

NUCLEO-64

MB1814

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U_Top
Top.SchDoc

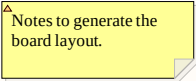


Legend

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

Text to be added to silkscreen.

Warning text.



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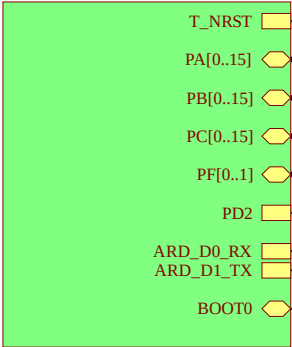
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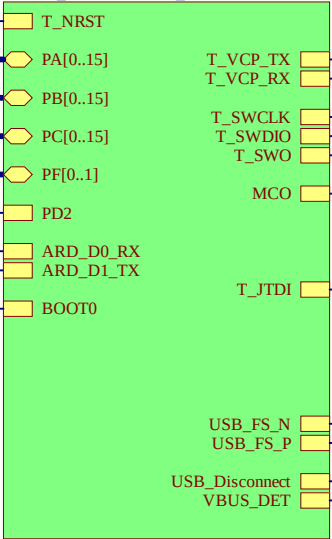
Title: Project overview		
Project: NUCLEO-64		
Variant: H503RB		
Revision: C-01		Reference: MB1814
Size: A4	Date: 15-JAN-2024	Sheet: 1 of 8



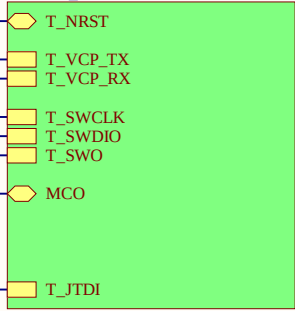
U_Connectors
Connectors.SchDoc



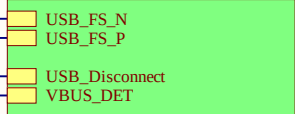
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STM32_microcontroller_IOS.SchDoc



