

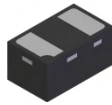
Features

- Fast Switching Speed: Maximum of 50 ns
- High Reverse Breakdown Voltage: 325V
- Low Leakage Current: Maximum of 50nA when $V_R = 5V$ or Maximum of 150nA when $V_R = 250V$ at Room Temperature
- Ultra Small Plastic SMD Package: 1.0mm x 0.6mm x 0.5mm
- **Lead, Halogen and Antimony Free, RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**

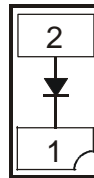
Mechanical Data

- Case: X1-DFN1006-2
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - NiPdAu over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Weight: 0.0009 grams (approximate)

X1-DFN1006-2



Bottom View



Device Schematic

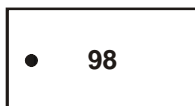
Ordering Information (Note 3)

Part Number	Case	Packaging
BAS521LP-7	X1-DFN1006-2	3,000/Tape & Reel
BAS521LP-7B	X1-DFN1006-2	10,000/Tape & Reel

- Notes:
1. No purposefully added lead. Halogen and Antimony Free.
 2. Diodes Inc.'s "Green" policy can be found on our website at <http://www.diodes.com>.
 3. For packaging details, go to our website at <http://www.diodes.com>.

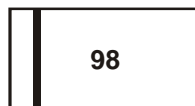
Marking Information

BAS521LP-7



Top View
Dot Denotes
Cathode Side

BAS521LP-7B



Top View
Bar Denotes
Cathode Side

98 = Product Type Marking Code

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	325	V
Working Peak Reverse Voltage	V _{RWM}	325	V
DC Blocking Voltage	V _R	325	V
Forward Current (Note 4)	I _F	400	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs	I _{FSM}	8.0	A
Repetitive Peak Forward Current @ t=8.3ms (Note 4)	I _{FRM}	3.0	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P _D	400	mW
Thermal Resistance Junction to Ambient Air (Note 4)	R _{θJA}	312	°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 5)	V _{(BR)R}	300	—	V	I _R = 100μA
Forward Voltage	V _F	—	1.1	V	I _F = 100mA
Reverse Current (Note 5)	I _R	—	50	nA	V _R = 5V
		—	150	nA	V _R = 250V
		—	100	μA	V _R = 250V, T _J = 150°C
Total Capacitance	C _T	—	5	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	50	ns	I _F = I _R = 30mA, I _{rr} = 0.1 x I _R , R _L = 100Ω

Notes: 4. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com>.
5. Short duration pulse test used to minimize self-heating effect.

