

Evaluation Kit RE01 1500KB

Main Board Schematics

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Note:

C : Capacitor
D : Diode
R : Fixed Resistor
RV : Potentiometer
L : Inductor
U : Integrated Circuit
X : Crystal, Oscillator
RES : Reset Switch
SW : Switch
LED : Light Emitting Diode
PWR : Power Jack
J : Connector, Jumper

* "DNF" marking means that component is not fitted by default.

Board Code:

RTK70E015DC00000BE : MP main board of Evaluation Kit RE01 1500KB

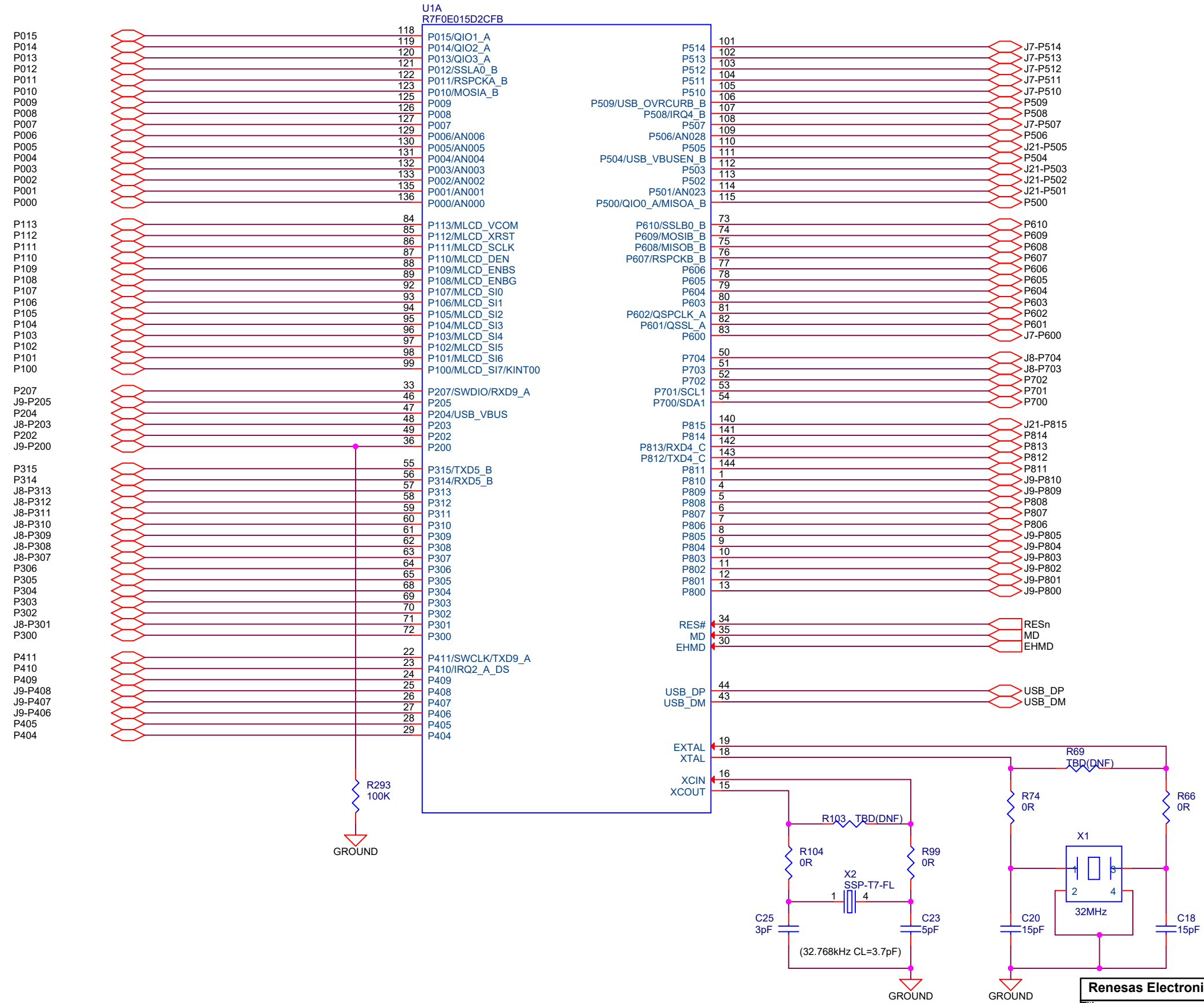
REE Drawing No. D016272_04

Renesas Electronics Corporation		
Title Main Board [Index]		
Size A3	Document Number R20UT4563EJ0310	Rev 3.10
Date:	Wednesday, November 25, 2020	Sheet 1 of 12

RE01 1500KB device-1

Note:

RE01 pins are not described by the full pin function.
For full pin function details, refer to RE01 datasheet.



RE01 1500KB device-2

Note:

RE01 pins are not described by the full pin function. For full pin function details, refer to RE01 datasheet.

EHC MODE/NORMAL MODE/External User Voltage Select

J5	
1-2 shorted	Normal Mode
2-3 shorted	External User Voltage
All Open	EHC Mode

J12, J16, J17	
1-2 shorted	Normal Mode/EHC Mode
2-3 shorted	External User Voltage

Internal VREF USE/NOT USE Select

J15	
1-2 shorted	Internal VREF NOT USE
2-3 shorted	Internal VREF USE

Internal LDO USE/NOT USE Select

J4, J14	
1-2 shorted	Internal LDO NOT USE
2-3 shorted	NOT USE
All Open	Internal LDO USE

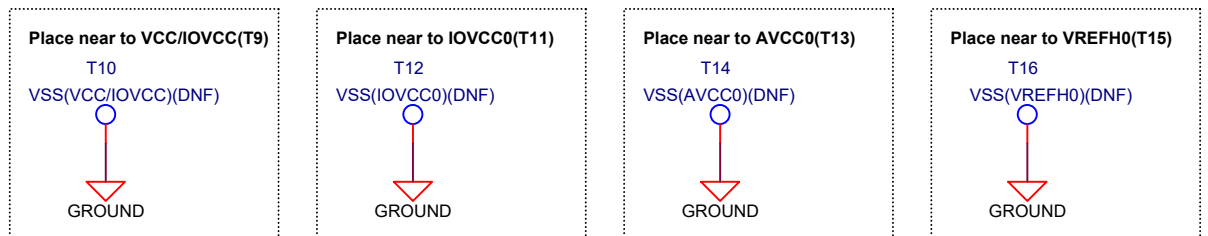
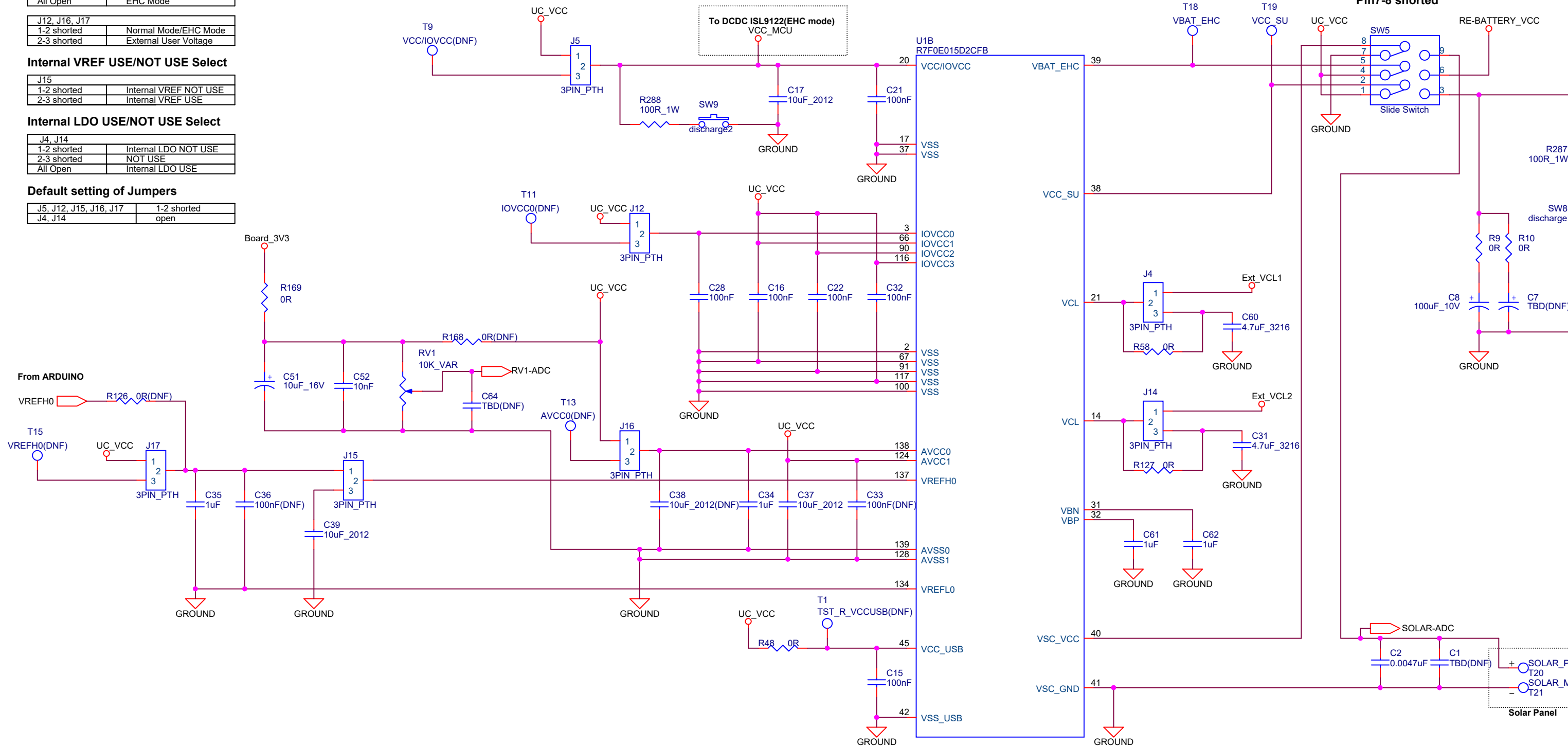
Default setting of Jumpers

