

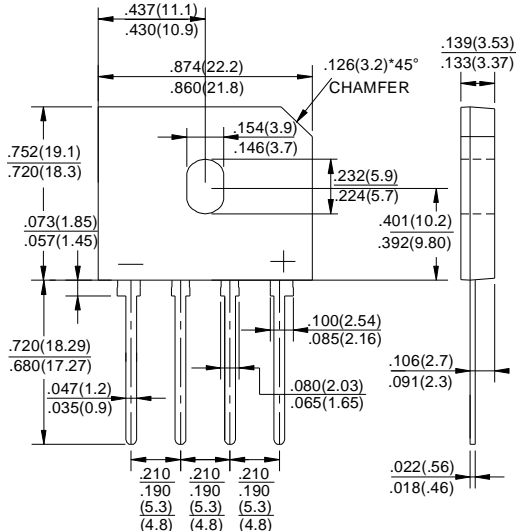


GBU6005 THRU GBU610

GLASS PASSIVATED BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes

GBU



FEATURES

- ◆ Surge overload rating -175 amperes peak
- ◆ Ideal for printed circuit board
- ◆ Reliable low cost construction utilizing molded plastic technique
- ◆ Plastic material has U/L flammability classification 94V-0
- ◆ Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| TWGMC Catalog Number | SYMBOLS | GBU 6005 | GBU 601 | GBU 602 | GBU 604 | GBU 606 | GBU 608 | GBU 610 | 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 (with heatsink NOTE 2) Rectified current @ $T_c=100^\circ\text{C}$ (without heatsink) | $I_{(AV)}$ | | | | | 6.0 | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | | | | | 175.0 | | | Amps |
| Rating for Fusing ($t < 8.3\text{ms}$) | I^2t | | | | | 127 | | | A^2s |
| Maximum forward voltage at 3.0A DC | V_F | | | | | 1.1 | | | Volts |
| Maximum DC reverse current $T_J=25^\circ\text{C}$ at rated DC blocking voltage $T_J=125^\circ\text{C}$ | I_R | | | | | 10 | | | μA |
| | | | | | | 500 | | | μA |
| Typical Junction Capacitance (Note 1) | C_J | | | | | 50 | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | | | | | 2.2 | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | | | | | -55 to +150 | | | $^\circ\text{C}$ |
| storage temperature range | T_{STG} | | | | | -55 to +150 | | | $^\circ\text{C}$ |

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Device mounted on 75mm*75mm*1.6mm cu plate heatsink.

RATINGS AND CHARACTERISTIC CURVES GBU6005 THRU GBU610

FIG.1-FORWARD CURRENT DERATING CURVE

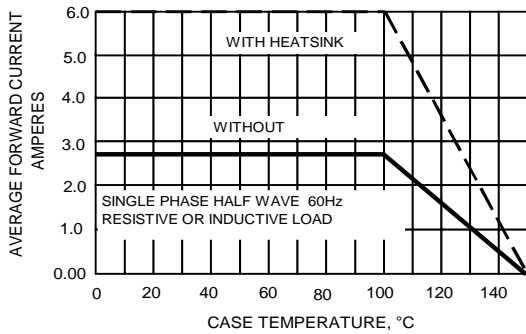


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

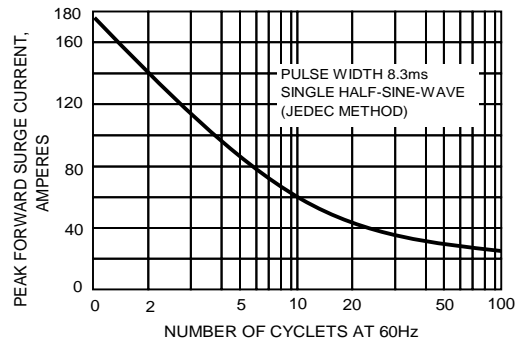


FIG.3-TYPICAL JUNCTION CAPACITANCE

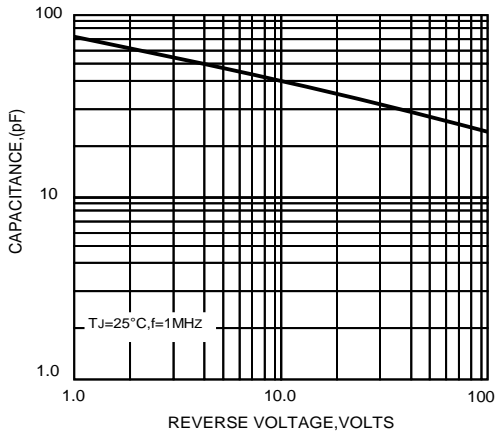


FIG.4-TYPICAL FORWARD CHARACTERISTICS

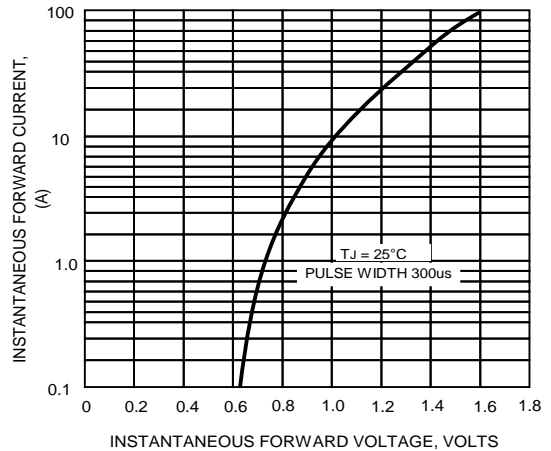


FIG.5-TYPICAL REVERSE CHARACTERISTICS

