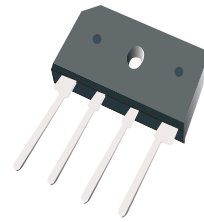


## GBU6005-G Thru. GBU610-G

Reverse Voltage: 50 to 1000V

Forward Current: 6.0A

RoHS Device

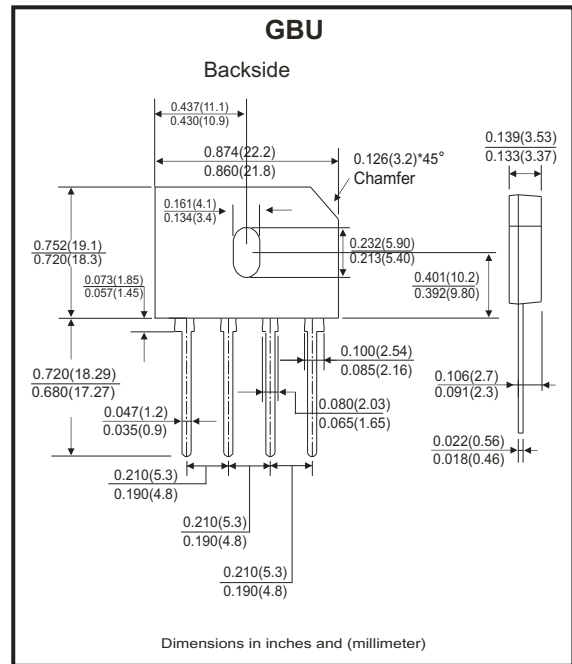


### Features

- Surge overload rating -175 amperes peak.
- Ideal for printed circuit board.
- UL recognized file # E349301

### Mechanical Data

- Epoxy: UL 94V-0 rate flame retardant.
- Case: Molded plastic, GBU
- Mounting position: Any.
- Weight: 3.91 grams (approx.).



### 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 6005-G | GBU 601-G | GBU 602-G | GBU 604-G | GBU 606-G   | GBU 608-G | GBU 610-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 heatsink)       | $I_{(AV)}$      |            |           |           |           | 6.0         |           |           |      | A                |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Super Imposed On Rated Load (JEDEC Method) | $I_{FSM}$       |            |           |           |           | 175         |           |           |      | A                |
| Maximum Forward Voltage at 3.0A DC   | $V_F$           |            |           |           |           | 1.0         |           |           |      | V                |
| Maximum DC Reverse Current @Tj=25°C At Rate DC Blocking Voltage @Tj=125°C                          | $I_R$           |            |           |           |           | 10.0        |           |           |      | $\mu A$          |
| $I^2 T$ Rating for Fusing(t<8.3ms)   | $I^2 t$         |            |           |           |           | 127         |           |           |      | A <sup>2</sup> s |
| Typical Junction Capacitance Per Element (Note 1)  | $C_J$           |            |           |           |           | 50          |           |           |      | 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 75mm\*75mm\*1.6mm Cu plate heatsink.

