



PT3621A

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

- PT3621A-LH /PKG:SOT23
- PT3621A-UA /PKG:TO92
- Temperature(T): K

Specifications

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Conditions	Rating	Units
Maximum supply voltage	V _{DDmax}		18	V
Allowable power dissipation	P _D	TO-92(UA)	550 ^{*1}	mW
		SOT-23(LH)	300 ^{*1}	mW
Operating temperature	T _a	Suffix 'K'	-40~+125	°C
Storage temperature	T _s		-55~+150	°C
Maximum Junction temperature	T _{jmax}		150	°C
Max. output current	I _{OMAX}		25	mA

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

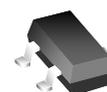
Package Type

P/N: PT3621A-XX-X

TO92-3L (UA)



SOT23-3L (LH)



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PROLIFIC TECHNOLOGY INC.

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

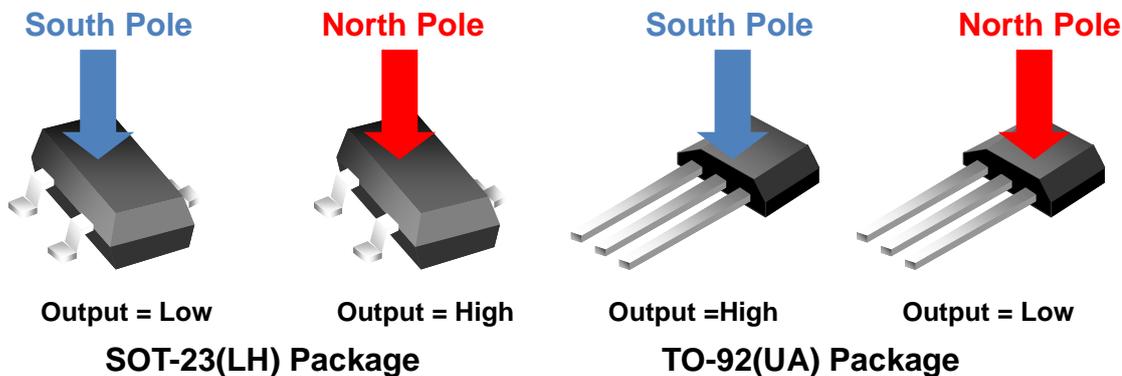
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Units
Supply Voltage	V _{DD}		2.5		18	V
Supply Voltage	V _{DD}	R _{DD} ≥ 200Ω	2.5		26	V
Supply current through protection device	I _{DD}	R _{DD} ≥ 200Ω			50	mA
Output Sink Voltage	V _{DS(ON)}	@ I _{OUT} =20mA		0.3	0.5	V
Output Breakdown Voltage	V _{BV}			22	30	V
Supply Current	I _{DD}	Output open		6	10	mA

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

Operate Point	B _{OP}		90	105	120	G
Release Point	B _{RP}		55	85	110	G
Hysteresis	B _{HYS}		10	20	35	G

Output Behavior versus Polarity (T_A=-40°C~125°C, V_{DD}=2.5V~18V)

Parameters	Test Conditions(LH)	Output(LH)	Test Conditions(UA)	Output(UA)
South pole	B>Bop	Low	B<Brp	High
North pole	B<Brp	High	B>Bop	Low



General Specifications

The PT3621A 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.

