



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 - 3-Pole Fast Gas Discharge Tube

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 µs) Throughout Service Life	500 V	650 V	850 V

Impulse Transverse Delay.....	1000 V/µs	< 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 µs, 5 kA	1 operation
	10/1000 µs, 1 kV, 100 A.....	100 operations ²
	2/10 µs, 5 kV, 1000 A.....	10 operations ²
	10/700 µs, 6 kV, 150 A.....	50 operations ²
	8/20 µs, 500 A, 1.2/50 µs, 500 V.....	150 operations ²
	600 V, 5 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 and Storage Temperature.....		-40 to +90 °C
Climatic Category (IEC 60068-1)		40 / 90 / 21

Notes:

- 1 Applied per conductor to center pin.
 - 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

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*RoHS Directive 2002/95/EC Jan 27, 2003 including Annex.

Specifications are subject to change without notice.

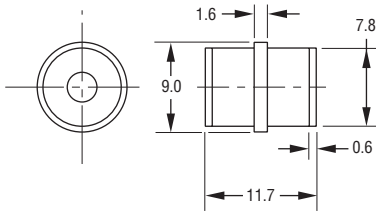
Customers should verify actual device performance in their specific applications.

2020 T Series - 3-Pole Fast Gas Discharge Tube

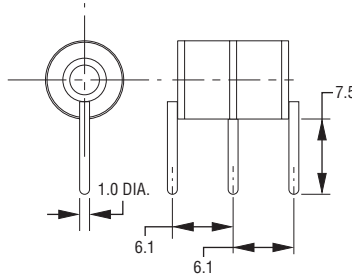
BOURNS®

Product Dimensions (additional lead form configurations available upon request)

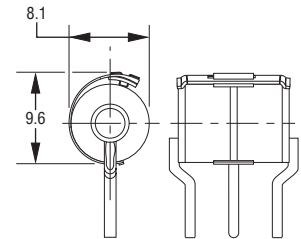
2020-xxT-A



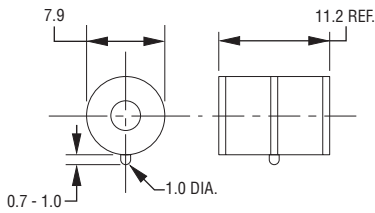
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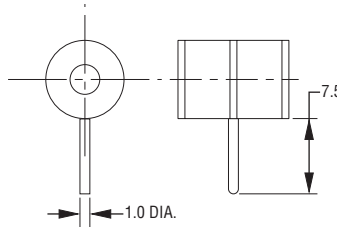
**FAIL-SHORT
CONFIGURATION
2020-xxT-C2F SHOWN**



2020-xxT-A1



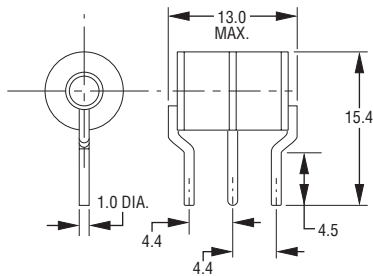
2020-xxT-C8



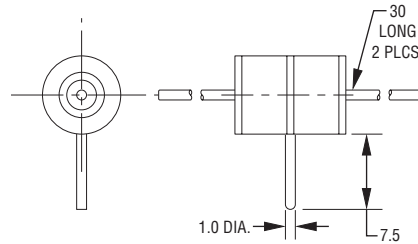
DIMENSIONS: MILLIMETERS

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

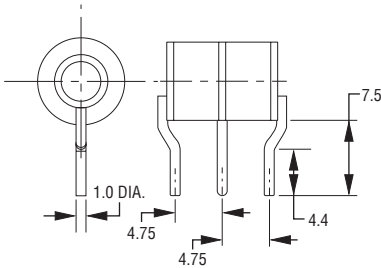
2020-xxT-C2



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



2020-xxT-C3



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

Cn = 1 mm Dia. Leads/Through-hole

Lead Shape

(See Product Dimension Drawings)

