

## 4GBU Series

### 4.0 Amps Single Phase Full Wave

### Bridge Rectifier

#### Features

- Diode chips are glass passivated
- Suitable for Universal hole mounting
- Easy to assemble & install on P.C.B.
- High Surge Current Capability
- High Isolation between terminals and molded case
- Leads are suitable for high temperature
- Soldering at 260°C for 8-10 seconds
- UL evaluation is under process

$$I_{O(AV)} = 4A$$

$$V_{RRM} = 50/ 1200V$$

#### Description

These GBU Series of Single Phase Bridges consist of four glass passivated silicon junction connected as a Full Wave Bridge. These four junctions are encapsulated by plastic molding technique. These Bridges are mainly used in Switch Mode power supply and in industrial and consumer equipment.

#### Major Ratings and Characteristics

| Parameters      | 4GBU        | Units            |
|-----------------|-------------|------------------|
| $I_o$           | 4           | A                |
| @ $T_c$         | 100         | °C               |
| $I_{FSM}$ @50Hz | 150         | A                |
| @60Hz           | 158         | A                |
| $I^2t$ @50Hz    | 113         | A <sup>2</sup> s |
| @60Hz           | 104         | A <sup>2</sup> s |
| $V_{RRM}$ range | 50 to 1200  | V                |
| $T_J$           | - 55 to 150 | °C               |



4GBU

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Preliminary Data Sheet rev. A I2717 11/00

International  
IR Rectifier

### ELECTRICAL SPECIFICATIONS

#### Voltage Ratings

| Type number | Voltage Code | $V_{RRM}$ , max repetitive peak rev. voltage<br>$T_J = T_J \text{ max.}$<br>V | $V_{RSM}$ , max non-repetitive peak rev. voltage<br>$T_J = T_J \text{ max.}$<br>V | $I_{RRM}$ max.<br>@ rated $V_{RRM}$<br>$T_J = 25^\circ\text{C}$<br>$\mu\text{A}$ | $I_{RRM}$ max.<br>@ rated $V_{RRM}$<br>$T_J = 150^\circ\text{C}$<br>$\mu\text{A}$ |
|-------------|--------------|---|---|--|---|
| 4GBU        | 005          | 50  | 80  | 5  | 400   |
|             | 01           | 100   | 150   | 5  | 400   |
|             | 02           | 200   | 300   | 5  | 400   |
|             | 04           | 400   | 500   | 5  | 400   |
|             | 06           | 600   | 700   | 5  | 400   |
|             | 08           | 800   | 900   | 5  | 400   |
|             | 10           | 1000  | 1100  | 5  | 400   |
|             | 12           | 1200  | 1300  | 5  | 400   |

#### Forward Conduction

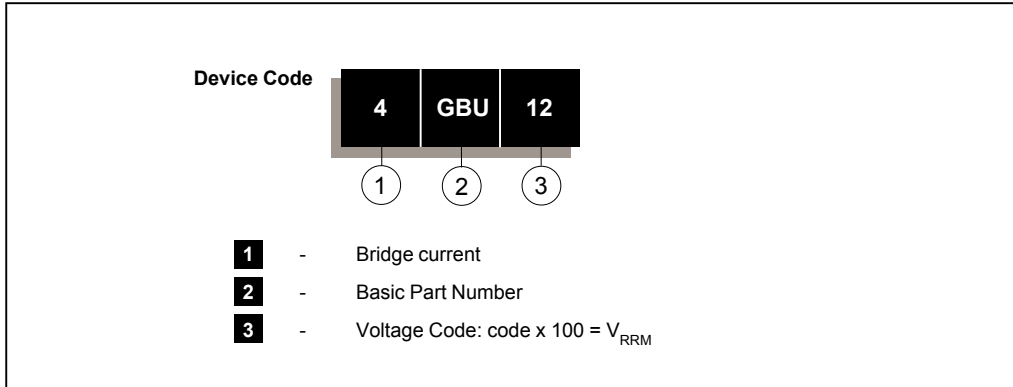
| Parameters  | 4GBU       | Unit                 | Conditions  |
|---|------------|----------------------|---|
| $I_O$ Maximum DC output current   | 4          | A                    | $T_C = 100^\circ\text{C}$ , Resistive & inductive load<br>$T_C = 100^\circ\text{C}$ , Capacitive load |
|   | 3.2        |                      |   |
| $I_{FSM}$ Maximum peak, one-cycle non-repetitive surge current, following any rated load condition and with rated $V_{RRM}$ reapplied | 150        |                      | $T_J = 150^\circ\text{C}$   |
|   | 158        |                      |   |
| $I^2t$ Maximum $I^2t$ for fusing, initial $T_J = T_J \text{ max}$   | 113        | $\text{A}^2\text{s}$ | $t = 10\text{ms}$<br>$t = 8.3\text{ms}$   |
|   | 104        |                      |   |
| $V_{FM}$ Maximum peak forward voltage per diode   | 1.0        | V                    | $T_J = 25^\circ\text{C}$ , $I_{FM} = 4\text{A}$   |
| $I_{RM}$ Typical peak reverse leakage current per diode   | 5          | $\mu\text{A}$        | $T_J = 25^\circ\text{C}$ , 100% $V_{RRM}$   |
| $V_{RRM}$ Maximum repetitive peak reverse voltage range   | 50 to 1200 | V                    |   |

