



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Multilayer Varistor ESD Suppressor MLVB Series



Description

Cooper Bussmann® MLVB Series of multilayer varistors are designed to protect electronic circuits from ESD damage. The MLVB Series has the low capacitance necessary to protect a wide range of data speeds, including protection against high speed transient voltages.

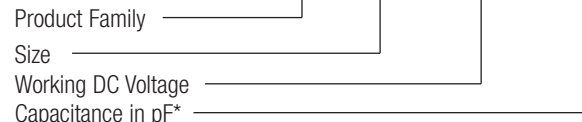
Features

- Zinc oxide based ceramic chip
- Low capacitance to meet the need for high speed transient voltage protection
- Provides ESD protection with fast response time (<1ns) allowing equipment to pass IEC 61000-4-2 Level 4 Test
- Low profile designs for board space savings
- Low and stable leakage current reduces power consumption
- Low clamping voltage
- Lead free, halogen free and RoHS compliant for global applications

Applications

- Computers and peripherals
- Digital still cameras
- Cell phones
- Medical equipment
- DVD Players
- MP3/Multimedia players
- LCD TV / Monitor
- External storage
- Cable/DSL Modems
- USB 2.0
- Set top boxes

Part Numbering System: MLVB 04 V18 C001



* Part numbers use "R" to denote decimal point for decimal values of pico farads.

Packaging

- Size 0402: 10,000 pieces per reel - EIA (EIAJ)
- Size 0603: 4000 pieces per reel - EIA (EIAJ)

Specifications

Part Number	Size	Working Voltage (Vdc)	Varistor Voltage @1mAdc	Clamping Voltage	Capacitance pF	Leakage Current (µA)
MLVB04V18C0R5	0402	18	90-120	250*	0.5	<10
MLVB04V18C001	0402	18	46-60	110*	1	<10
MLVB04V18C003	0402	18	22-34	58	3	<10
MLVB04V09C005	0402	9	11-17	35	5	<10
MLVB06V18C0R5	0603	18	90-120	250*	0.5	<10
MLVB06V18C001	0603	18	46-60	110*	1	<10
MLVB06V18C003	0603	18	22-34	58	3	<10
MLVB06V09C005	0603	9	11-17	35	5	<10

* Maximum peak voltage across the varistor with 8/20µs waveform and 0.5A pulse current.

Working Voltage (Vdc) - Maximum DC operating voltage the varistor can maintain and not exceed 10µA leakage current.

Varistor Voltage - Voltage across the device measured at 1mA DC current. Equivalent to V_B , "breakdown voltage."

Clamping Voltage - Maximum peak voltage across the varistor with 8/20µs waveform and 1A pulse current.

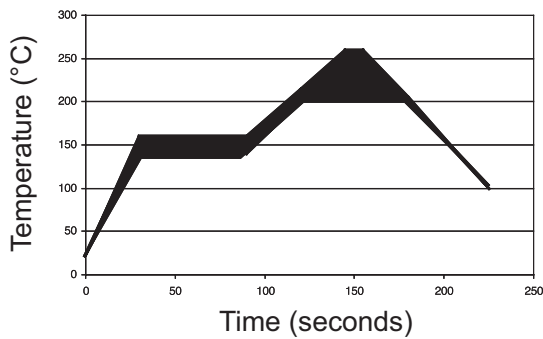
Capacitance - Device capacitance measured with zero volt bias $1V_{RMS}$ at 1MHz.

Environmental Specifications

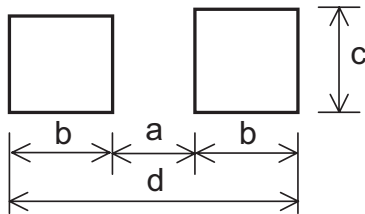
Characteristic	Value
Bias Humidity:	+40°C, 90% RH for 1000 hours
Thermal Shock:	-40°C to +85°C, 30 minute cycle, 5 cycles
Operating Temperature Range:	-40°C to +85°C
Storage Temperature Range:	-40°C to +85°C

Soldering Recommendations

- Compatible with lead and lead-free solder reflow processes
- Peak reflow temperatures and durations:
 - IR Reflow = 260°C max for 30 sec. max.
 - Wave Solder = 260°C max. for 10 sec. max.
- Recommended IR Reflow Profile:

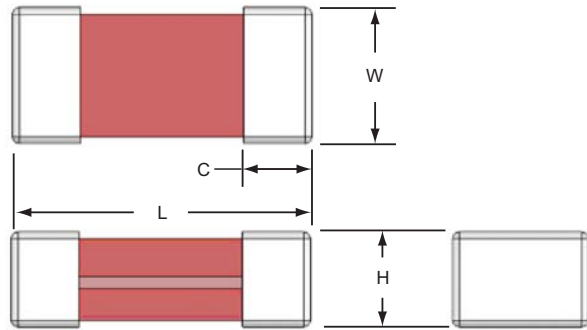


Recommended Pad Layout - mm (in)



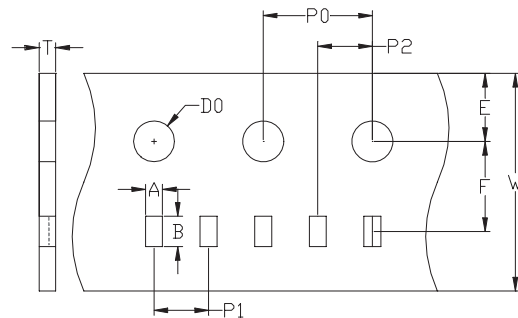
Size	a	b	c	d
0402	0.51 (0.020)	0.61 (0.024)	0.51 (0.020)	1.70 (0.067)
0603	0.50 (0.020)	1.02 (0.040)	0.76 (0.030)	2.54 (0.100)

Dimensions - mm



Size	L	W	H	C
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

Tape Packaging Specifications - mm



0402 Carrier Dimensions									
A	B	W	E	F	P0	P1	P2	D0	T
0.58 ±0.03	1.2 ±0.03	8.0 ±0.1	1.75 ±0.05	3.5 ±0.05	4.0 ±0.1	2.0 ±0.05	2.0 ±0.05	1.55 ±0.05	0.60 ±0.03
0603 Carrier Dimensions									
0.90 ±0.20	1.80 ±0.20	8.0 ±0.30	1.75 ±0.10	3.50 ±0.05	4.00 ±0.10	-	2.00 ±0.05	1.50 ±0.10	-

The only controlled copy of this Data Sheet is the electronic read-only version located on the Cooper Bussmann Network Drive. All other copies of this document are by definition uncontrolled. This bulletin is intended to clearly present comprehensive product data and provide technical information that will help the end user with design applications. Cooper Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Bussmann also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Life Support Policy: Cooper Bussmann does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.