

Bulletin I27127 rev.D 06/03


International IOR Rectifier

IR25XB..H

25.0 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 ($2500 V_{RMS}$)
- High Thermal Conductivity
- Lead free terminals solderable as per MIL-STD-750, Method 2026
- High Temperature soldering guaranteed at $260^{\circ}C$ / 8-10secs
- UL E160375 approved 

$$I_{O(AV)} = 25A$$

$$V_{RRM} = 200/ 800V$$

Description

These IRXB..H 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, Induction cooker, Airconditioner, Washing Machine and Microwave oven.

Major Ratings and Characteristics

Parameters	IR25XB..H	Units
I_o	25	A
@ T_c	100	$^{\circ}C$
I_{FSM}	400	A
@50Hz	420	A
@60Hz	800	A^2s
I^2t	732	A^2s
@50Hz		
@60Hz		
V_{RRM} range	200 to 800	V
T_j	- 55 to 150	$^{\circ}C$



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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_{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
IR25XB..H	02	200	140	275	5	250
	04	400	280	500	5	250
	06	600	420	725	5	250
	08	800	560	900	5	250

Forward Conduction

Parameters	IR25XB..H	Unit	Conditions
I_O Maximum DC output current	25	A	$T_C = 100^\circ\text{C}$, Resistive & inductive load
I_{FSM} Maximum peak, one-cycle non-repetitive surge current, following any rated load condition and with rated V_{RRM} reapplied	400		$t = 10\text{ms}$
	420		$t = 8.3\text{ms}$
I^2t Maximum I^2t for fusing, initial $T_J = T_J \text{ max}$	800	A^2s	$t = 10\text{ms}$
	732		$t = 8.3\text{ms}$
V_{FM} Maximum peak forward voltage per diode	0.975	V	$T_J = 25^\circ\text{C}$, $I_{FM} = 12.5\text{A}$
I_{RM} Typical peak reverse leakage current per diode	5.0	μA	$T_J = 25^\circ\text{C}$, 100% V_{RRM}
	250		$T_J = 150^\circ\text{C}$, 100% V_{RRM}
V_{RRM} Maximum repetitive peak reverse voltage range	200 to 800	V	

Thermal and Mechanical Specifications

Parameters	IR25XB..H	Unit	Conditions
T_J Operating and storage temperature range	-55 to 150	$^\circ\text{C}$	
R_{thJC} Max. thermal resistance junction to case	1.0	$^\circ\text{C}/\text{W}$	At DC rated current (1)
R_{thJA} Thermal resistance, junction to ambient	22	$^\circ\text{C}/\text{W}$	At DC rated current (2)
W Approximate weight	7.4 (0.26)	g(oz)	
T Mounting Torque	1.0	Nm	Bridge to Heatsink
	9.0	Lb.in	

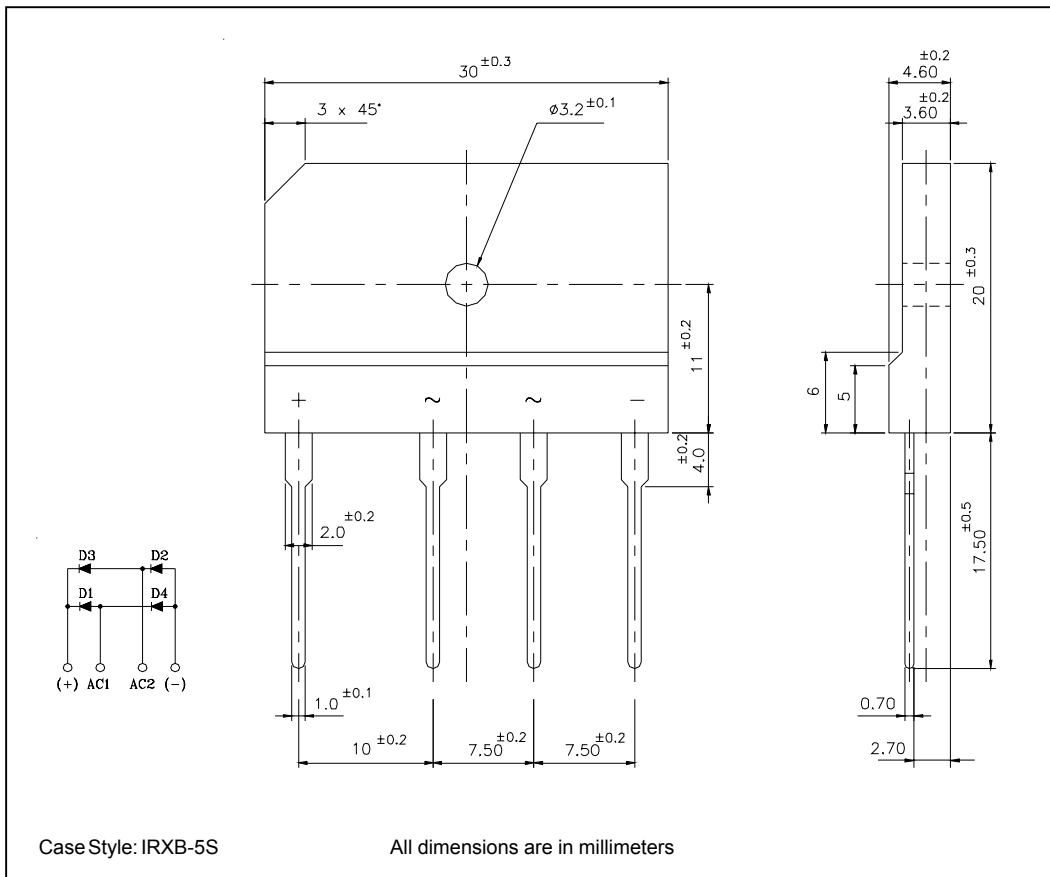
Note (1): Bridge mounted on Aluminum heat sink, use silicon thermal compound for heat transfer and bolt down using 3mm screw

