



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.

REV	ECN	DESCRIPTION OF REVISION	APPD DATE
8	0006400877	ENGINEERING RELEASED	2016-06-14

D10 MLB - DVT

LAST_MODIFICATION= Tue Jun 14 15:20:28 2016

PAGE	<CSA>	CONTENTS	SYNC	DATE	PAGE	<CSA>	CONTENTS	SYNC	DATE
1	<CSA_PAGE1>	TABLE OF CONTENTS	<SYNC_MASTER1>	<SYNC_DATE1>	46	<CSA_PAGE46>	SMALL FORM FACTOR SPECIFIC	<SYNC_MASTER46>	<SYNC_DATE46>
2	<CSA_PAGE2>	SYSTEM:BOM TABLES	<SYNC_MASTER2>	<SYNC_DATE2>	47	<CSA_PAGE47>	I2C MAP: AP, TOUCH, HOMER, I2C5	<SYNC_MASTER47>	<SYNC_DATE47>
3	<CSA_PAGE3>	MLB SPECIFIC: BOM TABLE	<SYNC_MASTER3>	<SYNC_DATE3>	48	<CSA_PAGE48>	I2C MAP AOP	<SYNC_MASTER48>	<SYNC_DATE48>
4	<CSA_PAGE4>	SYSTEM:MECHANICAL, TESTPOINTS	<SYNC_MASTER4>	<SYNC_DATE4>	49	<CSA_PAGE49>	I2C TABLE	<SYNC_MASTER49>	<SYNC_DATE49>
5	<CSA_PAGE5>	SYSTEM:BOARDID	<SYNC_MASTER5>	<SYNC_DATE5>	50	<CSA_PAGE50>	spare	<SYNC_MASTER50>	<SYNC_DATE50>
6	<CSA_PAGE6>	spare	<SYNC_MASTER6>	<SYNC_DATE6>	51	<CSA_PAGE51>	spare	<SYNC_MASTER51>	<SYNC_DATE51>
7	<CSA_PAGE7>	SOC:JTAG,USB,XTAL	<SYNC_MASTER7>	<SYNC_DATE7>	52	<CSA_PAGE52>	MLB UNIQUE	<SYNC_MASTER52>	<SYNC_DATE52>
8	<CSA_PAGE8>	SOC:PCIE	<SYNC_MASTER8>	<SYNC_DATE8>	53	<CSA_PAGE53>	CELL,WIFI,NFC	<SYNC_MASTER53>	<SYNC_DATE53>
9	<CSA_PAGE9>	SOC:MIPI AND ISP	<SYNC_MASTER9>	<SYNC_DATE9>	54	<CSA_PAGE54>	WIFI_MLB SCHEMATIC	<SYNC_MASTER54>	<SYNC_DATE54>
10	<CSA_PAGE10>	SOC:LPDP	<SYNC_MASTER10>	<SYNC_DATE10>	55	<CSA_PAGE55>	PERENNIAL	<SYNC_MASTER55>	<SYNC_DATE55>
11	<CSA_PAGE11>	SOC:SERIAL	<SYNC_MASTER11>	<SYNC_DATE11>	56	<CSA_PAGE56>	WIFI FRONT-END [77]	<SYNC_MASTER56>	<SYNC_DATE56>
12	<CSA_PAGE12>	SOC:GPIO & UART	<SYNC_MASTER12>	<SYNC_DATE12>	57	<CSA_PAGE57>	pagel	<SYNC_MASTER57>	<SYNC_DATE57>
13	<CSA_PAGE13>	SOC:AOP	<SYNC_MASTER13>	<SYNC_DATE13>	58	<CSA_PAGE58>	NFC	<SYNC_MASTER58>	<SYNC_DATE58>
14	<CSA_PAGE14>	SOC:POWER (1/3)	<SYNC_MASTER14>	<SYNC_DATE14>	59	<CSA_PAGE59>	pagel [1]	<SYNC_MASTER59>	<SYNC_DATE59>
15	<CSA_PAGE15>	SOC:POWER (2/3)	<SYNC_MASTER15>	<SYNC_DATE15>	60	<CSA_PAGE60>	UAT MATCH AND TUNER CONNECTOR [2]	<SYNC_MASTER60>	<SYNC_DATE60>
16	<CSA_PAGE16>	SOC:POWER (3/3)	<SYNC_MASTER16>	<SYNC_DATE16>	61	<CSA_PAGE61>	BOM LIST	<SYNC_MASTER61>	<SYNC_DATE61>
17	<CSA_PAGE17>	NAND	<SYNC_MASTER17>	<SYNC_DATE17>	62	<CSA_PAGE62>	pagel	<SYNC_MASTER62>	<SYNC_DATE62>
18	<CSA_PAGE18>	SYSTEM POWER:PMU (1/3)	<SYNC_MASTER18>	<SYNC_DATE18>	63	<CSA_PAGE63>	BOM_OMIT_TABLE	<SYNC_MASTER63>	<SYNC_DATE63>
19	<CSA_PAGE19>	SYSTEM POWER:PMU (2/3)	<SYNC_MASTER19>	<SYNC_DATE19>	64	<CSA_PAGE64>	PMU: CONTROL AND CLOCKS	<SYNC_MASTER64>	<SYNC_DATE64>
20	<CSA_PAGE20>	SYSTEM POWER:PMU (3/3)	<SYNC_MASTER20>	<SYNC_DATE20>	65	<CSA_PAGE65>	PMU: SWITCHERS AND LDOS	<SYNC_MASTER65>	<SYNC_DATE65>
21	<CSA_PAGE21>	SYSTEM POWER:CHARGER	<SYNC_MASTER21>	<SYNC_DATE21>	66	<CSA_PAGE66>	BASEBAND: POWER2	<SYNC_MASTER66>	<SYNC_DATE66>
22	<CSA_PAGE22>	SYSTEM POWER:BATTERY CONN	<SYNC_MASTER22>	<SYNC_DATE22>	67	<CSA_PAGE67>	BASEBAND: CONTROL	<SYNC_MASTER67>	<SYNC_DATE67>
23	<CSA_PAGE23>	SYSTEM POWER:BOOST	<SYNC_MASTER23>	<SYNC_DATE23>	68	<CSA_PAGE68>	BASEBAND GPIO	<SYNC_MASTER68>	<SYNC_DATE68>
24	<CSA_PAGE24>	SENSORS	<SYNC_MASTER24>	<SYNC_DATE24>	69	<CSA_PAGE69>	TRANSCEIVER0/1: POWER	<SYNC_MASTER69>	<SYNC_DATE69>
25	<CSA_PAGE25>	B2B FILTERS: UTAH	<SYNC_MASTER25>	<SYNC_DATE25>	70	<CSA_PAGE70>	TRANSCEIVER0/1: TX PORTS	<SYNC_MASTER70>	<SYNC_DATE70>
26	<CSA_PAGE26>	CAMERA:STROBE DRIVER	<SYNC_MASTER26>	<SYNC_DATE26>	71	<CSA_PAGE71>	TRANSCEIVER0/1: PRX PORTS	<SYNC_MASTER71>	<SYNC_DATE71>
27	<CSA_PAGE27>	Accessory: Buck Circuit	<SYNC_MASTER27>	<SYNC_DATE27>	72	<CSA_PAGE72>	RECEIVE MATCHING	<SYNC_MASTER72>	<SYNC_DATE72>
28	<CSA_PAGE28>	TRINITY: FF SPECIFIC	<SYNC_MASTER28>	<SYNC_DATE28>	73	<CSA_PAGE73>	LOWER ANTENNA & COUPLERS	<SYNC_MASTER73>	<SYNC_DATE73>
29	<CSA_PAGE29>	B2B:FOREHEAD	<SYNC_MASTER29>	<SYNC_DATE29>	74	<CSA_PAGE74>	DIVERSITY RECEIVE ASM'S	<SYNC_MASTER74>	<SYNC_DATE74>
30	<CSA_PAGE30>	spare	<SYNC_MASTER30>	<SYNC_DATE30>	75	<CSA_PAGE75>	DIVERSITY RECEIVE LNA'S	<SYNC_MASTER75>	<SYNC_DATE75>
31	<CSA_PAGE31>	AUDIO:CALTRA CODEC (1/2)	<SYNC_MASTER31>	<SYNC_DATE31>	76	<CSA_PAGE76>	UPPER ANTENNA FEEDS	<SYNC_MASTER76>	<SYNC_DATE76>
32	<CSA_PAGE32>	AUDIO:CALTRA CODEC (2/2)	<SYNC_MASTER32>	<SYNC_DATE32>	77	<CSA_PAGE77>	PMU: ET MODULATOR	<SYNC_MASTER77>	<SYNC_DATE77>
33	<CSA_PAGE33>	AUDIO:SPEAKER AMP 2	<SYNC_MASTER33>	<SYNC_DATE33>	78	<CSA_PAGE78>	TEST POINTS & BOOT CONFIG	<SYNC_MASTER78>	<SYNC_DATE78>
34	<CSA_PAGE34>	AUDIO:SPEAKER AMP 1	<SYNC_MASTER34>	<SYNC_DATE34>	79	<CSA_PAGE79>	TDD TRANSMIT	<SYNC_MASTER79>	<SYNC_DATE79>
35	<CSA_PAGE35>	ARC:DRIVER	<SYNC_MASTER35>	<SYNC_DATE35>	80	<CSA_PAGE80>	FDD TRANSMIT	<SYNC_MASTER80>	<SYNC_DATE80>
36	<CSA_PAGE36>	ARC:MAGGIE	<SYNC_MASTER36>	<SYNC_DATE36>	81	<CSA_PAGE81>	ICEFALL, SIM, DEBUG_CONN	<SYNC_MASTER81>	<SYNC_DATE81>
37	<CSA_PAGE37>	DISPLAY & MESA:POWER	<SYNC_MASTER37>	<SYNC_DATE37>		<CSA_PAGE82>		<SYNC_MASTER82>	<SYNC_DATE82>
38	<CSA_PAGE38>	B2B:ORB & MESA	<SYNC_MASTER38>	<SYNC_DATE38>		<CSA_PAGE83>		<SYNC_MASTER83>	<SYNC_DATE83>
39	<CSA_PAGE39>	B2B FILTERS: DISPLAY & TOUCH	<SYNC_MASTER39>	<SYNC_DATE39>		<CSA_PAGE84>		<SYNC_MASTER84>	<SYNC_DATE84>
40	<CSA_PAGE40>	TRISTAR 2	<SYNC_MASTER40>	<SYNC_DATE40>		<CSA_PAGE85>		<SYNC_MASTER85>	<SYNC_DATE85>
41	<CSA_PAGE41>	B2B:DOCK FLEX	<SYNC_MASTER41>	<SYNC_DATE41>		<CSA_PAGE86>		<SYNC_MASTER86>	<SYNC_DATE86>
42	<CSA_PAGE42>	spare	<SYNC_MASTER42>	<SYNC_DATE42>		<CSA_PAGE87>		<SYNC_MASTER87>	<SYNC_DATE87>
43	<CSA_PAGE43>	spare	<SYNC_MASTER43>	<SYNC_DATE43>		<CSA_PAGE88>		<SYNC_MASTER88>	<SYNC_DATE88>
44	<CSA_PAGE44>	B2B FILTERS: RIGHT BUTTON FLEX	<SYNC_MASTER44>	<SYNC_DATE44>		<CSA_PAGE89>		<SYNC_MASTER89>	<SYNC_DATE89>
45	<CSA_PAGE45>	B2B: SMALL FF SPECIFIC	<SYNC_MASTER45>	<SYNC_DATE45>		<CSA_PAGE90>		<SYNC_MASTER90>	<SYNC_DATE90>

TABLE OF CONTENTS

Schematic & PCB Callouts

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-00419	1	SCH,MLB,D10	SCH	CRITICAL	?
820-00188	1	PCBF,MLB,D10	PCB	CRITICAL	?

System Block Diagram:
<http://rdar://problem/16684269>

SCH 051-00419
 BRD 820-00188
 MCO 056-01342

TABLE OF CONTENTS			
PAGE TITLE		spare	
DRAWING NUMBER		051-00419	SIZE D
REVISION		8.0.0	
BRANCH			
PAGE		6 OF 53	
SHEET		6 OF 81	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED			

NAND BOM Options

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335800169	1	NAND, 8, 32GB, 16nm, MLC	U1701	CRITICAL	NAND_32G
335800182	1	NAND, 8, 128GB, 16nm, TLC	U1701	CRITICAL	NAND_128G
335800156	1	NAND, 8, 256GB, 3Dv3, TLC	U1701	CRITICAL	NAND_256G
13880867	5	CAP, X5R, 100F, 20V, 4.7V, 0.450M, 0805, 0402	C1748, C1713, C1716, C1721, C1733	CRITICAL	NAND_32G
138800003	5	CAP, X5R, 100F, 20V, 4.7V, 0.450M, 0805, 0402	C1748, C1713, C1716, C1721, C1733	CRITICAL	NAND_128G
138800003	5	CAP, X5R, 100F, 20V, 4.7V, 0.450M, 0805, 0402	C1748, C1713, C1716, C1721, C1733	CRITICAL	NAND_256G

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335800201	335800169	ALTERNATE	U1701	T, 15nm, MLC, 32GB
335800209	335800169	ALTERNATE	U1701	S, 16nm, MLC, 32GB
335800195	335800182	ALTERNATE	U1701	SS, 1Ynm, TLC, 128GB
335800180	335800182	ALTERNATE	U1701	T, 15nm, TLC, 128GB
335800179	335800182	ALTERNATE	U1701	SD, 15nm, TLC, 128GB
335800148	335800183	ALTERNATE	U1701	SD, 3Dv2, TLC, 256GB
335800190	335800183	ALTERNATE	U1701	SS, 3Dv3, TLC, 256GB

#22686038: See Radar

Magnesium Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
338800173	338800203	ALTERNATE	U2402	Seeger Mfg. 1-28 Elove Resistor

Carbon Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
338800087	338800226	ALTERNATE	U2401, U2404	Updated version of Carbon

UT LDO Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
353800889	353800015	ALTERNATE	U2501	RE, 100 RES, 1.200V, OP 0.450M-05

Mamba LDO Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
353800932	353800576	ALTERNATE	U3801	RE, 100 RES, 1.70V

I2C5 Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335800234	335800233	ALTERNATE	U1101	I2C5 ALTERNATE

Active Diode Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
376800106	376800047	ALTERNATE	Q2101	DIODES INC. ACT DIODE

DDR PLL Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155800095	155800068	ALTERNATE	FL1501	FORM 80, 1000M, 25V, 0.00M, 200M, 0.0005

Power Inductor Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152800118	152800075	ALTERNATE	ALL	100, PMU, 0805, 1.0 OHM, 2.5A, 1.5H, 0805, 2014
152800077	152800397	ALTERNATE	ALL	100, PMU, 0805, 1.0 OHM, 2.5A, 1.5H, 0805, 2014
152800121	152800081	ALTERNATE	ALL	100, PMU, 0805, 1.0 OHM, 2.5A, 1.5H, 0805, 2014
152800123	15281936	ALTERNATE	ALL	100, PMU, 0805, 1.0 OHM, 2.5A, 1.5H, 0805, 2014
152800402	152800366	ALTERNATE	ALL	100, PMU, 0805, 1.0 OHM, 2.5A, 1.5H, 0805, 2014
152800297	15281843	ALTERNATE	ALL	CITEC 2012 10R
152800365	152800297	ALTERNATE	ALL	CITEC 2012 10R
152800398	152800204	ALTERNATE	ALL	100, PMU, 1.000M, 0.1V, 1.0V, 2.000M, 0.012
152800120	152800077	ALTERNATE	ALL	For Chestnut Inductor; so it doesn't interfere with PMU inductor Buck 7 alts
152800117	152800074	ALTERNATE	ALL	100, PMU, 0805, 1.0 OHM, 2.5A, 1.5H, 0805, 2014

updated 11/12

updated 11/12
reverted 11/13

For Chestnut inductor; so it doesn't interfere with PMU inductor Buck 7 alts
Except BUCKS LX (BUCKS LX is Taiyo only)

Global R/C Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
11880764	11880717	ALTERNATE	ALL	RES, 3.92K, 0.1%, 0201
13880702	13880657	ALTERNATE	ALL	CAP, X5R, 4.70F, 4V, 0410
138800006	13880835	ALTERNATE	ALL	CAP, X5R, 4.70F, 4V, 0410
138800005	138800003	ALTERNATE	ALL	CAP, X5R, 100F, 20V, 4.7V, 0.450M, 0805, 0402
138800048	138800003	ALTERNATE	ALL	CAP, X5R, 100F, 20V, 4.7V, 0.450M, 0805, 0402
13880648	13880652	ALTERNATE	ALL	CAP, X5R, 100F, 20V, 4.7V, 0.450M, 0805, 0402
13280400	13280436	ALTERNATE	ALL	CAP, X5R, 1.000F, 0.1V, 0.100M, 0805
138800024	13880986	ALTERNATE	ALL	0805, 1.000F, 0.1V, 0.100M, 0805, 0805
13880706	13880739	ALTERNATE	ALL	CAP, X5R, 100F, 20V, 4.7V, 0.450M, 0805, 0402
13880945	13880739	ALTERNATE	ALL	CAP, X5R, 100F, 20V, 4.7V, 0.450M, 0805, 0402
13280436	13280400	ALTERNATE	ALL	CAP, X5R, 1.000F, 0.1V, 0.100M, 0805

Global Ferrite Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155800067	15580581	ALTERNATE	ALL	FERR, 2400HM, 0.330HM DCR, 0201
15580581	155800067	ALTERNATE	ALL	FERR, 2400HM, 0.330HM DCR, 0201
155800012	155800168	ALTERNATE	ALL	F10R, 65 OHMS, 0405
155800194	15580610	ALTERNATE	ALL	FERR 8D, 1500HM, 70K
155800200	15580610	ALTERNATE	ALL	FERR 8D, 1500HM, 70K
152800489	152800456	ALTERNATE	ALL	FERR 8D, 0.470H, 70K

Global Varistor Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
37780168	37780140	ALTERNATE	ALL	VARIATOR, 6.8V, 100PF, 01005

ACC BUCK CIRCUIT Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
371800087	371800064	ALTERNATE	D2700	DIODES, 800VTR, 30V, 200M, 0201
152800558	152800557	ALTERNATE	L2700	IND, MFD, 0.470H, 2.5A, 800uOhm, 1608
376800166	376800164	ALTERNATE	Q2700, Q2701	PFET, 12V, 0.024
353801007	353801039	ALTERNATE	U2710	IC, LOGIC SWITCH, MCM04

PAGE TITLE		spare	
DRAWING NUMBER		051-00419	SIZE D
REVISION		8.0.0	
BRANCH			
PAGE		6 OF 53	
SHEET		6 OF 81	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED			



Apple Inc.

D10 EEEE CALLOUTS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-6838	1	EEEE CODE FOR 639-01754	EEEE_GXD5	CRITICAL	EEEE_BEST
825-6838	1	EEEE CODE FOR 639-01755	EEEE_GXD6	CRITICAL	EEEE_SUPREME
825-6838	1	EEEE CODE FOR 639-01756	EEEE_GXD7	CRITICAL	EEEE_EXTREME
825-6838	1	EEEE CODE FOR 639-02372	EEEE_H6TF	CRITICAL	EEEE_BEST_ROW
825-6838	1	EEEE CODE FOR 639-02373	EEEE_H6TG	CRITICAL	EEEE_SUPREME_ROW
825-6838	1	EEEE CODE FOR 639-02374	EEEE_H6TH	CRITICAL	EEEE_EXTREME_ROW

CAYMAN DDR Alternates


PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339800254	339800253	ALTERNATE	ALL	DDR-H, 2G, B1
339800255	339800253	ALTERNATE	ALL	DDR-S, 2G, B1

Cap 2.2UF Alternates

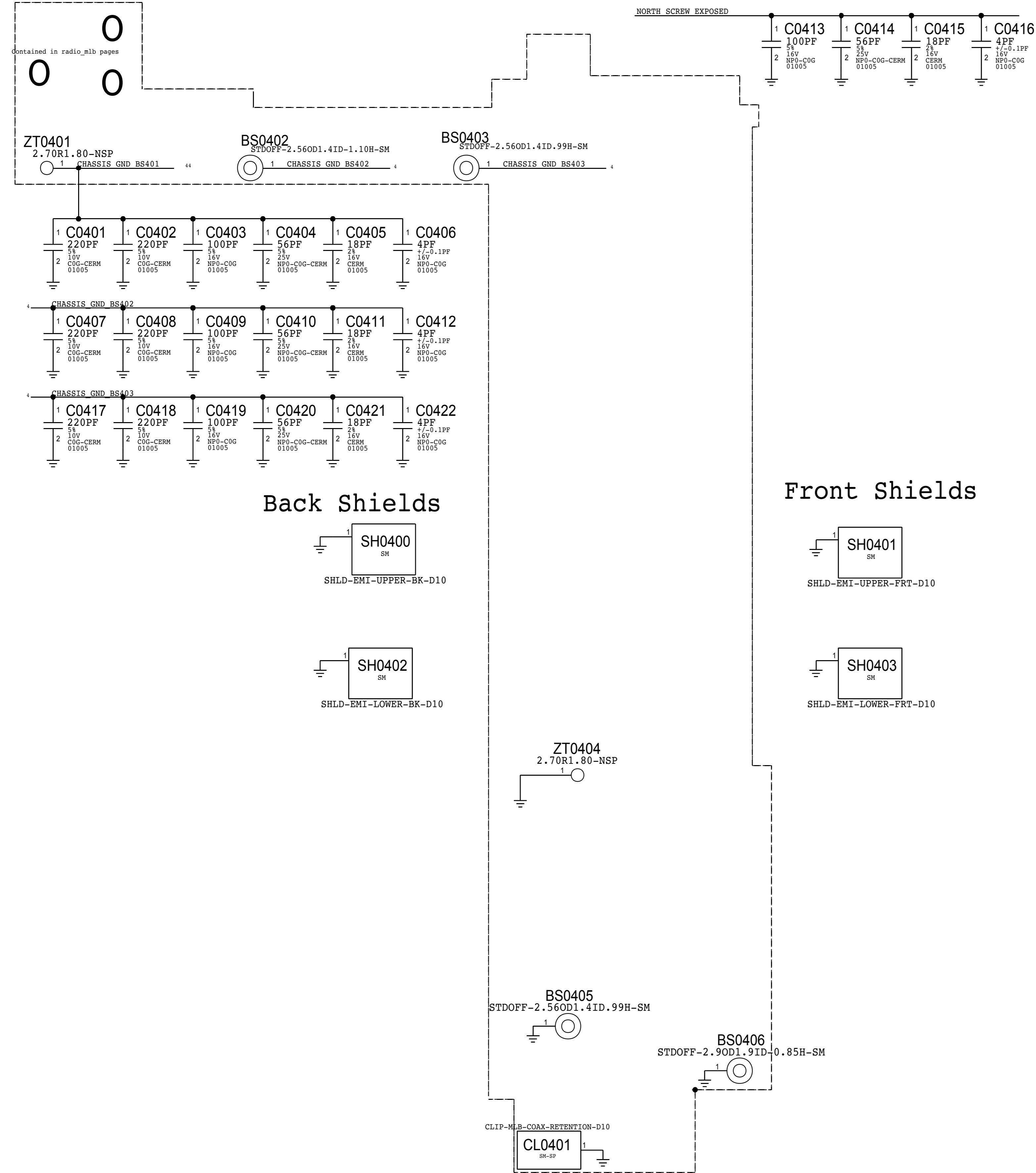
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138800049	138800032	ALTERNATE	(C2507,C2531)	Cap_C08_05A_2.2UF_010V_10%_X0000A #25634778: Exclude Xyocera as 2.2UF all at only C2507/C2531 REFDES (other refdes no impact)
13880831	138800032	ALTERNATE	ALL	Cap_C08_05A_2.2UF_010V_10%_X0000A

D10x Specific BOM Callouts

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152800117	1	TAL10_100_P08_08L0_10H_3_6A_0_6600M_2016	L1803	CRITICAL	B5LX_FAIYO #24681501
11780156	2	RES_RP_1K_0805_5A_1/20K_01005	R4808,R4809	CRITICAL	UTAH_C #24429229

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

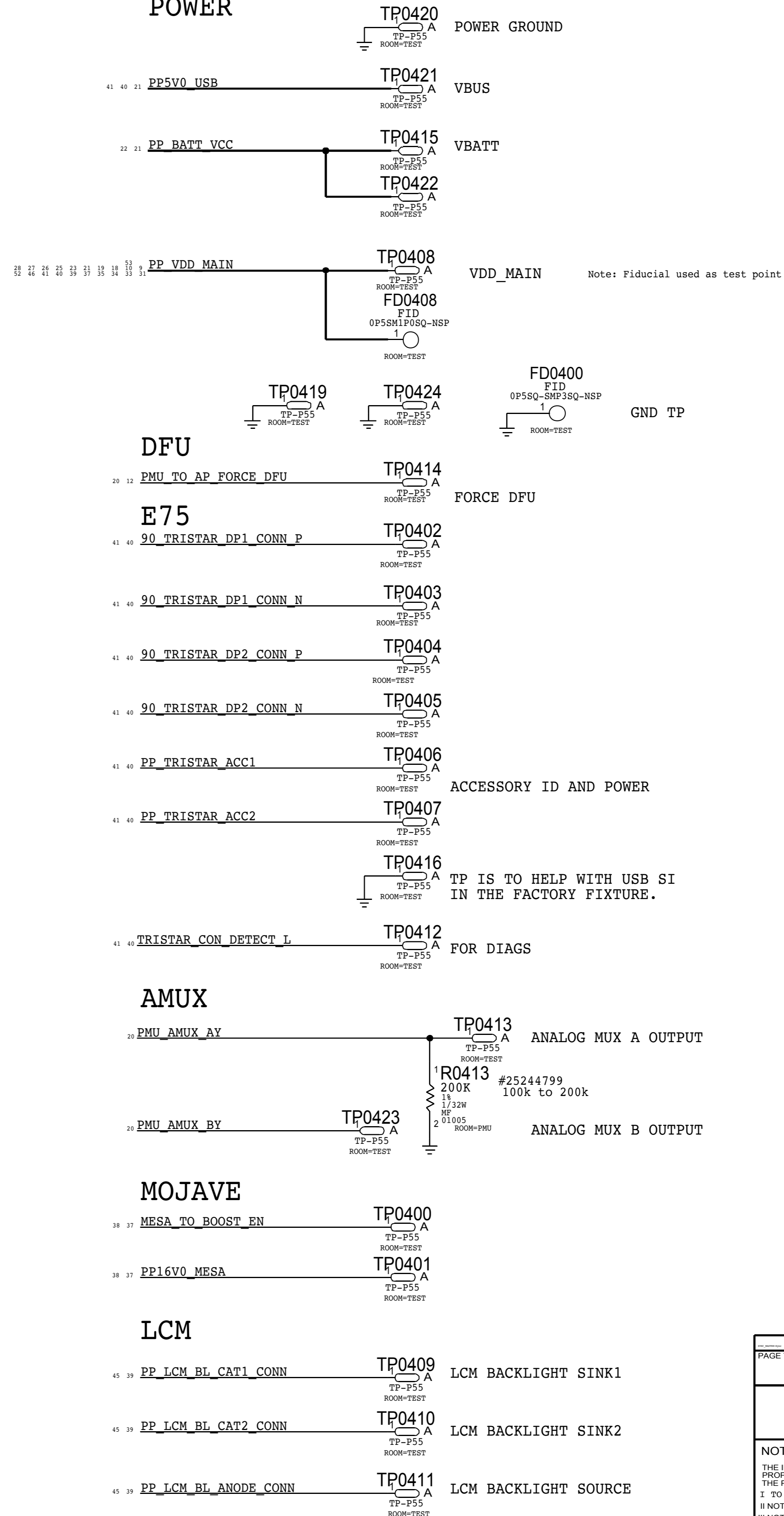
Current as of D10 MCO 056-01342-78



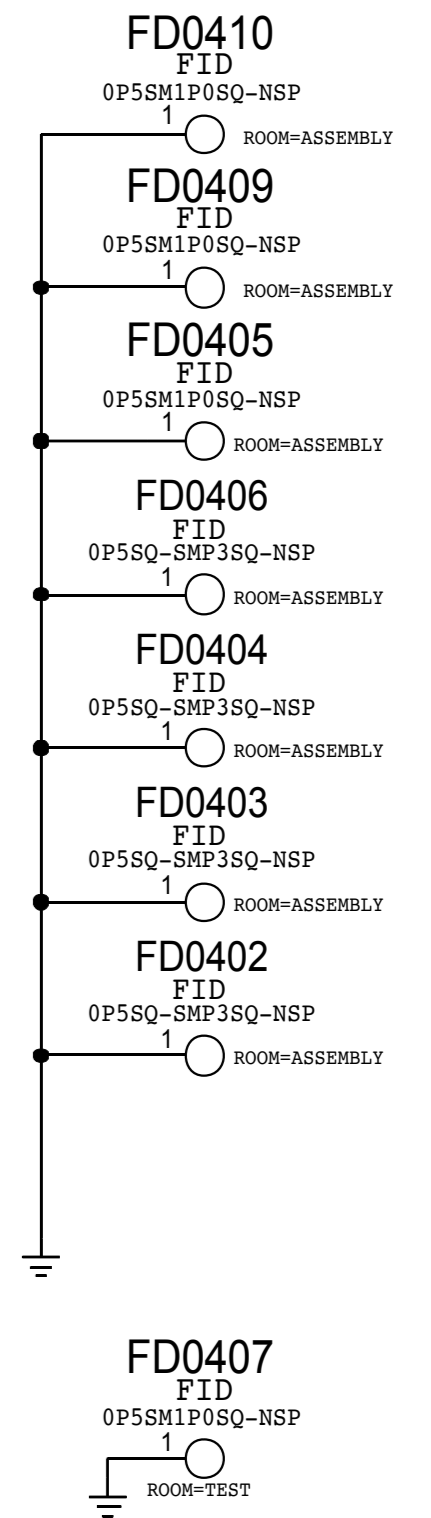
TOP SIDE

TESTPOINTS

POWER

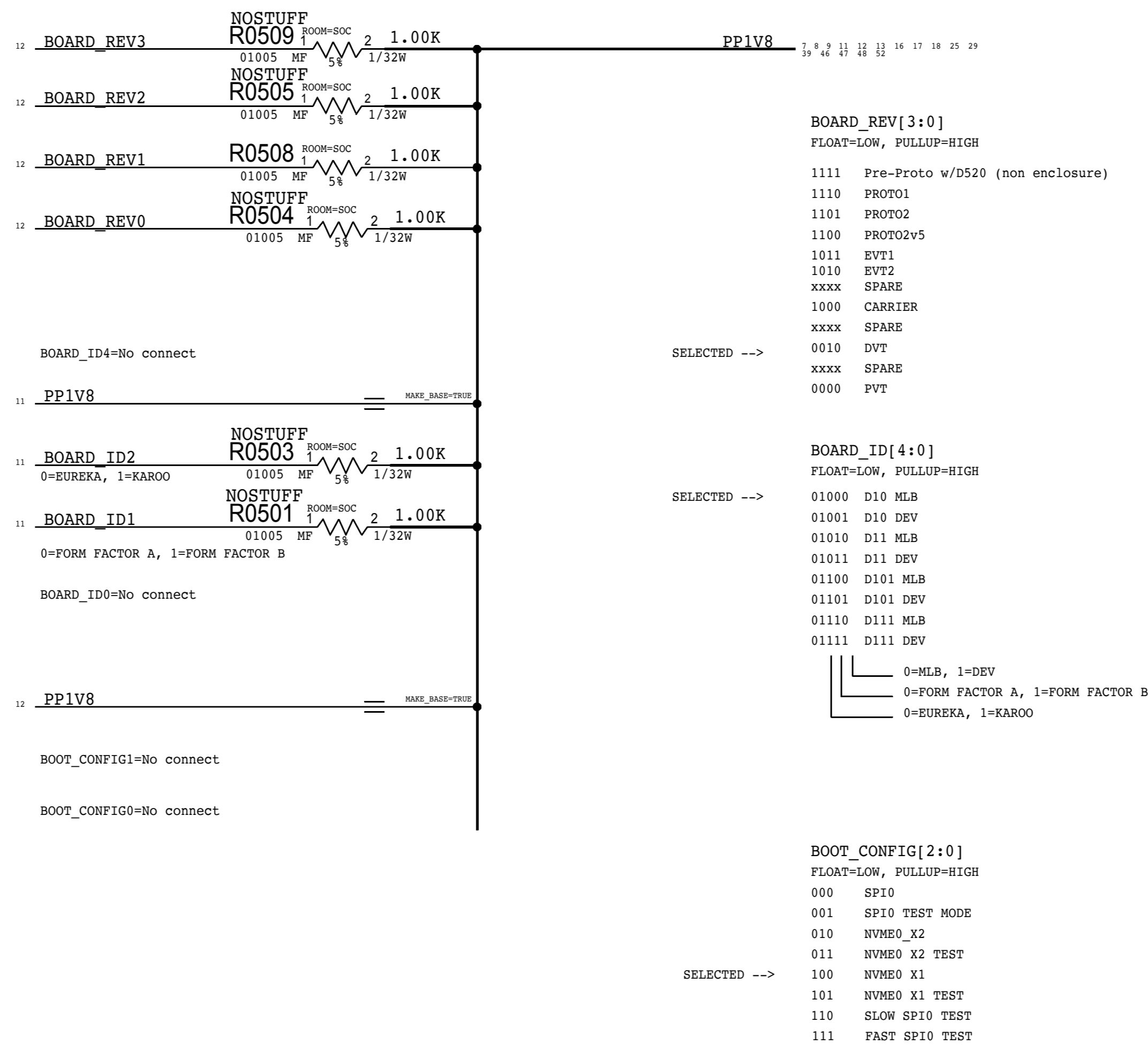


FIDUCIALS



PAGE TITLE		
Apple Inc. spare		
DRAWING NUMBER	051-00419	SIZE D
REVISION	8.0.0	
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		

BOOTSTRAPPING:BOARD REV BOARD ID BOOT CONFIG



8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

8

7

6


5

4

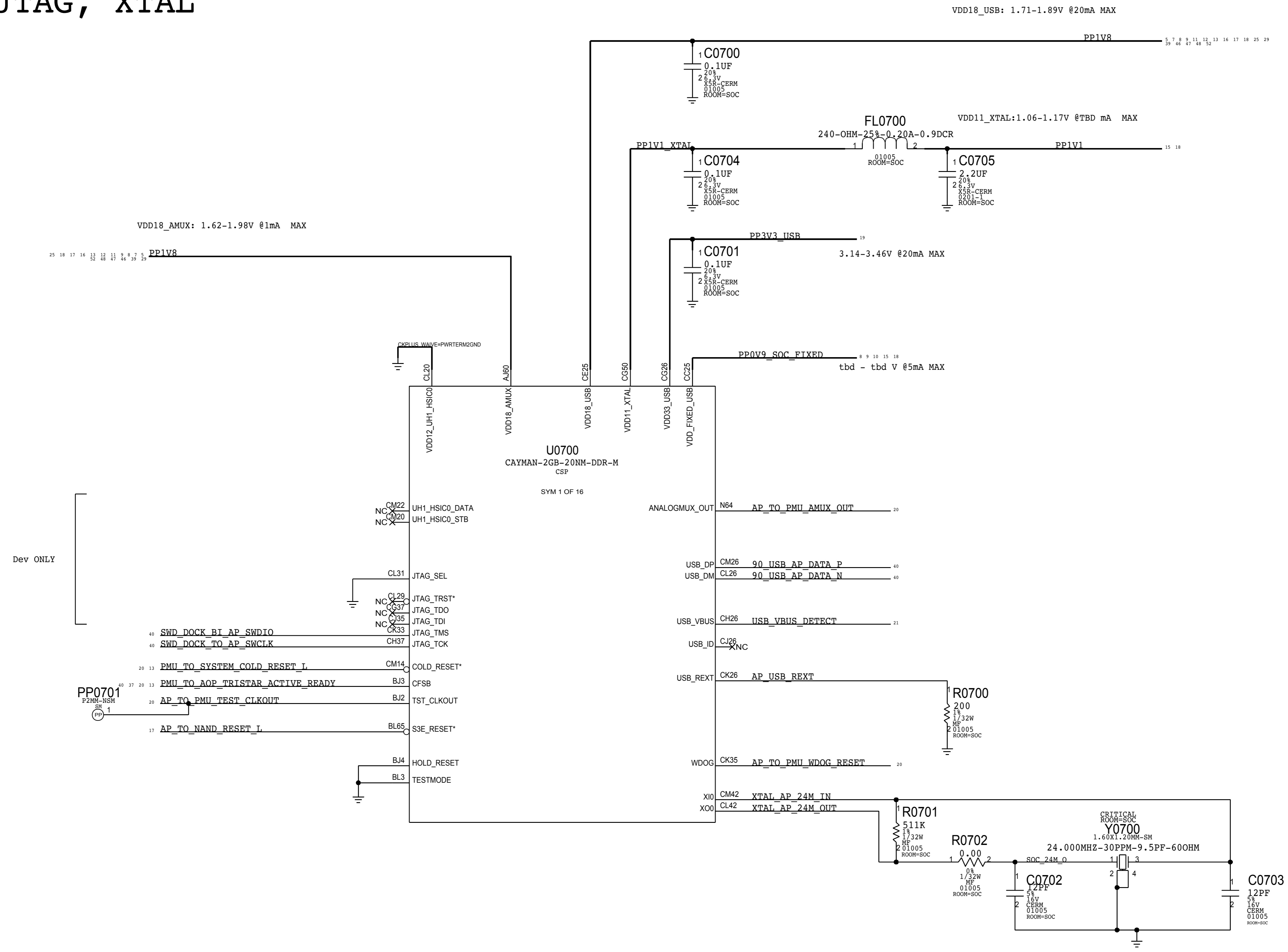
3

2

1

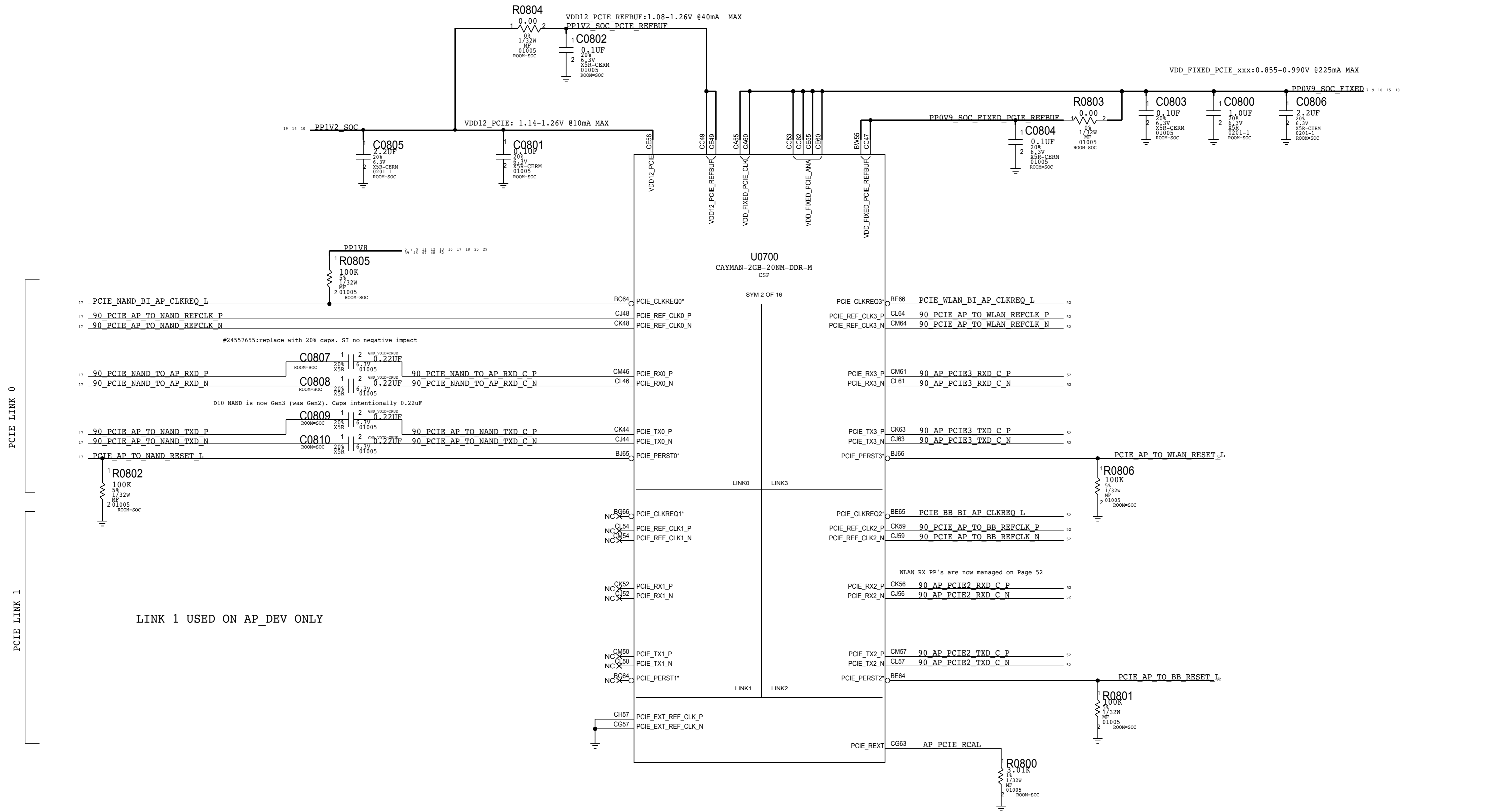
PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
<small>THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:</small> I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	
		6 OF 53	
		SHEET	
		6 OF 81	

SOC - USB, JTAG, XTAL



PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

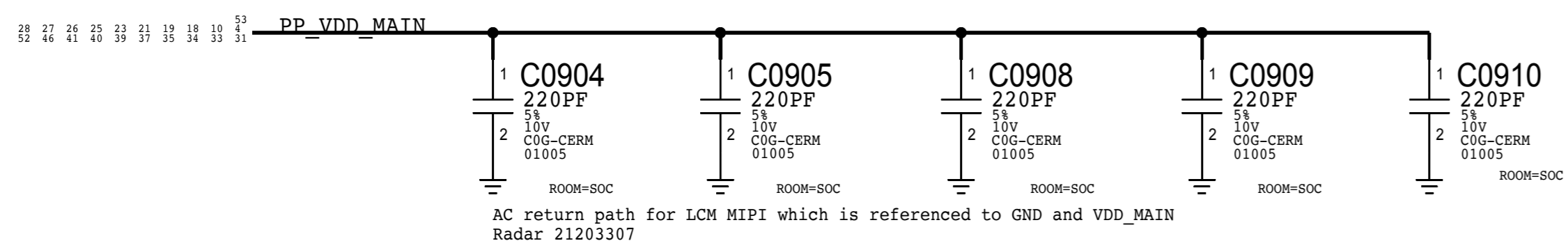
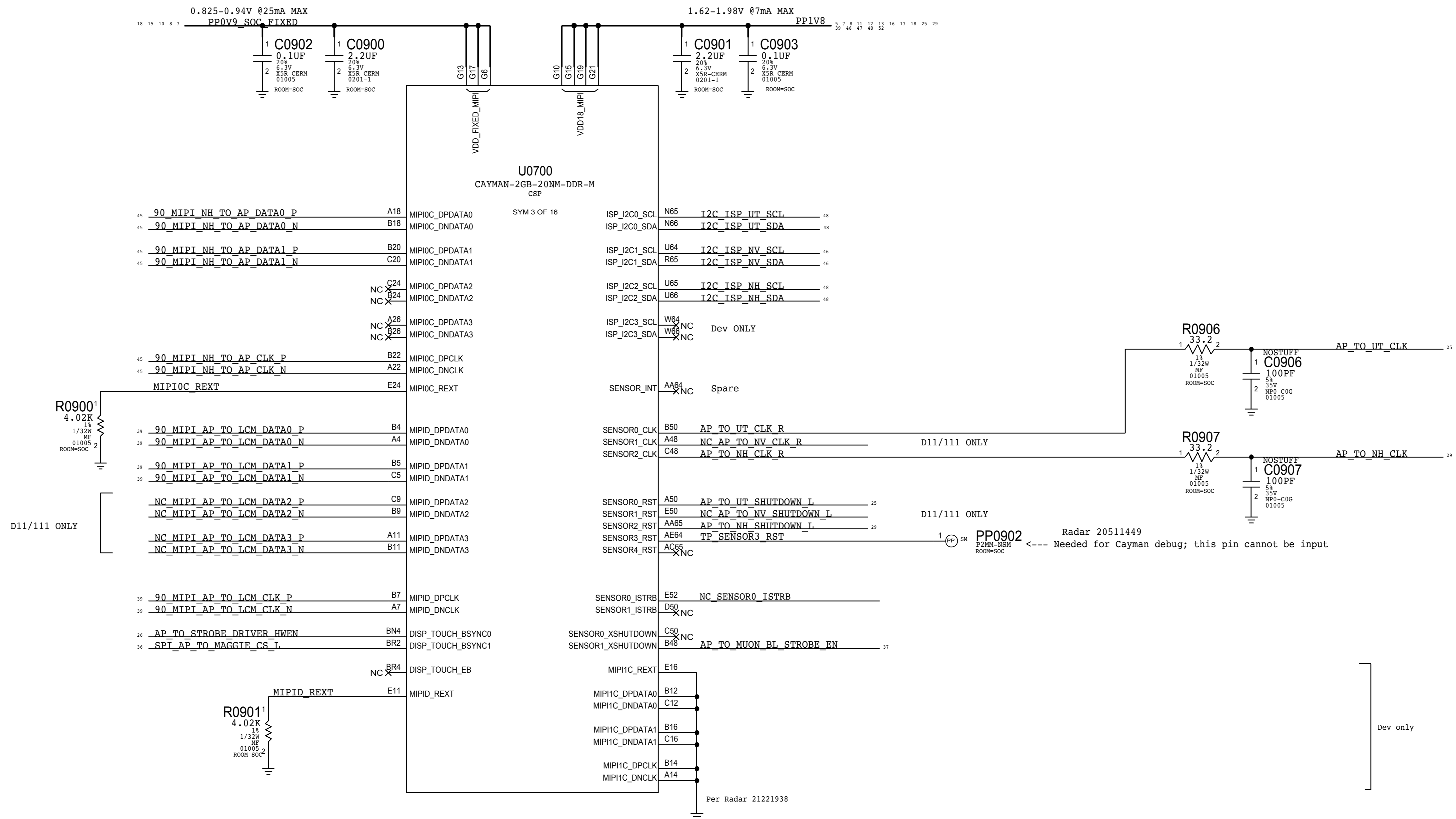
SOC - PCIE INTERFACES



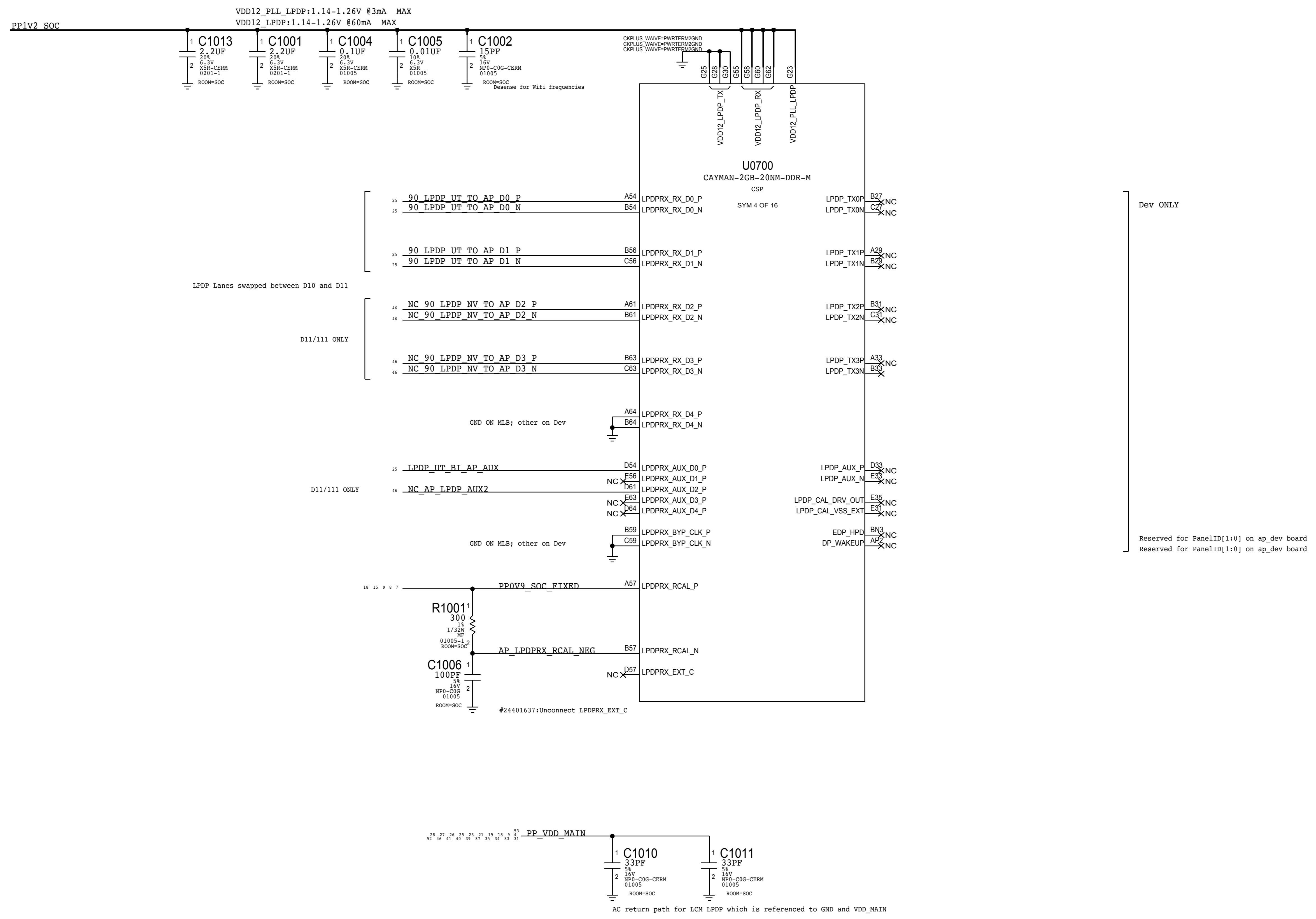
LINK 1 USED ON AP_DEV ONLY

PAGE TITLE		spare	
DRAWING NUMBER		051-00419	SIZE D
REVISION		8.0.0	
BRANCH			
PAGE		6 OF 53	
SHEET		6 OF 81	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED			

SOC - MIPI & ISP INTERFACES

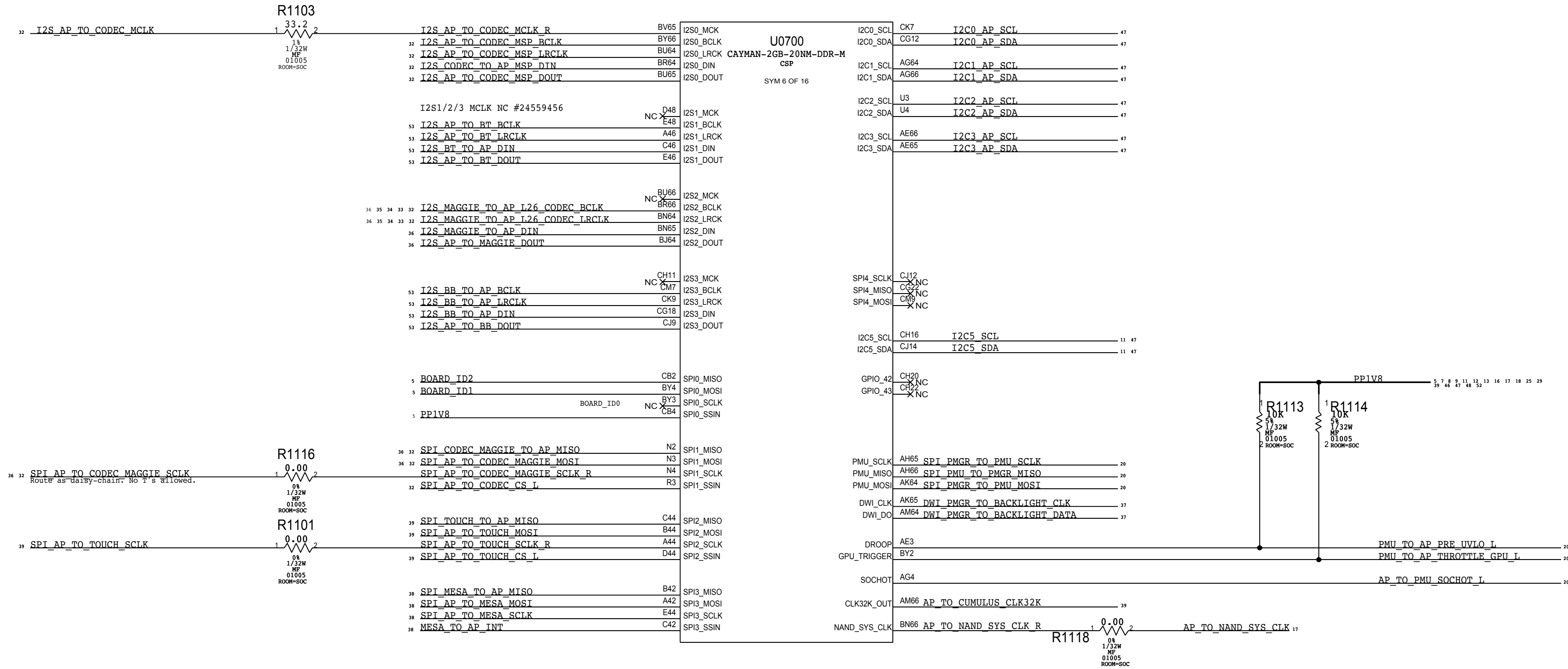


PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	6 OF 53
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	6 OF 81
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

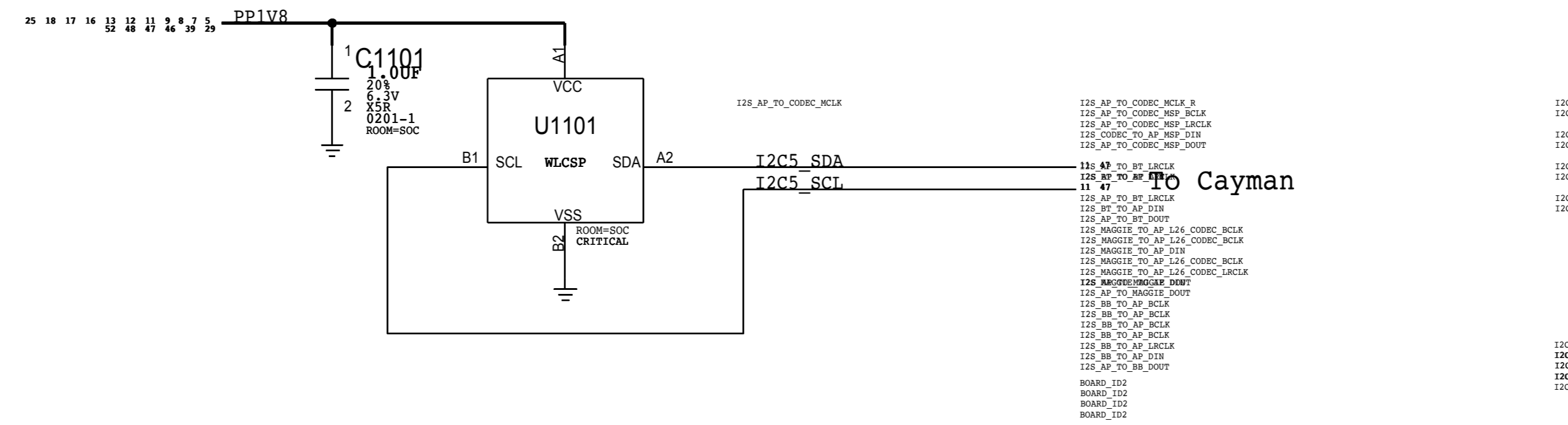


PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

SOC - SERIAL INTERFACES

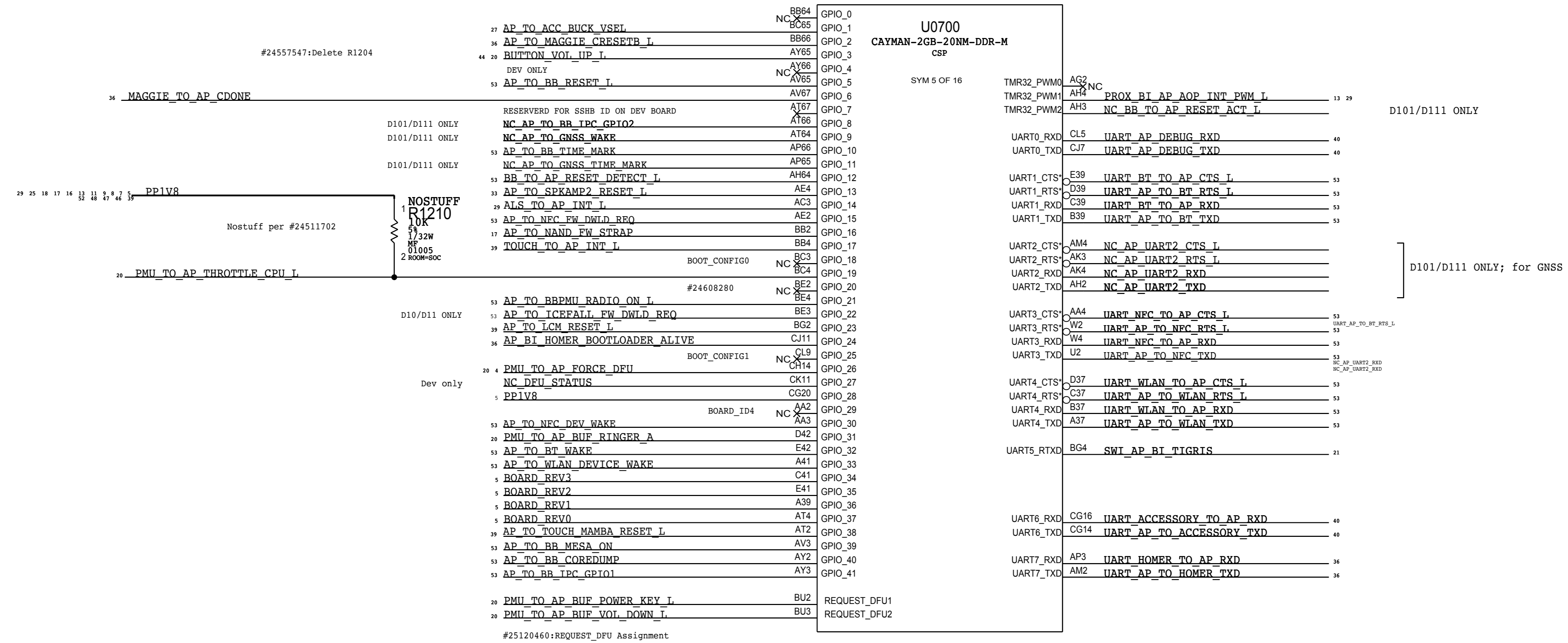


I2C5
See Radar#25316444 for Details



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR PUBLISH IT IN WHOLE OR PART III ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

SOC - GPIO INTERFACES



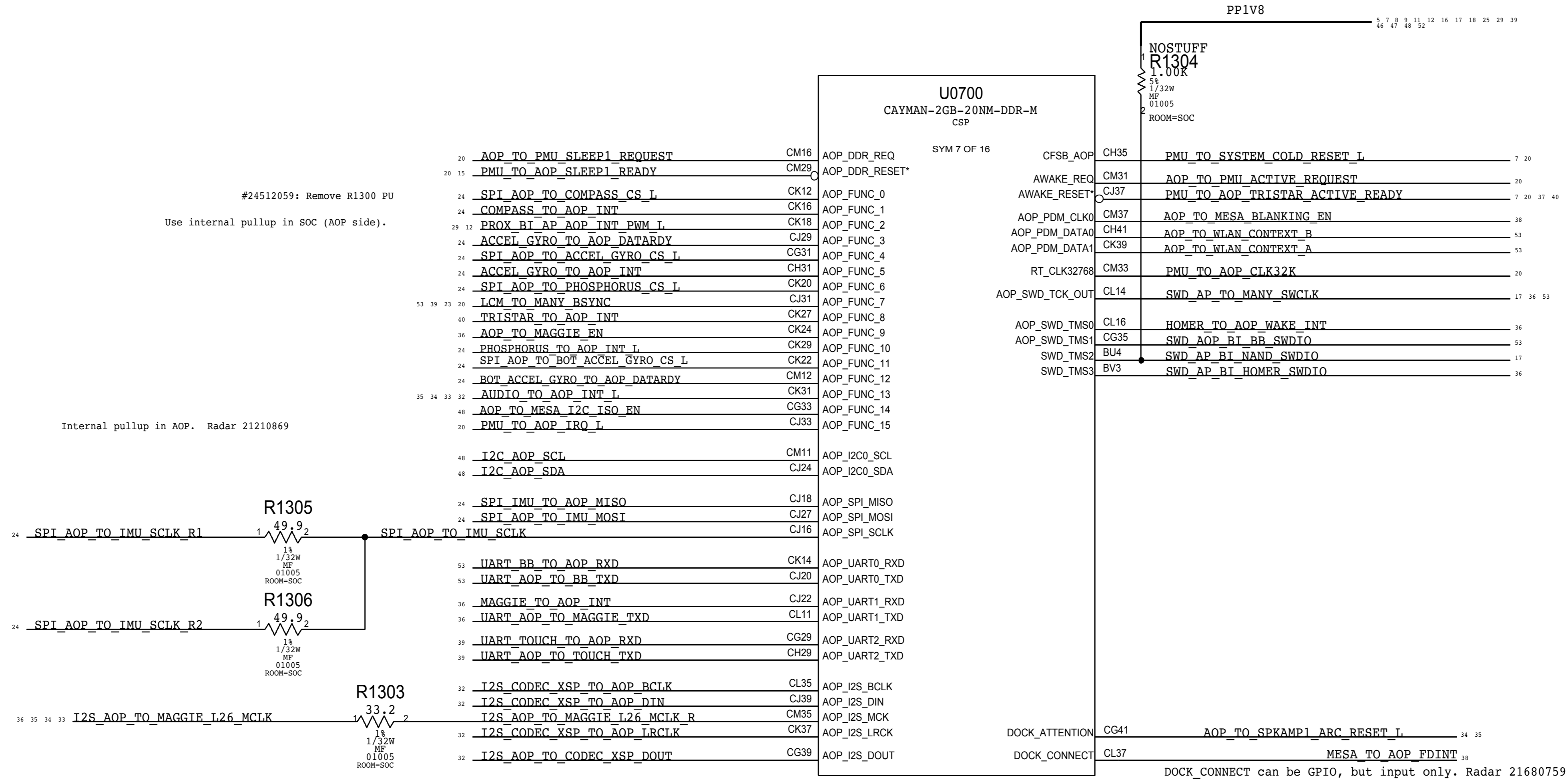
SOC - AOP

#24512059: Remove R1300 PU
Use internal pullup in SOC (AOP side).

