



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
- Optional Fail-Short mechanism
- Various lead configurations
- Non-radioactive materials

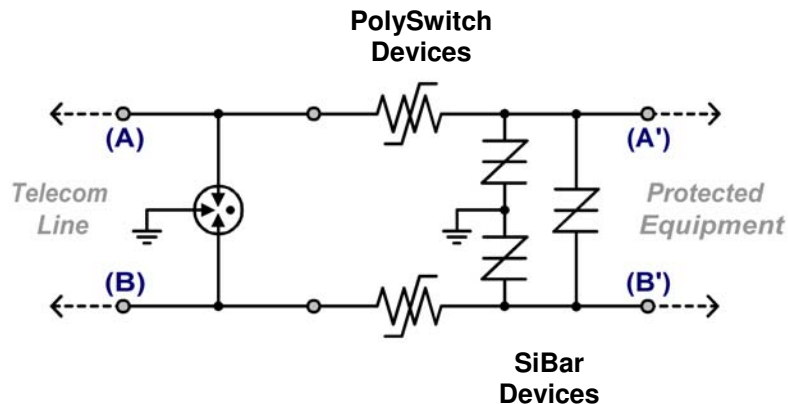
APPLICATIONS

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

SYMBOL



TYPICAL APPLICATION SCHEMATIC



Gas Discharge Tube Three Electrode 7.5mm Diameter Overvoltage Protection Device

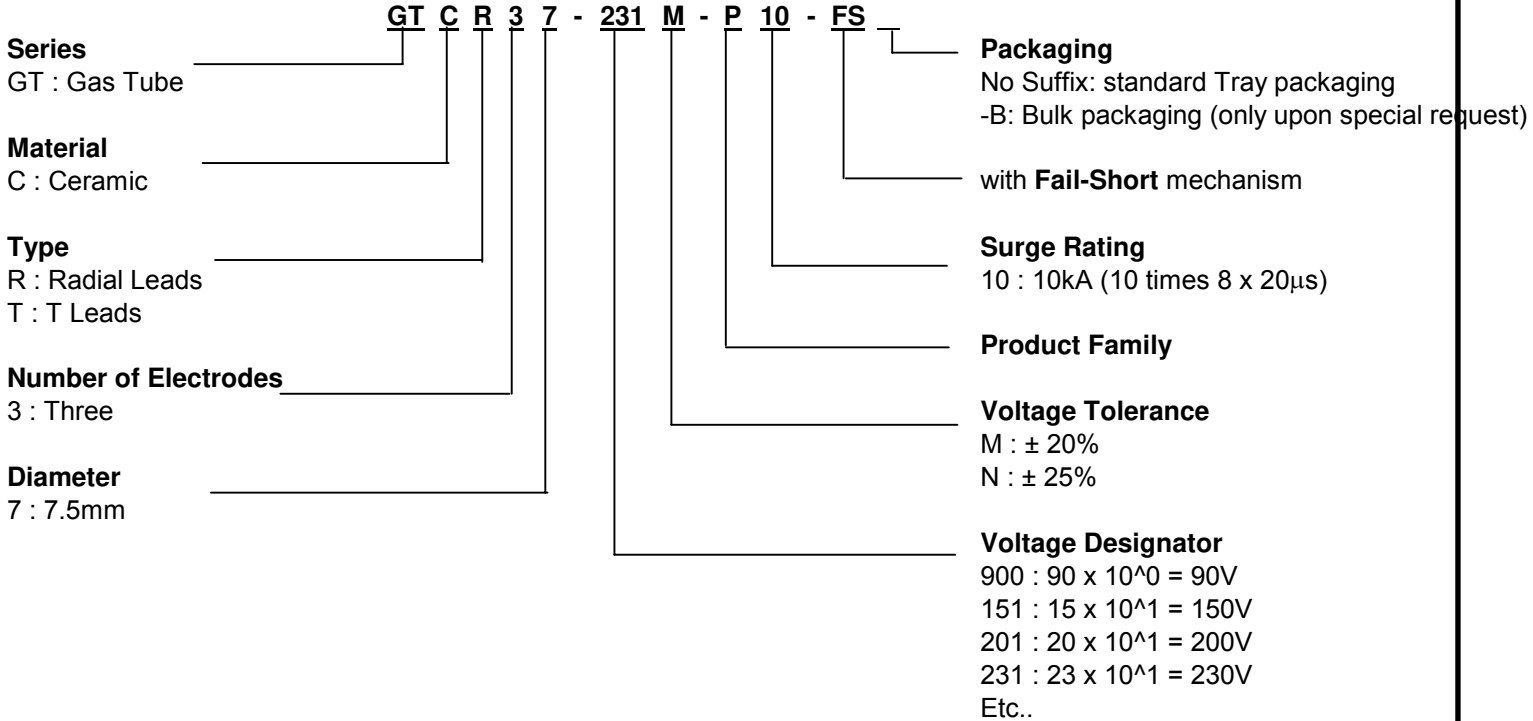
Raychem Circuit Protection Products

PRODUCT: GTCx37

DOCUMENT: SCD 25821
REV LETTER: D
REV DATE: MAY 25, 2007