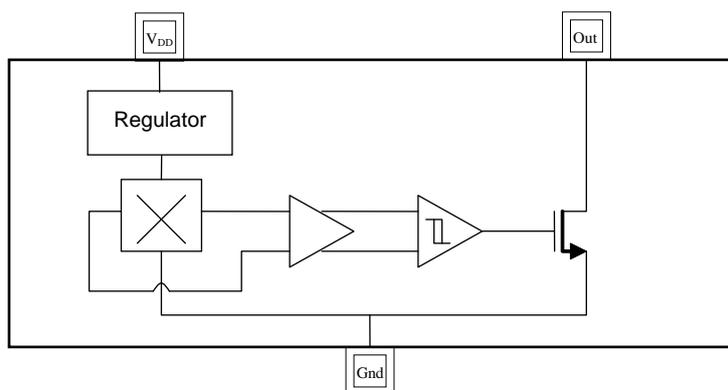
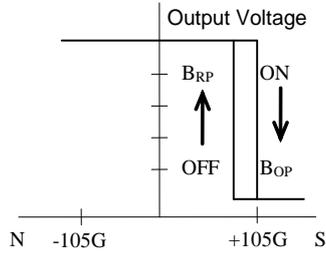
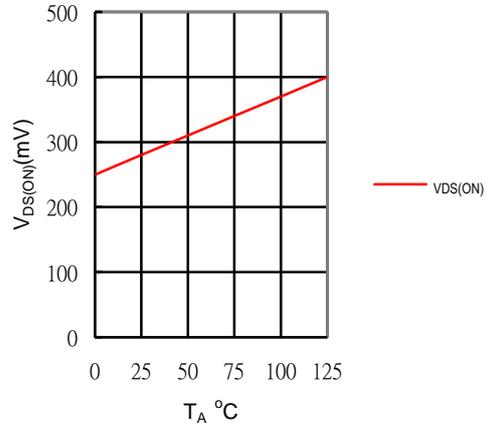


Fig. 1. Functional diagram

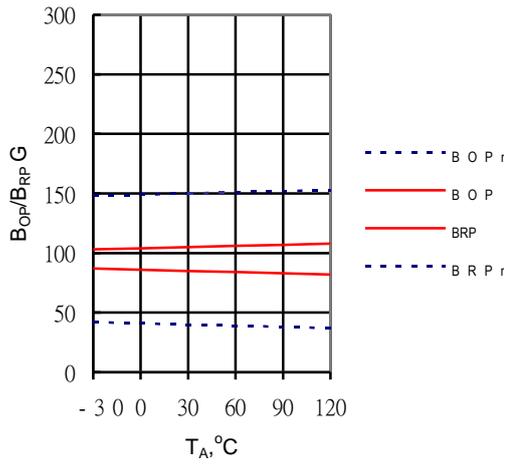
Magnetic Flux Density in Gauss



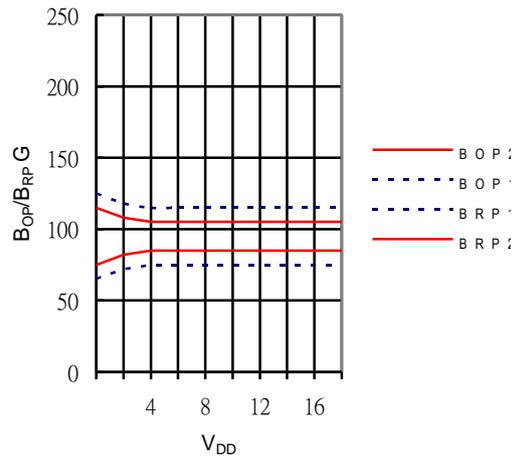
Output sink voltage versus temperature



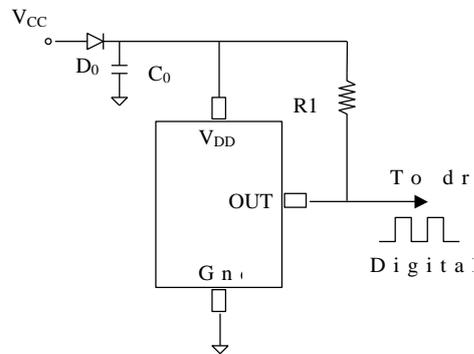
B_{OP}, B_{RP} versus temperature



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



Application circuits



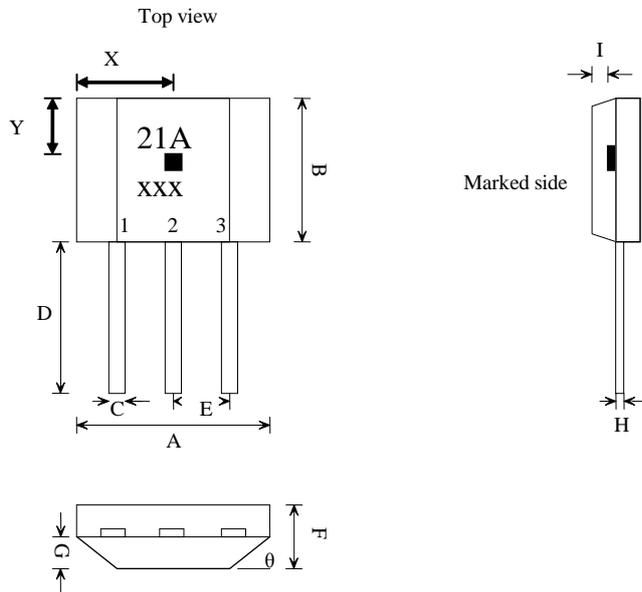
NOTE :

