



概述

AH463 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-23-3L 封装，且封装都符合 RoHS 环保标准。

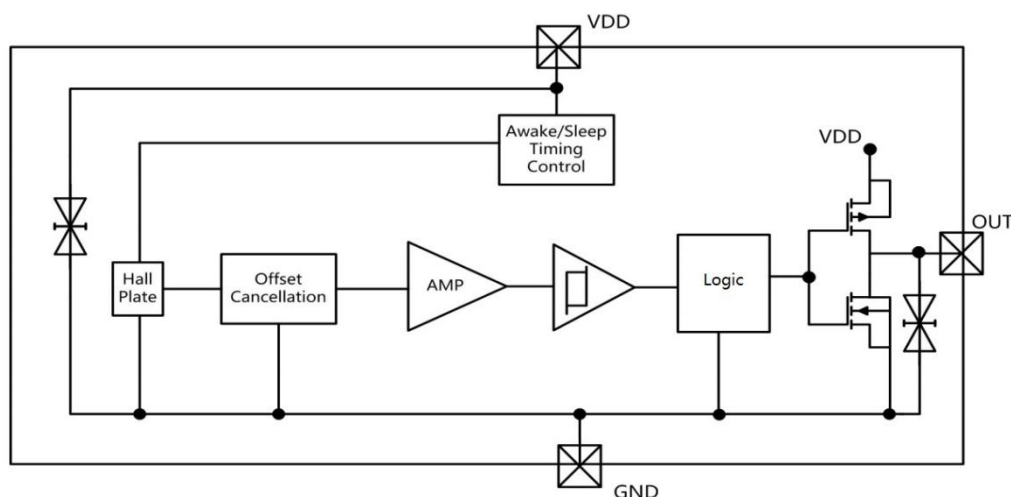
特征

- 推挽输出
- ESD 性能可达：±6 kV
- 工作电压：2.5V-5.5V
- 低功耗电池供电应用
- 全极性的输出开关

典型应用

- 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

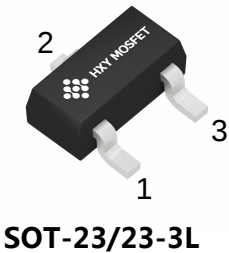
功能框图



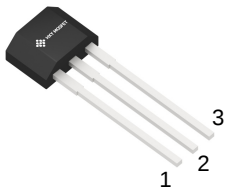
AH463 功能框图



引脚信息



SOT-23/23-3L



TO-92S

芯片引脚号	名称	说明
1	VDD	电源
2	GND	地
3	VOUT	输出

订购信息

编号	封装	包装	工作温度范围
AH463UA	TO-92S	1000/袋	-40℃~85℃
AH463SU	SOT-23-3L	3000/盘	-40℃~85℃

绝对最大额定

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。

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	℃
储存温度范围	Ts	-50~150	℃



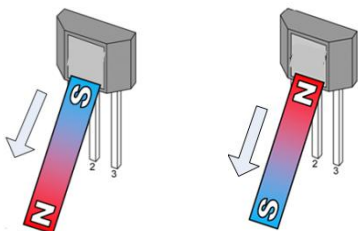
电磁特性

测试条件: $T_j=25^{\circ}\text{C}$, $V_{DD}=3.0\text{V}$

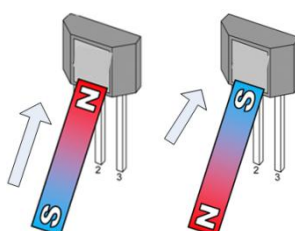
参数	符号	测试条件	最小	典型	最大	单位
电特性						
工作电压	VDD		2.5		5.5	V
输出低电压	VOL	IOUT=1mA			0.2	V
输出高电压	VOH	IOUT=-1mA	VDD-0.2			V
输出电流	IOUT	输出低电压时			3.0	mA
		输出高电压时	-2.0			mA
工作电流	Iawk	唤醒时		2.8		mA
电源平均电流	IDD			5	10	uA
唤醒模式时间	Tawk			50	80	us
休眠模式时间	Tp			100	150	ms
工作频率	Fw		6	10		Hz
响应频率	Fr		3	5		Hz
磁特性						
工作点	Bop		+/-11	+/-17	+/-23	Gauss
释放点	Brp		+/-6	+/-12	+/-18	Gauss
回差	Bhys	Bop-Brp		5		Gauss



