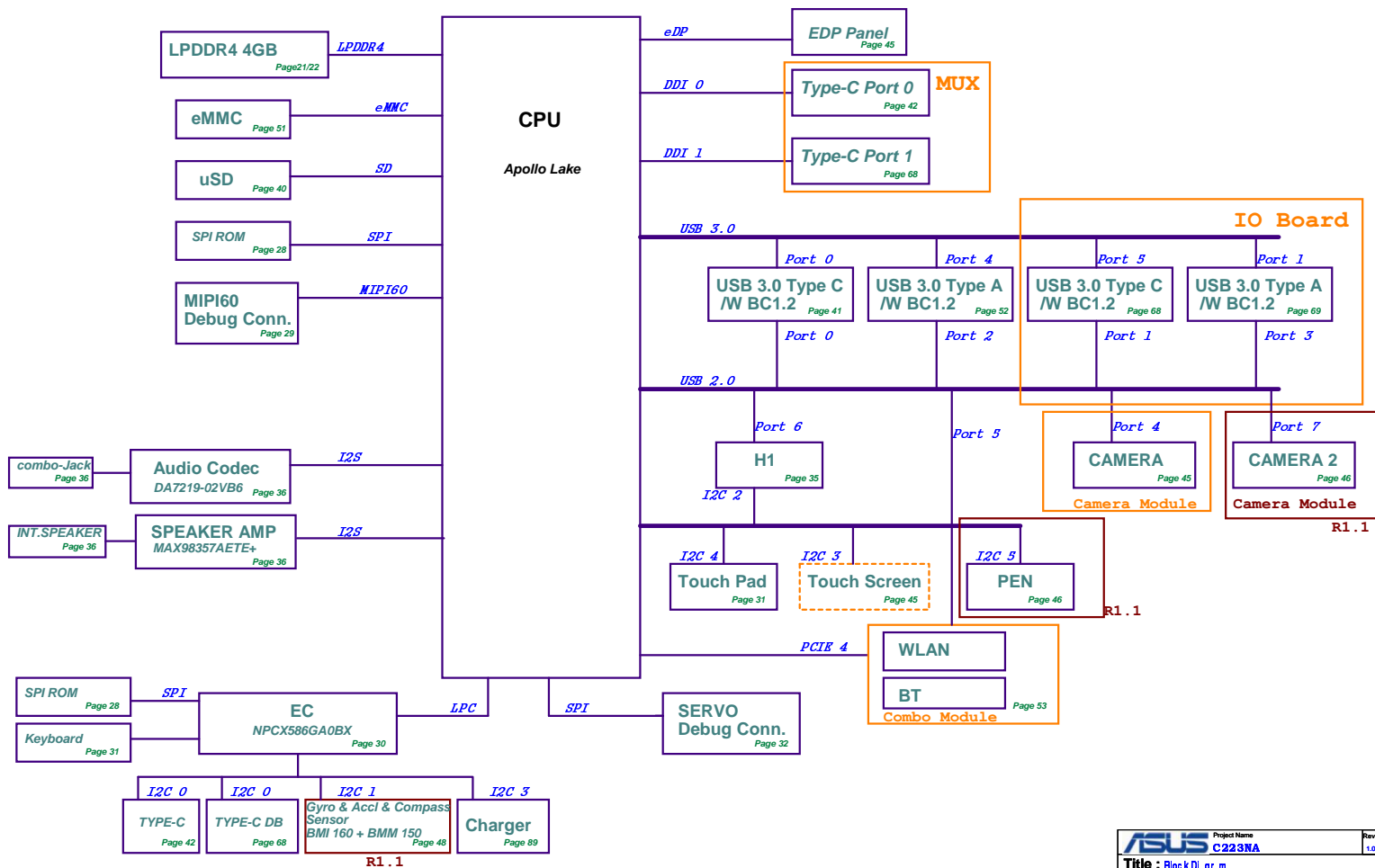


SYSTEM PAGE REF.

PAGE	Content
1	Block Diagram
2	Sku Table/BOM Option
3	Power Flow Chart
5	CPU_LPDDR4
6	CPU_DISPLAY
7	CPU_SDIO/EMMC
8	CPU_USB3/PCIE
9	CPU_SATA/PCIE/USB
10	CPU_I2S/LPC/CLOCKS
11	CPU_SVID/SMBUS/USB2
12	CPU_SPI/I2C
13	CPU_PMU/UART
14	CPU_GPIO
15	CPU_RTC/PWM
16	CPU_RCOMP
17	CPU_DECOUPLING
18	CPU_GND
19	CPU_POWER
21	LPDDR4_CH0
22	LPDDR4_CH1
28	SPI ROM
29	MIPI60 Debug
30	EC_NPCX586GA0BX
31	KB_TP
32	SERVO Debug
34	INAs
35	H1_SECURE
36	Audio Codec_DA7219
40	uSD
41	Type-C MUX
42	Type-C PWR
43	Type-C Conn
44	Type-A Conn
45	EDP/CAM/TCH
46	PEN/CAM2
48	GYRO+ACCEL+COMPASS/LED
49	EMI
51	eMMC
52	Type-A Conn
53	WLAN
60	Battery Conn
61	B-to-B Conn
65	SCREW HOLE
67	IO_B-to-B Conn IO Board
68	IO_TypeC
69	IO_TypeA
80	POWER-PMIC LOGIC
81	POWER-PMIC RAILS
83	POWER-LOAD SWITCHES
87	PW_+3VADSW/+5VSUS
89	POWER-CHARGER

BLOCK DIAGRAM

C223NA/C423NA/C523NA SCHEMATIC Revision 1.2



Function options		
Touch screen	/touch screen	STUFF
	/touch screen@	DO NOT STUFF
H1 SuzyQ	/H1_Debug	STUFF
IO_TypeA	/IO_TypeA	STUFF
	/IO_TypeA@	DO NOT STUFF
Gyro+Accel	/Gyro+Accel	STUFF
	/Gyro+Accel@	DO NOT STUFF
MIPI60	/MIPI60	STUFF
	/MIPI60@	DO NOT STUFF
ME PWRBTN	/Mech_PWRBTN	STUFF
INAS	/INAS	STUFF
SERVO Board	/SERVO	STUFF
Convertible	/Flip	STUFF
2ND camera	/C-PANEL CAMERA	STUFF
Pen sensor	/PEN	


Function options table

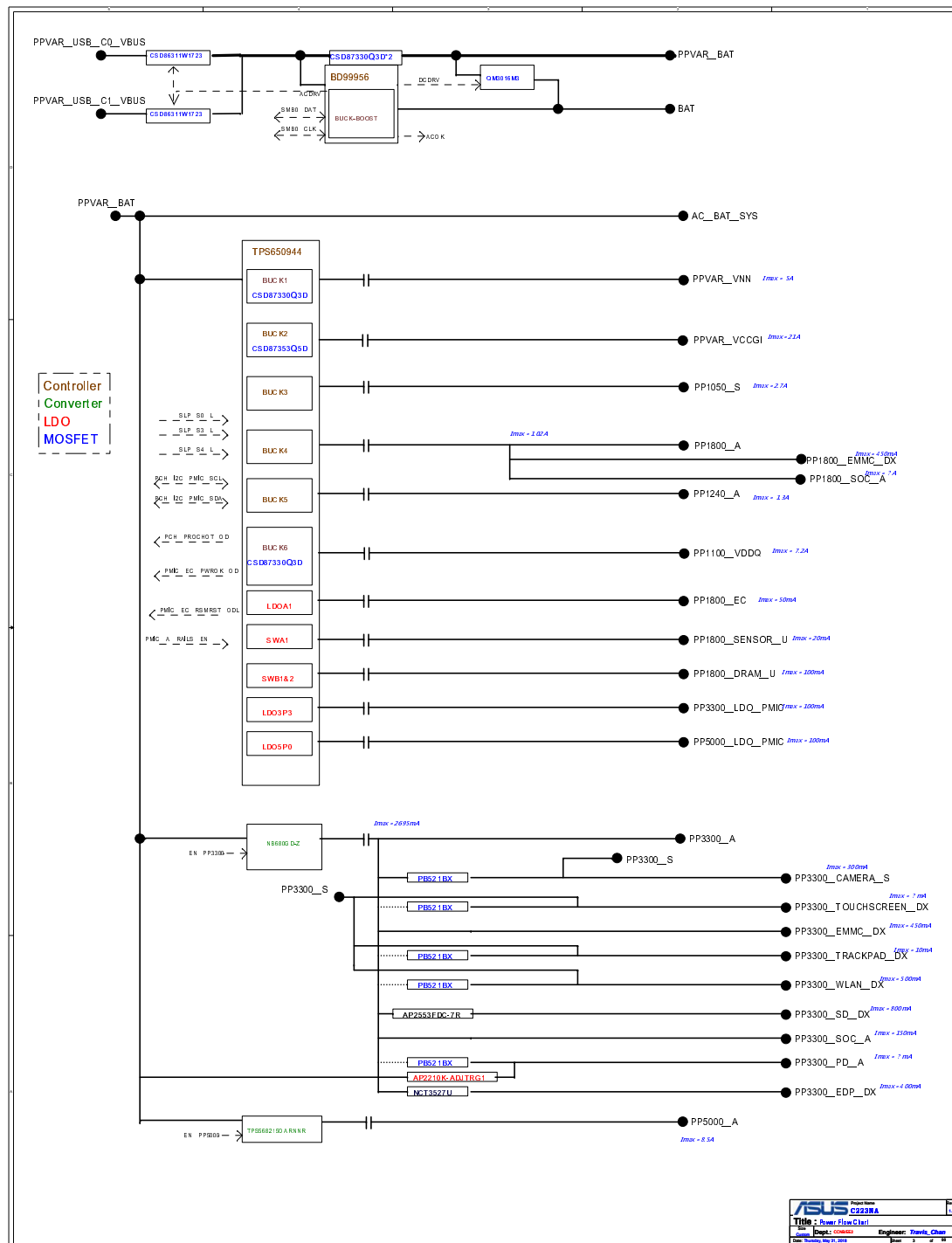
C223NA	C423NA	C523NA
-----STUFF-----		
N/A	N/A	N/A
/EMI	/EMI	/EMI
/SERVO	/SERVO	/SERVO
/H1_Debug	/H1_Debug	/H1_Debug
/INAS	/INAS	/INAS
/MIPI60	/MIPI60	/MIPI60
/Mech_PWRBTN	/Mech_PWRBTN	/Mech_PWRBTN
	/IO_TypeA	/IO_TypeA
	/touch screen(If need)	

**C223NA/C423NA/C523NA
BOM option table (NPI)**

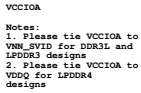
C223NA	C423NA	C523NA
-----STUFF-----		
N/A	N/A	N/A
/EMI	/EMI	/EMI
/SERVO	/SERVO	/SERVO
/H1_Debug	/H1_Debug	/H1_Debug
/INAS	/INAS	/INAS
/MIPI60	/MIPI60	/MIPI60
/Mech_PWRBTN	/Mech_PWRBTN	/Mech_PWRBTN
	/IO_TypeA	/IO_TypeA
	/touch screen(If need)	

**C223NA/C423NA/C523NA
BOM option table (R1.1)**

		Project Name	Rev
		C223NA	1.0
Title : Sku Table/BOM Options			
Size	Dept.: CCNB/EE2	Engineer: Travis_Chan	
B	Date: Thursday, May 31, 2018	Sheet	2 of 99



