

International IOR Rectifier

IR15XB..

15.0 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 approval E215862 in progress

$$I_{O(AV)} = 15A$$

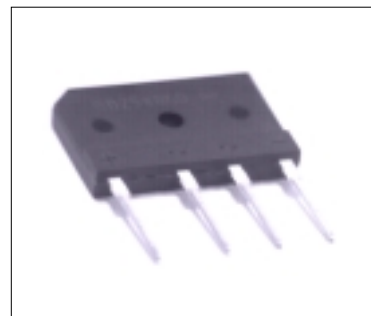
$$V_{RRM} = 200/ 800V$$

Description

These IRXB 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	IR15XB..	Units
I_o	15	A
@ T_c	107	$^{\circ}C$
I_{FSM}	240	A
@50Hz	250	A
@60Hz	288	A^2s
I^2t	260	A^2s
@50Hz		
@60Hz		
V_{RRM} range	200 to 800	V
T_j	- 55 to 150	$^{\circ}C$



IR15XB..

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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_{RMS} , max RMS 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
IR15XB..	02	200	140	5	250
	04	400	280	5	250
	06	600	420	5	250
	08	800	560	5	250

Forward Conduction

Parameters	IR15XB..	Unit	Conditions
I_O Maximum DC output current	15	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	240		$t = 10\text{ms}$
	250	$t = 8.3\text{ms}$	
I^2t Maximum I^2t for fusing, initial $T_J = T_J \text{ max}$	288	A^2s	$t = 10\text{ms}$
	260		$t = 8.3\text{ms}$
V_{FM} Maximum peak forward voltage per diode	1.05	V	$T_J = 25^\circ\text{C}$, $I_{FM} = 7.5\text{A}$
I_{RM} Typical peak reverse leakage current per diode	5.0	μA	$T_J = 25^\circ\text{C}$, 100% V_{RRM}
	400		$T_J = 150^\circ\text{C}$, 100% V_{RRM}
V_{RRM} Maximum repetitive peak reverse voltage range	200 to 800	V	

Thermal and Mechanical Specifications

Parameters	IR15XB..	Unit	Conditions
T_J Operating and storage temperature range	-55 to 150	$^\circ\text{C}$	
R_{thJC} Max. thermal resistance junction to case	1.5	$^\circ\text{C}/\text{W}$	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	15	XB	06
①	②	③	④
1	-	International Rectifier	
2	-	Bridge Current - 15Amps	
3	-	10-7.5mm spacing	
4	-	Voltage Code: code x 100 = V_{RRM}	

Outline Table

The drawing shows the physical dimensions of the IR15XB.. rectifier case. The top view shows a square case with a width of 30 ±0.3 mm and a height of 11 ±0.2 mm. The case has a 3 x 45° chamfered top edge and a central circular feature with a diameter of 8.32 ±0.1 mm. The bottom view shows four leads with a diameter of 2.0 ±0.2 mm and a length of 4.0 ±0.2 mm. The lead spacing is 10 ±0.2 mm between the first and second leads, and 7.50 ±0.2 mm between the second and third, and third and fourth leads. The side view shows a total height of 17.50 ±0.5 mm, with a mounting tab height of 6 mm and a lead height of 5 mm. The mounting tab has a width of 4.60 ±0.2 mm and a thickness of 3.60 ±0.2 mm. The case has a diameter of 20 ±0.3 mm at the base of the mounting tab. The lead diameter is 2.70 mm.

Case Style: IRXB-5S

All dimensions are in millimeters

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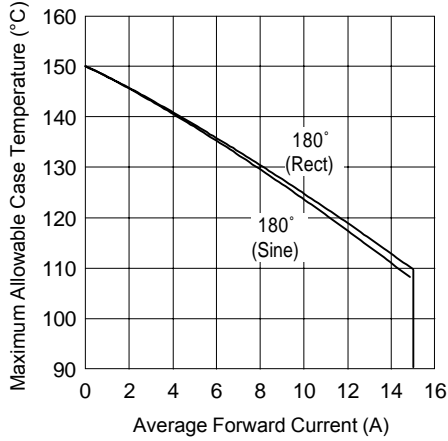


Fig. 1 - Current Ratings Characteristics

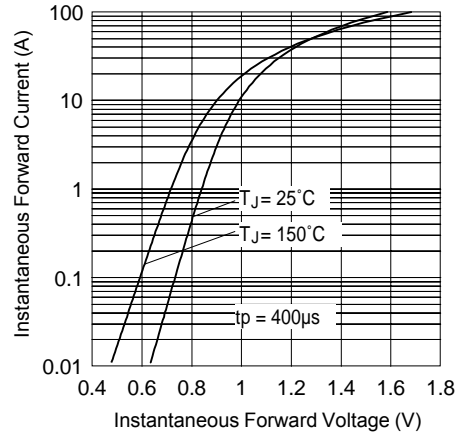


Fig. 2 - Forward Voltage Drop Characteristics

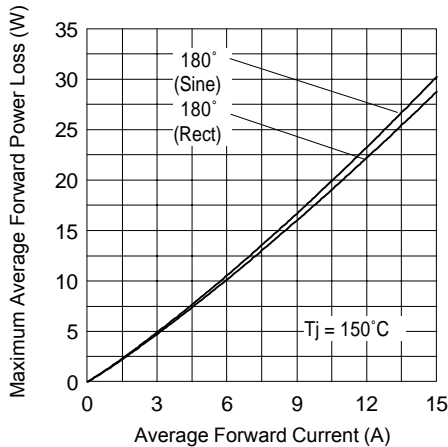


Fig. 3 - Total Power Loss Characteristics

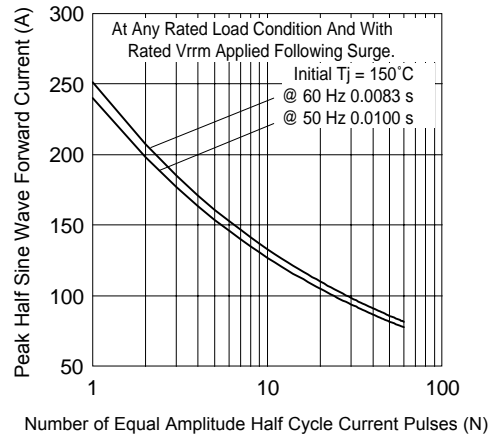


Fig. 4 - Maximum Non-Repetitive Surge Current

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.