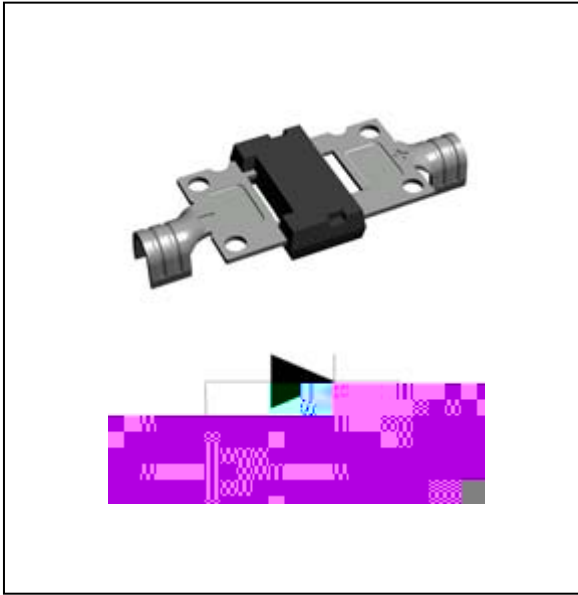




# GFMK6045C

## Schottky Bypass Diode Module



### Features

- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

### Typical Applications

Photovoltaic solar cell protection schottky rectifier

### Mechanical Data

**Package:** GF025

Molding compound meets UL 94 V-0 flammability rating,

**Terminals:** Tin plated leads, solderable per J-STD-002 and JESD 22-B102

**Polarity:** As marked

### Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER   | SYMBOL | UNIT             | GFMK6045C |
|---|--------|------------------|-----------|
| Device marking code   |        |                  | GFMK6045C |
| Repetitive Peak Reverse Voltage   | VRRM   | V                | 45        |
| Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25$                                      | $I_O$  | A                | 60        |
| Surge(Non-repetitive)Forward Current @60Hz sine wave, 1 cycle, $T_j=25$                                 | IFSM   | A                | 700       |
| Current Squared Time @1ms $t < 8.3\text{ms}$ $T_j=25$ , Rating of per diode                             | $I^2t$ | A <sup>2</sup> S | 2030      |
| Storage Temperature   | Tstg   |                  | -55 ~+150 |
| Junction Temperature<br>IN DC Forward Mode-Forward Operations, without reverse bias, t 1 h (Fig. 1) (1) | $T_j$  |                  | -55 ~+200 |

#### Note

(1) Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

### Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER   | SYMBOL            | UNIT | TEST CONDITIONS       | GFMK6045C |
|---|-------------------|------|-----------------------|-----------|
| Maximum instantaneous forward voltage drop per diode              | VF                | V    | IFM=60A               | 0.51      |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>RRM1</sub> | mA   | VRM=VRRM<br>$T_a=25$  | 0.12      |
|   | I <sub>RRM2</sub> | mA   | VRM=VRRM<br>$T_a=100$ | 18        |
|   | I <sub>RRM3</sub> | mA   | VRM=VRRM<br>$T_a=125$ | 70        |



# GFMK6045C

## Thermal Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER              | SYMBOL | UNIT | GFMK6045C |
|------------------------|--------|------|-----------|
| Thermal Resistance (1) | R J-C  | /W   | 1.5       |

### Note

(1) Thermal resistance from Between junction and case, On glass-epoxi substrate.

## Ordering Information (Example)

| PREFERRED P/N | UNIT WEIGHT(g)  | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|-----------------|----------------------|-------------------------|----------------------------|---------------|
| GFMK6045C     | Approximate 4.0 | 30                   | 600                     | 2400                       | Tube          |

