

International
IR Rectifier

IR4GBU..LS Series

4.0 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.
- Surge Current Capability - $90A_{PK}$
- High Isolation between terminals and molded case ($1500V_{RMS}$)
- Lead free terminals solderable as per MIL-STD-750, Method 2026
- Terminals suitable for High Temperature soldering guaranteed at $260^{\circ}C/ 8-10secs$
- UL E160375 approved

$$I_{O(AV)} = 4A$$

$$V_{RRM} = 200/ 600V$$

Description

These IR4GBU.. 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	IR4GBU..LS	Units
I_O	4	A
@ T_C	100	$^{\circ}C$
I_{FSM}	90	A
@ 50Hz	94	A
@ 60Hz	40	A^2s
I^2t	36	A^2s
@ 50Hz		
@ 60Hz		
V_{RRM} range	200 to 600	V
T_J	- 55 to 150	$^{\circ}C$



GBU

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
IR4GBU..LS	02	200	300	5	250
IR4GBU..LSF	04	400	500	5	250
	06	600	700	5	250

Forward Conduction

Parameters	IR4GBU..LS	Unit	Conditions
I_O Maximum DC output current	4	A	$T_C = 100^\circ\text{C}$, Resistive & inductive load
	3.2		$T_C = 100^\circ\text{C}$, Capacitive load
I_{FSM} Maximum peak, one-cycle non-repetitive surge current, following any rated load condition and with rated V_{RRM} reapplied	90		$t = 10\text{ms}, 20\text{ms}$
	94		$t = 8.3\text{ms}, 16.7\text{ms}$ $T_J = 150^\circ\text{C}$
I^2t Maximum I^2t for fusing, initial $T_J = T_J \text{ max}$	40	A^2s	$t = 10\text{ms}$
	36		$t = 8.3\text{ms}$
V_{FM} Maximum peak forward voltage per diode	0.975	V	$T_J = 25^\circ\text{C}$, $I_{FM} = 2\text{A}$
I_{RM} Typical peak reverse leakage current per diode	5	μA	$T_J = 25^\circ\text{C}$, 100% V_{RRM}
V_{RRM} Maximum repetitive peak reverse voltage range	200 to 600	V	

Thermal and Mechanical Specifications

Parameters	IR4GBU..LS	Unit	Conditions
T_J Operating and storage temperature range	-55 to 150	$^\circ\text{C}$	
R_{thJC} Max. thermal resistance junction to case	5.0	$^\circ\text{C}/\text{W}$	DC rated current through bridge (1)
R_{thJA} Thermal resistance, junction to ambient	26	$^\circ\text{C}/\text{W}$	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): Devices mounted on 40x40x1.5mm aluminum plate; use silicon thermal compound for maximum heat transfer and bolt down using 3mm screw