U_STLINK_V3EC
STLINK_V3EC.SchDoc



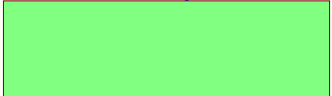
U_User_USB
User_USB.SchDoc

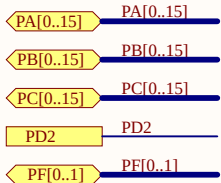
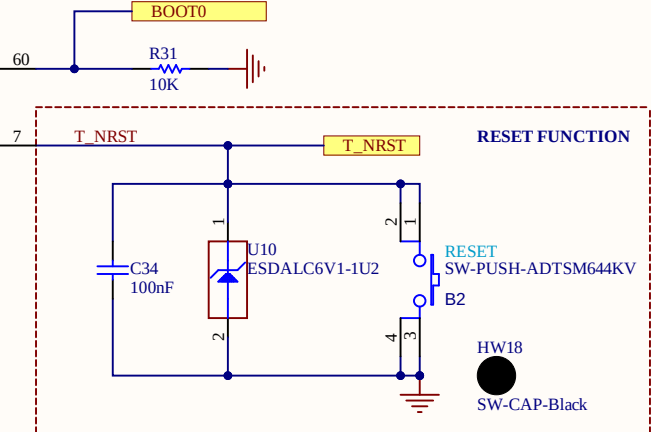
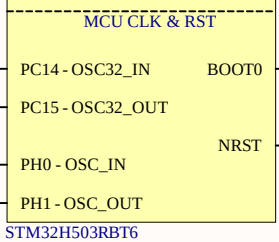
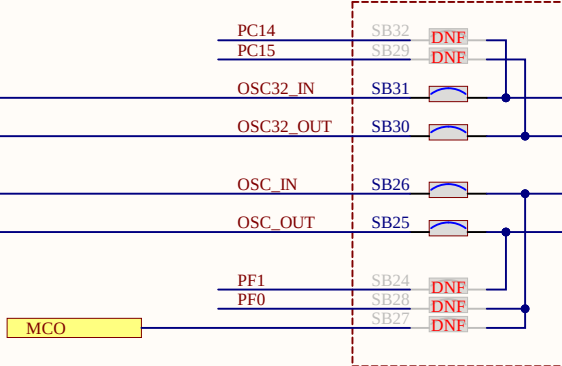
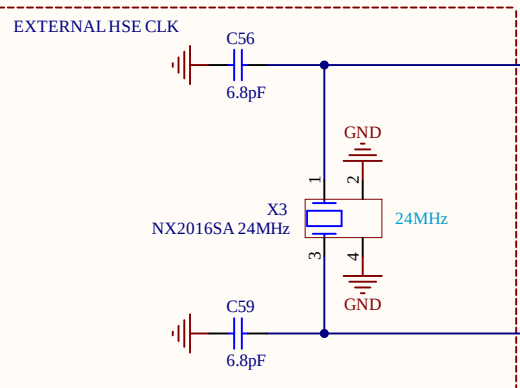
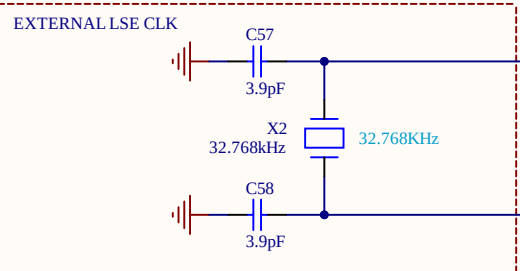
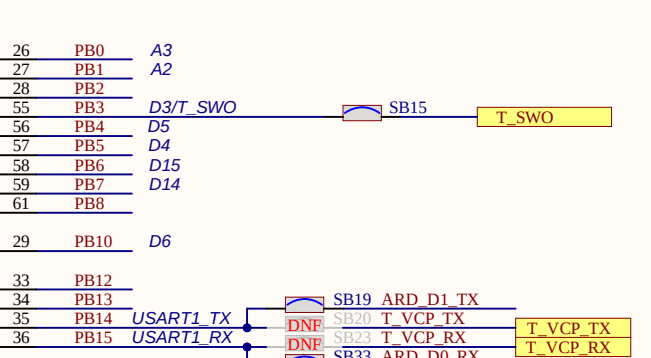
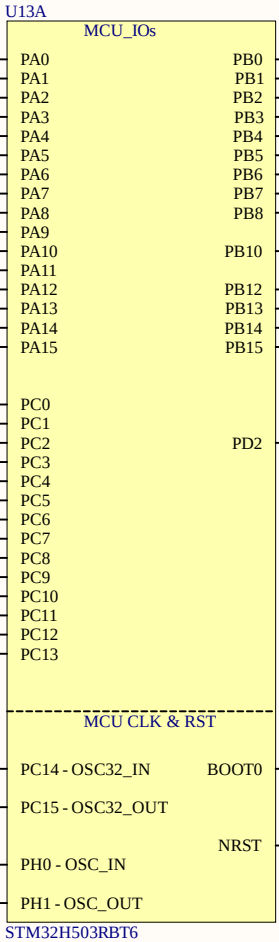
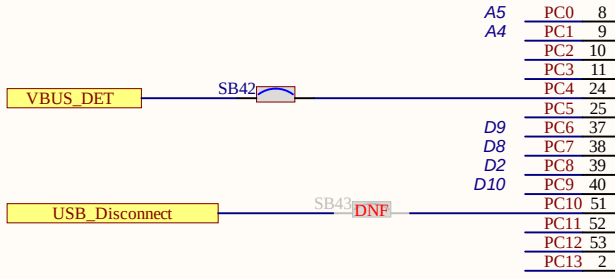
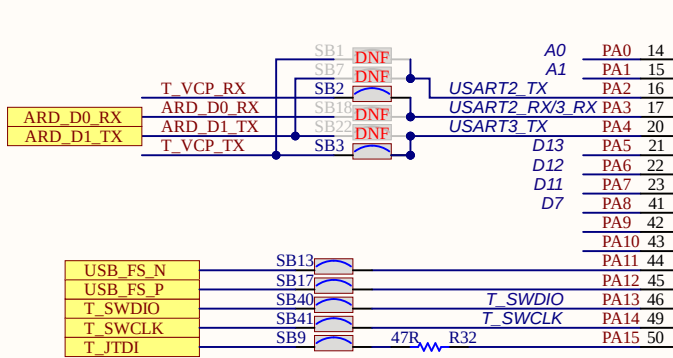
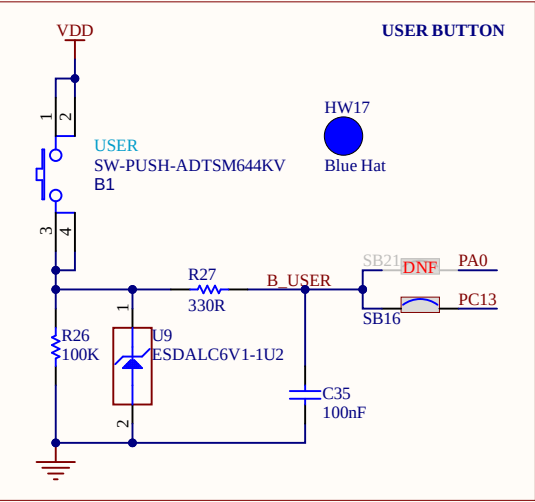


