

EEEE Codes

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-7691	1	EEEE FOR (MLB_TOP,639-04583,ULTIMATE)	EEEE_U2WJ	NO	ULTIMATE
825-7691	1	EEEE FOR (MLB_TOP,639-03409,EXTREME)	EEEE_HP26	NO	EXTREME

SOC

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
339S00358	1	SKYE+3GB, B0, M, DEV	U1000	CRITICAL	COMMON

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339S00359	339S00358	BOM_TABLE_ALTS	U1000	DDR-H,3G, B0
339S00360	339S00358	BOM_TABLE_ALTS	U1000	DDR-S-20,3G, B0
339S00361	339S00358	BOM_TABLE_ALTS	U1000	DDR-S-18,3G, B0

NAND

Ultimate

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00287	1	HYNIX, 3DV3, ULTIMATE	U2600	CRITICAL	ULTIMATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00284	335S00287	BOM_TABLE_ALTS	U2600	TOSHIBA, 1Z, ULTIMATE
335S00285	335S00287	BOM_TABLE_ALTS	U2600	TOSHIBA, B1CS3, ULTIMATE
335S00286	335S00287	BOM_TABLE_ALTS	U2600	SANDISK, B1CS3, ULTIMATE
335S00288	335S00287	BOM_TABLE_ALTS	U2600	SAMSUNG, 3DV4, ULTIMATE

Extreme

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00240	1	HYNIX, 3DV3, EXTREME	U2600	CRITICAL	EXTREME

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00228	335S00240	BOM_TABLE_ALTS	U2600	TOSHIBA, B1CS3, EXTREME
335S00247	335S00240	BOM_TABLE_ALTS	U2600	SANDISK, B1CS3, EXTREME
335S00276	335S00240	BOM_TABLE_ALTS	U2600	SAMSUNG, 3DV4, EXTREME

Global Capacitors

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00148	138S00149	BOM_TABLE_ALTS	ALL	0402-3T,10.5uF@1V, Kyocera
138S00150	138S00149	BOM_TABLE_ALTS	ALL	0402-3T,10.5uF@1V, SEMKO
138S00151	138S00149	BOM_TABLE_ALTS	ALL	0402-3T,10.5uF@1V, TY

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00143	138S00144	BOM_TABLE_ALTS	ALL	0402,16uF@1V, Kyocera
138S00163	138S00144	BOM_TABLE_ALTS	ALL	0402,16uF@1V, Taiyo

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00138	138S00139	BOM_TABLE_ALTS	ALL	0201,3uF@1V, Kyocera
138S00164	138S00139	BOM_TABLE_ALTS	ALL	0201,3uF@1V, Taiyo

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00145	138S00146	BOM_TABLE_ALTS	ALL	0402,5.1uF@3V, Kyocera
138S00165	138S00146	BOM_TABLE_ALTS	ALL	0402,5.1uF@3V, Taiyo

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00140	138S00141	BOM_TABLE_ALTS	ALL	0201,1.1uF@3V, Kyocera
138S00142	138S00141	BOM_TABLE_ALTS	ALL	0201,1.1uF@3V, SEMKO
138S00166	138S00141	BOM_TABLE_ALTS	ALL	0201,1.1uF@3V, Taiyo

CRITICAL PART#	COMMENT
138S00149	0402-3T,10.5uF@1V

CRITICAL PART#	COMMENT
138S00144	0402,16uF@1V

CRITICAL PART#	COMMENT
138S00139	0201,3uF@1V

CRITICAL PART#	COMMENT
138S00146	0402,5.1uF@3V

CRITICAL PART#	COMMENT
138S00141	0201,1.1uF@3V

Global Ferrites

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S00194	155S0610	BOM_TABLE_ALTS	ALL	FERR BD, 1500HM, TDE
155S00200	155S0610	BOM_TABLE_ALTS	ALL	FERR BD, 1500HM, TY

CRITICAL PART#	COMMENT
155S0610	FERR BD, 1500HM, 01005

Global R/C Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
118S0764	118S0717	BOM_TABLE_ALTS	ALL	RES, 3.92K, 0.1%, E201
138S0648	138S0652	BOM_TABLE_ALTS	ALL	CAP,XSR,4.7UF,4.3V,5.03MM,0402,TAIYO
138S0739	138S0706	BOM_TABLE_ALTS	ALL	CAP,CER,XSR,0.22UF,20%,E,3V,20%
132S0436	132S0400	BOM_TABLE_ALTS	ALL	CAP,CER,XSR,0.22UF,20%,E,3V,01005
138S00049	138S0831	BOM_TABLE_ALTS	ALL	CAP,CER,XSR,2.2UF,20%,E,3V,0201

