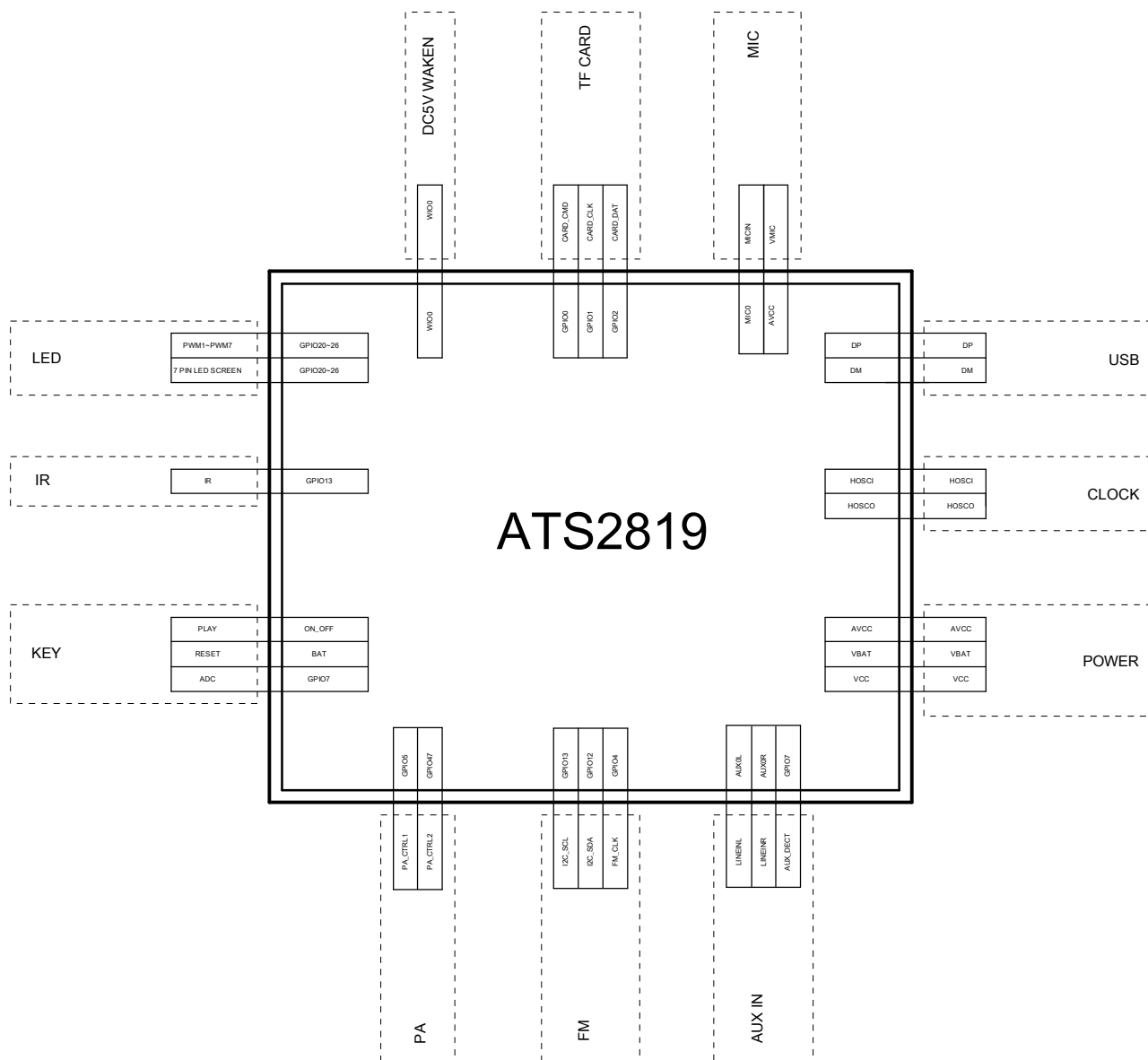


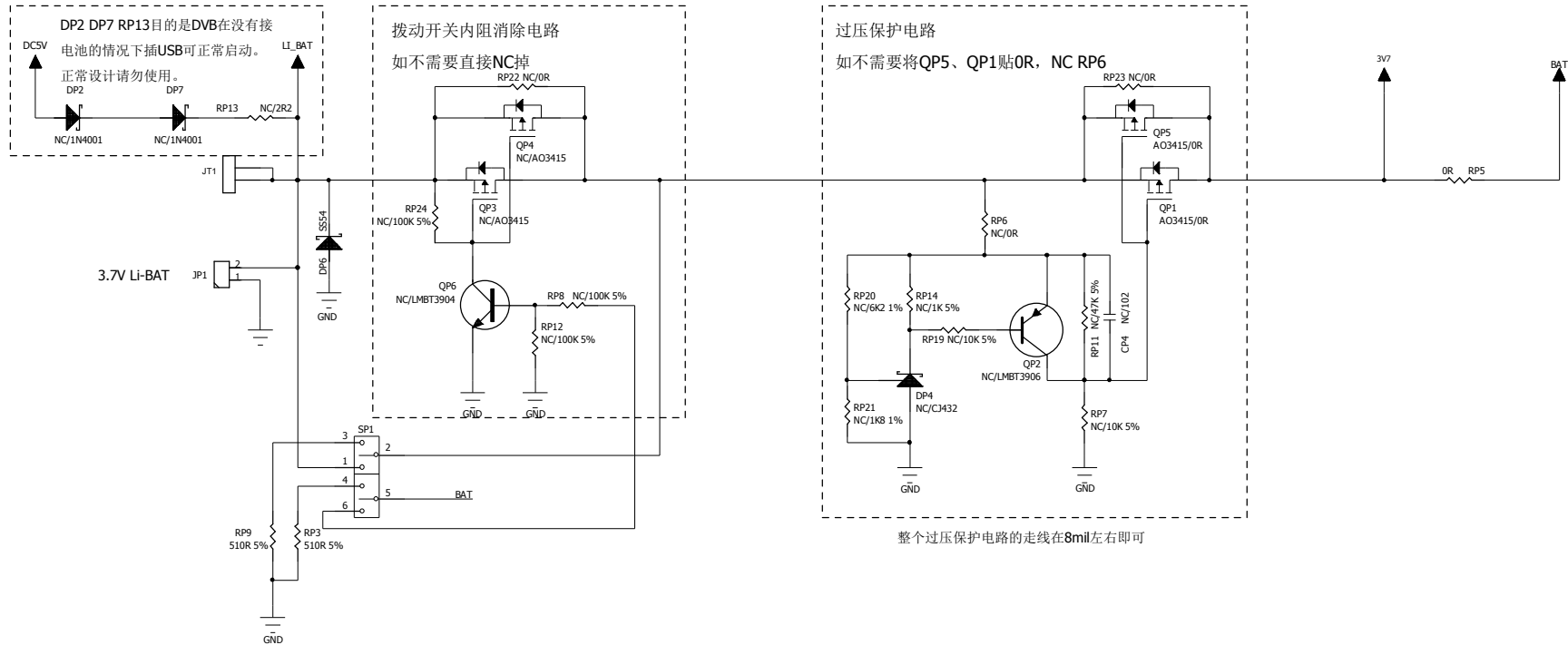


# Block Diagram

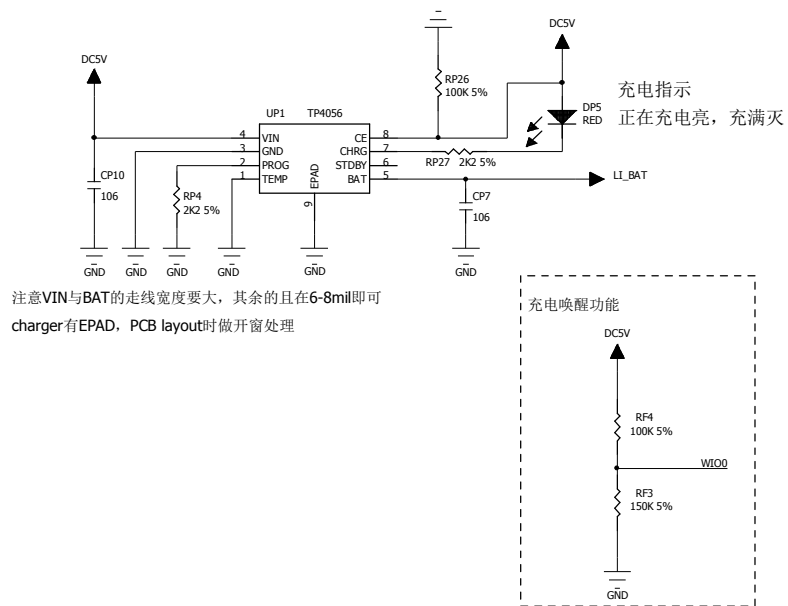


ATS2819 DVB	
File name:	ATS2819_DVB_MAIN_V1.1_180713
Sheet name:	BLOCK
Drawing No:	Version: V1.2
Drawn By: ALEX	Date: 181017
Checked By:	Date:
Approved By:	Date:
Size: A3	Sheet: 2 of 6

