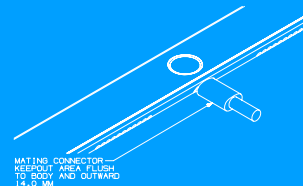
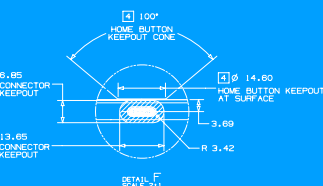
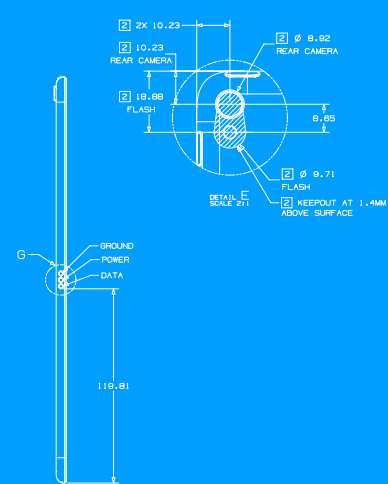
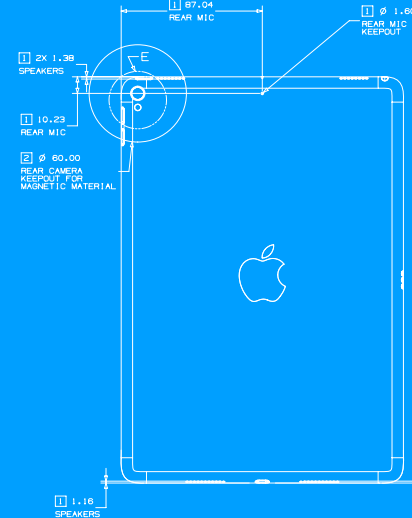
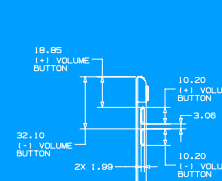
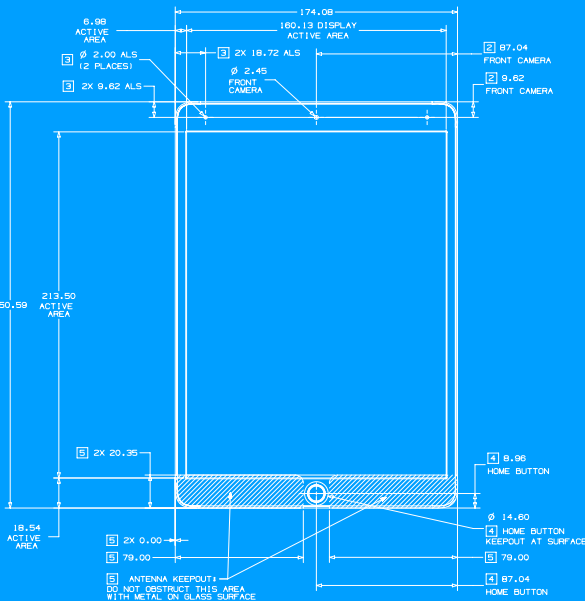
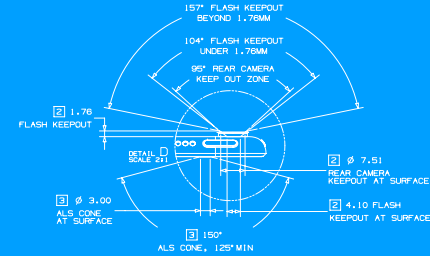
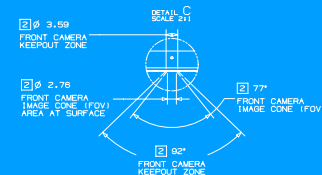
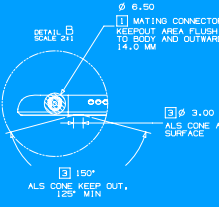
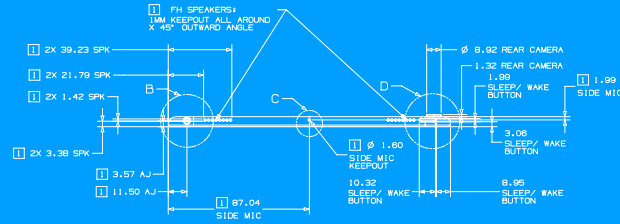
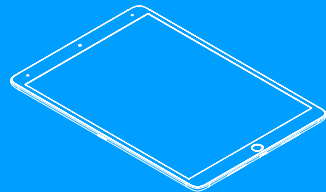
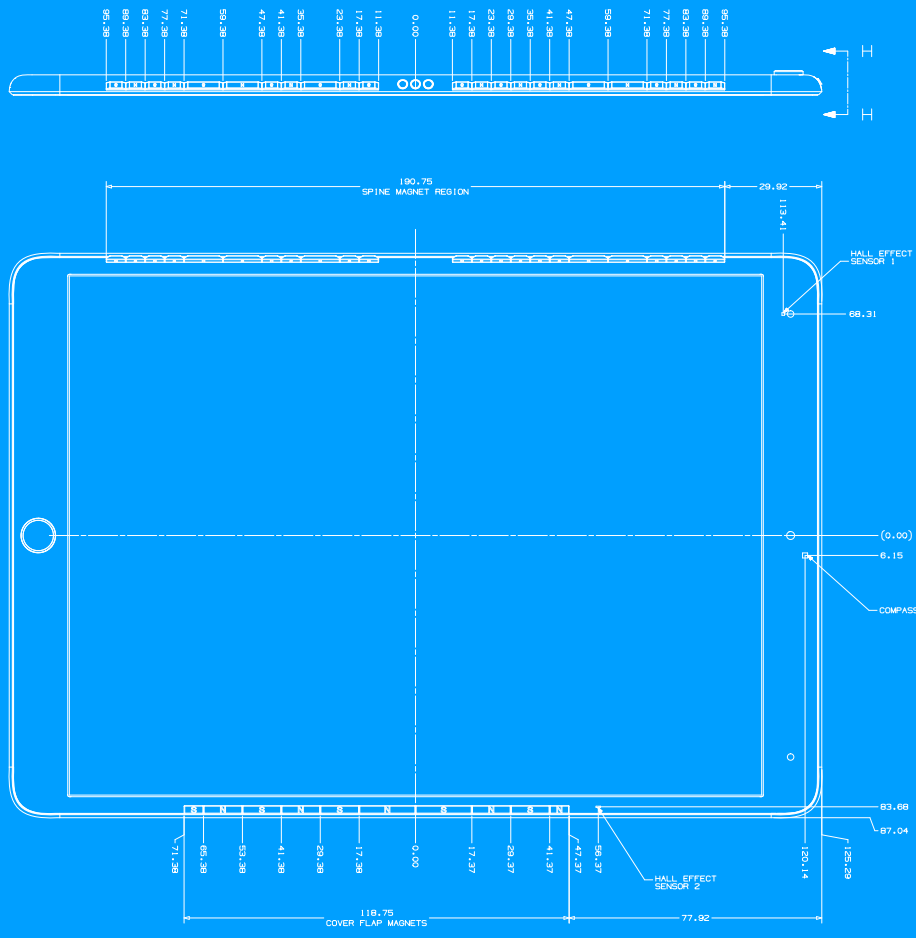


- 1 DO NOT OBSTRUCT ACOUSTIC OPENINGS; SIDE MIC, REAR MIC, AUDIO JACK, SPEAKERS
- 2 DO NOT OBSTRUCT THE IMAGING FEATURES; FRONT CAMERA, REAR CAMERA, REAR FLASH
- 3 DO NOT OBSTRUCT AMBIENT LIGHT SENSOR (ALS)
- 4 DO NOT OBSTRUCT THE HOME BUTTON
- 5 DO NOT HAVE METAL CONTACT WITH DEVICE COVER GLASS

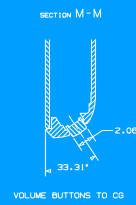
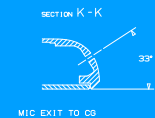
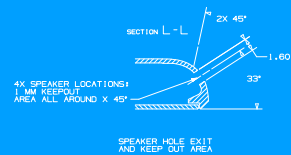
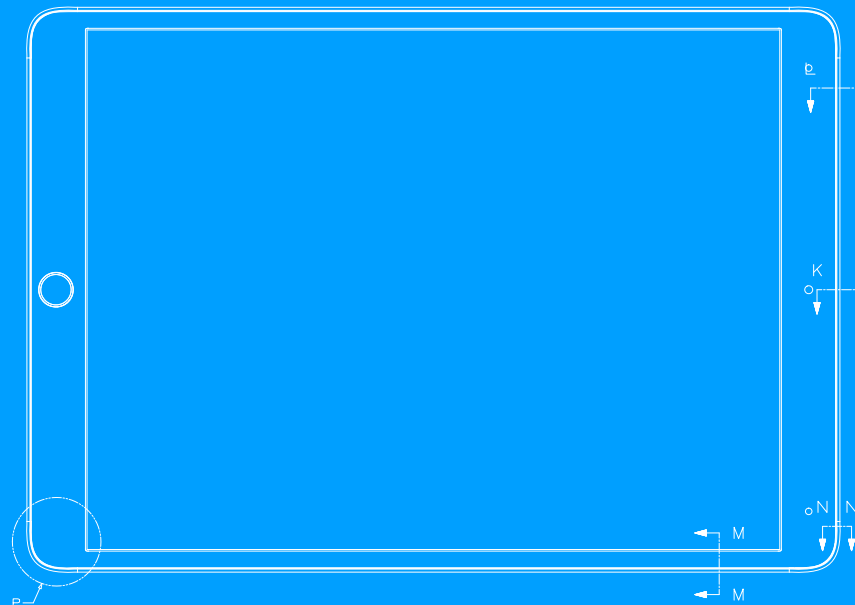
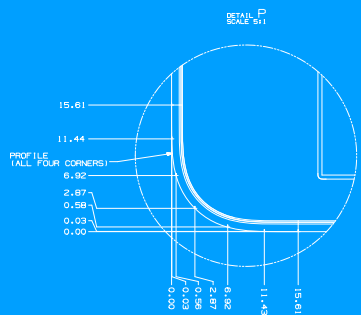
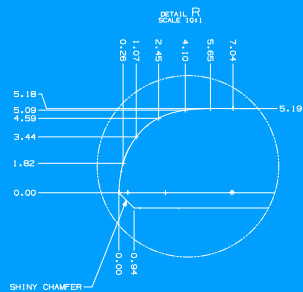


MTRIC		Apple Inc.	
DATE	2015	OFFICE OF PRODUCT SECURITY	
REVISION	2015	THE APPLE OF THE PRODUCT DESIGN, BUILT, AND TESTED TO MEET OR EXCEED ALL APPLICABLE REGULATORY REQUIREMENTS	
FORWARDER FOR THE INFORMATION	TRUCKS	ALL INFORMATION IS FOR THE INFORMATION OF THE PRODUCT DESIGN	
DATE	2015	TITLE	iPad Pro (10.5-inch) W1-F1
DATE	2015	REVISION	01
BY		CHECKED	NONE
APP		DATE	

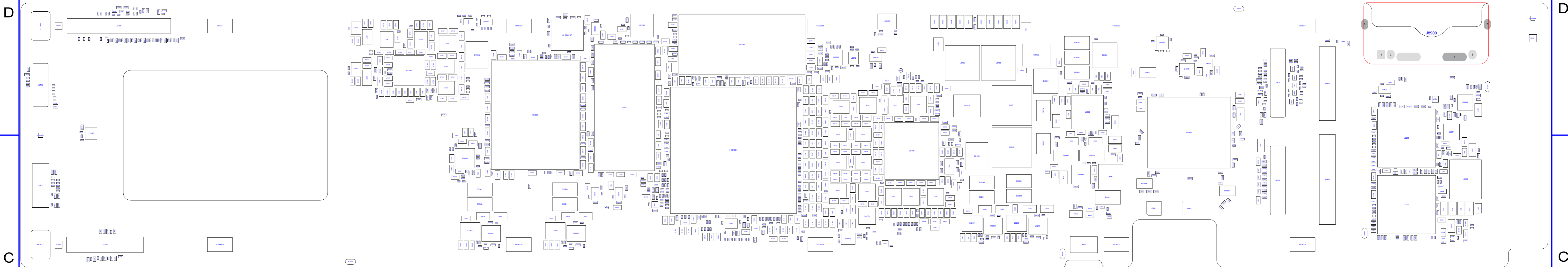
COVER FLAP MAGNET DETAIL
 POLARITY IS SHOWN TOWARD COVER GLASS
 DIMENSIONS TO CENTER OF PRODUCT
 +N = NORTH
 +S = SOUTH



SECTION AND DETAIL INFORMATION



8 7 6 5 4 3 2 1



A A

PAGE TITLE			iPad Pro 10.5 J207 PVT MLB-A	
PART NUMBER		820-00432	SIZE	
REVISION		1.0.0	D	
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			ASSEMBLY A/B	
			PAGE 0/0	

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1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
 2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
 3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

J207: MLB-A

LAST_MODIFICATION= Tue Oct 4 09:02:14 2016

J207_MLB_B SYNC VER 3.5.0
 WIFI_MLB SYNC VER 0.29.0

REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
5	0007236685	ENGINEERING RELEASED		2016-10-04

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3	4	BOM TABLES	MLB_B	08/26/2016
4	5	SOC: MISC & ALIASES	MLB_B	08/26/2016
5	6	SOC: MAIN	MLB_B	07/29/2016
6	7	SOC: I/OS	MLB_B	07/29/2016
7	8	SOC: LPDP & MIPI	MLB_B	09/19/2016
8	9	SOC: PCIE	MLB_B	08/26/2016
9	10	SOC: AOP	MLB_B	07/29/2016
10	11	SOC: DDR	MLB_B	07/29/2016
11	12	SOC: POWER (IO)	MLB_B	07/29/2016
12	13	SOC: POWER (CPU, GPU)	MLB_B	07/29/2016
13	14	SOC: POWER (SRAM, SOC)	MLB_B	07/29/2016
14	15	SOC: GND	MLB_B	07/29/2016
15	16	DRAM: CHANNELS 0-3	MLB_B	07/29/2016
16	17	DRAM: CHANNELS 4-7	MLB_B	07/29/2016
17	18	NAND: NAND	MLB_B	08/26/2016
18	21	SENSOR: CARBON, PHOS, MAGN	MLB_B	07/29/2016
19	22	TOUCH: KONA MASTER	MLB_B	07/29/2016
20	23	TOUCH: KONA SLAVE	MLB_B	07/29/2016
21	24	TOUCH: GRAPE CONN	MLB_B	07/29/2016
22	26	HAWKING	MLB_B	07/29/2016
23	27	FLEX CONNS: CORNER 3	MLB_B	07/29/2016
24	28	CAMERA: FRONT	MLB_B	07/29/2016
25	29	CAMERA: STROBE	MLB_B	07/29/2016
26	30	AUDIO: CLIFDEN, BELFIELD	MLB_B	07/29/2016
27	31	FLEX CONNS: C4 & DMIC	MLB_B	07/29/2016
28	32	AUDIO: SPEAKER AMPS (CN)	MLB_B	07/29/2016
29	33	AUDIO: SPEAKER AMPS (FH)	MLB_B	07/29/2016
30	35	IO: TRISTAR	MLB_B	07/29/2016
31	37	IO: HOTBAR, SIM, XBAR	MLB_B	07/29/2016
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33	46	DISPLAY: EDP SUPPORT	MLB_B	07/29/2016
34	47	SENSOR: MESA	MLB_B	07/29/2016
35	49	WIFI/BT: MODULE	WIFI_MLB	09/30/2016
36	50	WIFI/BT: J207 FRONT END	WIFI_MLB	09/30/2016
37	74	STOCKHOLM	MLB_B	08/26/2016
38	77	POWER: AUTUMN (1/3)	MLB_B	07/29/2016
39	78	POWER: AUTUMN (2/3)	MLB_B	07/29/2016
40	79	POWER: AUTUMN (3/3)	MLB_B	07/29/2016
41	80	ORION	MLB_B	07/29/2016
42	81	POWER: AUGUST (1/4)	MLB_B	07/29/2016
43	82	POWER: AUGUST (2/4)	MLB_B	07/29/2016
44	83	POWER: AUGUST (3/4)	MLB_B	07/29/2016
45	84	POWER: AUGUST (4/4)	MLB_B	07/29/2016
46	85	POWER: CHARGER	MLB_B	07/29/2016
47	86	POWER: EXTERNAL SWITCHES & LDOS	MLB_B	07/29/2016
48	88	POWER: USB PD	MLB_B	07/29/2016
49	89	POWER: BATTERY & ORION CONN	MLB_B	07/29/2016
50	90	SOC: DEBUG	MLB_B	08/26/2016

PAGE	CSA	CONTENTS	SYNC	DATE
51	91	ALIASES: BB/WLAN/BT	MLB_A_ELBA	04/24/2016
52	93	TEST: TFS/HOLES/FIDUCIALS	MLB_B	06/01/2016
53	95	TEST: EE TP/PP	MLB_B	06/01/2016
54	121	POWER: ALIASES	MLB_B	07/29/2016

SCH AND BOARD P/N

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-01015	1	SCHEM,MLB-A, (YN), J207	SCH1	CRITICAL	
820-00432	1	PCBF,MLB-A, (YN), J207	PCB1	CRITICAL	

TABLE OF CONTENTS

DRAWING TITLE		SCHEM,MLB-A, (YN), J207	
DRAWING NUMBER		051-04464	SIZE D
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BRANCH			
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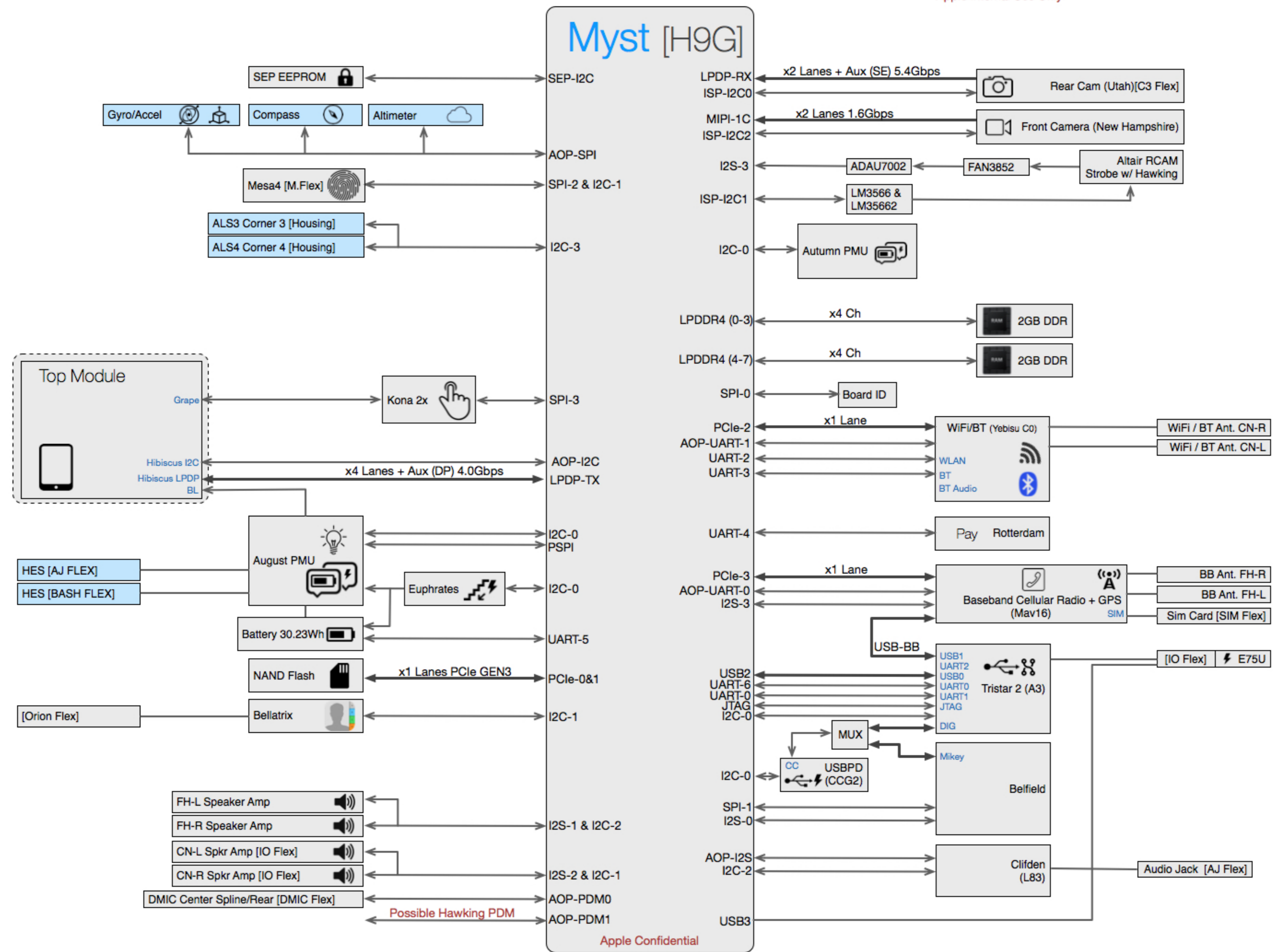
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J208 P2 System Block Diagram

Updated: July 11, 2016
Apple Internal Use Only



SYNC_MASTER=MLB_B		SYNC_DATE=05/14/2016	
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BLOCK DIAGRAM			
	DRAWING NUMBER	051-04464	SIZE
	REVISION	5.0.0	D
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		PAGE	2 OF 121
		SHEET	2 OF 54

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CKPLUS WAIVE TABLE

CKPLUS RULE EXCEPTIONS	REQUIRED
SCHEMATIC DEFINED CONSTRAINTS (YES/NO)	NO

MECHANICAL PARTS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
806-09232	1	CAN, TOUCH_MLB	TOUCH_FENCE	CRITICAL	
806-08286	1	CAN, RADIO_MLB_B	RADIO_FENCE	CRITICAL	MLB_B
806-08942	1	FENCE, AP_MLB	AP_FENCE	CRITICAL	

BARCODE LABEL/EEEE CODES

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-7691	1	EEEE FOR 639-01321 (MLB A BETTER)	EEEE_HFRC	CRITICAL	EEEE_MLB_A_BETTER
825-7691	1	EEEE FOR 639-03350 (MLB A EXTREME)	EEEE_HN82	CRITICAL	EEEE_MLB_A_EXTREME
825-7691	1	EEEE FOR 639-01325 (MLB A ULTIMATE)	EEEE_GPM	CRITICAL	EEEE_MLB_A_ULTIMATE
825-7691	1	EEEE FOR 639-01327 (MLB A SUPREME)	EEEE_GPM	CRITICAL	EEEE_MLB_A_SUPREME
825-7691	1	EEEE FOR 639-01322 (MLB B BETTER)	EEEE_HFR9	CRITICAL	EEEE_MLB_B_BETTER
825-7691	1	EEEE FOR 639-03349 (MLB B EXTREME)	EEEE_HN81	CRITICAL	EEEE_MLB_B_EXTREME
825-7691	1	EEEE FOR 639-01326 (MLB B ULTIMATE)	EEEE_GPMQ	CRITICAL	EEEE_MLB_B_ULTIMATE
825-7691	1	EEEE FOR 639-01328 (MLB B SUPREME)	EEEE_GPMV	CRITICAL	EEEE_MLB_B_SUPREME

SOC

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
343800172	1	IC, MYST	U0600	CRITICAL	

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
343800173	343800172		U0600	DIFF ASSEMBLY HOUSE

SDRAM

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
333800103	2	IC, DRAM, SAMSUNG, FBGA480	U1600, U1700	CRITICAL	

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
333800104	333800103		U1600, U1700	HYNIX DRAM
333800105	333800103		U1600, U1700	MICRON DRAM

PMU

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
343800118	1	IC, PMU, AUGUST, D2400AA, OTP-BE	U8100	CRITICAL	
343800120	1	IC, PMU, AUTUMN, WLCSPL121, OTP-BD	U7700	CRITICAL	

EUPHRATES

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
343800121	1	IC, EUPHRATES, D2355A1, OTP-CD	U8500	CRITICAL	

NAND

BETTER FLASH CONFIGURATIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335800155	1	TOSHIBA, 32GB, MLC, ULGA70, BETTER	U1800	CRITICAL	BETTER_PROD

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335800160	335800155	BETTER_PROD	U1800	HYNIX NAND

ULTIMATE FLASH CONFIGURATIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335800174	1	TOSHIBA, 128GB, TLC, ULGA70, ULTIMATE	U1800	CRITICAL	ULTIMATE_PROD

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335800165	335800174	ULTIMATE_PROD	U1800	SANDISK NAND


SUPREME FLASH CONFIGURATIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335800188	1	TOSHIBA, 256GB, TLC, ULGA70, SUPREME	U1800	CRITICAL	SUPREME_PROD

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335800166	335800188	SUPREME_PROD	U1800	SANDISK NAND

EXTREME FLASH CONFIGURATIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335800265	1	NAND, 512GB, 3DV2, ULGA70, XTREME	U1800	CRITICAL	EXTREME_PROD

SYNC_MASTER=MLB_B		SYNC_DATE=08/26/2016	
PAGE TITLE			
 Apple Inc.		DRAWING NUMBER	051-04464
		REVISION	5.0.0
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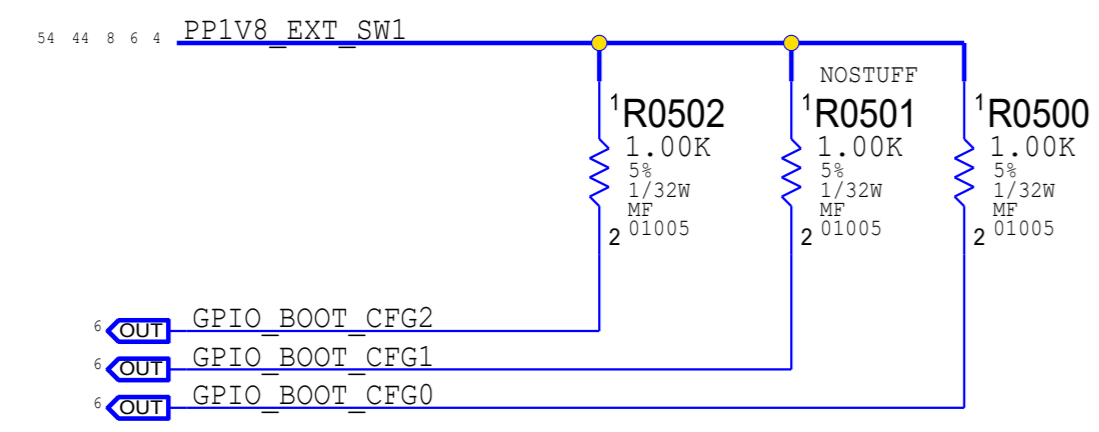
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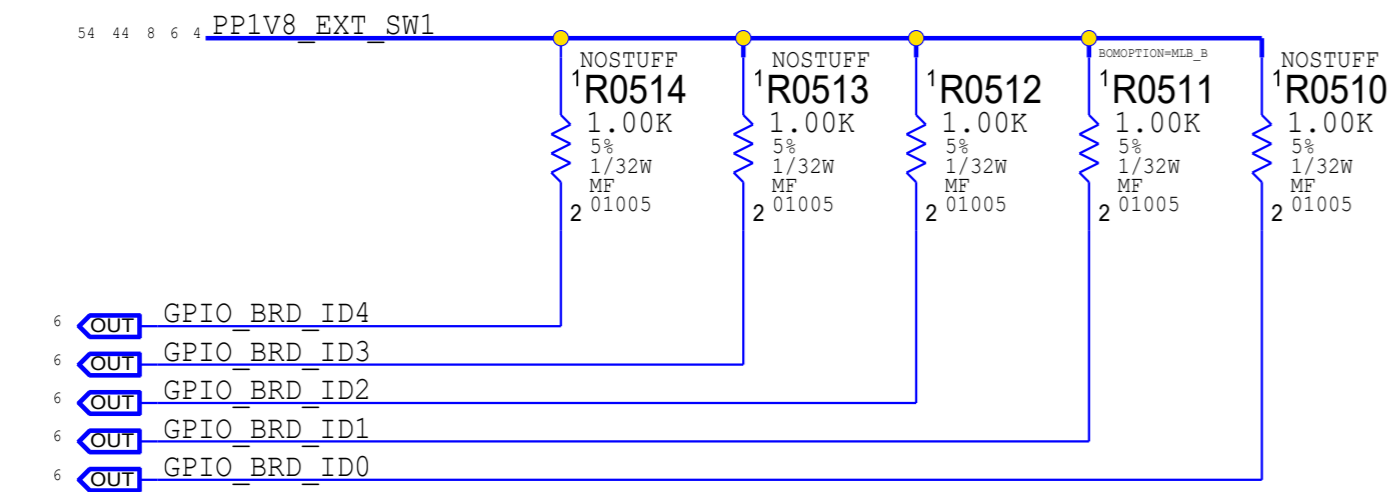
BOOT CONFIG ID



BOOT_CFG[3:0]	MODE	S/W READ FLOW
000	RESERVED	1. SET GPIO AS INPUT 2. DISABLE PU AND ENABLE PD 3. READ
001	RESERVED	
010	NVME0 X2	
011	NVME0 X2 TEST	
100	NVME0 X1	
101	NVME0 X1 TEST	

CURRENT SETTING ---->

BOARD ID



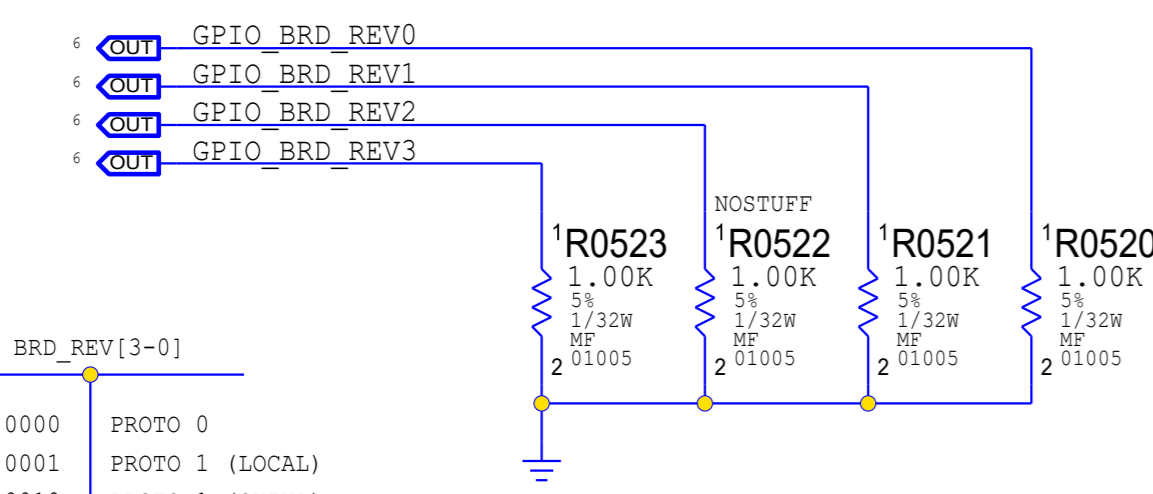
BRD_ID[4-0]	MODE	S/W READ FLOW
00100	J207 AP	1. SET GPIO AS INPUT 2. DISABLE PU AND ENABLE PD 3. READ
00101	J207 DEV	
00110	J208 AP	
00111	J208 DEV	

CURRENT SETTING ---->

RDAR://PROBLEM/24427656

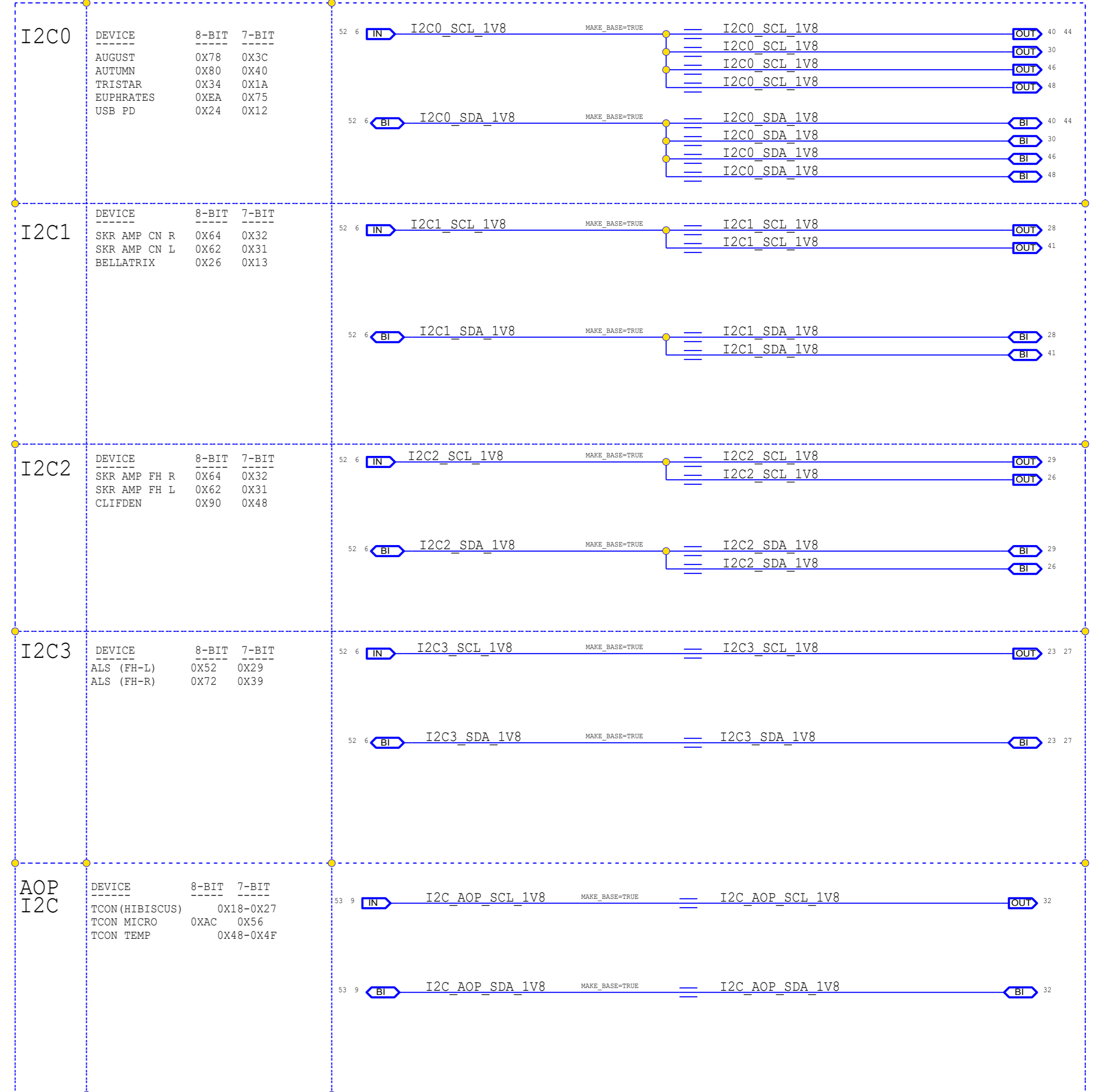
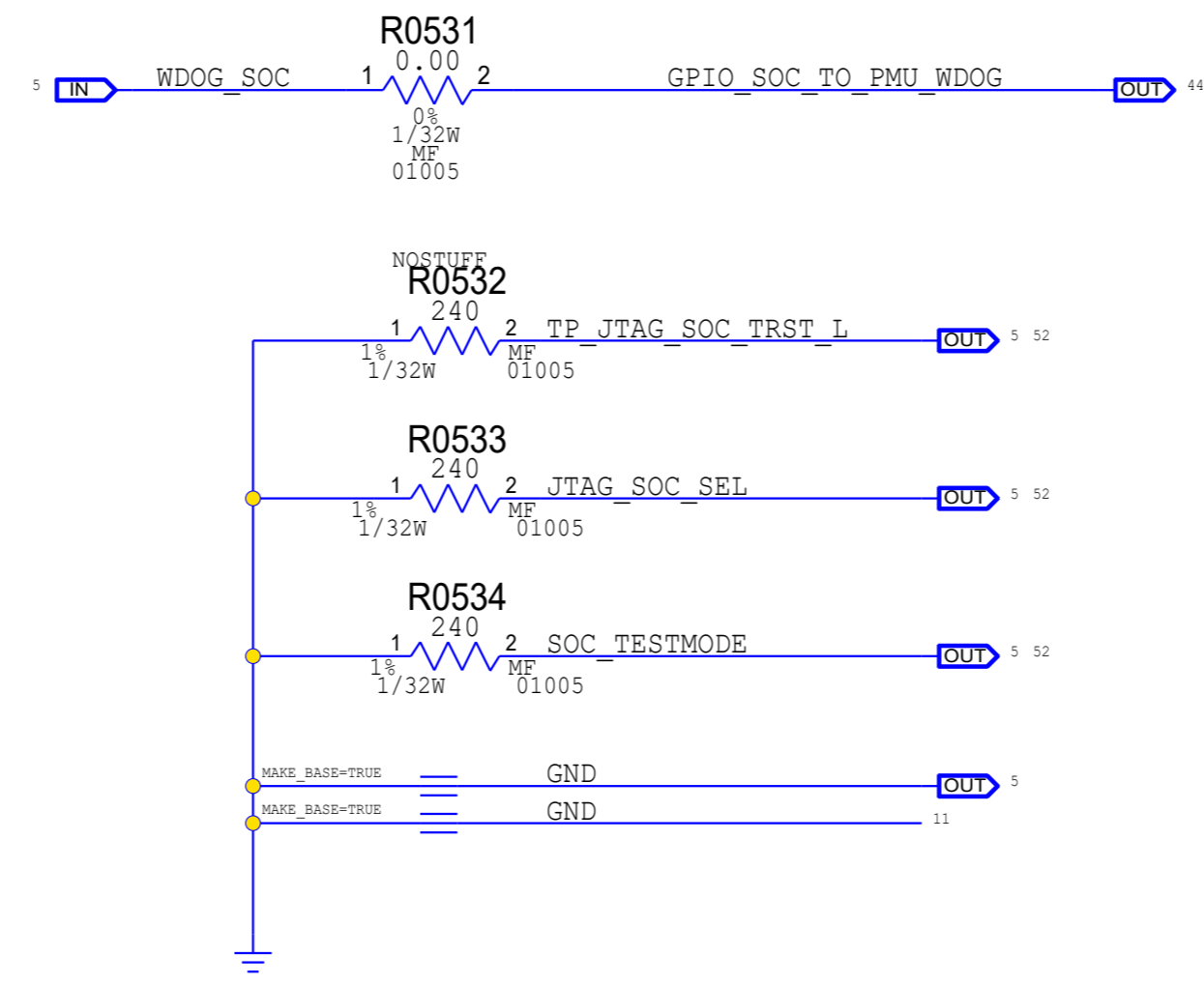
BOARD REVISION

NOTE: STUFFING RESISTOR MEANS 0

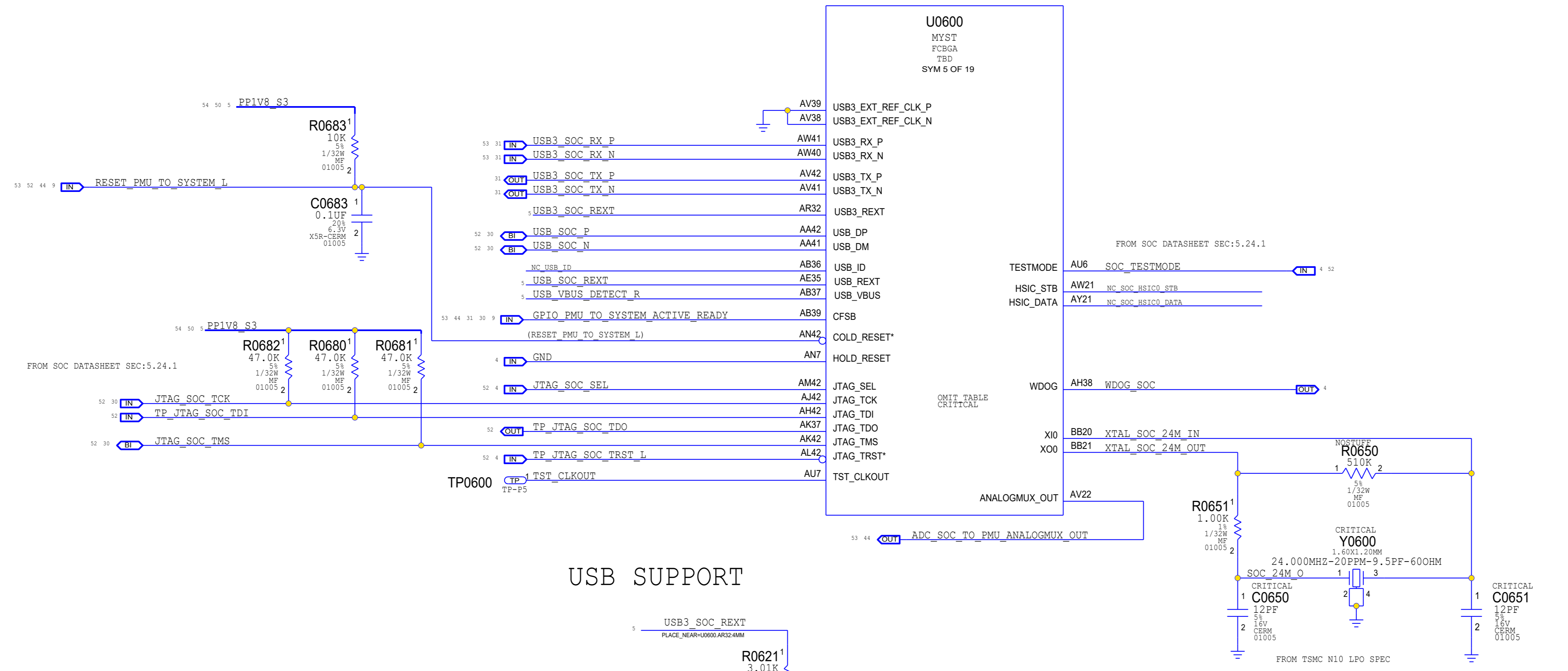


BRD_REV[3-0]	MODE	S/W READ FLOW
0000	PROTO 0	1. SET GPIO AS INPUT 2. ENABLE PU AND DISABLE PD 3. READ
0001	PROTO 1 (LOCAL)	
0010	PROTO 1 (CHINA)	
0011	PROTO 2	
0100	EVT	
0101	UNUSED	
0110	UNUSED	
0111	UNUSED	
1000	UNUSED	

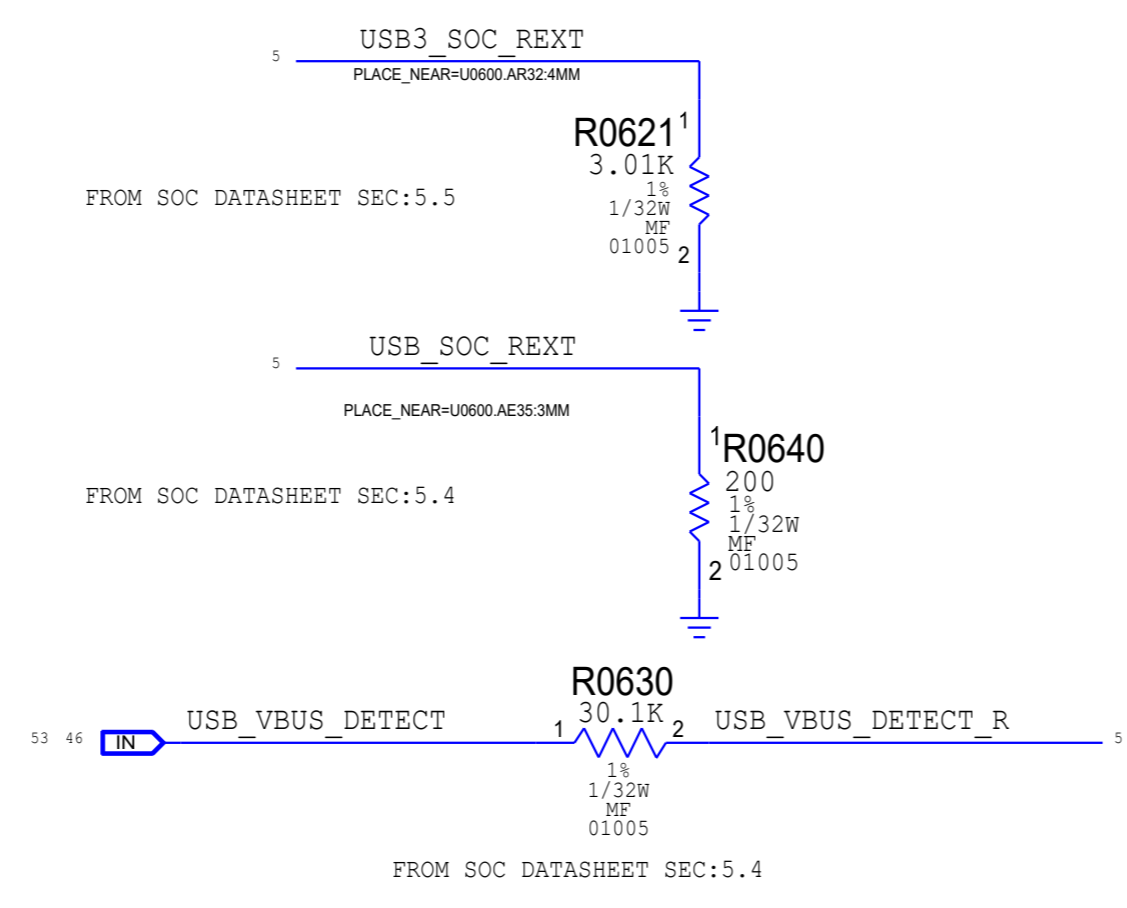
CURRENT SETTING ---->



USB/JTAG/XTAL



USB SUPPORT



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
19780590	19780591		Y0600	EFSON, 24MHZ, XTAL
19780588	19780591		Y0600	TXC, 24MHZ, XTAL

SYNC_MASTER=MLB_B SYNC_DATE=07/29/2016

PAGE TITLE: SOC: MAIN

Apple Inc.

DRAWING NUMBER: 051-04464 SIZE: D

REVISION: 5.0.0

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I2S/SPI/I2C

GPIO/UART/CLK

D

D

C

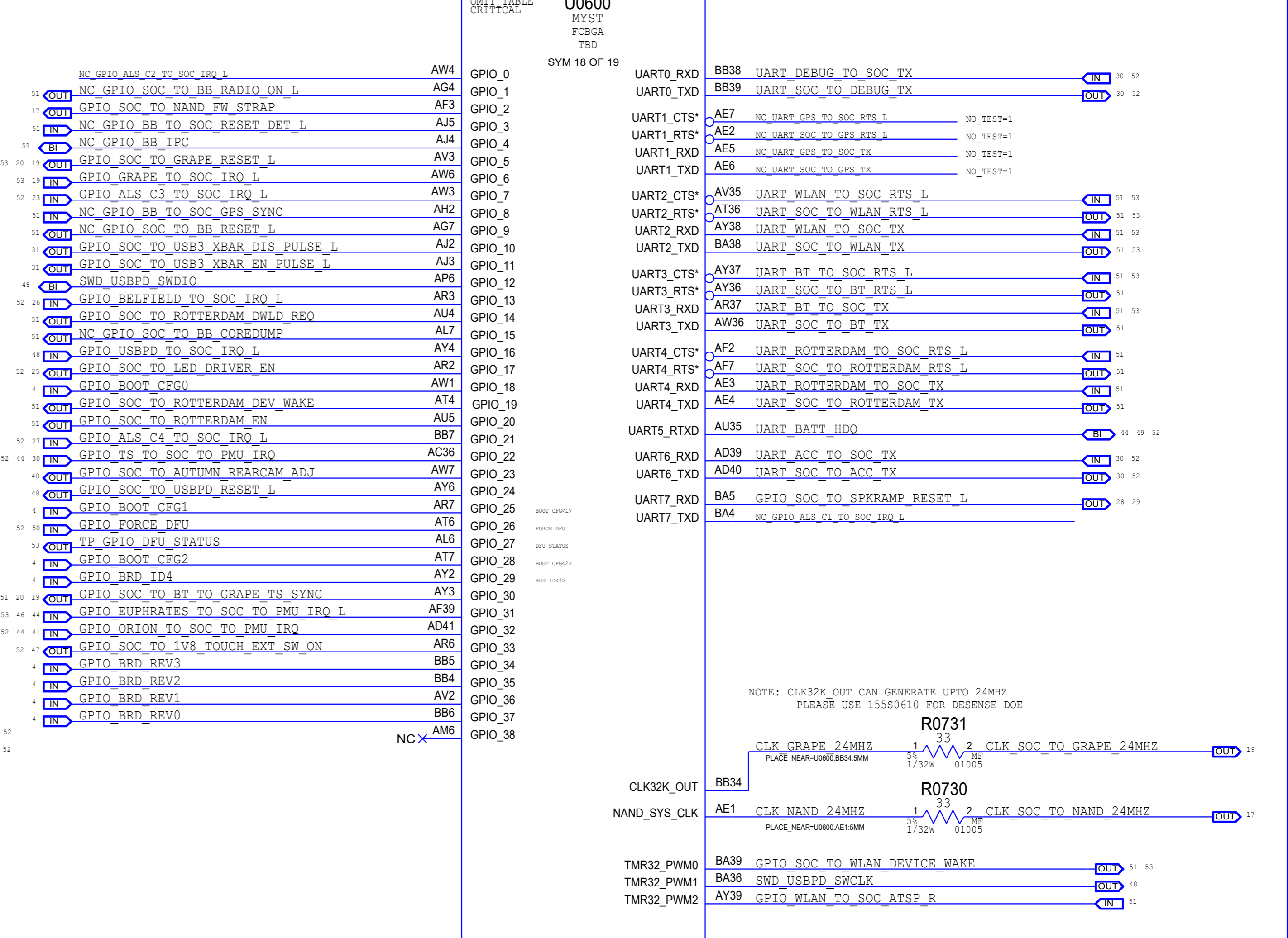
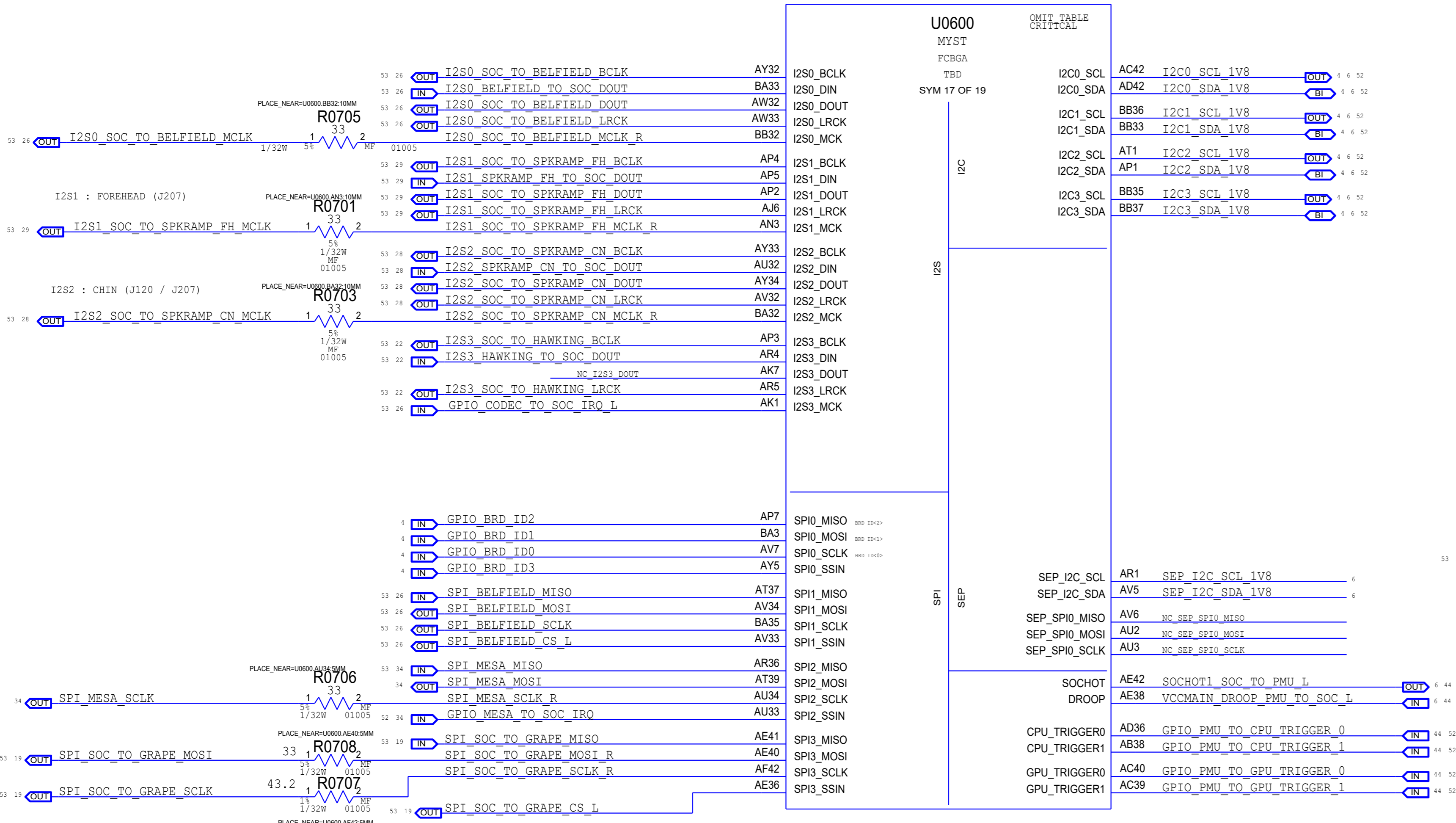
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B

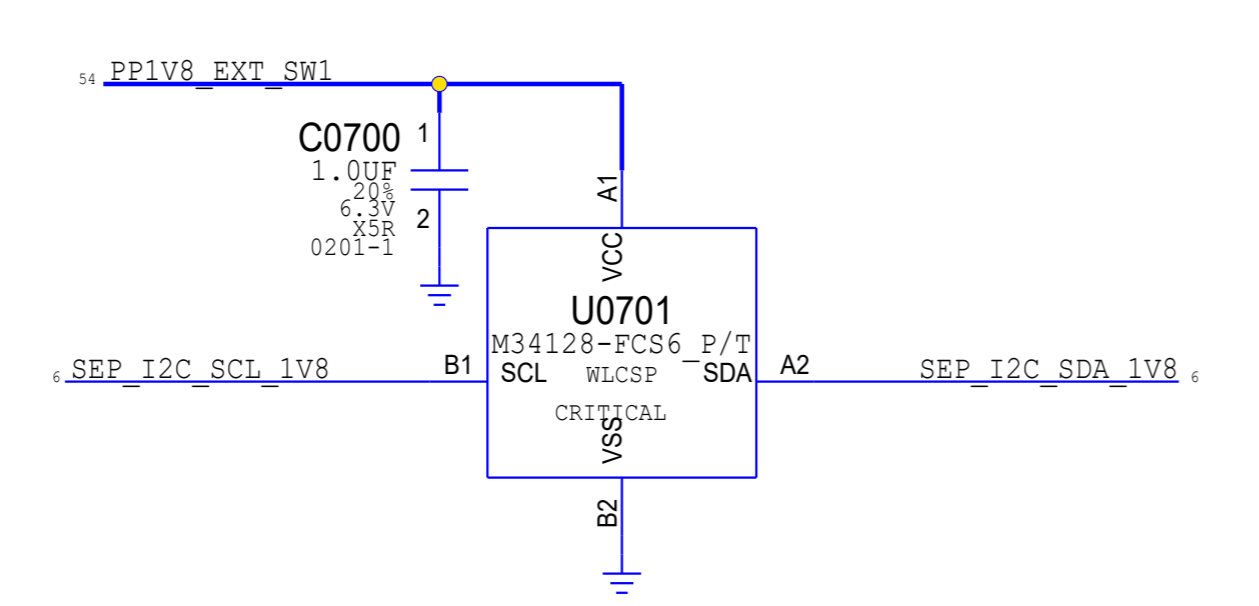
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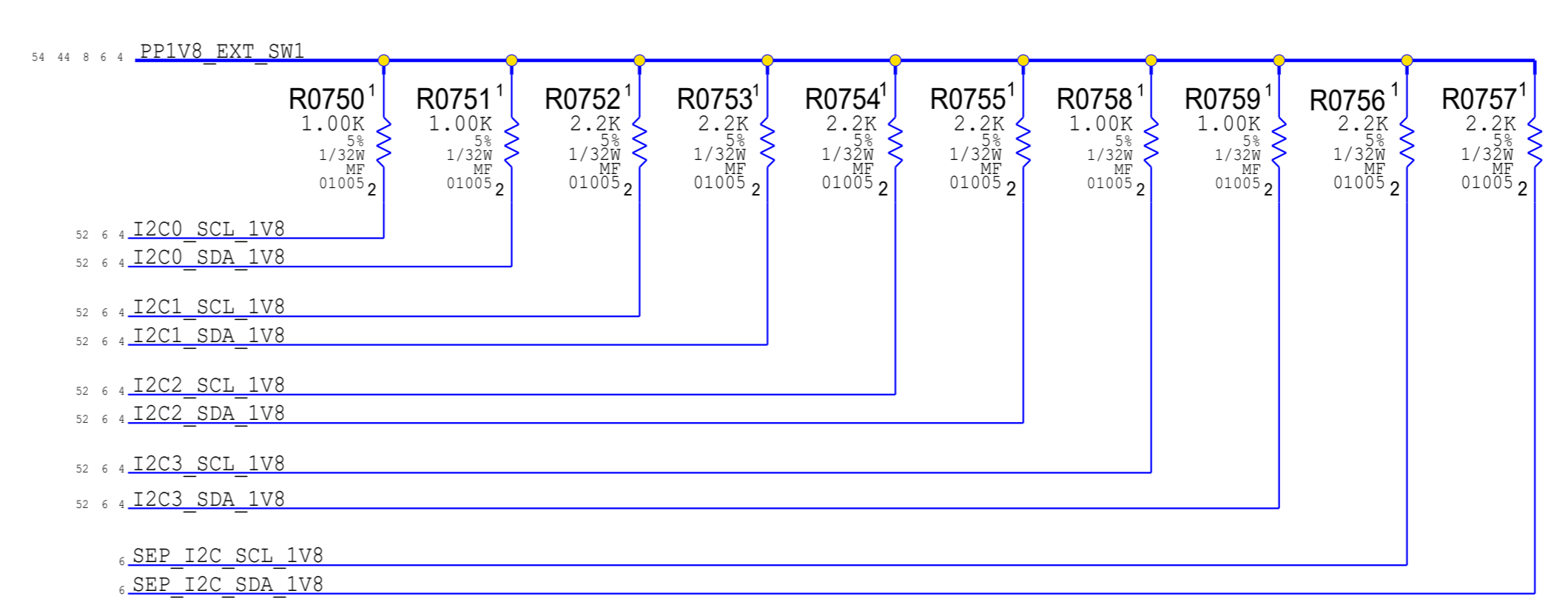
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SEP EEPROM



I2C PULL UPS



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
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SYNC_MASTER=MLB_B SYNC_DATE=07/29/2016

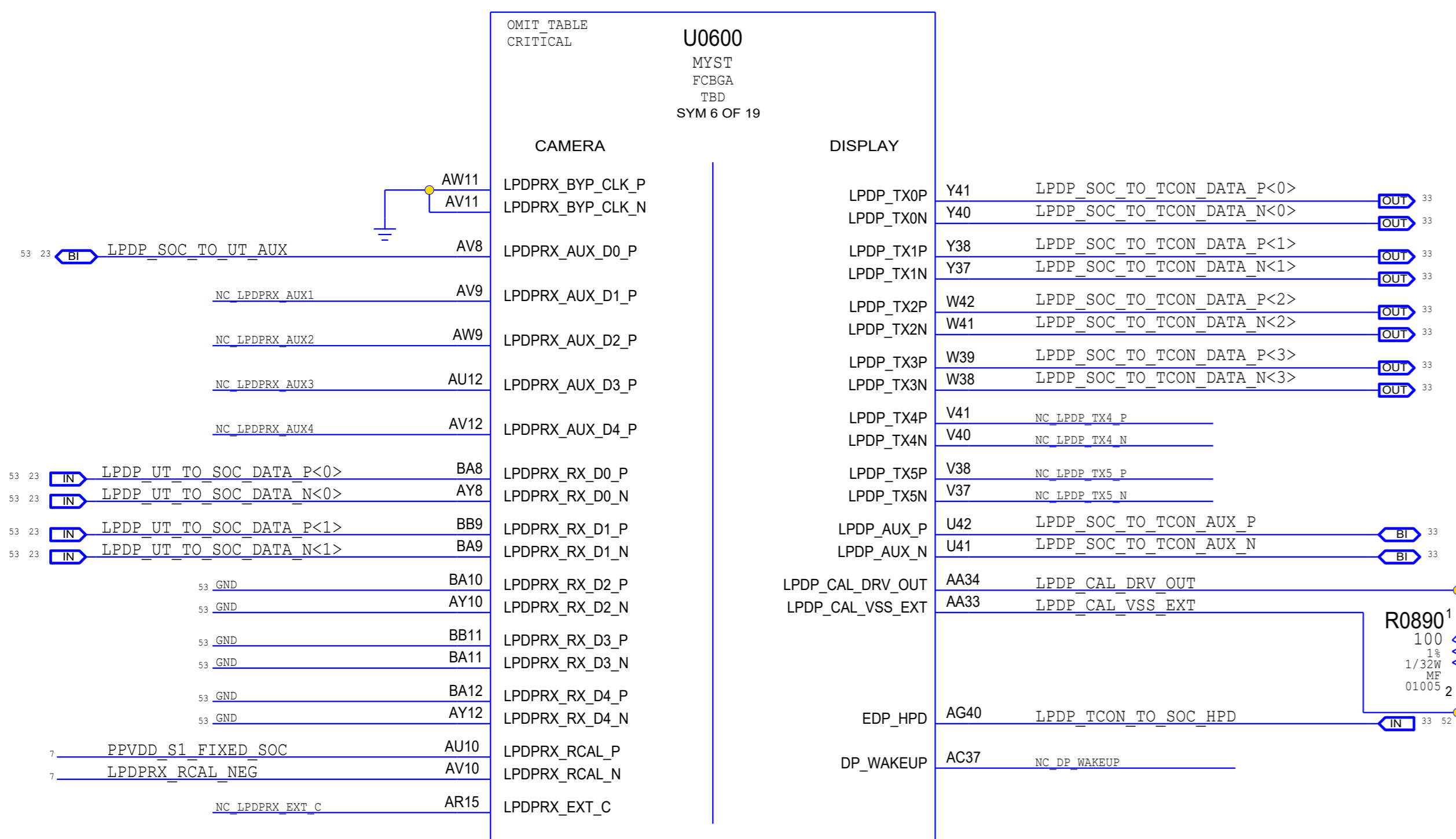
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Apple Inc.