J5, J12, J15, J16, J17	1-2 shorted
J4, J14	open

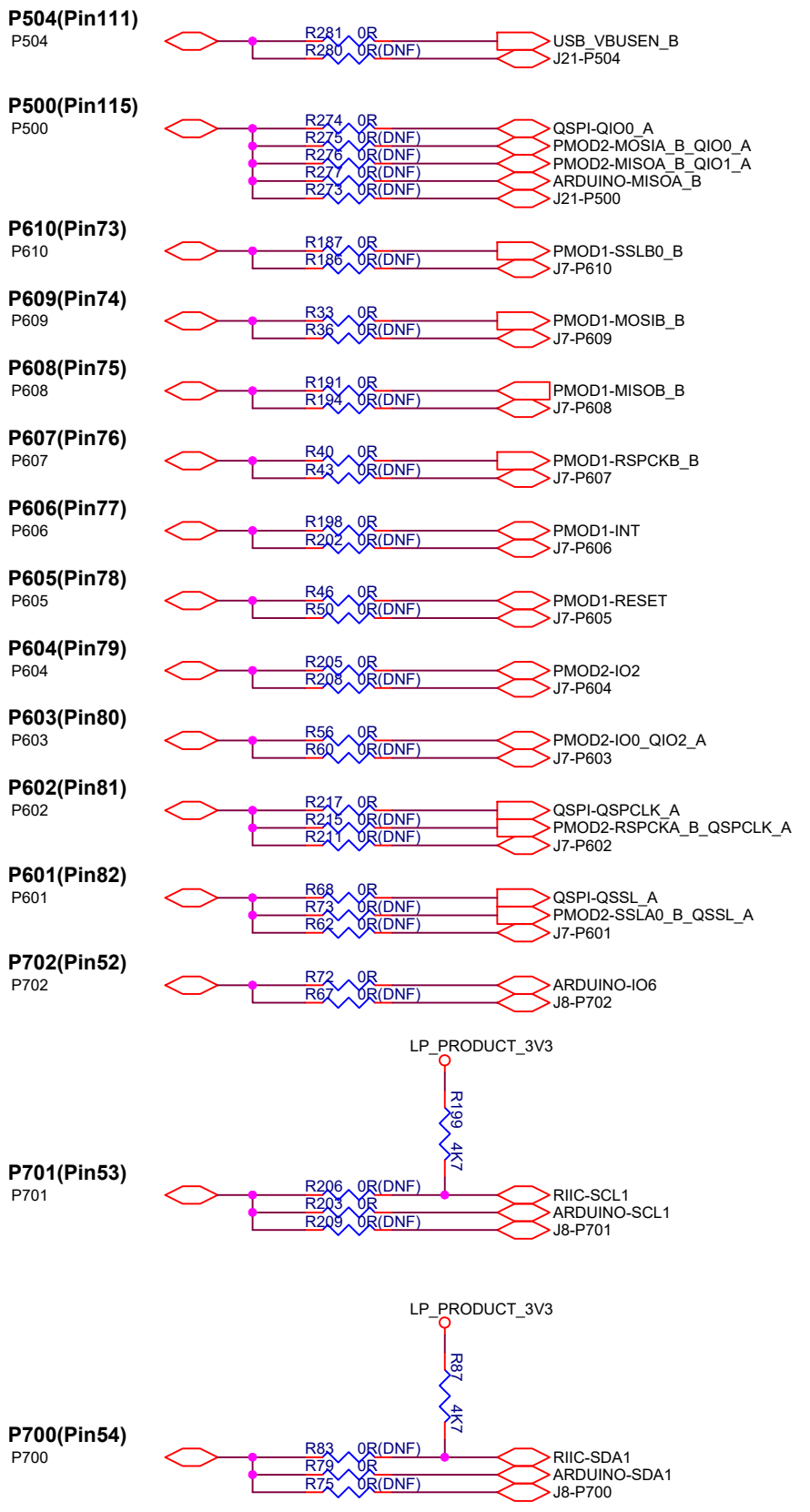
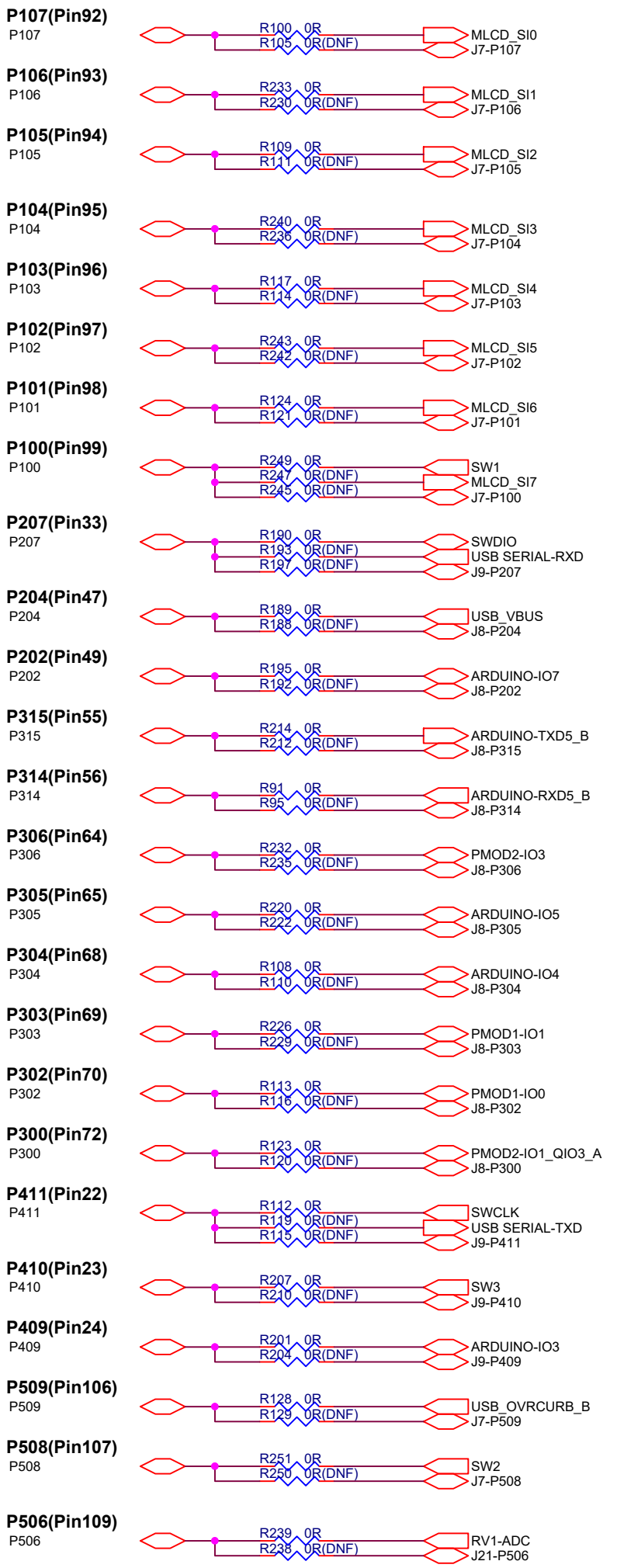
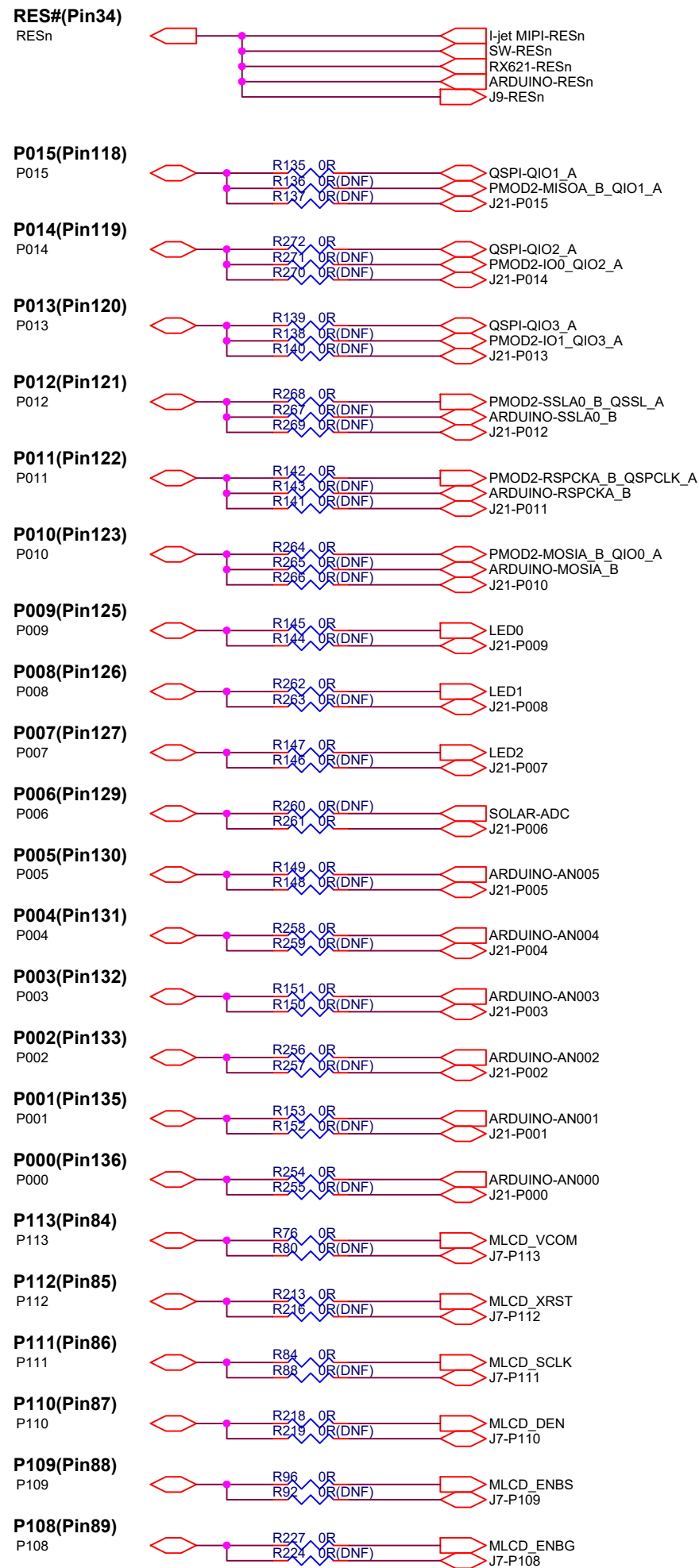
SW5 EHC MODE/NORMAL MODE Select

