

YBS4010
BRIDGE RECTIFIERS



VOLTAGE: 1000 Volts	CURRENT: 4.0 Ampers	TMBF	Marking & Schematic diagram
----------------------------	----------------------------	-------------	--

FEATURES

- Glass passivated die construction
- low forward voltage drop
- High surge current capability
- Plastic material-UL flammability 94V-0

MECHANICAL DATA

- **Case:** TMBF
- **Terminals:** Plated Leads Solderable per MIL-STD-202, Method 208
- **Polarity:** As Marked on Case
- **Mounting Position:** Any
- **Lead Free:** For RoHS / Lead Free Version
- **Weight:** App. 0.225 grams (0.0079 ounce)

TYPICAL APPLICATIONS

- For use in switch power supply ,high frequency inverters , PD Charger applications

PIN	DISCRIPTION
1	Output Cathode(-)
2	Output Anode(+)
3	Input Pin(-)
4	Input Pin(-)

Remark:

- NH=niuhang trademark
- FF=Product line code,According to actual changes
YWW=Data code,According to actual changes
- YBS4010=Modle
- "- "+"=Polarity mark

Single phase,half wave,60Hz,resistive or inductive load.For capacitive load,derate current by 20%

Maximum Ratings (Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	YBS4010	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS Voltag	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Maximum Average Forward Rectified Current @ TC=100°C (see fig.1)	$I_{F(AV)}$	4	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rate Load (JEDEC Method)	I_{FSM}	125	A
Current Squared Time Per Diode(t<8.3ms)	I^2t	64.84	A ² sec

Electrical Charactercsts (Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Test Conditions		Symbol	YBS4010			Unit
				Min.	Typ.	Max.	
Maximum Forward Voltage Per Diode (Note 1)	Ta=25°C	IF= 4.0 A	V_{FM}	--	--	1.05	V
Maximum DC Reverse Current at Rated DC Blocking Voltage (Note 1)	Ta=25°C	VR= 1000 V	I_{RRM}	--	--	5	uA
	Ta=125°C	VR= 1000 V		--	--	300	
Typical Junction Capacitance Per Diode	4V,1MHz		C_J	--	50	--	pF

Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	YBS4010	Unit
Operating Junction Temperature Range	T_J	-55 to 150	°C
Storage Temperature Range	T_{STD}	-55 to 150	
Typical thermal resistance (Note 2)	$R_{\theta JA}$	60	°C/W
	$R_{\theta JC}$	15	

- Notes:
- Pulse test: 300 μs pulse width,1% duty cycle
 - Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

