



PT3651

General purpose Hall-effect Latch

Applications

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

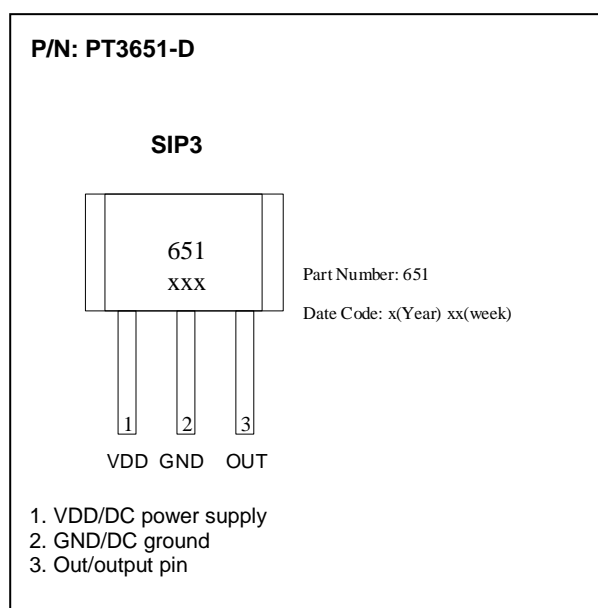
Features

- 2.5V to 18V operation
- Built-in dynamic offset cancellation
- Small size
- High balance and low thermal drift magnetic sensing
- ESD protected to 8KV

Order information

- PT3651-D /PKG:SIP3

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	SIP3	550	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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PROLIFIC TECHNOLOGY INC.

7F, No.48,Sec.3, Nan Kang Rd., Nan Kang, Taipei, 115, Taiwan.

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

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

Operate Point	B _{OP}		100	150	200	G
Release Point	B _{RP}		-200	-150	-100	G
Hysteresis	B _{HYS}		200	300	400	G

General Specifications

The PT3651 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.

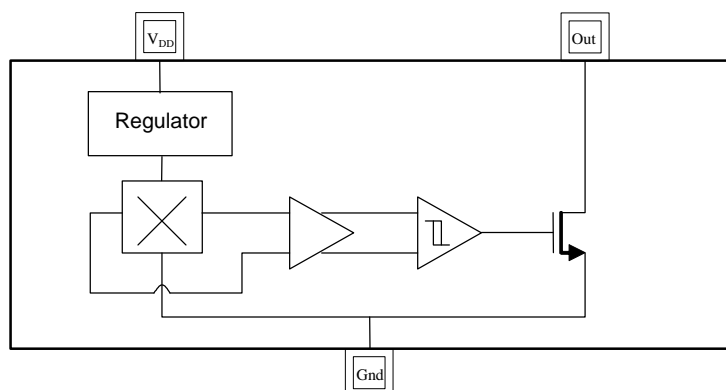
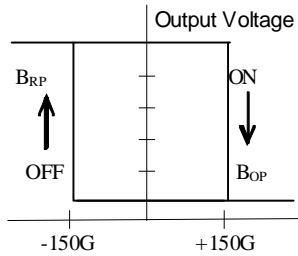
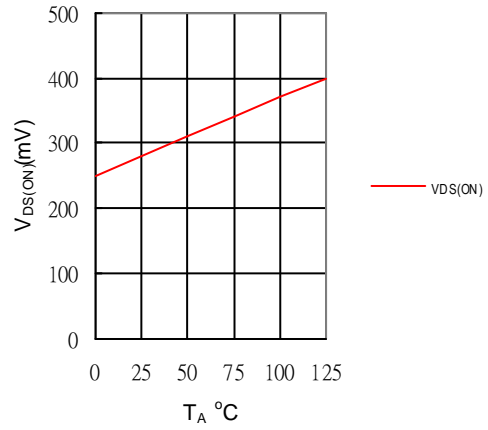
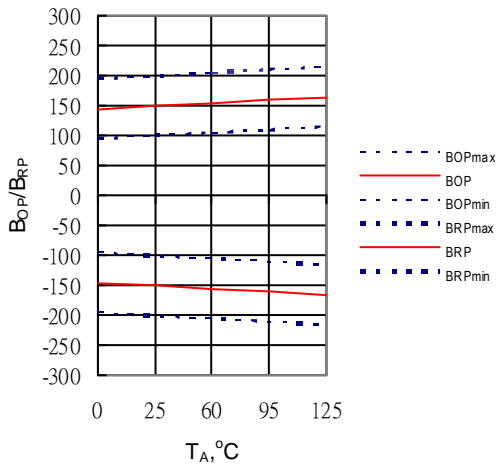
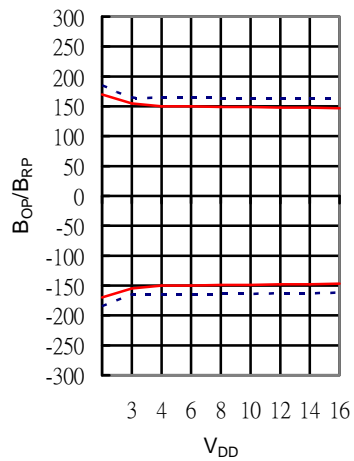