## Characteristics (Typical)

FIG1:  $I_o$  -  $T_c$  Curve

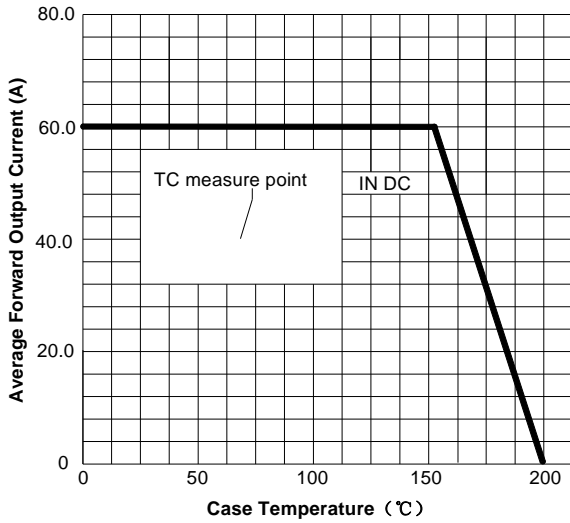


FIG2: Surge Forward Current Capability

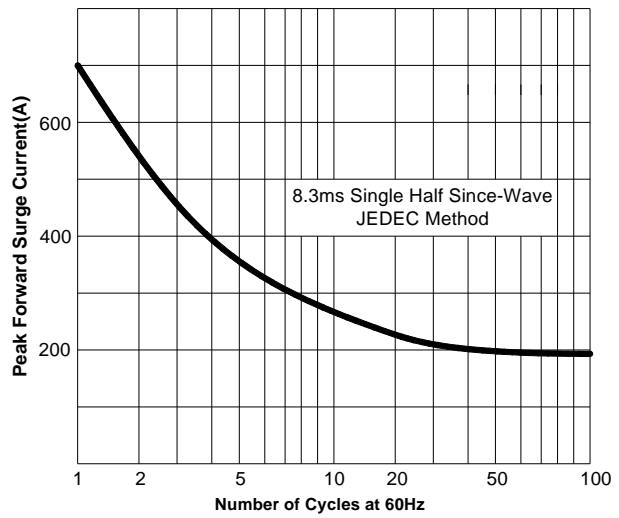


FIG3: Instantaneous Forward Voltage

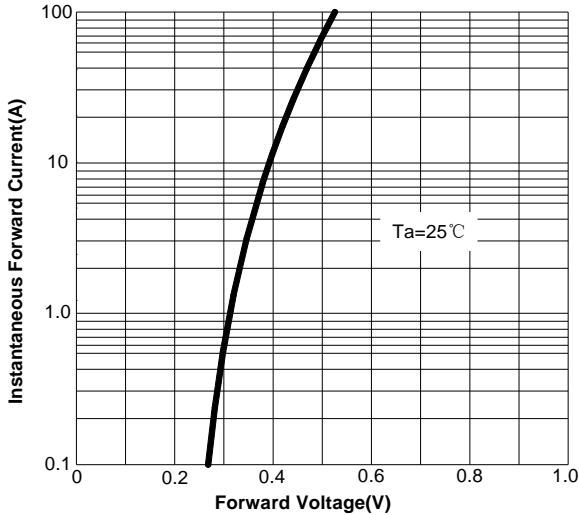
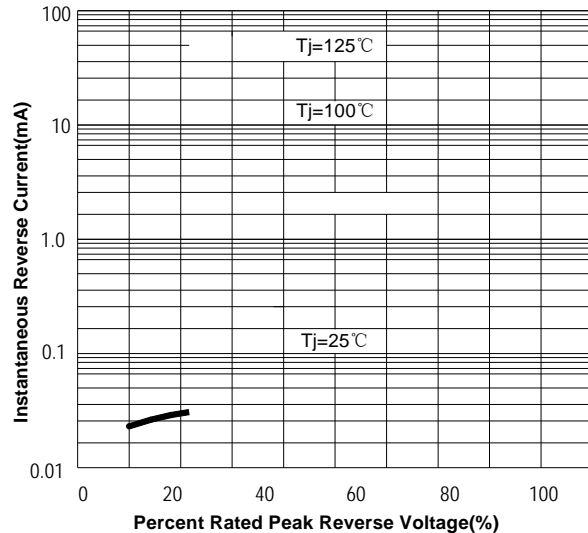


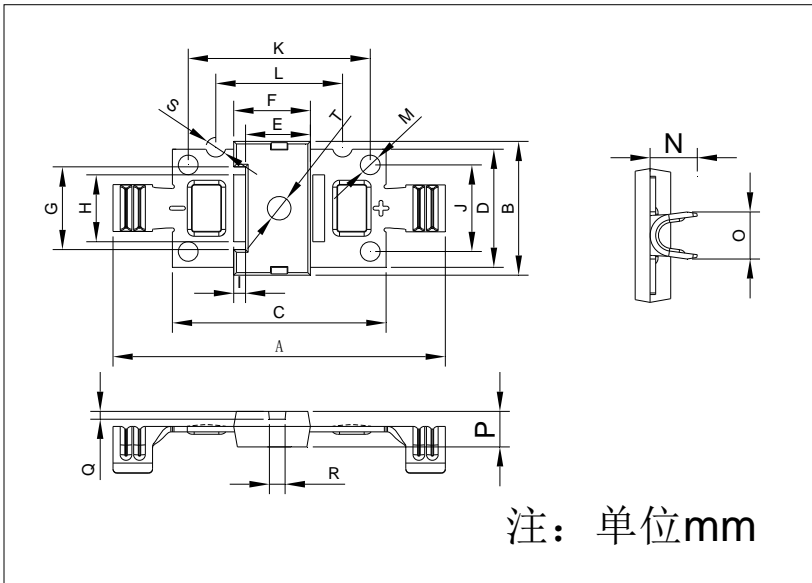
FIG4: Instantaneous Reverse Characteristics





# GFMK6045C

## Outline Dimensions (in millimeters)



| DIM | MM       |      | NOTE |
|-----|----------|------|------|
|     | MIN      | MAX  |      |
| A   | 41.5     | 42.5 |      |
| B   | 16.5     | 17.5 |      |
| C   | 26.5     | 27.5 |      |
| D   | 14.5     | 15.5 |      |
| E   | 7.9      | 8.5  |      |
| F   | 9.4      | 10   |      |
| G   | 10.50REF |      |      |
| H   | 8.2      | 8.8  |      |
| I   | 1.2      | 1.8  |      |
| J   | 10.7     | 11.3 |      |
| K   | 22.7     | 23.3 |      |
| L   | 15.7     | 16.3 |      |
| M   | 2.35     | 2.65 |      |
| N   | 5.65     | 6.25 |      |
| O   | 5.72     | 6.22 |      |
| P   | 4.4      | 4.6  |      |
| Q   | 0.7      | 1.3  |      |
| R   | 1.7      | 2.3  |      |
| S   | 2.3      | 2.7  |      |
| T   | 2.7      | 3.3  |      |



## GFMK6045C

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