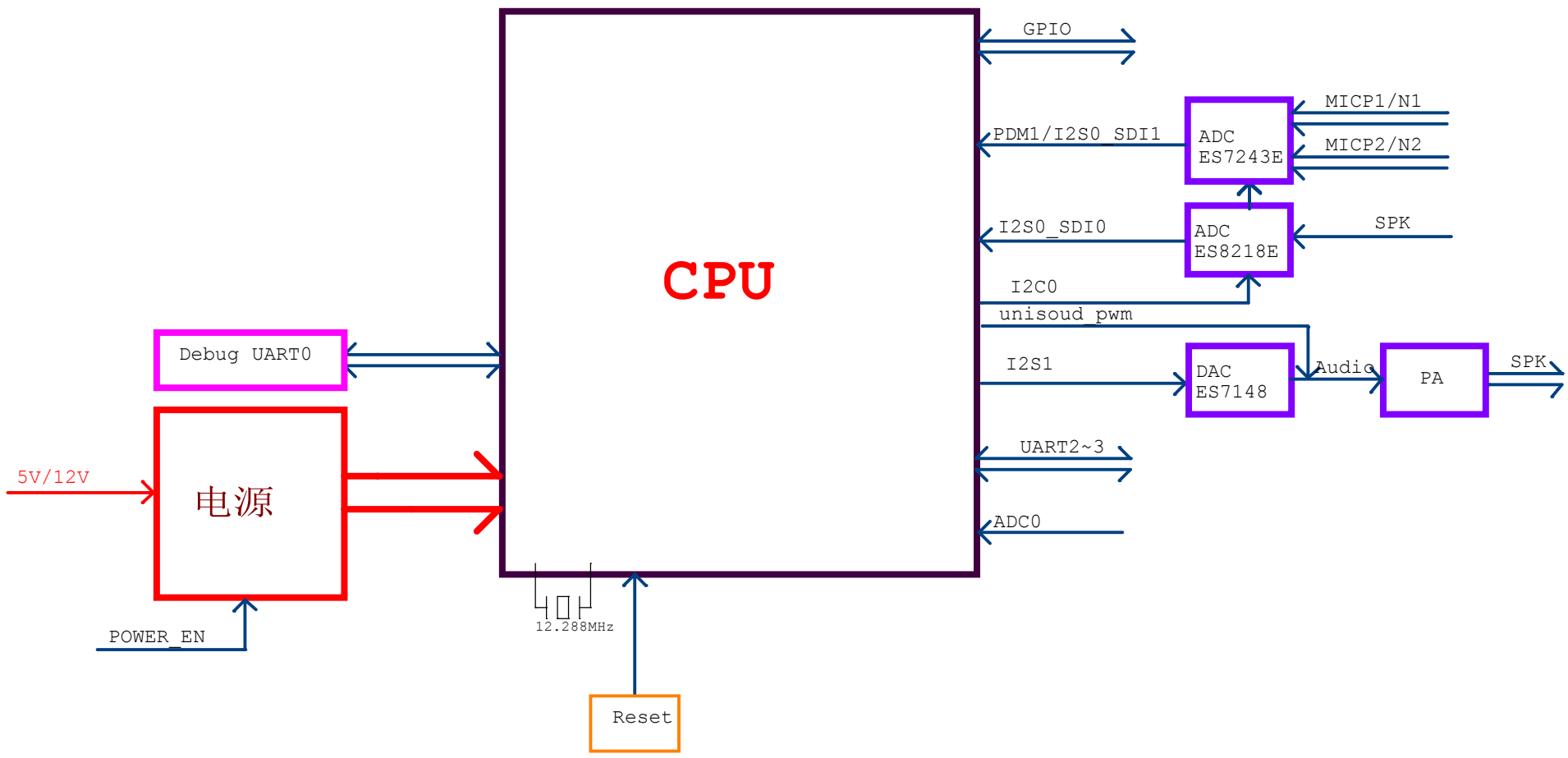



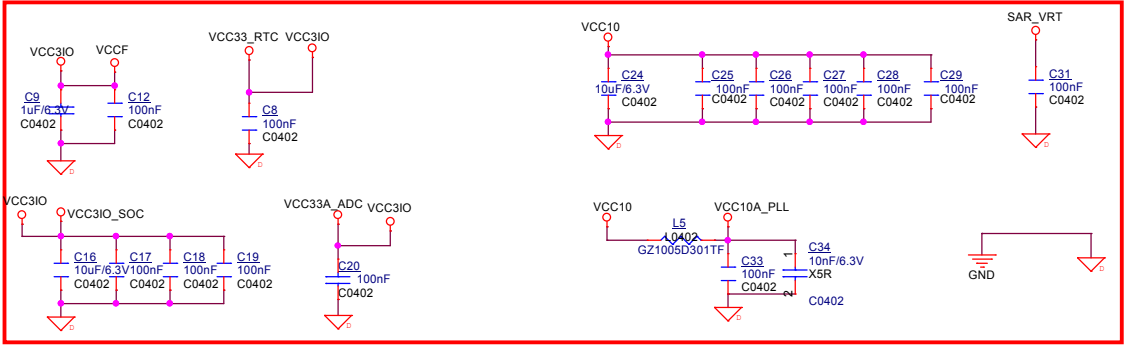
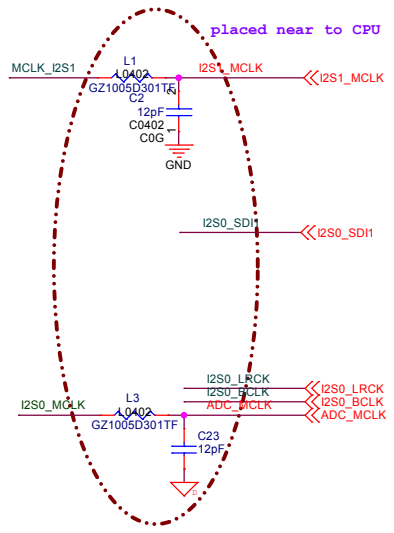
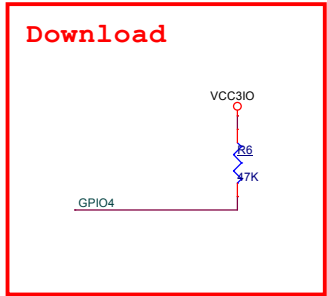
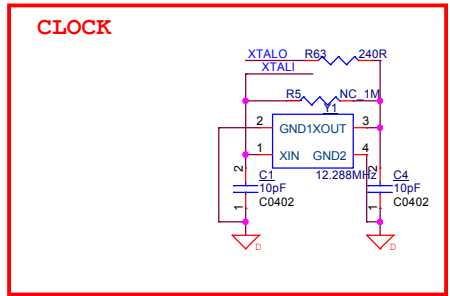