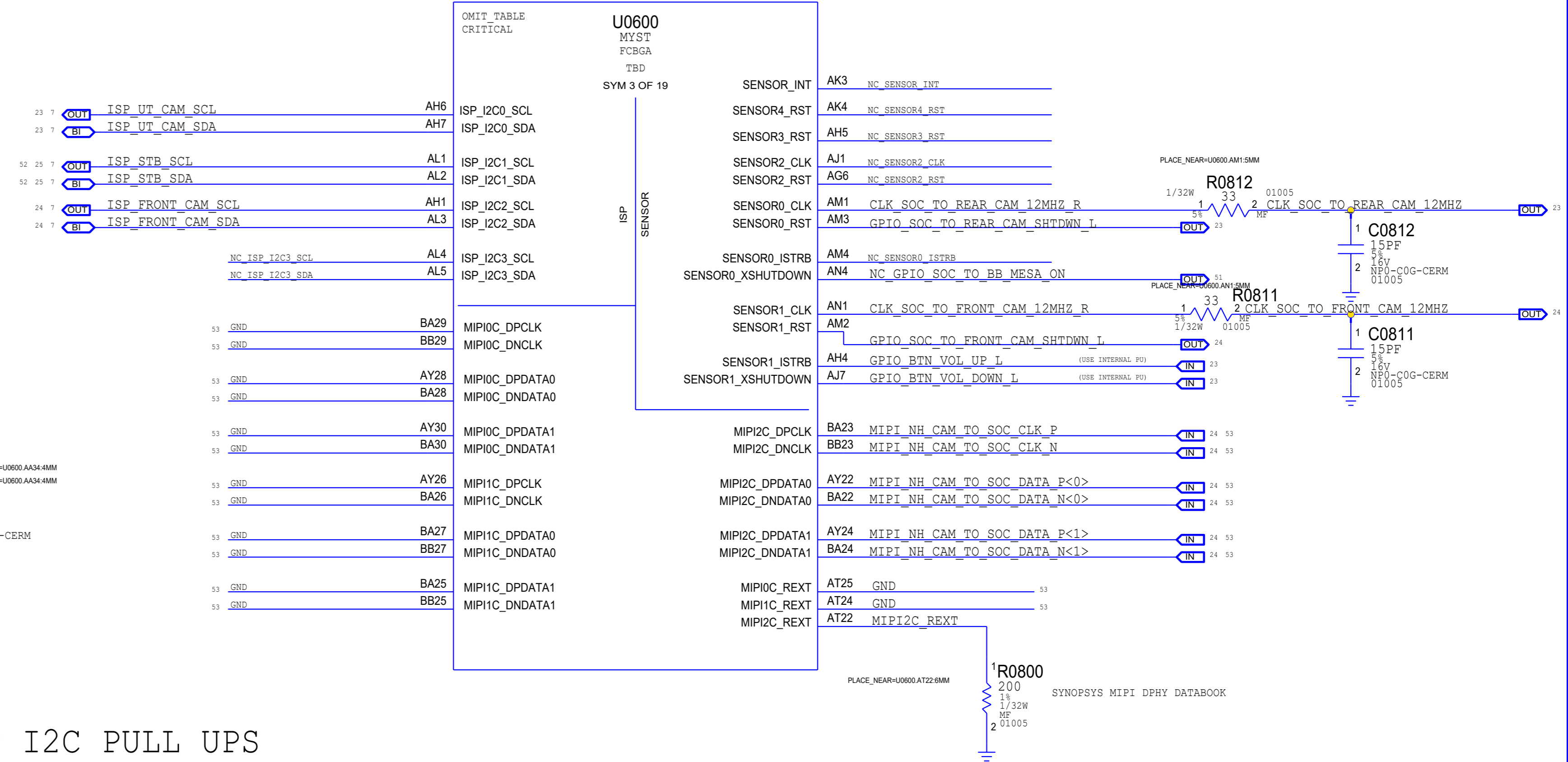
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REVISION	5.0.0	BRANCH	
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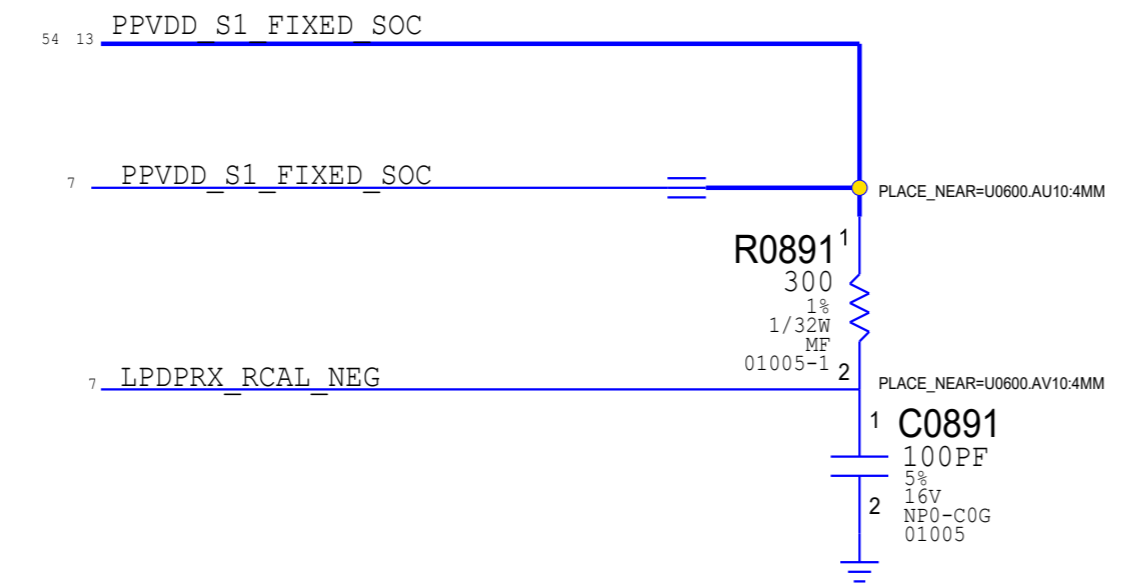
LPDP RX/TX



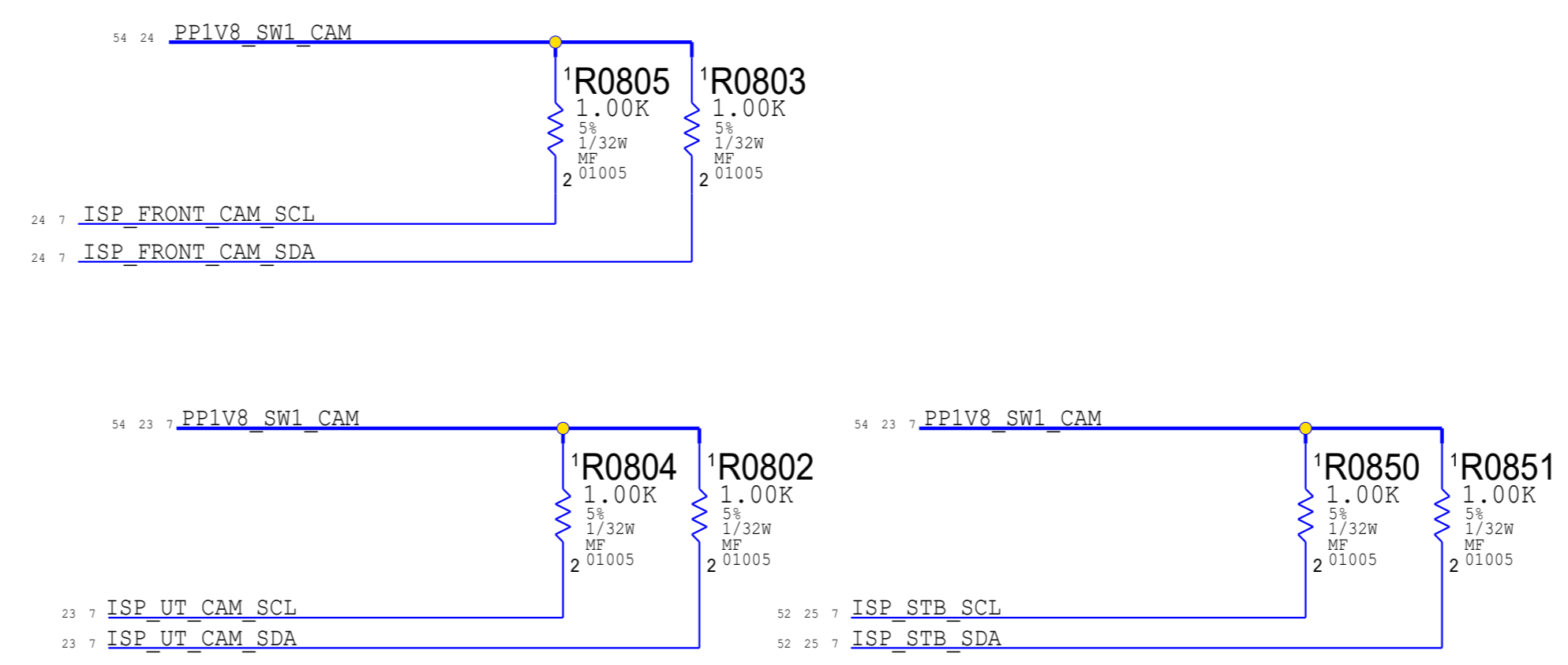
MIPI/ISP



LPDP RX CAL



ISP I2C PULL UPS

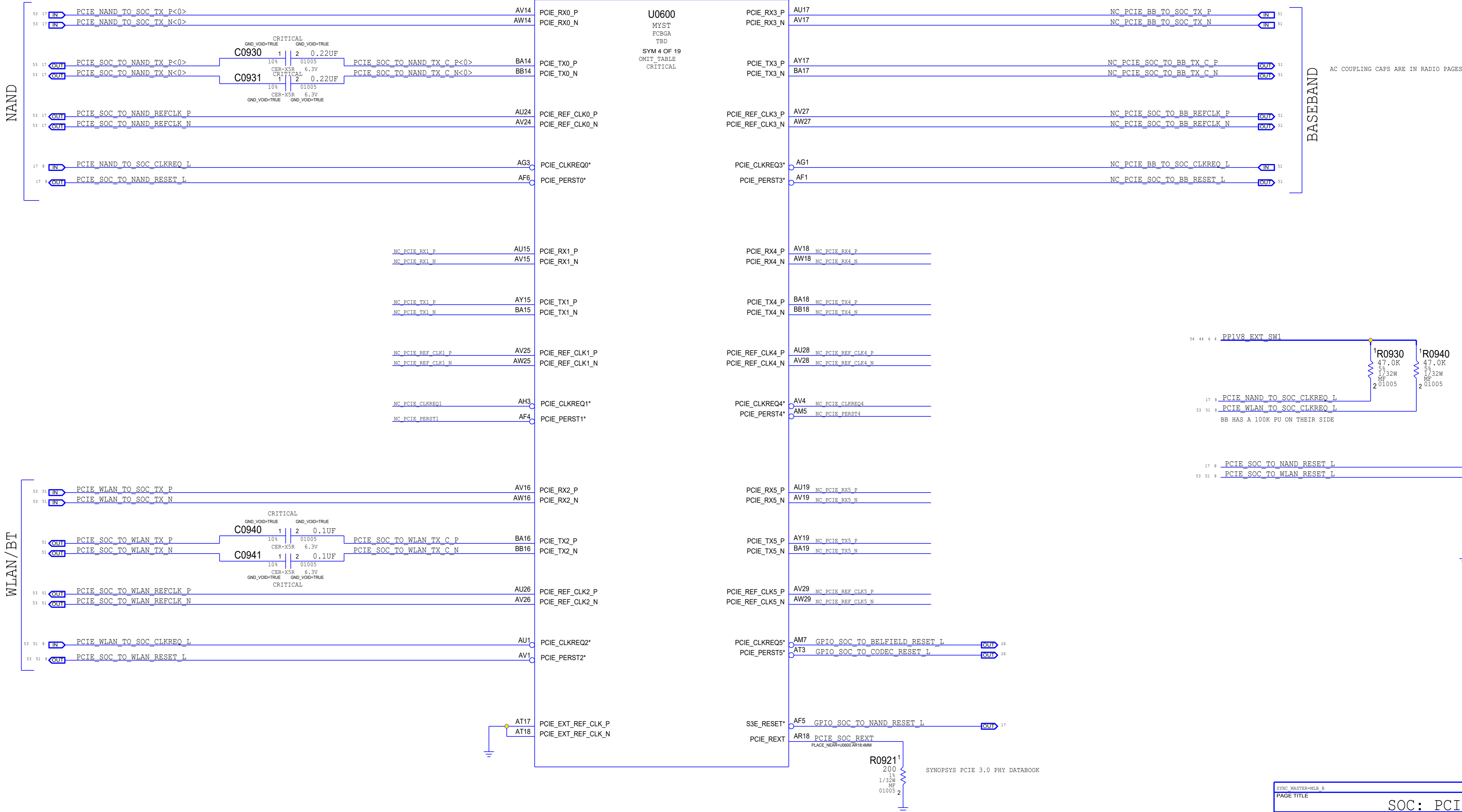


C0892 MUST BE NOSTUFF PER SEG

PAGE TITLE		DRAWING NUMBER		SIZE
SOC: LPDP & MIPI		051-04464		D
Apple Inc.		REVISION		5.0.0
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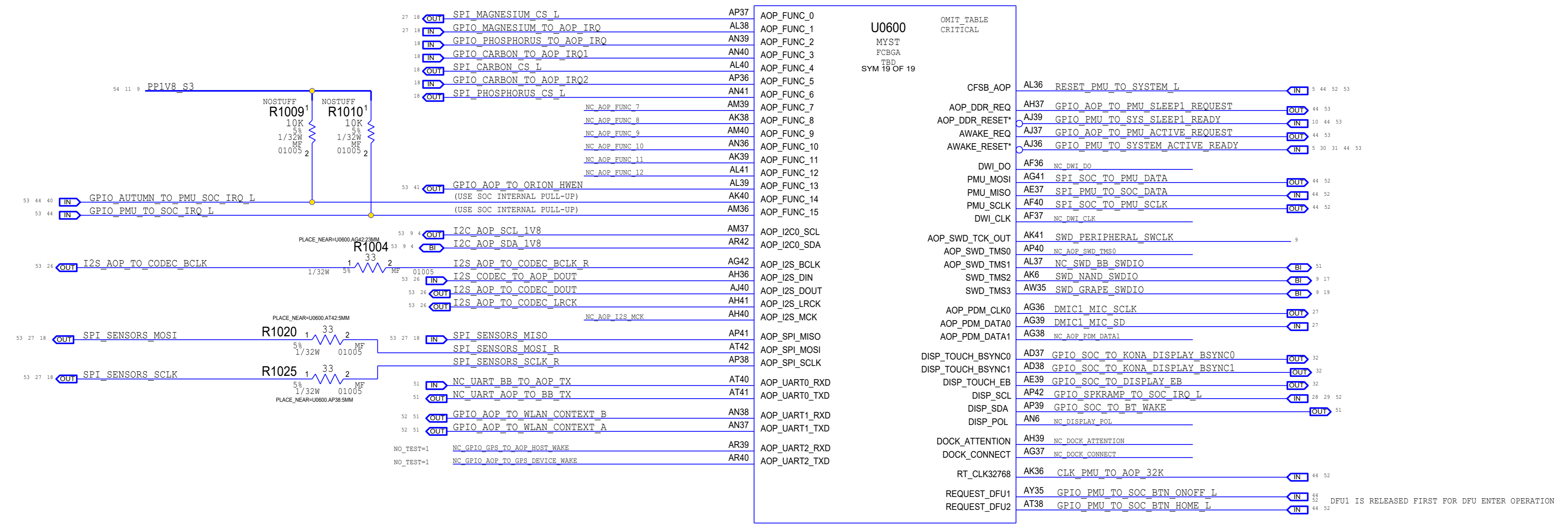
PER PCISIG SPEC, AC COUPLING CAPS SHOULD BE BETWEEN 176 NF AND 265 NF FOR GEN1/2/3

PCIE

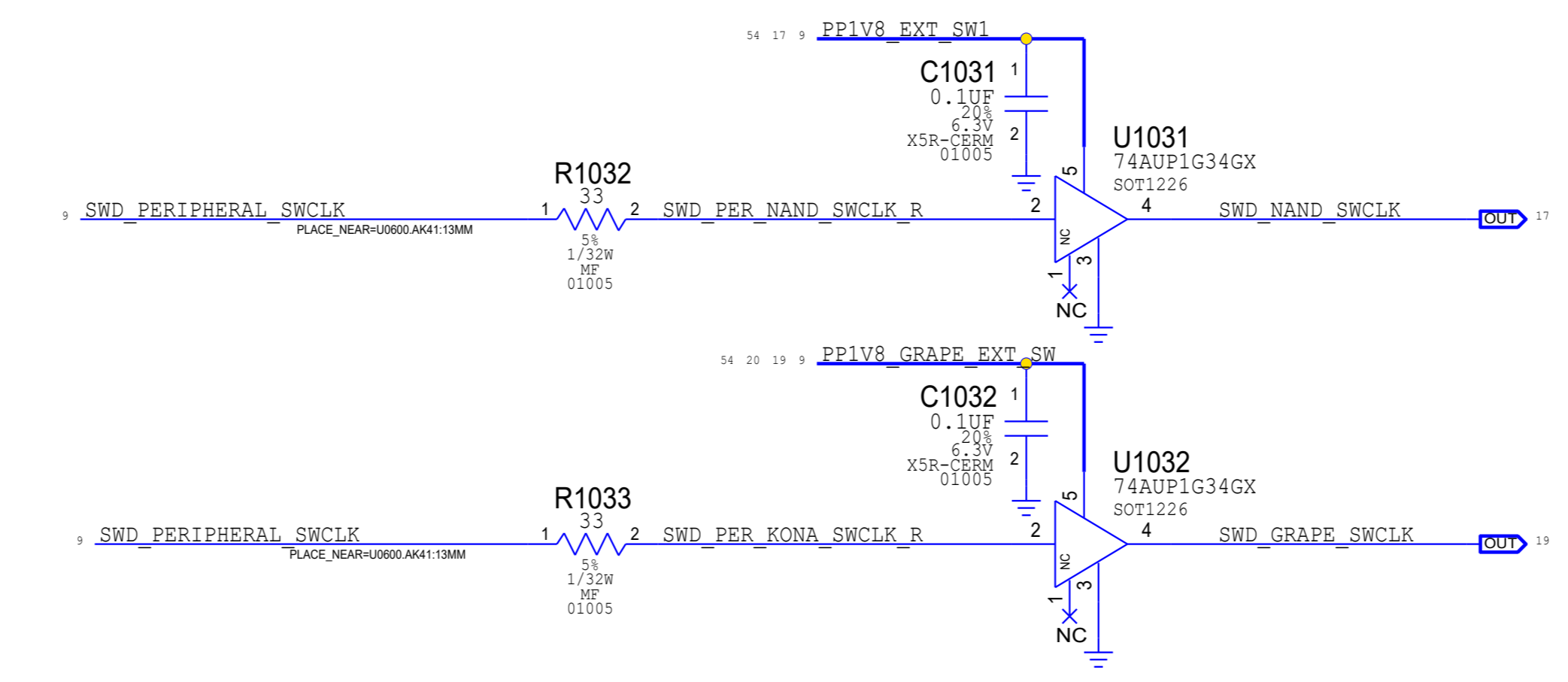


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				REVISION	5.0.0
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				SHEET	8 OF 54
				SIZE	D

AOP/MISC

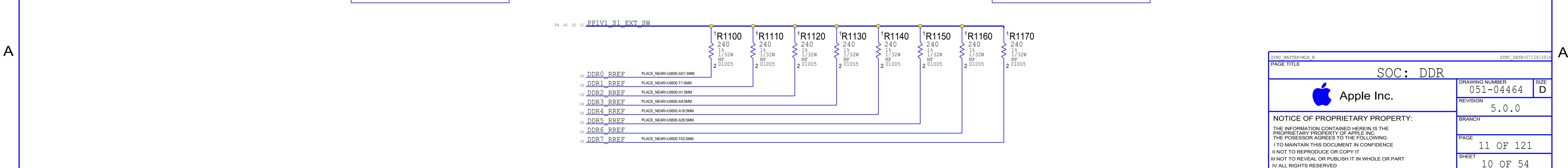
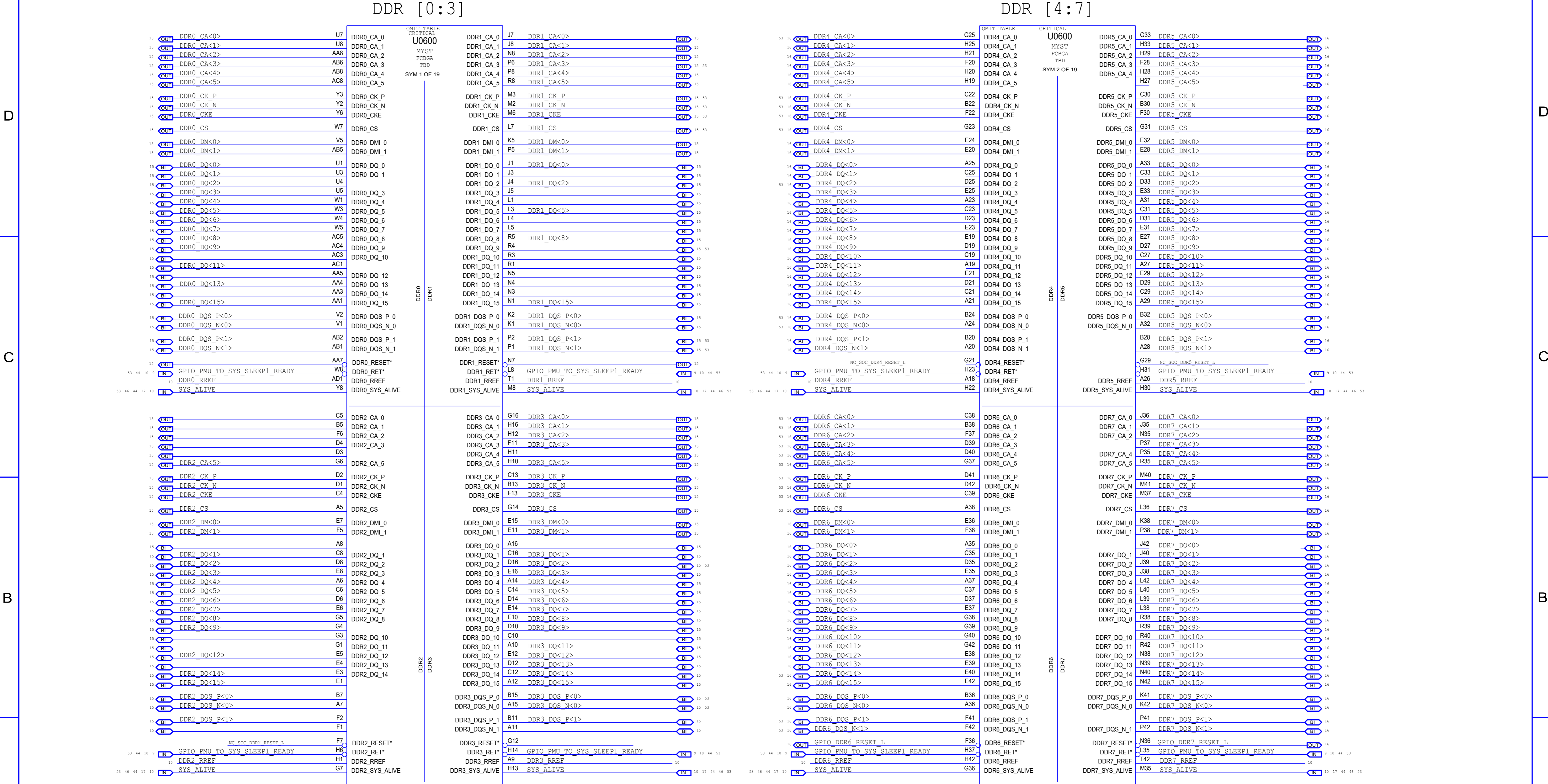


THESE GATES HAVE BACKPOWER PROTECTION



PAGE TITLE		SOC: AOP	
DRAWING NUMBER		051-04464	SIZE
REVISION		5.0.0	D
BRANCH			
PAGE		10 OF 121	
SHEET		9 OF 54	

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PAGE TITLE

SOC: DDR

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		PAGE	11 OF 121	
		SHEET	10 OF 54	

D

D

C

C

B

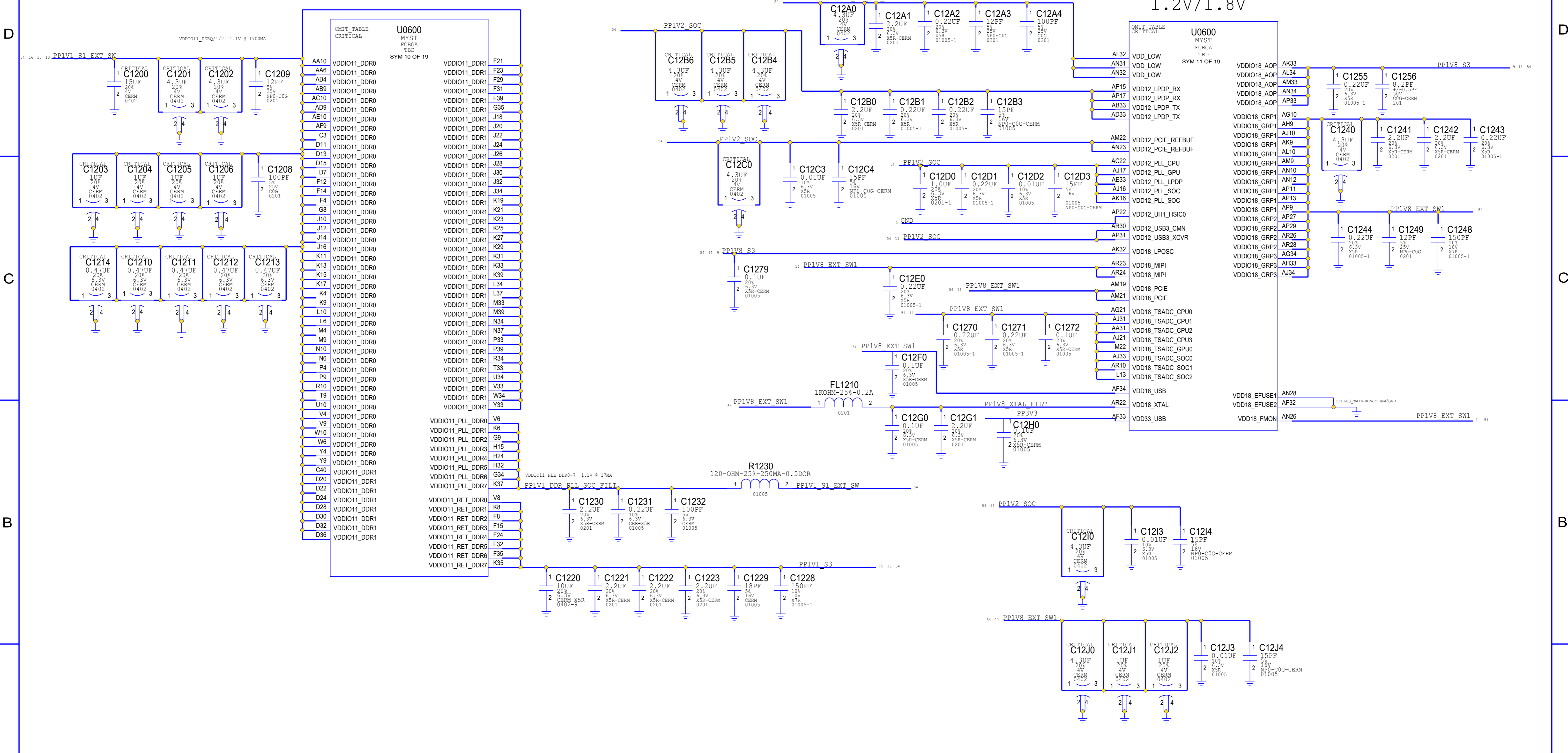
B

A

A

DDR PWR

1.2V/1.8V



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
138800032	13880831		C1201 & MORE	R0401//PWR062M/1974064
138800049	13880831		C1202 & MORE	R0401//PWR062M/1974064
138800006	13880835		C1203 & MORE	R0401//PWR062M/2651418

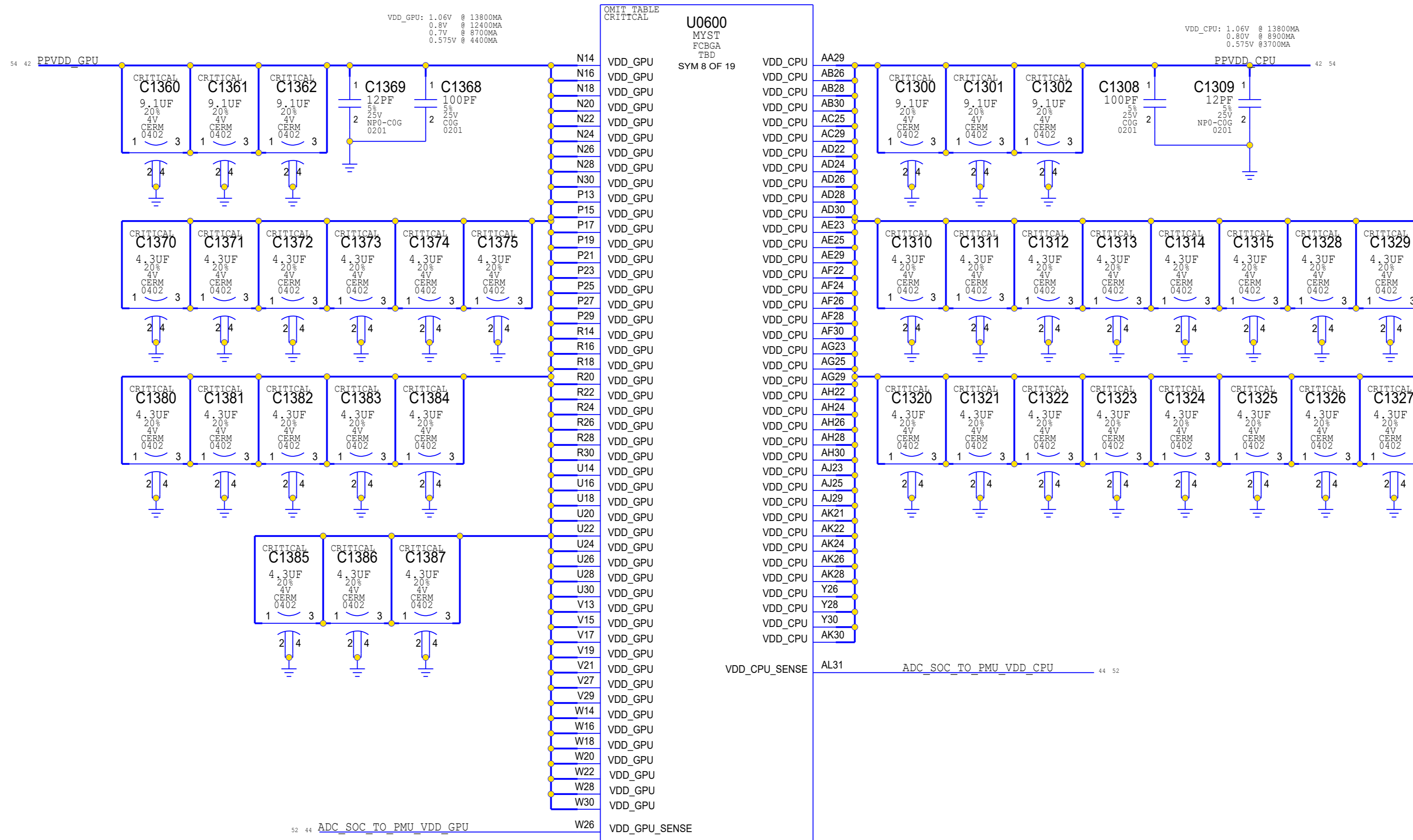
VDD12_PLL_CPO: 1.2V @ 7MA
 VDD12_PLL_SOC: 1.2V @ 8MA
 VDD12_PLL_CPO: 1.2V @ 7MA
 VDD12_PLL_LPDP: 1.2V @ 9MA
 VDD12_PCIE_REFBUF: 1.2V @ 48MA
 VDD12_LPDP_TX: 1.2V @ 45MA
 VDD12_LPDP_RX: 1.2V @ 55MA
 VDD12_USB3: 1.2V @ 25MA

VDD18_AOP: 1.8V @ 75MA
 VDD18_USB: 1.8V @ 17MA
 VDD18_TSADC: 1.8V @ 10.4MA
 VDD18_GRP: 1.8V @ 75MA
 VDD18_MIP: 1.8V @ 2MA
 VDD18_XTAL: 1.8V @ 2MA
 VDD18_LPOSC: 1.8V @ 1MA
 VDD18_FMON: 1.8V @ 1MA
 VDD18_PCIE: 1.8V @ 81.7MA
 VDD33_USB: 3.3V @ 5MA

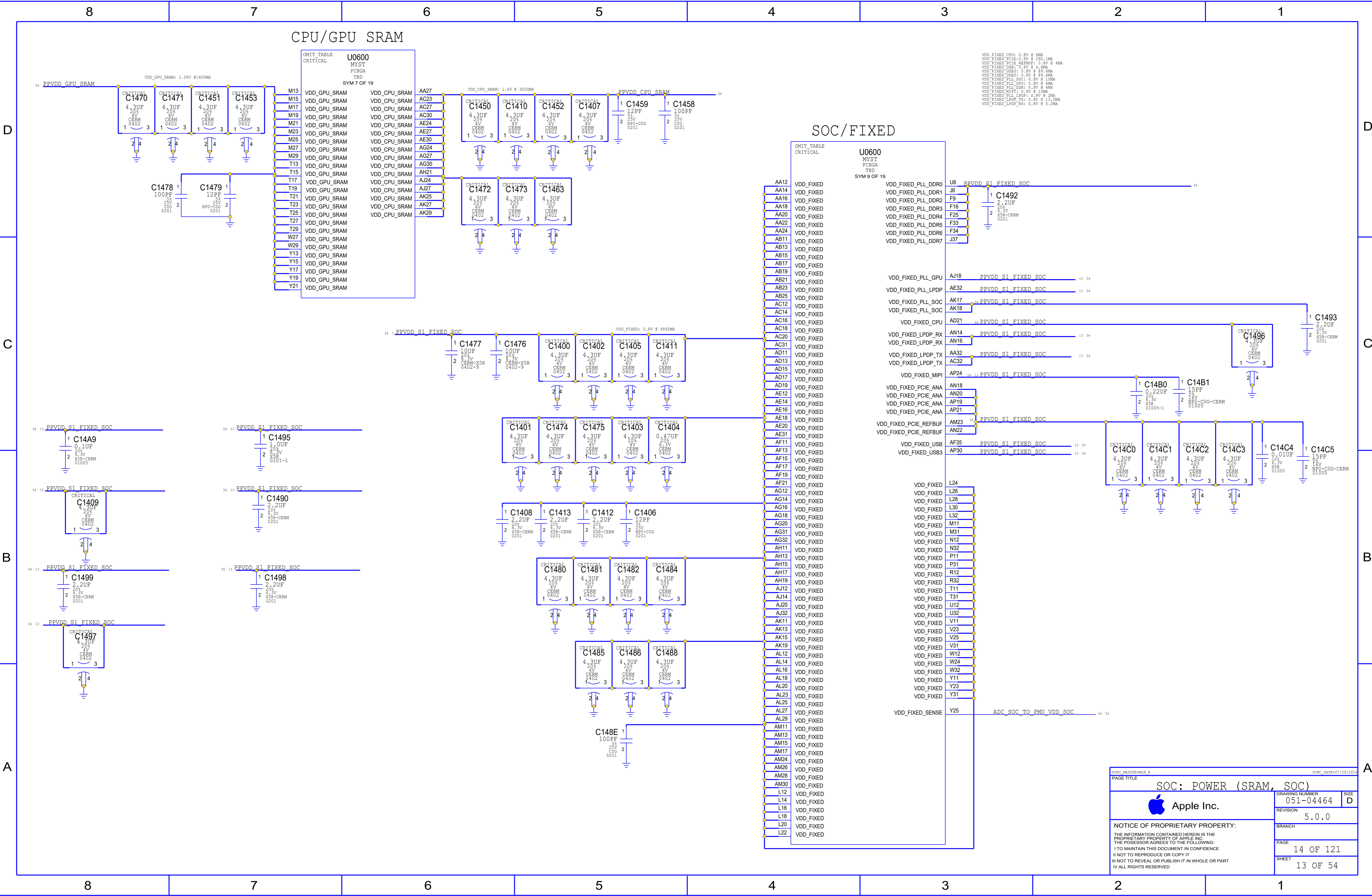
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			11 OF 54	

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
138S00056	138S1100		C1300, ETC	QUALIFIED IN J127

CPU/GPU



PAGE TITLE		SOC: POWER (CPU, GPU)	
	DRAWING NUMBER	051-04464	SIZE
	REVISION	5.0.0	D
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		SHEET	12 OF 54



VDD_FIXED_CPU: 0.8V @ 6MA
 VDD_FIXED_PCIE: 0.8V @ 250.1MA
 VDD_FIXED_PCIE_REFBUF: 0.8V @ 4MA
 VDD_FIXED_USB: 0.8V @ 6.6MA
 VDD_FIXED_USB3: 0.8V @ 89.4MA
 VDD_FIXED_USB3: 0.8V @ 89.4MA
 VDD_FIXED_PLL_SOC: 0.8V @ 10MA
 VDD_FIXED_PLL_CPU: 0.8V @ 6MA
 VDD_FIXED_PLL_DDR: 0.8V @ 4MA
 VDD_FIXED_MIPF: 0.8V @ 10MA
 VDD_FIXED_PLL_LPDP: 0.8V @ 2MA
 VDD_FIXED_LPDP_TX: 0.8V @ 13.2MA
 VDD_FIXED_LPDP_RX: 0.8V @ 5.2MA

VDD_FIXED_PLL_DDR0
 VDD_FIXED_PLL_DDR1
 VDD_FIXED_PLL_DDR2
 VDD_FIXED_PLL_DDR3
 VDD_FIXED_PLL_DDR4
 VDD_FIXED_PLL_DDR5
 VDD_FIXED_PLL_DDR6
 VDD_FIXED_PLL_DDR7

VDD_FIXED_PLL_GPU
 VDD_FIXED_PLL_LPDP
 VDD_FIXED_PLL_SOC
 VDD_FIXED_PLL_SOC

VDD_FIXED_LPDP_RX
 VDD_FIXED_LPDP_TX
 VDD_FIXED_MIPI

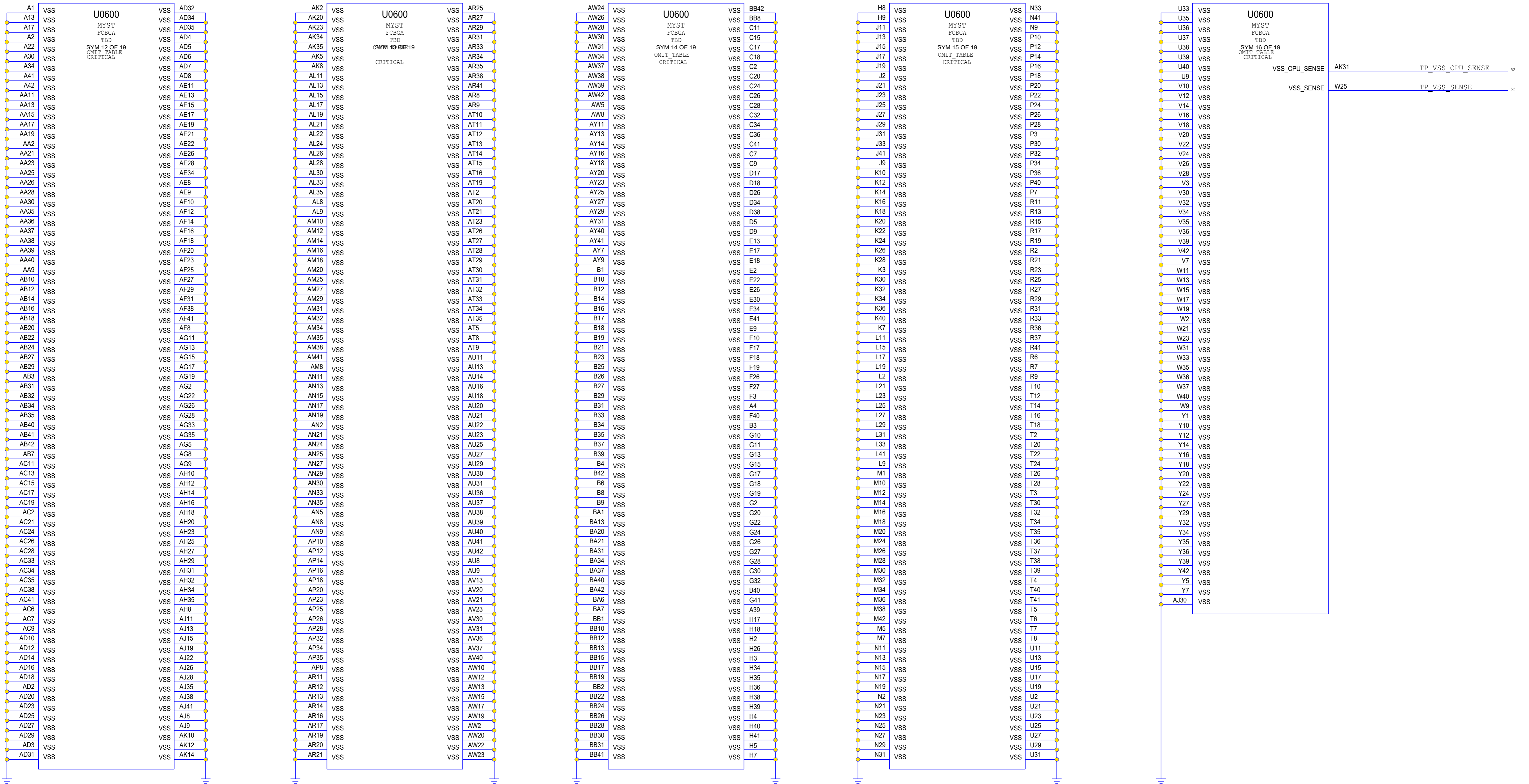
VDD_FIXED_PCIE_ANA
 VDD_FIXED_PCIE_ANA
 VDD_FIXED_PCIE_ANA
 VDD_FIXED_PCIE_ANA

VDD_FIXED_PCIE_REFBUF
 VDD_FIXED_PCIE_REFBUF
 VDD_FIXED_USB
 VDD_FIXED_USB3

VDD_FIXED_SENSE

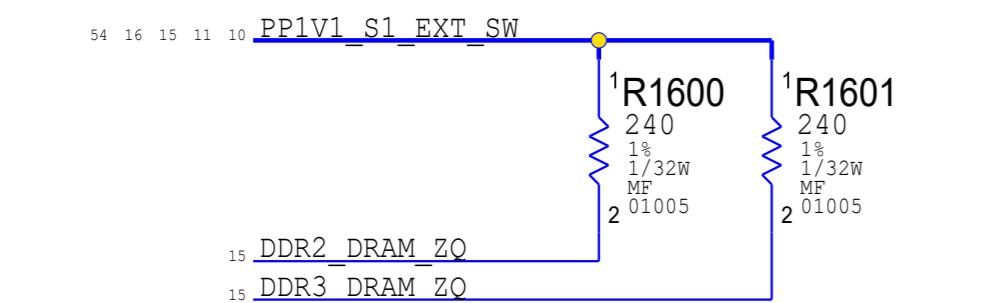
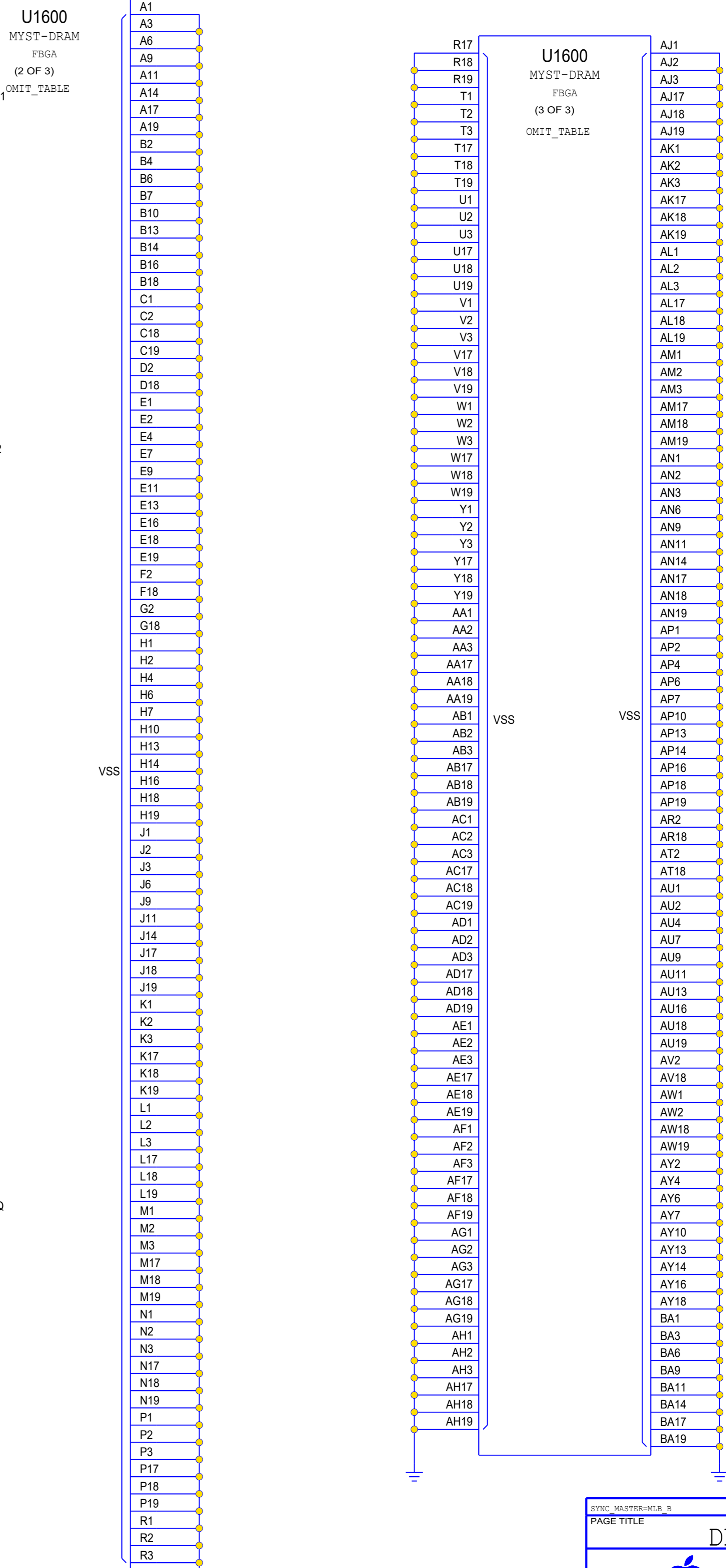
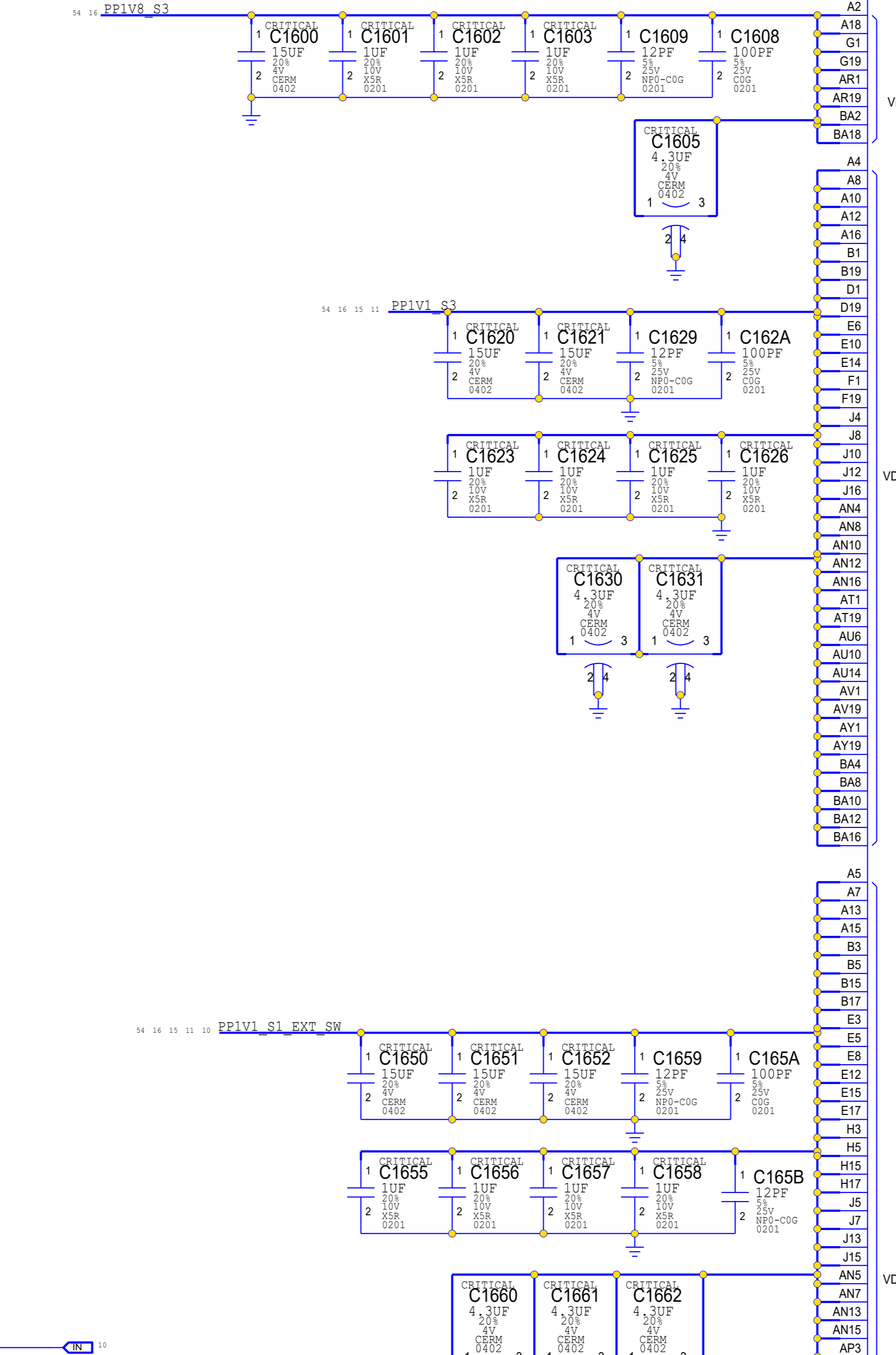
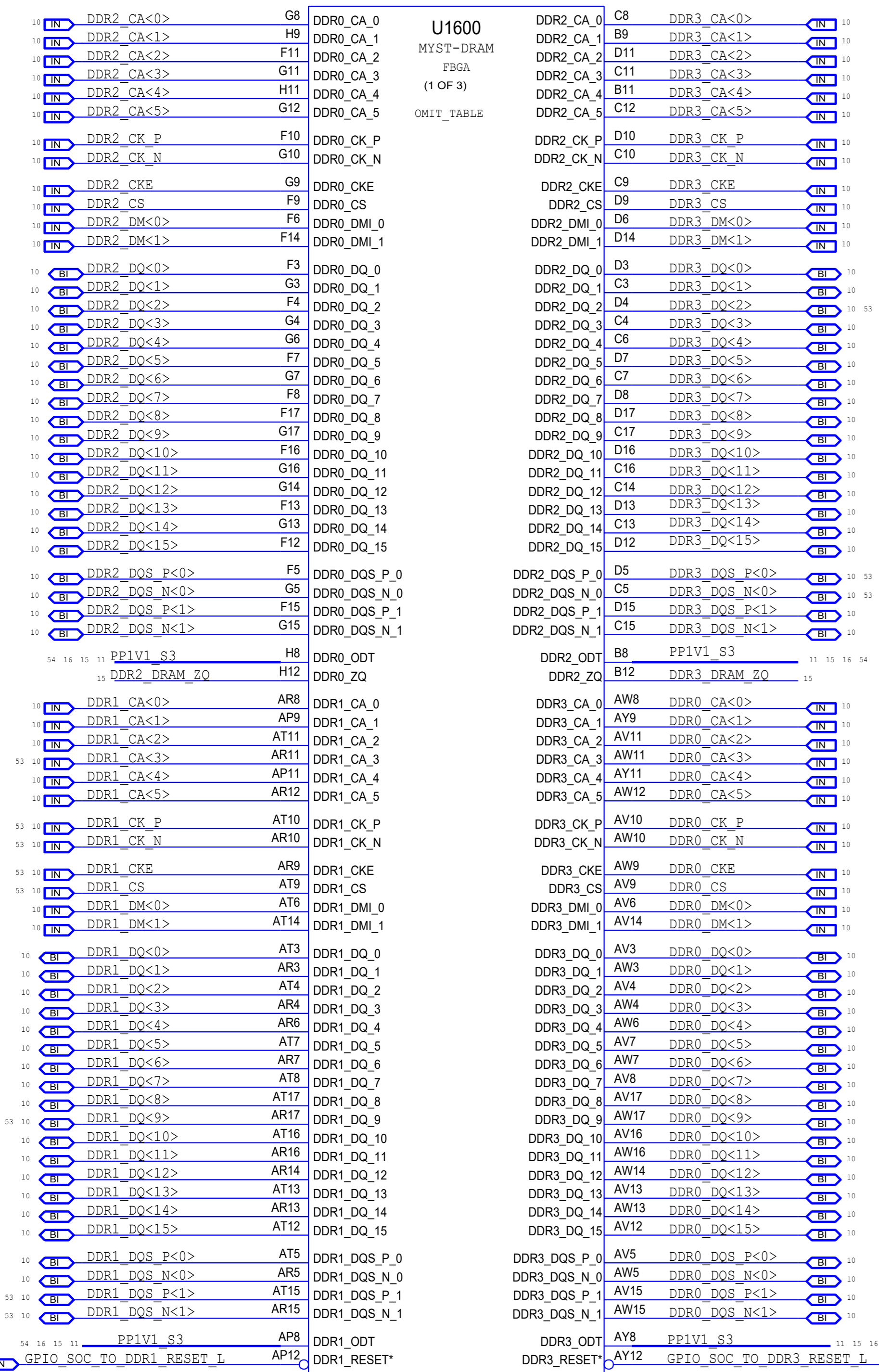
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SOC: POWER (SRAM, SOC)			
Apple Inc.		DRAWING NUMBER	SIZE
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		REVISION	
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SOC GND:



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Apple Inc.	DRAWING NUMBER 051-04464
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BRANCH	PAGE 15 OF 121
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DRAM1

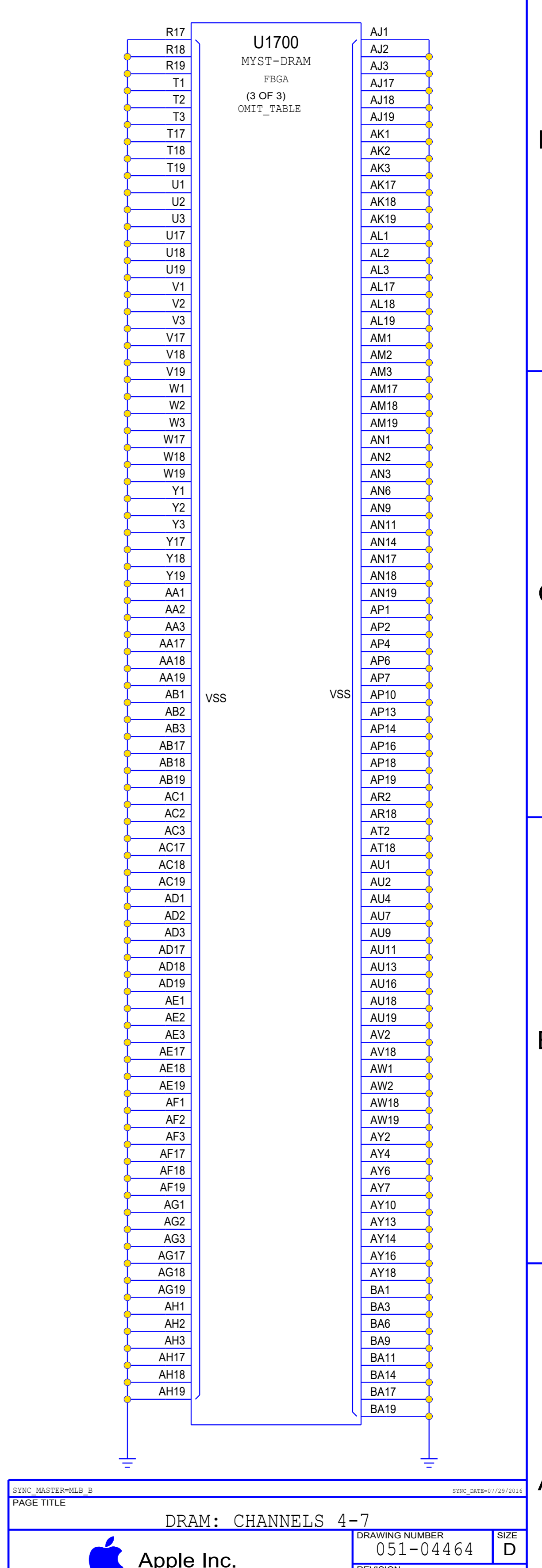
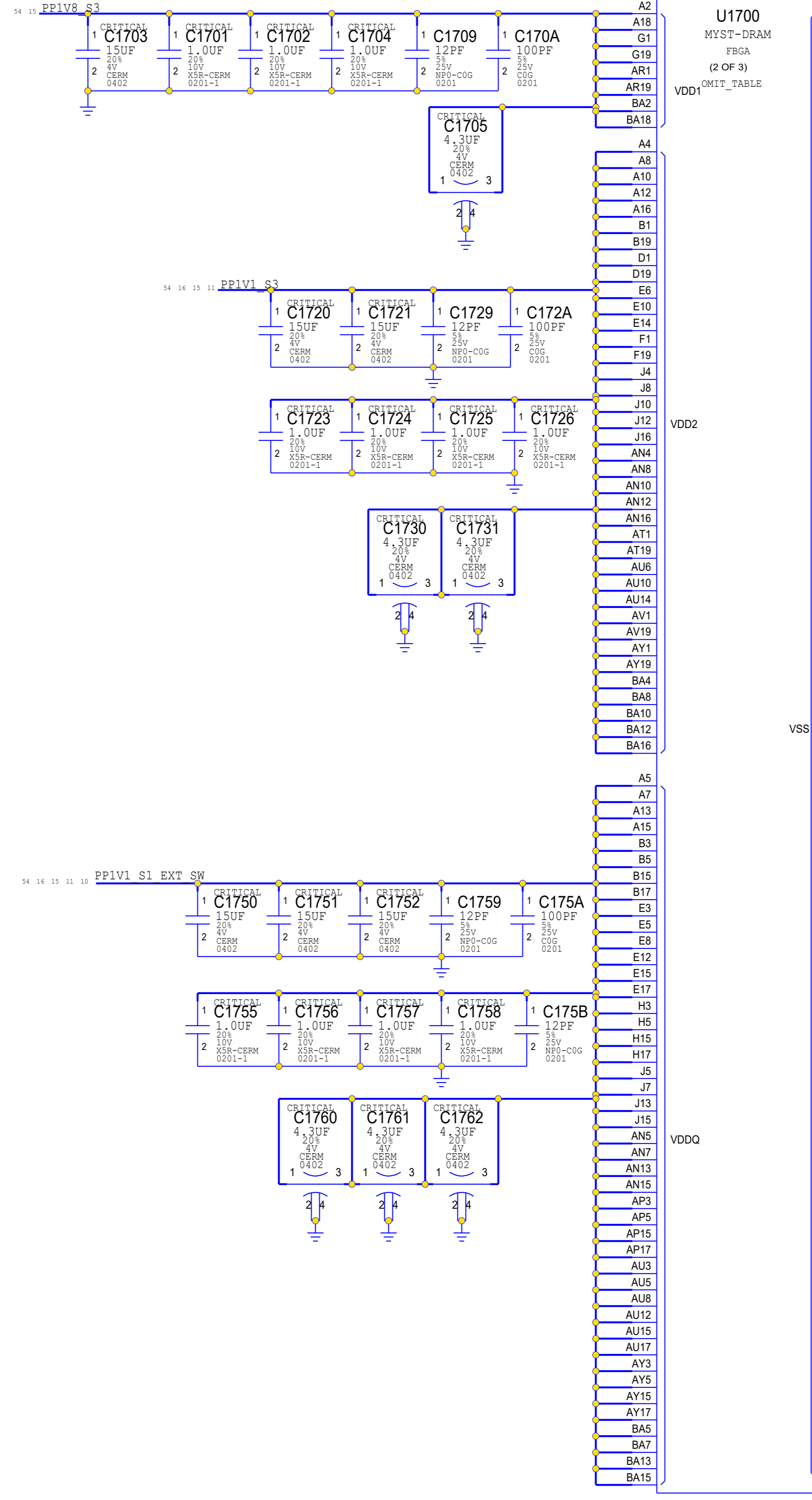
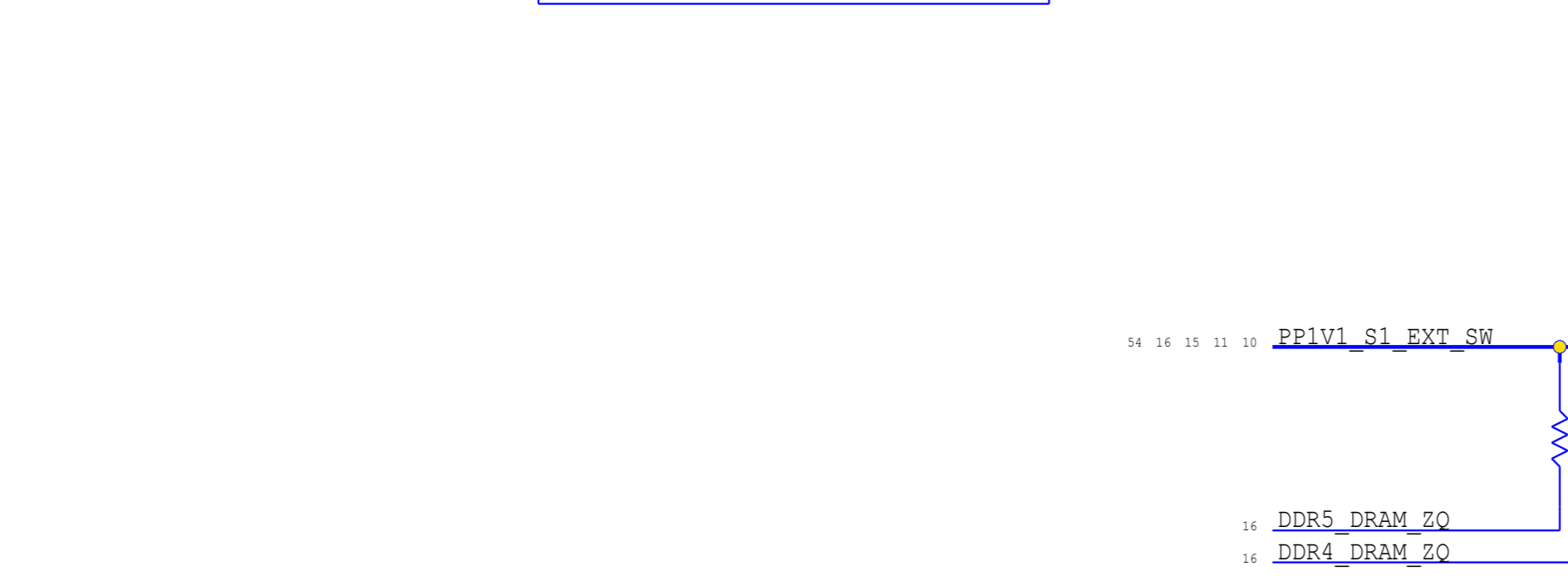
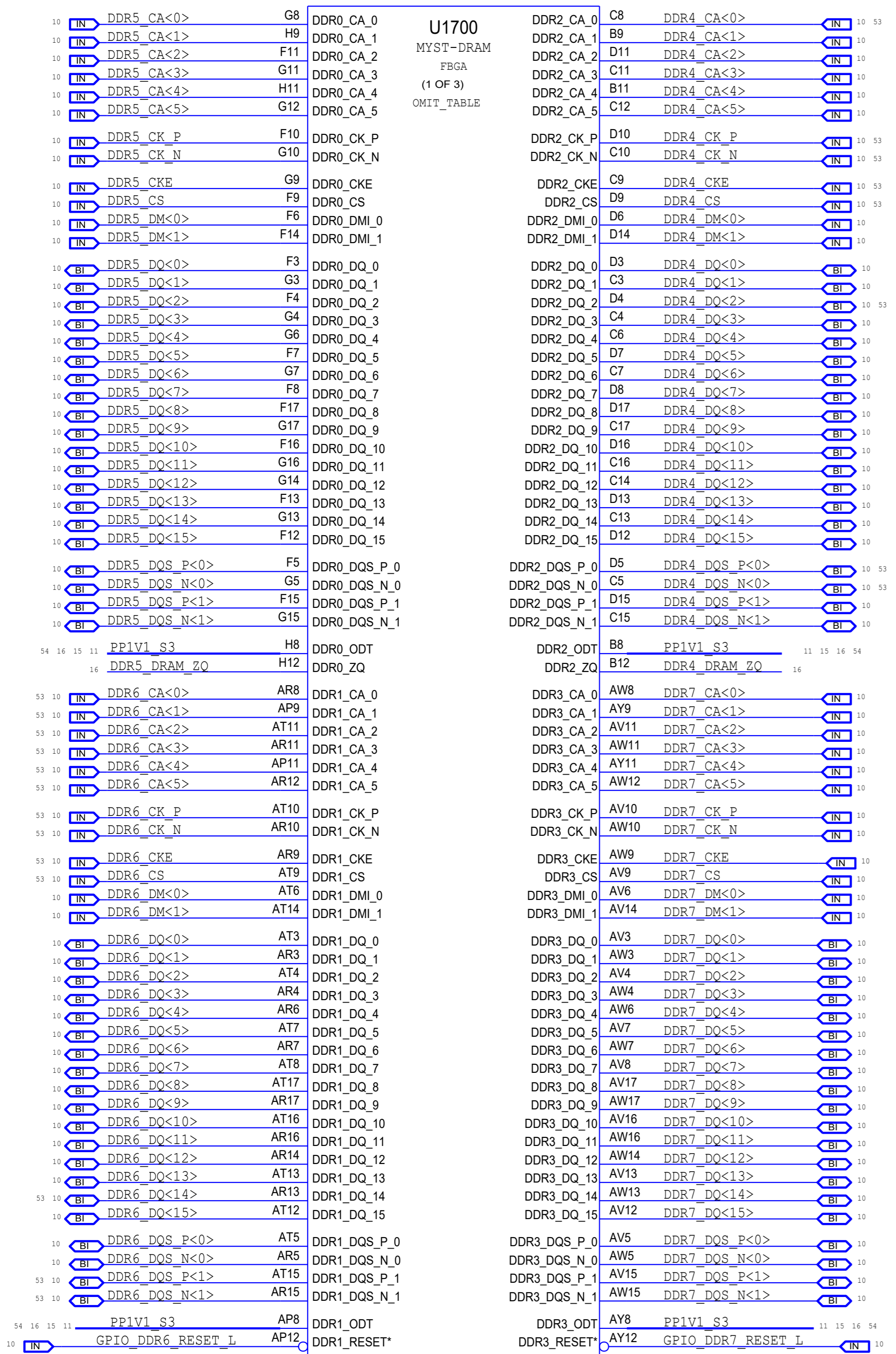


PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
13880706	13880739		C1601, ETC	QUALIFIED IN J127
13880945	13880739		C1601, ETC	
13880739	13880706		C1601, ETC	
13880945	13880706		C1601, ETC	

SYNC_MASTER=MLB_B
 SYNC_DATE=07/29/2016
 DRAWING NUMBER: 051-04464
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DRAM: CHANNELS 0-3
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DRAM2

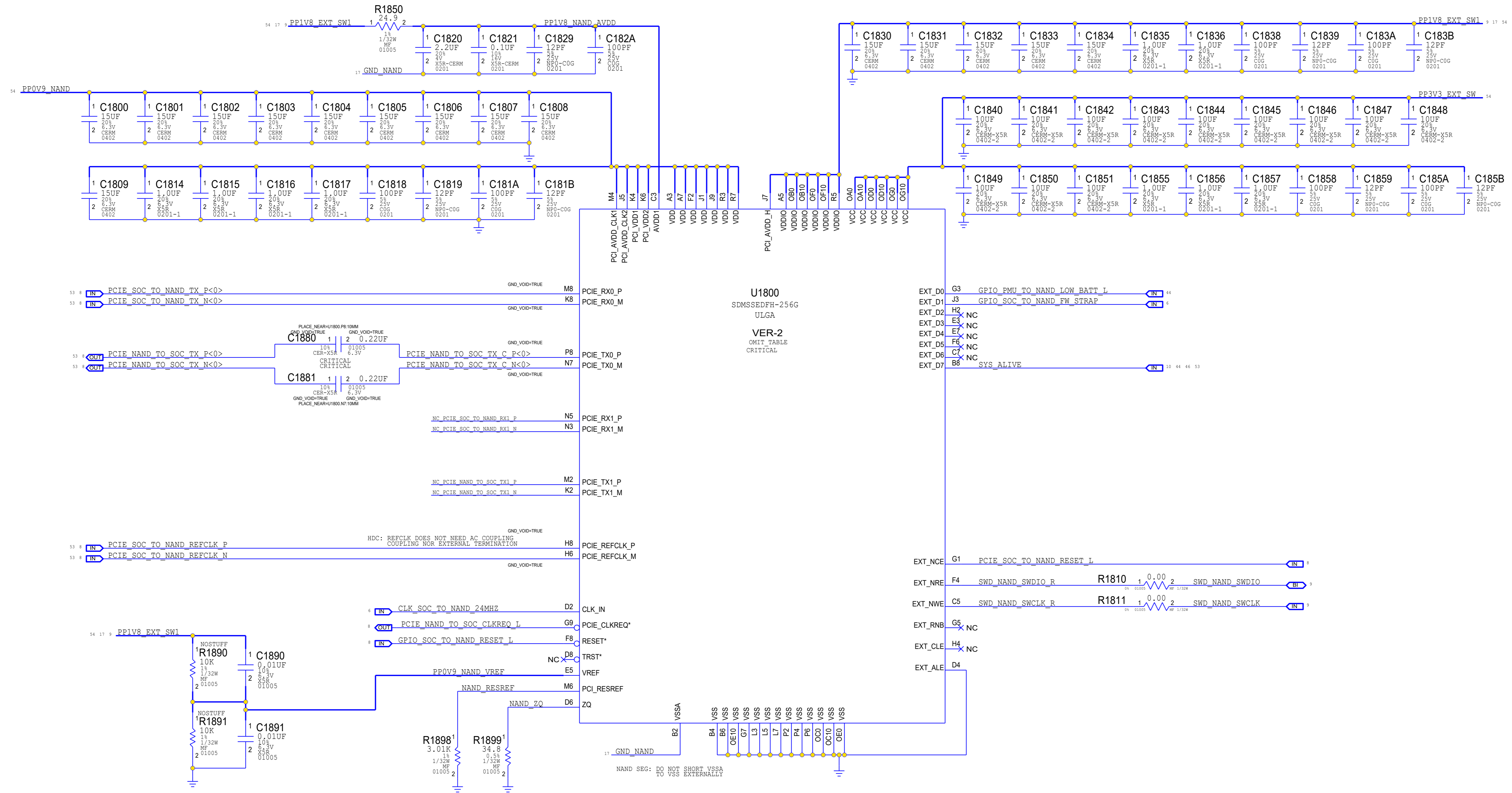


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NAND

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
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138S00003	138S0888		C1800	RDAR://PROBLEM/20618160

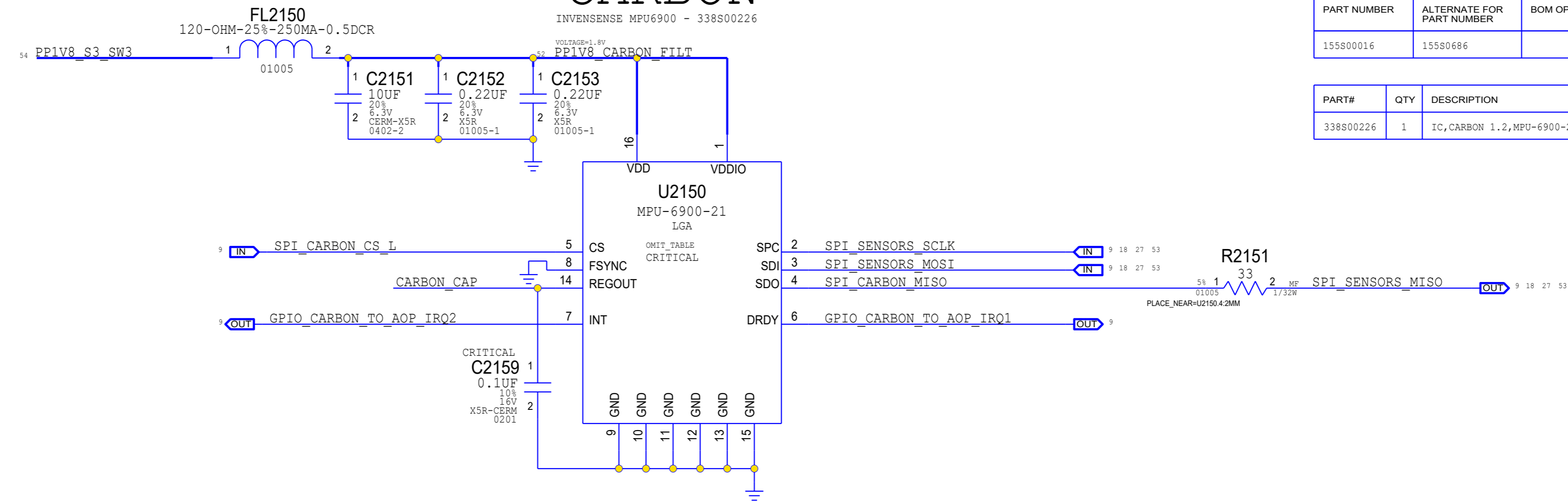


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		PAGE	18 OF 121
		SHEET	17 OF 54

SENSORS

CARBON

INVENSENSE MPU6900 - 338800226

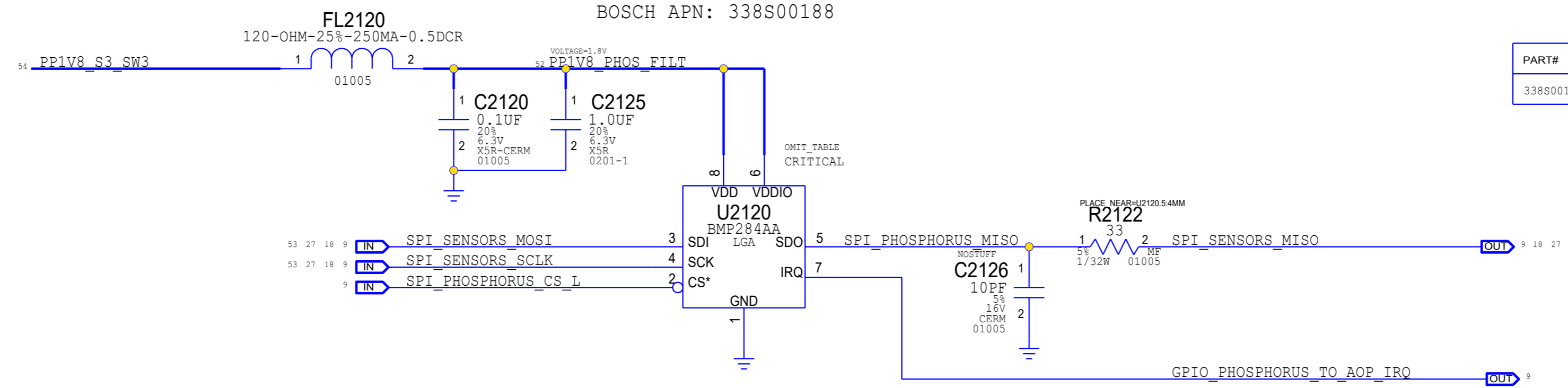


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PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
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PHOSPHORUS

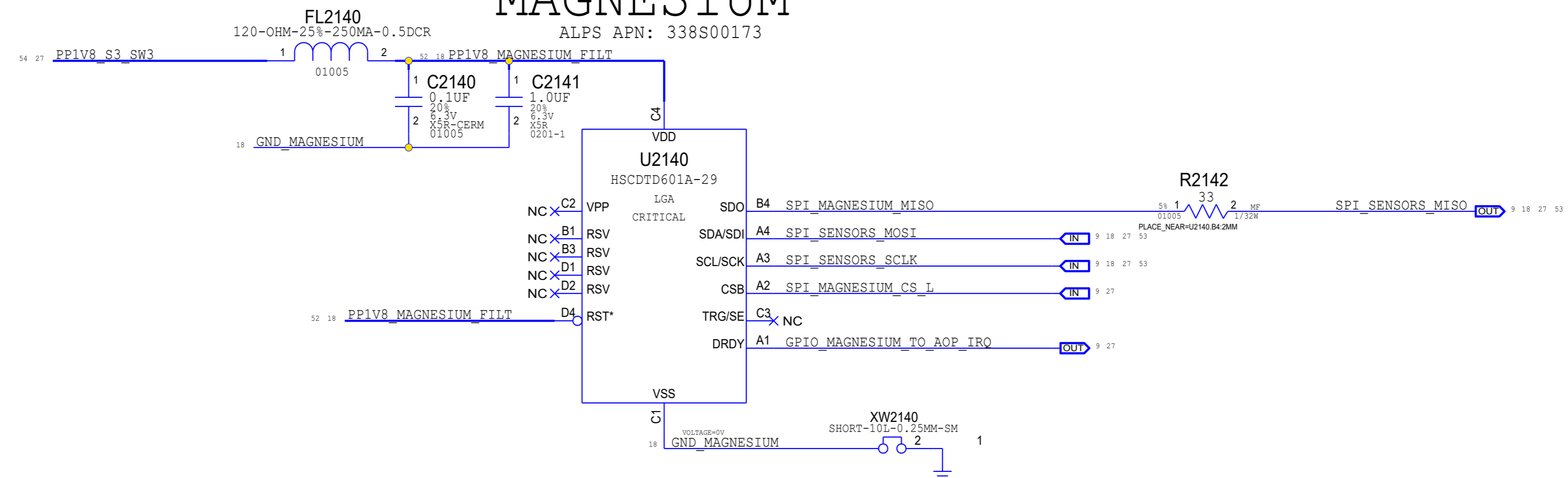
BOSCH APN: 338S00188



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
338S00188	1	PHOSPHORUS2, BMP284AA, LGA8	U2120	CRITICAL	

MAGNESIUM

ALPS APN: 338S00173



SYNC_MASTER=MLB_B SYNC_DATE=07/29/2016

PAGE TITLE SENSOR: CARBON, PHOS, MAGN

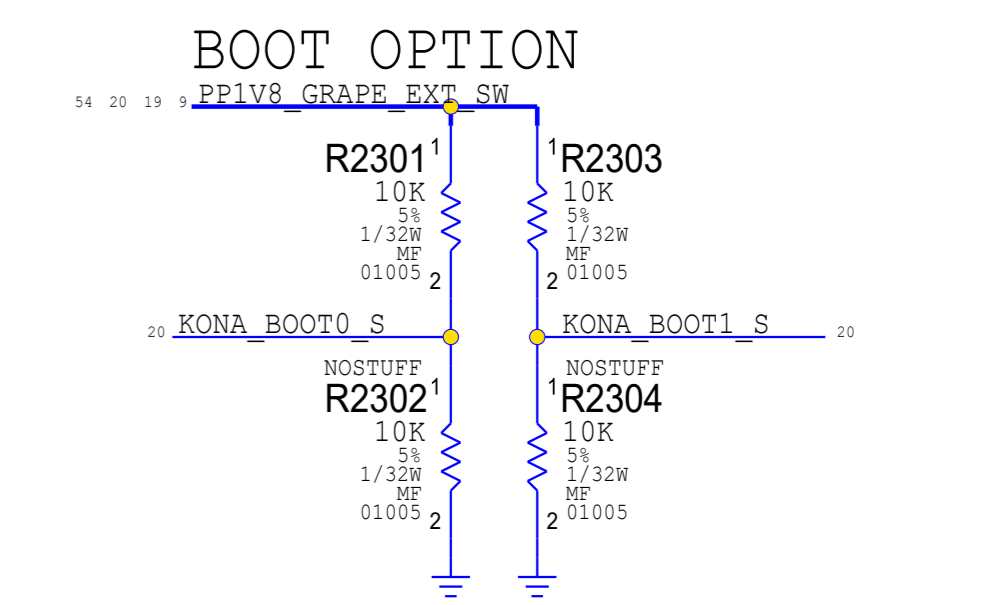
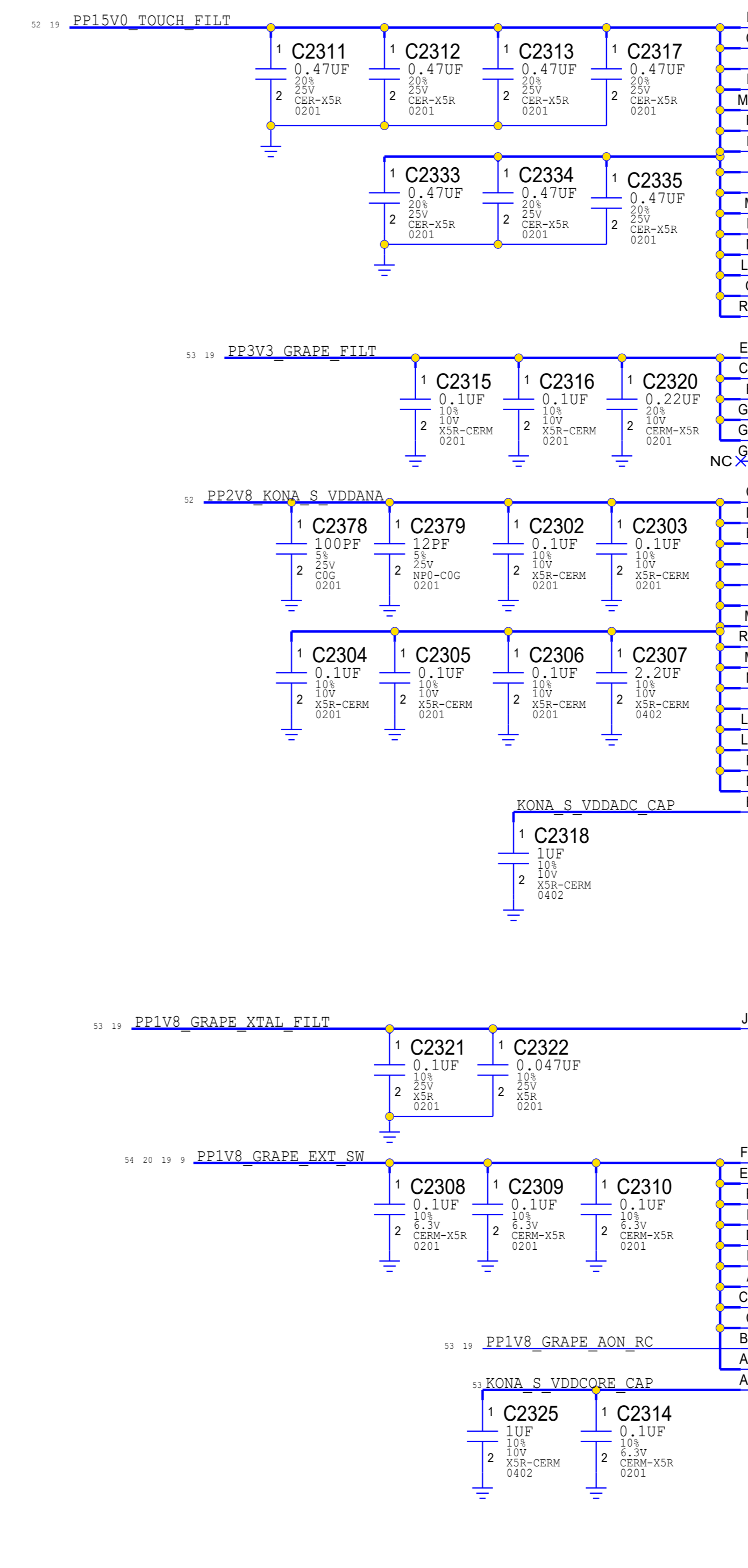
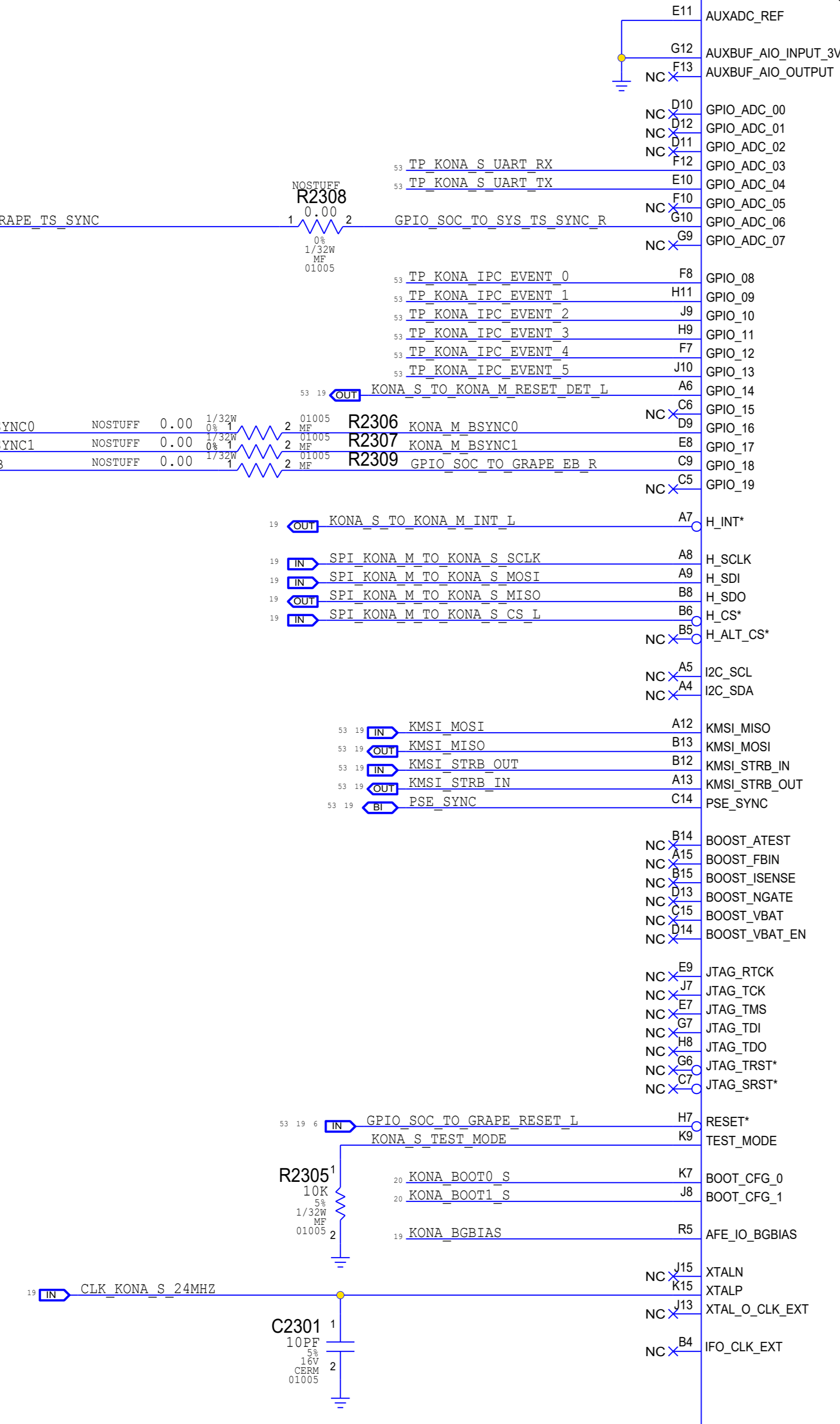
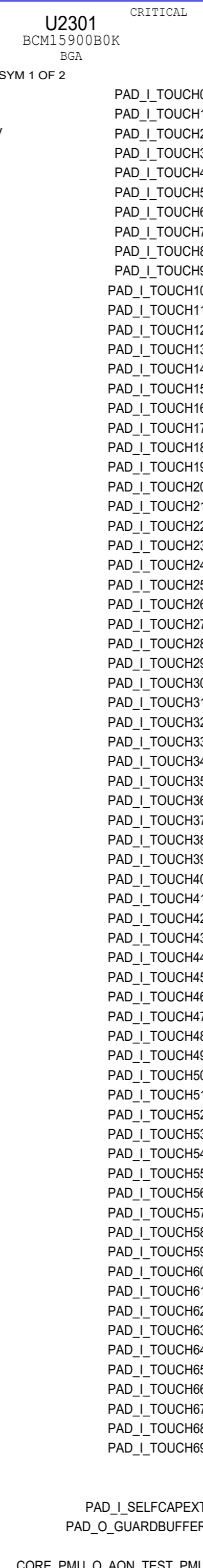


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BRANCH	
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KONA: SLAVE



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TOUCH: KONA SLAVE

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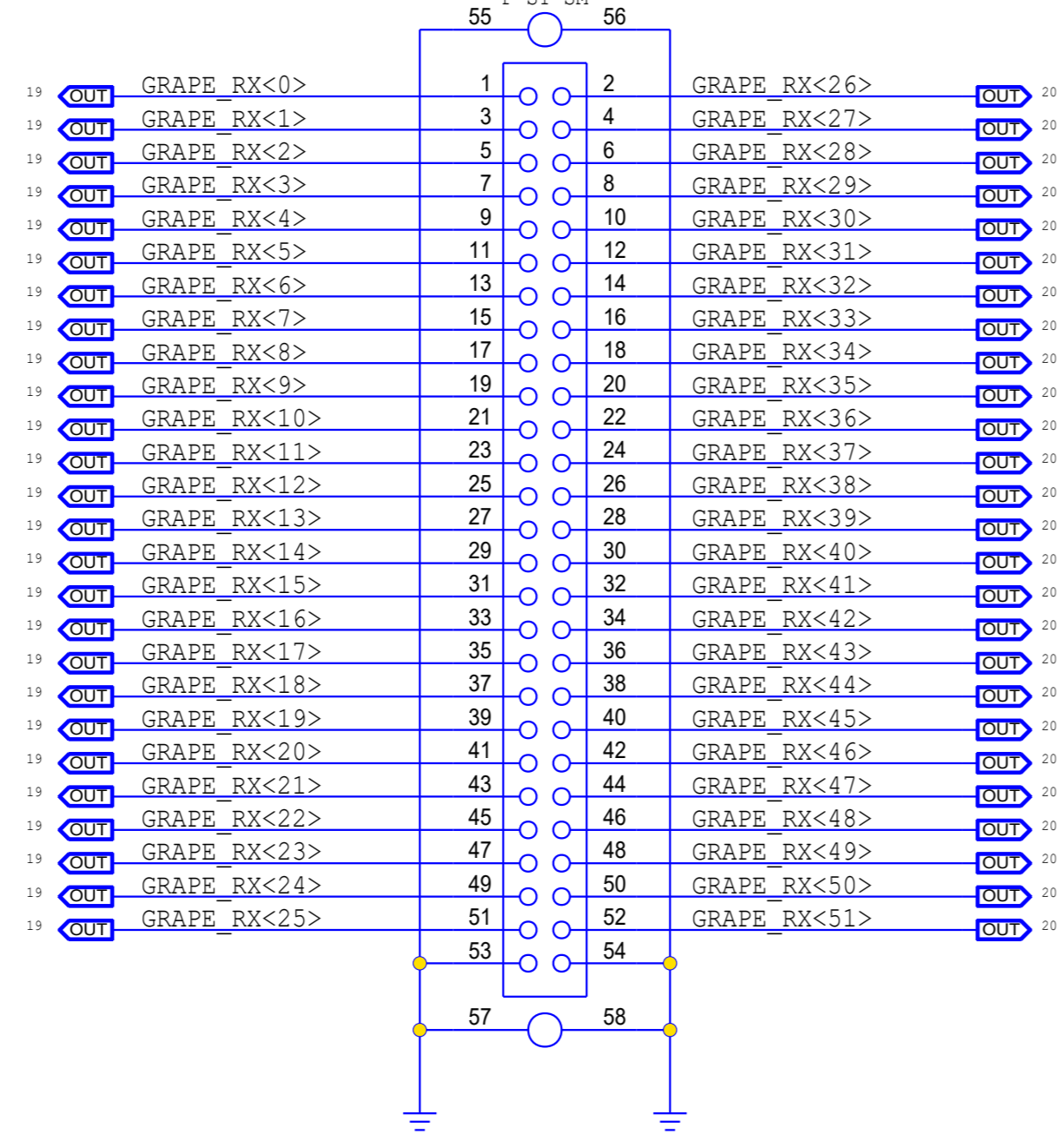
TOUCH FLEX CONNECTOR (SENSE)

MATCHES J207_GRAPE_FLEX 051-01606_3.0.0

MLB: 516S00063
FLEX: 516S00064

CRITICAL
J2400

505066-5420
F-ST-SM



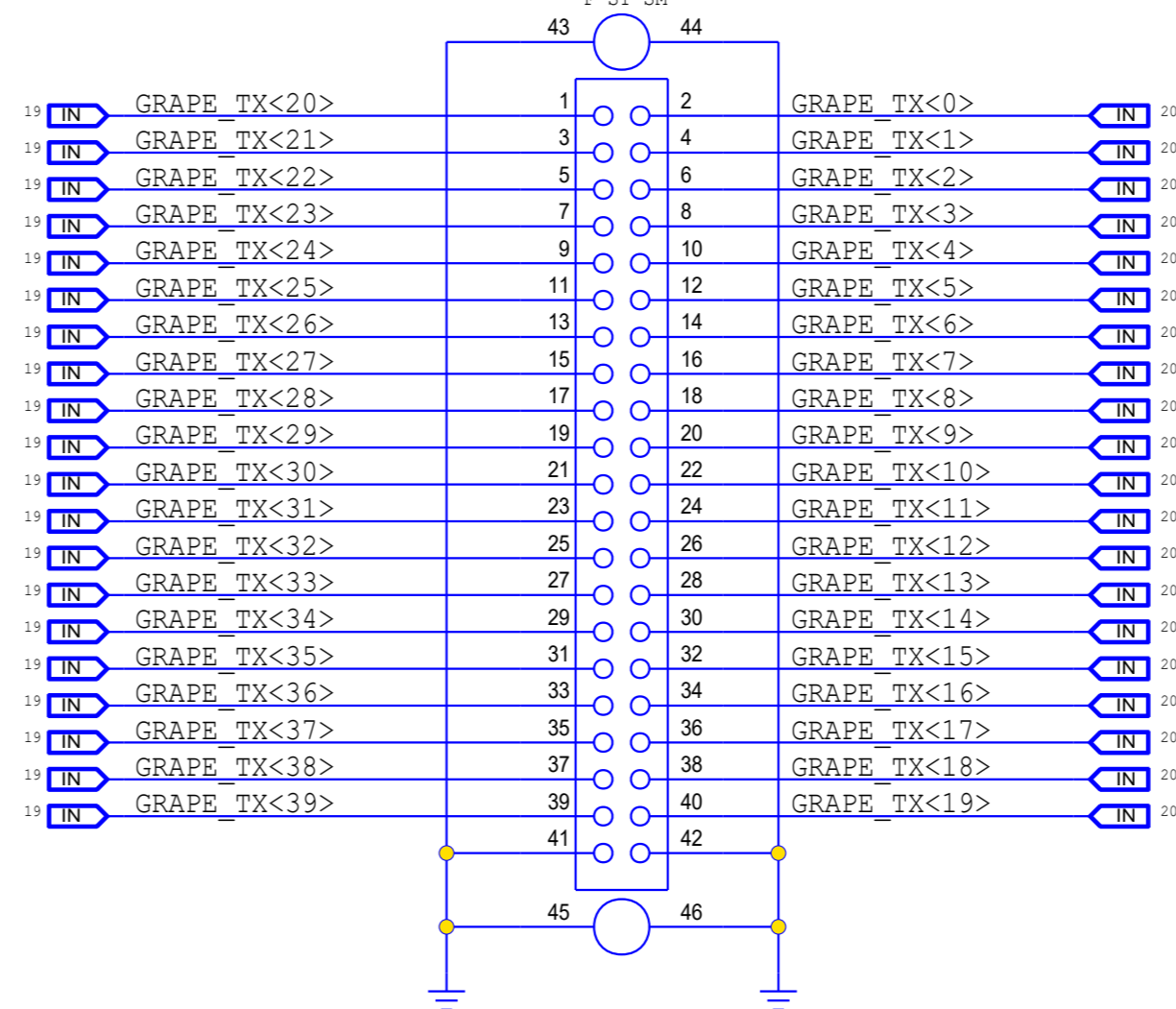
TOUCH FLEX CONNECTOR (DRIVE)

MATCHES J207_GRAPE_FLEX 051-01606_3.0.0

MLB: 516S00224
FLEX: 516S00225

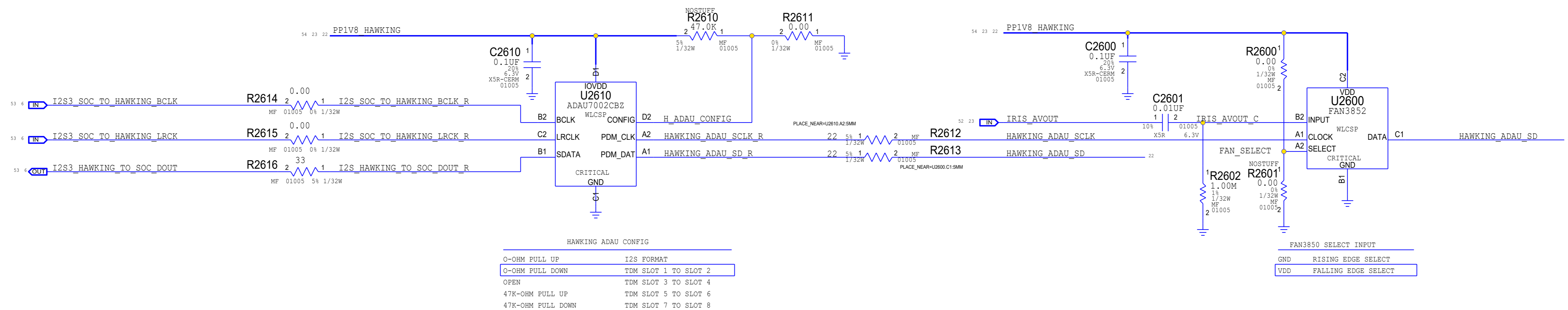
CRITICAL
J2401

505066-4220
F-ST-SM



SYNC_MASTER=MLB_B		SYNC_DATE=07/29/2016	
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	DRAWING NUMBER	051-04464	SIZE D
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HAWKING

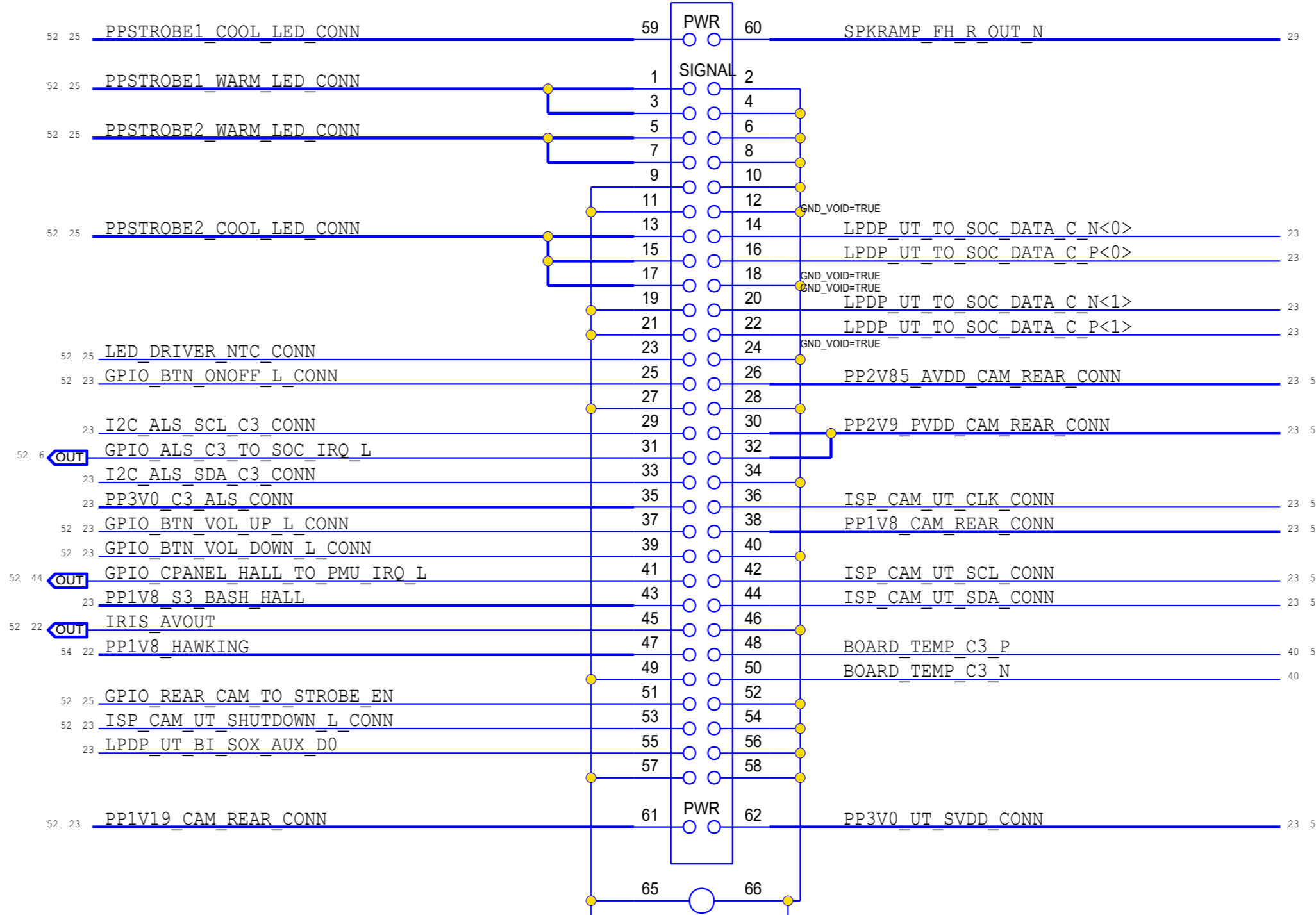
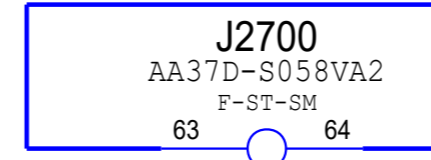


