

SERVICE MANUAL

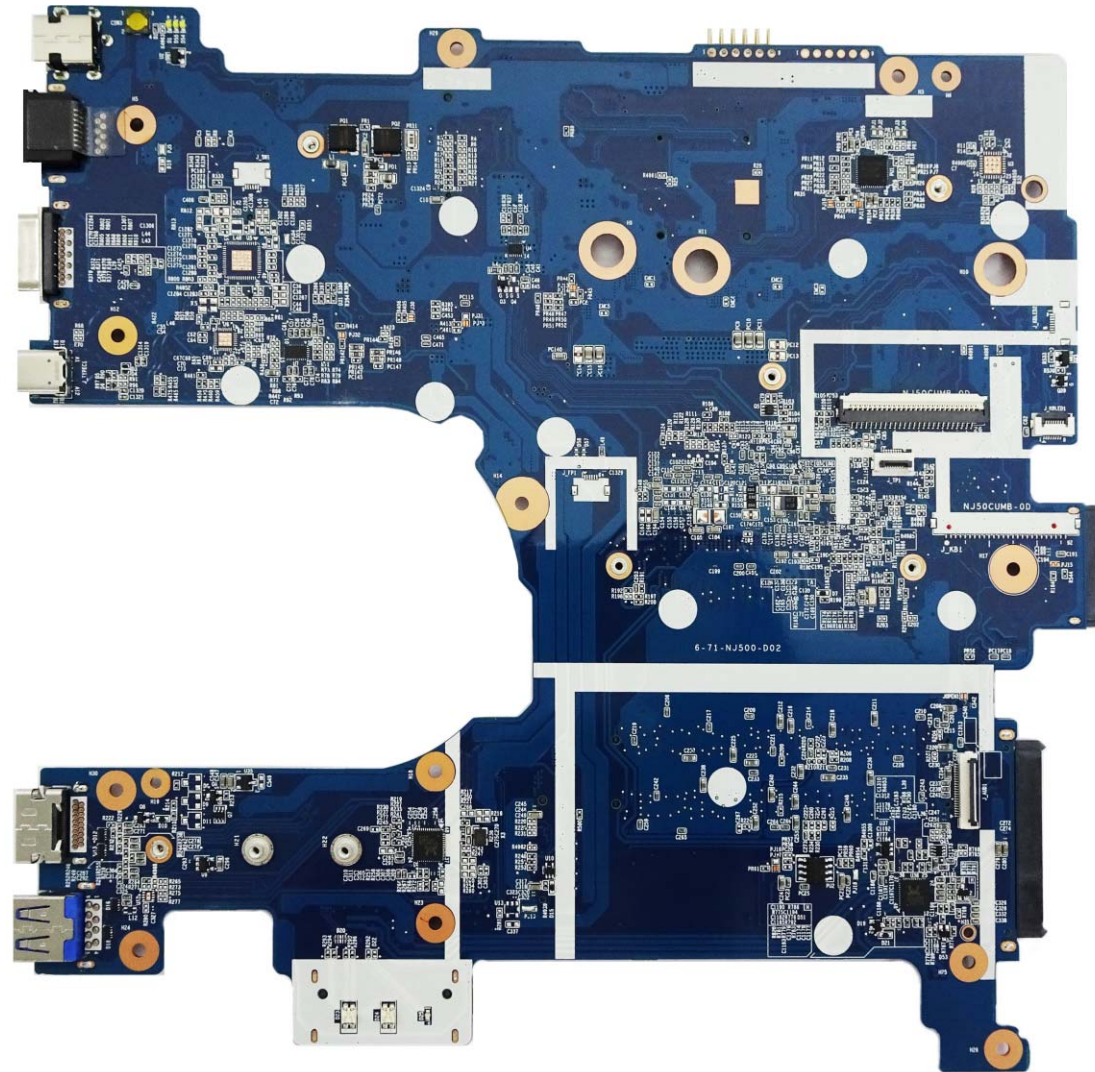
NJ50CU / NJ51CU

notebook



Figure 7
Mainboard Top
Key Parts

Mainboard Overview - Top (Key Parts)



Mainboard Overview - Bottom (Key Parts)

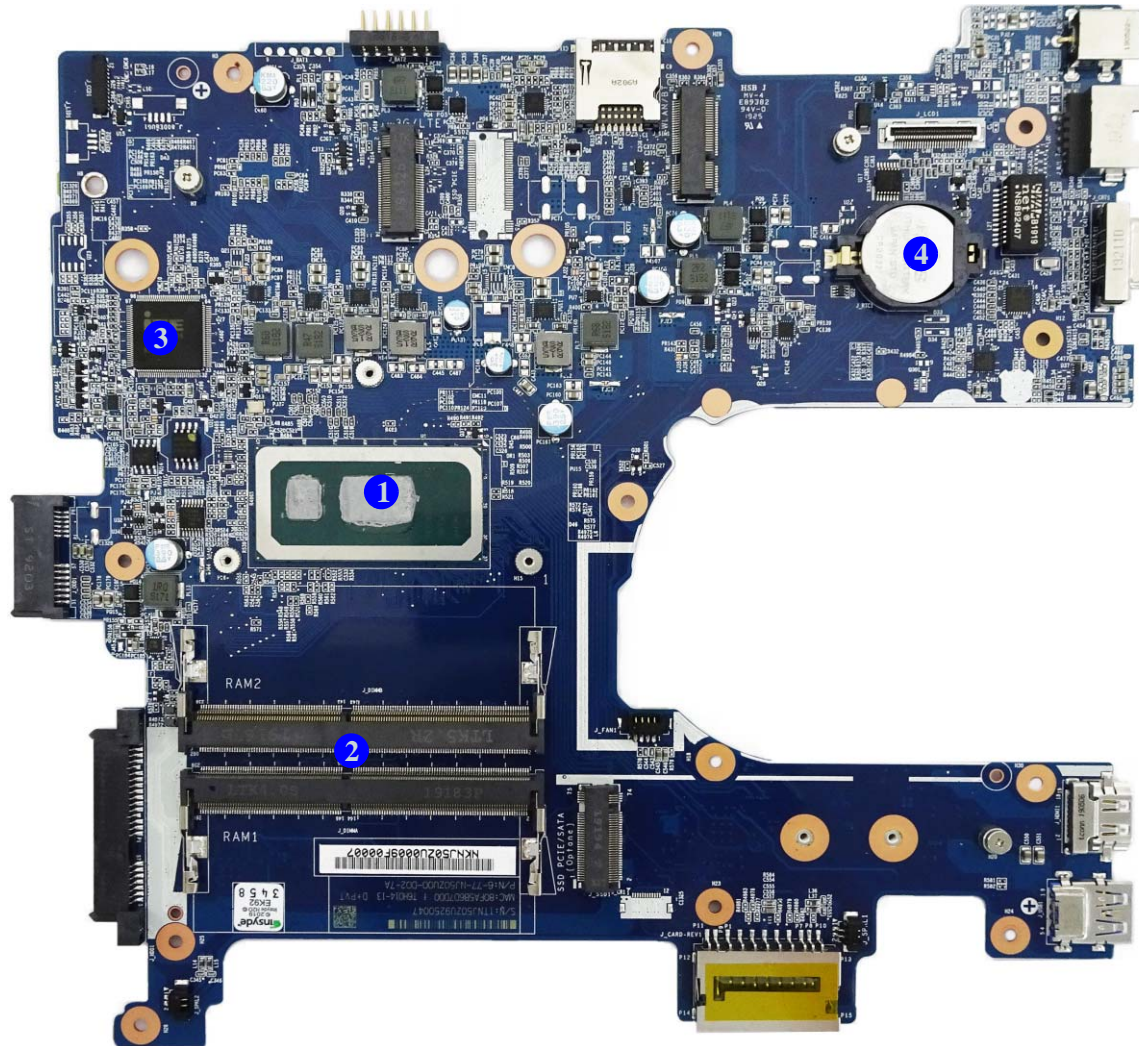


Figure 8
**Mainboard Bottom
Key Parts**

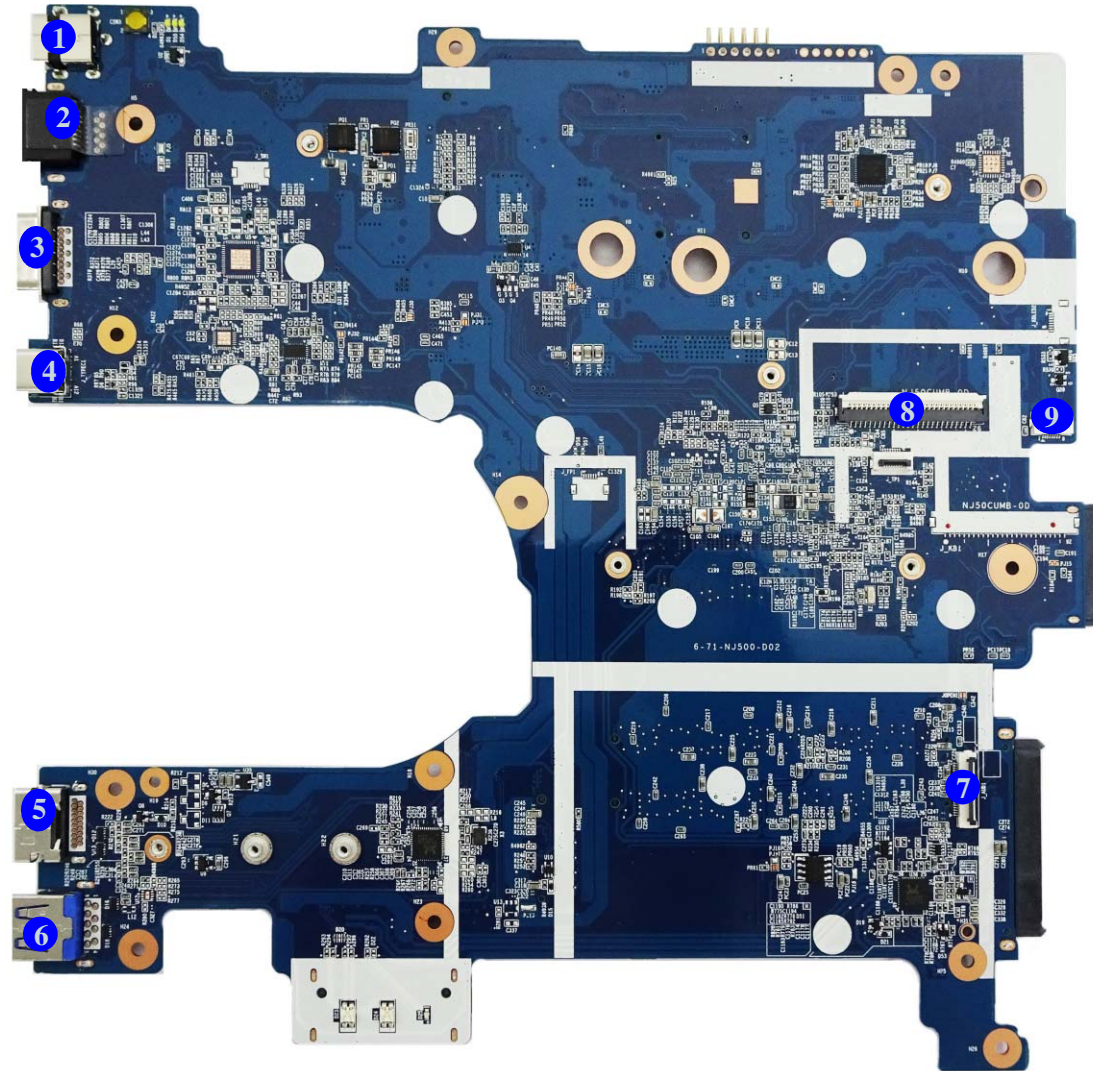
1. CPU
2. Memory Slots
DDR4 SO-DIMM
3. KBC-ITE IT5570
4. CMOS Battery

Introduction

Figure 9
**Mainboard Top
Connectors**

1. DC-In Jack
2. RJ-45 LAN Jack
3. External Monitor Port
4. USB 3.1 Gen 2 Type-C Port Or
*(Factory Option)
USB 3.1 Gen 2 Type-C Port with Power Delivery
5. HDMI-Out Port
6. USB 3.0 (USB 3.1 Gen 1) Type-A Port
7. Audio Board Cable Connector
8. Keyboard Cable Connector
9. LED Keyboard Connector

Mainboard Overview - Top (Connectors)



Mainboard Overview - Bottom (Connectors)

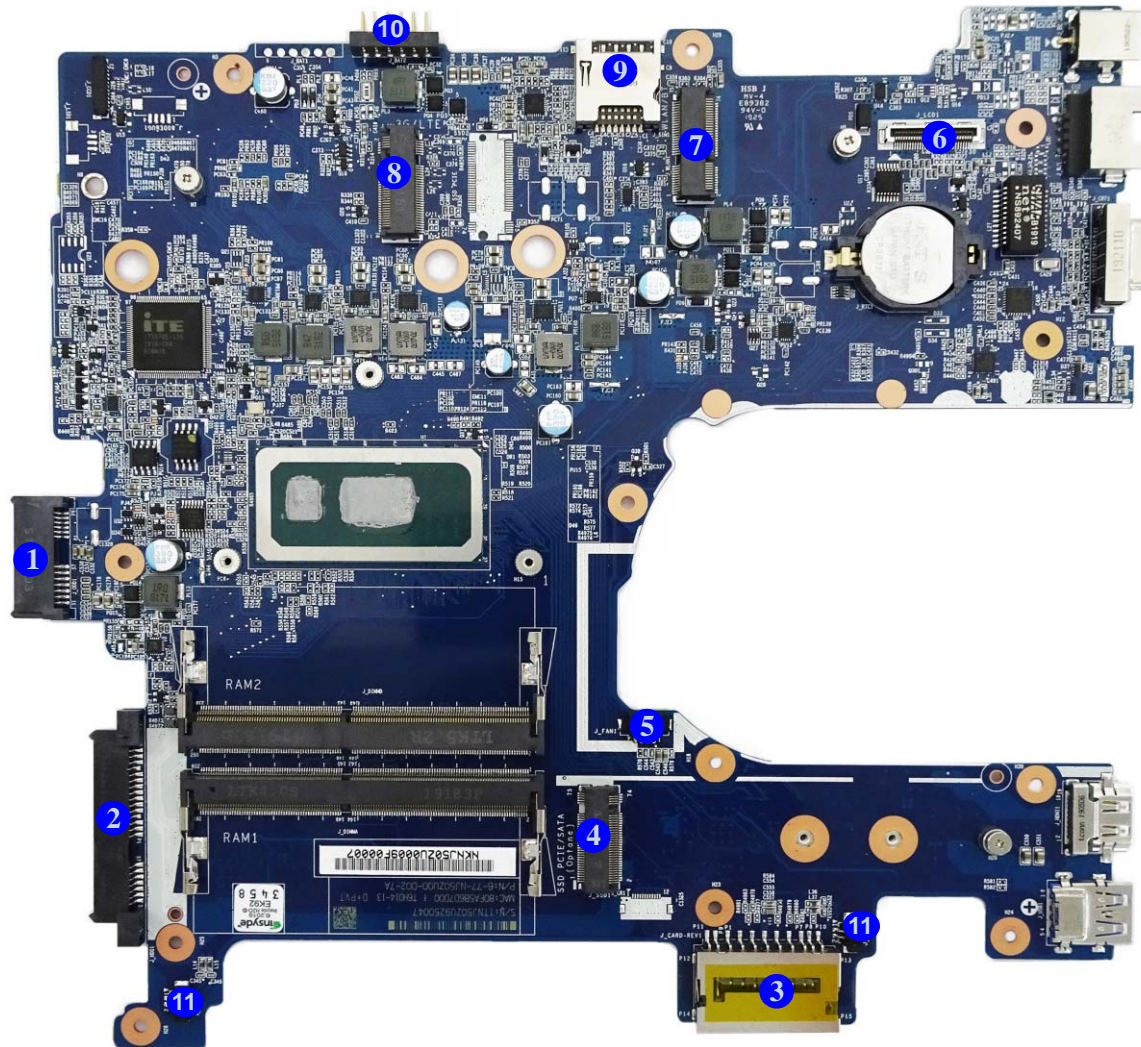


Figure 10
**Mainboard Bottom
Connectors**

1. ODD Connector
2. HDD Connector
3. Multi-in-1 Card Reader
4. M.2 Card Connector
5. Fan Connector
6. LCD Cable Connector
7. WLAN Connector
8. LTE Connector
9. SIM Card Reader
10. Battery Connector
11. Speaker Connector

Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the *NJ50CU* / *NJ51CU* notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

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Processor 3/12 - Page B - 5	M Key PCIE SSD - Page B - 23	LID SW Board - Page B - 41
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KBL RTD2168 - Page B - 18	1.8V, 2.5V - Page B - 36	
PD Function - Page B - 19	MP2979 Controller - Page B - 37	