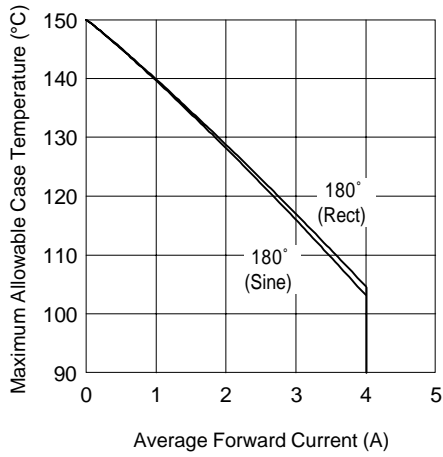


Fig. 1 - Current Ratings Characteristics

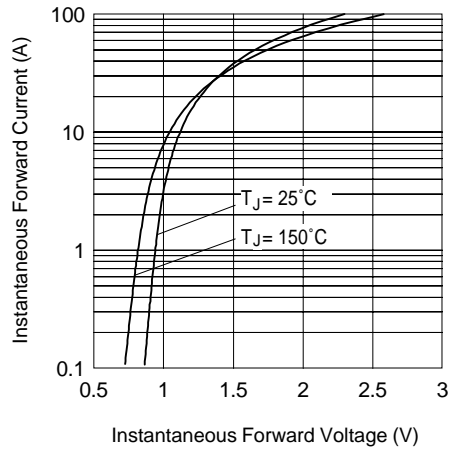


Fig. 2 - Forward Voltage Drop Characteristics

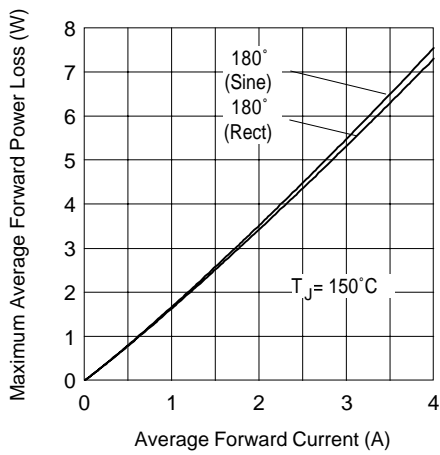


Fig. 3 - Total Power Loss Characteristics

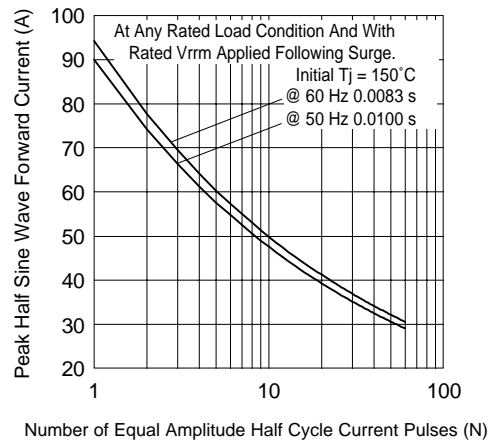


Fig. 4 - Maximum Non-Repetitive Surge Current

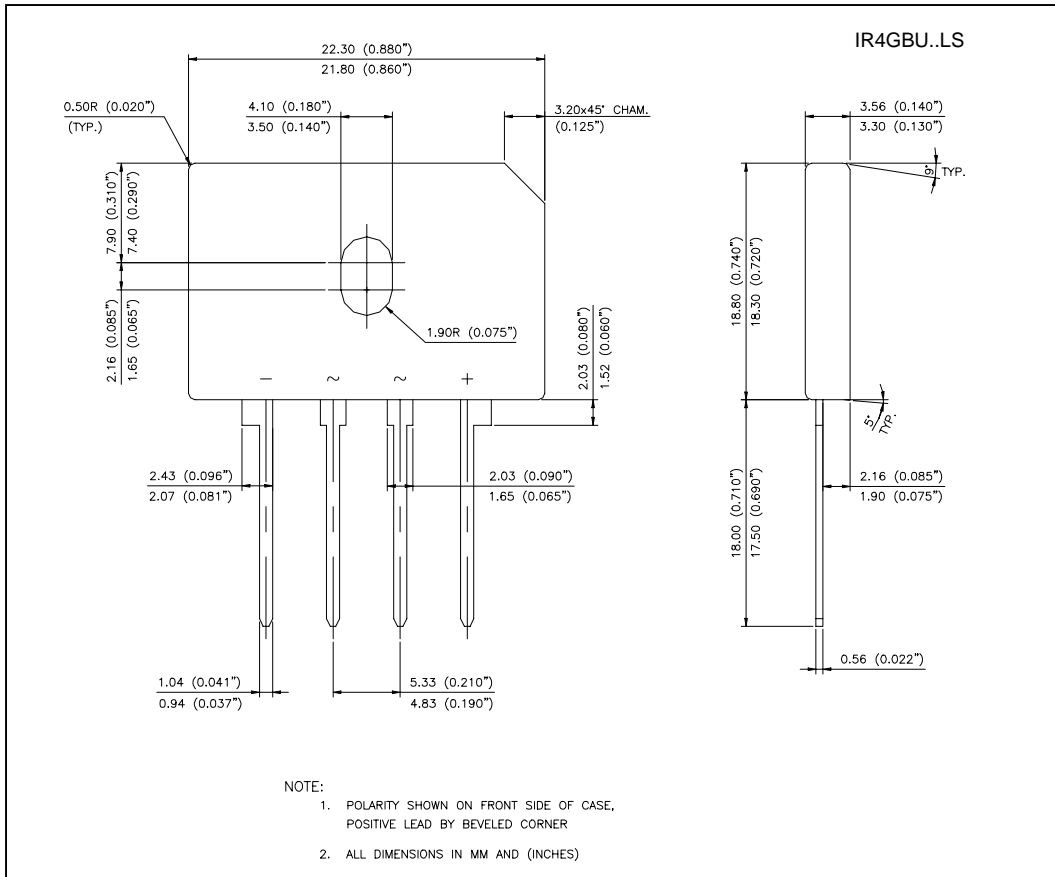
