

Evaluation Kit RE01 256KB Main Board Schematics

| PAGE | DESCRIPTION |
|------|-------------------------------------|
| 1 | INDEX |
| 2 | RE01 256KB device |
| 3 | RE01 256KB Pin Function Select |
| 4 | PSU |
| 5 | Emulator, J-Link On Board |
| 6 | Switches, LEDs, Mode Setting |
| 7 | USB to Serial Interface, MLCD |
| 8 | Pmod, QSPI FLASH MEMORY |
| 9 | ARDUINO UNO HEADER, RE01 Pin Header |

Note:

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

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

Board Code:

RTK70E0118C00001BJ : MP main board of Evaluation Kit RE01 256KB

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

| | | |
|-------------------------|-----|------|
| P015 | 92 | P015 |
| PMOD_IO0_P014 | 93 | P014 |
| P013 | 94 | P013 |
| P012 | 95 | P012 |
| P011 | 96 | P011 |
| P010 | 97 | P010 |
| J2_P007 | 80 | P007 |
| J2_P006 | 81 | P006 |
| ARDUINO_AN005 | 82 | P005 |
| ARDUINO_AN004 | 85 | P004 |
| ARDUINO_AN003 | 86 | P003 |
| ARDUINO_AN002 | 87 | P002 |
| ARDUINO_AN001 | 88 | P001 |
| ARDUINO_AN000 | 89 | P000 |
| MLCD_VCOM | 56 | P113 |
| MLCD_XRST | 57 | P112 |
| MLCD_SCLK | 58 | P111 |
| MLCD_DEN | 59 | P110 |
| MLCD_ENBS | 60 | P109 |
| MLCD_ENBG | 61 | P108 |
| MLCD_SI0 | 64 | P107 |
| MLCD_SI1 | 65 | P106 |
| MLCD_SI2 | 66 | P105 |
| MLCD_SI3 | 67 | P104 |
| MLCD_SI4 | 68 | P103 |
| MLCD_SI5 | 69 | P102 |
| MLCD_SI6 | 70 | P101 |
| MLCD_SI7 | 71 | P100 |
| LED0 | 32 | P210 |
| DCDC_EHC_EN | 33 | P209 |
| DCDC_Ext_EN | 34 | P208 |
| P207 | 22 | P207 |
| ARDUINO_IO3_IRQ8_C | 35 | P205 |
| ARDUINO_IO2_IRQ7_B | 36 | P204 |
| J1_P203 | 37 | P203 |
| P202 | 38 | P202 |
| J1_P200 | 25 | P200 |
| ARDUINO_IO1_TXD5_B | 44 | P315 |
| ARDUINO_IO0_RXD5_B | 45 | P314 |
| ARDUINO_IO9_GTI0C2A_B | 48 | P302 |
| J1_P301 | 49 | P301 |
| ARDUINO_IO7 | 50 | P300 |
| P411 | 16 | P411 |
| LED1 | 17 | P410 |
| ARDUINO_IO8 | 18 | P409 |
| J2_P511 | 72 | P511 |
| J2_P510 | 73 | P510 |
| SW1 | 74 | P509 |
| SW2 | 75 | P508 |
| J2_P501 | 76 | P501 |
| J2_P500 | 77 | P500 |
| ARDUINO_IO6_GTI0C5B_B | 51 | P604 |
| ARDUINO_IO5_GTI0C5A_B | 52 | P603 |
| ARDUINO_IO4 | 53 | P602 |
| J2_P601 | 54 | P601 |
| J2_P600 | 55 | P600 |
| P704 | 39 | P704 |
| P703 | 40 | P703 |
| P702 | 41 | P702 |
| J1_P701 | 42 | P701 |
| J1_P700 | 43 | P700 |
| P815 | 98 | P815 |
| PMOD_INT_AGTWOA1_B_P814 | 99 | P814 |
| PMOD_RESET_RXD4_C | 100 | P813 |
| P812 | 1 | P812 |
| P811 | 2 | P811 |
| P810 | 3 | P810 |
| P809 | 4 | P809 |
| P808 | 5 | P808 |
| P807 | 6 | P807 |
| PMOD_IO1 | 7 | P806 |

EHC MODE/NORMAL MODE Select

| | | |
|-----|-------------|-------------|
| J10 | 1-2 shorted | Normal Mode |
| | 2-3 shorted | EHC Mode |

Default setting
"Pin1-2 shorted"

EHC MODE/NORMAL MODE Select

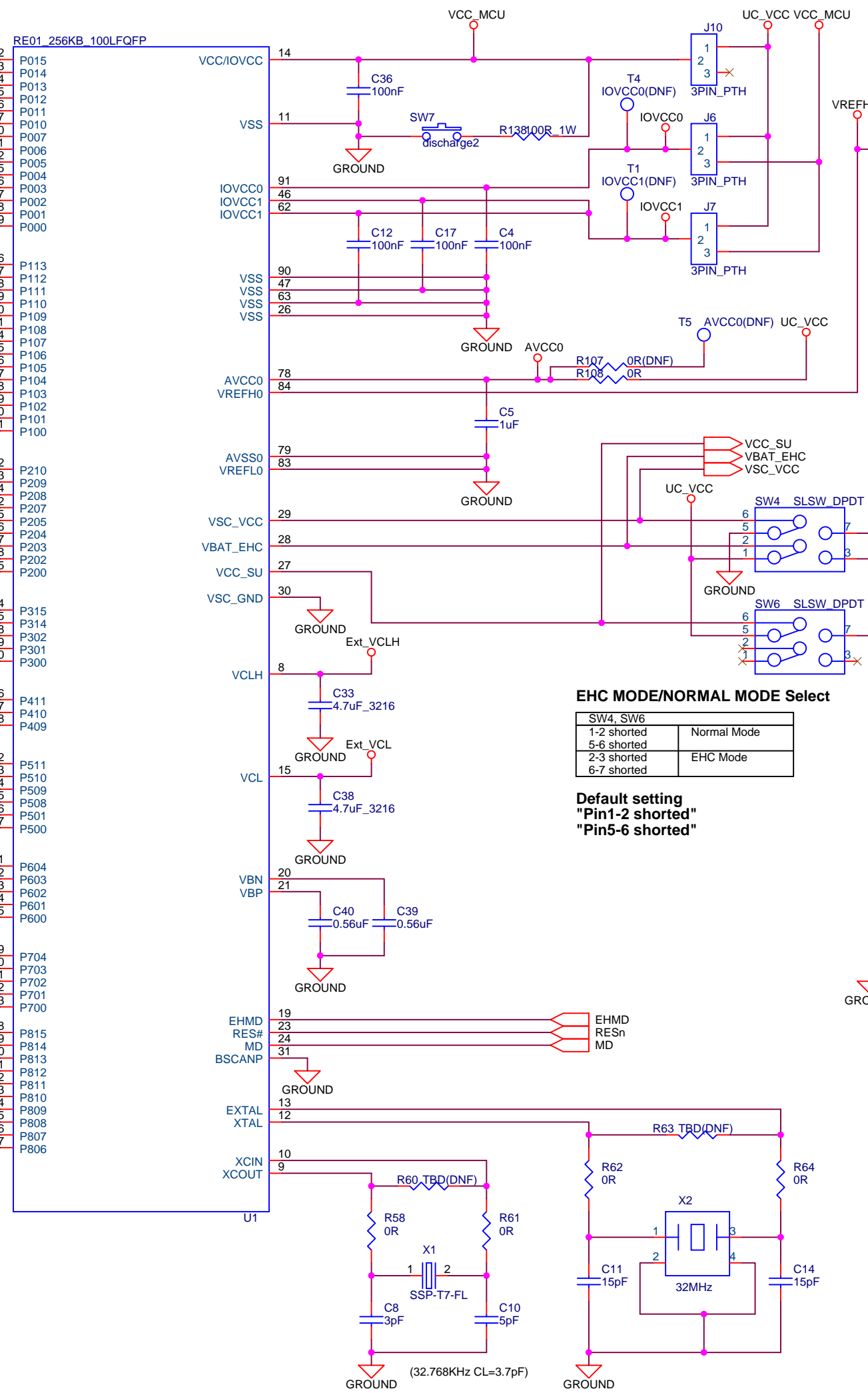
| | | |
|-------|-------------|------------------------|
| J6, 7 | 1-2 shorted | Normal Mode / EHC mode |
| | 2-3 shorted | EHC Mode |

