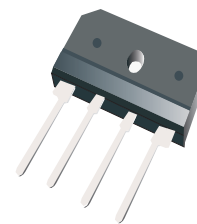


# GBU4005-G Thru. GBU410-G

Reverse Voltage: 50 to 1000V

Forward Current: 4.0A

RoHS Device

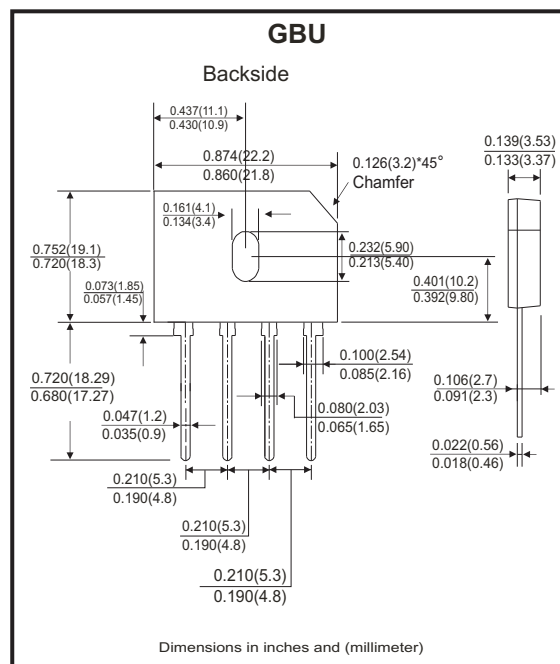


## Features

- Surge overload rating -150 amperes peak.
- Ideal for printed circuit board.

## Mechanical Data

- Epoxy: U/L 94V-0 rate flame retardant.
- Case: Molded plastic, GBU
- Mounting position: Any
- Weight: 3.91grams



## Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave ,60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

| Parameter                                                                                          | Symbol           | GBU 4005-G  | GBU 401-G | GBU 402-G | GBU 404-G | GBU 406-G | GBU 408-G | GBU 410-G | Unit             |
|----------------------------------------------------------------------------------------------------|------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|
| Maximum Recurrent Peak Reverse Voltage                                                             | $V_{RRM}$        | 50          | 100       | 200       | 400       | 600       | 800       | 1000      | V                |
| Maximum RMS Voltage                                                                                | $V_{RMS}$        | 35          | 70        | 140       | 280       | 420       | 560       | 700       | V                |
| Maximum DC Blocking Voltage                                                                        | $V_{DC}$         | 50          | 100       | 200       | 400       | 600       | 800       | 1000      | V                |
| Maximum Average Forward (With heatsink Note2) Rectified Current @Tc=100°C (without hestsink)       | $I_{AV}$         | 4.0<br>2.4  |           |           |           |           |           |           | A                |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Super Imposed On Rated Load (JEDEC Method) | $I_{FSM}$        | 150         |           |           |           |           |           |           | A                |
| Maximum Forward Voltage at 2.0A DC                                                                 | $V_F$            | 1.0         |           |           |           |           |           |           | V                |
| Maximum Forward Voltage at 4.0A DC                                                                 | $V_F$            | 1.1         |           |           |           |           |           |           | V                |
| Maximum DC Reverse Current @Tj=25°C At Rated DC Blocking Voltage @Tj=125°C                         | $I_R$            | 10.0<br>500 |           |           |           |           |           |           | μA               |
| I <sup>2</sup> T Rating for Fusing (t<8.3ms)                                                       | I <sup>2</sup> t | 93          |           |           |           |           |           |           | A <sup>2</sup> s |
| Typical Junction Capacitance Per Element (Note 1)                                                  | $C_J$            | 45          |           |           |           |           |           |           | pF               |
| Typical Thermal Resistance                                                                         | $R_{\theta JC}$  | 2.2         |           |           |           |           |           |           | °C/W             |
| Operating Temperature Range                                                                        | $T_J$            | -55 to +150 |           |           |           |           |           |           | °C               |
| Storage Temperature Range                                                                          | $T_{STG}$        | -55 to +150 |           |           |           |           |           |           | °C               |

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Device mounted on 50mm\*50mm\*1.6mm Cu plate heatsink.

Company reserves the right to improve product design , functions and reliability without notice.

