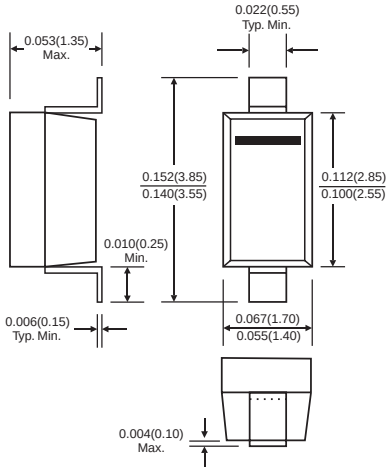
BAV19W-BAV21W

Surface Mount Fast Switching Diode

SOD-123



Dimensions in inches and (millimeters)

Features

- ✧ Fast Switching Speed
- ✧ Surface Mount Package Ideally Suited for Automatic Insertion
- ✧ For General Purpose Switching Applications

Mechanical Data

- ✧ Case: SOD-123, Molded Plastic
- ✧ Case Material: UL Flammability Rating Classification 94V-0
- ✧ Polarity: Cathode Band
- ✧ Type Code: BAV19W: A8 or T2 or T3
  BAV20W: T2 or T3
  BAV21W: T3
- ✧ Weight: 0.01 grams (approx.)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Characteristic	Symbol	BAV19W	BAV20W	BAV21W	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	120	200	250	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	141	V
Forward Continuous Current	I_{FM}	400			mA
Average Rectified Output Current	I_O	200			mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0ms @ t = 1.0s	I_{FSM}	2.5 0.5			A
Repetitive Peak Forward Surge Current	I_{FRM}	625			mA
Power Dissipation (Note 2)	P_d	250			mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	500			°C/W
Operating and Storage Temperature Range	T_j , T_{STG}	-65 to +150			°C

Electrical Characteristics

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1) BAV19W BAV20W BAV21W	$V_{(BR)R}$	120 200 250	—	V	I_R = 100μA
Forward Voltage (Note 1)	V_{FM}	—	1.0 1.25	V	I_F = 100mA I_F = 200mA
Peak Reverse Current @ Rated DC Blocking Voltage (Note 1)	I_{RM}	—	100 15	nA μA	T_j = 25°C T_j = 100°C
Total Capacitance	C_T	—	5.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	50	ns	I_F = I_R = 30mA, I_{rr} = 0.1 x I_R, R_L = 100Ω

Notes: 1. Short duration pulse test used to minimize self-heating effect.

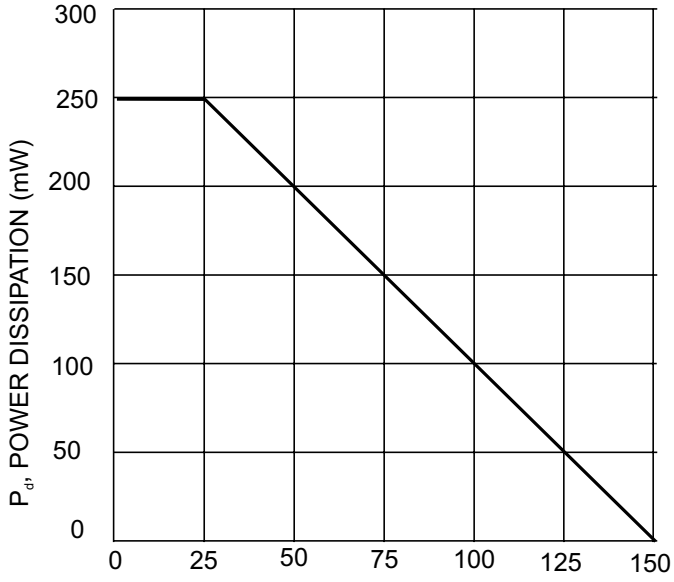


Fig. 1 Power Derating Curve

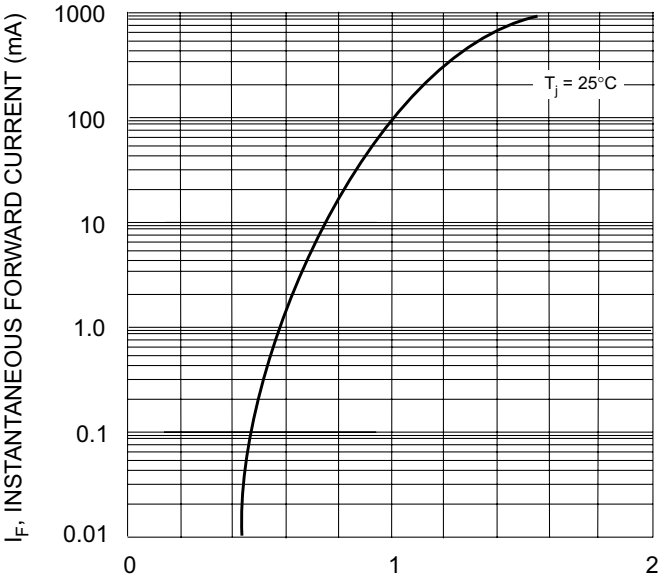


Fig. 2 Typical Forward Characteristics

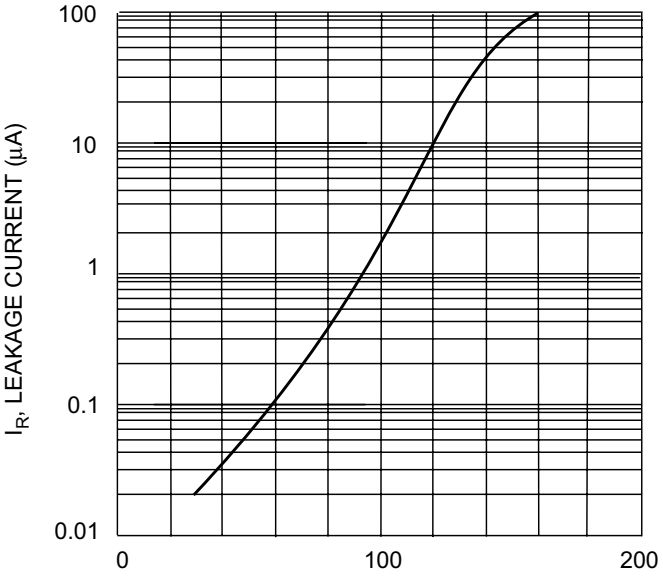


Fig. 3 Leakage Current vs Junction Temperature