D0: general diode

C0: decoupling capacitor 1uF(recommended)

R1: 1K~10Kohm (recommended)

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



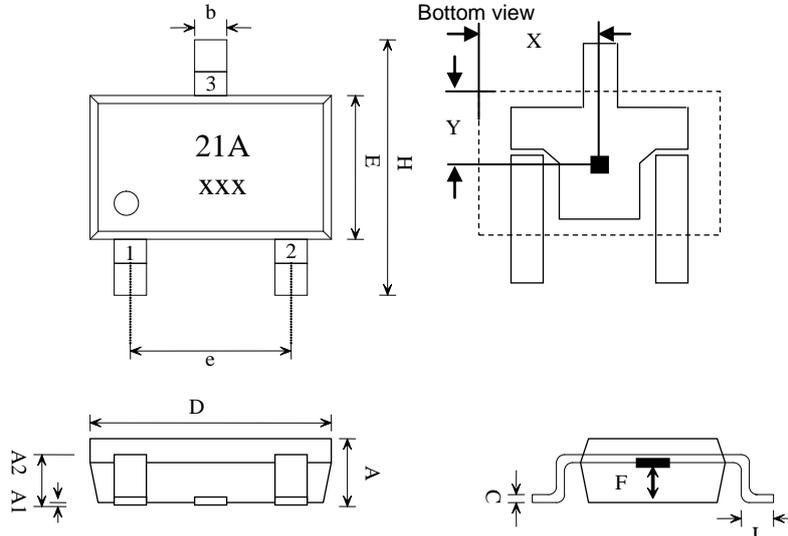
Marking:
Part Number : 21A
Date Code : x(Year) xx(Week)

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	2.90	3.10	3.30
C	0.38	0.45	0.52
D	15.10	15.30	15.50
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°	
Sensor Location			
X	1.85	2.0	2.15
Y	0.85	1.0	1.15

Package Outline
SOT-23(LH)

Sensor Location



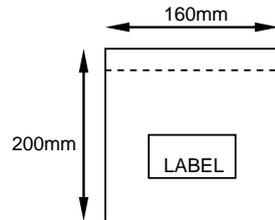
Marking:
Part Number : 21A
Date Code : x(Year) xx(Week)

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

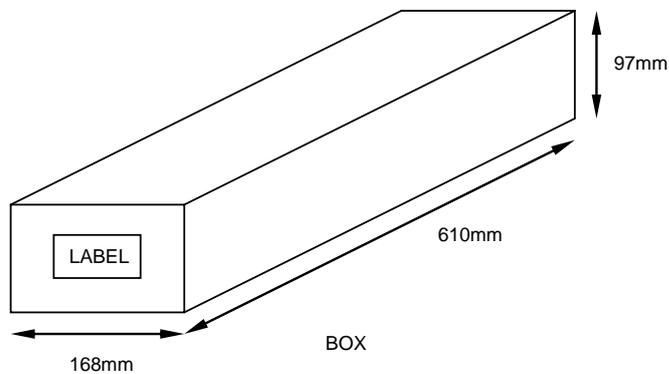
SYMBOLS	DIMENSIONS IN MILLIMETERS(mm)		
	MIN	NOM	MAX
A	1.00	1.10	1.30
A1	0.00	-	0.10
A2	0.70	0.80	0.90
b	0.35	0.40	0.50
C	0.10	0.15	0.25
D	2.70	2.90	3.10
E	1.40	1.80	2.00
F	0.35	0.50	0.65
H	2.60	2.8	3.00
e	1.7	1.9	2.1
L	0.20	-	-
Sensor Location			
X	1.3	1.45	1.6
Y	0.7	0.85	1.0

