

BAT42WS, BAT43WS

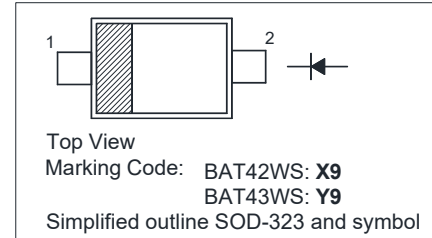
Surface Mount Schottky Barrier Diodes

Features

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	30	V
Reverse Voltage	V _R	30	V
Average Rectified Forward Current	I _{F(AV)}	100	mA
Forward Continuous Current	I _{FM}	200	mA
Repetitive Peak Forward Current at t < 1 s	I _{FRM}	500	mA
Non-repetitive Peak Forward Surge Current at t < 10 ms	I _{FSM}	2	A
Power Dissipation	P _{tot}	200	mW
Thermal Resistance Junction to Ambient	R _{θJA}	500	°C/W
Operating and Storage Temperature Range	T _J , T _{Stg}	- 55 to + 125	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at I _R = 100 μA	V _{(BR)R}	30	-	V
Reverse Current at V _R = 25 V	I _R	-	500	nA
Forward Voltage at I _F = 200 mA	V _F	-	1	V
at I _F = 10 mA		-	0.4	V
at I _F = 50 mA		-	0.65	V
at I _F = 2 mA		0.26	0.33	V
at I _F = 15 mA		-	0.45	V
Total Capacitance at V _R = 1 V, f = 1 MHz	C _T	-	10	pF
Reverse Recovery Time at I _F = I _R = 10 mA, I _{tr} = 0.1 X I _R , R _L = 100 Ω	t _{rr}	-	5	ns