CRITICAL PART#	COMMENT
118S0717	RES, 3.92K, 0.1%, 0201
138S0652	CAP,XSR,4.7UF,6.3V,0.65MM,0402
138S0706	CAP,CER,XSR,0.22UF,20%,6.3V,20%
132S0400	CAP,CER,XSR,0.22UF,20%,6.3V,01005
138S0831	CAP,CER,XSR,2.2UF,20%,6.3V,0201

Global Inductors

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S00710	152S00617	BOM_TABLE_ALTS	ALL	IND,MLD,0.1UH,20%,6.1A,2990HM,H=65,1608
152S00712	152S00620	BOM_TABLE_ALTS	ALL	IND,MLD,0.1UH,20%,7.2A,1790HM,H=0.8,2012
152S00713	152S00621	BOM_TABLE_ALTS	ALL	IND,MLD,0.47UH,20%,3.5A,53MM,H=65,2012
152S00714	152S00622	BOM_TABLE_ALTS	ALL	IND,MLD,1.0UH,20%,2.1A,100MM,H=65,2012
152S00716	152S00626	BOM_TABLE_ALTS	ALL	IND,MLD,1.5UH,20%,1.1A,160MM,H=65,2012
152S00717	152S00631	BOM_TABLE_ALTS	ALL	IND,MLD,1.5UH,20%,2.5A,78MM,H=0.8,2012
152S00718	152S00632	BOM_TABLE_ALTS	ALL	IND,MLD,1.0UH,20%,1.2A,60MM,H=0.8,2016
152S00720	152S00640	BOM_TABLE_ALTS	ALL	IND,MLD,0.47UH,3.8A,55MM,H=0.65MM,2012
152S00721	152S00641	BOM_TABLE_ALTS	ALL	IND,MLD,0.47UH,4A,48MM,H=0.8MM,2012
152S00715	152S00623	BOM_TABLE_ALTS	ALL	IND,MLD,1UH,3.6A,60MM,H=0.8MM,2016
152S00653	152S00651	BOM_TABLE_ALTS	ALL	IND,1.2OH,3A,2016,0.65Z
152S00649	152S00650	BOM_TABLE_ALTS	L3340,L3341	IND,0.47UH,6.6A,3225,0.8Z

CRITICAL PART#	COMMENT
152S00617	IND,MLD,0.1UH,20%,6.1A,2990HM,H=65,1608
152S00620	IND,MLD,0.1UH,20%,7.2A,1790HM,H=0.8,2012
152S00621	IND,MLD,0.47UH,20%,3.5A,53MM,H=65,2012
152S00622	IND,MLD,1.0UH,20%,2.1A,100MM,H=65,2012
152S00626	IND,MLD,1.5UH,20%,1.1A,160MM,H=65,2012
152S00631	IND,MLD,1.0UH,20%,2.5A,78MM,H=0.8,2012
152S00632	IND,MLD,1.0UH,20%,3.2A,60MM,H=0.8,2016
152S00640	IND,MLD,0.47UH,3.8A,55MM,H=0.65MM,2012
152S00641	IND,MLD,0.47UH,4A,48MM,H=0.8MM,2012
152S00623	IND,MLD,1UH,3.6A,60MM,H=0.8MM,2016
152S00651	IND,1.2OH, 3A, 2016, 0.65Z
152S00650	IND,0.47UH,6.6A,3225,0.8Z

XTAL Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0612	197S0446	BOM_TABLE_ALTS	Y1000	XTAL, 24M, 1612

