

Gas Discharge Tube: GB83R Series



3-Electrode $\Phi 8.0 \times T10$ mm Type

■ Features

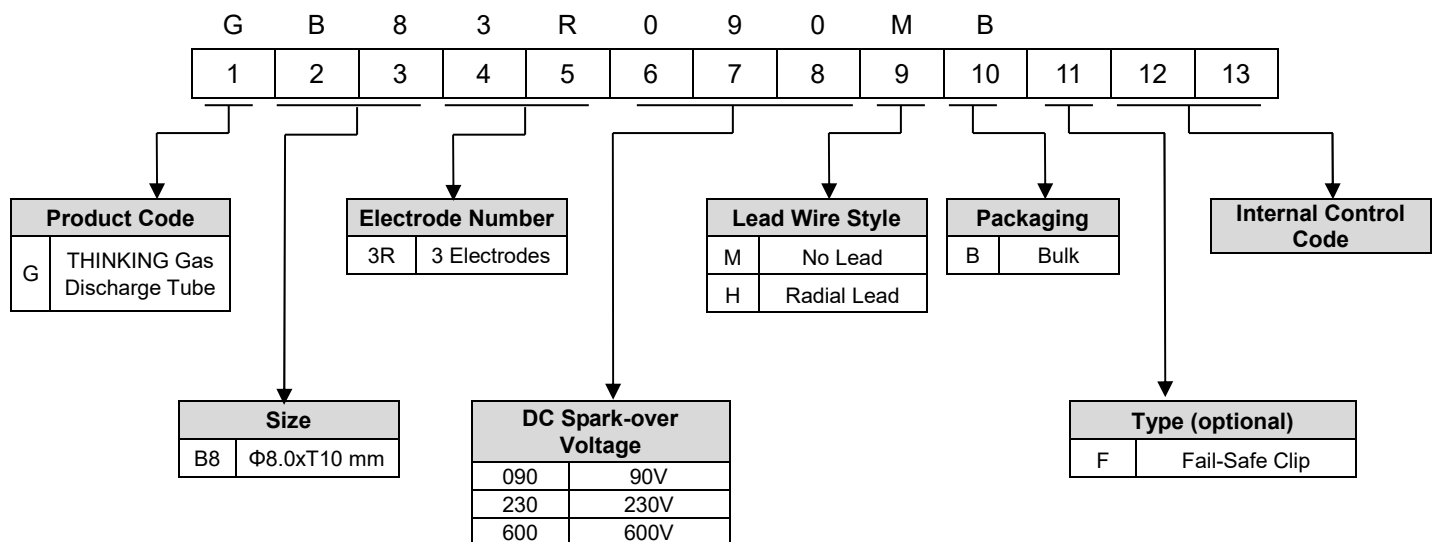
1. RoHS & HF compliant
2. Rugged ceramic-metal construction
3. Available with or without leads
4. Available with fail-safe clip
5. DC spark-over voltage: 90~600V
6. Low capacitance
7. Agency recognition: UL
8. Operating temperature: $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
Storage temperature: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



■ 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	10 times	200 A	50Hz, 1Sec	<150ms			
	(V)	(V)	(V)	(KA)	Times	(A)	(V)			
GB83R090□□(F)	90 \pm 20%	600	700	20	130	20	52	10	2	√
GB83R145□□(F)	145 \pm 20%	500	700				52			√
GB83R200□□(F)	200 \pm 20%	500	700				135			√
GB83R230□□(F)	230 \pm 20%	600	700				135			√
GB83R250□□(F)	250 \pm 20%	600	700				135			√
GB83R350□□(F)	350 \pm 20%	700	800				150			√
GB83R400□□(F)	400 \pm 20%	800	900				150			√
GB83R470□□(F)	470 \pm 20%	900	1000				150			√
GB83R600□□(F)	600 \pm 20%	1000	1100				150			√

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

Note2 : F = With fail-safe clip for optional.

