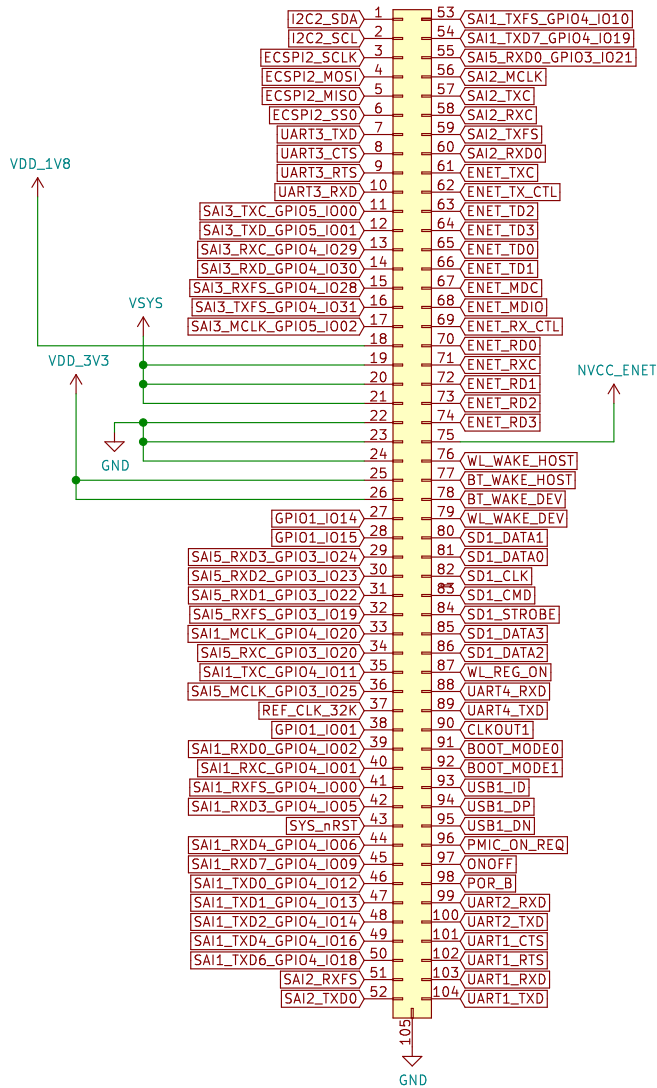


SOM contains iMX8M Mini, LPDDR4 SDRAM, eMMC and PMIC PCA9450DS



SAI1_TXDx & SAI1_RXDx are output only, because of boot mode at power up

Sheet: eMMC

File: emmc.sch

Sheet: i.MX8M Mini Power

File: MX8MM_PWR.sch

Sheet: SYS PMIC

File: PCA9450.sch

Sheet: i.MX8M Mini PHYs

File: MX8MM_PHYs.sch

Sheet: LPDDR4

File: LPDDR4.sch

Sheet: i.MX8M Mini IO Interface

File: MX8MM_IO.sch

Sheet: Boot Mode

File: boot_mode.sch

Sheet: i.MX8M Mini MISC

File: MX8MM_MISC.sch

Sheet: /
File: imx8_som.sch

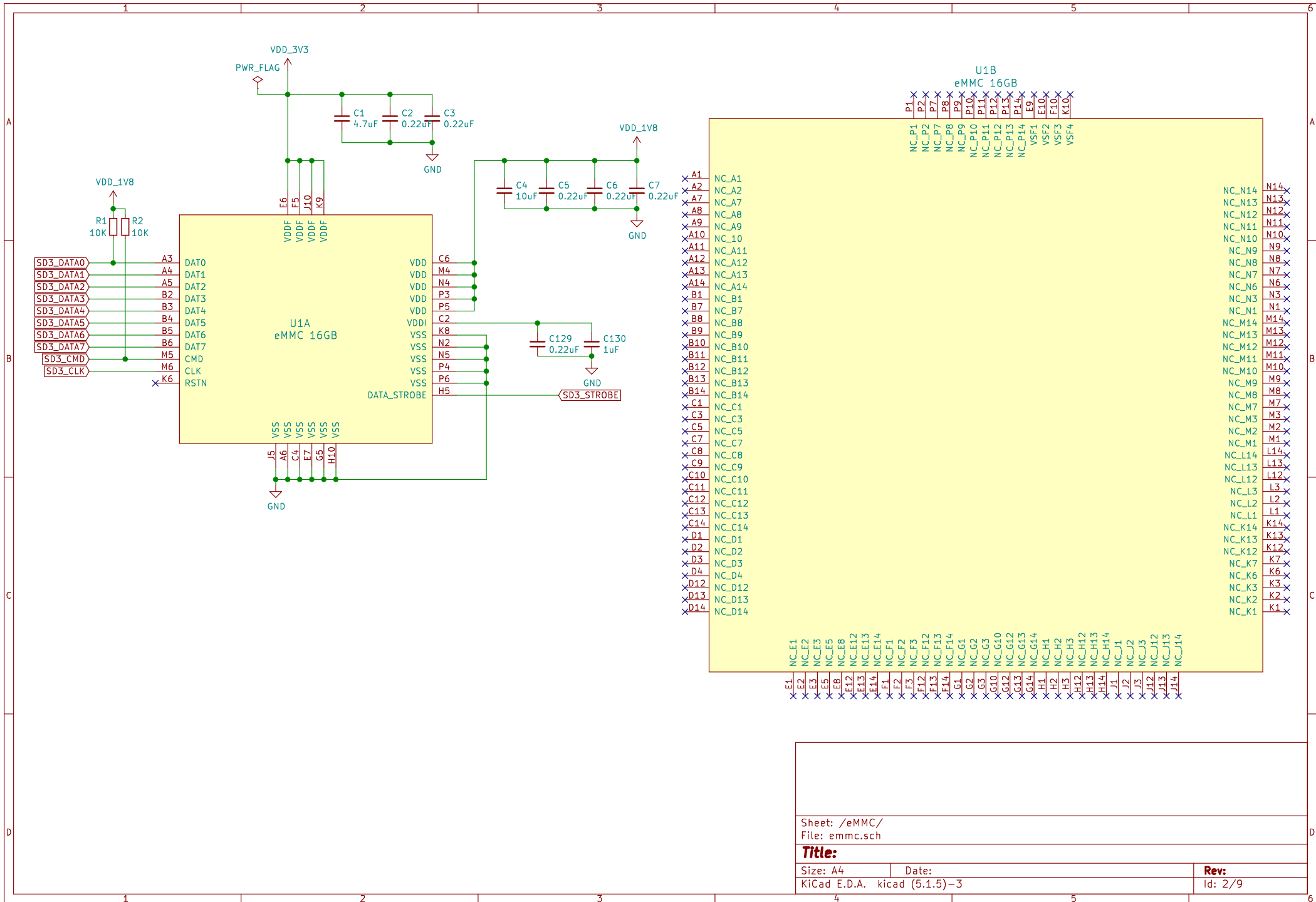
Title:

Size: A4
KiCad E.D.A. kicad (5.1.5)-3

Date:

Rev:

Id: 1/9



U1B
eMMC 16GB

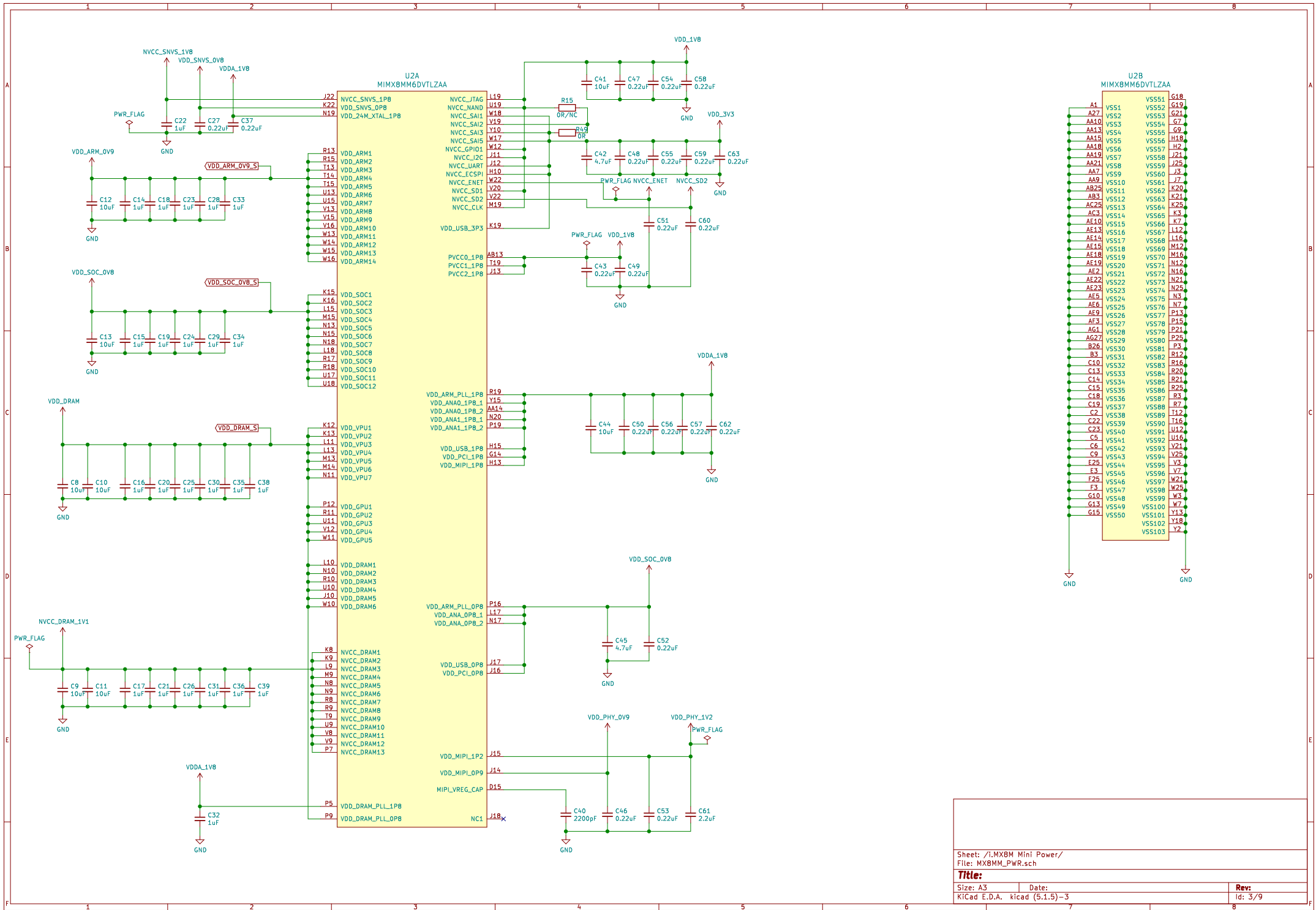
P1	NC_P1
P2	NC_P2
P7	NC_P7
P8	NC_P8
P9	NC_P9
P10	NC_P10
P11	NC_P11
P12	NC_P12
P13	NC_P13
P14	NC_P14
E9	VSF1
E10	VSF2
F10	VSF3
K10	VSF4

