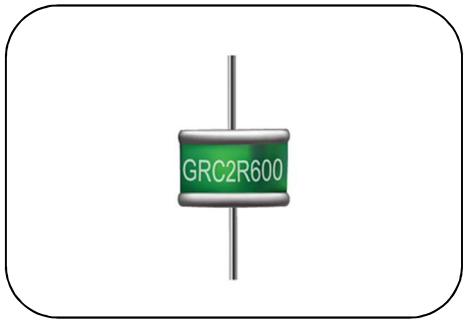
Gas Discharge Tube: GRC2R Series

2-Electrode Φ8xT6/7.9mm High Voltage and Surge Type

■ Features



1. RoHS compliant
2. Rugged ceramic-metal construction
3. Available lead wire
4. DC spark-over voltage: 280~6500V
5. Low capacitance
6. Agency recognition: UL / cUL / TUV
7. Operating temperature: -40℃~ +125℃
   Storage temperature: -40℃ ~ +115℃

■ Recommended Applications

1. Modem
2. xDSL splitter
3. CATV system
4. Power supply
5. Consumer electronics
6. Communication lines

■ Part Number Code

G	R	C	2	R	6	0	0	Y	B			
1	2	3	4	5	6	7	8	9	10	11	12	13

Product Code	
G	THINKING Gas Discharge Tube

Size	
RC	Φ8.0 x T6/7.9mm

Electrode Number	
2R	2 Electrodes

DC Spark-over Voltage	
600	600V
14B	1400V
60B	6000V

Lead Wire Style	
Y	Axial Lead
E	Pitch 10 mm Formed Lead
F	Pitch 12 mm Formed Lead

Packaging	
B	Bulk
R	Reel Taping

Internal Control Code

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■ Characteristics

Part No.	DC Spark-over Voltage	Max. Impulse Breakdown Voltage		Max. Impulse Discharge Current (8/20μs)		Arc Voltage	Max. Follow On Current	AC withstand voltage	Minimum Insulation Resistance	Maximum Capacitance (1MHz)	Safety Approvals	
	100V/S	100V/μs	1KV/μs	1 time	10 times	at 1 Amp Min		ID=10mA 1min				
	(V)	(V)	(V)	(KA)		TYP	Amps	(V)	(GΩ)	(pF)	UL1449/ cUL	TUV (EN/IEC 61643-311)
GRC2R280□□	230-340	500	550	10	5	~25	200	/	10	1.5	√	
GRC2R600□□	600±20%	1100	1200					/			√	√
GRC2R800□□	800±20%	1300	1500					/			√	√
GRC2R10B□	1000±20%	1400	1500					/			√	√
GRC2R11B□	1100±20%	1600	1700					/			√	√
GRC2R12B□	1200±20%	1700	1800					/			√	√
GRC2R13B□	1300±20%	1800	1900					/			√	√
GRC2R15B□	1500±20%	1800	2000					/			√	√
GRC2R20B□	2000±20%	2500	2750					1000			√	√
GRC2R25B□	2500±20%	3200	3500					1250			√	√
GRC2R27B□	2700±20%	3600	4000					1350			√	√
GRC2R30B□	3000±20%	4000	4200					1500			√	√
GRC2R33B□	3300±20%	4600	4700					1650			√	√
GRC2R40B□	4000±20%	5800	6000					2000			√	
GRC2R45B□	4500±20%	6150	6500					2250			√	
GRC2R50B□	5000±20%	7500	8000					2500			√	
GRC2R62B□	6200±20%	8100	9500					3100			√	
GRC2R65B□	6500±20%	9500	10000					3250			√	

Note 1：The first □ is style of lead wire, and the second □ is packing.

