

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

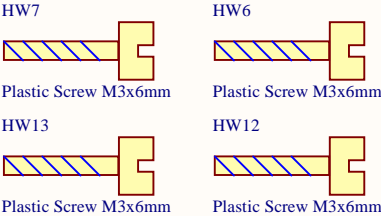
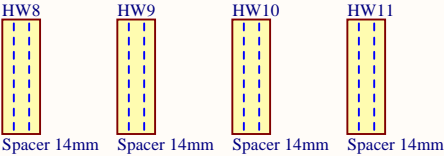
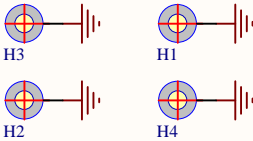
BLISTER

STM32F413H-DISCO BLISTER

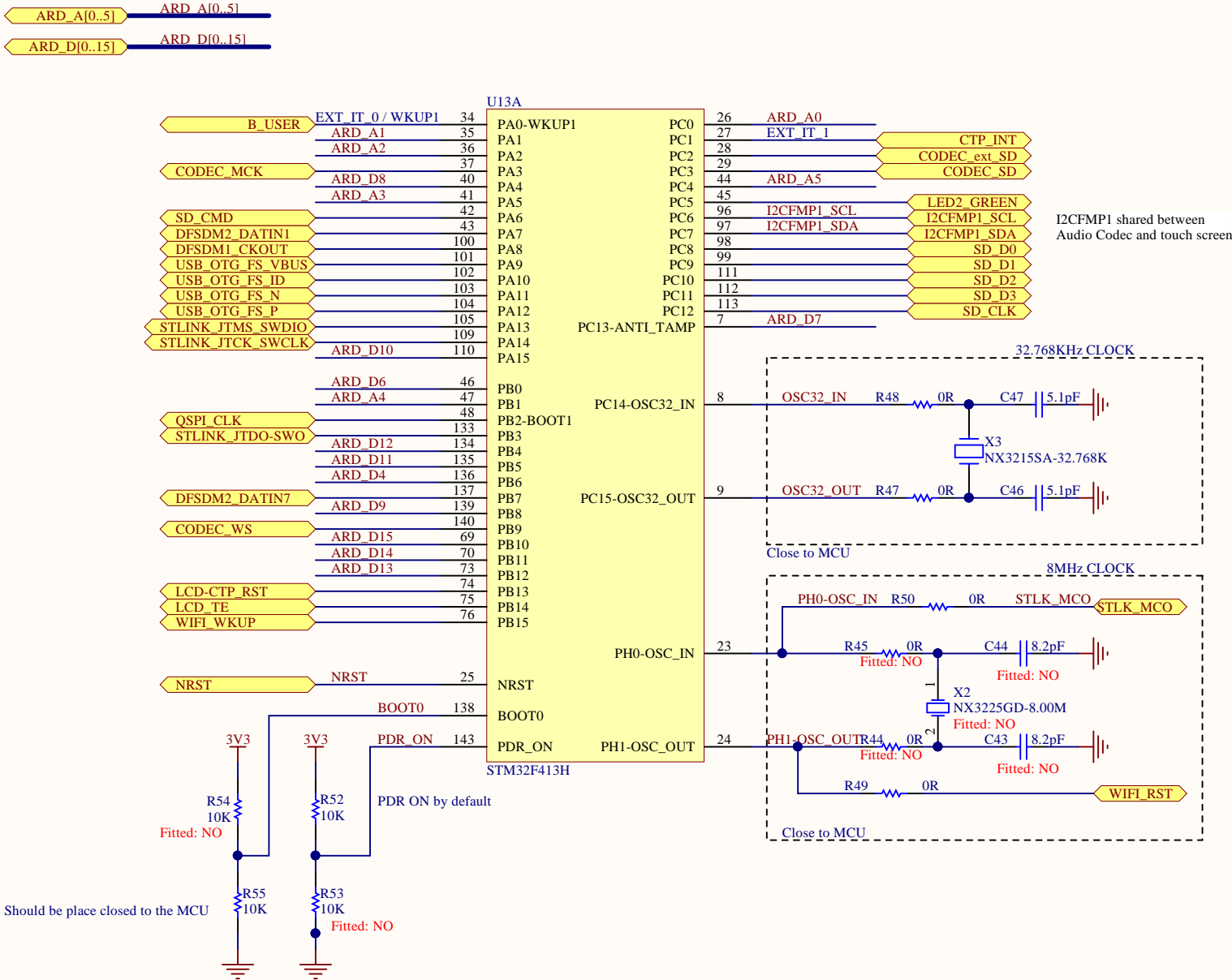
HW3

BLISTER CARD

