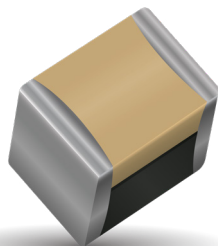


# Surface Mount CapGuard®

## Varistor/Capacitor Combination for EMI/Surge Suppression



AVX's surface mount CapGuard® products are designed to provide both transient voltage protection and EMI/RFI suppression for electronic circuits. CapGuards® are ideally suited to filter out EMI/RFI noise generated by switch mode power supplies or motors on DC lines or I/O lines in electronic circuits. With multilayer varistor (MLV) utilized in CapGuard® product, effective transient voltage protection is achieved to protect sensitive electronics from high voltage transients. The capacitor, on the other hand, absorbs high frequency noise on the line. The MLCC capacitors are designed with temperature stable X7R dielectric, allowing for wide temperature use with good capacitance stability. The surface mount CapGuards® are characterized with a very small form factor to minimize board space. The parts are assembled using high melting point solder (268°C solidus / 290°C liquidus) allowing for standard reflow processing during board level assembly without a risk of reflowing HMP solder.

### FEATURES

- High Capacitance / EMI Filtering
- Bi-Directional Protection
- Fast Turn-On Time
- Multiple Strike Capability
- HMP Solder Termination
- 1210 EIA Case Size

### TARGET APPLICATIONS

- Avionics
- Military
- I/O port protection
- EMI filtering with surge protection

### GENERAL CHARACTERISTICS

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

### HOW TO ORDER

<b>MV</b>	<b>10</b>	<b>18</b>	<b>J</b>	<b>104</b>	<b>M</b>	<b>A</b>	<b>A</b>	<b>1</b>
Product Designation MLCC/Varistor (MLV)	Component Style 1210	Working Voltage 18 = 18V 26 = 26V 48 = 48V 60 = 60V	Transient Energy Rating J = 1.5 - 1.6J H = 1.2	Capacitance Code (2 significant digits + no. of zeros) Examples: 0.012µF = 123 0.047µF = 473 0.1µF = 104	Tolerance M = ±20%	Specification Code A = Standard	Termination HMP	Packaging T&R

### PRODUCT OFFERING

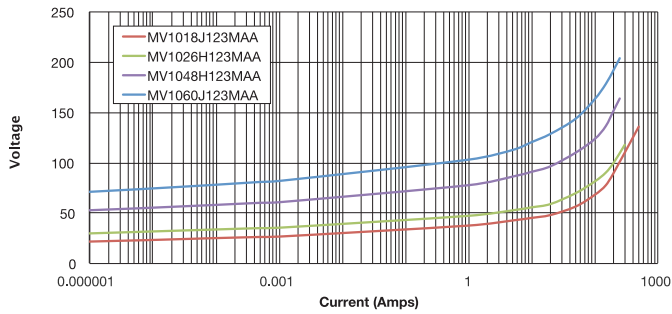
Part Number	Operating Voltage (V)	Nominal Breakdown Voltage (V)	Breakdown Voltage Range (V)	Clamping Voltage (V)	Current for Clamping Voltage (Amp)	Transient Energy (J)	Peak Current (Amp)	Typical Capacitance (µF)
MV1018J123MAA1	18	25	23 - 28	42	5	1.6	500	0.012
MV1018J473MAA1	18	25	23 - 28	42	5	1.6	500	0.047
MV1018J104MAA1	18	25	23 - 28	42	5	1.6	500	0.1
MV1026H123MAA1	26	34.5	31 - 38	60	5	1.2	300	0.012
MV1026H473MAA1	26	34.5	31 - 38	60	5	1.2	300	0.047
MV1026H104MAA1	26	34.5	31 - 38	60	5	1.2	300	0.1
MV1048H123MAA1	48	62	55 - 69	100	5	1.2	250	0.012
MV1048H473MAA1	48	62	55 - 69	100	5	1.2	250	0.047
MV1048H104MAA1	48	62	55 - 69	100	5	1.2	250	0.1
MV1060J123MAA1	60	76	68 - 84	120	5	1.5	250	0.012
MV1060J473MAA1	60	76	68 - 84	120	5	1.5	250	0.047
MV1060J104MAA1	60	76	68 - 84	120	5	1.5	250	0.1

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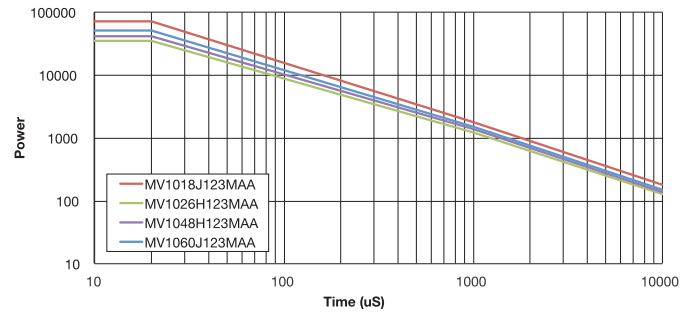
## Varistor/Capacitor Combination for EMI/Surge Suppression



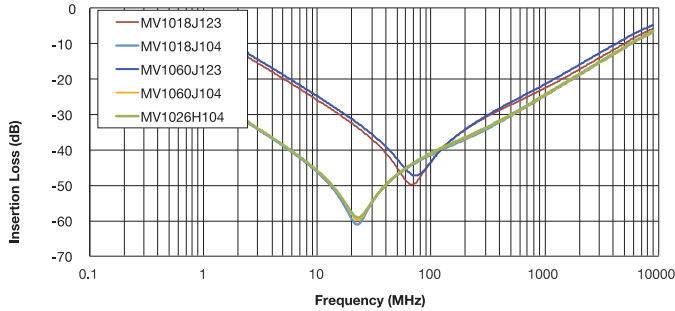
### TYPICAL VOLTAGE CURRENT RESPONSE



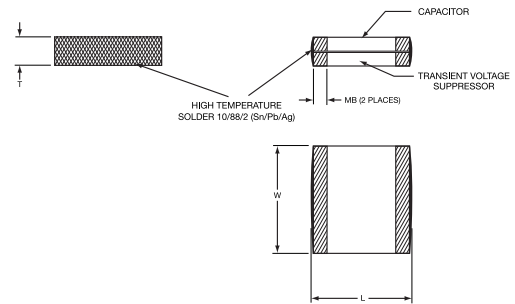
### TYPICAL PULSE POWER DURATION



### TYPICAL HIGH FREQUENCY CHARACTERISTICS



### DIMENSIONS



millimeters (inches)

Length (L)	Width (W)	Thickness (T)	Metallized Bands (MB)
3.302 ± 0.381 (0.130) ± (0.015)	2.540 ± 0.381 (0.100) ± (0.015)	2.794 (0.110) Max.	0.5 ± 0.25 (0.02) ± (0.01)