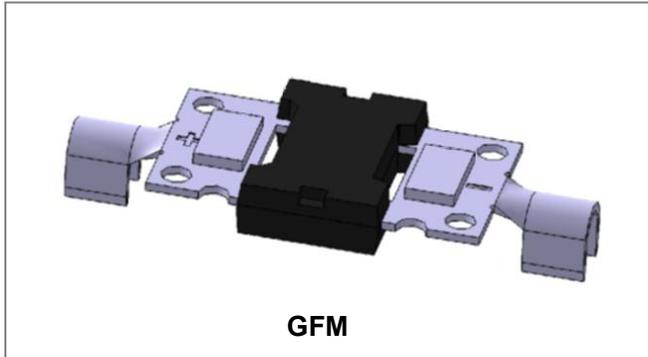


## GF6045PC Power Schottky Module Bypass Diode



### Features

- Schottky Barrier high diode
- Low thermal resistance
- Lower forward voltage drop, low power loss
- Isolate Package design, ideal for heat dispersion
- High forward current capability
- Excellent anti-humidity
- Low profile package
- High forward surge capability
- Terminals: Tin plated
- All SMC parts are traceable to the wafer lot
- Additional electrical and life testing can be performed upon request

### Mechanical Data

- Case: GFM
- Terminals: Copper
- High temperature soldering guaranteed
- Heated-tool welding 260°C, 10seconds
- Marking Code: GF6045PC

### Maximum Ratings (limiting values, at 25 °C unless otherwise specified)

| Characteristics  | Symbol                          | Condition                        | Max. | Units |
|--|---------------------------------|----------------------------------|------|-------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | -                                | 45   | V     |
| Average Rectified Forward Current  | $I_F (AV)$                      | $T_C = 96^\circ\text{C}$ , In DC | 60   | A     |
| Peak One Cycle Non-Repetitive Surge Current  | $I_{FSM}$                       | 8.3 ms, half Sine pulse          | 450  | A     |

### Electrical Characteristics:

| Characteristics       | Symbol   | Condition  | Typ. | Max. | Units |
|-----------------------|----------|--|------|------|-------|
| Forward Voltage Drop* | $V_{F1}$ | @ 60A, Pulse, $T_J = 25^\circ\text{C}$                                 | 0.50 | 0.60 | V     |
| Reverse Current*      | $I_{R1}$ | @ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$                    | 0.09 | 1    | mA    |
|                       | $I_{R2}$ | @ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$                   | 65   | 200  | mA    |
| Junction Capacitance  | $C_T$    | @ $V_R = 5\text{V}, T_C = 25^\circ\text{C}$<br>$f_{SIG} = 1\text{MHz}$ | 2985 | -    | pF    |

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

| Characteristics   | Symbol                | Condition | Specification | Units                |
|---|-----------------------|-----------|---------------|----------------------|
| Junction Temperature IN DC Forward Mode, without reverse bias, $t \leq 1$ h | $T_J$                 | -         | -55 to +200   | $^{\circ}\text{C}$   |
| Storage Temperature   | $T_{\text{stg}}$      | -         | -55 to +150   | $^{\circ}\text{C}$   |
| Typical Thermal Resistance Junction to Case                                 | $R_{\theta\text{JC}}$ | -         | 1.5           | $^{\circ}\text{C/W}$ |

