



## GBU Plastic-Encapsulate Bridge Rectifier

### GBU8005 THRU GBU810

General Purpose Bridge Rectifier

#### Features

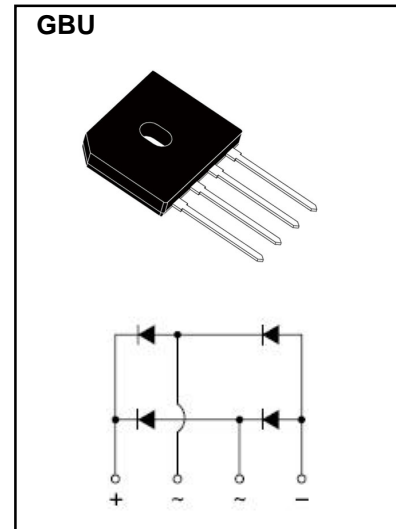
- $I_o$  8.0A
- $V_{RRM}$  50V-1000V
- High surge current capability
- Glass passivated chip

#### Applications

- General purpose 1 phase Bridge rectifier applications

#### Marking

- GBU8XX
- XX : From 005 To 10



#### Limiting Values (Absolute Maximum Rating)

| Item                                 | Symbol    | Unit          | Conditions  | GBU8                                |     |     |     |     |     |      |
|--------------------------------------|-----------|---------------|---|-------------------------------------|-----|-----|-----|-----|-----|------|
|                                      |           |               |   | 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  | With heatsink $T_c = 110^\circ C$   |     | 8   |     |     |     |      |
|                                      |           |               |   | Without heatsink $T_a = 25^\circ C$ |     | 2.9 |     |     |     |      |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$ | A             | 60Hz sine wave, 1 cycle, $T_j = 25^\circ C$                   | 200                                 |     |     |     |     |     |      |
| Current Squared Time                 | $I^2t$    | $A^2S$        | $1ms \leq t < 8.3ms$ $T_j = 25^\circ C$ , Rating of per diode | 166                                 |     |     |     |     |     |      |
| Storage Temperature                  | $T_{stg}$ | $^\circ C$    |   | -55 ~ +150                          |     |     |     |     |     |      |
| Junction Temperature                 | $T_j$     | $^\circ C$    |   | -55 ~ +150                          |     |     |     |     |     |      |
| Dielectric Strength                  | $V_{dis}$ | KV            | Terminals to case, AC 1 minute                                | 2                                   |     |     |     |     |     |      |
| Mounting Torque                      | Tor       | $kg \cdot cm$ | Recommend torque: $5kg \cdot cm$                              | 8                                   |     |     |     |     |     |      |

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

| Item                 | Symbol           | Unit         | Test Condition  | Max |
|----------------------|------------------|--------------|---|-----|
| Peak Forward Voltage | $V_{FM}$         | V            | $I_{FM} = 4A$ , Pulse measurement, Rating of per diode      | 1.0 |
| Peak Reverse Current | $I_{RRM}$        | $\mu A$      | $V_{RM} = V_{RRM}$ , Pulse measurement, Rating of per diode | 10  |
| Thermal Resistance   | $R_{\theta J-A}$ | $^\circ C/W$ | Between junction and ambient, Without heatsink              | 25  |
|                      | $R_{\theta J-C}$ |              | Between junction and case, With heatsink                    | 2.3 |

