



DESCRIPTION

The SD103AWS~SD103CWS are available in SOD-323 Package

FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Reverse Capacitance
- Ultra-Small Surface Mount Package
- Available in SOD-323 Package

ORDERING INFORMATION

Package Type	Part Number
SOD-323	SD103AWS
	SD103BWS
	SD103CWS
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

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.)



ABSOLUTE MAXIMUM RATINGS

@T_A=25°C, unless otherwise specified

Parameter	Symbol	SD103AWS	SD103BWS	SD103CWS	Unit
Peak Repetitive Reverse Voltage	V _{RRM}				
Working Peak Reverse Voltage	V _{RWM}	40	30	20	V
DC Blocking Voltage	V _R				
RMS Reverse Voltage	V _{R(RMS)}	28	21	14	V
Forward Continuous Current ^{NOTE1}	I _{FM}	350			mA
Non-Repetitive Peak Forward Surge Current @t≤1.0s	I _{FSM}	1.5			A
Power Dissipation ^{NOTE1}	P _D	200			mW
Thermal Resistance, Junction to Ambient Air ^{NOTE1}	R _{θJA}	625			°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +125			°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

@T_A=25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Reverse Breakdown Voltage ^{NOTE2}	V _{(BR)R}	SD103AWS	40	-	-	V	
		SD103BWS	30	-	-		
		SD103CWS	20	-	-		
Forward Voltage Drop ^{NOTE2}	V _{FM}	I _F =20mA	-	-	0.37	V	
		I _F =200mA			0.60		
Peak Reverse Current ^{NOTE2}	I _{RM}	V _R =30V	SD103AWS	-	-	μA	
		V _R =20V	SD103BWS		-		5.0
		V _R =10V	SD103CWS				
Total Capacitance	C _T	V _R =0V, f=1.0MHz	-	50	-	pF	
Reverse Recovery Time	t _{rr}	I _F =I _R =200mA, I _{rr} =0.1 x I _R , R _L =100Ω	-	10	-	ns	

NOTE1: part mounted on FR-4 PC board with recommended pad layout

NOTE2: Short duration test pulse used to minimize self-heating effect.



TYPICAL CHARACTERISTICS

Figure 1. Power Derating Curve

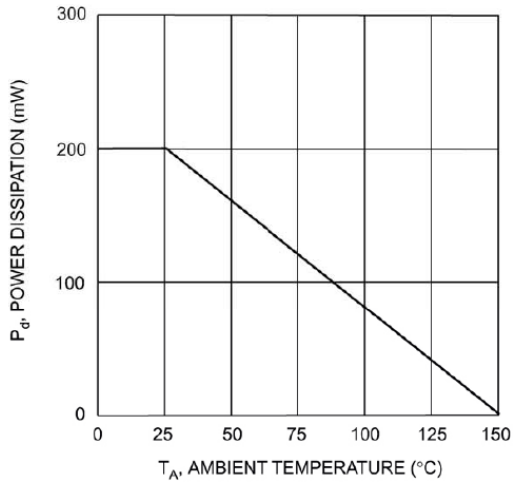


Figure 2. Typical Forward Characteristics

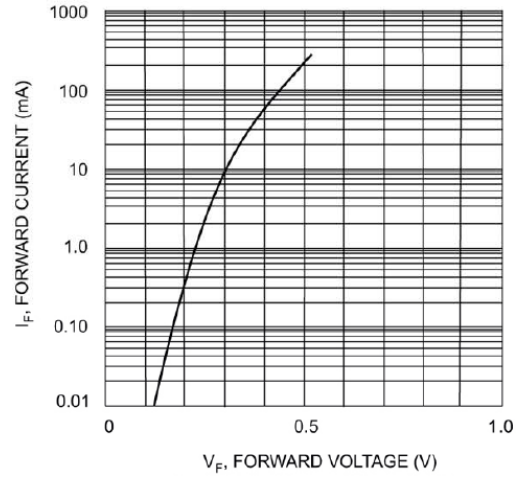
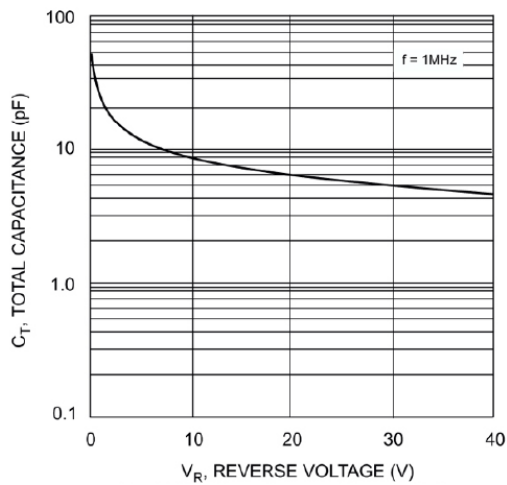


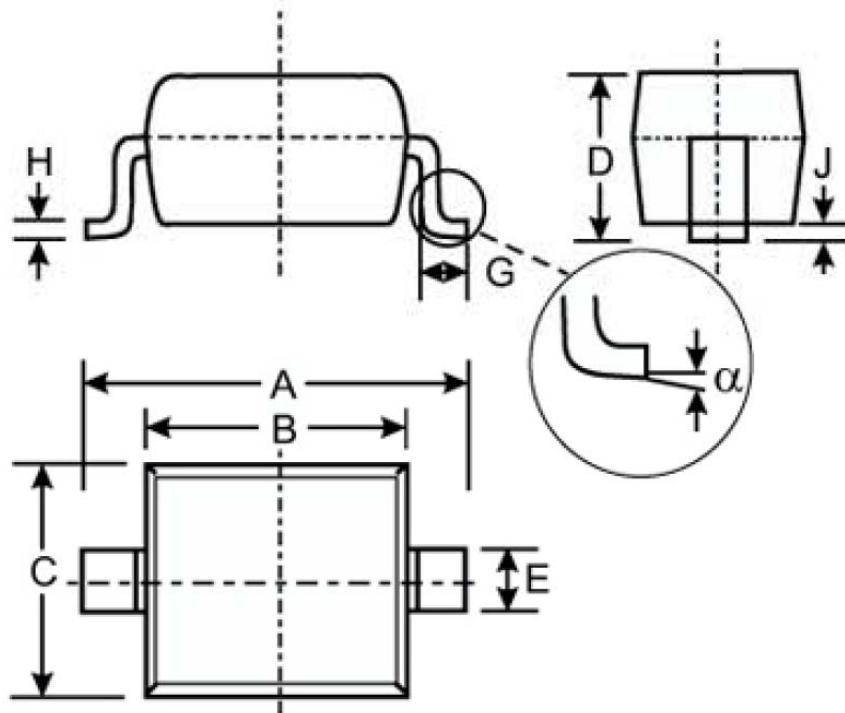
Figure 3. Total Capacitance vs. Reverse Voltage





PACKAGE INFORMATION

Dimension in SOD-323 (Unit: mm)



Symbol	Min	Max
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 TYP	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 TYP	
α	0°	8°



IMPORTANT NOTICE

AiT Components (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Components' integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or severe property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Components assumes no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.