

Gas Discharge Tubes GTCX36-XXXM-R05 Series

Raychem Circuit Protection 6mm 3Pole 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:

- 3Pole, 6mm devices
- Broad voltage range from 75V-600V
- Various form factors: surface-mount, leaded, no leads
- Optional fail-short mechanism on some devices
- Low capacitance and insertion loss
- Crowbar overvoltage protection
- 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

Downloaded from Elcodis.com electronic components distributor

GTCX36-XXXM-R05 Series

Device Voltage Ratings and Part Marking

Part Number	DC Sparkover		ulse kover	DC Holdover Voltage	On-State Voltage
	@100V/s ±20% Tolerance (V)	@100 Vµs (V)	@1000 Vµs (V)	Per ITU K.12 (<150ms) (V)	Nominal (@ 1A) (V)
GTCX36-750M-R05	75	450	550	<52	20
GTCX36-900M-R05	90	450	550	<52	20
GTCX36-141M-R05	140	500	600	<80	20
GTCX36-151M-R05	150	500	600	<80	20
GTCX36-201M-R05	200	600	700	<135	20
GTCX36-231M-R05	230	600	700	<135	20
GTCX36-251M-R05	250	600	700	<135	20
GTCX36-261M-R05	260	700	800	<135	20
GTCX36-301M-R05	300	800	900	<150	20
GTCX36-351M-R05	350	900	1000	<150	20
GTCX36-401M-R05	400	900	1000	<150	20
GTCX36-421M-R05	420	900	1000	<150	20
GTCX36-471M-R05	470	1050	1150	<150	20
GTCX36-501M-R05	500	1100	1200	<150	20
GTCX36-551M-R05	550	1300	1400	<150	20
GTCX36-601M-R05	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
GTCX36-XXXM-R05	5kA	200A	5Arms	<1pF	10,000 (MΩ)	All Devices

^{*} Devices <=150V measured @ 50V. Devices >= 500V measured @ 250V



GTCX36-XXXM-R05 Series

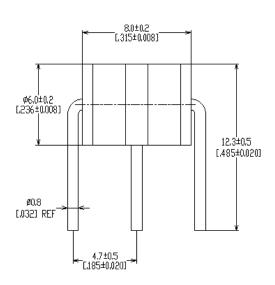
Product Dimensions

DIMENSIONS = MILLIMETERS [INCHES]

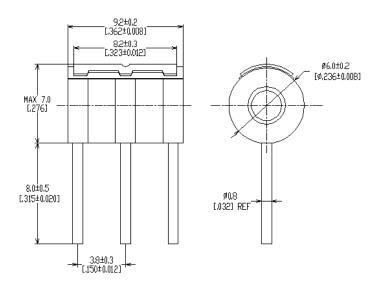
Axial Leaded with- FT (GTCA36-XXXM-R05-FT)

8.2±0.3 [.323±0.012] 8.0±0.2 [.315±0.008] (6.0±0.2 [.6.236±0.008] (6.0±0.2 [.6.236±0.008]

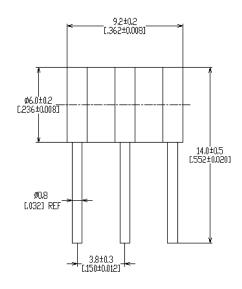
Axial Leaded (GTCA36-XXXM-R05)



Radial Leaded with- FT (GTCR36-XXXM-R05-FT)



Radial Leaded (GTCR36-XXXM-R05)



Gas Discharge Tubes

Downloaded from Elcodis.com electronic components distributor

Rev: A Date: JULY 23, 2009

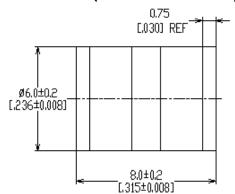


GTCX36-XXXM-R05 Series

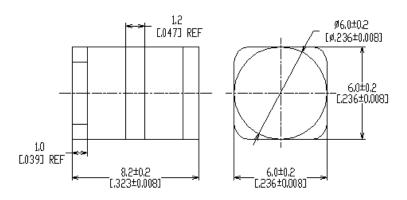
No Leads with- FT (GTCN36-XXXM-R05-FT)

8,2±0,3 1,323±0,012] #6,0±0,2 [\$\phi,236±0,008]

No Leads (GTCN36-XXXM-R05)



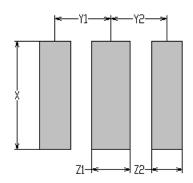
Surface-mount (GTCS36-XXXM-R05)



GTCX36-XXXM-R05 Series

Pad Layout – Surface-mount Devices (GTCS36-XXXM-R05)

<u>Y1</u> <u>Y2</u> <u>Z</u>1 Z2 Χ NOM NOM NOM **NOM** MOM mm: 7.0 3.6 3.6 2.5 2.0 (0.276)(0.142)(0.142)(0.098)(0.079)



General Characteristics

No Radioactive Material

Storage Temperature: -40°C to +90°C Operating Temperature: -40°C to +90°C

Body: Nickel Plated

in*:

Leads: Surface-mount, Radial and Axial Devices: Tin Plated

Devices with no leads: Nickel Plated

Soldering Notes: Devices with no leads: non-solderable; suitable for insertion into a magazine clip

Materials Information

RoHS Compliant

ELV Compliant

Directive 2002/95/EC Compliant

Directive 2000/53/EC Compliant

Packaging Information

Part Description	Tray / Reel	Standard Package	
No Leaded: GTCN36-XXXM-R05	100pcs (Tray)	2,500pcs	
With Leads: GTCA36-XXXM-R50/GTCR36-XXXM-R05	100pcs (Tray)	1,000pcs	
Surface-mount: GTCS36-XXXM-R05	100pcs (Tray)	2,500pcs	
Surface-mount (T&R): GTCS36-XXXM-R05-2	750pcs	6000pcs	

Document: SCD 27698

© 2009 Tyco Electronics Corporation. All rights reserved.



GTCX36-XXXM-R05 Series

Part Numbering System

Example Part Number: GTCX36-351M-R05-FT

GT = Gas Tube C = Ceramic

X = Lead Configuration: N = No leads; A = Axial Leads; S = Surface-mount; R = Radial Leads

3 = 3 Electrode device 6 = 6mm Diameter

351 = DC Spark Over Voltage of 350V (at 100V/s)
M = Tolerance of 20% on DC Spark Over Voltage

R = Product Family Designator

05 = Surge rating: 8x20µs 5kA 10 times

FT = With Fail-Short mechanism

Part Marking Reference

Example Part Marking: X 35 R05 GN

X = Manufacture Mark

35 = Voltage Designator (35 = 350V)

R05 = Product Family Designator + Surge Current 5kA (8x20µs 10 hits)

GN = Year and Week of Manufacture



Our commitment. Your advantage.

308 Constitution Drive, MS R21/2A Menlo Park, CA USA 94025-1164 Tel (800) 227-7040 (650) 361-6900 Fax (650) 361-2508

www.circuitprotection.com www.circuitprotection.com.hk (Chinese) www.circuitprotection.jp (Japanese)

Raychem, TE Logo and Tyco Electronics are trademarks.

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. 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 expressed or written consent by an officer of Tyco Electronics does not authorize the use of any of its products as components in nuclear facility applications, aerospace, or in critical life support devices or systems. Tyco Electronics expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. 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.