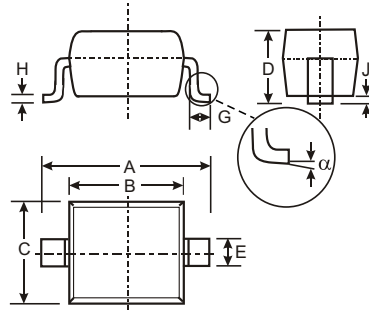


### Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Lead Free/RoHS Compliant (Note 3)**
- Qualified to AEC-Q101 Standards for High Reliability**

### Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Band, See Page 2
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- 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	
	0	8
All Dimensions in mm		

### Maximum Ratings @ T<sub>A</sub> = 25 C unless otherwise specified

Characteristic	Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	120	200	250	V
Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RWM</sub> V <sub>R</sub>	100	150	200	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	71	106	141	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>		400		mA
Average Rectified Output Current (Note 1)	I <sub>O</sub>		200		mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 s @ t = 1.0s	I <sub>FSM</sub>		2.5 0.5		A
Repetitive Peak Forward Surge Current	I <sub>FRM</sub>		625		mA
Power Dissipation	P <sub>d</sub>		200		mW
Thermal Resistance Junction to Ambient Air (Note 1)	R <sub>JA</sub>		625		C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>		-65 to +150		C

### Electrical Characteristics @ T<sub>A</sub> = 25 C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	BAV19WS BAV20WS BAV21WS V <sub>(BR)R</sub>	120 200 250		V	I <sub>R</sub> = 100 A
Forward Voltage	V <sub>F</sub>		1.0 1.25	V	I <sub>F</sub> = 100mA I <sub>F</sub> = 200mA
Peak Reverse Current @ Rated DC Blocking Voltage (Note 2)	I <sub>R</sub>		100 15	nA A	T <sub>j</sub> = 25 C T <sub>j</sub> = 100 C
Total Capacitance	C <sub>t</sub>		5.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>		50	ns	I <sub>F</sub> = I <sub>R</sub> = 30mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100

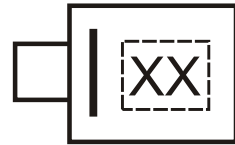
- Note:
1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Short duration pulse test used to minimize self-heating effect.
  3. No purposefully added lead.

**Ordering Information** (Note 4)

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

Notes: 4. For Packaging Details, go to our website at: <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



XX = Product Type Marking Code  
(See Page 1)