CORNER3 XFER FLEX B2B

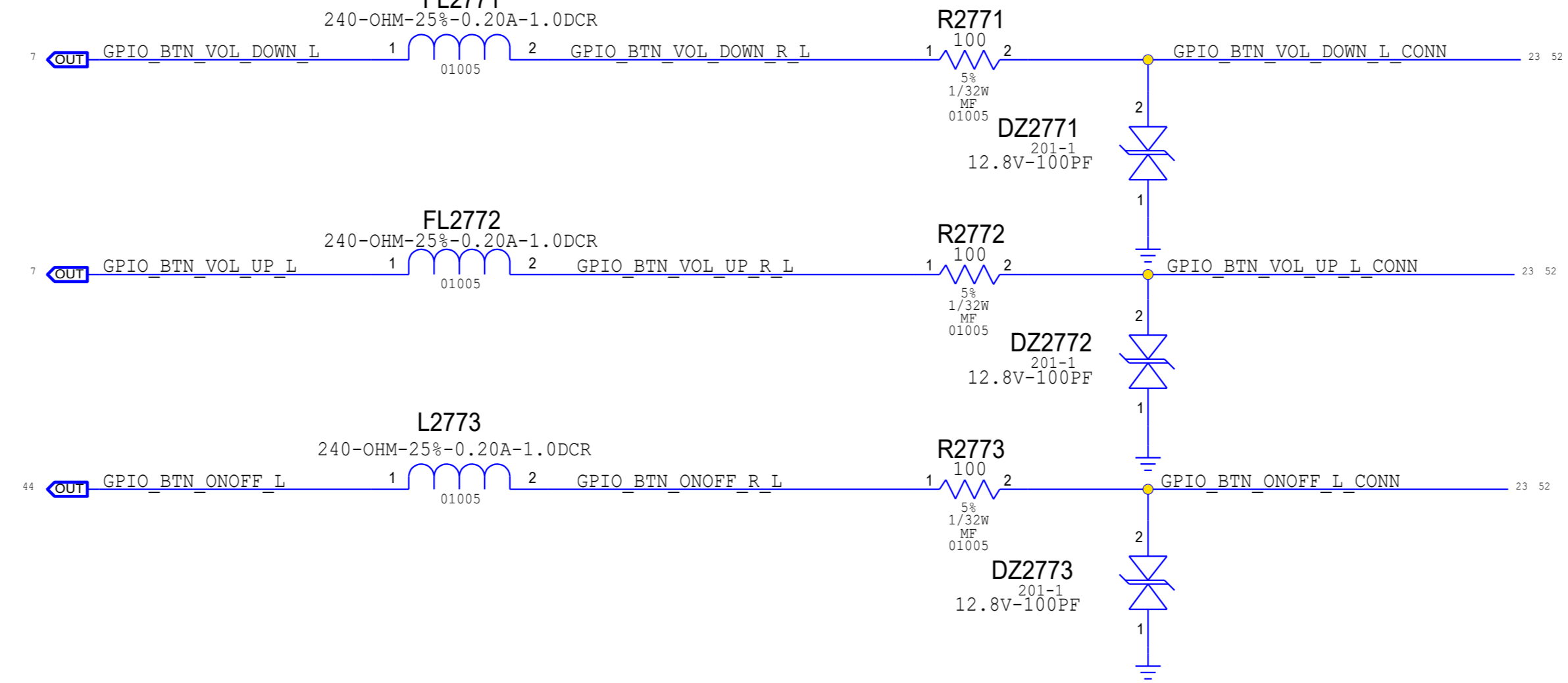
MATCHES J207_C3_TRANSFER_B2B_FLEX_051-01950_0.5.0

MLB: 516S00259
FLEX: 516S00260

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
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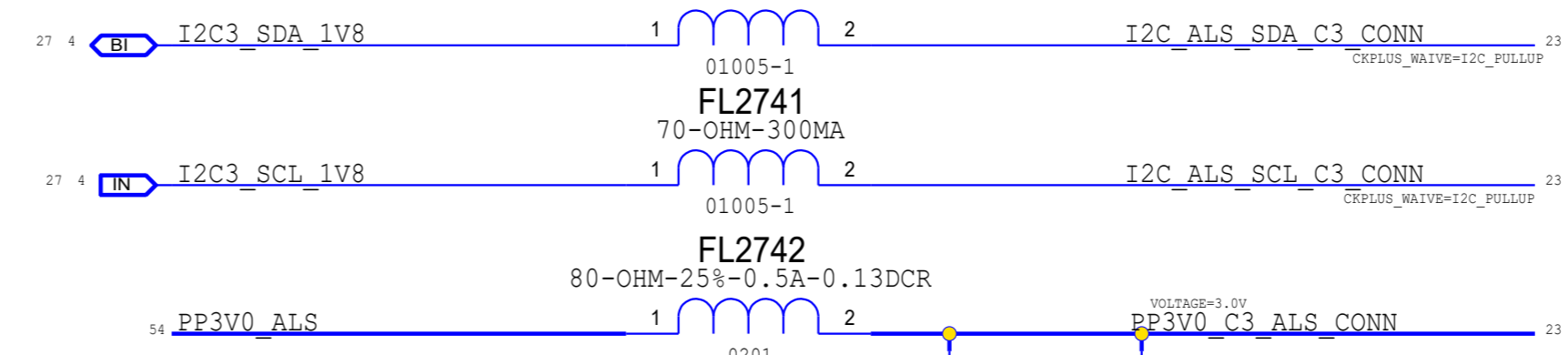


BUTTON FILTERS/ESD

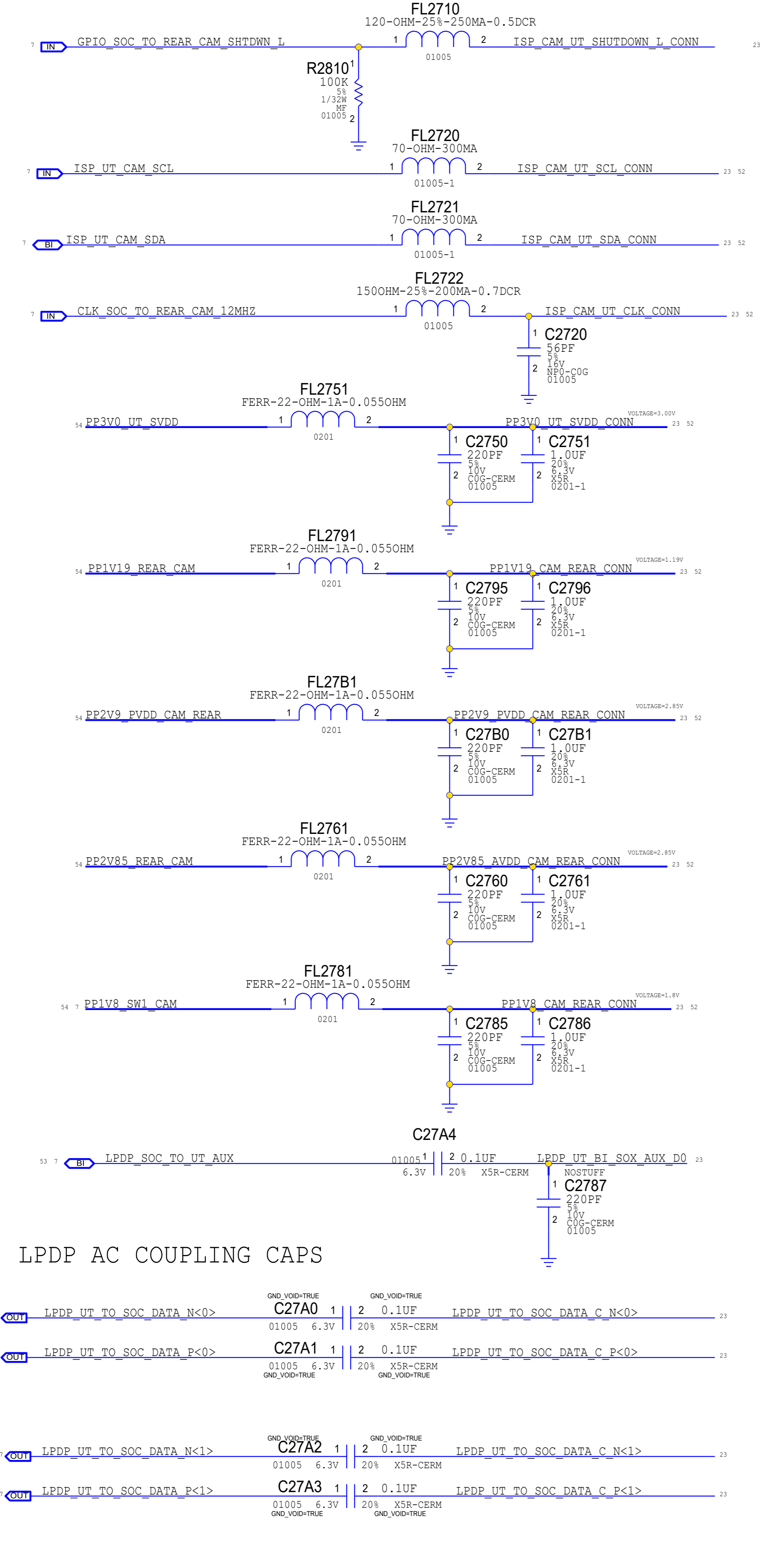
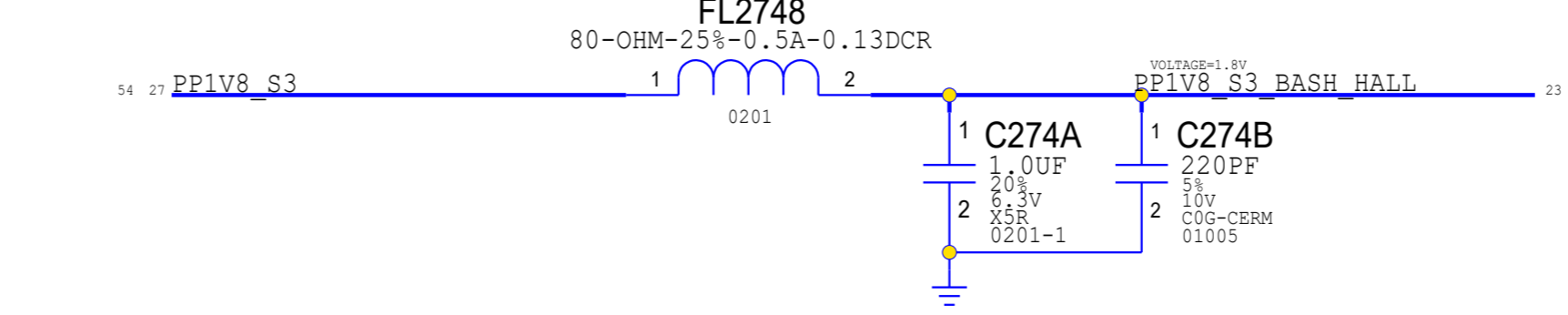


ANTENNA SWITCH FILTERS

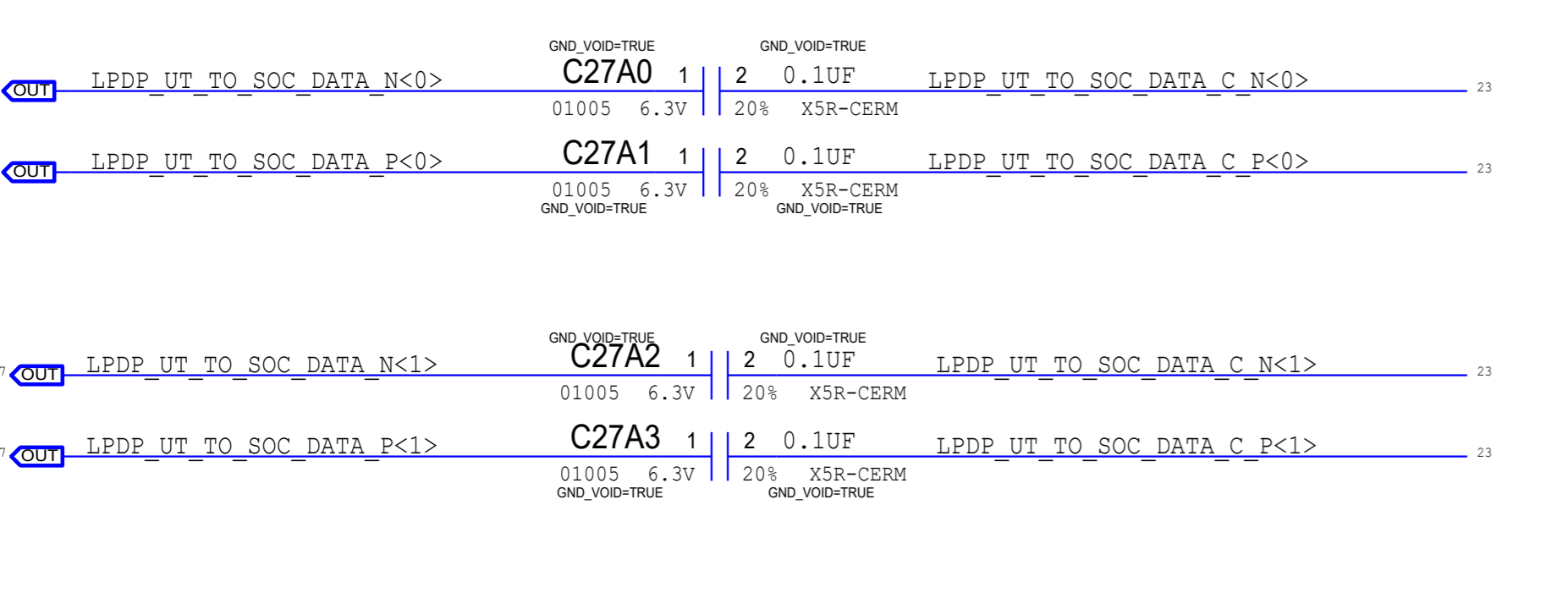
ALS FILTERS



HALL PWR FILTER



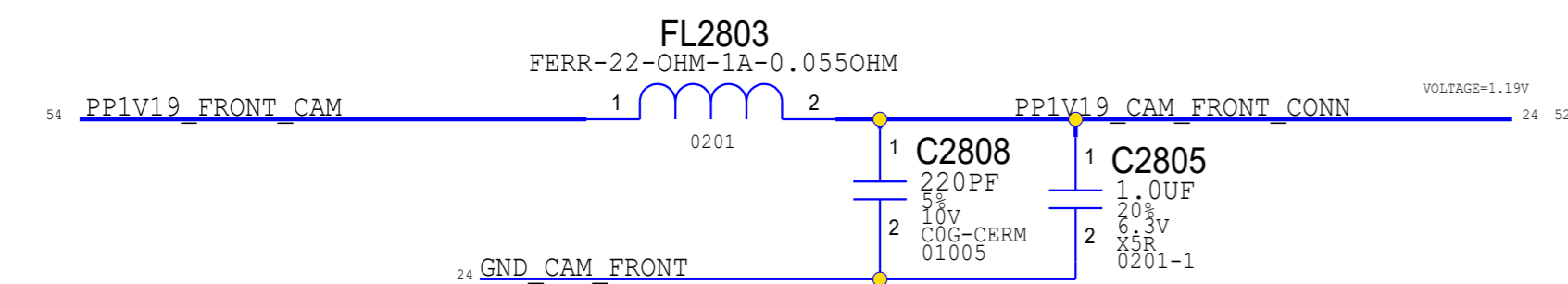
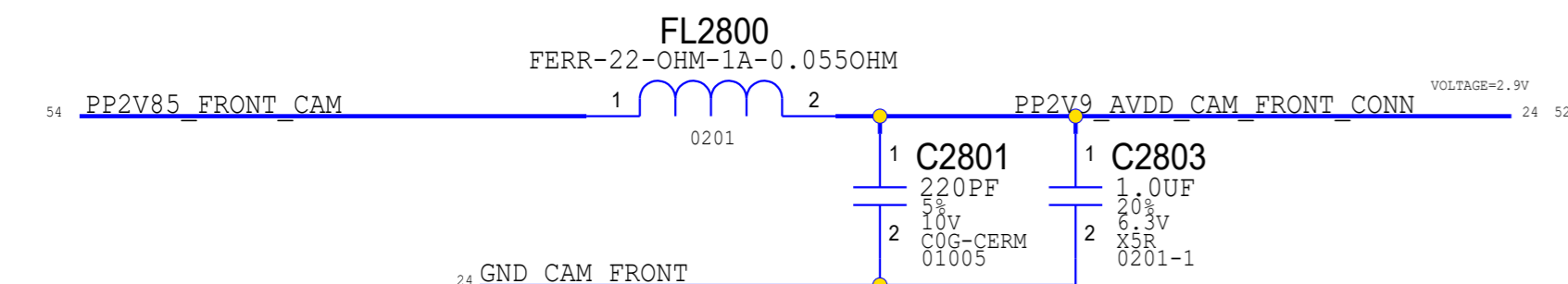
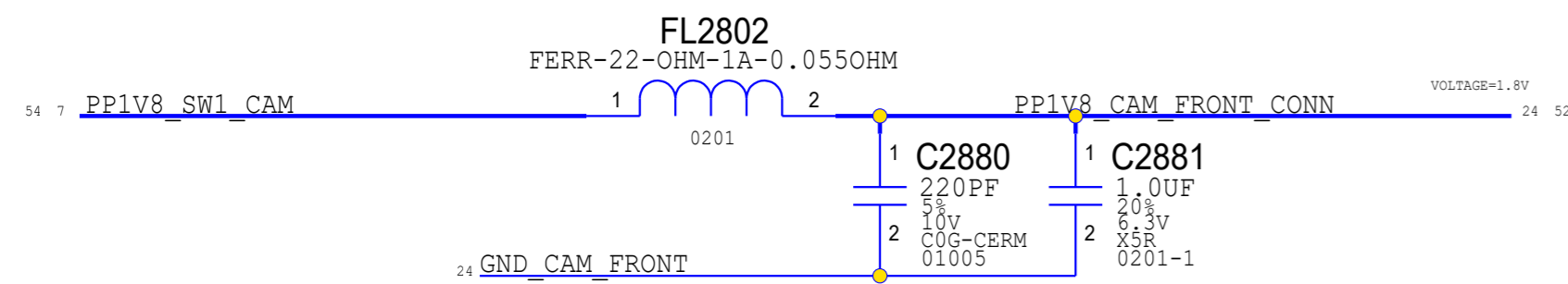
LPDP AC COUPLING CAPS



SYNC_MASTER=MLB_B		SYNC_DATE=07/29/2016	
PAGE TITLE			
FLEX CONNS: CORNER 3			
		DRAWING NUMBER	SIZE
		051-04464	D
		REVISION	5.0.0
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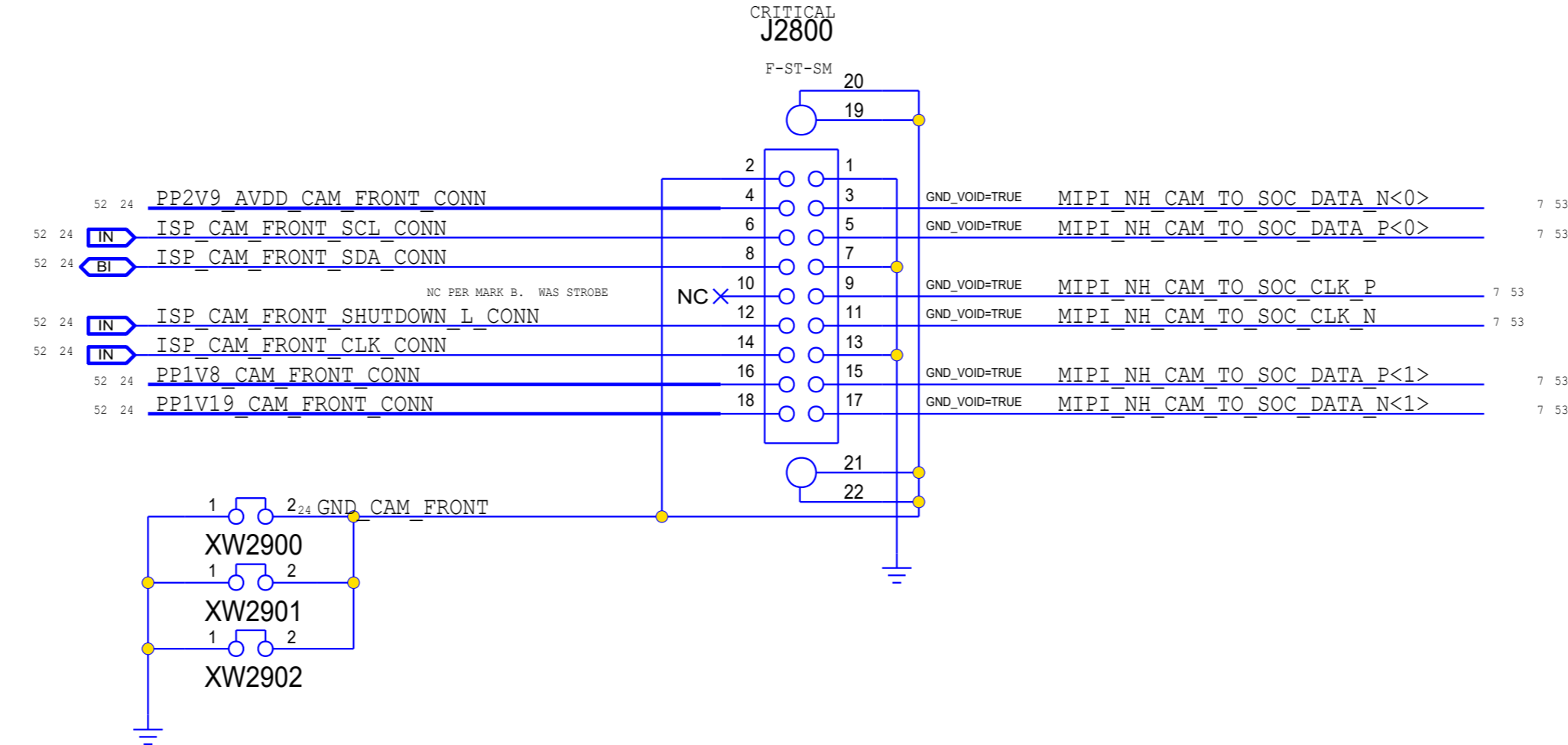
FRONT CAMERA (NH)

POWER FILTERS

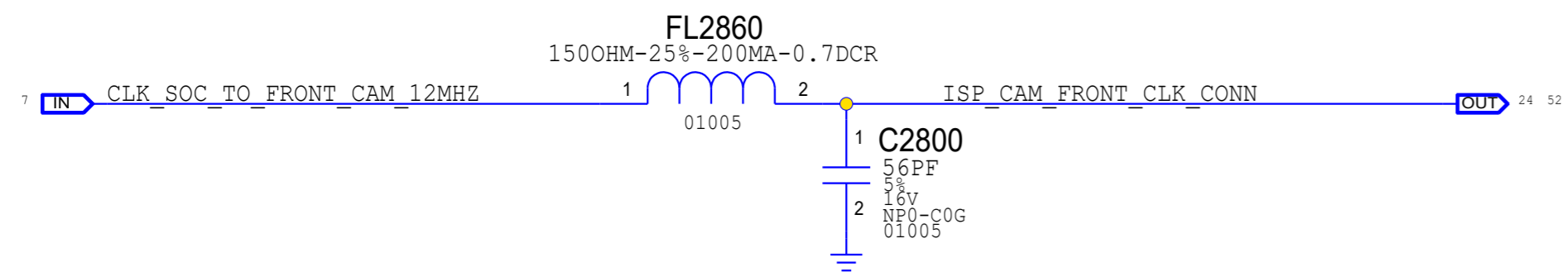
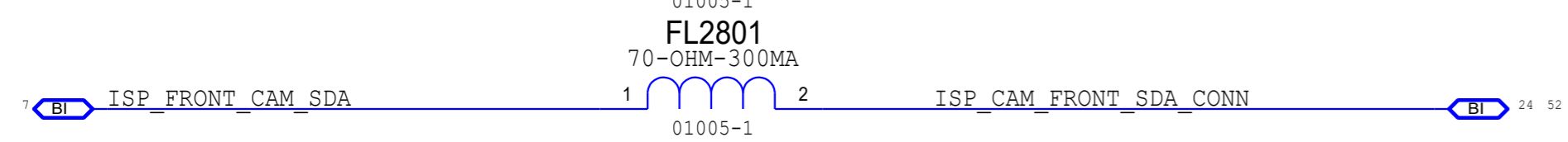
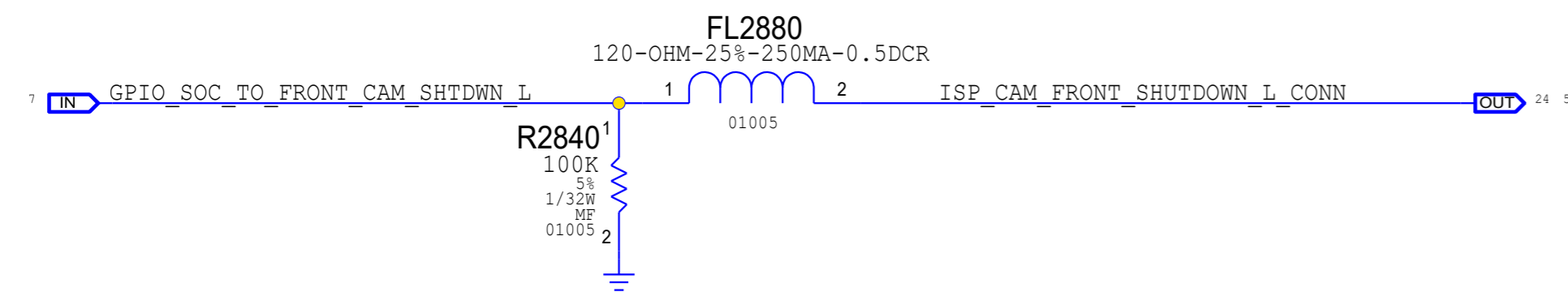


FRONT CAMERA CONNECTOR

MATCHES J120_FRONT_CAM_FLEX_051-01272_2.0.0
 FLEX SIDE: 516S00194
 MLB SIDE: 516S00193



IO FILTERS



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
155800200	155800610		FL2860, SCT	RDAR://PROBLEM/12880271

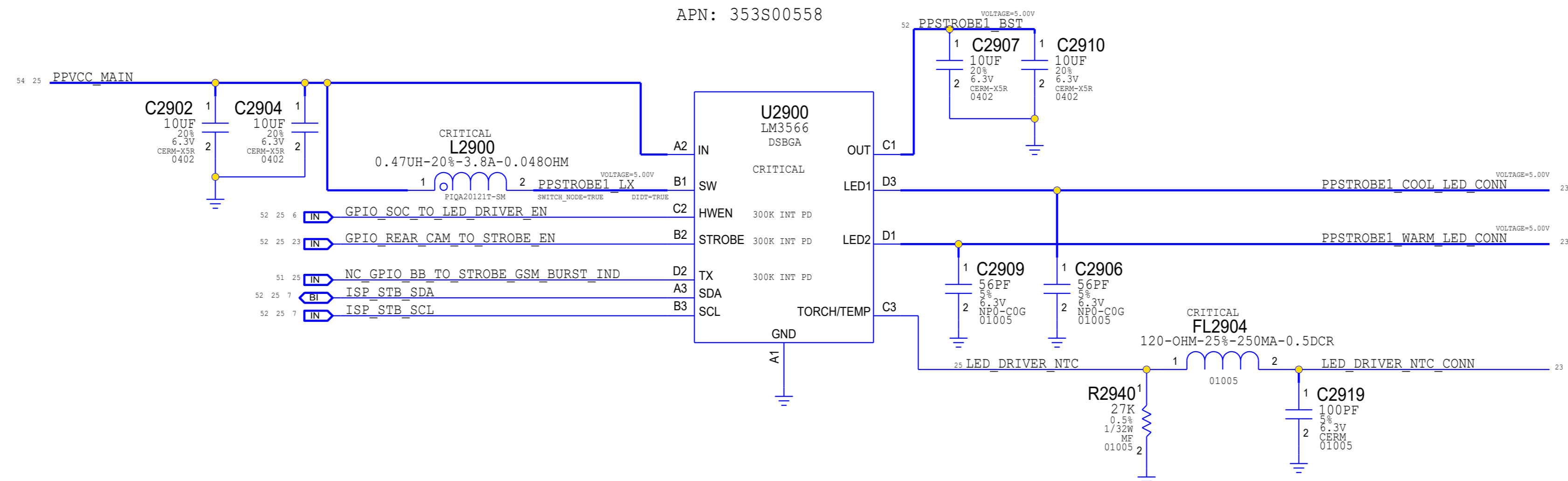
CAMERA: FRONT	
	DRAWING NUMBER: 051-04464
	REVISION: 5.0.0
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	PAGE: 28 OF 121
	SHEET: 24 OF 54

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
13850875	13850678		C2902, ETC	RDAR://PROBLEM/26929420

STROBE CIRCUITRY

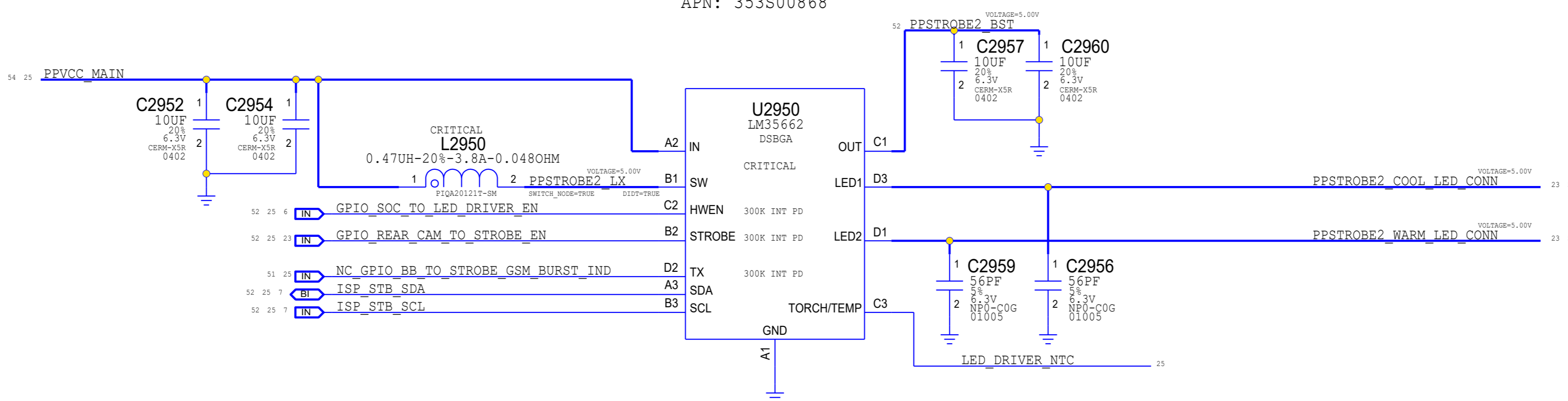
LED DRIVER 1

APN: 353S00558



LED DRIVER 2

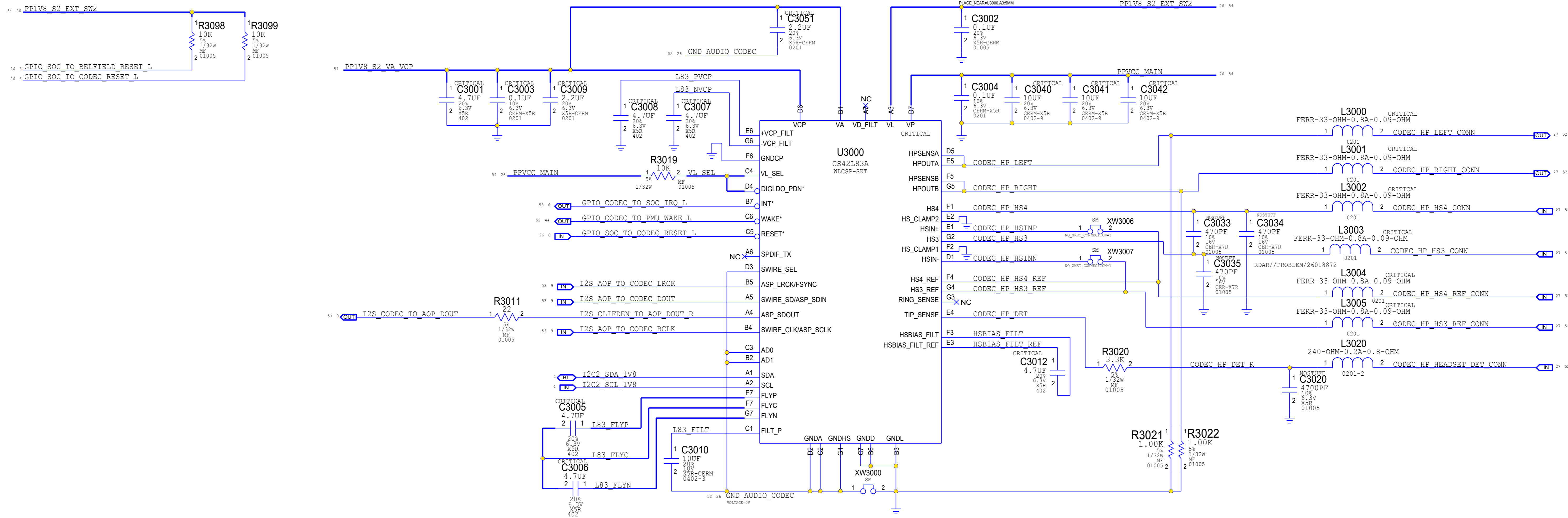
APN: 353S00868



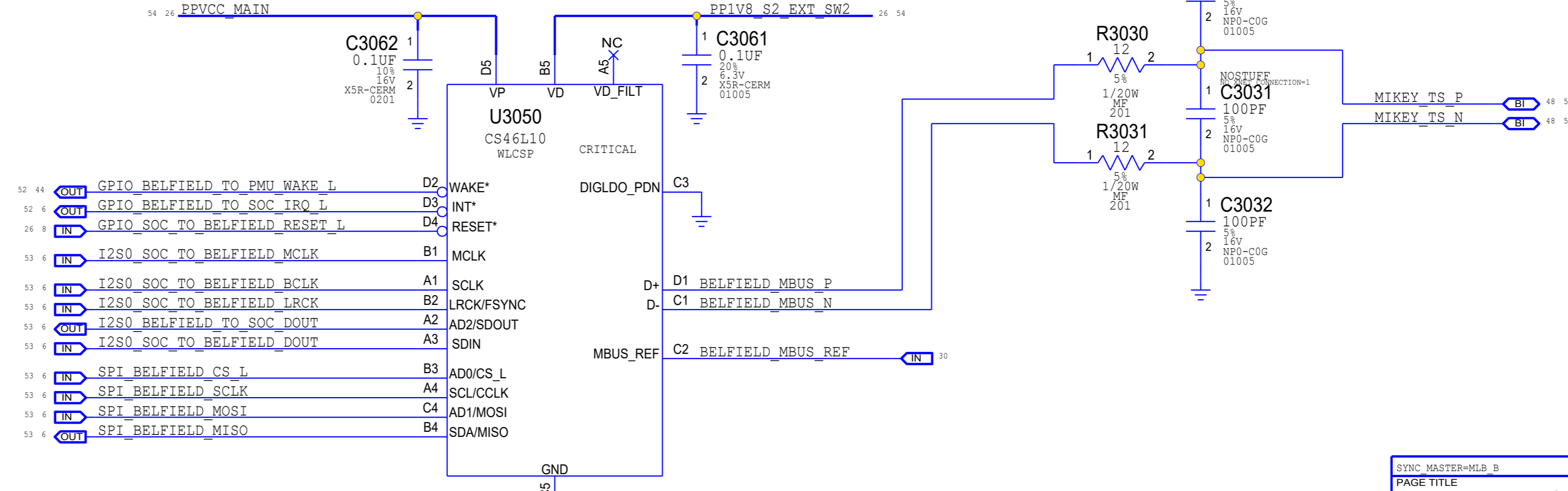
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		PAGE	29 OF 121
		SHEET	25 OF 54

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
15580661	15580511		L3000,ECT	RDAR://PROBLEM/12639854
13850847	13850786		C3010	

CLIFDEN



BELFIELD



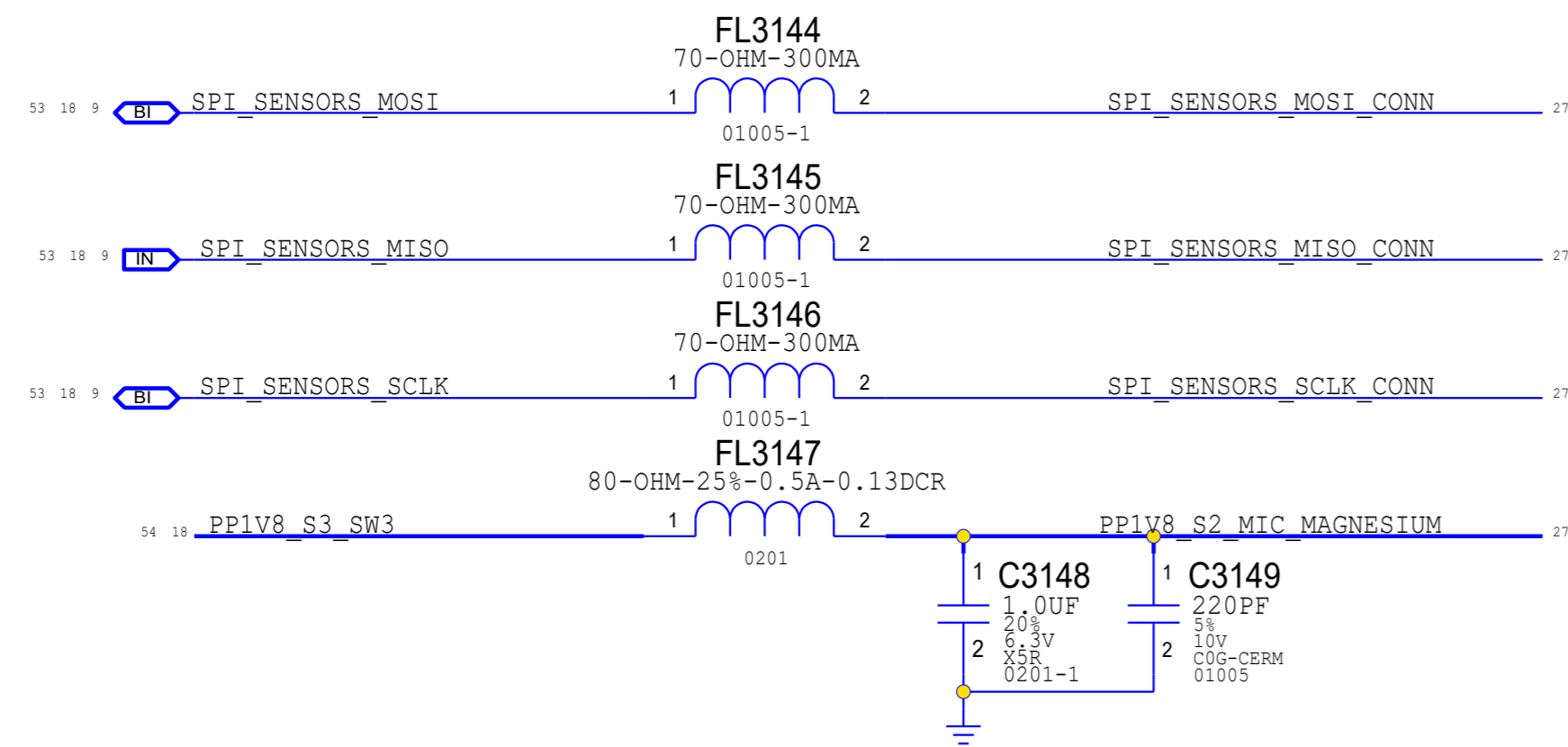
SYNC_MASTER=MLB_B SYNC_DATE=07/29/2016

PAGE TITLE: AUDIO: CLIFDEN, BELFIELD

	DRAWING NUMBER	051-04464	SIZE	D
	REVISION	5.0.0		
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		PAGE	30 OF 121	
		SHEET	26 OF 54	

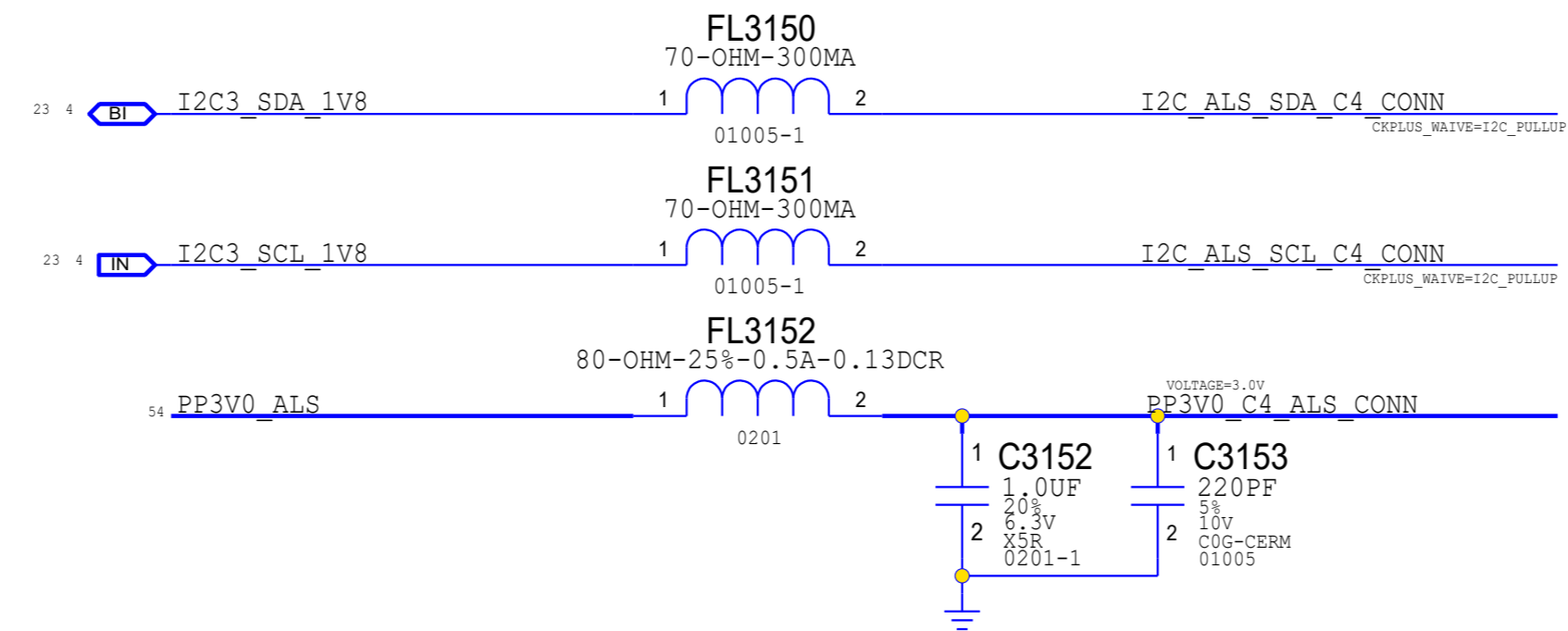
CORNER 4 + DMIC FLEX FILTERS

MAGNESIUM SPI FILTERS

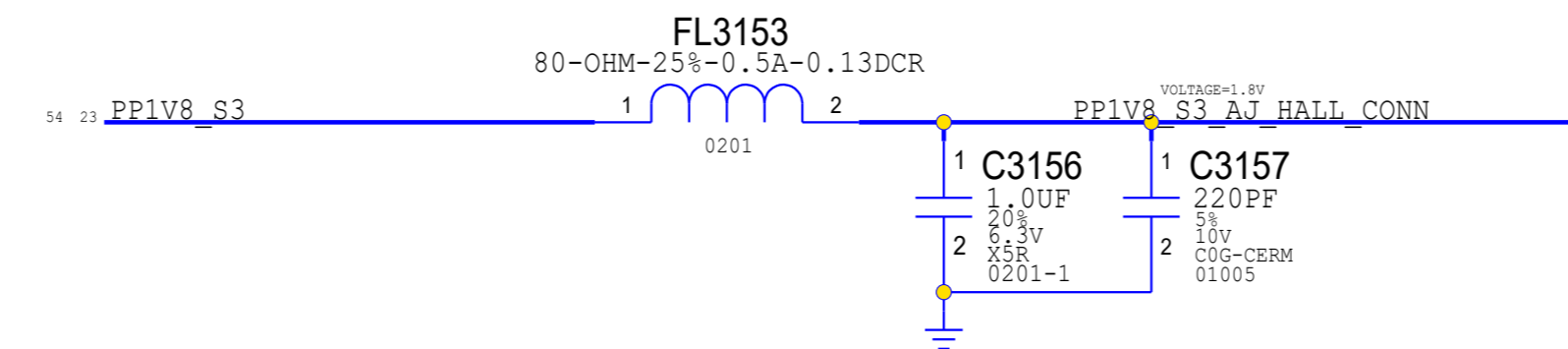


ANTENNA SWITCH FILTERS

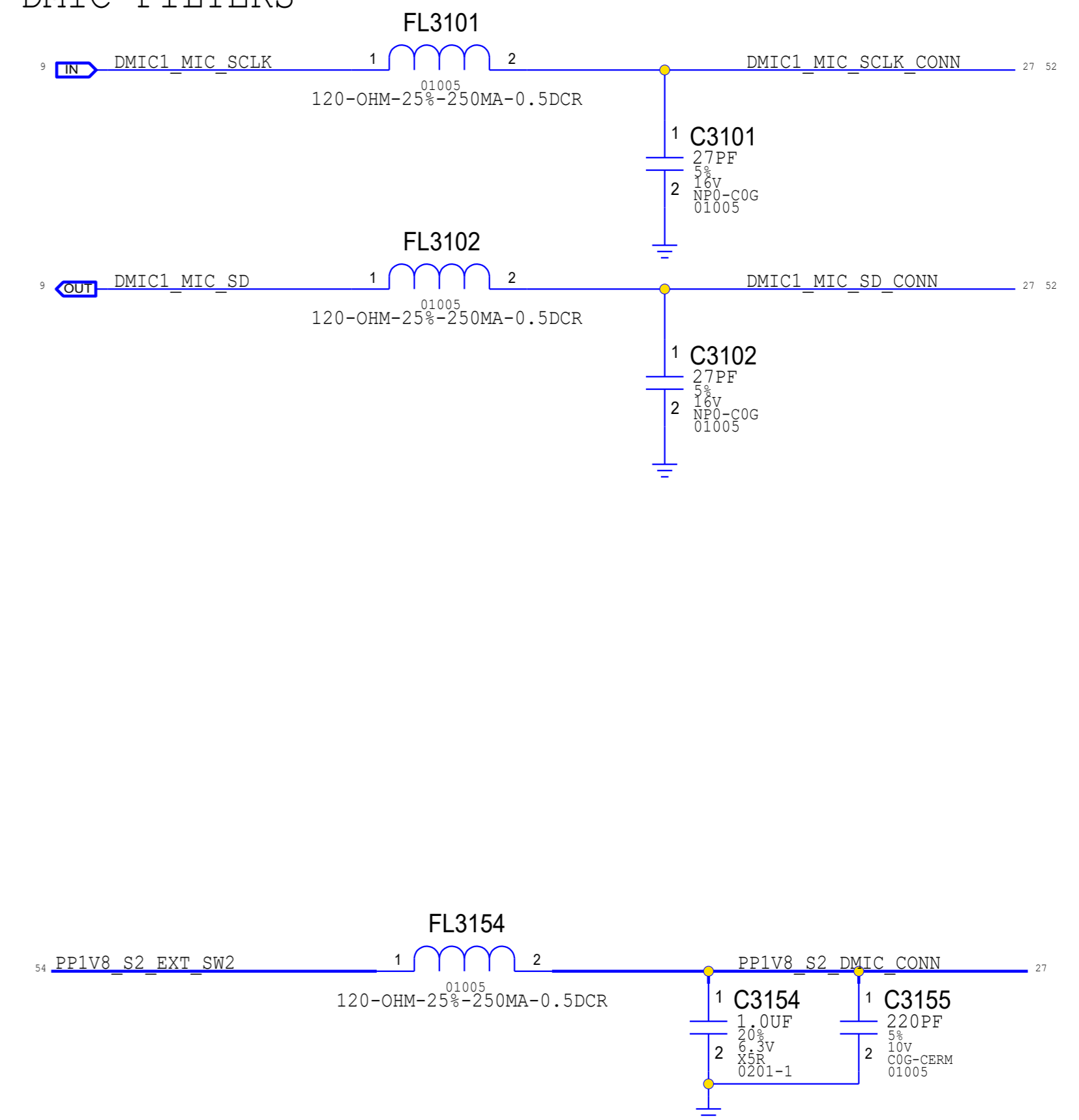
ALS FILTERS



HALL FILTER

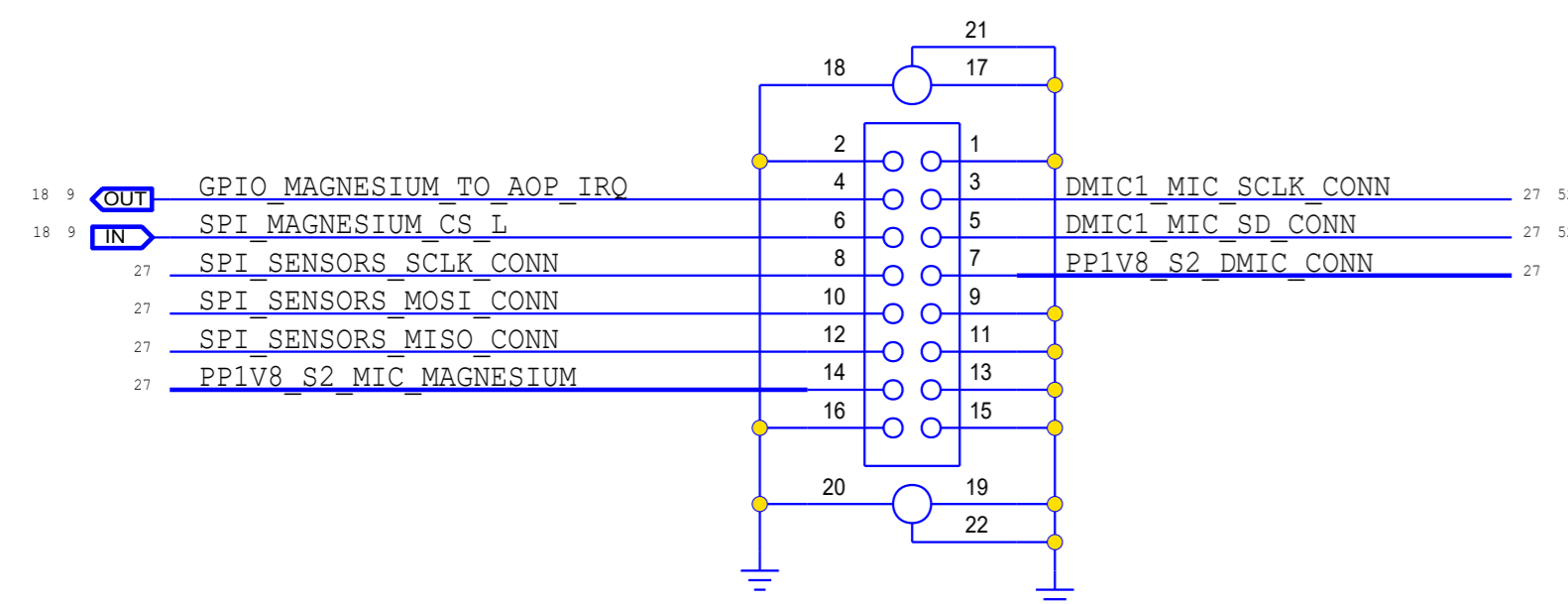


DMIC FILTERS



MIC FLEX B2B

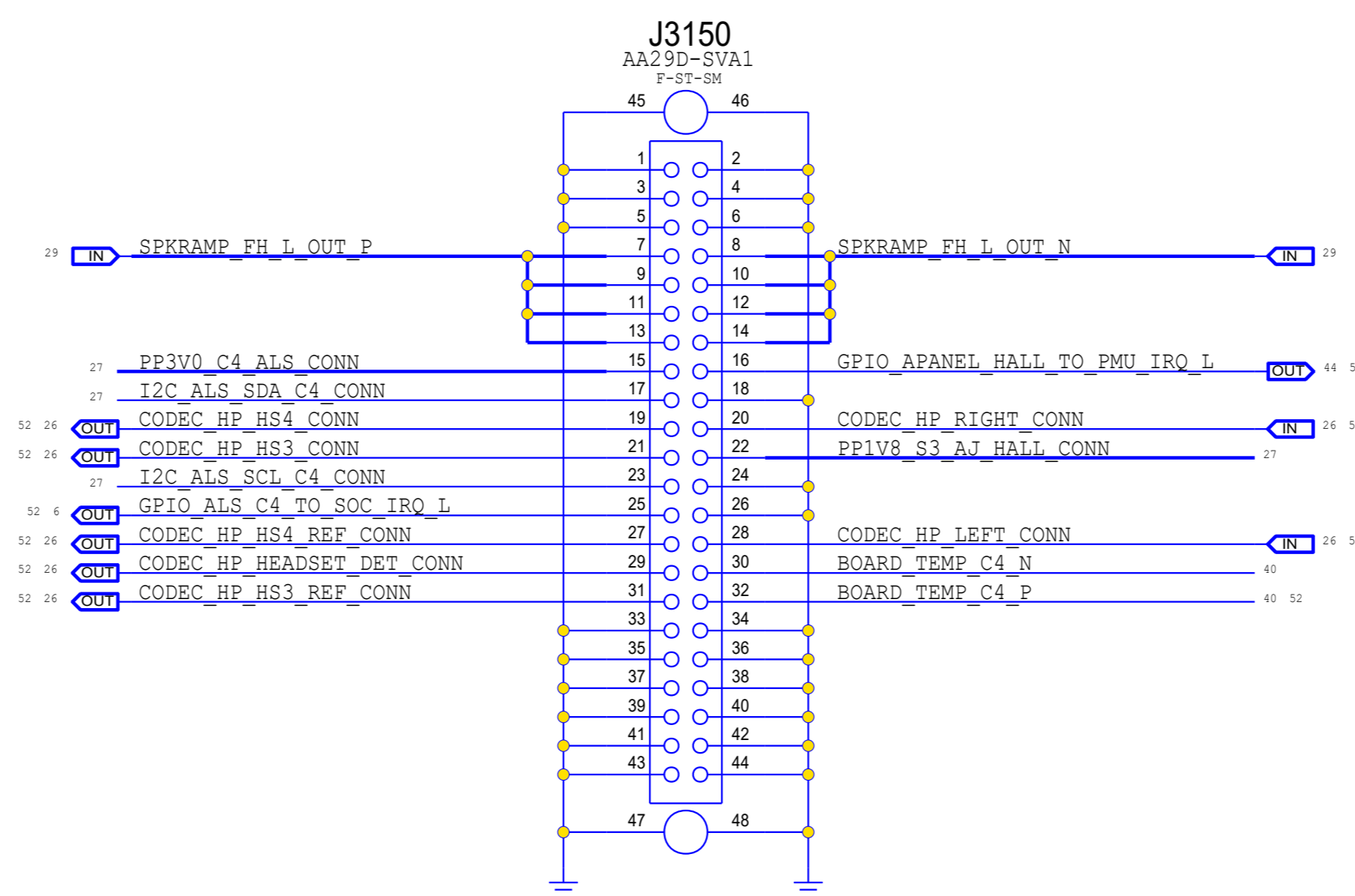
MATCHES J207_MIC_FLEX_051-01915_0.5.0
MLB APN: 516S1278
FLEX APN: 516S1280
CRITICAL
J3100
24-5857-016-201-829
F-ST-SM