SW5	
1-2 shorted	Normal Mode
4-5 shorted	
7-8 shorted	
2-3 shorted	EHC Mode
5-6 shorted	
8-9 shorted	

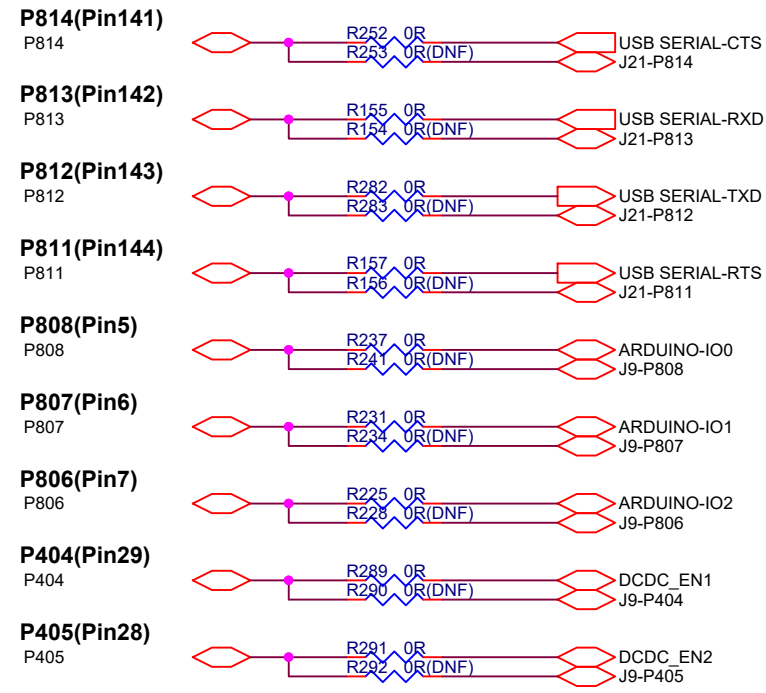
Default setting
"Pin1-2 shorted"
"Pin4-5 shorted"
"Pin7-8 shorted"



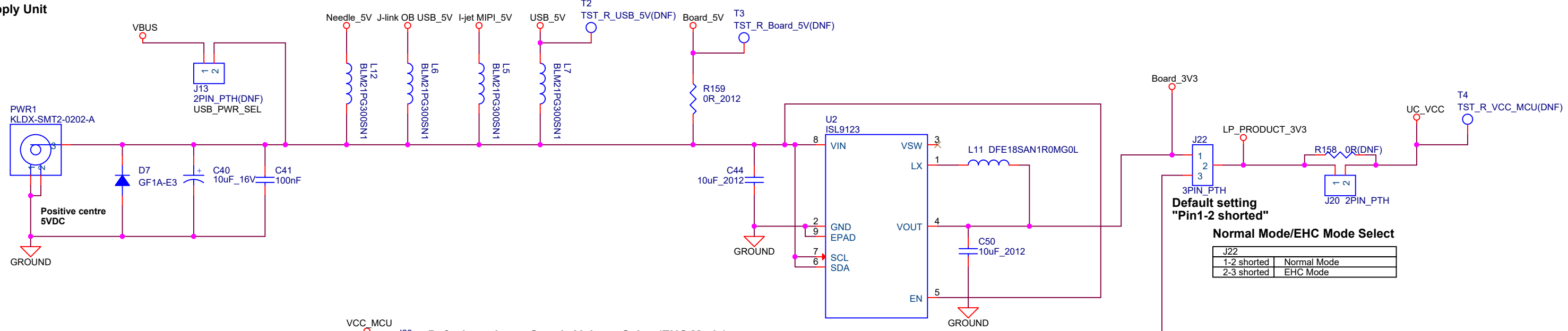
RE01 Pin Function Select-1



RE01 Pin Function Select-2



Power Supply Unit

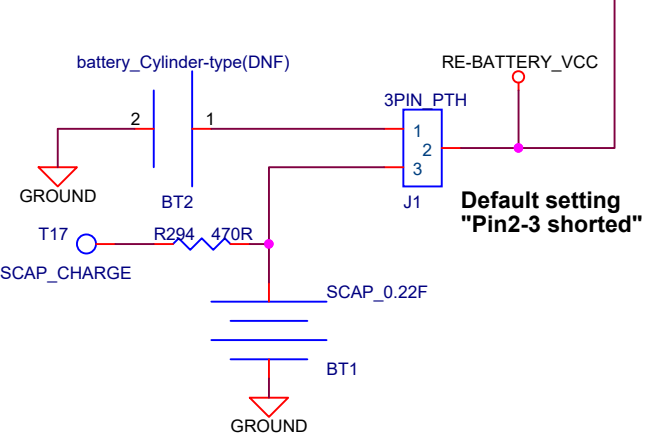


Default setting "Pin1-2 shorted"

