

# BAT54W1

## Schottky Barrier Diode

### Features

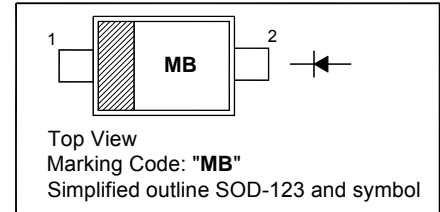
- Low forward voltage

### Applications

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

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

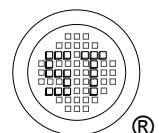


### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	30	V
Forward Current	$I_F$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	300	mA
Peak Forward Surge Current ( $t_p = 10$ ms)	$I_{FSM}$	600	mA
Power Dissipation	$P_D$	230	mW
Thermal Resistance from Junction Ambient	$R_{\theta JA}$	435	$^\circ\text{C}/\text{W}$
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 $I_F = 0.1$ mA at $I_F = 1$ mA at $I_F = 10$ mA at $I_F = 30$ mA at $I_F = 100$ mA	$V_F$	240 320 400 500 800	mV
Reverse Current at $V_R = 25$ V	$I_R$	2	$\mu\text{A}$
Total Capacitance at $V_R = 1$ V, $f = 1$ MHz	$C_T$	10	pF
Reverse Recovery Time at $I_F = 10$ mA, $I_R = 10$ mA, $I_{RR} = 1$ mA, $R_L = 100$ $\Omega$	$t_{rr}$	6	ns



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## Electrical characteristics curves

Fig 1. Reverse Characteristics Curve

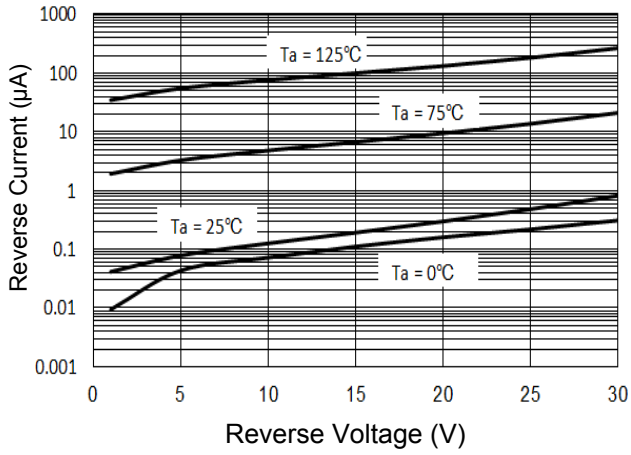


Fig 2. Forward Characteristics Curve

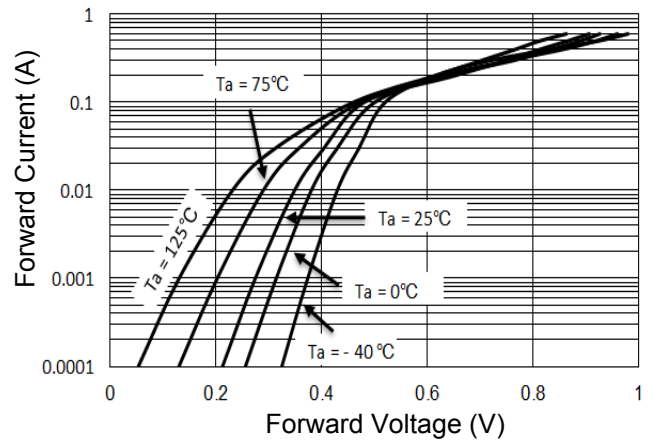
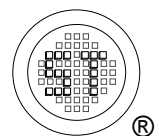
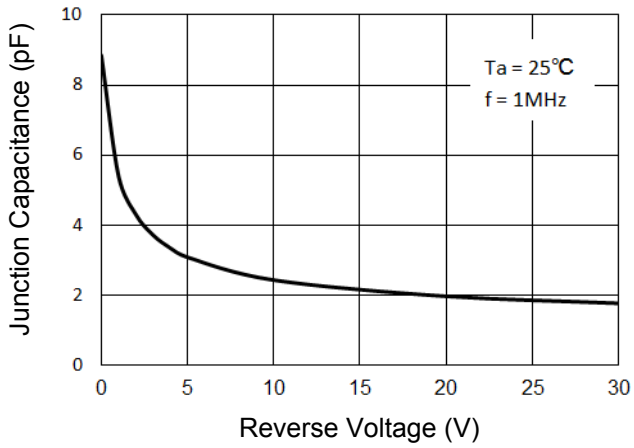


Fig 3. Junction Capacitance

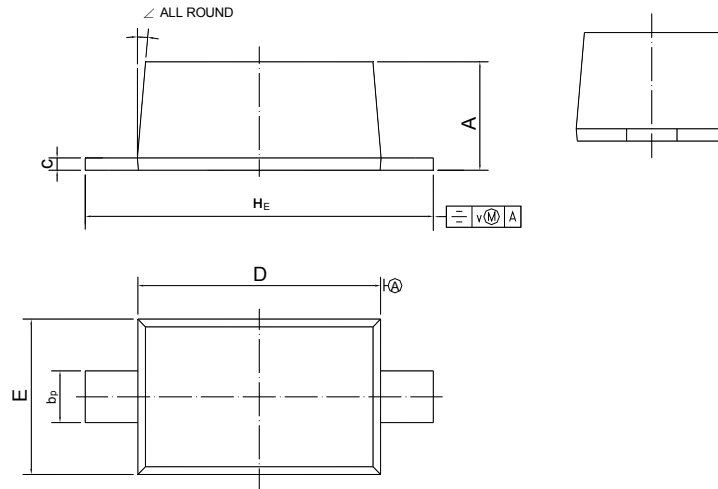


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## PACKAGE OUTLINE

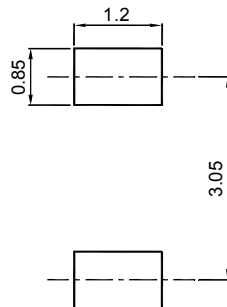
Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b <sub>P</sub>	c	D	E	H <sub>E</sub>	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°

### Recommended Soldering Footprint



### Packing information

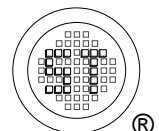
Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

### Marking information

" III " = Cathode line

" MB " = Part No.

Font type: Arial



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