PT3602B
General purpose Hall-effect Latch

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

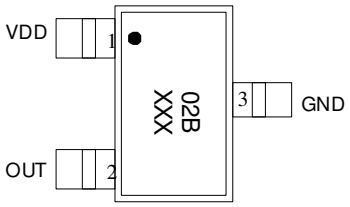
Features
- 2.5V to 18V operation
- Built-in dynamic offset cancellation
- Small size
- High balance and low thermal drift magnetic sensing
- Output with pull-up resistor

Order information
- PT3602B-S /PKG:SOT23

Package Type

P/N: PT3602A-S

SOT23



1. VDD/DC power supply
2. Out/output pin
3. GND/DC ground

Specifications

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Conditions	Rating	Units
Maximum supply voltage	V_{DD}max		18	V
Allowable power dissipation	Pd	SOT23	300	mW
Operating temperature	Ta		-40~+125	℃
Storage temperature	Ts		-50~+150	℃
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}		-	30	60	G
Release Point	B_{RP}		-60	-30	-	G
Hysteresis	B_{HYS}		20	60	100	G

General Specifications

The PT3602B 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.

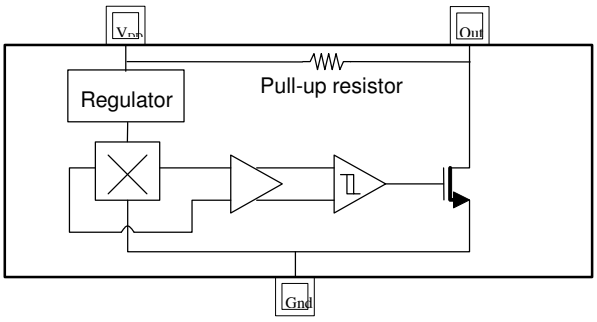
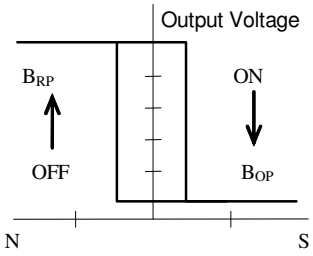
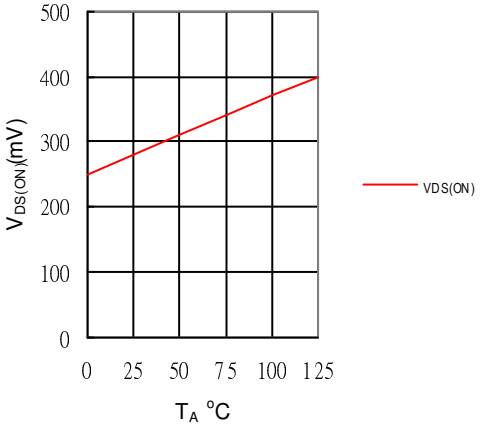


Fig. 1. Functional

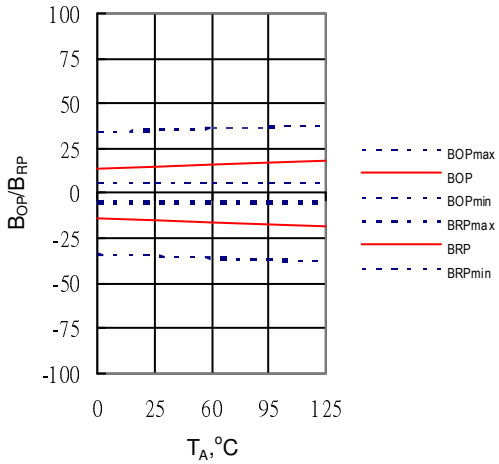
Magnetic Flux Density in Gauss



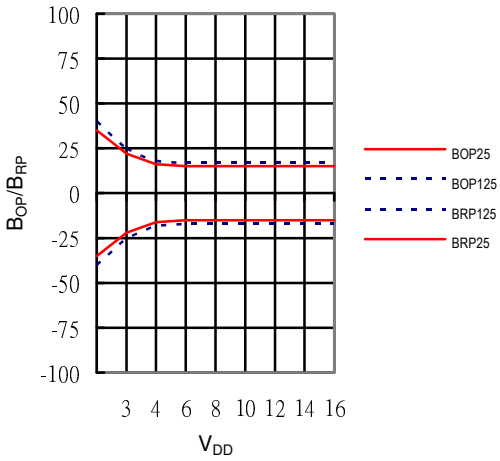
Output sink voltage versus temperature



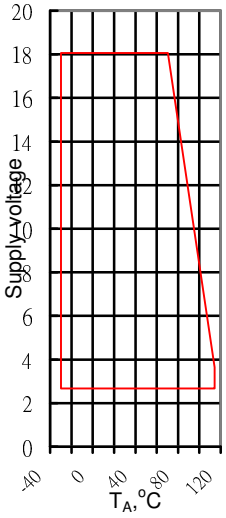
BOP, BRP versus temperature



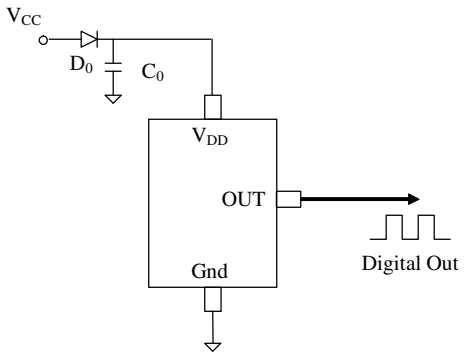
BOP, BRP versus supply voltage



Supply voltage vs T_A C



Application circuits

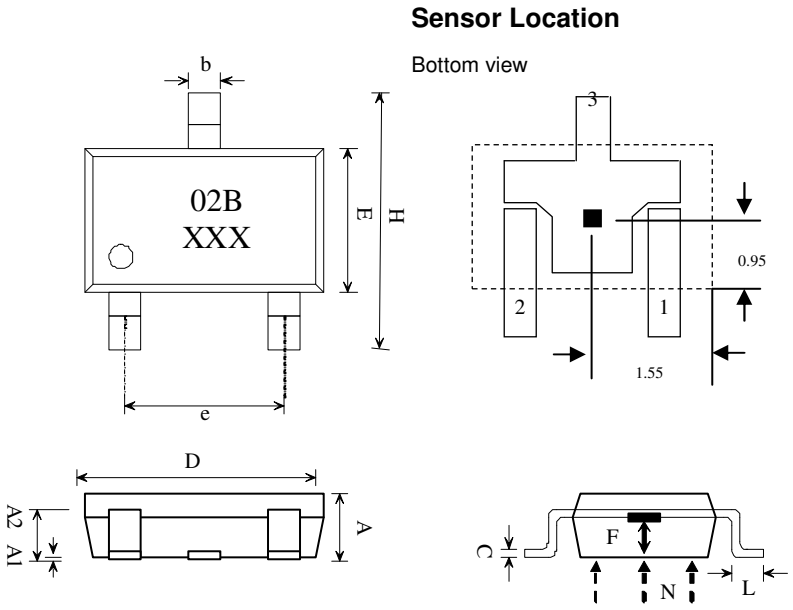


NOTE :

D0: general diode

C0: decoupling capacitor 1uF (recommended)

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	-	-