PAGE NO.: 2 OF 6

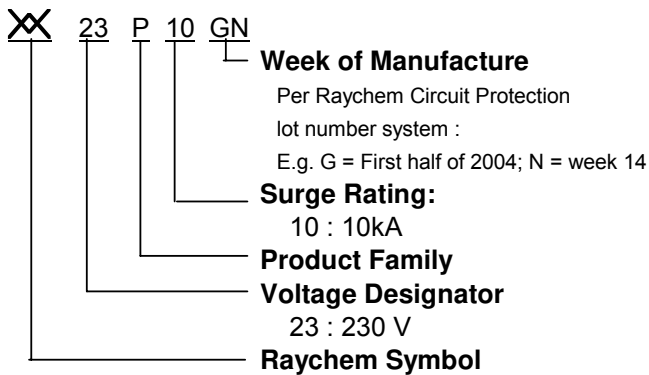
PART NUMBERING

EXAMPLE:



DEVICE MARKING

EXAMPLE : GTCR37-231M-P10



Gas Discharge Tube Three Electrode 7.5mm Diameter Overvoltage Protection Device

Raychem Circuit Protection Products

GENERAL CHARACTERISTICS

No Radioactive Materials

Storage temperature:

Devices without Fail-Short mechanism: -40°C ... +90°C

Devices with Fail-Short mechanism: -20°C ... +65°C

Operating temperature:

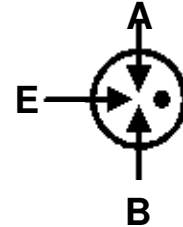
Devices without Fail-Short mechanism: -40°C ... +90°C

