

STM32F413H-DISCO

MB1274

Table of contents

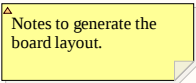
- Sheet 1: Project overview (this page)
- Sheet 2: Top
- Sheet 3: MCU
- Sheet 4: PSRAM
- Sheet 5: QSPI
- Sheet 6: Audio
- Sheet 7: LCD
- Sheet 8: USB_OTG_FS
- Sheet 9: Peripherals
- Sheet 10: Arduino_Connectors
- Sheet 11: ST-Link/V2-1
- Sheet 12: Power

Legend

General comment such as function title, configuration, ...

Text to be added to silkscreen.

Warning text.



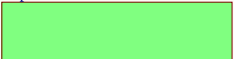
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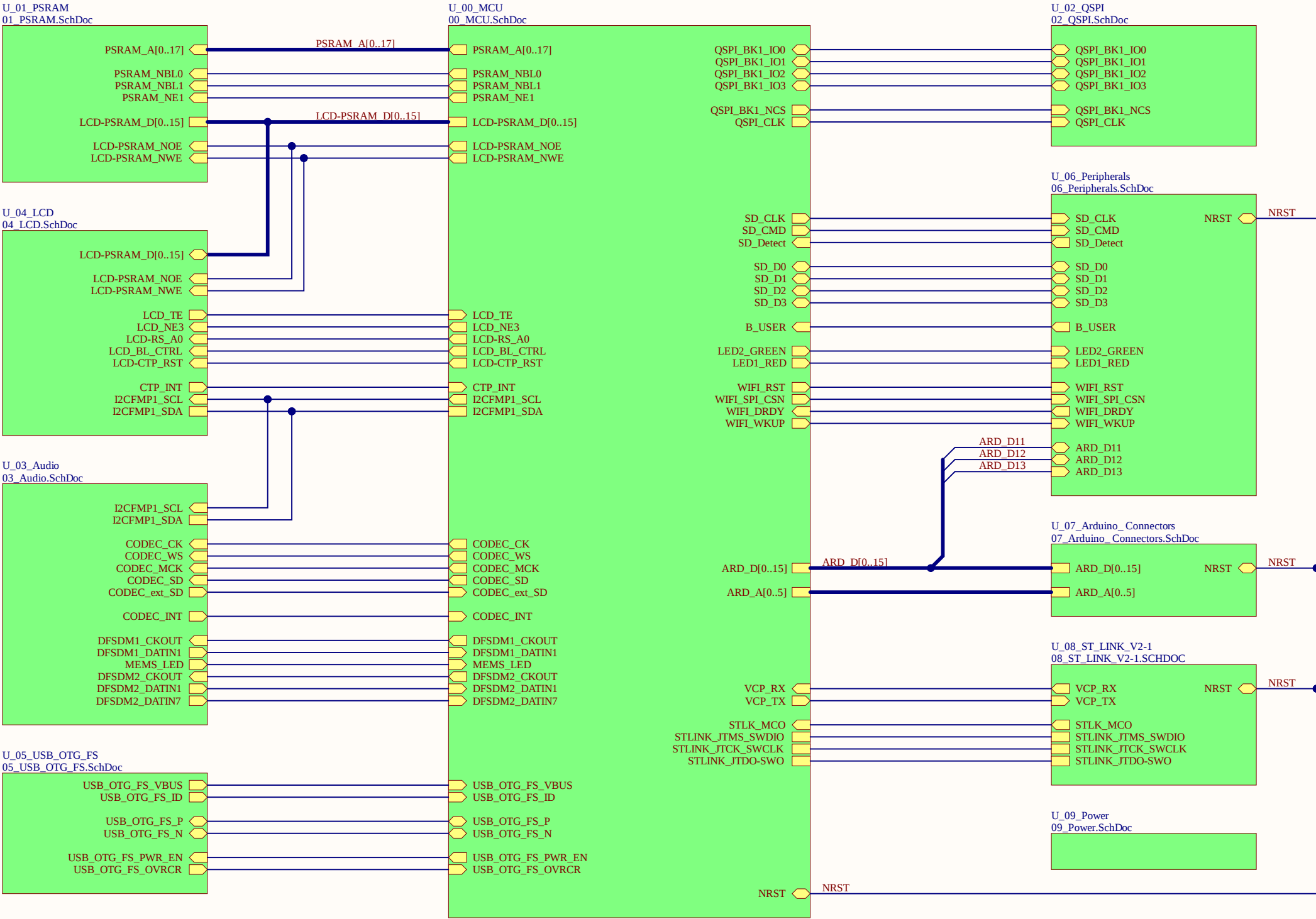
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U_Top
Top.SchDoc



Title: Project overview		
Project: STM32F413H-DISCO		
Variant: F413ZHT6		
Revision: D-01	Reference: MB1274	
Size: A4	Date: 19/12/2016	Sheet: 1 of 12





Note: Text in BLUE placed on a wire is not the net name. It just a COMMENT to give more details about the function, or it is the MCU port information.

REVISION D01
Add U21 for USB_VBUS ESD protection.

REVISION C01:
Released 22 - November- 2016
- USB ESD: U19 update (rotation).

REVISION B01:
Released 05 - October- 2016
- Update WIFI module with new reference
- Update IO assignment for PA0, PC0, PC1 and PC13.
- Update USB ESD protection.
- LD2: Correction of LD2, LD2 was mirrored on revA
- HW5: Update Capacitive touch Panel to rev B instead of revision A