Normal Mode/EHC Mode Select

J22	
1-2 shorted	Normal Mode
2-3 shorted	EHC Mode

BATTERY SUPPLY

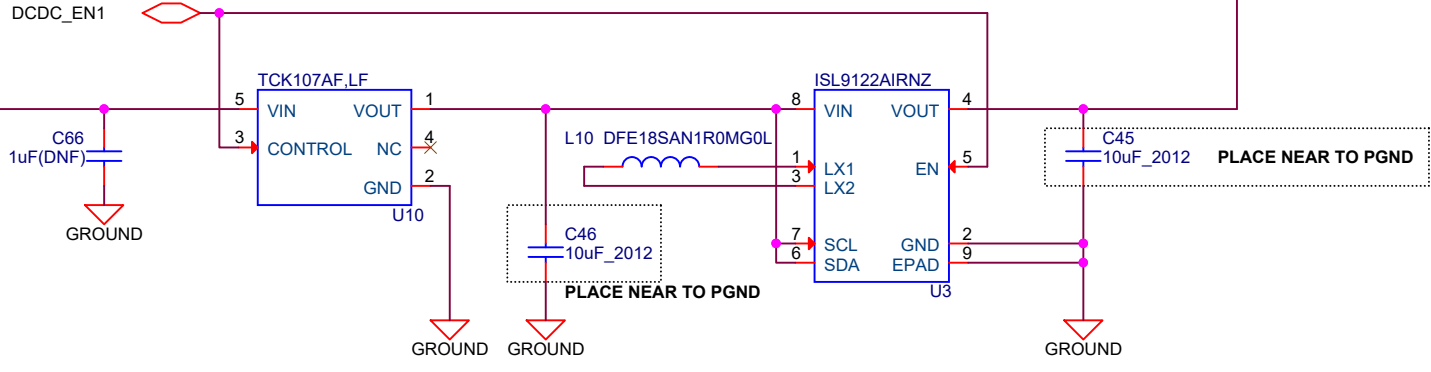


Default setting "Pin1-2 shorted"

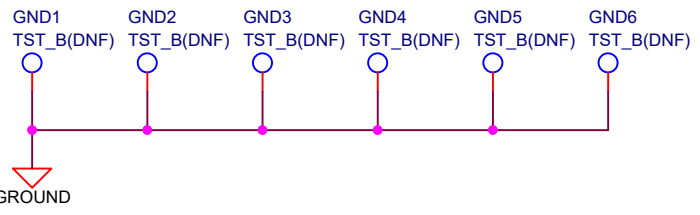
Supply Voltage Select(EHC Mode)

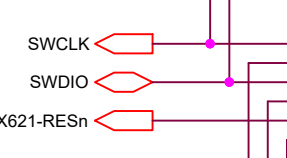
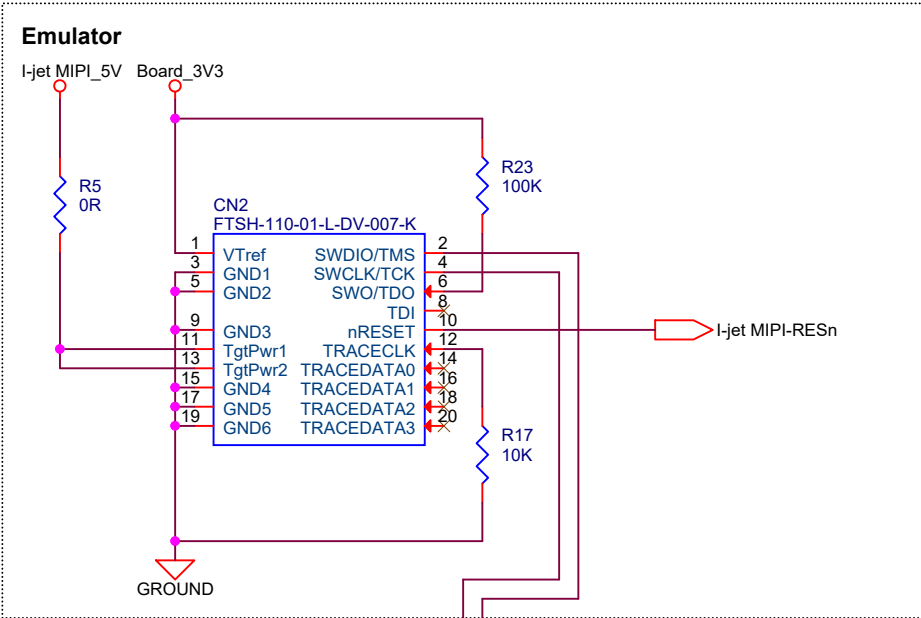
J23	
1-2 shorted	VCC_MCU Voltage Supply (VCC/IOVCC)
2-3 shorted	BATTERY Supply