Default setting
"Pin1-2 shorted"

REFERENCE VOLTAGE GENERATION CIRCUIT (VREF) Select

| | | |
|----|-------------|---|
| J5 | 1-2 shorted | The Reference Voltage Generation Circuit (VREF) not use |
| | 2-3 shorted | The Reference Voltage Generation Circuit (VREF) use |

Default setting
"Pin1-2 shorted"



EHC MODE/NORMAL MODE Select

| | | |
|----------|-------------|-------------|
| SW4, SW6 | 1-2 shorted | Normal Mode |
| | 5-6 shorted | |
| | 2-3 shorted | EHC Mode |
| | 6-7 shorted | |

Default setting
"Pin1-2 shorted"
"Pin5-6 shorted"

BATTERY Select

| | | |
|-----|-------------|-------------------------|
| J12 | 1-2 shorted | Connect VBAT_EHC to BT1 |
| | 2-3 shorted | Connect VBAT_EHC to BT2 |

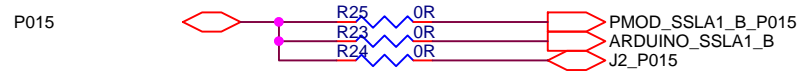
Default setting
"Pin2-3 shorted"

SCAP charge select

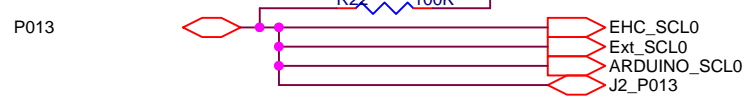
| | | |
|-----|-------------|---|
| J11 | 1-2 shorted | Charge SCAP from external power supply T7 |
| | 2-3 shorted | Charge SCAP from board |

Default setting
"Pin1-2 shorted"

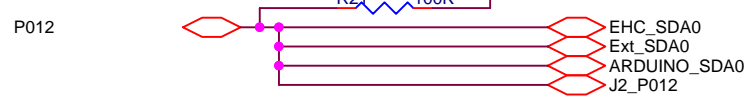
P015(Pin92)



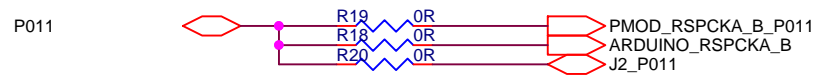
P013(Pin94)



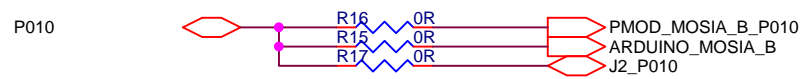
P012(Pin95)



P011(Pin96)



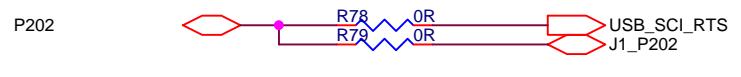
P010(Pin97)



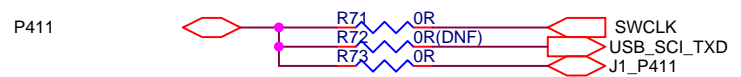
P207(Pin22)



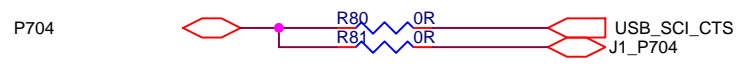
P202(Pin38)



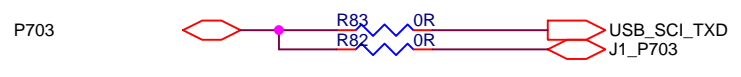
P411(Pin16)



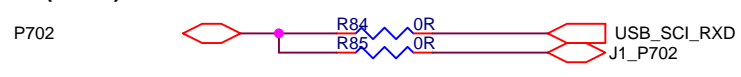
P704(Pin39)



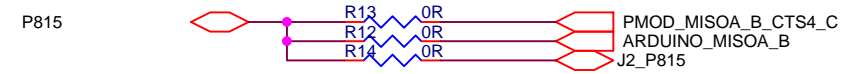
P703(Pin40)



P702(Pin41)



P815(Pin98)



P812(Pin1)



P811(Pin2)



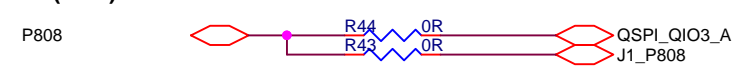
P810(Pin3)



P809(Pin4)



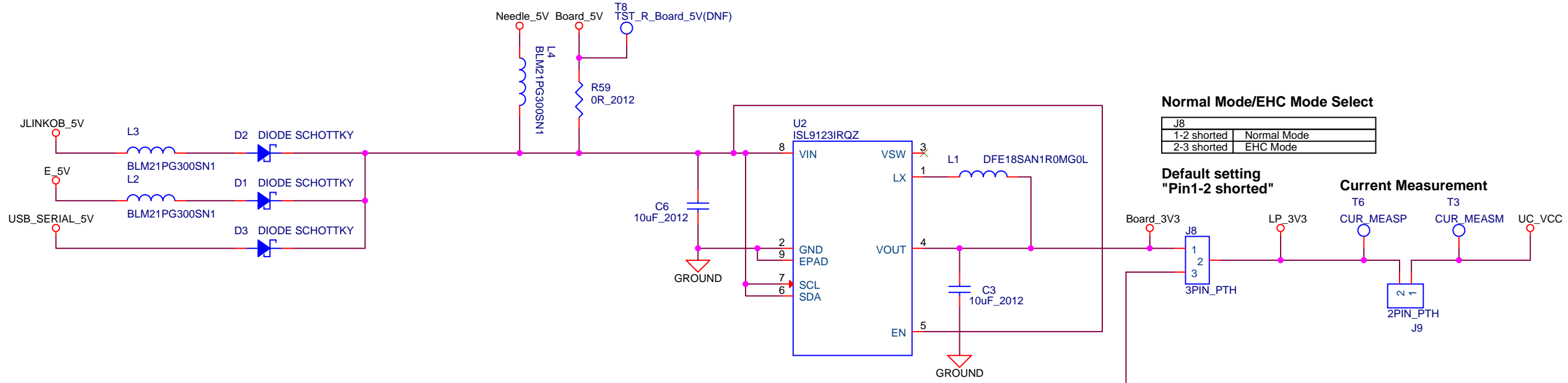
P808(Pin5)



