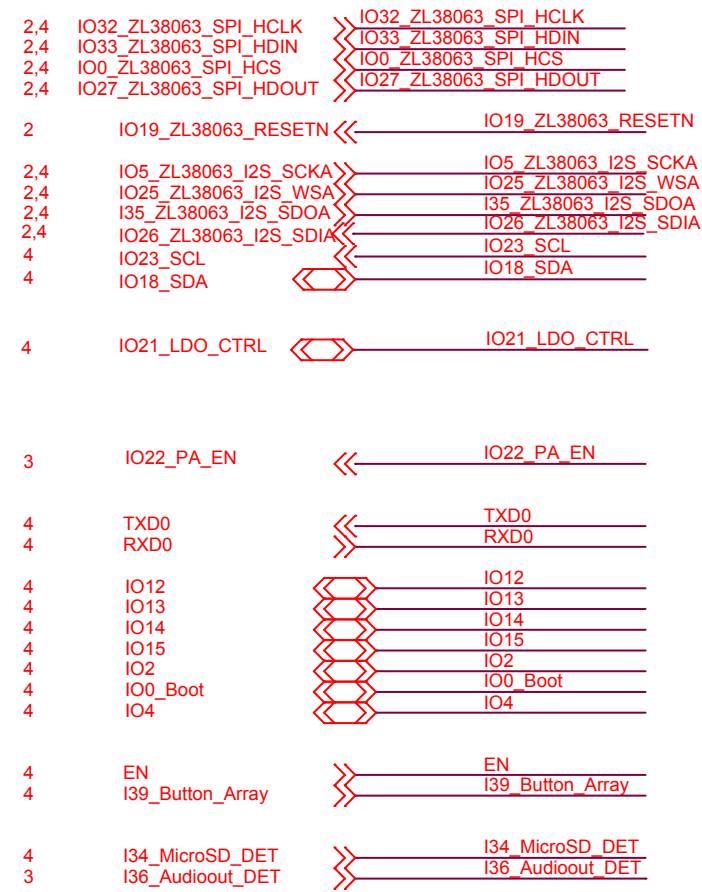
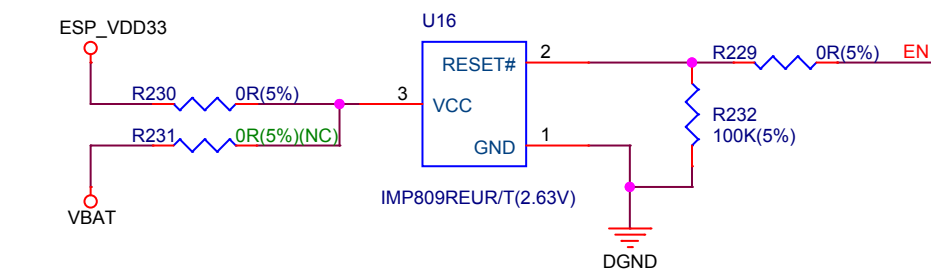
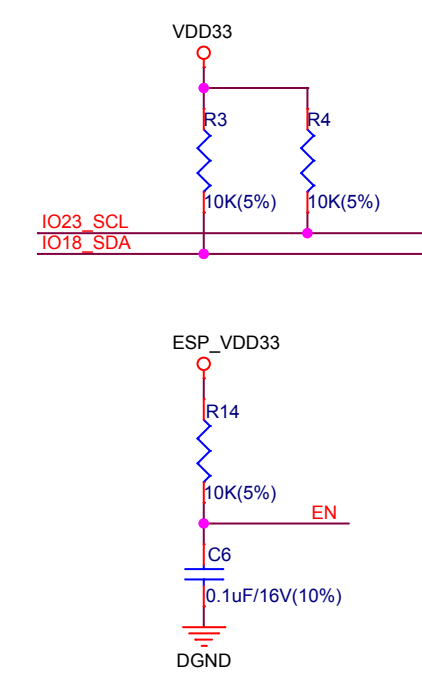
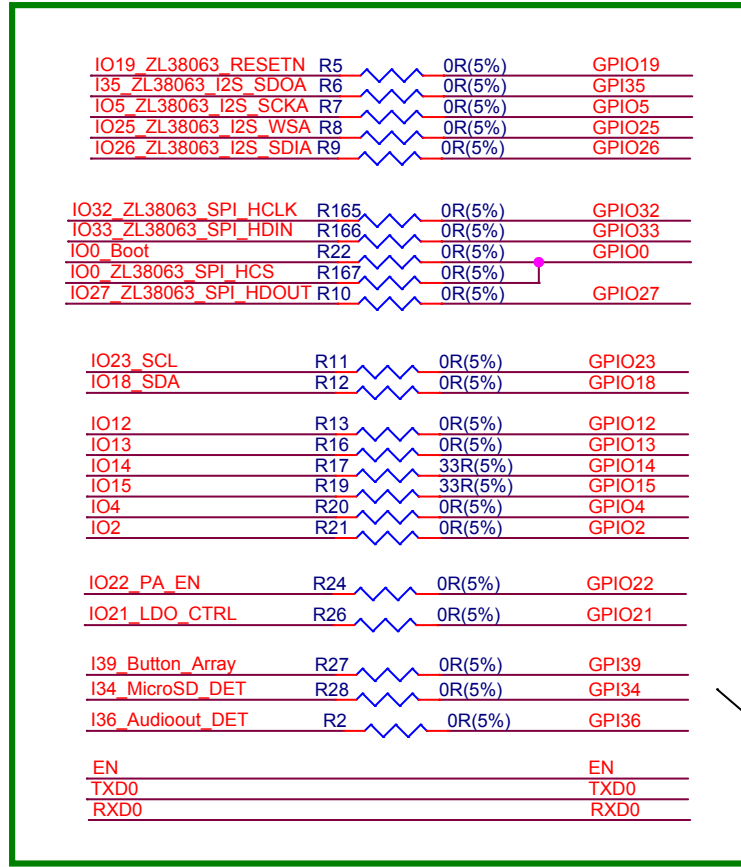
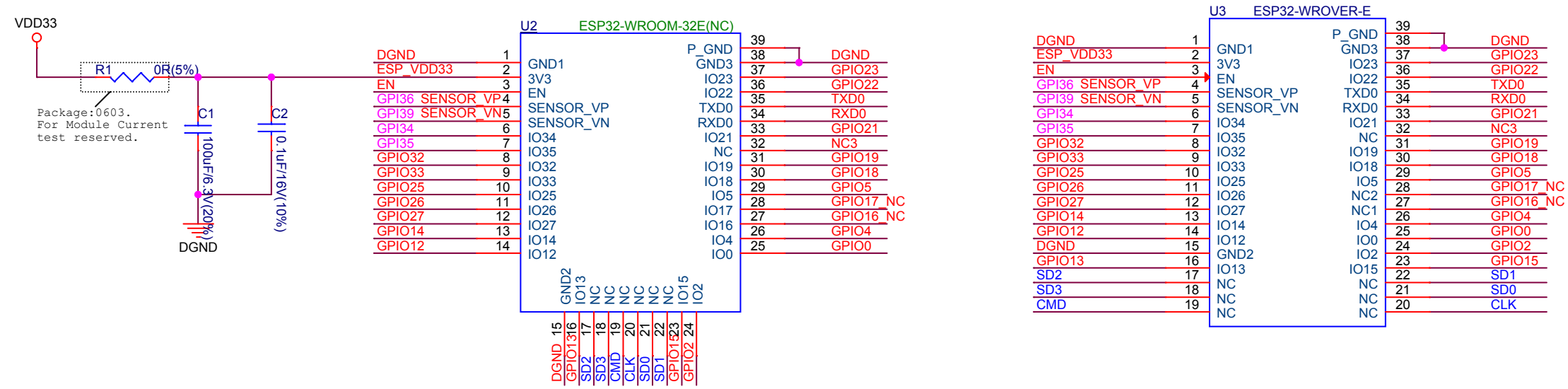


