



BAV3004WS

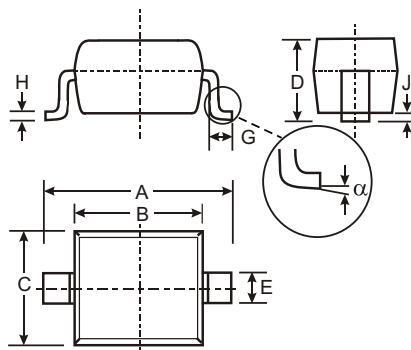
SURFACE MOUNT LOW LEAKAGE DIODE

Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Low Leakage Current
- Fast Switching Speed
- High Reverse Breakdown Voltage
- Lead Free By Design/RoHS Compliant (Note 3)**
- "Green Device" (Note 4)**

Mechanical Data

Case: SOD-323
 Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
 Moisture Sensitivity: Level 1 per J-STD-020C
 Terminals: Finish Matte Tin Finish annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
 Polarity: Cathode Band
 Marking: Type Code, See Page 2
 Type Code: 4P
 Ordering Information, See Page 2
 Weight: 0.004 grams (approximate)



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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	350	V
Working Peak Reverse Voltage DC Blocking Voltage	V_{RWM} V_R	300	V
RMS Reverse Voltage	$V_{R(RMS)}$	212	V
Forward Continuous Current	I_{FM}	225	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\text{ s}$ @ $t = 1.0\text{ s}$	I_{FSM}	4.0 1.0	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_d	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R_{JA}	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	350			V	$I_R = 150\text{ }\mu\text{A}$
Forward Voltage	V_F		0.78 0.93 1.03	0.87 1.0 1.25	V	$I_F = 20\text{ mA}$ $I_F = 100\text{ mA}$ $I_F = 200\text{ mA}$
Leakage Current (Note 2)	I_R		30 35	100 100	nA A	$V_R = 240\text{ V}, T_j = 25^\circ\text{C}$ $V_R = 240\text{ V}, T_j = 150^\circ\text{C}$
Total Capacitance	C_T		1.0	5.0	pF	$V_R = 0, f = 1.0\text{ MHz}$
Reverse Recovery Time	t_{rr}			50	ns	$I_F = I_R = 30\text{ mA}$, $I_{rr} = 3.0\text{ mA}, R_L = 100$

- Notes:
- 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>. $T_A = 25^\circ\text{C}$.
 - Short duration pulse test used to minimize self-heating effect.
 - No purposefully added lead.
 - Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