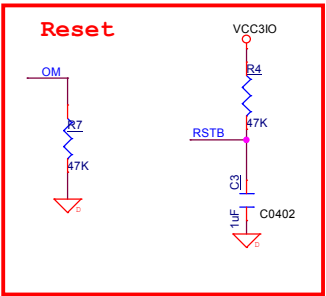
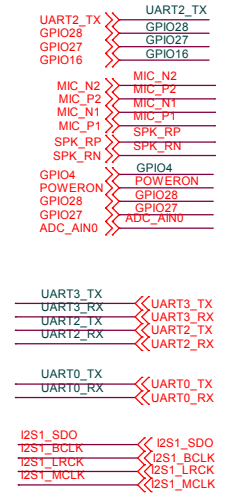
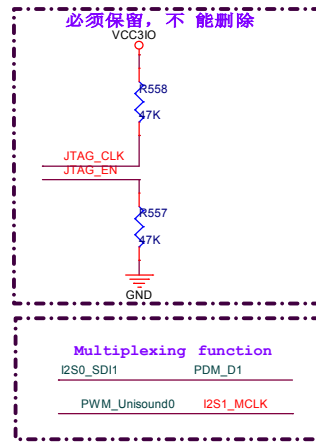
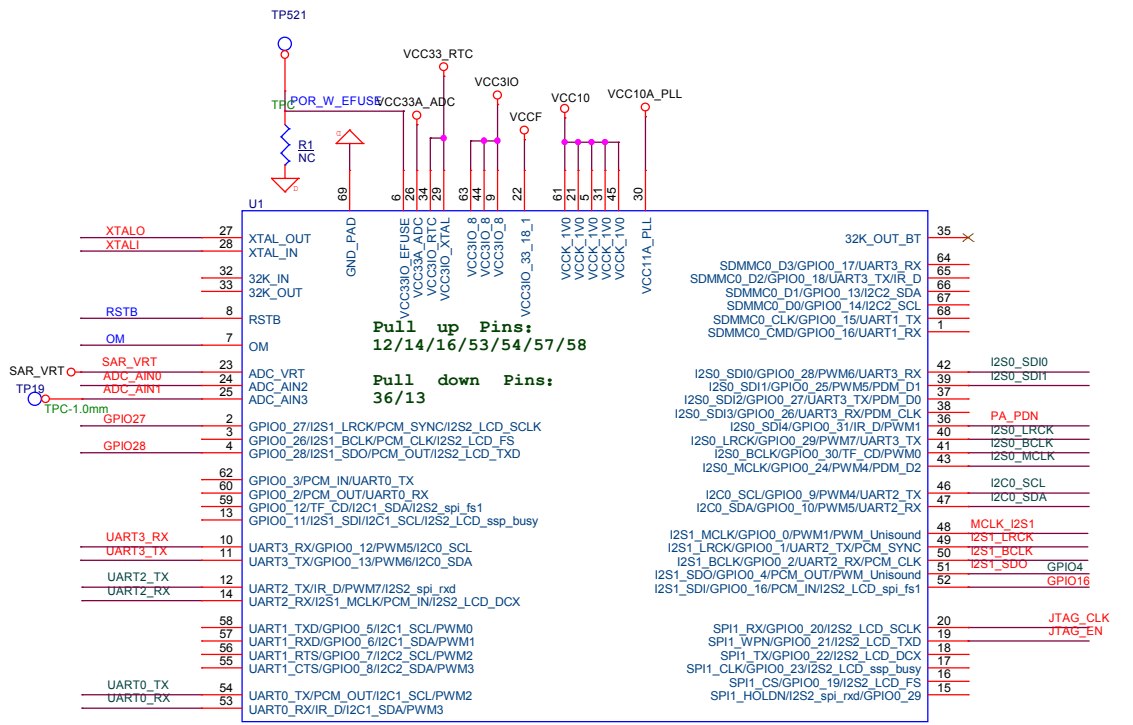
版本	修改记录	修改时间	修改人
V1.0	初始版本	2020.01.15	Huangzhiteng
V1.1	1、R4改为47K 2、增加R557/R558 3、R5不焊接	2020.02.10	Huangzhiteng
V1.2	1、增加系统电源方案对比，客户可根据项目情况选择电源方案	2020.04.02	Huangzhiteng
V1.3	1、第9页的串口2和串口3互换了一下，跟demo板的实物一致 2、C59和C68改为1nf 3、AEC回采电路增加AB类功放和D类功放的区别说明	2021.08.04	sunlehua



