



# DATA SHEET

## 1N4148WS, 1N4448WS, BAV16WS

### SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 100 Volts      **POWER** 200mWatts

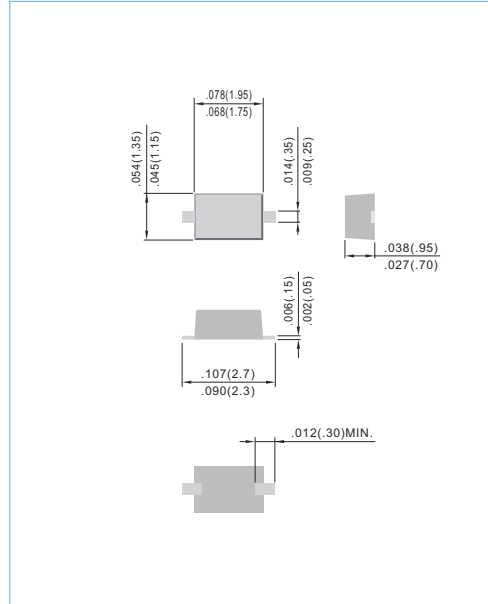
**SOD-323**      Unit: inch (mm)

#### FEATURES

- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: SOD-323, Plastic  
Terminals: Solderable per MIL-STD-202G, Method 208  
Approx. Weight: 4.1mg



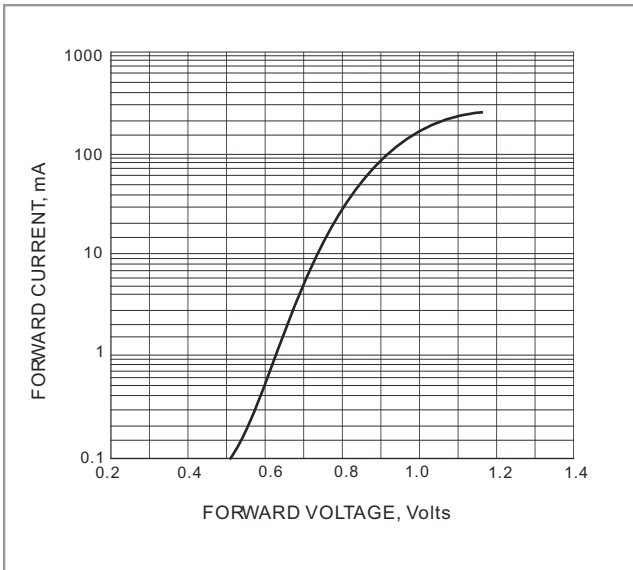
#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. For capacitive load, derate current by 20%.

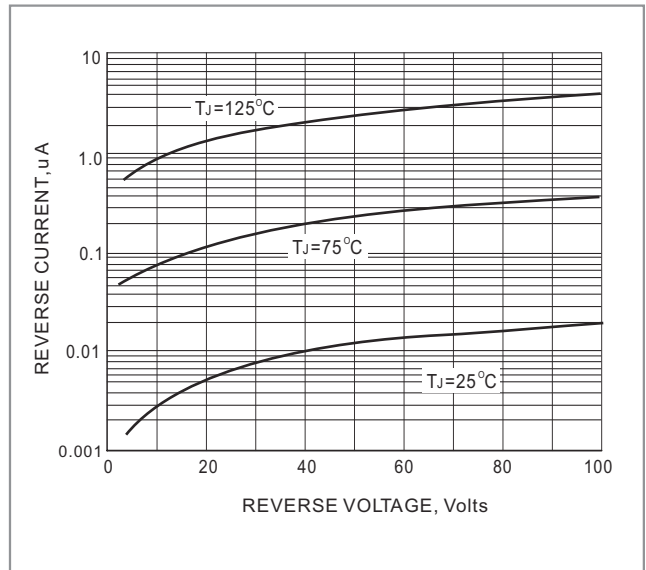
PARAMETER	SYMBOL	1N4148WS	1N4448WS	BAV16WS	UNITS
Marking Code		A 2	A 3	A 6	
Reverse Voltage	$V_R$	75			V
Peak Reverse Voltage	$V_{RM}$	100			V
RMS Voltage	$V_{RMS}$	50			V
Maximum DC Blocking Voltage	$V_{DC}$	75			V
Maximum Average Forward Current at $T_a=25^\circ C$	$I_{AV}$	200			mA
Peak Forward Surge Current, 1.0us	$I_{FSM}$	2	4	2	A
Power Dissipation Derate Above 25°C	$P_{TOT}$	200			mW
Maximum Forward Voltage	$V_F$	0.715 @ 0.001A 0.855 @ 0.01A 1.0 / 0.05A 1.25 @ 0.15A	0.72 @ 0.005A 1.0 @ 0.1A	0.855 @ 0.01A	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.025 @ 20V 2.5 @ 75V	2.5 @ 75V	1.0 @ 75V	uA
Junction Capacitance (Notes1)	$C_J$	1.5	4.0	2.0	pF
Maximum Reverse Recovery (Notes2)	$T_{RR}$	4	4	6	ns
Maximum Thermal Resistance	$R_{\theta JA}$	640			°C / W
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 TO +150			°C

