



GBU Plastic-Encapsulate Bridge Rectifier

GBU6005 THRU GBU610

General Purpose Bridge Rectifier

Features

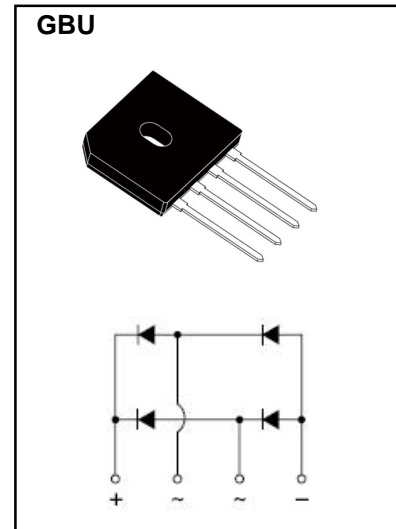
- I_o 6.0A
- V_{RRM} 50V-1000V
- High surge current capability
- Glass passivated chip

Applications

- General purpose 1 phase Bridge rectifier applications

Marking

- GBU6XX
- XX : From 005 To 10



Limiting Values (Absolute Maximum Rating)

| Item | Symbol | Unit | Conditions | GBU6 | | | | | | |
|--------------------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------------|-------------------------------------------|-----|-----|-----|-----|-----|------|
| | | | | 005 | 01 | 02 | 04 | 06 | 08 | 10 |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | V_{RMS} | V | | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Average Rectified Output Current | I_o | A | 60Hz sine wave, R-load | With heatsink $T_c = 110^\circ\text{C}$ | | 6 | | | | |
| | | | | Without heatsink $T_a = 25^\circ\text{C}$ | | 2.8 | | | | |
| Surge(Non-repetitive)Forward Current | I_{FSM} | A | 60Hz sine wave, 1 cycle, $T_j = 25^\circ\text{C}$ | 175 | | | | | | |
| Current Squared Time | I^2t | A^2S | $1\text{ms} \leq t < 8.3\text{ms}$ $T_j = 25^\circ\text{C}$, Rating of per diode | 127 | | | | | | |
| Storage Temperature | T_{stg} | $^\circ\text{C}$ | | -55 ~ +150 | | | | | | |
| Junction Temperature | T_j | $^\circ\text{C}$ | | -55 ~ +150 | | | | | | |
| Dielectric Strength | V_{dis} | KV | Terminals to case, AC 1 minute | 2 | | | | | | |
| Mounting Torque | Tor | $\text{kg} \cdot \text{cm}$ | Recommend torque: $5\text{kg} \cdot \text{cm}$ | 8 | | | | | | |

Electrical Characteristics ($T_a = 25^\circ\text{C}$ Unless otherwise specified)

| Item | Symbol | Unit | Test Condition | Max |
|----------------------|------------------|---------------------------|---------------------------------------------------------------|-----|
| Peak Forward Voltage | V_{FM} | V | $I_{FM} = 3\text{A}$, Pulse measurement, Rating of per diode | 1.0 |
| Peak Reverse Current | I_{RRM} | μA | $V_{RM} = V_{RRM}$, Pulse measurement, Rating of per diode | 10 |
| Thermal Resistance | $R_{\theta J-A}$ | $^\circ\text{C}/\text{W}$ | Between junction and ambient, Without heatsink | 26 |
| | $R_{\theta J-C}$ | | Between junction and case, With heatsink | 3.4 |