IR4GBU..LS Series

Bulletin I2789 rev. A 10/02

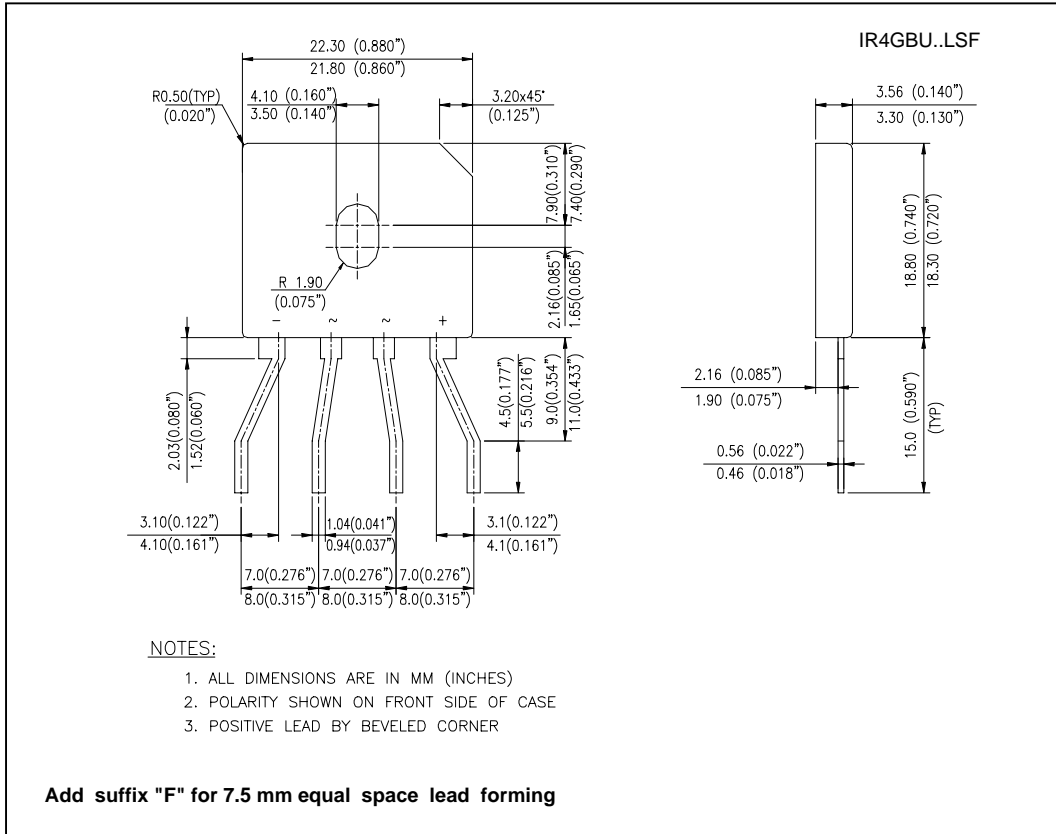
Ordering Information Table

Device Code					
IR	4	GBU	06	LS	F
①	②	③	④	⑤	⑥
1	-	IR Bridge			
2	-	4 Amps			
3	-	Basic Part Number			
4	-	Voltage Code: code x 100 = V_{RRM}			
5	-	Low surge			
6	-	Lead Forming: 7.5 mm			

Outline Table



Outline Table



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