BAS40LP

SURFACE MOUNT SCHOTTKY BARRIER DIODE

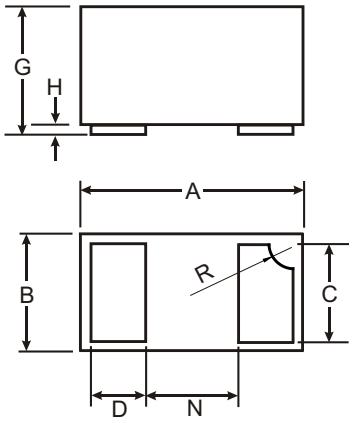
NEW PRODUCT

Features

- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Leadless Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- **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
- Ordering Information: See Page 2
- Marking Code: 43, Dot Denotes Cathode Side
- 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
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
Forward Continuous Current	I_{FM}	200	mA
Forward Surge Current @ t < 1.0s	I_{FSM}	600	mA
Operating Temperature Range	T_j	-55 to +125	C
Storage Temperature Range	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_{JA}	400	C/W

Electrical Characteristics @ T_A = 25 C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	$V_{(BR)R}$	40	—	—	V	I_R = 10 A
Forward Voltage (Note 3)	V_F	—	—	380 1000	mV	t_p < 300 s, I_F = 1.0mA t_p < 300 s, I_F = 40mA
Reverse Leakage Current (Note 3)	I_R	—	20	200	nA	t_p < 300 s, V_R = 30V
Total Capacitance	C_T	—	2.3	5.0	pF	V_R = 0V, f =1.0MHz
Reverse Recovery Time	t_{rr}	—	—	5.0	ns	I_F = I_R = 10mA to I_R = 1.0mA, R_L = 100

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

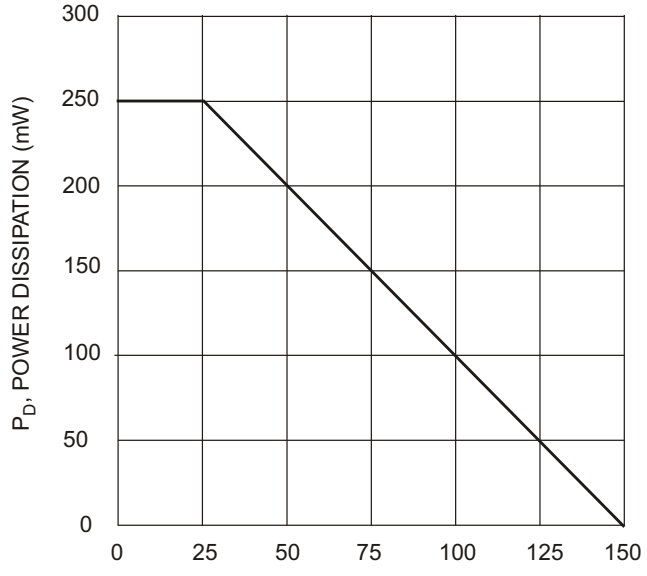


Fig. 1 Power Derating Curve

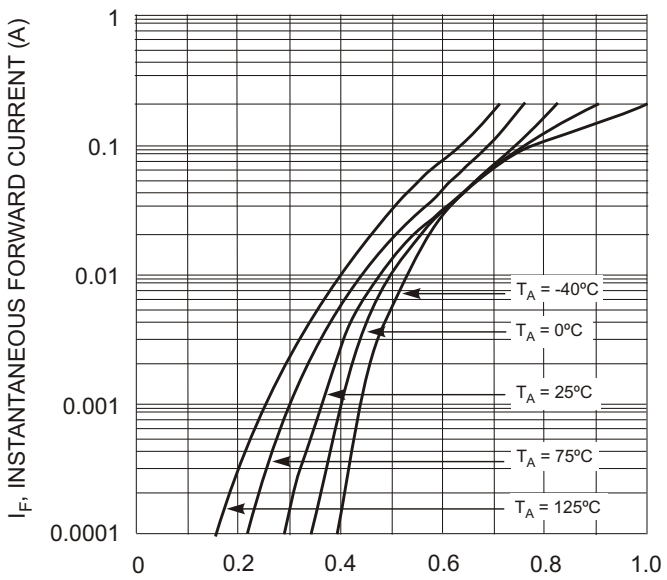


Fig. 2 Typical Forward Voltage

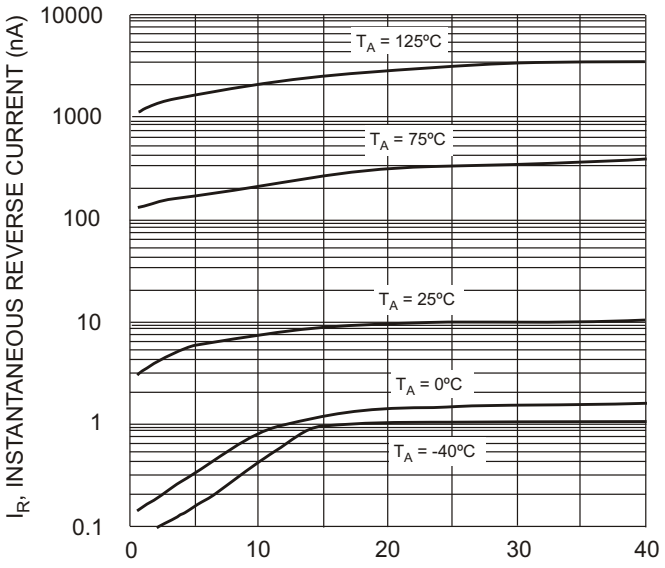


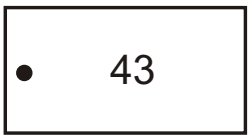
Fig. 3 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
BAS40LP-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



43 = Product Type Marking Code, Dot Denotes Cathode Side

NEW PRODUCT

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