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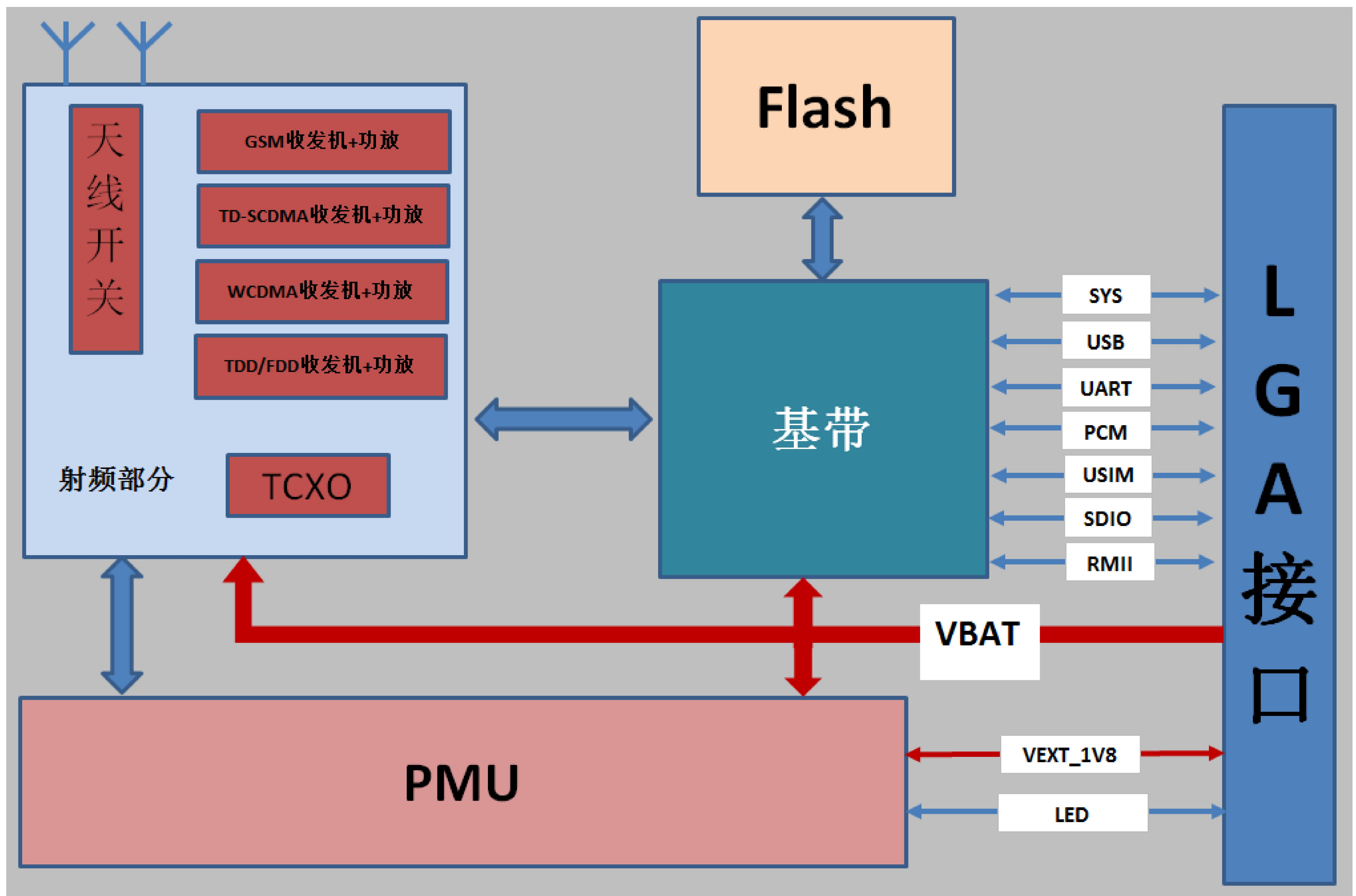
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CMIOT			
DRAWN: Liang Xiaohua	DATED: 2018.02.09	TITLE: 1.BLOCK_DIAGRAM	PROJECT
CHECKED: <Checked By>	DATED: <Checked Date>	SIZE: A2	REV: <Revision>
		SHEET: 1 of	8

