

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.

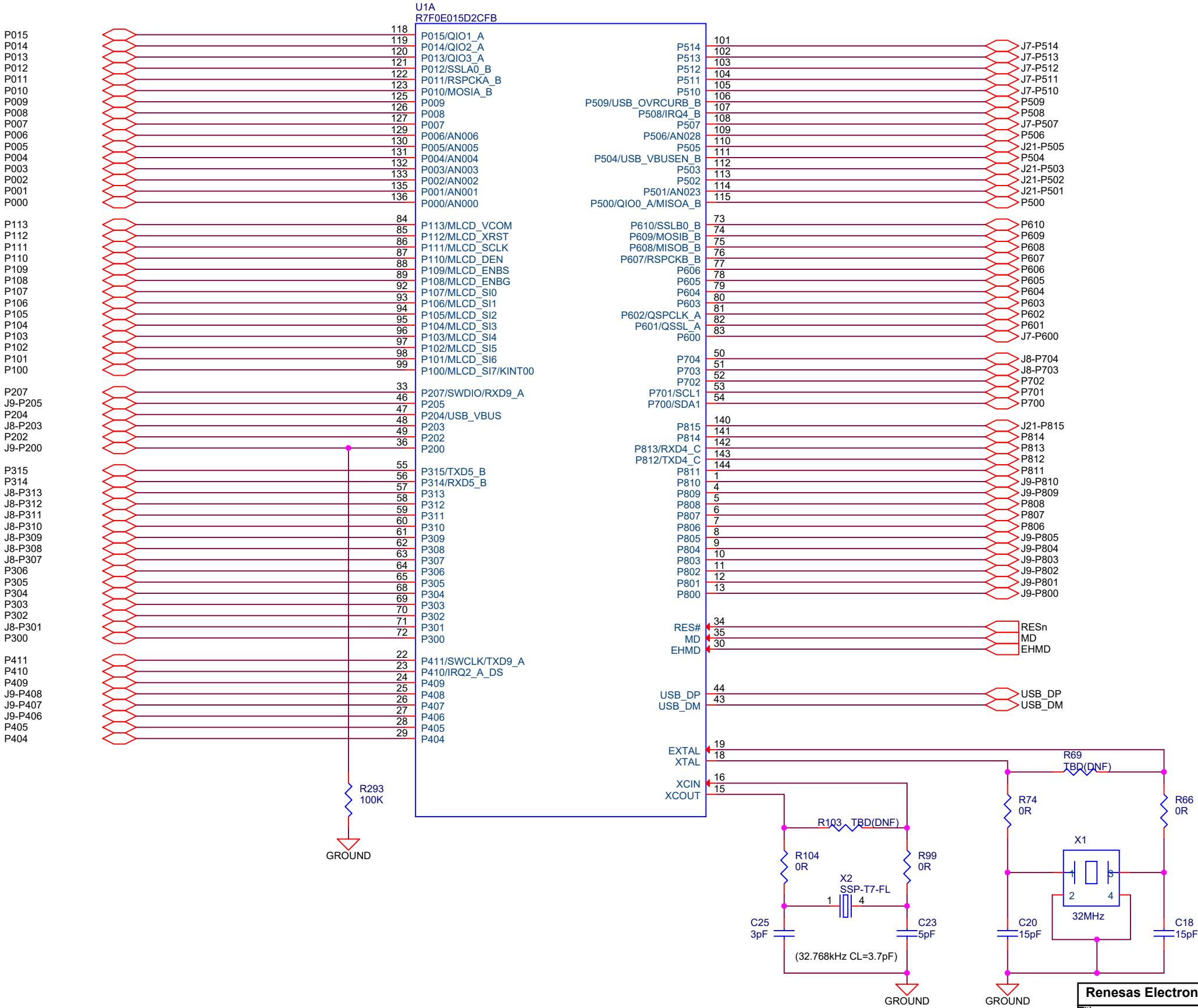
Board Code:

RTK70E015DC00000BE : MP main board of Evaluation Kit RE01 1500KB

RE01 1500KB device-1

Note:

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



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Title		
Main Board [RE01 1500KB device-1]		
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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

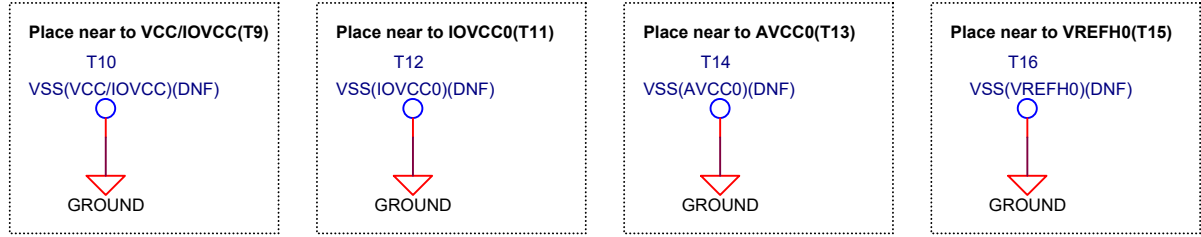
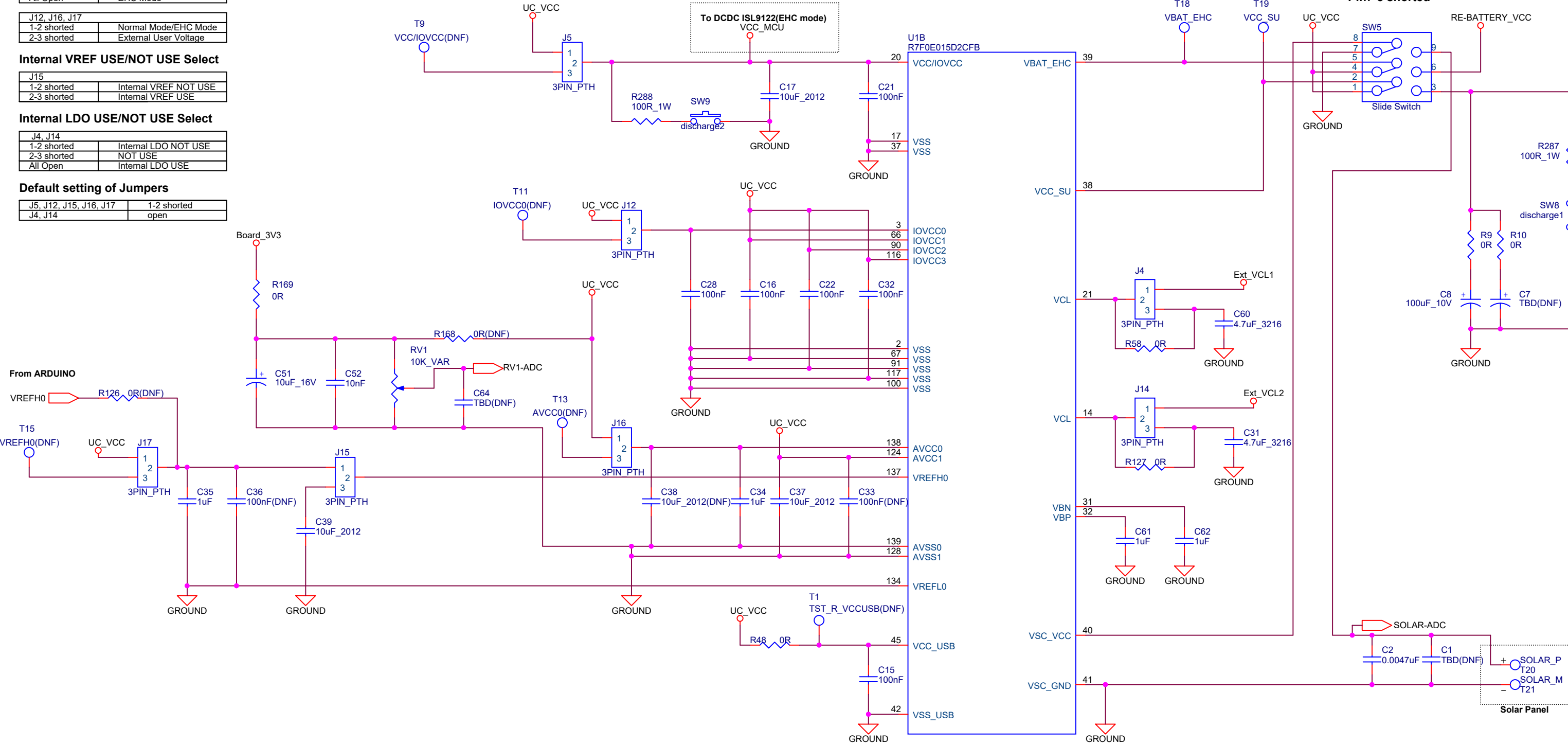
Default setting of Jumpers

