

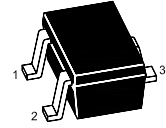
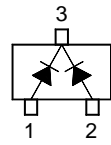


BAV70W Silicon Epitaxial Planar Switching Diode

Features

- Fast switching diode
- Ultra small surface mount package

Marking Code: A4



SOT-323

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

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Continuous Forward Current	I_F	175	mA
Single diode loaded Double diode loaded		100	
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	0.5	A
at $t = 1\text{ s}$		1	
at $t = 1\text{ ms}$ at $t = 1\text{ }\mu\text{s}$		4	
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	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 $I_R = 100\text{ }\mu\text{A}$	$V_{BR(R)}$	75	-	V
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 50\text{ mA}$ at $I_F = 150\text{ mA}$	V_F	-	0.715	V
		-	0.855	
		-	1	
		-	1.25	
Reverse Leakage Current at $V_R = 25\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 25\text{ V}, T_J = 150\text{ }^\circ\text{C}$ at $V_R = 75\text{ V}, T_J = 150\text{ }^\circ\text{C}$	I_R	-	30	nA
		-	2.5	μA
		-	60	μA
		-	100	μA
Diode Capacitance at $V_R = 0\text{ V}, f = 1\text{ MHz}$	C_{tot}	-	2	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}, I_{rr} = 0.1 I_R, R_L = 100\text{ }\Omega$	t_{rr}	-	4	ns

