

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 ($1500 V_{RMS}$)
- 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

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

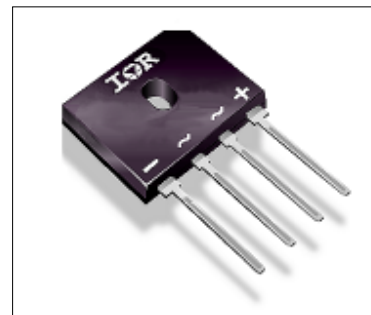
$$V_{RRM} = 50/1200V$$

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_C	100	$^{\circ}\text{C}$
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	$^{\circ}\text{C}$



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} $T_J = 25^\circ\text{C}$ μA	I_{RRM} max. @ rated V_{RRM} $T_J = 150^\circ\text{C}$ μA
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	μA	$T_J = 25^\circ\text{C}$, 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

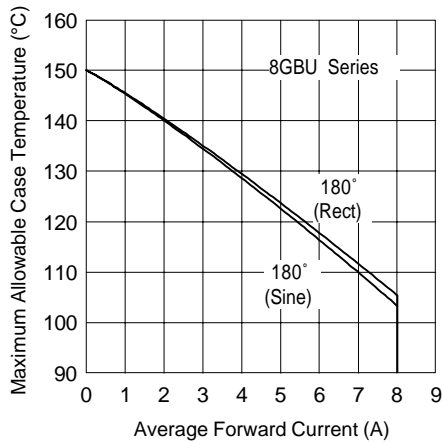


Fig. 1 - Current Ratings Characteristics

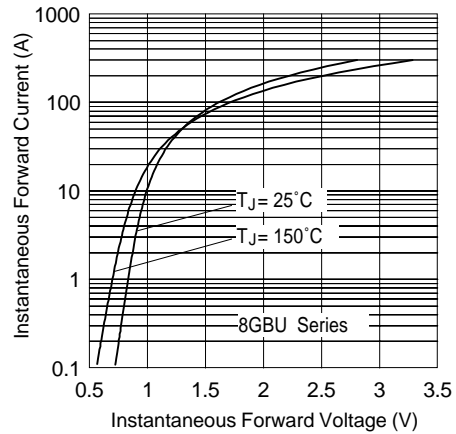


Fig. 2 - Forward Voltage Drop Characteristics

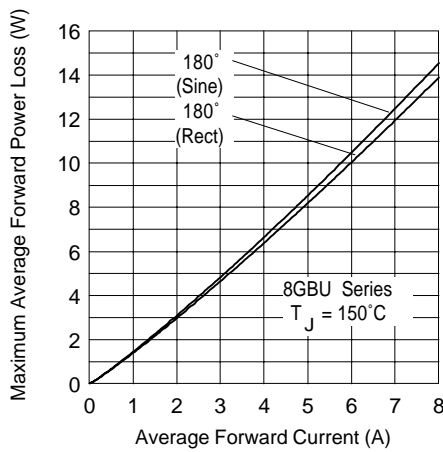


Fig. 3 - Total Power Loss Characteristics

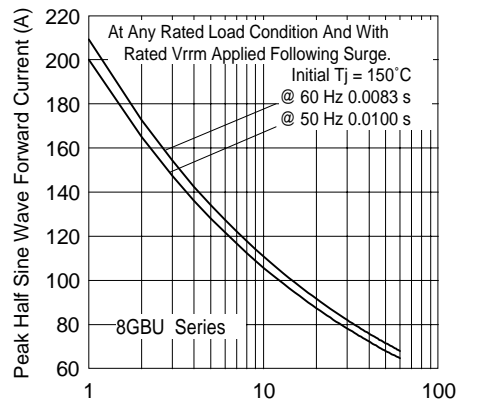


Fig. 4 - Maximum Non-Repetitive Surge Current

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.

International
IR Rectifier

IR WORLD HEADQUARTERS: 233 Kansas St., El Segundo, California 90245, USA Tel: (310) 252-7105
TAC Fax: (310) 252-7309
Visit us at www.irf.com for sales contact information. 11/02