YBS4010
BRIDGE RECTIFIERS



RATING AND CHARACTERISTIC CURVES

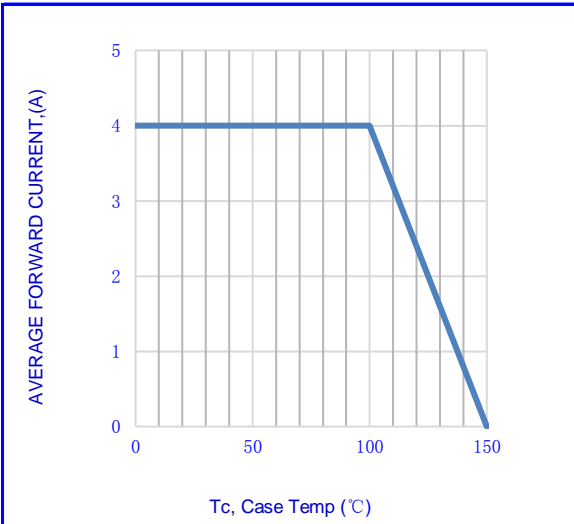


Fig.1-FORWARD CURRENT DERATING CURVE

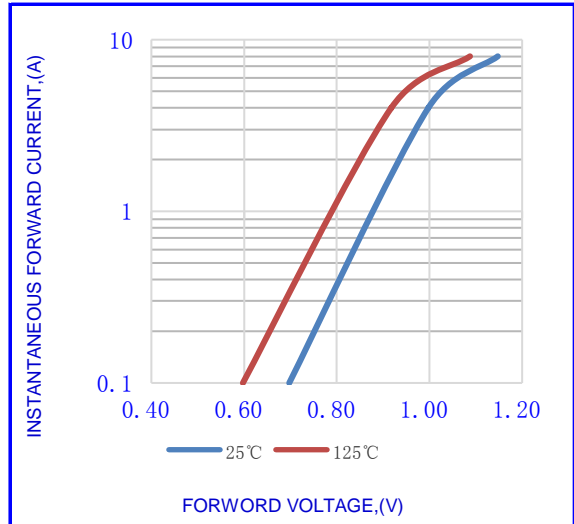


Fig.2- TYPICAL INSTANTANEOUS FORWARD

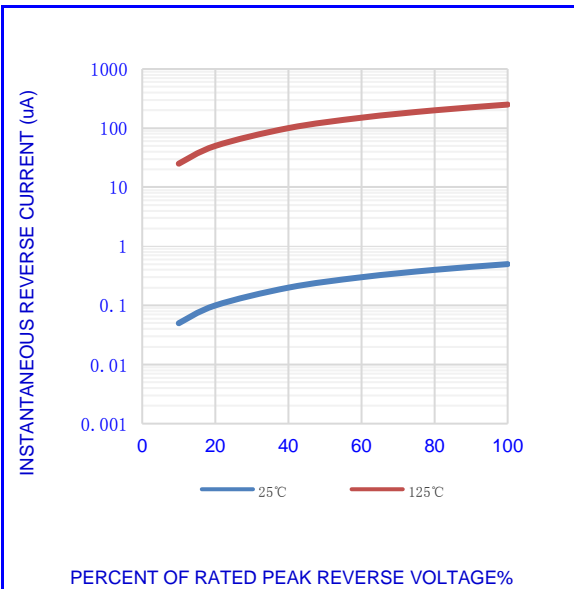


Fig.3- TYPICAL REVERSE CHARACTERISTICS

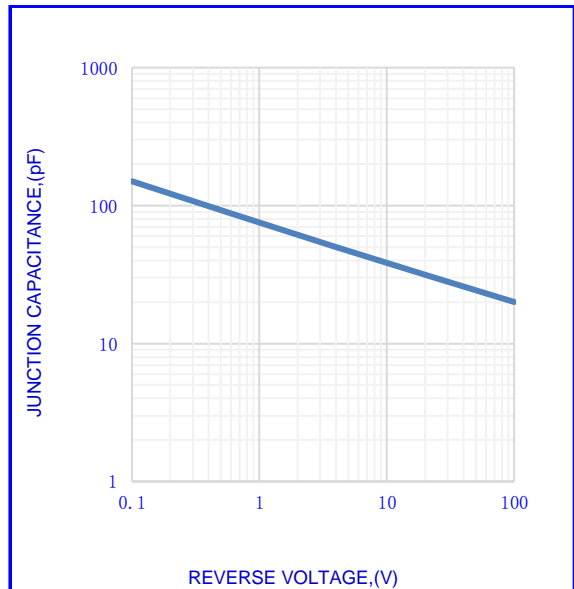


Fig.4- TYPICAL JUNCTION CAPACITANCE

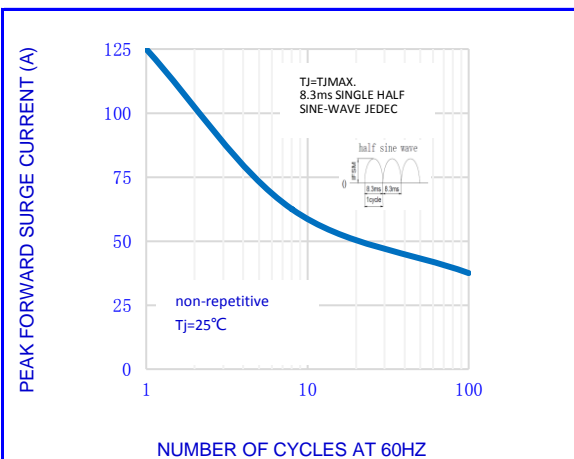


Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

YBS4010
BRIDGE RECTIFIERS



OUTLINE DRAWINGS		TMBF																																																																																
		<table border="1"> <thead> <tr> <th colspan="7">OUTLINE DIMENSIONS</th> </tr> <tr> <th rowspan="2">Dim.</th> <th colspan="3">Milimeters</th> <th colspan="3">Inches</th> </tr> <tr> <th>Min.</th> <th>Typ.</th> <th>Max.</th> <th>Min.</th> <th>Typ.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>7.10</td> <td>-</td> <td>7.70</td> <td>0.280</td> <td>-</td> <td>0.303</td> </tr> <tr> <td>B</td> <td>6.10</td> <td>-</td> <td>7.10</td> <td>0.240</td> <td>-</td> <td>0.280</td> </tr> <tr> <td>C</td> <td>1.30</td> <td>-</td> <td>1.50</td> <td>0.051</td> <td>-</td> <td>0.059</td> </tr> <tr> <td>D</td> <td>8.30</td> <td>-</td> <td>9.00</td> <td>0.327</td> <td>-</td> <td>0.354</td> </tr> <tr> <td>E</td> <td>0.16</td> <td>-</td> <td>0.30</td> <td>0.006</td> <td>-</td> <td>0.012</td> </tr> <tr> <td>F</td> <td>4.90</td> <td>-</td> <td>5.30</td> <td>0.193</td> <td>-</td> <td>0.209</td> </tr> <tr> <td>G</td> <td>1.00</td> <td>-</td> <td>1.60</td> <td>0.039</td> <td>-</td> <td>0.063</td> </tr> <tr> <td>H</td> <td>0.90</td> <td>-</td> <td>1.20</td> <td>0.035</td> <td>-</td> <td>0.047</td> </tr> </tbody> </table>					OUTLINE DIMENSIONS							Dim.	Milimeters			Inches			Min.	Typ.	Max.	Min.	Typ.	Max.	A	7.10	-	7.70	0.280	-	0.303	B	6.10	-	7.10	0.240	-	0.280	C	1.30	-	1.50	0.051	-	0.059	D	8.30	-	9.00	0.327	-	0.354	E	0.16	-	0.30	0.006	-	0.012	F	4.90	-	5.30	0.193	-	0.209	G	1.00	-	1.60	0.039	-	0.063	H	0.90	-	1.20	0.035	-	0.047
OUTLINE DIMENSIONS																																																																																		
Dim.	Milimeters			Inches																																																																														
	Min.	Typ.	Max.	Min.	Typ.	Max.																																																																												
A	7.10	-	7.70	0.280	-	0.303																																																																												
