

B5817WS-B5819WS

SCHOTTKY BARRIER RECTIFIERS



VOLTAGE: 20~40 Volts	CURRENT: 1.0 Amperes	SOD-323	Marking and Polarity
FEATURES <ul style="list-style-type: none"> Low Forward Voltage Drop for high efficiency Low leakage current for high reliability High forward surge capability for high reliability 			
MECHANICAL DATA <ul style="list-style-type: none"> Terminals: Plated Leads Solderable per MIL-STD-202, Method 208 Mounting Position: Any Lead Free: Lead Free Finish, RoHS Compliant Weight: App. 0.0041 grams (0.0001 ounce) 		Remark: <ol style="list-style-type: none"> Sx=Modle,x=J,K,L White band denotes cathode Marking:B5817WS: SJ B5818WS: SK B5819WS: SL 	
TYPICAL APPLICATIONS <ul style="list-style-type: none"> For use in high frequency inverteS ,AC/DC converteS, DC/DC converteS,LED driver etc. applications 			

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

Parameter	Symbol	B5817WS	B5818WS	B5819WS	Unit
Maximum repetitive peak reveSe voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Maximum average forward rectified current(see fig.1)	$I_{F(AV)}$	1.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)(see fig.5)	I_{FSM}	9			A
Current Squared Time Per Diode(t<8.3ms)	I^2t	0.34			A ² sec

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

Parameter	Test Conditions		Symbol	B5817WS	B5818WS	B5819WS	Unit
	$T_A=25^\circ C$	$T_A=125^\circ C$					
Maximum instantaneous forward voltage (see fig.2) (Note 1)	$I_F= 1.0$ A		V_F	0.45	0.55	0.60	V
		$I_F= 1.0$ A		0.41	0.51	0.55	
Maximum instantaneous reveSecurent at rated DC blockingvoltage (see fig.3)(Note 1)	$V_R= V_{RRM}$		I_R	1			mA
	$V_R= 80\%*V_{RRM}$			100			
Typical junction capacitance(see fig.4)	4V,1MHz		C_J	120			pF

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

Parameter	Symbol	B5817WS	B5818WS	B5819WS	Unit
Operating junction	T_J	-55	to	150	°C
Storage temperature range	T_{STG}	-55	to	150	

Note: 1.Pulse width < 300 uS, Duty cycle < 2%
2.P.C.B. mounted with 0.1"x0.1"(2.54 x2.54 mm) copper pad areas

