

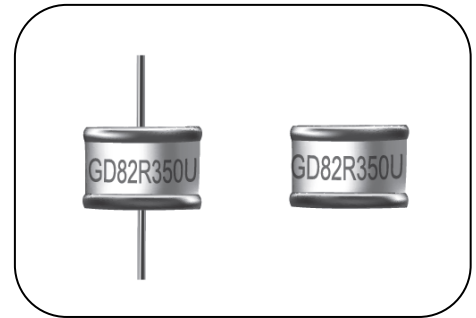
Gas Discharge Tube: GD82R-U Series



2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

■ Features

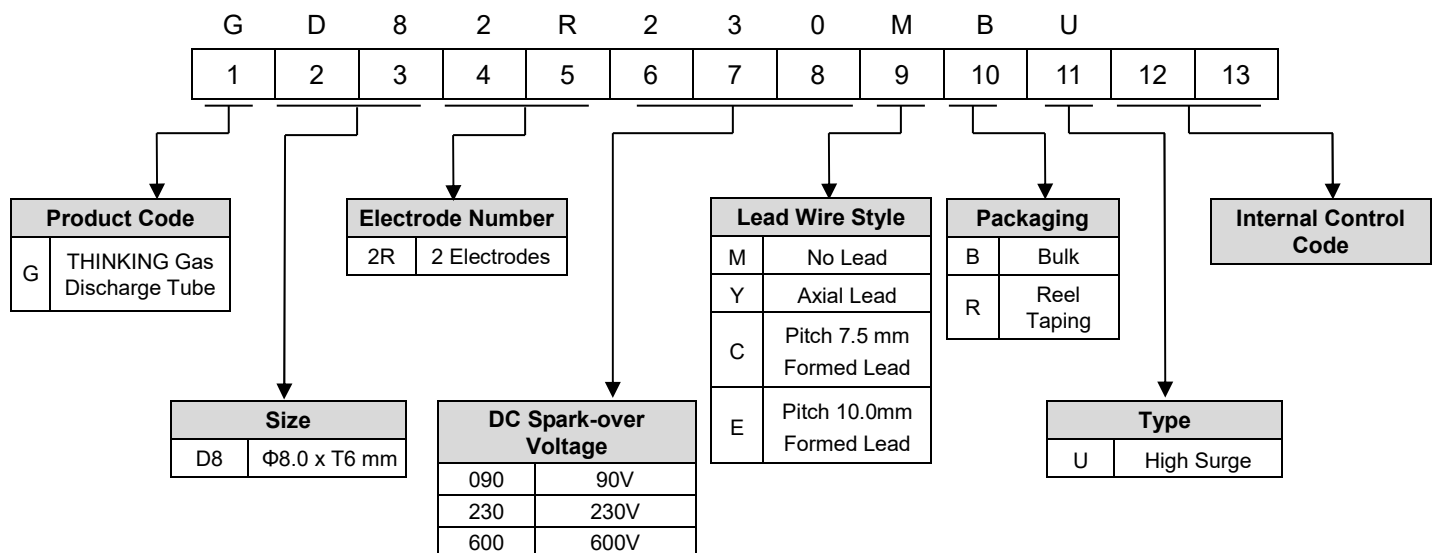
1. RoHS & HF compliant
2. Rugged ceramic-metal construction
3. Available with or without leads
4. DC spark-over voltage: 90V ~600V
5. Low capacitance
6. High transient current capability
7. Agency recognition: UL / cUL
8. Operating temperature: $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
Storage temperature: $-40^{\circ}\text{C} \sim +115^{\circ}\text{C}$



■ Recommended Applications

1. Cable modem
2. xDSL
3. Set-top box
4. TV sets
5. Power supply
6. Consumer electronics

■ Part Number Code



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■ Characteristics

Part No.	DC Spark-over Voltage	Max. Impulse Breakdown Voltage		Max. Impulse Discharge Current (8/20 μ s)		Impulse Life (10/1000 μ s)	Normal Alternating Discharge Current	DC Holdover Voltage	Minimum Insulation Resistance	Maximum Capacitance (1MHz)	Safety Approvals			
	100V/S	100V/ μ s	1KV/ μ s	1 time	10 times	100A	50Hz, 1Sec	<150ms			(G Ω)	(pF)	UL 497B	UL 1449
	(V)	(V)	(V)	(KA)		(Times)	(A)	(V)					(V)	(V)
GD82R090□	90 \pm 20%	500	600	25	20	500	20	52	10	1.5	√			
GD82R120□	120 \pm 15%	500	700					52			√			
GD82R130□	130 \pm 15%	500	700					52			√			
GD82R145□	145 \pm 15%	500	700					52			√			
GD82R230□	230 \pm 15%	500	700					80			√			
GD82R250□	250 \pm 15%	500	700					135			√			
GD82R300□	300 \pm 15%	700	900					150			√			
GD82R350□	350 \pm 15%	700	900					150			√			
GD82R400□	400 \pm 15%	800	1000					150			√			
GD82R470□	470 \pm 15%	900	1100					150			√			
GD82R600□	600 \pm 15%	1100	1300					150			√	√		

Note1: The first □ is style of lead wire, and the second □ is packaging.

