



PT3602

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

- PT3602-LH /PKG:SOT23
- PT3602-UA /PKG:TO92

Package Type



Specifications

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Conditions	Rating	Units
Maximum supply voltage	V_{DDmax}		18	V
Allowable power dissipation	Pd	SOT23	300*	mW
		TO92	550*	mW
Operating temperature	Ta	Suffix 'K'	-40~+125	°C
Storage temperature	Ts		-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}		-	30	60	G
Release Point	B _{RP}		-60	-30	-	G
Hysteresis	B _{HYS}		20	60	100	G

General Specifications

The PT3602 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.

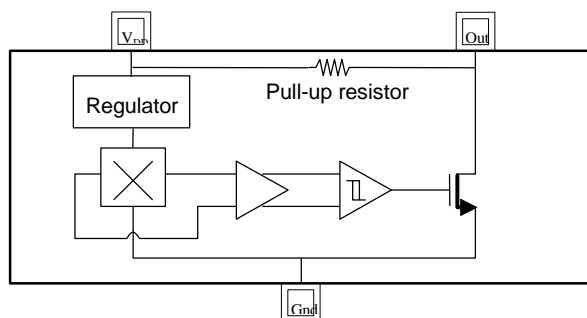
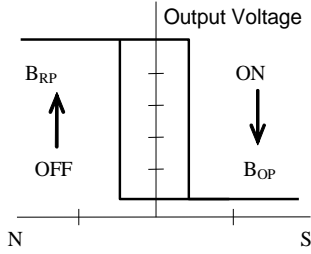
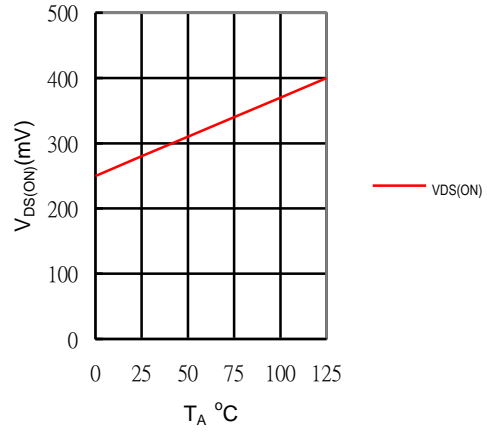
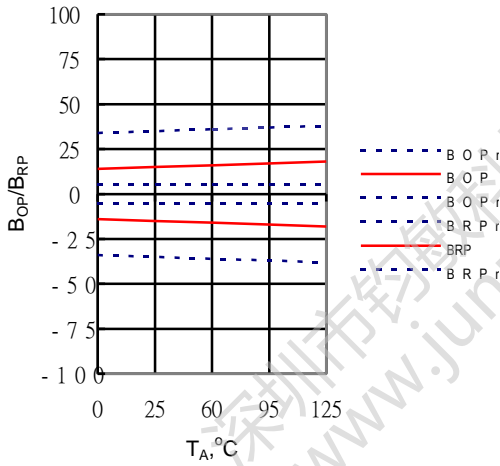
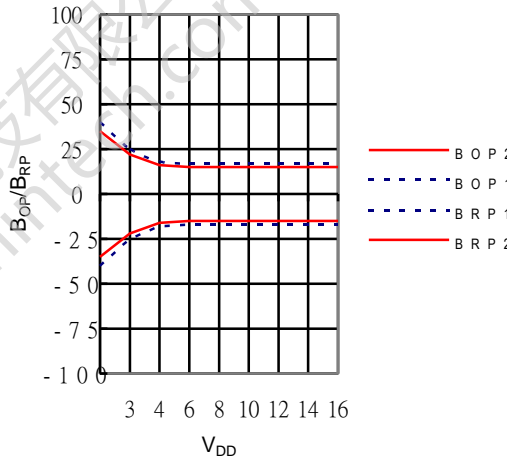
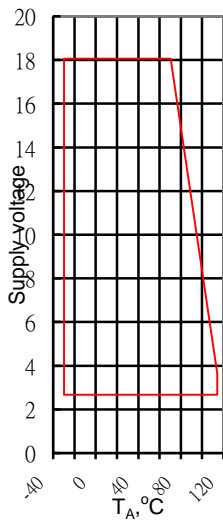


