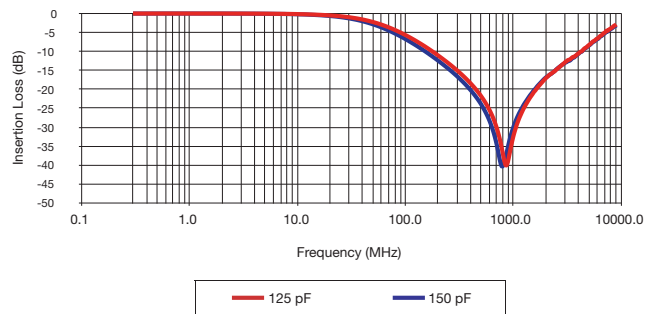
## TRANSMISSION CHARACTERISTICS 5.6Vdc



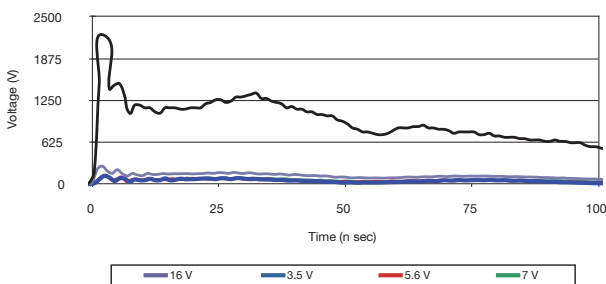
## TYPICAL 8 KV ESD PERFORMANCE (150pF / 300ohm IEC Network)



## 3.5Vdc



## 8kV CONTACT ESD vs PULSE 1 Mohm Input (150pF / 330ohm Network)



## 16Vdc

