# GBU4005 THRU GBU410

Single Phase 4.0AMP Glass Passivated Bridge Rectifier

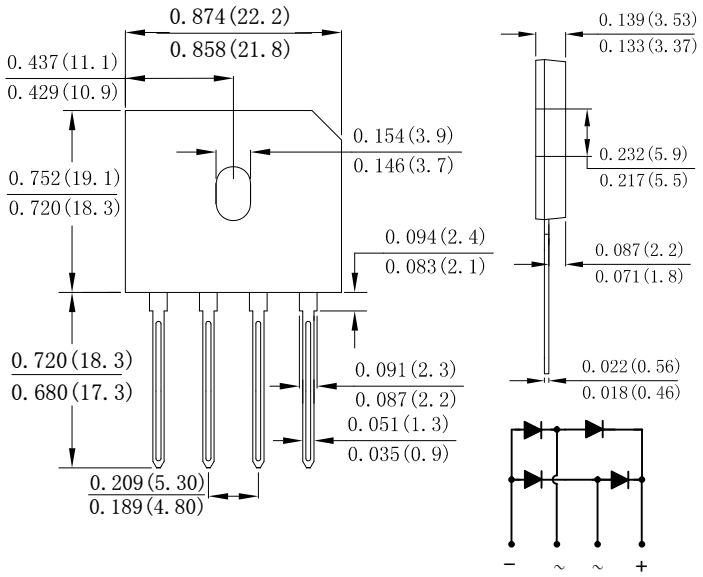
## Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

## Mechanical Data

- Case: G B U , molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version

Case: GBU




dimensions in inches and (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%.

| TYPE NUMBER | SYMBOL | GBU 4005 | GBU 401 | GBU 402 | GBU 404 | GBU 406 | GBU 408 | GBU 410 | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1)@$T_C$=90℃ | $I_{F(AV)}$ | 4.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current @$T_J$=25℃<br>8.3ms Single half sine-wave superimposed @$T_J$=125℃<br>on rated load (JEDEC Method) | $I_{FSM}$ | 80<br>64 | | | | | | | A |
| Non-Repetitive Peak Forward Surge @$T_J$=25℃<br>Current 1 ms Single half sine-wave @$T_J$=125℃<br>superimpose on rated load (JEDEC Method) | $I_{FSM}$ | 160<br>128 | | | | | | | A |
| Forward Voltage per element @IF=2.0A<br>@IF=4.0A | $V_{FM}$ | 1.0<br>1.1 | | | | | | | V |
| Peak Reverse Current @$T_J$=25℃<br>At Rated DC Blocking Voltage $T_J$=125℃ | $I_R$ | 5.0<br>200 | | | | | | | uA |
| $I^2t$ Rating for fusing (t <8.3ms) | $I^2t$ | 26.56 | | | | | | | $A^2s$ |
| Dielectric Strength | Vids | 2500 | | | | | | | V |
| The proposed installation torque<br>Max torque | Tor | 5.0<br>8.0 | | | | | | | Kgf.cm |
| Typical Junction Capacitance (Note 2) | $C_J$ | 27 | | | | | | | pF |
| Typical Thermal Resistance | $R_{\theta JA}$ | 25.7 | | | | | | | ℃/W |
| | $R_{\theta JC}$ | 8.4 | | | | | | | |
| | $R_{\theta JL}$ | 6.3 | | | | | | | |
| Operating and Storage Temperature Range | $T_J$,$T_{STG}$ | -55to+150 | | | | | | | ℃ |

Note: 1. Mounted on glass epoxy PC board with 1.3mm$^2$ solder pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