Fig. 1. Functional

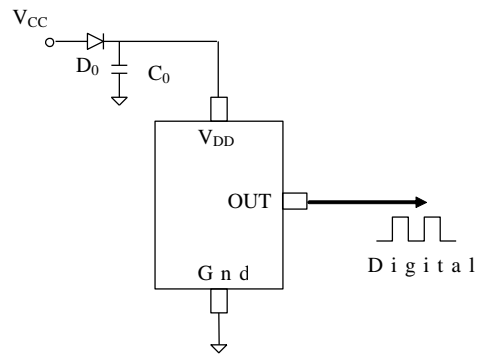
Magnetic Flux Density in Gauss



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



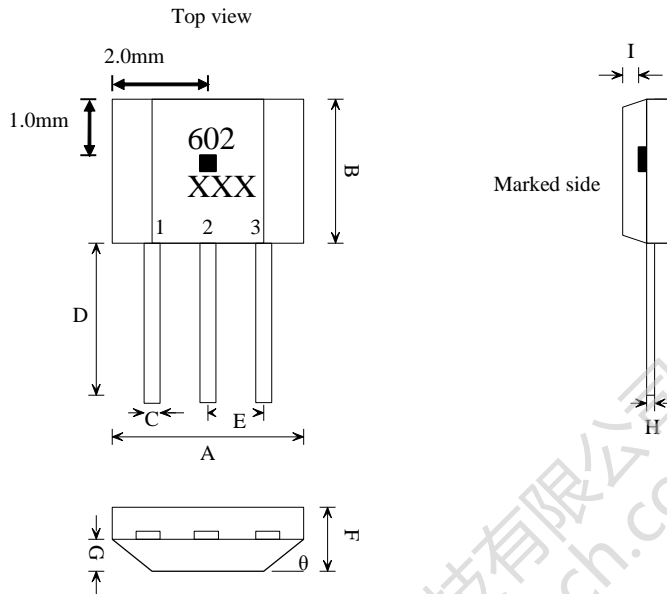
NOTE :

D0: general diode

C0: decoupling capacitor 1uF (recommended)

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**Package Outline
TO-92(UL)**



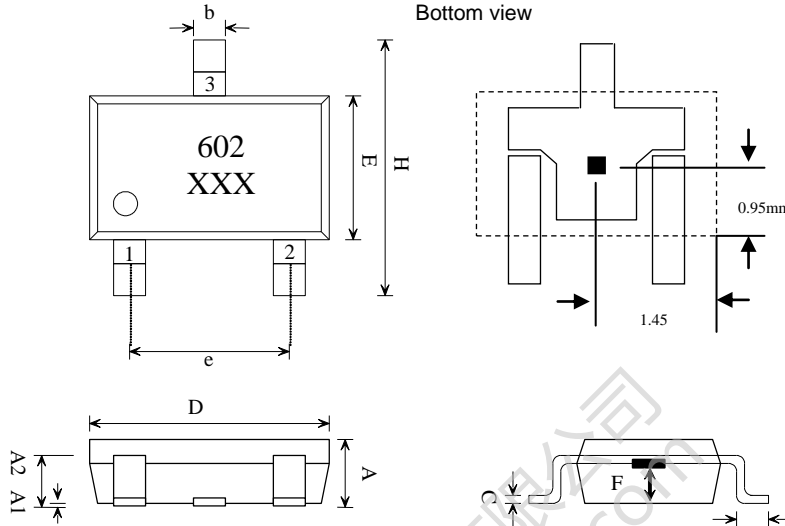
Marking:
 Part Number : 602
 Date Code : X(Year) XX(Week)

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

SYMBOLS	DIMENSIONS IN MILLIMETERS(mm)		
	MIN	NOM	MAX
A	3.80	4.00	4.20
B	2.80	3.00	3.20
C	0.33	0.40	0.47
D	18.20	18.70	19.20
E	1.24	1.27	1.30
F	1.45	1.50	1.55
G	0.68	0.73	0.78
H	0.36	0.43	0.50
I	0.33	0.40	0.47
θ		45°	

Package Outline
SOT-23(LH)

Sensor Location



Marking:
Part Number : 602
Date Code : X(Year) XX(Week)

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

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	-	-

Order information

Part Number	Temperature Range	Package Type	Package Qty
PT3602UAK	-40°C~+125°C	TO92-3L	1000pcs/Bulk
PT3602LHK	-40°C~+125°C	SOT23-3L	3000pcs/Reel

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