Internal pullup in AOP. Radar 21210869

#25756894:North Carbon R1 (+Mg,P)

#25756894:South Carbon R2

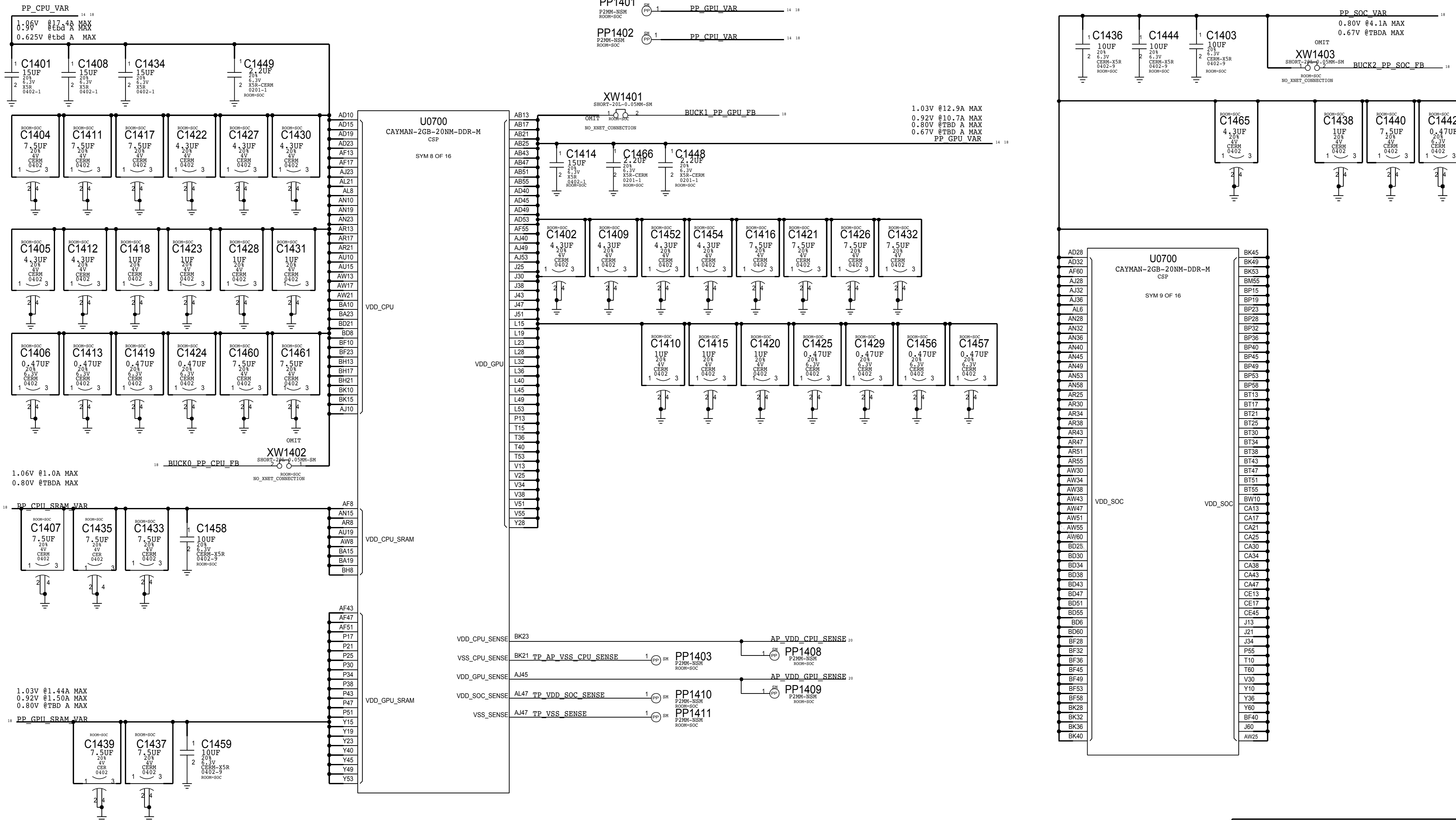


BB_SWDIO has pullup in Radio_MLB pages

DOCK_CONNECT can be GPIO, but input only. Radar 21680759

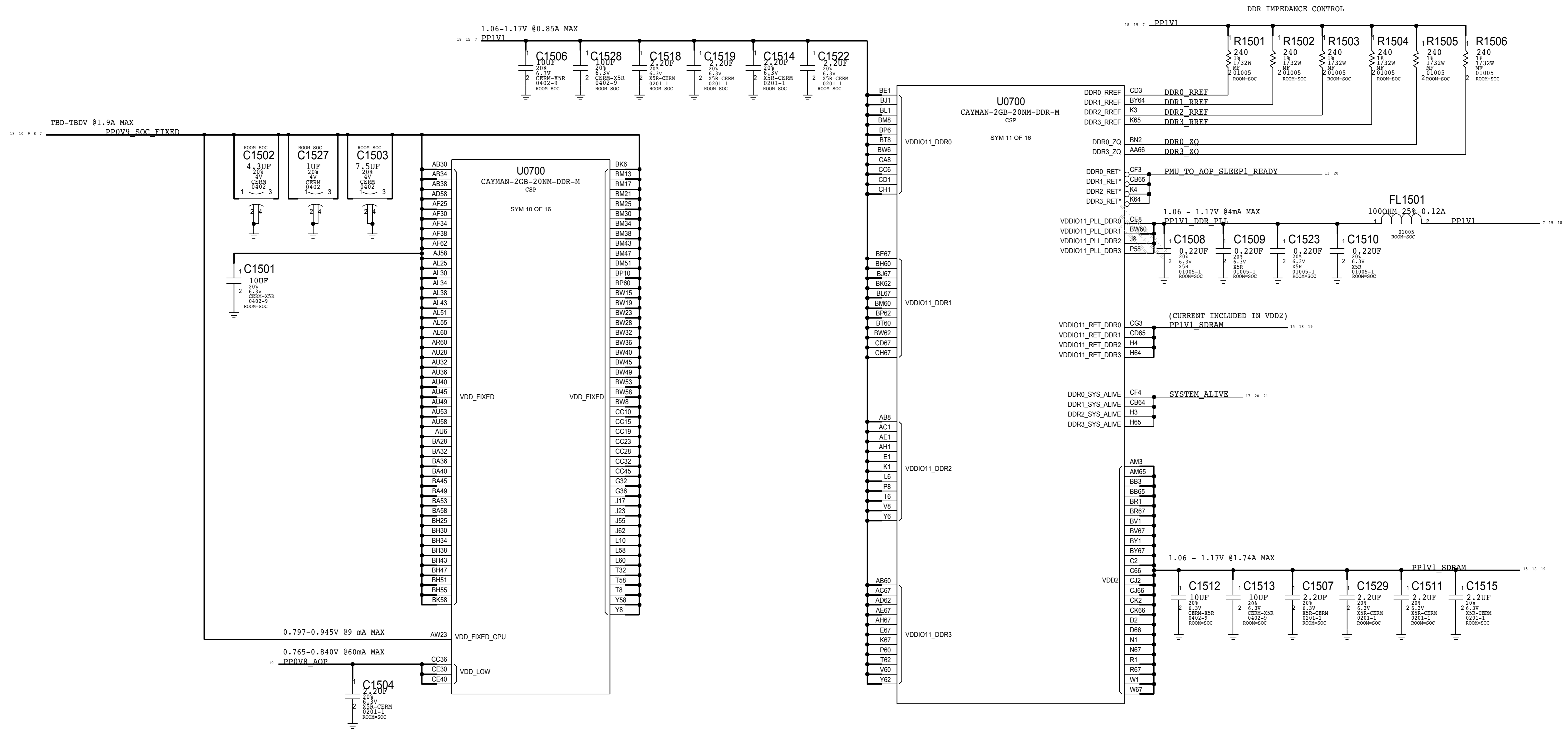
PAGE TITLE		spare	
	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	6 OF 53
		SHEET	6 OF 81

SOC - CPU, GPU & SOC RAILS



PAGE TITLE	
spare	
	DRAWING NUMBER 051-00419
	REVISION 8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	
BRANCH	
PAGE	6 OF 53
SHEET	6 OF 81

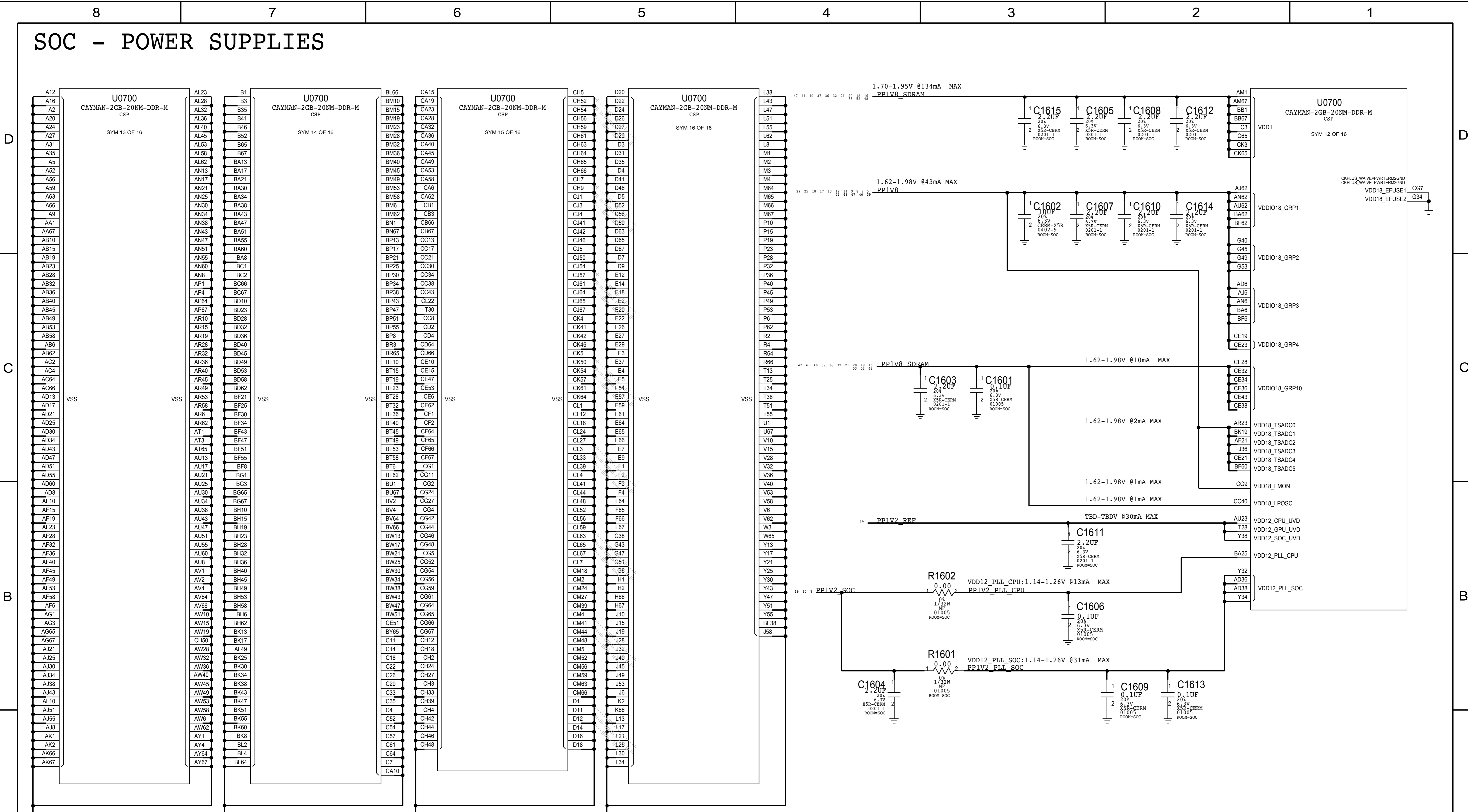
SOC - POWER SUPPLIES



PAGE TITLE		Apple Inc.	
DRAWING NUMBER		051-00419	
REVISION		8.0.0	
BRANCH		6 OF 53	
PAGE		6 OF 81	
SHEET		6 OF 81	

NOTICE OF PROPRIETARY PROPERTY:
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:
 I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART
 IV ALL RIGHTS RESERVED

SOC - POWER SUPPLIES



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

D

C

B

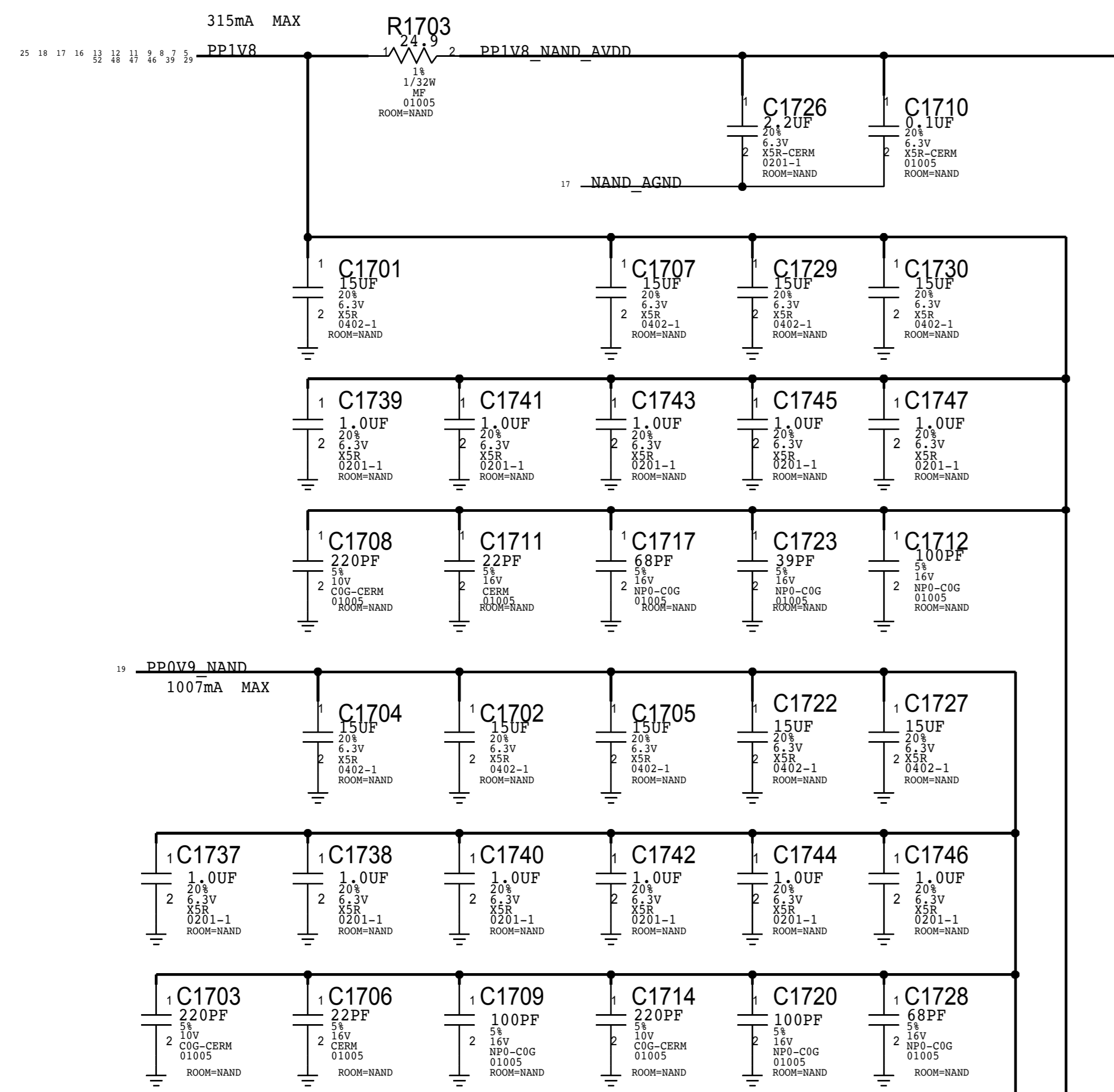
A

D

C

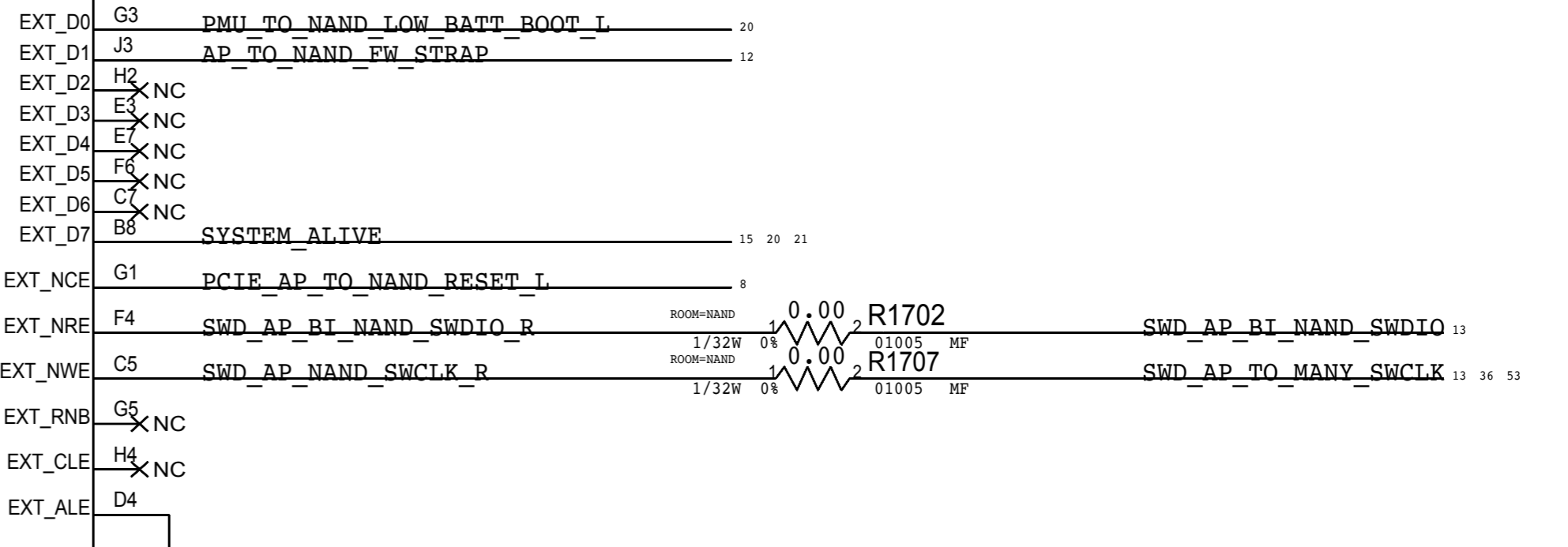
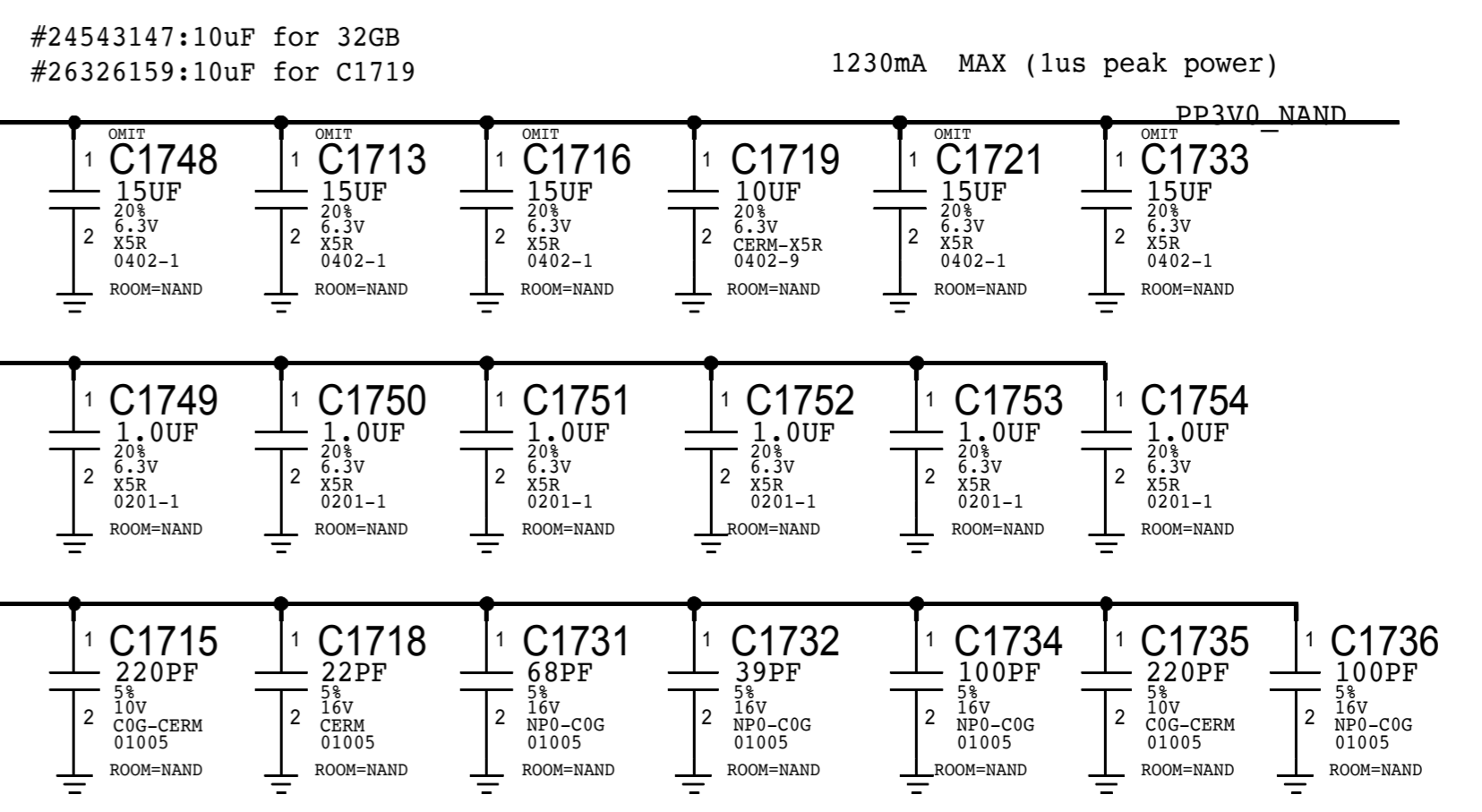
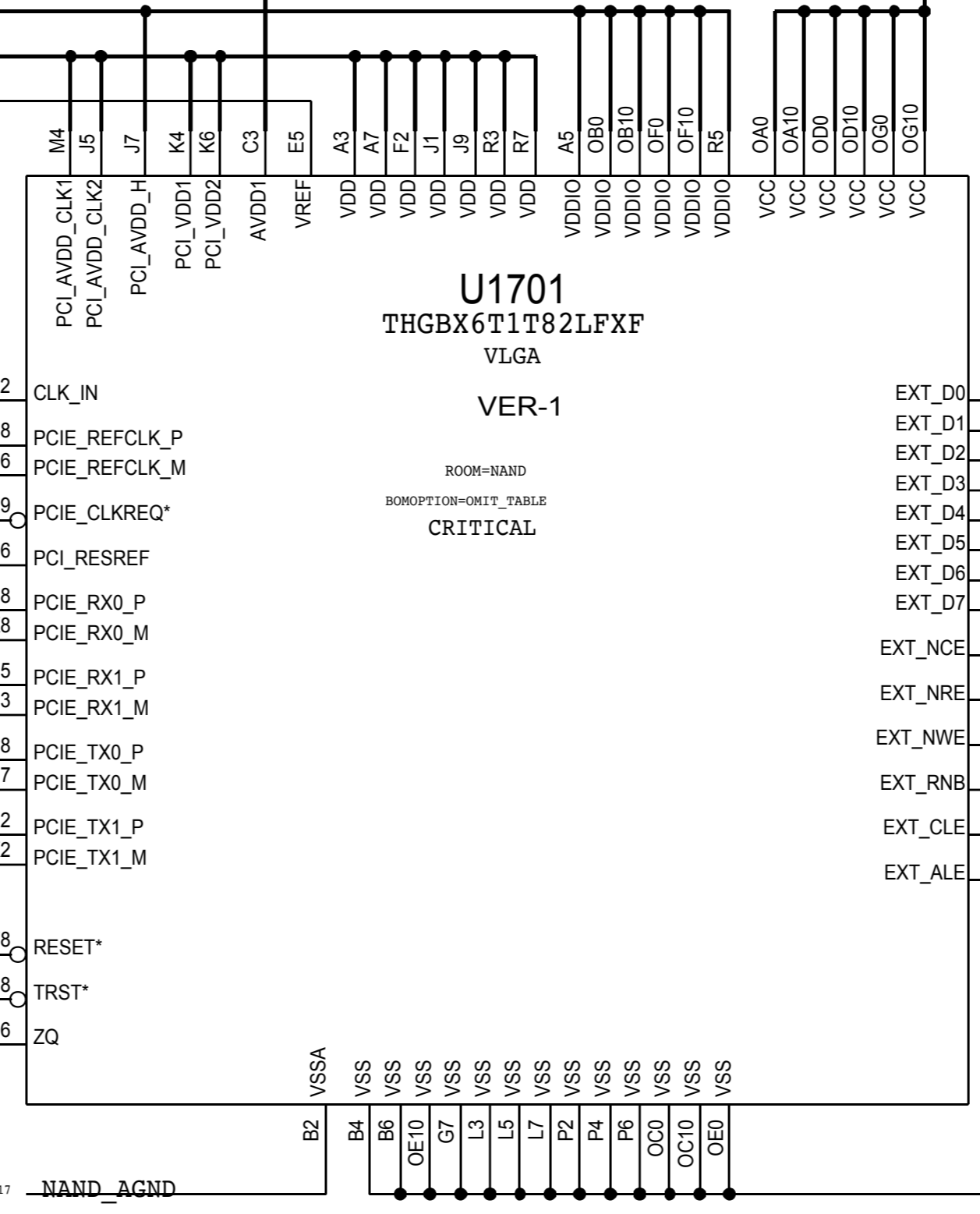
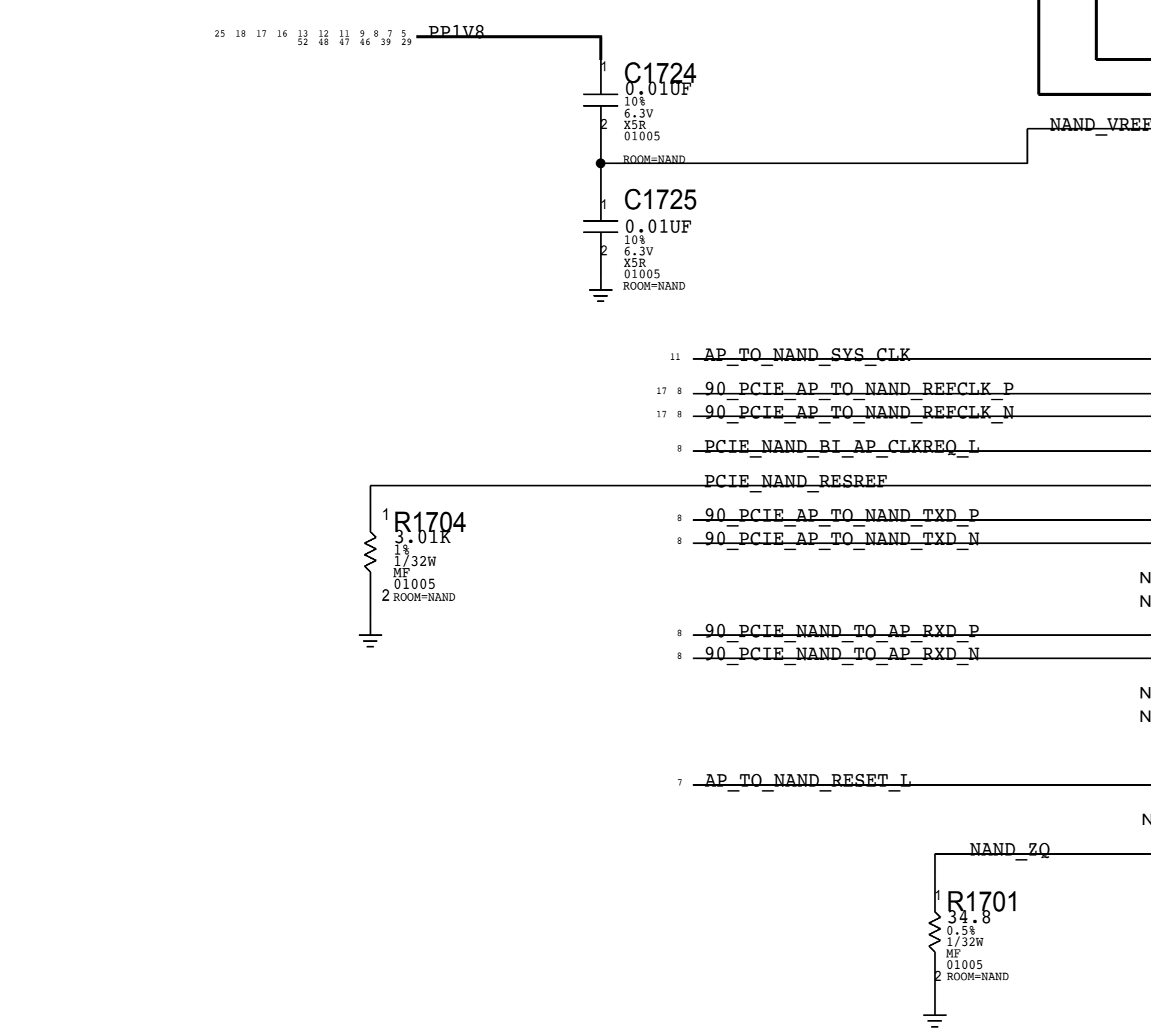
B

A

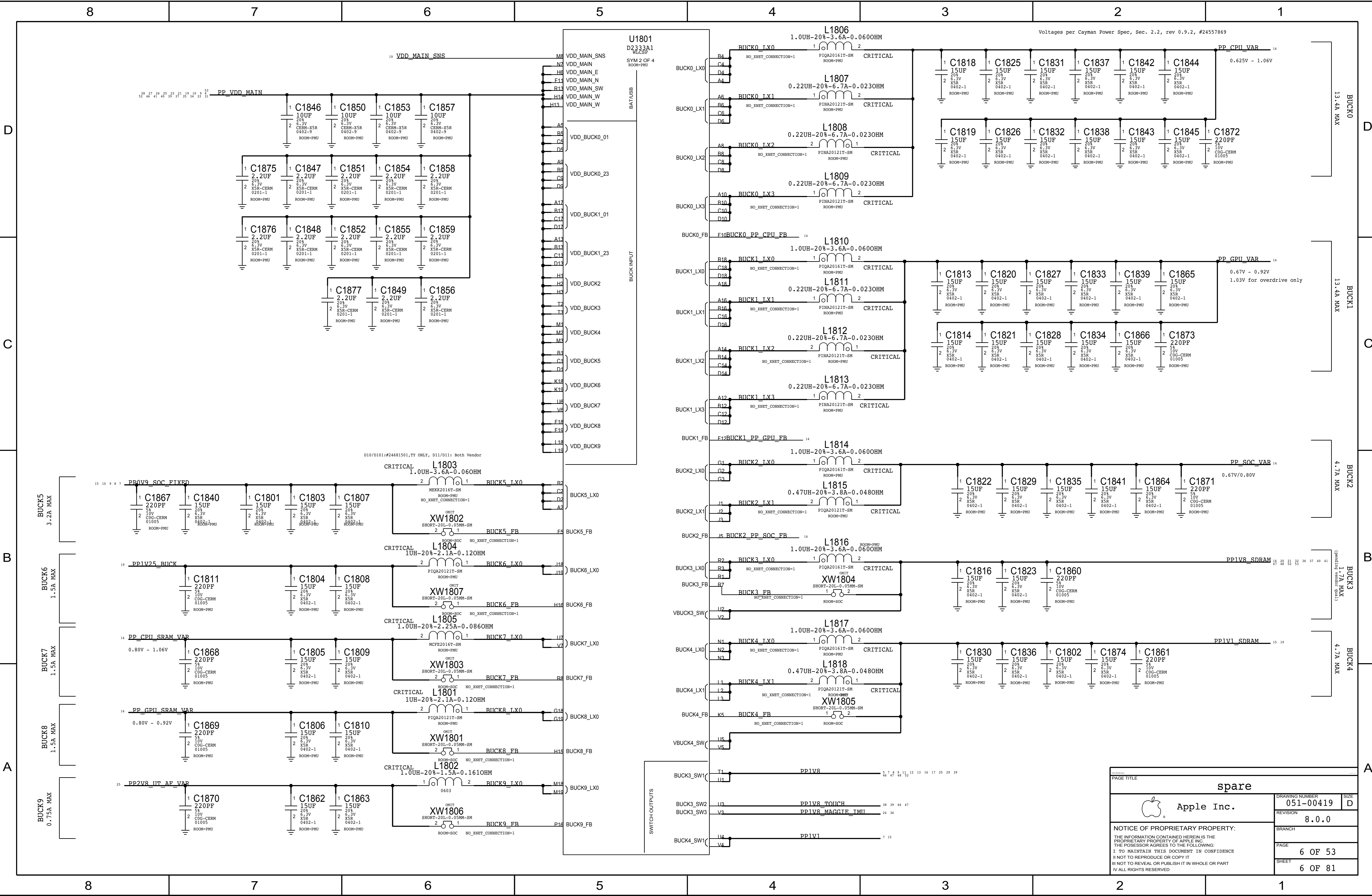


PROBE POINTS

- 17 8 90_PCIE_AP_TO_NAND_REFCLK_P 1 PP1701
- 17 8 90_PCIE_AP_TO_NAND_REFCLK_N 1 PP1702



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	6 OF 53
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	6 OF 81
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	6 OF 53
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	6 OF 81
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

ADELYN LDO SPECS

LDO#	ADJ. RANGE, LOW	ADJ. RANGE, HI	ACCURACY	MAX. CURRENT
LD01 (Ca)	1.2-2.475V	2.4-3.675V	+/-1.4%	50mA
LD02 (Ca)	1.2-2.475V	2.4-3.675V	+/-2.5%	50mA
LD03 (Ca)	1.2-2.475V	2.4-3.675V	+/-2.5%	50mA
LD04 (D)	0.7-1.2V		+/-2.5%	60mA
LD05 (F)	2.5-3.6V(tbc)		+/-75mV	1000mA
LD06 (Cb)	1.2-2.475V	2.4-3.675V	+/-2.5%	250mA (500/100mA in bypass)
LD07 (Cb)	1.2-2.475V	2.4-3.675V	+/-30mV	250mA
LD08 (Cb)	1.2-2.475V	2.4-3.675V	+/-30mV	250mA
LD09 (Cb)	1.2-2.475V	2.4-3.675V	+/-25mV	250mA
LD010 (Ga)	0.7-1.2V		+/-4.5%	1150mA

LDO#	ADJ. RANGE, LOW	ADJ. RANGE, HI	ACCURACY	MAX. CURRENT
LD011 (Cb)	1.2-2.475V	2.4-3.675V	+/-30mV	250mA
LD012 (E)	1.8V		+/-5%	10mA
LD013 (Cb)	1.2-2.475V	2.4-3.675V	+/-30mV	250mA
LD014 (Gb)	0.7-1.4V		+/-3.0%	400mA
LD015 (Ca)	1.2-2.475V	2.4-3.675V	+/-2.5%	50mA
LD016 (Cb)	1.2-2.475V	2.4-3.675V	+/-30mV	250mA
LD017 (Ca)	1.2-2.475V	2.4-3.675V	+/-2.5%	50mA
LD018 (Gb)	0.7-1.4V		+/-3.0%	400mA
LD019 (Gb)	0.7-1.4V		+/-3.0%	400mA
LDO_RTC	2.5V		+/-2.0%	10mA
BUF_1V2	1.2V		+/-5.0%	10mA

D

D

C

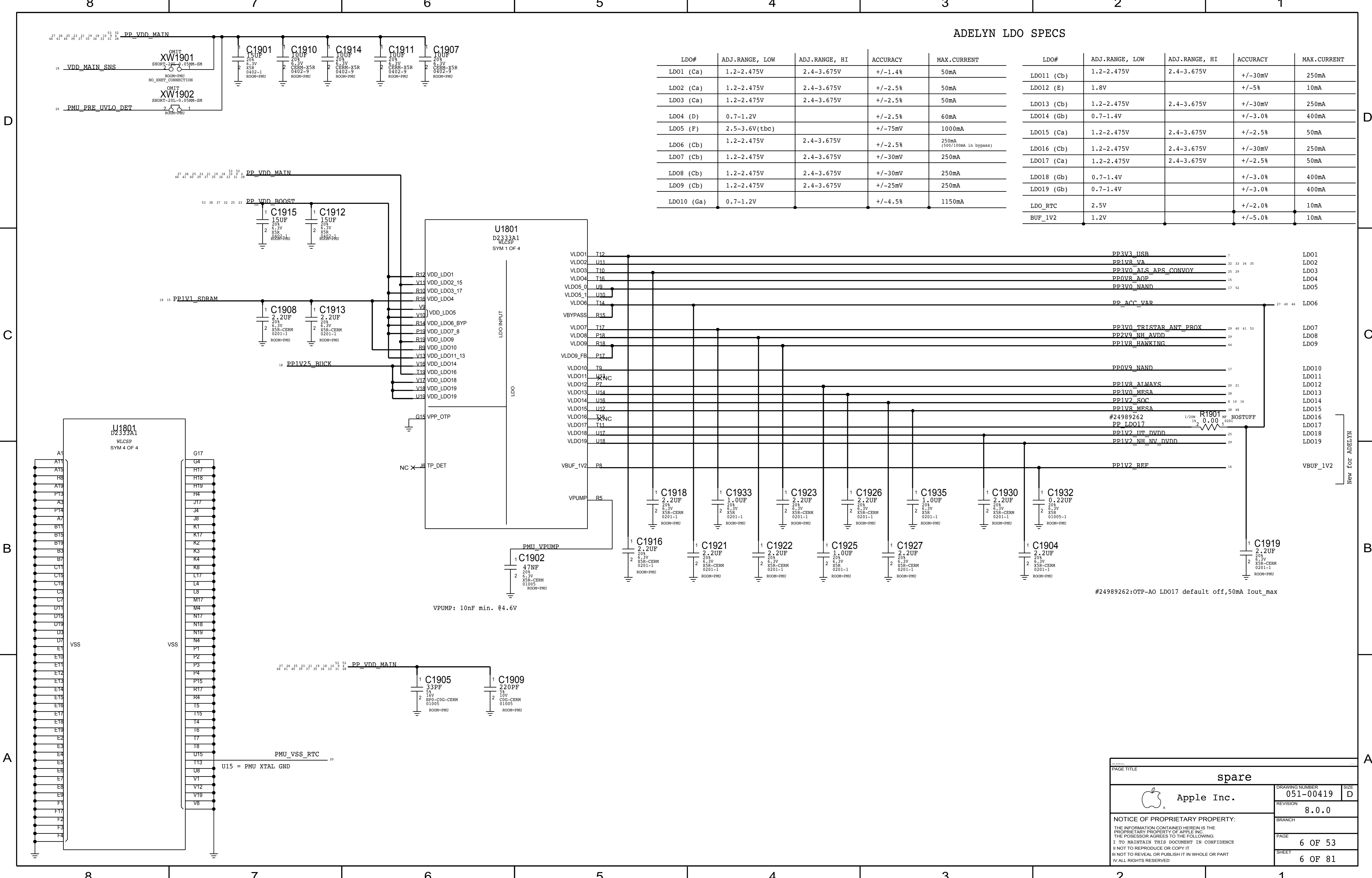
C

B

B

A

A



#24989262:OTP-AO LD017 default off,50mA Iout_max

PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	6 OF 53
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	6 OF 81
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

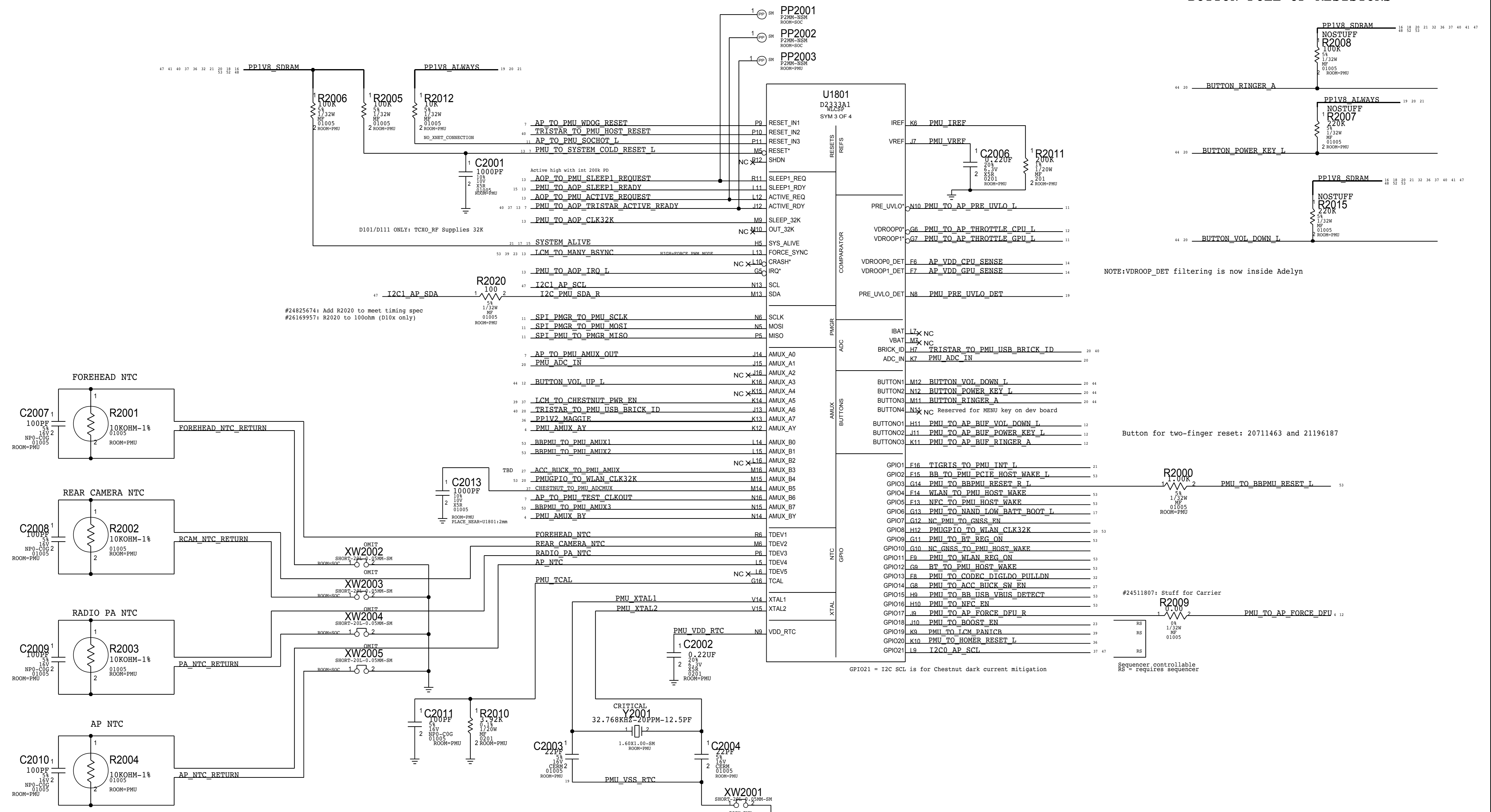
D

C

B

A

BUTTON PULL-UP RESISTORS



#24825674: Add R2020 to meet timing spec
#26169957: R2020 to 100ohm (D10x only)

NOTE:VDR00P_DET filtering is now inside Adelyn

Button for two-finger reset: 20711463 and 21196187

#24511807: Stuff for Carrier

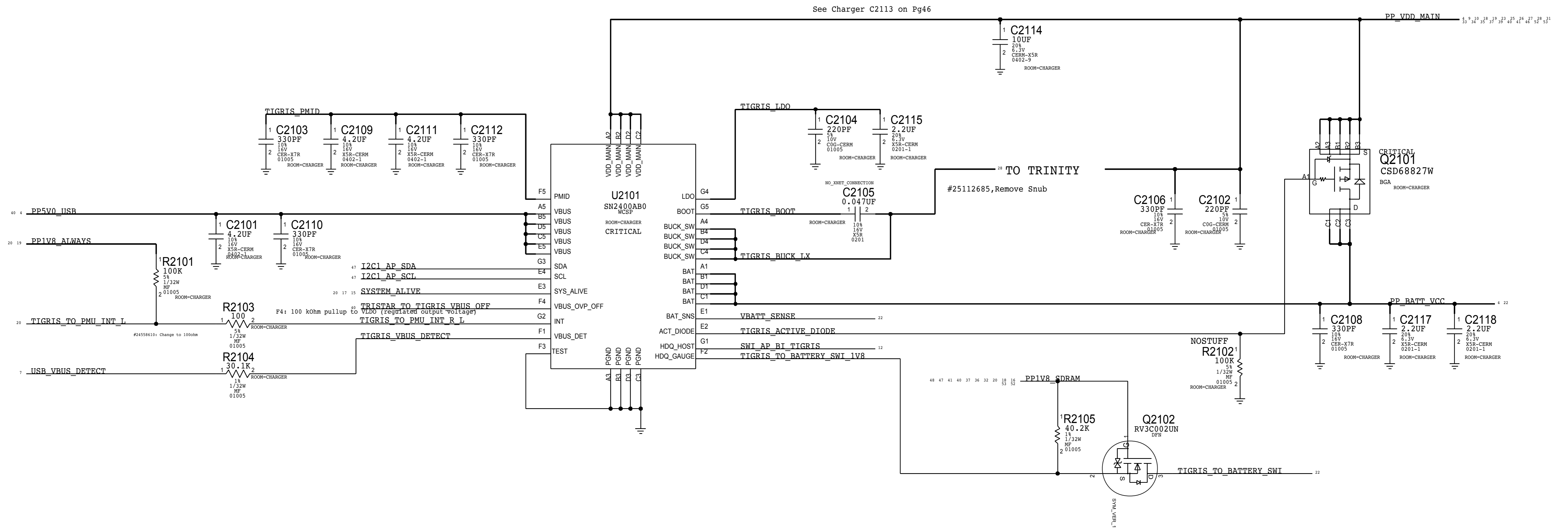
GPIO21 = I2C SCL is for Chestnut dark current mitigation

Sequencer controllable
RS™ requires sequencer

NOTE:100PF CAPS ARE THE SAMPLING CAPS FOR PMU ADC

PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

TIGRIS CHARGER



PAGE TITLE		
Apple Inc. spare		
DRAWING NUMBER	051-00419	SIZE
REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

8

7

6

5

4

3

2

1

D

D

C

C

B

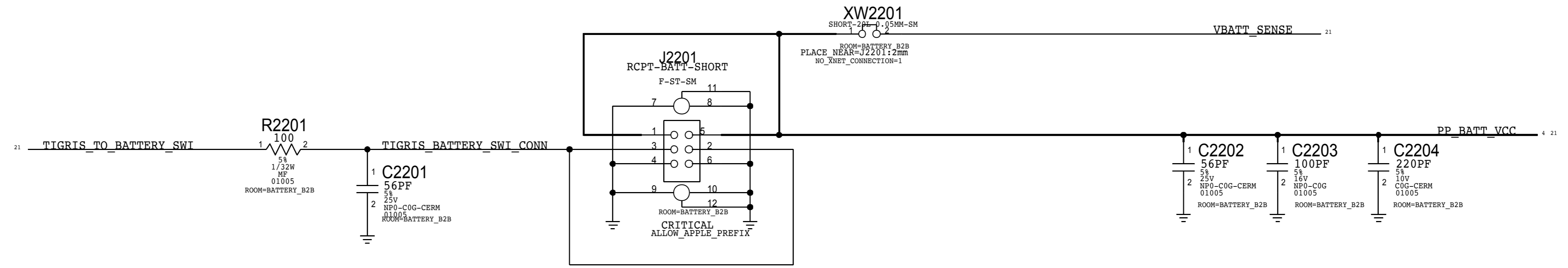
B

A

A

BATTERY CONNECTOR

THIS ONE ON MLB ----> 516S00172 (matches d10 m1b MCO rev 27)



PAGE TITLE		spare	
	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

8

7

6

5

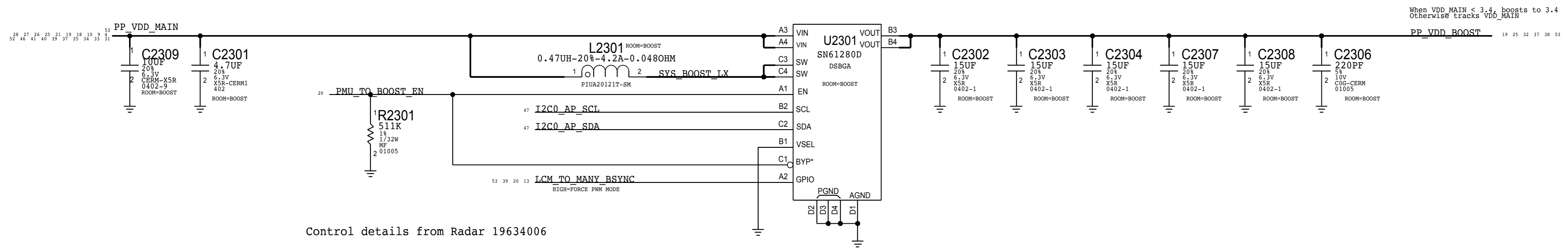
4

3

2

1

BOOST



Control details from Radar 19634006

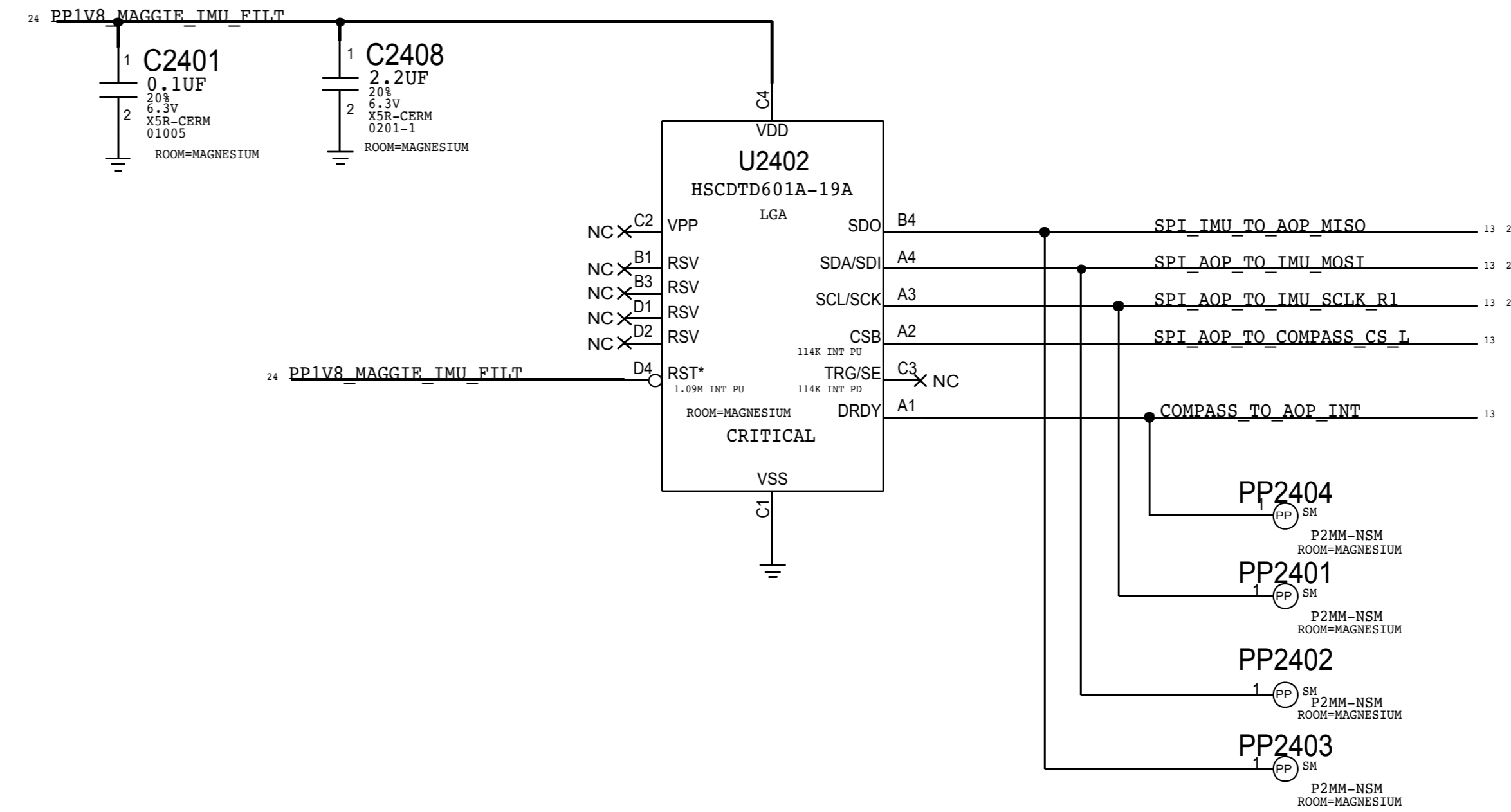
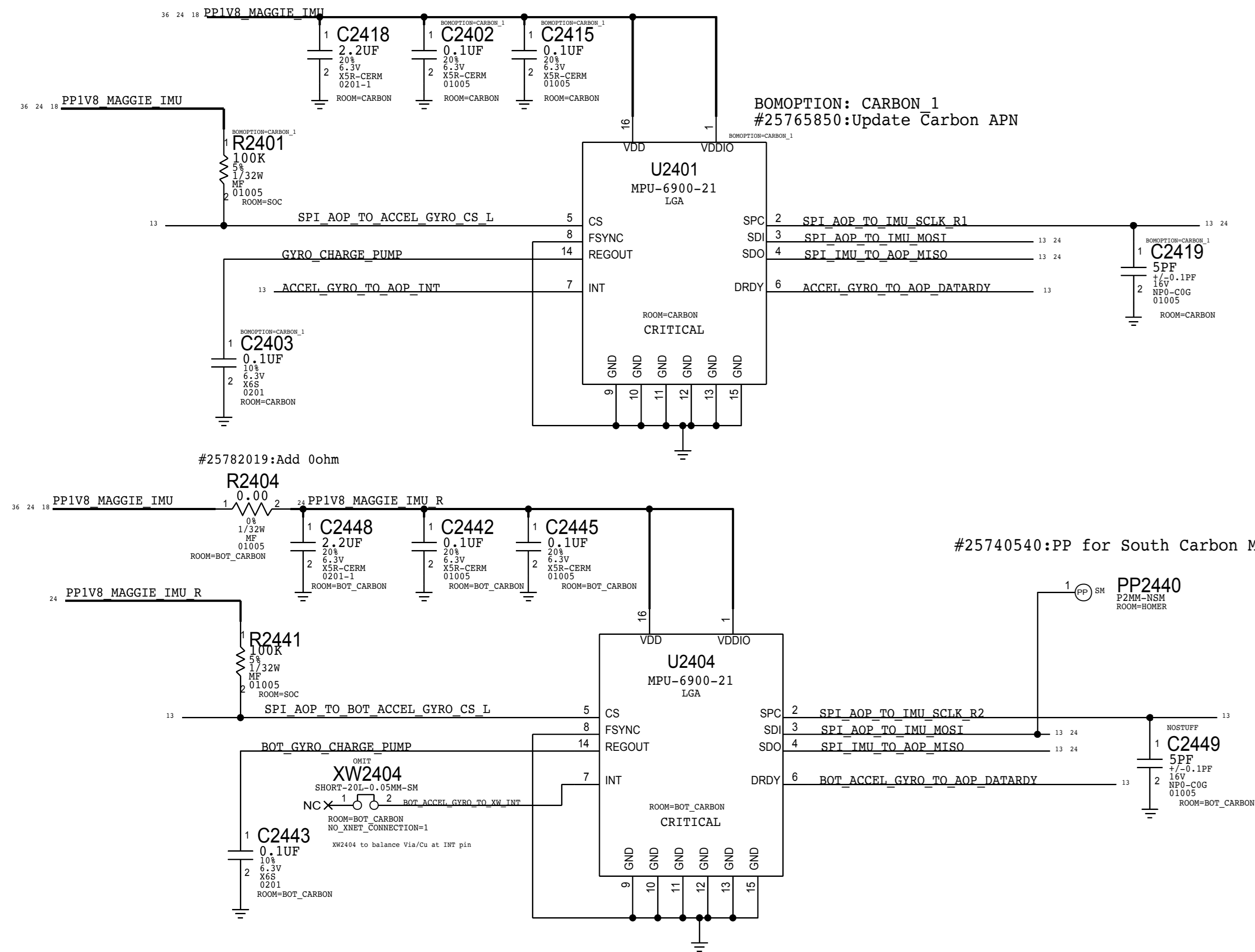
When VDD_MAIN < 3.4, boosts to 3.4
Otherwise tracks VDD_MAIN

PAGE TITLE		spare	
	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

CARBON - ACCEL & GYRO

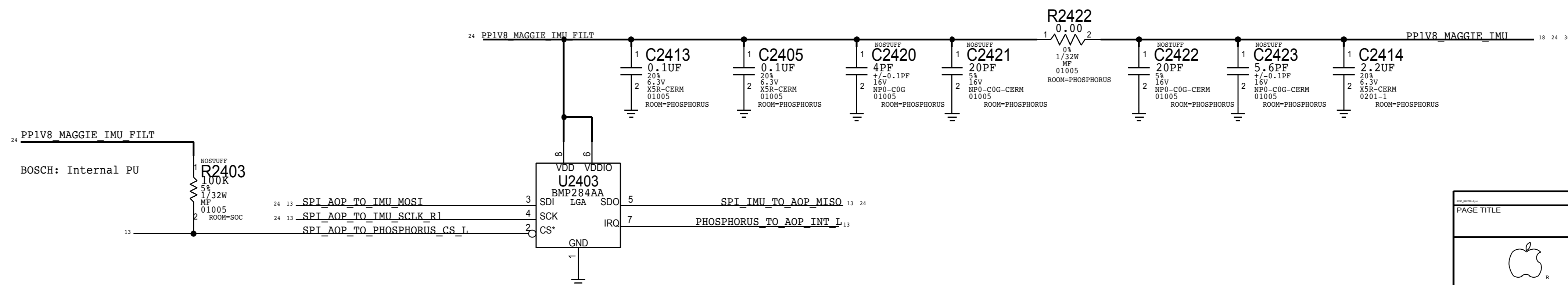
INVENSENSE, MPU-6800: C2403=0.1UF

MAGNESIUM - COMPASS



PHOSPHORUS

#24593845, #25691124
BOSCH (APN:338S00188): nostuff C2420/C2421/C2422/C2423 and R2403 PU



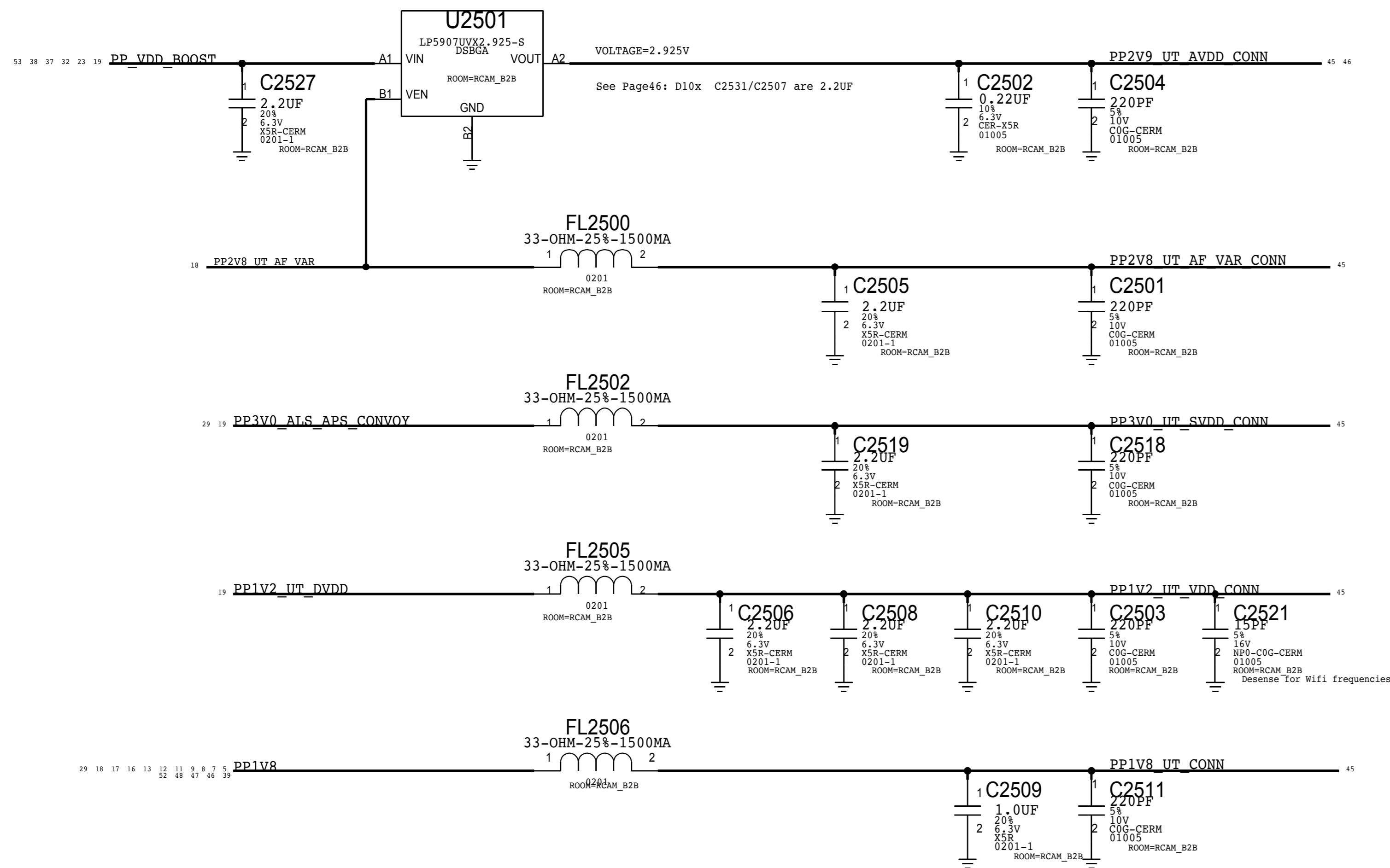
PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

THIS PAGE UNIQUE TO SMALL FORM FACTOR

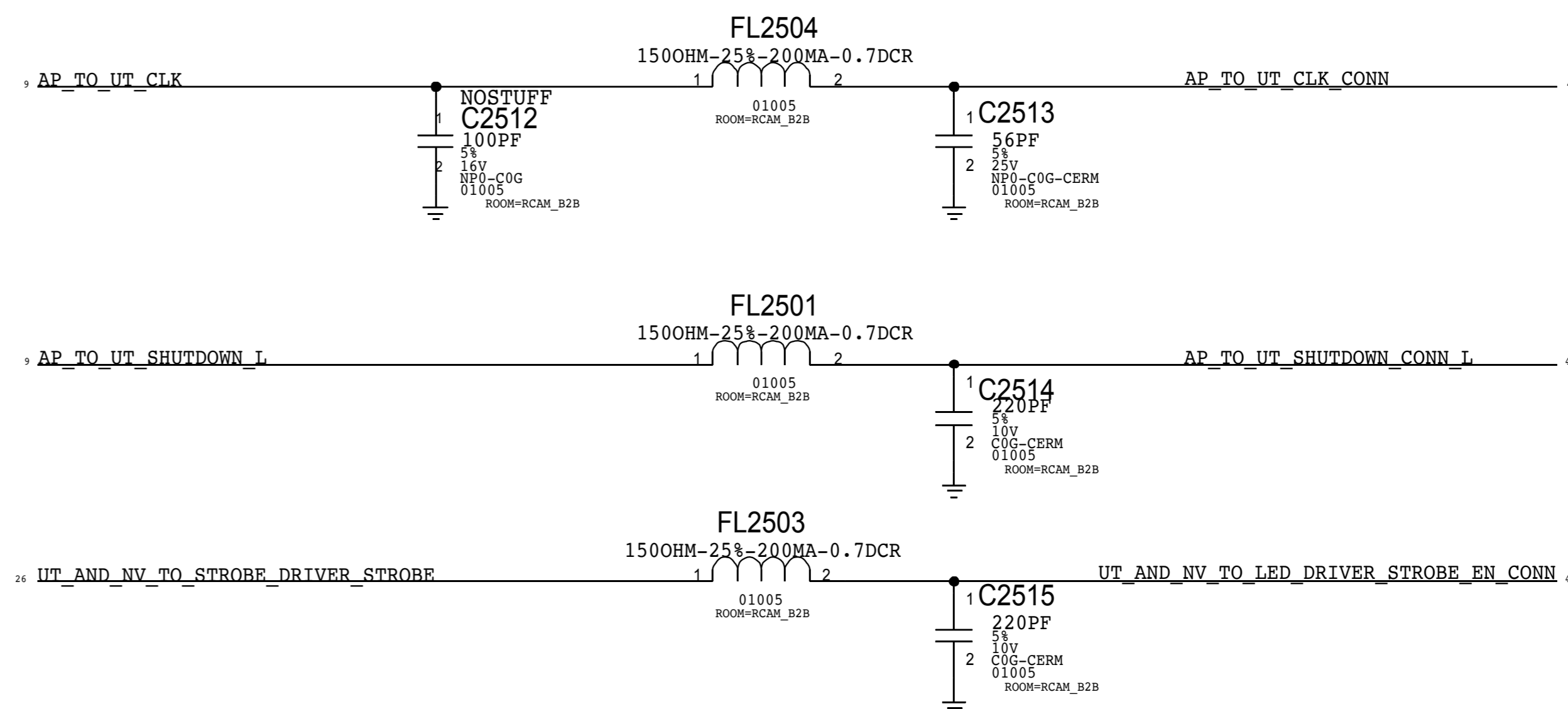
UTAH POWER

NOTE: OUTPUT IMPEDANCE MUST BE >0.005-OHM
IN ORDER TO MEET CAP ESR REQUIREMENT PER LDO SPEC.
VENDOR ALSO RECOMMENDS CIN = COUT FOR STABILITY

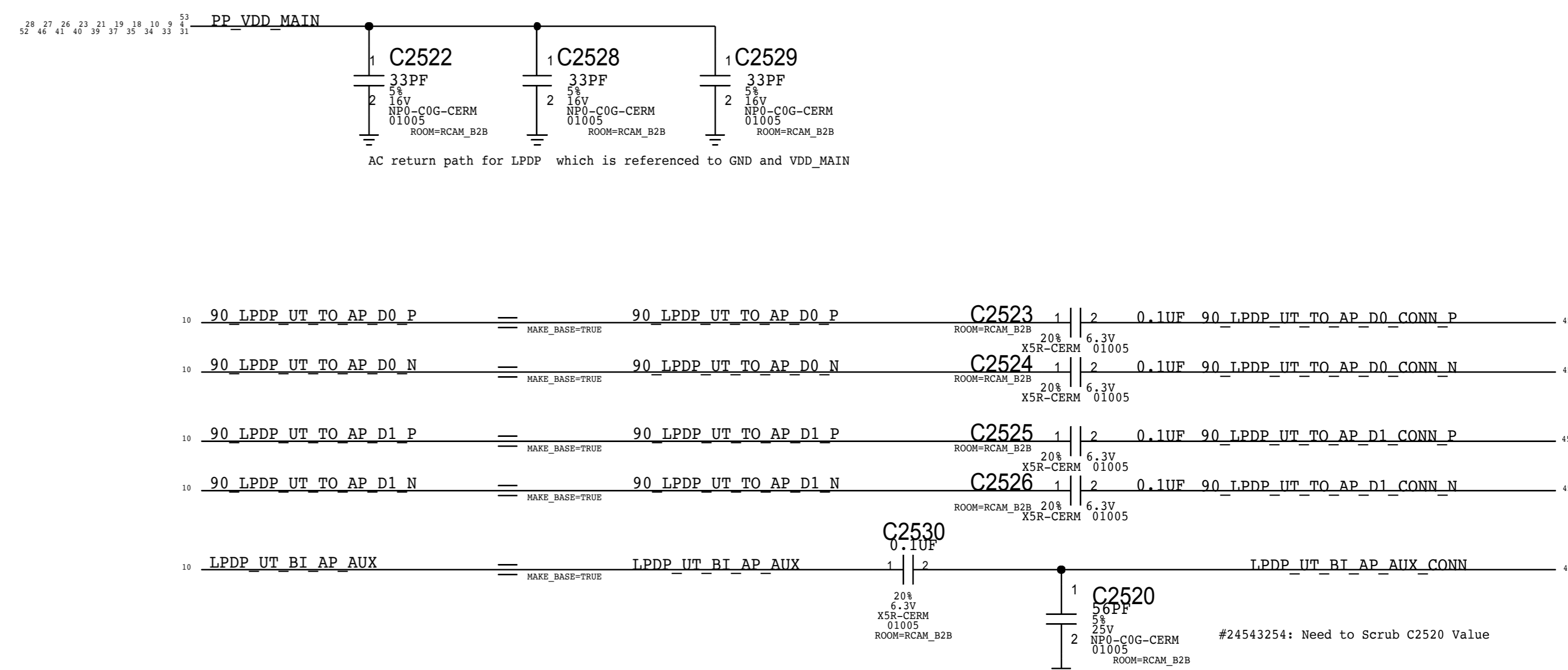
TI:353S00015
ST:353S00889



IO FILTERS



LPDP FILTERS



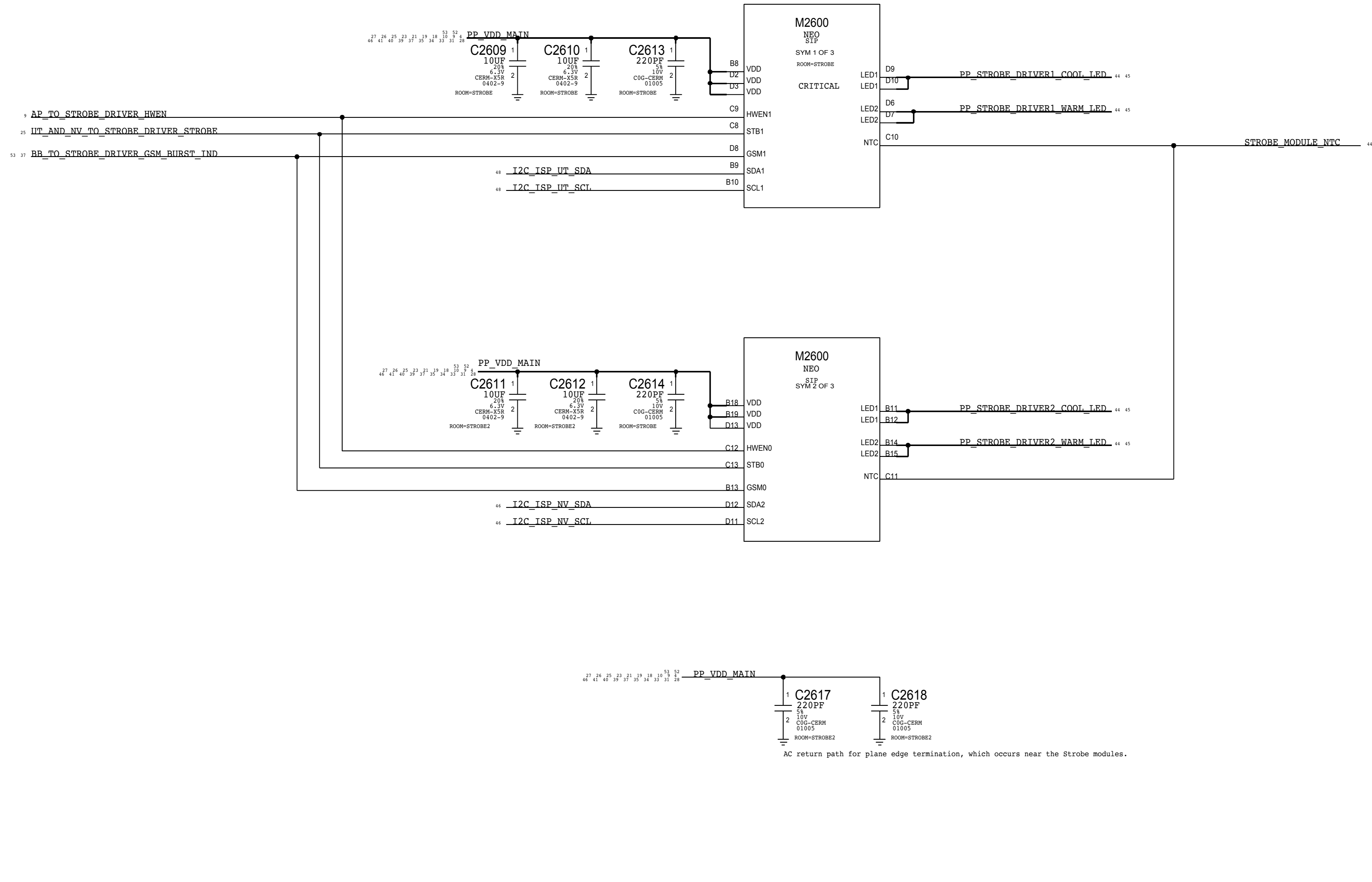
PAGE TITLE		
Apple Inc. spare		
DRAWING NUMBER	051-00419	SIZE D
REVISION	8.0.0	
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

NOTICE OF PROPRIETARY PROPERTY:
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE
II NOT TO REPRODUCE OR COPY IT
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART
IV ALL RIGHTS RESERVED

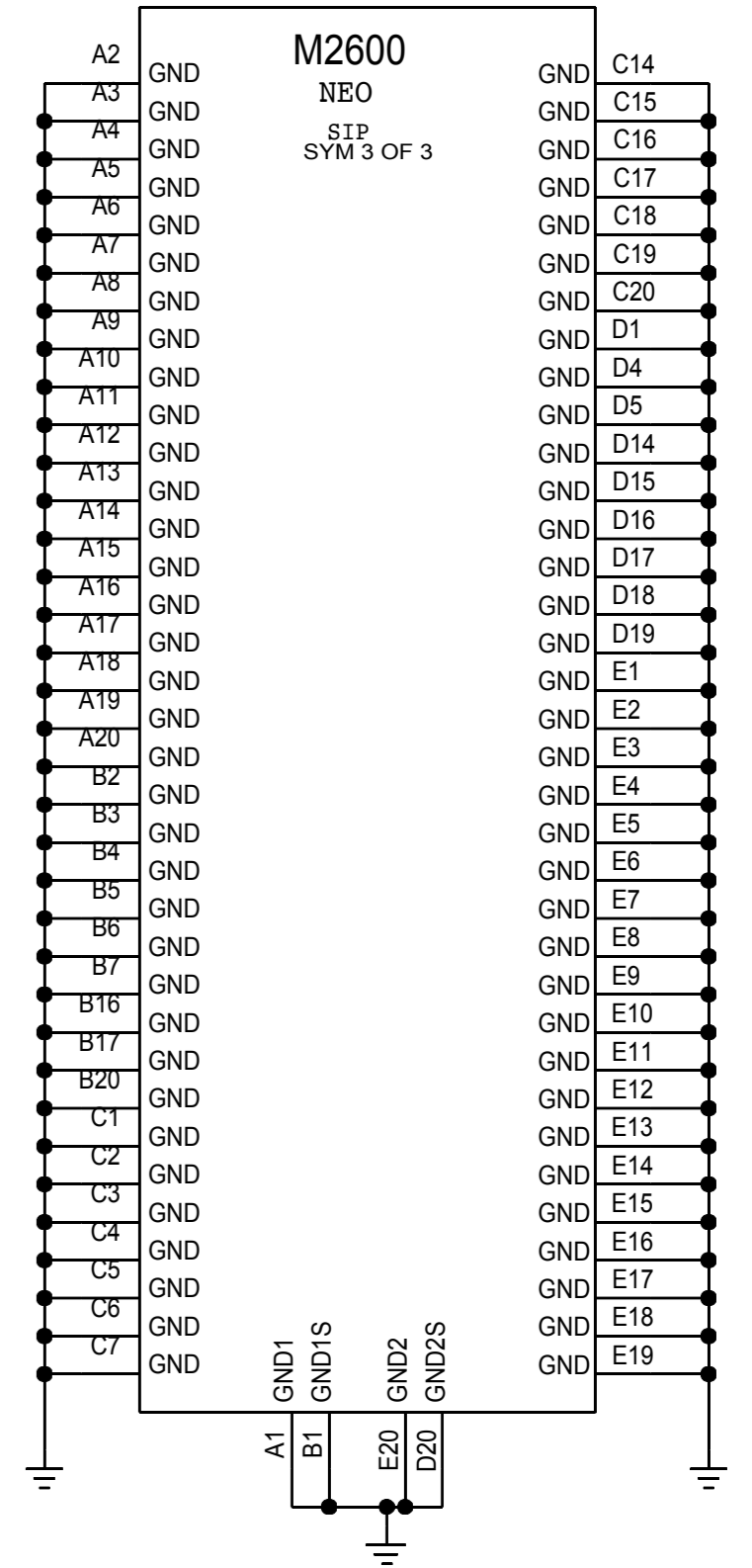
#24543254: Need to Scrub C2520 Value

STROBE DRIVERS INSIDE NEO SIP MODULE

D10/sip_neo

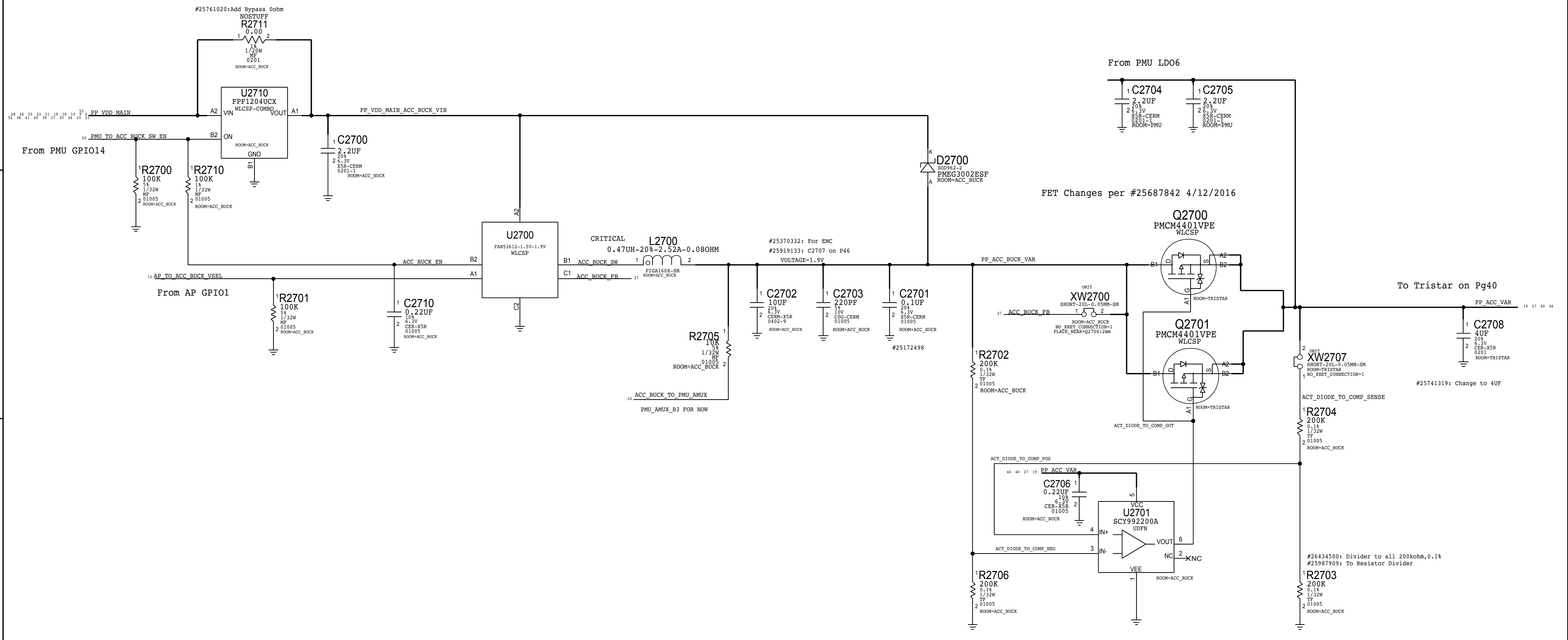


AC return path for plane edge termination, which occurs near the Strobe modules.



