



**BAV3004W** SURFACE MOUNT LOW LEAKAGE DIODE

### **Features**

- Surface Mount Package Ideally Suited for Automated Insertion
- Low Leakage Current
- Fast Switching Speed
- High Reverse Breakdown Voltage
- Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 1 and 4)
- 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-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: Cathode Band
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.01 grams (approximate)





TOP VIEW

# **Maximum Ratings** $@T_A = 25^{\circ}C$ unless otherwise specified

Characteristic		Symbol	Value	Unit	
Peak Repetitive Reverse Voltage		V <sub>RRM</sub>	350	V	
Working Peak Reverse Voltage DC Blocking Voltage		V <sub>RWM</sub> V <sub>R</sub>	300	V	
RMS Reverse Voltage		V <sub>R(RMS)</sub>	212	V	
Forward Continuous Current		I <sub>FM</sub>	225	mA	
Repetitive Peak Forward Current		I <sub>FRM</sub>	625	mA	
Non-Repetitive Peak Forward Surge Current	@ t = 1.0μs @ t = 1.0s	I <sub>FSM</sub>	4.0 1.0	А	

## **Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 3)	PD	400	mW
Thermal Resistance Junction to Ambient Air (Note 3)	R <sub>0</sub> JA	312	°C/W
Operating and Storage Temperature Range	TJ, TSTG	-65 to +150	°C

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

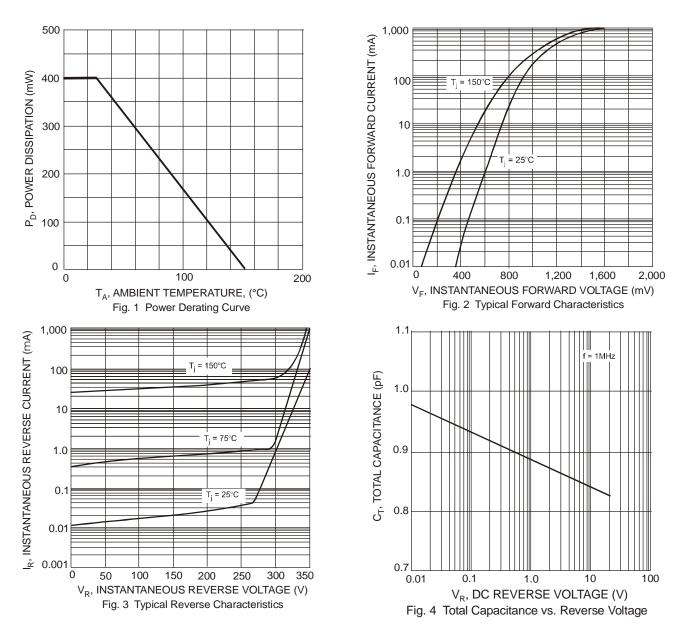
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	350	_	_	V	I <sub>R</sub> = 150μA
Forward Voltage	V <sub>FM</sub>	_	0.78 0.93 1.03	0.87 1.0 1.25	V	I <sub>F</sub> = 20mA I <sub>F</sub> = 100mA I <sub>F</sub> = 200mA
Leakage Current (Note 2)	I <sub>RM</sub>		30 35	100 100	nA μA	$V_R = 240V, T_J = 25^{\circ}C$ $V_R = 240V, T_J = 150^{\circ}C$
Total Capacitance	Ст		1.0	5.0	pF	$V_{R} = 0, f = 1.0MHz$
Reverse Recovery Time	t <sub>rr</sub>		_	50		$I_F = I_R = 30 \text{mA},$ $I_{rr} = 3.0 \text{mA}, R_L = 100 \Omega$

Notes: 1. No purposefully added lead. Halogen and Antimony Free.

2. Short duration pulse test used to minimize self-heating effect.

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.
Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb<sub>2</sub>O<sub>3</sub> Fire Retardants.



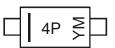


## Ordering Information (Note 5)

Part Number	Case	Packaging
BAV3004W-7-F	SOD-123	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

# **Marking Information**



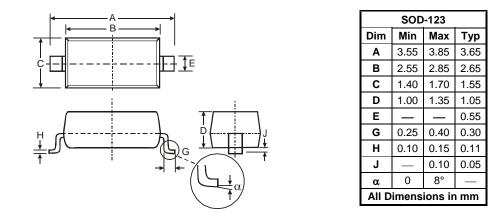
4P = Product Type Marking Code YM = Date Code Marking Y = Year (ex: T = 2006) M = Month (ex: 9 = September)

-			,	
M =	Month	(ex: 9	= Septen	nber)

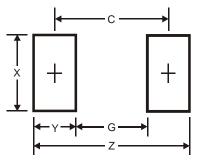
Date Code Key													
Year	2002	2003	2004	200	5 20	06 2	007	2008	1	2009	2010	2011	2012
Code	N	Р	R	S	Т	-	U	V		W	Х	Y	Z
Month	Jan	Feb	Mar	Apr	Мау	Jun	Ju	I A	ug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7		8	9	0	Ν	D



# **Package Outline Dimensions**



## **Suggested Pad Layout**



Dimensions	Value (in mm)
Z	4.9
G	2.5
х	0.7
Y	1.2
С	3.7

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