

## 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 <sup>2</sup> s
@60Hz	138	A <sup>2</sup> s
$V_{RRM}$ range	50 to 1200	V
$T_J$	- 55 to 150	°C



6GBU

## 6GBU Series

Preliminary Data Sheet I2718 07/00

International  
IR Rectifier

### 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 $V_{RRM}$ $T_J = 25^\circ\text{C}$ $\mu\text{A}$	$I_{RRM}$ max. @ rated $V_{RRM}$ $T_J = 150^\circ\text{C}$ $\mu\text{A}$
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

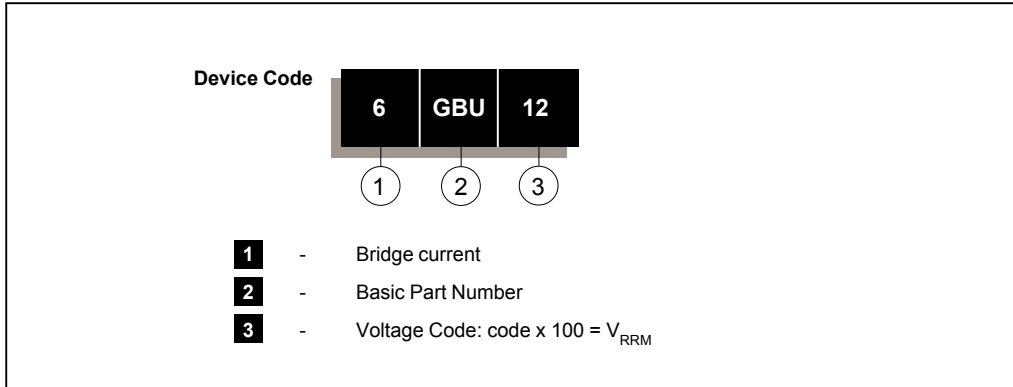
Parameters	6GBU	Unit	Conditions
$I_O$ Maximum DC output current	6.0	A	$T_C = 100^\circ\text{C}$ , Resistive & inductive load $T_C = 100^\circ\text{C}$ , Capacitive load
	4.8		
$I_{FSM}$ Maximum peak, one-cycle non-repetitive surge current, following any rated load condition and with rated $V_{RRM}$ reapplied	175		$t = 10\text{ms}, 20\text{ms}$ $T_J = 150^\circ\text{C}$ $t = 8.3\text{ms}, 16.7\text{ms}$
	182		
$I^2t$ Maximum $I^2t$ for fusing, initial $T_J = T_J \text{ max}$	154	$\text{A}^2\text{s}$	$t = 10\text{ms}$ $t = 8.3\text{ms}$
	138		
$V_{FM}$ Maximum peak forward voltage per diode	1.0	V	$T_J = 25^\circ\text{C}$ , $I_{FM} = 6\text{A}$
$I_{RM}$ 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

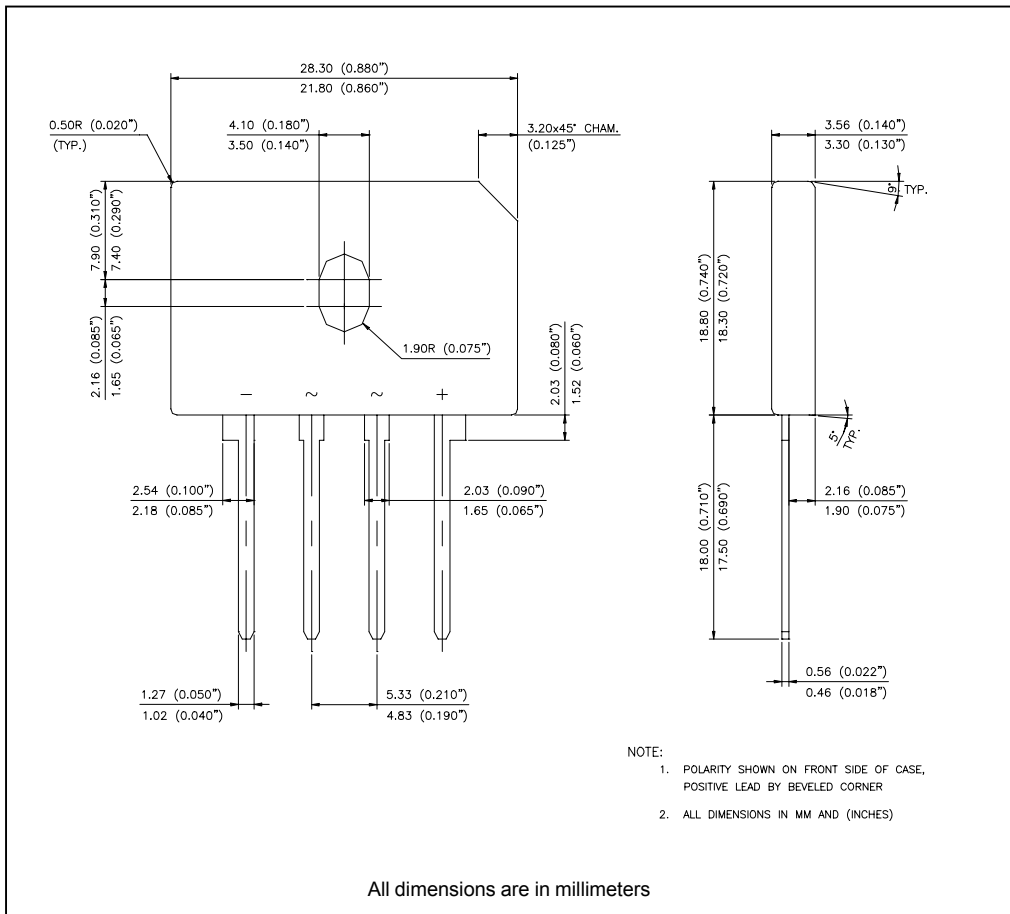
Parameters	6GBU	Unit	Conditions
$T_J$ Operating and storage temperature range	-55 to 150	$^\circ\text{C}$	
$R_{thJC}$ Max. thermal resistance junction to case	2.2	$^\circ\text{C}/\text{W}$	DC rated current through bridge (1)
$R_{thJA}$ Thermal resistance, junction to ambient	7.4	$^\circ\text{C}/\text{W}$	DC rated current through bridge (1)
W Approximate weight	4 (0.14)	g (oz)	

