



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. | | | | | |
|--|-----------|---------|---------|---------|---------|---------|
| | 2027-07 | 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 | | | | | | |
| 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 | | | | | | |
| 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 |

| | | |
|--|---|----------------------|
| 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 ¹ | 135 V, (52 V for Models 2027-07 and 2027-09, 80 V for Model 2027-15) | < 150 ms |
| Impulse Discharge Current..... | 20000 A, 8/20 μs ² | 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 ² | 1 operation minimum |
| | 10 Arms, 1 s | > 10 operations |
| Operating Temperature..... | | -55 to +85 °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.

¹ Network applied.

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

2027 Series - 2-Pole Gas Discharge Tube

BOURNS®

Product Dimensions

2027-XX-A



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



Packaging Specifications

Model 2027-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.

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



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 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)

Lead Free Option _____

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

REV. 11/10

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