



# B12WS THRU B120WS

Reverse Voltage 20 to 200Volts Forward Current - 1.0 Ampere

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

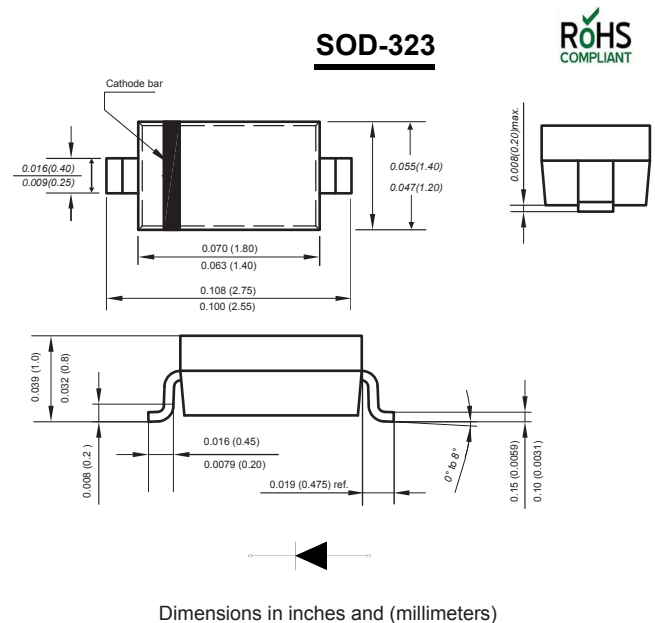
- ◆ Metal silicon junction, majority carrier conduction
- ◆ For surface mounted applications
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### Mechanical Data

Case : SOD-323

Terminals : Solderable per MIL-STD-750, Method 2026A

Weight : 0.0019 ounce, 0.00548 grams



### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	SYMBOLS	B12WS	B14WS	B16WS	B18WS	B110WS	B112WS	B115WS	B120WS	UNITS	
		B12S	B14S	B16S	B18S	110S	112S	115S	120S		
Maximum repetitive peak reverse voltage	$V_{RMM}$	20	40	60	80	100	120	150	200	V	
Maximum RMS voltage	$V_{RMS}$	14	28	42	56	70	84	105	140	V	
Maximum DC blocking voltage	$V_{DC}$	20	40	60	80	100	120	150	200	V	
Maximum average forward rectified current	$I_{(AV)}$	1.0								A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25								A	
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.55	0.70	0.85	0.90					V	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	0.3 10			0.2 5		0.1 2		mA		
Typical junction capacitance (NOTE 1)	$C_J$	110			80					pF	
Operating junction temperature range	$T_J$	-55 to +125									°C
Storage temperature range	$T_{STG}$	-55 to +150									°C

