

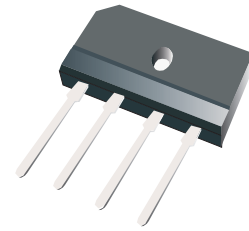
# Glass Passivated Bridge Rectifiers

## GBJ10005-G Thru. GBJ1010-G


Reverse Voltage: 50 to 1000V

Forward Current: 10 A

RoHS Device

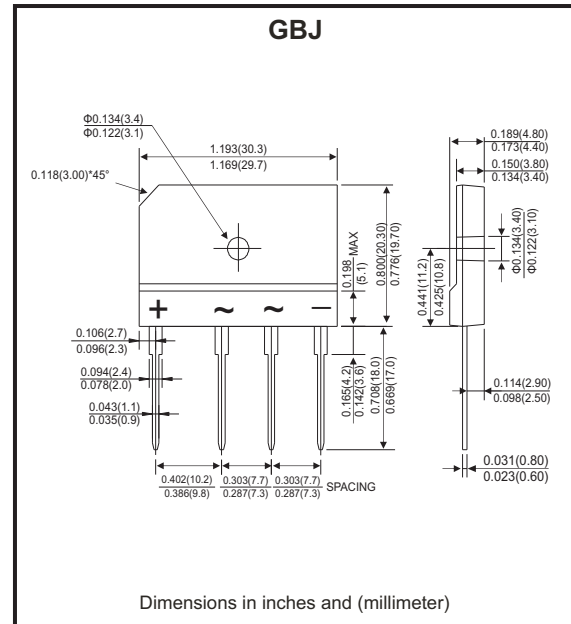


### Features

- Rating to 1000V PRV.
- Ideal for printed circuit board.
- Low forward voltage drop.
- High current capability.
- UL recognized file # E349301 

### Mechanical Data

- Epoxy: UL 94V-0 rate flame retardant.
- Case: Molded plastic, GBJ
- Mounting position: Any.
- Weight: 6.81grams.



### 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     | GBJ 10005-G | GBJ 1001-G | GBJ 1002-G | GBJ 1004-G | GBJ 1006-G  | GBJ 1008-G | GBJ 1010-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=110°C (without heatsink)         | $I_{(AV)}$ |             |            |            |            | 10          |            |            | A                |
| Peak forward surge current, 8.3ms single half sine-wave super imposed on rated load (JEDEC Method)   | $I_{FSM}$  |             |            |            |            | 220         |            |            | A                |
| Maximum forward voltage at 5.0A DC   | $V_F$      |             |            |            |            | 1.0         |            |            | V                |
| Maximum DC reverse current at rated DC blocking voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =125°C | $I_R$      |             |            |            |            | 10          |            |            | μA               |
| $I^2t$ rating for fusing (t<8.3ms)   | $I^2t$     |             |            |            |            | 200.86      |            |            | A <sup>2</sup> s |
| Typical junction capacitance per element (Note 1)  | $C_J$      |             |            |            |            | 55          |            |            | pF               |
| Typical thermal resistance   | $R_{θJC}$  |             |            |            |            | 1.4         |            |            | °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 150mm\*150mm\*1.6mm Cu plate heatsink.

