

General Description

GPH1311LE is a micropower, ultra sensitive, uni-polar hall effect switch. It is mainly designed for battery-powered, hand held equipment. GPH1311LE includes hall sensor, a small-signal amplifier, dynamic offset cancellation and CMOS output. Superior high-temperature performance is made possible through Dynamic Offset Cancellation, which reduces the residual offset voltage normally caused by device package over molding, temperature dependencies, and thermal stresses. South pole of sufficient strength will turn the output on.

GPH1311LE is available in SOT-553 packages. The operating temperature is -40°C to 150°C .

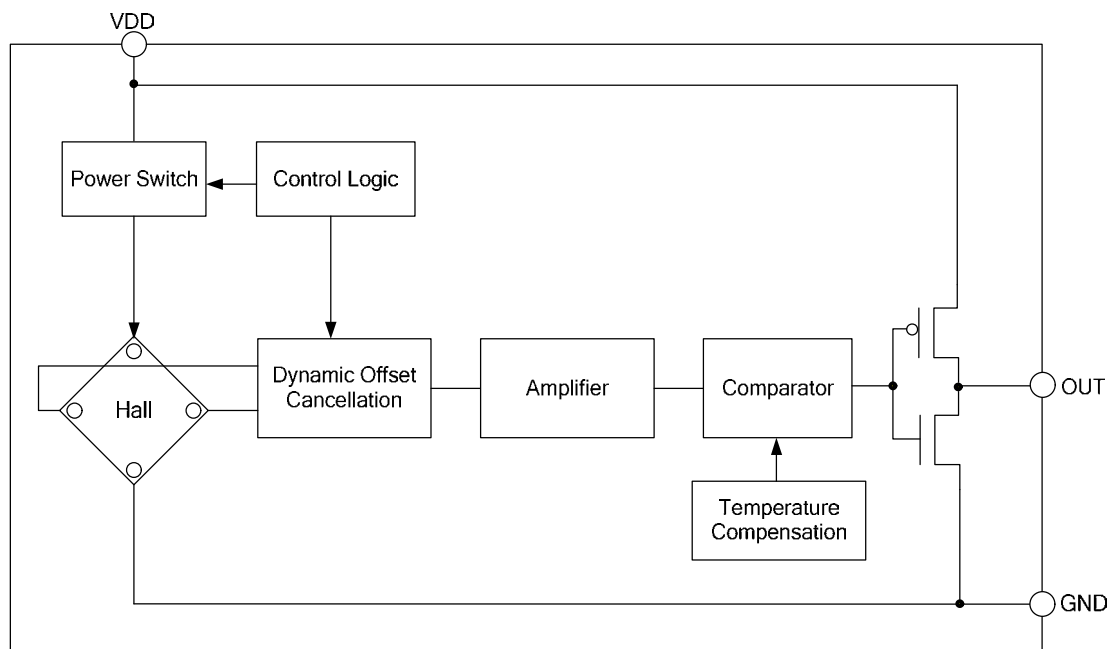
Features

- ◆ Wide operating voltage, 2.1~5V
- ◆ Micro power
- ◆ Operating South pole
- ◆ Superior temperature stability
- ◆ Extremely Low Switch-point Drift
- ◆ ESD (HBM) 6000V
- ◆ Small package size

Application

- ◆ PDA, IPAD
- ◆ Cellular phone

Function Block Diagram

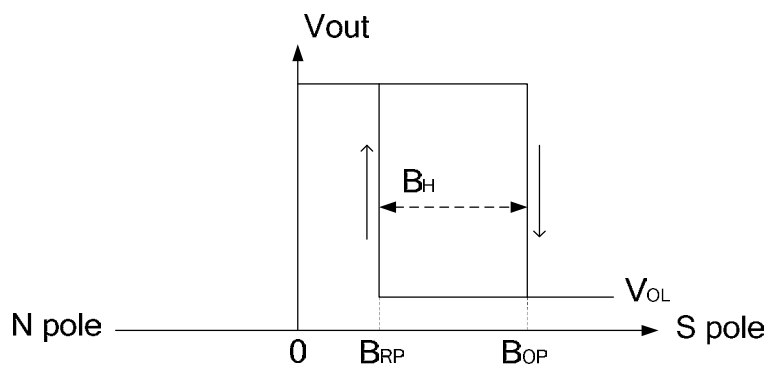


Electrical Characteristics

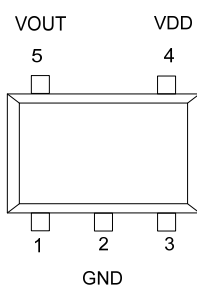
Ordering Information

Part No.	Packing Form	Package Code
GPH1311LE	tape reel, 3000 pcs/reel	SOT-553

Output Voltage VS. Magnetic Pole



PIN Configurations



Pin Name	PIN NO.	FUNCTION
	SOT-553	
V_{DD}	4	Supply voltage
V_{OUT}	5	OUT
GND	2	GND
-	1	NC
-	3	NC

Electrical Characteristics
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Supply Voltage	V_{DD}	-0.3~5.5	V
Magnetic Flux Density	B	unlimited	Gauss
Junction Temperature	T_A	-40~150	°C
Storage Temperature	T_s	-50~160	°C
ESD(HBM)		6000	V

Electrical Parameters ($V_{DD}=5V$ @ 25°C room temperature, unless specified otherwise)

