

## SMD 0805 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](http://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 0805 (2012M) 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 38.0	V
AC	4.0 to 30.0	V
Maximum clamping voltage at 1 A	15.5 to 77	V
Capacitance range (at 1 MHz)	80 to 860	pF
Maximum energy (10/1000 $\mu$ s)	0.1 to 0.3	J
Maximum peak current	30 to 100	A
Operating temperature range	-55 to 125	$^{\circ}$ C
Weight	$\pm$ 0.011	g

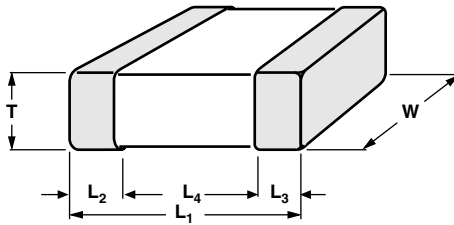
### ELECTRICAL DATA AND ORDERING INFORMATION

WORKING VOLTAGE		BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE	MAXIMUM PEAK CURRENT	MAXIMUM ENERGY	TYPICAL CAPACITANCE	PART NUMBER
$V_{RMS}$	$V_{DC}$	$V_b$	$V_c$	$I_p$	$E_M$	C	SAP
V	V	V	V	A	J	pF	MLV0805E3
		1 mA	1 A, 8/20 $\mu$ s	8/20 $\mu$ s	10/1000 $\mu$ s	1 MHz	
4.0	5.6	7.1 to 9.3	15.5	40	0.1	860	0403T
7.0	9.0	11.0 to 14.0	20.0	40	0.1	585	0703T
11.0	14.0	16.5 to 20.3	30.0	40	0.1	280	1103T
13.0	18.0	23.0 to 28.0	42.0	100	0.3	550	1305T
25.0	30.0	37.0 to 46.0	65.0	30	0.1	80	2503T
30.0	38.0	42.3 to 51.7	77.0	80	0.3	220	3005T

### Notes

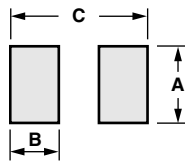
- Sinusoidal voltage assumed as normal operating condition.  
If a non-sinusoidal voltage is present, the crest voltage x 0.707 should be used for type selection
- Breakdown voltage at a current of 1 mA, measured according to 4.5 of IEC 61051-1
- Parts are not recommended for automotive applications

**DIMENSIONS** in millimeters



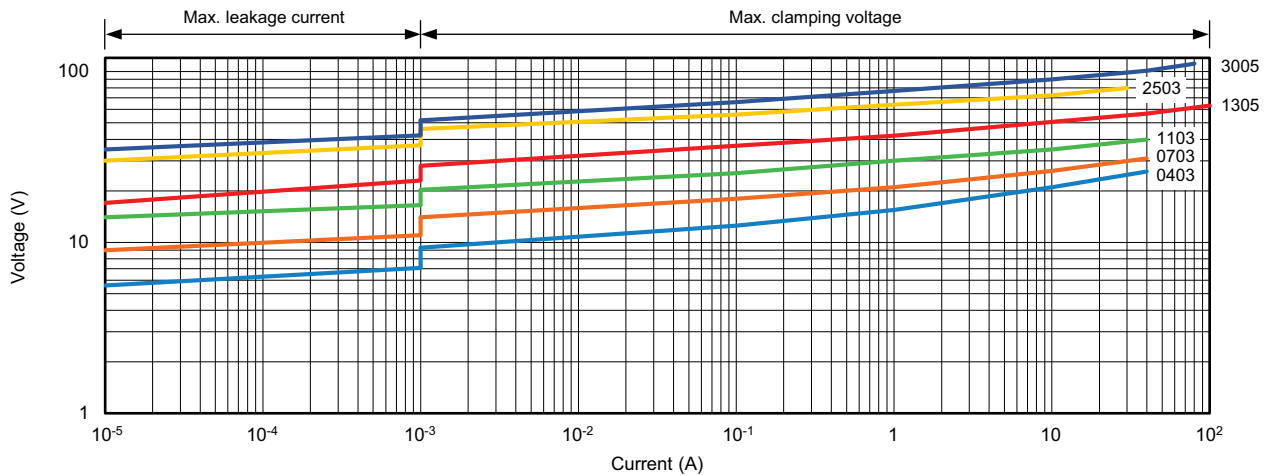
$L_1$	$W$	$T$	$L_2$ and $L_3$
$2.0 \pm 0.2$	$1.25 \pm 0.2$	1.1 max.	$0.4 \pm 0.3$

**RECOMMENDED FOOTPRINT** in millimeters



$A$	$B$	$C$
1.4	1.2	3.4

**V/I CHARACTERISTICS**





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