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

RES#(Pin34)

RESn



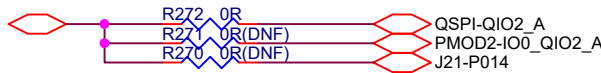
P015(Pin118)

P015



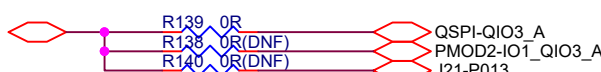
P014(Pin119)

P014



P013(Pin120)

P013



P012(Pin121)

P012



P011(Pin122)

P011



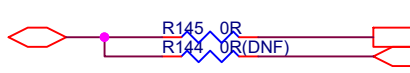
P010(Pin123)

P010



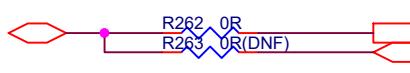
P009(Pin125)

P009



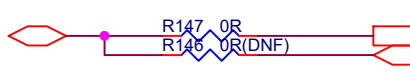
P008(Pin126)

P008



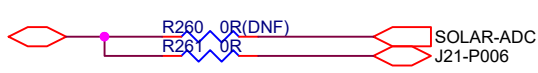
P007(Pin127)

P007



P006(Pin129)

P006



P005(Pin130)

P005



P004(Pin131)

P004



P003(Pin132)

P003



P002(Pin133)

P002



P001(Pin135)

P001



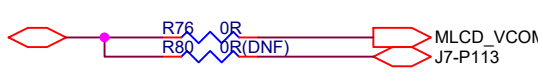
P000(Pin136)

P000



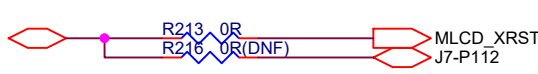
P113(Pin84)

P113



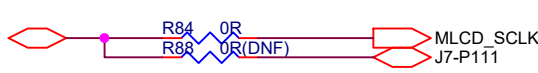
P112(Pin85)

P112



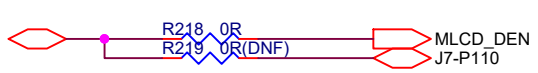
P111(Pin86)

P111



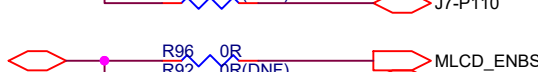
P110(Pin87)

P110



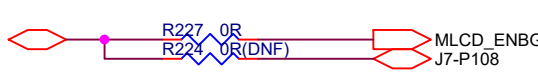
P109(Pin88)

P109



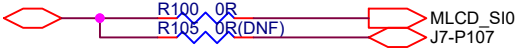
P108(Pin89)

P108



P107(Pin92)

P107



P106(Pin93)

P106



P105(Pin94)

P105



P104(Pin95)

P104



P103(Pin96)

P103



P102(Pin97)

P102



P101(Pin98)

P101



P100(Pin99)

P100



P207(Pin33)

P207



P204(Pin47)

P204



P202(Pin49)

P202



P315(Pin55)

P315



P314(Pin56)

P314



P306(Pin64)

P306



P305(Pin65)

P305



P304(Pin68)

P304



P303(Pin69)

P303



P302(Pin70)

P302



P300(Pin72)

P300



P411(Pin22)

P411



P410(Pin23)

P410



P409(Pin24)

P409



P509(Pin106)

P509



P508(Pin107)

P508



P506(Pin109)

P506



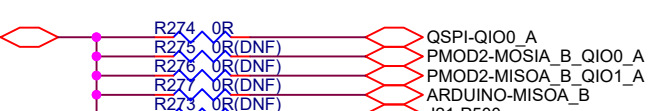
P504(Pin111)

P504



P500(Pin115)

P500



P610(Pin73)

P610



P609(Pin74)

P609



P608(Pin75)

P608



P607(Pin76)

P607



P606(Pin77)

P606



P605(Pin78)

P605



P604(Pin79)

P604



P603(Pin80)

P603



P602(Pin81)

P602



P601(Pin82)

P601



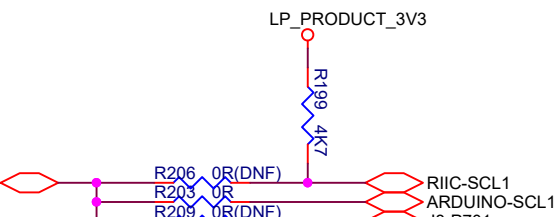
P702(Pin52)

