



BAS116

Features

- Surface Mount Package Ideally Suited for Automated Insertion
- Very Low Leakage Current
- Lead Halogen and Antimony Free, RoHS Compliant
 - "Green" Device (Notes 3 and 4)

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminal Connections: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.008 grams (approximate)

SOT-23



TOP VIEW Internal Schematic

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	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	@ t = 1.0μs @ t = 1.0ms @ t = 1.0s	IFSM	4.0 1.0 0.5	А	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1) $@T_A = 25^{\circ}C$	PD	250	mW
Thermal Resistance Junction to Ambient Air (Note 1) $@T_A = 25^{\circ}C$	$R_{ ext{ heta}JA}$	500	°C/W
Operating and Storage Temperature Range	TJ, T _{STG}	-65 to +150	°C

Electrical Characteristics $@T_A = 25^{\circ}C$ unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	85			V	I _R = 100μA
Forward Voltage	V _F	—	_	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 _R		_	5.0 80		V _R = 75V V _R = 75V, T _j = 150°C
Total Capacitance	CT	_	2		рF	$V_{R} = 0, f = 1.0MHz$
Reverse Recovery Time	t _{rr}		_	3.0	μS	$\begin{split} I_F &= I_R = 10 \text{mA}, \\ I_{\text{rr}} &= 0.1 \text{ x } I_R, \text{ R}_L = 100 \Omega \end{split}$

1. Part mounted on FR-4 PC board with pad layout as shown on page 3.

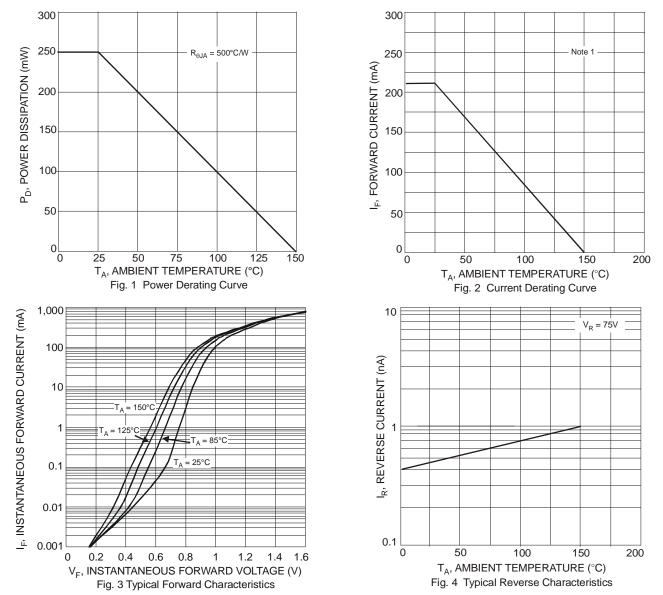
2. Short duration pulse test used to minimize self-heating effect.

3. No purposefully added lead. Halogen and Antimony Free.

 Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.

Notes:





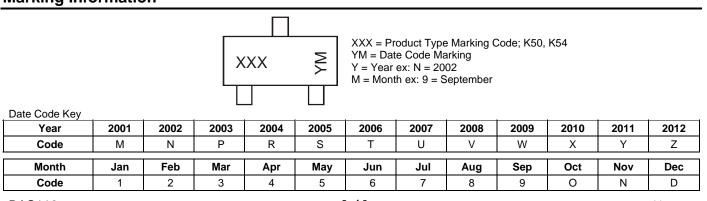
Ordering Information (Note 5)

Part Number	Case	Packaging
BAS116-7-F	SOT-23	3000/Tape & Reel

Notes:

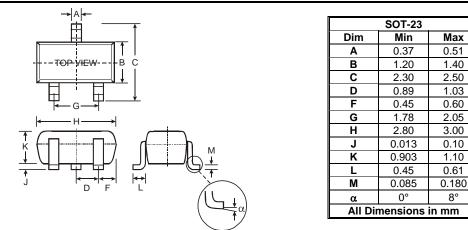
tes:	5. For packaging details,	go to our website at http://www.diodes.com/	/datasheets/ap02007.pdf.
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Marking Information

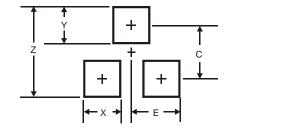




Package Outline Dimensions



Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.9
Х	0.8
Y	0.9
С	2.0
E	1.35

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