


## 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 (CCITT) K.12, IEEE C62.31

| 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        | 300 V        |
| Impulse Sparkover<br>100 V/ $\mu$ s<br>1000 V/ $\mu$ s                    | 300 V        | 350 V        | 425 V        | 450 V        | 475 V        | 525 V        |
|   | 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 $\pm 15\%$<br>( $\pm 20\%$ for Model 2035/2037-09) @ 100 V/s | 350 V        | 400 V        | 420 V        | 470 V        | 600 V        |
| Impulse Sparkover<br>100 V/ $\mu$ s<br>1000 V/ $\mu$ s                    | 600 V        | 650 V        | 675 V        | 750 V        | 950 V        |
|   | 750 V        | 800 V        | 850 V        | 950 V        | 1100 V       |

|  |   |                    |
|--|---|--------------------|
| 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>1</sup> ..... | 135 V, (52 V for Models 2035/2037-09, ..... | $< 150$ ms         |
| Impulse Discharge Current .....        | 10000 A, 8/20 $\mu$ s <sup>2</sup> .....    | 1 operation min    |
|  | 5000 A, 8/20 $\mu$ s.....                   | $> 10$ operations  |
|  | 100 A, 10/1000 $\mu$ s .....                | $> 300$ operations |
|  | 100 A, 10/700 $\mu$ s .....                 | $> 500$ operations |
| Alternating Discharge Current .....    | 20 Arms, 11 cycles <sup>2</sup> .....       | 1 operation min    |
|  | 5 Arms, 1 s.....                            | $> 10$ operations  |
| Operating Temperature .....            |   | -55 to +85 °C      |

## 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.

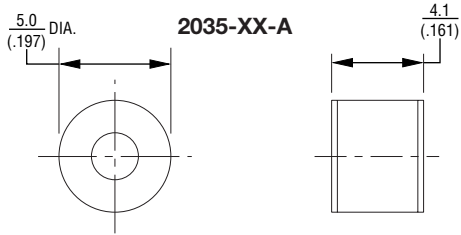
<sup>1</sup> Network applied.

<sup>2</sup> DC Sparkover may exceed  $\pm 20\%$  but will continue to protect without venting.

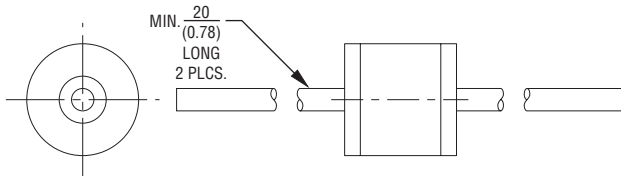
# 2035/2037 Series - Miniature 2-Pole Gas Discharge Tube

**BOURNS®**

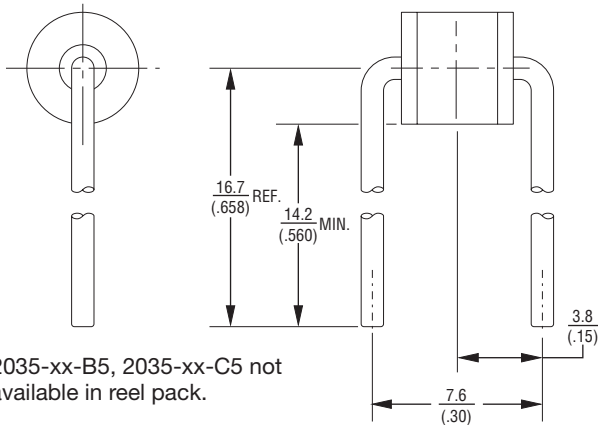
## Product Dimensions



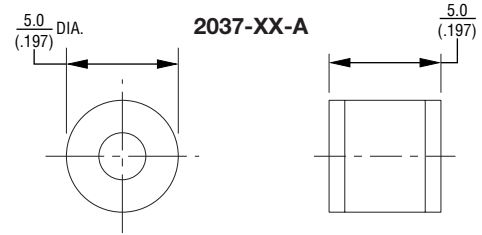
2035-XX-B — 0.8 mm (0.032 in.) dia. lead wire  
2035-XX-C — 1.0 mm (0.040 in.) dia. lead wire



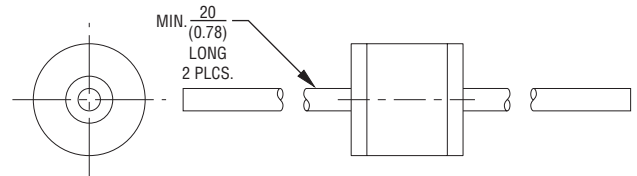
2035-XX-B5 — 0.8 mm (0.032 in.) dia. lead wire  
2035-XX-C5 — 1.0 mm (0.040 in.) dia. lead wire



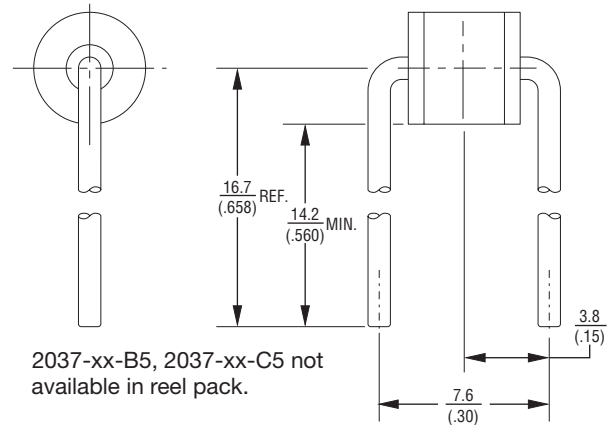
2035-xx-B5, 2035-xx-C5 not available in reel pack.



2037-XX-B — 0.8 mm (0.032 in.) dia. lead wire  
2037-XX-C — 1.0 mm (0.040 in.) dia. lead wire

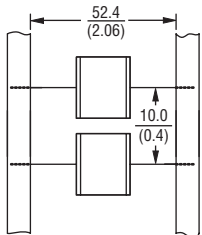


2037-XX-B5 — 0.8 mm (0.032 in.) dia. lead wire  
2037-XX-C5 — 1.0 mm (0.040 in.) dia. lead wire



2037-xx-B5, 2037-xx-C5 not available in reel pack.

## Packaging Specifications



Model 2035/2037-xx-nn ships standard bulk pack, 100 pcs./bag.

The optional reelpack (-BT1) contains 1,000 pcs./reel. Reel is 14 " in diameter and 2.75 " wide.

2035-xx-B5, 2035-xx-C5 not available in reel pack

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

## How To Order

2035/37 - xx - x - nn - 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    C = 1 mm

Lead Shape \_\_\_\_\_  
(See Product Dimension Drawings)

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

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

REV. 02/09

Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.