BORN SEMICONDUCTOR

B5817WS-5819WS

Schottky Barrier Diode

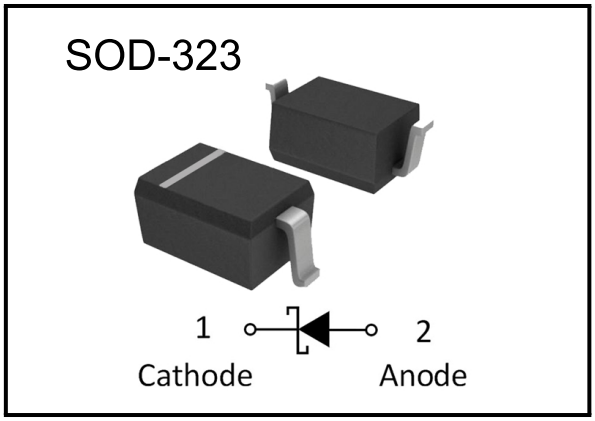
Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

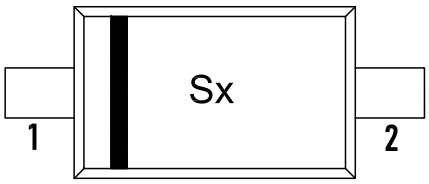
General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-323 Plastic Package

Package



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
B5817WS	SOD-323	SJ	3K	Tape and reel
B5818WS	SOD-323	SK	3K	Tape and reel
B5819WS	SOD-323	SL	3K	Tape and reel

Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Parameter	B5817WS	B5818WS	B5819WS	Unit
V_{RRM}	Maximum repetitive peak reverse voltage	20	30	40	V
V_{RMS}	Maximum RMS voltage	14	21	28	
V_{DC}	Maximum DC blocking voltage	20	30	40	
I_{FM}	Maximum average forward rectified current	1.0			A
I_{FSM}	Peak forward surge current 8.3 ms single half sine-wave	9			A
$R_{\theta JA}$	Typical thermal resistance	400			°C/ W
P_D	Power Dissipation	250			mW
T_j	Operating junction temperature	125			°C
T_{STG}	Storage temperature range	-55 to +150			

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Electrical Characteristics(@T_A=25°C unless otherwise noted)

Symbol	Parameter	Test Condition	B5817WS	B5818WS	B5819WS	Unit
V_F	Maximum forward voltage	I_F=1.0A	0.450	0.550	0.600	V
		I_F=3.0A	0.750	0.875	0.900	
V_R	Maximum reverse breakdown voltage	I_R=1mA	20	30	40	V
I_R	Maximum reverse current	V_R = 20V, B5817WS	100			uA
		V_R = 30V, B5818WS				
		V_R = 40V, B5819WS				
C_j	Type junction capacitance	V_R = 4.0V, f=1MHZ	120			pF

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Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Characteristics

