



PT3602A

General purpose Hall-effect Latch

Applications

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

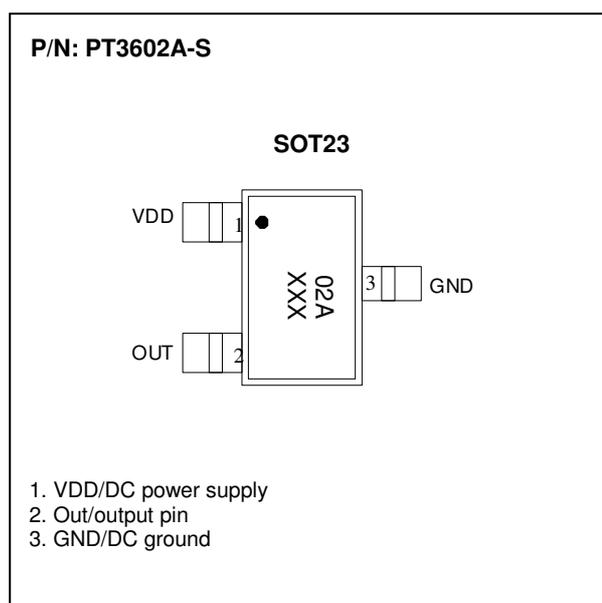
Features

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

Order information

- PT3602A-S /PKG:SOT23

Package Type



Specifications

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Conditions	Rating	Units
Maximum supply voltage	V _{DDmax}		18	V
Allowable power dissipation	P _d	SOT23	300	mW
Operating temperature	T _a		-40~+125	°C
Storage temperature	T _s		-50~+150	°C
Max. output current	I _{OMAX}		25	mA

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

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Electrical Characteristics (T_A=+25°C, V_{DD}=12V)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Units
Supply Voltage	V _{DD}		2.5		18	V
Output Sink Voltage	V _{DS(ON)}	@ I _{OUT} =15mA		0.3	0.5	V
Output Breakdown Voltage	V _{BV}		18			V
Supply Current	I _{DD}	Output open		6	8	mA
Internal Pull-up resistor	R _L		6		14	KΩ

Magnetic Characteristics (T_A=+25°C, V_{DD}=12V)

Operate Point	B _{OP}		-	15	35	G
Release Point	B _{RP}		-35	-15	-	G
Hysteresis	B _{HYS}		20	30	60	G

General Specifications

The PT3602A is designed for magnetic actuating using a bipolar magnetic field. The built-in dynamic offset cancellation of pre-amplifier stage achieves optimal symmetrical magnetic sensing. This Hall effect IC is optimal for DC brushless fan application . 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.

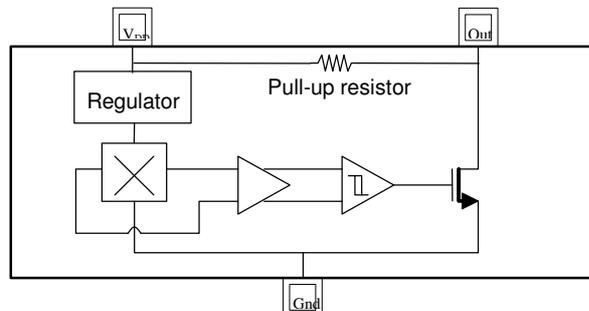
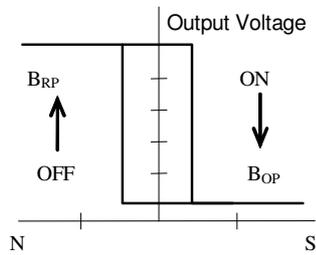
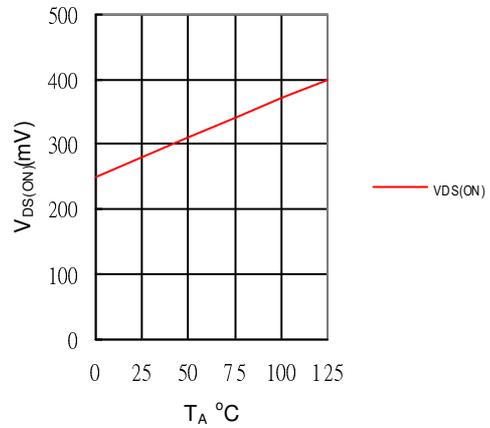


