




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	P115- SOD323819WSSSL
DATE	Jan. 15, 2022
REVISION	A0
DESCRIPTION	<p>SMD Schottky Diodes, SOD-323 series, 2 pads</p> <p>B5819WS Type, Reverse Voltage 40V Max. Forward Current 1.0A Max.</p> <p>Operating Temp. Range -55°C ~+125°C,</p> <p>Package in Tape/Reel, 3000pcs/Reel</p> <p>RoHS/RoHS III compliant</p>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD B5819WS
PART CODE	SOD323819WSSSL

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: Jan. 15, 2022			

CUSTOMER APPROVE	
DATE:	

1/16/2022

SMD SCHOTTKY DIODES SOD323 SERIES



MAIN FEATURE

- Fast Switching Speed
- Surface Mount Package Ideally Suited For Automatic Insertion
- High Conductance

APPLICATION

- For Use In Low Voltage, High Frequency Inverters

RFQ

[Request For Quotation](#)

PART CODE GUIDE

SOD323	819WS	S	SL
1	2	3	4

1) **SOD323**: SMD Schottky diodes, 2 pads, SOD-323 series code

2) **819WS**: Type code for original part number B5819WS

3) **S**: Package code, Tape/reel, 3000pcs/reel.

4) **SL**: Marking code for "SL" on the case surface, Different Marking for different specification.

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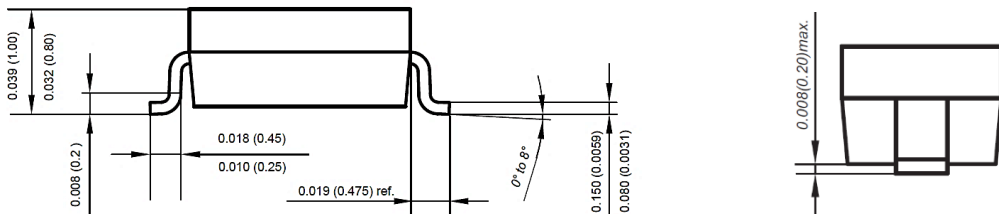
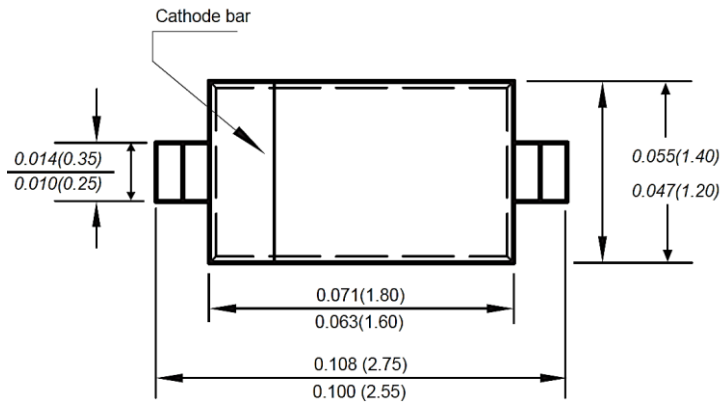
DIMENSION (Unit: Inch/mm)

Image for reference

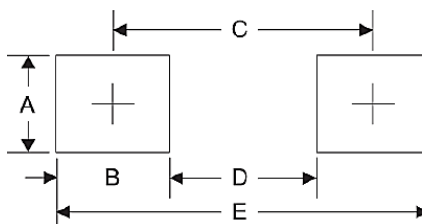


Marking: SL

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 SCHOTTKY DIODES SOD323 SERIES
MECHANICAL DATA

Case	Terminals	Polarity	Weight per piece
JEDEC SOD-323 molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on case	0.00019 Ounce, 0.0055 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_{RWM}			40	Volts
DC Blocking Voltage	V_R			40	Volts
RMS Reverse Voltage	$V_{R(RMS)}$			28	Volts
Average Rectified Output Current	I_O			1.0	A
Peak Forward Surge Current @ 8.3ms	I_{FSM}			25	A
Repetitive Peak Forward Current	I_{FRM}			625	mA
Power Dissipation	P_d			500	mW
Thermal Resistance Junction To Ambient	$R_{\theta JA}$			200	°C/W
Non – Repetitive Peak Reverse Voltage	V_{RM}			40	V
Operating Junction Temperature Range	T_J	-55		+125	°C
Storage Temperature Range	T_{STG}	-55		+125	°C

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CHARACTERISTICS AT Ta= 25 °C

Parameter		SYMBOLS	VALUE			UNIT	Condition
			Min.	Typ.	Max.		
Reverse Breakdown Voltage		V _{BR}	40			V	I _R = 10 mA
Reverse Voltage Leakage Current	Ta = 25 °C	I _R			1	mA	V _R = 40 V
	Ta = 100 °C				10		
Forward Voltage		V _F			0.6	V	I _F = 1 A
					0.9		I _F = 3 A
Diode Capacitance		C _D			110	pF	V _R = 4V, f = 1.0MHz

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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)



Profile Feature		Pb-Free Assembly
Average Ramp-up Rate (Ts Max to Tp)		3°C/second Max
Preheat	Temperature Min (Ts Min.)	150°C
	Temperature Max (Ts Max.)	200°C
	Time (ts Min. to ts Max.)	60 ~ 180 seconds
Time maintained above	Temperature (Tl)	217°C
	Time (tL)	60 ~ 150 seconds
Peak/Classification Temperature (Tp)		260 °C
Time within 5°C of actual Peak Temperature (tp)		10 seconds
Ramp-down rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		6 minutes Max.
Suggest reflow times		3 Times Max.

