



## 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\* versions available

## Applications

- Telecommunications
- Industrial electronics
- Commercial electronics
- Consumer electronics
- Automotive, aircraft, military electronics

## 2035/2037 Series - Miniature 2-Pole Gas Discharge Tube

### 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 $\pm 15\%$<br>( $\pm 20\%$ for Model 2035/2037-09) @ 100 V/s | 90 V         | 150 V        | 200 V        | 230 V        | 250 V        | 300V         |
| Impulse Sparkover <sup>(1)</sup>                                          |              |              |              |              |              |              |
| 100 V/ $\mu$ s                                                            | 300 V        | 350 V        | 425 V        | 450 V        | 475 V        | 525 V        |
| 1000 V/ $\mu$ s                                                           | 550 V        | 550 V        | 575 V        | 600 V        | 625 V        | 650 V        |

| Characteristic                    | Model No.    |              |              |              |              |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
|                                   | 2035/2037-35 | 2035/2037-40 | 2035/2037-42 | 2035/2037-47 | 2035/2037-60 |
| DC Sparkover $\pm 15\%$ @ 100 V/s | 350 V        | 400 V        | 420 V        | 470 V        | 600 V        |
| Impulse Sparkover <sup>(1)</sup>  |              |              |              |              |              |
| 100 V/ $\mu$ s                    | 600 V        | 650 V        | 675 V        | 750 V        | 950 V        |
| 1000 V/ $\mu$ s                   | 750 V        | 800 V        | 850 V        | 950 V        | 1100 V       |

<sup>(1)</sup> Impulse Sparkover voltage is defined as typical values of distribution.

|                                          |                                                                             |                   |
|------------------------------------------|-----------------------------------------------------------------------------|-------------------|
| Insulation Resistance (IR) .....         | 100 V (50 V for Models 2035/2037-09) .....                                  | $>10^{10} \Omega$ |
| Glow Voltage .....                       | 10 mA .....                                                                 | $\sim 70$ V       |
| Arc Voltage .....                        | 1 A .....                                                                   | $\sim 10$ V       |
| Glow-Arc Transition Current .....        | .....                                                                       | $<0.5$ A          |
| Capacitance.....                         | 1 MHz .....                                                                 | $<1$ pF           |
| DC Holdover Voltage <sup>(2)</sup> ..... | 135 V, (52 V for Models 2035/2037-09,.....<br>80 V for Models 2035/2037-15) | $<150$ ms         |
| Impulse Discharge Current .....          | 10000 A, 8/20 $\mu$ s <sup>(3)</sup> .....                                  | 1 operation min.  |
|                                          | 5000 A, 8/20 $\mu$ s .....                                                  | $>10$ operations  |
|                                          | 1000 A, 10/350 $\mu$ s .....                                                | 1 operation       |
|                                          | 100 A, 10/1000 $\mu$ s .....                                                | $>300$ operations |
|                                          | 100 A, 10/700 $\mu$ s .....                                                 | $>500$ operations |
| Alternating Discharge Current .....      | 20 Arms, 11 cycles <sup>(3)</sup> .....                                     | 1 operation min.  |
|                                          | 5 Arms, 1 s .....                                                           | $>10$ operations  |
| Operating Temperature .....              | .....                                                                       | -55 to +85 °C     |
| Climatic Category (IEC 60068-1).....     | .....                                                                       | 40/90/21          |

#### Notes:

- UL recognized component, UL File E153537.
- Model number marking on tube: xxxV.
- Sparkover limits after life  $\pm 20\%$  (-25 %, +30 % for Models 2035/2037-09 and 2035/2037-60) , IR $>10^8 \Omega$ .
- Other DC sparkover ranges available on request.
- At delivery AQL 0.65 Level II, DIN ISO 2859.

<sup>(2)</sup> Network applied.

<sup>(3)</sup> DC Sparkover may exceed  $\pm 20\%$  but will continue to protect without venting.

\*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.