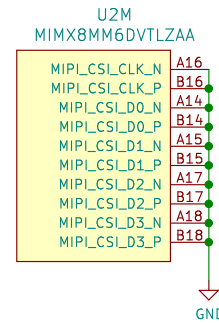
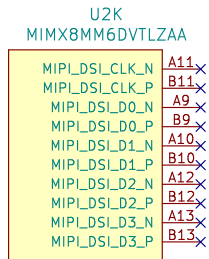
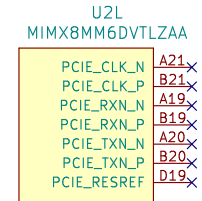
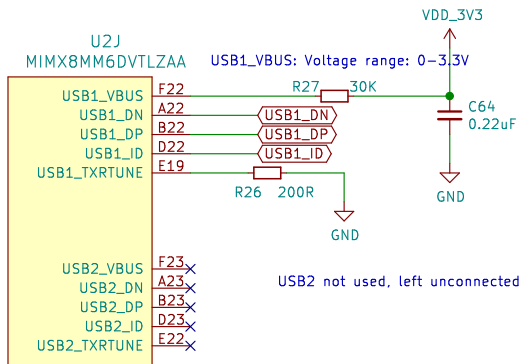
A1	NC_A1	NC_N14	N14
A2	NC_A2	NC_N13	N13
A7	NC_A7	NC_N12	N12
A8	NC_A8	NC_N11	N11
A9	NC_A9	NC_N10	N10
A10	NC_A10	NC_N9	N9
A11	NC_A11	NC_N8	N8
A12	NC_A12	NC_N7	N7
A13	NC_A13	NC_N6	N6
A14	NC_A14	NC_N3	N3
B1	NC_B1	NC_N1	N1
B7	NC_B7	NC_N14	M14
B8	NC_B8	NC_N13	M13
B9	NC_B9	NC_N12	M12
B10	NC_B10	NC_N11	M11
B11	NC_B11	NC_N10	M10
B12	NC_B12	NC_N9	M9
B13	NC_B13	NC_N8	M8
B14	NC_B14	NC_N7	M7
C1	NC_C1	NC_M3	M3
C3	NC_C3	NC_M2	M2
C5	NC_C5	NC_M1	M1
C7	NC_C7	NC_L14	L14
C8	NC_C8	NC_L13	L13
C9	NC_C9	NC_L12	L12
C10	NC_C10	NC_L3	L3
C11	NC_C11	NC_L2	L2
C12	NC_C12	NC_L1	L1
C13	NC_C13	NC_K14	K14
C14	NC_C14	NC_K13	K13
D1	NC_D1	NC_K12	K12
D2	NC_D2	NC_K7	K7
D3	NC_D3	NC_K6	K6
D4	NC_D4	NC_K3	K3
D12	NC_D12	NC_K2	K2
D13	NC_D13	NC_K1	K1
D14	NC_D14		

E1	NC_E1
E2	NC_E2
E3	NC_E3
E5	NC_E5
E8	NC_E8
E12	NC_E12
E13	NC_E13
E14	NC_E14
F1	NC_F1
F2	NC_F2
F3	NC_F3
F12	NC_F12
F13	NC_F13
F14	NC_F14
G1	NC_G1
G2	NC_G2
G3	NC_G3
G10	NC_G10
G12	NC_G12
G13	NC_G13
G14	NC_G14
H1	NC_H1
H2	NC_H2
H3	NC_H3
H12	NC_H12
H13	NC_H13
H14	NC_H14
J1	NC_J1
J2	NC_J2
J3	NC_J3
J12	NC_J12
J13	NC_J13
J14	NC_J14

Sheet: /eMMC/
File: emmc.sch

Title:	
Size: A4	Date:
KiCad E.D.A. kicad (5.1.5)-3	
Rev:	
Id: 2/9	





Sheet: /i.MX8M Mini PHYs/
File: MX8MM_PHYs.sch

Title:

Size: A4

Date:

KiCad E.D.A. kicad (5.1.5)-3

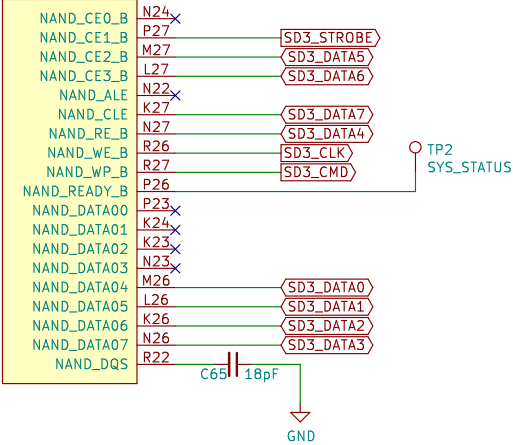
Rev:

Id: 4/9

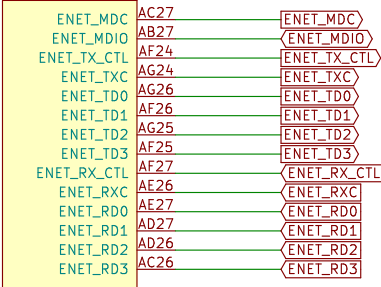
i.MX8M Mini IO Interface

SAI1_RXD1, SAI1_RXD2, SAI1_RXD5, SAI1_RXD6, SAI1_TXD3, SAI1_TXD5 used in boot-mode selection

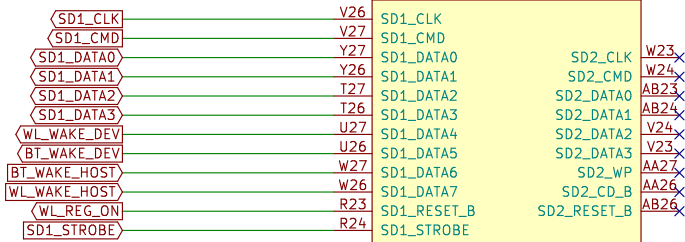
U2D
MIMX8MM6DVTLZAA



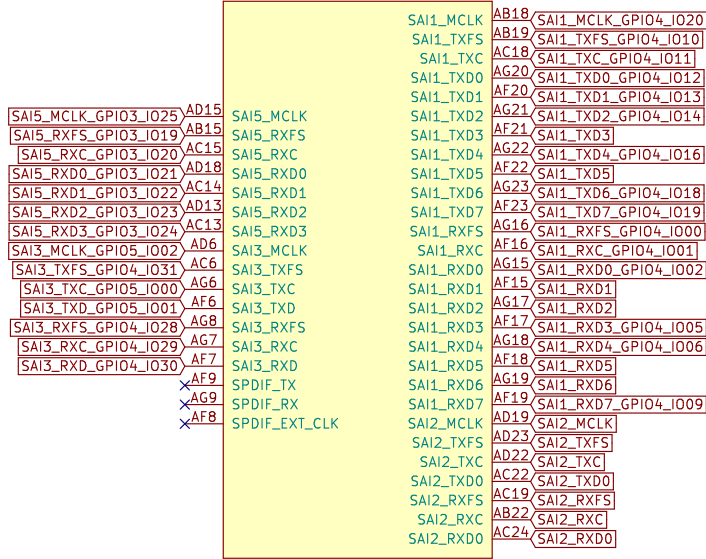
U2E
MIMX8MM6DVTLZAA



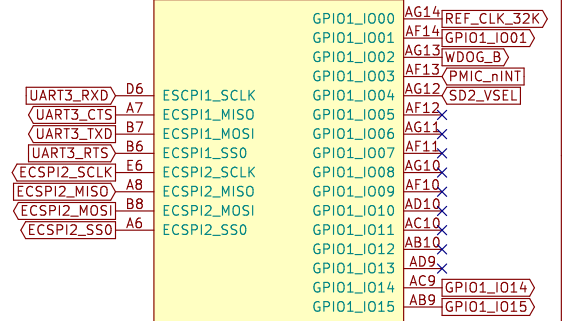
U2F
MIMX8MM6DVTLZAA



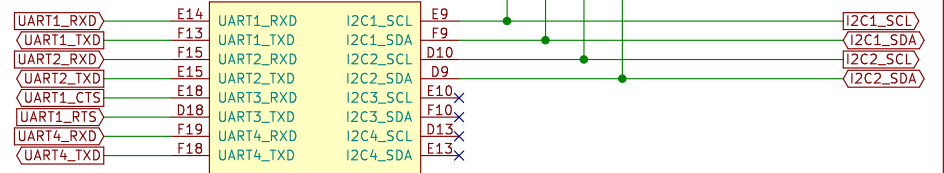
U2H
MIMX8MM6DVTLZAA



U2I
MIMX8MM6DVTLZAA



U2G
MIMX8MM6DVTLZAA



Caution:
IO internal pull up/down is not supported in 3.3V mode, must disable the internal pull up/down via software and use external pull up/down resistors instead.
All IO pin groups are impacted except for XTAL, DDR, PCI, USB and MIPI PHY IO's.
See Errata e50080 for detailed information.

