Preliminary Data Sheet I2719 rev. A 12/00

International
IOR Rectifier

# 8GBU Series

## 8.0 Amps Single Phase Full Wave Bridge Rectifier

$I_{O(AV)}$ = 8A
$V_{RRM}$ = 50/ 1200V

### Features

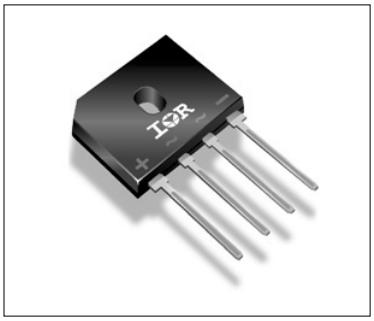
- Diode chips are glass passivated
- Suitable for Universal hole mounting
- Easy to assemble & install on P.C.B.
- High Surge Current Capability
- High Isolation between terminals and molded case
- Leads are suitable for high temperature
- Soldering at 260°C for 8-10 seconds
- UL evaluation is under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

### 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 | | 8GBU | Units |
|---|---|---|---|
| $I_O$ | | 8 | A |
| | @$T_C$ | 100 | °C |
| $I_{FSM}$ | @50Hz | 200 | A |
| | @60Hz | 210 | A |
| $I^2t$ | @50Hz | 200 | $A^2s$ |
| | @60Hz | 184 | $A^2s$ |
| $V_{RRM}$ | range | 50 to 1200 | V |
| $T_J$ | | - 55 to 150 | °C |



**8GBU**

## ELECTRICAL SPECIFICATIONS

Voltage Ratings

| Type number | Voltage Code | $V_{RRM}$, max repetitive peak rev. voltage $T_J = T_J$ max. V | $V_{RSM}$, max non-repetitive peak rev. voltage $T_J = T_J$ max. V | $I_{RRM}$ max. @ rated $V_{RRM}$ $T_J$ = 25°C µA | $I_{RRM}$ max. @ rated $V_{RRM}$ $T_J$ = 150°C µA |
|---|---|---|---|---|---|
| 8GBU | 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 | 8GBU | Unit | Conditions | |
|---|---|---|---|---|---|
| $I_O$ | Maximum DC output current | 8.0 | A | $T_C$ = 100°C, Resistive & inductive load | |
| | | 6.4 | | $T_C$ = 100°C, Capacitive load | |
| $I_{FSM}$ | Maximum peak, one-cycle non-repetitive surge current, following any rated load condition and with rated $V_{RRM}$ reapplied | 200 | | t = 10ms, 20ms | $T_J$ = 150°C |
| | | 210 | | t = 8.3ms, 16.7ms | |
| $I^2t$ | Maximum $I^2t$ for fusing, initial $T_J = T_J$ max | 200 | $A^2s$ | t = 10ms | |
| | | 184 | | t = 8.3ms | |
| $V_{FM}$ | Maximum peak forward voltage per diode | 1.0 | V | $T_J$ = 25°C, $I_{FM}$ = 8A | |
| $I_{RM}$ | Typical peak reverse leakage current per diode | 5.0 | µA | $T_J$ = 25°C, 100% $V_{RRM}$ | |
| | | 400 | | $T_J$ = 150°C, 100% $V_{RRM}$ | |
| $V_{RRM}$ | Maximum repetitive peak reverse voltage range | 50 to 1200 | V | | |

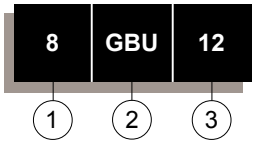
### Thermal and Mechanical Specifications

| | Parameters | 8GBU | Unit | Conditions |
|---|---|---|---|---|
| $T_J$ $T_{stg}$ | Operating and storage temperature range | -55 to 150 | °C | |
| $R_{thJC}$ | Max. thermal resistance junction to case | 2.2 | °C/W | DC rated current through bridge (1) |
| $R_{thJA}$ | Thermal resistance, junction to ambient | 21 | °C/W | DC rated current through bridge (1) |
| W | Approximate weight | 4 (0.14) | g (oz) | |
| T | Mounting Torque | 1.0 | Nm | Bridge to Heatsink |
| | | 9.0 | Lb.in | |

Note (1): Bridge mounted on Aluminun heat sink of dim 82x82x3.0mm, use silicon thermal compound heat transfer and bolt down using 3mm screw

