8MM Base

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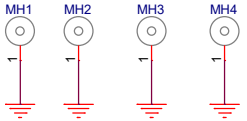
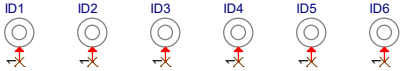
Revision History

Rev. Code	Date	By	Description
Rev:00	2018-11-30	Jake	First version





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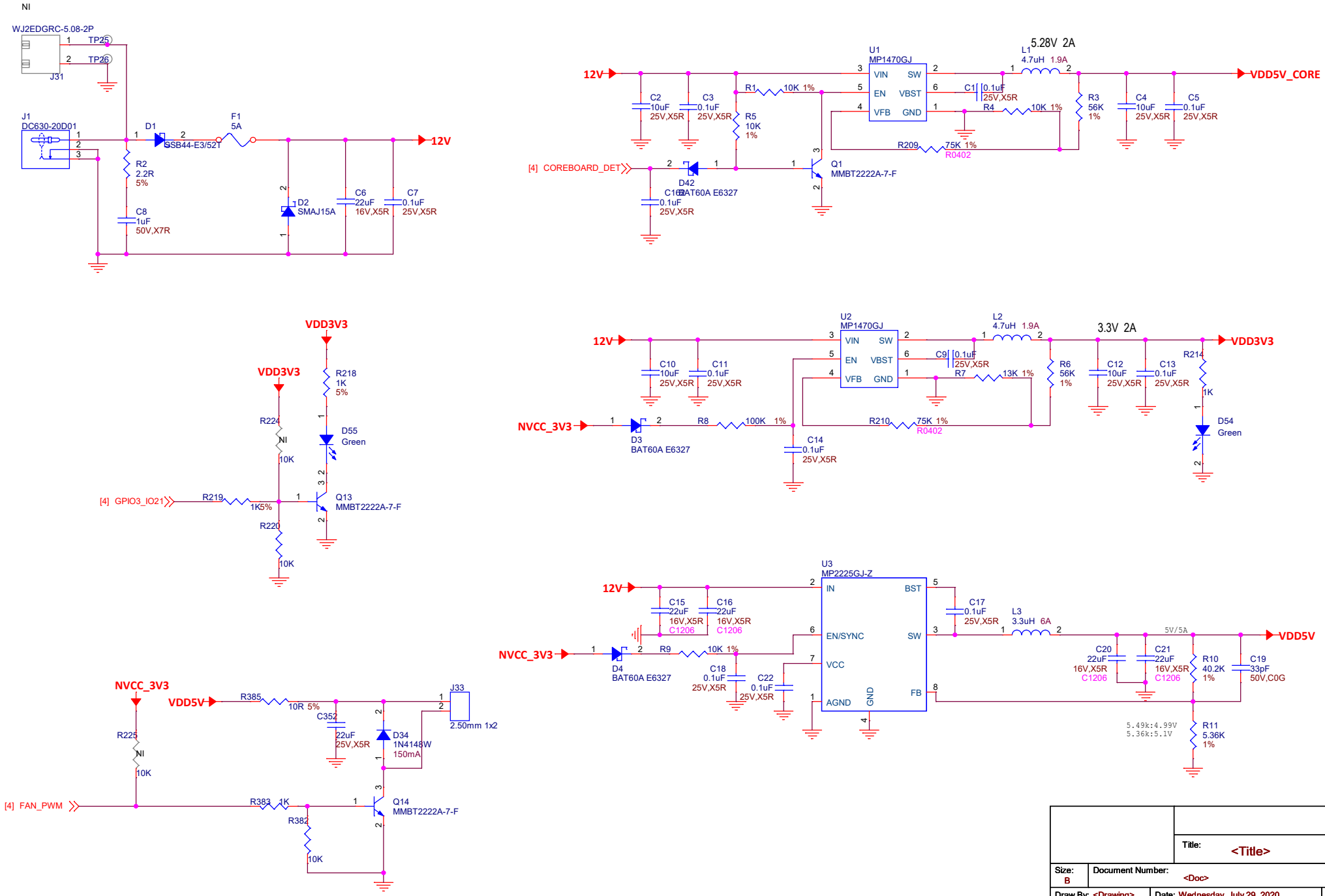
NI
WJ2EDGRC-5.08-2P
TP25
TP26
J31
J1
DC630-20D01
D1
SSB44-E3/52T
F1
5A
12V
R2
2.2R
5%
C8
1uF
50V,X7R
D2
SMAJ15A
C6
22uF
16V,X5R
C7
0.1uF
25V,X5R
U1
MP1470GJ
VIN
SW
EN
VBST
VFB
GND
5.28V 2A
L1
4.7uH 1.9A
VDD5V_CORE
C2
10uF
25V,X5R
C3
0.1uF
25V,X5R
R1
10K 1%
R5
10K
1%
C1
0.1uF
25V,X5R
R4
10K 1%
R209
75K 1%
R0402
R3
56K
1%
C4
10uF
25V,X5R
C5
0.1uF
25V,X5R
[4] COREBOARD_DET
D42
BAT60A E6327
C16
0.1uF
25V,X5R
Q1
MMBT2222A-7-F
VDD3V3
R218
1K
5%
D55
Green
R224
NI
10K
[4] GPIO3_IO21
R219
1K5%
Q13
MMBT2222A-7-F
R220
10K
U2
MP1470GJ
L2
4.7uH 1.9A
3.3V 2A
VDD3V3
C10
10uF
25V,X5R
C11
0.1uF
25V,X5R
C9
0.1uF
25V,X5R
R7
13K 1%
R6
56K
1%
C12
10uF
25V,X5R
C13
0.1uF
25V,X5R
R214
1K
D54
Green
NVCC_3V3
R8
100K 1%
D3
BAT60A E6327
C14
0.1uF
25V,X5R
R210
75K 1%
R0402
U3
MP2225GJ-Z
IN
BST
EN/SYNC
SW
VCC
AGND
GND
FB
C15
22uF
16V,X5R
C1206
C16
22uF
16V,X5R
C1206
C17
0.1uF
25V,X5R
L3
3.3uH 6A
5V/5A
VDD5V
R9
10K 1%
D4
BAT60A E6327
C18
0.1uF
25V,X5R
C22
0.1uF
25V,X5R
C20
22uF
16V,X5R
C1206
C21
22uF
16V,X5R
C1206
R10
40.2K
1%
C19
33pF
50V,C0G
5.49k:4.99V
5.36k:5.1V
R11
5.36K
1%
NVCC_3V3
VDD5V
R385
10R 5%
C352
22uF
25V,X5R
D34
1N4148W
150mA
J33
2.50mm 1x2
R225
NI
10K
[4] FAN_PWM
R383 1K
Q14
MMBT2222A-7-F
R382
10K
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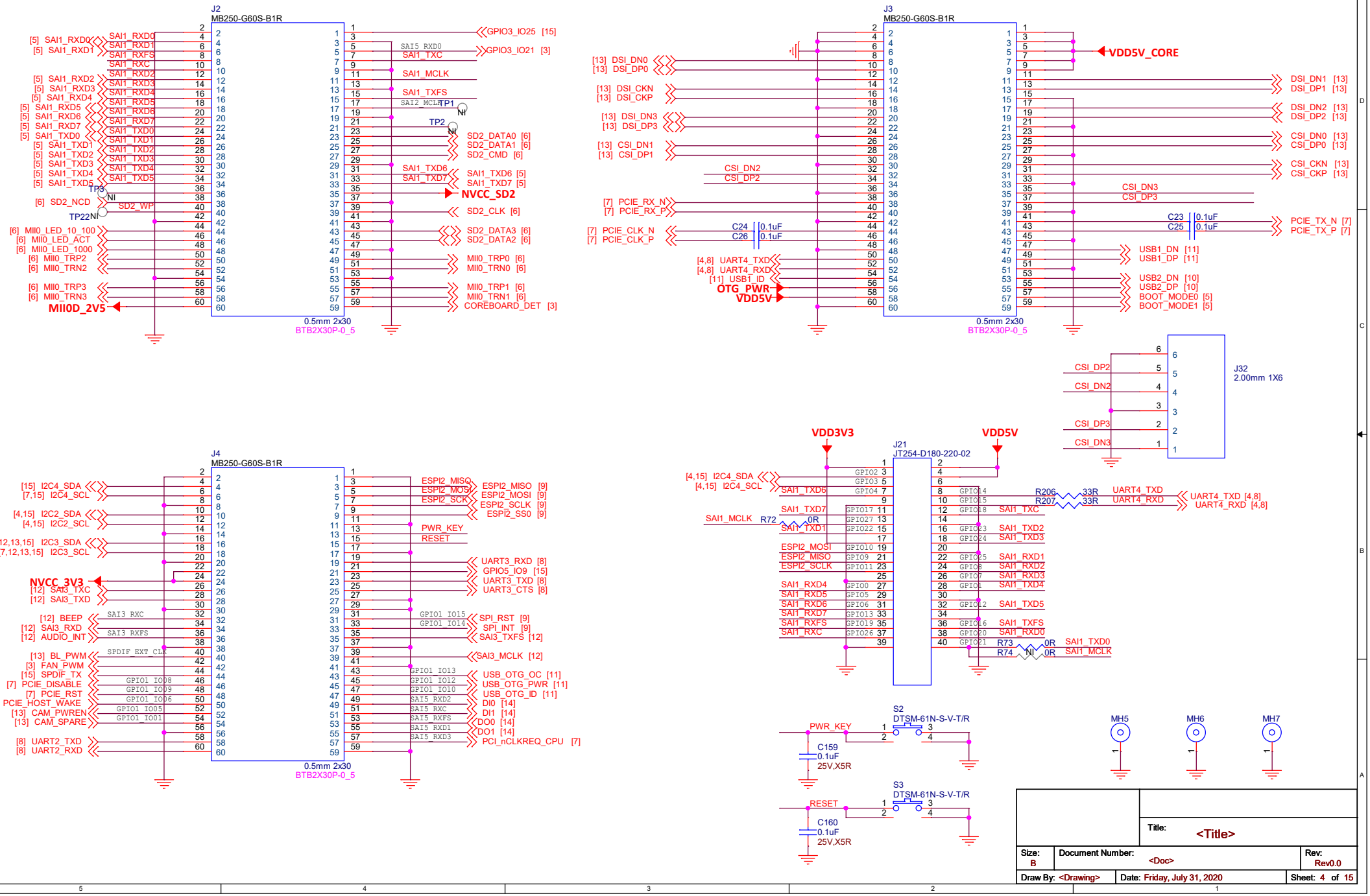
J2
MB250-G60S-B1R
[5] SAI1_RXD0
[5] SAI1_RXD1
[5] SAI1_RXD2
[5] SAI1_RXD3
[5] SAI1_RXD4
[5] SAI1_RXD5
[5] SAI1_RXD6
[5] SAI1_RXD7
[5] SAI1_TXD0
[5] SAI1_TXD1
[5] SAI1_TXD2
[5] SAI1_TXD3
[5] SAI1_TXD4
[5] SAI1_TXD5
[6] SD2_NCD
SD2_WP
[6] MII0_LED_10_100
[6] MII0_LED_ACT
[6] MII0_LED_1000
[6] MII0_TRP2
[6] MII0_TRN2
[6] MII0_TRP3
[6] MII0_TRN3
MII0D_2V5
TP3
TP22
NI
SAI5_RXD0
SAI1_TXC
SAI1_MCLK
SAI1_TXFS
SAI2_MCLK
TP1
TP2
SAI1_TXD6
SAI1_TXD7
NVCC_SD2
GPIO3_IO25 [15]
GPIO3_IO21 [3]
SD2_DATA0 [6]
SD2_DATA1 [6]
SD2_CMD [6]
SD2_CLK [6]
SD2_DATA3 [6]
SD2_DATA2 [6]
MII0_TRP0 [6]
