




Features

- Leadless, surface mount for economical assembly
- Compact mini-size
- Low capacitance and insertion loss
- RoHS compliant*
-  UL Recognized

2003 Series Gas Discharge Tube Surge Protector

Bourns offers a low-cost surface mount (SM) 2-electrode GDT surge protection device. The 2003 Series is ideal for broadband protection due to its ultra-low capacitance. The 2003 Series offers superior protection characteristics suitable for telecommunications, commercial and industrial applications.

Additional Information

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Characteristics

Test Methods per ITU-T (CCITT) K.12 and IEEE C62.31

| Characteristic | Model No. | | | | |
|-----------------------------------|-----------|---------|---------|---------|---------|
| | 2003-07 | 2003-09 | 2003-12 | 2003-15 | 2003-20 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 75 V | 90 V | 120 V | 150 V | 200 V |
| Maximum Impulse Breakdown Voltage | | | | | |
| 100V/ μ s | 600 V | 600 V | 600 V | 600 V | 600 V |
| 1000V/ μ s | 700 V | 700 V | 700 V | 700 V | 700 V |
| DC Holdover Voltage <150 ms | 52 V | 52 V | 80 V | 80 V | 135 V |

| Characteristic | Model No. | | | | |
|-----------------------------------|-----------|---------|---------|---------|---------|
| | 2003-23 | 2003-25 | 2003-35 | 2003-40 | 2003-47 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 230 V | 250 V | 350 V | 400 V | 470 V |
| Maximum Impulse Breakdown Voltage | | | | | |
| 100V/ μ s | 600 V | 600 V | 600 V | 700 V | 900 V |
| 1000V/ μ s | 700 V | 700 V | 800 V | 800 V | 1100 V |
| DC Holdover Voltage <150 ms | 135 V | 135 V | 135 V | 135 V | 135 V |

| | | |
|---|------------------------------|------------------|
| Glow Voltage | 10 mA..... | ~ 70 V |
| Arc Voltage | 1 A..... | ~ 10 V |
| Glow-Arc Transition Current | | < 1 A |
| Maximum Impulse Discharge Current | 8/20 μ s, 1 Time | 2000 A |
| | 8/20 μ s, 10 Times | 1000 A |
| Impulse Life | 8/20 μ s, 100 A | 300 operations |
| Alternating Discharge Current | 50 Hz, 1 Sec. | 1 A |
| DC Holdover Voltage | <150 ms..... | 135 V |
| Minimum Insulation Resistance | | 1 gigohm |
| Maximum Capacitance | 1 MHz | 0.5 pF |
| Operating Temperature | | -40 °C to +90 °C |
| Moisture Sensitivity Level | | 1 |
| ESD Classification (HBM)..... | | 6 |

Notes:

- UL Recognized component, UL File E153537.

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WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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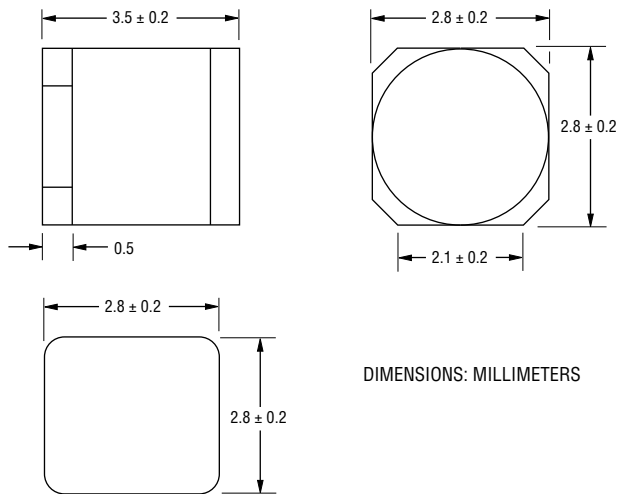
Users should verify actual device performance in their specific applications.

