

# Gas Discharge Tube: GF4 Series

## SMD 2-Electrode $\Phi 4.2/3.5 \times T4$ mm Type



### ■ Features

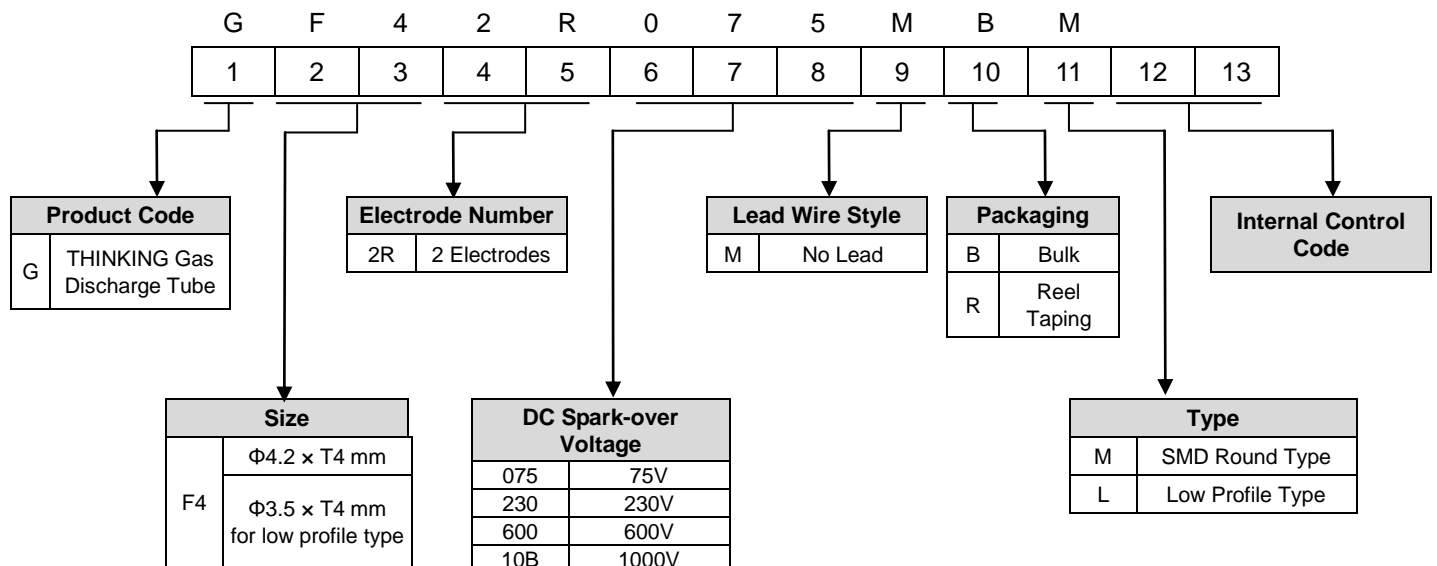
1. RoHS & HF compliant
2. SMD type series
3. DC spark-over voltage: 75~1000V
4. Low capacitance
5. Agency recognition: UL / cUL
6. Operating temperature:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$   
Storage temperature:  $-40^{\circ}\text{C} \sim +115^{\circ}\text{C}$