Interface	Function	Resources	Notes
UART0	debug		
UART1	To bluetooth	GPIO5~8/PWM0~3	
UART2	Communication0	PWM7	
UART3	Communication1	GPIO12~13	
I2C0	To ADCs	GPIO9~10	
I2C1	Reserve	GPIO12~13/PWM4~5	unused
SPI1		GPIO19~23,GPIO29	unused
I2S0	To ADCs as analog mics and AEC signal input	GPIO24~25,28~30	SDI0: AEC SDI1: MIC
PDM	To digital MEMS MICs	GPIO26~27/I2S0_SDI2~3	unused
PWM_unisound	To Analog PA	GPIO0/PWM1	Audio output
PCM	To bluetooth	GPIO0~3	unused
SDC0	To wifi	GPIO13~18	
I2S0	To DAC	GPIO0~2, GPIO4	Reserve
ADC	To Keys or Voltage detection etc	ADC_AIN2~3	
PA_EN	Enable PA	GPIO31/I2S0_SDI4	Active low

详见 page 07.Power

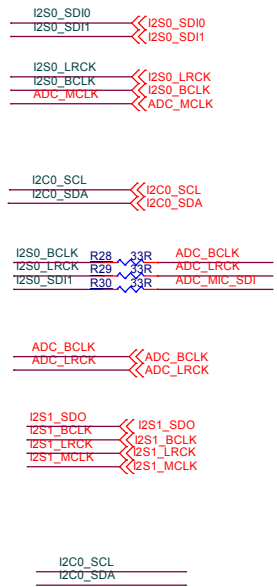
		<a href="http://www.unisound.com">www.unisound.com</a>	
Title			
<b>US52X_2MIC_OFFLINE_DEMO</b>			
Size	Document Number	Rev	
A3	<b>Power Tree</b>		
Date:	Tuesday, April 14, 2020	Sheet	4 of 10



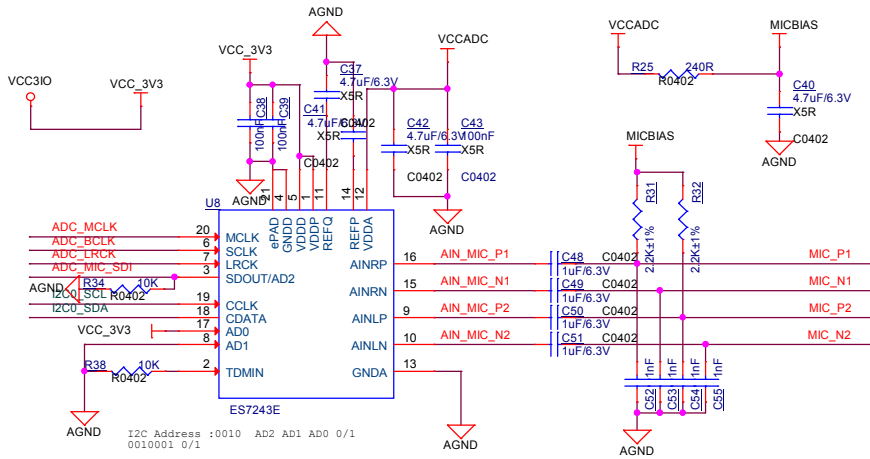
**www.unisound.com**

**US52X\_2MIC\_OFFLINE\_DEMO**

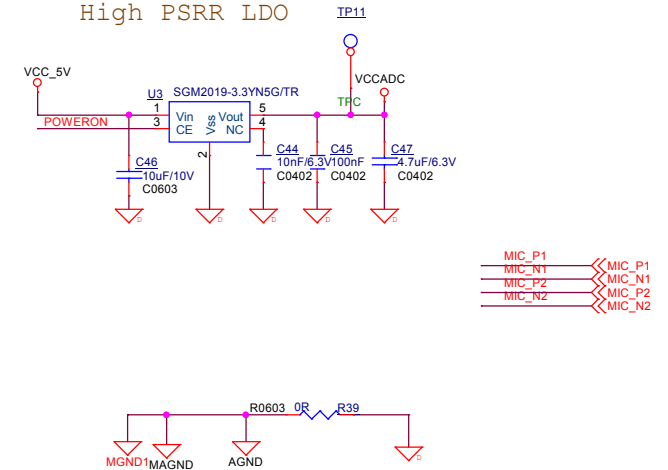
Size A3	Document Number	Rev
	<b>US536 LITE</b>	
Date: Tuesday, April 14, 2020	Sheet 5 of 10	



