

## Single Phase 30.0Amp Glass passivated Bridge Rectifiers

GBJ

RoHS  
COMPLIANT

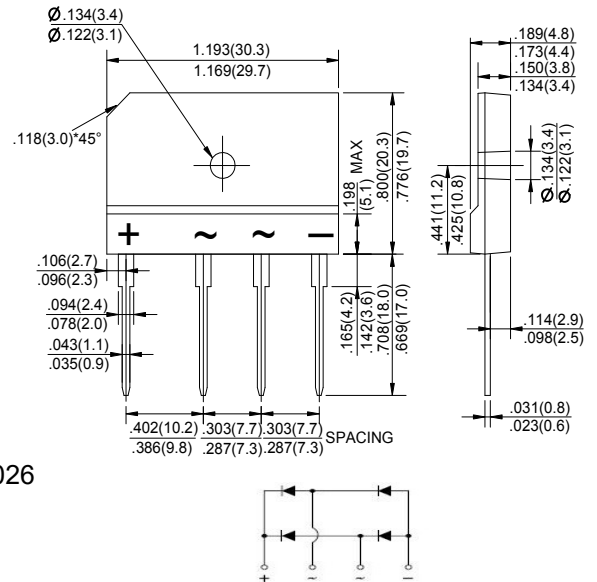
Pb  
Pb-Free

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
260°C/10 seconds at terminals

### Mechanical Data

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter   | Symbols        | GBJ30005    | GBJ3001 | GBJ3002 | GBJ3004 | GBJ3006 | GBJ3008 | GBJ3010 | Units                     |
|---|----------------|-------------|---------|---------|---------|---------|---------|---------|---------------------------|
| 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 rectified current with heatsink   | $I_{(AV)}$     | 30.0        |         |         |         |         |         |         | A                         |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load                        | $I_{FSM}$      | 350.0       |         |         |         |         |         |         | A                         |
| Rating for fusing (t=8.3ms, $T_A=25^\circ\text{C}$ )  | $I^2t$         | 508         |         |         |         |         |         |         | $\text{A}^2\text{s}$      |
| Maximum instantaneous forward voltage at 30.0A  | $V_F$          | 1.10        |         |         |         |         |         |         | V                         |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=125^\circ\text{C}$ | $I_R$          | 2.0<br>200  |         |         |         |         |         |         | $\mu\text{A}$             |
| Typical junction capacitance (Note 1)   | $C_J$          | 65.0        |         |         |         |         |         |         | pF                        |
| Typical thermal resistance  | $R_{qJA}$      | 23.0        |         |         |         |         |         |         | $^\circ\text{C}/\text{W}$ |
| Operating junction and storage temperature range  | $T_J, T_{STG}$ | -55 to +150 |         |         |         |         |         |         | $^\circ\text{C}$          |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.



Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

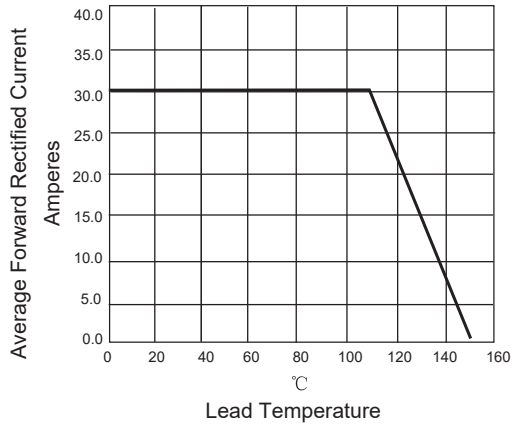


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

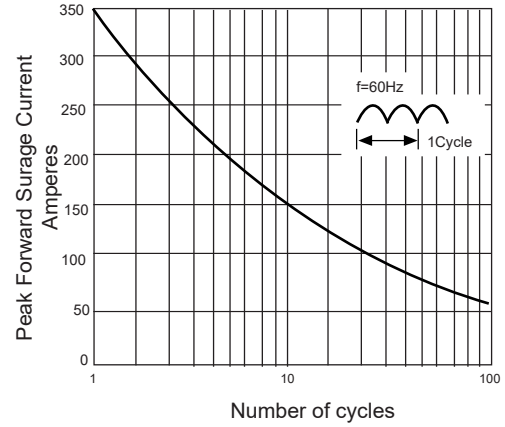


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

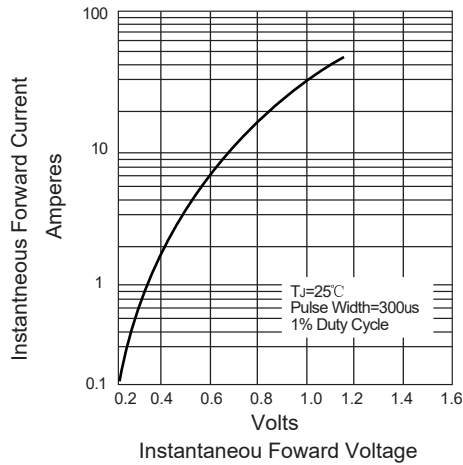
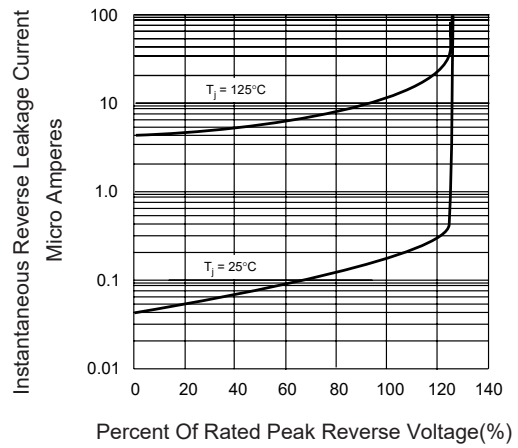
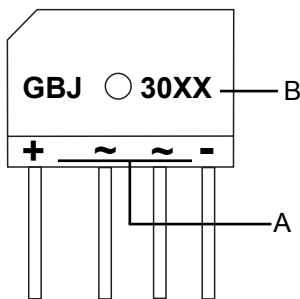


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



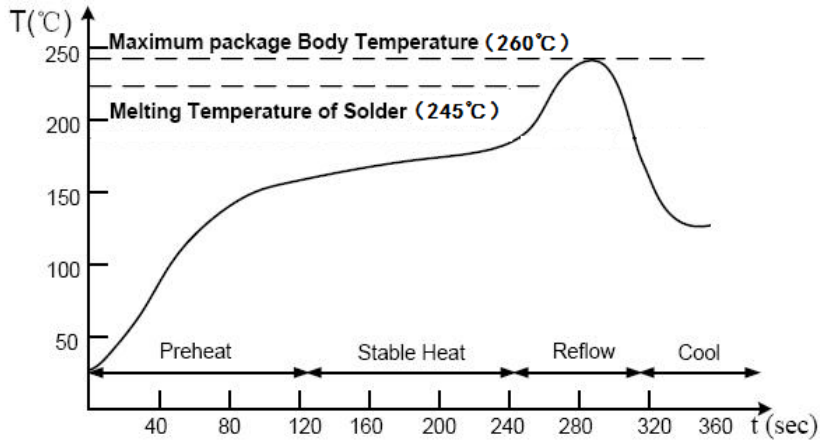
Marking



| Symbol | Explanation                     |
|--------|---------------------------------|
| A      | Polarity Symbol                 |
| B      | Product Name, XX: 005,01.....10 |



## Suggested Soldering Temperature Profile



### Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.