BAV3004WS

SURFACE MOUNT LOW LEAKAGE DIODE

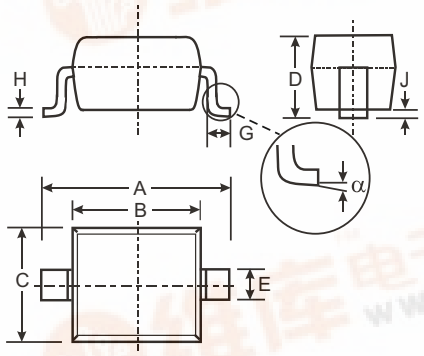
Lead-free Green

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

Notes:
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. T_A = 25°C.
2. Short duration pulse test used to minimize self-heating effect.
3. No purposefully added lead.
4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

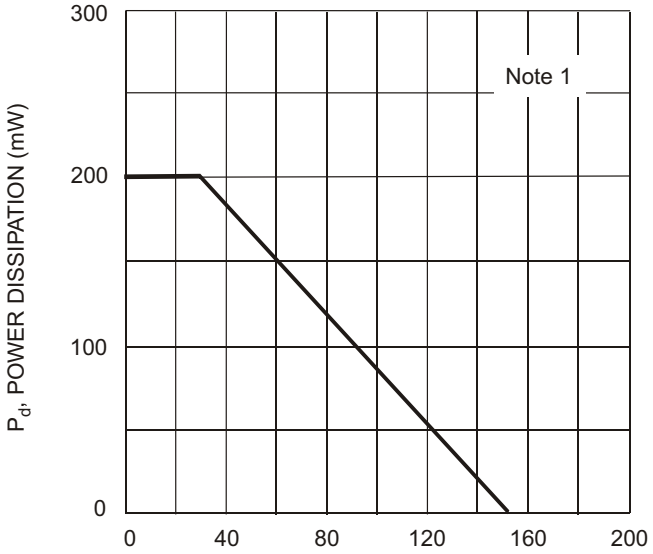


Fig. 1 Power Derating Curve

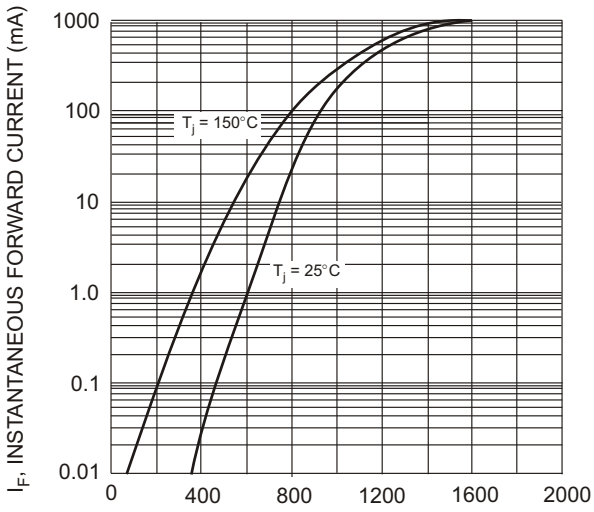


Fig. 2 Typical Forward Characteristics

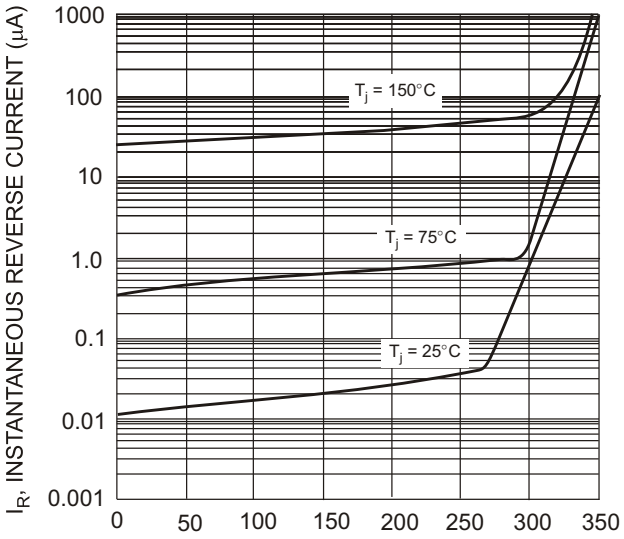


Fig. 3 Typical Reverse Characteristics

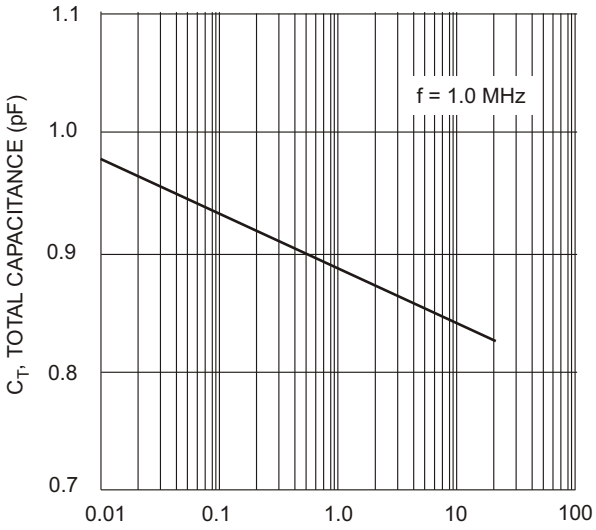


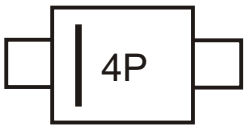
Fig. 4 Typical Total Capacitance vs. Reverse Voltage

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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