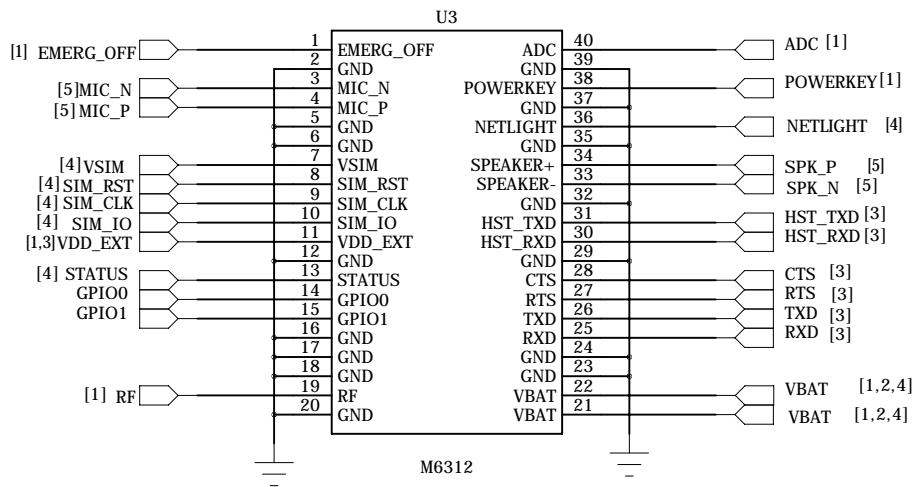
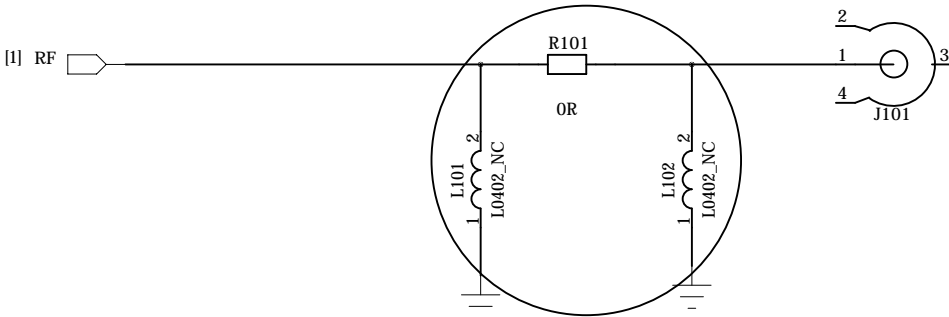


