

GBU4005 THRU GBU410

SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIERS
REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 4.0 Ampere

FEATURES

◆ Plastic package has Underwriters Laboratory
Flammability Classification 94V-0

◆ Ideal for printed circuit boards

◆ Glass passivated chip junction

◆ High forward surge capability

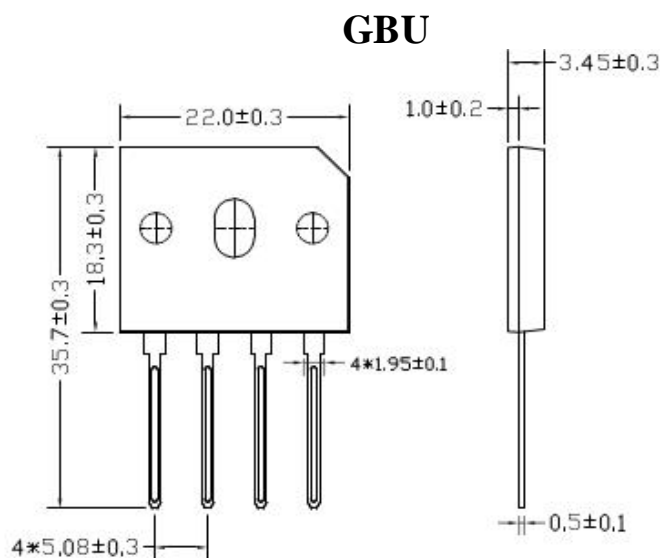
Mechanical Data

◆ Case: GBU Molded plastic body

◆ Terminals: Plated leads solderable per MIL-STD-750,
Method 2026

◆ High temperature soldering guaranteed: 260°C /10 seconds

◆ Mounting Position: Any



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at $T_A = 25^\circ\text{C}$ unless otherwise specified

| PARAMETER | SYMBOL | GBU 4005 | GBU 401 | GBU 402 | GBU 404 | GBU 406 | GBU 408 | GBU 410 | UNIT |
|---|---------------------------|-------------|------------|------------|------------|------------|------------|------------|------------------------|
| Maximum recurrent 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 |
| Average forward rectified output current $T_C = 100^\circ\text{C}$ (1) $T_A = 40^\circ\text{C}$ (2) | $I_{F(AV)}$ | 4.0 3.0 | | | | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 125 | | | | | | | A |
| Rating for fusig ($t < 8.3\text{ms}$) | I^2t | 64.85 | | | | | | | A^2sec |
| Maximum instantaneous forward voltage dropper leg at 2A | V_F | 1.0 | | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage per leg | $T_j = 25^\circ\text{C}$ | 5.0 | | | | | | | uA |
| | $T_j = 125^\circ\text{C}$ | 500 | | | | | | | |

THERMAL CHARACTERISTICS

| | | | |
|---|--------------------|-------------|-----------------------------|
| Typical thermal resistance per leg (Note 1) | $R_{\theta JA(2)}$ | 22 | $^\circ\text{C} / \text{W}$ |
| | $R_{\theta JL(3)}$ | 4.2 | |
| Operating junction temperature range | T_J | -55 to +150 | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

Note

(1) Unit case mounted on 1.6 x 1.6 x 0.06" thick (4.0 x 4.0 x 0.15 cm) aluminum plate

