



PT3601A

霍尔效应传感器集成电路

应用

- 直流无刷电机
- 转速侦测
- 位置传感器

特色

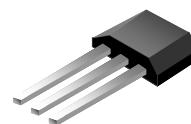
- 较大的电压范围 (2.5~24V)
- 内建动态补偿
- 较小的体积
- 温度补偿机制
- 磁场灵敏度补偿机制

订购信息

- PT3601A-PA
包装代码(PA):UA or LH

代號: PT3601A-XX

TO92-3L (UA)



SOT23-3L (LH)



特征参数

绝对最大指标 (Ta=25°C)

参数	符号	条件	参数	单位
最大供电电压	V_{DDmax}		24**	伏特
最大耗散功率	P_D	TO-92(UA)	550*	毫瓦
		SOT-23(LH)	300*	毫瓦
操作温度	T_a		-40~+125	°C
存放温度	T_s		-50~+150	°C
最大输出电流	I_{OMAX}		25	毫安

*: 玻璃测试基板 : 50mm x 50mm x 1.6mm

** : 24V 应用需串接电阻

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电气特征参数 (T_A=+25°C, V_{DD}=12V)

参数	符号	条件	最小	标准	最大	单位
供电电压	V _{DD}		2.5		24*	伏特
饱和电压	V _{DS(ON)}	@ I _{OUT} =15mA		0.3	0.5	伏特
崩溃电压	V _{BV}		18			伏特
供电电流	I _{DD}	Output open		6	8	毫安

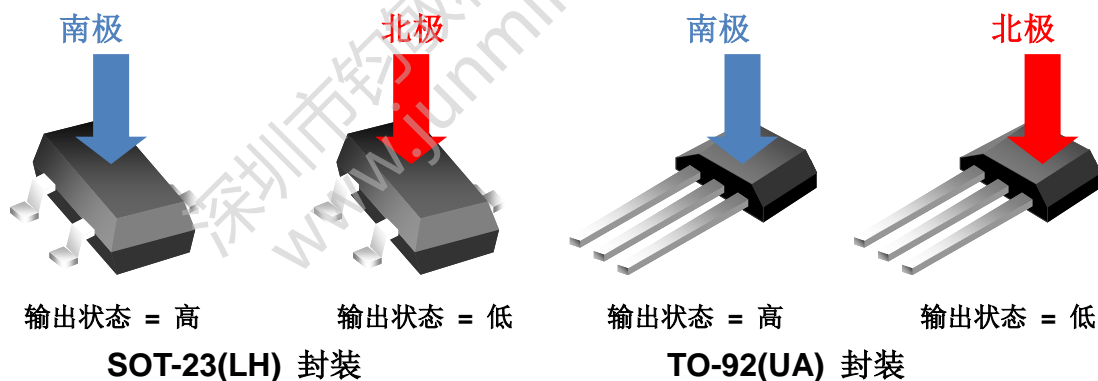
磁特性参数 (T_A=+25°C, V_{DD}=12V)

操作点	B _{OP}		-	15	35	高斯
释放点	B _{RP}		-35	-15	-	高斯
回差	B _{HYS}		20	30	60	高斯

* 24V 应用需串接电阻

输出特性与外加磁场关系 (T_A=-40°C~125°C, V_{DD}=2.5V~18V)

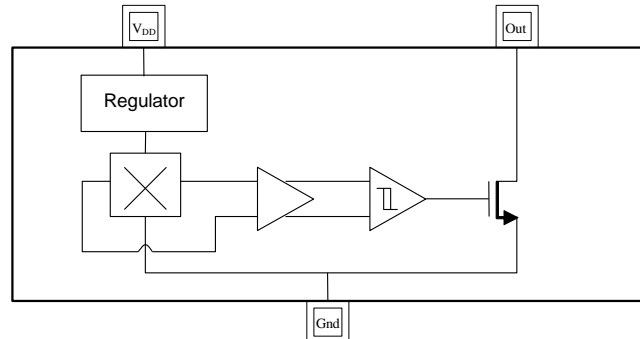
参数	条件 (LH)	输出状态(LH)	条件(UA)	输出状态(UA)
南极	磁场 < B _{rp}	高	磁场 > B _{op}	低
北极	磁场 > B _{op}	低	磁场 < B _{rp}	高



