




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0310- SOD323103AS0S4
DATE	Mar. 10, 2021
REVISION	A0
DESCRIPTION	<p>SMD Small Signal Schottky diodes, SOD-323 series, 2 pads, SD103AWS Type Reverse Voltage 40V Max. Forward Current 350mA Max. Operating Temp. Range -65°C ~+125°C, Package in Tape/Reel, 3000pcs/Reel RoHS/RoHS III compliant</p>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD SD103AWS
PART CODE	SOD323103AS0S4

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: March 10, 2021			

CUSTOMER APPROVE	
DATE:	

SMD SMALL SIGNAL SCHOTTKY DIODES SOD323 SERIES

MAIN FEATURE

- Low forward voltage drop
- Guard ring construction for transient protection
- Negligible reverse recovery time



APPLICATION

- For printed circuit board

RFQ

[Request For Quotation](#)

PART CODE GUIDE

SOD323	103A	S	0S4
1	2	3	4

- 1) **SOD323**: SMD Small Signal Schottky diodes, 2 pads, SOD-323 series code
- 2) **103A**: Type code for SD103AWS
- 3) **S**: Package code, Tape/reel, 3000pcs/reel.
- 4) **0S4**: Marking code for "S4" on the case surface, Different Marking for different specification.

MORE ITEMS AVAILABLE

SOD323101AS0S1	SOD323101BS0S2	SOD323101CS0S3		
SOD323103AS0S4	SOD323103BS0S5	SOD323103CS0S6		
SOD3231060SS21	SOD3231070S0SG			

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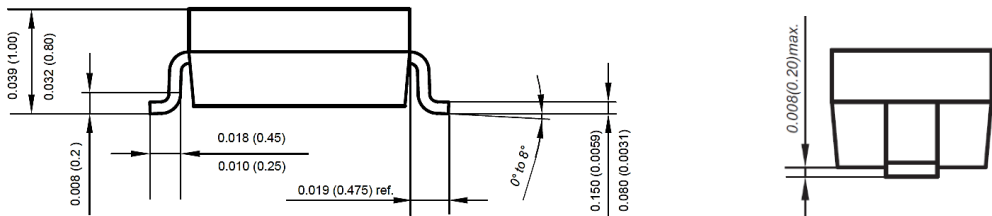
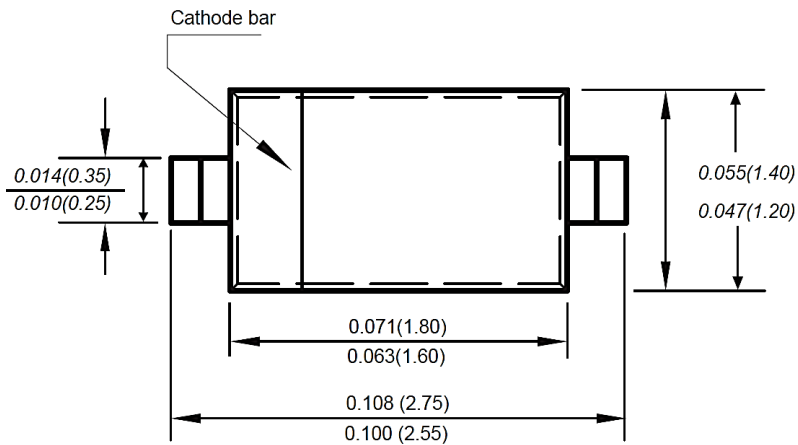
DIMENSION (Unit: Inch/mm)

Image for reference

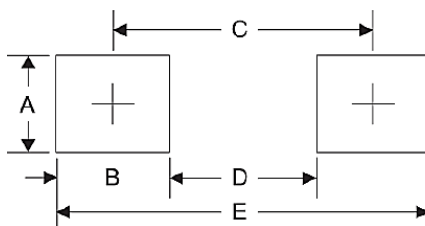


Marking: S4

SOD-323



Recommend Pad Layout



Symbol	Unit (inch)	Unit (mm)
A	0.028	0.70
B	0.028	0.70
C	0.085	2.15
D	0.071	1.80
E	0.112	2.85

SMD SMALL SIGNAL SCHOTTKY DIODES SOD323 SERIES
MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC SOD-323 molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on case	Any	0.0007 Ounce, 0.0021 grams

