

# 1N4148WS

ROHS

SOD-323 Plastic-Encapsulate Switching Diode

## Features

- ◆ Fast Switching Speed
- ◆ High Conductance
- ◆ For General Purpose Switching Applications
- ◆ Surface Mount Package Ideally Suited for Automatic Insertion

## Mechanical Data

- ◆ Case: SOD-323
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Polarity: Color band denotes cathode end
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Lead Finish : Lead Free
- ◆ Device Marking: T4

## Mechanical Characteristics

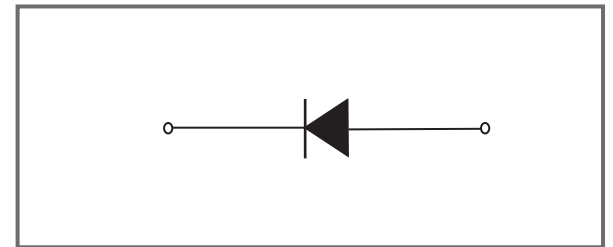
Parameter	Symbol	Value	Units
Repetitive Peak Reverse Voltage	VRRM	100	V
Reverse Voltage	VR	100	V
Repetitive Peak Forward Current	IFM	0.3	A
Average Rectified Output Current	Io	0.15	A
Non-repetitive Peak Forward Surge Current @t=8.3ms	IFSM	2.0	A
Power Dissipation	PD	0.2	W
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	625	°C/W
Junction Temperature	TJ	150	°C
Storage Temperature	Tstg	-55~+150	°C



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## Functional Diagram



**Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)**

Parameter	Symbol	Test Conditions	Value		Units
			Min.	Max.	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =20V	-	0.025	μA
		V <sub>R</sub> =75V	-	1.0	μA
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1mA	-	0.715	V
		I <sub>F</sub> =10mA	-	0.855	V
		I <sub>F</sub> =50mA	-	1.0	V
		I <sub>F</sub> =150mA	-	1.25	V
Capacitance Between Terminals	C <sub>T</sub>	V <sub>R</sub> =0V, f=1MHz	-	2.0	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100Ω	-	4.0	ns

