




## 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/ $\mu$ s	600 V	600 V	600 V	600 V	600 V
1000V/ $\mu$ 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/ $\mu$ s	600 V	600 V	600 V	700 V	900 V
1000V/ $\mu$ 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 $\mu$ s, 1 Time .....	2000 A
	8/20 $\mu$ s, 10 Times .....	1000 A
Impulse Life .....	8/20 $\mu$ 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](http://www.P65Warnings.ca.gov)

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

Specifications are subject to change without notice.

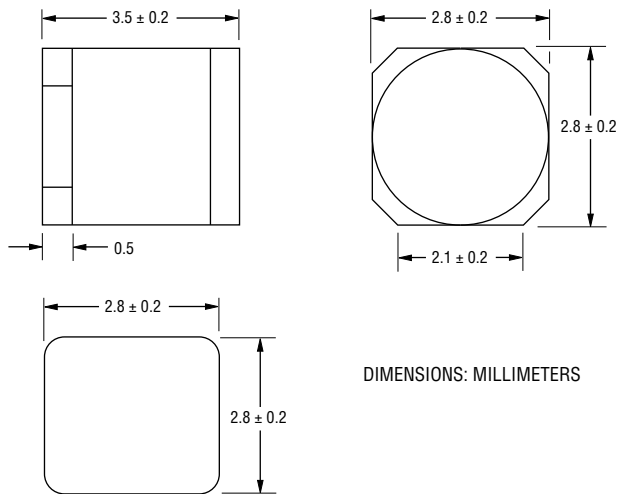
Users should verify actual device performance in their specific applications.

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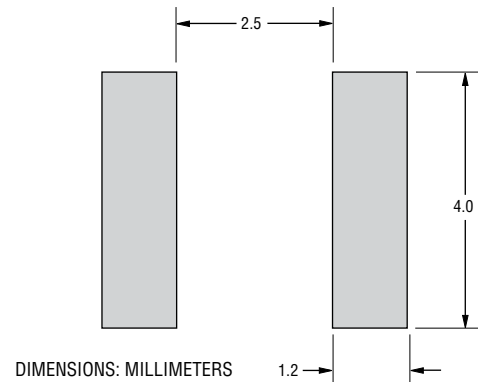
# 2003 Series Gas Discharge Tube Surge Protector

**BOURNS®**

## Product Dimensions

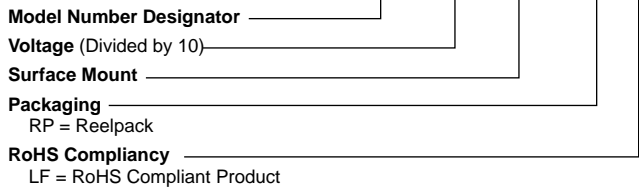


## Recommended Pad Layout



## How to Order

2003 - xx - SM - RP LF

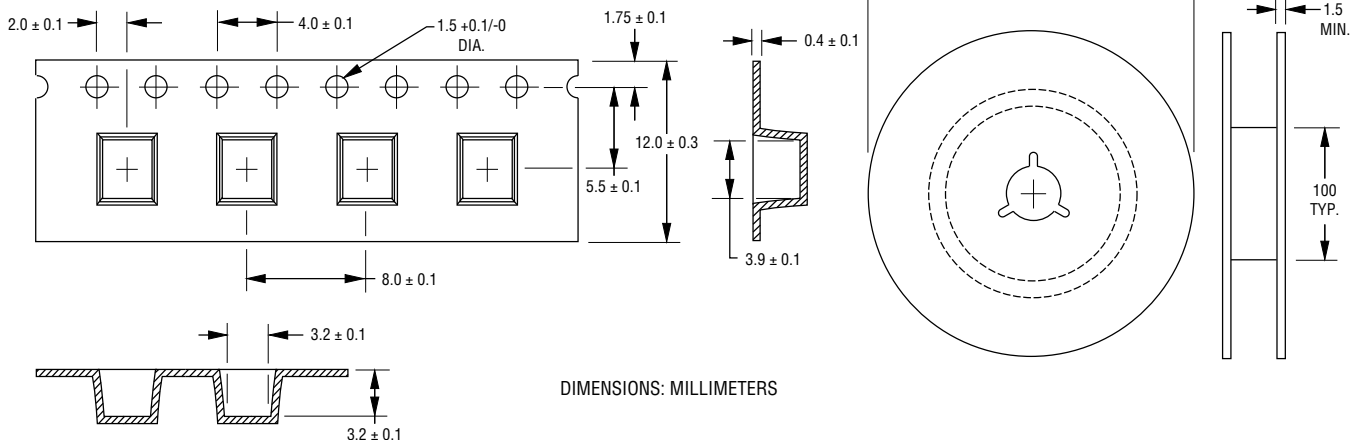


## Typical Part Marking

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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