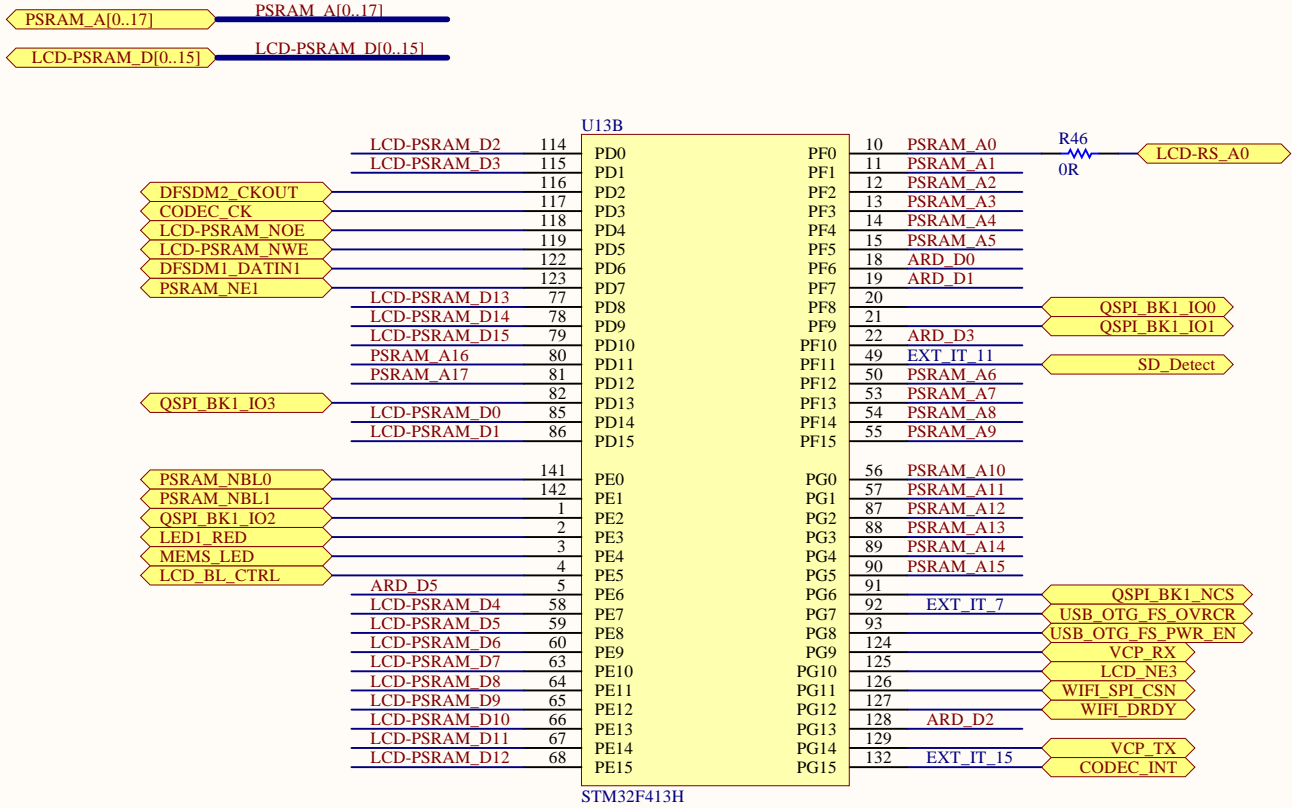
STM32F413H-DISCO BLISTER CARD



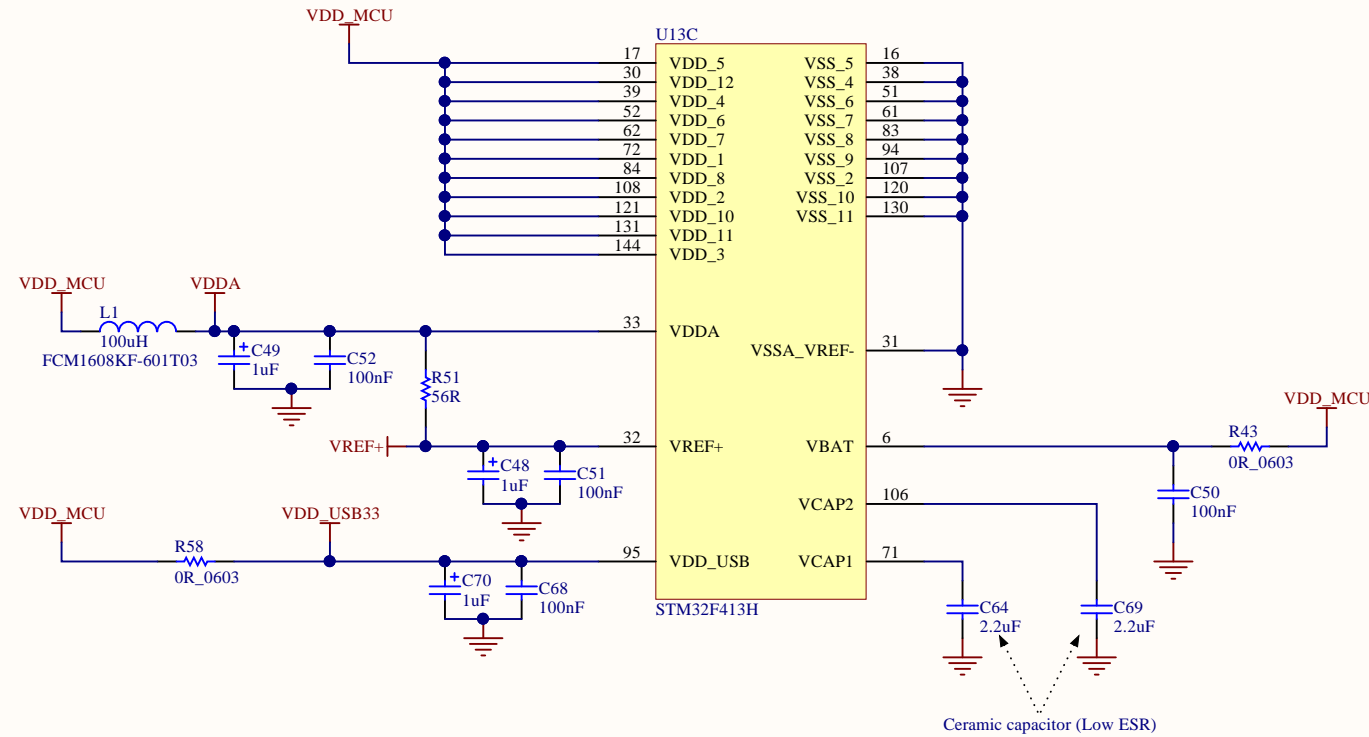
MCU GPIO BANK A, B, C, and SYSTEM



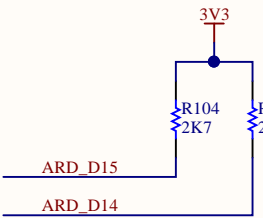
MCU GPIO BANK D, E, F, G



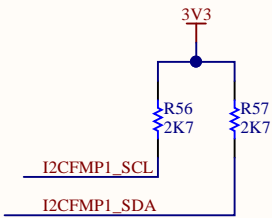
MCU PWR



