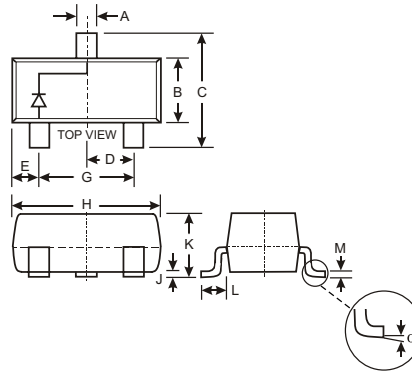


Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Very Low Leakage Current
- Available in Lead Free/RoHS Compliant Version (Note 3)

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe). Please See Ordering Information, Note 5, on Page 3
- Polarity: See Diagram
- Marking: K50, K54 (See Page 3)
- Weight: 0.008 grams (approximate)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	BAS116	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	85	V
RMS Reverse Voltage	V _{R(RMS)}	60	V
Forward Continuous Current (Note 1)	I _{FM}	215	mA
Repetitive Peak Forward Current	I _{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I _{FSM}	4.0	A
@ t = 1.0μs		1.0	
@ t = 1.0ms		0.5	
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	BAS116	Unit
Power Dissipation (Note 1)	P _d	250	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}	500	°C/W

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	85	—	—	V	I _R = 100μA
Forward Voltage (Note 2)	V _{FM}	—	—	0.90 1.0 1.1 1.25	V	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA
Leakage Current (Note 2)	I _{RM}	—	—	5.0 80	nA nA	V _R = 75V V _R = 75V, T _J = 150°C
Total Capacitance	C _T	—	2	—	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. 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>.
 2. Short duration test pulse used to minimize self-heating effect.
 3. No Purposefully added Lead.

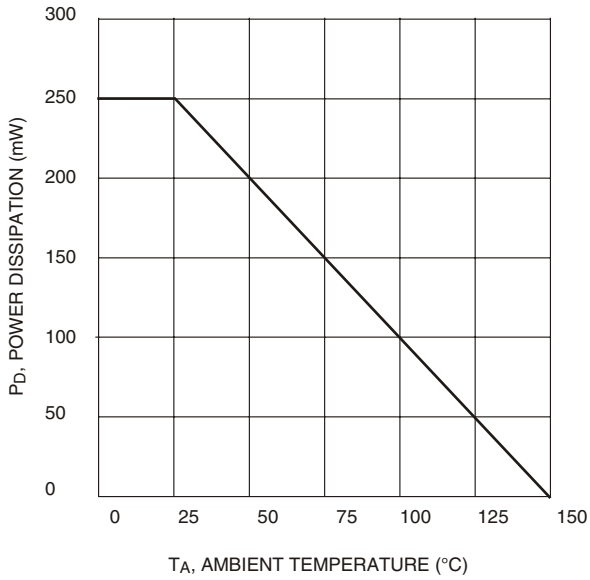


Fig. 1 Power Derating Curve

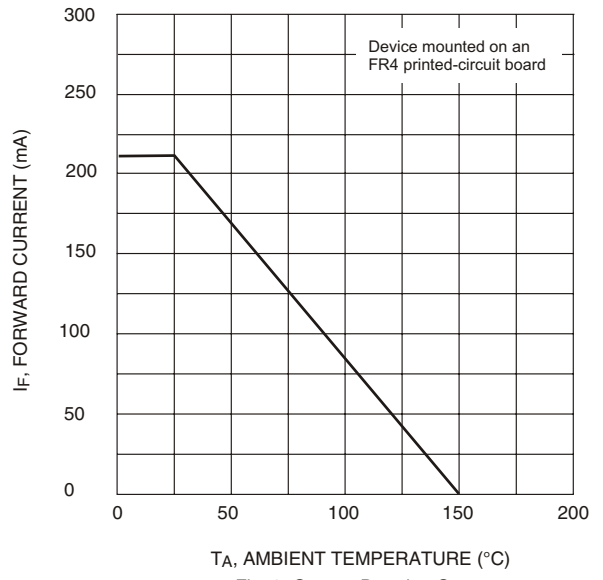


Fig. 2 Current Derating Curve

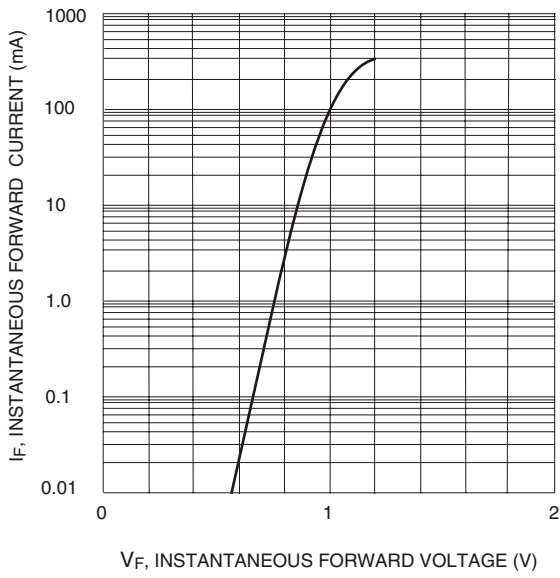


Fig. 3 Typical Forward Characteristics

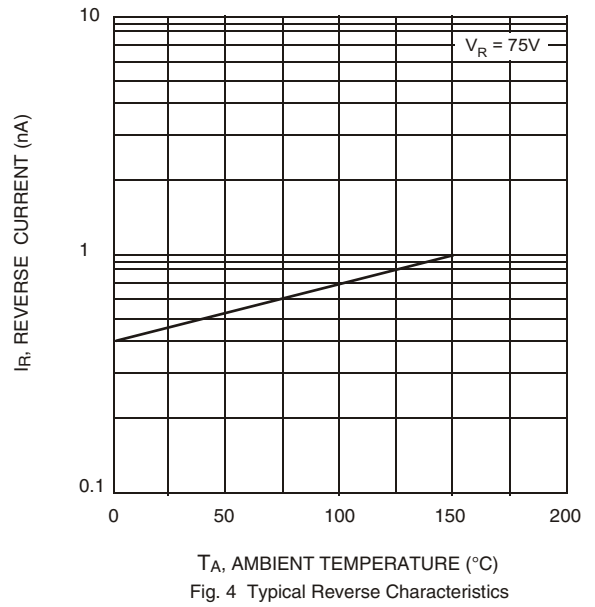


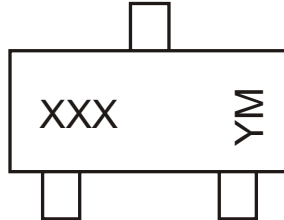
Fig. 4 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
BAS116-7	SOT-23	3000/Tape & Reel

- Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
 5. For Lead Free/RoHS Compliant version part number, please add "-F" suffix to the part number above. Example: BAS116-7-F.

Marking Information



XXX = Product Type Marking Code (See Page 1)
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September

Date Code Key

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	M	N	P	R	S	T	U	V	W

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