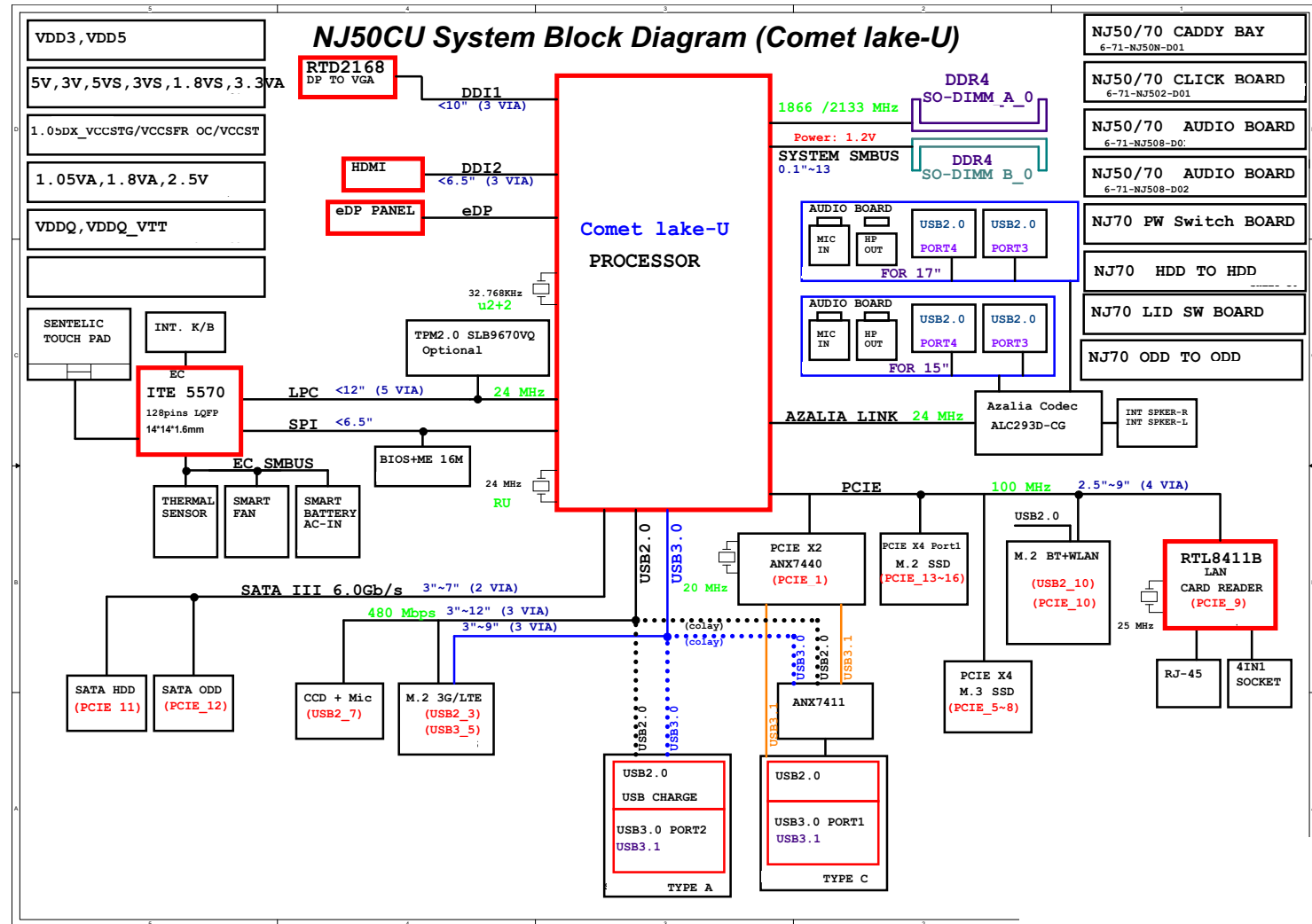
Table B - 1
**SCHEMATIC
DIAGRAMS**



Version Note

The schematic diagrams in this chapter are based upon version 6--7P-NJ506-003. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

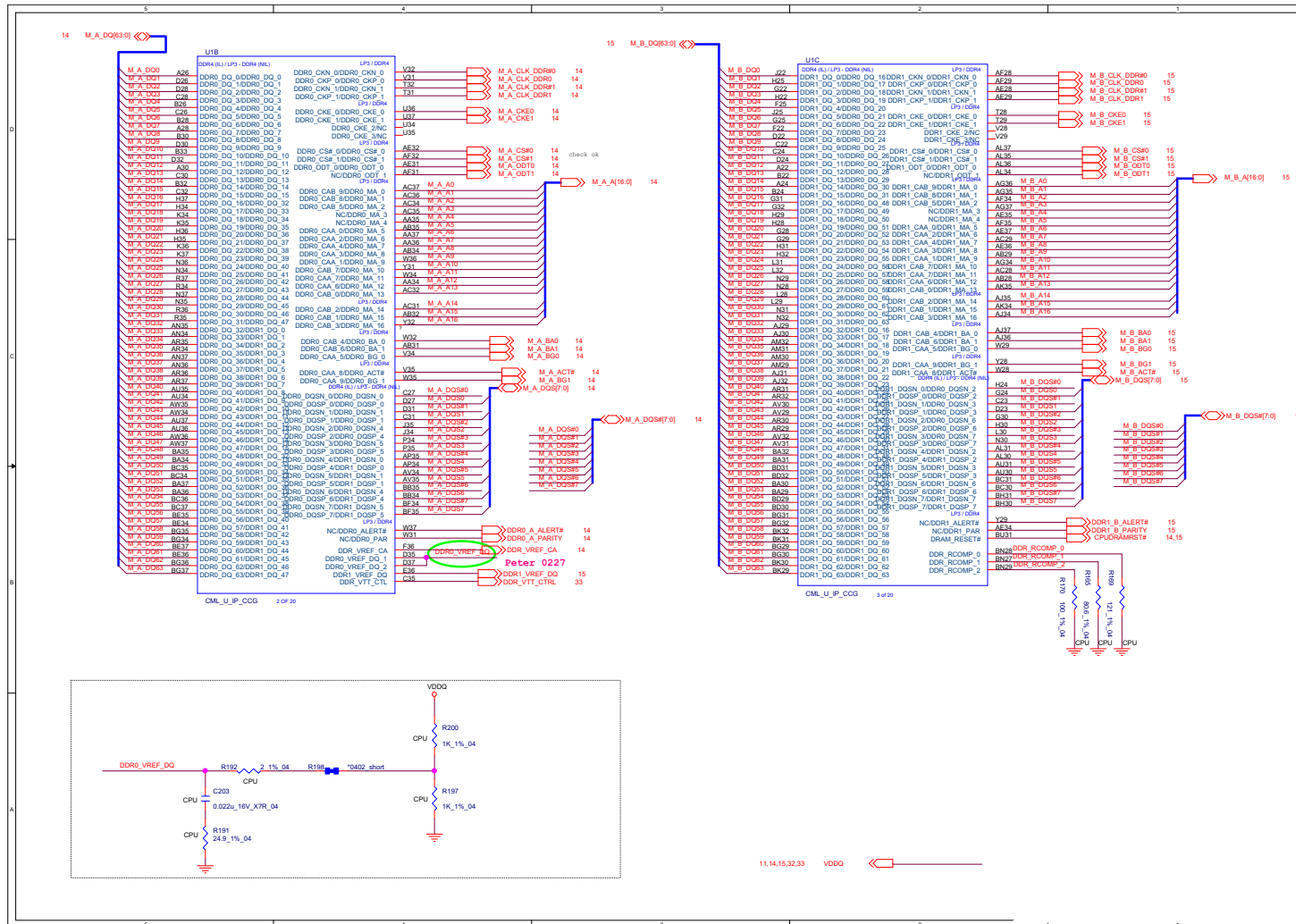
System Block Diagram



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System Block
Diagram

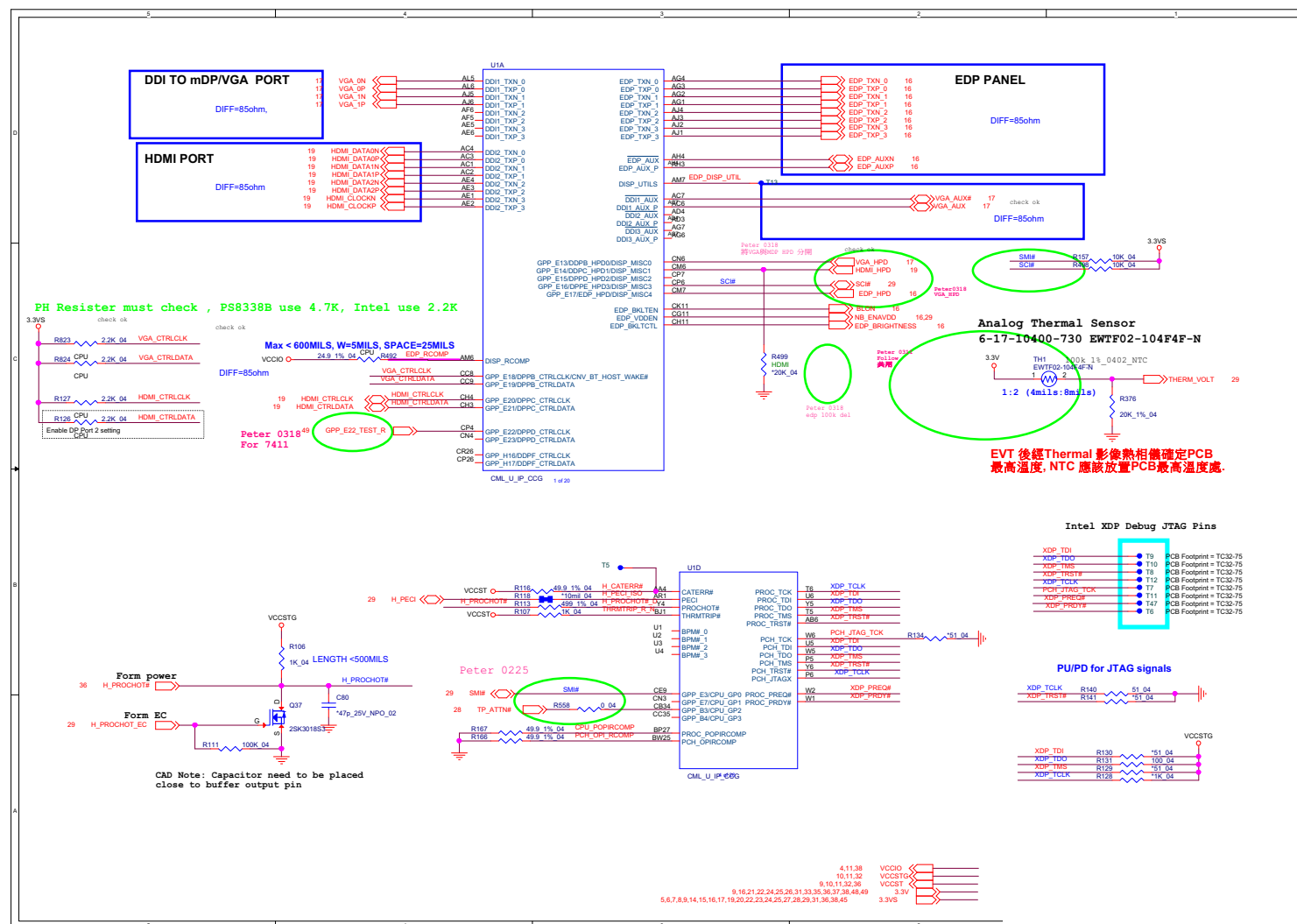
Processor 1/12

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Processor 1/11

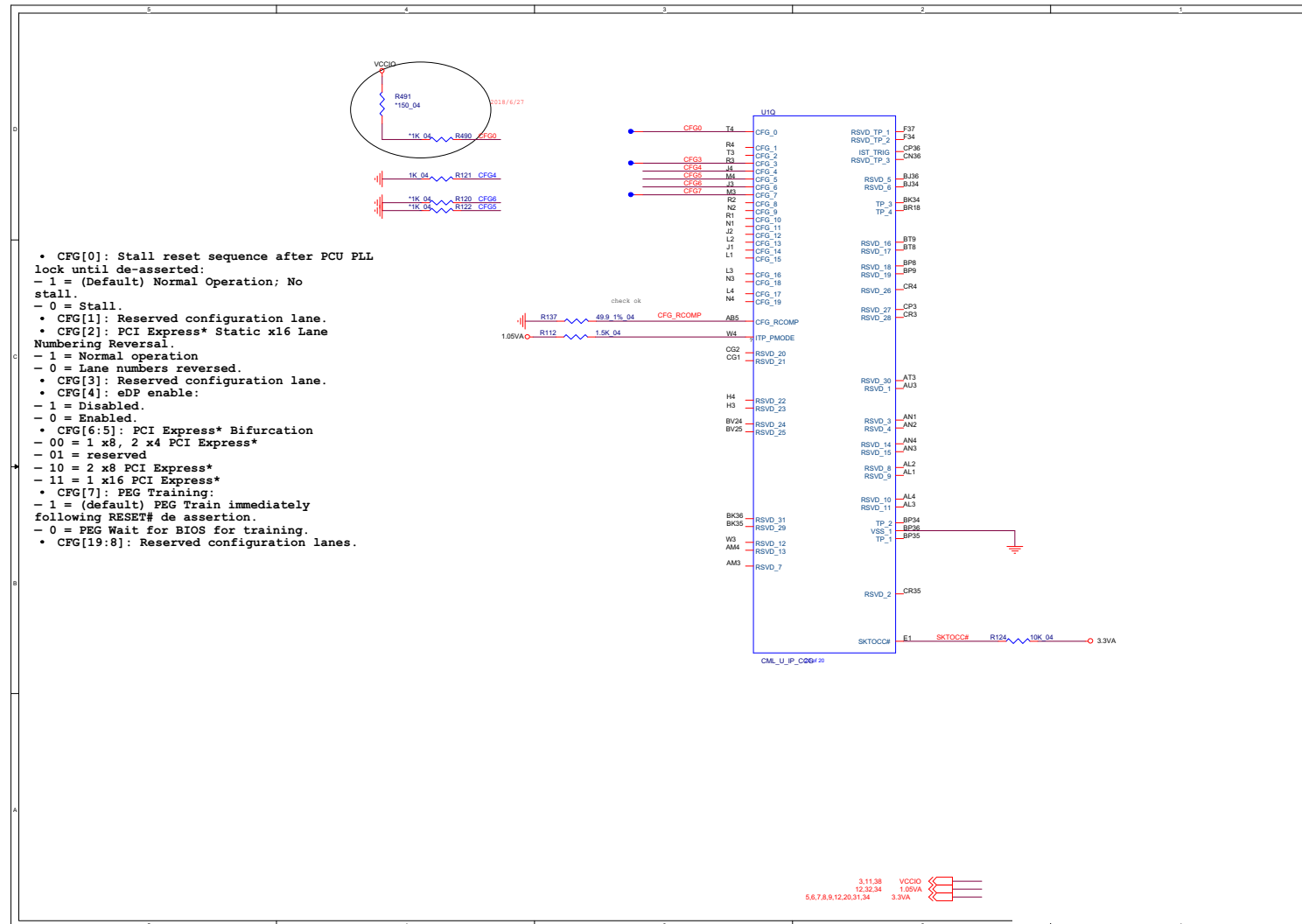


Processor 2/12

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Processor 2/12



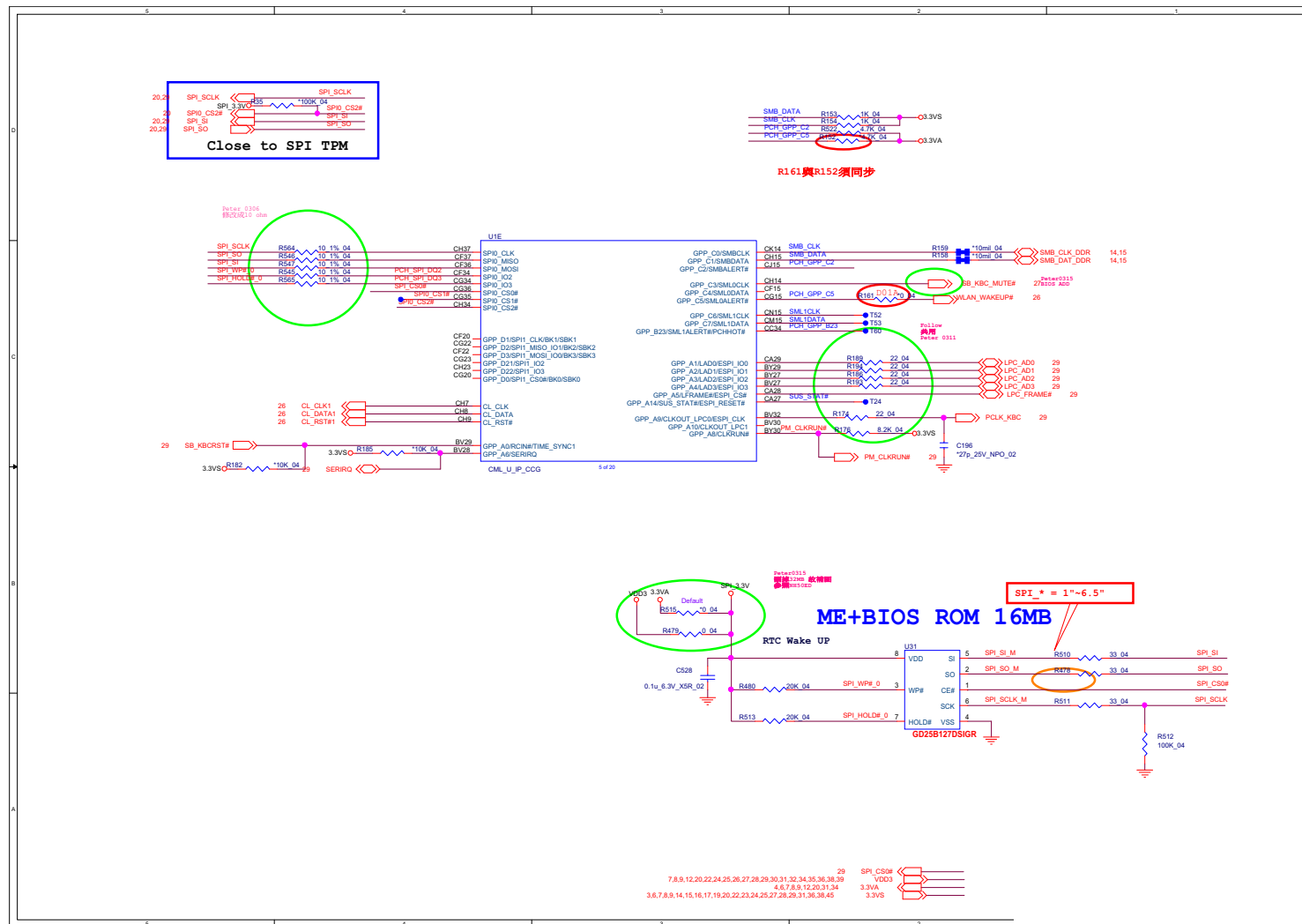
Processor 3/12

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Processor 3/12

Processor 4/12

B. Schematic Diagrams

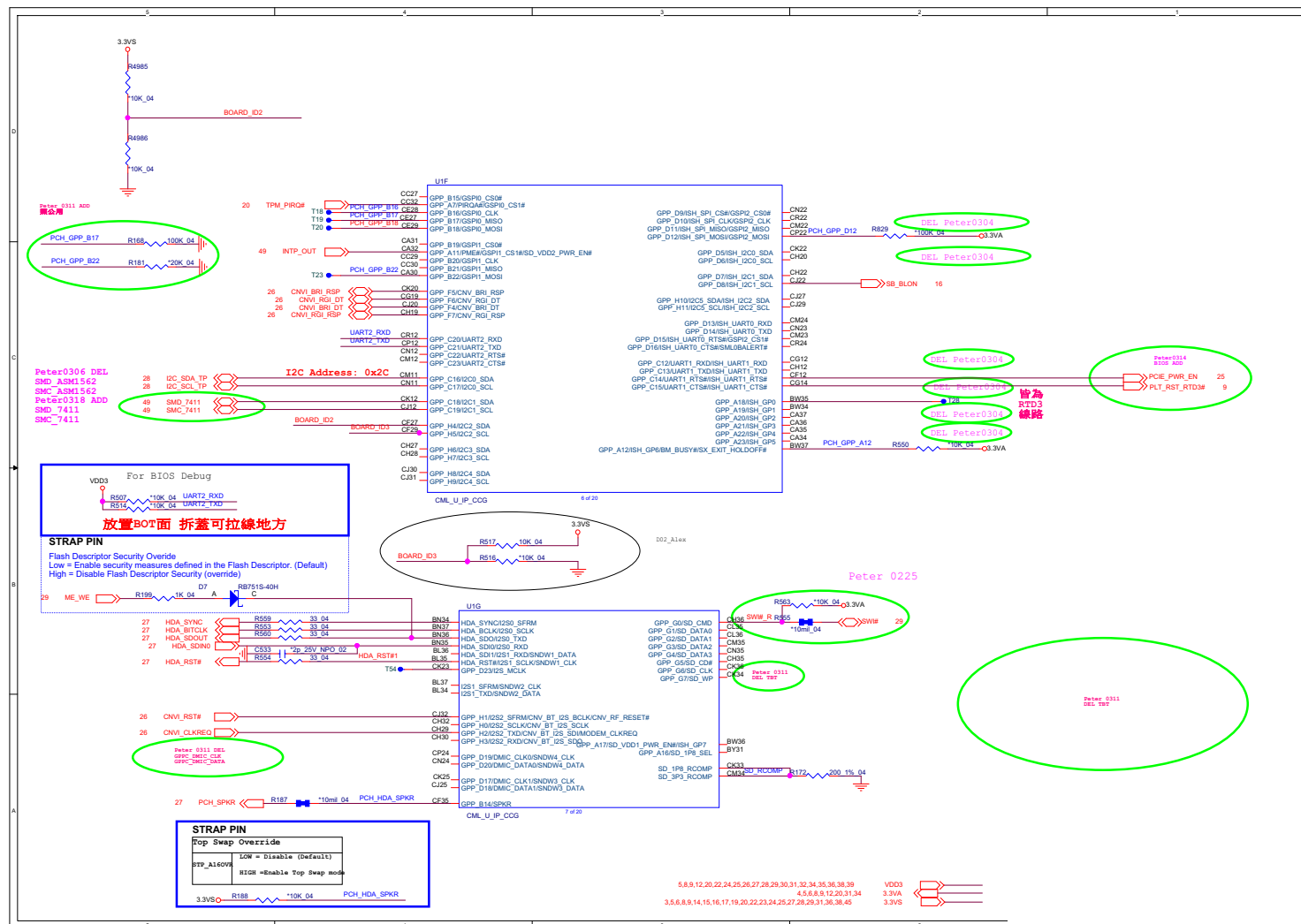
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Processor 4/12