I2C2\_PULL-UP

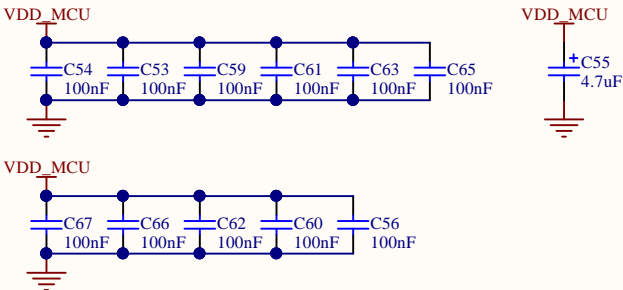


I2CFMP1\_PULL-UP



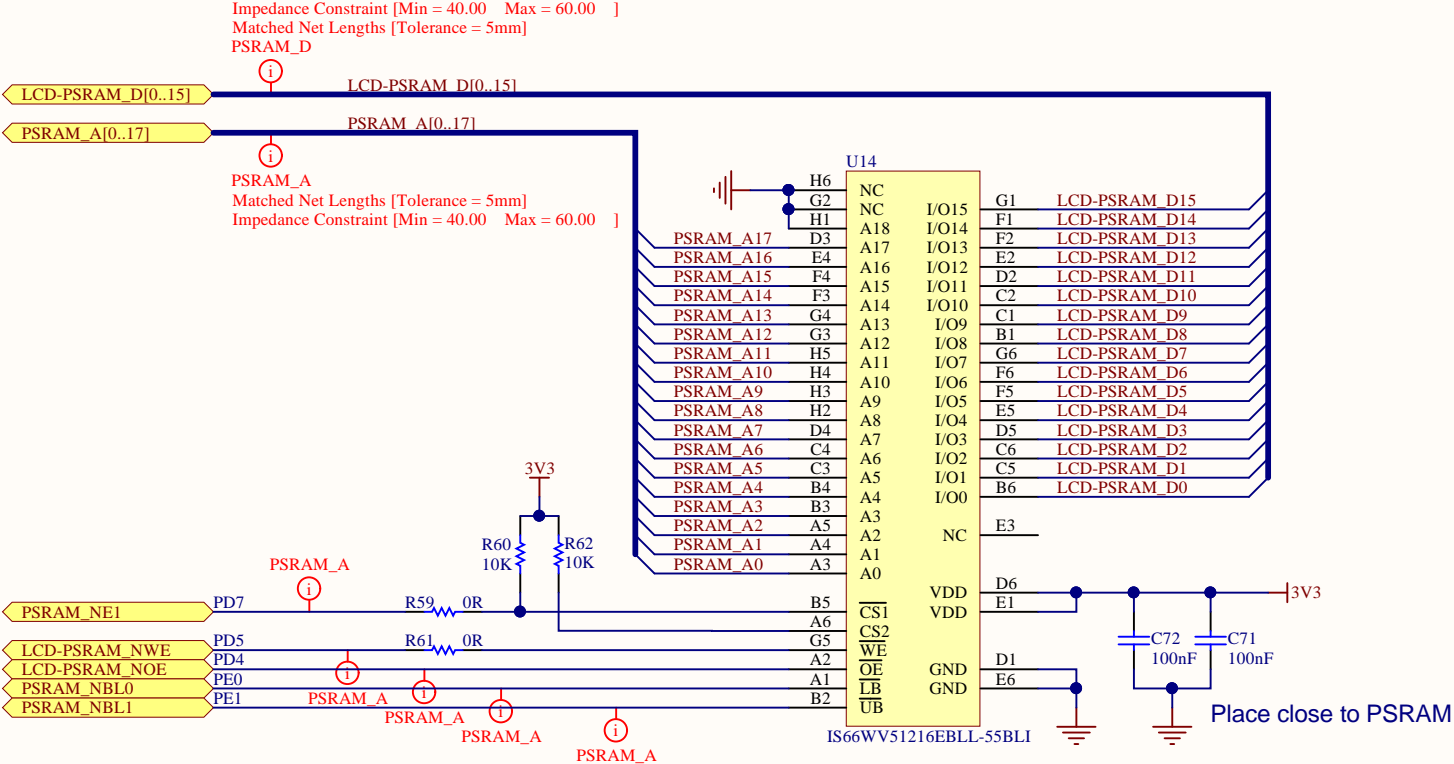
DECOUPLING CAPACITORS

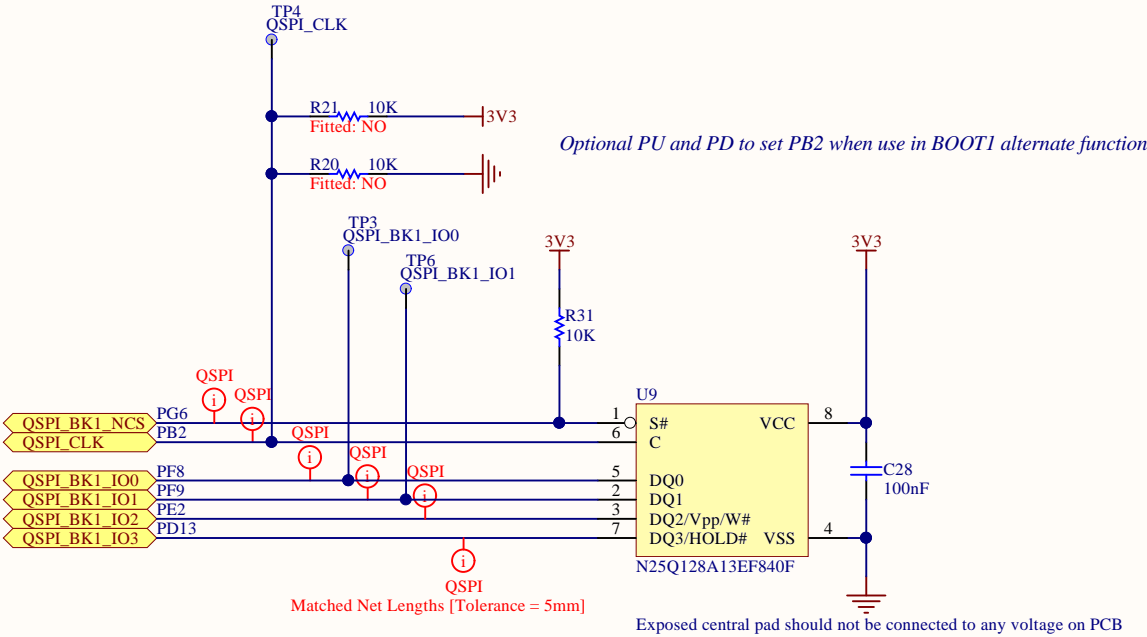
One 100nF placed close to each VDD\_x pin of MCU



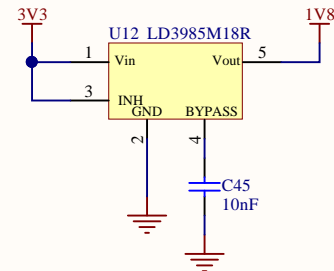