Electrical Characteristics Curves

Fig.1 Forward Characteristics

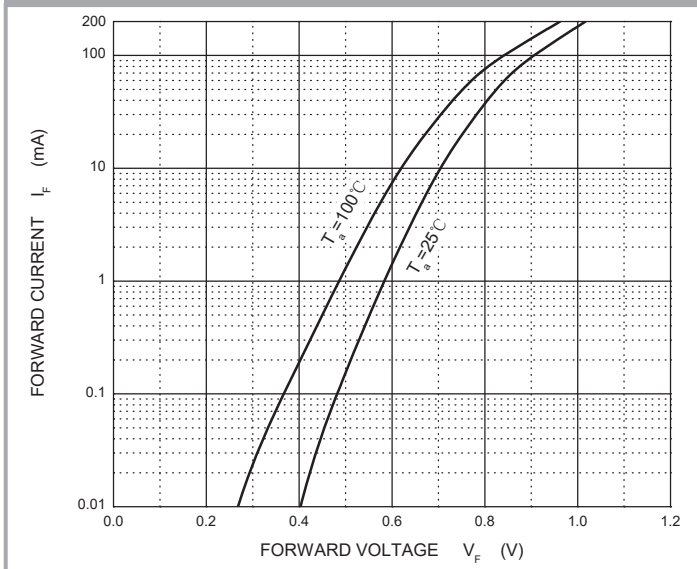


Fig.2 Reverse Characteristics

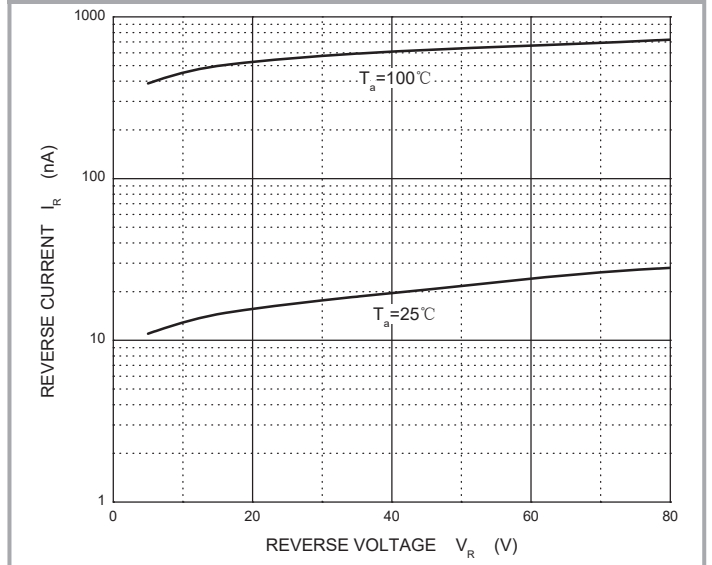


Fig.3 Capacitance Characteristics

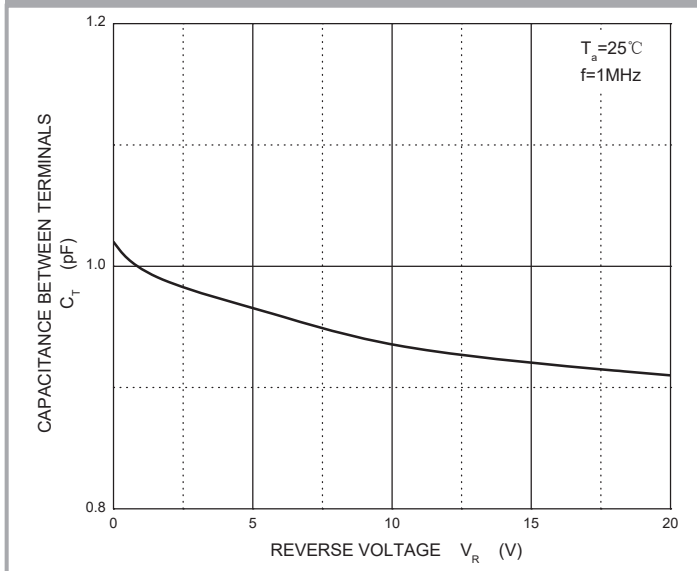
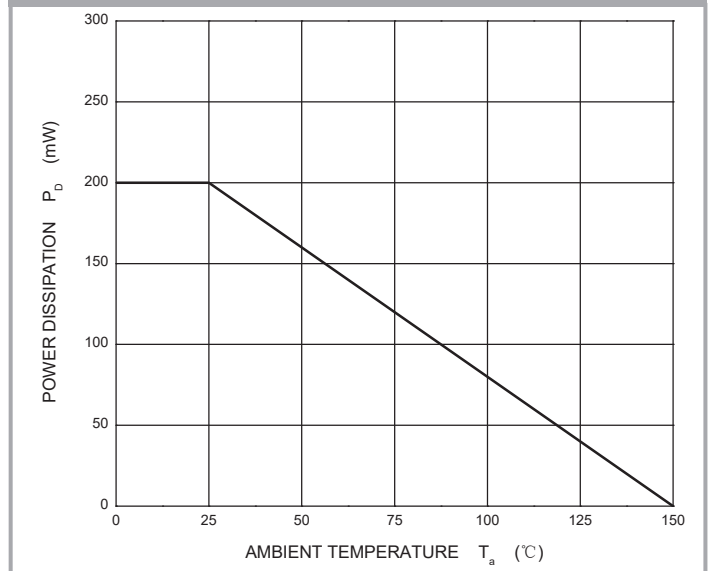
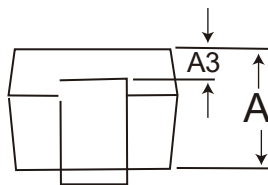
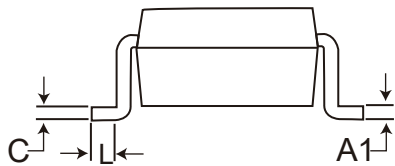
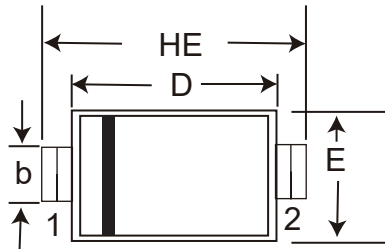


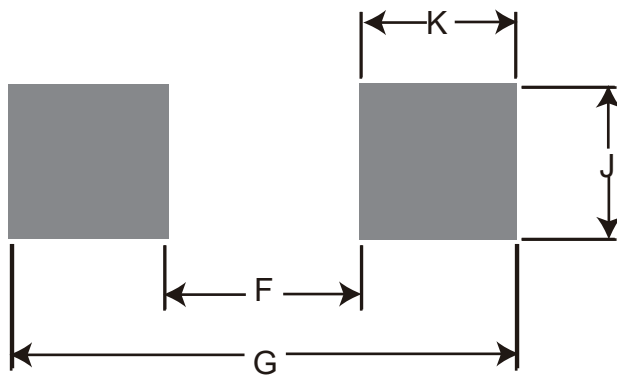
Fig. 4 Power Derating Curve



SOD-323 Package Outline & Dimensions



Soldering Footprint



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15REF			0.006REF		
b	0.25	0.32	0.40	0.010	0.012	0.016
c	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
HE	2.30	2.50	2.70	0.090	0.098	0.105

Symbol	Millimeters	Inches
F	1.60	0.063
G	2.85	0.112
J	0.83	0.033
K	0.63	0.025

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