ROUTING	BUS	SELECT	LOCATION	DATA ASSERTS ON	DATA LATCHED ON
MIC1	DMIC1	HIGH	CENTER SPLINE	CLK RISING EDGE	CLK FALLING EDGE
MIC2	DMIC1	LOW	REAR	CLK FALLING EDGE	CLK RISING EDGE

CORNER 4 B2B

MATCHES J207_C4_TRANSFER_FLEX_051-01724_2.16.0
MLB APN: 516S00222
FLEX APN: 526S00223

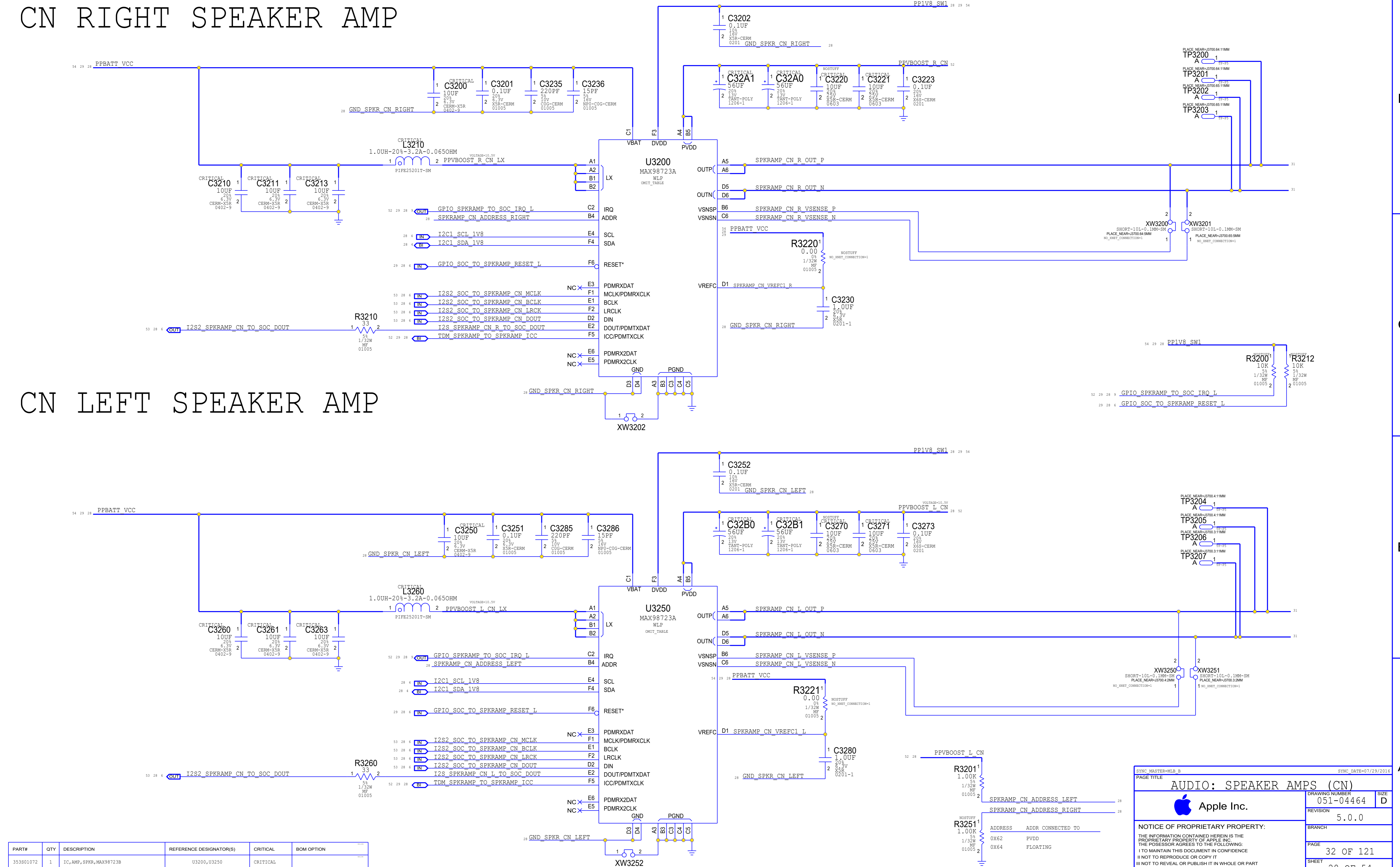


PAGE TITLE		FLEX CONNS: C4 & DMIC	
DRAWING NUMBER		051-04464	SIZE
REVISION		5.0.0	
BRANCH			
PAGE		31 OF 121	
SHEET		27 OF 54	


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CN RIGHT SPEAKER AMP

CN LEFT SPEAKER AMP



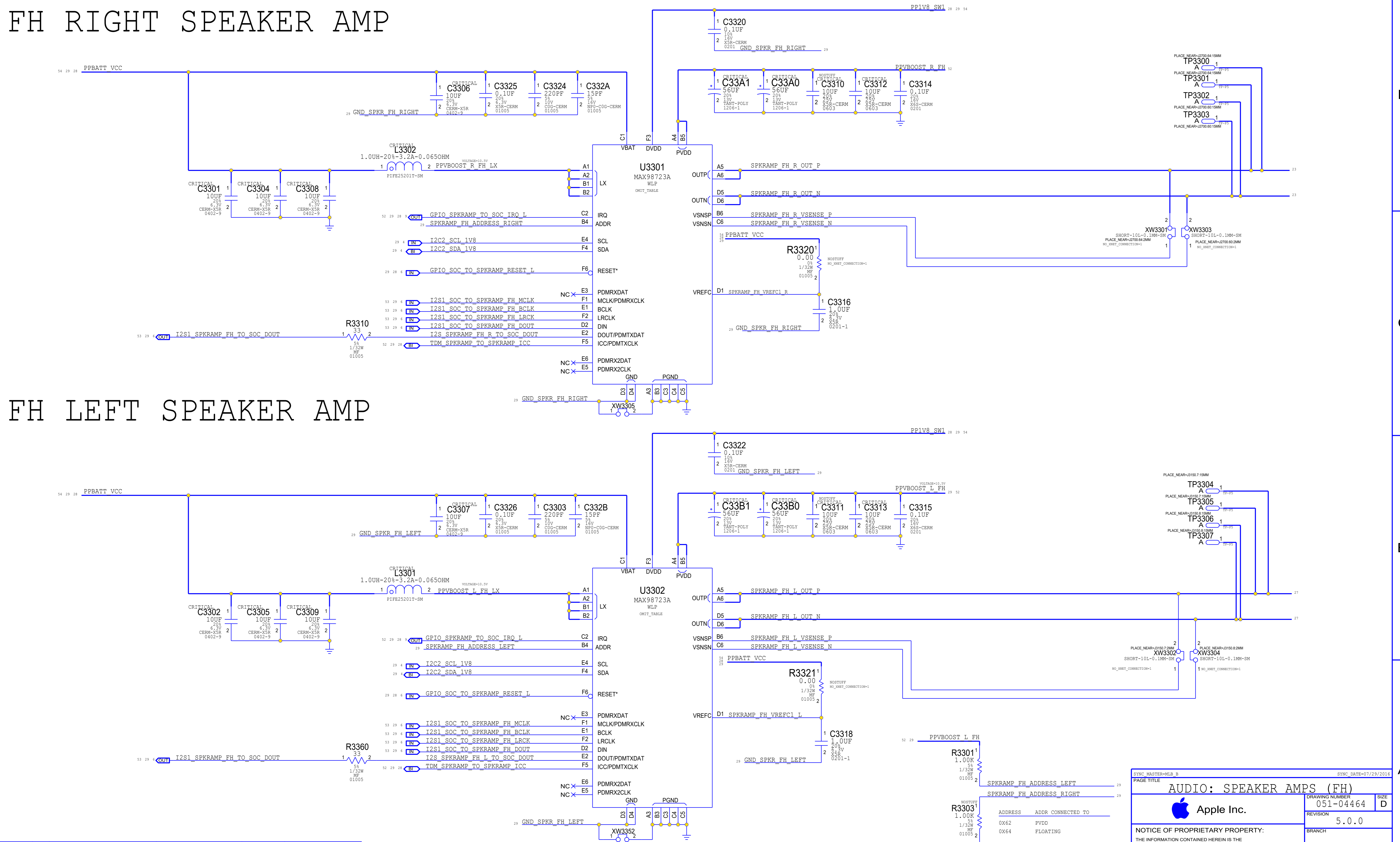
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
353801072	1	IC, AMP, SPKR, MAX98723B	U3200, U3250	CRITICAL	

SYNC_MASTER=MLB_B SYNC_DATE=07/29/2016
 PAGE TITLE
AUDIO: SPEAKER AMPS (CN)

 DRAWING NUMBER: 051-04464
 REVISION: 5.0.0
 BRANCH:
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 SHEET: 28 OF 54

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FH RIGHT SPEAKER AMP

FH LEFT SPEAKER AMP



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
353801072	1	IC, AMP, SPKR, MAX98723B	U3301, U3302	CRITICAL	

SYNC_MASTER=MLB_B SYNC_DATE=07/29/2016

PAGE TITLE: **AUDIO: SPEAKER AMPS (FH)**

Apple Inc.

DRAWING NUMBER: 051-04464 SIZE: D

REVISION: 5.0.0

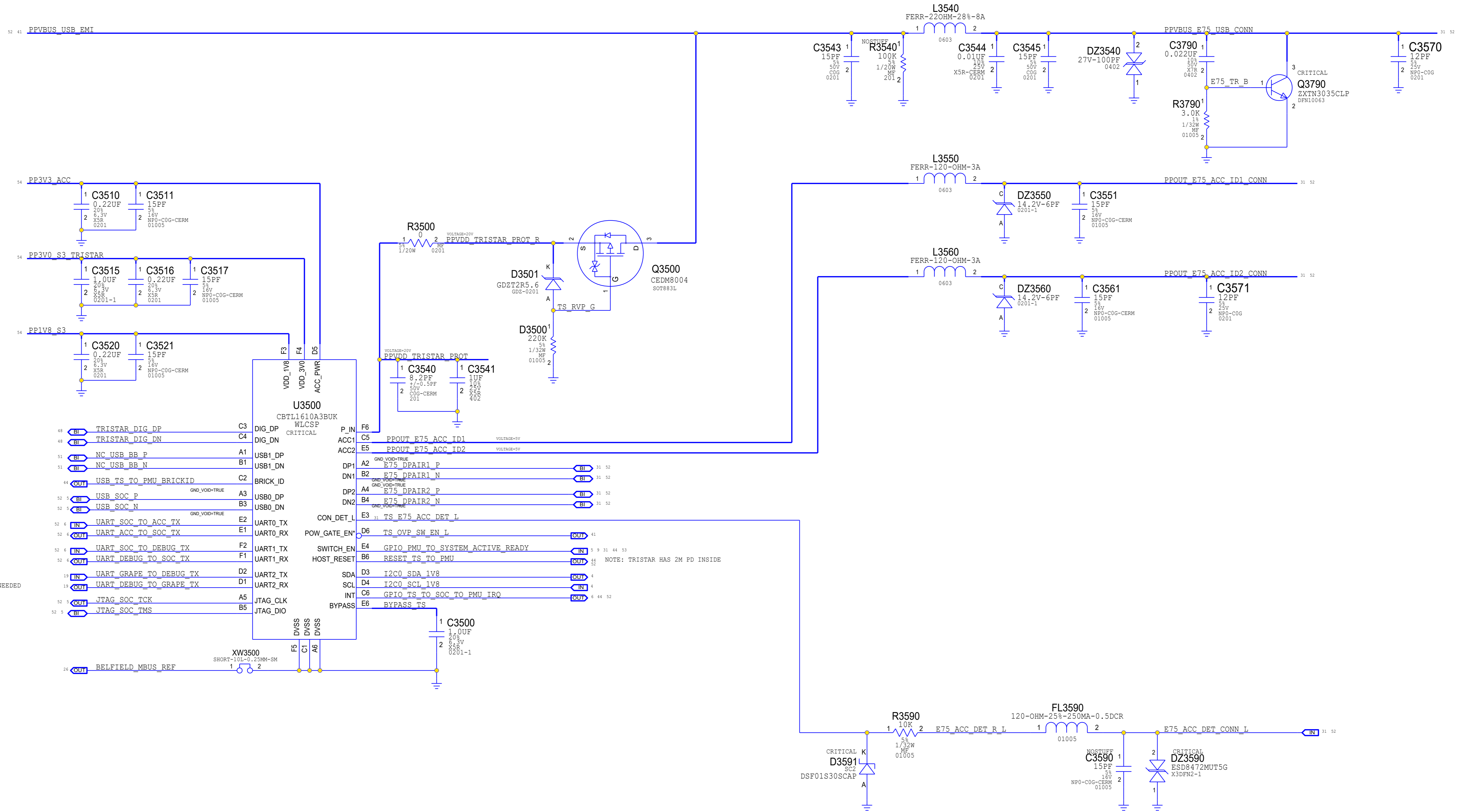
BRANCH:

PAGE: 33 OF 121

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TRISTAR



TRISTAR TX IS AN INPUT
AND ITS RX IS AN OUT
TODO: CHECK IF THIS IO IS NEEDED

NOTE: TRISTAR HAS 2M PD INSIDE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
37750116	37750108		DZ3540	RDR-L//PROBLEM/8376432

IO: TRISTAR

Apple Inc.

DRAWING NUMBER: 051-04464
REVISION: 5.0.0

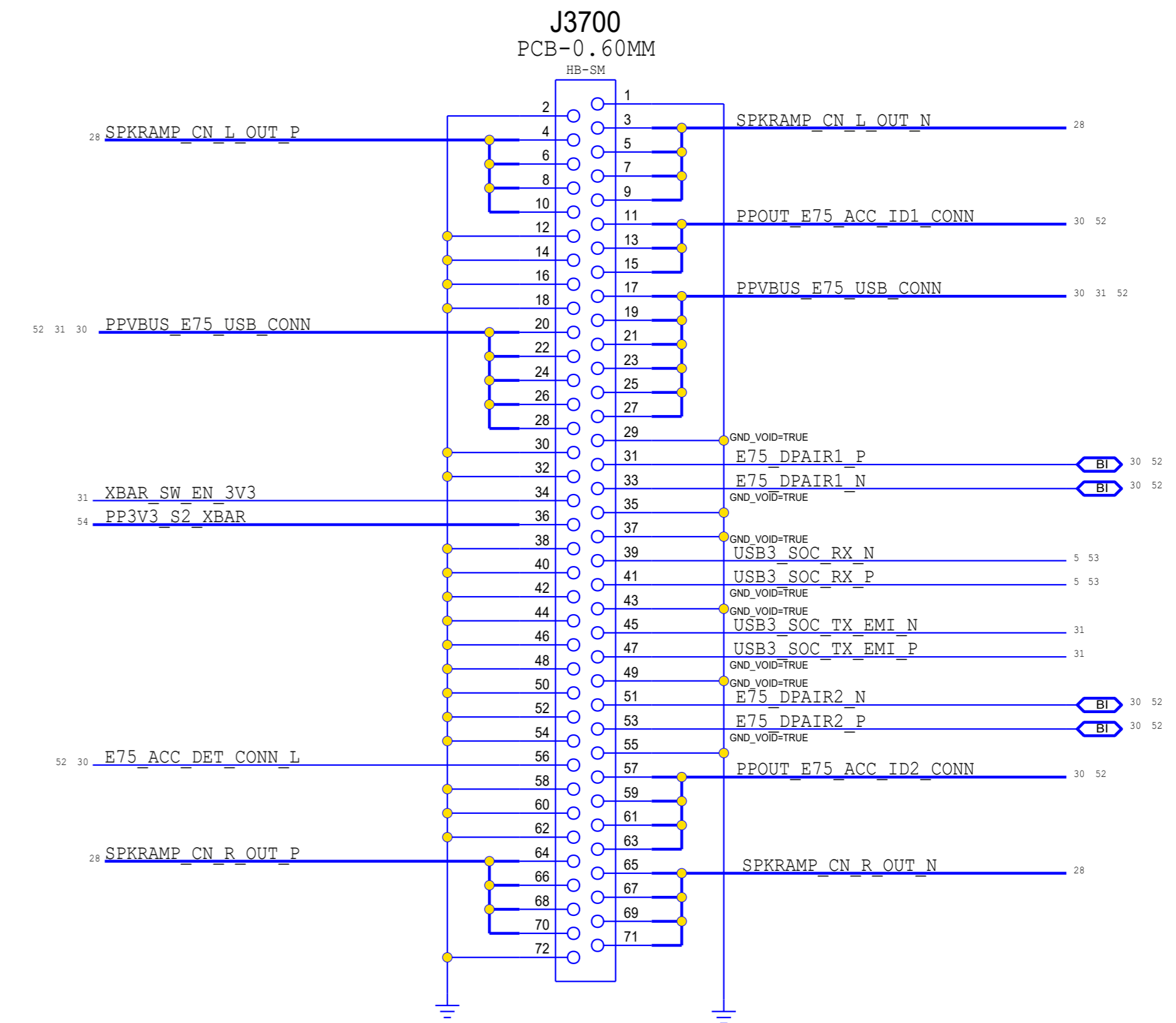
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PAGE: 35 OF 121
SHEET: 30 OF 54

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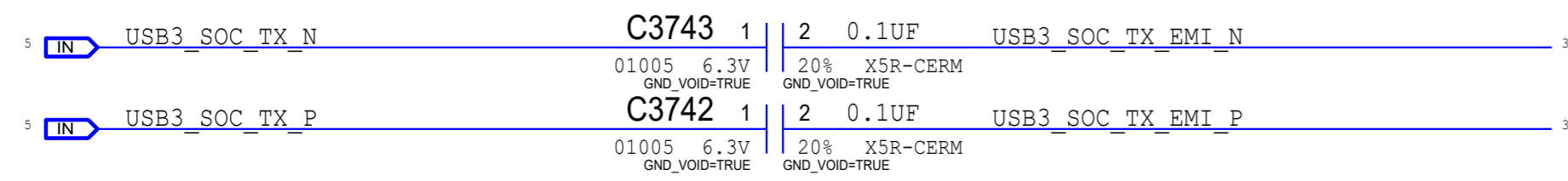
SYNC_MASTER=MLB_B SYNC_DATE=07/29/2016
PAGE TITLE

HOTBAR CONNECTOR TO I/O FLEX

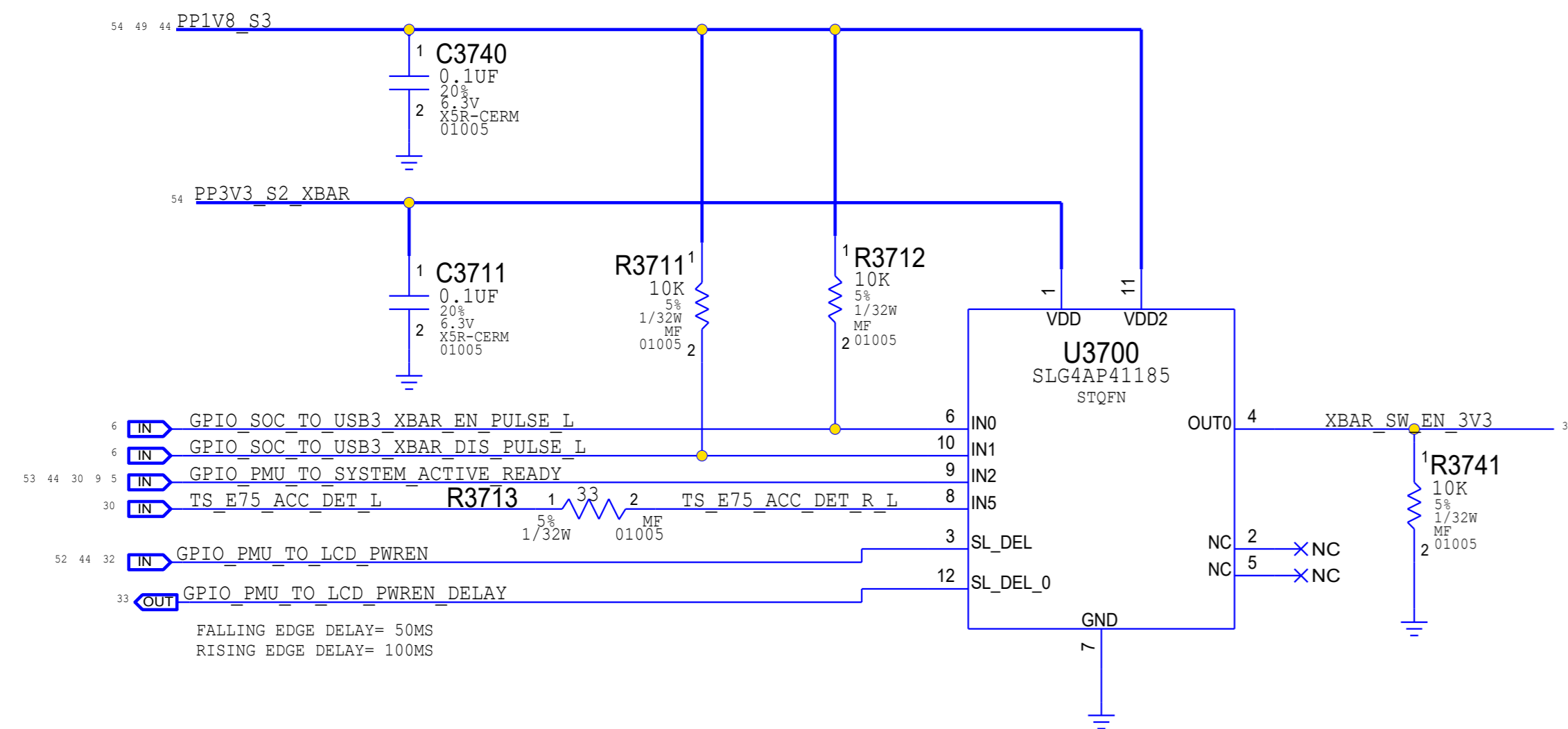
MATCHES J207_IO_FLEX_051-01873_1.0.0
 MLB APN: 998-01935
 FLEX APN: 998-01936



USB3 DC BLOCKING CAPS



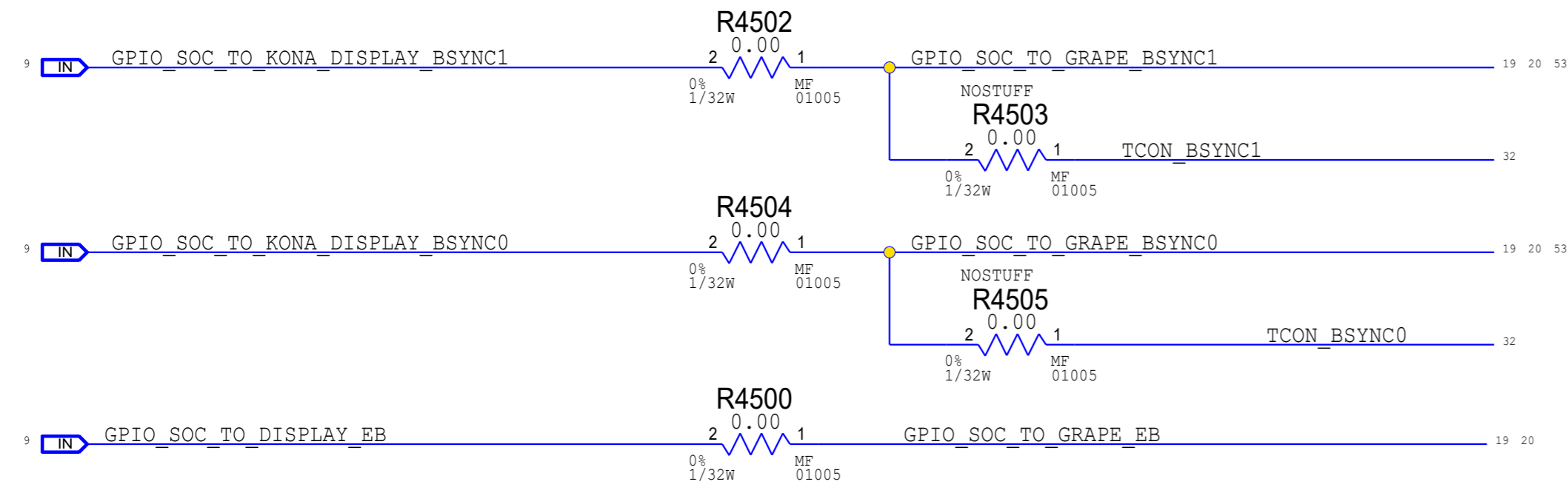
XBAR SWITCH GLUE LOGIC & LCD PWR DELAY



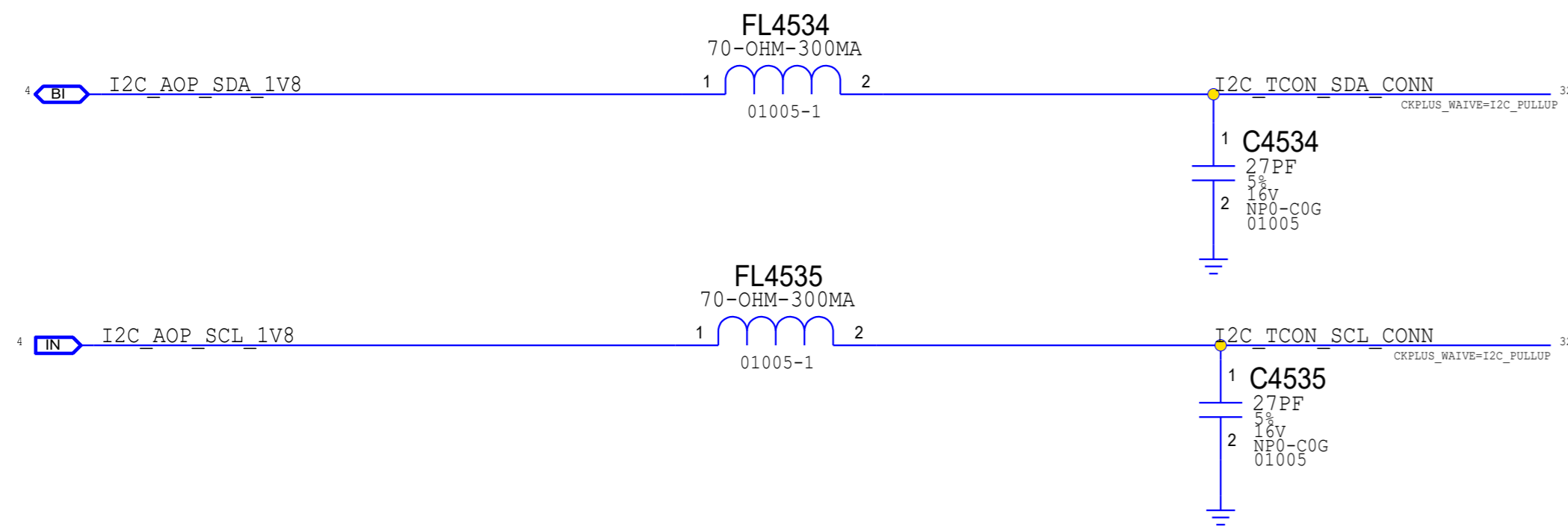
SYNC MASTER=MLB B		SYNC DATE=07/29/2016	
PAGE TITLE			
IO: HOTBAR, SIM, XBAR			
	DRAWING NUMBER	051-04464	SIZE
	REVISION	5.0.0	D
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		SHEET	31 OF 54

EDP FLEX FILTERS AND CONNECTORS

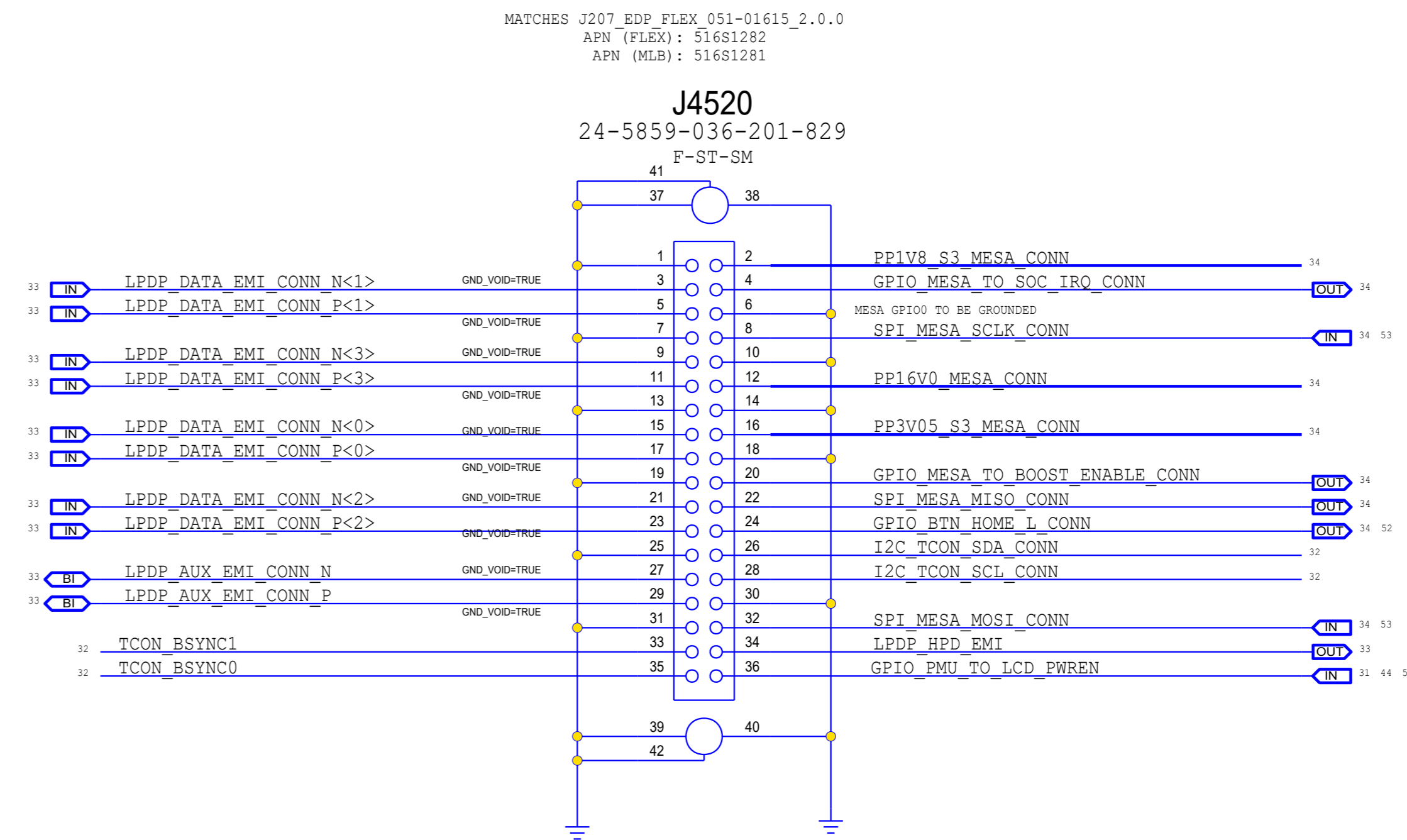
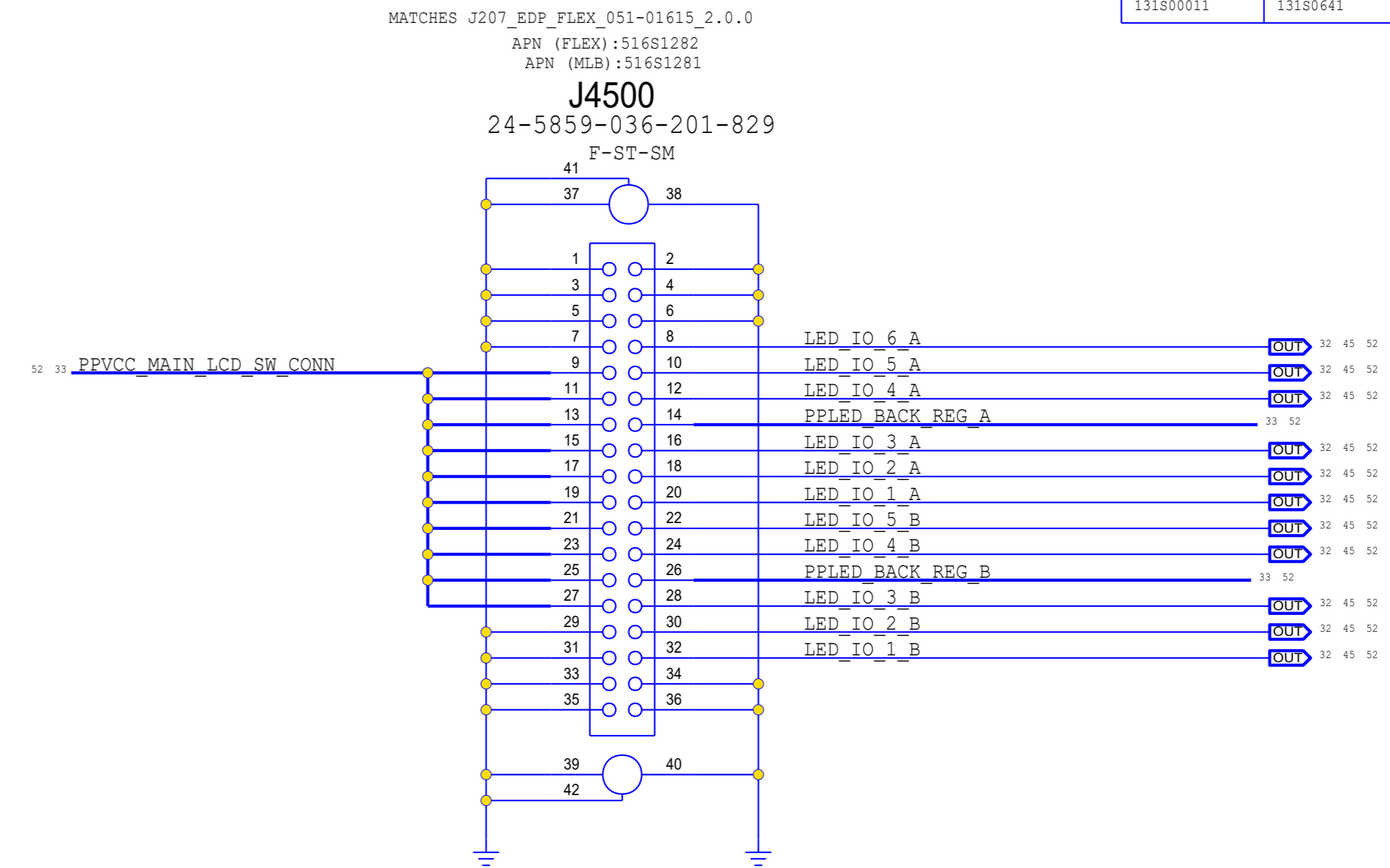
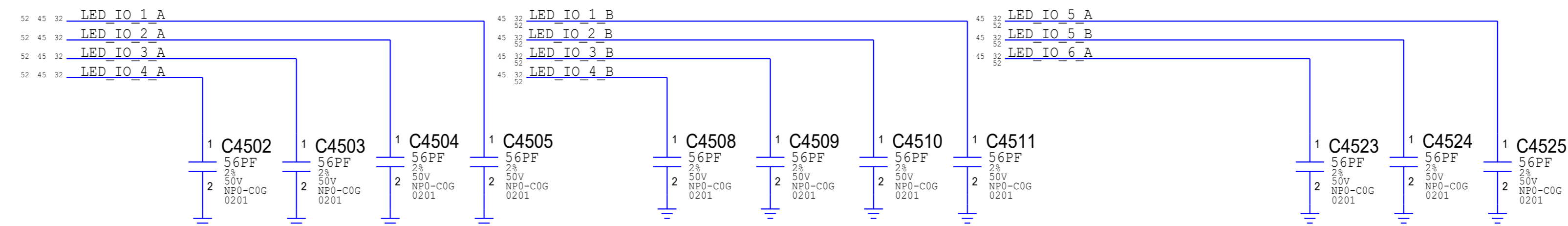
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TCON I2C FILTERS



LED DRIVER FILTERS



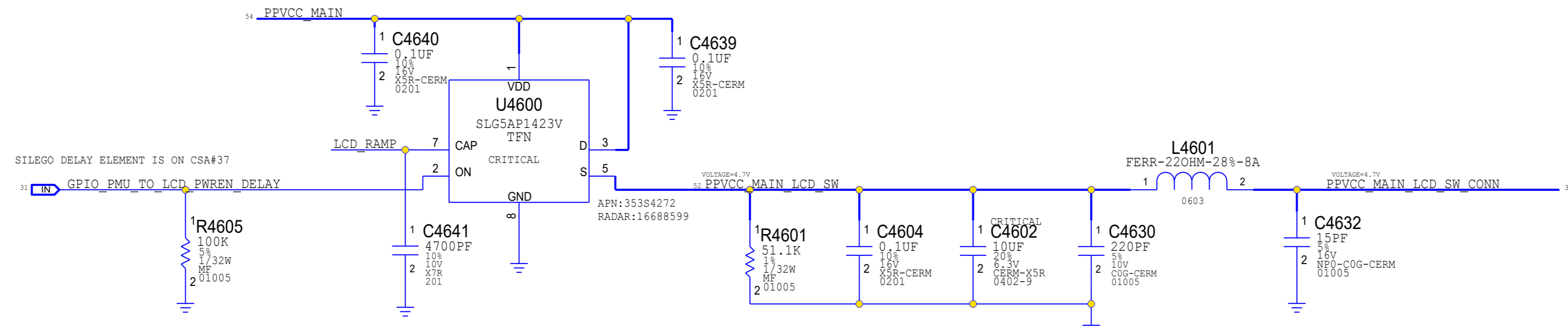
PAGE TITLE		DRAWING NUMBER		SIZE
DISPLAY CONN		051-04464		D
REVISION		5.0.0		
BRANCH				
PAGE		45 OF 121		
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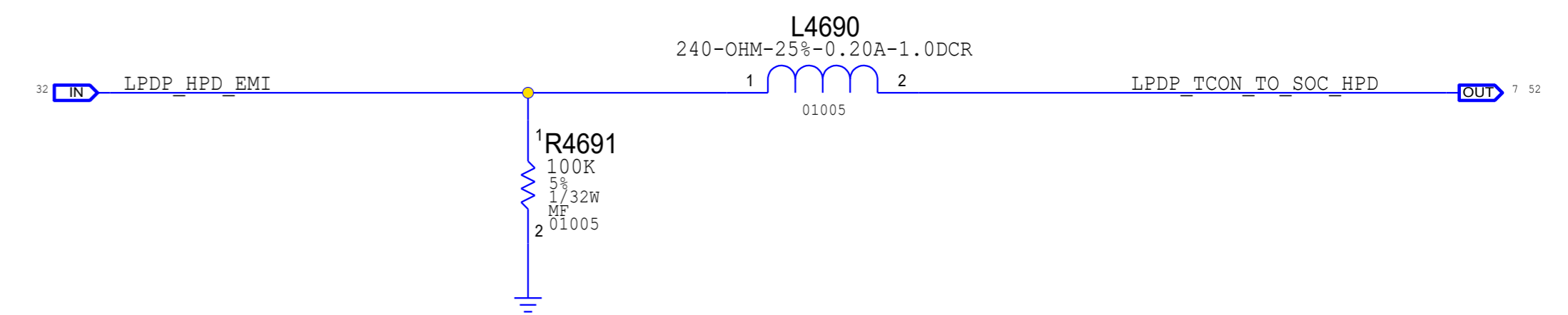
EDP CONNECTOR SUPPORT

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15550914	15550897		L4602, ETC	RADAR://PROBLEM/21527410

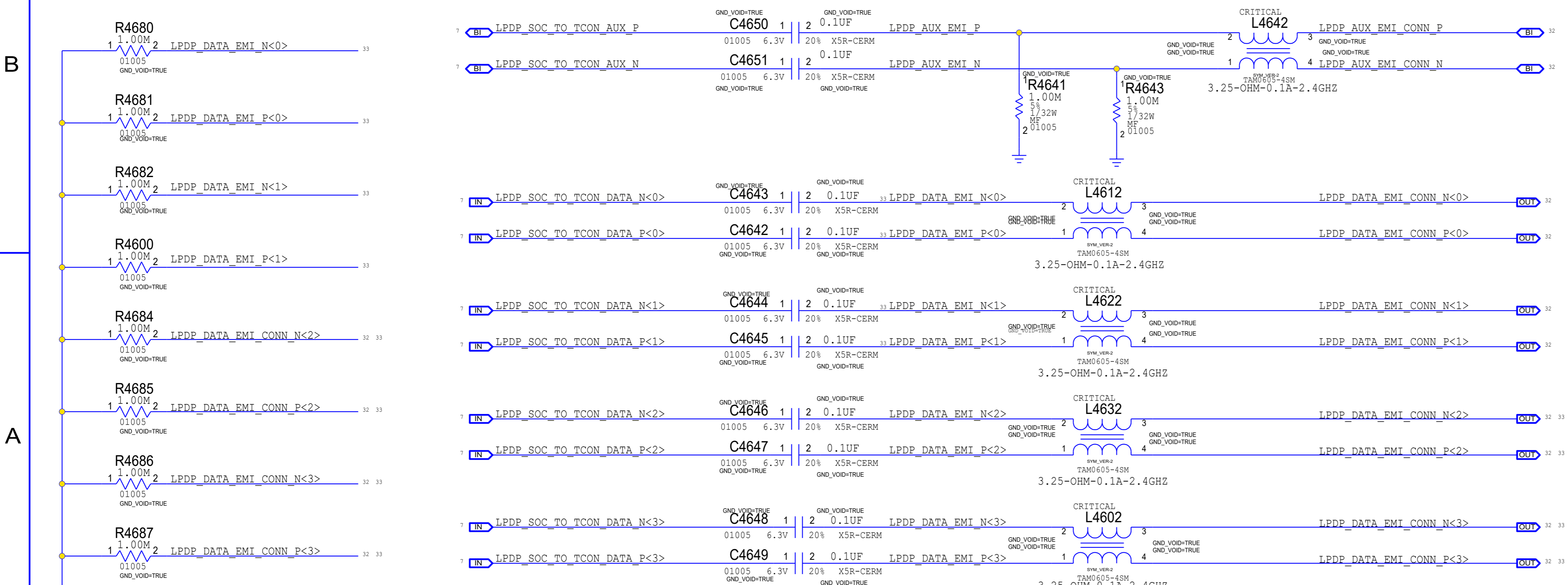
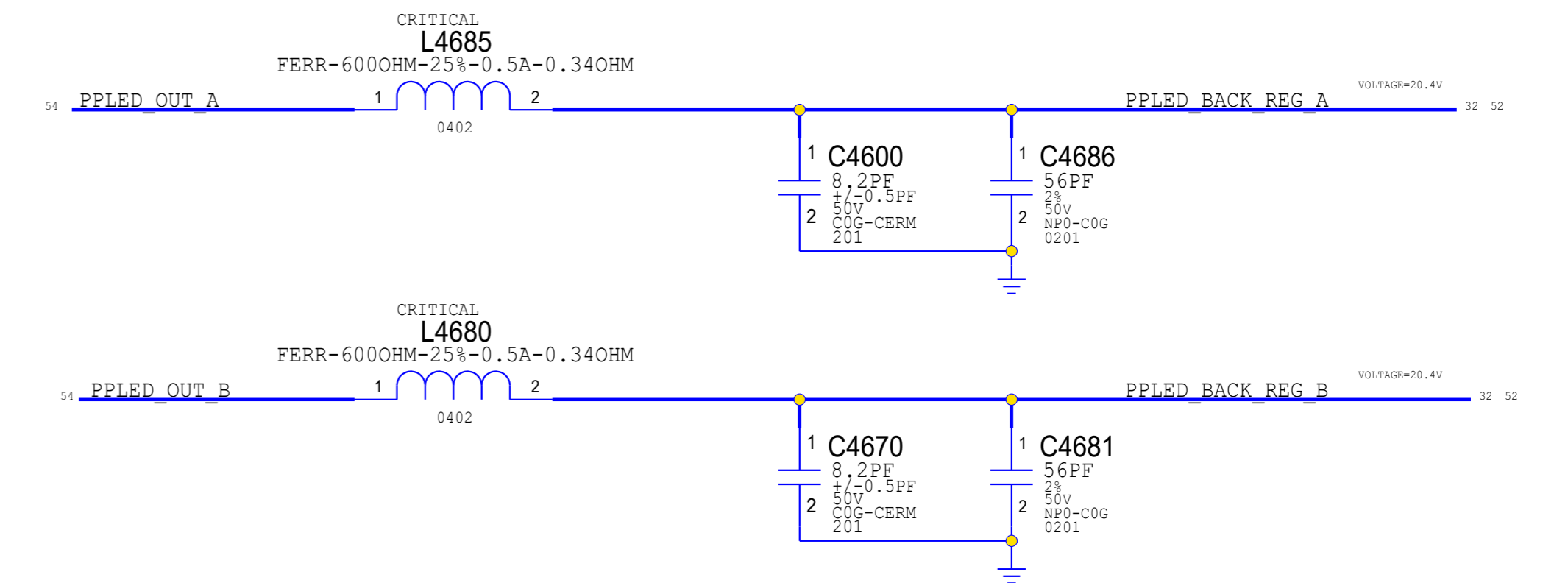
DISPLAY PWR SWITCH



HIBISCUS HPD VOLTAGE IS 1.8V COMPATIBLE, VOLTAGE DIVIDER REMOVED
VOLTAGE DIVIDER REFERENCE IN PREVIOUS PLATFORMS; RDAR://PROBLEM/15390794



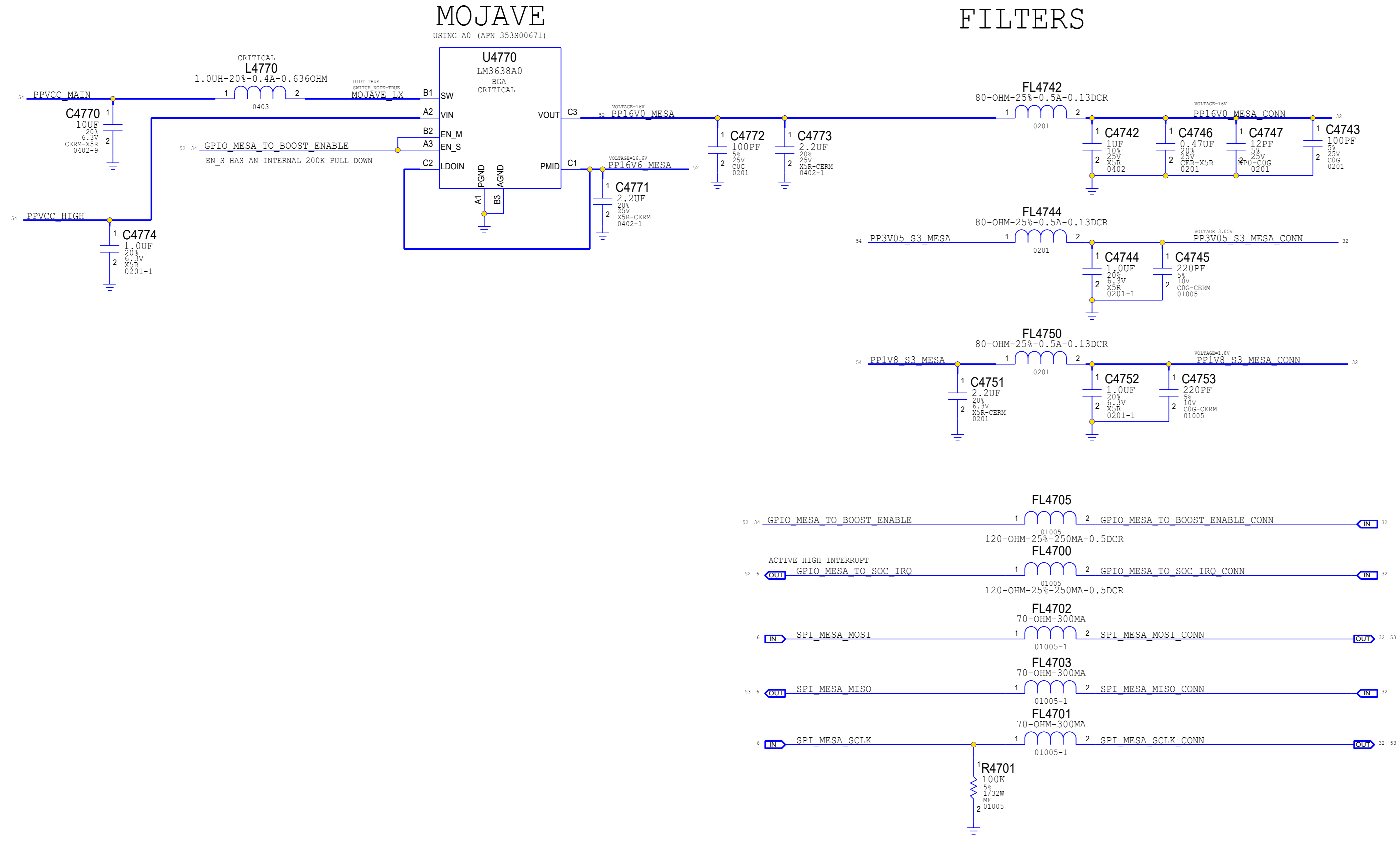
LPDP-AC COUPLING & CMC



SYNC_MASTER=MLB_B		SYNC_DATE=07/29/2016	
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		DRAWING NUMBER	051-04464
		REVISION	5.0.0
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		PAGE	46 OF 121
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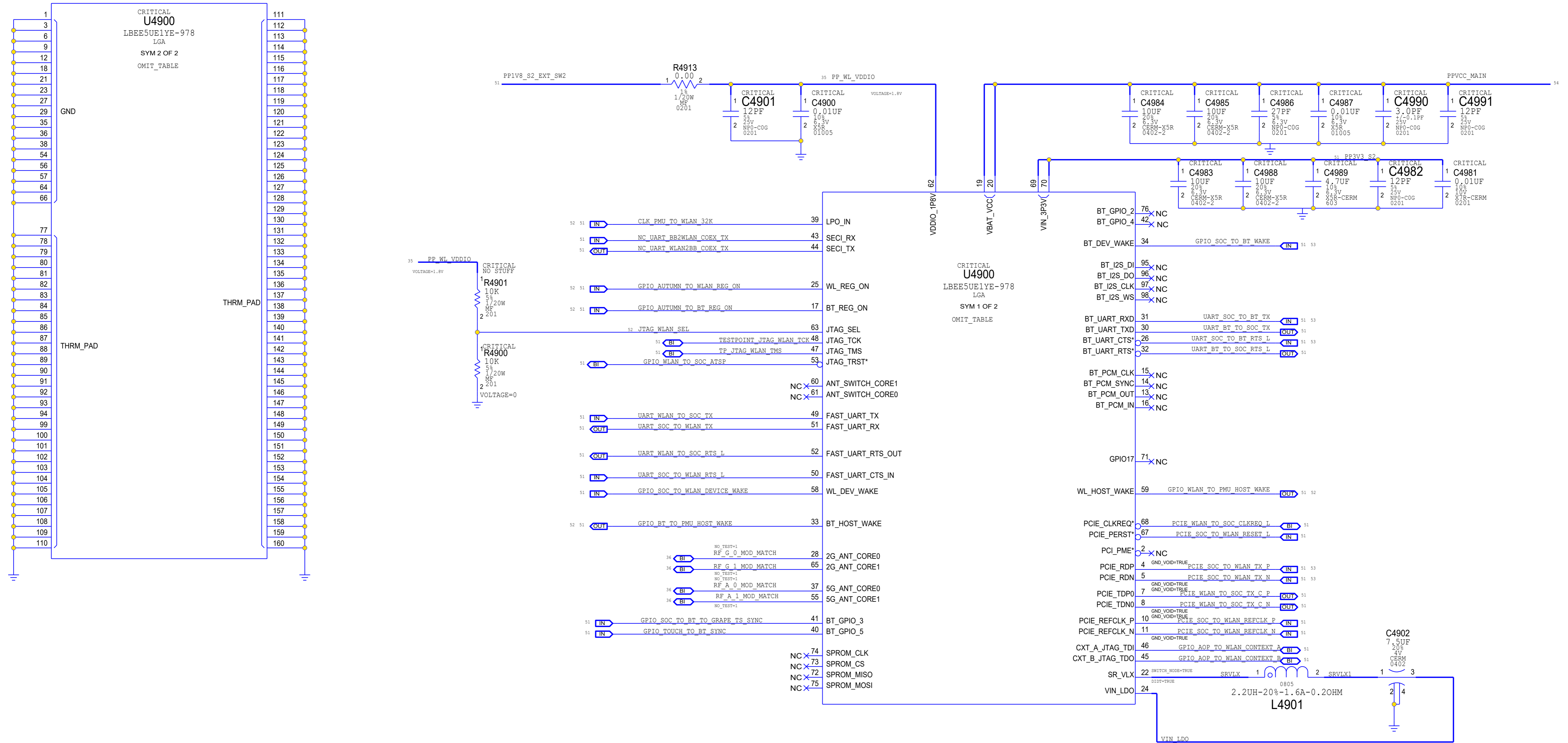
MESA & HOME BUTTON

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132900088	13290639		C4744, etc	RDAR://PROBLESN/26928883



PAGE TITLE		SENSOR: MESA	
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WIFI/BT: J207/208: YEBISU MODULE, POWER, I/O



