

## BAV19WS, BAV20WS, BAV21WS

### Silicon Epitaxial Planar Diodes

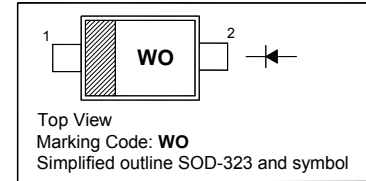
High Voltage Switching Diode

#### Features

- Fast switching speed
- Surface mount package ideally suited for automatic insertion

#### 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	$V_{RRM}$	120	V
		200	
		250	
Reverse Voltage	$V_R$	100	V
		150	
		200	
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Forward Continuous Current	$I_{FM}$	400	mA
Repetitive Peak Forward Current	$I_{FRM}$	625	mA
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	at $t = 1\ \mu\text{s}$ 2.5	A
		at $t = 1\ \text{s}$ 0.5	
Power Dissipation	$P_{tot}$	200	mW
Operating and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\ \mu\text{A}$	$V_{(BR)R}$	120	-	V
		200	-	
		250	-	
Reverse Current at $V_R = 100\ \text{V}$ at $V_R = 150\ \text{V}$ at $V_R = 200\ \text{V}$	$I_R$	-	100	nA
		-	100	
		-	100	
Forward Voltage at $I_F = 100\ \text{mA}$ at $I_F = 200\ \text{mA}$	$V_F$	-	1	V
		-	1.25	
Total Capacitance at $V_R = 0, f = 1\ \text{MHz}$	$C_T$	-	5	pF
Reverse Recovery Time at $I_F = I_R = 30\ \text{mA}, I_{RR} = 0.1 \times I_R, R_L = 100\ \Omega$	$t_{rr}$	-	50	ns

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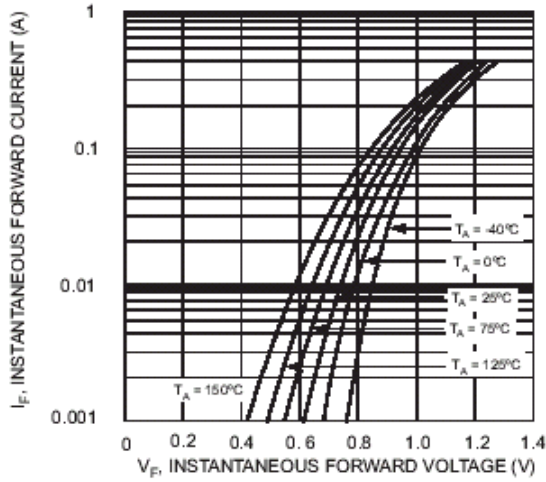