CRITICAL PART#	COMMENT
197S0446	XTAL, 24M, 1612

Multi-Vendor Criticals

CRITICAL PART#	COMMENT
377S0106	SUPPR,TRANS,VARIISTOR,12V,33PF,01005
197S0446	XTAL,24MHZ,30PPM,9.5PF,60 OHM MAX,1612
155S0576	FERR BD,10 OHM,50A,750MA,0.07 DCR,01005
155S00168	FLTR,NOISE,65 OHMZ,3.4OHM,0.7-2GHZ,0605
138S0979	CAP,CER,XSR,10UF,20%,10V,0402,H=0.65MM
138S0692	CAP,CER,XSR,1UF,20%,6.3V,0201
138S0683	CAP,CER,XSR,1UF,10%,25V,0402
138S0652	CAP,CER,XSR,4.7UF,20%,6.3V,H=0.65MM,0402
138S00070	CAP,XSR,4.7UF,20%,25V,0402
138S00014	CAP,CER,1UF,20%,16V,XSR,0201,H=0.39MM
132S0664	CAP,CER,0.047UF,10%,25V,XSR,0201
132S0663	CAP,CER,XSR,1UF,10%,25V,0402
132S0534	CAP,CER,XSR,0.1UF,10%,25V,0201
132S0436	CAP,CER,XSR,0.22UF,20%,6.3V,01005
132S0396	CAP,CER,XSR,1000PF,10%,10V,01005
132S0316	CAP,CER,XSR,0.1UF,20%,6.3V,01005
132S0304	CAP,CER,XSR,0.22UF,20%,6.3V,0201
132S0296	CAP,CER,XSR,1000PF,10%,6.3V,01005
132S0318	CAP,CER,XSR,820PF,10%,10V,01005

CRITICAL PART#	COMMENT
132S0288	CAP,CER,XSR,0.1UF,10%,16V,0201
132S0275	CAP,CER,XSR,470PF,10%,10V,01005
132S0249	CAP,CER,X7R,220PF,10%,10V,01005
132S0245	CAP,CER,XSR,0.01UF,10%,6.3V,01005
132S00093	CAP,XSR,0.022UF,20%,6.3V,01005
132S00025	CAP,CER,XSR,0.047UF,20%,6.3V,01005
132S00008	CAP,CER,0.1UF,10%,50V,X7R,0402
131S0883	CAP,CER,NP0/COG,220PF,2A,50V,0201
131S0804	CAP,CER,27PF,5A,COG,25V,0201
131S0307	CAP,CER,NP0/COG,100PF,5A,16V,01005
131S0225	CAP,CER,NP0/COG,15PF,5A,16V,01005
131S0223	CAP,CER,NP0/COG,27PF,5A,16V,01005
131S0220	CAP,CER,NP0/COG,12PF,5A,16V,01005
131S0216	CAP,CER,NP0/COG,47PF,5A,16V,01005
131S00053	CAP,CER,COG,220PF,5A,10V,01005
116S00068	RES,NF,1.3 MOHM,14,200PFM,1/20W,0201
117S0055	RES,NF,1/20W,2M OHM,5,0201,0MD
107S0257	THERMISTOR,NTC,10K OHM,1A,B=3435,01005

Soft-Term Cap Sub BOMs

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
68S-00155	1	SUBBOM,MLB_TOP,CAP,TYPICAL,XB91	SUBBOM_CAP	CRITICAL	COMMON

Agnes Input

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	4	CAP,SOFT-TERM,2.2UF,6.3V,0201,KYOCERA	C2970,C2971,C2980,C2981	CRITICAL	SOFT_CAP
138S0831	4	CAP,TYPICAL,2.2UF,6.3V,0201,NEBRATA	C2970,C2971,C2980,C2981	CRITICAL	TYPICAL_CAP

Agnes Output

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	9	CAP,SOFT-TERM,2.2UF,6.3V,0201,KYOCERA	C3602,C3622	CRITICAL	SOFT_CAP
138S0831	9	CAP,TYPICAL,2.2UF,6.3V,0201,NEBRATA	C3602,C3622	CRITICAL	TYPICAL_CAP

Sensors

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	2	CAP,SOFT-TERM,2.2UF,6.3V,0201,KYOCERA	C3602,C3622	CRITICAL	SOFT_CAP
138S0831	2	CAP,TYPICAL,2.2UF,6.3V,0201,NEBRATA	C3602,C3622	CRITICAL	TYPICAL_CAP

RCAM B2Bs

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	3	CAP,SOFT-TERM,2.2UF,6.3V,0201,KYOCERA	C3909,C3925,C4025	CRITICAL	SOFT_CAP
138S0831	3	CAP,TYPICAL,2.2UF,6.3V,0201,NEBRATA	C3909,C3925,C4025	CRITICAL	TYPICAL_CAP