DOI: 10.1002/eqm2
DOI: 10.1002/eqm2



	DOR_1A_DQ[31:0]	22
	DOR_1B_DQ[31:0]	22

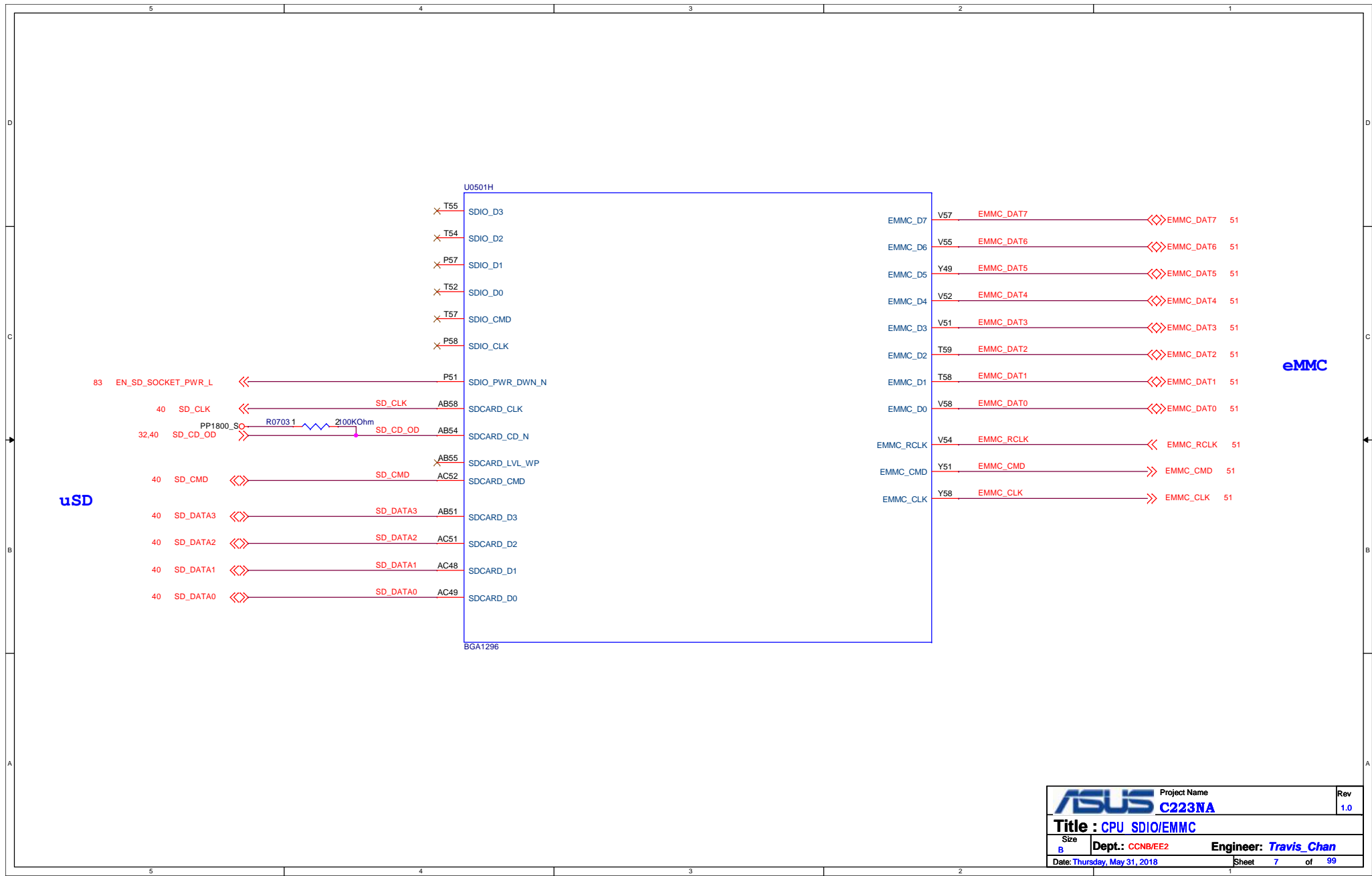


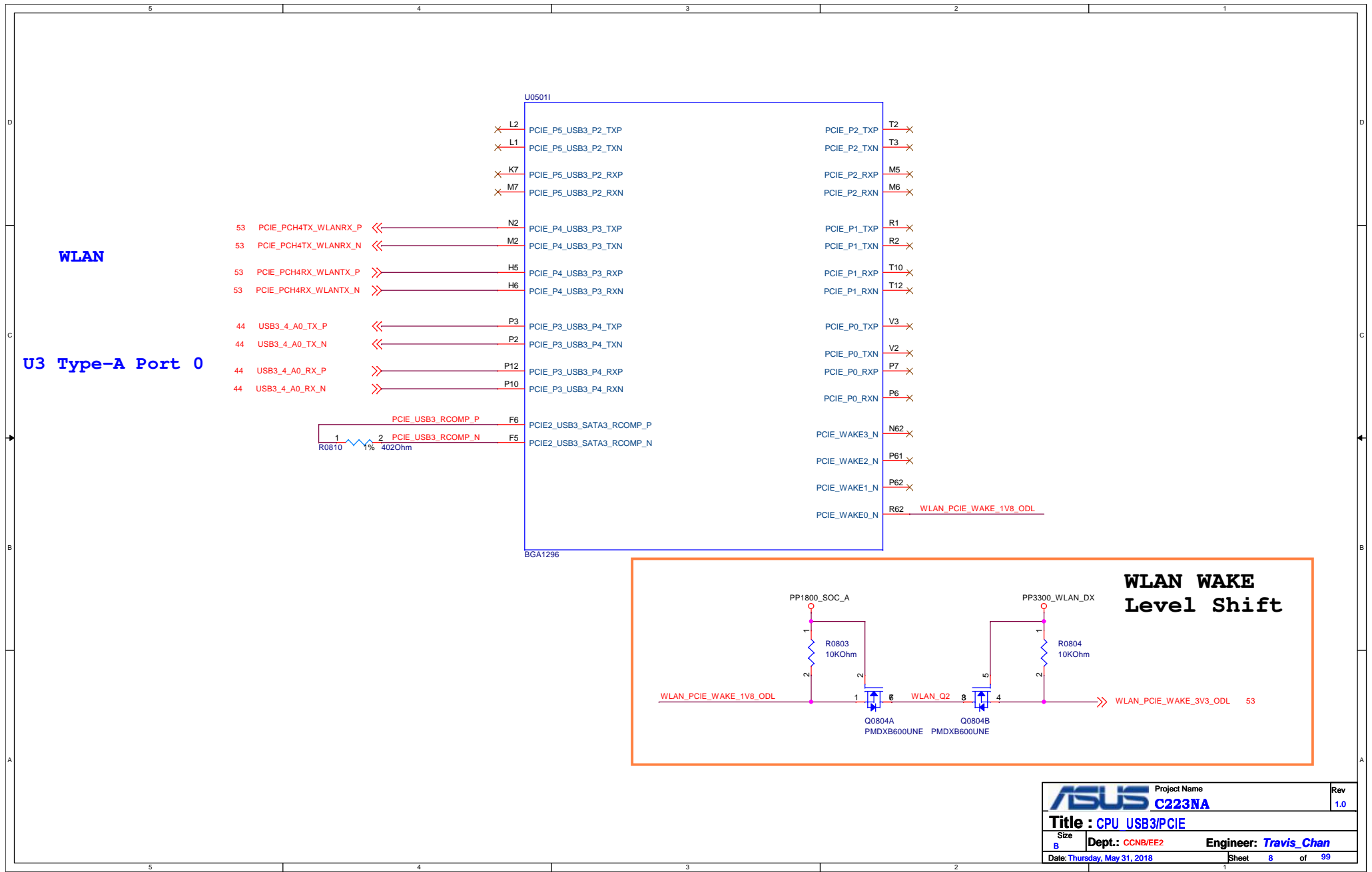
EDP

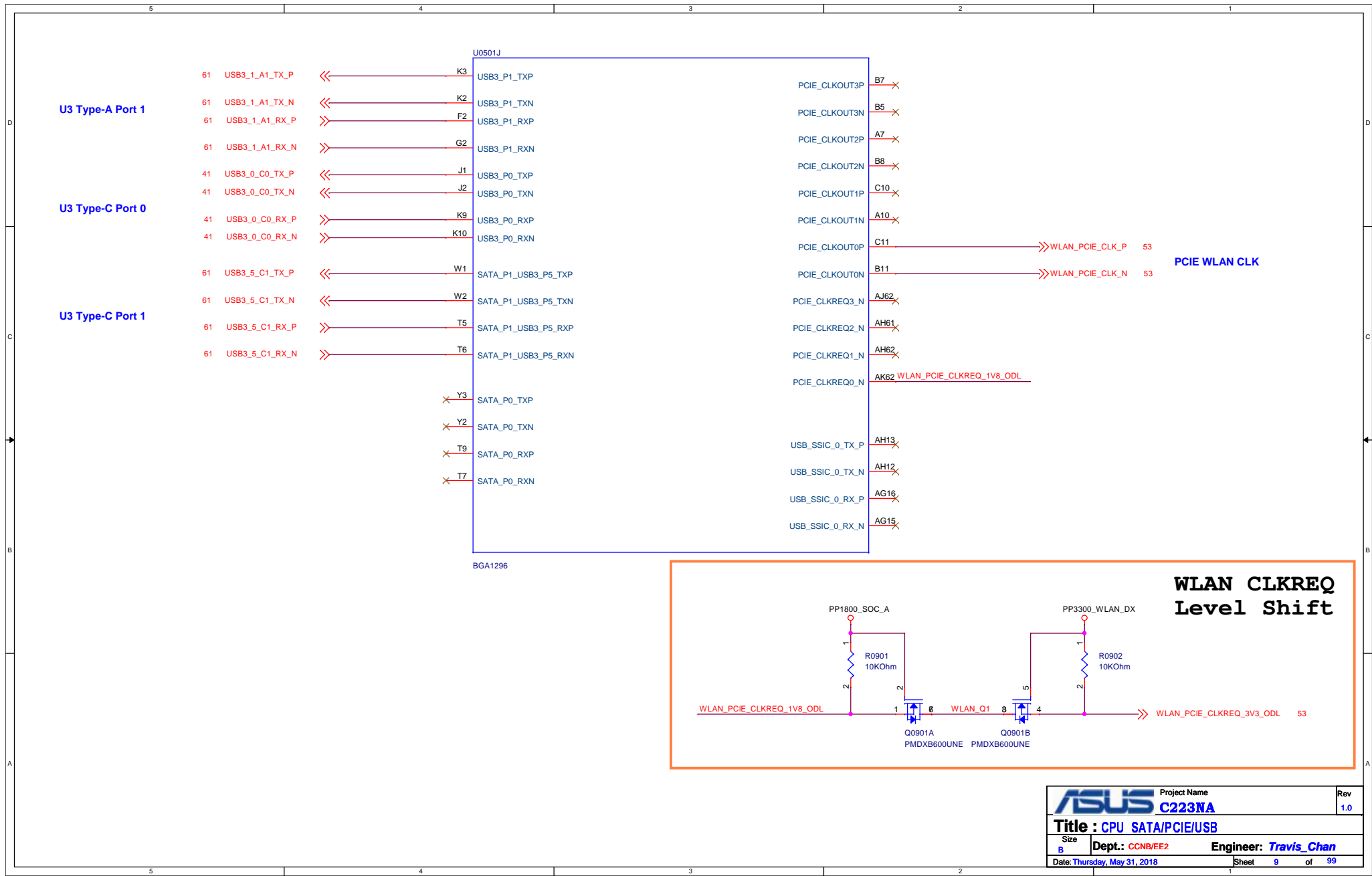
Display DDI 0
Type-C PORT 0

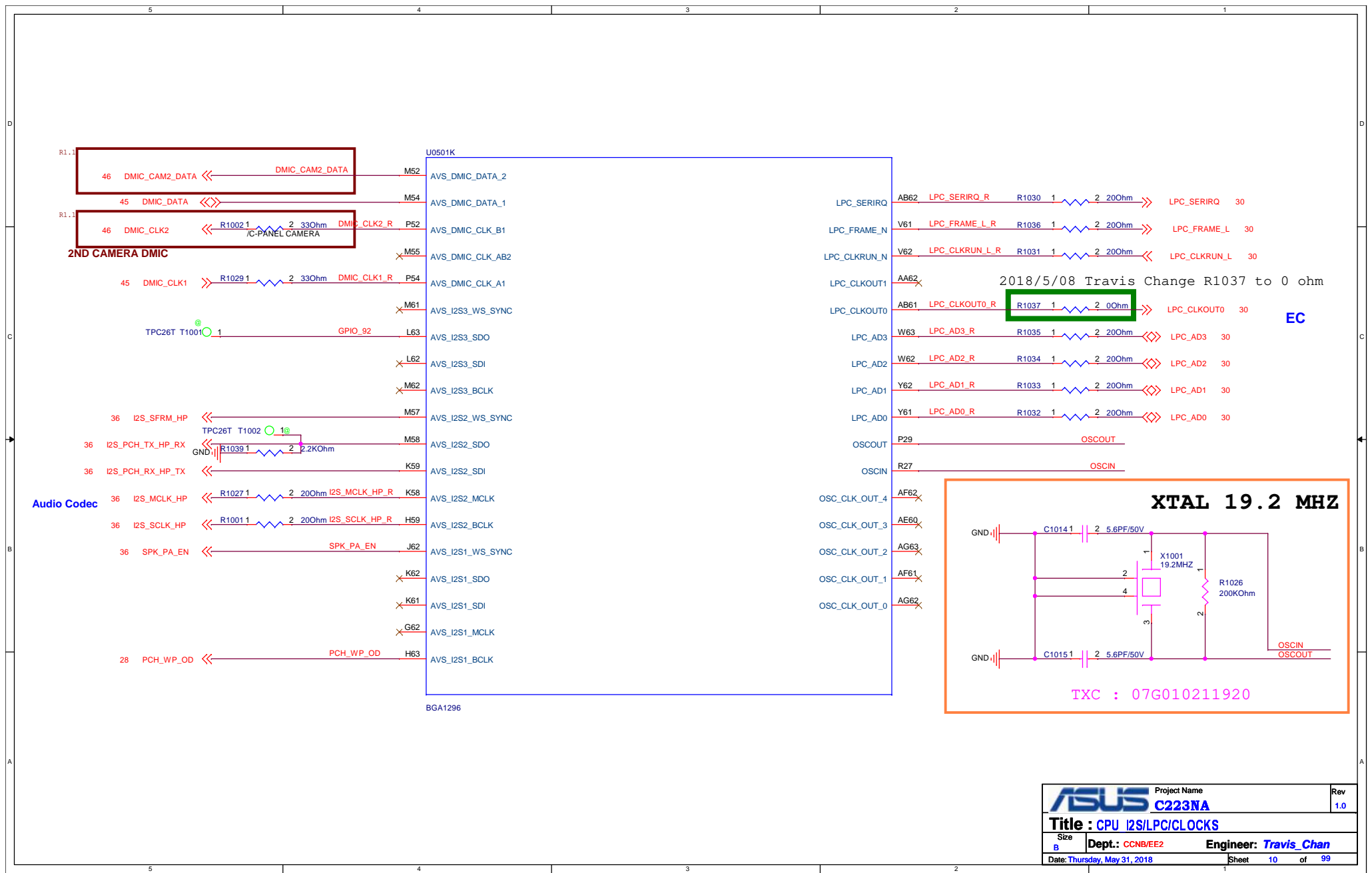
Display DDI 1
Type-C Port 1

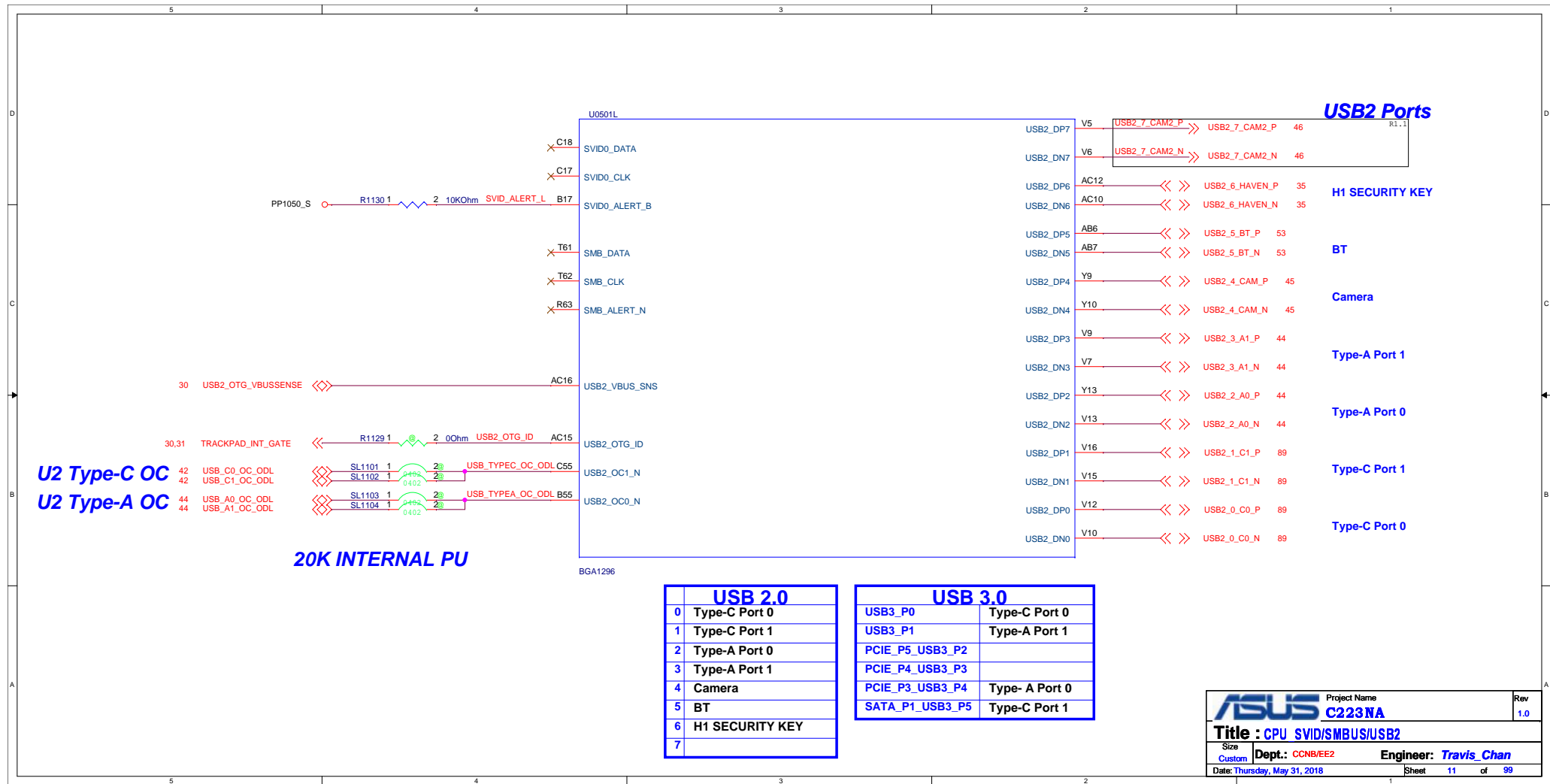
ALL 1.8V

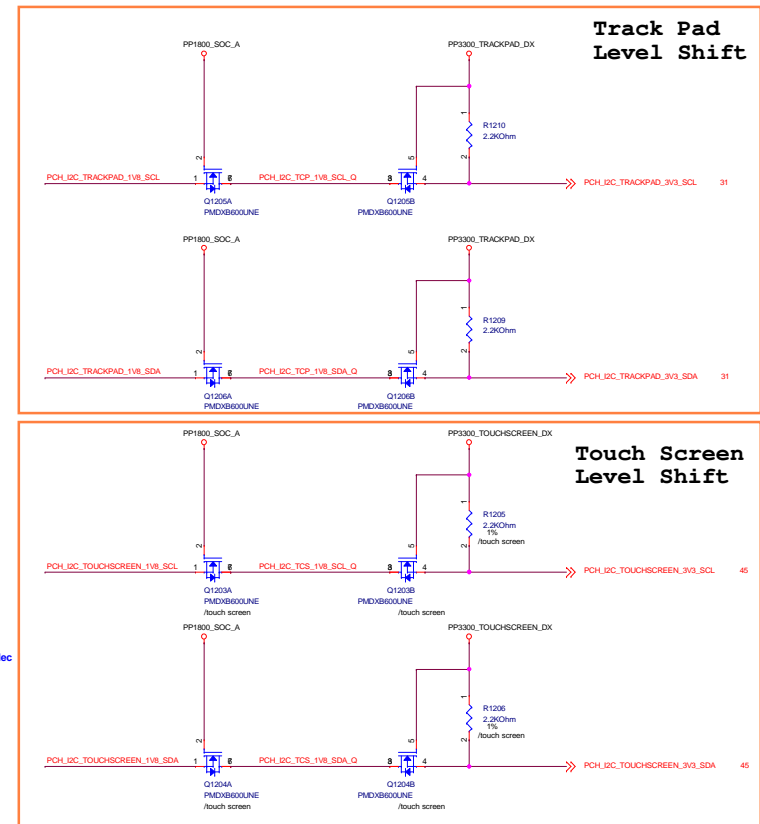






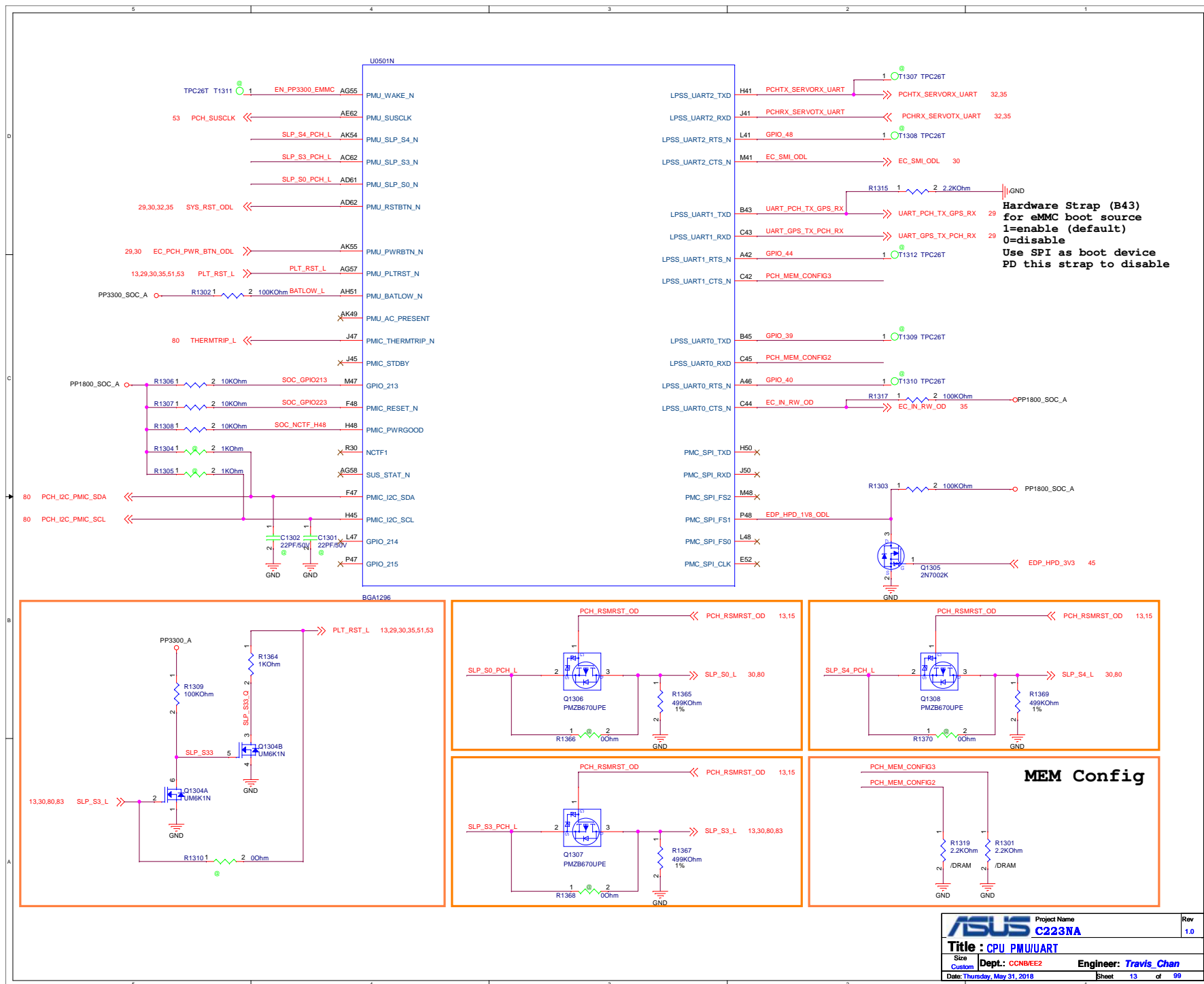


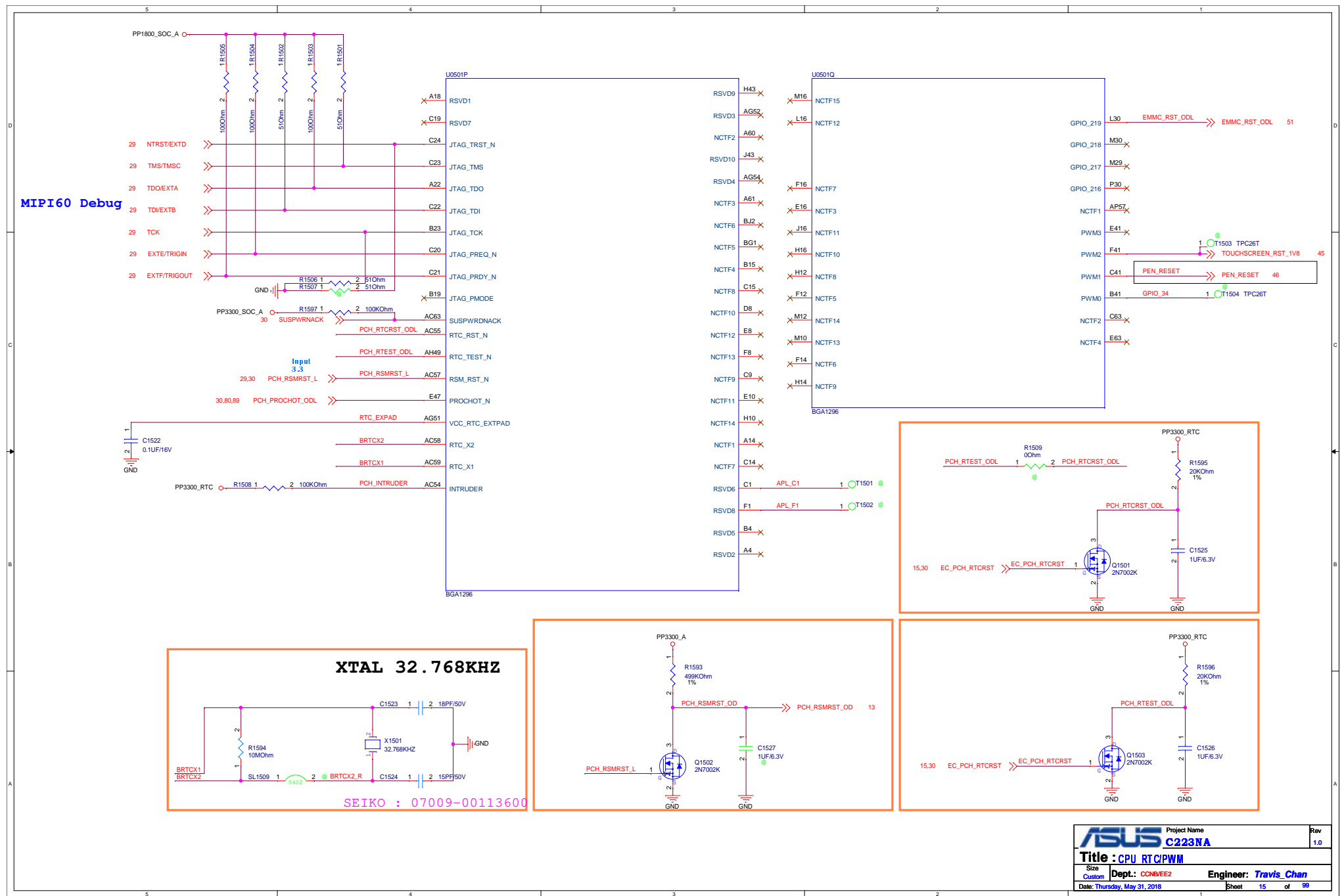


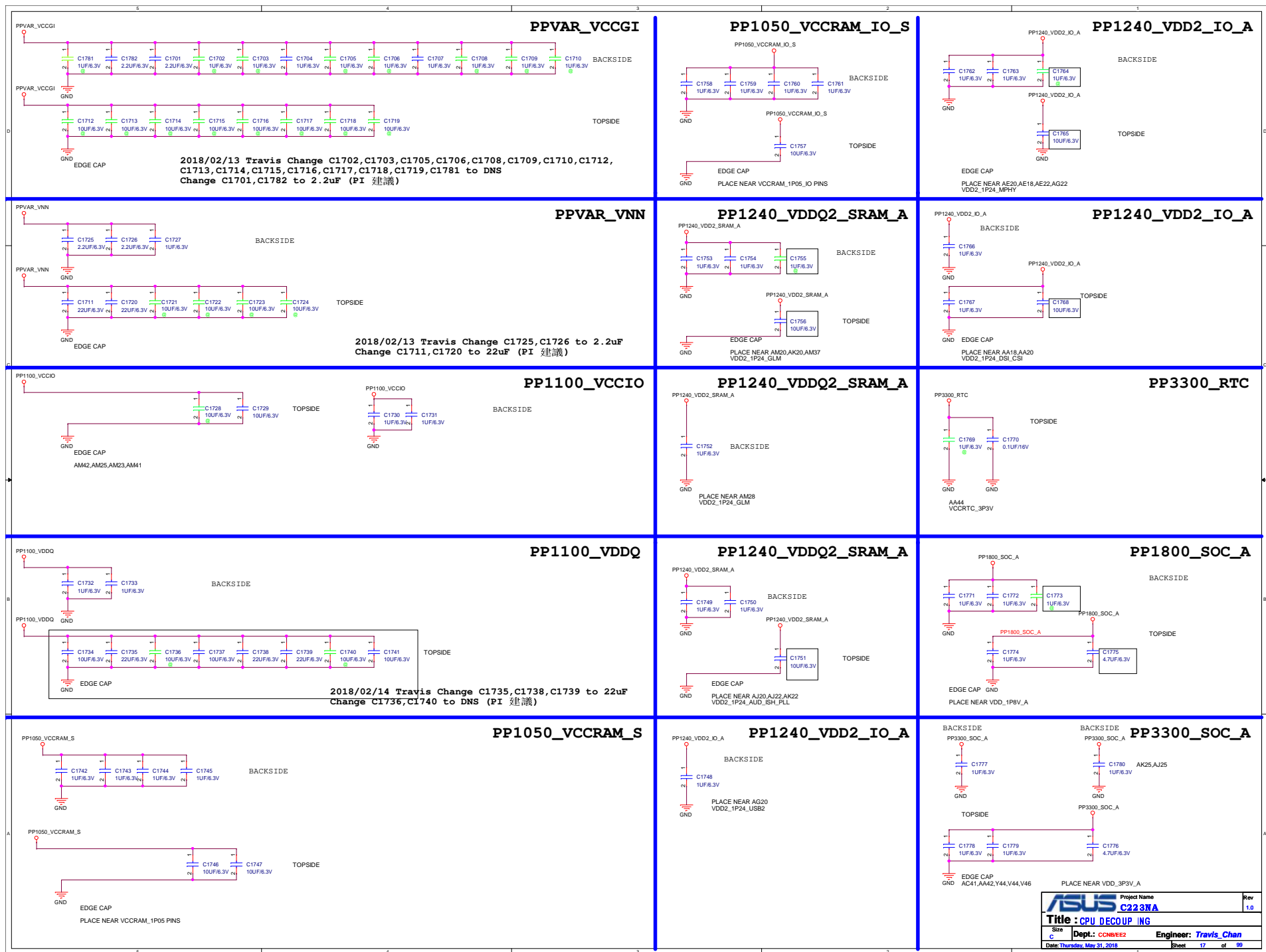


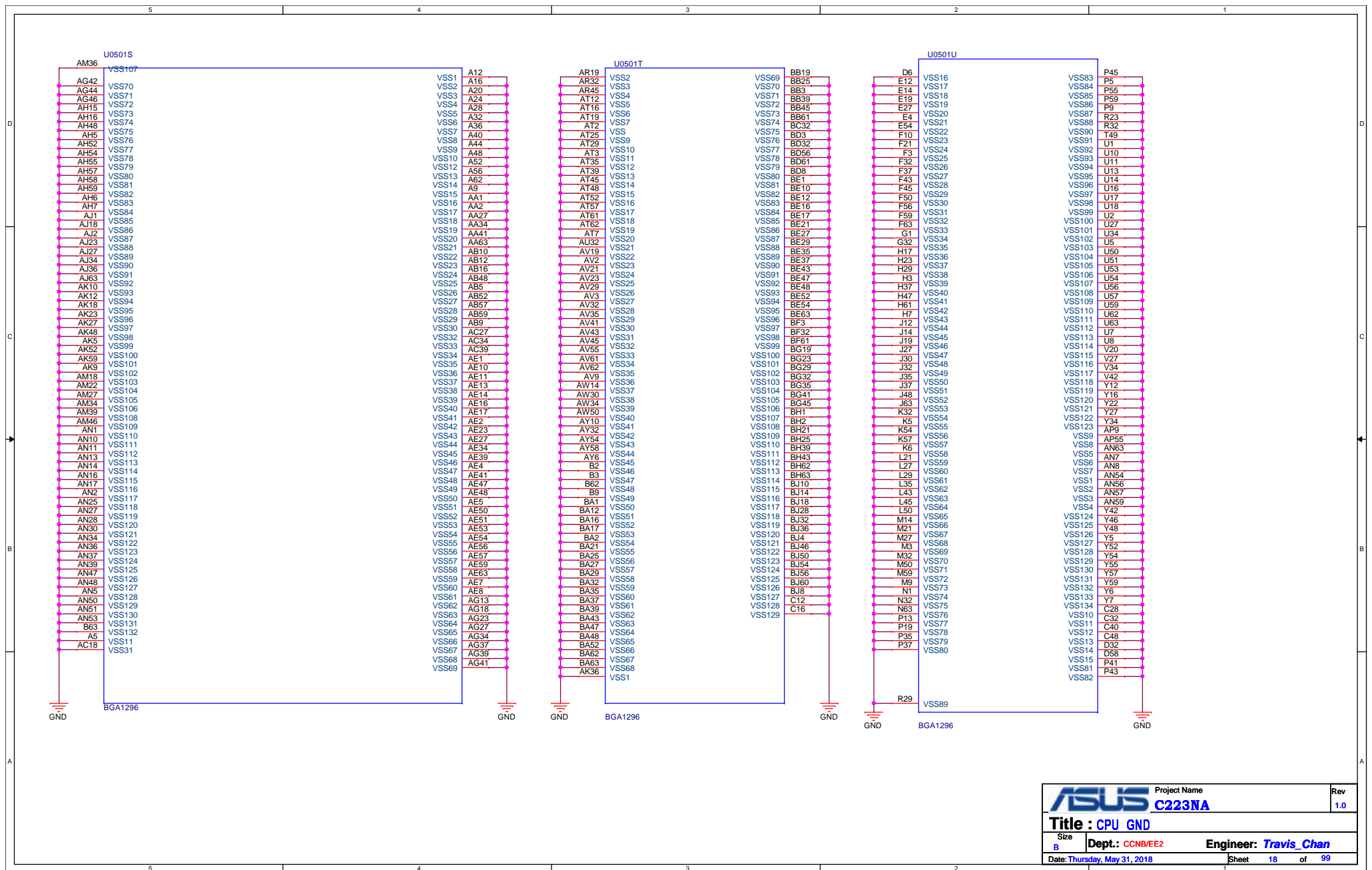
	I2C	Address
0	Audio Codec	
1	NA	
2	H1	
3	TOUCH SCREEN	
4	TRACKPAD	
5	NA	
6	NA	
7	NA	

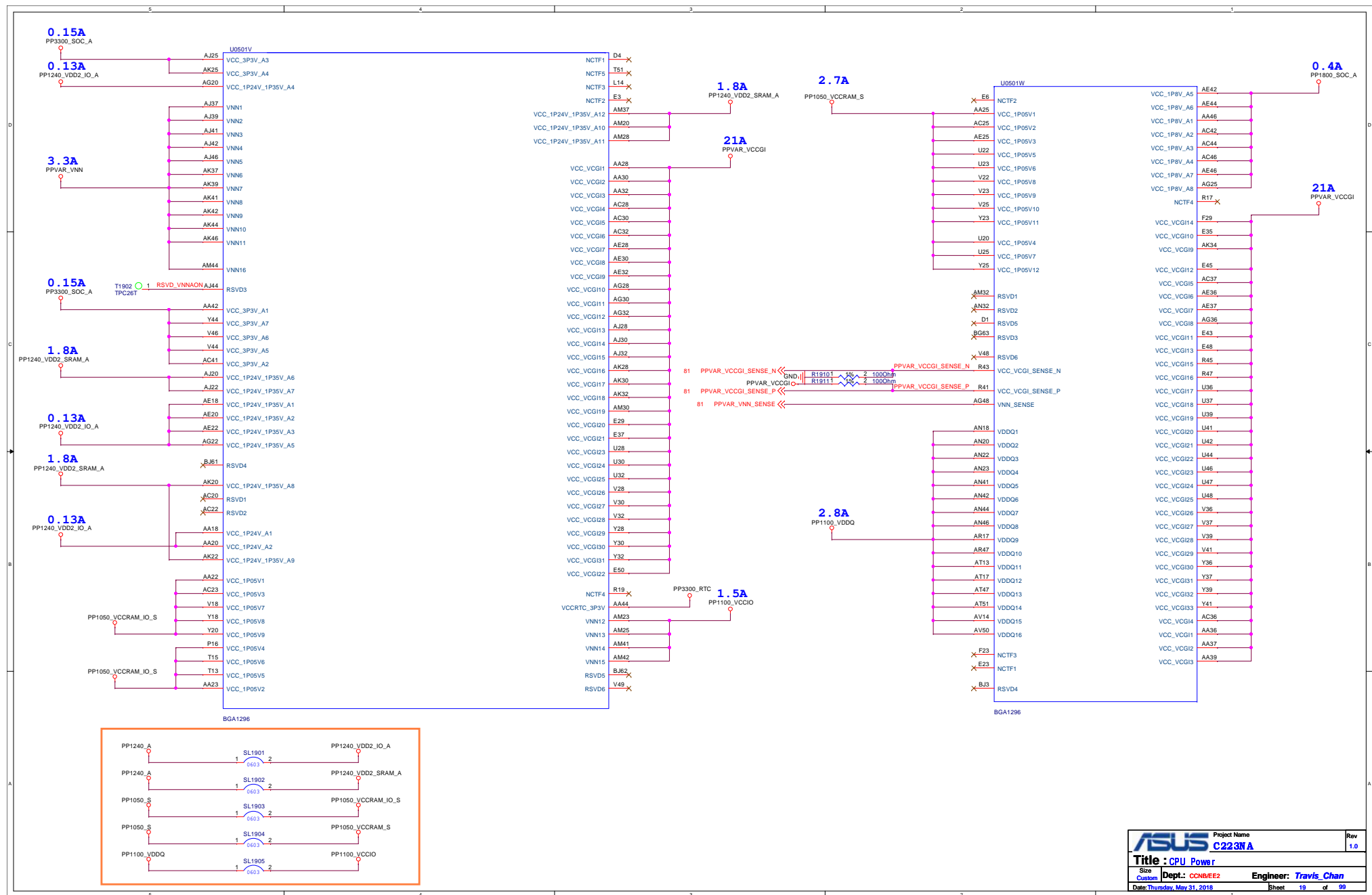
HARDWARE STRAPS (* = SYSTEM STRAP SELECTION)				
GPIO_39: INTERNAL 20K PD *DISABLE CSE ROM BYPASS: 0 ENABLE CSE ROM BYPASS: 1	GPIO_47: INTERNAL 20K PD *DON'T FORCE DNX FW LOAD: 0 FORCE DNX FW LOAD: 1	GPIO_106: INTERNAL 20K PU *MUST BE HIGH WHEN RSM_RST_N DEASSERTS	GPIO_117: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_120: INTERNAL 20K PD *TOP SWAP OVERRIDE ENABLE: 0 TOP SWAP OVERRIDE ENABLE: 1
GPIO_40: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_48: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_111: INTERNAL 20K PU DO NOT BOOT FROM SPI: 1 *BOOT FROM SPI: 0	GPIO_123: INTERNAL 20K PU *MUST BE HIGH WHEN RSM_RST_N DEASSERTS	GPIO_121: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS
GPIO_43: INTERNAL 20K PU ENABLE BOOT FROM EMMC: 1 *DISABLE BOOT FROM EMMC: 0	GPIO_104: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_118: INTERNAL 20K PD *NO FLASH DESCRIPTOR OVERRIDE: 0 OVERRIDE FLASH DESCRIPTOR: 1	GPIO_112: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	