P807(Pin6)



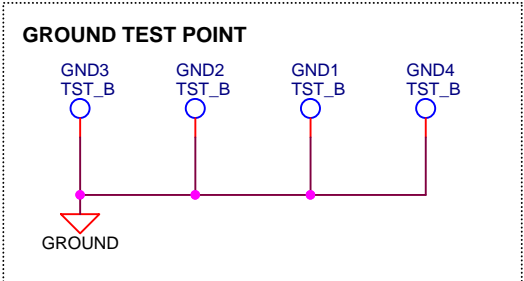
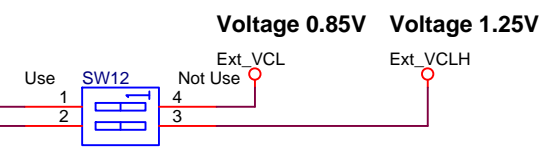
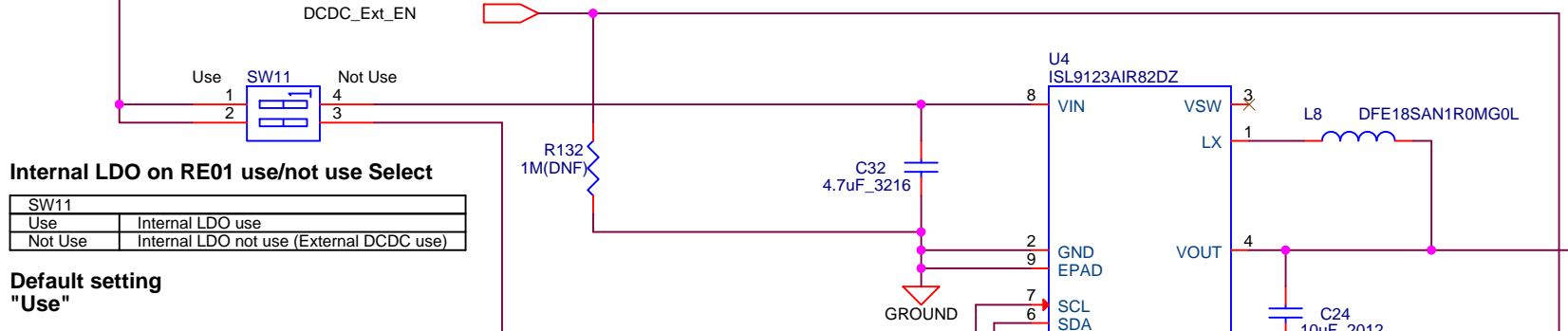
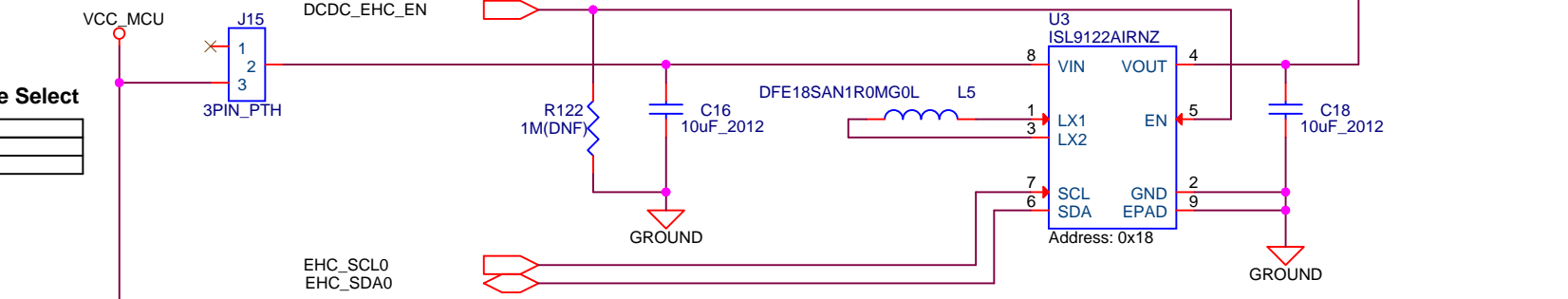
Power Supply Unit

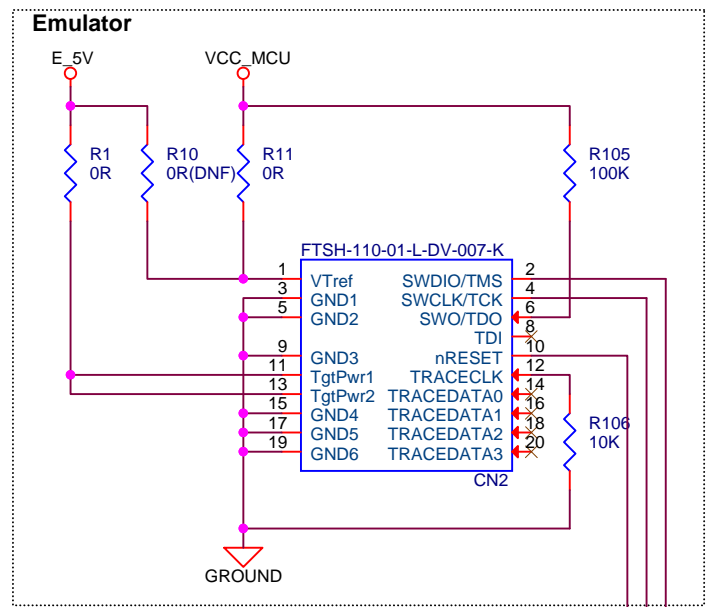


Normal Mode/EHC Mode Select

| | |
|-------------|-------------|
| J15 | |
| 1-2 shorted | Normal Mode |
| 2-3 shorted | EHC Mode |

Default setting "1-2 shorted"