MODULE: USI ALTERNATES FOR MUR

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339800246	339800248		U4900	USI ALT FOR MUR
339800247	339800249		U4900	CIDRE USI ALT FOR MUR

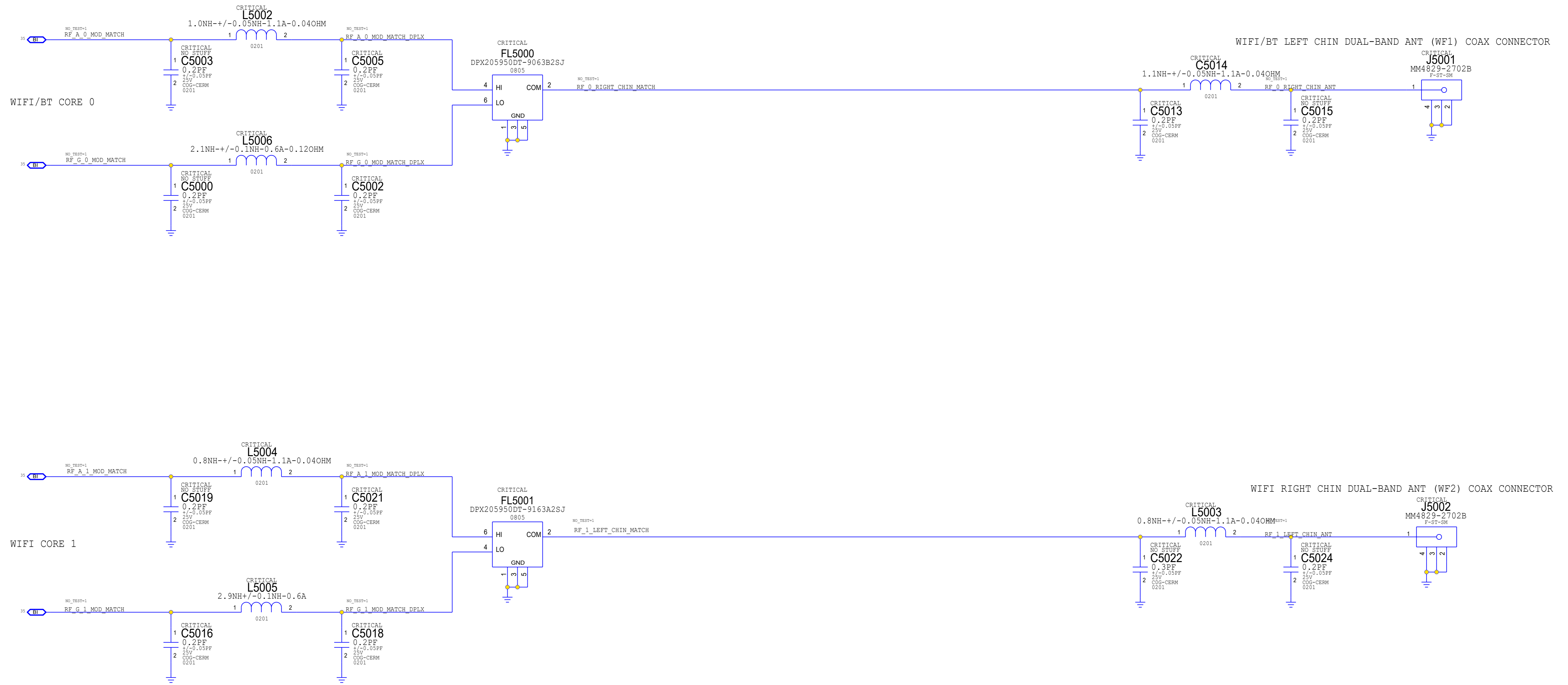
MODULE: BOM OPTION FOR CIDRE IN MLB_A, NOT IN MLB_B

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
339800248	1	YEBISU MURATA ES2	U4900	CRITICAL	MLB_B
339800249	1	YEBISU CIDRE MURATA ES2	U4900	CRITICAL	MLB_A

LAST UPDATED: 09/29/2016

PAGE TITLE		DRAWING NUMBER	SIZE
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Apple Inc.		REVISION	5.0.0
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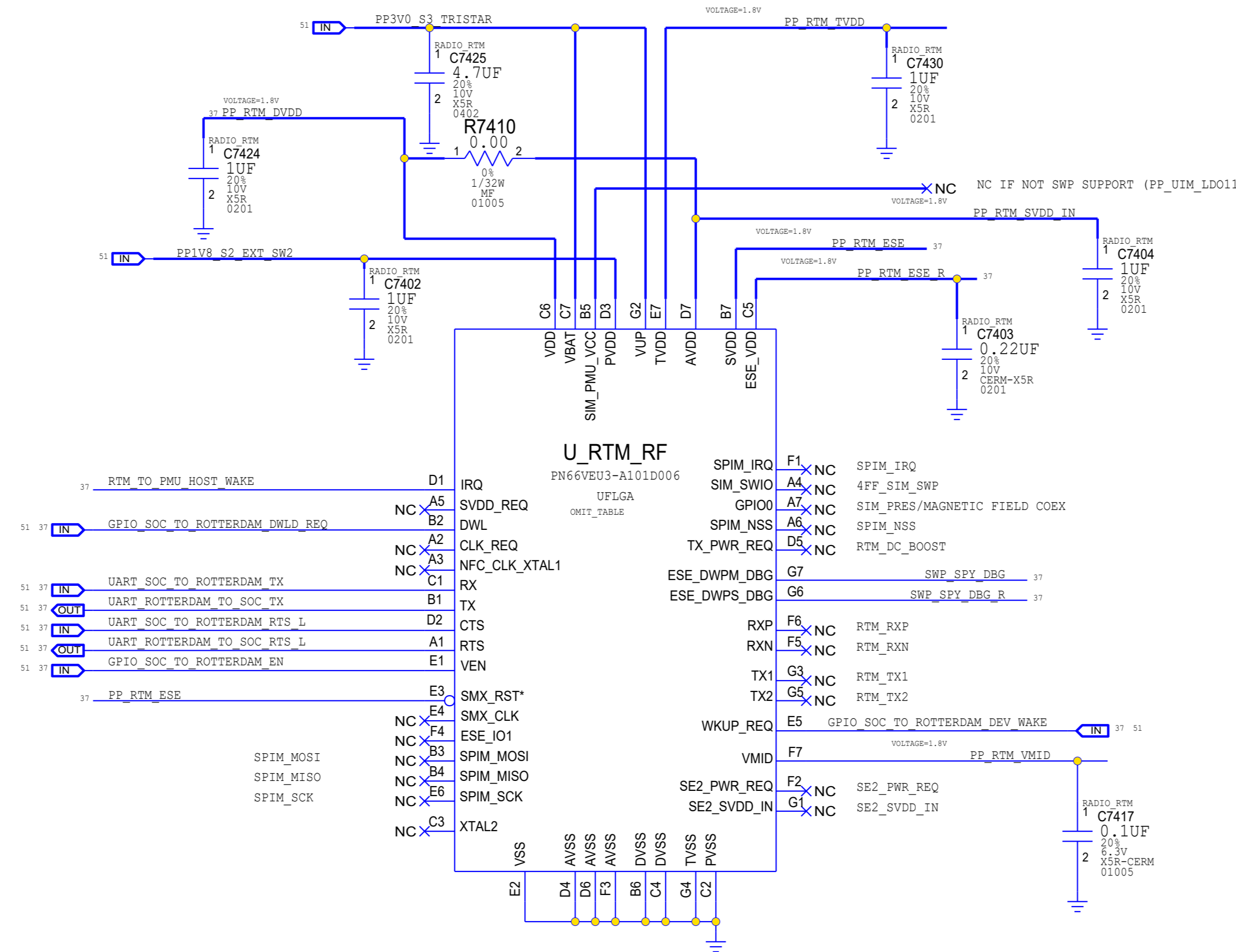
WIFI/BT: J207 (WIFI/BT ONLY) RF FRONT END



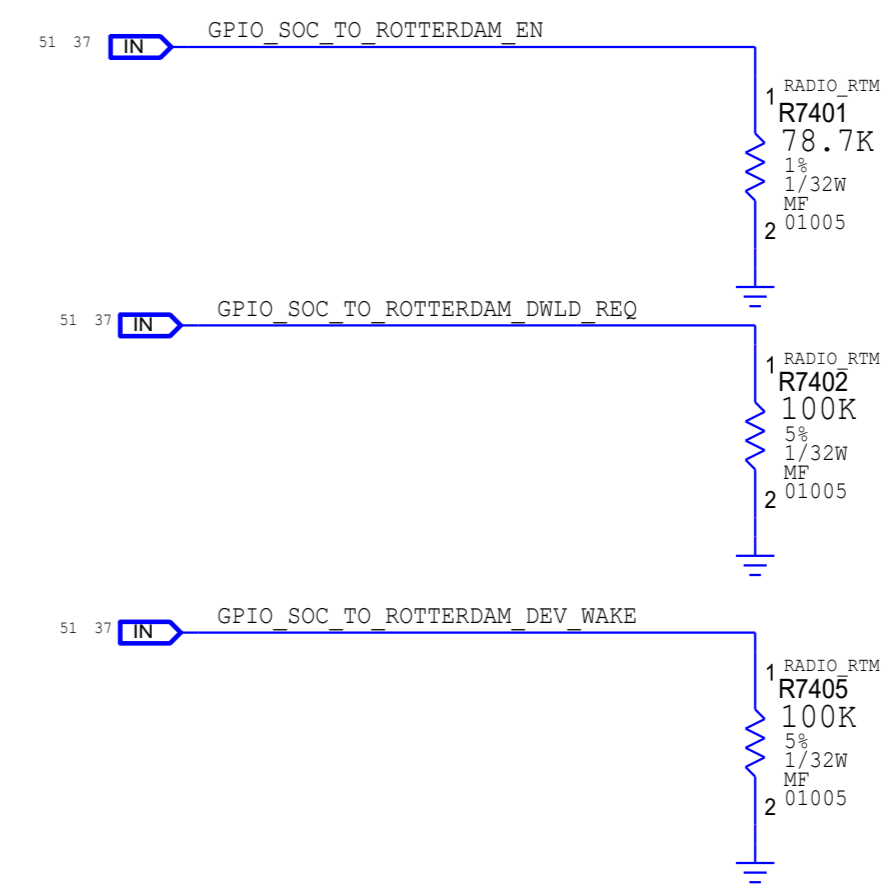
LAST UPDATED: 09/29/2016

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		PAGE	50 OF 121
		SHEET	36 OF 54

RTM/SECURE ELEMENT



SUPPORT PULLS

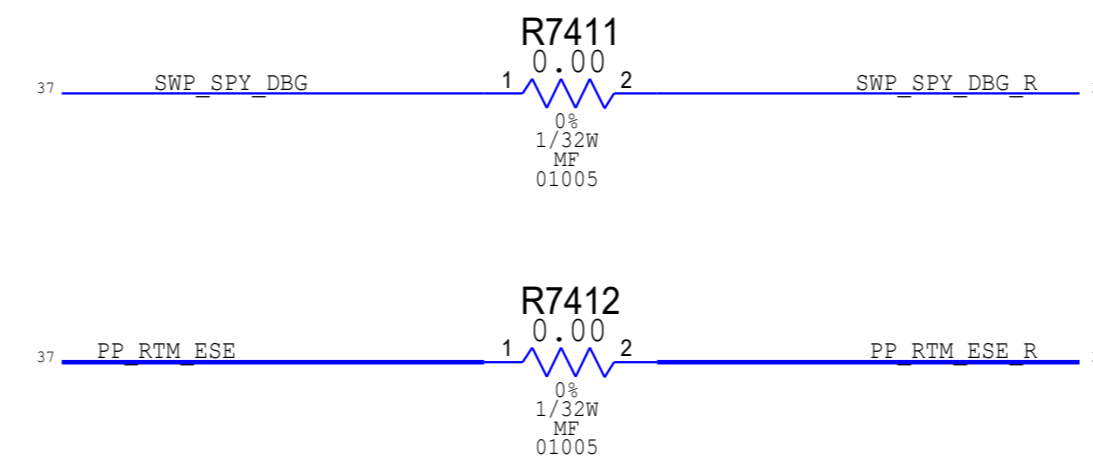


TEST POINTS

TP7401	UART_SOC_TO_ROTTERDAM_TX	37 51
TP7402	UART_ROTTERDAM_TO_SOC_TX RTM_DEBUG	37 51
TP7403	UART_SOC_TO_ROTTERDAM_RTS_L RTM_DEBUG	37 51
TP7404	UART_ROTTERDAM_TO_SOC_RTS_L RTM_DEBUG	37 51
TP7405	RTM_TO_PMU_HOST_WAKE	37
TP7406	GPIO_SOC_TO_ROTTERDAM_DWLD_REQ RTM_DEBUG	37 51
TP7407	PP_RT_M_ESE	37
TP7408	PP_RT_M_ESE_R	37
TP7409	PP_RT_M_DVDD	37
TP740A	GPIO_SOC_TO_ROTTERDAM_DEV_WAKE RTM_DEBUG	37 51
TP740B	GPIO_SOC_TO_ROTTERDAM_EN RTM_DEBUG	37 51

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
338800157	1	ROTTERDAM,PN67VEU3	U_RTM_RF	CRITICAL	

IMPORTANT DEBUG FEATURES



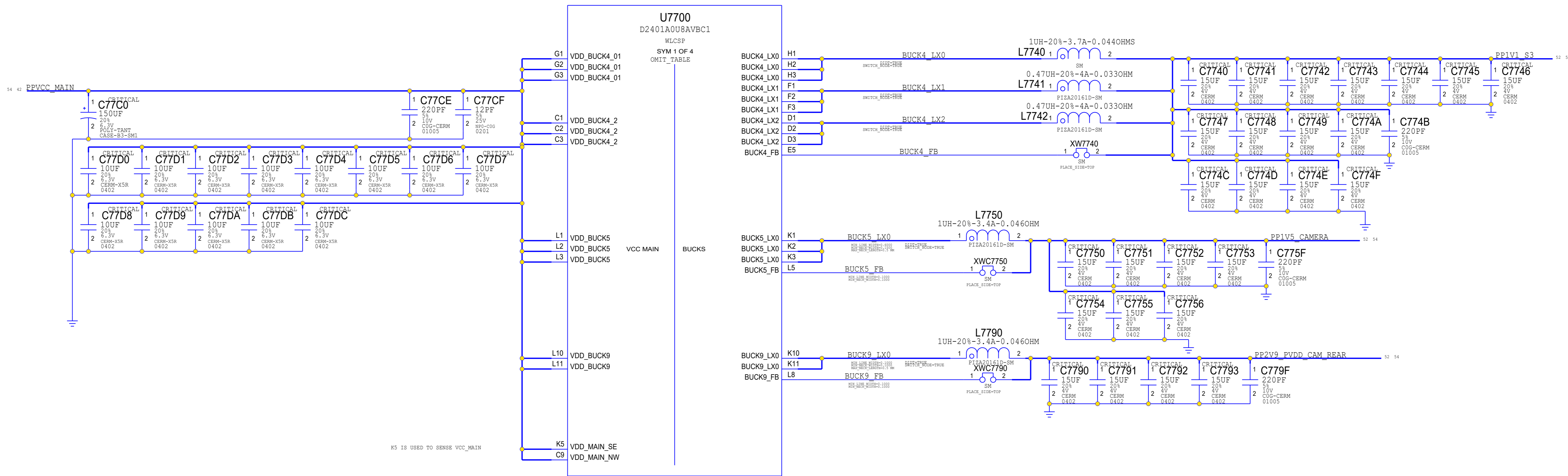
STOCKHOLM

Apple Inc.

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REVISION: 5.0.0
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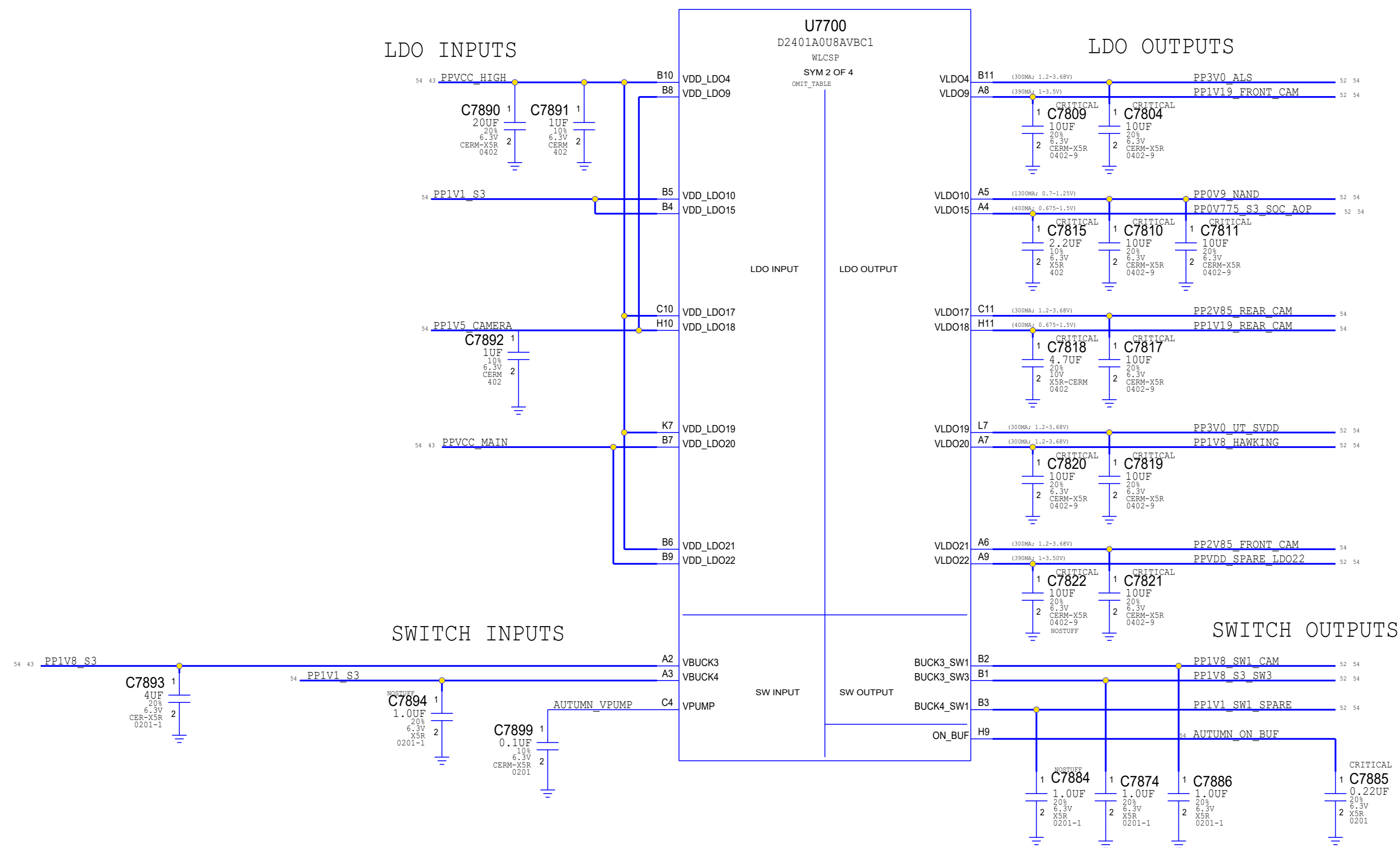
AUTUMN BUCKS



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		PAGE	77 OF 121
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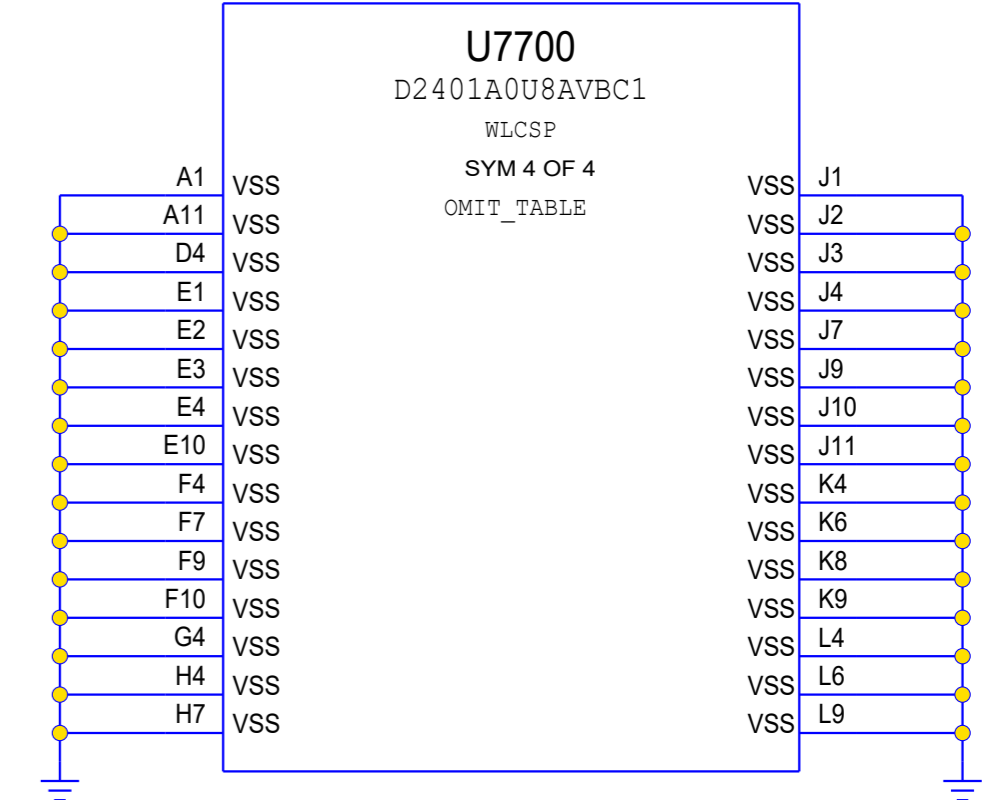
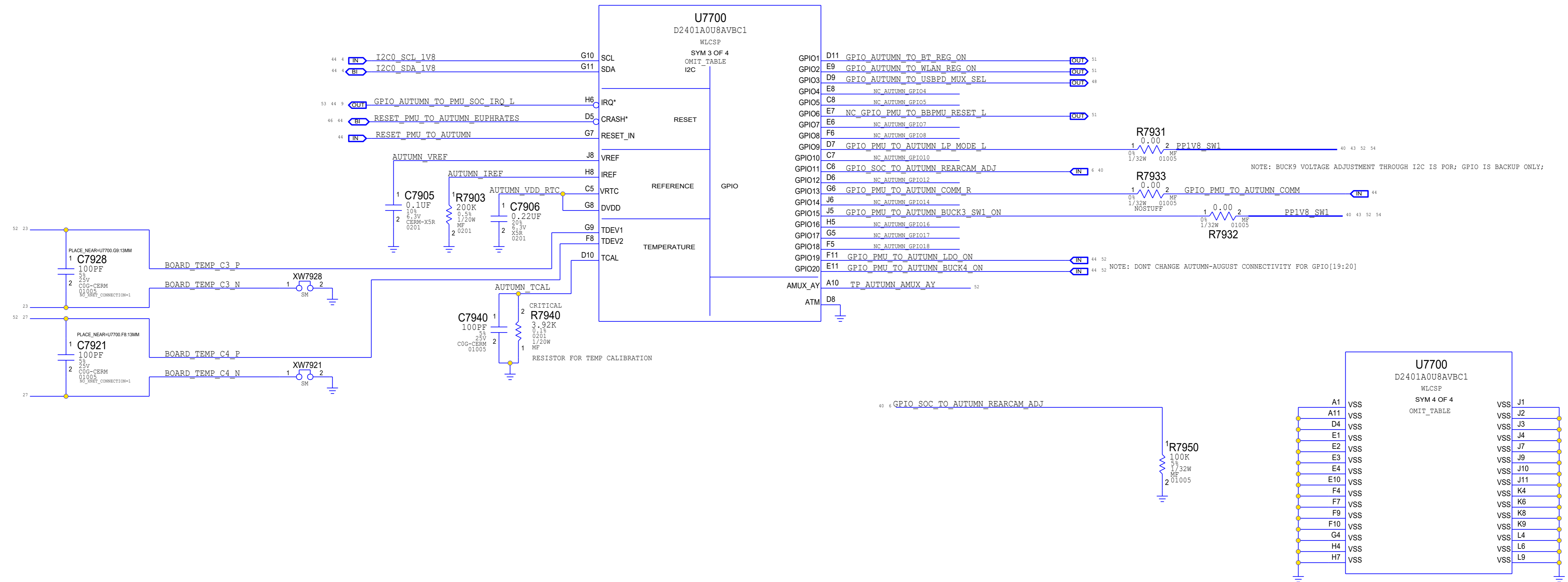
AUTUMN LDOS

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
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SYNC_MASTER=MLB_B		SYNC_DATE=07/29/2016	
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	REVISION	5.0.0	D
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		PAGE	78 OF 121
		SHEET	39 OF 54

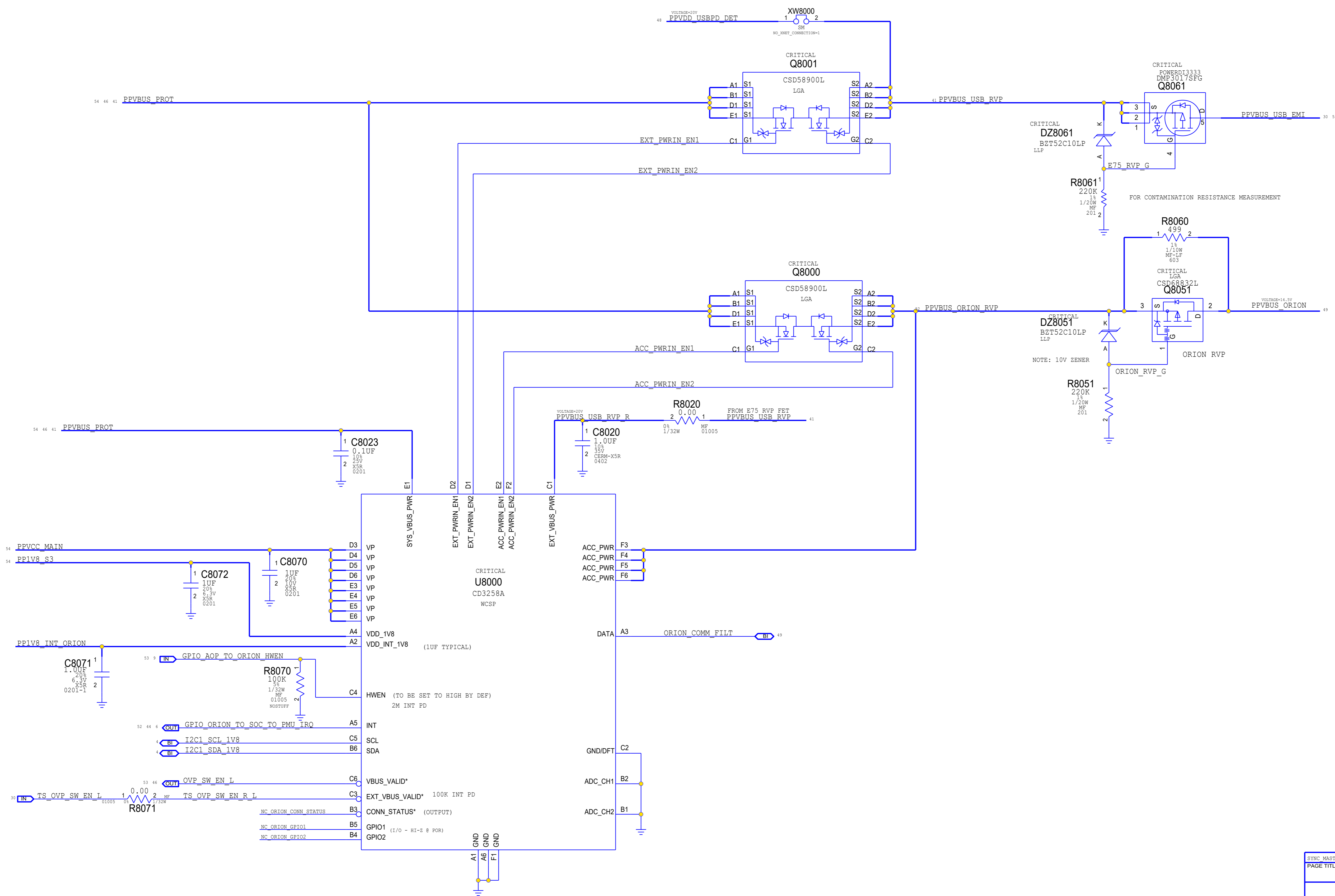
AUTUMN GPIO



SYNC_MASTER=MLB_B		SYNC_DATE=07/29/2016	
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POWER: AUTUMN (3/3)			
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BELLATRIX

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
376800190	376800119		Q8000, Q8001	



ORION		DRAWING NUMBER	SIZE
		051-04464	D
		REVISION	5.0.0
		BRANCH	
		PAGE	80 OF 121
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AUGUST BUCKS

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S00069	128S00032		C8100_BCT	
128S00062	128S00032		C8100_BCT	

D

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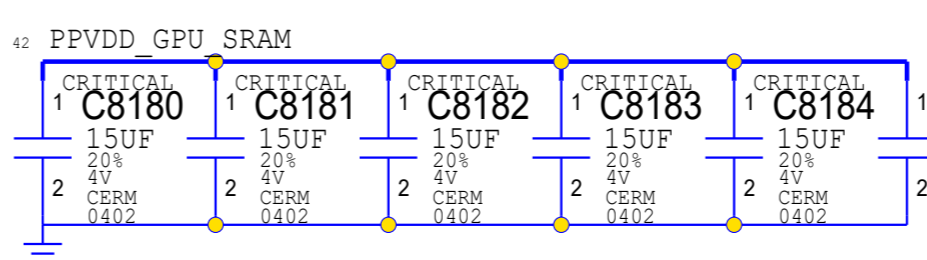
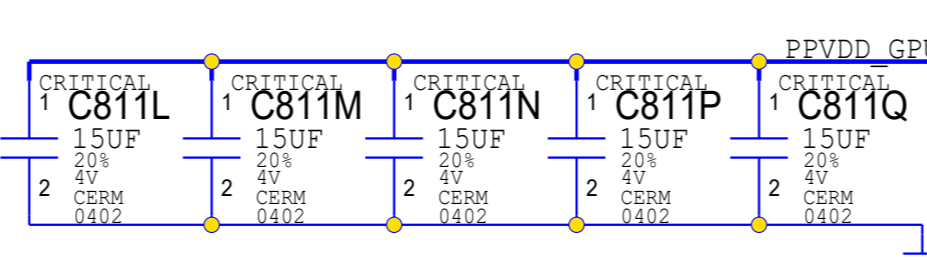
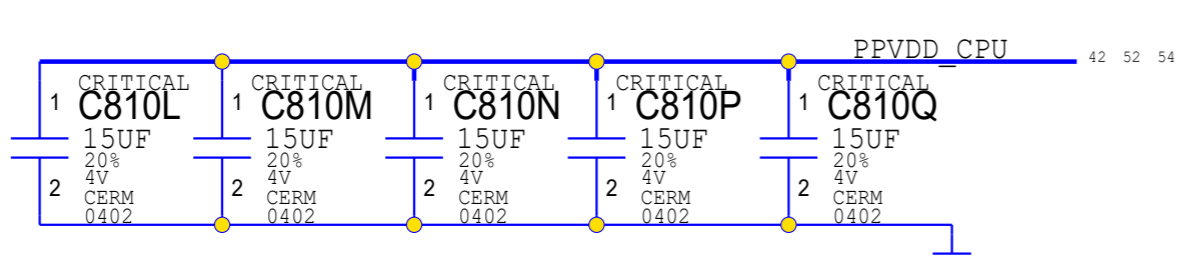
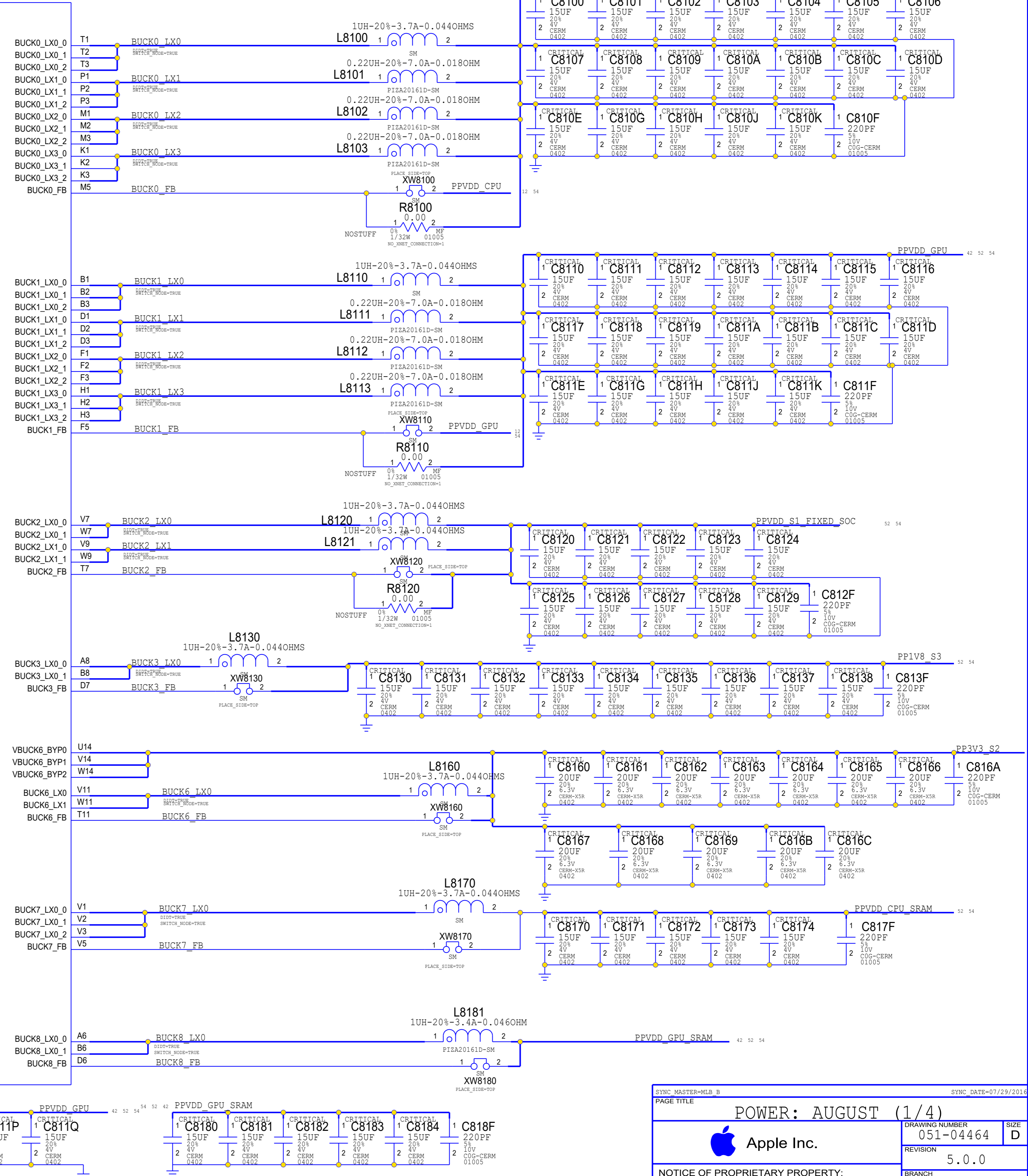
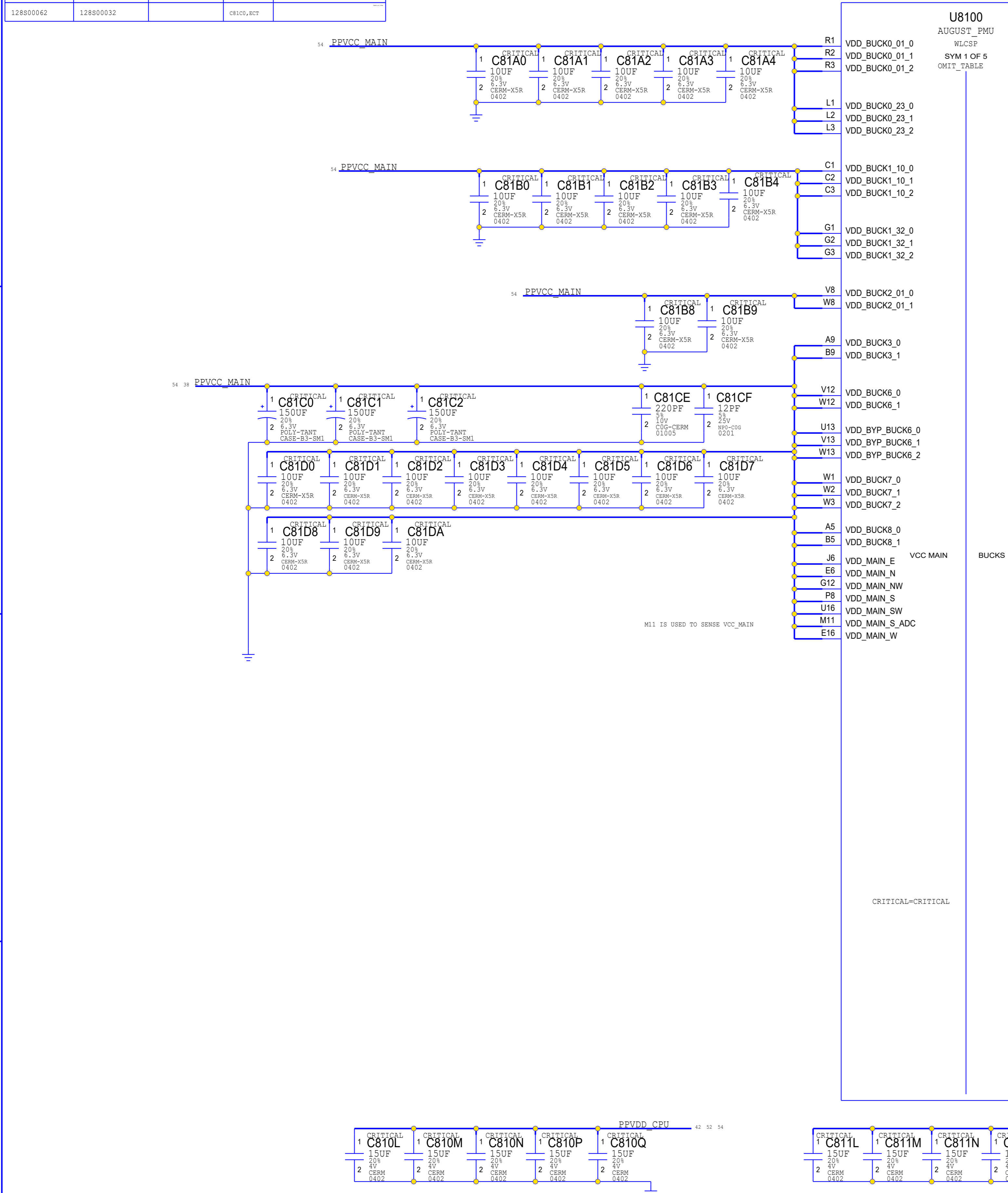
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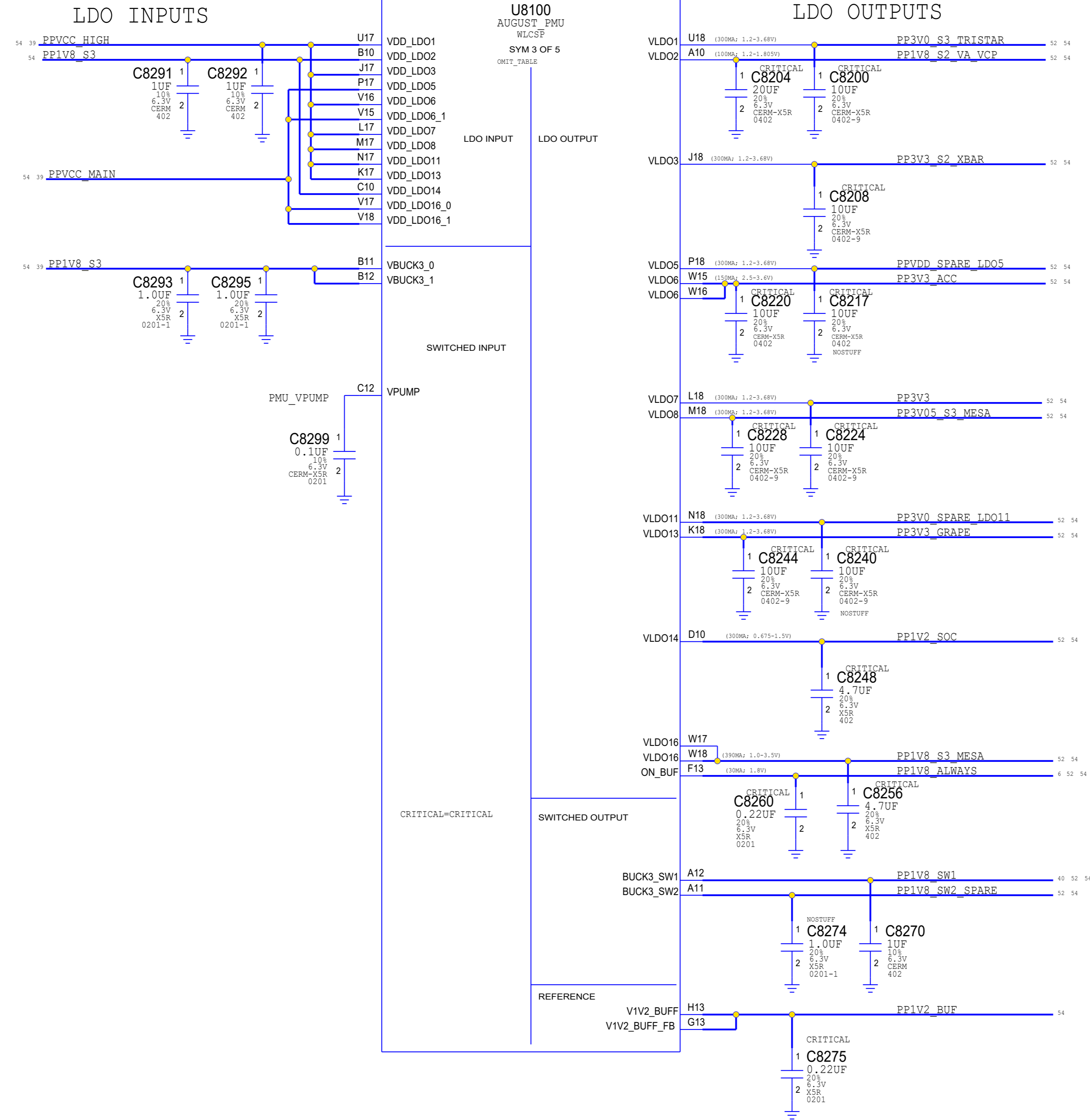
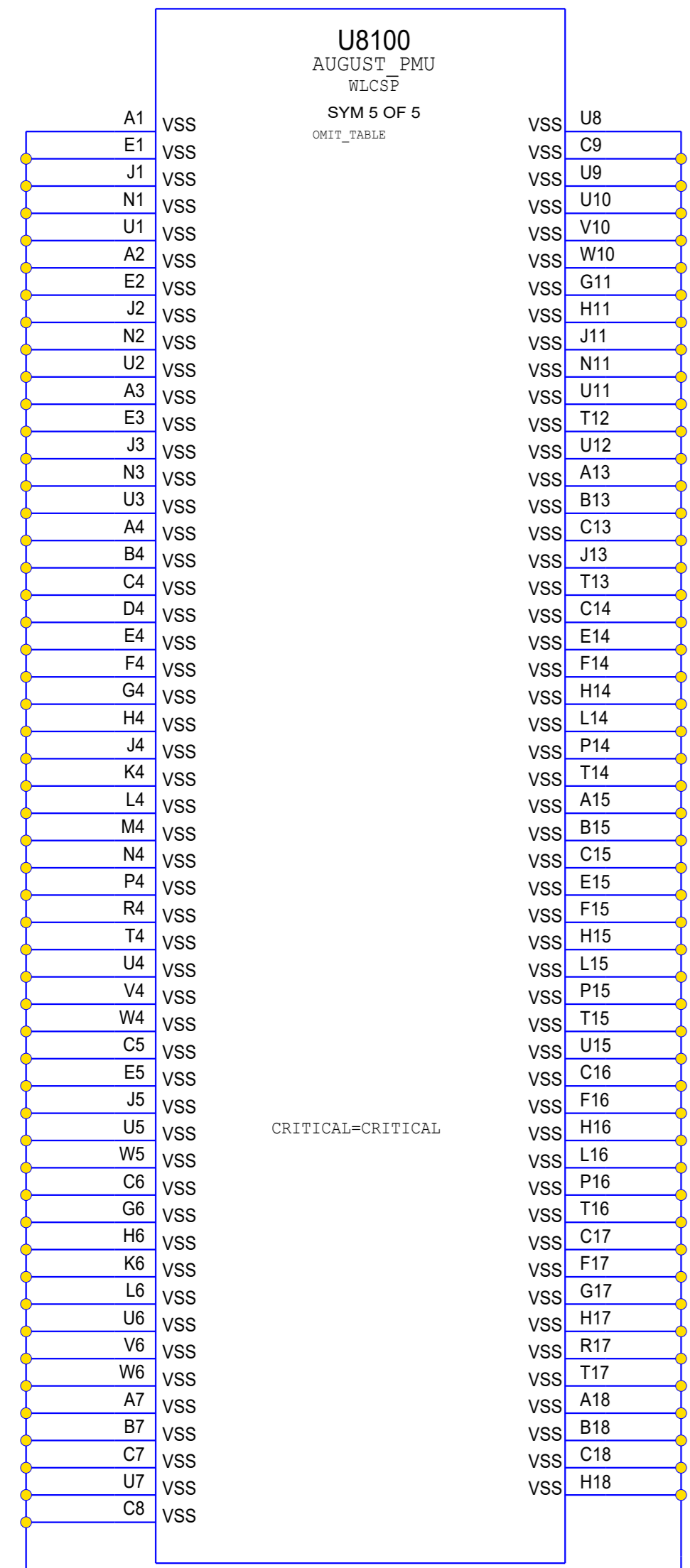
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AUGUST LDOS



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AUGUST GPIO/MISC

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
11880764	11880717		R8340	RDR://PROBLEM/9380367
10780150	10780208		R8321-R8328	RDR://PROBLEM/9380367
19780399	19780392		Y8300	RDR://PROBLEM/9936684

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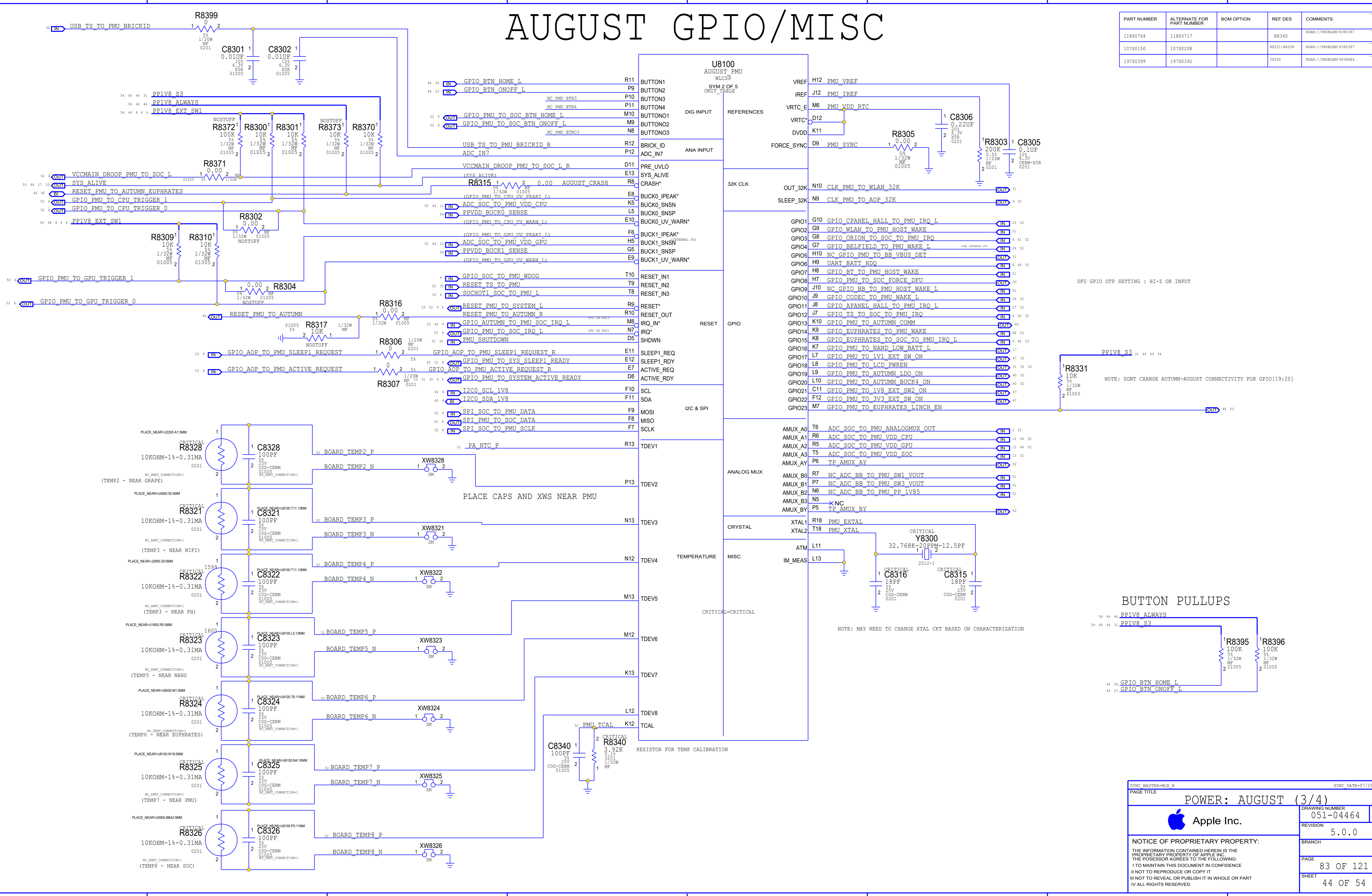
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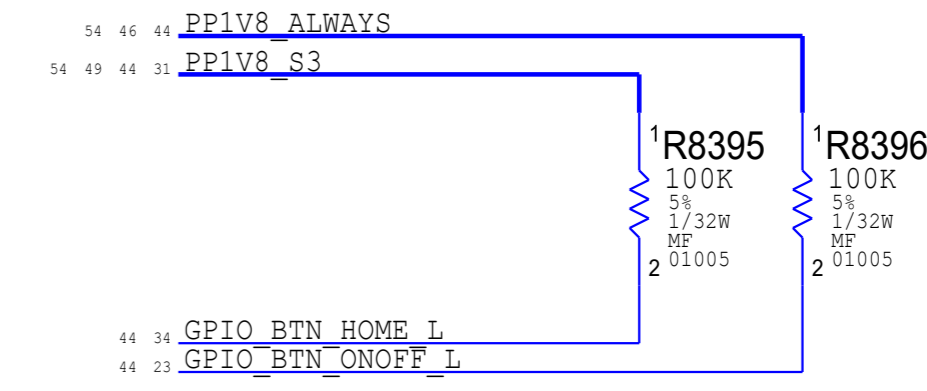


DFU GPIO OTP SETTING : HI-Z OR INPUT

NOTE: DONT CHANGE AUTUMN-AUGUST CONNECTIVITY FOR GPIO[19:20]

NOTE: MAY NEED TO CHANGE XTAL CKT BASED ON CHARACTERIZATION

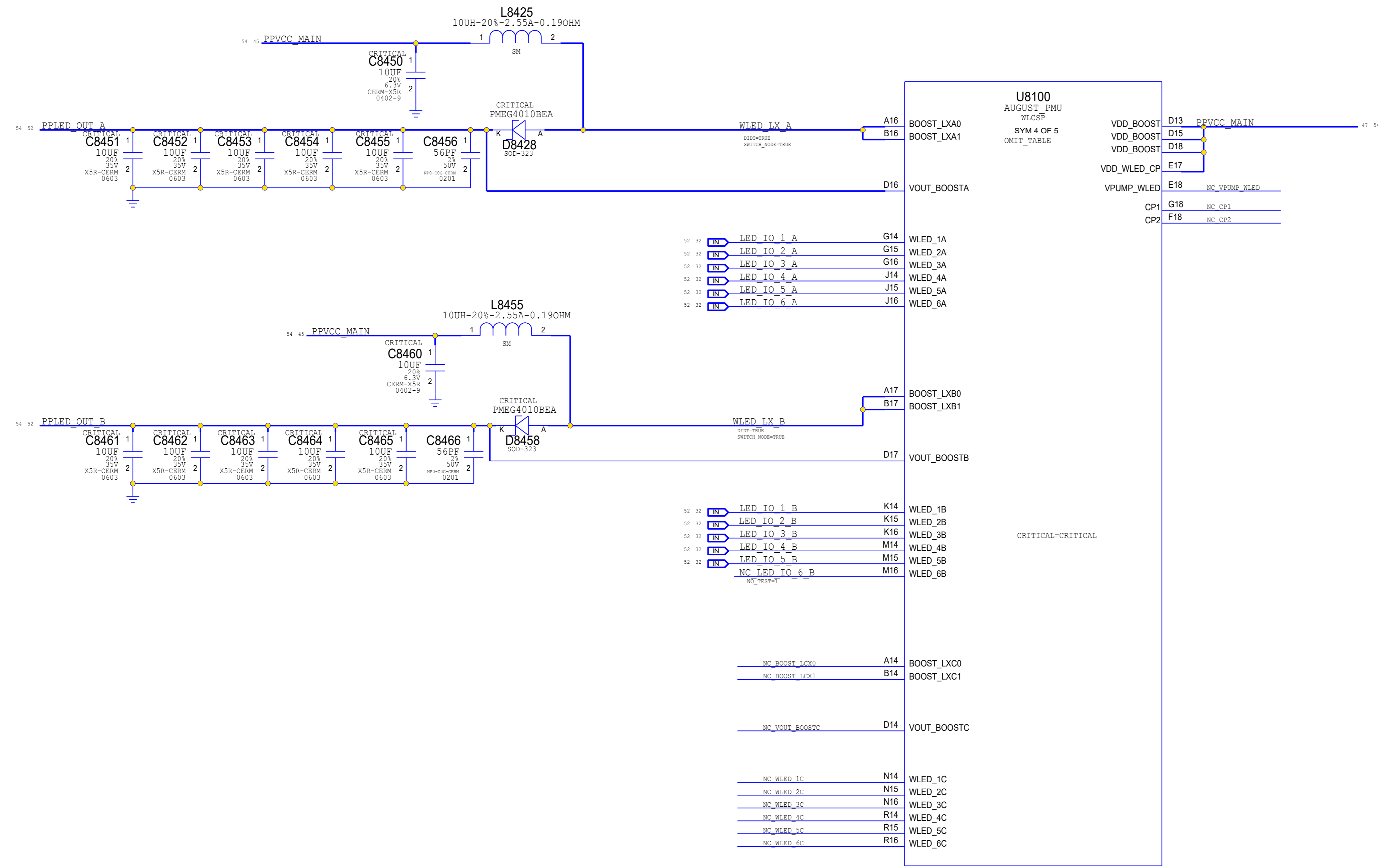
BUTTON PULLUPS



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		SHEET	44 OF 54

AUGUST BACKLIGHT

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
37100730	37100490		D8428, ETC	RSAR://PROBLEM/2692011