Devices with Fail-Short mechanism: -20°C ... +65°C

Body: Nickel Plated

Lead Material : Tin Plated

UL 497B Pending



DEVICE RATINGS AND CHARACTERISTICS

Part Number	DC Sparkover Voltage (A-E) (B-E)		Impulse Sparkover Voltage (A-E) (B-E)		Insulation Resistance @ 100V _{DC}	Capacitance @ 1MHz	DC Holdover Voltage Per ITU K.12	Impulse Life (A+B-E) 10/1000µs, 400A	Impulse Discharge Current 8/20µs (A+B-E)		AC Discharge Current, 50Hz (A+B-E)	
	@ 100V/s	@ 100V/µs	@ 1kV/µs						Single Hit	Repeat 10 times (5 times each polarity)	Single Hit, 9 Cycles	Repeat 10 times (1s interval)
GTCR37-900M-P10 GTCR37-900M-P10-FS GTCT37-900M-P10	90V ± 20%	≤ 700V	≤ 850V	≥ 10,000MΩ ¹	≤ 3.0pF	≤ 52V	300 times	20kA	10kA	130A	10A	
GTCR37-151M-P10 GTCR37-151M-P10-FS GTCT37-151M-P10	150V ± 20%	≤ 700V	≤ 850V	≥ 10,000MΩ ¹	≤ 3.0pF	≤ 52V	300 times	20kA	10kA	130A	10A	
GTCR37-201N-P1 GTCR37-201N-P10-FS GTCT37-201N-P10	200V ± 25%	≤ 500V	≤ 650V	≥ 10,000MΩ	≤ 3.0pF	≤ 135V	300 times	20kA	10kA	130A	10A	
GTCR37-231M-P10 GTCR37-231M-P10-FS GTCT37-231M-P10	230V ± 20%	≤ 500V	≤ 650V	≥ 10,000MΩ	≤ 3.0pF	≤ 135V	300 times	20kA	10kA	130A	10A	
GTCR37-251M-P10 GTCR37-251M-P10-FS GTCT37-251M-P10	250V ± 20%	≤ 500V	≤ 650V	≥ 10,000MΩ	≤ 3.0pF	≤ 135V	300 times	20kA	10kA	130A	10A	
GTCR37-261M-P10 GTCR37-261M-P10-FS GTCT37-261M-P10	260V ± 20%	≤ 500V	≤ 650V	≥ 10,000MΩ	≤ 3.0pF	≤ 135V	300 times	20kA	10kA	130A	10A	
GTCR37-301M-P10 GTCR37-301M-P10-FS GTCT37-301M-P10	300V ± 20%	≤ 600V	≤ 750V	≥ 10,000MΩ	≤ 3.0pF	≤ 135V	300 times	20kA	10kA	130A	10A	
GTCR37-351M-P10 GTCR37-351M-P10-FS GTCT37-351M-P10	350V ± 20%	≤ 600V	≤ 750V	≥ 10,000MΩ	≤ 3.0pF	≤ 150V	300 times	20kA	10kA	130A	10A	
GTCR37-401M-P10 GTCR37-401M-P10-FS GTCT37-401M-P10	400V ± 20%	≤ 700V	≤ 850V	≥ 10,000MΩ	≤ 3.0pF	≤ 150V	300 times	20kA	10kA	130A	10A	
GTCR37-551M-P10 GTCR37-551M-P10-FS GTCT37-551M-P10	550V ± 20%	≤ 850V	≤ 1,000V	≥ 10,000MΩ	≤ 3.0pF	≤ 150V	300 times	20kA	10kA	130A	10A	

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

Gas Discharge Tube Three Electrode 7.5mm Diameter Overvoltage Protection Device

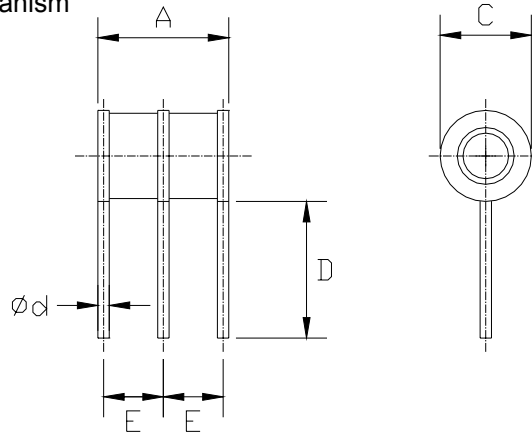
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DIMENSIONS

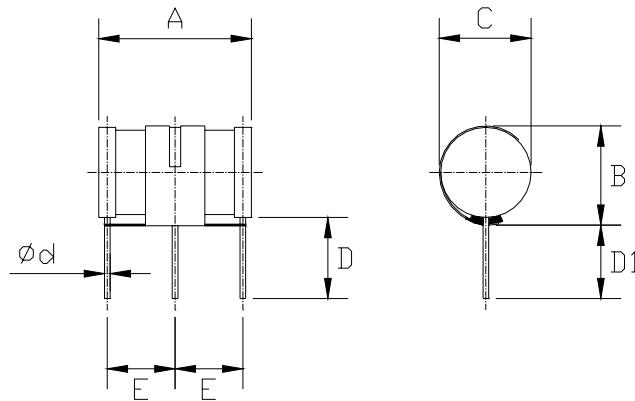
Radial Leads, no Fail-Short mechanism
(GTCR37-xxxx-P10)



A		C		D		E		Ød	
MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	NOM	
mm:	--	12.0	7.3	7.7	6.5	7.5	4.1	4.7	1.0
in*:	--	0.47	0.29	0.30	0.26	0.30	0.16	0.19	0.04

* Rounded off approximation

Radial Leads, with Fail-Short mechanism
(GTCR37-xxxx-P10-FS)