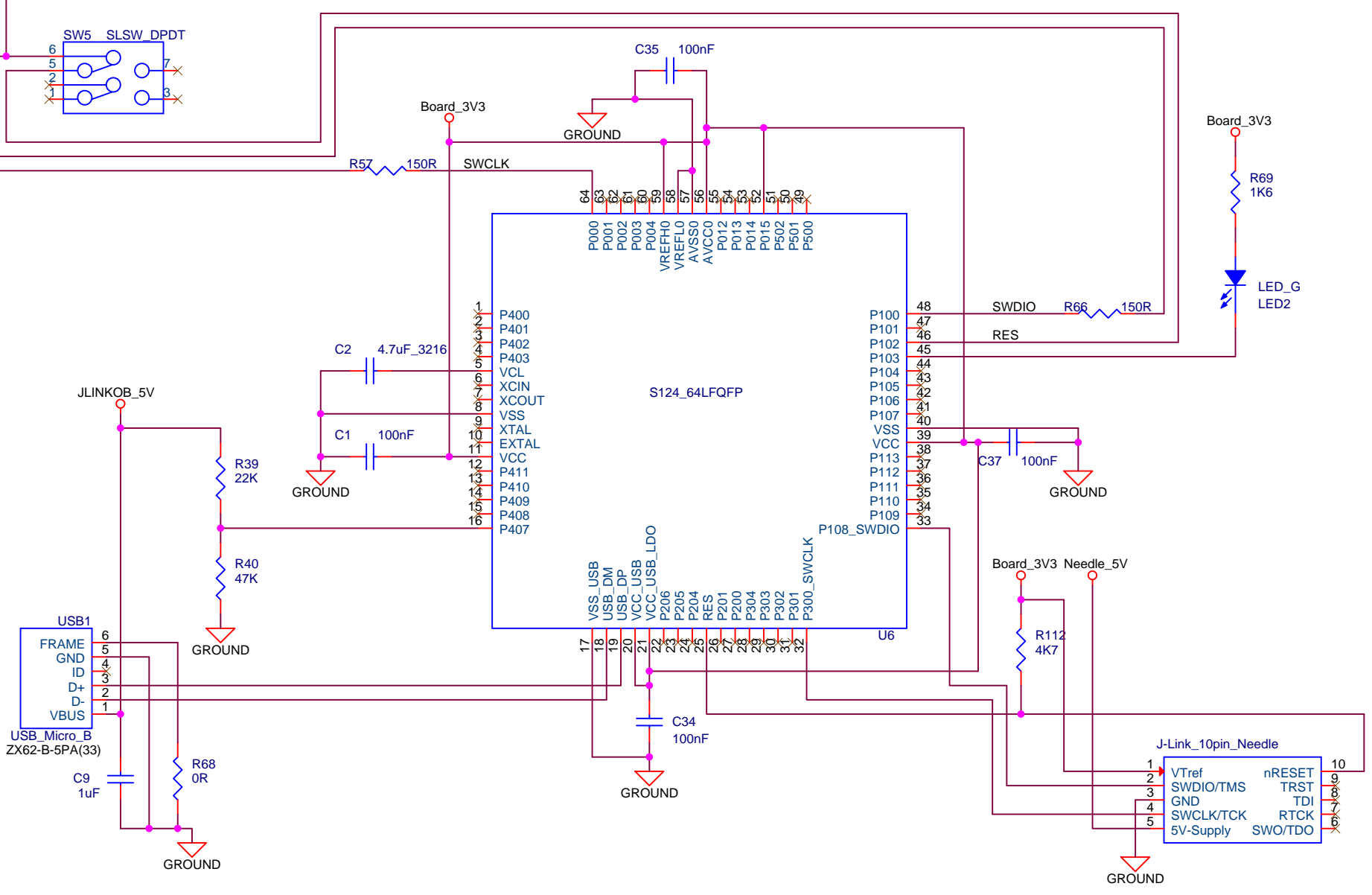
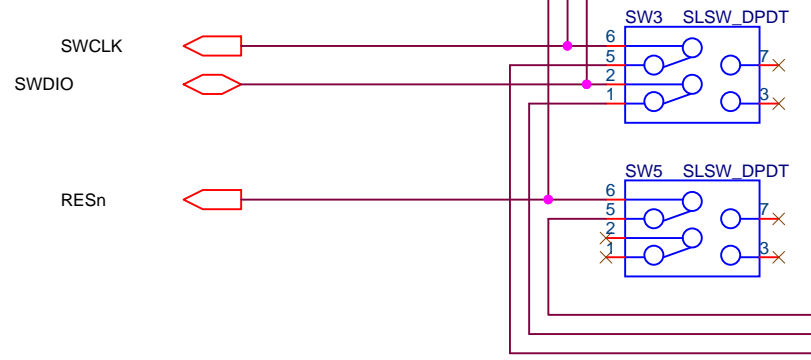