- 52 32 IN LED_IO_1_A G14 WLED_1A
- 52 32 IN LED_IO_2_A G15 WLED_2A
- 52 32 IN LED_IO_3_A G16 WLED_3A
- 52 32 IN LED_IO_4_A J14 WLED_4A
- 52 32 IN LED_IO_5_A J15 WLED_5A
- 52 32 IN LED_IO_6_A J16 WLED_6A

- 52 32 IN LED_IO_1_B K14 WLED_1B
- 52 32 IN LED_IO_2_B K15 WLED_2B
- 52 32 IN LED_IO_3_B K16 WLED_3B
- 52 32 IN LED_IO_4_B M14 WLED_4B
- 52 32 IN LED_IO_5_B M15 WLED_5B
- 52 32 IN NC_LED_IO_6_B M16 WLED_6B

- NC_BOOST_LCX0 A14 BOOST_LXC0
- NC_BOOST_LCX1 B14 BOOST_LXC1
- NC_VOUT_BOOSTC D14 VOUT_BOOSTC
- NC_WLED_1C N14 WLED_1C
- NC_WLED_2C N15 WLED_2C
- NC_WLED_3C N16 WLED_3C
- NC_WLED_4C R14 WLED_4C
- NC_WLED_5C R15 WLED_5C
- NC_WLED_6C R16 WLED_6C

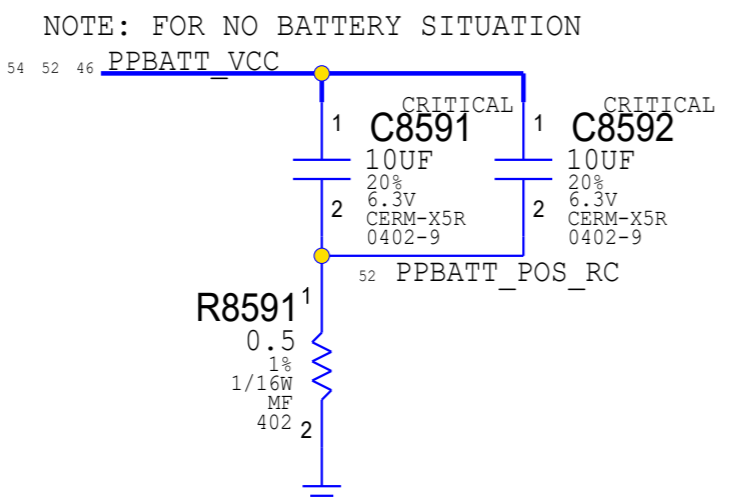
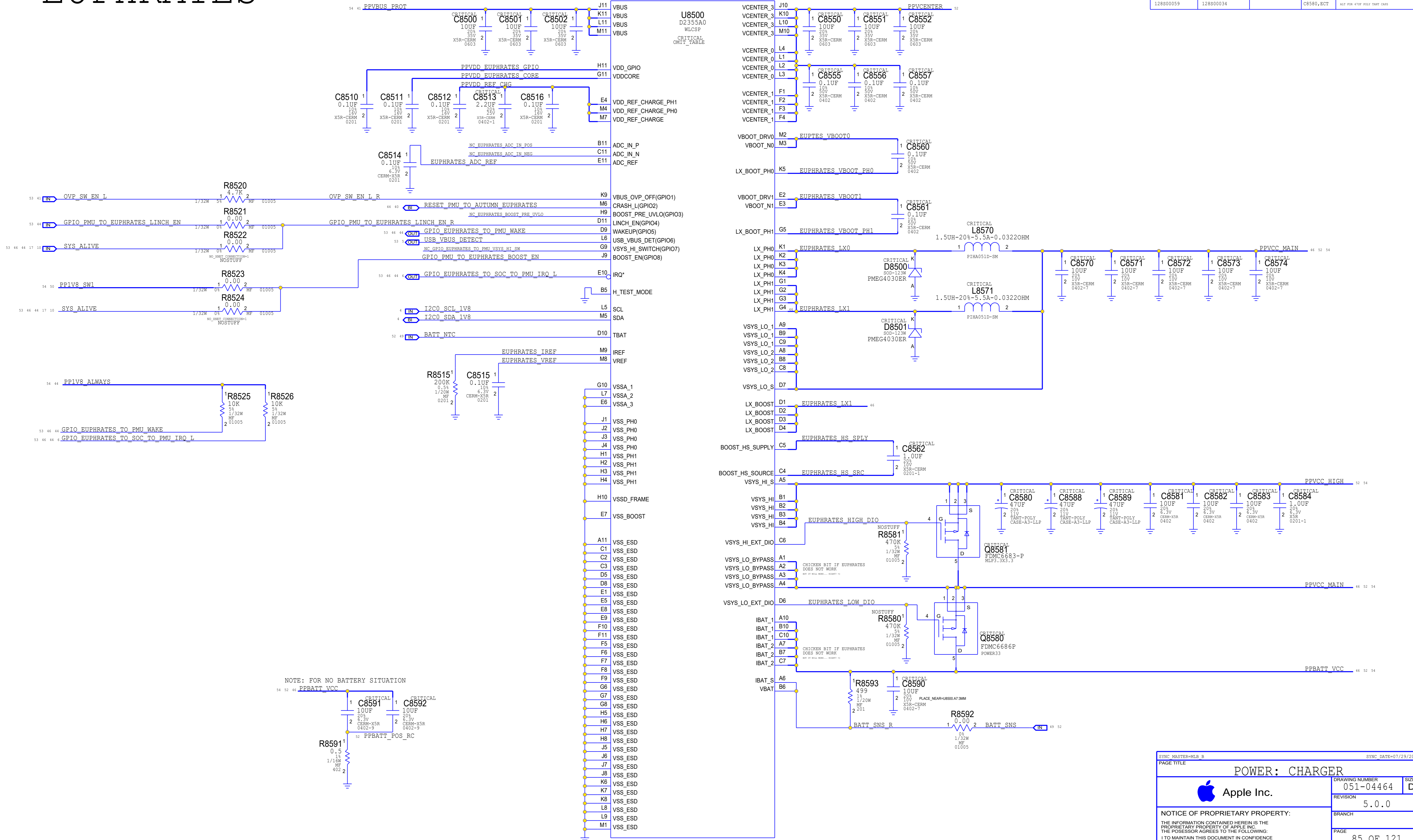
U8100
AUGUST_EMU
WLCSP
SYM 4 OF 5
OMIT_TABLE

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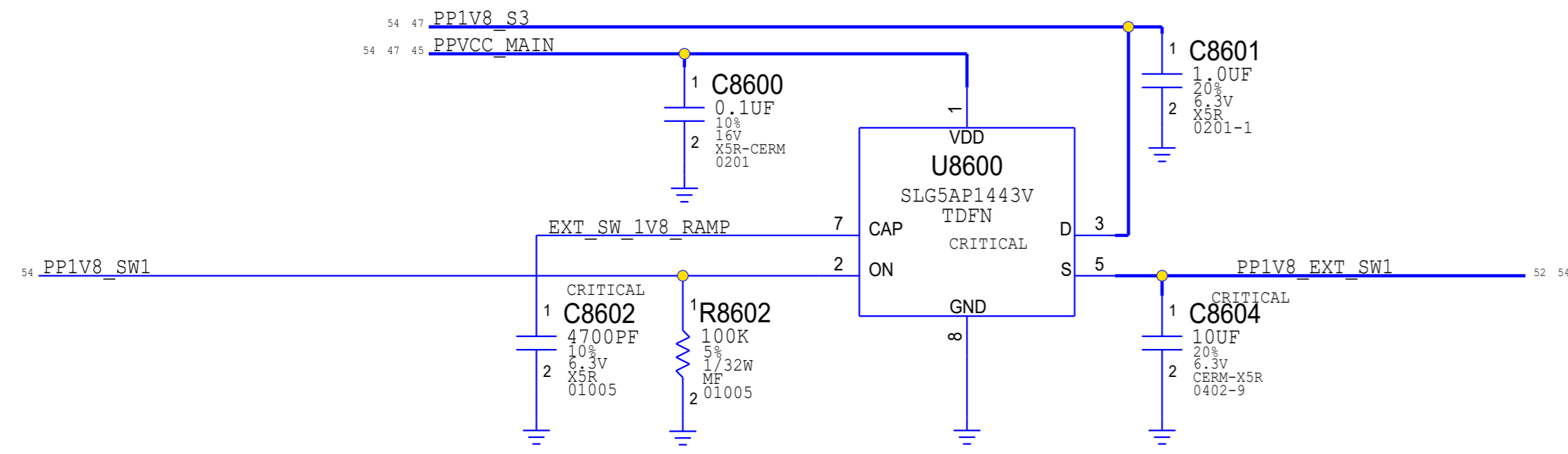
EUPHRATES

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376800071	376800073		Q8580, ECT	RDAR://PROBLEM/20217540
128500059	128500034		C8580, ECT	NOT FOR ATOP POLY TANT CASE

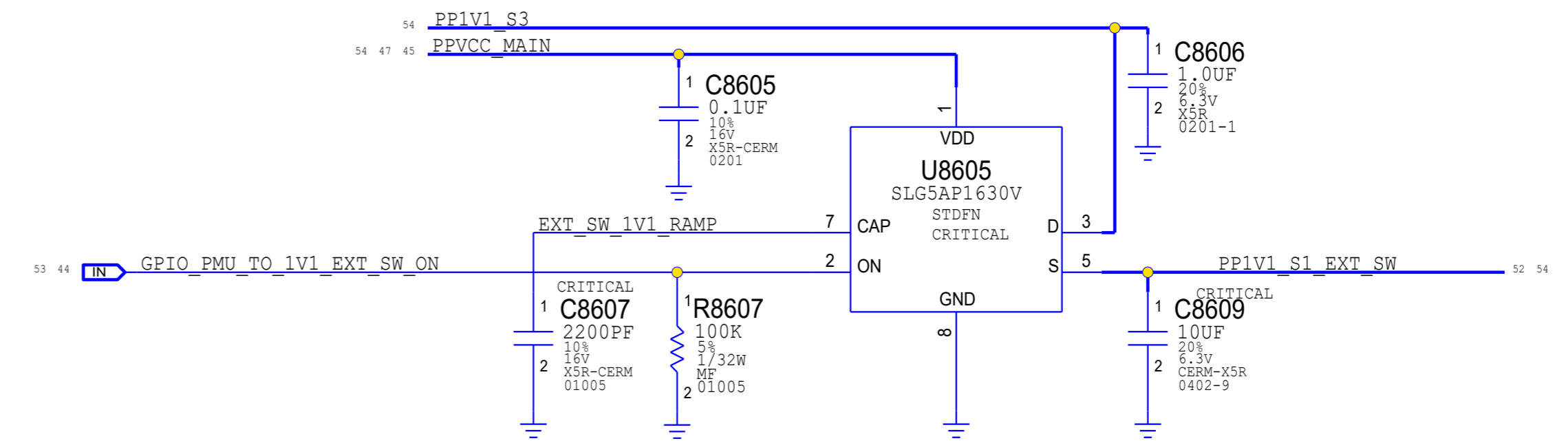


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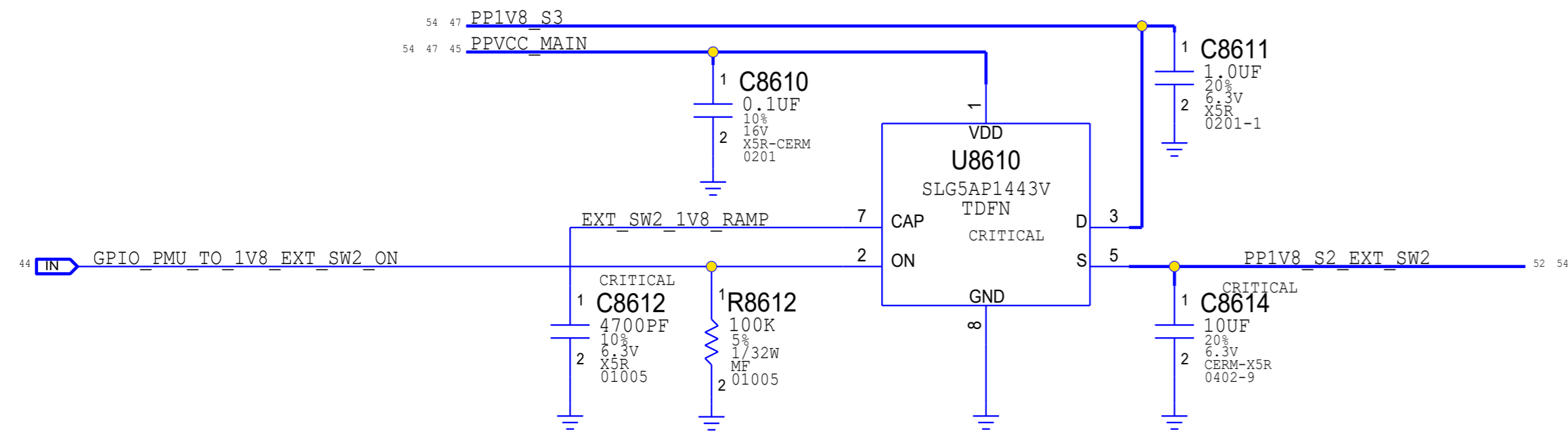
1.8V EXTERNAL SWITCH 1



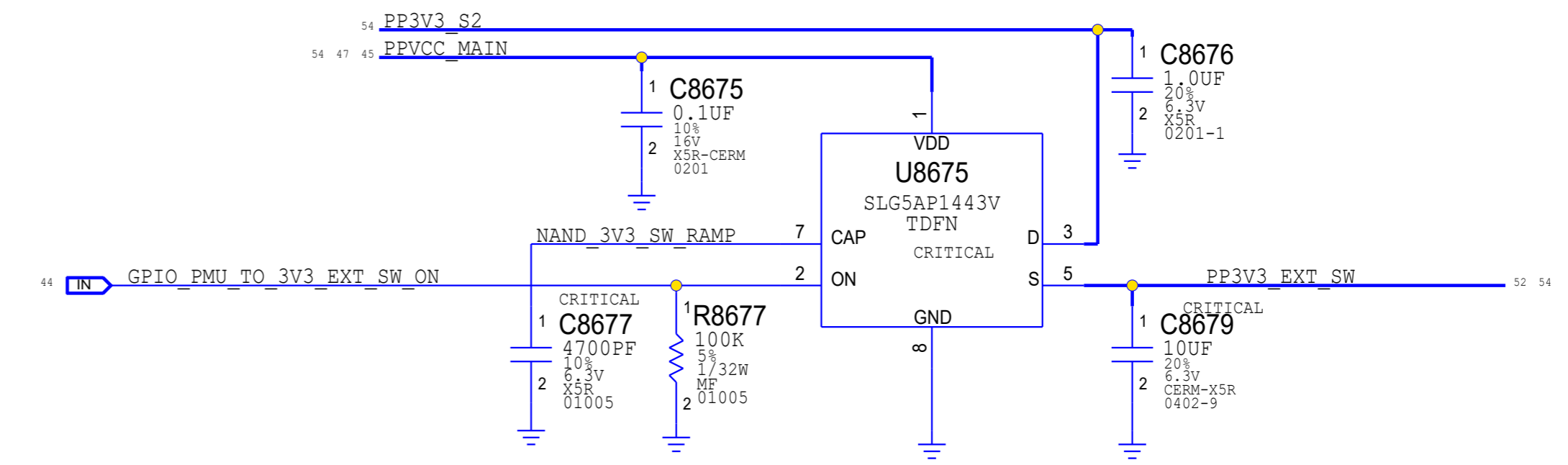
DDR 1.1V SWITCH



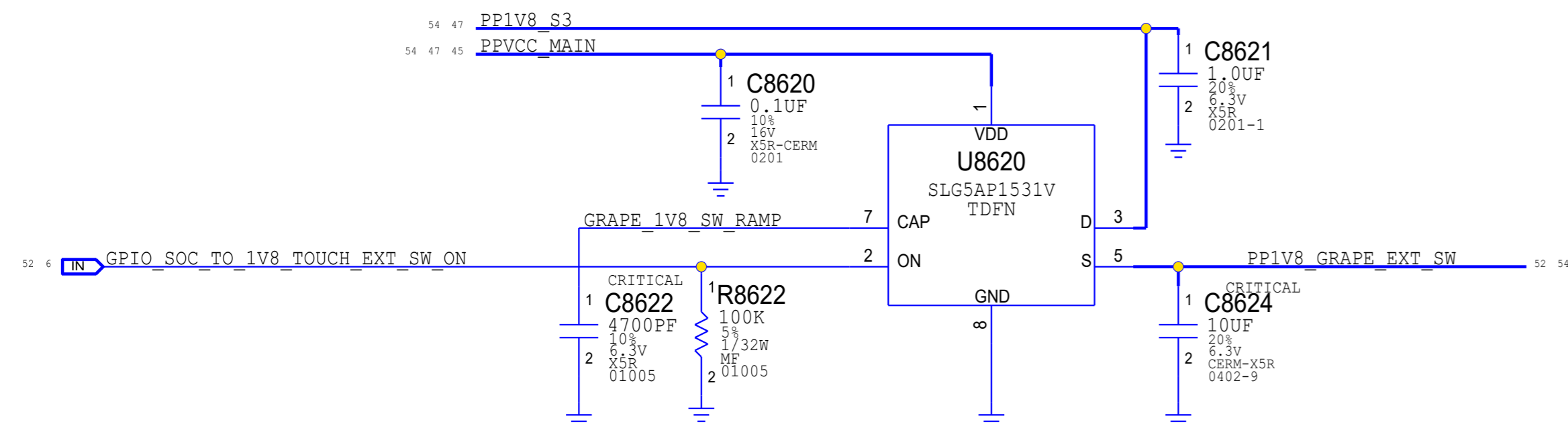
1.8V EXTERNAL SWITCH 2



NAND 3.3V SWITCH

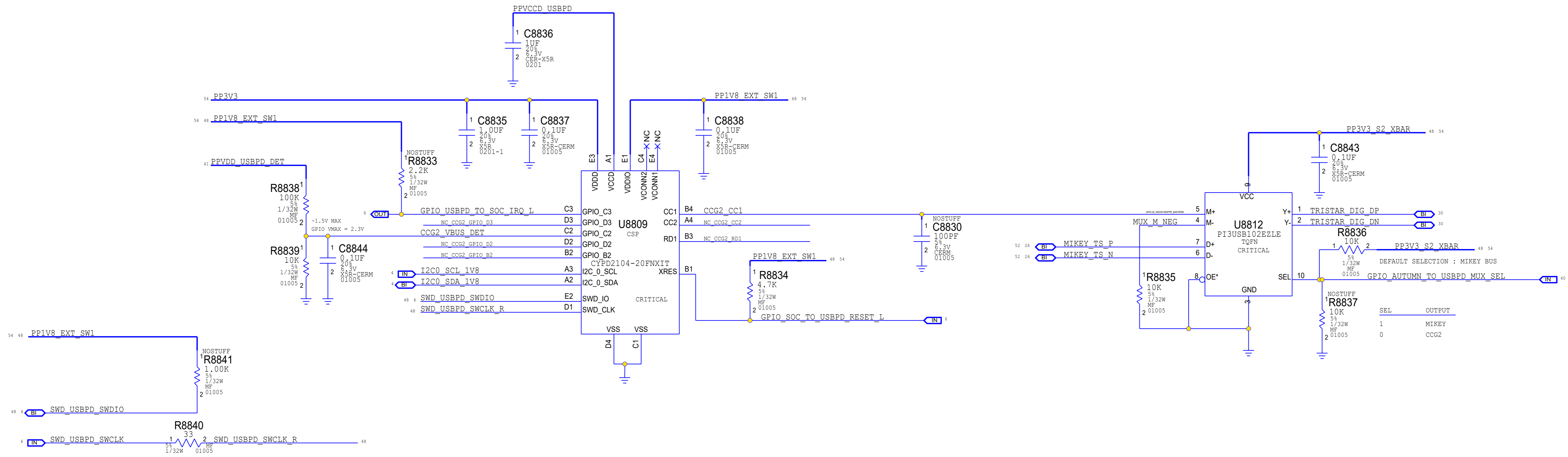


GRAPE 1.8V SWITCH



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USBPD

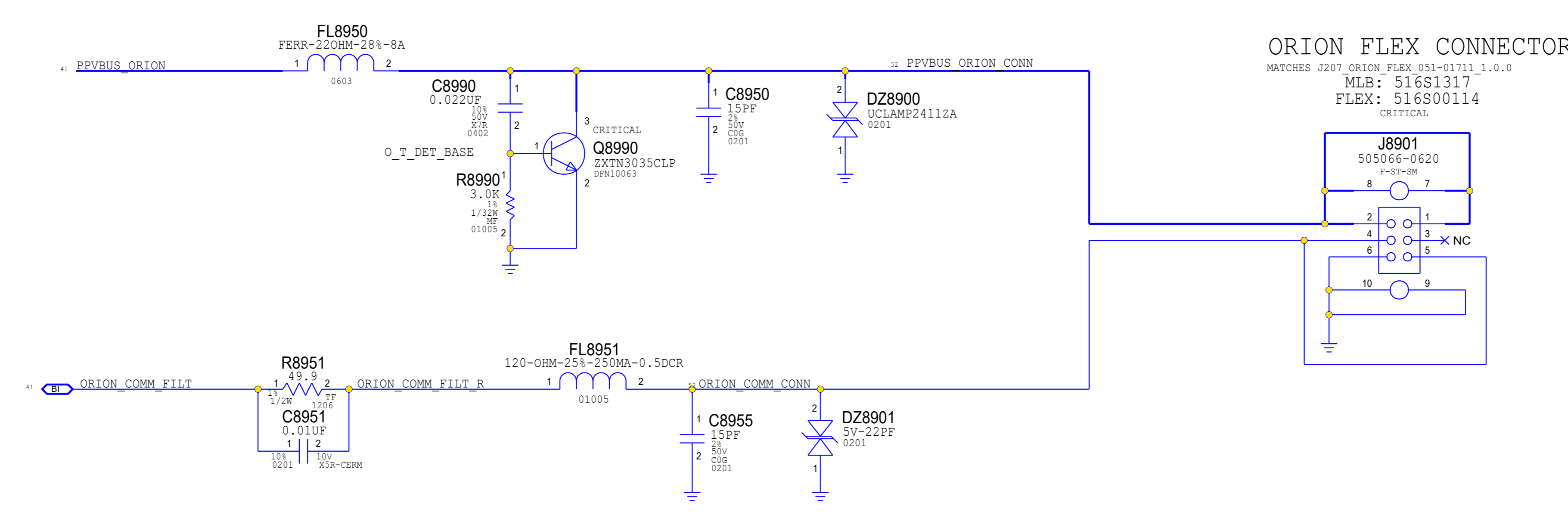
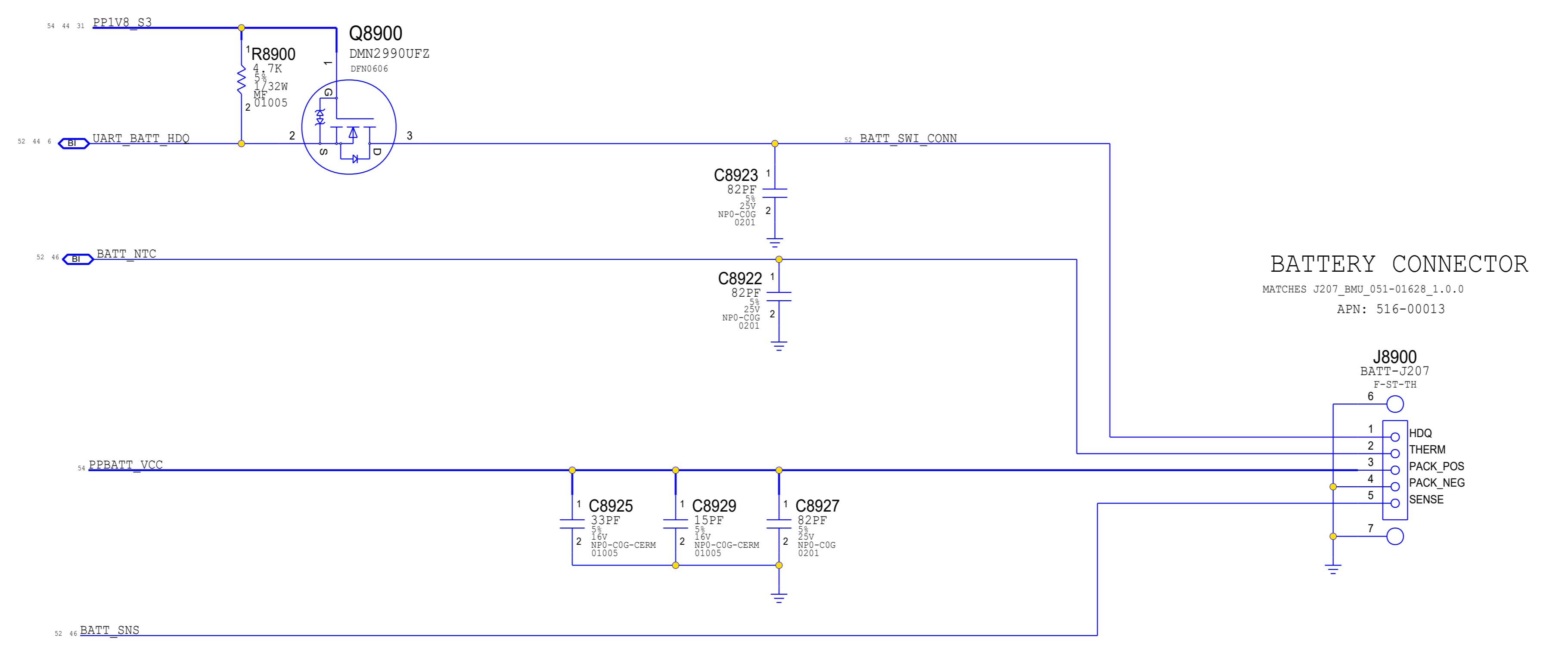


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REVISION: 5.0.0		BRANCH:
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POWER: USB PD

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	DRAWING NUMBER 051-04464	SIZE D	
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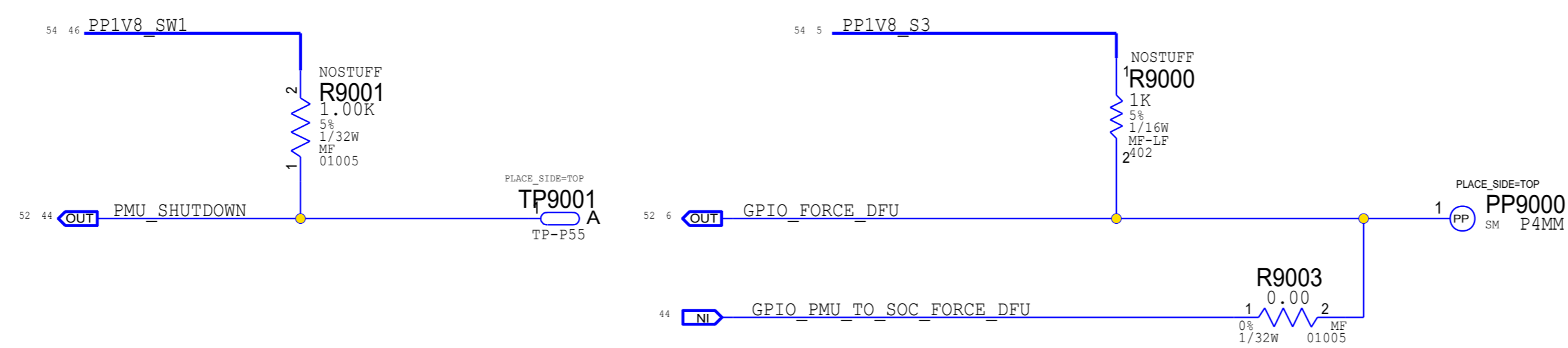
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DEBUG RESET ACCESS



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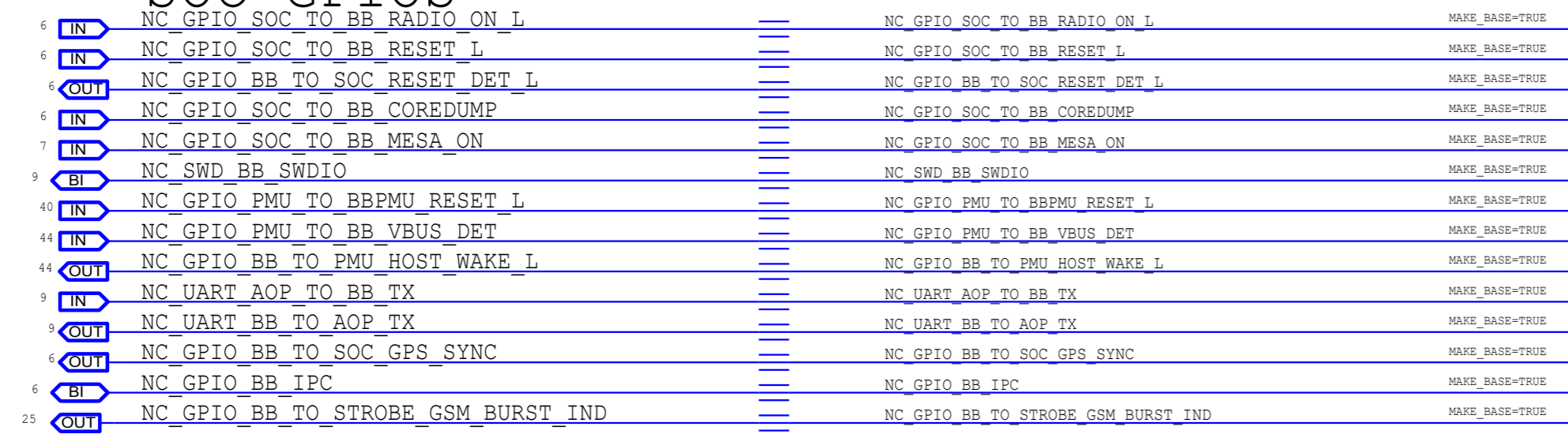
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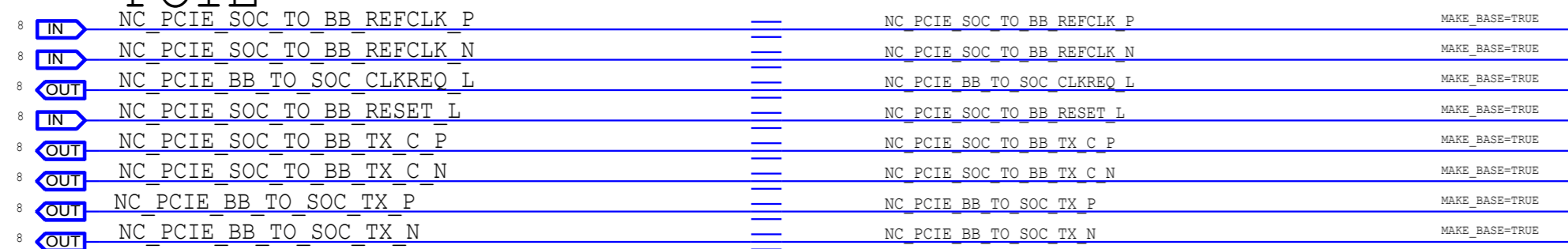
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CELLULAR AND WLAN/BT ALIASES

BASEBAND SOC GPIOS



PCIE



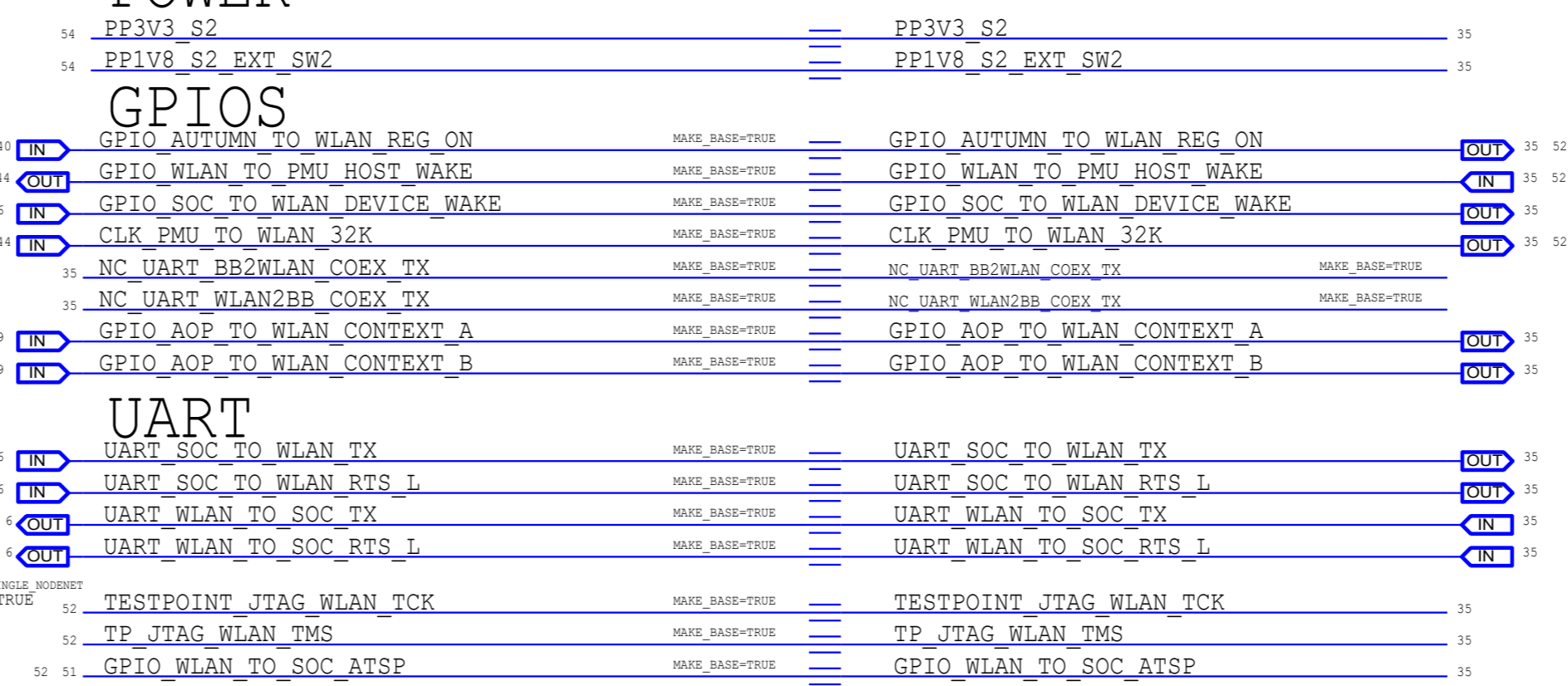
USB



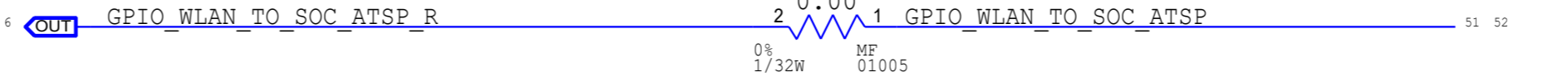
PMU ADC



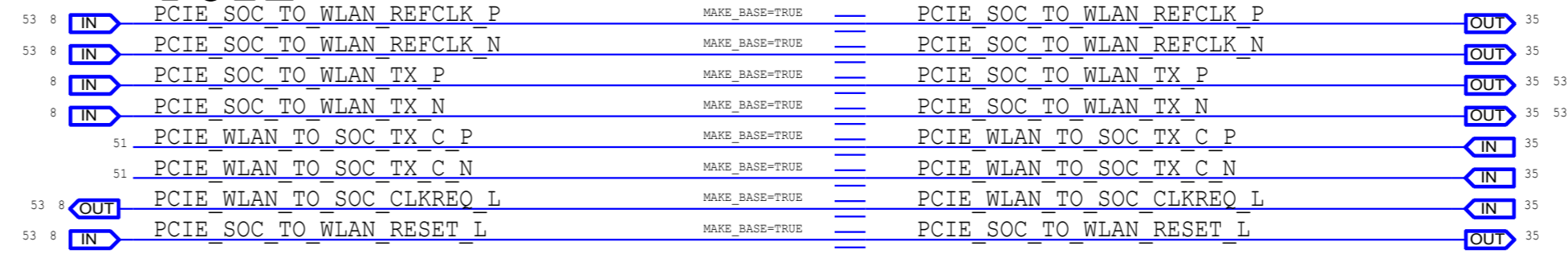
WLAN POWER



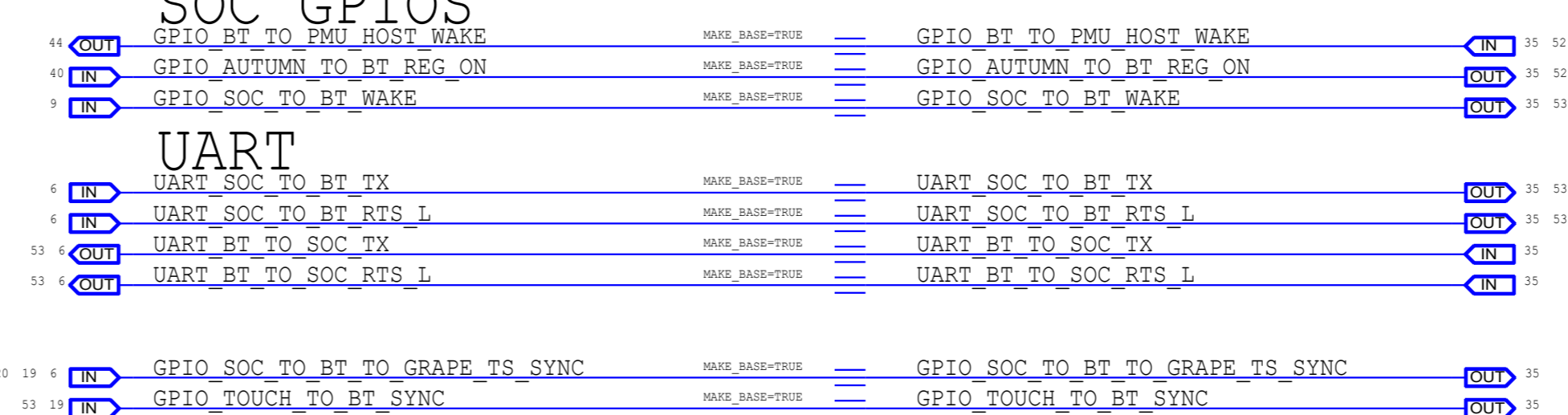
R9110



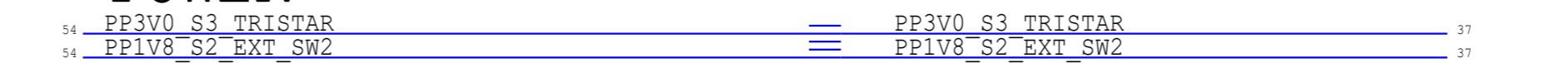
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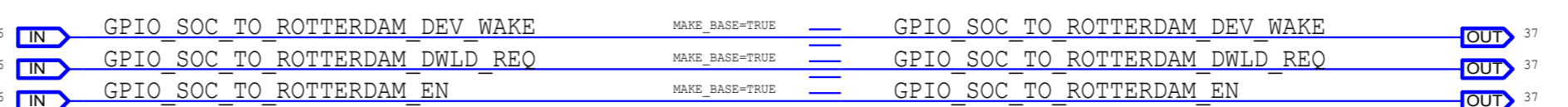
BLUETOOTH SOC GPIOS



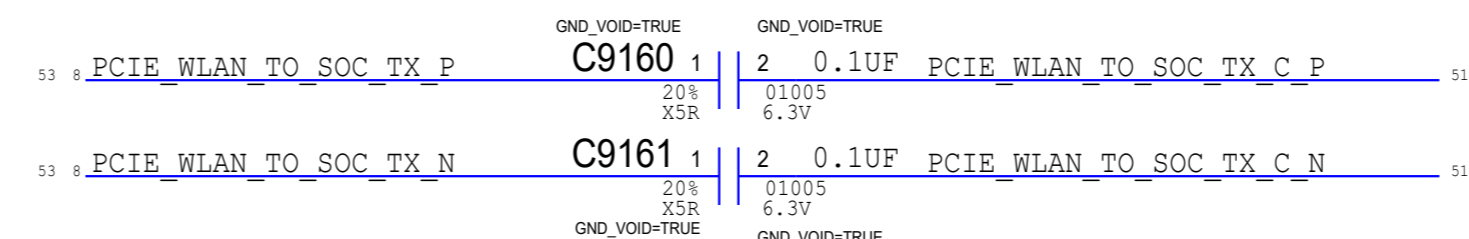
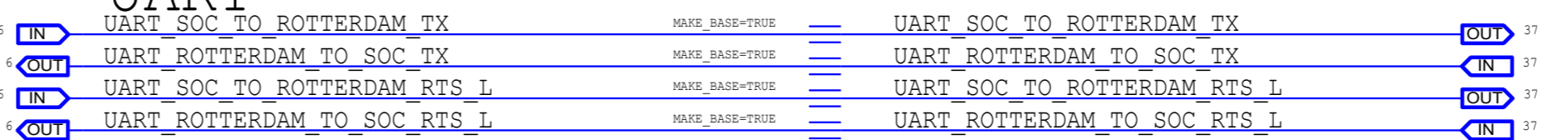
ROTTERDAM POWER



