

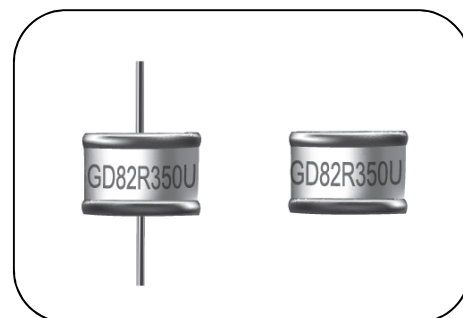
Gas Discharge Tube: GD82R-U Series



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

■ Features

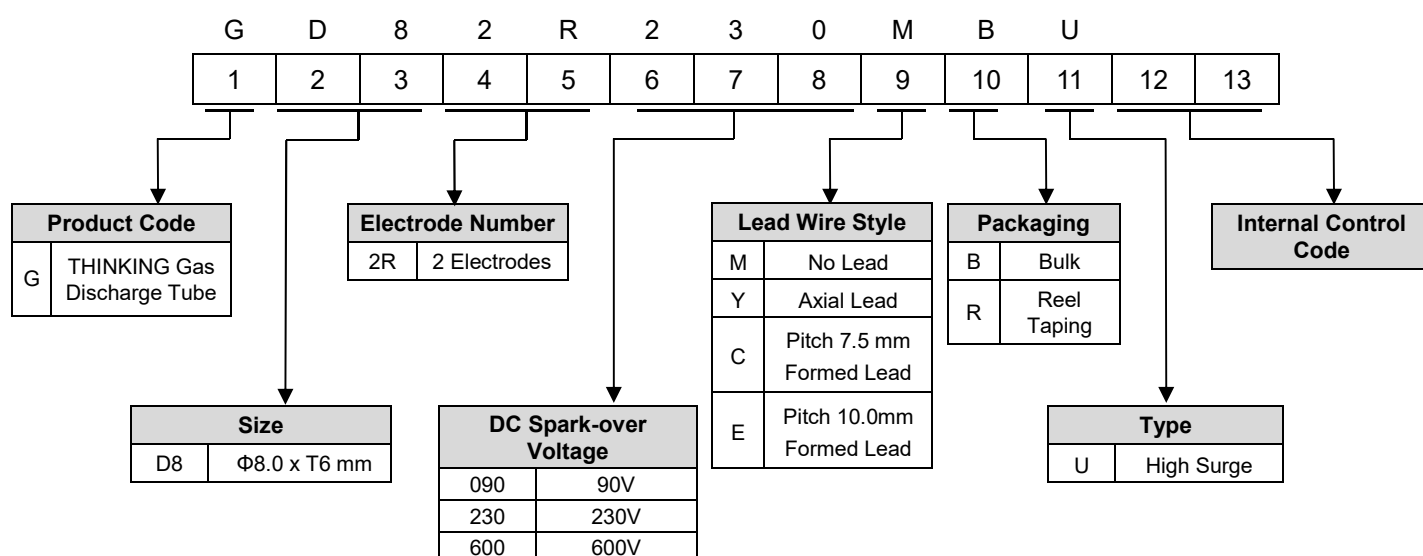
1. RoHS & HF compliant
2. Rugged ceramic-metal construction
3. Available with or without leads
4. DC spark-over voltage: 90V ~600V
5. Low capacitance
6. High transient current capability
7. Agency recognition: UL / cUL / TUV
8. Operating temperature: $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
Storage 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 | | | UL 497B | UL1449/cUL | TUV (EN/IEC 61643-311) |
| | (V) | (V) | (V) | (KA) | | (Times) | (A) | (V) | | | (G Ω) | (pF) | |
| 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, TUV (EN/IEC 61643-311) File No: J 50659206

Note 4: Insulation resistance test conditions:

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

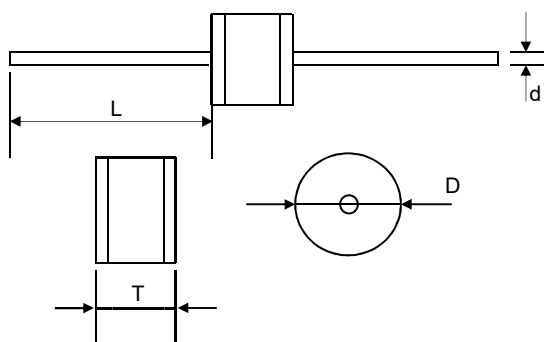
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2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