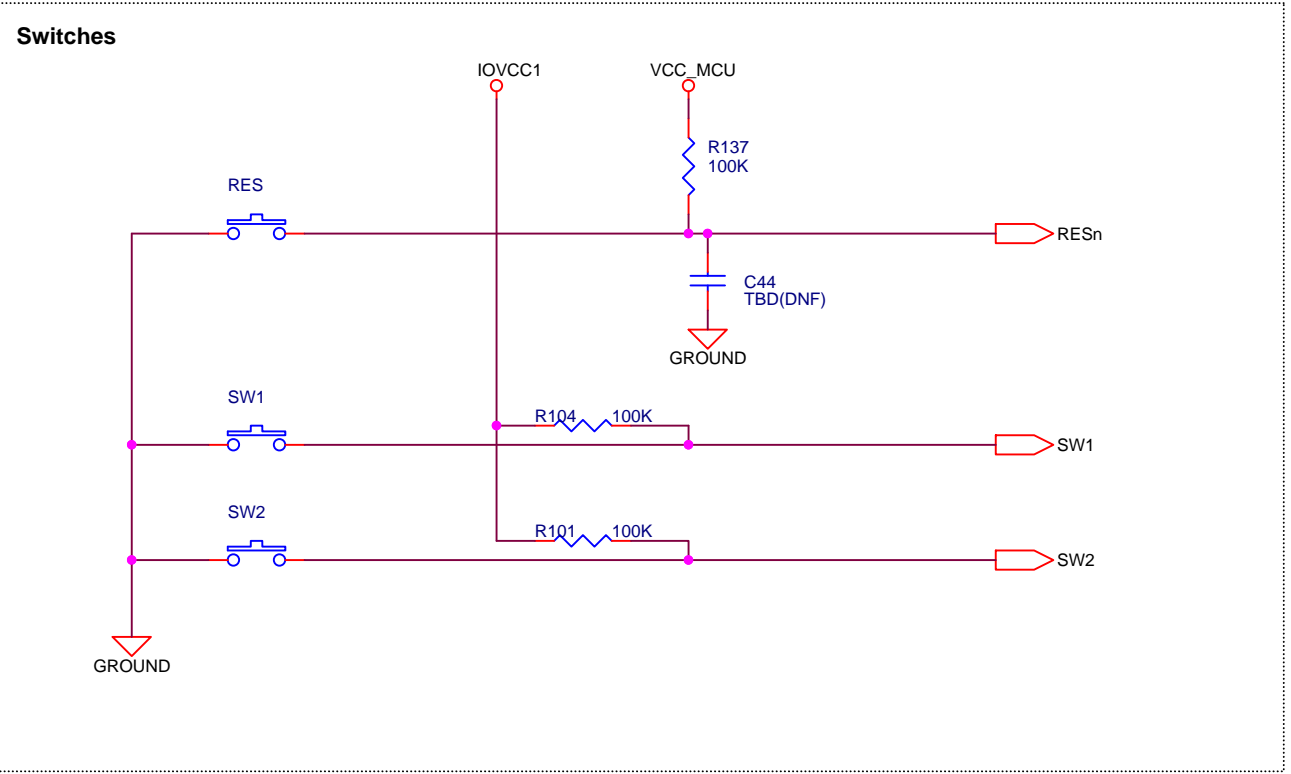
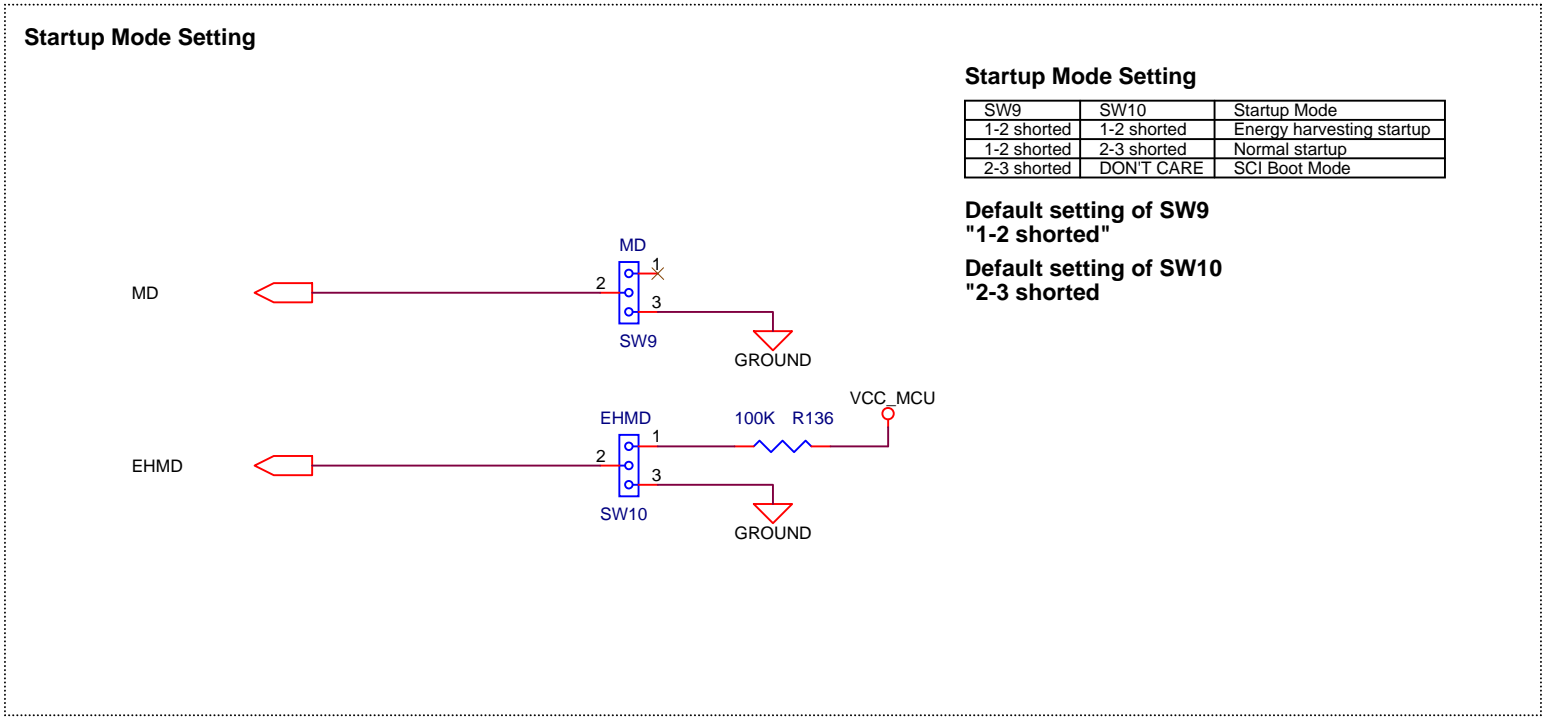
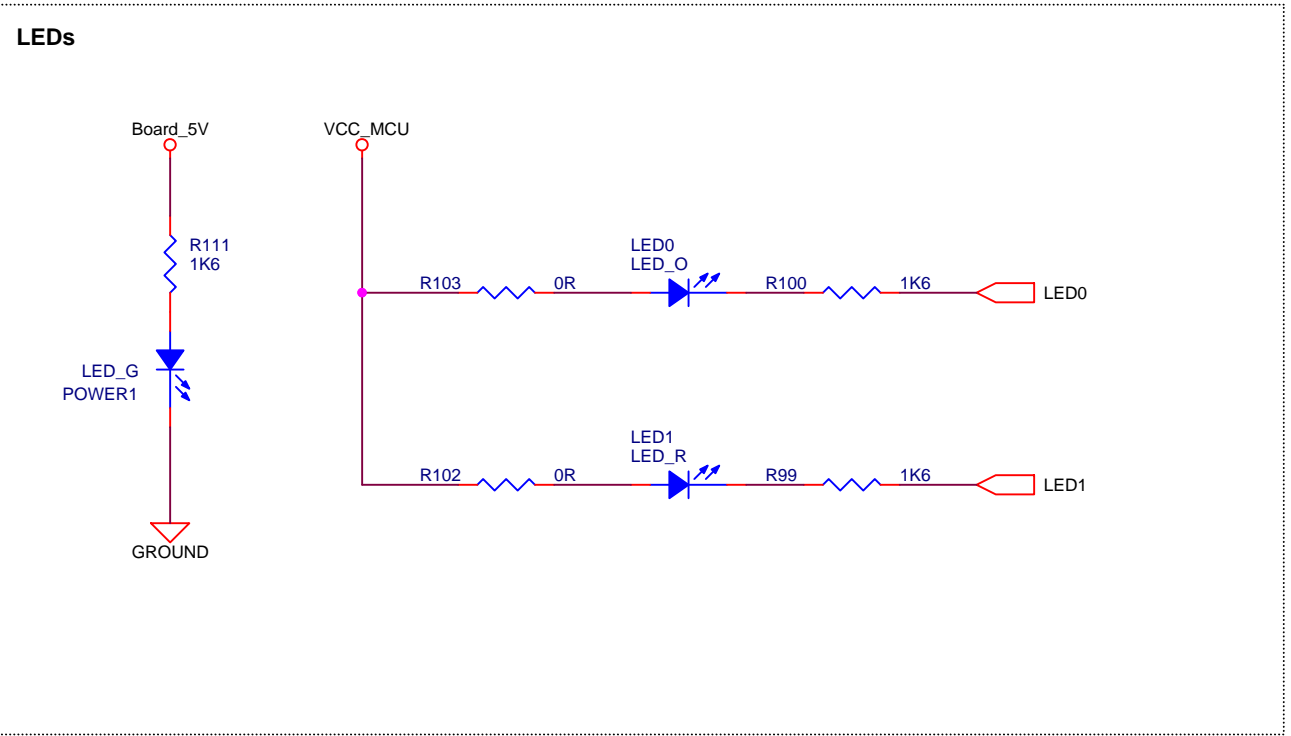


