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ELECTRONICS

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Jameco Part Number 1539260

**Features**

- Surface Mount Package Ideally Suited for Automated Insertion
- Very Low Leakage Current
- **Lead Free/RoHS Compliant (Note 3)**

**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)

SOD-123



TOP VIEW

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	130	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	90	V
Forward Continuous Current	I <sub>FM</sub>	215	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	500	mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	@ t = 1.0μs	4.0
		@ t = 1.0ms	1.0
		@ t = 1.0s	0.5

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P <sub>D</sub>	250	mW
Thermal Resistance Junction to Ambient Air (Note 2)	R <sub>θJA</sub>	500	°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	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	130 130	— —	— —	V	I <sub>R</sub> = 100μA I <sub>R</sub> = 100μA, T <sub>J</sub> = 125°C
Forward Voltage	V <sub>F</sub>	—	—	0.90 1.0 1.1 1.25 1.0	V	I <sub>F</sub> = 1.0mA, T <sub>J</sub> = 25°C I <sub>F</sub> = 10mA, T <sub>J</sub> = 25°C I <sub>F</sub> = 50mA, T <sub>J</sub> = 25°C I <sub>F</sub> = 150mA, T <sub>J</sub> = 25°C I <sub>F</sub> = 10mA, T <sub>J</sub> = 125°C
Leakage Current (Note 1)	I <sub>R</sub>	—	—	5.0 80	nA nA	V <sub>R</sub> = 75V, T <sub>J</sub> = 25°C V <sub>R</sub> = 75V, T <sub>J</sub> = 125°C
Total Capacitance	C <sub>T</sub>	—	2.4	5	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	—	3.0	μs	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

