

### Gas Discharge Tubes GTCX25-XXXM-R02 Series

Littelfuse Circuit Protection 5mm 2Pole GDTs (ceramic gas discharge tubes), are commonly used to help protect sensitive telecom equipment such as communication lines, signal lines and data transmission lines from damage caused by transient surge voltages that typically result from lightning strikes and equipment switching operations.

Littelfuse Circuit Protection GDTs offer a high level of surge protection, low capacitance and a broad array of breakover voltage levels, making them suitable for applications such as MDF (Main Distribution Frame) modules, high data-rate telecom applications (e.g. ADSL, VDSL), and surge protection on power lines. Littelfuse Circuit Protection GDTs, can help equipment meet the most stringent regulatory standards.



#### **Benefits:**

- Compact, small form factor suitable for efficient assembly
- Helps provide overvoltage fault protection against high energy surges
- · Suitable for high-frequency applications

#### Features:

- 2Pole, 5mm devices
- Broad voltage range from 75V-600V
- Various form factors: surface mount, axial leads, no leads
- · Low capacitance and insertion loss
- UL 497B recognized
- · RoHS compliant
- Devices tested per ITU K.12 recommendations
- Non-radioactive materials

#### **Applications:**

- Telecommunications
- MDF modules, xDSL equipment, RF system

protection, antenna, base station

- Industrial and consumer electronics, such as
  - Surge protectors
  - Alarm system



### GTCX25-XXXM-R02 Series

### Device Voltage Ratings and Part Marking

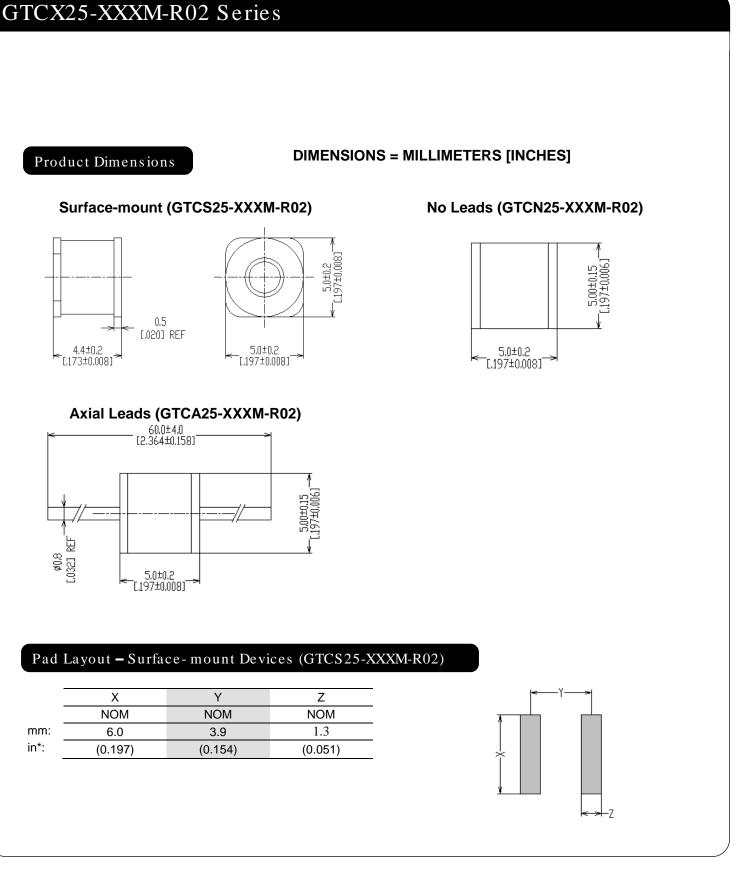
Part Number	DC Sparkover	Impulse Sparkover		DC Holdover Voltage	On-State Voltage
	@100V/s ±20% Tolerance (V)	@100 V/µs (V)	@1000 V/µs (V)	Per ITU K.12 (<150ms) (V)	Nominal (@ 1A) (V)
GTCX25-750M-R02	75	450	550	<52	20
GTCX25-900M-R02	90	450	550	<52	20
GTCX25-141M-R02	140	500	600	<80	20
GTCX25-151M-R02	150	500	600	<80	20
GTCX25-201M-R02	200	600	700	<135	20
GTCX25-231M-R02	230	600	700	<135	20
GTCX25-251M-R02	250	600	700	<135	20
GTCX25-261M-R02	260	700	800	<135	20
GTCX25-301M-R02	300	800	900	<150	20
GTCX25-351M-R02	350	900	1000	<150	20
GTCX25-401M-R02	400	900	1000	<150	20
GTCX25-421M-R02	420	900	1000	<150	20
GTCX25-471M-R02	470	1050	1150	<150	20
GTCX25-501M-R02	500	1100	1200	<150	20
GTCX25-551M-R02	550	1300	1400	<150	20
GTCX25-601M-R02	600	1300	1400	<150	20

### Device Surge Rating, Capacitance, Insulation Resistance, UL

Part Number	Impulse Discharge Current	Impulse Life	AC Discharge Current (1sec duration; 10 hits)	Capacitance	Insulation Resistance	UL Rating
	8x20µs 10 hits	10x1000µs 300 hits	@50 Hz	@1Mhz	@100V*	UL497B #E179610
GTCX25-xxxM-R02	2.5kA	100A	2.5Arms	<1pF	10,000 (MΩ)	All Devices

Devices >=500V measured @ 250V







### GTCX25-XXXM-R02 Series

### General Characteristics

No Radioactive Material Storage Temperature: -40°C to +90°C Operating Temperature: -40°C to +90°C Body: Nickel Plated Leads: Surface-mount, Axial Devices: Tin Plated Devices with No Leads: Nickel Plated Soldering Note: Devices with no leads are non-solderable; meant for insertion into magazine clips

#### Packaging Information

#### **Part Description**

No Leads: GTCN25-XXXM-R02 Axial Leads: GTCA25-XXXM-R02 Surface-mount: GTCS25-XXXM-R02

Tray /	Reel	Standard	Pa

### Standard Package

 200pcs
 5,000pcs

 100pcs
 1,000pcs

 1,500pcs (Reel)
 12,000pcs

#### Part Numbering System

### Example Part Number: GTCX25-351M-R02

- GT = Gas Tube
- C = Ceramic
- X = Lead Configuration: N= No leads; A= Axial Leads; S= Surface-mount
- 2 = 2 Electrode device
- 5 = 5mm Diameter
- 351 = DC Spark Over Voltage of 350V (at 100V/s)
- M = Tolerance of 20% on DC Spark Over Voltage
- R = Product Family Designator
- 02 = Surge rating: 8x20µs 2.5kA 10 times



Part Marking Reference

### Example Part Marking: X 35 R02 GN

- X = Manufacture Mark
- 35 = Voltage Designator (35 = 350V)
- R02 = Product Family Designator + Surge Current 2.5kA (8x20µs 10 hits)
- GN = Year and Week of Manufacture

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