描述

PT3601A 是双极性霍尔效应传感器集成电路.在前端放大器内建了动态偏差取消功能.来达到理想的磁特性集中度.并且设计了温度补偿机制,确保 PT3601A 能在较高的工作温度下使用,并保持于室温的特性.适合客户应用于直流无刷电机,或用于转速流量侦测等.PT3601A 供电电压的范围为 2.5V~24V.应用于 24V 时须外部串接电阻.最大的输出电流为 25 毫安

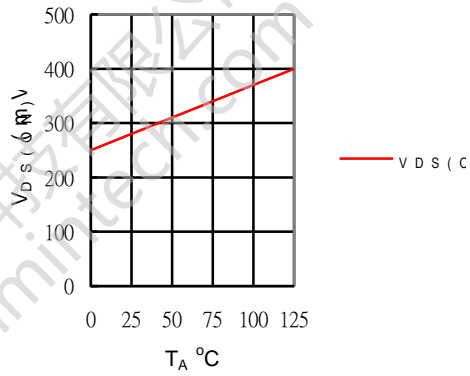
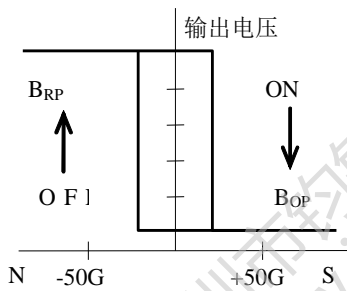
此霍尔效应传感器集成电路包含了霍尔芯片,前端放大器,回差比较器於单一芯片上. 集成电路架构如图一.



图一：功能结构图

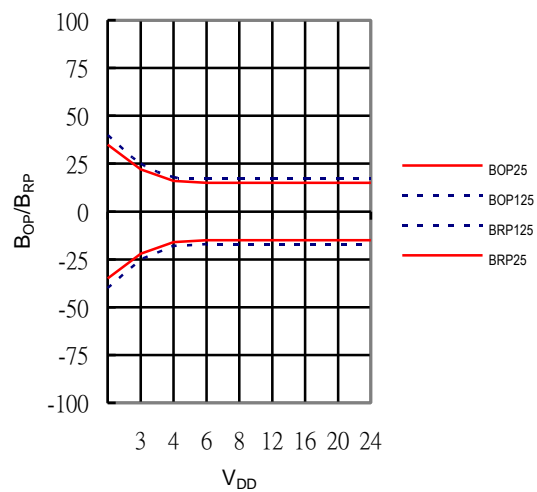
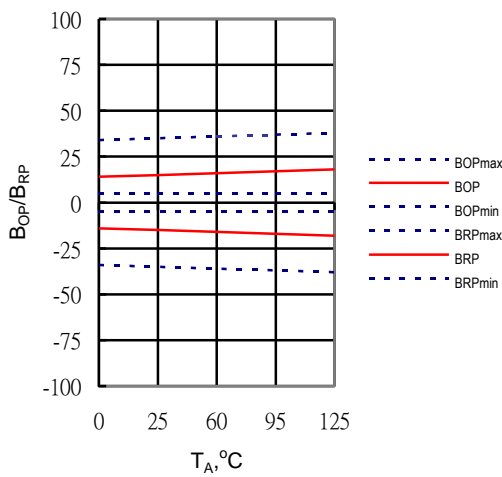
飽和電壓與溫度關係