### ■ 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 | Maximum Impulse Breakdown Voltage |              | Max. Impulse Discharge Current (8/20 $\mu$ s) |          | Impulse Life (10/1000 $\mu$ s) | Normal Alternating Discharge Current | DC Holdover Voltage | Minimum Insulation Resistance | Maximum Capacitance (1MHz) | Safety Approvals |         |
|---------------|-----------------------|-----------------------------------|--------------|---|----------|--------------------------------|--------------------------------------|---------------------|-------------------------------|----------------------------|------------------|---------|
|               | 100V/S                | 100V/ $\mu$ s                     | 1KV/ $\mu$ s | 1 time  | 10 times | 100A                           | 50Hz<br>1Sec                         | <150ms              |                               |                            | UL 1449/<br>cUL  | UL 497B |
|               | (V)                   | (V)                               | (V)          | (KA)  |          | (Times)                        | (A)                                  | (V)                 |                               |                            |                  |         |
| GF42R075MRM   | 75 $\pm$ 20%          | 700                               | 800          | 5   | 3        | 300                            | 3                                    | 52                  | 1                             | 0.5                        |                  | √       |
| GF42R090MRM/L | 90 $\pm$ 20%          | 700                               | 800          |   |          |                                |                                      | 52                  |                               |                            | √                |         |
| GF42R145MRM/L | 145 $\pm$ 20%         | 700                               | 800          |   |          |                                |                                      | 52                  |                               |                            | √                |         |
| GF42R230MRM/L | 230 $\pm$ 20%         | 600                               | 700          |   |          |                                |                                      | 80                  |                               |                            | √                |         |
| GF42R250MRM/L | 250 $\pm$ 20%         | 600                               | 700          |   |          |                                |                                      | 80                  |                               |                            | √                |         |
| GF42R300MRM/L | 300 $\pm$ 20%         | 600                               | 700          |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GF42R350MRM/L | 350 $\pm$ 20%         | 650                               | 800          |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GF42R400MRM/L | 400 $\pm$ 20%         | 700                               | 800          |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GF42R470MRM/L | 470 $\pm$ 20%         | 800                               | 900          |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GF42R600MRM/L | 600 $\pm$ 20%         | 900                               | 1000         |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GF42R800MRM   | 800 $\pm$ 20%         | 1300                              | 1400         | 3   | 2        | 100                            | 2                                    | 150                 |                               | √                          |                  |         |
| GF42R10BMRM   | 1000 $\pm$ 20%        | 1500                              | 1600         |   |          |                                |                                      | 150                 | √                             |                            |                  |         |

Note1: M is for SMD round type; L is for low profile type

Note2: UL 497B File No: E245070; UL 1449 4th File No: E314979

Note3: Insulation resistance test condition:

| DC Spark-over Voltage | DC Measuring Voltage |
|-----------------------|----------------------|
| 70-150V               | 50V                  |
| 151-400V              | 100V                 |
| 401-1000V             | 250V                 |
| 1001-2000V            | 500V                 |
| >2001V                | 1000V                |

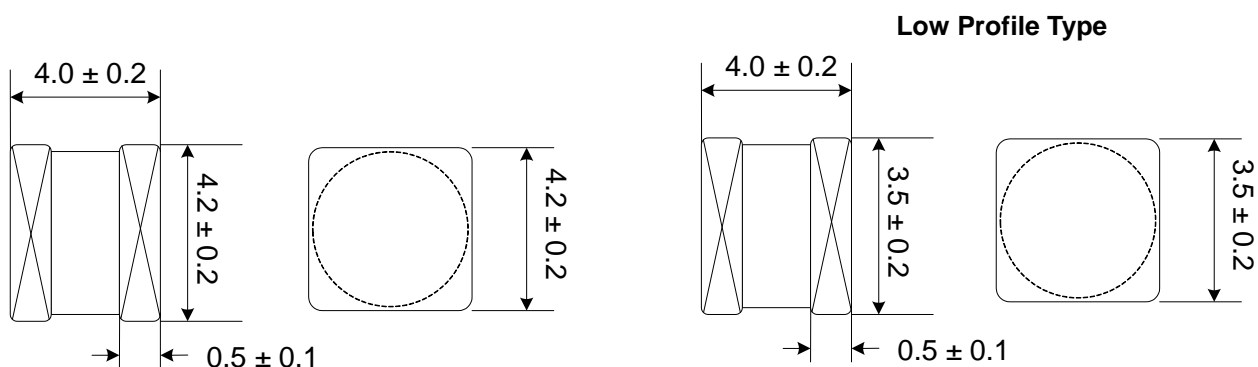
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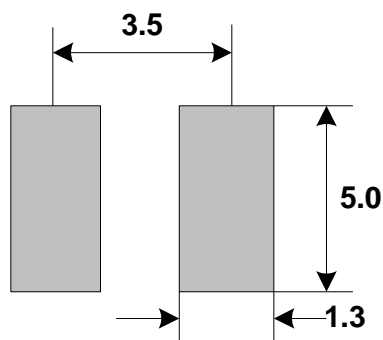
### Dimension