MII0_TRN0 [6]
MII0_TRP1 [6]
MII0_TRN1 [6]
COREBOARD_DET [3]
SAI1_TXD6 [5]
SAI1_TXD7 [5]
0.5mm 2x30
BTB2X30P-0_5
J3
MB250-G60S-B1R
[13] DSI_DN0
[13] DSI_DP0
[13] DSI_CKN
[13] DSI_CKP
[13] DSI_DN3
[13] DSI_DP3
[13] CSI_DN1
[13] CSI_DP1
CSI_DN2
CSI_DP2
[7] PCIE_RX_N
[7] PCIE_RX_P
[7] PCIE_CLK_N
[7] PCIE_CLK_P
C24 0.1uF
C26 0.1uF
[4,8] UART4_TXD
[4,8] UART4_RXD
[11] USB1_ID
OTG_PWR
VDD5V
VDD5V_CORE
DSI_DN1 [13]
DSI_DP1 [13]
DSI_DN2 [13]
DSI_DP2 [13]
CSI_DN0 [13]
CSI_DP0 [13]
CSI_CKN [13]
CSI_CKP [13]
CSI_DN3
CSI_DP3
C23 0.1uF
C25 0.1uF
PCIE_TX_N [7]
PCIE_TX_P [7]
USB1_DN [11]
USB1_DP [11]
USB2_DN [10]
USB2_DP [10]
BOOT_MODE0 [5]
BOOT_MODE1 [5]
0.5mm 2x30
BTB2X30P-0_5
J32
2.00mm 1X6
CSI_DP2
CSI_DN2
CSI_DP3
CSI_DN3
J4
MB250-G60S-B1R
[15] I2C4_SDA
[7,15] I2C4_SCL
[4,15] I2C2_SDA
[4,15] I2C2_SCL
[7,12,13,15] I2C3_SDA
[7,12,13,15] I2C3_SCL
NVCC_3V3
[12] SAI3_TXC
[12] SAI3_TXD
[12] BEEP
[12] SAI3_RXD
[12] AUDIO_INT
SAI3_RXC
SAI3_RXFS
SPDIF_EXT_CLK
[13] BL_PWM
[3] FAN_PWM
[15] SPDIF_TX
[7] PCIE_DISABLE
[7] PCIE_RST
[7] PCIE_HOST_WAKE
[13] CAM_PWREN
[13] CAM_SPARE
[8] UART2_TXD
[8] UART2_RXD
GPIO1_IO08
GPIO1_IO09
GPIO1_IO06
GPIO1_IO05
GPIO1_IO01
ESPI2_MISO
ESPI2_MOSI
ESPI2_SCLK
ESPI2_SS0 [9]
PWR_KEY
RESET
UART3_RXD [8]
GPIO5_IO9 [15]
UART3_TXD [8]
UART3_CTS [8]
GPIO1_IO15
GPIO1_IO14
SPI_RST [9]
SPI_INT [9]
SAI3_TXFS [12]
SAI3_MCLK [12]
GPIO1_IO13
GPIO1_IO12
GPIO1_IO10
SAI5_RXD2
SAI5_RXC
SAI5_RXFS
SAI5_RXD1
SAI5_RXD3
USB_OTG_OC [11]
USB_OTG_PWR [11]
USB_OTG_ID [11]
DI0 [14]
DI1 [14]
DO0 [14]
DO1 [14]
PCI_nCLKREQ_CPU [7]
0.5mm 2x30
BTB2X30P-0_5
VDD3V3
VDD5V
J21
JT254-D180-220-02
[4,15] I2C4_SDA
[4,15] I2C4_SCL
SAI1_TXD6
SAI1_TXD7
SAI1_MCLK
R72 0R
SAI1_TXD1
ESPI2_MOSI
ESPI2_MISO
ESPI2_SCLK
SAI1_RXD4
SAI1_RXD5
SAI1_RXD6
SAI1_RXD7
SAI1_RXFS
SAI1_RXC
R206 33R
R207 33R
UART4_TXD
UART4_RXD
UART4_TXD [4,8]
UART4_RXD [4,8]
SAI1_TXC
SAI1_TXD2
SAI1_TXD3
SAI1_RXD1
SAI1_RXD2
SAI1_RXD3
SAI1_TXD4
SAI1_TXD5
SAI1_TXFS
SAI1_RXD0
R73 0R
R74 NI 0R
SAI1_TXD0
SAI1_MCLK
S2
DTSM-61N-S-V-T/R
PWR_KEY
C159
0.1uF
25V,X5R
S3
DTSM-61N-S-V-T/R
RESET
C160
0.1uF
25V,X5R
MH5
MH6
MH7
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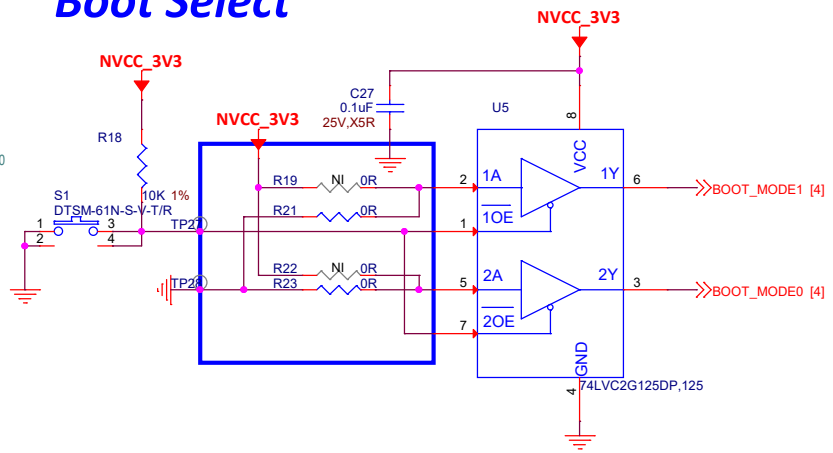
i.MX8M Mini ROM Fuse