ABSOLUTE MAX. RATING AT 25 °C

Parameter	SYMBOLS	VALUE			UNITS
		Min.	Typical	Max.	
Repetitive peak reverse voltage	V _{RRM}			40	Volts
Working peak reverse voltage	V _{RMS}			40	Volts
DC Blocking voltage	V _{DC}			40	Volts
RMS voltage	V _{R(RMS)}			28	Volts
Forward continuous current	I _{FM}			350	mA
Repetitive peak forward current @t 1.0s	I _{FRM}			1.50	A
Power Dissipation	P _d			200	mW
Thermal resistance junction to ambient	R _{QA}			300	°C/W
Operating Junction temperature range	T _J	-65		+125	°C
Storage temperature range	T _{STG}	-65		+125	°C

CHARACTERISTICS AT Ta= 25 °C

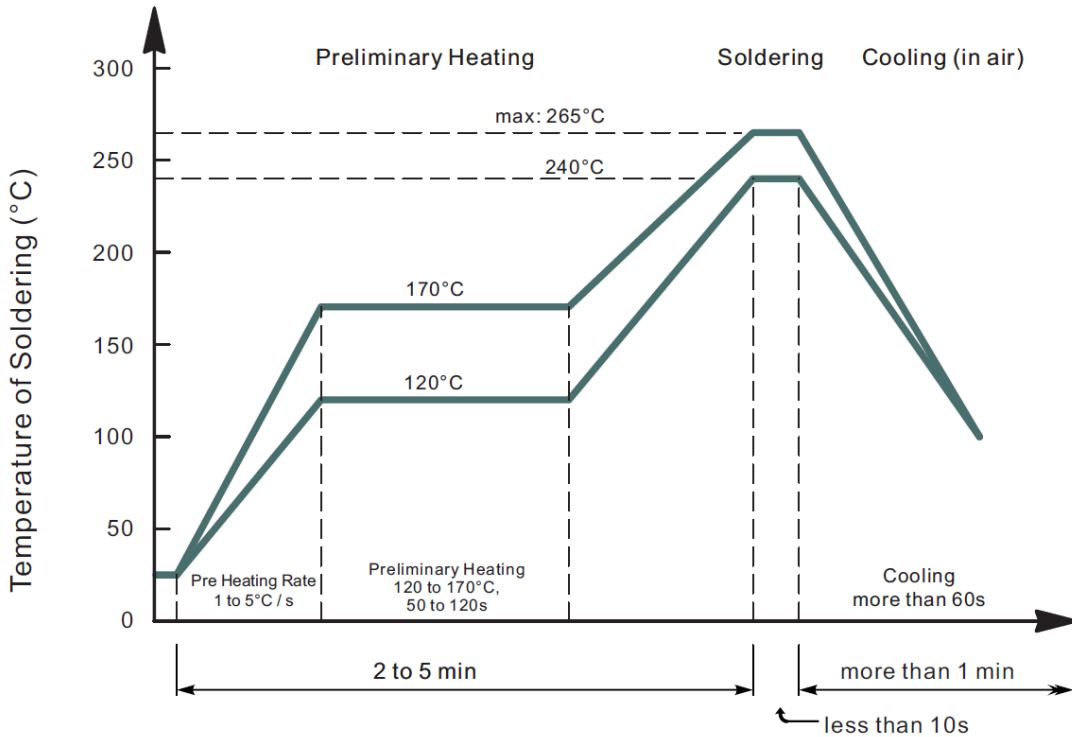
Parameter	SYMBOLS	VALUE			UNIT	Condition
		Min.	Typ.	Max.		
Reverse breakdown Voltage Reverse	V _{(BR)R}	40			V	I _R = 10 μA
Forward voltage	V _F			0.37	V	I _F = 20mA
				0.60	V	I _F = 200mA
Reverse current	I _{RM}			5.0	μA	V _R = 30 V
Capacitance between terminals	C _T		50		pF	V _R = 0V, f = 1.0MHz
Reverse recovery time	t _{rr}		10		ns	I _F = I _R = 200mA I _{rr} = 0.1 * I _R , R _L = 100 Ω

