VII. Switching Diode

(b). SMD Type (SOD-123)

BAV3004W (Package: SOD-123)

FEATURES

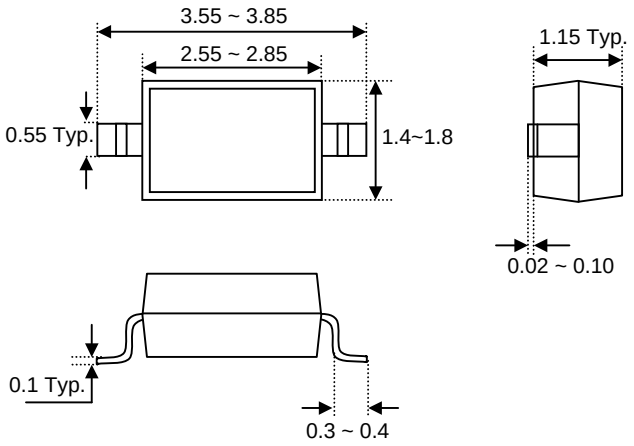
- Fast switching speed.
- Ideally suited for automated assembly processes.
- Low leakage current.
- High reverse breakdown voltage.

MECHANICAL DATA

- Case : Molded plastic, SOD-123
- Mounting position : Any
- Polarity : Color band denotes cathode end

DEVICE MARKING CODE

- BAV3004W : 4P



Case: SOD-123
Dimensions in millimeters

Ratings & Electrical Characteristics

Characteristic		Symbol	Limits	Unit
Peak repetitive reverse voltage		V_{RRM}	350	Volts
Minimum reverse breakdown voltage (@ I_R=150μA)		$V_{(BR)R}$	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	I_F=20mA I_F=100mA I_F=200mA	V_F	0.78 (Typ), 0.87 (Max) 0.93 (Typ), 1.00 (Max) 1.03 (Typ), 1.25 (Max)	Volts
Forward continuous current		I_O	225	mA
Repetitive peak forward current		I_{FRM}	625	mA
Non-repetitive peak forward surge current	@ t=1.0μs @ t=1.0s	I_{FSM}	4 1	Amps
Reverse leakage current	V_R =240V, Tj=25℃ V_R =240V, Tj=150℃	I_R	30 (Typ), 100 (Max) 35 (Typ), 100 (Max)	nA μA
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=100Ω		Trr	50	ns
Thermal resistance, junction to ambient air		Rth-JA	312	℃/W
Operating junction & storage temperature range		Tj, Tstg	-65 to +150	℃

Ratings and Characteristic Curves of BAV3004W

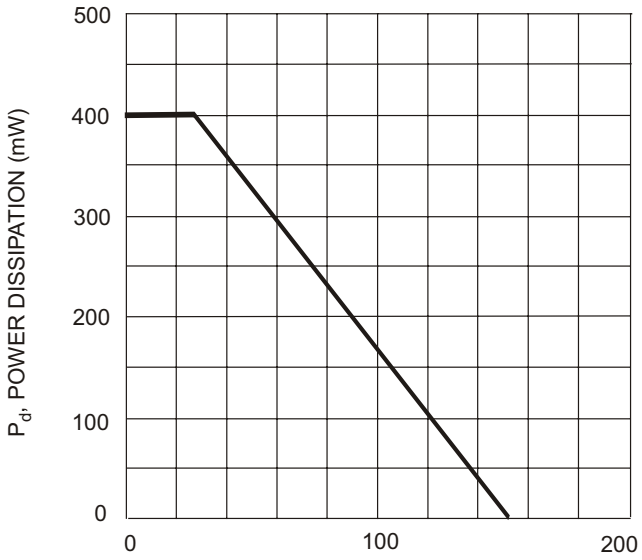


Fig. 1 Power Derating Curve

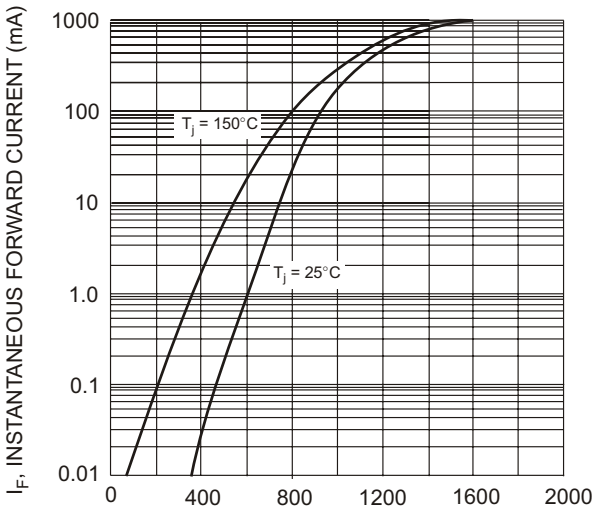


Fig. 2 Typical Forward Characteristics

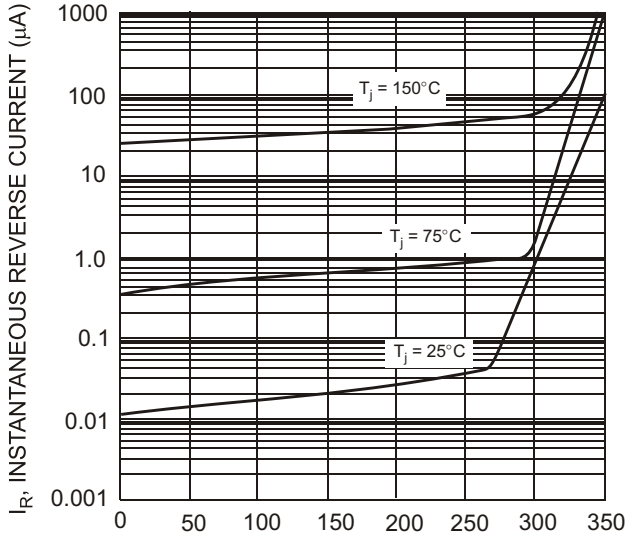


Fig. 3 Typical Reverse Characteristics

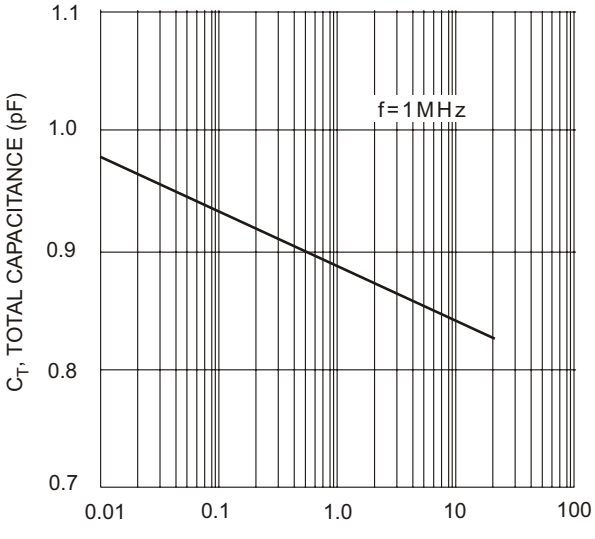


Fig. 4 Typical Total Capacitance vs. Reverse Voltage