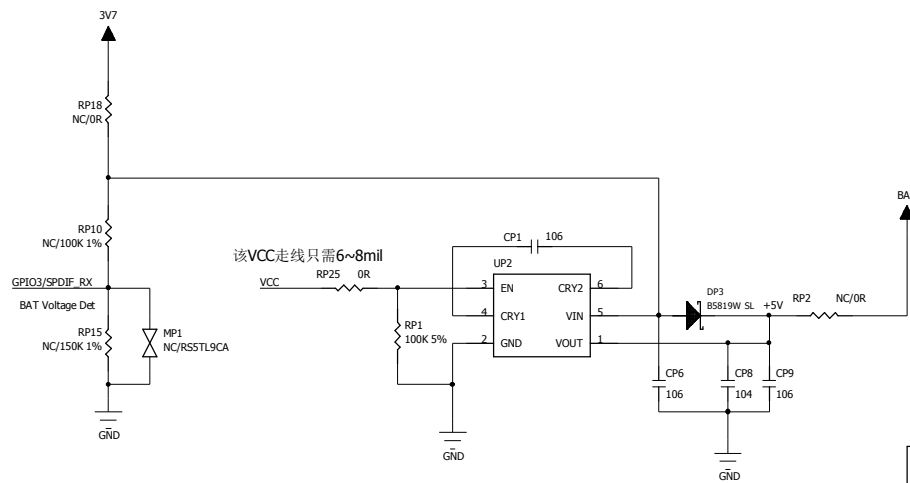
# 电池开关



# 充电模块



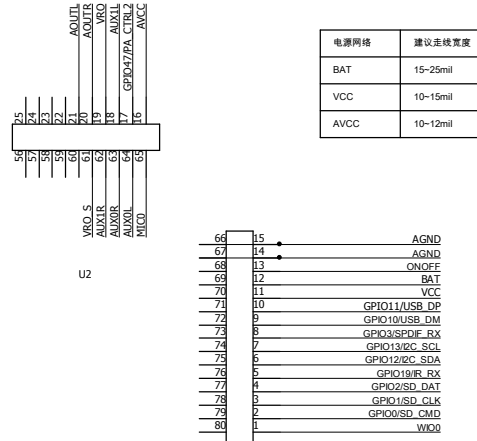
# 升压模块



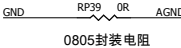
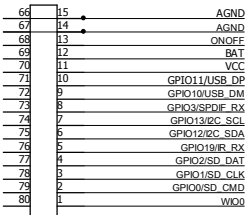
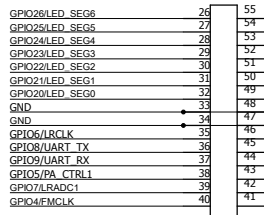
电池升压到5V给IC供电电路，解决大功率喇叭输出时拉低电池电压，造成系统死机问题  
如果需要此升压电路，电阻RP18、RP2贴0R，RP5不贴；如果不需要此升压电路，电阻RP2、RP18不贴、RP5贴0R

ATS2819 DVB	
File name:	ATS2819_DVB_MAIN_V1.1_180713
Sheet name:	POWER
Drawing No:	Version: V1.2
Drawn By: ALEX	Date: 181017
Checked By:	Date:
Approved By:	Date:
Size: A3	Sheet: 3 of 6