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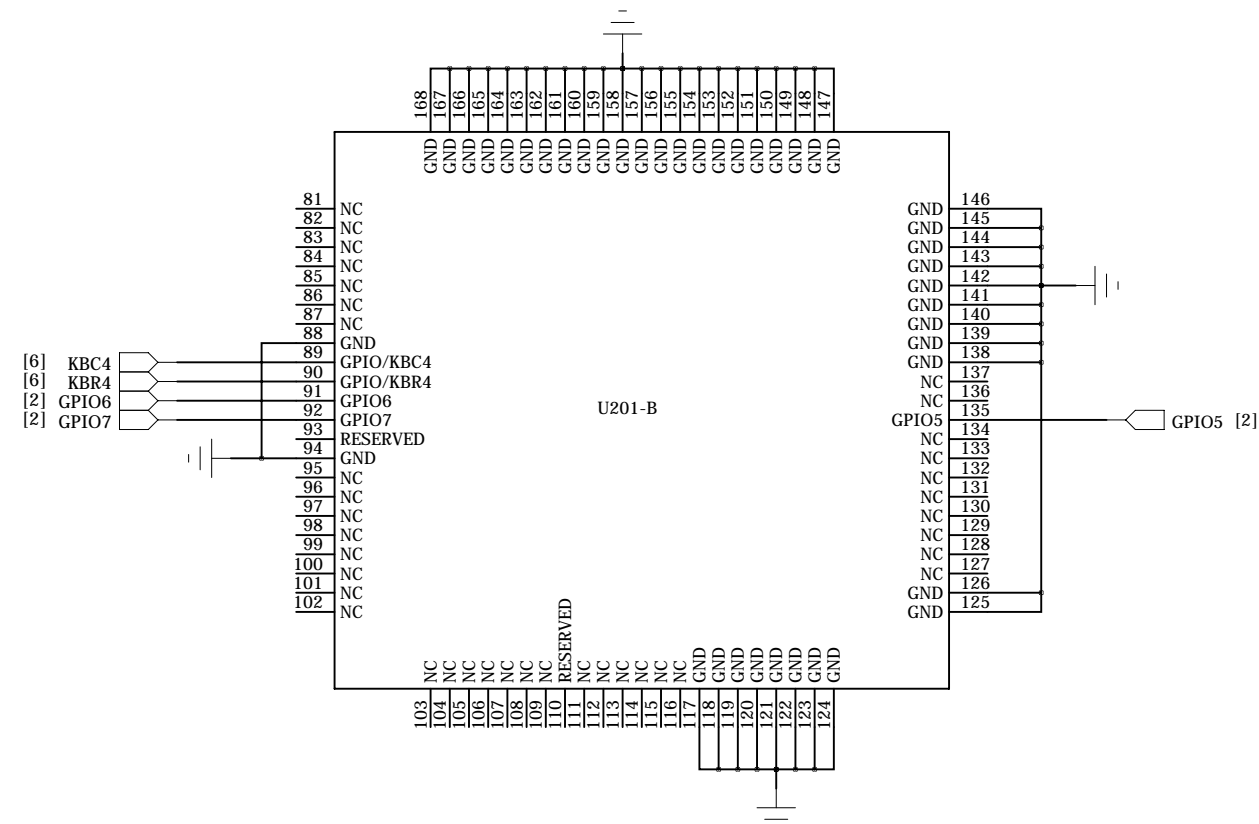
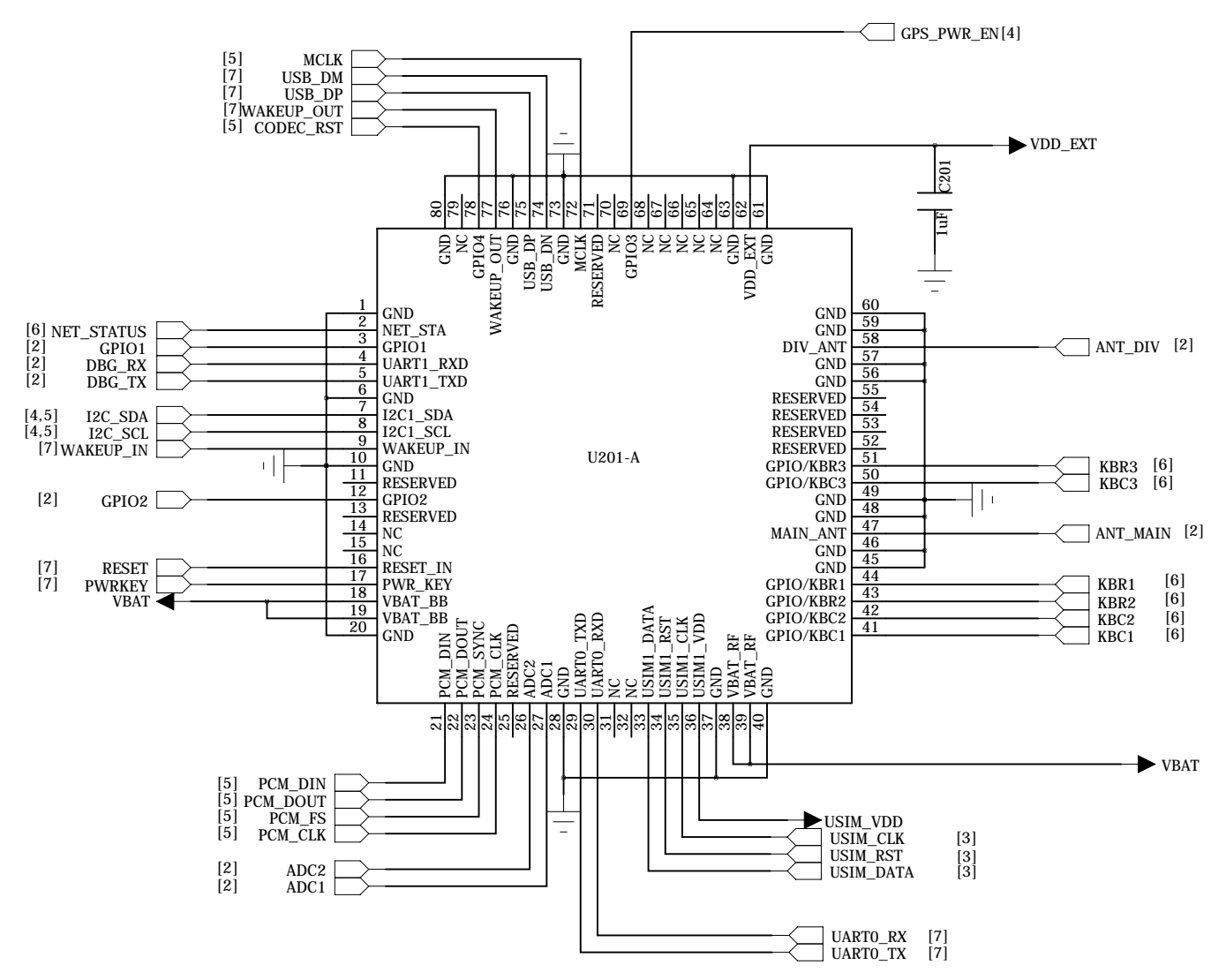
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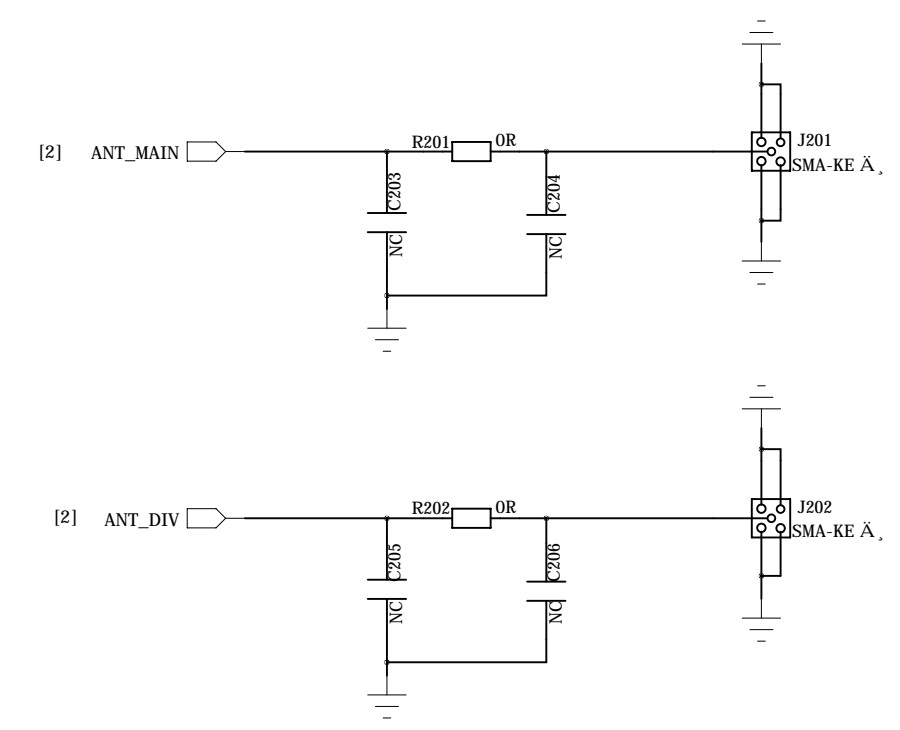
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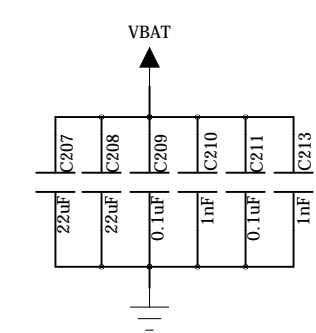
LCC



