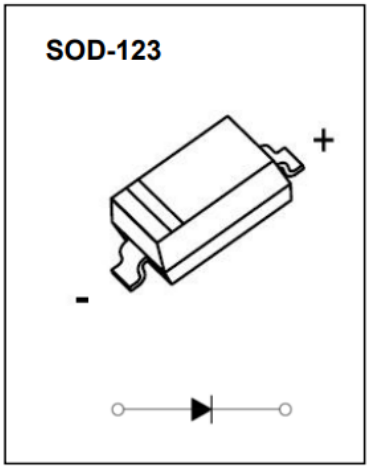
SD103AW/BW/CW Plastic-Encapsulated Diode

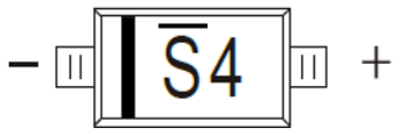
SD103AW/BW/CW Schottky barrier diode



FEATURES

- Guard ring construction for transient protection
- Low voltage
- Negligible reverse recovery time
- Low capacitance
- AEC-Q101 qualified

MARKING

SD103AW: S̄4	SD103BW: S̄5	SD103CW: S̄6
		

The marking bar indicates the cathode

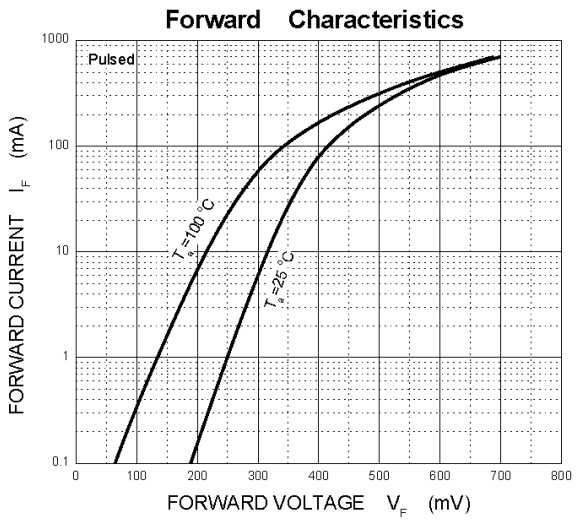
MAXIMUM RATINGS (T_j = 25°C unless otherwise specified)

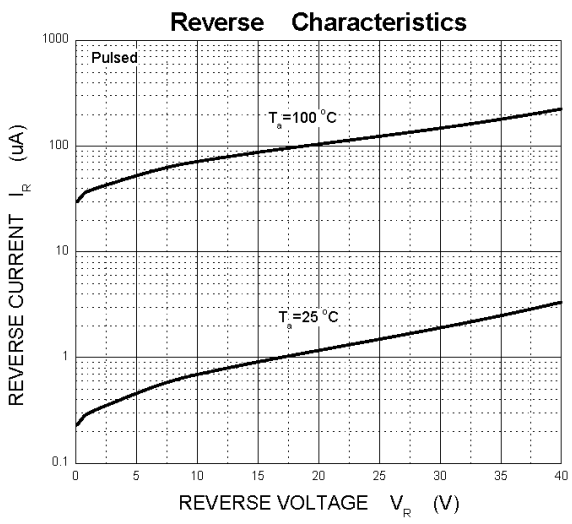
Parameter	Symbol	Value			Unit
		SD103AW	SD103BW	SD103CW	
Peak Repetitive Reverse Voltage	V_{RRM}	40	30	20	V
Working Peak Reverse Voltage	V_{RWM}	40	30	20	V
RMS reverse voltage	$V_{R(RMS)}$	28	21	14	V
Forward continuous current	I_{FM}	350			mA
Non-repetitive peak forward surge current @ t = 8.3ms	I_{FSM}	2			A
Power dissipation	P_D	400			mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	250			°C/W
Operating junction temperature range	T_j	-40 ~ 125			°C
Storage temperature range	T_{stg}	-55 ~ 150			°C

