



# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

GBU4A  
THRU  
GBU4M

## TECHNICAL SPECIFICATIONS OF SINGLE-PHASE GLASS PASSIVATED BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 4.0 Amperes

### FEATURES

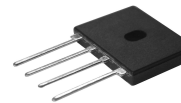
- \* Ideal for printed circuit board
- \* Surge overload rating: 150 Amperes peak
- \* Glass passivated junction

### MECHANICAL DATA

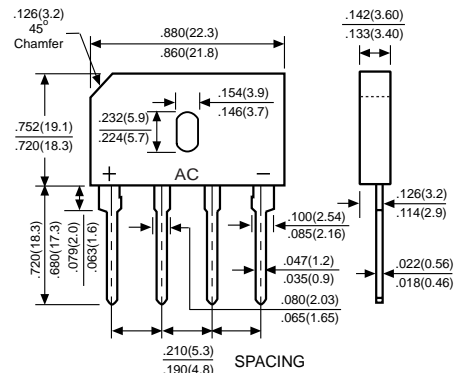
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any

### 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, derate current by 20%.



GBU



Dimensions in inches and (millimeters)

|   | SYMBOL                  | GBU4A       | GBU4B | GBU4D | GBU4G | GBU4J | GBU4K | GBU4M | UNITS              |
|---|-------------------------|-------------|-------|-------|-------|-------|-------|-------|--------------------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>        | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | Volts              |
| Maximum RMS Bridge Input 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 @T <sub>c</sub> =100°C                                  | I <sub>(AV)</sub>       | 4.0<br>2.4  |       |       |       |       |       |       | Amps               |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>        | 150         |       |       |       |       |       |       | Amps               |
| Maximum Forward Voltage Drop per element at 2.0A DC   | V <sub>F</sub>          | 1.1         |       |       |       |       |       |       | Volts              |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element                               | @T <sub>J</sub> = 25°C  | 10          |       |       |       |       |       |       | μAmps              |
|   | @T <sub>J</sub> = 125°C | 500         |       |       |       |       |       |       |                    |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)  | I <sup>2</sup> t        | 93          |       |       |       |       |       |       | A <sup>2</sup> Sec |
| Typical Junction Capacitance ( Note1)   | C <sub>J</sub>          | 45          |       |       |       |       |       |       | pF                 |
| Typical Thermal Resistance ( Note 2)  | R <sub>θJA</sub>        | 2.2         |       |       |       |       |       |       | °C/W               |
| Operating Temperature Range   | T <sub>J</sub>          | -55 to +150 |       |       |       |       |       |       | °C                 |
| Storage Temperature Range   | T <sub>STG</sub>        | -55 to +150 |       |       |       |       |       |       | °C                 |

NOTES : 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts.

2.Thermal Resistance from Junction to Case per element Unit mounted on 50x50x1.6mm Cu plate heat-sink.

# RATING AND CHARACTERISTIC CURVES (GBU4A THRU GBU4M)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

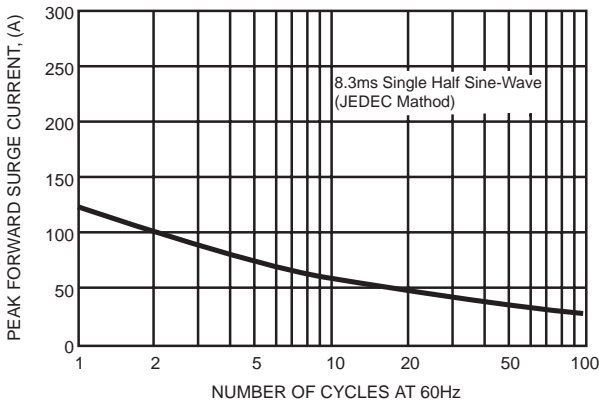


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

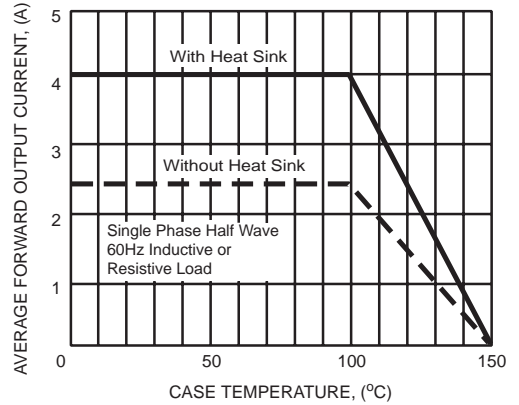


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

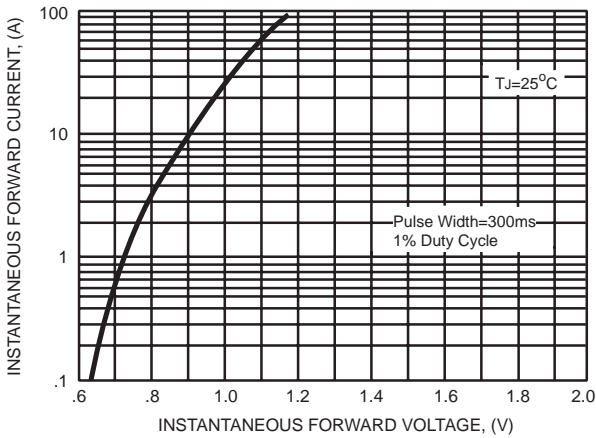
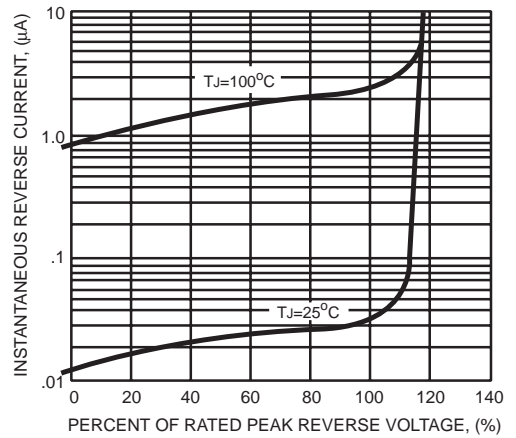


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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