



BAS40LP

DFN 1.0X0.6-2L Plastic-Encapsulate Schottky Barrier Diode

FEATURES

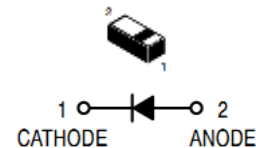
- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Leadless Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)

MARKETS

- Mobile Handsets
- MP3 Players
- Digital Camera and Camcorders
- Notebook PCs & PDAs
- GPS

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
- Terminal Connections: Cathode Dot
- Terminals: Finish - NiPdAu annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Weight: 0.001 grams (approximate)



Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
2. See <http://www.goodark.com> for more information about Good-Ark's definitions of Halogen and Antimony-free, "Green" and Lead-free.
3. For packaging details, go to our website at <http://www.goodark.com>.

Maximum Ratings (Ta=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
V _{RRM}	Peak Repetitive Reverse Voltage	40	V
V _{RWM}	Working Peak Reverse Voltage		
V _R	DC Blocking Voltage		
I _F	Forward Continuous Current	200	mA
I _{FSM}	Forward Surge Current @ t < 1.0s	600	mA

Thermal Characteristics

Symbol	Parameter	Value	Unit
P _D	Power Dissipation (Note 4)	250	mW
R _{θJA}	Thermal Resistance, Junction to Ambient Air (Note 4)	400	°C/W
T _J	Operating Temperature Range	-55~+125	°C
T _{STG}	Storage Temperature Range	-65~+150	°C





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Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage (Note 5)	$V_{(BR)R}$	$I_R = 10\mu A$	40	-	-	V
Forward Voltage	V_F	$t_p < 300\mu s, I_F = 1.0mA$ $t_p < 300\mu s, I_F = 40mA$	-	-	380 1000	mV
Reverse Leakage Current (Note 5)	I_R	$t_p < 300\mu s, V_R = 30V$		20	200	nA
Total Capacitance	C_T	$V_R = 0V, f = 1.0MHz$		2.3	5.0	pF
Reverse Recovery Time	T_{rr}	$I_F=10mA$ through $I_R= 10mA$ to $I_R = 1.0mA, R_L = 100\Omega$			5.0	nS

Notes:

- Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com>
- Short duration pulse test used to minimize self-heating effect.

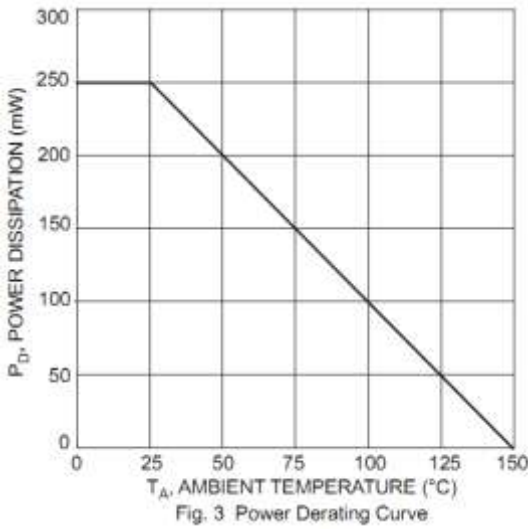
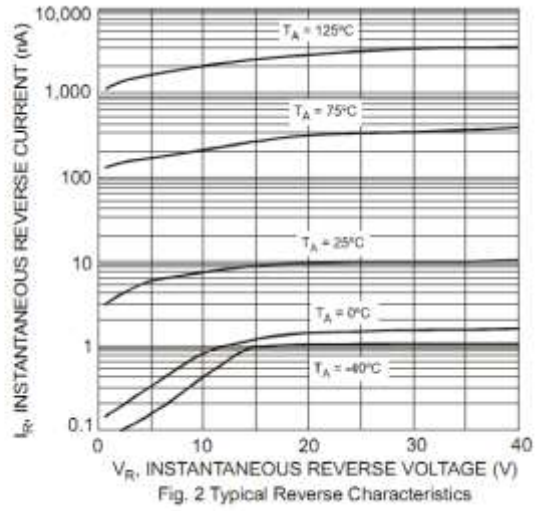
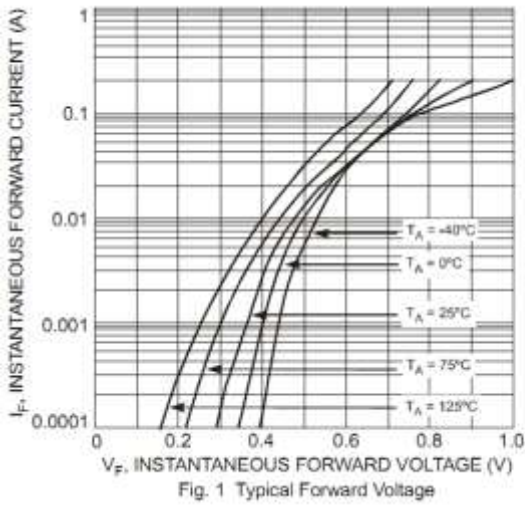




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Electrical characteristic curves (Ta=25°C unless otherwise specified)

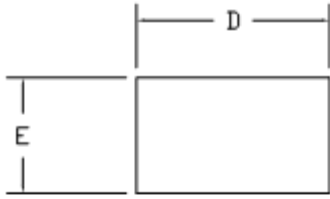




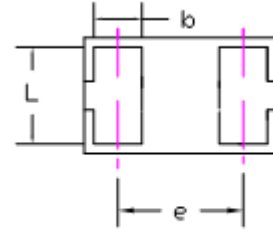
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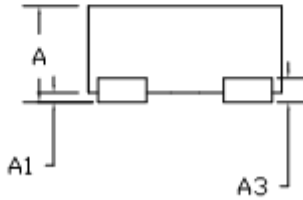
DFN 1.0X0.6-2L Package Outline Dimensions



TOP VIEW



BOTTOM VIEW

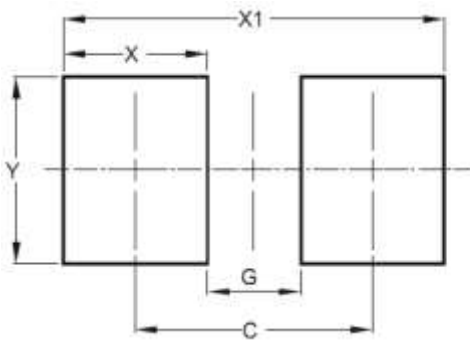


SIDE VIEW

COMMON DIMENSIONS(MM)			
PKG. REF.	X1-EXTREME THIN		
	MIN.	NOM.	MAX.
A	>0.4	-	0.50
A1	0.00	-	0.05
A3	0.125REF.		
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.20	0.25	0.30
L	0.45	0.50	0.55
	-	-	-
	-	-	-
e	0.65 BSC		

Lead finish: NiPdAu

DFN 1.0X0.6-2L Suggested Pad Layout



Dimensions	Value (in mm)
C	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

