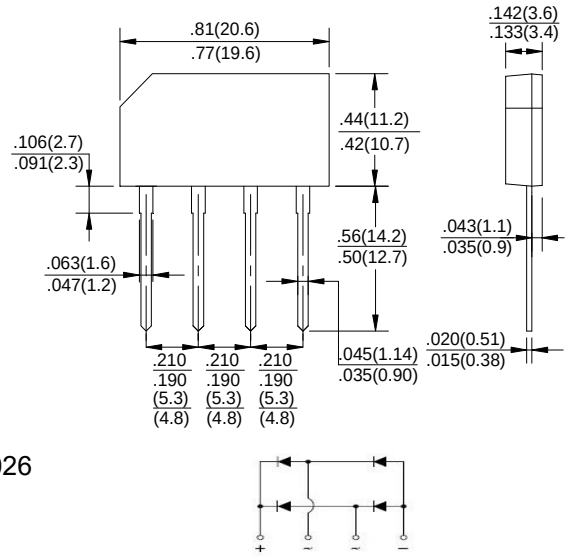
# Single Phase 4.0Amp Glass passivated Bridge Rectifiers

GBL

## 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℃/10 seconds at terminals




Dimensions in inches and (millimeters)

## 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

## Maximum Ratings And Electrical Characteristics

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

| Parameter | Symbols | GBL4005 | GBL401 | GBL402 | GBL404 | GBL406 | GBL408 | GBL410 | 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 | $I_{(AV)}$ | 4.0 | | | | | | | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$ | 120.0 | | | | | | | A |
| Rating for fusing (t=8.3ms, Ta=25℃) | $I^2t$ | 59.7 | | | | | | | $A^2s$ |
| Maximum instantaneous forward voltage at 4.0A | $V_F$ | 1.10 | | | | | | | V |
| Maximum DC reverse current $T_A$ =25℃<br>at rated DC blocking voltage $T_A$=125℃ | $I_R$ | 2.0<br>200 | | | | | | | uA |
| Typical junction capacitance (Note 1) | $C_J$ | 38.0 | | | | | | | pF |
| Typical thermal resistance | $R_{qJA}$ | 55.0 | | | | | | | °C/W |
| Operating junction and storage temperature range | $T_J$,$T_{STG}$ | -55 to +150 | | | | | | | °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

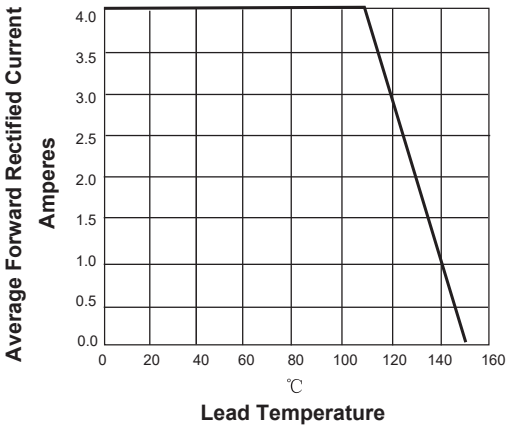



FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

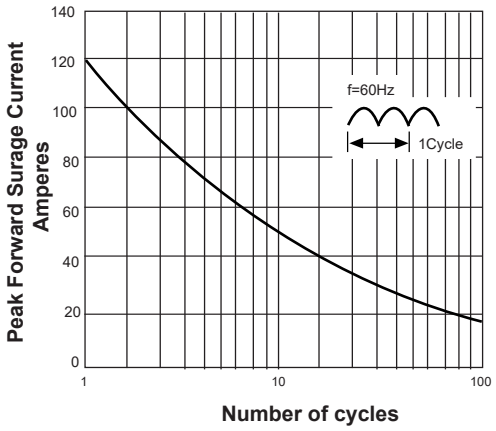



FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

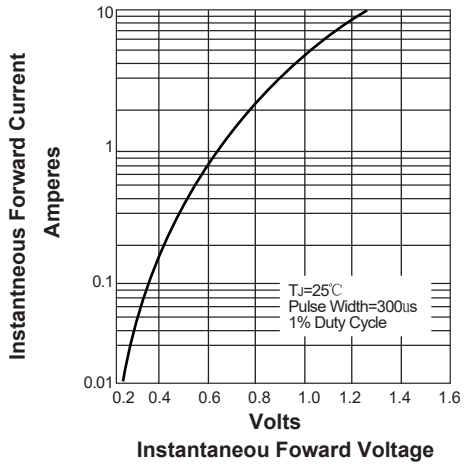
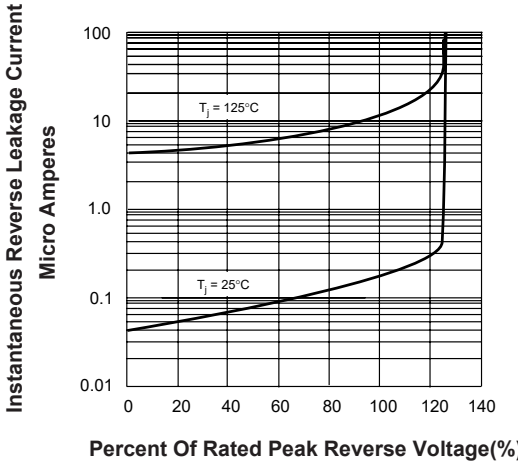
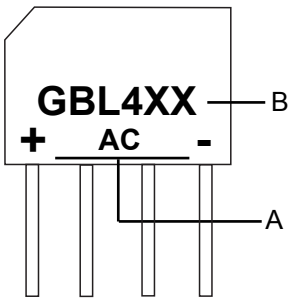



FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

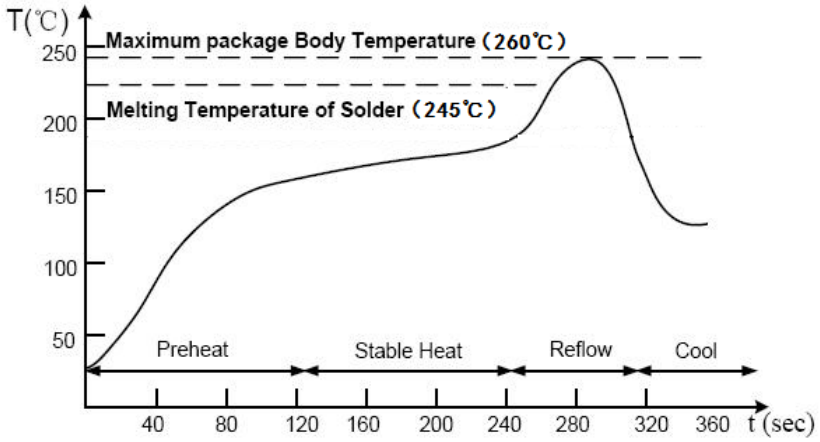



## Marking




| 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.