EHC MODE/NORMAL MODE Select

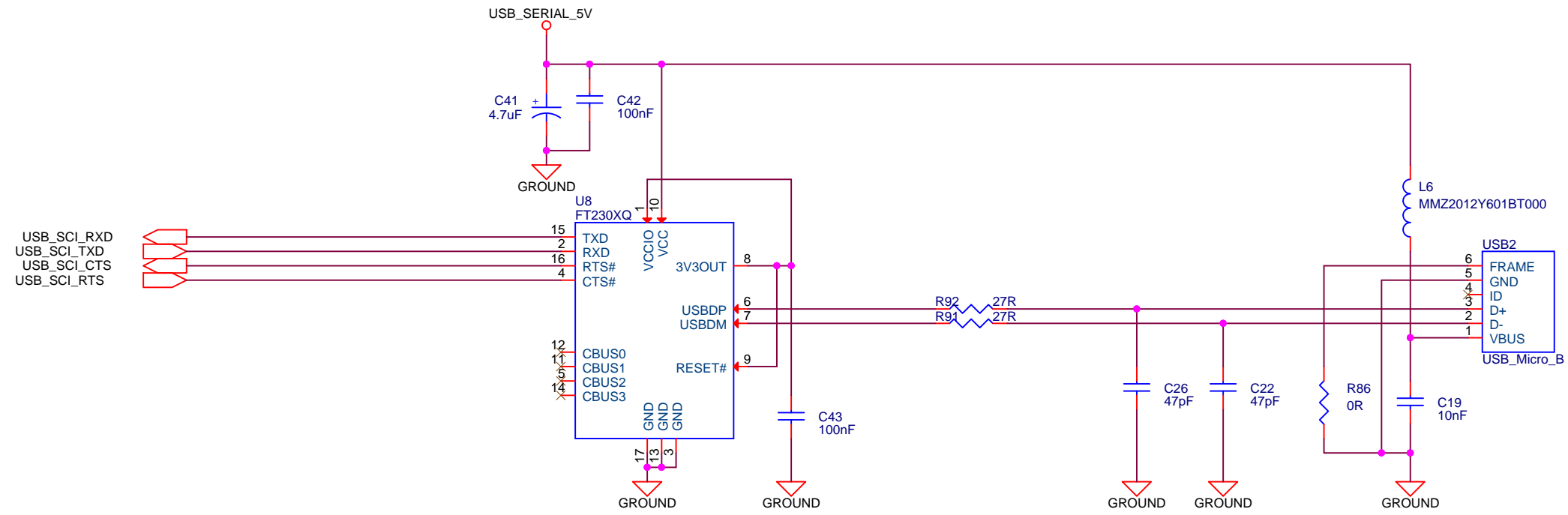
| SW3, SW5 | |
|-------------|--|
| 1-2 shorted | Normal Mode |
| 5-6 shorted | J-Link OB use |
| 2-3 shorted | EHC Mode |
| 6-7 shorted | J-Link OB not use (Use of another emulator) |

Default setting
 "Pin1-2 shorted"
 "Pin5-6 shorted"

