

International
IOR Rectifier

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



GBU

4GBU..LS Series

Bulletin I2789 rev. B 03/03

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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_{RMS} , max RMS 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
4GBU..LS	02	200	140	300	5	250
4GBU..LSF	04	400	280	500	5	250
	06	600	420	700	5	250

Forward Conduction

Parameters	4GBU..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	4GBU..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	$^\circ\text{C/W}$	DC rated current through bridge (1)
R_{thJA} Thermal resistance, junction to ambient	26	$^\circ\text{C/W}$	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): Devices mounted on 40x 40x1.5mm aluminum plate; use silicon thermal compound for maximum heat transfer and bolt down using 3mm screw

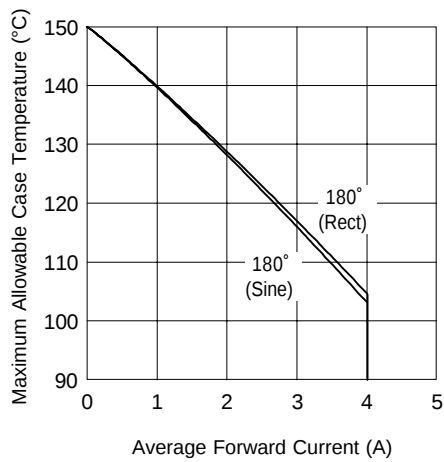


Fig. 1 - Current Ratings Characteristics

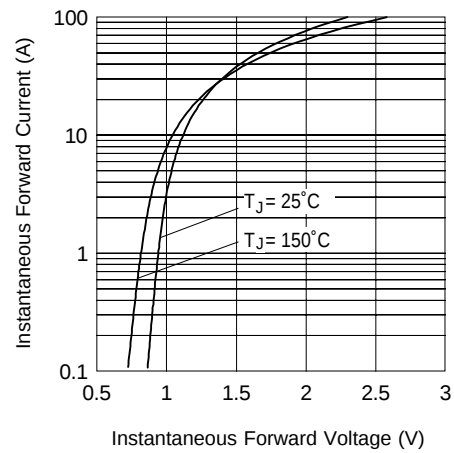


Fig. 2 - Forward Voltage Drop Characteristics

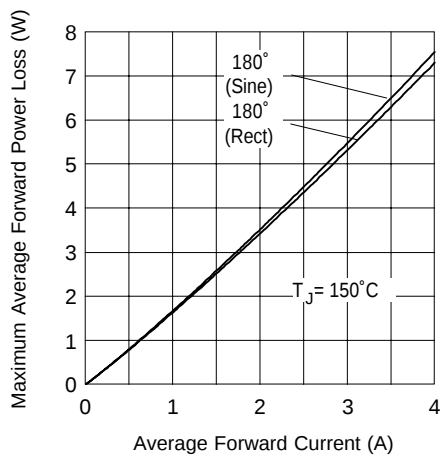


Fig. 3 - Total Power Loss Characteristics

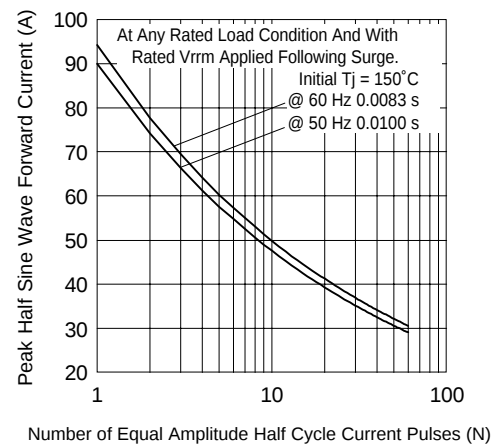


Fig. 4 - Maximum Non-Repetitive Surge Current

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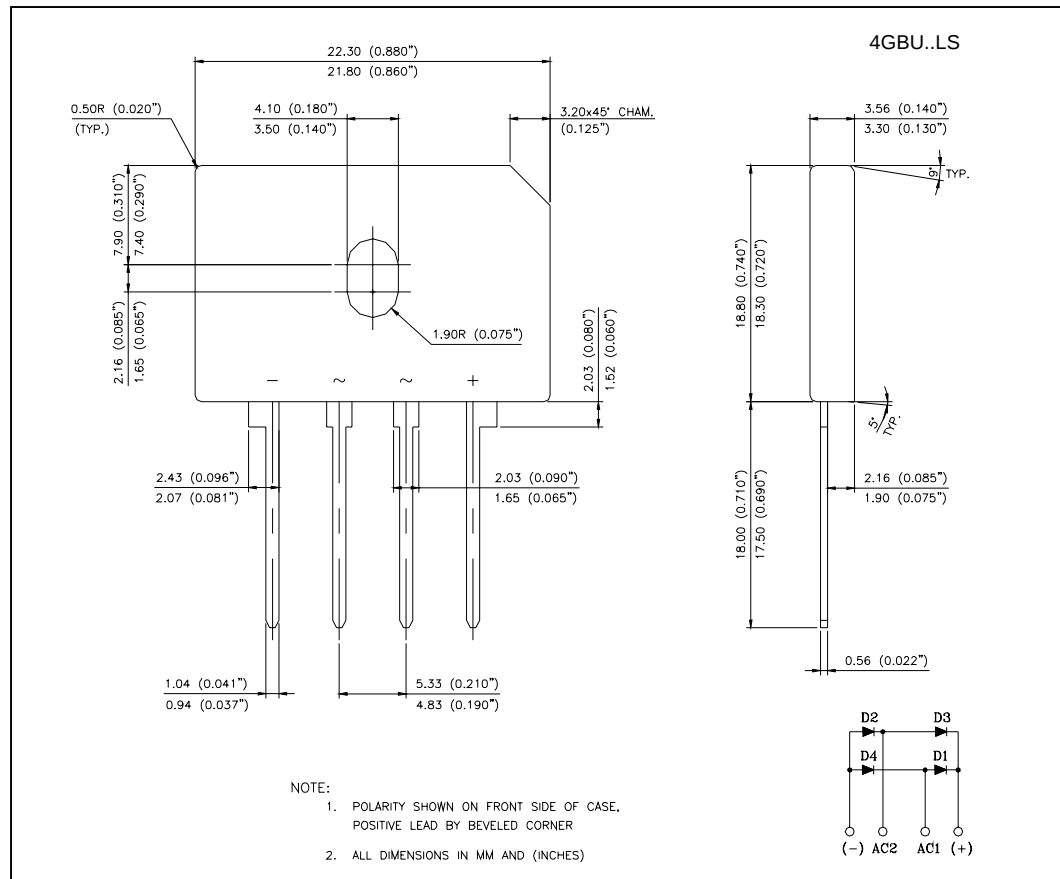
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Ordering Information Table

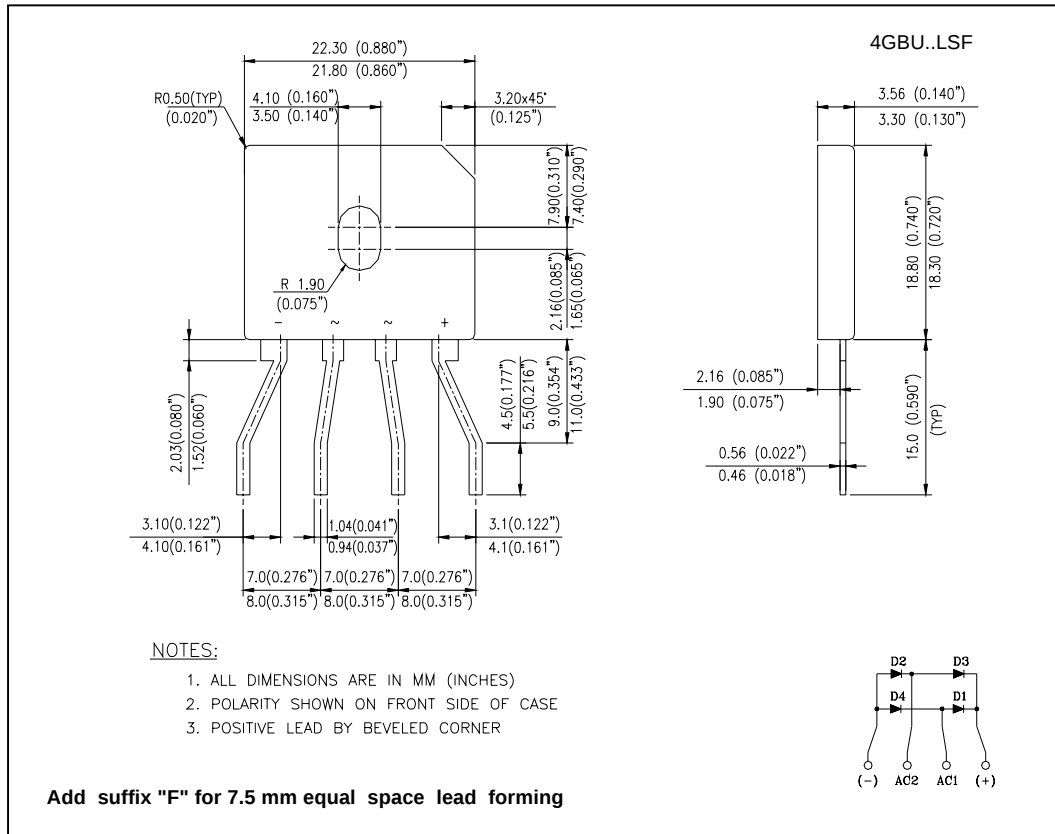
Device Code				
4	GBU	06	LS	F
1	2	3	4	5
1	-			
2	-			
3	-			
4	-			
5	-			

1 - Bridge current
2 - Basic Part Number
3 - Voltage Code: code x 100 = V_{RRM}
4 - Low surge
5 - 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.

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