Fig. 1. Functional diagram

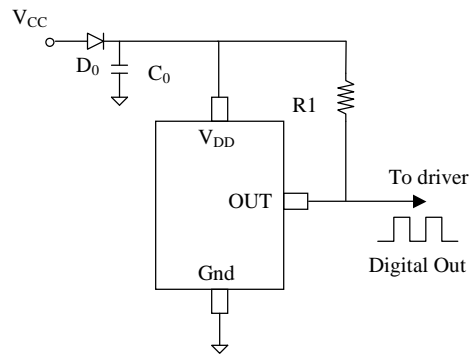
Magnetic Flux Density in



Output sink voltage versus temperature


 B_{OP} , B_{RP} versus temperature

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


Application circuits



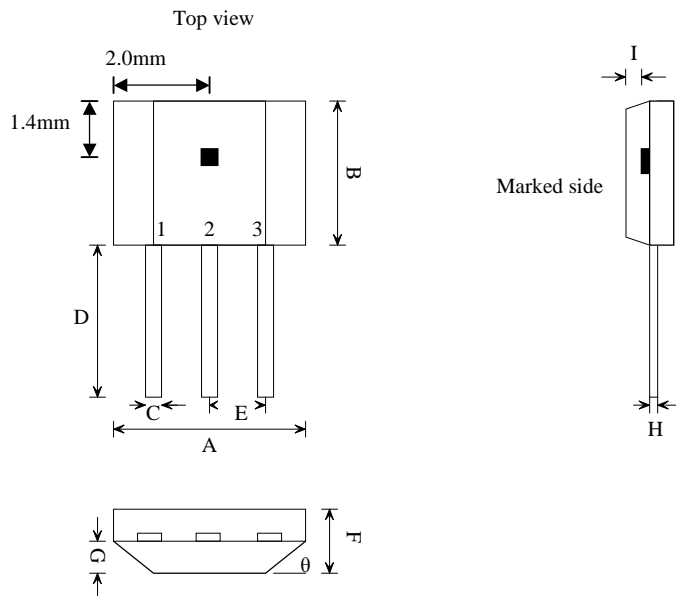
NOTE :

D0: general diode

C0: decoupling capacitor 1uF(recommended)

R1: 1K~10Kohm (recommended)

Package Outline



SYMBOLS	DIMENSIONS IN MILLIMETERS(mm)		
	MIN	NOM	MAX
A	3.80	4.00	4.20
B	2.90	3.10	3.30
C	0.38	0.45	0.52
D	19.80	20.00	20.20
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	0.41	0.43	0.45
θ		45°	

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