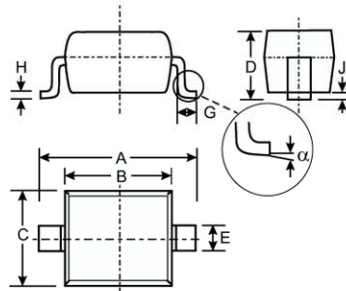


## ● Features

Low Forward Voltage Drop  
Guard Ring Construction for  
Transient Protection  
Negligible Reverse Recovery Time  
Low Reverse Capacitance  
Ultra-Small Surface Mount Package

## ● Mechanical Data

Case: SOD-323, Plastic  
Case material - UL Flammability Rating  
Classification 94V-0  
Moisture sensitivity: Level 1 per J-STD-020A  
Polarity: Cathode Band  
Leads: Solderable per MIL-STD-202,  
Method 208  
Weight: 0.004 grams (approx.)



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
$\alpha$	0°	8°
All Dimensions in mm		

## ● Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	SD103AWS	SD103BWS	SD103CWS	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	40	30	20	V
Working Peak Reverse Voltage	$V_{RWM}$				
DC Blocking Voltage	$V_R$				
RMS Reverse Voltage	$V_{R(RMS)}$	28	21	14	V
Forward Continuous Current (Note 1)	$I_{FM}$	350			mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 1.0s$	$I_{FSM}$	1.5			A
Power Dissipation (Note 1)	$P_d$	200			mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625			$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +125			$^\circ\text{C}$

## ● Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	SD103AWS SD103BWS SD103CWS $V_{(BR)R}$	40 30 20	—	—	V	$I_R = 10\mu\text{A}$ $I_R = 10\mu\text{A}$ $I_R = 10\mu\text{A}$
Forward Voltage Drop (Note 2)	$V_{FM}$	—	—	0.37 0.60	V	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$
Peak Reverse Current (Note 2)	SD103AWS SD103BWS SD103CWS $I_{RM}$	—	—	5.0	$\mu\text{A}$	$V_R = 30\text{V}$ $V_R = 20\text{V}$ $V_R = 10\text{V}$
Total Capacitance	$C_T$	—	50	—	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	10	—	ns	$I_F = I_R = 200\text{mA}$ , $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

Notes: 1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.  
2. Short duration test pulse used to minimize self-heating effect.



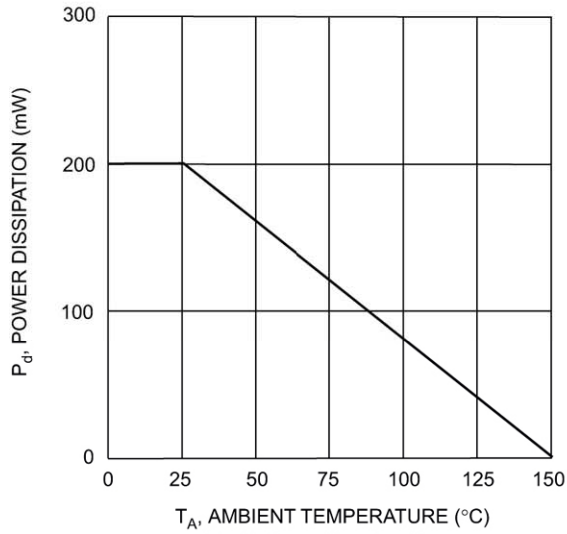


Fig. 1 Power Derating Curve

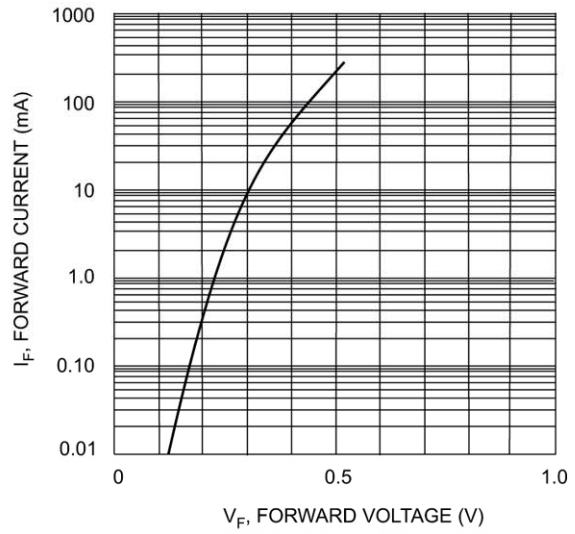


Fig. 2 Typical Forward Characteristics

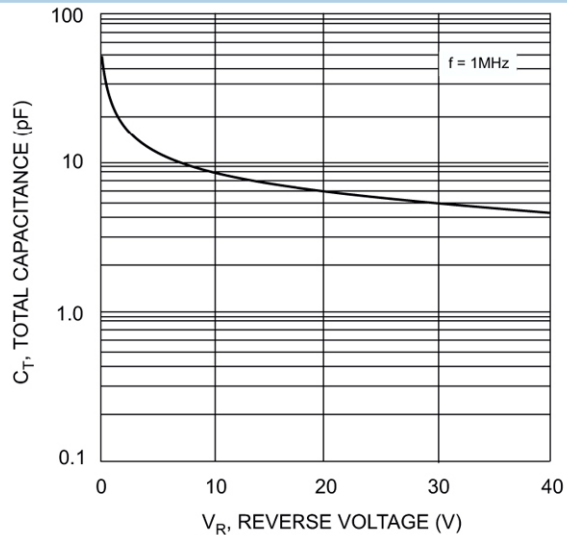


Fig. 3 Total Capacitance vs Reverse Voltage

## Ordering Information

Device	Packaging	Shipping
SD103AWS	SOD-323	3000/Tape & Reel
SD103BWS	SOD-323	3000/Tape & Reel
SD103CWS	SOD-323	3000/Tape & Reel