# Typical Characteristics

FIG.1-MAXIMUM FORWARD SURGE CURRENT

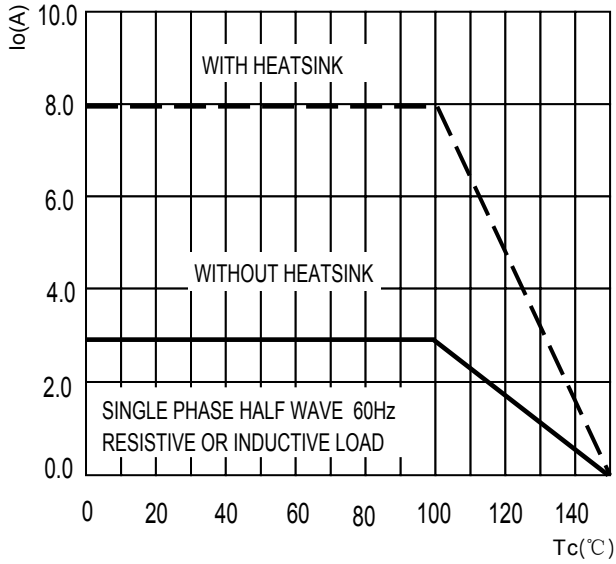


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

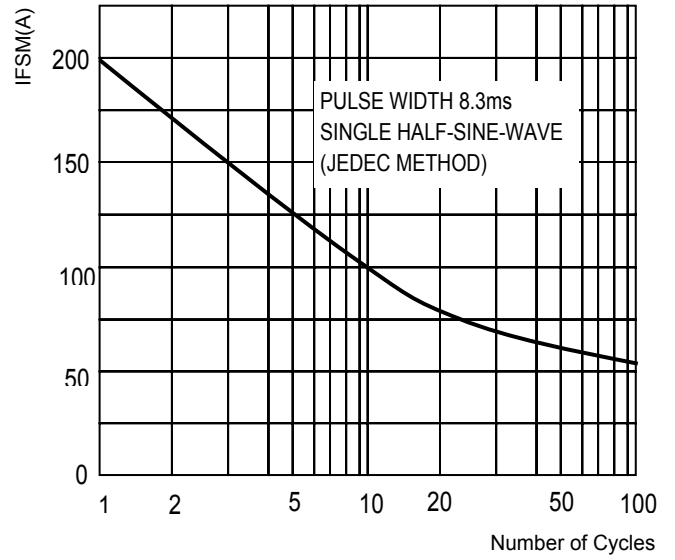


FIG.3-TYPICAL FORWARD CHARACTERISTICS

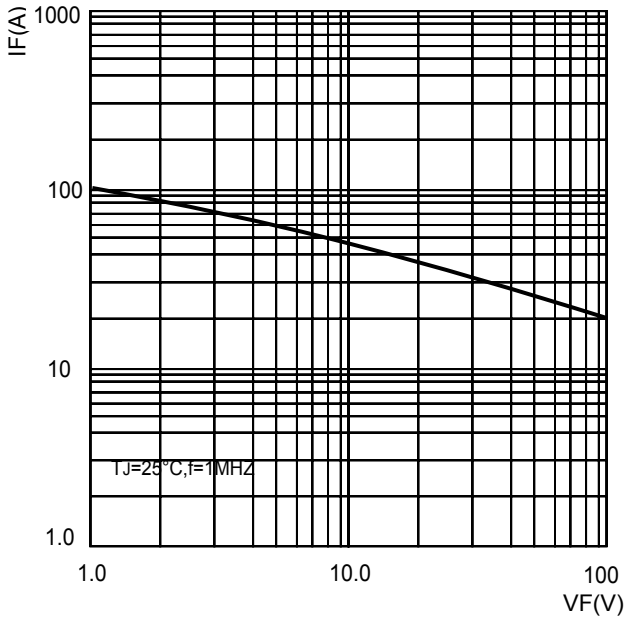