ESP32 Module:

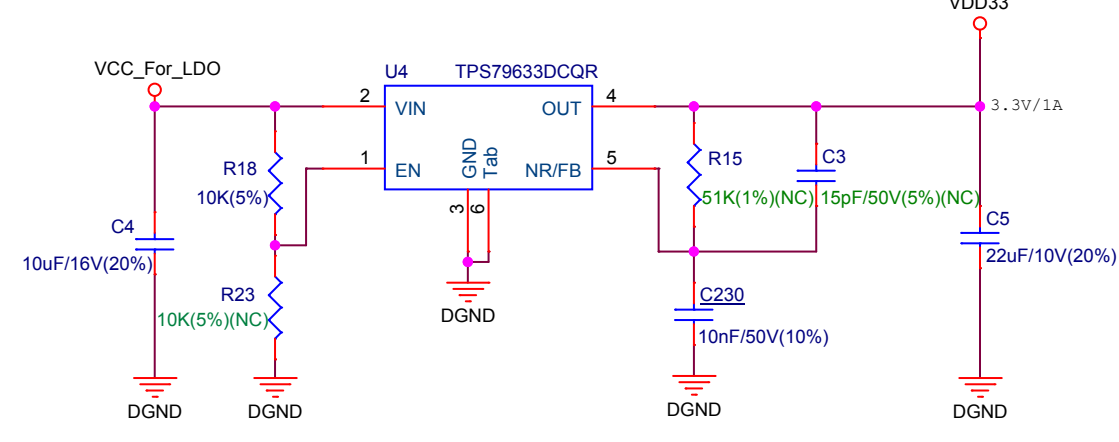
The purple color means INPUT only.



The blue color is NC for ESP32-WROVER-E and ESP32-WROOM-32E.

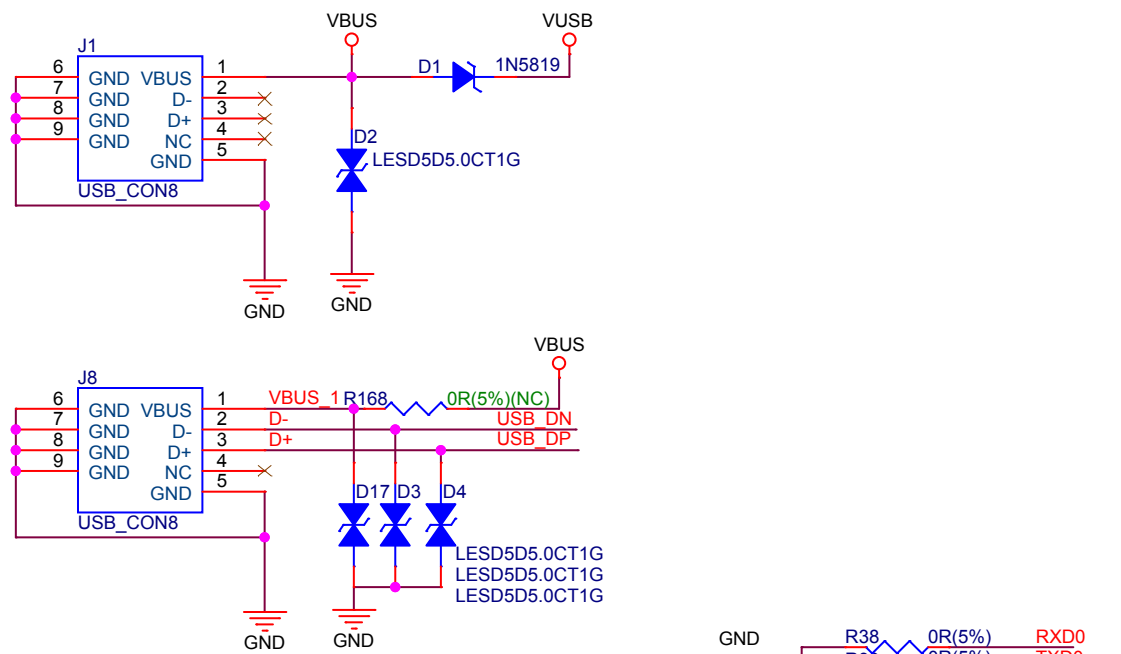


Power Supply For ESP32:

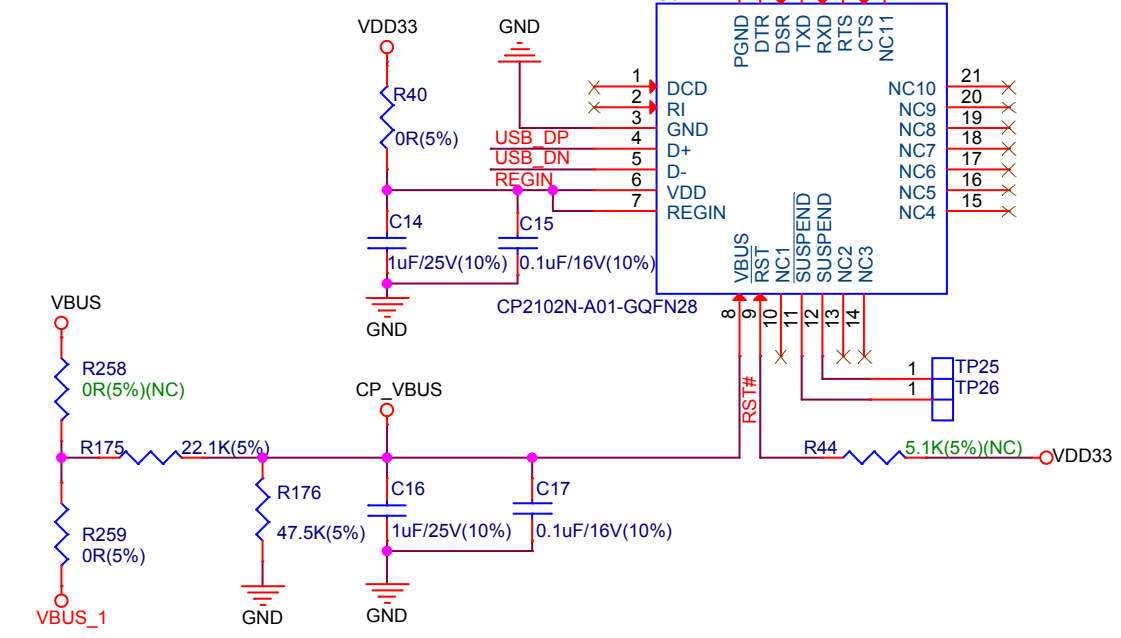


Please keep this block, it directly shows Pin assignment. If you wanna change Pin assignment, just revise this block.

