

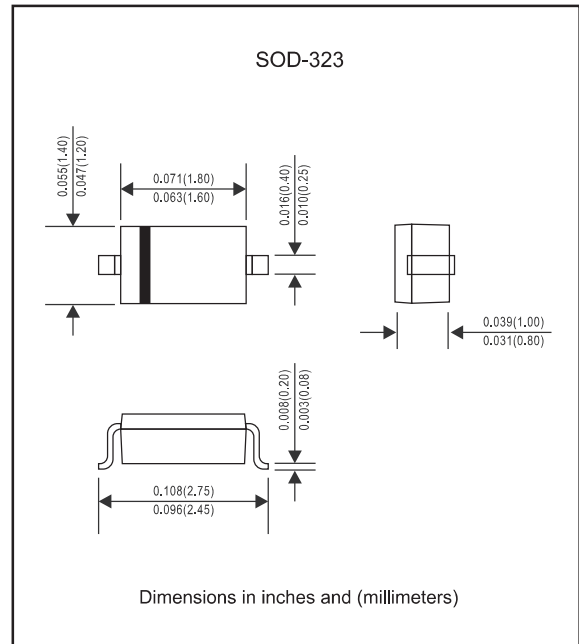
### Features

- 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
- Compliant to Halogen-free

### 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 $25^\circ\text{C}$	$P_D$	200	mW
Maximum forward voltage	$V_F$	0.715@ $I_F=0.001\text{A}$ 0.855@ $I_F=0.01\text{A}$ 1.0@ $I_F=0.05\text{A}$ 1.25@ $I_F=0.15\text{A}$	V
Maximum DC reverse current at rated DC blocking voltage $T_j = 25^\circ\text{C}$	$I_R$	0.025@ $V_R=20\text{V}$ 1.0@ $V_R=75\text{V}$	$\mu\text{A}$
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	$^\circ\text{C}/\text{W}$
Operating junction and Storage Temperature Range	$T_j, T_{STG}$	-55 to +150	$^\circ\text{C}$

#### Notes :

1.  $C_J$  at  $V_R = 0\text{V}$ ,  $f = 1\text{MHZ}$
2. From  $I_F = 10\text{mA}$  to  $I_R = 1\text{mA}$ ,  $V_R = 6\text{V}$ ,  $R_L = 100\text{ohm}$

## Rating and characteristic curves (1N4148WS)

Fig. 1 TYPICAL FORWARD CHARACTERISTICS

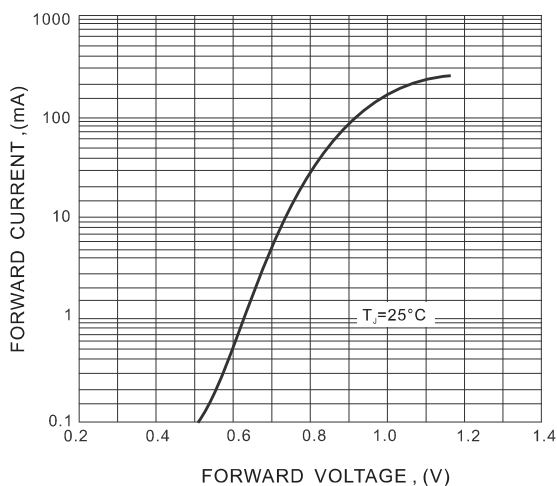


Fig. 2 TYPICAL REVERSE CHARACTERISTICS

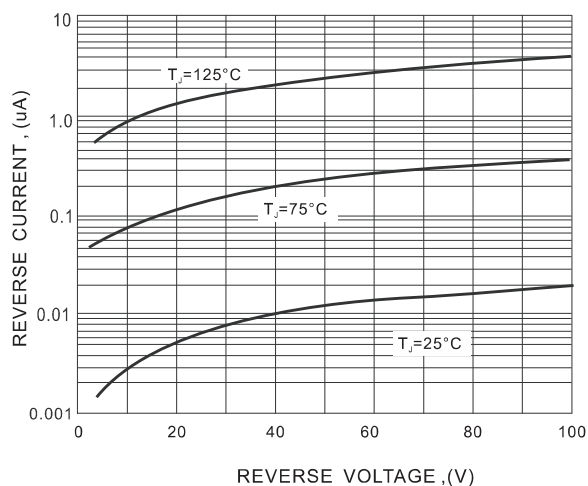
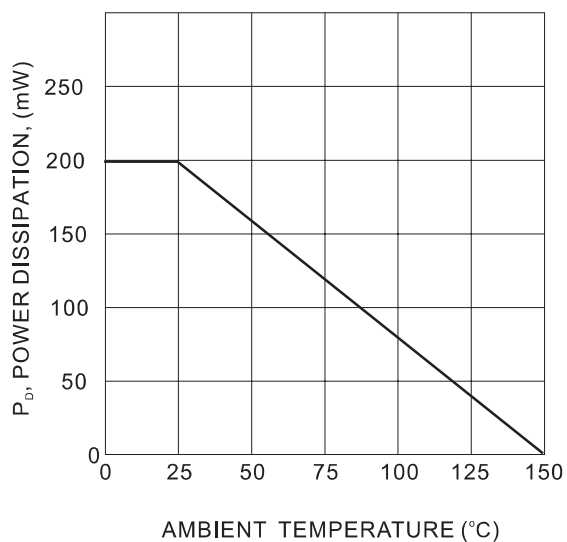




Fig. 3 POWER DERATING CURVE



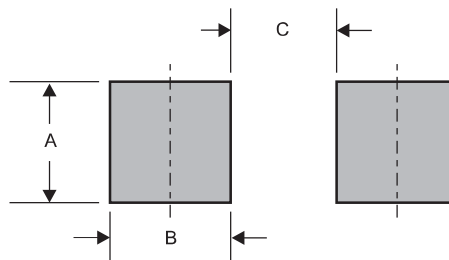
## Pinning information

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)