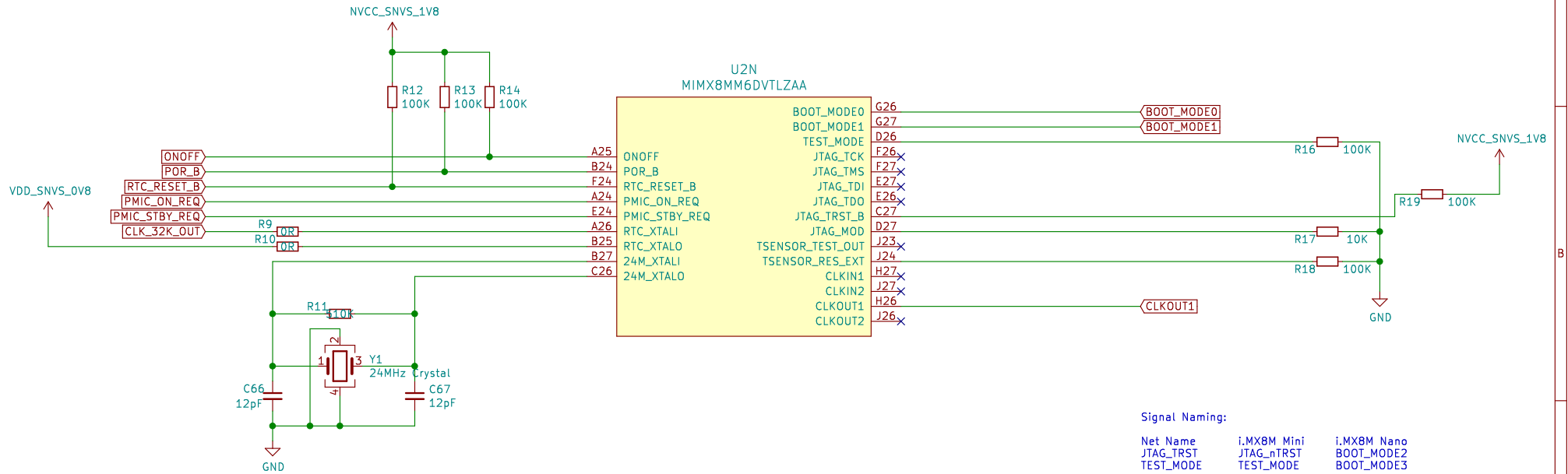
Sheet: /i.MX8M Mini IO Interface/
File: MX8MM_IO.sch

Title:

Size: A4 Date:
KiCad E.D.A. kicad (5.1.5)-3

Rev:
Id: 5/9

i.MX8M Mini MISC



Caution:

BOOT_MODE0, BOOT_MODE1, JTAG_MOD and TEST_MODE must be pulled to "1101" for i.MX8M Mini to enter Boundary Scan mode.

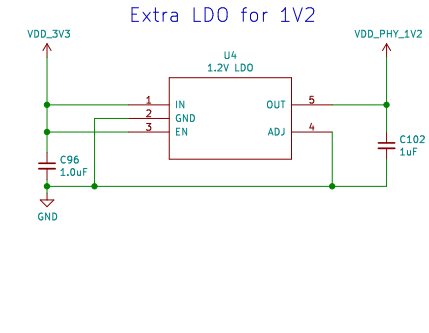
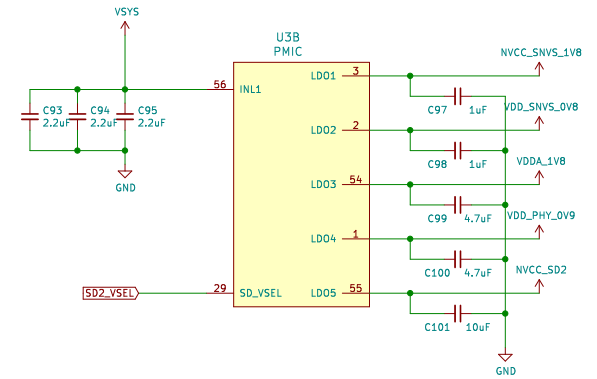
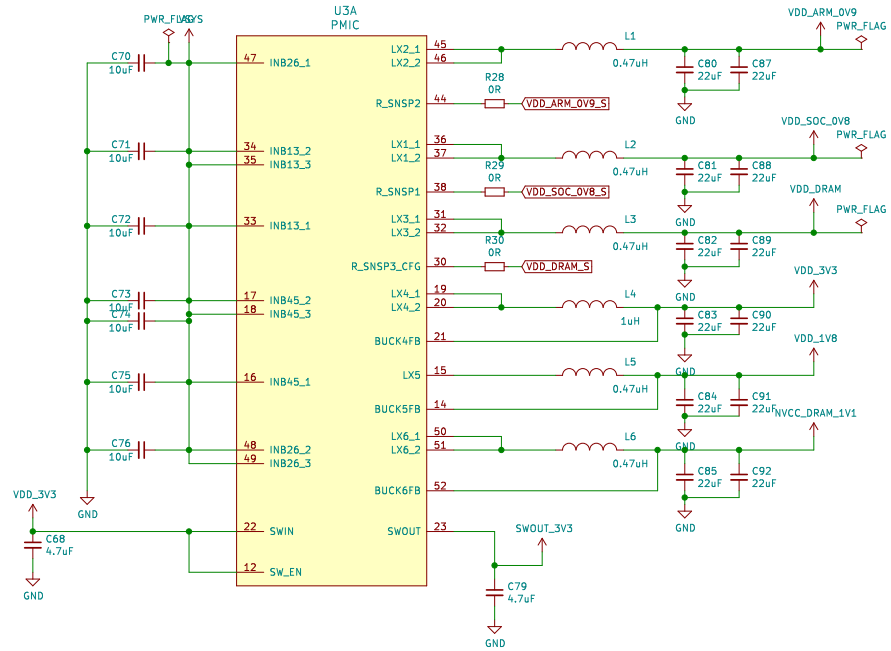
Sheet: /i.MX8M Mini MISC/
 File: MX8MM_MISC.sch

Title:

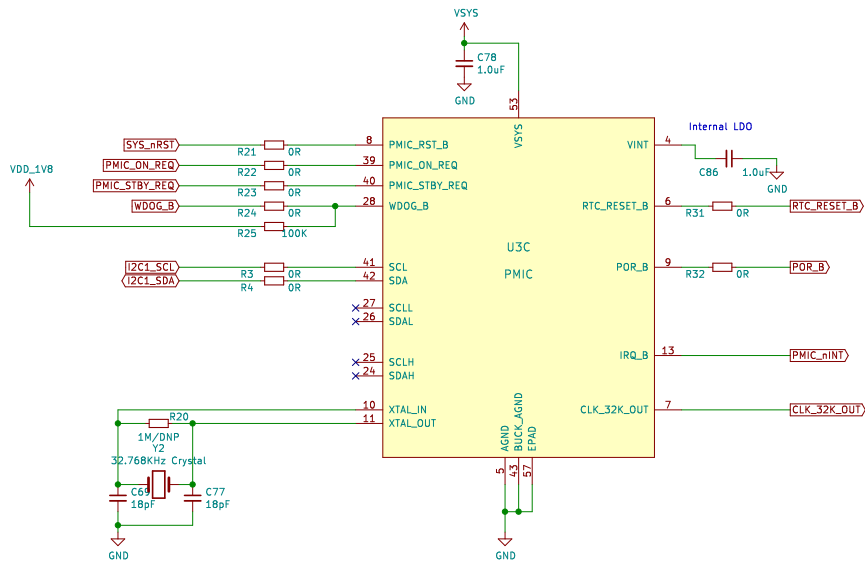
Size: A4 Date:
 KiCad E.D.A. kicad (5.1.5)-3