Dimension

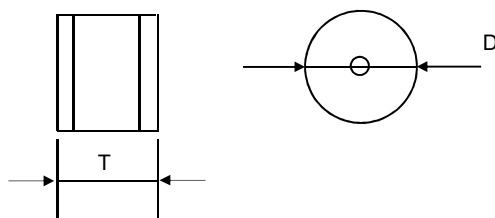
□ = Y (Axial Lead Type)



(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 |

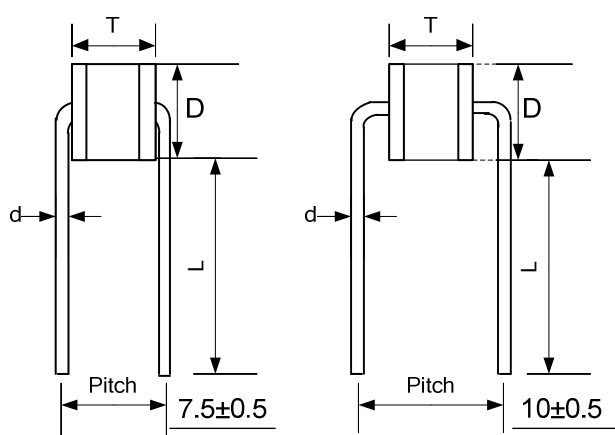
□ = M (No Lead Type)



(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)

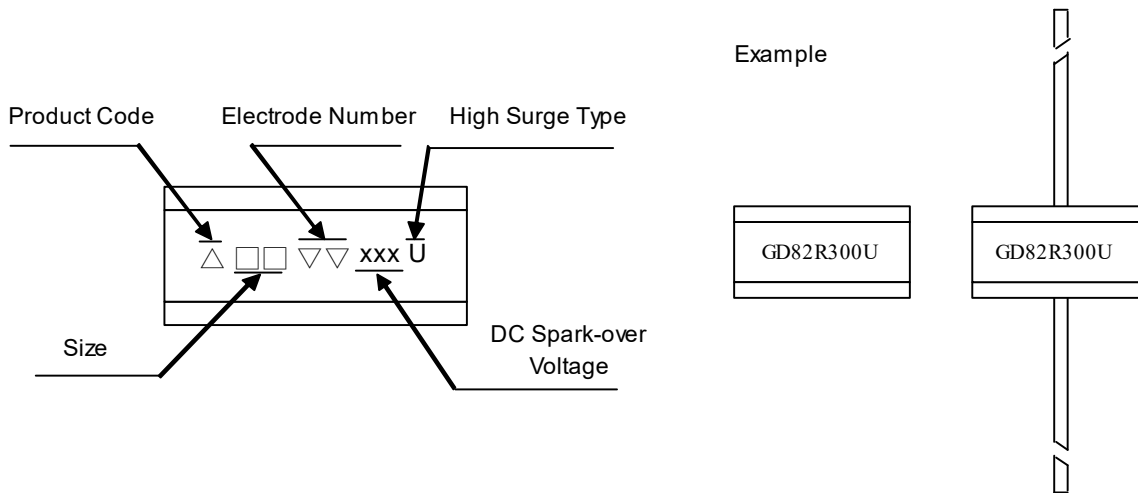
| Item | Dimensions | |
|------|------------|------------|
| | Spec. | Tolerance |
| D | 8.0 | +0.3/-0.5 |
| T | 6.0 | +0.3/-0.5 |
| d | 1.0 | ± 0.05 |
| L | 15.0 | Min. |
| P | 7.5 | ± 0.5 |
| | 10 | ± 0.5 |

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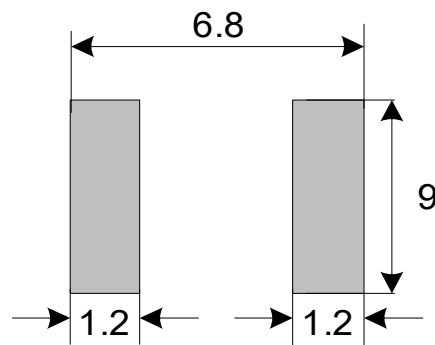


