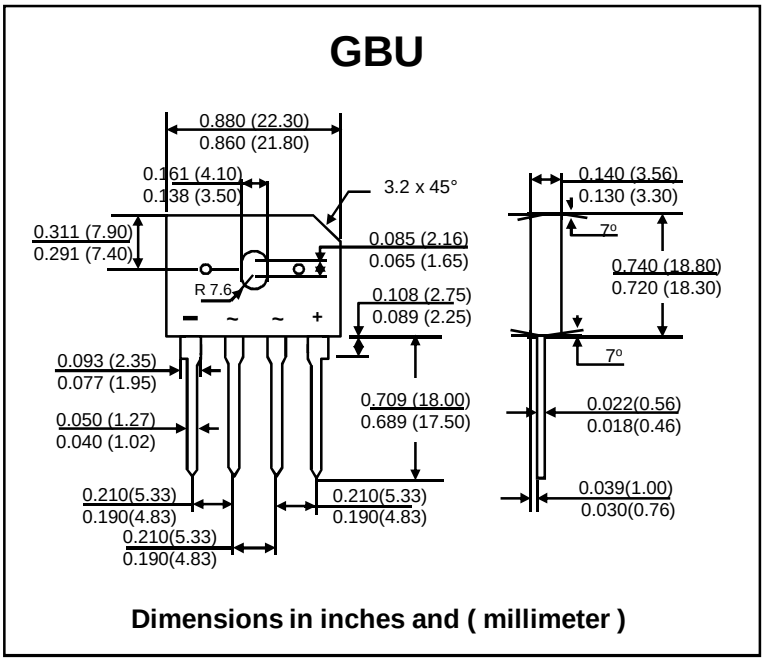
# GBU8A ~ GBU8M

# Glass Passivated Single-Phase Bridge Rectifiers

## PRV : 50 - 1000 Volts
## Io : 8.0 Amperes




### FEATURES :

* Glass passivated chip junction
* Ideal for printed circuit board
* Plastic material has Underwriters Laboratory Flammability Classification 94V-0
* Reliable low cost construction utilizing molded plastic technique
* Pb / RoHS Free

### 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

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| RATING | SYMBOL | GBU 8A | GBU 8B | GBU 8D | GBU 8G | GBU 8J | GBU 8K | GBU 8M | 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 |
| Maximum Average Forward Output Current Tc=100 °C (1) | $I_{F(AV)}$ | 8.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single half sine-wave Superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 200 | | | | | | | A |
| Maximum Forward Voltage at $I_F$ = 8 A | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current Ta = 25 °C | $I_R$ | 5.0 | | | | | | | μA |
| at Rated DC Blocking Voltage Ta = 125 °C | $I_{R(H)}$ | 500 | | | | | | | μA |
| Typical Junction capacitance per element (Note3) | $C_J$ | 225 | | | | 125 | | | pF |
| Typical Thermal Resistance (Note 4) | $R_{\theta JA}$ | 21 | | | | | | | °C/W |
| Typical Thermal Resistance (Note 4) | $R_{\theta JC}$ | 2.2 | | | | | | | °C/W |
| Operating Junction and Storage Temperature Range | $T_J$, $T_{STG}$ | - 55 to + 150 | | | | | | | °C |

**Notes :**

(1) Units case mounted on 3.2 x 3.2 x 0.12" thick (8.2 x 8.2 x 0.3cm) 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 MHz and applied reverse voltage of 4.0 VDC
(4) Units mounted in free air, no heatsink on P.C.B., 0.5 x 0.5" (12 x 12mm) copper pads, 0.375" lead length

## RATING AND CHARACTERISTIC CURVES ( GBU8A - GBU8M )

**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**

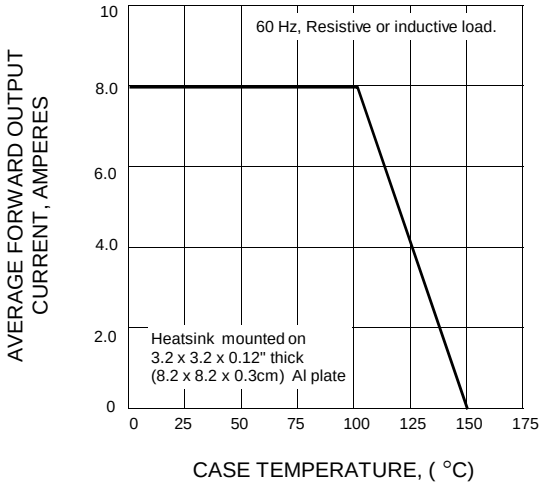



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

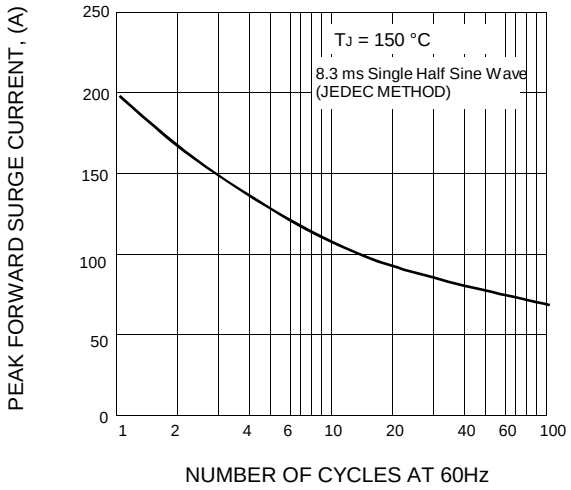



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER LEG**

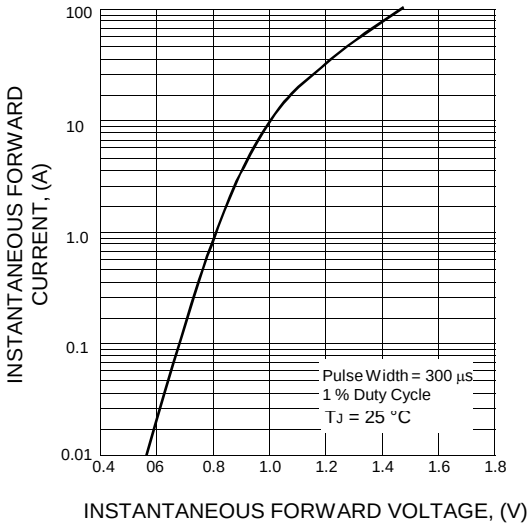



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER LEG**