

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	GDT28H-300-BRP
Manufacturer:	Bourns Inc.
Package:	Tape & Reel (TR), Cut Tape (CT)
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/bourns-inc/gdt28h-300-brp.html>

Request a Quote:

[Submit RFQ for this part](#)



Scan for product page

Contact Information

Email: info@antrexco.com

WhatsApp: +86-186-8066-5326

Website: <https://antrexco.com>

Quality & Trust

New & Original Components

Supplier verification and packaging condition review

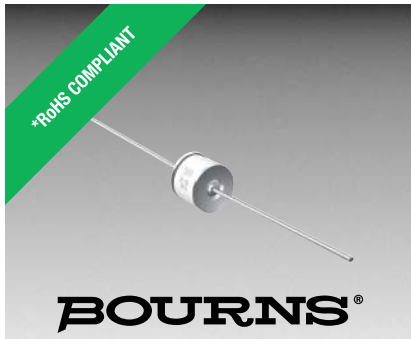
CoC / RoHS / REACH documents available on request

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

- 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 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.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

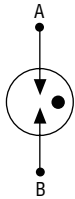


WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

GDT28H Series - High Voltage Gas Discharge Tube

BOURNS®

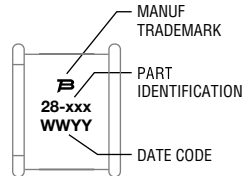
Circuit Diagram



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

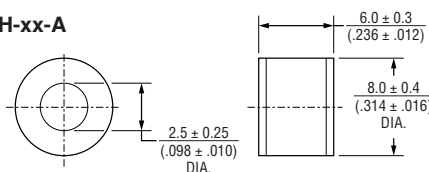
How To Order

GDT28H - xxx - B RP

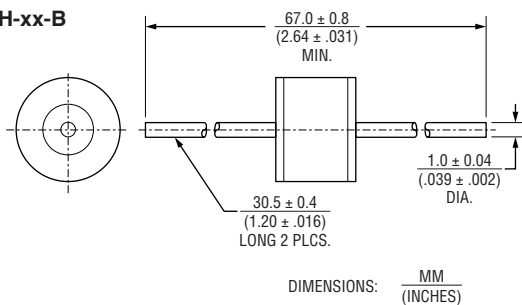
Series Designator _____
DC Sparkover Voltage _____
100 = 1000 V 200 = 2000 V
110 = 1100 V 250 = 2500 V
120 = 1200 V 270 = 2700 V
130 = 1300 V 300 = 3000 V
150 = 1500 V 330 = 3300 V
Leads _____
A = No Leads
B = Straight Lead 1.0 mm
Packaging _____
Blank = Bulk
RP = Reel Pack

Product Dimensions

GDT28H-xx-A



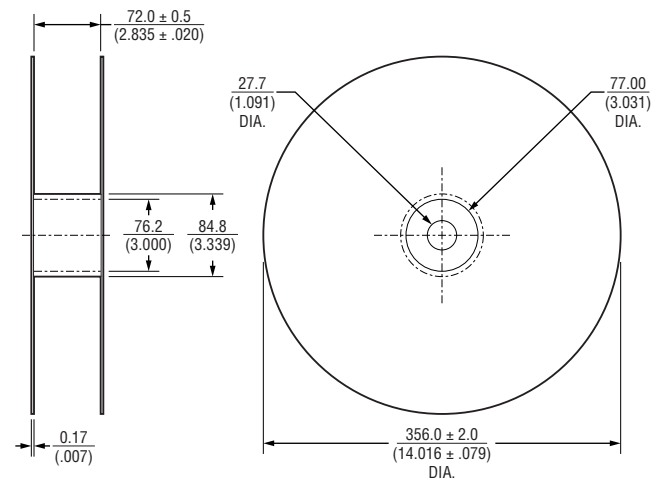
GDT28H-xx-B



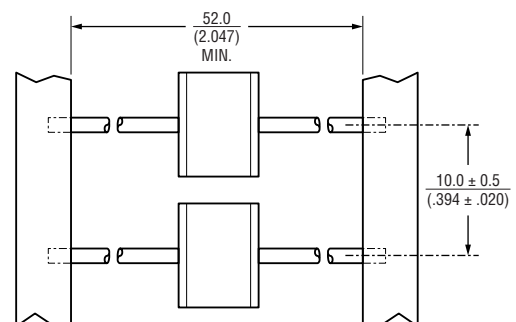
Packaging Specifications

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

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

This legal disclaimer applies to purchasers and users of Bourns® products manufactured by or on behalf of Bourns, Inc. and its affiliates (collectively, "Bourns").

Unless otherwise expressly indicated in writing, Bourns® products and data sheets relating thereto are subject to change without notice. Users should check for and obtain the latest relevant information and verify that such information is current and complete before placing orders for Bourns® products.