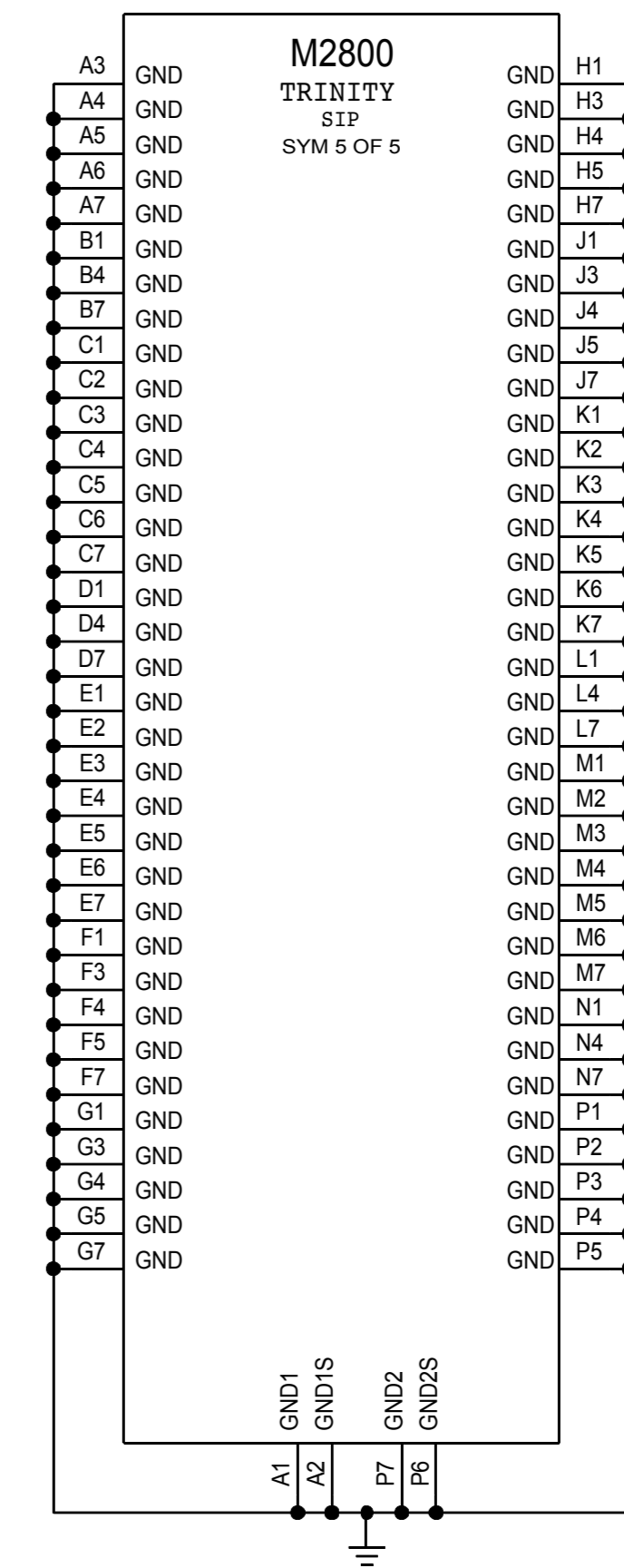
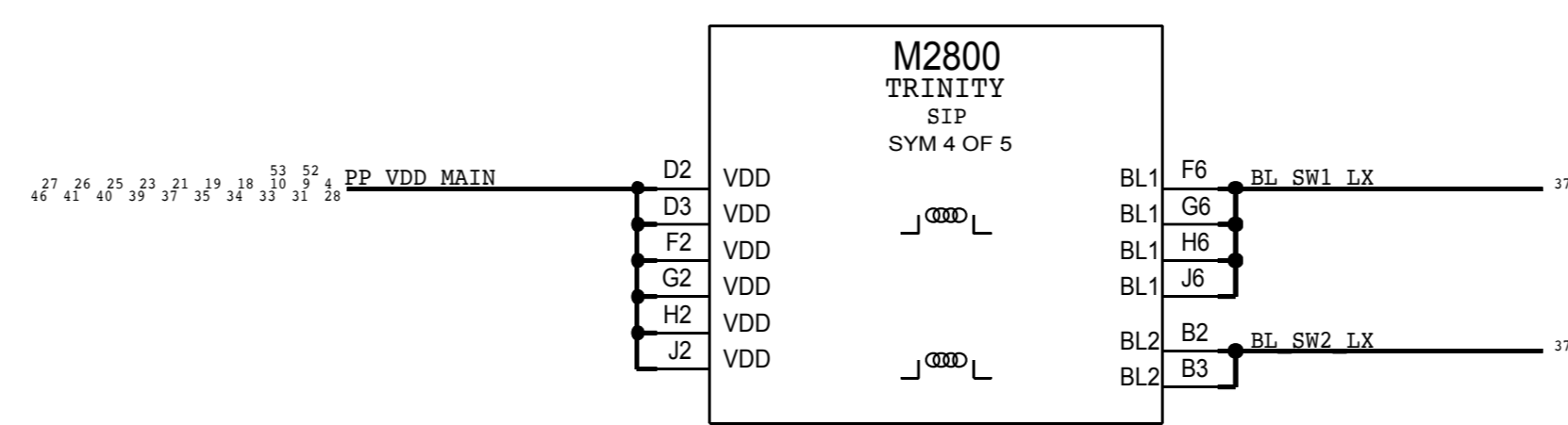
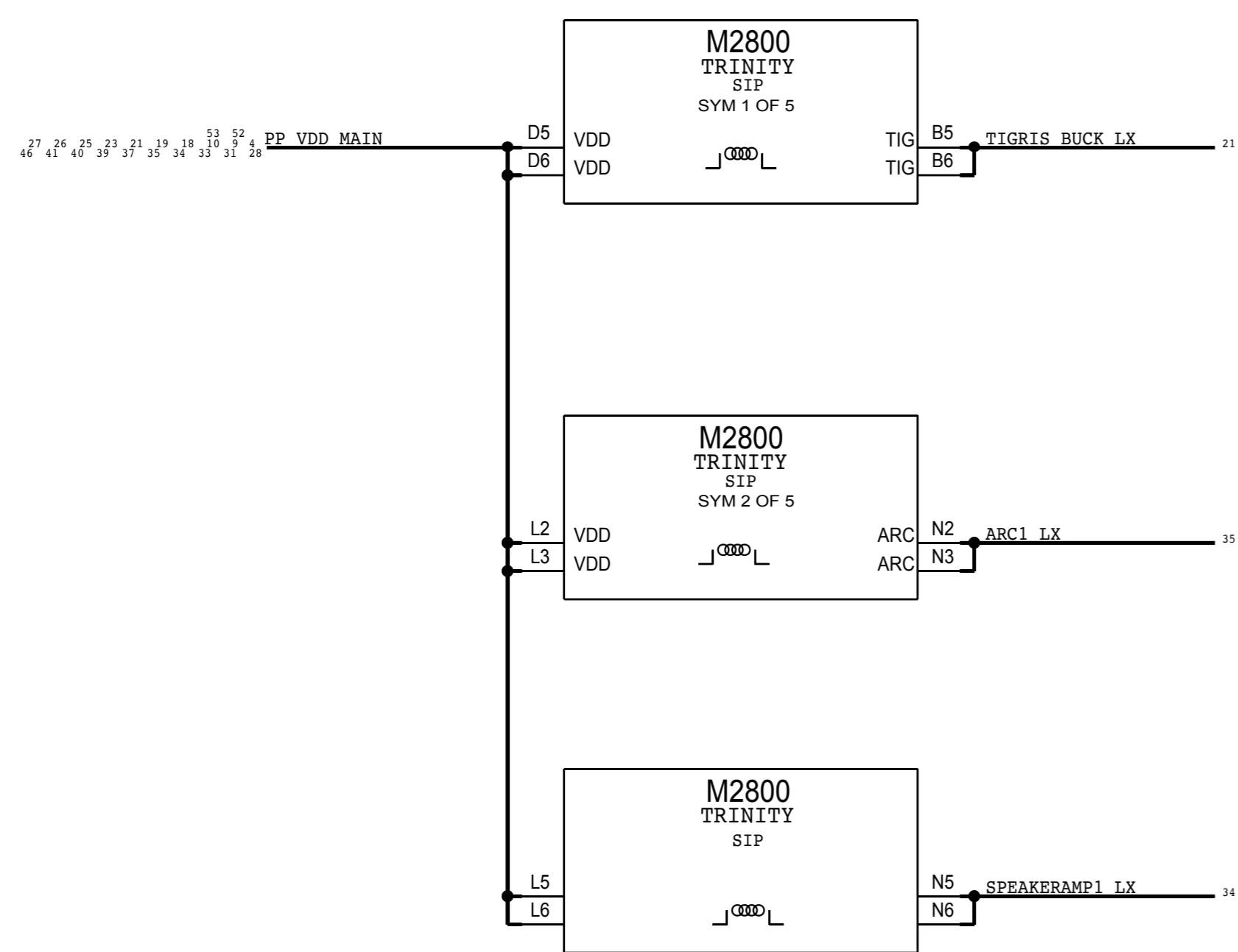
PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

ACCESSORY BUCK



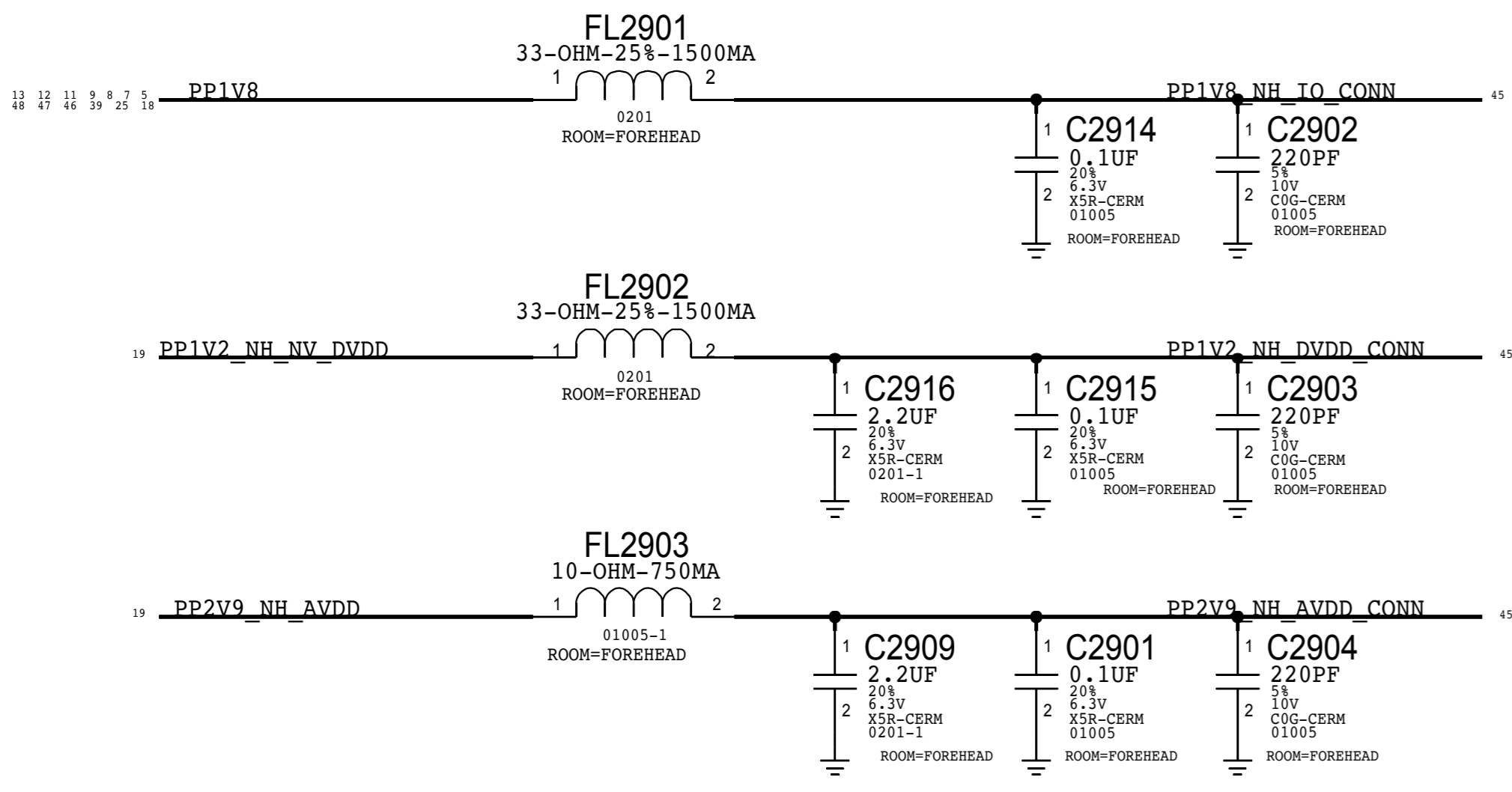
PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

THIS PAGE UNIQUE TO SMALL FORM FACTOR

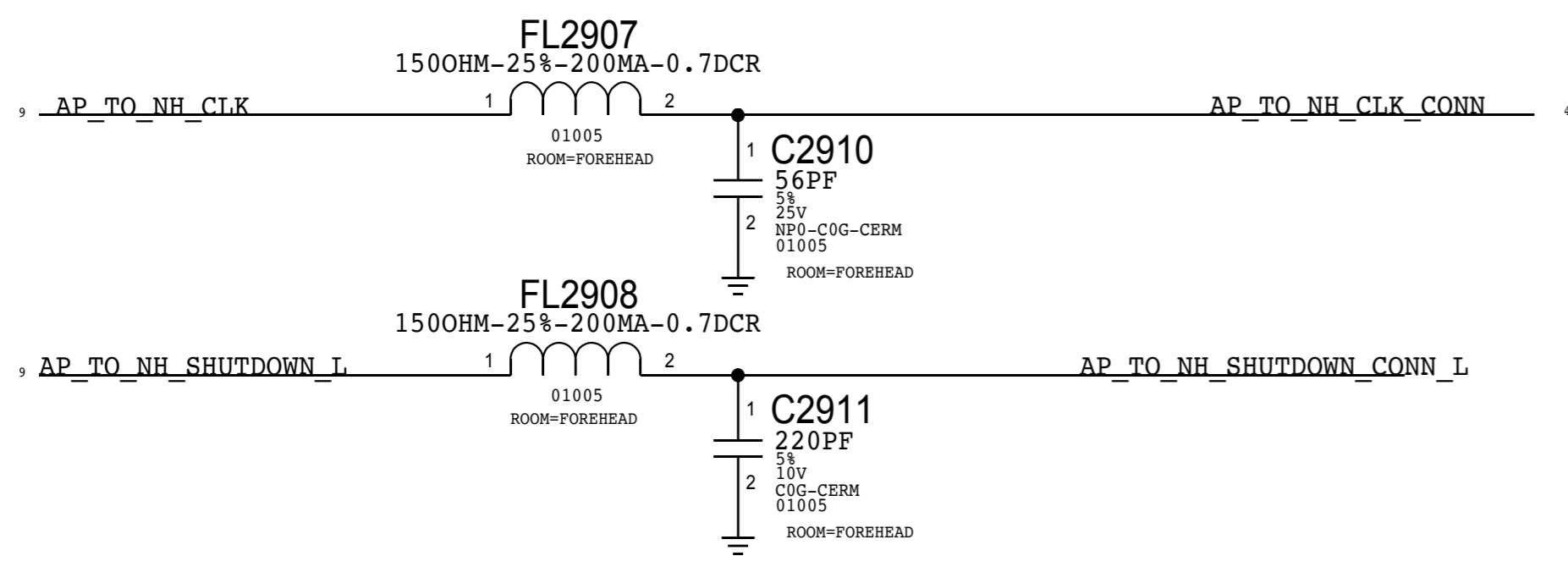


PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

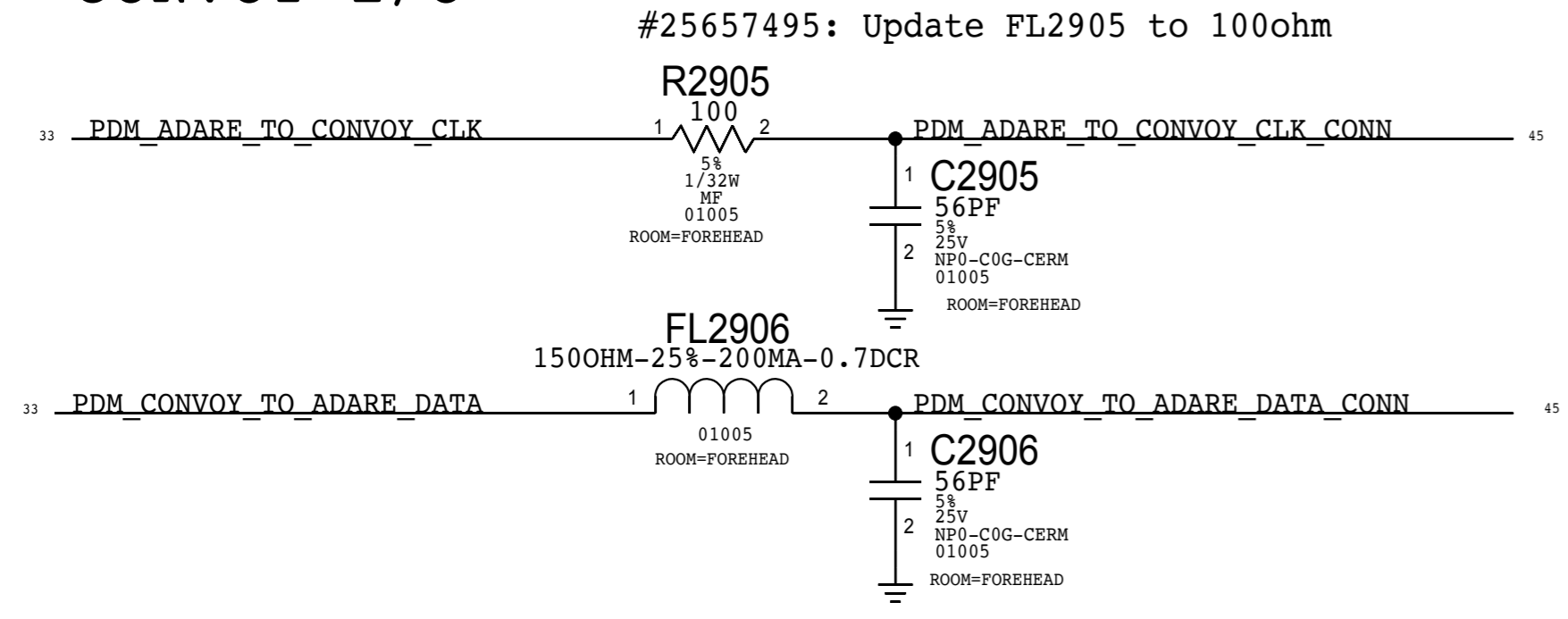
NEW HAMPSHIRE POWER



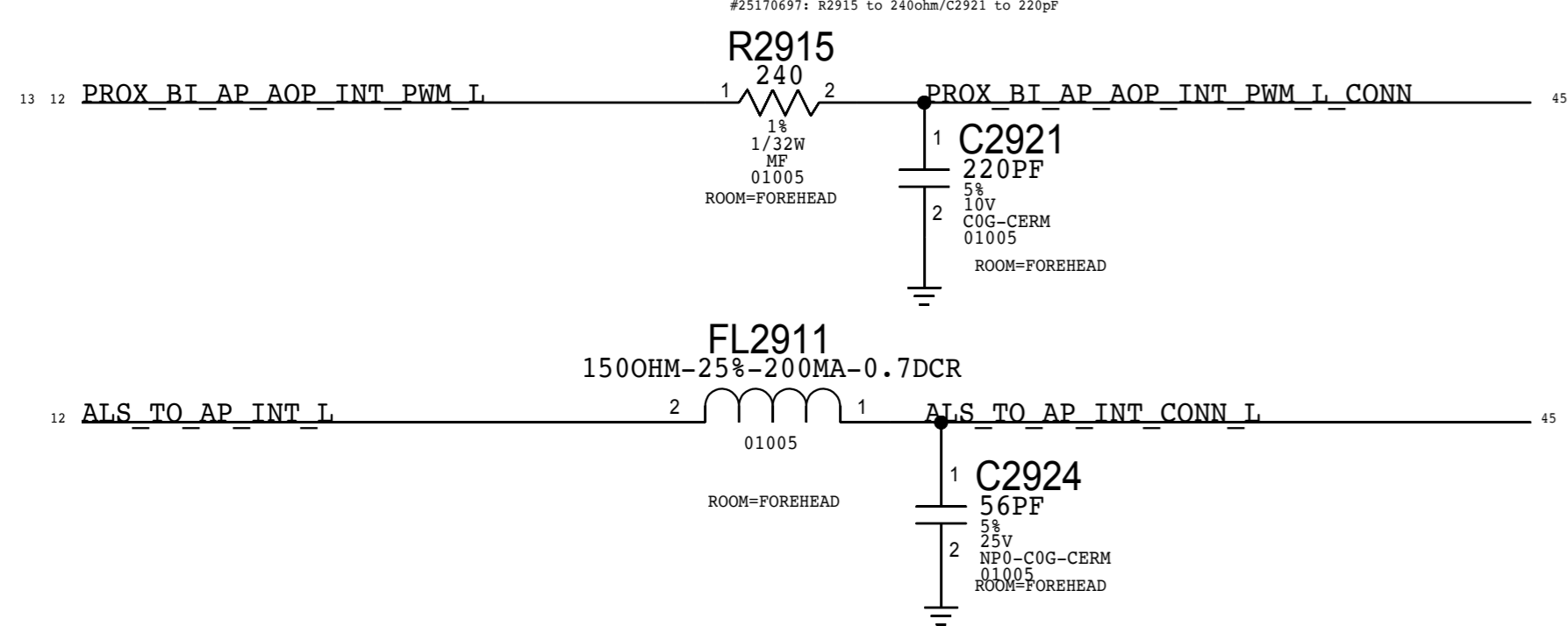
NEW HAMPSHIRE I/O



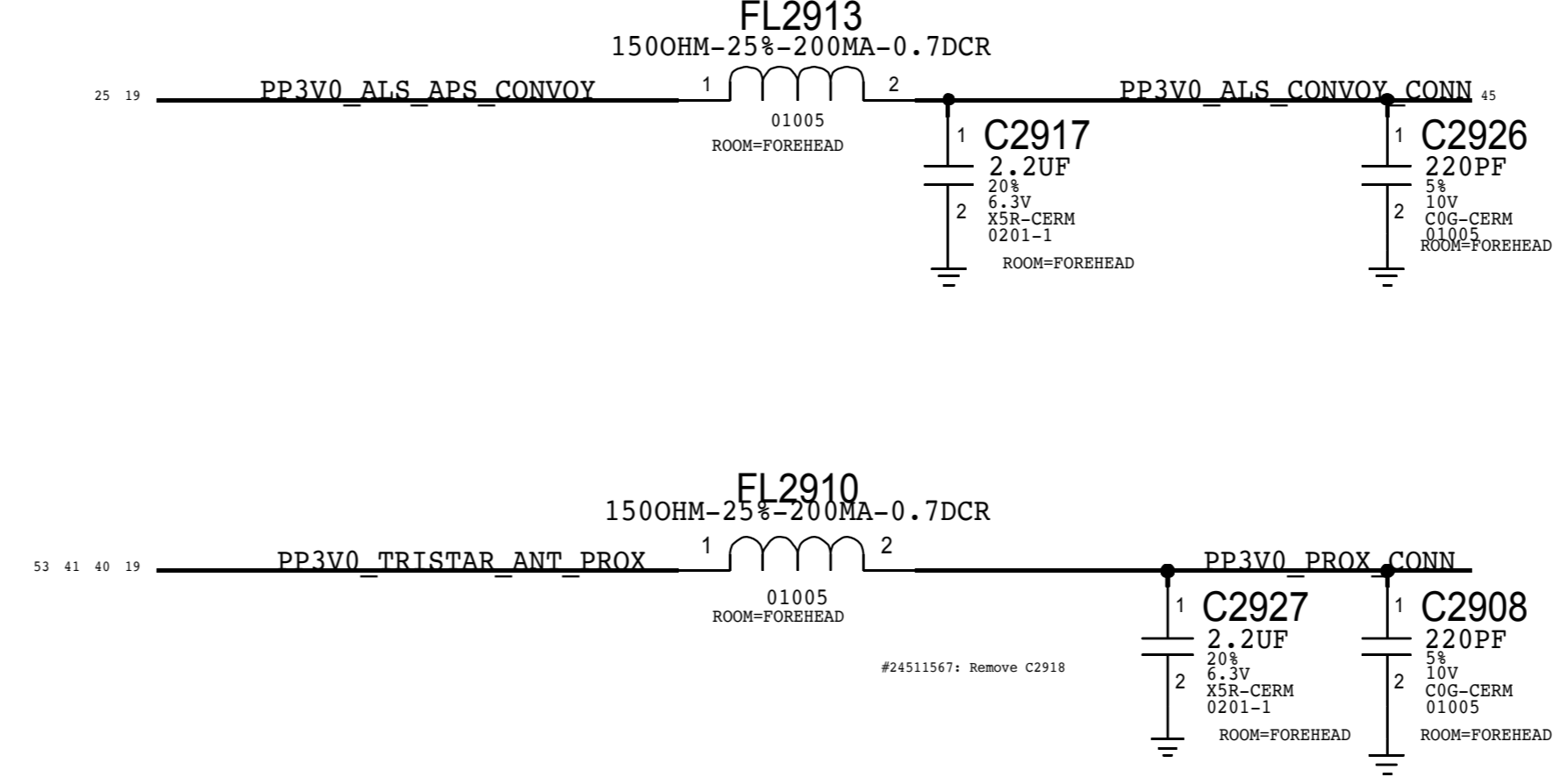
CONVOY I/O



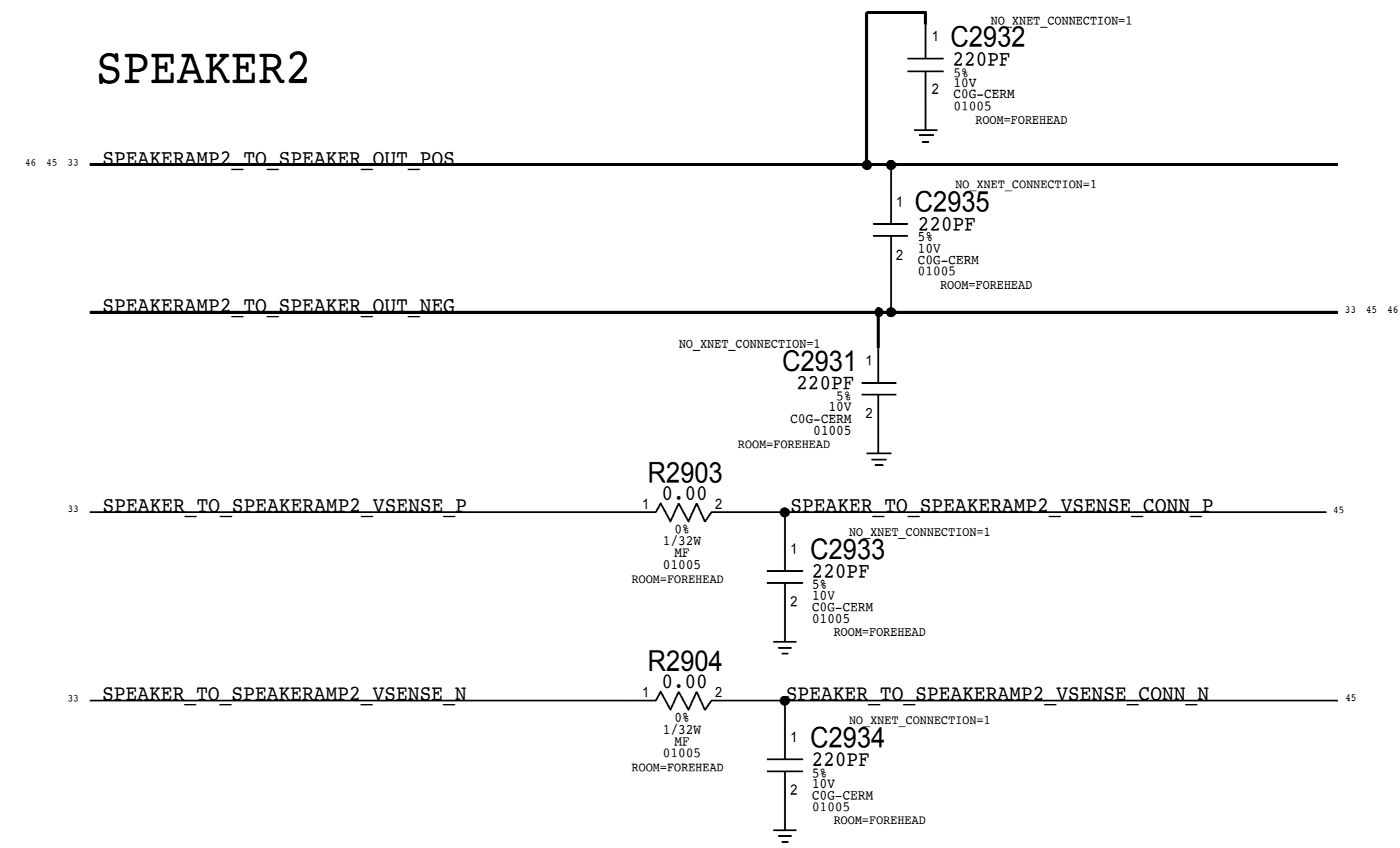
PROX/ALS I/O



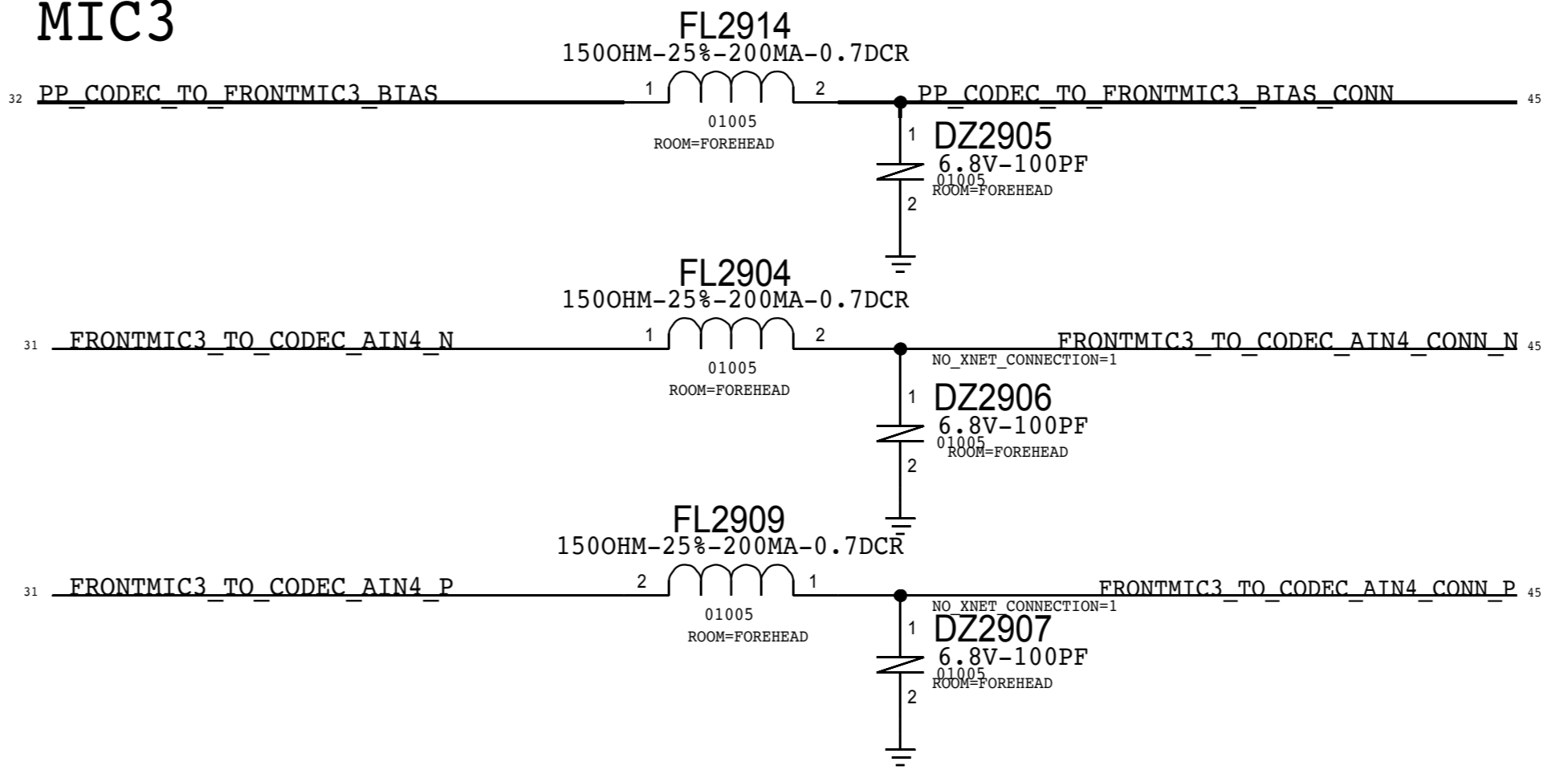
PROX, ALS, & CONVOY POWER



SPEAKER2



MIC3



PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

8

7

6


5

4

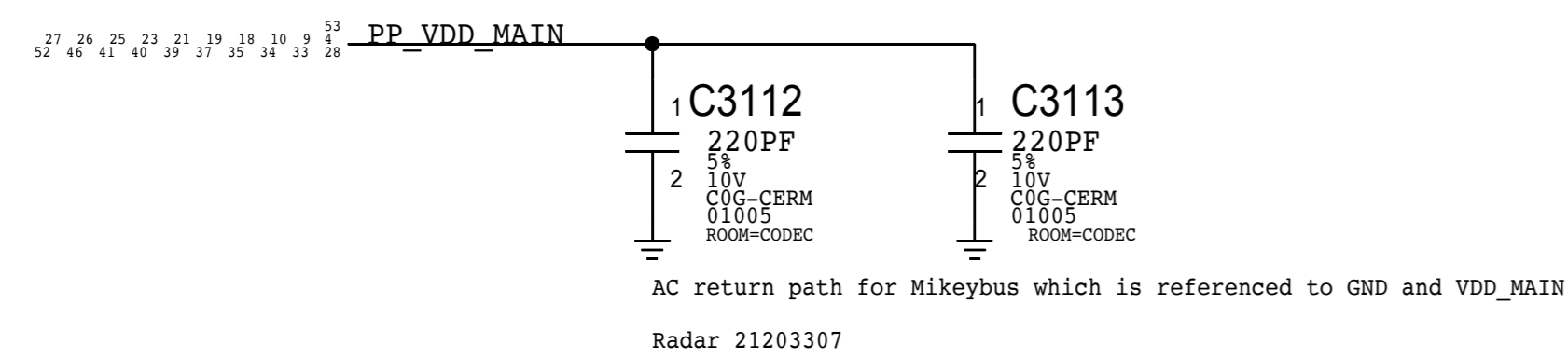
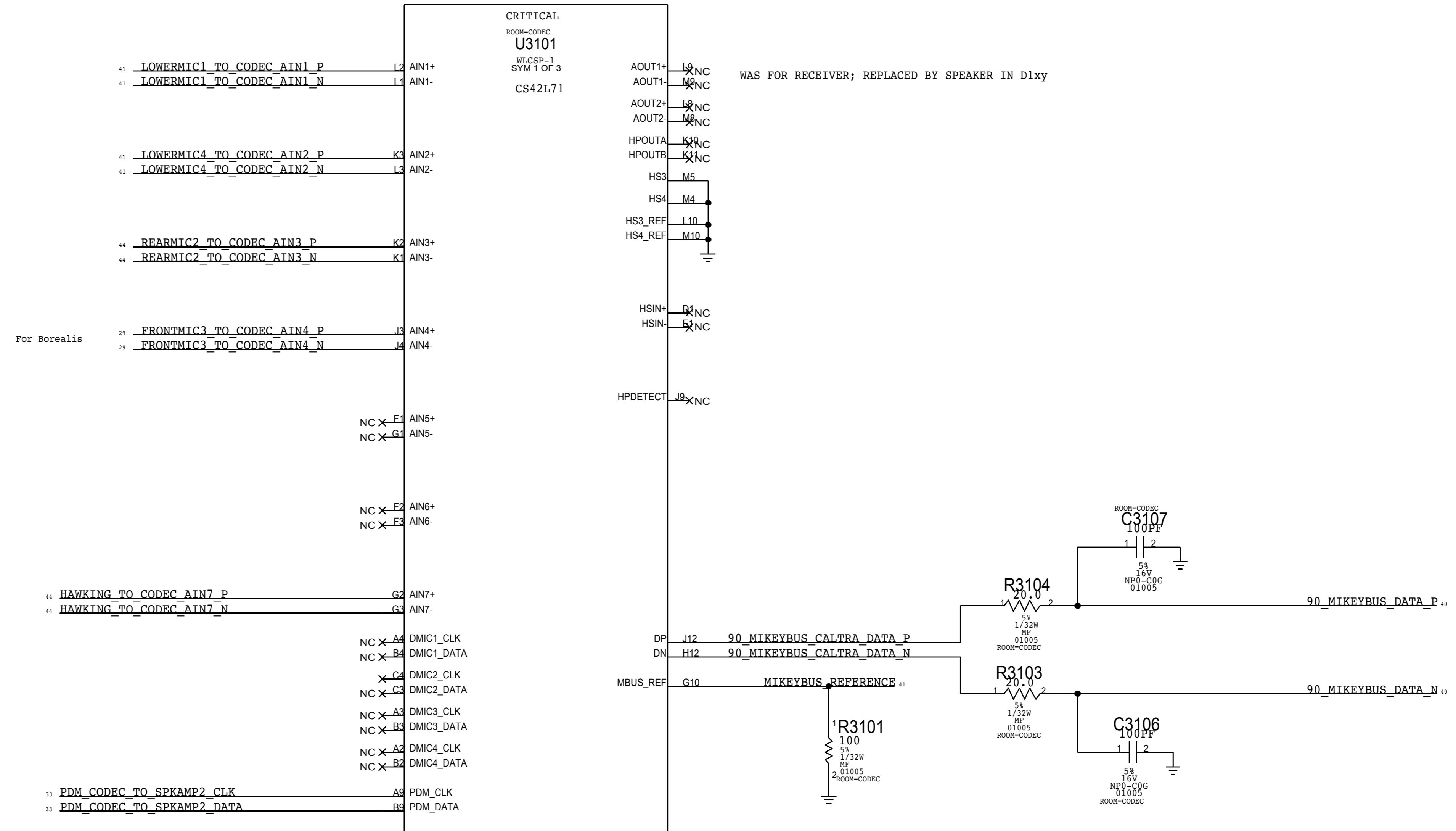
3

2

1

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE D
	REVISION	8.0.0	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

CALTRA AUDIO CODEC (ANALOG INPUTS & OUTPUTS)



PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH	PAGE	6 OF 53
SHEET	SHEET	6 OF 81

CALTRA AUDIO CODEC (POWER & I/O)

8

7

6

5

4

3

2

1

C

B

8

7

6

5

4

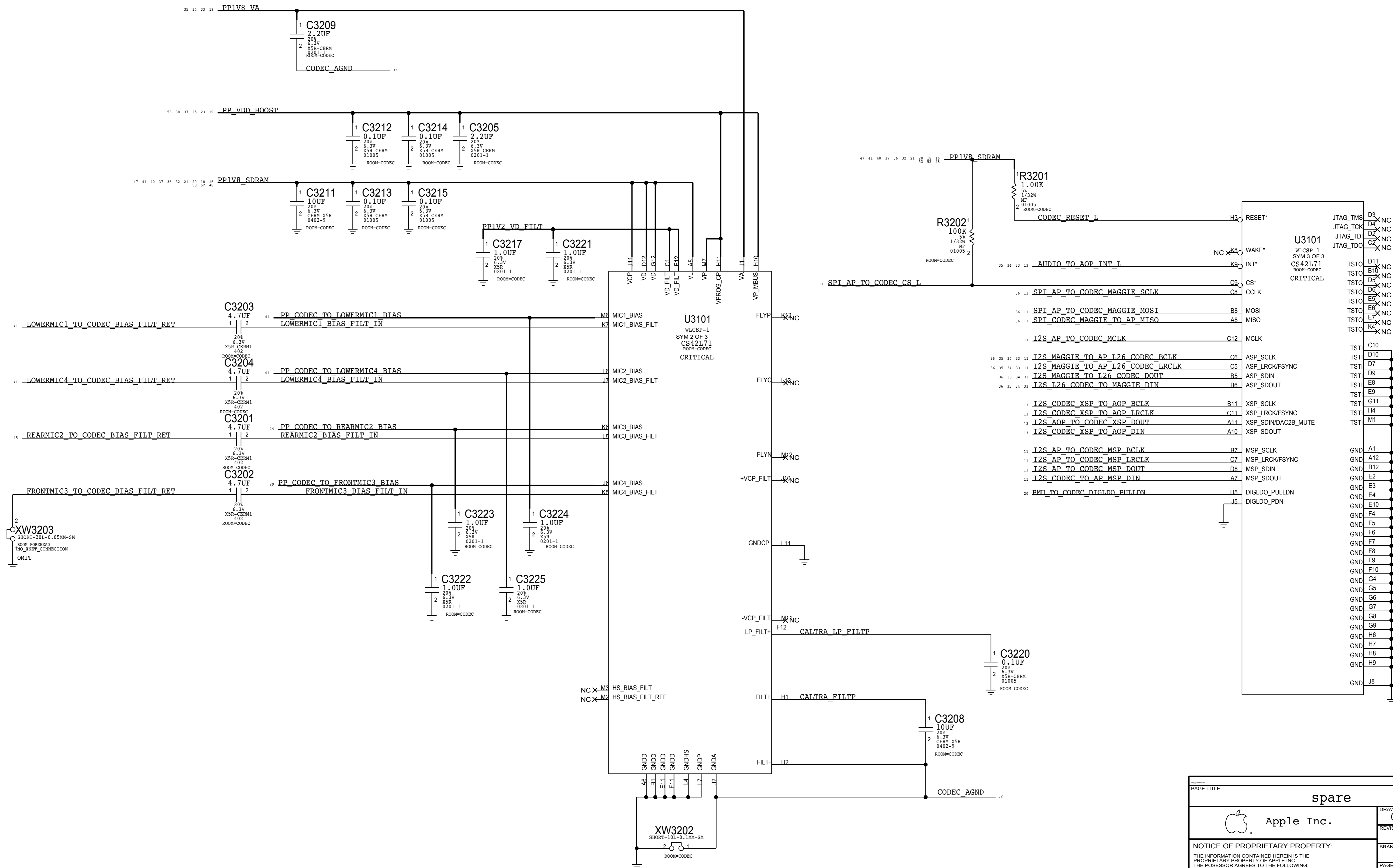
3

2

1

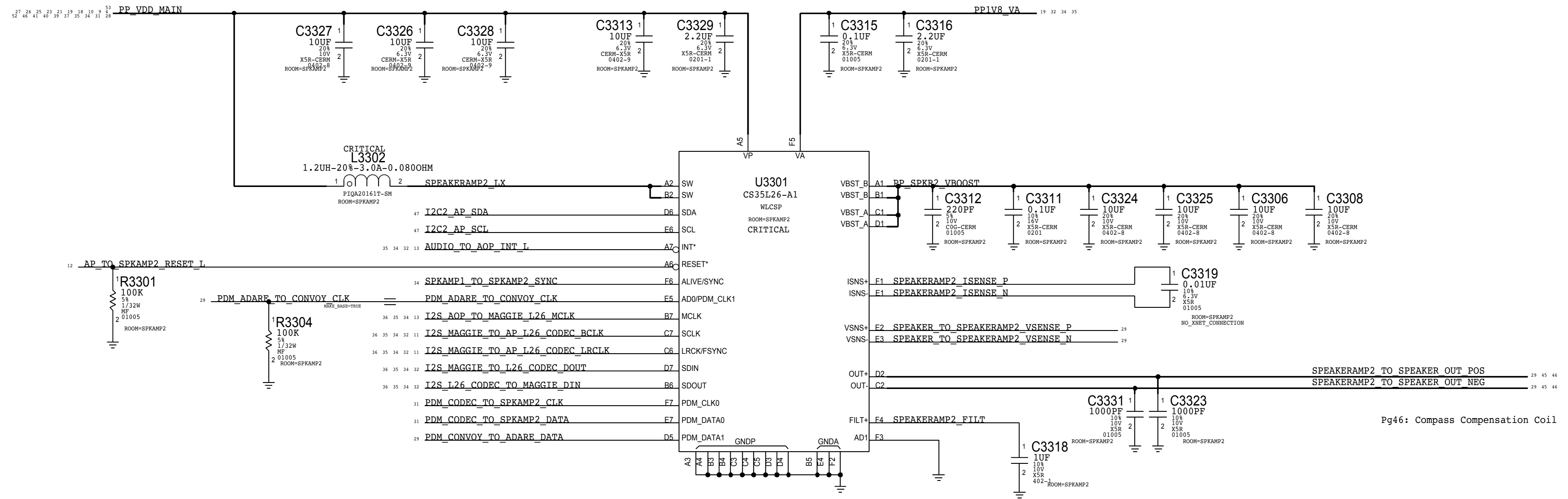
D

A



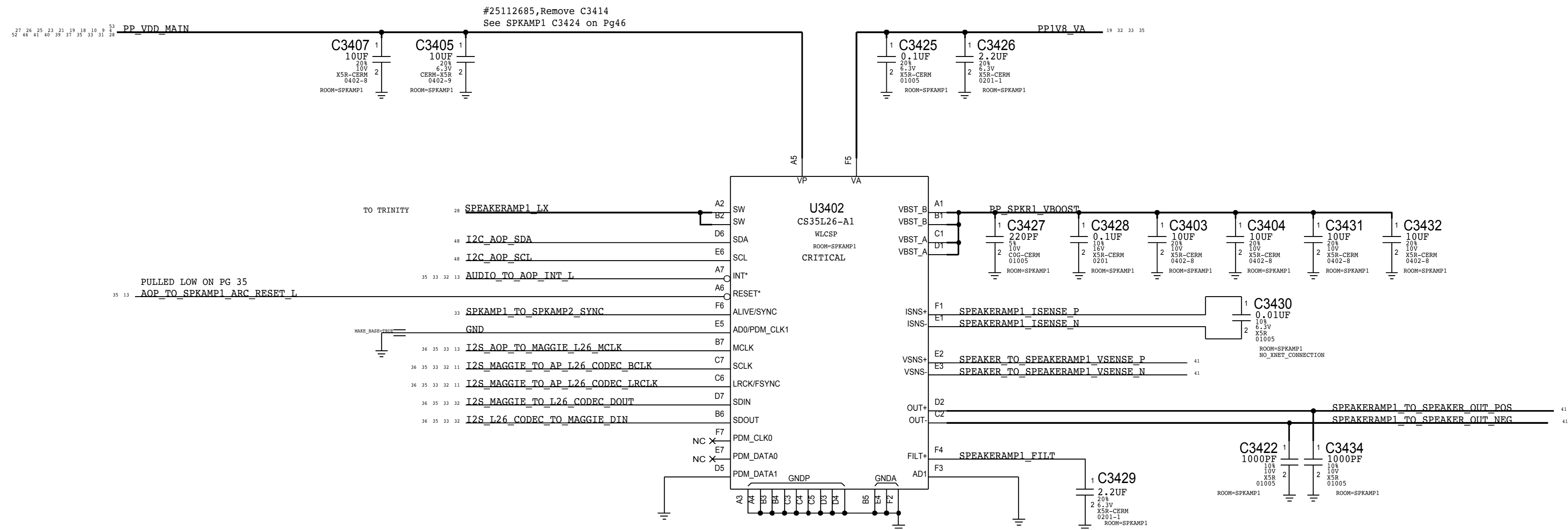
PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

SPEAKER AMPLIFIER 2 (North)



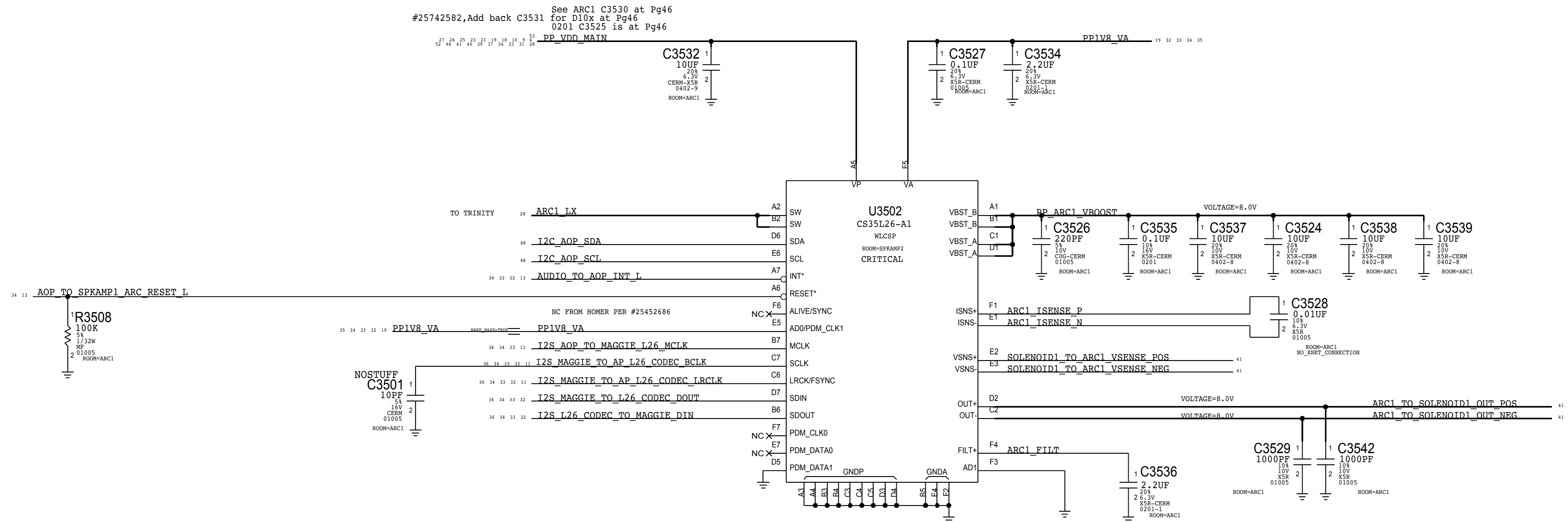
PAGE TITLE		spare	
	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	6 OF 53
		SHEET	6 OF 81

SPEAKER AMPLIFIER 1 (South)



PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

ARC DRIVER



PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

D

C

B

A

D

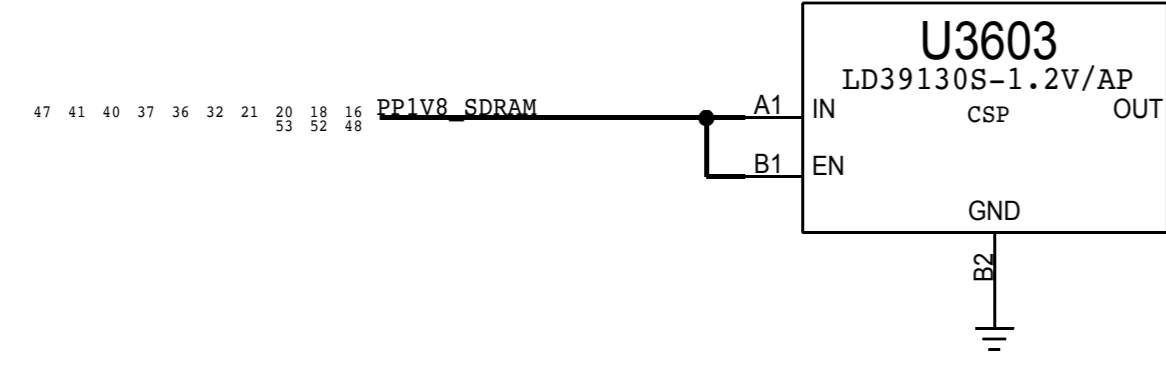
C

B

A

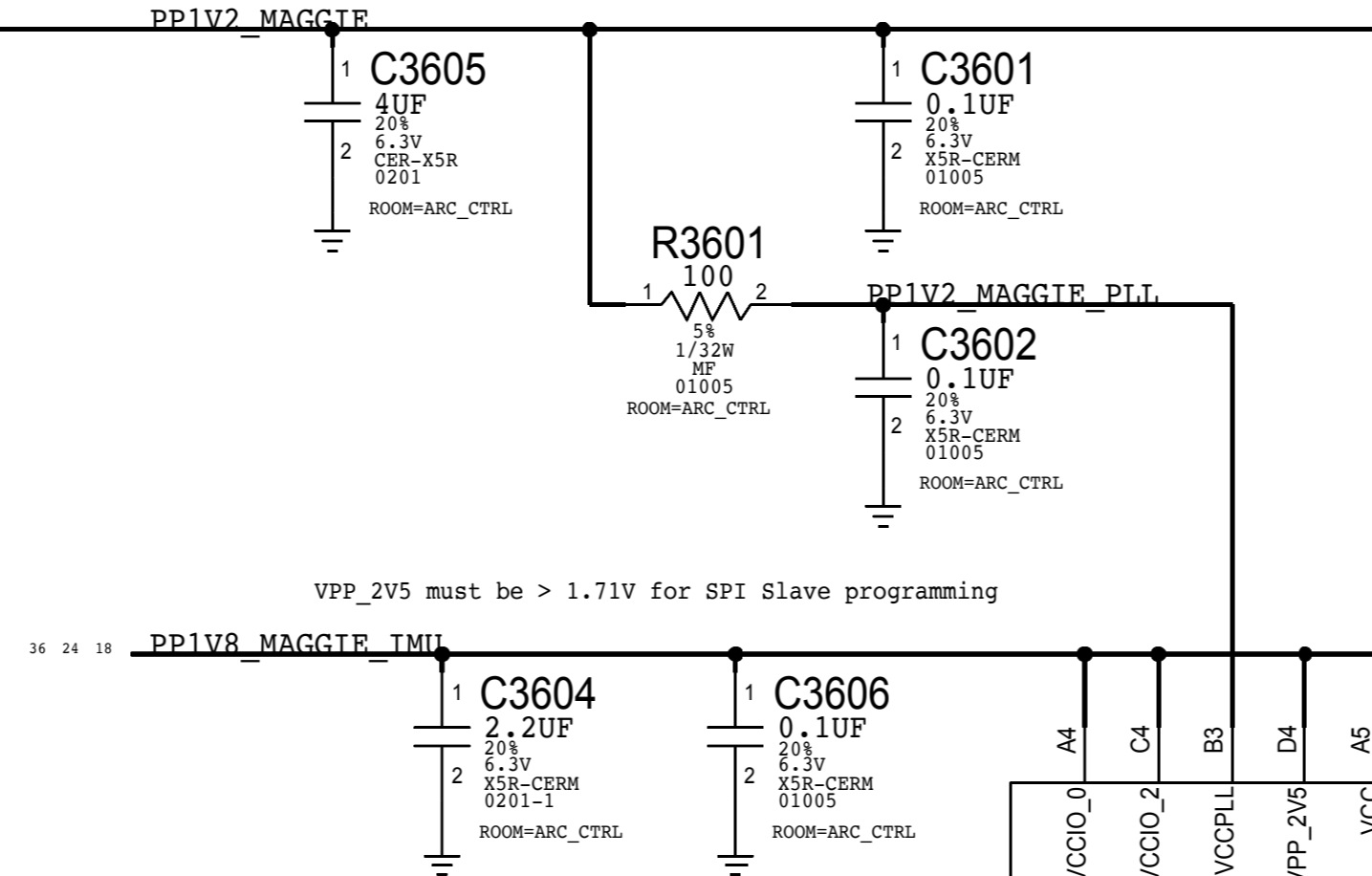
MAGGIE LDO

APN: 353800842



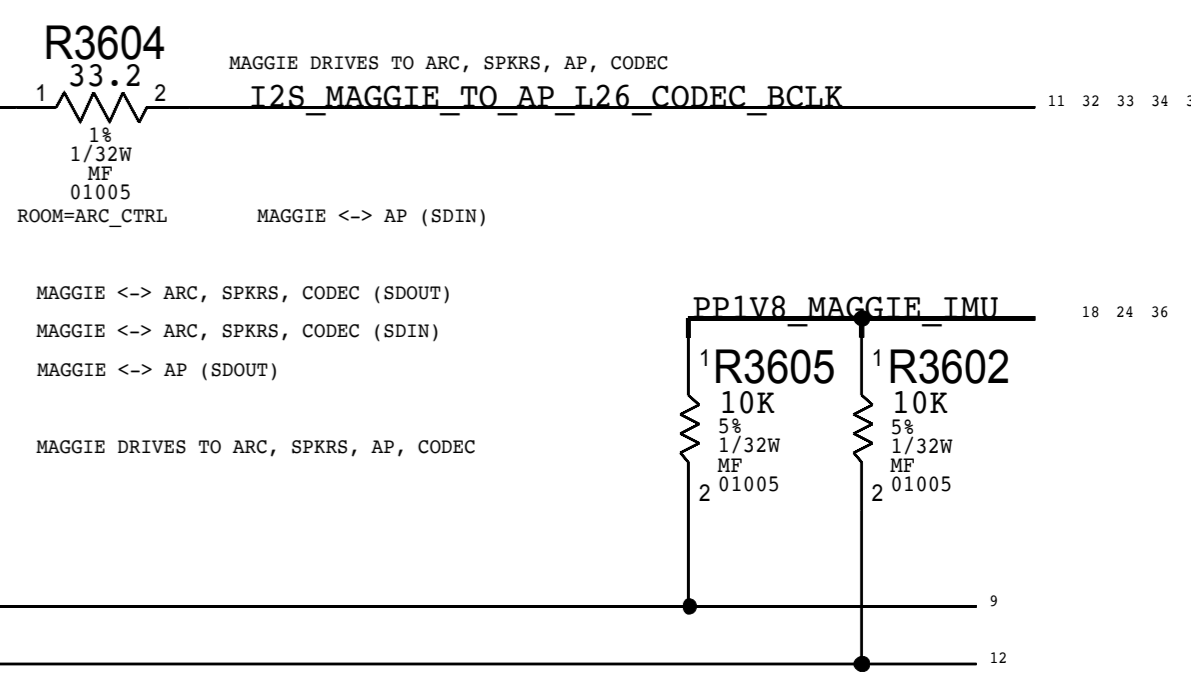
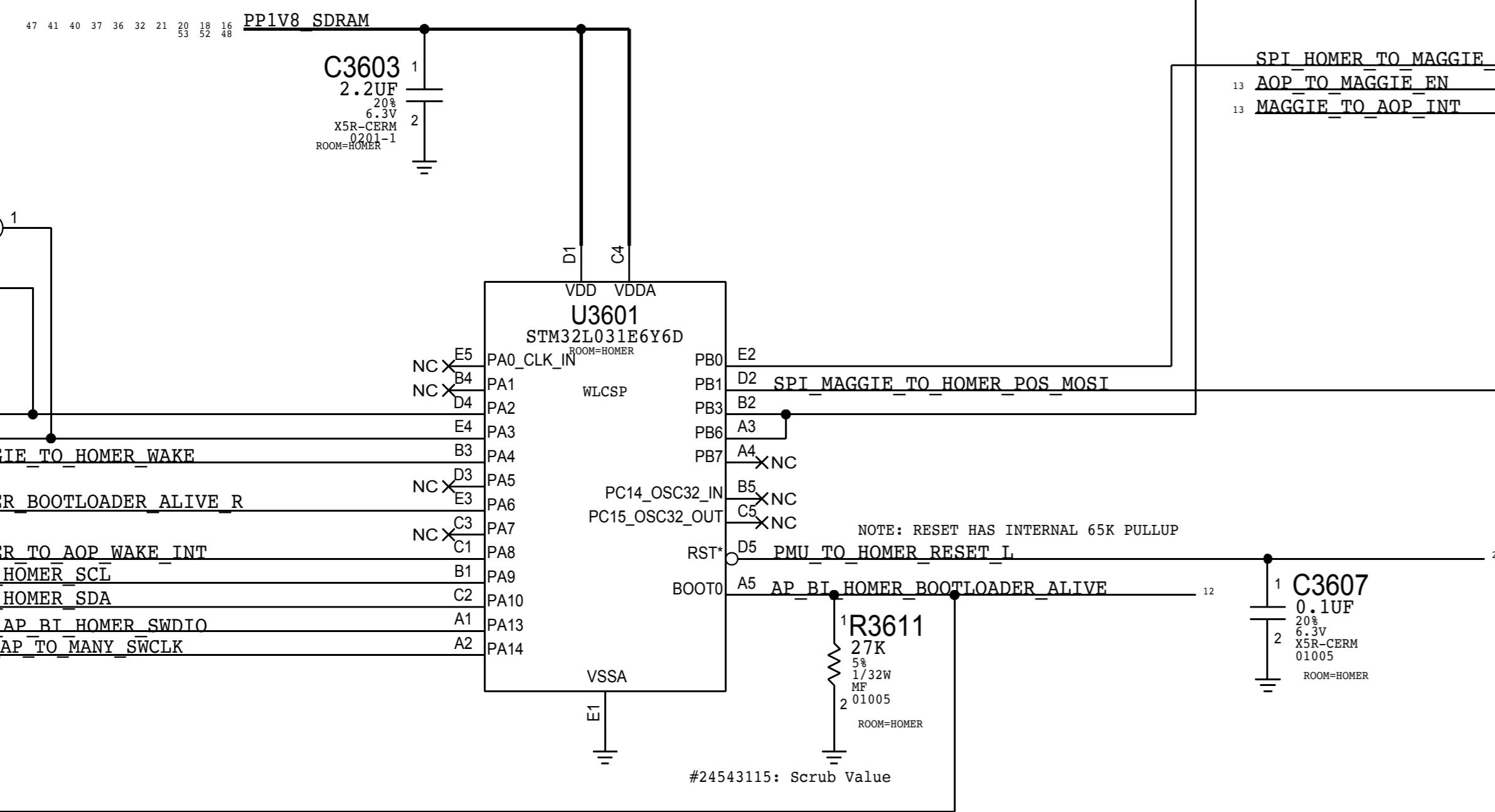
MAGGIE

APN: 336800020



HOMER STM32L0 MICRO

STM32L03 APN: 337800231

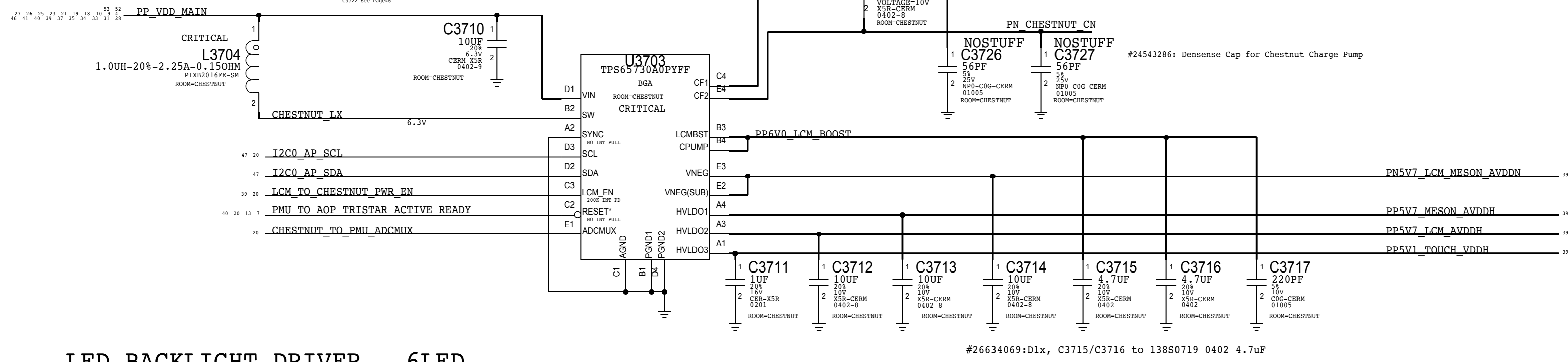


PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

DISPLAY & TOUCH - POWER SUPPLIES

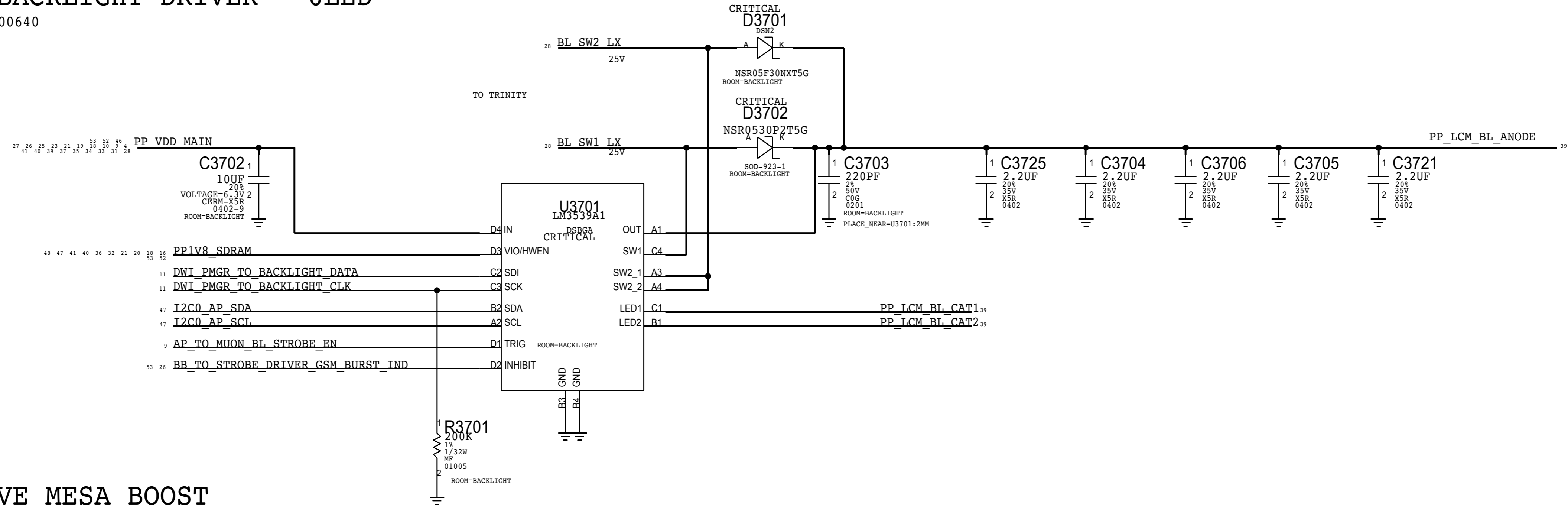
CHESTNUT DISPLAY PMU

APN:338S1172



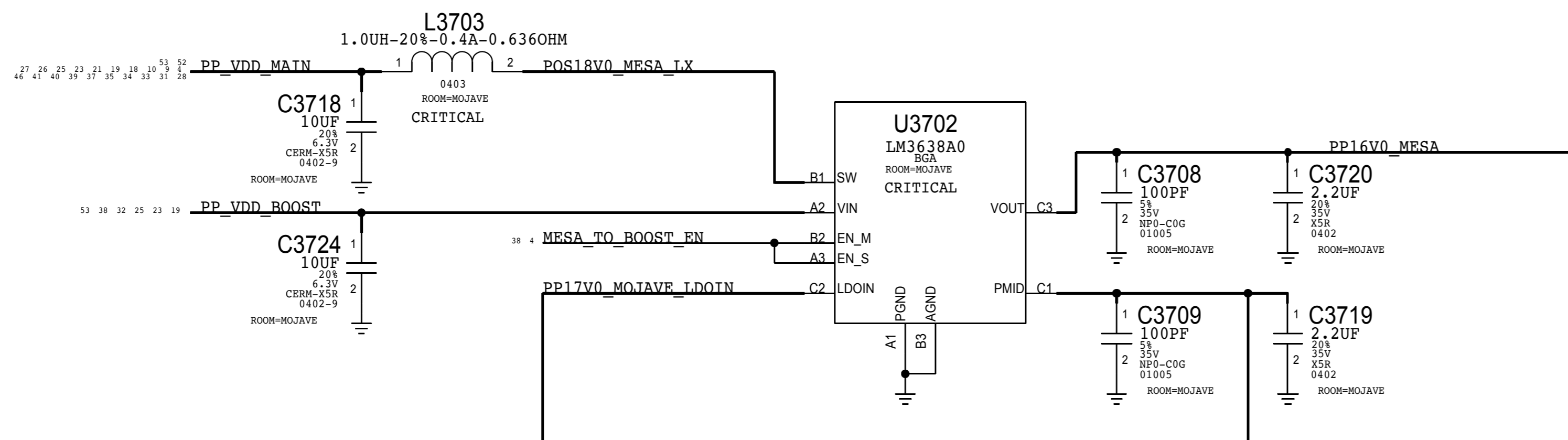
LED BACKLIGHT DRIVER - 6LED

APN:353S00640



MOJAVE MESA BOOST

APN:353S00671



PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

MESA POWER

MAMBA AND MESA CONNECTOR

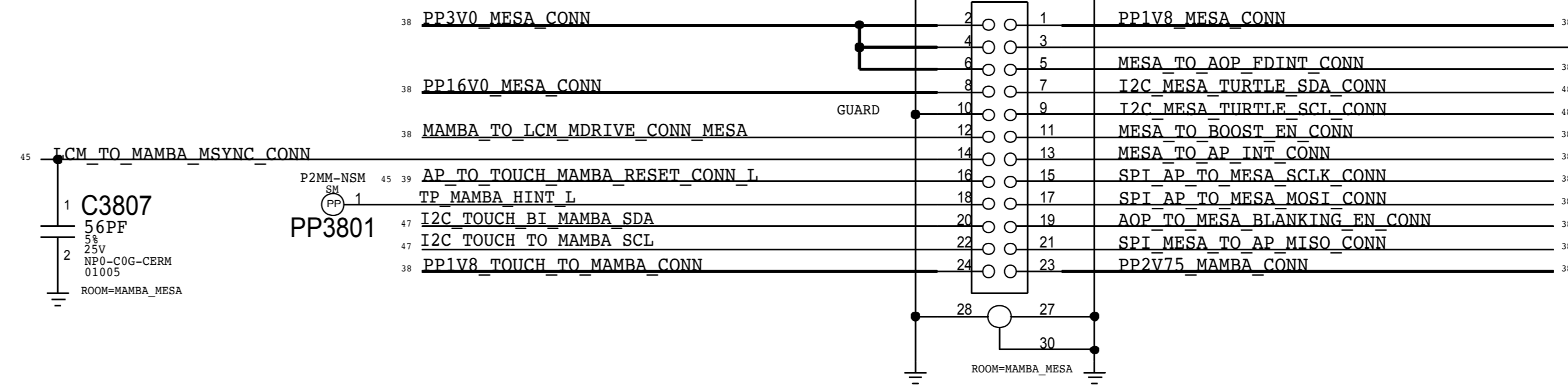
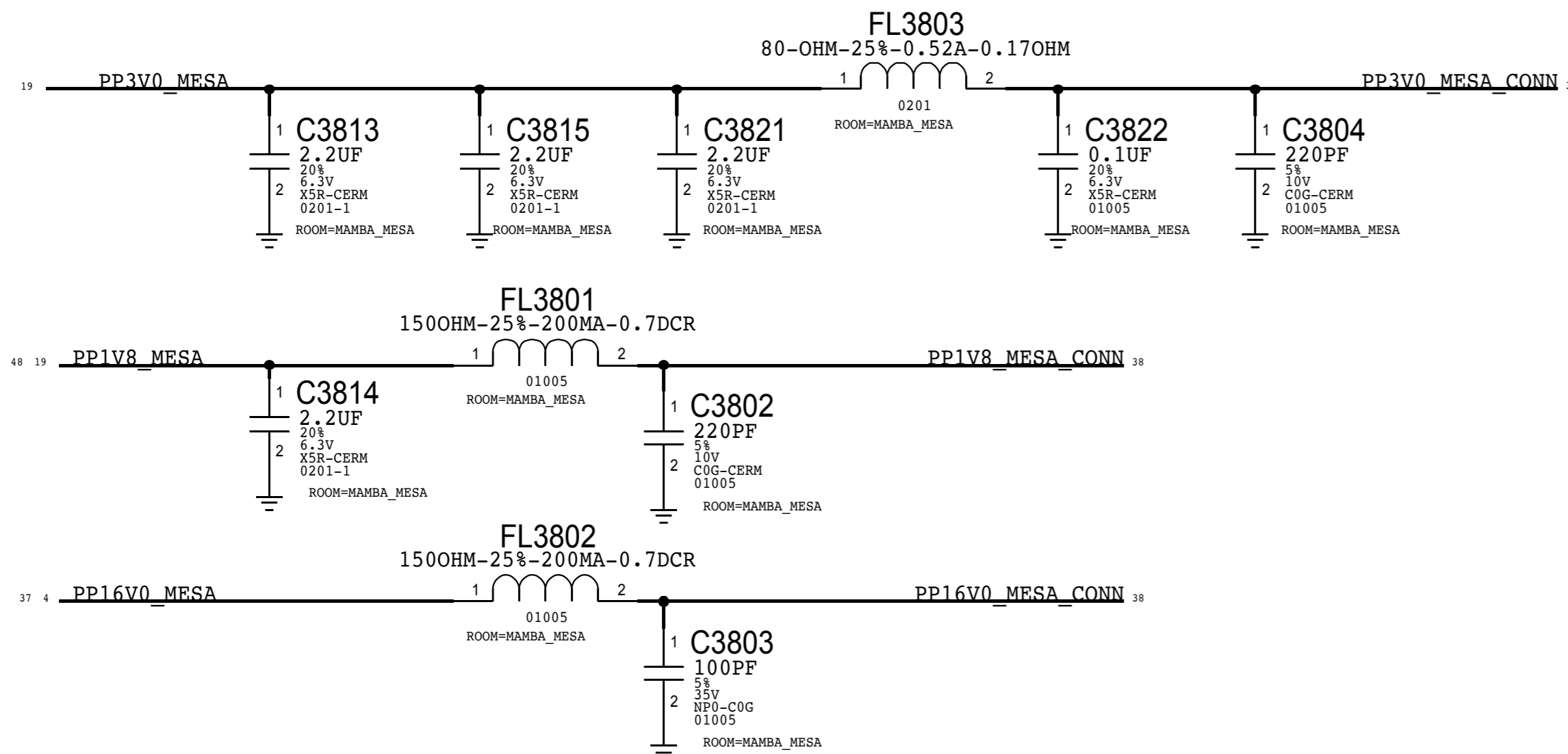
MLB: 516S00141 (RCPT)
FLEX: 516S00142 (PLUG)

CRITICAL
J3801

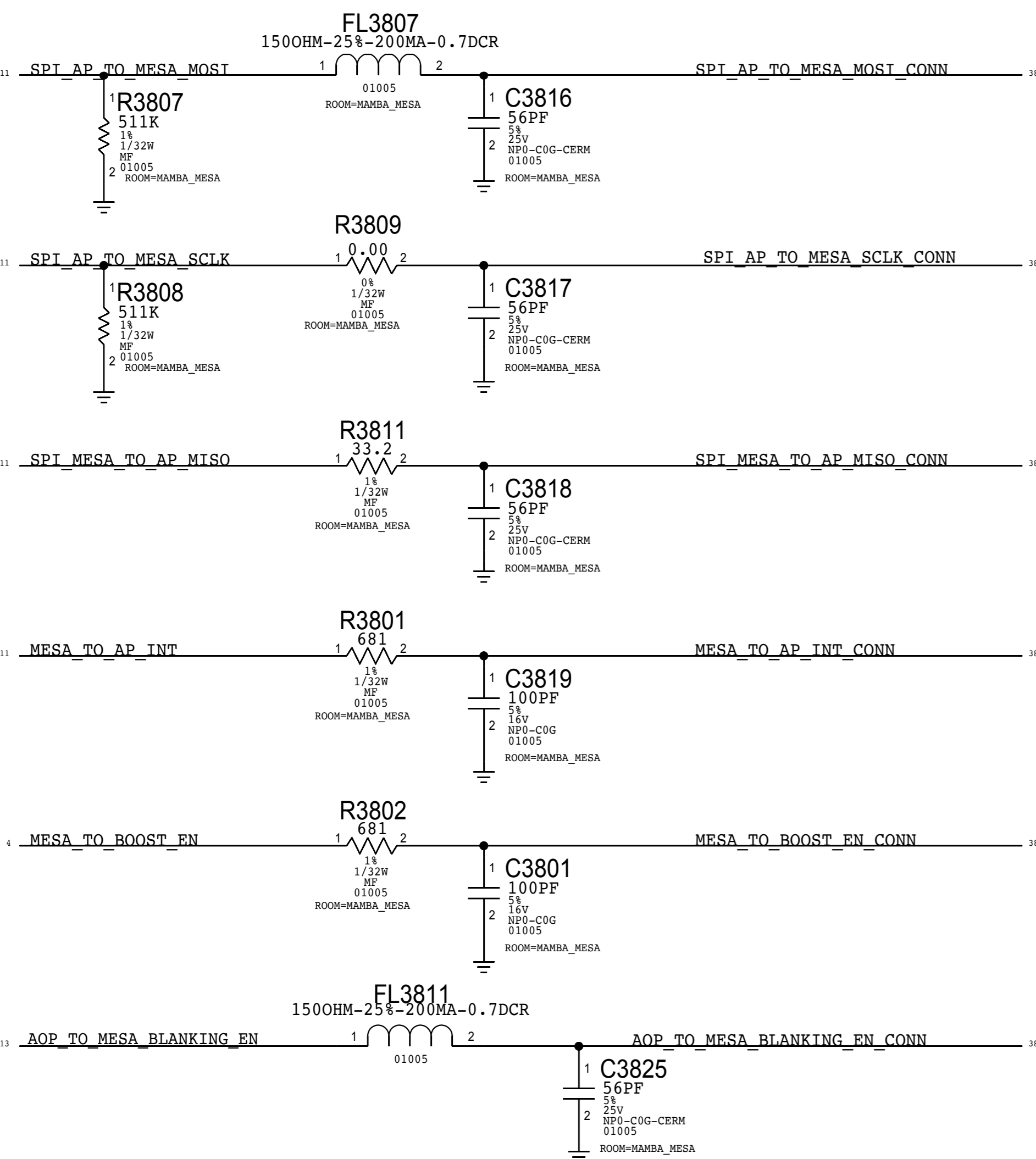
BB35C-RA24-3A

F-ST-SM

Matches flex_x452_acf, schematic revision 1.5.0 pinout



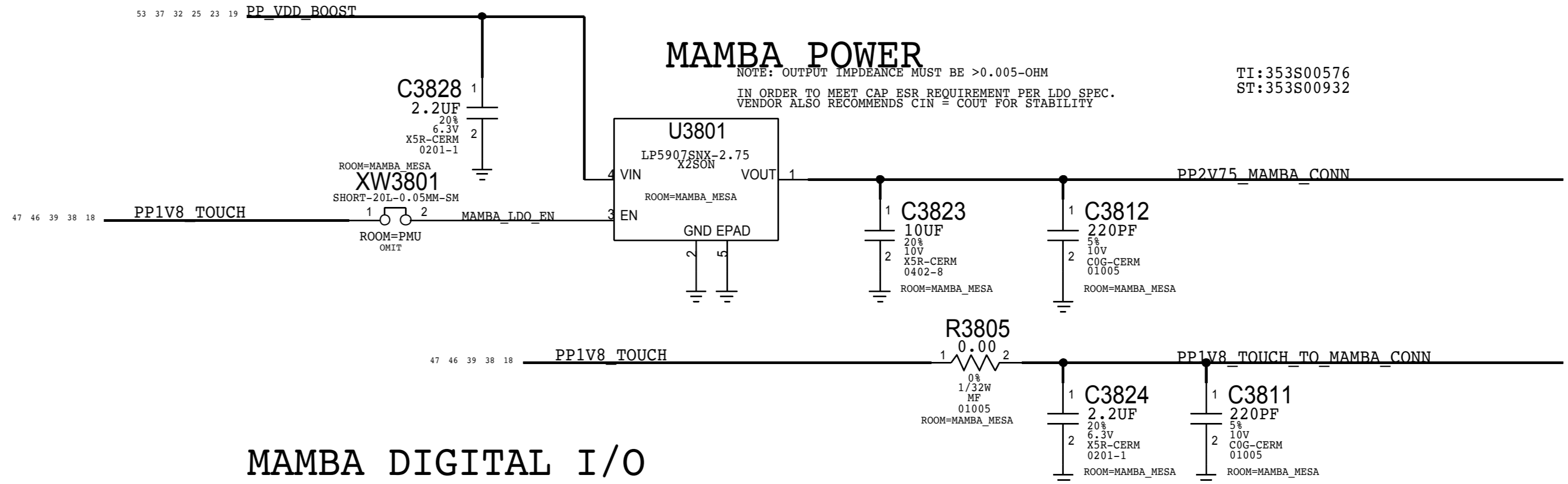
MESA DIGITAL I/O



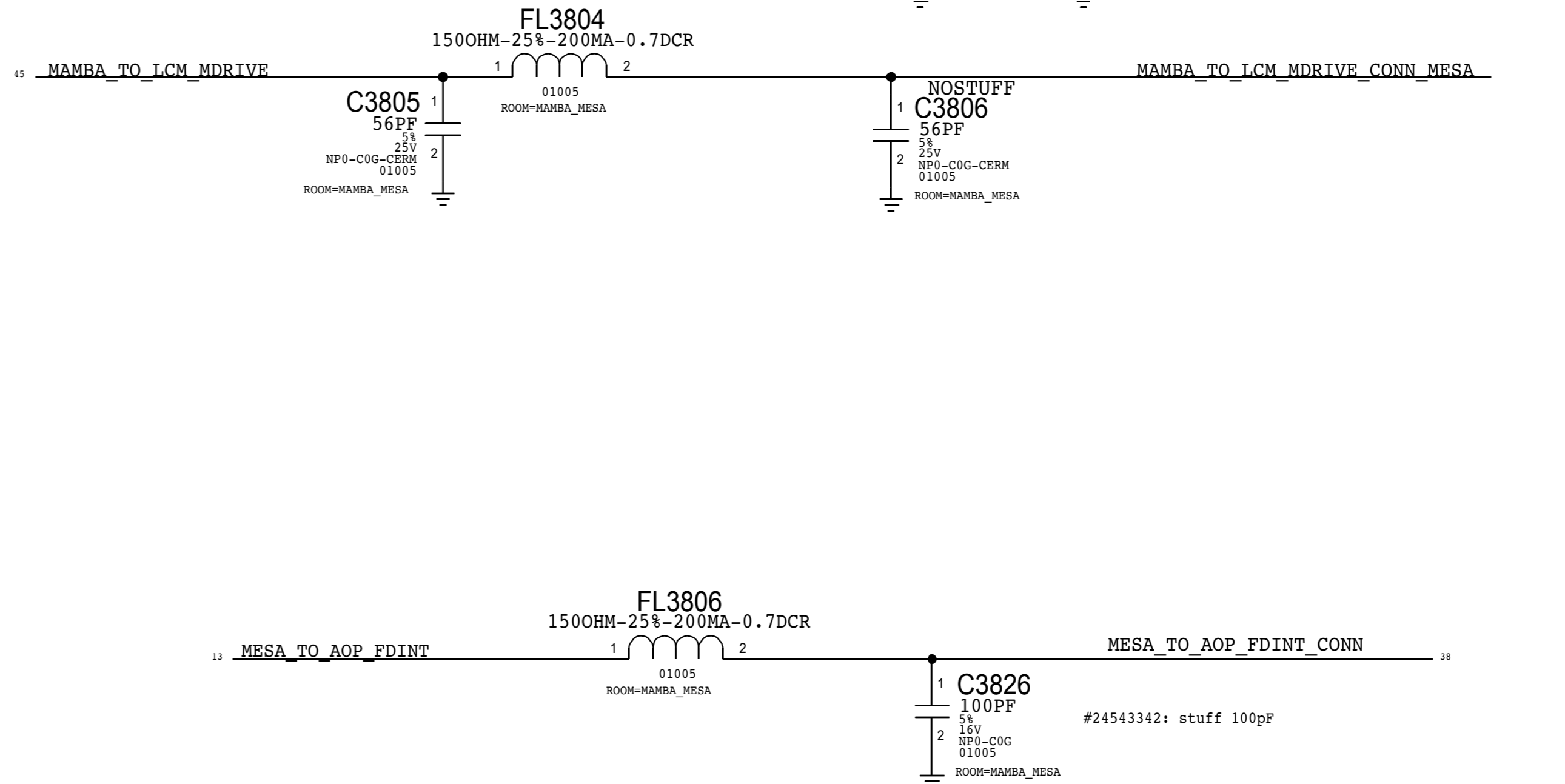
MAMBA POWER

NOTE: OUTPUT IMPEDANCE MUST BE >0.005-OHM
IN ORDER TO MEET CAP RSR REQUIREMENT PER LDO SPEC.
VENDOR ALSO RECOMMENDS CIN = COUT FOR STABILITY.

