



**THE DATASHEET OF  
2027-47-CLF**





## Features

- 8 mm diameter, 6 mm long
- UL Recognized
- Custom configurations available
- High surge current rating
- Stable breakdown throughout life
- RoHS compliant\* versions available

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# 2027 Series - 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.					
	2027-07	2027-09	2027-15	2027-20	2027-23	2027-25
DC Sparkover $\pm 15\%$ ( $\pm 20\%$ for Models 2027-07 & 2027-09) @ 100 V/s	75 V	90 V	150 V	200 V	230 V	250 V
Impulse Sparkover <sup>(1)</sup>						
100 V/ $\mu$ s	300 V	300 V	350 V	400 V	450 V	475 V
1000 V/ $\mu$ s	500 V	500 V	575 V	600 V	675 V	700 V

Characteristic	Model No.					
	2027-30	2027-35	2027-40	2027-42	2027-47	2027-60
DC Sparkover $\pm 15\%$ @ 100 V/s	300 V	350 V	400 V	420 V	470 V	600 V
Impulse Sparkover <sup>(1)</sup>						
100 V/ $\mu$ s	550 V	600 V	650 V	675 V	725 V	850 V
1000 V/ $\mu$ s	800 V	875 V	925 V	950 V	1000 V	1100 V

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

Insulation Resistance .....	100 V (50 V for Models 2027-07 and 2027-09) .....	$> 10^{10} \Omega$
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 2027-07 and 2027-09, 80 V for Model 2027-15) .....	$< 150$ ms
Impulse Discharge Current.....	25000 A, 8/20 $\mu$ s <sup>(3)</sup> .....	1 operation minimum
	10000 A, 8/20 $\mu$ s .....	10 operations
	2000 A, 10/350 $\mu$ s .....	2 operations
	500 A, 10/1000 $\mu$ s .....	400 operations
	100 A, 10/1000 $\mu$ s or 10/700 $\mu$ s .....	1000 operations
Alternating Discharge Current .....	65 Arms, 11 cycles <sup>(3)</sup> .....	1 operation minimum
	10 Arms, 1 s .....	10 operations
Operating and Storage Temperature .....	.....	-55 to +125 °C
Climatic Category (IEC 60068-1).....	.....	55/125/21
Moisture Sensitivity Level.....	.....	1
ESD Classification (HBM).....	.....	N/A

### Notes:

- UL recognized component, UL File E153537.
- Model number marking on tube: 27-xxxV.
- Sparkover limits  $\pm 20\%$  after life, IR  $> 10^8 \Omega$  (-25 %, +30 % for Models 2027-07, 2027-09 and 2027-60).
- At delivery AQL 0.65 Level II, DIN ISO 2859.

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

<sup>(3)</sup> DC Sparkover may exceed  $\pm 20\%$  after discharge, 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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## Applications

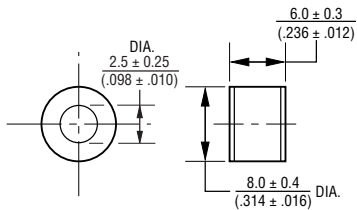
- Telecommunications
- Industrial electronics
- Commercial electronics
- Consumer electronics

# 2027 Series - 2-Pole Gas Discharge Tube

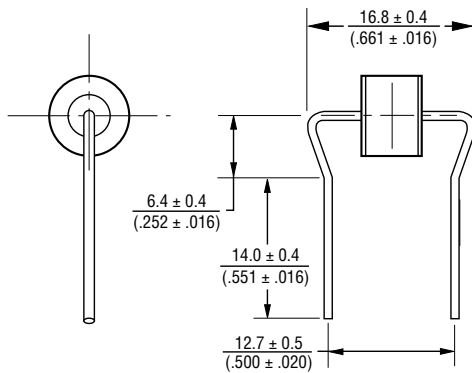
# BOURNS®

## Product Dimensions

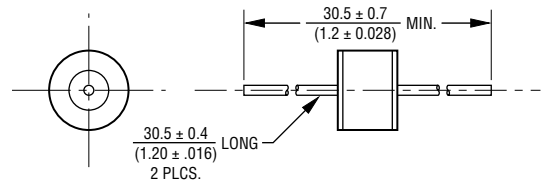
2027-XX-A



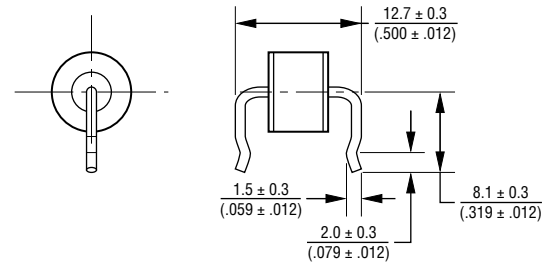
2027-XX-B19 —  $0.8 \pm 0.04$  mm ( $0.032 \pm 0.002$  in.) dia. lead wire  
(Not available in reelpack)



2027-XX-B —  $0.8 \pm .04$  mm ( $0.032 \pm 0.002$  in.) dia. lead wire  
2027-XX-C —  $1.0 \pm .04$  mm ( $0.039 \pm 0.002$  in.) dia. lead wire



2027-XX-B10 —  $0.8 \pm .04$  mm ( $0.032 \pm 0.002$  in.) dia. lead wire  
2027-XX-C10 —  $1.0 \pm .04$  mm ( $0.039 \pm 0.002$  in.) dia. lead wire  
(Not available in reelpack)



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## How to Order

2027 - xx - x nn T1 LF

Model Number Designator \_\_\_\_\_

Voltage (Divided by 10) \_\_\_\_\_

07 = 75 V	30 = 300 V
09 = 90 V	35 = 350 V
15 = 150 V	40 = 400 V
20 = 200 V	42 = 420 V
23 = 230 V	47 = 470 V
25 = 250 V	60 = 600 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 - not available for Models 2027-xx-B19 and 2027-xx-B10/C10)

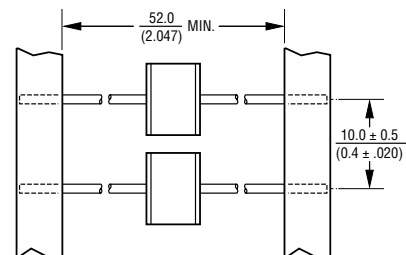
RoHS Compliant Option \_\_\_\_\_

Blank = Standard Product  
LF = RoHS Compliant Product

## Packaging Specifications

Model	Standard Packaging Quantity			
	Bulk (Bag)	Tray	Box	Reel
2027-XX-A	250		1000	
2027-XX-B	100		500	
2027-XX-C	100		500	
2027-XX-B10		100	1000	
2027-XX-C10		100	1000	
2027-XX-B19	100		500	
2027-XX-C19	100		500	
2027-XX-BT1				1000
2027-XX-CT1				1000

2027-XX-BT1 —  $0.8 \pm 0.04$  mm ( $0.032 \pm 0.002$  in.) dia. lead wire  
Reel is 14-inches in diameter and 2.75-inches wide.



REV. B 12/20

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