GENERATION OF 3V3 DURING ENERGY HARVEST CONTROLLER USED



GROUND TEST POINT

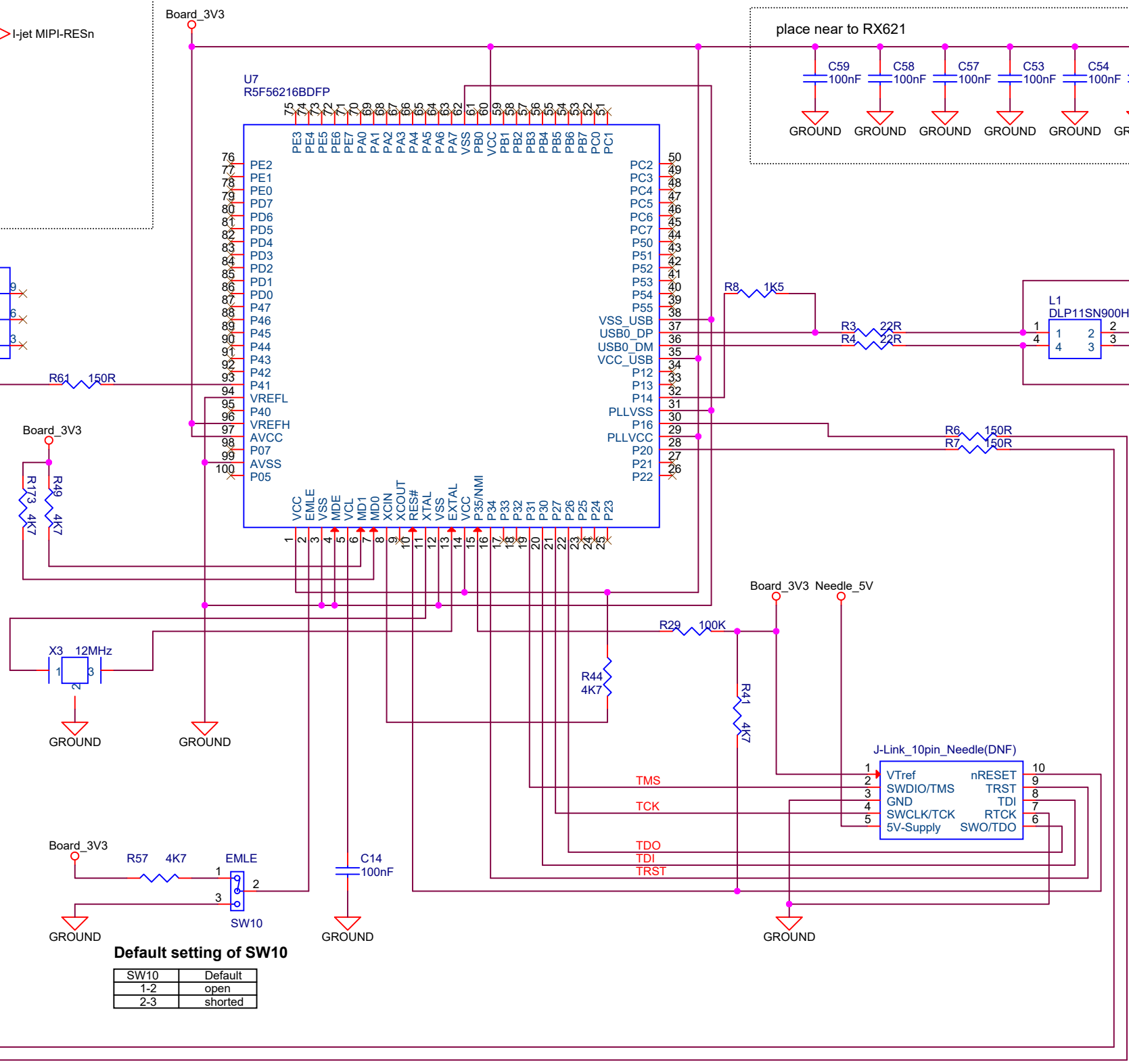




**SW6 EHC MODE/NORMAL MODE Select
J-Link OB USE/NOT USE Select**

SW6	
1-2 shorted	Normal Mode
4-5 shorted	J-Link OB use
7-8 shorted	
2-3 shorted	EHC Mode
5-6 shorted	J-Link OB not use
8-9 shorted	(Use of another emulator)

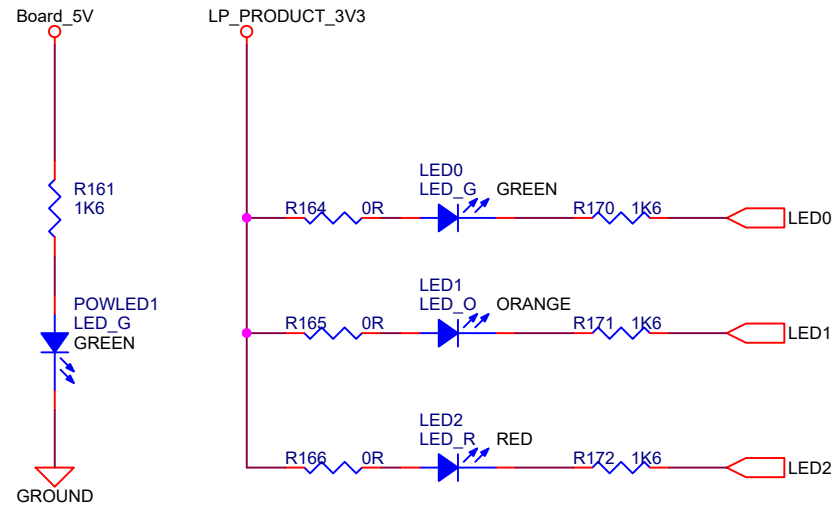
Default setting
"Pin1-2 shorted"
"Pin4-5 shorted"
"Pin7-8 shorted"



Default setting of SW10

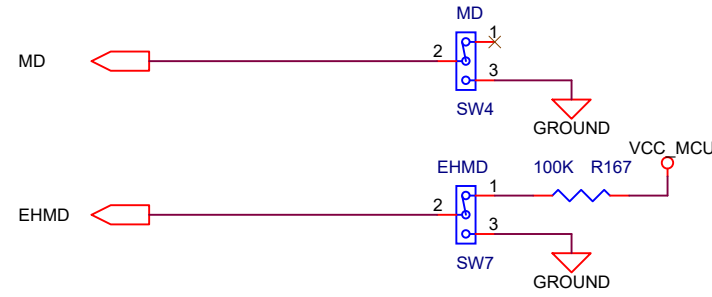
SW10	Default
1-2	open
2-3	shorted

RESET, Switches, LEDs, Mode Setting



Operating and Startup Mode Setting

Note: Recommended to pull up the MD pin. Use VCC_MCU as the power supply for the pull-up.



Operating Mode and Startup Mode Setting

SW4	SW7	Operating Mode	Startup Mode
1-2 shorted	1-2 shorted	Single Chip Mode	Energy harvesting startup
1-2 shorted	2-3 shorted		Normal startup
2-3 shorted	DON'T CARE	SCI/USB Boot Mode	-

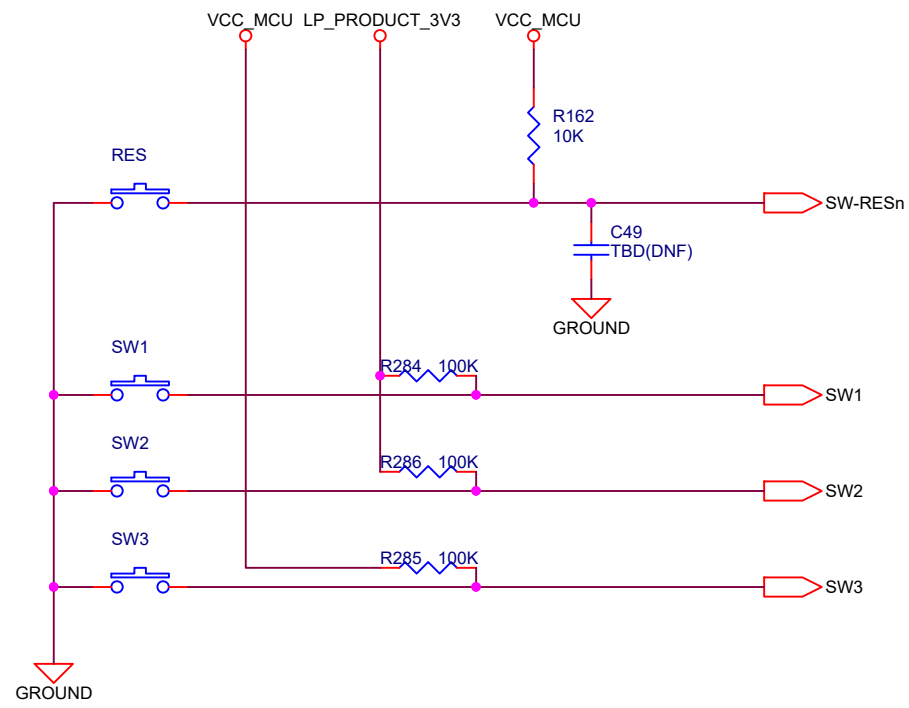
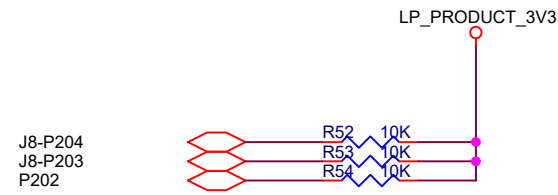
Default setting of SW4

