




## Features

- Leadless, surface mount for economical assembly
  - Compact mini-size
  - High surge current rating
  - Low capacitance and insertion loss
  - Stable breakdown throughout life
-  UL Recognized
  - RoHS compliant\* version available

## 2035-xx-SM Precision Gas Discharge Tube Surge Protector

Bourns now offers a surface mount (SM) 2-electrode GDT surge protection device. The industry-leading quality and features of the Bourns® miniature 2035 Series GDT continue in this new SM version. Compatible with “pick and place” assembly systems, the SM is ideal for high-density applications such as PCBs for telecommunications, commercial and industrial applications.

### Characteristics

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

Characteristic	Model No.					
	2035-09	2035-15	2035-20	2035-23	2035-25	2035-30
DC Sparkover ±15 % (±20 % for Model 2035-09) @ 100 V/s	90 V	150 V	200 V	230 V	250 V	300 V
Impulse Sparkover 100 V/μs	350 V	400 V	425 V	450 V	475 V	525 V
1000 V/μs	525 V	550 V	575 V	600 V	625 V	650 V

Characteristic	Model No.				
	2035-35	2035-40	2035-42	2035-47	2035-60
DC Sparkover ±15 % @ 100 V/s (-12 %, +15 % for Model 2035-60) @ 100 V/s	350 V	400 V	420 V	470 V	600 V
Impulse Sparkover 100 V/μs	600 V	650 V	675 V	750 V	950 V
1000 V/μs	750 V	800 V	850 V	950 V	1100 V

Insulation Resistance (IR).....	100 V (50 V for Model 2035-09).....	> 10 <sup>10</sup> Ω
Glow Voltage.....	10 mA.....	~ 70 V
Arc Voltage.....	>1 A.....	~ 10 V
Glow-Arc Transition Current.....		< 0.5 A
Capacitance.....	1 MHz.....	< 1 pF
DC Holdover Voltage <sup>1</sup> .....	>135 V, (52 V for Model 2035-09, 80 V for Model 2035-15)	< 150 ms
Impulse Discharge Current.....	10000 A, 8/20 μs <sup>2</sup> .....	1 operation minimum
	5000 A, 8/20 μs.....	> 10 operations
	100 A, 10/1000 μs.....	> 300 operations
	100 A, 10/700 μs.....	> 500 operations
Alternating Discharge Current.....	20 Arms, 11 cycles <sup>2</sup> .....	1 operation minimum
	5 Arms, 1 s.....	> 10 operations
Operating Temperature.....		-55 to +85 °C

### Notes:

- **UL Recognized component, UL File E153537**
- Sparkover limits after life ±20 % (-25 %, +30 % for Model 2035-09, 2035-60), IR >10<sup>8</sup>.
- At delivery AQL 0.65 Level II, DIN ISO 2859.

<sup>1</sup> Network applied.

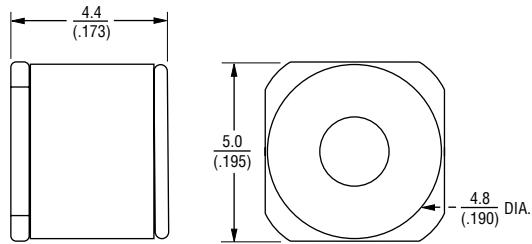
<sup>2</sup> Tube may exceed ±20 % but will continue to protect without venting.

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.  
Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

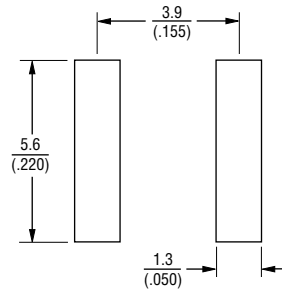
# 2035-xx-SM Precision Gas Discharge Tube Surge Protector

**BOURNS®**

## Product Dimensions



## Recommended Pad Layout

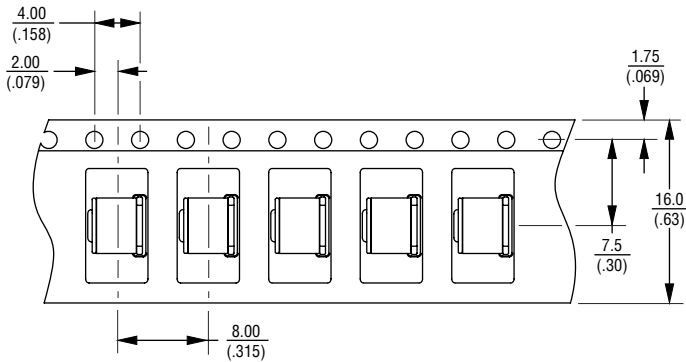


DIMENSIONS =  $\frac{\text{MILLIMETERS}}{\text{(INCHES)}}$

## Packaging Specifications

The Model 2035-xx-SM ships standard bulk pack, 100 pieces per bag.

The optional reelpack (-RP) contains 1,500 pieces per reel. Reel is 13 " in diameter and 3/4 " wide.



## How To Order

2035 - xx - SM - RP LF

**Model Number Designator** \_\_\_\_\_

**Voltage** \_\_\_\_\_

**Surface Mount** \_\_\_\_\_

**Packaging Options** \_\_\_\_\_  
 Blank = Bulk Packaging (Standard)  
 RP = Reelpack (Optional)

**Lead Free Option** \_\_\_\_\_  
 Blank = Standard Product  
 LF = Lead Free / RoHS Compliant Product

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