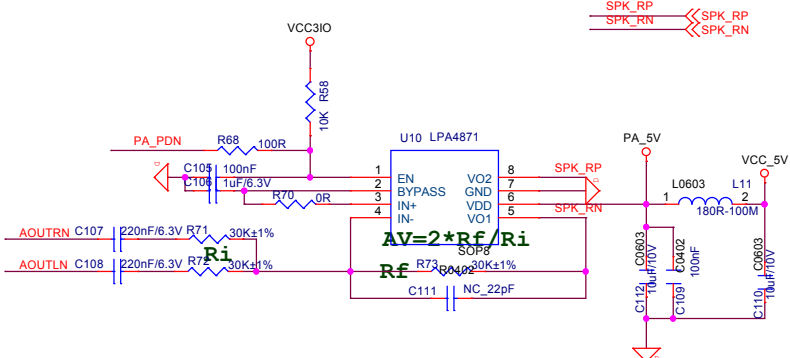
**AUDIO INPUT** ES7243E跟 ES7243 是不同的 芯片, 不能使用 ES7243



High PSRR LDO

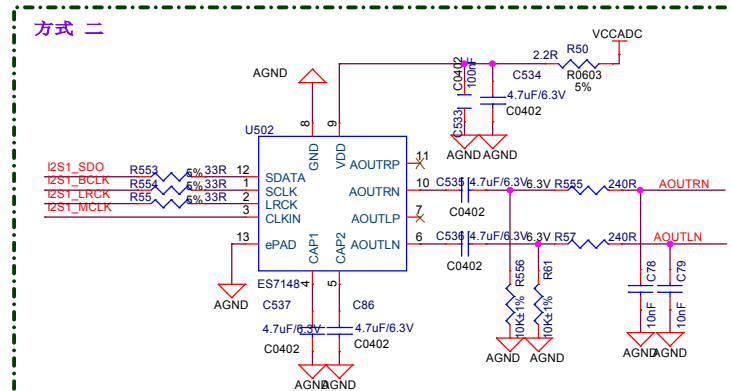


**PA**

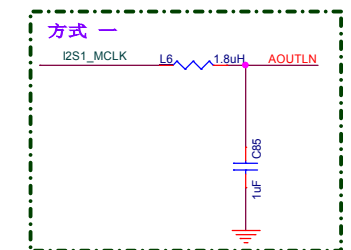


Notes:  
1、客户根据对项目需要选择音频输出方式, 若对音质要求不高选择方式一输出; 反之选用方式二DAC输出

方式二



方式一



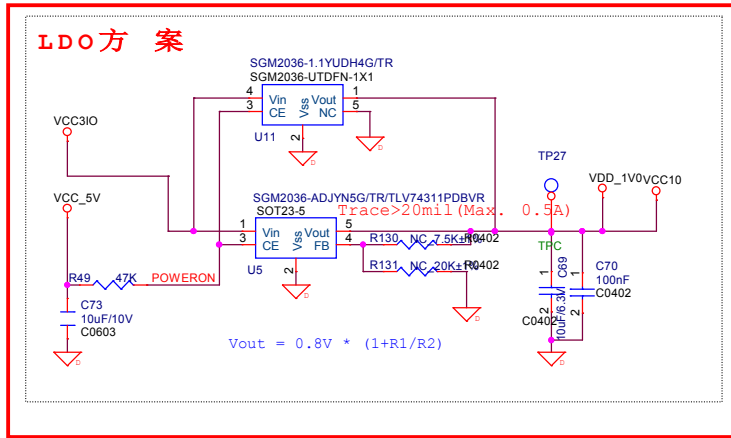
 [www.unisound.com](http://www.unisound.com)

