

# GBU10005 THRU GBU1010

## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER



康比電子  
HORNBY ELECTRONIC

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 10.0 AMPERE

### 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

### MECHANICAL DATA

Case: Molded plastic, GBU

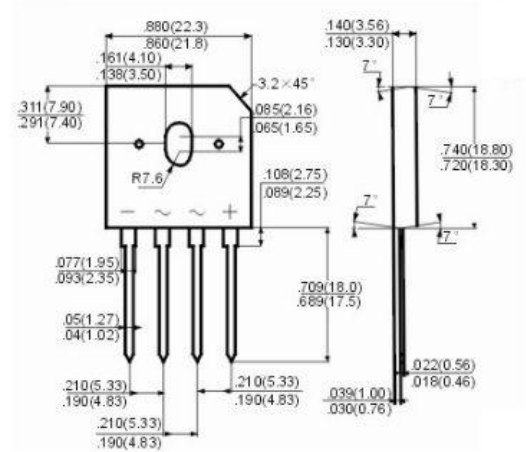
Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.15ounce, 4.0gram

### GBU



Dimensions in inches and (millimeters)

### 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, derate current by 20%.

|                                                                                                       | Symbols                           | GBU10005    | GBU1001 | GBU1002 | GBU1004 | GBU1006 | GBU1008 | GBU1010 | Units |
|-------------------------------------------------------------------------------------------------------|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | V <sub>RRM</sub>                  | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | Volts |
| Maximum RMS Voltage                                                                                   | V <sub>RMS</sub>                  | 35          | 70      | 140     | 280     | 420     | 560     | 700     | Volts |
| Maximum DC Blocking Voltage                                                                           | V <sub>DC</sub>                   | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | Volts |
| Maximum Average Forward Rectified Current at T <sub>C</sub> =100°C                                    | I <sub>(AV)</sub>                 | 10.0        |         |         |         |         |         |         | Amp   |
| Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)     | I <sub>FSM</sub>                  | 200         |         |         |         |         |         |         | Amp   |
| Maximum Forward Voltage at 10.0A DC and 25°C                                                          | V <sub>F</sub>                    | 1.0         |         |         |         |         |         |         | Volts |
| Maximum Reverse Current at T <sub>A</sub> =25°C<br>at Rated DC Blocking Voltage T <sub>A</sub> =125°C | I <sub>R</sub>                    | 10.0<br>500 |         |         |         |         |         |         | uAmp  |
| Typical Junction Capacitance (Note 3)                                                                 | C <sub>J</sub>                    | 255         |         |         |         | 125     |         |         | pF    |
| Typical Thermal Resistance (Note 1)                                                                   | R <sub>θJA</sub>                  | 8.6         |         |         |         |         |         |         | °C/W  |
| Typical Thermal Resistance (Note 2)                                                                   | R <sub>θJC</sub>                  | 3.1         |         |         |         |         |         |         | °C/W  |
| Operating and Storage Temperature Range                                                               | T <sub>J</sub> , T <sub>stg</sub> | -55 to +150 |         |         |         |         |         |         | °C    |

### NOTES:

1- Units Mounted in free air, no heatsink, P.C.B at 0.375"(9.5mm) lead length with 0.5 x 0.5"(12 x 12mm)copper pads.

2- Units Mounted on a 2.6 x 1.4" x 0.06" thick ( 6.5 x 3.5 x 0.15cm) AL plate.

3- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

4- Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

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### RATINGS AND CHARACTERISTIC CURVES

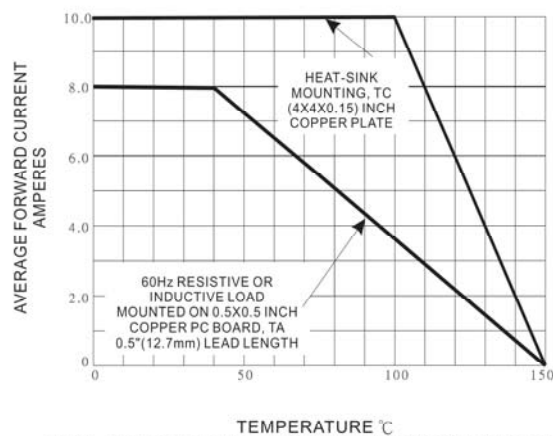


Fig.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

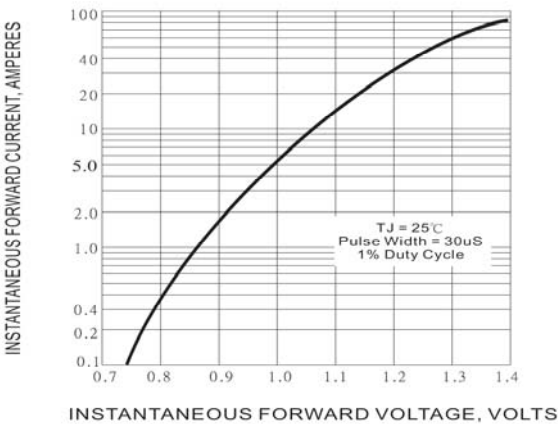


Fig.2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

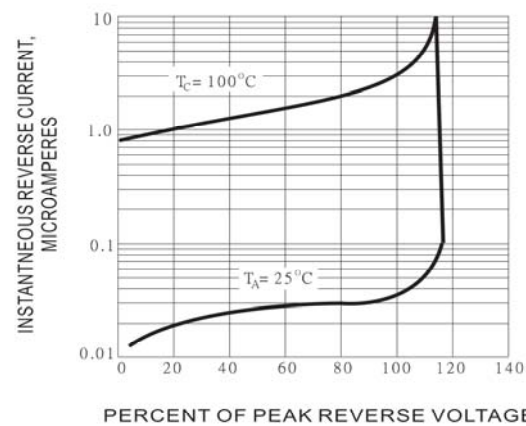


Fig.3 - TYPICAL REVERSE CHARACTERISTICS

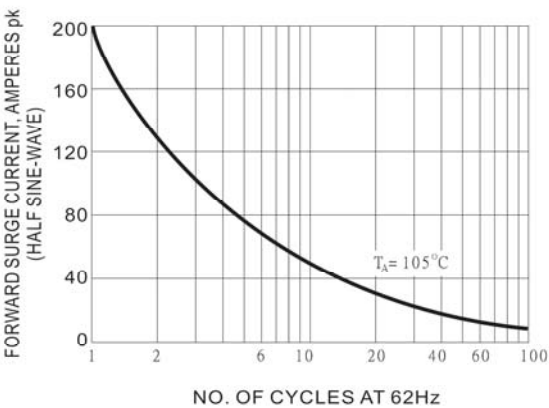


Fig.4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

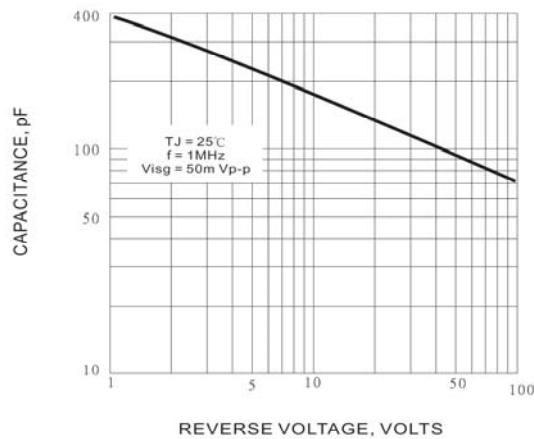


Fig.5 - TYPICAL JUNCTION CAPACITANCE PER ELEMENT