# SUB

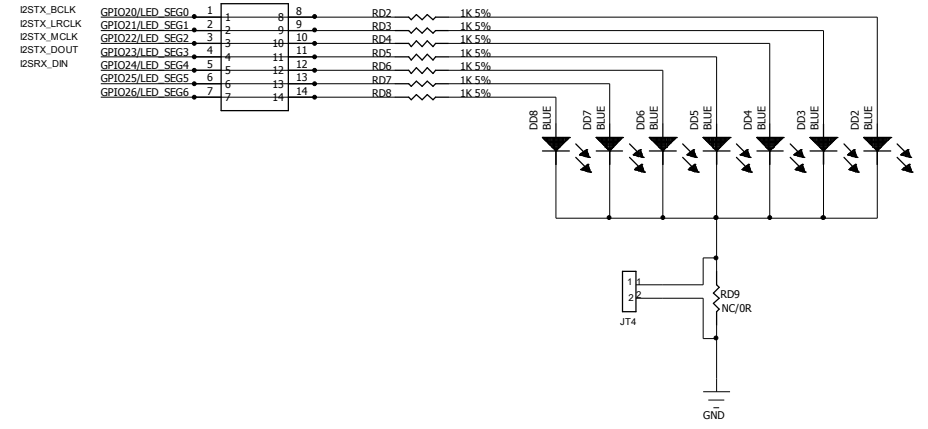


电源网络	建议走线宽度
BAT	15-25mil
VCC	10-15mil
AVCC	10-12mil



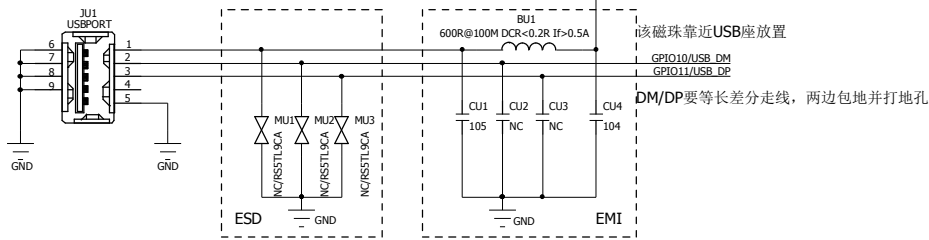
# 7PIN LED SCREEN & PWM & PWM

优先使用这一组I2S。



# USB DEVICE

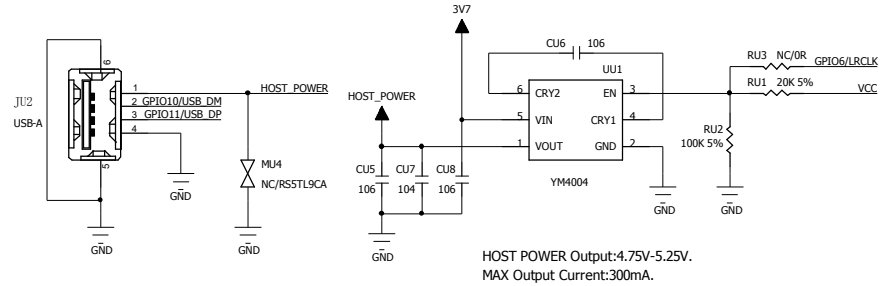
USB座作为静电击打点，要求其有一块完整的地平面为静电提供快速泄放。敏感信号线如DM/DP等不能靠近USB座，信号线与铜箔之间间距要有12mil以上。



信号线应先到ESD器件/EMI电容再到IC，尽量避免在信号线拉分叉线出来

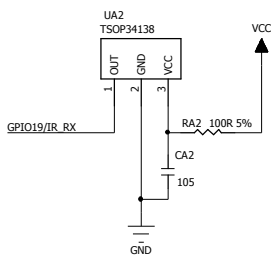
# USB HOST

选择对应电流输出能力的升压IC



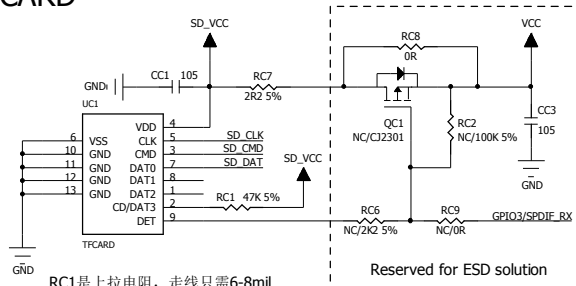
HOST POWER Output: 4.75V-5.25V. MAX Output Current: 300mA.

