

# Module Interface

VBAT can be only connected to PIN38,39 or PIN 62,63. To get a better GND plane

The total Capacitance depend on current ability

Add ZENER Diode (5.1V/500mW) to get better surge performance!

Refer to Page5 for the GNSS Antenna details!

1. Place caps close to VBAT pins
2. VBAT trace should be short and wide (>2mm)
3. VBAT range is 3.4~4.2V, recommend 4V.

Reserved Test point for Download mode

Normal voltage is 0.85V

Div Antenna

1. Add ZENER Diode to get better surge performance!
2. USB\_VBUS is 3.0~5.25V.

Keep RF trace 50 ohm and as short as possible

VIL should be lower than 0.5V

1. VDD\_EXT can be configured to 1.8V or 2.95V
2. Iout max is 150mA

Netlight LED

Status LED

Controlled by MCU

Controlled by MCU

Keep RF trace 50 ohm and as short as possible

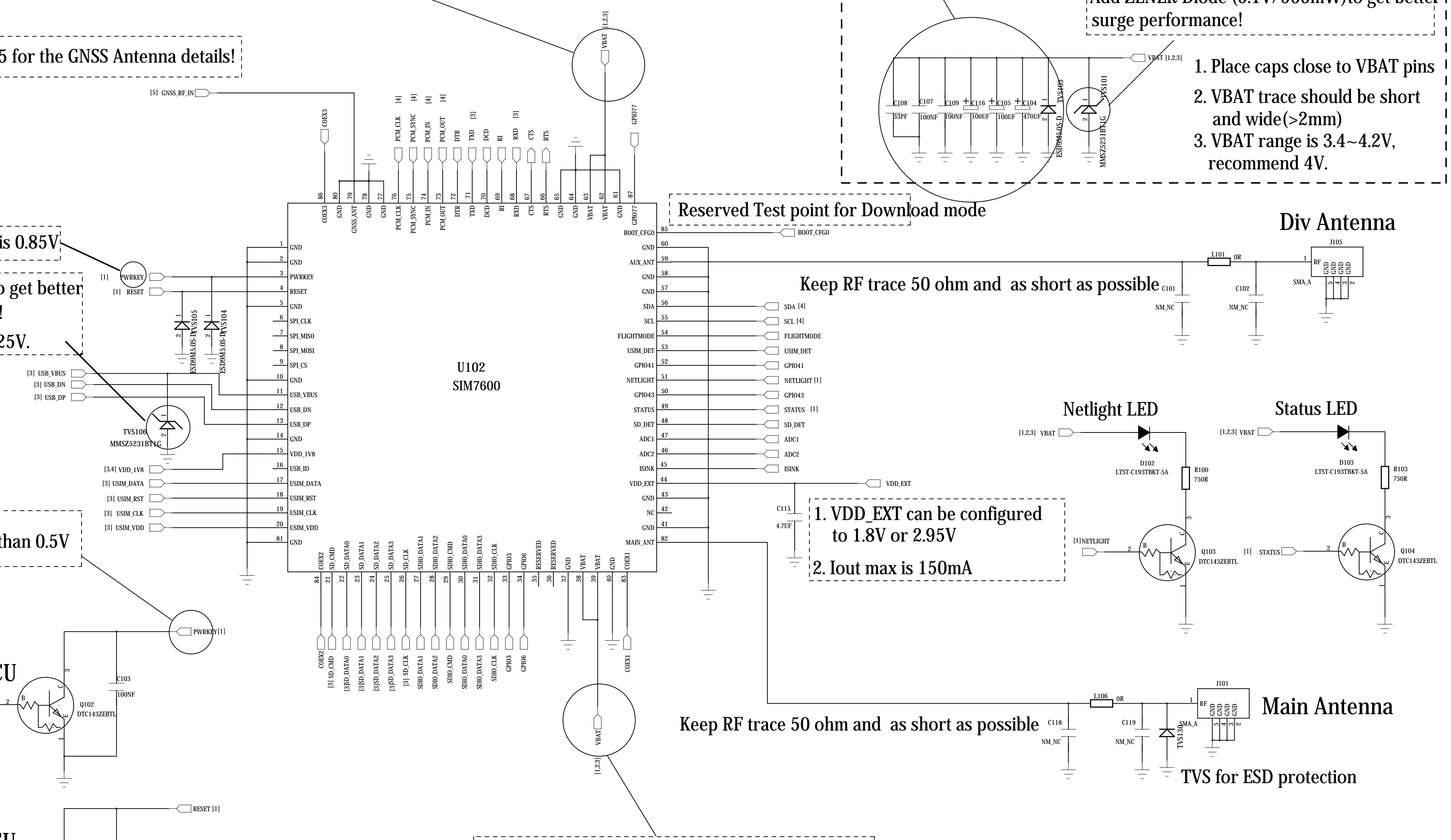
Main Antenna

TVS for ESD protection

VBAT can be only connected to PIN38,39 or PIN 62,63. To get a better GND plane

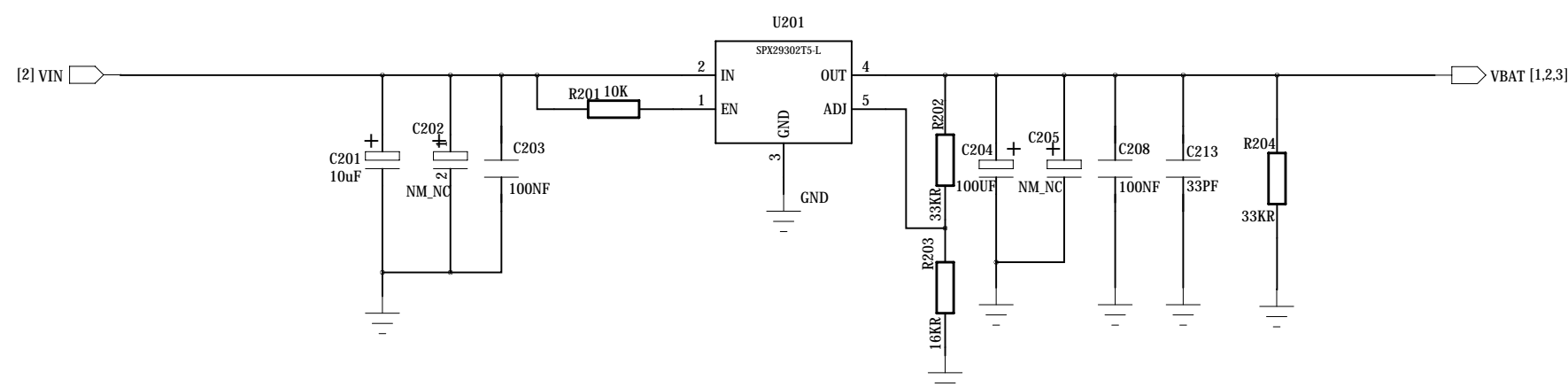
## SIMCom Wireless

DRAWN BY Ma Honggang	PROJECT SIM7600 Ref Design	TITLE MODULE_INTERFACE
CHECKED BY Zhou Jing	SIZE A2	VER V1.01
SHEET 1 of 6		2017-12-29

