

International  
**IR** Rectifier

## 8GBU Series

### 8.0 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 (1500 V<sub>RMS</sub>)
- Lead free terminals solderable as per MIL-STD-750 Method 2026
- Terminals suitable for high temperature soldering at 260°C for 8-10 secs
- UL E160375 approved

$$I_{O(AV)} = 8A$$

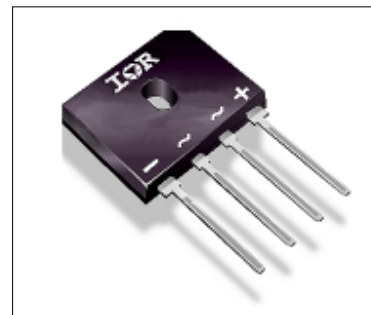
$$V_{RRM} = 50/1200V$$

#### 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	8GBU	Units
$I_O$	8	A
@ T <sub>C</sub>	100	°C
$I_{FSM}$	200	A
@ 50Hz		
@ 60Hz	210	A
$I^2t$	200	A <sup>2</sup> s
@ 50Hz		
@ 60Hz	184	A <sup>2</sup> s
V <sub>RRM</sub> range	50 to 1200	V
T <sub>J</sub>	- 55 to 150	°C



8GBU

**ELECTRICAL SPECIFICATIONS**

Voltage Ratings

Type number	Voltage Code V	$V_{RRM}$ , max repetitive peak rev. voltage $T_J = T_J \text{ max.}$ V	$V_{RSM}$ , max non-repetitive peak rev. voltage $T_J = T_J \text{ max.}$ V	$V_{RMS}$ , max RMS voltage $T_J = T_J \text{ max.}$ V	$I_{RRM}$ max. @ rated $V_{RRM}$ $T_J = 25^\circ\text{C}$ $\mu\text{A}$	$I_{RRM}$ max. @ rated $V_{RRM}$ $T_J = 150^\circ\text{C}$ $\mu\text{A}$
8GBU	005	50	80	35	5	400
	01	100	150	70	5	400
	02	200	300	140	5	400
	04	400	500	280	5	400
	06	600	725	420	5	400
	08	800	900	560	5	400
	10	1000	1100	700	5	400
	12	1200	1300	850	5	400

**Forward Conduction**

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

**Thermal and Mechanical Specifications**

Parameters	8GBU	Unit	Conditions
$T_J$ Operating and storage temperature range	-55 to 150	$^\circ\text{C}$	
$R_{thJC}$ Max. thermal resistance junction to case	2.2	$^\circ\text{C}/\text{W}$	DC rated current through bridge (1)
$R_{thJA}$ Thermal resistance, junction to ambient	21	$^\circ\text{C}/\text{W}$	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 Aluminum heat sink of dim 82x82x3.0mm, use silicon thermal compound heat transfer and bolt down using 3mm screw

