

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
- “-A” is an AEC-Q101 qualified device
- 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

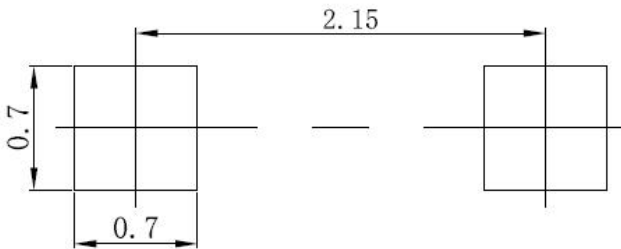
Characteristic	Symbol	Value	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	30	V
Continuous Forward Current	I _O	100	mA
Forward Continuous Current	I _{FM}	200	mA
Repetitive Peak Forward Current @ t _s ≤1s, δ≤0.5	I _{FRM}	300	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	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°C unless otherwise specified

Characteristics	Symbol	Condition	Min.	Max.	Units
Reverse Breakdown Voltage*	V _{BR}	@ I _{BS} =100uA	30	-	V
Forward Voltage Drop*	V _{F1}	@ 1.0mA, Pulse, T _J = 25 °C @ 100mA, Pulse, T _J = 25 °C	-	0.32 1	V
Reverse Current*	I _{R1}	@V _R = 25V, Pulse, T _J = 25 °C	-	2	μA
Capacitance between terminals	C _T	@V _R = 1 V, Tc=25, f _{SIG} = 1MHz	-	10	pF
Reverse Recovery Time	t _{rr}	I _F =10mA I _R = 10mA T _J = 25 °C I _{rr} =1 mA R _L =100Ω	-	5	ns

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

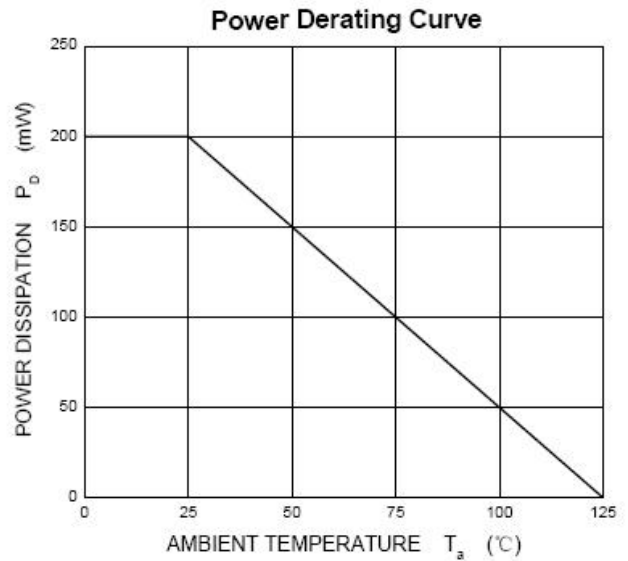
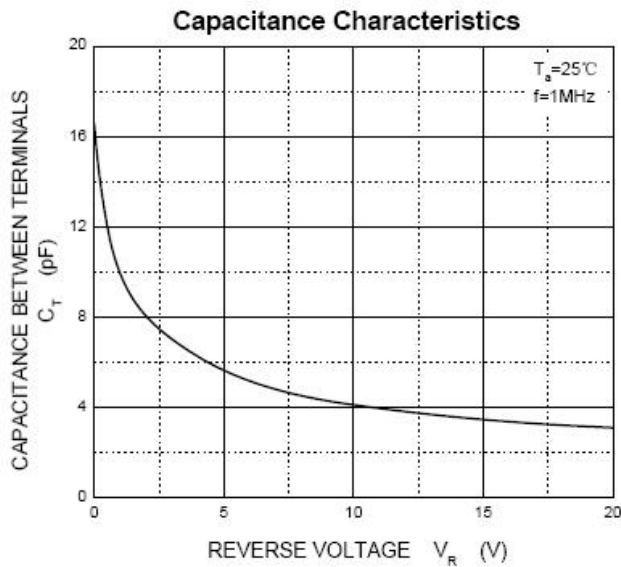
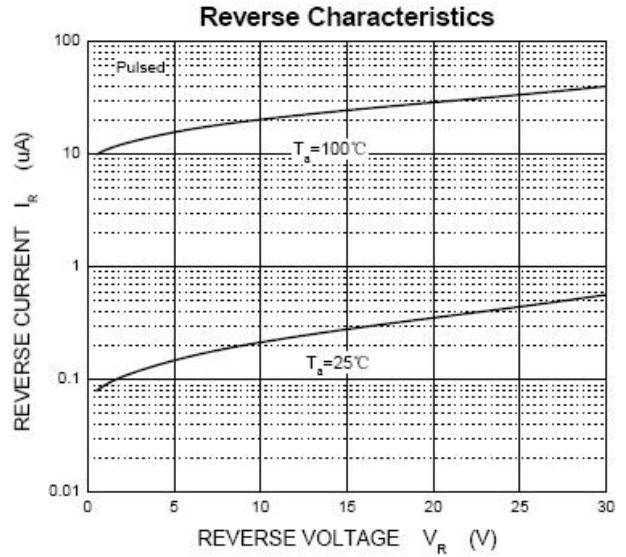
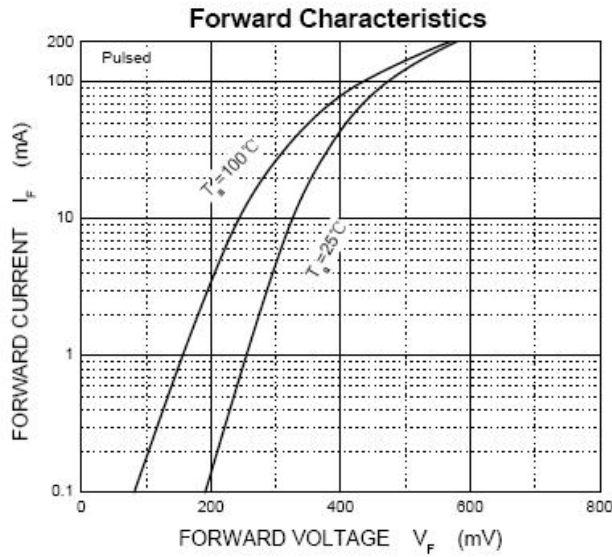
SOD-323 Suggested Pad Layout



