

SMD 1206 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



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 1206 (M3216) multilayer chip varistor with NiSn terminations.

PACKAGING

Available in 8 mm embossed carrier tape, component pitch 4 mm on 180 mm reels containing 3000 pieces.

QUICK REFERENCE DATA

| PARAMETER | VALUE | UNIT |
|--|---------------|--------------|
| Maximum continuous voltage DC | 5.6 to 65.0 | V |
| AC | 4.0 to 45.0 | V |
| Maximum clamping voltage at 1 A | 22.0 to 135.0 | V |
| Capacitance range (at 1 kHz) | 240 to 1500 | pF |
| Maximum energy (10/1000 μ s) | 0.5 to 1.1 | J |
| Maximum peak current (8/20 μ s) | 100 to 200 | A |
| Operating temperature range | -55 to 85 | $^{\circ}$ C |
| Weight | \pm 0.025 | g |

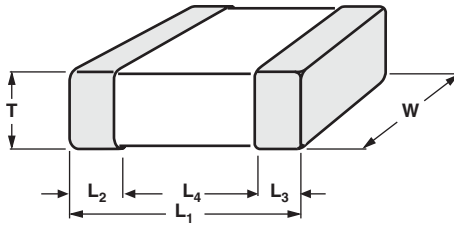
ELECTRICAL DATA AND ORDERING INFORMATION

| WORKING VOLTAGE | | BREAKDOWN VOLTAGE | CLAMPING VOLTAGE | MAX. PEAK CURRENT | MAXIMUM ENERGY | CAPACITANCE | PART NUMBER |
|-----------------|--------------|-------------------|-------------------|-------------------|-----------------|-------------|-------------|
| V_{RMS} | V_{DC} | V_b | V_C | I_p | E_t | C | SAP |
| V | V | V | V | A | J | pF | MLV1206E3 |
| | < 50 μ A | 1 mA | 1 A, 8/20 μ s | 8/20 μ s | 10/1000 μ s | 1 kHz | |
| 4.0 | 5.6 | 7.0 to 10.0 | 22.0 | 150 | 1.0 | 3000 | 0403T |
| 11.0 | 14.0 | 16.2 to 19.8 | 37.0 | 200 | 0.5 | 800 | 1103T |
| 14.0 | 18.0 | 21.6 to 26.0 | 48.0 | 200 | 1.0 | 1300 | 1403T |
| 20.0 | 26.0 | 31.0 to 38.0 | 62.0 | 200 | 1.0 | 900 | 2003T |
| 25.0 | 30.0 | 37.0 to 46.0 | 73.0 | 200 | 1.0 | 550 | 2503T |
| 30.0 | 38.0 | 42.3 to 51.7 | 88.0 | 200 | 1.1 | 500 | 3003T |
| 35.0 | 45.0 | 50.4 to 61.6 | 95.0 | 180 | 0.8 | 550 | 3503T |
| 40.0 | 56.0 | 61.0 to 77.0 | 120.0 | 180 | 1.0 | 380 | 4003T |
| 45.0 | 65.0 | 73.8 to 90.2 | 135.0 | 100 | 0.6 | 240 | 4503T |

Notes

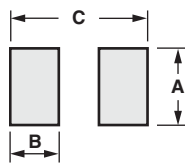
- Sinusoidal voltage assumed as normal operating condition.
If a non-sinusoidal voltage is present, the crest voltage x 0.707 should be used for type selection.
- Breakdown voltage at a current of 1 mA, measured according to 4.5 of IEC 61051-1.
- Parts are not recommended for automotive applications.

DIIMENSIONS in millimeters



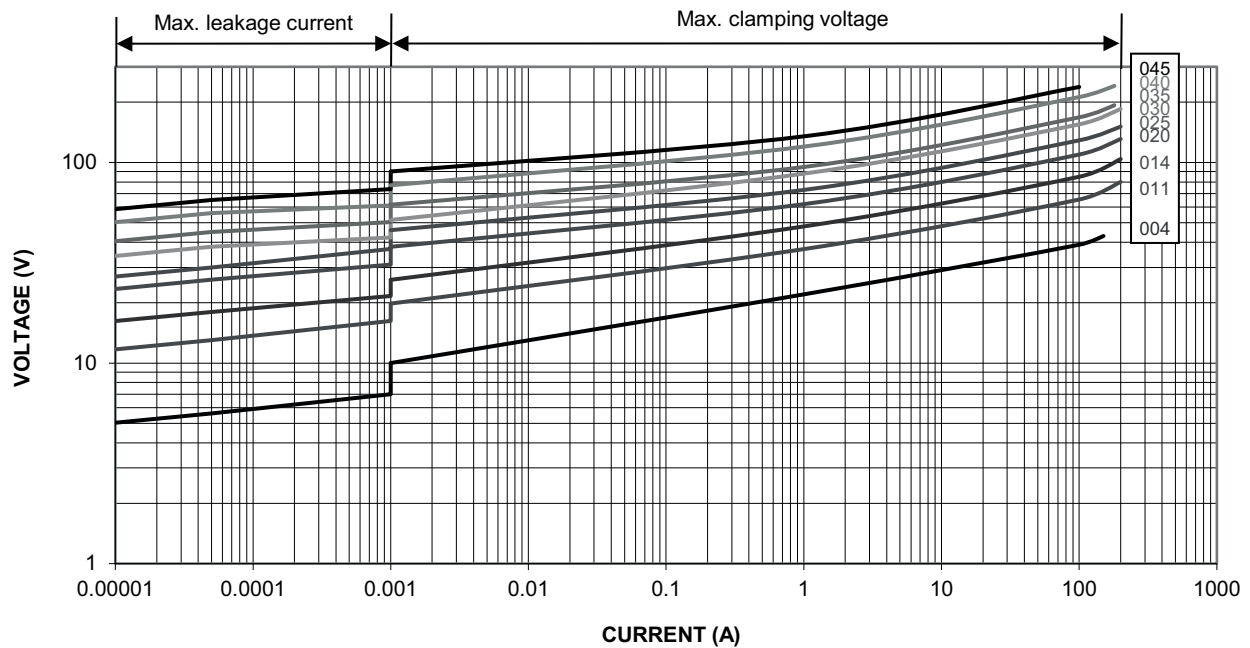
| L ₁ | W | T | L ₂ and L ₃ |
|----------------|-----------|----------|-----------------------------------|
| 3.2 ± 0.2 | 1.6 ± 0.2 | 1.8 max. | 0.71 max. |

RECOMMENDED FOOTPRINT in millimeters



| A | B | C |
|-----|-----|-----|
| 1.8 | 1.2 | 3.9 |

V/I CHARACTERISTICS





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