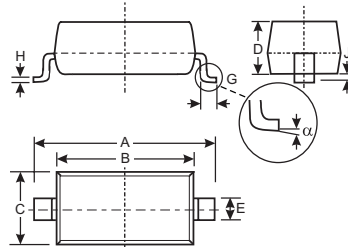


Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Low Leakage Current
- Fast Switching Speed
- High Reverse Breakdown Voltage
- **Lead Free/RoHS Compliant (Note 1)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: Cathode Band
- Marking: Date Code and Type Code, See Page 2
- Type Code: 4P
- Ordering Information, See Page 2
- Weight: 0.01 grams (approximate)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.45	0.65
	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	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 = 1.0μs @ t = 1.0s	I _{FSM}	4.0 1.0	A

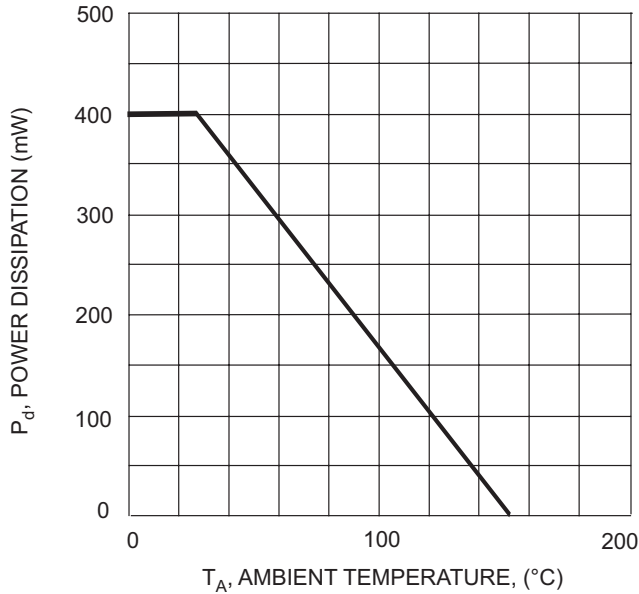
Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 3)	P _d	400	mW
Thermal Resistance Junction to Ambient Air (Note 3)	R _{θJA}	312	°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150	°C

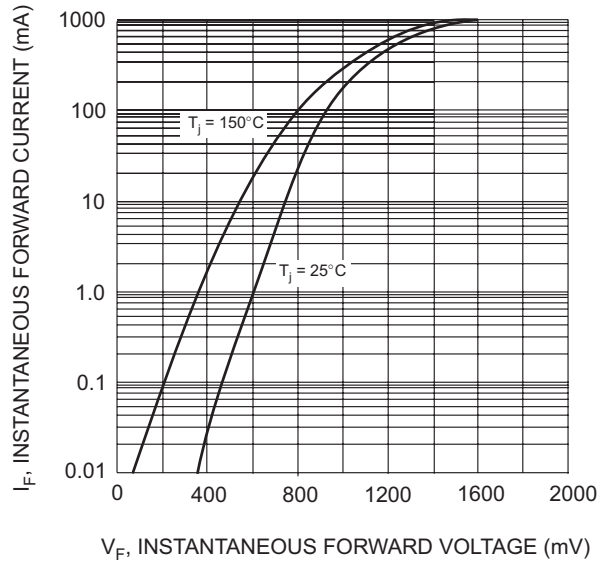
Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	350	—	—	V	I _R = 150μA
Forward Voltage	V _{FM}	—	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 _{RM}	—	30 35	100 100	nA μA	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 = 100Ω

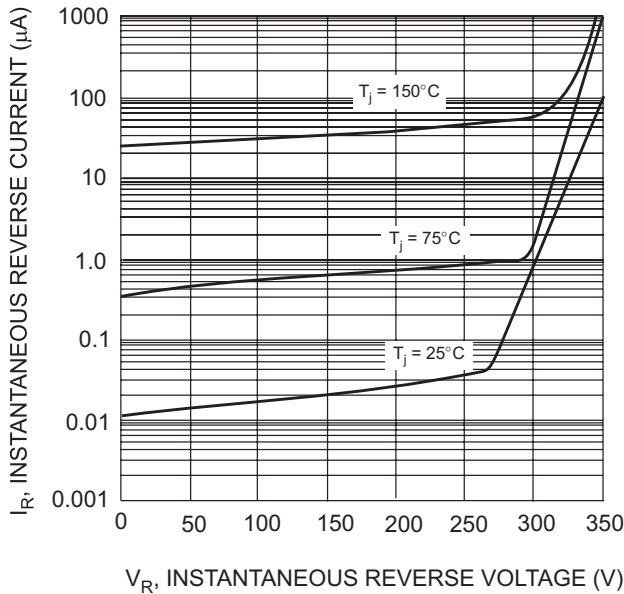
- Notes:
1. No purposefully added lead.
 2. Short duration pulse test used to minimize self-heating effect.
 3. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>. T_A = 25°C.



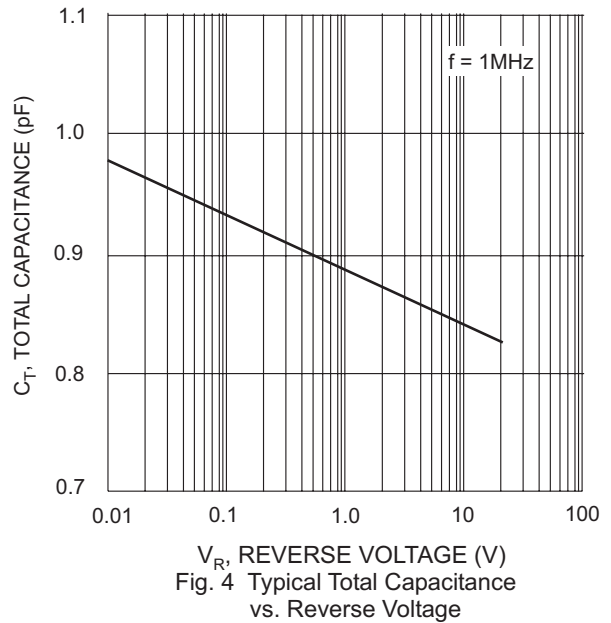
T_A , AMBIENT TEMPERATURE, (°C)
Fig. 1 Power Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2 Typical Forward Characteristics



V_R , INSTANTANEOUS REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics



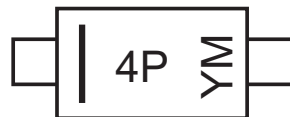
V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance vs. Reverse Voltage

Ordering Information (Note 3)

Device	Packaging	Shipping
BAV3004W-7-F	SOD-123	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



4P = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: T = 2006)
M = Month (ex: 9 = September)

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	N	P	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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