REVISION A01
Released : 09 - June - 2016
- First version

HW PART

HW17

mb1274 B-01
Serial Number

HW18

ES

HW1

PCB

STM32F413H-DISCO PCB 4L

HW2

BLISTER

STM32F413H-DISCO BLISTER

HW3

BLISTER CARD

STM32F413H-DISCO BLISTER CARD

H3

H2

H1

H4

HW8

Spacer 14mm

HW9

Spacer 14mm

HW10

Spacer 14mm

HW11

Spacer 14mm

HW7

Plastic Screw M3x6mm

HW13

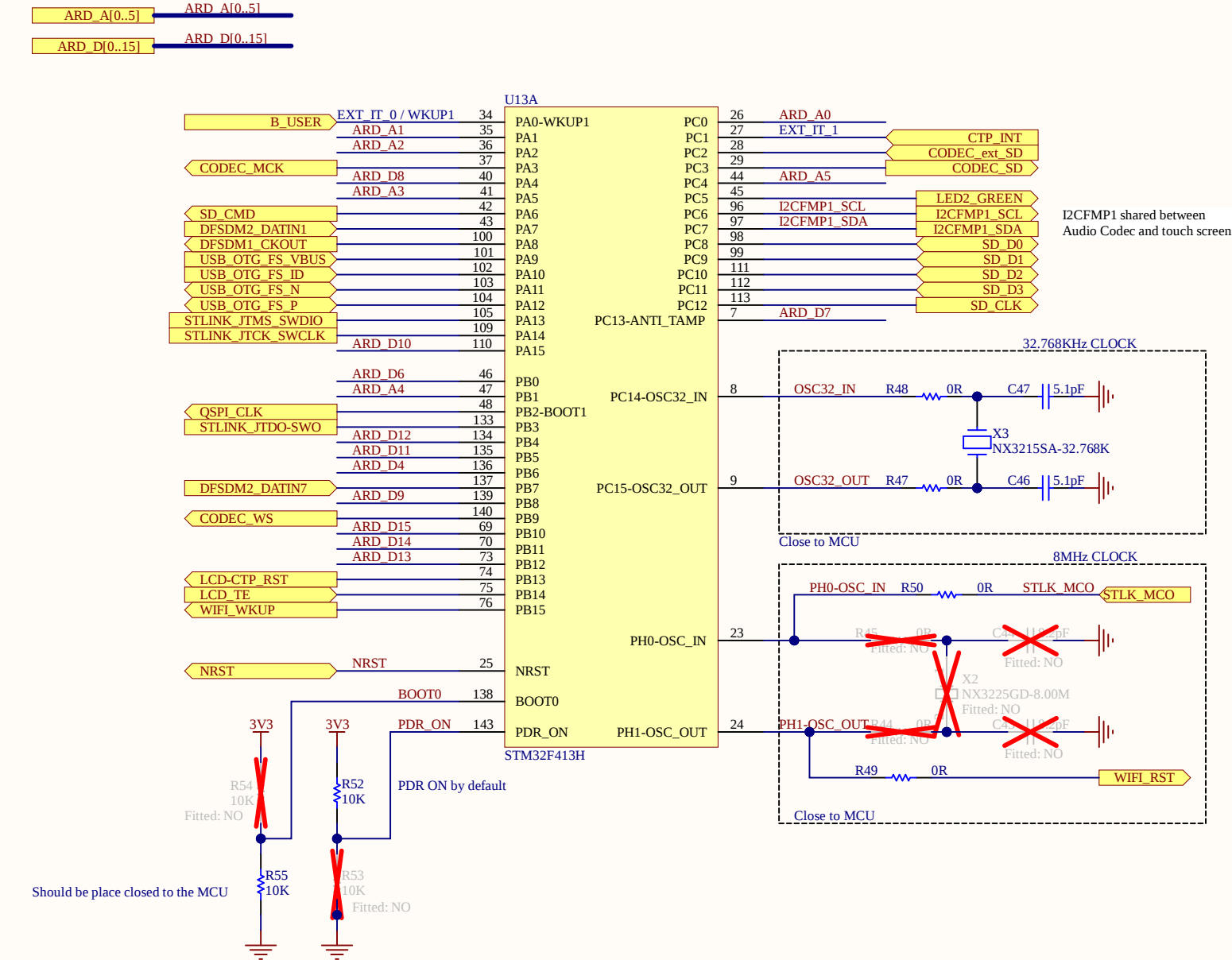
Plastic Screw M3x6mm

HW6

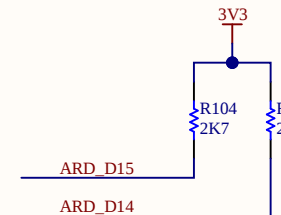
Plastic Screw M3x6mm

HW12

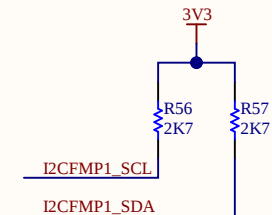
Plastic Screw M3x6mm



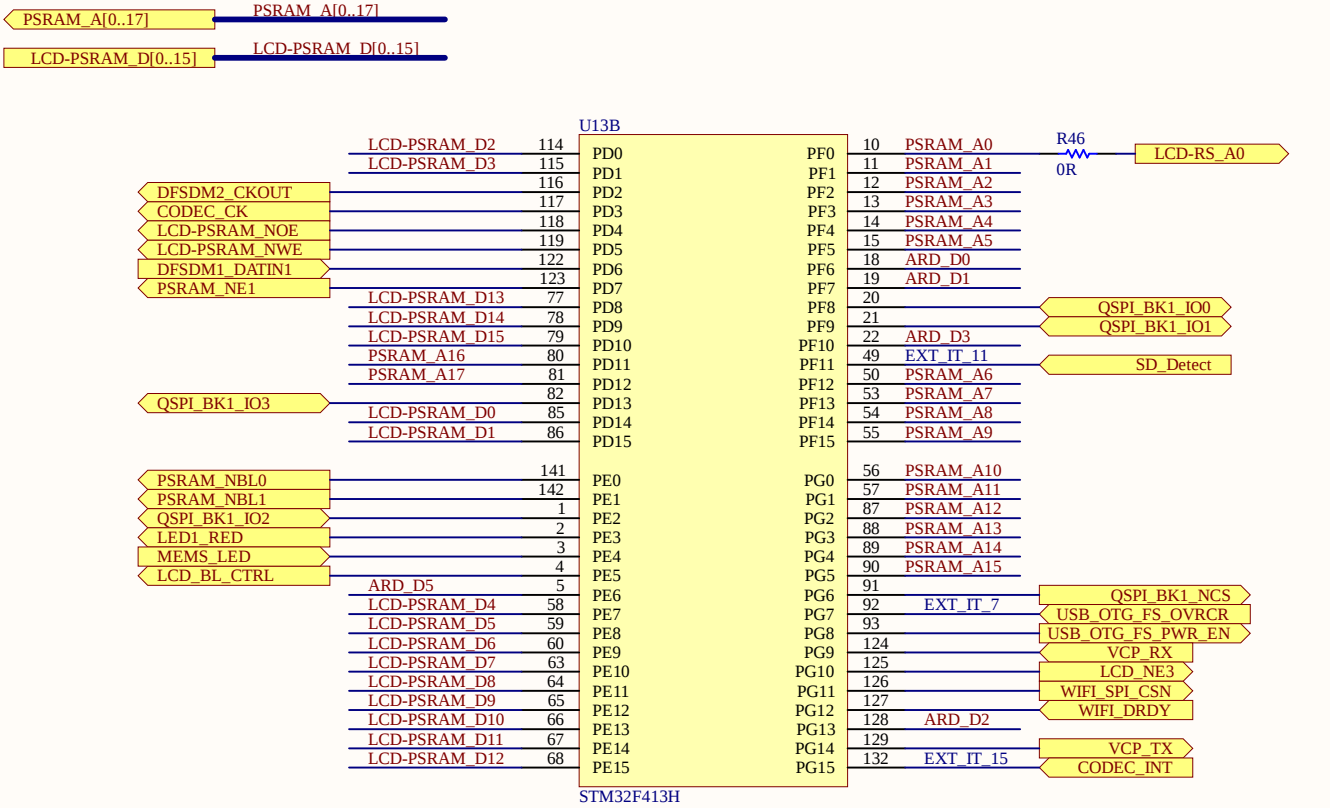
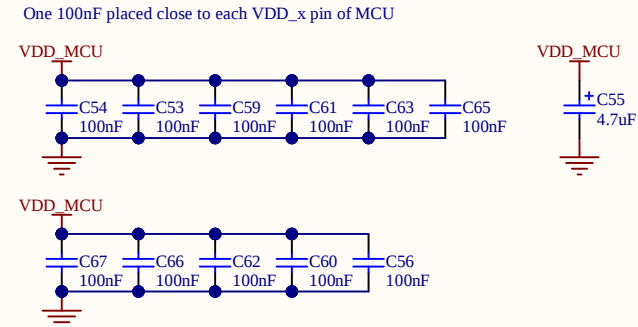
I2C2_PULL-UP