**Title** US52X\_2MIC\_OFFLINE\_DEMO

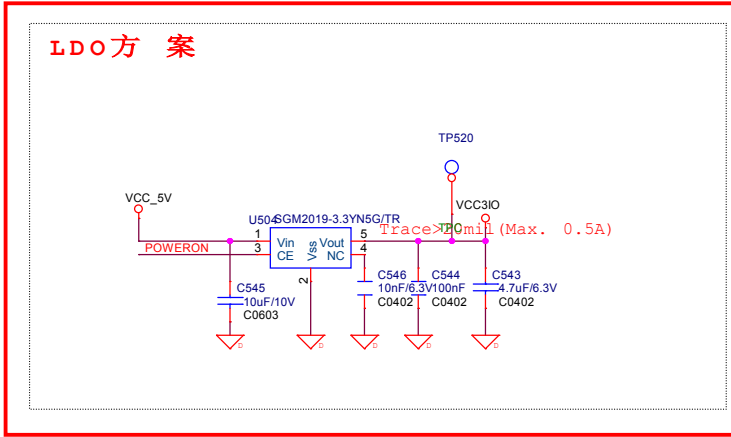
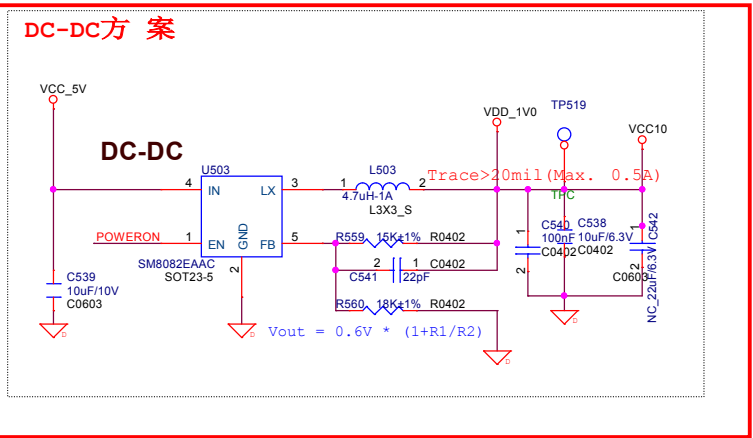
Size A3	Document Number	Rev
<b>AUDIO</b>		
Date: Wednesday, August 11, 2021	Sheet 6 of 10	

POWER

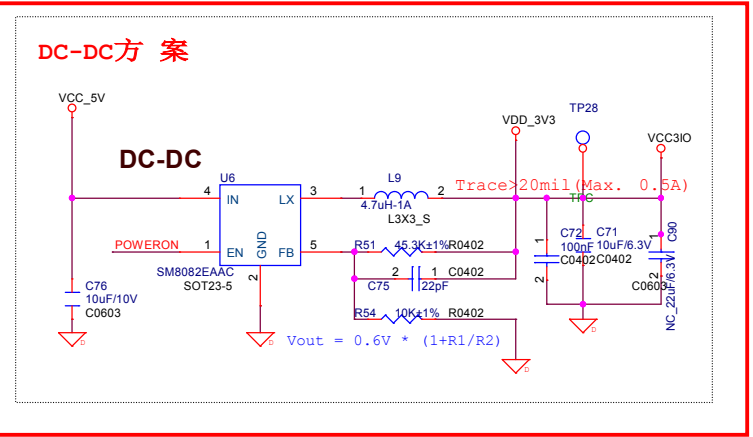
POWERON



1V1电源



3V3电源



蜂鸟芯片电源方案						
电源	电源类型		方案特点			备注
	LDO	DC-DC	电源效率	物料成本	PCB面积	
VCC10	●		低	低	小	成本低, 由于电源效率不高, 芯片发热也较为严重
		●	高	高	大	电源效率高, 整机功耗明显降低, 推荐使用
VCC3IO	●		低	低	小	成本低, 推荐使用
		●	高	高	大	电源效率高, 输出能力强, 3.3V有其他负载需要大电流时使用

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Title: **US52X\_2MIC\_OFFLINE\_DEMO**

