# *GBU60X SERIES*

***GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER***

思晶源

产品规格确认书

# GBU6005 THRU GBU610

## *GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER*

***REVERSE VOLTAGE:*** **50 to 1000 VOLTS**

***FORWARD CURRENT:*** **6.0 AMPERE**

### *FEATURES*

- Glass passivated chip junction
- Reliable low cost construction utilizing molded plastic technique
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability

### *MECHANICAL DATA*

Case: Molded plastic, GBU

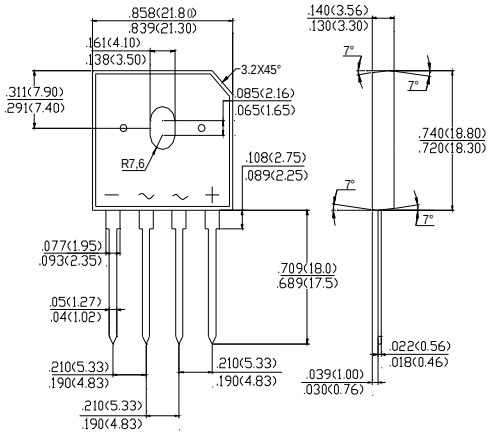
Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.15ounce, 4.0gram

**GBU**




**Dimensions in inches and (millimeters)**

## *Maximum Ratings and Electrical Characteristics*

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60$H_Z$, resistive or inductive load.

For capacitive load, derate current by 20%.

| | Symbols | *GBU6005* | *GBU601* | *GBU602* | *GBU604* | *GBU606* | *GBU608* | *GBU610* | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Maximum Recurrent 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 Current at $T_C$=100℃ (Note 1),(Note 2)** | $I_{(AV)}$ | 6.0 | | | | | | | **Amp** |
| **Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)** | $I_{FSM}$ | 175 | | | | | | | **Amp** |
| **Maximum Forward Voltage at 6.0A DC and 25℃** | $V_F$ | 1.0 | | | | | | | **Volts** |
| **Maximum Reverse Current at $T_A$=25℃** | $I_R$ | 5.0 | | | | | | | **uAmp** |
| **at Rated DC Blocking Voltage $T_A$=125℃** | | 500 | | | | | | | |
| **Typical Junction Capacitance (Note 3)** | $C_J$ | 210 | | | | 94 | | | **pF** |
| **Typical Thermal Resistance (Note 1),(Note 2)** | $R_{\theta JA}$ | 7.4 | | | | | | | **℃/W** |
| **Typical Thermal Resistance (Note 1),(Note 2)** | $R_{\theta JC}$ | 2.2 | | | | | | | **℃/W** |
| **Operating and Storage Temperature Range** | $T_J$, Tstg | -55 to +150 | | | | | | | **℃** |

**NOTES:**

1- Units case mounted on 2.6 x 1.4 x 0.06" thick (6.5 x 3.5 x 0.15 cm) Al. Plate heatsink

2- Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

3- Measured at 1 $MH_Z$ and applied reverse voltage of 4.0 VDC.

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## *RATINGS AND CHARACTERISTIC CURVES*