B5817WS-B5819WS

SCHOTTKY BARRIER RECTIFIERS



RATING AND CHARACTERISTIC CURVES

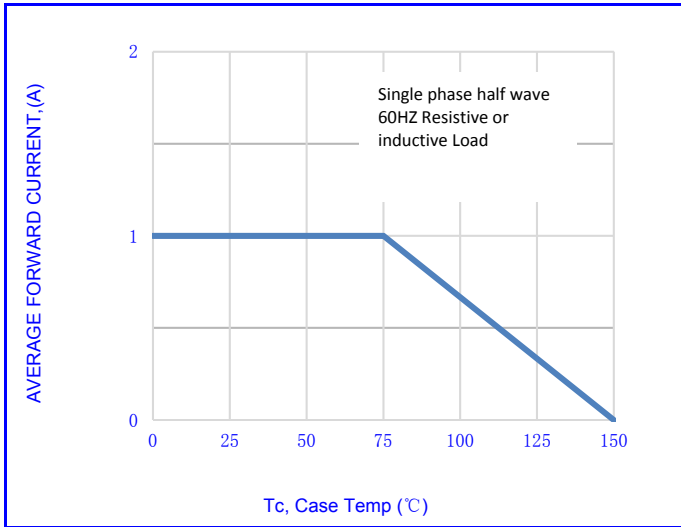


Fig.1- FORWARD CURRENT DERATING CURVE

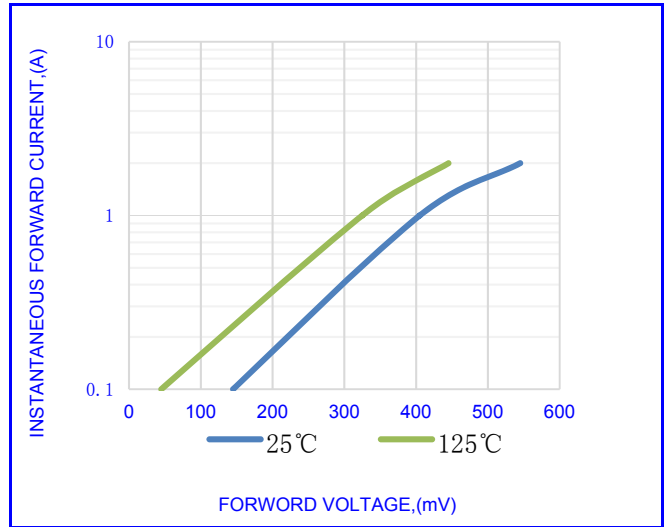


Fig.2-TYPICAL INSTANTANEOUS FORWARD

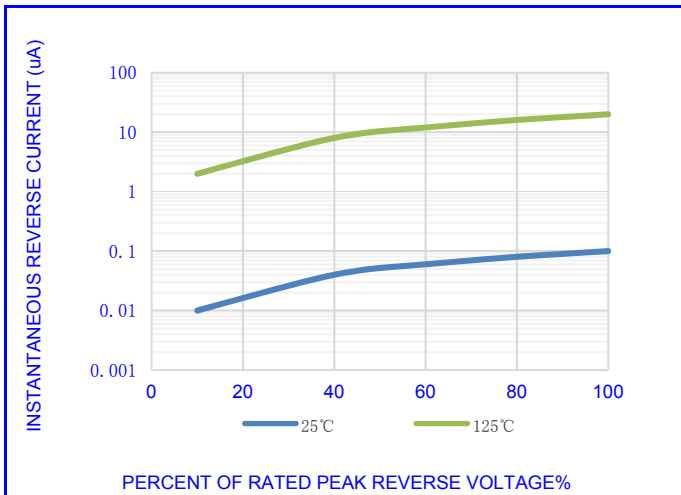


Fig.3-TYPICAL REVERSE CHARACTERISTICS

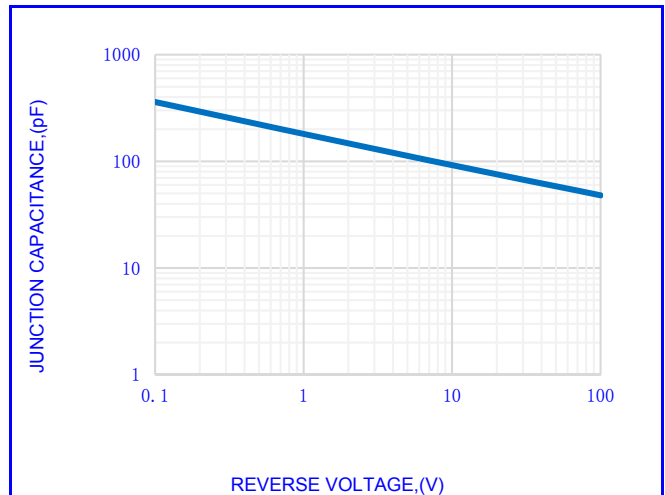


Fig.4- TYPICAL JUNCTION CAPACITANCE

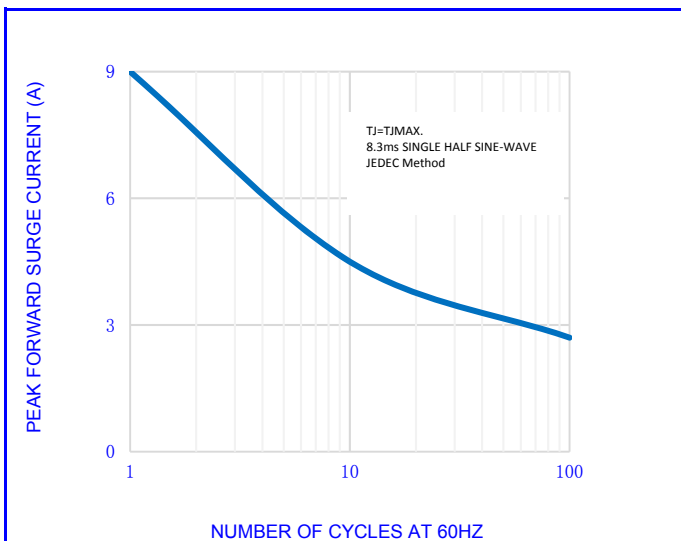


Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

B5817WS-B5819WS
SCHOTTKY BARRIER RECTIFIERS



OUTLINE DRAWINGS		SOD-323																																																																																
		<table border="1"> <thead> <tr> <th colspan="7">OUTLINE DIMENSIONS</th> </tr> <tr> <th rowspan="2">Dim.</th> <th colspan="3">Millimeters</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>1.600</td> <td>-</td> <td>1.800</td> <td>0.063</td> <td>-</td> <td>0.071</td> </tr> <tr> <td>B</td> <td>2.400</td> <td>-</td> <td>2.700</td> <td>0.094</td> <td>-</td> <td>0.106</td> </tr> <tr> <td>C</td> <td>1.200</td> <td>-</td> <td>1.400</td> <td>0.047</td> <td>-</td> <td>0.055</td> </tr> <tr> <td>D</td> <td>-</td> <td>-</td> <td>1.000</td> <td>-</td> <td>-</td> <td>0.039</td> </tr> <tr> <td>E</td> <td>0.250</td> <td>-</td> <td>0.350</td> <td>0.010</td> <td>-</td> <td>0.014</td> </tr> <tr> <td>F</td> <td>0.080</td> <td>-</td> <td>0.150</td> <td>0.003</td> <td>-</td> <td>0.006</td> </tr> <tr> <td>G</td> <td>-</td> <td>0.475</td> <td>-</td> <td>-</td> <td>0.019</td> <td>-</td> </tr> <tr> <td>H</td> <td>-</td> <td>-</td> <td>0.120</td> <td>-</td> <td>-</td> <td>0.005</td> </tr> </tbody> </table>					OUTLINE DIMENSIONS							Dim.	Millimeters			Inches			Min.	Typ.	Max.	Min.	Typ.	Max.	A	1.600	-	1.800	0.063	-	0.071	B	2.400	-	2.700	0.094	-	0.106	C	1.200	-	1.400	0.047	-	0.055	D	-	-	1.000	-	-	0.039	E	0.250	-	0.350	0.010	-	0.014	F	0.080	-	0.150	0.003	-	0.006	G	-	0.475	-	-	0.019	-	H	-	-	0.120	-	-	0.005
OUTLINE DIMENSIONS																																																																																		
Dim.	Millimeters			Inches																																																																														
	Min.	Typ.	Max.	Min.	Typ.	Max.																																																																												
