

## Features

- High current rating
- High insulation resistance
- Quick response, long service life
- Wide operating temperature range
- RoHS compliant\*

## Applications

- Power supplies
- Medical devices\*\*
- Air conditioning
- Lighting
- IEC 62368-1 equipment

# GDT28H Series - High Voltage Gas Discharge Tube

## Description

Bourns® GDT28H Series two-electrode High Voltage Gas Discharge Tube offers high insulation resistance over a wide temperature range and is available with a DC Sparkover Voltage range from 1 kV to 3.3 kV. Other customized voltages in this range are available upon request.

## Agency Recognition

Agency	Category	Agency File
UL	1449 – 4th Ed.	<a href="#">E313168</a>

## Additional Information

Click these links for more information:



## Electrical Characteristics @ 25 °C

Bourns Part No.	Device Specifications										
	DC Sparkover Voltage @ 100 V/s (V)			Impulse Sparkover Voltage (V)		AC Withstand Voltage	Insulation Resistance @ 100 V	Capacitance @ 1 MHz	Glow to Arc Transition Current	Glow Voltage	Arc Voltage @ 1 A min.
	Min.	Typ.	Max.	100 V/μs	1 kV/μs	3 Min.	Min.	Max.			Typ.
GDT28H-100	800	1000	1200	1400	1500	510	10 GΩ	< 1.5 pF	< 0.5 A	~140 V	~25 V
GDT28H-110	880	1100	1320	1600	1700	560					
GDT28H-120	960	1200	1440	1700	1800	610					
GDT28H-130	1040	1300	1560	1800	1900	660					
GDT28H-150	1200	1500	1800	1800	2000	760					
GDT28H-200	1600	2000	2400	2500	2750	1015					
GDT28H-250	2000	2500	3000	3200	3500	1270					
GDT28H-270	2160	2700	3240	3600	4000	1370					
GDT28H-300	2400	3000	3600	4000	4200	1525					
GDT28H-330	2640	3300	3960	4600	4700	1680					

Bourns Part No.	Life Ratings <sup>3</sup>				
	Maximum Follow On Current <sup>1</sup>	Nominal AC Discharge Current	AC Discharge Current	Nominal Impulse Discharge Current <sup>2</sup>	Max. Surge Current <sup>3</sup>
	A	10 x 1 s @ 50-60 Hz	1 x 50-60 Hz, 9 cycles	8/20 μs	8/20 μs
GDT28H-100	200	N/A	N/A	5 kA 10 operations	10 kA 2 operations
GDT28H-110					
GDT28H-120					
GDT28H-130					
GDT28H-150					
GDT28H-200					
GDT28H-250					
GDT28H-270					
GDT28H-300					
GDT28H-330					

### Notes:

- (1) Test conducted in series with suitable MOV per UL1449 Edition 4.
- (2) 2 x [1(+) and 1(-)] operation 10 kA @ 80/20 μs.
- (3) DC and Impulse Sparkover after Life Ratings may exceed the upper limits shown but will continue to protect without venting (in compliance with ITU-T K.12 Edition 9.0, Section 6, as applicable).



**WARNING**  
Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

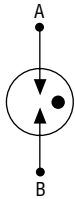
\*\*Bourns® products have not been designed for and are not intended for use in "lifesaving," "life-critical" or "life-sustaining" applications nor any other applications where failure or malfunction of the Bourns® product may result in personal injury or death.

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# GDT28H Series - High Voltage Gas Discharge Tube

**BOURNS®**

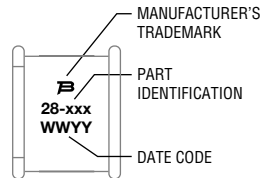
## Circuit Diagram



Note:  
Gas discharge tubes are bidirectional.

## Typical Part Marking

Represents total content. Layout may vary.



## Environmental Characteristics

Storage Temperature Range ..... -40 °C to +125 °C  
Operating Temperature Range ..... -40 °C to +125 °C  
Climatic Category (IEC 60068-1)..... 40/125/21  
Moisture Sensitivity Level ..... 1  
ESD Classification (HBM)..... N/A

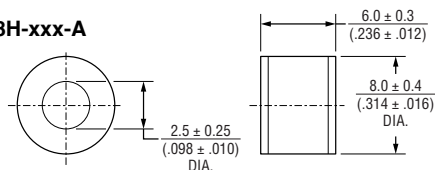
## How To Order

**GDT28H - xxx - B RP**

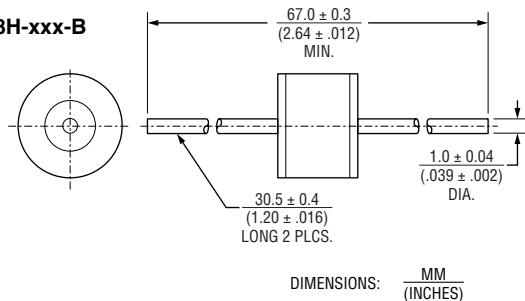
Series Designator \_\_\_\_\_  
DC Sparkover Voltage \_\_\_\_\_  
100 = 1000 V      200 = 2000 V  
110 = 1100 V      250 = 2500 V  
120 = 1200 V      270 = 2700 V  
130 = 1300 V      300 = 3000 V  
150 = 1500 V      330 = 3300 V  
Leads \_\_\_\_\_  
A = No Leads  
B = Straight Lead 0.8 mm  
Packaging \_\_\_\_\_  
Blank = Bulk  
RP = Reel Pack

## Product Dimensions

### GDT28H-xxx-A



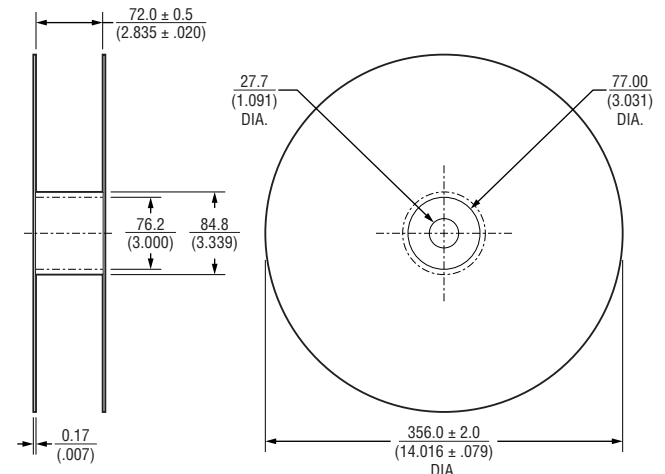
### GDT28H-xxx-B



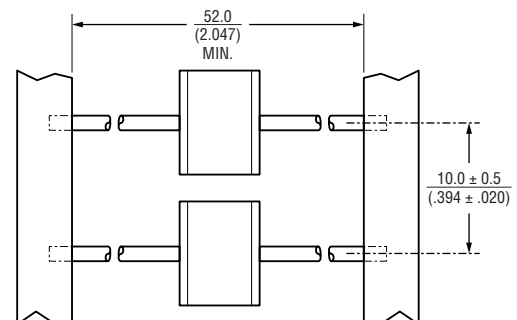
## Packaging Specifications

Model	Standard Packaging Quantity		
	Bulk (bag)	Box	Reel
GDT28H-xxx-A	250	1000	—
GDT28H-xxx-B	100	500	—
GDT28H-xxx-BRP	—	—	1000

## Reel Pack



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



REV. A 07/23

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