U_Board_Power
Board_Power.SchDoc

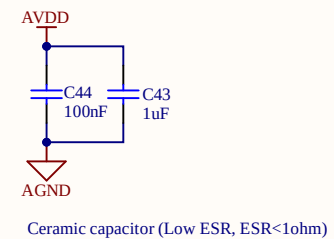
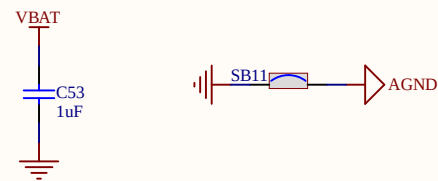
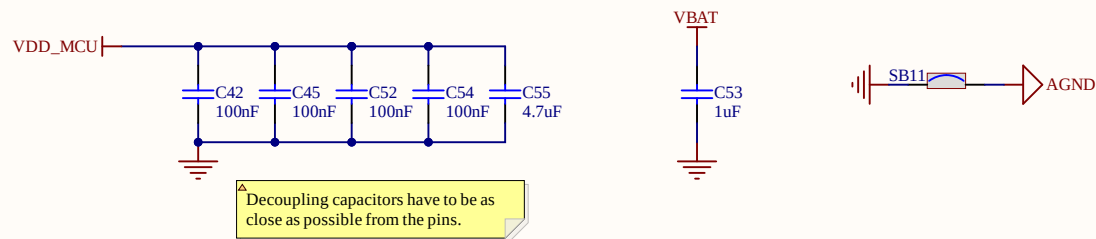
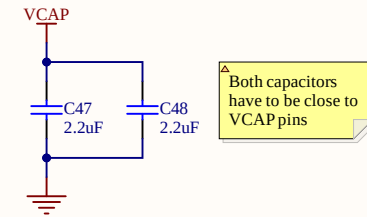
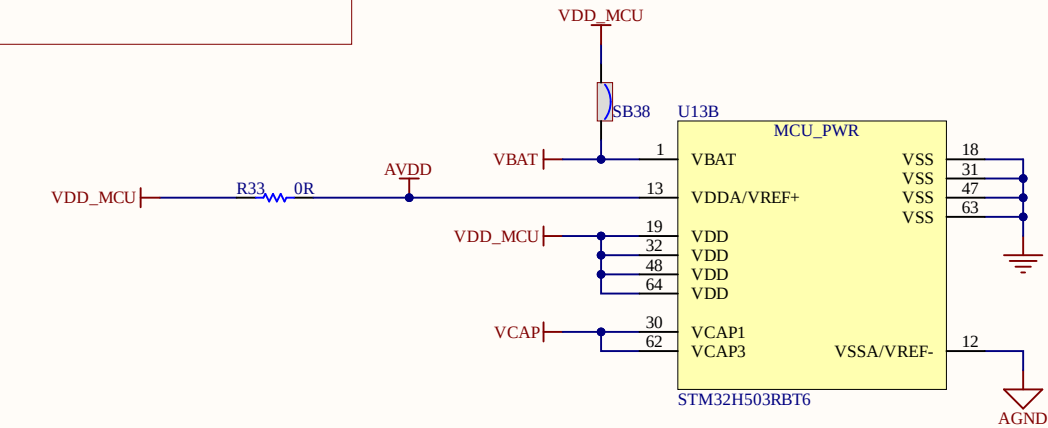
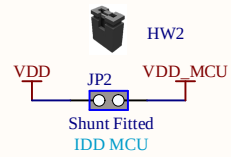