PSRAM

PSRAM Data, NWE & NOE shared with LCD

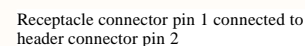
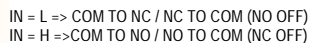




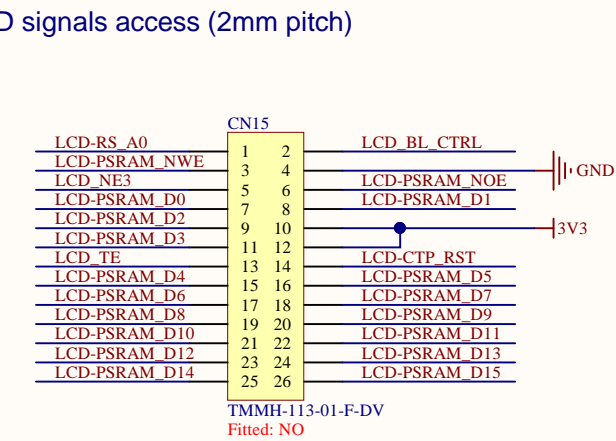
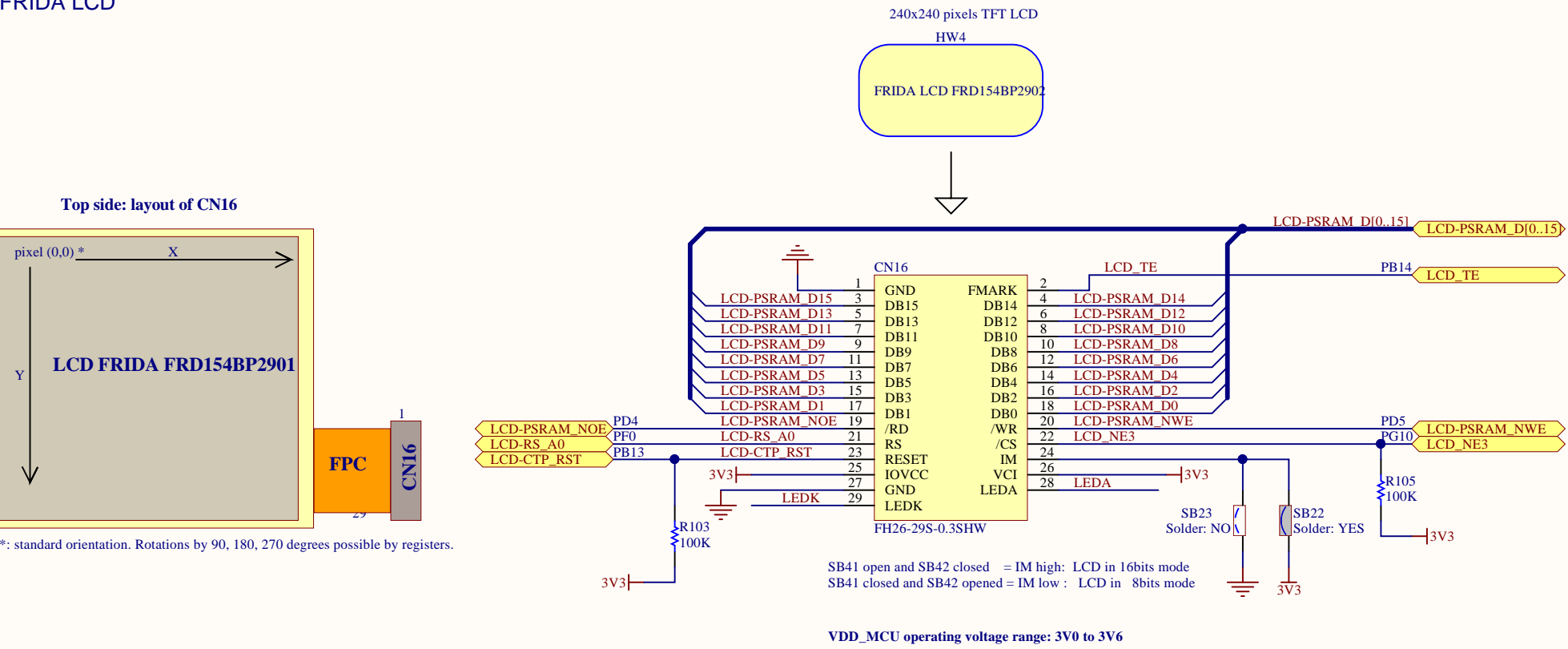
**Operating range:  $1.62 < V_{DD} < 3.6V$**