TI:353800576
ST:353800932

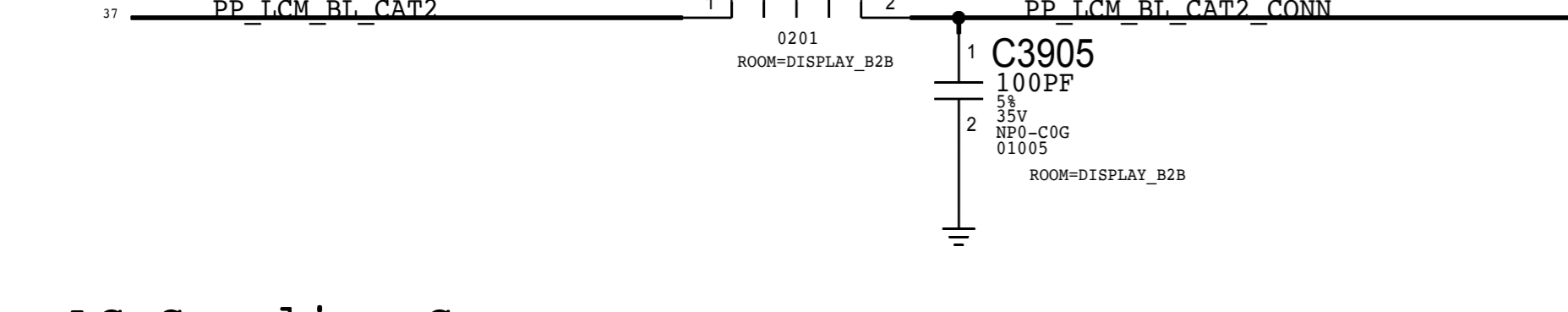
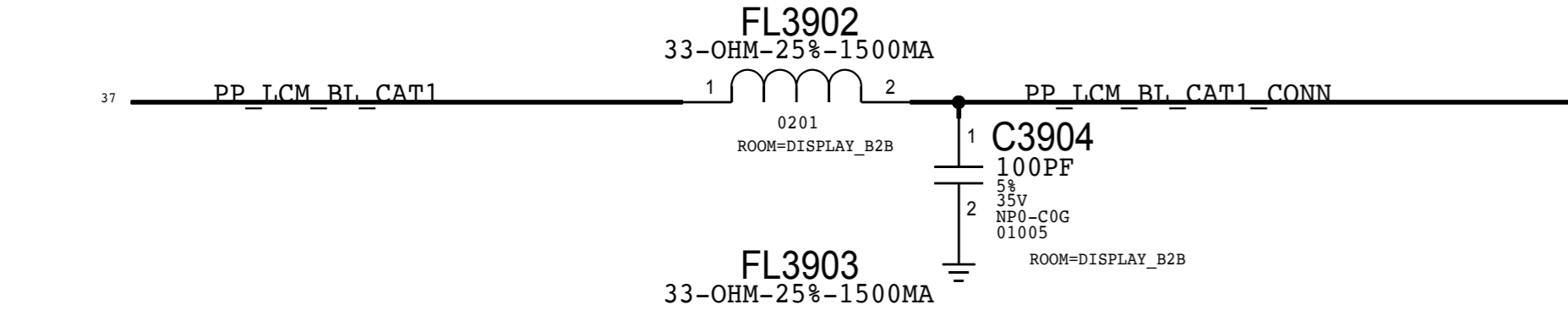
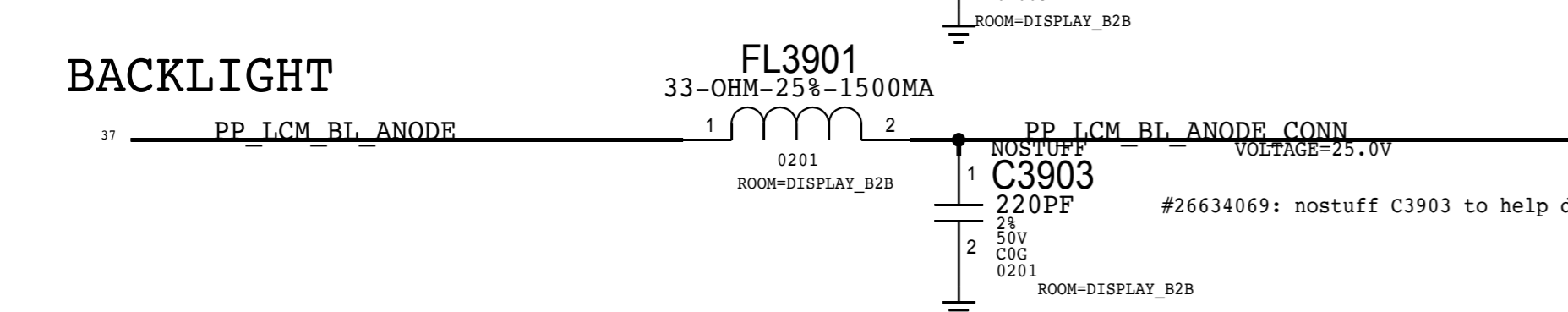
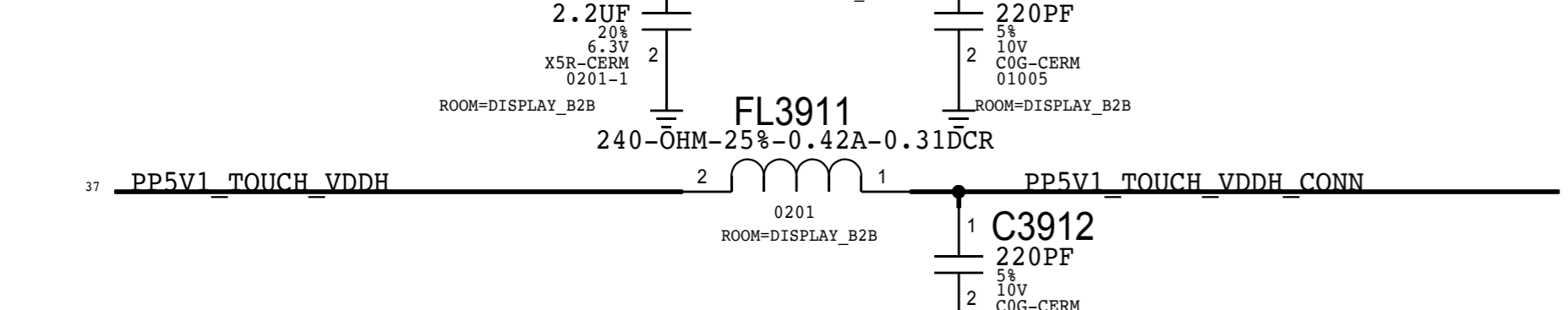
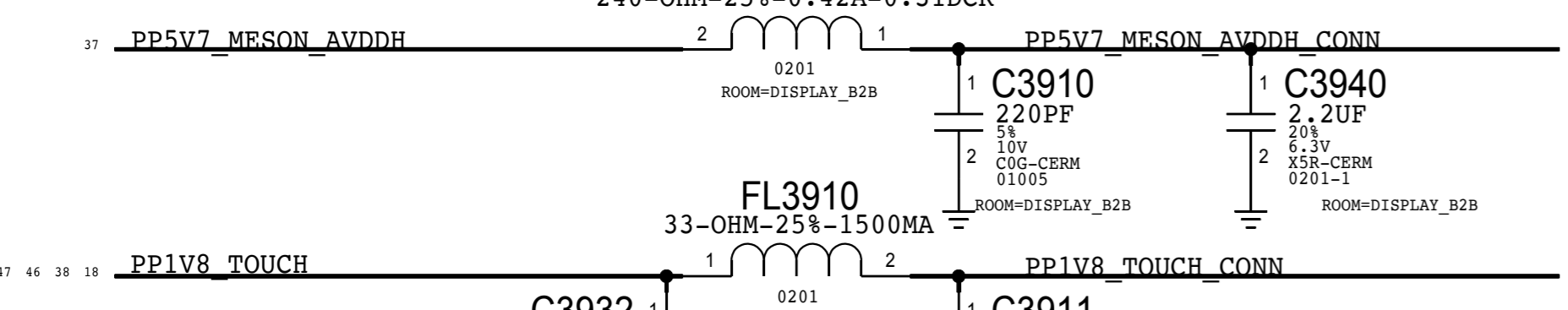
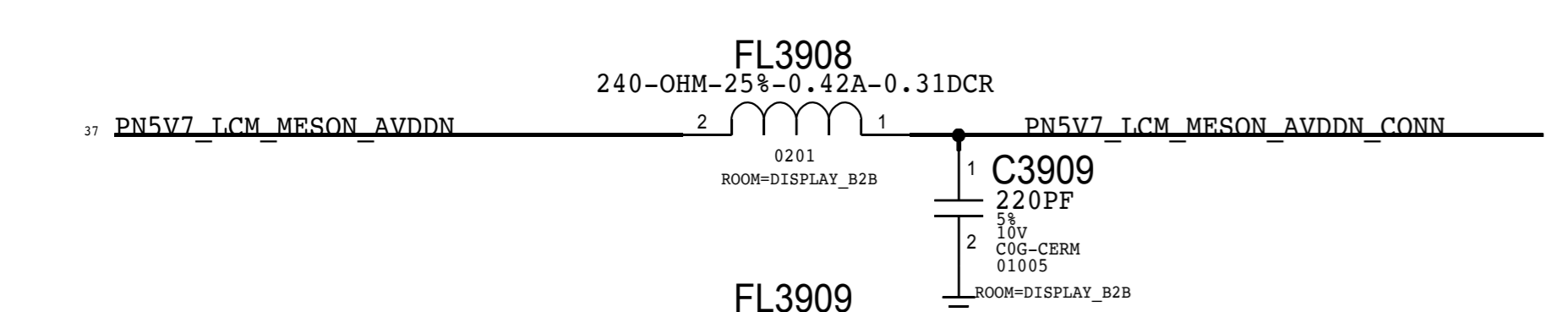
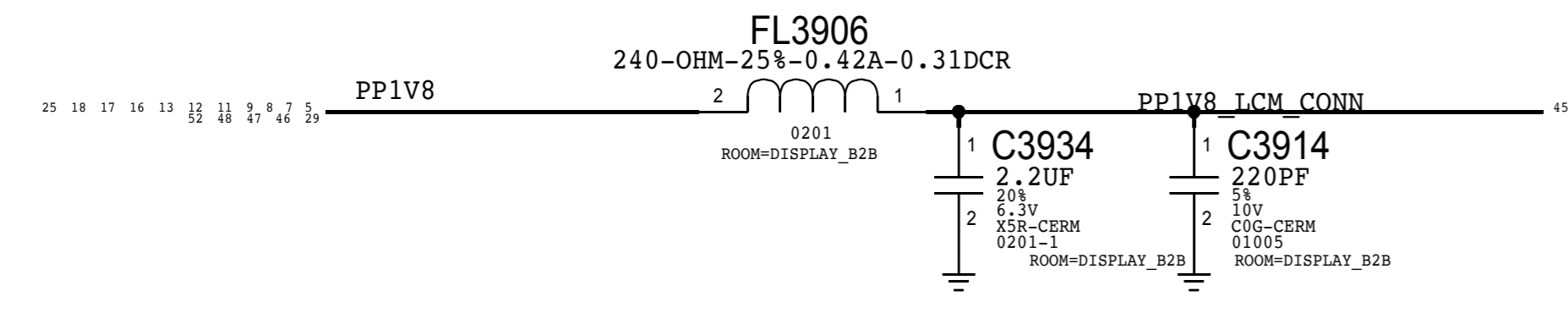
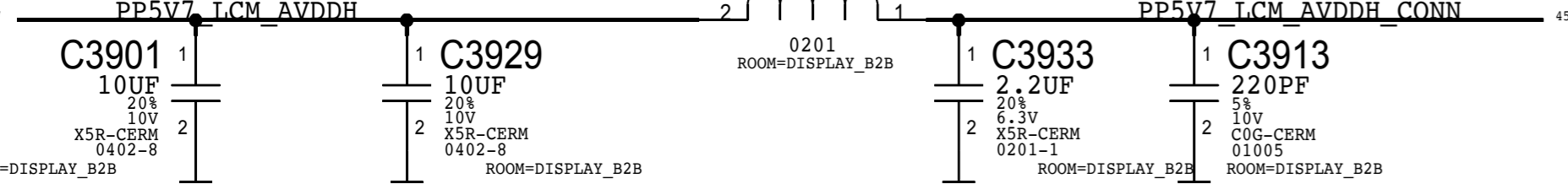


MAMBA DIGITAL I/O

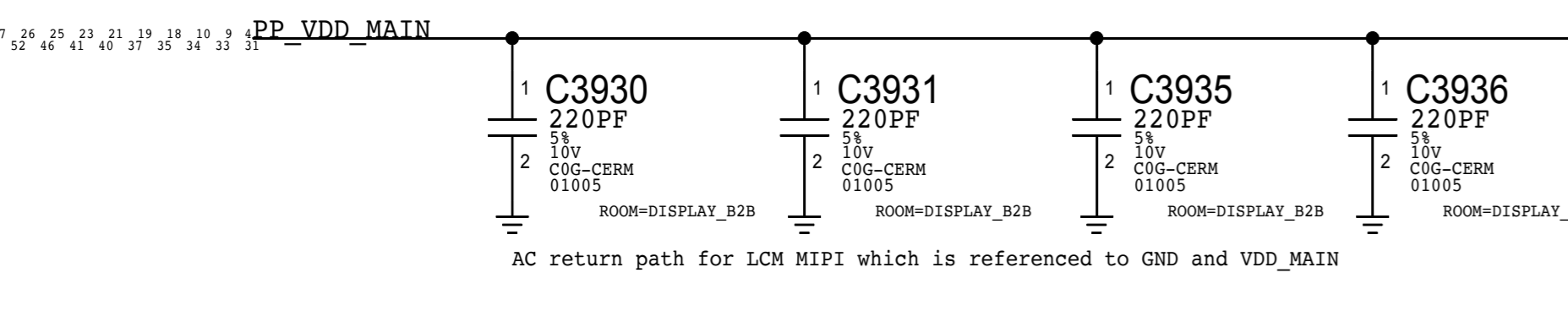


PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE D
	REVISION	8.0.0	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

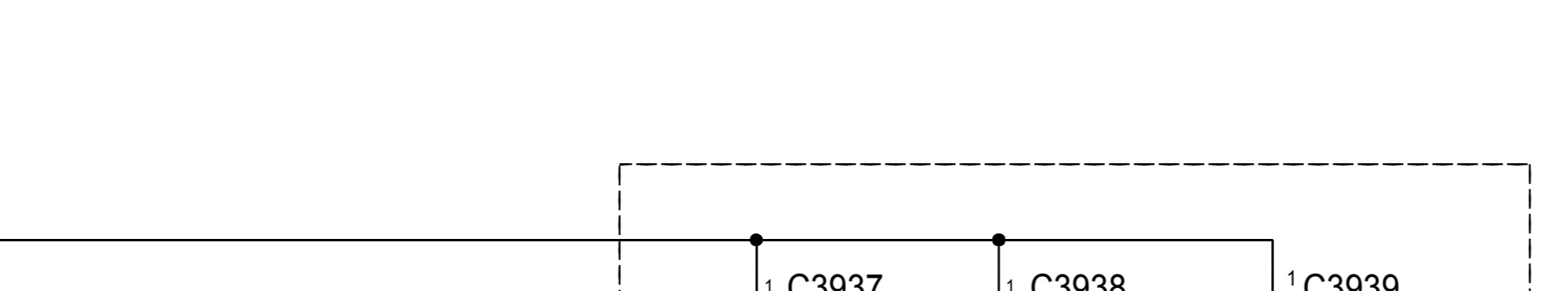
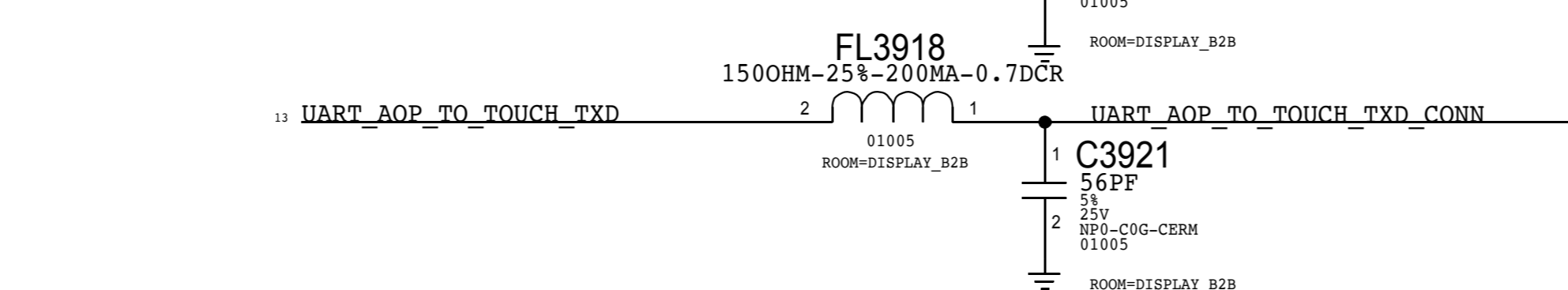
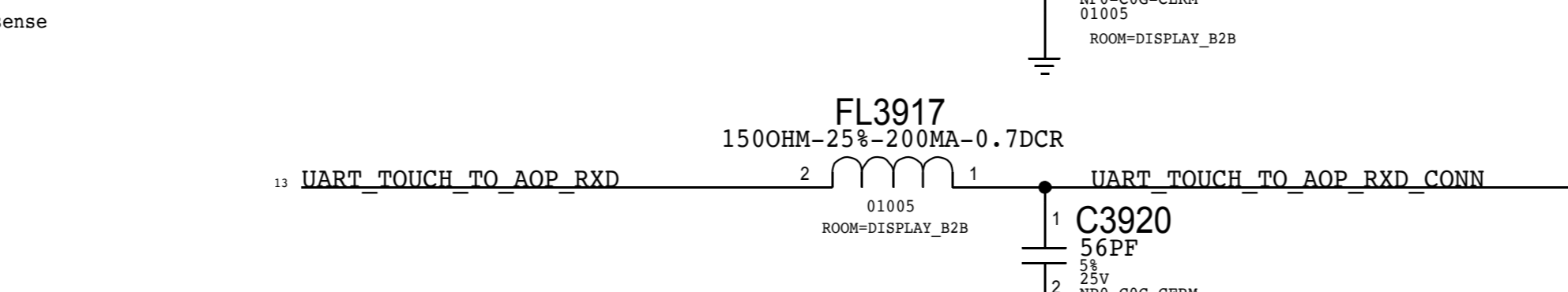
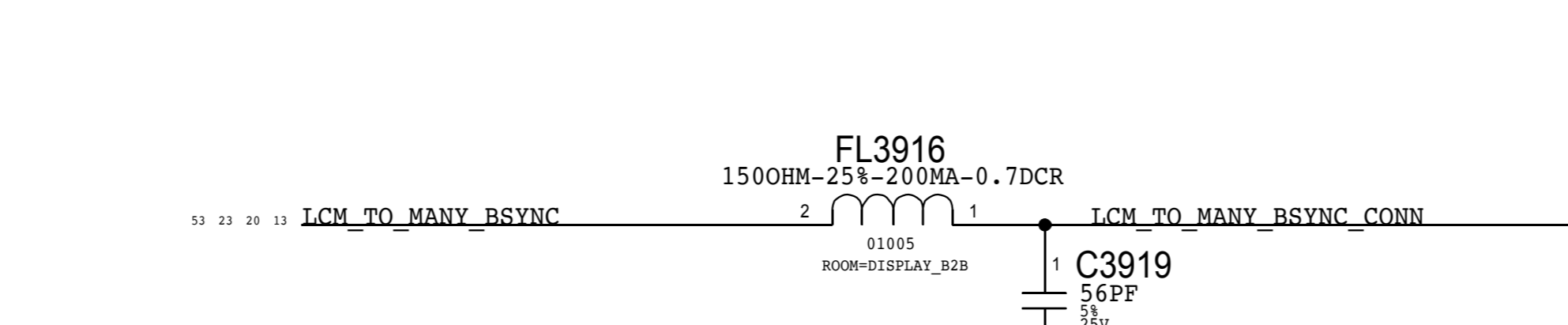
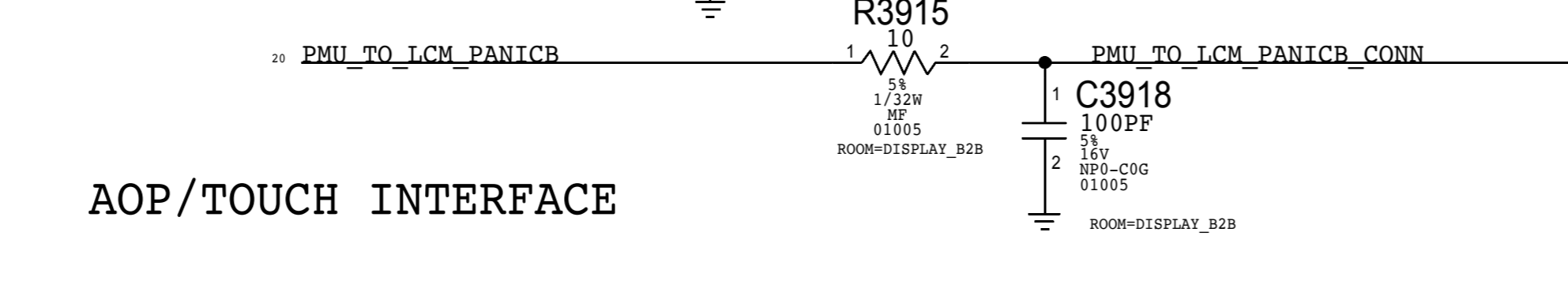
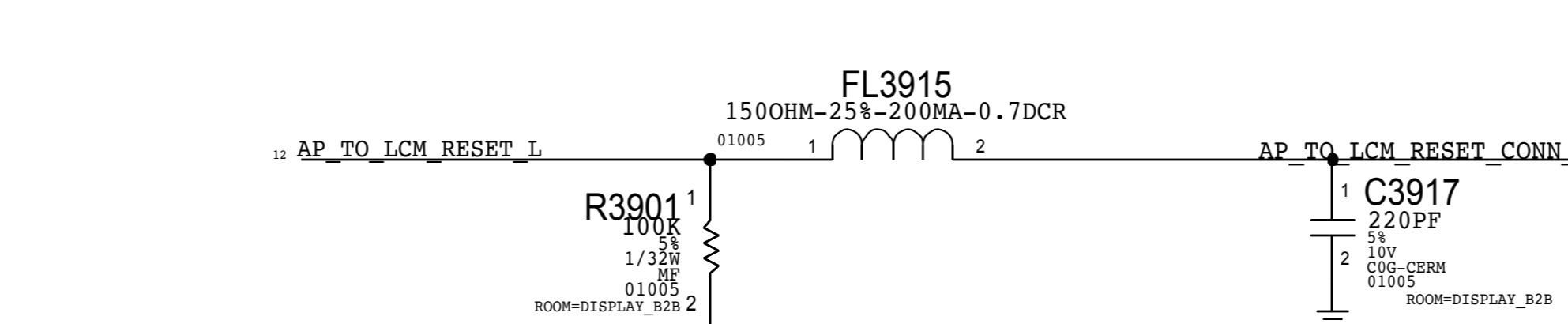
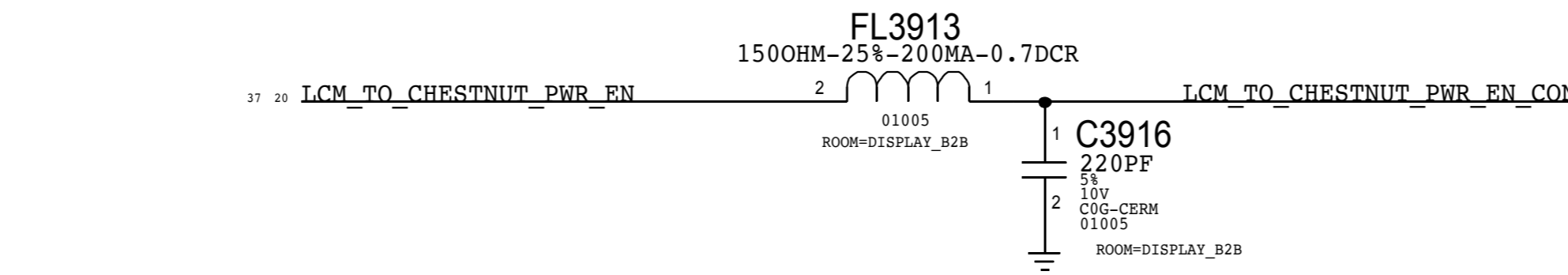
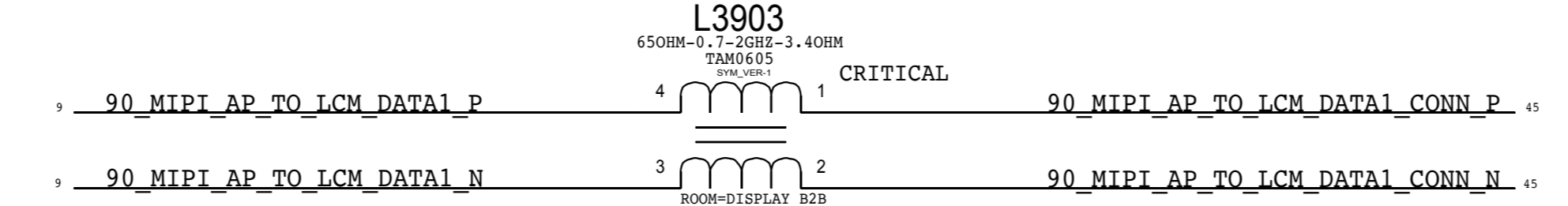
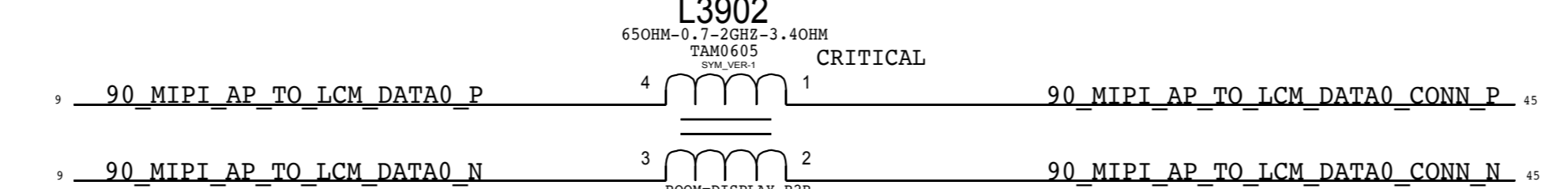
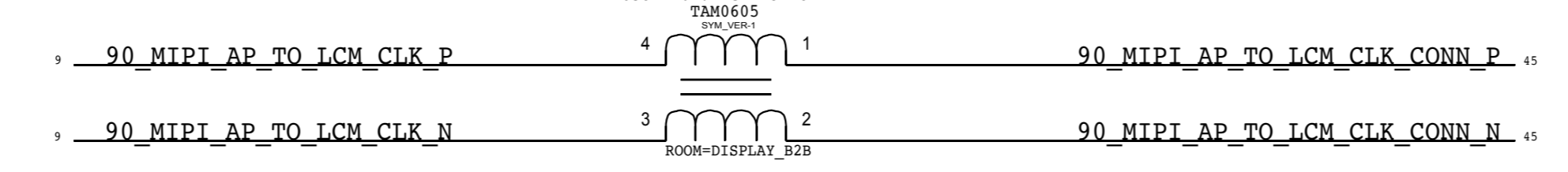
DISPLAY POWER



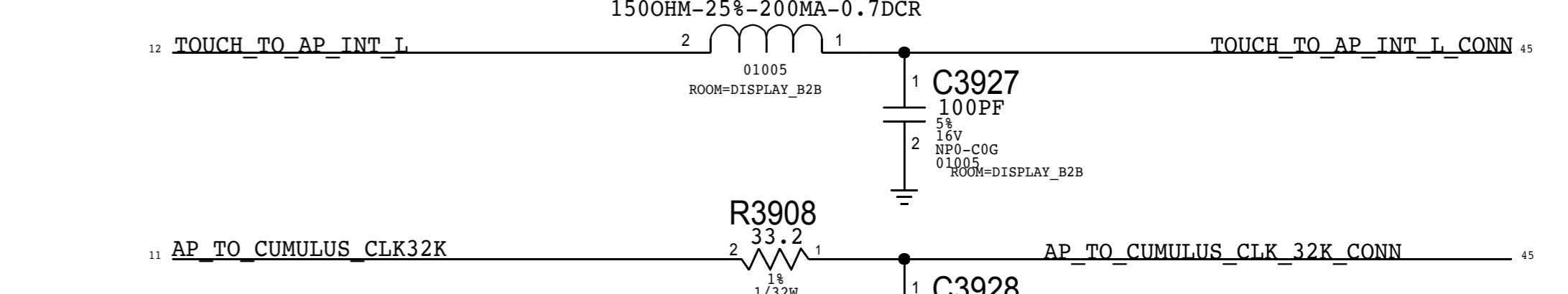
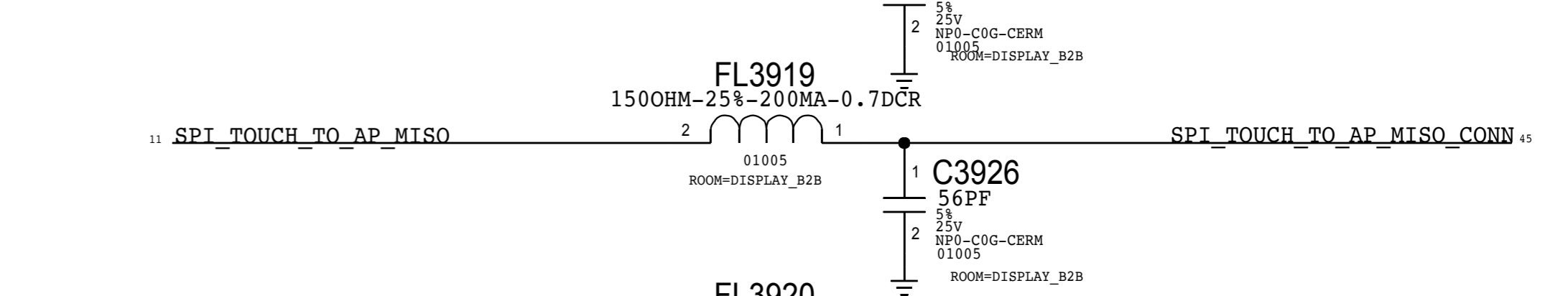
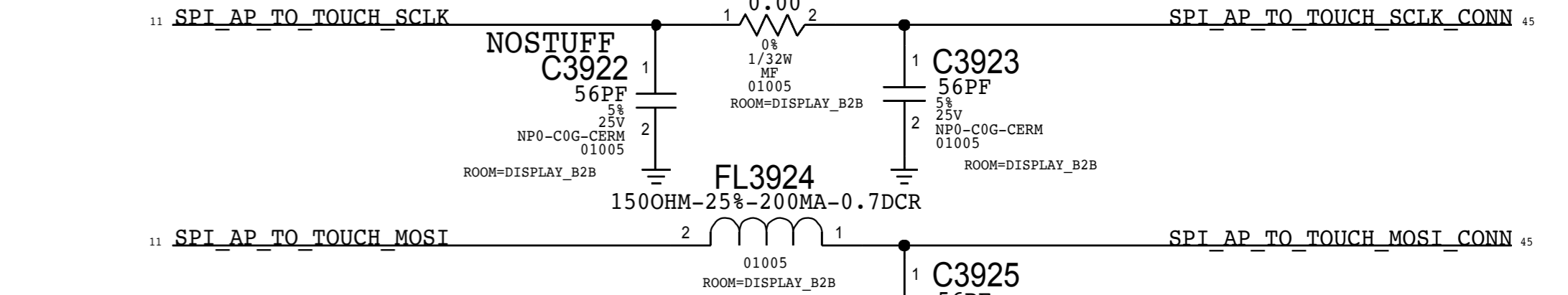
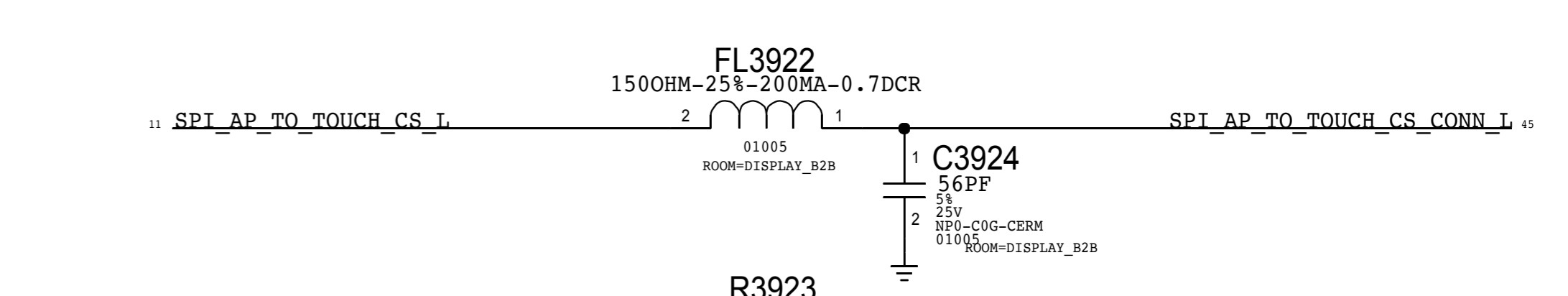
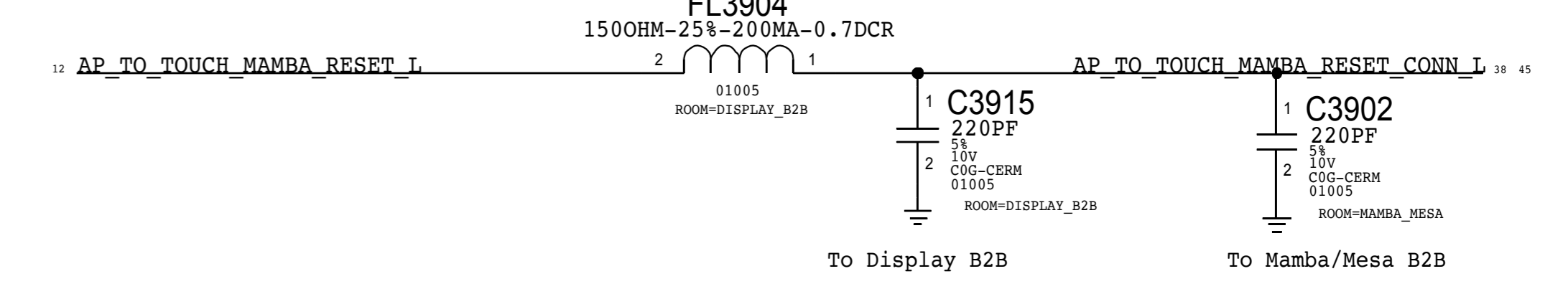
AC Coupling Caps



DISPLAY MIPI



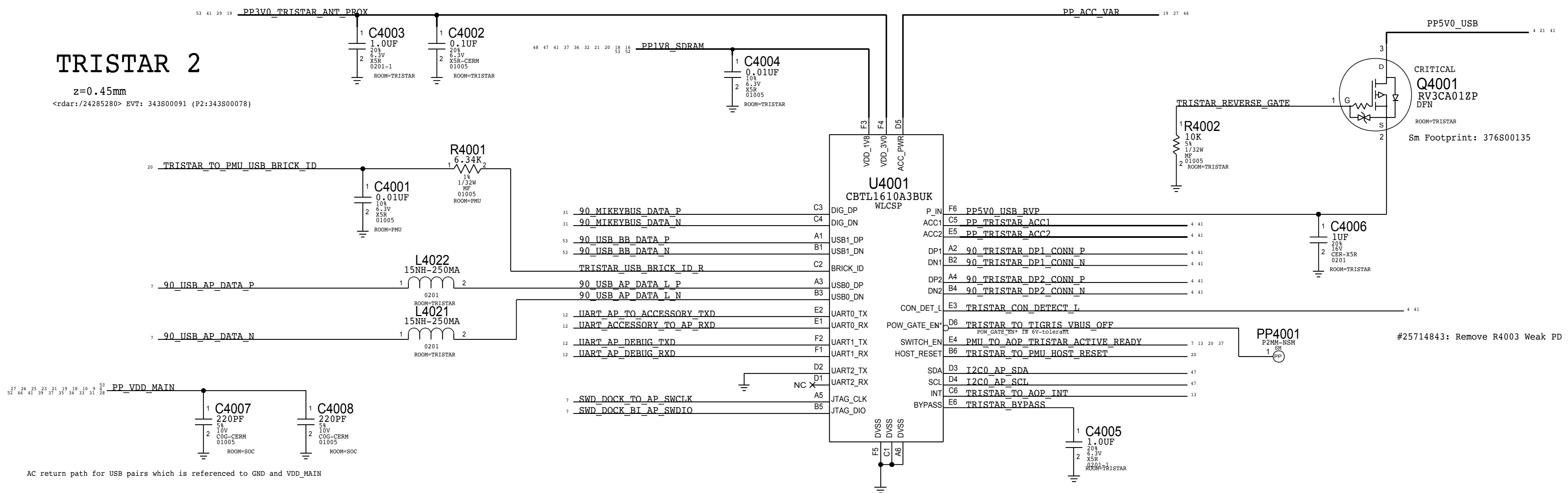
AP/TOUCH INTERFACE



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	6 OF 53
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	6 OF 81
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

TRISTAR 2

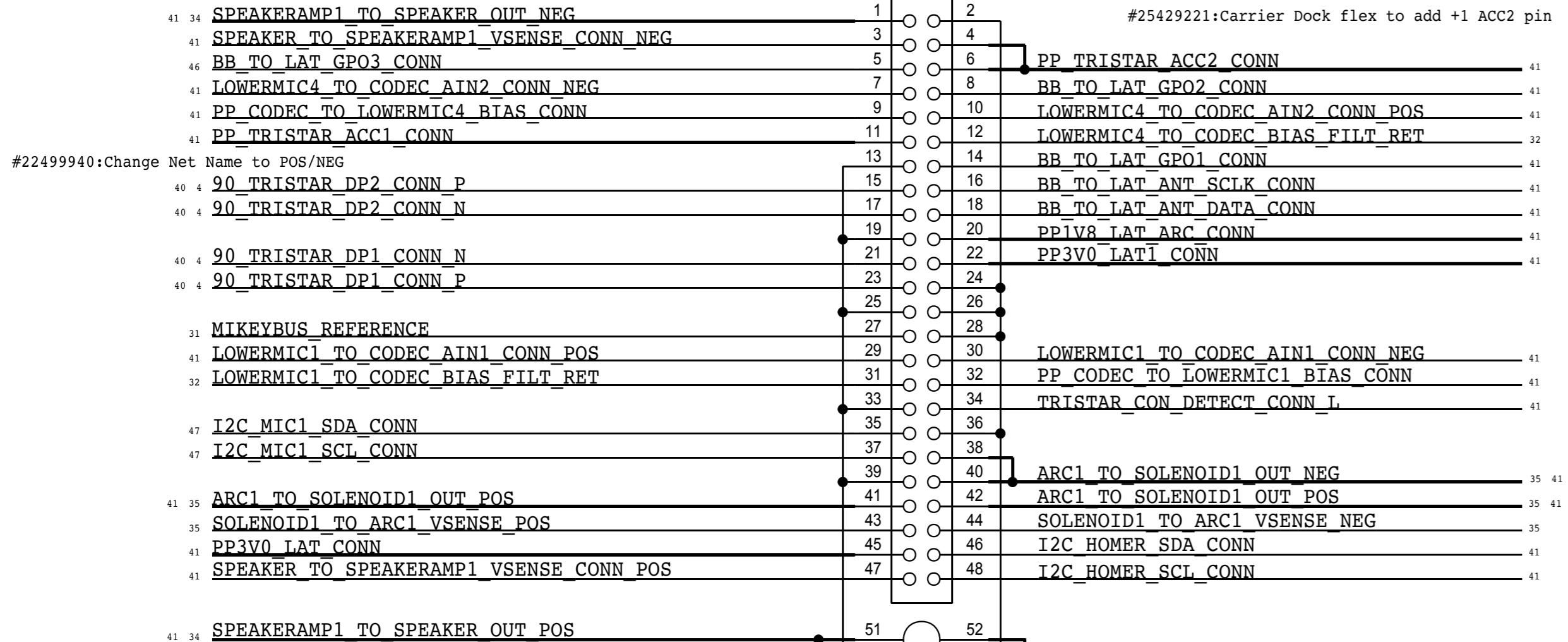
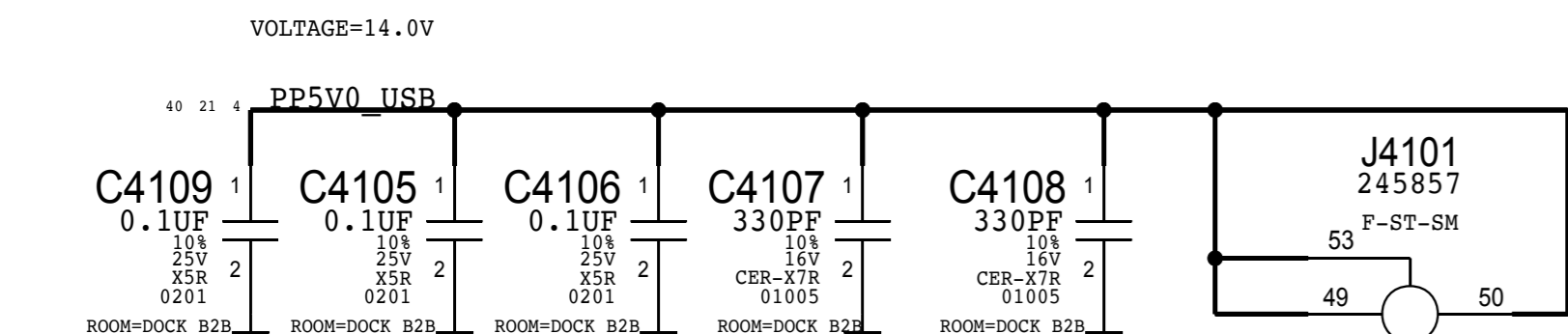
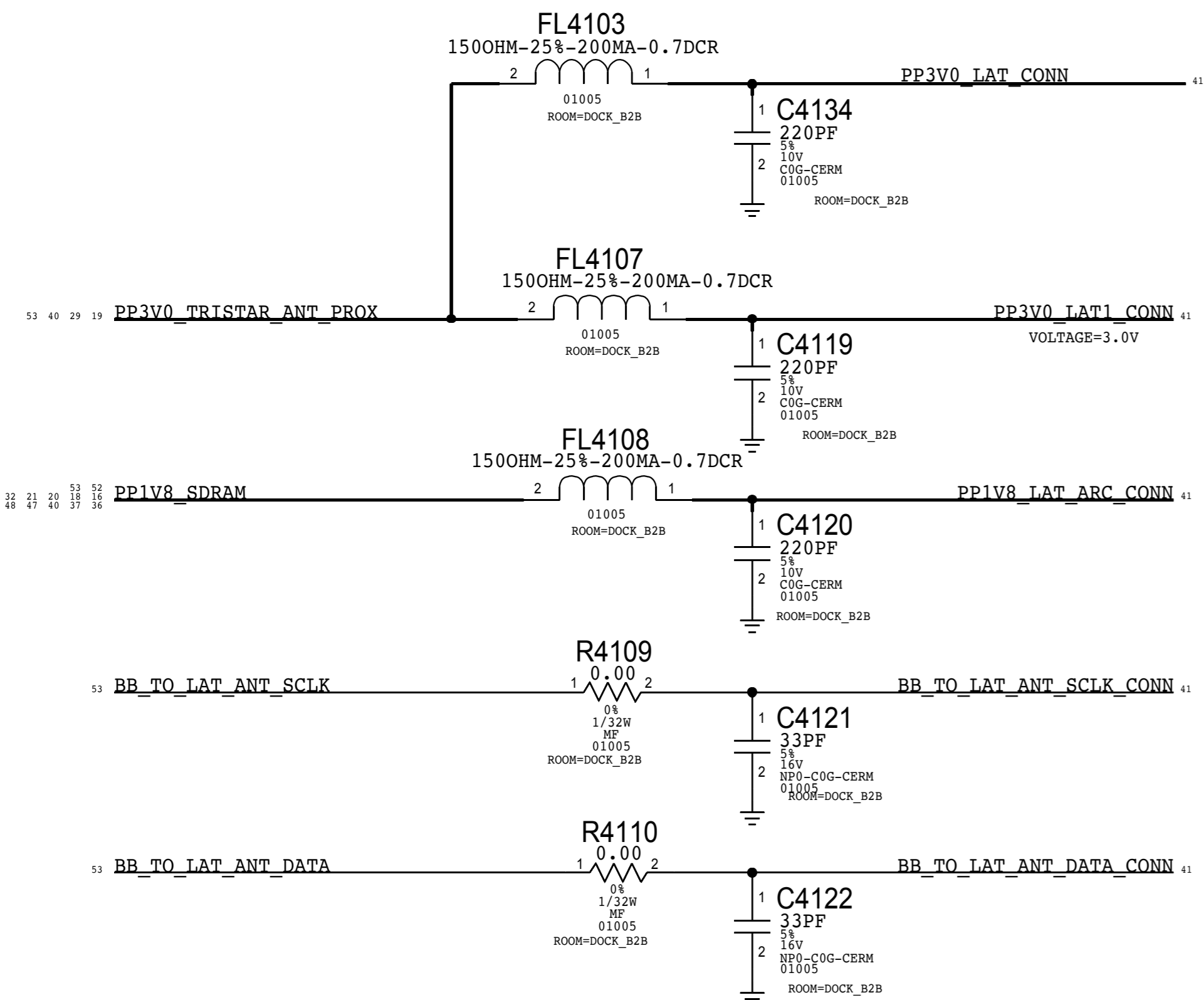
z=0.45mm
 <rdar://24285280> EVT: 343S00091 (P2:343S00078)



PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

ANTENNA

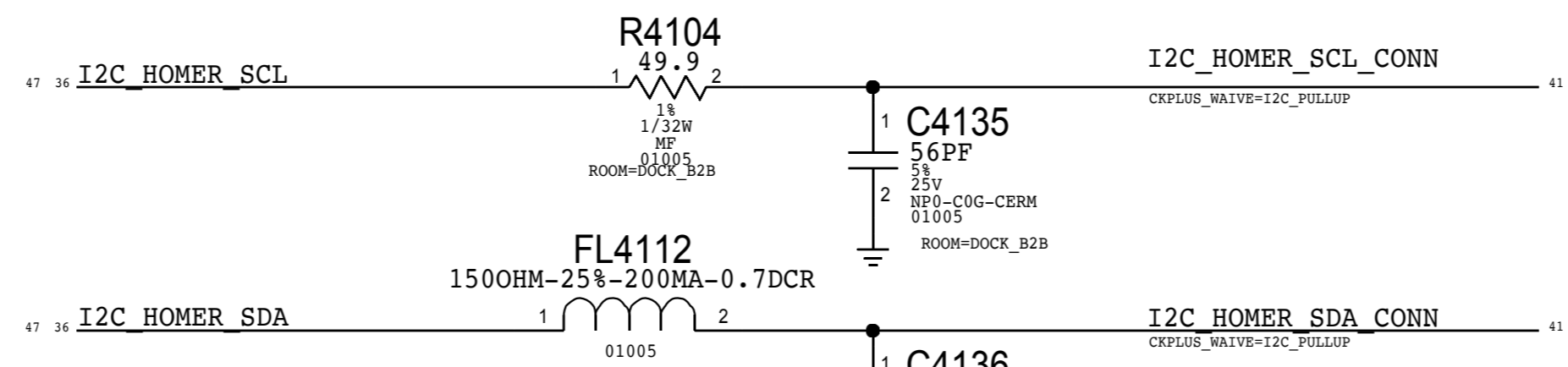
Please loop in Matt Mow (Antenna Team) when changing these components!



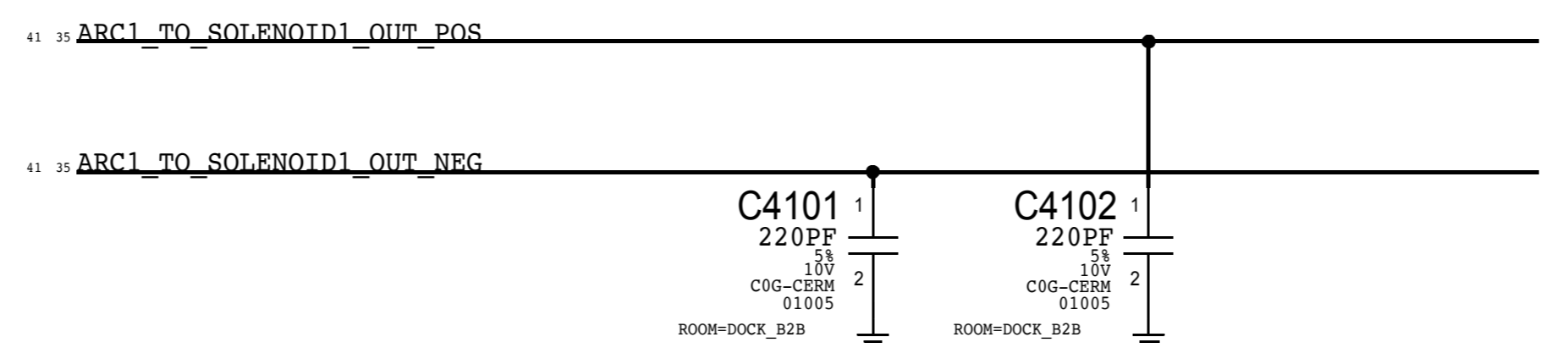
DOCK FLEX CONNECTOR

ARC CONTROL

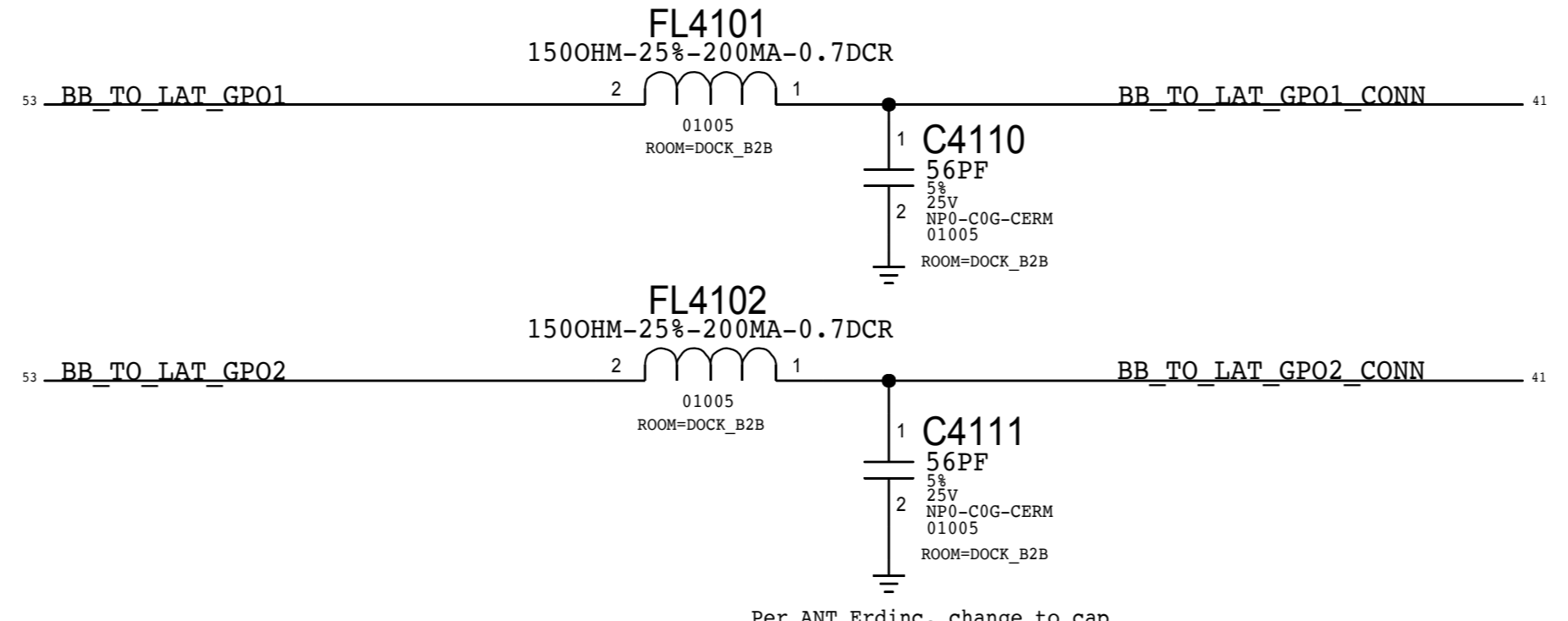
#26118161: Update FL4104 to 49.9ohm



ARC1

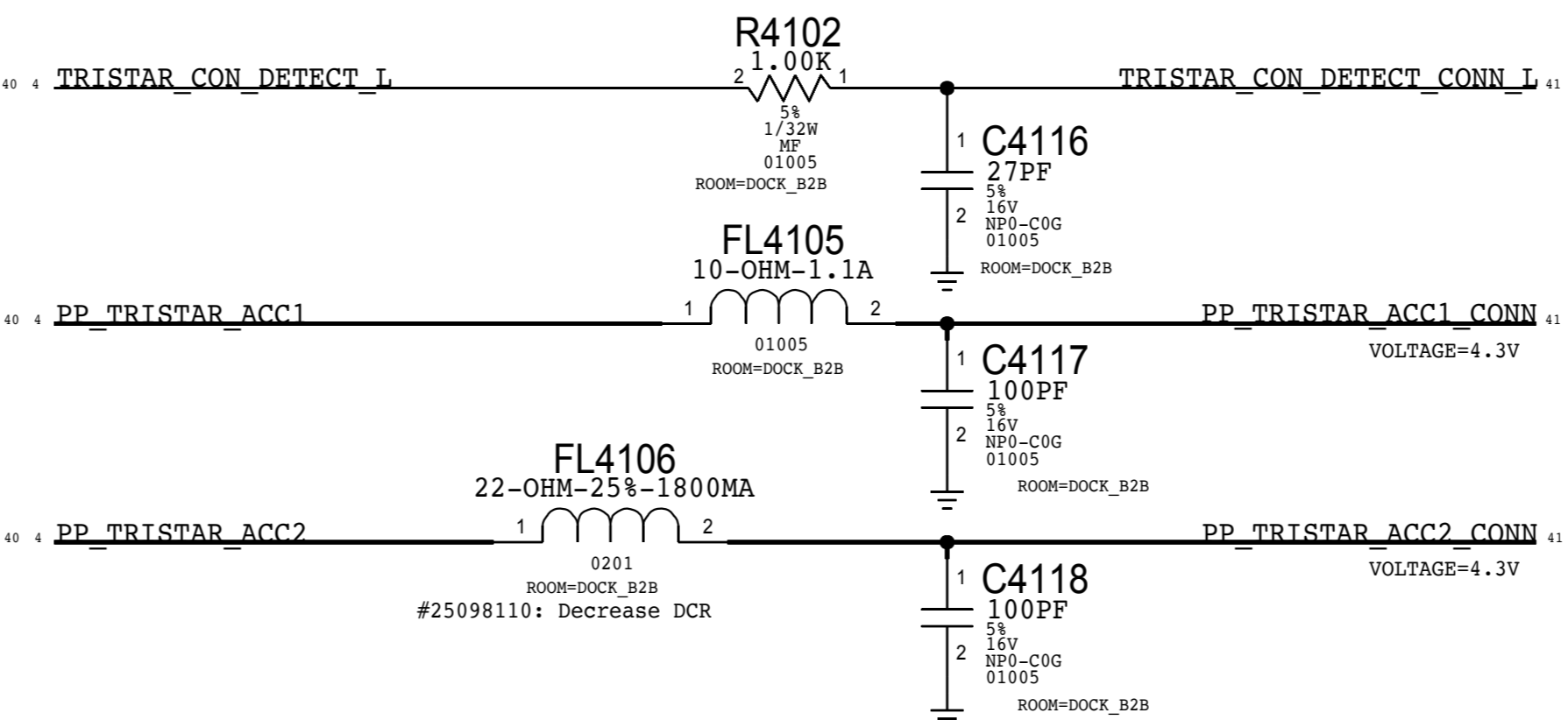


Antenna GPIO

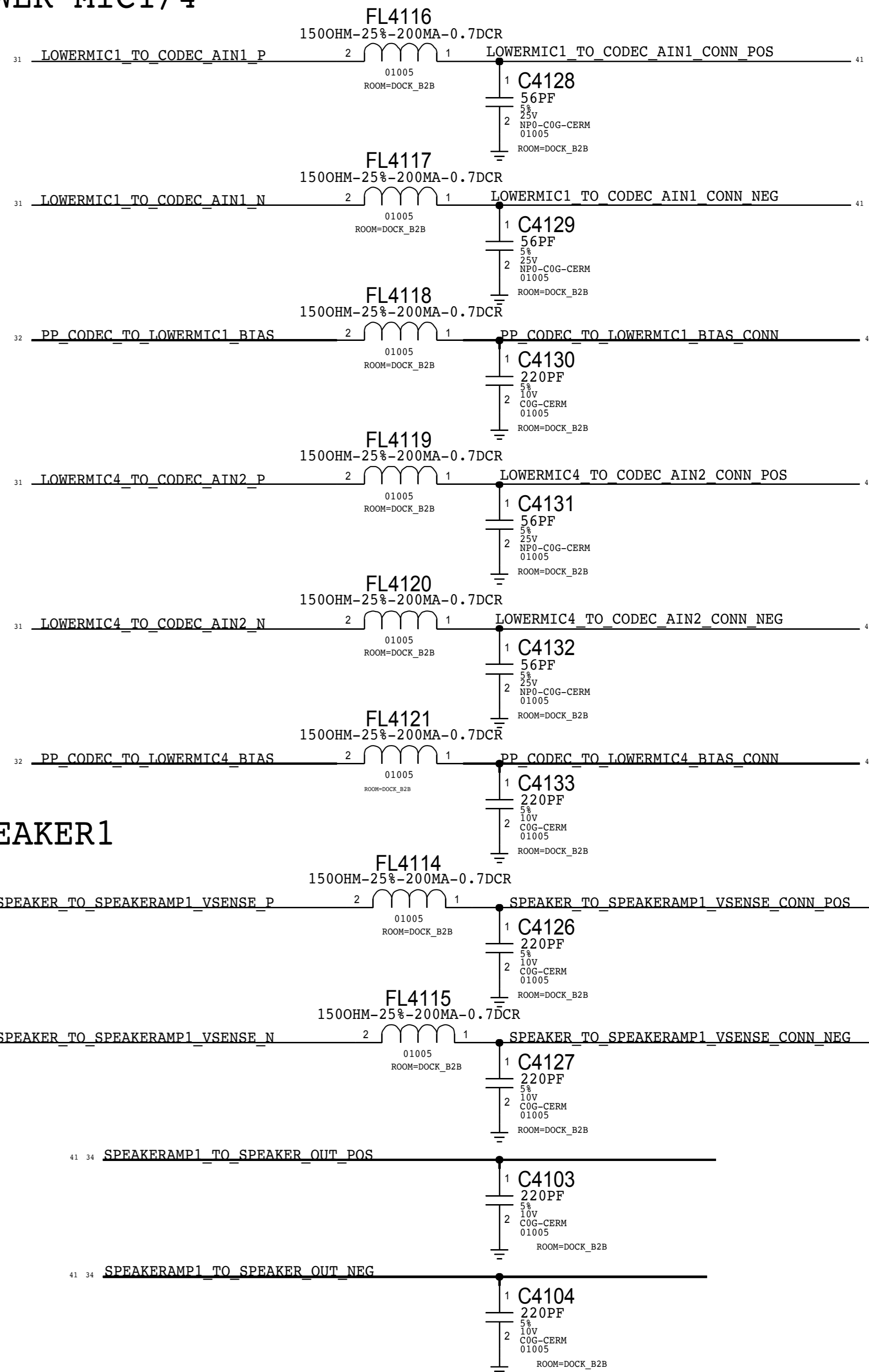


Per ANT Erdinc, change to cap

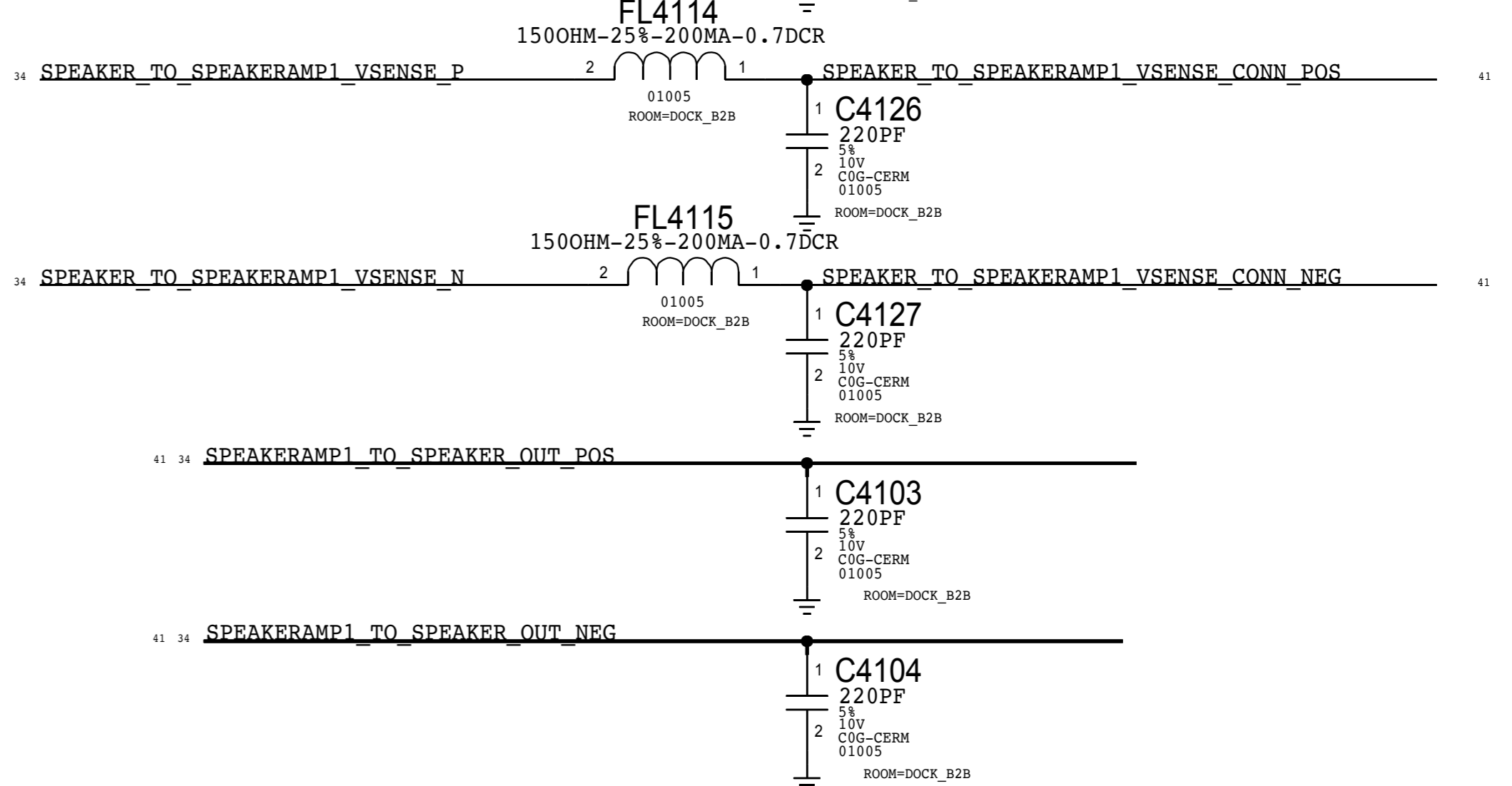
TRISTAR



LOWER MIC1/4

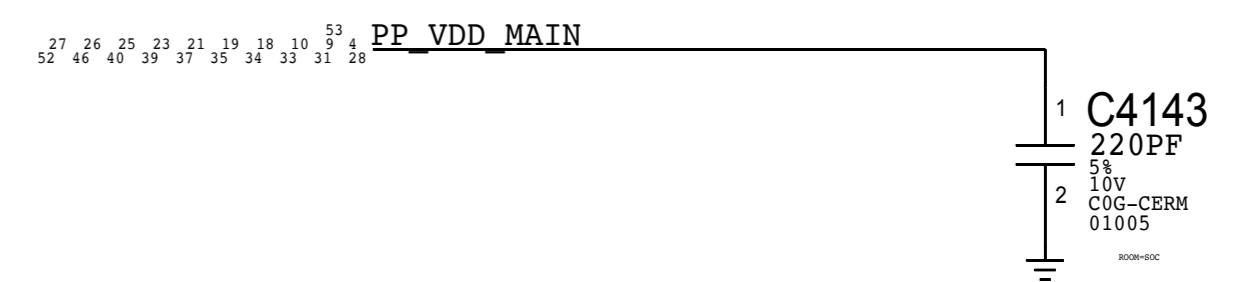


SPEAKER1



USB AC Coupling

AC return path for USB pairs which is referenced to GND and VDD_MAIN



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	6 OF 53
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	6 OF 81
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

8

7

6


5

4

3

2

1

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE D
	REVISION	8.0.0	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

