SURFACE MOUNT SCHOTTKY BARRIER DIODE

NEW PRODUCT

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

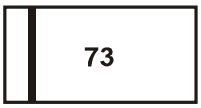
Bottom View

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

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Maximum Ratings @T_A = 25℃ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	70	V
Forward Continuous Current (Note 4)	I_{FM}	70	mA
Non-Repetitive Peak Forward Surge Current @ t_p < 1.0s	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	℃/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	℃

Electrical Characteristics @T_A = 25℃ unless otherwise specified

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

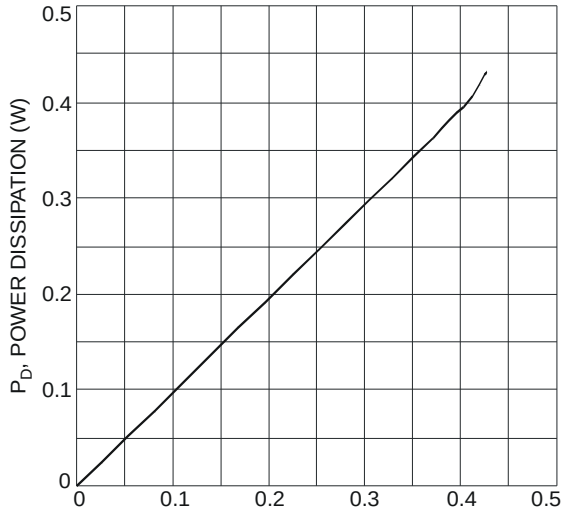

Fig. 1 Forward Power Dissipation

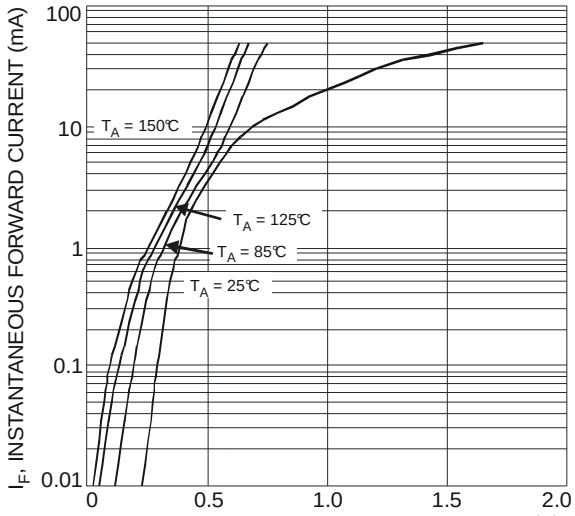

Fig. 2 Typical Forward Characteristics

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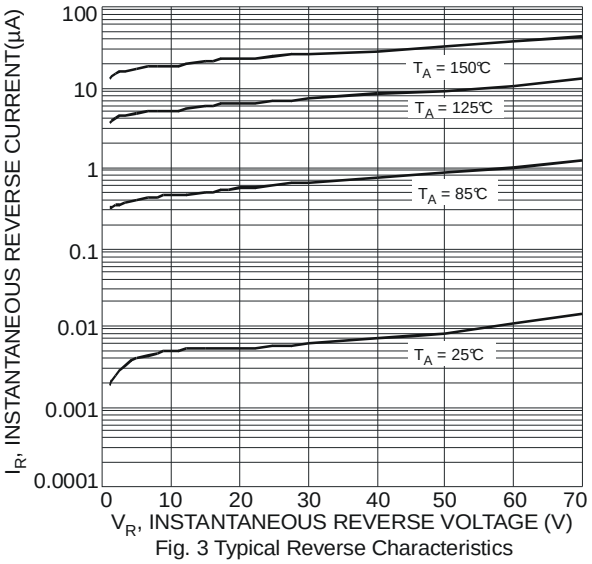