The characteristics and parameters of a Bourns® product set forth in its data sheet are based on laboratory conditions, and statements regarding the suitability of products for certain "typical" applications are based on Bourns' knowledge of typical requirements in generic applications. Bourns assumes that "typical" applications include failsafe/backup features to address critical risks to users and are designed to allow rework of Bourns® product to avoid scrap of a device solely due to malfunctioning Bourns® product. The characteristics and parameters of a Bourns® product in a user application may vary from the data sheet characteristics and parameters due to (i) the combination of the Bourns® product with other components in the user's application, or (ii) the environment of the user application itself. The characteristics and parameters of a Bourns® product also can and do vary in different applications and actual performance may vary over time. Thus, users should always verify the actual performance of the Bourns® product in their specific devices and applications and make their own independent judgments regarding the suitability of Bourns® product and the amount of additional test margin to design into their device or application to compensate for differences between laboratory and real-world conditions.

Unless Bourns has explicitly designated an individual Bourns® product as meeting the requirements of a particular industry standard (e.g., IATF 16949) or a particular qualification (e.g., UL listed or recognized), Bourns is not responsible for any failure of an individual Bourns® product to meet the requirements of such industry standard or particular qualification even if such industry standard or qualification is a "state of art". Users of Bourns® products are responsible for ensuring compliance with safety-related requirements and standards applicable to their devices or applications.

Bourns® products are not recommended, authorized or intended for use in applications where failure or malfunction may result in personal injury, death, or severe property or environmental damage, such as without limitation nuclear, life-critical medical and certain automotive and aviation applications. Except as set forth in the bullet points below or unless expressly and specifically approved in writing on a case-by-case basis by an authorized Bourns' representative, use of any Bourns® products in such unauthorized high-risk applications is at the user's sole risk.

- Bourns considers implantable/invasive devices and devices/procedures designed as life-supporting or life-sustaining by the U.S. Food and Drug Administration or equivalent organizations outside of the United States as "life-critical" medical applications. Bourns expressly identifies those Bourns® standard products that are suitable for use in typical medical applications that are not life-critical in its publication entitled "Bourns Medical Grade Component Guide."
- Bourns expressly identifies those Bourns® standard products that are suitable for use in typical automotive applications associated with any Automate Safety Integrity Level (ASIL) in its publication entitled "Bourns Automotive Grade Component Guide." Bourns' designation of Bourns® product as compliant with the AEC-Q standard does not by itself mean that Bourns has approved such product for use in an automotive application.
- Bourns expressly identifies Bourns® standard products that are suitable for use in the typical aviation applications/systems requiring System Design Assurance Level (RTCA DO-254 DAL) of C, D or E in its publication entitled "Bourns Civilian Aerospace/Aviation Grade Component Guide." Bourns does not test its products for compliance with United States Federal Aviation Administration standards or any other generally equivalent governmental organization standard applicable to products designed or manufactured for use in aviation applications. Use of Bourns® standard components in aviation applications associated with RTCA DO-254 DAL A or B without proper approval noted above shall be at the user's sole risk.
- Bourns will review and authorize on a case-by-case basis the use of Bourns® standard products which are at least AEC-Q compliant in space-related civil applications (rockets, satellites) with a negotiated cross-waiver and indemnity agreement.

The use and level of testing applicable to Bourns® custom products shall be negotiated on a case-by-case basis by Bourns and the user for which such Bourns® custom products are specially designed. Absent a written agreement between Bourns and the user regarding the use and level of such testing, the above provisions applicable to Bourns® standard products shall also apply to such Bourns® custom products.

Use of Bourns® products or Bourns' technology in military/defense applications must be reviewed with Bourns for compliance with applicable export control laws and embargoes. Users shall not sell, transfer, export or re-export (which includes transfers within a country) any Bourns® products or technology or technical data for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor shall they use Bourns® products or technology or technical data in any facility which engages in activities relating to such devices. Further, Bourns® products and Bourns' technology and technical data may not under any circumstance be exported or re-exported to countries subject to international sanctions or embargoes. Bourns® products and technology may not, without prior authorization from Bourns and/or the Government of a country where such product/technology is designed and/or manufactured, be resold, transferred, or re-exported (including within the same country) to any party not eligible to receive commodities, software, and technical data originating in such country.

To the maximum extent permitted by applicable law, Bourns disclaims (i) any and all liability for special, punitive, consequential, incidental or indirect damages or lost revenues or lost profits, and (ii) any and all implied warranties (those not based on parameters specified in Bourns' data sheets and/or specifications), including implied warranties of fitness for particular purpose, non-infringement and merchantability.

For your convenience, copies of this Legal Disclaimer Notice with German, Spanish, Japanese, Traditional Chinese and Simplified Chinese bilingual versions are available at:

Web Page: <https://www.bourns.com/legal/disclaimers-terms-and-policies>

PDF: <https://www.bourns.com/docs/Legal/disclaimer.pdf>