

SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

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

Mechanical Data

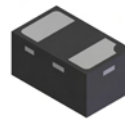
- Case: DFN1006-2
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - NiPdAu annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Weight: 0.001 grams (approximate)

NEW PRODUCT

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	70	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Forward Continuous Current (Note 4)	I_{FM}	70	mA
Non-Repetitive Peak Forward Surge Current @ $t_p < 1.0\text{s}$	I_{FSM}	800	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P_D	430	mW
Thermal Resistance Junction to Ambient Air (Note 4)	$R_{\theta JA}$	295	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	$V_{(BR)R}$	70	-	-	V	$I_R = 10\mu\text{A}$
Forward Voltage	V_F	-	-	0.42	V	$I_F = 1.0\text{mA}, T_J = 25^\circ\text{C}$
		-	-	0.75		$I_F = 10\text{mA}, T_J = 25^\circ\text{C}$
		-	-	0.96		$I_F = 15\text{mA}, T_J = 25^\circ\text{C}$
Leakage Current (Note 5)	I_R	-	-	0.1	μA	$V_R = 50\text{V}, T_J = 25^\circ\text{C}$
		-	-	10		$V_R = 70\text{V}, T_J = 25^\circ\text{C}$
Total Capacitance	C_T	-	1	-	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	-	1.6	-	ns	$I_F = I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}$, $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

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.