GPIO_44: INTERNAL 20K PU *ENABLE BOOT FROM SPI: 1 DISABLE BOOT FROM SPI: 0	GPIO_105: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_110: INTERNAL 20K PU LPC BUFFERS AT 1.8V: 1 *LPC BUFFERS AT 3.3V: 0	GPIO_113: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	




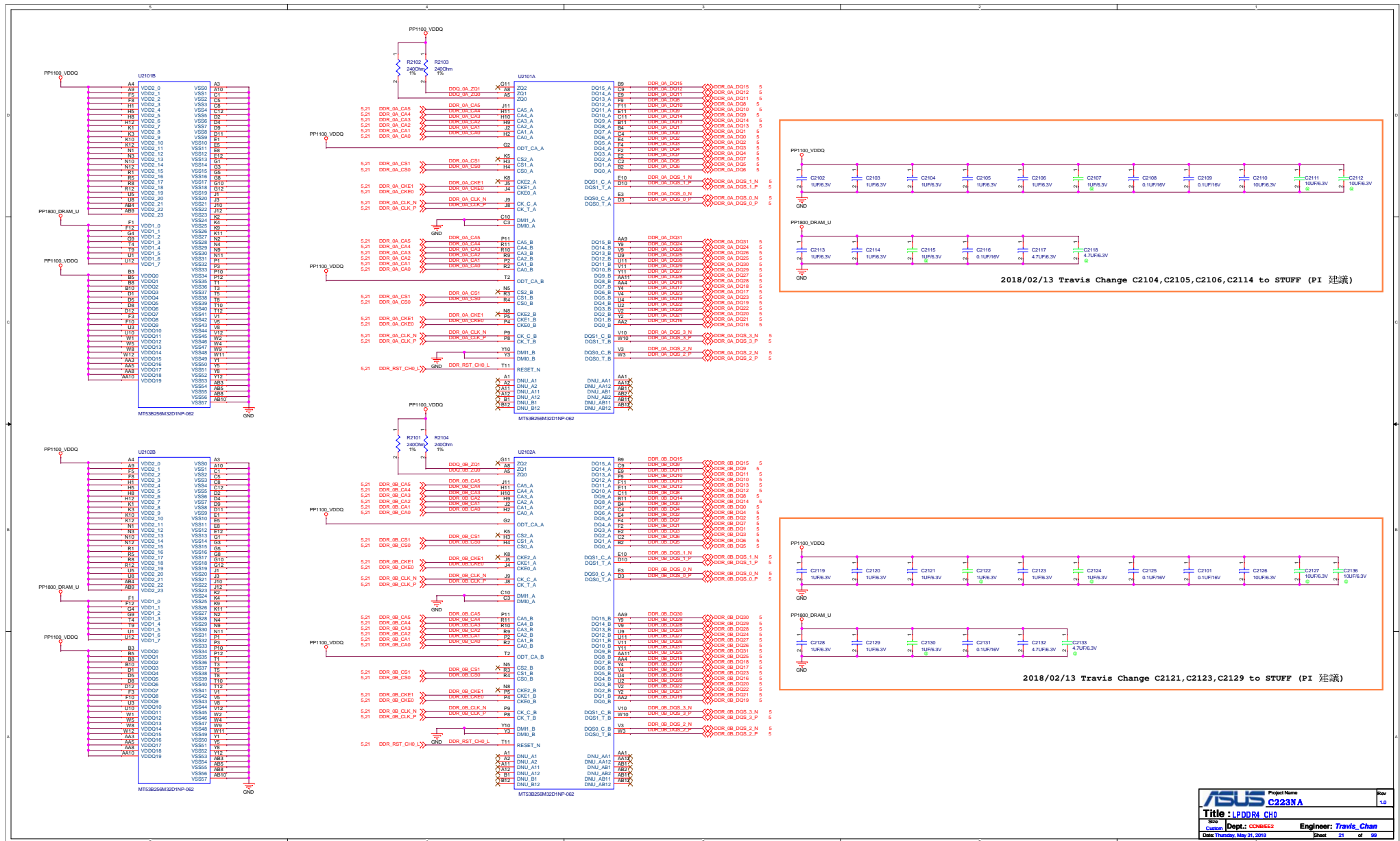


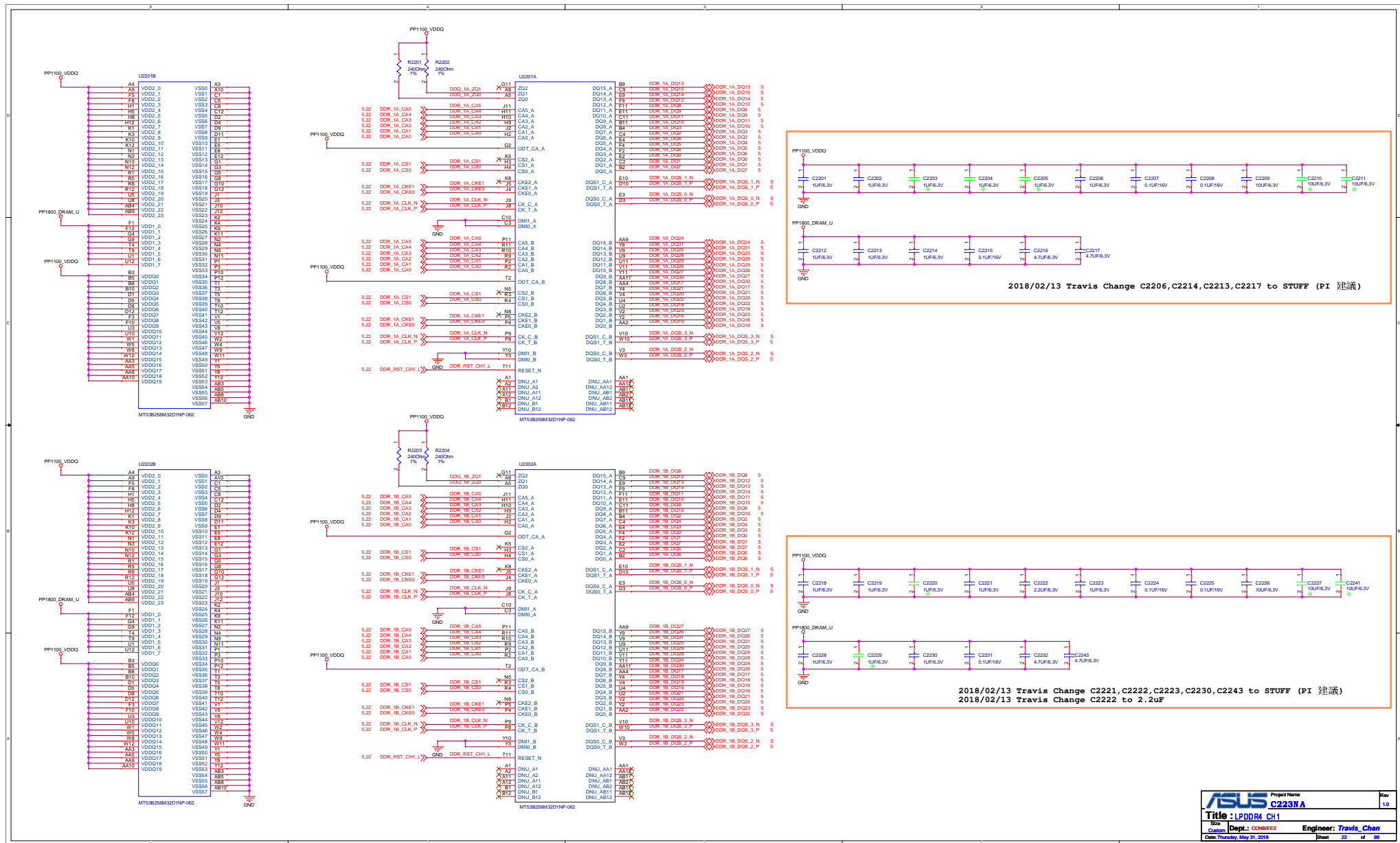






		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	20 of 99





5					4					3					2					1				
D																								
C																								
B																								
A																								
5					4					3					2					1				

ASUS

Project Name

C223NA

Rev

1.0

Title :

Size


B


Dept.: CCNB/EE2

Engineer: Travis_Chan

Date: Thursday, May 31, 2018

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		Project Name		Rev
		C223NA		1.0
Title :				
Size	Dept.:		Engineer:	
B	CCNB/EE2		Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	23	of 99

		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis, Chan	
Date: Thursday, May 31, 2018		Sheet	24 of 99

5					4					3					2					1				
D																								
C																								
B																								
A																								
5					4					3					2					1				

ASUS

Project Name

C223NA

Rev

1.0

Title :

Size

B

Dept.: CCNB/EE2

Engineer: Travis_Chan


Date: Thursday, May 31, 2018

Sheet

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of

99


		Project Name		Rev
		C223NA		1.0
Title :				
Size	Dept.:		Engineer:	
B	CCNB/EE2		Travis_Chan	
Date: Thursday, May 31, 2018			Sheet	25 of 99


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D																								
C																								
B																								
A																								
5					4					3					2					1				