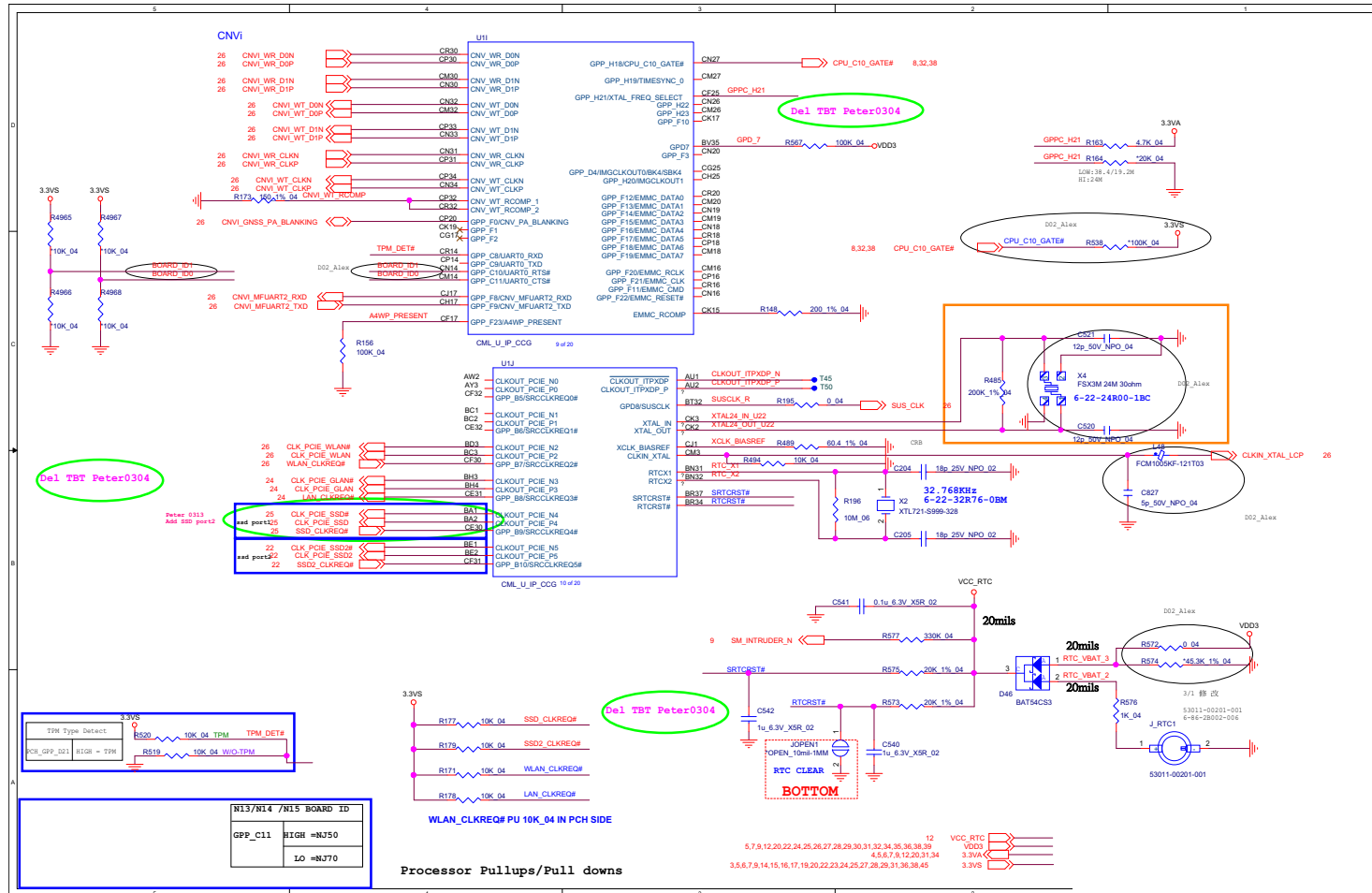
Processor 6/12

B. Schematic Diagrams

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Processor 6/12



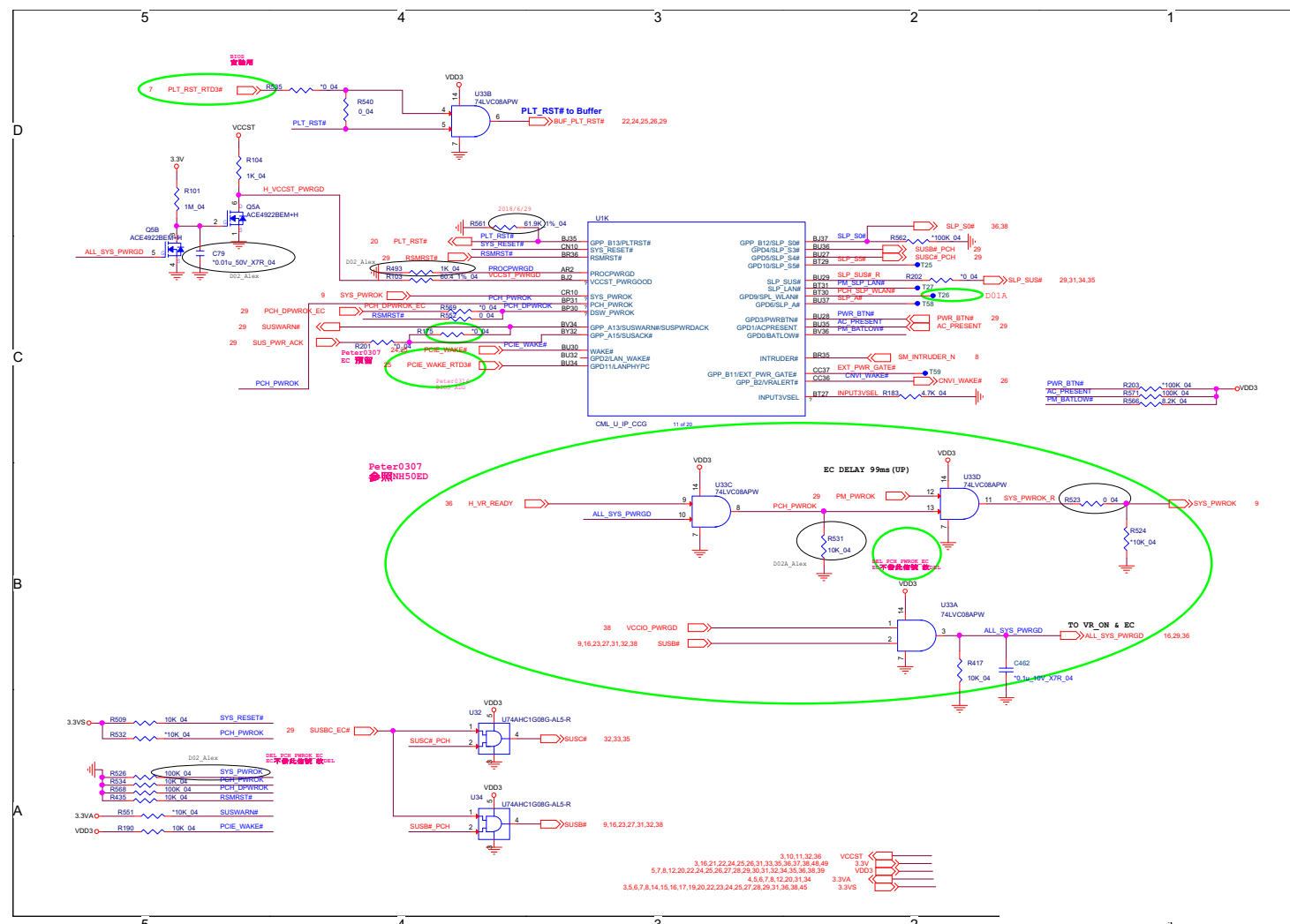
Processor 7/12

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Processor 7/12

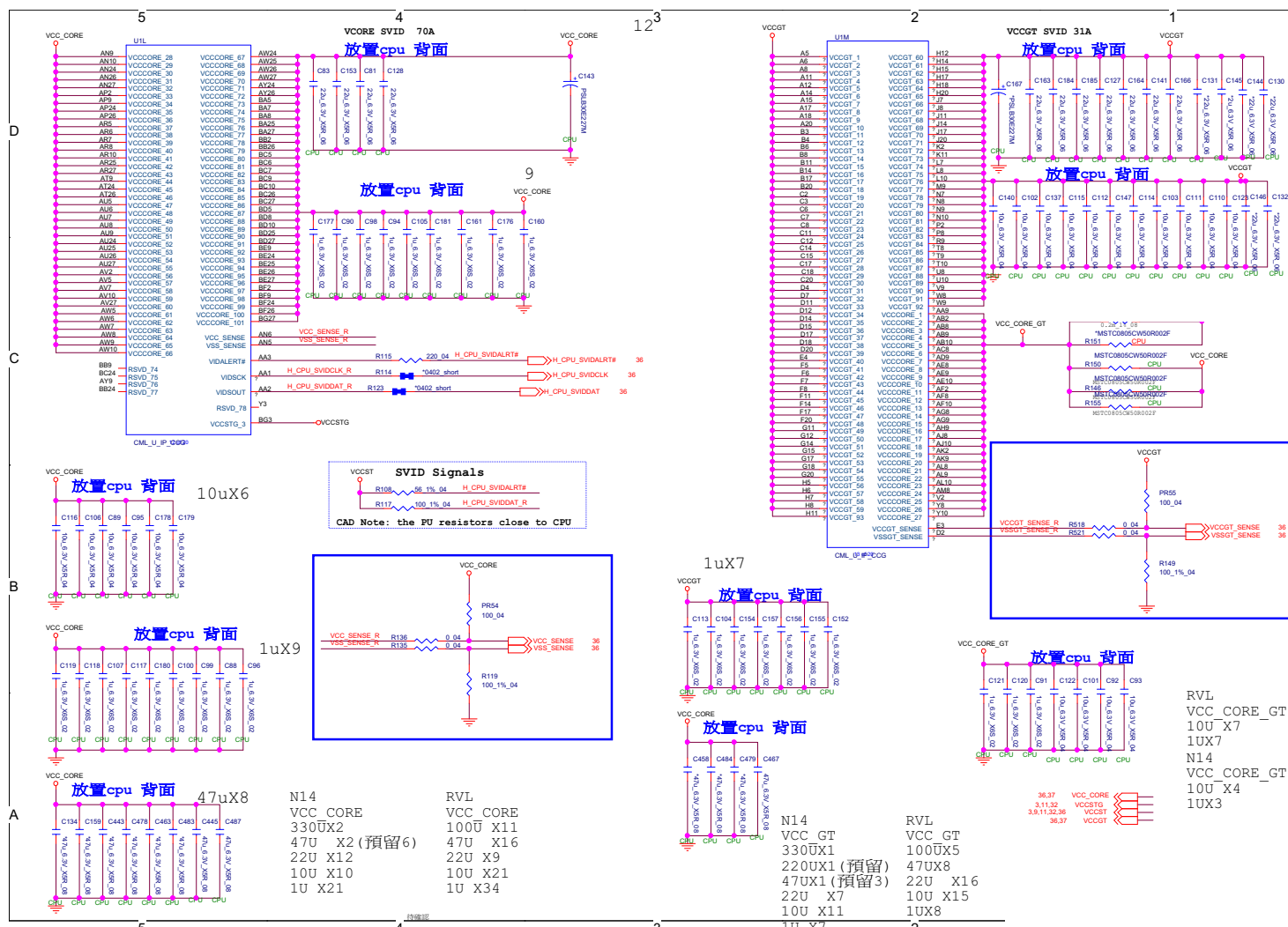
Processor 8/12

B. Schematic Diagrams

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Processor 8/12



Processor 9/12

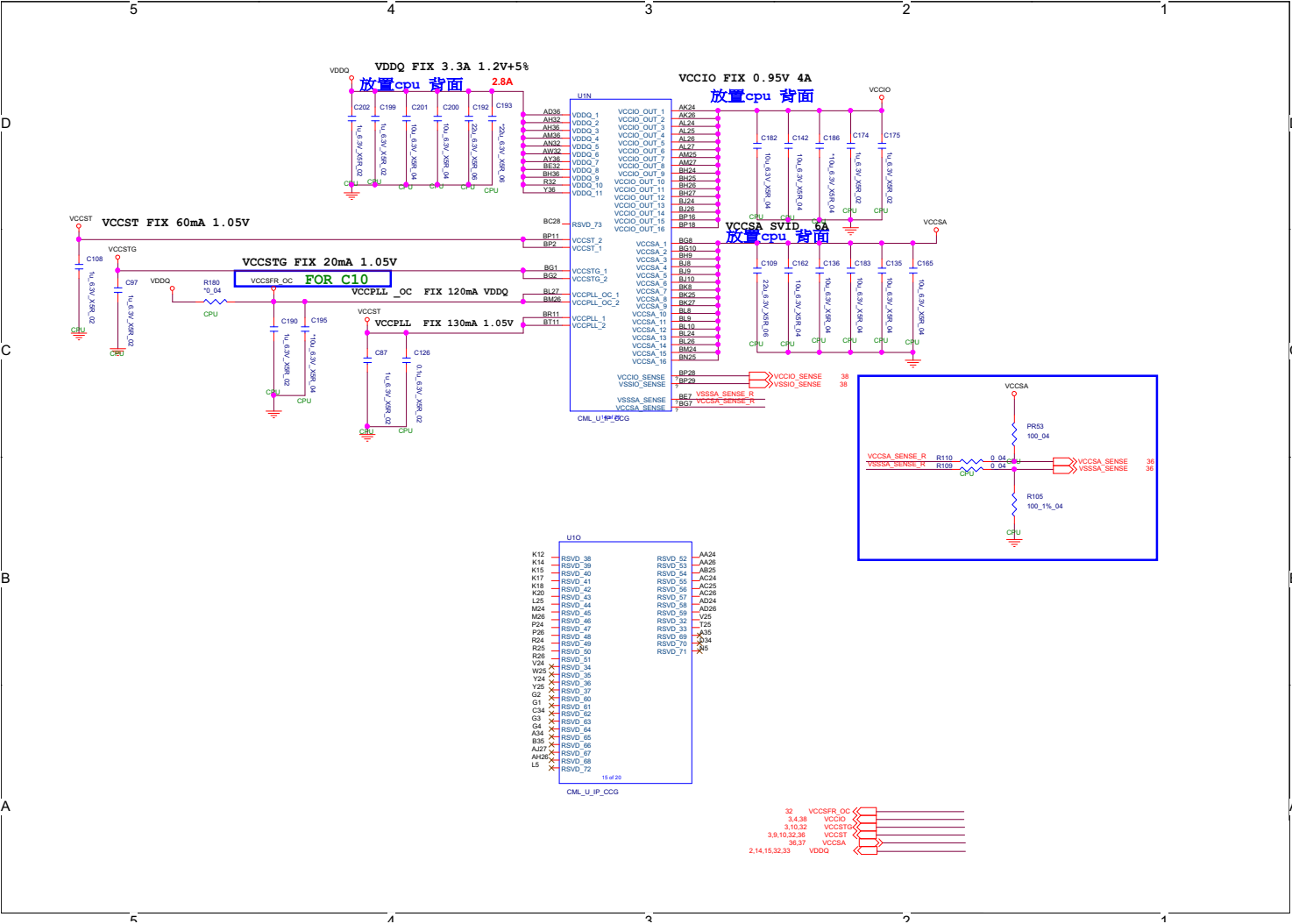
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Processor 9/12

