

SD103AWS THRU SD103CWS

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SOD-323 Surface Mount Schottky Barrier Rectifier

Features

- V_R 40V/30V/20V
- $I_{F(AV)}$ 0.35A
- For use in low voltage, high frequency inverters
- Free wheeling, and polarity protection applications

Applications

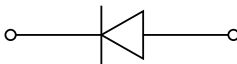
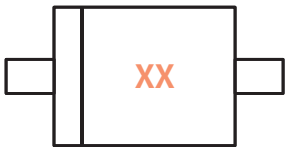
For use in low voltage high frequency circuit signals.

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

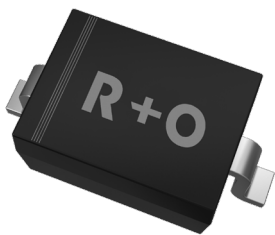
Function Diagram

Marking:
SD103AWS:S4
SD103BWS:S5
SD103CWS:S6



Reverse Voltage
40/30/20 V
Forward Current
0.35 Ampere

SOD-323



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

PARAMETER	SYMBOL	UNIT	SD103AWS	SD103BWS	SD103CWS
Maximum repetitive peak reverse voltage	V_{RRM}	V	40	30	20
Maximum RMS Voltage	V_{RMS}	V	28	21	14
Maximum DC blocking voltage	V_{DC}	V	40	30	20
Maximum Average Forward Rectified Current	$I_{F(AV)}$	mA	350		
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	I_{FSM}	A	1.5		
Power Dissipation	P_d	mW	200		
Storage temperature	T_{stg}	°C	-55~+125		
Junction temperature	T_j	°C	-55 ~+150		
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	500		

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

PARAMETER	TEST CONDITIONS		SYMBOL	UNIT	SD103AWS	SD103BWS	SD103CWS
Maximum instantaneous forward voltage	I _F =20mA		V _{F1}	V	0.37		
	I _F =200mA		V _{F2}		0.60		
Maximum Reverse current	SD103AWS	V _R =30V,T _A =25° C	I _R	μA	5.0		
	SD103BWS	V _R =20V,T _A =25° C					
	SD103CWS	V _R =10V,T _A =25° C					
Typical junction capacitance	V _R =0V,f=1MHz		C _J	pF	50		

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

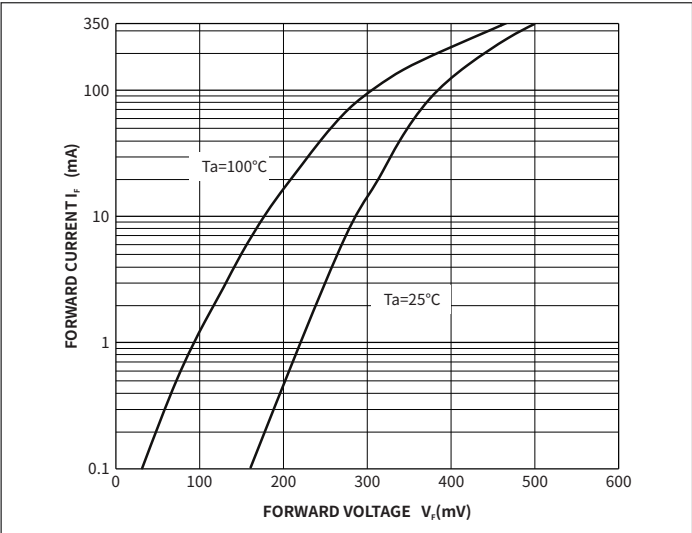


Fig.1 Typical Instantaneous Forward Characteristics

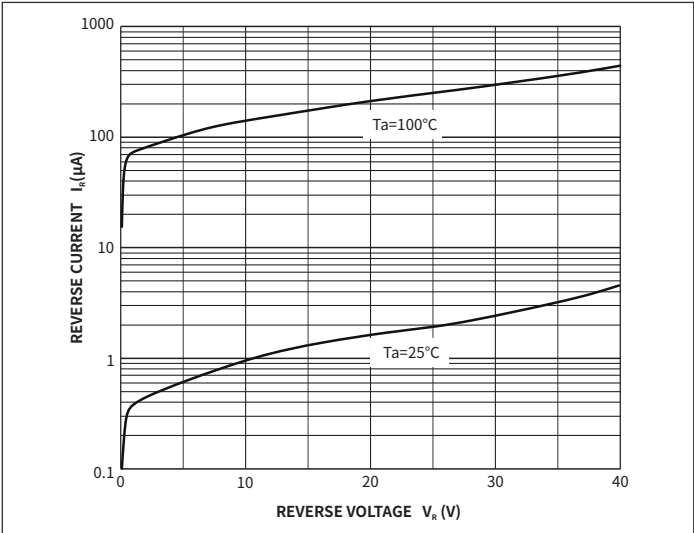


Fig.2 Typical Reverse Characteristics

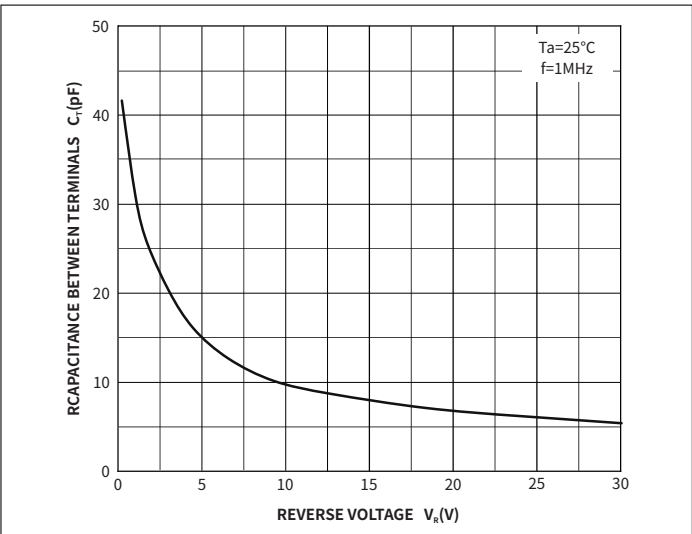


Fig.3 Typical Junction Capacitance

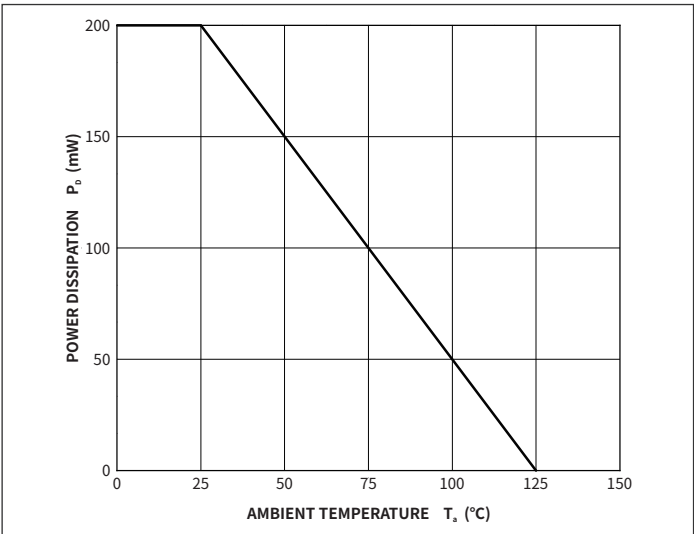


Fig.4 Power Derating Curve

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● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-323	R1	0.0048	3000	30000	120000	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