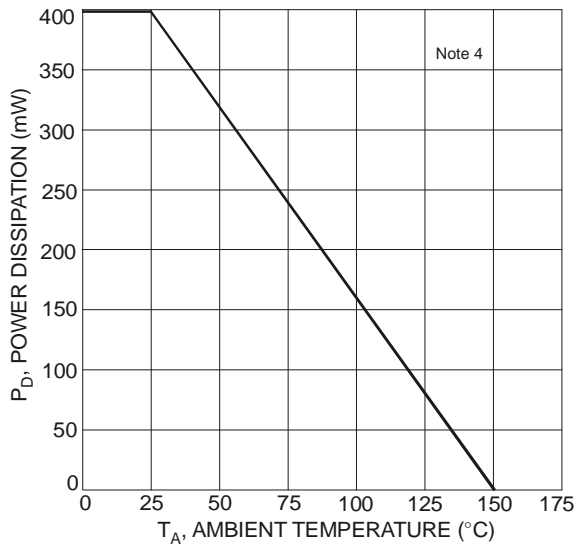


Fig. 1 Power Derating Curve

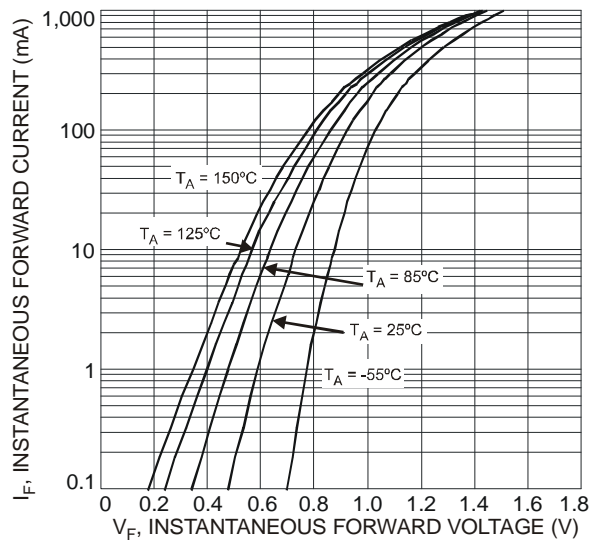


Fig. 2 Typical Forward Characteristics

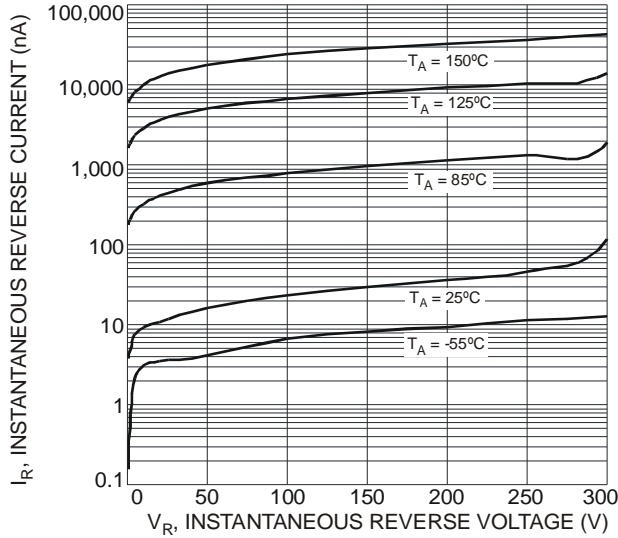


Fig. 3 Typical Reverse Characteristics

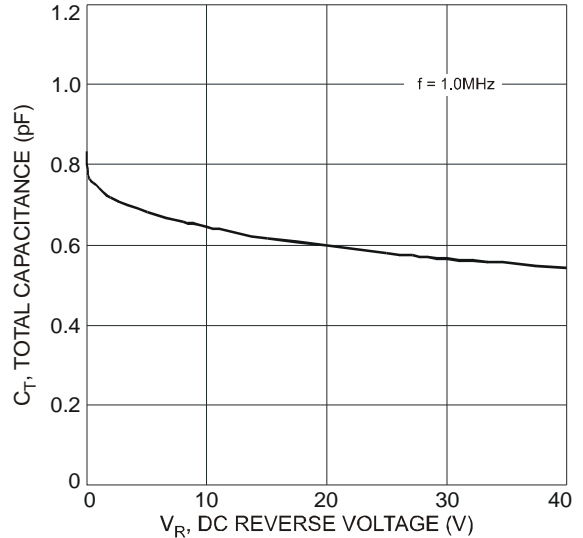
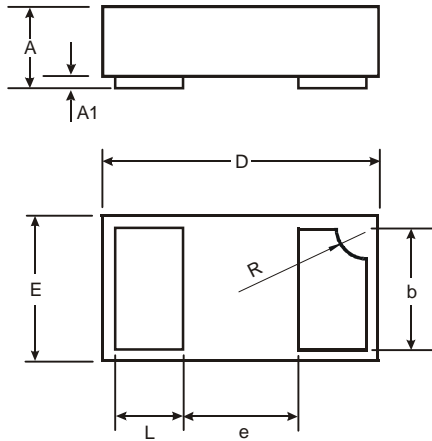


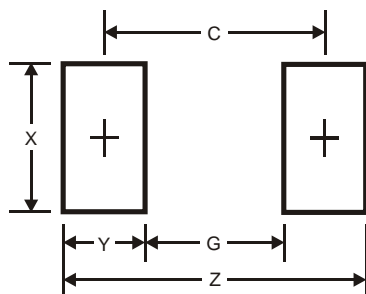
Fig. 4 Total Capacitance vs. Reverse Voltage

Package Outline Dimensions



X1-DFN1006-2			
Dim	Min	Max	Typ
A	0.47	0.53	0.50
A1	0	0.05	0.03
b	0.45	0.55	0.50
D	0.95	1.075	1.00
E	0.55	0.675	0.60
e	-	-	0.40
L	0.20	0.30	0.25
R	0.05	0.15	0.10
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	1.1
G	0.3
X	0.7
Y	0.4
C	0.7

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