# IR



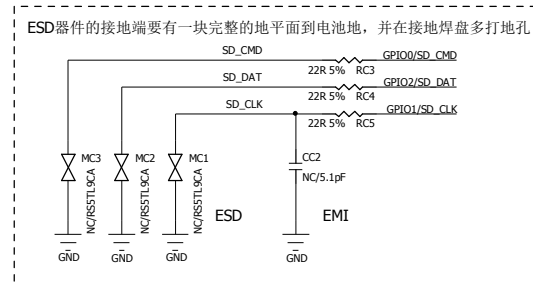
# TF CARD

卡供电的线宽需要15-20mil, CC1电容靠近SD\_VCC放置



RC1是上拉电阻，走线只需6-8mil  
CLK/DATA/CMD信号线走6-8mil，且铺铜间距设置为12mil以上  
这三根信号线应尽量少过孔，走线不宜过长

EMI的电阻靠近ATS2819放置

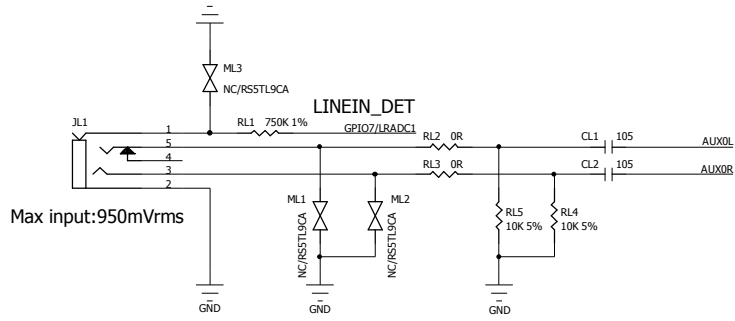


卡模块最重要还是ESD器件布局要做好

# ATS2819 DVB

File name: ATS2819_DVB_MAIN_V1.1_180713	
Sheet name: MAIN/USB/CARD/IR/LED	
Drawing No:	Version: V1.2
Drawn By: ALEX	Date: 181017
Checked By:	Date:
Approved By:	Date:
Size: A3	Sheet: 4 of 6

