BORN SEMICONDUCTOR

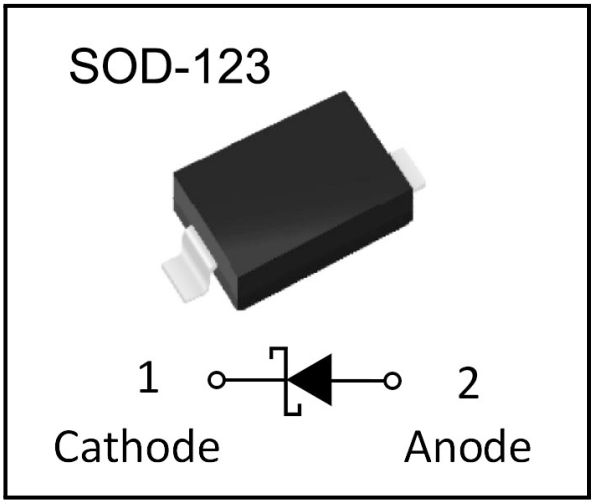
BAT46W

Schottky Barrier Diode

Features

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

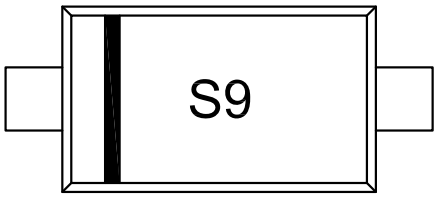
Package



General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-123 Plastic Package

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAT46W	SOD-123	S9	3K	Tape and reel

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

Symbol	Parameter	Value	Unit
V_{RRM}	Repetitive Peak Reverse voltage	100	V
V_{RWM}	Working Peak Reverse Voltag		
V_R	DC Blocking Voltage		
$I_{F(AV)}$	Maximum average forward rectified current	150	mA
I_{FRM}	Repetitive Peak Forward Current@ tp<1.0s,Duty Cycle <50%	350	mA
I_{FSM}	Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave	750	mA
P_d	Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	°C/W
T_j	Operating junction temperature range	-40 to +125	°C
T_{STG}	Storage temperature range	-55 to +150	°C

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BAT46W

Schottky Barrier Diode

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

Symbol	Parameter	Test Condition	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	Maximum 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=1V, f=1MHZ	–	6.0	–	

