



THE DATASHEET OF
2027-23-BT1





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 ⁽¹⁾						
100 V/ μ s	300 V	300 V	350 V	400 V	450 V	475 V
1000 V/ μ 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 ⁽¹⁾						
100 V/ μ s	550 V	600 V	650 V	675 V	725 V	850 V
1000 V/ μ s	800 V	875 V	925 V	950 V	1000 V	1100 V

⁽¹⁾ 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	~ 70 V
Arc Voltage	> 1 A	~ 10 V
Glow-Arc Transition Current .....	.....	< 0.5 A
Capacitance.....	1 MHz	< 1 pF
DC Holdover Voltage ⁽²⁾	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 μ s ⁽³⁾	1 operation minimum
	10000 A, 8/20 μ s	10 operations
	2000 A, 10/350 μ s	2 operations
	500 A, 10/1000 μ s	400 operations
	100 A, 10/1000 μ s or 10/700 μ s	1000 operations
Alternating Discharge Current	65 Arms, 11 cycles ⁽³⁾	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.

⁽²⁾ Network applied.

⁽³⁾ DC Sparkover may exceed $\pm 20\%$ after discharge, but will continue to protect without venting.



WARNING Cancer and Reproductive Harm - 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

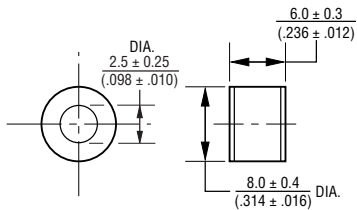
- Telecommunications
- Industrial electronics
- Commercial electronics
- Consumer electronics

2027 Series - 2-Pole Gas Discharge Tube

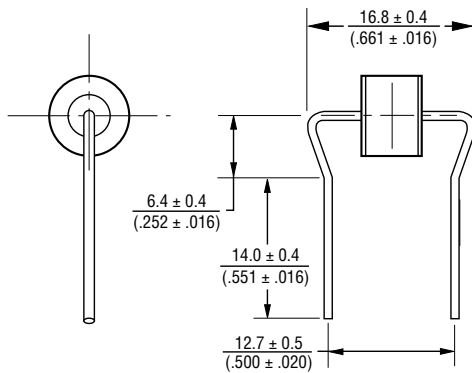
BOURNS®

Product Dimensions

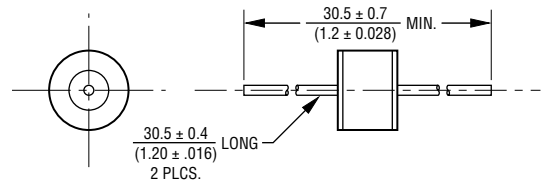
2027-XX-A



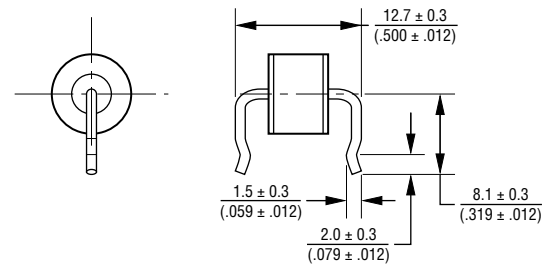
2027-XX-B19 — 0.8 ± 0.04 mm (0.032 ± 0.002 in.) dia. lead wire
(Not available in reelpack)



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



2027-XX-B10 — $0.8 \pm .04$ mm (0.032 ± 0.002 in.) dia. lead wire
2027-XX-C10 — $1.0 \pm .04$ mm (0.039 ± 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)

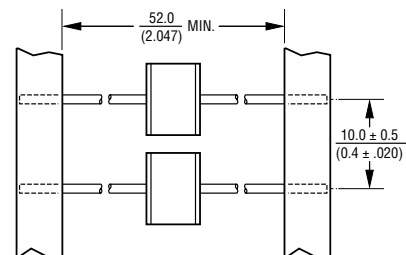
RoHS Compliant Option _____

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 ± 0.04 mm (0.032 ± 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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