# ANTREX Electronics

Electronic Components Sourcing Information

## Product Reference Information

| | |
|---|---|
| **Part Number:** | GDT225HE-160-T1-BX |
| **Manufacturer:** | Bourns Inc. |
| **Package:** | Box |
| **Availability:** | Please confirm with sales |

**Product Page:**

https://antrexco.com/product/details/bourns-inc/gdt225he-160-t1-bx.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:**

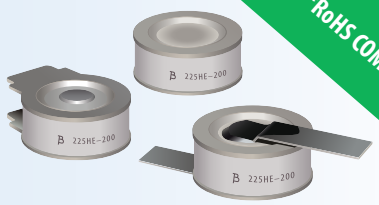
This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

BOURNS®

# GDT225HE SERIES

## High Voltage, High Energy Gas Discharge Tube Arrestor




*RoHS COMPLIANT

### Features

- Fast response time
- Wide temperature range
- High surge current rating
- Low capacitance and insertion loss
- Stable performance throughout life
- RoHS compliant*

### Applications

- Surge Protective Devices (SPDs)
- Power systems
- Industrial equipment
- Renewable energy (solar/wind) systems
- Energy storage systems

### Sustainability

- Small size reduces material use
- Corrosion-resistant for longevity
- ISO 14001, low-impact energy
- Responsibly sourced and produced

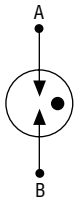
## Product Overview

The Model GDT225HE Series are UL recognized GDT devices rated at 60 kA maximum on an 8/20 µs waveform, providing a volume and space-saving solution for high density and space-restricted applications. This device is available in various lead shapes to fit a variety of configuration requirements.

## Product Characteristics

| | |
|---|---|
| Storage Temperature Range | -40 °C to +105 °C |
| Operating Temperature Range | -40 °C to +105 °C |
| Climate Category (IEC 60068-1) | 55 / 105 / 21 |
| Moisture Sensitivity Level (MSL) | 1 |
| ESD Classification - HBM | N/A |

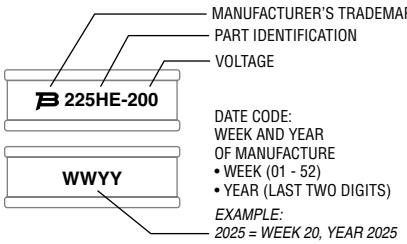
## Circuit Diagram




Note: Gas discharge tubes are bidirectional and non-polarized.

## Typical Part Marking

Represents total content. Layout may vary.




## How to Order

**GDT 2 25 HE - xxx - A - BX**

Description
GDT = Gas Discharge Tube - Next-Generation Series

Electrodes
2 = 2-Electrode

Size
25 = 25 mm Diameter

Sub-series Designator
HE = High Voltage, High Energy GDT

Voltage
100 = 1000 V
120 = 1200 V
140 = 1400 V
160 = 1600 V
180 = 1800 V
200 = 2000 V

Terminal Designator**
A = Leadless (Standard)
T1 = Two Side Terminals
T2 = Parallel Terminals

Package Designator
BX = Box (Standard)

** Special terminals upon request.

## Packaging Specifications

| Model | Quantity per Box |
|---|---|
| GDT225HE-xxx-A | 400 pcs. |
| GDT225HE-xxx-T1 | 160 pcs. |
| GDT225HE-xxx-T2 | 400 pcs. |

## Agency Recognition***

| Agency | Category | Agency File No. |
|---|---|---|
| UL | 1449 4th Edition | E313168 |

*** 2000 V model has passed UL safety certification; other voltages are pending.

## Contact Information

| www.bourns.com | Phone | Email |
|---|---|---|
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| The Americas | +1-951 781-5500 | americus@bourns.com |

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.

