SD103AW - SD103CW

SURFACE MOUNT SCHOTTKY BARRIER DIODE
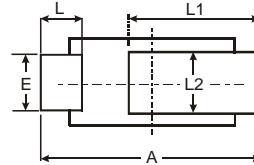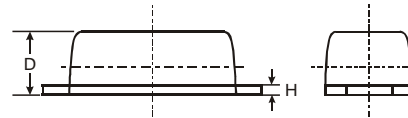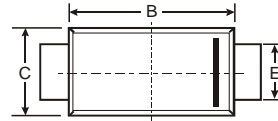
Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Low Reverse Recovery Time
- Low Reverse Capacitance

Mechanical Data

- Case: SOD-123, Molded Plastic
- Weight: 0.01 grams (approx.)
- Marking: SD103AW   S6
  SD103BW   S7
  SD103CW   S8

RoHS COMPLIANT

SOD-123

Dim	Min	Max	Typ
A	3.50	3.90	3.70
B	2.60	3.00	2.80
C	1.63	1.93	1.78
D	0.93	1.00	0.98
E	0.85	1.25	1.00
H	0.15	0.25	0.20
L	0.55	0.75	0.65
L1	1.80	2.20	2.00
L2	0.95	1.25	1.10
All Dimensions in mm			

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	SD103AW	SD103BW	SD103CW	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	30	20	V
Forward Continuous Current (Note 1)	I_F	350			mA
Non-Repetitive Peak Forward Surge Current @ t < 1.0s	I_{FSM}	2.0			A
Power Dissipation	P_d	400			mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300			°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125			°C

Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	All Types	Unit	Test Condition
Forward Voltage Drop	V_{FM}	0.37 0.60	V	@ I_F = 20mA @ I_F = 200mA
Peak Reverse Leakage Current	I_{RM}	5.0	µA	@ Rated DC Blocking Voltage
Typical Junction Capacitance	C_j	50	pF	V_R = 0V, f = 1.0MHz
Typical Reverse Recovery Time	t_{rr}	10	nS	I_F = I_R = 50mA to 200mA I_{RR} = 0.1 x I_R, R_L = 100Ω

Note: 1. Valid provided that terminals are kept at ambient temperature.

www.sunmate.tw

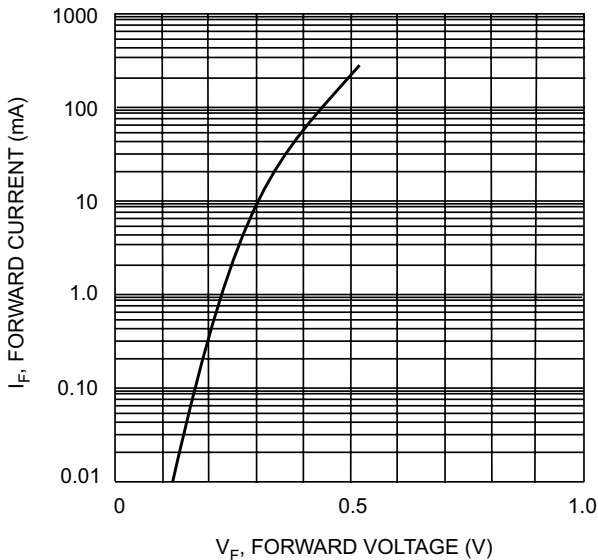# RATINGS AND CHARACTERISTIC CURVES SD103AW THRU SD103CW
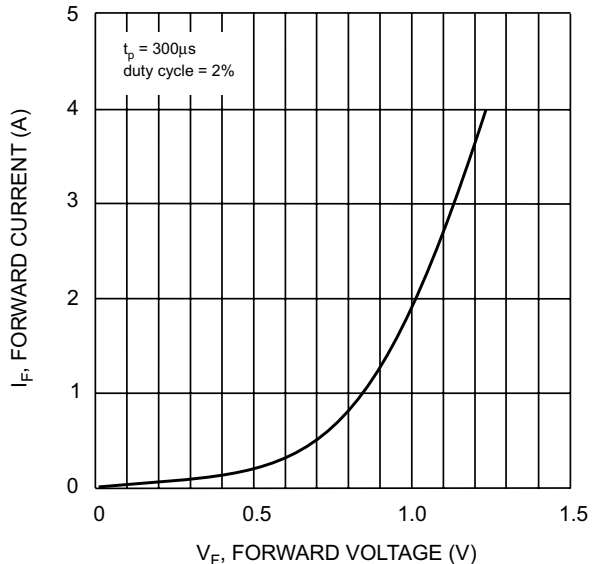

Fig. 1 Typical Forward Characteristics

$t_p = 300\mu s$
duty cycle = 2%

Fig. 2 Typical High Current Fwd Characteristics
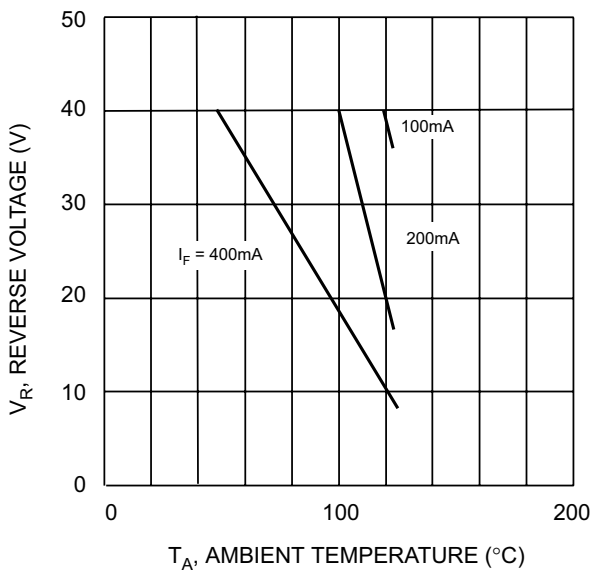

100mA

200mA
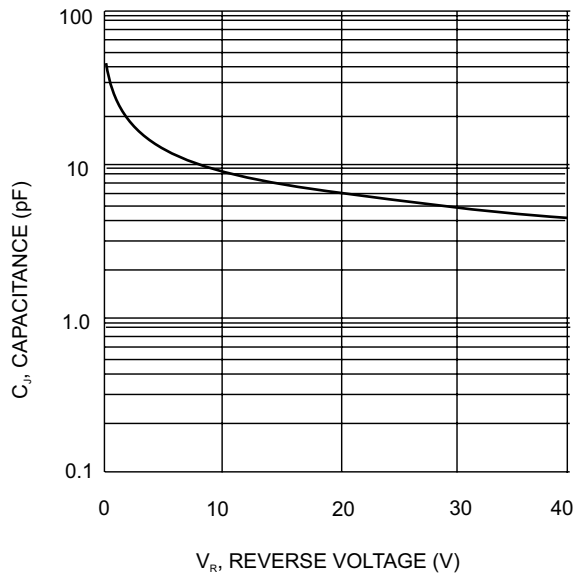
$I_F = 400mA$

Fig. 3 Blocking Voltage Derating Curves

Fig. 4 Typ. Junction Capacitance vs Reverse Voltage

www.sunmate.tw