



## 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

## 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, ..... | $<150$ ms         |
|  | 80 V for Models 2035/2037-15)               |                   |
| 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.



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

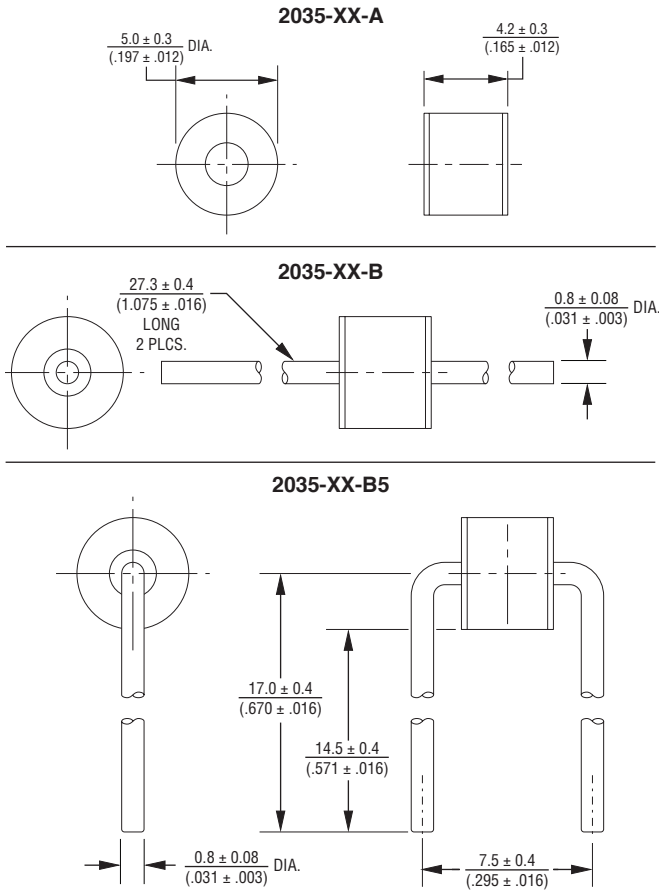
Users should verify actual device performance in their specific applications.

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



## 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. 11/20

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Users should verify actual device performance in their specific applications.

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