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RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

Fig.1 Forward Current Derating Curve

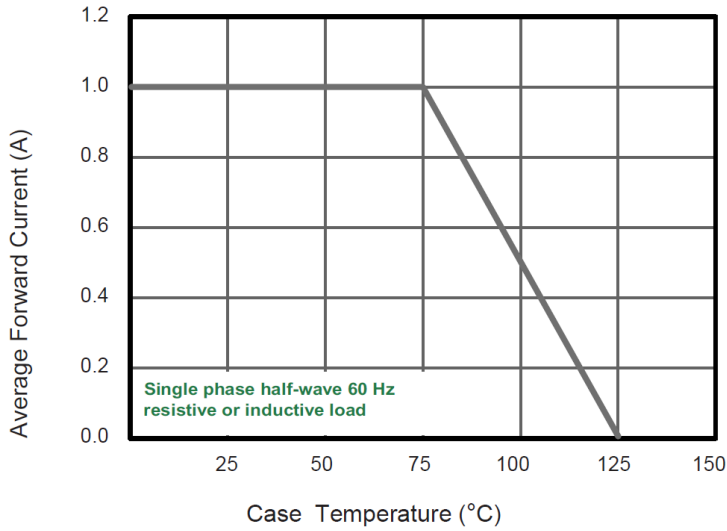
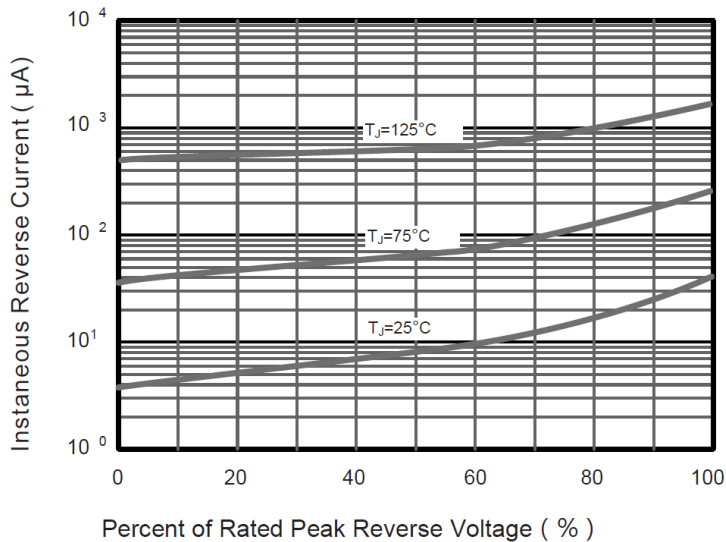


Fig.2 Typical Reverse Characteristics



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RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

Fig.3 Typical Forward Characteristic

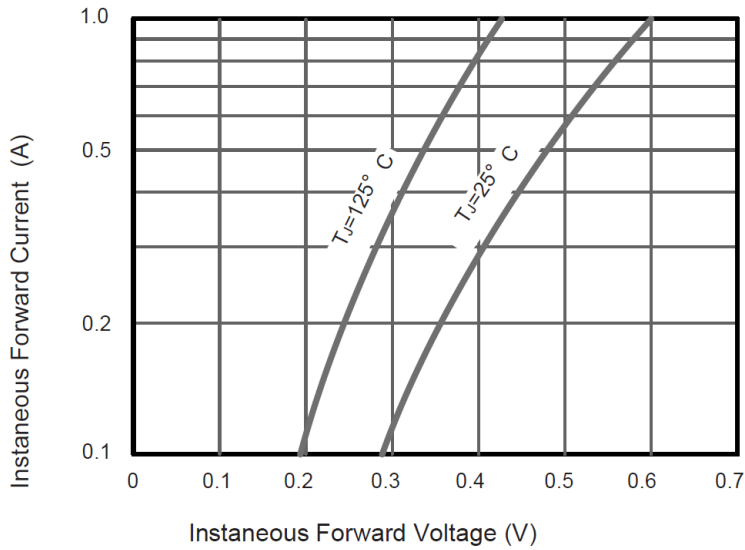
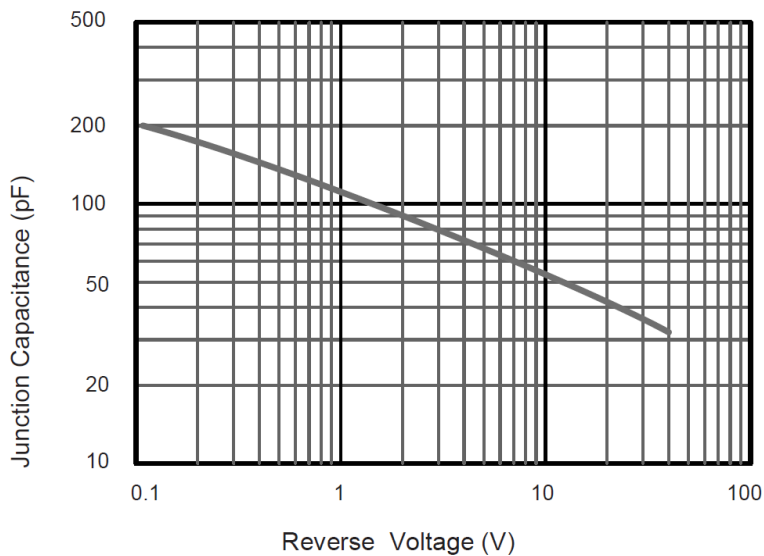


