

SMD 0402 Multilayer Varistor



FEATURES

- Surface mount multilayer surge suppressor
- Inherent bidirectional clamping
- Excellent energy/volume ratio
- Suitable for reflow soldering
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT

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 and reel

QUICK REFERENCE DATA

PARAMETER	VALUE	UNIT
Maximum Continuous Voltage DC AC	5.6 to 18.0 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 μ s)	0.05	J
Maximum Peak Current	20	A
Operating Temperature Range	- 55 to 125	$^{\circ}$ C
Climatic Category	55/125/56	
Weight	\pm 0.0015	g

ELECTRICAL DATA AND ORDERING INFORMATION

WORKING VOLTAGE		BREAKDOWN VOLTAGE (1 mA)	MAXIMUM CLAMPING VOLTAGE (1 A)	CAPACITANCE (1 MHz) typical	PART NUMBER	
V_{RMS}	V_{DC}	V_b	V_c	C	12NC	SAP
V	V	V	V	pF	2381 553	MLV0402E3
4.0	5.6	7.1 to 9.3	15.5	360	20406	0403T
7.0	9.0	11.0 to 14.0	20.0	230	20706	0703T
11.0	14.0	16.0 to 20.0	30.0	120	21106	1103T
14.0	18.0	23.0 to 28.0	40.0	90	21406	1403T

Notes

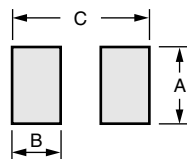
- Sinusoidal voltage assumed as normal operating condition.
If a non-sinusoidal voltage is present, the crest voltage x 0.707 should be used for type selection.
- Voltage at a current of 1 mA, measured according to 4.3 of CECC 42 000
- Parts are not recommended for automotive applications

DIMENSIONS in millimeters



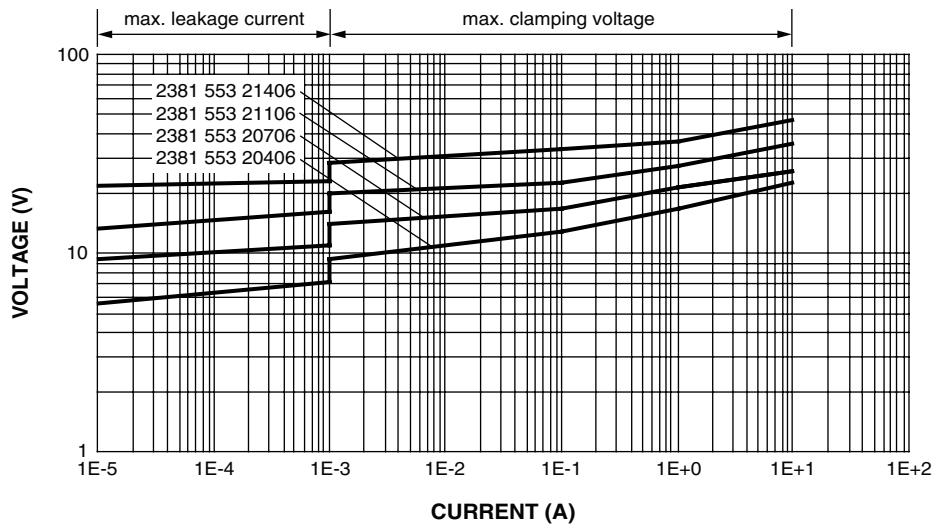
L ₁	W	T	L ₂ and L ₃
1.0 ± 0.1	0.5 ± 0.1	0.6 max.	0.25 ± 0.15

RECOMMENDED FOOTPRINT in millimeters



A	B	C
0.7	0.7	2.0

V/I CHARACTERISTICS





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