Note2: H = High Surge Series

Note3: UL 497B File No. E245070

Note 4: Insulation resistance test conditions:

DC Spark-over Voltage	DC Measuring Voltage
90-150V	50V
151-400V	100V
401-600V	250V

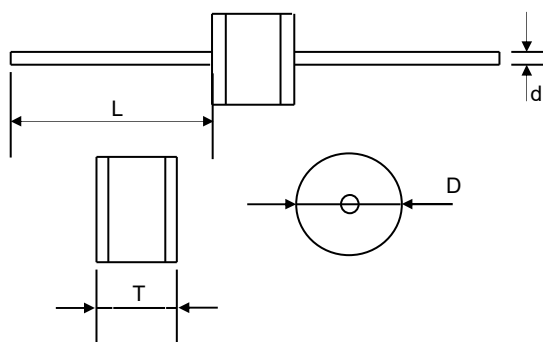
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2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

Dimension

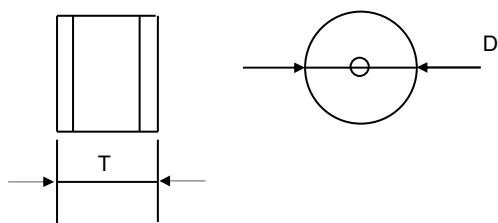
□ = Y (Axial Lead Type)



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.3/-0.5
T	6.0	+0.3/-0.5
L	20	Min.
d	1.0	± 0.05

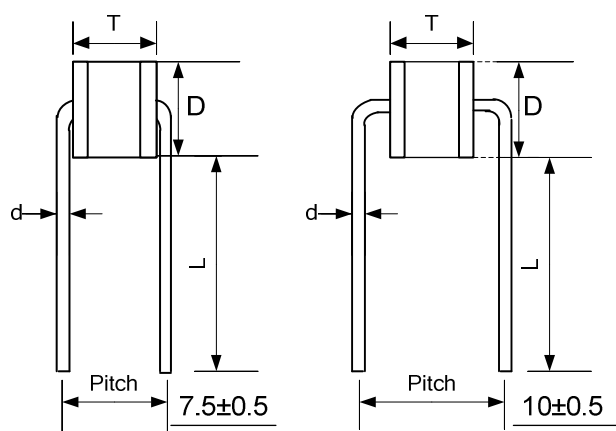
□ = M (No Lead Type)



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.3/-0.5
T	6.0	+0.3/-0.5

□ = C, E (Formed Lead)



(Unit: mm)

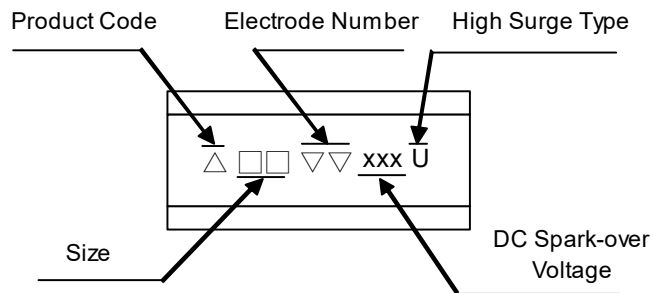
Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.3/-0.5
T	6.0	+0.3/-0.5
d	1.0	± 0.05
L	15.0	Min.
	7.5	± 0.5
P	10	± 0.5

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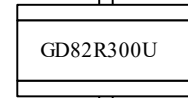
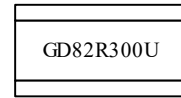


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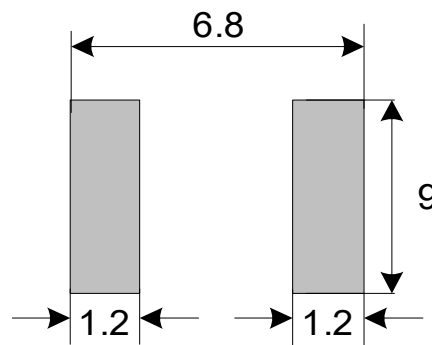
■ Marking



