




## 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.

### 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 gigaohm
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.

**BOURNS®**

**Asia-Pacific:** Tel: +886-2 2562-4117 • Email: [asiacus@bourns.com](mailto:asiacus@bourns.com)

**EMEA:** Tel: +36 88 520 390 • Email: [eurocus@bourns.com](mailto:eurocus@bourns.com)

**The Americas:** Tel: +1-951 781-5500 • Email: [americus@bourns.com](mailto:americus@bourns.com)

[www.bourns.com](http://www.bourns.com)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

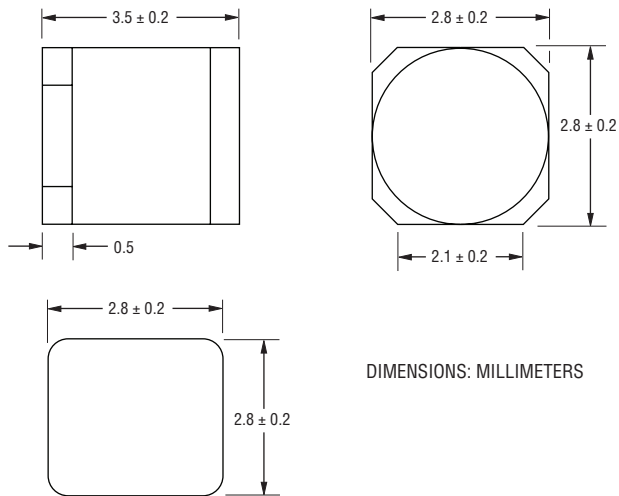
Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific disclaimers as set forth on the last page of this document, and at [www.bourns.com/legal/disclaimer.pdf](http://www.bourns.com/legal/disclaimer.pdf).

# 2003 Series Gas Discharge Tube Surge Protector

**BOURNS®**

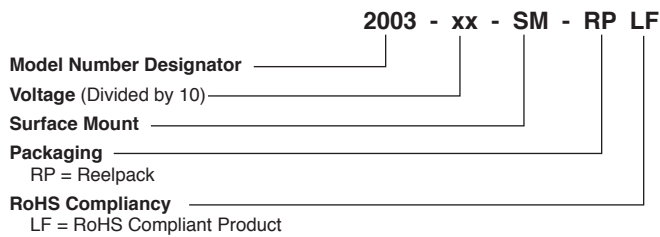
## Product Dimensions



## Recommended Pad Layout



## How to Order

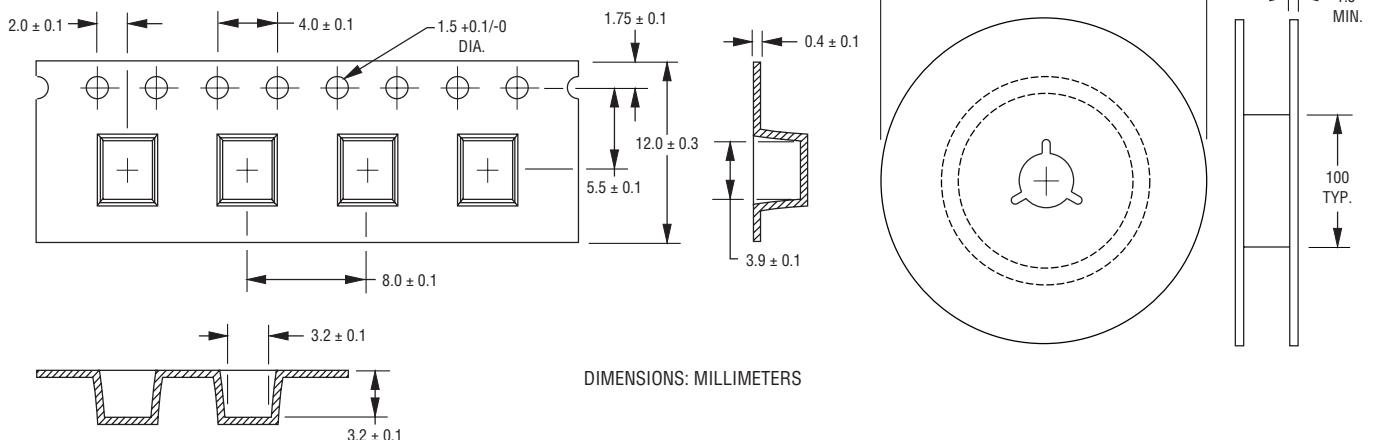


## Typical Part Marking

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 10/17

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific disclaimers as set forth on the last page of this document, and at [www.bourns.com/legal/disclaimer.pdf](http://www.bourns.com/legal/disclaimer.pdf).