

## SOD-323 Surface Mount Schottky Barrier Rectifier

### Features

- $V_R=40V$
- $I_{F(AV)}=0.2A$
- Low Turn-on Voltage
- Fast switching speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

### Applications

For use in low voltage high frequency circuit signals.

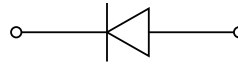
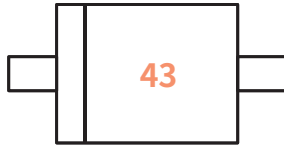
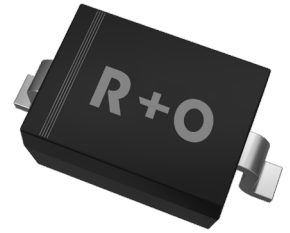
### Mechanical Data

- 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**  
40 V  
**Forward Current**  
0.2 Ampere

SOD-323



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

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	$V_{RRM}$	V	40
Maximum RMS voltage	$V_{RMS}$	V	40
Maximum DC blocking voltage	$V_{DC}$	V	40
Maximum average forward rectified current	$I_{F(AV)}$	A	0.2
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	$I_{FSM}$	A	0.6
Power Dissipation	$P_D$	mW	200
Junction Temperature	$T_j$	°C	125
Storage temperature range	$T_{STG}$	°C	-55 ~+150
Typical thermal resistance	$R_{\theta JA}$	°C /W	500

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Type	Max
Maximum forward voltage	$I_F=1.0\text{mA}$	$V_F$	V	—	—	0.38
	$I_F=10\text{mA}$			—	—	0.5
	$I_F=40\text{mA}$			—	—	1.0
Maximum reverse current	$V_R=30\text{V}$	$I_{R1}$	nA	—	20	200
Capacitance between terminals	$V_R=10\text{V}, f=1.0\text{MHz}$	$C_T$	pF	—	4.0	5.0
Reverse recovery time	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$	$t_{rr}$	ns	—	—	5.0

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

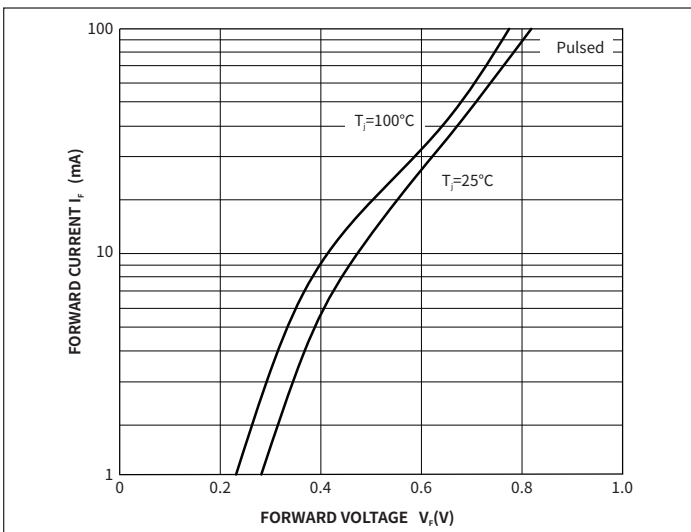


Fig.1 Typical Instantaneous Forward Characteristics

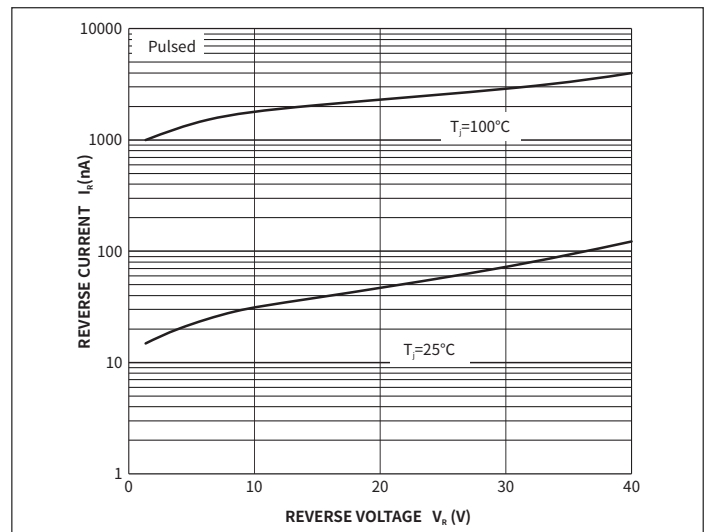


Fig.2 Typical Reverse Characteristics

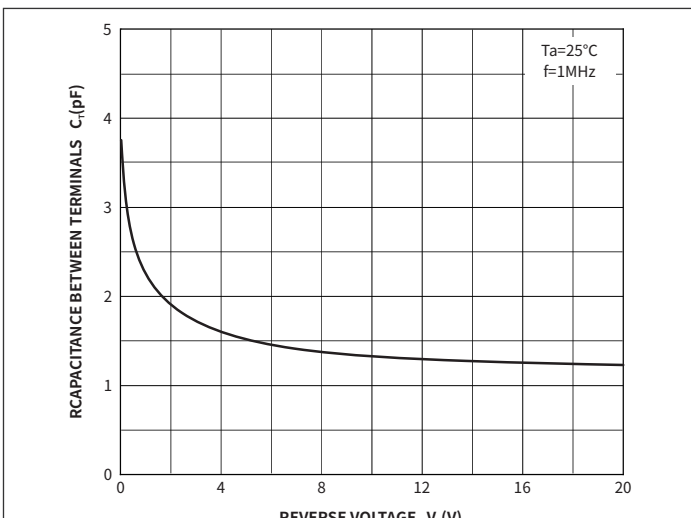


Fig.3 Typical Junction Capacitance

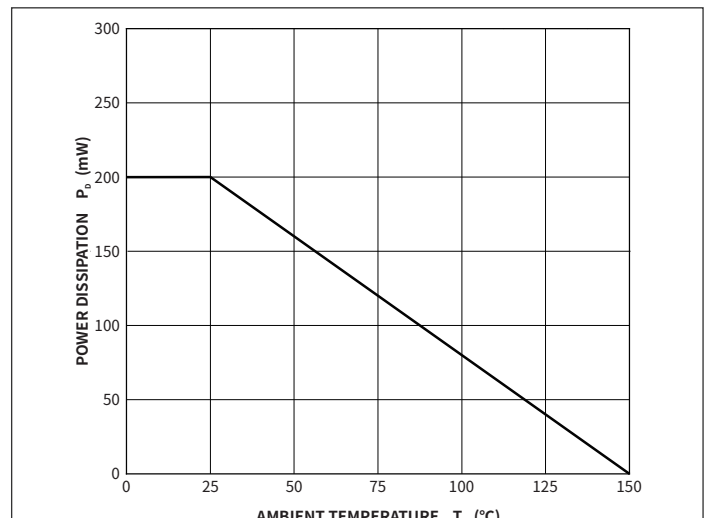


Fig.4 Power Derating Curve

## 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 <sub>1</sub>	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 <sub>1</sub>	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

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