# GBU4005 THRU GBU410

Single Phase 4.0AMP Glass Passivated Bridge Rectifier

Fig. 1 Output Current Derating Curve

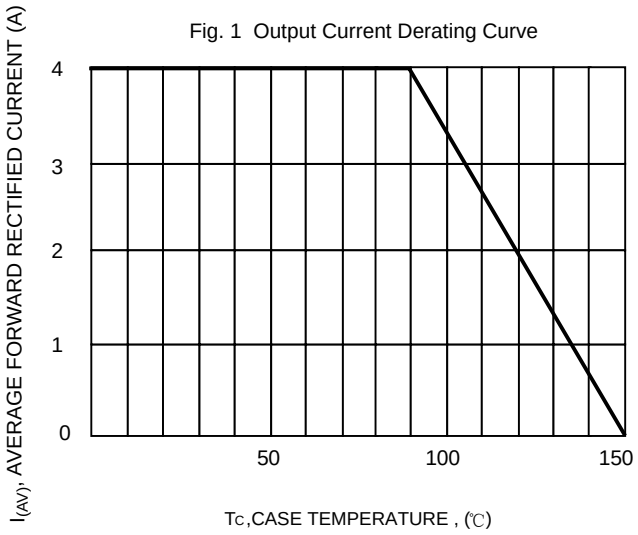



Fig. 2 Typical Forward Characteristics

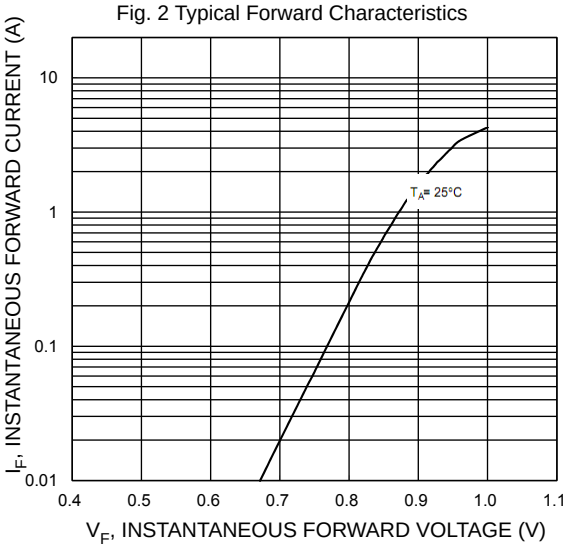



Fig. 3 Maximum Peak Forward Surge Current

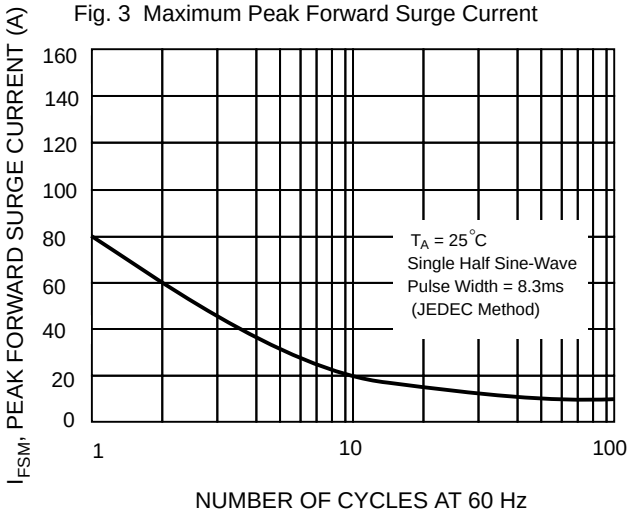



Fig. 4 Typical Junction Capacitance

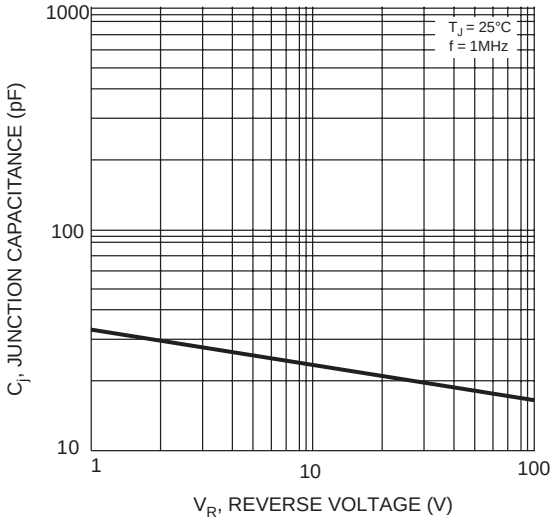
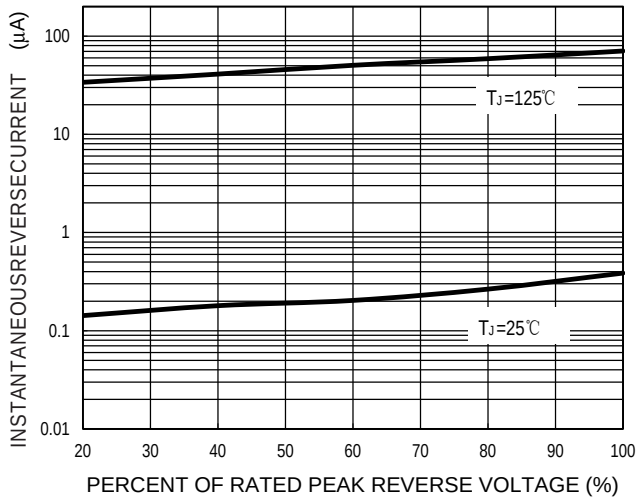



Fig. 5 Typical Reverse Characteristics



# Important Notice and Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from XINNUO
- XINNUO reserves the right to make changes to this document and its products and specifications
- XINNUO disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- XINNUO does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the here in document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications.

  XINNUO makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown here in are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own ris k andagree to fully indemnify XINNUO for any damages resulting from such improper use or sale.
- Since XINNUO uses lot number as the tracking base, please provide the lot number for tracking when complaining.