Rev:
 Id: 6/9

SYS PMIC



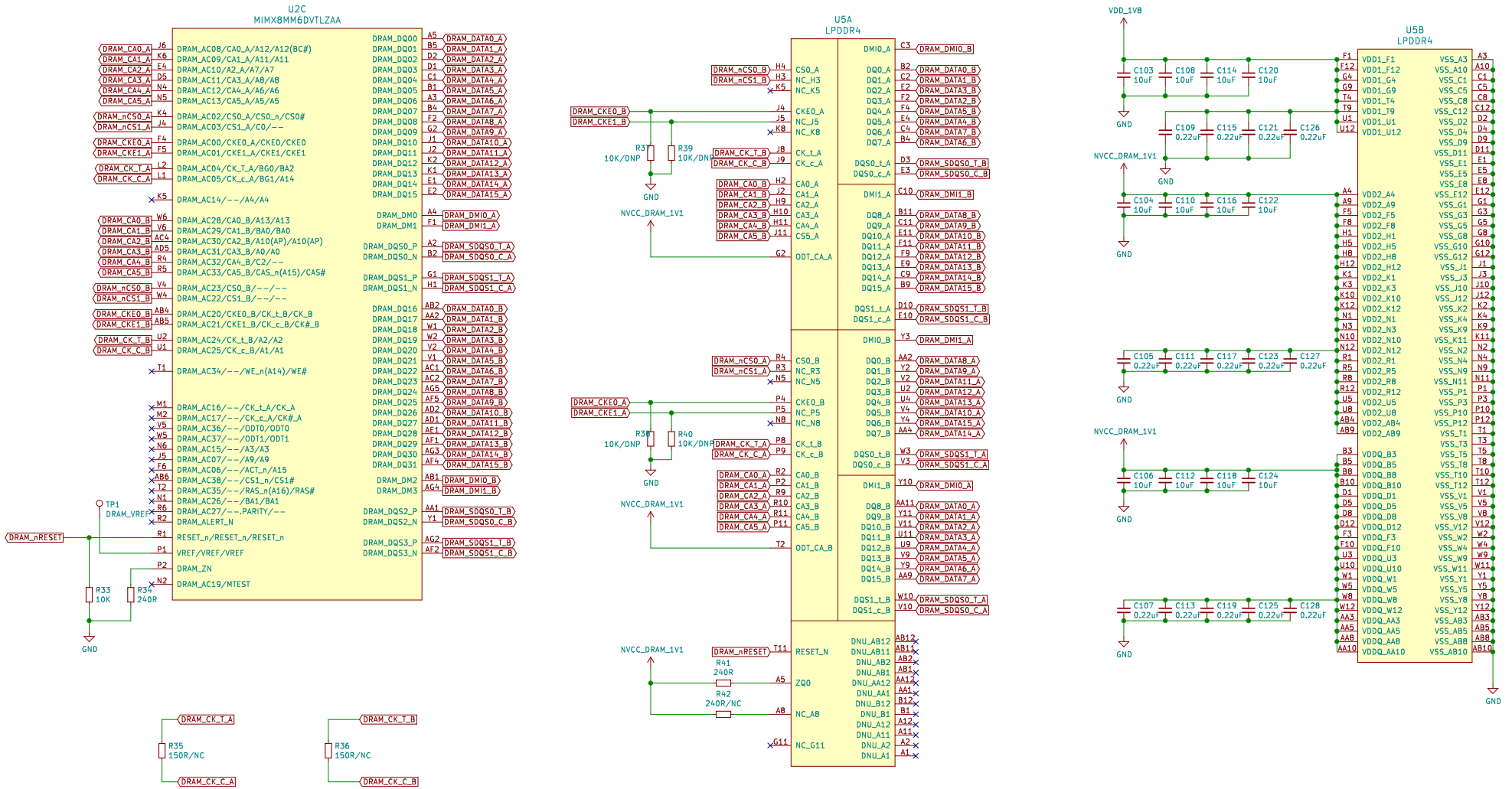
Note:
 BUCK2 default output voltage is 0.85V for A53 1.2GHz. Software will change it to 0.95V for A53 1.6GHz, 1.0V for A53 1.8GHz.
 BUCK3 default output voltage is 0.85V for DDRC 1GHz. Software will change it to 0.9V for DDRC 1.2GHz, 0.95V for DDRC 1.5GHz in SPL before DDR initialization.

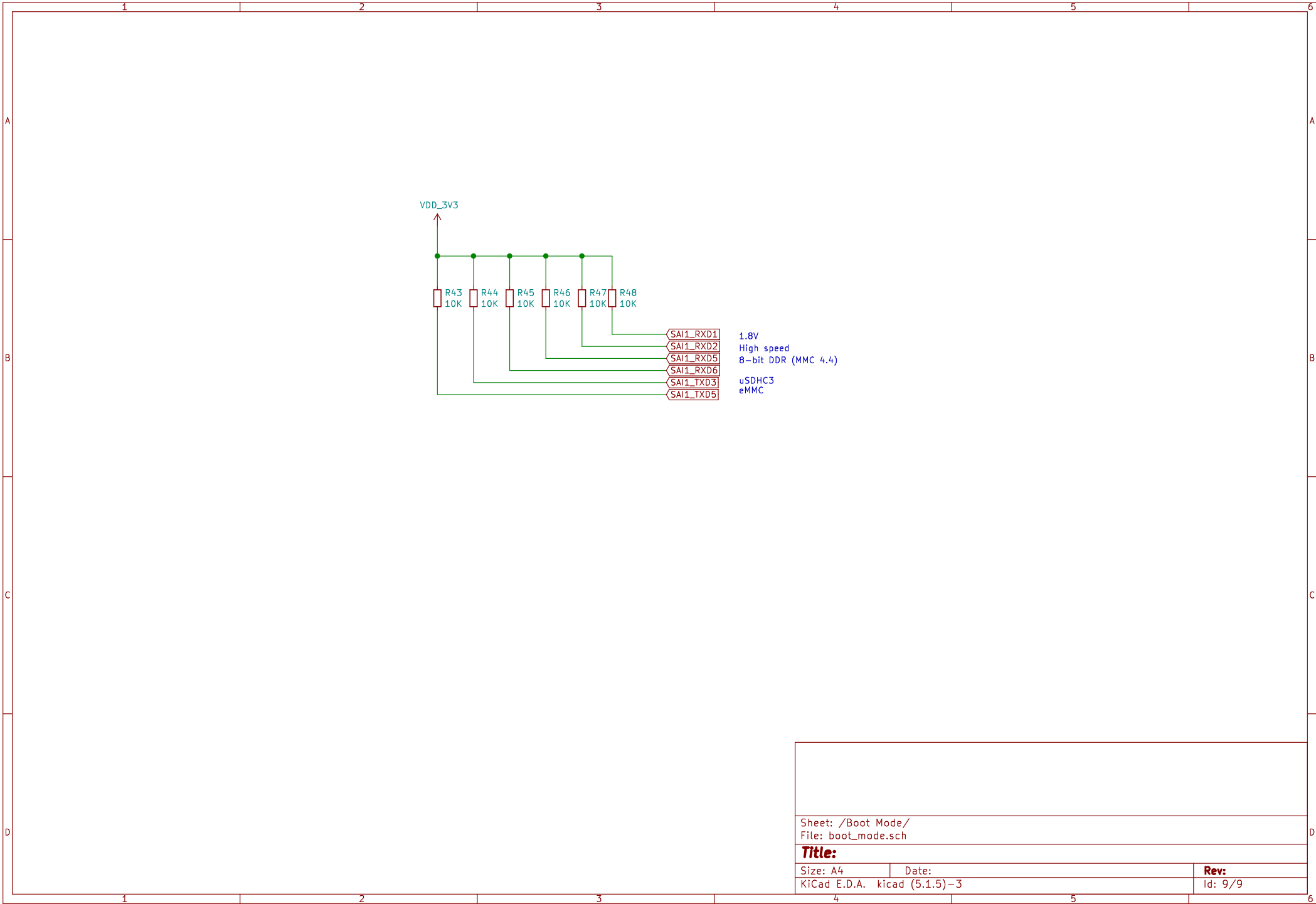


Notes:
 1. PWRON is used as RESET Button as default, need to configure PWRON long push as 10ms/Cold Reset, and disable short push detect!
 2. WDOG_B is used as Cold Reset, external pull up is needed. For normal usage, WDOG_B/GPIO1_I002 has internal pull up, dont need the external PU resistor, but in Boundary Scan mode, this pin is floating, external PU is necessary.

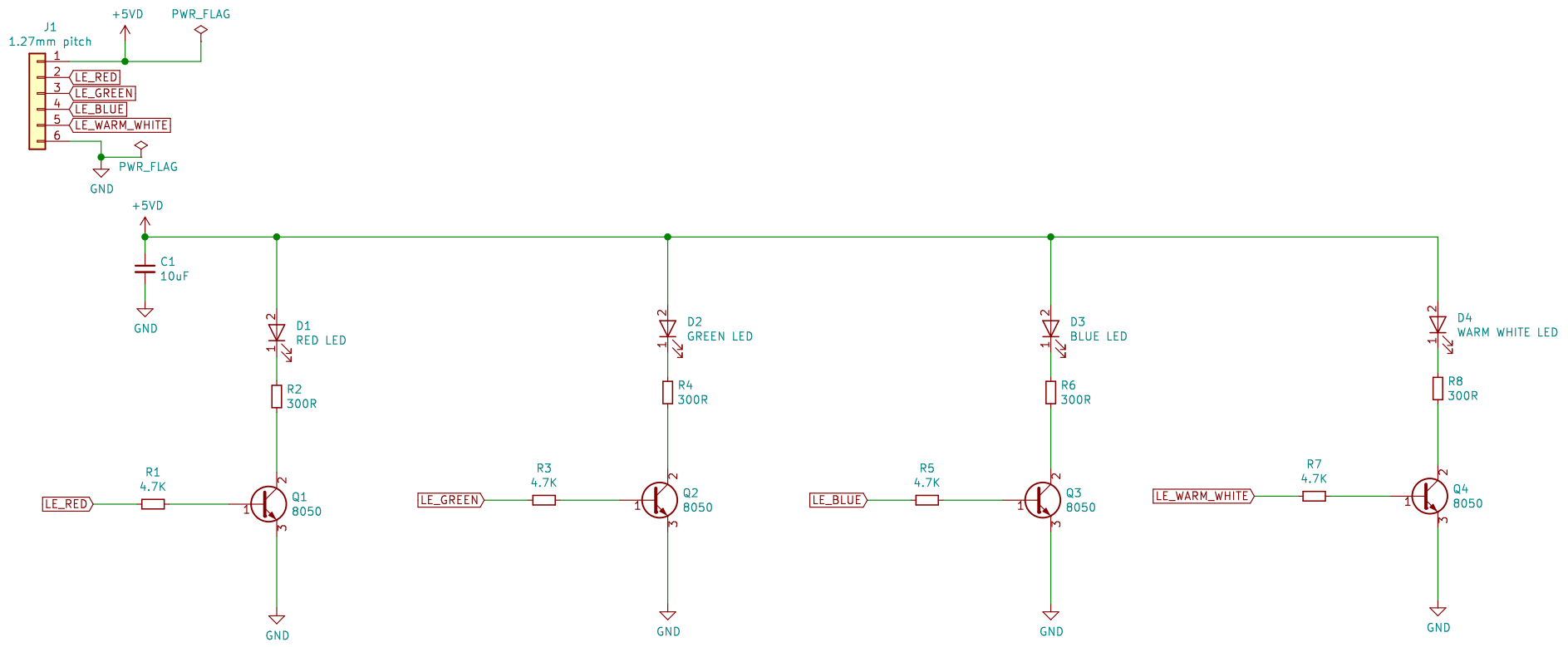
Sheet: /SYS PMIC/ File: PCA9450.sch		
Title:		
Size: A3	Date:	Rev:
KiCad E.D.A. kicad (5.1.5)-3		Id: 7/9

