

SOD-323 Fast Switching Diodes

Features

- Fast Switching Device ($T_{RR} < 4\text{nS}$)
- Power Dissipation of 250mW
- High Stability and High Reliability
- Low reverse leakage

Applications

Small signal switching
Ultra high speed switching application

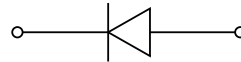
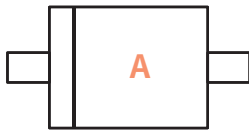
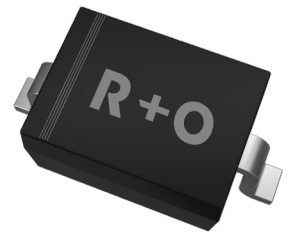
Mechanical Data

- Case: SOD-323
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage
80 V
Forward Current
0.1 Ampere

SOD-323



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	V_{RRM}	V	80
Maximum RMS Voltage	V_{RMS}	V	80
Reverse Breakdown voltage @ $I_R=100\mu\text{A}$	$V_{(BR)R}$	V	90
Maximum Average Forward Rectified Current	$I_{F(AV)}$	mA	100
Non-Repetitive Peak forward surge current @ $t_p=1.0\text{ms}$	I_{FSM}	mA	500
Power Dissipation	P_d	mW	250
Storage temperature	T_{stg}	°C	-55 ~ +150
Junction temperature	T_j	°C	150
Typical thermal resistance	$R_{\theta J-A}$	°C /W	625

● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Type	Max
Maximum instantaneous forward voltage	I _F =100mA	V _F	V	—	1.2	—
Reverse Leakage Current	V _R =80V	I _R	μA	—	—	0.1
Total capacitance	V _R =0V,f=1MHz	C _T	pF	—	—	3.0
Maximum reverse recovery time	I _F =10mA, V _R =6V, I _{rr} =0.1×I _R , R _L =100Ω	T _{rr}	ns	—	—	4.0

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)

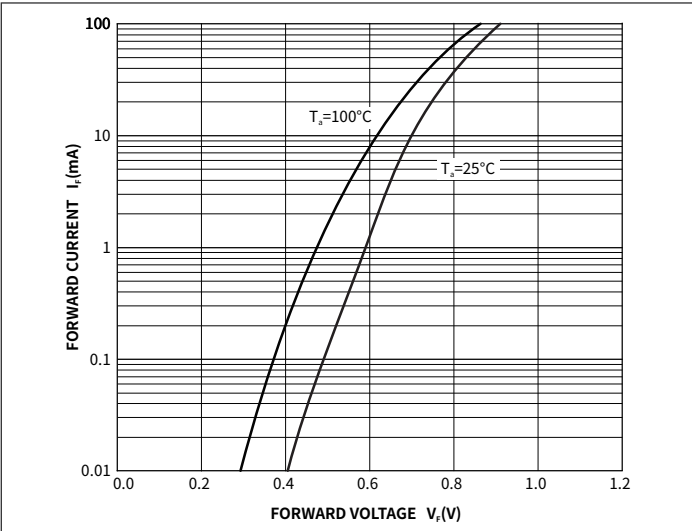


Fig.1 Typical Instantaneous Forward Characteristics

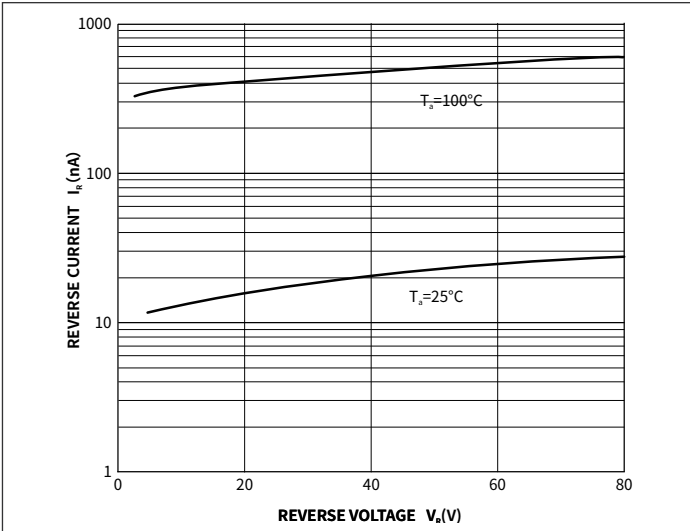


Fig.2 Typical Reverse Characteristics

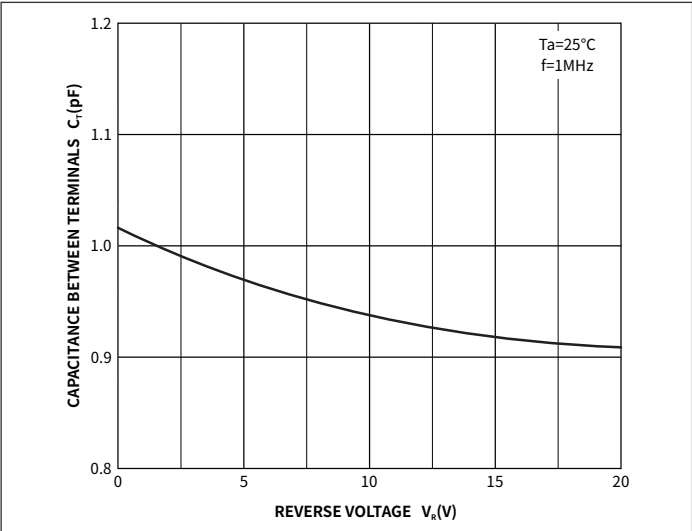


Fig.3 Typical Junction Capacitance

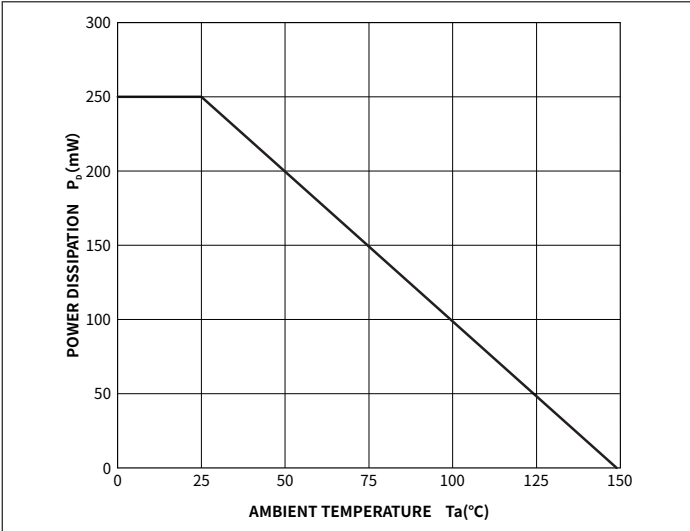


Fig.4 Power Derating Curve

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-323	R1	0.0048	3000	45000	180000	7"

● Package Outline Dimensions (SOD-323)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.80	0.063	0.071
B	0.25	0.40	0.010	0.016
C	2.30	2.80	0.091	0.110
D	0.80	1.10	0.031	0.043
D ₁	0.80	0.90	0.031	0.035
E	1.20	1.40	0.047	0.055
F	0.08	0.18	0.003	0.007
L	0.475REF		0.019REF	
L ₁	0.25	0.40	0.010	0.016
H	-	0.14	-	0.006

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
X	0.65	0.75	0.026	0.030
Y	0.65	0.75	0.026	0.030
Z	2.10	2.20	0.084	0.088