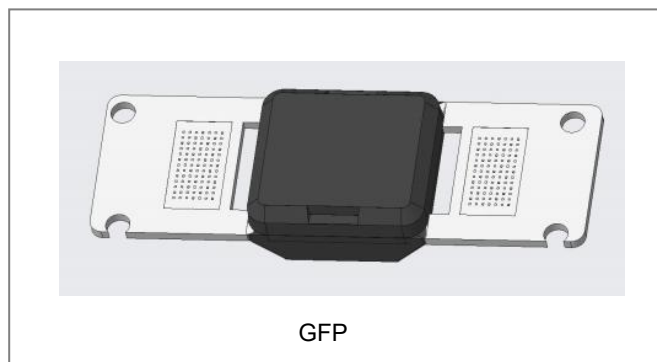


## GFP5045TC Power Schottky Module Bypass Diode



### Features

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

### Mechanical Data

- Case: GFP
- High temperature soldering guaranteed
- Heated-tool welding 260°C, 10 seconds
- Marking Code: GFP5045TC

### 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  | $I_F (AV)$                      | $T_C = 111^\circ\text{C}$ , In DC | 50   | A     |
| Peak One Cycle Non-Repetitive Surge Current  | $I_{FSM}$                       | 8.3 ms, half Sine pulse           | 450  | A     |

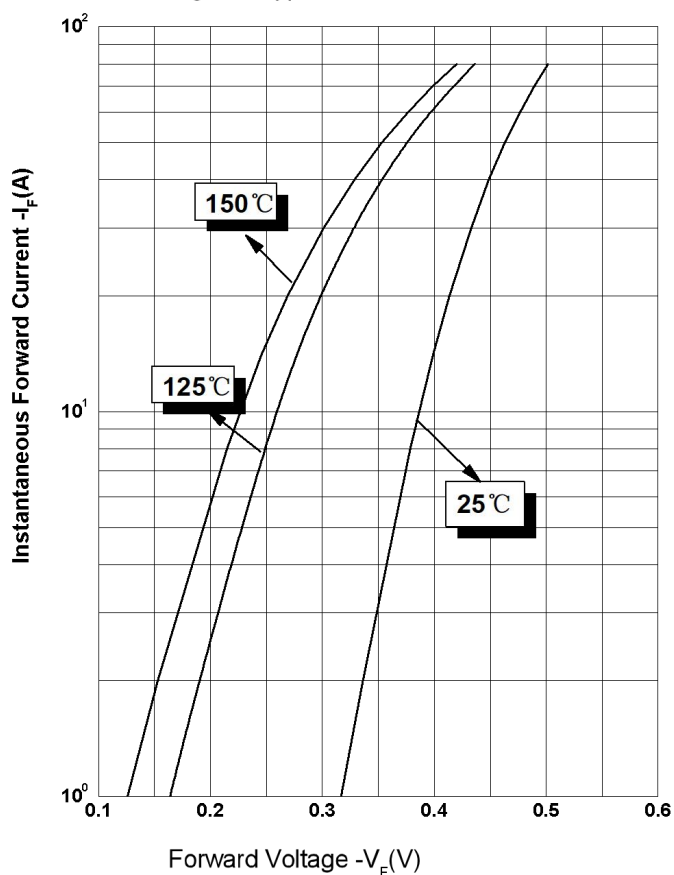
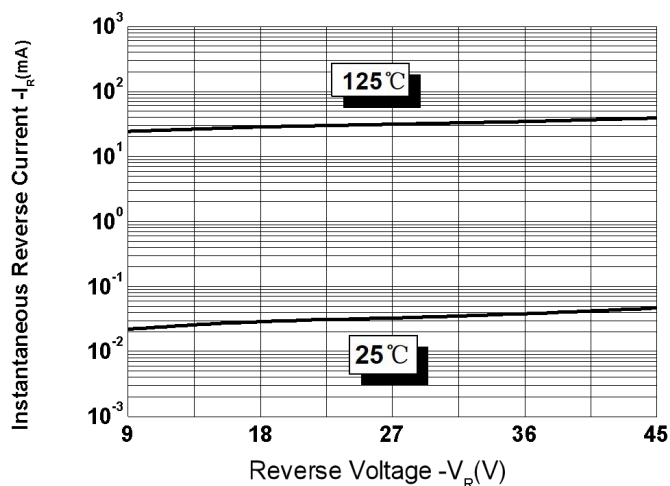
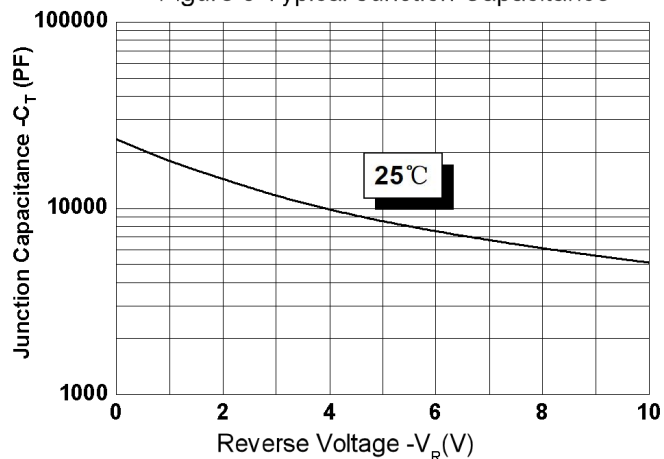
### Electrical Characteristics( $T_a = 25^\circ\text{C}$ Unless otherwise specified)