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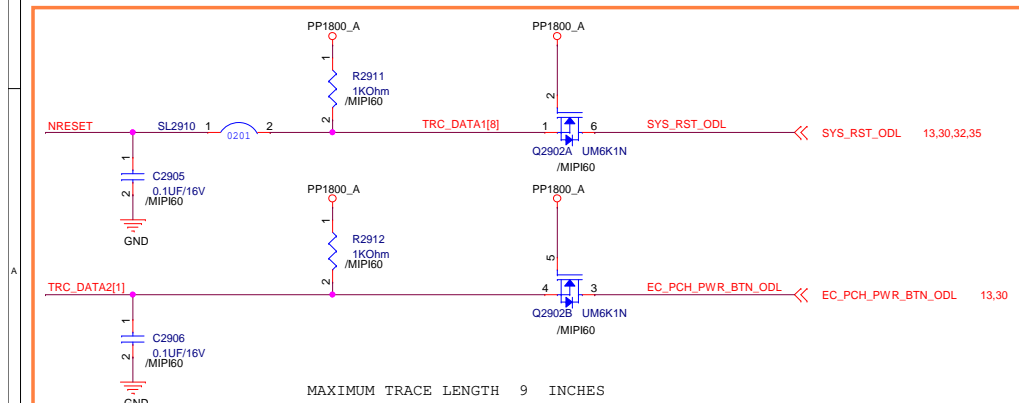
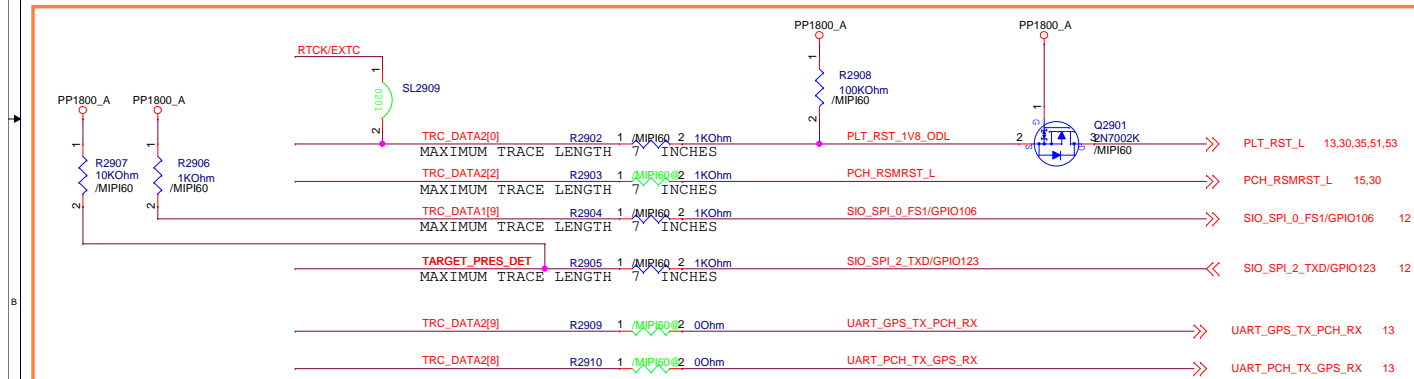
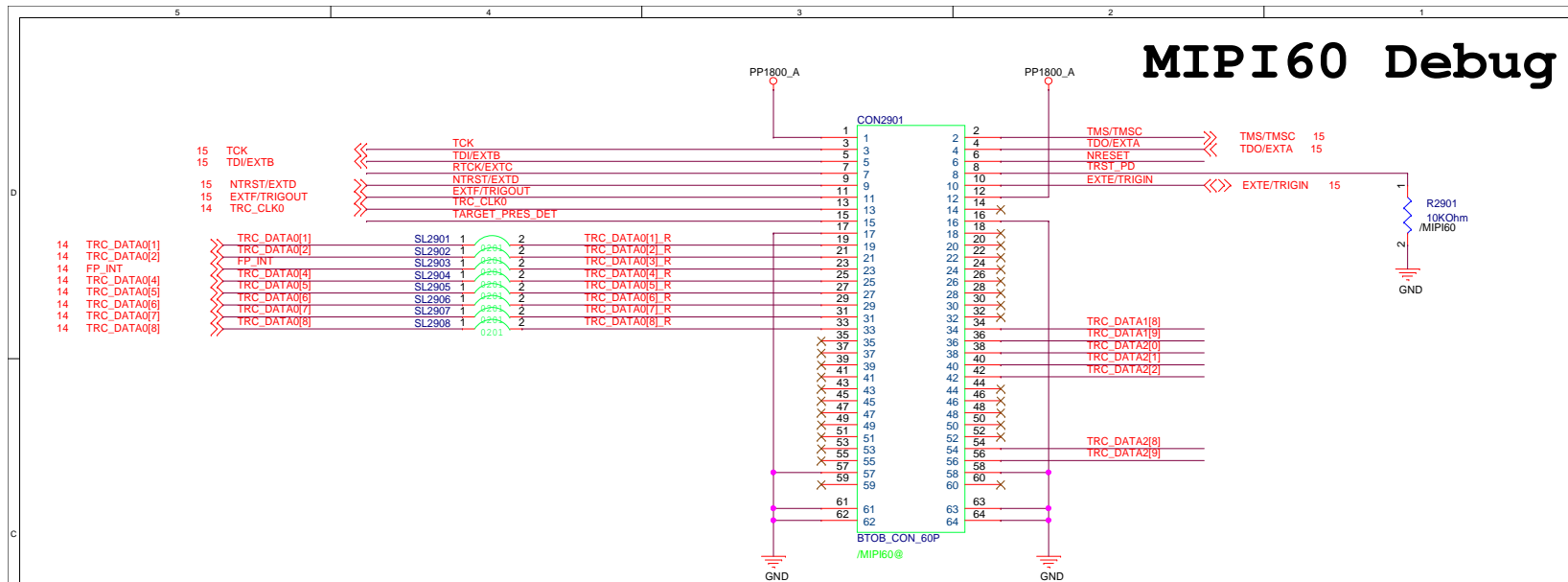
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		C223NA		1.0
Title :				
Size	Dept.:		Engineer:	
B	CCNB/EE2		Travis_Chan	
Date: Thursday, May 31, 2018			Sheet	26 of 99

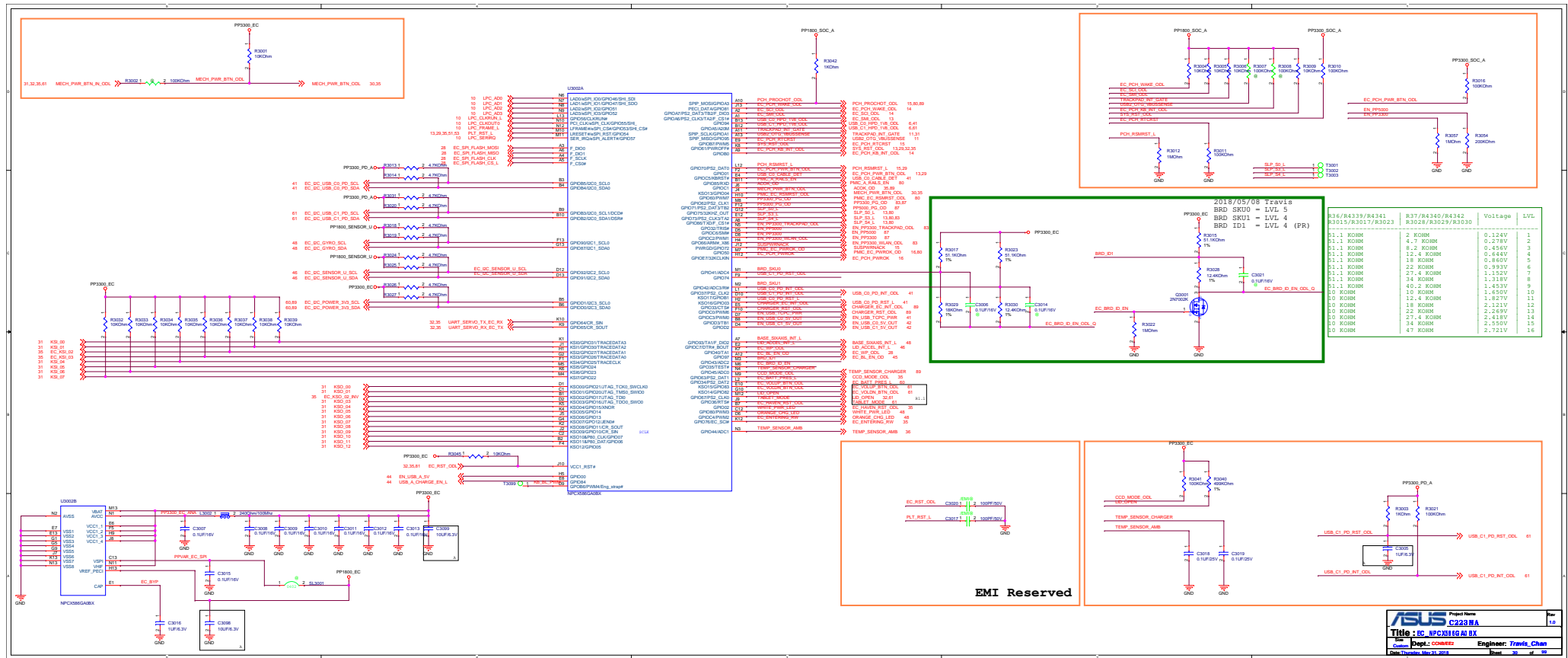
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D																								
C																								
B																								
A																								
5					4					3					2					1				

		Project Name		Rev
		C223NA		1.0
Title :				
Size	Dept.: CCNB/EE2		Engineer: Travis_Chan	
B				
Date: Thursday, May 31, 2018		Sheet	27	of 99

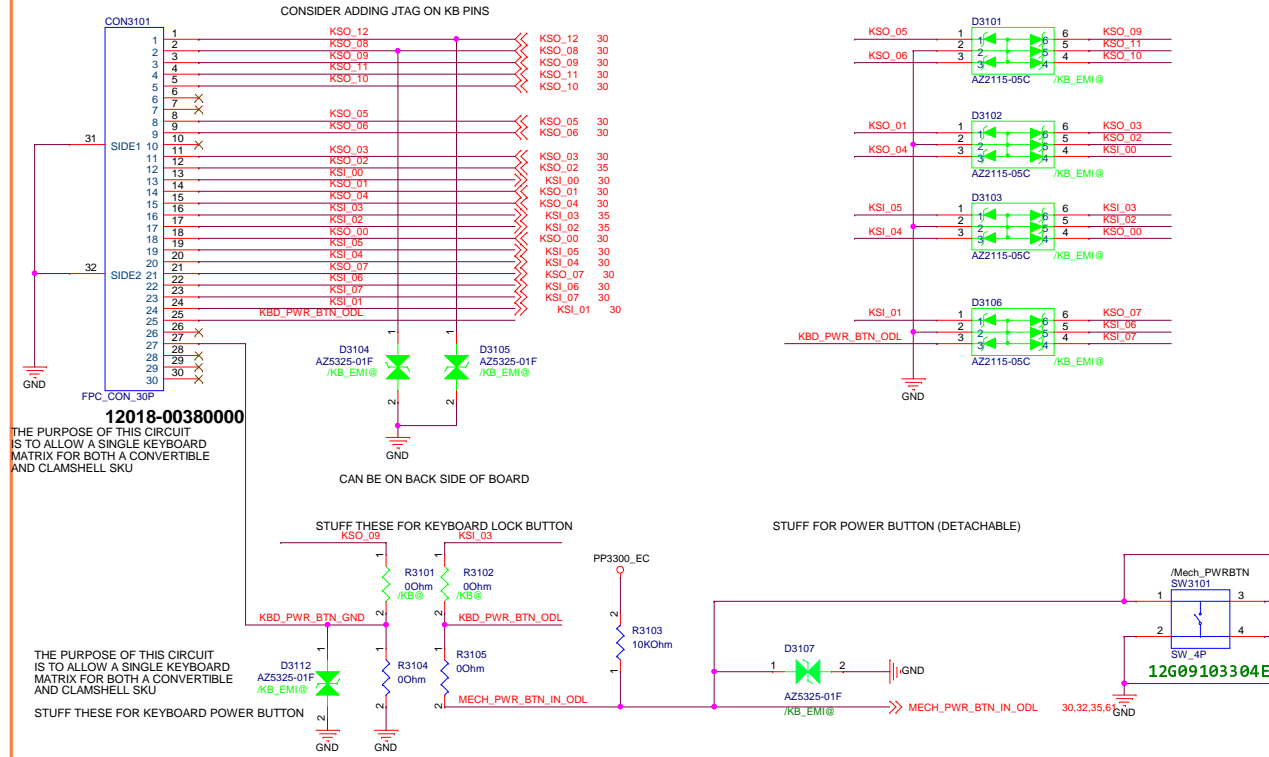
		Project Name		Rev
		C223NA		1.0
Title :				
Size	Dept.:		Engineer:	
B	CCNB/EE2		Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	27	of 99

MIPI60 Debug

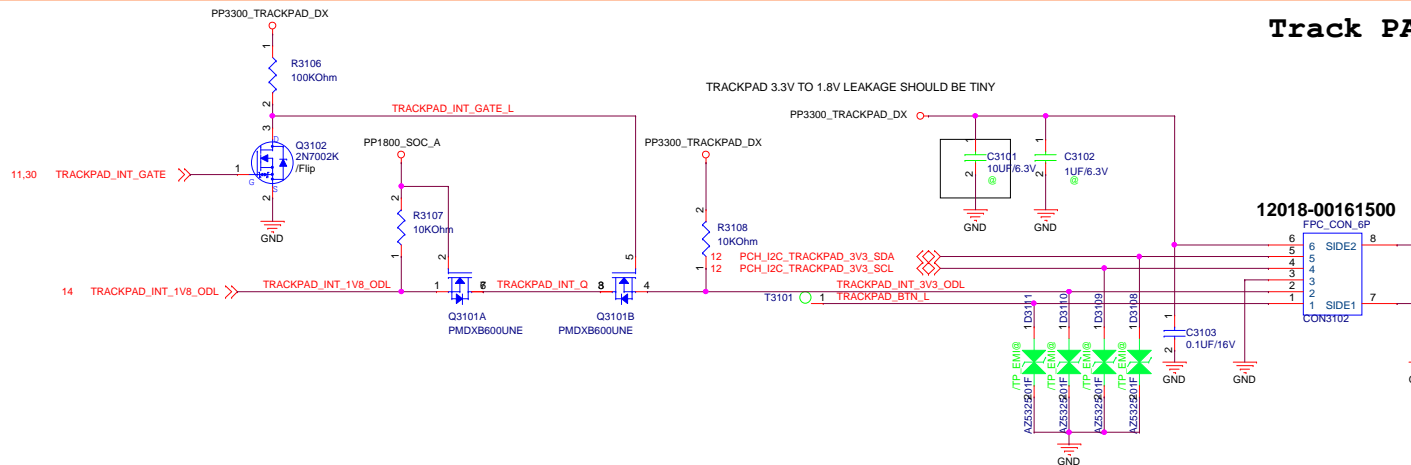




Keyboard

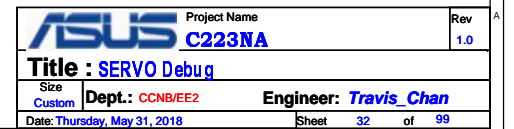



Track PAD



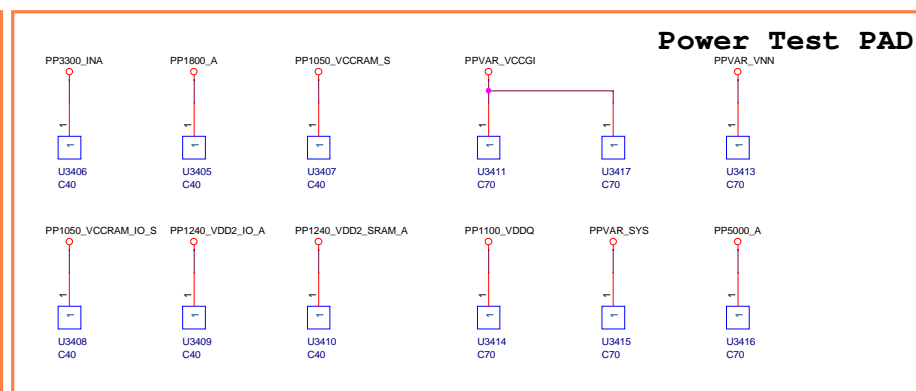
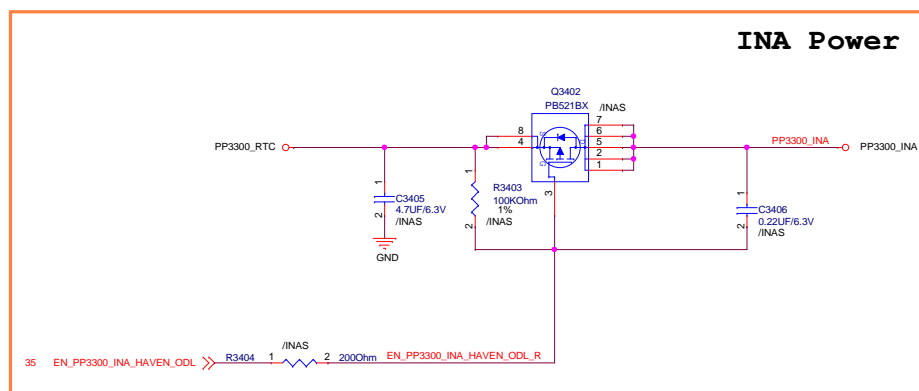
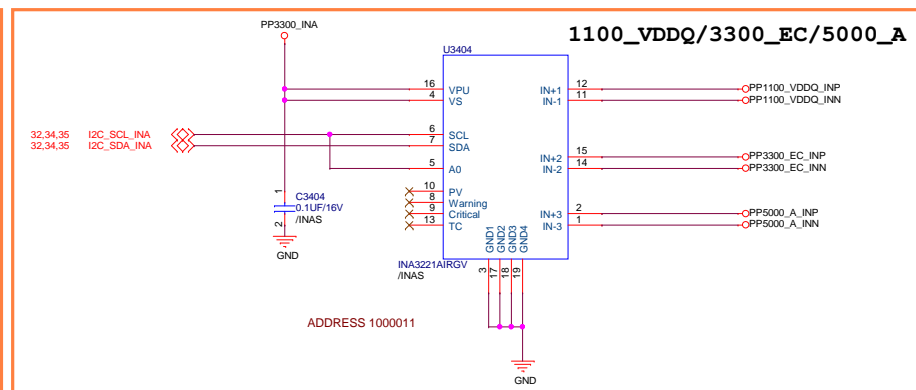
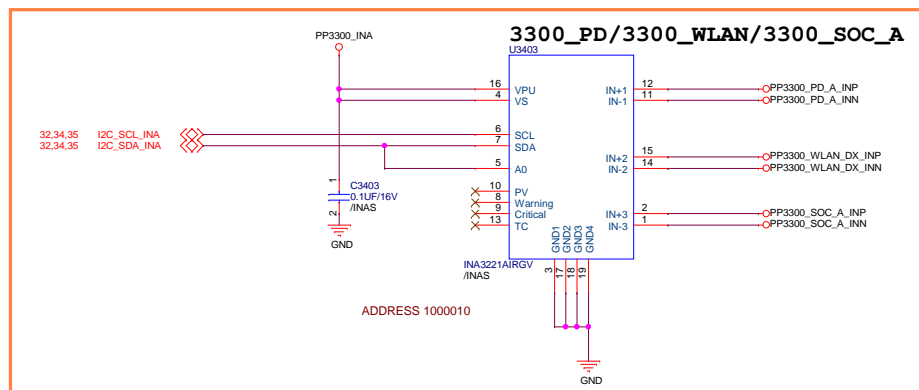
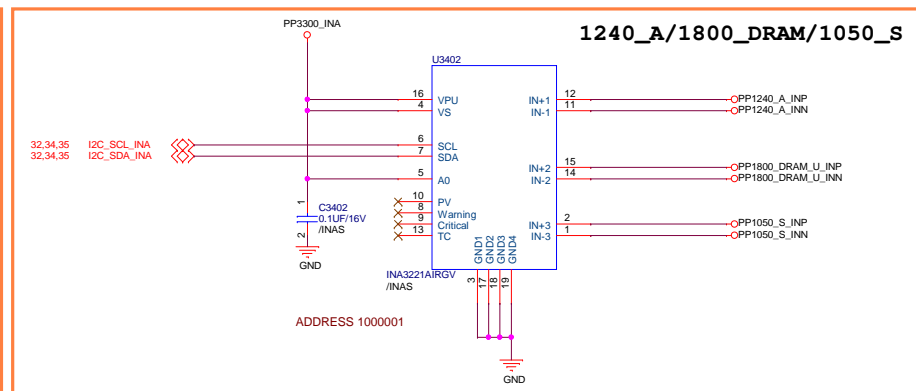
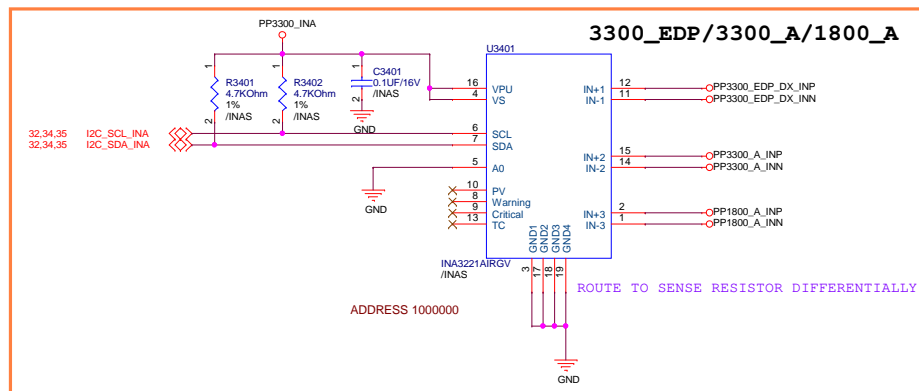
ASUS		Project Name	Rev
C223N A			1.0
Title : KB TP			
Size	Dept.:	Engineer:	
Custom	CCNB/EE2	Travis Chan	
Date: Thursday, May 31, 2018	Sheet	31	of 99

