

Features

- Surface Mount Package Ideally Suited for Automated Insertion
- Very Low Leakage Current
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic, "Green" Molding Compound; UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish Annealed over Alloy 42 Leadframe; (Lead-Free Plating). Solderable per MIL-STD-202, Method 208③
- Polarity: Cathode Band
- Weight: 0.01 grams (Approximate)

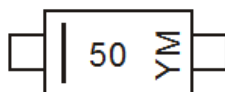


Ordering Information (Note 4)

Part Number	Case	Packaging
BAV116W-7-F	SOD-123	3,000/Tape & Reel
BAV116W-13-F	SOD-123	10,000/Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
 2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information



50 = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: D = 2016)
 M = Month (ex: 9 = September)

Date Code Key

Year	2000	2001	2002	2003	...	2015	2016	2017	2018	2019	2020	2021	2022
Code	L	M	N	P	...	C	D	E	F	G	H	I	J

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

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	130	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
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}	@ t = 1.0µs	4.0
		@ t = 1.0ms	1.0
		@ t = 1.0s	0.5

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P _D	250	mW
Thermal Resistance Junction to Ambient Air (Note 5)	R _{θJA}	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 6)	V _{(BR)R}	130	—	—	V	I _R = 100µA I _R = 100µA, T _J = 125°C
Forward Voltage	V _F	—	—	0.90	V	I _F = 1.0mA, T _J = 25°C
				1.0		I _F = 10mA, T _J = 25°C
				1.1		I _F = 50mA, T _J = 25°C
				1.25		I _F = 150mA, T _J = 25°C
				1.0		I _F = 10mA, T _J = 125°C
Leakage Current (Note 6)	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: 5. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com>.
6. Short duration pulse test used to minimize self-heating effect.