## Extension microphones module

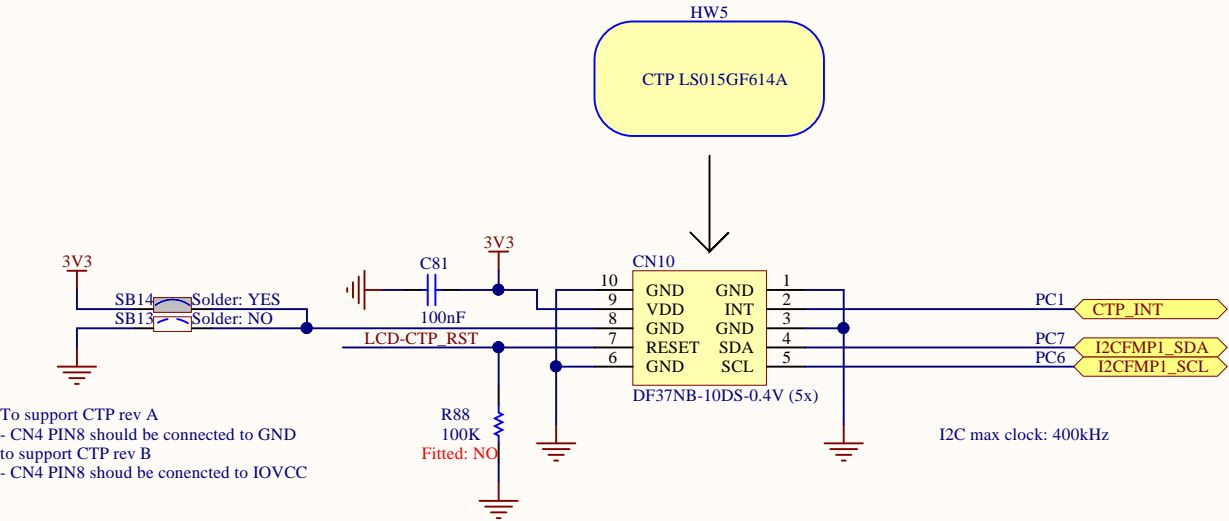


## FRIDA LCD

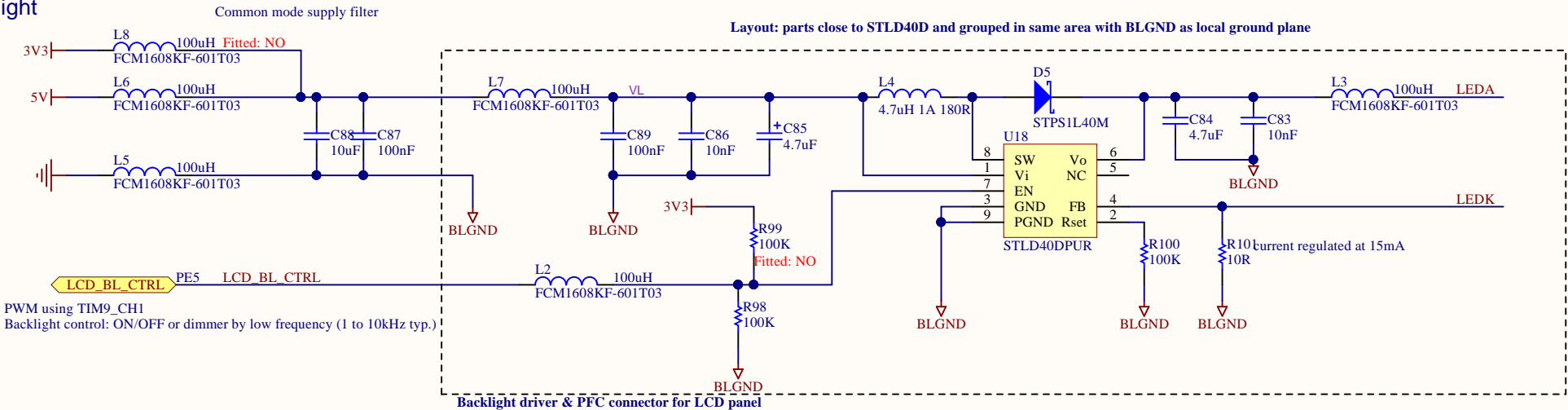


## Capacitive Touch Panel

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

