

SD103AW THRU SD103CW

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SOD-123 Surface Mount Schottky Barrier Rectifier

Features

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

Applications

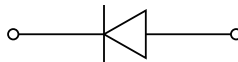
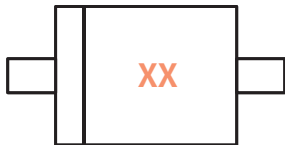
The device is a single rectifier offering low VF and excellent high temperature stability.

Mechanical Data

- Case: SOD-123
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

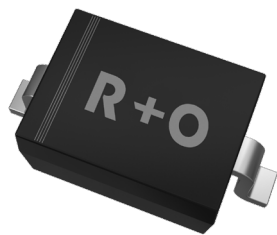
Function Diagram

Marking:
SD103AW:S4
SD103BW:S5
SD103CW:S6



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

SOD-123



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

PARAMETER	SYMBOL	UNIT	SD103AW	SD103BW	SD103CW
Maximum repetitive peak reverse voltage	V_{RRM}	V	40	30	20
Maximum RMS voltage	V_{RMS}	V	28	21	18
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	2.0		
Power Dissipation	P_D	mW	400		
Junction temperature	T_j	°C	125		
Storage temperature range	T_{STG}	°C	-55-+150		
Typical thermal resistance	$R_{\theta J-A}$	°C /W	250		

