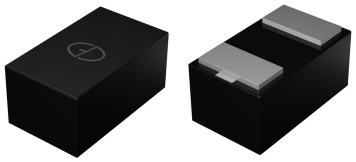
GOOD-ARK
SEMICONDUCTOR

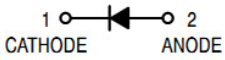
BAT54LP
Schottky Barrier Diode

Features

- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- Lead Free/RoHS Compliant
- PN Junction Guard Ring for Transient and ESD Protection



Package: DFN1006-2L



Mechanical Data

- Case Material: Molded plastic, "Green" molding compound, compliant to UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Dot
- Terminals Finish - NiPdAu annealed over Copper lead frame solderable per MIL-STD-202, Method 208
- Weight: 0.001 grams (approximately)

Applications

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

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

Symbol	Parameter	Value	Unit
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	30	V
I_F	Forward Continuous Current	200	mA
I_{FRM}	Repetitive Peak Forward Current	300	mA
I_{FSM}	Forward Surge Current @ t < 1.0s	600	mA

Thermal Characteristics

Symbol	Parameter	Value	Unit
P_D	Power Dissipation (Note 1)	250	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient Air (Note 1)	400	°C/W
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-65 to +150	°C

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

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	I_R = 100μA	30	-	V
Forward Voltage	V_F	I_F = 0.1mA I_F = 1mA I_F = 10mA I_F = 30mA I_F = 200mA	-	0.24 0.32 0.40 0.50 0.65	V
Reverse Leakage Current (Note 2)	I_R	V_R = 25V		2.0	uA
Total Capacitance	C_T	V_R = 1.0V, f = 1.0MHz		10	pF
Reverse Recovery Time	T_{rr}	I_F=10mA through I_R= 10mA to I_R = 1.0mA, R_L = 100Ω		5.0	nS

Notes: 1. Part mounted on FR-4 PC board with recommended pad layout
2. Short duration pulse test used to minimize self-heating effect.

Electrical Characteristic Curves (T_A=25°C unless otherwise specified)

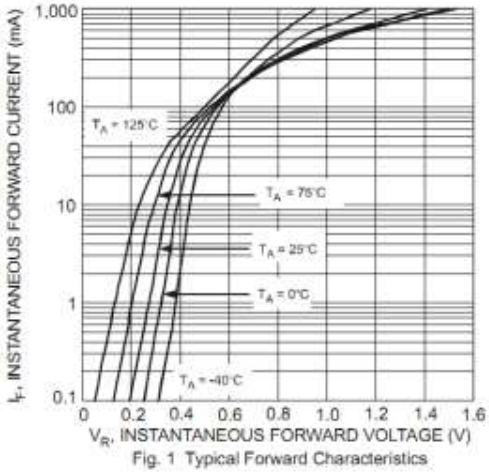


Fig. 1 Typical Forward Characteristics

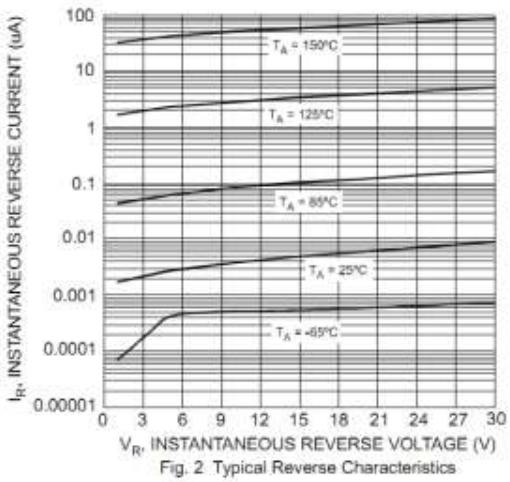


Fig. 2 Typical Reverse Characteristics

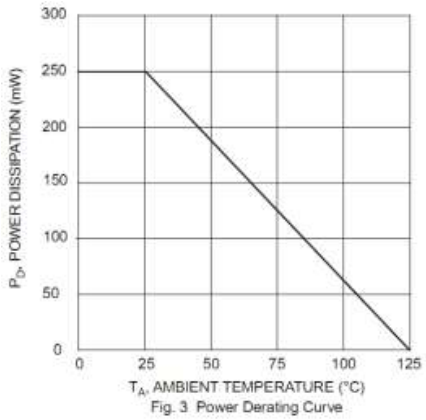
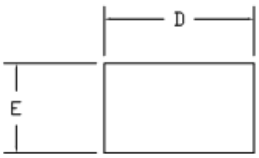
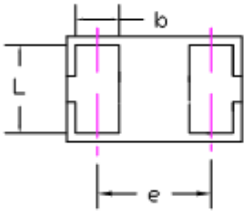


Fig. 3 Power Derating Curve

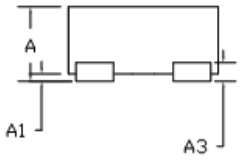
Package Outline Dimensions DFN1006-2L (Dimensions in mm)



TOP VIEW



BOTTOM VIEW

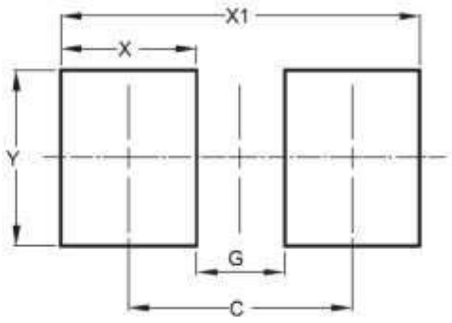


SIDE VIEW

Lead finish: NiPdAu

COMMON DIMENSIONS (MM)			
PKG.	DFN1006-2L		
REF.	MIN.	NOM.	MAX.
A	>0.40	-	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		

DFN1006-2L Suggested Pad Layout



DIMENSIONS	VALUE (MM)
C	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

Packing Information

Package Type	Carrier	Reel Size	Quantity	Marking
DFN1006-2L	Tape & Reel	7"	8,000pcs / Reel	(Date Code) C