Note (1): Bridge mounted on Aluminum heat sink of dim 65 x 35 x 1.5mm, use silicon thermal compound heat transfer and bolt down using 3mm screw

Ordering Information Table



Outline Table



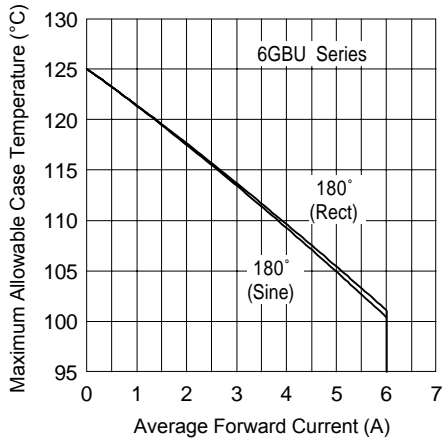


Fig. 1 - Current Ratings Characteristics

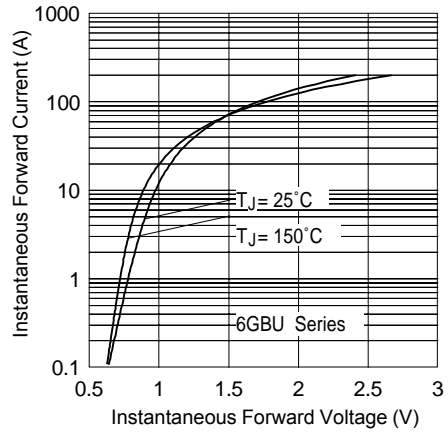


Fig. 2 - Forward Voltage Drop Characteristics

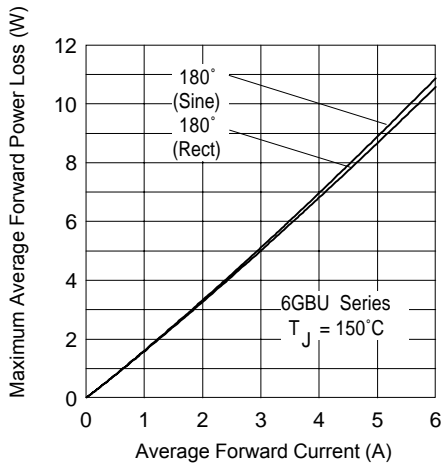


Fig. 3 - Total Power Loss Characteristics

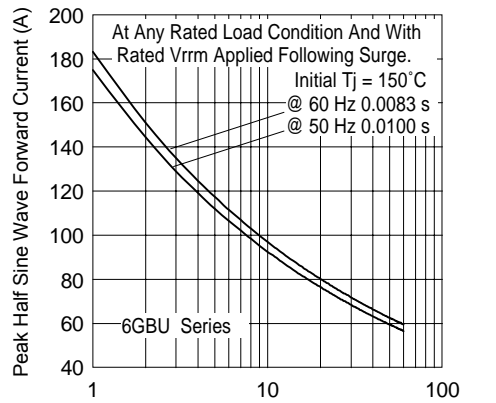


Fig. 4 - Maximum Non-Repetitive Surge Current

**WORLD HEADQUARTERS:** 233 Kansas St., El Segundo, California 90245 U.S.A. Tel: (310) 322 3331. Fax: (310) 322 3332.  
**EUROPEAN HEADQUARTERS:** Hurst Green, Oxted, Surrey RH8 9BB, U.K. Tel: ++ 44 1883 732020. Fax: ++ 44 1883 733408.  
**IR CANADA:** 15 Lincoln Court, Brampton, Markham, Ontario L6T3Z2. Tel: (905) 453 2200. Fax: (905) 475 8801.  
**IR GERMANY:** Saalburgstrasse 157, 61350 Bad Homburg. Tel: ++ 49 6172 96590. Fax: ++ 49 6172 965933.  
**IR ITALY:** Via Liguria 49, 10071 Borgaro, Torino. Tel: ++ 39 11 4510111. Fax: ++ 39 11 4510220.  
**IR FAR EAST:** K&H Bldg., 2F, 30-4 Nishi-Ikebukuro 3-Chome, Toshima-Ku, Tokyo, Japan 171. Tel: 81 3 3983 0086.  
**IR SOUTHEAST ASIA:** 1 Kim Seng Promenade, Great World City West Tower, 13-11, Singapore 237994. Tel: ++ 65 838 4630.  
**IR TAIWAN:** 16 Fl. Suite D.207, Sec. 2, Tun Haw South Road, Taipei, 10673, Taiwan. Tel: 886 2 2377 9936.

<http://www.irf.com> Fax-On-Demand: +44 1883 733420

Data and specifications subject to change without notice.