B.Schematic Diagrams

Schematic Diagrams

Processor 10/12

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Processor 10/12

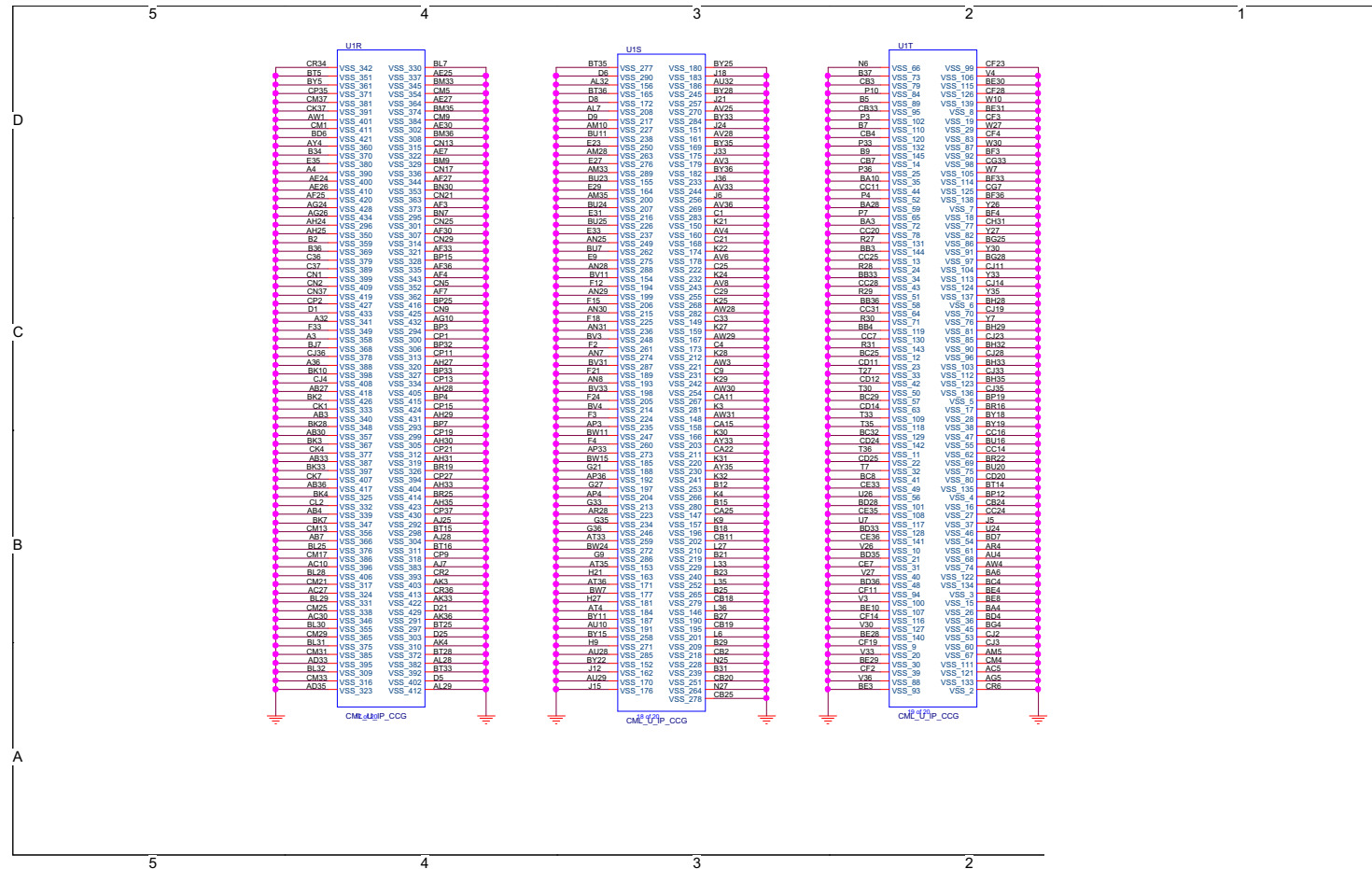


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Processor 11/12



Processor 12/12

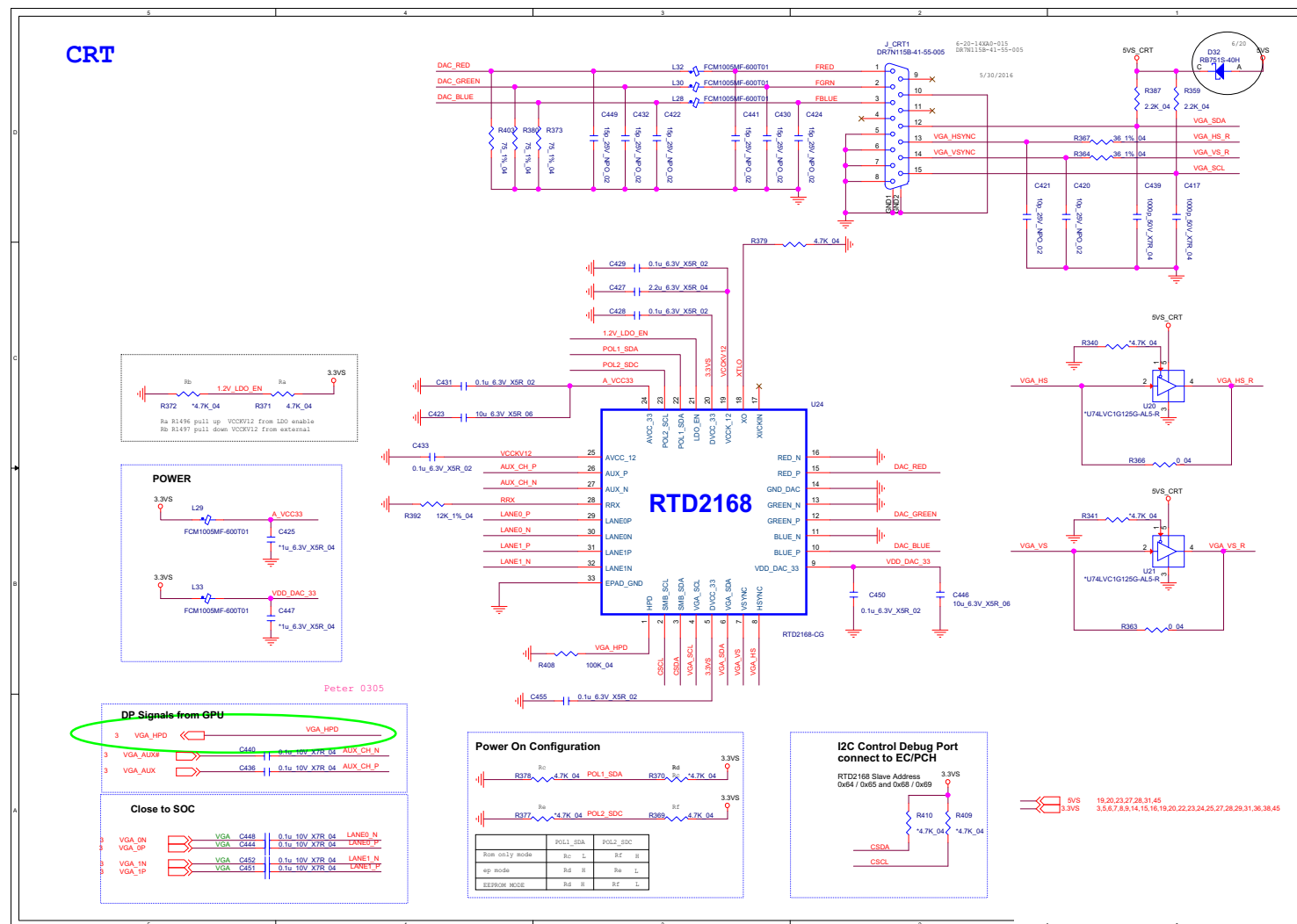
Sheet 13 of 46
Processor 12/12



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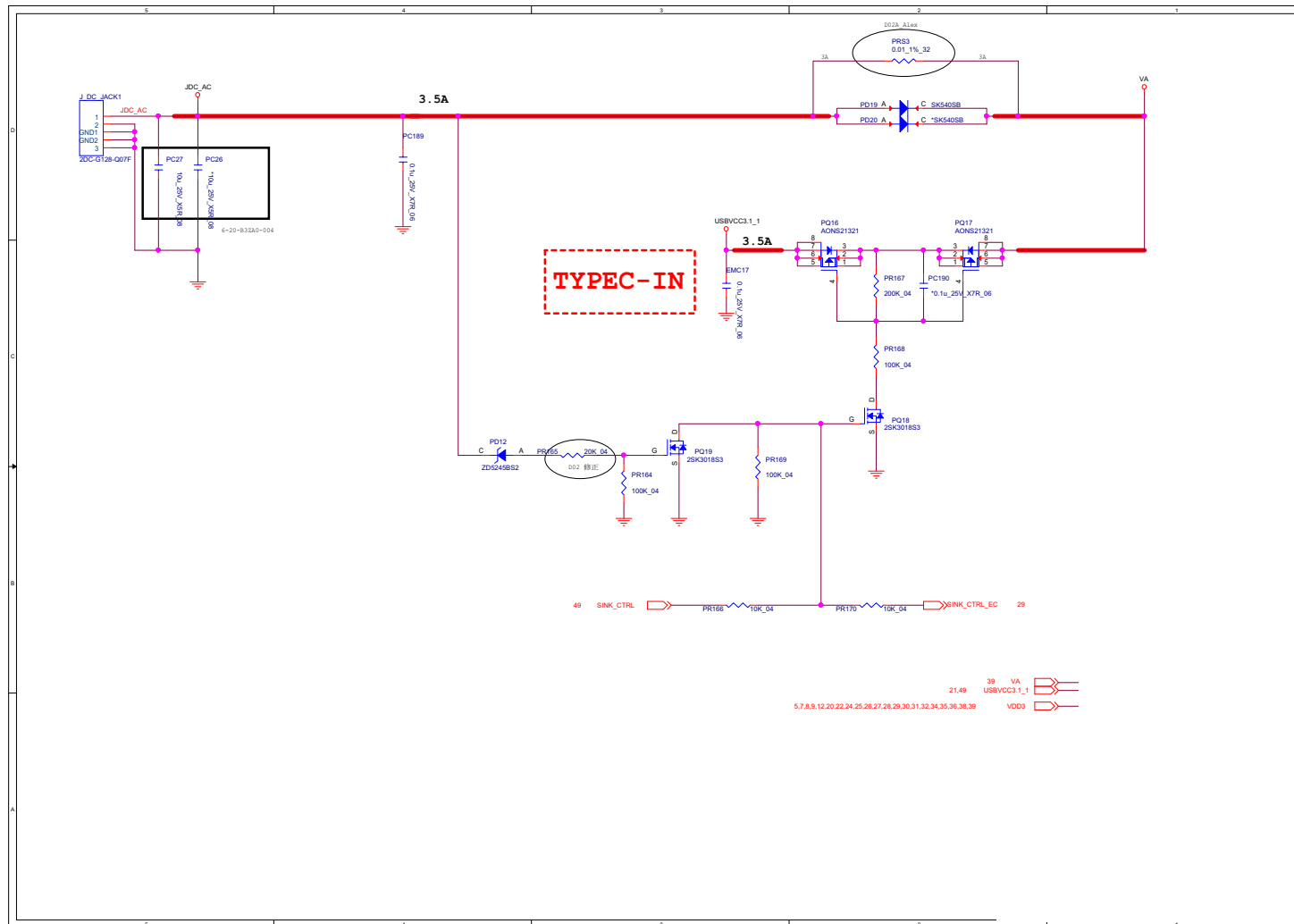
KBL RTD2168