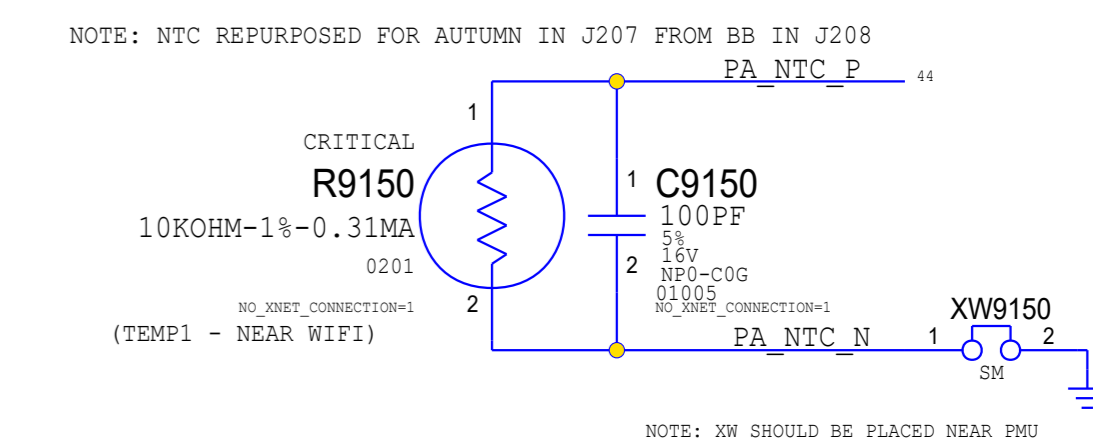
SOC GPIOS



UART

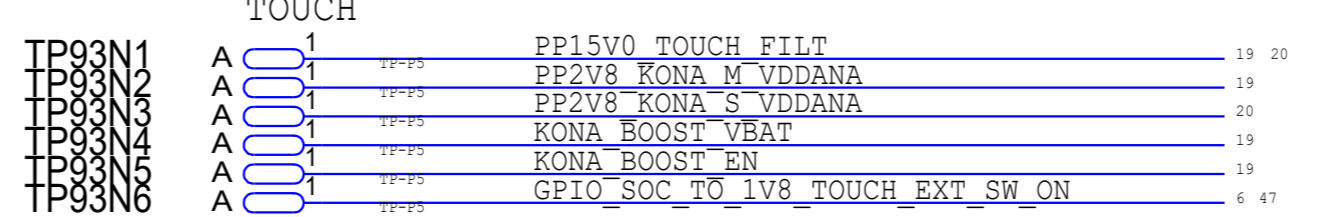
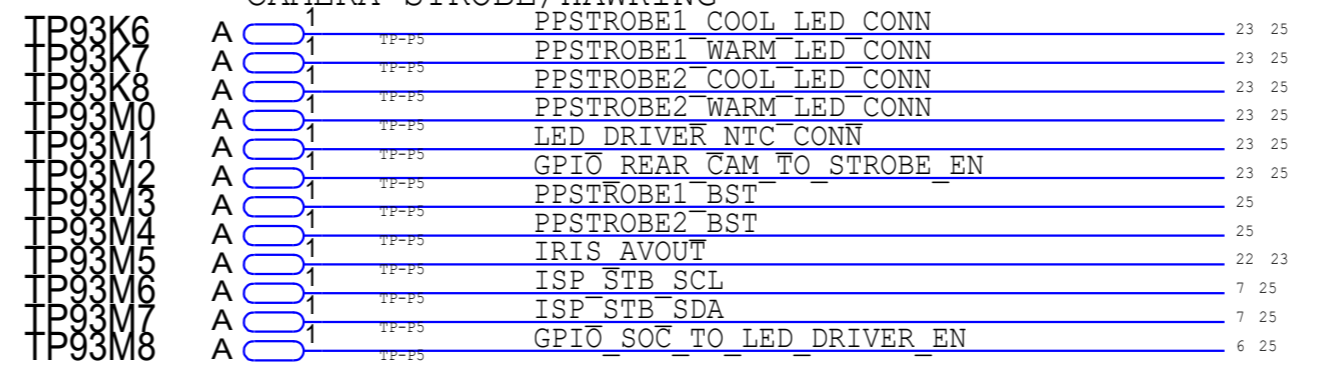
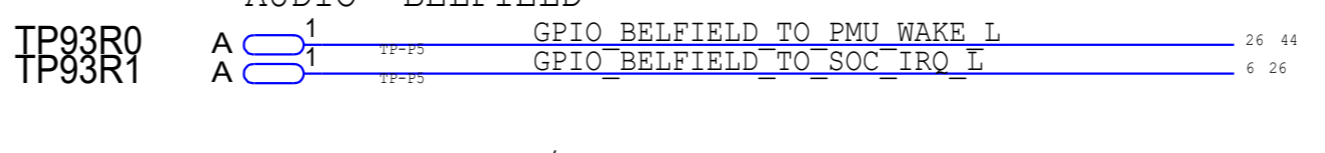
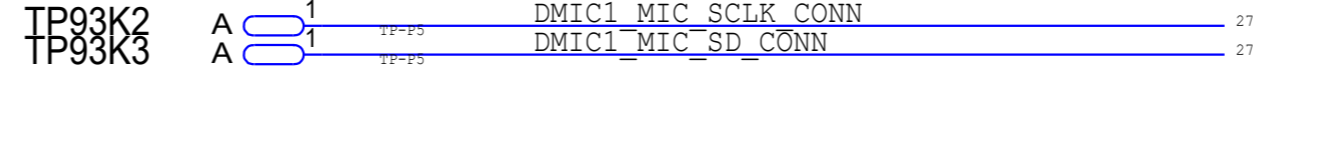
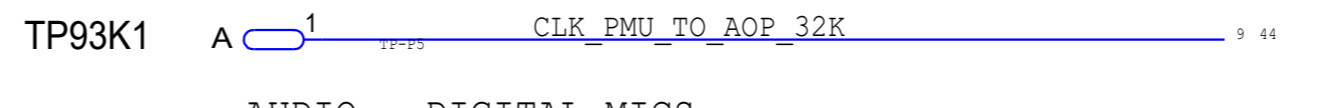
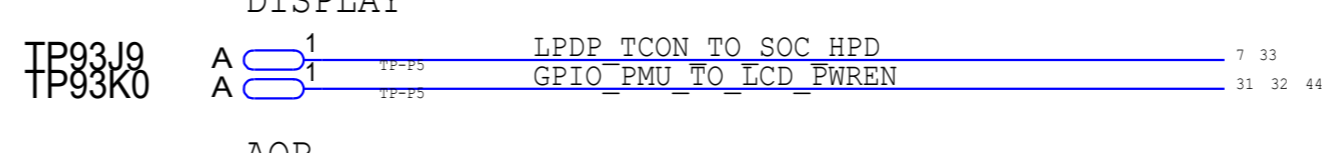
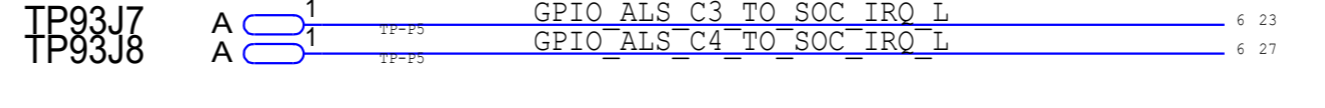
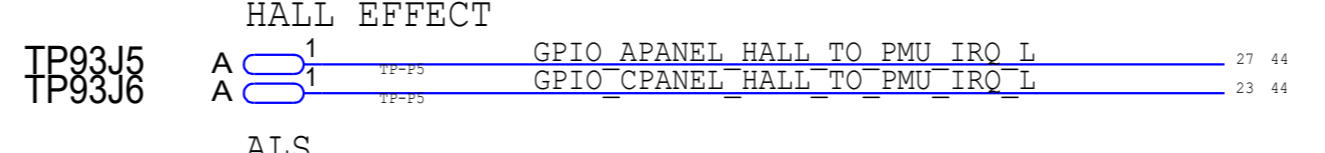
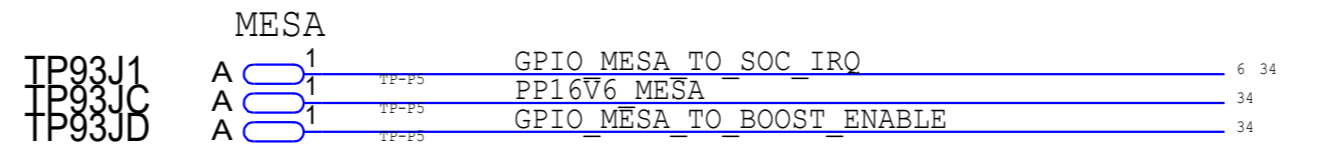
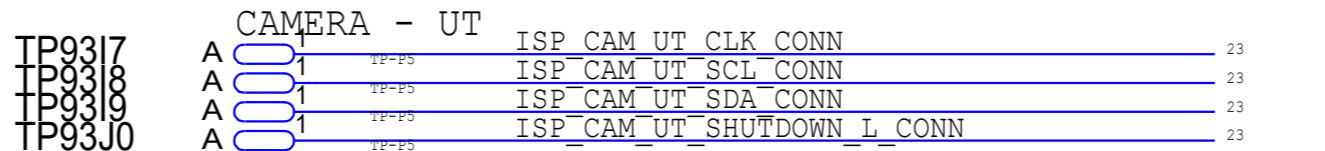
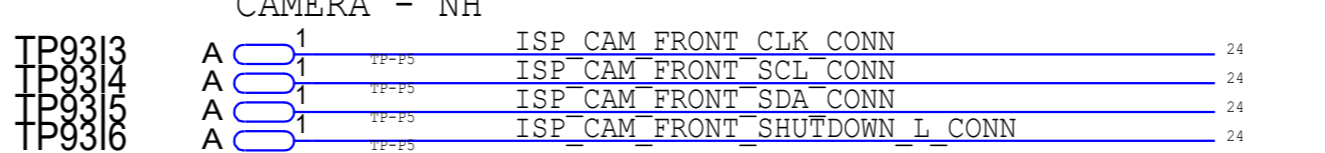
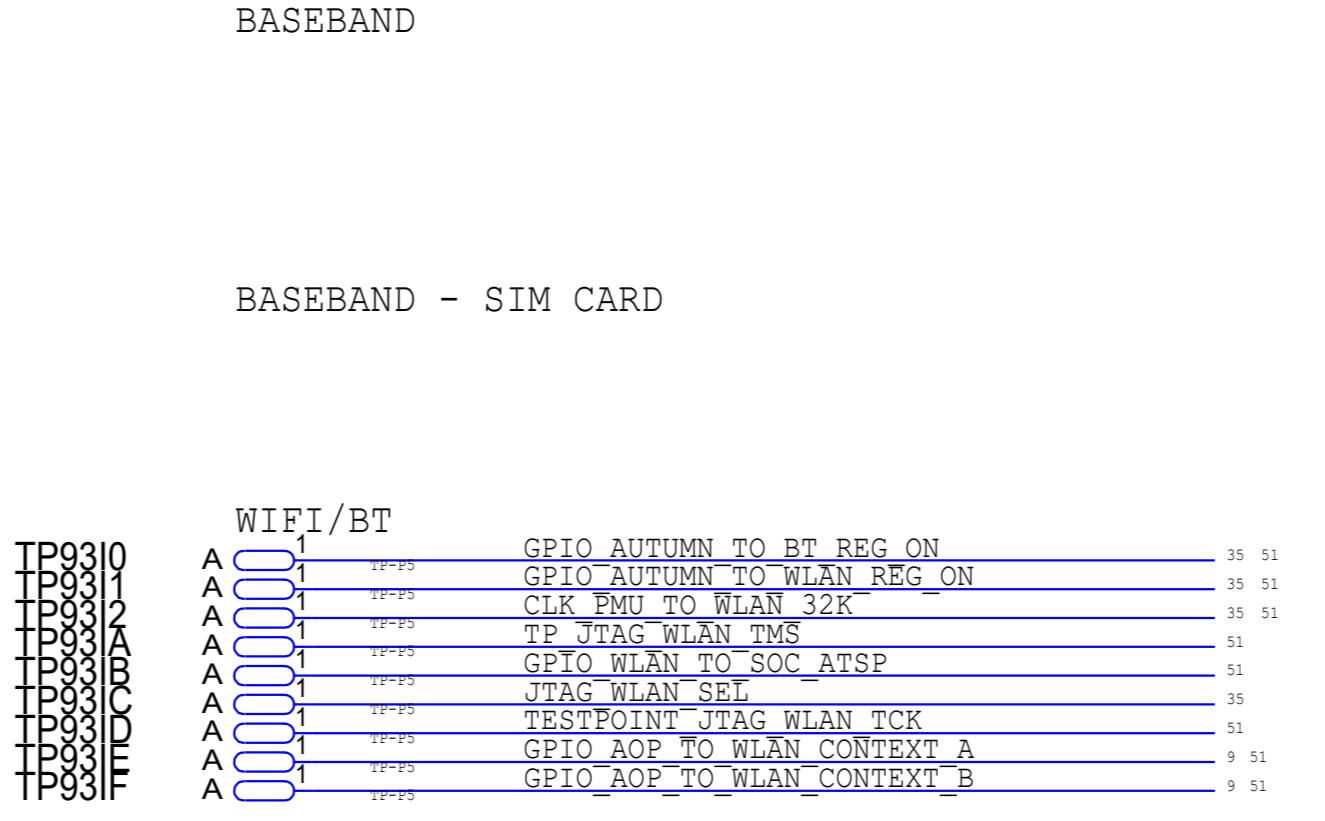
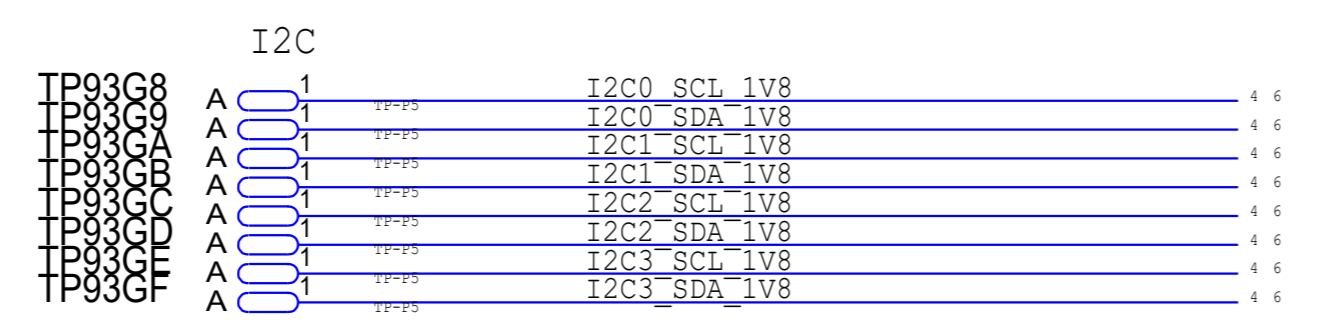
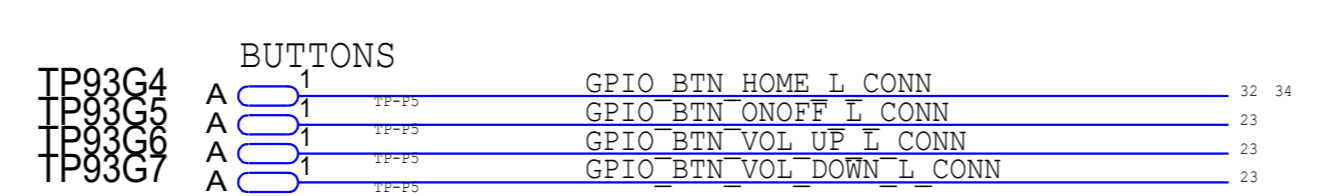
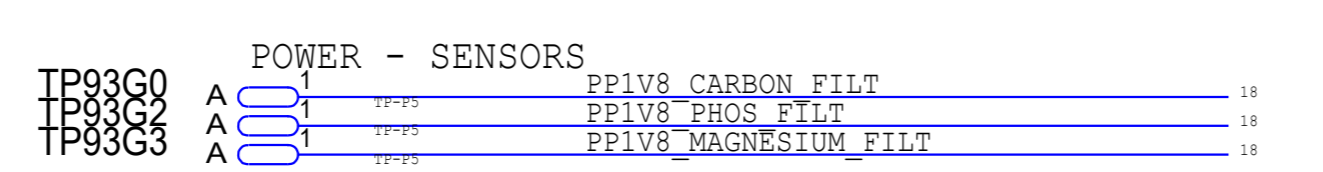
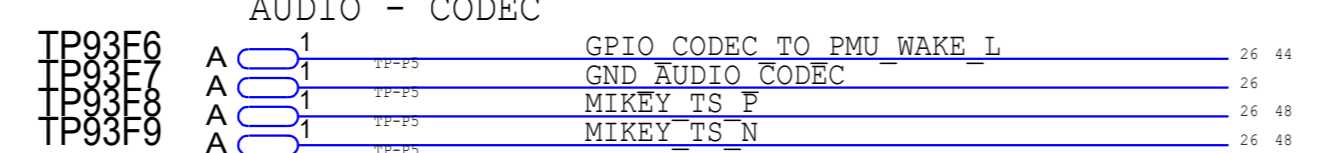
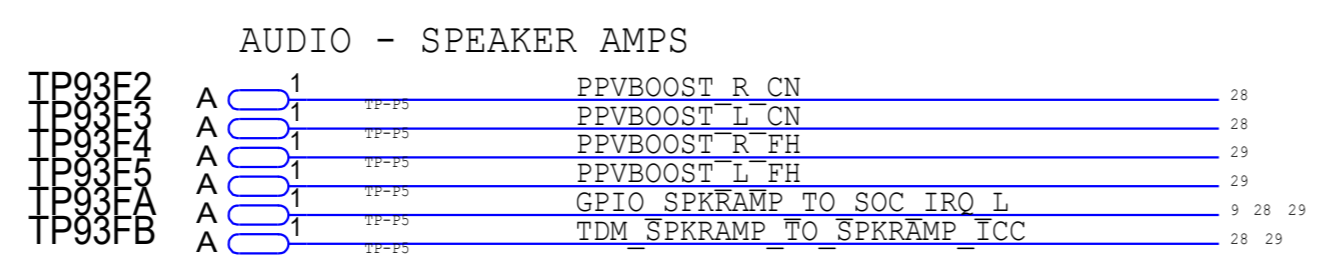
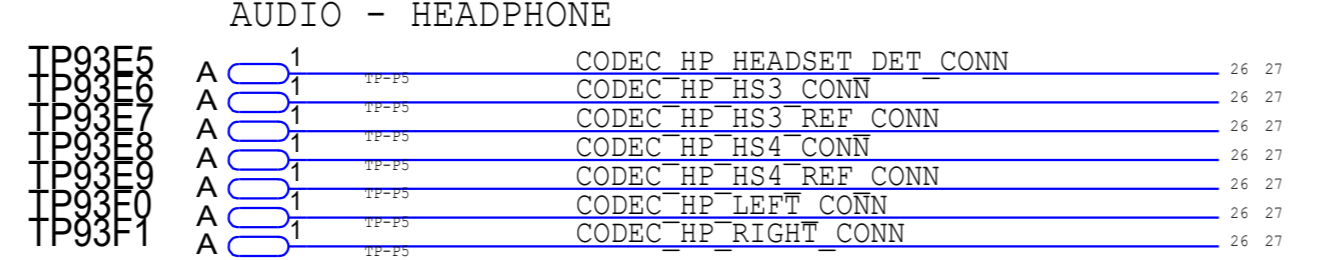
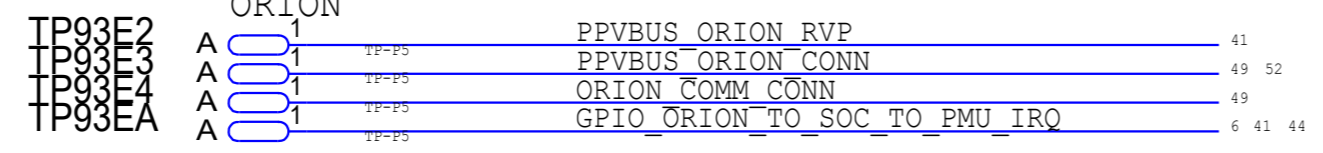
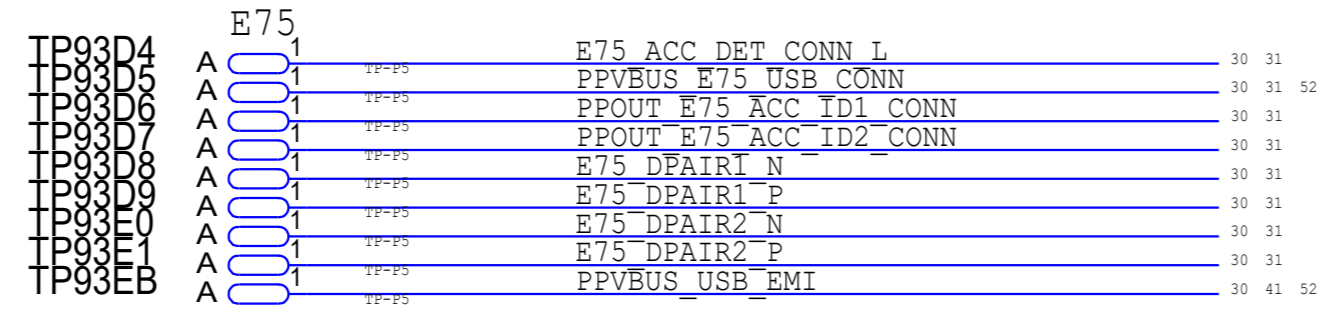
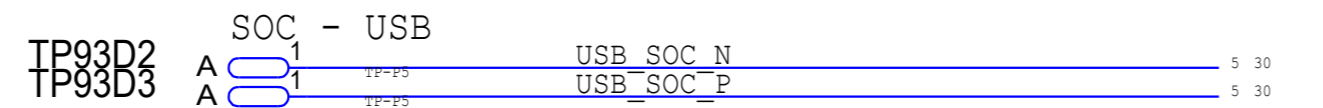
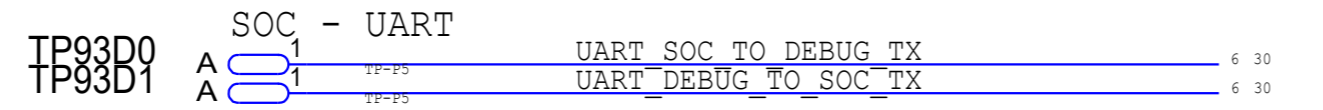
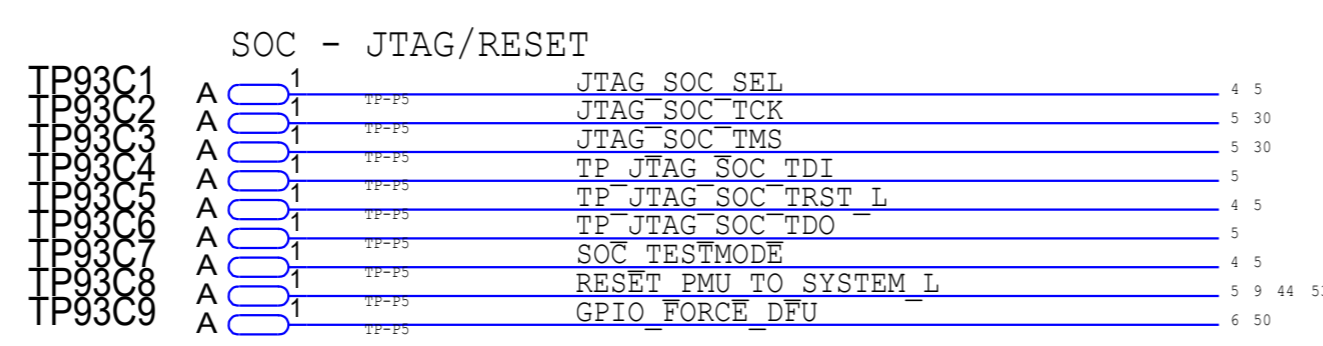
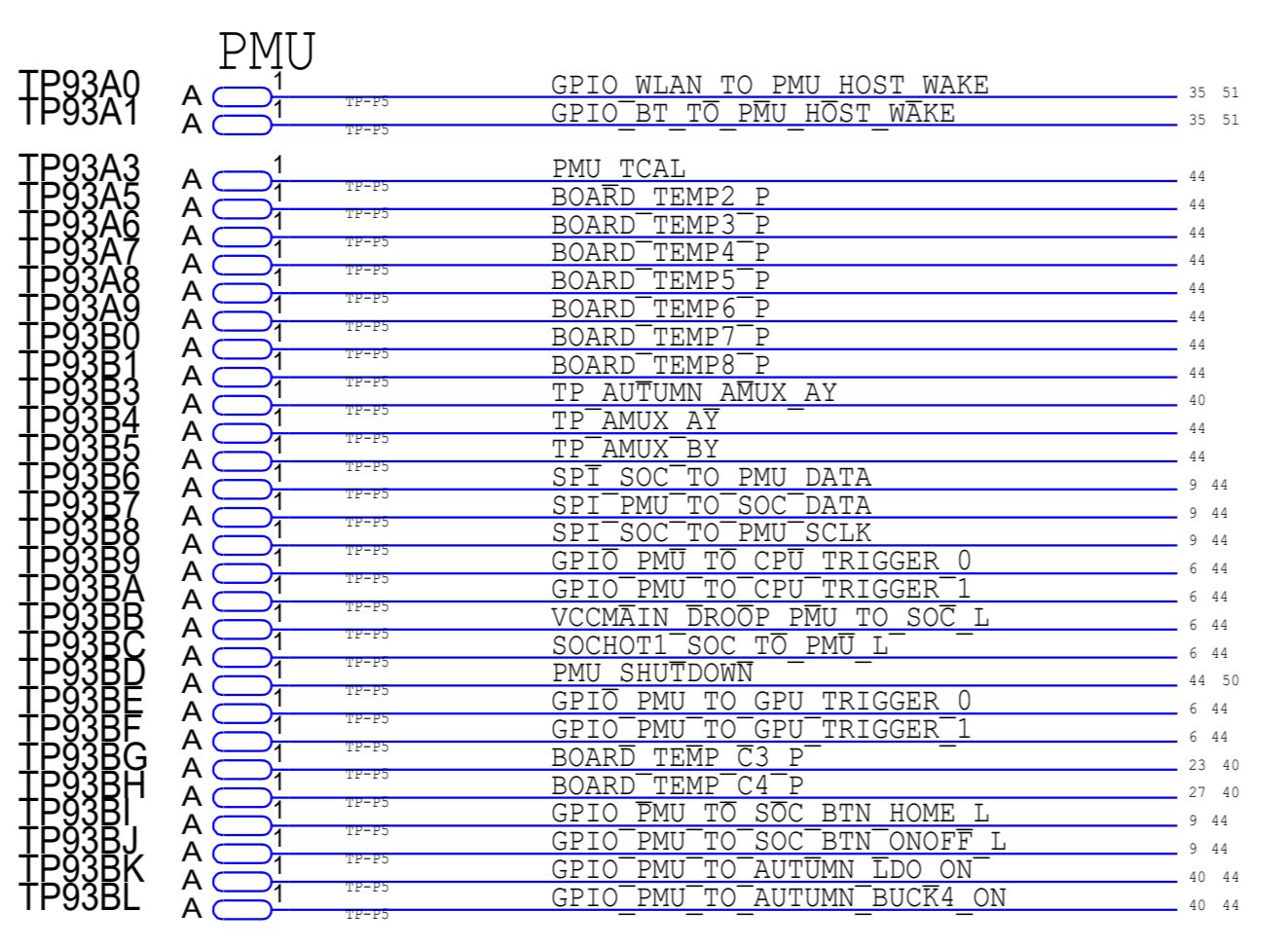
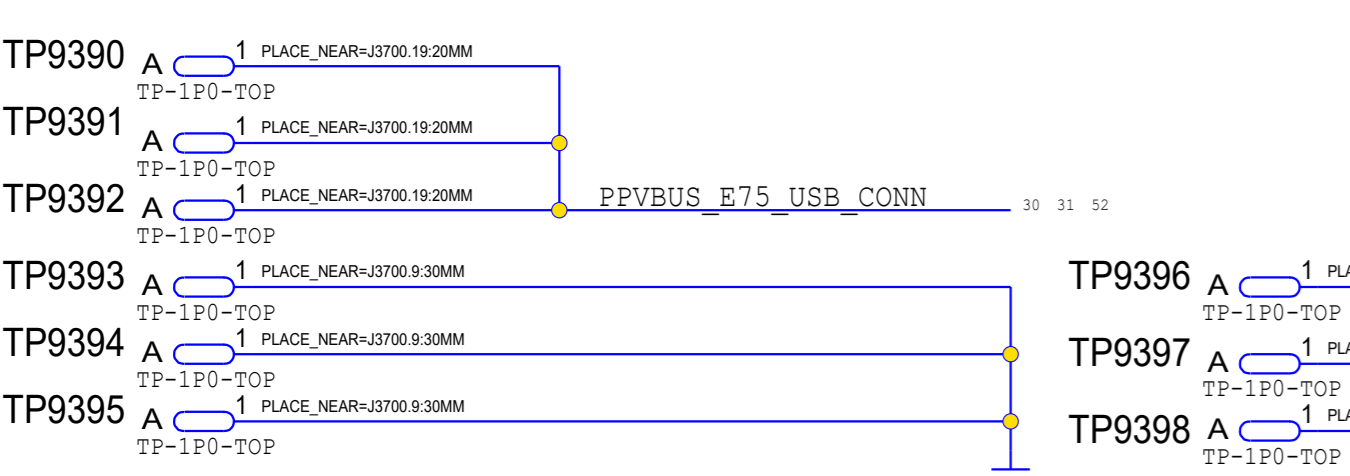
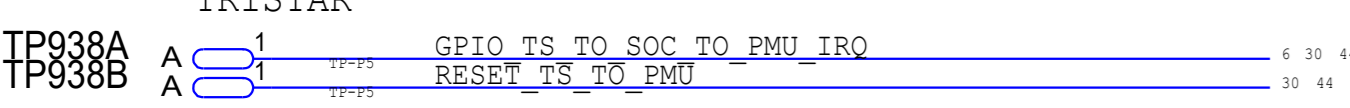
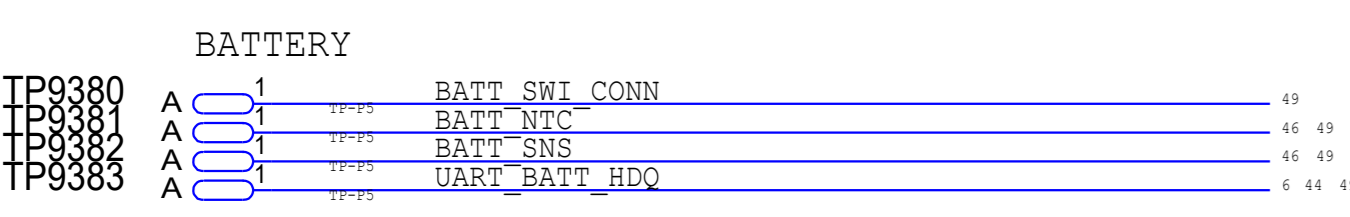
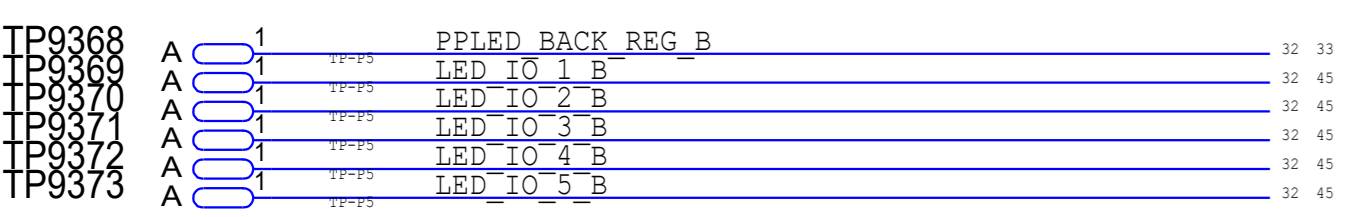
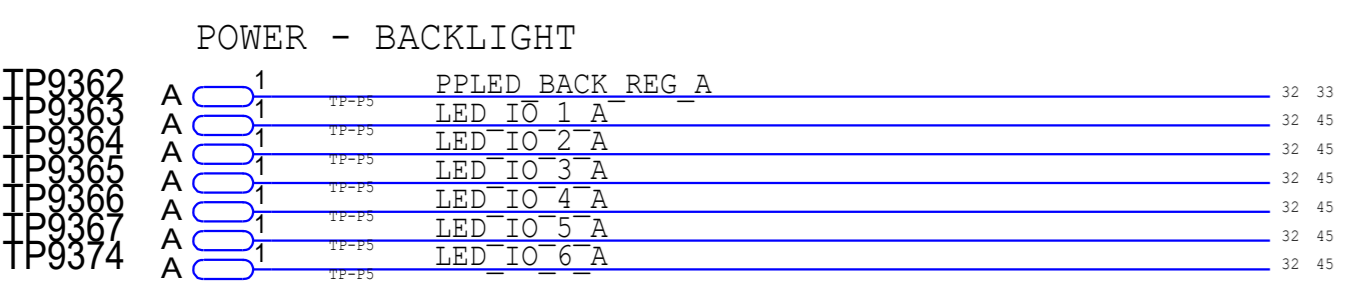
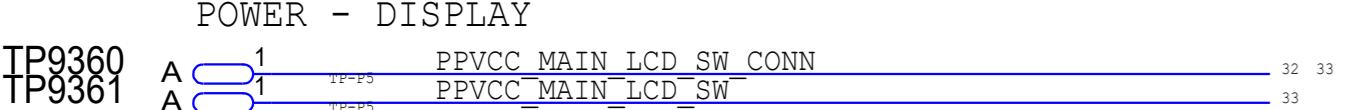
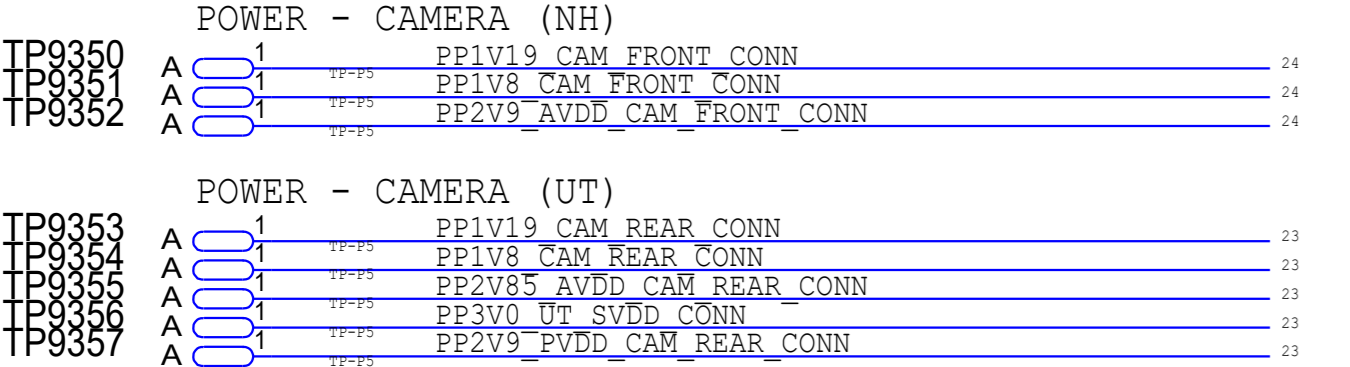
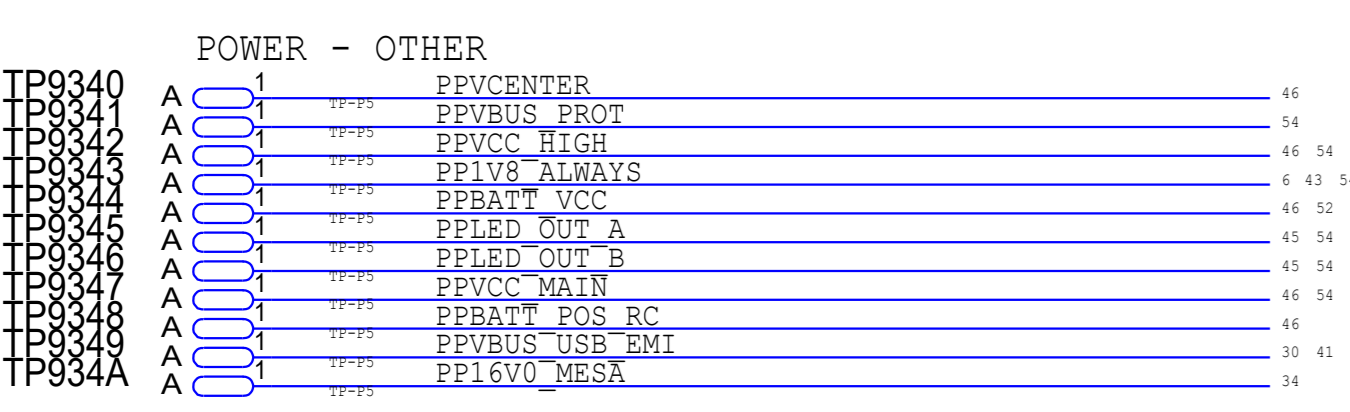
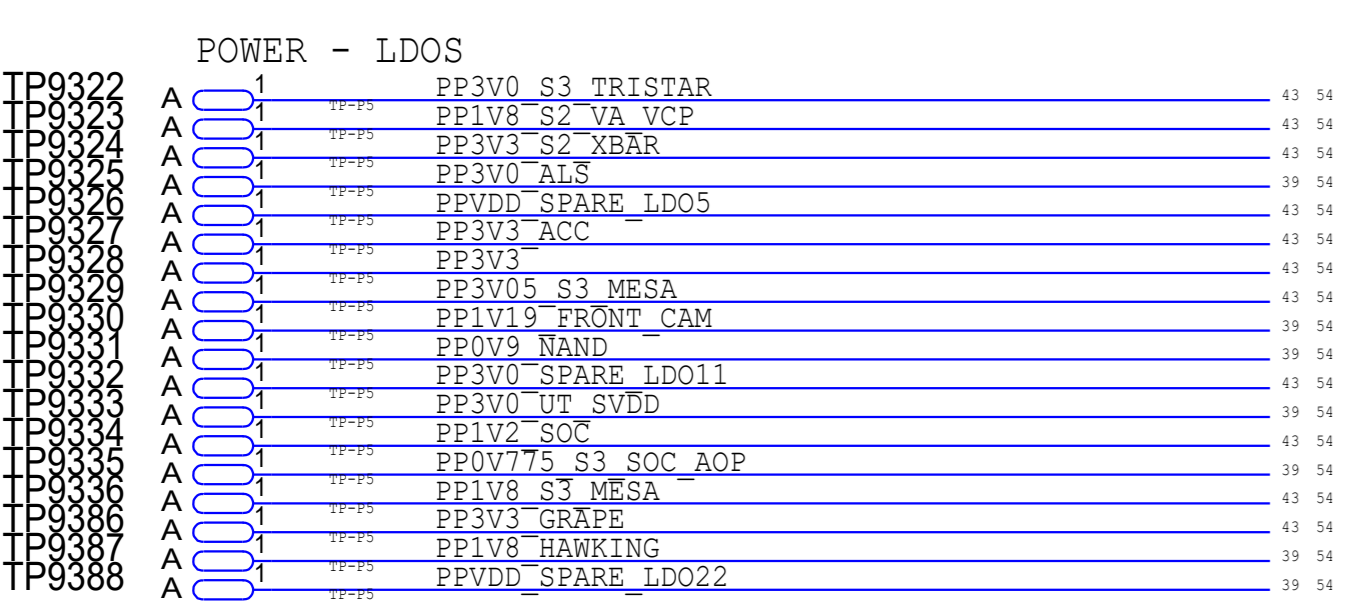
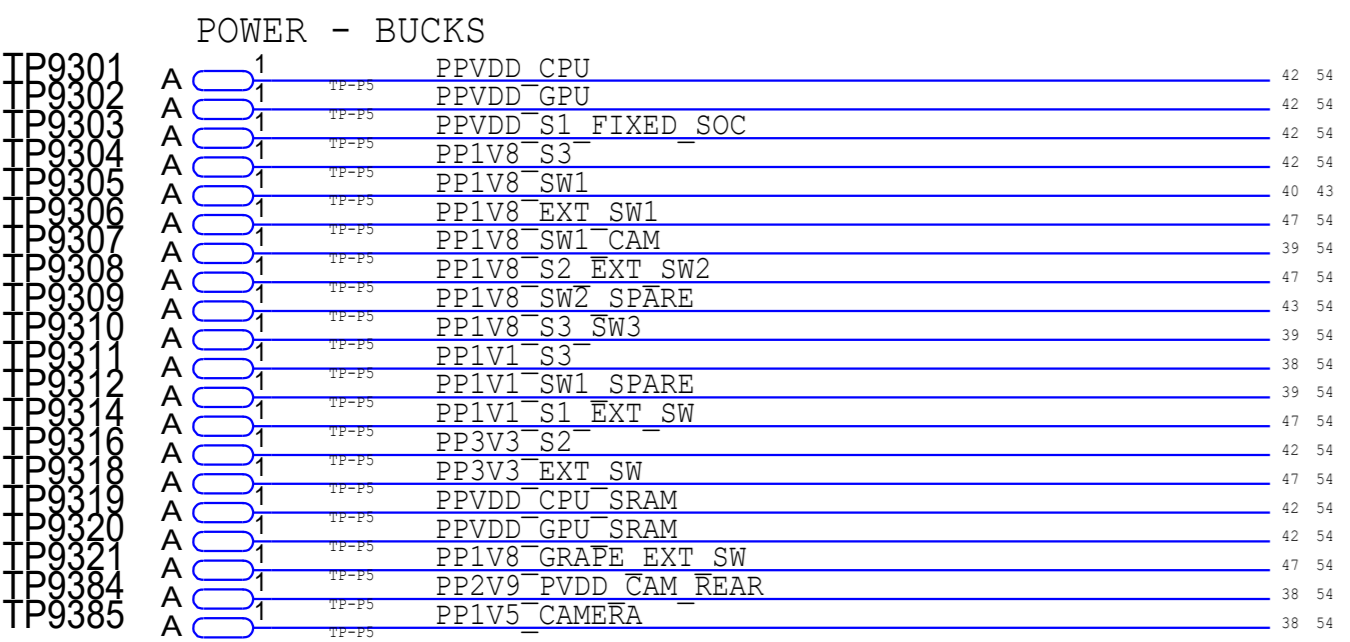


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PAGE TITLE		ALIASES: BB/WLAN/BT	
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		REVISION	5.0.0
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SMT TEST FIXTURE TP



EE CHARACTERIZATION PP/TP

SOC

PP9501	PP	1	RESET_PMU_TO_SYSTEM_L	9 3 44 52
PP9502	PP	1	TP_GPIO_DFU_STATUS	6
PP9504	PP	1	ADC_SOC_TO_PMU_ANALOGMUX_OUT	5 44
PP950A	PP	1	GPIO_AOP_TO_PMU_SLEEP1_REQUEST	9 3 44
PP950B	PP	1	GPIO_PMU_TO_SYS_SLEEP1_READY	9 10 44
PP950C	PP	1	GPIO_AOP_TO_PMU_ACTIVE_REQUEST	9 3 44
PP950D	PP	1	GPIO_PMU_TO_SYSTEM_ACTIVE_READY	9 30 31 44
PP950E	PP	1	I2C_AOP_SCL_I1V8	4 9
PP950F	PP	1	I2C_AOP_SDA_I1V8	4 9

CODEC I2S

PP9510	PP	1	I2S_AOP_TO_CODEC_BCLK	9 26
PP9511	PP	1	I2S_AOP_TO_CODEC_LRCK	9 26
PP9512	PP	1	I2S_AOP_TO_CODEC_DOUT	9 26
PP9513	PP	1	I2S_CODEC_TO_AOP_DOUT	9 26

BELFIELD I2S

PP9514	PP	1	I2S0_SOC_TO_BELFIELD_BCLK	6 26
PP9515	PP	1	I2S0_SOC_TO_BELFIELD_LRCK	6 26
PP9516	PP	1	I2S0_SOC_TO_BELFIELD_DOUT	6 26
PP9517	PP	1	I2S0_BELFIELD_TO_SOC_DOUT	6 26
PP9518	PP	1	I2S0_SOC_TO_BELFIELD_MCLK	6 26

FH SPEAKER I2S

PP9520	PP	1	I2S1_SOC_TO_SPKRAMP_FH_MCLK	6 29
PP9521	PP	1	I2S1_SOC_TO_SPKRAMP_FH_BCLK	6 29
PP9522	PP	1	I2S1_SOC_TO_SPKRAMP_FH_LRCK	6 29
PP9523	PP	1	I2S1_SOC_TO_SPKRAMP_FH_DOUT	6 29
PP9524	PP	1	I2S1_SPKRAMP_FH_TO_SOC_DOUT	6 29

CN SPEAKER I2S

PP9525	PP	1	I2S2_SOC_TO_SPKRAMP_CN_MCLK	6 28
PP9526	PP	1	I2S2_SOC_TO_SPKRAMP_CN_BCLK	6 28
PP9527	PP	1	I2S2_SOC_TO_SPKRAMP_CN_LRCK	6 28
PP9528	PP	1	I2S2_SOC_TO_SPKRAMP_CN_DOUT	6 28
PP9529	PP	1	I2S2_SPKRAMP_CN_TO_SOC_DOUT	6 28

HAWKING

PP952A	PP	1	I2S3_SOC_TO_HAWKING_BCLK	6 22
PP952B	PP	1	I2S3_SOC_TO_HAWKING_LRCK	6 22
PP952C	PP	1	I2S3_HAWKING_TO_SOC_DOUT	6 22

EUPHRATES

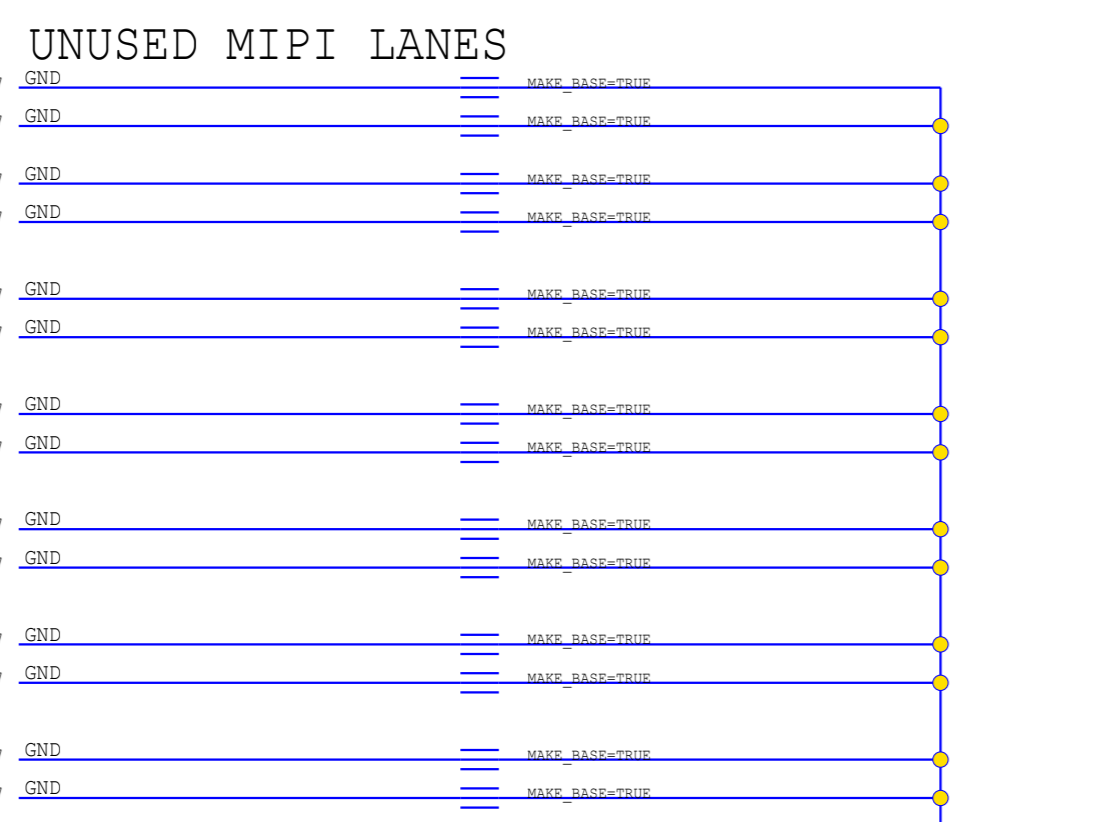
PP9539	PP	1	SYS_ALIVE	10 17 44 46
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AUDIO

PP953A	PP	1	GPIO_CODEC_TO_SOC_IRQ_L	6 26
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ORION

PP953B	PP	1	GPIO_AOP_TO_ORION_HWEN	9 41
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BELFIELD SPI LINES

PP9540	PP	1	SPI_BELFIELD_CS_L	6 26
PP9541	PP	1	SPI_BELFIELD_SCLK	6 26
PP9542	PP	1	SPI_BELFIELD_MOSI	6 26
PP9543	PP	1	SPI_BELFIELD_MISO	6 26

SENSOR SPI LINES

PP9544	PP	1	SPI_SENSORS_SCLK	PLACE_NEAR=U2150.2.10MM 9 18 27 53
PP9545	PP	1	SPI_SENSORS_MISO	PLACE_NEAR=U0600.AD40.10MM 9 18 27
PP9546	PP	1	SPI_SENSORS_MOSI	PLACE_NEAR=U2150.3.10MM 9 18 27 53
PP9547	PP	1	SPI_SENSORS_SCLK	PLACE_NEAR=U2150.4.10MM 9 18 27 53
PP9548	PP	1	SPI_SENSORS_SCLK	PLACE_NEAR=U2140.A3.10MM 9 18 27 53
PP9549	PP	1	SPI_SENSORS_MOSI	PLACE_NEAR=U2120.3.10MM 9 18 27 53
PP954A	PP	1	SPI_SENSORS_MOSI	PLACE_NEAR=U2140.A4.10MM 9 18 27 53

MESA SPI LINES

PP954B	PP	1	SPI_MESA_MISO	6 34
PP954C	PP	1	SPI_MESA_MOSI_CONN	32 34
PP954D	PP	1	SPI_MESA_SCLK_CONN	32 34

CAMERA - FRONT

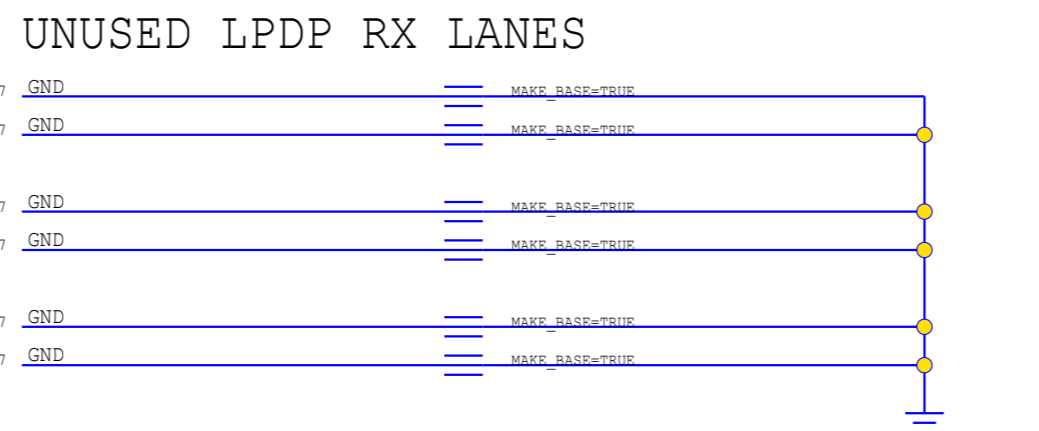
PP9560	PP	1	MIPI_NH_CAM_TO_SOC_CLK_P	7 24
PP9561	PP	1	MIPI_NH_CAM_TO_SOC_CLK_N	7 24
PP9562	PP	1	MIPI_NH_CAM_TO_SOC_DATA_P<0>	7 24
PP9563	PP	1	MIPI_NH_CAM_TO_SOC_DATA_N<0>	7 24
PP9564	PP	1	MIPI_NH_CAM_TO_SOC_DATA_P<1>	7 24
PP9565	PP	1	MIPI_NH_CAM_TO_SOC_DATA_N<1>	7 24

GRAPE

PP9580	PP	1	SPI_SOC_TO_GRAPE_SCLK	6 19
PP9581	PP	1	SPI_SOC_TO_GRAPE_MISO	6 19
PP9582	PP	1	SPI_SOC_TO_GRAPE_MOSI	6 19
PP9583	PP	1	SPI_SOC_TO_GRAPE_CS_L	6 19
PP9584	PP	1	GPIO_SOC_TO_GRAPE_RESET_L	6 19 20
PP9585	PP	1	GPIO_GRAPE_TO_SOC_IRQ_L	6 19
PP9586	PP	1	KONA_S_TO_KONA_M_RESET_DET_L	19 20
PP9587	PP	1	PSE_SYNC	19 20
PP9588	PP	1	KMSI_MISO	19 20
PP9589	PP	1	KMSI_MOSI	19 20
PP958A	PP	1	KMSI_STRB_IN	19 20
PP958B	PP	1	KMSI_STRB_OUT	19 20
PP958C	PP	1	KONA_BOOST_ATEST	19
PP958D	PP	1	TP_KONA_S_UART_TX	20
PP958E	PP	1	TP_KONA_S_UART_RX	20
PP958F	PP	1	TP_KONA_IPC_EVENT_0	20
PP958G	PP	1	TP_KONA_IPC_EVENT_1	20
PP958H	PP	1	TP_KONA_IPC_EVENT_2	20
PP958I	PP	1	TP_KONA_IPC_EVENT_3	20
PP958J	PP	1	TP_KONA_IPC_EVENT_4	20
PP958K	PP	1	TP_KONA_IPC_EVENT_5	20
PP958L	PP	1	TP_KONA_GPIO_ADC_03	19
PP958M	PP	1	CLK_KONA_M_24MHZ	19 20
PP958N	PP	1	GPIO_SOC_TO_GRAPE_BSYNCO	19 20 32
PP958P	PP	1	GPIO_SOC_TO_GRAPE_BSYNC1	19 20 32

GRAPE POWER

PP958R	PP	1	PP3V3_GRAPE_FILT	19 20
PP958S	PP	1	PP1V8_GRAPE_XTAL_FILT	19 20
PP958T	PP	1	KONA_M_VDDCORE_CAP	19
PP958U	PP	1	KONA_S_VDDCORE_CAP	20
PP958V	PP	1	PP1V8_GRAPE_AON_RC	19 20



DDR

PP9590	PP	1	DDR6_CS	PLACE_NEAR=U1700.A7B.1MM 10 16
PP9591	PP	1	DDR6_CKE	PLACE_NEAR=U1700.A9B.1MM 10 16
PP9592	PP	1	DDR6_CA<0>	PLACE_NEAR=U1700.A9B.1MM 10 16
PP9593	PP	1	DDR6_CA<1>	PLACE_NEAR=U1700.A9B.1MM 10 16
PP9594	PP	1	DDR6_CA<2>	PLACE_NEAR=U1700.A11.1MM 10 16
PP9595	PP	1	DDR6_CA<3>	PLACE_NEAR=U1700.A11.1MM 10 16
PP9596	PP	1	DDR6_CA<4>	PLACE_NEAR=U1700.A11.1MM 10 16
PP9597	PP	1	DDR6_CA<5>	PLACE_NEAR=U1700.A13.1MM 10 16
PP9598	PP	1	DDR6_DQ<14>	PLACE_NEAR=U1700.A13.1MM 10 16 53
PP9599	PP	1	DDR6_DQS_P<1>	PLACE_NEAR=U1700.A15.1MM 10 16 53
PP959A	PP	1	DDR6_DQS_N<1>	PLACE_NEAR=U1700.A15.1MM 10 16 53
PP959B	PP	1	DDR6_CK_P	PLACE_NEAR=U1700.A10.1MM 10 16
PP959C	PP	1	DDR6_CK_N	PLACE_NEAR=U1700.A10.1MM 10 16
PP959D	PP	1	DDR6_DQ<14>	PLACE_NEAR=U0600.F43.1MM 10 16 53
PP959E	PP	1	DDR6_DQS_P<1>	PLACE_NEAR=U0600.H45.1MM 10 16 53
PP959F	PP	1	DDR6_DQS_N<1>	PLACE_NEAR=U0600.H46.1MM 10 16 53

LPDDR4 TPS

PP95A0	PP	1	DDR1_CS	PLACE_NEAR=U1600.A7B.1MM 10 15
PP95A1	PP	1	DDR1_CKE	PLACE_NEAR=U1600.A9B.1MM 10 15
PP95A2	PP	1	DDR1_CA<3>	PLACE_NEAR=U1600.A11.1MM 10 15
PP95A3	PP	1	DDR1_DQ<9>	PLACE_NEAR=U1600.A17.1MM 10 15 53
PP95A4	PP	1	DDR1_DQS_P<1>	PLACE_NEAR=U1600.A15.1MM 10 15 53
PP95A5	PP	1	DDR1_DQS_N<1>	PLACE_NEAR=U1600.A15.1MM 10 15 53
PP95A6	PP	1	DDR1_CK_P	PLACE_NEAR=U1600.A10.1MM 10 15
PP95A7	PP	1	DDR1_CK_N	PLACE_NEAR=U1600.A10.1MM 10 15
PP95A8	PP	1	DDR1_DQ<9>	PLACE_NEAR=U0600.AB4.1MM 10 15 53
PP95A9	PP	1	DDR1_DQS_P<1>	PLACE_NEAR=U0600.AB2.1MM 10 15 53
PP95AA	PP	1	DDR1_DQS_N<1>	PLACE_NEAR=U0600.AB1.1MM 10 15 53

WIFI

PP95B3	PP	1	UART_BT_TO_SOC_TX	6 51
PP95B4	PP	1	UART_SOC_TO_BT_TX	35 51
PP95B5	PP	1	UART_SOC_TO_WLAN_TX	6 51
PP95B6	PP	1	UART_WLAN_TO_SOC_TX	6 51
PP95BD	PP	1	GPIO_SOC_TO_WLAN_DEVICE_WAKE	6 51
PP95BE	PP	1	GPIO_SOC_TO_BT_WAKE	35 51
PP95BF	PP	1	UART_SOC_TO_WLAN_RTS_L	6 51
PP95BG	PP	1	UART_WLAN_TO_SOC_RTS_L	6 51
PP95BH	PP	1	UART_SOC_TO_BT_RTS_L	35 51
PP95BI	PP	1	UART_BT_TO_SOC_RTS_L	6 51
PP95BL	PP	1	GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC	6 19 20 51
PP95BM	PP	1	GPIO_TOUCH_TO_BT_SYNC	19 51

PMU/EUPHRATES

PP95G0	PP	1	GPIO_AUTUMN_TO_PMU_SOC_IRQ_L	9 40 44
PP95G1	PP	1	GPIO_PMU_TO_SOC_IRQ_L	9 44
PP95G2	PP	1	GPIO_EUPHRATES_TO_PMU_WAKE	44 46
PP95G3	PP	1	GPIO_EUPHRATES_TO_SOC_TO_PMU_IRQ_L	6 44 46
PP95G4	PP	1	OVP_SW_EN_L	42 46
PP95G5	PP	1	GPIO_PMU_TO_EUPHRATES_LINCH_EN	44 46
PP95G6	PP	1	GPIO_PMU_TO_I1V1_EXT_SW_ON	44 47
PP95G7	PP	1	USB_VBUS_DETECT	5 46

PP95C0

PP95C0	PP	1	DDR4_CS	PLACE_NEAR=U1700.D9.1MM 10 16
PP95C1	PP	1	DDR4_CKE	PLACE_NEAR=U1700.C9.1MM 10 16
PP95C2	PP	1	DDR4_CA<0>	PLACE_NEAR=U1700.C8.1MM 10 16
PP95C3	PP	1	DDR4_DQ<2>	PLACE_NEAR=U1700.D4.1MM 10 16 53
PP95C4	PP	1	DDR4_DQS_P<0>	PLACE_NEAR=U1700.D5.1MM 10 16 53
PP95C5	PP	1	DDR4_DQS_N<0>	PLACE_NEAR=U1700.C5.1MM 10 16 53
PP95C6	PP	1	DDR4_CK_P	PLACE_NEAR=U1700.D10.1MM 10 16
PP95C7	PP	1	DDR4_CK_N	PLACE_NEAR=U1700.C10.1MM 10 16
PP95C8	PP	1	DDR4_DQ<2>	PLACE_NEAR=U0600.F24.1MM 10 16 53
PP95C9	PP	1	DDR4_DQS_P<0>	PLACE_NEAR=U0600.B24.1MM 10 16 53
PP95CA	PP	1	DDR4_DQS_N<0>	PLACE_NEAR=U0600.A24.1MM 10 16 53
PP95CB	PP	1	DDR3_DQ<2>	PLACE_NEAR=U0600.F14.1MM 10 15
PP95CC	PP	1	DDR3_DQS_P<0>	PLACE_NEAR=U0600.B14.1MM 10 15
PP95CD	PP	1	DDR3_DQS_N<0>	PLACE_NEAR=U0600.A14.1MM 10 15

NAND PCIE TPS

PP95D0	PP	1	PLACE_NEAR=U0600.AW5.3MM	PCIE NAND TO SOC_TX_P<0>	8 17
PP95D1	PP	1	PLACE_NEAR=U0600.AV5.3MM	PCIE NAND TO SOC_TX_N<0>	8 17
PP95D2	PP	1	PLACE_NEAR=U1800.H8.3MM	PCIE SOC TO NAND_TX_P<0>	8 17
PP95D3	PP	1	PLACE_NEAR=U1800.K8.3MM	PCIE SOC TO NAND_TX_N<0>	8 17
PP95D4	PP	1	PLACE_NEAR=U1800.H8.3MM	PCIE SOC TO NAND_REFCLK_P	8 17
PP95D5	PP	1	PLACE_NEAR=U1800.H8.3MM	PCIE SOC TO NAND_REFCLK_N	8 17

WLAN PCIE TPS

PP95E0	PP	1	PLACE_NEAR=U0600.AW7.3MM	PCIE WLAN TO SOC_TX_P	8 51
PP95E1	PP	1	PLACE_NEAR=U0600.AV7.3MM	PCIE WLAN TO SOC_TX_N	8 51
PP95E2	PP	1	PLACE_NEAR=U0600.BA29.4MM	PCIE WLAN TO SOC_CLKREQ_L	8 51
PP95E3	PP	1	PLACE_NEAR=U4900.4.3MM	PCIE SOC TO WLAN_TX_P	35 51
PP95E4	PP	1	PLACE_NEAR=U4900.5.3MM	PCIE SOC TO WLAN_TX_N	35 51
PP95E5	PP	1	PLACE_NEAR=U4900.10.3MM	PCIE SOC TO WLAN_REFCLK_P	8 51
PP95E6	PP	1	PLACE_NEAR=U4900.11.3MM	PCIE SOC TO WLAN_REFCLK_N	8 51
PP95E7	PP	1	PLACE_NEAR=U4900.07.3MM	PCIE SOC TO WLAN_RESET_L	8 51

BB PCIE TPS

PP95F0	PP	1	PLACE_NEAR=U0600.BA8.3MM	LPDP_UT_TO_SOC_DATA_P<0>	7 23
PP95F1	PP	1	PLACE_NEAR=U0600.AY8.3MM	LPDP_UT_TO_SOC_DATA_N<0>	7 23
PP95F2	PP	1	PLACE_NEAR=U0600.BB9.4MM	LPDP_UT_TO_SOC_DATA_P<1>	7 23
PP95F3	PP	1	PLACE_NEAR=U0600.BA9.3MM	LPDP_UT_TO_SOC_DATA_N<1>	7 23
PP95F4	PP	1	PLACE_NEAR=U0600.AV8.3MM	LPDP_SOC_TO_UT_AUX	7 23

LPDPX TPS

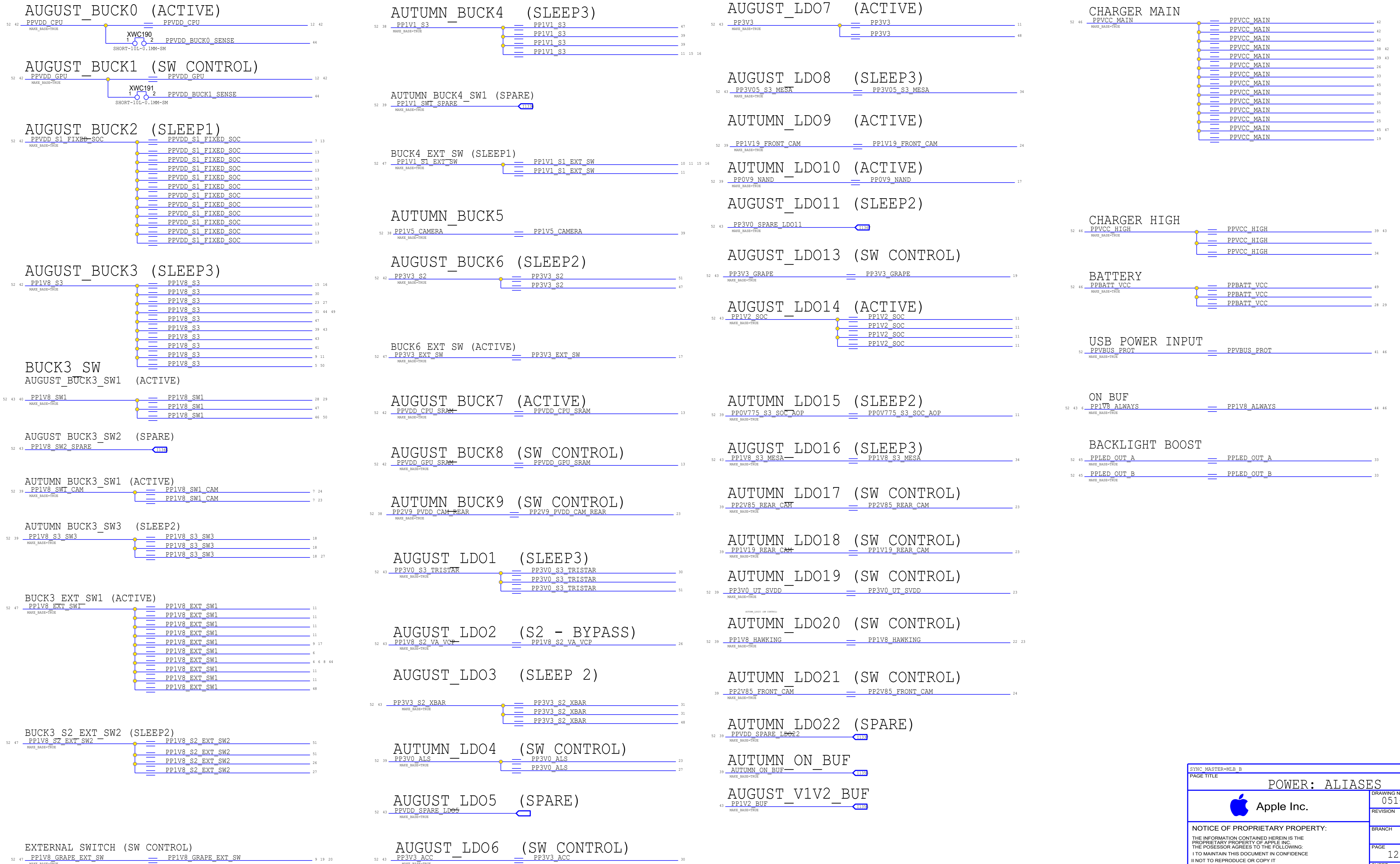
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PP95F1	PP	1	PLACE_NEAR=U0600.AY8.3MM	LPDP_UT_TO_SOC_DATA_N<0>	7 23
PP95F2	PP	1	PLACE_NEAR=U0600.BB9.4MM	LPDP_UT_TO_SOC_DATA_P<1>	7 23
PP95F3	PP	1	PLACE_NEAR=U0600.BA9.3MM	LPDP_UT_TO_SOC_DATA_N<1>	7 23
PP95F4	PP	1	PLACE_NEAR=U0600.AV8.3MM	LPDP_SOC_TO_UT_AUX	7 23

USB3

PP95BN	PP	1	PLACE_NEAR=U0600.AW40.3MM	USB3_SOC_RX_N	5 31
PP95BP	PP	1	PLACE_NEAR=U0600.AW41.3MM	USB3_SOC_RX_P	5 31

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POWER CONNECTIONS



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