P702



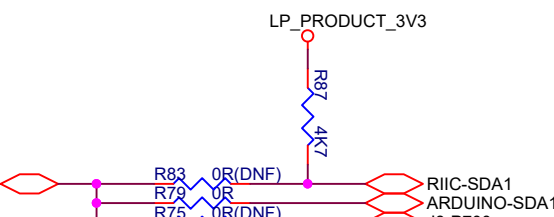
P701(Pin53)

P701



P700(Pin54)

P700



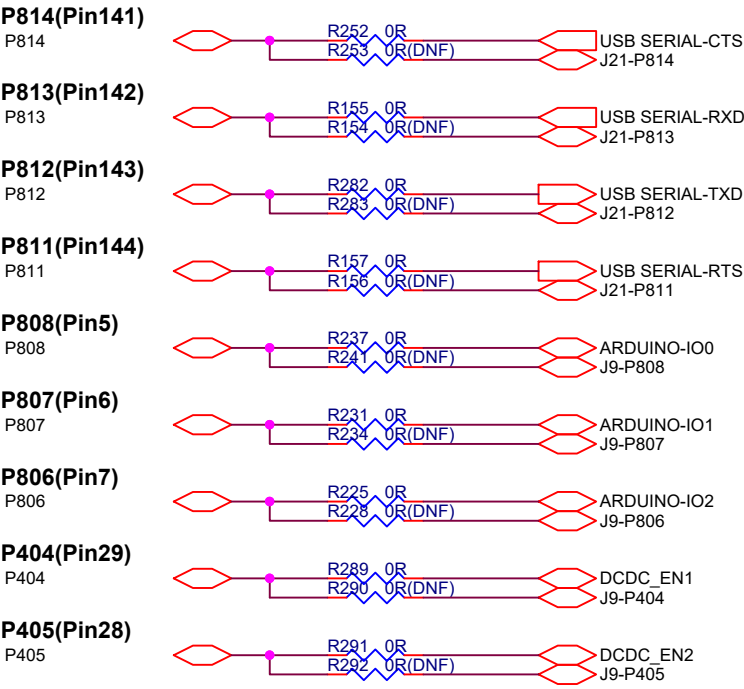
Renesas Electronics Corporation

Title Main Board [RE01 Pin Function Select-1]

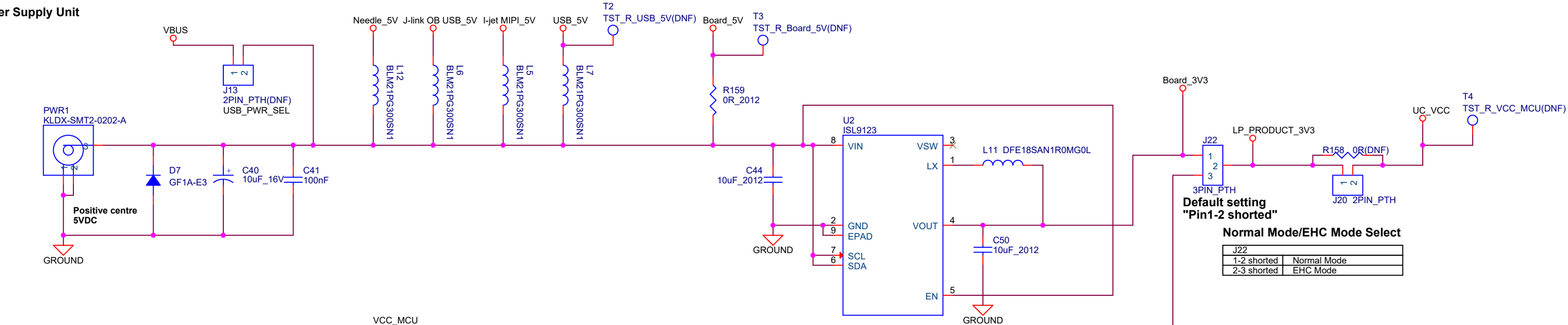
Size A3 Document Number R20UT4563EJ0310 Rev 3.10

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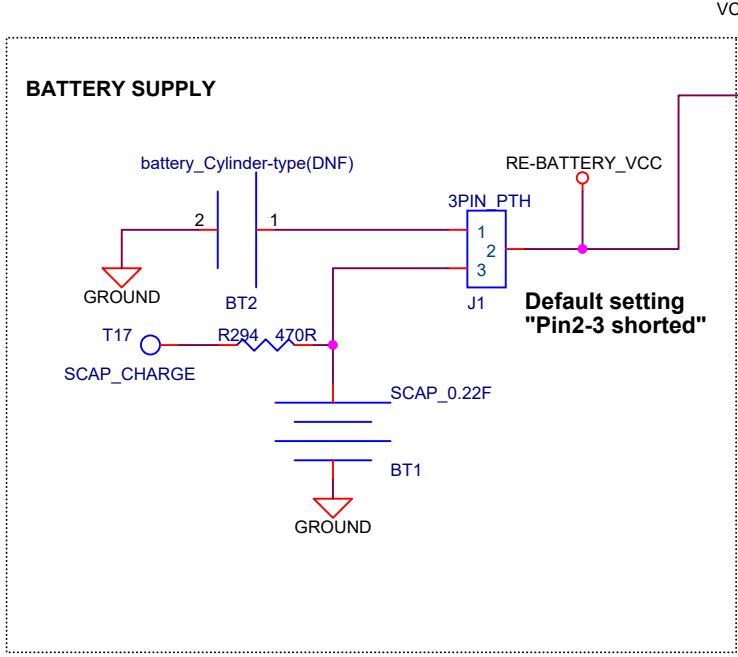
RE01 Pin Function Select-2