SW4	Default
1-2	shorted
2-3	open

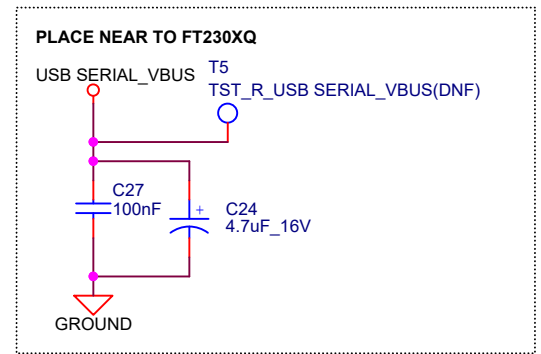
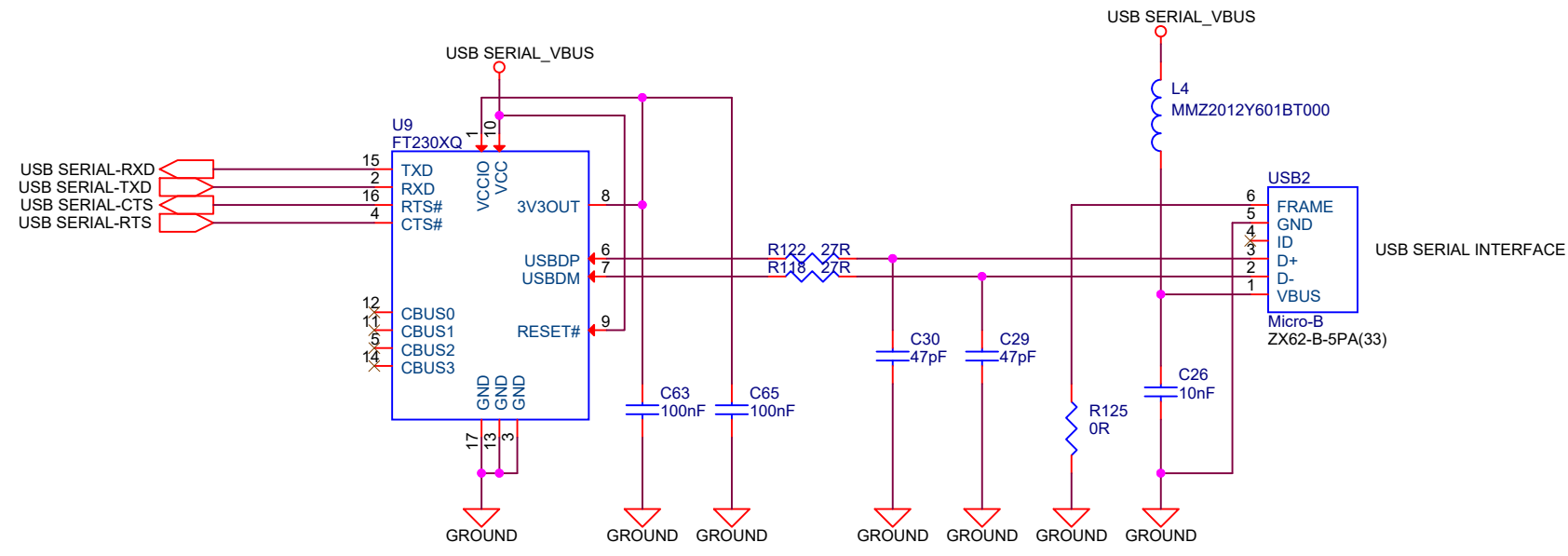
Default setting of SW7

SW7	Default
1-2	open
2-3	shorted

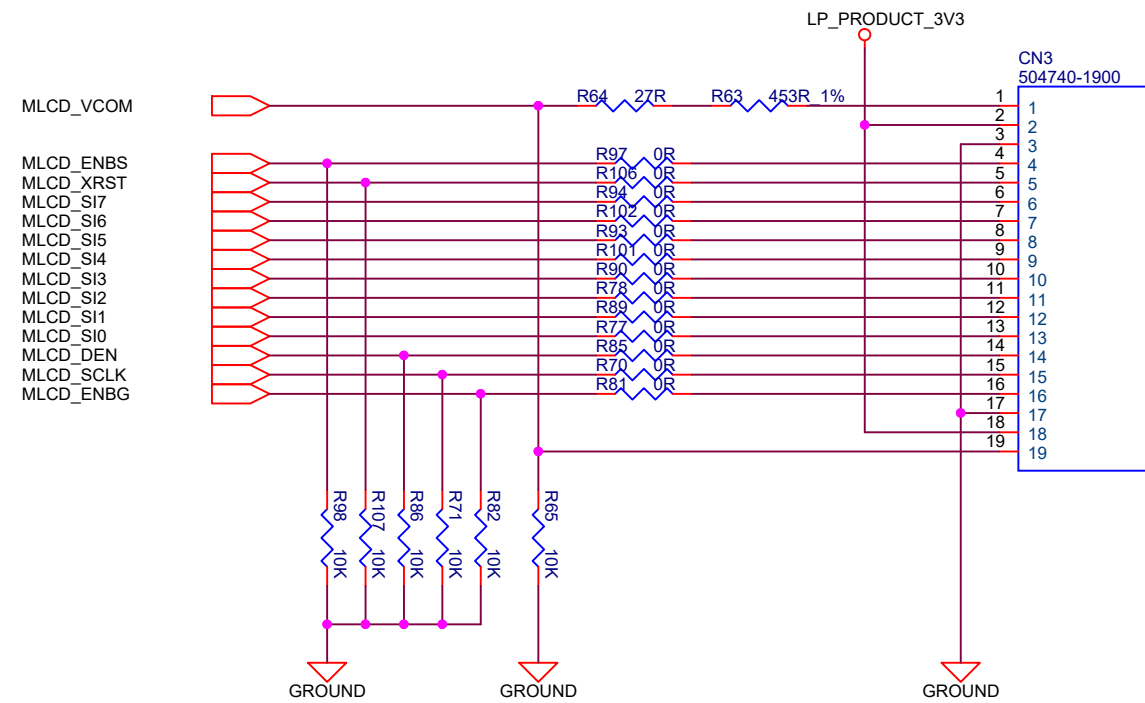
Pull-up resistors



USB to Serial Interface



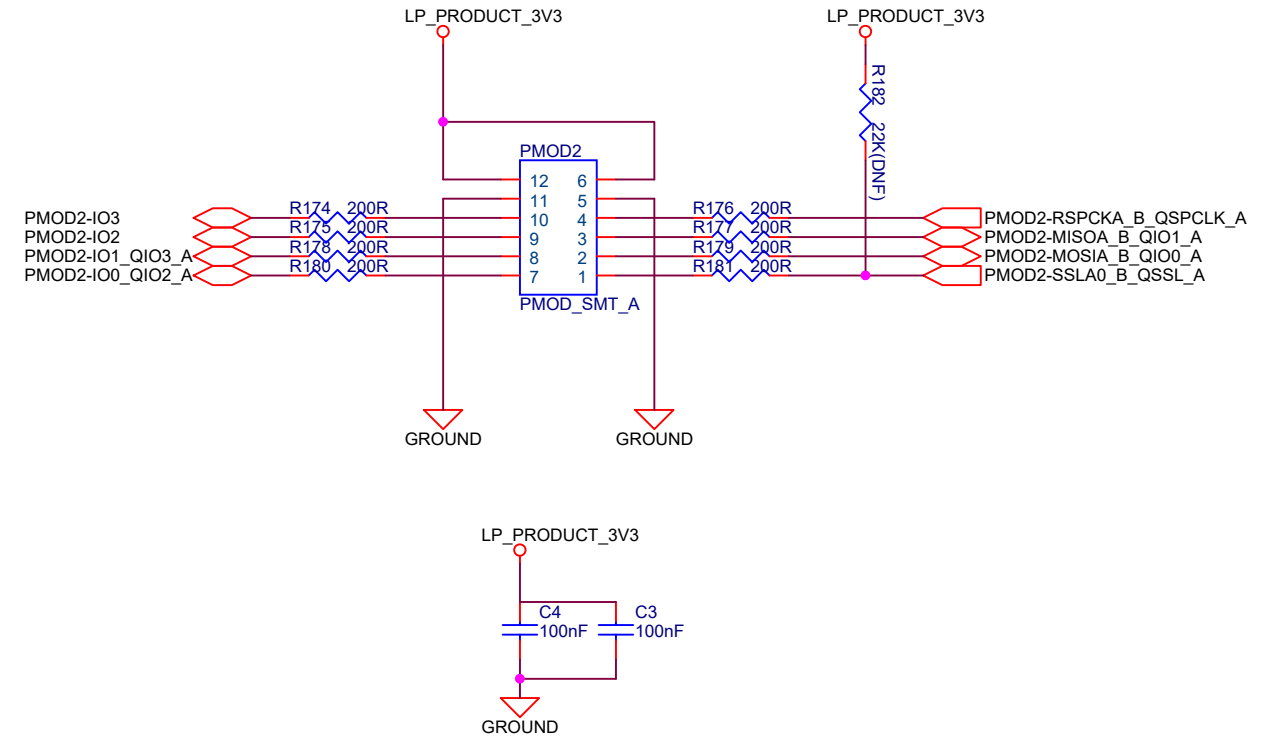
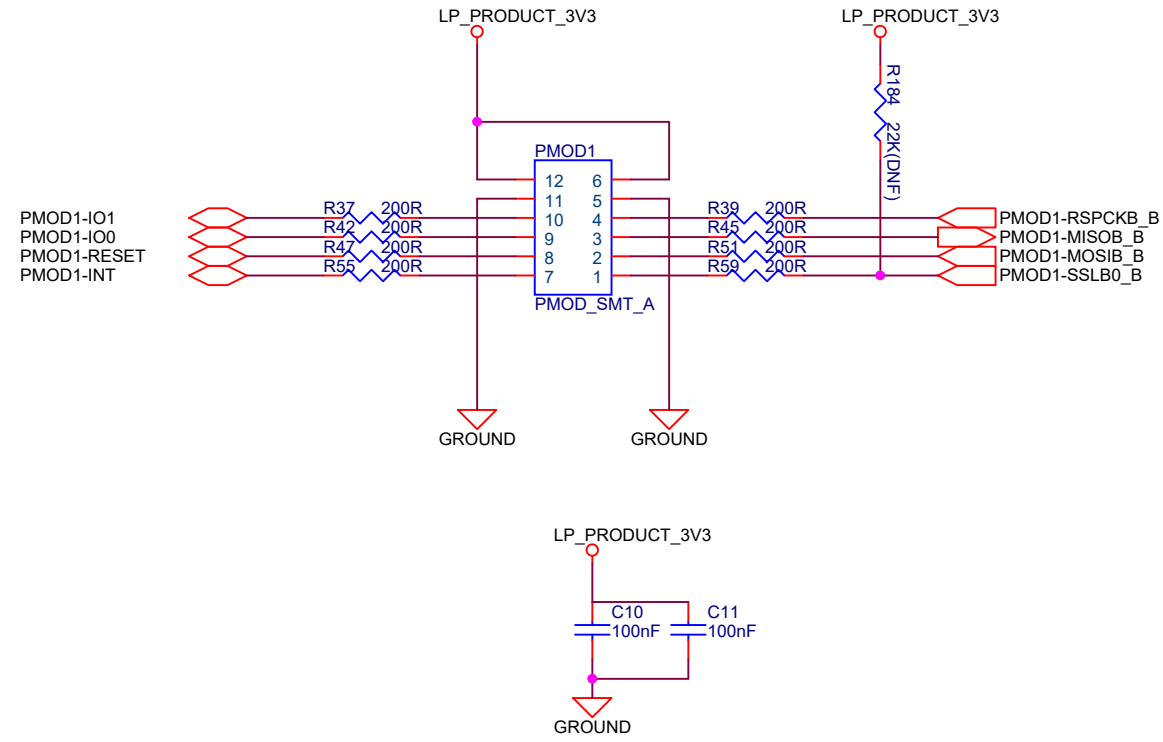
MIPLCD-MLCD (Kyocera)