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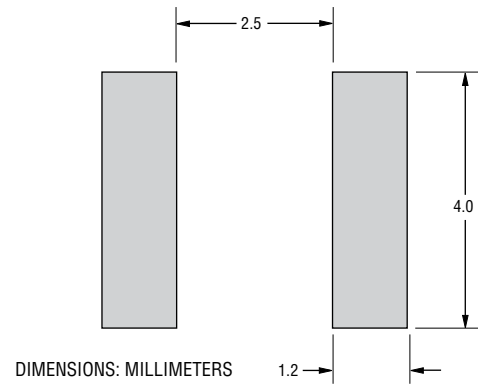
2003 Series Gas Discharge Tube Surge Protector



Product Dimensions

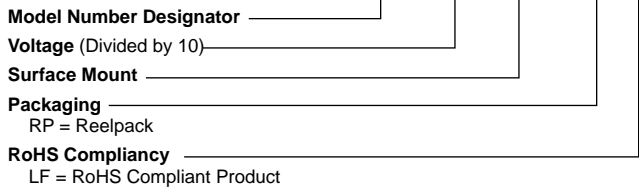


Recommended Pad Layout



How to Order

2003 - xx - SM - RP LF

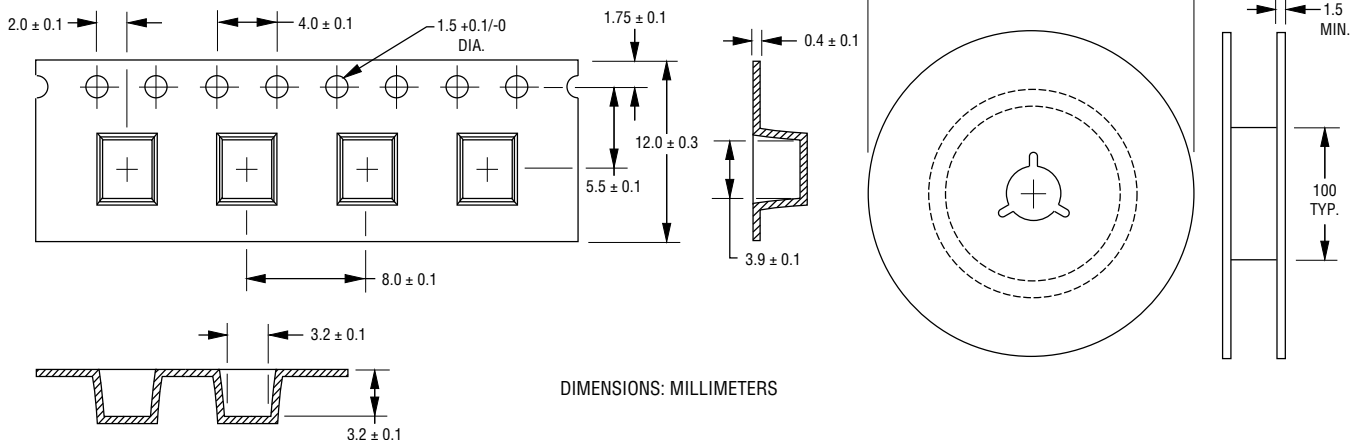


Typical Part Marking

| | |
|-----------------------|-----|
| 2003-07-SM-RPLF | B07 |
| 2003-09-SM-RPLF | B09 |
| 2003-12-SM-RPLF | B12 |
| 2003-15-SM-RPLF | B15 |
| 2003-20-SM-RPLF | B20 |
| 2003-23-SM-RPLF | B23 |
| 2003-25-SM-RPLF | B25 |
| 2003-35-SM-RPLF | B35 |
| 2003-40-SM-RPLF | B40 |
| 2003-47-SM-RPLF | B47 |

Packaging Specifications

The Model 2003-xx-SM ships standard reelpack (-RP), 2,500 pieces per reel, 7,500 pieces per box. Reel is 330 mm in diameter and 12 mm wide.



REV. A 09/19

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