

International
IOR Rectifier

6GBU Series

6.0 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

$$I_{O(AV)} = 6A$$

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

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	6GBU	Units
I_O	6	A
@ T_C	100	°C
I_{FSM} @ 50Hz	175	A
@ 60Hz	182	A
I^2t @ 50Hz	154	A ² s
@ 60Hz	138	A ² s
V_{RRM} range	50 to 1200	V
T_J	- 55 to 150	°C



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ELECTRICAL SPECIFICATIONS

Voltage Ratings

Type number	Voltage Code	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	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
6GBU	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		6GBU	Unit	Conditions	
I _O	Maximum DC output current	6.0	A	T _C = 100°C, Resistive & inductive load	
		4.8		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	175		t = 10ms, 20ms	T _J = 150°C
		182		t = 8.3ms, 16.7ms	
I ² t	Maximum I ² t for fusing, initial T _J = T _J max	154	A ² s	t = 10ms	
		138		t = 8.3ms	
V _{FM}	Maximum peak forward voltage per diode	1.0	V	T _J = 25 °C, I _{FM} = 6A	
I _{RM}	Typical peak reverse leakage current t 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

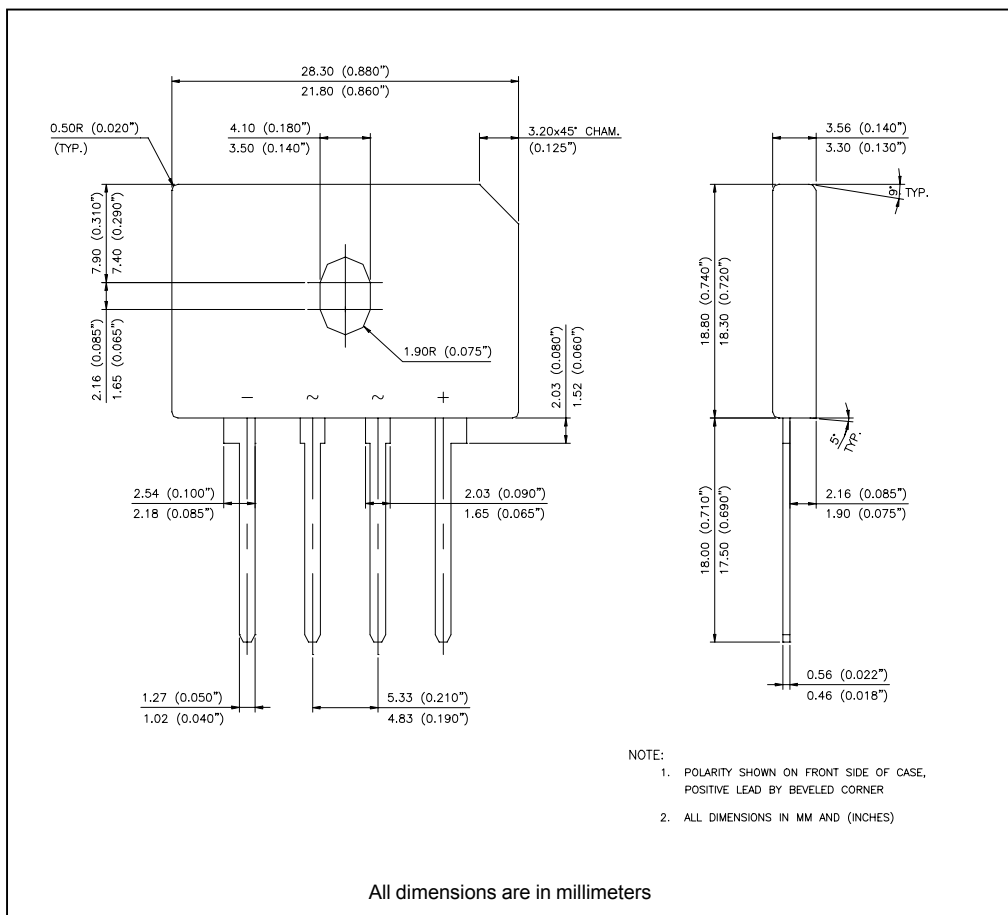
Parameters		6GBU	Unit	Conditions
T_J T_{stg}	Operating and storage temperature range	-55 to 150	$^\circ\text{C}$	
R_{thJC}	Max. thermal resistance junction to case	2.2	$^\circ\text{C/W}$	DC rated current through bridge (1)
R_{thJA}	Thermal resistance, junction to ambient	7.4	$^\circ\text{C/W}$	DC rated 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 Aluminum heatsink of dim 65 x 35 x 1.5mm, use silicon thermal compound heat transfer and bolt down using 3mm screw

