

Single Phase 3.0Amp Glass passivated Bridge Rectifiers

GBP
RoHS
 COMPLIANT

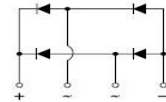
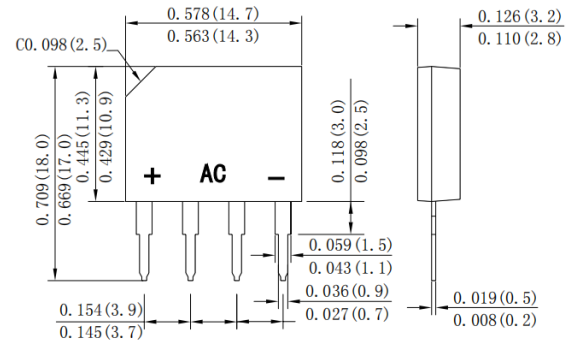

 Pb-Free

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 | GBP3005 | GBP301 | GBP302 | GBP304 | GBP306 | GBP308 | GBP310 | 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 | $I_{(AV)}$ | 3.0 | | | | | | | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 80.0 | | | | | | | A |
| Rating for fusing (t=8.3ms, $T_a=25^\circ\text{C}$) | I_t^2 | 26.5 | | | | | | | A_s^2 |
| Maximum instantaneous forward voltage at 3.0A | V_F | 1.10 | | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage $T_a=25^\circ\text{C}$ $T_a=125^\circ\text{C}$ | I_R | 2.0 200 | | | | | | | μA |
| Typical junction capacitance (Note 1) | C_J | 32.0 | | | | | | | pF |
| Typical thermal resistance | R_{qJA} | 55.0 | | | | | | | $^\circ\text{C/W}$ |
| 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

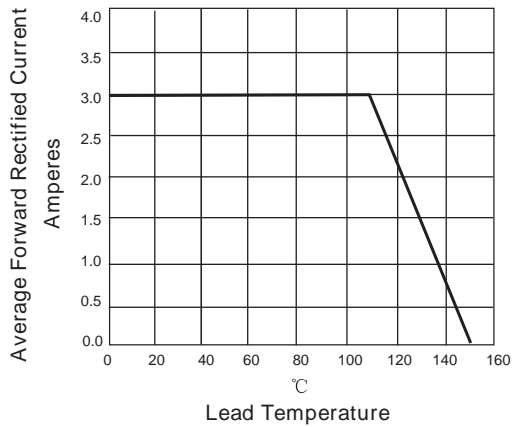


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

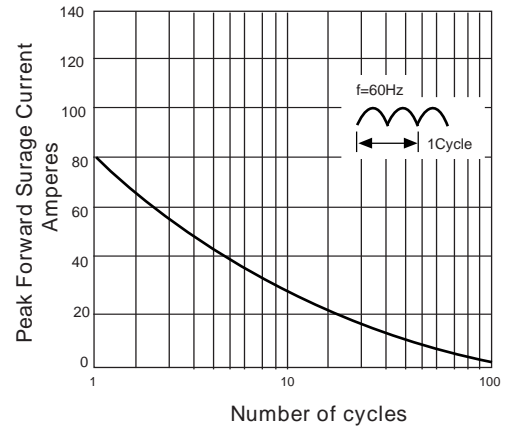


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

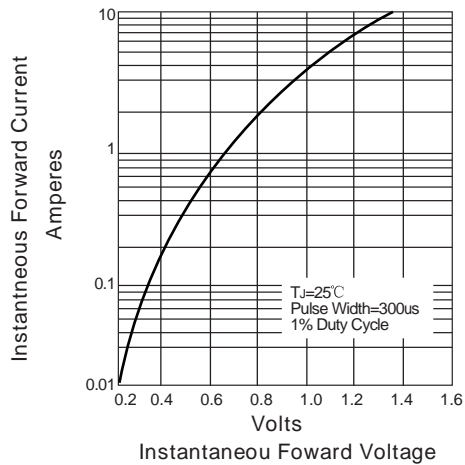
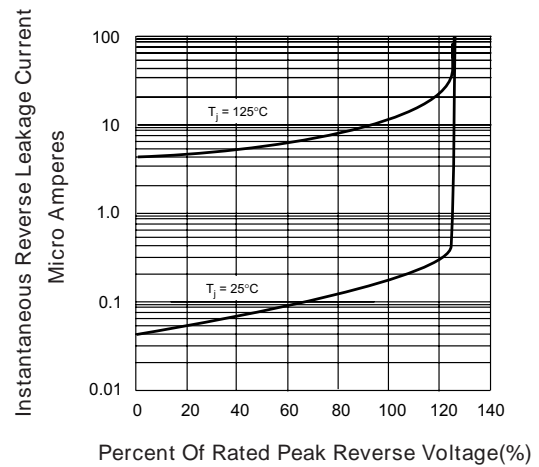
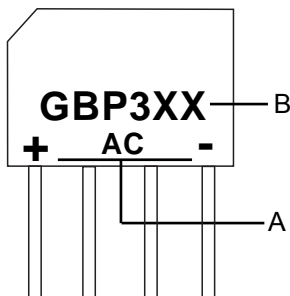


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



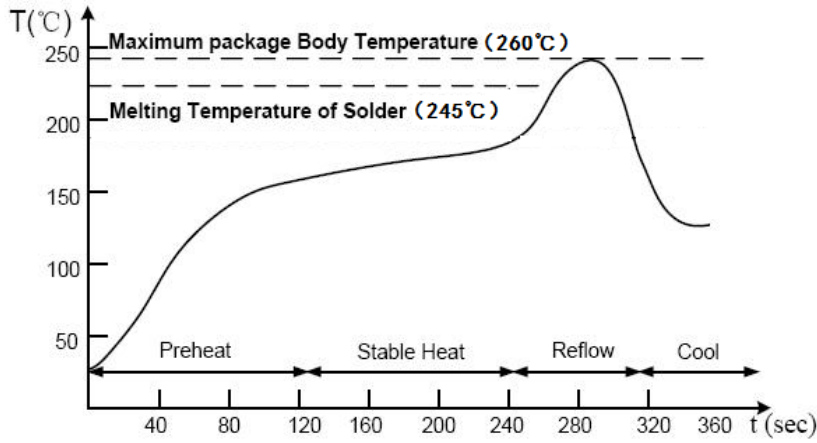
Marking



| 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.

Package Information

Tube Package

| Package | Tube (mm) | Q'TY/Tube (Kpcs) | Box Size (mm) | QTY/Box (Kpcs) | Carton Size (mm) | Q'TY/Carton (Kpcs) |
|---------|------------|------------------|---------------|----------------|------------------|--------------------|
| GBP | 450*22*5.6 | 0.03 | 480*130*80 | 1.5 | 505*345*145 | 6 |