U_STM32_microcontroller_power
STM32_microcontroller_power.SchDoc

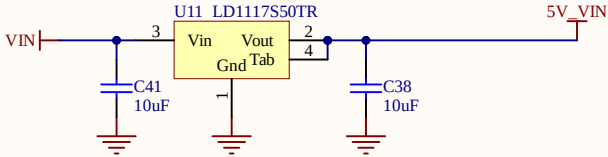




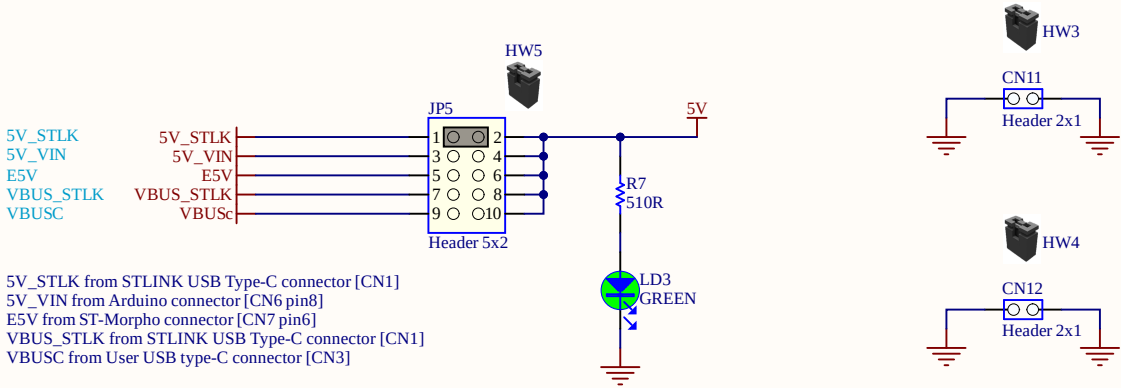
IDD Measurement



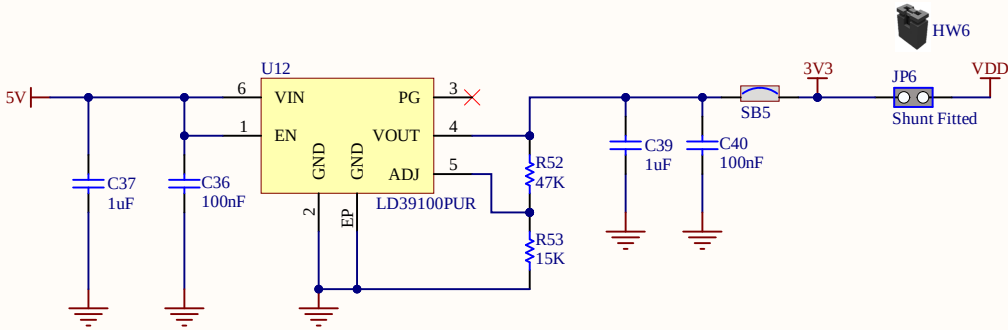
VIN / 5V POWER



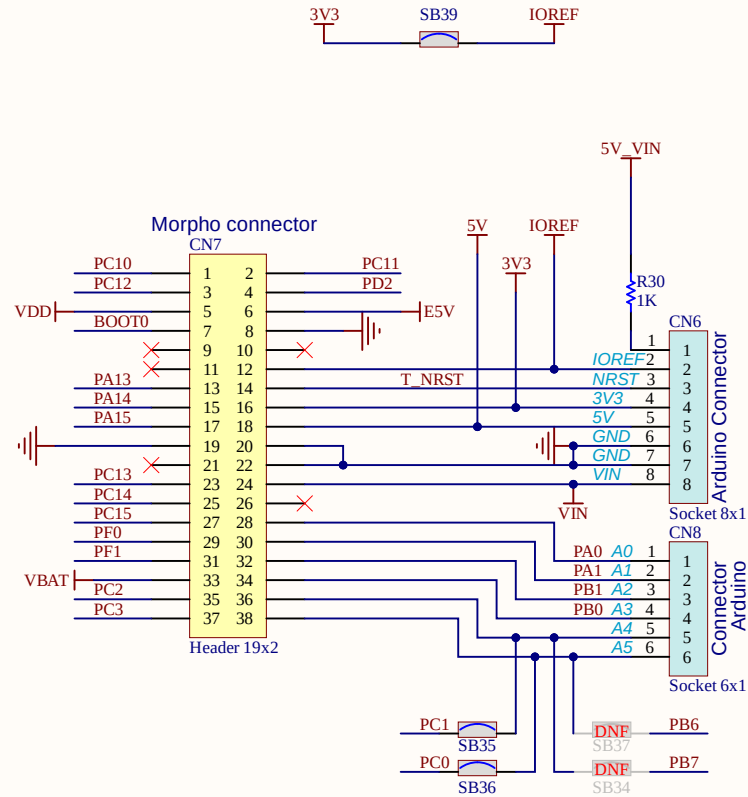
5V POWER SOURCE SELECTION



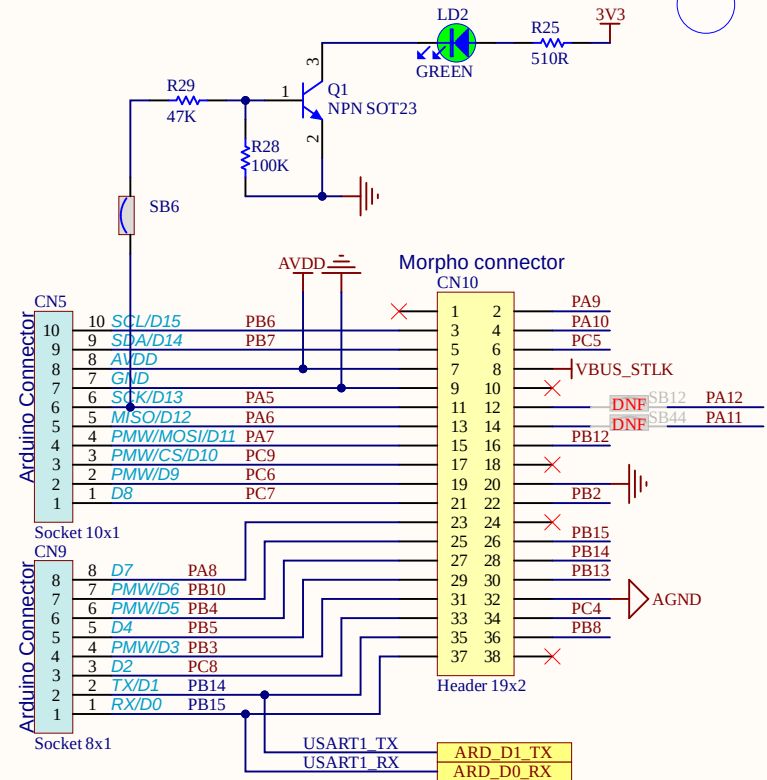
VDD POWER
3V3 - 1A max



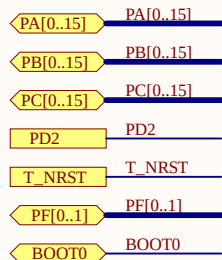
WARNING voltage applied to VIN <12V



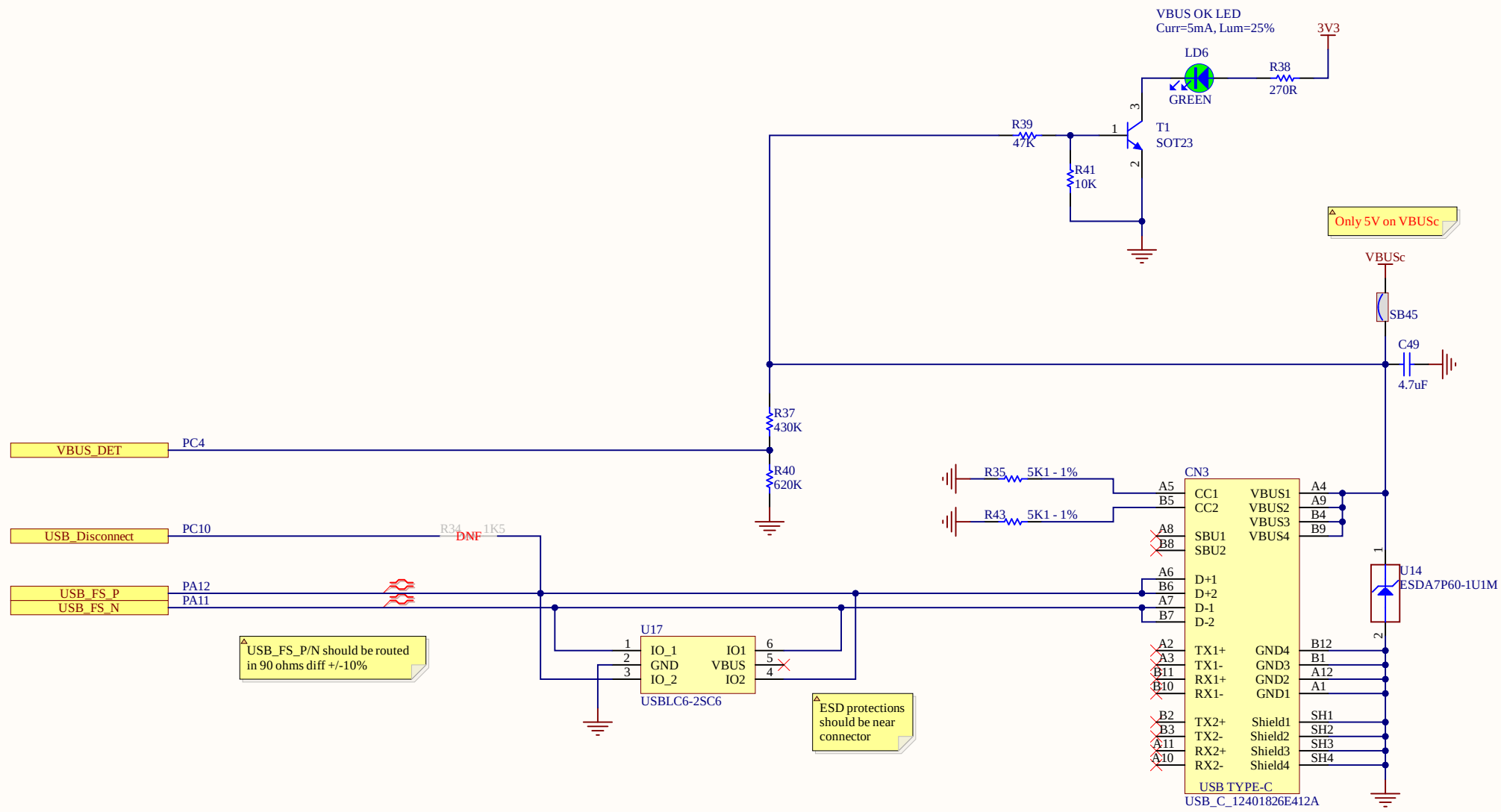