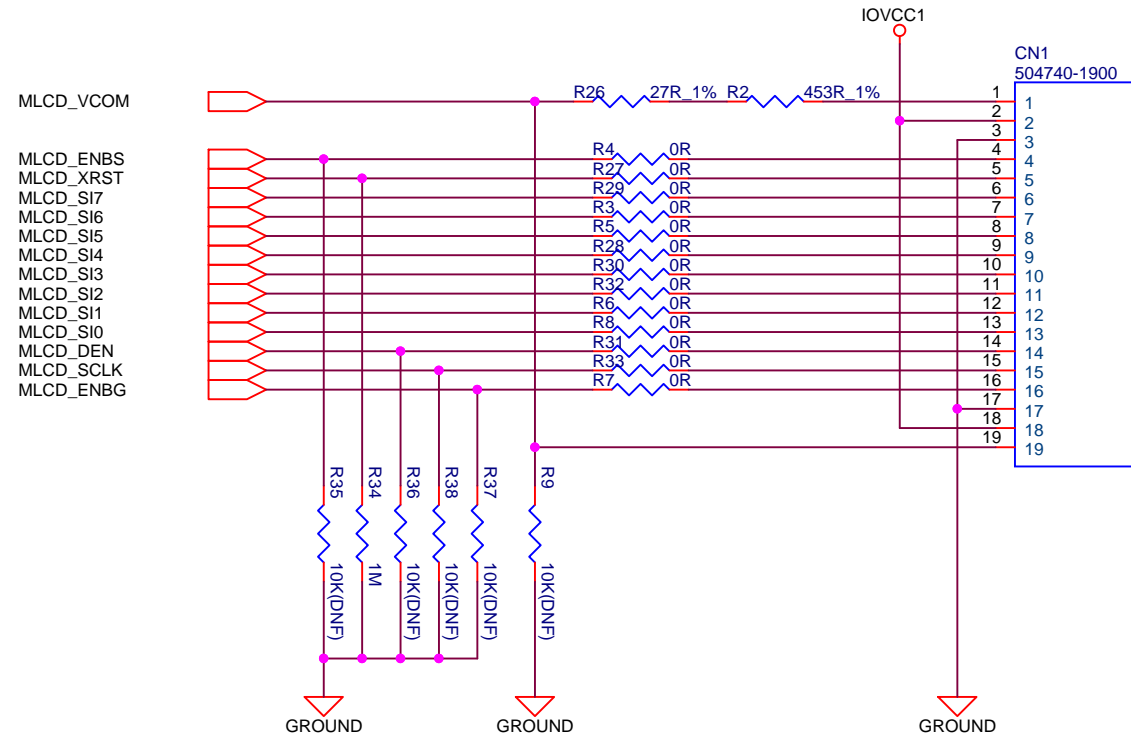




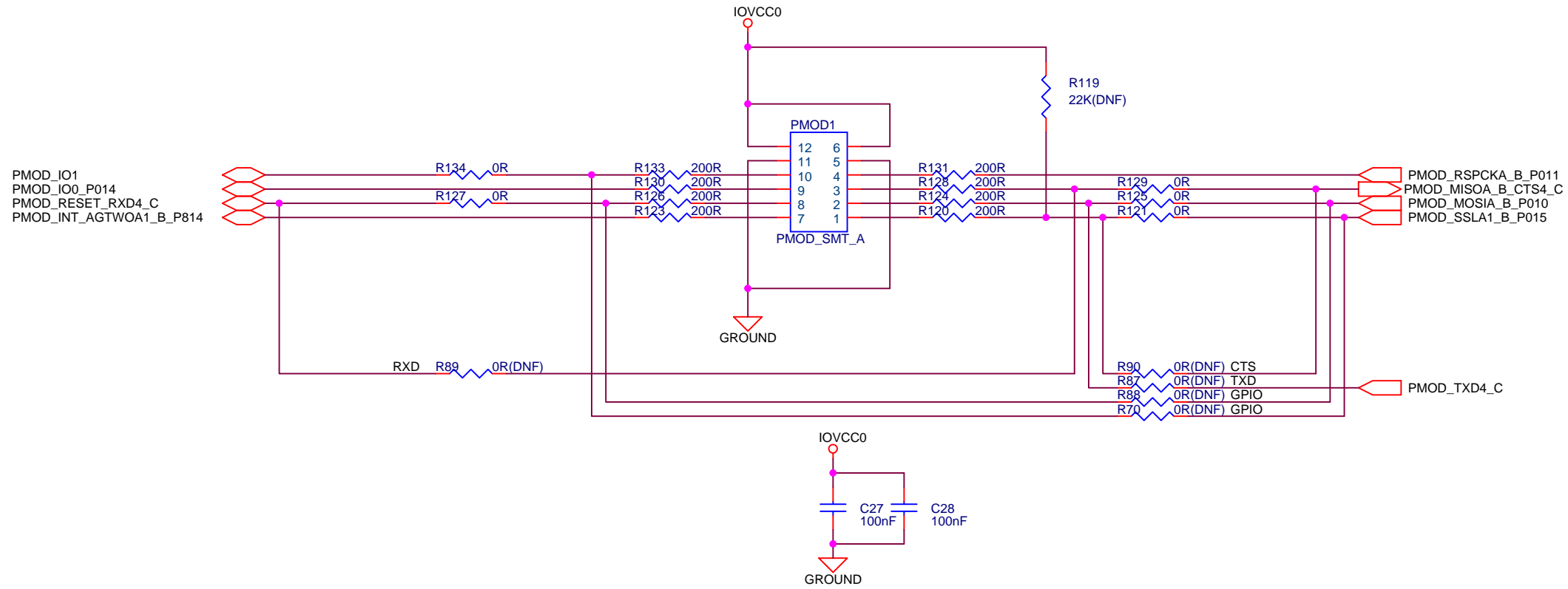
USB to Serial Interface



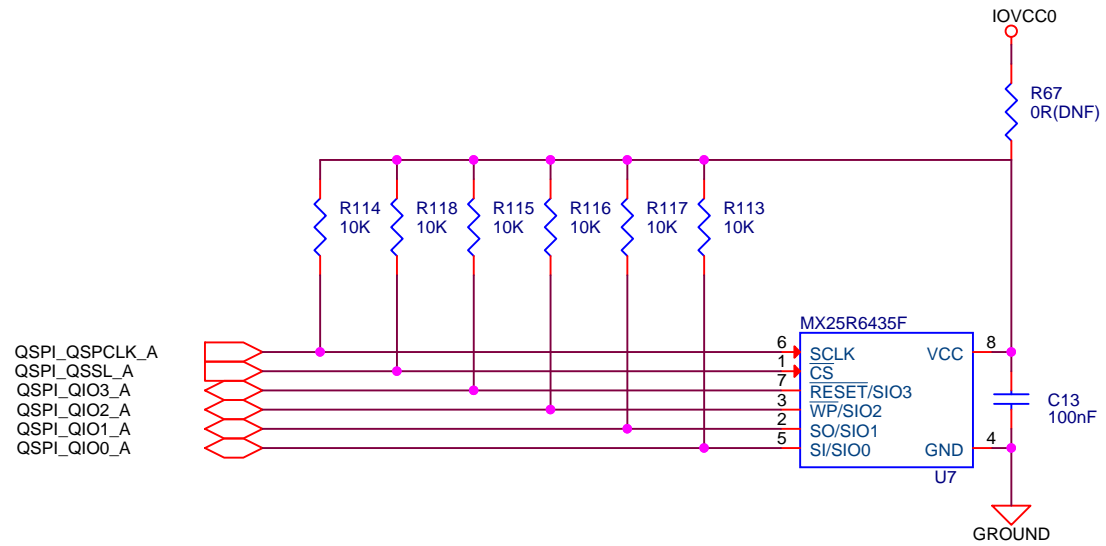
MIPLCD-MLCD (Kyocera)



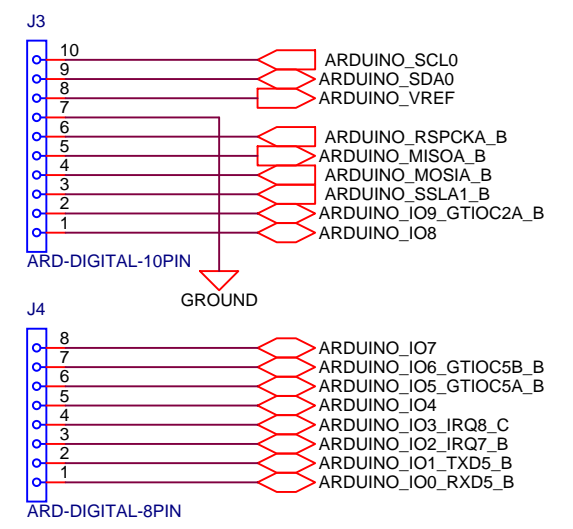
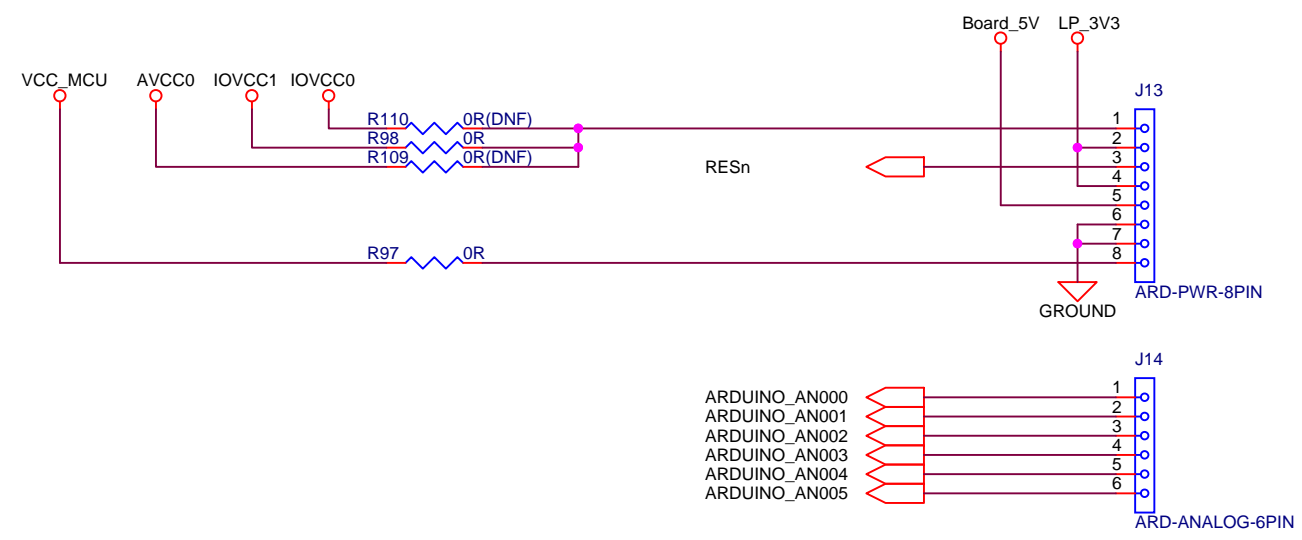
PMOD