FIG.4-TYPICAL REVERSE CHARACTERISTICS

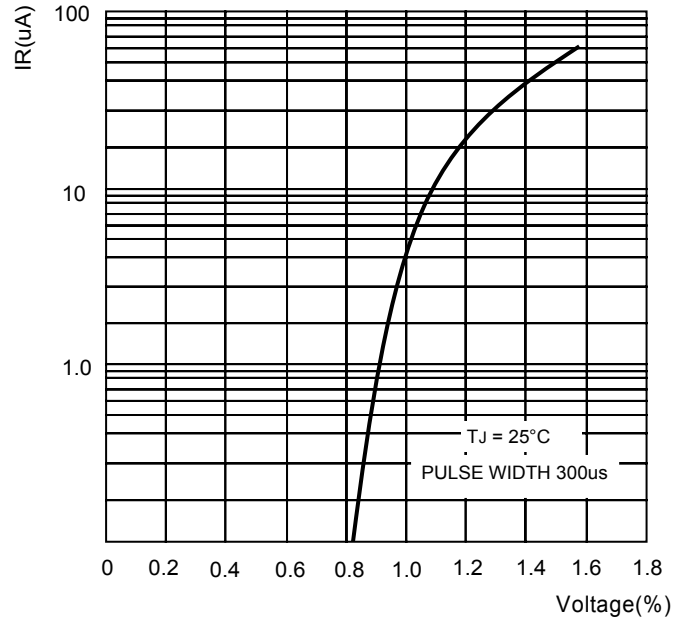
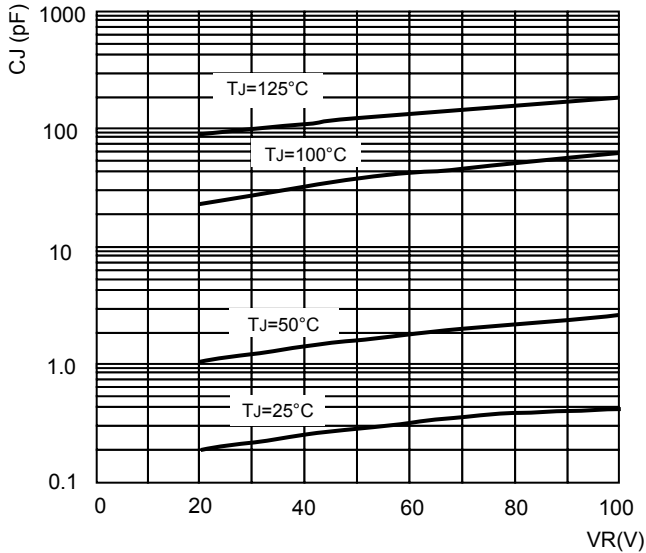
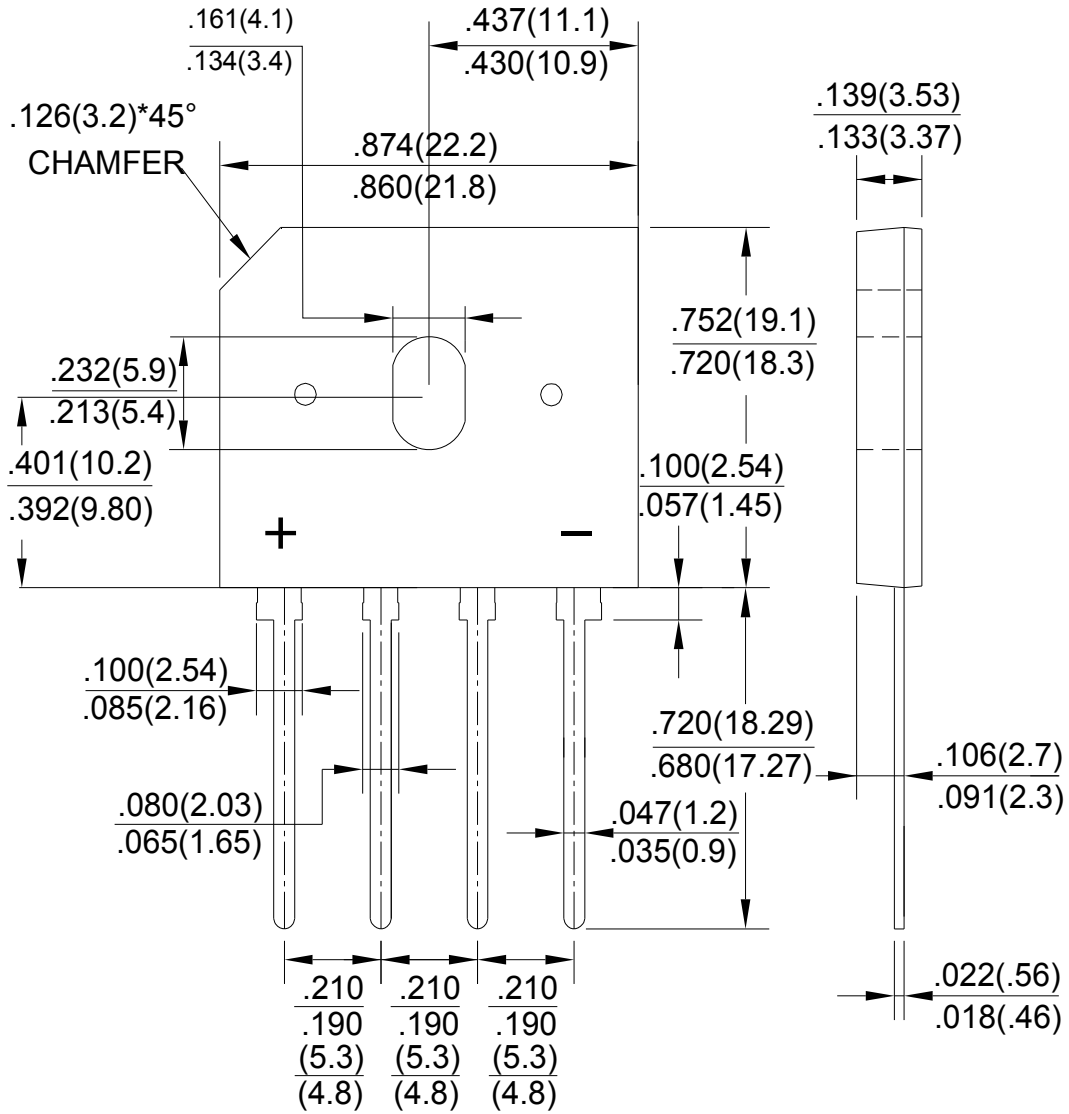


FIG.5-TYPICAL JUNCTION CAPACITANCE



# GBU Package Outline Dimensions



Unit: in inches (millimeters)

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