Electrical characteristics curves

Fig 1. Reverse Characteristics Curves

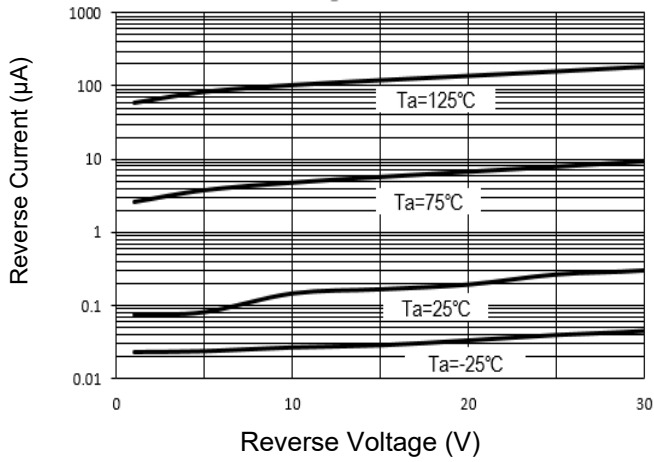


Fig 2. Forward Characteristics Curves

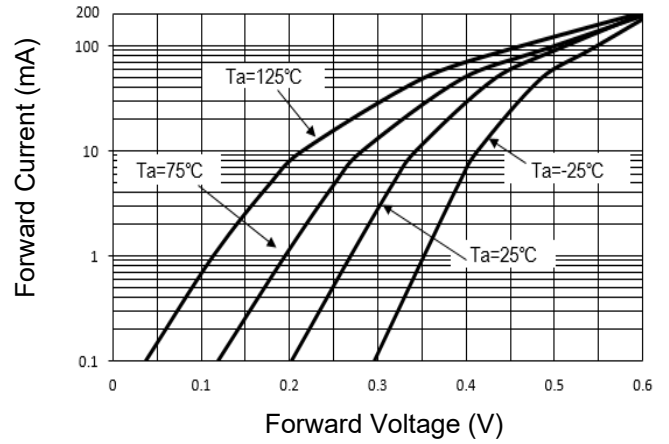


Fig 3. Junction Capacitance

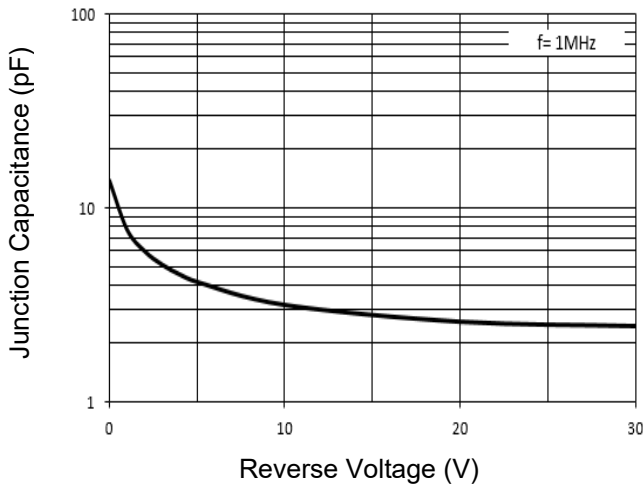
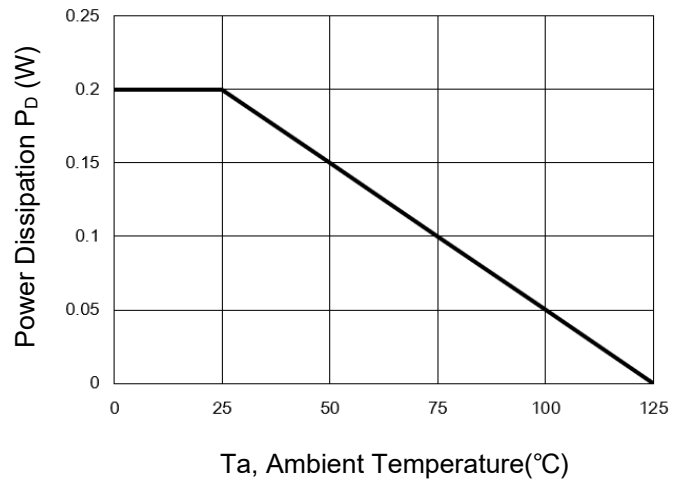


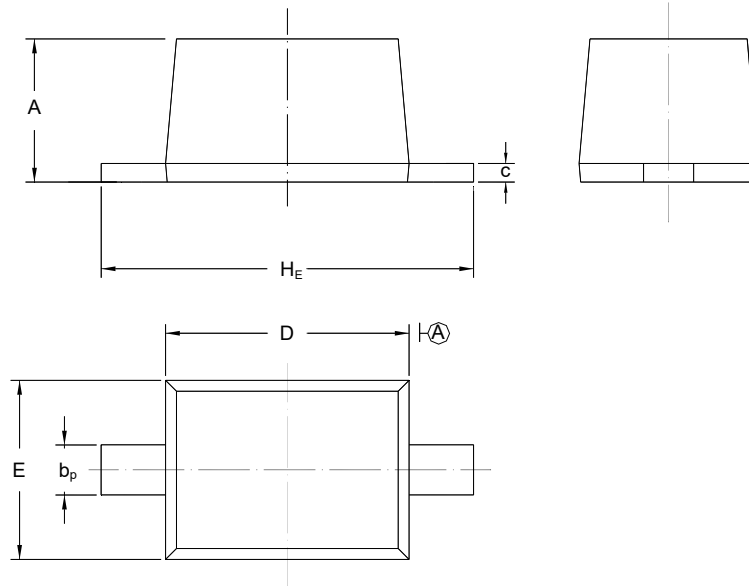
Fig 4. Power Derating Curve



PACKAGE OUTLINE

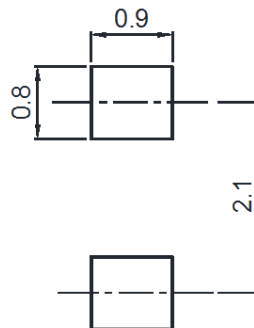
Plastic surface mounted package; 2 leads

S O D - 3 2 3



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

" ** " = Part No.

Font type: Arial