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KBL RTD2168



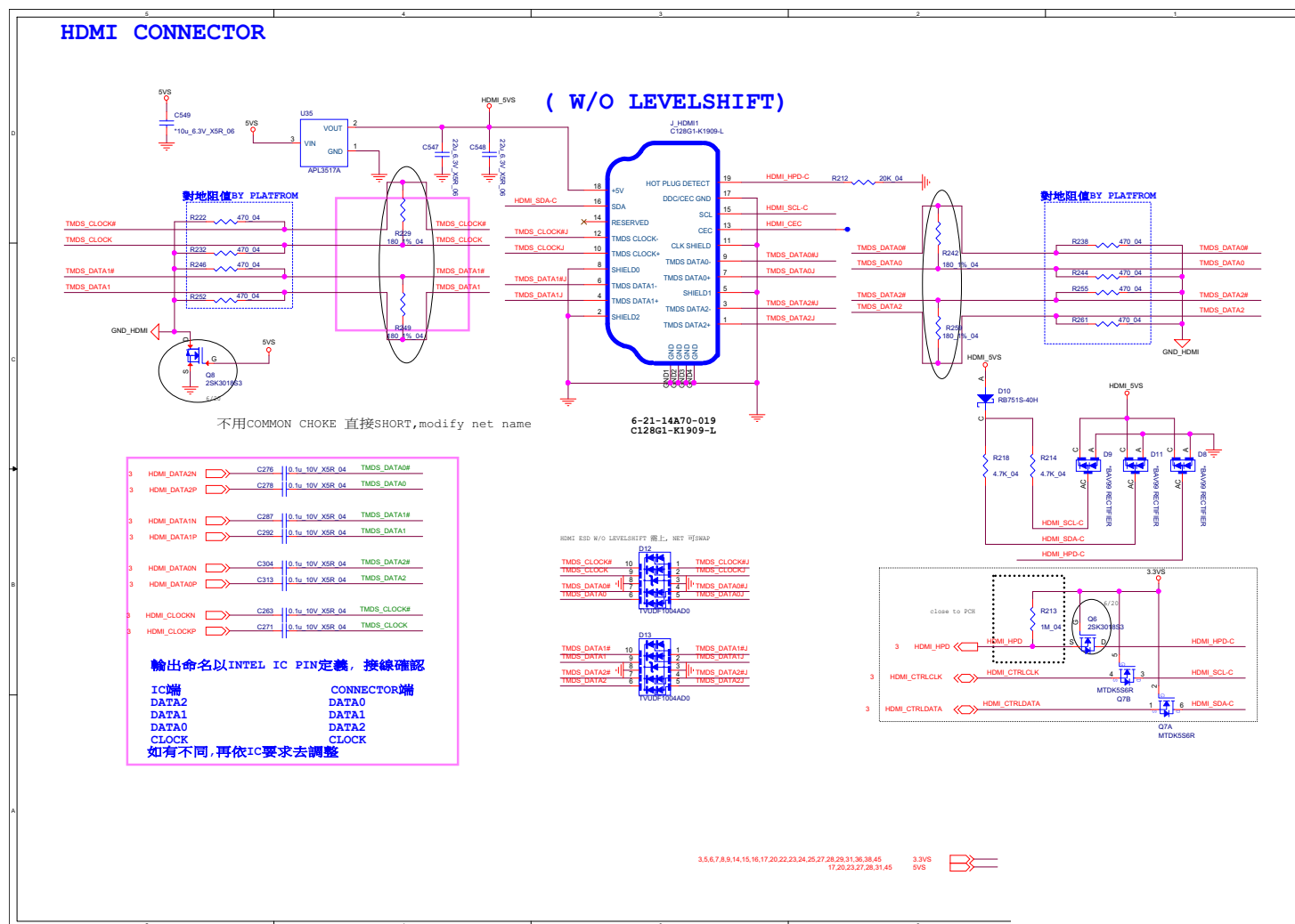
PD Function

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PD Function

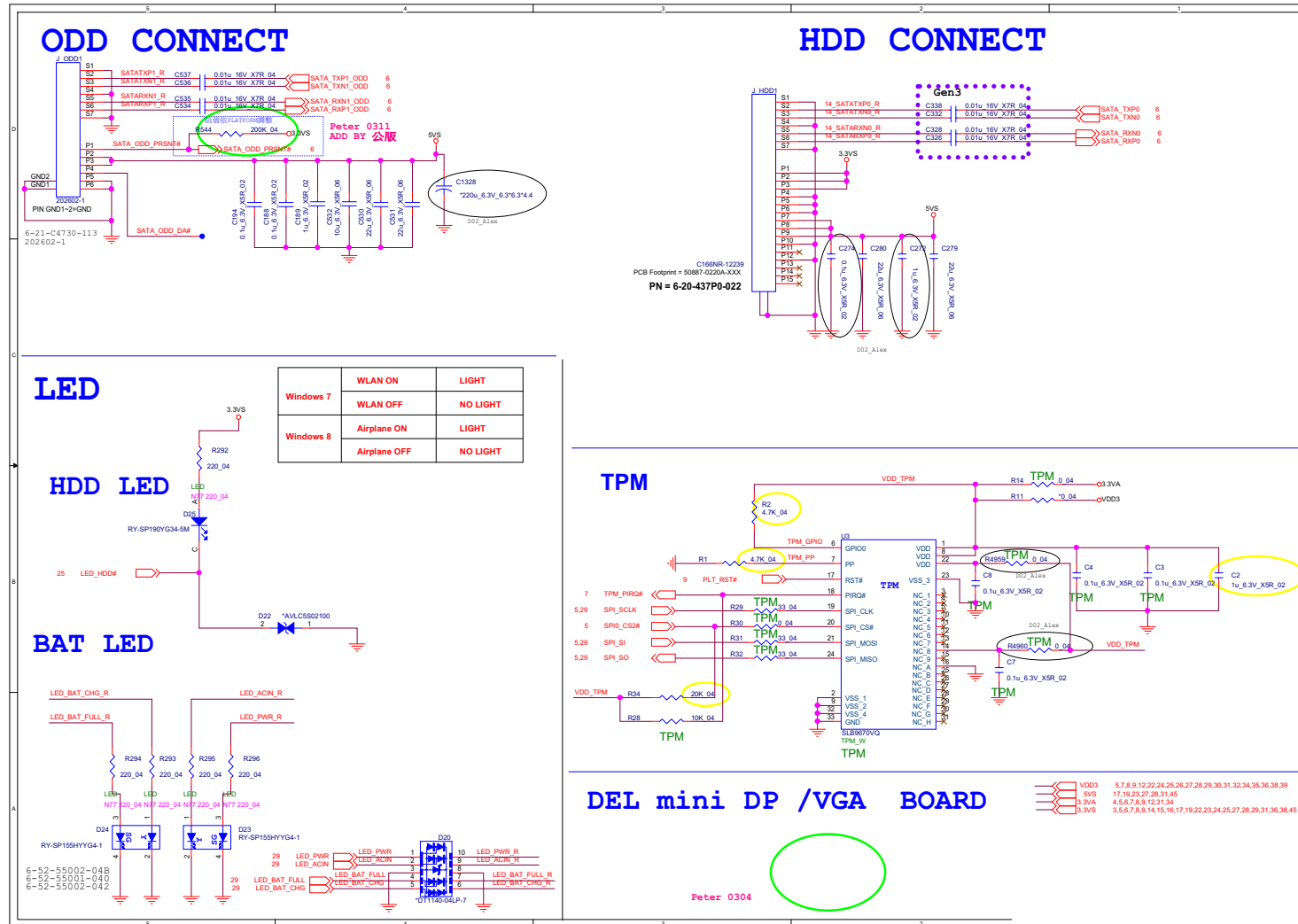


HDMI

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HDMI



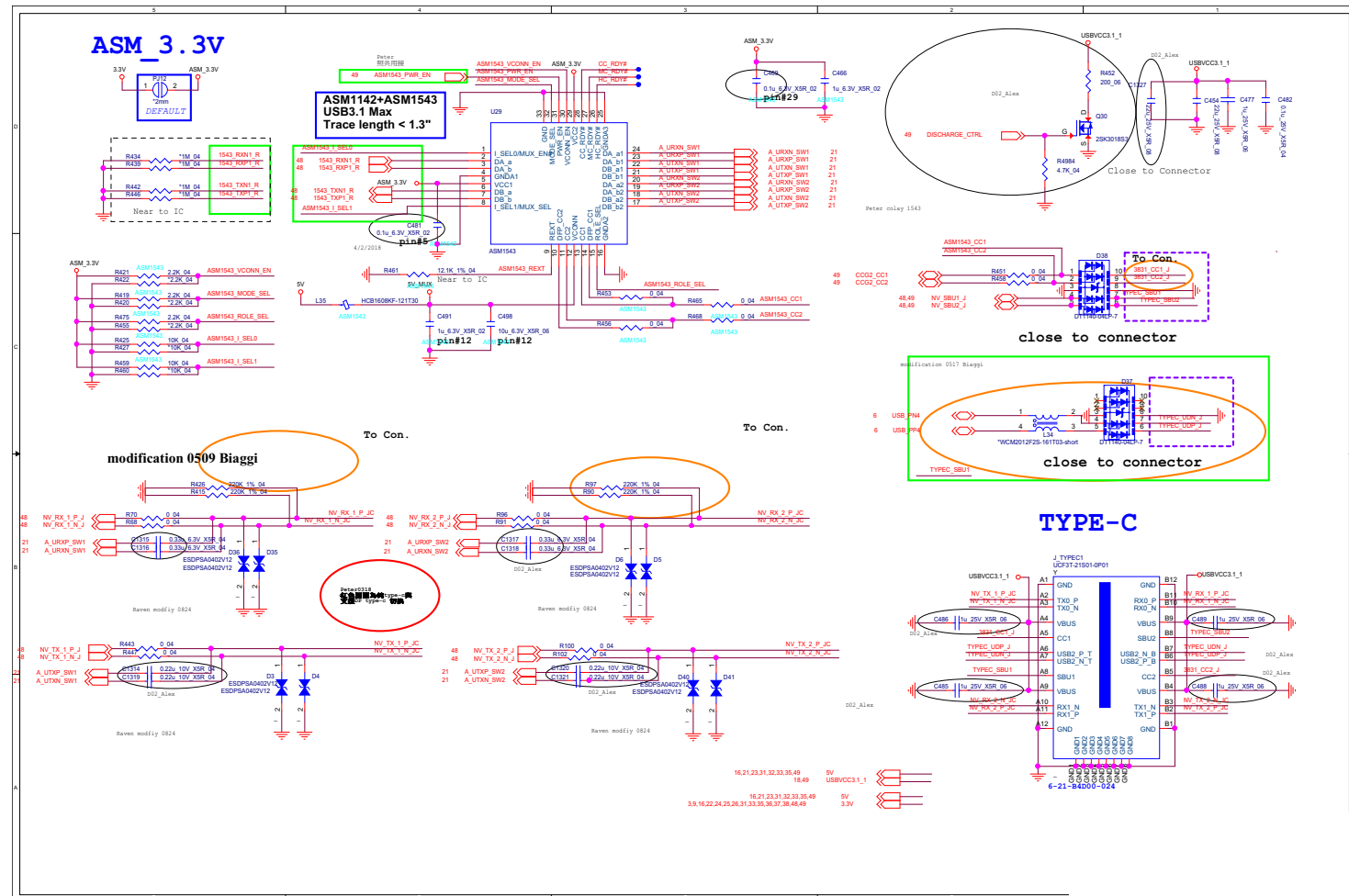
HDD, ODD, LED, TPM



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HDD, ODD, LED,
TPM

Schematic Diagrams

Type-C

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Type-C

NGFF_M (M2) SSD (PCIe 4X) Port2

FOR OPTANE SUPPORT
 10u 6.3V XSR_06 --> 22u
 0621

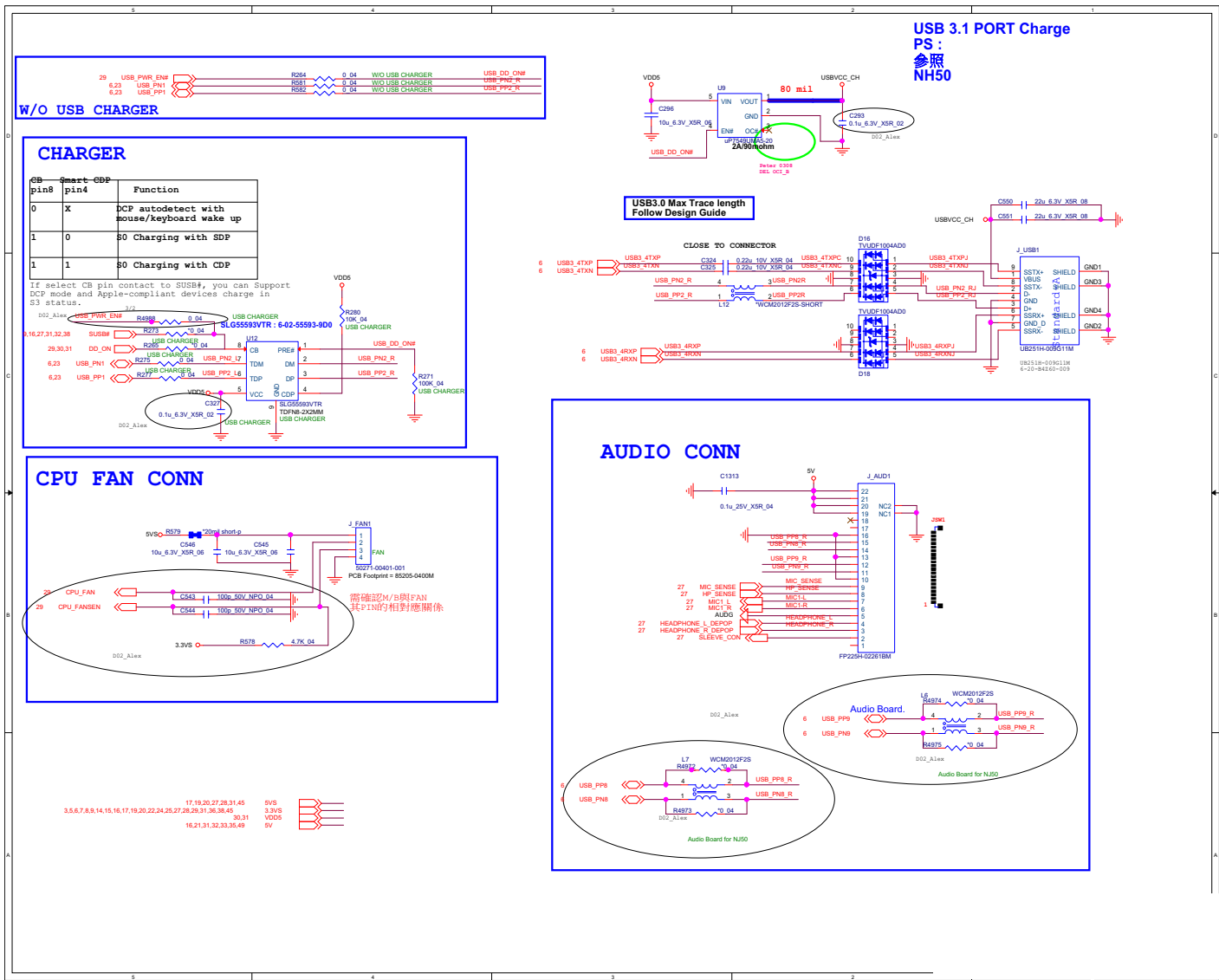
Pinout Table:

Pin	Signal	Pin	Signal	Pin	Signal
1	GND	26	PERP3	51	PERP3
2	GND	27	PERP2	52	PERP2
3	GND	28	PERP1	53	PERP1
4	GND	29	PERP0	54	PERP0
5	GND	30	PERP0	55	PERP0
6	GND	31	PERP0	56	PERP0
7	GND	32	PERP0	57	PERP0
8	GND	33	PERP0	58	PERP0
9	GND	34	PERP0	59	PERP0
10	GND	35	PERP0	60	PERP0
11	GND	36	PERP0	61	PERP0
12	GND	37	PERP0	62	PERP0
13	GND	38	PERP0	63	PERP0
14	GND	39	PERP0	64	PERP0
15	GND	40	PERP0	65	PERP0
16	GND	41	PERP0	66	PERP0
17	GND	42	PERP0	67	PERP0
18	GND	43	PERP0	68	PERP0
19	GND	44	PERP0	69	PERP0
20	GND	45	PERP0	70	PERP0
21	GND	46	PERP0	71	PERP0
22	GND	47	PERP0	72	PERP0
23	GND	48	PERP0	73	PERP0
24	GND	49	PERP0	74	PERP0
25	GND	50	PERP0	75	PERP0
26	GND	51	PERP0	76	PERP0
27	GND	52	PERP0	77	PERP0
28	GND	53	PERP0	78	PERP0
29	GND	54	PERP0	79	PERP0
30	GND	55	PERP0	80	PERP0
31	GND	56	PERP0	81	PERP0
32	GND	57	PERP0	82	PERP0
33	GND	58	PERP0	83	PERP0
34	GND	59	PERP0	84	PERP0
35	GND	60	PERP0	85	PERP0
36	GND	61	PERP0	86	PERP0
37	GND	62	PERP0	87	PERP0
38	GND	63	PERP0	88	PERP0
39	GND	64	PERP0	89	PERP0
40	GND	65	PERP0	90	PERP0
41	GND	66	PERP0	91	PERP0
42	GND	67	PERP0	92	PERP0
43	GND	68	PERP0	93	PERP0
44	GND	69	PERP0	94	PERP0
45	GND	70	PERP0	95	PERP0
46	GND	71	PERP0	96	PERP0
47	GND	72	PERP0	97	PERP0
48	GND	73	PERP0	98	PERP0
49	GND	74	PERP0	99	PERP0
50	GND	75	PERP0	100	PERP0

Schematic Diagrams

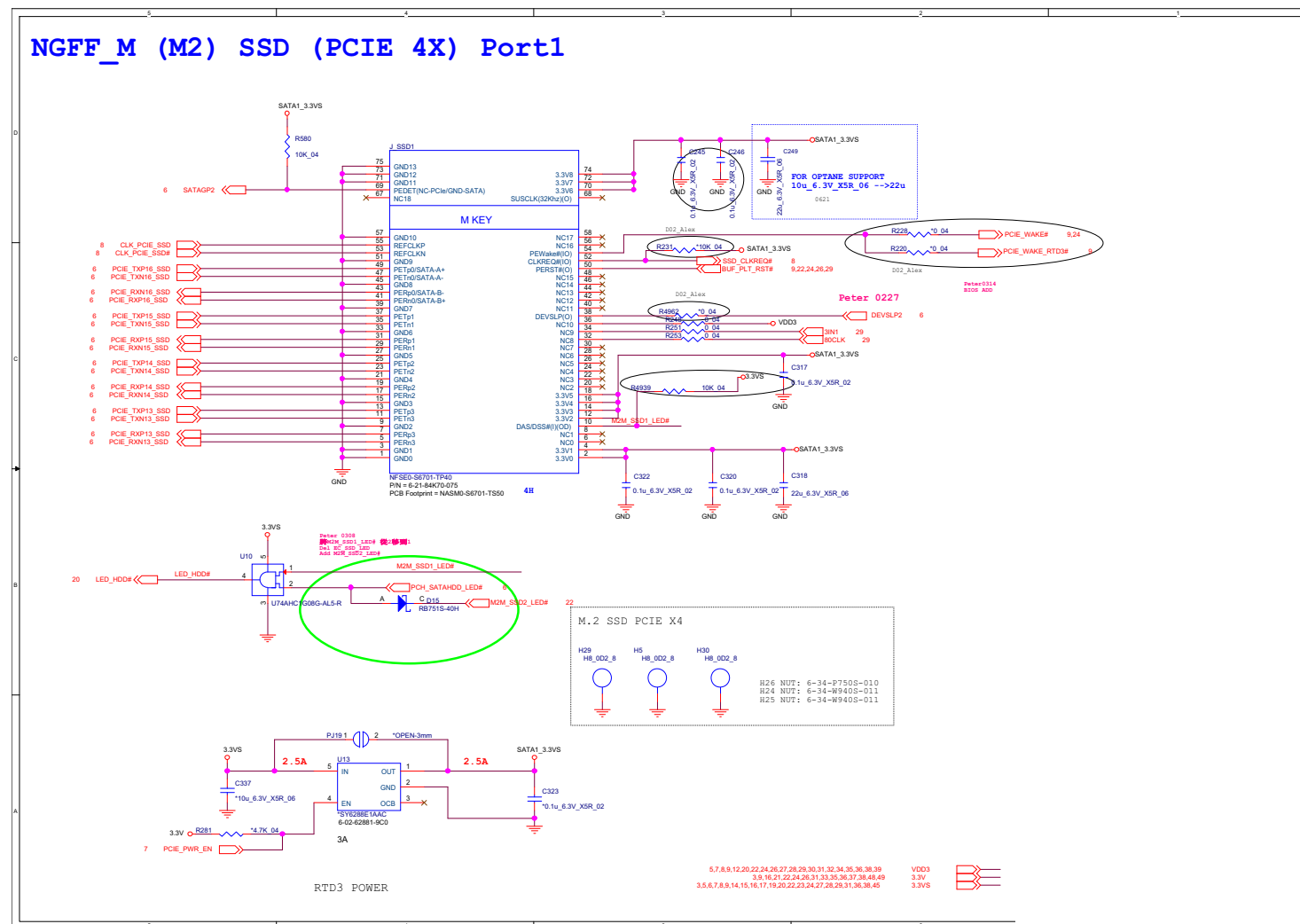
USB Charger/Audio Conn.

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USBCharger/Audio
Conn.