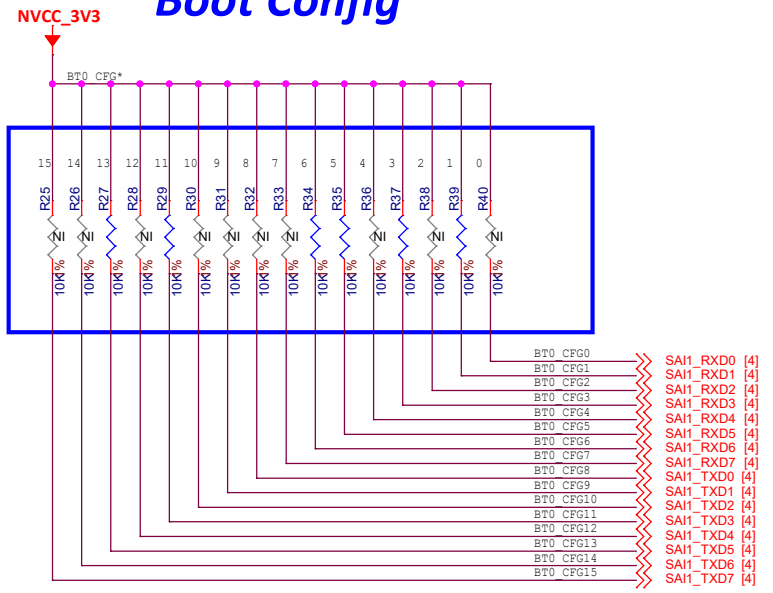
	Address	7	6	5	4	3	2	1	0
	0x470[15:8]	BOOT_CFG[15]	BOOT_CFG[14]	BOOT_CFG[13]	BOOT_CFG[12]	BOOT_CFG[11]	BOOT_CFG[10]	BOOT_CFG[9]	BOOT_CFG[8]
	0x470[15:8]	Infinit-Loop (Debug USE only) 0 - Disable 1 - Enable	001 - SD/eSD			Port Select: 00 - uSDHC1 01 - uSDHC2 10 - uSDHC3		Power Cycle Enable '0' - No power cycle '1' - Enabled via	SD Loopback Clock Source Sel (for SDR50 and SDR104 only) '0' - through SD pad '1' - direct
	0x470[15:8]		010 - MMC/eMMC						
	0x470[15:8]		011 - NAND			Pages In Block: 00 - 128 01 - 64 10 - 32 11 - 256		Nand_Row_address_bytes: 00 - 3 01 - 2 10 - 4 11 - 5	
	0x470[15:8]		100 - QSPI			Flash Auto Probe	FLASH_TYPE 000-Device supports 3B read by default 001-Device supports 4B read by default 010-HyperFlash 1V8 011-HyperFlash 3V3 100-MXIC Octal DDR		
	0x470[15:8]		110 - SPI NOR			Port Select: 000 - eCSPI1 001 - eCSPI2 010 - eCSPI3			SPI Addressing: 0 - 3-bytes (24-bit) 1 - 2-bytes (16-bit)
	0x470[15:8]	Others - Reserved for future use							

		BOOT_CFG[7]	BOOT_CFG[6]	BOOT_CFG[5]	BOOT_CFG[4]	BOOT_CFG[3]	BOOT_CFG[2]	BOOT_CFG[1]	BOOT_CFG[0]
SD/eSD	0x470[7:0]	Fast Boot: 0 - Regular 1 - Fast Boot	Reserved	Reserved	Bus Width: 0 - 1-bit 1 - 4-bit	Speed 000 - Normal/SDR12 001 - High/SDR25 010 - SDR50 011 - SDR104 101 - Reserved for DDR50 Others - Reserved			Reserved
MMC/eMMC	0x470[7:0]		Bus Width: 000 - 1-bit 001 - 4-bit 010 - 8-bit 101 - 4-bit DDR (MMC 4.4) 110 - 8-bit DDR (MMC 4.4) Else - reserved.			Speed 00 - Normal 01 - High 10 - Reserved for HS200 11 - Reserved		USDHC IO VOLTAGE SELECTION For Normal Boot Mode 0 - 3.3V 1 - 1.8V	USDHC IO VOLTAGE SELECTION For Manufacture Mode 0 - 3.3V 1 - 1.8V
NAND	0x470[7:0]	BT_TOGGLEMODE	BOOT_SEARCH_COUNT: 00 - 2 01 - 2 10 - 4 11 - 8		Toggle Mode 33MHz Preamble Delay, Read Latency: '000' - 16 GPMICLK cycles. '001' - 1 GPMICLK cycles. '010' - 2 GPMICLK cycles. '011' - 3 GPMICLK cycles. '100' - 4 GPMICLK cycles. '101' - 5 GPMICLK cycles. '110' - 6 GPMICLK cycles. '111' - 7 GPMICLK cycles. '1111'- 15 GPMICLK cycles.			Reserved
FlexSPI	0x470[7:0]	HOLD TIME: 00 - 500us 01 - 1ms 10 - 3ms 11 - 10ms		FLASH Auto Probe Type		FlexSPI FLASH Dummy Cycle			
SPINOR	0x470[7:0]	CS select SPI only: 00 - CS#0 default 01 - CS#1 10 - CS#2 11 - CS#3	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved

Boot Select



Boot Config



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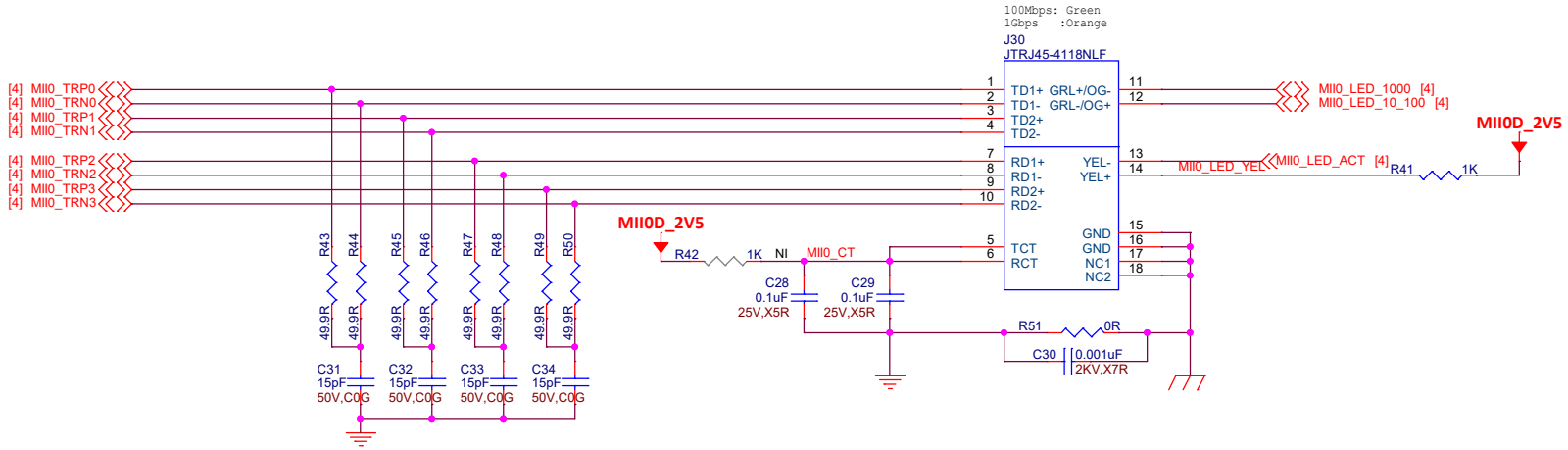
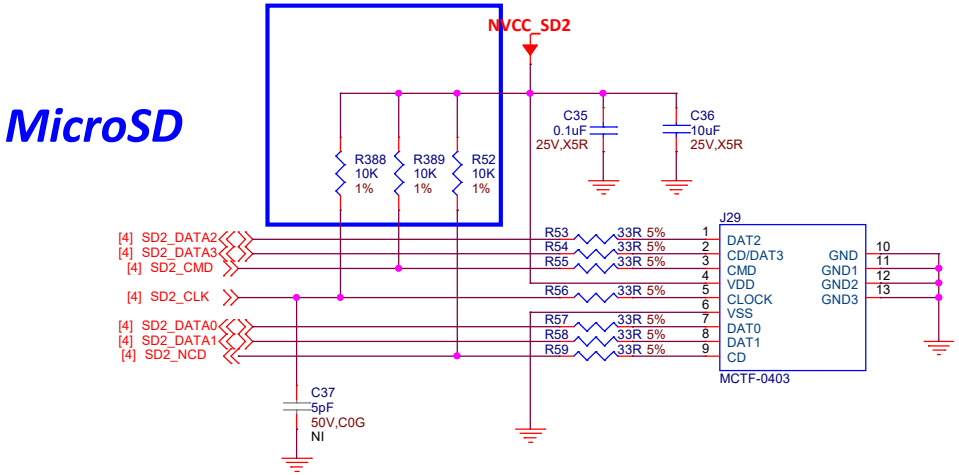
Ethernet