模组接口

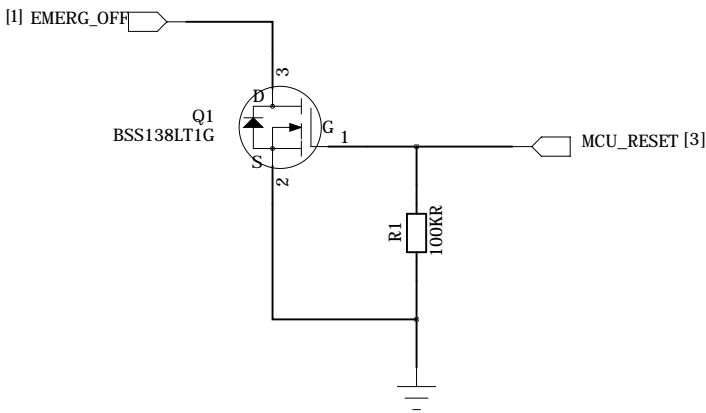


GSM天线

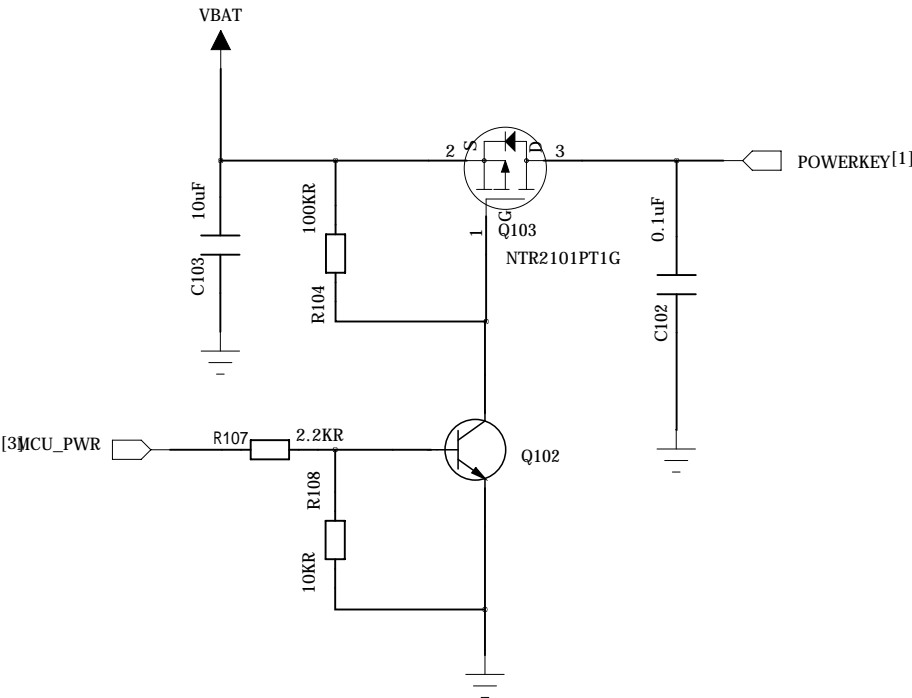
靠近天线座子端预留PI型匹配电路，天线控制50欧姆阻抗



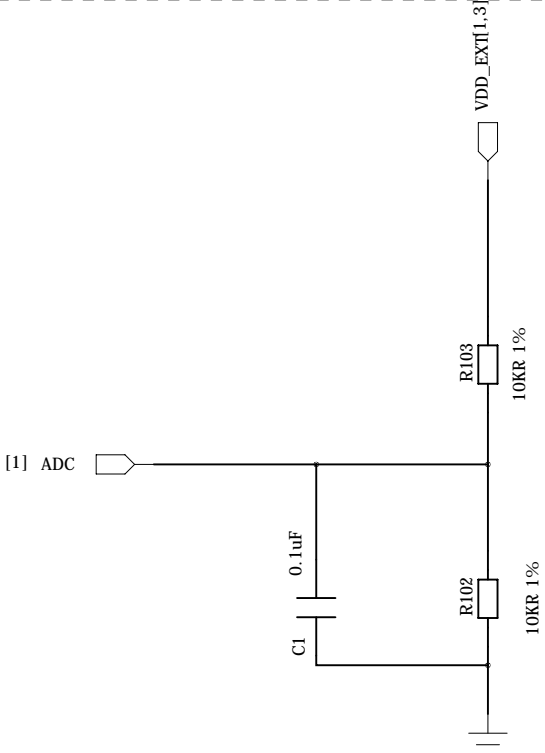
EMERG\_OFF电路



POWERKEY电路



ADC参考电路



中移物联网				
DRAWN: zhangle	DATED: 2018/04/02	TITLE: MODULE	PROJECT M6312参考设计	
CHECKED: <Checked By>	DATED: <Checked Date>	SIZE: A2	REV: V1.1	SHEET: 1 of 5

