



BAS40LP

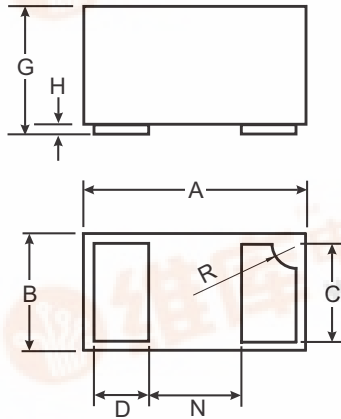
SURFACE MOUNT SCHOTTKY BARRIER DIODE

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 @ $T_A = 25^\circ\text{C}$ 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 @ $t < 1.0\text{s}$	I_{FSM}	600	mA
Operating Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Value	Unit
Power Dissipation	P_d	250	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	400	$^\circ\text{C}/\text{W}$

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

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

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.

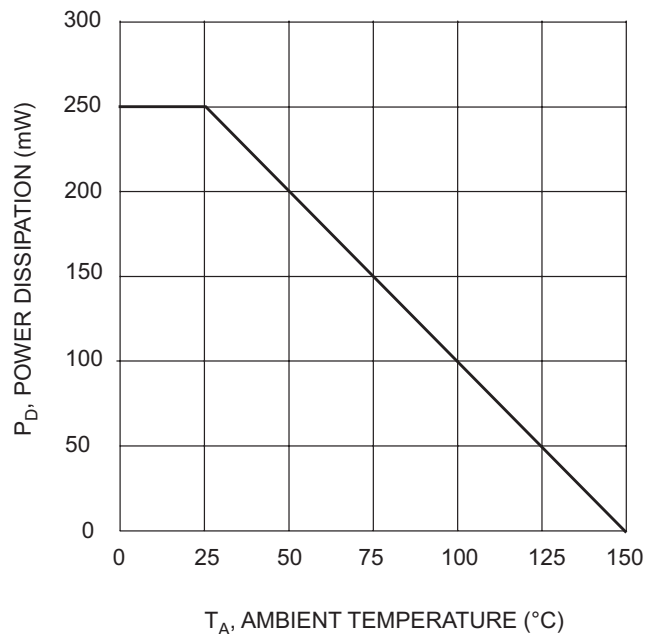


Fig. 1 Power Derating Curve

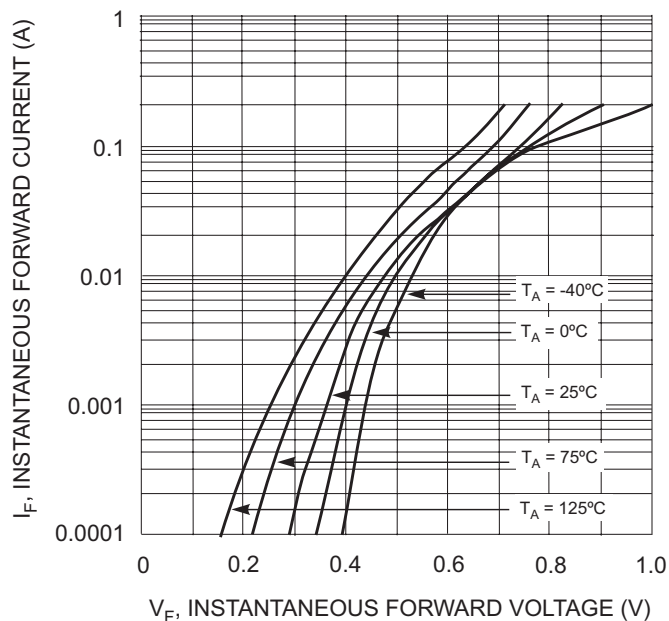


Fig. 2 Typical Forward Voltage

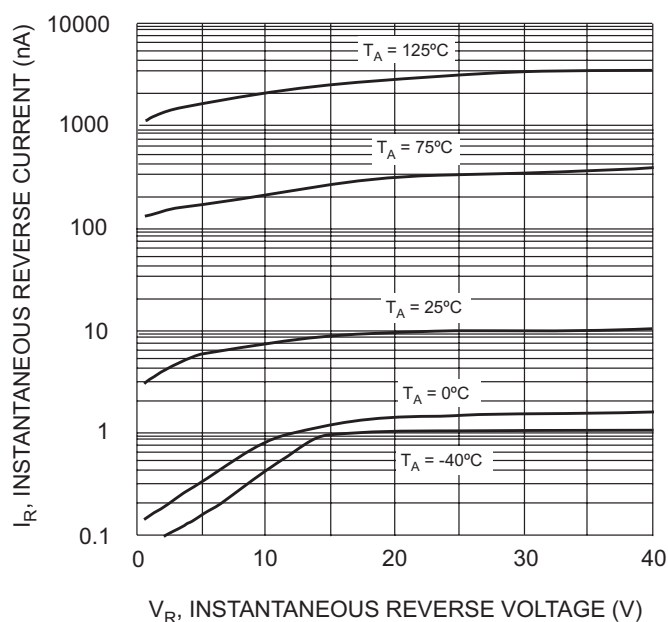


Fig. 3 Typical Reverse Characteristics

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

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