

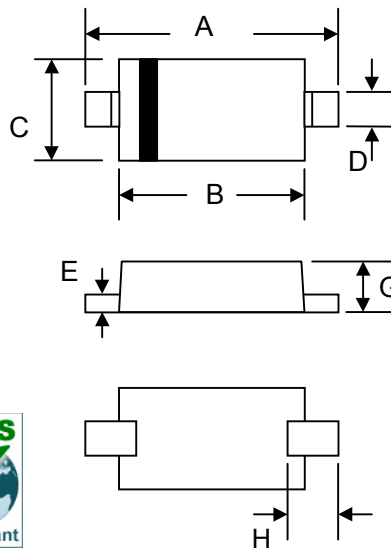


# 1N4148WS / BAV16WS

## SURFACE MOUNT FAST SWITCHING DIODE

### Features

- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Application
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.75	1.95
C	1.15	1.35
D	0.25	0.35
E	0.05	0.15
G	0.70	0.95
H	0.30	—
All Dimensions in mm		

### Mechanical Data

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)



### Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit	
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V	
Peak Repetitive Reverse Voltage	$V_{RRM}$	75	V	
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
RMS Reverse Voltage	$V_{R(RMS)}$	53	V	
Forward Continuous Current (Note 1)	$I_{FM}$	300	mA	
Average Rectified Output Current (Note 1)	$I_o$	150	mA	
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	@ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	2.0 1.0	A
Power Dissipation (Note 1)		$P_d$	200	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	K/W	
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	$^\circ\text{C}$	

### Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage Drop @ $I_F = 10\text{mA}$	$V_{FM}$	1.0	V
Peak Reverse Leakage Current @ $V_R = 75\text{V}$	$I_{RM}$	2.5	$\mu\text{A}$
Junction Capacitance ( $V_R = 0\text{V DC}, f = 1.0\text{MHz}$ )	$C_j$	2.0	pF
Reverse Recovery Time (Note 2)	$t_{rr}$	4.0	nS

Note: 1. Valid provided that terminals are kept at ambient temperature.  
2. Measured with  $I_F = I_R = 10\text{mA}$ ,  $I_{RR} = 0.1 \times I_R$ ,  $R_L = 100\Omega$ .



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## RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

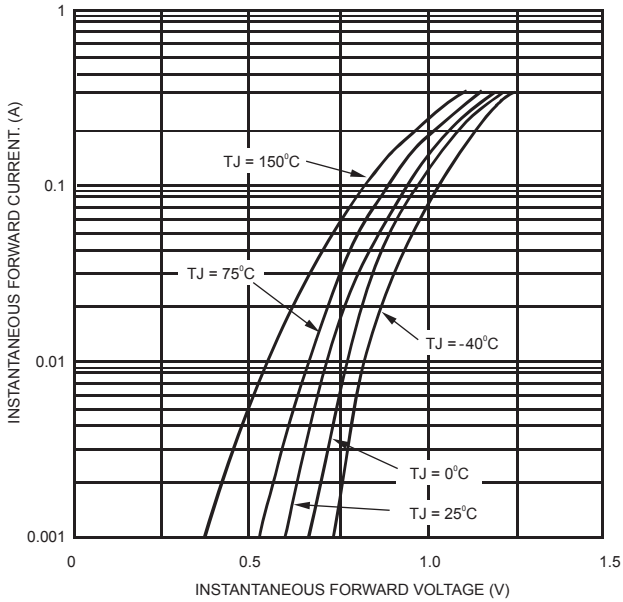


FIG.2- POWER DERATING CURVE

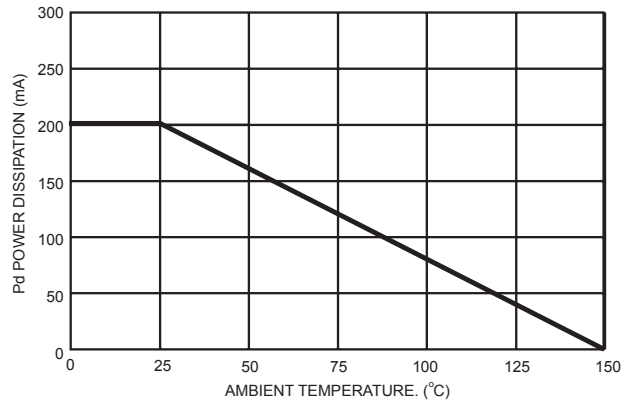


FIG.3- TYPICAL REVERSE CHARACTERISTICS

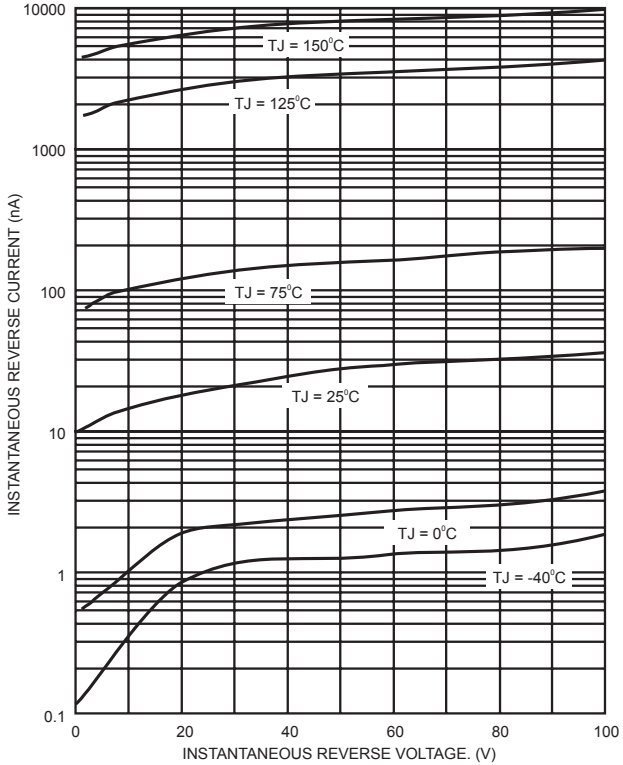


FIG.4- TYPICAL CAPACITANCE VS REVERSE VOLTAGE