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

REV: D

## Rating and Characteristics Curves (GBU6005-G Thru. GBU610-G)

Fig.1 - Forward Current Derating Curve

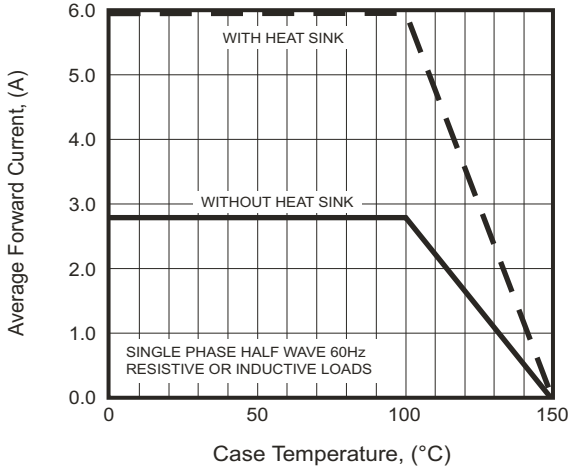


Fig.2 - Typical Forward Characteristics

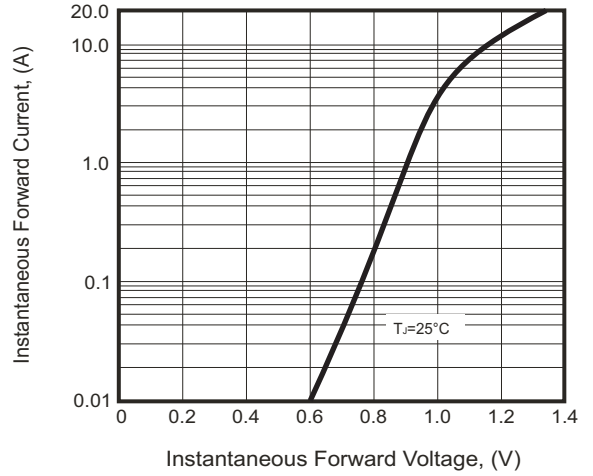


Fig.3 - Maximum Non-Repetitive Surge Current

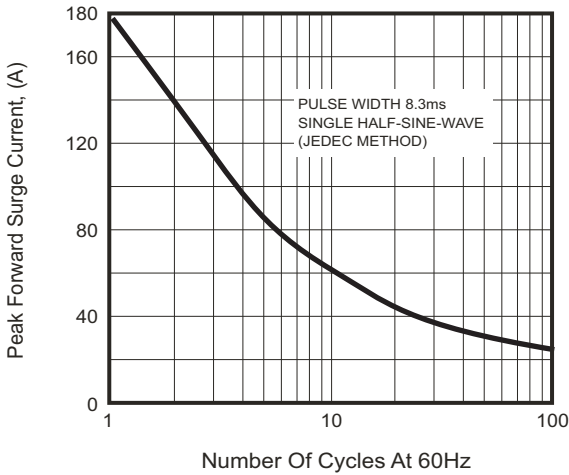


Fig.4 - Typical Junction Capacitance

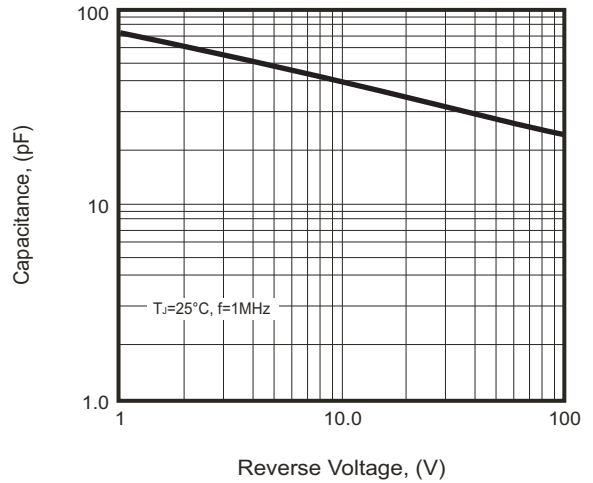
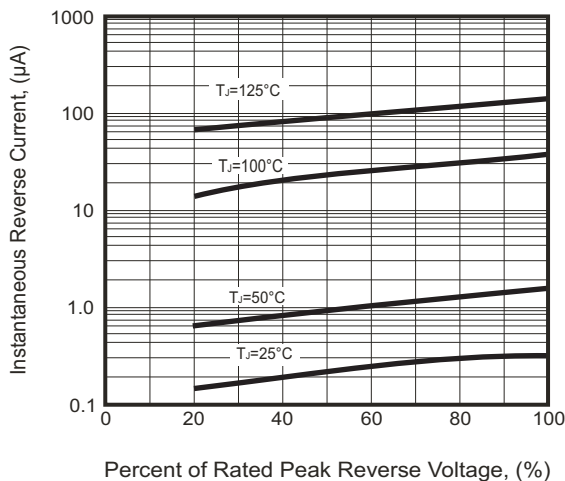


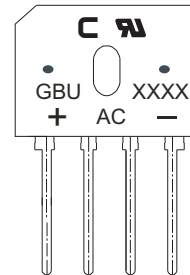
Fig.5 - Typical Reverse Characteristics



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

## Marking Code

| Part Number | Marking code |
|-------------|--------------|
| GBU6005-G   | GBU6005      |
| GBU601-G    | GBU601       |
| GBU602-G    | GBU602       |
| GBU604-G    | GBU604       |
| GBU606-G    | GBU606       |
| GBU608-G    | GBU608       |
| GBU610-G    | GBU610       |



XXX / XXXX = Product type marking code  
**C** = Compchip Logo

## Standard Packaging

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

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