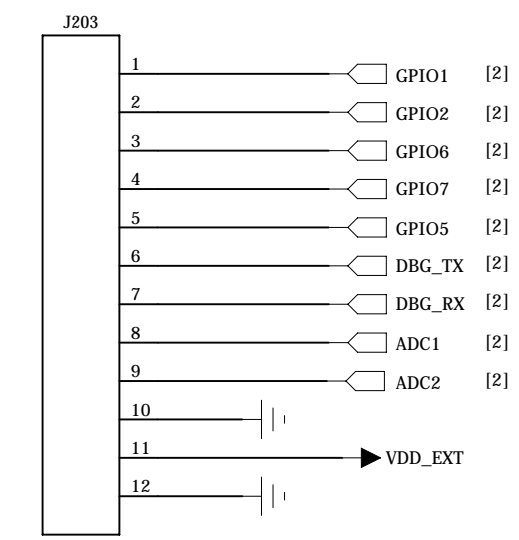
RF



POWER



Test Point

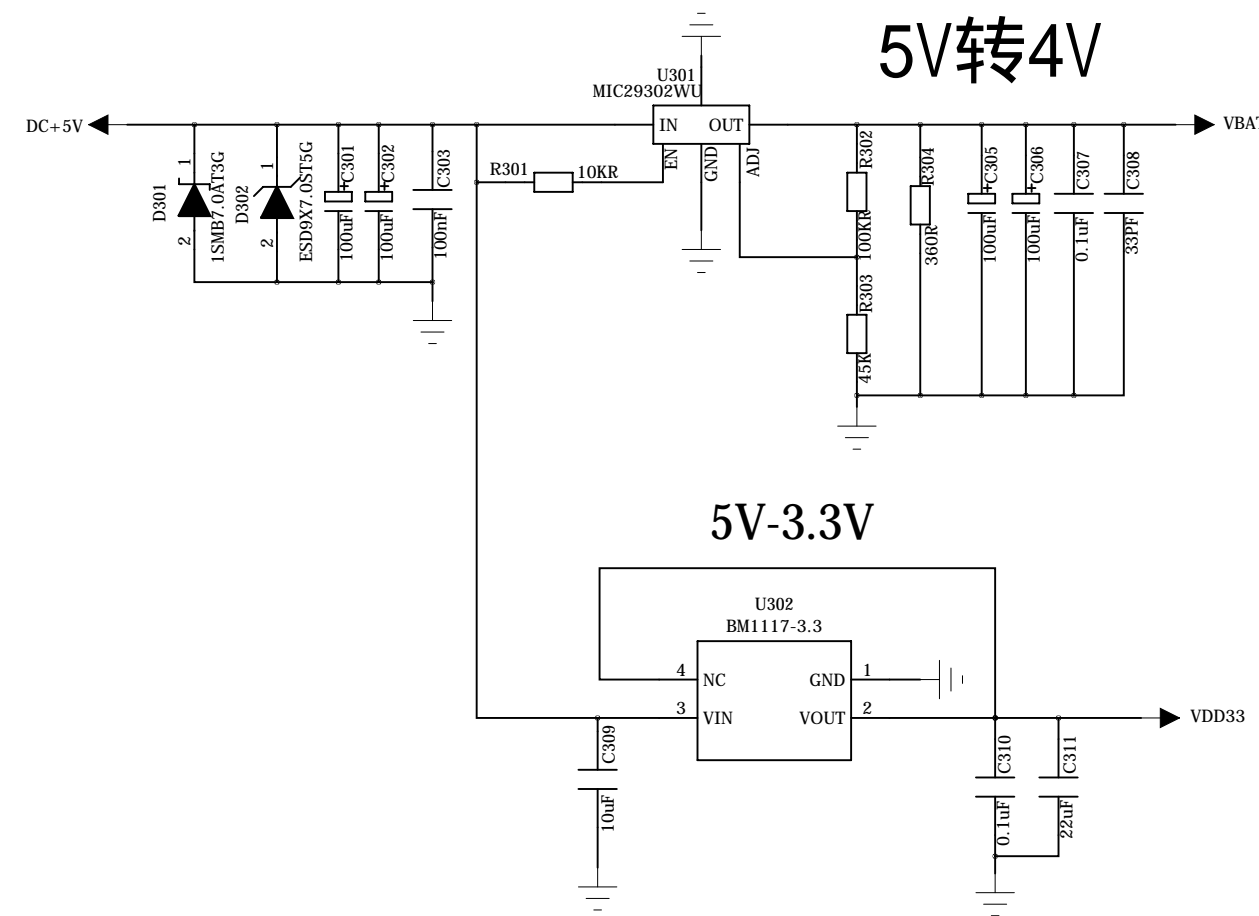


CMIOT			
DRAWN: Liang Xiaohua	DATED: 2018.02.09	TITLE: 2.LCC	PROJECT
CHECKED: <Checked By>	DATED: <Checked Date>	SIZE: A2	REV: <Revision>
		SHEET: 2 of	8

POWER

压差较小的话建议使用LDO

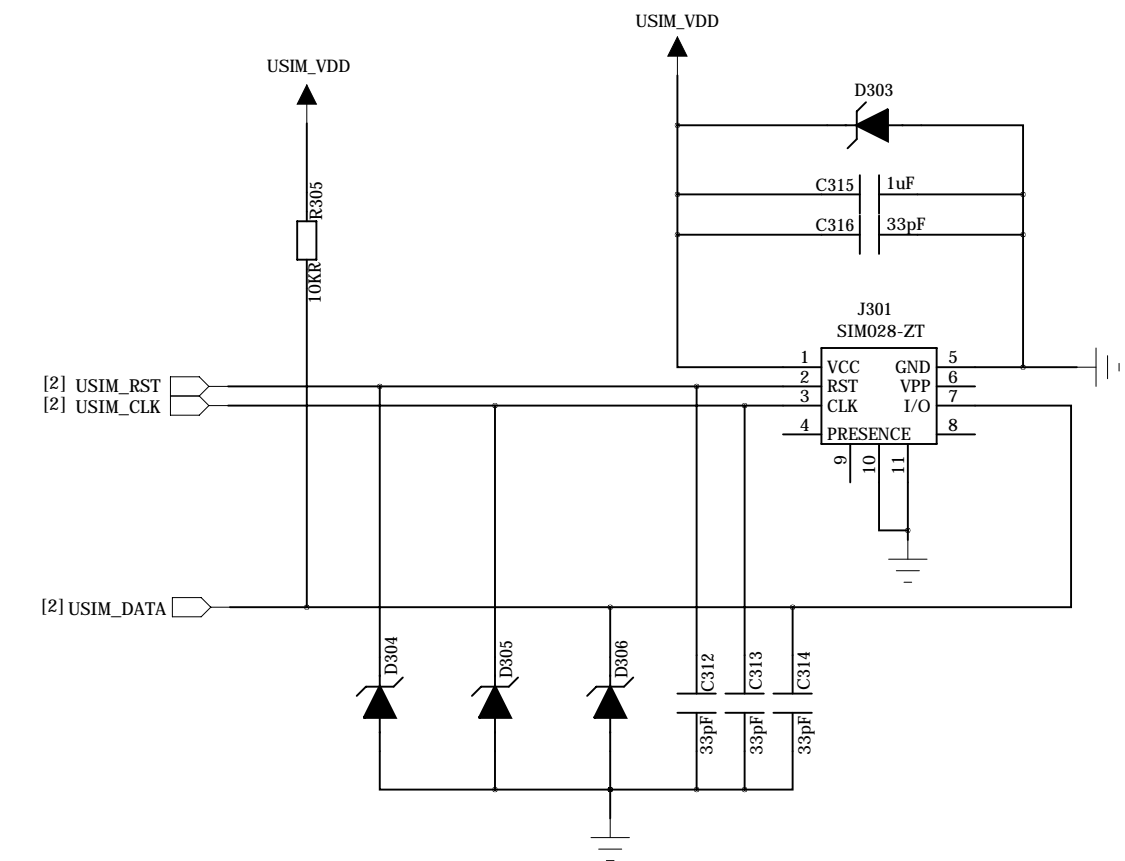
- 1、模组供电范围3.3V-4.6V，典型值3.8V，电源至少能够提供2A电流
- 2、建议增加稳压二极管，提高抗浪涌能力
- 3、电源layout走线尽量短且粗