MicroSD



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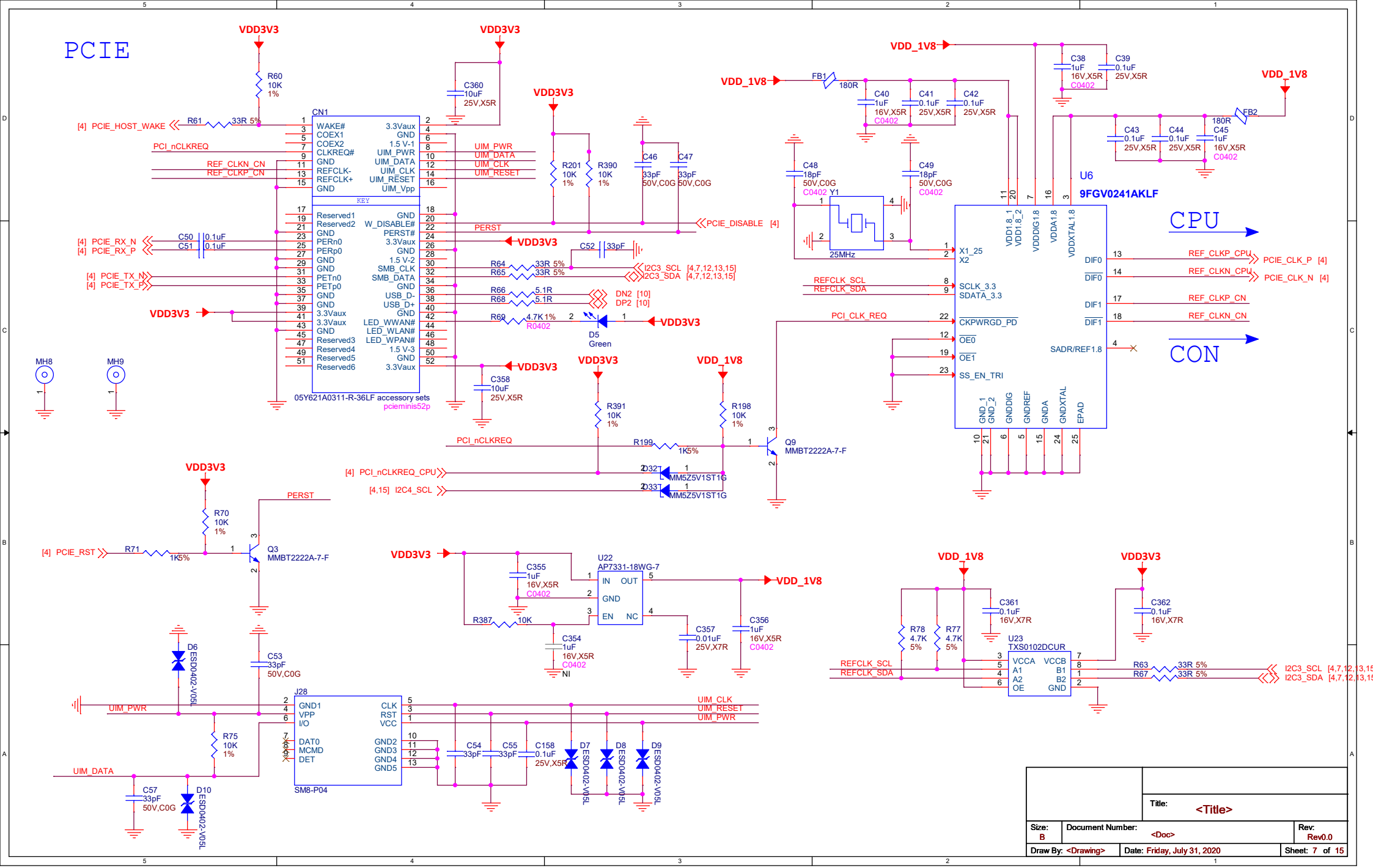
PCIE
VDD3V3
VDD_1V8
R60 10K 1%
C360 10uF 25V,X5R
CN1
[4] PCIE_HOST_WAKE
R61 33R 5%
PCI_nCLKREQ
REF_CLKN_CN
REF_CLKP_CN
WAKE# COEX1 COEX2 CLKREQ# GND REFCLK- REFCLK+ GND
3.3Vaux GND 1.5 V-1 UIM_PWR UIM_DATA UIM_CLK UIM_RESET UIM_Vpp
KEY
Reserved1 Reserved2 GND PERn0 PERp0 GND GND PETn0 PETp0 GND GND 3.3Vaux 3.3Vaux Reserved3 Reserved4 Reserved5 Reserved6
GND W_DISABLE# PERST# 3.3Vaux GND 1.5 V-2 SMB_CLK SMB_DATA GND USB_D- USB_D+ GND LED_WWAN# LED_WLAN# LED_WPAN# 1.5 V-3 GND 3.3Vaux
UIM_PWR UIM_DATA UIM_CLK UIM_RESET
05Y621A0311-R-36LF accessory sets
pcieminis52p
R201 10K 1%
R390 10K 1%
C46 33pF 50V,C0G
C47 33pF 50V,C0G
PCIE_DISABLE [4]
PERST
[4] PCIE_RX_N
[4] PCIE_RX_P
C50 0.1uF
C51 0.1uF
[4] PCIE_TX_N
[4] PCIE_TX_P
C52 33pF
R64 33R 5%
R65 33R 5%
I2C3_SCL [4,7,12,13,15]
I2C3_SDA [4,7,12,13,15]
R66 5.1R
R68 5.1R
DN2 [10]
DP2 [10]
R69 4.7K 1% R0402
D5 Green
C358 10uF 25V,X5R
MH8
MH9
R391 10K 1%
R198 10K 1%
PCI_nCLKREQ
R199 1K5%
Q9 MMBT2222A-7-F
[4] PCI_nCLKREQ_CPU
[4,15] I2C4_SCL
D32T MM5Z5V1ST1G
D33T MM5Z5V1ST1G
FB1 180R
C40 1uF 16V,X5R C0402
C41 0.1uF 25V,X5R
C42 0.1uF 25V,X5R
C38 1uF 16V,X5R C0402
C39 0.1uF 25V,X5R
FB2 180R
C43 0.1uF 25V,X5R
C44 0.1uF 25V,X5R
C45 1uF 16V,X5R C0402
C48 18pF 50V,C0G C0402
C49 18pF 50V,C0G C0402
Y1 25MHz
U6
9FGV0241AKLF
CPU
CON
X1_25 X2
SCLK_3.3 SDATA_3.3
CKPWRGD_PD
OE0 OE1 SS_EN_TRI
VDD1.8_1 VDD1.8_2 VDDDIG1.8 VDDA1.8 VDDXTAL1.8
SADR/REF1.8
GND_1 GND_2 GNDDIG GNDREF GNDA GNDXTAL EPAD
DIF0 DIF0 DIF1 DIF1
REF_CLKP_CPU
REF_CLKN_CPU
REF_CLKP_CN
REF_CLKN_CN
PCIE_CLK_P [4]
PCIE_CLK_N [4]
REFCLK_SCL
REFCLK_SDA
PCI_CLK_REQ
R70 10K 1%
PERST
[4] PCIE_RST
R71 1K5%
Q3 MMBT2222A-7-F
D6 ESD0402-V05L
C53 33pF 50V,C0G
UIM_PWR
R75 10K 1%
UIM_DATA
C57 33pF 50V,C0G
D10 ESD0402-V05L
J28
GND1 VPP I/O DAT0 MCMD DET
CLK RST VCC GND2 GND3 GND4 GND5
SM8-P04
C54 33pF
C55 33pF
C158 0.1uF 25V,X5R
D7 ESD0402-V05L
D8 ESD0402-V05L
D9 ESD0402-V05L
U22
AP7331-18WG-7
IN OUT GND EN NC
C355 1uF 16V,X5R C0402
R387 10K
C354 1uF 16V,X5R C0402 NI
C357 0.01uF 25V,X7R
C356 1uF 16V,X5R C0402
C361 0.1uF 16V,X7R
C362 0.1uF 16V,X7R
R78 4.7K 5%
R77 4.7K 5%
U23
TXS0102DCUR
VCCA VCCB A1 B1 A2 B2 OE GND
R63 33R 5%
R67 33R 5%
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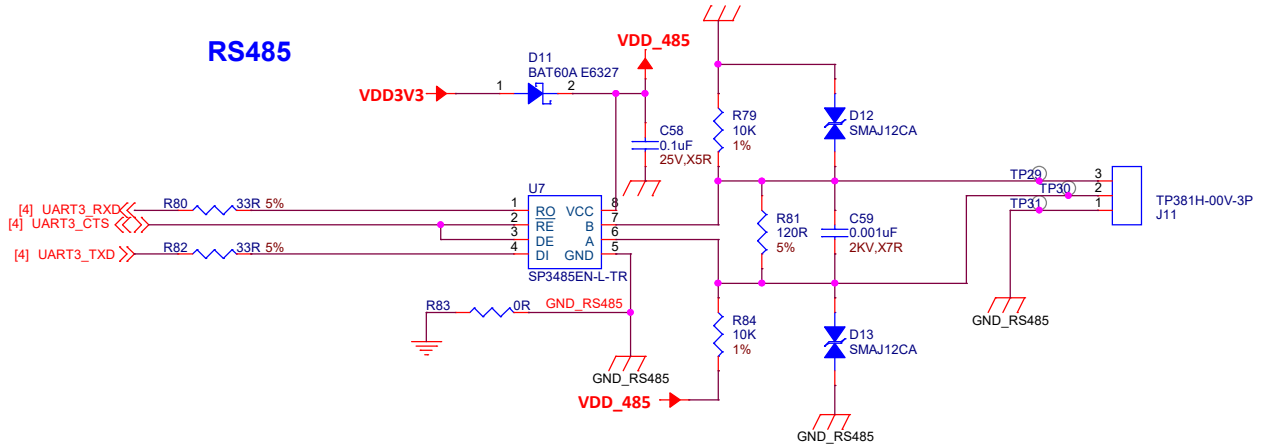
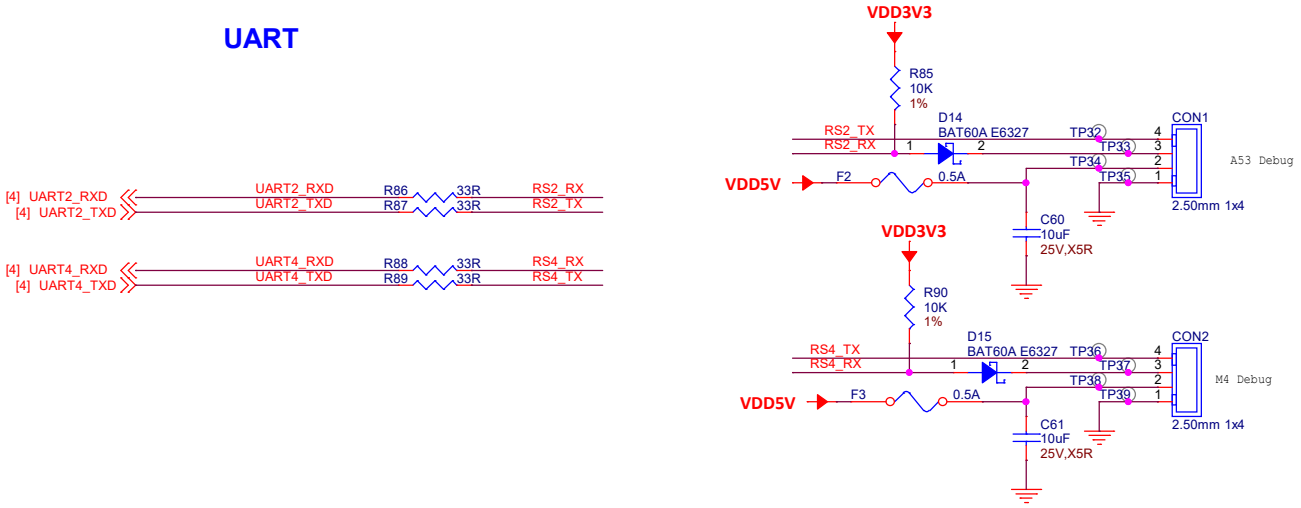
RS485