MCU



SB34 & SB37 to be ON only for I2C on A4/A5.
Pull-up resistors to be populated on Arduino shield



USER USB



The schematic shows the internal connections of the USB Type-C port. Key components include:

- VBUS_STLK**: Power supply input.
- CN1**: USB connector pins A4, A9, B4, B9, SBU1, SBU2, D+1, D+2, D-1, D-2, B12, B1, A12, A1, SH1, SH2, SH3, SH4.
- U3**: ESDA25P35-1UI1M protection diode.
- CC1, CC2**: Configuration chips.
- R9, R13, R14, R17**: Resistors (5K1, 100K).
- C2, C3, C20**: Capacitors (100pF, 10nF).
- U2**: ECMF02-2AMX6 differential driver.
- X1**: 24MHz crystal oscillator.
- C1**: 100nF capacitor.
- JP1**: Jumper pin.

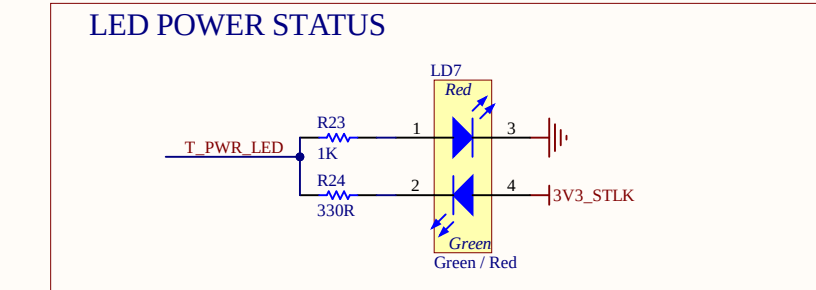
A warning box indicates: **WARNING ! Only 5V/500mA supported on VBUS_STLK.**

5V_STLK OVERCURRENT PROTECTION MANAGMENT

	T_PWR_SEL2/PD5	T_PWR_SEL1/PD4
PowerDefault SNK (Current limit: 550mA)	Hi-Z	Hi-Z
Power1.5.SNK (Current limit: 1.66A)	Hi-Z	0
Power3.0.SNK (Current limit: 3.2A)	0	0