若输入输出压差较大，建议先使用DCDC降压到5V，再使用LDO



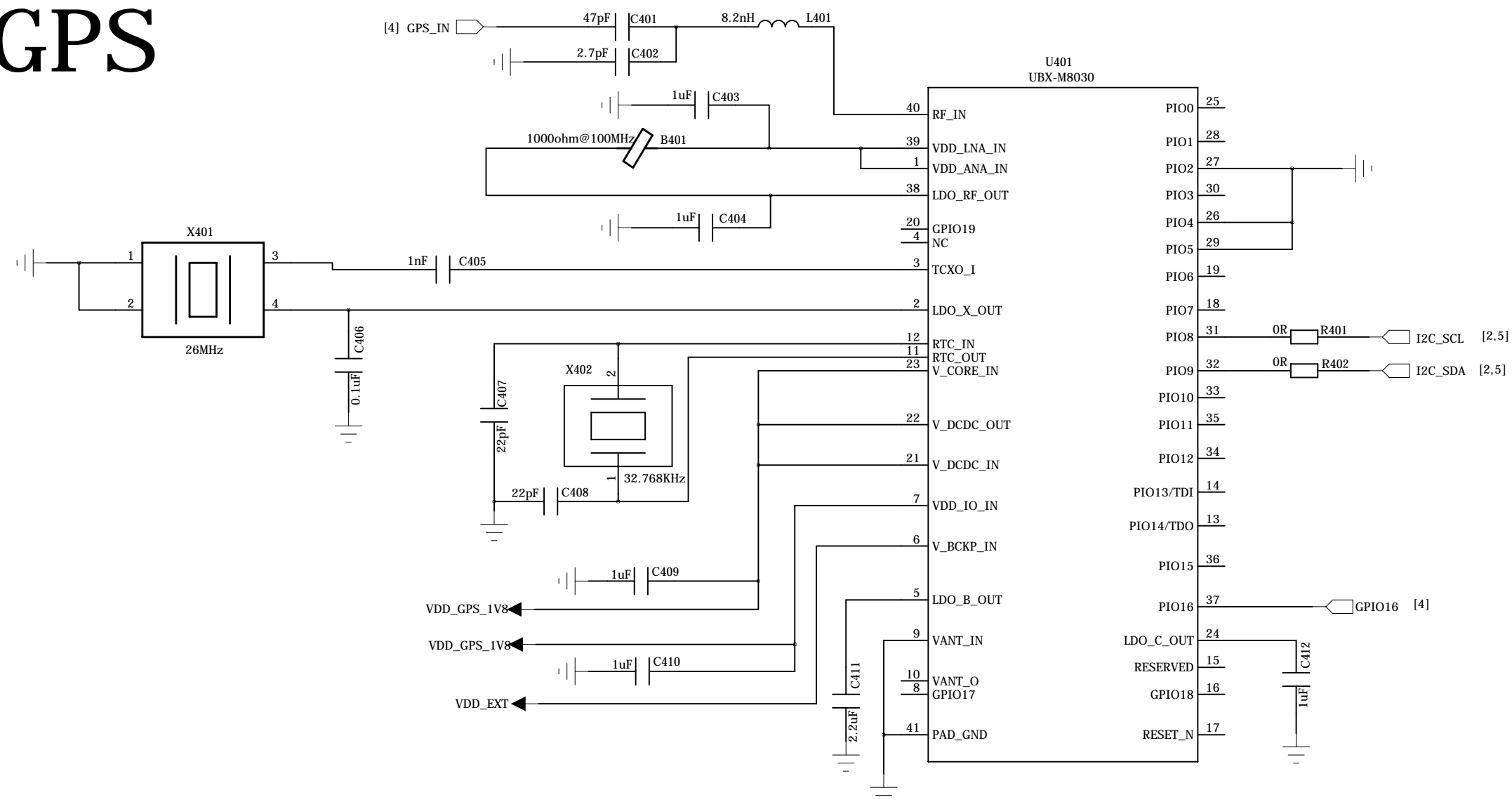
SIM



- 1、USIM_DATA上必须加上拉电阻
- 2、USIM_DET不用可以悬空
- 3、各信号线上预留TVS和33pF滤波电容位置
- 4、SIM卡座远离天线以及强干扰区域，卡座正下方禁止走电源等强干扰信号
- 5、SIM卡不支持热插拔，结构上应避免模组开机状态下SIM卡被拔出

