# GBU25005 THRU GBU2510

## Glass Passivated Bridge Rectifiers

**Reverse Voltage - 50 to 1000 Volts**

**Forward Current - 25 Amperes**

### Features

- Glass passivated chip
- Low forward voltage drop
- Ideal for printed circuit board
- High surge current capability
- Meet UL flammability classification 94V-0

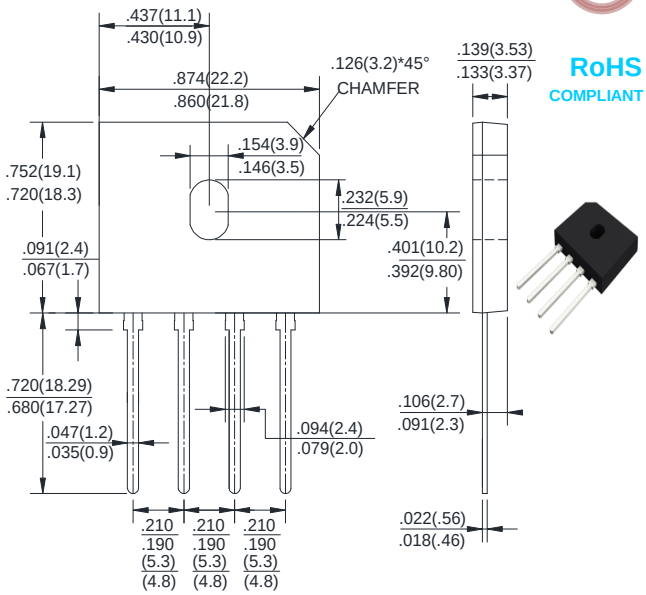
### Mechanical Data

- Polarity: Symbol marked on body
- Mounting position: Any

### Applications

- General purpose use in AC/DC bridge full wave rectification, for SMPS, lighting ballaster, adapter, etc.

### GBU




Package Outline Dimensions in Inches (Millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Characteristics | Symbol | GBU 25005 | GBU 2501 | GBU 2502 | GBU 2504 | GBU 2506 | GBU 2508 | GBU 2510 | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive 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 Note 2) | $I_{(AV)}$ | 25.0 | | | | | | | A |
| Rectified Current @ $T_C$=100℃ (without heatsink) | | 4.2 | | | | | | | |
| Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$ | 350 | | | | | | | A |
| $I^2t$ Rating for Fusing (t<8.3mS) | $I^2t$ | 508 | | | | | | | $A^2s$ |
| Peak Forward Voltage per Diode at 12.5A DC | $V_F$ | 1.0 | | | | | | | V |
| Maximum DC Reverse Current at Rated @$T_J$=25℃ | $I_R$ | 5.0 | | | | | | | μA |
| DC Blocking Voltage per Diode @$T_J$=125℃ | | 500 | | | | | | | |
| Typical Junction Capacitance per Diode (Note1) | $C_J$ | 70 | | | | | | | pF |
| Typical Thermal Resistance to Ambient (Note2) | $R_{\theta JA}$ | 10 | | | | | | | ℃/W |
| Typical Thermal Resistance to case (Note2) | $R_{\theta JC}$ | 2 | | | | | | | |
| Typical Thermal Resistance to lead (Note2) | $R_{\theta JL}$ | 2.2 | | | | | | | |
| Operating Junction Temperature Range | $T_J$ | -55 to +150 | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | ℃ |

Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

2.Device mounted on 100mm*100mm*1.6mm Cu plate heatsink.