Strobe B2B

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	1	CAP,SOFT-TERM,2.2UF,6.3V,0201,KYOCERA	C4303	CRITICAL	SOFT_CAP
138S0831	1	CAP,TYPICAL,2.2UF,6.3V,0201,NEBRATA	C4303	CRITICAL	TYPICAL_CAP

Audio

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	2	CAP,SOFT-TERM,2.2UF,6.3V,0201,KYOCERA	C4809,C4805	CRITICAL	SOFT_CAP
138S0831	2	CAP,TYPICAL,2.2UF,6.3V,0201,NEBRATA	C4809,C4805	CRITICAL	TYPICAL_CAP

Pearl B2B

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	1	CAP,SOFT-TERM,2.2UF,6.3V,0201,KYOCERA	C4613	CRITICAL	SOFT_CAP
138S0831	1	CAP,TYPICAL,2.2UF,6.3V,0201,NEBRATA	C4613	CRITICAL	TYPICAL_CAP

Acorn

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00160	2	CAP,SOFT-TERM,10UF,10V,0402,NEBRATA	C5641,C5653	CRITICAL	SOFT_CAP
138S0979	2	CAP,TYPICAL,10UF,10V,0402,NEB/KYO	C5641,C5653	CRITICAL	TYPICAL_CAP


CODEC

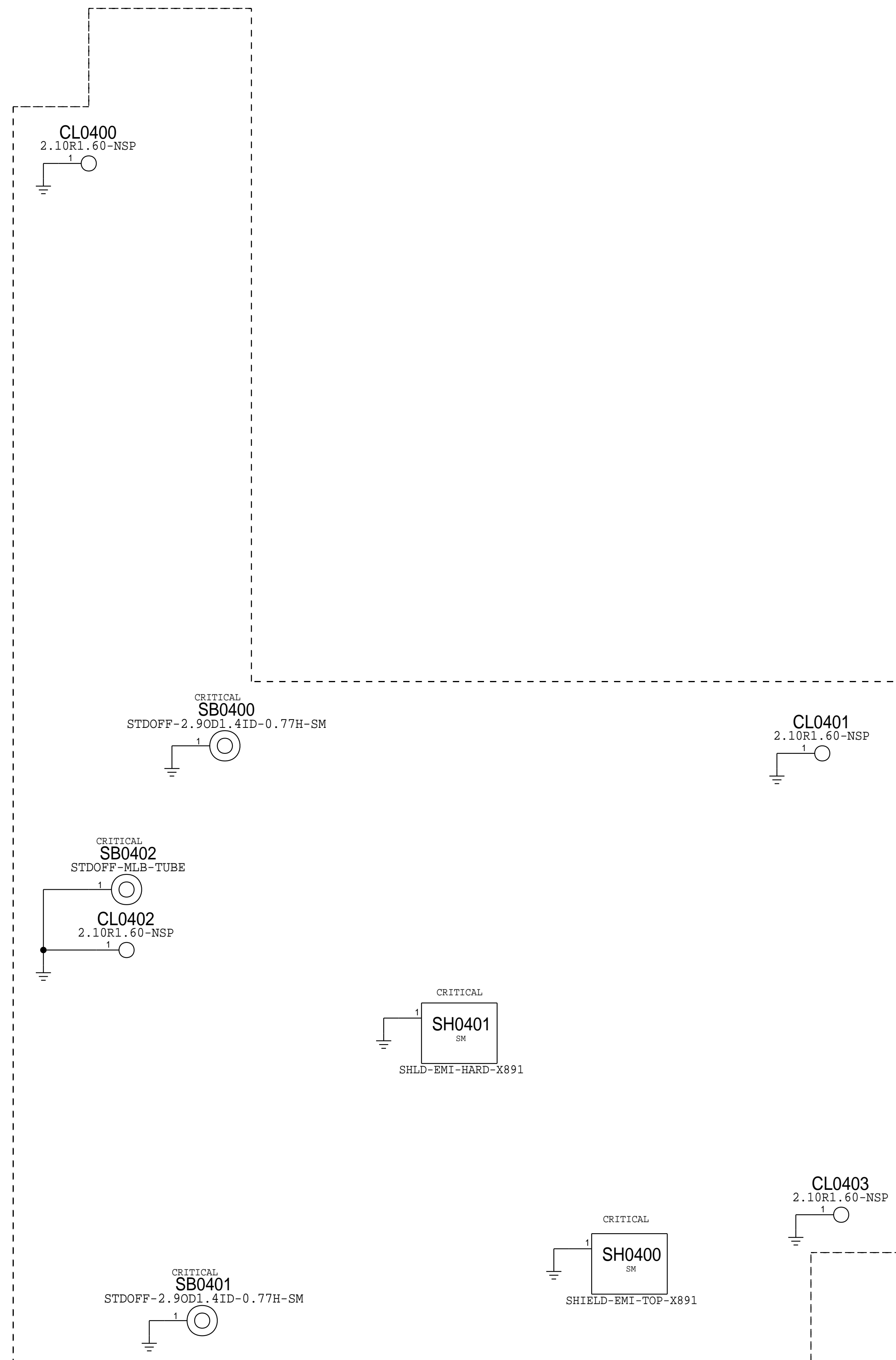
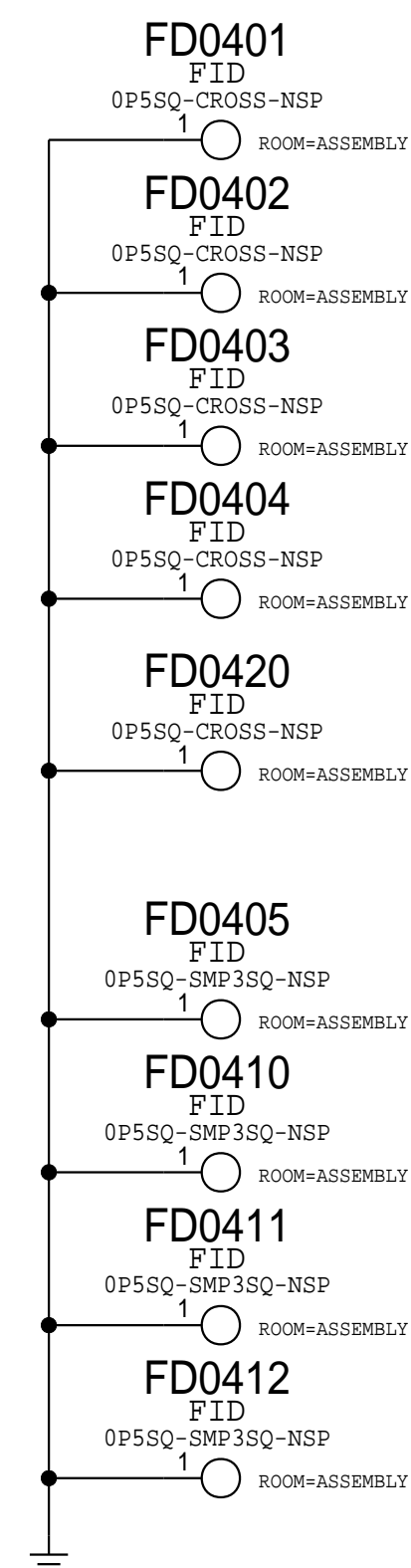
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00160	2	CAP,SOFT-TERM,10UF,10V,0402,NEBRATA	C4811,C4808	CRITICAL	SOFT_CAP
138S0979	2	CAP,TYPICAL,10UF,10V,0402,NEB/KYO	C4811,C4808	CRITICAL	TYPICAL_CAP