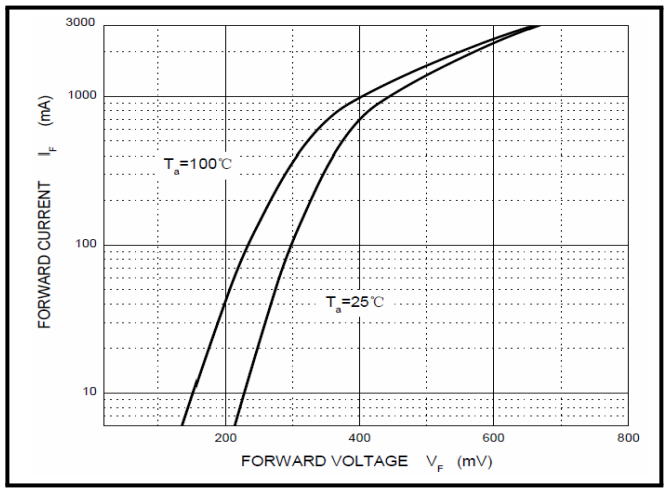


Figure 2: Reverse Characteristics

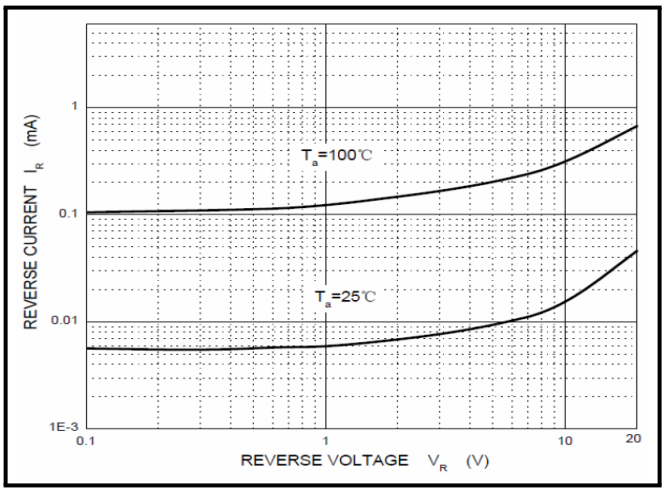


Figure 3: Capacitance Characteristics

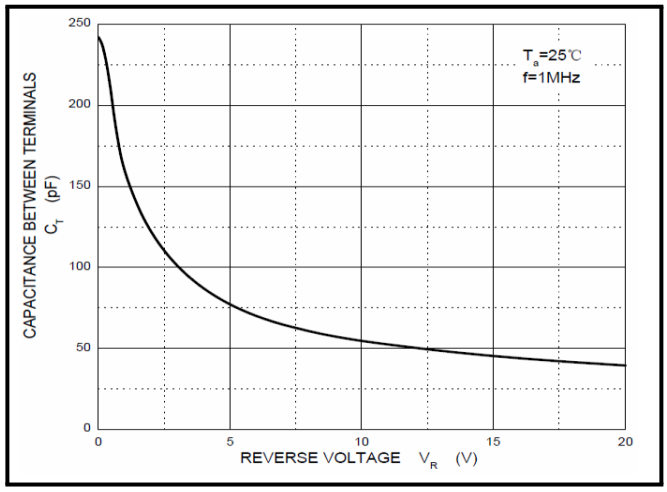
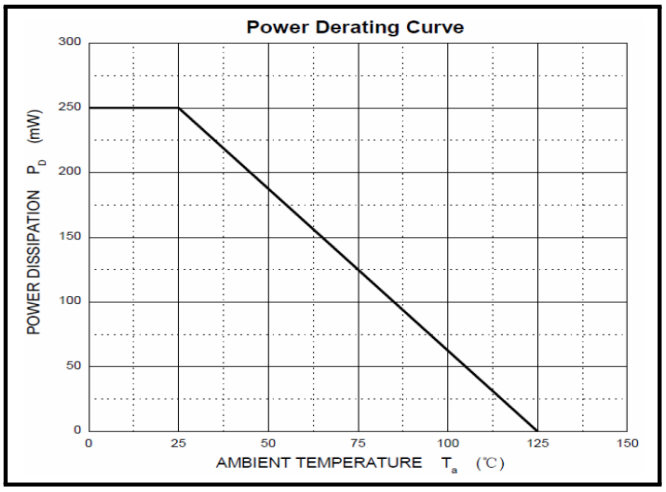