**Fig. 1 – Derating Curve Output Rectified Current**

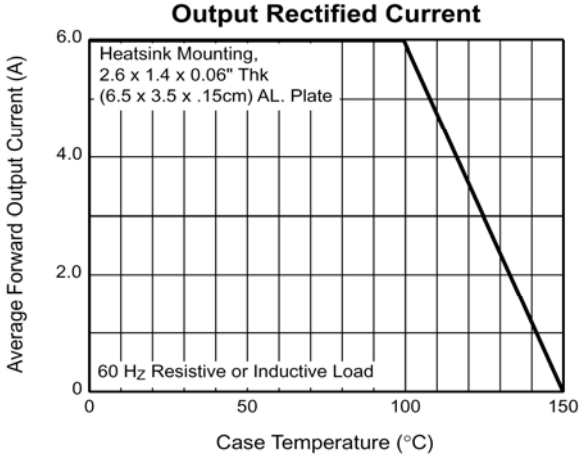


**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg**

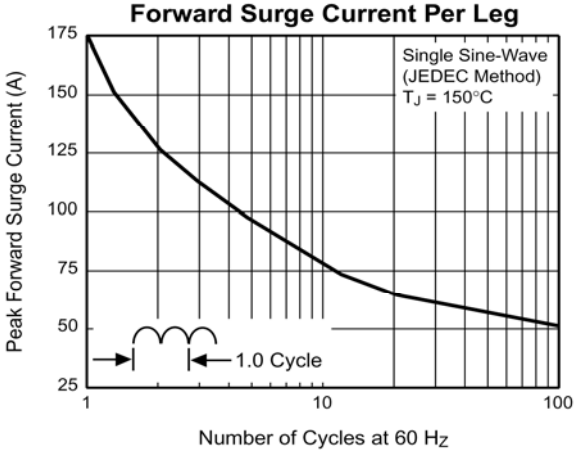


**Fig. 3 – Typical Forward Characteristics Per Leg**

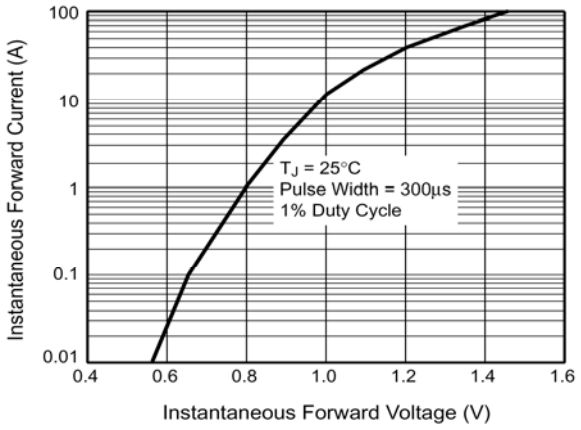


**Fig. 4 – Typical Reverse Leakage Characteristics Per Leg**

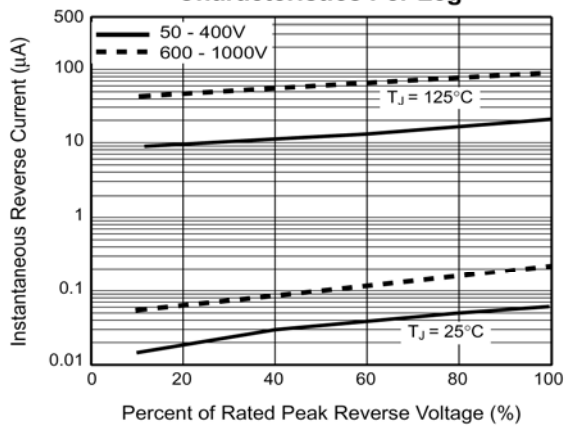


**Fig. 5 – Typical Junction Capacitance Per Leg**

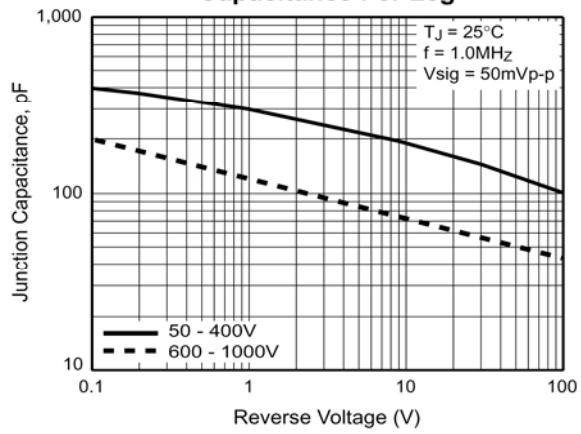


**Fig. 6 – Typical Transient Thermal Impedance**