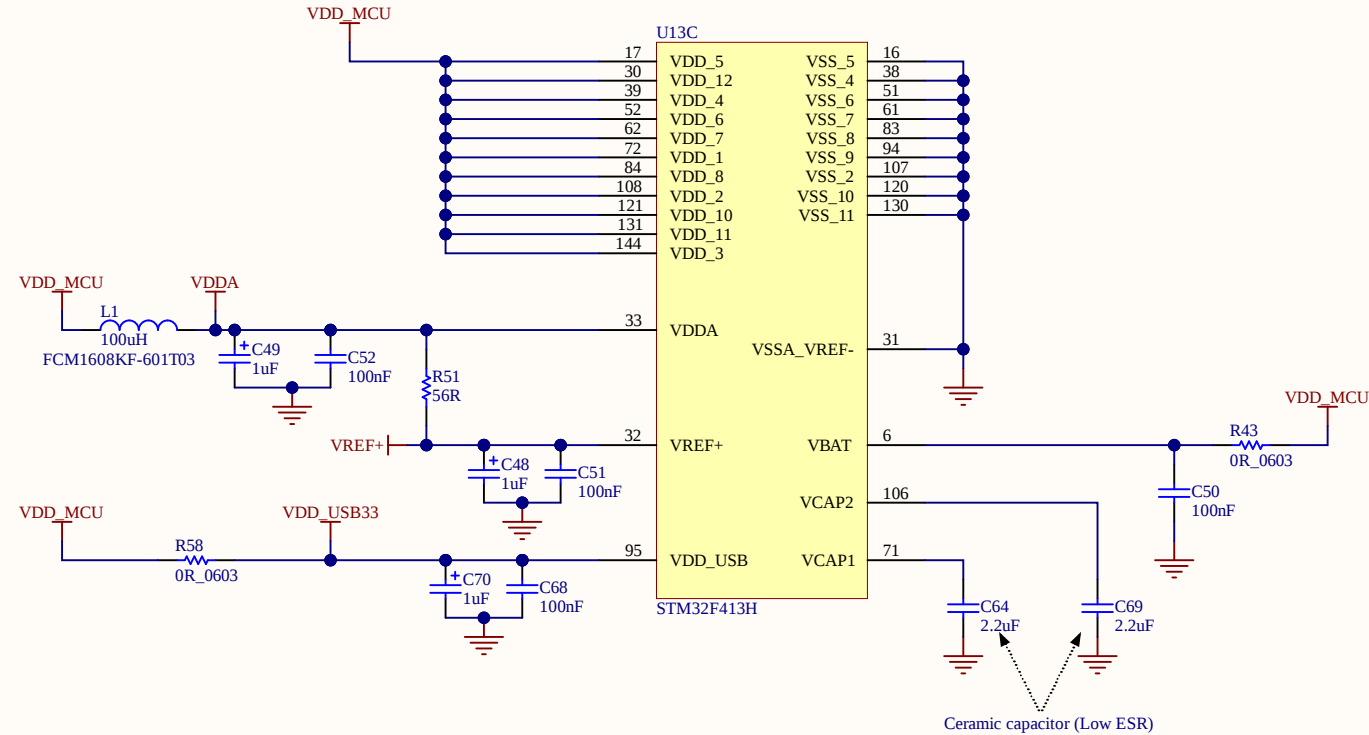
I2CFMP1_PULL-UP



DECOUPLING CAPACITORS

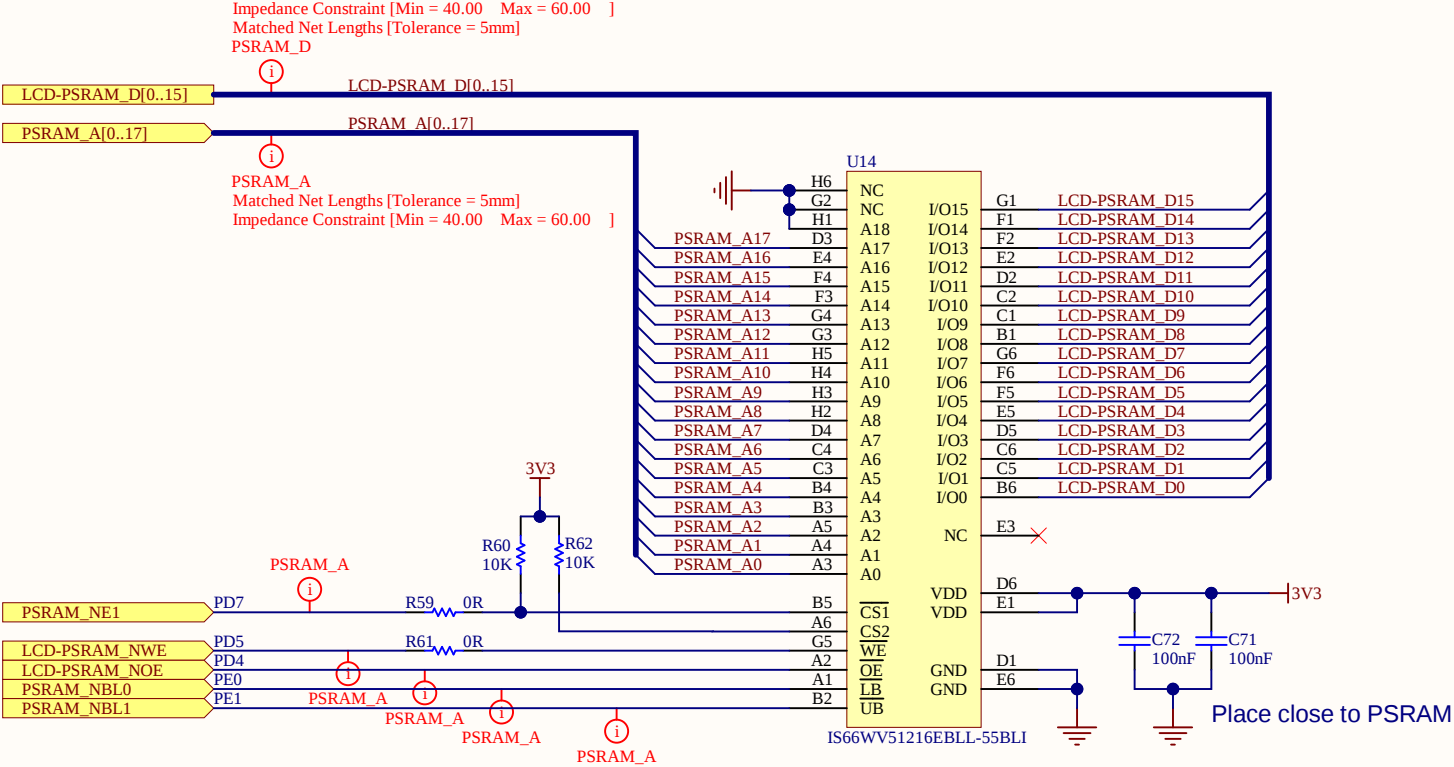


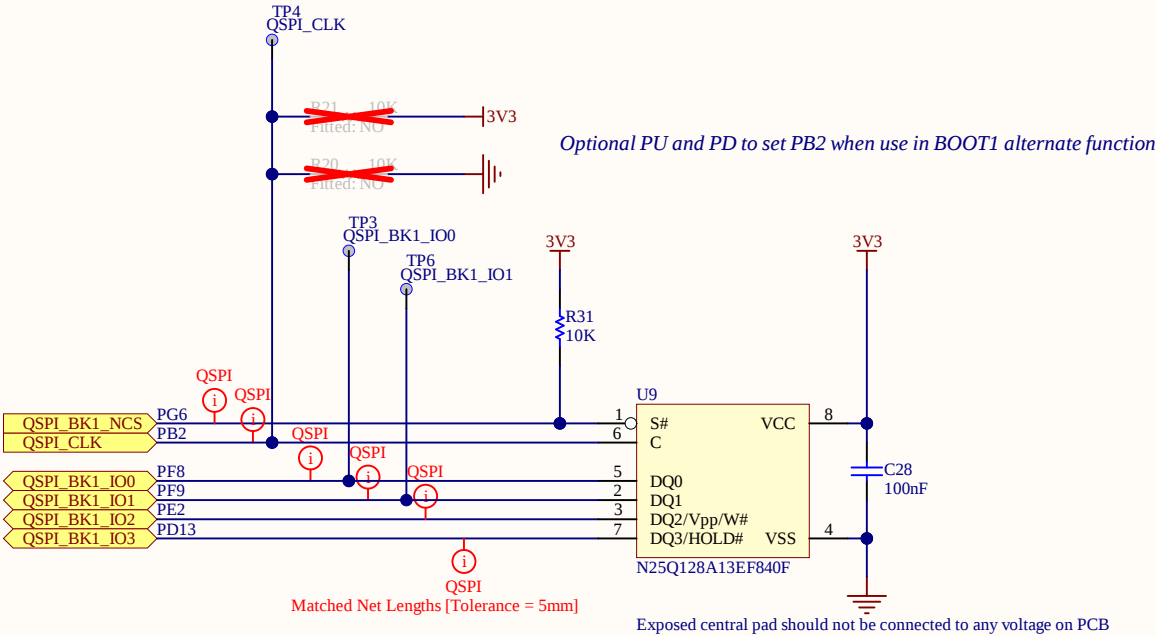
MCU PWR



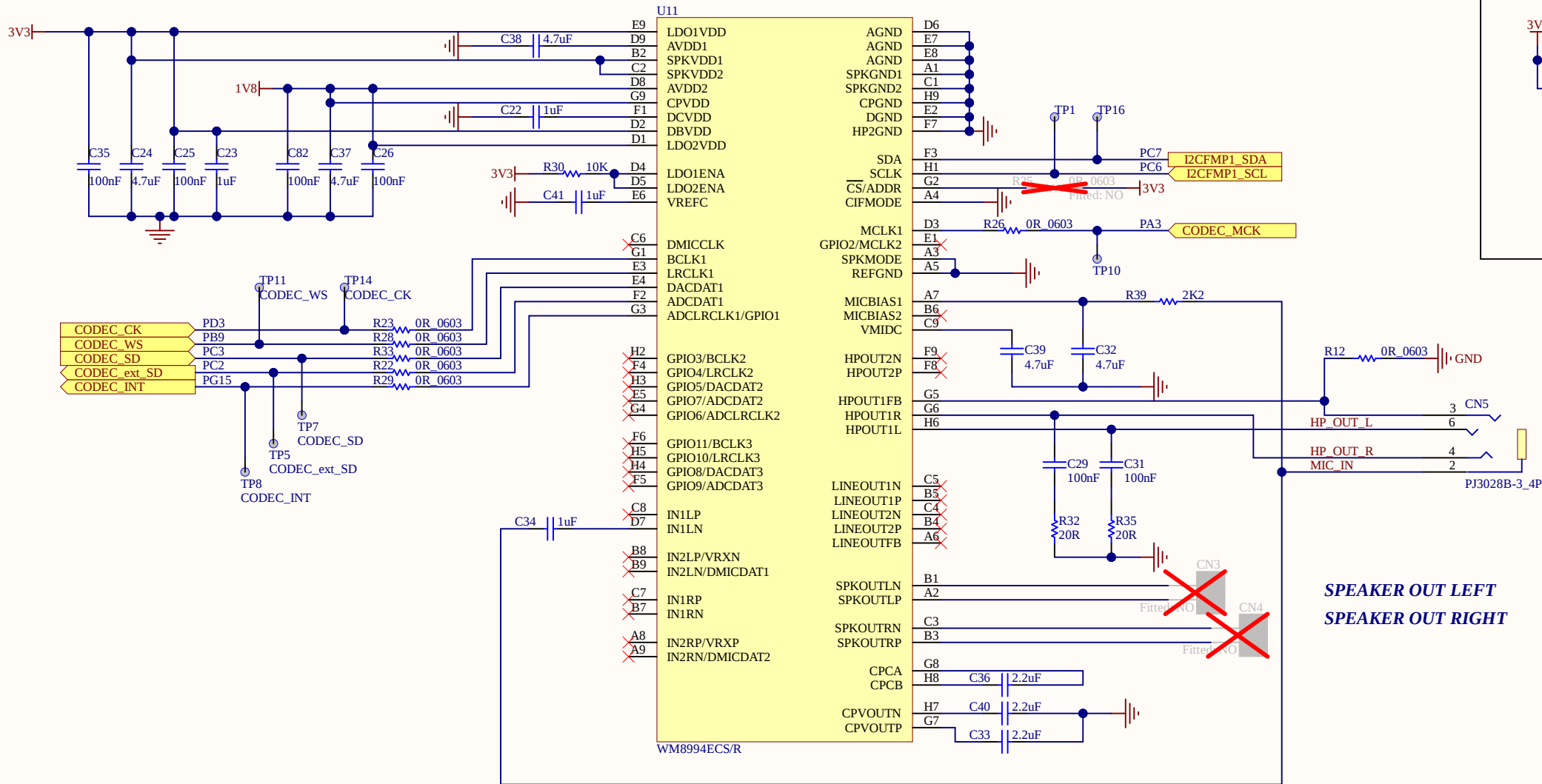
PSRAM

PSRAM Data, NWE & NOE shared with LCD

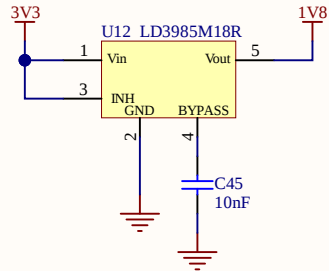




CODEC WOLFSON
WM8994 I2C Address : 0011 0100
Operating range: 1.62<VDD<3.6V

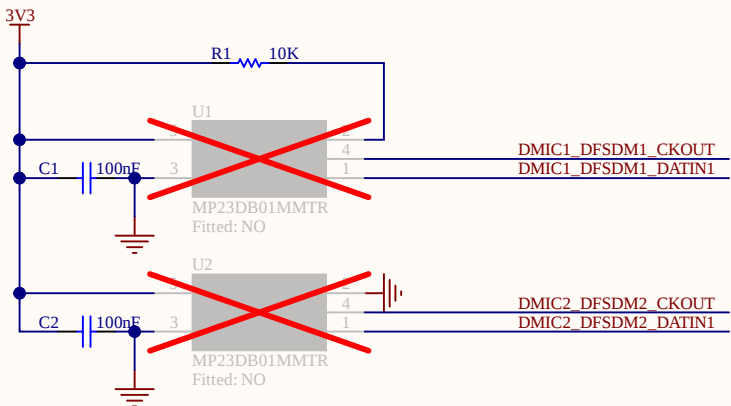


CODEC PWR 1V8 / 150mA