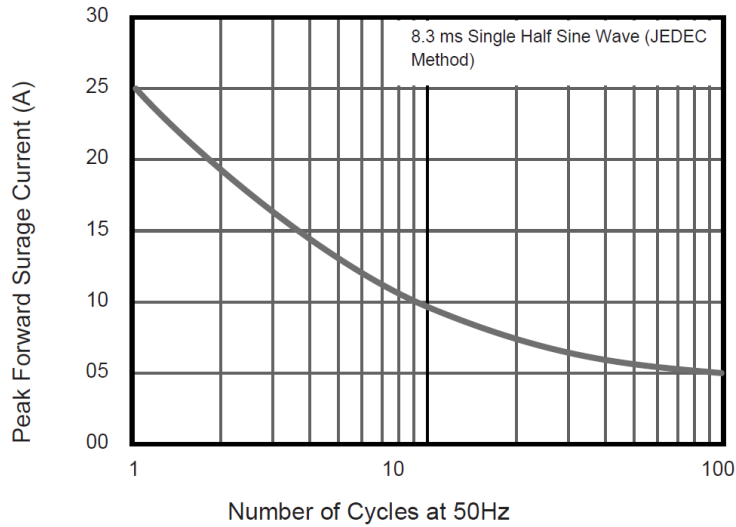
Fig.4 Typical Junction Capacitance



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RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

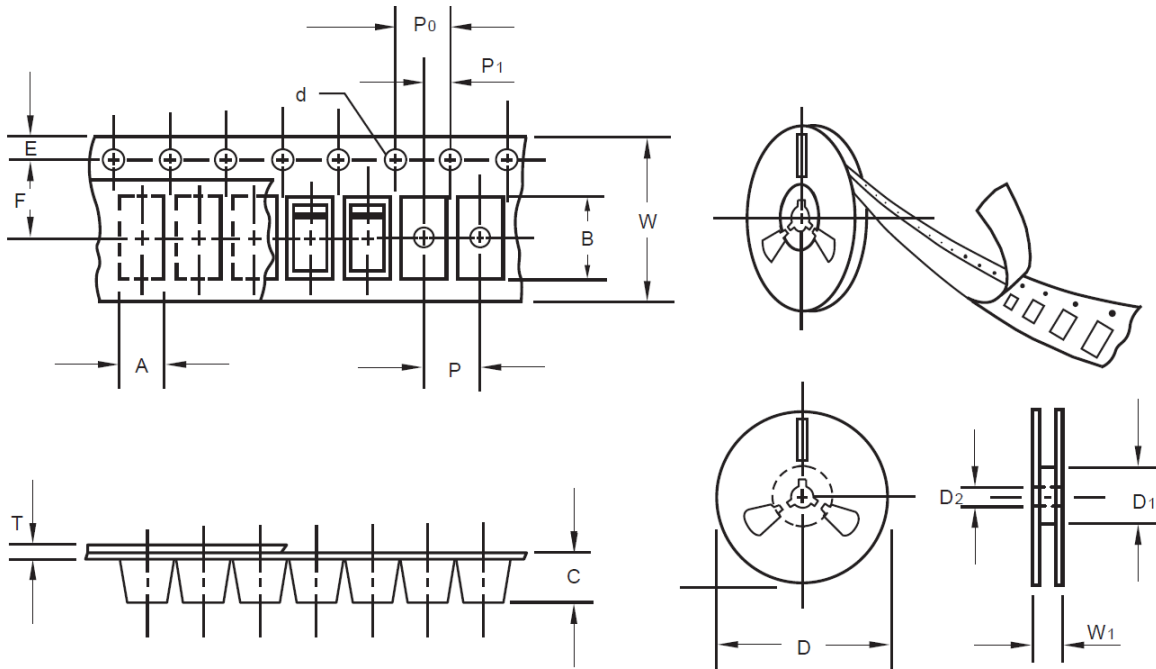
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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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	SOD-323
Reel Size	7"
Reel Size	178mm
MPQ/Reel	3000 pcs
Qty. /Box	6000 pcs
G.W/Box	2 lbs

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