Ansel

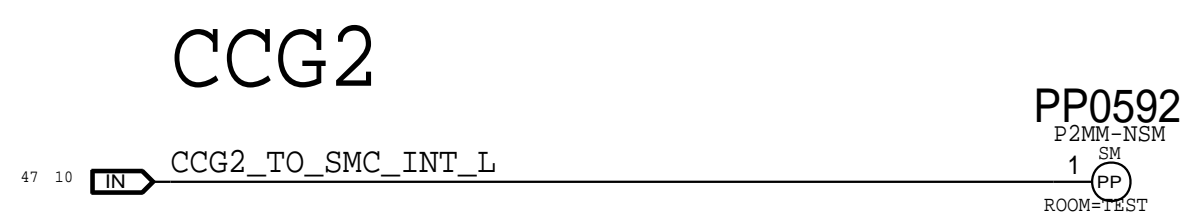
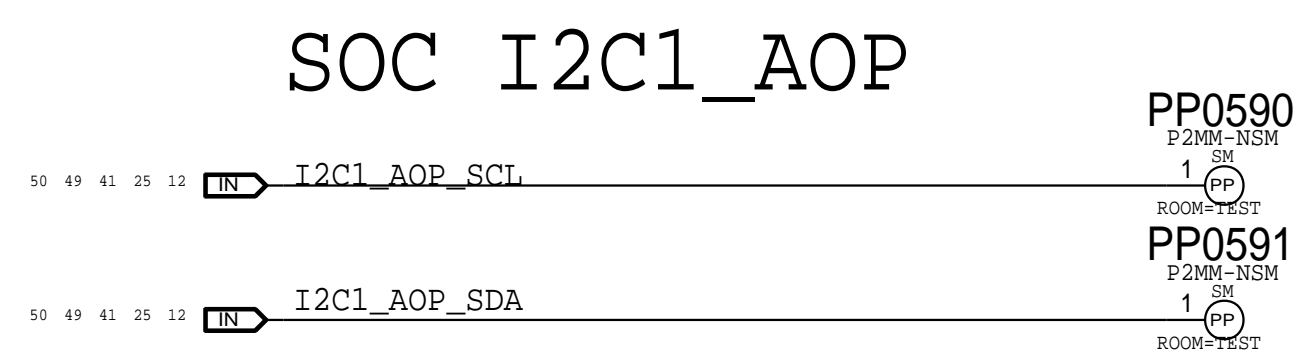
