BORN SEMICONDUCTOR

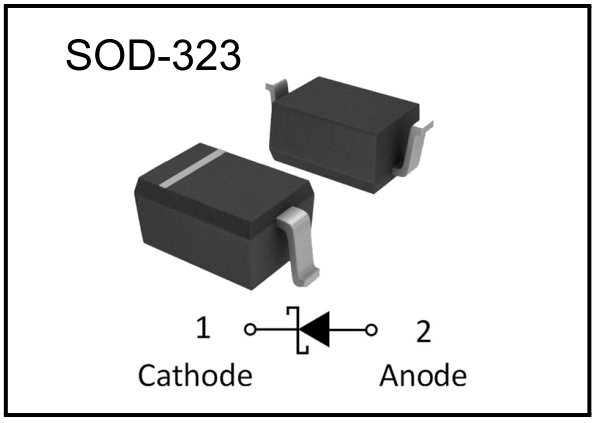
BAT46WS

Schottky Barrier Diode

Features

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

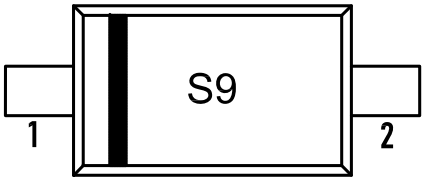
Package



Description

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

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAT46WS	SOD-323	S9	3K	Tape and reel

Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	100	V
V_{RWM}	Working Peak Reverse Voltage	100	V
V_R	DC Blocking Voltage	100	V
I_O	Average Rectified Output Current	75	mA
I_F	Forward Continuous Current	150	mA
I_{FRM}	Repetitive Peak Forward Surge Current @ tp ＜ 1.0s，Duty Cycle ＜ 50%	350	mA
I_{FSM}	Forward Surge Current @tp=10ms	750	mA
P_d	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	500	°C/W
T_J	Operating Temperature Range	-40 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

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Schottky Barrier Diode

Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{BR}	Reverse Breakdown Voltage	I_R=100uA	100	–	–	V
V_F	Forward Voltage Drop	I_F=0.1mA	–	–	0.25	V
		I_F=10mA			0.45	
		I_F=250mA			1.00	
I_R	Peak Reverse Current	V_R=1.5V	–	–	0.5	uA
		V_R=1.5V,T_J=60°C			5.0	
		V_R=10V			0.8	
		V_R=10V,T_J=60°C			7.5	
		V_R=50V			2.0	
		V_R=50V,T_J=60°C			15	
		V_R=75V			5.0	
		V_R=75V,T_J=60°C			20	
C_T	Total Capacitance	V_R = 0V, f=1MHZ	–	10		pF
		V_R = 1.0V, f=1MHZ	–	6.0		