Note 3: 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

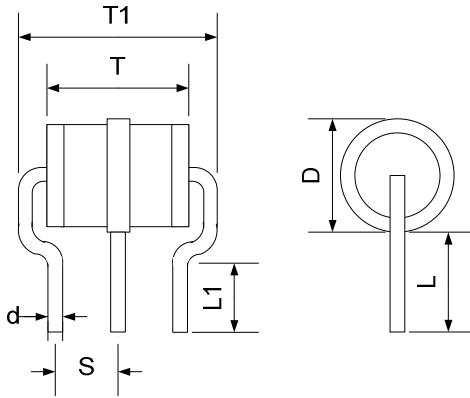
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■ Dimensions

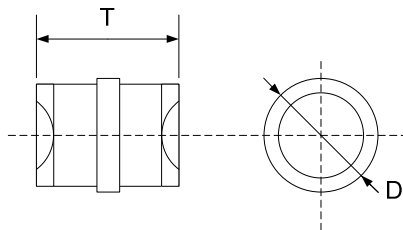
□ = H (Radial Lead Type)



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.2/-0.8
T	10.0	± 0.5
T1	13.4	+0.8/-0.5
L	7.5	± 0.5
L1	4.5	Min
S	4.4	± 0.4
d	1.0	± 0.05

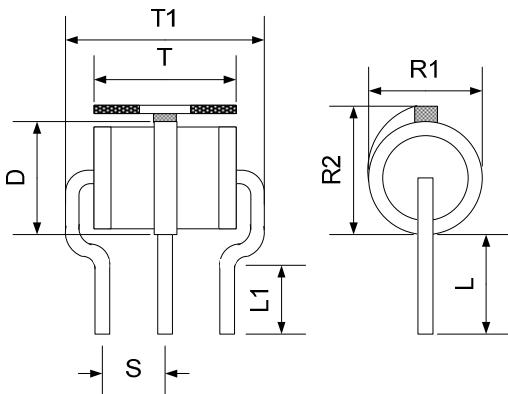
□ = M (No Lead Type)



(Unit: mm)

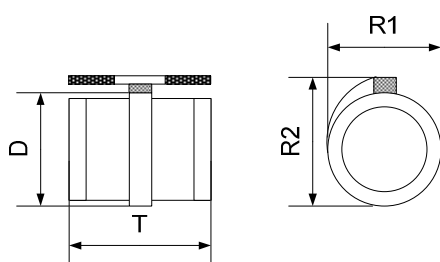
Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.2/-0.8
T	10.0	± 0.5

F = with fail-safe clip for optional



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.2/-0.8
T	10.0	± 0.5
R1	8.1	± 0.3
R2	9.8	± 0.4
T1	13.4	+0.8/-0.5
L	7.5	± 0.5
L1	4.5	Min
S	4.4	± 0.4
d	1.0	± 0.05



(Unit: mm)

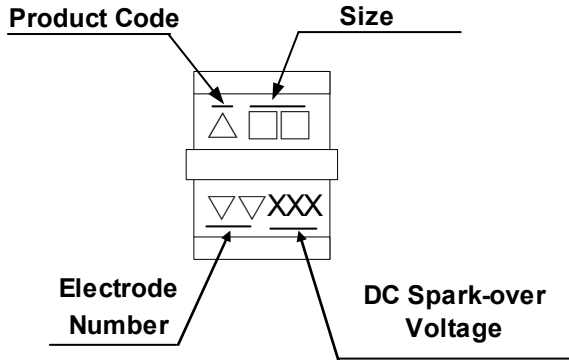
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T	10.0	± 0.5
R1	8.1	± 0.3
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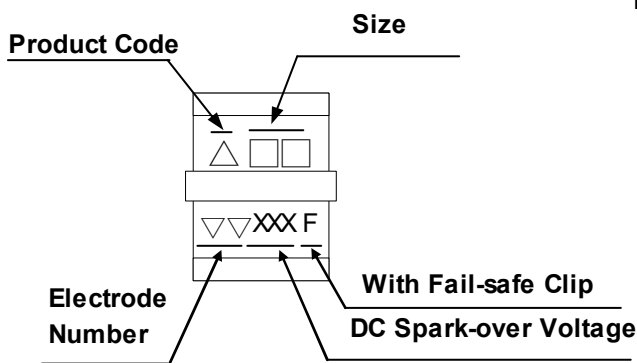
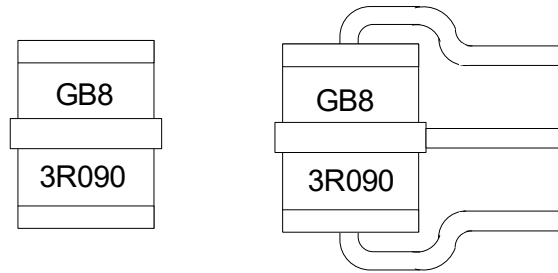