(2): Bridges mounted in free air without heatsink.

Ordering Information Table

Device Code				
IR	25	XB	08	H
①	②	③	④	⑤
1	-	International Rectifier		
2	-	Bridge Current - 25Amps		
3	-	10-7.5mm spacing		
4	-	Voltage Code: code x 100 = V_{RRM}		
5	-	H = High Surge		

Outline Table



IR25XB..H

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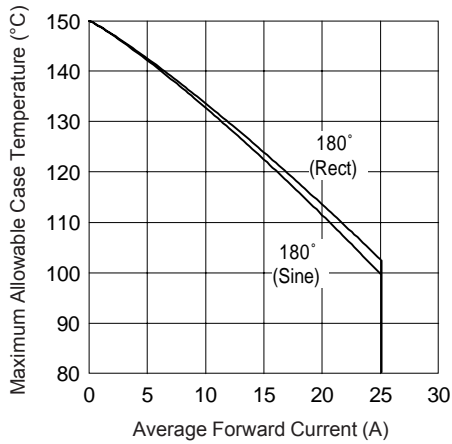


Fig. 1 - Current Ratings Characteristics

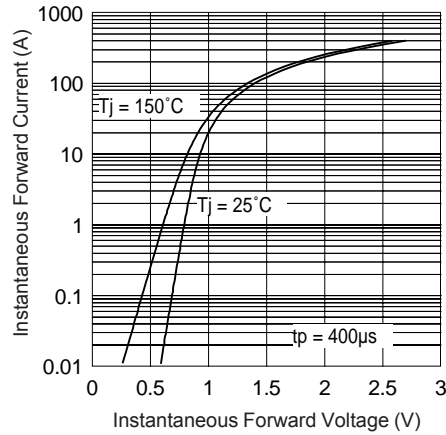


Fig. 2 - Forward Voltage Drop Characteristics

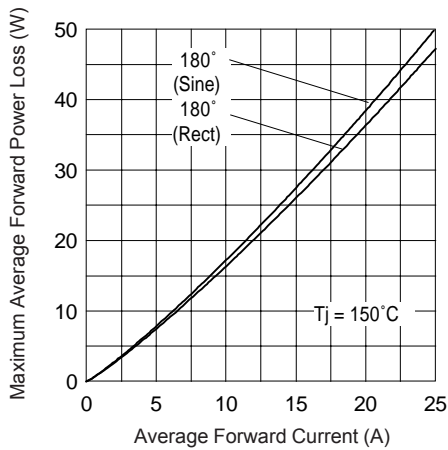


Fig. 3 - Total Power Loss Characteristics

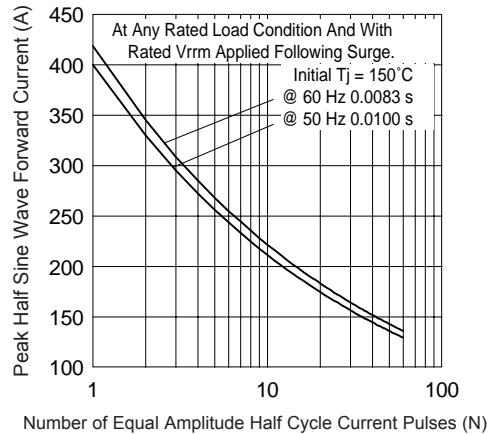


Fig. 4 - Maximum Non-Repetitive Surge Current

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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