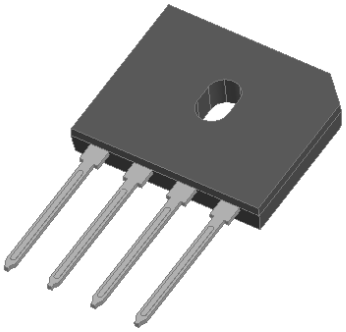
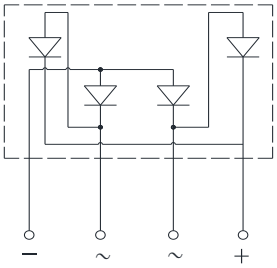
## Bridge Rectifiers






### Features

- Glass passivated chip junction
- Ideal for printed circuit boards
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, power supply, switching mode power supply, adapter, audio equipment, and home appliances applications.

### Mechanical Data

- **Package**: GBU
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■Maximum Ratings (Ta=25℃ Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | GBU50005 | GBU5001 | GBU5002 | GBU5004 | GBU5006 | GBU5008 | GBU5010 |
|---|---|---|---|---|---|---|---|---|---|---|
| Device marking code | | | | GBU50005 | GBU5001 | GBU5002 | GBU5004 | GBU5006 | GBU5008 | GBU5010 |
| Maximum 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 |
| Maximum DC blocking Voltage | | $V_{DC}$ | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average rectified output current @60Hz sine wave, R-load | With heatsink Tc =100℃ | $I_O$ | A | 50.0 | | | | | | |
| | Without heatsink Ta =25℃ | | | 4.0 | | | | | | |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃ | | $I_{FSM}$ | A | 500 | | | | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | | | 1000 | | | | | | |
| Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode | | $I^2t$ | $A^2S$ | 1037.5 | | | | | | |
| Storage temperature | | $T_{stg}$ | ℃ | -55 ~ +150 | | | | | | |
| Junction temperature | | $T_j$ | ℃ | -55 ~ +150 | | | | | | |
| Dielectric strength @ Terminals to case, AC 1 minute | | $V_{dis}$ | KV | 2.5 | | | | | | |
| Mounting torque @Recommend torque：5kg·cm | | Tor | kg·cm | 8 | | | | | | |

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | GBU50005 | GBU5001 | GBU5002 | GBU5004 | GBU5006 | GBU5008 | GBU5010 |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | $V_F$ | V | $I_{FM}$=25A | 1.05 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_R$ | μA | $T_j$=25℃ | 5 | | | | | | |
| | | | $T_j$=125℃ | 200 | | | | | | |
| Typical junction capacitance | Cj | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 190 | | | | | | |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | GBU50005 | GBU5001 | GBU5002 | GBU5004 | GBU5006 | GBU5008 | GBU5010 |
|---|---|---|---|---|---|---|---|---|---|---|
| Thermal Resistance | Between junction and ambient, Without heatsink | $R_{\theta J-A}$ | ℃/W | 22.0 | | | | | | |
| | Between junction and case, With heatsink | $R_{\theta J-C}$ | | 0.5 | | | | | | |

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## ■Ordering Information (Example)

| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|---|
| GBU50005 THRU GBU5010 | B1 | Approximate 3.95 | 20 | 1000 | 2000 | TUBE |

