

## BAT42WS-BAT43WS

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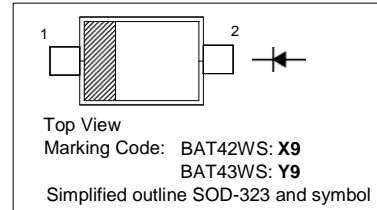
### SURFACE MOUNT SCHOTTKY BARRIER DIODE

#### Features

- Low Forward Voltage
- Fast Switching
- Ultra-Small Surface Mount Package

#### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Reverse Voltage	$V_R$	30	V
Average Rectified Output Current	$I_O$	100	mA
Forward Continuous Current	$I_{FM}$	200	mA
Repetitive Peak Forward Current at $t < 1\text{ s}$	$I_{FRM}$	500	mA
Non-repetitive Peak Forward Surge Current at $t < 10\text{ ms}$	$I_{FSM}$	2	A
Power Dissipation	$P_{tot}$	200	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Junction Temperature	$T_j$	- 55 to + 125	$^\circ\text{C}$
Storage Temperature Range	$T_{Stg}$	- 55 to + 125	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	30	-	V
Reverse Current at $V_R = 25\text{ V}$	$I_R$	-	1	$\mu\text{A}$
Forward Voltage at $I_F = 200\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 50\text{ mA}$ at $I_F = 2\text{ mA}$ at $I_F = 15\text{ mA}$	$V_F$	- - - 0.26 -	1 0.4 0.65 0.33 0.45	V
Total Capacitance at $V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	$C_T$	-	10	pF
Reverse Recovery Time at $I_F = I_R = 10\text{ mA}$ , $I_{RR} = 0.1 \times I_R$ , $R_L = 100\text{ }\Omega$	$t_{rr}$	-	5	ns

