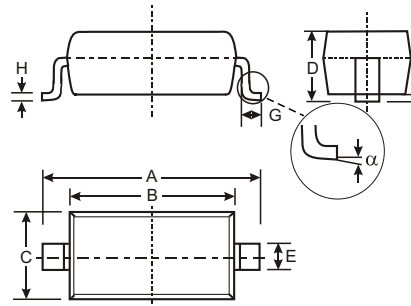


Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Very Low Leakage Current

Mechanical Data

- Case: SOD-123, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Date Code and Type Code, See Page 2 Type Code: 50
- Weight: 0.01 grams (approx.)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

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

Characteristic	Symbol	BAV116W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	130	V
RMS Reverse Voltage	$V_{R(RMS)}$	90	V
Forward Continuous Current	I_{FM}	215	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4.0	A
@ $t = 1.0\mu\text{s}$		1.0	
@ $t = 1.0\text{ms}$ @ $t = 1.0\text{s}$		0.5	
Power Dissipation (Note 2)	P_d	250	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	500	$^\circ\text{C/W}$
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 1)	$V_{(BR)R}$	130	—	—	V	$I_R = 100\mu\text{A}$ $I_R = 100\mu\text{A}, T_j = 125^\circ\text{C}$
Forward Voltage (Note 1)	V_{FM}	—	—	0.90 1.0 1.1 1.25 1.0	V	$I_F = 1.0\text{mA}, T_j = 25^\circ\text{C}$ $I_F = 10\text{mA}, T_j = 25^\circ\text{C}$ $I_F = 50\text{mA}, T_j = 25^\circ\text{C}$ $I_F = 150\text{mA}, T_j = 25^\circ\text{C}$ $I_F = 10\text{mA}, T_j = 125^\circ$
Leakage Current (Note 1)	I_{RM}	—	—	5.0 80	nA nA	$V_R = 75\text{V}, T_j = 25^\circ\text{C}$ $V_R = 75\text{V}, T_j = 125^\circ\text{C}$
Total Capacitance	C_T	—	2.4	5	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	—	3.0	μs	$I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

Notes: 1. Short duration pulse to minimize self-heating effect.
 2. 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>.

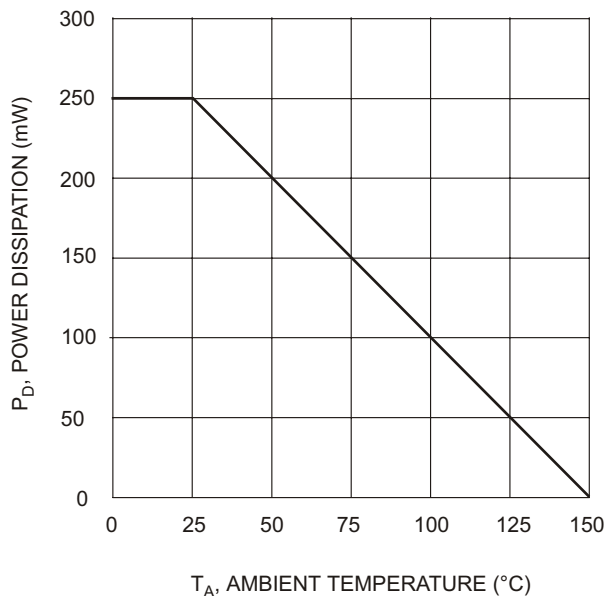


Fig. 1 Power Derating Curve

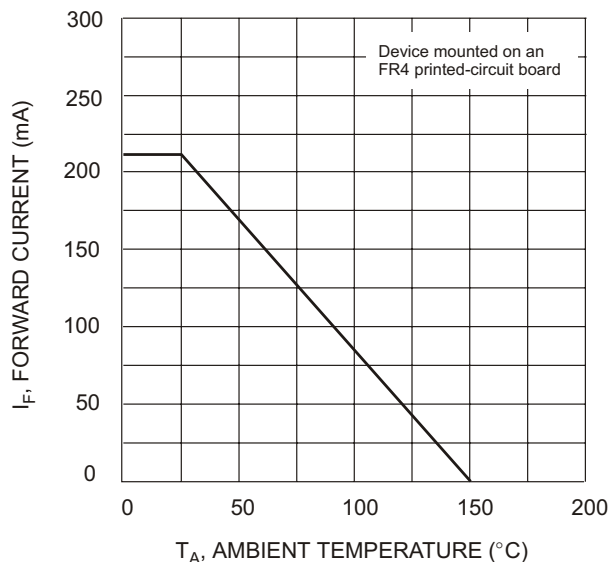


Fig. 2 Current Derating Curve

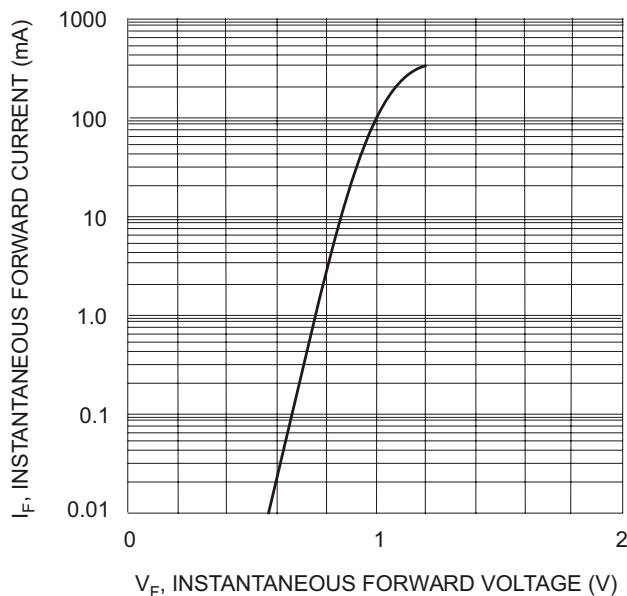


Fig. 3 Typical Forward Characteristics

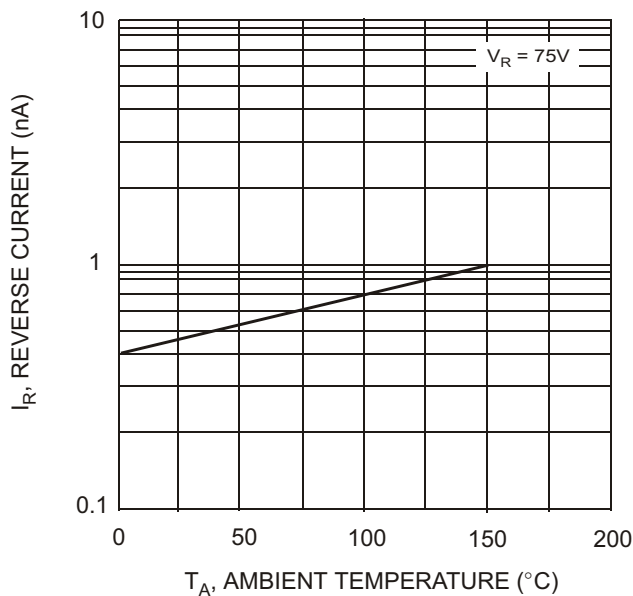


Fig. 4 Typical Reverse Characteristics

Ordering Information (Note 3)

Device	Packaging	Shipping
BAV116-7	SOD-123	3000/Tape & Reel

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

Marking Information



XX = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: N = 2002)
 M = Month (ex: 9 = September)

Date Code Key

Year	2000	2001	2002	2003	2004	2005
Code	L	M	N	P	R	S

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