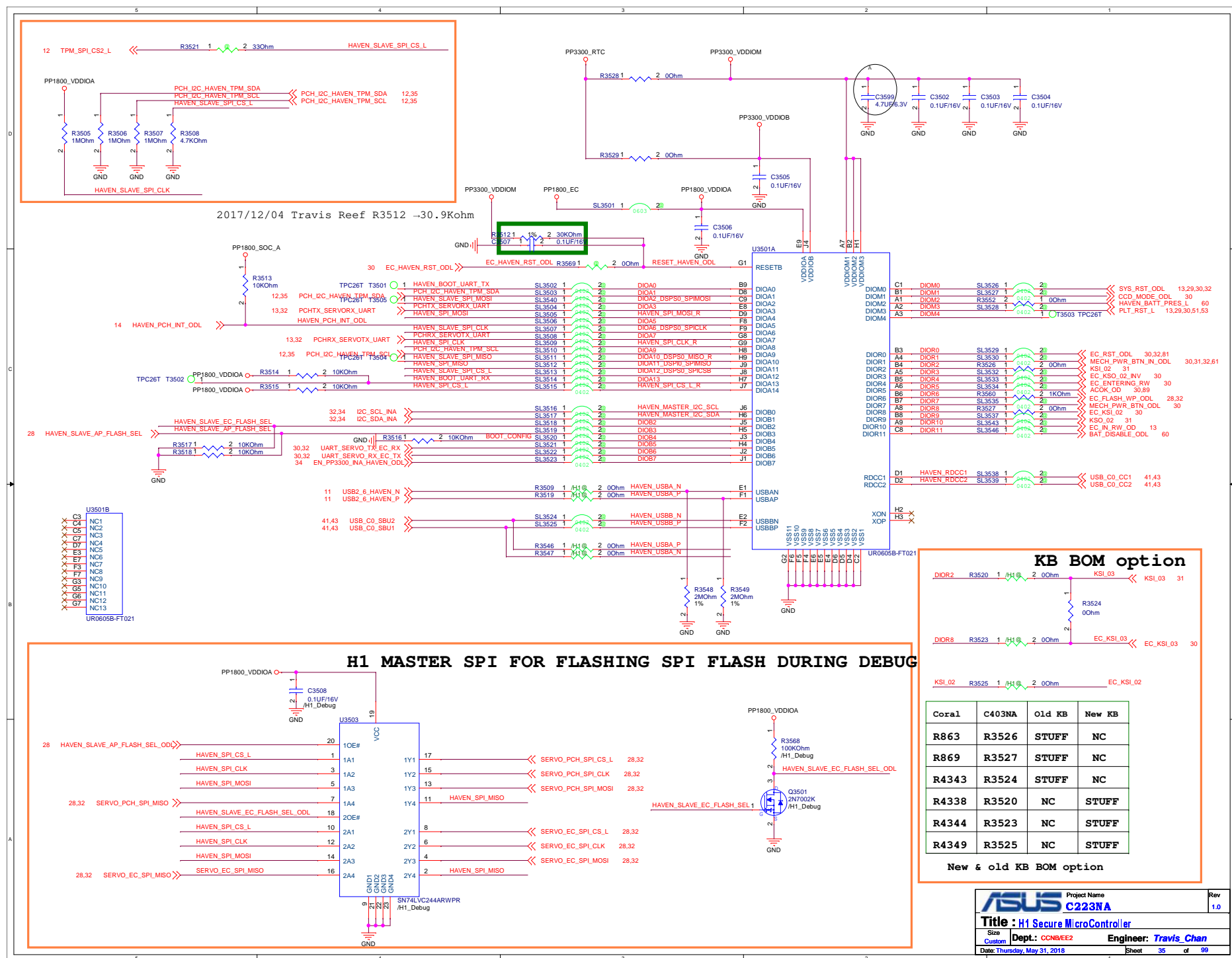
SERVO Debug



		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	33 of 99

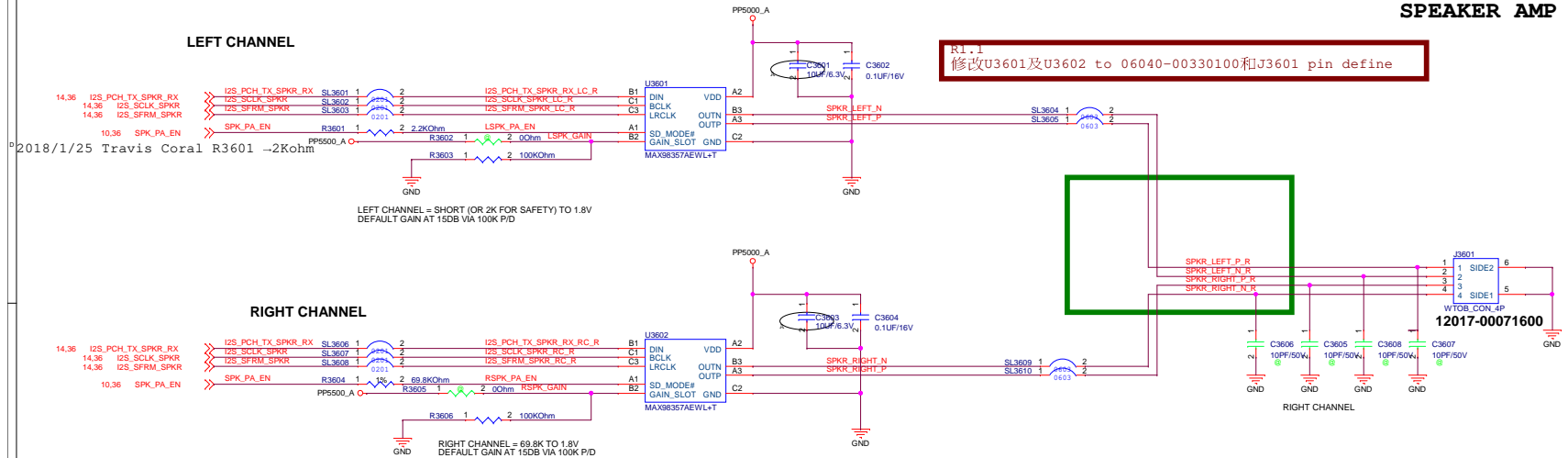
INAs





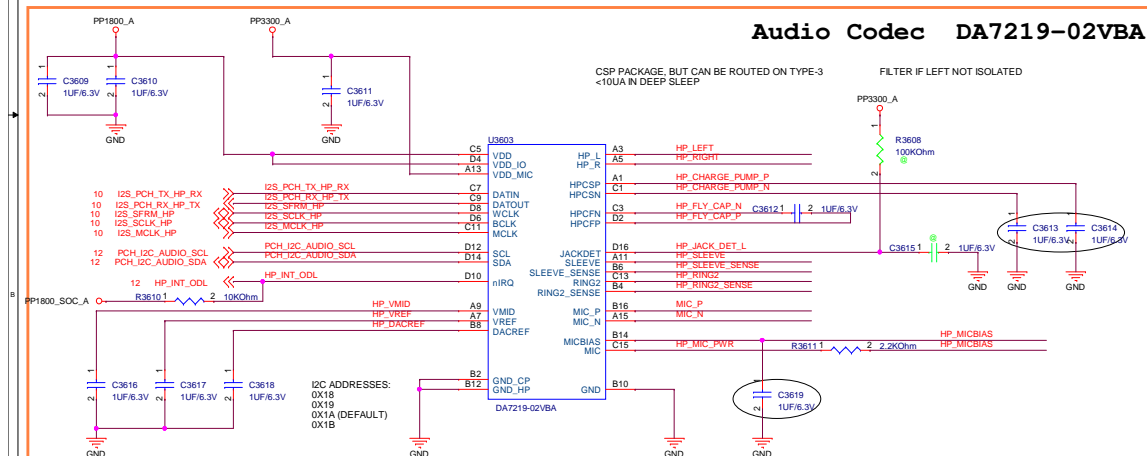
SPEAKER AMP

LEFT CHANNEL



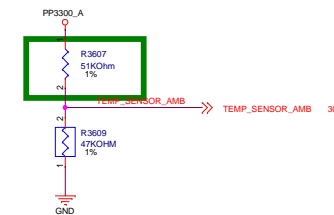
RIGHT CHANNEL = 69.8K TO 1.8V
DEFAULT GAIN AT 15DB

Audio Codec DA7219-02VBA



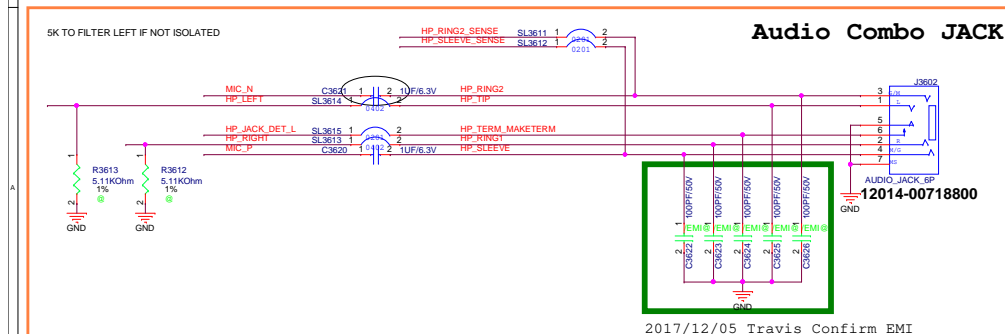
AMBIENT TEMPERATURE SENSOR

2018/1/10 Travis Coral R4004 -51.1Kohm



AMBIENT TEMPERATURE SENSOR SHOULD BE PLACED NEAR HEADPHONE JACK, AWAY FROM ICS
DO NOT CHANGE THERMISTOR TYPE

Audio Combo JACK



2017/12/05 Travis Confirm EMI

		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	37 of 99

5					4					3					2					1				
D																								
C																								
B																								
A																								
5					4					3					2					1				

ASUS

Project Name

C223NA

Rev

1.0

Title :

Size

B

Dept.: CCNB/EE2

Engineer: Travis_Chan


Date: Thursday, May 31, 2018


Sheet

38

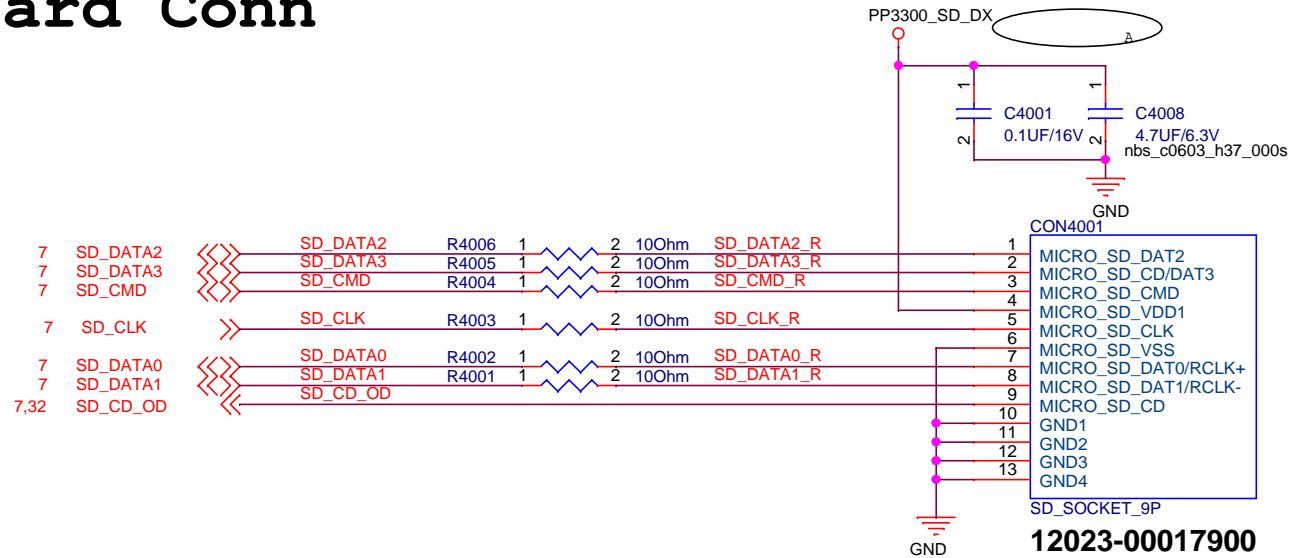
of

99

		Project Name		Rev
		C223NA		1.0
Title :				
Size	Dept.:		Engineer:	
B	CCNB/EE2		Travis_Chan	
Date: Thursday, May 31, 2018			Sheet	38 of 99

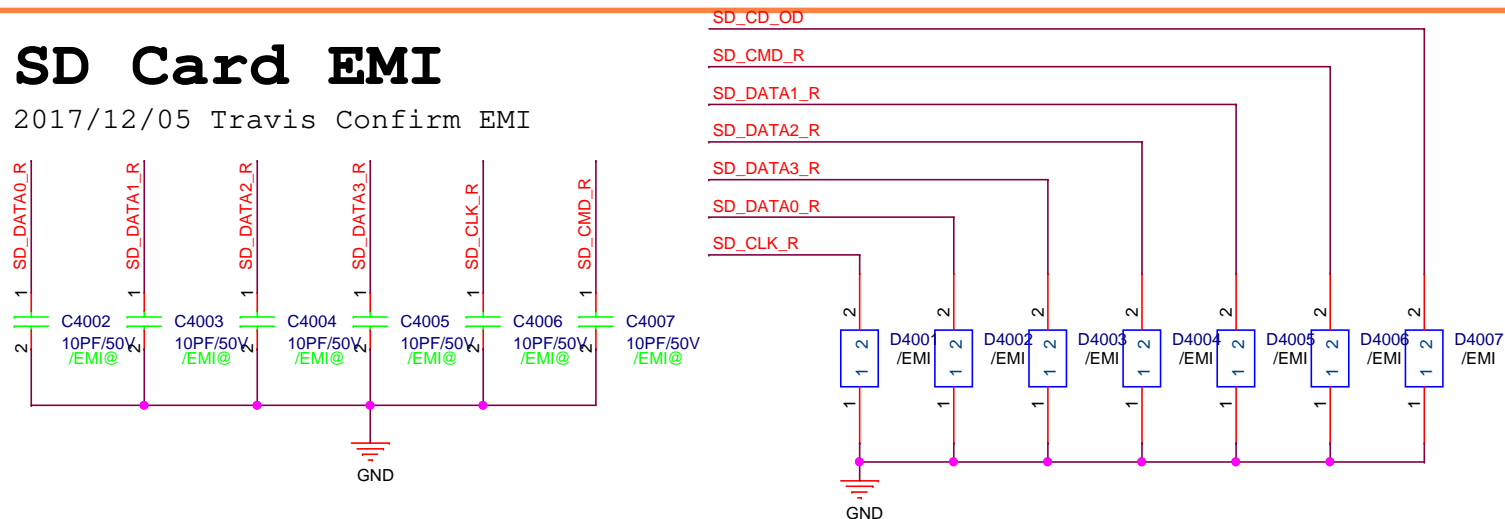
		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	39 of 99

SD Card Conn



SD Card EMI

2017/12/05 Travis Confirm EMI



ASUS Project Name
C223NA

Rev
1.0

Title : uSD

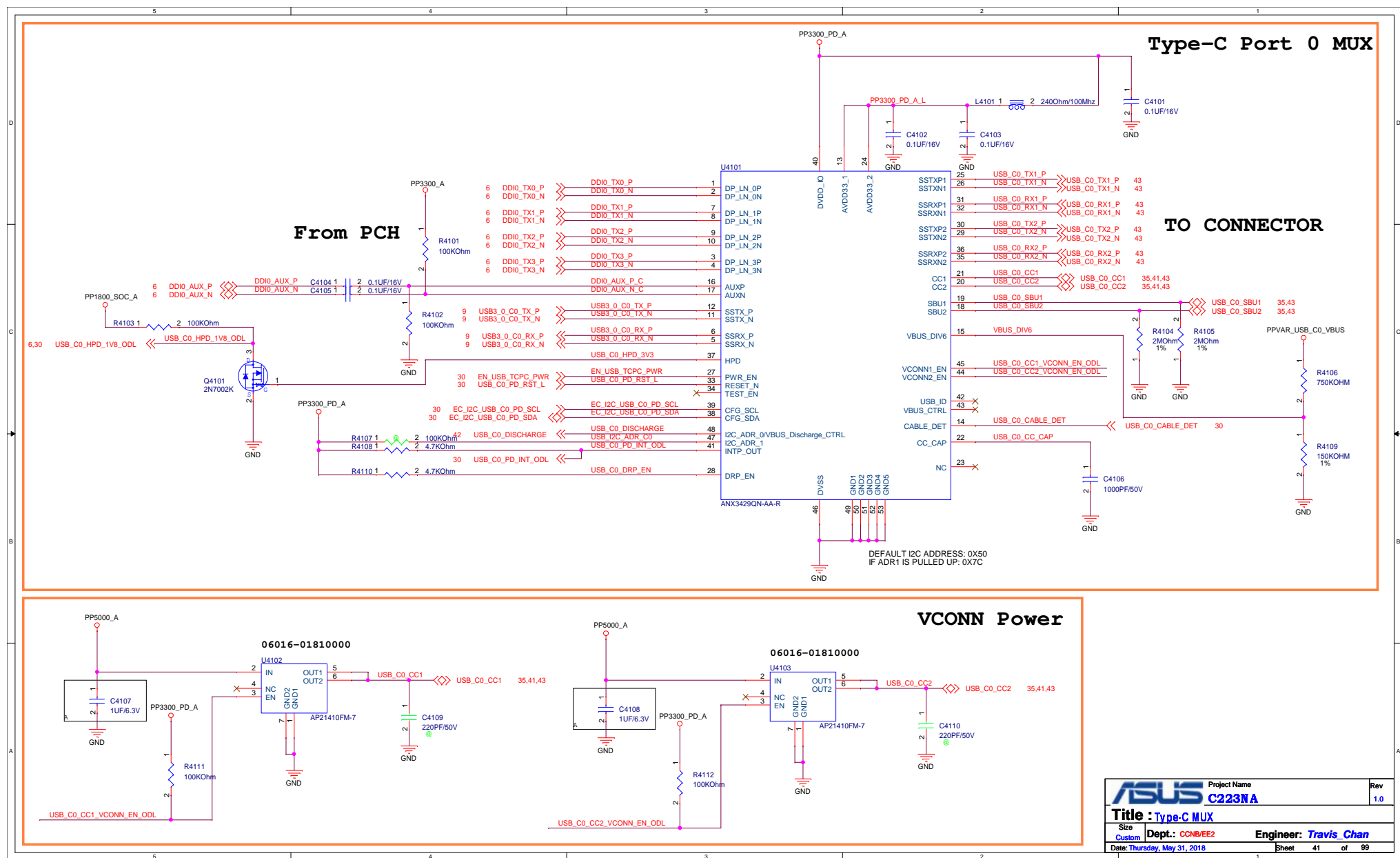
Size
Custom

Dept.: CCNB/EE2

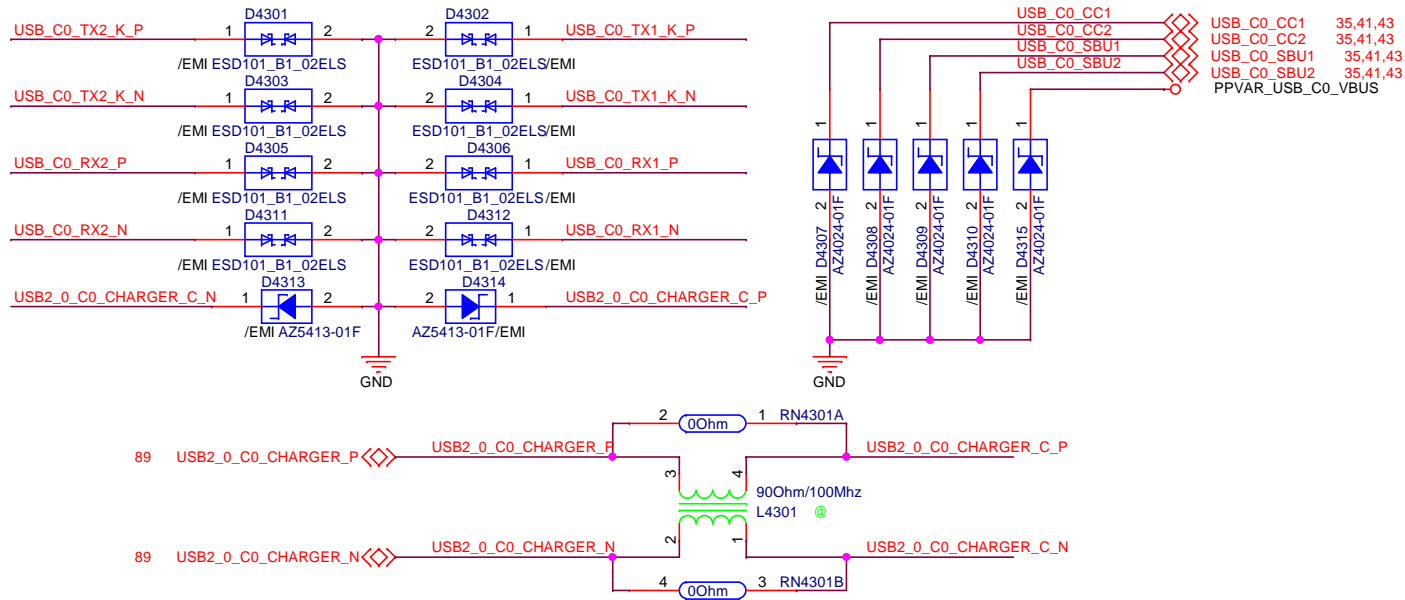
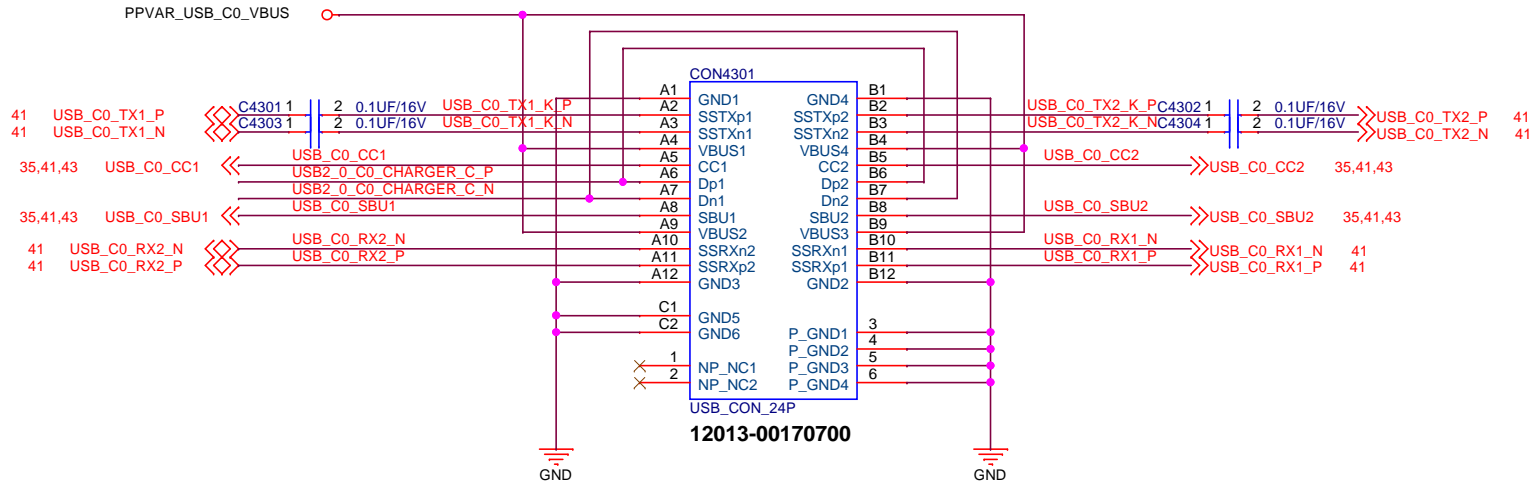
Engineer: Travis_Chan