磁电转换说明

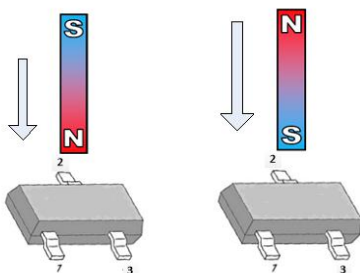


VOUT= 高电平

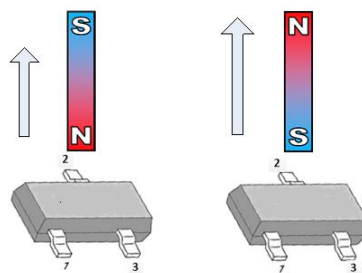


VOUT= 低电平

TO-92S

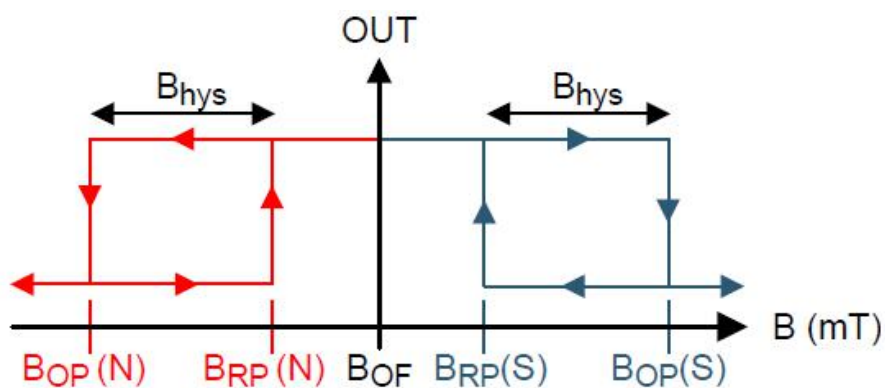


VOUT= 低电平



VOUT= 高电平

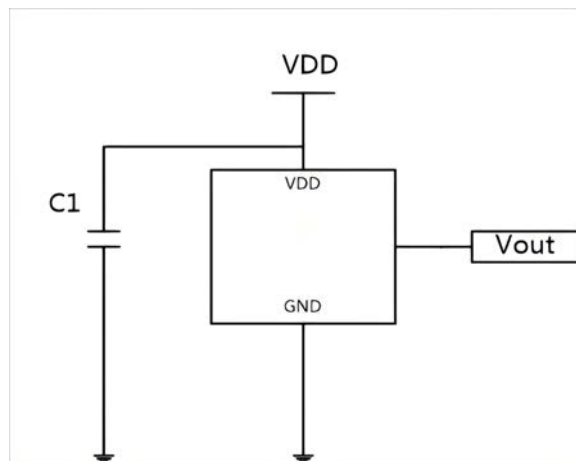
SOT-23-3L





应用电路

$C1=2.2\mu F$



注意事项

- 霍尔芯片是敏感器件，在使用及存储过程中应注意采取静电防护措施。
- 在安装使用中应尽量减少施加到器件外壳和引线上的机械应力。
- 建议焊接温度不超过 350℃，持续时间不超过 5 秒。
- 为保证霍尔芯片的安全性和稳定性，不建议长期超出参数范围使用。



外形尺寸

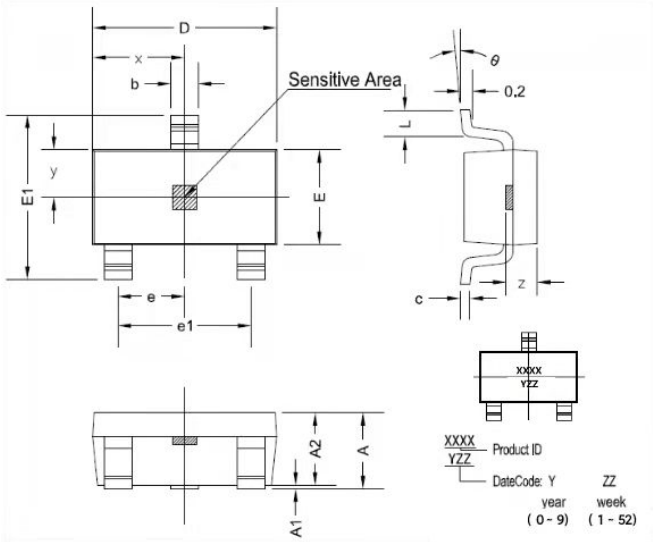
TO-92S 封装尺寸



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-23-3L 封装尺寸



符号	尺寸 (毫米)		尺寸 (英尺)	
	最小	最大	最小	最大
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	1.460 TYP		0.057 TYP	
y	0.800 TYP		0.032 TYP	
z	0.600 TYP		0.024 TYP	
θ	0°	8°	0°	8°



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