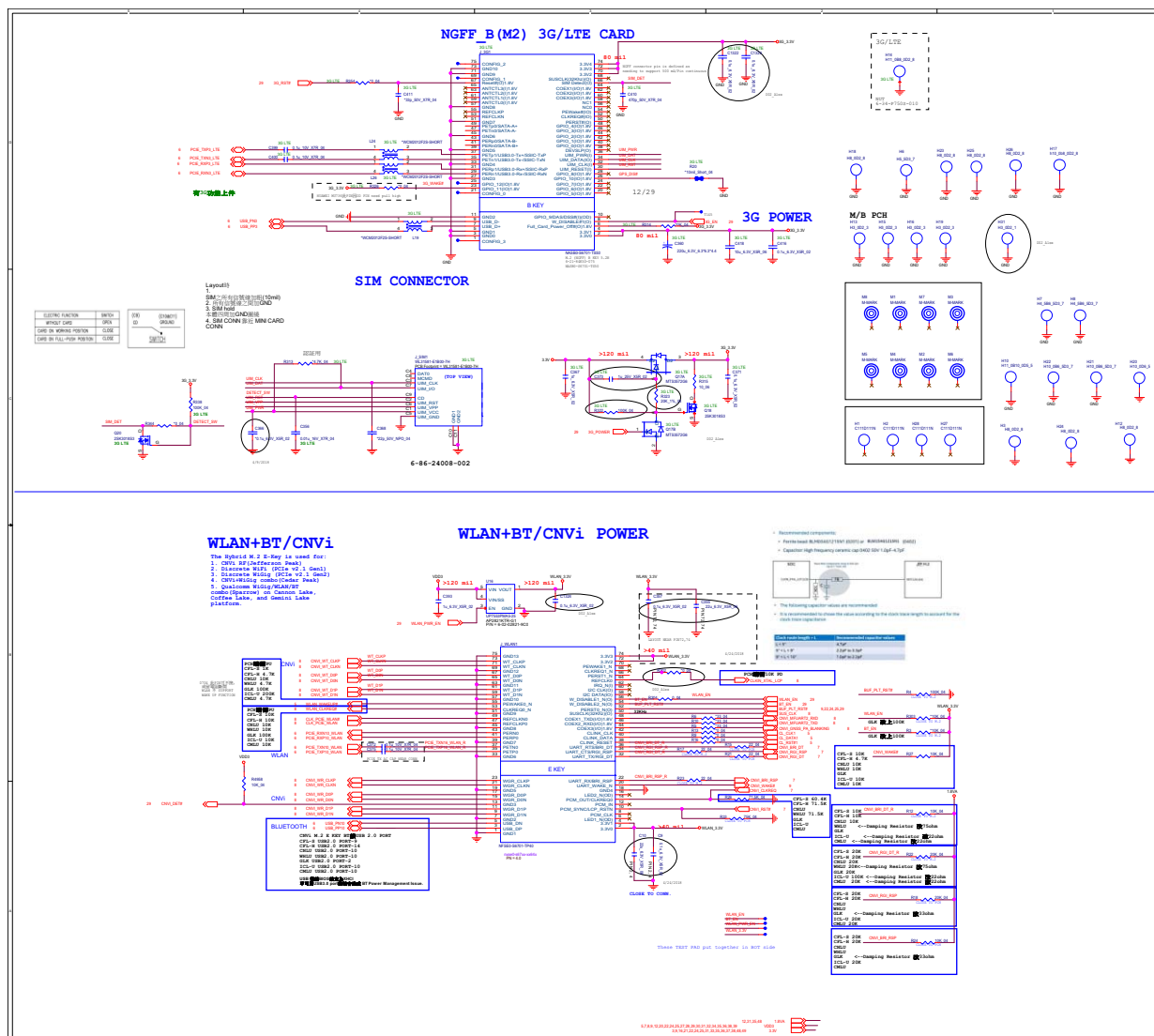


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Card Reader &
LAN_RTL8411B



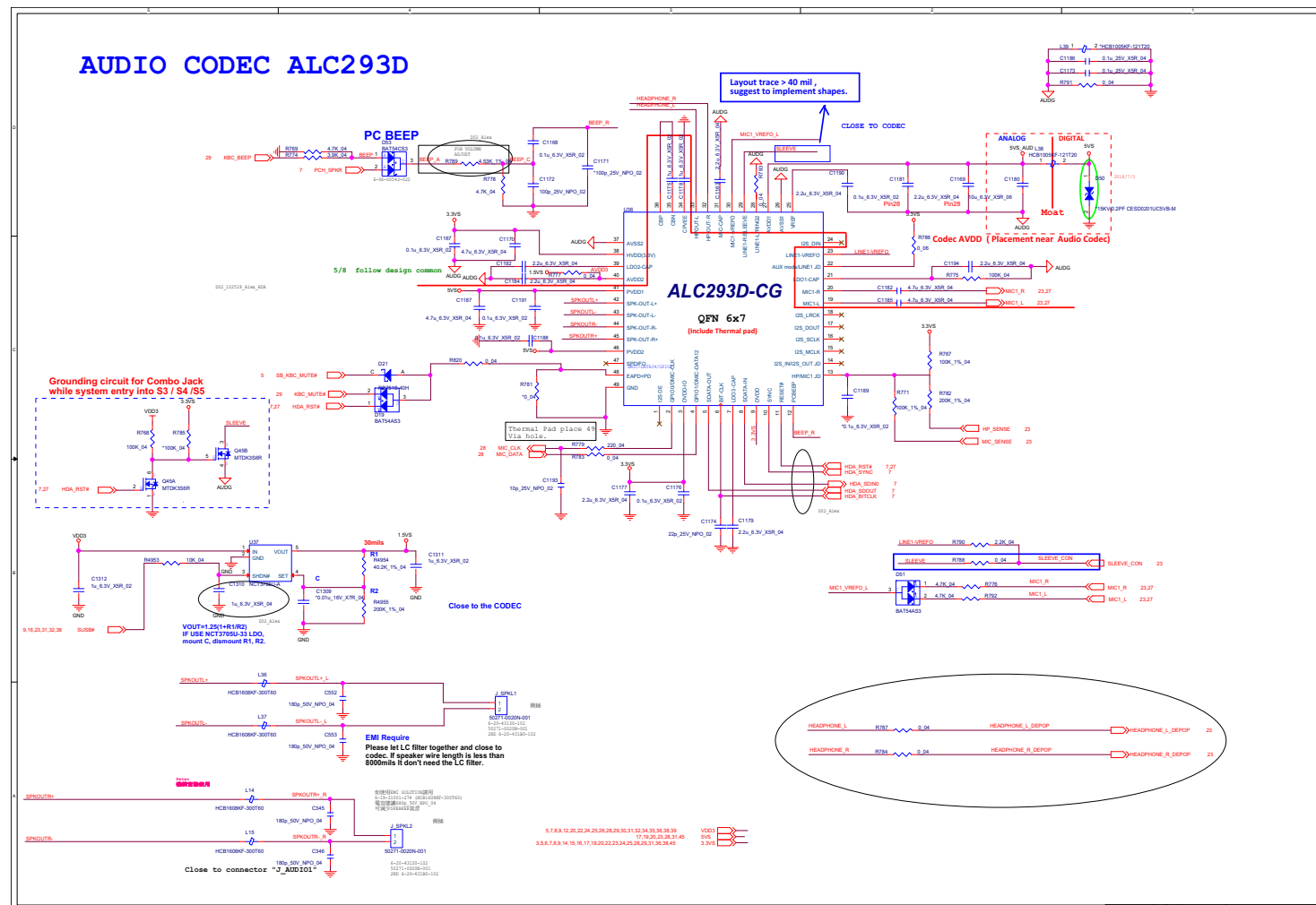


M.2 Card

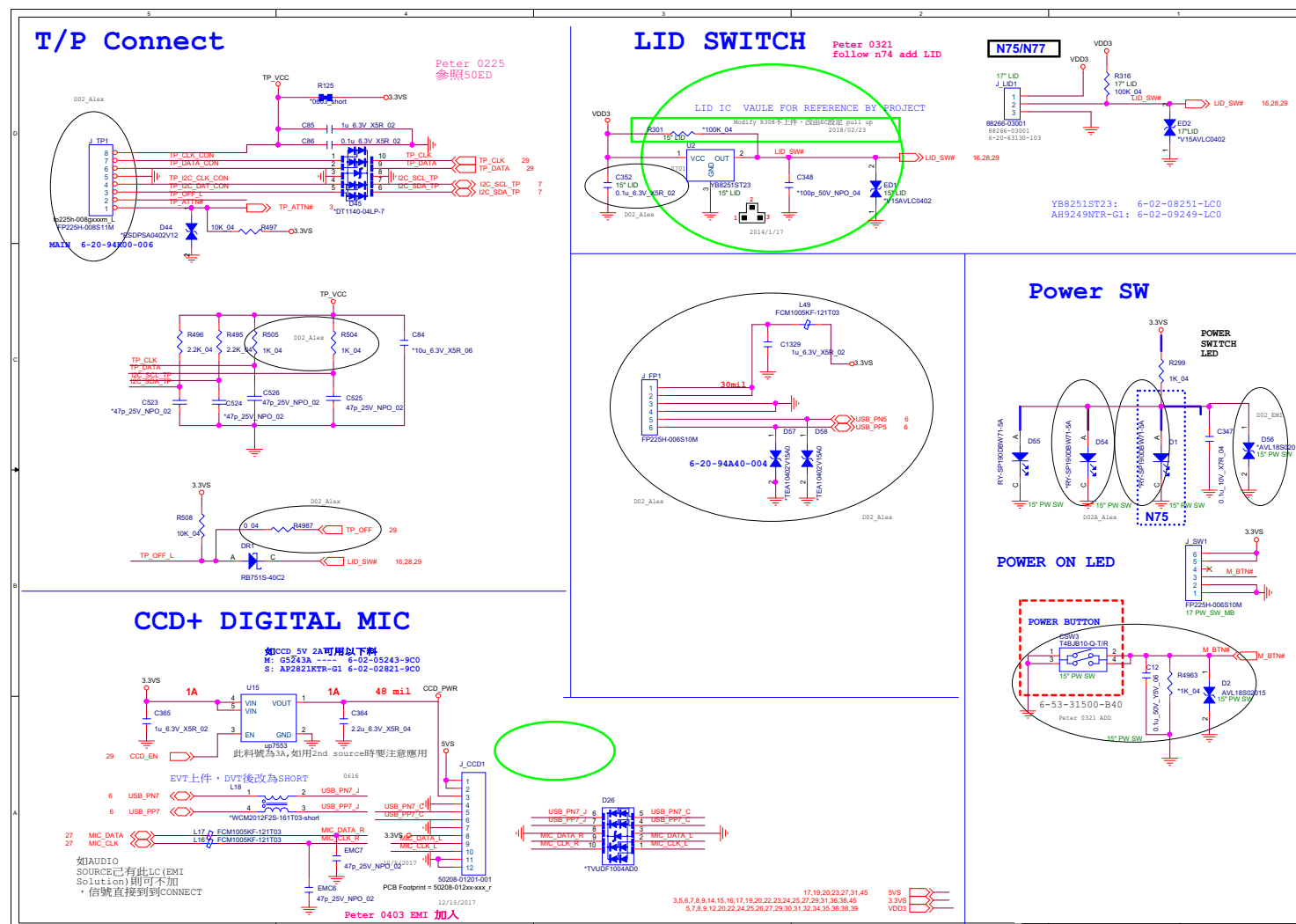
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M.2 Card

Audio Codec

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Audio Codec



CCD, MIC, LID, I/O Conn

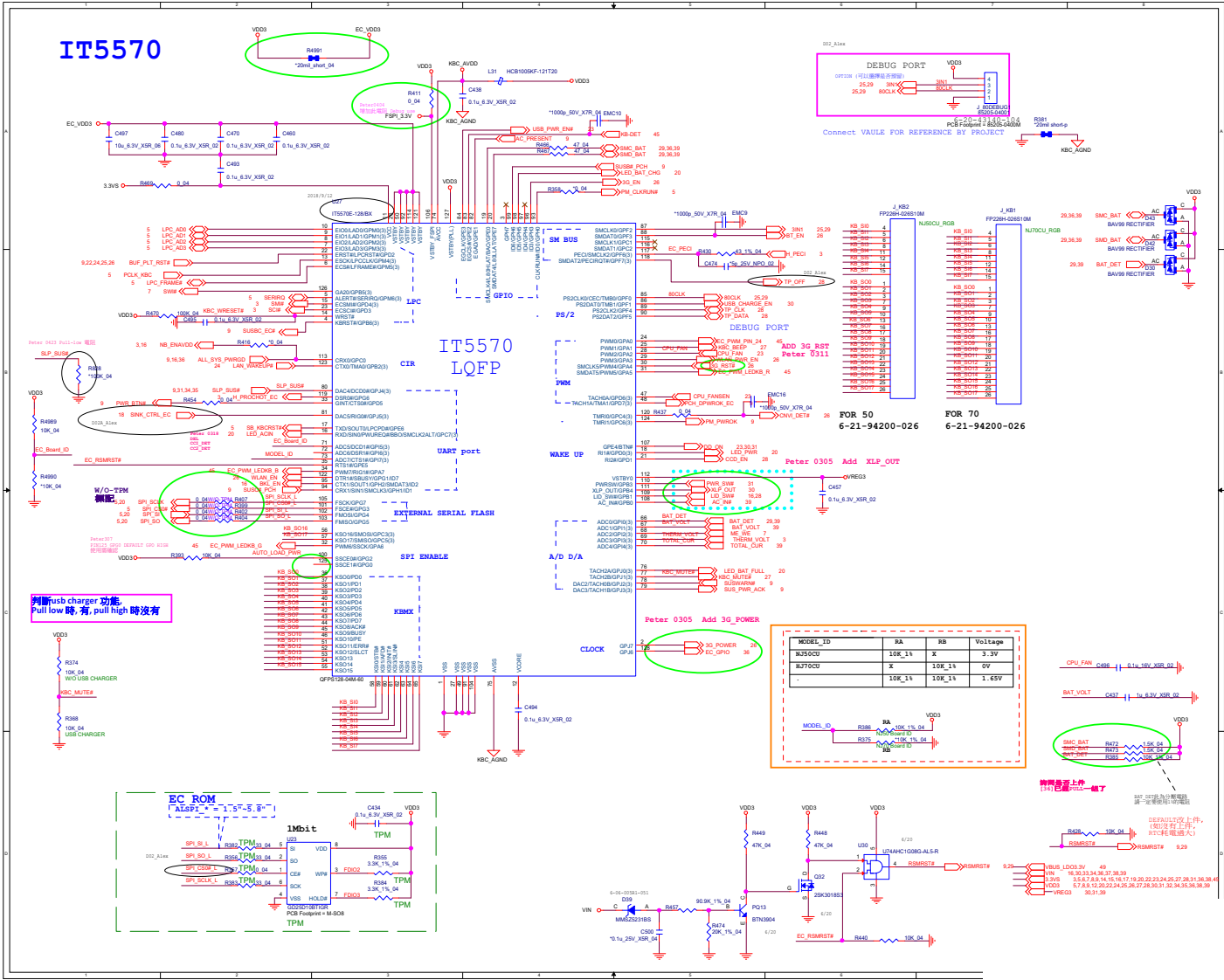


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CCD, MIC, LID, I/O
Conn

KBC ITE IT5570

B. Schematic Diagrams

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KBC ITE IT5570

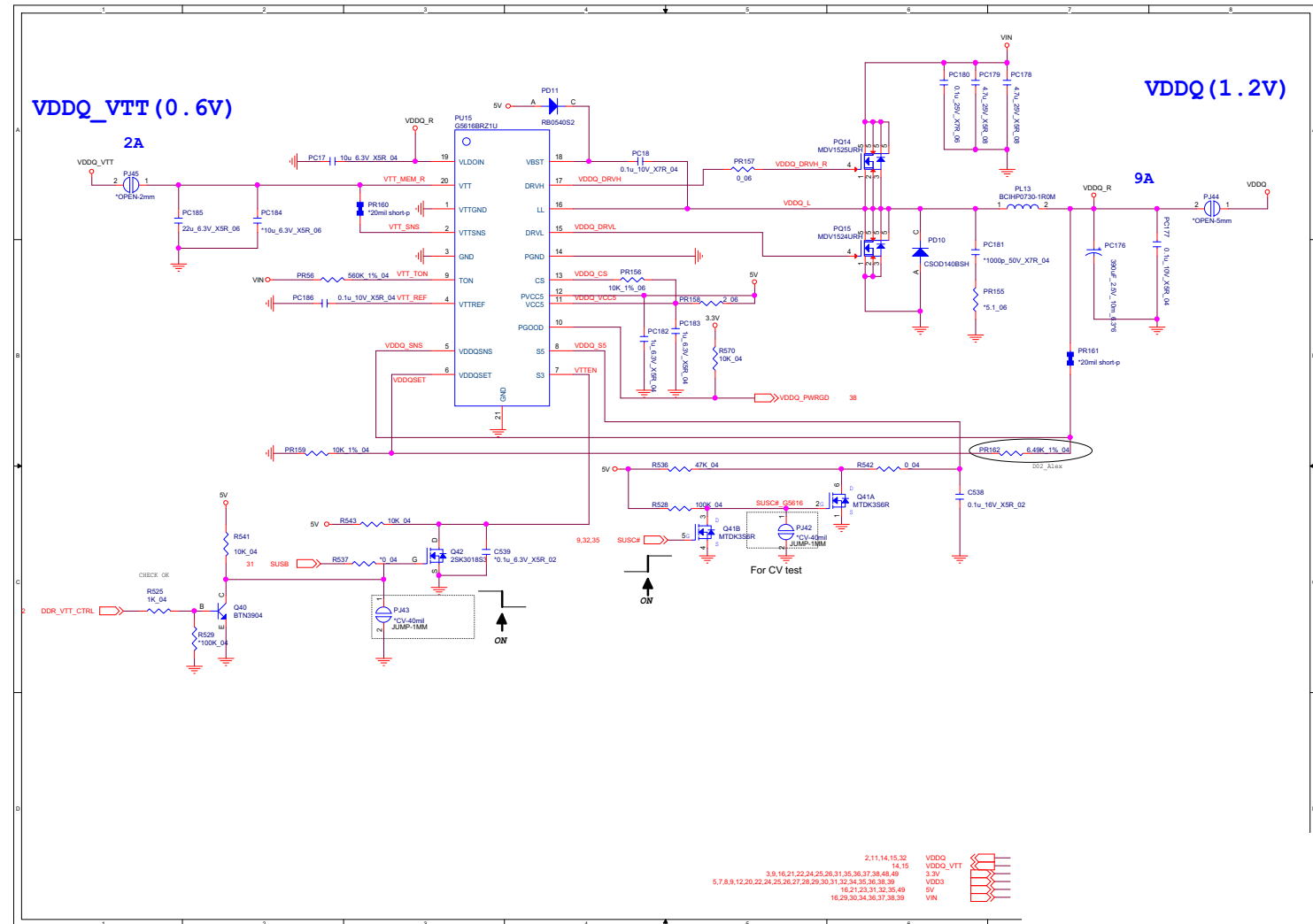


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1.05DX VCCSTG,
VCCSFR, VCCST