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RELIABILITY

Number	Experiment Items	Experiment Method And Conditions	Reference Documents
1	Solder Resistance Test	Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32"	MIL-STD-750D METHOD-2031.2
2	Solderability Test	230°C ±5°C for 5 sec.	MIL-STD-750D METHOD-2026.1 0
3	Pull Test	1 kg in axial lead direction for 10 sec.	MIL-STD-750D METHOD-2036.4
4	Bend Test	0.5Kg Weight Applied To Each Lead, Bending Arcs 90 °C ± 5 °C For 3 Times	MIL-STD-750D METHOD-2036.4
5	High Temperature Reverse Bias Test	TA=100°C for 1000 Hours at VR=80% Rated VR	MIL-STD-750D METHOD-1038.4
6	Forward Operation Life Test	TA=25°C Rated Average Rectified Current	MIL-STD-750D METHOD-1027.3
7	Intermittent Operation Life Test	On state: 5 min with rated IRMS Power Off state: 5 min with Cool Forced Air. On and off for 1000 cycles.	MIL-STD-750D METHOD-1036.3
8	Pressure Cooker Test	15 PSIG, TA=121°C, 4 hours	MIL-S-19500 APPENOIXC
9	Temperature Cycling Test	-55°C~+125°C; 30 Minutes For Dwelled Time 5 minutes for transferred time. Total: 10 cycles.	MIL-STD-750D METHOD-1051.7
10	Thermal Shock Test	0°C for 5 minutes., 100°C for 5minutes, Total: 10 cycles	MIL-STD-750D METHOD-1056.7
11	Forward Surge Test	8.3ms Single Sale Sine-wave One Surge.	MIL-STD-750D METHOD-4066.4
12	Humidity Test	TA=65°C, RH=98% for 1000 hours.	MIL-STD-750D METHOD-1021.3
13	High Temperature Storage life Test	150°C for 1000 Hours	MIL-STD-750D METHOD-1031.5

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SUGGESTED REFLOW PROFILE (For Reference Only)



- Recommended peak temperature is over 245°C, If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)
- Welding shall not exceed 2 times
- Remark: lead free solder paste (96.5 sn/3.0 Ag/0.5Cu)

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RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

FIG. 1- TYPICAL FORWARD CHARACTERISTICS

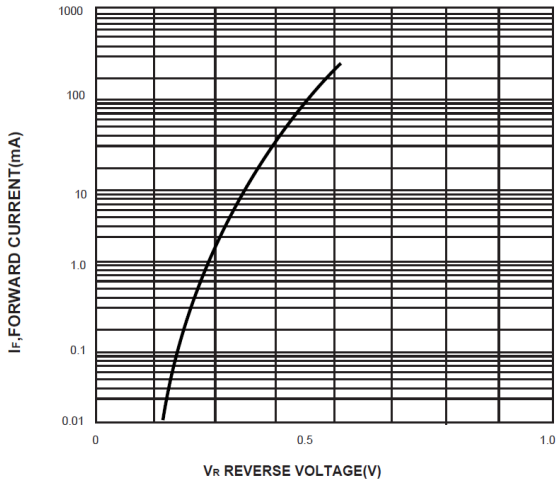
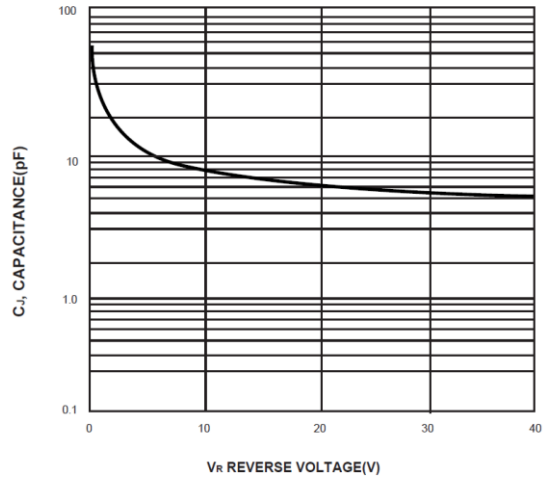


