

Silicon Epitaxial Planar Diodes

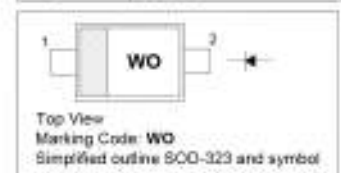
High Voltage Switching Diode

Features

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode


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

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage	BAV19WS	V_{RRM}	120	V
	BAV20WS		200	
	BAV21WS		250	
Reverse Voltage	BAV19WS	V_R	100	V
	BAV20WS		150	
	BAV21WS		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	at $t = 1 \mu\text{s}$	I_{FSM}	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 $T_a = 25^\circ\text{C}$

Parameter		Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	BAV19WS	$V_{(BR,R)}$	120	-	V
	BAV20WS		200	-	
	BAV21WS		250	-	
Reverse Current at $V_R = 100 \text{ V}$ at $V_R = 150 \text{ V}$ at $V_R = 200 \text{ V}$	BAV19WS	I_R	-	100	nA
	BAV20WS		-	100	
	BAV21WS		-	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

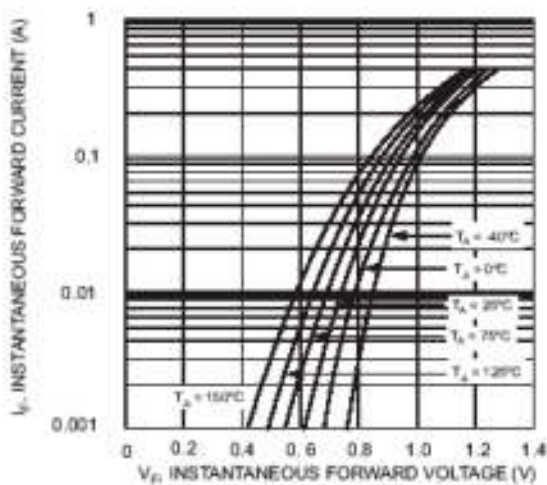


Fig. 1 Typical Forward Characteristics

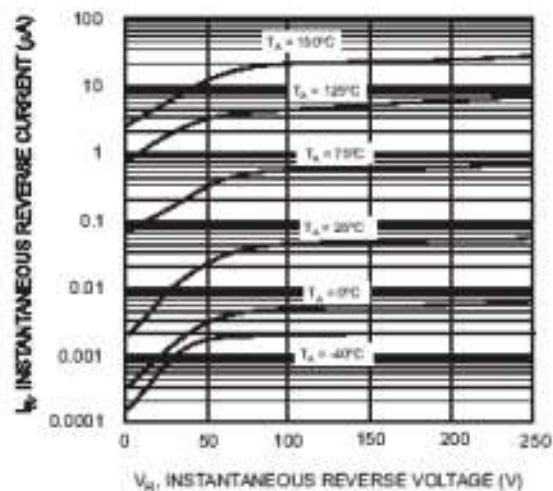


Fig. 2 Typical Reverse Characteristics

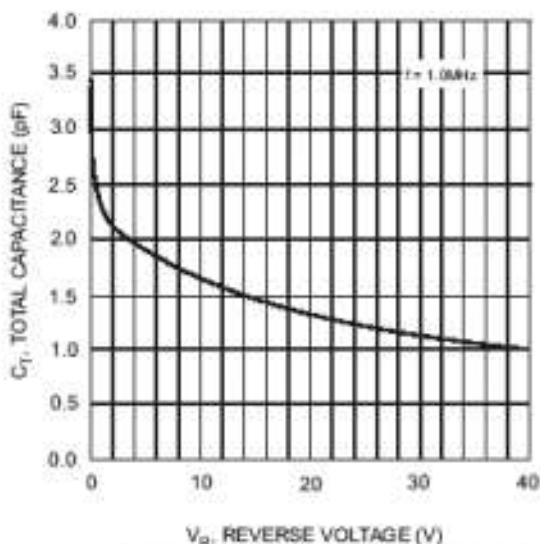


Fig. 3 Typical Capacitance vs. Reverse Voltage

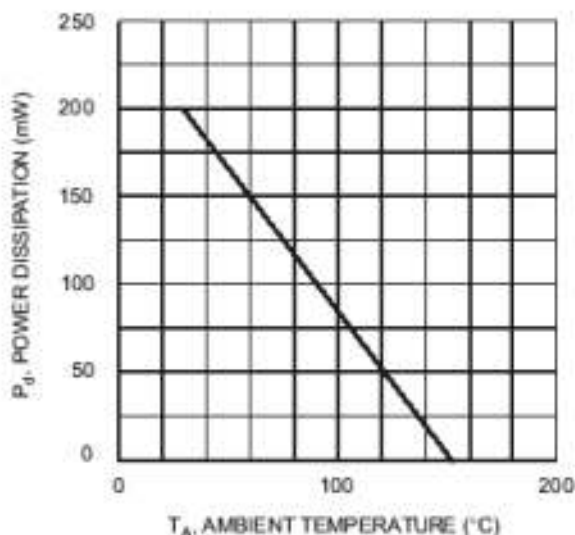
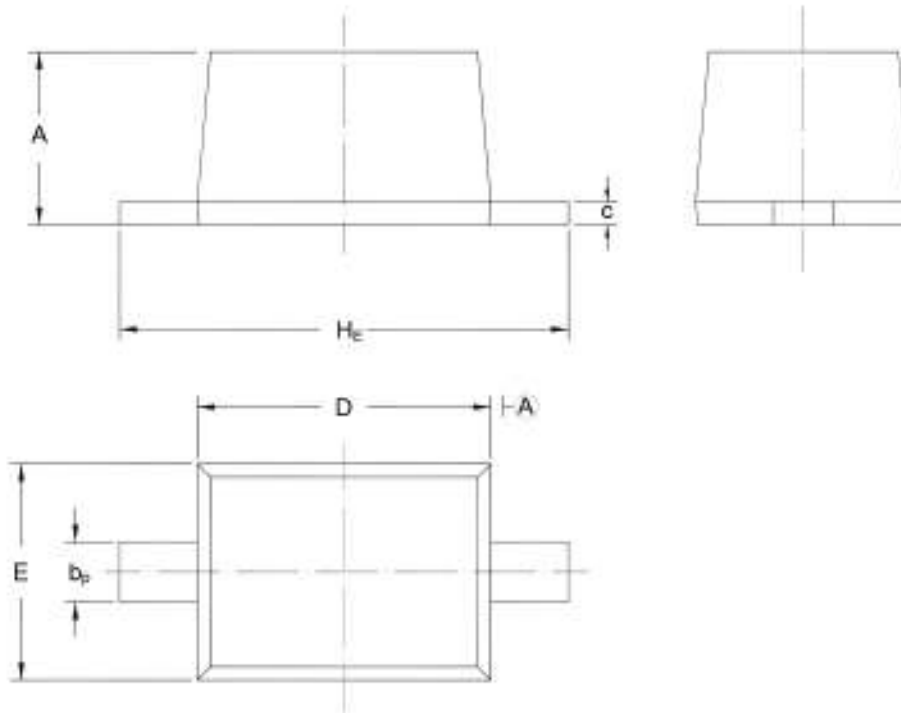


Fig. 4 Power Derating Curve, Total Package

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323


UNIT	A	b_p	C	D	E	H_e
mm	1.10	0.40	0.15	1.80	1.35	2.80
	0.80	0.25	0.00	1.60	1.15	2.30