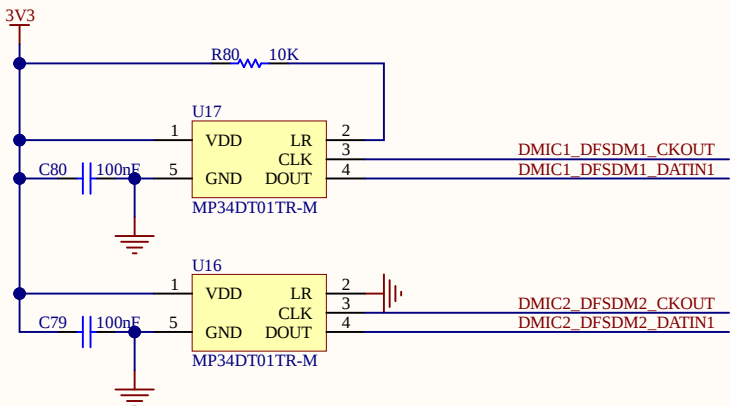


SPEAKER OUT LEFT
SPEAKER OUT RIGHT

MEMS

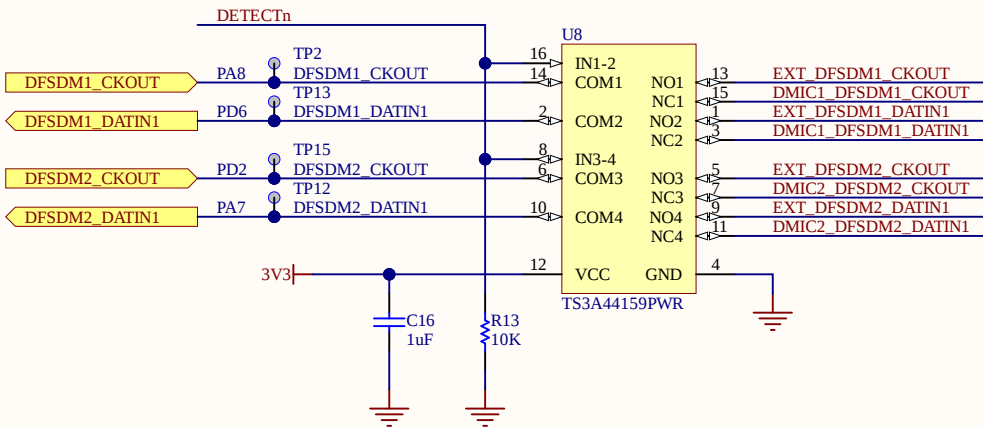


21mm distance between a pair of microphones



21mm distance between a pair of microphones

Microphone switch

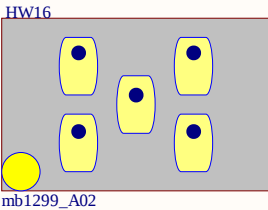
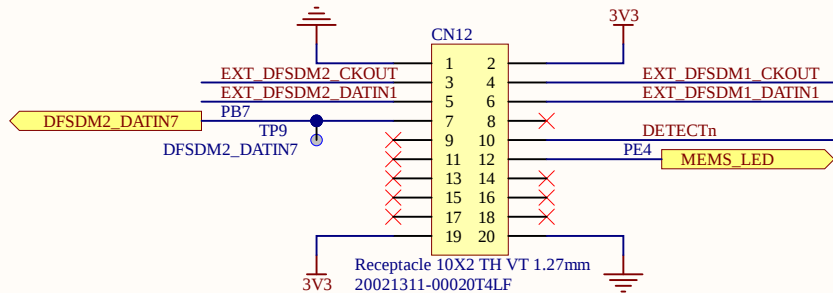


NC = Normally Closed / NO Normally Open

IN = L => COM TO NC / NC TO COM (NO OFF)

IN = H => COM TO NO / NO TO COM (NC OFF)