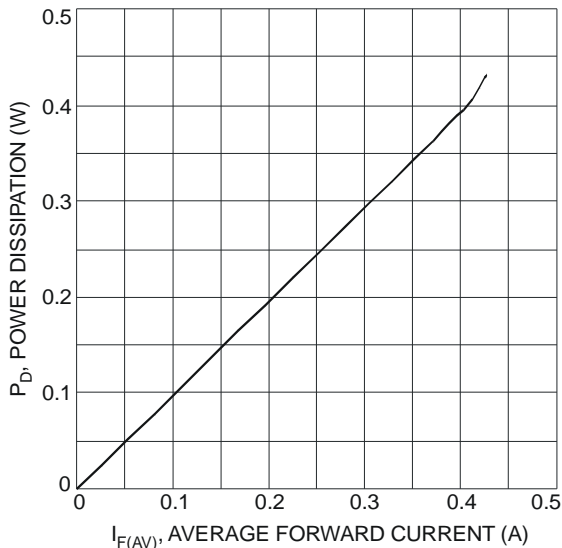


Fig. 1 Forward Power Dissipation

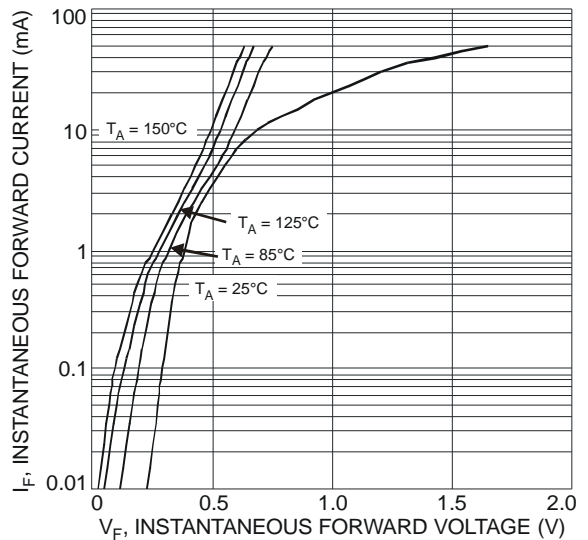


Fig. 2 Typical Forward Characteristics

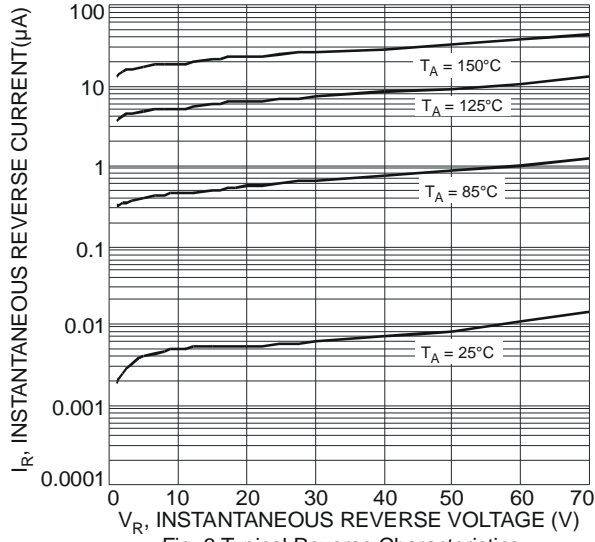


Fig. 3 Typical Reverse Characteristics

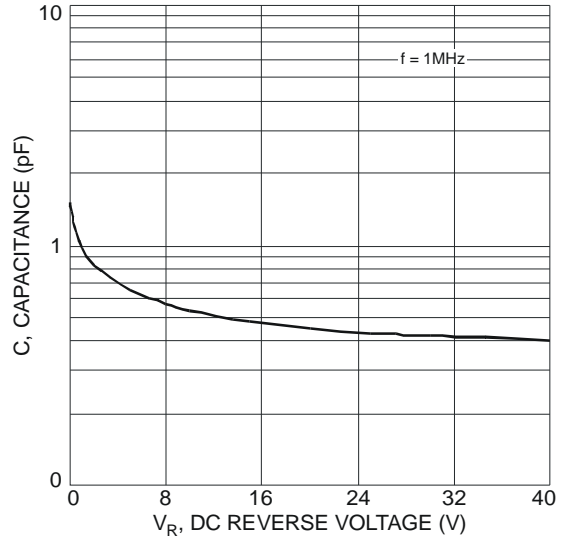


Fig. 4 Total Capacitance vs. Reverse Voltage

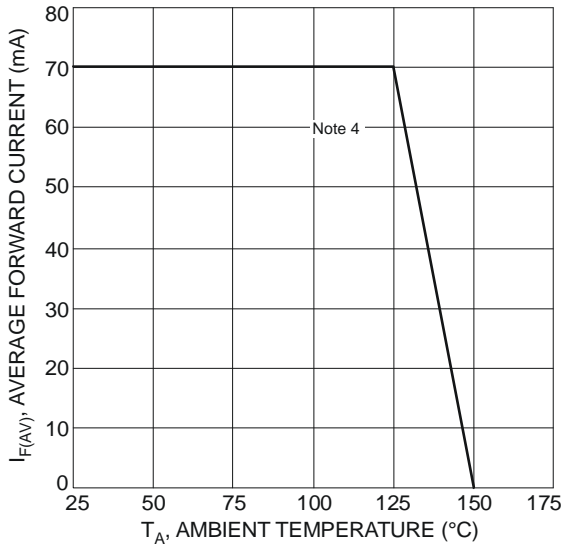


Fig. 5 Forward Current Derating Curve

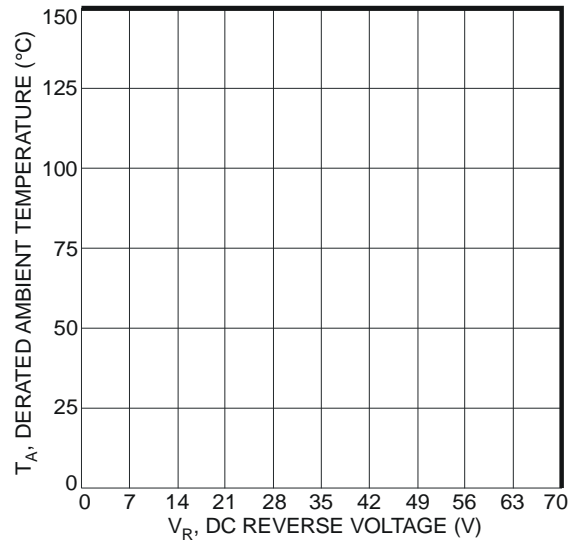
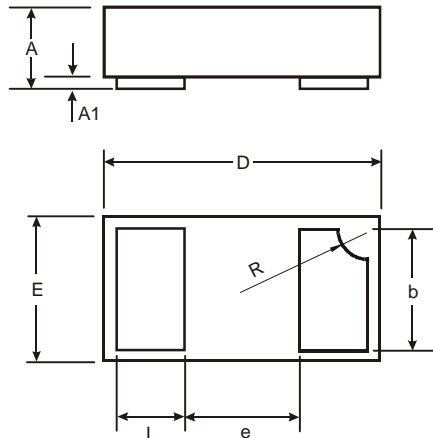


Fig. 6 Operating Temperature Derating

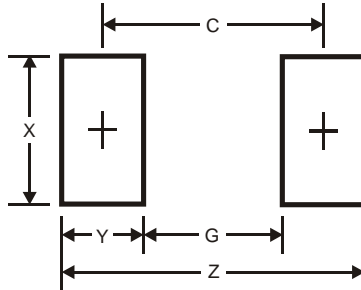
Package Outline Dimensions



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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