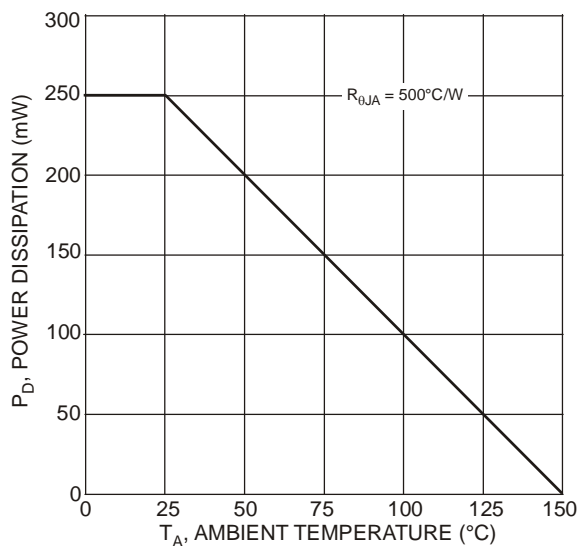


Fig. 1 Power Derating Curve

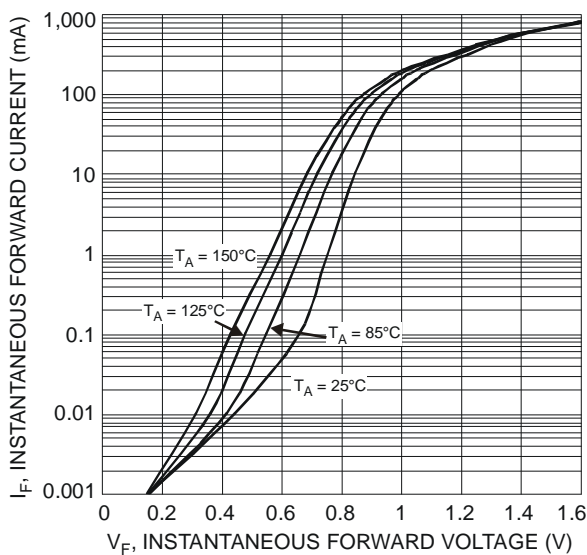


Fig. 2 Typical Forward Characteristics

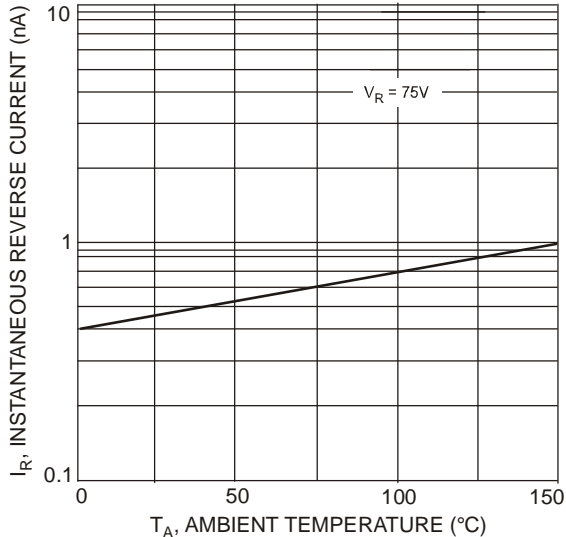


Fig. 3 Typical Reverse Characteristics

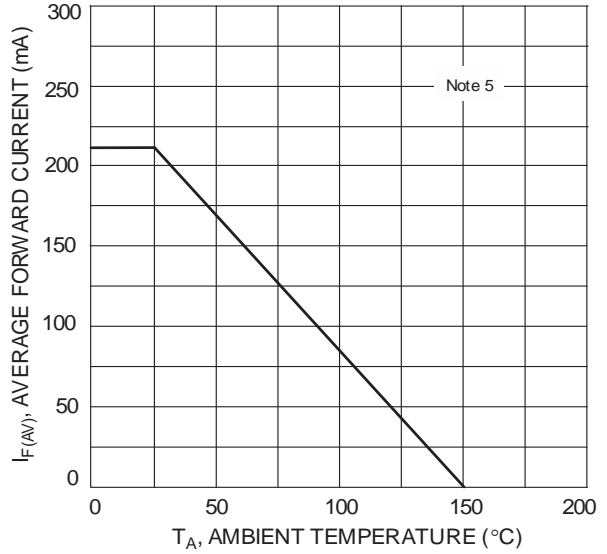
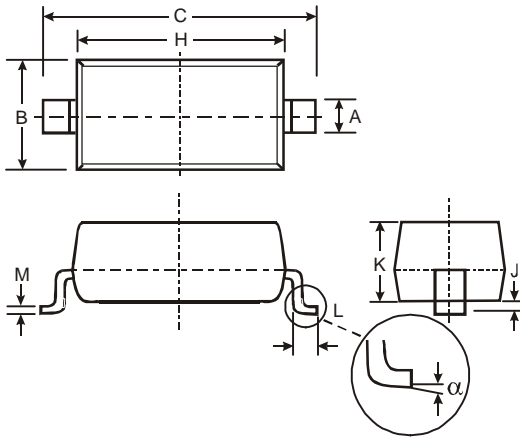


Fig. 4 Forward Current Derating Curve

Package Outline Dimensions

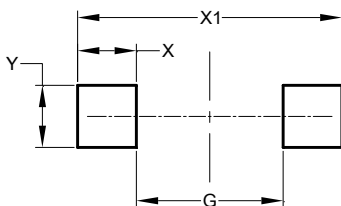
Please see <http://www.diodes.com/package-outlines.html> for the latest version.



SOD123		
Dim	Min	Max
A	0.55 Typ	
B	1.40	1.70
C	3.55	3.85
H	2.55	2.85
J	0.00	0.10
K	1.00	1.35
L	0.25	0.40
M	0.10	0.15
α	0	8°
All Dimensions in mm		

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.



Dimensions	Value(in mm)
G	2.250
X	0.900
X1	4.050
Y	0.950

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