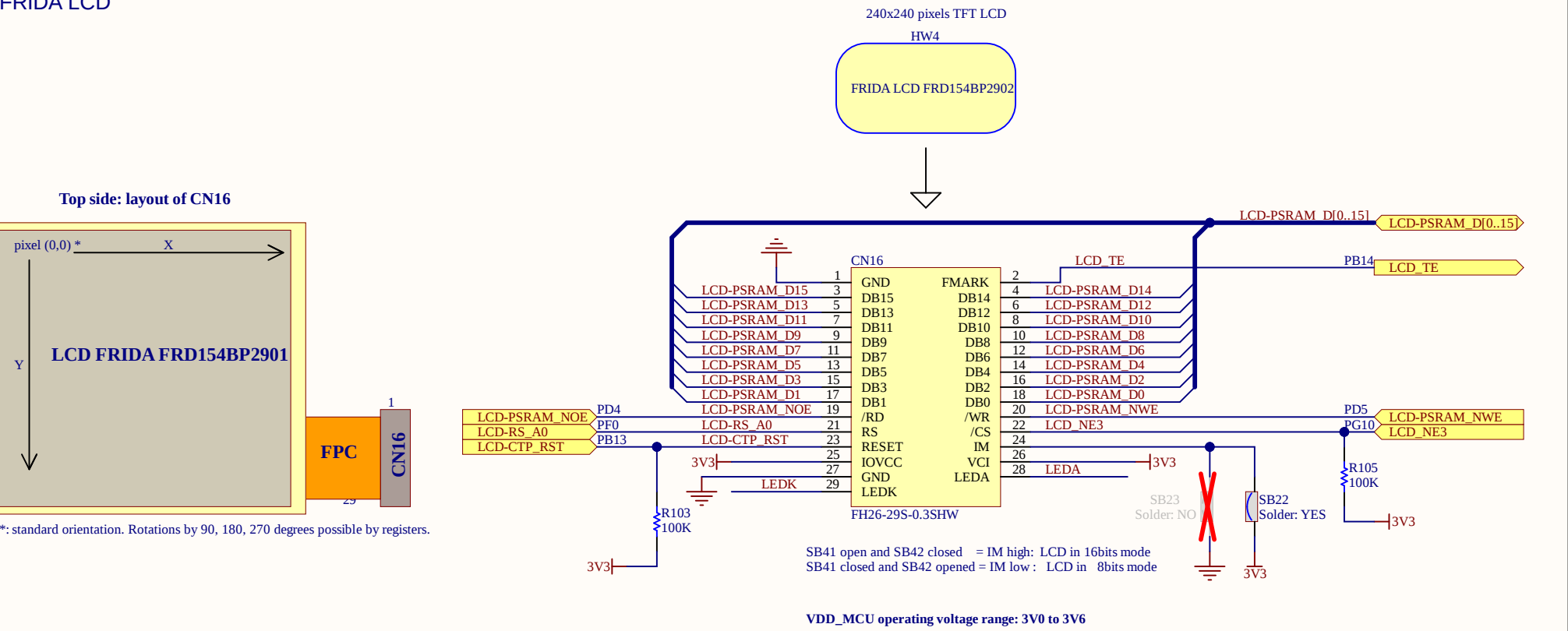
Extension microphones module



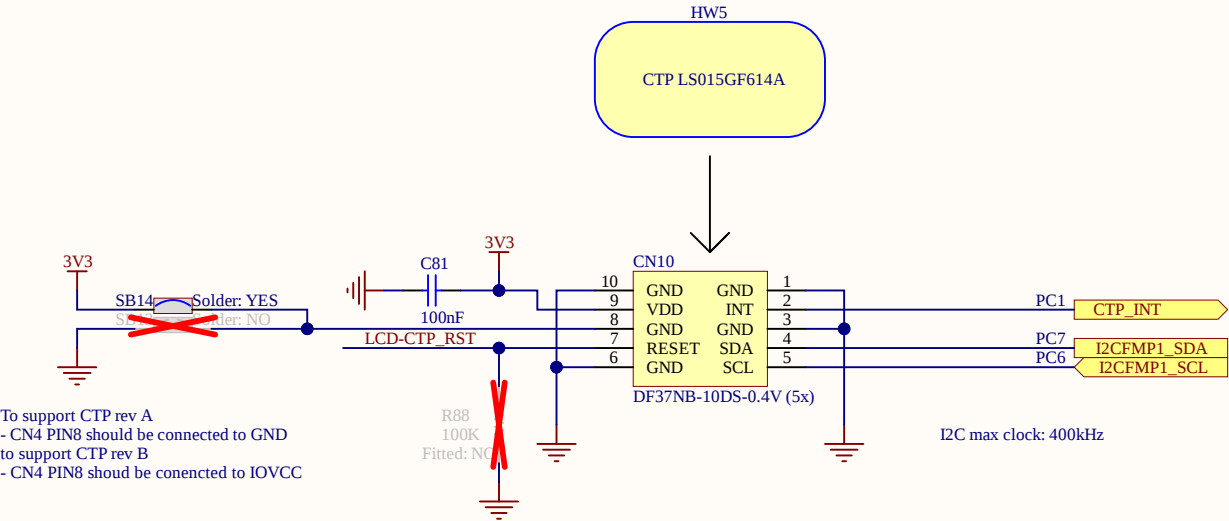
Receptacle connector pin 1 connected to header connector pin 2



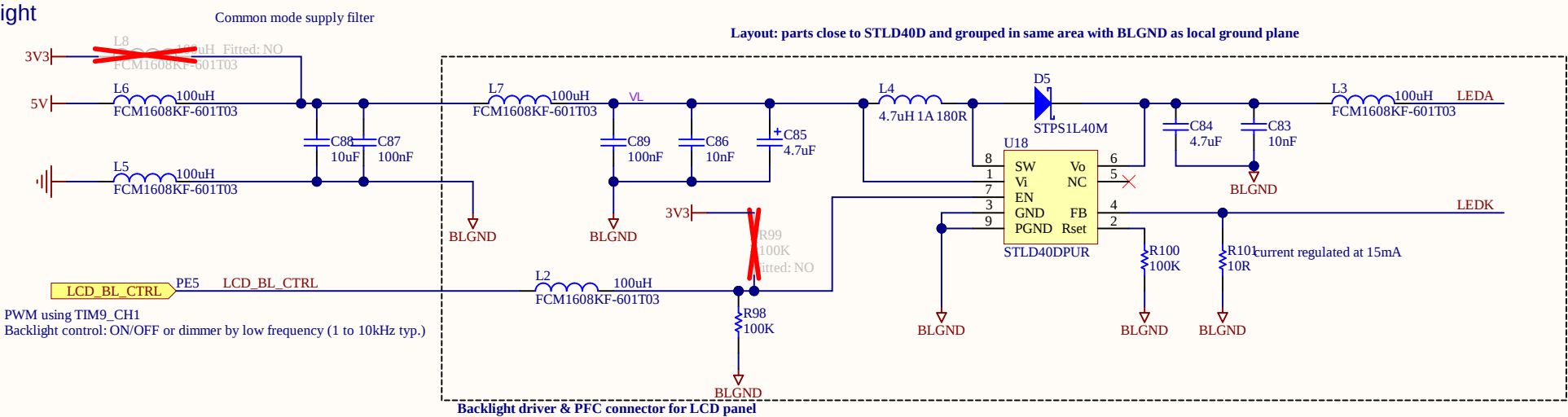
FRIDA LCD