TO-92(UA) packing specification

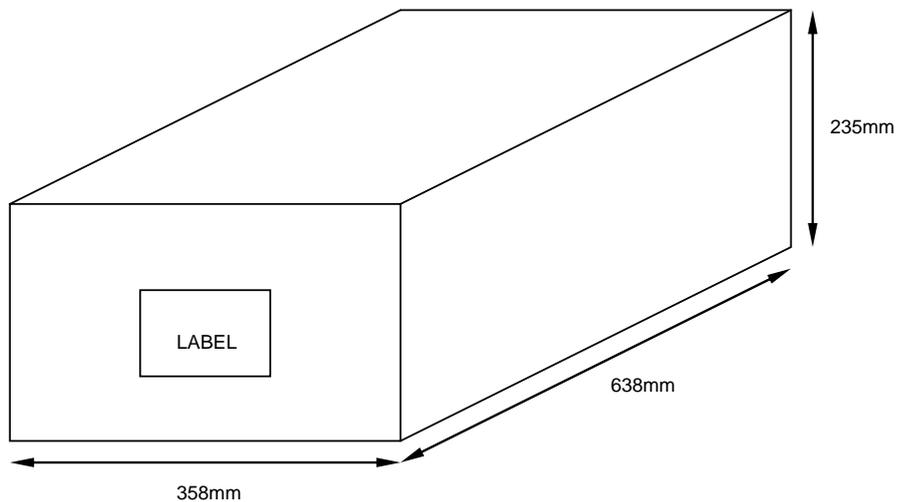
1. Reference document: PD-3-75-010
2. Dimension:



BAG



BOX



CARTON

3. Quantity:

1BAG=1000EA

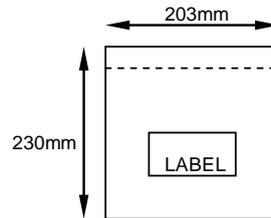
1BOX=20BAGS

1CARTON=4BOXES

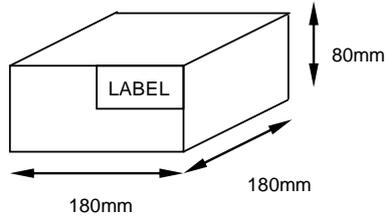
SOT-23(LH) packing specification

1. Reference document: PD-3-75-010

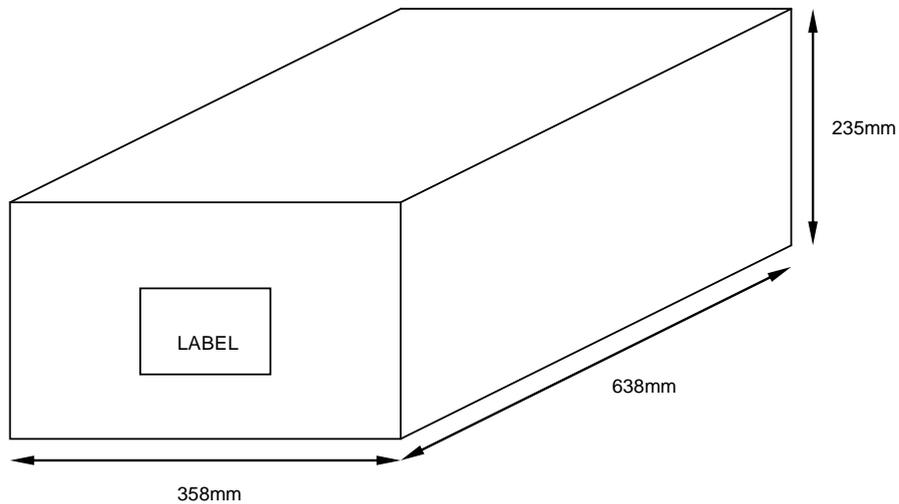
2. Dimension:



BAG



BOX



CARTON

3. Quantity:

1REEL=3000EA

1BOX=5 REELS

1CARTON=14BOXES

Order information

Part Number	Temperature Range	Package Type	Package Qty
PT3621A-UAK	-40°C~+125°C	TO92-3L	1000pcs/Bulk
PT3621A-LHK	-40°C~+125°C	SOT23-3L	3000pcs/Reel

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