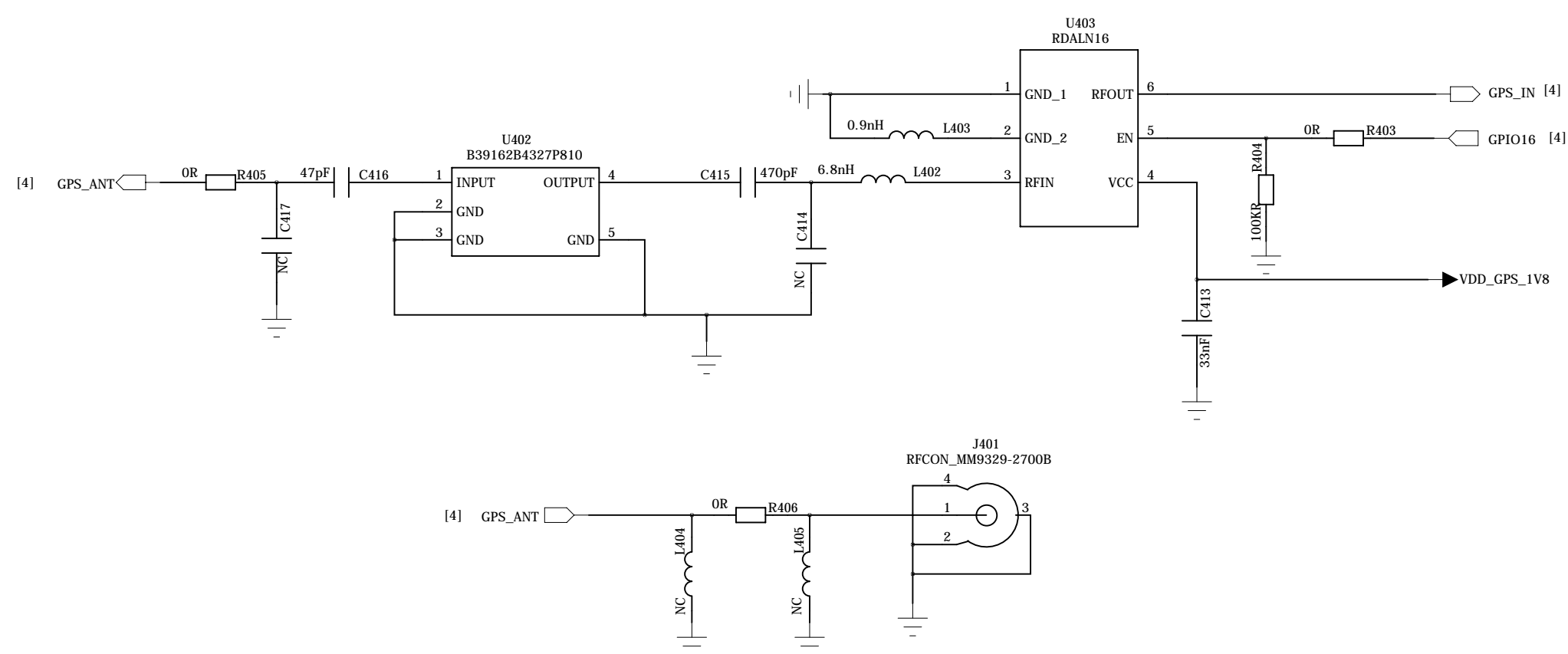
CMIOT							
DRAWN: Liang Xiaohua	DATED: 2018.02.09	TITLE: 3.POWER/SIM	PROJECT				
CHECKED: <Checked By>	DATED: <Checked Date>	SIZE: A2	REV: <Revision>	SHEET: 3of 8			

GPS

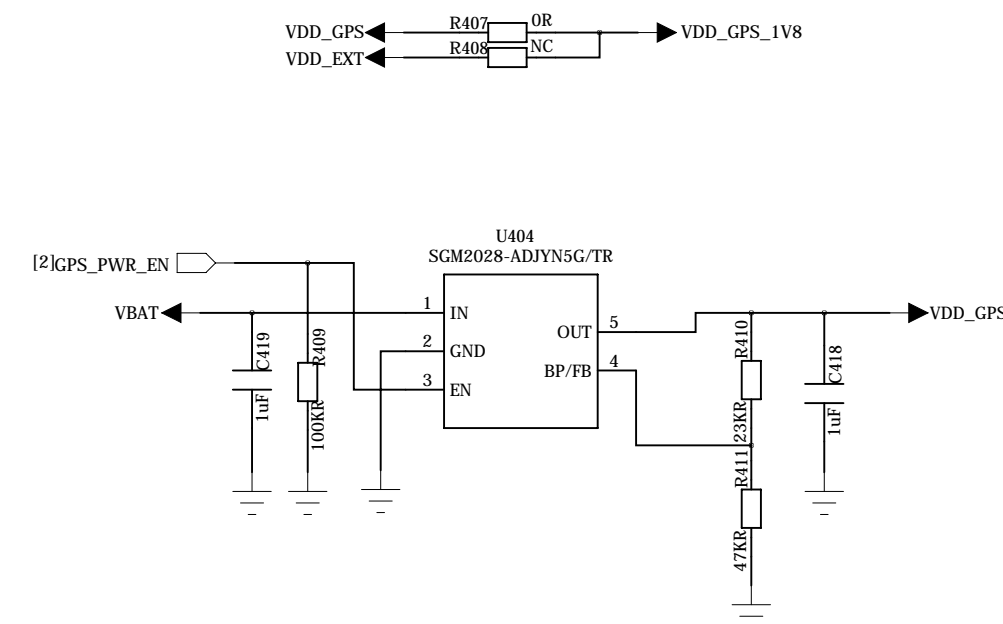


1. GPS芯片推荐选用U-Blox的UBX-M8030或者UBX-G7020
2. GPS芯片跟模组的通信接口推荐选用I2C接口
3. V_BCKP_IN电源需要保持常供电，以保存星历数据
4. 建议在待机状态并且GPS不用的情况下，关闭VDD_GPS电源，达到省电目的
GPS_PWR_EN可由模组控制，或者外部AP控制，已达到开关VDD_GPS的目的

