

Switching Diodes

250mW SOD-323

1N4148WS

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FEATURE

- Power Dissipation: 250mW
- 100V Peak Reverse Voltage
- 200mA Average Forward Current
- Fast Switching Speed
- Electrically Identical to Standard JEDEC
- High Conductance



MECHANICAL DATA

- Case: SOD-323, Molded Plastic
- Terminals: Solderable per MIL-STD, Method 2026
- Polarity: Color Band Denotes Cathode End



MAXIMUM RATING



Parameter	Symbol	Value	Units
Reverse Voltage	V_R	75	V
Maximum DC Blocking Voltage	V_{DC}	75	V
Peak Reverse Voltage	V_{RM}	100	V
RMS Voltage	V_{RMS}	50	V
Maximum Average Forward Current at $T_A=25^\circ\text{C}$	$I_{F(AV)}$	200	mA
Peak Forward Surge Current	I_{FSM}	0.001ms	4.0
		10ms	1.5
		1s	0.5
Power Dissipation Derate above 25°C	P_D	250	mW
Maximum Forward Voltage	V_F	$I_F=1\text{mA}$	0.715
		$I_F=10\text{mA}$	0.855
		$I_F=50\text{mA}$	1.000
		$I_F=150\text{mA}$	1.250
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$V_R=20\text{V}$	0.025
		$V_R=75\text{V}$	2.5
Junction Capacitance Measured at 1MHz and $V_R=0\text{V}$	C_J	1.5	pF
Maximum Reverse Recovery Time	T_{RR}	4	ns
Typical Thermal Resistance	Note 2	$R_{\theta JA}$	500
	Note 3	$R_{\theta JA}$	650
	Note 5	$R_{\theta JC}$	280
	Note 5	$R_{\theta JL}$	400
Operating and Storage Temperature Range	T_J, T_{STG}	-55~150	$^\circ\text{C}$

Note:

1. $T_A = 25^\circ\text{C}$ unless otherwise specified.
2. Mounted on a FR4, single-sided copper, with 50x15mm PCB.
3. Mounted on a FR4, single-sided copper, with mini pad.
4. From $I_F=10\text{mA}$ to $I_R=1\text{mA}$, $V_R=6\text{V}$, $R_L=100\Omega$.
5. Mounted on a FR4 PCB, single-sided copper, mini pad, with 100cm² copper pad area.

Switching Diodes

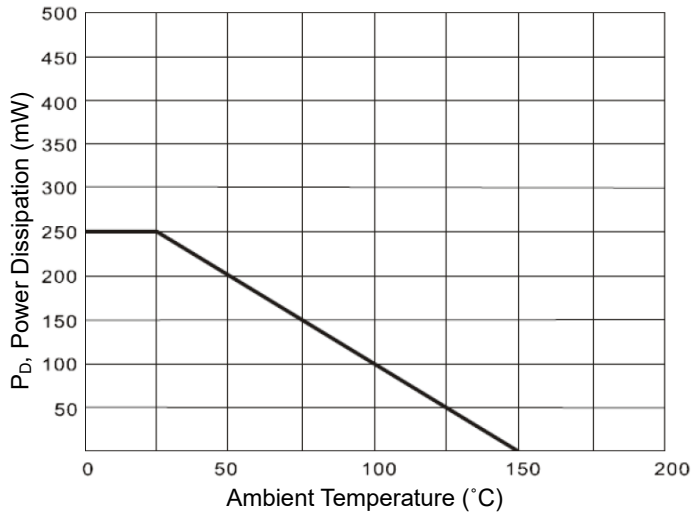
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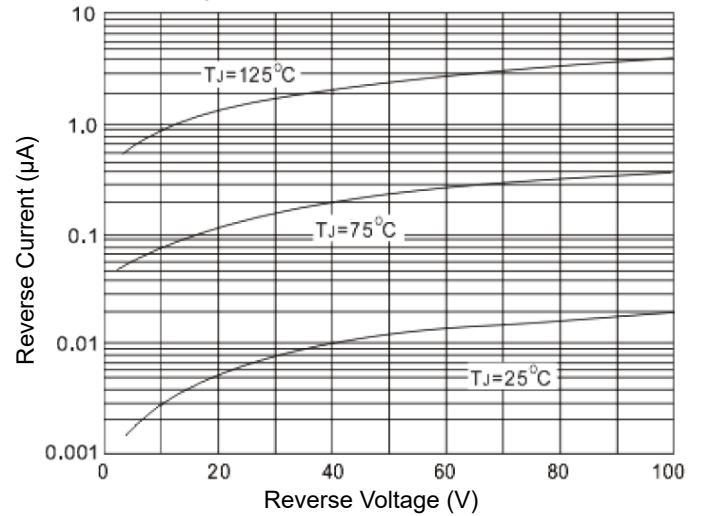
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CHARACTERISTIC CURVES