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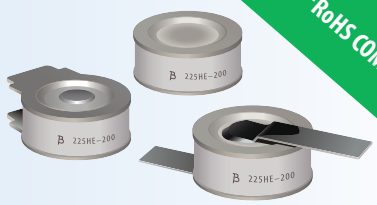


*RoHS COMPLIANT

## Electrical Characteristics (@ $T_A$ = 25 °C Unless Otherwise Noted)

Test Methods per ITU-T K.12, IEEE C62.31 and IEC 61643-311 GDT standards

| Bourns Part No. | Device Specifications *(1)* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | DC Breakdown Voltage ±20 % | Maximum Impulse Breakdown Voltage | Maximum Impulse Discharge Current (8/20 µs) | | Maximum Impulse Discharge Current (10/350 µs) | TOV 1200 V 0.2 S | Maximum Follow-on Current @ 50/60 Hz | MCOV [1] @ 50/60 Hz | Minimum Insulation Resistance [2] | Breakdown Time |
| | 100~2000 V/s | 1.2/50 µs 6 kV | 2 Times | 15 Times | 1 Time | | | | | |
| GDT225HE-100 | 1000 V | 1800 V | 60 kA | 40 kA | 12.5 kA | 300 A | 100 A | 255 V | 1 GΩ | <100 ns |
| GDT225HE-120 | 1200 V | 2100 V | | | | | | | | |
| GDT225HE-140 | 1400 V | 2400 V | | | | | | | | |
| GDT225HE-160 | 1600 V | 2500 V | | | | | | | | |
| GDT225HE-180 | 1800 V | 2800 V | | | | | | | | |
| GDT225HE-200 | 2000 V | 3000 V | | | | | | | | |

Notes:

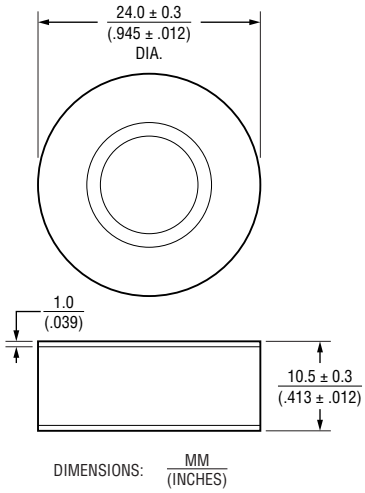
(1) By a suitable MOV in series.

(2) IR Test Voltage: 500 V.

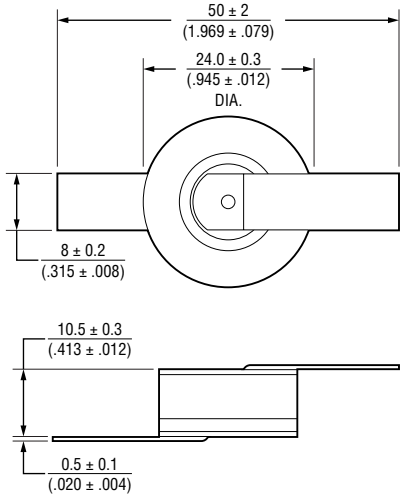
- At delivery AQL 0.65 Level II, DIN ISO 2859.
- DC and Impulse Sparkover values are in ionized mode @ 25 °C.
- Bourns recommends reflowing surface mount devices per IPC/ JEDEC J-STD-020 rev. D.
- Impulse Sparkover voltage is expressed as a maximum value, with a 99 % probability of measured values within limit.
- IR limits after Life Ratings > 100 MΩ.
- Network applied (per ITU-T K.12 Edition 9.0, Section 7).
- DC Sparkover Voltage limits after Life Ratings may exceed +20 % but will continue to protect without venting (per ITU-T K.12 Edition 9.0, Section 6, where applicable).

## Product Dimensions

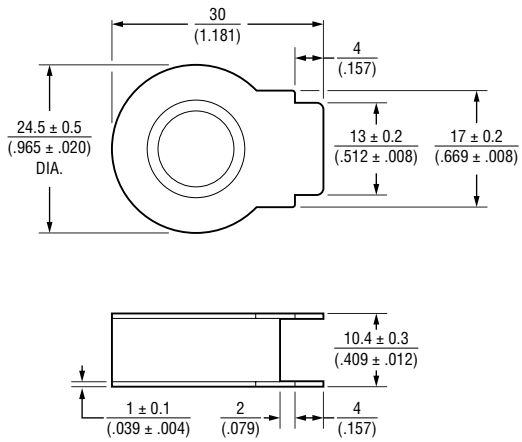
**GDT225HE-xxx-A**




**GDT225HE-xxx-T1**




**GDT225HE-xxx-T2**




REV. 11/25

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

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