LPDDR4 1GB

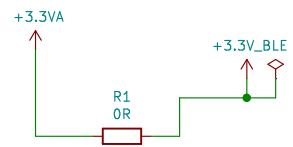




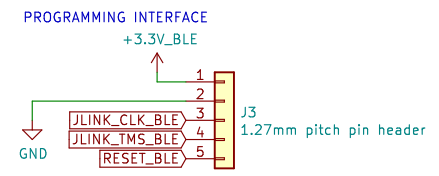
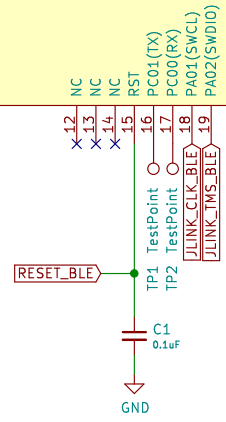
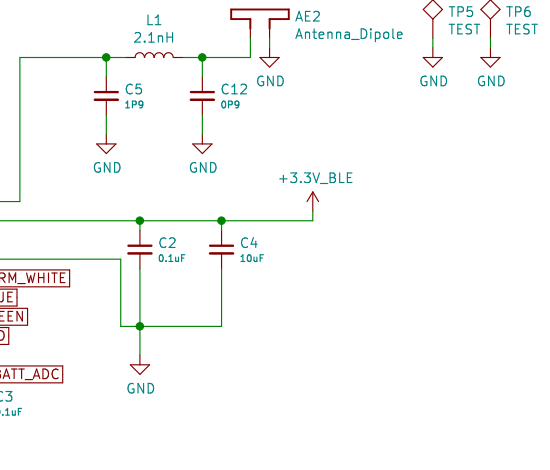
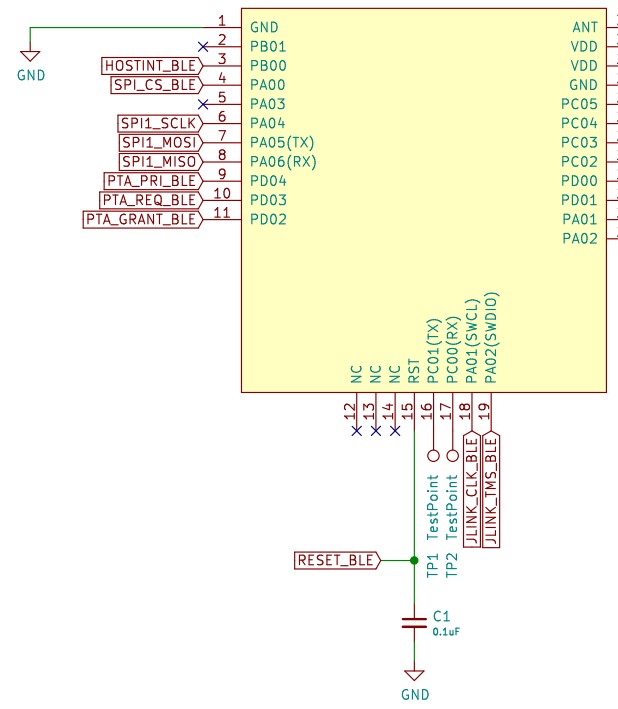
Sheet: /Boot Mode/ File: boot_mode.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.5)-3		Id: 9/9



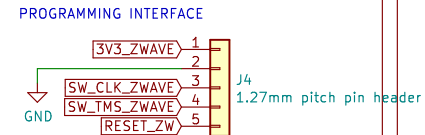
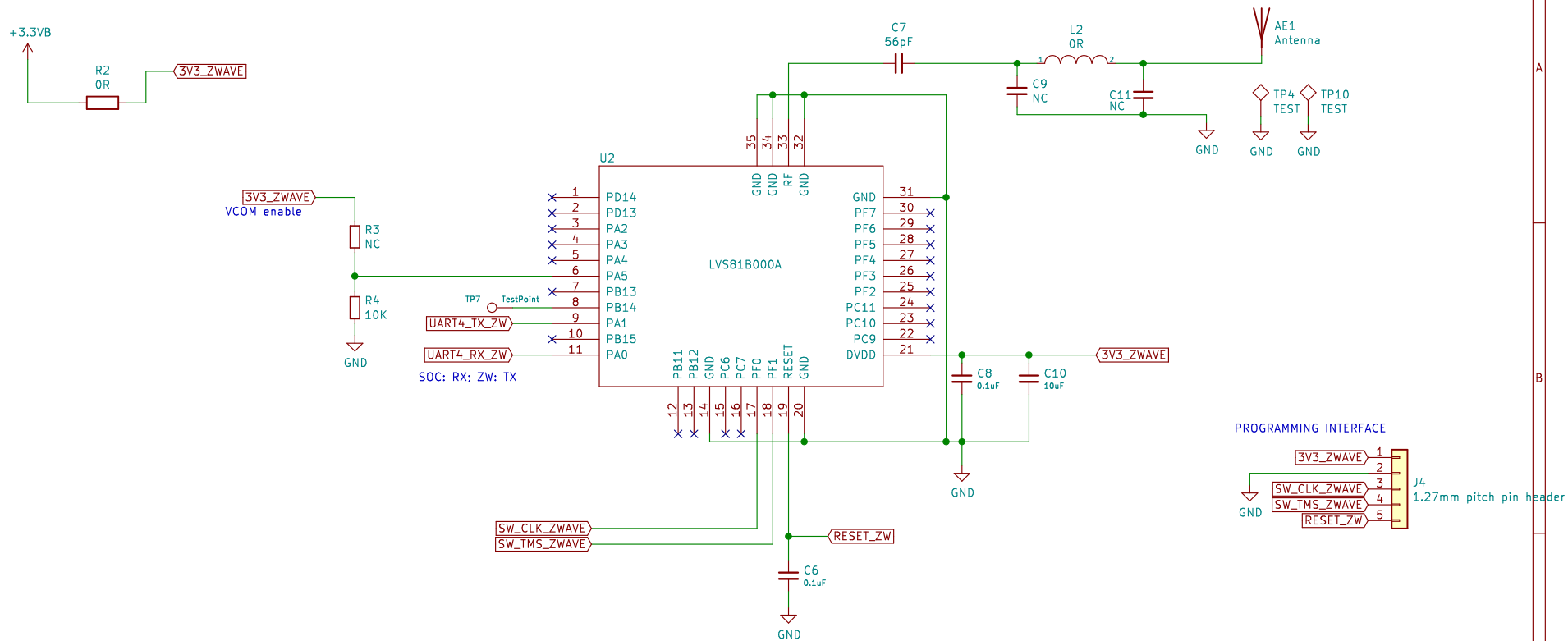
Sheet: /LED_Board/		
File: LED_Board.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.5)-3		Id: 2/2



On-board U.Fl socket
U1
MG21-002-02



Sheet: /BLE_LDS73B00A/	
File: BLE_LDS73B00A.sch	
Title:	
Size: A4	Date:
KiCad E.D.A. kicad (5.1.5)-3	Rev: Id: 2/9

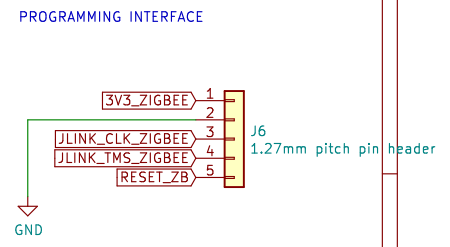
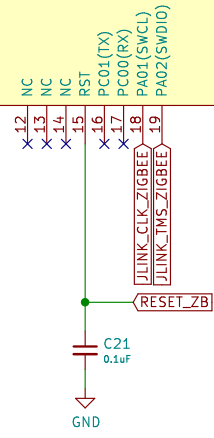
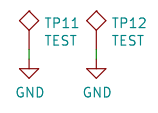
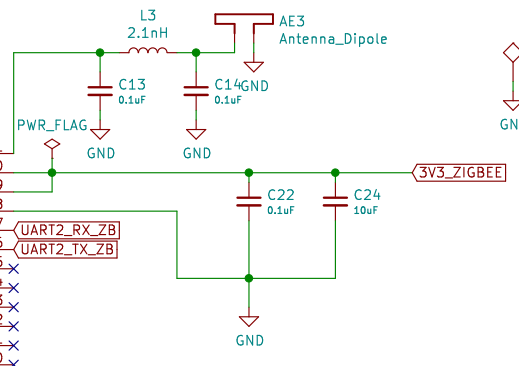
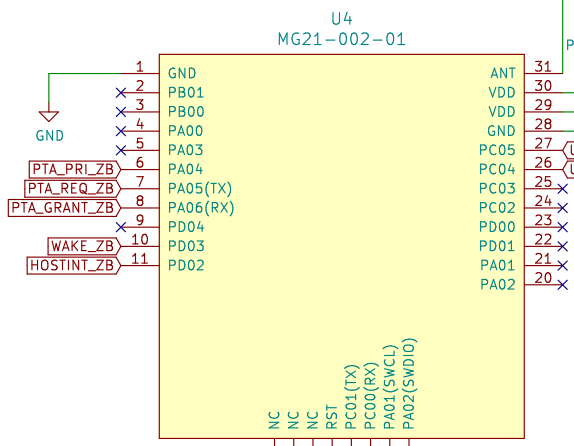