Date: Thursday, May 31, 2018

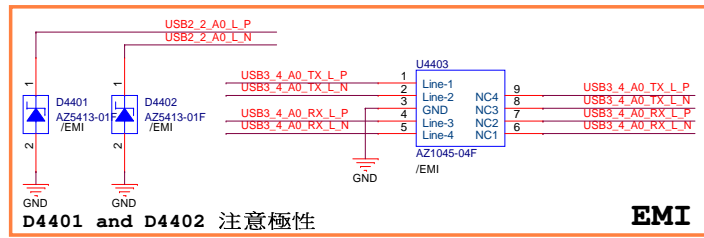
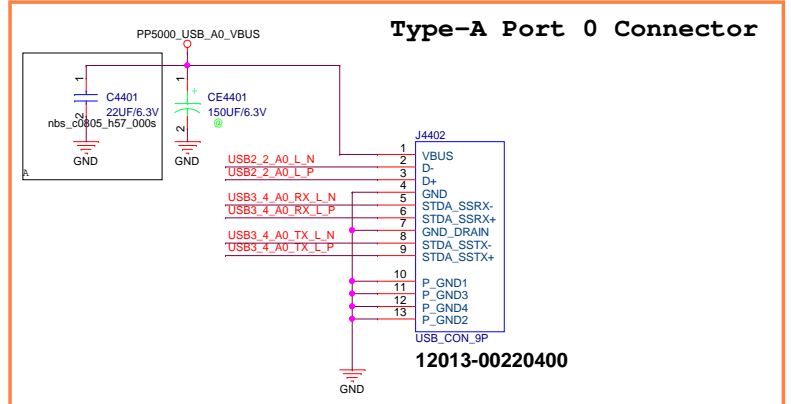
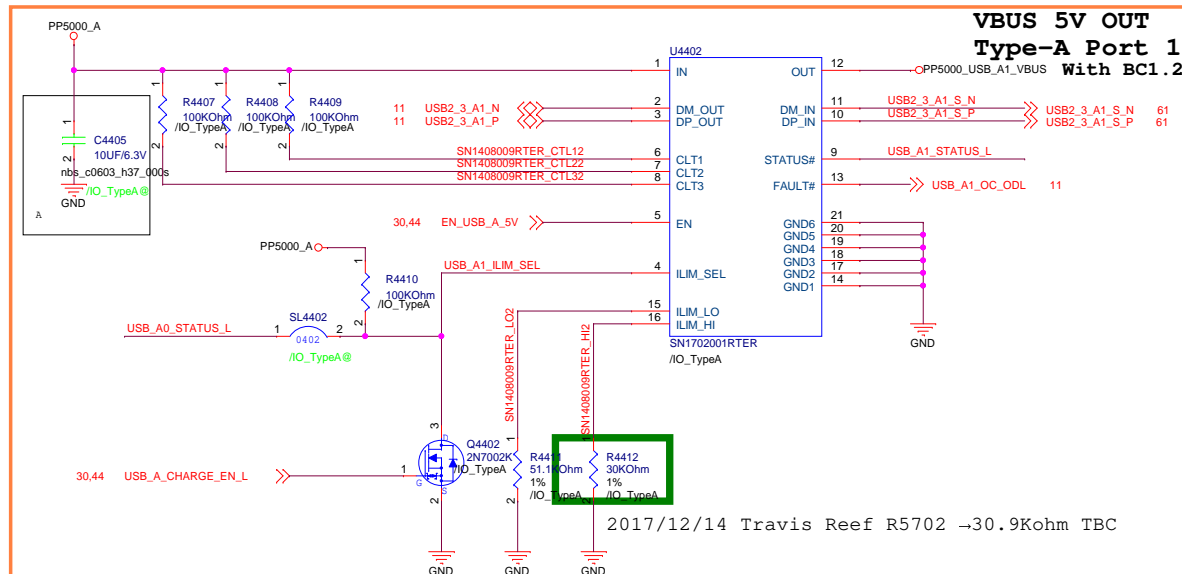
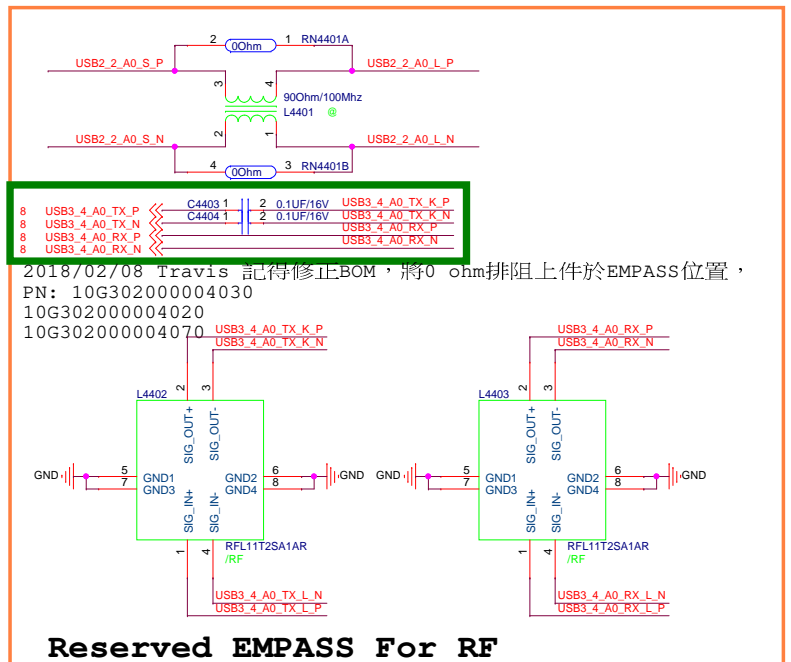
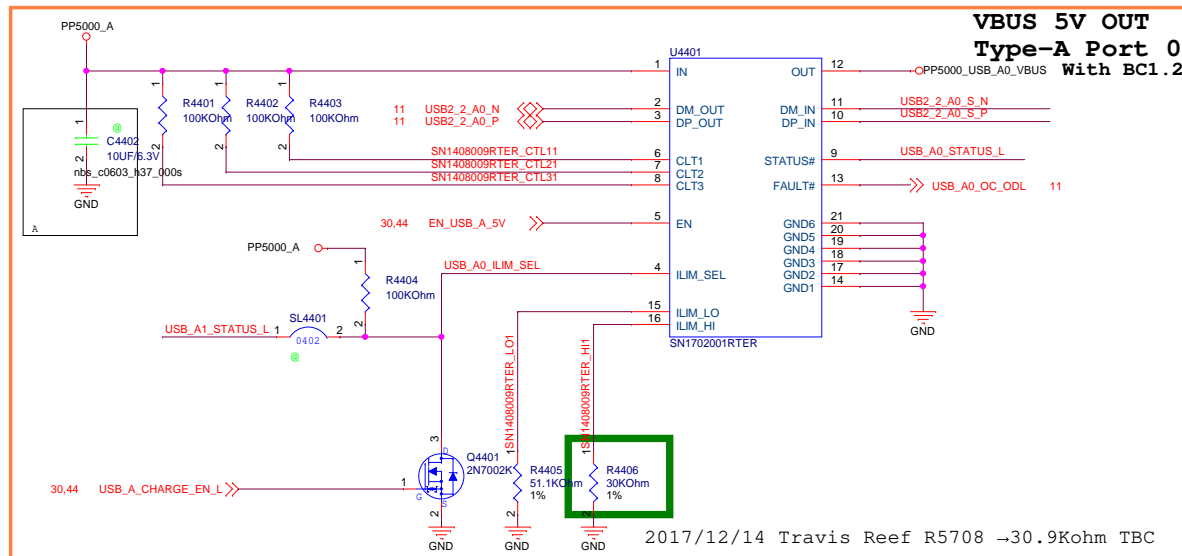
Sheet 40 of 99

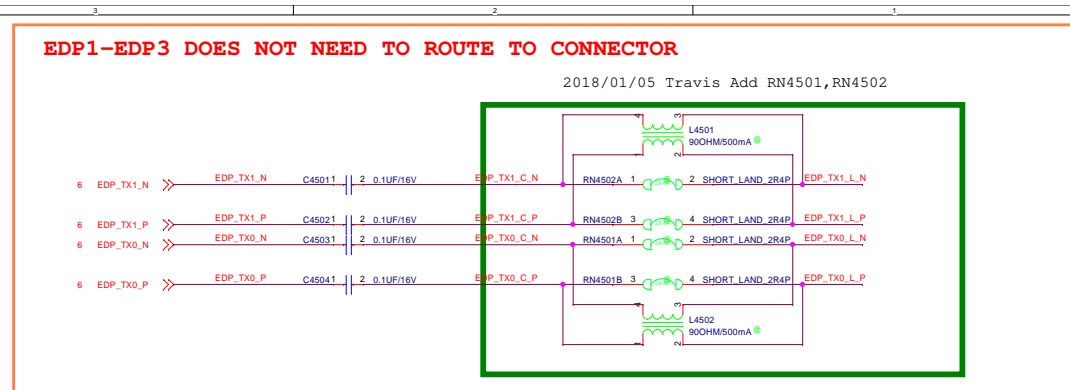
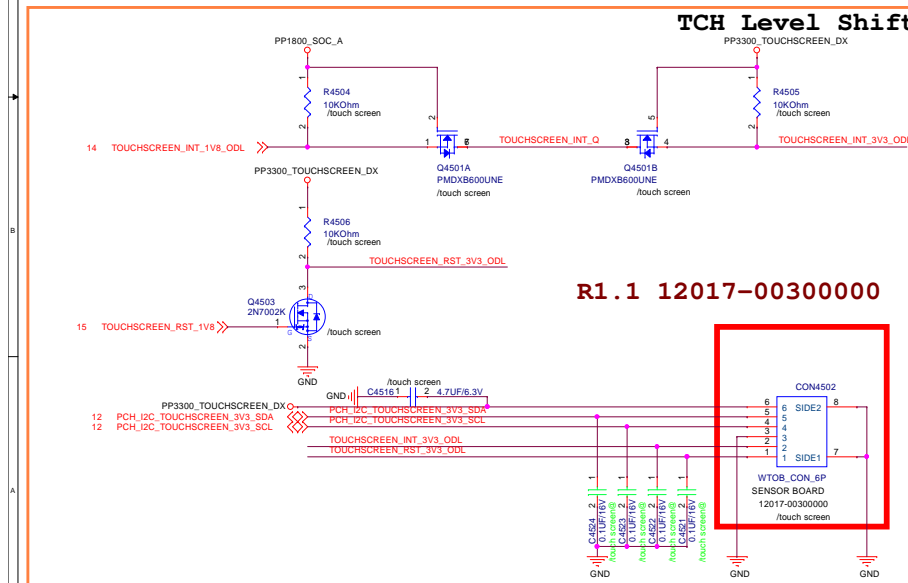
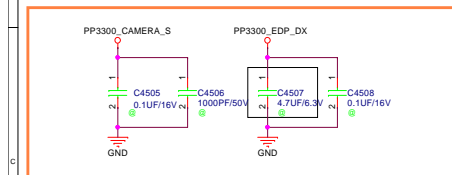
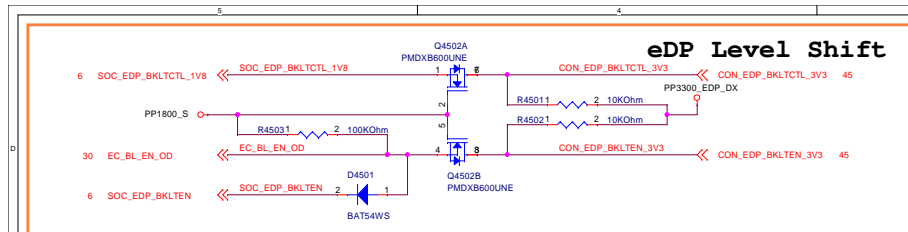


Type-C Port 0 Connector

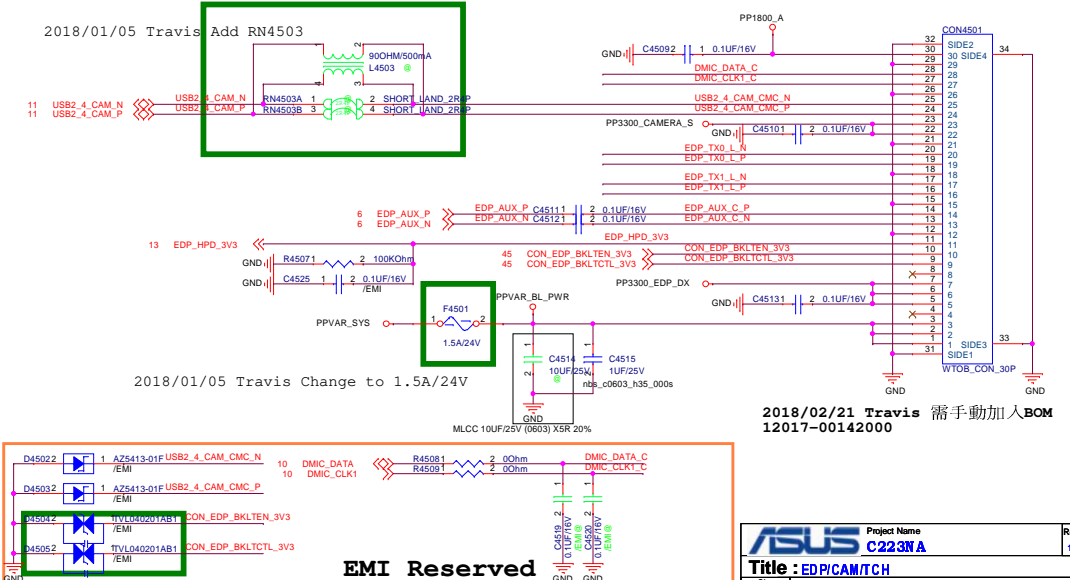


ASUS		Project Name	Rev
C223NA			1.0
Title : Type-C Conn			
Size	Dept.:	Engineer:	
Custom	CCNB/EE2	Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	of
		43	99



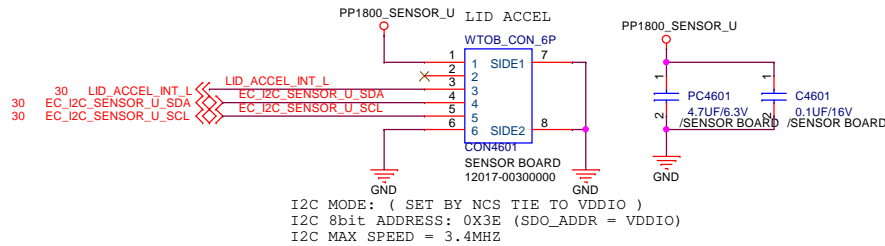


EDP + CAMERA CONNECTOR
INCORRECT PINOUT AND SIGNALING ON EDP + CAMERA CONNNECTOR



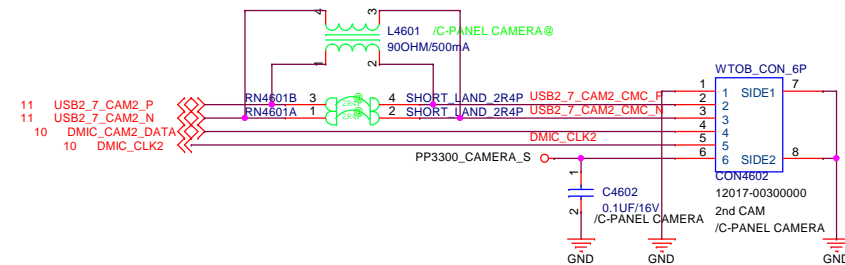
Project Name		Rev
C223NA		1.0
Title : EDP/CAM/TC		
Size	Dept.: CONBEE2	Engineer: Travis Chan
Date: Thursday, May 31, 2018	Sheet	45 of 99

SENSOR BOARD (KX022)



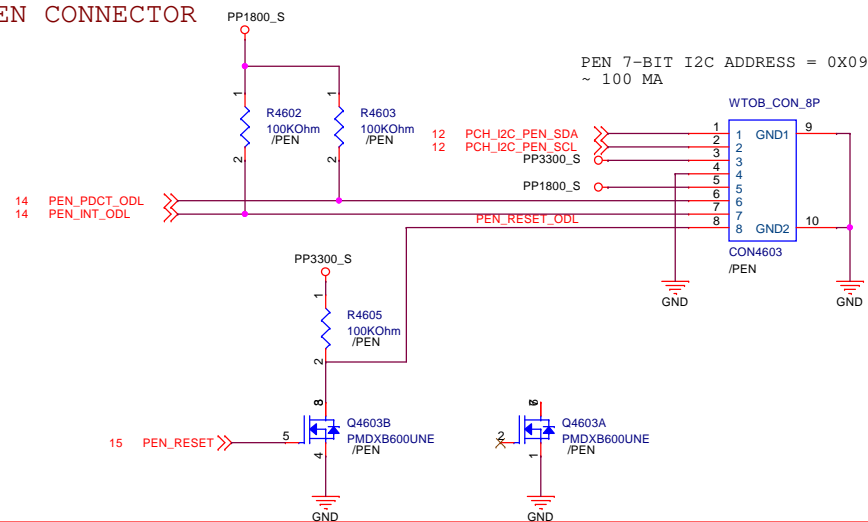
R1.1

C-PANEL CAMERA

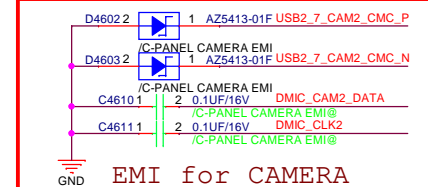


R1.1


PEN CONNECTOR

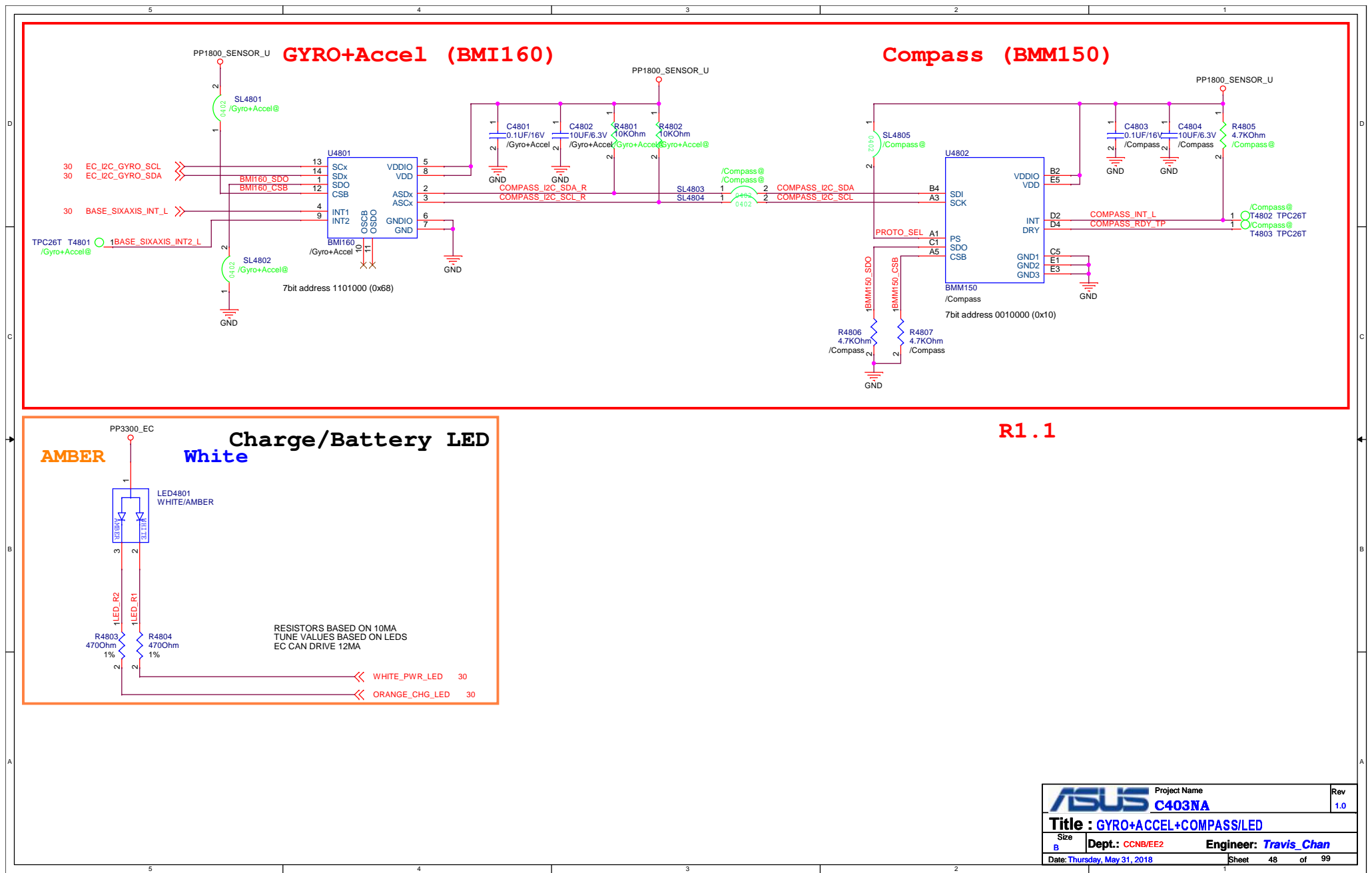


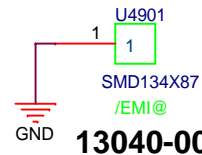
R1.1



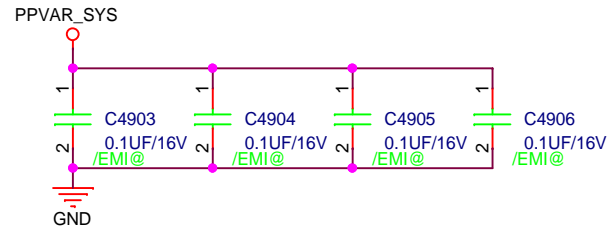
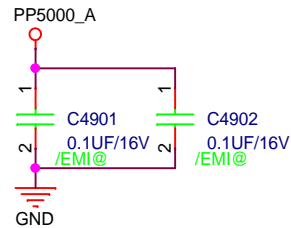
Project Name		Rev
ASUS C403NA		1.0
Title : Temp LID ACCEL/PEN/CAM2/KB BL		
Size	Dept.:	Engineer:
Custom	CCNB/EE2	Travis.Chan
Date: Thursday, May 31, 2018	Sheet	46 of 99

