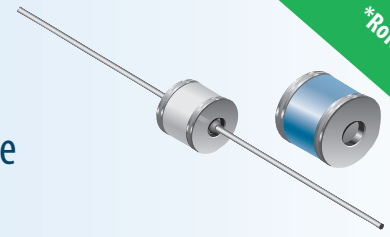




THE DATASHEET OF
2035-23-BT1LF





Features

- 5 mm diameter, 4 mm long (2035 series)
- 5 mm diameter, 5 mm long (2037 series)
- UL Recognized
- High surge current rating
- Stable breakdown throughout life
- RoHS compliant*

Applications

- Telecommunications
- Industrial electronics
- Commercial electronics
- Consumer electronics

Sustainability

- Small size reduces material use
- Corrosion-resistant for longevity
- ISO 14001, low-impact energy
- Responsibly sourced and produced

Product Overview

The Bourns® 2035 & 2037 Series Miniature 2-Pole Gas Discharge Tubes (GDTs) are compact, high-energy primary protection devices designed to provide dependable overvoltage protection across a broad range of operating voltages. Available in 5 mm diameter packages with two body length options, this series enables flexible design integration in space-conscious applications.

With DC sparkover voltages ranging from 90 V to 600 V and surge current capability up to 10 kA (8/20 µs), the 2035 & 2037 Series deliver

robust performance against lightning-induced transients, power cross conditions and industrial surge environments. The devices maintain stable breakdown characteristics throughout their service life, helping to ensure consistent protection margins over time.

The 2035 & 2037 Series provide a reliable, high-insulation and low-capacitance (<1 pF) solution for telecommunications, industrial, commercial and consumer electronic equipment requiring solid primary surge protection.

Characteristics

Test Methods per ITU-T K.12, IEEE C62.31 and IEC 61643-311 GDT standards.

Characteristic	Model No.					
	2035-2037-09	2035/2037-15	2035/2037-20	2035/2037-23	2035/2037-25	2035/2037-30
DC Sparkover ±15 % (±20 % for Model 2035/2037-09) @ 100 V/s	90 V	150 V	200 V	230 V	250 V	300 V
Impulse Sparkover ⁽¹⁾ 100 V/µs 1000 V/µs	300 V 550 V	350 V 550 V	425 V 575 V	450 V 600 V	475 V 625 V	525 V 650 V

Characteristic	Model No.				
	2035/2037-35	2035/2037-40	2035/2037-42	2035/2037-47	2035/2037-60
DC Sparkover ±15 % @ 100 V/s	350 V	400 V	420 V	470 V	600 V
Impulse Sparkover ⁽¹⁾ 100 V/µs 1000 V/µs	600 V 750 V	650 V 800 V	675 V 850 V	750 V 950 V	950 V 1100 V

⁽¹⁾ Impulse Sparkover voltage is defined as typical values of distribution.

~ Continued ~

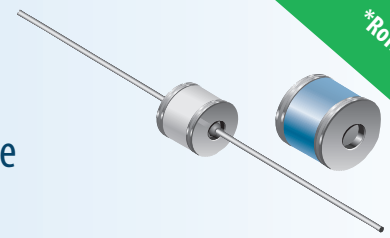
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* RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

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Characteristics (Continued)

Characteristic	Value
Insulation Resistance (IR) 100 V 50 V (2035/2037-09)	> 10 ¹⁰ 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 ⁽²⁾ 135 V 52 V (2035/2037-09) 80 V (2035/2037-15)	< 150 ms
Impulse Discharge Current 10,000 A, 8/20 μs ⁽³⁾ 5,000 A, 8/20 μs 1,000 A, 10/350 μs 100 A, 10/1000 μs 100 A, 10/700 μs	1 operation min. >10 operations 1 operation >300 operations 500 operations
Alternating Discharge Current 20 Arms, 11 cycles ⁽³⁾ 5 Arms, 1 s	1 operation min. >10 operations
Operating Temperature	-55 to +85 °C
Climatic Category (IEC 60068-1)	40/90/21

Notes:

- UL recognized component, file [E153537](#).
- Model number marking on tube: xxxV.
- Sparkover limits after life: ±20 % (-25 %, +30 % for Model 2035/2037-09 and 2035/2037-60, IR >10⁸Ω.
- Other DC sparkover ranges available on request.
- At delivery AQL 0.65 Level II, DIN ISO 2859.

⁽²⁾ Network applied.

⁽³⁾ DC Sparkover may exceed ±20 % but will continue to protect without venting.

How to Order

2035/37 - xx - x (n) T1 LF

Model Number Designator _____

Voltage (Divided by 10) _____

09 = 90 V
25 = 250 V
42 = 420 V
15 = 150 V
30 = 300 V
47 = 470 V
20 = 200 V
35 = 350 V
60 = 600 V
23 = 230 V
40 = 400 V

Leads _____

A = None
B = 0.8 mm

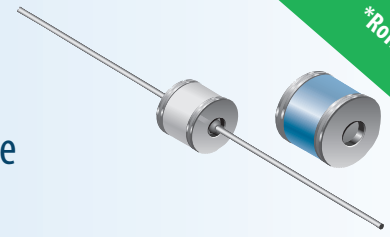
Lead Shape _____
(See Product Dimension Drawings)