Figure 4: Power Derating Curve

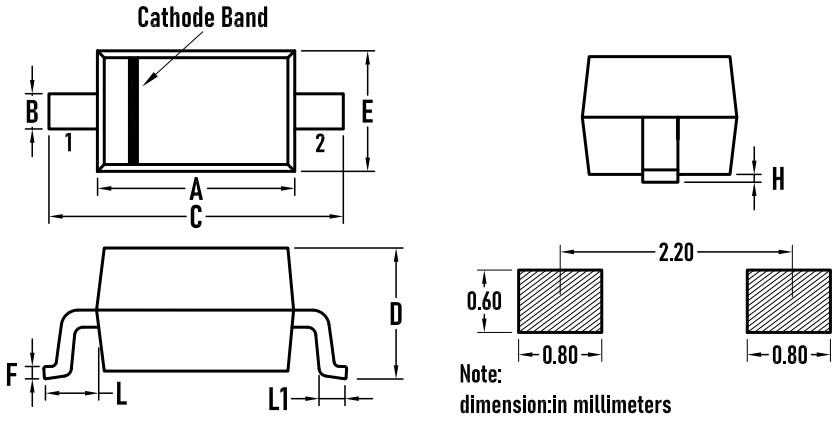


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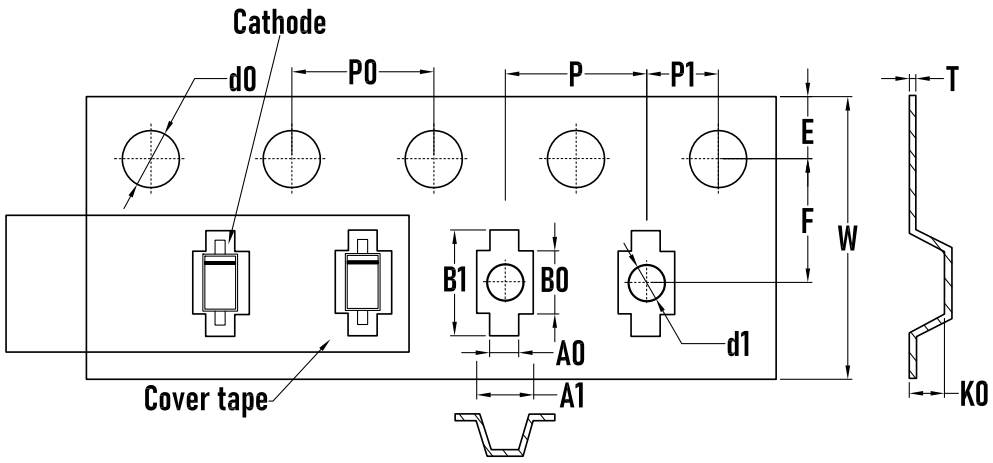
Schottky Barrier Diode

Outline Drawing - SOD-323



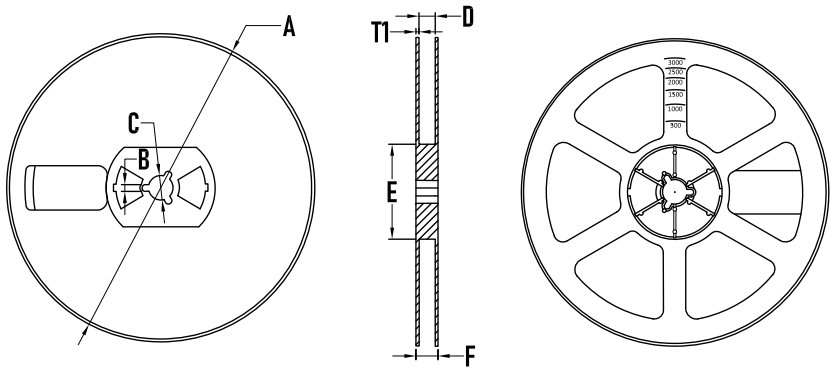
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.400	2.800	0.094	0.110
D	–	1.100	–	0.043
E	1.100	1.500	0.043	0.059
F	0.080	0.150	0.003	0.006
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Packaging Tape - SOD-323



SYMBOL	MILLIMETER
A0	0.80±0.10
A1	1.48±0.10
B0	1.80±0.10
B1	3.00±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.05±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.25 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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