



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Specification Status: Released

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

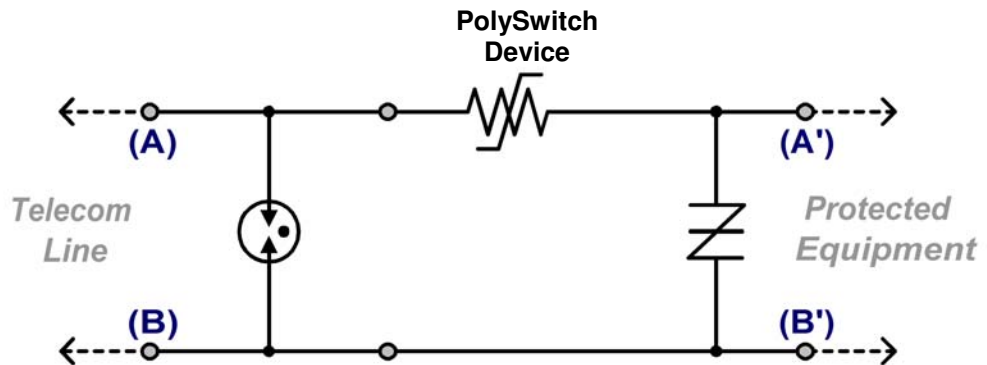
- Crowbar device with low arc-voltage
- Low capacitance and insertion loss
- High accuracy spark-over voltages for high precision designs
- Tested per ITU K.12 recommendations
- Non-radioactive materials

APPLICATIONS

- Telecommunications:
 - MDF modules, xDSL equipment, RF system protection
- Industrial Electronics and Commercial Electronics, such as
 - Power Supplies, Surge Protectors, Alarm systems

SYMBOL
APPLICATION SCHEMATIC

TYPICAL



SiBar
Device

Gas Discharge Tube Standard Two Electrode Series Overvoltage Protection Device

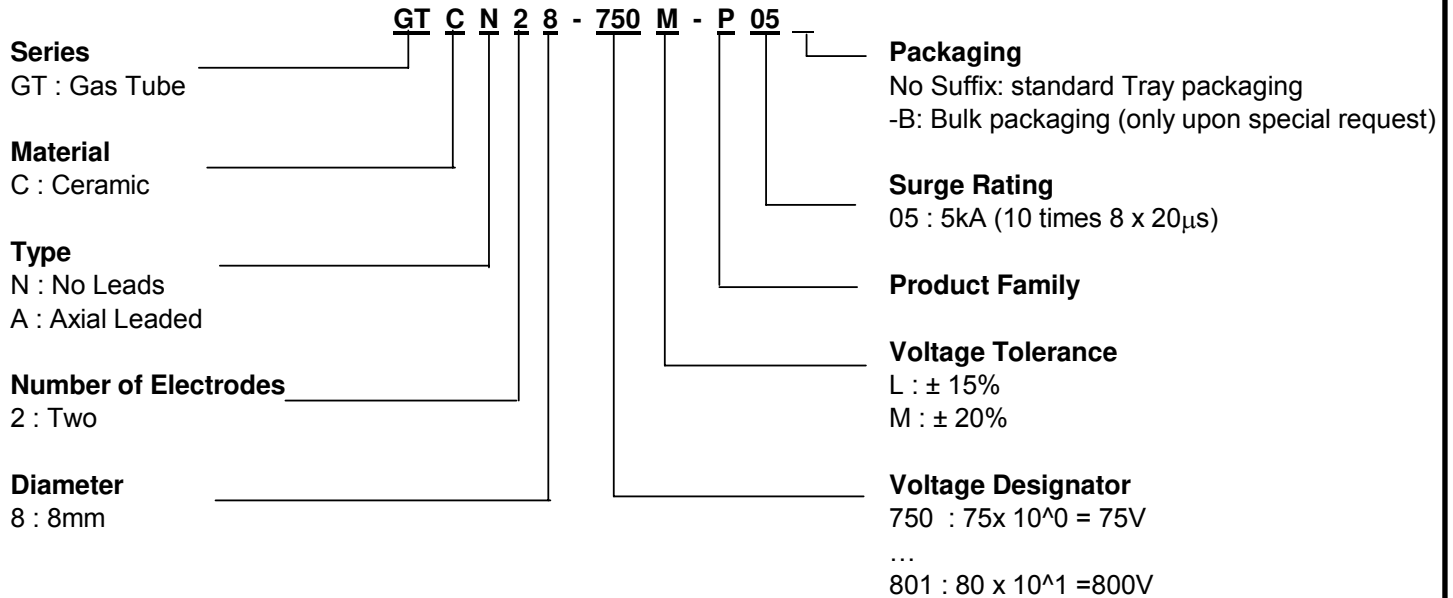
Raychem Circuit Protection Products

PRODUCT: GTCx28-xxxx-P05

DOCUMENT: SCD 25819
REV LETTER: D
REV DATE: JULY 7, 2008
PAGE NO.: 2 OF 5

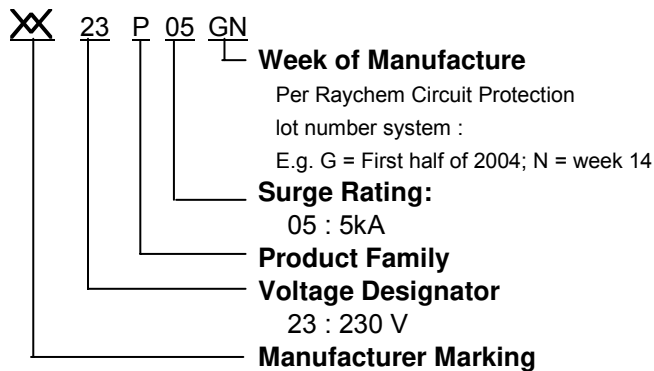
PART NUMBERING

EXAMPLE:



DEVICE MARKING

EXAMPLE : GTCA28-231L-P05:



Gas Discharge Tube Standard Two Electrode Series Overvoltage Protection Device

Raychem Circuit Protection Products

GENERAL CHARACTERISTICS

No Radioactive Material

Storage temperature: -40°C ... +90°C

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

Body: Nickel Plated

Leads: Tin Plated

UL 497B Pending



MATERIALS INFORMATION

RoHS Compliant

ELV Compliant

Directive 2002/95/EC
Compliant

Directive 2000/53/EC
Compliant

DEVICE RATINGS AND CHARACTERISTICS

Part Number	DC Sparkover Voltage	Impulse Sparkover Voltage		Insulation Resistance	Capacitance	DC Holdover Voltage	Impulse Life	Impulse Discharge Current 8/20 μ s		AC Discharge Current, 50 Hz	
	@ 100V/s	@ 100V/ μ s	@ 1kV/ μ s	@ 100V	@ 1MHz	Per ITUK.12	10/1000 μ s, 500A	Single Hit	Repeat 10 times (5 times each polarity)	Single Hit, 9 Cycles	Repeat (1s interval)
GTCN28-750M-P05 GTCA28-750M-P05	75V \pm 20%	\leq 500V	\leq 700V	\geq 10,000M Ω ¹	\leq 1.0pF	\leq 52V	300 times	10kA	5kA	65A	10A, 5 times
GTCN28-900M-P05 GTCA28-900M-P05	90V \pm 20%	\leq 500V	\leq 700V	\geq 10,000M Ω ¹	\leq 1.0pF	\leq 52V	300 times	10kA	5kA	65A	10A, 5 times
GTCN28-151M-P05 GTCA28-151M-P05	150V \pm 20%	\leq 500V	\leq 700V	\geq 10,000M Ω ¹	\leq 1.0pF	\leq 80V	300 times	10kA	5kA	65A	10A, 5 times
GTCN28-231L-P05 GTCA28-231L-P05	230V \pm 15%	\leq 600V	\leq 750V	\geq 10,000M Ω	\leq 1.0pF	\leq 135V	300 times	10kA	5kA	65A	10A, 5 times
GTCN28-251L-P05 GTCA28-251L-P05	250V \pm 15%	\leq 600V	\leq 800V	\geq 10,000M Ω	\leq 1.0pF	\leq 135V	300 times	10kA	5kA	65A	10A, 10times
GTCN28-301L-P05 GTCA28-301L-P05	300V \pm 15%	\leq 700V	\leq 850V	\geq 10,000M Ω	\leq 1.0pF	\leq 150V	300 times	10kA	5kA	65A	10A, 10times
GTCN28-351L-P05 GTCA28-351L-P05	350V \pm 15%	\leq 700V	\leq 850V	\geq 10,000M Ω	\leq 1.0pF	\leq 150V	300 times	10kA	5kA	65A	10A, 10times
GTCN28-401L-P05 GTCA28-401L-P05	400V \pm 15%	\leq 700V	\leq 850V	\geq 10,000M Ω	\leq 1.0pF	\leq 150V	300 times	10kA	5kA	65A	10A, 10times
GTCN28-471L-P05 GTCA28-471L-P05	470V \pm 15%	\leq 700V	\leq 850V	\geq 10,000M Ω ²	\leq 1.0pF	\leq 150V	300 times	10kA	5kA	65A	10A, 10times
GTCN28-601L-P05 GTCA28-601L-P05	600V \pm 15%	\leq 800V	\leq 1,000V	\geq 10,000M Ω ²	\leq 1.0pF	\leq 150V	300 times	10kA	5kA	65A	10A, 10times
GTCN28-801L-P05 GTCA28-801L-P05	800V \pm 15%	\leq 1,000V	\leq 1,200V	\geq 10,000M Ω ²	\leq 1.0pF	\leq 150V	300 times	10kA	5kA	65A	10A, 10times

Note 1. Insulation Resistance at 50 V_{DC}.

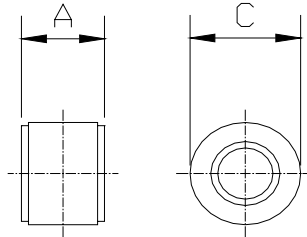
Note 2. Insulation Resistance at 250 V_{DC}.

**Gas Discharge Tube
Standard Two Electrode Series
Overvoltage Protection Device**

Raychem Circuit Protection Products

DIMENSIONS

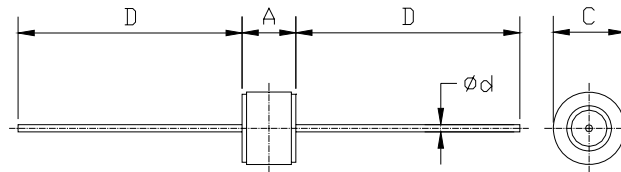
No Leads (GTCN28-xxxx-P05)



		A		C	
		MIN	MAX	MIN	MAX
mm:		5.7	6.3	7.7	8.3
in*:		0.22	0.25	0.30	0.33

*Rounded off approximation

Axial Leads (GTCA28-xxxx-P05)



		A		C		D		$\varnothing d$
		MIN	MAX	MIN	MAX	MIN	MAX	NOM
mm:		5.7	6.3	7.7	8.3	28.0	32.0	0.8
in*:		0.22	0.25	0.30	0.33	1.10	1.26	0.03

* Rounded off approximation

**Gas Discharge Tube
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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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