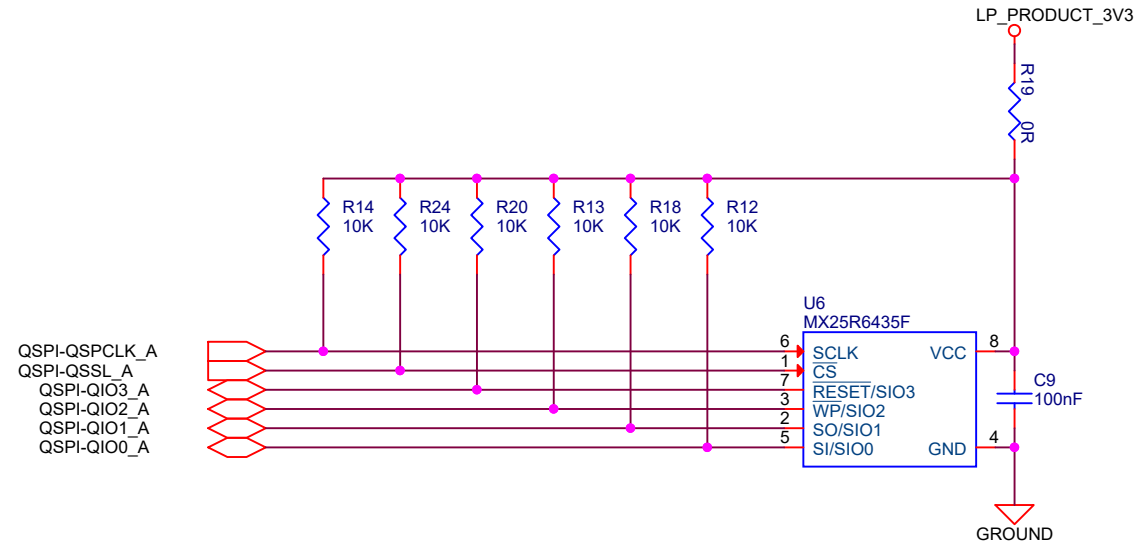
PMOD

PMOD1: Angle type connector

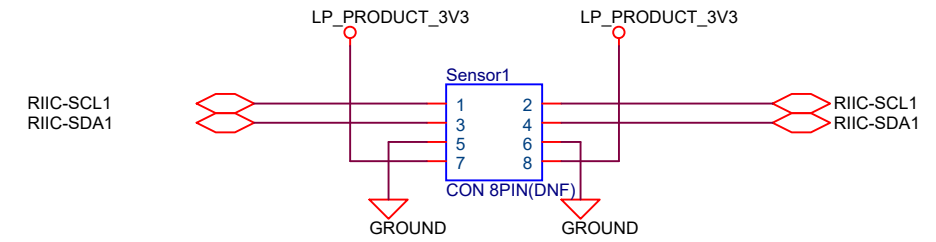
PMOD2: Angle type connector



QSPI-SPI FLASH MEMORY(64Mbits)



