

Protect a Wide Variety of Data Circuits from ESD Damage

Introducing the Cooper Bussmann™ MLVA and MLVB Series of Multilayer Varistors that Protect Against ESD Damage in Discrete 0201, 0402 and 0603 SMD Packages

- **Space Savings**

Available in small SMD packages from 0201 to 0603, the discrete designs of the Cooper Bussmann™ MLVA and MLVB Series save precious PCB space while giving designers flexibility in device placement for superior ESD protection schemes.

- **Low Capacitance MLVB Series**

With low capacitances ranging from 0.5-5pF, the MLVB Series is ideal for some high speed transient voltage protection, including USB 2.0.

- **Low Leakage Currents**

The MLVA and MLVB Series feature an insulator overcoat to keep leakage currents low and stable.

- **Fast Response Time**

Both the MLVA and MLVB Series provide fast response time (<1ns), allowing equipment to pass IEC 61000-4-2 Level 4 Test for ESD protection.

- **Environmentally Friendly**

Cooper Bussmann offers ESD suppressors that are RoHS compliant, lead free* and halogen free, making them a great choice for any global application.



* MLVB Series only

MLVA & MLVB Specifications*



* MLVB Series only

Catalog Symbols:

- MLVA Series MLVA02V--C--- (0201 size)
 MLVA04V--C--- (0402 size)
 MLVA06V--C--- (0603 size)
- MLVB Series MLVB04V--C--- (0402 size)
 MLVB06V--C--- (0603 size)



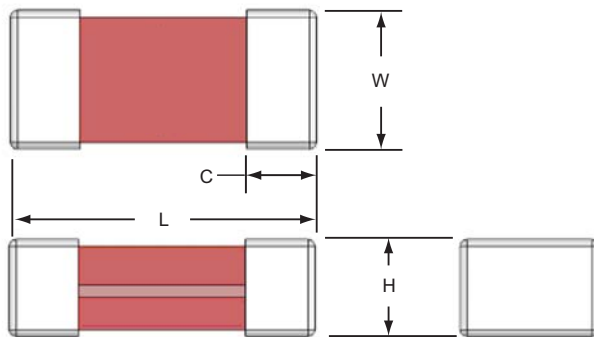
Technology: Multilayer Varistor

Electrical Characteristics:	MLVA	MLVB
• Working Voltage:	5.5-26Vdc	9-18Vdc
• Clamp Voltage:	20-58V	35-250V
• Capacitance:	33-270pF	0.5-5pF

ESD Capability:

- IEC61000-4-2 Direct Discharge: 8kV
- IEC61000-4-2 Air Discharge: 15kV

Product Dimensions - mm:



Size	L	W	H	C
0201**	0.60±0.05	0.30±0.05	0.30±0.05	0.20±0.10
0402	1.00±0.15	0.50±0.10	0.50±0.10	0.25±0.15
0603	1.60±0.20	0.80±0.20	0.80±0.20	0.30±0.20

Environmental Specifications

Characteristic	Value
Bias Humidity:	+40°C, 90% RH for 1000 hours
Thermal Shock:	-40°C to +85°C, 30 minute cycle, 5 cycles
Operating Temperature Range:	-40°C to +85°C
Storage Temperature Range:	-40°C to +85°C
Full Load Voltage:**	Working Voltage, 85°C, 1000 hours

* For more details, see Data Sheets 4070 (MLVA) and 4071 (MLVB) online at www.cooperbussmann.com/elx

** MLVA Series only.

Typical Applications:

- Computers and peripherals
- Digital still cameras
- Cell phones
- Medical equipment
- Printers/copiers/scanners
- DVD Players
- LCD TV / Monitor
- MP3/Multimedia players
- External storage
- Cable/DSL Modems
- Set top boxes
- USB2.0 (MLVB only)

Design Considerations:

The location in the circuit for the MLVA and MLVB Series has to be carefully determined. For better performance, the device should be placed as close to the signal input as possible and ahead of any other component. Due to the high current associated with an ESD event, it is recommended to use a "0-stub" pad design (pad directly on the signal/data line and second pad directly on common ground).

Order samples online - www.cooperbussmann.com