

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.	E313168

Additional Information

Click these links for more information:



Electrical Characteristics @ 25 °C

Bourns Part No.	Device Specifications										
	DC Sparkover Voltage @ 100 V/s (V) ⁽¹⁾			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.
				100 V/μs	1 kV/μs						
	Min.	Typ.	Max.	Max.	Max.	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 ⁽⁴⁾				
	Maximum Follow On Current ⁽²⁾	Nominal AC Discharge Current	AC Discharge Current	Nominal Impulse Discharge Current ⁽³⁾	Max. Surge Current ⁽⁴⁾
	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) DC and Impulse Sparkover values are in ionized mode @ 25 °C.
- (2) Test conducted in series with suitable MOV per UL1449 Edition 4.
- (3) 5(+) and 5(-) operation 5 kA @ 80/20 μs.
- (4) 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).

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

**Bourns® products have not been designed for and are not intended for us 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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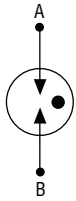


WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

GDT28H Series - High Voltage Gas Discharge Tube

BOURNS®

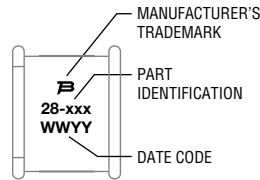
Circuit Diagram



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 _____

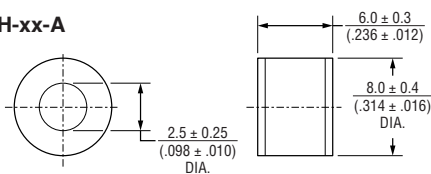
A = No Leads
 B = Straight Lead 1.0 mm

Packaging _____

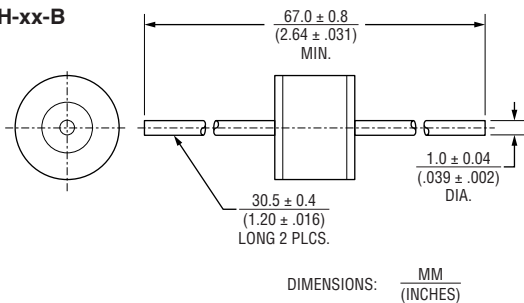
Blank = Bulk
 RP = Reel Pack

Product Dimensions

GDT28H-xx-A



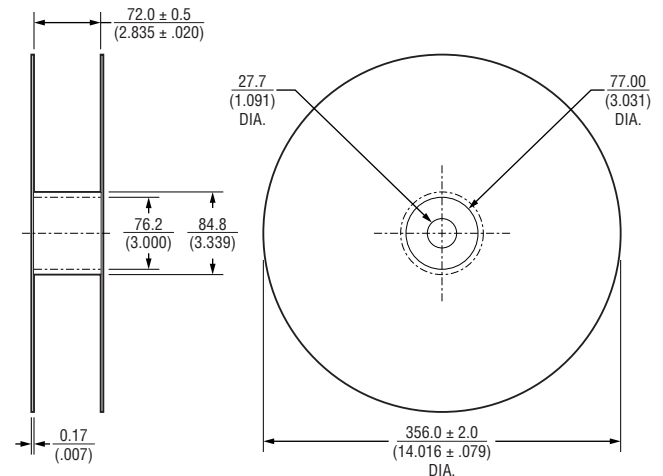
GDT28H-xx-B



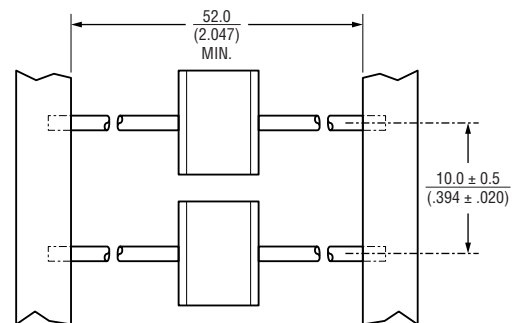
Packaging Specifications

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. C 07/24

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