8

7

6


5

4

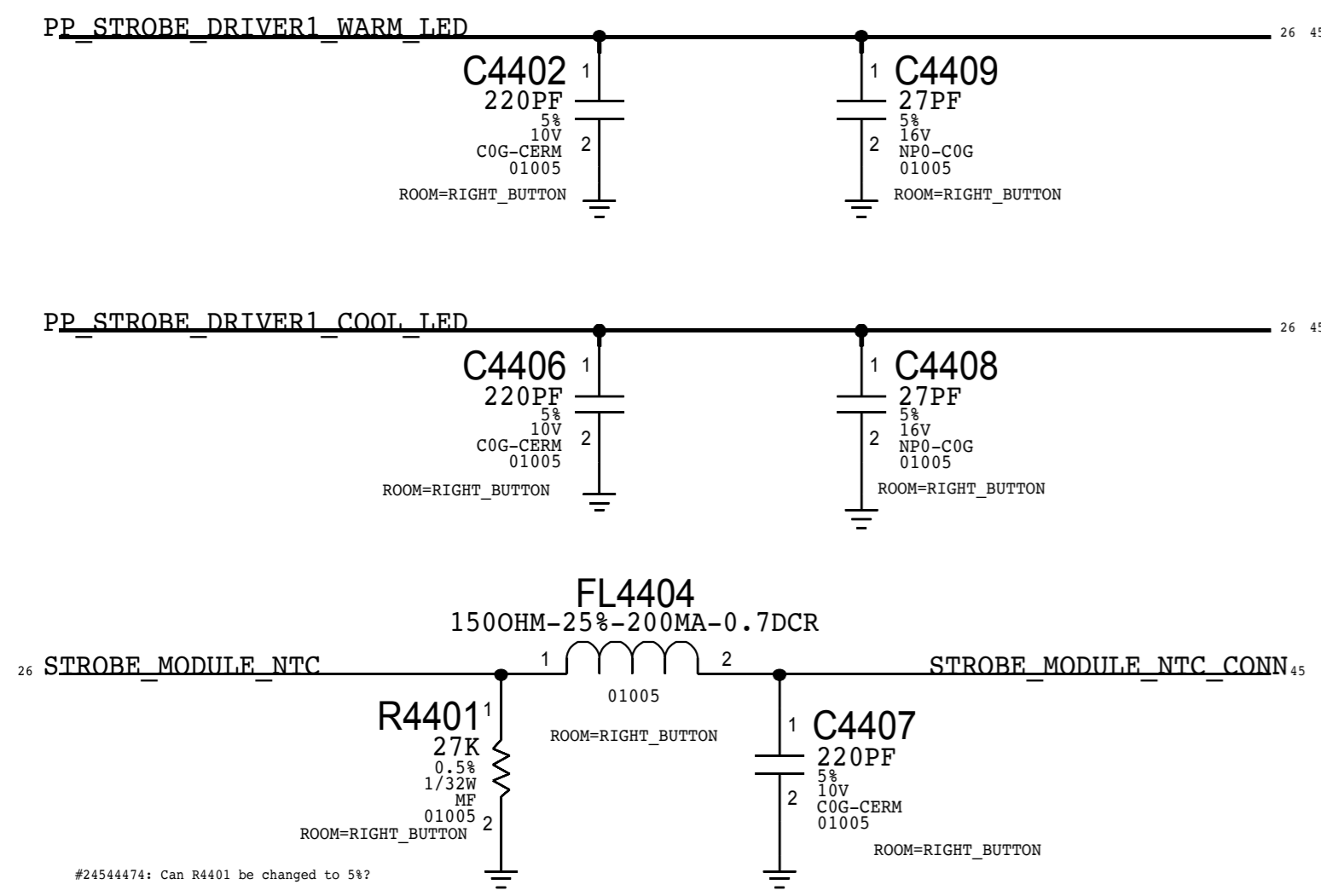
3

2

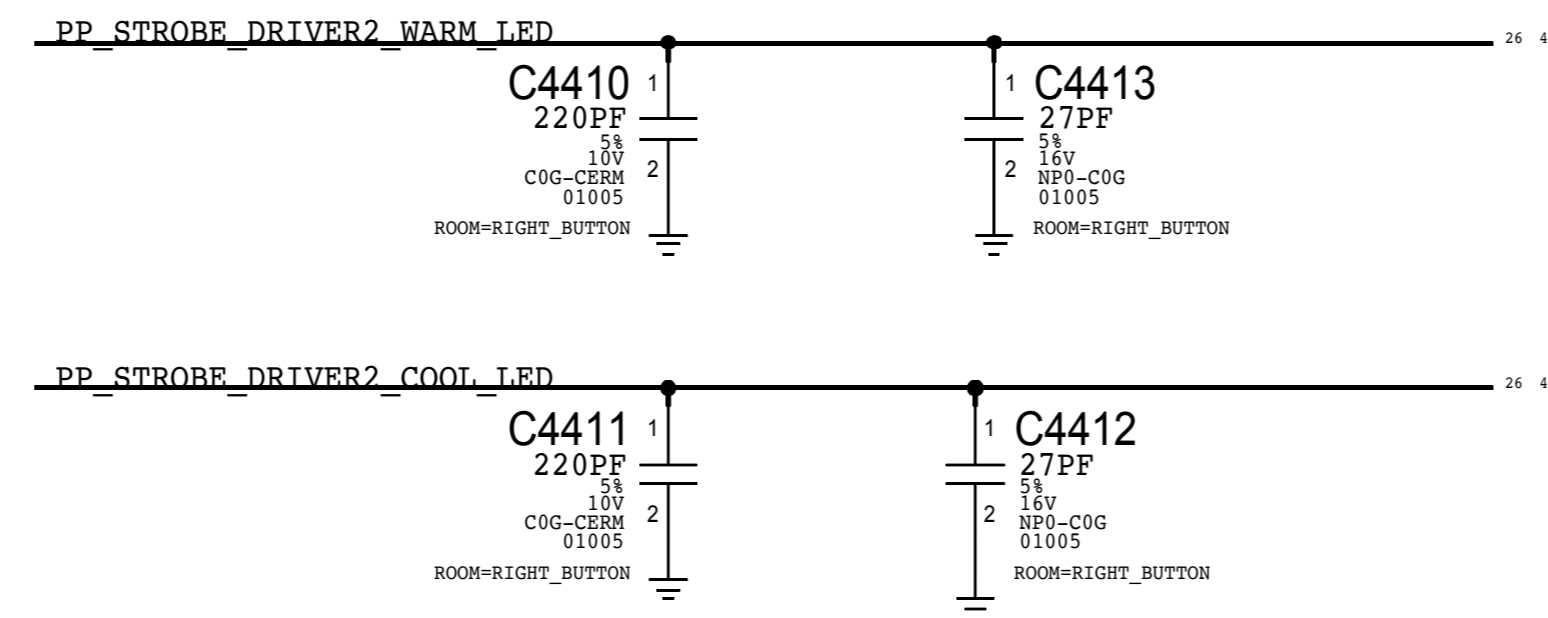
1

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

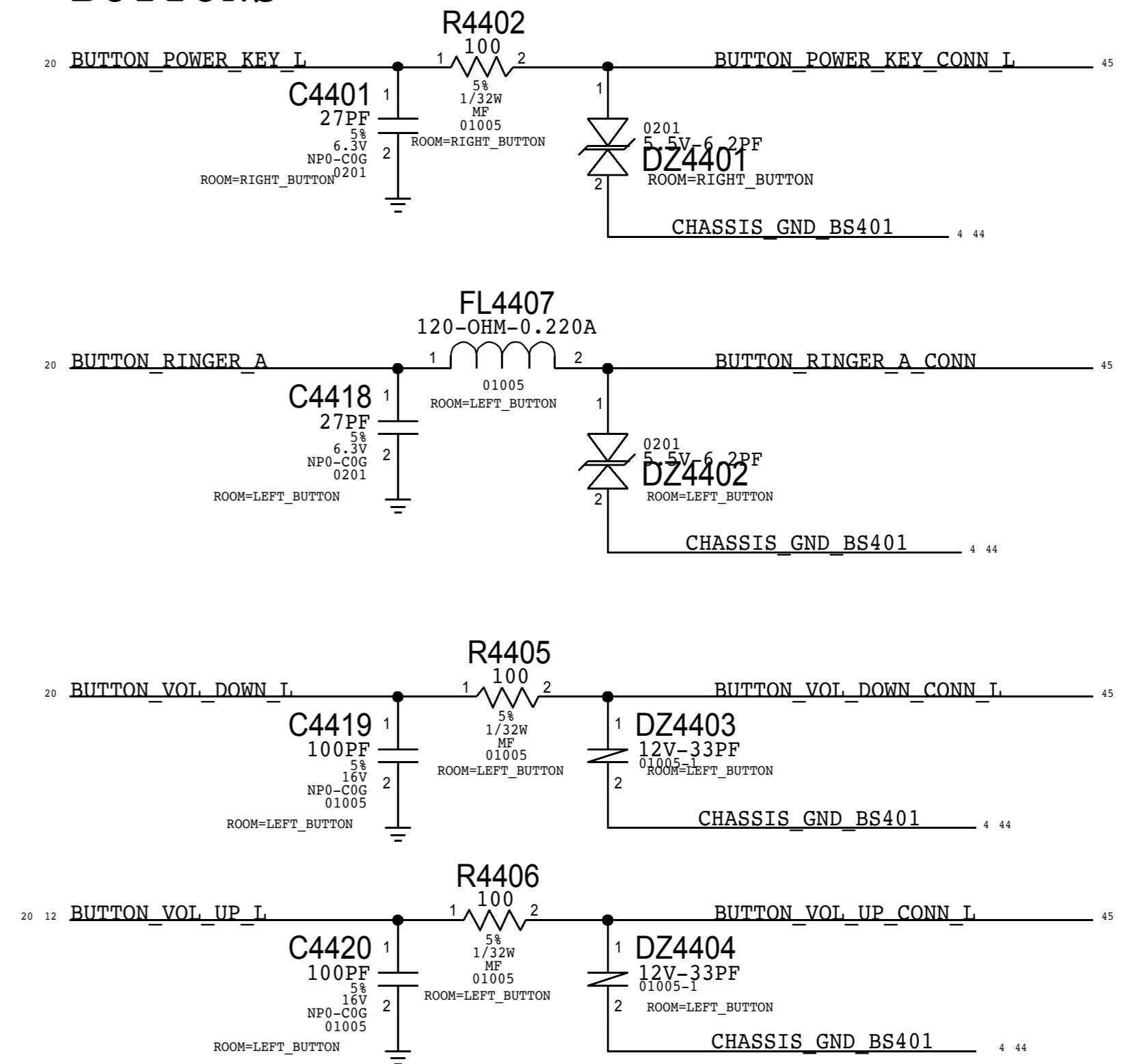
STROBE1



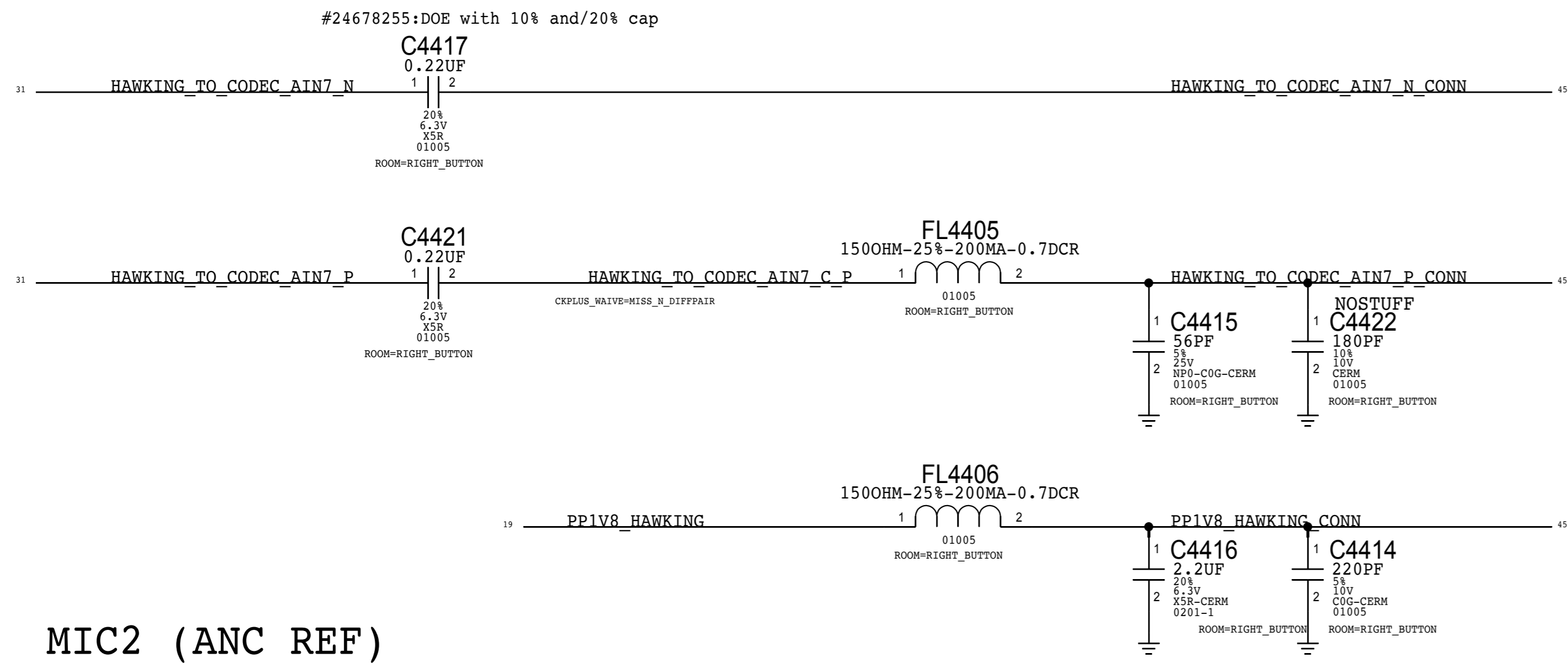
STROBE2



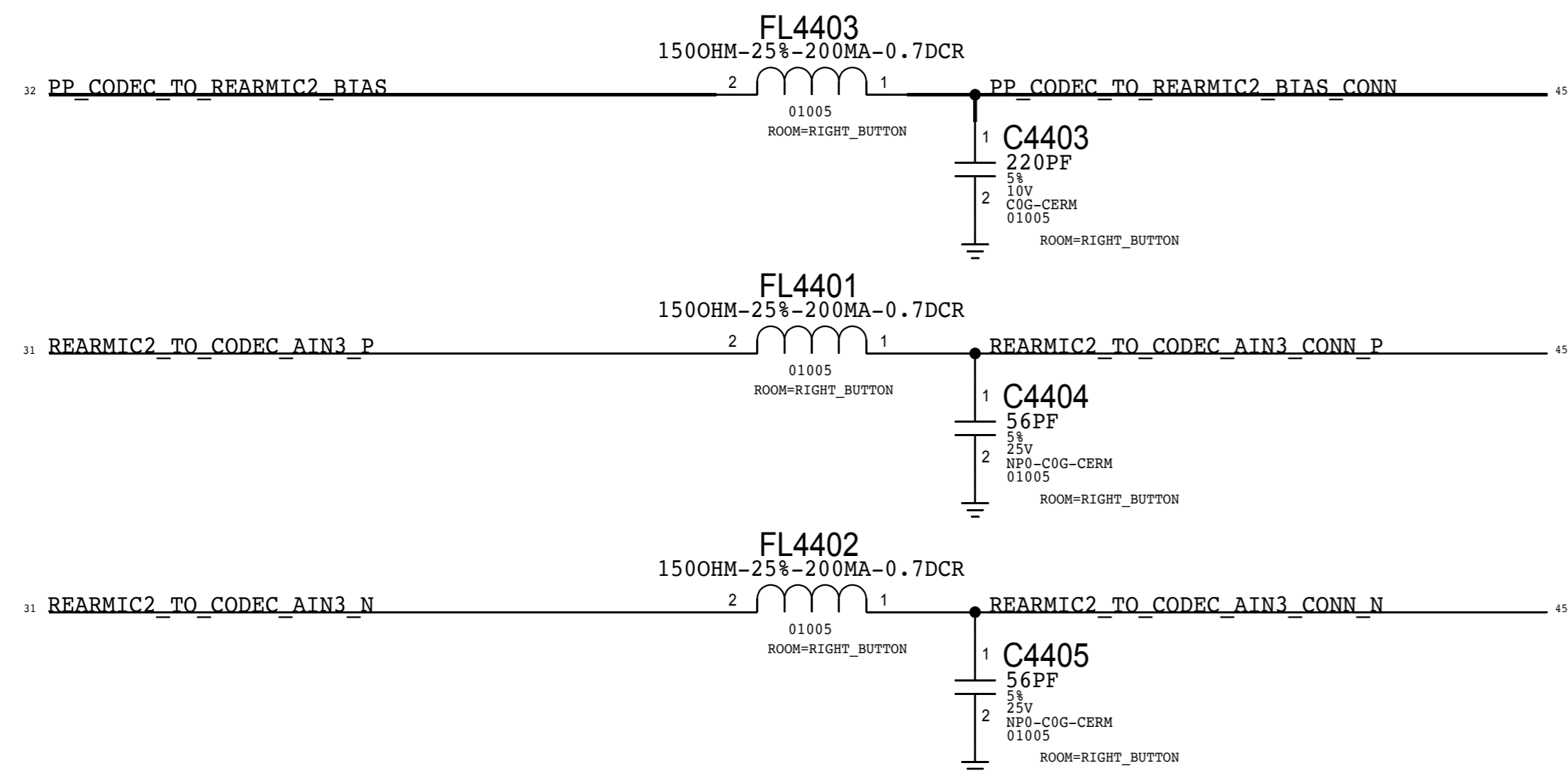
BUTTONS



HAWKING



MIC2 (ANC REF)

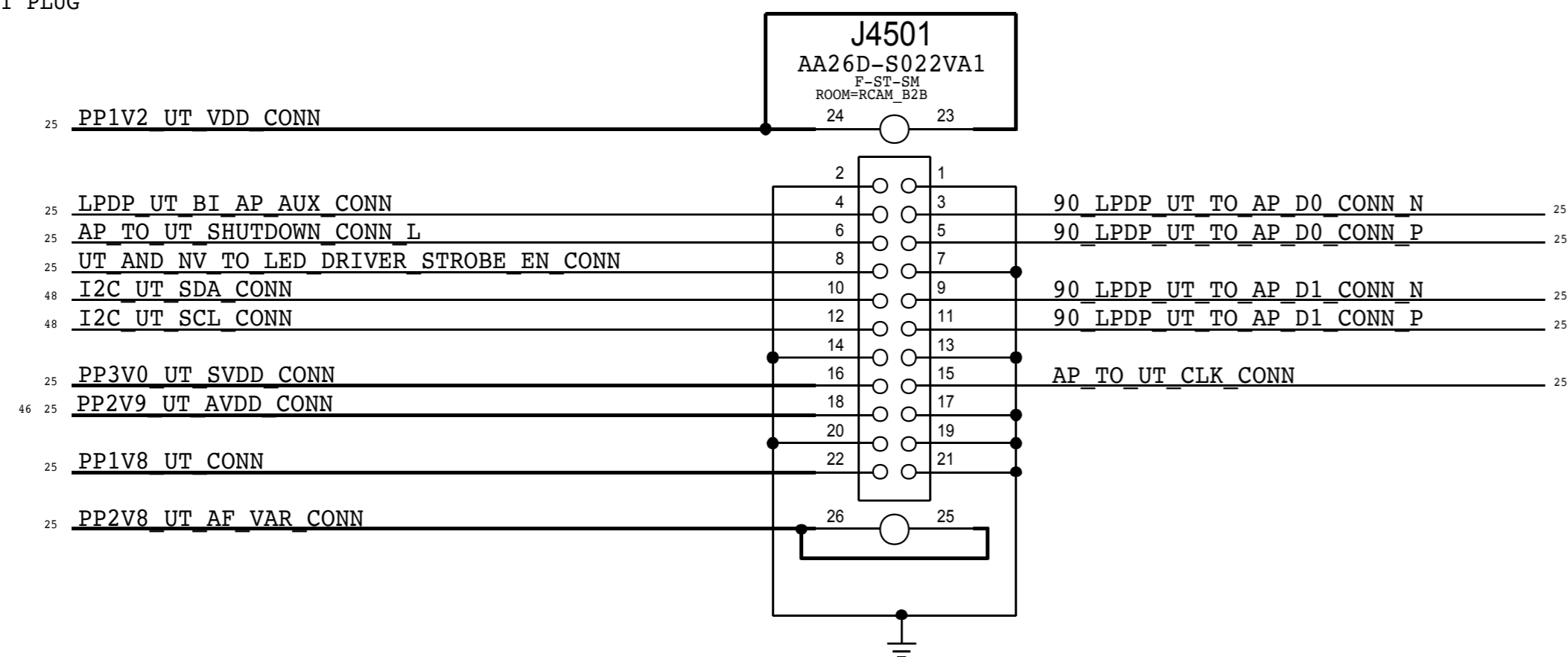


PAGE TITLE			spare	
Apple Inc.		DRAWING NUMBER	051-00419	SIZE
		REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH		
		PAGE	6 OF 53	
		SHEET	6 OF 81	

UTAH-C FLEX CONNECTOR

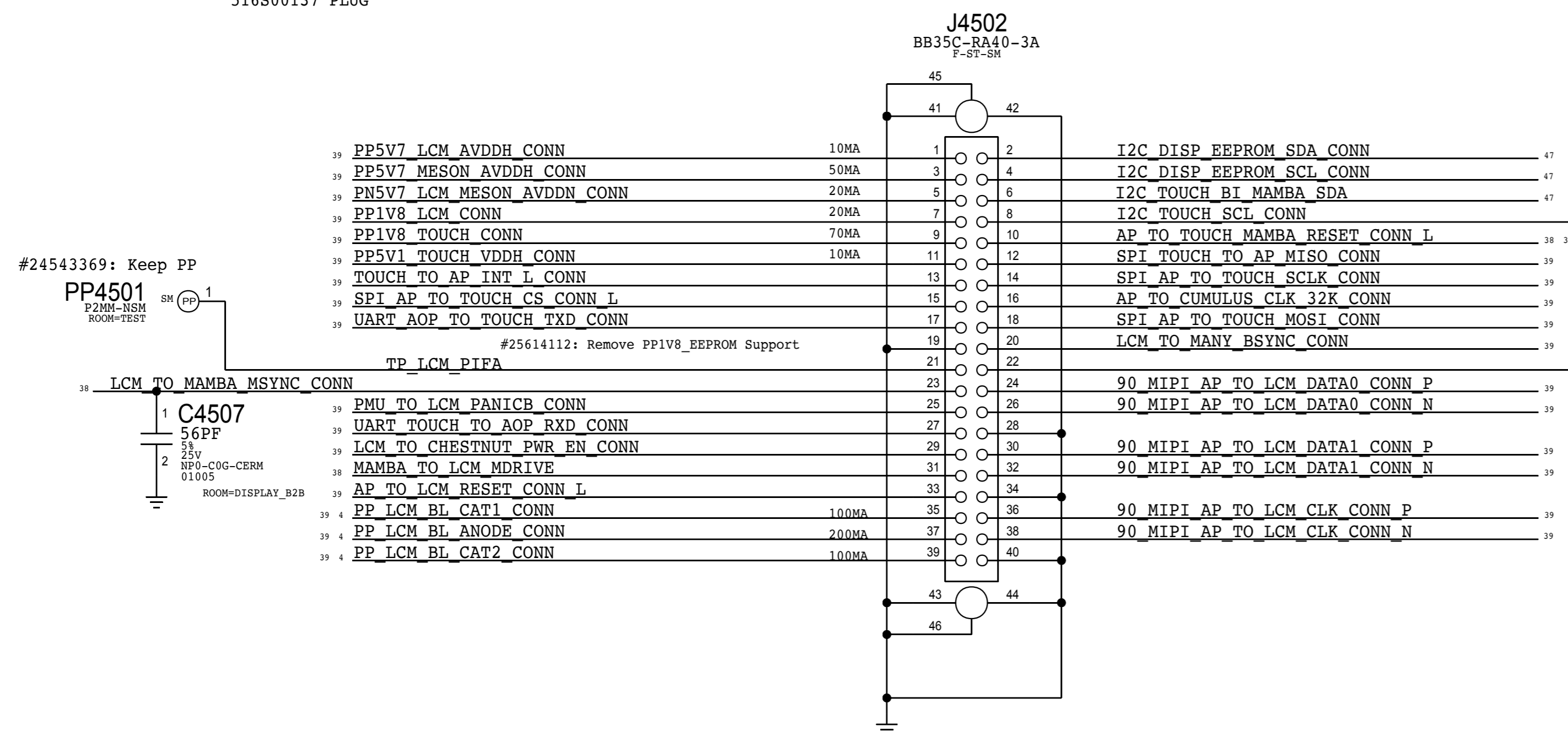
THIS PAGE UNIQUE TO SMALL FORM FACTOR

THIS ONE ----> 516S00152 RCPT (USED ON MLB)
516S00151 PLUG



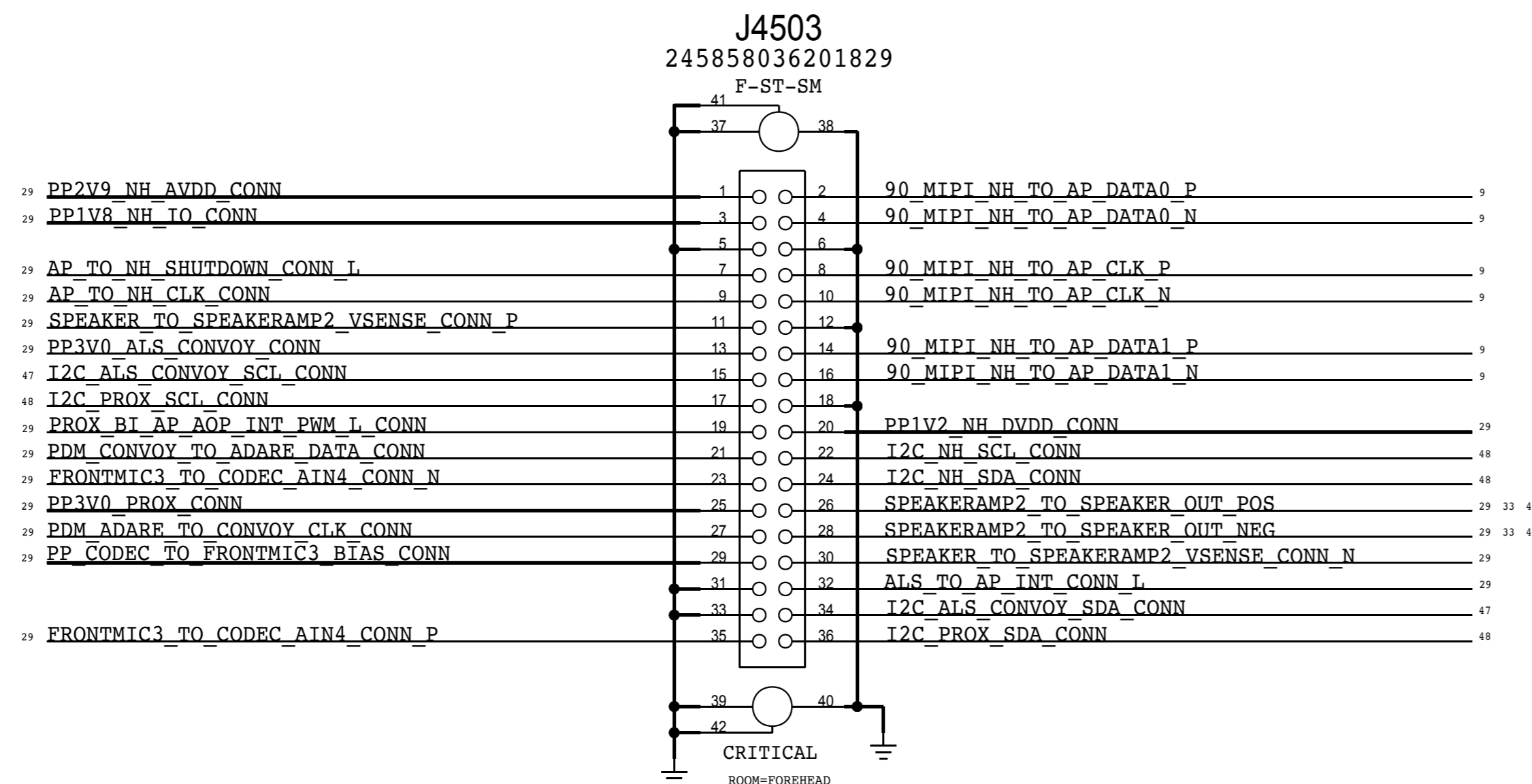
DISPLAY / TOUCH FLEX CONNECTOR

THIS ONE ----> 516S00138 RCPT (USED ON MLB)
516S00137 PLUG



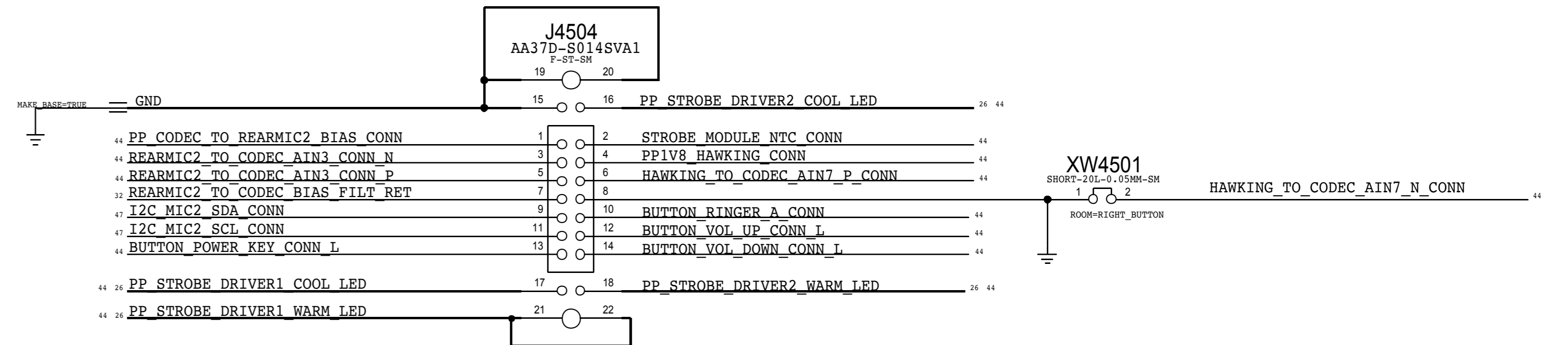
FOREHEAD FLEX CONNECTOR

THIS ONE ----> 516S00146 RCPT (USED ON MLB)
516S00145 PLUG



COMBINED BUTTON FLEX CONNECTOR

MLB APN: 516S00150
FLEX APN: 516S00149



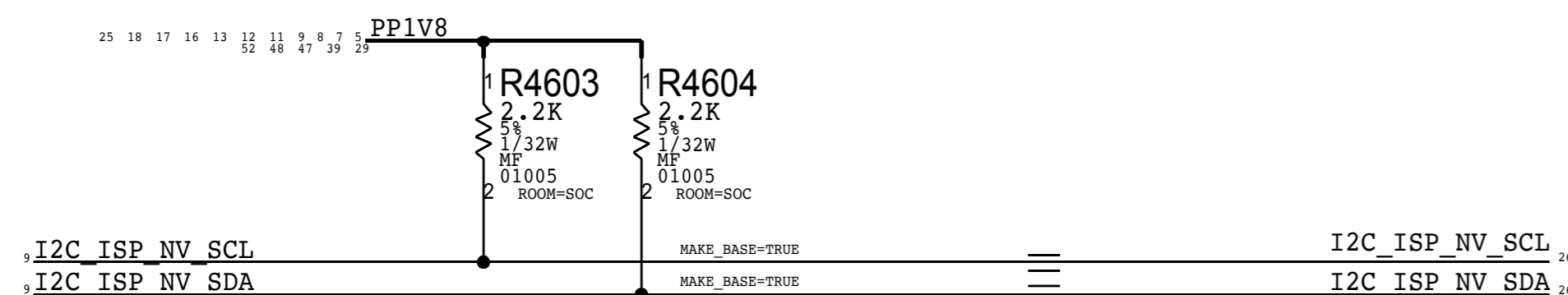
PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		REVISION	8.0.0
		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

THIS PAGE UNIQUE TO SMALL FORM FACTOR

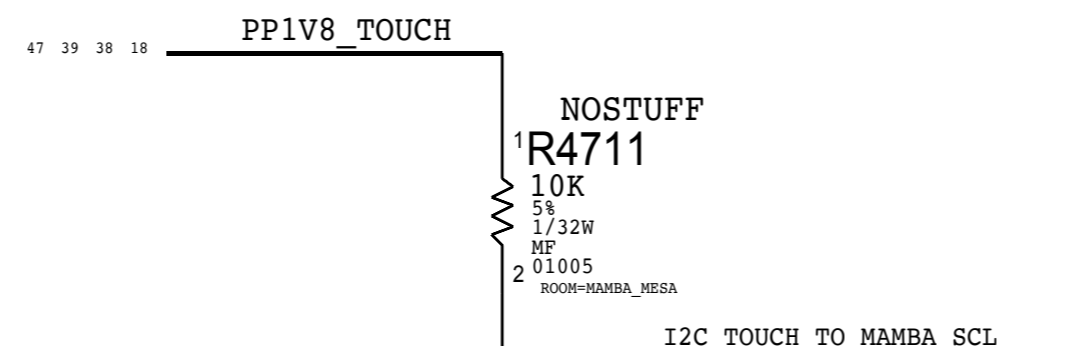
OTHER SMALL FORM FACTOR SPECIFIC PAGES:

4 - MECHANICAL

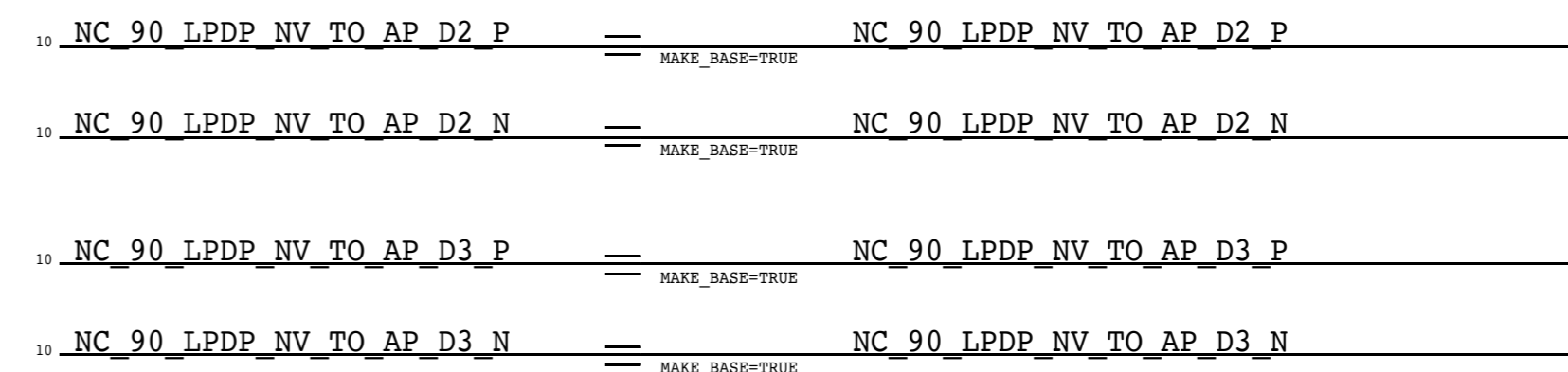
ISP I2C1



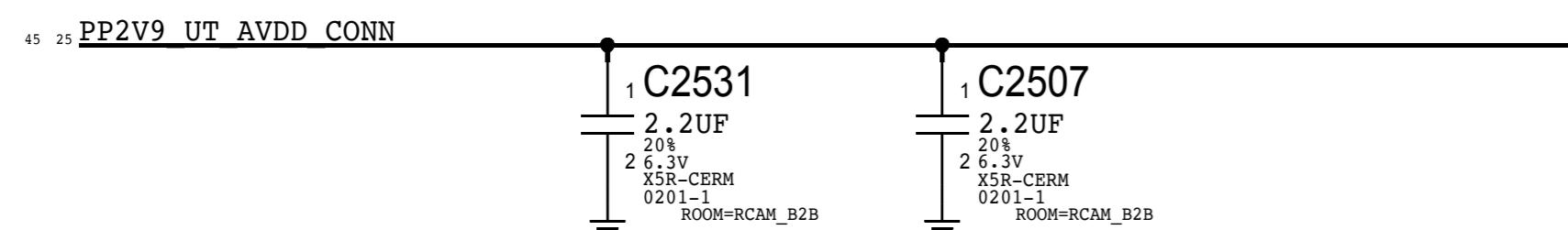
#26682438: Move to Page 46
TOUCH I2C



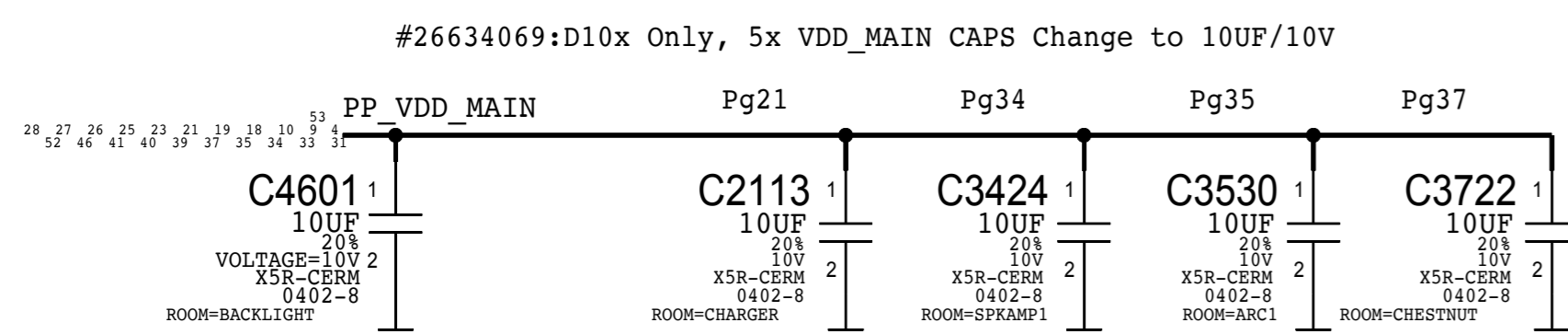
NC Nets in Small FF



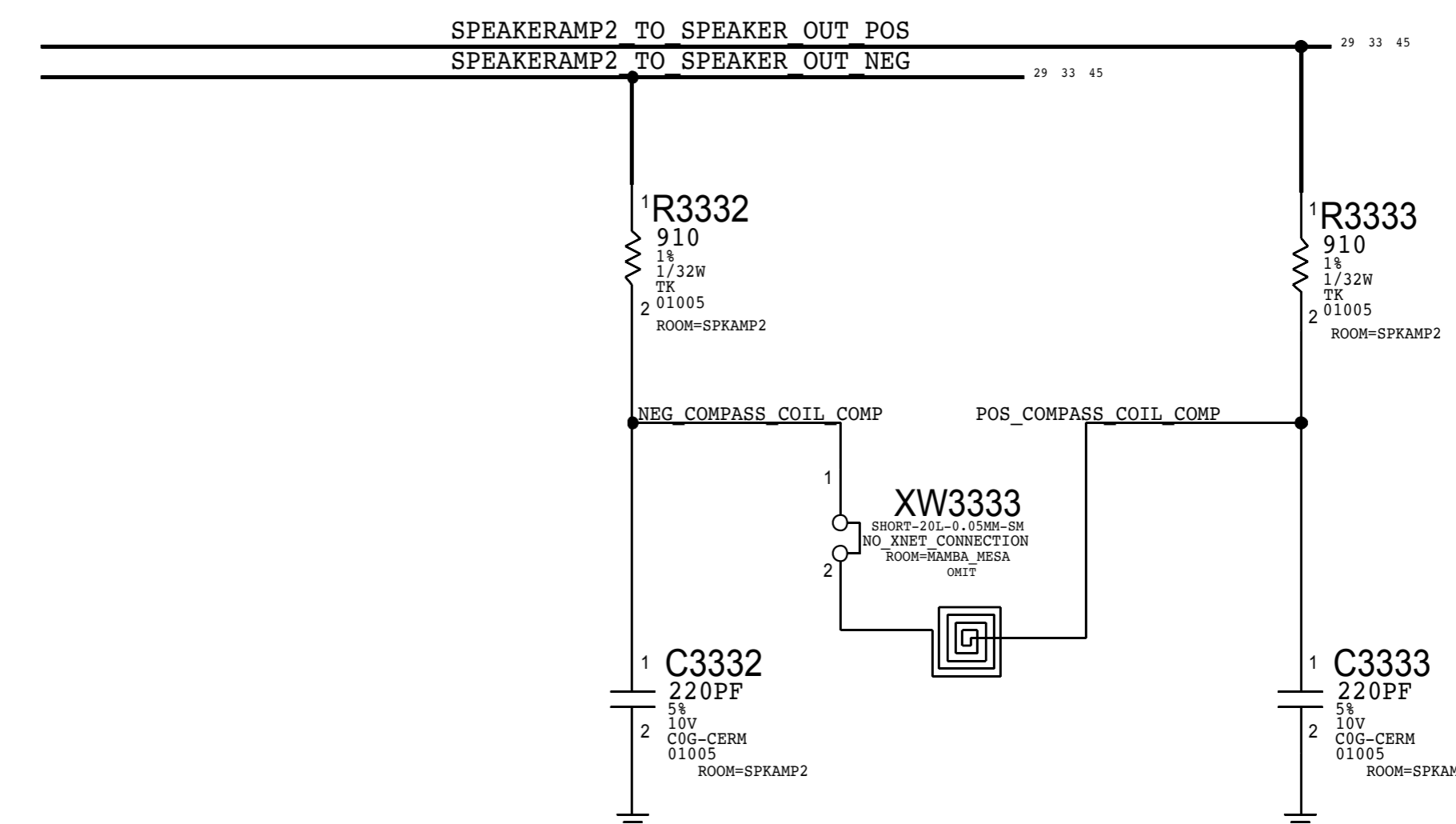
UT B2B



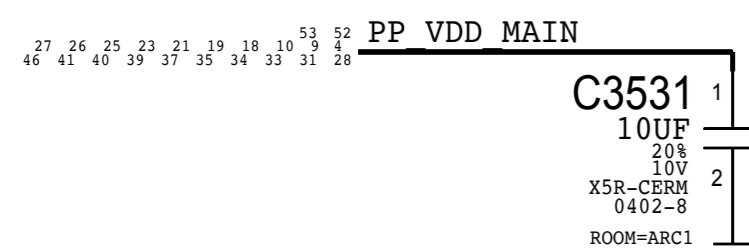
VDD_MAIN Cap



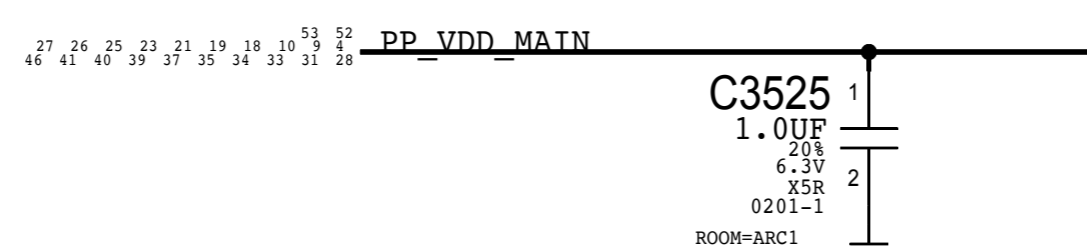
Top Speaker Compass Coil



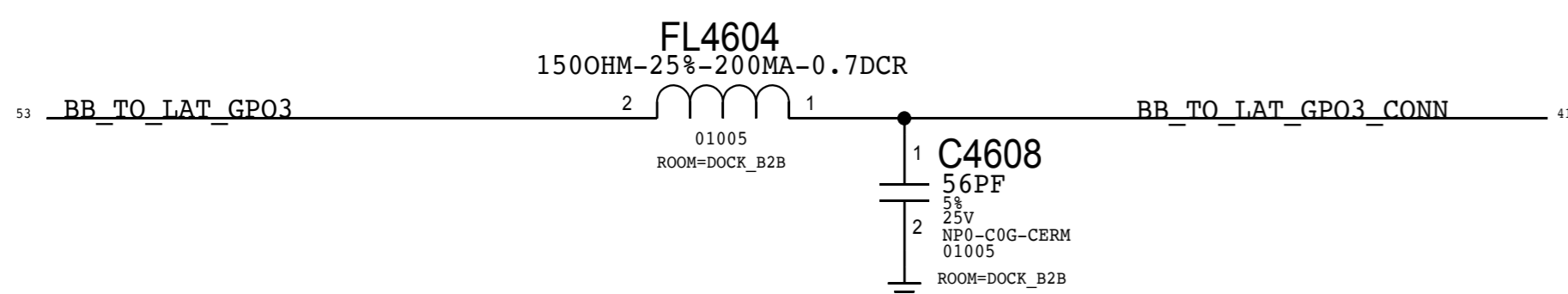
#25742582, Add back C3531 in layout at ARC



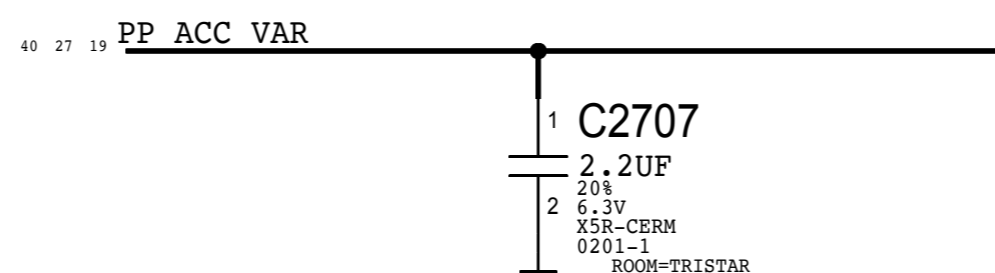
#26104509: C3525 Change to 1UF 0201 in DVT



Dock B2B (Pg 41)



ACC Buck Caps



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		REVISION	8.0.0
		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

AP

I2C0

I2C1

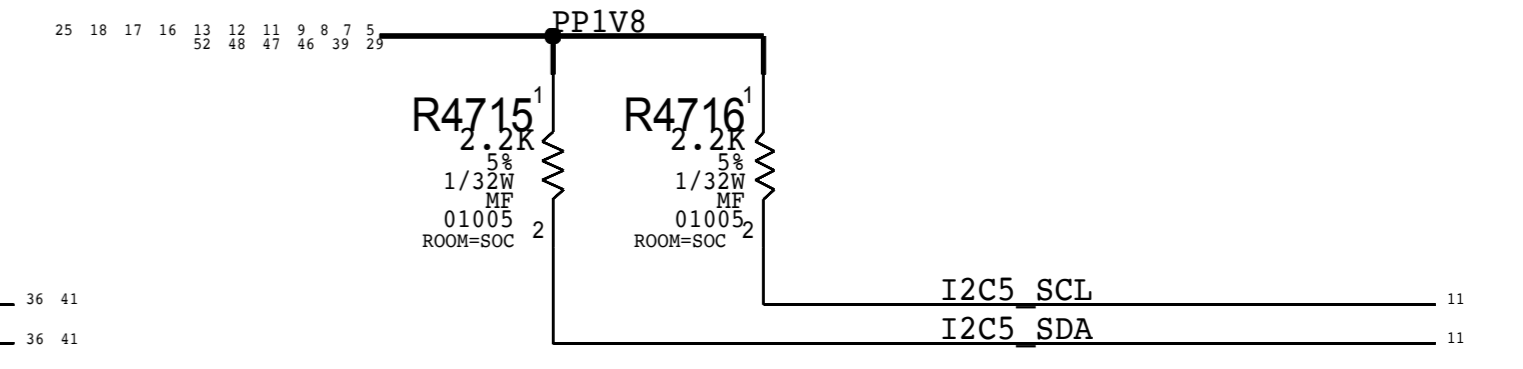
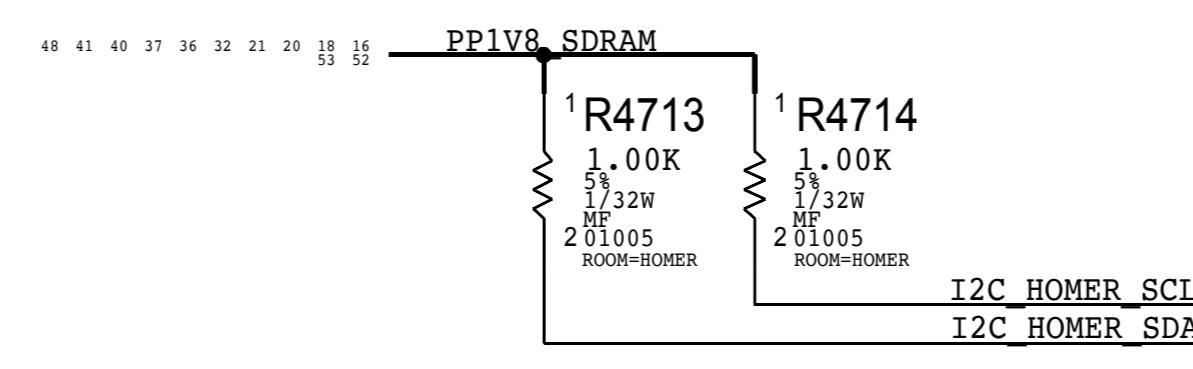
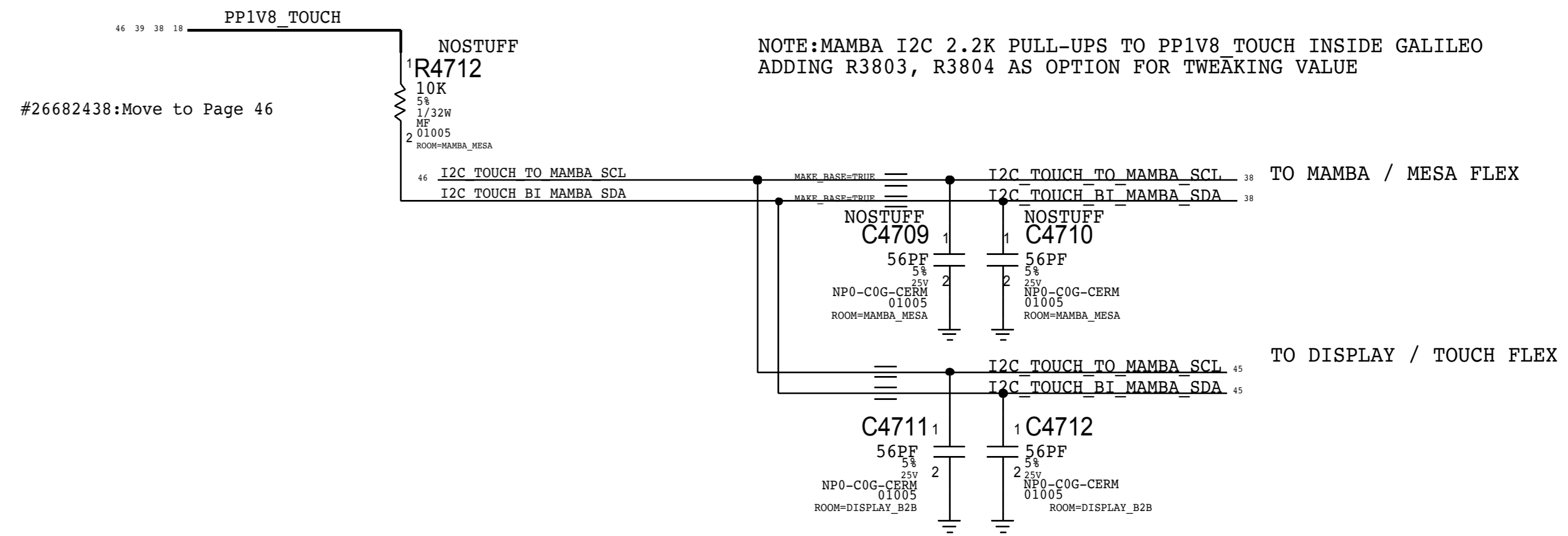
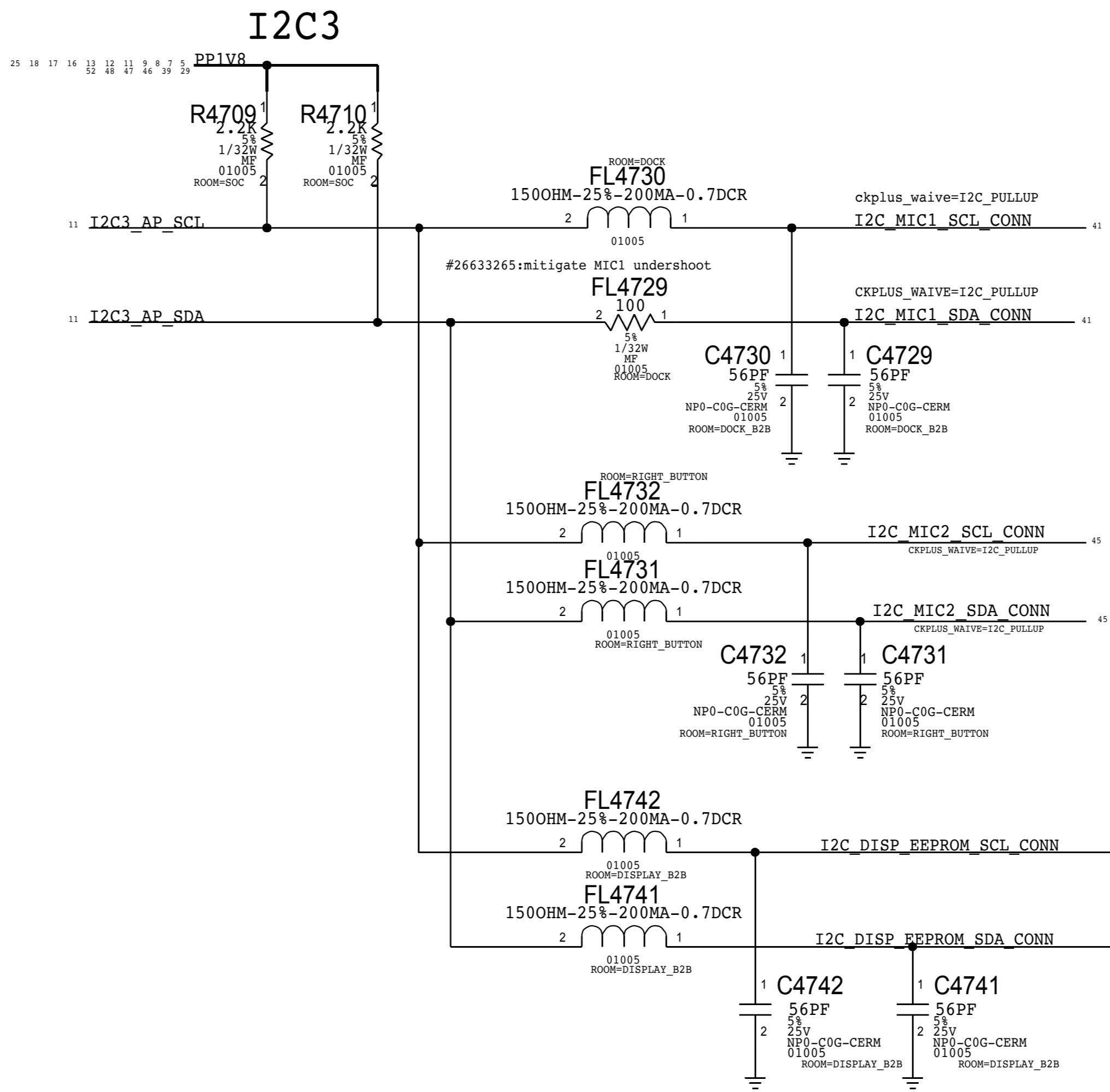
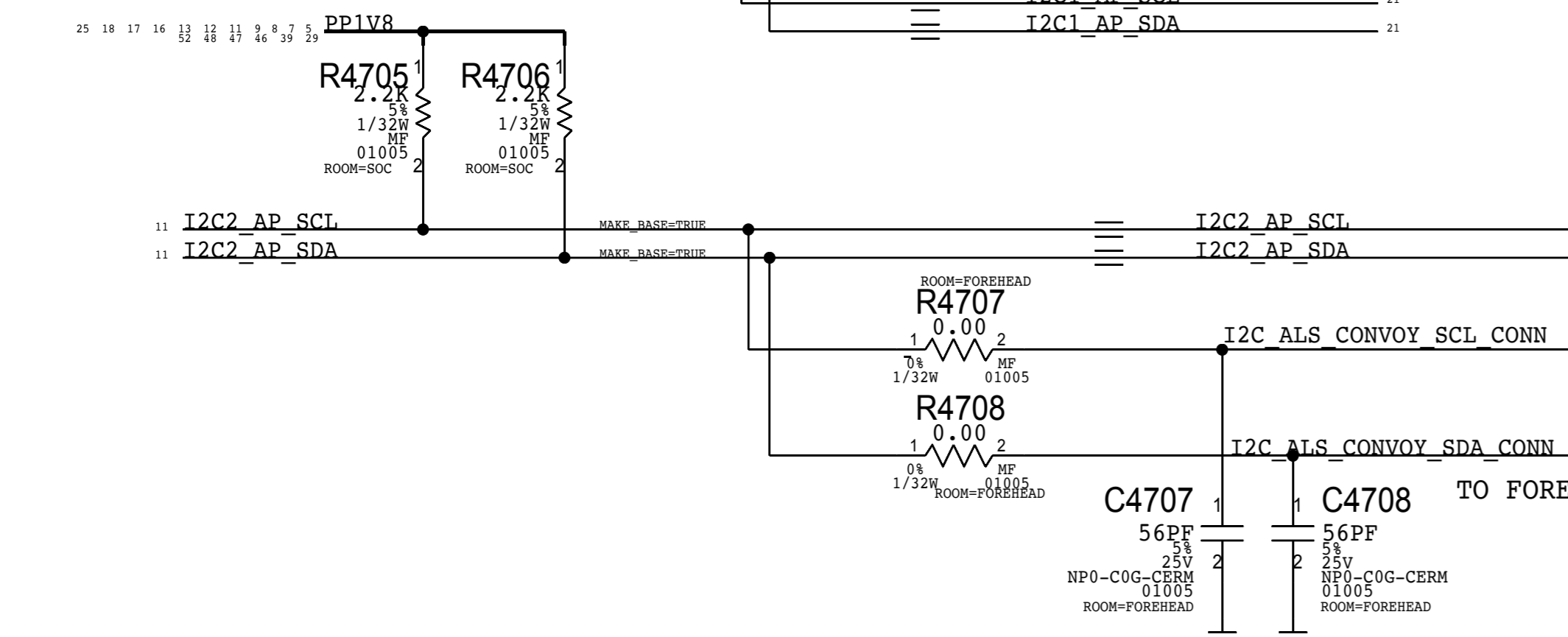
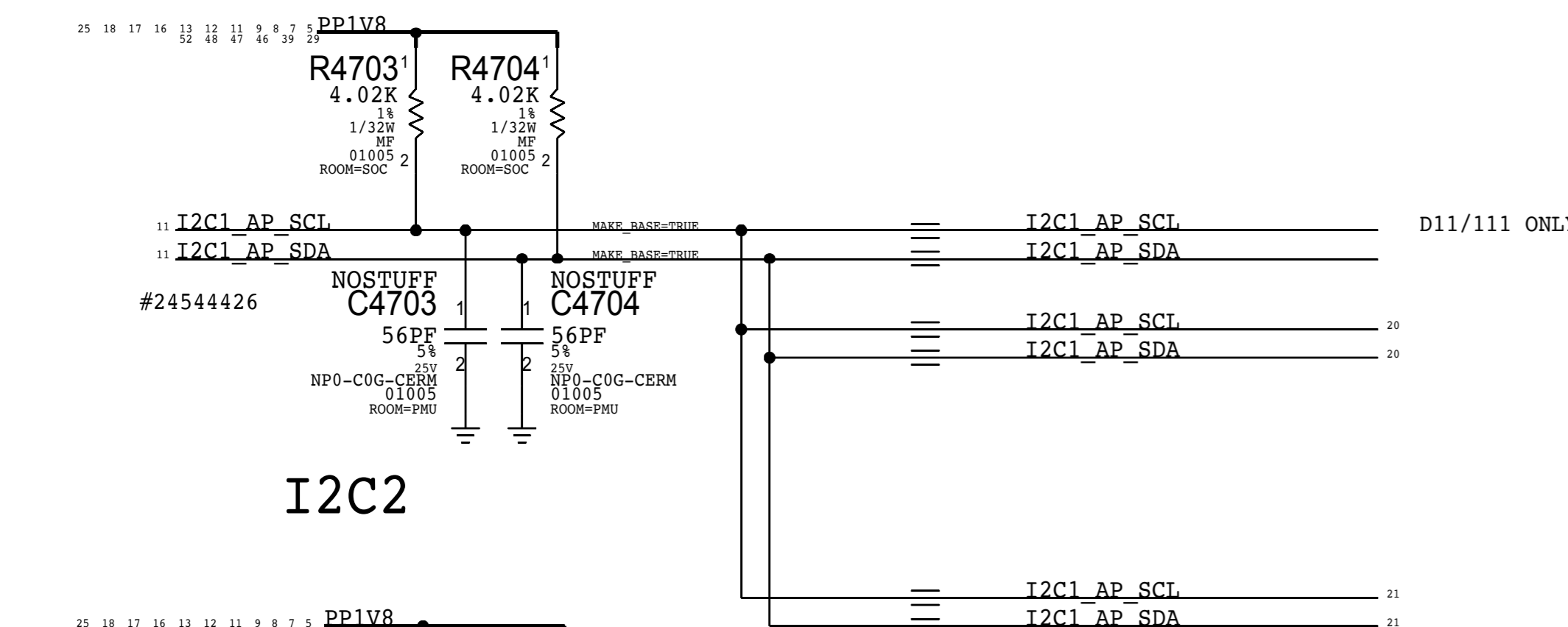
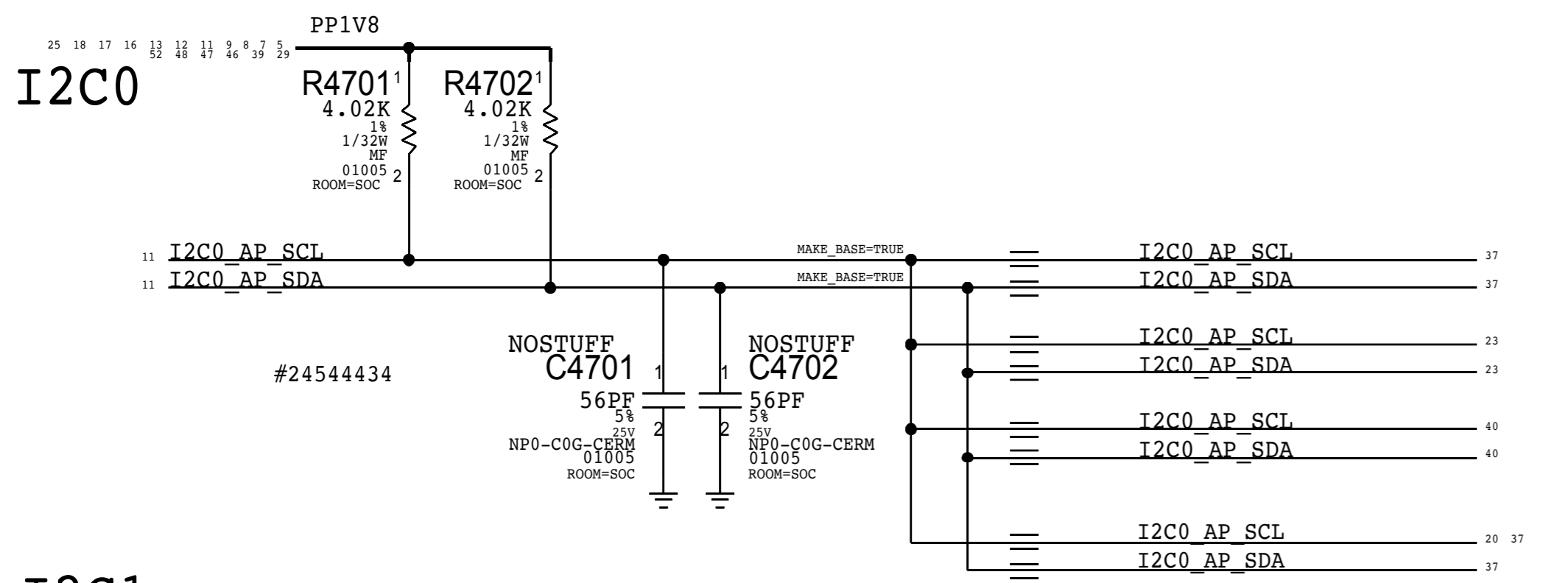
I2C2

I2C3

TOUCH

HOMER

I2C5



NOTE:MAMBA I2C 2.2K PULL-UPS TO PPIV8 TOUCH INSIDE GALILEO
 ADDING R3803, R3804 AS OPTION FOR TWEAKING VALUE

#26682438:Move to Page 46

D11/111 ONLY

PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

AOP

I2C

ISP

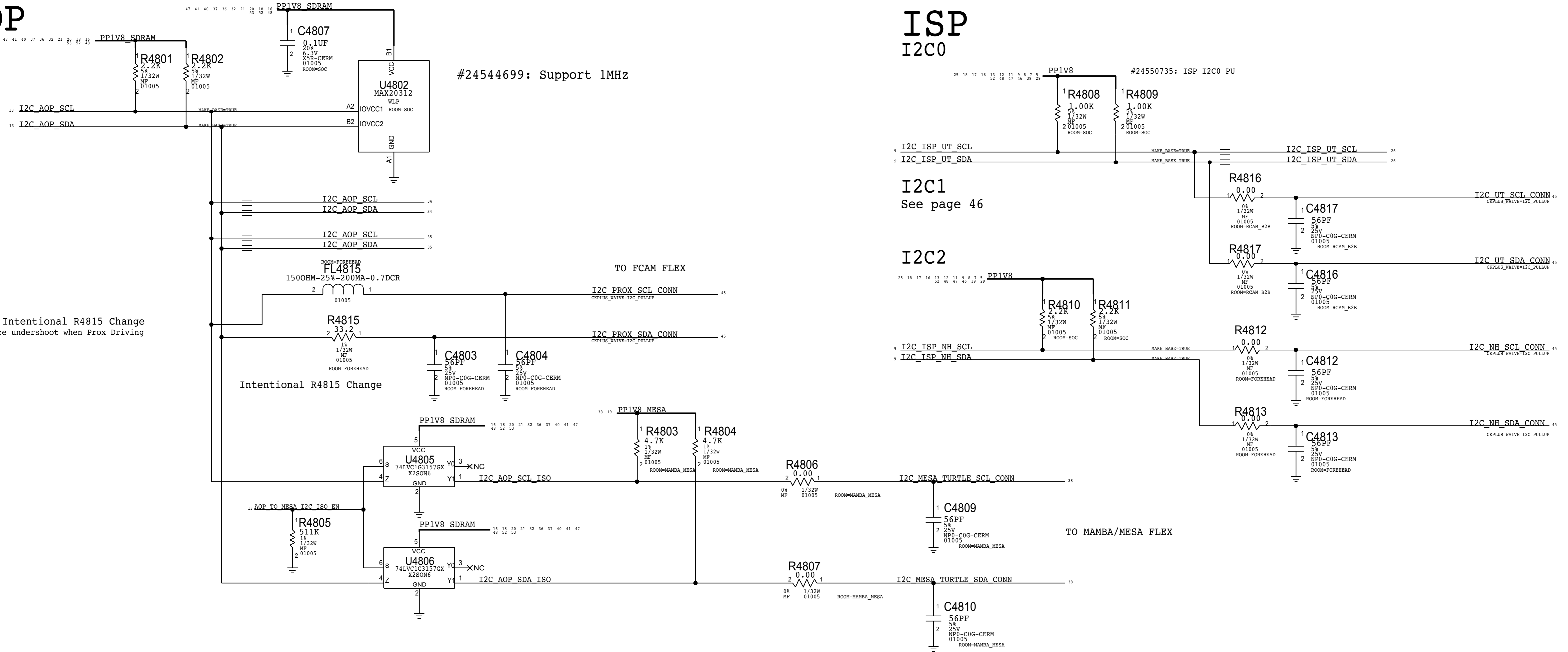
I2C0

#24544699: Support 1MHz

#24550735: ISP I2C0 PU

#24958320: Intentional R4815 Change
Reduce undershoot when Prox Driving


Intentional R4815 Change



PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

D1x I2C Table

Bus	Device	Binary	7-bit Address	8-bit Address	Max Speed
ISP I2C0 1MHz	SALT LAKE (PRIMARY)	0010000X	0x10	0x20	1 MHz
	SALT LAKE (SECONDARY)	0110000X	0x30	0x60	1 MHz
	GRUNBERG (STANDARD)	0011100X	0x1C	0x38	1 MHz
	GRUNBERG (SPECIAL ABSOLUTE RW)	0011101X	0x1D	0x3A	1 MHz
	GRUNBERG (SPECIAL DELTA READ)	0011110X	0x1E	0x3C	1 MHz
	STROBE 1	1100011X	0x63	0xC6	1 MHz
ISP I2C1 1MHz	LAS VEGAS (PRIMARY)	0100000X	0x20	0x40	1 MHz
	LAS VEGAS (SECONDARY)	0110000X	0x30	0x60	1 MHz
	EDWIN	1100011X	0x63	0xC6	400 kHz
	STROBE 2	0000110X	0x06	0x0C	1 MHz
ISP I2C2 400kHz	CONCORD	0010000X	0x10	0x20	1 MHz
ADP I2C 1MHz	ARC DRIVER 1	100000YX	0x41	0x82	1 MHz
	PROX	1011000X	0x58	0xB0	1 MHz
	SPKAMP1 (L26)	100000YX	0x40	0x80	1 MHz
	TURTLE	0101100X	0x2c	0x58	400 kHz
	MESA	1100001X	0x81	0xC2	400 kHz
Touch I2C 400kHz	MAABA	1100000X	0x60	0xC0	1 MHz
	MESON	1000000X	0x40	0x80	510 kHz
EEPROM I2C	EEPROM	1010001X	0x51	0xA2	400 kHz
AP I2C0 400kHz	BOOST	1110101X	0x75	0xEA	3.4 MHz
	TRISTAR	0011010X	0x1A	0x34	400 kHz
	BACKLIGHT 1	1100010X	0x62	0xC4	1 MHz
	CHESTNUT	0100111X	0x27	0x4E	400 kHz
AP I2C1 400kHz	ADELYN	1110100X	0x74	0xE8	400 kHz
	TIGRIS	1110101X	0x75	0xEA	400 kHz
	BACKLIGHT 2	1100010X	0x62	0xC4	1 MHz
AP I2C2 400kHz	ALS	0101001X	0x29	0x52	400 kHz
	CONVOY	0100001X	0x21	0x42	3.4 MHz
	SPKAMP 2 (L26)	0100010X	0x22	0x44	400 kHz
AP I2C3 1MHz	DOCK FLEX (MIC1)	1010100X	0x54	0xA8	1 MHz
	COMBINED BUTTON FLEX (MIC2)	1010100X	0x56	0xAC	1 MHz
	DISP EEPROM	1010001X	0x51	0xA2	400kHz
Homer I2C 1MHz	SCHRODINGER (STANDARD)	0001110X	0xE	0x1C	1 MHz
	SCHRODINGER (CAL REG S)	0001111X	0xF	0x1D	1 MHz
	EEPROM (STANDARD)	1010000X	0x50	0xA0	
	EEPROM (CONFIG)	1010000X	0x90	0xA0	

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE D
	REVISION	8.0.0	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
	PAGE	6 OF 53	
	SHEET	6 OF 81	

8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

8

7

6


5

4

3

2

1

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: <small>THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:</small> I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