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■ Marking



■ Recommended Pad Size



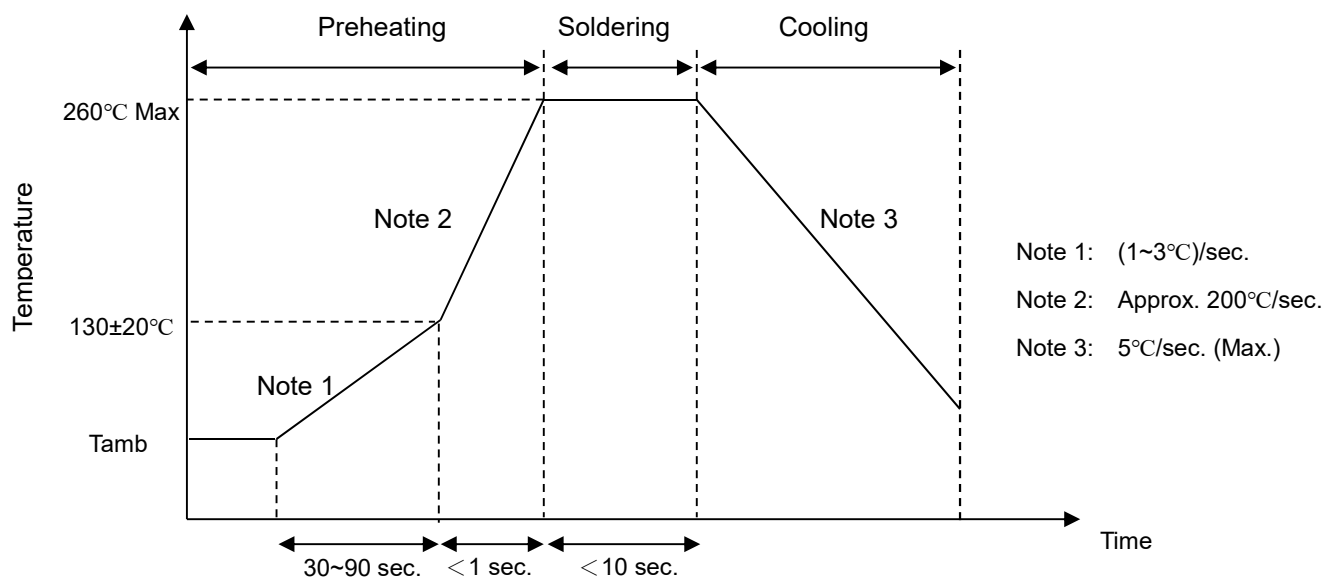
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2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

■ 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) :

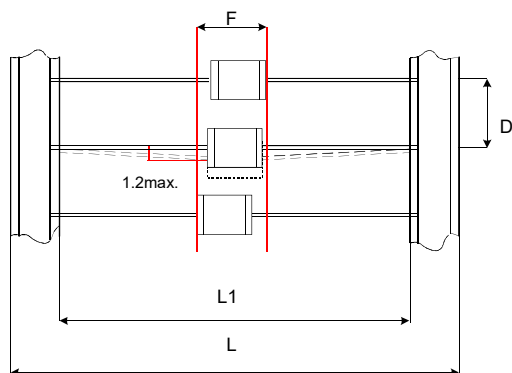
Quantity: 100pcs per PVC Box, 500pcs per Inner Box

Quantity (MPQ): 500pcs

● Taping

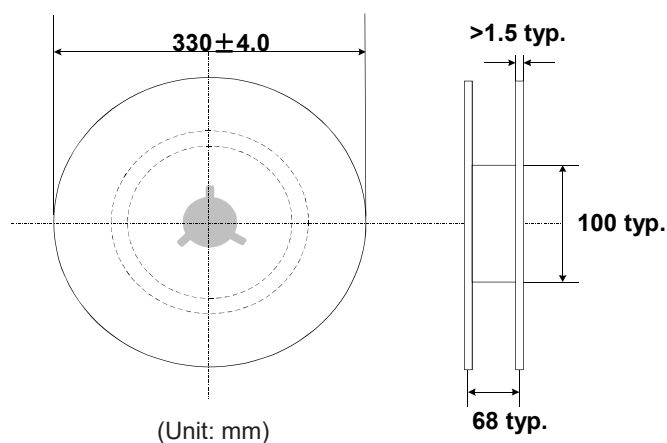
For 2-electrode Axial Lead GDT: 500 PCS/Reel

Quantity (MPQ): 500pcs



(Unit: mm)

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



(Unit: mm)

■ 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