HZ= IO set in high impedance

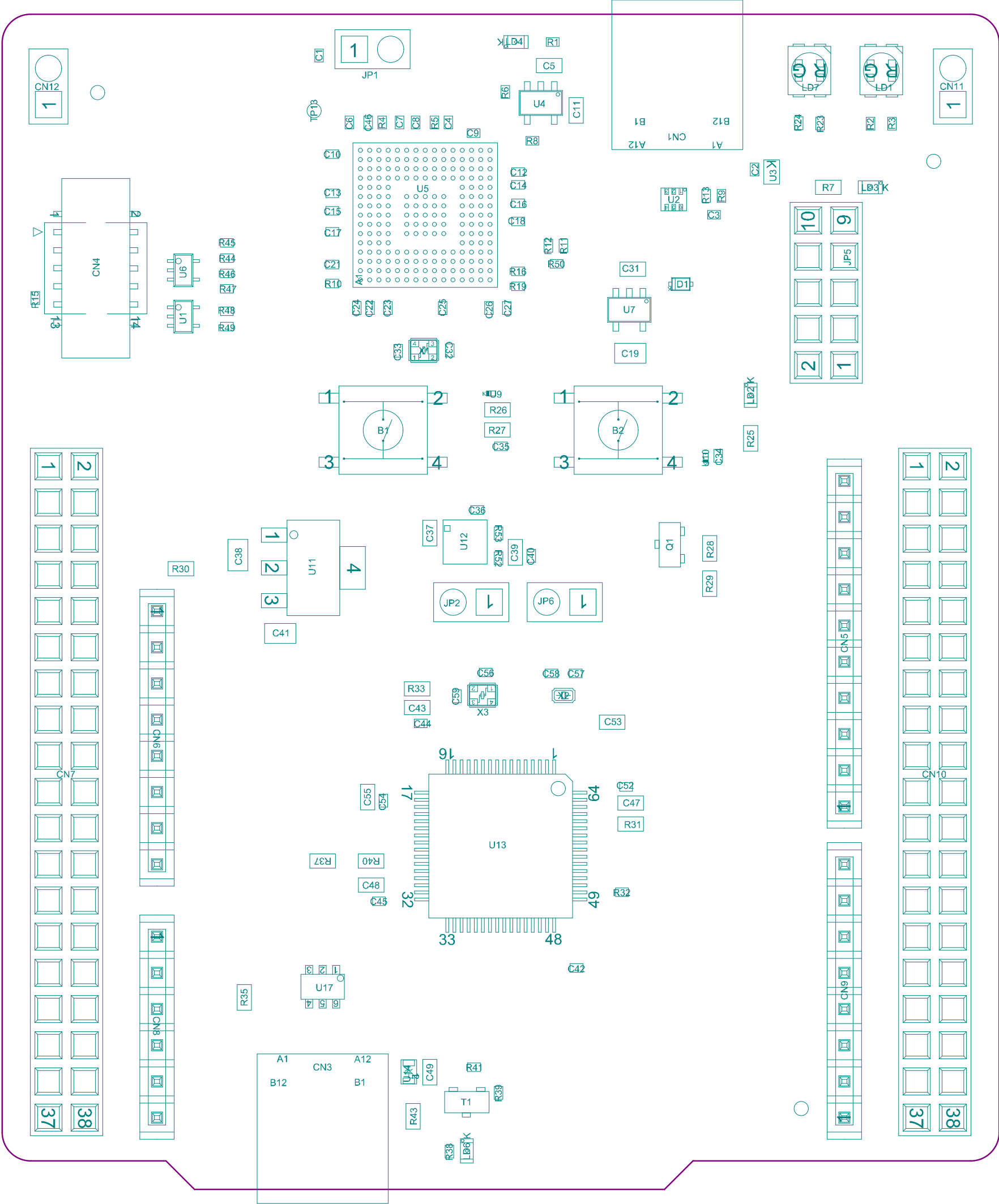
The diagram shows a 5V regulator circuit. The input is labeled 'VBUS_STLK' and is connected to a 1μF capacitor (C11) and a 1K resistor (R1) in parallel to ground. The input pin (5) of the U4STMP52151STR regulator is connected to this input. The enable pin (4) is connected to a signal 'T_PWR_EN' through a 10K resistor (R8) to ground. The output pin (1) is connected to a 10μF capacitor (C5) to ground and to a red LED (LD4) through a 100K resistor (R6). The LED's anode is connected to the output and its cathode is connected to ground. The regulator's ground pin (2) is connected to the common ground.

