线性霍尔芯片

1. 描述

SS495A 是一款采用双极工艺设计的线性霍尔芯片，内置霍尔电压发生器、放大器、Fuse 修调电路。输出电压与垂直于芯片丝印标记表面的磁通密度成正比。无磁时输出电压为电源电压的一半。

SS495A 具有低噪声输出的特点，不需要采用外部滤波。可以在 3.0V 至 10.5V 的给电范围内稳定运行，5V 下功耗仅为 5mA，工作温度范围为-40℃至 150℃。

SS495A 是 TO-92 封装形式，符合无铅工艺标准。

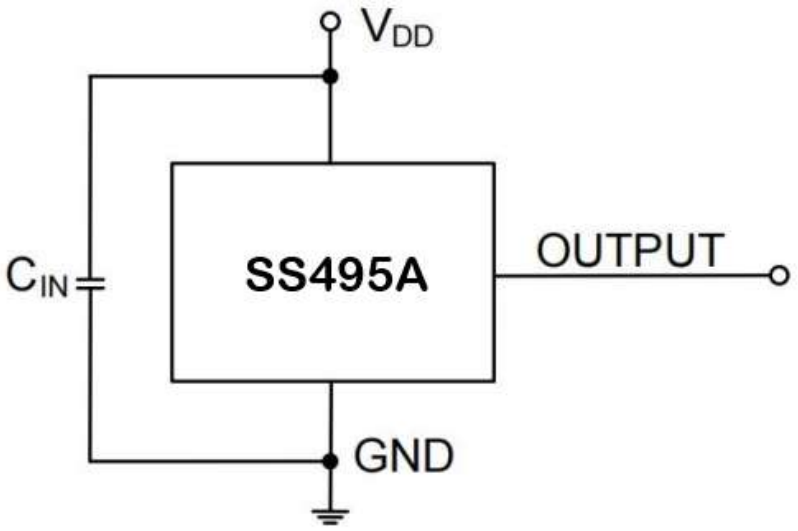
2. 特点

- 工作电压：3.0V~10.5V
- 灵敏度典型值：3.3V 2.1mV/Gs
  5V 3.5mV/Gs
- 低噪声
- 低功耗
- 抗静电能力±8KV
- AEC-Q100