RF



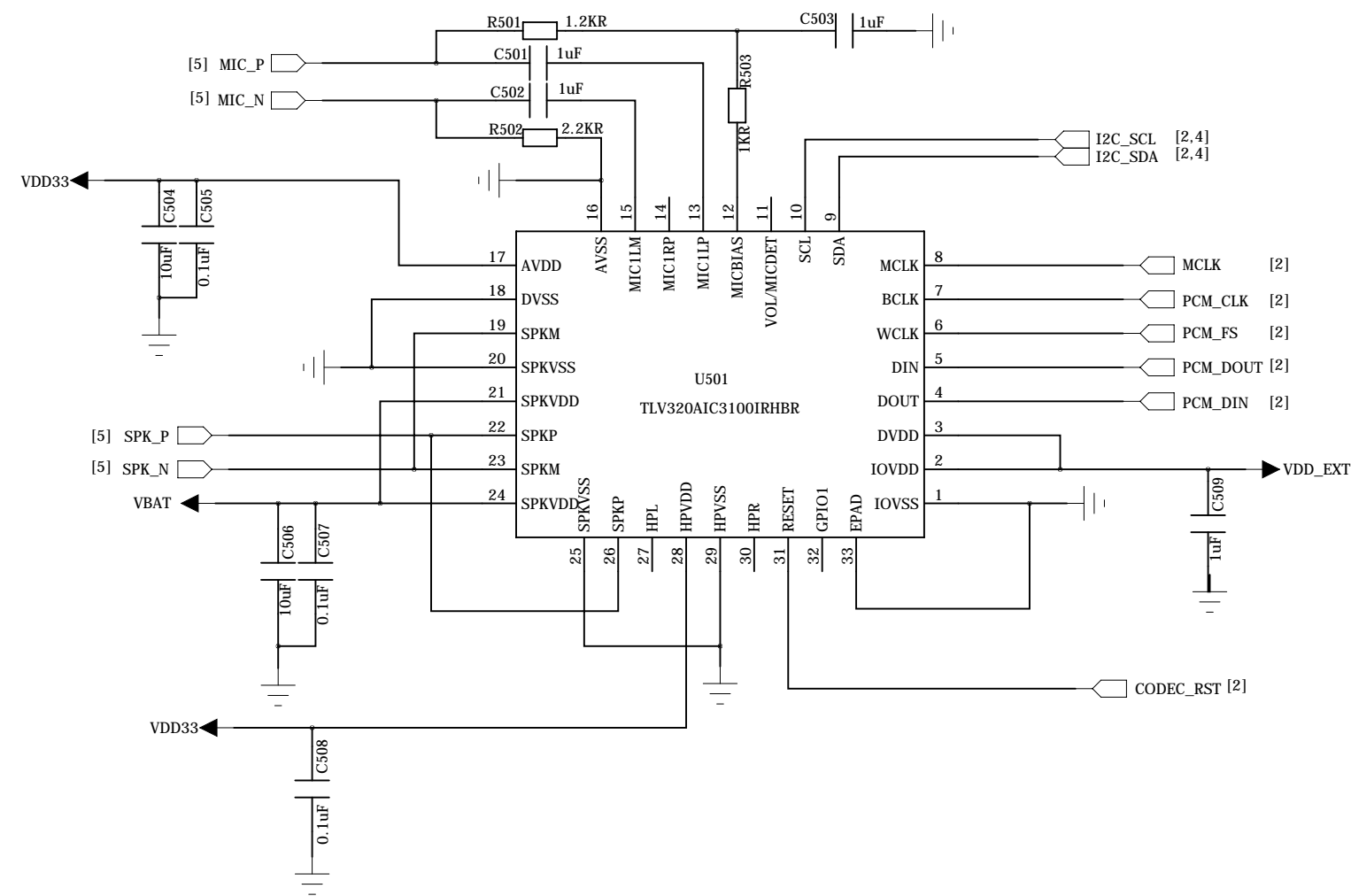
POWER



CMIOT

DRAWN: Liang Xiaohua		DATED: 2018.02.09		TITLE: 4.GPS		PROJECT	
CHECKED: <Checked By>		DATED: <Checked Date>		SIZE: A2		REV: <Revision>	
				SHEET: 4OF		8	

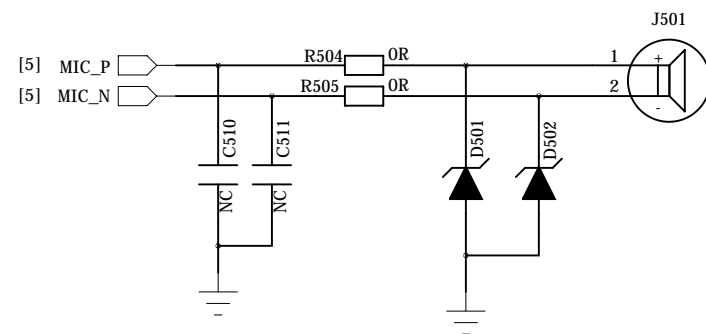
CODEC



- 1. 模组内部集成TLV320AIC3100的驱动，建议Codec选用该芯片
- 2. 建议SPKVDD AVDD和HPVDD

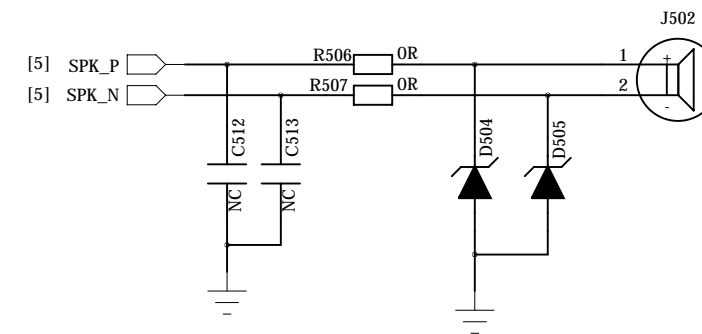
MIC

MIC通路上必须预留串联电阻位置
 MIC通路上必须预留并联电容和TVS的位置，TVS靠近MIC摆放
 电容和TVS单点接主地
 MIC本体远离天线等强干扰源



SPK

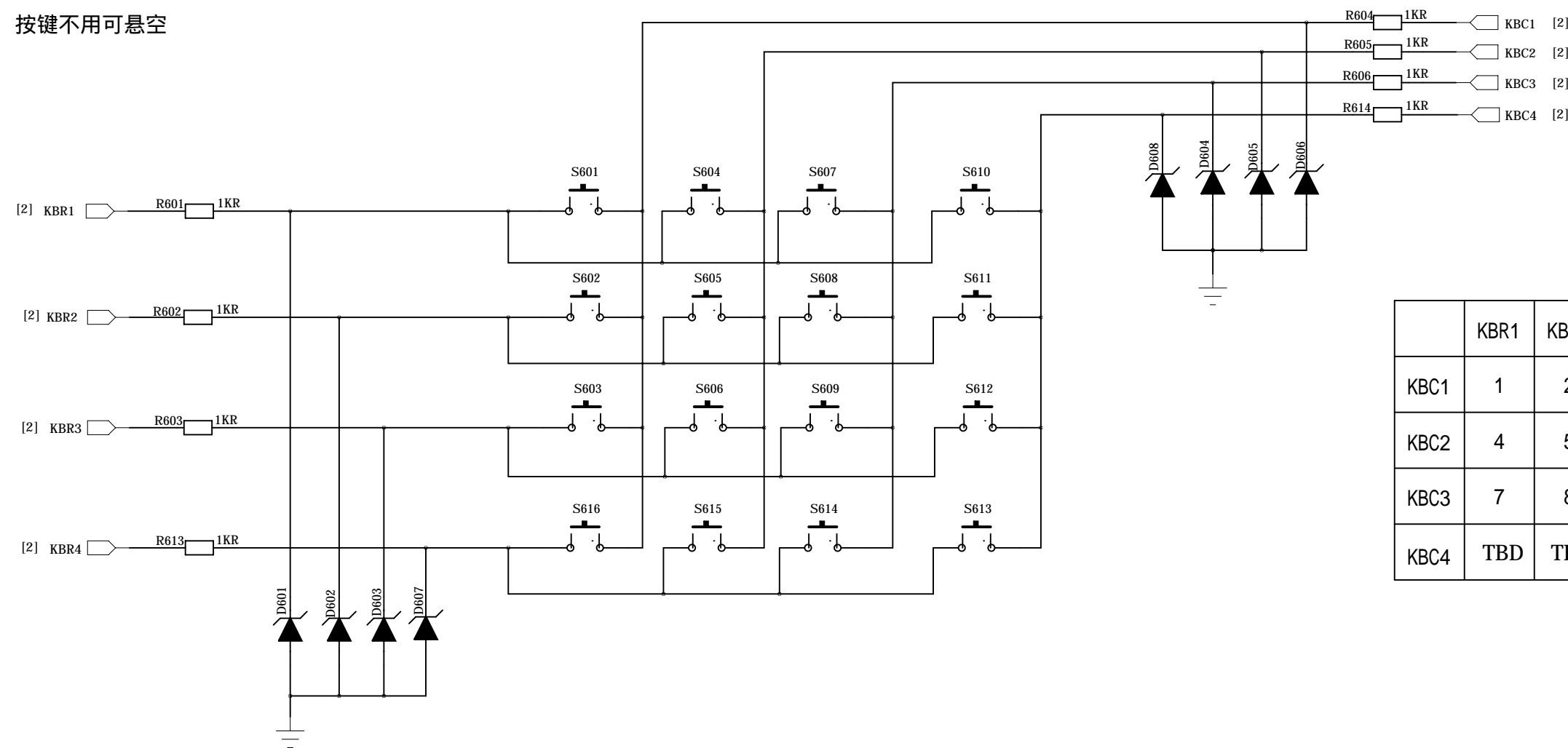
SPK通路上必须预留串联电阻位置
 SPK通路上必须预留并联电容和TVS的位置，TVS靠近MIC摆放
 电容和TVS单点接主地
 SPK本体远离天线等强干扰源



