BORN SEMICONDUCTOR

SD103A/B/CW

Schottky Barrier Diode

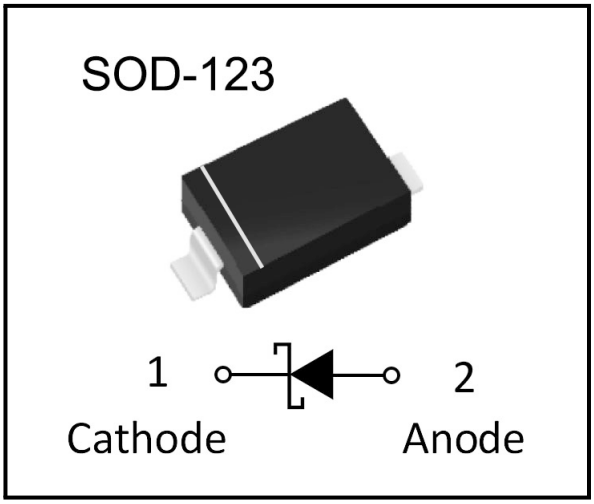
Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

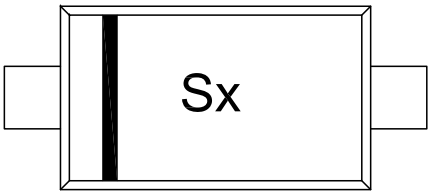
General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-123 Plastic Package

Package



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
SD103AW	SOD-123	S4	3K	Tape and reel
SD103BW	SOD-123	S5	3K	Tape and reel
SD103CW	SOD-123	S6	3K	Tape and reel

Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Parameter	SD103AW	SD103BW	SD103CW	Unit
V_{RRM}	Maximum repetitive peak reverse voltage	40	30	20	V
V_{RMS}	Maximum RMS voltage	28	21	14	
V_{DC}	Maximum DC blocking voltage	40	30	20	
I_{FM}	Maximum average forward rectified current	350			mA
I_{FSM}	Peak forward surge current 8.3 ms single half sine-wave	2			A
P_D	Power Dissipation	400			mW
$R_{\theta JA}$	Typical thermal resistance	250			°C/W
T_j	Operating junction temperature	125			°C
T_{STG}	Storage temperature range	-55 to +150			°C

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Electrical Characteristics(@T_A=25°C unless otherwise noted)

Symbol	Parameter	Test Condition	SD103AW	SD103BW	SD103CW	Unit
V_F	Maximum forward voltage	I_F=20mA	0.370			V
		I_F=200mA	0.600			
V_R	Maximum reverse breakdown voltage	I_R=100uA	40	30	20	V
I_R	Maximum reverse current	V_R=30V, SD103AW V_R=20V, SD103BW V_R=10V, SD103CW	5.0			uA
C_j	Type junction capacitance	V_R = 0V, f=1MHZ	50			pF
T_{rr}	Reverse recovery time	I_F=I_R=200mA I_{rr}=0.1×I_R,R_L=100Ω	10			nS

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Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Characteristics

