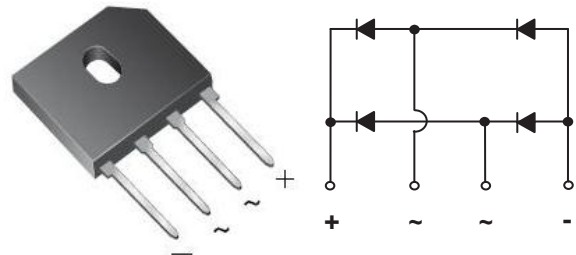


## Single-Phase Bridge Rectifier in GBU

### Features

- Ideal for printed circuit boards
- High surge current capability
- Typical IR less than 0.1 $\mu$ A
- High case dielectric strength
- Glass passivated chip junction



### Mechanical Data

- **Case:** GBU(plastic package).  
RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

- Audio equipment
- Monitor
- TV
- Printer
- SMPS
- Other AC/DC rectification application

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter   | Symbol         | GBU1502       | GBU1504 | GBU1506 | GBU1508 | GBU1510 | Unit             |
|---|----------------|---------------|---------|---------|---------|---------|------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$      | 200           | 400     | 600     | 800     | 1000    | V                |
| Maximum RMS voltage   | $V_{RMS}$      | 140           | 280     | 420     | 560     | 700     | V                |
| Maximum DC blocking voltage   | $V_{DC}$       | 200           | 400     | 600     | 800     | 1000    | V                |
| Maximum average forward output rectified current (fig. 1)<br><small>on glass-epoxy PCB <sup>(1)</sup></small> | $I_{F(AV)}$    | 15.0          |         |         |         |         | A                |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load                            | $I_{FSM}$      | 200           |         |         |         |         | A                |
| Rating for fusing (t < 8.3 ms)  | $I^2t$         | 166           |         |         |         |         | A <sup>2</sup> s |
| Operating junction and storage temperature range  | $T_J, T_{STG}$ | - 55 to + 150 |         |         |         |         | °C               |

### Thermal Characteristics

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter  | Symbol                | GBU1502 | GBU1504 | GBU1506 | GBU1508 | GBU1510 | Unit |
|--|-----------------------|---------|---------|---------|---------|---------|------|
| Typical thermal resistance (junction to ambient) | $R_{\theta JA}^{(1)}$ | 23      |         |         |         |         | °C/W |
| Typical thermal resistance (junction to ambient) | $R_{\theta JA}^{(2)}$ | 1.8     |         |         |         |         | °C/W |
| Typical thermal resistance (junction to lead)    | $R_{\theta JL}^{(1)}$ | 20      |         |         |         |         | °C/W |

### Electrical Characteristics

( $T_A = 25$  °C unless otherwise specified)

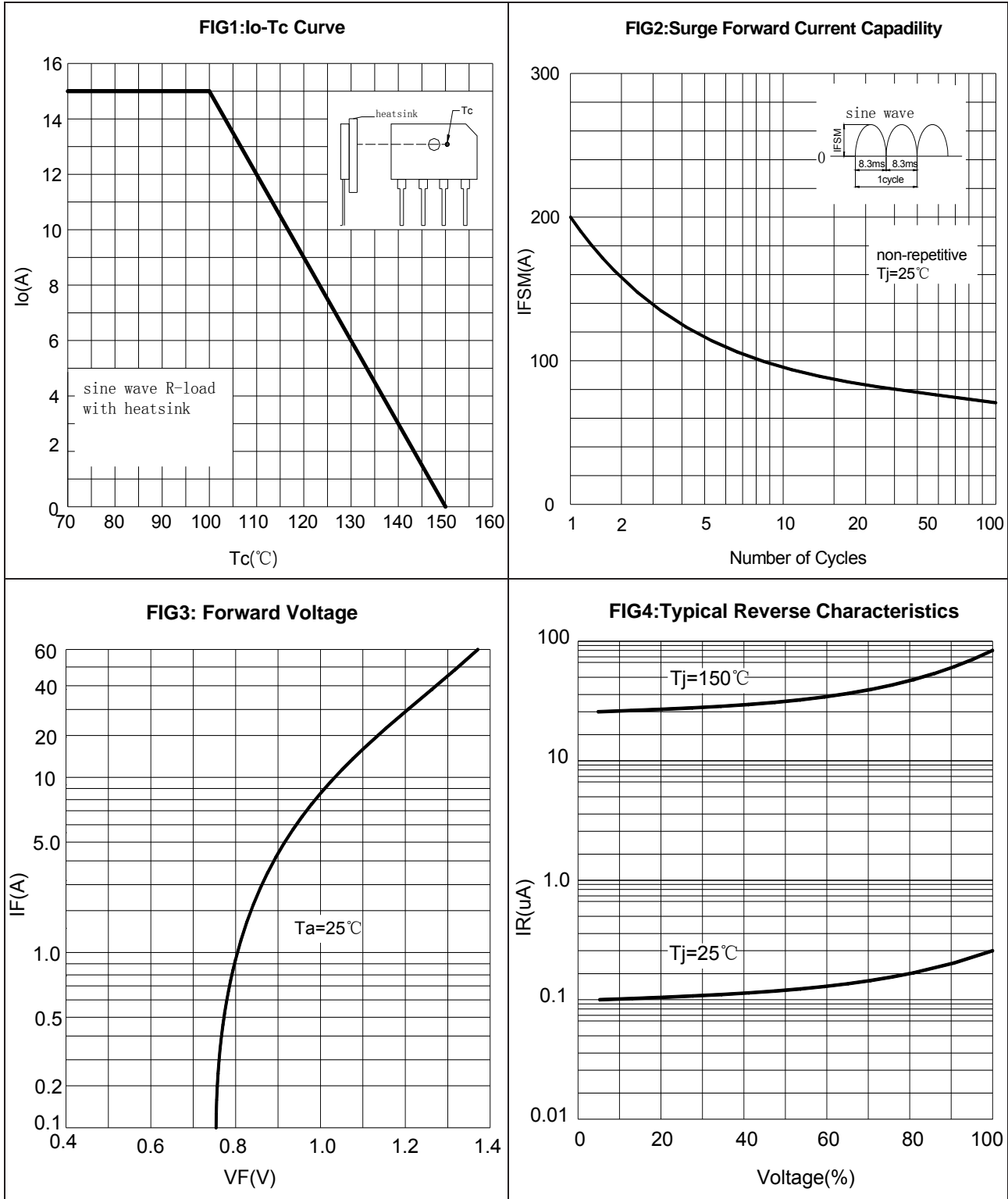
| Parameter   | Condition      | Symbol | GBU1502 | GBU1504 | GBU1506 | GBU1508 | GBU1510 | Unit    |
|---|----------------|--------|---------|---------|---------|---------|---------|---------|
| Maximum instantaneous forward voltage per diode                   | $I_F = 0.4$ A  | $V_F$  | 1.1     |         |         |         |         | V       |
| Maximum DC reverse current at rated DC blocking voltage per diode | $T_A = 25$ °C  | $I_R$  | 10      |         |         |         |         | $\mu$ A |
|   | $T_A = 125$ °C | $I_R$  | 500     |         |         |         |         | $\mu$ A |
| Typical junction capacitance per diode                            | 4.0 V, 1 MHz   | $C_J$  | 80      |         |         |         |         | pF      |

