

1N4148WS

200mW Surface Mount Switching Diode-100V

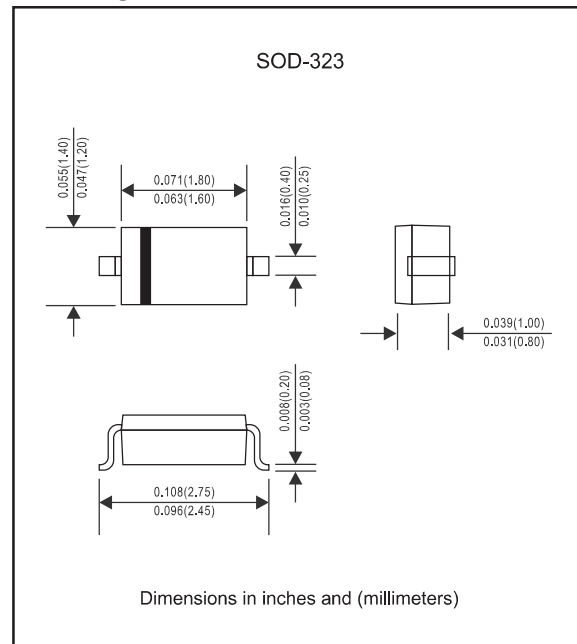
Features

- Fast switching speed.
- Electrically identical to standard JEDEC.
- Surface mount package ideally suited for automatic insertion.
- Tiny plastic SMD package.
- RoHS Compliant
- Green EMC
- High Conductance.
- Silicon epitaxial planar chip.
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-323
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package Outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	Symbol	1N4148WS	UNIT
Maximum reverse voltage	V_R	75	V
Maximum peak reverse voltage	V_{RM}	100	V
Maximum RMS voltage	V_{RMS}	50	V
Maximum DC blocking voltage	V_{DC}	75	V
Maximum average forward current at $T_A = 25^\circ\text{C}$	I_O	150	mA
Maximum peak forward surge current, 1.0us	I_{FSM}	2.0	A
Maximum power dissipation derate above 25°C	P_D	200	mW
Maximum forward voltage	V_F	0.715@ $I_F=0.001A$ 0.855@ $I_F=0.01A$ 1.0@ $I_F=0.05A$ 1.25@ $I_F=0.15A$	V
Maximum DC reverse current at rated DC blocking voltage $T_j = 25^\circ\text{C}$	I_R	0.025@ $V_R=20V$ 1.0@ $V_R=75V$	μA
Typical junction capacitance (Notes 1)	C_J	2.0	pF
Maximum reverse recovery time (Notes 2)	t_{rr}	4.0	ns
Typical thermal resistance junction to ambient	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Notes :

1. C_J at $V_R = 0V$, $f = 1\text{MHz}$

2. From $I_F = 10\text{mA}$ to $I_R = 1\text{mA}$, $V_R = 6V$, $R_L = 100\Omega$

Rating and characteristic curves (1N4148WS)

Fig. 1 TYPICAL FORWARD CHARACTERISTICS

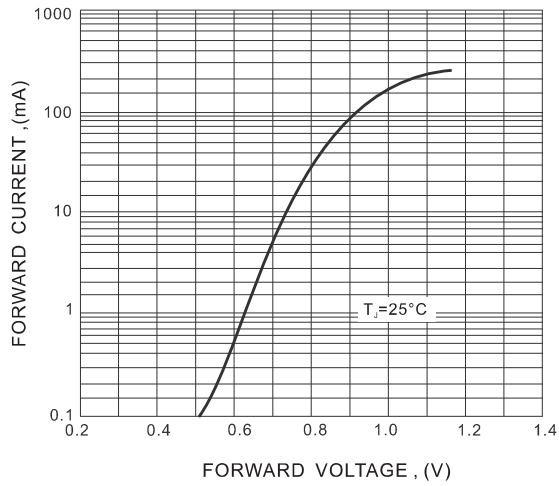


Fig. 2 TYPICAL REVERSE CHARACTERISTICS

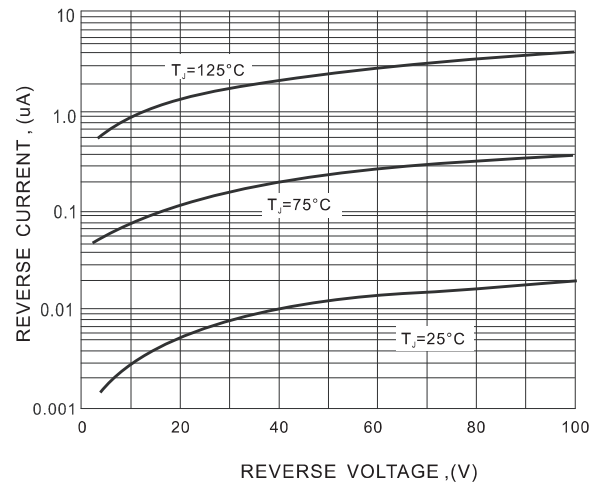
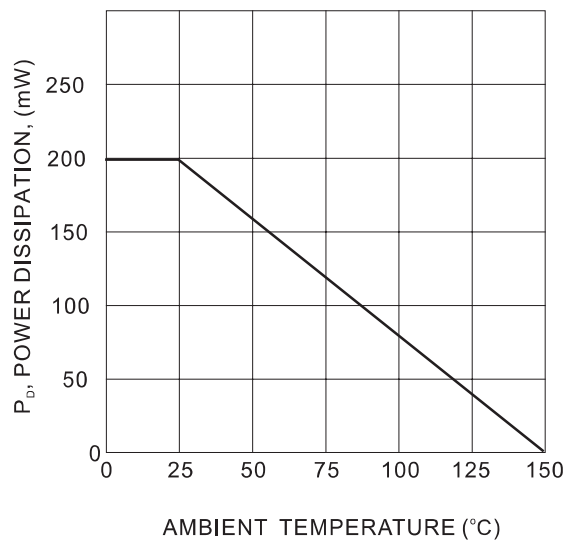


Fig. 3 POWER DERATING CURVE



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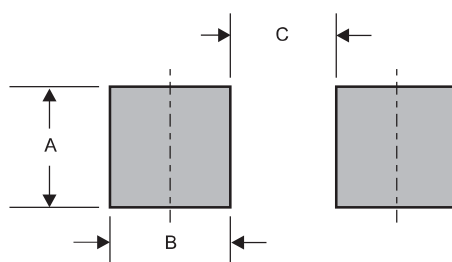
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
1N4148WS	T4

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.033 (0.83)	0.025 (0.63)	0.063 (1.60)

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-323	7"	3000	4.0	30,000	195*195*150	178	460*400*420	360,000	14.8