Power Supply Unit



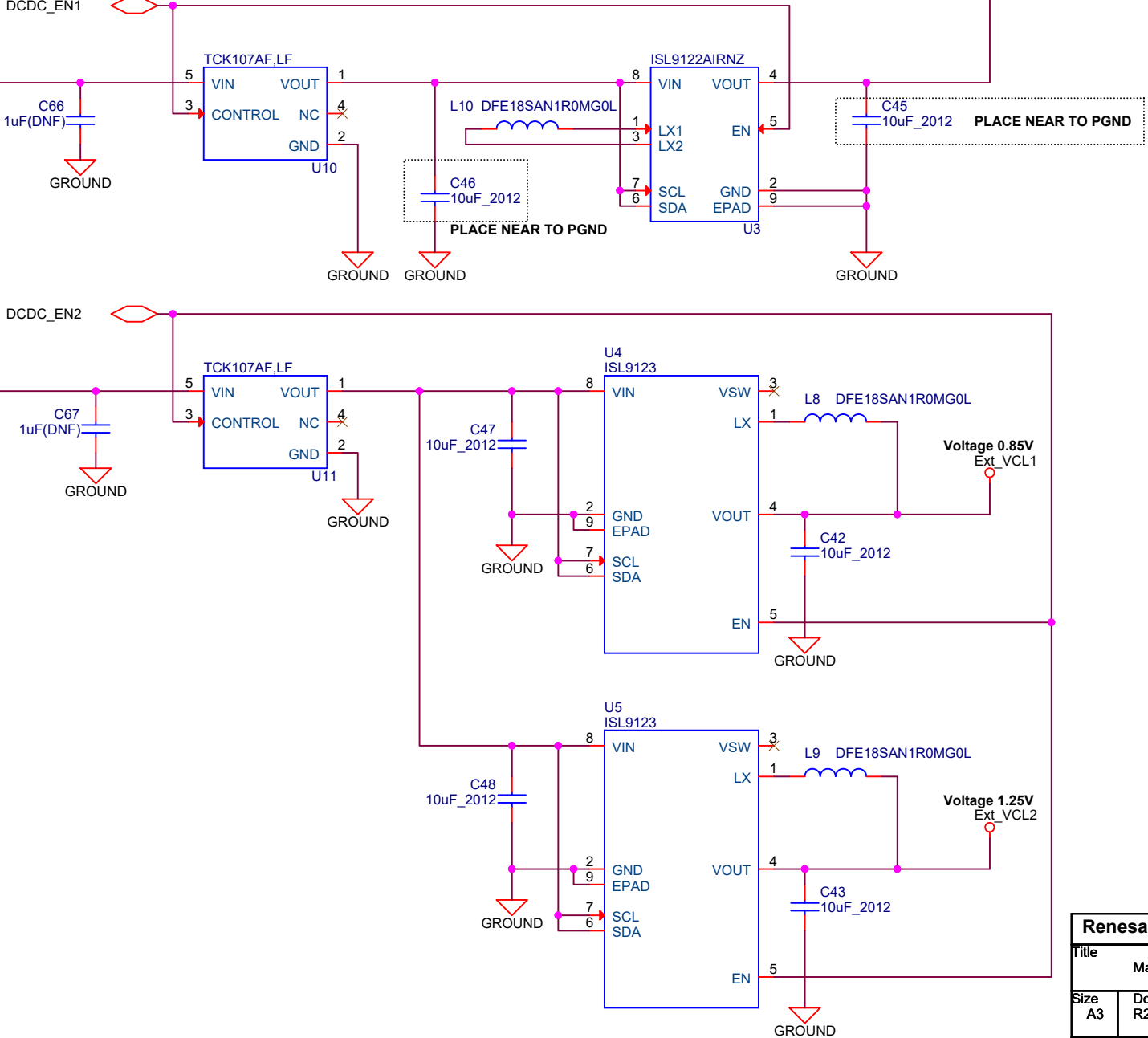
BATTERY SUPPLY



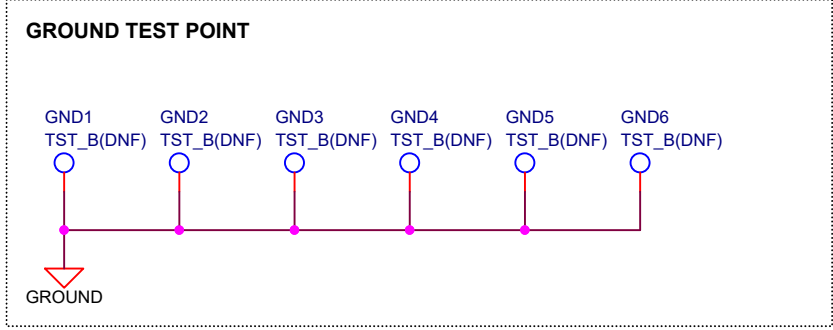
Supply Voltage Select(EHC Mode)