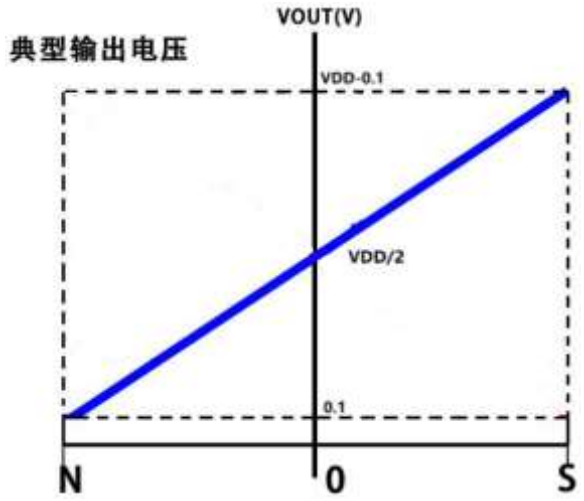
3. 应用

- 电动车调速踏板
- 电流检测传感器
- 接近检测器
- 运动检测器
- 齿轮传感器
- 电动机控制
- 旋转编码器

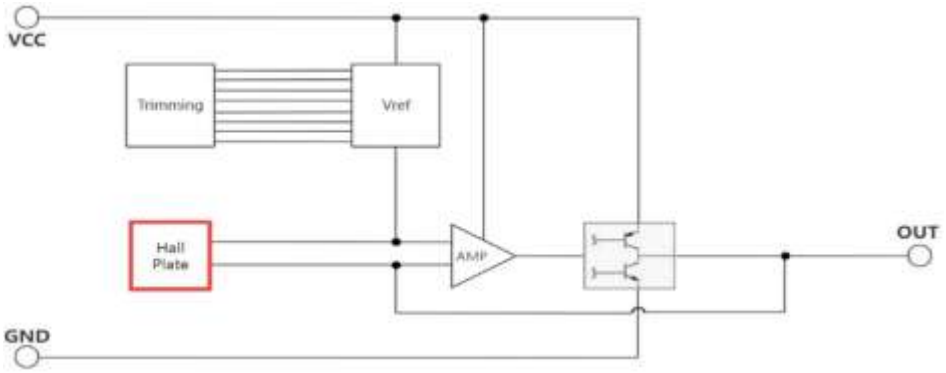
4. 应用电路



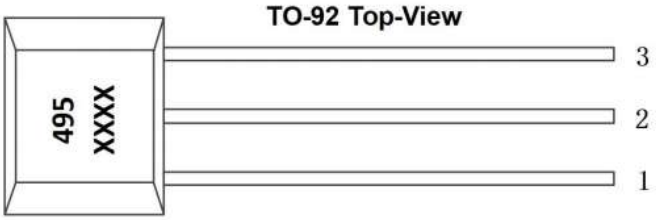
5. 磁电转换曲线



6. 功能框图



7. 管脚定义



名称	管脚	描述
	TO-92	
V_{DD}	1	电源端
GND	2	地端
OUT	3	输出端

8. 特性

9.1. 极限参数

参数	符号	参数值	单位
供电电压	V_{DD}	18	V
输出电流	I_{OUT}	3	mA
工作温度	T_A	-40~+150	℃
存储温度	T_S	-50~+150	℃
静电能力	ESD	8	KV

8.2. 电学特性

（Ta=25℃, V_{DD}=5V,unless otherwise specified）

参数	符号	测试条件	最小值	典型值	最大值	单位
工作电压	V_{DD}	Operating	3.0	5.0	10.5	V
工作电流	Icc	V_{DD}=5.0V		5.0	8.0	mA
开机时间	$t_{ON\_INITIAL}$			1.5		us
噪音	V_{no}	V_{DD}=5.0V, no load on V_{OUT}		3.0		mV_{Rms}
最大输出电压	V_{OUTH}				V_{DD}-0.1	V
最小输出电压	V_{OUTL}		0.1			V