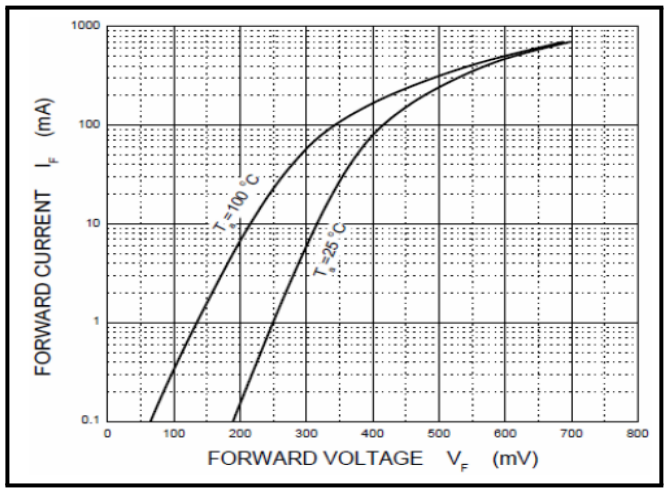


Figure 2: Reverse Characteristics

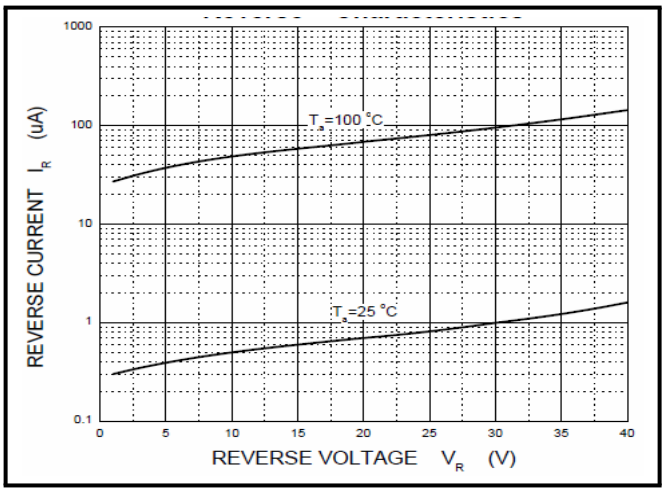


Figure 3: Capacitance Characteristics

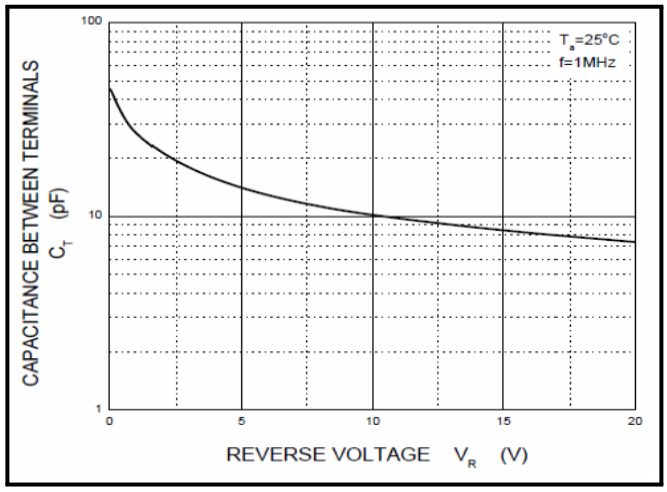
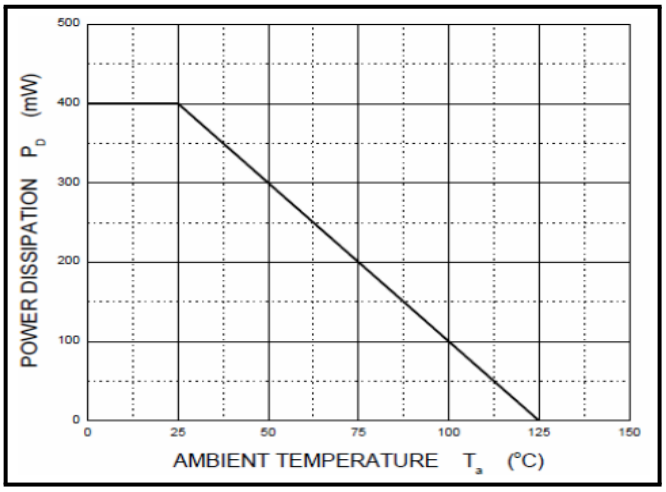


