



Features

- Fast Switching Speed: max. 50 ns
- High Reverse Breakdown Voltage: 300V
- Low Leakage Current: 100nA at room temperature
- Ultra Small Plastic SMD Package
- Lead, Halogen and Antimony Free, RoHS Compliant (Note 3)
- "Green" Device (Note 4)

Mechanical Data

- Case: SOD-523
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Matte Tin annealed over Alloy 42 leadframe.
- Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.0014 grams (approximate)







Top View

Device Schematic

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	300	V
Working Peak Reverse Voltage DC Blocking Voltage	V _{RWM}	300	V
Forward Current (Note 2)	lF	250	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0µs	I _{FSM}	4.5	A
Repetitive Peak Forward Current (Note 2)	I _{FRM}	1	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	PD	325	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{ heta JA}$	385	°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	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	300	_	V	I _R = 100μA
Forward Voltage	VF	_	1.1	V	I _F = 100mA
Reverse Current (Note 1)	I _R	 	50 150 100	nA nA μA	V _R = 5V V _R = 250V V _R = 250V, T _J = 150°C
Total Capacitance	CT	_	5	pF	$V_{R} = 0, f = 1.0MHz$
Reverse Recovery Time	t _{rr}	_	50	ns	$I_F = I_R = 30 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100 \Omega$

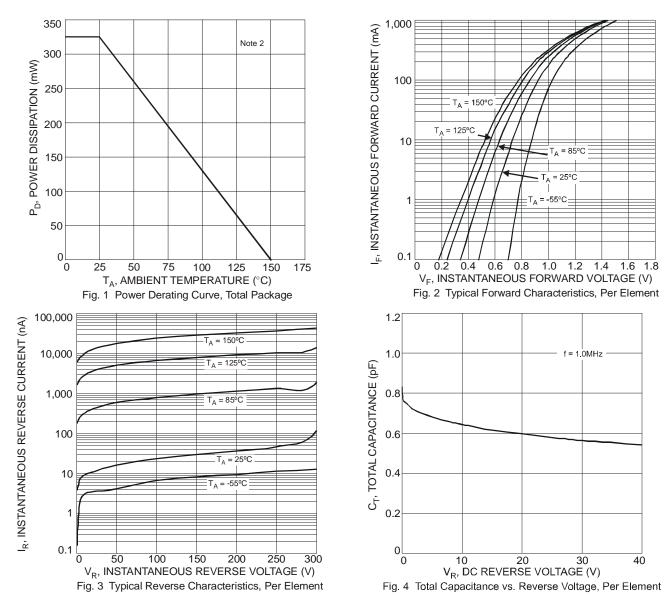
Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Part mounted on FR-4 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. Halogen and Antimony Free.

4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.





Ordering Information (Note 5)

Part Number	Case	Packaging
BAS521-7	SOD-523	3000/Tape & Reel (Note 6)

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf. 6. Dispensed in every other cavity of the tape.

Marking Information

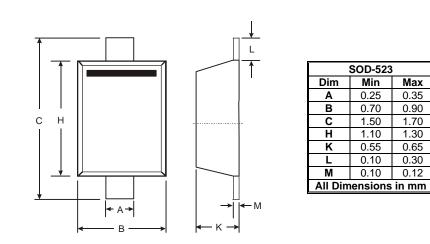


99 = Product Type Marking Code

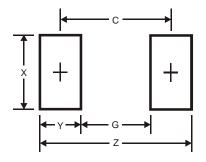
NEW PRODUCT



Package Outline Dimensions



Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.3
G	1.1
Х	0.8
Y	0.6
С	1.7



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