



## DESCRIPTION

The 1N4448WS is available in SOD-323 package.

## FEATURE

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance

## MECHANICAL DATA

- Case: SOD-323, Plastic
- Case Material-UL Flammability Rating
- Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020A
- Polarity: Cathode Band
- Terminals: Solderable per MIL-STD-202, Method 208
- Weight: 0.004 grams(approx.)

## PIN DESCRIPTION



SOD-323

PIN#	DESCRIPTION
1	CATHODE
2	ANODE

## ORDERING INFORMATION

Package Type	Part Number
SOD-323	1N4448WS
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	



## ABSOLUTE MAXIMUM RATINGS

$T_A = 25^\circ\text{C}$ , unless otherwise specified

$V_{RM}$ , Non-Repetitive Peak Reverse Voltage		100V
$V_{RRM}$ , Peak Repetitive Reverse Voltage		75V
$V_{RWM}$ , Working Peak Reverse Voltage		75V
$V_R$ , DC Blocking Voltage		75V
$V_{R(\text{RMS})}$ , RMS Reverse Voltage		53V
$I_{FM}$ , Forward Continuous Current		500mA
$I_o$ , Average Rectified Output Current		250mA
$I_{FSM}$ , Non-Repetitive Peak Forward	$t=1.0\mu\text{s}$	4A
Surge Current	$t=1.0\text{s}$	2A
$P_d$ , Power Dissipation*		200mW
$R_{\theta JA}$ , Thermal Resistance Junction to Ambient*		625°C/W
$T_J$ , Junction Temperature Range		-65°C ~ + 150°C
$T_{STG}$ , Storage Temperature Range		-65°C ~ + 150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

\*Part mount on FR-4 PC board with minimum recommended pad layouts.

## ELECTRICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$ , Unless Otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage*	$V_{(BR)R}$	$I_R = 2.5\mu\text{A}$	75	-	-	V
Forward Voltage*	$V_F$	$I_F = 5\text{mA}$	0.620	-	0.720	V
		$I_F = 10\text{mA}$	-	-	0.855	
		$I_F = 100\text{mA}$	-	-	1.000	
		$I_F = 150\text{mA}$	-	-	1.250	
Peak Reverse Current*	$I_{RM}$	$V_R = 75\text{V}$	-	-	2.5	$\mu\text{A}$
		$V_R = 75\text{V}, T_J = 150^\circ\text{C}$	-	-	50	
		$V_R = 25\text{V}, T_J = 150^\circ\text{C}$	-	-	30	
		$V_R = 20\text{V}$	-	-	25	
Total Capacitance	$C_T$	$V_R = 0, f = 1\text{MHz}$	-	-	4	pF
Reverse Recovery Time	$T_{rr}$	$I_F = I_R = 10 \text{ mA}$ , $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns

\*Short duration test pulsed to minimize self-heating.



## TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Forward Current Derating Curve

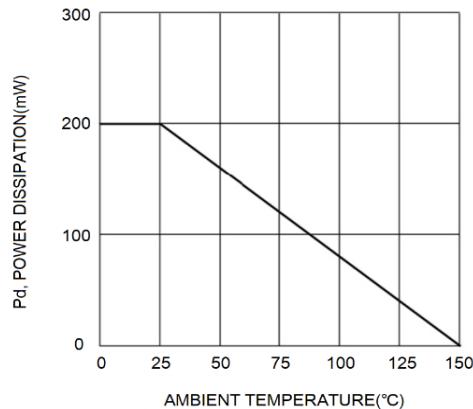


Fig 2. Typical Forward Characteristics

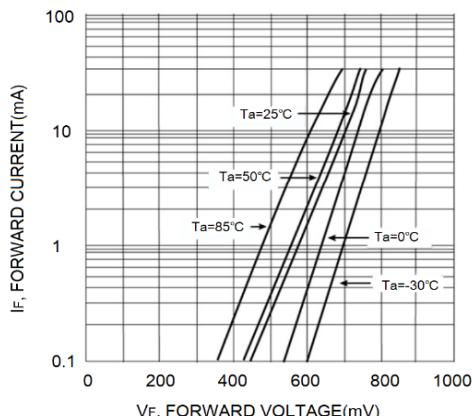


Fig 3. Typical Reverse Characteristics

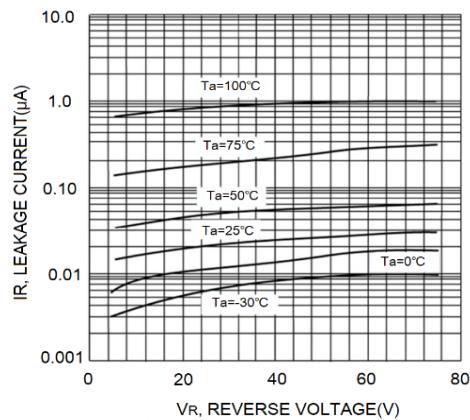


Fig 4. Reverse Recovery Time vs. Forward Current

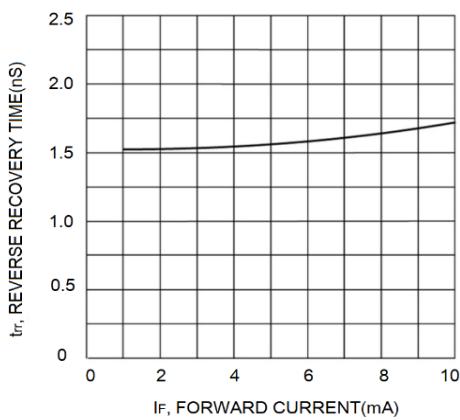
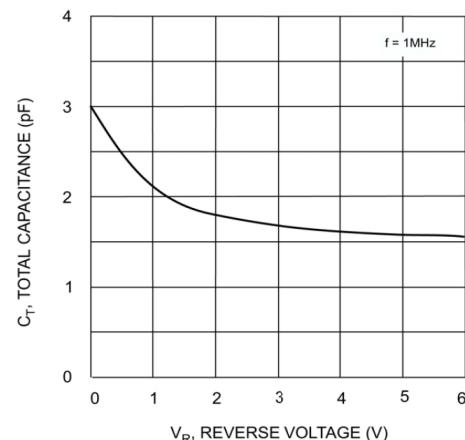


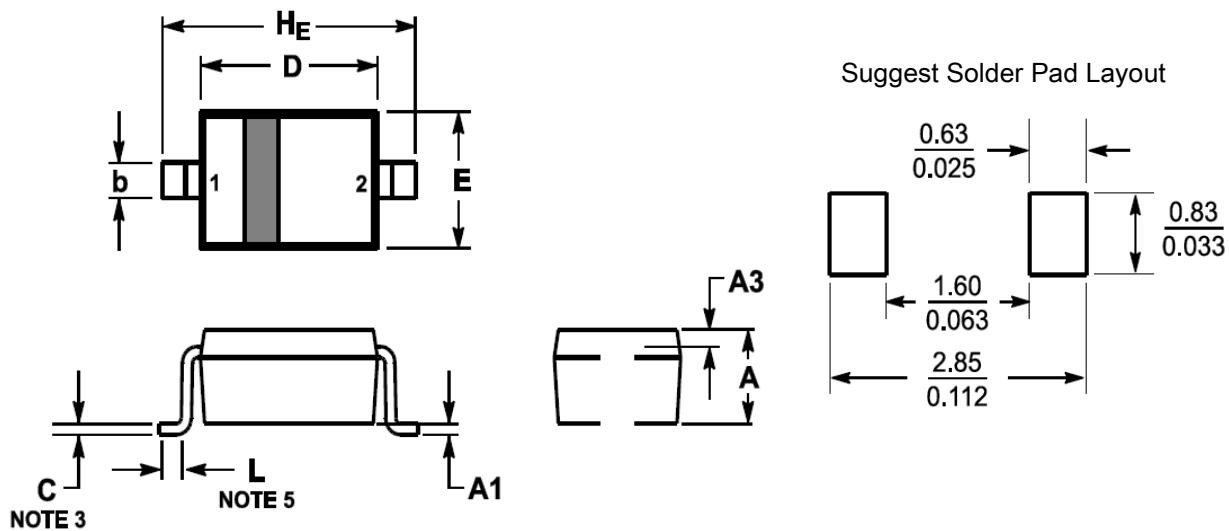
Fig 5. Total Capacitance vs. Reverse Voltage





### PACKAGE INFORMATION

Dimension in SOD-323 Package (Unit: mm)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.80	1.00	0.031	0.040
A1	0.00	0.10	0.000	0.004
A3	0.15 REF		0.006 REF	
b	0.25	0.40	0.010	0.016
C	0.089	0.177	0.003	0.007
D	1.60	1.80	0.062	0.070
E	1.15	1.35	0.045	0.053
L	0.08	-	0.003	-
$H_E$	2.30	2.70	0.090	0.105



**AiT Semiconductor Inc.**

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**1N4448WS**

SWITCHING DIODE

FORWARD VOLTAGE 1.25V CURRENT 150mA RECOVERY 4ns

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