REV: B

Fig.1 - Forward Current Derating Curve

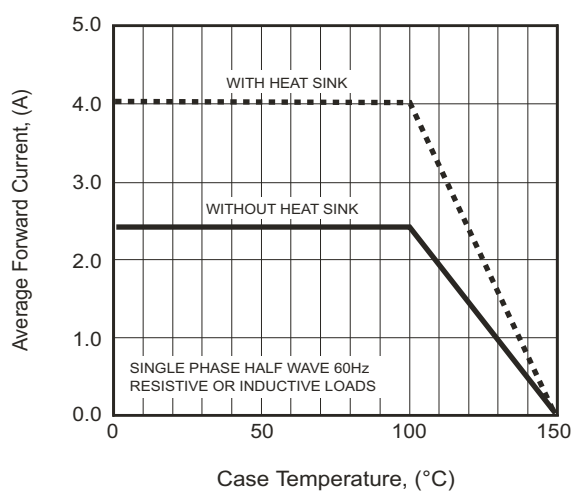


Fig.2 - Typical Forward Characteristics

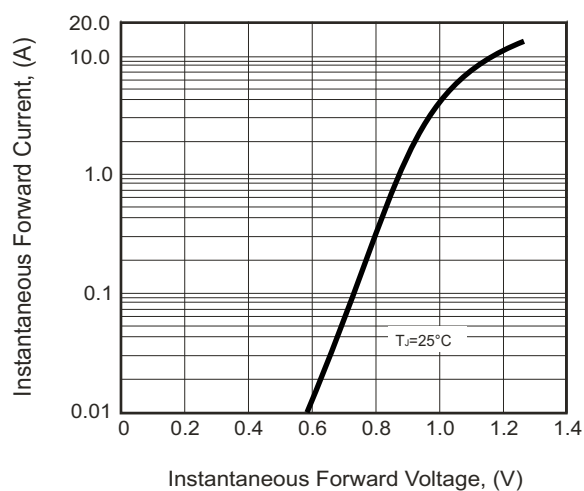


Fig.3 - Maximum NON-Repetitive Surge Current

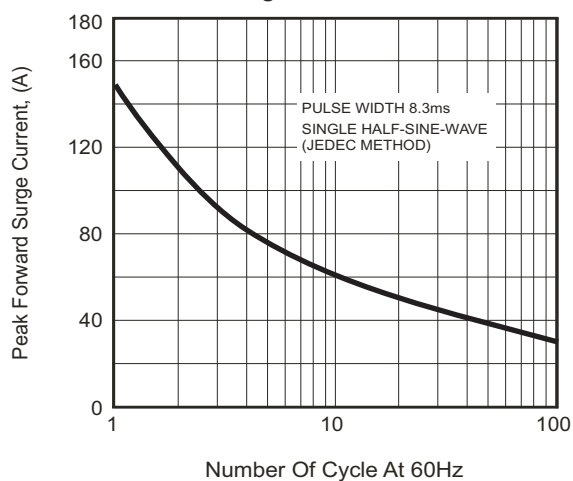


Fig.4 - Typical Junction Capacitance

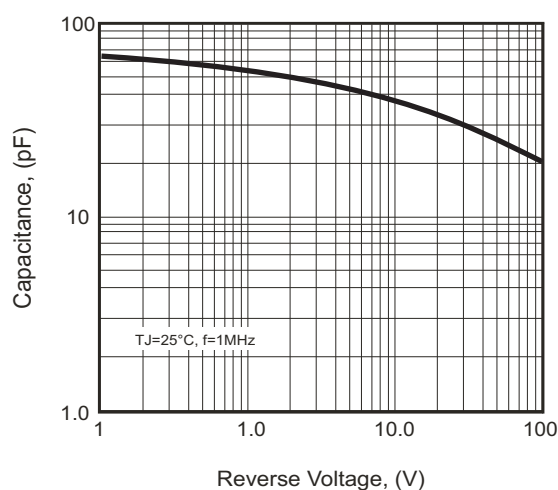
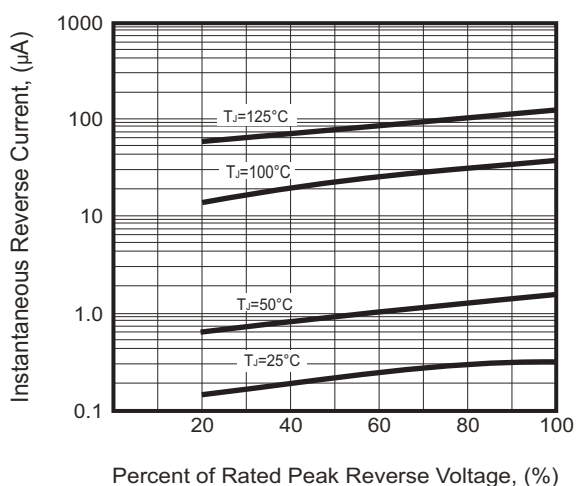
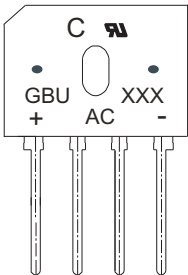


Fig.5 - Typical Reverse Characteristics



## Marking Code

| Part Number | Marking code |
|-------------|--------------|
| GBU4005-G   | GBU4005      |
| GBU401-G    | GBU401       |
| GBU402-G    | GBU402       |
| GBU404-G    | GBU404       |
| GBU406-G    | GBU406       |
| GBU408-G    | GBU408       |
| GBU410-G    | GBU410       |



XXX / XXXX = Product type marking code  
C = Comchip Logo

## Standard Packaging

| Case Type | TUBE PACK       |                   |
|-----------|-----------------|-------------------|
|           | TUBE<br>( pcs ) | Carton<br>( pcs ) |
| GBU       | 20              | 1,000             |