

Vishay BCcomponents

SMD 0603 Multilayer Varistor



| 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 | А | | | |
| Operating temperature range | -55 to 125 °C | | | | |
| Weight | ± 0.005 | g | | | |

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





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.

| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | |
|--|-----------------|----------------------|--------------------------------|------------------------|-------------|--|
| WORKING | VOLTAGE | BREAKDOWN VOLTAGE | MAXIMUM CLAMPING VOLTAGE | TYPICAL CAPACITANCE | PART NUMBER | |
| V _{RMS} | V _{DC} | V _b | V _C | С | 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 | |

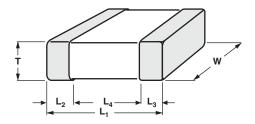
Notes

- 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.



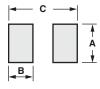
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DIMENSIONS in millimeters



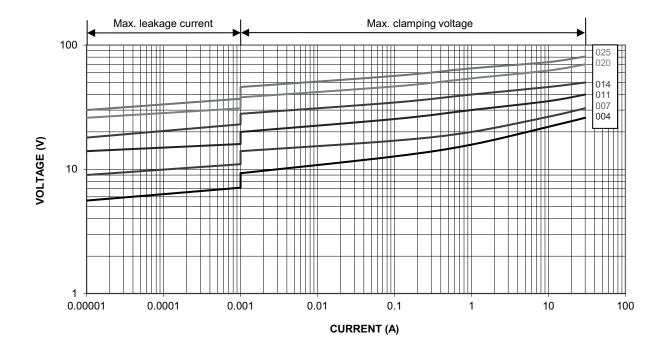
| L ₁ | W | T | L ₂ and L ₃ |
|----------------|------------|----------|-----------------------------------|
| 1.6 ± 0.15 | 0.8 ± 0.15 | 0.9 max. | 0.35 ± 0.15 |

RECOMMENDED FOOTPRINT in millimeters



| Α | В | С |
|-----|-----|-----|
| 1.0 | 1.0 | 3.0 |

V/I CHARACTERISTICS





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Vishay

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