

# Gas Discharge Tube

## GTCA28-xx2x-P0x

### High Voltage Two Electrode Series

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Document: SCD 25818  
Status: Released  
Rev. E Date: OCTOBER 21, 2005

#### GENERAL DESCRIPTION

#### BENEFITS

- Helps provide overvoltage fault protection against high energy surges
- Suitable for sensitive equipment due to excellent impulse sparkover response
- Suitable for high-frequency applications
- Highly reliable performance

#### FEATURES

- Crowbar device with low arc-voltage
- Low capacitance and insertion loss
- High accuracy spark-over voltages for high precision designs
- Non-radioactive materials

#### APPLICATIONS

- Industrial Electronics and Commercial Electronics, such as
  - Power Supplies, Surge Protectors, Alarm systems

#### SYMBOL



# Gas Discharge Tube

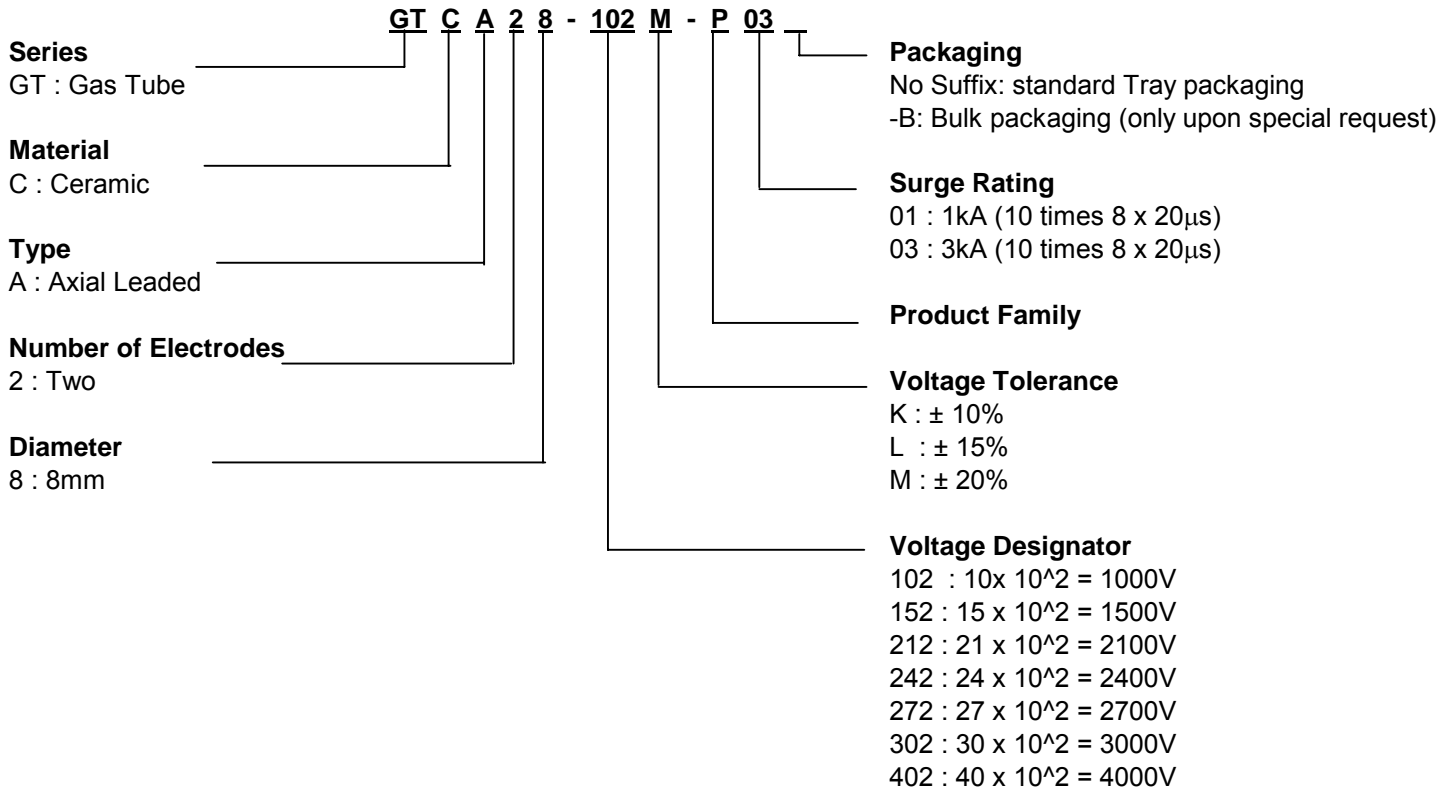
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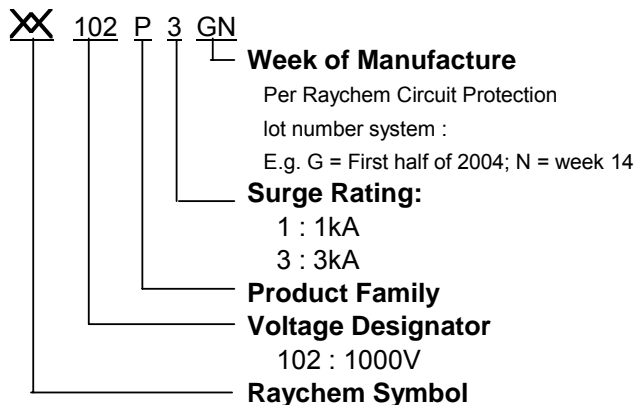
#### PART NUMBERING