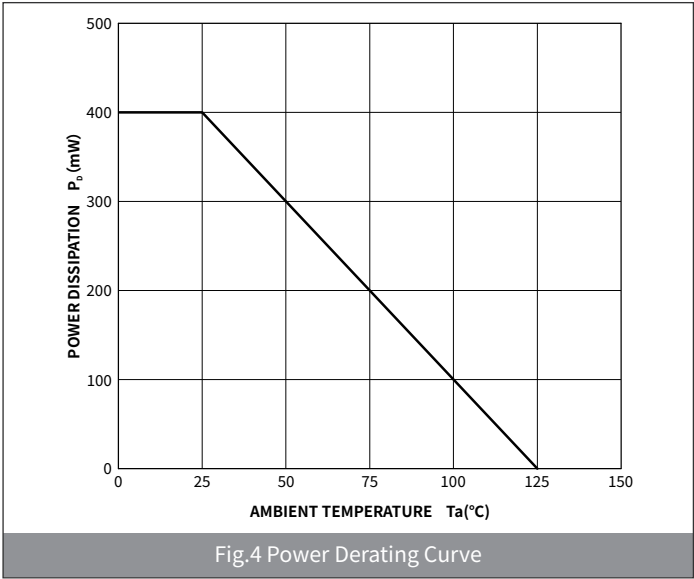
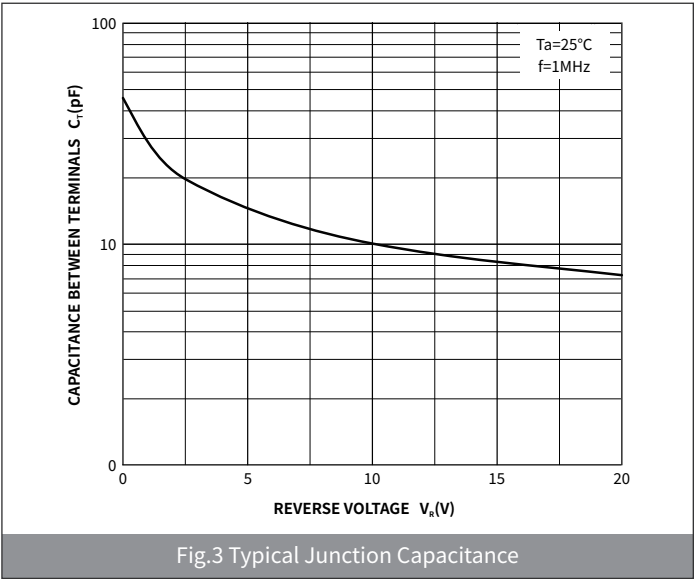
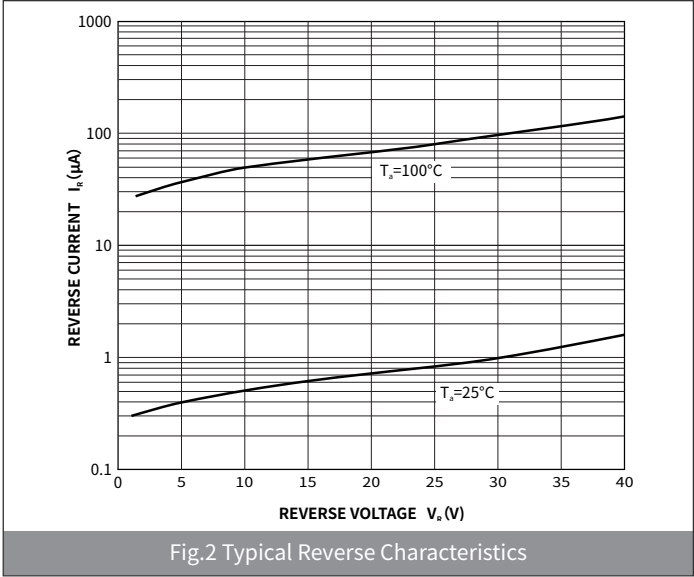
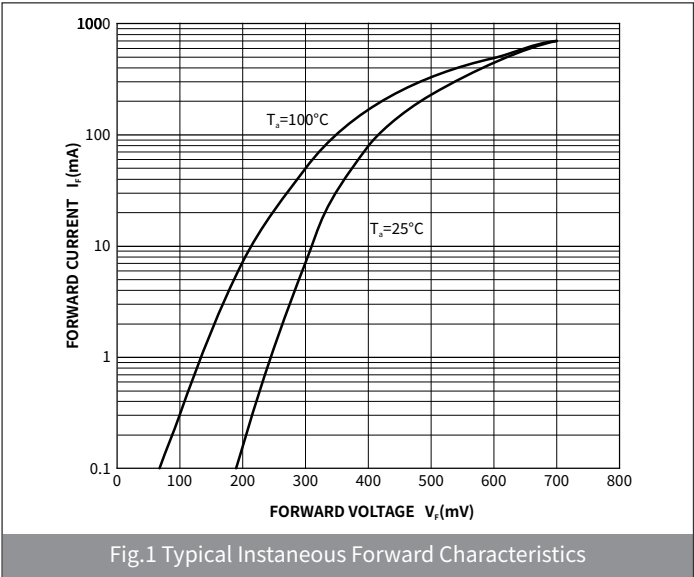
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● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SD103AW	SD103BW	SD103CW
Maximum forward voltage	$I_F=20\text{mA}$	V_F	V	0.37		
	$I_F=200\text{mA}$	V_F		0.60		
Maximum reverse current	$V_R=30\text{V}$	I_R	μA	5.0		
	$V_R=20\text{V}$					
	$V_R=10\text{V}$					
Capacitance between terminals	$V_R=0\text{V}, f=1\text{MHz}$	C_T	pF	50		
Reverse Recovery time	$I_F=I_R=200\text{mA}$ $I_{rr}=0.1\times I_R, R_L=100\Omega$	t_{rr}	ns	10		

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



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● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-123	R1	0.012	3000	45000	180000	7"

● Package Outline Dimensions (SOD-123)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.55	3.85	0.140	0.152
B	2.55	2.85	0.100	0.112
C	1.40	1.80	0.055	0.071
D	0.95	1.35	0.140	0.152
E	0.51	0.71	0.037	0.053
F	-	0.15	-	0.006
G	0.15	0.45	0.006	0.008
H	0.08	0.25	0.003	0.010
θ	-	8°	-	8°

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.91	-	0.036	-
K	-	2.36	-	0.092
M	1.22	-	0.048	-