SD103AWS THRU SD103CWS

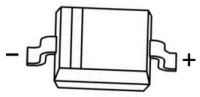
Plastic-encapsulate diodes

Product data sheet

1. General description

Schottky barrier diode encapsulated in a small SOD-323 Surface-Mounted Device(SMD) plastic package.

SOD-323



2. Features

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

3. Applications

- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications

4. Quick reference data

Table 1. Quick reference data

Parameter	Symbol	SD103AWS	SD103BWS	SD103CWS	Unit
Peak Repetitive Peak 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}	350			mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	2.0			A
Power Dissipation	Pd	200			mW

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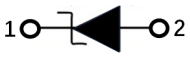
5.Pinning information

Table 2.Pinning information

Pin	Name	Description	Simplified outline	Graphic symbol
1	Cathode	connect to IO		
2	Anode	connect to IO		

6.Ordering information

Table 3.Ordering information

Part number	Package	Material	Packing	Quantity per reel	Flammability rating	Reel size
SD103AWS THRU SD103CWS	SOD-323	halogen free	tape & reel	3,000pcs	UL 94V-0	7 inches

7.Marking

Table 4. Marking codes

Part number	Marking code
SD103AWS	S4
SD103BWS	S5
SD103CWS	S6

The marking bar indicates the cathode

Solid dot = Green molding compound device,if none,the normal device.

8. Limiting values and electrical Characteristics

Table 5. Limiting values

Ta=25℃

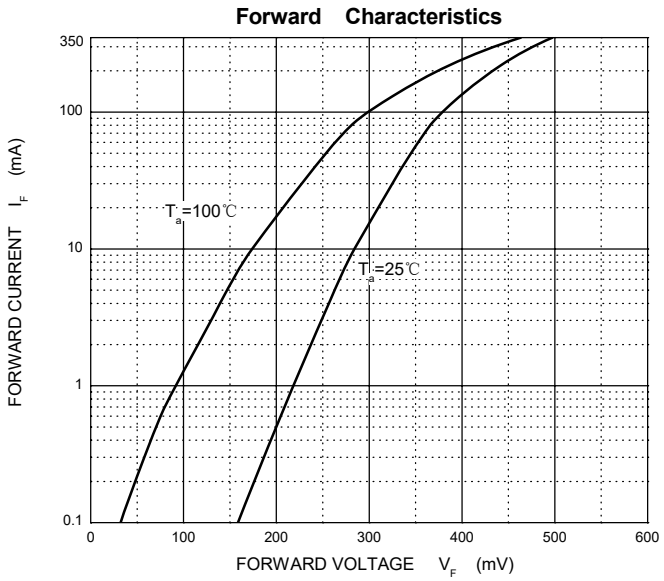
Parameter	Symbol	SD103AWS	SD103BWS	SD103CWS	Unit
Peak Repetitive Peak Reverse Voltage **Working Peak Reverse Voltage** **DC Blocking Voltage**	V_{RRM} V_{RWM} V_R	40	30	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	21	14	V
Forward Continuous Current	I_{FM}	350			mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	2.0			A
Power Dissipation	Pd	200			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500			℃/W
Junction Temperature	T_j	-40~+125			℃
Storage Temperature	T_{STG}	-55~+150			℃

