



1. 产品介绍

HCC6201是一款低功耗高灵敏全极性霍尔开关芯片，采用CMOS工艺设计生产。该芯片器件内部集成了电压调节器、霍尔电压发生器、小信号放大器、斩波稳压器、施密特触发器和CMOS输出驱动器。该芯片温度稳定性好、抗应力强、灵敏度高等特点，工作电压在2.5V-5.5V。提供TO-92S直插封装，贴片SOT-23封装，且封装都符合RoHS环保标准。

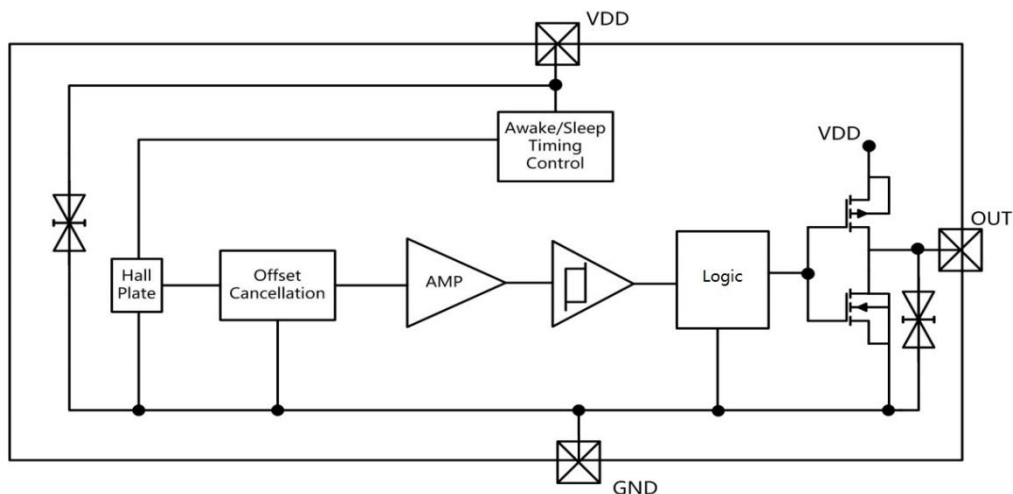
2. 特点

- 推挽输出
- ESD 性能可达： $\pm 6\text{kV}$
- 工作电压：2.5V-5.5V
- 微功耗电池供电应用
- 全极性的输出开关

3. 应用

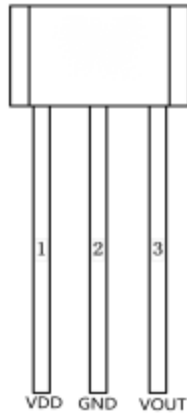
- 固态开关
- 无绳手机提醒开关
- 翻盖式手机屏保开关
- 笔记本电脑
- 低占空比替代簧片的磁传感开关
- 液位计
- 接近开关

4. 功能图

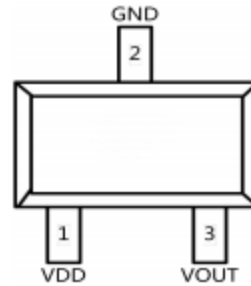




5.引脚信息



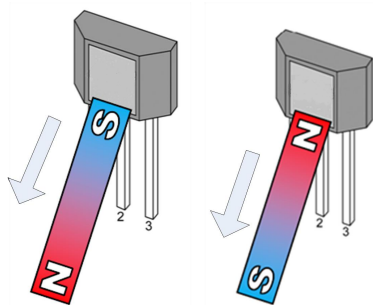
TO-92S



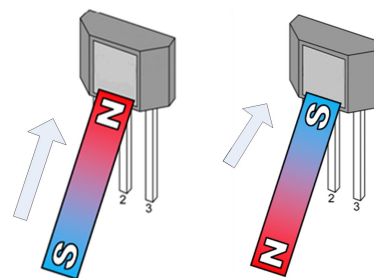
SOT-23

| 名称 | 芯片引脚 | 描述 |
|------|------|----|
| VDD | 1 | 电源 |
| Vout | 2 | 输出 |
| GND | 3 | 地 |