Typical Characteristics

FIG.1-MAXIMUM FORWARD SURGE CURRENT

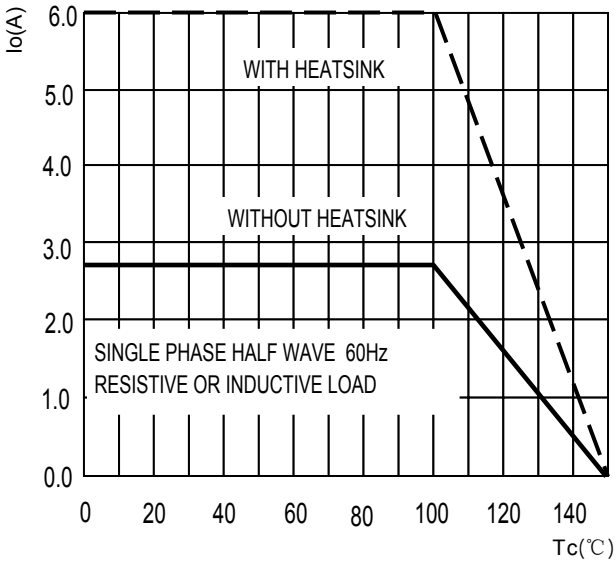


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

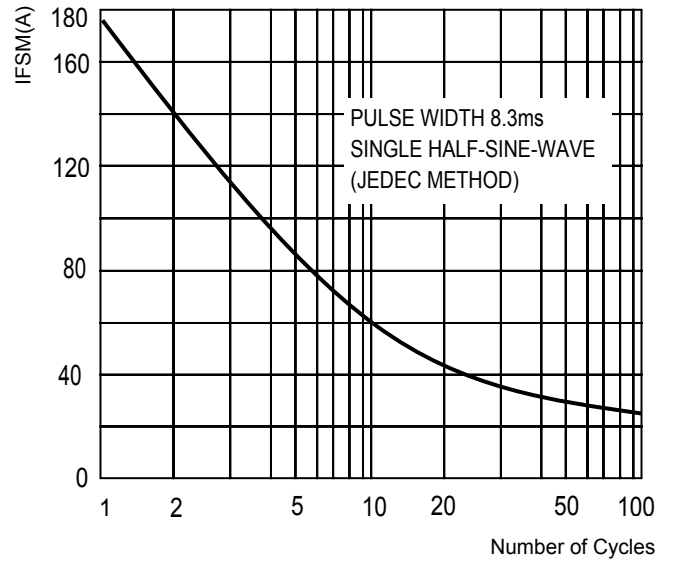


FIG.3-TYPICAL FORWARD CHARACTERISTICS

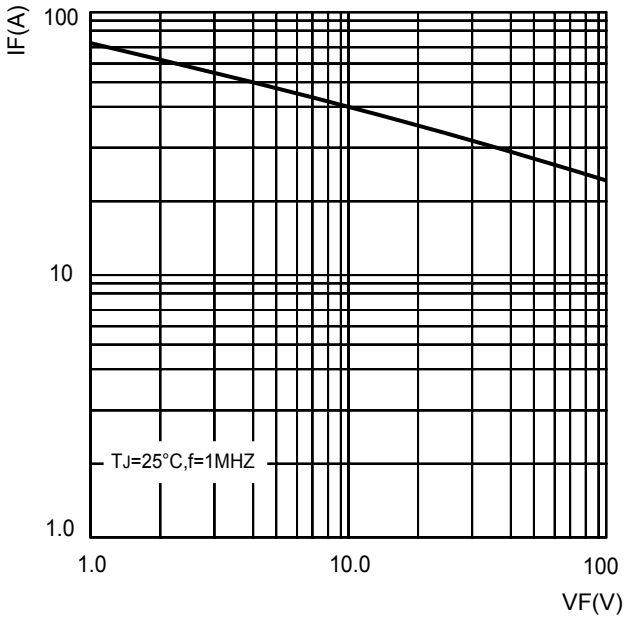


