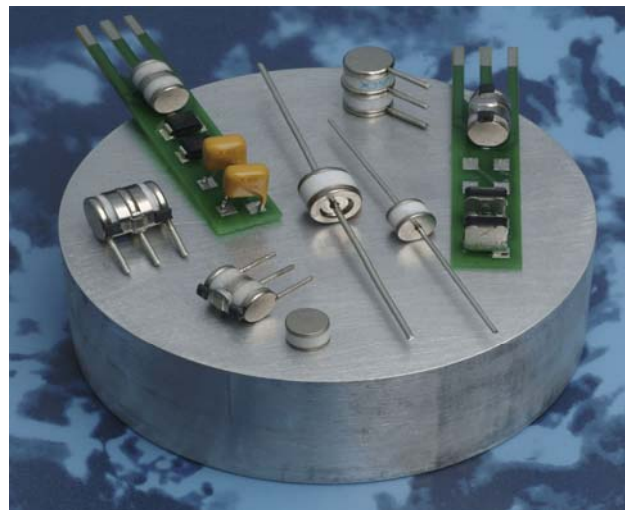


Raychem Circuit Protection 5mm 2Pole GDTs (ceramic gas discharge tubes), are commonly used to help protect sensitive telecom equipment such as communication lines, signal lines and data transmission lines from damage caused by transient surge voltages that typically result from lightning strikes and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

Raychem 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. Raychem 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

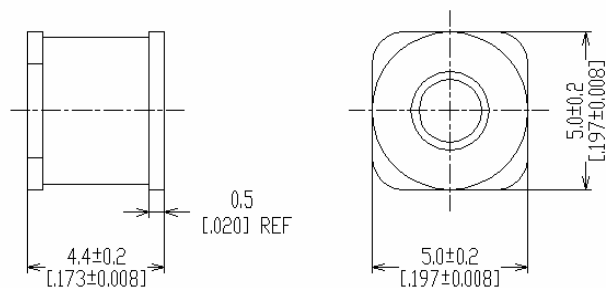
Devices <=90V measured @ 50V  
 Devices >=500V measured @ 250V

## GTCX25-XXXM-R02 Series

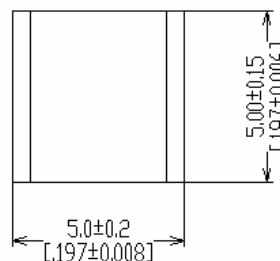
### Product Dimensions

DIMENSIONS = MILLIMETERS [INCHES]

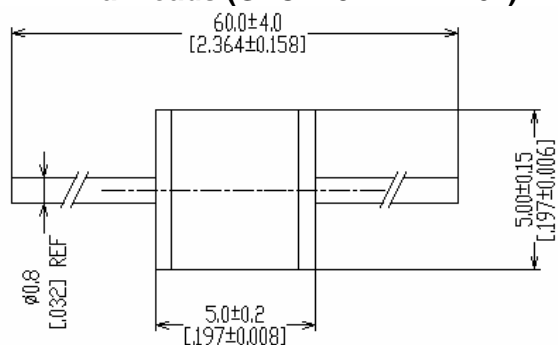
#### Surface-mount (GTCS25-XXXM-R02)



#### No Leads (GTCN25-XXXM-R02)

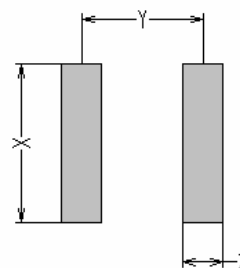


#### Axial Leads (GTCA25-XXXM-R02)



### Pad Layout – Surface-mount Devices (GTCS25-XXXM-R02)

	X	Y	Z
	NOM	NOM	NOM
mm:	6.0	3.9	1.3
in*:	(0.197)	(0.154)	(0.051)



## 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	Tray / Reel	Standard Package
No Leads: GTCN25-XXXM-R02	200pcs	5,000pcs
Axial Leads: GTCA25-XXXM-R02	100pcs	1,000pcs
Surface-mount: GTCS25-XXXM-R02	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

## GTCX25-XXXM-R02 Series

### Part Marking Reference

**Example Part Marking:  $\times$  35 R02 GN**

$\times$ =	Manufacture Mark
35 =	Voltage Designator (35 = 350V)
R02 =	Product Family Designator + Surge Current 2.5kA (8x20 $\mu$ s 10 hits)
GN =	Year and Week of Manufacture



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