# AUX

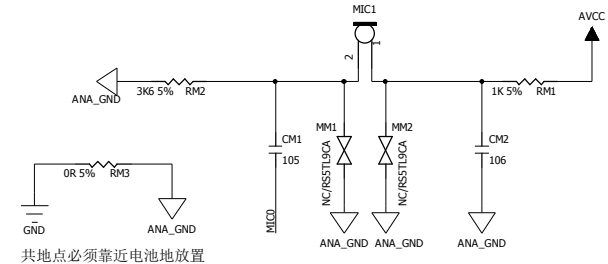


Max input:950mVrms

音频部分请参考硬件设计指南第七章。

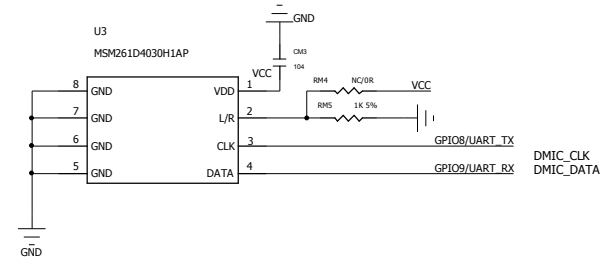
# AMIC

MICIN是模拟走线，线宽8mi，走线避开高速信号干扰，包地处理。



共地点必须靠近电池地放置

# DMIC



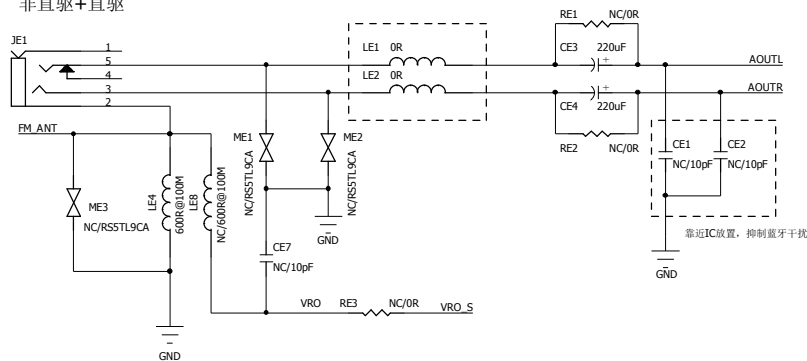
# EARPHONE

Max output:950mVrms

Single-ended output

非直驱+直驱

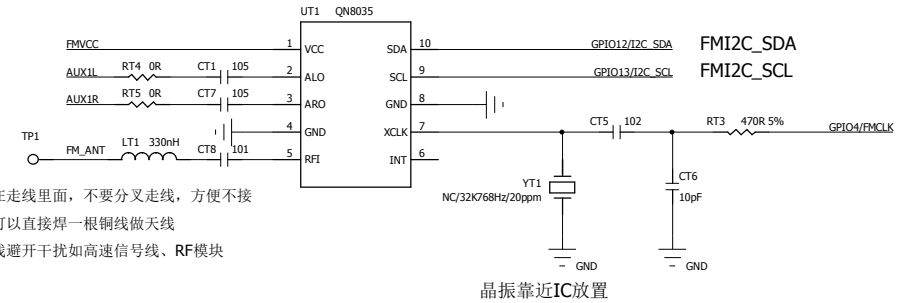
磁珠靠近输入端放置



靠近IC放置，抑制蓝牙干扰

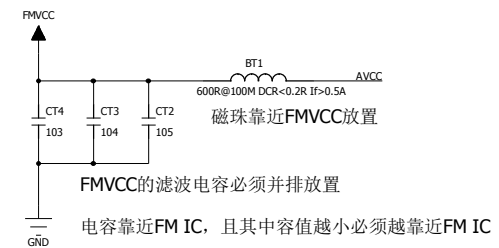
默认是非直驱模式，直驱时RE1 RE2 RE3贴0R，LE1 LE1 LE8贴磁珠，LE4 NC。

# FM



测试点放在走线里面，不要分叉走线，方便不接耳机线时可以直接焊一根铜线做天线  
天线的走线避开干扰如高速信号线、RF模块

晶振靠近IC放置

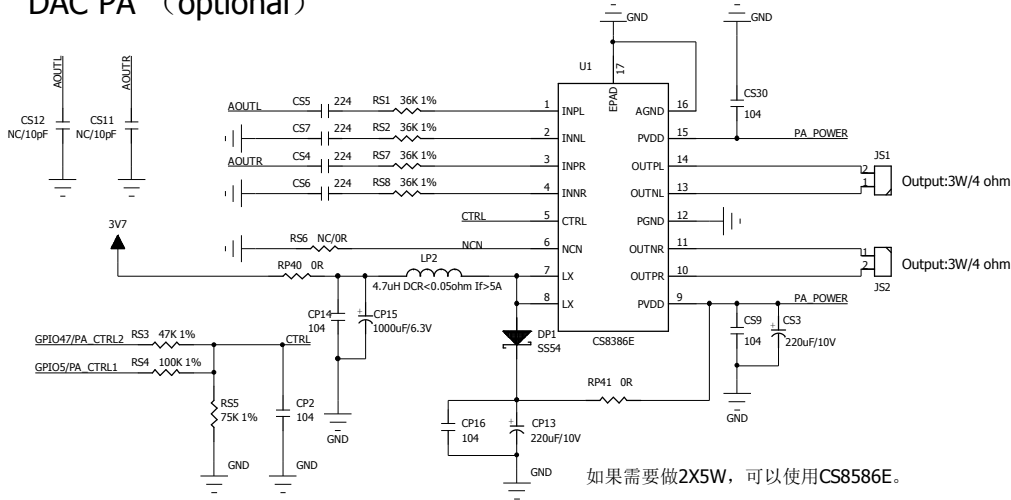


FMVCC的滤波电容必须并排放置

电容靠近FM IC，且其中容值越小必须越靠近FM IC

ATS2819 DVB	
File name:	ATS2819_DVB_MAIN_V1.1_180713
Sheet name:	AUX/AOUT/FM/MIC
Drawing No:	Version: V1.2
Drawn By: ALEX	Date: 181017
Checked By:	Date:
Approved By:	Date:
Size: A3	Sheet: 5 of 6

### DAC PA (optional)

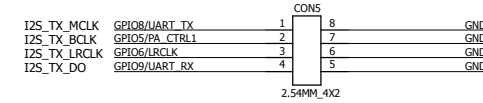


如果需要做2X5W, 可以使用CS586E.

