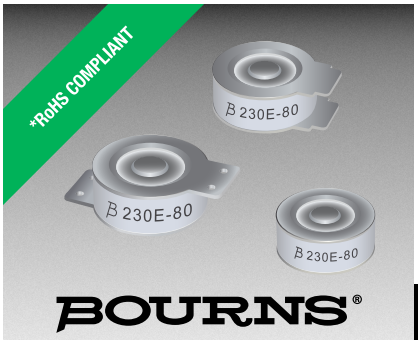


Features

- 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 µs 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

GDT 2 30 E - xx - A - BX

Description
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
60 = 600 V
80 = 800 V

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

Packaging Options
BX = Box (Standard)

**Special terminals upon request

Additional Information

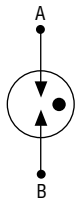
Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Agency Recognition

Agency	Category	Agency File No.
UL	1449-4	E313168

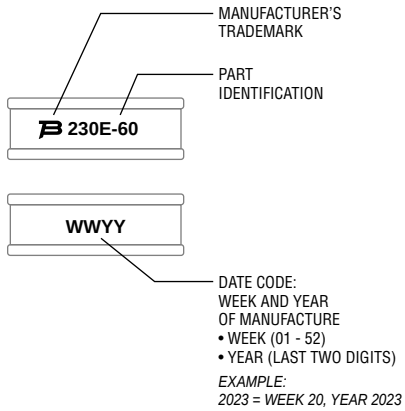
Circuit Diagram



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

Typical Part Marking

Represents total content. Layout may vary.



Packaging Specifications

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

BOURNS®

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Asia: Tel: +886-2-2562-4117 • Email: asiacus@bourns.com
EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com
www.bourns.com

WARNING Cancer and Reproductive Harm - 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.

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 ±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 @ 50/60 Hz	Minimum Insulation Resistance[1]	Breakdown Time
	100~2000 V/s	1.2/50 μs 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 GΩ	<100 ns
GDT230E-60	600 V	1400 V								
GDT230E-80	800 V	1500 V								

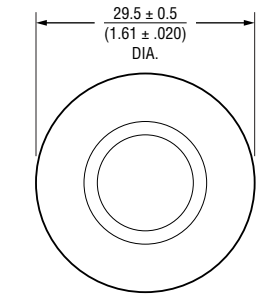
Notes:

(1) IR Test Voltage: 250 V.

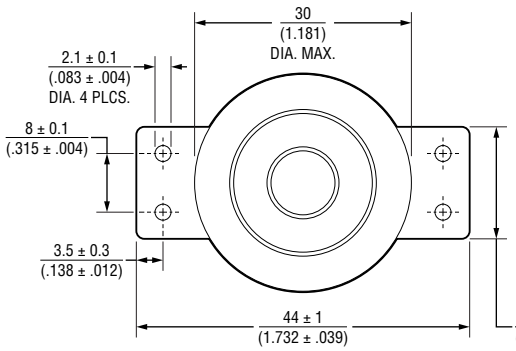
- At delivery AQL 0.65 Level II, DIN ISO 2859.
- DC and Impulse Sparkover values are in ionized mode @ 25 °C.
- Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev. D.
- Impulse Sparkover voltage is expressed as a maximum value, with a 99 % probability of measured values within limit.
- IR limits after Life Ratings > 100 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

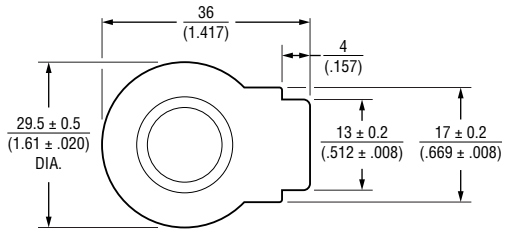
GDT230E-xx-A

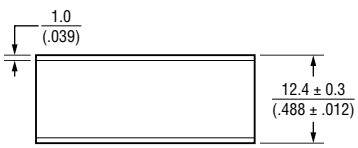


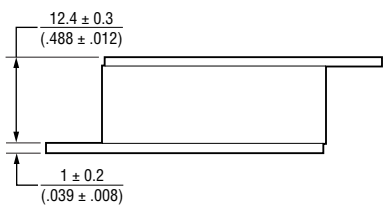
GDT230E-xx-T1

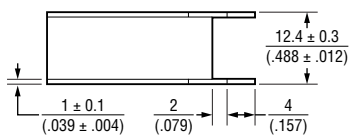


GDT230E-xx-T2









DIMENSIONS: MM (INCHES)

REV. 1 04/25

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