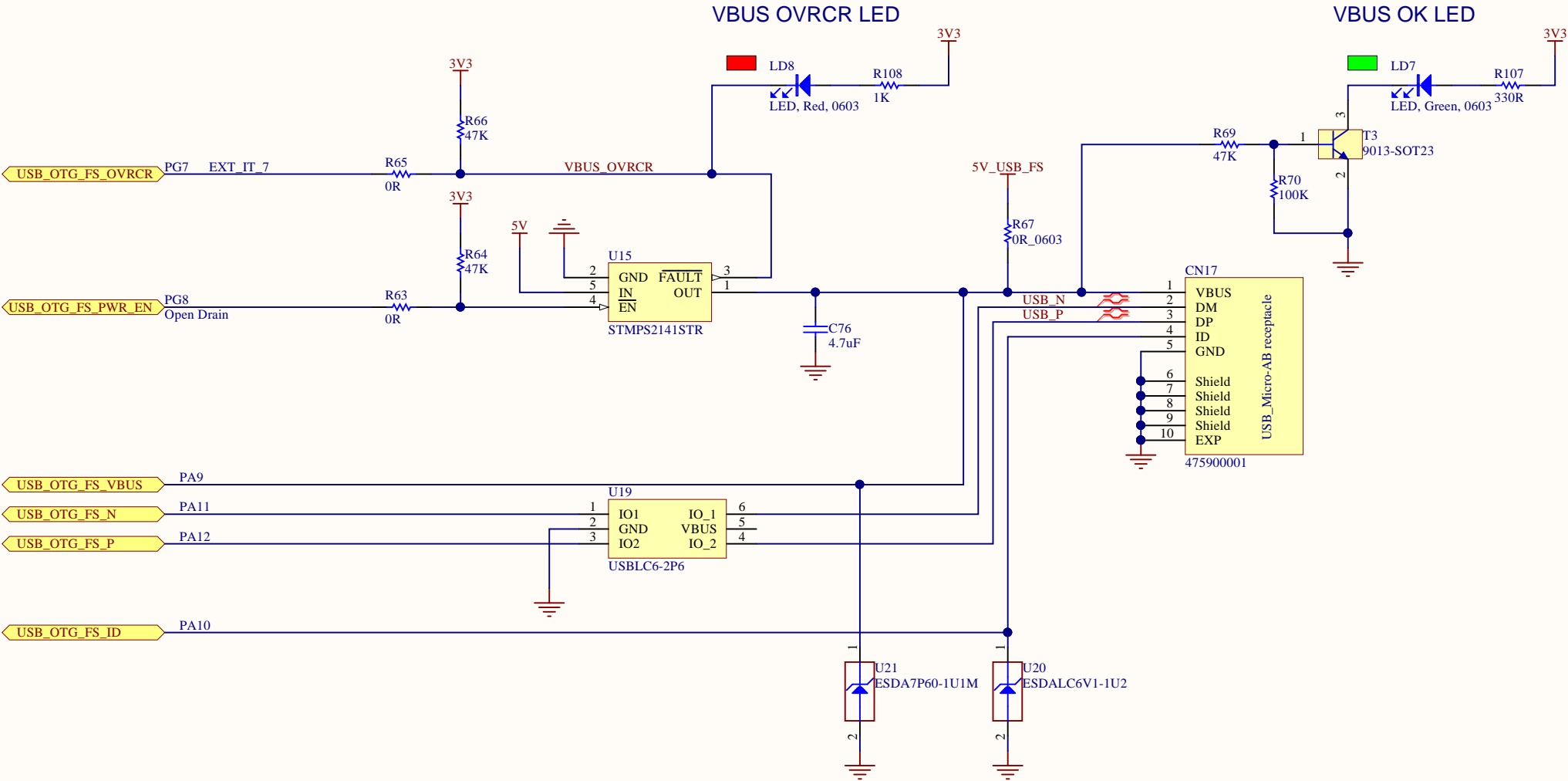


## LCD Backlight



USB\_OTG\_FS

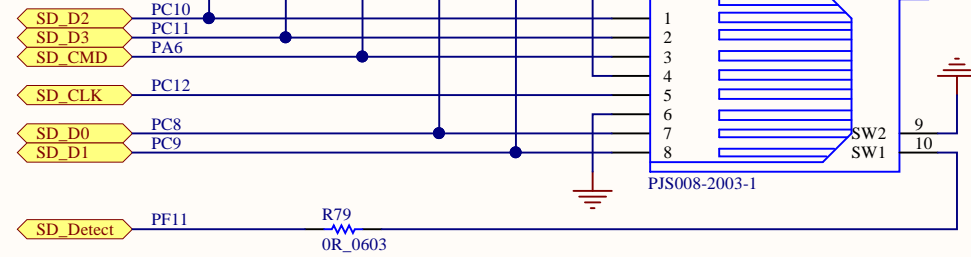
USB Full Speed operating range voltage: 3.0V<VDDUSB<3.6V