UART



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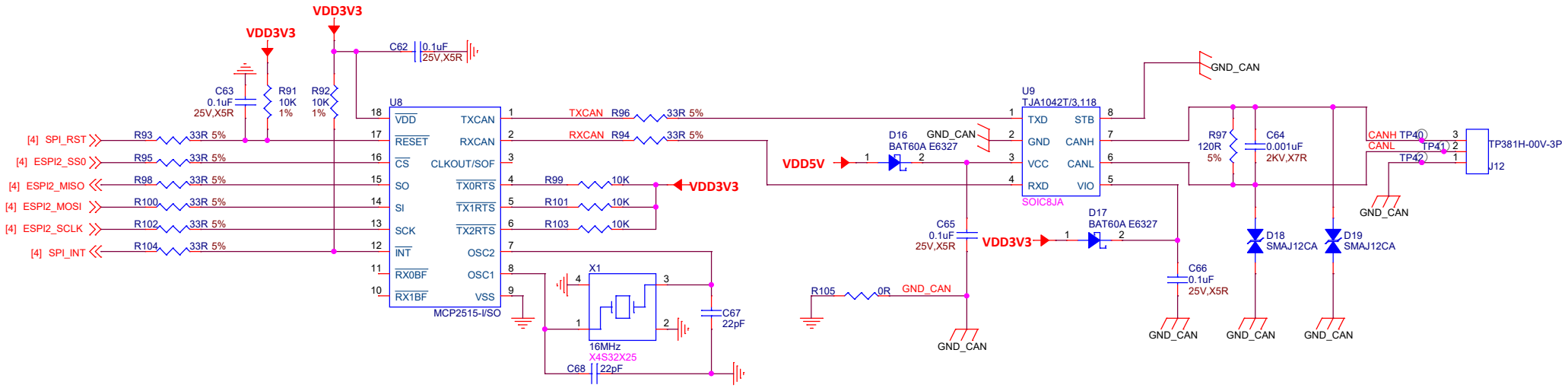

