

## GBU Plastic-Encapsulate Bridge Rectifier

### General Purpose Bridge Rectifier

#### Features:

- $I_o$  15A
- $V_{RRM}$  50V-1000V
- High surge current capability
- Glass passivated chip

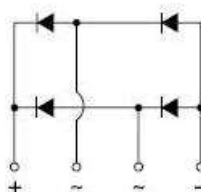
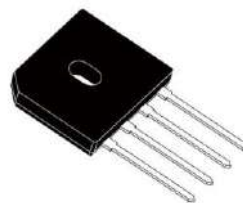
#### Applications:

- General purpose 1 phase Bridge rectifier applications

#### Marking

- GBU15Lxx
- XX : From 005 To 10

GBU



#### Limiting Values (Absolute Maximum Rating)

| Item                                 | Symbol    | Unit                        | Conditions                                                                        | GBU15L          |     |     |     |     |     |      |
|--------------------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------------|-----------------|-----|-----|-----|-----|-----|------|
|                                      |           |                             |                                                                                   | 005             | 01  | 02  | 04  | 06  | 08  | 10   |
| Repetitive Peak Reverse Voltage      | $V_{RRM}$ | V                           |                                                                                   | 50              | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage                  | $V_{RMS}$ | V                           |                                                                                   | 35              | 70  | 140 | 280 | 420 | 560 | 700  |
| Average Rectified Output Current     | $I_o$     | A                           | 60Hz sine wave, R-load $T_c = 100^\circ\text{C}$                                  | 15              |     |     |     |     |     |      |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$ | A                           | 60Hz half-sine wave, 1 cycle, $T_j = 25^\circ\text{C}$                            | 200             |     |     |     |     |     |      |
| Current Squared Time                 | $I^2t$    | $\text{A}^2\text{S}$        | $1\text{ms} \leq t < 8.3\text{ms}$ $T_j = 25^\circ\text{C}$ , Rating of per diode | 170             |     |     |     |     |     |      |
| Storage Temperature                  | $T_{stg}$ | $^\circ\text{C}$            |                                                                                   | $-55 \sim +150$ |     |     |     |     |     |      |
| Junction Temperature                 | $T_j$     | $^\circ\text{C}$            |                                                                                   | $-55 \sim +150$ |     |     |     |     |     |      |
| Dielectric Strength                  | $V_{dis}$ | KV                          | Terminals to case, AC 1 minute                                                    | 2               |     |     |     |     |     |      |
| Mounting Torque                      | Tor       | $\text{kg} \cdot \text{cm}$ | Recommend torque: $5\text{kg} \cdot \text{cm}$                                    | 8               |     |     |     |     |     |      |

#### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ Unless otherwise specified)

| Item                 | Symbol           | Unit               | Test Condition                                                  | Max  |
|----------------------|------------------|--------------------|-----------------------------------------------------------------|------|
| Peak Forward Voltage | $V_{FM}$         | V                  | $I_{FM} = 7.5\text{A}$ , Pulse measurement, Rating of per diode | 0.90 |
| Peak Reverse Current | $I_{RRM}$        | $\mu\text{A}$      | $V_{RM} = V_{RRM}$ , Pulse measurement, Rating of per diode     | 10   |
| Thermal Resistance   | $R_{\theta J-A}$ | $^\circ\text{C/W}$ | Between junction and ambient, Without heatsink                  | 23   |
|                      | $R_{\theta J-C}$ |                    | Between junction and case, With heatsink                        | 1.2  |

