



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 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 ±15 % (±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/μs | 300 V | 300 V | 350 V | 400 V | 450 V | 475 V |
| 1000 V/μs | 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 ±15 % @ 100 V/s | 300 V | 350 V | 400 V | 420 V | 470 V | 600 V |
| Impulse Sparkover ⁽¹⁾ | | | | | | |
| 100 V/μs | 550 V | 600 V | 650 V | 675 V | 725 V | 850 V |
| 1000 V/μs | 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 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 ⁽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 μs ⁽³⁾ | 1 operation minimum |
| | 10000 A, 8/20 μs | > 10 operations |
| | 2500 A, 10/350 μs | 2 operations |
| | 500 A, 10/1000 μs | > 400 operations |
| | 100 A, 10/1000 μs or 10/700 μs | > 1000 operations |
| Alternating Discharge Current | 65 Arms, 11 cycles ⁽³⁾ | 1 operation minimum |
| | 10 Arms, 1 s | > 10 operations |
| Operating Temperature..... | | -55 to +125 °C |
| Climatic Category (IEC 60068-1)..... | | 40/90/21 |

Notes:

- **UL recognized component, UL File E153537.**
- Model number marking on tube: 27-xxxV.
- Sparkover limits ±20 % after life, IR > 10⁸ Ω (-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 ±20 % after discharge, but will continue to protect without venting.

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

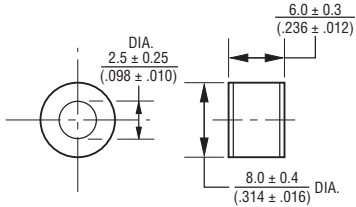
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

2027 Series - 2-Pole Gas Discharge Tube

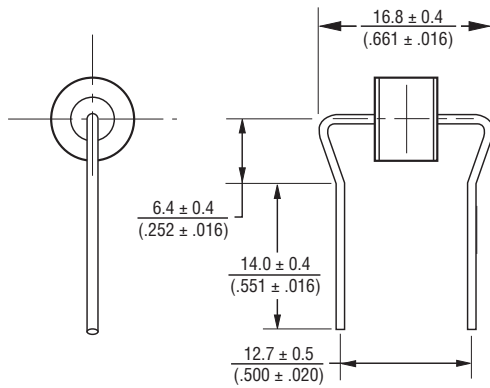
BOURNS®

Product Dimensions

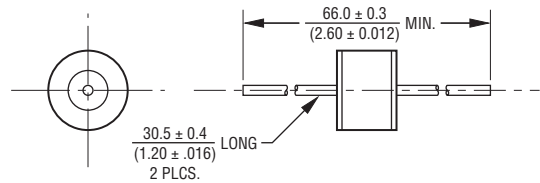
2027-XX-A



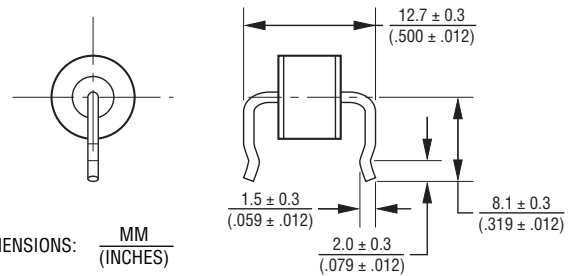
2027-XX-B19 — 0.8 ± 0.04 mm (0.032 ± 0.002 in.) dia. lead wire
(Not available in reelpack)



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



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

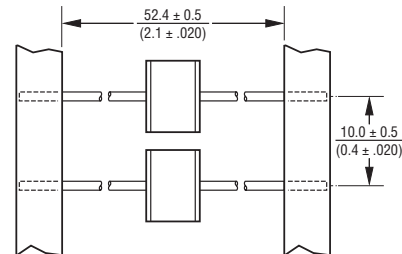
RoHS Compliant Option

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 | 900 | |
| 2027-XX-C10 | | 100 | 900 | |
| 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 " in diameter and 2.75 " wide.



REV. 08/15

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