Sheet: /ZWave_LVS81B000A/
 File: ZWave_LVS81B000A.sch

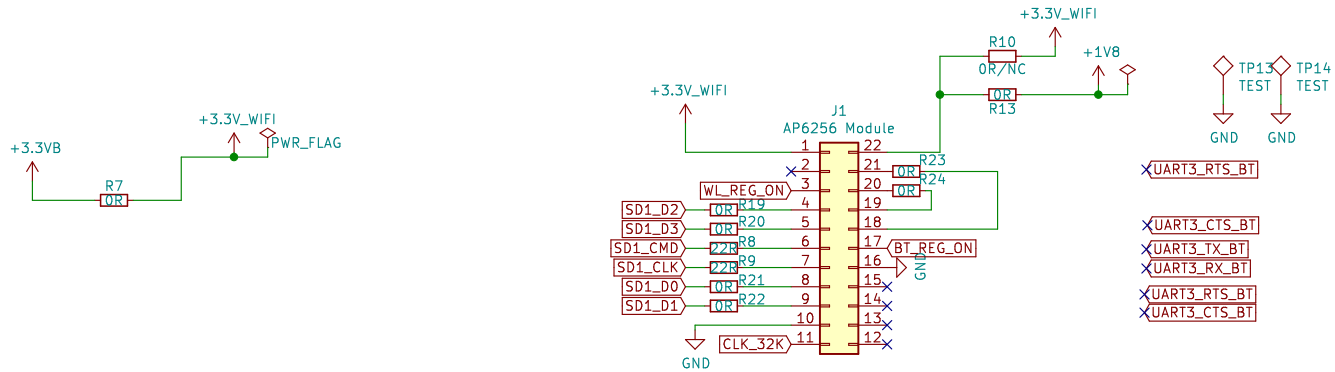
Title:

Size: A4 Date:
 KiCad E.D.A. kicad (5.1.5)-3

Rev:
 Id: 3/9



Sheet: /Zigbee_LDS73B000A/		
File: Zigbee_LDS73B00A.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.5)-3		Id: 4/9



Sheet: /WiFi/
File: wifi_esp8089.sch

Title:

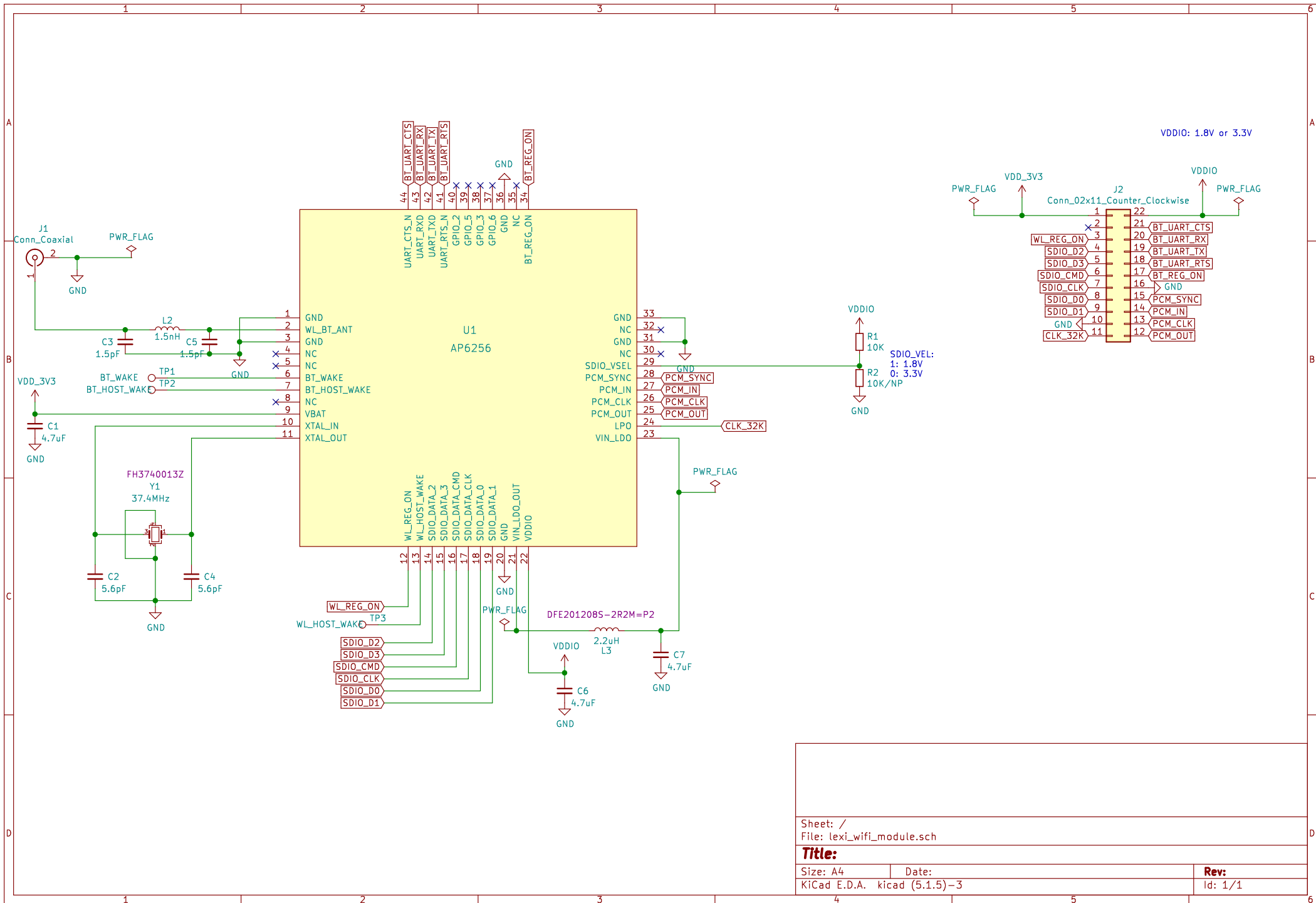
Size: A4

Date:

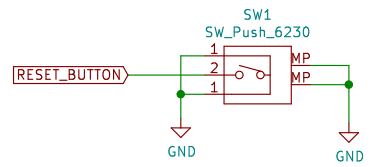
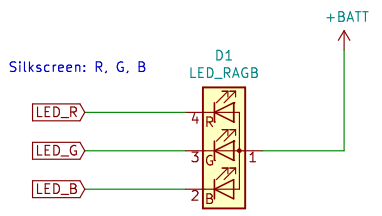
KiCad E.D.A. kicad (5.1.5)-3

Rev:

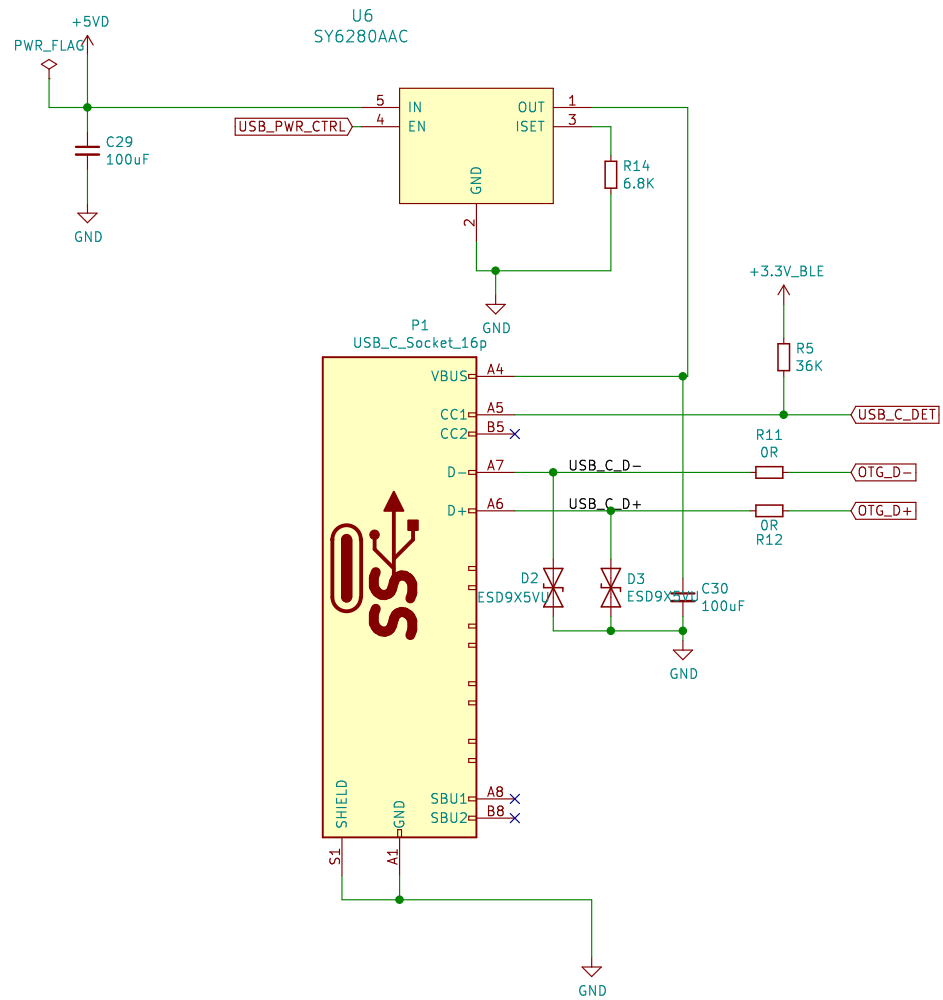
Id: 5/9



Sheet: /		Date:	
File: lexi_wifi_module.sch			
Title:			
Size: A4	KiCad E.D.A. kicad (5.1.5)-3		Rev: Id: 1/1