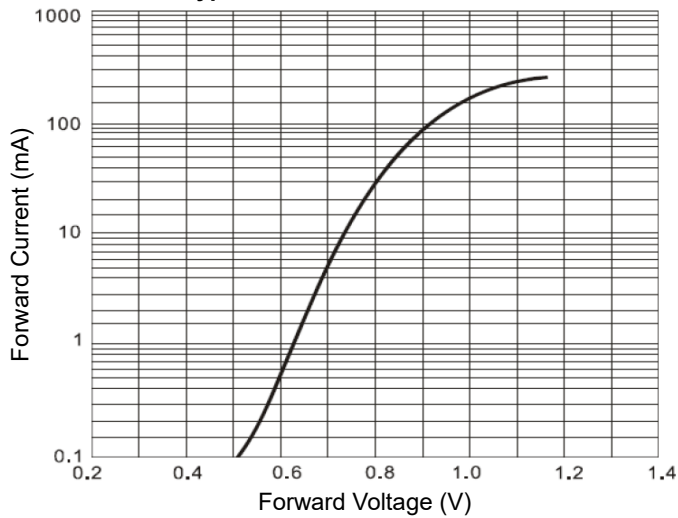
Power Derating Curve



Typical Reverse Characteristics



Typical Forward Characteristics



Switching Diodes

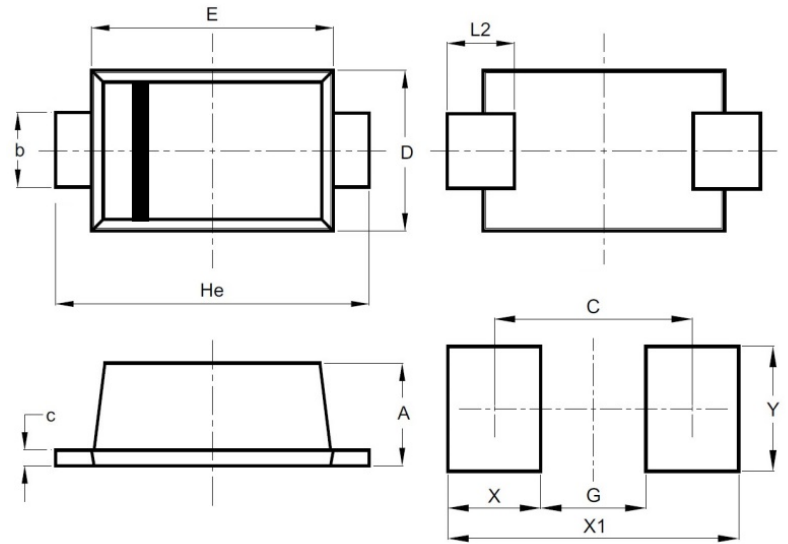
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DIMENSIONS

SOD-323	Min (mm)	Max (mm)
A	0.70	0.95
b	0.25	0.35
c	0.05	0.15
D	1.15	1.35
E	1.75	1.95
He	2.30	2.70
L2	0.30	-
G	1.44	
C	2.17	
X	0.73	
X1	2.90	
Y	0.50	



*Specifications subject to change without notice.