

# Switching Diodes

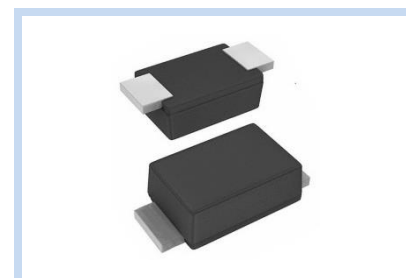
## 250mW SOD-323 AEC-Q101

1N4148WS-AU

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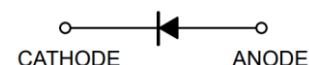
### FEATURE

- Power Dissipation: 250mW
- 100V Peak Reverse Voltage
- 200mA Average Forward Current
- Fast Switching Speed
- Electrically Identical to Standard JEDEC
- High Conductance
- AEC-Q101 Qualified



### 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 A
		10ms	1.5 A
		1s	0.5 A
Power Dissipation Derate above $25^\circ\text{C}$	$P_D$	250	mW
Maximum Forward Voltage	$V_F$	$I_F=1\text{mA}$	0.715 V
		$I_F=10\text{mA}$	0.855 V
		$I_F=50\text{mA}$	1.000 V
		$I_F=150\text{mA}$	1.250 V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$V_R=20\text{V}$	0.025 $\mu\text{A}$
		$V_R=75\text{V}$	2.5 $\mu\text{A}$
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 1	$R_{\theta JA}$	500 $^\circ\text{C/W}$
	Note 2	$R_{\theta JA}$	650 $^\circ\text{C/W}$
	Note 4	$R_{\theta JC}$	280 $^\circ\text{C/W}$
	Note 4	$R_{\theta JL}$	400 $^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55~150	$^\circ\text{C}$

Note:

- $T_A = 25^\circ\text{C}$  unless otherwise specified.
- Mounted on a FR4, single-sided copper, with 50x15mm PCB.
- Mounted on a FR4, single-sided copper, with mini pad.
- From  $I_F=10\text{mA}$  to  $I_F=1\text{mA}$ ,  $V_A=6\text{V}$ ,  $R_L=100\Omega$ .
- Mounted on a FR4 PCB, single-sided copper, mini pad, with 100cm<sup>2</sup> copper pad area.

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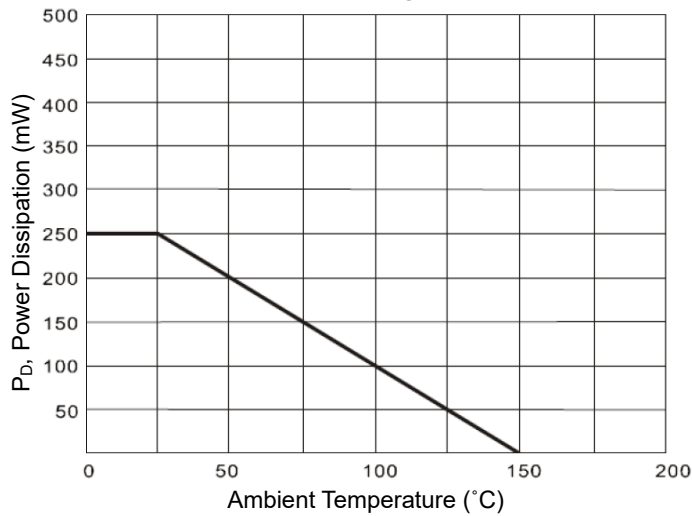
## 250mW SOD-323 AEC-Q101

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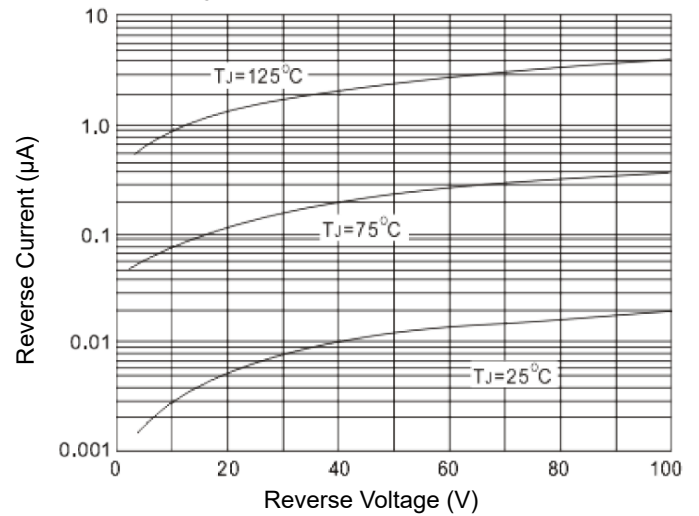
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### CHARACTERISTIC CURVES

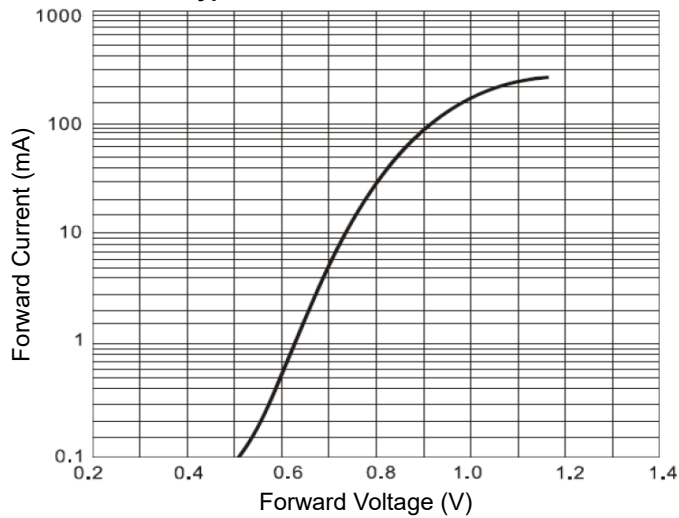
Power Derating Curve



Typical Reverse Characteristics



Typical Forward Characteristics



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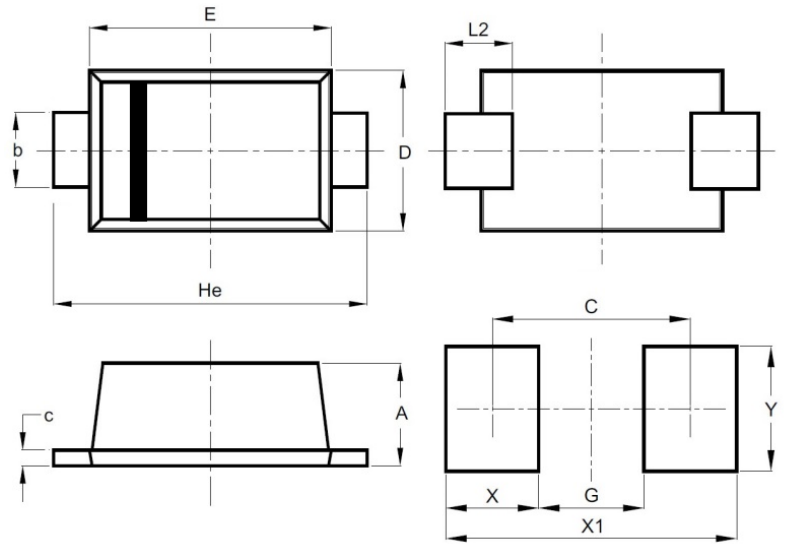
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### DIMENSIONS

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.