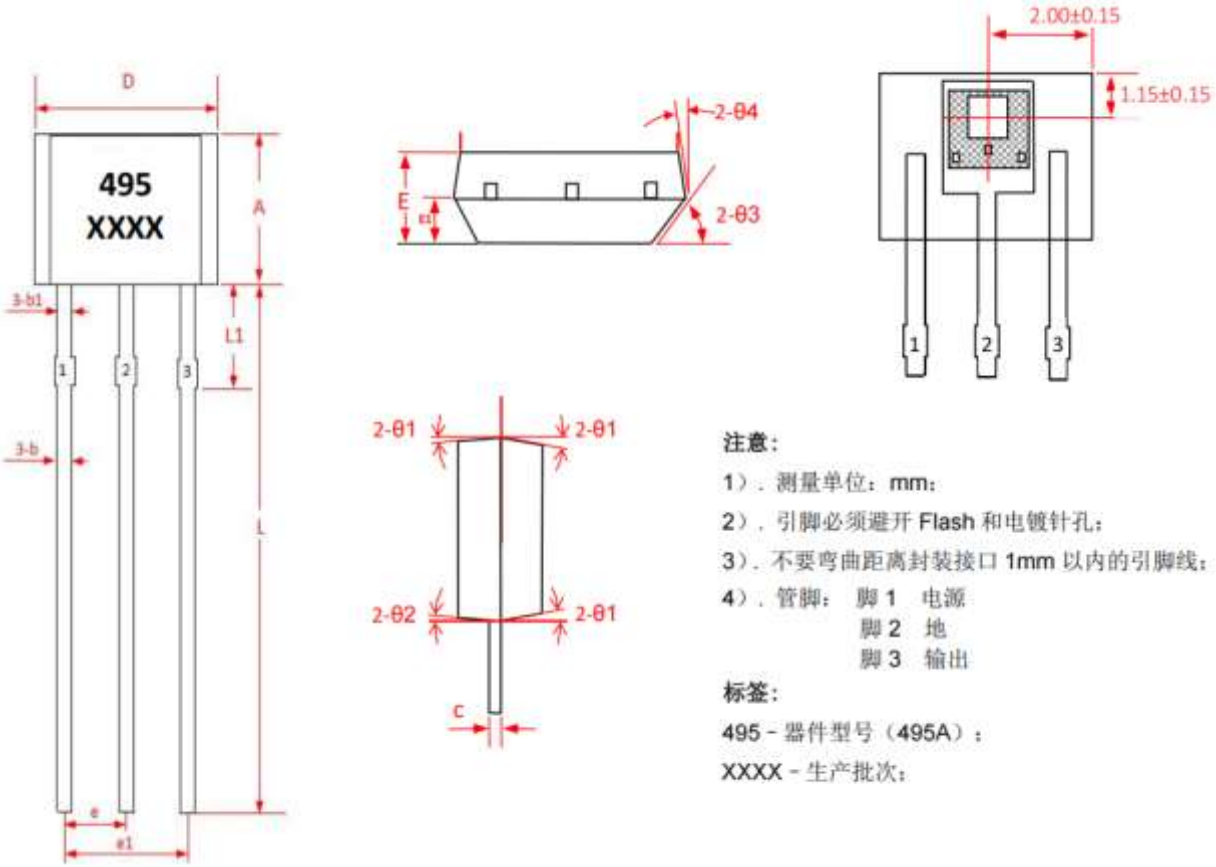
8.3. 磁场特性

参数	测试条件	最小值	典型值	最大值	单位
静态输出电压	B=0Gs VDD=3.3V	1.58	1.65	1.71	V
	B=0Gs VDD=5.0V	2.40	2.50	2.60	V
灵敏度	T_A=25℃ VDD=3.3V	1.8	2.1	2.4	mV/Gs
	T_A=25℃ VDD=5.0V	3.2	3.5	3.8	mV/Gs
磁场强度范围 1)	VDD=5.0V		±690		Gs

说明：1) 器件在理想测试环境下的到达最低\高输出电压的磁场感应

9. 封装

TO-92 封装



注意：

1）. 测量单位：mm；

2）. 引脚必须避开 Flash 和电镀针孔；

3）. 不要弯曲距离封装接口 1mm 以内的引脚线；

4）. 管脚： 脚 1 电源
脚 2 地
脚 3 输出

标签：

495 - 器件型号（495A）；

XXXX - 生产批次；

符号 SYMBOL	机械尺寸/mm Dimensions		
	最小值 MIN	典型值 NOMINAL	最大值 MAX
A	2.9	3.0	3.1
b	0.35	0.39	0.56
b1		0.44	
c	0.36	0.38	0.51
D	3.9	4.0	4.1
E	1.42	1.52	1.62
E1		0.75	
e		1.27	
e1		2.54	
L	13.5	14.5	15.5
L1		1.6	
θ1		6°	
θ2		3°	
θ3		45°	
θ4		3°	

DISCLAIMER

ELECSUPER PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with ElecSuper products. You are solely responsible for
(1) selecting the appropriate ElecSuper products for your application;
(2) designing, validating and testing your application;
(3) ensuring your application meets applicable standards, and any other safety, security, or other requirements.
These resources are subject to change without notice. ElecSuper grants you permission to use these resources only for development of an application that uses the ElecSuper products described in the resource. Other reproduction and display of these resources are prohibited. No license is granted to any other ElecSuper intellectual property right or to any third party intellectual property right. ElecSuper disclaims responsibility for, and you will fully indemnify ElecSuper and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources. ElecSuper’s products are provided subject to ElecSuper’s Terms of Sale or other applicable terms available either on www.elecsuper.com or provided in conjunction with such ElecSuper products. ElecSuper’s provision of these resources does not expand or otherwise alter ElecSuper’s applicable warranties or warranty disclaimers for ElecSuper products.