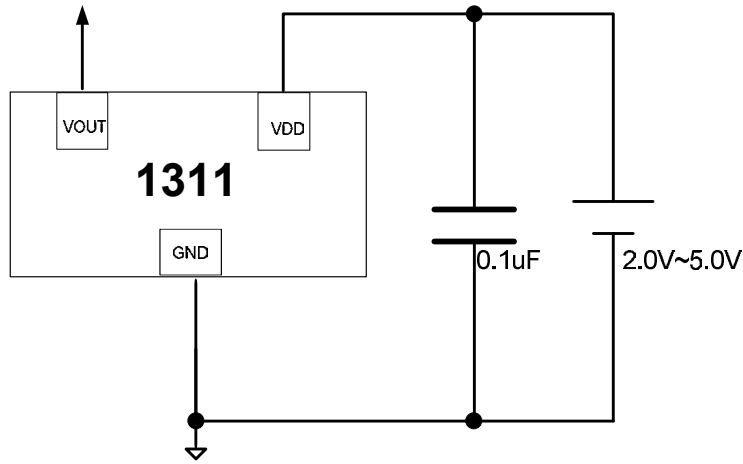
Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Input Voltage	V_{DD}	-	2.1	-	5	V
Output High Voltage	V_{OH}	$I_{OUT}=0.5mA$	$V_{DD}-0.2$	-	-	V
Output Low Voltage	V_{OL}	$I_{OUT}=0.5mA$	-	-	0.2	V
Supply Current	$I_{DD(EN)}$		-	1	2	mA
	$I_{DD(dis)}$		-	3	-	uA
Average Current	$I_{DD(average)}$		-	5	-	uA
Awake Time	T_{awake}		-	50	100	us
Period	T_{period}		-	25	-	ms
Duty Cycle	D.C.		-	0.2%	-	

Magnetic Specifications

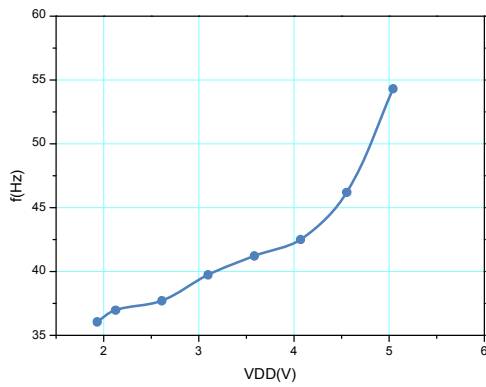
Parameter	Symbol	Min.	Typ.	Max.	Unit
Operate Points	BOPS	15	30	45	G
Release Points	BRPS	5	20	35	G
Hysteresis	BHYS	6	10	14	G

Typical Characteristics

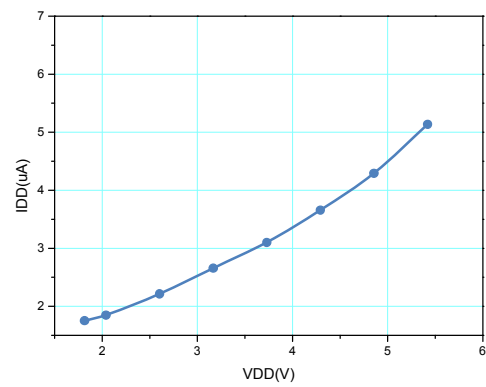
Typical Application Circuit



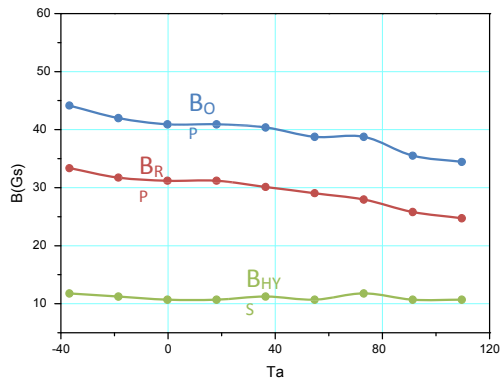
Waveform



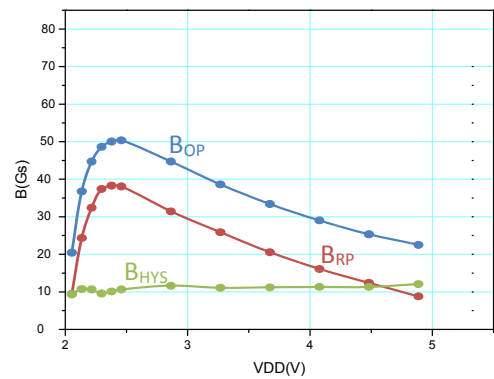
Frequency vs. VDD



Supply current vs. VDD

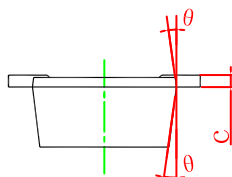
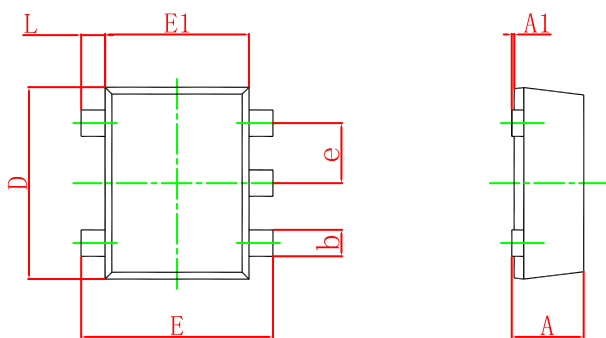


B_{OP}&B_{RP} vs. T_A



B_{OP}&B_{RP} vs. VDD

SOT-553 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
θ	7° REF.		7° REF.	

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)