[illegible]

STDC14 RECEIVER

MIP110 on STDC14 footprint

JP1 to be ON when an external probe is connected to the STDC14



Project: NUCLEO-64

Layer: M14-Top Assembly

Variant: H503RB

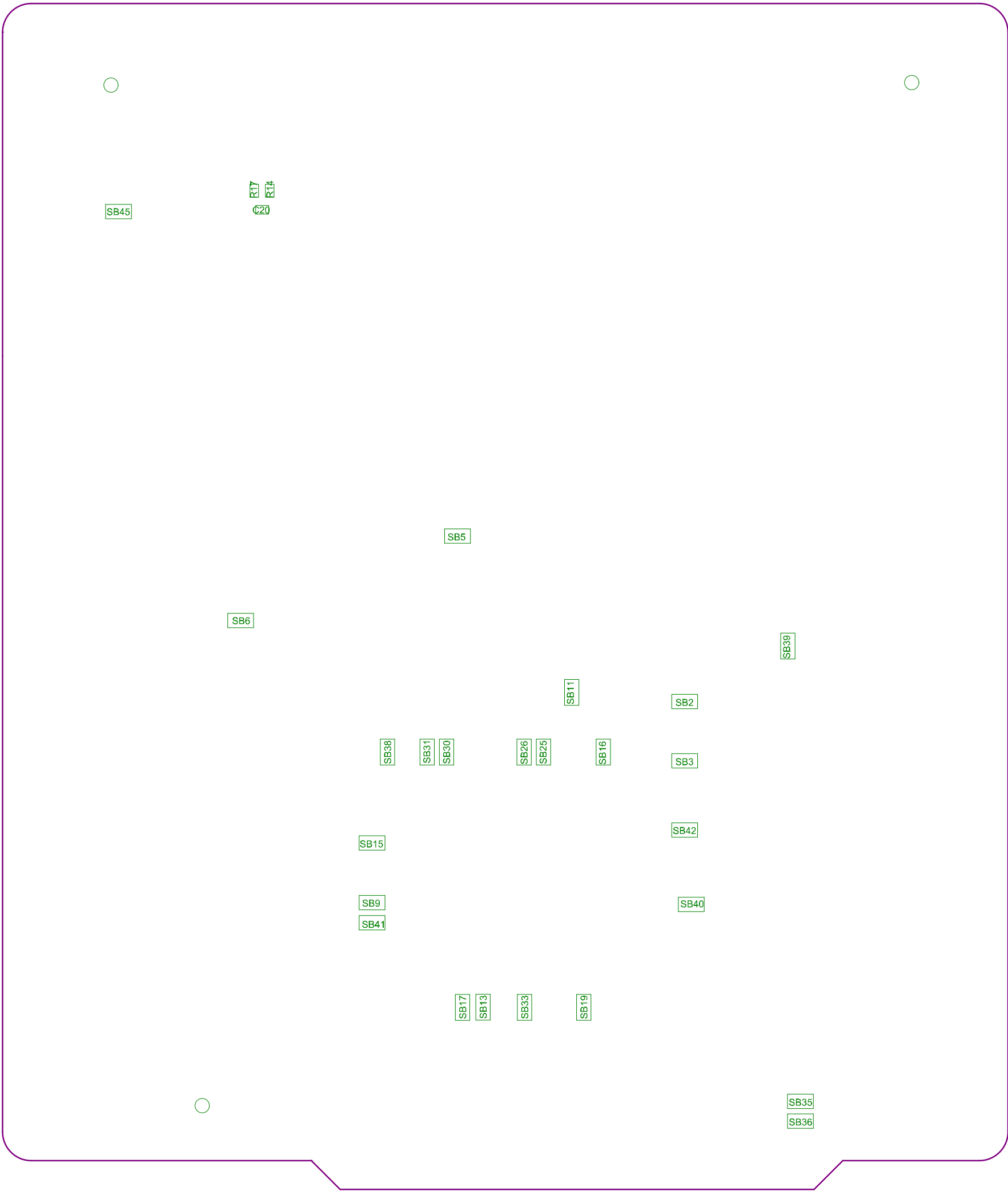
Date: 15-JAN-2024

Gerber: .GM14

MB1814

Rev: C





Project: NUCLEO-64

Layer: M15-Bottom Assembly

Variant: H503RB

Date: 15-JAN-2024

Gerber:.GM15

MB1814

Rev: C