CMIOT				
DRAWN: Liang Xiaohua	DATED: 2018.02.09	TITLE: 5.CODEC	PROJECT	
CHECKED: <Checked By>	DATED: <Checked Date>	SIZE: A2	REV: <Revision>	SHEET: 5of 8

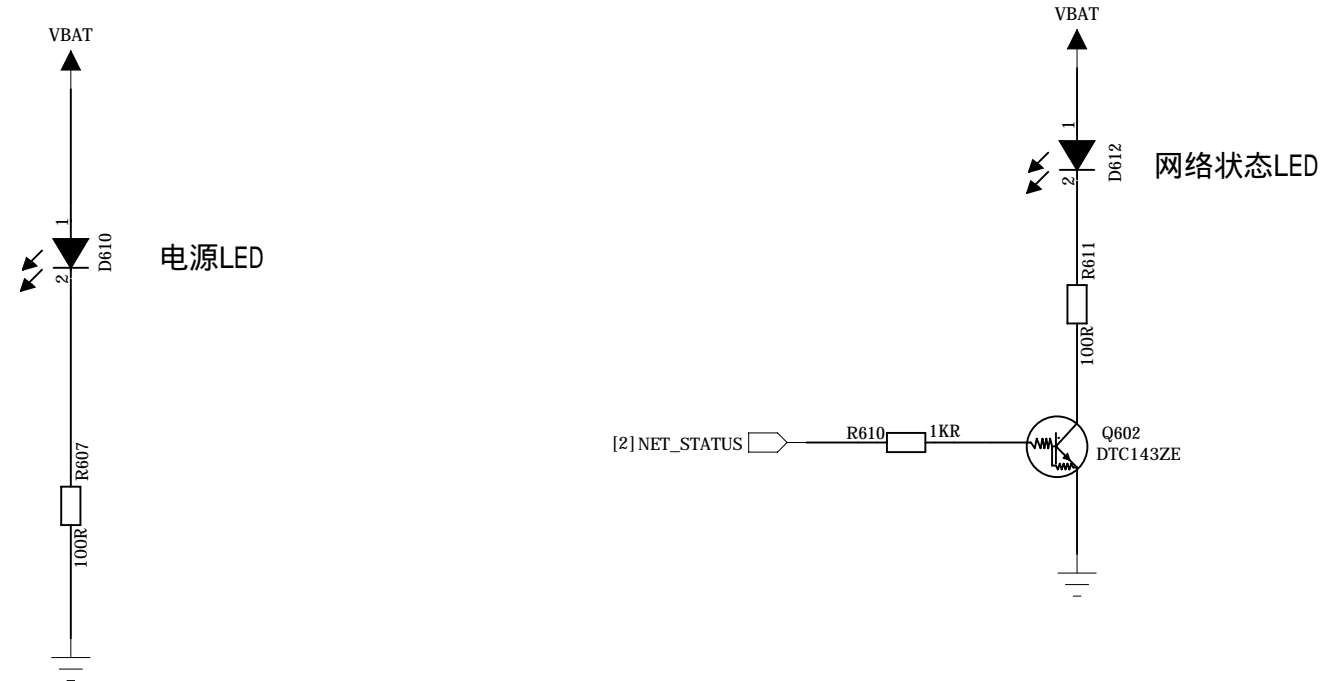
KEY

按键上务必预留串联电阻位置和并联的TVS位置
按键不用可悬空



	KBR1	KBR2	KBR3	KBR4
KBC1	1	2	3	TBD
KBC2	4	5	6	TBD
KBC3	7	8	9	TBD
KBC4	TBD	TBD	TBD	TBD

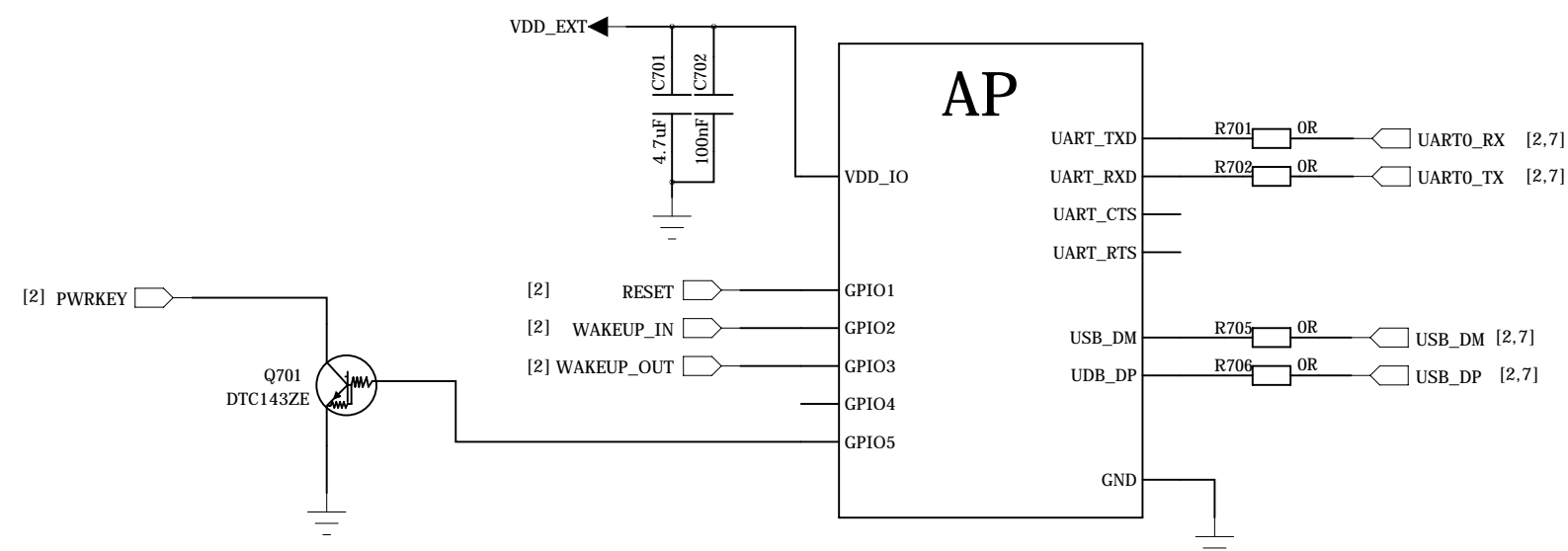
LED



CMIOT			
DRAWN: Liang Xiaohua	DATED: 2018.02.09	TITLE: 6.KEY/LED	PROJECT
CHECKED: <Checked By>	DATED: <Checked Date>	SIZE: A2	REV: <Revision>
		SHEET: 6 OF	8

