



BAS16LP

SURFACE MOUNT SWITCHING DIODE

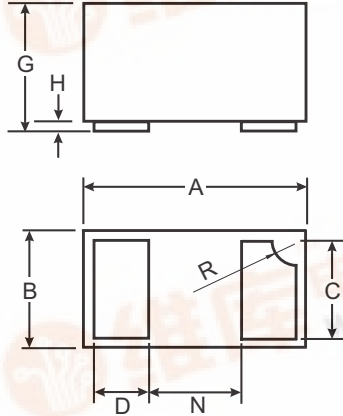
NEW PRODUCT

Features

- Fast Switching Speed
- Ultra-Small Leadless Surface Mount Package
- For General Purpose Switching Applications
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**
- **Qualified to AEC-Q101 Standards for High Reliability**

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-020C
- Terminal Connections: Cathode Dot
- Terminals: Finish - NiPdAu annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking: A6, Dot Denotes Cathode Side
- Ordering Information: See Page 3
- Weight: 0.001 grams



DFN1006-2			
Dim	Min	Max	Typ
A	0.95	1.075	1.00
B	0.55	0.675	0.60
C	0.45	0.55	0.50
D	0.20	0.30	0.25
G	0.47	0.53	0.50
H	0	0.05	0.03
N	—	—	0.40
R	0.05	0.15	0.10

All Dimensions in mm

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _R V _{RRM} V _{RWM} V _R	75	V
RMS Reverse Voltage	V _{R(RMS)}	53	V
Forward Continuous Current	I _{FM}	300	mA
Average Rectified Output Current	I _O	200	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I _{FSM}	2.0 1.0	A
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation	P _d	250	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	500	°C/W

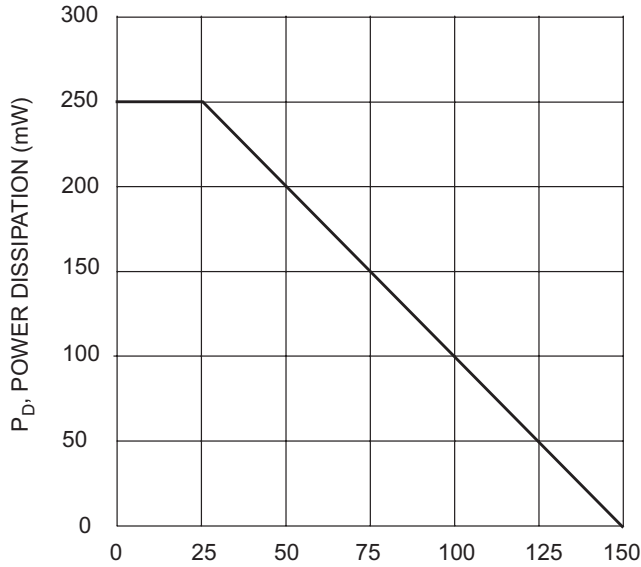
- Notes:
1. No purposefully added lead.
 2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.



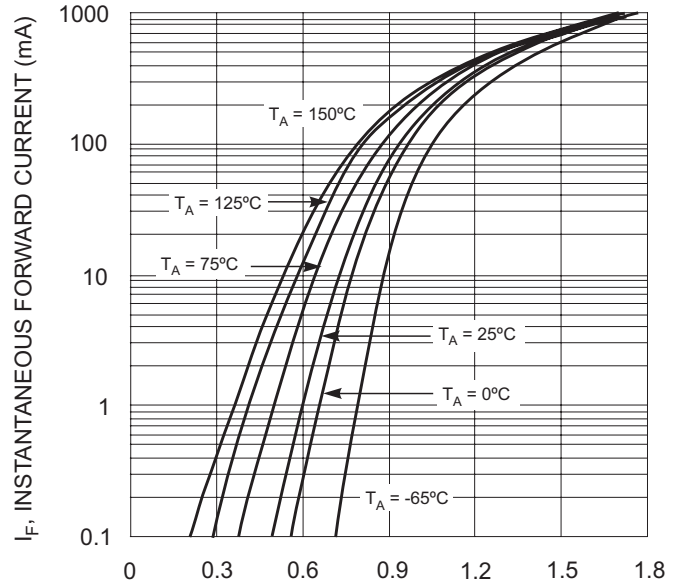
Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	$V_{(BR)R}$	75	—	V	$I_R = 100\mu\text{A}$
Forward Voltage (Note 3)	V_F	—	0.715 0.855 1.0 1.25	V	$I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$
Leakage Current (Note 3)	I_R	—	1.0 50 30 25	μA μA μA nA	$V_R = 75\text{V}$ $V_R = 75\text{V}, T_j = 150^\circ\text{C}$ $V_R = 25\text{V}, T_j = 150^\circ\text{C}$ $V_R = 20\text{V}$
Total Capacitance	C_T	—	2.0	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	4.0	ns	$I_F = I_R = 10\text{mA}$, $t_{rr} = 0.1 \times I_R, R_L = 100\Omega$

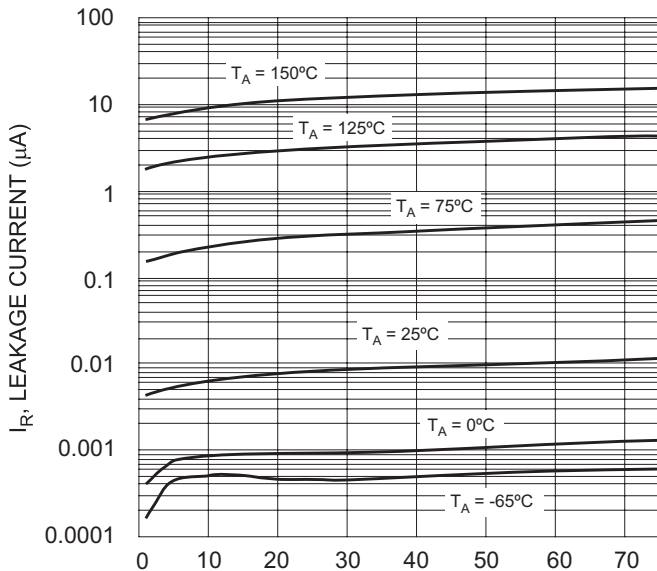
Notes: 3. Short duration pulse test used to minimize self-heating effect.



T_A , AMBIENT TEMPERATURE ($^\circ\text{C}$)
Fig. 1 Power Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



V_R , REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
BAS16LP-7	DFN1006-2	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

A6 = Product Type Marking Code, Dot Denotes Cathode Side

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