

BAT54WS SURFACE MOUNT SCHOTTKY BARRIER DIODE



Features

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material —UL Recognition Flammability Classification 94V-0
- Green Products in Compliance with the ROHS Directive
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Mechanical Characteristics

- Case: SOD-323, Molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.04 grams(approx)

Maximum Ratings @T_A=25°C unless otherwise specified

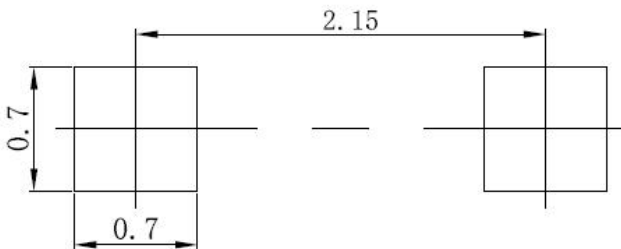
Characteristic	Symbol	Value	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	30	V
Forward Continuous Current	I _{FM}	200	mA
Repetitive Peak Forward Current	I _{FRM}	300	mA
Non-Repetitive Peak Forward Surge Current @t<1s	I _{FSM}	600	mA
Power Dissipation	P _D	200	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	625	°C/W
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristics	Symbol	Condition	Min.	Max.	Units
Reverse Breakdown Voltage*	V_{BR}	@ $I_{BS}=100\mu\text{A}$	30	-	V
Forward Voltage Drop*	V_{F1}	@ 1.0mA, Pulse, $T_J = 25^{\circ}\text{C}$ @ 100mA, Pulse, $T_J = 25^{\circ}\text{C}$	-	0.32 1	V
Reverse Current*	I_{R1}	@ $V_R = 25\text{V}$, Pulse, $T_J = 25^{\circ}\text{C}$	-	2	μA
Capacitance between terminals	C_T	@ $V_R = 0\text{V}$, $T_C=25$, $f_{SIG} = 1\text{MHz}$	-	10	pF
Reverse Recovery Time	t_{rr}	$I_F=10\text{mA}$ $I_R = 10\text{mA}$ $T_J = 25^{\circ}\text{C}$ $I_{rr} = 1\text{mA}$ $R_L=100\Omega$	-	5	ns

* Pulse width < 300 μs , duty cycle < 2%

SOD-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

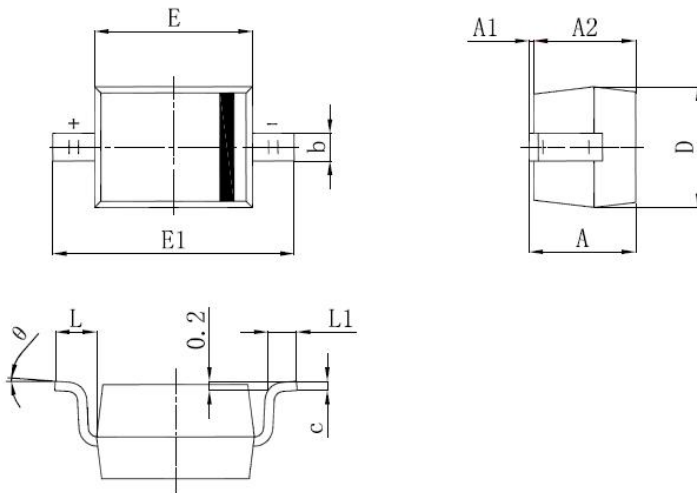
Ordering Information

Device	Package	Shipping
BAT54WS	SOD-323 (Pb-Free)	3000pcs / reel

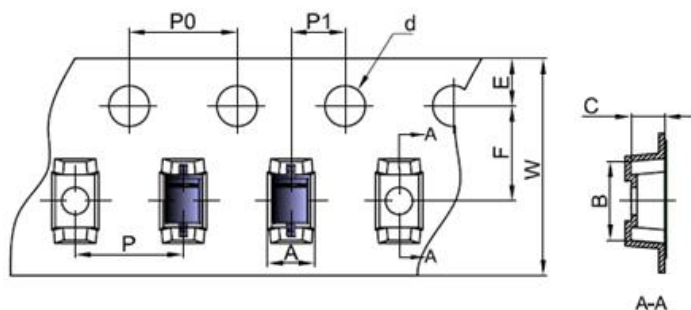
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


L9 = Marking Code

Mechanical Dimensions SOD-323


SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	-	1.000	-	0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.700	0.098	0.106
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Carrier Tape Specification SOD-323


SYMB OL	Millimeters	
	Min.	Max.
B	2.85	2.95
C	1.20	1.30
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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