Note 2：GRC2R280□□~GRC2R25B□□的T=6±0.2mm,GRC2R27B□□~GRC2R65B□□的T=7.9±0.3mm。

Note 3：UL 1449 4th File No: E314979, TUV（EN/IEC 61643-311）File No: J 50659206

Note 4：Insulation resistance test conditions:

DC Spark-over Voltage	DC Measuring Voltage
151-400V	100V
401-1000V	250V
1001-2000V	500V
2001-6500V	1000V

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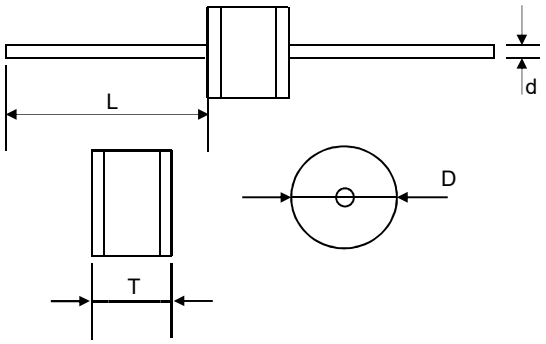
■ Dimension

□ = Y (Axial Lead Type)

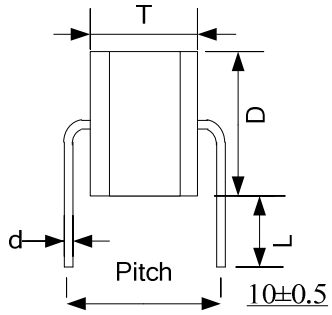


(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	8.0	±0.2
T	6.0&7.9	±0.2&±0.3
L	20	Min.
d	0.8	±0.05

Note:T of GRC2R280□□~ GRC2R25B□□ parts are 6mm, T of GRC2R27B□□ ~GRC2R65B□□ are 7.9mm.

□ = E (Formed Lead)

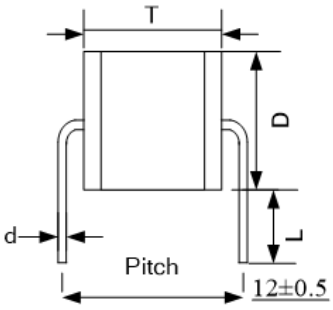


(Unit: mm)

Item	Dimensions	
	Spec	Spec
D	8.0	±0.2
T	6.0&7.9	±0.2&±0.3
d	0.8	±0.05
L	4.0	±0.5
P	10.0	±0.5

Note:T of GRC2R280□□~ GRC2R25B□□ parts are 6mm, T of GRC2R27B□□ ~GRC2R65B□□ are 7.9mm.

□ = F (Formed Lead)



(Unit: mm)

Item	Dimensions	
	Spec	Spec
D	8.0	±0.2
T	6.0&7.9	±0.2&±0.3
d	0.8	±0.05
L	4.0	±0.5
P	12.0	±0.5

Note:T of GRC2R280□□~ GRC2R25B□□ parts are 6mm, T of GRC2R27B□□ ~GRC2R65B□□ are 7.9mm.