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

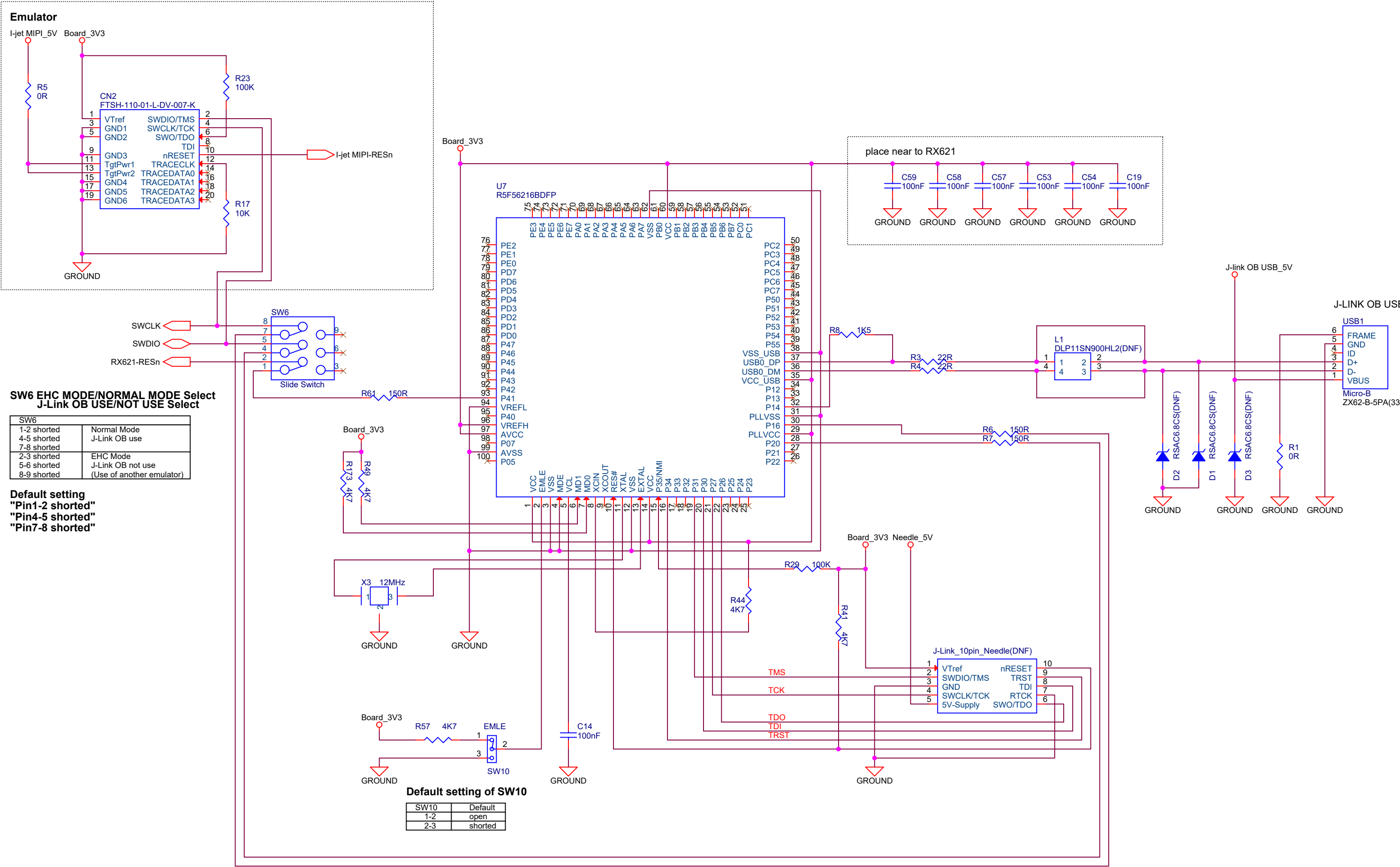
GENERATION OF 3V3 DURING ENERGY HARVEST CONTROLLER USED



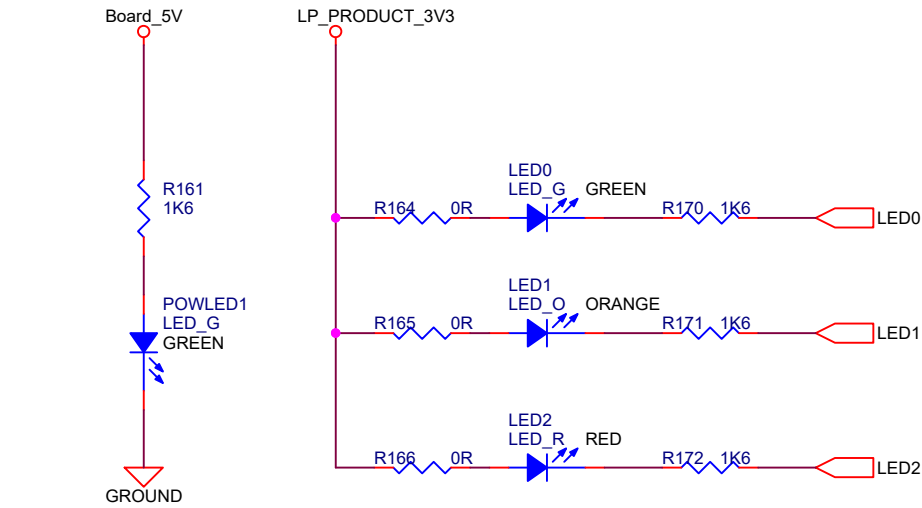
GROUND TEST POINT



Emulator, J-Link On Board

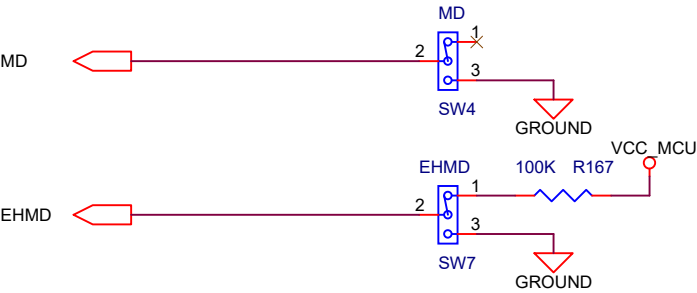


RESET, Switches, LEDs, Mode Setting



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	-

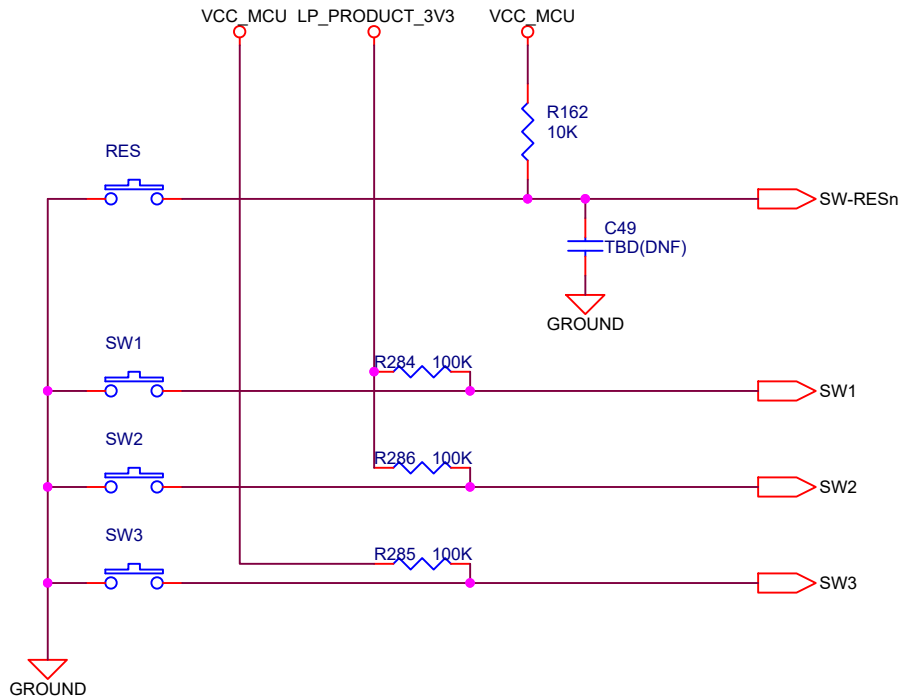
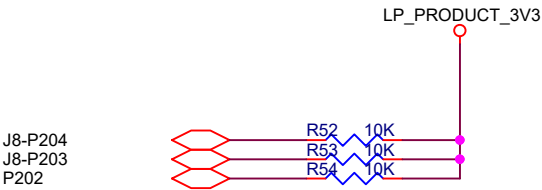
Default setting of SW4