**1**

## D

## C



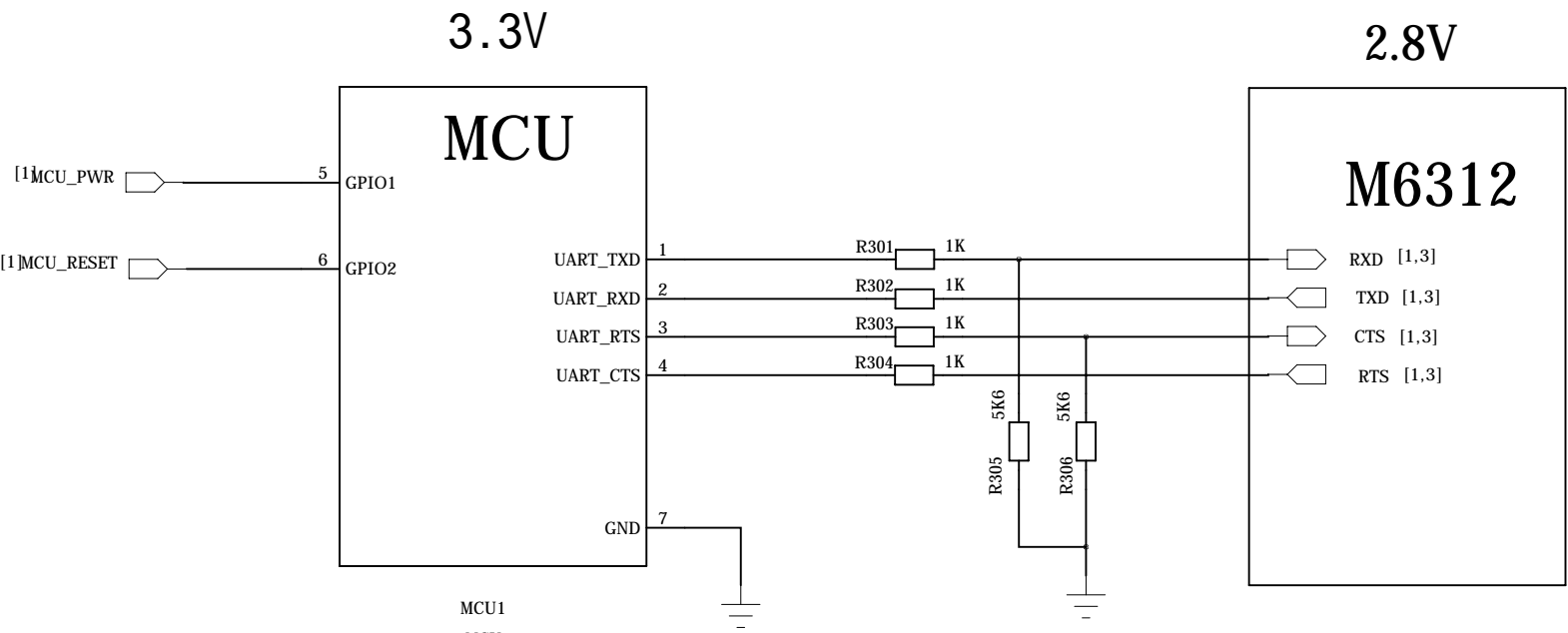
A



SHEET: 2 OF 5

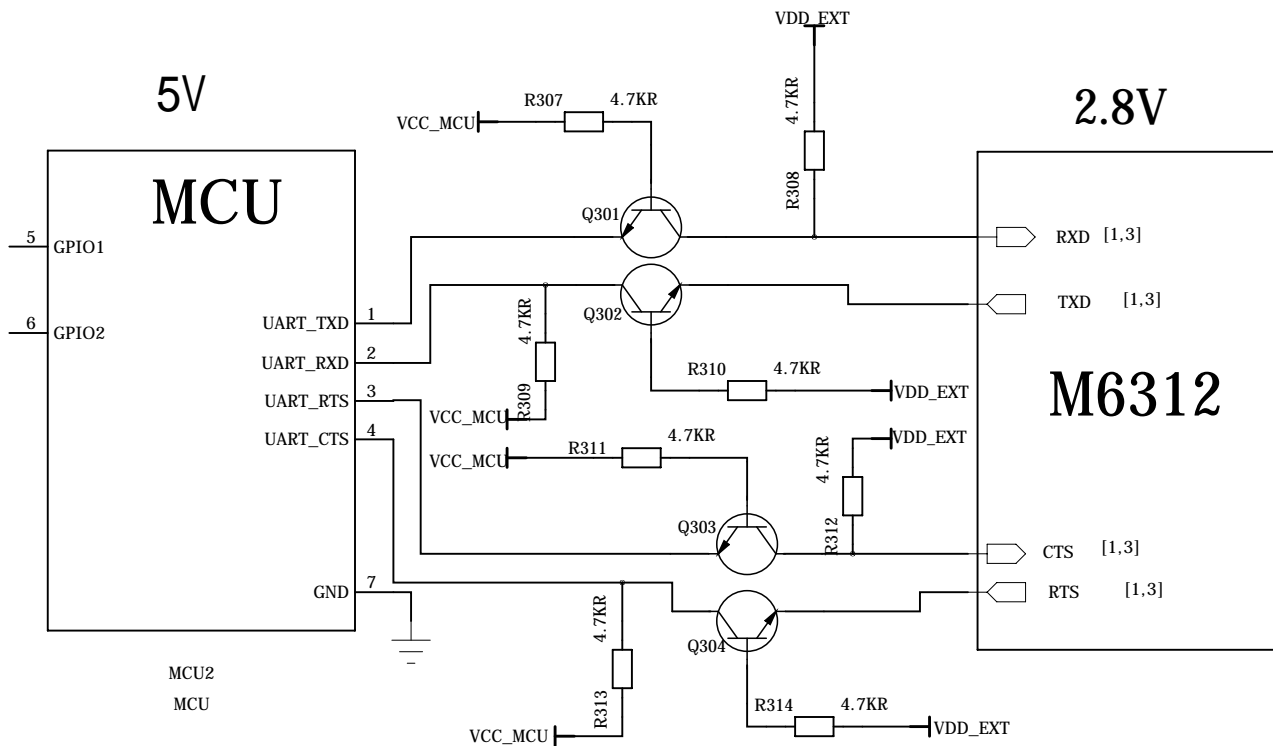
# UART

## 3.3V单片机



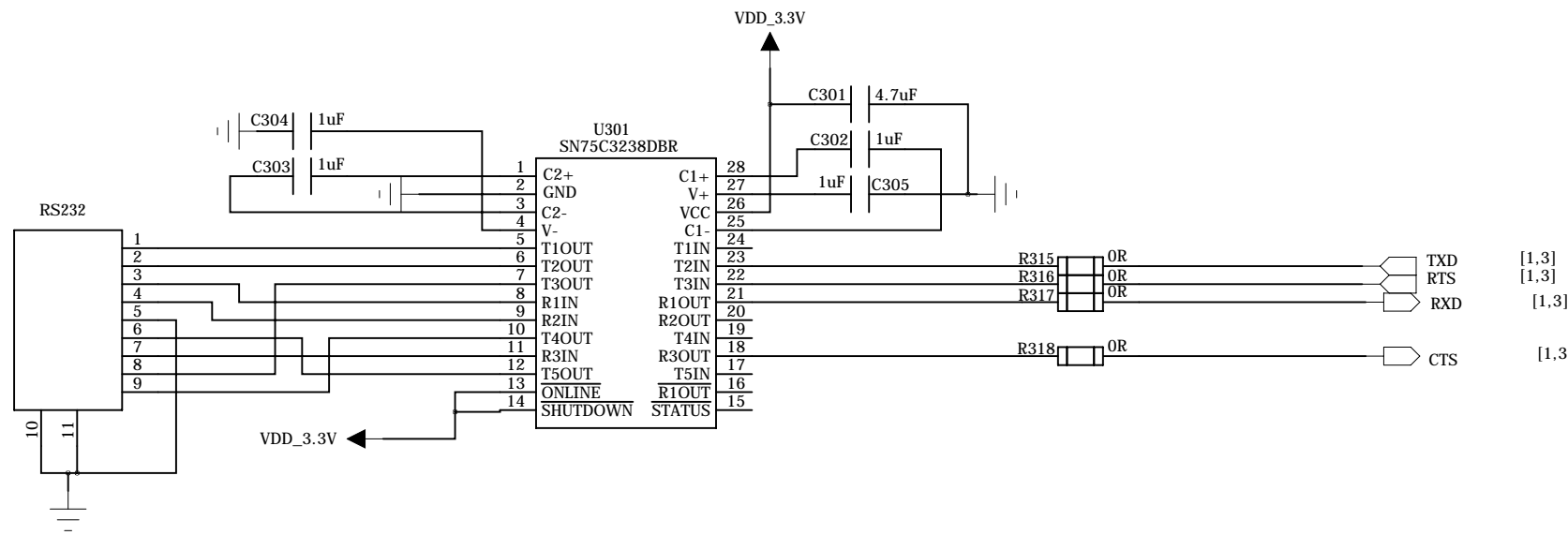
## 5V单片机

VCC\_MCU是单片机的I0电压，VDD\_EXT是模块输出的I0电压

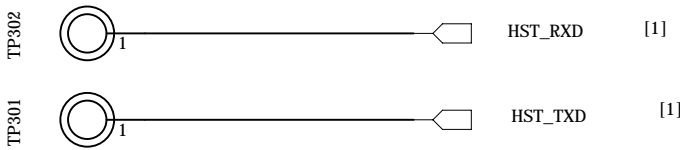


# TTL转RS232电路

如需转换为RS232电平可参考此电路



- 1、主串口提供4线串口，支持硬件流控功能
- 2、无需硬件流控可只使用RXD和TXD
- 3、模组串口为2.8V电平，注意电平匹配  
3.3V采用电阻分压，5V采用三极管推动
- 4、HST\_UART留测试点，用于debug和固件下载



中移物联网				
DRAWN:	zhangle	DATED:	2018/04/02	TITLE:
UART		PROJECT		
M6312参考设计		M6312参考设计		
CHECKED:	<Checked By>	DATED:	<Checked Date>	SIZE:
A2		REV:		V1.1
SHEET: 3of 5		5		

The schematic diagram illustrates the internal circuitry of the SIM module. It features three input signals on the left: [1] SIM\_RST, [1] SIM\_CLK, and [1] SIM\_IO. These signals are connected to a central horizontal bus. The bus is populated with several components: three capacitors labeled C401, C402, and C403, each with a value of 33pF; and three diodes labeled D404, D405, and D406, all oriented towards ground. To the right of the main bus, there is a sub-circuit containing a diode D407 pointing away from the bus, a capacitor C404 with a value of 1uF, and another capacitor C405 with a value of 33pF. This sub-circuit is connected to a component labeled 'SIM'. The 'SIM' component has pins numbered 1 through 10. Pins 1, 2, 3, and 4 are labeled VCC, RST, CLK, and PRESENCE respectively. Pins 5, 6, 7, and 8 are labeled GND, VPP, I/O, and another GND. Pins 9 and 10 are also shown. A vertical arrow labeled VSIM points upwards from the top of the circuit.