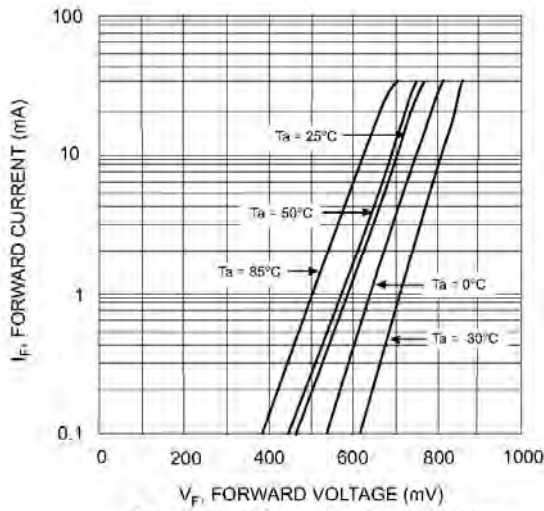


Fig. 1 Forward Current vs. Forward Voltage

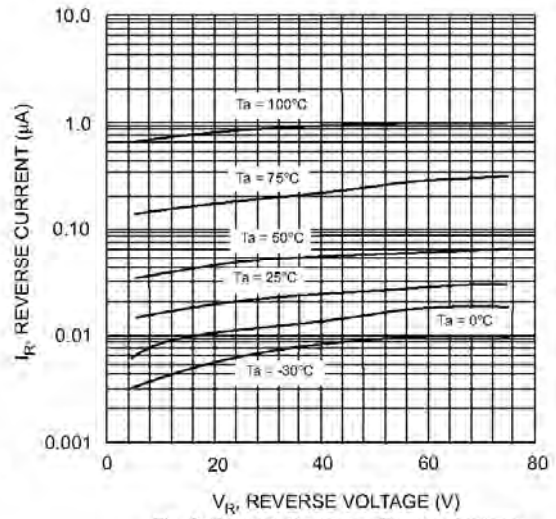


Fig. 2 Reverse Current vs. Reverse Voltage

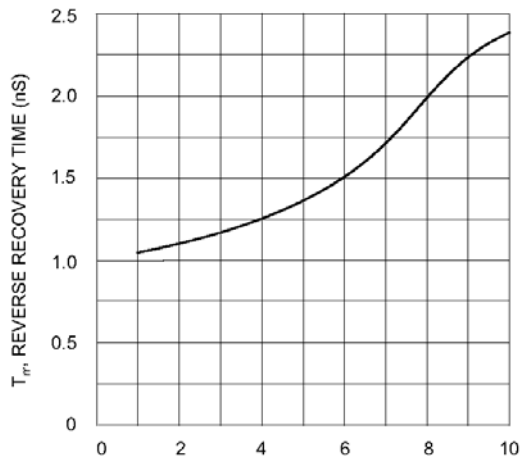


Fig. 3. Reverse Recovery Time vs. Forward Current

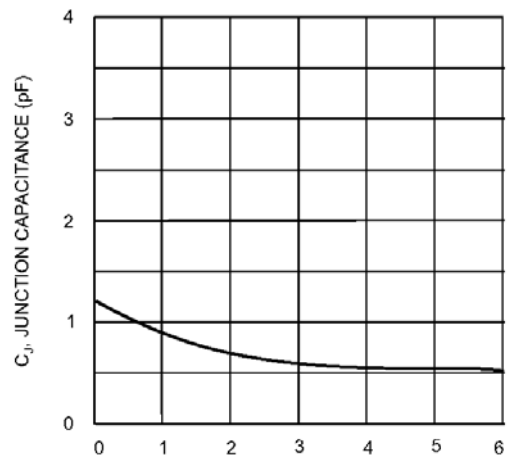
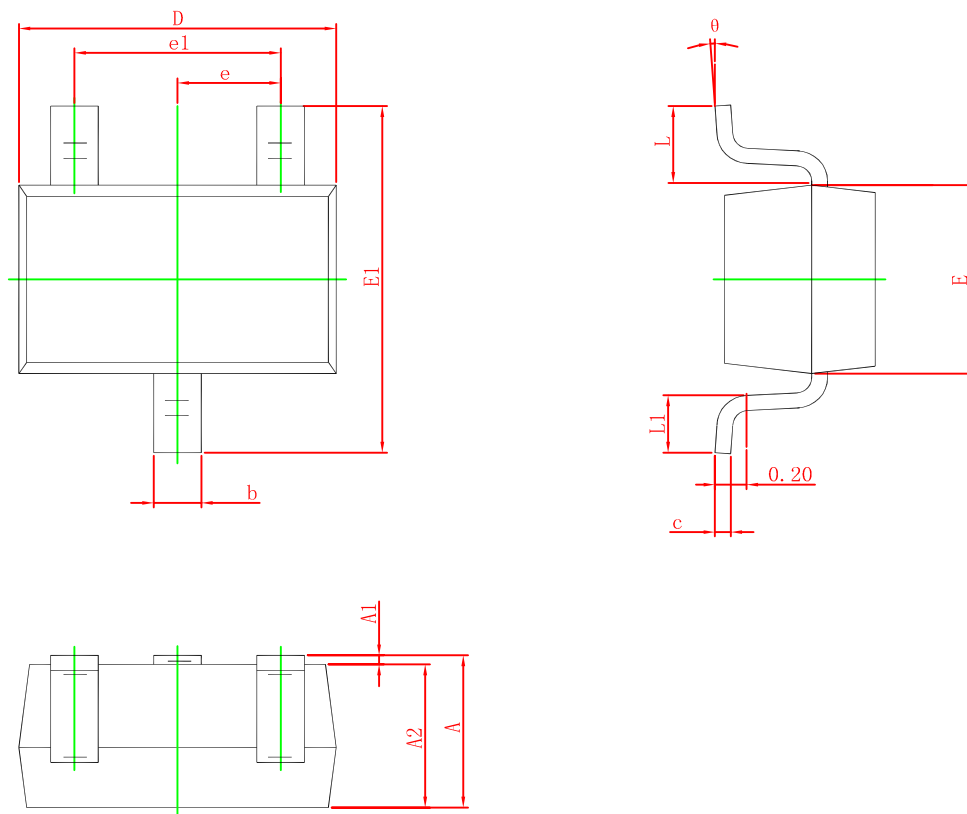


Fig. 4. Typical Junction Capacitance vs. Reverse Voltage



SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°