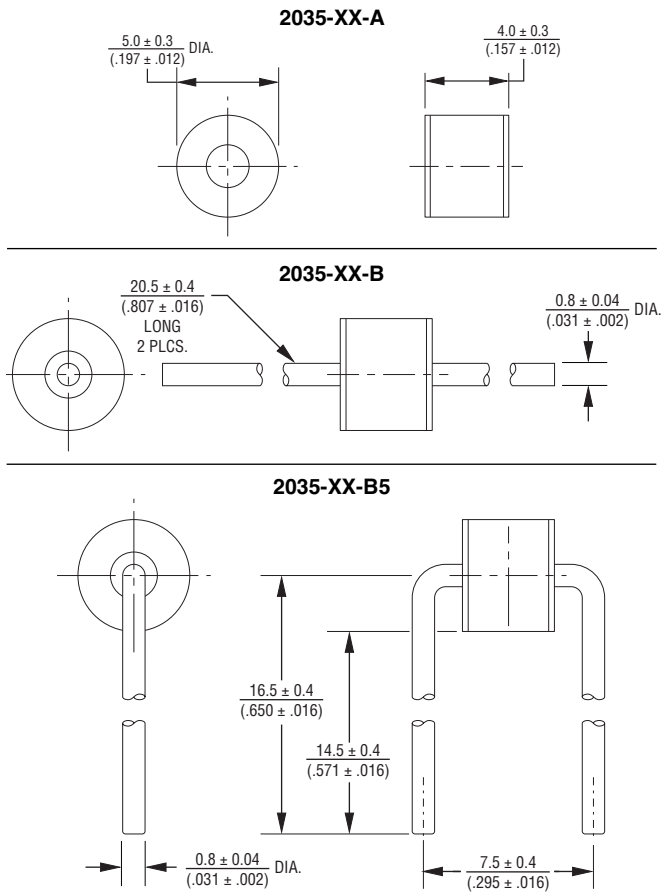
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

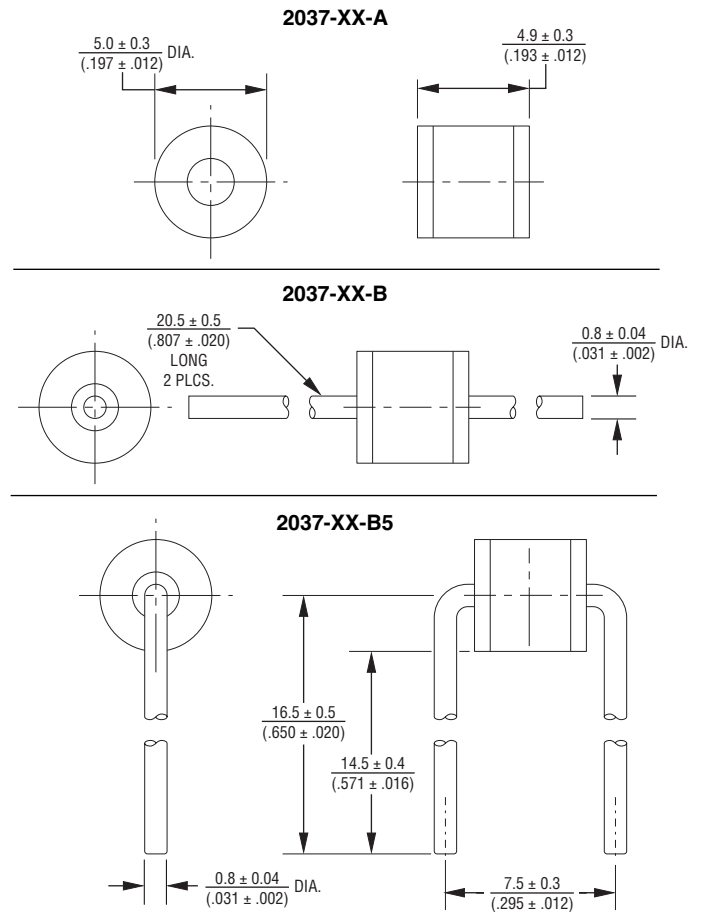
## 2035/2037 Series - Miniature 2-Pole Gas Discharge Tube

**BOURNS®**

### Product Dimensions

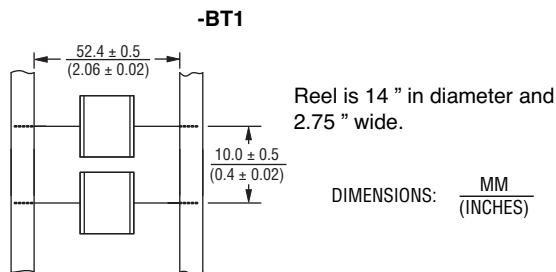


2035-xx-B5 not available in reel pack.



2037-xx-B5 not available in reel pack.

### Packaging Specifications



| 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 |

### 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 Option \_\_\_\_\_

Blank = Standard Product

LF = RoHS Compliant Product

REV. 08/15

Specifications are subject to change without notice.  
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.