SW4	Default
1-2	shorted
2-3	open

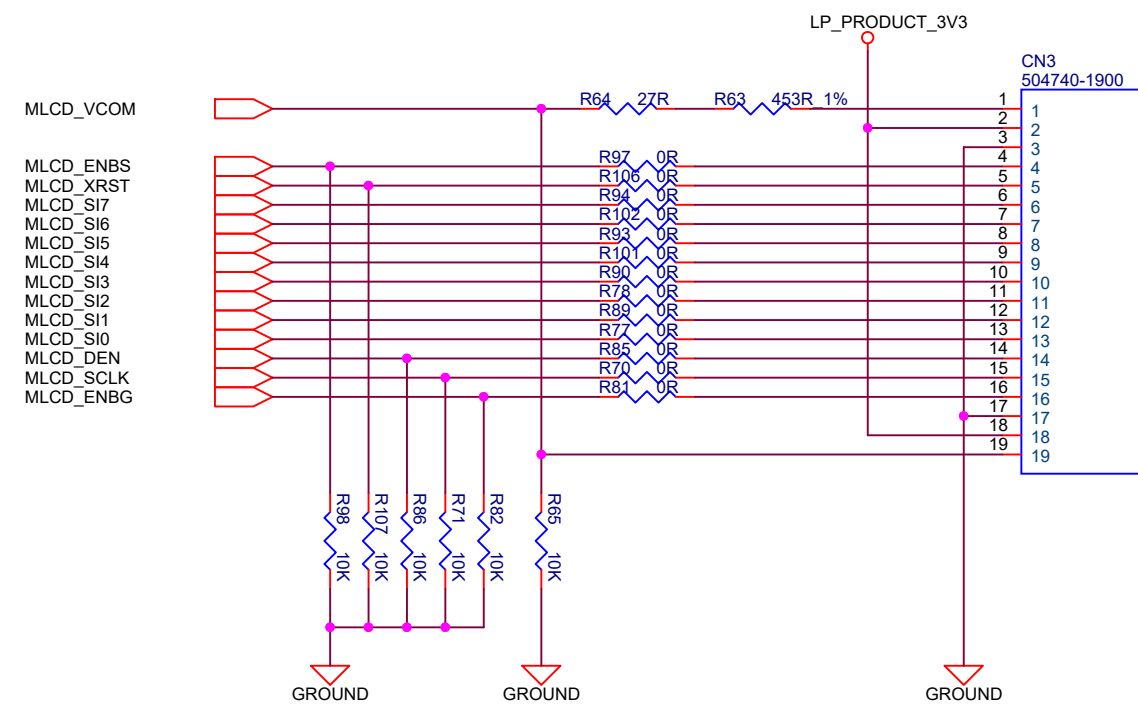
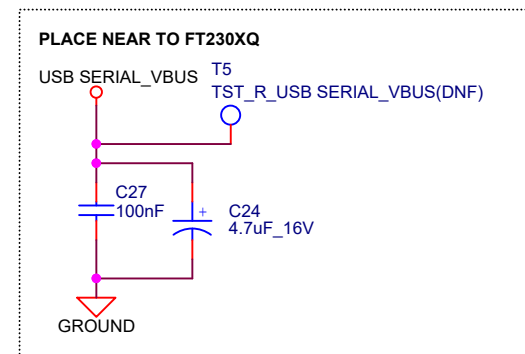
Default setting of SW7

SW7	Default
1-2	open
2-3	shorted

Pull-up resistors



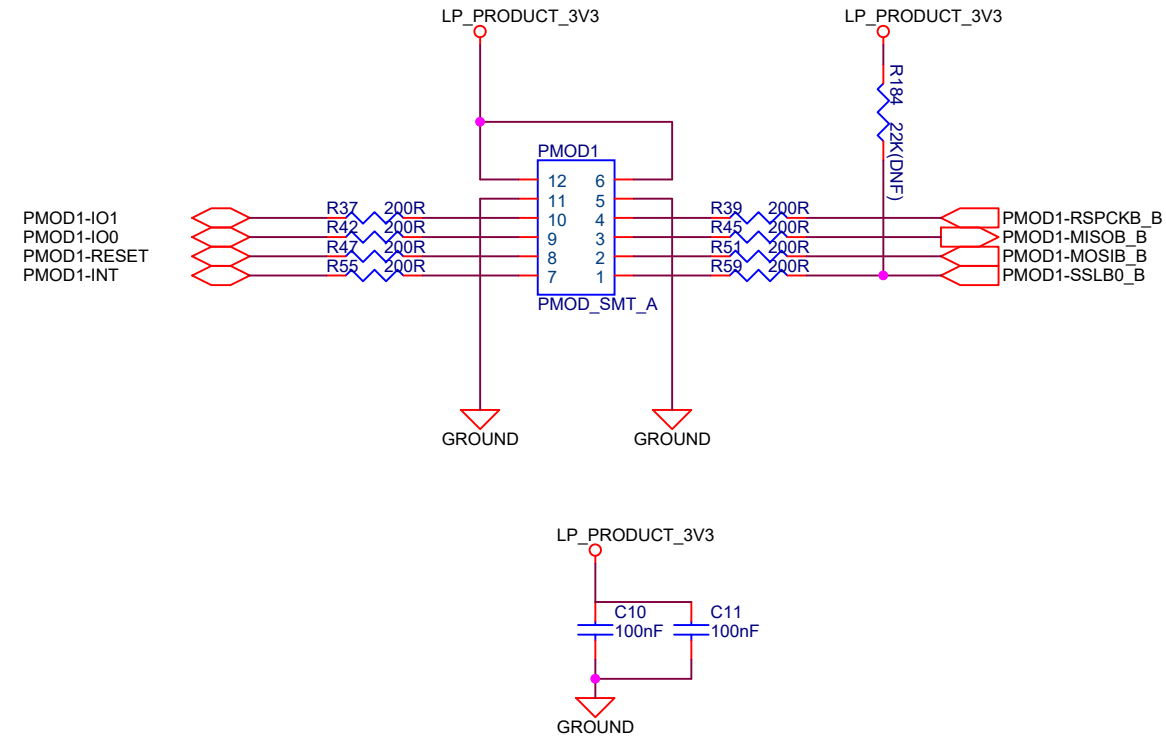
MIPLCD-MLCD (Kyocera)