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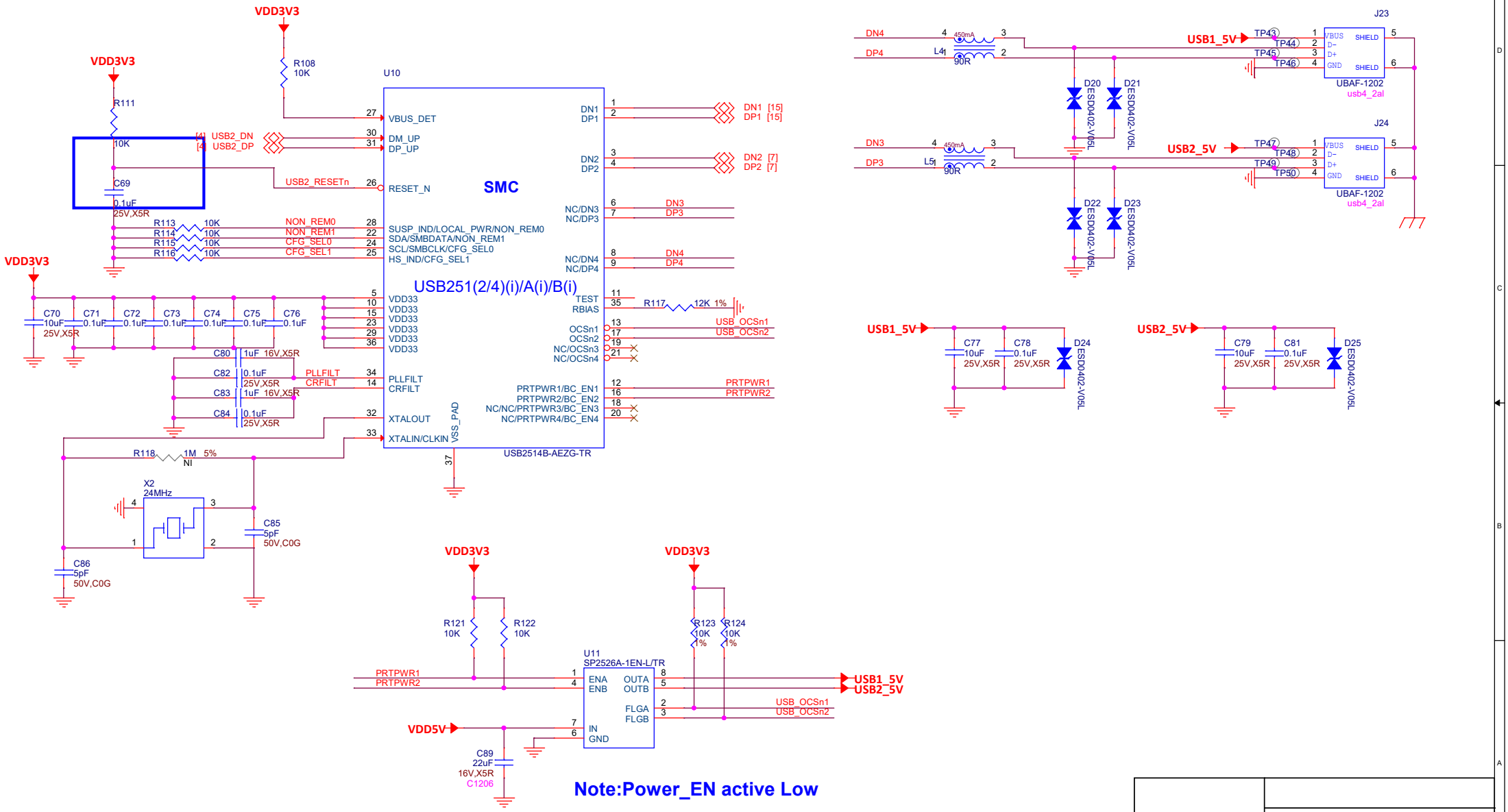
USB HOST



Note:Power_EN active Low

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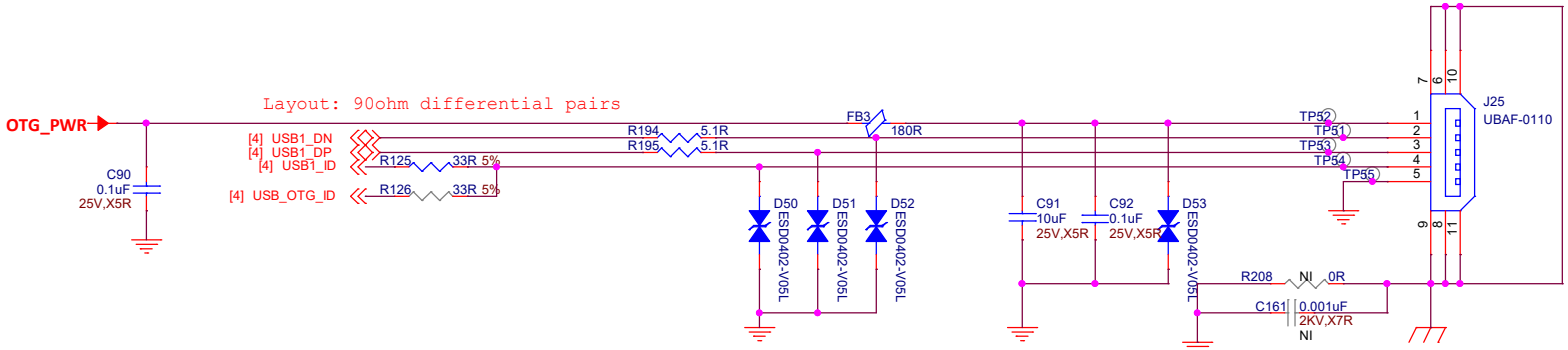

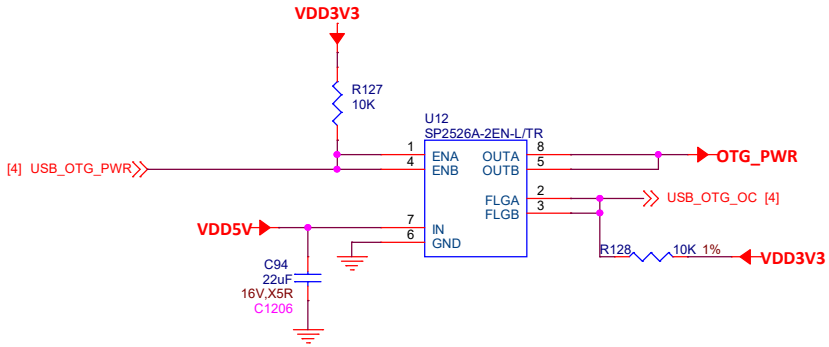

Note:Power_EN active Low

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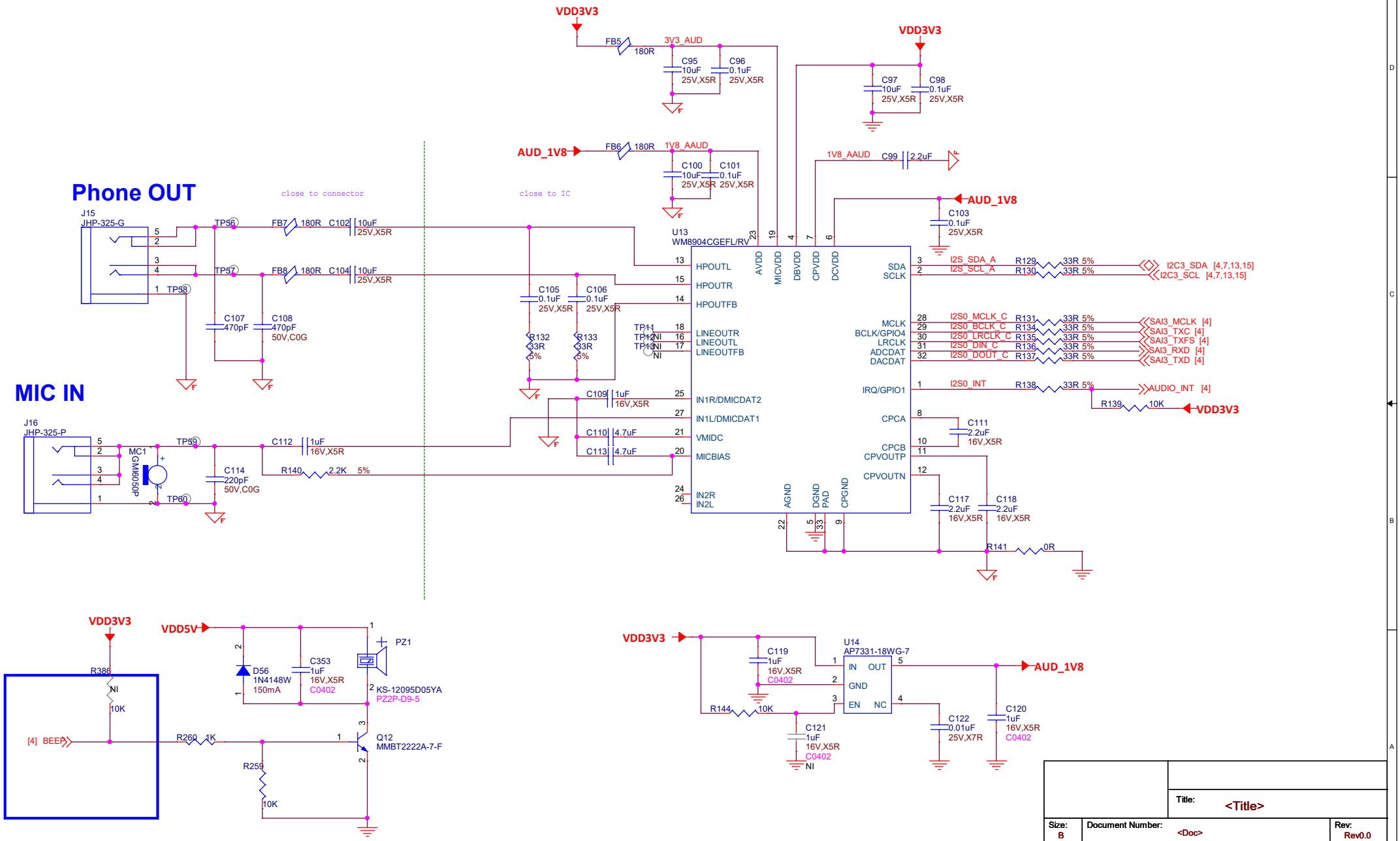
AUDIO