##### EXAMPLE:



#### DEVICE MARKING

##### EXAMPLE : GTCA28-102M-P03



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**GENERAL CHARACTERISTICS**

No Radioactive Material

Storage temperature: -40°C ... +90°C

Operating temperature: -40°C ... + 90°C

Body : Nickel Plated

Leads : Tin Plated



**DEVICE RATINGS AND CHARACTERISTICS**

Part Number	DC Sparkover Voltage	Impulse Sparkover Voltage	Insulation Resistance	Capacitance	Impulse Life	Impulse Discharge Current 8/20 μs		AC Discharge Current, 50 Hz	
	@ 100V/s	@ 100V / μs	@ 1000V <sub>DC</sub>	@ 1MHz	10/1000 μs, 500A	Single Hit	Repeat 10 times (5 times - each polarity)	Single Hit, 9 Cycles	Repeat 10 times (1s interval)
GTCA28-102M-P03	1,000V ± 20%	≤ 1,500V	≥ 10,000MΩ <sup>1</sup>	≤ 1.0pF	200 times	10kA	3kA	5A	1A
GTCA28-152L-P03	1,500V ± 15%	≤ 2,200V	≥ 10,000MΩ <sup>2</sup>	≤ 1.0pF	10 times	10kA	3kA	5A	1A
GTCA28-212M-P03	2,100V ± 20%	≤ 2,700V	≥ 10,000MΩ <sup>2</sup>	≤ 1.0pF	10 times	10kA	3kA	5A	1A
GTCA28-242M-P03	2,400V ± 20%	≤ 3,000V	≥ 10,000MΩ	≤ 1.0pF	10 times	10kA	3kA	5A	1A
GTCA28-272L-P03	2,700 ± 15% <sup>3</sup>	≤ 3,700V	≥ 10,000MΩ	≤ 1.0pF	300 times <sup>4</sup>	10kA	3kA	N/A	N/A
GTCA28-302M-P01	3,000V ± 20%	≤ 4,000V	≥ 10,000MΩ	≤ 1.0pF	10 times	10kA	1kA	5A	1A
GTCA28-312L-P03	3,100V ± 15% <sup>3</sup>	≤ 3,700V <sup>5</sup>	≥ 10,000MΩ	≤ 1.0pF	300 times <sup>4</sup>	10kA	3kA	N/A	N/A
GTCA28-402M-P01	4,000V ± 20%	≤ 5,000V	≥ 10,000MΩ	≤ 1.0pF	10 times	10kA	1kA	5A	1A

Note 1. Resistance measured at 250 V<sub>DC</sub>.

Note 2. Resistance measured at 500 V<sub>DC</sub>.

Note 3. DC Sparkover Voltage Measured at 5kV/s.

Note 4. Measured with an 8/20μs, 100A impulse.

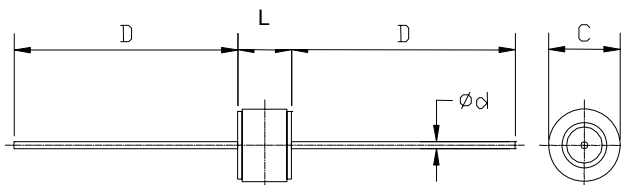
Note 5. Measured with 1kV/μs.

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**DIMENSIONS**



Part Number		L		C		D		Ød
		MIN	MAX	MIN	MAX	MIN	MAX	NOM
GTCA28-102M-P03	mm	7.7	8.3	7.7	8.3	28	32	0.8
	in*	0.3	0.33	0.3	0.33	1.1	1.26	0.03
GTCA28-152L-P03	mm	8.2	8.8	7.7	8.3	28	32	0.8
	in*	0.32	0.35	0.3	0.33	1.1	1.26	0.03
GTCA28-212M-P03	mm	8.2	8.8	7.7	8.3	28	32	0.8
	in*	0.32	0.35	0.3	0.33	1.1	1.26	0.03
GTCA28-242M-P03	mm	8.2	8.8	7.7	8.3	28	32	0.8
	in*	0.32	0.35	0.3	0.33	1.1	1.26	0.03
GTCA28-272L-P03	mm	8.5	9.1	7.7	8.3	28	32	0.8
	in*	0.33	0.36	0.3	0.33	1.1	1.26	0.03
GTCA28-312L-P03	mm	8.5	9.1	7.7	8.3	28	32	0.8
	in*	0.33	0.36	0.3	0.33	1.1	1.26	0.03
GTCA28-302M-P01	mm	8.2	8.8	7.7	8.3	28	32	0.8
	in*	0.32	0.35	0.3	0.33	1.1	1.26	0.03
GTCA28-402M-P01	mm	8.2	8.8	7.7	8.3	28	32	0.8
	in*	0.32	0.35	0.3	0.33	1.1	1.26	0.03

\*Rounded off approximation



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## PACKAGING

Packaging	Bulk* ( vacuum bags)	Tray	Standard Box
Quantity	200	100	1,000**

\* Standard packaging is in trays.  
Bulk packaging is only available upon request.

\*\* 5 bags or 10 trays

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