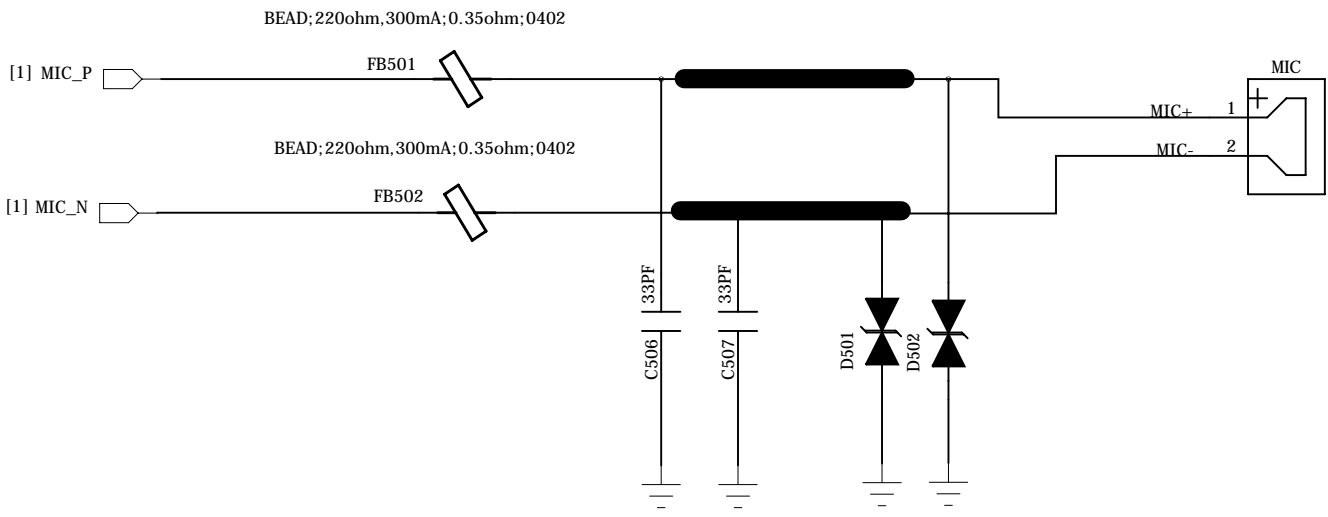
STATUE指示模块的开机状态

NETLIGHT指示网络状态

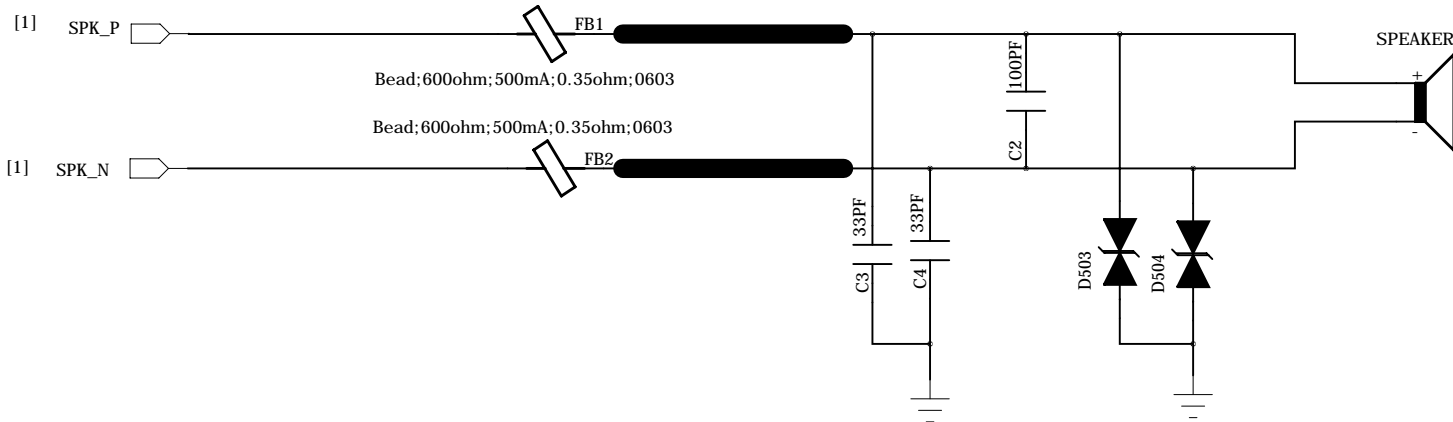
中移物联网				
DRAWN: zhangle	DATED: 2018/04/02	TITLE: SIM&LED		PROJECT M6312参考设计
CHECKED: <Checked By>	DATED: <Checked Date>	SIZE: A2	REV: V1.1	SHEET: 4 of 5

音频电路

MIC



Speaker



- 1、Speaker最大驱动功率为1.5W,如果需要驱动更大功率的扬声器需要使用外部PA
- 2、音频信号为模拟信号，增加滤波器件提升音质
- 3、音频信号为差分信号，layout时走差分线，线宽必须满足过流要求
- 4、添加ESD器件防静电，布局靠近音频器件

中移物联网				
DRAWN: zhangle	DATED: 2018/04/02	TITLE: AUDIO	PROJECT M6312参考设计	
CHECKED: <Checked By>	DATED: <Checked Date>	SIZE: A2	REV: V1.1	SHEET: 5of 5