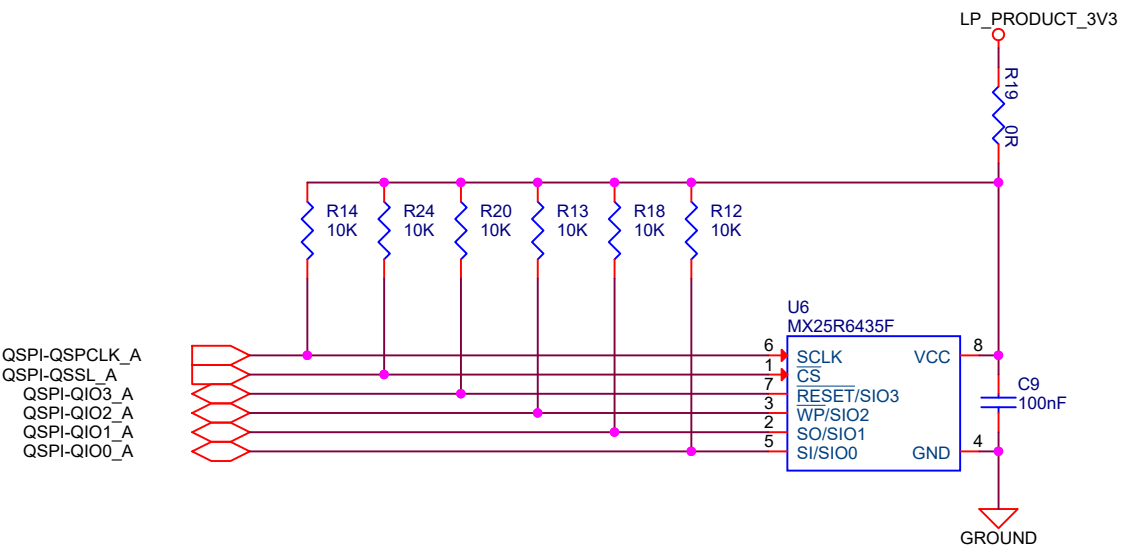
PMOD

PMOD1: Angle type connector

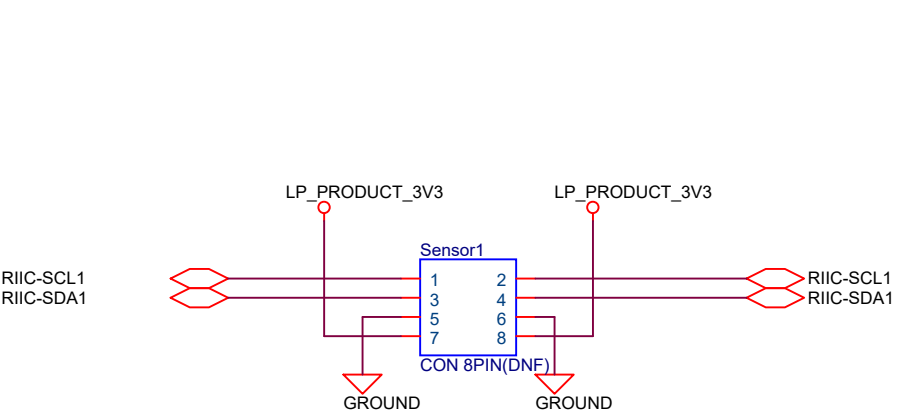
PMOD2: Angle type connector



QSPI-SPI FLASH MEMORY(64Mbits)