LCD RST and CTP RST share the same PIO for RST. Active LOW



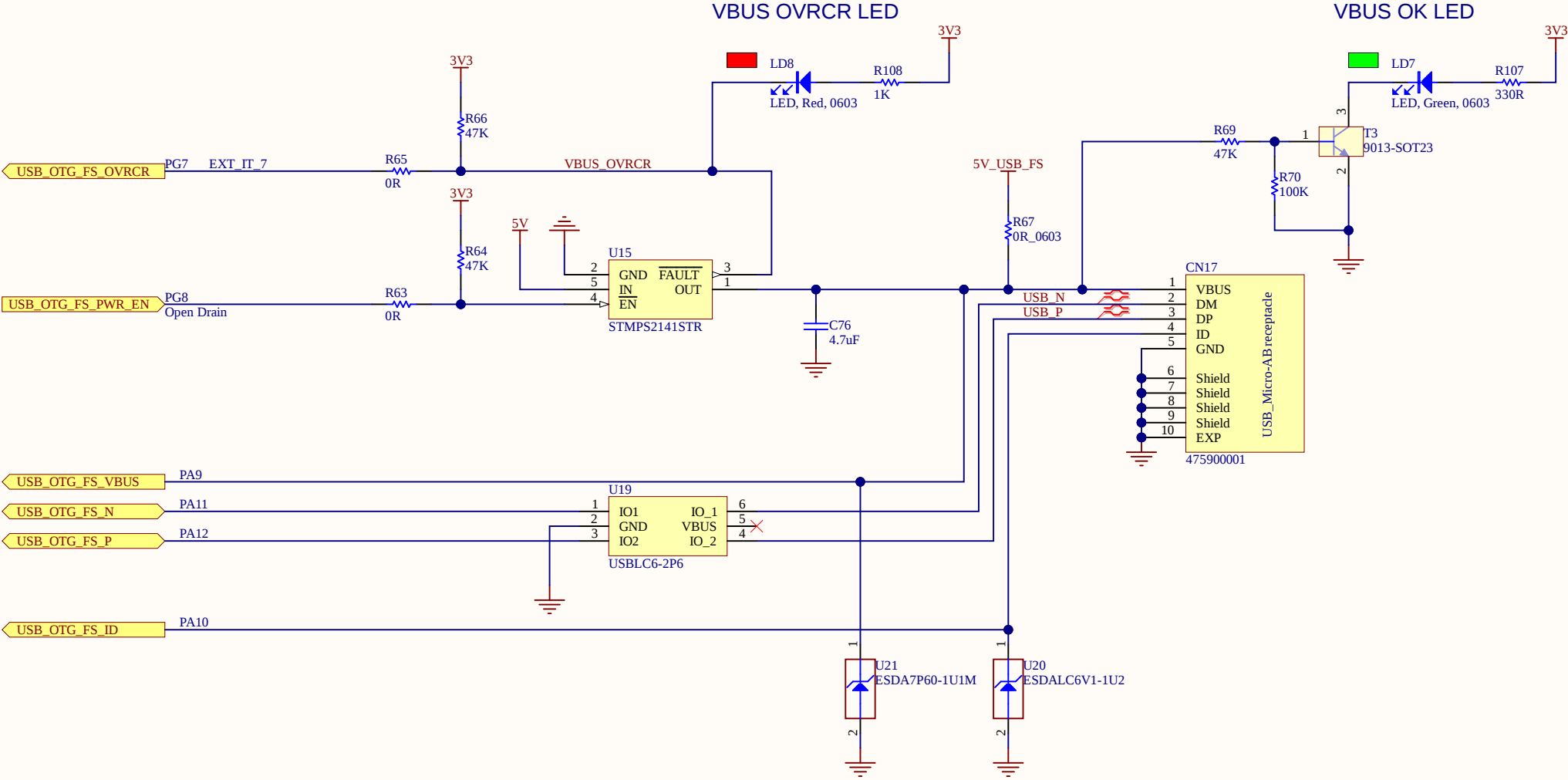
LCD Backlight



Title: LCD			
Project: STM32F413H-DISCO			
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USB_OTG_FS