8

7

6


5

4

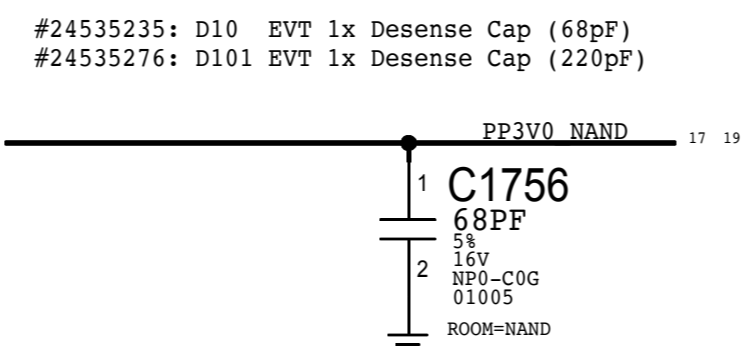
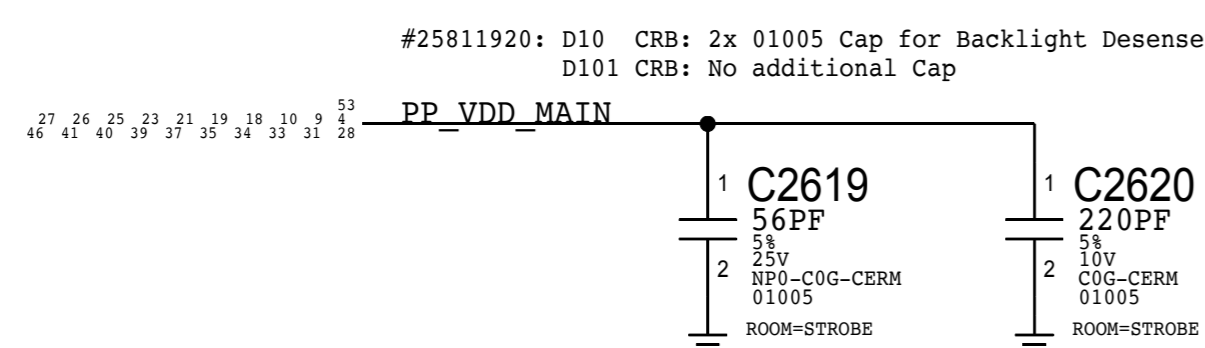
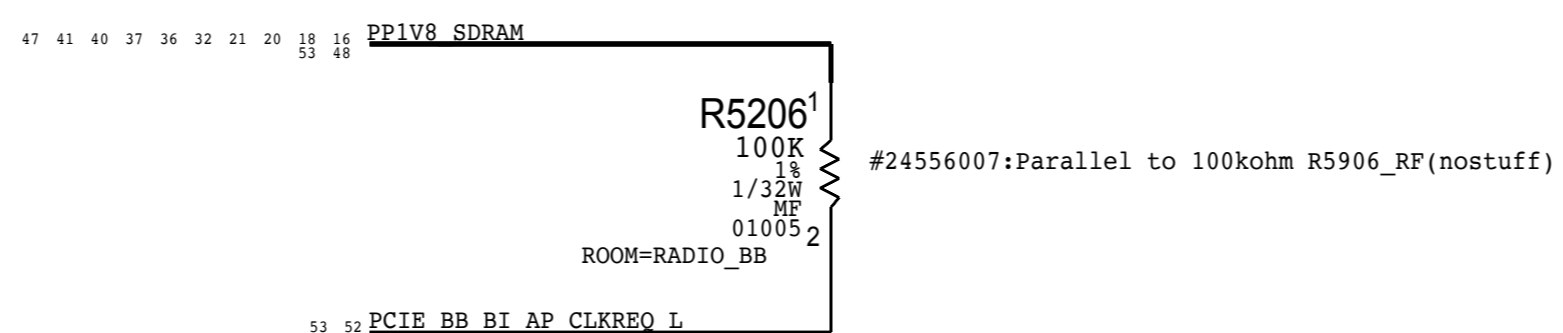
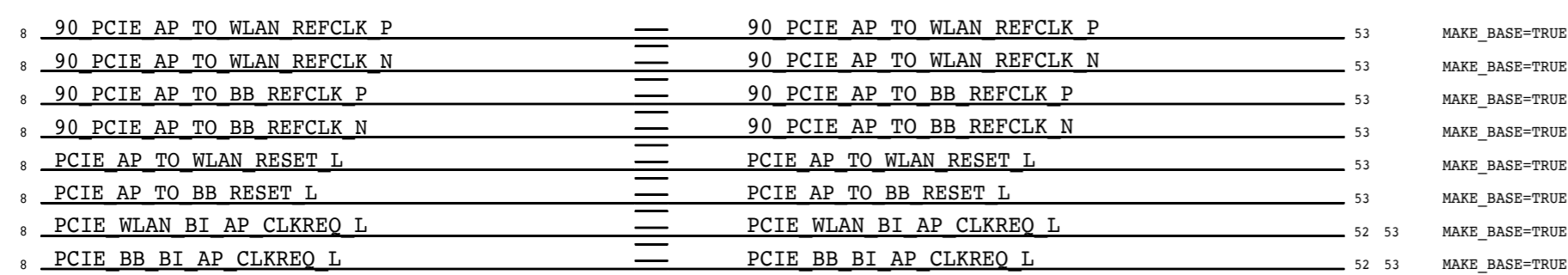
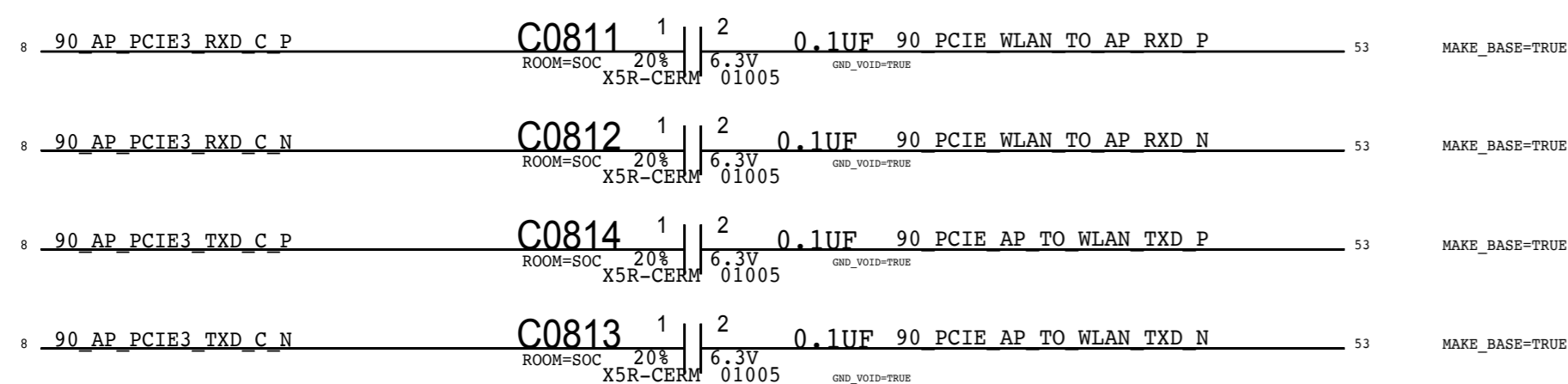
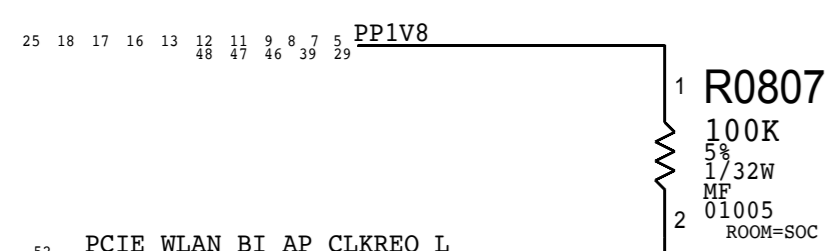
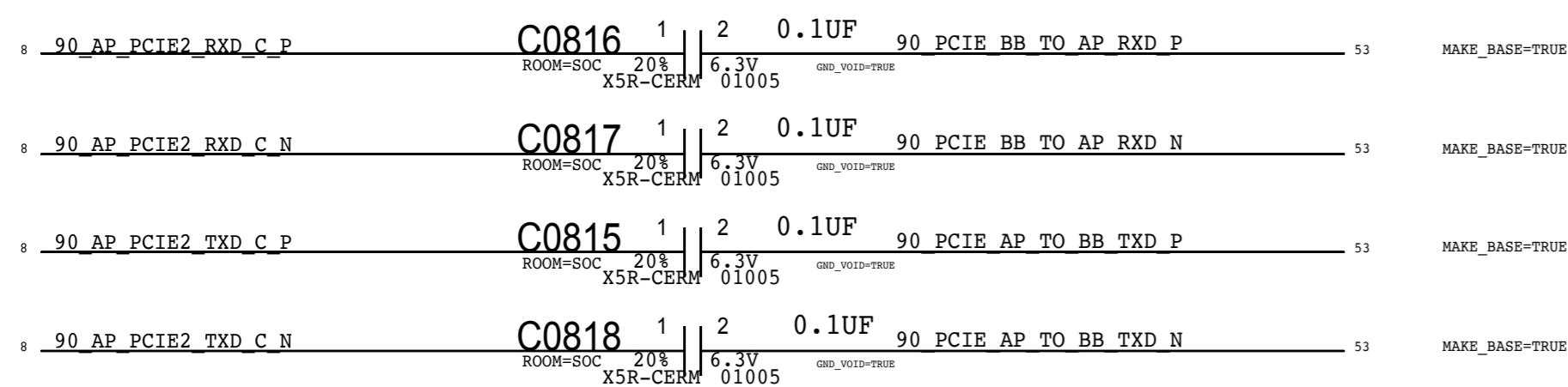
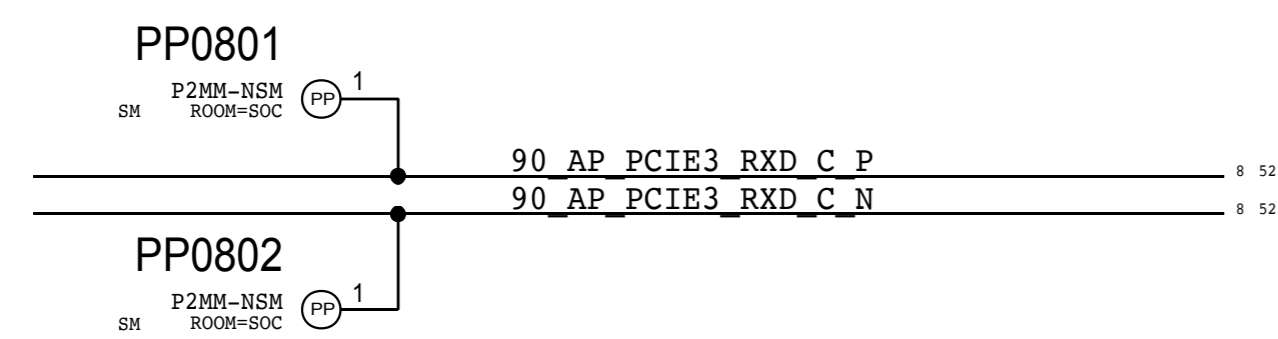
3

2

1

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE D
	REVISION	8.0.0	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

This page contains items which differ accross all MLB designs
 PCIe lanes



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: <small>THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED</small>		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

Wifi/BT

Cellular

Opposite polarity on Karoo -->

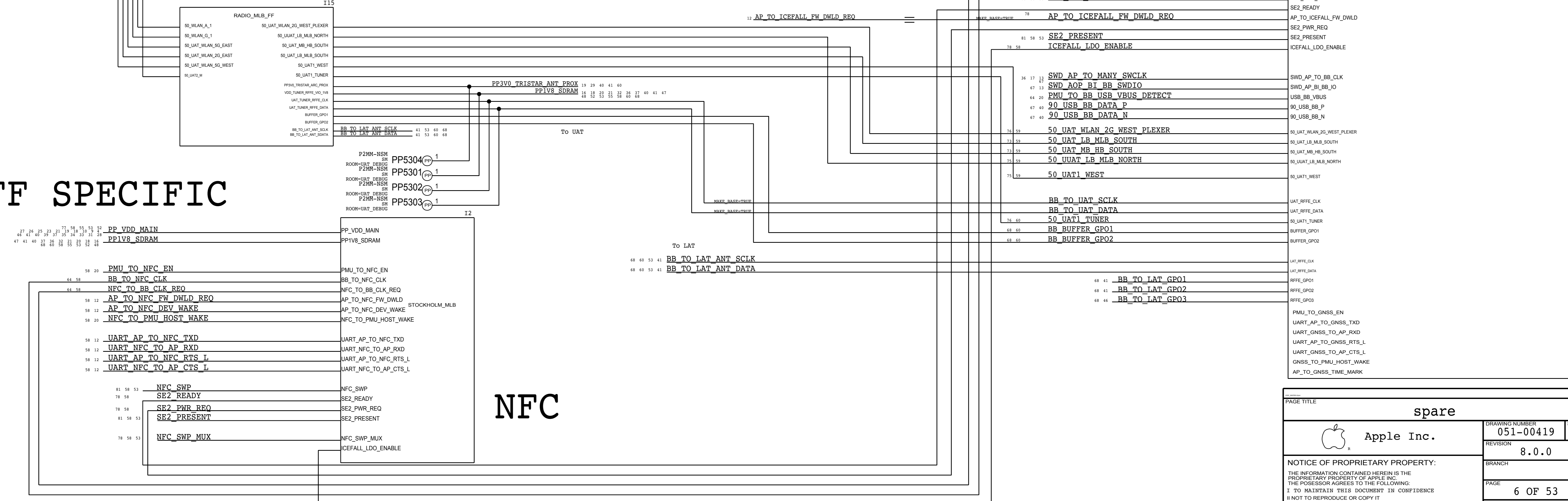
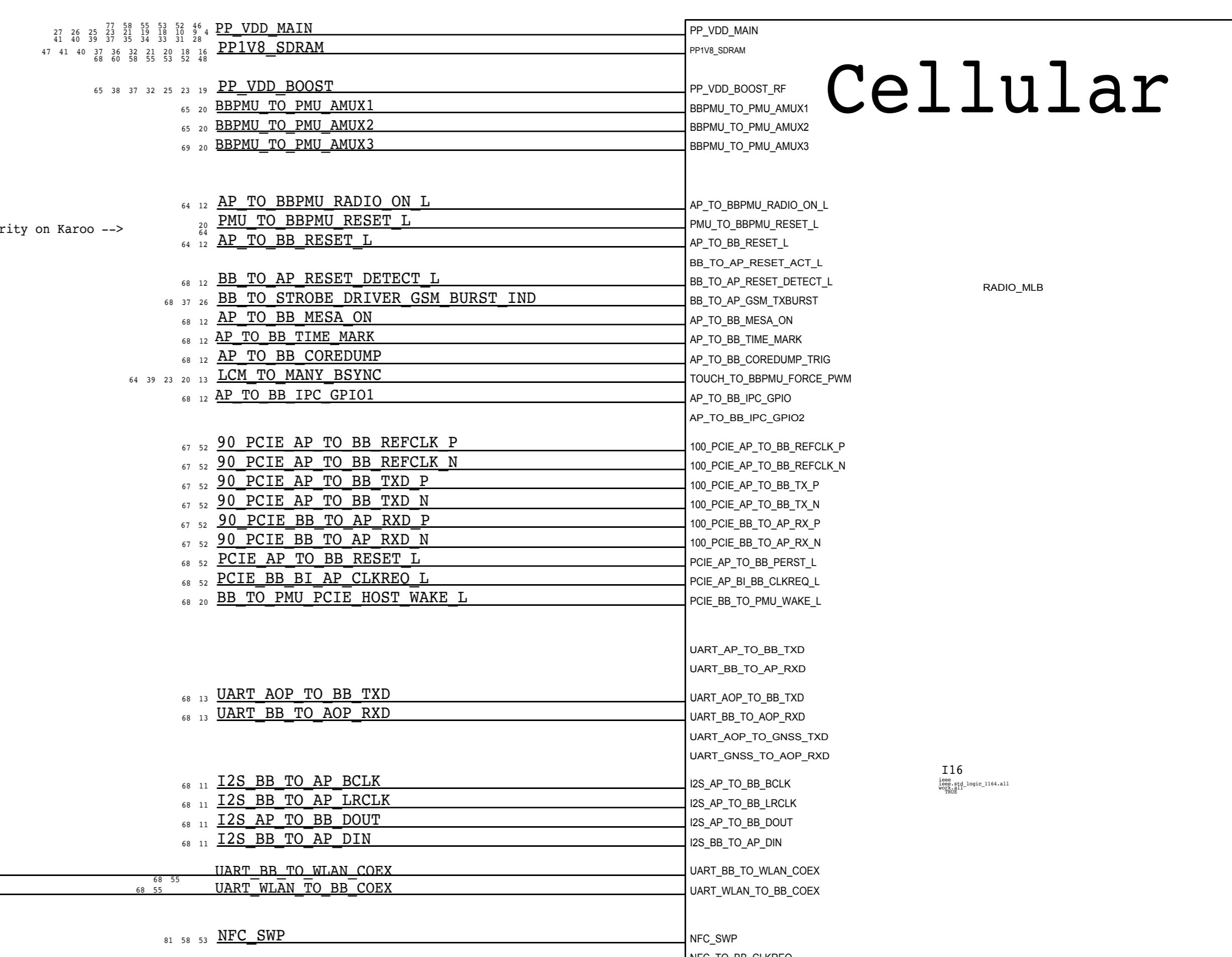
WIFI_MLB

RADIO_MLB

I16

FF SPECIFIC

NFC



PAGE TITLE: spare

Apple Inc.

DRAWING NUMBER: 051-00419

REVISION: 8.0.0

BRANCH: 6 OF 53

SHEET: 6 OF 81

NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED

- 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.

REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
8	0006400877	ENGINEERING RELEASED		2016-06-14

D1X WIFI MLB (PERENNIAL)

FEBRUARY 1, 2016

PDF PAGE	CSA PAGE	CONTENTS
2	76	PERENNIAL
3	77	WIFI FRONT-END

BOM OPTIONS:

D10_JP:

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
13180648	1	CAP,CER,0.3PF,+/-0.05,01005	C7705_RF	CRITICAL	D10_JP
15280029	1	IND,1.1NH,UH-Q,01005	R7703_RF	CRITICAL	D10_JP
13180893	1	CAP,CER,0.2PF,+/-0.05,01005	C7706_RF	CRITICAL	D10_JP
11780161	1	RES,MF,0 OHM,1/32W,01005	R7711_RF	CRITICAL	D10_JP
11780161	1	RES,MF,0 OHM,1/32W,01005	R7702_RF	CRITICAL	D10_JP
15281980	1	IND,1.0NH,UH-Q,01005	R7704_RF	CRITICAL	D10_JP
13180404	1	CAP,3.9PF,+/-1.0PF,01005	R6711_RF	CRITICAL	D10_JP
15282061	1	IND,7.5NH,UH-Q,01005	C6729_RF	CRITICAL	D10_JP
11780161	1	RES,MF,0 OHM,1/32W,01005	R7700_RF	CRITICAL	D10_JP
15282043	1	IND,6.2NH,UH-Q,01005	C7702_RF	CRITICAL	D10_JP
15281998	1	IND,0.8NH,UH-Q,01005	L7700_RF	CRITICAL	D10_JP
15282043	1	IND,6.2NH,UH-Q,01005	L7701_RF	CRITICAL	D10_JP
11780161	1	RES,MF,0 OHM,1/32W,01005	R7701_RF	CRITICAL	D10_JP

NOSTUFF:C7729_RF,C7711_RF,C7709_RF,C7710_RF, C7707_RF, C7708_RF
C7700_RF, C7703_RF,C7704_RF

D10_ROW:

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
13180648	1	CAP,CER,0.3PF,+/-0.05,01005	C7705_RF	CRITICAL	D10_ROW
15280029	1	IND,1.1NH,UH-Q,01005	R7703_RF	CRITICAL	D10_ROW
13180893	1	CAP,CER,0.2PF,+/-0.05,01005	C7706_RF	CRITICAL	D10_ROW
11780161	TRUE	RES,MF,0 OHM,1/32W,01005	R7711_RF	CRITICAL	D10_ROW
11780161	TRUE	RES,MF,0 OHM,1/32W,01005	R7702_RF	CRITICAL	D10_ROW
15281980	TRUE	IND,2.4NH,UH-Q,01005	R7704_RF	CRITICAL	D10_ROW
11780161	TRUE	RES,MF,0 OHM,1/32W,01005	R6711_RF	CRITICAL	D10_ROW
15281853	TRUE	IND,9.1NH,UH-Q,01005	C6729_RF	CRITICAL	D10_ROW
11780161	TRUE	RES,MF,0 OHM,1/32W,01005	R7700_RF	CRITICAL	D10_ROW
15282043	1	IND,6.2NH,UH-Q,01005	C7702_RF	CRITICAL	D10_ROW
15281998	1	IND,0.8NH,UH-Q,01005	L7700_RF	CRITICAL	D10_ROW
15282043	TRUE	IND,6.2NH,UH-Q,01005	L7701_RF	CRITICAL	D10_ROW
11780161	1	RES,MF,0 OHM,1/32W,01005	R7701_RF	CRITICAL	D10_ROW

NOSTUFF:C7729_RF,C7711_RF,C7709_RF,C7710_RF, C7707_RF, C7708_RF
C7700_RF, C7703_RF,C7704_RF

D101_WIFI:

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
13180648	1	CAP,CER,0.3PF,+/-0.05,01005	C7705_RF	CRITICAL	D101
15280029	1	IND,1.1NH,UH-Q,01005	R7703_RF	CRITICAL	D101
13180893	1	CAP,CER,0.2PF,+/-0.05,01005	C7706_RF	CRITICAL	D101
11780161	1	RES,MF,0 OHM,1/32W,01005	R7711_RF	CRITICAL	D101
11780161	1	RES,MF,0 OHM,1/32W,01005	R7702_RF	CRITICAL	D101
15281980	TRUE	IND,2.4NH,UH-Q,01005	R7704_RF	CRITICAL	D101
13180648	TRUE	CAP,CER,0.3PF,+/-0.05PF,01005	C7708_RF	CRITICAL	D101
11880724	TRUE	RES,MF,0 OHM,1/20W,0201	R6711_RF	CRITICAL	D101
15282054	TRUE	IND,9.1NH,UH-Q,0201	C6729_RF	CRITICAL	D101
11780161	1	RES,MF,0 OHM,1/32W,01005	R7700_RF	CRITICAL	D101
15281853	1	IND,9.1NH,UH-Q,01005	L7701_RF	CRITICAL	D101
11780161	1	RES,MF,0 OHM,1/32W,01005	R7701_RF	CRITICAL	D101
13180893	1	CAP,CER,0.2PF,+/-0.05PF,01005	C7705_RF	CRITICAL	D101
13180893	1	CAP,CER,0.2PF,+/-0.05PF,01005	C7729_RF	CRITICAL	D101

NOSTUFF: C7729_RF,C7711_RF,C7709_RF,C7710_RF, C7707_RF
C7700_RF, C7703_RF,C7704_RF

D11_JP:

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152800273	1	IND,0.6NH,UH-Q,01005	R7703_RF	CRITICAL	D11_JP
15281976	1	IND,0.7NH,UH-Q,01005	R7711_RF	CRITICAL	D11_JP
13180400	1	CAP,CER,3.5PF+/-0.1,01005	R7702_RF	CRITICAL	D11_JP
15281986	1	IND,FILM,2.2NH,UH-Q,01005	R7704_RF	CRITICAL	D11_JP
13180648	1	CAP,CER,0.3PF,+/-0.05PF,01005	C7708_RF	CRITICAL	D11_JP
13180593	1	CAP,3.9PF,+/-1.0PF,0201,HI-Q	R6711_RF	CRITICAL	D11_JP
15282055	1	IND,7.5NH,UH-Q,0201	C6729_RF	CRITICAL	D11_JP
11780161	1	RES,MF,0 OHM,1/32W,01005	R7700_RF	CRITICAL	D11_JP
11780161	1	RES,MF,0 OHM,1/32W,01005	L7700_RF	CRITICAL	D11_JP
15281853	1	IND,9.1NH,UH-Q,01005	L7701_RF	CRITICAL	D11_JP
11780161	1	RES,MF,0 OHM,1/32W,01005	R7701_RF	CRITICAL	D11_JP
13180893	1	CAP,CER,0.2PF,+/-0.05PF,01005	C7705_RF	CRITICAL	D11_JP
13180893	1	CAP,CER,0.2PF,+/-0.05PF,01005	C7729_RF	CRITICAL	D11_JP

NOSTUFF:C7706_RF, C7711_RF,C7709_RF,C7710_RF, C7707_RF
C7700_RF,C7702_RF, C7703_RF,C7704_RF

D11_ROW:

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152800273	1	IND,0.6NH,UH-Q,01005	R7703_RF	CRITICAL	D11_ROW
15281976	1	IND,0.7NH,UH-Q,01005	R7711_RF	CRITICAL	D11_ROW
13180400	1	CAP,CER,3.5PF+/-0.1,01005	R7702_RF	CRITICAL	D11_ROW
15281986	1	IND,FILM,2.2NH,UH-Q,01005	R7704_RF	CRITICAL	D11_ROW
11880724	1	RES,MF,0 OHM,1/20W,0201	R6711_RF	CRITICAL	D11_ROW
15282054	1	IND,9.1NH,UH-Q,0201	C6729_RF	CRITICAL	D11_ROW
11780161	1	RES,MF,0 OHM,1/32W,01005	R7700_RF	CRITICAL	D11_ROW
11780161	1	RES,MF,0 OHM,1/32W,01005	L7700_RF	CRITICAL	D11_ROW
15281853	1	IND,9.1NH,UH-Q,01005	L7701_RF	CRITICAL	D11_ROW
11780161	1	RES,MF,0 OHM,1/32W,01005	R7701_RF	CRITICAL	D11_ROW
13180893	1	CAP,CER,0.2PF,+/-0.05PF,01005	C7705_RF	CRITICAL	D11_ROW
13180893	1	CAP,CER,0.2PF,+/-0.05PF,01005	C7729_RF	CRITICAL	D11_ROW

NOSTUFF:C7706_RF,C7711_RF,C7709_RF,C7710_RF, C7707_RF, C7708_RF
C7700_RF,C7702_RF, C7703_RF,C7704_RF

D111_WIFI:

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152800273	1	IND,0.6NH,UH-Q,01005	R7703_RF	CRITICAL	D111
15281976	1	IND,0.7NH,UH-Q,01005	R7711_RF	CRITICAL	D111
13180400	1	CAP,CER,3.5PF+/-0.1,01005	R7702_RF	CRITICAL	D111
15281986	1	IND,FILM,2.2NH,UH-Q,01005	R7704_RF	CRITICAL	D111
11880724	1	RES,MF,0 OHM,1/20W,0201	R6711_RF	CRITICAL	D111
15282054	1	IND,9.1NH,UH-Q,0201	C6729_RF	CRITICAL	D111
11780161	1	RES,MF,0 OHM,1/32W,01005	R7700_RF	CRITICAL	D111
11780161	1	RES,MF,0 OHM,1/32W,01005	L7700_RF	CRITICAL	D111
15281853	1	IND,9.1NH,UH-Q,01005	L7701_RF	CRITICAL	D111
11780161	1	RES,MF,0 OHM,1/32W,01005	R7701_RF	CRITICAL	D111
13180893	1	CAP,CER,0.2PF,+/-0.05PF,01005	C7705_RF	CRITICAL	D111
13180893	1	CAP,CER,0.2PF,+/-0.05PF,01005	C7729_RF	CRITICAL	D111

NOSTUFF: C7706_RF,C7711_RF,C7709_RF,C7710_RF, C7707_RF, C7708_RF
C7700_RF,C7702_RF, C7703_RF,C7704_RF

CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSE ONLY - NOT A CHANGE REQUEST

POWER

- 53 IN PP_VDD_MAIN
- 53 IN PP1V8_SDRAM

CLOCKS

- 53 IN PMUGPIO_TO_WLAN_CLK32K

CONTROL

- 53 IN PMU_TO_WLAN_REG_ON
- 53 IN PMU_TO_BT_REG_ON
- 53 OUT BT_TO_PMU_HOST_WAKE
- 53 IN AP_TO_BT_WAKE

WLAN PCIE

- 53 IN 90_PCIE_AP_TO_WLAN_REPCLK_P
- 53 IN 90_PCIE_AP_TO_WLAN_REPCLK_N
- 53 IN 90_PCIE_AP_TO_WLAN_TXD_P
- 53 IN 90_PCIE_AP_TO_WLAN_TXD_N
- 53 OUT 90_PCIE_WLAN_TO_AP_RXD_P
- 53 OUT 90_PCIE_WLAN_TO_AP_RXD_N
- 53 IN PCIE_AP_TO_WLAN_RESET_L
- 53 IN PCIE_WLAN_BT_AP_CLKREQ_L
- 53 OUT WLAN_TO_PMU_HOST_WAKE
- 53 IN AP_TO_WLAN_DEVICE_WAKE

WLAN UART

- 53 OUT UART_WLAN_TO_AP_RXD
- 53 IN UART_AP_TO_WLAN_TXD
- 53 OUT UART_WLAN_TO_AP_CTS_L
- 53 IN UART_AP_TO_WLAN_RTS_L

BLUETOOTH UART

- 53 IN UART_AP_TO_BT_TXD
- 53 OUT UART_BT_TO_AP_RXD
- 53 IN UART_AP_TO_BT_RTS_L
- 53 OUT UART_BT_TO_AP_CTS_L

AOP

- 53 IN AOP_TO_WLAN_CONTEXT_A
- 53 IN AOP_TO_WLAN_CONTEXT_B

AUDIO

- 53 IN I2S_AP_TO_BT_BCLK
- 53 IN I2S_AP_TO_BT_LRCLK
- 53 OUT I2S_BT_TO_AP_DIN
- 53 IN I2S_AP_TO_BT_DOUT

COEX

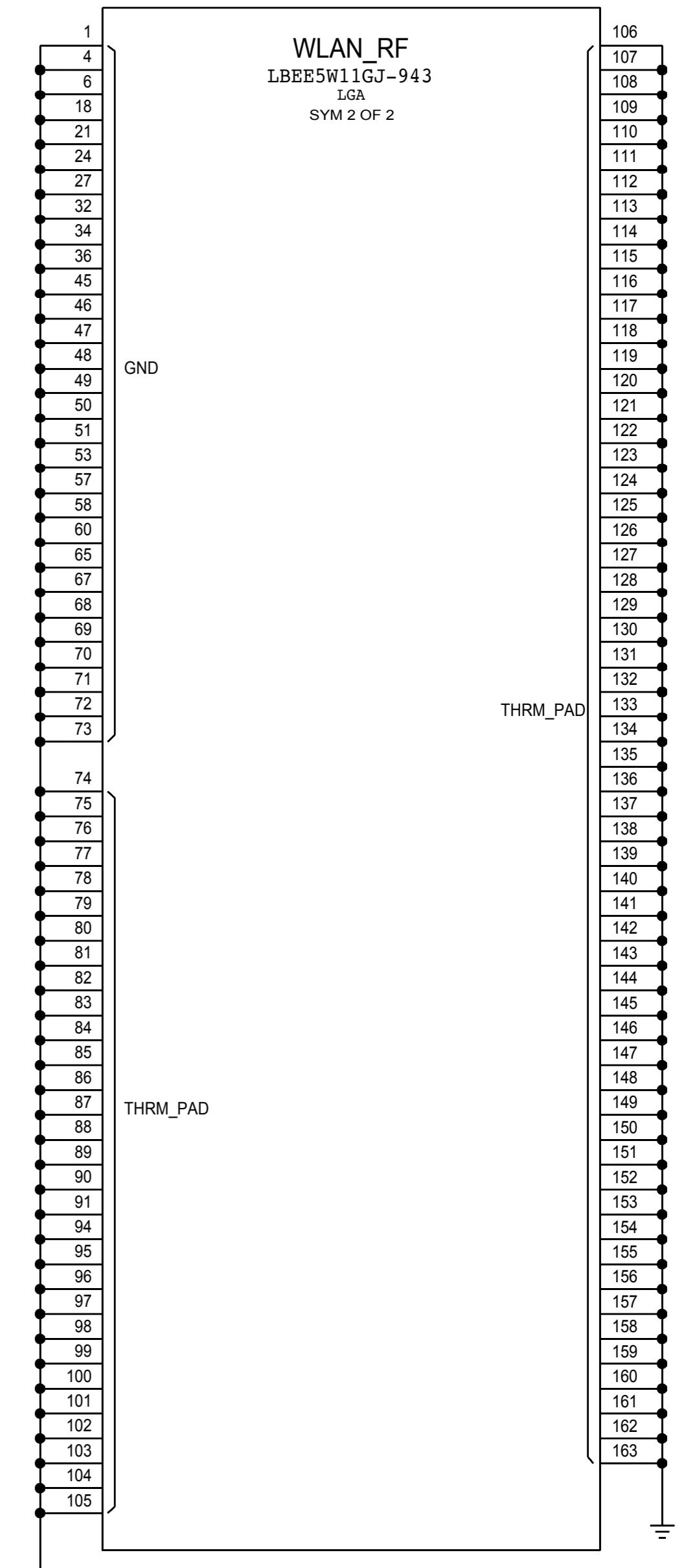
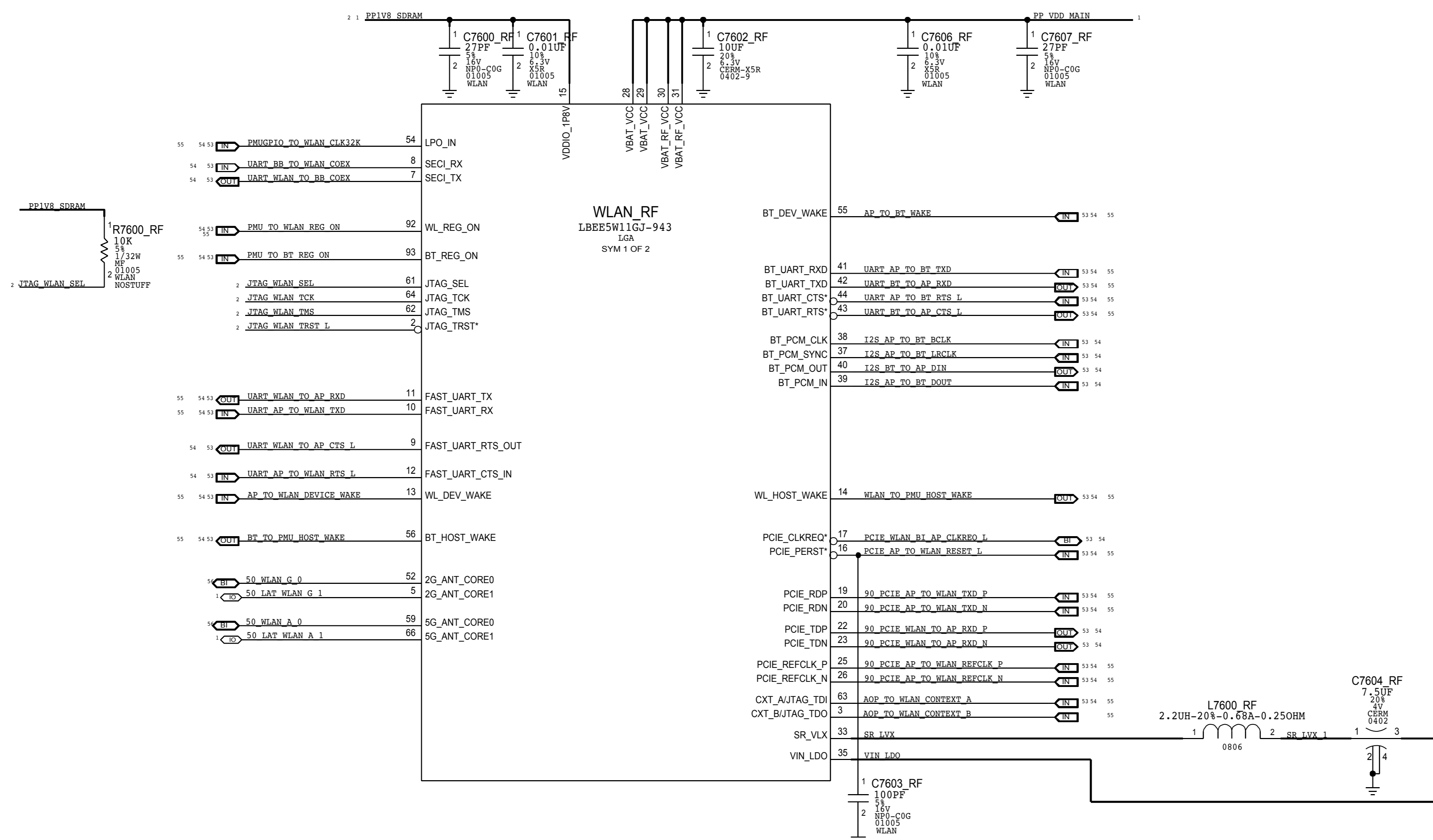
- 53 IN UART_BB_TO_WLAN_COEX
- 53 OUT UART_WLAN_TO_BB_COEX

ANTENNA

- 53 IO 50_UART_WLAN_5G_WEST
- 53 IO 50_UART_WLAN_2G_EAST
- 53 IO 50_UART_WLAN_5G_EAST
- 53 IO 50_UART_WLAN_G_1
- 53 IO 50_UART_WLAN_A_1
- 53 IO 50_UART2_M

PAGE TITLE		DRAWING NUMBER		SIZE
spare		051-00419		D
Apple Inc.		REVISION		8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH		
		PAGE		6 OF 53
		SHEET		6 OF 81

WIFI/BT



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
339800201	339800199	ALTERNATE	WLAN_RF	ALT WIFI/BT MODULE

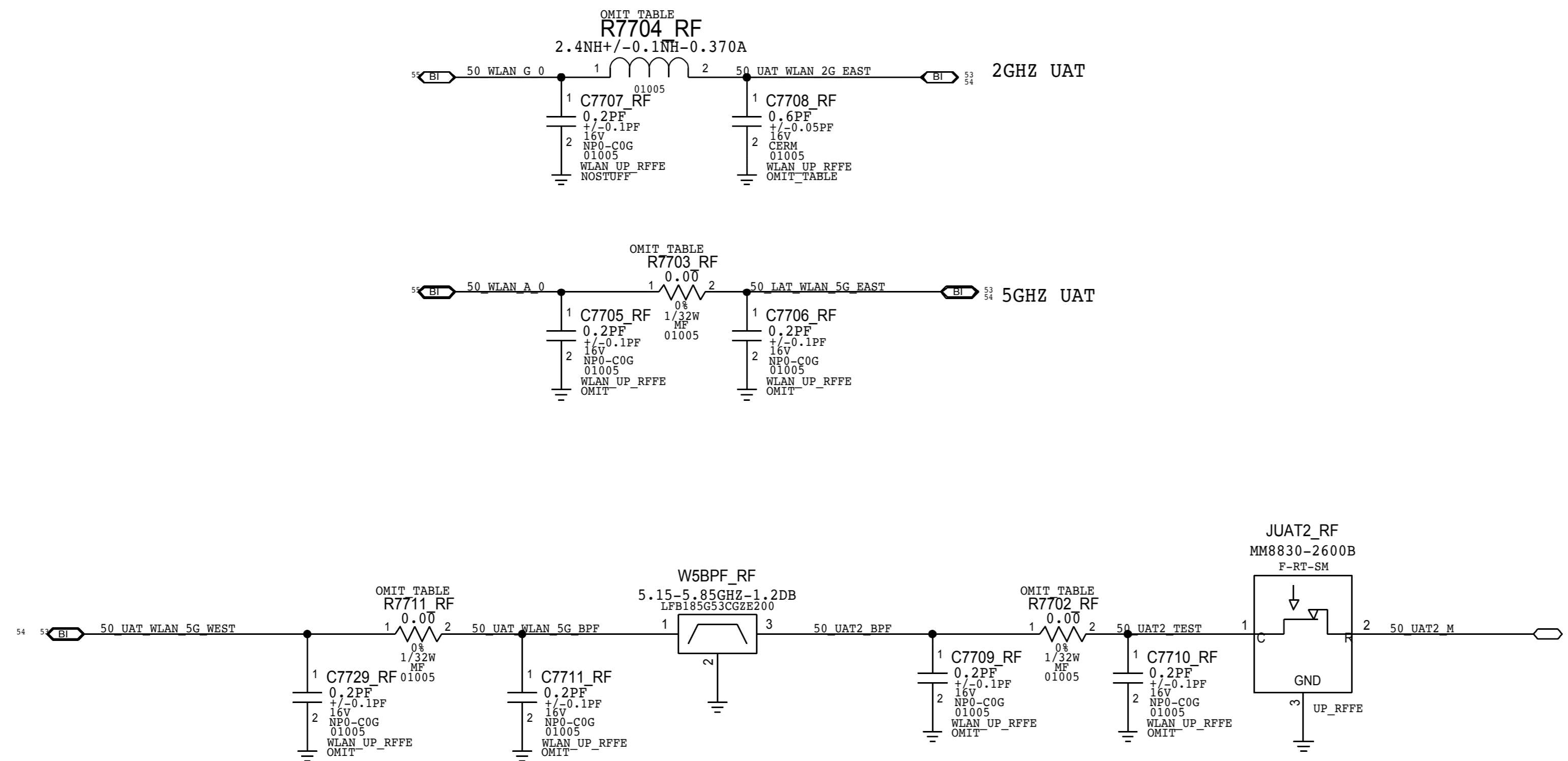
1	AOP TO WLAN CONTEXT A TDI	PP7600 RF P2MM-NSM OMIT	1	PMUGPIO TO WLAN CLK32K	PP7610 RF P2MM-NSM OMIT
1	AOP TO WLAN CONTEXT B TDO	PP7601 RF P2MM-NSM OMIT	1	WLAN TO PMU_HOST_WAKE	PP7611 RF P2MM-NSM OMIT
1	UART WLAN TO AP_RXD	PP7603 RF P2MM-NSM OMIT	1	90_PCIE_AP_TO_WLAN_REFCLK_P	PP7612 RF P2MM-NSM OMIT
1	UART AP_TO_WLAN_TXD	PP7604 RF P2MM-NSM OMIT	1	90_PCIE_AP_TO_WLAN_REFCLK_N	PP7613 RF P2MM-NSM OMIT
1	JTAG WLAN_TCK	PP7605 RF P2MM-NSM OMIT	1	90_PCIE_AP_TO_WLAN_TXD_P	PP7614 RF P2MM-NSM OMIT
1	JTAG WLAN_TMS	PP7606 RF P2MM-NSM OMIT	1	90_PCIE_AP_TO_WLAN_TXD_N	PP7615 RF P2MM-NSM OMIT
1	JTAG WLAN_TRST_L	PP7607 RF P2MM-NSM OMIT	1	PCIE_AP_TO_WLAN_RESET_L	PP7616 RF P2MM-NSM OMIT
1	AP_TO_WLAN_DEVICE_WAKE	PP7608 RF P2MM-NSM OMIT	1	JTAG WLAN_SEL	PP7617 RF P2MM-NSM OMIT
1	BT_TO_PMU_HOST_WAKE	PP7609 RF P2MM-NSM OMIT	1	PMU_TO_WLAN_REG_ON	PP7618 RF P2MM-NSM OMIT
			1	PMU_TO_BT_REG_ON	PP7619 RF P2MM-NSM OMIT

1	UART AP_TO_BT_TXD	PP7620 RF P2MM-NSM OMIT
1	UART BT_TO_AP_RXD	PP7621 RF P2MM-NSM OMIT
1	UART AP_TO_BT_RTS_L	PP7622 RF P2MM-NSM OMIT
1	UART BT_TO_AP_CTS_L	PP7623 RF P2MM-NSM OMIT
1	AP_TO_BT_WAKE	PP7624 RF P2MM-NSM OMIT

PAGE TITLE		Apple Inc.		DRAWING NUMBER	051-00419	SIZE	D
				REVISION	8.0.0		
				BRANCH			
				PAGE	6 OF 53		
				SHEET	6 OF 81		

NOTICE OF PROPRIETARY PROPERTY:
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:
 I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART
 IV ALL RIGHTS RESERVED

WIFI UPPER ANTENNA FEEDS



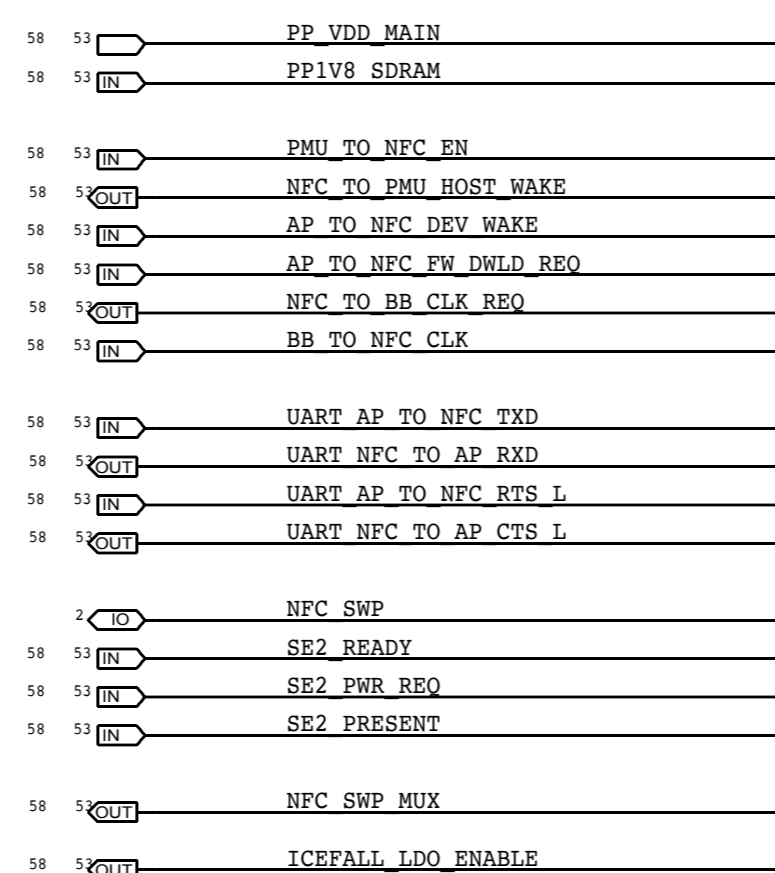
PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
PAGE	6 OF 53	
SHEET	6 OF 81	

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.

REV	ECN	DESCRIPTION OF REVISION	CK APPD
8	0006400877	ENGINEERING RELEASED	

STOCKHOLM MLB

JUNE 9, 2016



ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
132S0436	132S0400	C7504_RF	0.22UF 20% 6.3V 01005	?

BOM OPTIONS

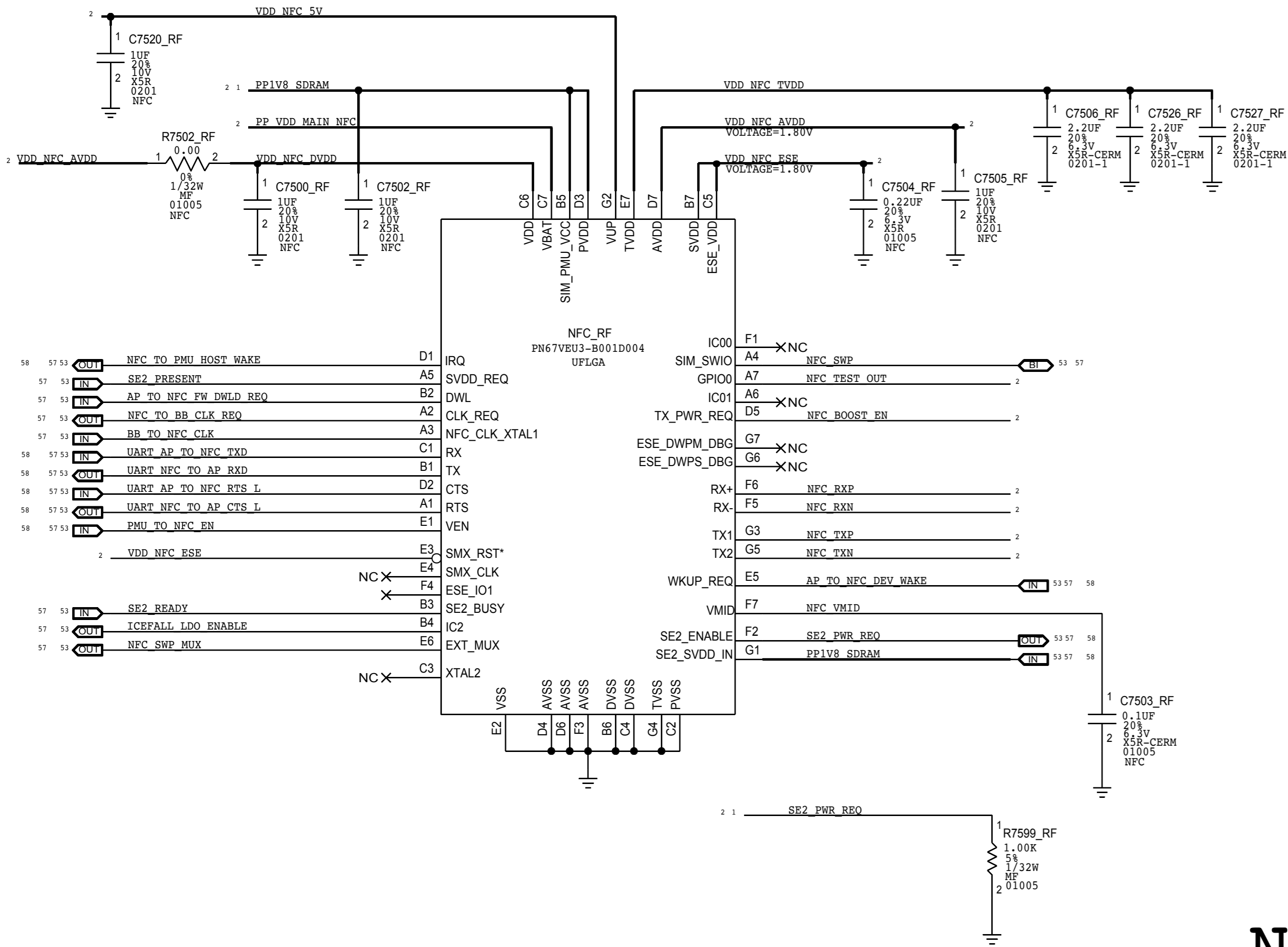
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0883	1	220PF, 0201 2% 50V	C7514_RF	D101
131S00055	1	22PF, 0201 2% 50V	C7512_RF	D101
131S00117	1	120PF, 0201 2% 50V	C7518_RF	D101
131S00026	1	820PF, 0201 2% 50V	C7516_RF	D101
131S0883	1	220PF, 0201 2% 50V	C7514_RF	D10_JP
131S00055	1	22PF, 0201 2% 50V	C7512_RF	D10_JP
131S00019	1	150PF, 0201 2% 50V	C7518_RF	D10_JP
131S0825	1	560PF, 0201 2% 50V	C7516_RF	D10_JP
131S0883	1	220PF, 0201 2% 50V	C7514_RF	D10_ROW
131S00055	1	22PF, 0201 2% 50V	C7512_RF	D10_ROW
131S00117	1	120PF, 0201 2% 50V	C7518_RF	D10_ROW
131S00026	1	820PF, 0201 2% 50V	C7516_RF	D10_ROW

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S00081	1	270PF, 0201 2% 25V	C7514_RF	D111
131S00118	1	180PF, 0201 2% 50V	C7518_RF	D111
131S00033	1	680PF, 0201 2% 50V	C7516_RF	D111
131S00081	1	270PF, 0201 2% 25V	C7514_RF	D11_JP
131S0731	1	100PF, 0201 2% 50V	C7518_RF	D11_JP
131S00033	1	680PF, 0201 2% 50V	C7516_RF	D11_JP
131S00081	1	270PF, 0201 2% 25V	C7514_RF	D11_ROW
131S00118	1	180PF, 0201 2% 50V	C7518_RF	D11_ROW
131S00033	1	680PF, 0201 2% 50V	C7516_RF	D11_ROW

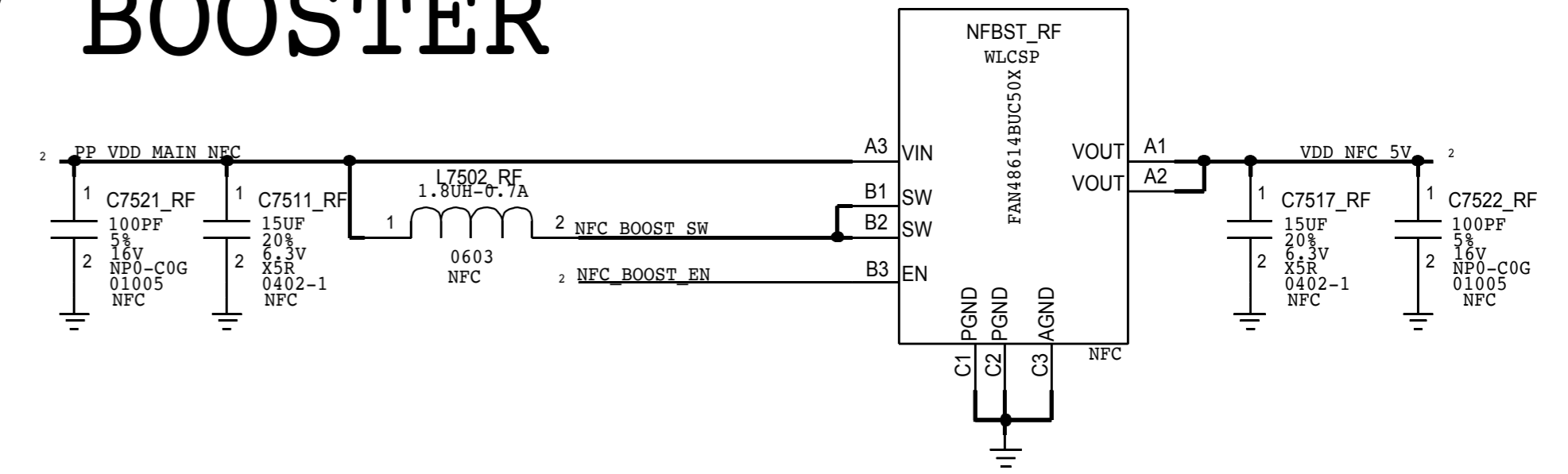
PAGE TITLE		spare	
	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	6 OF 53
		SHEET	6 OF 81

STOCKHOLM

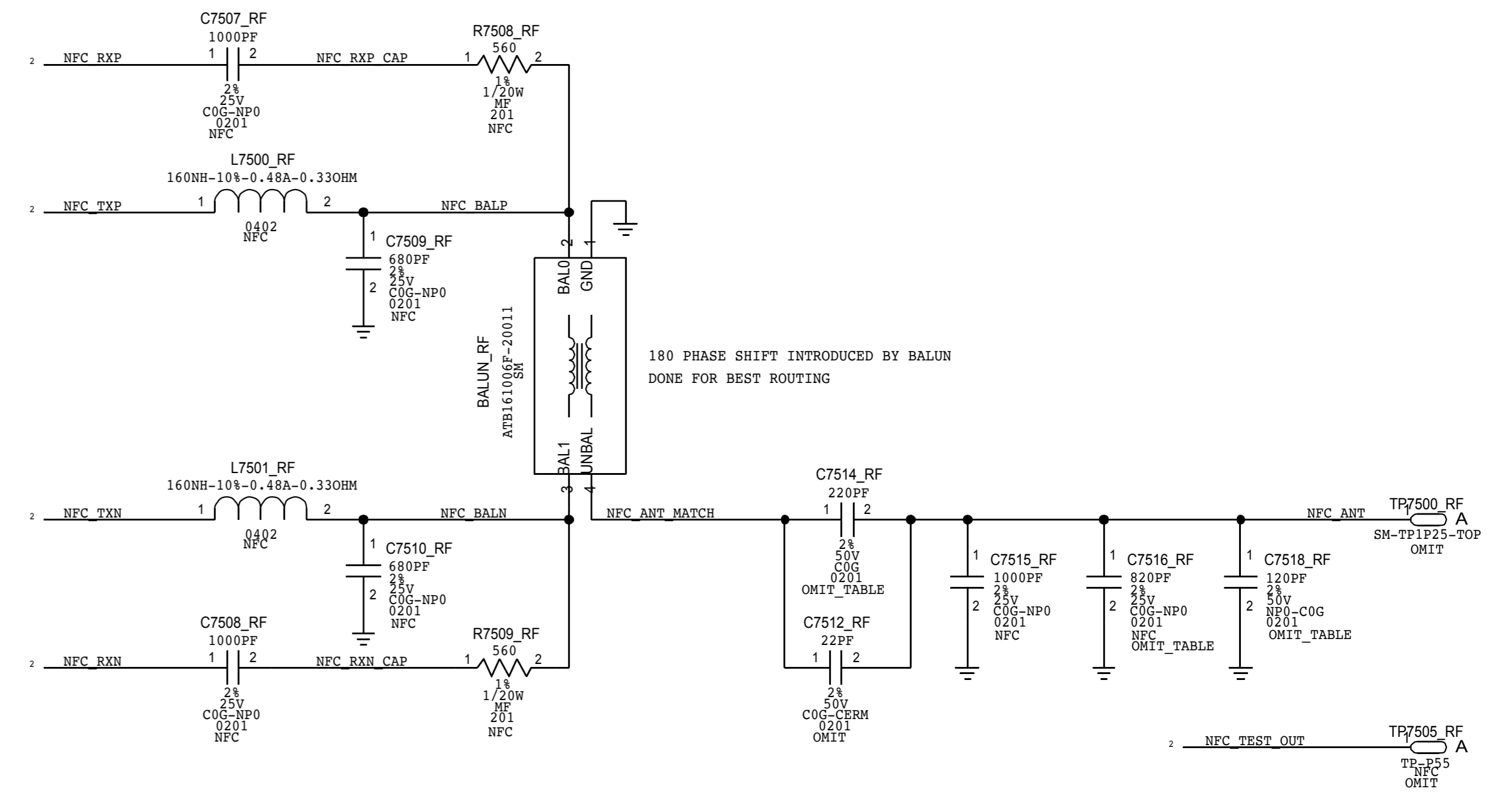
NFC CONTROLLER



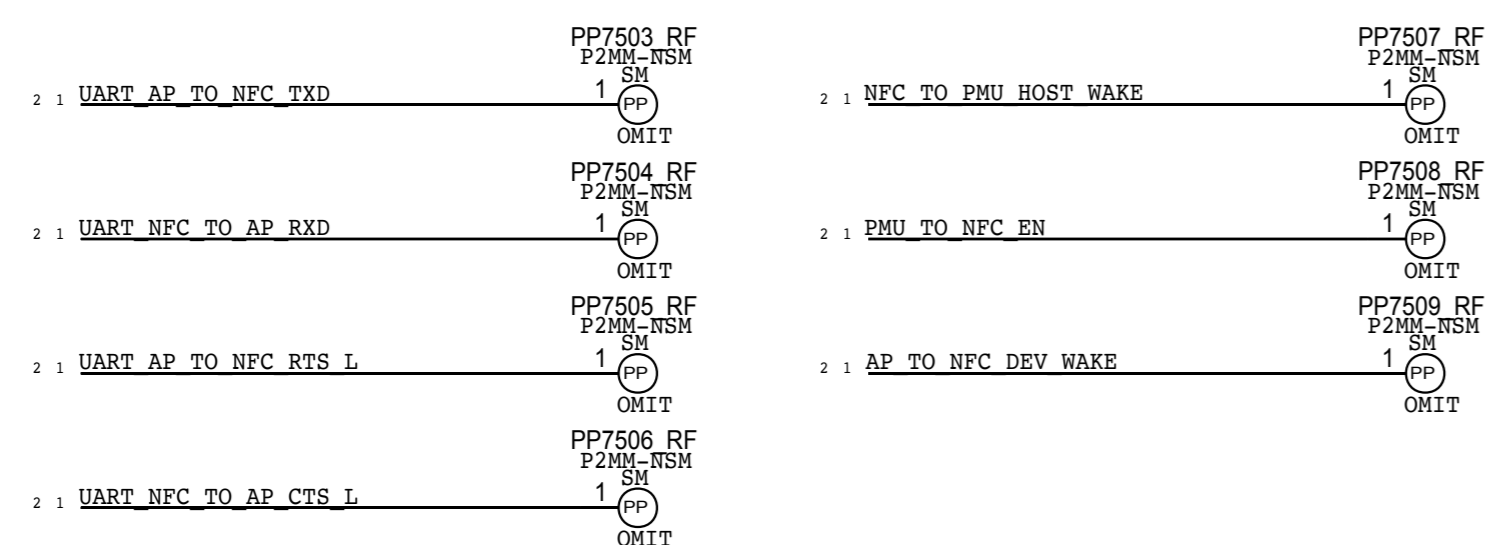
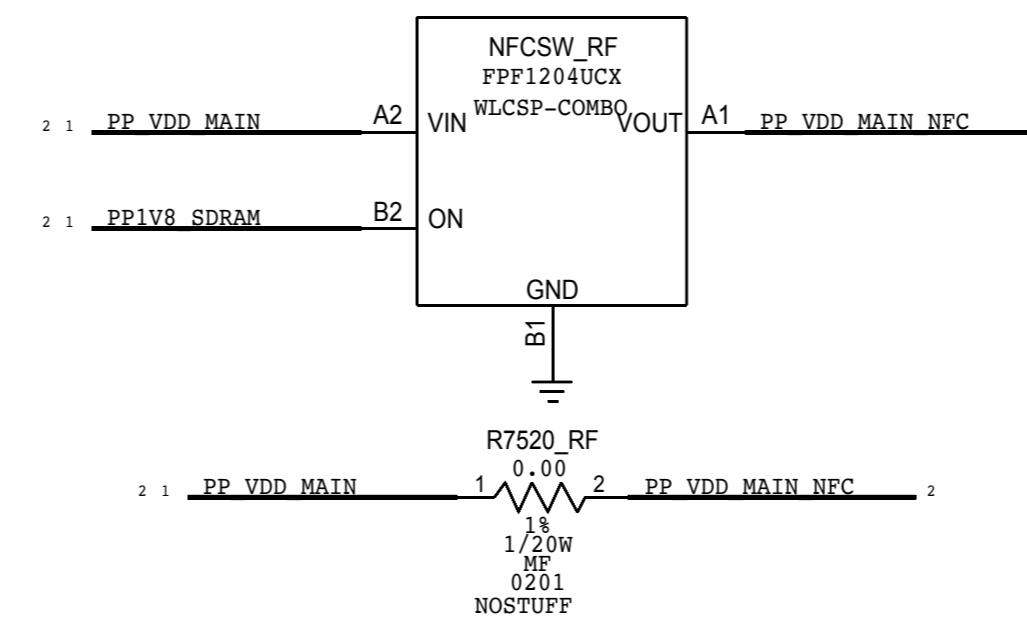
5V BOOSTER



NFC FRONT END



NFC LOAD SWITCH



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

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.

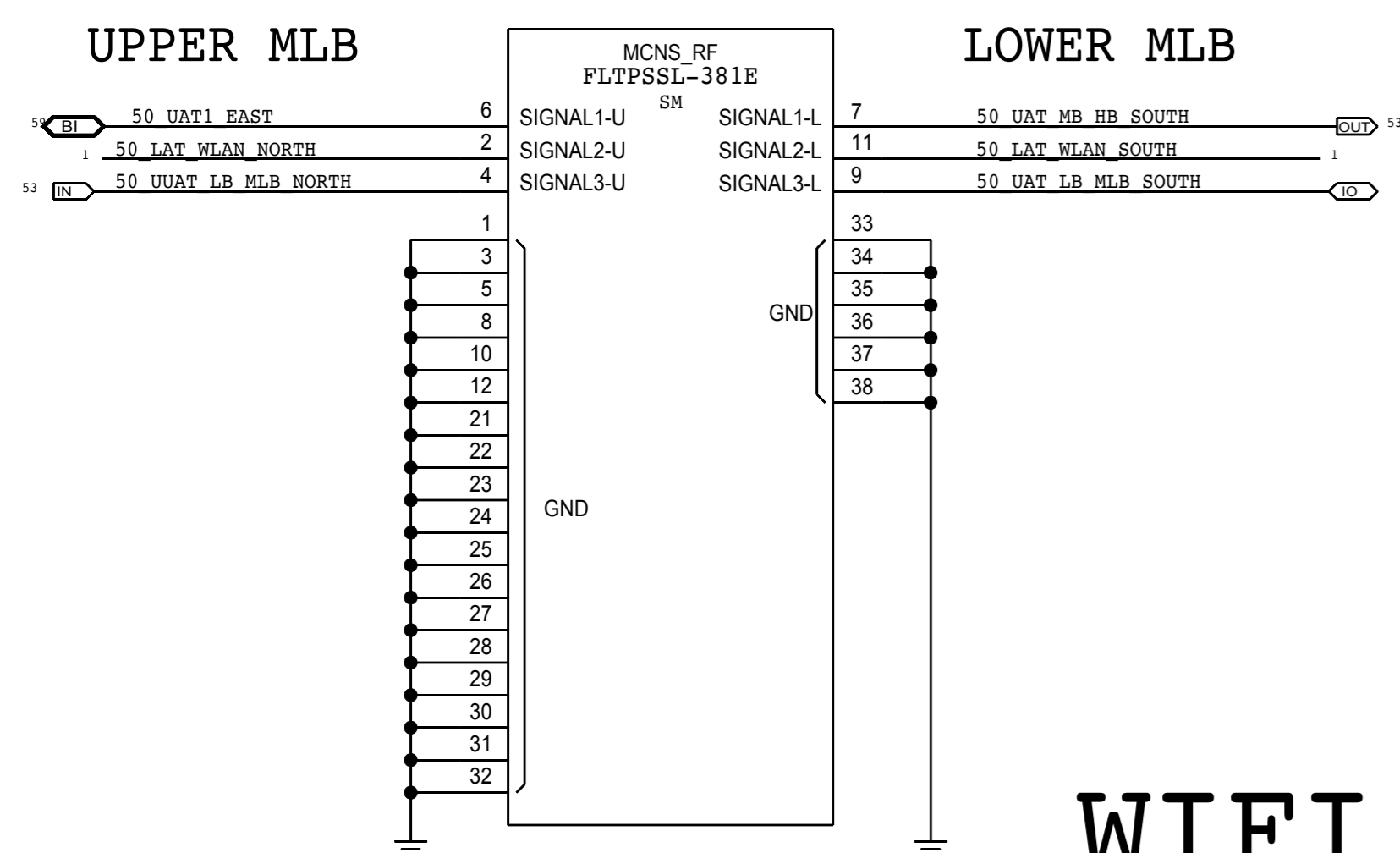
REV	ECN	DESCRIPTION OF REVISION	DATE
8	0006400877	ENGINEERING RELEASED	2016-06-14

D10 RADIO MLB_FF

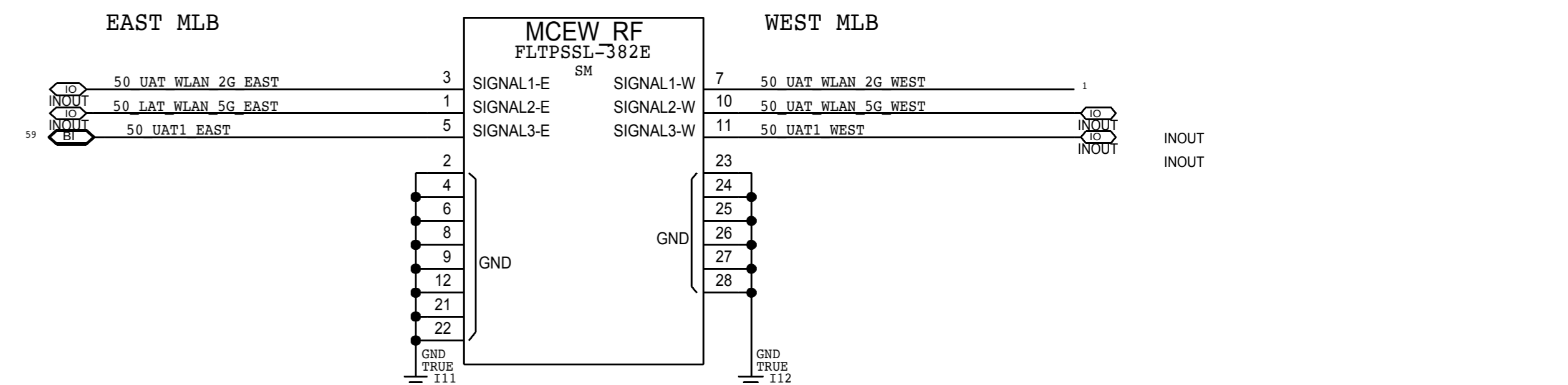
FEB 19, 2016

D10 NORTH-SOUTH METROCIRC
339S00086

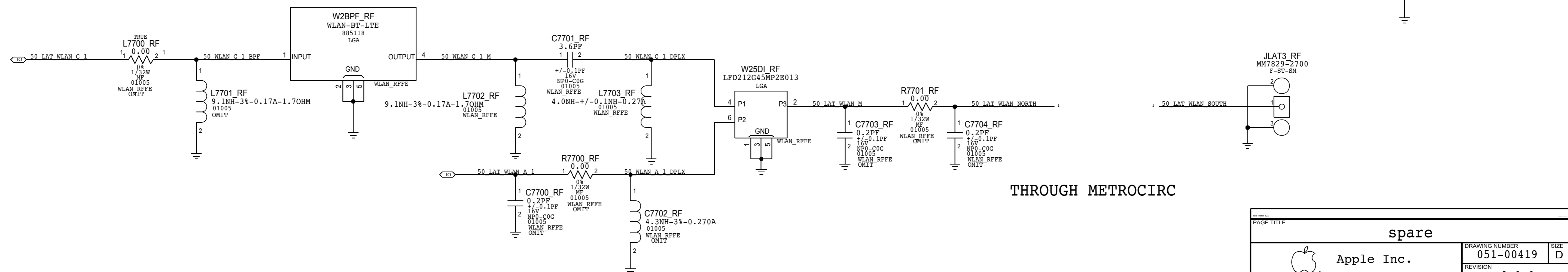
D10 EAST-WEST METROCIRC
339S00110



WIFI LOWER ANTENNA FEED



COAX



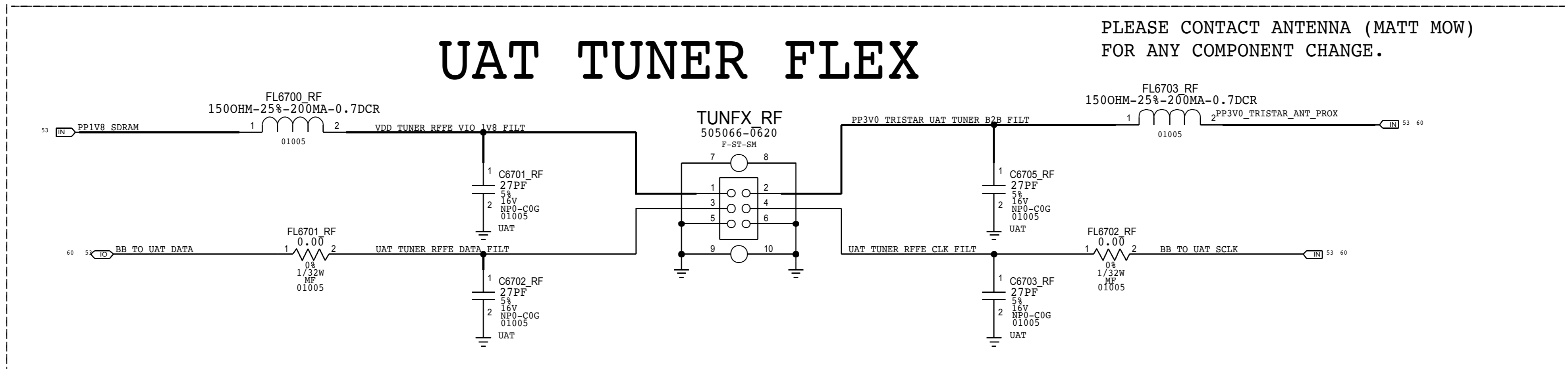
THROUGH METROCIRC

ADD REV ID FOR D10/D11 HERE

PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

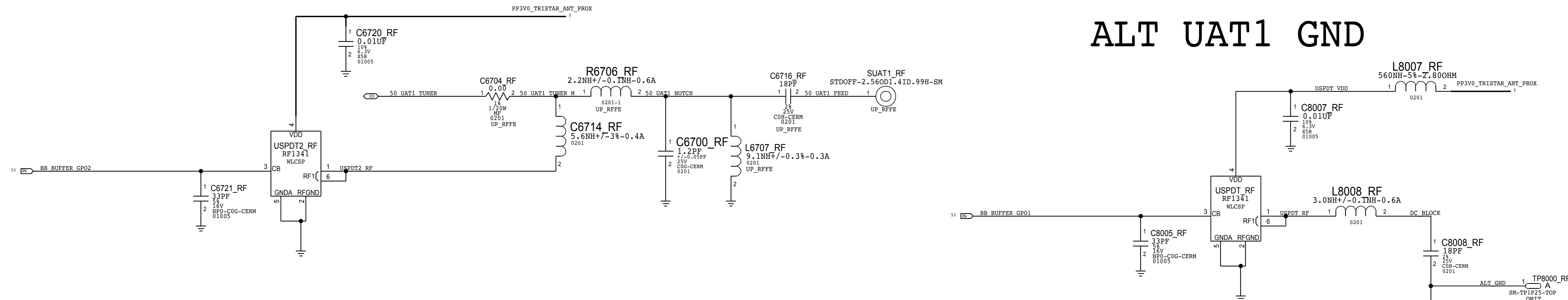
UAT TUNER FLEX

PLEASE CONTACT ANTENNA (MATT MOW)
FOR ANY COMPONENT CHANGE.