		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis, Chan	
Date: Thursday, May 31, 2018		Sheet	47 of 99

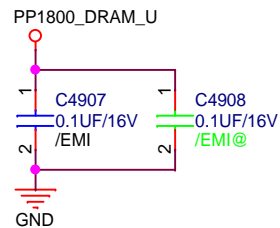




Gasket



EMI Reserved



EMI Request

<Variant Name>

ASUS		Project Name	Rev
C223NA			1.0
Title : EMI			
Size	Dept.: CCNB/EE2		Engineer: Travis_Chan
A	Date: Thursday, May 31, 2018		Sheet 49 of 99

5					4					3					2					1				
D																								
C																								
B																								
A																								
5					4					3					2					1				

ASUS

Project Name

C223NA

Rev

1.0

Title :

Size

B

Dept.: CCNB/EE2

Engineer: Travis_Chan


Date: Thursday, May 31, 2018

Sheet

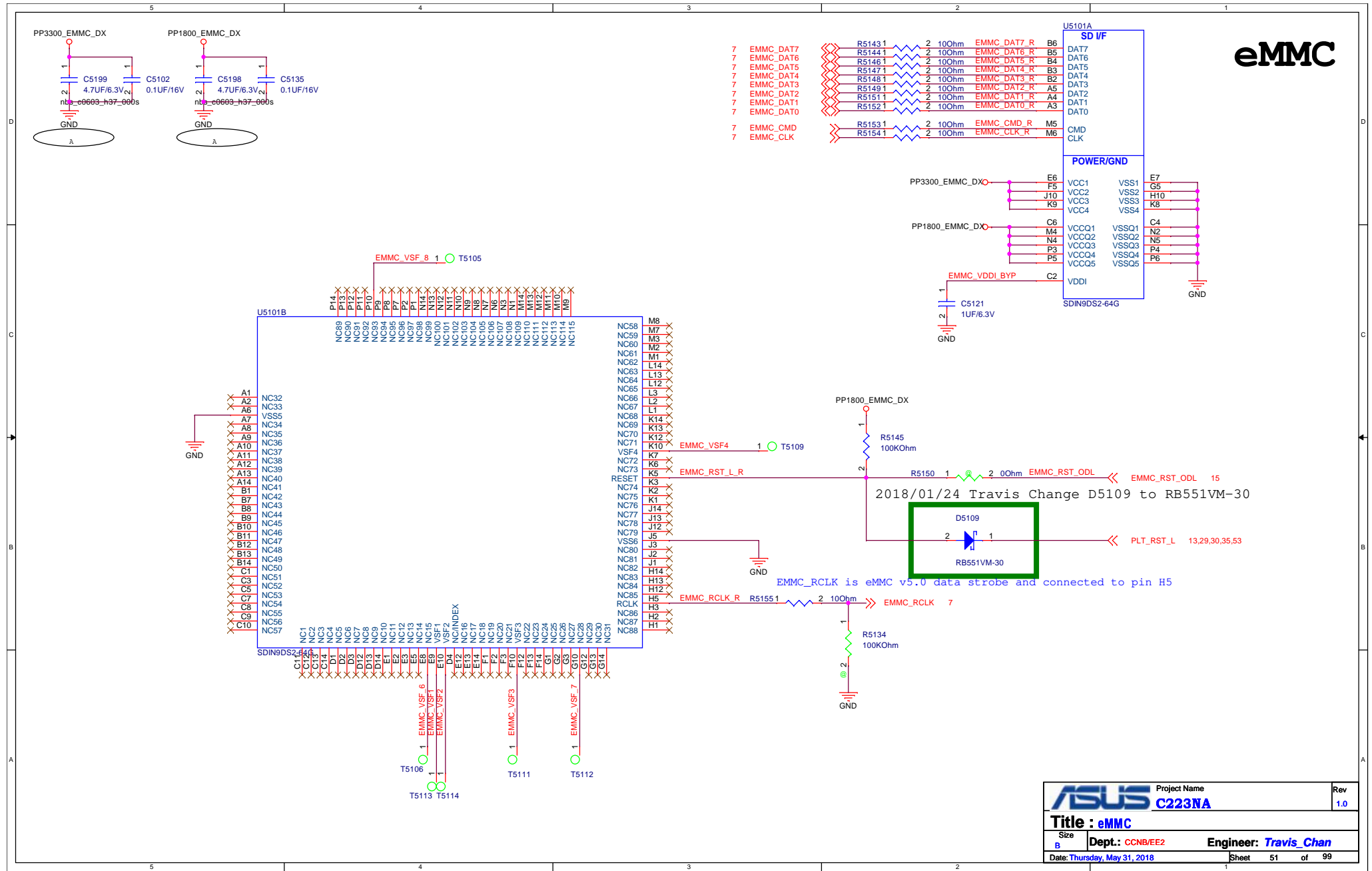
50


of

99

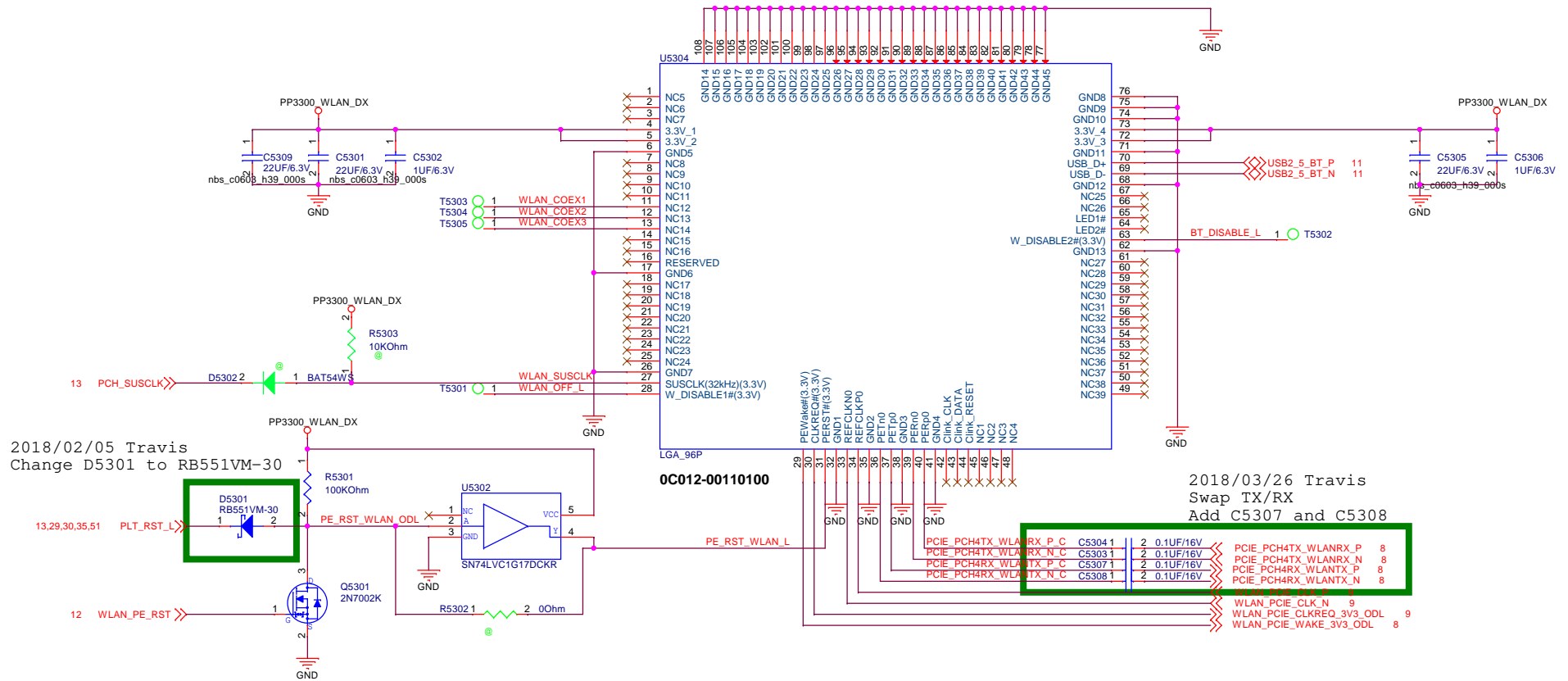
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		C223NA		1.0
Title :				
Size	Dept.:		Engineer:	
B	CCNB/EE2		Travis_Chan	
Date: Thursday, May 31, 2018			Sheet	50 of 99

eMMC





		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.: CCNB/EE2		Engineer: <i>Travis Chan</i>
B	Date: Thursday, May 31, 2018		Sheet 52 of 99


2018/02/05 Travis Change WIFI to on board module, PN: 0C012-00110100




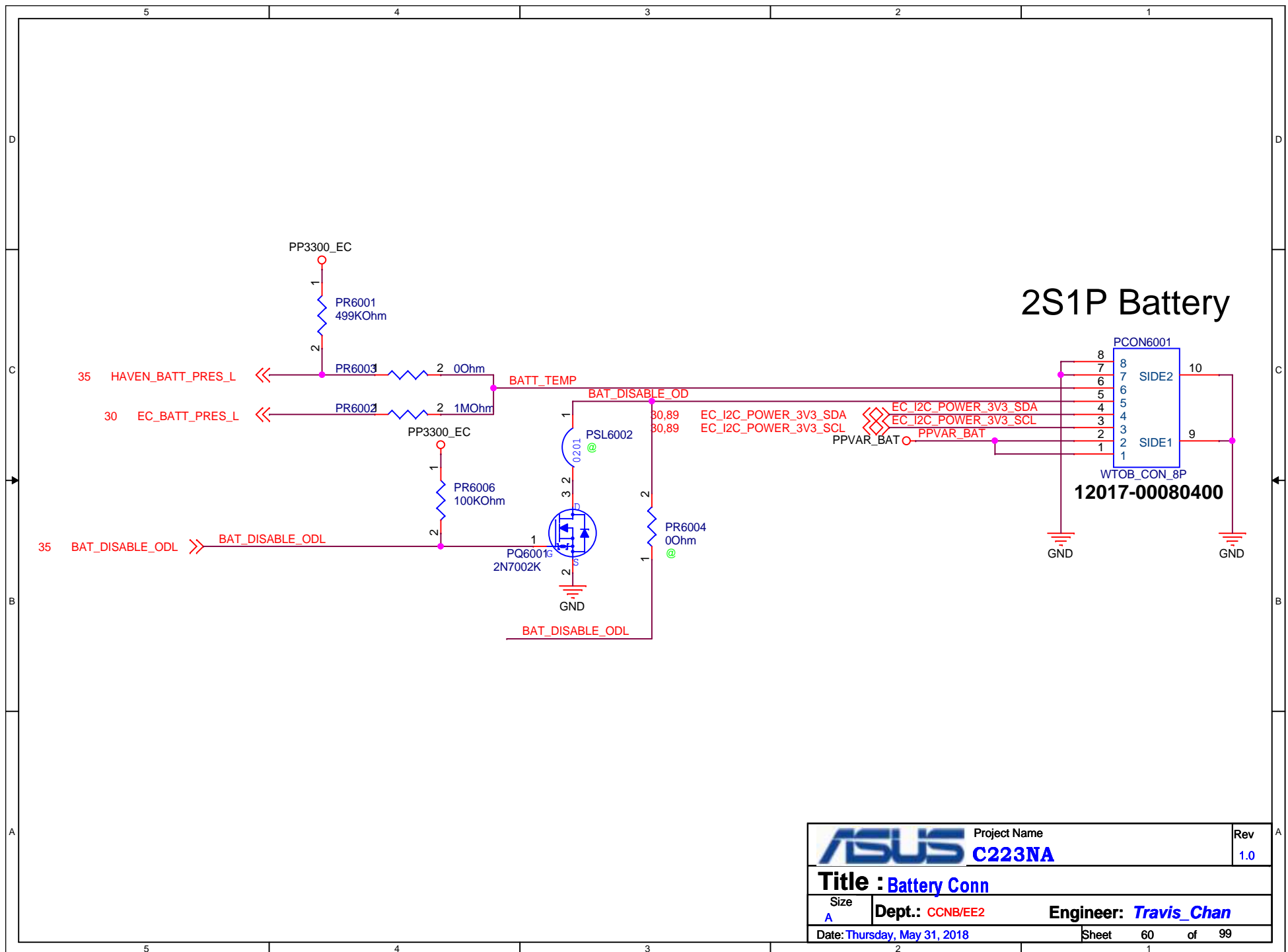
ASUS		Project Name	Rev
C223NA			1.0
Title : WLAN			
Size	Dept.: CCNB/EE2	Engineer: Travis_Chan	
B	Date: Thursday, May 31, 2018	Sheet	53 of 99

		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	55 of 99

		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis Chan	
Date: Thursday, May 31, 2018		Sheet	57 of 99

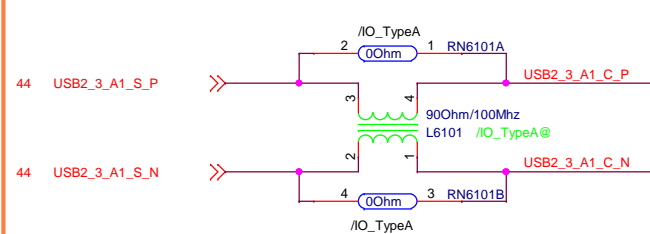
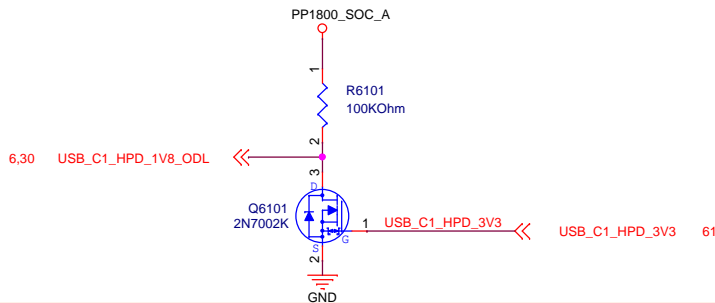
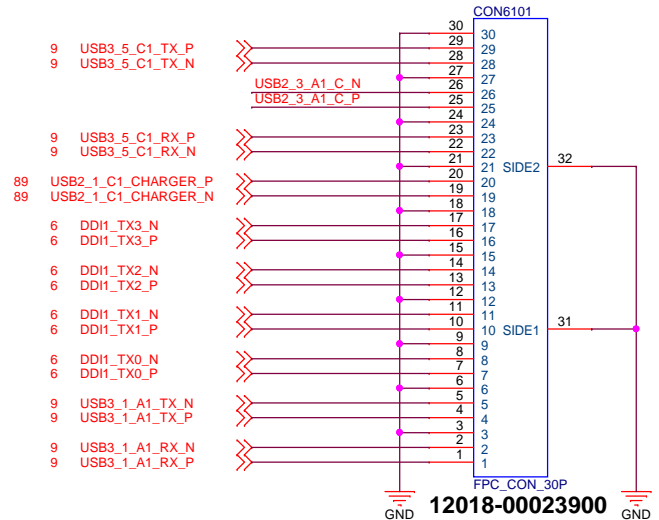
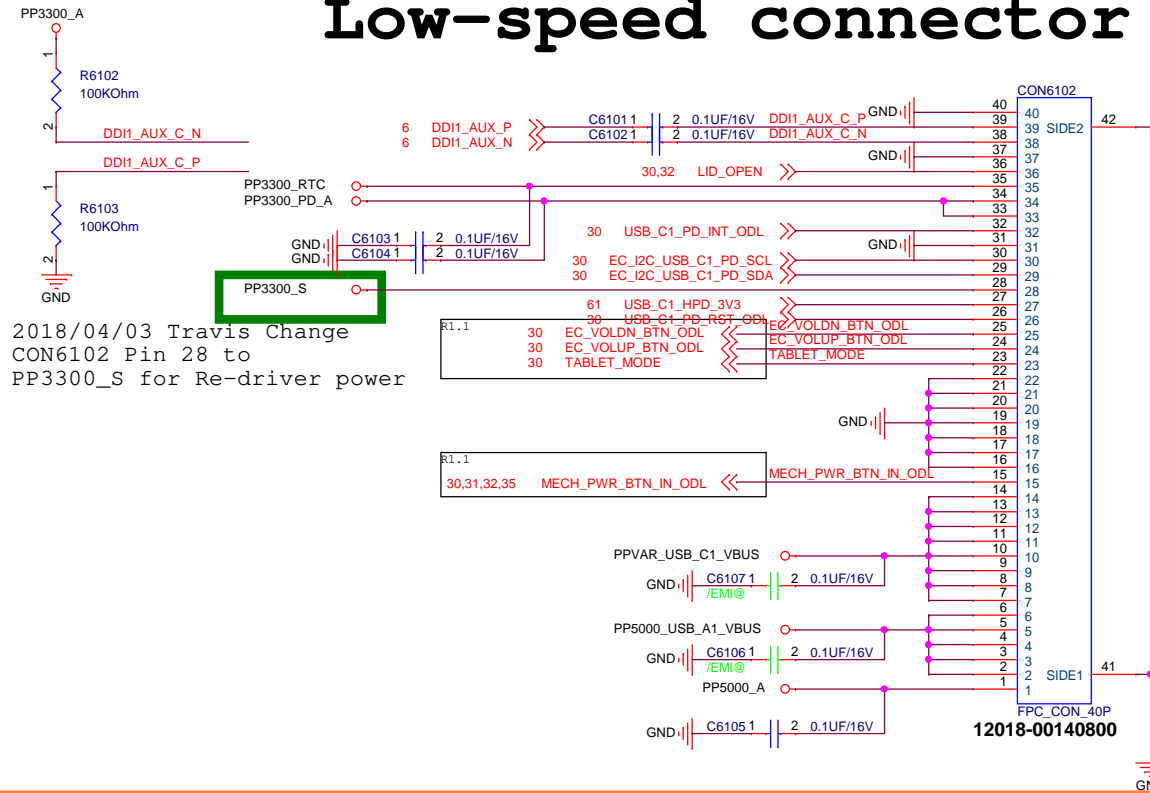
	Project Name		Rev
	C223NA		1.0
Title :			
Size	Dept.: CCNB/EE2	Engineer: <i>Travis_Chan</i>	
B			
Date: <u>Thursday, May 31, 2018</u>		Sheet	58 of 99

		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis Chan	
Date: Thursday, May 31, 2018		Sheet	59 of 99



Low-speed connector

High-speed connector



EMI Reserved

ASUS		Project Name	Rev
C223NA			1.0
Title : B to B Connector			
Size	Dept.:	Engineer:	
Custom	CCNB/EE2	Travis_Chan	
Date: Thursday, May 31, 2018		Sheet	61 of 99

5					4					3					2					1				
D																								
C																								
B																								
A																								
5					4					3					2					1				

ASUS

Project Name

C223NA

Rev

1.0

Title :