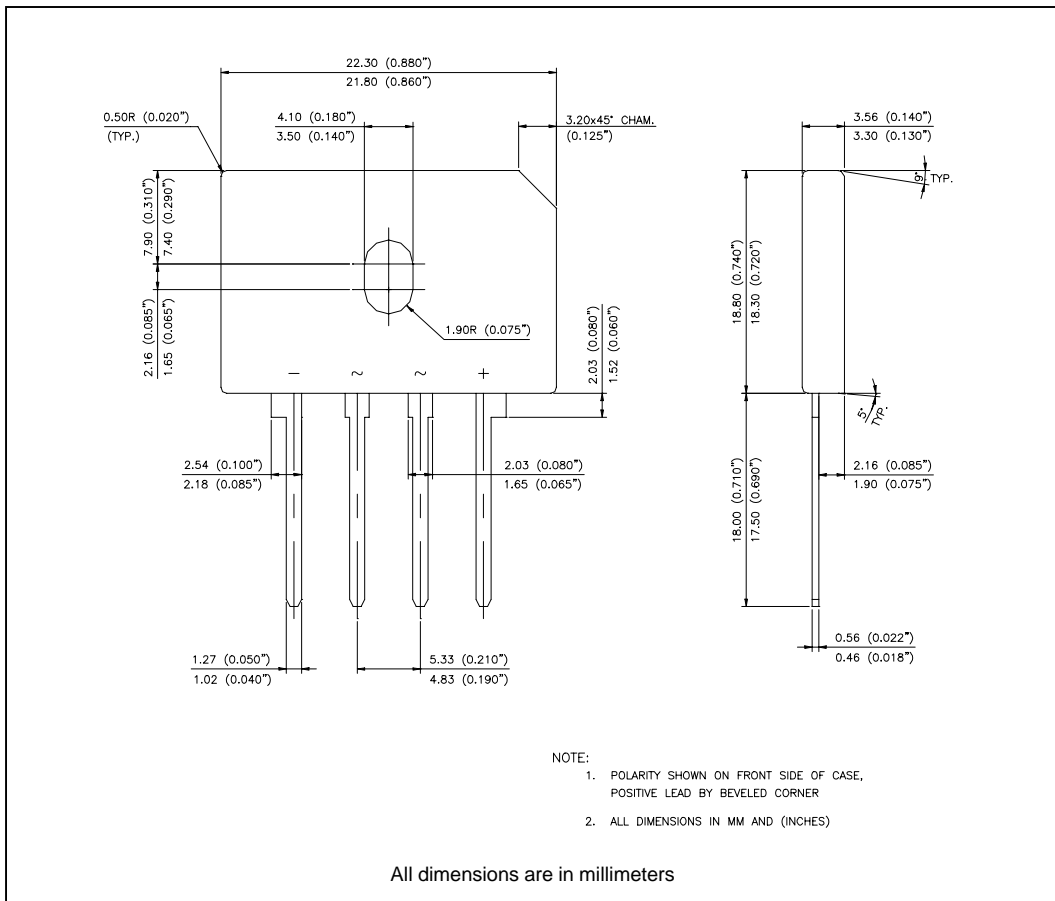
### Ordering Information Table

Device Code	
<b>8</b>	<b>GBU</b>
1	2
3	

<b>1</b>	-	Bridge current
<b>2</b>	-	Basic Part Number
<b>3</b>	-	Voltage Code: code x 100 = $V_{RRM}$

### Outline Table



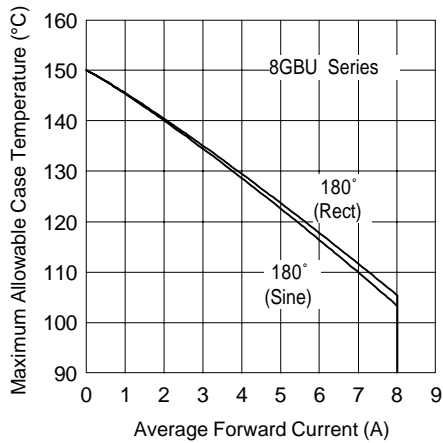


Fig. 1 - Current Ratings Characteristics

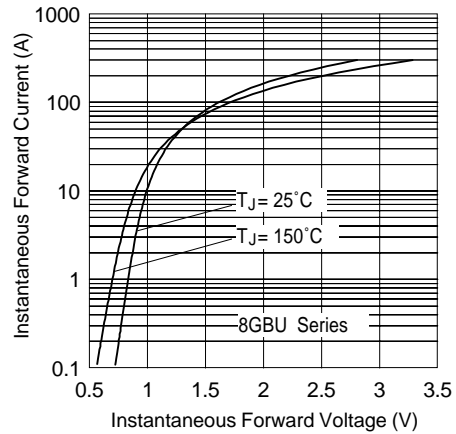


Fig. 2 - Forward Voltage Drop Characteristics

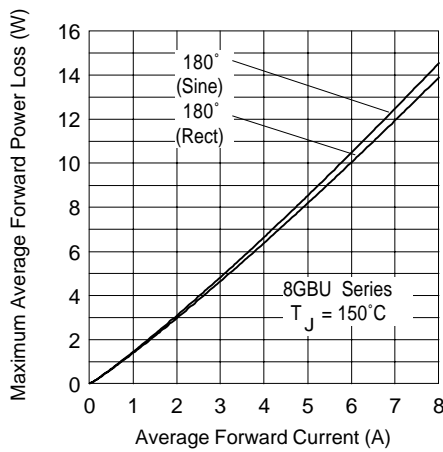


Fig. 3 - Total Power Loss Characteristics

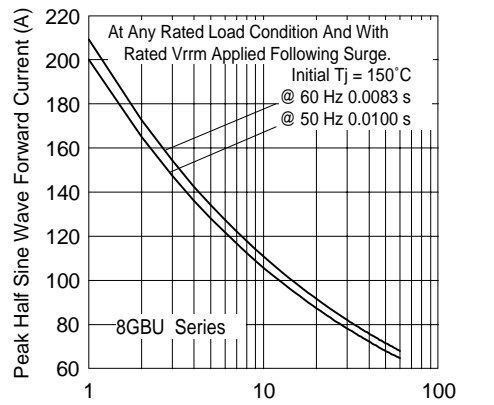


Fig. 4 - Maximum Non-Repetitive Surge Current

Data and specifications subject to change without notice.  
This product has been designed and qualified for Multiple Level.  
Qualification Standards can be found on IR's Web site.

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