Fig. 1 Typical Forward Characteristics

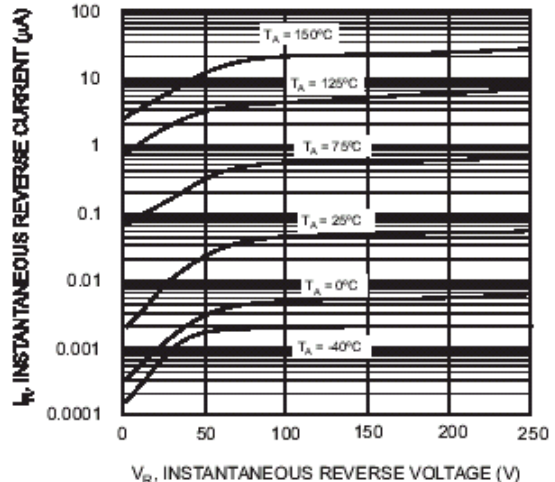


Fig. 2 Typical Reverse Characteristics

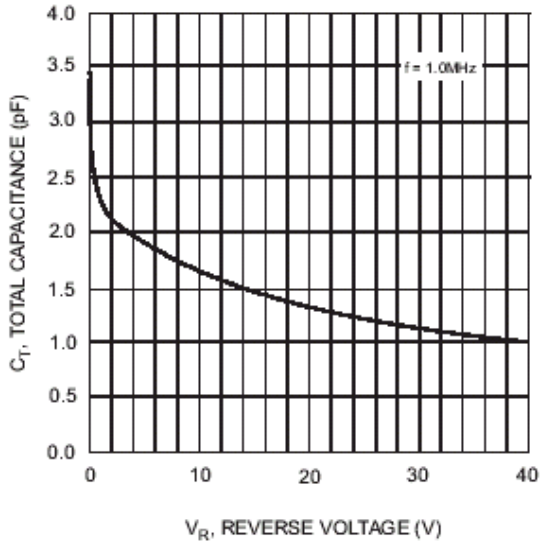


Fig. 3 Typical Capacitance vs. Reverse Voltage

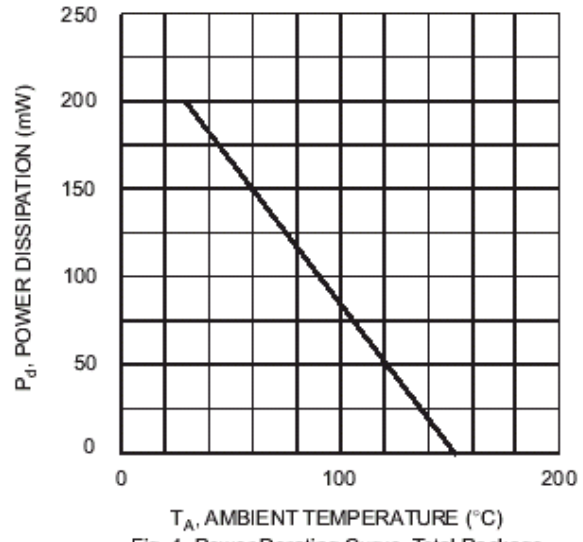


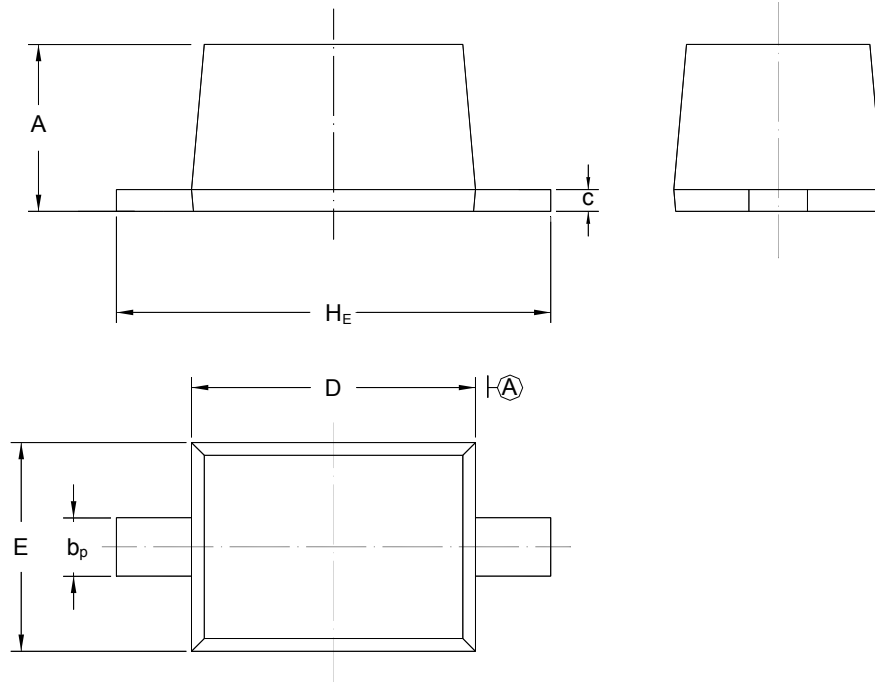
Fig. 4 Power Derating Curve, Total Package

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### PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b <sub>p</sub>	C	D	E	H <sub>E</sub>
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