BAV19WS - BAV21WS

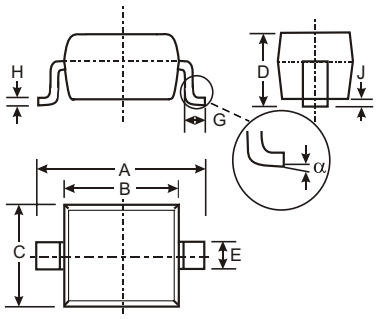
SURFACE MOUNT FAST SWITCHING DIODE

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Also Available in Lead Free Version

Mechanical Data

- Case: SOD-323, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 4, on Page 2
- Terminal Connections: Cathode Band, See Page 2
- BAV19WS Marking: A8 or T2 or T3
- BAV20WS Marking: T2 or T3
- BAV21WS Marking: T3
- Weight: 0.004 grams (approx.)



SOD-323		
Dim	**Min**	**Max**
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
α	0°	8°
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 (Note 1)	I_{FM}	400			mA
Average Rectified Output Current (Note 1)	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 (Note 1)	$R_{\theta JA}$	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 (Note 2)		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

Note: 1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
2. Short duration pulse test used to minimize self-heating effect.

Ordering Information (Note 3)

Device	Packaging	Shipping
BAV19WS-7	SOD-323	3000/Tape & Reel
BAV20WS-7	SOD-323	3000/Tape & Reel
BAV21WS-7	SOD-323	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at: http://www.diodes.com/datasheets/ap02007.pdf.
4. For Lead Free version (with Lead Free terminal finish) part number, please add "-F" suffix to the part number above. Example: BAV21WS-7-F.

Marking Information

XX = Product Type Marking Code
(See Page 1)

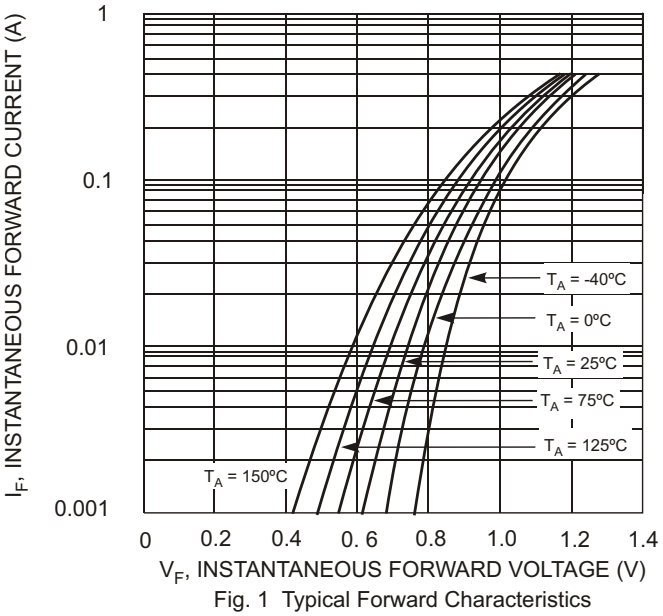


Fig. 1 Typical Forward Characteristics

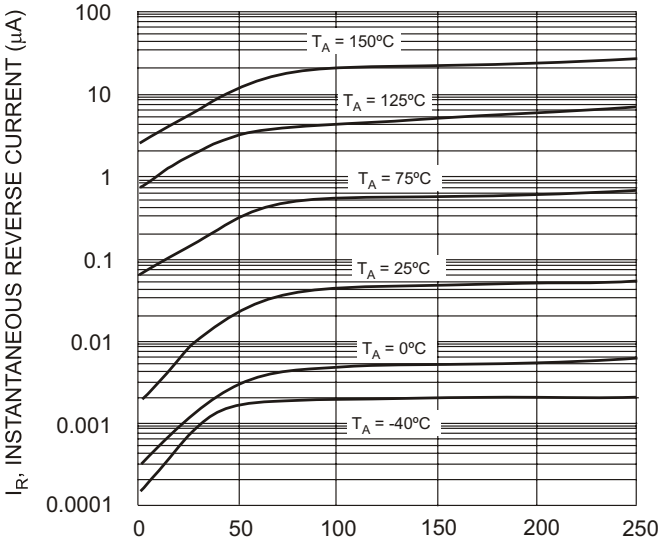


Fig. 2 Typical Reverse Characteristics

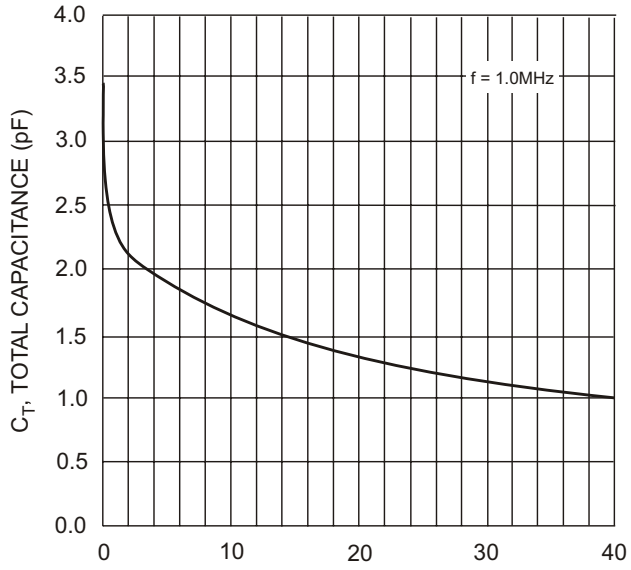


Fig. 3 Typical Capacitance vs. Reverse Voltage

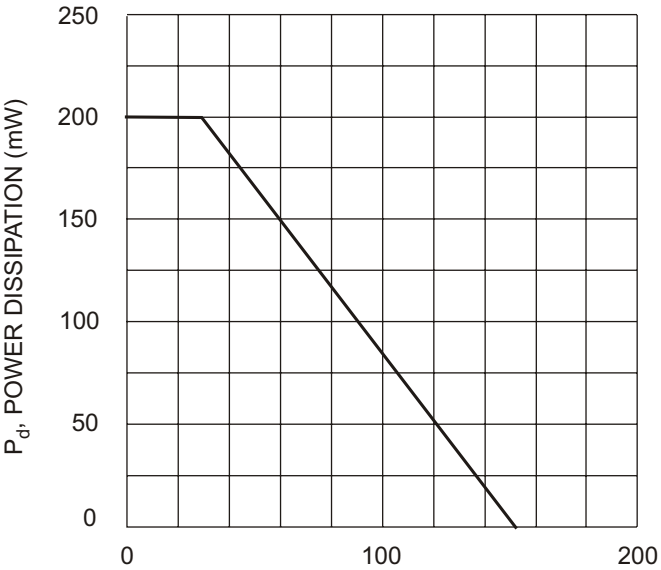


Fig. 4 Power Derating Curve, Total Package