Size: A3 Document Number: **Power** Rev: \_\_\_\_\_

Date: Tuesday, April 14, 2020 Sheet 7 of 10

I2S0\_SDIO << I2S0\_SDIO

ADC\_MCLK << ADC\_MCLK  
ADC\_BCLK << ADC\_BCLK  
ADC\_LRCK << ADC\_LRCK

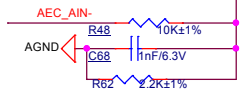
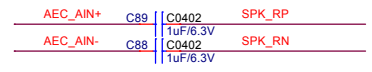
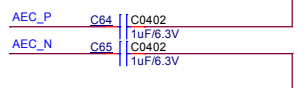
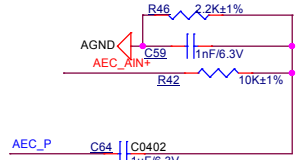
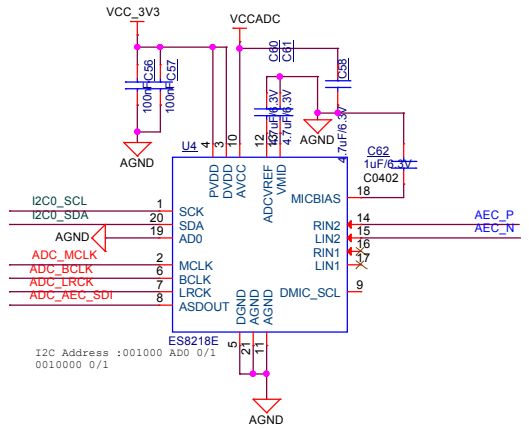
I2C0\_SCL << I2C0\_SCL  
I2C0\_SDA << I2C0\_SDA

I2S0\_SDIO R33 << R33R ADC\_AEC\_SDI

Notes:

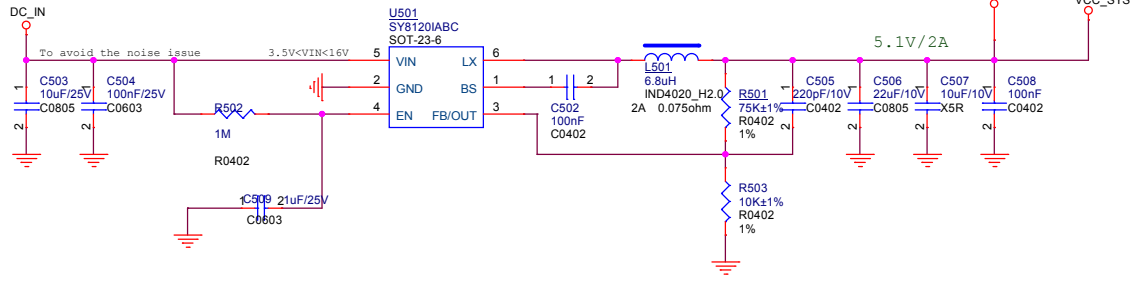
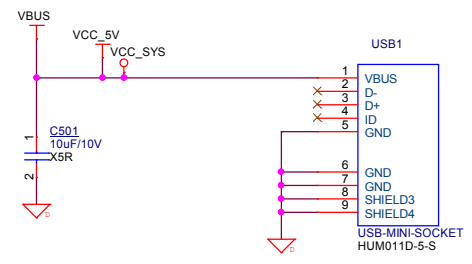
- 1、客户根据实际项目需要是否支持AEC功能。若不用可删除
- 2、如果是AB类的功放，可以参考此电路，如果是D类功放，需要在喇叭回采声音之后，加RC滤波电路

AEC

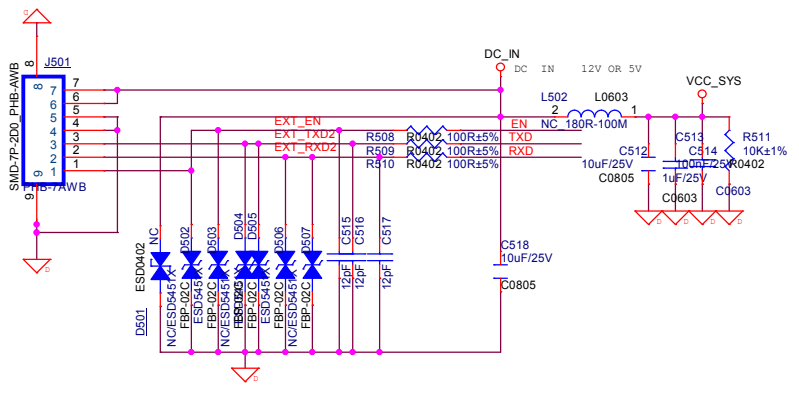
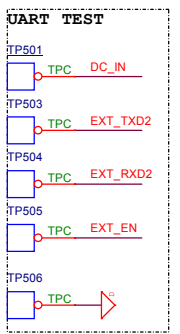