6.应用实例：

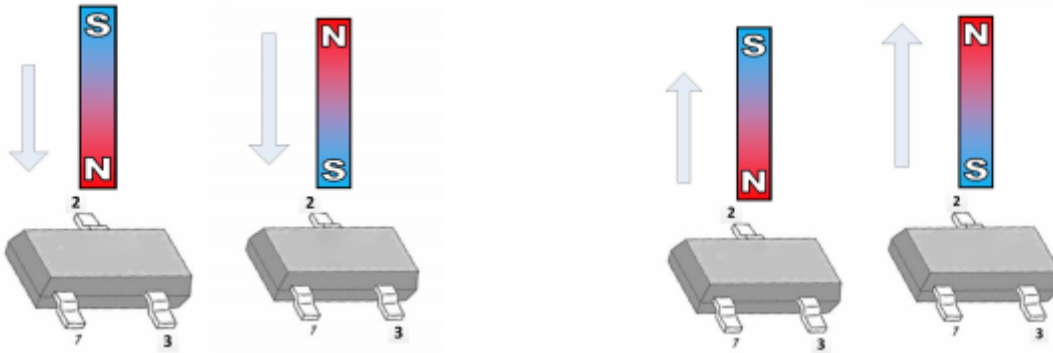


VOUT= 高电平



VOUT= 低电平

TO-92S

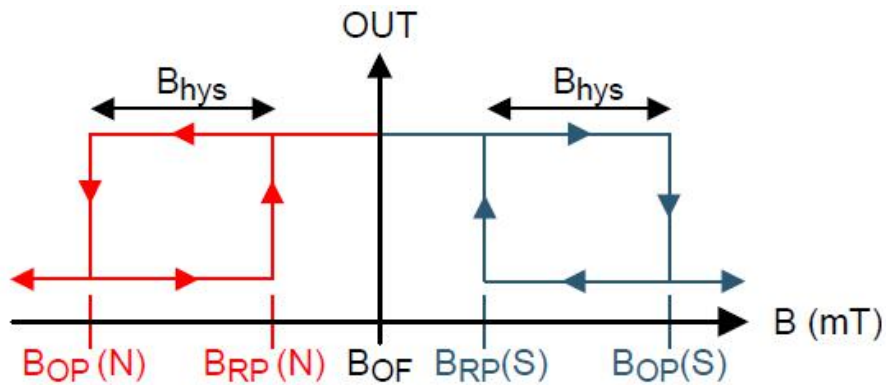


VOUT= 低电平

VOUT= 高电平

SOT-23

7.输出状态图



8. 订购信息

| 编号 | 封装 | 包装 | 温度范围 |
|-----------|--------|--------|-------------|
| HCC6201TO | TO-92S | 1000/袋 | -0°C ~ 70°C |
| HCC6201ST | SOT-23 | 3000/卷 | -0°C ~ 70°C |



9. 极限参数

| 参数 | 符号 | 数值 | 单元 |
|--------|------|---------|----|
| 电源电压 | VDD | 6.0 | V |
| 反向电压 | VDD | -0.3 | V |
| 输出电流 | IOUT | 5 | mA |
| 输出电压 | VOUT | 6.0 | V |
| 工作温度范围 | Ta | -40~85 | °C |
| 储存温度范围 | Ts | -50~150 | °C |

绝对最大额定值是芯片所能承受的极限值，超过该值芯片可能会永久损坏。

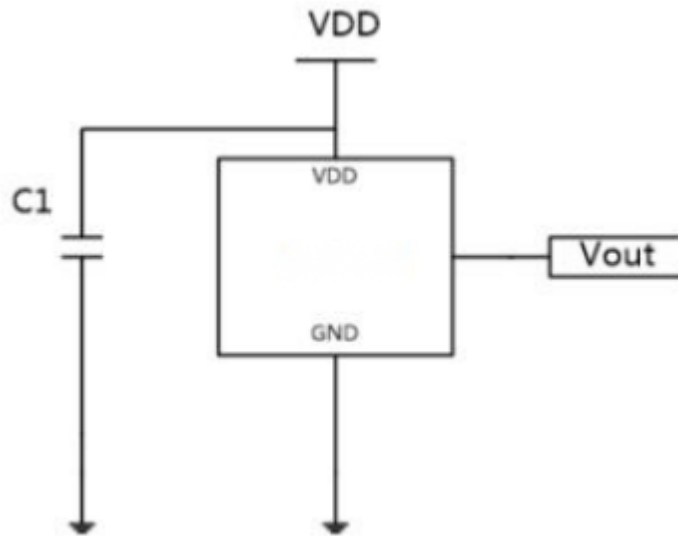
10. 电磁特性 (Ta = 25°C , VDD = 3.0V)

