

SOD-323 Surface Mount Schottky Barrier Rectifier

Features

- $V_R=45V$
- $I_{F(AV)}=0.1A$
- 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.

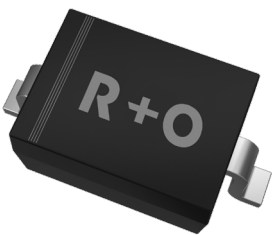
Mechanical Data

- 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
45 V
Forward Current
0.1 Ampere

SOD-323



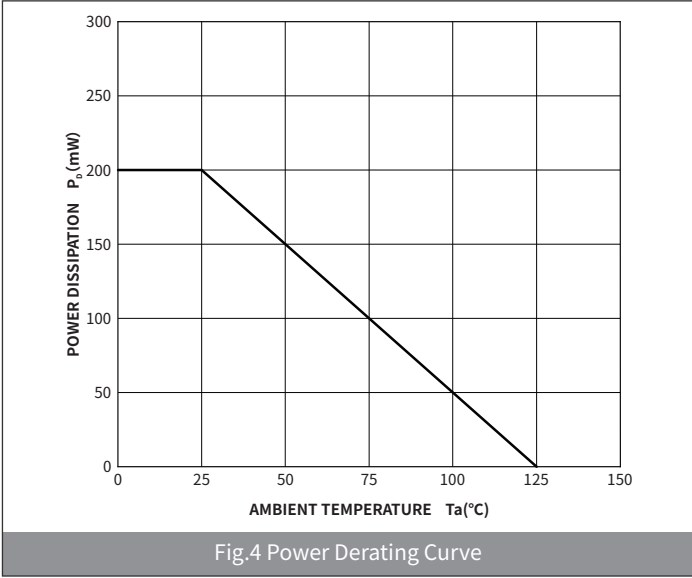
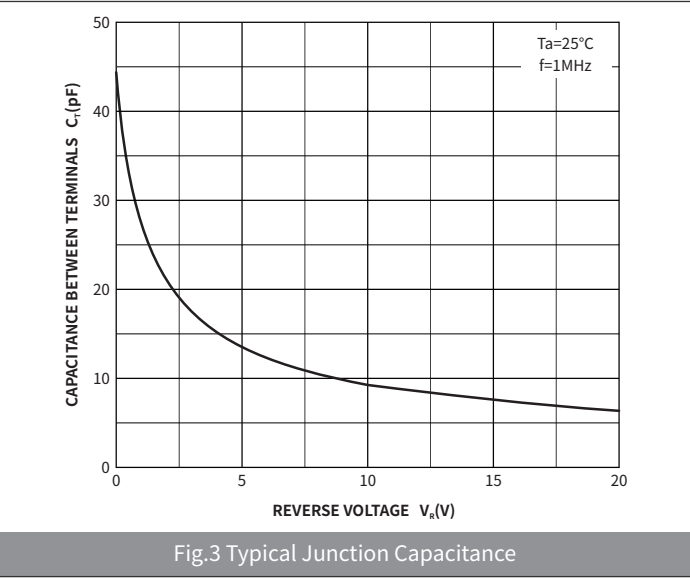
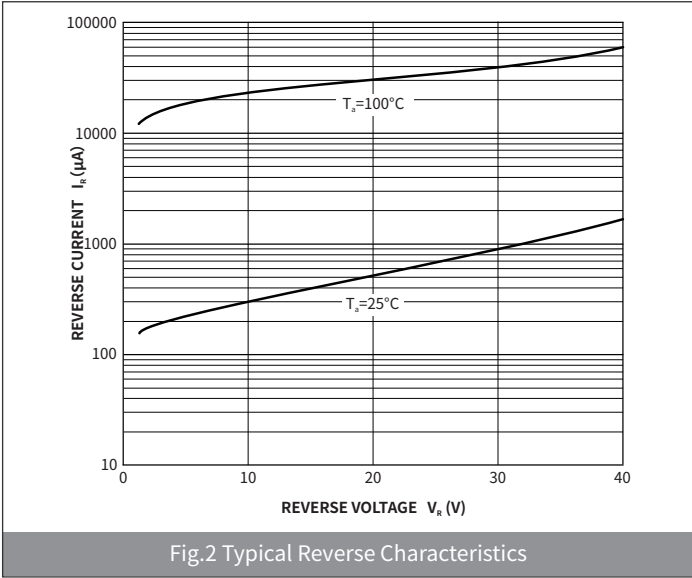
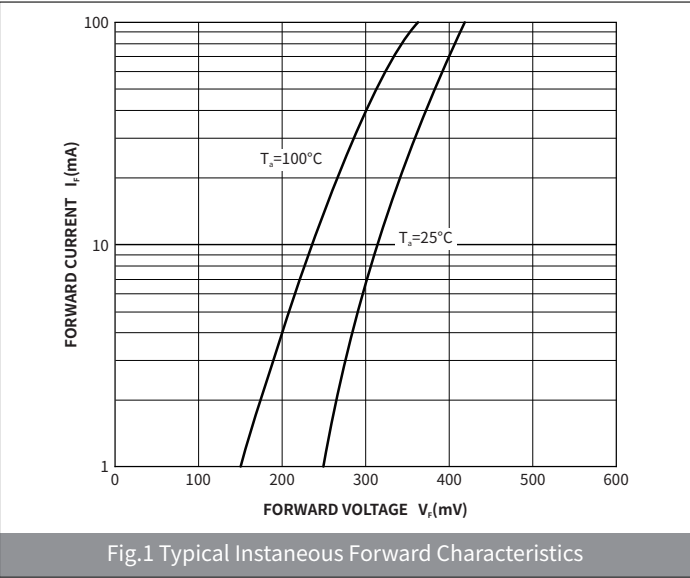
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	V_{RRM}	V	45
Maximum RMS voltage	V_{RMS}	V	40
Maximum DC blocking voltage	V_{DC}	V	40
Maximum average forward rectified current	$I_{F(AV)}$	A	0.1
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	1.0
Power Dissipation	P_D	mW	200
Junction Temperature	T_j	°C	125
Storage temperature range	T_{STG}	°C	-65 ~+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	$I_F=100\text{mA}$	V_F	V	—	—	0.55
	$I_F=10\text{mA}$			—	—	0.34
Maximum reverse current	$V_R=10\text{V}$	I_R	μA	—	—	30
Capacitance between terminals	$V_R=10\text{V}, f=1\text{MHz}$	C_T	pF	—	6	—

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



RB501V-40

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● 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