Figure 4: Power Derating Curve



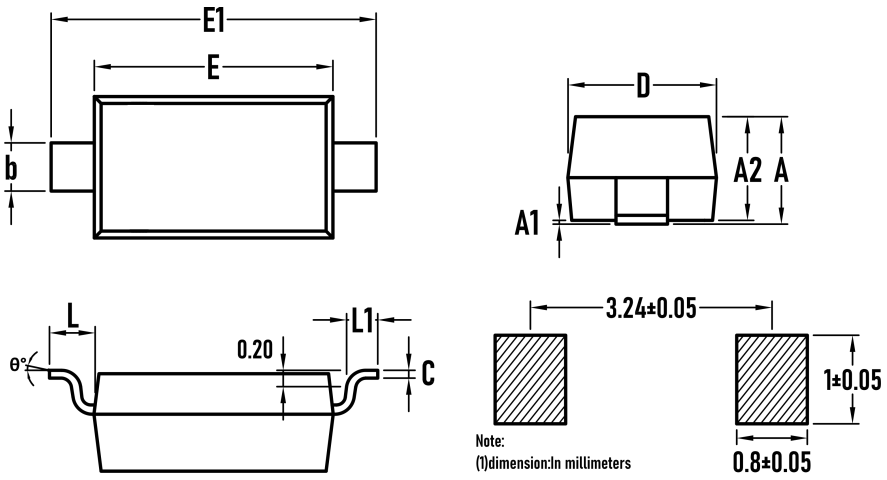
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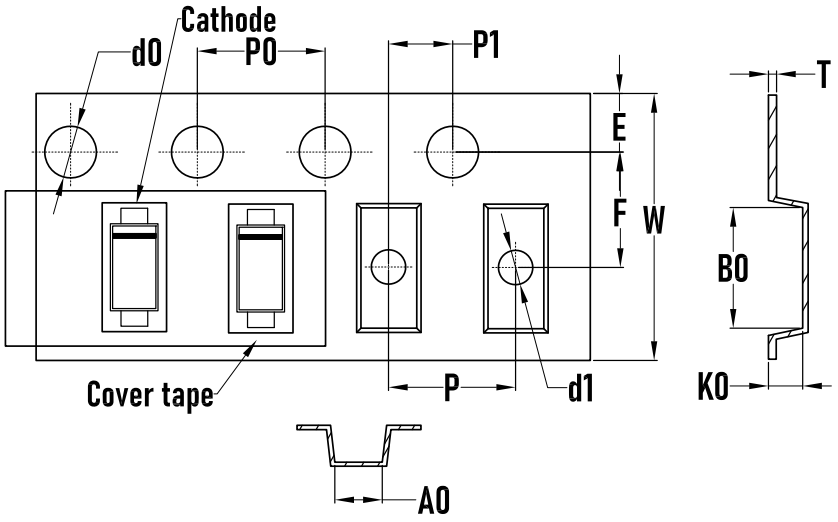
Schottky Barrier Diode

Package Information - SOD-123



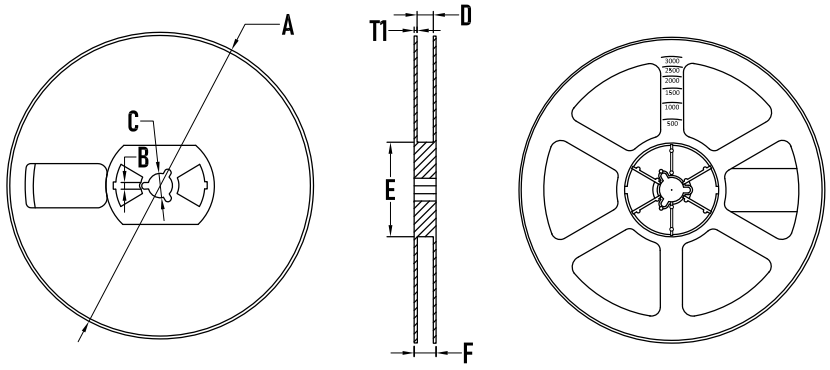
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.950	1.350	0.037	0.053
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500REF		0.020REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Packaging Tape - SOD-123



SYMBOL	MILLIMETER
A0	2.10±0.1
B0	4.0 ±0.1
d0	1.5±0.1
d1	1.0±0.1
E	1.75±0.1
F	3.50±0.1
K0	1.25±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	8.00±0.1
T	0.2±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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