

VII. Switching Diode

(b). SMD Type (SOD-123)

BAV3004W

(Package: SOD-123)

<p><u>FEATURES</u></p> <ul style="list-style-type: none"> • Fast switching speed. • Ideally suited for automated assembly processes. • Low leakage current. • High reverse breakdown voltage. <p><u>MECHANICAL DATA</u></p> <ul style="list-style-type: none"> • Case : Molded plastic, SOD-123 • Mounting position : Any • Polarity : Color band denotes cathode end <p><u>DEVICE MARKING CODE</u></p> <ul style="list-style-type: none"> • BAV3004W : 4P 	<p>Case: SOD-123 Dimensions in millimeters</p>
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Ratings & Electrical Characteristics

Characteristic	Symbol	Limits	Unit
Peak repetitive reverse voltage	V_{RRM}	350	Volts
Minimum reverse breakdown voltage (@ $I_R=150\mu A$)	$V_{(BR)R}$	350	Volts
RMS reverse voltage	$V_{R(RMS)}$	212	Volts
Working peak reverse voltage DC reverse voltage	V_{RWM} V_R	300	Volts
Forward voltage	V_F	0.78 (Typ), 0.87 (Max) 0.93 (Typ), 1.00 (Max) 1.03 (Typ), 1.25 (Max)	Volts
		$I_F=20mA$ $I_F=100mA$ $I_F=200mA$	
Forward continuous current	I_O	225	mA
Repetitive peak forward current	I_{FRM}	625	mA
Non-repetitive peak forward surge current	I_{FSM}	4 1	Amps
		@ $t=1.0\mu s$ @ $t=1.0s$	
Reverse leakage current	I_R	30 (Typ), 100 (Max) 35 (Typ), 100 (Max)	nA μA
		$V_R=240V, T_j=25$ $V_R=240V, T_j=150$	
Power dissipation	P_D	400	mW
Total capacitance $V_R=0V, f=1.0MHz$	C_T	1 (Typ), 5 (Max)	PF
Reverse recovery time (Max) $I_F=I_R=30mA, I_{RR}=0.1 * I_R, R_L=100$	T_{rr}	50	ns
Thermal resistance, junction to ambient air	R_{th-JA}	312	/W
Operating junction & storage temperature range	T_j, T_{stg}	-65 to +150	

Ratings and Characteristic Curves of BAV3004W

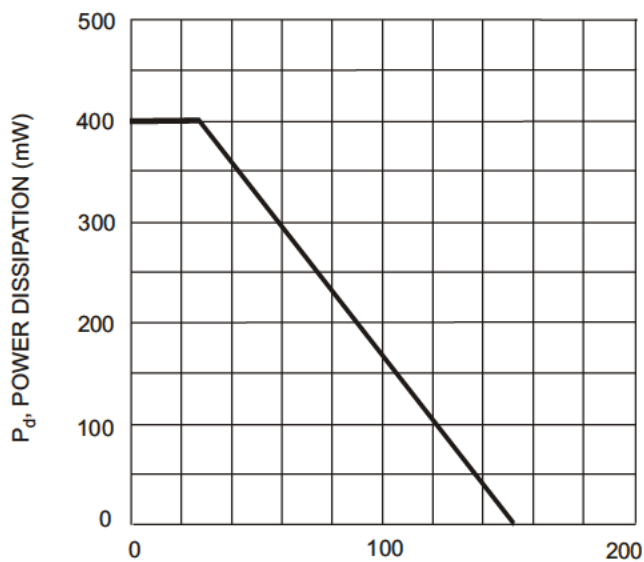


Fig. 1 Power Derating Curve

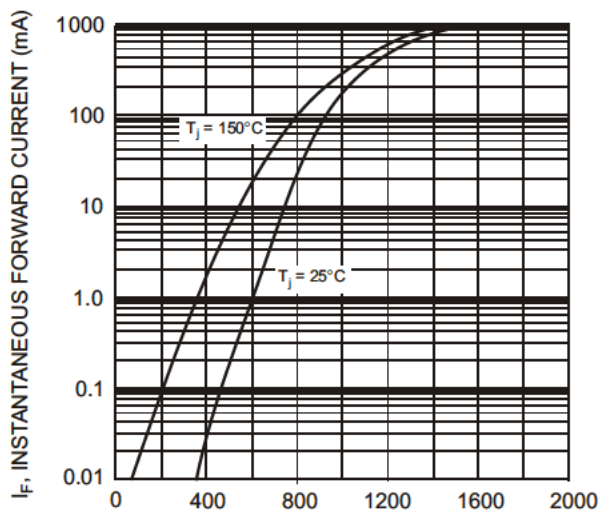


Fig. 2 Typical Forward Characteristics

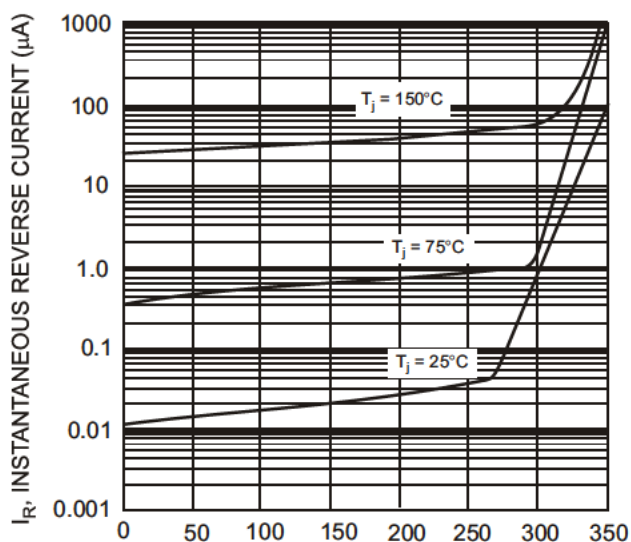


Fig. 3 Typical Reverse Characteristics

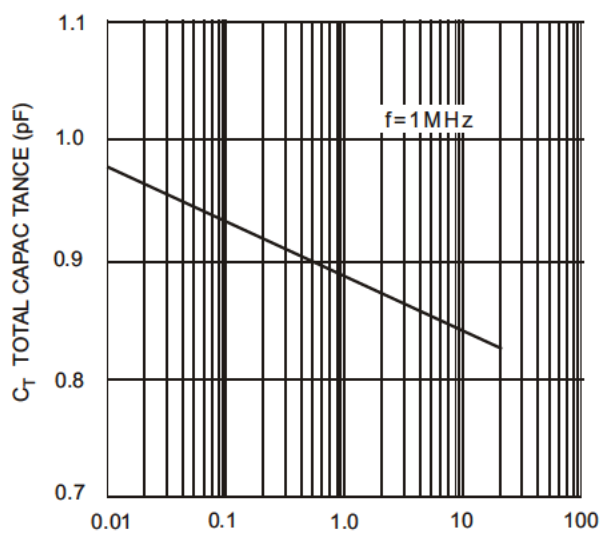


Fig. 4 Typical Total Capacitance vs. Reverse Voltage