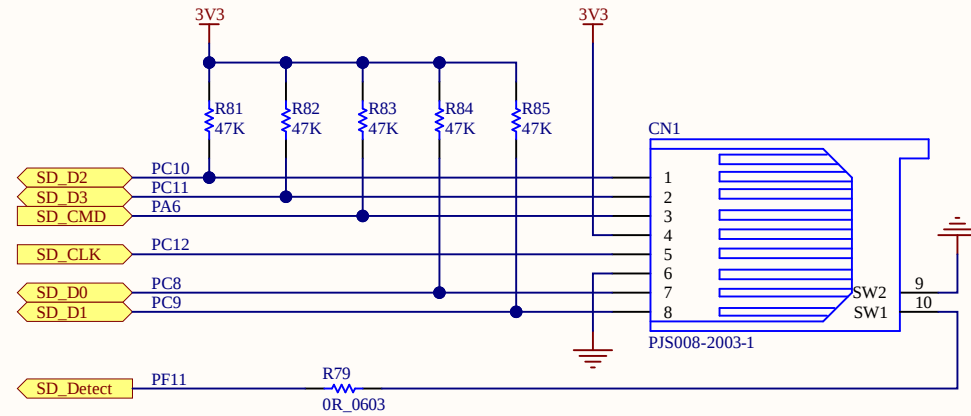
USB Full Speed operating range voltage: 3.0V<VDDUSB<3.6V



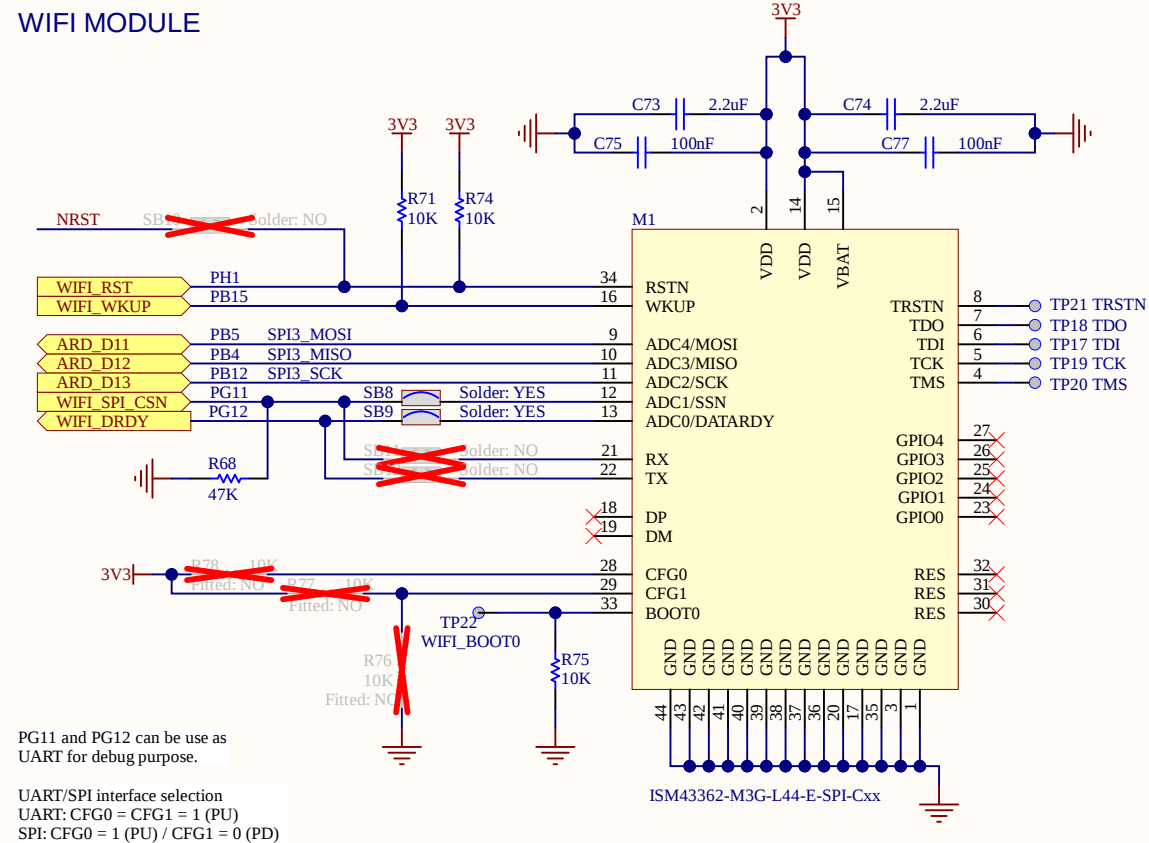
ESD PROTECTION SHOULD BE CLOSE TO THE CONNECTOR



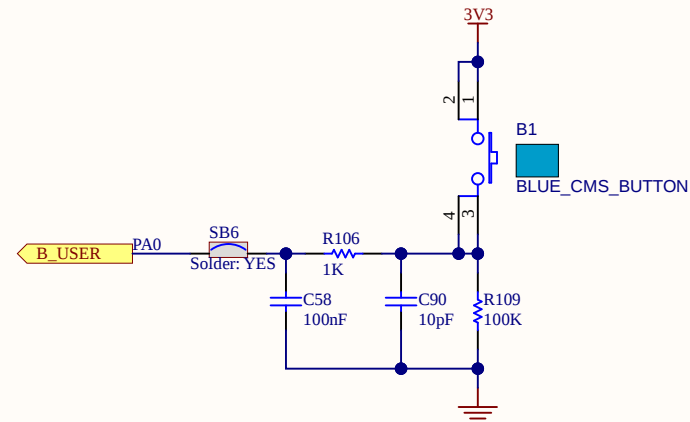
MICRO SD CARD



WIFI MODULE

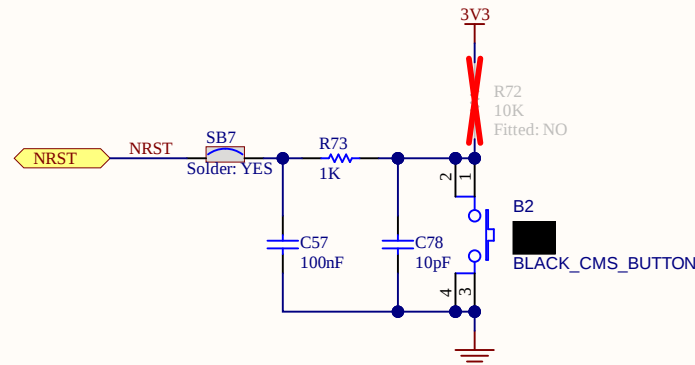


USER WAKE-UP Button



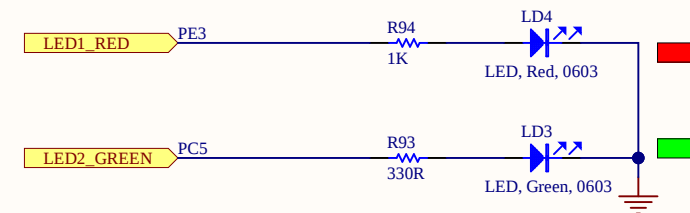
100nF should be place close to the MCU
10pF and 1K should be place close to the button