VDDQ, VDDQ_VTT

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VDDQ, VDDQ_VTT

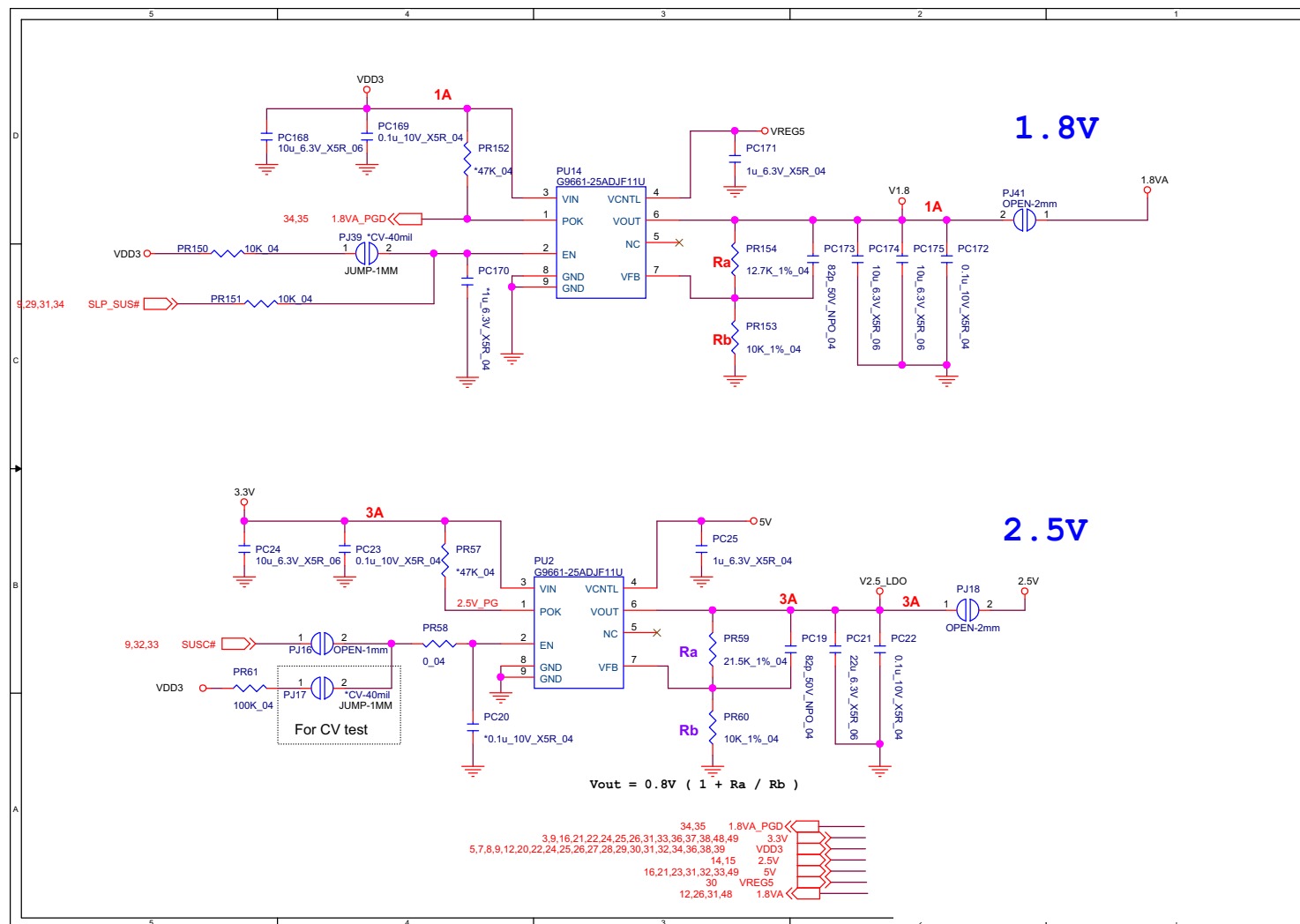


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1.05VA

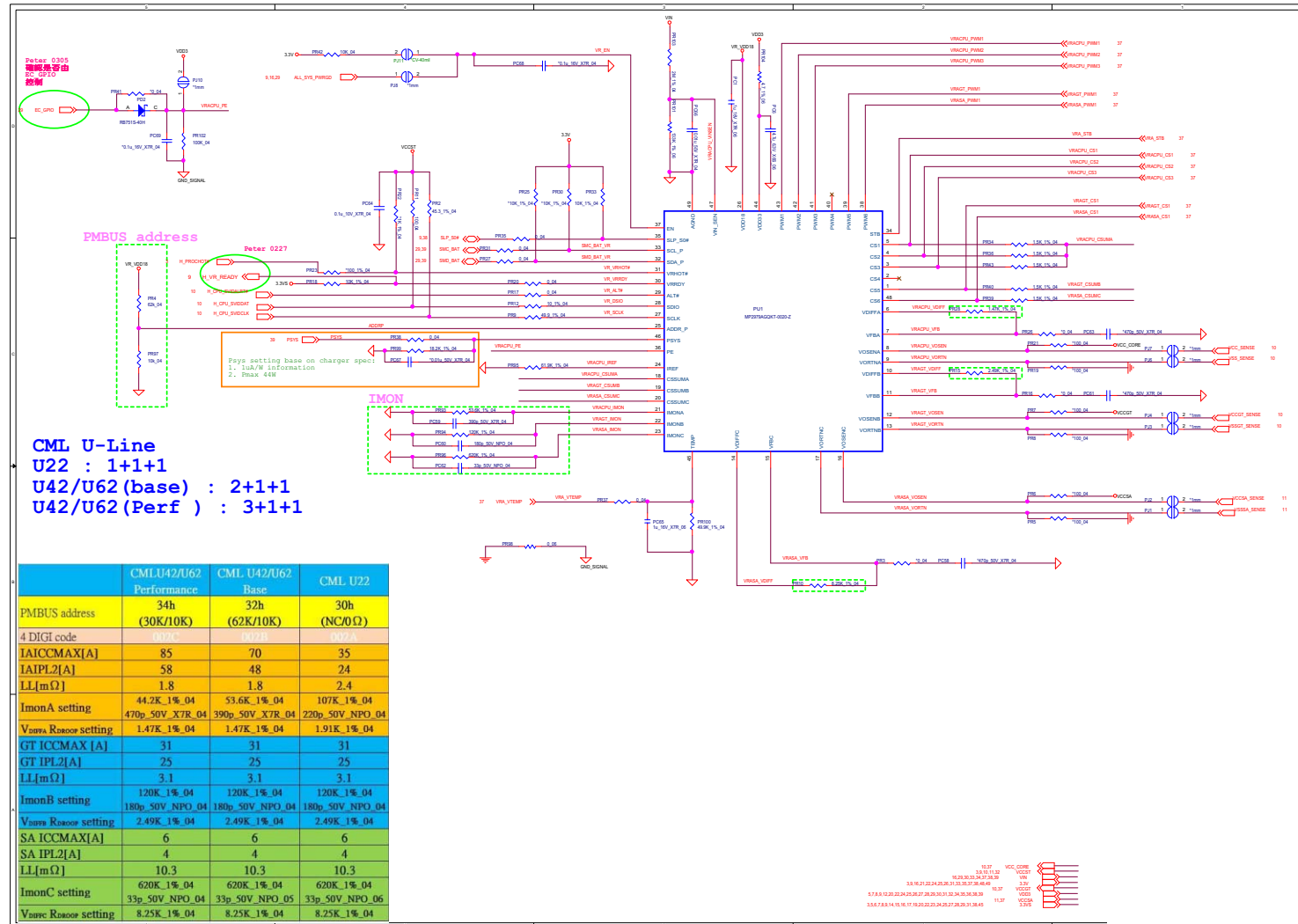


Schematic Diagrams

1.8V, 2.5V

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1.8V, 2.5V

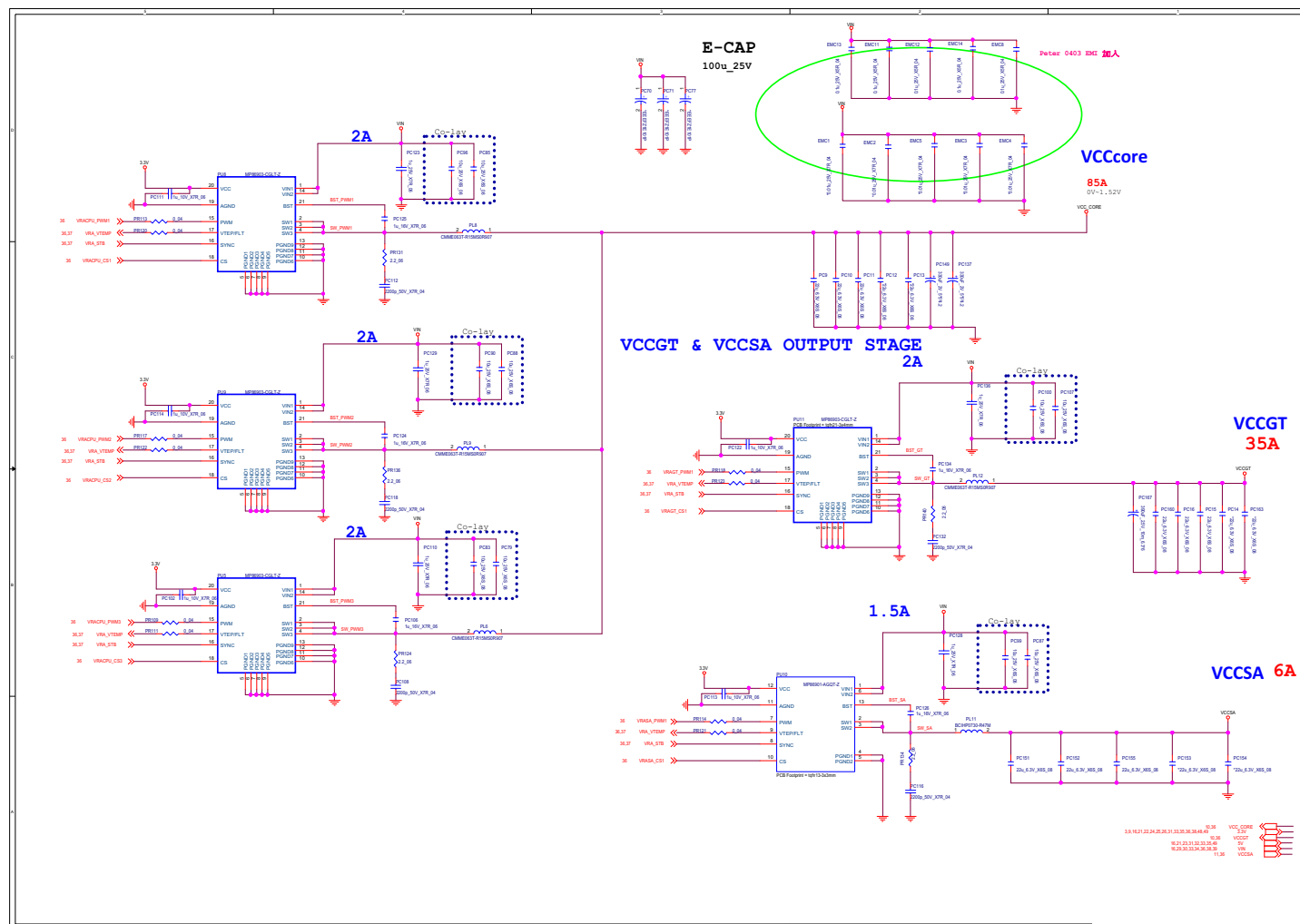
MP2979 Controller



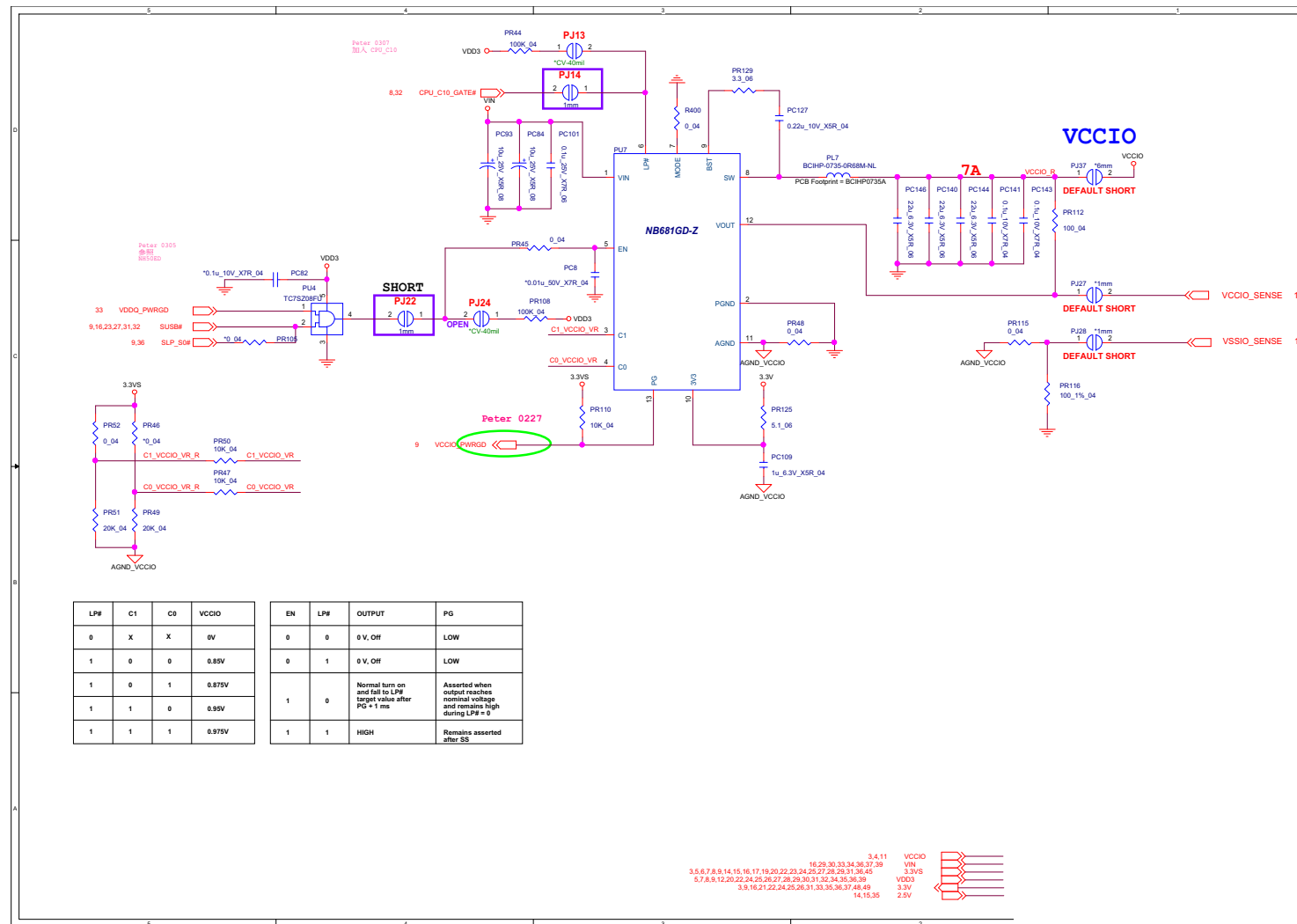
Sheet 36 of 46
MP2979 Controller

VCCIN, VCCGT, VCCSA Output

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VCCIN, VCCGT,
VCCSA Output



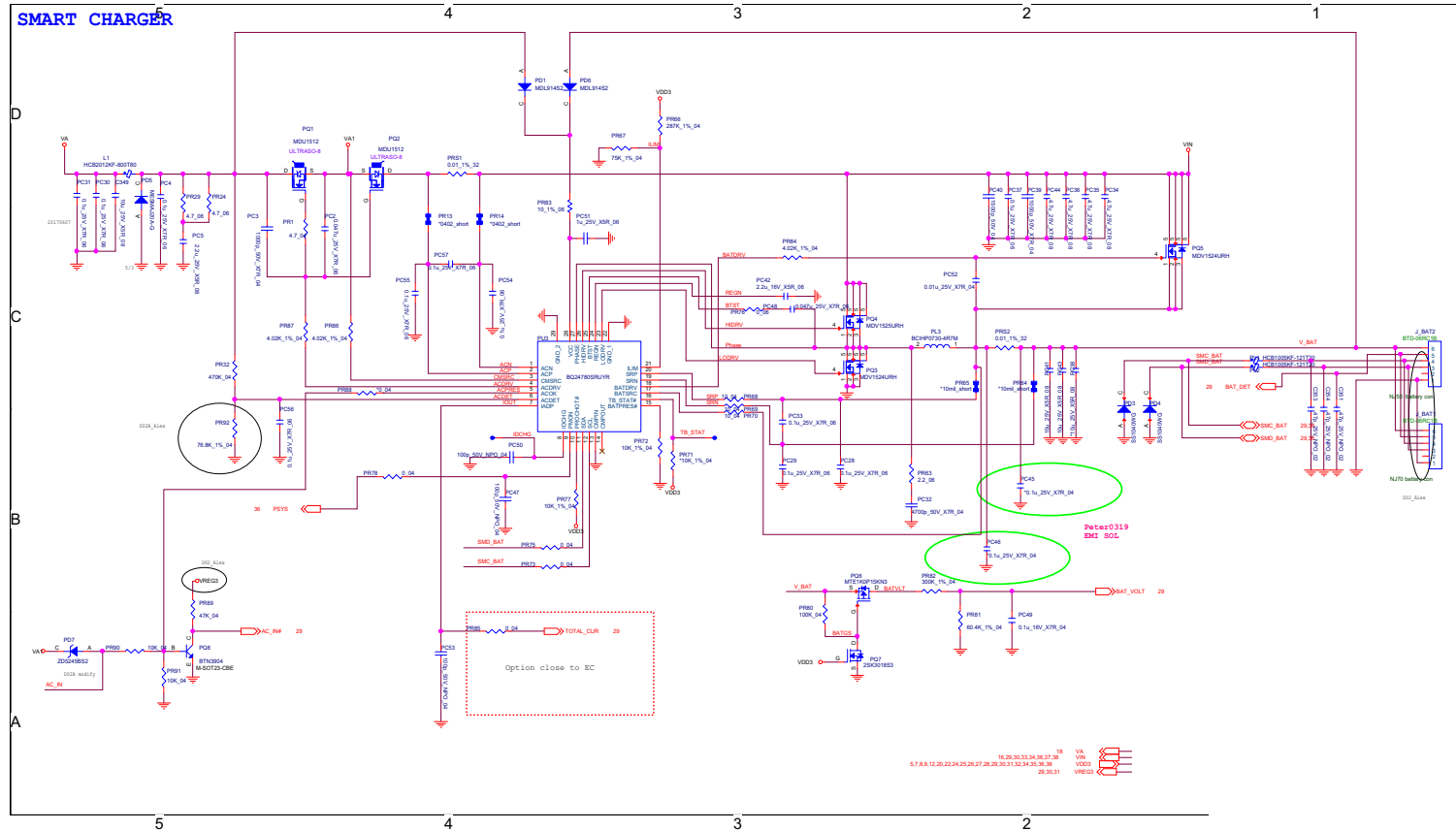
VCCIO, 2.5V



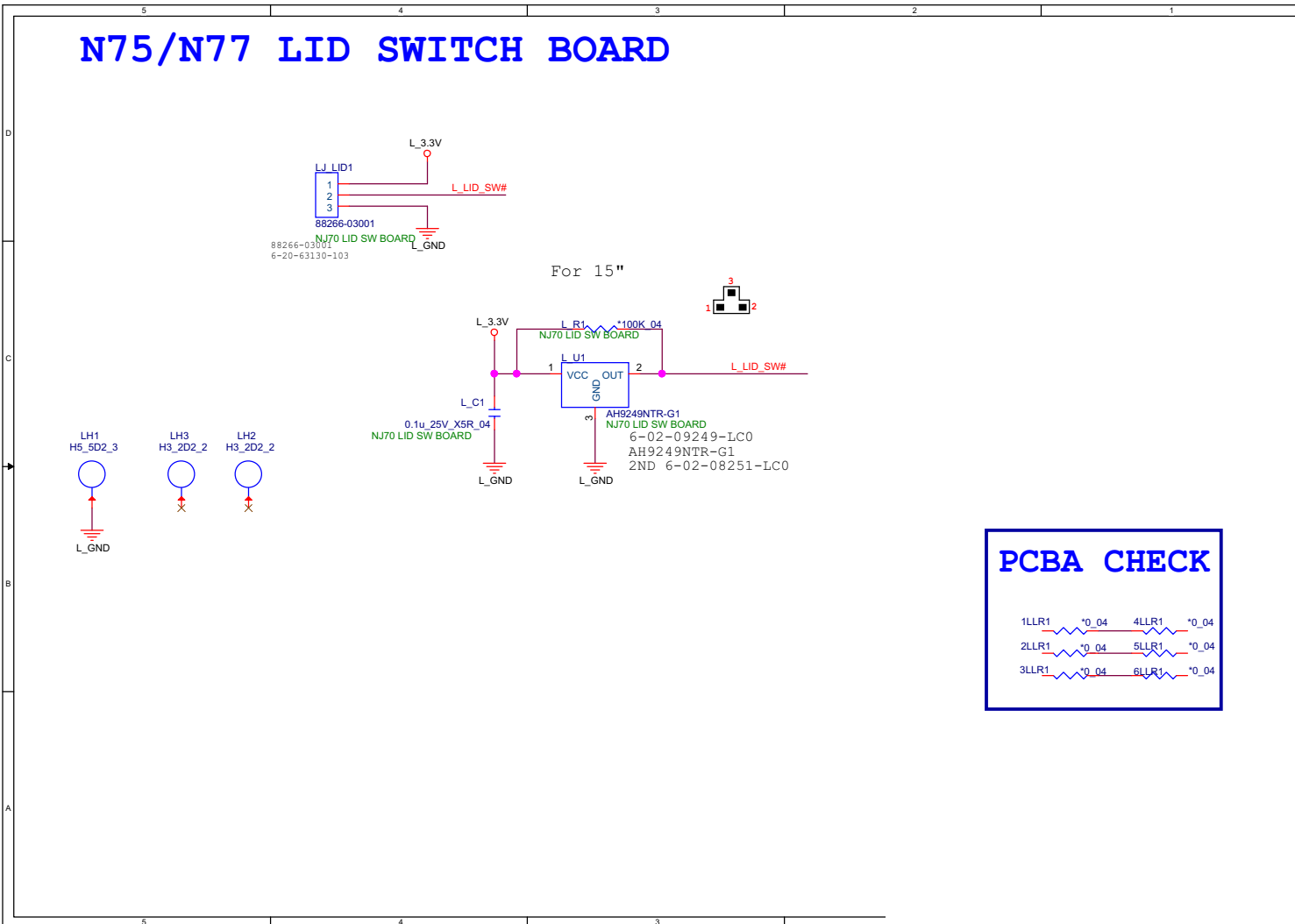
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VCCIO, 2.5V

