



GBU4A thru GBU4M

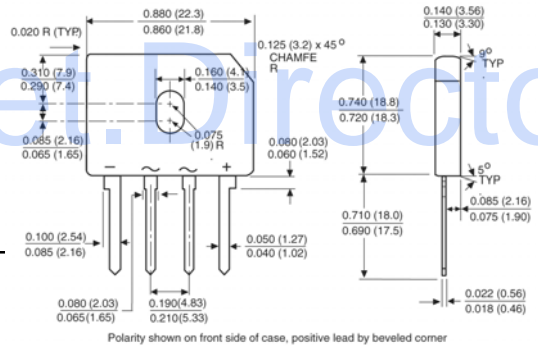
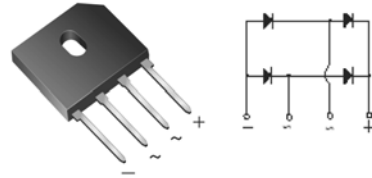
Glass Passivated Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 4.0 Amperes

Features

- ◆ Ideal for printed circuit boards
- ◆ High surge current capability
- ◆ High case dielectric strength of 1500 V_{RMS}
- ◆ Solder Dip 260 °C, 40 seconds

Mechanical Data

- ◆ Case: GBU
- ◆ Epoxy meets UL-94V-0 Flammability rating
- ◆ Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D
- ◆ Polarity: As marked on body
- ◆ Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.
- ◆ Recommended Torque: 5.7 cm-kg (5 inches-lbs)



Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Monitor, TV, Printer, Switching Mode Power Supply, Adapter, Audio equipment, and Home Appliances applications.

Maximum Ratings and Electrical Characteristics

T_A = 25 °C, unless otherwise specified.

| Parameter | Symbols | GBU4A | GBU4B | GBU4D | GBU4G | GBU4J | GBU4K | GBU4M | Units |
|---|---|-------|-------|-------|-------|-------|-------|-------------|--------------------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified output current at | T _C =100°C ⁽¹⁾ T _A =40°C ⁽²⁾ | | | | 4.0 | | | | Amps |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | | | | 150.0 | | | | Amps |
| Rating for fusing (t<8.3ms) | I _t | | | | 93 | | | | A ² sec |
| Maximum instantaneous forward voltage drop per leg at 2.0A | V _F | | | | 1.0 | | | | Volt |
| Maximum DC reverse current at rated DC blocking voltage per leg | T _A =25°C T _A =125°C | | | | 5.0 | | | | uA |
| Typical junction capacitance per leg at 4.0V, 1MHz | C _J | | | | 100 | | | | pF |
| Typical thermal resistance per leg | R _{θJA} ⁽²⁾ R _{θJC} ⁽¹⁾ | | | | 22 | | | | °C/W |
| Operating junction and storage temperature range | T _J , T _{STG} | | | | | | | -55 to +150 | °C |

- Notes:**
1. Unit case mounted on 1.6 x 1.6 x 0.06" thick (5.1 x 5.1 x 0.15 cm) Al. Plate
 2. Units mounted on P.C.B. with 0.5 x 0.5" (12.7 x 12.7 mm) copper pads and 0.375" (9.5 mm) lead length

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

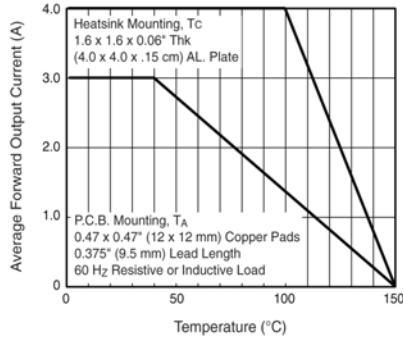


Figure 1. Derating Curve Output Rectified Current

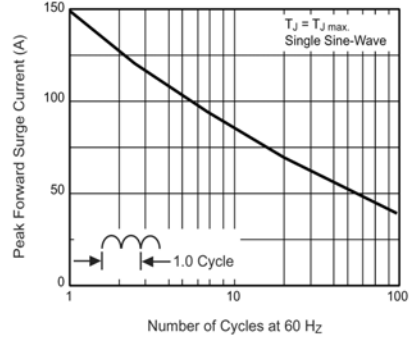


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

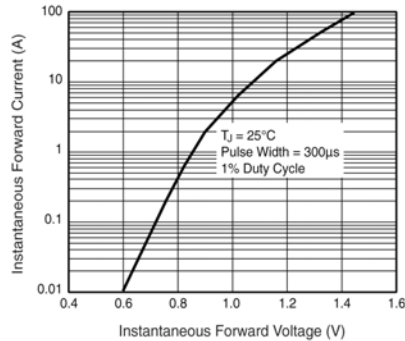


Figure 3. Typical Forward Characteristics Per Leg

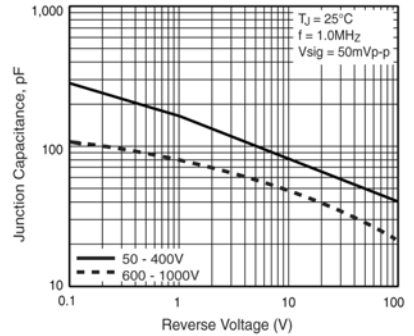


Figure 5. Typical Junction Capacitance Per Leg

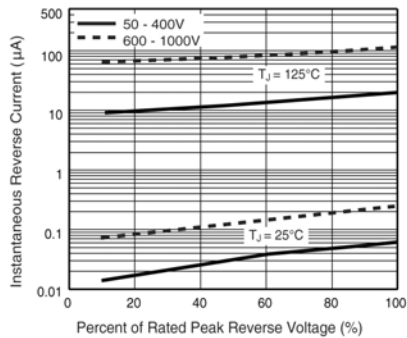


Figure 4. Typical Reverse Leakage Characteristics Per Leg

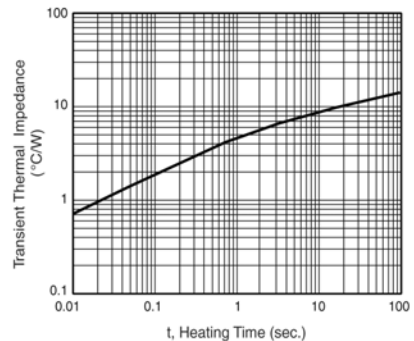


Figure 6. Typical Transient Thermal Impedance