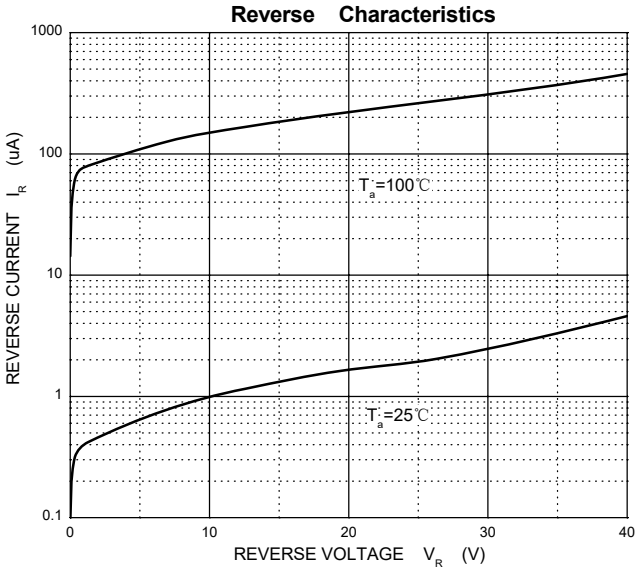
Table 6. Electrical characteristics

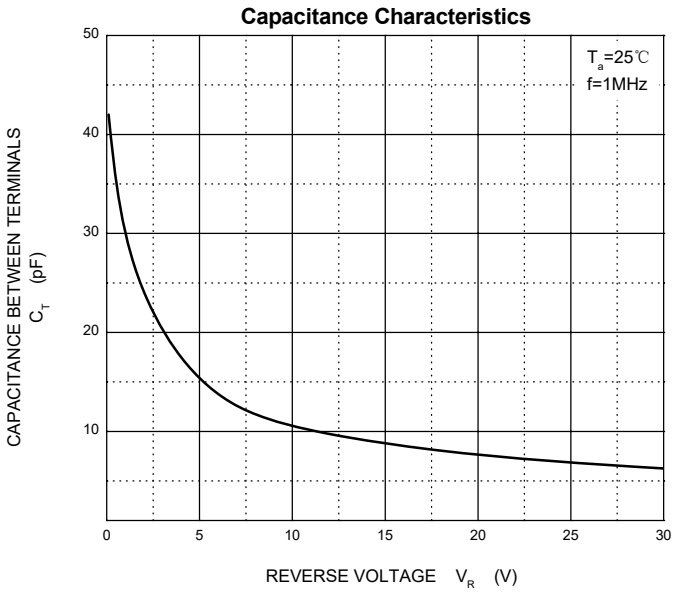
Ta=25℃

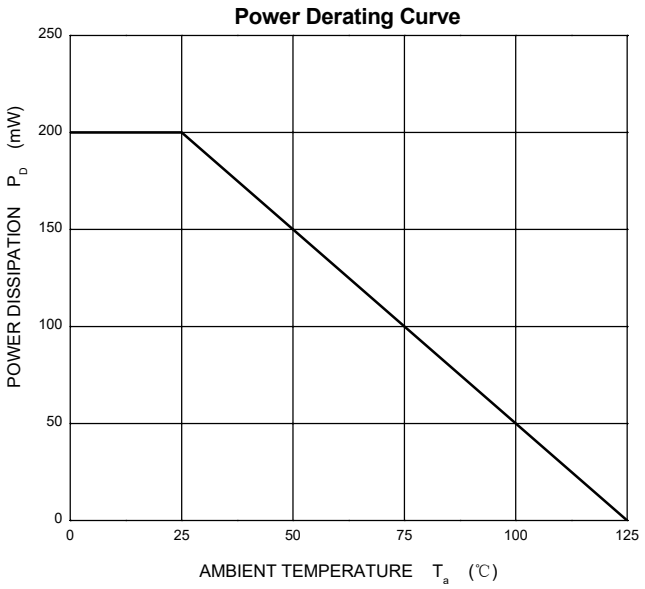
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage SD103AWS SD103BWS SD103CWS	$V_{(BR)R}$	 40 30 20			V	 I_R=100μA I_R=100μA I_R=100μA
Forward voltage	V_F			0.37 0.60	V	I_F=20mA I_F=200mA
Reverse current SD103AWS SD103BWS SD103CWS	I_{RM}			5.0	μA	 V_R=30V V_R=20V V_R=10V
Capacitance between terminals	C_T			50	pF	V_R=0V,f=1.0MHz
Reverse recovery time	t_{rr}		10		ns	I_F=I_R=200mA Irr=0.1XI_R,R_L=100Ω

9. Typical characteristics



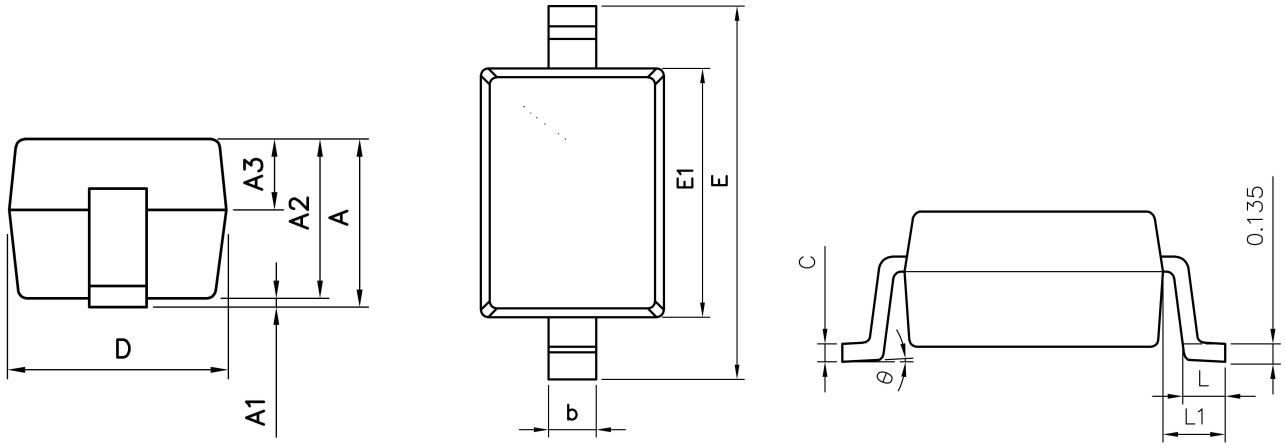






10.Package outline

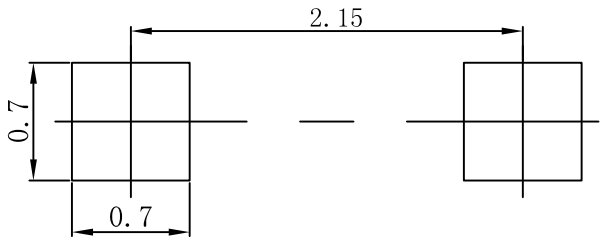
Table 5. SOD-323 Package outline



Symbol	Dimension in millimeter		
	Min	Nom	Max
A	0.95	1.0	1.05
A1	0.0	0.05	0.1
A2	0.85	0.90	0.95
A3	0.35	0.40	0.45
b	0.30	0.35	0.40
c	0.127	0.131	0.135
D	1.20	1.25	1.30
E	2.50	2.65	2.80
E1	1.65	1.70	1.75
L	0.20	0.30	0.40
L1	0.45		0.65
θ	0°	3°	8°

11.Suggested pad layout

Table 6. Suggested pad layout



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

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