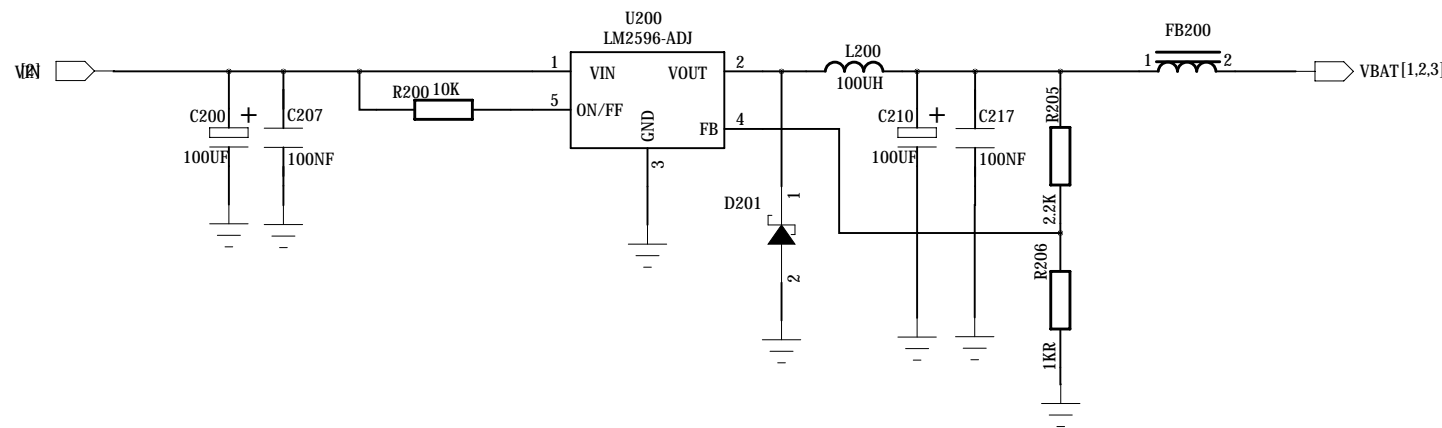


# Power Design

## LDO Circuit (VIN<9V)



## DCDC Circuit (VIN>9V)

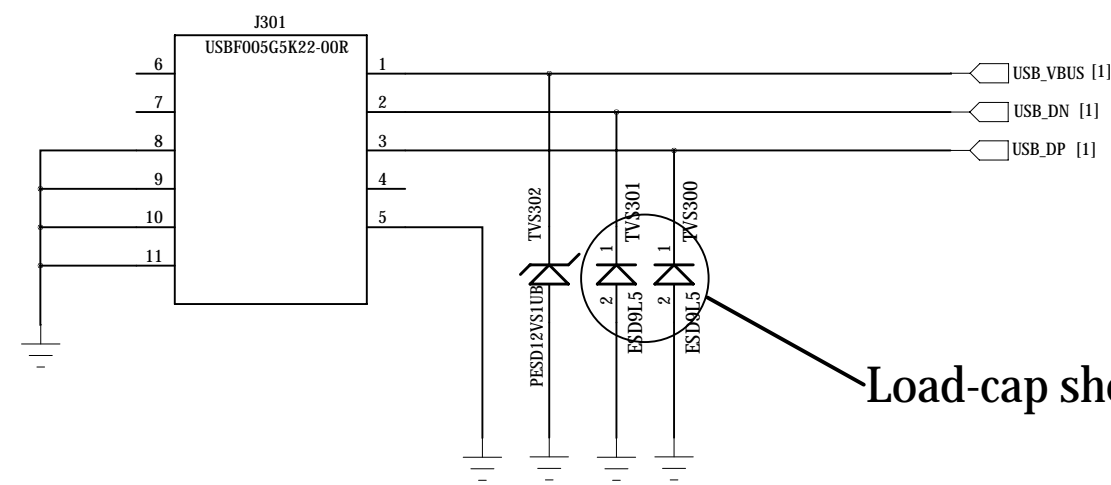


### SIMCom Wireless

DRAWN BY Ma Honggang	PROJECT SIM7600 Ref Design	TITLE POWER DESIGN
CHECKED BY Zhou Jing	SIZE A2	VER V1.01
SHEET 2 of 6		2017-12-29