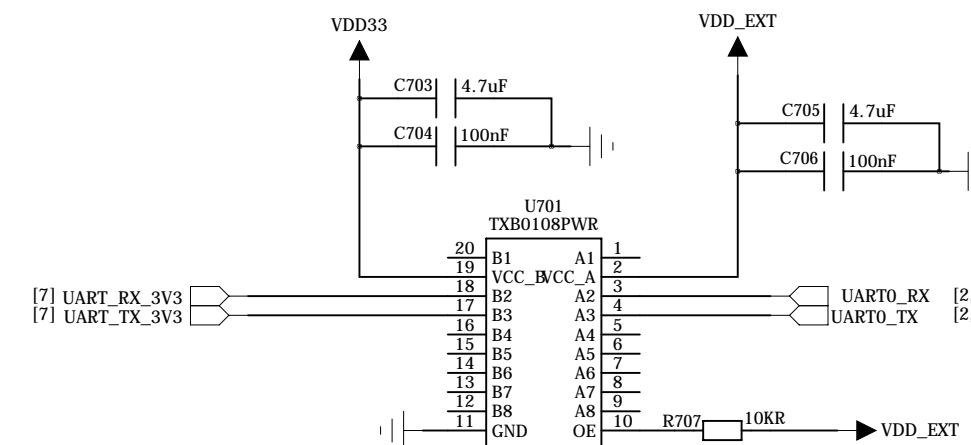
AP

RTS/CTS不用可悬空
 USB上的TVS结电容不要高于1.0pF
 当AP的IO口电平不是1.8V时，所有接到模组的IO口都需要电平转换



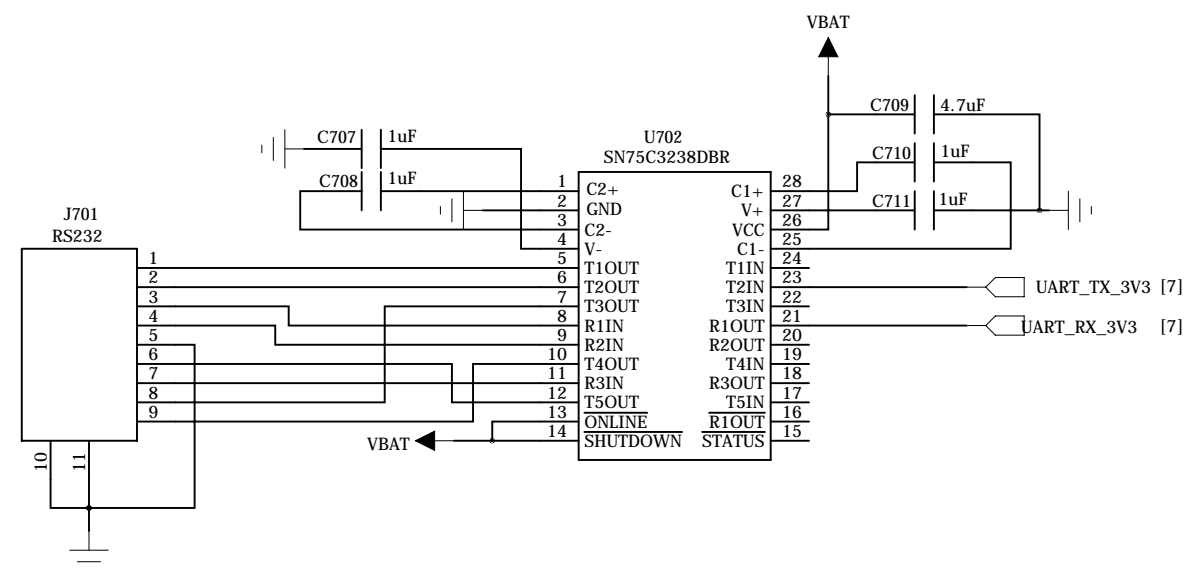
UART电平转换

当DTE需要3.3V串口的时候，可以采用此电路做电平转换
 RTS/CTS如果不用可以直接悬空



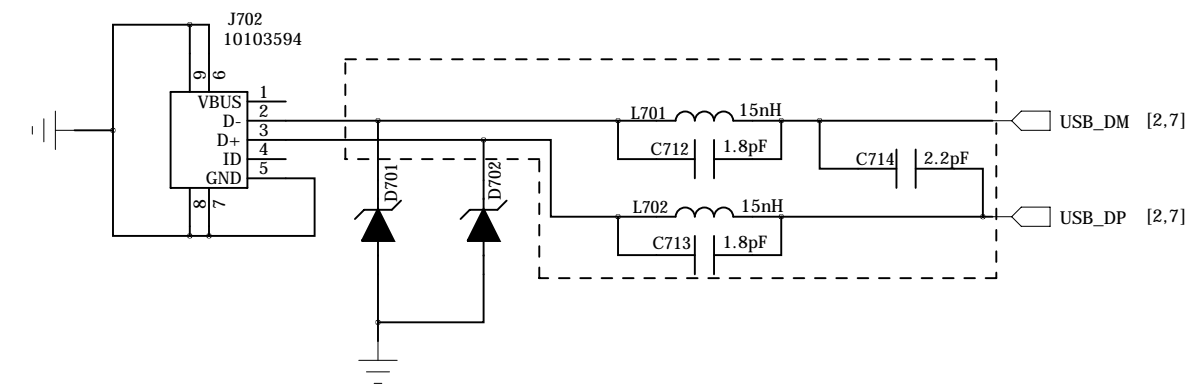
TTL转RS232电路

当外部需要RS232串口的时候，可以采用此电路转换
 RTS/CTS如果不用可以直接悬空
 C707/C708/C710/C711电容耐压值大于10V



USB

USB接口作为4G模组对外的主要数据传输接口
 DP/DM需要控制90欧姆差分阻抗
 D701/D702采用结电容小于1pF的TVS



CMIOT

DRAWN: Liang Xiaohua		DATED: 2018.02.09		TITLE: 7. UART/USB		PROJECT	
CHECKED: <Checked By>		DATED: <Checked Date>		SIZE: A2	REV: <Revision>	SHEET: 7of 8	

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CMIOT				
<small>DRAWN:</small> Liang Xiaohua	<small>DATED:</small> 2018.02.09	<small>TITLE:</small> 8.CHANGE_NOTES	<small>PROJECT</small>	
<small>CHECKED:</small> <Checked By>	<small>DATED:</small> <Checked Date>	<small>SIZE:</small> A2	<small>REV:</small> <Revision>	<small>SHEET: 8 of 8</small>