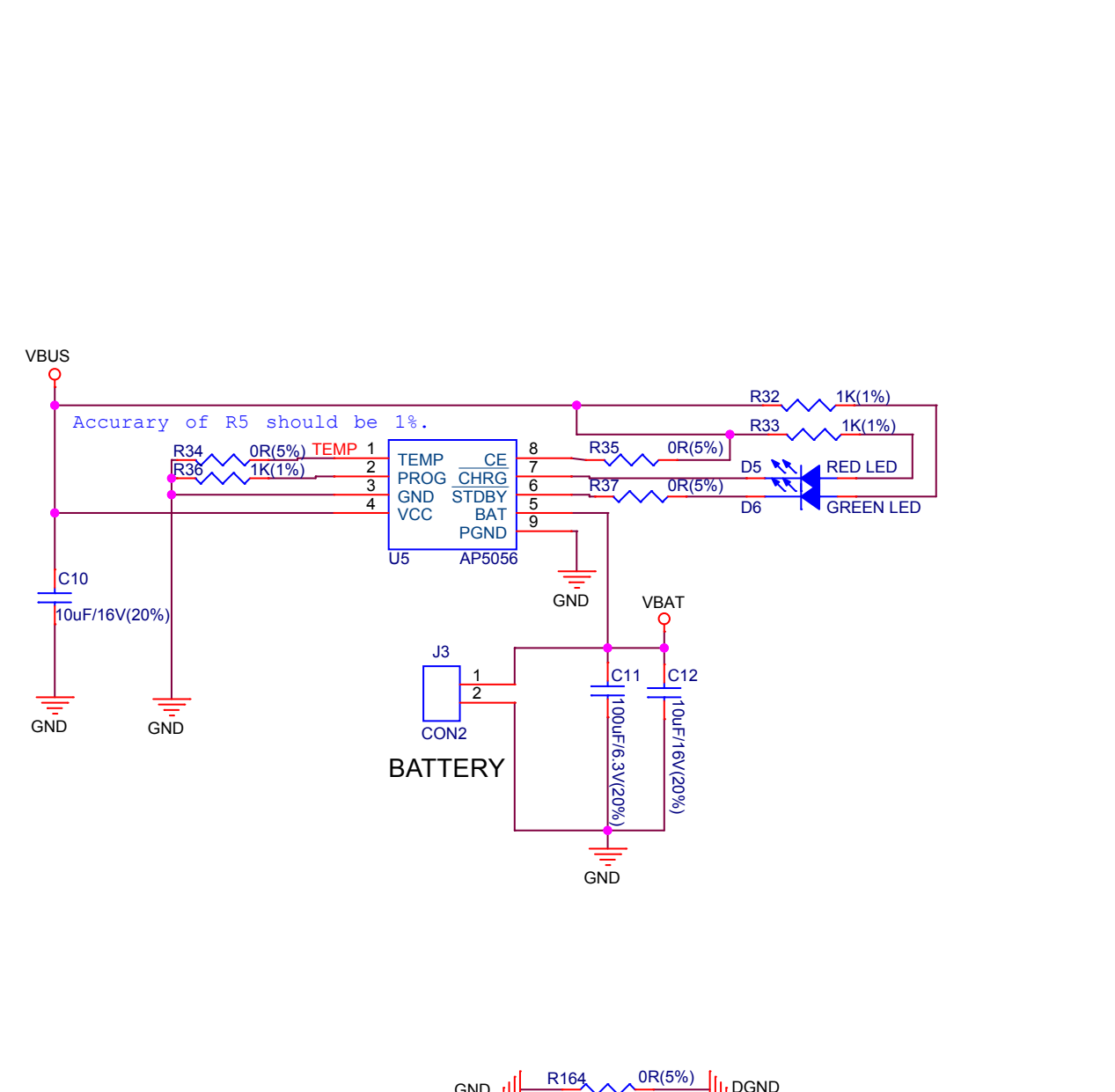
USB:



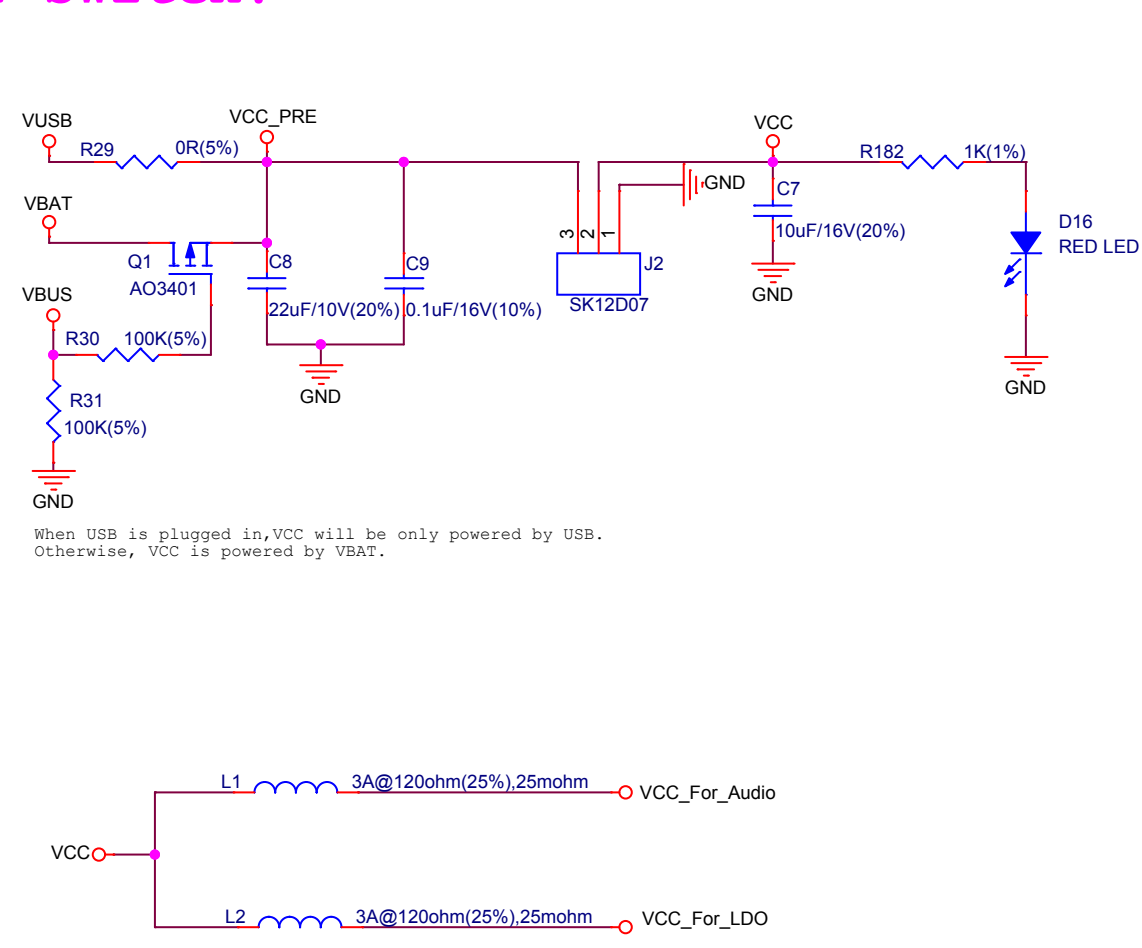
USB<->UART:



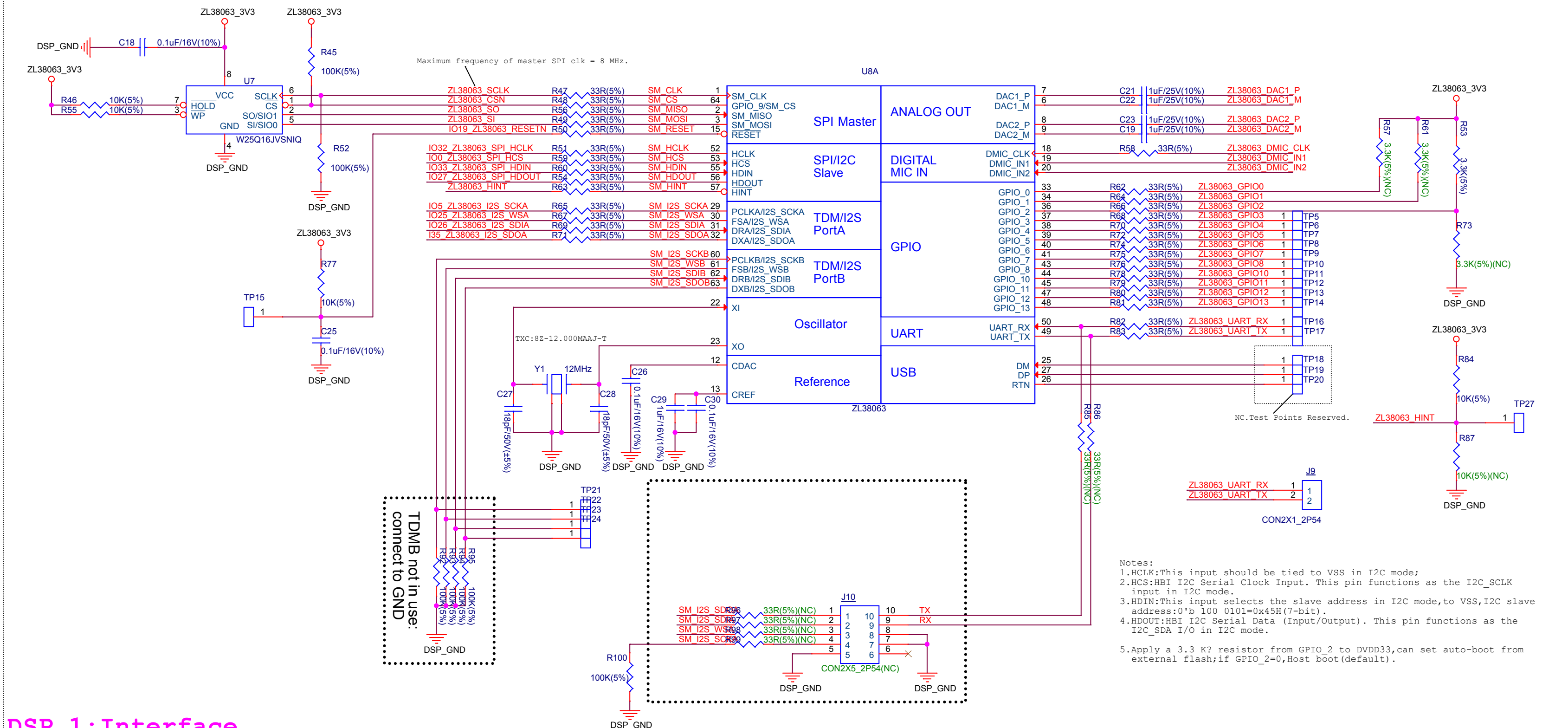
Charge Circuit:



Power Switch:



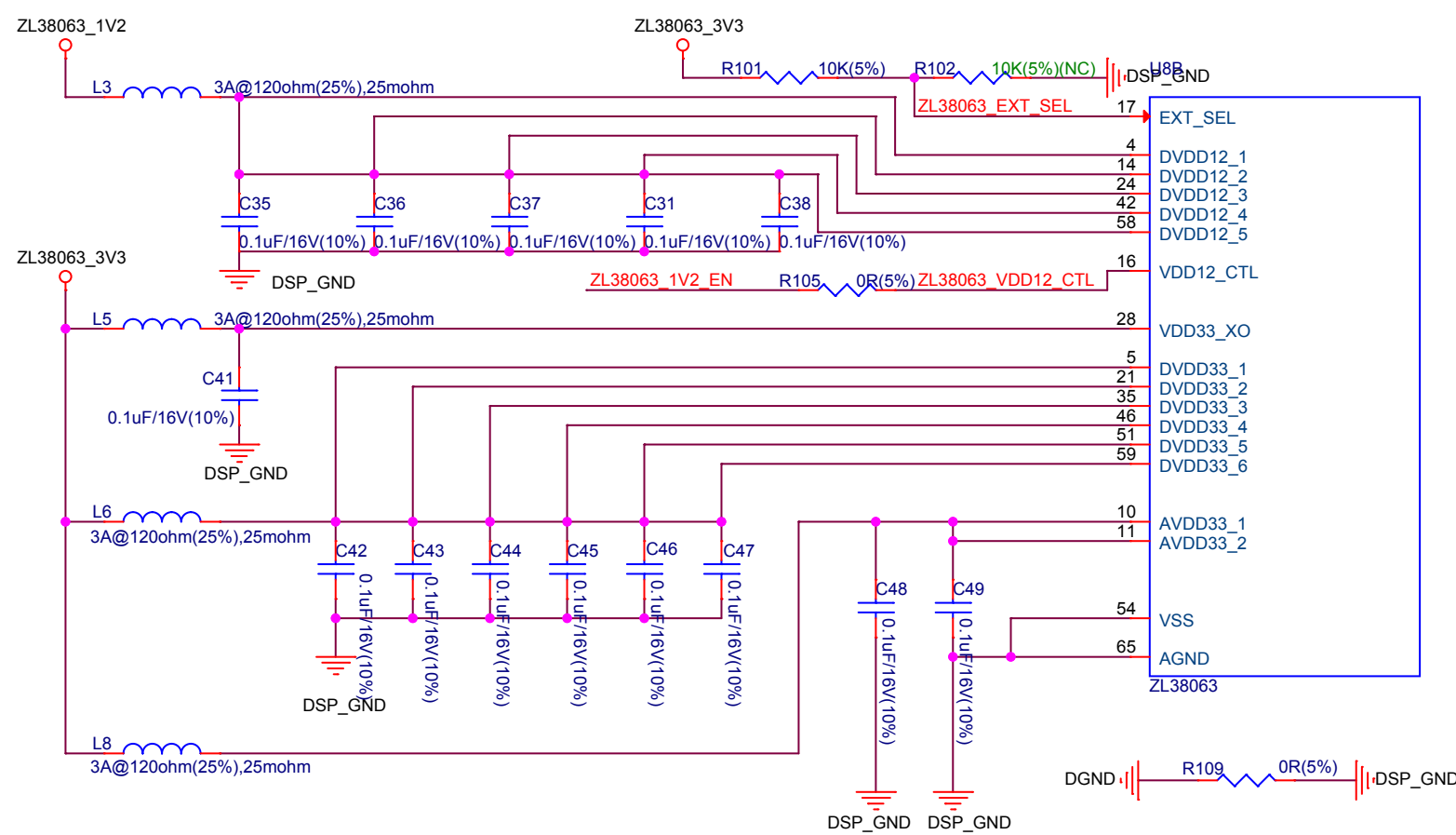
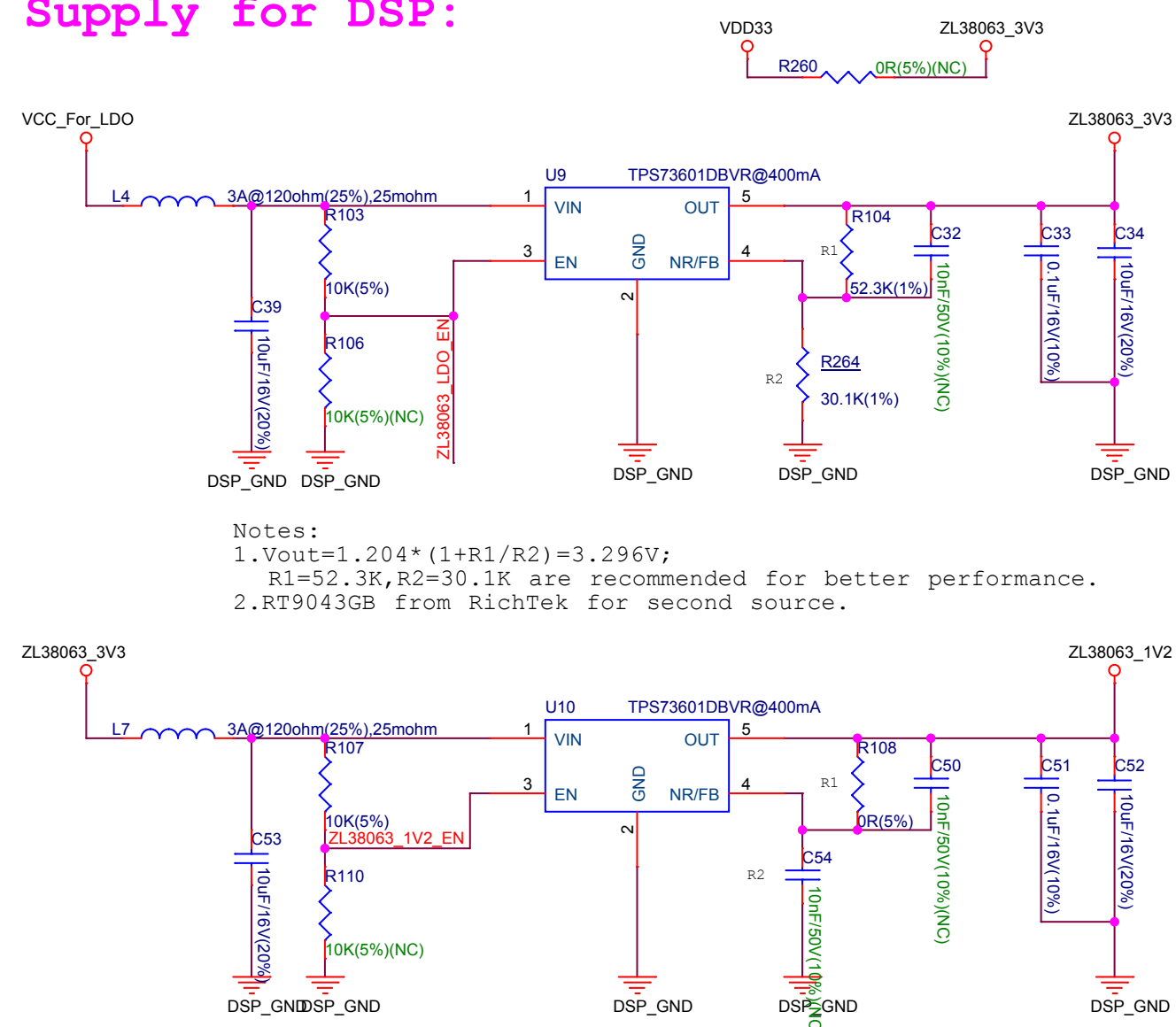
1,4	IO32_ZL38063_SPI_HCLK	IO32_ZL38063_SPI_HCLK
1,4	IO33_ZL38063_SPI_HDIN	IO33_ZL38063_SPI_HDIN
1,4	IO0_ZL38063_SPI_HCS	IO0_ZL38063_SPI_HCS
1,4	IO27_ZL38063_SPI_HDOUT	IO27_ZL38063_SPI_HDOUT
1	IO19_ZL38063_RESETN	IO19_ZL38063_RESETN
1,4	IO5_ZL38063_I2S_SCKA	IO33_ZL38063_I2S_SCKA
1,4	IO25_ZL38063_I2S_WSA	IO25_ZL38063_I2S_WSA
1,4	IO26_ZL38063_I2S_SDBIA	IO26_ZL38063_I2S_SDBIA
1,4	IO26_ZL38063_I2S_SDBIA	IO26_ZL38063_I2S_SDBIA
3,4	ZL38063_DAC1_P	ZL38063_DAC1_P
3	ZL38063_DAC1_M	ZL38063_DAC1_M
3	ZL38063_DAC2_P	ZL38063_DAC2_P
3	ZL38063_DAC2_M	ZL38063_DAC2_M
4	ZL38063_DMIC_CLK	ZL38063_DMIC_CLK
4	ZL38063_DMIC_IN1	ZL38063_DMIC_IN1
4	ZL38063_DMIC_IN2	ZL38063_DMIC_IN2
4	ZL38063_LDO_EN	ZL38063_LDO_EN



DSP.1: Interface

Power Supply for DSP:

DSP.2: Power

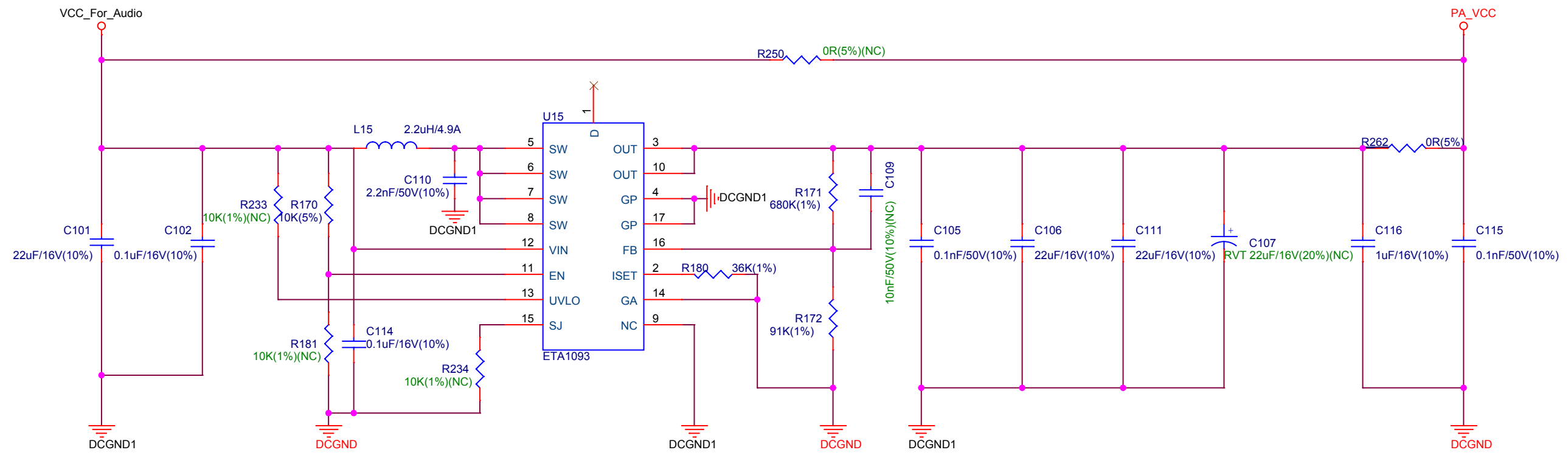


Notes:

- EXT_SEL: VDD +1.2 V Select. Select external +1.2 V supply. Tie to DVDD33 if the +1.2 V supply is to be provided externally. Tie to VSS (0 V) if the +1.2 supply is to be generated internally.
- VDD12_CTRL: VDD +1.2 V Control. Analog control line for the voltage regulator external FET when EXT_SEL is tied to VSS. When EXT_SEL is tied to the VDD12_CTRL pin becomes a CMOS output which can drive the shutdown input of an external LDO.
- Please place one 0.1uF/10V(20%) CAP close to each of the Power Pins.