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Schottky Barrier Diode

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

Figure 1: Forward Voltage

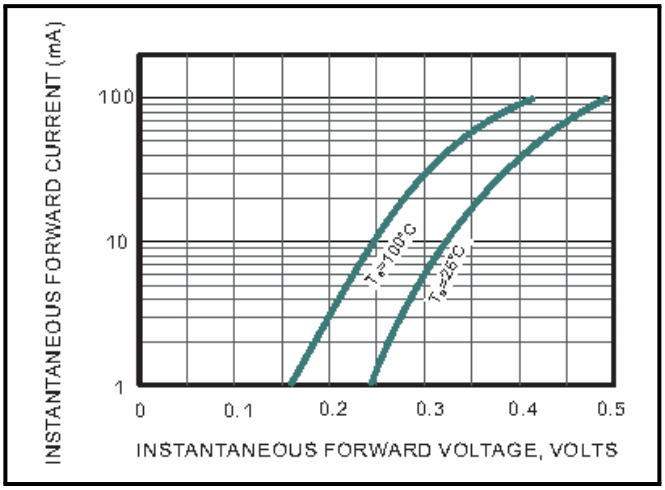


Figure 2: Reverse Characteristics

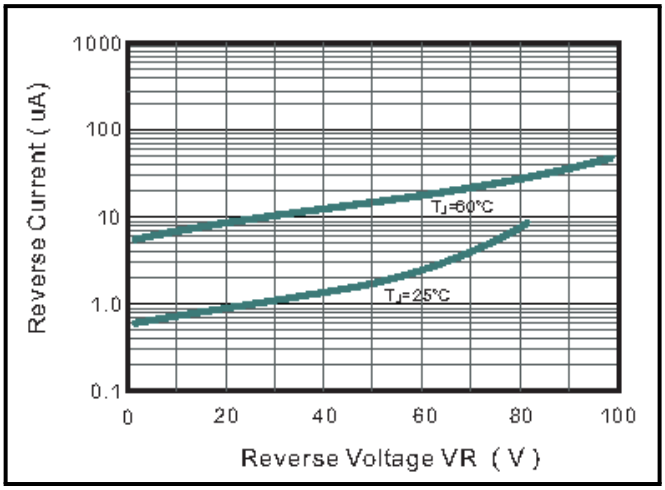


Figure 3: Junction Capacitance

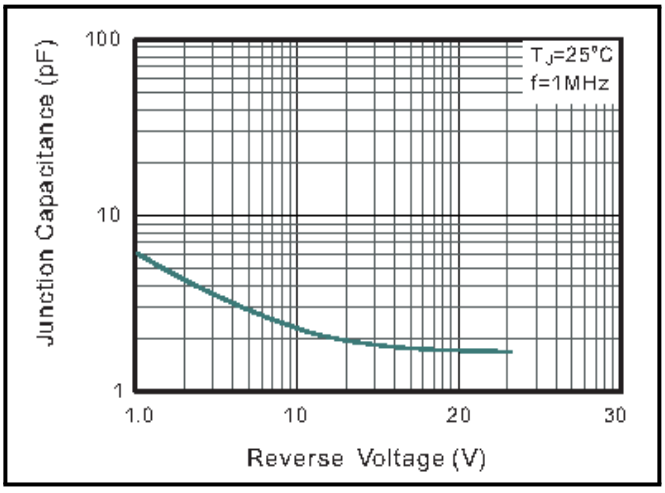
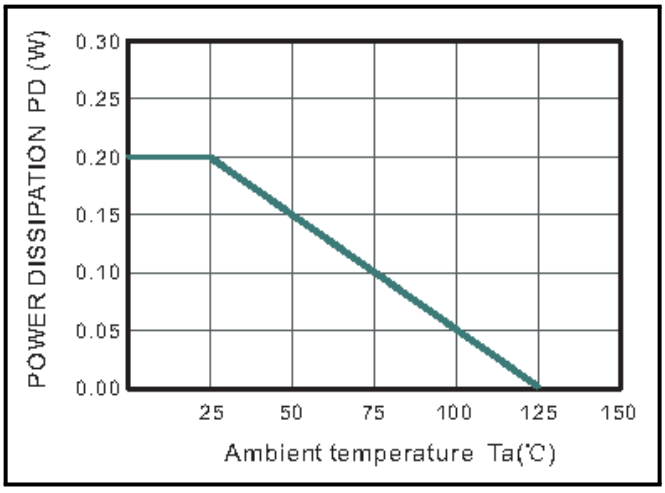


Figure 4: Power Derating Curve



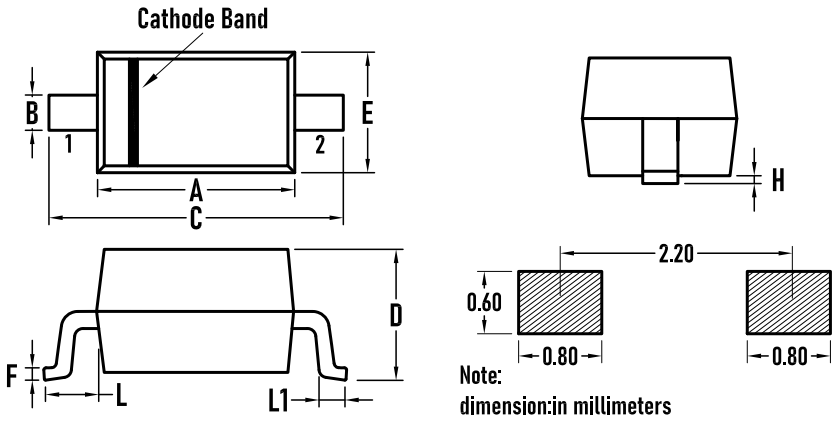
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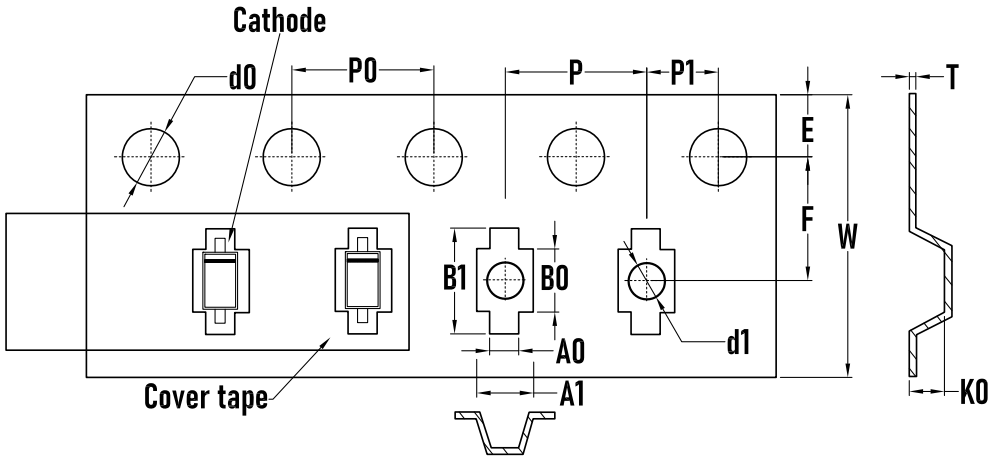
Schottky Barrier Diode

Outline Drawing - SOD-323



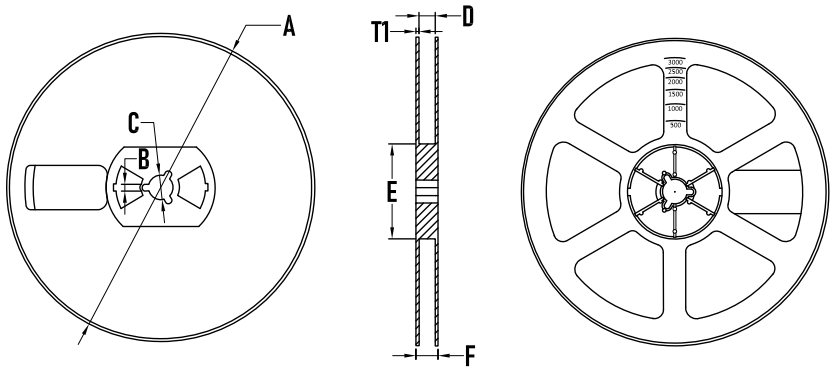
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.400	2.800	0.094	0.110
D	–	1.100	–	0.043
E	1.100	1.500	0.043	0.059
F	0.080	0.150	0.003	0.006
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

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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