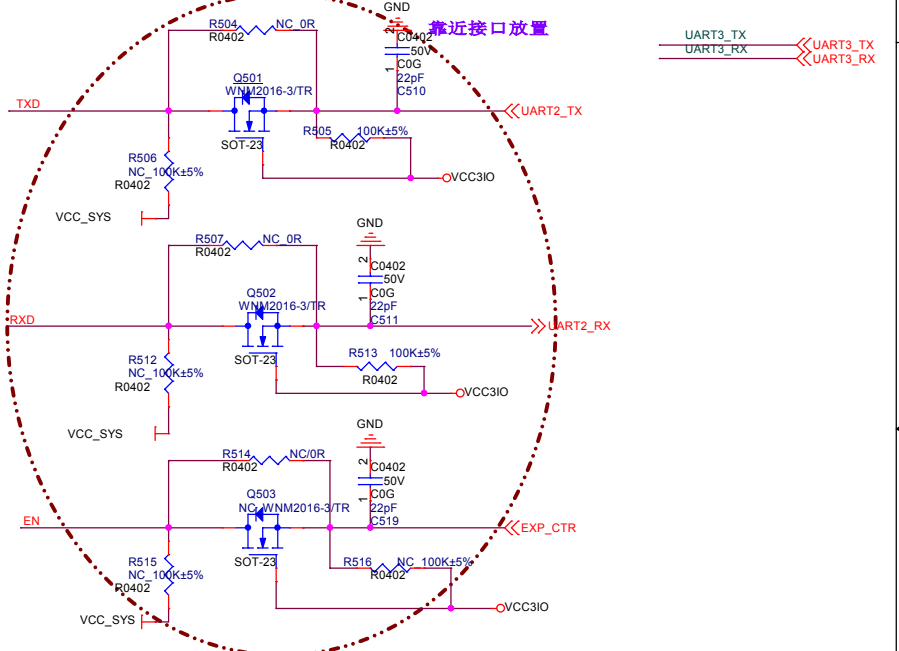
Notes:  
1、USB只是为了便调试 可根据实际需要删减



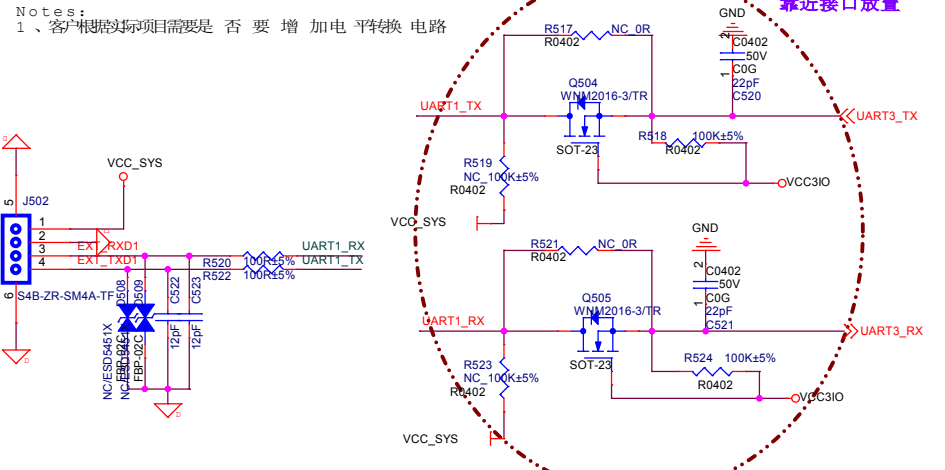
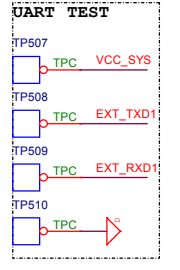
Notes:  
1、客户根据实际项目需要是否要增加电平转换电路




Notes:  
1、TVS管视具体情况需要删减



Notes:  
1、客户根据实际项目需要是否要增加电平转换电路




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**US52X\_2MIC\_OFFLINE\_DEMO**  
 Size A3 Document Number **Interface** Rev  
 Date: Monday, August 02, 2021 Sheet 9 of 10

