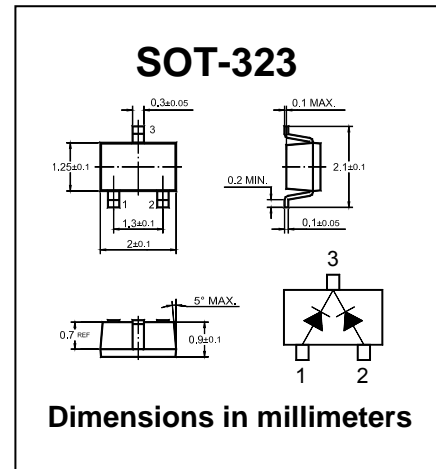


# BAV70W

## Silicon Epitaxial Planar Switching Diode

### Features

- Fast switching diode
- Ultra small surface mount package



### 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	$I_F$	Single diode loaded 175	mA
		Double diode loaded 100	
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	at $t = 1\text{ s}$ 0.5	A
		at $t = 1\text{ ms}$ 1	
		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	$\mu\text{A}$
		-	60	$\mu\text{A}$
		-	100	$\mu\text{A}$
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

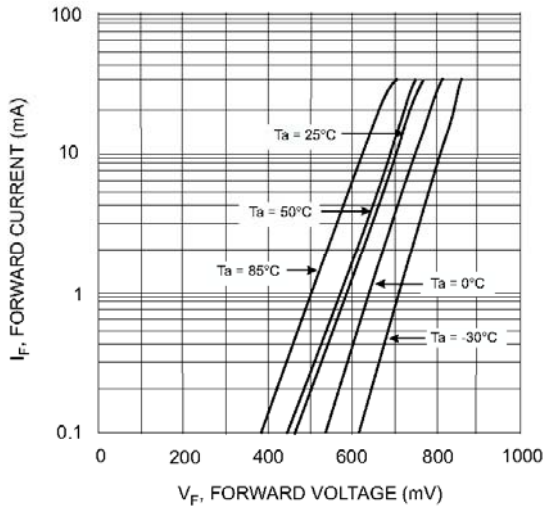


Fig. 1 Forward Current vs. Forward Voltage

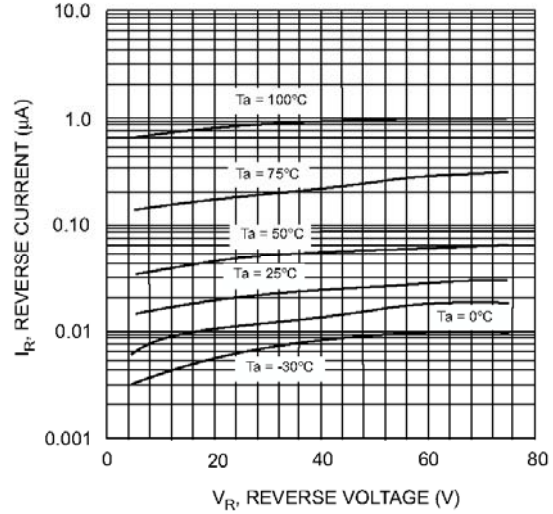


Fig. 2 Reverse Current vs Reverse Voltage

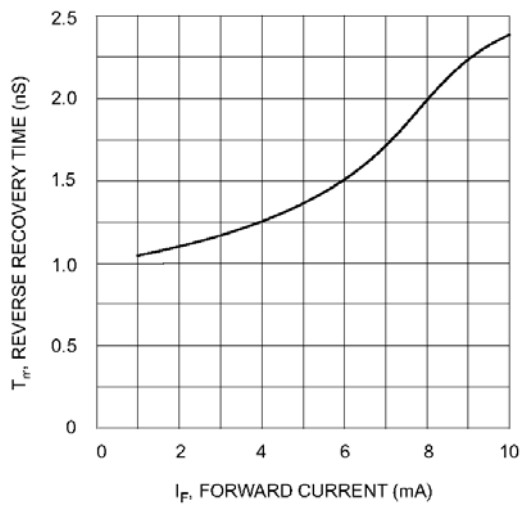


Fig. 3. Reverse Recovery Time vs. Forward Current

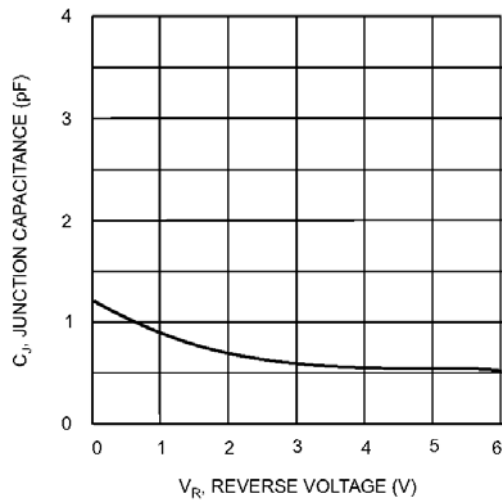


Fig. 4. Typical Junction Capacitance vs. Reverse Voltage