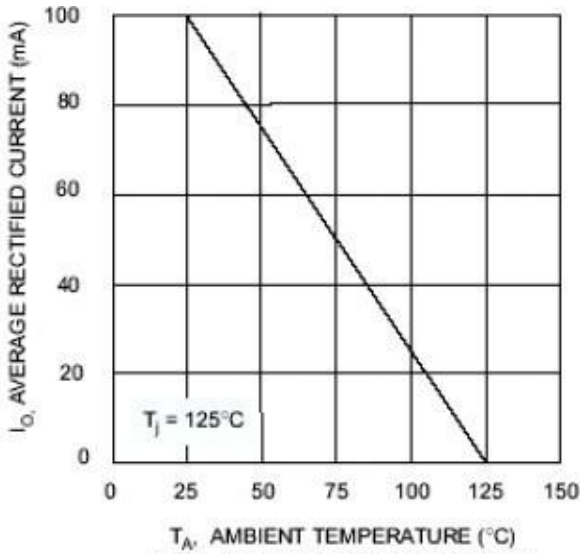


Fig. 1 Forward Current Derating Curve

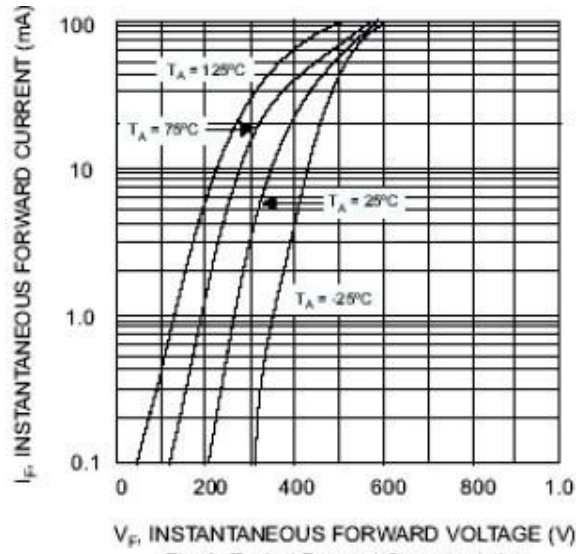


Fig. 2 Typical Forward Characteristics

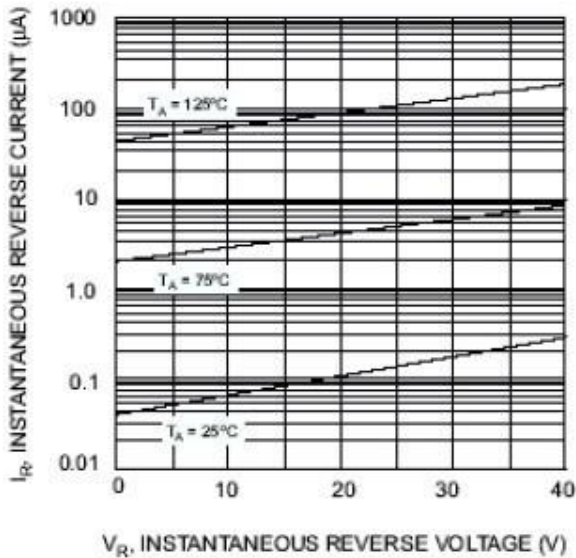


Fig. 3 Typical Reverse Characteristics

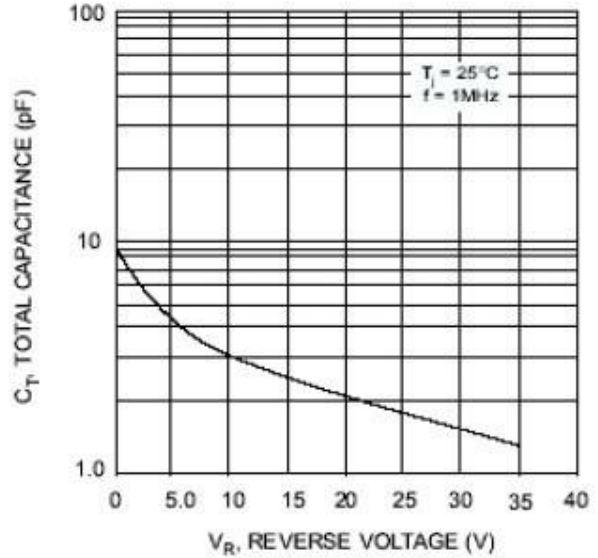


Fig. 4 Total Capacitance vs. Reverse Voltage



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**SOD-323**



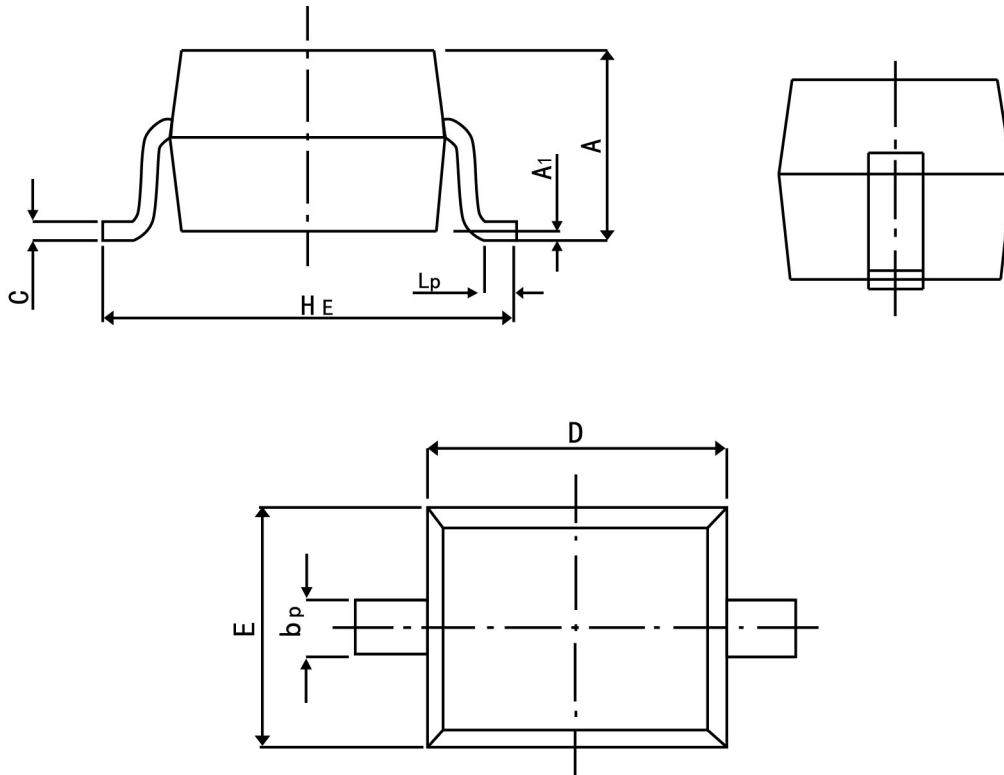
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**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SOD-323



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.20
bp	0.25	0.40
C	0.10	0.15
D	1.60	1.80
E	1.15	1.35
HE	2.30	2.80
A1	0.01	0.10
Lp	0.20	0.50