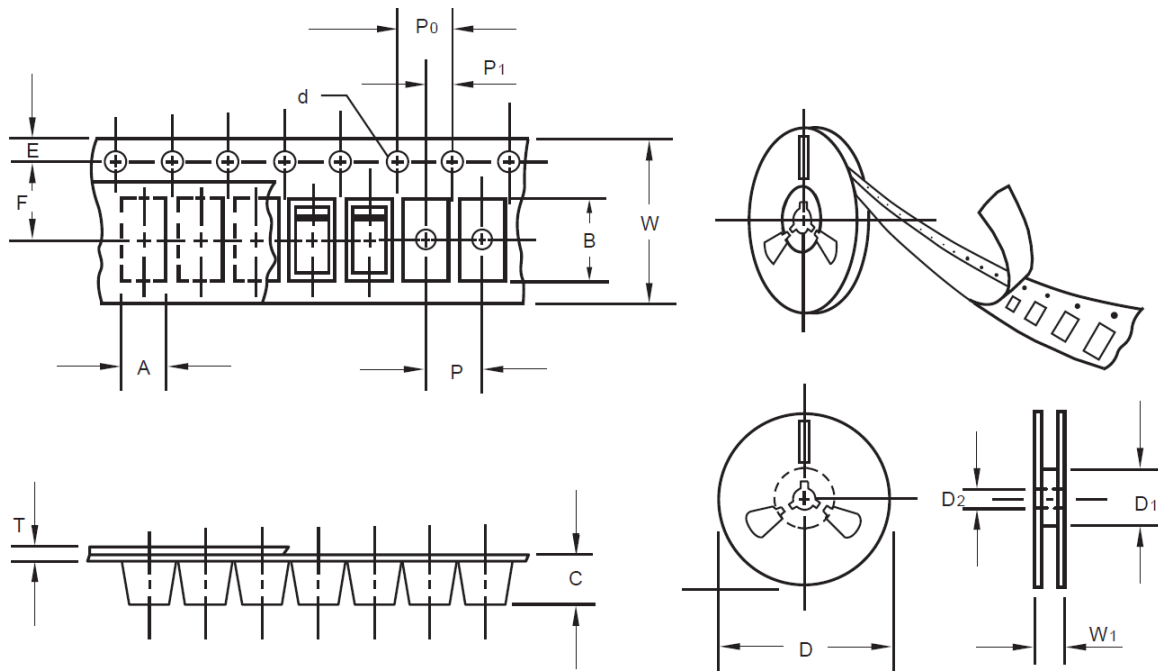
FIG. 2-TYP. JUNCTION CAPACITANCE VS REVERSE VOLTAGE



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TAPE/REEL (Unit: mm)

All Devices are packed in accordance with EIA standard RS-481-A and specifications.

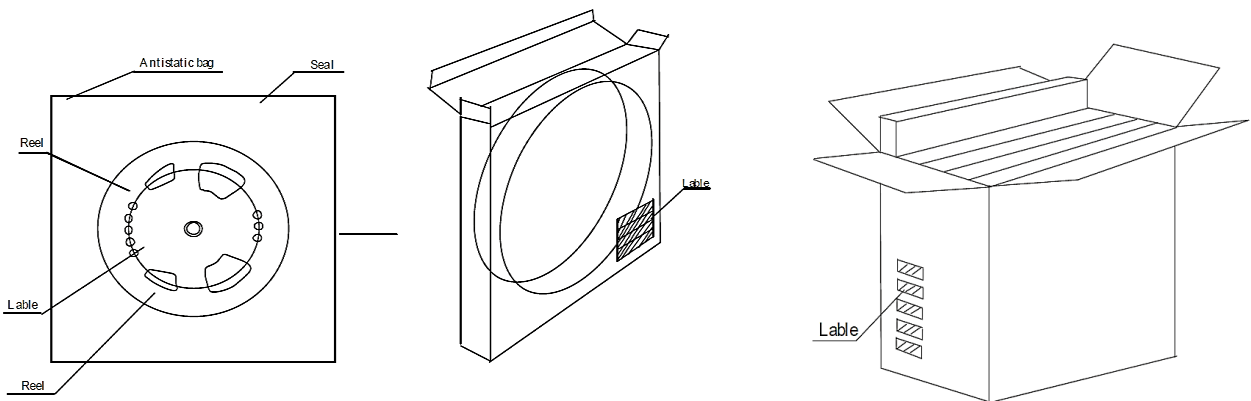


Item	Symbol	Tolerance	SO-323
Carrier width	A	0.1	2.10
Carrier Length	B	0.1	4.00
Carrier Depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
13" Reel outside diameter	-	-	-
13" Reel inner diameter	-	-	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	Min.	50.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1.0	10.50

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PACKAGE

Case Code	Reel Size	MPQ (pcs)	Component Spacing (mm)	Qty. Per Box (pcs)	Inner Box L*W*H (mm)	Reel Size (mm)	Carton size L*W*H (mm)	Qty. Per Carton (pcs)	G. W (kg)
SOD-323	7"	3,000	-	24,000	210*208*203	178	400*400*250	180,000	8.0



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