Preliminary Data Sheet I2719 rev. D 08/01

International
IOR 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 E215862 approved

$I_{O(AV)}$ = 8A
V_{RRM} = 50/ 800V

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 800	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_{RMS} , max RMS 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	35	5	400
	01	100	70	5	400
	02	200	140	5	400
	04	400	280	5	400
	06	600	420	5	400
	08	800	560	5	400

Forward Conduction

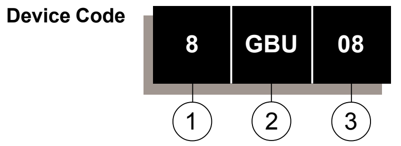
	Parameters	8GBU	Unit	Conditions	
I_O	Maximum DC output current	8.0	A	$T_C = 100°C$, Resistive & inductive load	
		6.4		$T_C = 100°C$, Capacitive load	
I_{FSM}	Maximum peak, one-cycle non-repetitive surge current, following any rated load condition and with rated V_{RRM} reapplied	200		t = 10ms	$T_J = 150°C$
		210		t = 8.3ms	
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 800	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

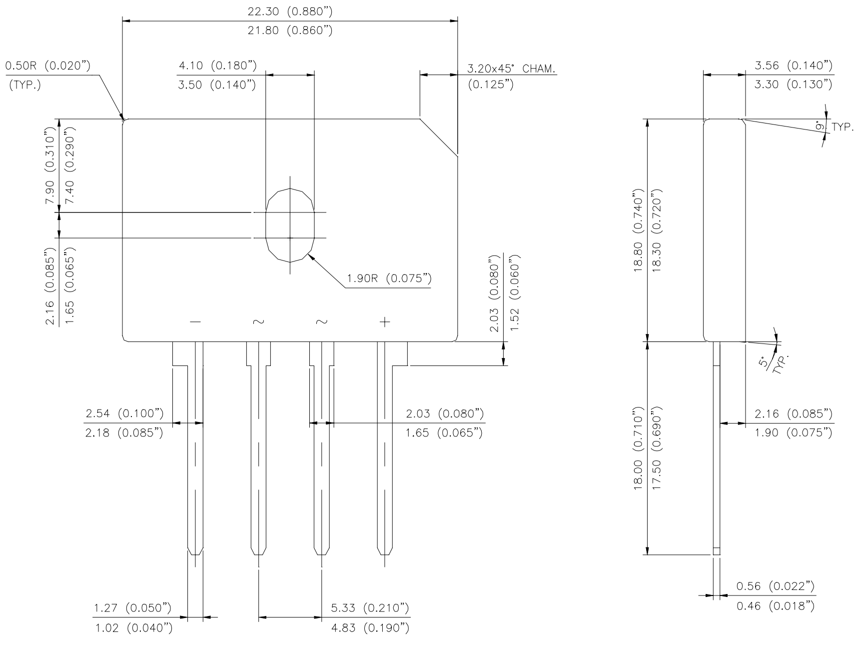


1 - Bridge current

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

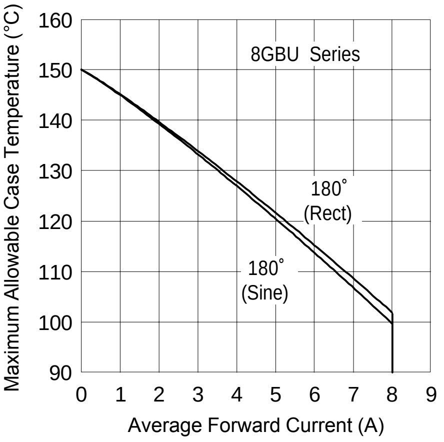


Fig. 1 - Current Ratings Characteristics

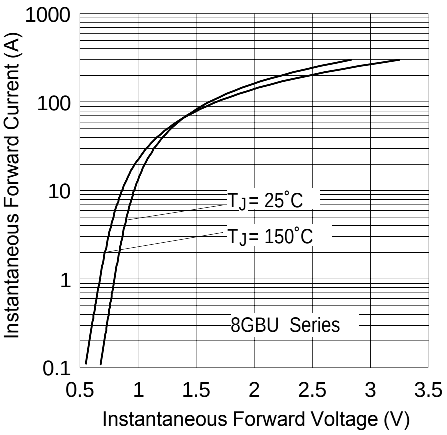


Fig. 2 - Forward Voltage Drop Characteristics

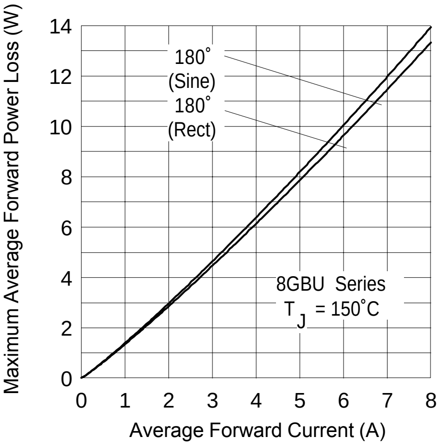


Fig. 3 - Total Power Loss Characteristics

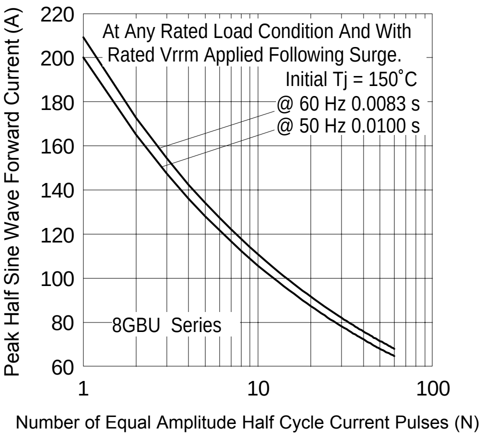


Fig. 4 - Maximum Non-Repetitive Surge Current

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