




## 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 ±15 % (±20 % for Model 2035/2037-09) @ 100 V/s	90 V	150 V	200 V	230 V	250 V	300 V
Impulse Sparkover 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 % (±20 % for Model 2035/2037-09) @ 100 V/s	350 V	400 V	420 V	470 V	600 V
Impulse Sparkover 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

Insulation Resistance (IR).....	100 V (50 V for Models 2035/2037-09) .....	> 10 <sup>10</sup> 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 <sup>1</sup> .....	135 V, (52 V for Models 2035/2037-09, .....	< 150 ms
Impulse Discharge Current .....	10000 A, 8/20 μs <sup>2</sup> .....	1 operation min
	5000 A, 8/20 μs.....	> 10 operations
	100 A, 10/1000 μs .....	> 300 operations
	100 A, 10/700 μs .....	> 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 ±20 % (-25 %, +30 % for Models 2035/2037-09 and 2035/2037-60) , IR>10<sup>8</sup> Ω.
- Other DC sparkover ranges available on request.
- At delivery AQL 0.65 Level II, DIN ISO 2859.

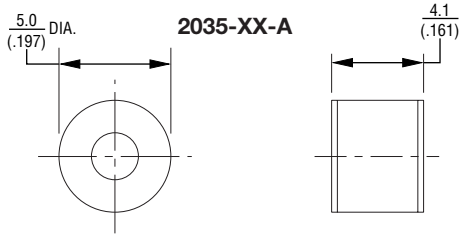
<sup>1</sup> Network applied.

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

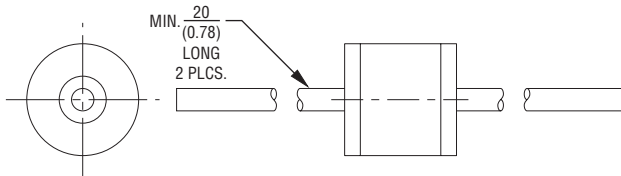
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**BOURNS®**

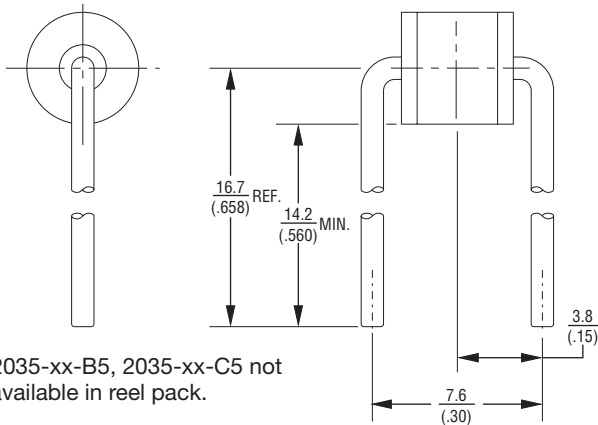
## Product Dimensions



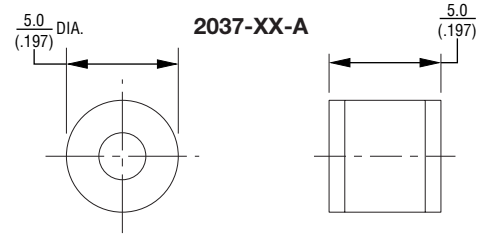
2035-XX-B — 0.8 mm (0.032 in.) dia. lead wire  
2035-XX-C — 1.0 mm (0.040 in.) dia. lead wire



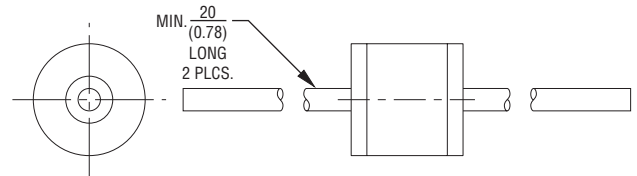
2035-XX-B5 — 0.8 mm (0.032 in.) dia. lead wire  
2035-XX-C5 — 1.0 mm (0.040 in.) dia. lead wire



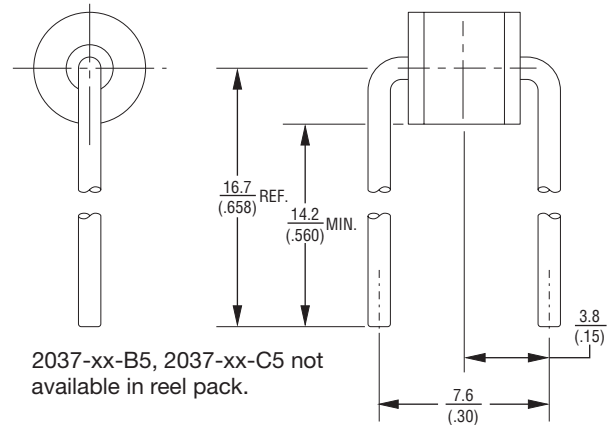
2035-xx-B5, 2035-xx-C5 not available in reel pack.



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

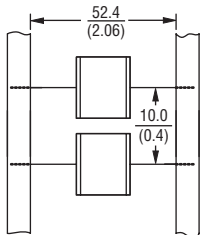


2037-XX-B5 — 0.8 mm (0.032 in.) dia. lead wire  
2037-XX-C5 — 1.0 mm (0.040 in.) dia. lead wire



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.