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BAT46W

Schottky Barrier Diode

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

Figure 1: Power Derating Curve

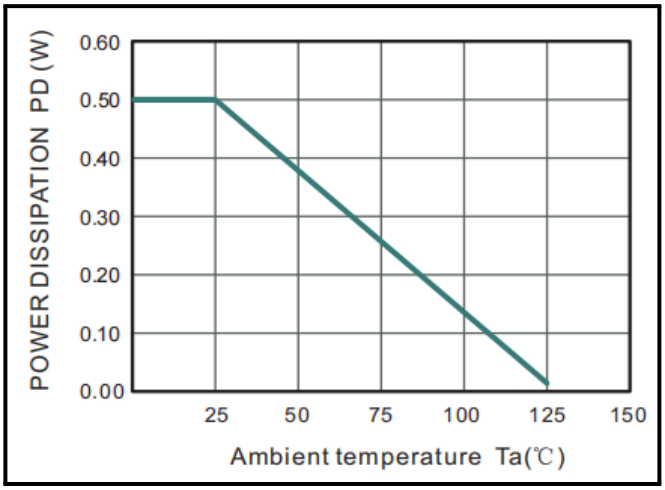


Figure 2:Typical Reverse Characteristics

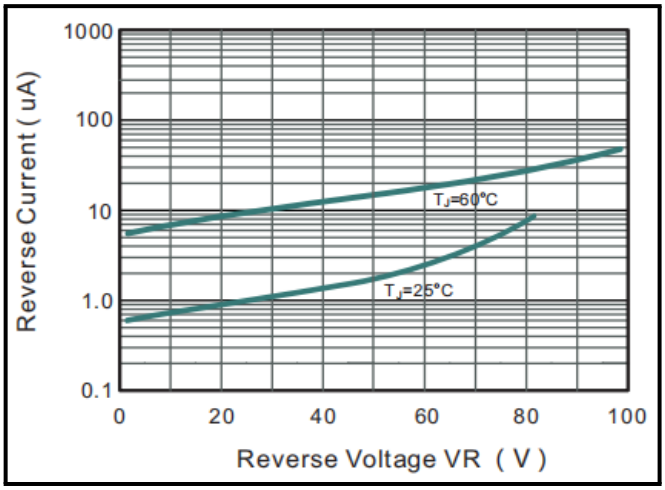


Figure 3: Typical Forward Voltage

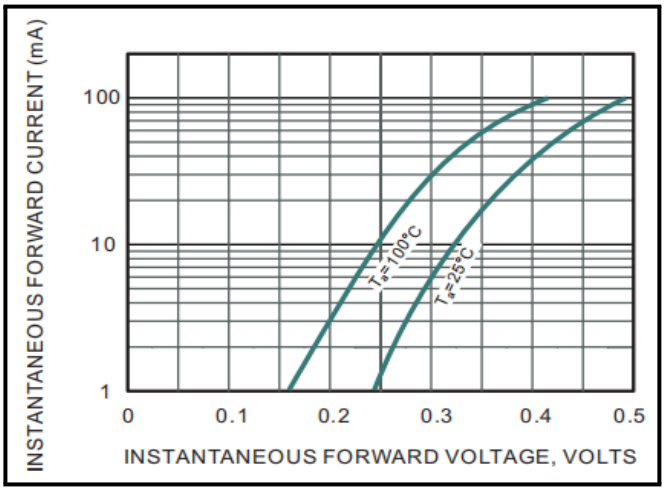
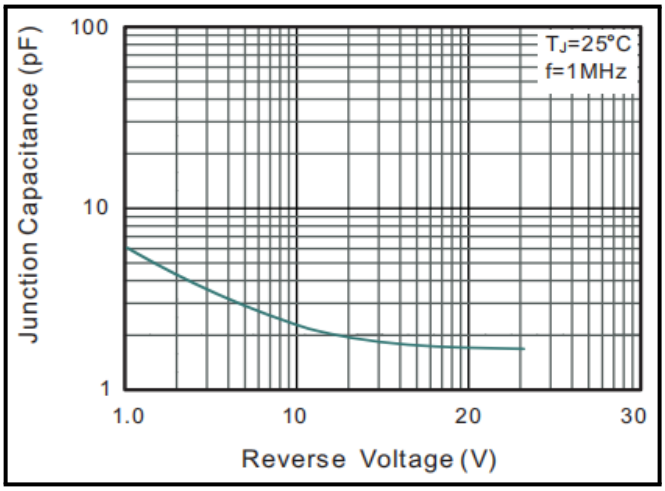


Figure 4:Typical Junction Capacitance



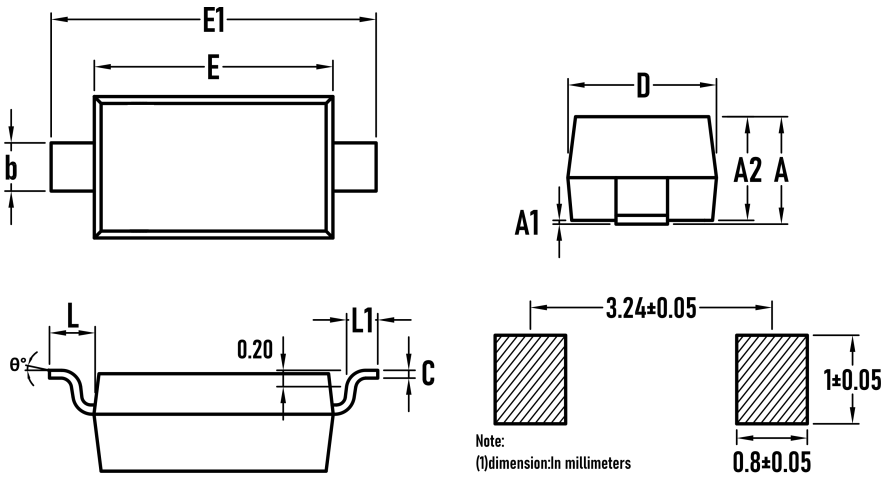
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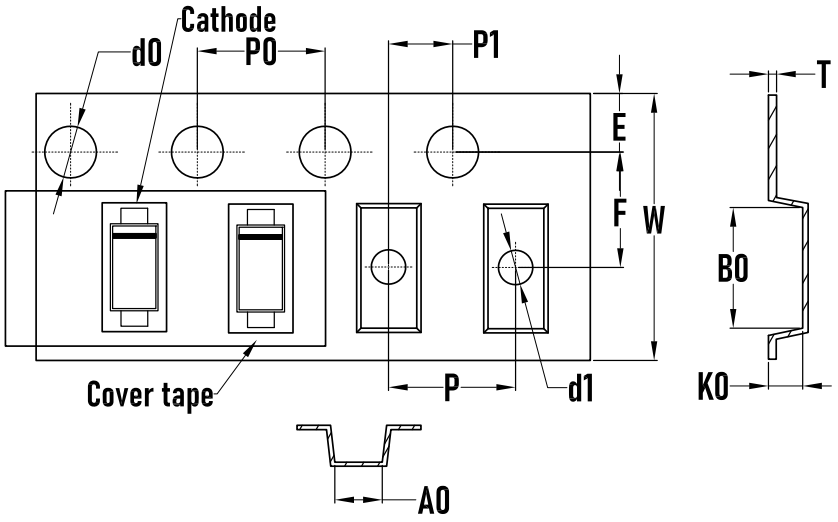
Schottky Barrier Diode

Package Information - SOD-123



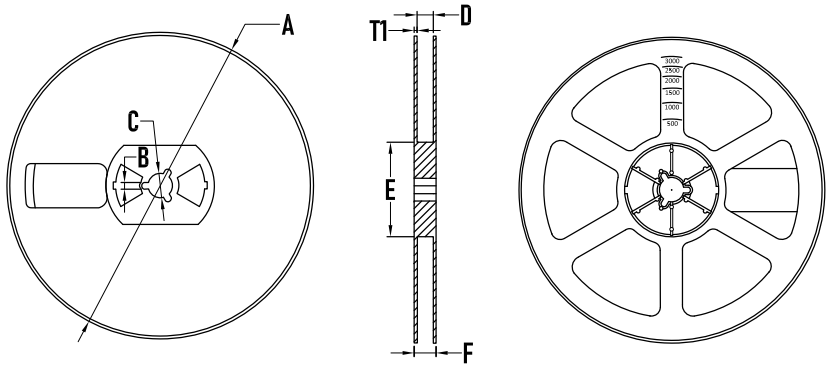
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.950	1.350	0.037	0.053
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500REF		0.020REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Packaging Tape - SOD-123



SYMBOL	MILLIMETER
A0	2.10±0.1
B0	4.0 ±0.1
d0	1.5±0.1
d1	1.0±0.1
E	1.75±0.1
F	3.50±0.1
K0	1.25±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	8.00±0.1
T	0.2±0.02

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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