SMD 0603 Multilayer Varistor



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

Pb-free

e3

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 0603 (1608M) multilayer chip varistor with NiSn terminations.

PACKAGING

Available in 8 mm paper tape, component pitch 4 mm on 180 mm reels containing 4000 pieces.

QUICK REFERENCE DATA

PARAMETER	VALUE	UNIT
Maximum continuous voltage		
DC	5.6 to 30.0	V
AC	4.0 to 25.0	V
Maximum clamping voltage at 1 A	15.5 to 65	V
Capacitance range (at 1 MHz)	150 to 825	pF
Maximum energy (10/1000 µs)	0.1	J
Maximum peak current	30	A
Operating temperature range	-55 to 125	°C
Weight	± 0.005	g

ELECTRICAL DATA AND ORDERING INFORMATION

WORKING VOLTAGE		BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE	TYPICAL CAPACITANCE	PART NUMBER
V_{RMS}	V_{DC}	V_b	V_C	C	SAP
V	V	V	V	pF	MLV0603E3
	< 10 µA	1 mA	1 A, 8/20 µs	1 MHz	
4.0	5.6	7.1 to 9.3	15.5	825	0403T
7.0	9.0	11.0 to 14.0	20.0	550	0703T
11.0	14.0	16.0 to 20.0	30.0	425	1103T
14.0	18.0	23.0 to 28.0	40.0	225	1403T
20.0	26.0	31.0 to 38.0	58.0	160	2003T
25.0	30.0	37.0 to 46.0	65.0	150	2503T

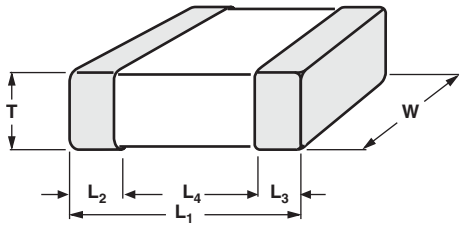
Notes

- 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.

For technical questions, contact: nlr@vishay.com

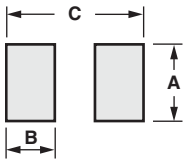
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DIMENSIONS in millimeters



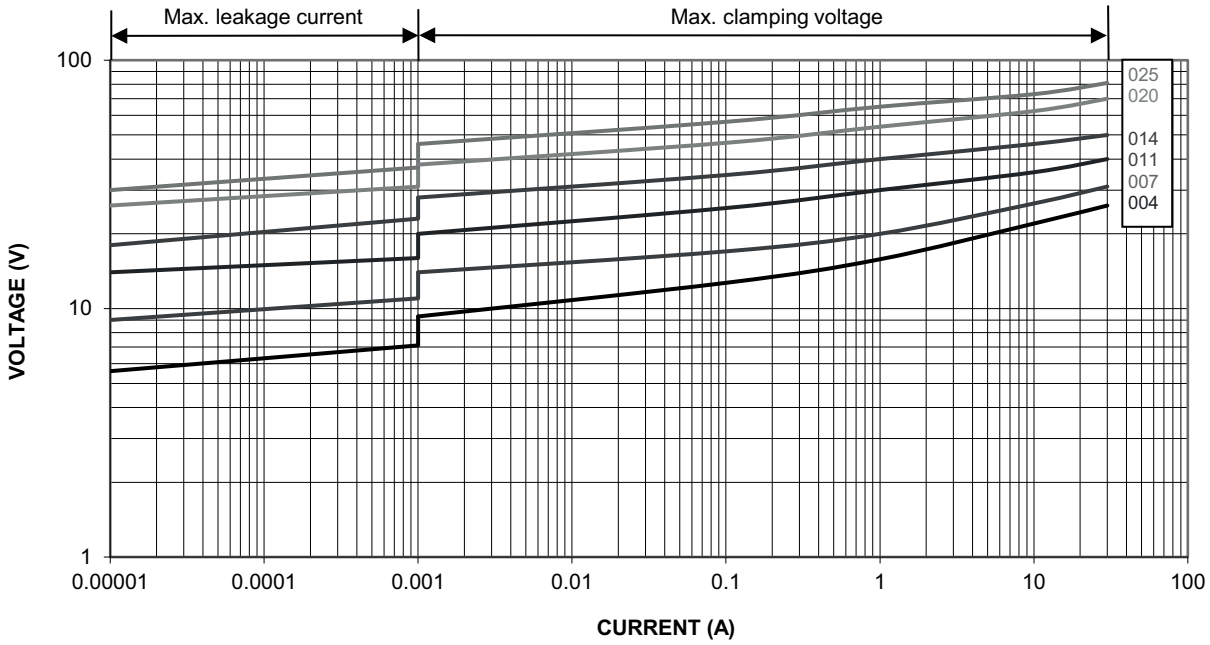
L_1	W	T	L_2 and L_3
1.6 ± 0.15	0.8 ± 0.15	0.9 max.	0.35 ± 0.15

RECOMMENDED FOOTPRINT in millimeters



A	B	C
1.0	1.0	3.0

V/I CHARACTERISTICS



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