



Features

- Fast acting
- Balanced
- Stable breakdown throughout life
- Designed to operate with TBU® devices
- RoHS compliant* versions available

Applications

- Telecommunications
- Industrial electronics
- Avionics

2020 T-Series - Fast Acting 3-Electrode Miniature GDT

Characteristics

Characteristic	Model No.		
	2020-15T	2020-23T	2020-42T
Minimum DC Sparkover (100 V/s) Throughout Service Life	60 V	180 V	360 V
Maximum Impulse Sparkover (5k V 1.2/50 μ s) Throughout Service Life	500 V	650 V	850 V

Impulse Transverse Delay	1000 V/ μ s	< 75 ns
Insulation Resistance (IR)	50 V / 100 V	> 10 ⁹ Ω
Glow Voltage	10 mA	~ 70 V
Arc Voltage	>1 A	~ 10 V
Glow-Arc Transition Current		< 0.5 A
Capacitance.....	1 MHz	< 1 pF
DC Holdover Voltage (Network Applied per ITU-T K.12)		
2020-15T	52 V	< 150 ms
2020-23T	80 V	< 150 ms
2020-42T	135 V	< 150 ms
Service Life ¹	8/20 μ s, 10 kA.....	1 operation
	10/1000 μ s, 1 kV, 200 A.....	100 operations ²
	2/10 μ s, 6 kV, 2000 A.....	10 operations ²
	10/700 μ s, 6 kV, 300 A.....	50 operations ²
	8/20 μ s, 500 A, 1.2/50 μ s, 500 V	150 operations ²
	600 V, 10 Arms, 0.2 sec.....	10 operations
	600 Vrms, 0.5 A - 60 A.....	Fail-Short activates ³
	230 Vrms, 0.5 A-25 A.....	Fail-Short activates ³
Operating Temperature Range		-40 °C to +90 °C
Storage Temperature Range		-55 °C to +90 °C

Notes:

- 1 The rated discharge current is the total current equally divided between each line to ground.
 - 2 Surge polarity should be reversed between consecutive surges (+,-,+,-)
 - 3 Applies only to GDT with optional Fail-Short. GDT operates and will survive with Fail-Short activation.
- At delivery AQL 0.65 Level II, DIN ISO 2859.

Applications

Port Protection	GDT Device P/N	TBU® Device P/N
CanBus	2020-23T	TBU-CA065-100-WH
RS232	2020-23T	TBU-CA065-200-WH
RS422	2020-23T	TBU-CA065-200-WH
RS485	2020-23T	TBU-CA065-200-WH
RS485	2020-42T	TBU-CA085-200-WH
SDI	2020-23T	TBU-CA065-100-WH
VDSL	2020-15T	TBU-CA050-500-WH

*"TBU" is a registered trademark of Bourns, Inc. in the United States and other countries.

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

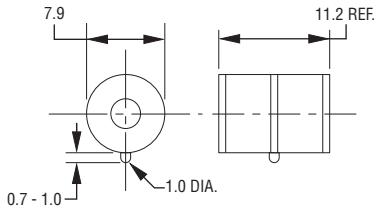
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

2020 T-Series - Fast Acting 3-Electrode Miniature GDT

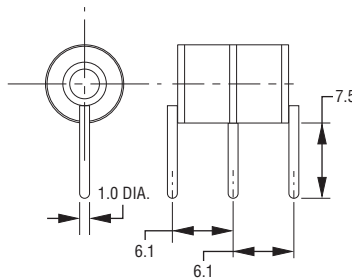
BOURNS®

Product Dimensions (additional lead form configurations available upon request)

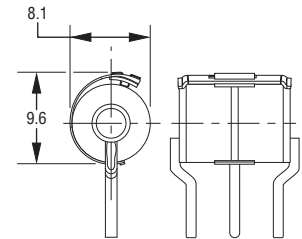
2020-xxT-A1



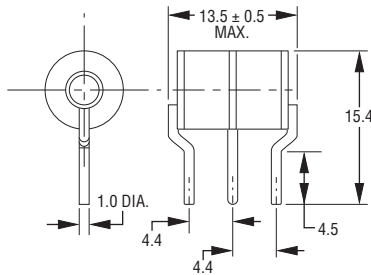
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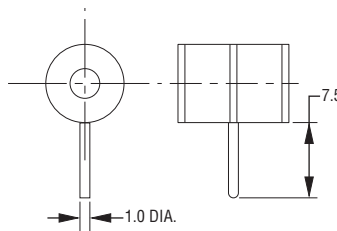
**FAIL-SHORT
CONFIGURATION
2020-xxT-C2F SHOWN**



2020-xxT-C2



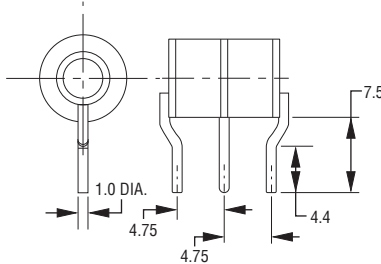
2020-xxT-C8



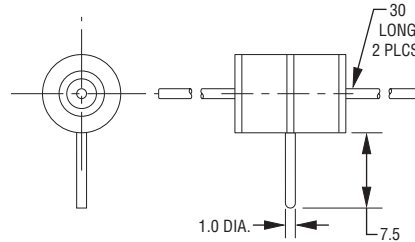
DIMENSIONS: MILLIMETERS

UNITS WITH LEADS ARE BASED ON THE 2020-xxT-A1 BODY.

