

Gas Discharge Tube

GTCA28-xx2x-P0x

High Voltage Two Electrode Series

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

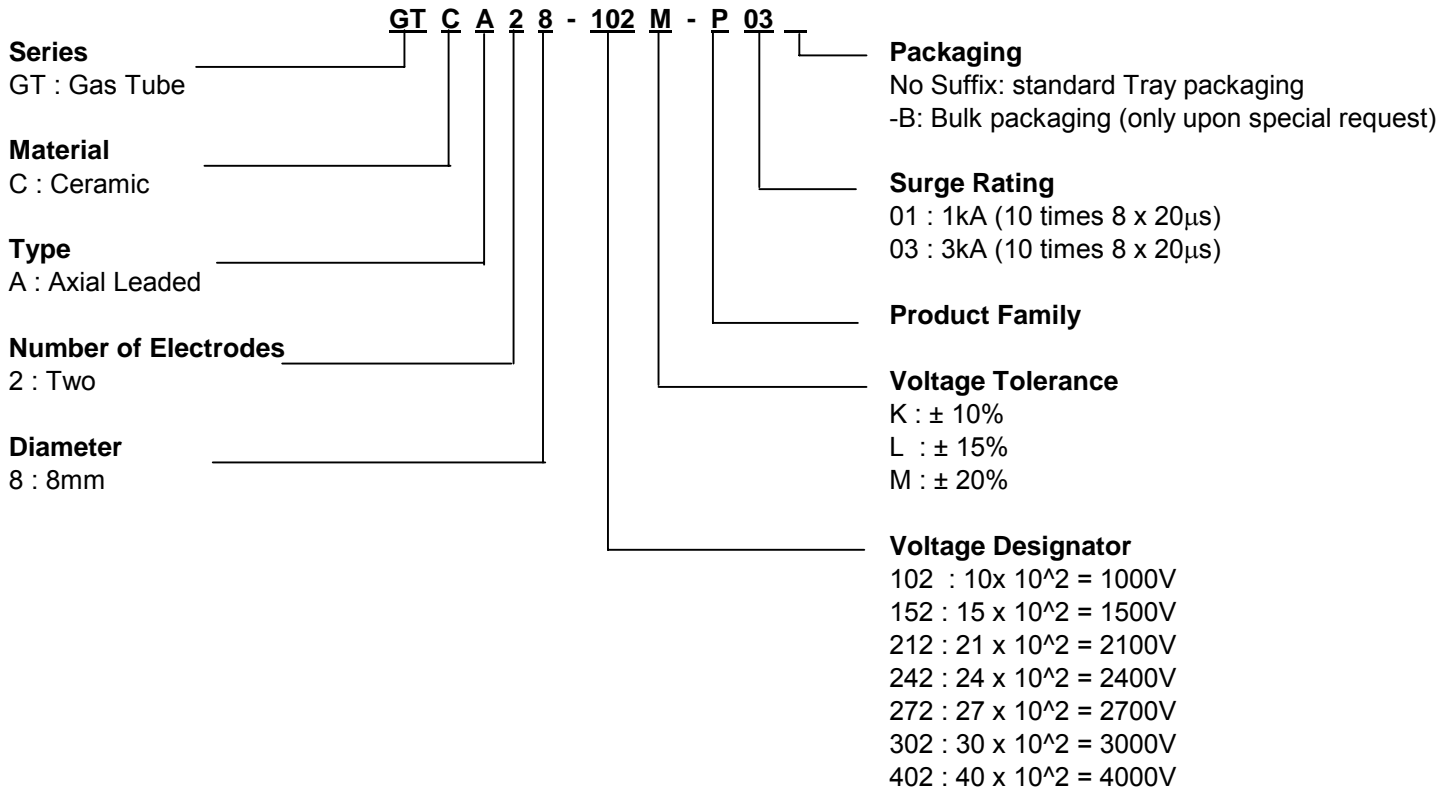
GTCA28-xx2x-P0x

High Voltage Two Electrode Series

Document: SCD 25818
Status: Released
Rev. C Date: JANUARY 21, 2005

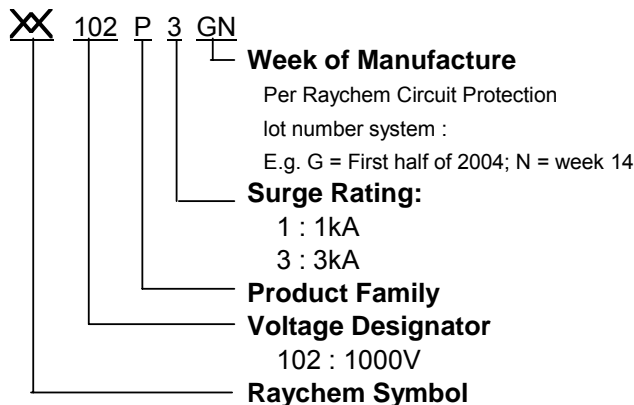
PART NUMBERING

EXAMPLE:



DEVICE MARKING

EXAMPLE : GTCA28-102M-P03



Gas Discharge Tube

GTCA28-xx2x-P0x

High Voltage Two Electrode Series

Document: SCD 25818
Status: Released
Rev. C Date: JANUARY 21, 2005

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 μ s		AC Discharge Current, 50 Hz	
	@ 100V/s	@ 100V / μ s	@ 1000V _{DC}	@ 1MHz	10/1000 μ s, 500A	Single Hit	Repeat 10 times (5 times - each polarity)	Single Hit, 9 Cycles	Repeat 10 times (1s interval)
GTCA28-102M-P03	1,000V \pm 20%	\leq 1,500V	\geq 10,000M Ω ¹	\leq 1.0pF	200 times	10kA	3kA	5A	1A
GTCA28-152L-P03	1,500V \pm 15%	\leq 2,200V	\geq 10,000M Ω ²	\leq 1.0pF	10 times	10kA	3kA	5A	1A
GTCA28-212M-P03	2,100V \pm 20%	\leq 2,700V	\geq 10,000M Ω ²	\leq 1.0pF	10 times	10kA	3kA	5A	1A
GTCA28-242M-P03	2,400V \pm 20%	\leq 3,000V	\geq 10,000M Ω	\leq 1.0pF	10 times	10kA	3kA	5A	1A
GTCA28-272L-P03	2,700 \pm 15% ³	\leq 3,700V	\geq 10,000M Ω	\leq 1.0pF	300 times ⁴	10kA	3kA	N/A	N/A
GTCA28-302M-P03	3,000V \pm 20%	\leq 4,000V	\geq 10,000M Ω	\leq 1.0pF	10 times	10kA	1kA	5A	1A
GTCA28-312L-P03	2,700 \pm 15% ³	\leq 3,700V ⁵	\geq 10,000M Ω	\leq 1.0pF	300 times ⁴	10kA	3kA	N/A	N/A
GTCA28-402M-P03	4,000V \pm 20%	\leq 5,000V	\geq 10,000M Ω	\leq 1.0pF	10 times	10kA	1kA	5A	1A

Note 1. Resistance measured at 250 V_{DC}.

Note 2. Resistance measured at 500 V_{DC}.

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

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

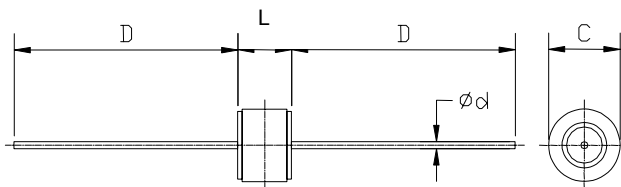
Note 5. Measured with 1kV/ μ s.

Gas Discharge Tube
GTCA28-xx2x-P0x
High Voltage Two Electrode Series

www.tycopowercomponents.com

Document: SCD 25818
Status: Released
Rev. C Date: JANUARY 21, 2005

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	9.1	8.5	7.7	8.3	28	32	0.8
	in*	0.36	0.33	0.3	0.33	1.1	1.26	0.03
GTCA28-312L-P03	mm	9.1	8.5	7.7	8.3	28	32	0.8
	in*	0.36	0.33	0.3	0.33	1.1	1.26	0.03
GTCA28-302M-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
GTCA28-402M-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

*Rounded off approximation

Gas Discharge Tube

GTCA28-xx2x-P0x

High Voltage Two Electrode Series

Document: SCD 25818
Status: Released
Rev. C Date: JANUARY 21, 2005

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

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of each product for their applications. Tyco Electronics Corporation assumes no responsibility for the use of its product or for any infringement of patents or other rights of third parties resulting from the use of its product. No license is granted by implication or otherwise under any patent or proprietary right of Tyco Electronics except the right to use such product for the purpose for which it is sold. Tyco Electronics reserves the right to change or update, without notice, any information contained in this publication; to change, without notice, the design, construction, processing, or specification of any product; and to discontinue or limit production or distribution of any product. This publication supersedes and replaces all information previously supplied. Without express written consent by an officer of Tyco Electronics, Tyco Electronics does not authorize the use of any its products as components in nuclear facility applications, aerospace, or in critical life support devices or systems. Tyco Electronics' only obligations are those in the Tyco Electronics Standard Terms and Conditions of Sale and in no case will Tyco Electronics be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of its products.

Raychem is a trademark of Tyco Electronics Corporation