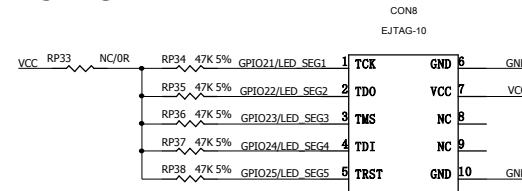
CTRL电压	小于0.2V	1.2V~1.5V	1.8V~电池电压
工作状态	芯片关断	AB类模式	D类模式
GPIO47	0	1	1
GPIO5	0	0	1
	0V	1.406V	2.101V

### I2S TX

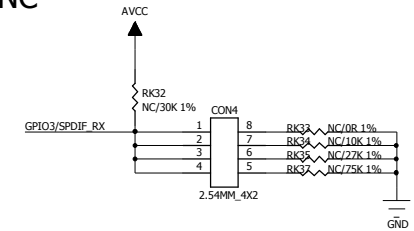
在必须保留显示功能时, 可以使用这一组I2S.



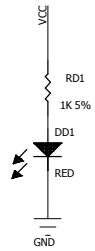
### EJTAG



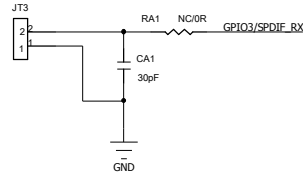
### NC



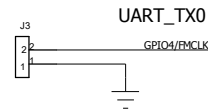
### LED Display



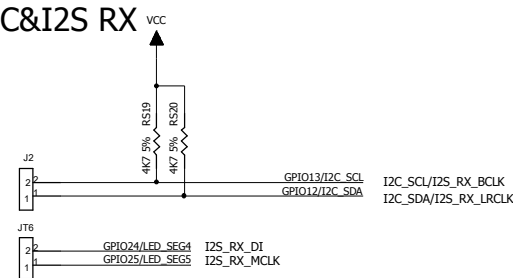
### SPDIF



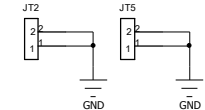
### UART



### I2C&I2S RX

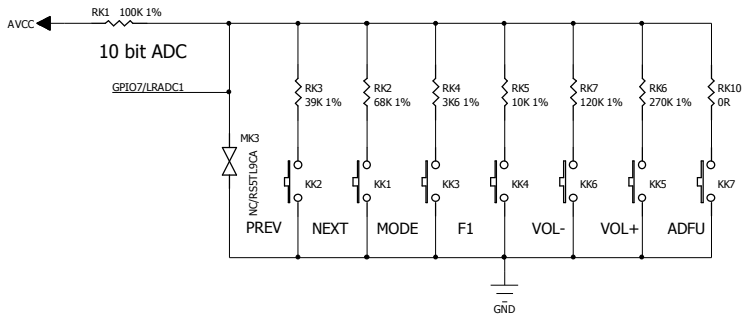


### GND



### KEY

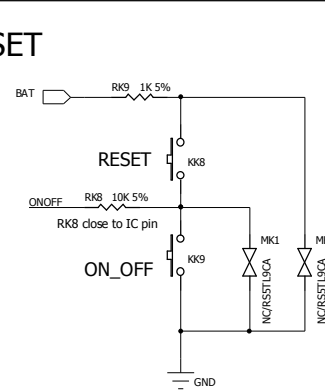
走线线宽只需6-8mil



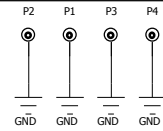
按键	电压值/V	HEX
ADFU	0	0x000
MODE	0.09-0.11	0x020-0x027
F1	0.24-0.30	0x053-0x068
RESERVED	0.52-0.63	0x0B6-0x0DC
PREV	0.74-0.89	0x100-0x134
NEXT	1.06-1.27	0x16F-0x1B8
VOL-	1.42-1.69	0x1EC-0x24A
VOL+	1.89-2.21	0x28F-0x2FE
LINEIN_DET	2.50-2.70	0x362-0x3A8

表中的电压值min是以阻值的-5%与linein电阻的-5%并联上拉电阻取+5%计算得出

### ON\_OFF and RESET



### 定位孔



ATS2819 DVB	
File name:	ATS2819_DVB_MAIN.V1.1_180713
Sheet name:	PA/KEY/DEBUG
Drawing No:	Version: V1.2
Drawn By: ALEX	Date: 181017
Checked By:	Date:
Approved By:	Date:
Size: A3	Sheet: 6 of 6