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

REV: A

## Rating and Characteristics Curves (GBJ10005-G Thru. GBJ1010-G)

Fig.1 - Forward Current Derating Curve

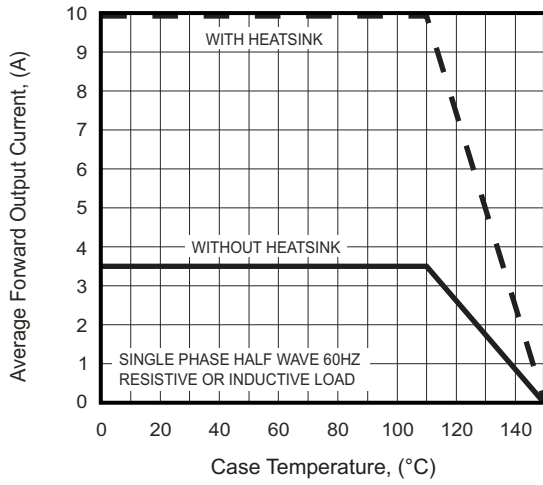


Fig.2 - Maximum Non-Repetitive Surge Current

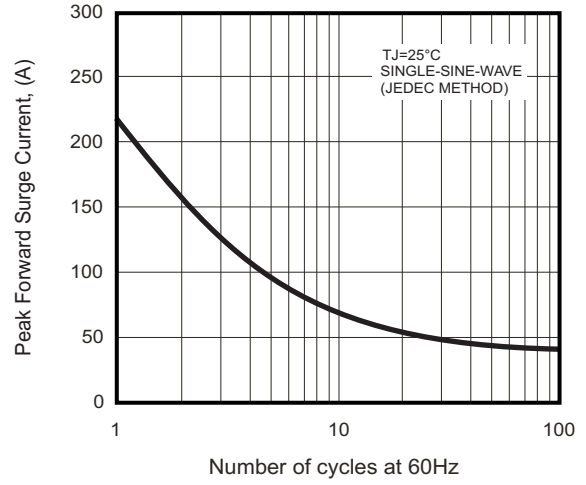


Fig.3 - Typical Junction Capacitance

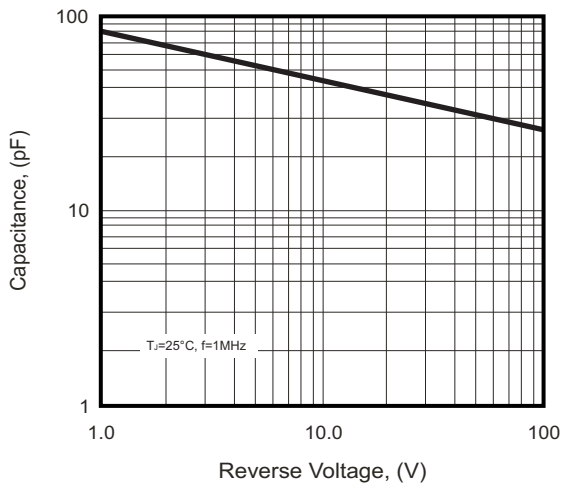


Fig.4 - Typical Forward Characteristics

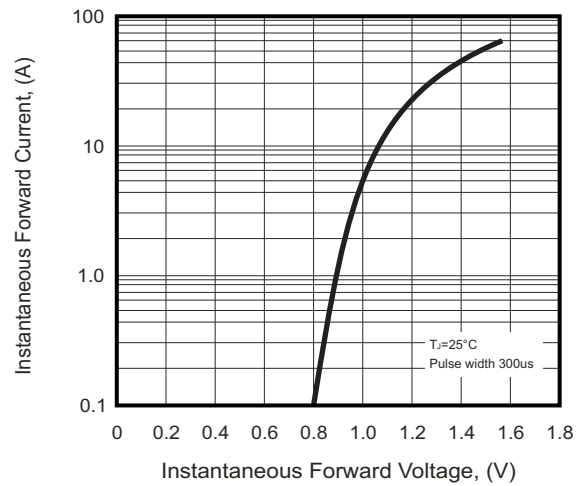
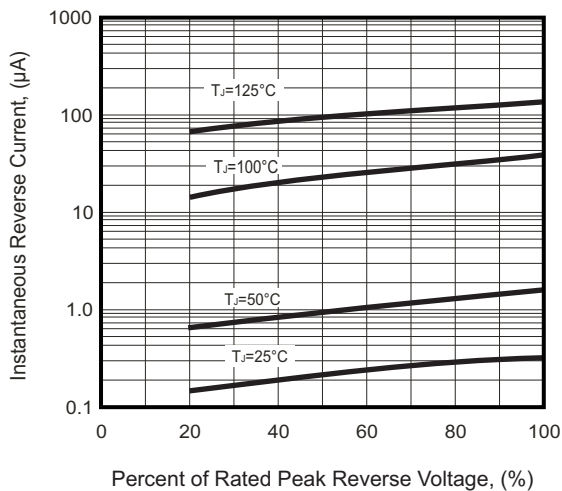


Fig.5 - Typical Reverse Characteristics

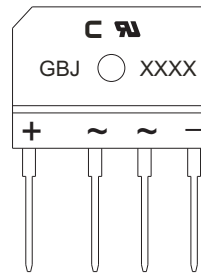


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REV: A

## Marking Code

| Part Number | Marking code |
|-------------|--------------|
| GBJ10005-G  | GBJ10005     |
| GBJ1001-G   | GBJ1001      |
| GBJ1002-G   | GBJ1002      |
| GBJ1004-G   | GBJ1004      |
| GBJ1006-G   | GBJ1006      |
| GBJ1008-G   | GBJ1008      |
| GBJ1010-G   | GBJ1010      |



XXX / XXXX = Product type marking code

C = Comchip Logo

## Standard Packaging

| Case Type | TUBE PACK       |                   |
|-----------|-----------------|-------------------|
|           | TUBE<br>( pcs ) | Carton<br>( pcs ) |
| GBJ       | 15              | 750               |