



# GBJ35005 THRU GBJ3510

## GLASS PASSIVATED BRIDGE RECTIFIER

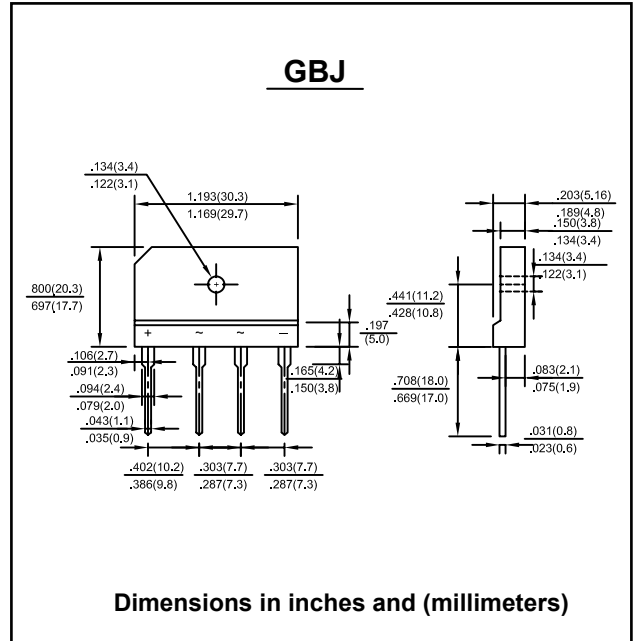
Reverse Voltage - 50 to 1000 Volts      Forward Current - 35.0 Ampere

### FEATURES

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

### MECHANICAL DATA

- Case: Molded plastic, GBJ
- Terminals: Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed
- Epoxy: UL 94V-0 rate flame retardant
- 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%.

| Parameter   | Symbols         | GBJ 35005   | GBJ 3501 | GBJ 3502 | GBJ 3504 | GBJ 3506 | GBJ 3508 | GBJ 3510 | Units              |
|---|-----------------|-------------|----------|----------|----------|----------|----------|----------|--------------------|
| 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 Rectified Current with Heatsink at $T_C = 100^\circ\text{C}$                          | $I_{(AV)}$      | 35          |          |          |          |          |          |          | A                  |
| Peak Forward Surge Current, 8.3 ms Single Half-Sine -Wave superimposed on rated load (JEDEC Method)           | $I_{FSM}$       | 400         |          |          |          |          |          |          | A                  |
| Maximum Forward Voltage at 17.5 A DC and 25°C   | $V_F$           | 1.1         |          |          |          |          |          |          | V                  |
| Maximum Reverse Current at $T_A = 25^\circ\text{C}$<br>at Rated DC Blocking Voltage $T_A = 125^\circ\text{C}$ | $I_R$           | 10<br>500   |          |          |          |          |          |          | $\mu\text{A}$      |
| Typical Junction Capacitance <sup>1)</sup>  | $C_J$           | 85          |          |          |          |          |          |          | pF                 |
| Typical Thermal Resistance <sup>2)</sup>  | $R_{\theta JC}$ | 0.8         |          |          |          |          |          |          | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range   | $T_J, T_S$      | -55 to +150 |          |          |          |          |          |          | $^\circ\text{C}$   |

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 VDC.

<sup>2)</sup> Thermal resistance from junction to case with device mounted on 300 mm X 300 mm X 1.6 mm Cu plate heatsink.



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## RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

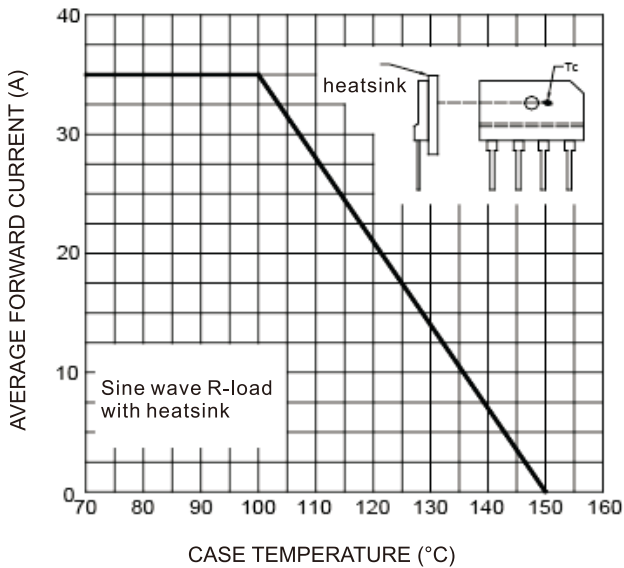


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

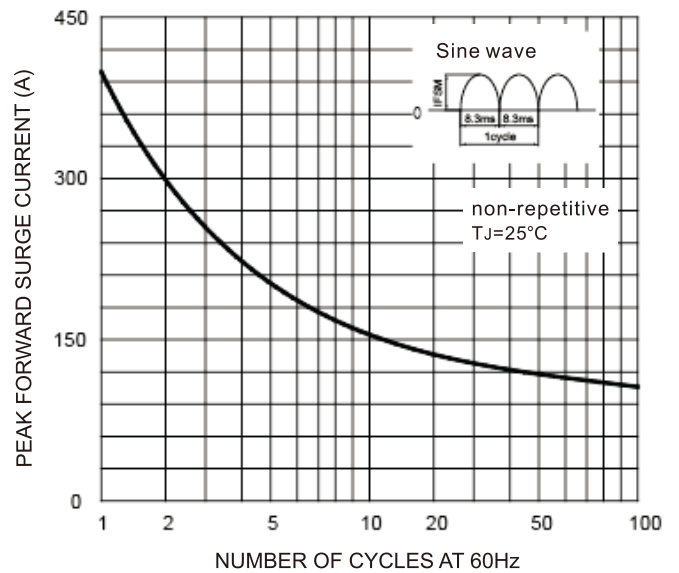


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

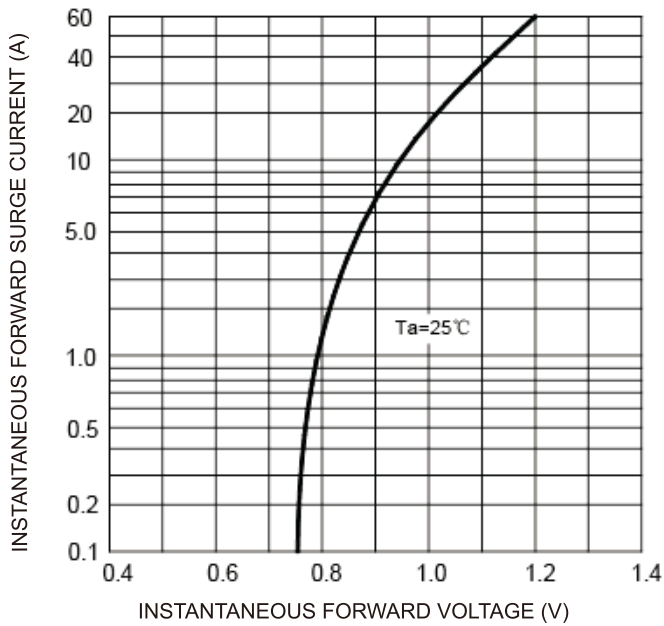


FIG.4- TYPICAL REVERSE CHARACTERISTICS