(2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length

(3) Unit case mounted on aluminum plate heatsink

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

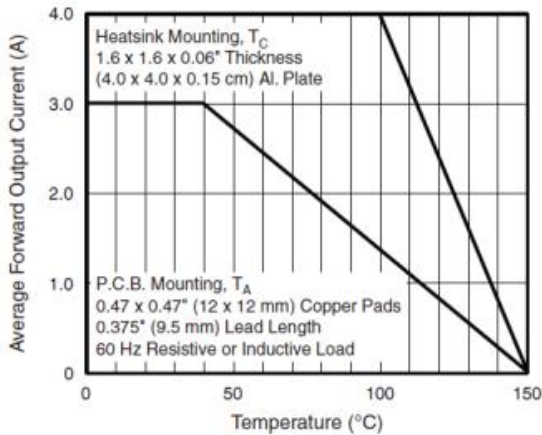


Figure 1. Derating Curve Output Rectified Current

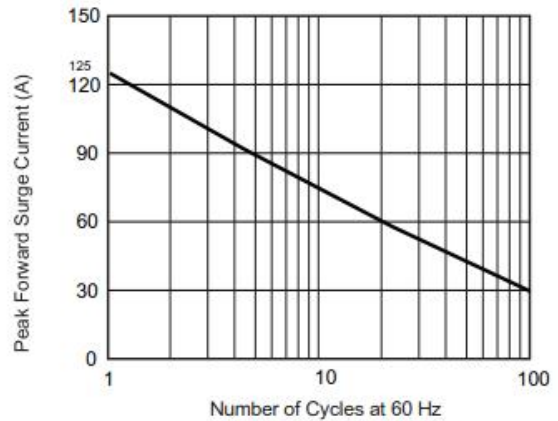


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

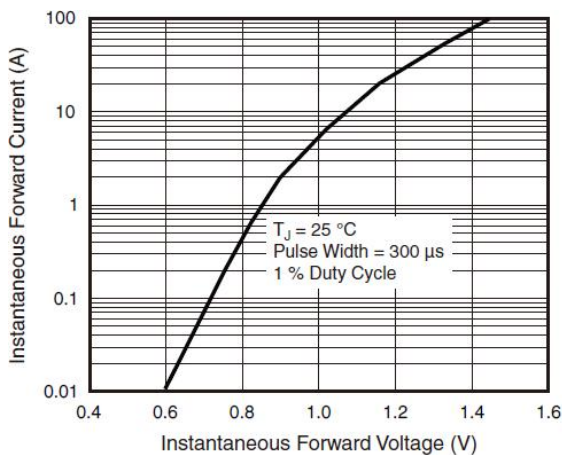


Figure 3. Typical Forward Characteristics Per Diode

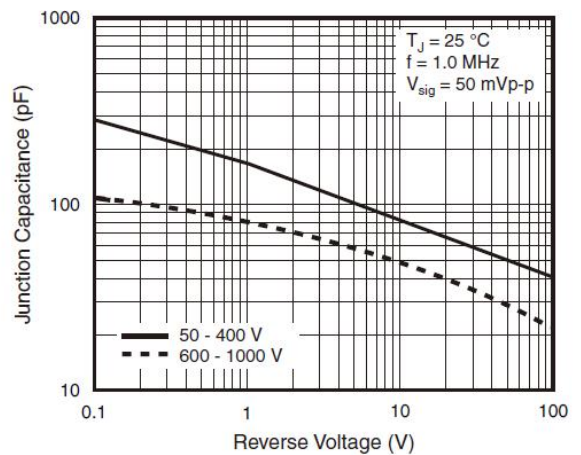


Figure 5. Typical Junction Capacitance Per Diode

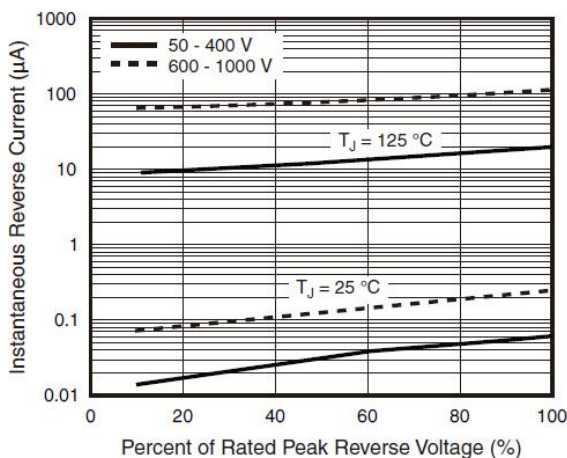


Figure 4. Typical Reverse Leakage Characteristics Per Diode

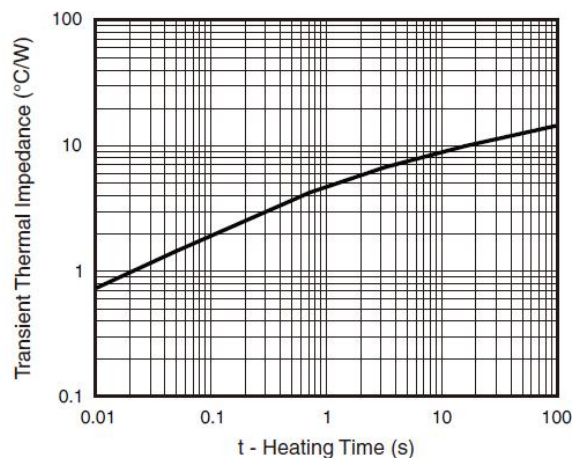


Figure 6. Typical Transient Thermal Impedance

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.