B	6.10	-	7.10	0.240	-	0.280																																																																												
C	1.30	-	1.50	0.051	-	0.059																																																																												
D	8.30	-	9.00	0.327	-	0.354																																																																												
E	0.16	-	0.30	0.006	-	0.012																																																																												
F	4.90	-	5.30	0.193	-	0.209																																																																												
G	1.00	-	1.60	0.039	-	0.063																																																																												
H	0.90	-	1.20	0.035	-	0.047																																																																												

RECOMMENDED MOUNTING PAD LAYOUT		TMBF																																																				
		<table border="1"> <thead> <tr> <th colspan="7">RECOMMENDED MOUNTING PAD LAYOUT</th> </tr> <tr> <th rowspan="2">Dim.</th> <th colspan="3">Milimeters</th> <th colspan="3">Inches</th> </tr> <tr> <th>Min.</th> <th>Typ.</th> <th>Max.</th> <th>Min.</th> <th>Typ.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>-</td> <td>5.100</td> <td>-</td> <td>-</td> <td>0.201</td> <td>-</td> </tr> <tr> <td>B</td> <td>-</td> <td>7.350</td> <td>-</td> <td>-</td> <td>0.289</td> <td>-</td> </tr> <tr> <td>C</td> <td>-</td> <td>1.800</td> <td>-</td> <td>-</td> <td>0.071</td> <td>-</td> </tr> <tr> <td>D</td> <td>-</td> <td>2.000</td> <td>-</td> <td>-</td> <td>0.079</td> <td>-</td> </tr> </tbody> </table>					RECOMMENDED MOUNTING PAD LAYOUT							Dim.	Milimeters			Inches			Min.	Typ.	Max.	Min.	Typ.	Max.	A	-	5.100	-	-	0.201	-	B	-	7.350	-	-	0.289	-	C	-	1.800	-	-	0.071	-	D	-	2.000	-	-	0.079	-
RECOMMENDED MOUNTING PAD LAYOUT																																																						
Dim.	Milimeters			Inches																																																		
	Min.	Typ.	Max.	Min.	Typ.	Max.																																																
A	-	5.100	-	-	0.201	-																																																
B	-	7.350	-	-	0.289	-																																																
C	-	1.800	-	-	0.071	-																																																
D	-	2.000	-	-	0.079	-																																																

PACKING INFORMATION				TMBF		
Package Method	Reel Size (mm)	Quantity (pcs/reel)	Inner Box Size LxWxH(mm)	Quantity (pcs/Inner Box)	Carton Size LxWxH(mm)	Quantity (pcs/carton)
Tape Reel	Φ330	3000	340x340x45	6000	360x360x240	30000