Sheet: /indicator_LED/		
File: indicator_LED.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.5)-3		Id: 6/9



Sheet: /USB_Host/
File: USB_Host.sch

Title:

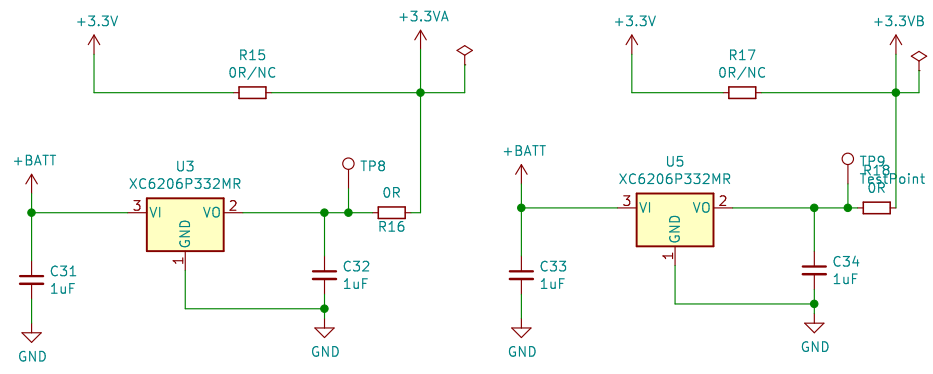
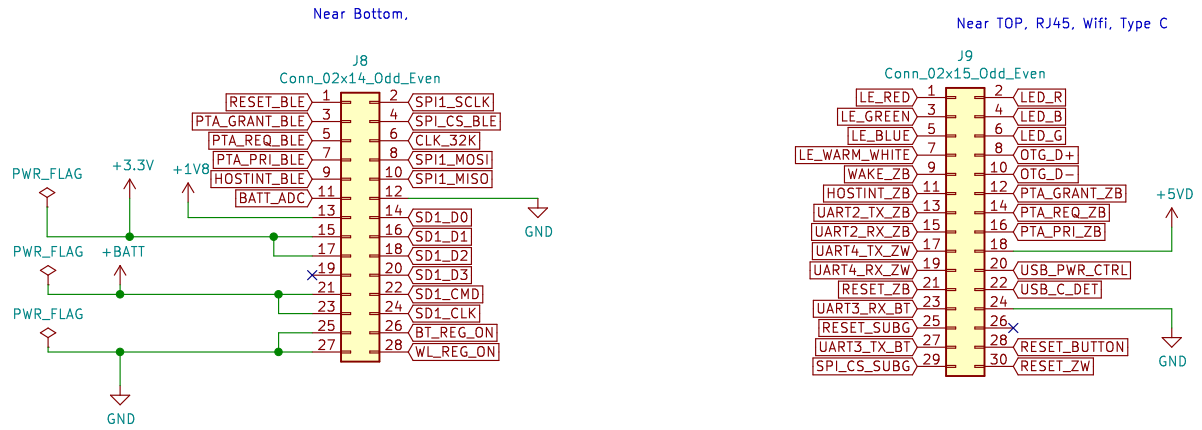
Size: A4
KiCad E.D.A. kicad (5.1.5)-3

Date:

Rev:
Id: 7/9

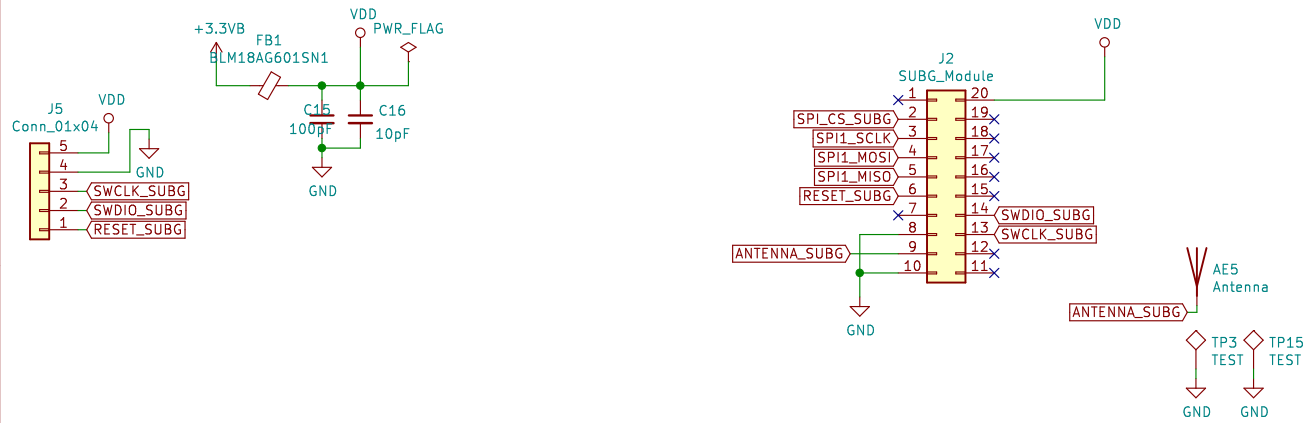
Placement of RF board
 (BOTTOM) Mesh – Zigbee – Type C – Indicator RGB LED – reset button (TOP)
 (BOTTOM) Zwave – Wifi – Type C – Indicator RGB LED – reset button (TOP)

History:
 UART3_CTS and UART3_RTS change to chip_cs and RESET_SUBG 28_1_2022



Sheet: /Board_Connector/	
File: Board_Connector.sch	
Title:	
Size: A4	Date:
KiCad E.D.A. kicad (5.1.5)-3	Rev: 8/9

* Add test points on all unused IO



Sheet: /SubG_EFR32FG12/
File: SubG_EFR32FG12.sch

Title:

Size: A4

Date:

KiCad E.D.A. kicad (5.1.5)-3

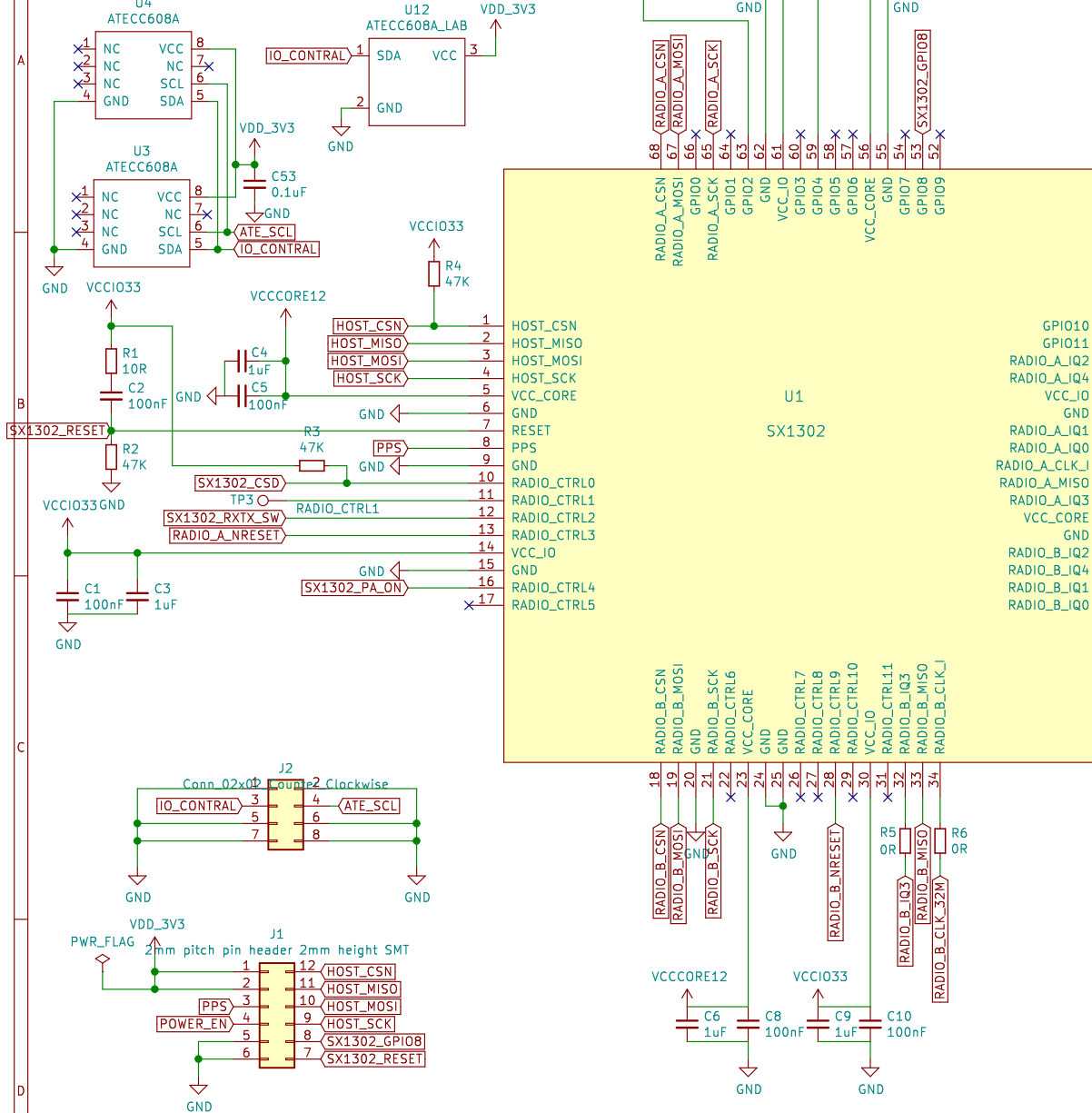
Rev:

Id: 9/9

History change by Kennedy:

Add alia of IO_Contral in Connector J1 or J2
Add U3 of ATECC608A 2022_02_12

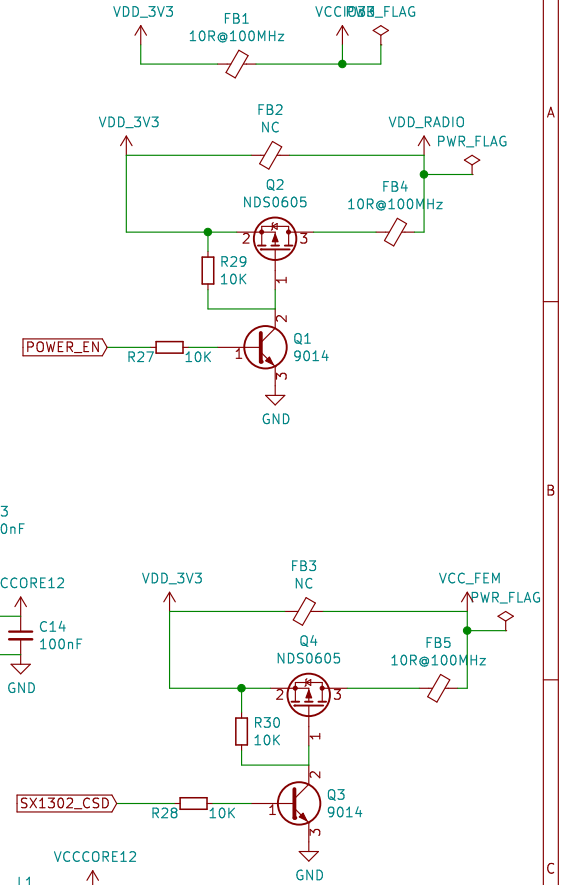
add ATECC608A with sop8 for package selection 2022_04_12



Sheet: RF Front Ends



File: RF_FrontEnds.sch



Sheet: /
File: LoRA_module.sch

Title:

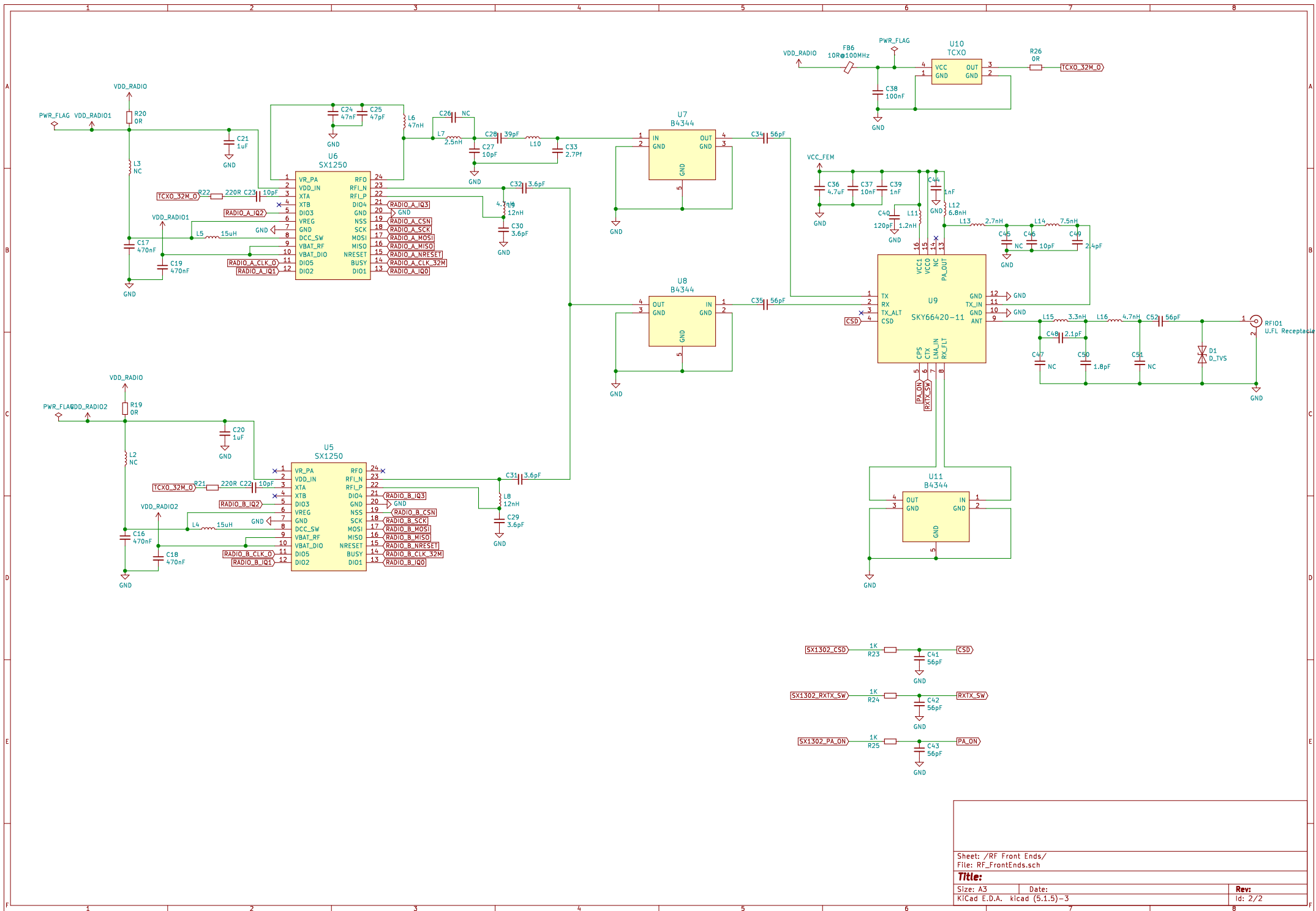
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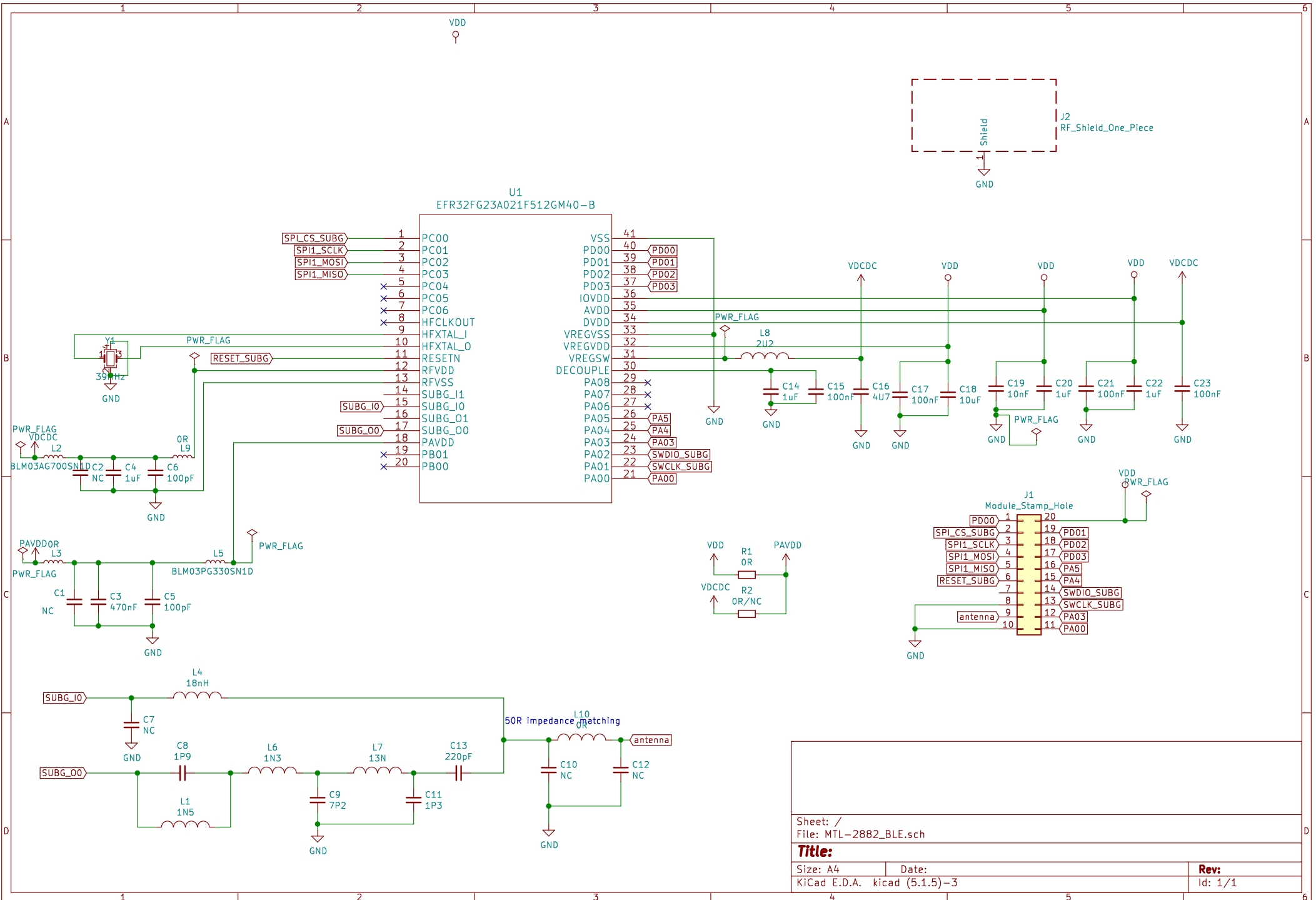
Date:

KiCad E.D.A. kicad (5.1.5)-3

Rev:

Id: 1/2





Sheet: /
 File: MTL-2882_BLE.sch
Title:
 Size: A4 Date:
 KiCad E.D.A. kicad (5.1.5)-3 Rev:
 Id: 1/1