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

Applications
- Telecommunications
- Industrial electronics
- Avionics

### Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>2020-15T</th>
<th>2020-23T</th>
<th>2020-42T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum DC Sparkover (100 V/s) Throughout Service Life</td>
<td>60 V</td>
<td>180 V</td>
<td>360 V</td>
</tr>
<tr>
<td>Maximum Impulse Sparkover (5k V 1.2/50 µs) Throughout Service Life</td>
<td>500 V</td>
<td>650 V</td>
<td>850 V</td>
</tr>
</tbody>
</table>

- Impulse Transverse Delay 1000 V/µs: < 75 ns
- Insulation Resistance (IR): 50 V / 100 V: > 10⁹ Ω
- Glow Voltage: 10 mA
- Arc Voltage: > 1 A
- Glow-Arc Transition Current: ~ 70 V
- Capacitance: < 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:
  - 8/20 µs, 10 kA: 1 operation
  - 10/1000 µs, 1 kV, 200 A: 100 operations
  - 2/10 µs, 6 kV, 2000 A: 10 operations
  - 10/700 µs, 6 kV, 300 A: 50 operations
  - 8/20 µs, 500 A, 1.2/50 µs, 500 V: 150 operations
  - 600 V, 10 Arms, 0.2 sec: 10 operations
  - 600 Vrms, 0.5 A - 60 A: Fail-Short activates
  - 230 Vrms, 0.5 A-25 A: Fail-Short activates

- Operating and Storage Temperature: -40 to +90 °C
- Climatic Category (IEC 60068-1): 40 / 90 / 21

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

<table>
<thead>
<tr>
<th>Port Protection</th>
<th>GDT Device P/N</th>
<th>TBU® Device P/N</th>
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<tbody>
<tr>
<td>CanBus</td>
<td>2020-23T</td>
<td>TBU-CA065-100-WH</td>
</tr>
<tr>
<td>RS232</td>
<td>2020-23T</td>
<td>TBU-CA065-200-WH</td>
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<td>2020-23T</td>
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<td>TBU-CA085-200-WH</td>
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<tr>
<td>SDI</td>
<td>2020-23T</td>
<td>TBU-CA065-100-WH</td>
</tr>
<tr>
<td>VDSL</td>
<td>2020-15T</td>
<td>TBU-CA050-500-WH</td>
</tr>
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</table>

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

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.
### How to Order

- **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.

### Specifications

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

**DIMENSIONS: MILLIMETERS**

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

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