

# ANTREX Electronics

## Electronic Components Sourcing Information

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### Product Reference Information

**Part Number:** GDT230E-60-T2-BX  
**Manufacturer:** Bourns Inc.  
**Package:** Box  
**Availability:** Please confirm with sales

**Product Page:**

<https://antrexco.com/product/details/bourns-inc/gdt230e-60-t2-bx.html>

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### Contact Information

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### Quality & Trust

New & Original Components

Supplier verification and packaging condition review

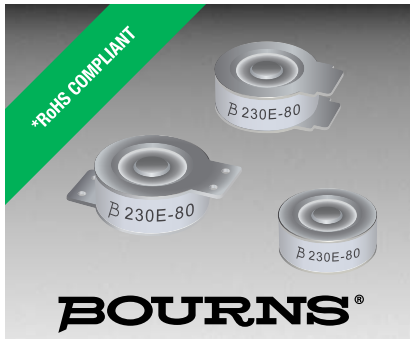
CoC / RoHS / REACH documents available on request

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

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

## Applications

- Surge Protective Devices (SPDs)
- Power systems
- Industrial equipment

## GDT230E Series – Very High Energy Gas Discharge Tube Arrestor

### General Information

Bourns® Model GDT230E Series UL recognized GDT devices are rated at 160 kA maximum on an 8/20  $\mu$ s waveform, providing a volume and space-saving solution for high-density and space-restricted applications that require a very high surge current. This series 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 |
| Climatic Category (IEC 60068-1) .....  | 40 / 105 / 21     |
| Moisture Sensitivity Level (MSL) ..... | 1                 |
| ESD Classification - HBM .....         | N/A               |

### How to Order

|                                                   |                                                                               |
|---------------------------------------------------|-------------------------------------------------------------------------------|
| Description .....                                 | GDT 2 30 E - xx - A - BX                                                      |
| GDT = Gas Discharge Tube - Next-Generation Series |                                                                               |
| Electrodes .....                                  | 2 = 2-Electrode                                                               |
| Size .....                                        | 30 = 30 mm Diameter                                                           |
| Sub-series Designator .....                       | E = High Energy GDT                                                           |
| Voltage .....                                     | 50 = 500 V<br>60 = 600 V<br>80 = 800 V                                        |
| Terminal Designator** .....                       | A = Leadless (Standard)<br>T1 = Two Side Terminals<br>T2 = Parallel Terminals |
| Packaging Options .....                           | BX = Box (Standard)                                                           |

\*\*Special terminals upon request

**BOURNS®**

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[www.bourns.com](http://www.bourns.com)



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\*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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### Additional Information

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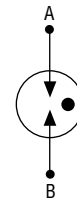


[CONTACT](#)

### Agency Recognition

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

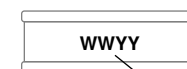
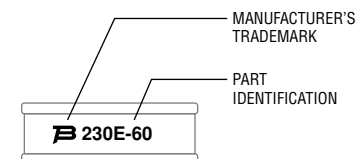
### Circuit Diagram



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

### Typical Part Marking

Represents total content. Layout may vary.



DATE CODE:  
WEEK AND YEAR  
OF MANUFACTURE  
• WEEK (01 - 52)  
• YEAR (LAST TWO DIGITS)  
EXAMPLE:  
2023 = WEEK 20, YEAR 2023

### Packaging Specifications

| Model         | Quantity per Box |
|---------------|------------------|
| GDT230E-xx-A  | 160              |
| GDT230E-xx-T1 | 160              |
| GDT230E-xx-T2 | 160              |

