

# 1N4448WS-AH

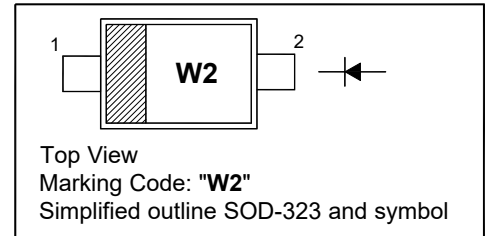
## Silicon Epitaxial Planar Switching Diode

### Features

- AEC-Q101 Qualified
- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications
- High conductance
- Halogen and Antimony Free(HAF), RoHS compliant

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



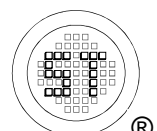
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	80	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Forward Continuous Current	$I_{FM}$	300	mA
Non-Repetitive Peak Forward Surge Current (at $t = 1\text{ }\mu\text{s}$ )	$I_{FSM}$	0.5	A
Power Dissipation	$P_d$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	625	$^\circ\text{C/W}$

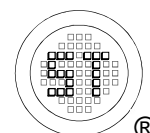
<sup>1)</sup> Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



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## Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 5\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 100\text{ mA}$ at $I_F = 150\text{ mA}$	$V_F$	0.62 - - -	0.72 0.855 1 1.25	V
Reverse Leakage Current at $V_R = 80\text{ V}$ at $V_R = 20\text{ V}$ at $V_R = 75\text{ V}$ , $T_J = 150\text{ }^\circ\text{C}$ at $V_R = 25\text{ V}$ , $T_J = 150\text{ }^\circ\text{C}$	$I_R$	- - - -	100 25 50 30	nA nA $\mu\text{A}$ $\mu\text{A}$
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	80	-	V
Total Capacitance at $V_R = 0.5\text{ V}$ , $f = 1\text{ MHz}$	$C_{tot}$	-	4	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ , $I_{rr} = 0.1 \times I_R$ , $V_R = 6\text{ V}$ , $R_L = 100\text{ }\Omega$	$t_{rr}$	-	4	ns



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## Electrical Characteristics Curves

