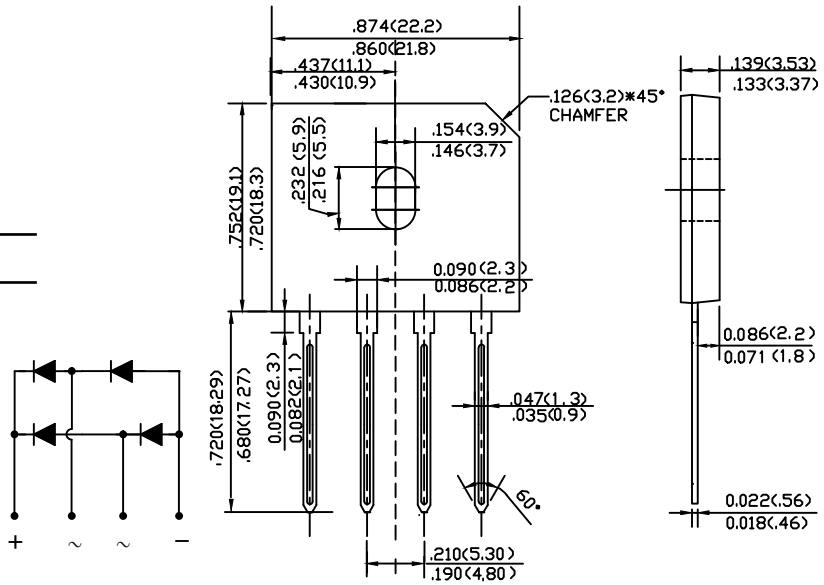
# GBU6005 THRU GBU610

**SINGLE PHASE 6.0 AMP GLASS PASSIVATED BRIDGE RECTIFIER**

## Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

GBU




dimensions in inches and (millimeters)

## Mechanical Data

- Case: G B U , molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version

## Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.
Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| TYPE NUMBER | SYMBOL | GBU 6005 | GBU 601 | GBU 602 | GBU 604 | GBU 606 | GBU 608 | GBU 610 | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1)@$T_C$=90℃ | $I_{F(AV)}$ | 6.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 120 | | | | | | | A |
| Forward Voltage per element @IF=3A<br>@IF=6A | $V_{FM}$ | 1.0<br>1.1 | | | | | | | V |
| Peak Reverse Current @$T_A$=25℃<br>At Rated DC Blocking Voltage @$T_A$=125℃ | $I_R$ | 5.0<br>500 | | | | | | | uA |
| $I^2t$ Rating for fusing (t <8.3ms) | $I^2t$ | 59.7 | | | | | | | $A^2s$ |
| Typical Junction Capacitance per leg (Note 2) | $C_J$ | 65 | | | | | | | pF |
| Typical Thermal Resistance per leg (Note 3) | $R_{\theta JA}$<br>$R_{\theta JL}$ | 31<br>7.6 | | | | | | | ℃/W |
| Operating and Storage Temperature Range | $T_J$,$T_{STG}$ | -55to+150 | | | | | | | ℃ |

Note:1. Mounted on glass epoxy PC board with 1.3mm$^2$ solder pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Device mounted on 50mm x 50mm x 1.6mm Cu Plate Heatsink.

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Fig. 1 Output Current Derating Curve