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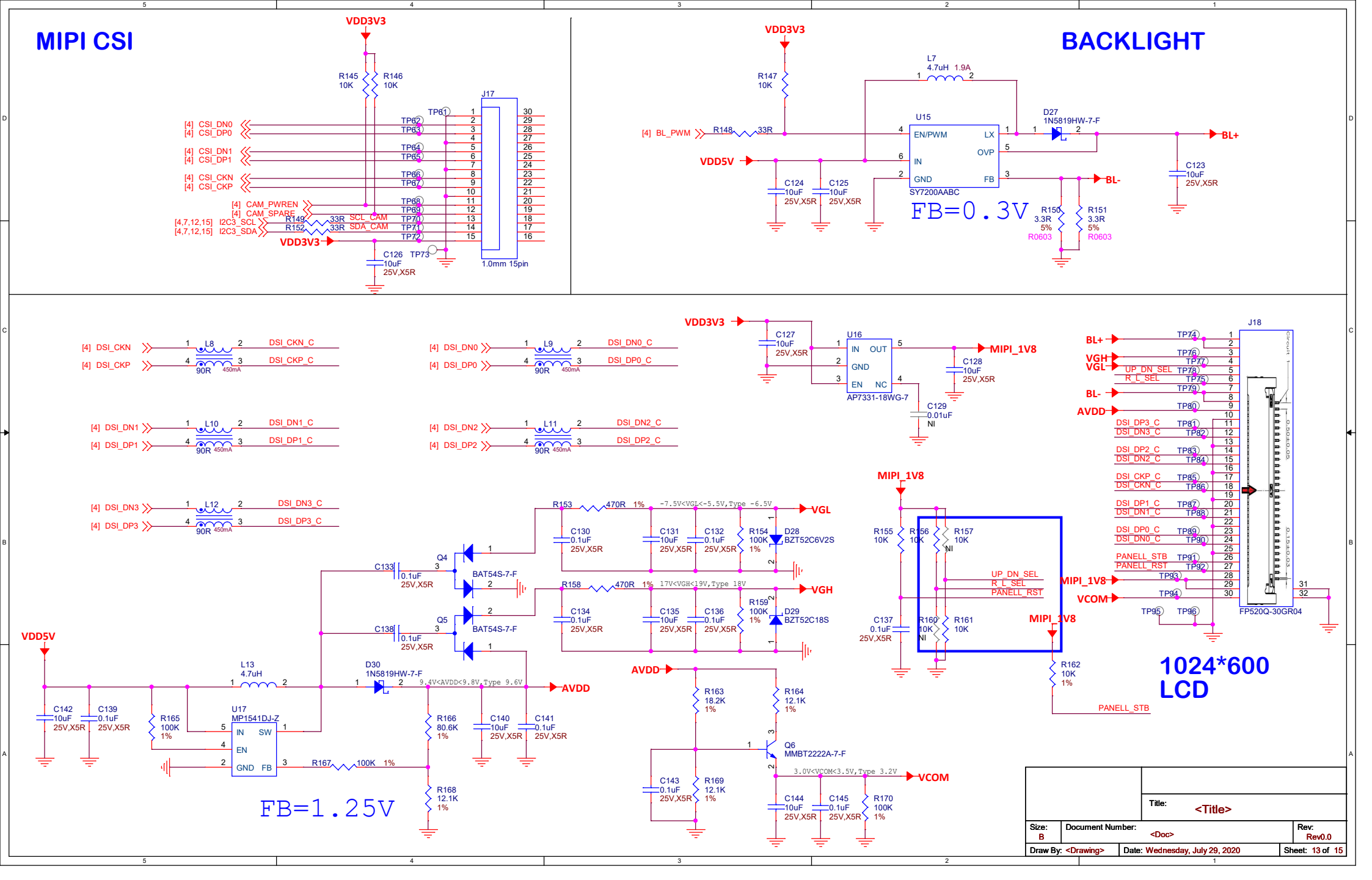
MIPI CSI
VDD3V3
R145 10K
R146 10K
J17
[4] CSI_DN0
[4] CSI_DP0
[4] CSI_DN1
[4] CSI_DP1
[4] CSI_CKN
[4] CSI_CKP
[4] CAM_PWREN
[4] CAM_SPARE
[4,7,12,15] I2C3_SCL
[4,7,12,15] I2C3_SDA
R149 33R SCL_CAM
R152 33R SDA_CAM
C126 10uF 25V,X5R
1.0mm 15pin
BACKLIGHT
R147 10K
L7 4.7uH 1.9A
[4] BL_PWM
R148 33R
U15
EN/PWM
LX
OVP
IN
GND
FB
SY7200AABC
D27 1N5819HW-7-F
BL+
BL-
VDD5V
C124 10uF 25V,X5R
C125 10uF 25V,X5R
C123 10uF 25V,X5R
FB=0.3V
R150 3.3R 5% R0603
R151 3.3R 5% R0603
[4] DSI_CKN
[4] DSI_CKP
L8
DSI_CKN_C
DSI_CKP_C
90R 450mA
[4] DSI_DN0
[4] DSI_DP0
L9
DSI_DN0_C
DSI_DP0_C
[4] DSI_DN1
[4] DSI_DP1
L10
DSI_DN1_C
DSI_DP1_C
[4] DSI_DN2
[4] DSI_DP2
L11
DSI_DN2_C
DSI_DP2_C
[4] DSI_DN3
[4] DSI_DP3
L12
DSI_DN3_C
DSI_DP3_C
VDD3V3
C127 10uF 25V,X5R
U16
IN
OUT
GND
EN
NC
AP7331-18WG-7
MIPI_1V8
C128 10uF 25V,X5R
C129 0.01uF NI
J18
BL+
VGH
VGL
BL-
AVDD
VCOM
UP_DN_SEL
R_L_SEL
PANELL_STB
PANELL_RST
DSI_DP3_C
DSI_DN3_C
DSI_DP2_C
DSI_DN2_C
DSI_CKP_C
DSI_CKN_C
DSI_DP1_C
DSI_DN1_C
DSI_DP0_C
DSI_DN0_C
FP520Q-30GR04
1024*600 LCD
R153 470R 1%
-7.5V<VGL<-5.5V,Type -6.5V
C130 0.1uF 25V,X5R
C131 10uF 25V,X5R
C132 0.1uF 25V,X5R
R154 100K 1%
D28 BZT52C6V2S
R158 470R 1%
17V<VGH<19V,Type 18V
C134 0.1uF 25V,X5R
C135 10uF 25V,X5R
C136 0.1uF 25V,X5R
R159 100K 1%
D29 BZT52C18S
Q4
Q5
BAT54S-7-F
C133 0.1uF 25V,X5R
C138 0.1uF 25V,X5R
R155 10K
R156 10K
R157 10K NI
R160 10K NI
R161 10K
C137 0.1uF 25V,X5R
R162 10K 1%
VDD5V
L13 4.7uH
D30 1N5819HW-7-F
9.4V<AVDD<9.8V,Type 9.6V
C142 10uF 25V,X5R
C139 0.1uF 25V,X5R
R165 100K 1%
U17 MP1541DJ-Z
IN
SW
EN
GND
FB
R167 100K 1%
R166 80.6K 1%
R168 12.1K 1%
C140 10uF 25V,X5R
C141 0.1uF 25V,X5R
FB=1.25V
R163 18.2K 1%
R164 12.1K 1%
Q6 MMBT2222A-7-F
3.0V<VCOM<3.5V,Type 3.2V
C143 0.1uF 25V,X5R
R169 12.1K 1%
C144 10uF 25V,X5R
C145 0.1uF 25V,X5R
R170 100K 1%
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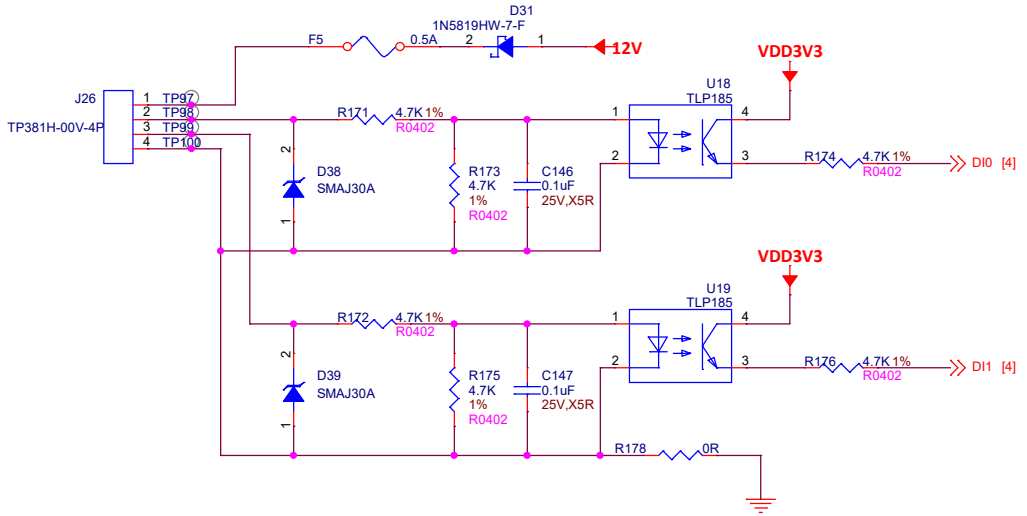
DI



