**GDT28H Series - High Voltage Gas Discharge Tube**

### 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

### 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

<table>
<thead>
<tr>
<th>Agency</th>
<th>Category</th>
<th>Agency File</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL</td>
<td>1449 – 4th Ed.</td>
<td>E313168</td>
</tr>
</tbody>
</table>

### Electrical Characteristics @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>DC Sparkover Voltage @ 100 V/s (V)</th>
<th>Impulse Sparkover Voltage (V)</th>
<th>AC Withstand Voltage</th>
<th>Insulation Resistance @ 100 V</th>
<th>Capacitance @ 1 MHz</th>
<th>Glow to Arc Transition Current</th>
<th>Glow Voltage</th>
<th>Arc Voltage @ 1 A min.</th>
<th>Typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDT28H-100</td>
<td>Min. 800 Typ. 1000 Max. 1200</td>
<td>100 V/µs Max. 1400</td>
<td>1 kV/µs Max. 1500</td>
<td>3 Min. 510</td>
<td>10 GΩ</td>
<td>&lt; 1.5 pF</td>
<td>&lt; 0.5 A</td>
<td>~140 V</td>
<td></td>
</tr>
<tr>
<td>GDT28H-110</td>
<td>Min. 880 Typ. 1100 Max. 1320</td>
<td>100 V/µs Max. 1600</td>
<td>1 kV/µs Max. 1700</td>
<td>3 Min. 560</td>
<td>10 GΩ</td>
<td>&lt; 1.5 pF</td>
<td>&lt; 0.5 A</td>
<td>~140 V</td>
<td></td>
</tr>
<tr>
<td>GDT28H-120</td>
<td>Min. 960 Typ. 1200 Max. 1440</td>
<td>100 V/µs Max. 1700</td>
<td>1 kV/µs Max. 1800</td>
<td>3 Min. 610</td>
<td>10 GΩ</td>
<td>&lt; 1.5 pF</td>
<td>&lt; 0.5 A</td>
<td>~140 V</td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Life Ratings

<table>
<thead>
<tr>
<th>Bourns Part No.</th>
<th>Maximum Follow On Current</th>
<th>Nominal AC Discharge Current</th>
<th>AC Discharge Current</th>
<th>Nominal Impulse Discharge Current</th>
<th>Max. Surge Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDT28H-100</td>
<td>200</td>
<td>N/A</td>
<td>N/A</td>
<td>5 kA 10 operations</td>
<td>10 kA 2 operations</td>
</tr>
</tbody>
</table>

**Notes:**
1. Test conducted in series with suitable MOV per UL1449 Edition 4.
2. 5(+)/5(-) operation 5 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

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GDT28H Series - High Voltage Gas Discharge Tube

Circuit Diagram

Typical Part Marking
Represented 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
110 = 1100 V
120 = 1200 V
130 = 1300 V
150 = 1500 V
200 = 2000 V
270 = 2700 V
250 = 2500 V
300 = 3000 V
330 = 3300 V

Leads
A = No Leads
B = Straight Lead 1.0 mm

Packaging
Blank = Bulk
RP = Reel Pack

Packaging Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Standard Packaging Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bulk (bag)</td>
</tr>
<tr>
<td>GDT28H-xxx-A</td>
<td>250</td>
</tr>
<tr>
<td>GDT28H-xxx-B</td>
<td>100</td>
</tr>
<tr>
<td>GDT28H-xxx-BRP</td>
<td>—</td>
</tr>
</tbody>
</table>

Product Dimensions

GDT28H-xx-A

GDT28H-xx-B

Environmental Characteristics

Product Dimensions

GDT28H-xx-A

GDT28H-xx-B

Note:
Gas discharge tubes are bidirectional.

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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