### Notes

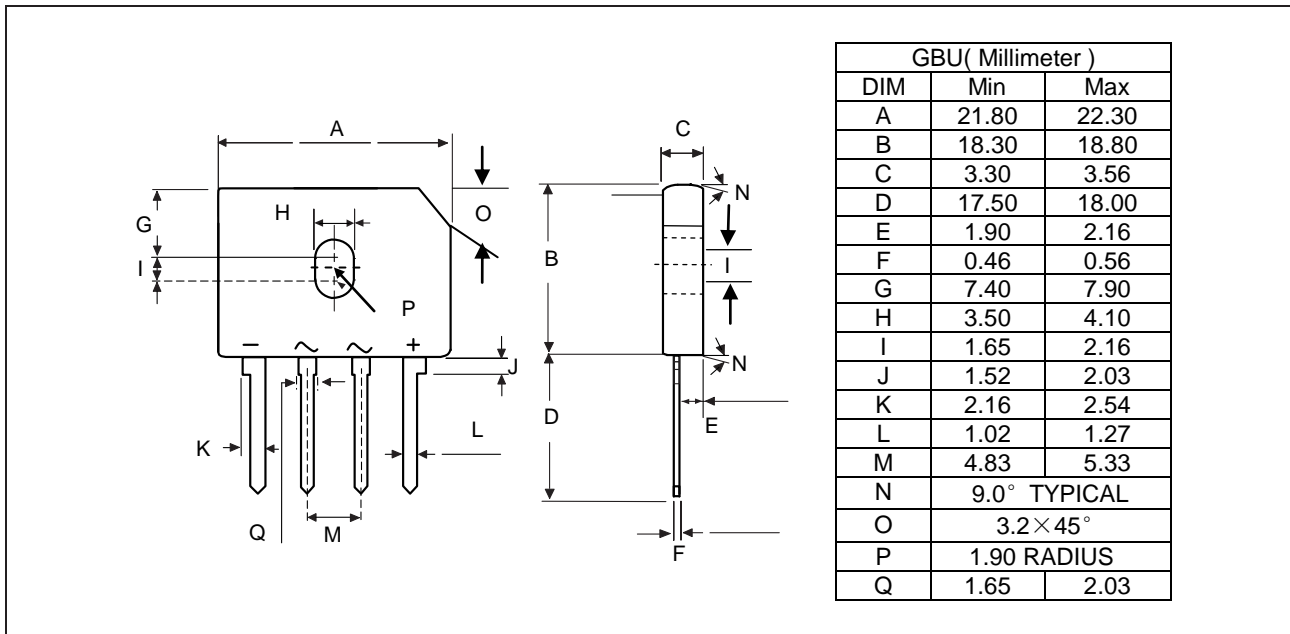
<sup>(1)</sup> Unit case mounted on 1.6x1.6x0.06" thick(5.1 x5.1 x0.15cm) Al .plate

<sup>(2)</sup> Units mounted on P.C.B. with 0.5 x 0.5" (12.7 x12.7 mm) copper pads and 0.375" (9.5 mm) lead length

**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)



## Package Dimensions



## Ordering information

| Order code           | Package | Packaging option | Base quantity | Packaging specification |
|----------------------|---------|------------------|---------------|-------------------------|
| GBU1502 thru GBU1510 | GBU     | BOX              | 500pcs / BOX  | EIA STD RS-481          |

## Revision history

| Date          | Revision | Changes         |
|---------------|----------|-----------------|
| 15-March-2016 | 1.0      | Initial release |

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