

Vishay BCcomponents

SMD 0402 Multilayer Varistor



QUICK REFERENCE DATA					
PARAMETER	VALUE	UNIT			
Maximum continuous voltage					
DC	5.6 to 18.0	V			
AC	4.0 to 14.0	V			
Maximum clamping voltage at 1 A	15.5 to 40	V			
Capacitance range (at 1 MHz)	90 to 360	pF			
Maximum energy (10/1000 μs)	0.05	J			
Maximum peak current	20	Α			
Operating temperature range	-55 to 125	°C			
Weight	± 0.0015	g			

FEATURES

- Surface mount multilayer surge suppressor
- · Inherent bidirectional clamping
- Excellent energy/volume ratio
- Suitable for reflow soldering
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





ROHS COMPLIANT HALOGEN FREE

APPLICATIONS

Over-voltage and transient voltage protection:

- Data lines and I/O port protection
- · Protection against ESD transients
- · On-board protection of IC's and transistors
- Modem protection
- LCD protection

DESCRIPTION

Size 0402 (1005M) multilayer chip varistor with NiSn terminations.

PACKAGING

Available in 8 mm paper tape, component pitch 4 mm on 180 mm reels containing 10 000 pieces.

ELECTRICAL DATA AND ORDERING INFORMATION						
WORKING	VOLTAGE	BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE	TYPICAL CAPACITANCE	PART NUMBER	
V _{RMS}	V _{DC}	V _b	V _C	С	SAP	
V	V	V	V	pF	MLV0402E3	
	< 10 µA	1 mA	1 A, 8/20 μs	1 MHz		
4.0	5.6	7.1 to 9.3	15.5	360	0403T	
7.0	9.0	11.0 to 14.0	20.0	230	0703T	
11.0	14.0	16.0 to 20.0	30.0	120	1103T	
14.0	18.0	23.0 to 28.0	40.0	90	1403T	

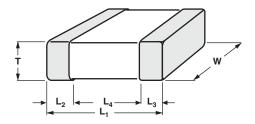
Notes

- Sinusoidal voltage assumed as normal operating condition.
 If a non-sinusoidal voltage is present, the crest voltage x 0.707 should be used for type selection.
- Breakdown voltage at a current of 1 mA, measured according to 4.5 of IEC 61051-1.
- Parts are not recommended for automotive applications.



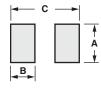
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DIMENSIONS in millimeters



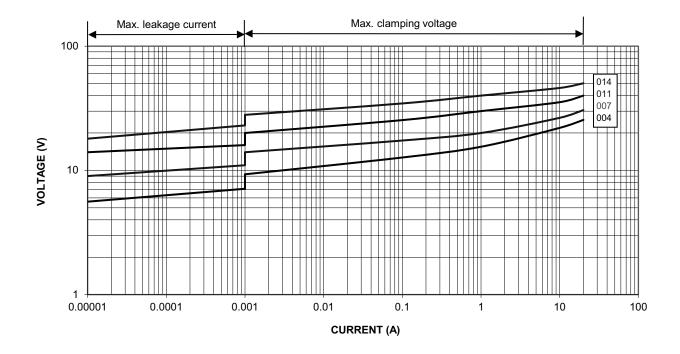
L ₁	W	T	L ₂ and L ₃
1.0 ± 0.1	0.5 ± 0.1	0.6 max.	0.25 ± 0.15

RECOMMENDED FOOTPRINT in millimeters



Α	В	С
0.7	0.7	2.0

V/I CHARACTERISTICS





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