



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

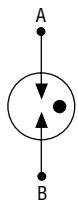
The Model GDT225HE Series are UL recognized GDT devices rated at 60 kA maximum on an 8/20 μ s waveform, providing a volume and space-saving solution for high density and space-restricted

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

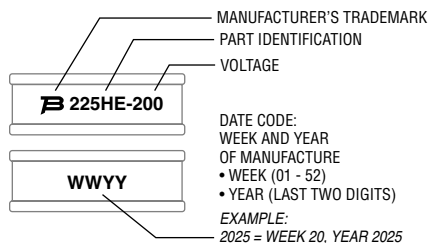
Circuit Diagram



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

Typical Part Marking

Represents total content. Layout may vary.



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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 160 = 1600 V
120 = 1200 V 180 = 1800 V
140 = 1400 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.

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

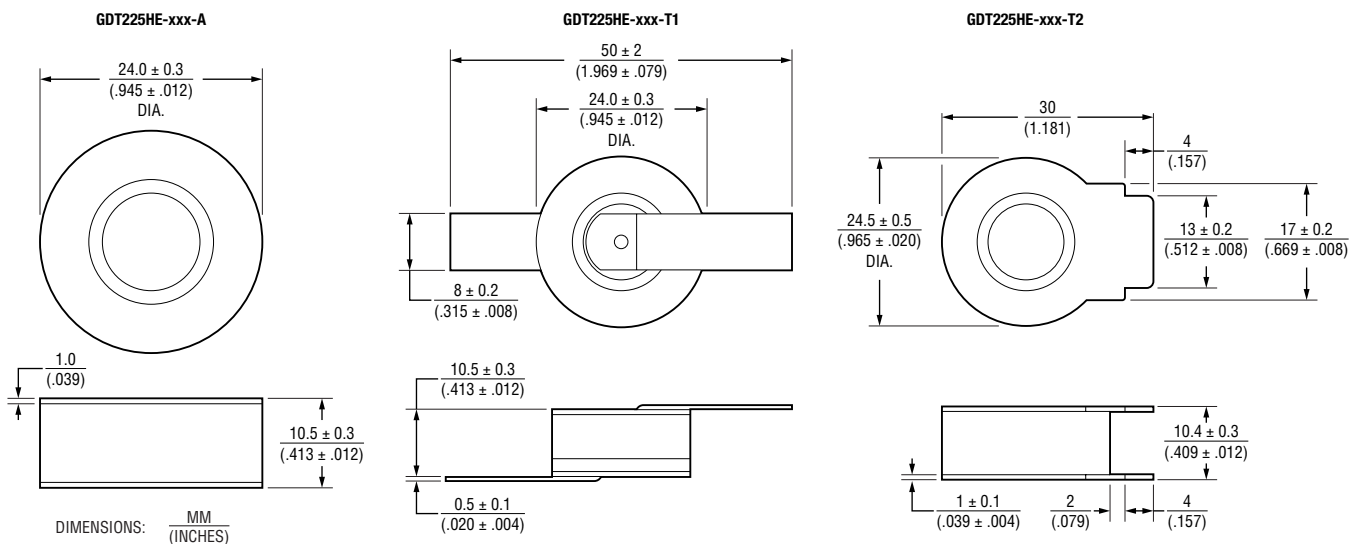
Test Methods per ITU-T K.12, IEEE C62.31 and IEC 61643-311 GDT standards

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



REV. 11/25
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