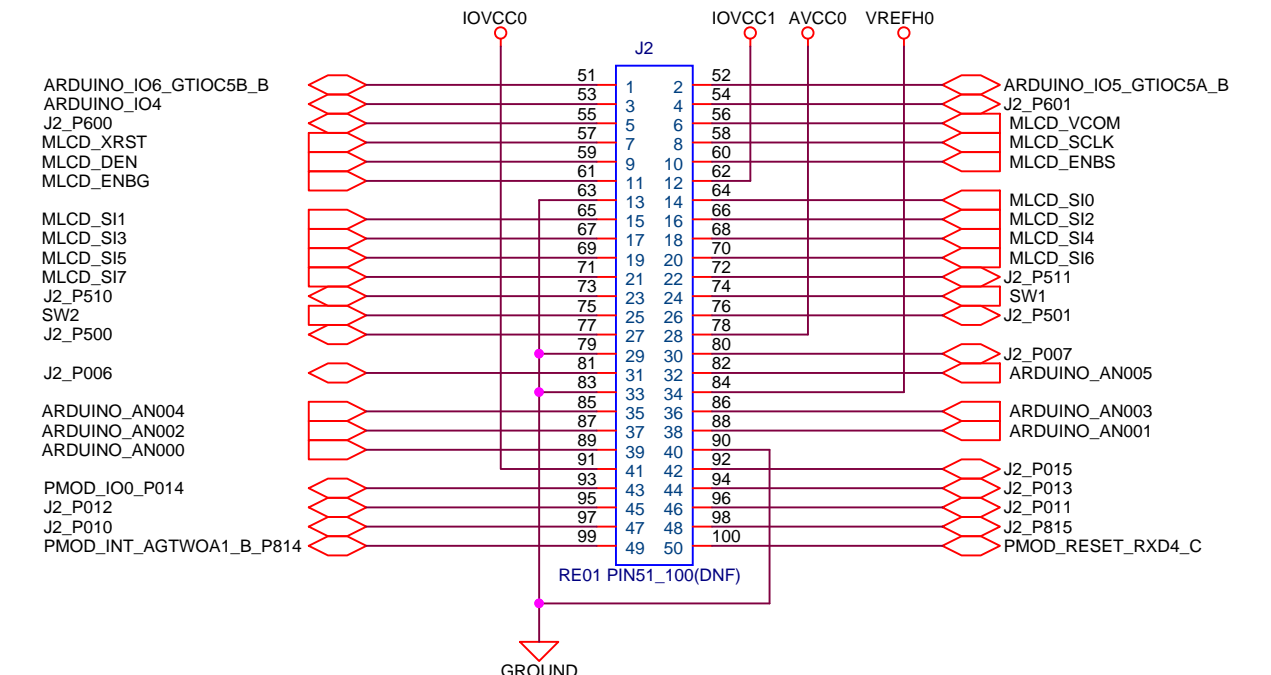
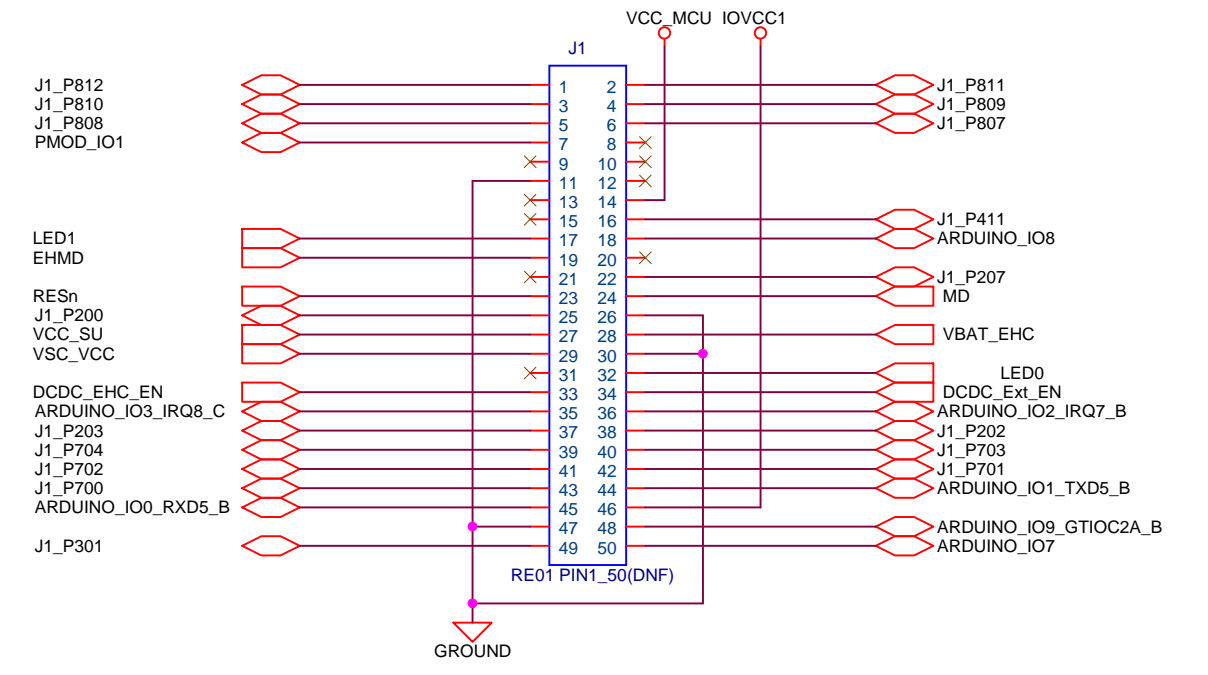
QSPI FLASH MEMORY(64Mbits)



ARDUINO UNO HEADER



RE01 Pin Header



Revision History

| REV | DATE | PAGE | DESCRIPTION |
|------|------------|------|-------------|
| 1.00 | 25.05.2020 | ALL | New |

D

C

B

A

| | | | |
|---|------------------------------------|------------|--------|
| Renesas Electronics Corporation | | | |
| Title Main Board [Revisin History] | | | |
| Size A3 | Document Number R20UT4802EJ0100 | Rev 1.0 | |
| Date: | Monday, May 25, 2020 | Sheet | X of X |