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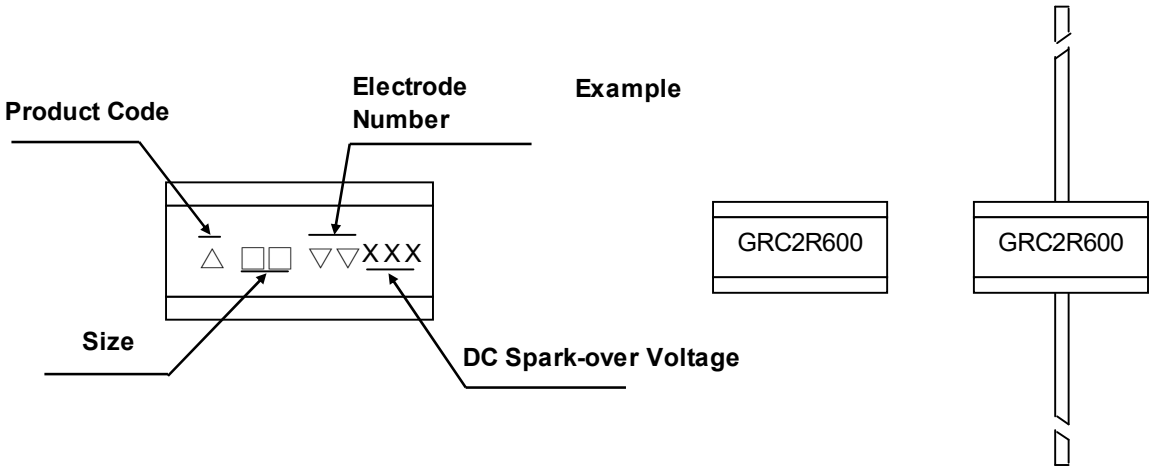
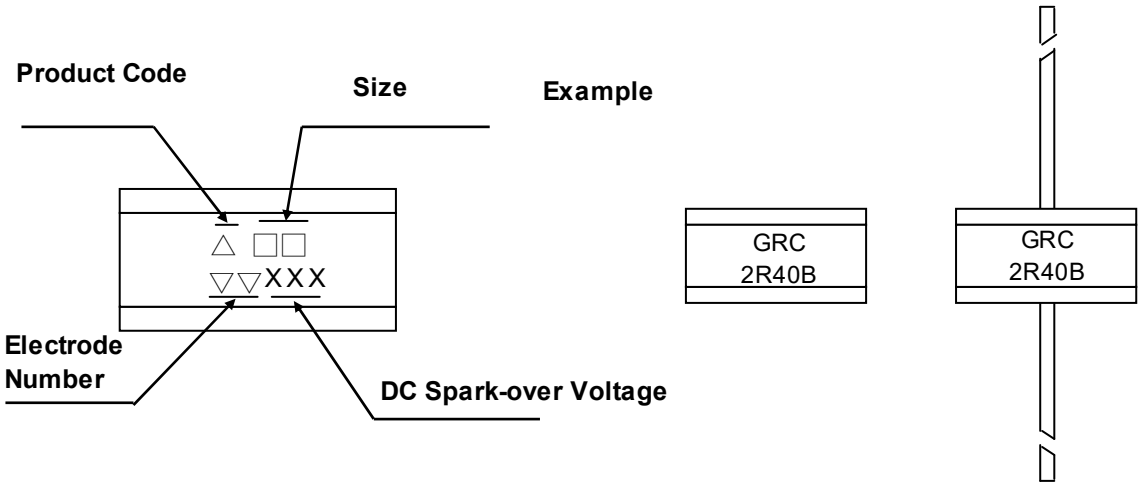
■ Marking

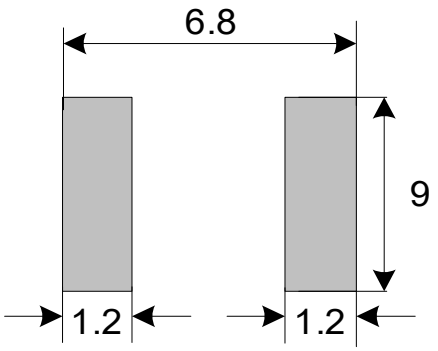


Note: T of GRC2R280□□~ GRC2R25B□□ parts are 6mm.

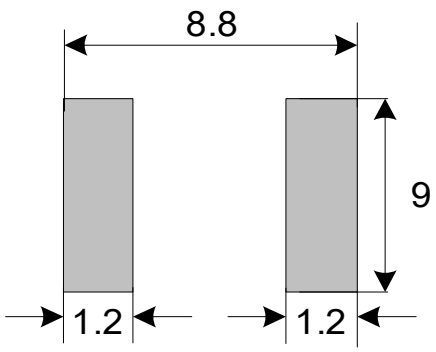


Note: T of GRC2R27B□□~GRC2R65B□□ are 7.9mm.

■ Recommended Pad Size(for8*8mm)