Fail-Short Option

Blank = Standard Product

F = With Fail-Short Mechanism

Lead Free Option

Blank = Standard Product

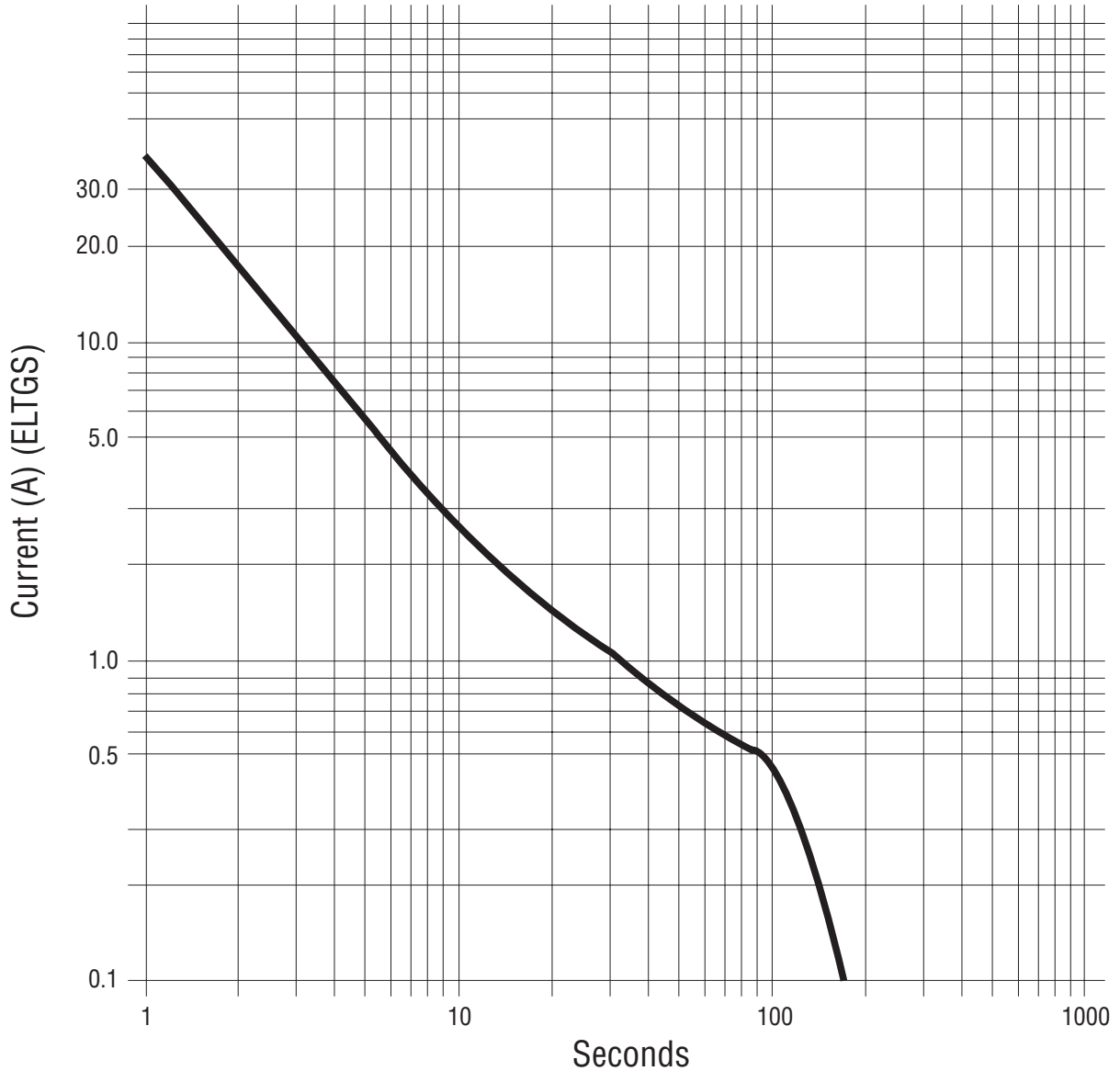
LF = Lead Free/RoHS Compliant Product

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

2020 T Series - 3-Pole Fast Gas Discharge Tube

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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.