Sensor



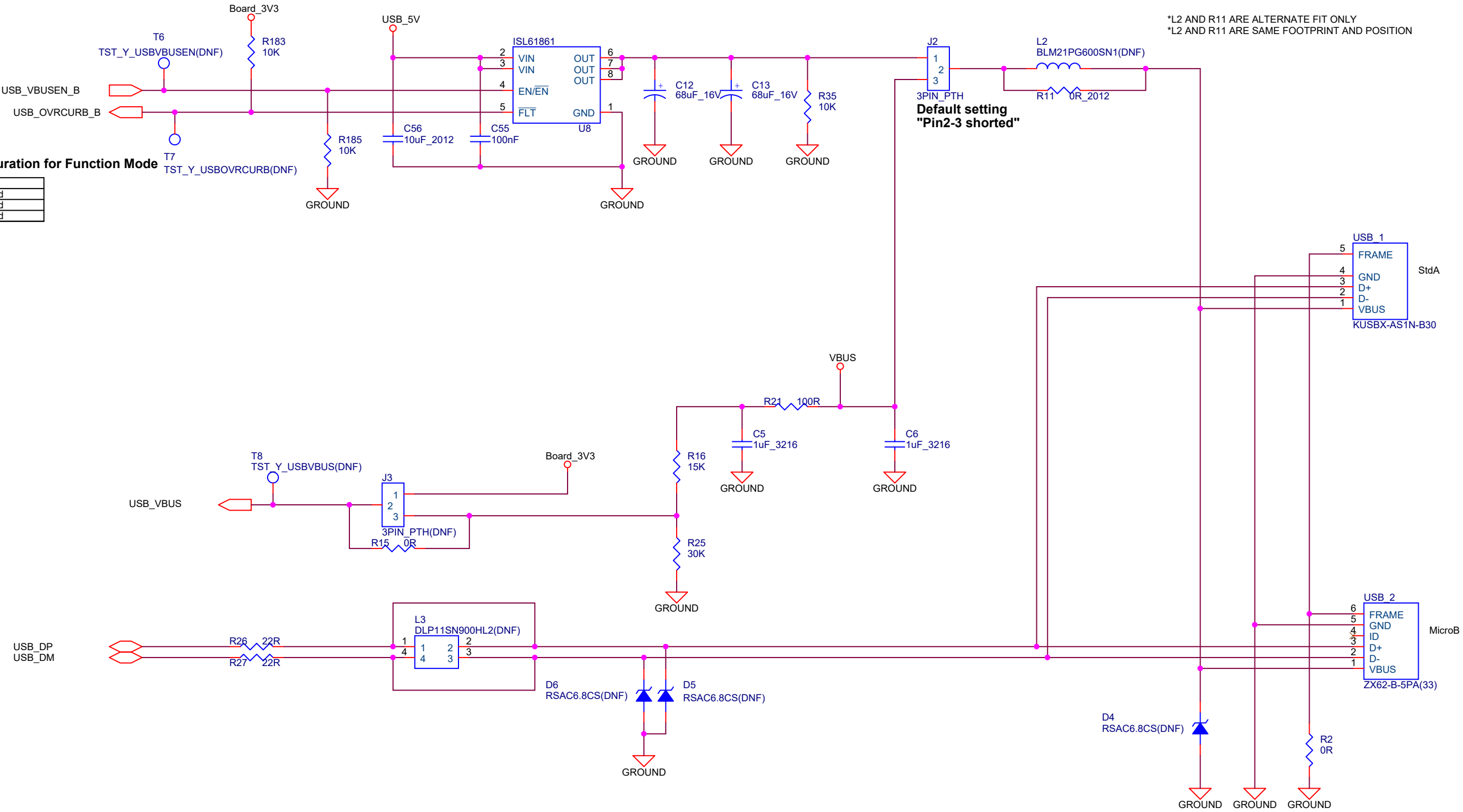
USB Host/Function

USB Host/Function Select

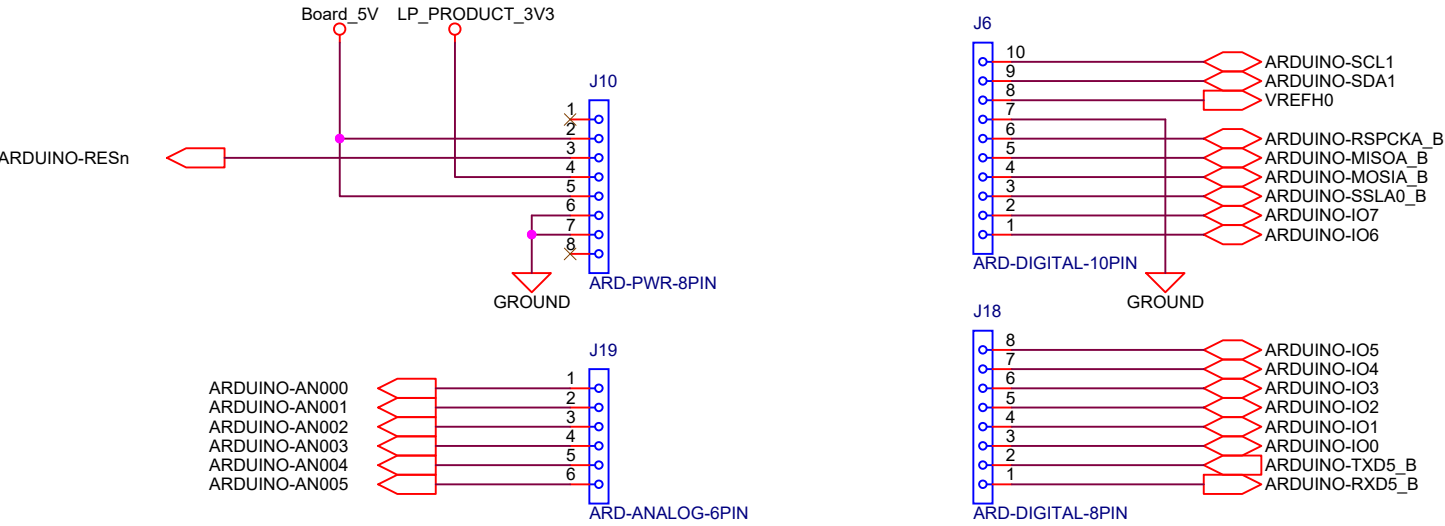
J2	
1-2 shorted	Host Mode
2-3 shorted	Function Mode

Self-powered/Bus-powered Configuration for Function Mode

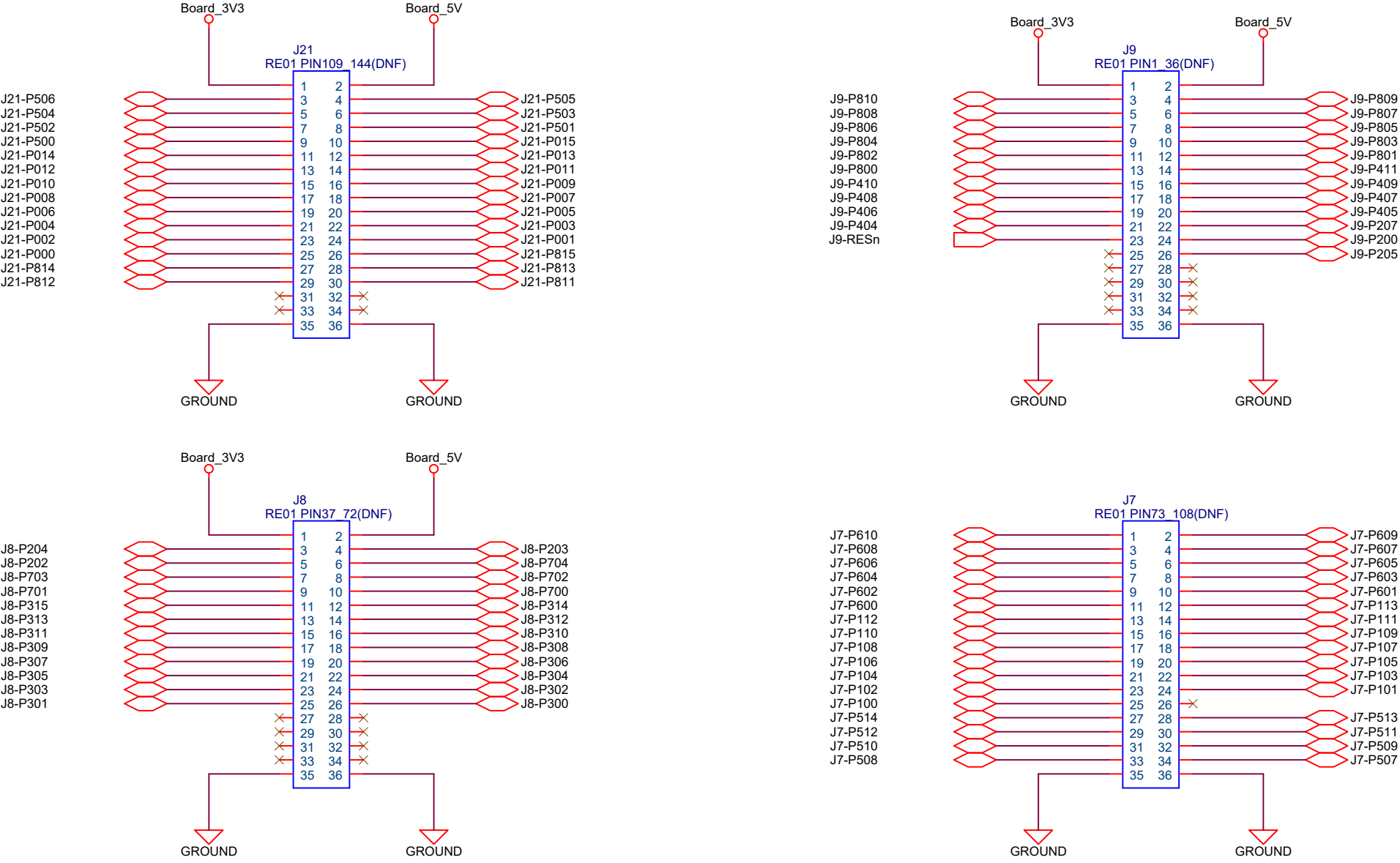
J3	R15	
1-2 shorted	Remove	Bus-powered
2-3 shorted	Remove	Self-powered
Open	Fit	Self-powered



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
3.00	07.10.2019	ALL	1st release edition.
		1	Changes title and product name.
3.10	25.11.2020	8	Added a note to the MD switch.