| Characteristics       | Symbol   | Condition   | Typ. | Max. | Units |
|-----------------------|----------|---|------|------|-------|
| Forward Voltage Drop* | $V_{F1}$ | @ 50A, Pulse, $T_J = 25^\circ\text{C}$                                    | 0.46 | 0.52 | V     |
| Reverse Current*      | $I_{R1}$ | @ $V_R = \text{rated } V_R$ , $T_J = 25^\circ\text{C}$                    | 0.05 | 0.50 | mA    |
| Junction Capacitance  | $C_T$    | @ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$<br>$f_{SIG} = 1\text{MHz}$ | 8.5  | -    | nF    |

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

**Technical Data**  
**Data Sheet N2656. Draft.**
**Thermal-Mechanical Specifications( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)**

| 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                                 | $R_{\theta JC}$  | -         | 1.5           | $^{\circ}\text{C/W}$ |

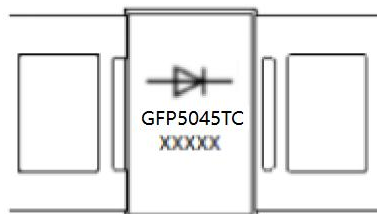
**Ratings and Characteristics Curves**
**Figure1 Typical Forward Characteristics**

**Figure 2 Typical Reverse Characteristics**

**Figure 3 Typical Junction Capacitance**


**Technical Data**  
**Data Sheet N2656. Draft.**

**Ordering Information**

| Device    | Package | Shipping   |
|-----------|---------|------------|
| GFP5045TC | GFP     | 36pcs/Tube |

**Marking Diagram**



Where XXXXX is YYWWL

GFP5045TC = Device Code  
YY = Year  
WW = Week  
L = Lot Number

| Order P/N    | Terminals  | Additional   |
|--------------|------------|--------------|
| GFP5045TC-S1 | Tin Plated | None         |
| GFP5045TC-S2 | Tin Plated | Solder Paste |
| GFP5045TC-S3 | Tin Plated | Solder Block |



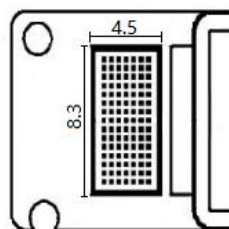
Solder Paste



Solder Block

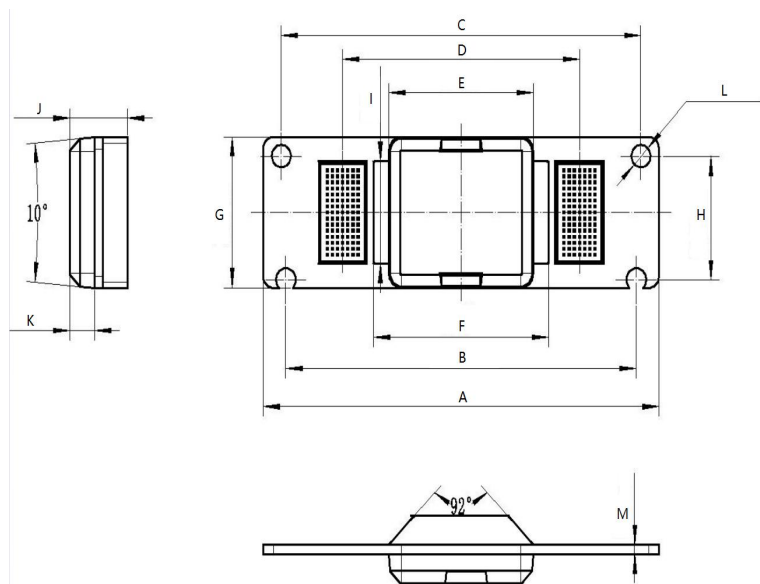
**Solder block Specification**

The composition of the tin block is Sn50Pb50.  
The size of the tin block is 9(-0.3)\*4(-0.2)\*1(±0.1) mm.  
Solder block to be centered, not exceed the flat groove.



**Technical Data**  
**Data Sheet N2656. Draft.**

**Mechanical Dimensions GFP (Millimeters)**



| Symbol | Dimensions in millimeters |                      |       |
|--------|---------------------------|----------------------|-------|
|        | Min.                      | Typical              | Max   |
| A      | 38.2                      | 38.4                 |       |
| B      | 33.85                     | 34                   | 34.15 |
| C      | 34.75                     | 34.9                 | 35.05 |
| D      |                           | 22.98                |       |
| E      | 13.9                      | 14                   |       |
| F      |                           | 17                   | 17.1  |
| G      | 12.4                      | 12.5                 |       |
| H      | 10.08                     | 10.23                | 10.38 |
| I      |                           | 8.5                  | 8.6   |
| J      | 5.5                       | 5.6                  | 5.7   |
| K      | 2.3                       | 2.4                  |       |
| L      |                           | 4- $\varnothing$ 1.9 |       |
| M      | 0.78                      | 0.8                  | 0.82  |

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**Technical Data**  
**Data Sheet N2656. Draft.**

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