外加磁場與輸出特性

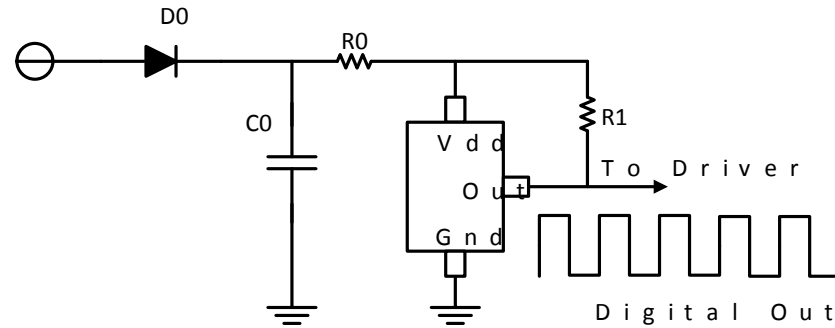


磁特性與電壓關係

磁特性與溫度關係



12V/24V 应用电路



註記：

D0: 一般二極管

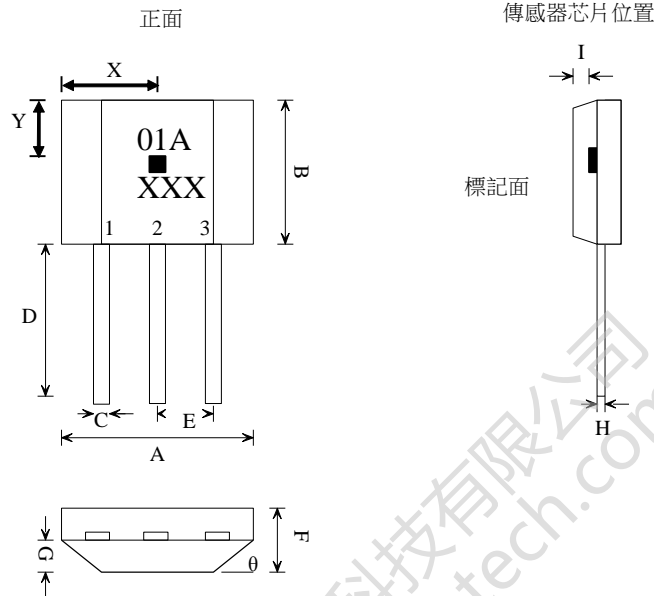
C0: 解耦電容 1uF(建議)

R0: 1K ohm, 1/2W (24V), 0 ohm (5V/12V)

R1: 10Kohm (建議)

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封装外观
TO-92(UA)



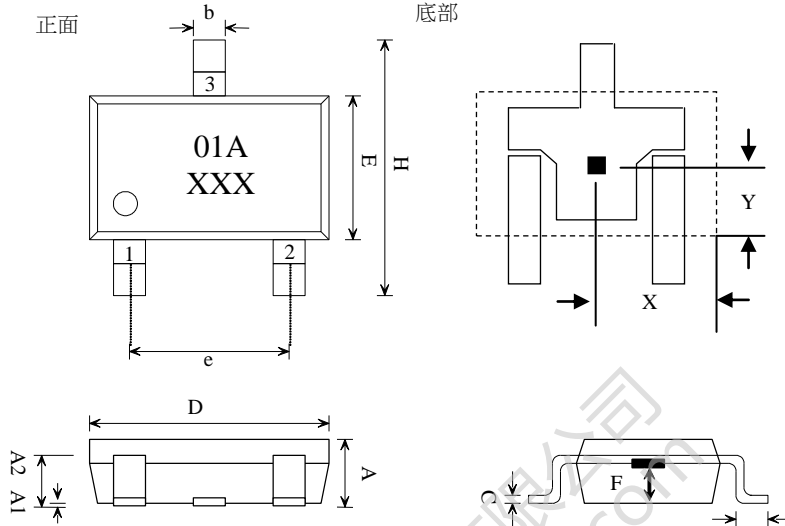
标记:
 产品代号 : 01A
 日期编码 : X(年) XX(周)

1. VDD/电源
 2. GND/接地
 3. OUT/输出

符号	尺寸(毫米)		
	最小	标准	最大
A	3.80	4.00	4.20
B	2.90	3.10	3.30
C	0.38	0.45	0.52
D	14.40	14.60	14.80
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°	
传感器芯片位置			
X	1.90	2.00	2.10
Y	0.90	1.00	1.10

封装外观
SOT-23(LH)

传感器芯片位置



标记:

产品代号 : 01A

日期编码 : X(年) XX(周)

1. VDD/电源

2. GND/接地

3. OUT/输出

符号	尺寸(毫米)		
	最小	标准	最小
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
H	2.60	2.8	3.00
e	1.7	1.9	2.1
L	0.20	-	-
传感器芯片位置			
X	1.35	1.45	1.55
Y	0.85	0.95	1.05
F	0.35	0.50	0.65

訂購資訊

产品代码	操作温度范围	产品封装	包装
PT3601D1OAG7P1	-40°C~+125°C	TO92-3L	袋装
PT-3601A LF	-40°C~+125°C	SOT23-3L	卷带

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