

## Features

- Low Turn-on Voltage
- Fast Switching
- Ultra-Small Surface Mount Package
- **Lead Free/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**

## Mechanical Data

- Case: 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 annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Weight: 0.001 grams (approximate)

DFN1006-2



Top View



Bottom View

## Ordering Information (Note 3)

Part Number	Case	Packaging
BAS70LP-7B	DFN1006-2	10,000/Tape & Reel

- Notes:
1. No purposefully added lead.
  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



73 = Product Type Marking Code  
Bar Denotes Cathode Side

**Maximum Ratings** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	70	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
Forward Continuous Current (Note 4)	I <sub>FM</sub>	70	mA
Non-Repetitive Peak Forward Surge Current @ t <sub>p</sub> < 1.0s	I <sub>FSM</sub>	800	mA

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P <sub>D</sub>	430	mW
Thermal Resistance Junction to Ambient Air (Note 4)	R <sub>θJA</sub>	295	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	V <sub>(BR)R</sub>	70	-	-	V	I <sub>R</sub> = 10μA
Forward Voltage	V <sub>F</sub>	-	-	0.42	V	I <sub>F</sub> = 1.0mA, T <sub>J</sub> = 25°C
		-	-	0.75		I <sub>F</sub> = 10mA, T <sub>J</sub> = 25°C
		-	-	0.96		I <sub>F</sub> = 15mA, T <sub>J</sub> = 25°C
Leakage Current (Note 5)	I <sub>R</sub>	-	-	0.1	μA	V <sub>R</sub> = 50V, T <sub>J</sub> = 25°C
		-	-	10		V <sub>R</sub> = 70V, T <sub>J</sub> = 25°C
Total Capacitance	C <sub>T</sub>	-	1	-	pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	-	1.6	-	ns	I <sub>F</sub> = I <sub>R</sub> = 10mA to I <sub>R</sub> = 1.0mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

Notes: 4. Device mounted on FR-4 PC 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.

