



# PT3621

## General purpose Hall-effect Switch

### Applications

- VCD/DVD loader, CD/DVD-Rom
- Cover detector
- Speed Measurement
- Home appliances
- Home safety

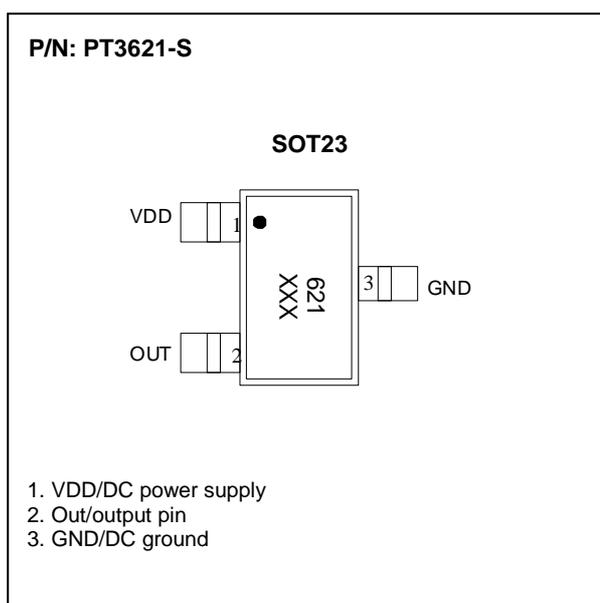
### Features

- 2.5V to 18V operation
- Built-in dynamic offset cancellation
- Small size
- High balance and low thermal drift magnetic sensing

### Order information

- PT3621-S /PKG:SOT23

### Package Type



### Specifications

#### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Conditions	Rating	Units
Maximum supply voltage	V <sub>DDmax</sub>		18	V
Allowable power dissipation	P <sub>d</sub>	SOT23	300	mW
Operating temperature	T <sub>a</sub>		-40~+125	°C
Storage temperature	T <sub>s</sub>		-55~+150	°C
Max. output current	I <sub>OMAX</sub>		25	mA

\*: On 50mm x 50mm x 1.6mm glass epoxy board

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**Electrical Characteristics ( $T_A=+25^{\circ}\text{C}$ ,  $V_{DD}=3\text{V}$ )**

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Units
Supply Voltage	$V_{DD}$		2.5	3	18	V
Output Sink Voltage	$V_{DS(ON)}$	@ $I_{OUT} = 20\text{mA}$		0.3	0.5	V
Output Breakdown Voltage	$V_{BV}$			22	30	V
Supply Current	$I_{DD}$	Output open		3	10	mA

**Magnetic Characteristics ( $T_A=+25^{\circ}\text{C}$ ,  $V_{DD}=12\text{V}$ )**

Operate Point	$B_{OP}$		-	150	180	G
Release Point	$B_{RP}$		100		-	G
Hysteresis	$B_{HYS}$			25	40	G

**General Specifications**

The PT3621 is designed for magnetic actuating using a unipolar magnetic field. The built-in dynamic offset cancellation of pre-amplifier stage achieves optimal symmetrical magnetic sensing. The supply voltage range is from 2.5V to 18V and the maximum output current is 25mA.

This Hall effect sensor IC integrate the sensor, pre-amplifier with dynamic offset cancellation and the hysteresis comparator in single chip. The architecture block diagram is shown in Fig. 1.