A	1.600	-	1.800	0.063	-	0.071																																																																												
B	2.400	-	2.700	0.094	-	0.106																																																																												
C	1.200	-	1.400	0.047	-	0.055																																																																												
D	-	-	1.000	-	-	0.039																																																																												
E	0.250	-	0.350	0.010	-	0.014																																																																												
F	0.080	-	0.150	0.003	-	0.006																																																																												
G	-	0.475	-	-	0.019	-																																																																												
H	-	-	0.120	-	-	0.005																																																																												

RECOMMENDED LAYOUT DRAWINGS		SOD-323																																																				
		<table border="1"> <thead> <tr> <th colspan="7">RECOMMENDED MOUNTING PAD DIMENSIONS</th> </tr> <tr> <th rowspan="2">Dim.</th> <th colspan="3">Millimeters</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>2.900</td> <td>--</td> <td>--</td> <td>0.114</td> <td>--</td> </tr> <tr> <td>B</td> <td>--</td> <td>0.500</td> <td>--</td> <td>--</td> <td>0.020</td> <td>--</td> </tr> <tr> <td>C</td> <td>--</td> <td>1.440</td> <td>--</td> <td>--</td> <td>0.057</td> <td>--</td> </tr> <tr> <td>D</td> <td>--</td> <td>0.730</td> <td>--</td> <td>--</td> <td>0.029</td> <td>--</td> </tr> </tbody> </table>					RECOMMENDED MOUNTING PAD DIMENSIONS							Dim.	Millimeters			Inches			Min.	Typ.	Max.	Min.	Typ.	Max.	A	--	2.900	--	--	0.114	--	B	--	0.500	--	--	0.020	--	C	--	1.440	--	--	0.057	--	D	--	0.730	--	--	0.029	--
RECOMMENDED MOUNTING PAD DIMENSIONS																																																						
Dim.	Millimeters			Inches																																																		
	Min.	Typ.	Max.	Min.	Typ.	Max.																																																
A	--	2.900	--	--	0.114	--																																																
B	--	0.500	--	--	0.020	--																																																
C	--	1.440	--	--	0.057	--																																																
D	--	0.730	--	--	0.029	--																																																