3.The typical data above is for reference only

## Rating and Characteristic Curves
## GBU25005 THRU GBU2510

Fig. 1 - Forward Current Derating Curve

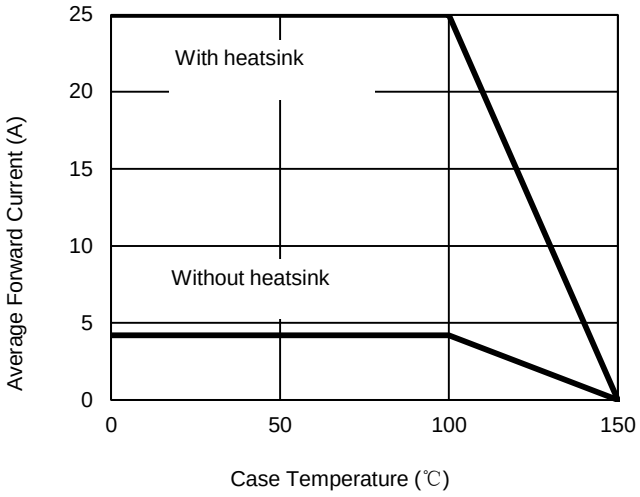



Fig. 2 - Maximum Non-Repetitive Surge Current

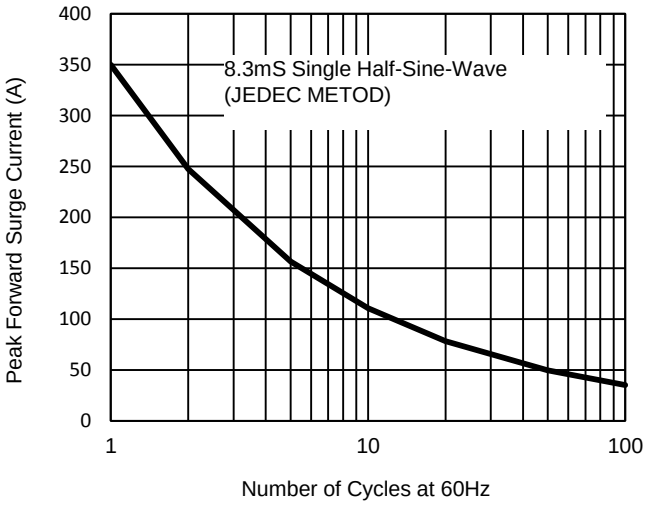



Fig. 3 - Typical Reverse Characteristics

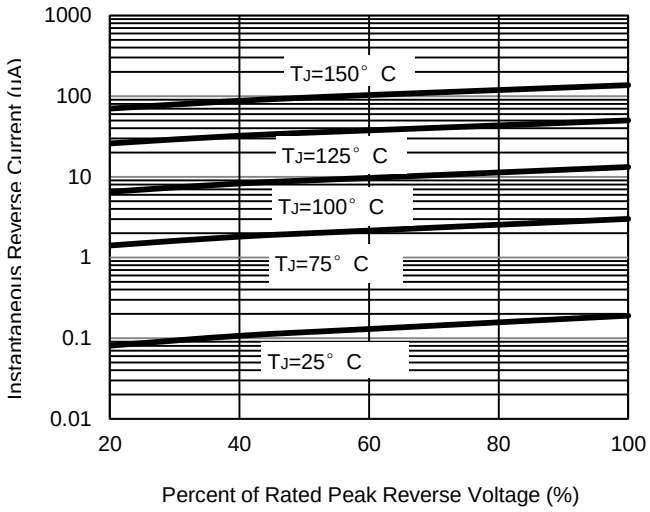
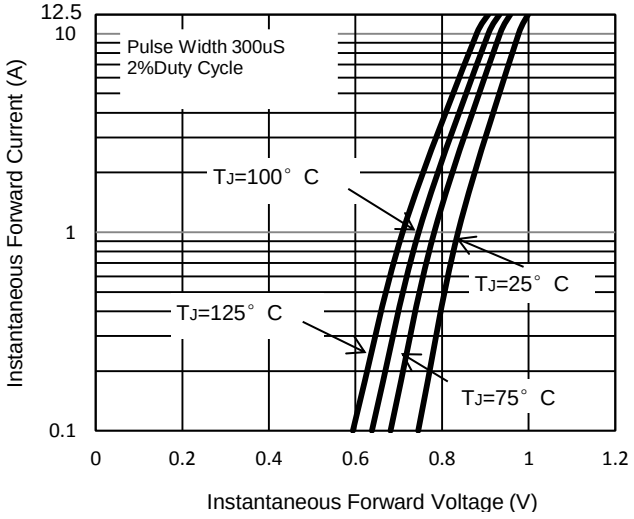



Fig. 4 - Typical Forward Characteristics




The curve above is for reference only.