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



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 (uF)
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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TYPICAL VOLTAGE CURRENT RESPONSE



TYPICAL PULSE POWER DURATION



DIMENSIONS



millimeters (inches)

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

TYPICAL HIGH FREQUENCY CHARACTERISTICS



101320

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Kyocera AVX:

 MV1060104MAA1
 MV1048H104MAA1
 MV1026104MAA1
 MV1026123MAA1
 MV1018123MAA1
 MV1060123MAA1

 MV1018473MAA1
 MV1048473MAA1
 MV1018J104MAA1
 MV1048123MAA1
 MV1060J104MAA1

 MV1060J473MAA1
 MV1026H104MAA1
 MV1026H473MAA1
 MV1026H473MAA1