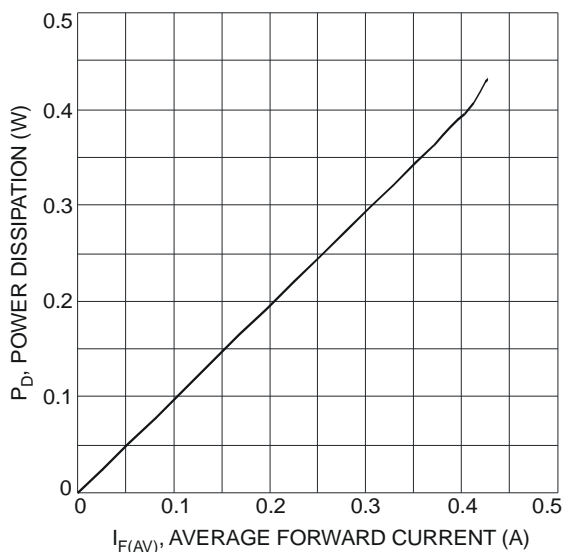


Fig. 1 Forward Power Dissipation

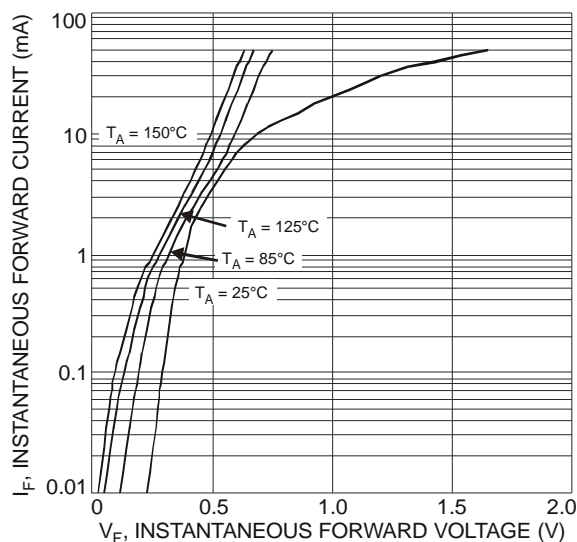


Fig. 2 Typical Forward Characteristics

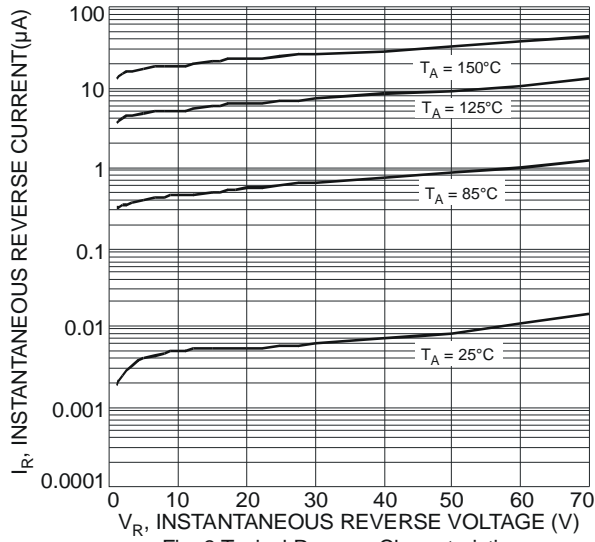


Fig. 3 Typical Reverse Characteristics

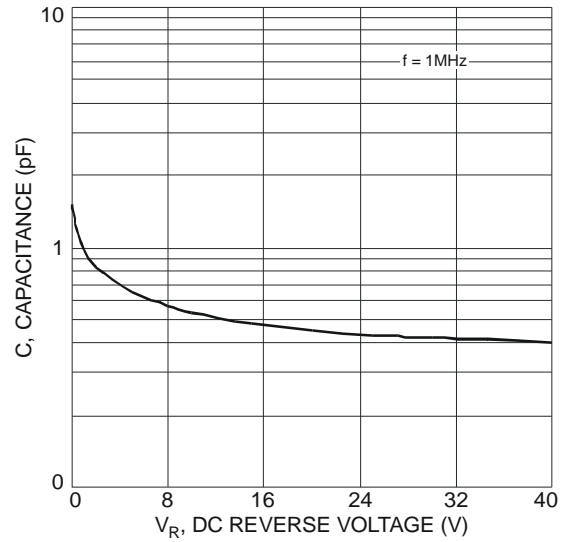


Fig. 4 Total Capacitance vs. Reverse Voltage

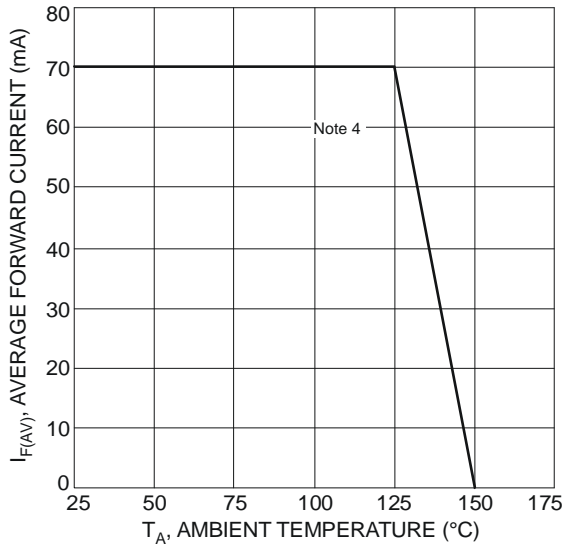


Fig. 5 Forward Current Derating Curve

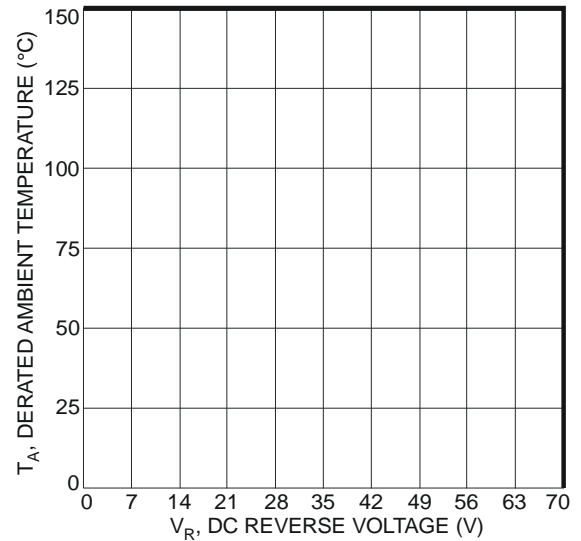
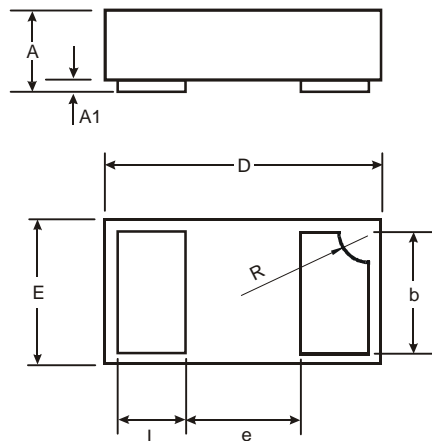


Fig. 6 Operating Temperature Derating

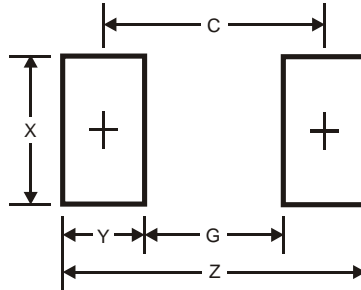
## Package Outline Dimensions



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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