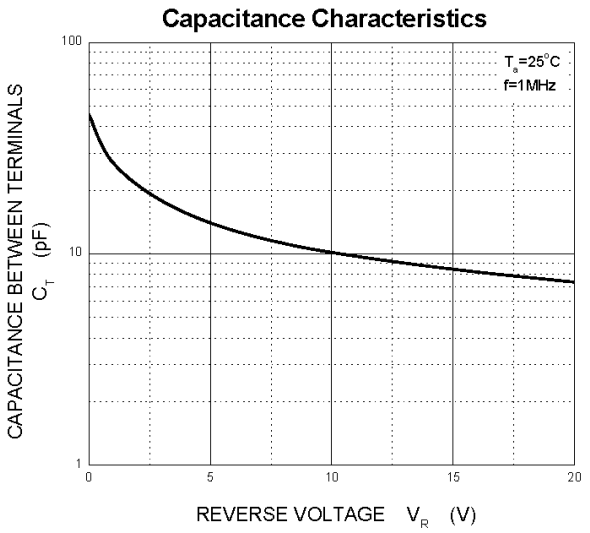
ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

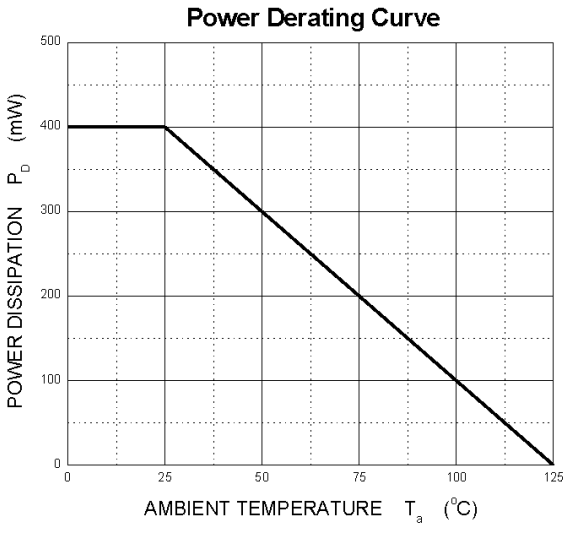
Parameter	Symbol	Test condition		Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	I_R = 100μA	SD103AW	40	-	-	V
			SD103BW	30	-	-	
			SD103CW	20	-	-	
Forward voltage	V_F	I_F = 20mA		-	-	0.37	
		I_F = 200mA		-	-	0.6	
Reverse current	I_R	V_R = 30V	SD103AW	-	-	5	μA
		V_R = 20V	SD103BW	-	-		
		V_R = 10V	SD103CW	-	-		
Reverse recovery time	T_{rr}	I_F = I_R = 200mA, I_{rr} = 0.1×I_R, R_L = 100Ω		-	10	-	ns
Capacitance between terminals	C_T	V_R = 0V, f = 1MHz		-	50	-	pF

TYPICAL CHARACTERISTICS

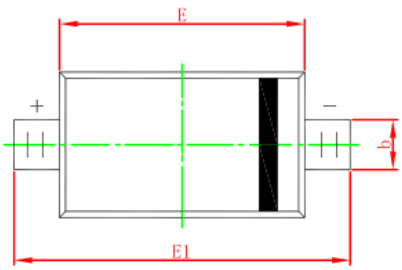


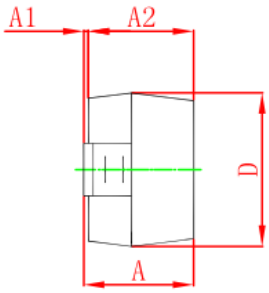


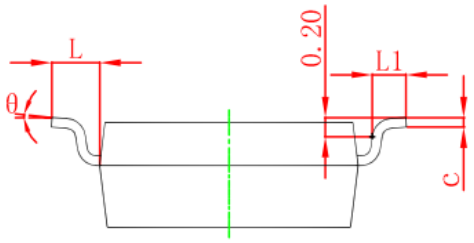




SOD-123 PACKAGE OUTLINE DIMENSIONS

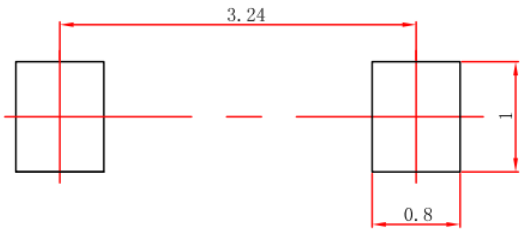






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 SUGGESTED PAD LAYOUT



Note:

1. Controlling dimension in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purpose only.