FIG.4-TYPICAL REVERSE CHARACTERISTICS

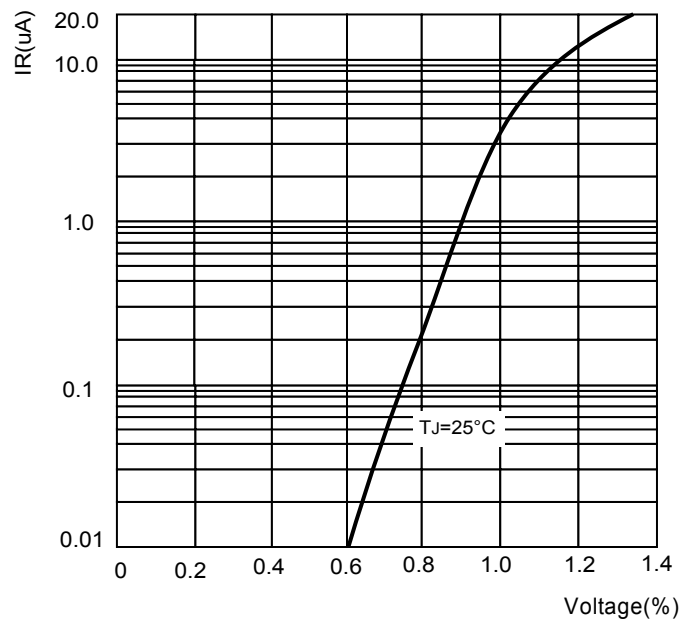
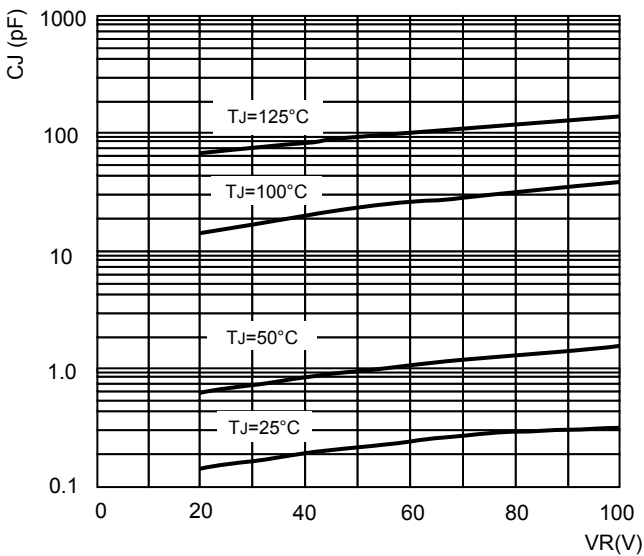
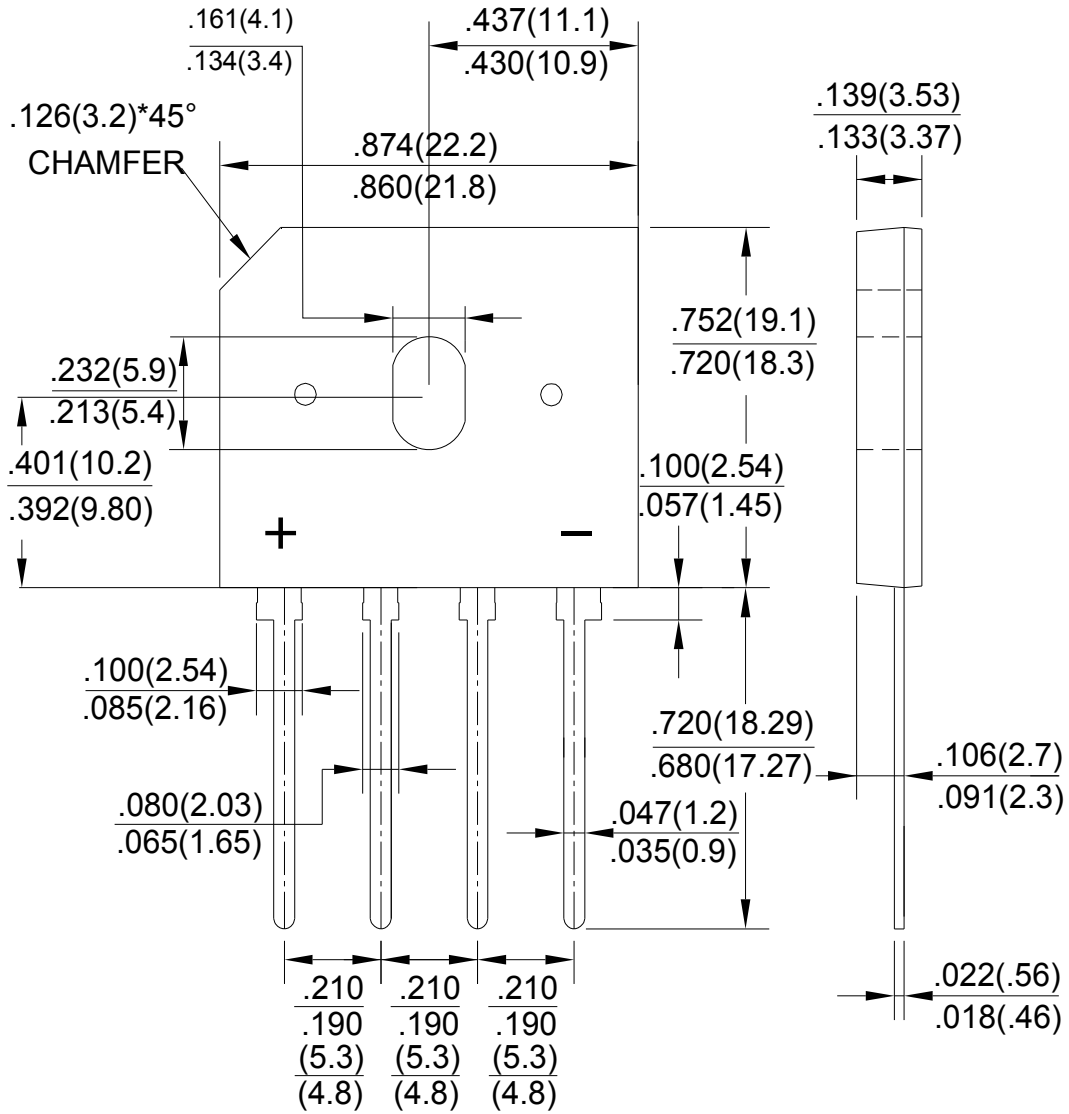


FIG.5-TYPICAL JUNCTION CAPACITANCE



GBU Package Outline Dimensions



Unit: in inches (millimeters)

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