Fig 1. Power Derating Curve

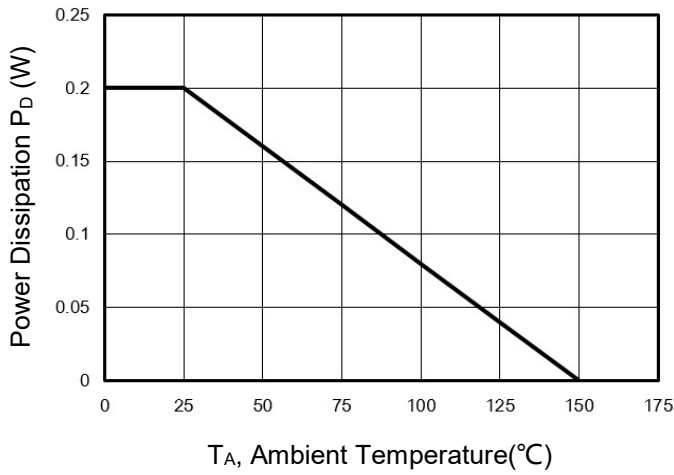


Fig 2. Capacitance characteristics

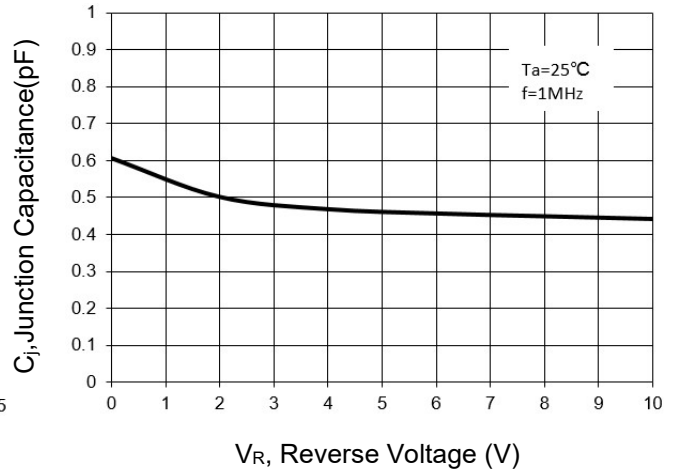


Fig 3. Reverse Characteristics

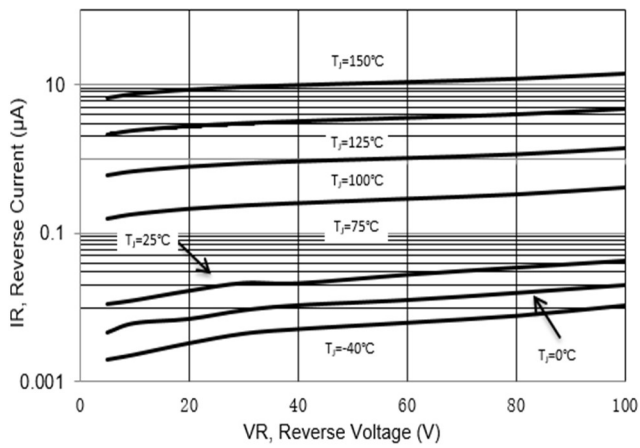
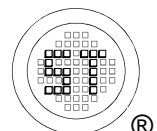
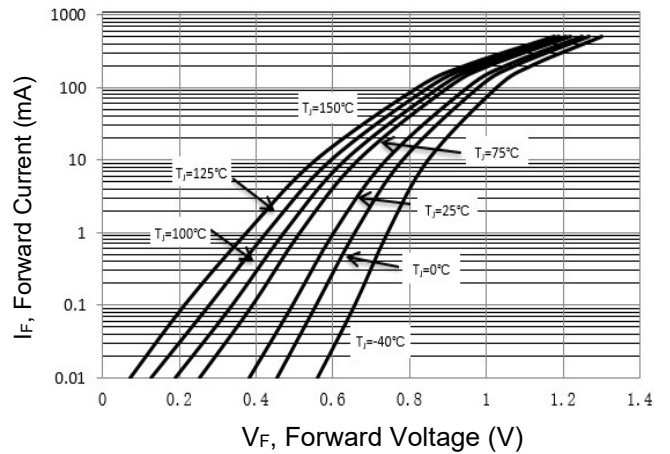


Fig 4. Forward Characteristics

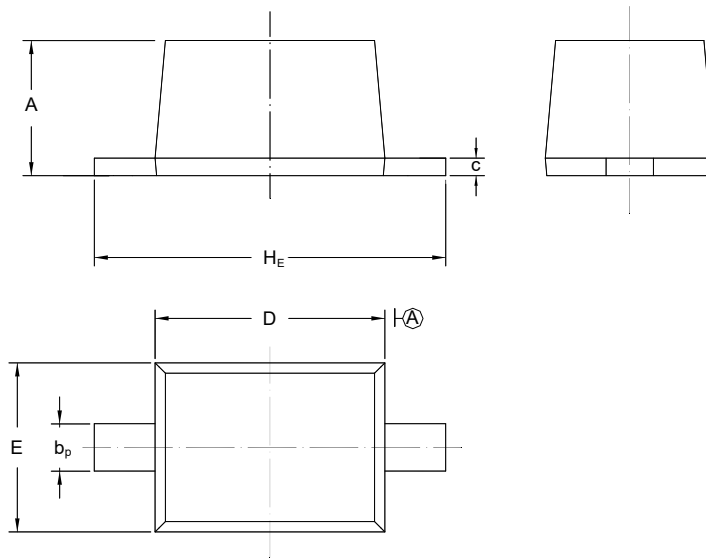


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## PACKAGE OUTLINE

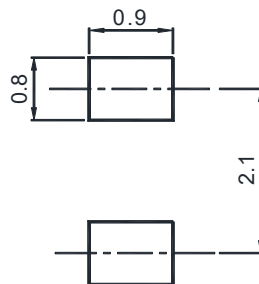
Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b <sub>p</sub>	C	D	E	H <sub>E</sub>
mm	1.10 0.80	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30

## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

" III " = Cathode line

" • " = HAF (Halogen and Antimony Free)

" W2 " = Part No.

Font type: Arial