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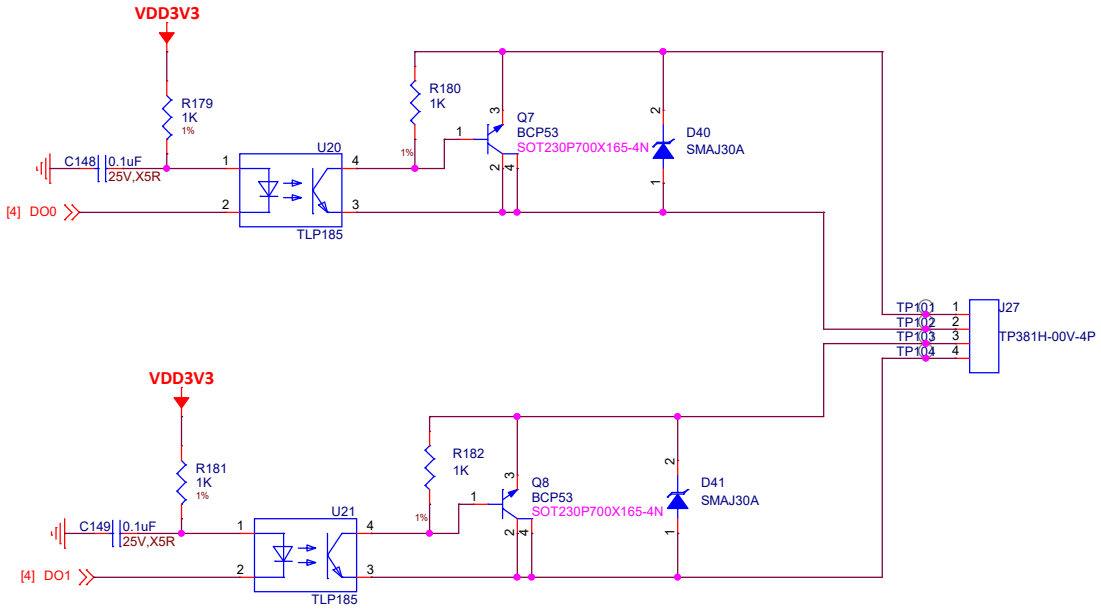

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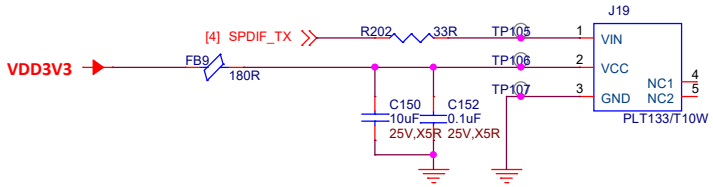
SPDIF



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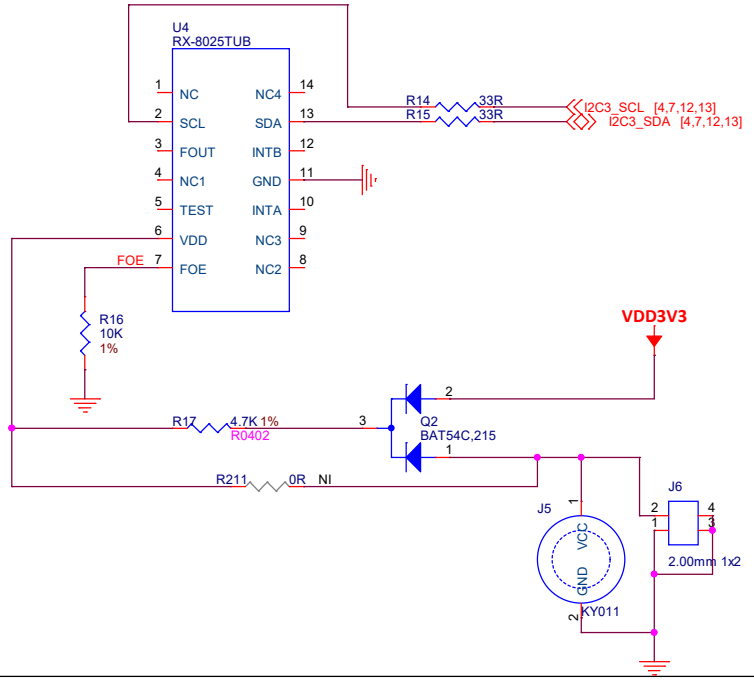
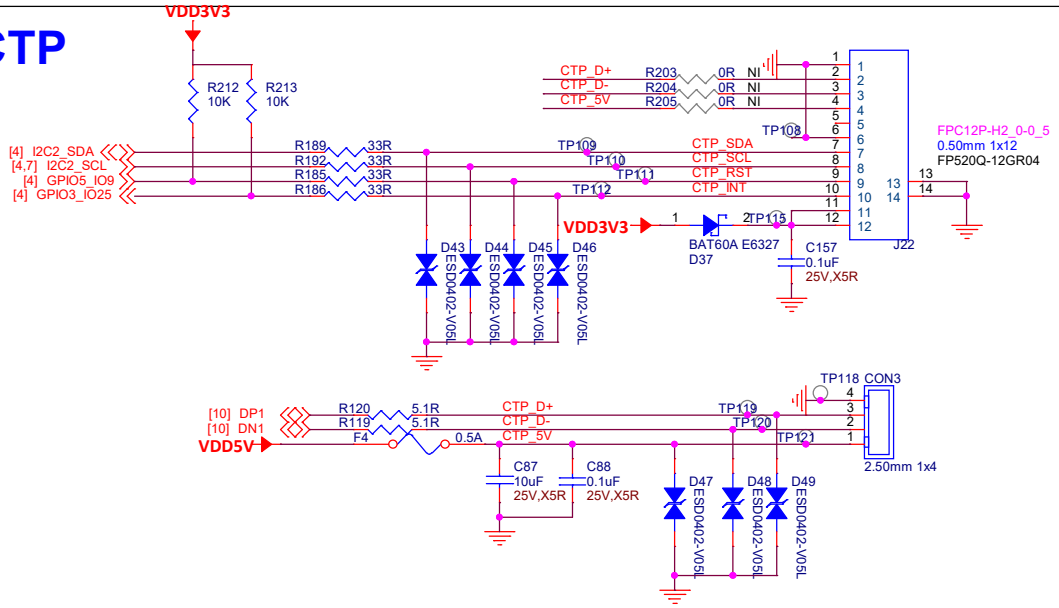


CTP



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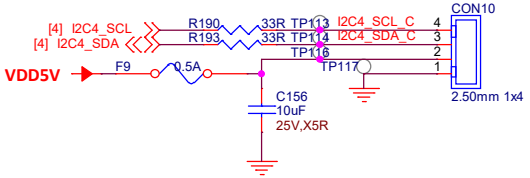

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