**Note:** 1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.



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## Typical Characteristics

Fig.1 Forward Current Derating Curve

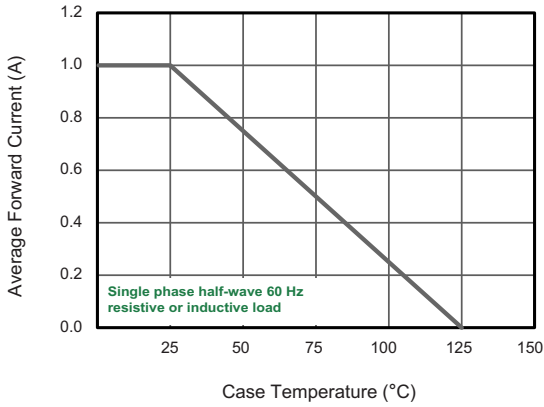


Fig.2 Typical Reverse Characteristics

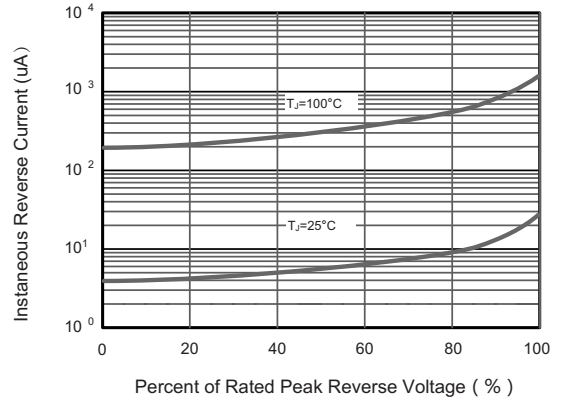


Fig.3 Typical Forward Characteristic

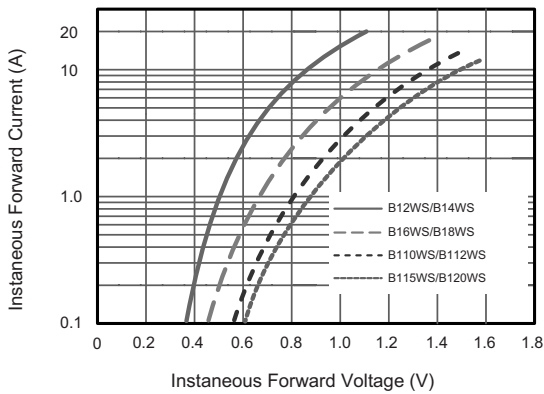


Fig.4 Typical Junction Capacitance

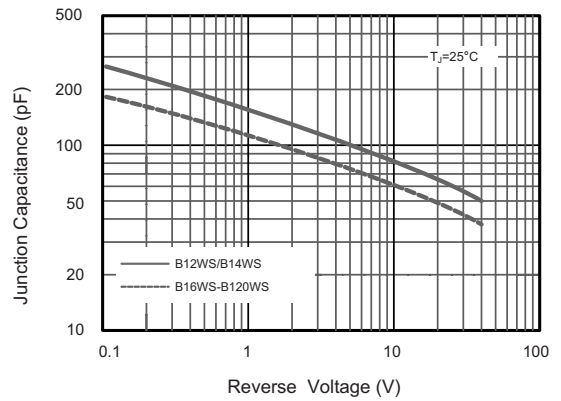
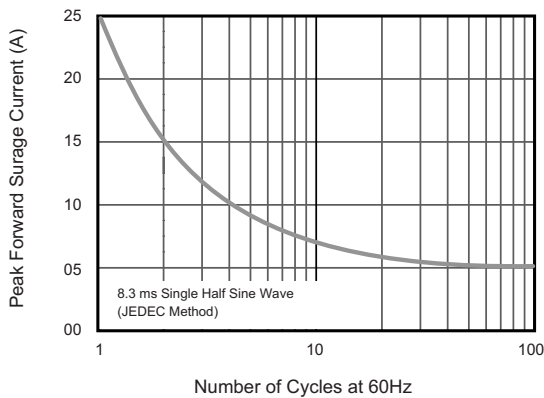


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



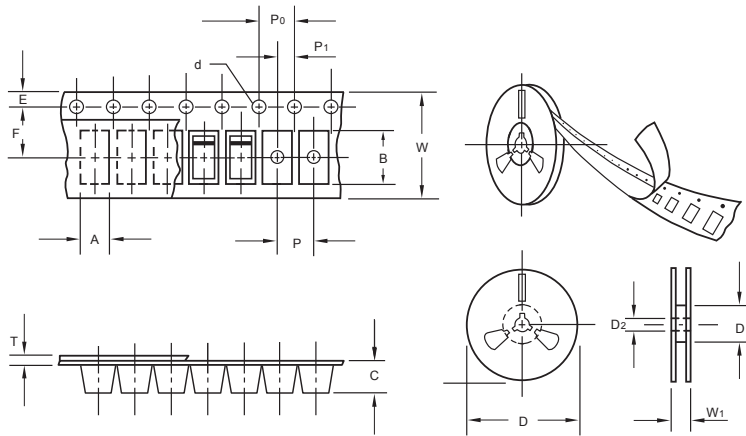
The curve above is for reference only.



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## Packing information



unit:mm

Item	Symbol	Tolerance	SOD-323
Carrier width	A	0.1	1.46
Carrier length	B	0.1	2.90
Carrier depth	C	0.1	1.25
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D <sub>1</sub>	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	54.40
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.06
Tape width	W	0.3	8.00
Reel width	W <sub>1</sub>	1.0	12.30

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-323	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	2.6	0.102
D	1.4	0.055
E	3.8	0.149