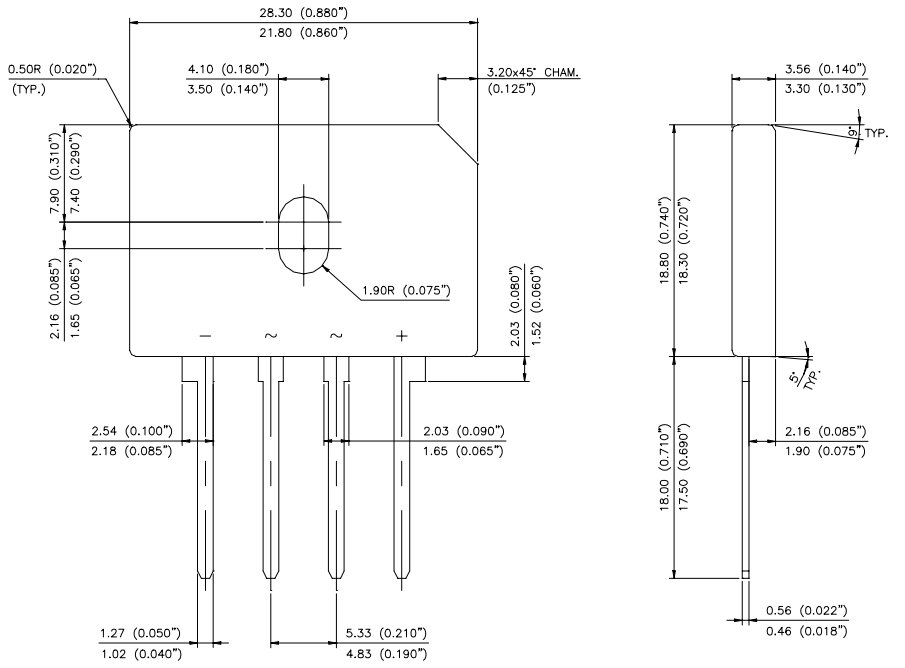
## Ordering Information Table

**Device Code**




| | | |
|---|---|---|
| **1** | - | Bridge current |
| **2** | - | Basic Part Number |
| **3** | - | Voltage Code: code x 100 = $V_{RRM}$ |

## Outline Table




NOTE:
1. POLARITY SHOWN ON FRONT SIDE OF CASE, POSITIVE LEAD BY BEVELED CORNER
2. ALL DIMENSIONS IN MM AND (INCHES)

All dimensions are in millimeters

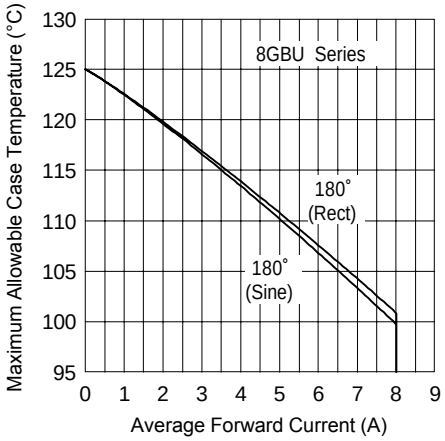



Fig. 1 - Current Ratings Characteristics

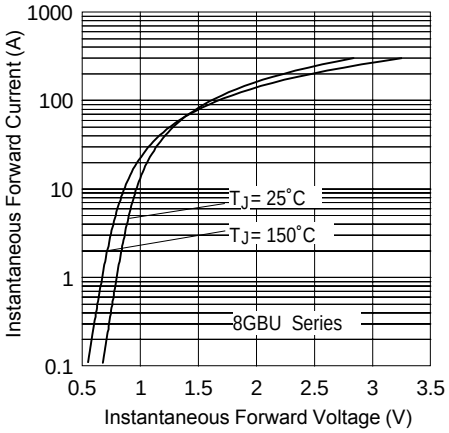



Fig. 2 - Forward Voltage Drop Characteristics

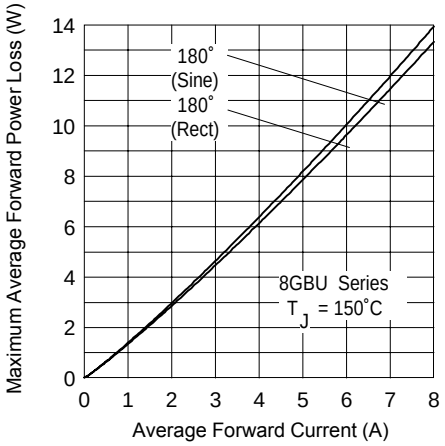



Fig. 3 - Total Power Loss Characteristics

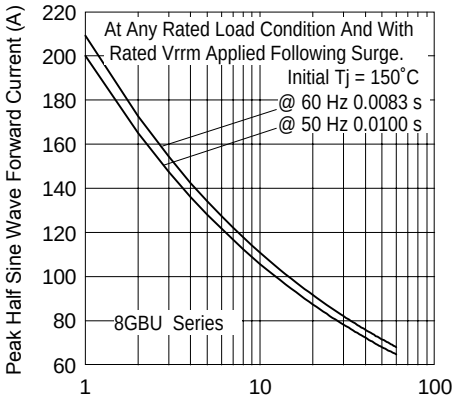



Fig. 4 - Maximum Non-Repetitive Surge Current

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