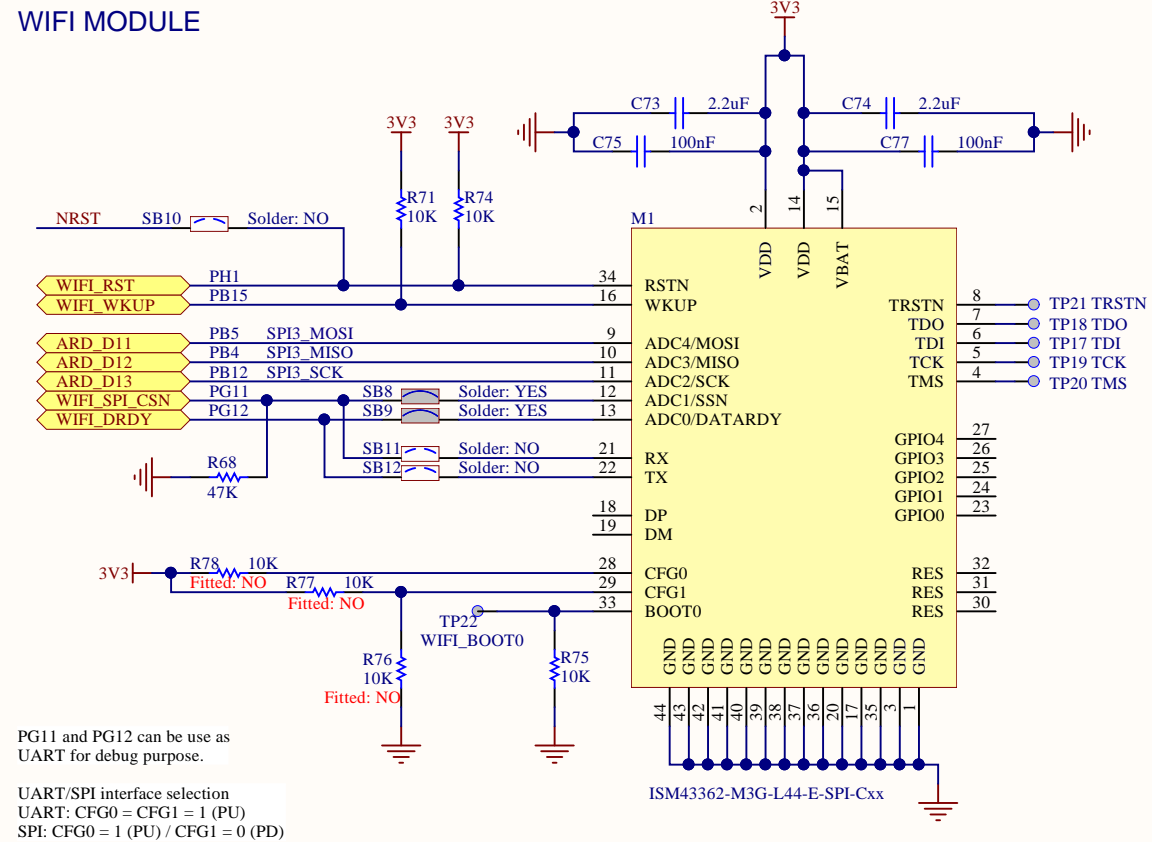
ESD PROTECTION SHOULD BE CLOSE TO THE CONNECTOR



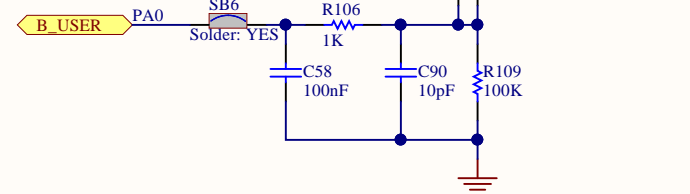
## MICRO SD CARD



## WIFI MODULE

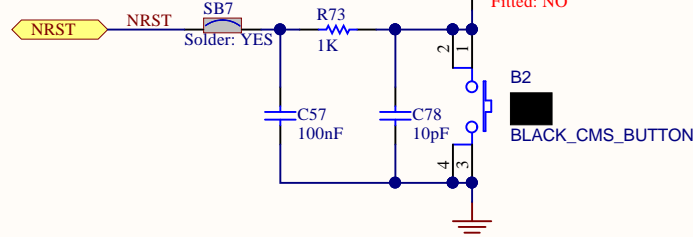


## USER WAKE-UP Button



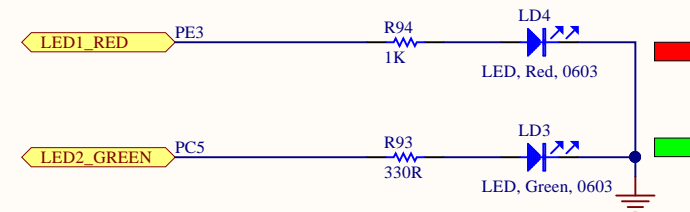
100nF should be place close to the MCU  
10pF and 1K should be place close to the button