Size

B

Dept.: CCNB/EE2

Engineer: Travis_Chan


Date: Thursday, May 31, 2018

Sheet


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99

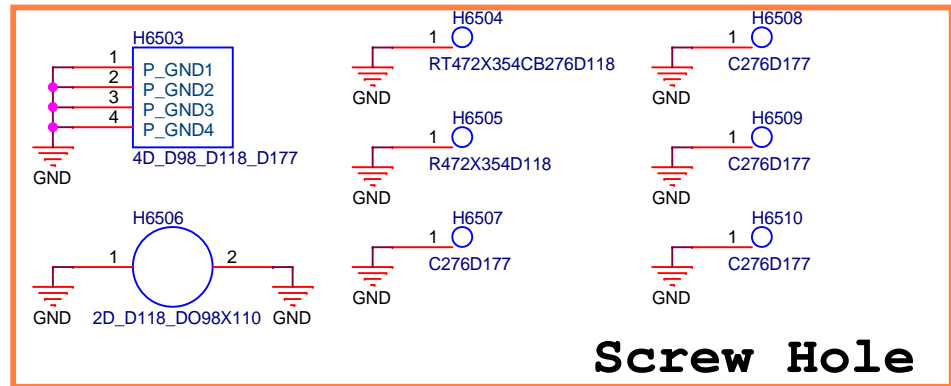
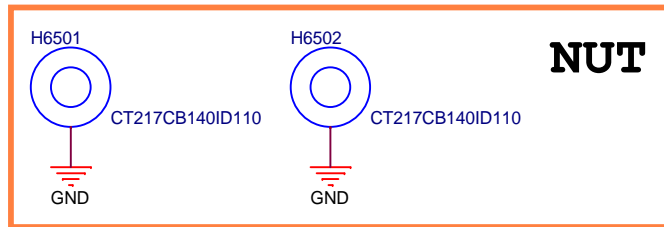
		Project Name		Rev
		C223NA		1.0
Title :				
Size	Dept.:		Engineer:	
B	CCNB/EE2		Travis_Chan	
Date: Thursday, May 31, 2018			Sheet	62 of 99

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D																								
C																								
B																								
A																								
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		Project Name		Rev
		C223NA		1.0
Title :				
Size	Dept.: CCNB/EE2		Engineer: Travis_Chan	
B				
Date: Thursday, May 31, 2018			Sheet 63 of 99	

		Project Name		Rev
		C223NA		1.0
Title :				
Size	Dept.:		Engineer:	
B	CCNB/EE2		Travis_Chan	
Date: Thursday, May 31, 2018			Sheet	63 of 99

		Project Name	Rev
		C223NA	1.0
Title :			
Size	Dept.:	Engineer:	
B	CCNB/EE2	Travis Chan	
Date: Thursday, May 31, 2018		Sheet	64 of 99

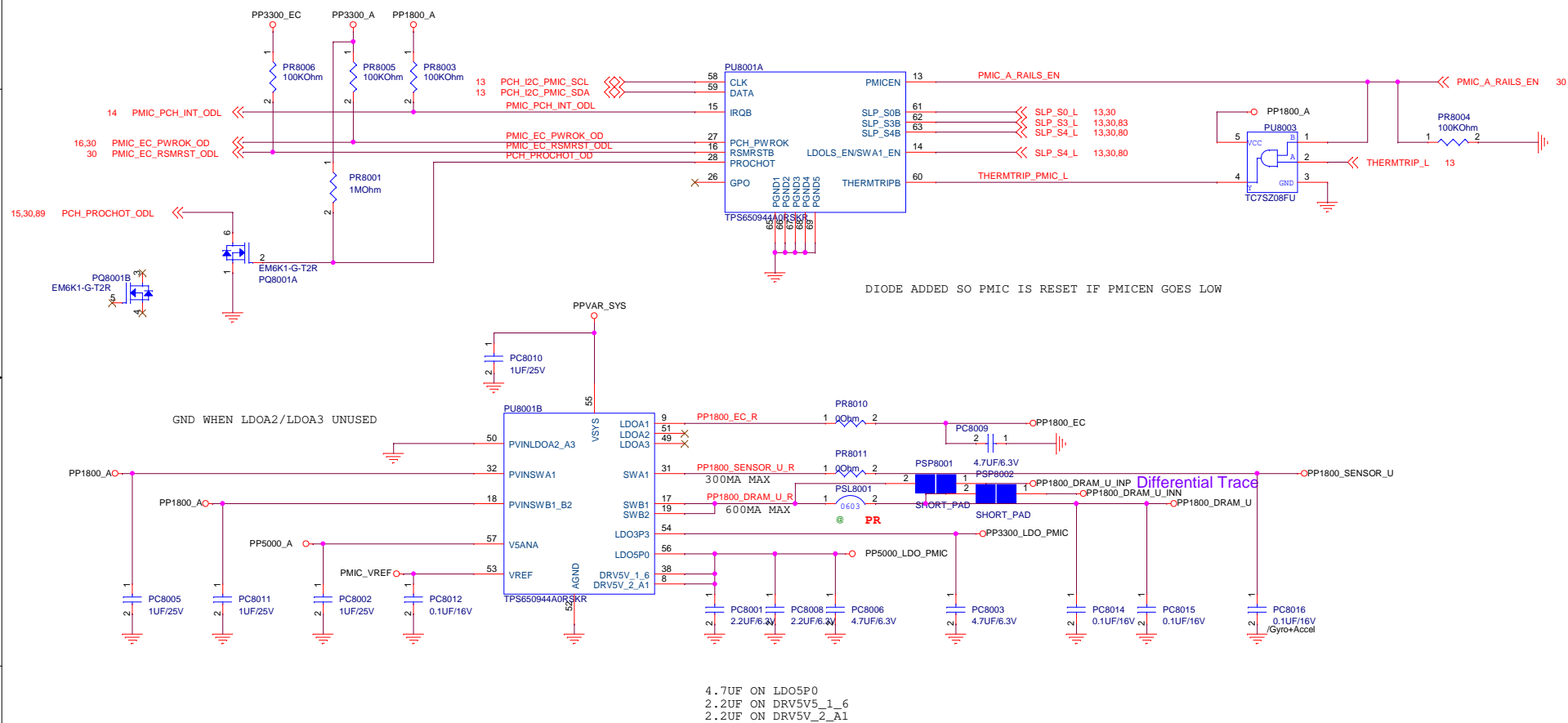


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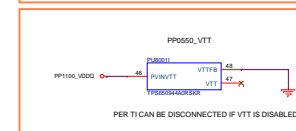
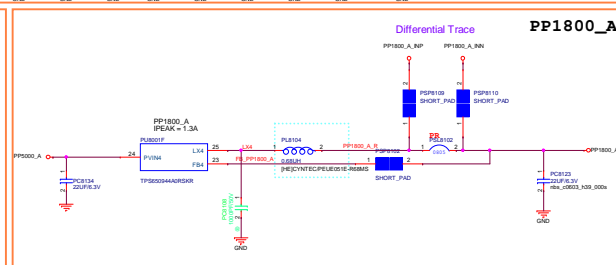
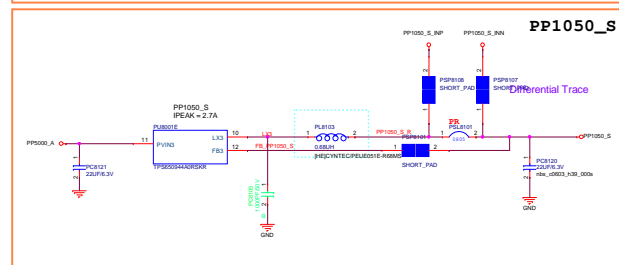
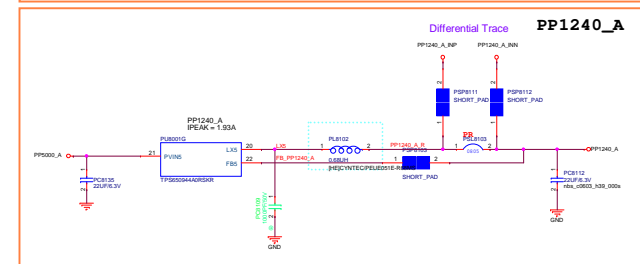
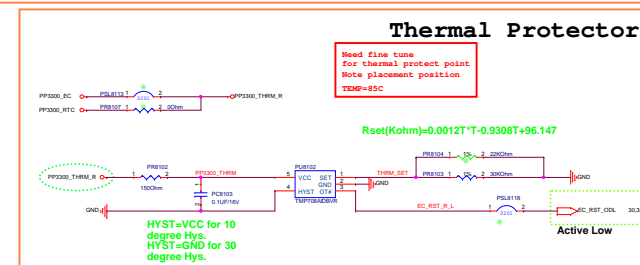
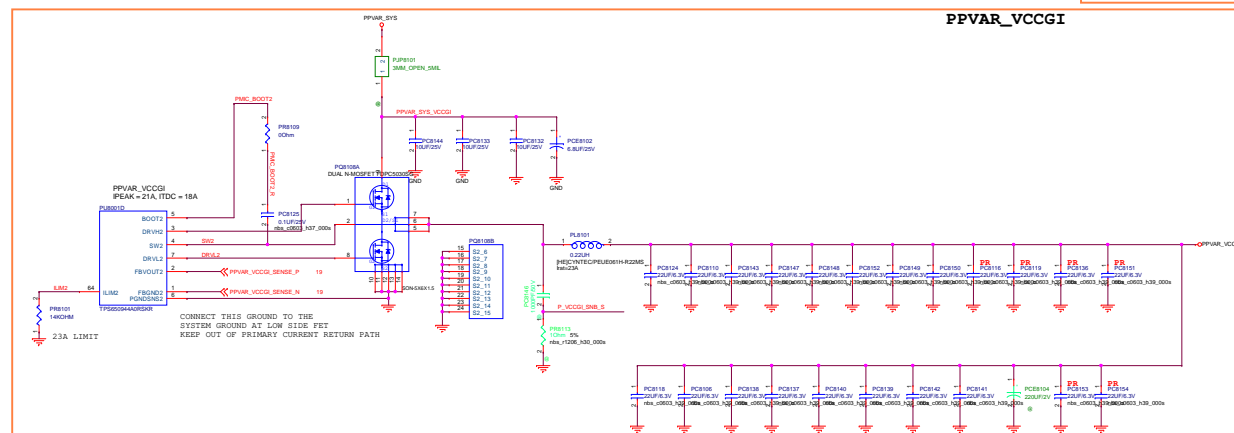
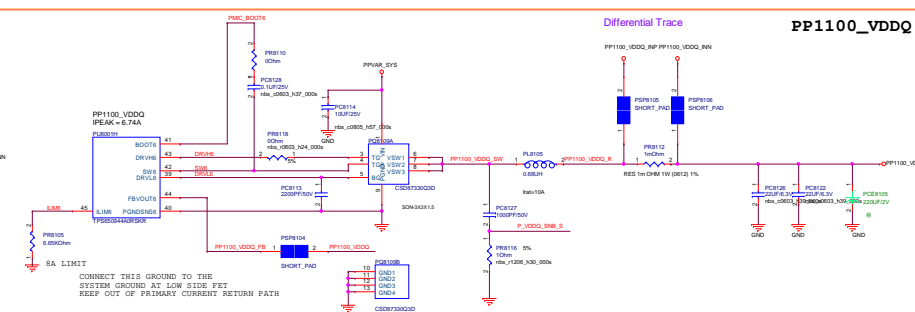
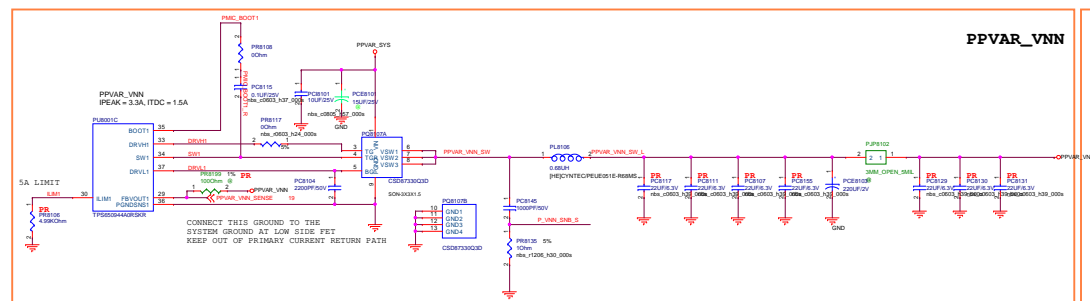
ASUS		Project Name	Rev
		C223NA	1.0
Title : SCREW HOLE			
Size	Dept.: CCNB/EE2		Engineer: Travis_Chan
A	Date: Thursday, May 31, 2018		Sheet 65 of 99

5					4					3					2					1				
D																								
C																								
B																								
A																								
5					4					3					2					1				

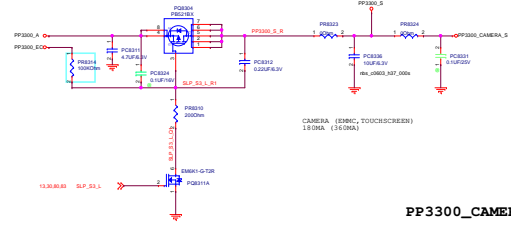
POWER - PMIC LOGIC



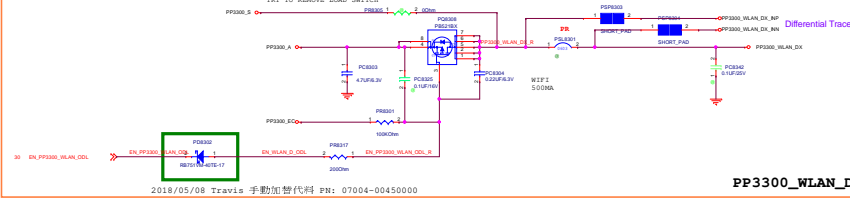
POWER - PMIC RAILS



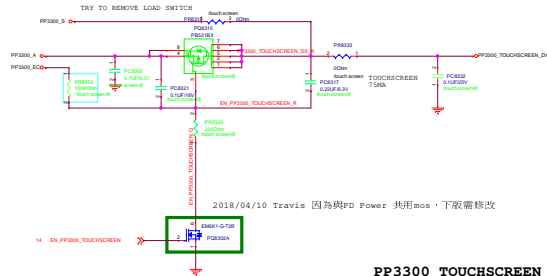
POWER - LOAD SWITCHES



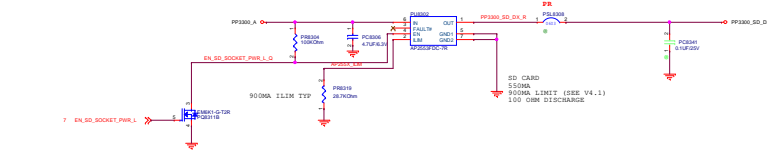
PP3300_CAMERA_S



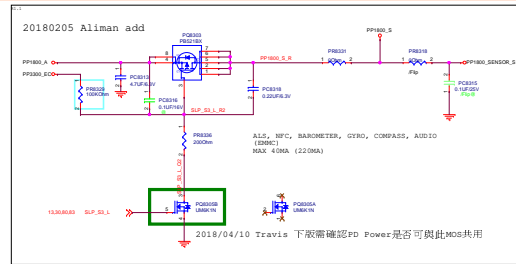
PP3300_WLAN_DX



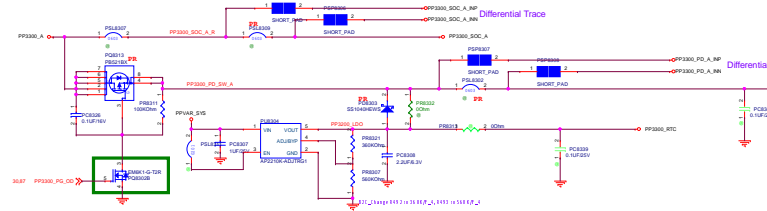
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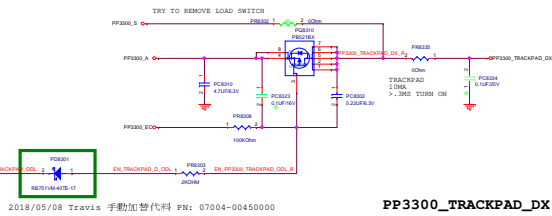
PP3300_SD_DX



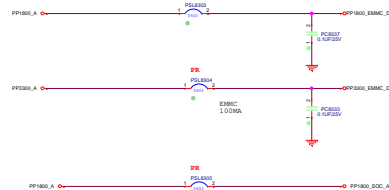
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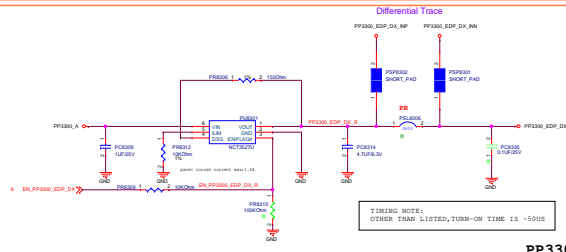
PP3300_PD_A



PP3300_TRACKPAD_DX

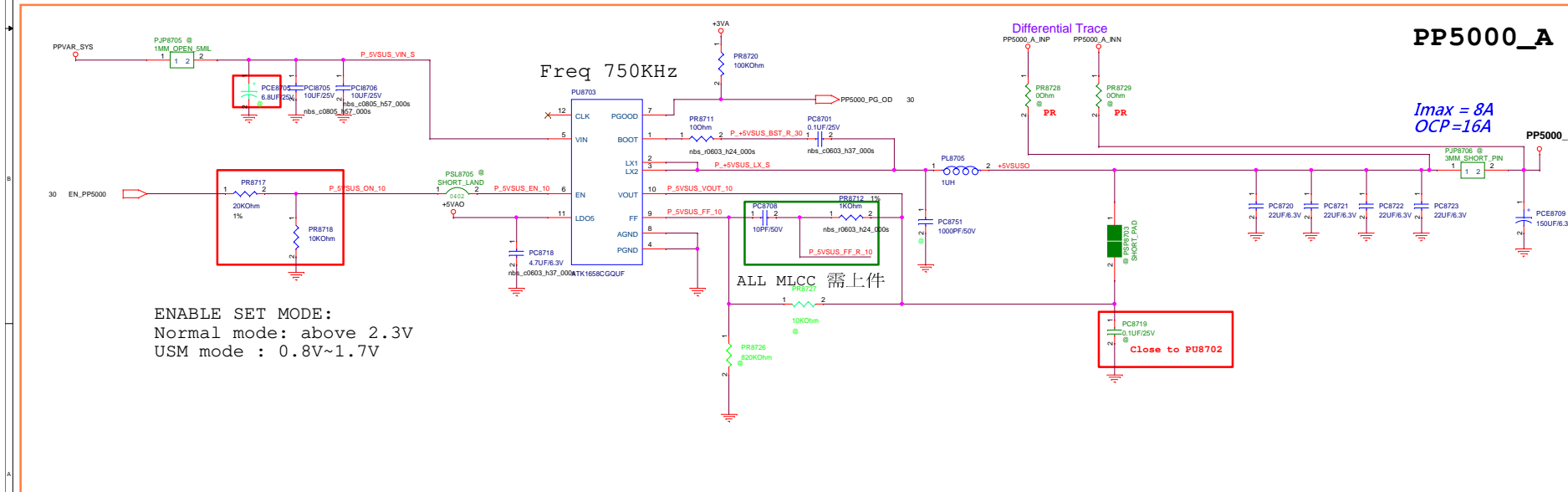
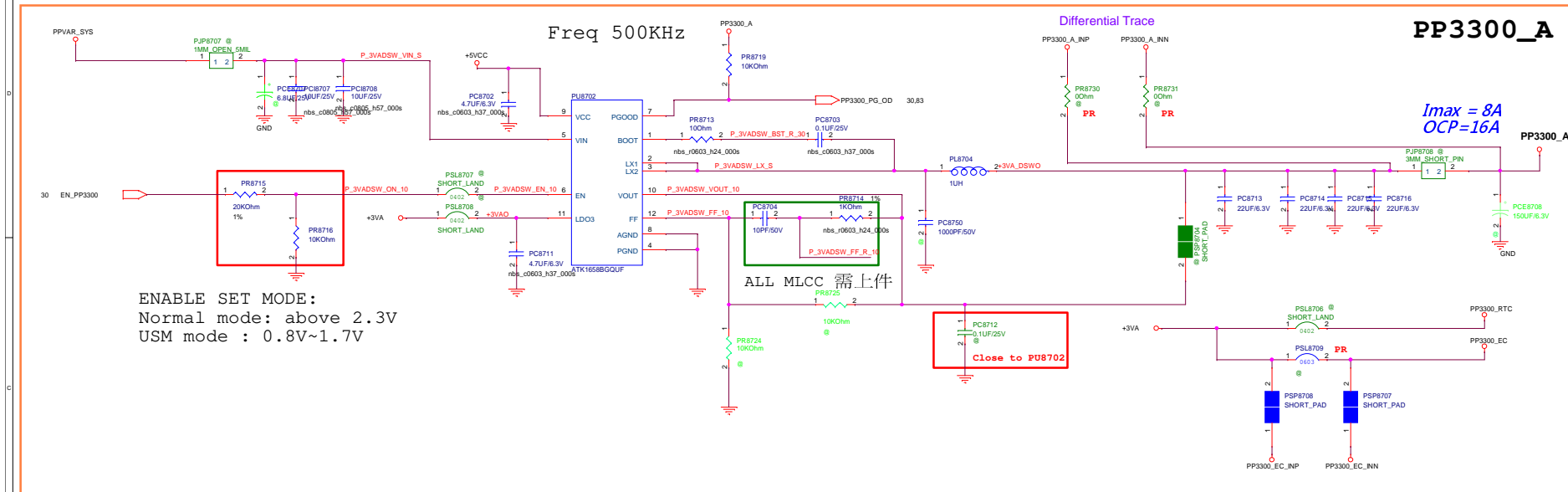


PP1800_EMMC_DX
PP3300_EMMC_DX
PP1800_SOC_A



PP3300_EDP_DX

3VA_DSW/+5VSUS



POWER - BATTERY CHARGER

ROHM BUCK-BOOST CHARGER

