

# ANTREX Electronics

Electronic Components Sourcing Information

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## Product Reference Information

**Part Number:** 2027-47-BT1LF

**Manufacturer:** Bourns Inc.

**Package:** Tape & Reel (TR), Cut Tape (CT)

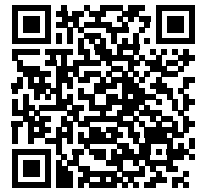
**Availability:** Please confirm with sales

**Product Page:**

<https://antrexco.com/product/details/bourns-inc/2027-47-bt1lf.html>

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## Contact Information

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New & Original Components

Supplier verification and packaging condition review

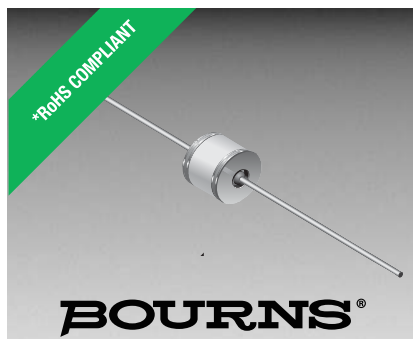
CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

**Note:**

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.



## Features

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

## Additional Information

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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 $\pm 15\%$<br>( $\pm 20\%$ 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) .....                             | $> 10^9 \Omega$     |
| 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,<br>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.



**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant.  
See [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

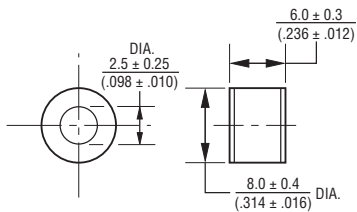
- Telecommunications
- Industrial electronics
- Commercial electronics
- Consumer electronics

## 2027 Series - 2-Pole Gas Discharge Tube

**BOURNS®**

### Product Dimensions

**2027-XX-A**



### 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)

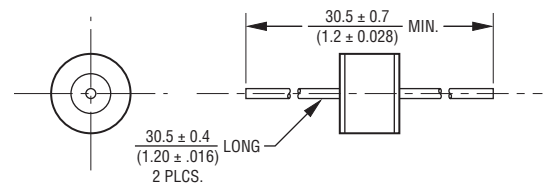
Packaging

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

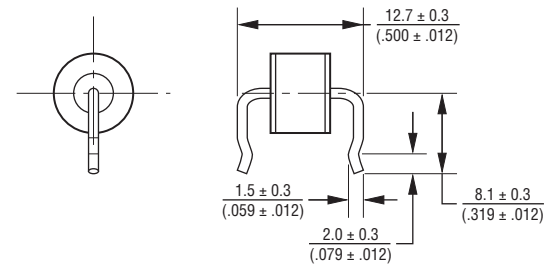
RoHS Compliant Option

LF = RoHS Compliant Product

**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)

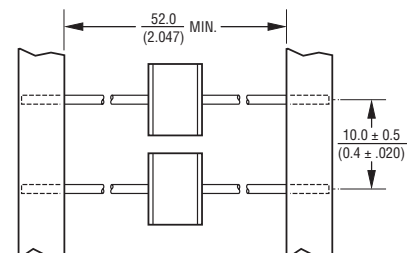


DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

### Packaging Specifications

| Model              | Standard Packaging Quantity |      |      |      |
|--------------------|-----------------------------|------|------|------|
|                    | Bulk (Bag)                  | Tray | Box  | Reel |
| <b>2027-XX-A</b>   | 250                         |      | 1000 |      |
| <b>2027-XX-B</b>   | 100                         |      | 500  |      |
| <b>2027-XX-C</b>   | 100                         |      | 500  |      |
| <b>2027-XX-B10</b> |                             | 100  | 1000 |      |
| <b>2027-XX-C10</b> |                             | 100  | 1000 |      |
| <b>2027-XX-C19</b> | 100                         |      | 500  |      |
| <b>2027-XX-BT1</b> |                             |      |      | 1000 |
| <b>2027-XX-CT1</b> |                             |      |      | 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. E 01/26

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