

SD103AW-SD103CW SURFACE MOUNT SCHOTTKY BARRIER DIODE



Features

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material —UL Recognition Flammability Classification 94V-0
- Green Products in Compliance with the ROHS Directive
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Mechanical Characteristics

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams(approx)

Maximum Ratings@T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

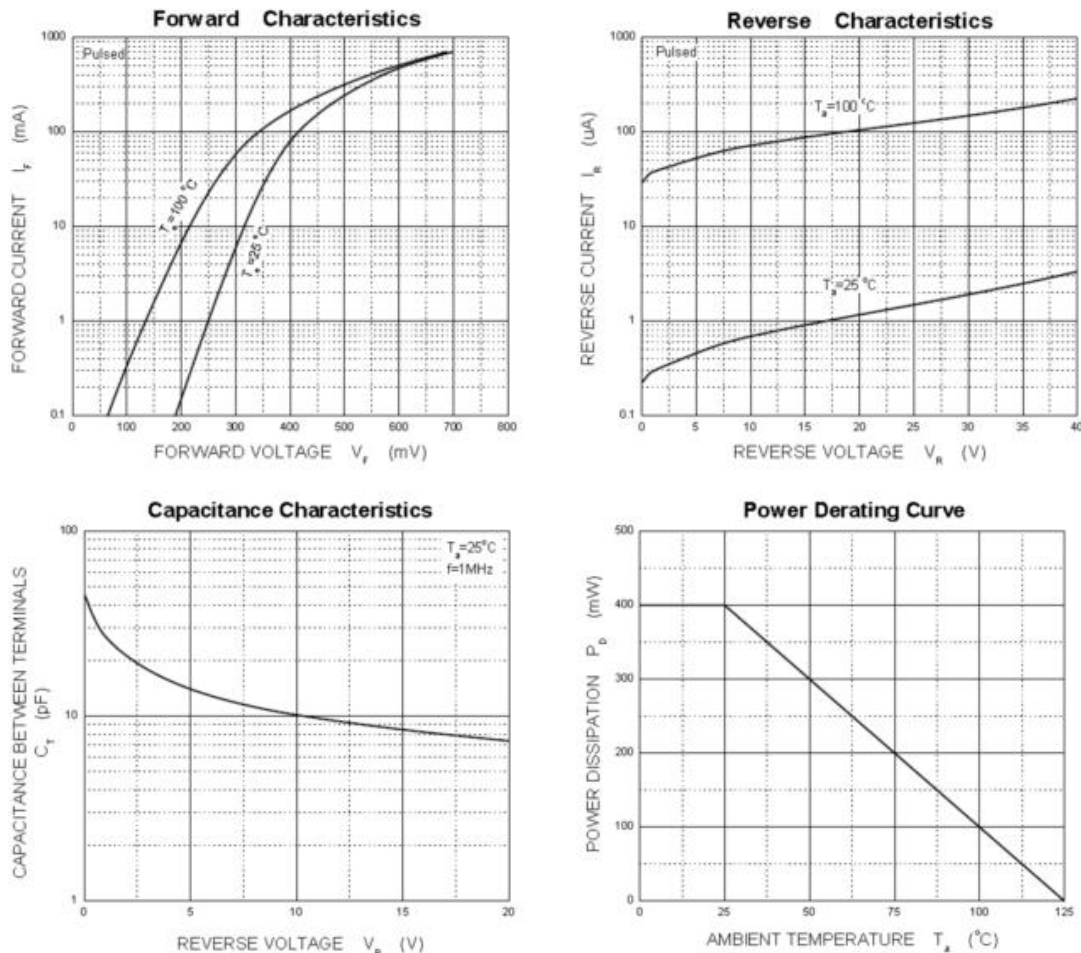
Characteristic	Symbol	SD103AW	SD103BW	SD103CW	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	30	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	21	14	V
Forward Continuous Current	I_{FM}	0.35			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	2			A
Power Dissipation	P_d	400			mW
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	250			°C/W
Junction Temperature Range	T_J	125			°C
Storage Temperature Range	T_{STG}	-55 to +150			°C