2020-xxT-C3



**2020-xxT-C
1.0 mm dia. lead wire**



How to Order

2020 - xxT - x x F LF

Model Number

Designator

Voltage

15 = 60 V

23 = 180 V

42 = 360 V

Leads

A = None/Cassette Applications

C = 1 mm Dia. Leads/Through-hole

Lead Shape

(See Product Dimension Drawings)

Fail-Short Option

Blank = Standard Product

F = With Fail-Short Mechanism

RoHS Compliant Option

Blank = Standard Product

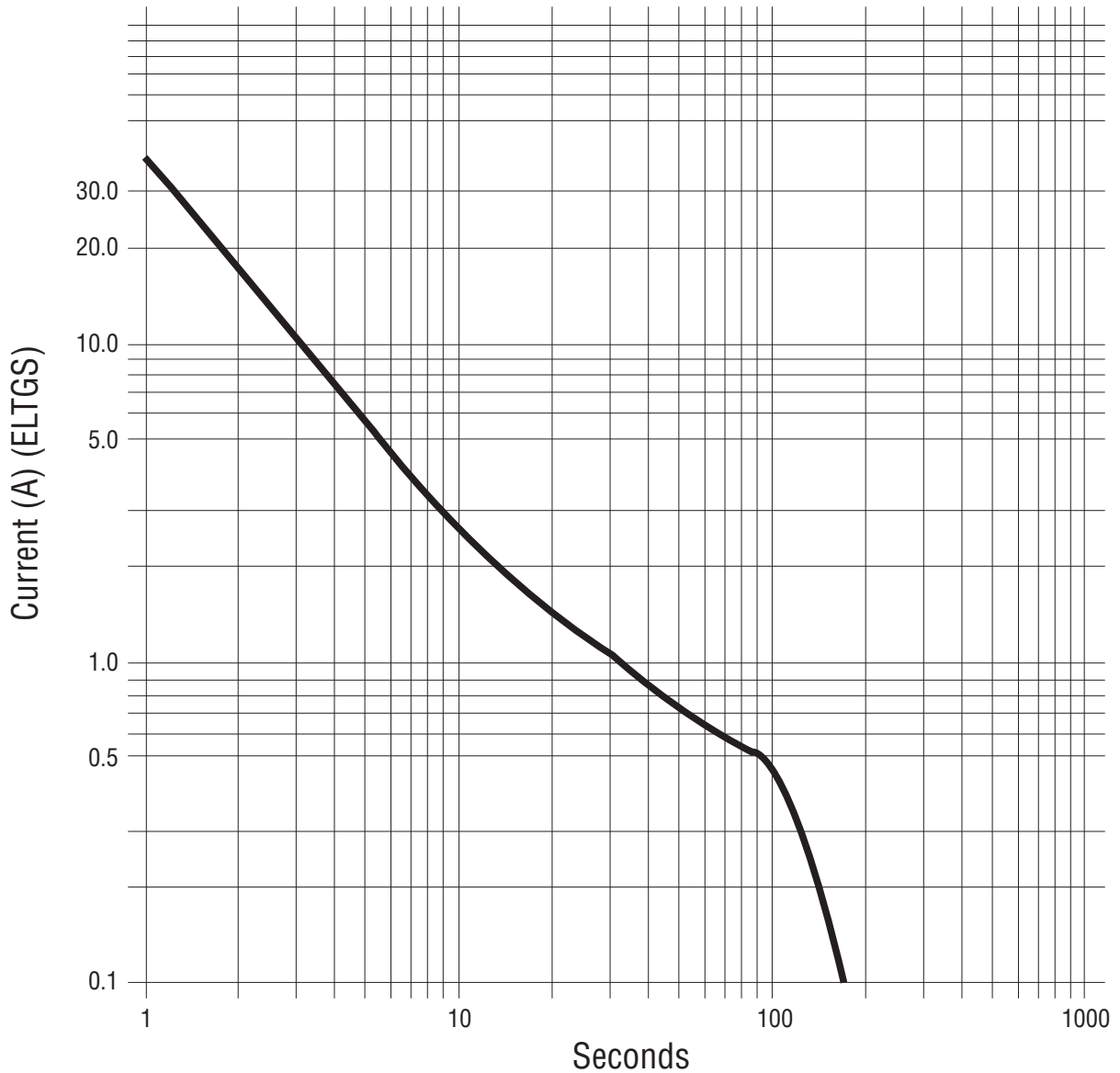
LF = RoHS Compliant Product

Model 2020-xxT ships in standard bulk pack, 100 pcs./tray.

2020 T-Series - Fast Acting 3-Electrode Miniature GDT

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Switch-Grade Fail-Short Device Shorting Curve 2020-xxT-XF



ELTGS = Each Line to Ground Simultaneously

NOTE: When using a GDT fail-short device, it is imperative that all components associated and connected to the GDT with failsafe be tested in their respective completely integrated environment (finished product) to assure desired operation.

REV. E 05/15

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