

BAT42WS-BAT43WS

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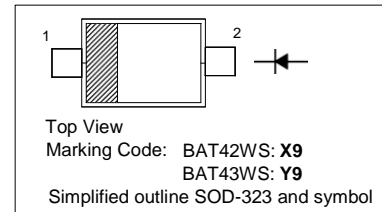
SURFACE MOUNT SCHOTTKY BARRIER DIODE

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	μA
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



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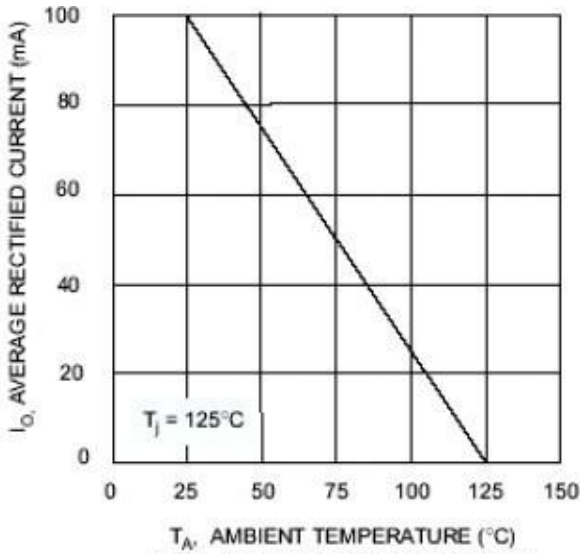


Fig. 1 Forward Current Derating Curve

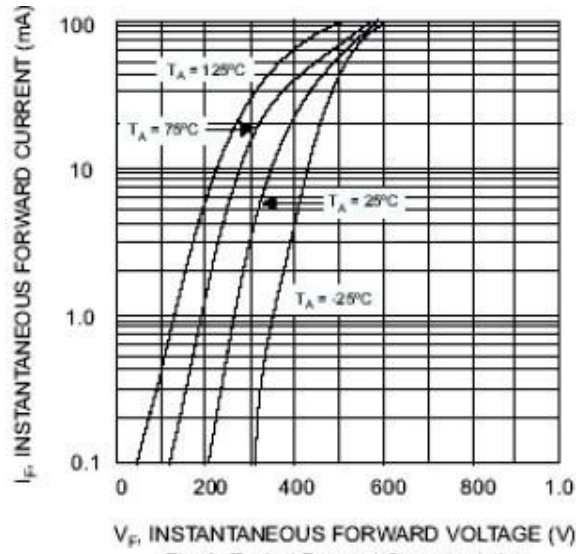


Fig. 2 Typical Forward Characteristics

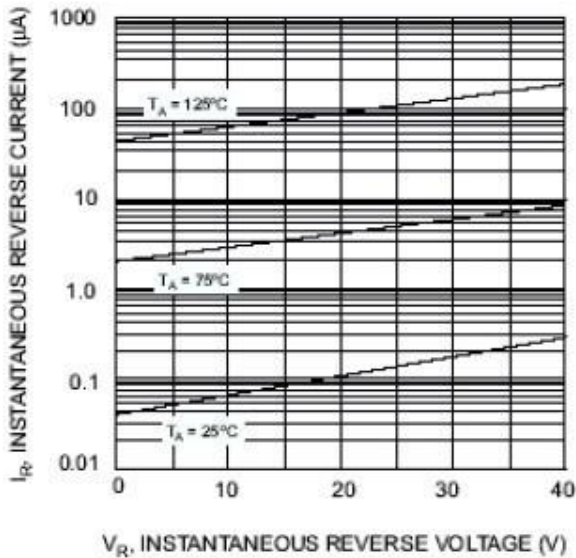


Fig. 3 Typical Reverse Characteristics

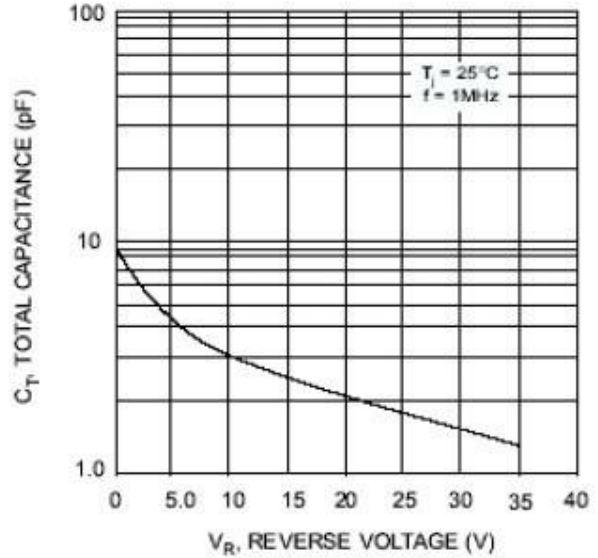


Fig. 4 Total Capacitance vs. Reverse Voltage



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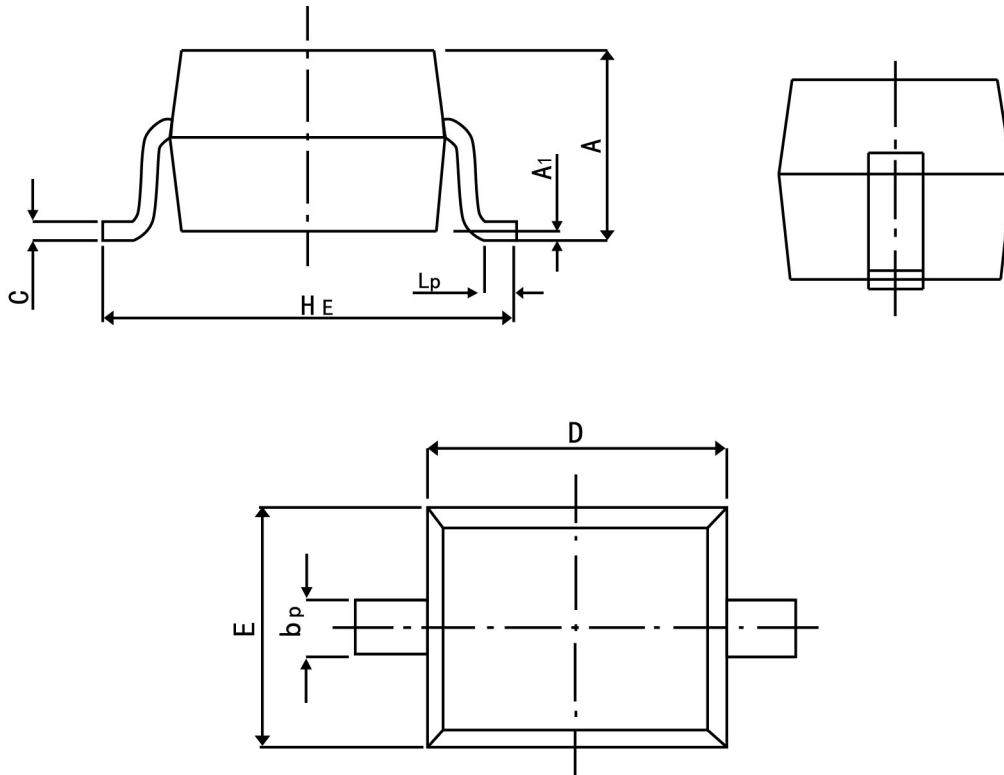
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

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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