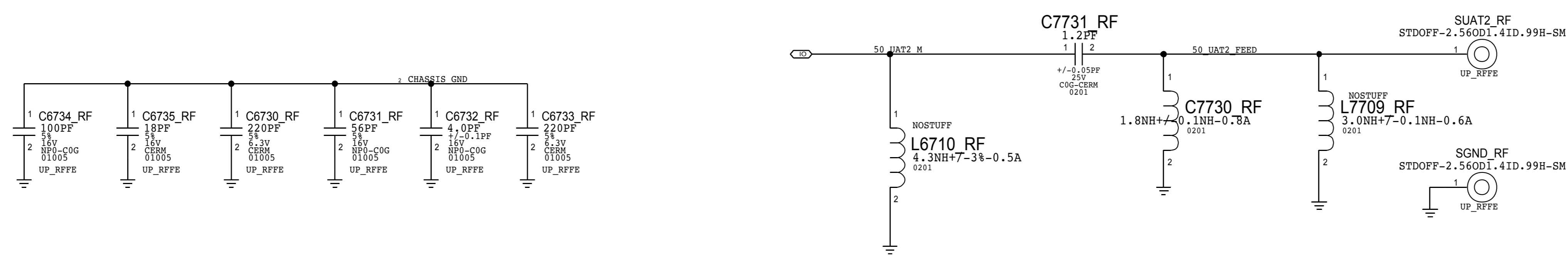
LB/MLB/GNSS/MB/HB STANDOFF

ALT UAT1 GND



UAT GROUND RING

5G WIFI STANDOFF



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

8

7

6

5

4

3

2

1

BOM LIST


PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152S1860	1	LONGER PATH INDUCTOR	L8009_RF	CRITICAL	LMBRF
152S0570	1	J.0 NH,03015	L8009_RF	CRITICAL	NOLMBRF

D

C

B

A

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE D
	REVISION	8.0.0	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

8

7

6

5

4

3

2

1

81 ICEFALL, SIM, DEBUG CONN
 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.

REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
8	0006400877	ENGINEERING RELEASED		2016-06-14

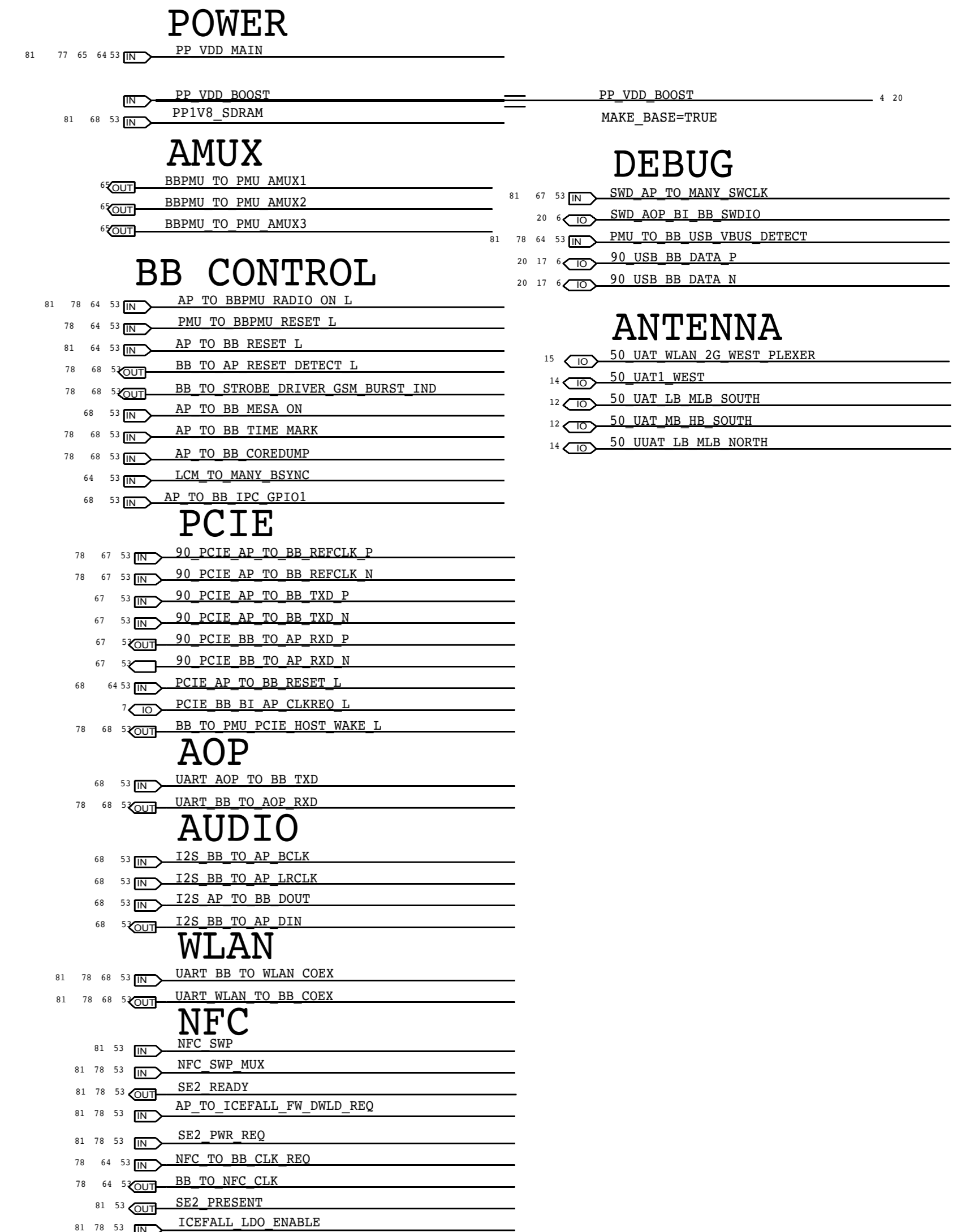
MAV16 RADIO_MLB

LAST_MODIFICATION=Wed Jun 8 12:54:09 2016

AP CONNECTIONS

PAGE CSA CONTENTS

PAGE	CSA	CONTENTS	SYNC	DATE
62	<CSA_PAGE1>	page1	<SYNC_MASTER1>	<SYNC_DATE1>
63	<CSA_PAGE2>	BOM OMIT TABLE	<SYNC_MASTER2>	<SYNC_DATE2>
64	<CSA_PAGE3>	PMU: CONTROL AND CLOCKS	<SYNC_MASTER3>	<SYNC_DATE3>
65	<CSA_PAGE4>	PMU: SWITCHERS AND LDOS	<SYNC_MASTER4>	<SYNC_DATE4>
66	<CSA_PAGE5>	BASEBAND: POWER2	<SYNC_MASTER5>	<SYNC_DATE5>
67	<CSA_PAGE6>	BASEBAND: CONTROL	<SYNC_MASTER6>	<SYNC_DATE6>
68	<CSA_PAGE7>	BASEBAND GPIOs	<SYNC_MASTER7>	<SYNC_DATE7>
69	<CSA_PAGE8>	TRANSCEIVER0/1: POWER	<SYNC_MASTER8>	<SYNC_DATE8>
70	<CSA_PAGE9>	TRANSCEIVER0/1: TX PORTS	<SYNC_MASTER9>	<SYNC_DATE9>
71	<CSA_PAGE10>	TRANSCEIVER0/1: PRX PORTS	<SYNC_MASTER10>	<SYNC_DATE10>
72	<CSA_PAGE11>	RECEIVE MATCHING	<SYNC_MASTER11>	<SYNC_DATE11>
73	<CSA_PAGE12>	LOWER ANTENNA & COUPLERS	<SYNC_MASTER12>	<SYNC_DATE12>
74	<CSA_PAGE13>	DIVERSITY RECEIVE ASM'S	<SYNC_MASTER13>	<SYNC_DATE13>
75	<CSA_PAGE14>	DIVERSITY RECEIVE LNA'S	<SYNC_MASTER14>	<SYNC_DATE14>
76	<CSA_PAGE15>	UPPER ANTENNA FEEDS	<SYNC_MASTER15>	<SYNC_DATE15>
77	<CSA_PAGE16>	PMU: ET MODULATOR	<SYNC_MASTER16>	<SYNC_DATE16>
78	<CSA_PAGE17>	TEST POINTS & BOOT CONFIG	<SYNC_MASTER17>	<SYNC_DATE17>
79	<CSA_PAGE18>	TDD TRANSMIT	<SYNC_MASTER18>	<SYNC_DATE18>
80	<CSA_PAGE19>	FDD TRANSMIT	<SYNC_MASTER19>	<SYNC_DATE19>
	<CSA_PAGE20>		<SYNC_MASTER20>	<SYNC_DATE20>
	<CSA_PAGE21>		<SYNC_MASTER21>	<SYNC_DATE21>
	<CSA_PAGE22>		<SYNC_MASTER22>	<SYNC_DATE22>
	<CSA_PAGE23>		<SYNC_MASTER23>	<SYNC_DATE23>
	<CSA_PAGE24>		<SYNC_MASTER24>	<SYNC_DATE24>
	<CSA_PAGE25>		<SYNC_MASTER25>	<SYNC_DATE25>
	<CSA_PAGE26>		<SYNC_MASTER26>	<SYNC_DATE26>
	<CSA_PAGE27>		<SYNC_MASTER27>	<SYNC_DATE27>
	<CSA_PAGE28>		<SYNC_MASTER28>	<SYNC_DATE28>
	<CSA_PAGE29>		<SYNC_MASTER29>	<SYNC_DATE29>
	<CSA_PAGE30>		<SYNC_MASTER30>	<SYNC_DATE30>

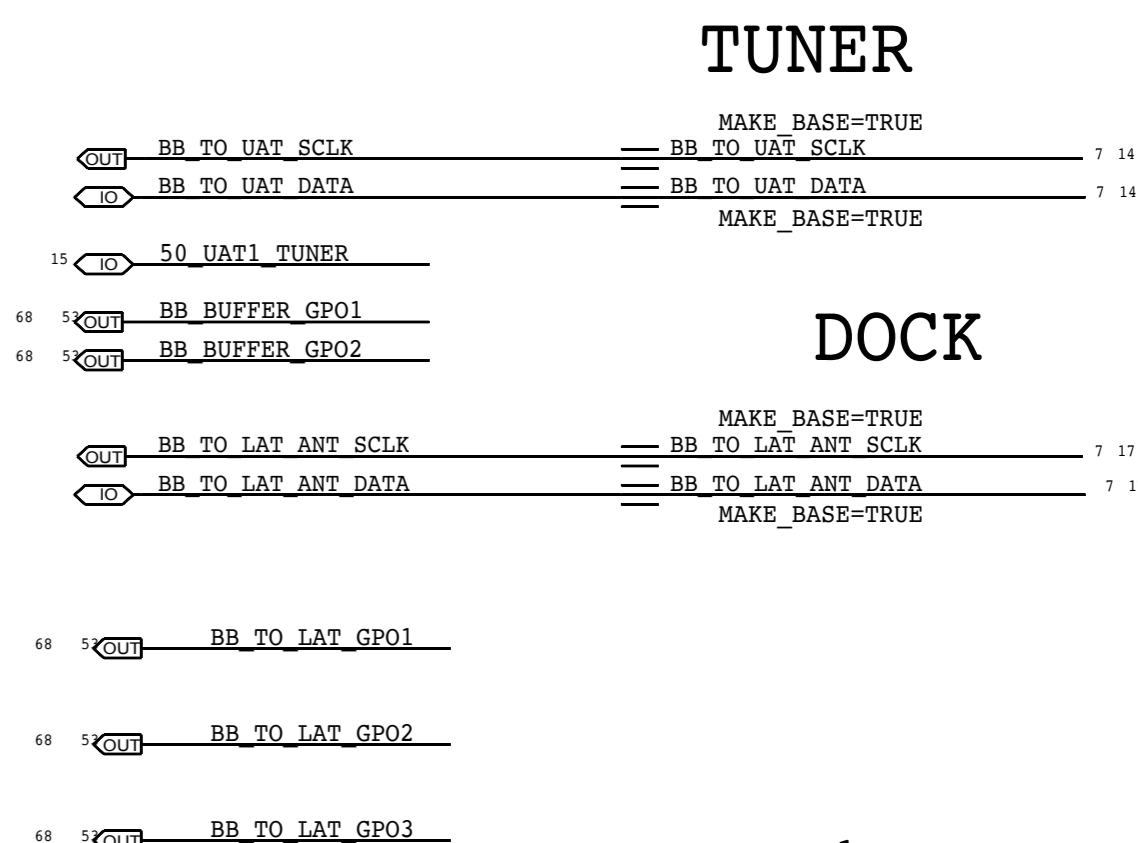


SCH: 951-00964
 BOM: 939-00826

ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
19780565	19780593	ALTERNATE	Y5501_RF	19P2 MHZ XTAL
19780598	19780593	ALTERNATE	Y5501_RF	19P2 MHZ XTAL
138800101	138800095	ALTERNATE	ALL	TRANSITION CAP
335800013	33580894	ALTERNATE	EPROM_RF	IC EPROM
353800253	353800321	ALTERNATE	SWPMX_RF	IC SWITCH SPDT
155800235	155800234	ALTERNATE	UPPDI_RF	NOLMBRF

ALL:C5616_RF-C5618_RF,C5632_RF-C5634_RF



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

BOM OPTIONS:

LMBRF:

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
353800723	1	MLB PAD	MLBPA_RF	CRITICAL	LMBRF
11780002	1	MLB PAD LAT OUTPUT MATCH	R7105_RF	CRITICAL	LMBRF
15282042	1	MLB PAD UAT OUTPUT MATCH	R7106_RF	CRITICAL	LMBRF
353800627	1	MLB LMA	MLBLN_RF	CRITICAL	LMBRF
11780002	1	MLB LMA OUTPUT MATCH	R6710_RF	CRITICAL	LMBRF
155800139	1	PENTAPLEXER	PPLXR_RF	CRITICAL	LMBRF
11880643	1	RES_WF_4.99K_0805	R7506_RF	CRITICAL	LMBRF
155800193	1	FLTR_DIPLEXER_LB-HB-HB_DPX_SHTLD_0805	UATDI_RF	CRITICAL	LMBRF
155800158	1	FLTR_DIPLEXER_LB-HB-HB_MIRROR_0805	UPPDI_RF	CRITICAL	LMBRF
337800284	1	IC_SECURE_ELEMENT_BCM20211_ML80A35	SE2_RF	CRITICAL	LMBRF
13880739	1	CAP_1UF_0201	C7201_RF	CRITICAL	LMBRF
13880739	1	CAP_1UF_0201	C7528_RF	CRITICAL	LMBRF
13280316	1	CAP_0.1UF_01005	C7501_RF	CRITICAL	LMBRF
13880739	1	CAP_1UF_0201	C7523_RF	CRITICAL	LMBRF
13880739	1	CAP_1UF_0201	C7524_RF	CRITICAL	LMBRF
138800032	1	CAP_2.2UF_0201	C7529_RF	CRITICAL	LMBRF
138800032	1	CAP_2.2UF_0201	C7530_RF	CRITICAL	LMBRF
13180217	1	CAP_100PF_01005	C7531_RF	CRITICAL	LMBRF
11880627	1	RES_10K0805_01005	R7512_RF	CRITICAL	LMBRF
353800026	1	LDO_RGA_2X2	SE2LDO_RF	CRITICAL	LMBRF
13180630	1	CAP_CER_NPO/COG_27PF_24.16V_01005	C6345_RF	CRITICAL	LMBRF
13180341	1	CAP_CER_COG_3.0PF_+/-0.05_25V_0201_HI-Q	C6348_RF	CRITICAL	LMBRF
15282006	1	IND_FILM_6.2MH_34_400MA_UH-Q_0201	L6322_RF	CRITICAL	LMBRF
13180630	1	CAP_CER_NPO/COG_27PF_24.16V_01005	C6315_RF	CRITICAL	LMBRF
15282006	1	IND_FILM_6.2MH_34_400MA_UH-Q_0201	L6305_RF	CRITICAL	LMBRF
13180341	1	CAP_CER_COG_3.0PF_+/-0.05PF_25V_0201_HI-Q	C6306_RF	CRITICAL	LMBRF
13180630	1	CAP_CER_NPO/COG_27PF_24.16V_01005	C6106_RF	CRITICAL	LMBRF
15282051	1	IND_1.3MH_1.1A_0201	R6404_RF	CRITICAL	LMBRF
15282000	1	IND_2.0MH_600MA_0201	R7104_RF	CRITICAL	LMBRF
131800001	1	CAP_CER_0.1PF_25V_0201	C7119_RF	CRITICAL	LMBRF
11880724	1	RES_WF_008M_1/20W_0201	R6703_RF	CRITICAL	LMBRF
11880724	1	RES_WF_008M_1/20W_0201	R6708_RF	CRITICAL	LMBRF
13180363	1	CAP_CER_COG_NQ_0.6PF_+/-0.05PF_25V_0201	C7123_RF	CRITICAL	LMBRF
15282002	1	IND_2.7MH_+/-0.18M_600MA_0201_UH-Q	R6605_RF	CRITICAL	LMBRF
13180337	1	CAP_1.5PF_+/-0.05PF_25V_0201_HQ	C6610_RF	CRITICAL	LMBRF
11880724	1	RES_WF_008M_1/20W_0201	R6606_RF	CRITICAL	LMBRF
13180275	1	CAP_CER_COG_0.3PF_+/-0.1PF_25V_0201_HQ	C6416_RF	CRITICAL	LMBRF
11880608	1	RES_WF_1K_0805_1/32W_01005	R5911_RF	CRITICAL	LMBRF
15281356	1	IND_1.0MH_34_250MA_HI-Q_0201	C6613_RF	CRITICAL	LMBRF

NOLMBRF:


PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
13180444	1	DCS/PCS RX FILTER MATCH	R6301_RF	CRITICAL	NOLMBRF
15282020	1	DCS/PCS RX FILTER MATCH	L6320_RF	CRITICAL	NOLMBRF
155800149	1	DCS/PCS RX FILTER	GSMRX_RF	CRITICAL	NOLMBRF
15282005	1	DCS/PCS RX MATCH (DCS)	L6318_RF	CRITICAL	NOLMBRF
13180319	1	DCS/PCS RX MATCH (DCS)	C6332_RF	CRITICAL	NOLMBRF
13180630	1	DCS/PCS RX MATCH (DCS)	C6340_RF	CRITICAL	NOLMBRF
15282005	1	DCS/PCS RX MATCH (DCS)	L6319_RF	CRITICAL	NOLMBRF
13180385	1	DCS/PCS RX MATCH (DCS)	C6333_RF	CRITICAL	NOLMBRF
13180630	1	DCS/PCS RX MATCH (DCS)	C6341_RF	CRITICAL	NOLMBRF
155800163	1	QUADPLEXER	PPLXR_RF	CRITICAL	NOLMBRF
155800199	1	FLTR_DPX_PASS_THRU_LB-HB-HB_SHTLD_0805	UATDI_RF	CRITICAL	NOLMBRF
155800234	1	FLTR_DPX_PASS_THRU_LB-HB-HB_UNSHLD_0805	UPPDI_RF	CRITICAL	NOLMBRF
11880724	1	RES_WF_008M_1/20W_0201	R6404_RF	CRITICAL	NOLMBRF
15282044	1	IND_2.2MH_+/-0.18M_600MA_0201	R7104_RF	CRITICAL	NOLMBRF
152800157	1	1.2MH_+/-0.05MH_1.1A_UH-Q_0201	R6703_RF	CRITICAL	NOLMBRF
13180549	1	18PF_0201_25V	R6708_RF	CRITICAL	NOLMBRF
13180445	1	CAP_CER_12PF_5V_25V_0201_HI-Q	R6606_RF	CRITICAL	NOLMBRF

D10 SPECIFIC:

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
13180278	1	CAP_CER_COG_1PF_+/-0.1PF_25V_0201_HI-Q	C7120_RF	CRITICAL	D10

D11 SPECIFIC:

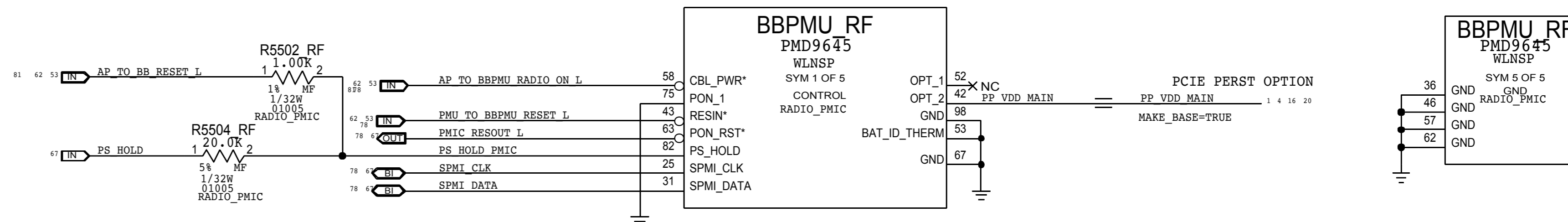
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
13180425	1	CAP_CER_COG_0.5PF_+/-0.05PF_25V_0201_HI-Q	C7120_RF	CRITICAL	D11

PAGE TITLE		spare	
 Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	6 OF 53
		SHEET	6 OF 81

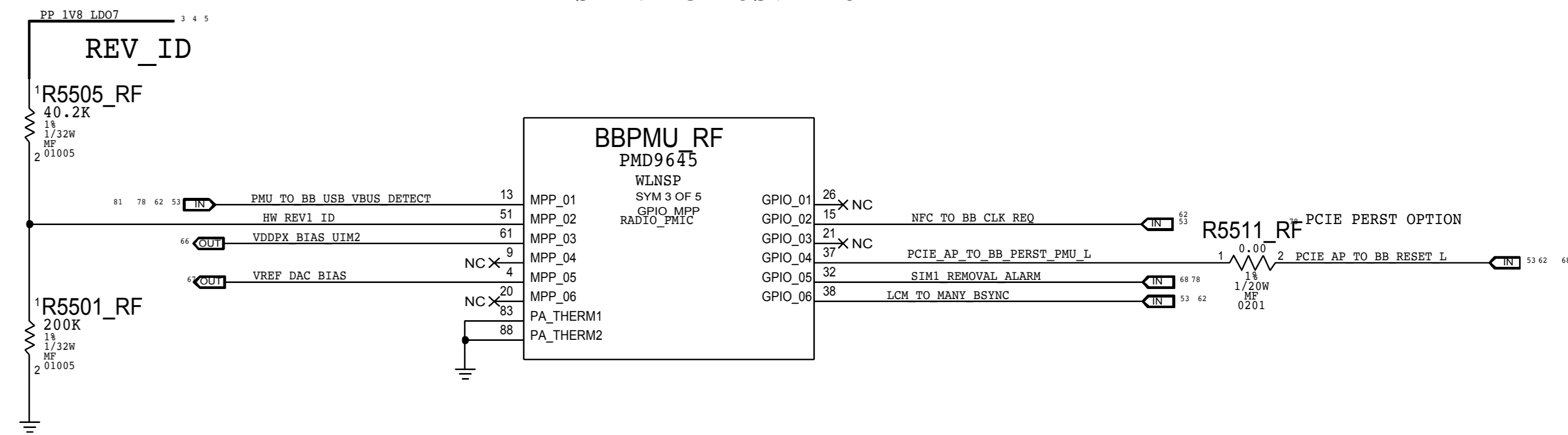
PMU: CONTROL AND CLOCKS

RESET AND CONTROL: PMU

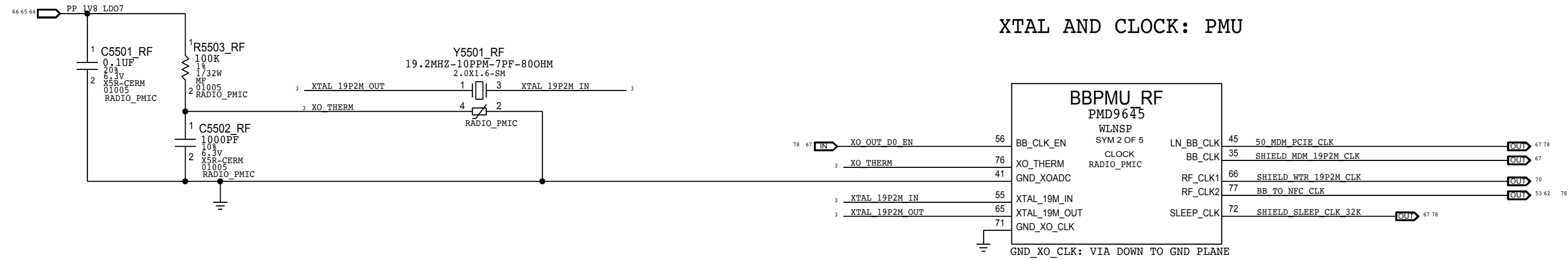
HW_REV_ID	R5505	R5501	REVISION
0.10V	887K	51.1K	DEV1
0.20V	422K	51.1K	DEV2
0.30V	255K	51.1K	DEV 2.1
0.40V	180K	51.1K	DEV 3
0.50V	124K	51.1K	T181
0.60V	102K	51.1K	PP/P1
0.70V	82.5K	51.1K	DEV4
0.80V	63.4K	51.1K	P2
0.90V	51.1K	51.1K	DEV5
1.00V	51.1K	63.4K	EVT
1.10V	51.1K	82.5K	EVT DOE
1.20V	50.0K	100K	EVT ALT/CARBON
1.30V	39.0K	100K	DEV6
1.40V	14.7K	51.1K	CARRIER
1.50V	40.2K	200K	DVT
1.60V	6.34K	51.1K	PVT



MPPS AND GPIOs: PMU



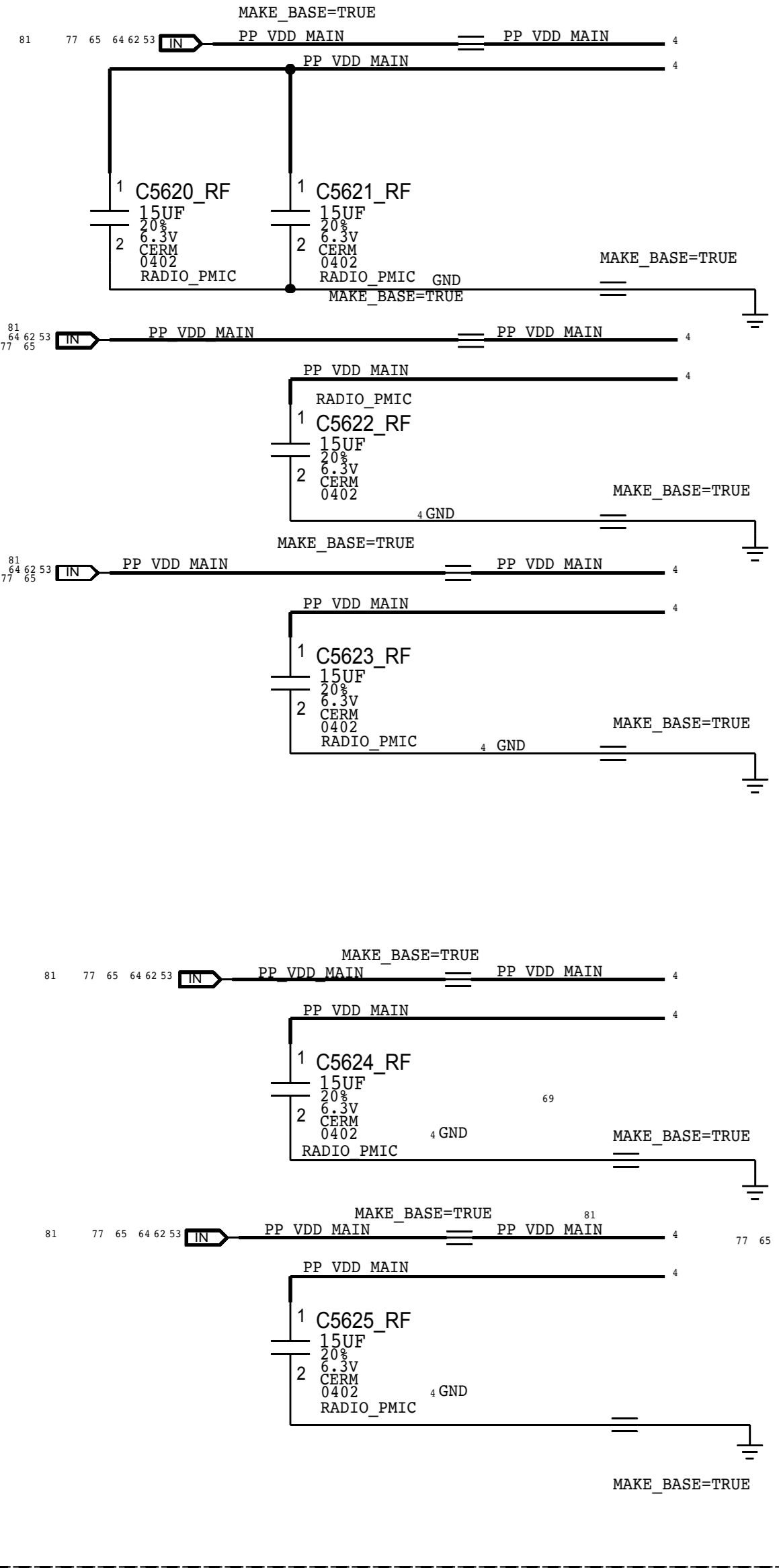
XTAL AND CLOCK: PMU



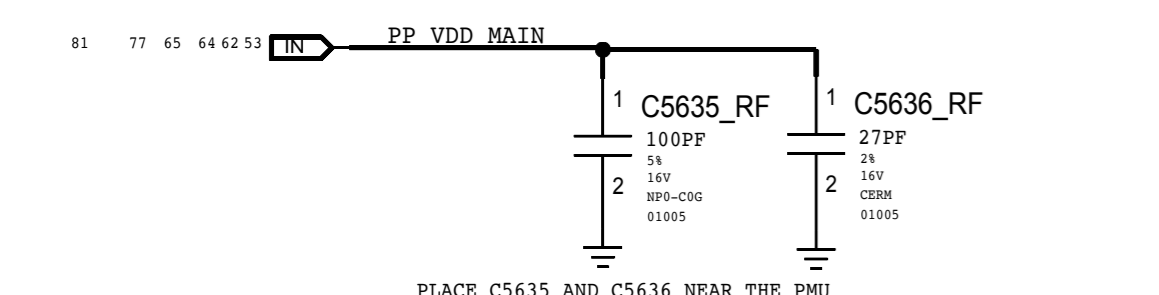
PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	6 OF 53
		SHEET	6 OF 81

PMU: SWITCHERS AND LDOS

SWITCHERS BULK CAPS

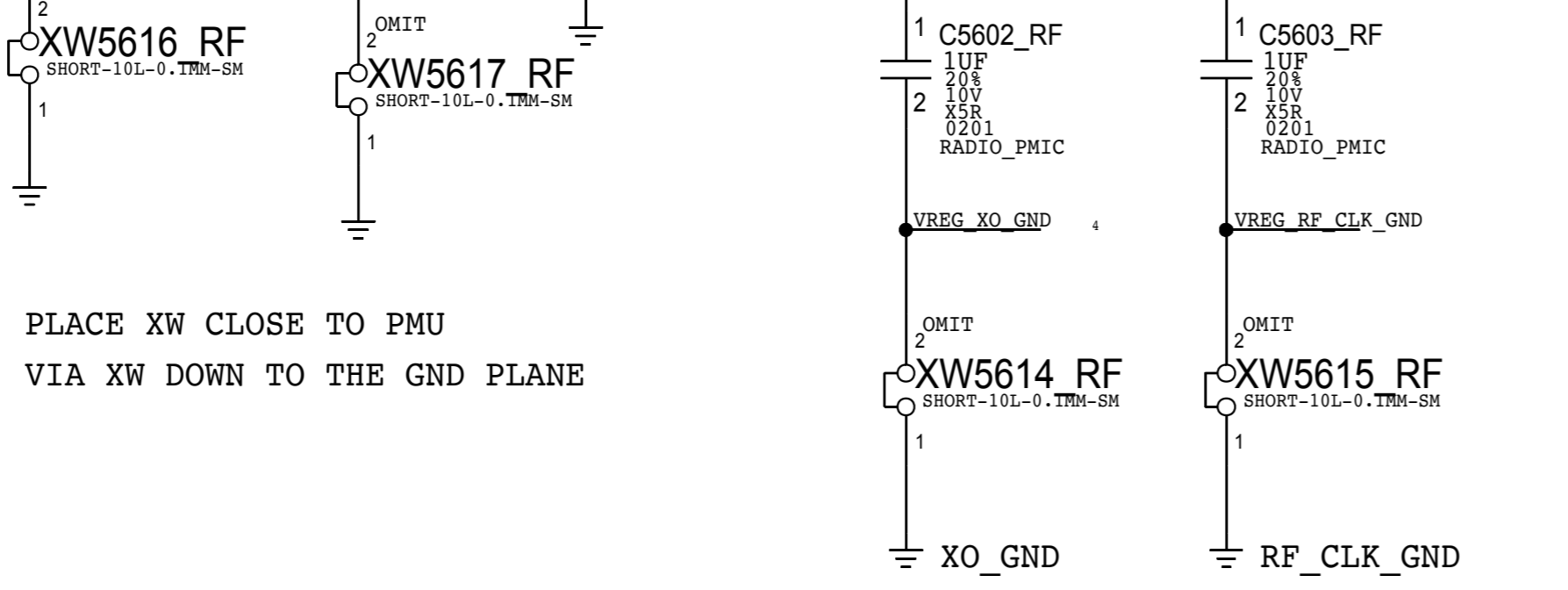
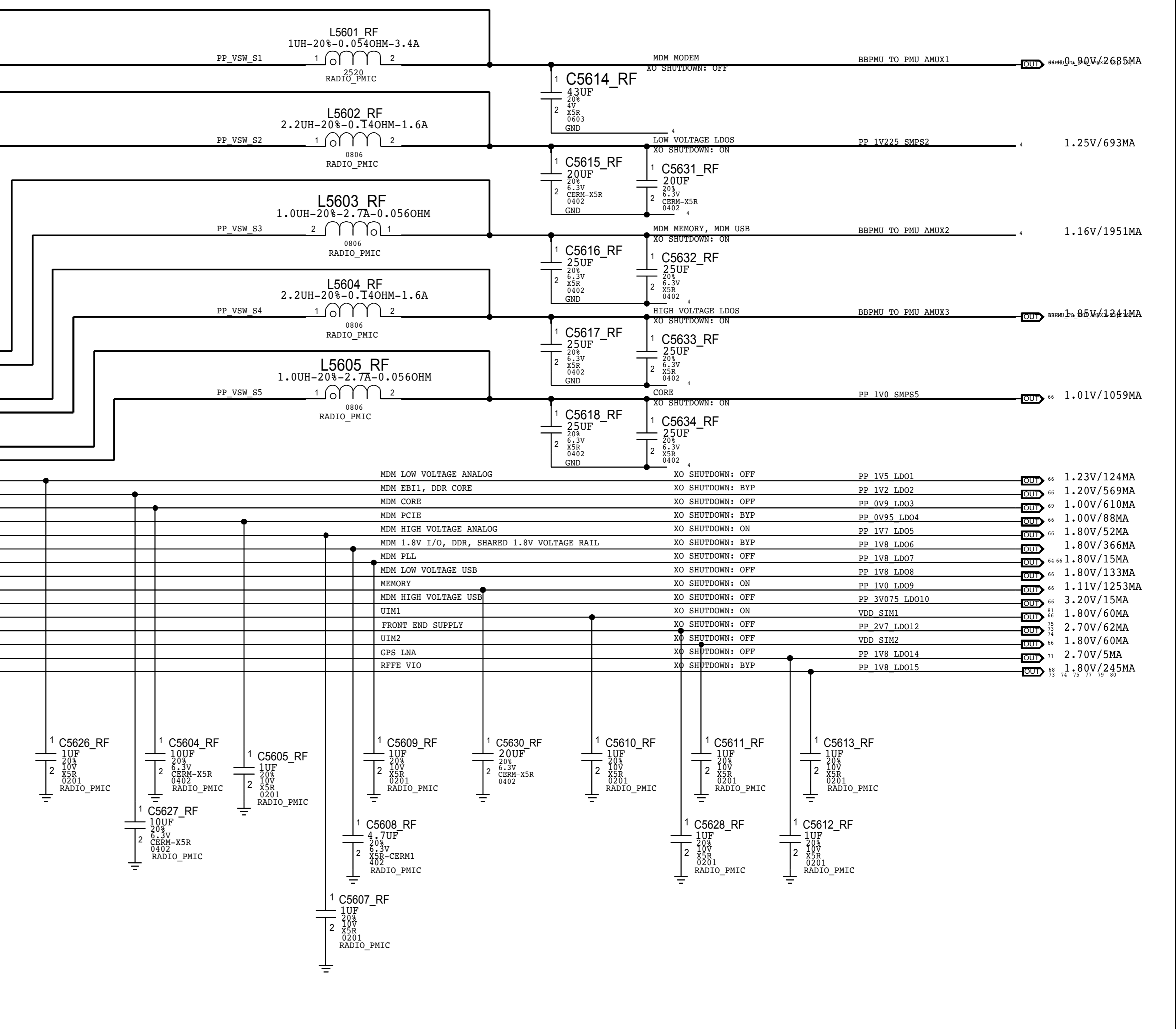
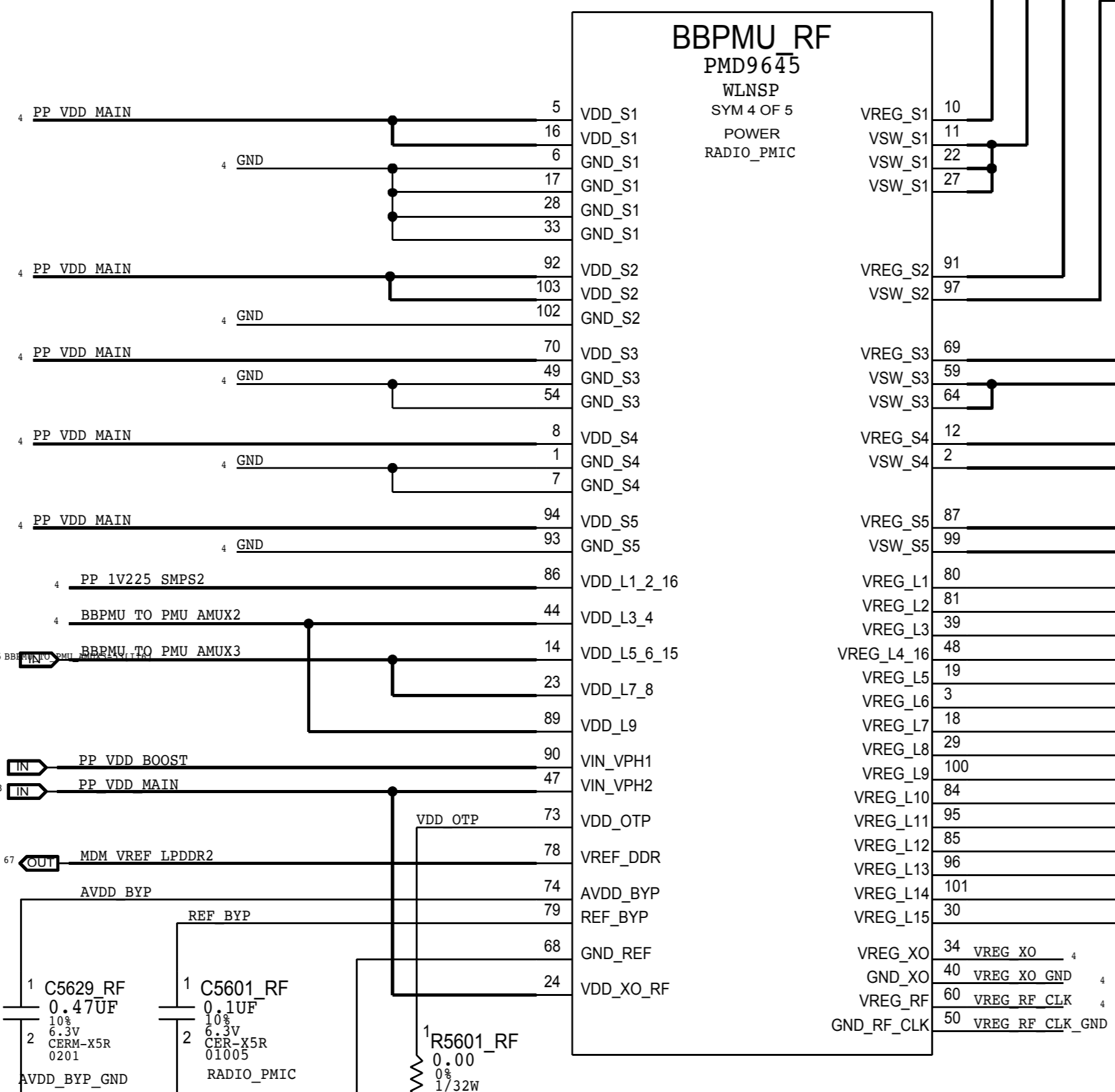


DESENSE CAPS



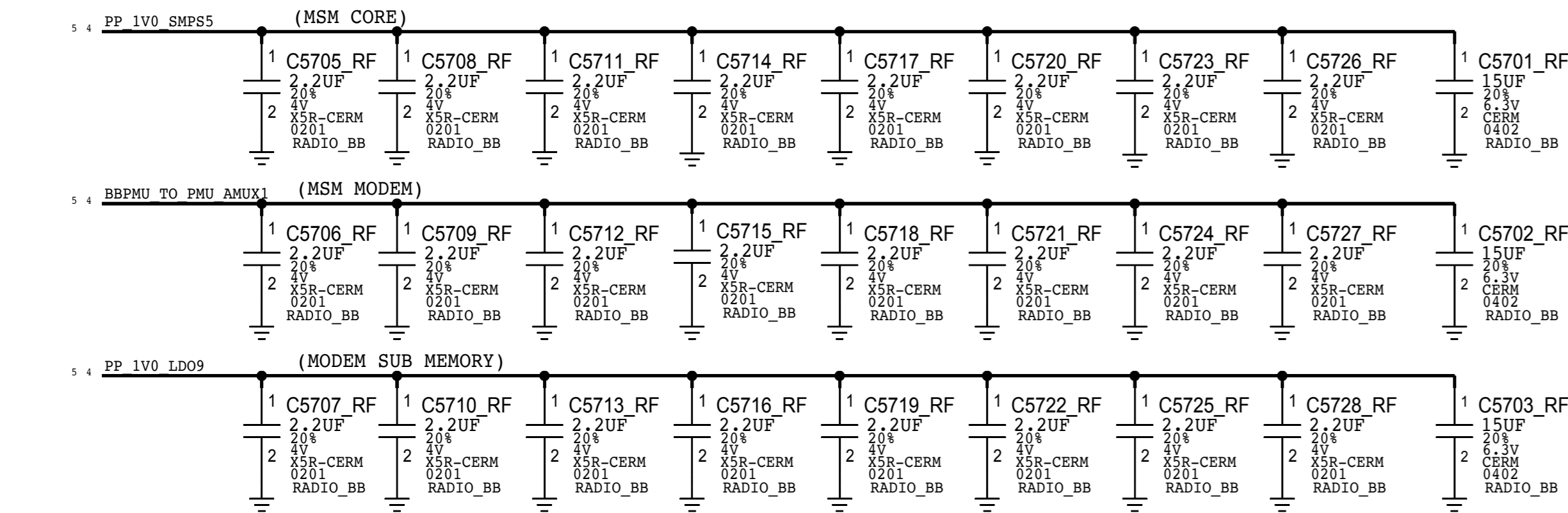
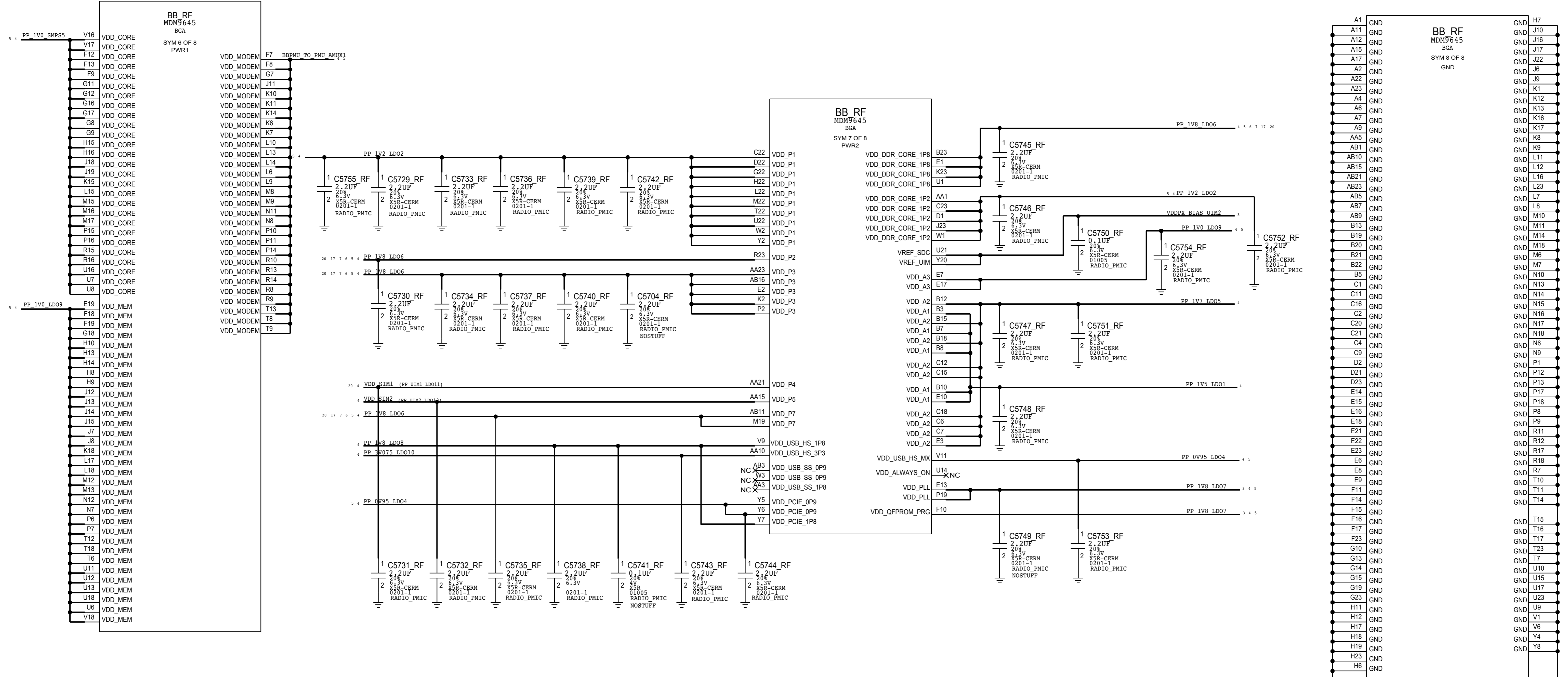
PLACE XW CLOSE TO PMU
VIA XW DOWN TO THE GND PLANE

PLACE XW CLOSE TO PMU
VIA XW DOWN TO THE GND PLANE



PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	6 OF 53
		SHEET	6 OF 81

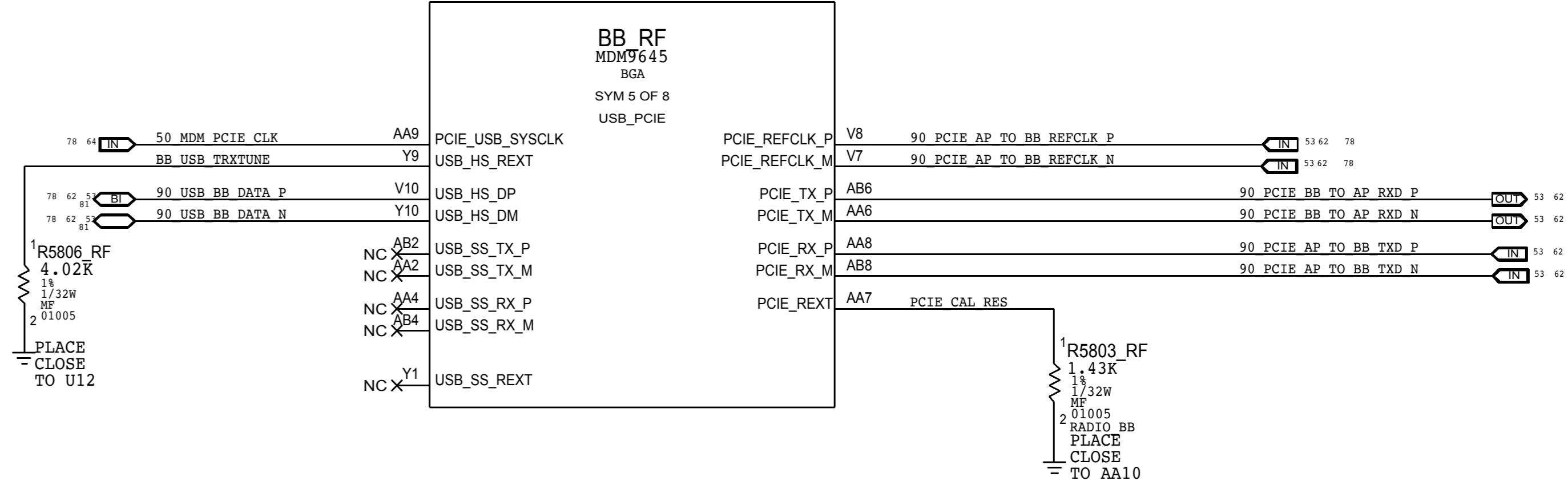
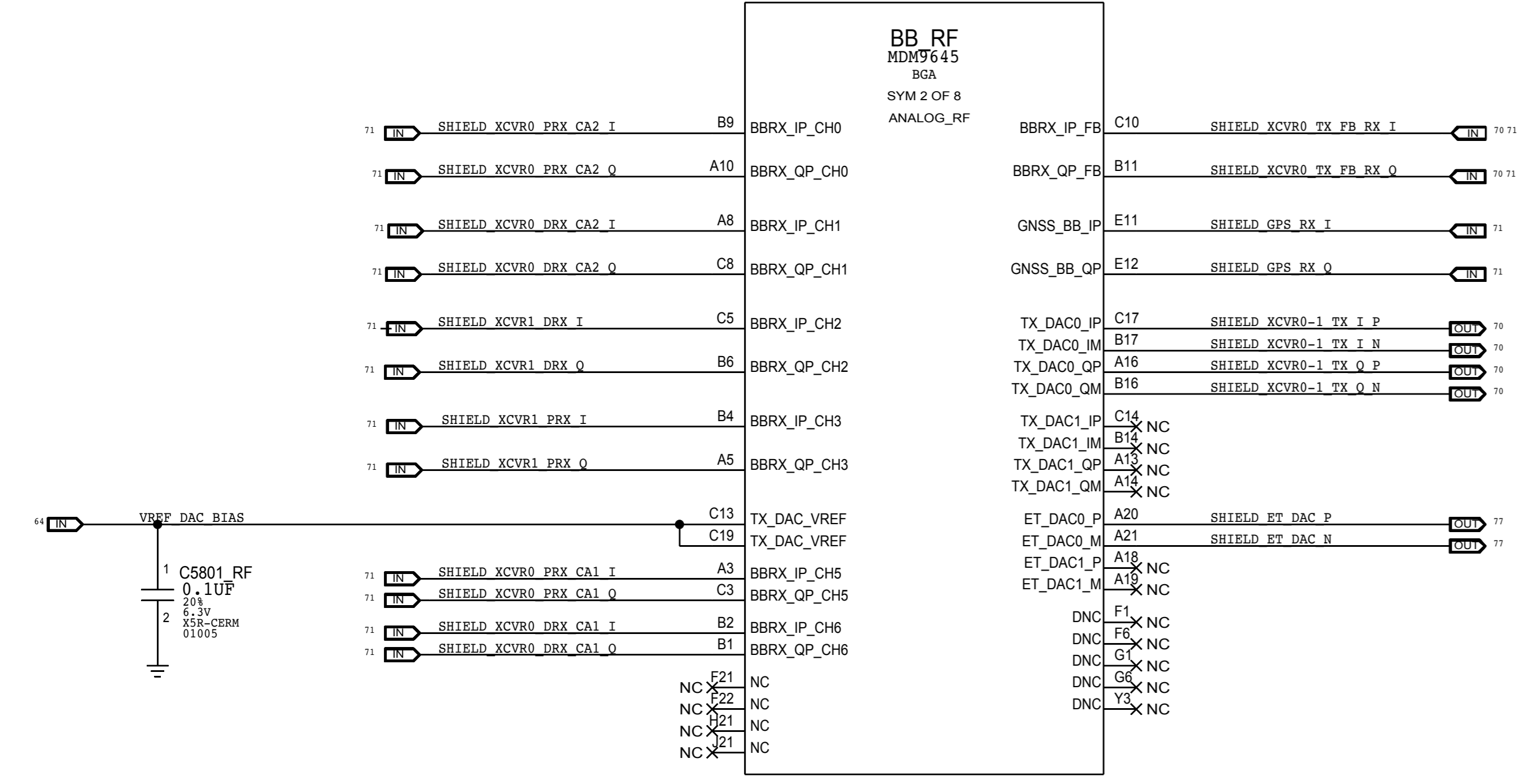
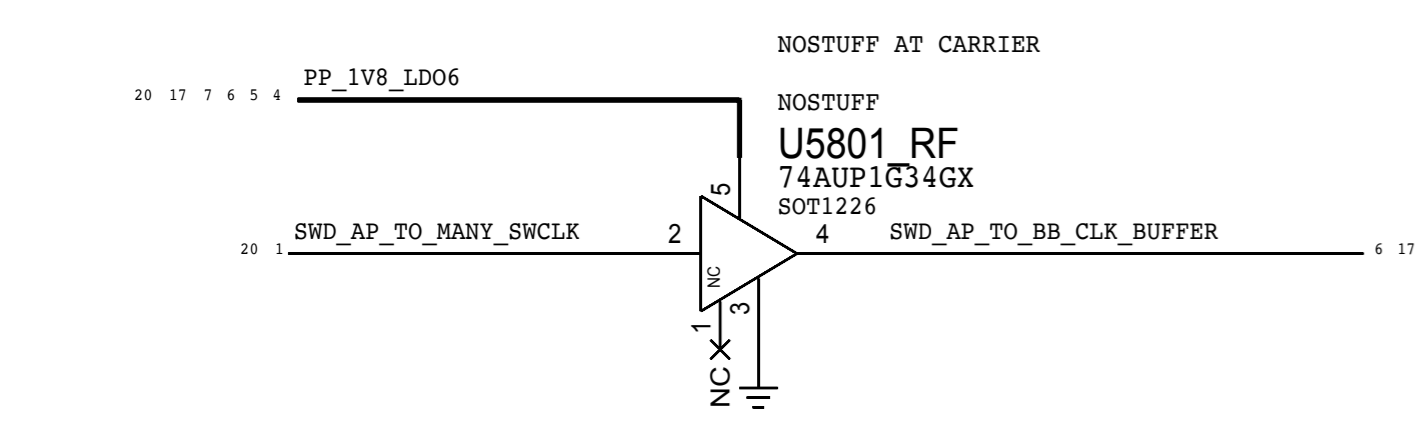
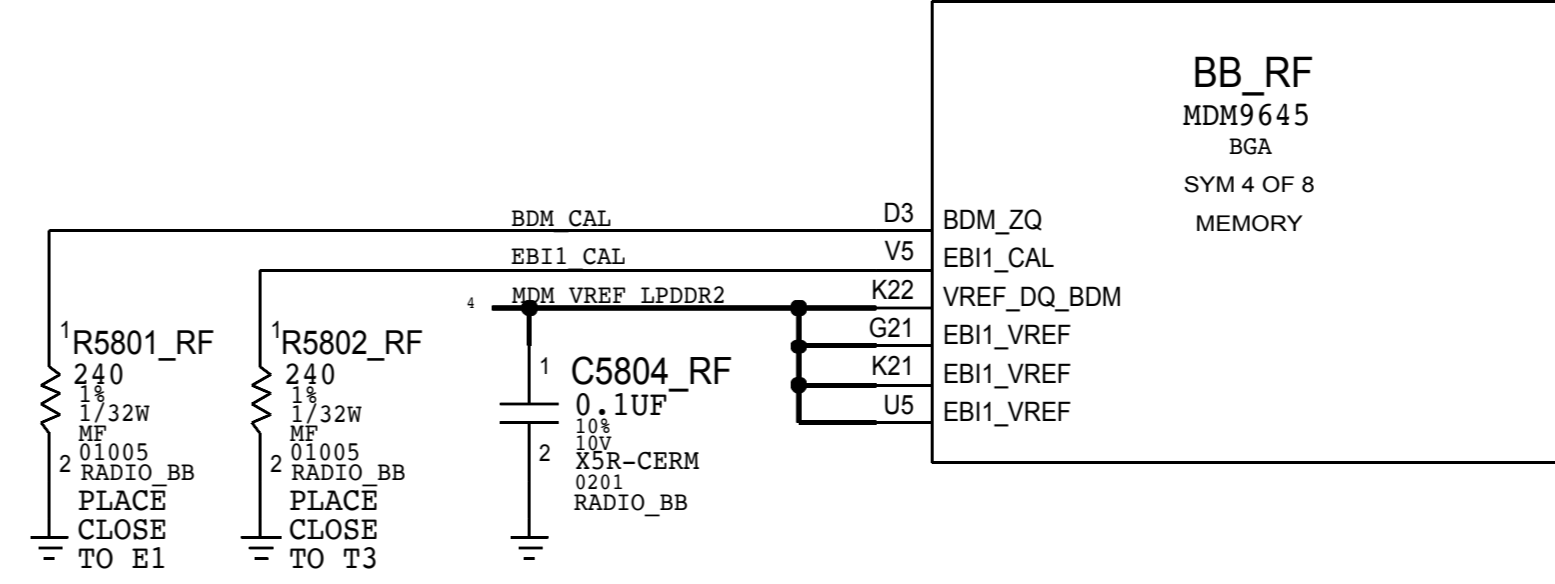
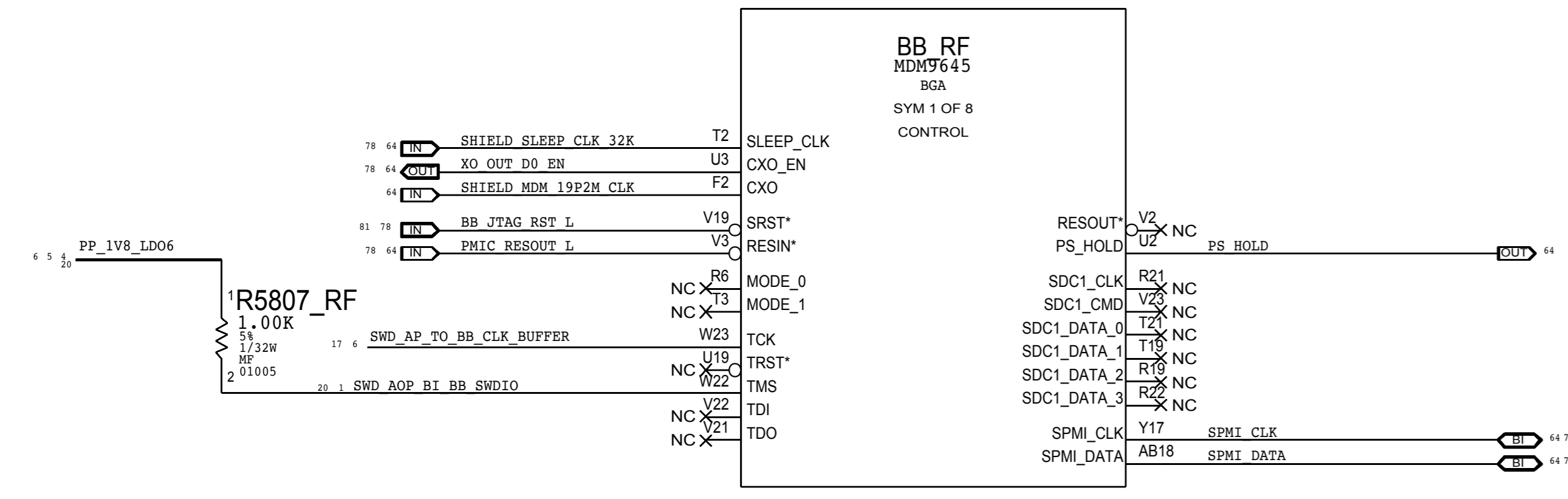
BASEBAND: POWER



CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSE ONLY - NOT A CHANGE REQUEST

PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

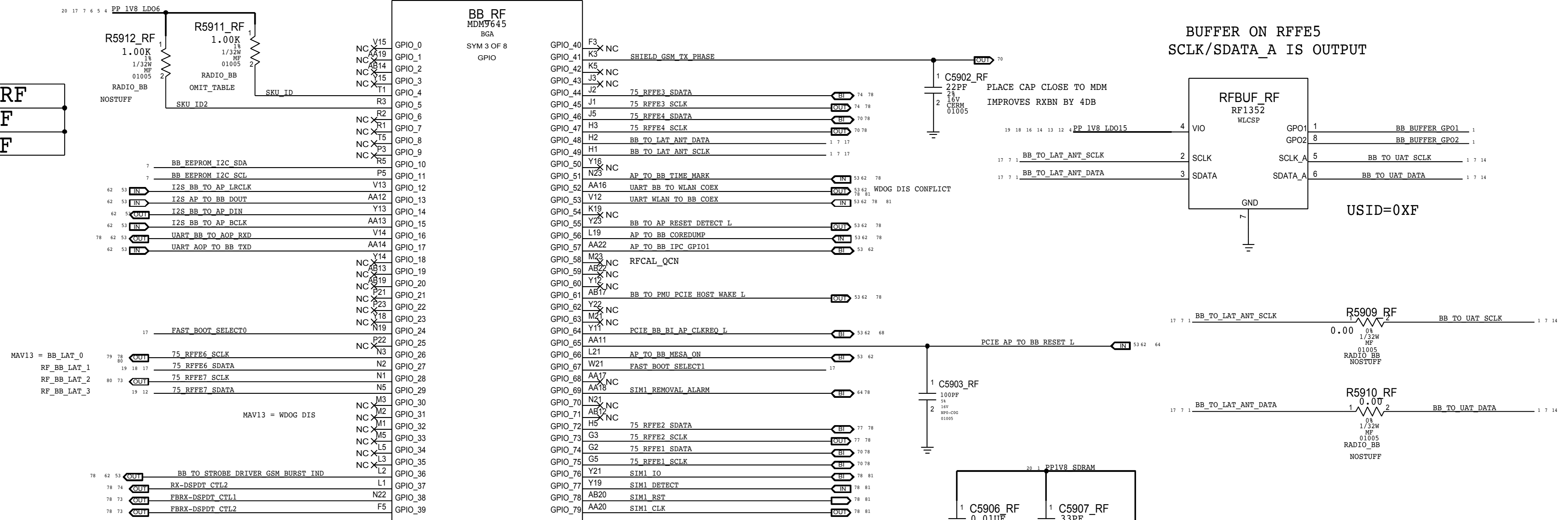
BASEBAND: CONTROL AND INTERFACES



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	6 OF 53
		SHEET	6 OF 81

BASEBAND: GPIOS

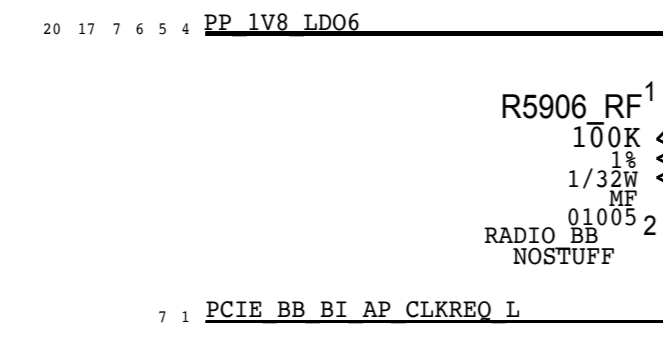
SKU	R5911 RF	R5912 RF
ROW	NOSTUFF	NOSTUFF
JP	1.0 KOHM	NOSTUFF



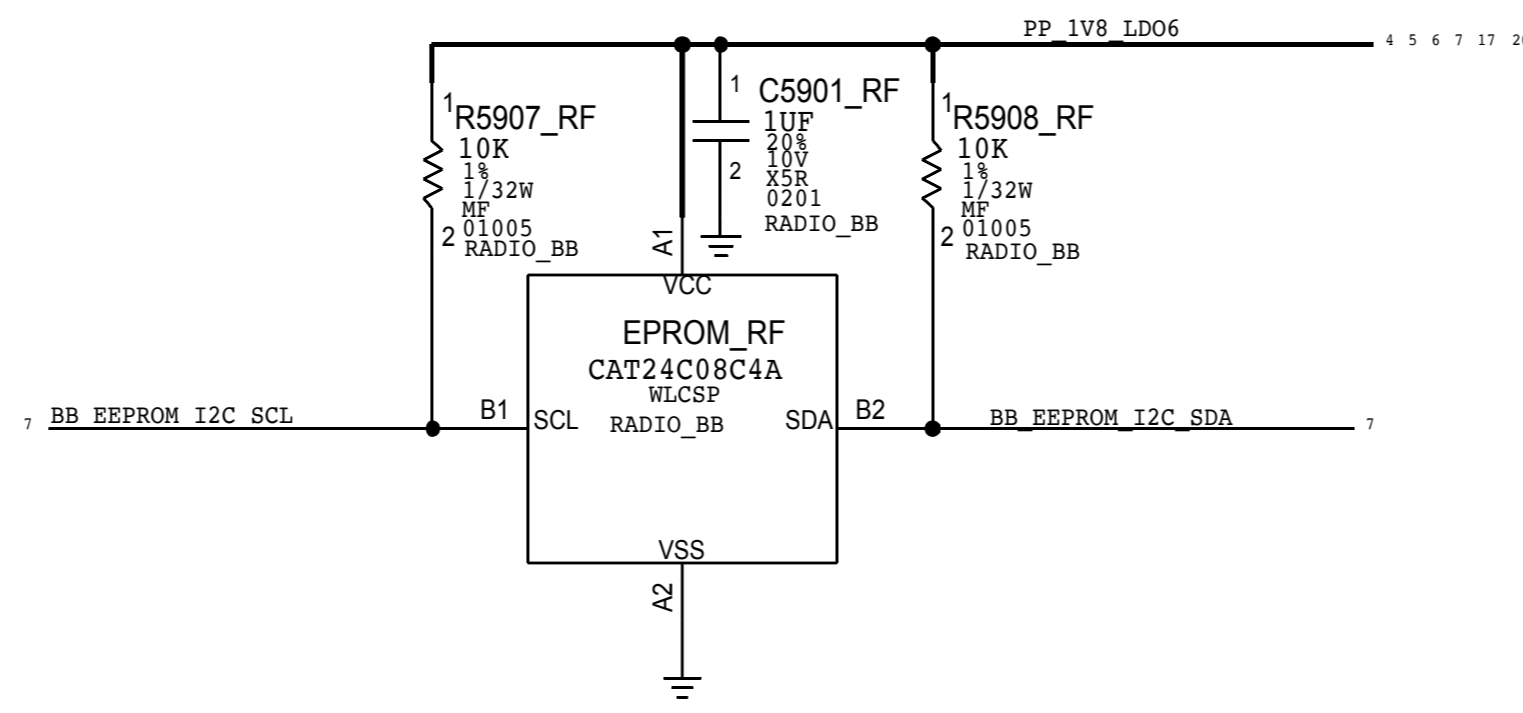
RFFE USAGE TABLE

- RFFE1 WTR3925
- RFFE2 QFE3100
- RFFE3 DIV MODULES
- RFFE4 WTR4905
- RFFE5 TUNERS + ELNAS
- RFFE6 2G PA, MLB PA, MB/HB TDD PA, MB/HB FDD PA
- RFFE7 LB PA, COUPLERS

PCIE PULL-UPS TO BB RAIL

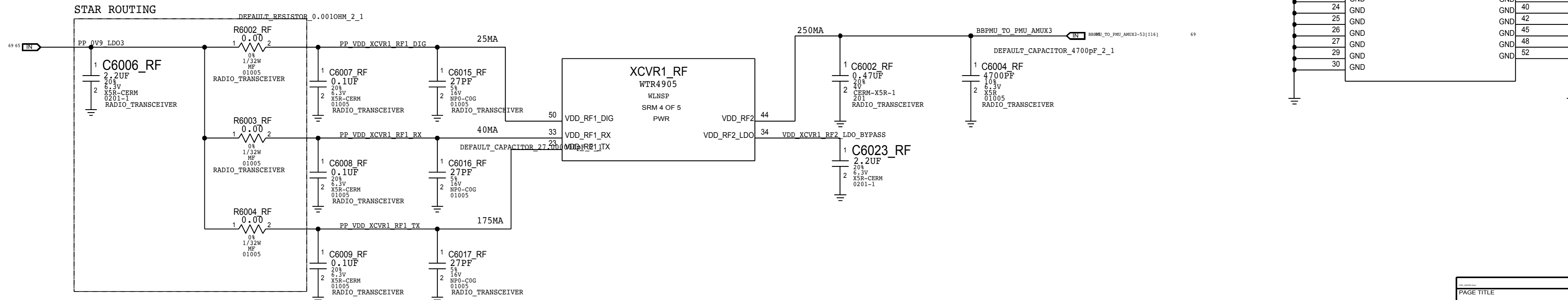
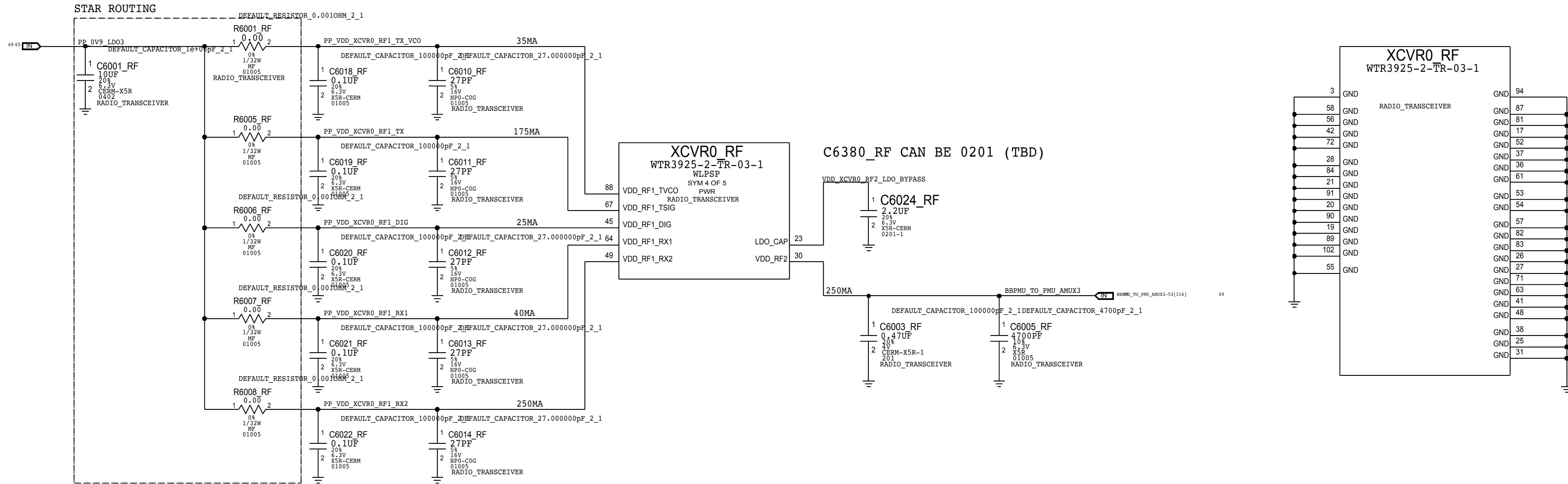


BB EEPROM



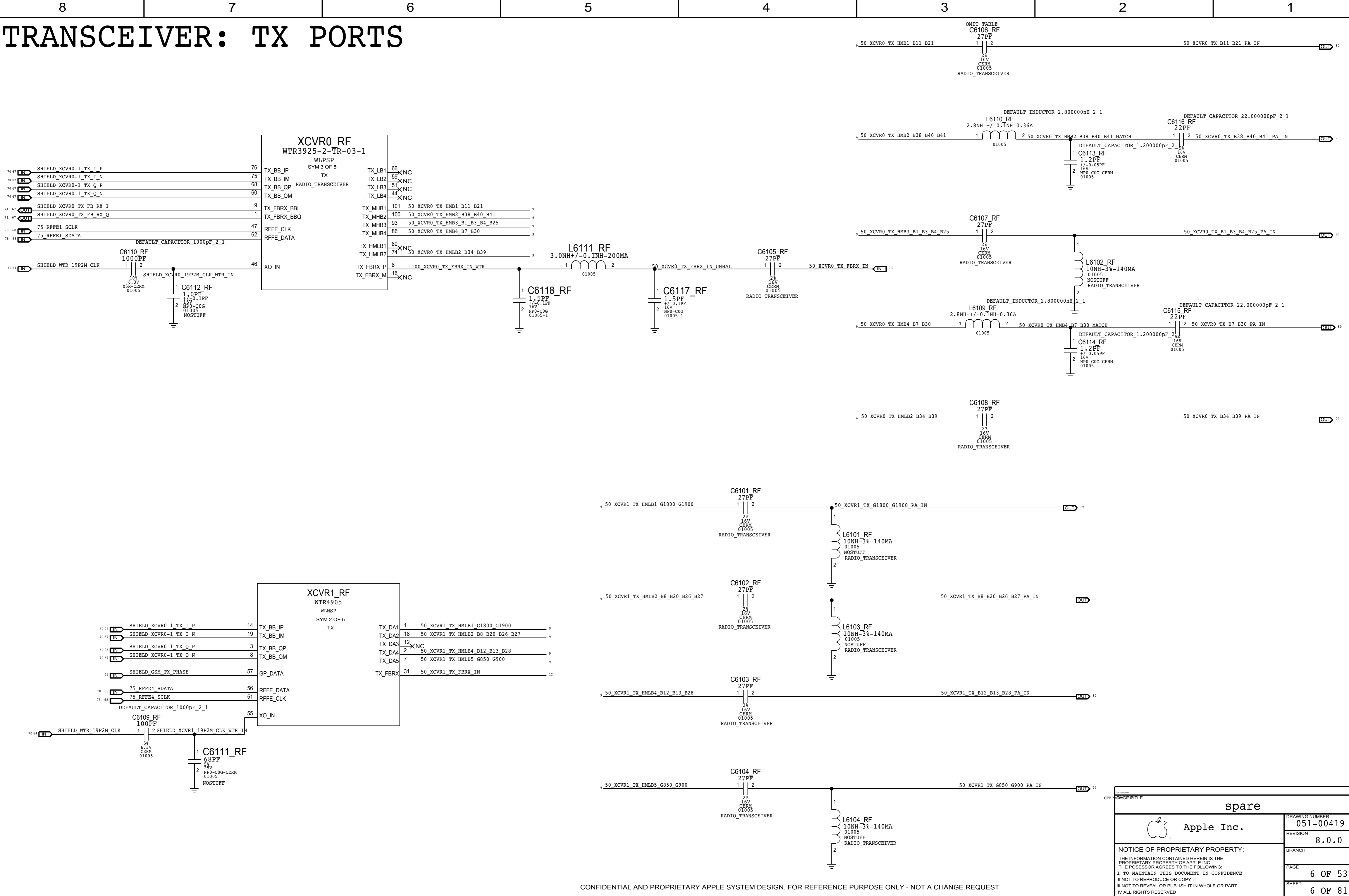
PAGE TITLE		Apple Inc.	
DRAWING NUMBER		051-00419	SIZE D
REVISION		8.0.0	
BRANCH			
PAGE		6 OF 53	
SHEET		6 OF 81	

