BAV116W

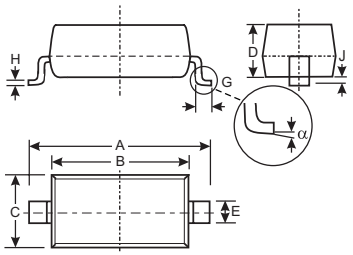
SURFACE MOUNT LOW LEAKAGE DIODE

Features

- Surface Mount Package Ideally Suited for Automatic 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-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 3
- Type Code: 50
- 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 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 @ t = 1.0μs @ t = 1.0ms @ t = 1.0s	I_{FSM}	4.0 1.0 0.5	A
Power Dissipation (Note 2)	P_d	250	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	500	°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 1)	$V_{(BR)R}$	130 130	— —	— —	V	I_R = 100μA I_R = 100μA, T_j =125°C
Forward Voltage	V_F	—	—	0.90 1.0 1.1 1.25 1.0	V	I_F = 1.0mA, T_j = 25°C I_F = 10mA, T_j = 25°C I_F = 50mA, T_j = 25°C I_F = 150mA, T_j = 25°C I_F = 10mA, T_j = 125°
Leakage Current (Note 1)	I_R	—	—	5.0 80	nA nA	V_R = 75V, T_j = 25°C V_R = 75V, T_j = 125°C
Total Capacitance	C_T	—	2.4	5	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	—	3.0	μs	I_F = I_R = 10mA, I_{rr} = 0.1 x I_R, R_L = 100Ω

Notes: 1. Short duration pulse test used 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.
3. No purposefully added lead.

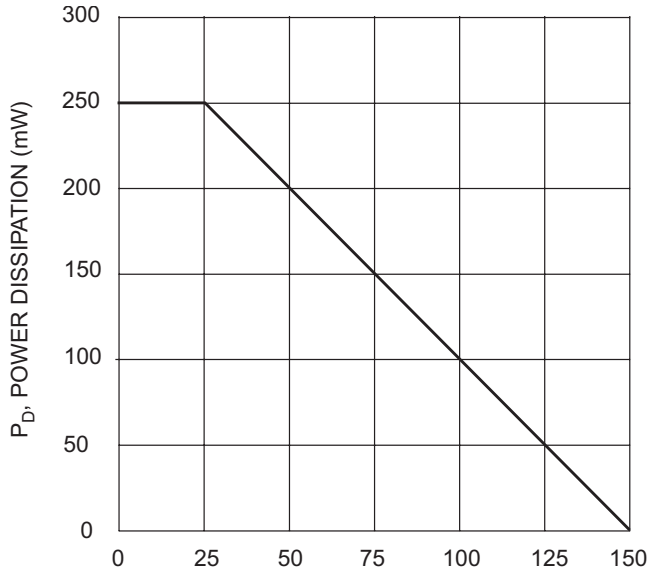


Fig. 1 Power Derating Curve

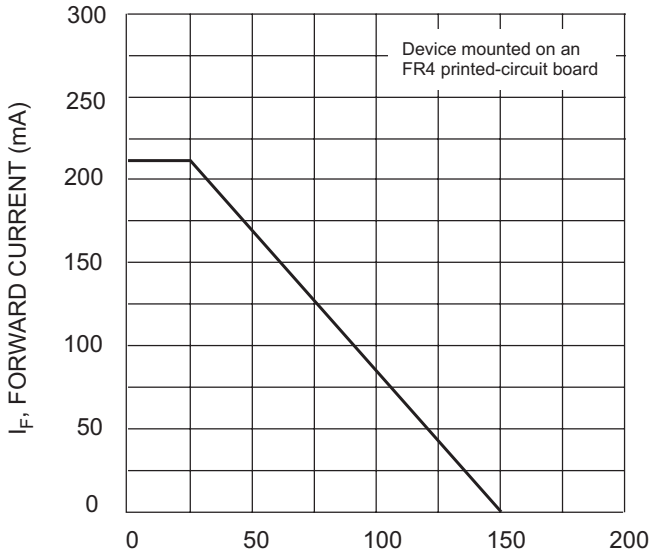


Fig. 2 Current Derating Curve

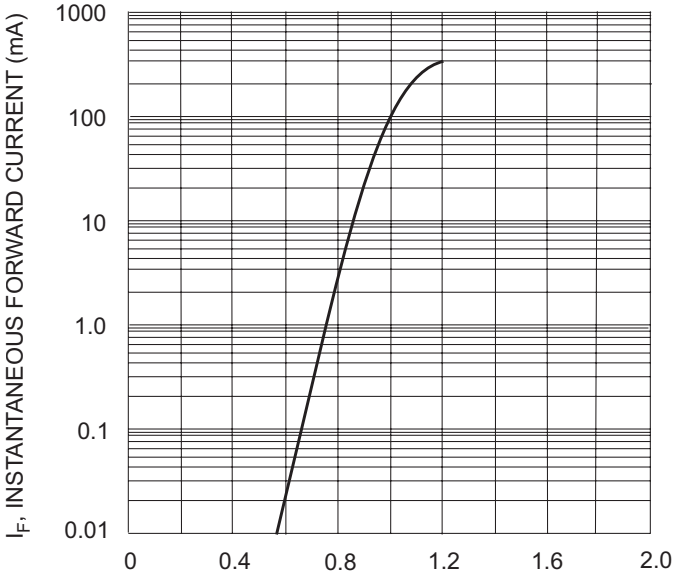


Fig. 3 Typical Forward Characteristics

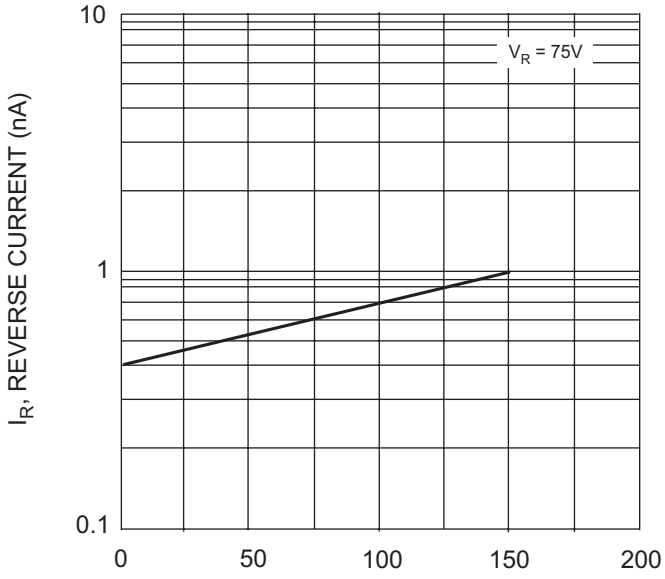


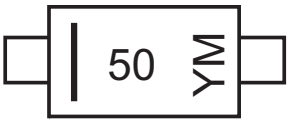
Fig. 4 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
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