

## SMD 0805 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 0805 (2012M) multilayer chip varistor with NiSn terminations.

### PACKAGING

Available in 8 mm paper tape and reel.

### QUICK REFERENCE DATA

| PARAMETER                              | VALUE                      | UNIT         |
|--|----------------------------|--------------|
| Maximum Continuous Voltage<br>DC<br>AC | 5.6 to 30.0<br>4.0 to 25.0 | V            |
| Maximum Clamping Voltage<br>at 1 A     | 15.5 to 65                 | V            |
| Capacitance Range<br>(at 1 MHz)        | 80 to 860                  | pF           |
| Maximum Energy (10/1000 $\mu$ s)       | 0.1                        | J            |
| Maximum Peak Current                   | 30 to 40                   | A            |
| Operating Temperature Range            | - 55 to 125                | $^{\circ}$ C |
| Climatic Category                      | 55/125/56                  |              |
| Weight                                 | $\pm$ 0.011                | g            |

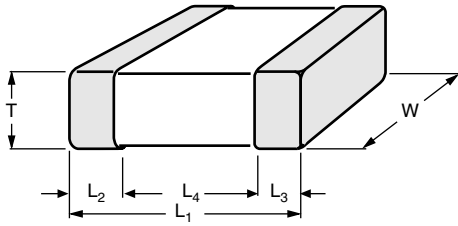
### ELECTRICAL DATA AND ORDERING INFORMATION

| WORKING VOLTAGE |          | BREAKDOWN VOLTAGE (1 mA) | MAXIMUM CLAMPING VOLTAGE (1 A) | PEAK CURRENT (8/20 $\mu$ s) | CAPACITANCE (1 MHz) typical | PART NUMBER |           |
|-----------------|----------|--------------------------|--------------------------------|-----------------------------|-----------------------------|-------------|-----------|
| $V_{RMS}$       | $V_{DC}$ | $V_b$                    | $V_c$                          | $I_p$                       | C                           | 12NC        | SAP       |
| V               | V        | V                        | V                              | A                           | pF                          | 2381 553    | MLV0805E3 |
| 4.0             | 5.6      | 7.1 to 9.3               | 15.5                           | 40                          | 860                         | 40406       | 0403T     |
| 7.0             | 9.0      | 11.0 to 14.0             | 20.0                           | 40                          | 585                         | 40706       | 0703T     |
| 11.0            | 14.0     | 16.5 to 20.3             | 30.0                           | 40                          | 280                         | 41106       | 1103T     |
| 25.0            | 30.0     | 37.0 to 46.0             | 65.0                           | 30                          | 80                          | 42506       | 2503T     |

#### Notes

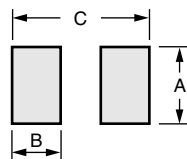
- Sinusoidal voltage assumed as normal operating condition.  
If a non-sinusoidal voltage is present, the crest voltage x 0.707 should be used for type selection.
- Voltage at a current of 1 mA, measured according to 4.3 of CECC 42 000
- Parts are not recommended for automotive applications

## DIMENSIONS in millimeters



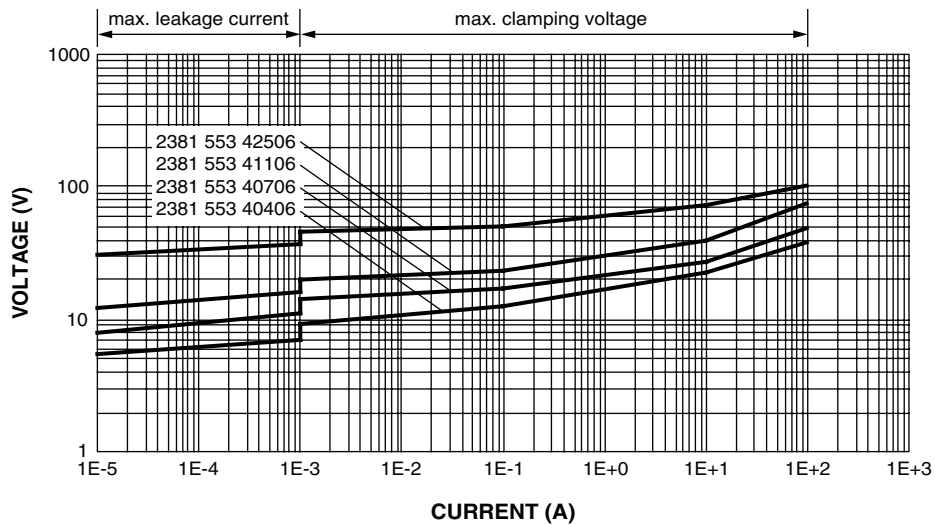
| L <sub>1</sub> | W          | T        | L <sub>2</sub> and L <sub>3</sub> |
|----------------|------------|----------|-----------------------------------|
| 2.0 ± 0.2      | 1.25 ± 0.2 | 1.0 max. | 0.4 ± 0.3                         |

## RECOMMENDED FOOTPRINT in millimeters



| A   | B   | C   |
|-----|-----|-----|
| 1.4 | 1.2 | 3.4 |

## V/I CHARACTERISTICS





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