Packaging _____

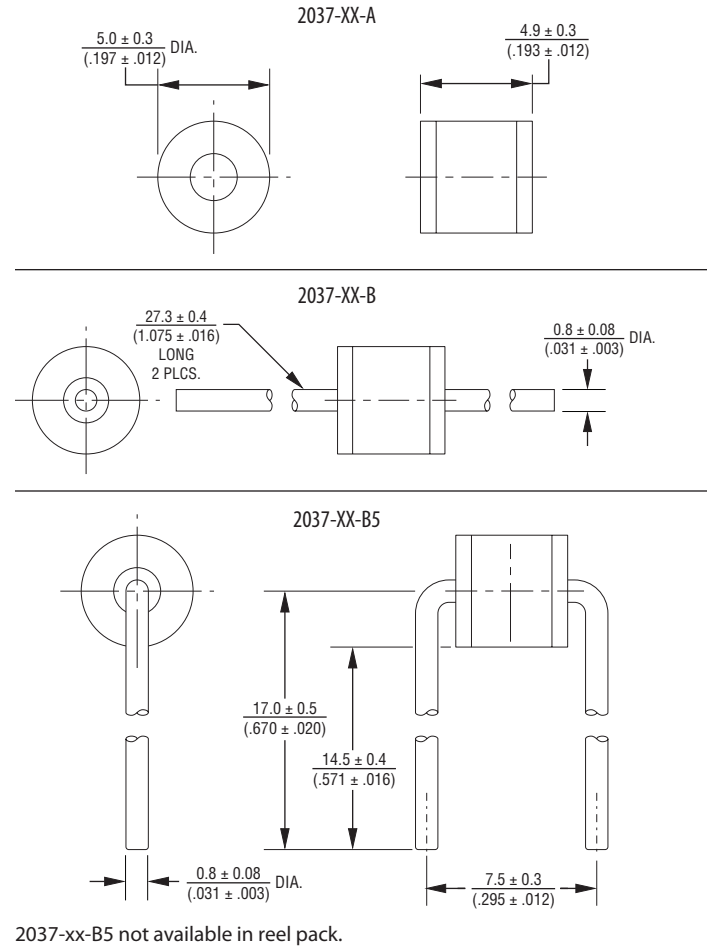
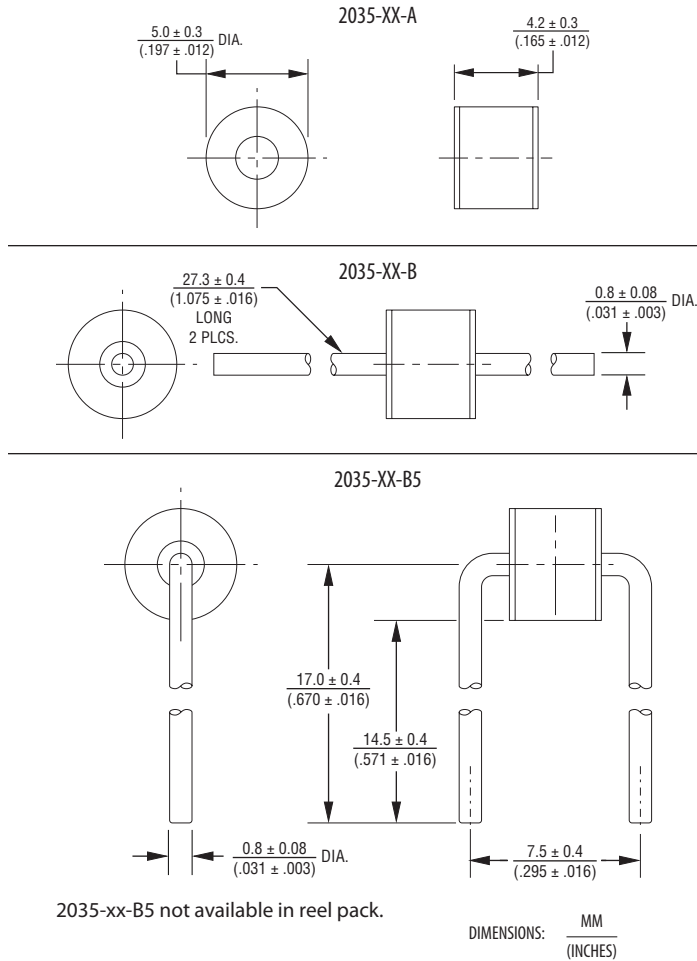
Blank = Bulk Packaging (Standard)
T1 = Reelpack (Optional)

RoHS Compliant Designator _____

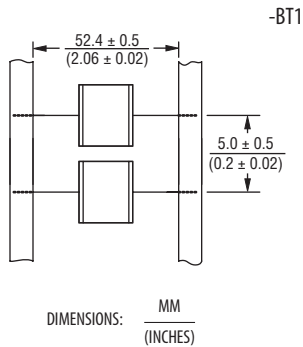
LF = RoHS Compliant Product



Product Dimensions



Packaging Specifications



Reel is 14-inches in diameter and 2.75-inches wide.

Model	Standard Packaging Quantity			
	Bulk (Bag)	Tray	Box	Reel
2035/2037-XX-A	250		1000	
2035/2037-XX-B	100		700	
2035/2037-XX-B5	250		1000	
2035/2037-XX-BT1				1000

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