#### Thermal and Mechanical Specifications

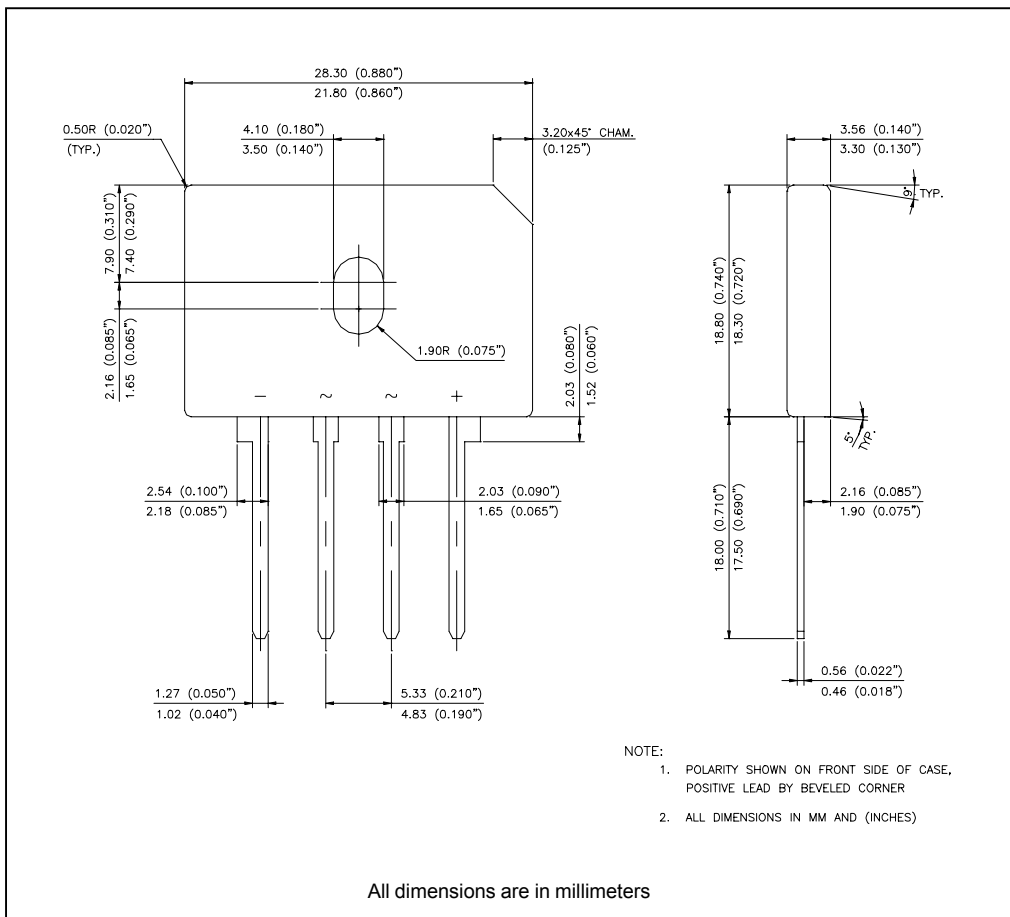
| Parameters  | 4GBU       | Unit                      | Conditions                          |
|---|------------|---------------------------|-------------------------------------|
| $T_J$ Operating and storage temperature range       | -55 to 150 | $^\circ\text{C}$          |                                     |
| $R_{thJC}$ Max. thermal resistance junction to case | 4.2        | $^\circ\text{C}/\text{W}$ | DC rated current through bridge (1) |
| $R_{thJA}$ Thermal resistance, junction to ambient  | 22         | $^\circ\text{C}/\text{W}$ | DC rated current through bridge (1) |
| W Approximate weight                                | 4 (0.14)   | g (oz)                    |                                     |