(Unit: mm)



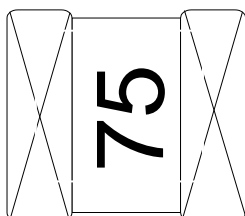
### Recommended Pad Size

(Unit: mm)



### Marking

Example: GF42R075MRM



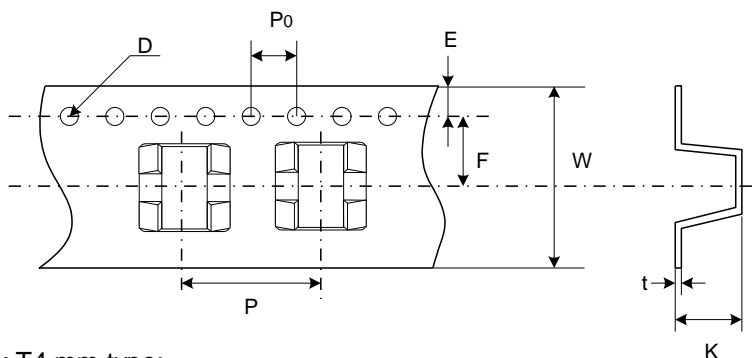
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### ■ Packaging

#### ● Taping



#### ◆ For $\Phi 4.2$ x T4 mm type:

Quantity: 900pcs per reel (13")

(Unit: mm)

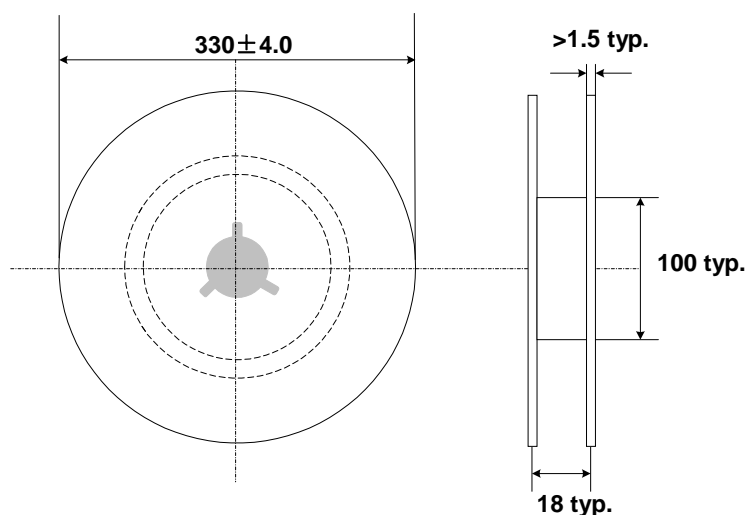
| Item      | P         | P0        | W         | F         | E         | D           | K         | t          |
|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|------------|
| Spec.     | 12.0      | 4.0       | 16.0      | 7.5       | 1.75      | $\Phi 1.55$ | 4.6       | 0.5        |
| Tolerance | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.3$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.05$  | +0.2,-0.1 | $\pm 0.05$ |

#### ◆ For $\Phi 3.5$ x T4 mm low profile type:

Quantity: 2,000pcs per reel (13")

(Unit: mm)

| Item      | P         | P0        | W         | F         | E         | D           | K         | t          |
|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|------------|
| Spec.     | 8.0       | 4.0       | 16.0      | 7.5       | 1.75      | $\Phi 1.55$ | 3.9       | 0.4        |
| Tolerance | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.3$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.05$  | $\pm 0.1$ | $\pm 0.05$ |



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- **Bulk**

- ◆ For GF4 Series:

Quantity: 200pcs per PVC Box, 1200pcs per Inner Box

- **Warehouse Storage Conditions of Product**

- 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