## Typical Characteristics

FIG.1-MAXIMUM FORWARD SURGE CURRENT

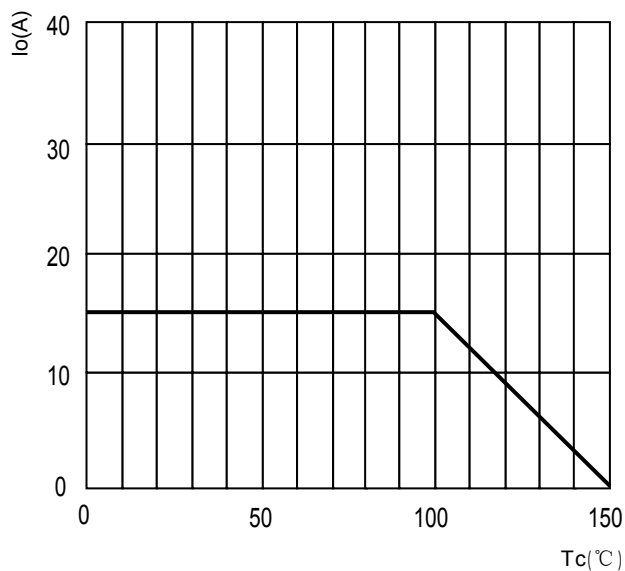


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

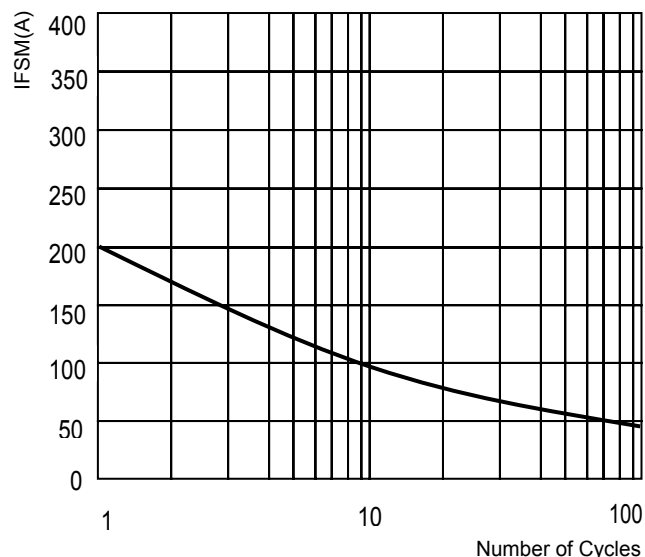


FIG.3-TYPICAL FORWARD CHARACTERISTICS

