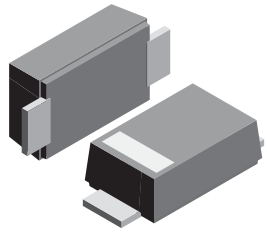
SUNMATE SEMICONDUCTORCO · LIMITED

BAV19WS - BAV21WS

SURFACE MOUNT FAST SWITCHING DIODE



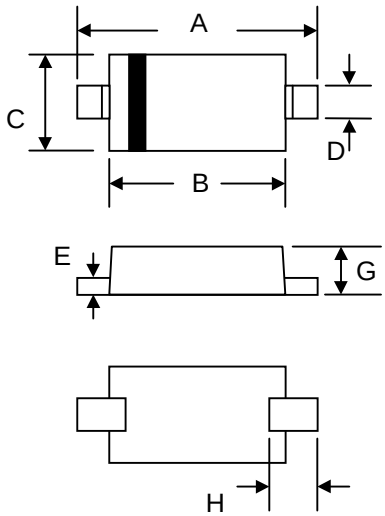
Features

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

Mechanical Data

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)
- Marking: A3

RoHS COMPLIANT



SOD-323		
Dim	**Min**	**Max**
A	2.30	2.70
B	1.75	1.95
C	1.15	1.35
D	0.25	0.35
E	0.05	0.15
G	0.70	0.95
H	0.30	—
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	120	200	250	V
Working Peak Reverse Voltage DC Blocking Voltage	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 = 1.0μs @ t = 1.0s	I_{FSM}	2.5 0.5			A
Repetitive Peak Forward Surge Current	I_{FRM}	625			mA
Power Dissipation	P_d	200			mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	625			°C/W
Operating and Storage Temperature Range	T_j , T_{STG}	-65 to +150			°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	BAV19WS BAV20WS BAV21WS	$V_{(BR)R}$	120 200 250	—	V	I_R = 100μA
Forward Voltage (Note 2)		V_{FM}	—	1.0 1.25	V	I_F = 100mA I_F = 200mA
Peak Reverse Current @ Rated DC Blocking Voltage		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

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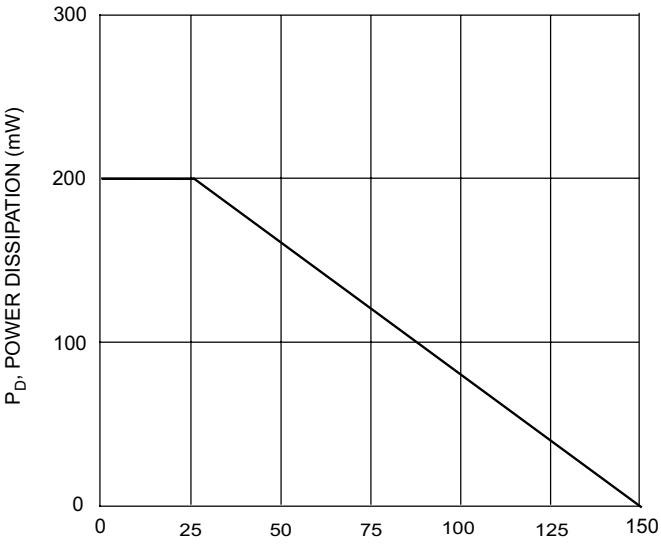

Fig. 1 Power Dissipation vs Ambient Temperature

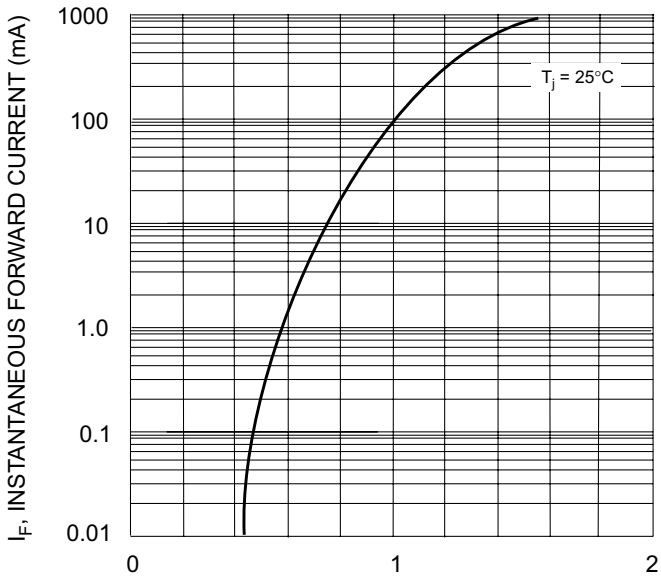

Fig. 2 Forward Characteristics

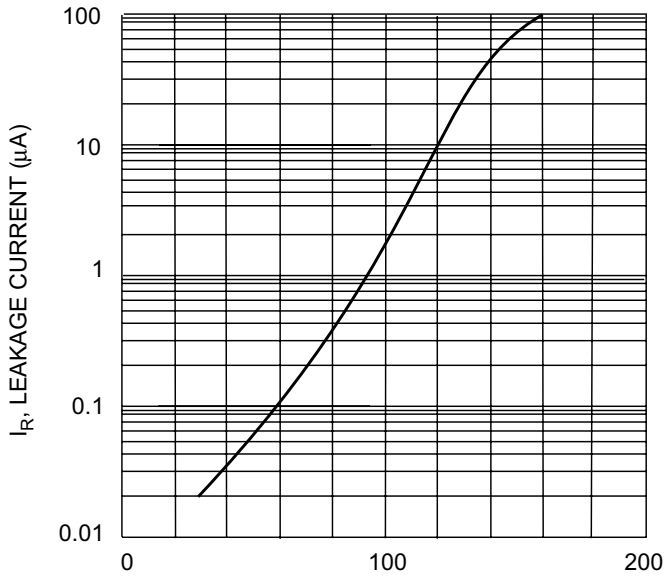

Fig. 3 Leakage Current vs Junction Temperature