**NOTE:**

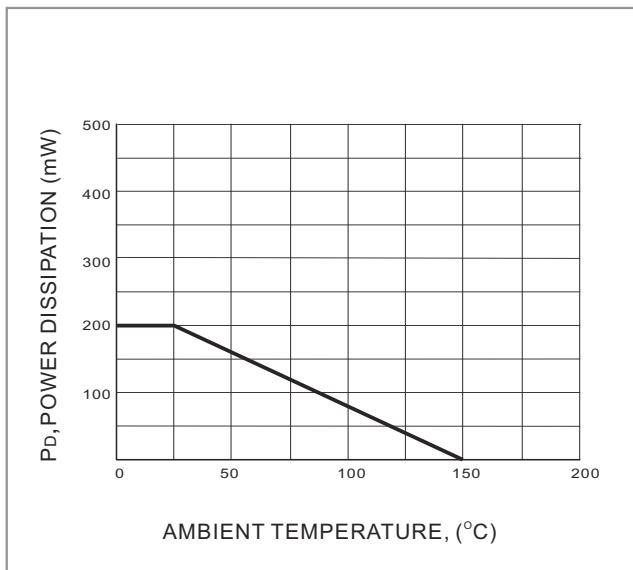
1.  $C_J$  at  $V_R=0$ ,  $f=1MHz$
2. From  $I_F=10mA$  to  $I_R=1mA$ ,  $V_R=6Volts$ ,  $R_L=100\Omega$



**FIG. 1-TYPICAL FORWARD CHARACTERISTIC**



**FIG. 2-TYPICAL REVERSE CHARACTERISTICS**



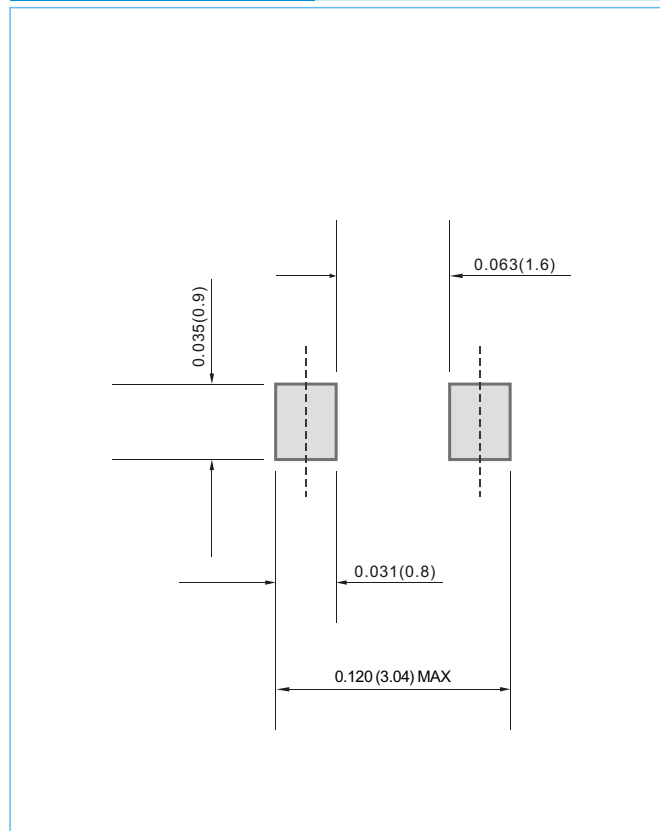
**FIG. 3 POWER DERATING CURVE**



## MOUNTING PAD LAYOUT

SOD-323

Unit: inch (mm)



## ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 5.0K per 7" plastic Reel

## LEGAL STATEMENT

### IMPORTANT NOTICE

This information is intended to unambiguously characterize the product in order to facilitate the customer's evaluation of the device in the application. The information will help the customer's technical experts determine that the device is compatible and interchangeable with similar devices made by other vendors. The information in this data sheet is believed to be reliable and accurate. The specifications and information herein are subject to change without notice. New products and improvements in products and product characterization are constantly in process. Therefore, the factory should be consulted for the most recent information and for any special characteristics not described or specified.

### Copyright Pan Jit International Inc. 2003

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner.

The information presented in this document does not form part of any quotation or contract. The information presented is believed to be accurate and reliable, and may change without notice in advance. No liability will be accepted by the publisher for any consequence of use. Publication thereof does not convey nor imply any license under patent or other industrial or intellectual property rights.