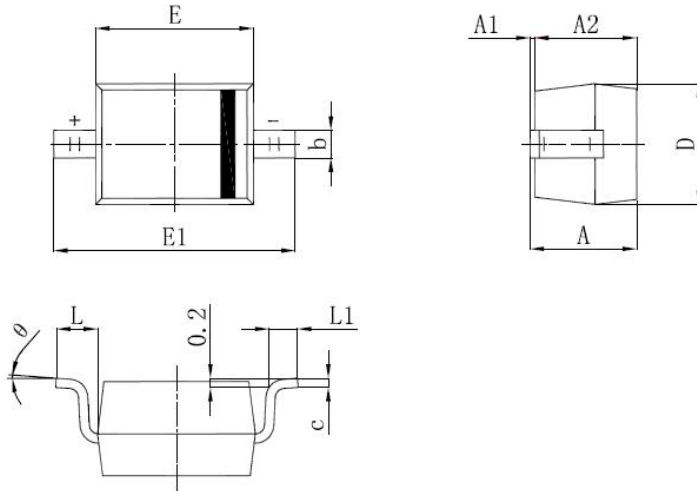
Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

Ratings and Characteristics Curves

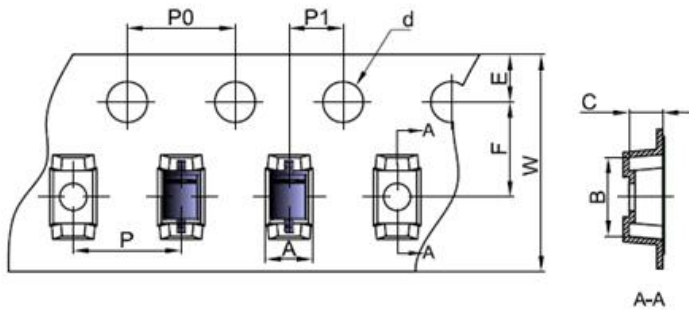


Mechanical Dimensions SOD-323



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



SYMBOL	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

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

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