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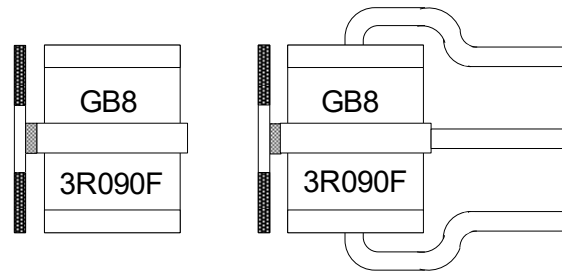
■ Marking



Example

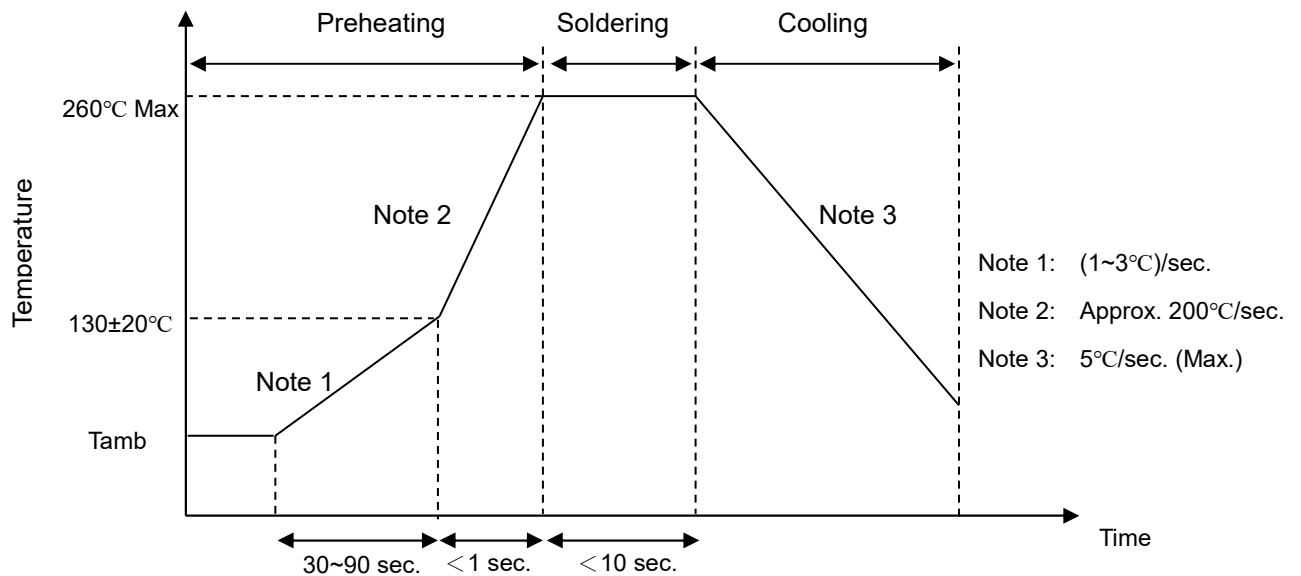


Example



■ Soldering Recommendation

● Wave Soldering Profile



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- 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.)

- Packaging

- Bulk :

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

Quantity (MPQ): 500pcs

- Warehouse Storage Conditions of Products

- Storage Conditions:

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

- Period of Storage: 1 year