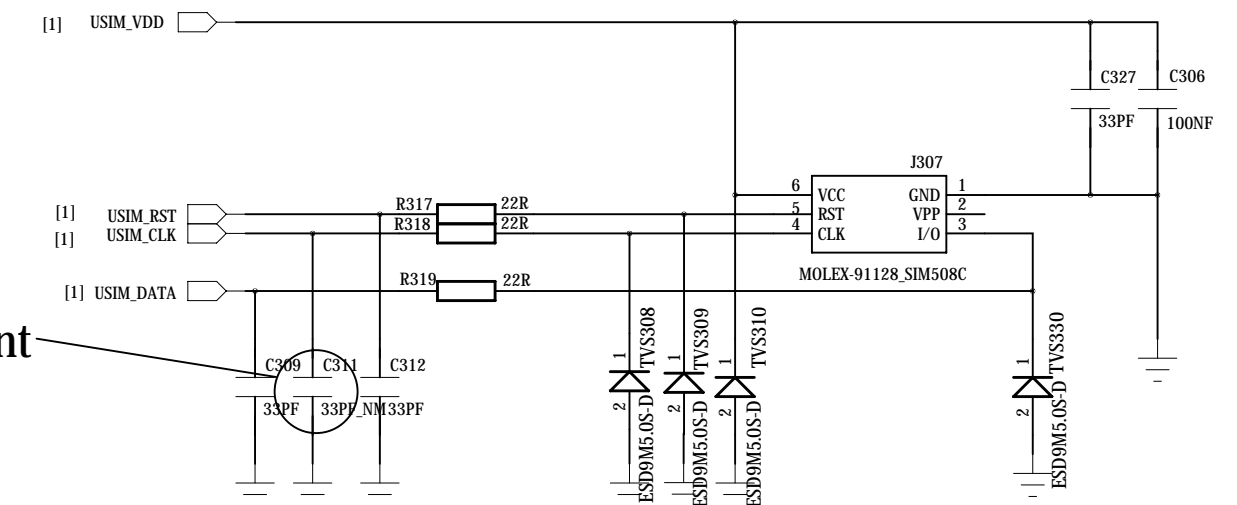
# USIM/SD/USB/UART Interface

## USB Interface



Load-cap should less than 3pf

## USIM Socket

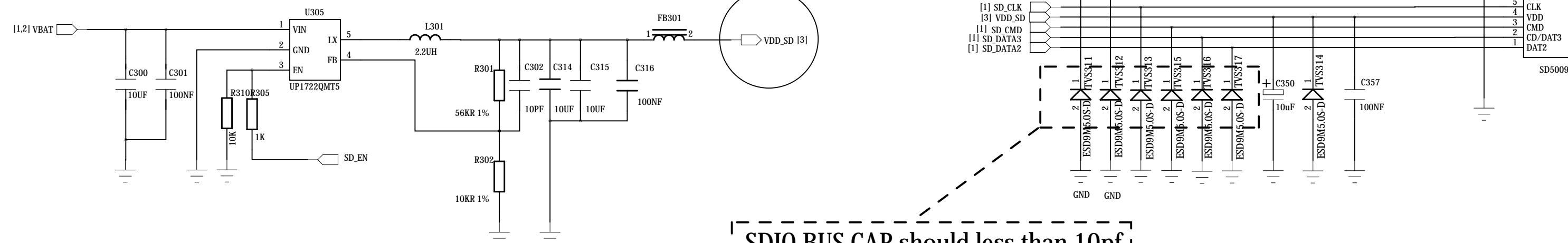


R311 default not mount

Notice: The rise time and fall time of USIM\_CLK should less than 40ns!