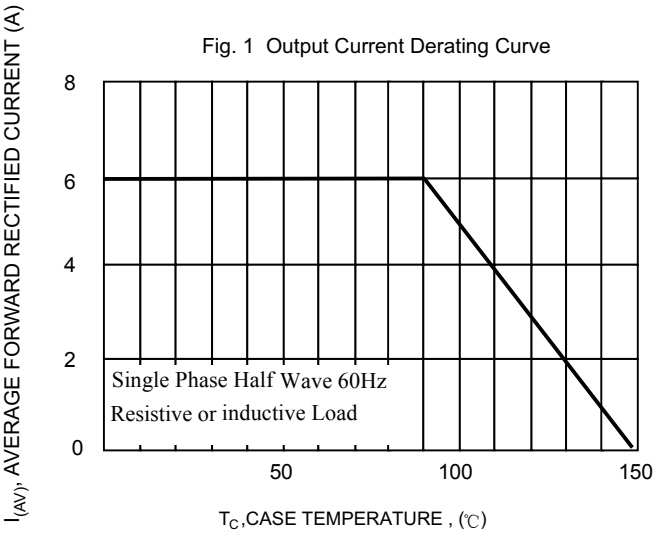



Fig. 2 Typical Forward Characteristics (per leg)

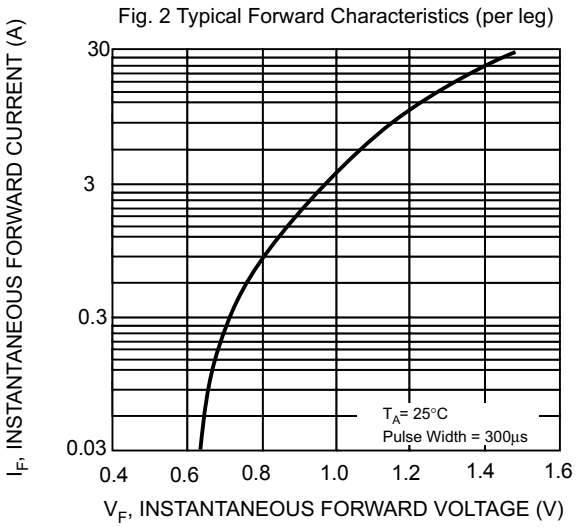



Fig. 3 Maximum Peak Forward Surge Current (per leg)

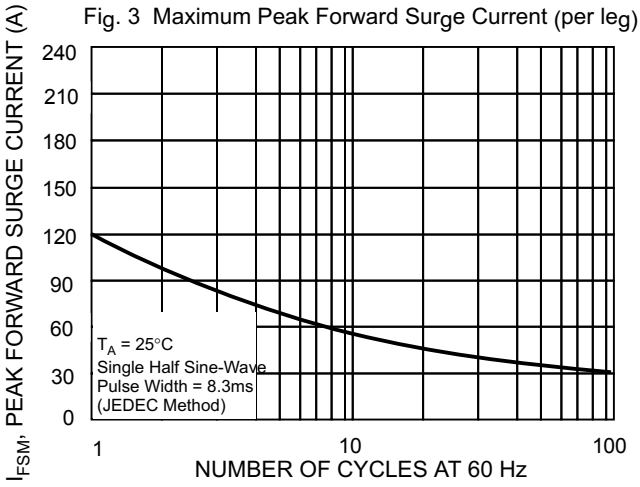
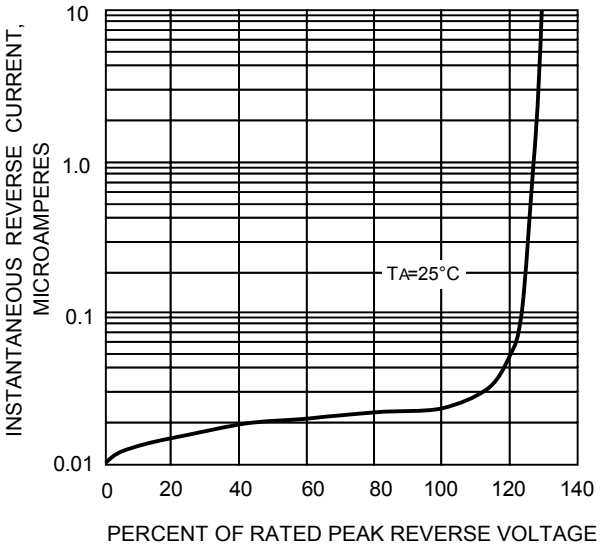



Fig. 4 Typical Junction Capacitance



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