| 参数 | 符号 | 测试条件 | 最小 | 典型 | 最大 | 单位 |
|------------|-----------|-------------|-----------|-----------|-----------|-----------|
| 电特性 | | | | | | |
| 工作电压 | VDD | | 2.5 | | 5.5 | V |
| 输出低电压 | VOL | IOUT=1mA | | | 0.2 | V |
| 输出高电压 | VOH | IOUT=-1mA | VDD-0.2 | | | V |
| 输出电流 | IOUT | 输出低电压时 | | | 3.0 | mA |
| | | 输出高电压时 | -2.0 | | | mA |
| 工作电流 | Iawk | 唤醒时 | | 2.8 | | mA |
| 电源平均电流 | IDD | | | 50 | 100 | uA |
| 唤醒模式时间 | Tawk | | | 50 | 80 | us |
| 休眠模式时间 | Tp | | | 3.1 | 4.6 | ms |
| 工作频率 | Fw | | 220 | 320 | | Hz |
| 响应频率 | Fr | | 110 | 160 | | Hz |
| 参数 | 符号 | 测试条件 | 最小 | 典型 | 最大 | 单位 |
| 磁特性 | | | | | | |
| 工作点 | Bop | | +/-18 | +/-30 | +/-42 | Gauss |
| 释放点 | Brp | | +/-8 | +/-20 | +/-32 | Gauss |
| 回差 | Bhys | Bop-Brp | | 10 | | Gauss |