PACKING INFORMATION				SOD-323		
Package Method	Reel Size (mm)	Quantity (pcs/reel)	Inner Box Size L×W×H(mm)	Quantity (pcs/Inner Box)	Carton Size L×W×H(mm)	Quantity (pcs/carton)
Tape Reel	Φ180	3000	185×185×90	21000	400×400×300	252000

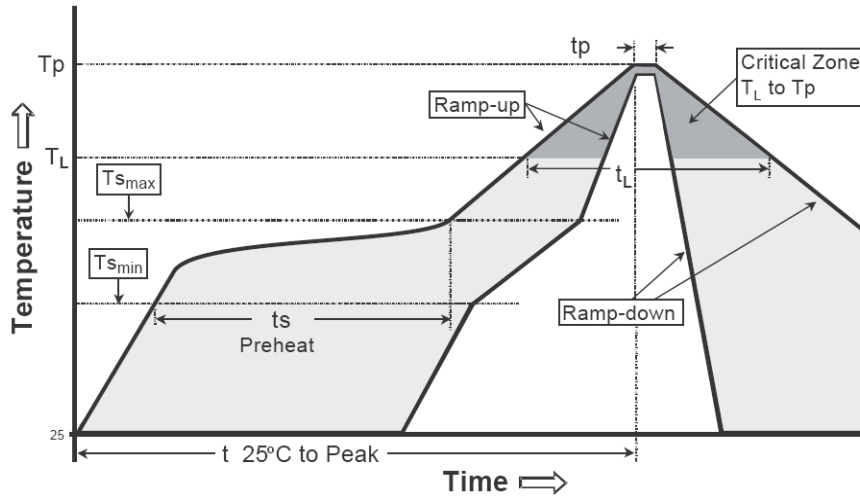
B5817WS-B5819WS
SCHOTTKY BARRIER RECTIFIERS



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 (Tsmax 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.

B5817WS-B5819WS

SCHOTTKY BARRIER RECTIFIERS



Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from niuhang Electronics co., LTD
- Niuhan Electronics co., LTD. reserves the rights to make changes of the content herein the document anytime without notification.
- Niuhan Electronics co., LTD. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Niuhan 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. Niuhan 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 Niuhan 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 Niuhan can not notify

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Schottky Diodes & Rectifiers](#) category:

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

Other Similar products are found below :

[MA4E2039](#) [MMBD301M3T5G](#) [RB160M-50TR](#) [D83C](#) [BAS16E6433HTMA1](#) [BAS 3010S-02LRH E6327](#) [BAT 54-02LRH E6327](#)
[NRVBAF360T3G](#) [NSR05F40QNXT5G](#) [NTE555](#) [JANS1N6640](#) [SS3003CH-TL-E](#) [GA01SHT18](#) [CRS10I30A\(TE85L,QM](#) [MBRA140TRPBF](#)
[MBRB30H30CT-1G](#) [BAT 15-04R E6152](#) [JANTX1N5712-1](#) [DMJ3940-000](#) [SB007-03C-TB-E](#) [NRVBB20100CTT4G](#) [NRVBM120LT1G](#)
[NTSB30U100CT-1G](#) [CRG04\(T5L,TEMQ\)](#) [ACDBA1100LR-HF](#) [ACDBA1200-HF](#) [ACDBA240-HF](#) [ACDBA3100-HF](#) [CDBQC0530L-HF](#)
[ACDBA260LR-HF](#) [ACDBA1100-HF](#) [10BQ015-M3/5BT](#) [NRVBM120ET1G](#) [SDM8M100P5-13](#) [VSSB410S-M3/5BT](#) [1N5819T-G](#)
[PDS1040Q-13](#) [B160BQ-13-F](#) [SDM05U20CSP-7](#) [BAS 70-07 E6433](#) [B140S1F-7](#) [HSM560Je3/TR13](#) [DDB2265-000](#) [ZHCS506QTA](#)
[HSM190Je3/TR13](#) [B330AF-13](#) [ACDBUC0230-HF](#) [SDM1U100S1F-7](#) [MBR10200CTF-G1](#) [CDLL5712](#)