**Ratings and Characteristics Curves**

Figure1 Typical Forward Characteristics

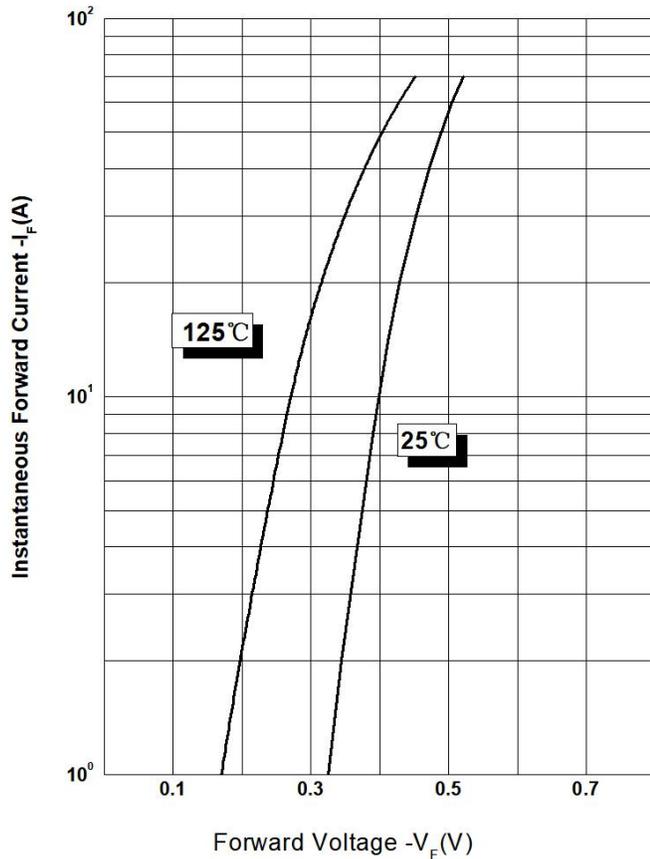


Figure 2 Typical Reverse Characteristics

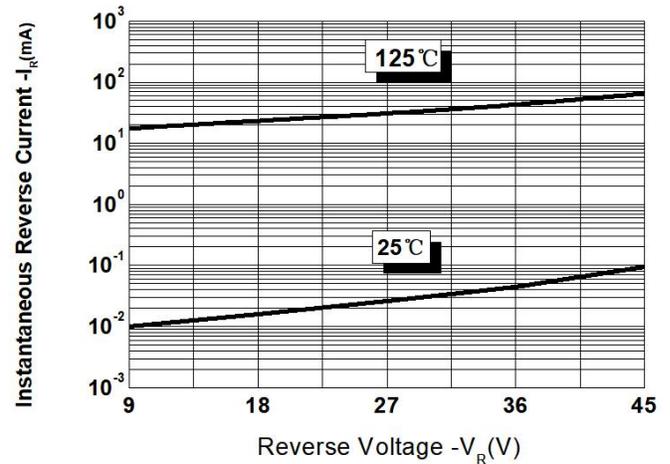
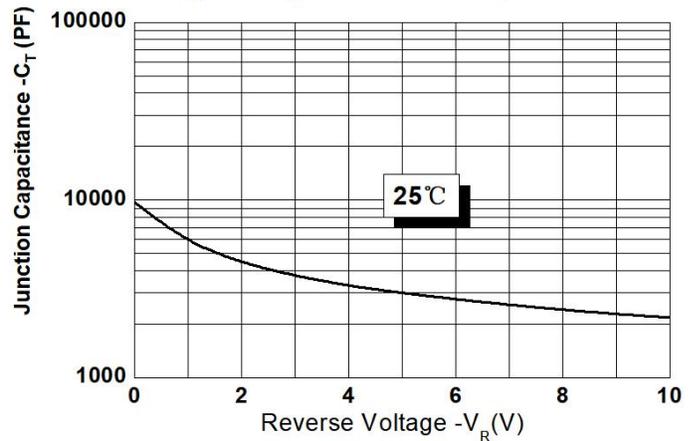


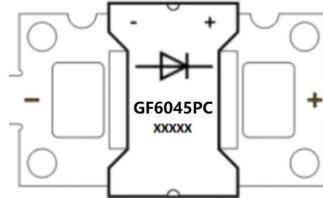
Figure 3 Typical Junction Capacitance



**Ordering Information**

| Device   | Package | Shipping     |
|----------|---------|--------------|
| GF6045PC | GFM     | 30pcs / Tube |

**Marking Diagram**



Where XXXXX is YYWWL

GF6045PC = Marking Code  
YY = Year  
WW = Week  
L = Lot Number

| Order P/N   | Terminals     | Additional   |
|-------------|---------------|--------------|
| GF6045PC-S1 | Tin Plated    | None         |
| GF6045PC-S2 | Tin Plated    | Solder Paste |
| GF6045PC-S3 | Tin Plated    | Solder Block |
| GF6045PC-N1 | Nickel Plated | None         |
| GF6045PC-N2 | Nickel Plated | Solder Paste |
| GF6045PC-N3 | Nickel Plated | Solder Block |