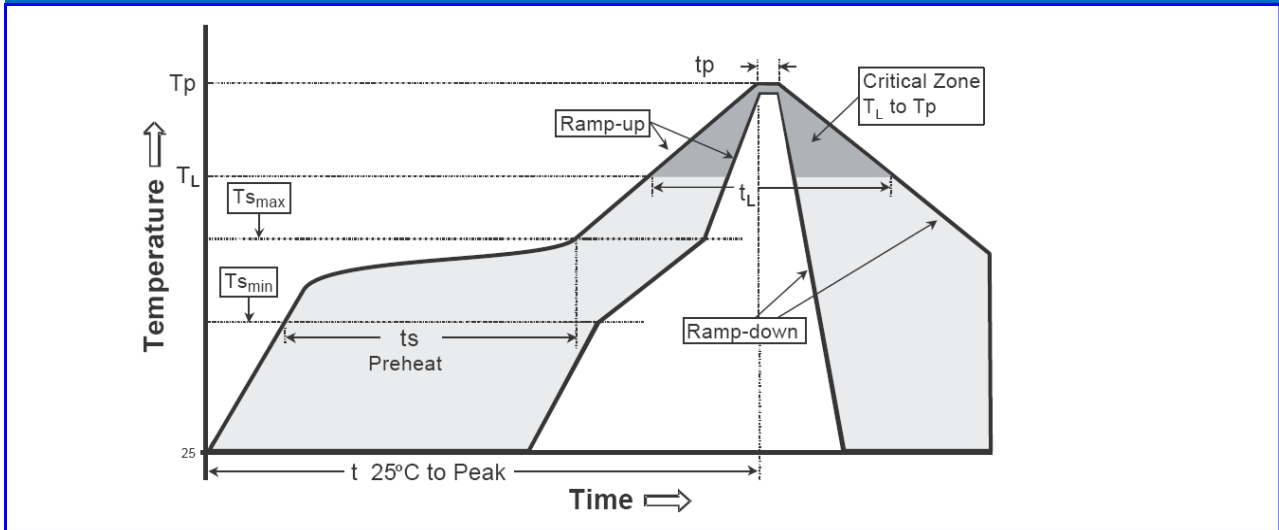
YBS4010
BRIDGE RECTIFIERS



Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmmax to Tp)	3°C/second max.	3°C/second max.
Preheat -Temperature Min(TS min) -Temperature Max(TS max) -Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: -Temperature (TL) - Time (tL)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(TP)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

YBS4010
BRIDGE RECTIFIERS**Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from Niuhang Electronics Co., LTD
- Niuhang Electronics Co., LTD. reserves the rights to make changes of the content herein the document anytime without notification.
- Niuhang Electronics Co., LTD. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Niuhang Electronics Co., LTD. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Niuhang Electronics Co., LTD. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Niuhang Electronics Co., LTD. for any damages resulting from such improper use or sale.
- When the appearance of the product and chip size does not change, in order to product the customer quality, change the internal structure and the production process Niuhang can not notify

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bridge Rectifiers](#) category:

Click to view products by [NH manufacturer](#):

Other Similar products are found below :

[MB252](#) [MB356G](#) [MB358G](#) [GBJ1504-BP](#) [GBU10B-BP](#) [GBU15K-BP](#) [GBU4A-BP](#) [GBU4D-BP](#) [DB101-BP](#) [DF01](#) [DF10SA-E345](#) [KBPC50-10S](#) [RS405GL-BP](#) [GBJ1502-BP](#) [GBU6M](#) [TB102M](#) [MB1510](#) [MB86](#) [TL401G](#) [MDA920A2](#) [TU602](#) [TU810](#) [MP5010W-BP](#) [MP501W-BP](#) [MP502-BP](#) [KBPC25-02](#) [VBO160-12NO7](#) [VS-110MT120KPBF](#) [VS-60MT80KPBF](#) [DB105-BP](#) [DF1510S](#) [VS-40MT160PAPBF](#) [GBU4G-BP](#) [GSIB15A80-E3/45](#) [DB104-BP](#) [D3SB60](#) [TB354](#) [GBJ2504-BP](#) [26MB100A](#) [B1S-G](#) [VS-40MT160KPBF](#) [VUO162-16NO7](#) [ABS10-G](#) [GBU6B-BP](#) [GBJ1508-BP](#) [BR5010-G](#) [ABS6-G](#) [B125C800G-E4/51](#) [MSB15MH-13](#) [LBS10-13](#)