Fig. 3 Typical Reverse Characteristics

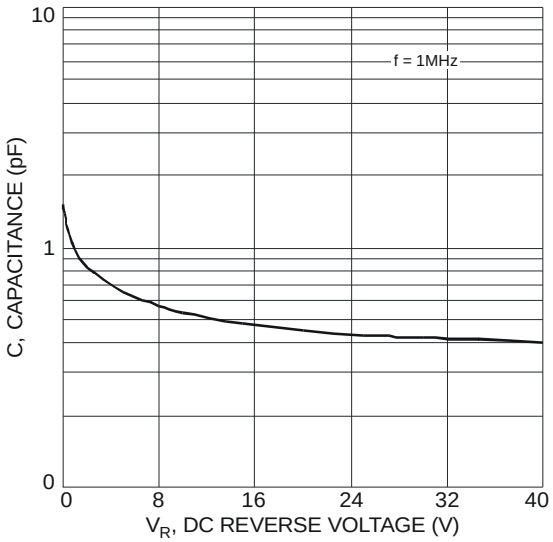


Fig. 4 Total Capacitance vs. Reverse Voltage

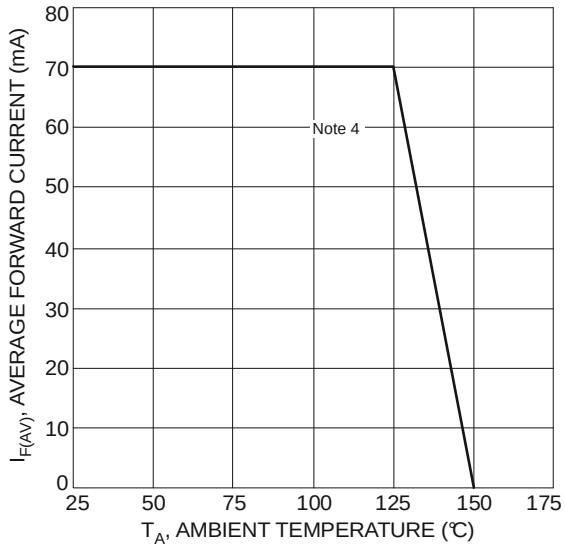


Fig. 5 Forward Current Derating Curve

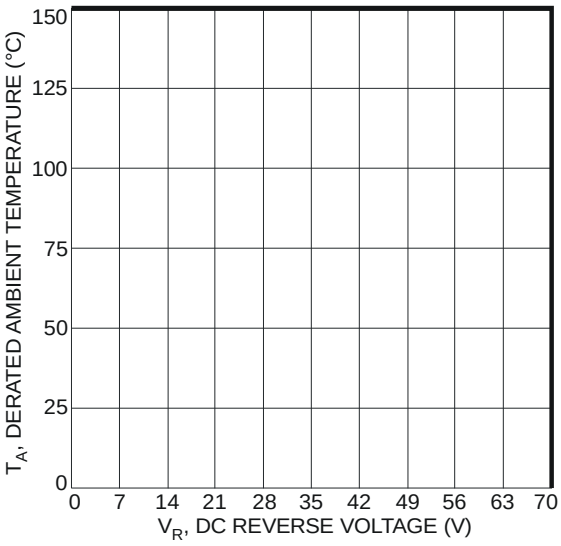
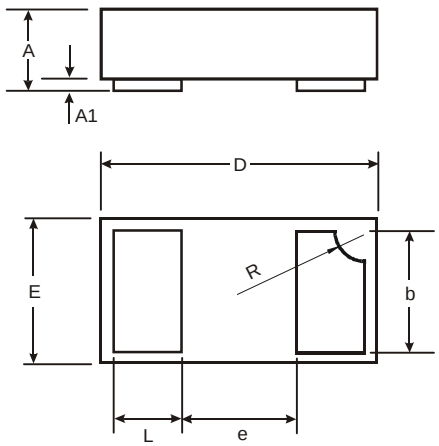


Fig. 6 Operating Temperature Derating

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			

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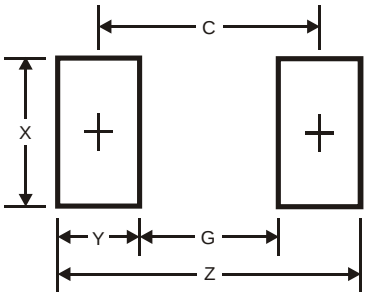
Suggested Pad Layout



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