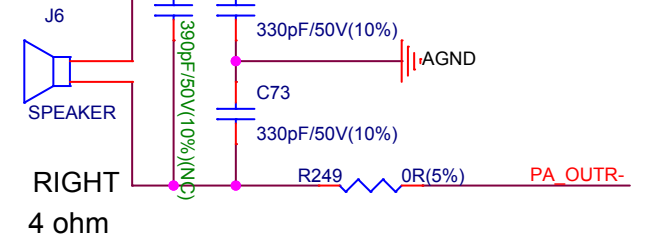
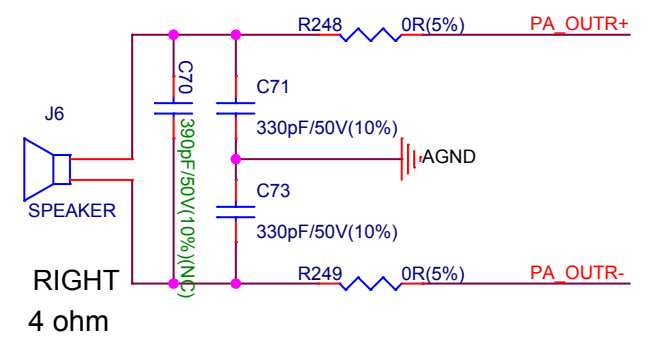
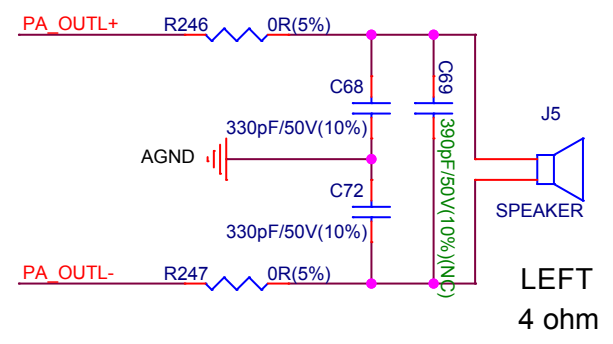
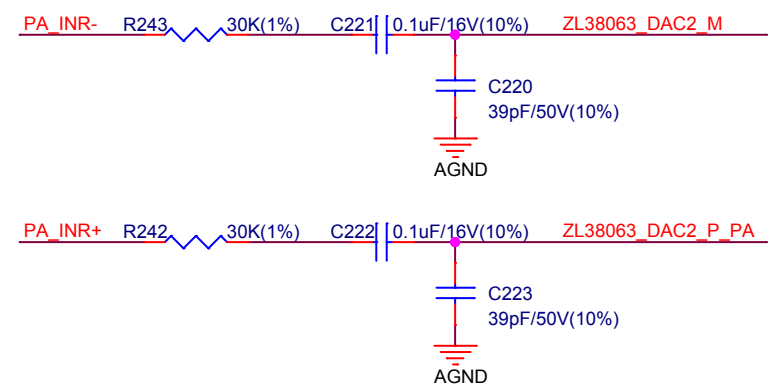
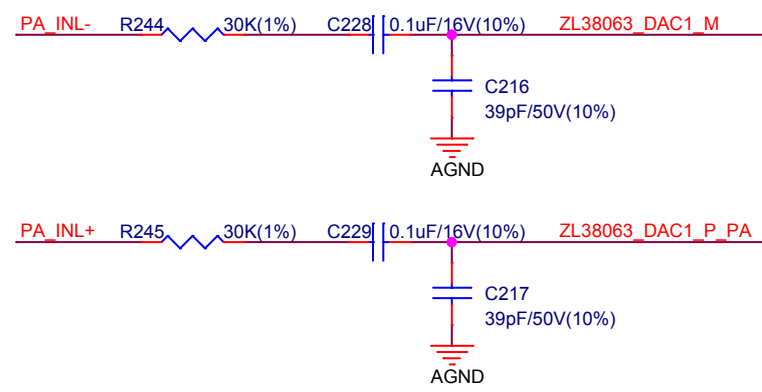
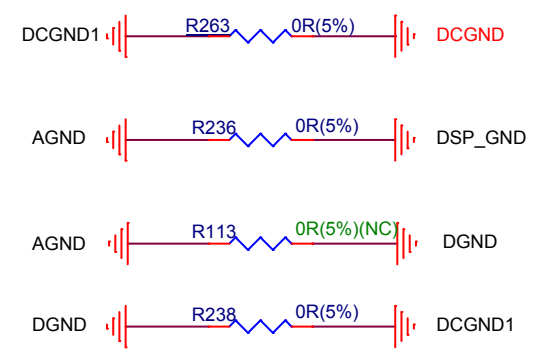
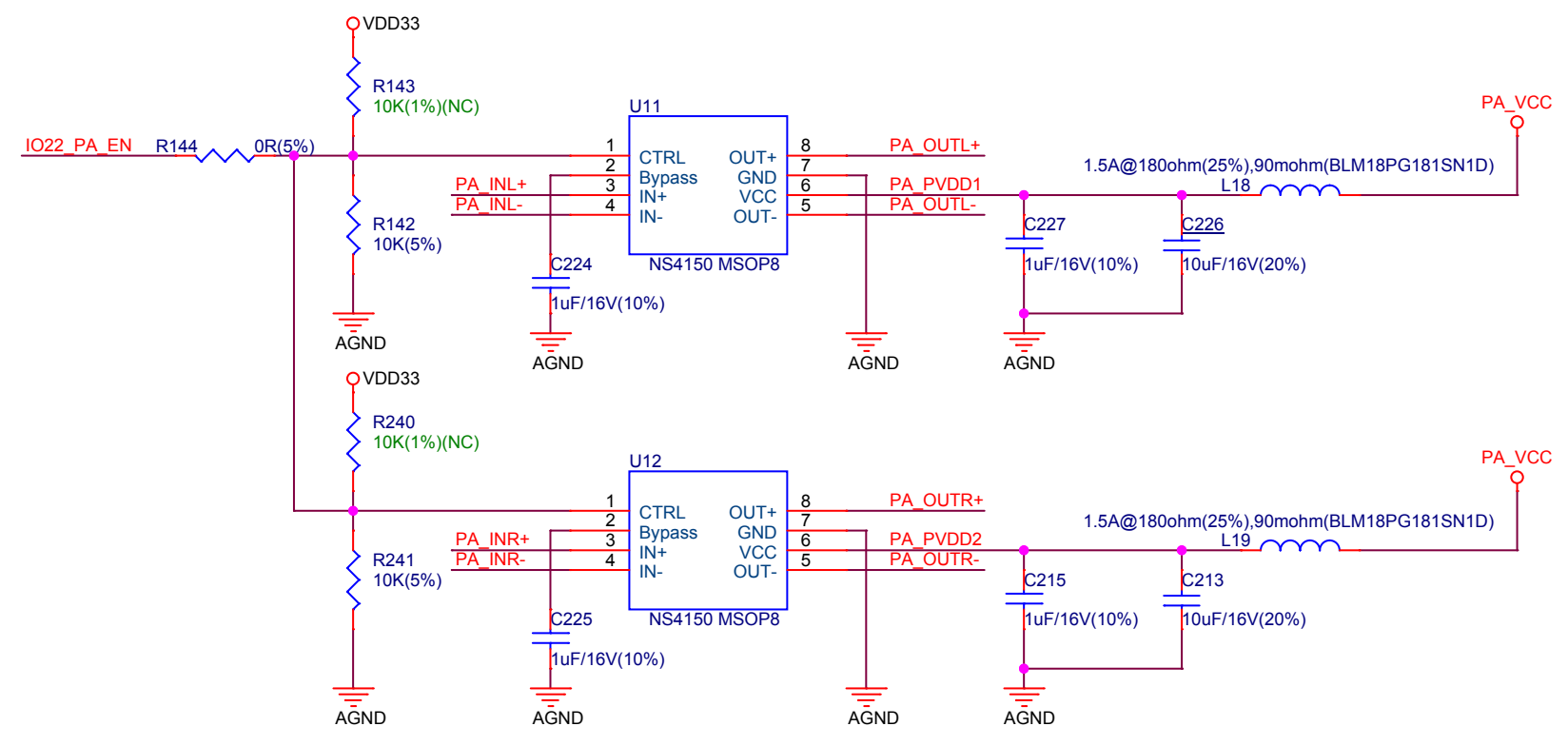
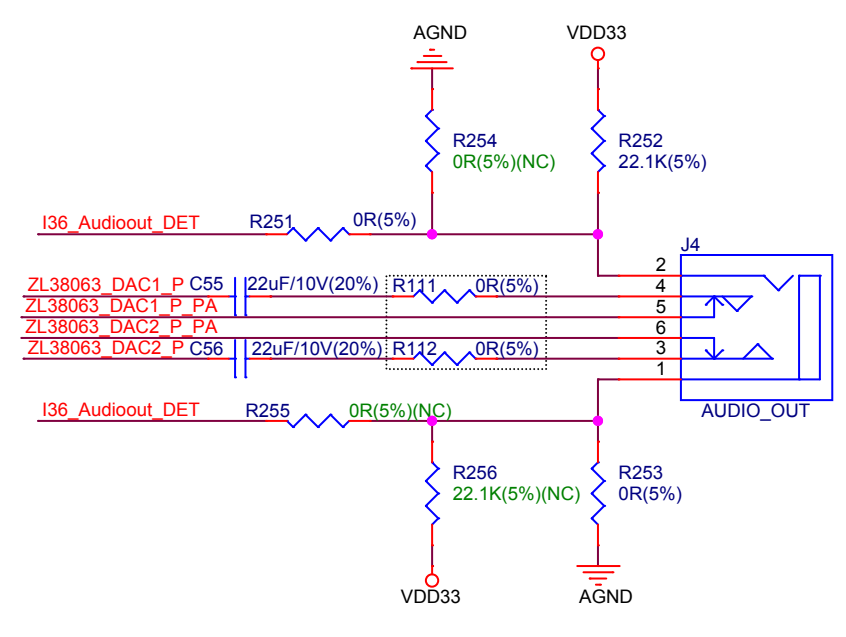
PA Output:

