



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 $\pm 15\%$ ($\pm 20\%$ for Models 2027-07 & 2027-09) @ 100 V/s	75 V	90 V	150 V	200 V	230 V	250 V
Impulse Sparkover						
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						
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

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**	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***	1 operation minimum
	10000 A, 8/20 μ s	> 10 operations
	2500 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***	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 $\pm 20\%$ 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.

** Network applied.

*** DC Sparkover may exceed $\pm 20\%$ 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.

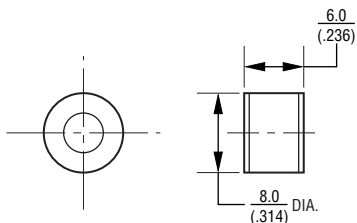
Users should verify actual device performance in their specific applications.

2027 Series - 2-Pole Gas Discharge Tube

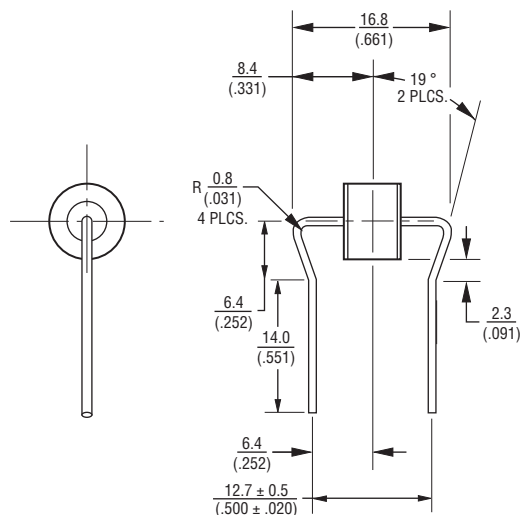
BOURNS®

Product Dimensions

2027-XX-A



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

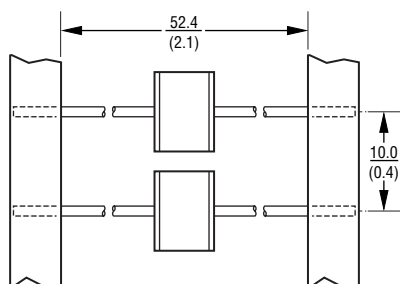


Packaging Specifications

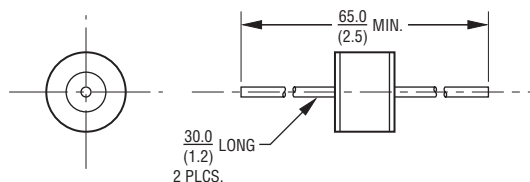
Model 2027-xx-nn ships standard bulk pack, 100 pcs./bag.

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

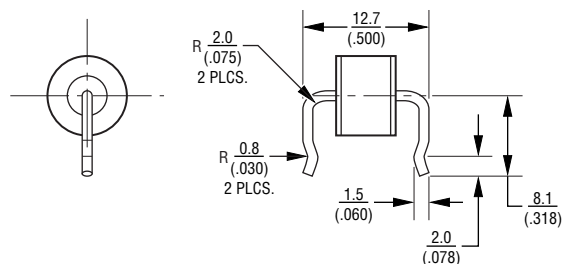
2027-XX-BT1 — 0.8 mm (0.032 in.) dia. lead wire



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)

RoHS Compliant Option _____

Blank = Standard Product
LF = RoHS Compliant Product

REV. 07/14

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Users should verify actual device performance in their specific applications.

Mouser Electronics

Authorized Distributor

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Bourns:

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[2027-23-A](#) [2027-23-C](#) [2027-23-B](#) [2027-15-A](#) [2027-15-C](#) [2027-15-B](#) [2027-30-BT1](#) [2027-35-A](#) [2027-35-C](#) [2027-35-B](#) [2027-20-A](#) [2027-30-B10](#) [2027-20-B](#) [2027-20-C](#) [2027-15-BT1](#) [2027-15-B10](#) [2027-09-BT1](#) [2027-42-C10](#) [2027-60-BT1](#) [2027-35-B10](#) [2027-60-A](#) [2027-60-C](#) [2027-60-B](#) [2027-23-B10](#) [2027-23-BT1](#) [2027-07-BT1](#) [2027-25-B10](#) [2027-35-C10](#) [2027-09-C10LF](#) [2027-15-BLF](#) [2027-09-CLF](#) [2027-09-ALF](#) [2027-09-B10LF](#) [2027-09-BLF](#) [2027-09-BT1LF](#) [2027-15-ALF](#) [2027-15-B10LF](#) [2027-15-BT1LF](#) [2027-20-ALF](#) [2027-20-BLF](#) [2027-23-BT1LF](#) [2027-23-C5LF](#) [2027-23-CLF](#) [2027-25-ALF](#) [2027-35-CLF](#) [2027-40-BLF](#) [2027-47-BLF](#) [2027-47-CLF](#) [2027-60-ALF](#) [2027-60-BT1LF](#) [2027-60-C10LF](#) [2027-60-CLF](#) [2027-09-C10](#) [2027-30-B](#) [2027-30-A](#) [2027-30-C](#) [2027-23-C10](#) [2027-47-A](#) [2027-47-C](#) [2027-47-B](#) [2027-20-BT1](#) [2027-42-B10](#) [2027-35-BSM2](#) [2027-42-B](#) [2027-40-A](#) [2027-40-C](#) [2027-40-B](#) [2027-23-BLF](#) [2027-25-CLF](#) [2027-60-BLF](#) [2027-30-CLF](#) [2027-23-ALF](#) [2027-42-ALF](#) [2027-42-CLF](#) [2027-15-CLF](#) [2027-25-BLF](#) [2027-35-BLF](#) [2027-47-BT1LF](#) [2027-30-BLF](#) [2027-42-BLF](#) [2027-20-CLF](#) [2027-35-ALF](#) [2027-07-CLF](#) [2027-40-CLF](#) [2027-47-B10LF](#) [2027-42-BT1LF](#) [2027-60-B10LF](#) [2027-07-BT1LF](#) [2027-25-C10LF](#) [2027-35-BT1LF](#) [2027-30-C10](#)