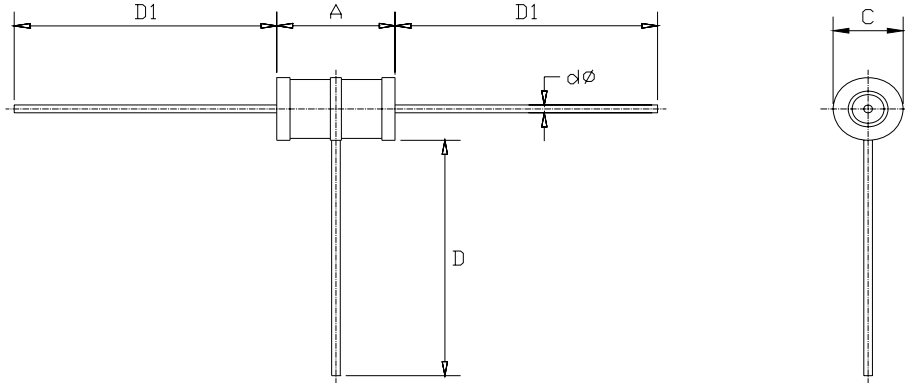
A		B		C		D		D1		E		Ød	
MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	NOM	
mm:	--	12.0	--	9.3	--	8.0	6.5	7.5	6.0	--	4.1	4.7	1.0
in*:	--	0.47	--	0.37	--	0.32	0.26	0.30	0.24	--	0.16	0.19	0.04

* Rounded off approximation

**Gas Discharge Tube
Three Electrode 7.5mm Diameter
Overvoltage Protection Device**

Raychem Circuit Protection Products

T Leads, no Fail-Short mechanism
(GTCT37)



	A		D		D1		$\varnothing d$
	MIN	MAX	MIN	MAX	MIN	MAX	NOM
mm:	--	12.0	23.0	29.0	28.0	32.0	1.0
in*:	--	0.47	0.91	1.14	1.10	1.26	0.04

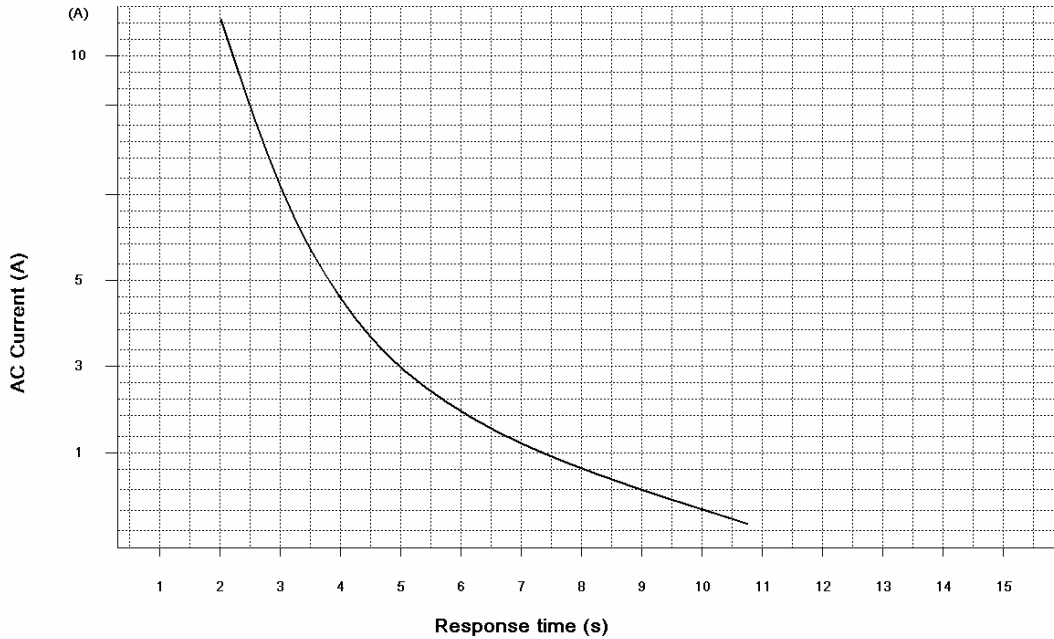
approximation

* Rounded off

**Gas Discharge Tube
Three Electrode 7.5mm Diameter
Overvoltage Protection Device**

Raychem Circuit Protection Products

FAIL-SHORT MECHANISM RESPONSE TIME (Graph represents typical values)



Note: Both electrodes simultaneously powered, each with the AC current value in the graph

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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