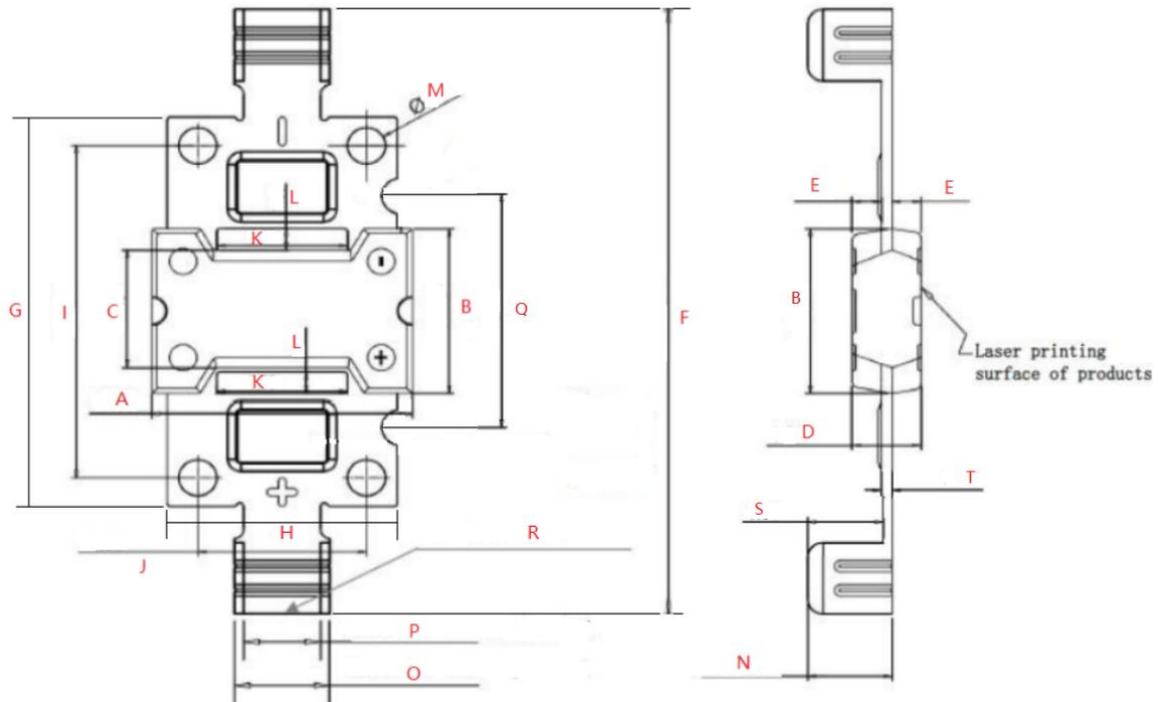


Solder Paste



Solder Block

**Mechanical Dimensions GFM (Millimeters)**



| Symbol | Dimensions in millimeters |         |       |
|--------|---------------------------|---------|-------|
|        | Min.                      | Typical | Max   |
| A      | 16.90                     | 17.00   | 17.10 |
| B      | 11.38                     | 11.48   | 11.58 |
| C      | 8.15                      | 8.20    | 8.25  |
| D      | 4.40                      | 4.50    | 4.60  |
| E      | 1.85                      | 1.90    | 1.95  |
| F      | 41.90                     | 42.00   | 42.10 |
| G      | 26.90                     | 27.00   | 27.10 |
| H      | 14.90                     | 15.00   | 15.60 |
| I      | 22.90                     | 23.00   | 23.10 |
| J      | 10.90                     | 11.00   | 11.10 |
| K      | -                         | 8.50    | -     |
| L      | -                         | 1.50    | -     |
| M      | -                         | ∅ 2.50  | 2.55  |
| N      | 5.35                      | 5.50    | 5.65  |
| O      | 6.20                      | 6.30    | 6.40  |
| P      | 4.90                      | 5.00    | 5.10  |
| Q      | 15.95                     | 16.00   | 16.05 |
| R      | 2.80                      | 2.90    | 3.00  |
| S      | 4.75                      | 4.80    | 4.85  |
| T      | 0.67                      | 0.70    | 0.73  |

Dimension H includes Burrs/cutting residuals.

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