Sensor



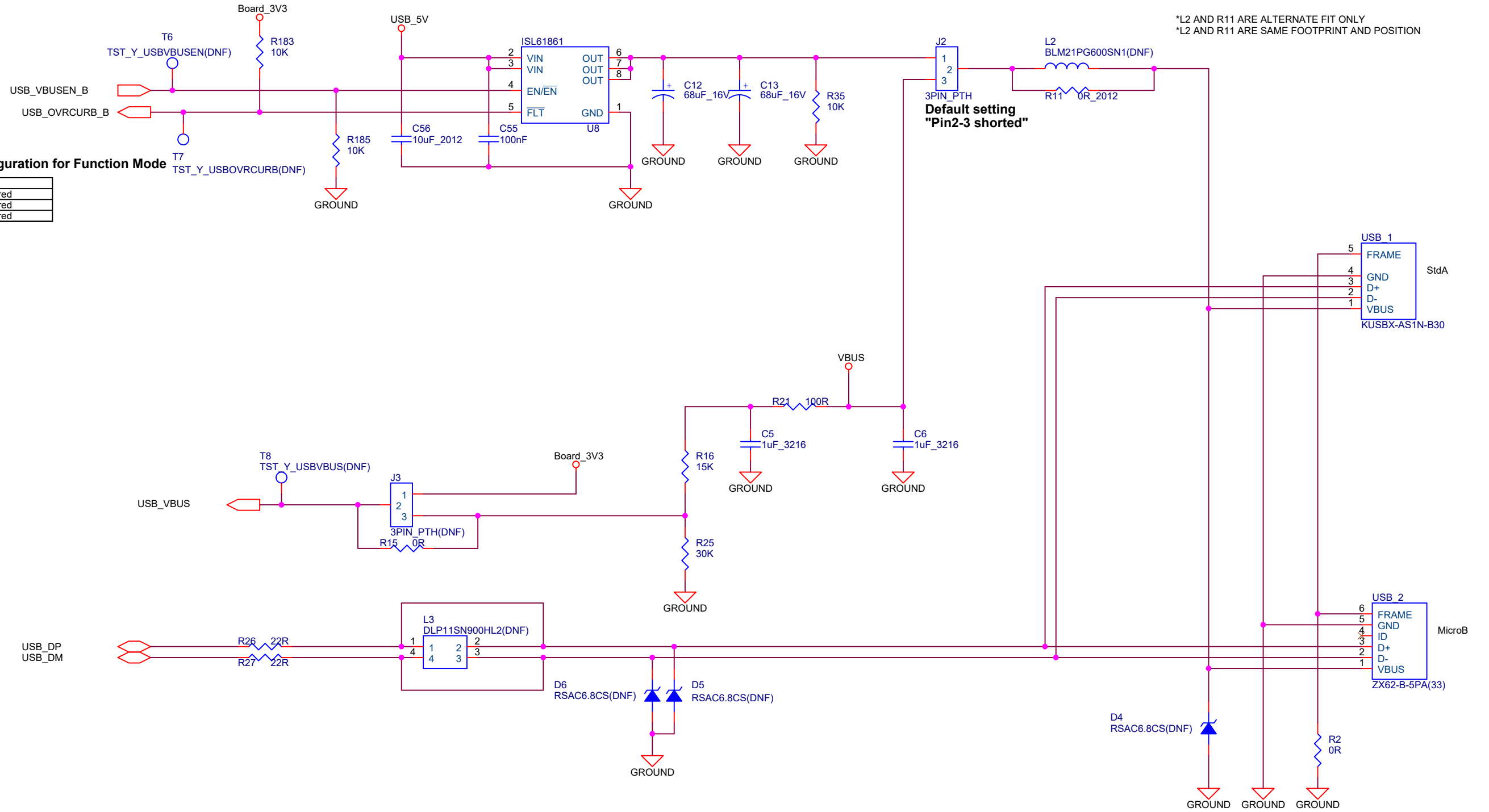
USB Host/Function

USB Host/Function Select

J2	
1-2 shorted	Host Mode
2-3 shorted	Function Mode

Self-powered/Bus-powered Configuration for Function Mode

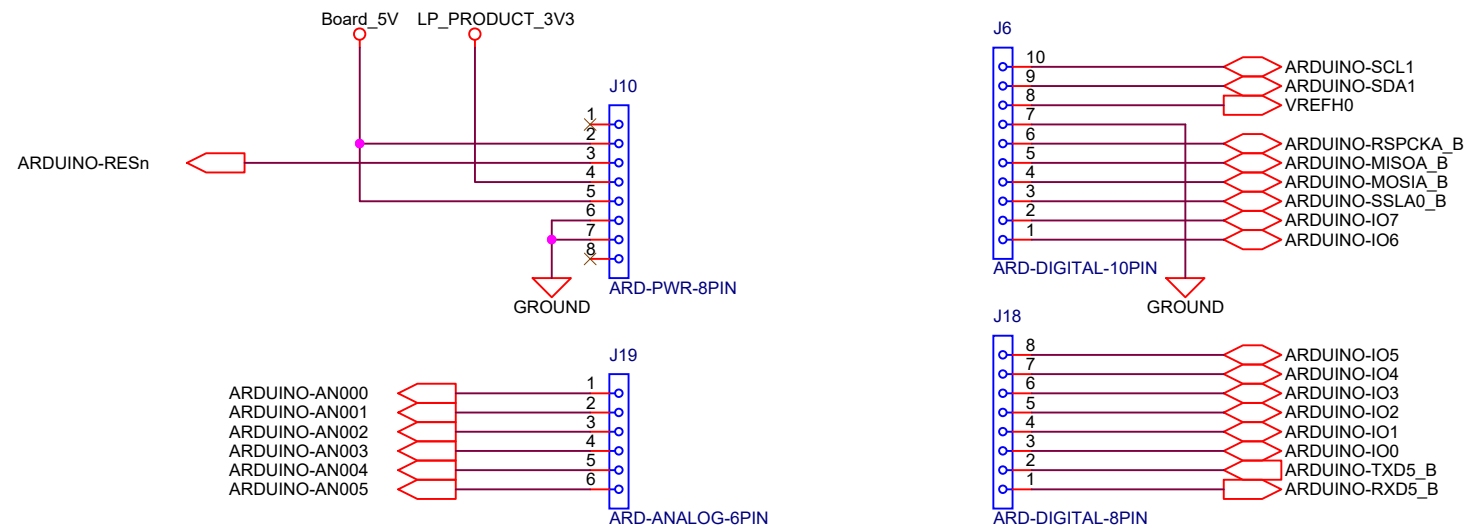
J3	R15	
1-2 shorted	Remove	Bus-powered
2-3 shorted	Remove	Self-powered
Open	Fit	Self-powered



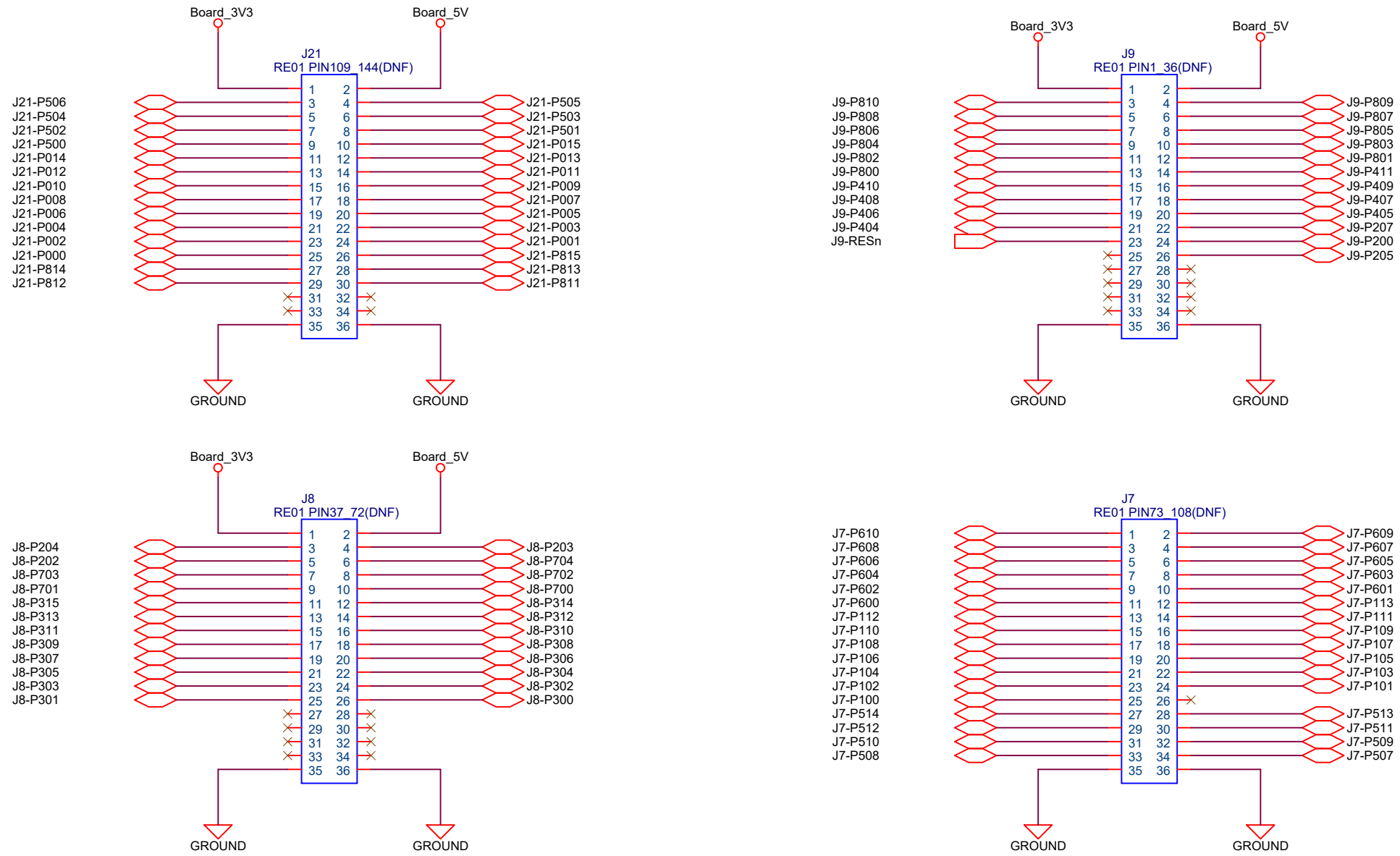
*L2 AND R11 ARE ALTERNATE FIT ONLY
*L2 AND R11 ARE SAME FOOTPRINT AND POSITION

Default setting
"Pin2-3 shorted"

ARDUINO UNO HEADER



RE01 Pin Header



Revision History

REV	DATE	SHEET	DESCRIPTION
1.00	30.07.2019	ALL	New
2.00	22.08.2019	2	Changes device port name in U1. (P100/MLCD SI7/KRM00 -> P100/MLCD SI7/KINT00)
		3	Change status C17(DNF) -> C17
		ALL	1st release edition.
3.00	07.10.2019	1	Changes title and product name.
		8	Added a note to the MD switch.
3.10	25.11.2020	8	Added a note to the MD switch.

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