

BAT54WS

Schottky Barrier Diode

Features

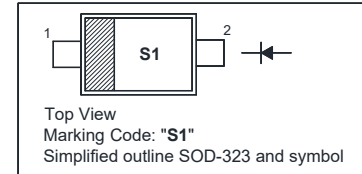
- Low forward voltage
- Guard ring protected

Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

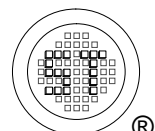


Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	30	V
Average Rectified Forward Current	$I_{F(AV)}$	100	mA
Forward Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Peak Forward Surge Current ($t_p = 10 \text{ ms}$)	I_{FSM}	600	mA
Power Dissipation	P_{tot}	230	mW
Thermal Resistance from Junction Ambient	$R_{\theta JA}$	435	$^\circ\text{C/W}$
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 0.1 \text{ mA}$ at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 30 \text{ mA}$ at $I_F = 100 \text{ mA}$	V_F	240 320 400 500 800	mV
Reverse Current at $V_R = 25 \text{ V}$	I_R	2	μA
Total Capacitance at $V_R = 1 \text{ V}$, $f = 1 \text{ MHz}$	C_{tot}	10	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}$, $V_R = 6 \text{ V}$, $I_R = 10 \text{ mA}$, $R_L = 100 \Omega$	t_{rr}	6	ns



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Electrical Characteristics Curves

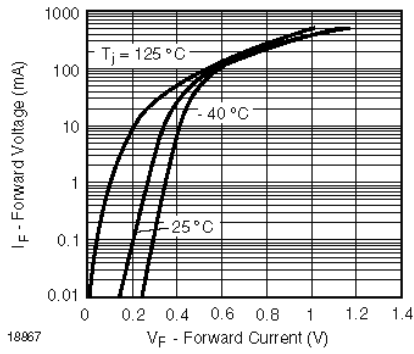


Figure 1. Typical Forward Voltage Forward Current at Various Temperatures

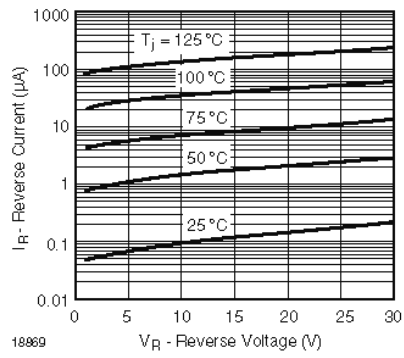


Figure 3. Typical Variation of Reverse Current at Various Temperatures

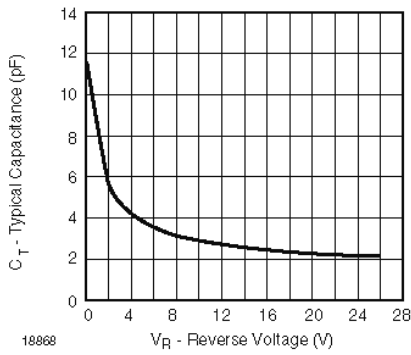
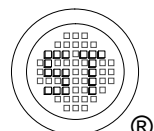


Figure 2. Typical Capacitance °C vs. Reverse Applied Voltage V_R

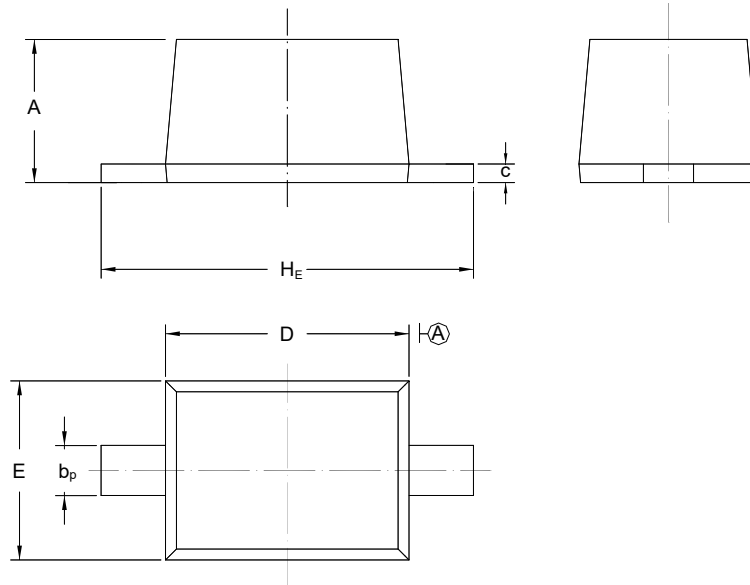


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PACKAGE OUTLINE

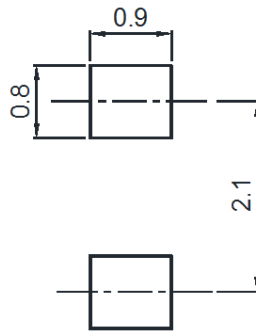
Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b _p	C	D	E	H _E
mm	1.10 0.80	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30

Recommended Soldering Footprint



Packing information

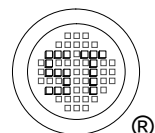
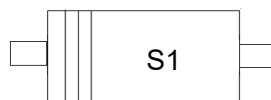
Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" III " = Cathode line

" S1 " = Part No.

Font type: Arial



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