Ordering Information Table

Device Code		
6	GBU	12
1	2	3
1	-	Bridge current
2	-	Basic Part Number
3	-	Voltage Code: code x 100 = V_{RRM}

Outline Table



6GBU Series

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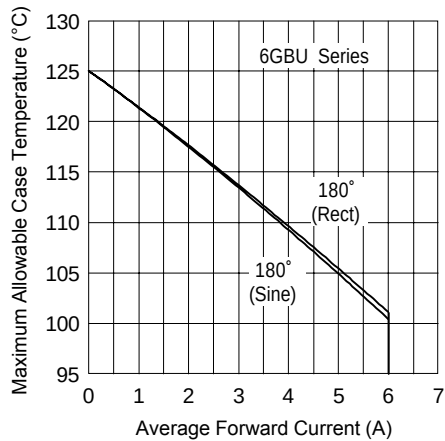


Fig. 1 - Current Ratings Characteristics

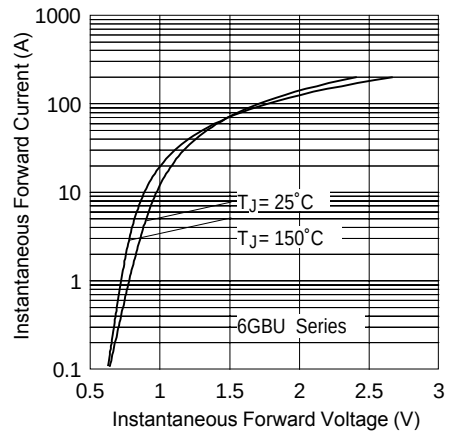


Fig. 2 - Forward Voltage Drop Characteristics

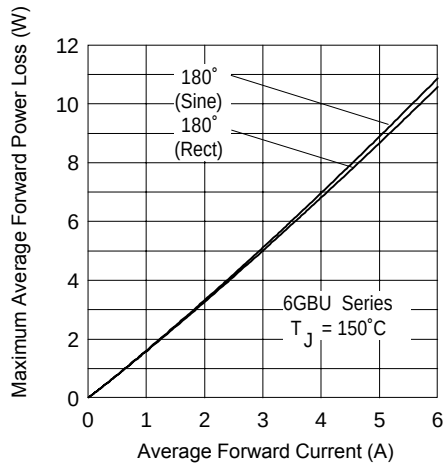


Fig. 3 - Total Power Loss Characteristics

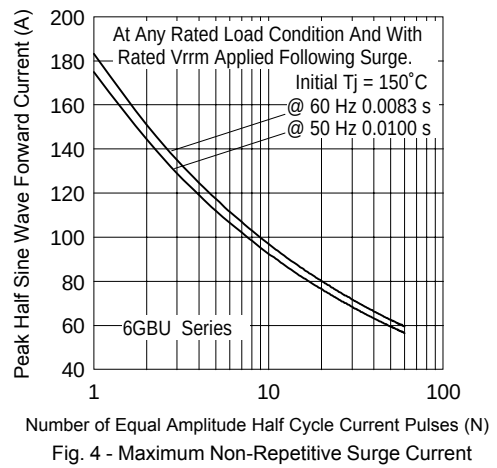


Fig. 4 - Maximum Non-Repetitive Surge Current

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Data and specifications subject to change without notice.