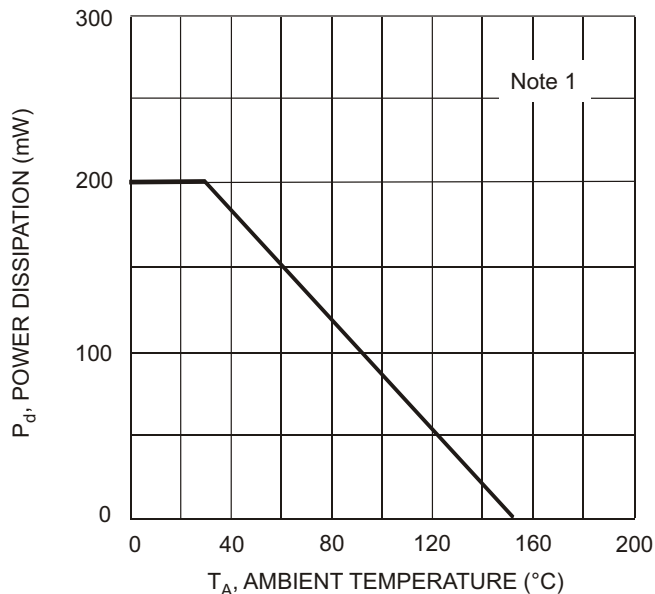


Fig. 1 Power Derating Curve

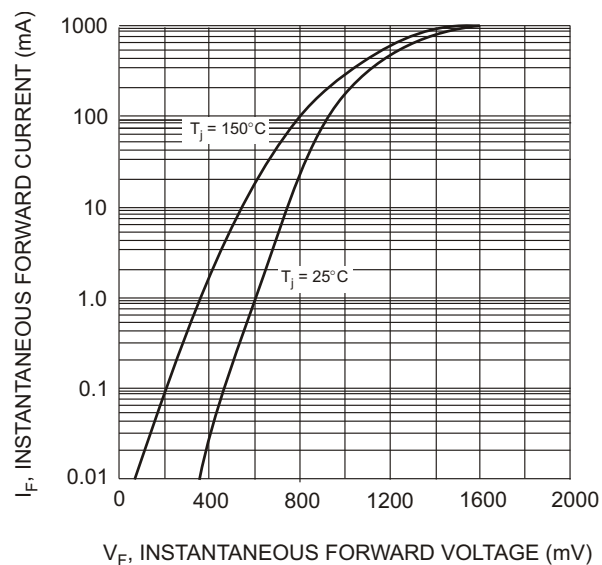


Fig. 2 Typical Forward Characteristics

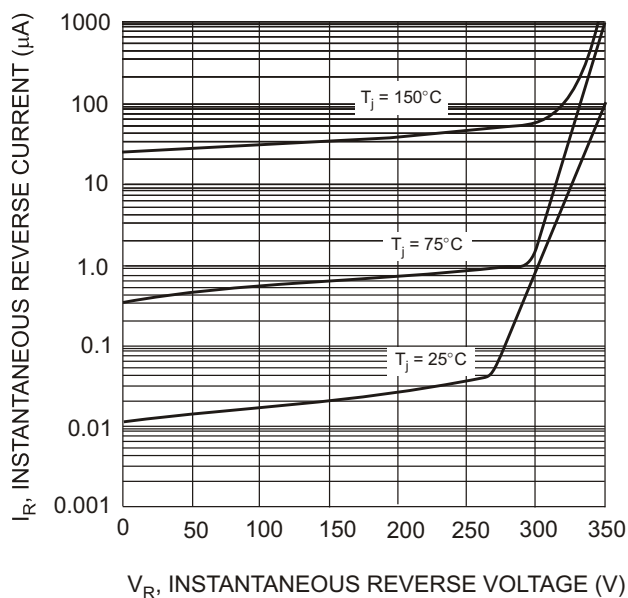


Fig. 3 Typical Reverse Characteristics

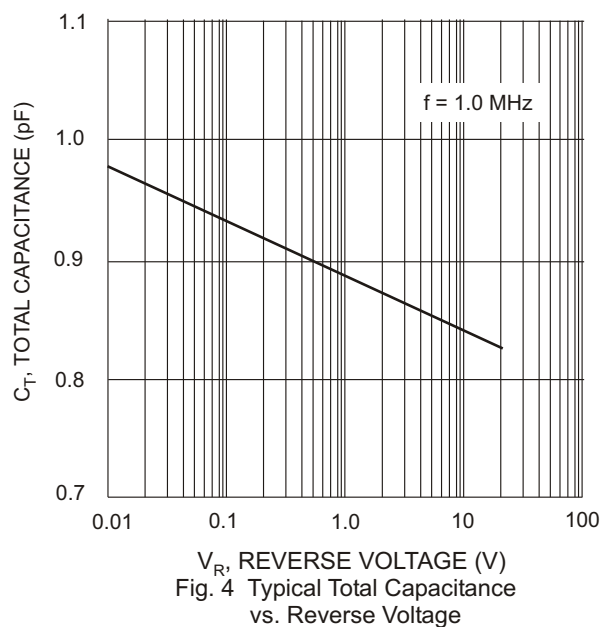


Fig. 4 Typical Total Capacitance vs. Reverse Voltage

Ordering Information (Note 5)

Device	Packaging	Shipping
BAV3004WS-7	SOD-323	3000/Tape & Reel

Notes: 5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



4P = Product Type Marking Code

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