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

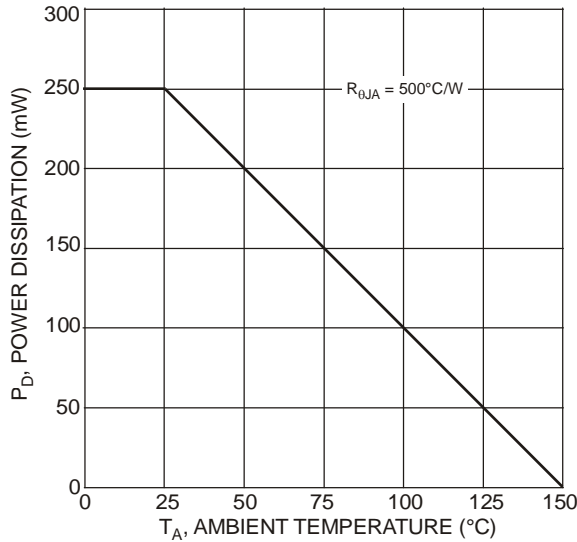


Fig. 1 Power Derating Curve

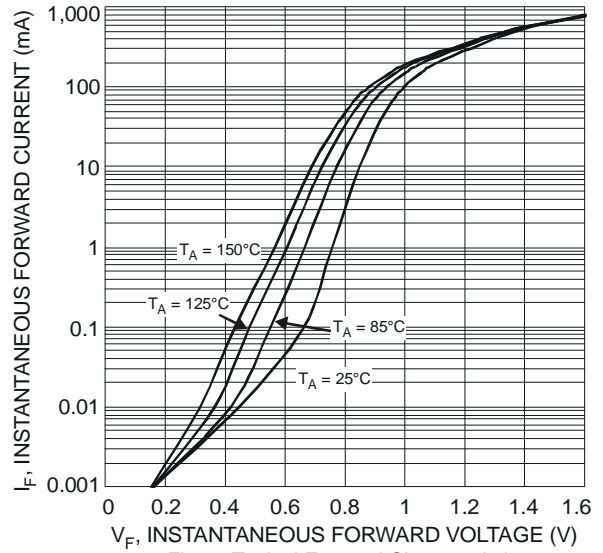


Fig. 2 Typical Forward Characteristics

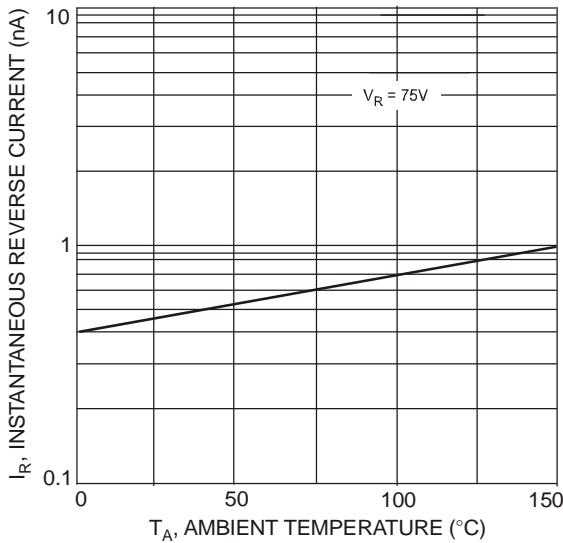


Fig. 3 Typical Reverse Characteristics

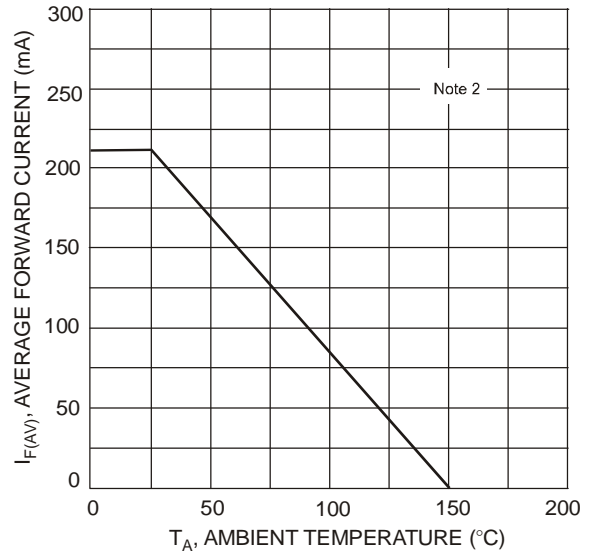


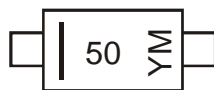
Fig. 4 Forward Current Derating Curve

**Ordering Information** (Note 4)

Part Number	Case	Packaging
BAV116W-7-F	SOD-123	3000/Tape & Reel

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

**Marking Information**



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

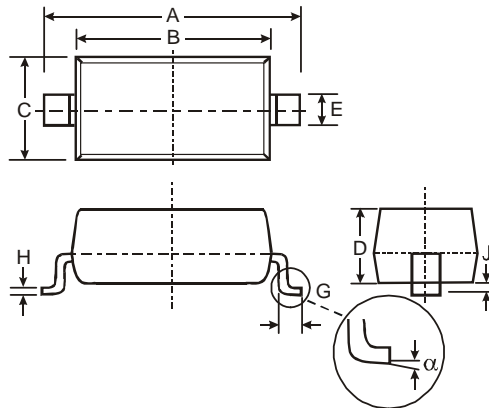
Date Code Key

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	L	M	N	P	R	S	T	U	V	W	X	Y	Z

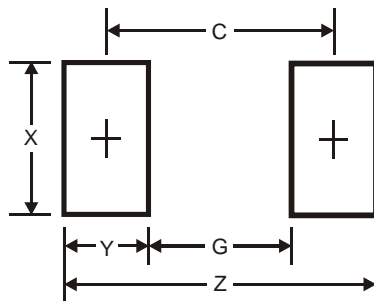
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

**Package Outline Dimensions**



SOD-123			
Dim	Min	Max	Typ
A	3.55	3.85	3.65
B	2.55	2.85	2.65
C	1.40	1.70	1.55
D	1.00	1.35	1.05
E	—	—	0.55
G	0.25	0.40	0.30
H	0.10	0.15	0.11
J	—	0.10	0.05
α	0	8°	—
All Dimensions in mm			

**Suggested Pad Layout**



Dimensions	Value (in mm)
Z	4.9
G	2.5
X	0.7
Y	1.2
C	3.7

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