Fig. 1. Functional

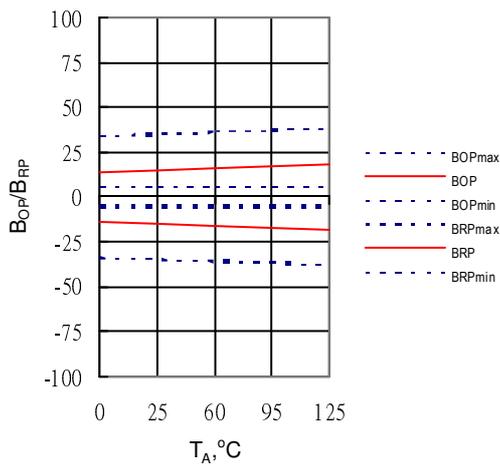
Magnetic Flux Density in Gauss



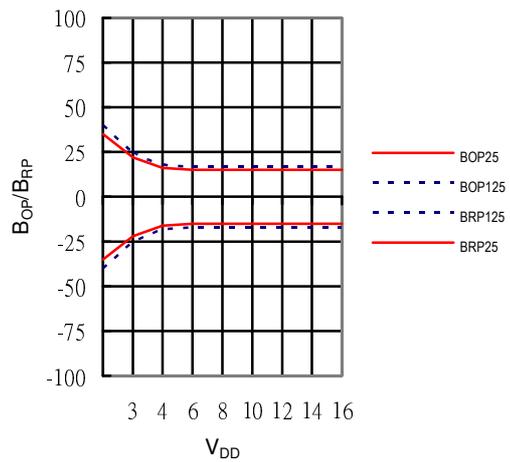
Output sink voltage versus temperature



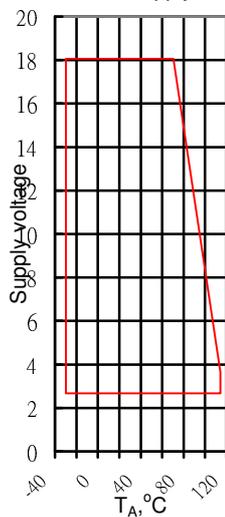
B_{OP}, B_{RP} versus temperature



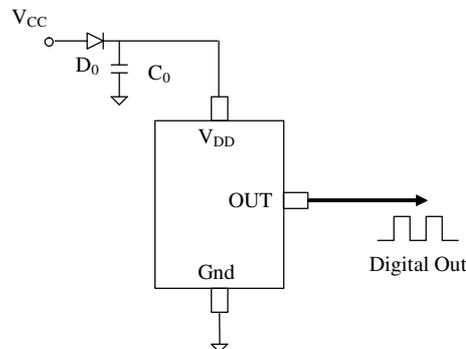
B_{OP}, B_{RP} versus supply voltage



Supply voltage vs T_A C



Application circuits



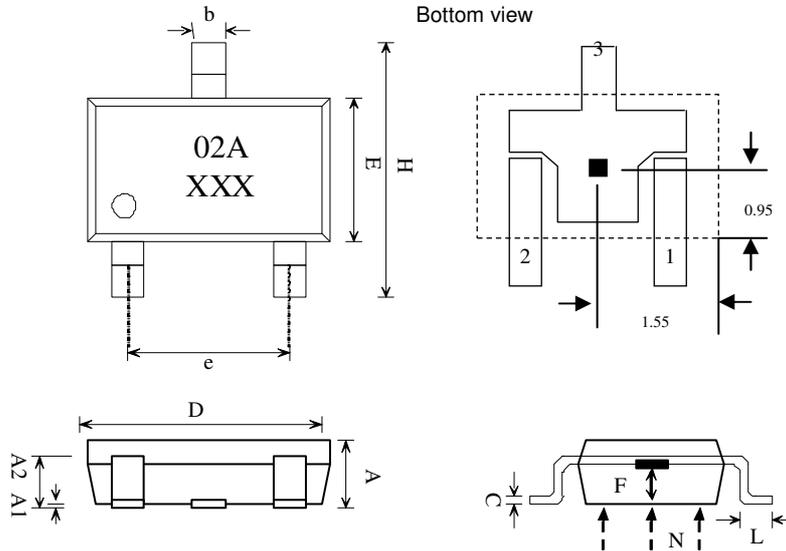
NOTE :

D0: general diode

C0: decoupling capacitor 1uF (recommended)

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Package Outline
Sensor Location


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	-	-