Charger, DC IN

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Charger, DC IN



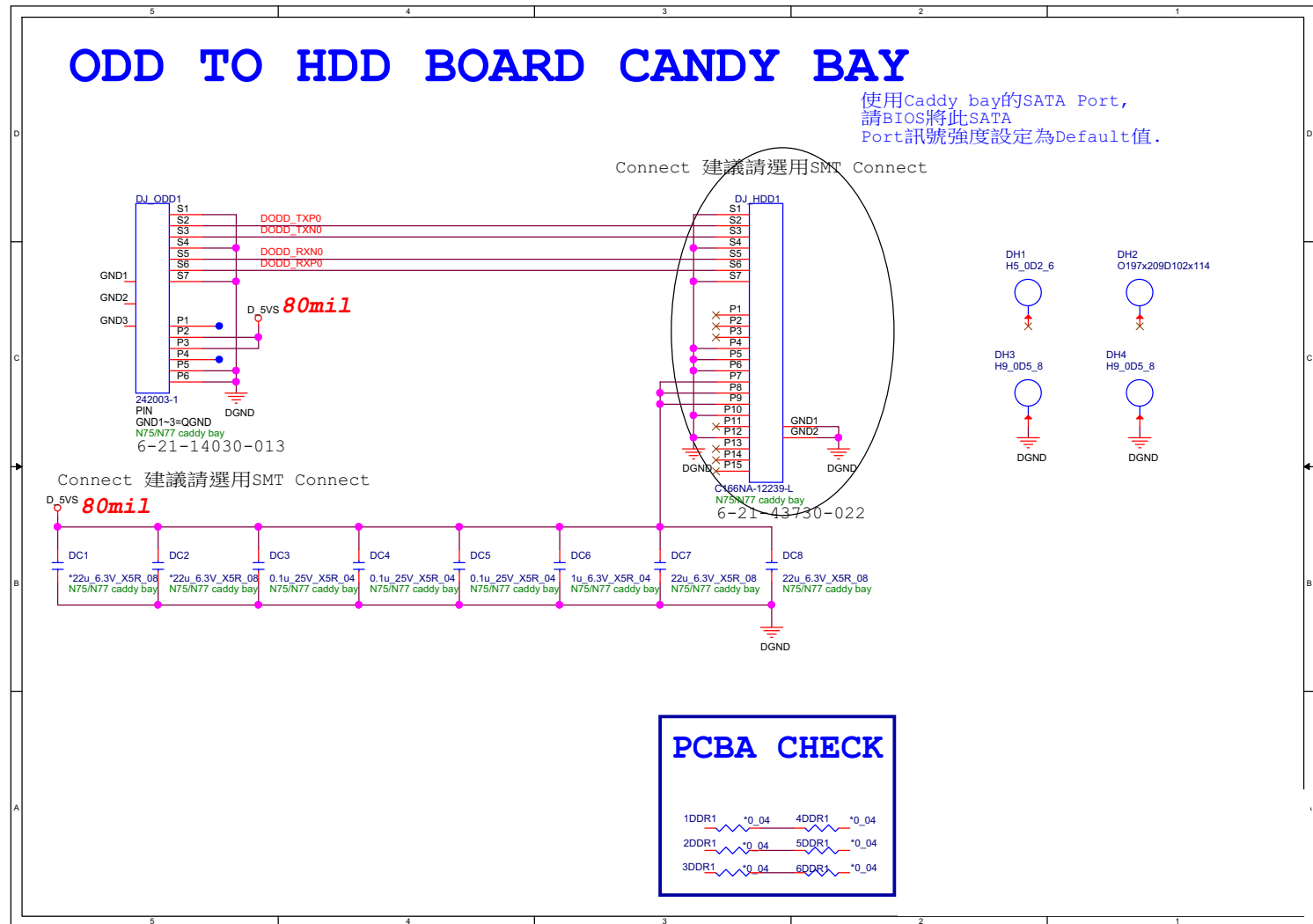
LID SW Board



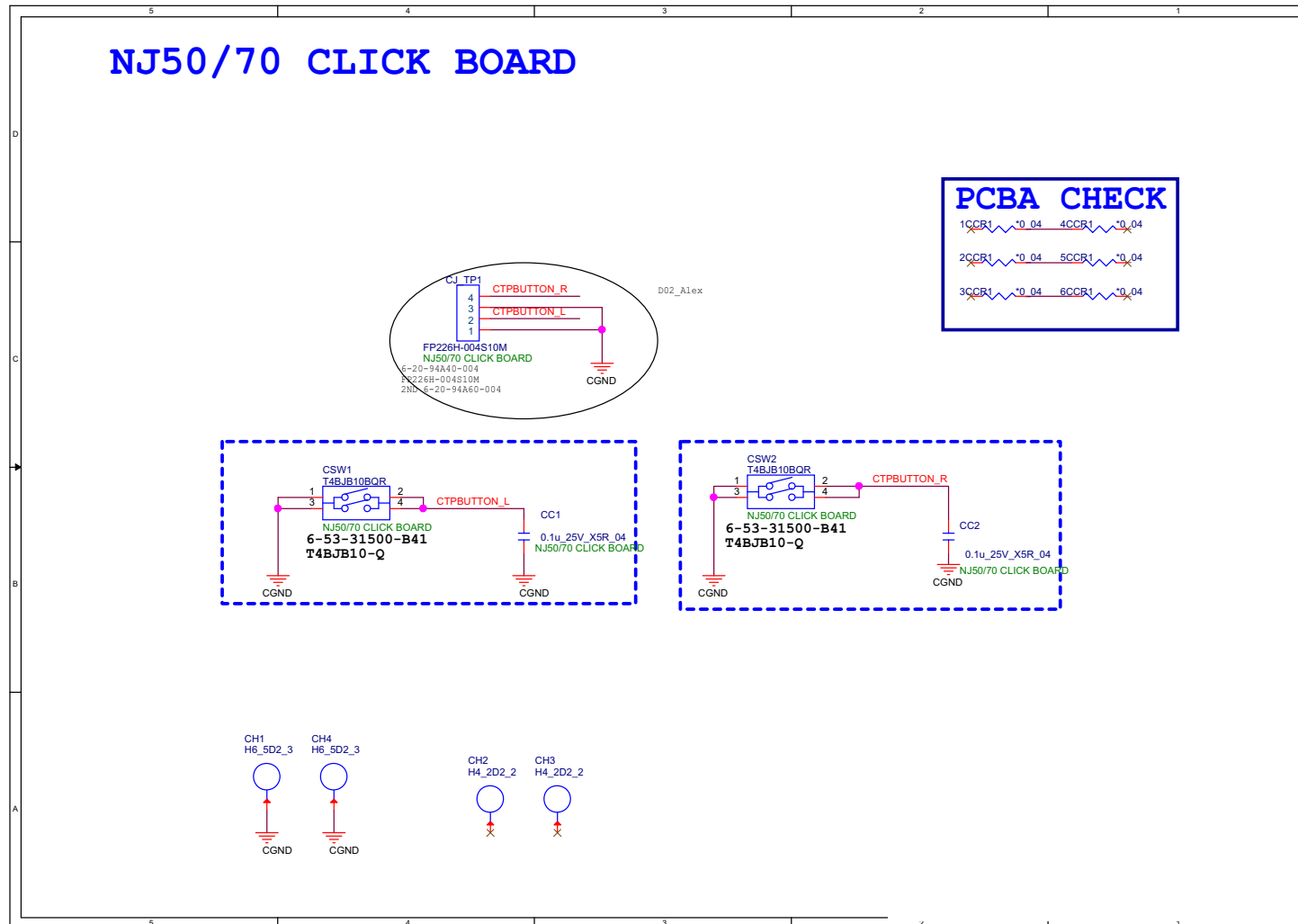
Sheet 40 of 46
LID SW Board

ODD to HDD Caddy Bay

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ODD to HDD Caddy Bay

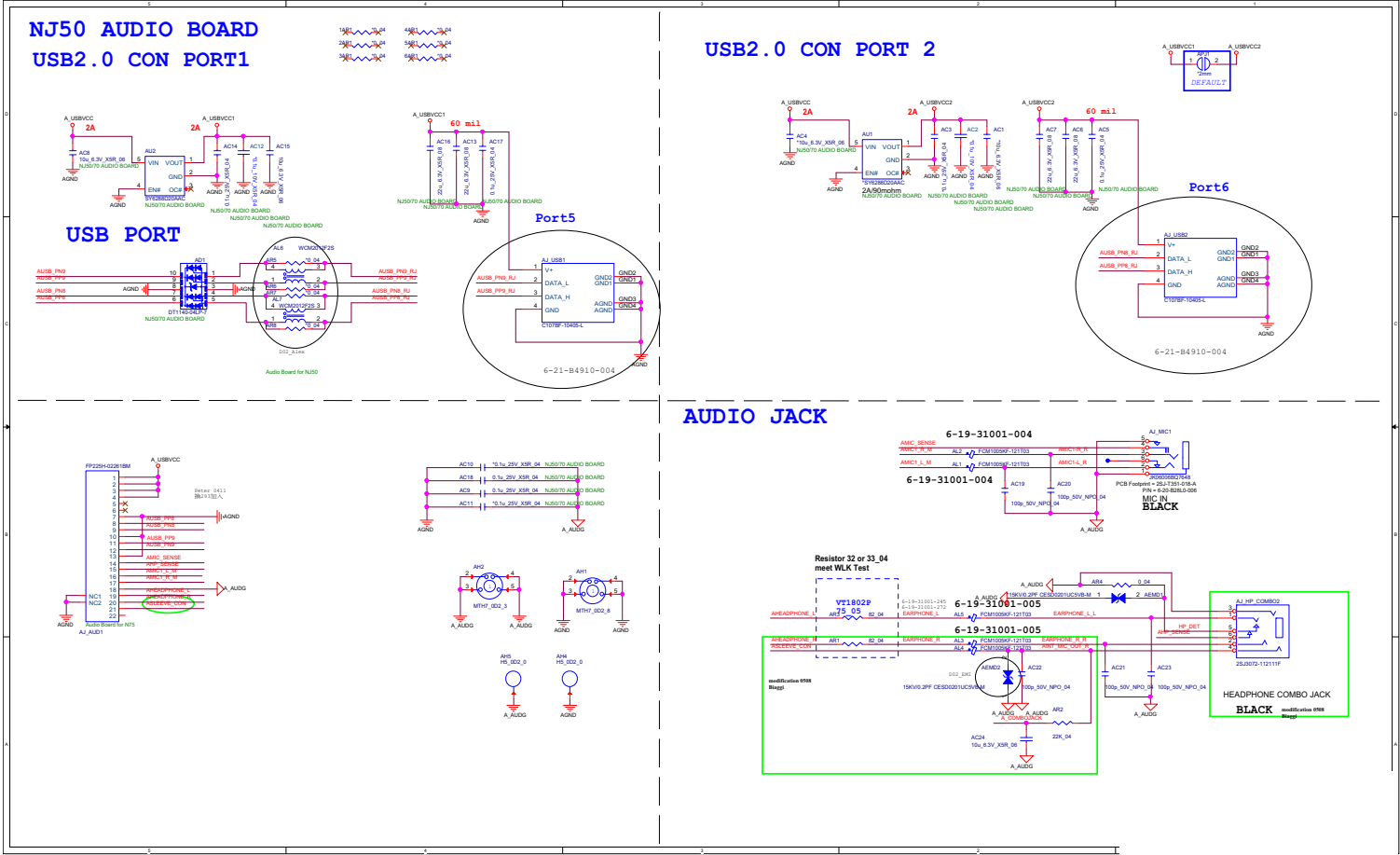


Click Board



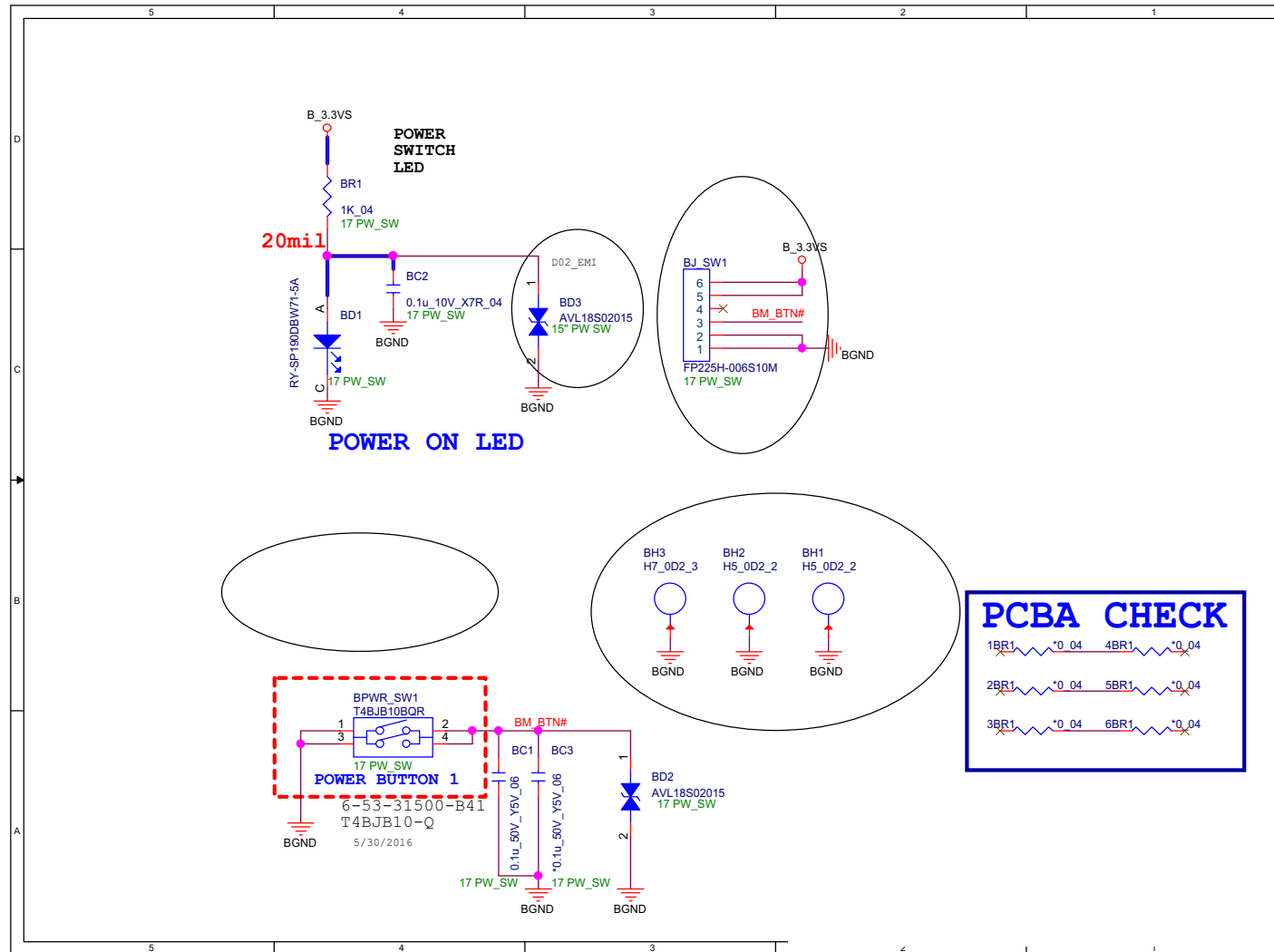
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Click Board

Audio Board



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Audio Board

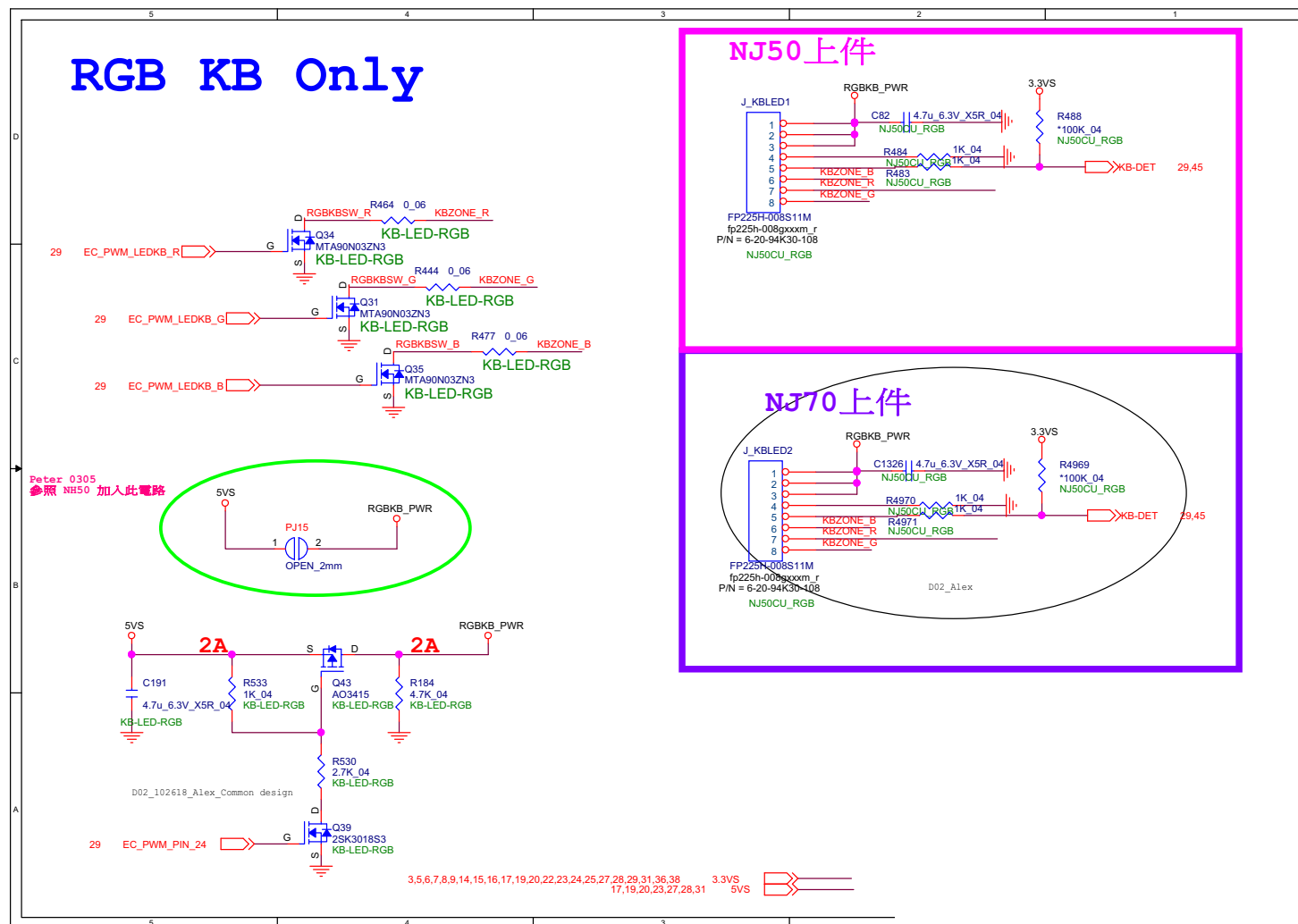
Power SW Board



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Power SW Board

Schematic Diagrams

RGB KB

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RGB KB

Power Seq.

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Power Seq.