



# BAS116WS

SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODE

**Voltage Range 100 Volts**  
**Power 200mWatts**

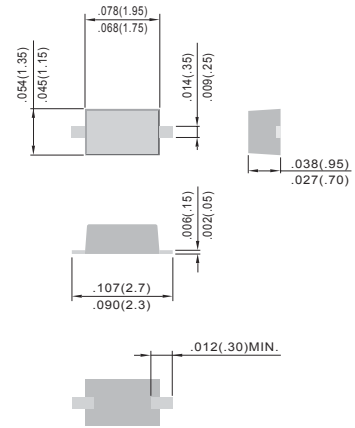
## Features

- \* Surface mount package ideally suited for automatic insertion.
- \* Very low leakage current. 2pA typical at VR=75V.
- \* Low capacitance. 2pF max at VR=0V, f=1MHz
- \* Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

## Mechanical Data

Case: SOD-323 plastic  
Terminals: Solderable per MIL-STD-202, Method 208  
Approx weight: 0.0045 gram  
Marking: P1

### SOT-323



Dimensions in millimeters

## Absolute Ratings

PARAMETER	Symbol	Value	Units
Reverse Voltage	$V_R$	75	V
Peak Reverse Voltage	$V_{RM}$	100	V
Continuous Forward Current	$I_F$	0.2	A
Non-repetitive Peak Forward Surge Current at t=1.0us	$I_{FSM}$	2.0	A

## Thermal Characteristics

PARAMETER	Symbol	Value	Units
Power Dissipation (Note 1)	$P_{TOT}$	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	625	$^{\circ}C/W$
Junction Temperature	$T_J$	-55 to 150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to 150	$^{\circ}C$

### NOTES:

1.FR-5 Board=1.0 x 0.75 x 0.062 in.



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## Electrical Characteristics (T<sub>J</sub>=25°C, unless otherwise noted)

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	(BR)	I <sub>R</sub> =100 uA	75			V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =75 V V <sub>R</sub> =75 V, T <sub>J</sub> =150 °C		0.002 8.0	5 80	nA
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1 mA I <sub>F</sub> =10 mA I <sub>F</sub> =50 mA I <sub>F</sub> =150 mA			0.9 1.0 1.1 1.25	V
Total Capacitance	C <sub>T</sub>	V <sub>R</sub> =0 V, f=1MHz			2.0	pF
Reverse Recovery Time	T <sub>RR</sub>	I <sub>F</sub> =I <sub>R</sub> =10mA, R <sub>L</sub> =100 Ω			3.0	us

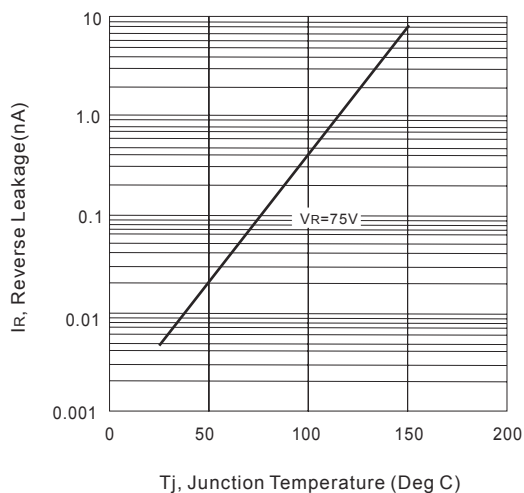


Fig.1 Reverse Leakage vs. Junction Temperature

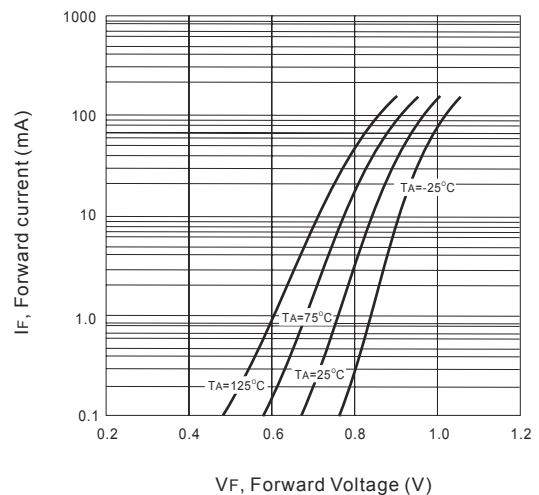


Fig.2 Forward Current vs. Forward Voltage

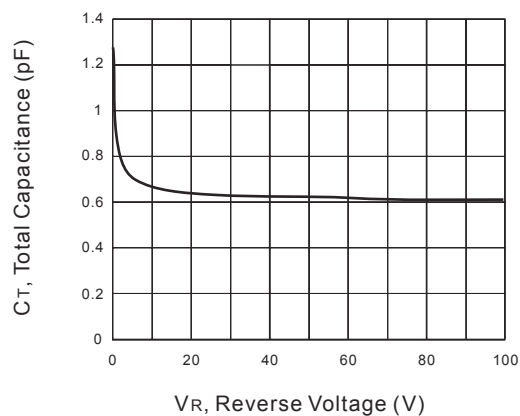


Fig.3 Total capacitance vs. Reverse Voltage

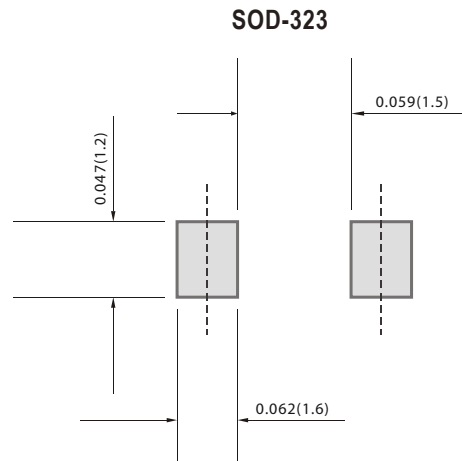


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## Mounting Pad Layout



## Order Information

Packing information

T/R - 12K per 13" plastic Reel

T/R - 5K 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.

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