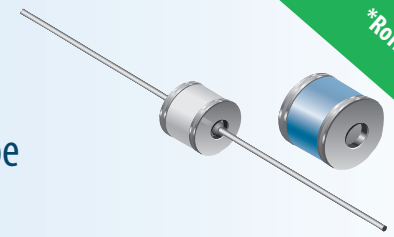
THE DATASHEET OF

2037-47-BLF

BOURNS®

2035/2037 Series

Miniature 2-Pole Gas Discharge Tube



*RoHS COMPLIANT

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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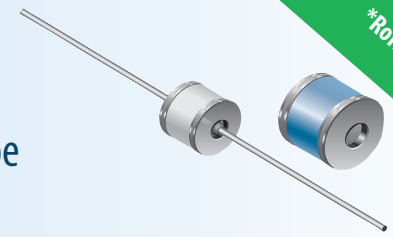
2035/2037 Series

Miniature 2-Pole Gas Discharge Tube



*RoHS COMPLIANT

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 >10^8Ω.
- 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

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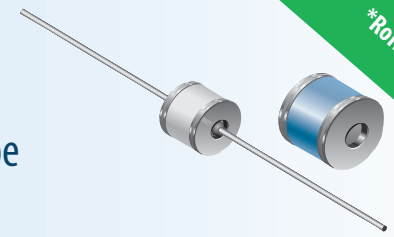

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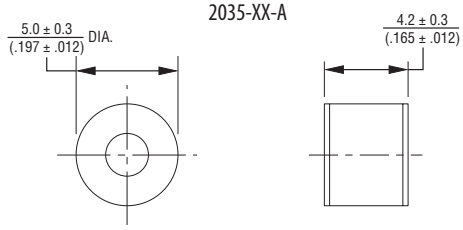
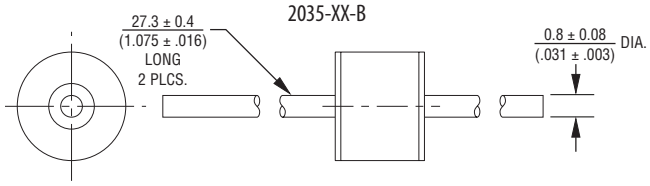
Product Dimensions

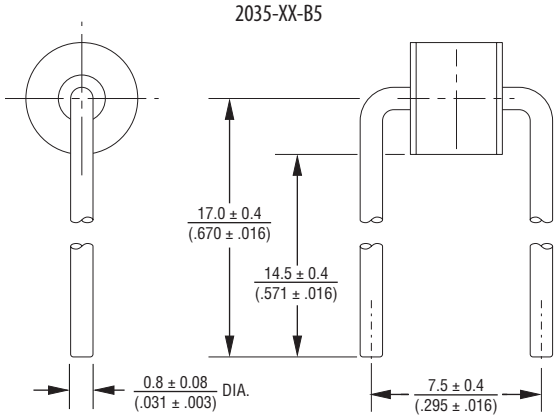
2035-XX-A



2035-XX-B



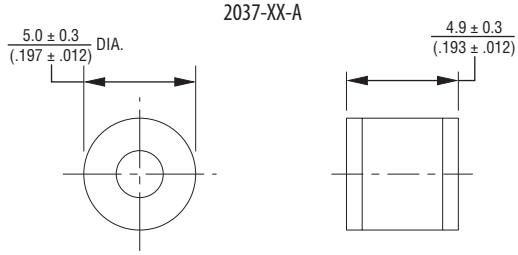
2035-XX-B5



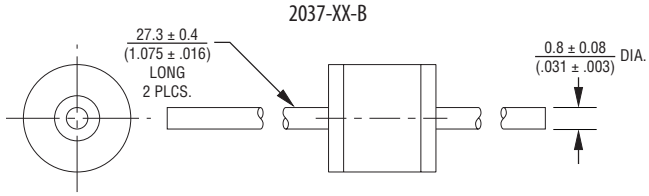
2035-xx-B5 not available in reel pack.

DIMENSIONS: MM / (INCHES)

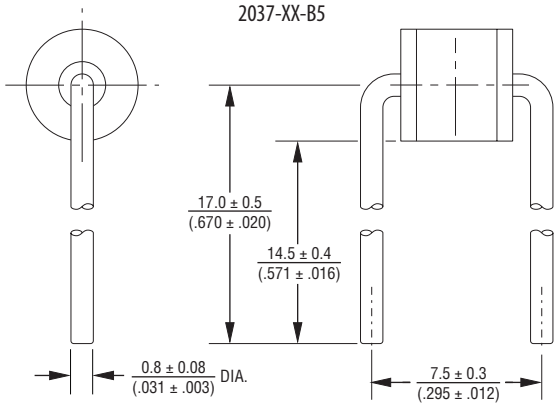
2037-XX-A



2037-XX-B



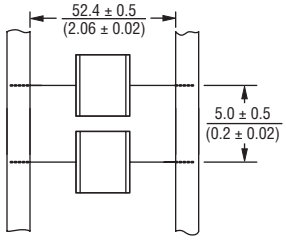
2037-XX-B5



2037-xx-B5 not available in reel pack.

Packaging Specifications

-BT1



DIMENSIONS: MM / (INCHES)

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

REV. 02/26

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C1753 12/14/23R

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