## RESET BUTTON



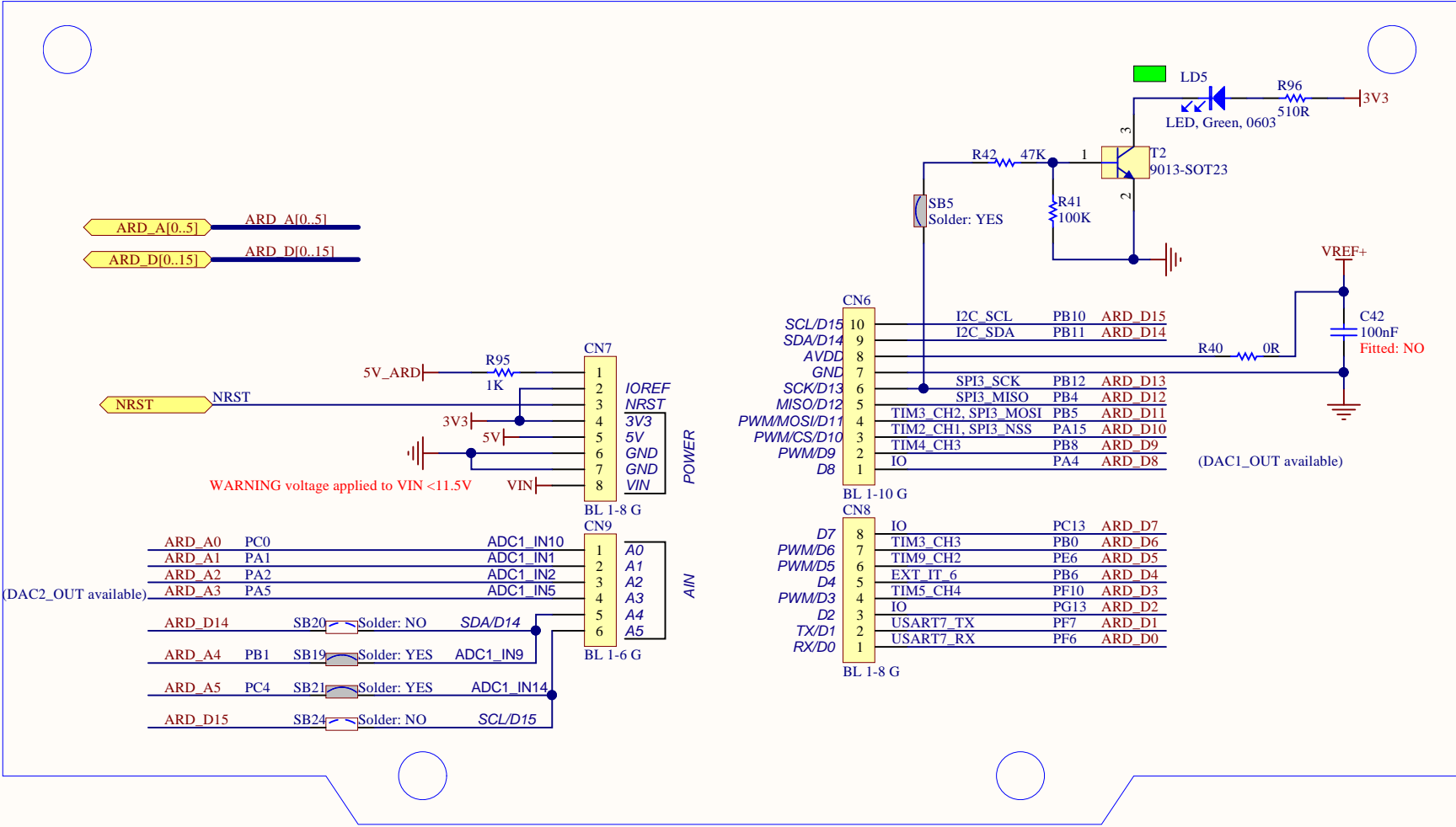
100nF should be place close to the MCU  
10pF and 1K should be place close to the button

**USER LED**  
The 2 LEDs are top side



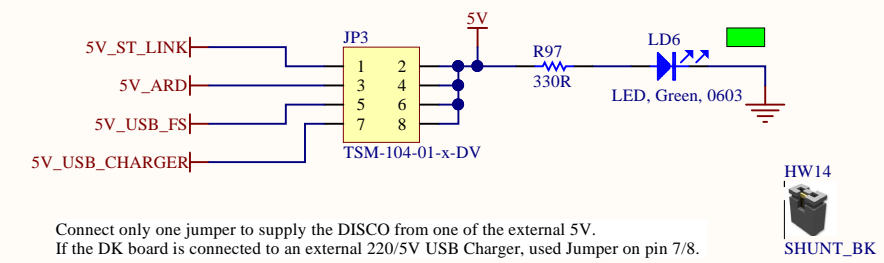
Title: <b>Peripherals</b>		
Project: <b>STM32F413H-DISCO</b>		
Size: <b>A4</b>	Reference: <b>MB1274</b>	Revision: <b>D-01</b>
Date: <b>12/16/2016</b>		Sheet: <b>8</b> of <b>11</b>



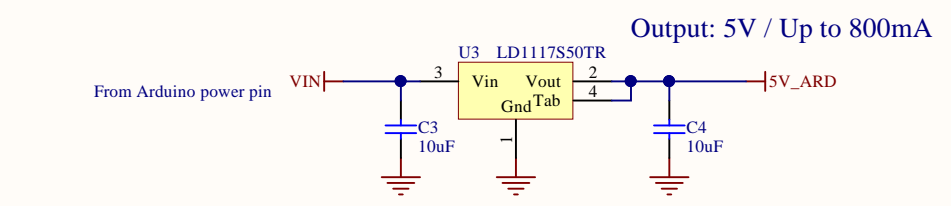




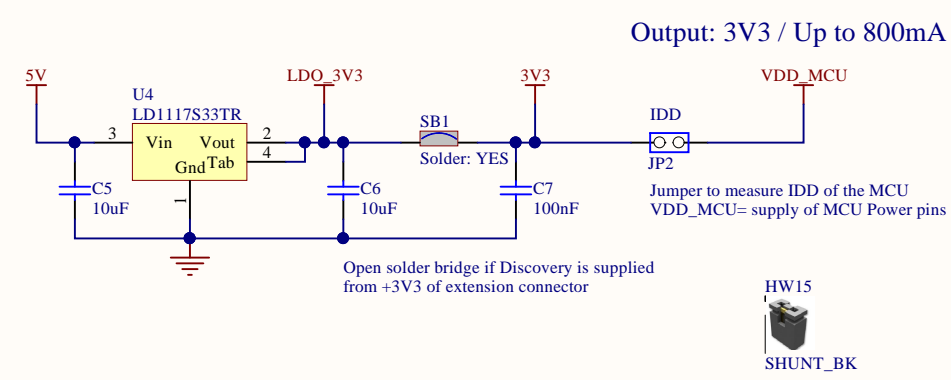
5V PWR SELECTION FROM EXTERNAL SOURCES



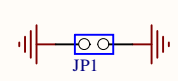
5V PWR FROM ARDUINO (VIN < 11.5V)



3V3 PWR



GND PROBE



PWR TREE