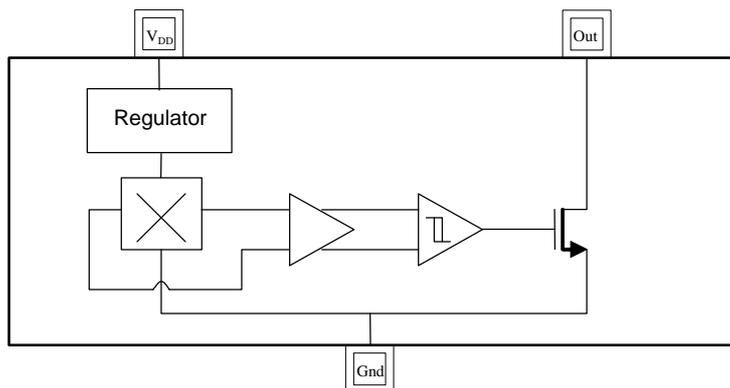
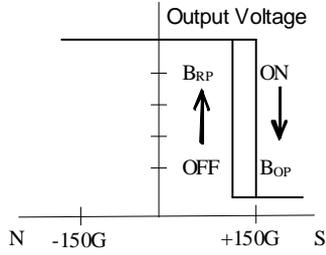
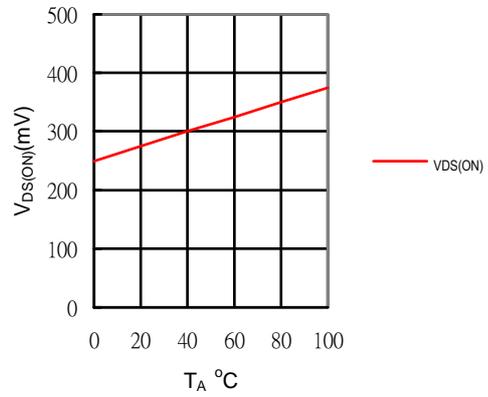
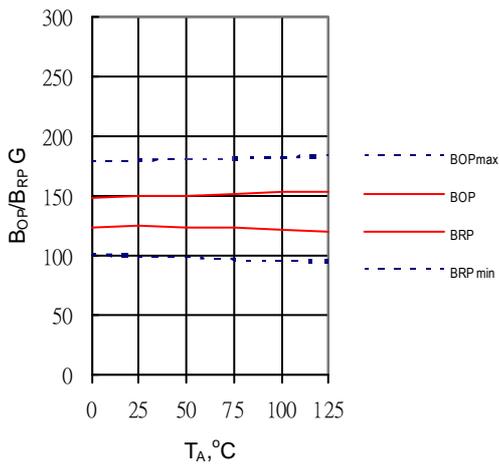
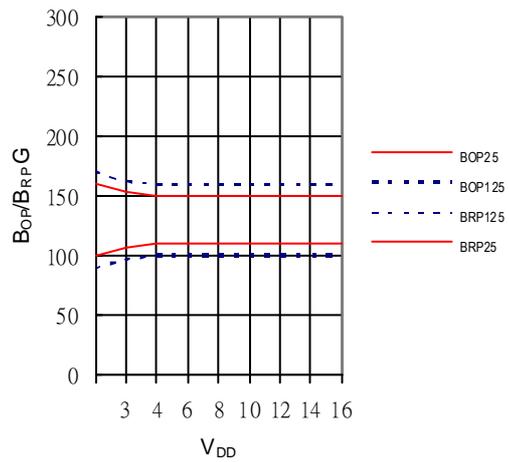


Fig. 1. Functional diagram

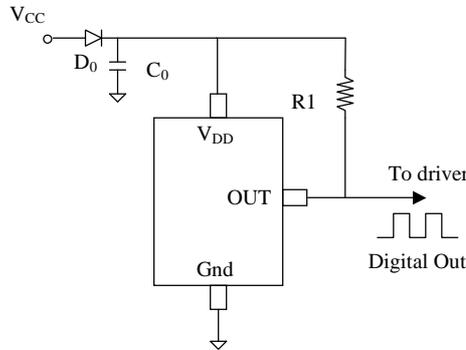
Magnetic Flux Density in Gauss



Output sink voltage versus temperature


 B<sub>OP</sub>, B<sub>RP</sub> versus temperature

 B<sub>OP</sub>, B<sub>RP</sub> versus supply voltage


### Application circuits



NOTE :

D0: general diode

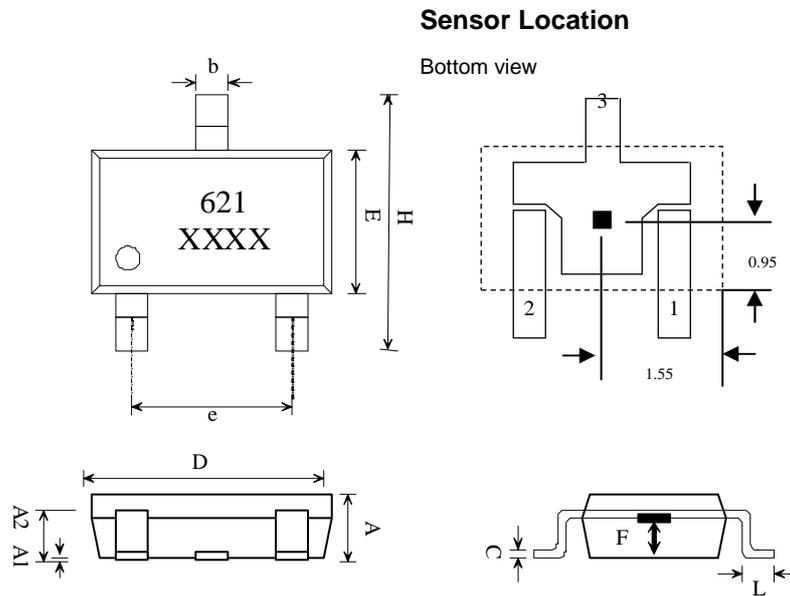
C0: decoupling capacitor 1uF(recommended)

R1: 1K~10Kohm (recommended)

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**Package Outline**



SYMBOLS	DIMENSIONS IN MILLIMETERS(mm)		
	MIN	NOM	MAX
A	1.00	1.10	1.30
A1	0.00	-	0.10
A2	0.70	0.80	0.90
b	0.35	0.40	0.50
C	0.10	0.15	0.25
D	2.70	2.90	3.10
E	1.40	1.80	2.00
F	0.35	0.50	0.65
H	2.60	2.8	3.00
e	1.7	1.9	2.1
L	0.20	-	-