# GDT230E Series – Very High Energy Gas Discharge Tube Arrestor

**BOURNS®**

## Electrical Characteristics

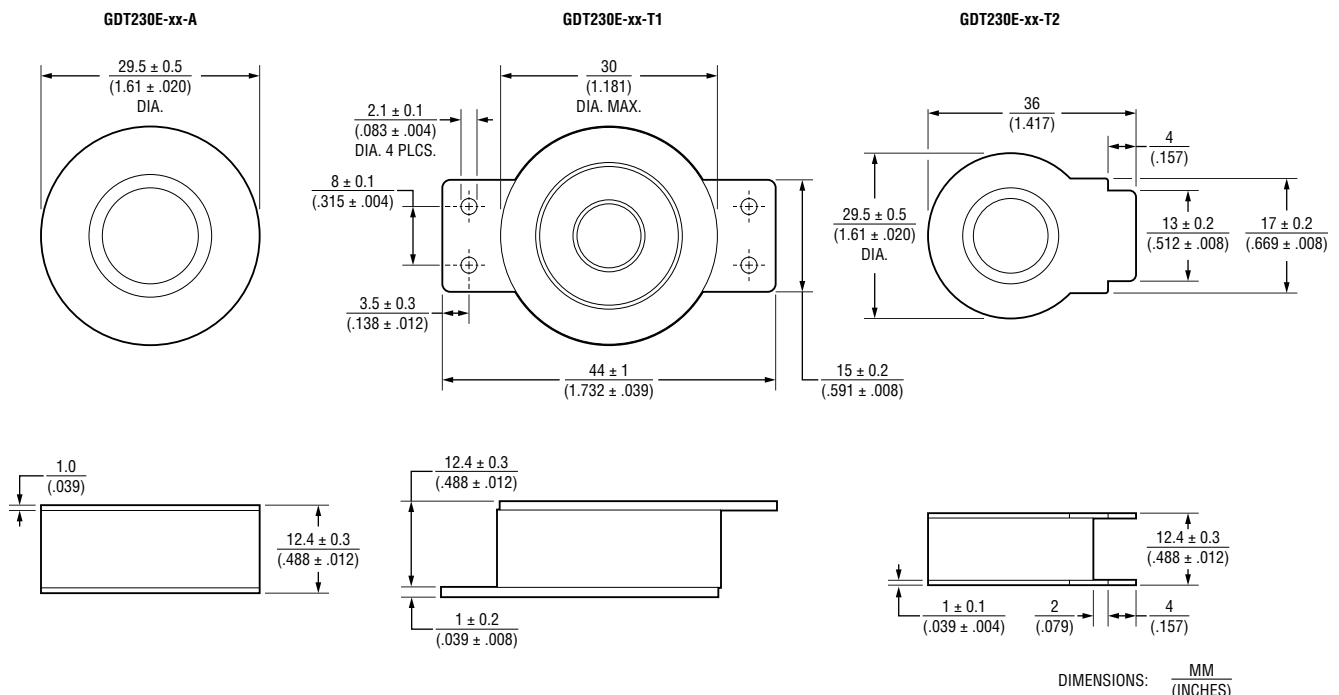
Test Methods per ITU-T K.12, IEEE C62.31 and IEC 61643-311 GDT standards.

| Bourns Part No. | Device Specifications           |                                   |                                                  |          |                                                    |                  |                                      |                 |                                            |                |
|-----------------|---------------------------------|-----------------------------------|--------------------------------------------------|----------|----------------------------------------------------|------------------|--------------------------------------|-----------------|--------------------------------------------|----------------|
|                 | DC Breakdown Voltage $\pm 20\%$ | Maximum Impulse Breakdown Voltage | Maximum Impulse Discharge Current (8/20 $\mu$ s) |          | Maximum Impulse Discharge Current (10/350 $\mu$ s) | TOV 1200 V 0.2 S | Maximum Follow-On Current @ 50/60 Hz | MCOV @ 50/60 Hz | Minimum Insulation Resistance <sup>1</sup> | Breakdown Time |
|                 | 100~2000 V/s                    | 1.2/50 $\mu$ s 6 kV               | 1 time                                           | 10 times | 1 time                                             |                  |                                      |                 |                                            |                |
| GDT230E-50      | 500 V                           | 1300 V                            | 160 kA                                           | 100 kA   | 50 kA                                              | 300 A            | 100 A                                | 255 V           | 10 G $\Omega$                              | <100 ns        |
| GDT230E-60      | 600 V                           | 1400 V                            |                                                  |          |                                                    |                  |                                      |                 |                                            |                |
| GDT230E-80      | 800 V                           | 1500 V                            |                                                  |          |                                                    |                  |                                      |                 |                                            |                |

Notes:

- (1) IR Test Voltage: 250 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 M $\Omega$ .
- 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. 1 04/25

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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