## ■ Characteristics (Typical)

FIG1:Io-Tc Curve

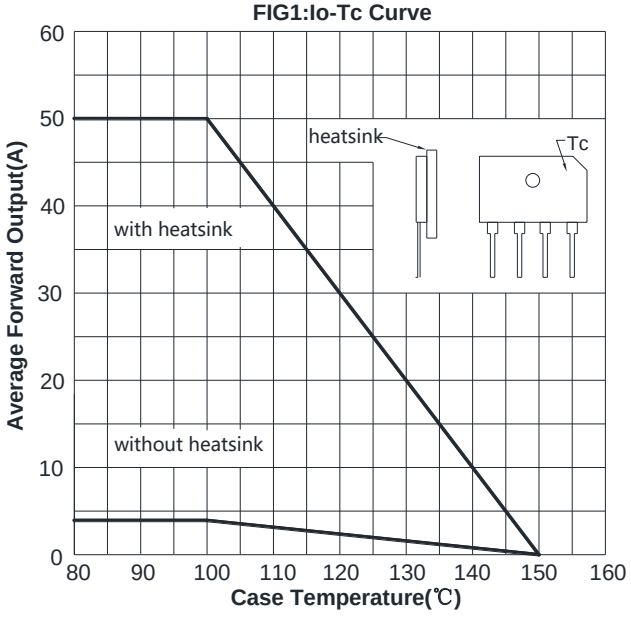



FIG2:Surge Forward Current Capability

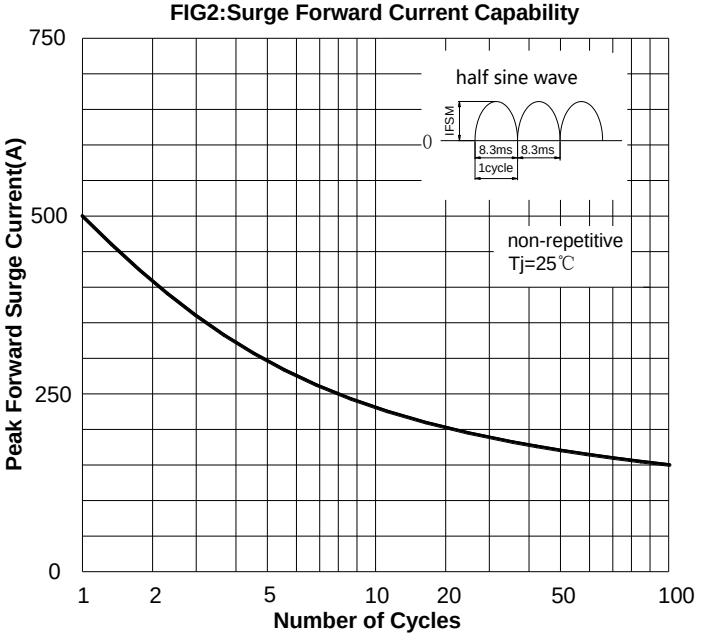


FIG3: Typical Forward Voltage

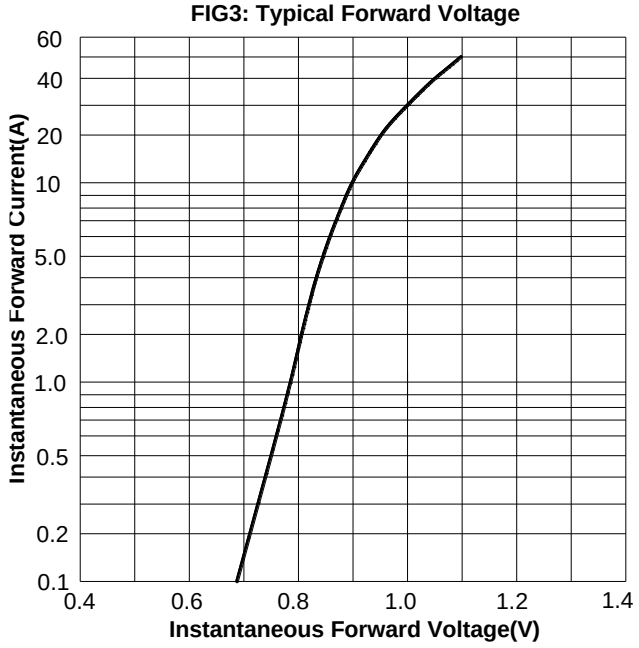
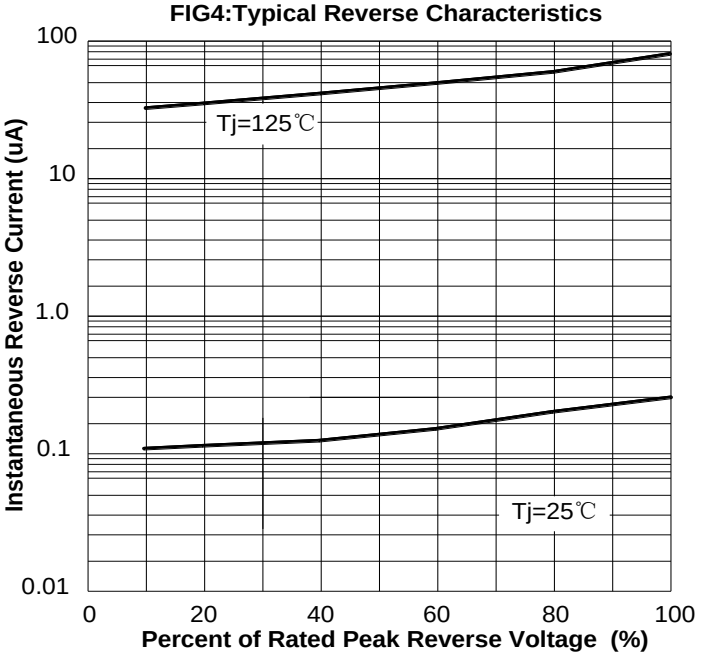
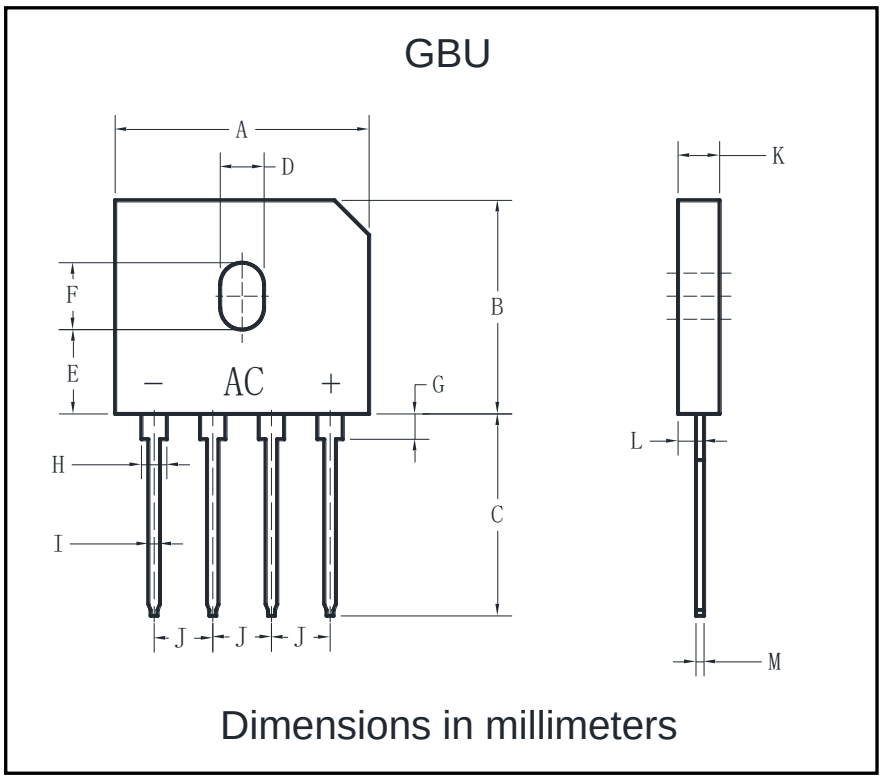



FIG4:Typical Reverse Characteristics




## ■ Outline Dimensions




| GBU | | |
|---|---|---|
| Dim | Min | Max |
| A | 21.80 | 22.30 |
| B | 18.30 | 18.80 |
| C | 17.50 | 18.00 |
| D | 3.30 | 3.90 |
| E | 7.10 | 7.50 |
| F | 5.50 | 5.90 |
| G | 1.91 | 2.54 |
| H | 2.06 | 2.54 |
| I | 1.02 | 1.27 |
| J | 4.83 | 5.33 |
| K | 3.30 | 3.56 |
| L | 2.40 | 2.66 |
| M | 0.46 | 0.56 |

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