Note (1): Devices mounted on 40x40x1.5mm aluminum plate; use silicon thermal compound for maximum heat transfer and bolt down using 3mm screw

Ordering Information Table



Outline Table



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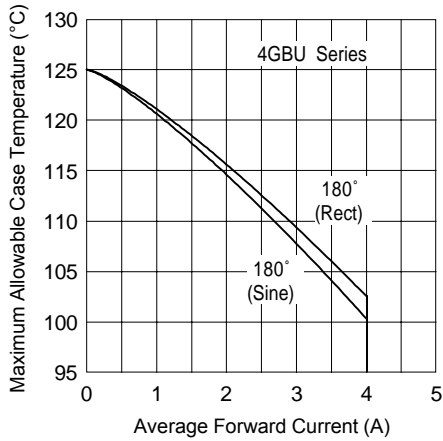


Fig. 1 - Current Ratings Characteristics

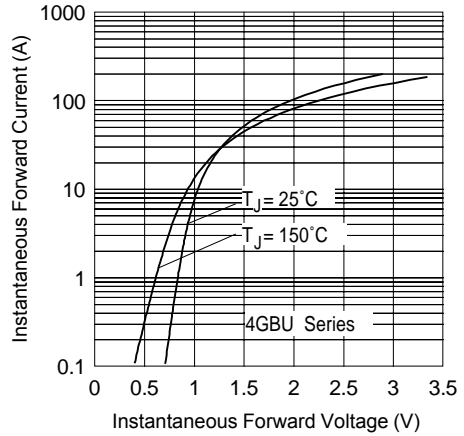


Fig. 2 - Forward Voltage Drop Characteristics

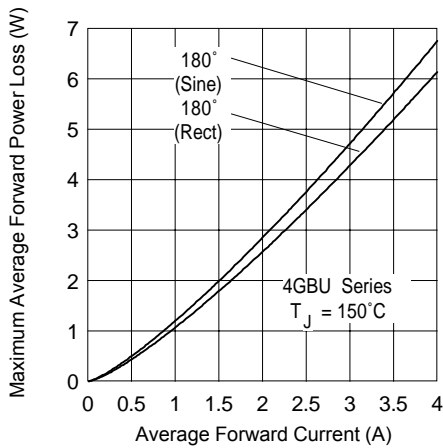


Fig. 3 - Total Power Loss Characteristics

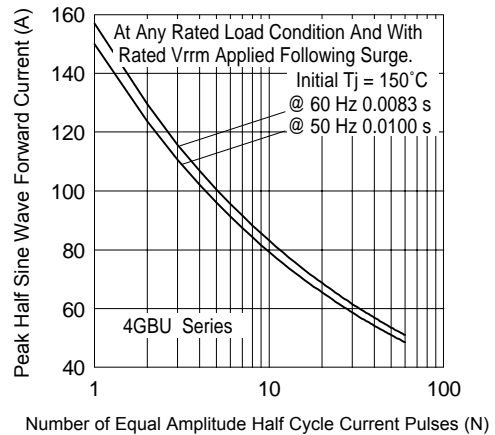


Fig. 4 - Maximum Non-Repetitive Surge Current

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Data and specifications subject to change without notice.