11.应用电路

$C1=2.2\mu F$

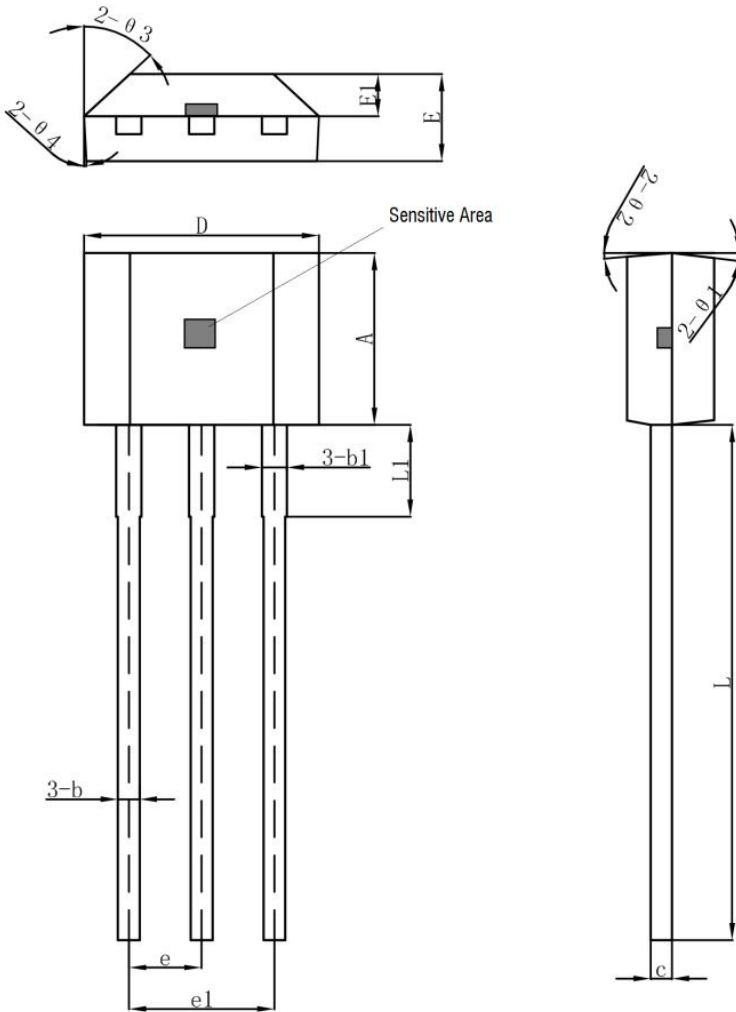


典型应用电路



12.外形尺寸

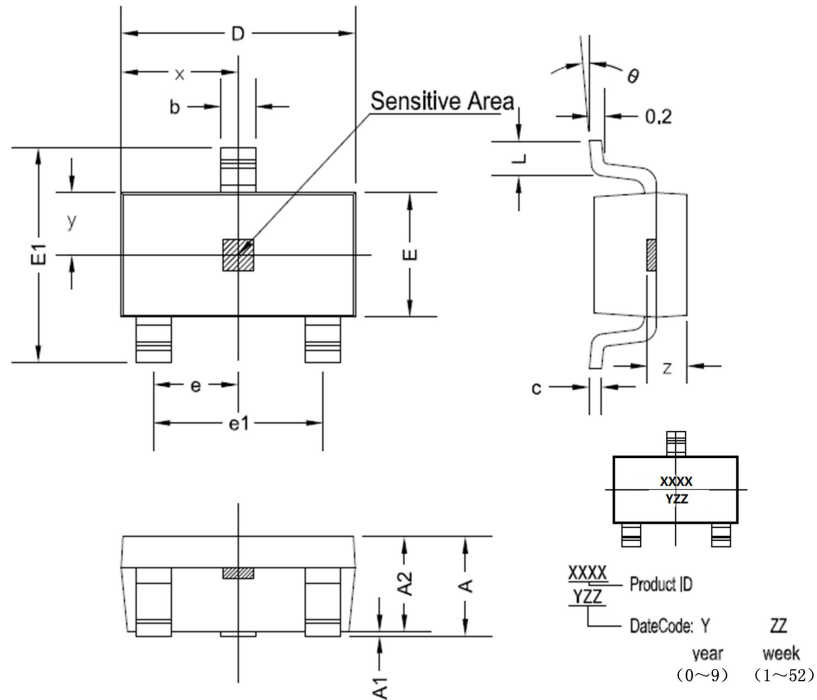
TO-92S 封装尺寸



| 符号 | 机械尺寸/mm | | |
|----|---------|-------|-------|
| | 最小 | 典型 | 最大 |
| A | 2.90 | 3.00 | 3.10 |
| b | 0.35 | 0.39 | 0.40 |
| b1 | | 0.44 | |
| c | 0.36 | 0.38 | 0.40 |
| D | 4.00 | 4.10 | 4.20 |
| E | 1.42 | 1.52 | 1.62 |
| E1 | | 0.75 | |
| e | | 1.27 | |
| e1 | | 1.27 | |
| L1 | | 2.54 | |
| L | 13.50 | 14.50 | 15.50 |
| θ1 | | 6° | |
| θ2 | | 3° | |
| θ3 | | 45° | |
| θ4 | | 3° | |
| h | | 3.6 | |



SOT-23 封装尺寸



| 符号 | 尺寸 (毫米) | | 尺寸 (英尺) | |
|----|-----------|------|-----------|-------|
| | 最小值 | 最大值 | 最小值 | 最大值 |
| A | 1.05 | 1.25 | 0.041 | 0.049 |
| A1 | 0 | 0.1 | 0 | 0.004 |
| A2 | 1.05 | 1.15 | 0.041 | 0.045 |
| b | 0.3 | 0.5 | 0.012 | 0.02 |
| c | 0.100 | 0.2 | 0.004 | 0.008 |
| D | 2.82 | 3.02 | 0.111 | 0.119 |
| E | 1.5 | 1.7 | 0.059 | 0.067 |
| E1 | 2.65 | 2.95 | 0.104 | 0.116 |
| e | 0.950 TYP | | 0.037 TYP | |
| e1 | 1.8 | 2 | 0.071 | 0.079 |
| L | 0.3 | 0.6 | 0.012 | 0.024 |
| x | 1.460TYP | | 0.057TYP | |
| y | 0.800TYP | | 0.032TYP | |
| z | 0.600TYP | | 0.024TYP | |
| θ | 0° | 8° | 0° | 8° |



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