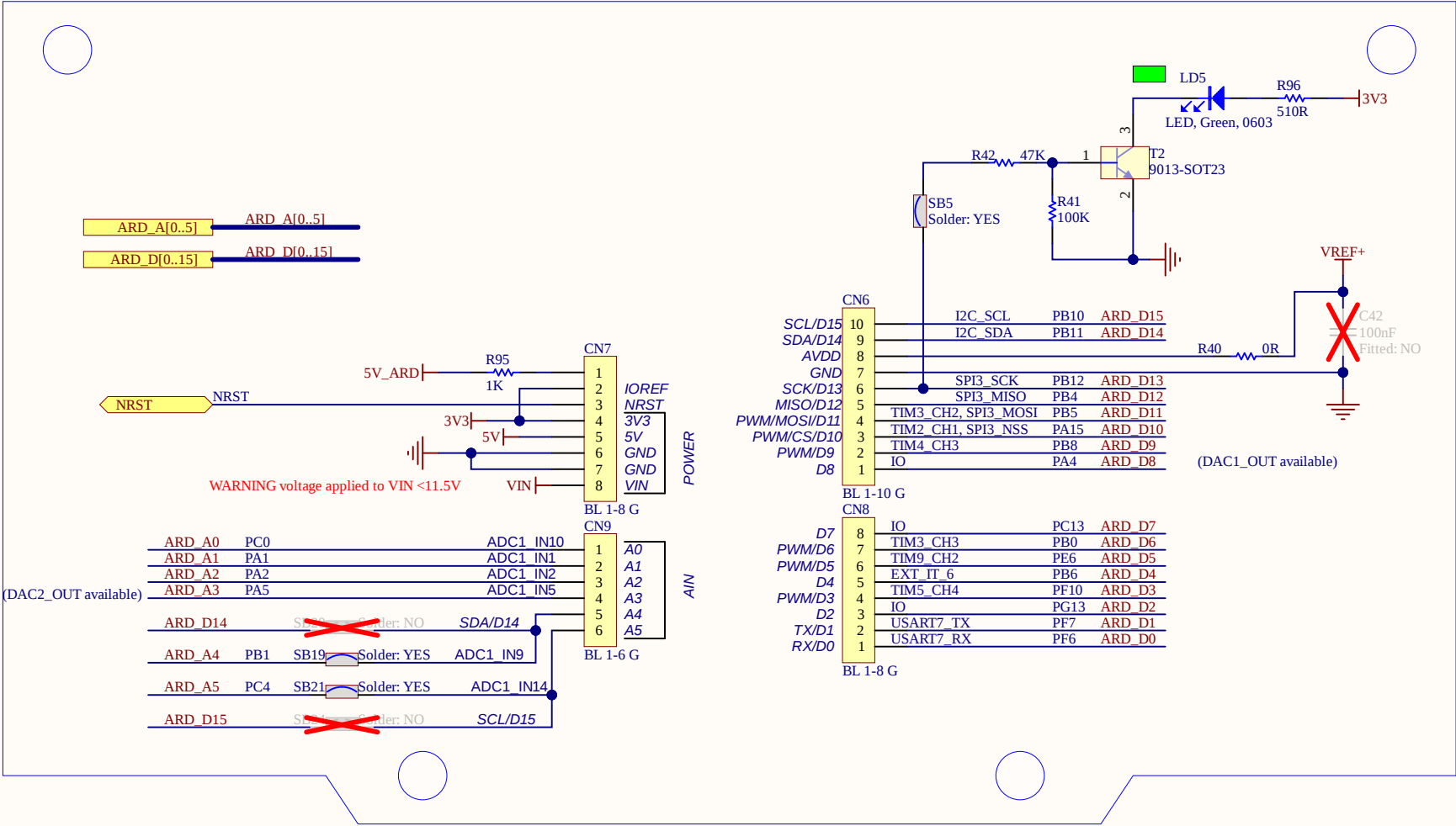
RESET BUTTON



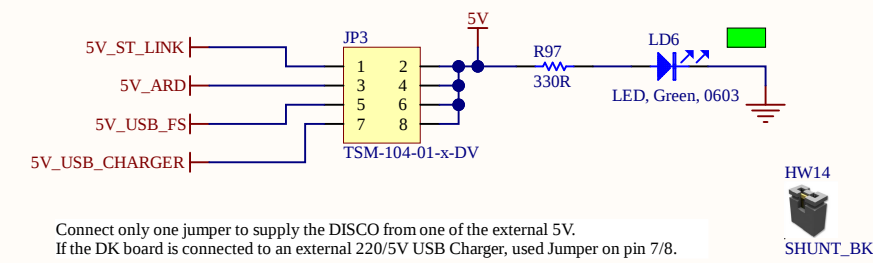
100nF should be place close to the MCU
10pF and 1K should be place close to the button

USER LED
The 2 LEDs are top side

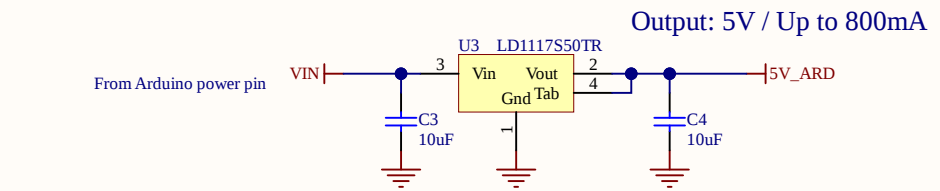




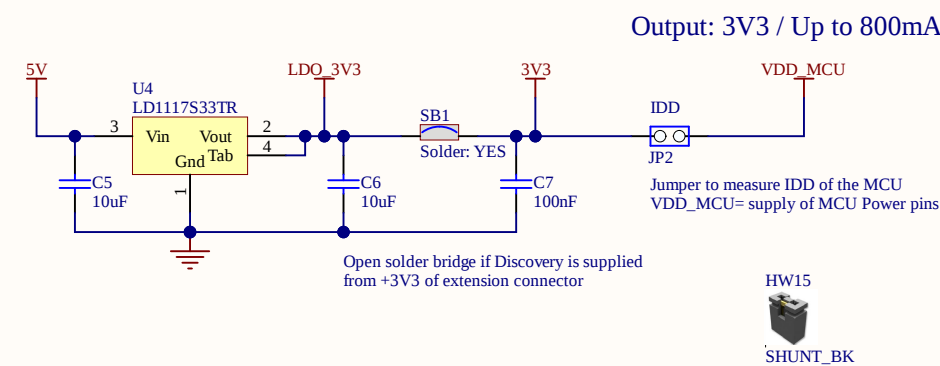
5V PWR SELECTION FROM EXTERNAL SOURCES



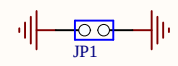
5V PWR FROM ARDUINO (VIN < 11.5V)



3V3 PWR



GND PROBE



PWR TREE