Example



■ Recommended Pad Size



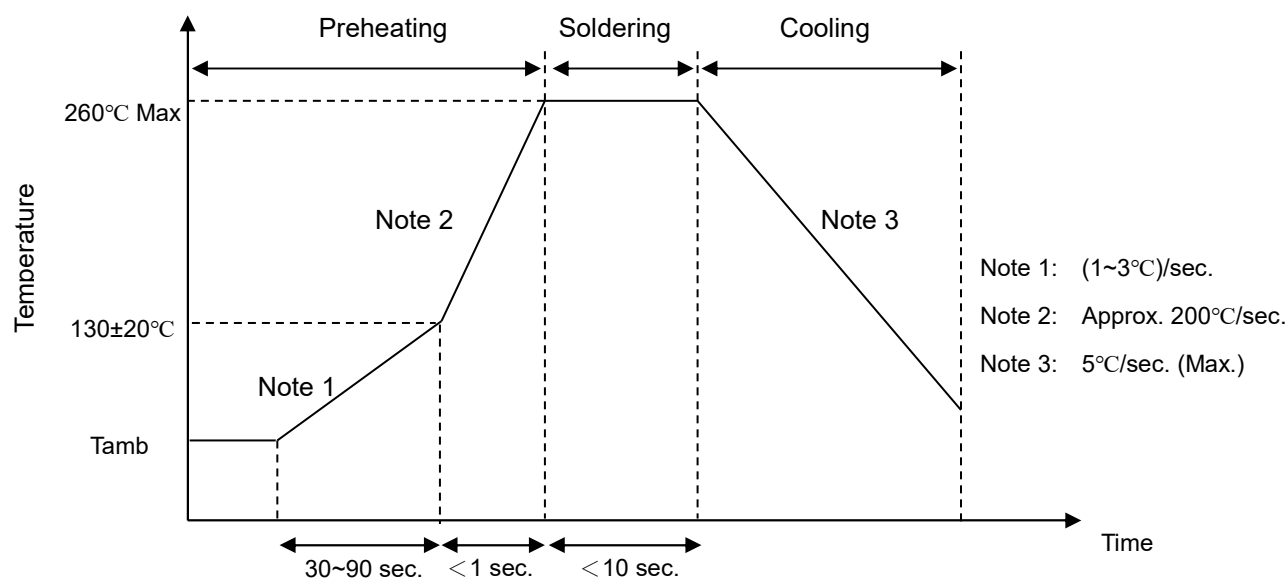
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2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

■ Soldering Recommendation

● Wave Soldering Profile



● Recommended Reworking Conditions with Soldering Iron

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

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■ Packaging

● Bulk

- ◆ For No Lead (M Type) and Axial Lead (Y Type):

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

Quantity (MPQ): 500pcs

- ◆ For Formed Lead (C, E Type) :

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

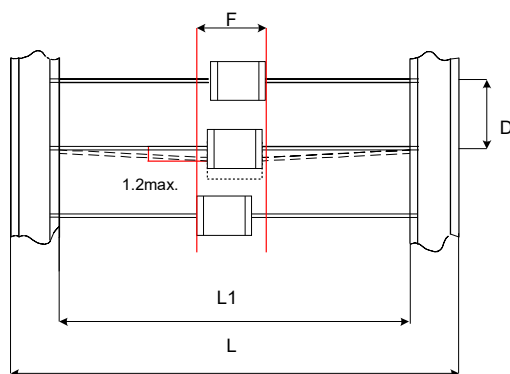
Quantity (MPQ): 500pcs

● Taping

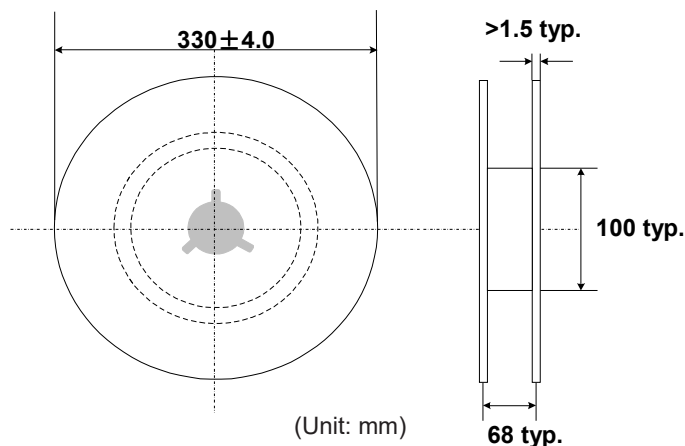
For 2-electrode Axial Lead GDT: 500 PCS/Reel

Quantity (MPQ): 500pcs

(Unit: mm)



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



■ Warehouse Storage Conditions of Products

● Storage Conditions:

1. Storage Temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
2. Relative Humidity: $\leq 75\% \text{RH}$
3. Keep away from corrosive atmosphere and sunlight.

● Period of Storage: 1 year