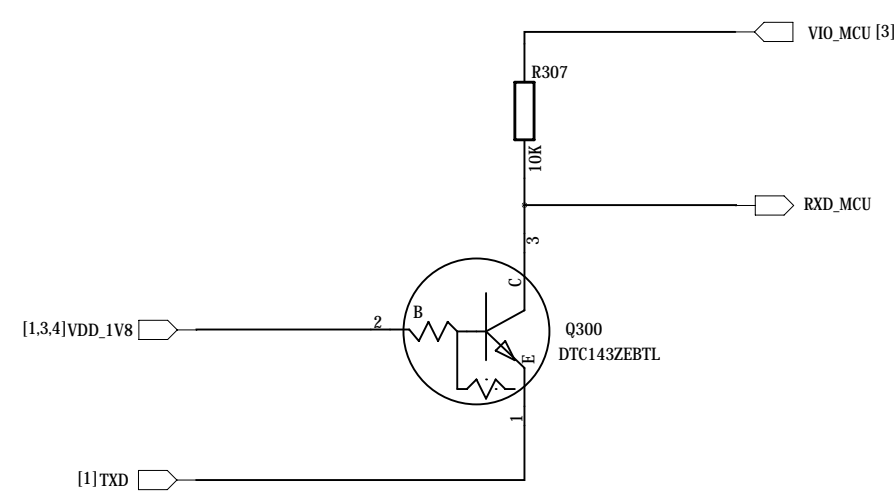
VDD\_SD provides 350mA at least

## SD Card Socket

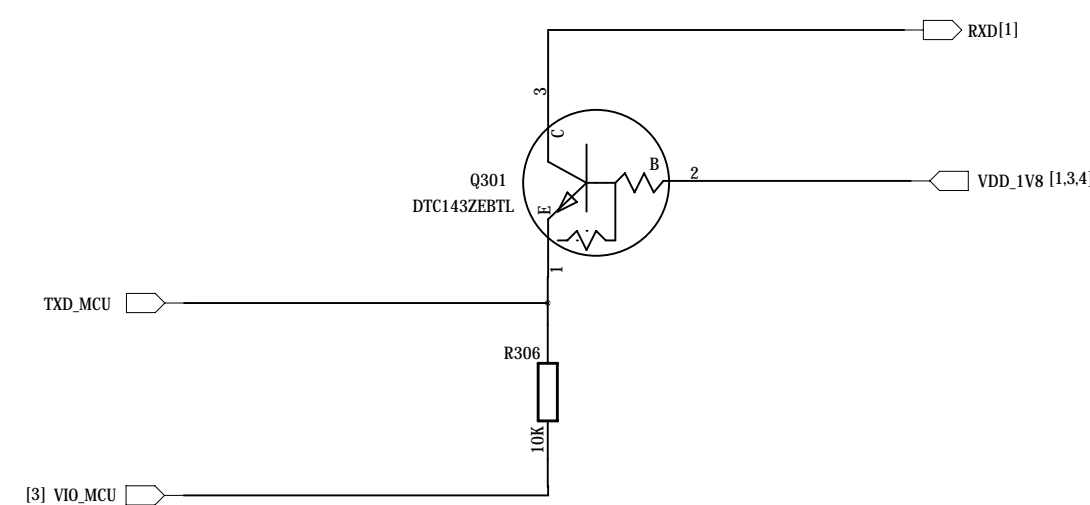


SDIO BUS CAP should less than 10pf

## TXD Circuit



## RXD Circuit



## SIMCom Wireless

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# Audio Design

Analog ground and Digital ground

C412 reserved for audio tuning

Analog Audio

Close to module

Handset

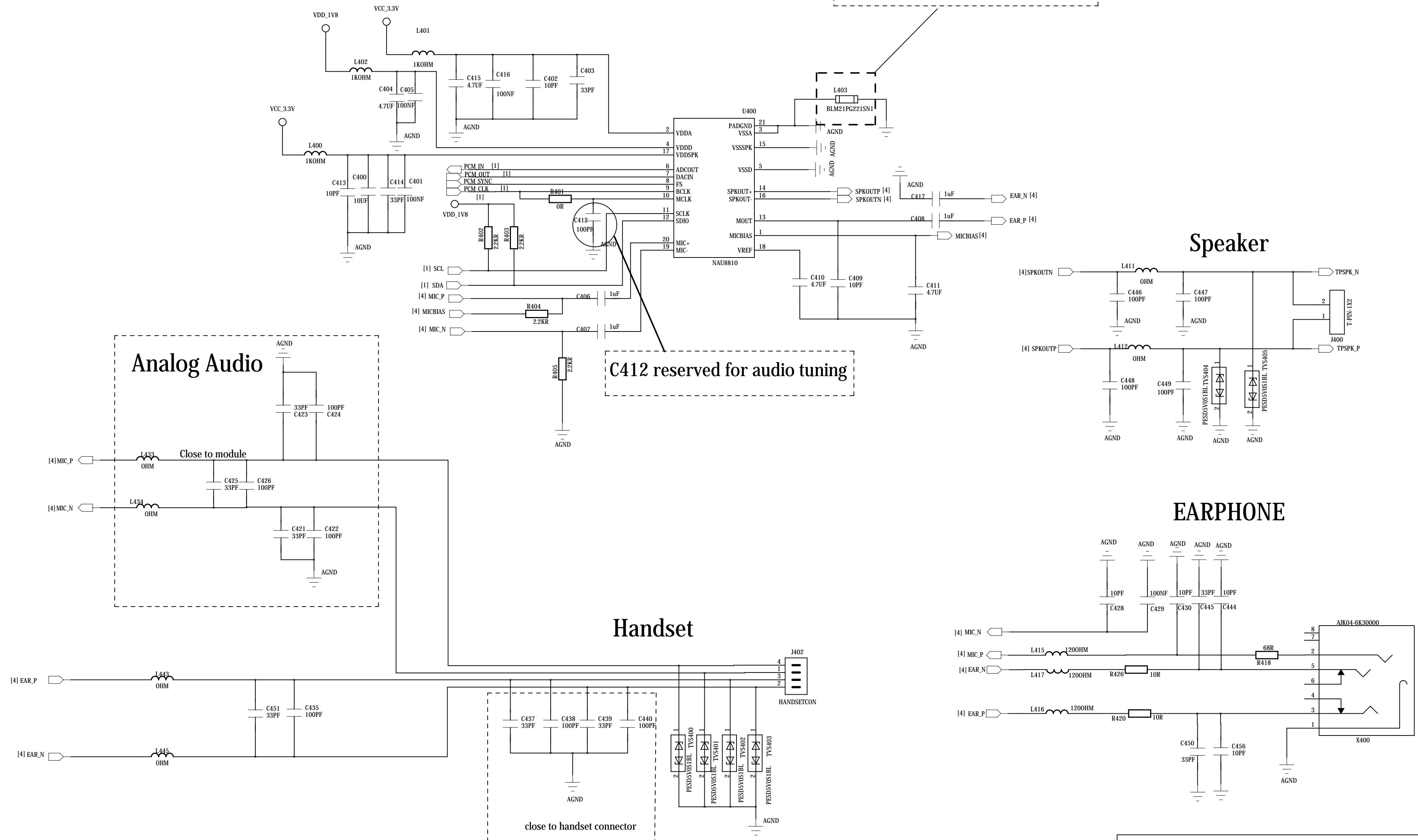
close to handset connector

Speaker

EARPHONE

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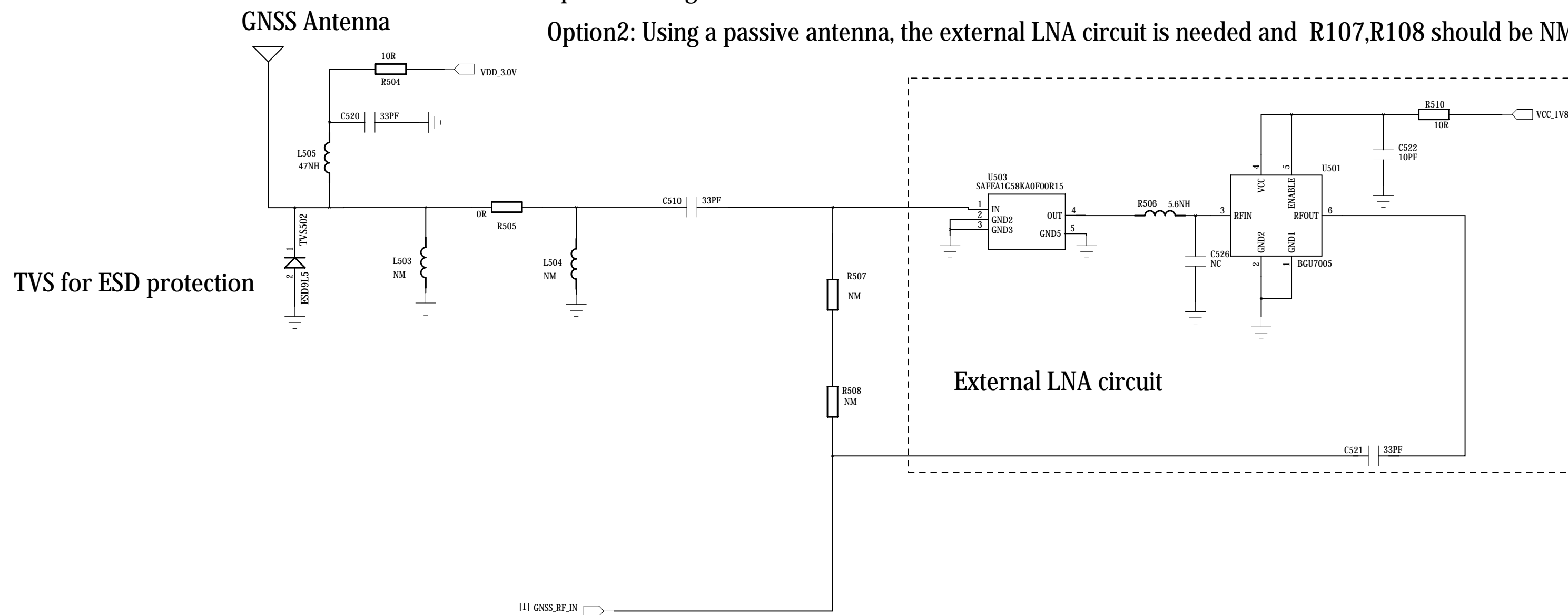
DRAWN BY Ma Honggang	PROJECT SIM7600 Ref Design	TITLE AUDIO DESIGN
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# GNSS Antenna

Option1: Using an active antenna, the external LNA circuit is not needed and R107,R108 should be used.

Option2: Using a passive antenna, the external LNA circuit is needed and R107,R108 should be NM



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SHEET 5 of 6		2017-12-29

6

5

4

3

2

1

D

D

V1.00 INITIAL

V1.01 Change R402 R403 to 2.2KR  
Change C412 to 100pf.

C

C

B

B

A

A

**SIMCom Wireless**

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CHECKED BY Zhou Jing	SIZE A2	VER V1.01
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6

5

4

3

2

1