



Features

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

Applications

- Telecommunications
- Industrial electronics
- Commercial electronics
- Consumer electronics
- Automotive, aircraft, military electronics

2027 Series - 2-Pole Gas Discharge Tube

Characteristics

Test Methods per ITU-T (CCITT) K.12, IEEE C62.31, RUS PE-80, Telcordia GR 1361

Characteristic	Model No.					
	2027-09	2027-15	2027-20	2027-23	2027-25	2027-30
DC Sparkover $\pm 15\%$ ($\pm 20\%$ for Model 2027-09) @ 100 V/s	90 V	150 V	200 V	230 V	250 V	300 V
Impulse Sparkover 100 V/ μ s 1000 V/ μ s	300 V 500 V	350 V 575 V	400 V 600 V	450 V 675 V	475 V 700 V	550 V 800 V

Characteristic	Model No.				
	2027-35	2027-40	2027-42	2027-47	2027-60
DC Sparkover $\pm 15\%$ @ 100 V/s	350 V	400 V	420 V	470 V	600 V
Impulse Sparkover 100 V/ μ s 1000 V/ μ s	600 V 875 V	650 V 925 V	675 V 950 V	725 V 1000 V	850 V 1100 V

Insulation Resistance.....	100 V (50 V for Model 2027-09).....	> 10 ¹⁰ Ω
Glow Voltage.....	10 mA.....	~ 70 V
Arc Voltage.....	> 1A.....	~ 10 V
Glow-Arc Transition Current.....		< 0.5 A
Capacitance.....	1 MHz.....	< 1 pF
DC Holdover Voltage ¹	135 V, (52 V for Model 2027-09 80 V for Model 2027-15) ...	< 150 ms
Impulse Discharge Current	20000 A, 8/20 μ s ²	1 operation minimum
	10000 A, 8/20 μ s.....	> 10 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 ²	1 operation minimum
	10 Arms, 1 s.....	> 10 operations
Operating Temperature.....		-55 to +85 °C

Notes:

- **UL recognized component, UL File E153537.**
- Model number marking on tube: 27-xxxV.
- Sparkover limits $\pm 20\%$ after life, IR > 10⁸ Ω (-25 %, +30 % for Model 2027-09 and 2027-60).
- At delivery AQL 0.65 Level II, DIN ISO 2859.

¹ Network applied.

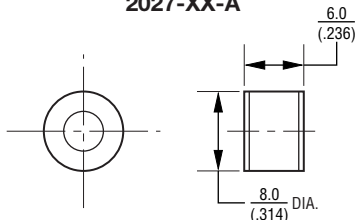
² DC Sparkover may exceed $\pm 20\%$ after discharge, but will continue to protect without venting.

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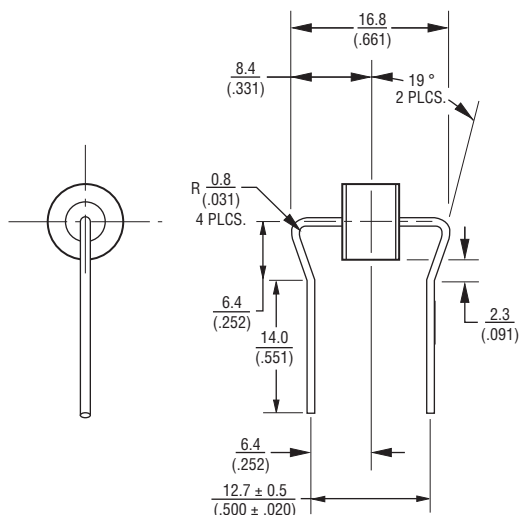
BOURNS®

Product Dimensions

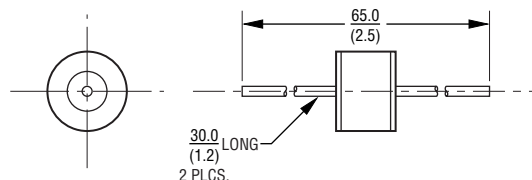
2027-XX-A



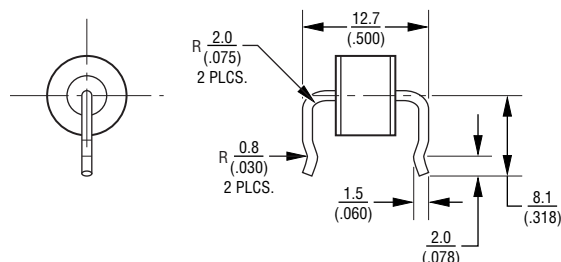
2027-XX-B19 — 0.8 mm (0.032 in.) dia. lead wire
(Not available in reel pack)



2027-XX-B — 0.8 mm (0.032 in.) dia. lead wire
2027-XX-C — 1.0 mm (0.040 in.) dia. lead wire



2027-XX-B10 — 0.8 mm (0.032 in.) dia. lead wire
2027-XX-C10 — 1.0 mm (0.040 in.) dia. lead wire
(Not available in reel pack)



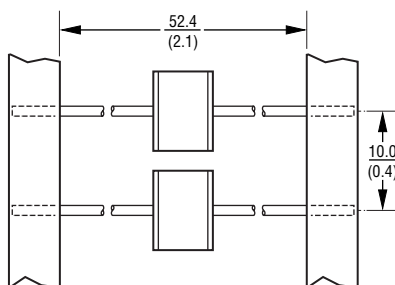
DIMENSIONS = $\frac{\text{MILLIMETERS}}{(\text{INCHES})}$

Packaging Specifications

Model 2027-xx-nn ships standard bulk pack, 100 pcs./bag.

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

2027-XX-BT1 — 0.8 mm (0.032 in.) dia. lead wire



How To Order

2027 - xx - x nn T1 LF

Model Number
Designator

Voltage (Divided by 10)

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
30 = 300 V	

Leads

A = None
B = 0.8 mm
C = 1 mm

Lead Shape

(See Product Dimension Drawings)

Packaging

Blank = Bulk Packaging (Standard)
T1 = Reel pack (Optional - not available for Models 2027-xx-B19 and 2027-xx-B10/C10)

Lead Free Option

Blank = Standard Product
LF = Lead Free/RoHS Compliant Product

REV. 04/09

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