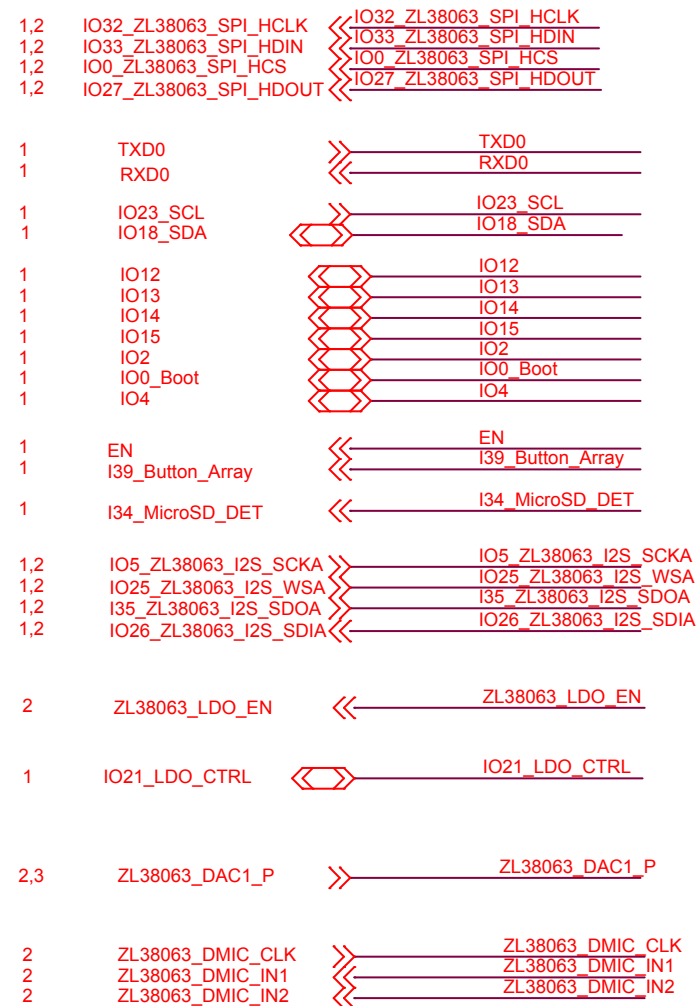
1	IO22_PA_EN	IO22_PA_EN
2,4	ZL38063_DAC1_P	ZL38063_DAC1_P
2	ZL38063_DAC1_M	ZL38063_DAC1_M
2	ZL38063_DAC2_P	ZL38063_DAC2_P
2	ZL38063_DAC2_M	ZL38063_DAC2_M
1	I36_Audioout_DET	I36_Audioout_DET



Notes:
 1. $V_{out} = 0.6 * (R1+R2) / R2 = 5V$;
 2. $I_{peak} = (180 / R_{iset}) * 1000 = 5A$

Audio Out:

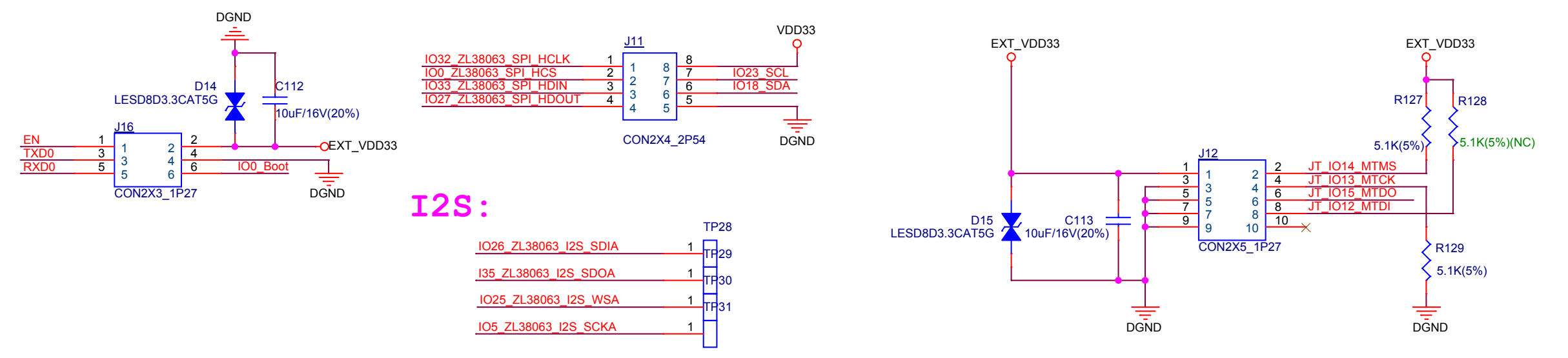




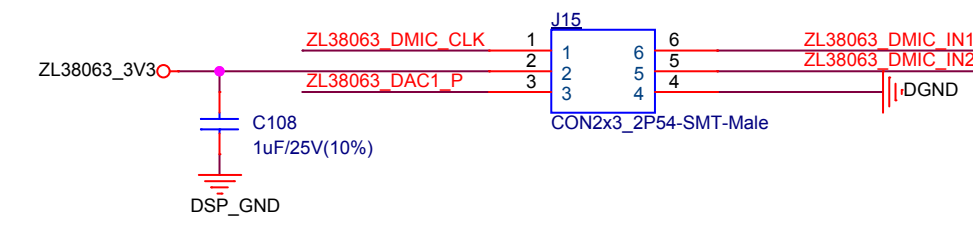
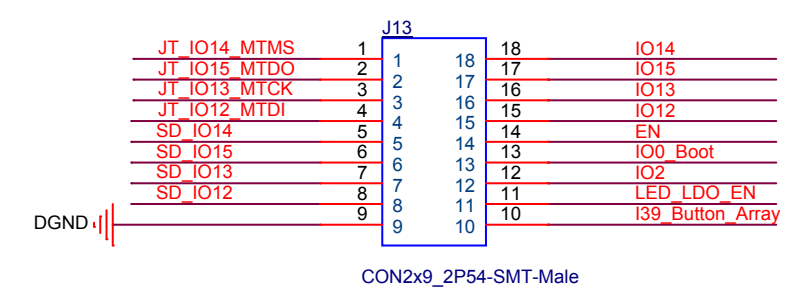
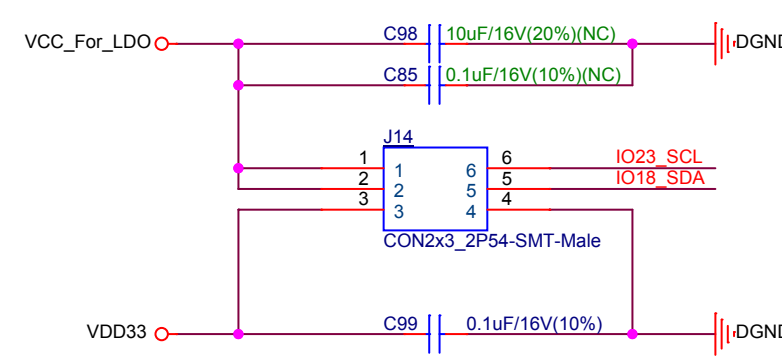
UART:

SPI & I2C:

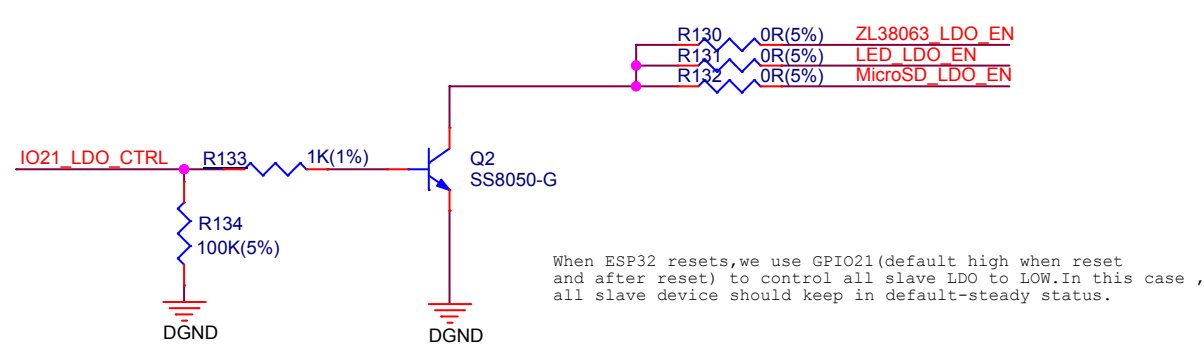
JTAG:



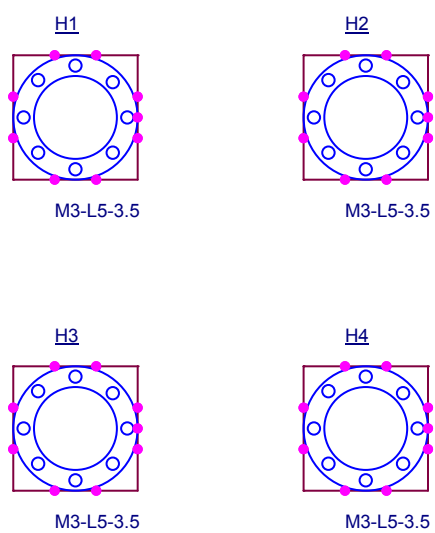
Connectors For SubBoard:



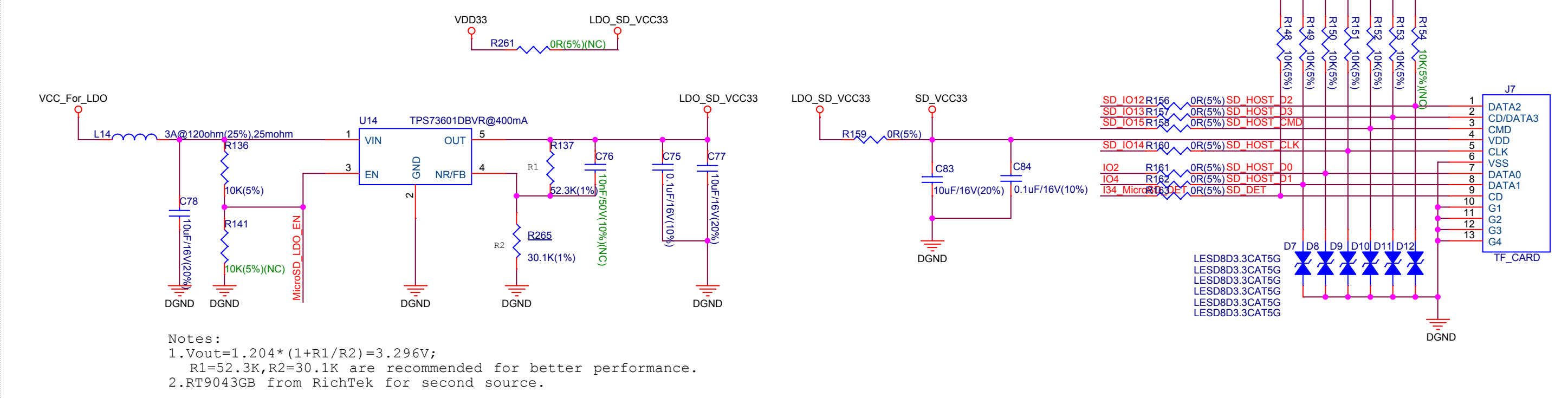
Reset Test



Fixing Holes:



MicroSD:



Notes:
 1. $V_{out} = 1.204 * (1 + R1/R2) = 3.296V$;
 $R1 = 52.3K, R2 = 30.1K$ are recommended for better performance.
 2. RT9043GB from RichTek for second source.

ESPRESSIF