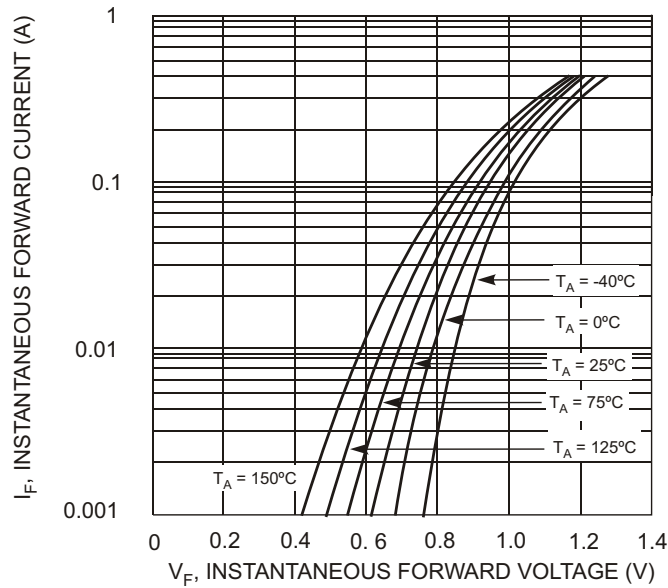


Fig. 1 Typical Forward Characteristics

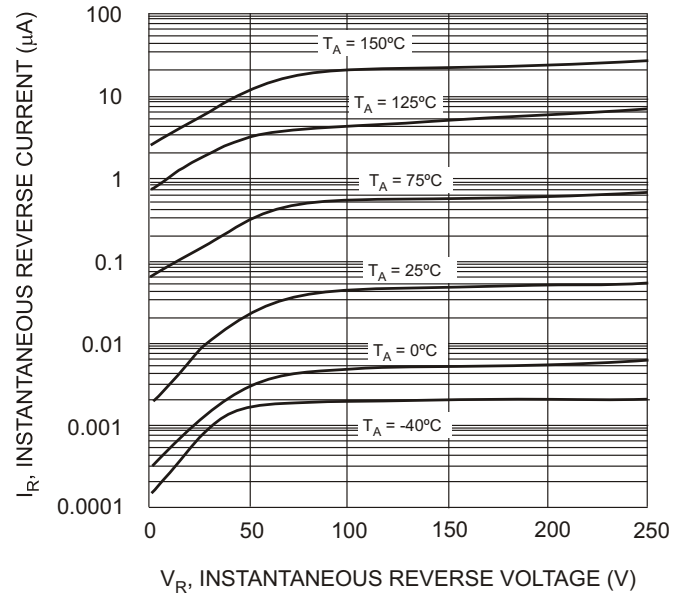


Fig. 2 Typical Reverse Characteristics

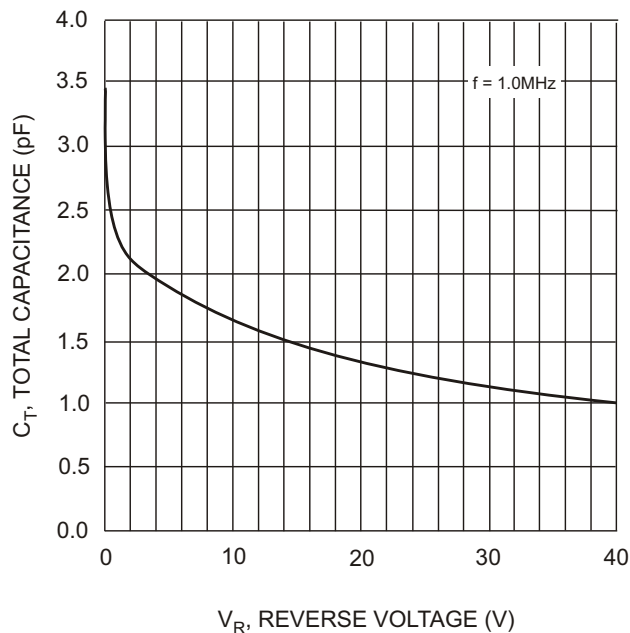


Fig. 3 Typical Capacitance vs. Reverse Voltage

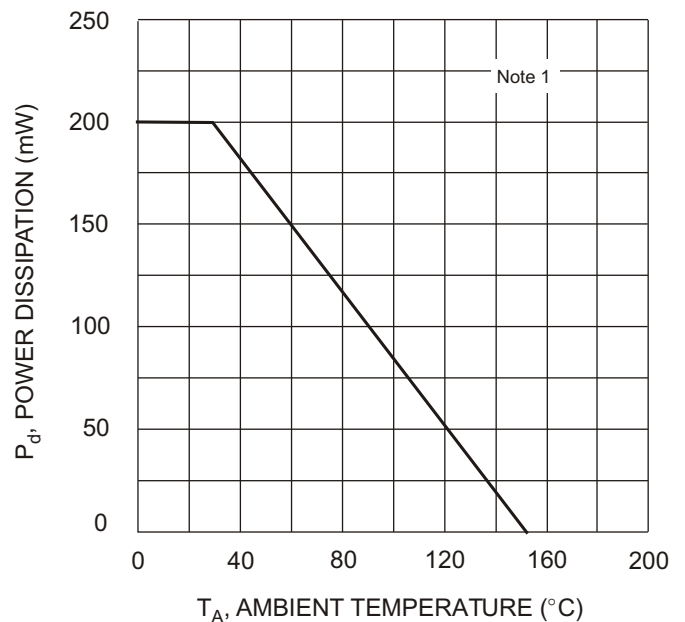


Fig. 4 Power Derating Curve

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