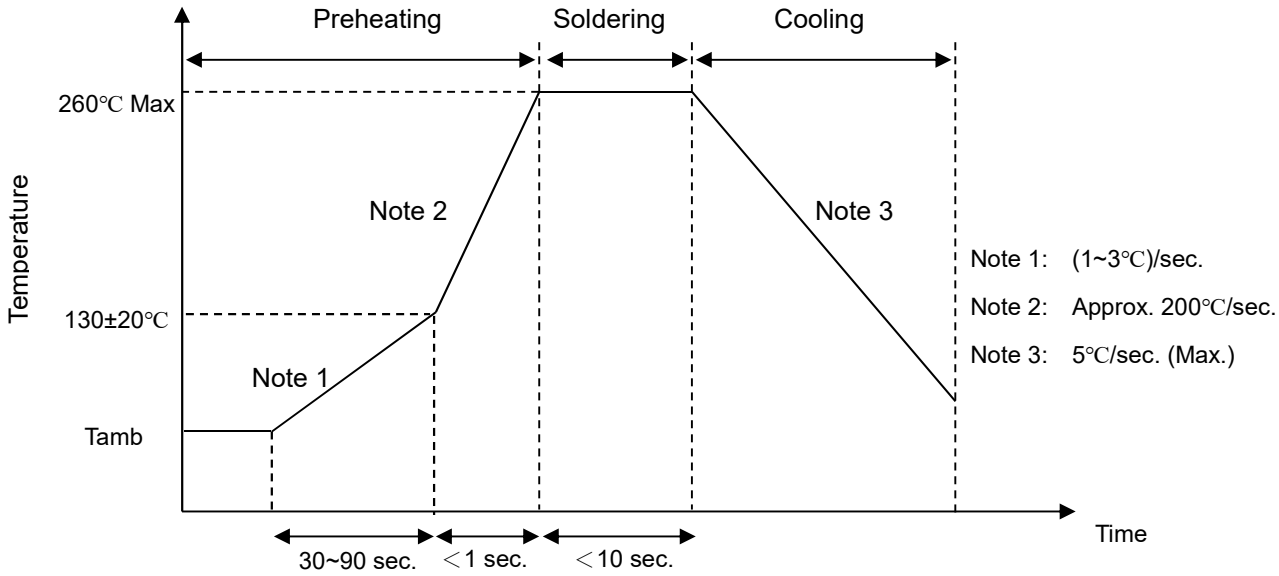
(8*6mm)



(8*7.9mm)

■ Soldering Recommendation

● Wave Soldering Profile



● Recommended Reworking Conditions with Soldering Iron

Item	Condition
Temperature of Soldering Iron-tip	360℃ (max.)
Soldering Time	3 sec. (max.)
Distance from Tube	2 mm (min.)

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■ Packaging

● Bulk

◆ **8x6mm For Axial Lead (Y/E Type):**

Quantity: 100pcs per PVC Box, and 500 pcs per Inner Box

Quantity (MPQ): 500pcs

◆ **8x7.9mm For Axial Lead (Y/F Type):**

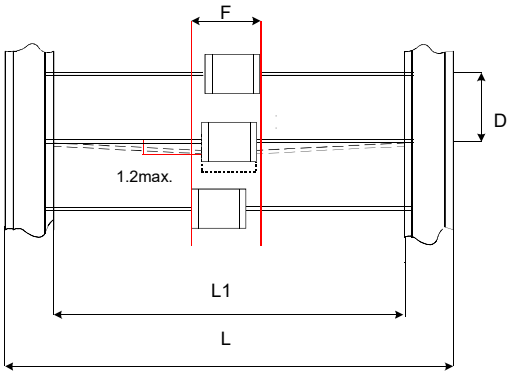
Quantity: 100pcs per PVC Box, and 500 pcs per Inner Box

Quantity (MPQ): 500pcs

● Taping

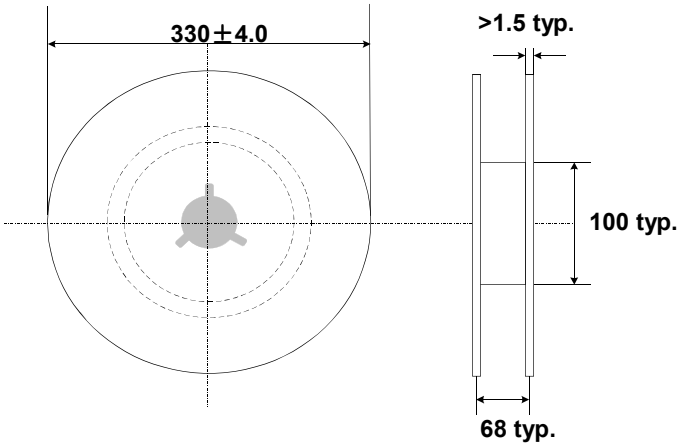
For 2-electrode Axial Lead GDT: 500 PCS/Reel

Quantity (MPQ): 500pcs



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
L1	52	±2
L	64	±3
D	10	±0.5
F	T + 1.4	Max.



(Unit: mm)

■ Warehouse Storage Conditions of Products

● Storage Conditions:

1. Storage Temperature: -10℃~+40℃
2. Relative Humidity: ≤75%RH
3. Keep away from corrosive atmosphere and sunlight.

● Period of Storage: 1 year

All specification are subject to change without notice.