Electrical Characteristics@T_A=25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Units	Test Condition
Reverse Breakdown Voltage *	V _(BR)	40	-	-	V	I _R =100μA SD103AW
		30				I _R =100μA SD103BW
		20				I _R =100μA SD103CW
Forward Voltage *	V _F	-	-	0.37	V	I _F =20mA
		-	-	0.60	V	I _F =200mA
Reverse Leakage Current *	I _R	-	-	5	μA	V _R =30V SD103AW
		-	-			V _R =20V SD103BW
		-	-			V _R =10V SD103CW
Total Capacitance	C _{tot}	-	-	50	pF	V _R =0V, f=1.0MHz
Reverse recovery time	t _{rr}	-	10	-	ns	I _F = I _R =200mA, I _{rr} =0.1×I _R , R _L =100Ω

* Pulse width < 300 μs, duty cycle < 2%

Ratings and Characteristics Curves



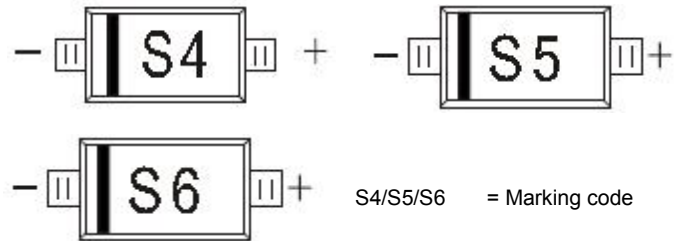
- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Ordering Information

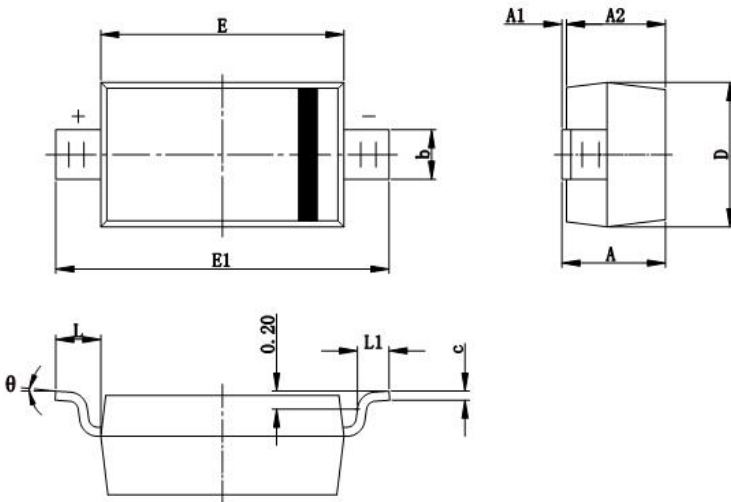
Device	Package	Shipping
SD103AW-SD103CW	SOD-123 (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

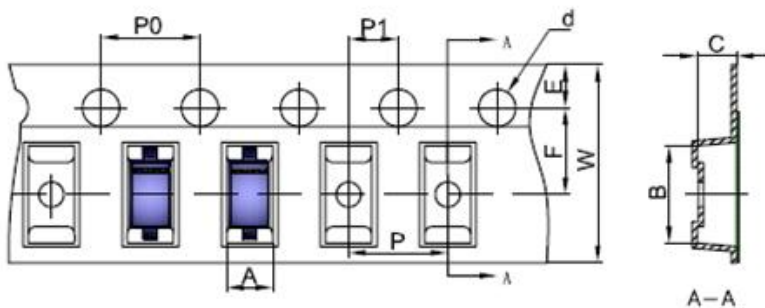


Mechanical Dimensions SOD-123



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.050	1.250	0.041	0.049
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	0.500 REF.		0.020 REF.	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Carrier Tape Specification SOD-123



SYMBOL	Millimeters	
	Min.	Max.
A	1.80	1.90
B	3.89	3.99
C	1.52	1.62
d	1.45	1.65
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30



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