

# BAT54WS SCHOTTKY BARRIER DIODE

## Features

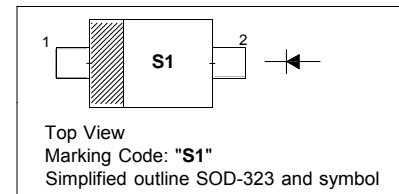
- Low forward voltage
- Guard ring protected
- Small plastic SMD SOD-323 package

## Applications

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

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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

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 ( $t_p = 10\text{ ms}$ )	$I_{FSM}$	600	mA
Power Dissipation	$P_D$	230	mW
Thermal Resistance from Junction Ambient	$R_{thJA}$	500	K/W
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

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

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	$\mu\text{A}$
Total Capacitance at $V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	$C_T$	10	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ , $V_R = 6\text{ V}$ , $I_R = 10\text{ mA}$ , $R_L = 100\text{ }\Omega$	$t_{rr}$	6	ns

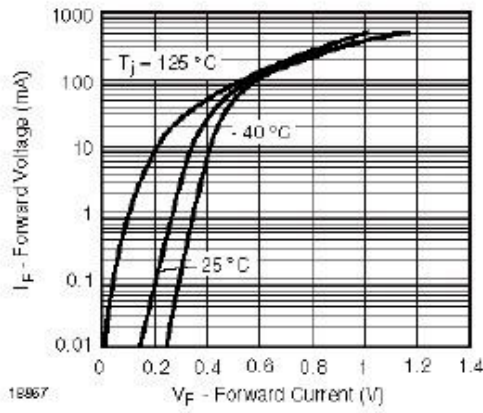


Figure 1. Typical Forward Voltage Forward Current at Various Temperatures

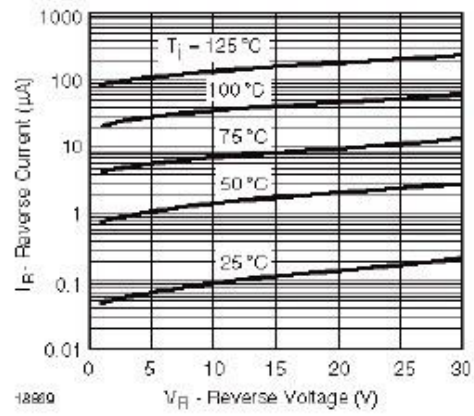


Figure 3. Typical Variation of Reverse Current at Various Temperatures

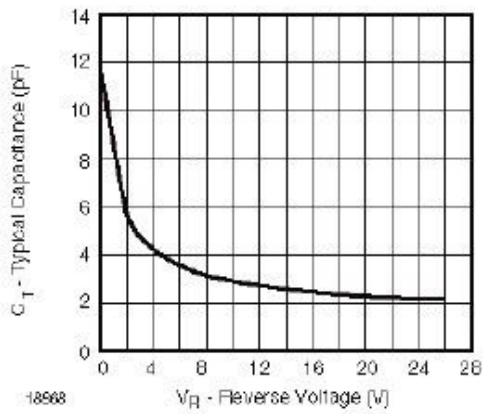


Figure 2. Typical Capacitance  $C_T$  vs. Reverse Applied Voltage  $V_R$

# PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323