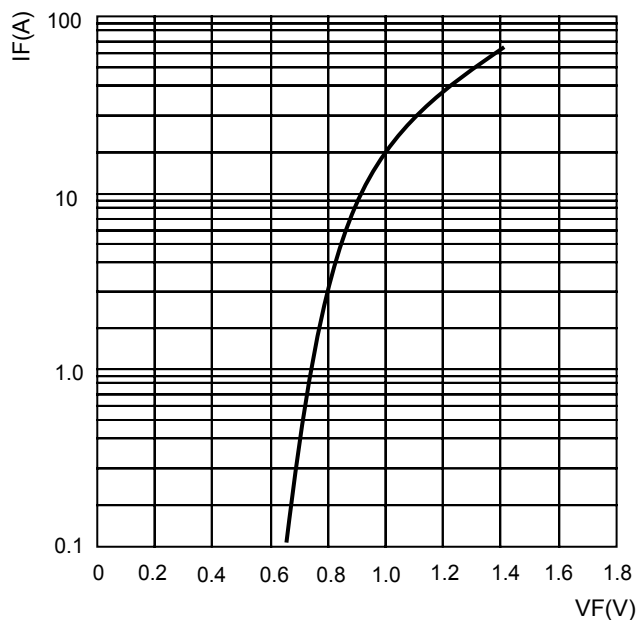
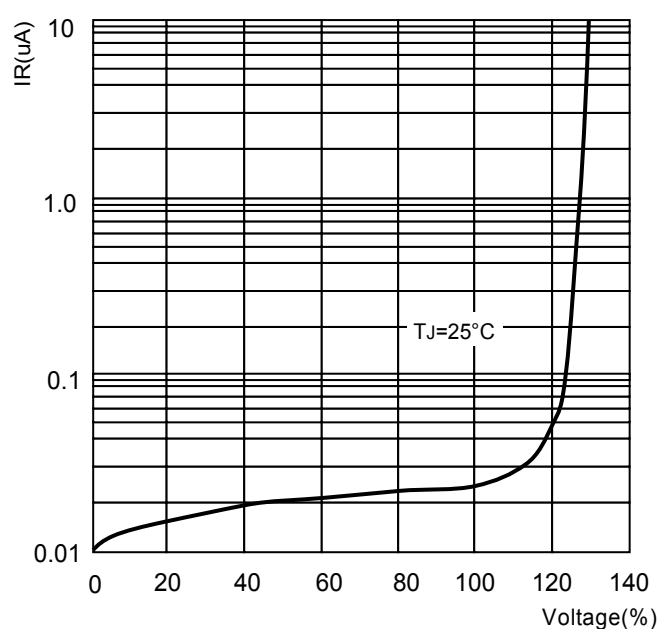
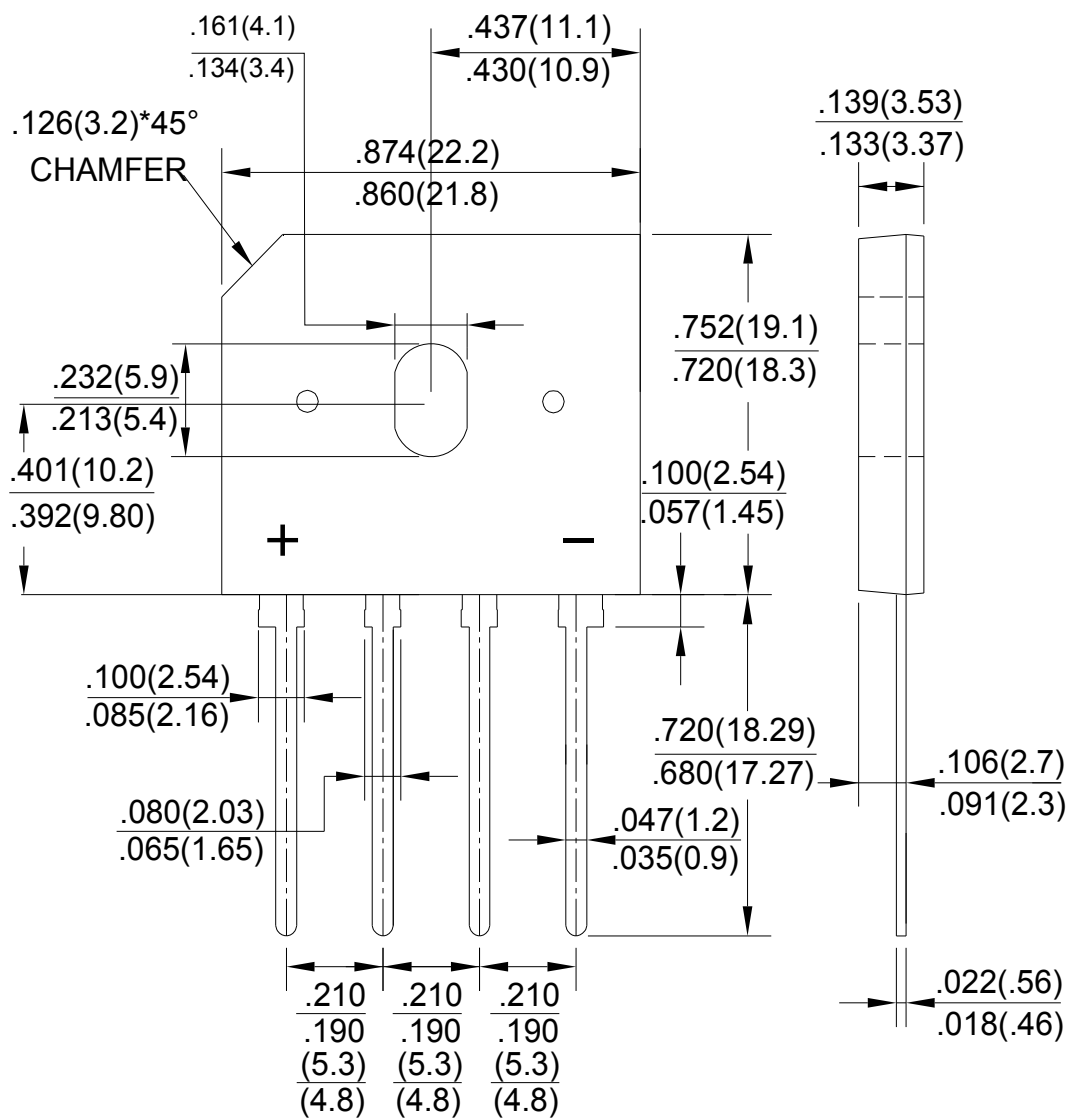


FIG.4-TYPICAL REVERSE CHARACTERISTICS



## GBU Package Outline Dimensions



Unit: in inches (millimeters)