TRANSCEIVER: POWER



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

TRANSCEIVER: TX PORTS



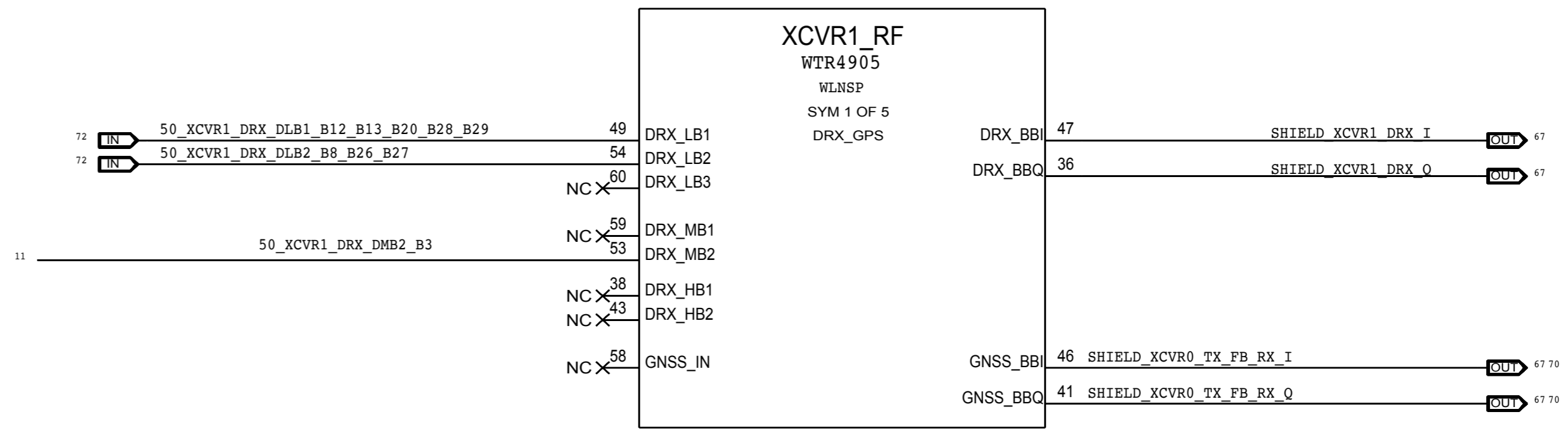
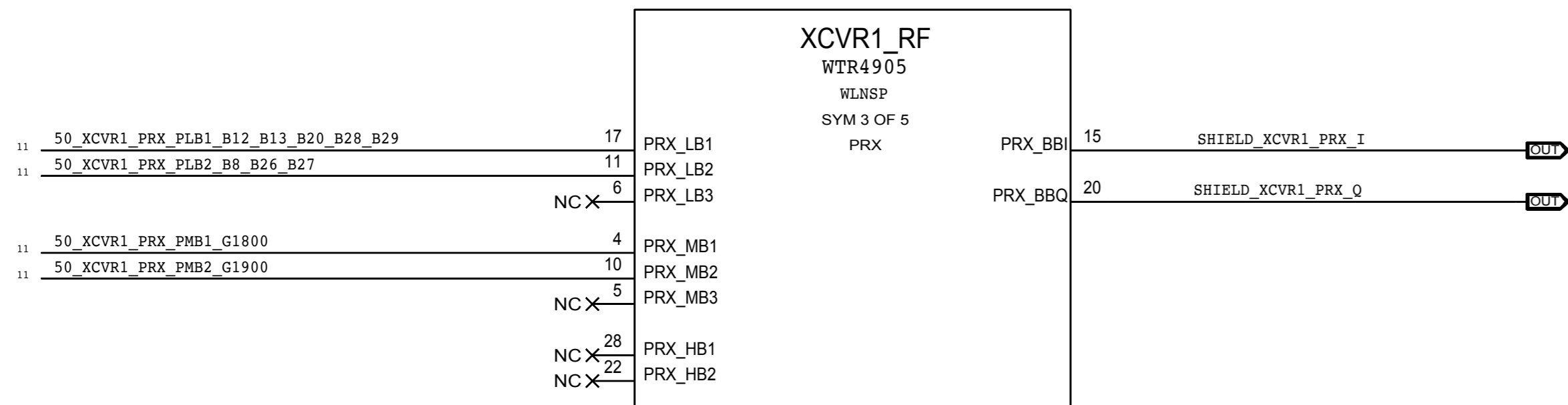
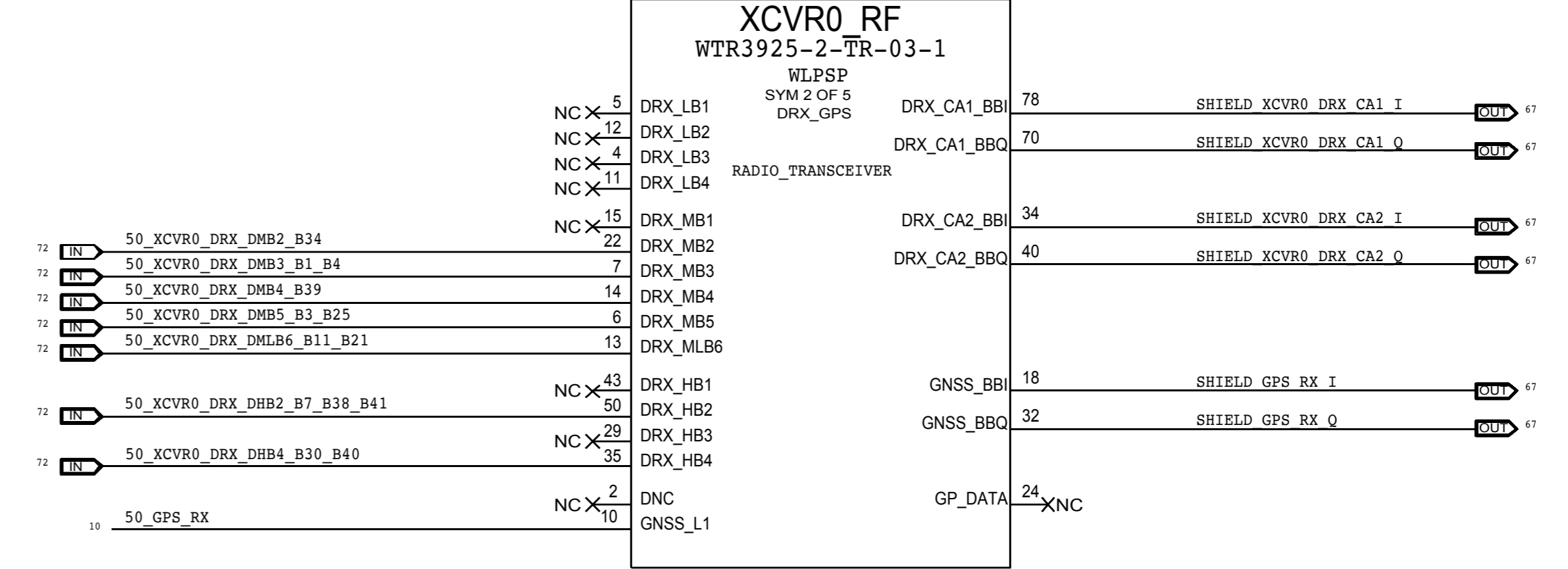
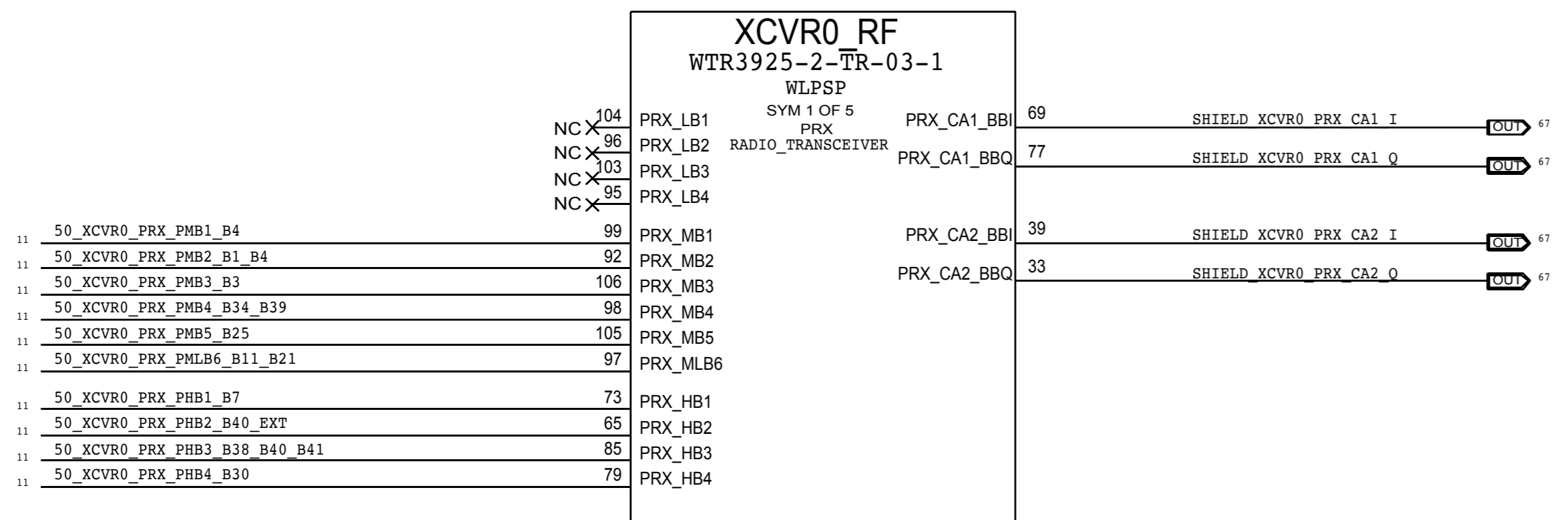
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSE ONLY - NOT A CHANGE REQUEST

DRAWING NUMBER		051-00419	SIZE	D
REVISION		8.0.0		
BRANCH				
PAGE		6 OF 53		
SHEET		6 OF 81		

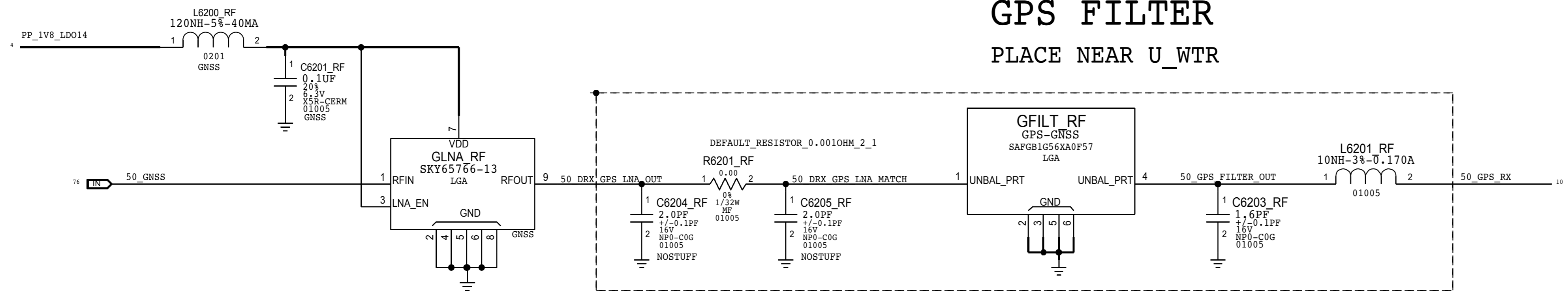
Apple Inc. spare

NOTICE OF PROPRIETARY PROPERTY:
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:
 I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART
 IV ALL RIGHTS RESERVED

TRANSCEIVER: PRX, DRX, & GPS PORTS



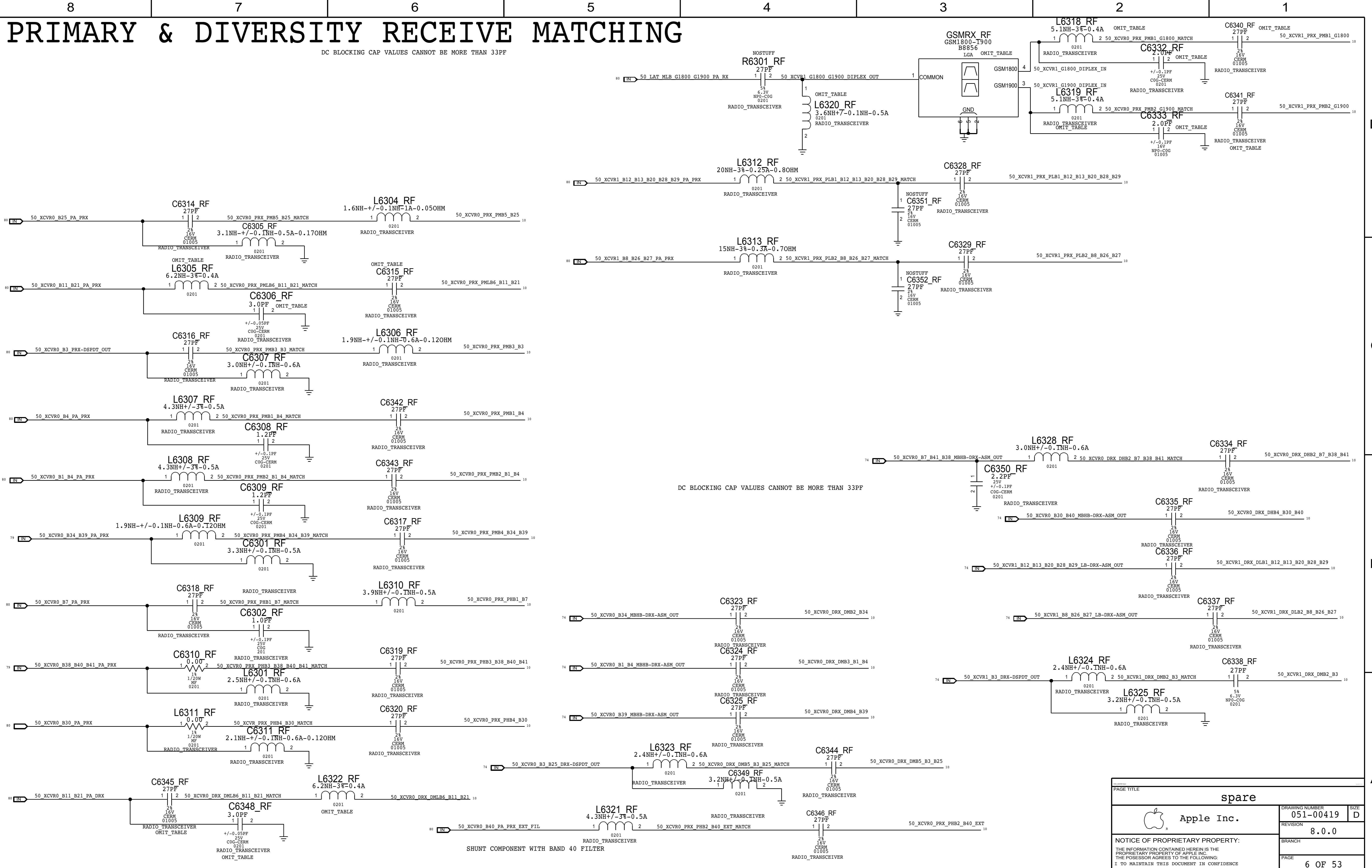
GPS FILTER PLACE NEAR U_WTR



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

PRIMARY & DIVERSITY RECEIVE MATCHING

DC BLOCKING CAP VALUES CANNOT BE MORE THAN 33PF

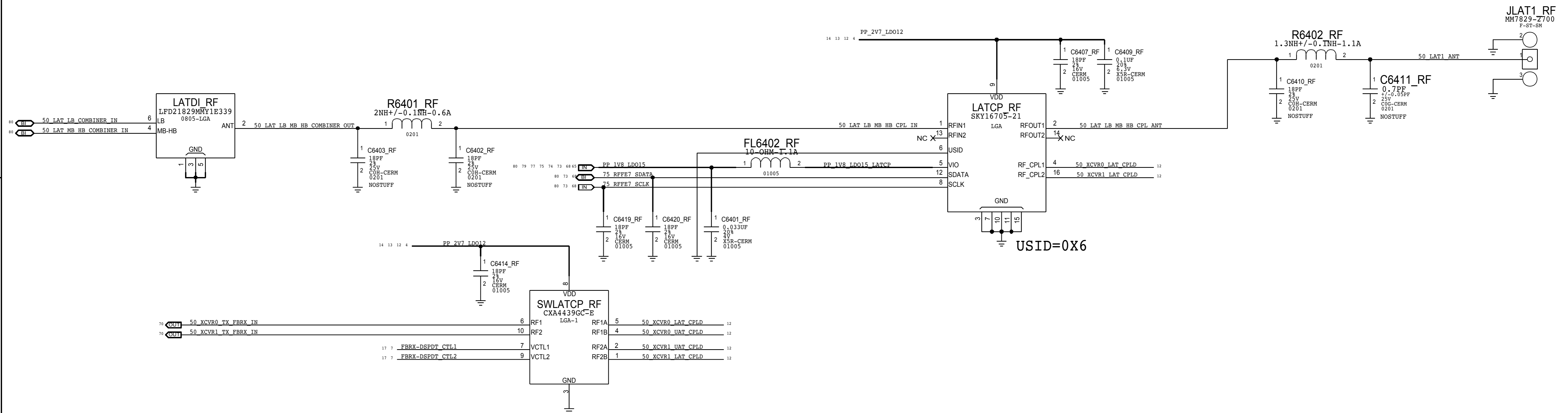


DC BLOCKING CAP VALUES CANNOT BE MORE THAN 33PF

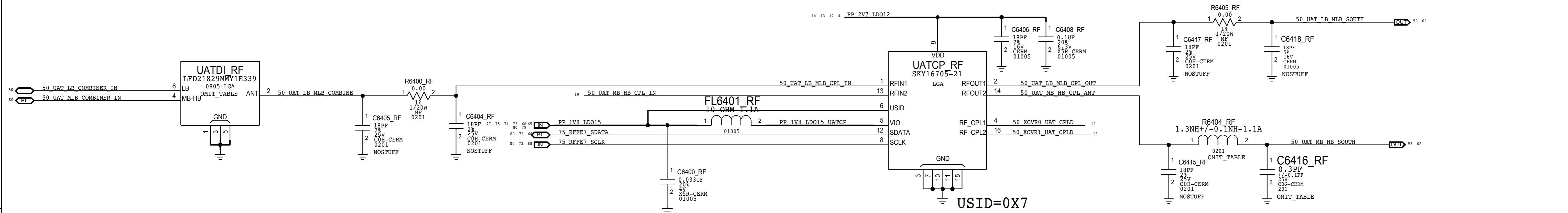
SHUNT COMPONENT WITH BAND 40 FILTER

PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

LOWER ANTENNA AND COUPLER



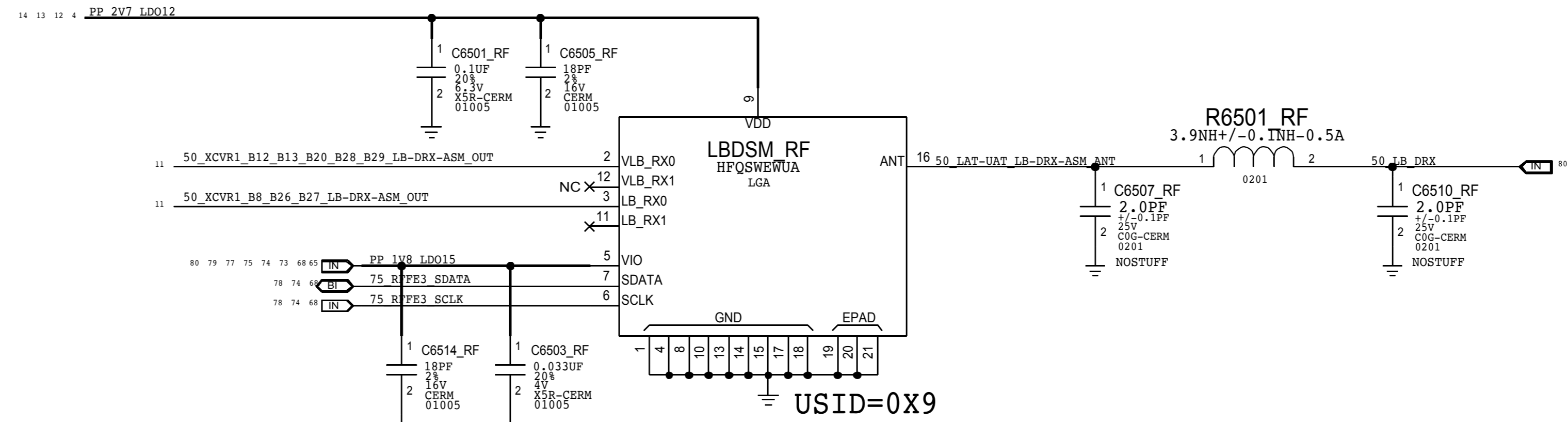
UPPER ANTENNA COUPLER



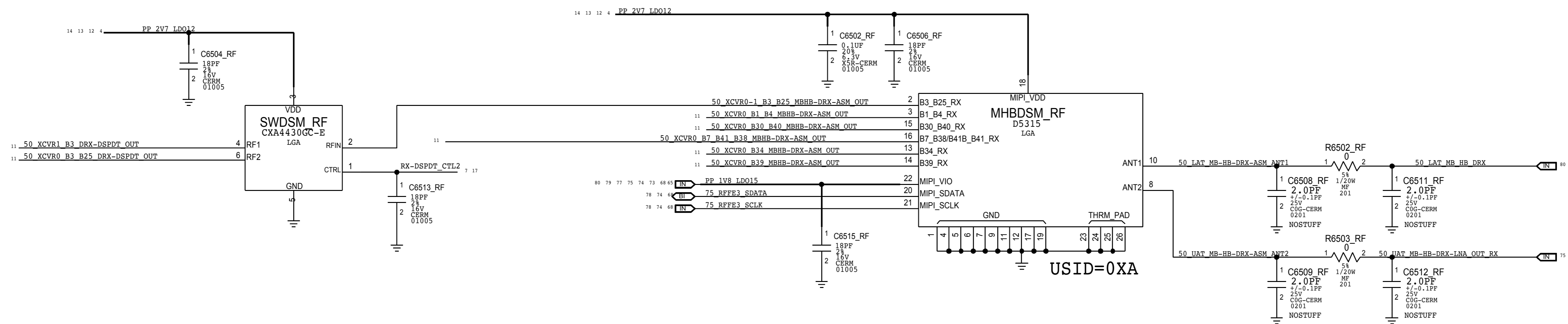
PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

DIVERSITY RECEIVE

LB DRX ASM



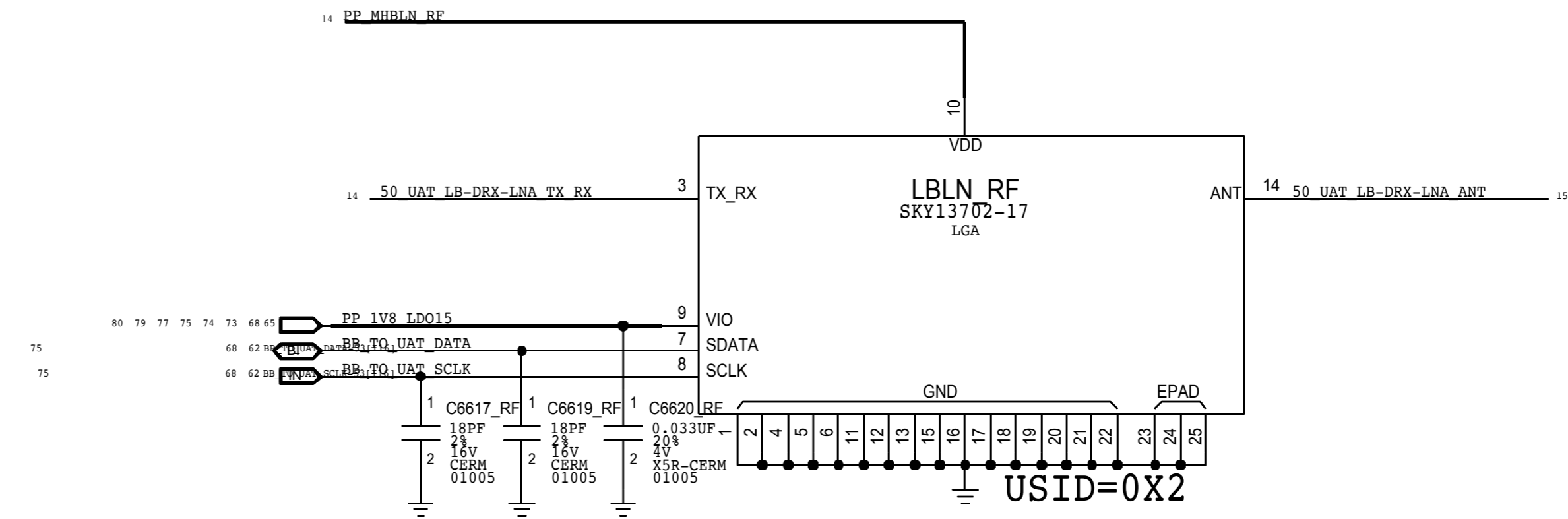
MB HB DRX ASM



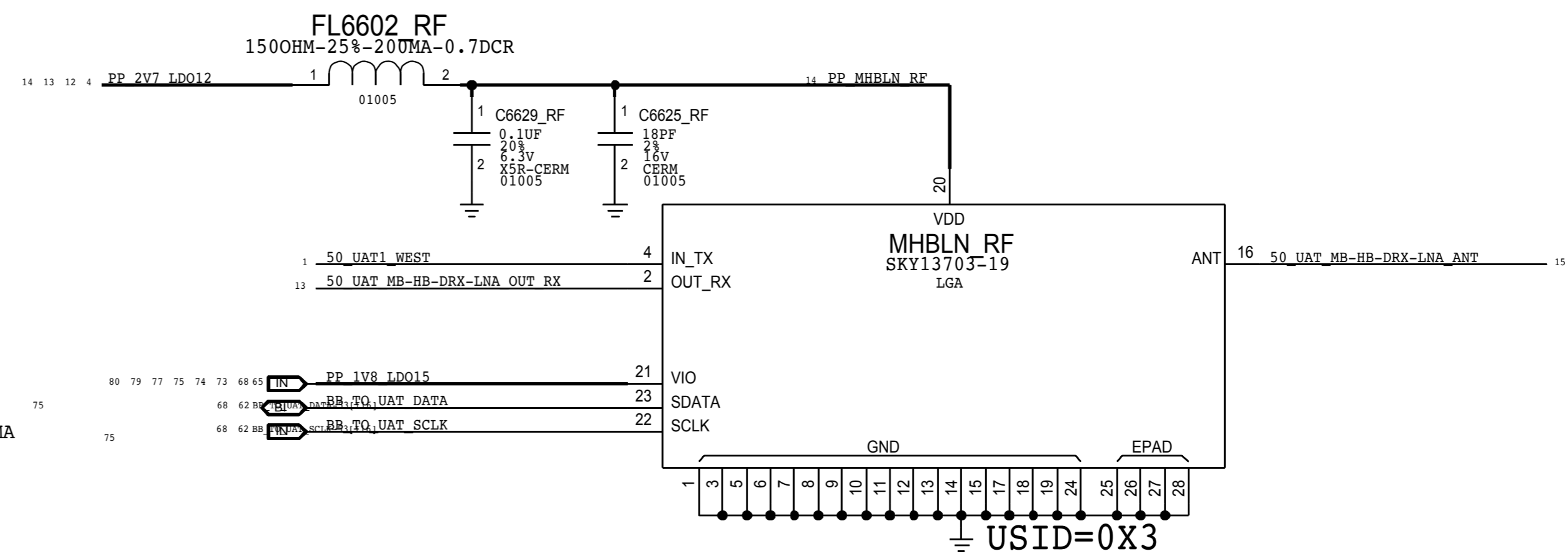
PAGE TITLE		SYNC_DATE=04/17/2015	
Apple Inc.		DRAWING NUMBER	SIZE
		051-00419	D
		REVISION	
		8.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		6 OF 53	
II NOT TO REPRODUCE OR COPY IT		SHEET	
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		6 OF 81	
IV ALL RIGHTS RESERVED			

DIVERSITY RECEIVE LNAs

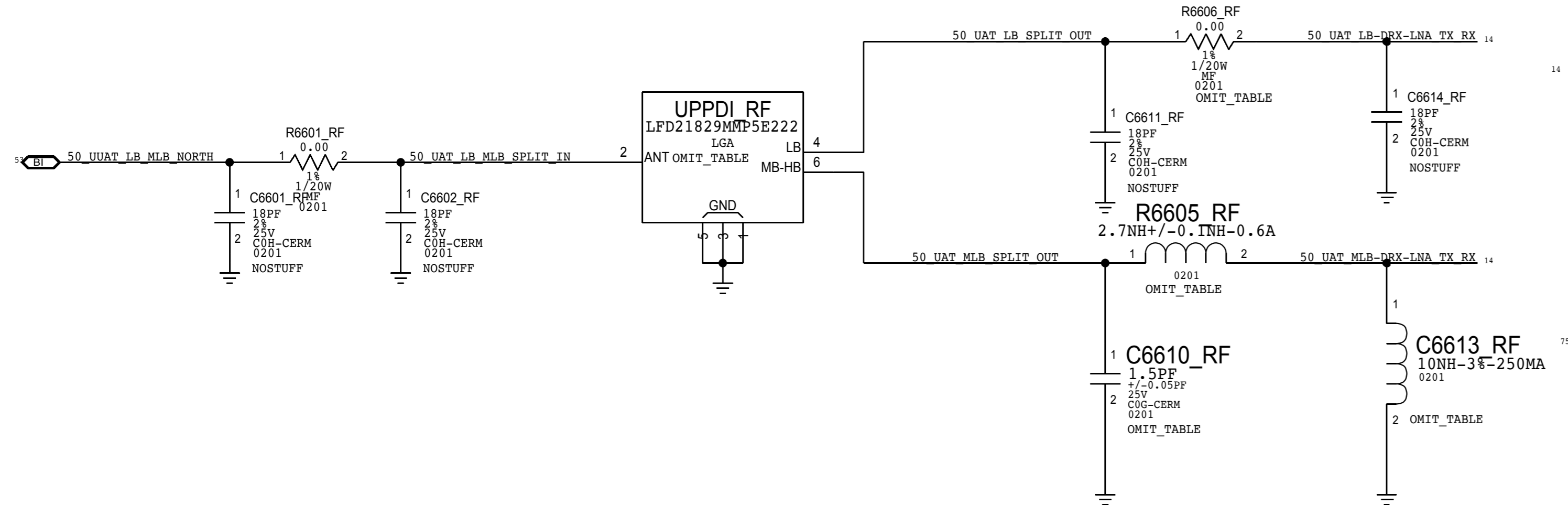
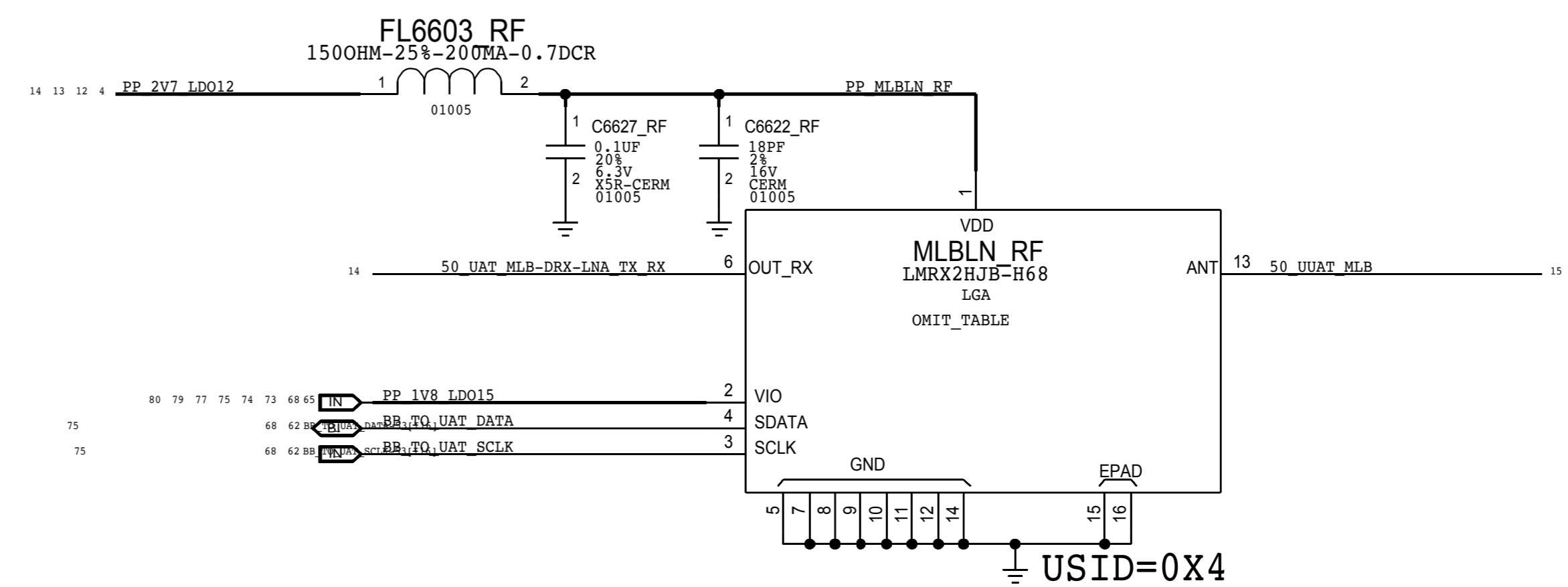
LB DRX LNA



MB/HB DRX LNA



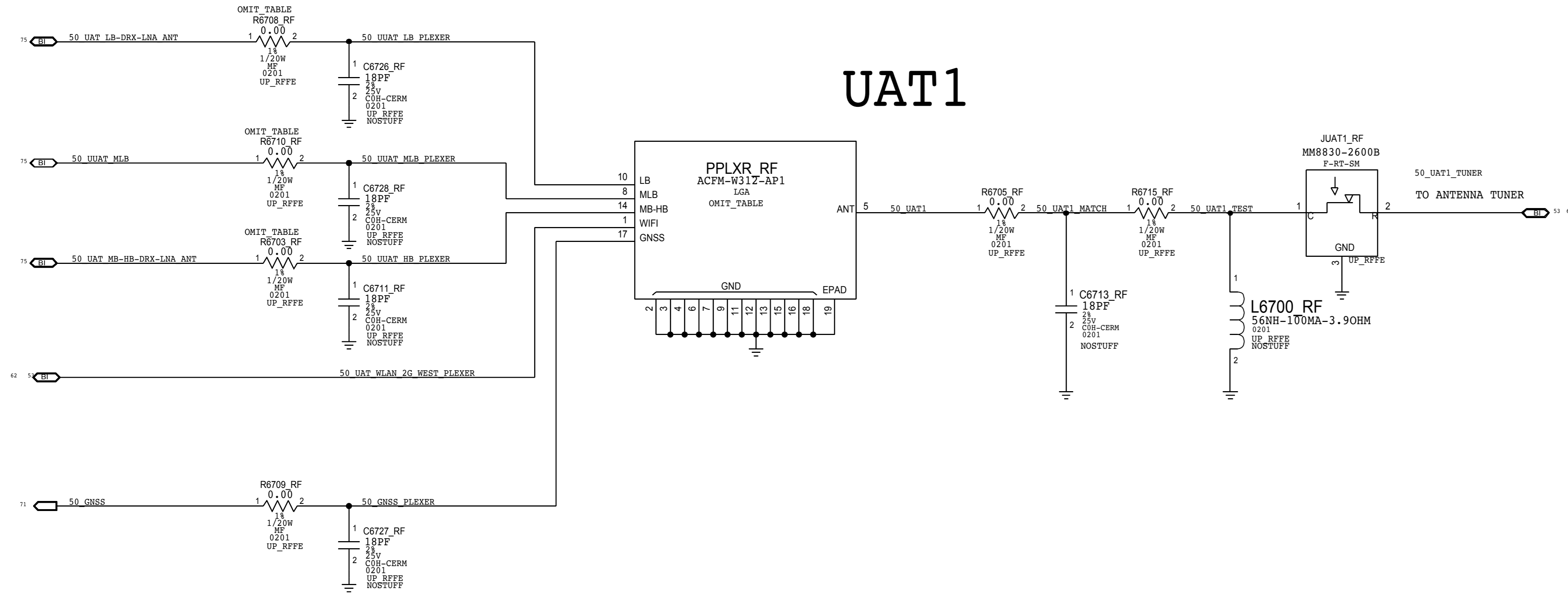
MLB DRX LNA



PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

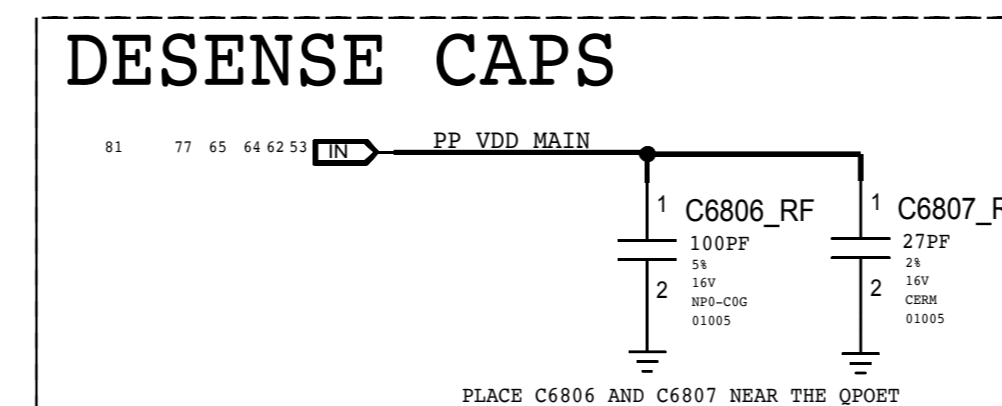
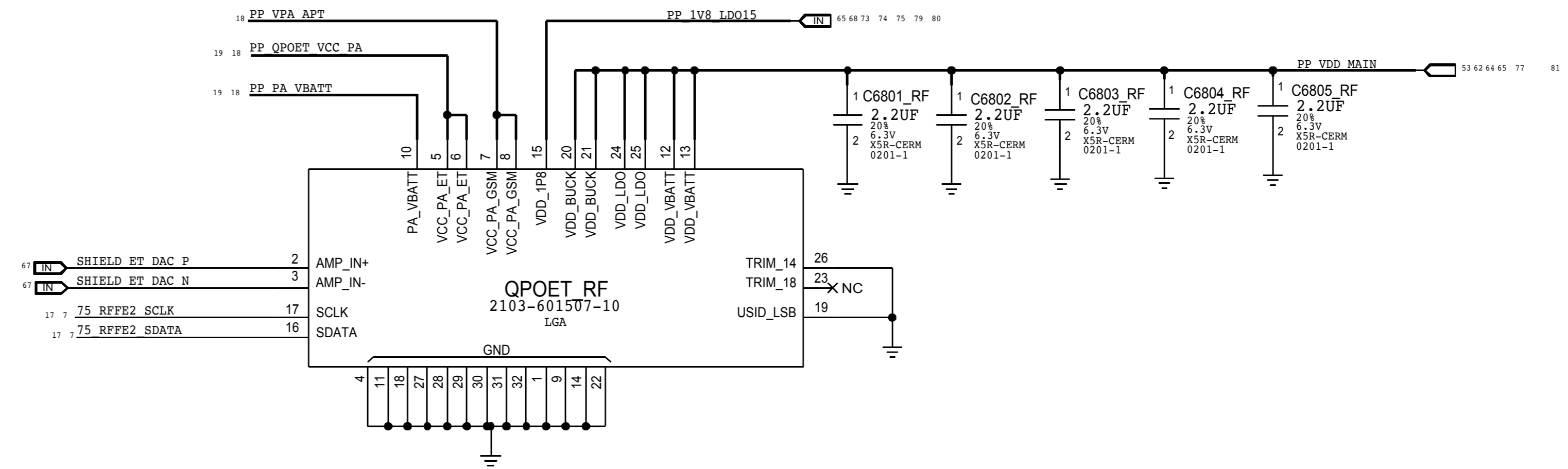
UPPER ANTENNA FEEDS

UAT1



PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		
<small>THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED</small>		
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

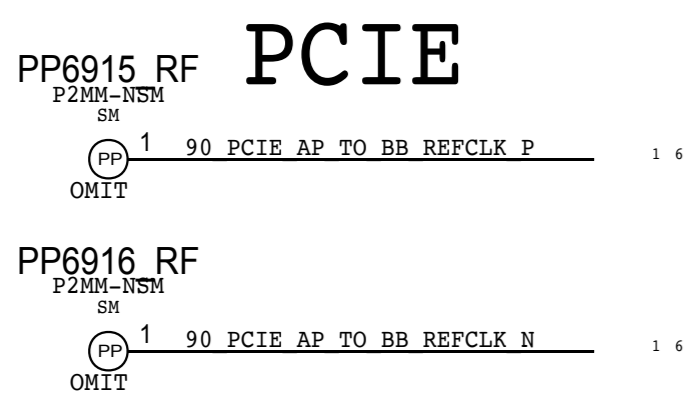
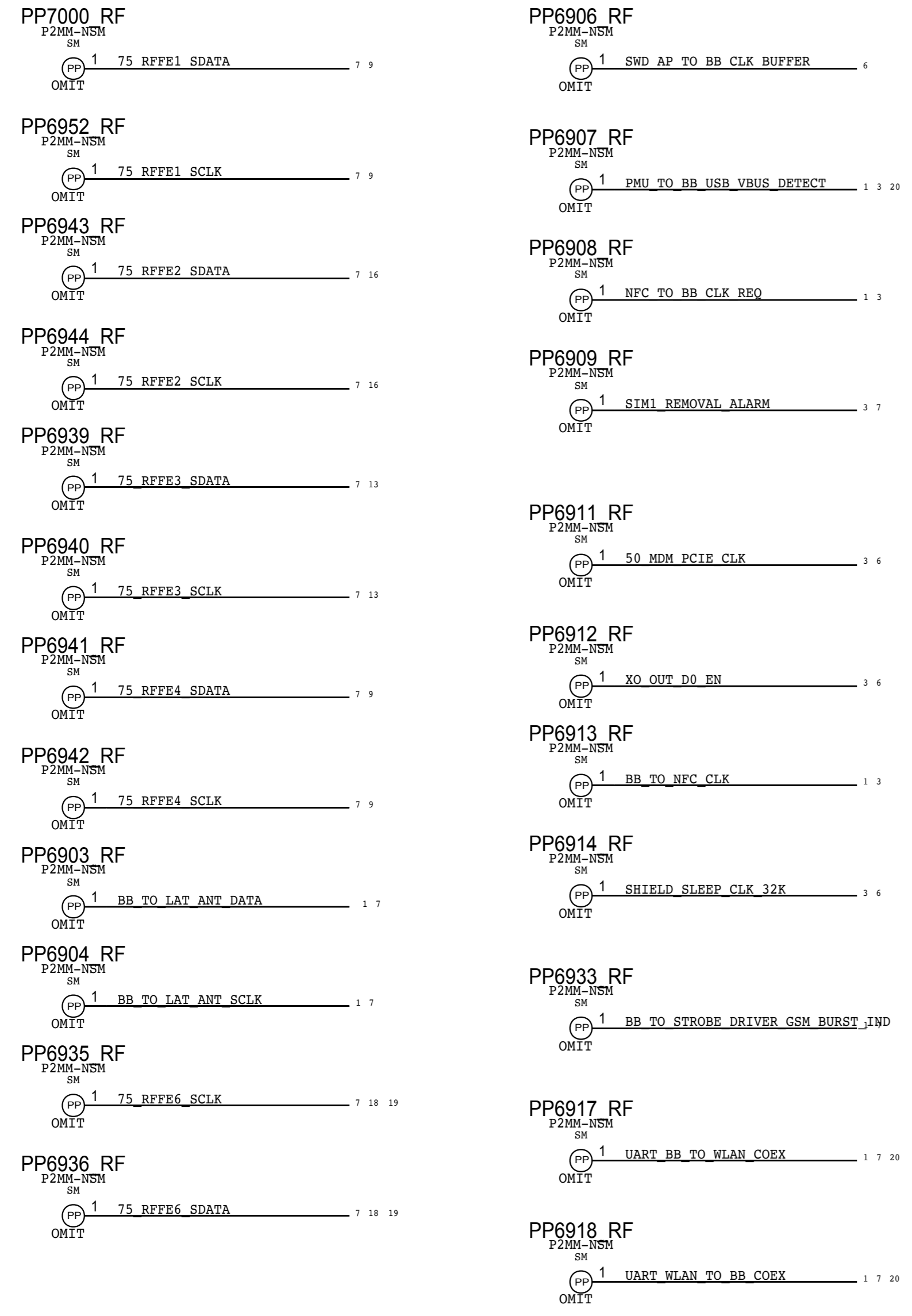
PMU: ET MODULATOR



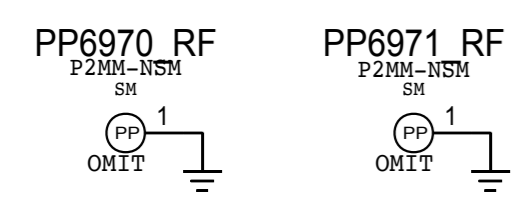
PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR PUBLISH IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

MLB TEST POINTS

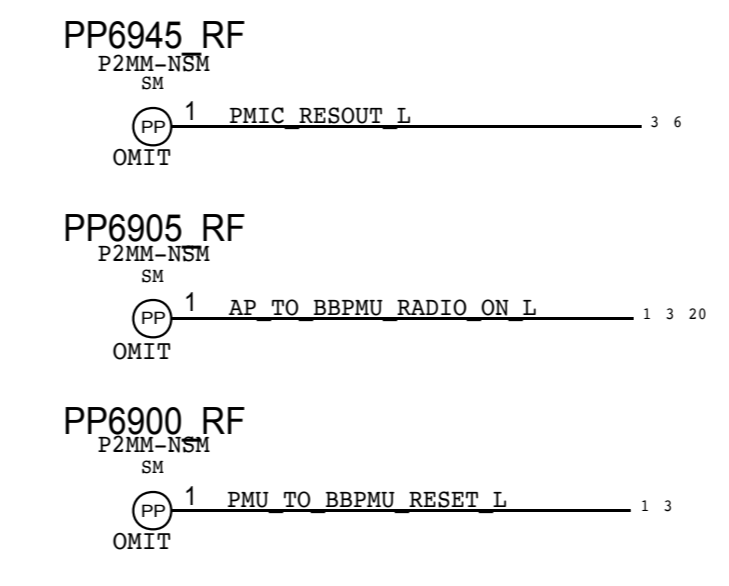
BASEBAND



PCIE GND



BBPMU

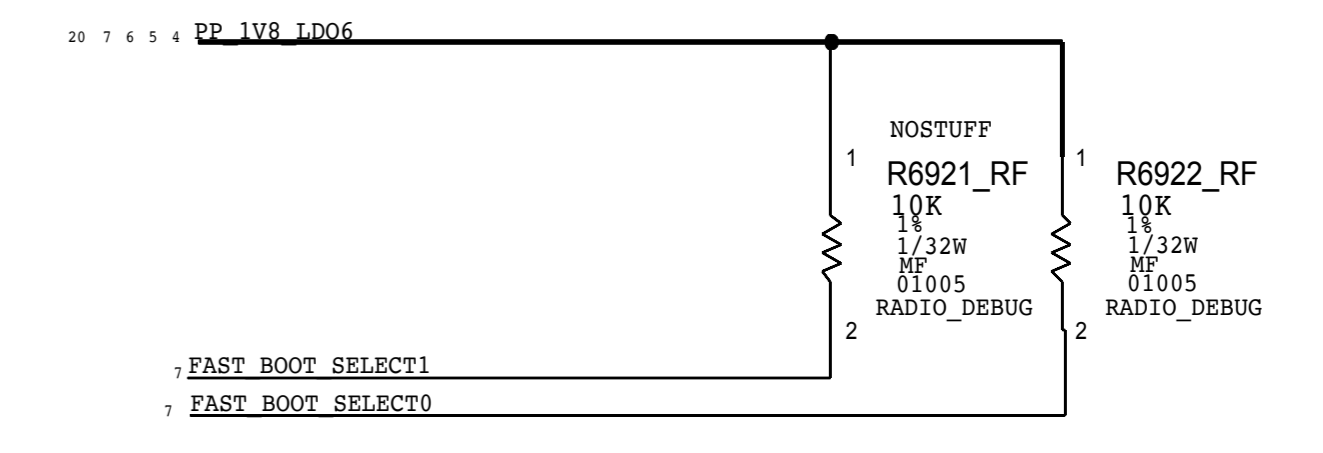


SIM

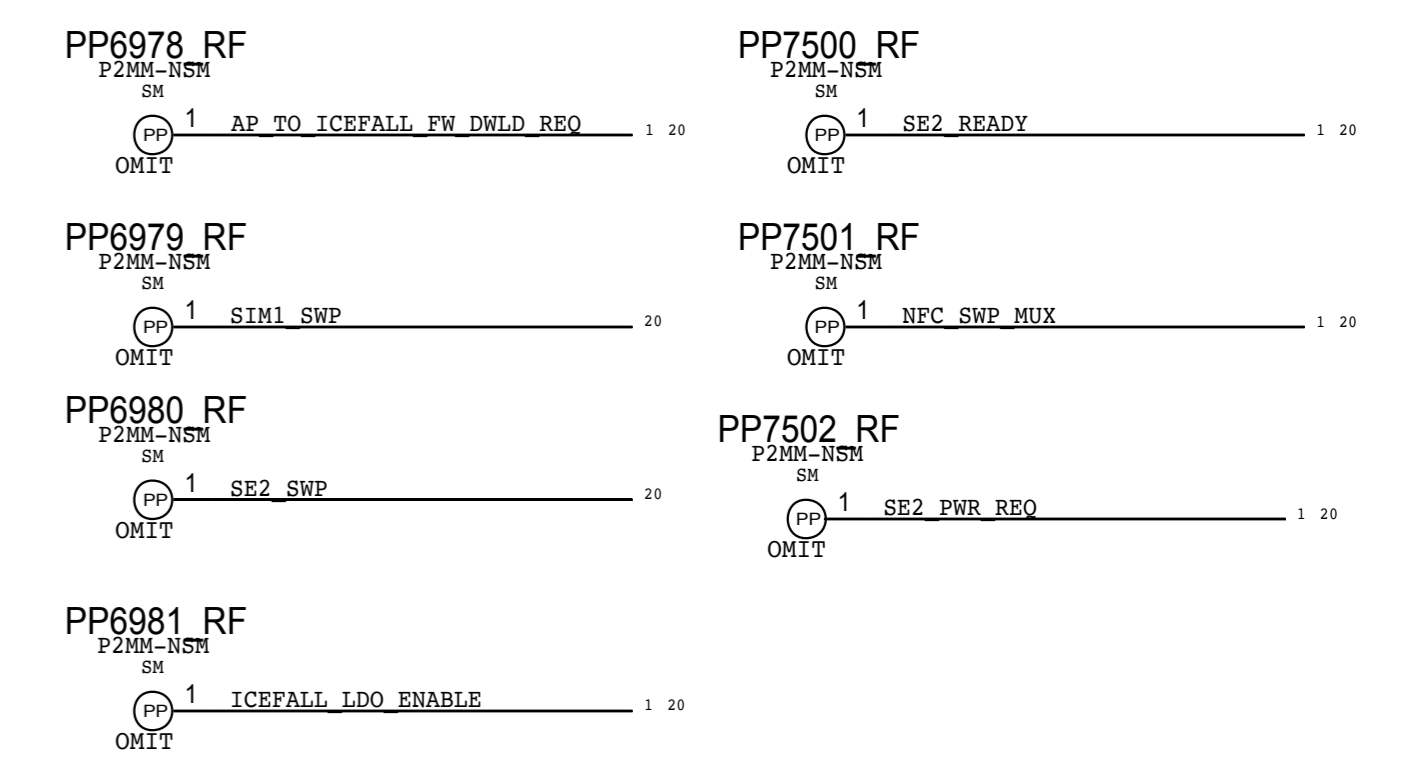


BOOT CONFIG

DEFAULT_FAST_BOOT[2:0]
USB = 0X2



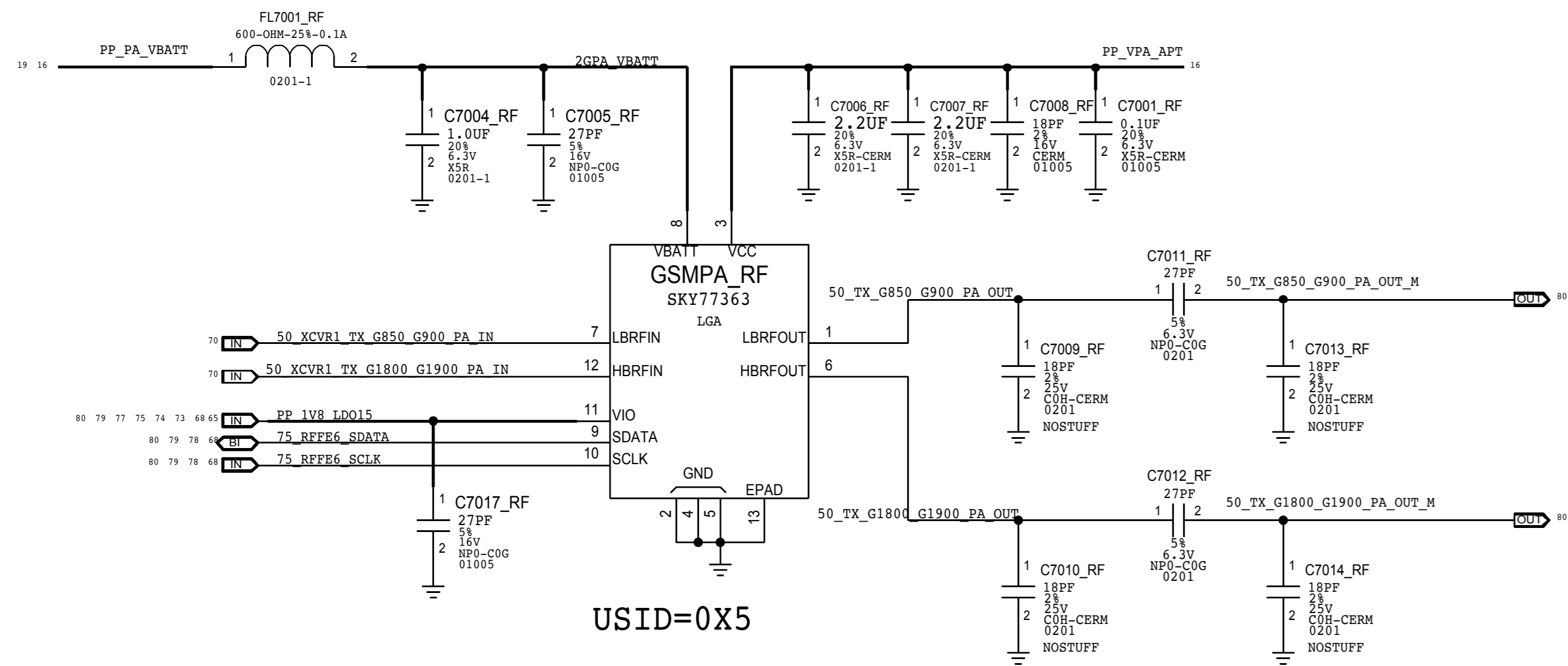
ICEFALL



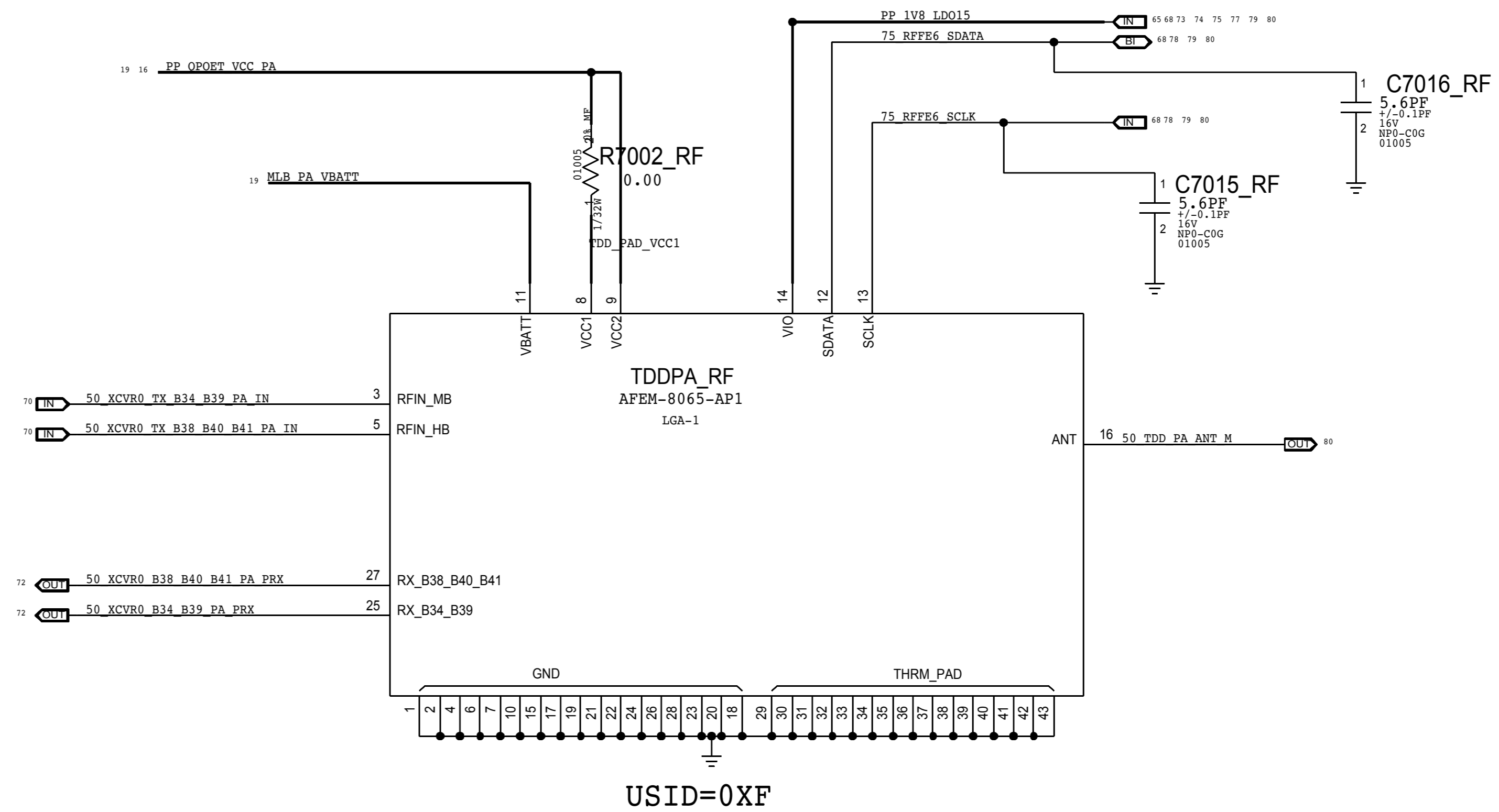
PAGE TITLE		
spare		
	DRAWING NUMBER	051-00419
	REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH		
PAGE	6 OF 53	
SHEET	6 OF 81	

TDD TRANSMIT

2G PA

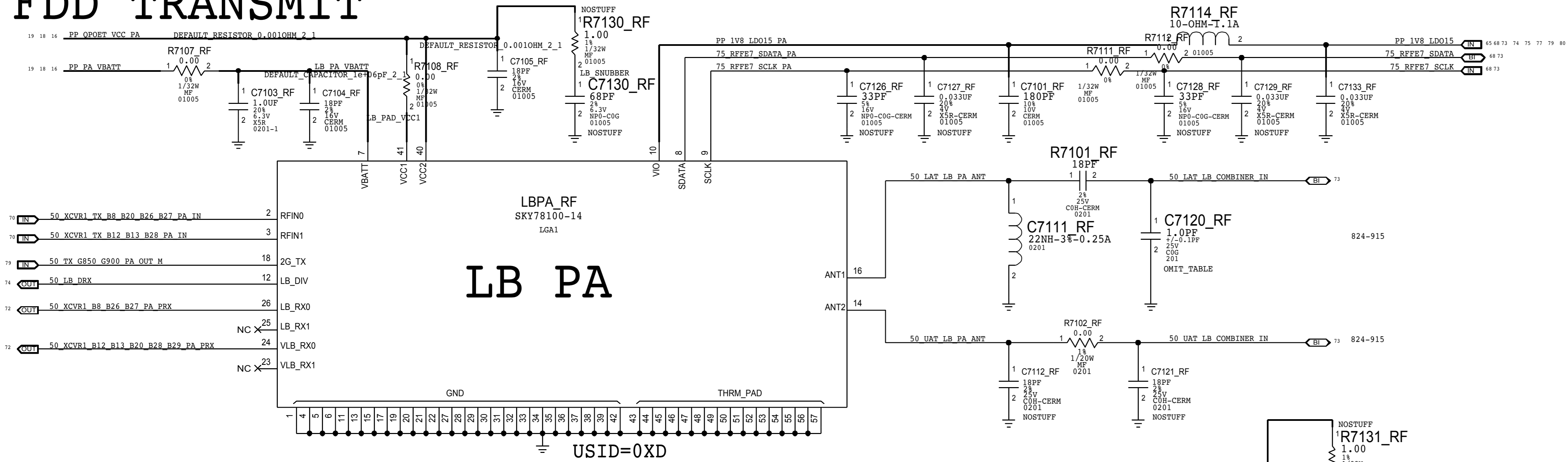


MB HB TDD PA

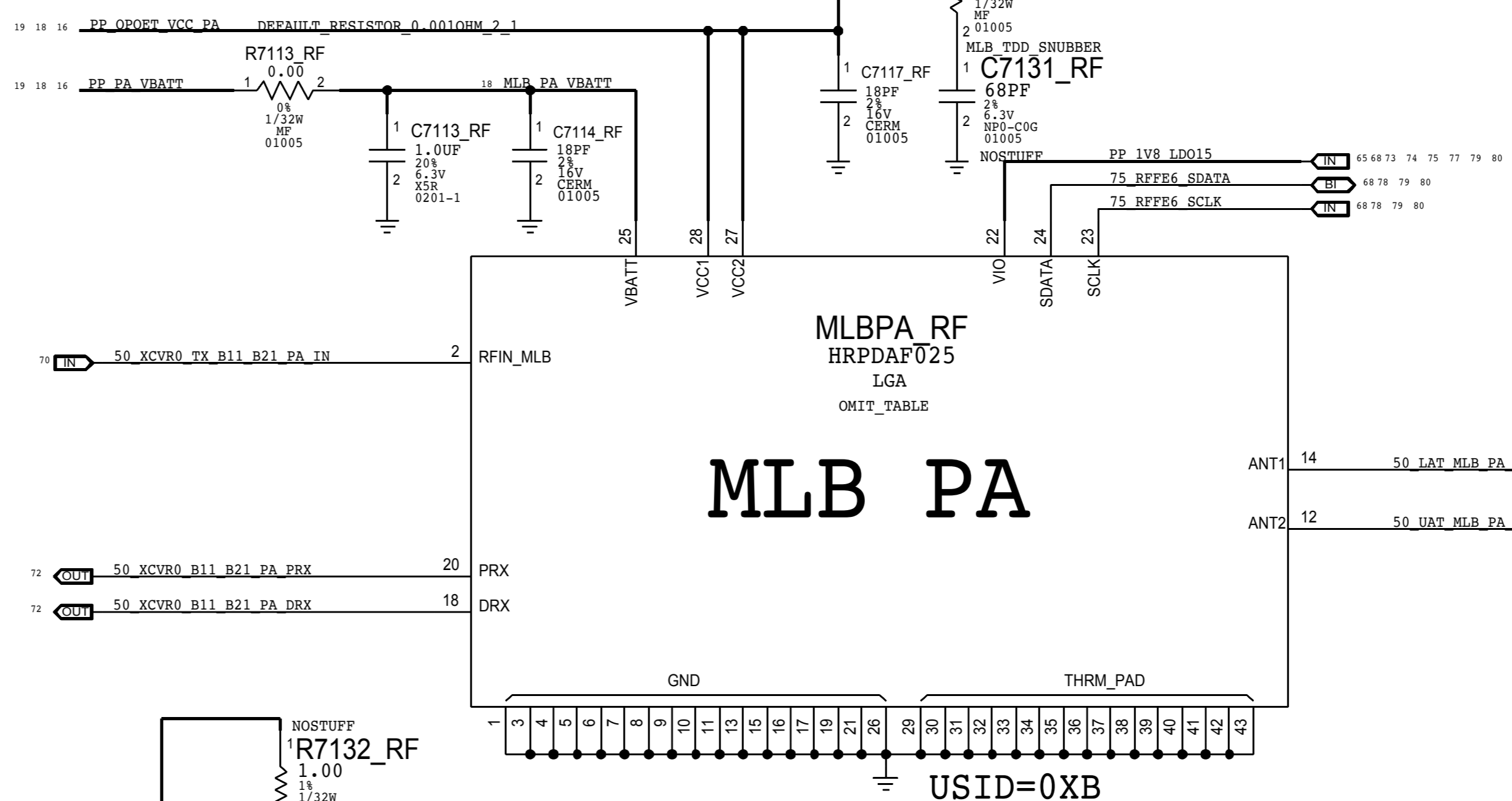
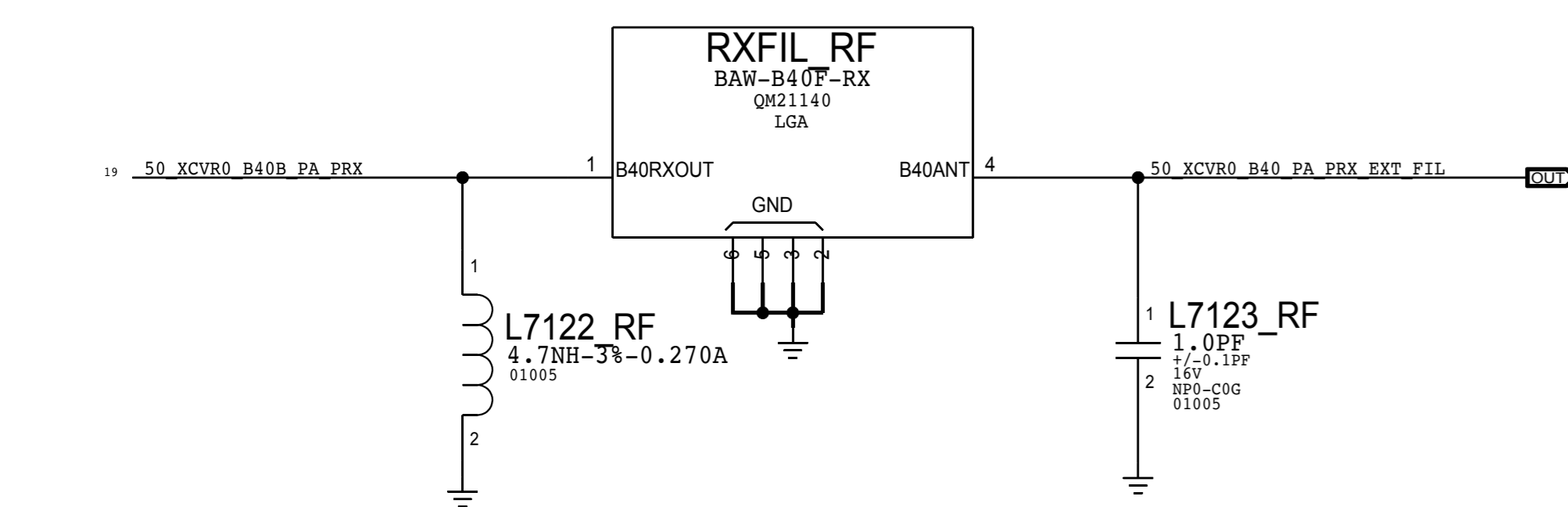


PAGE TITLE		spare	
Apple Inc.	DRAWING NUMBER	051-00419	SIZE
	REVISION	8.0.0	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR PUBLISH IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81

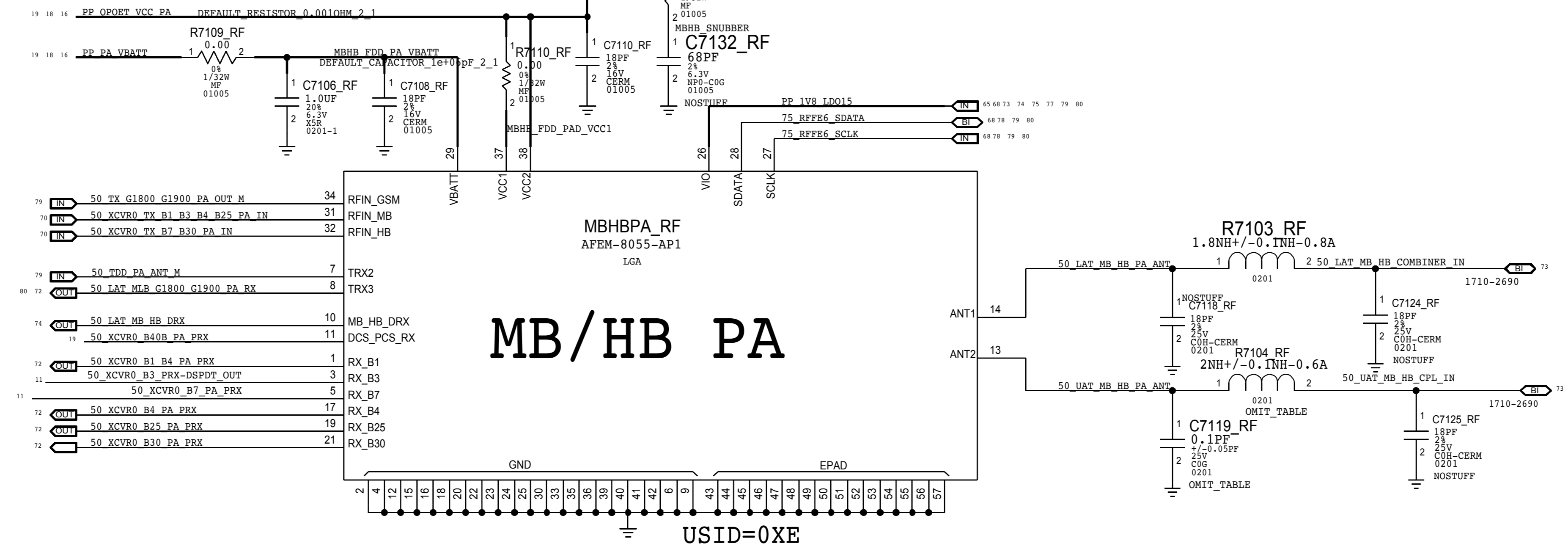
FDD TRANSMIT



LB PA



MLB PA



MB/HB PA

PAGE TITLE		SYNC_DATE=04/17/2015	
		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	6 OF 53
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	6 OF 81
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

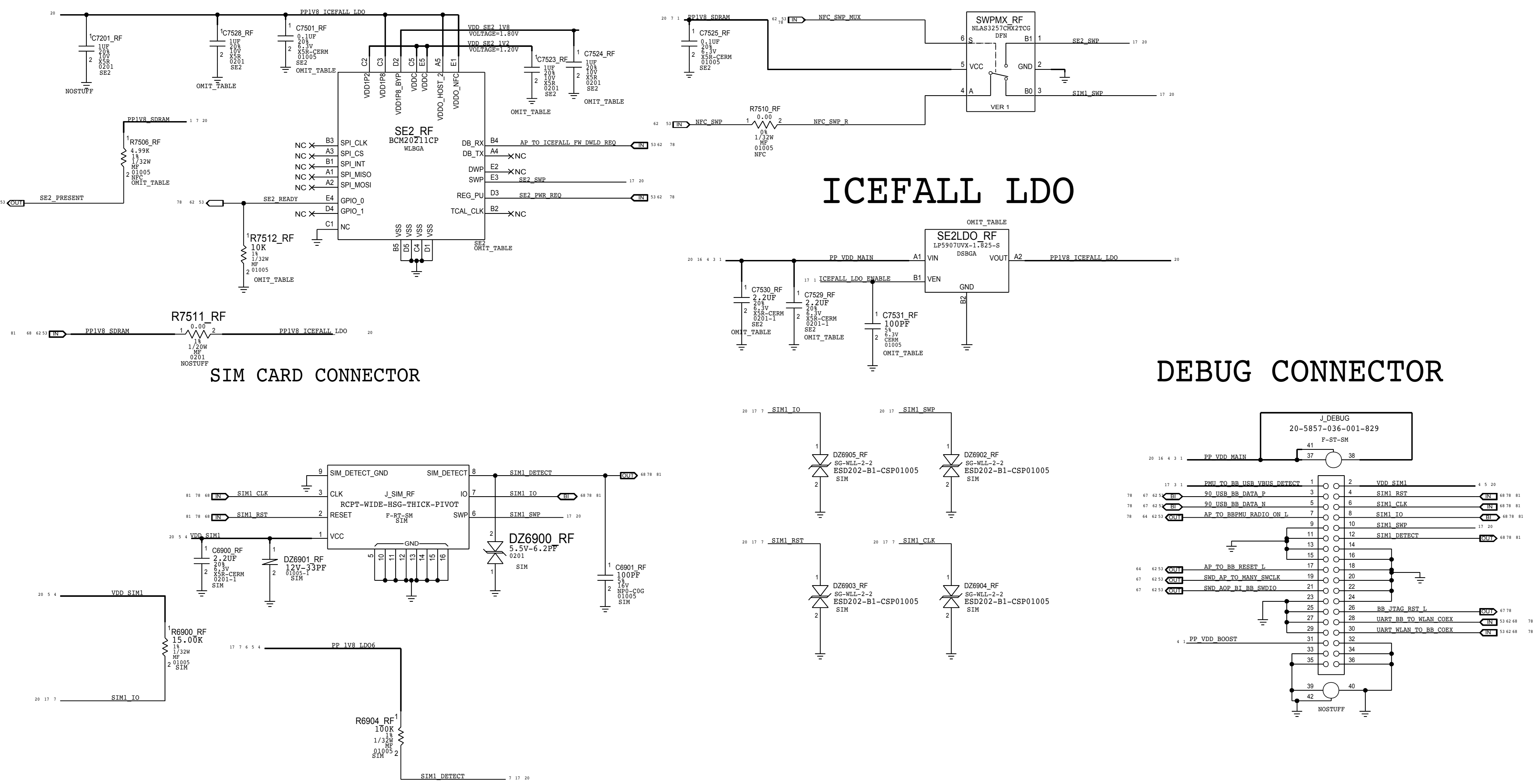
ICEFALL

SWP MUX

ICEFALL LDO

DEBUG CONNECTOR

SIM CARD CONNECTOR



PAGE TITLE		spare	
Apple Inc.		DRAWING NUMBER	051-00419
		REVISION	8.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	6 OF 53
		SHEET	6 OF 81