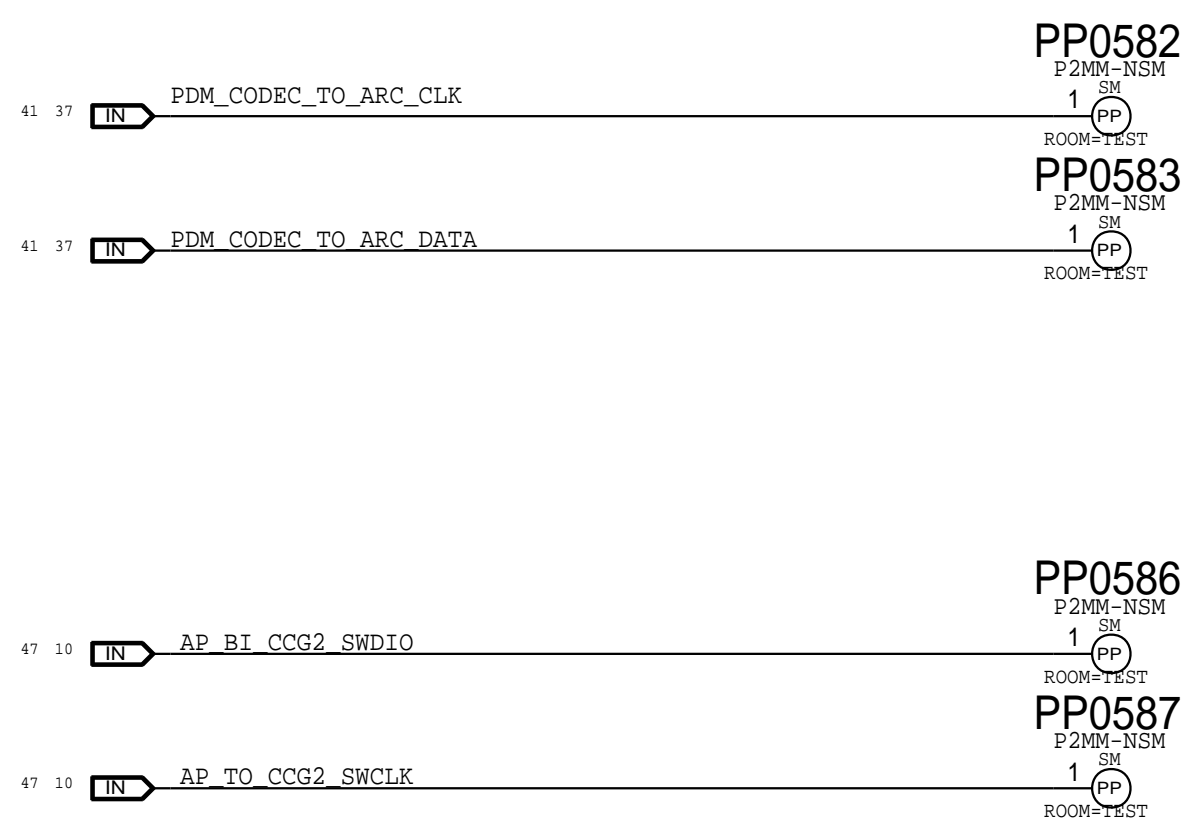
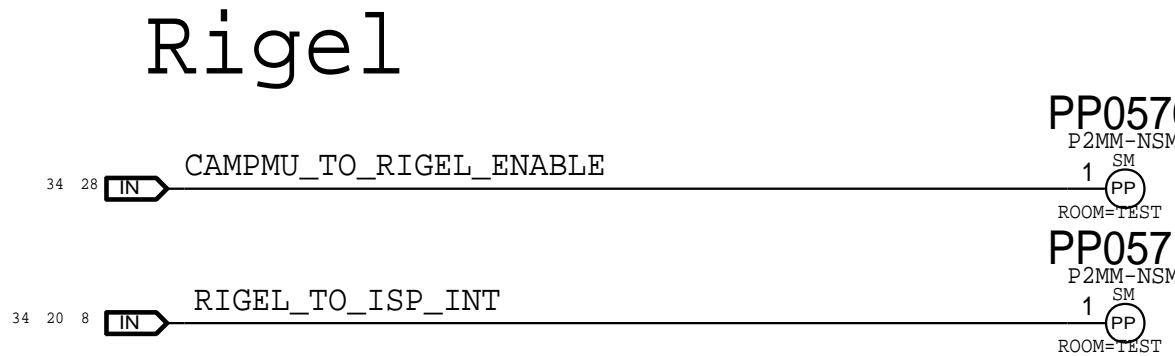
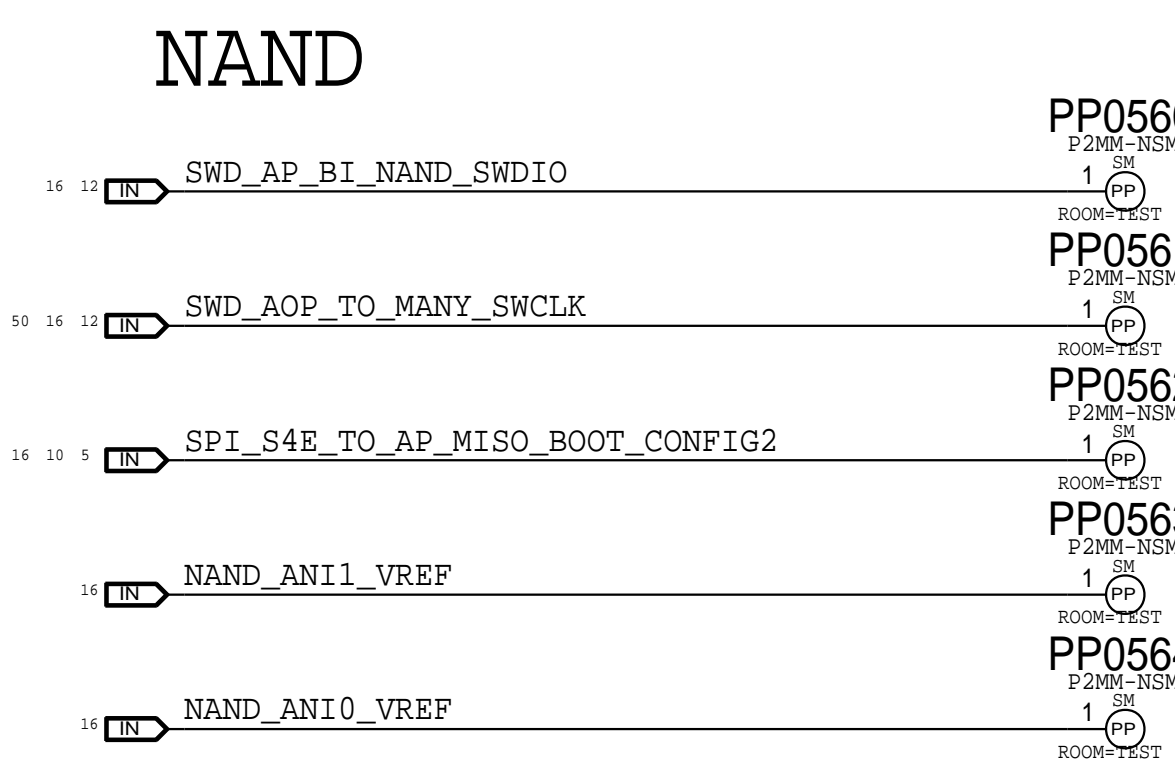
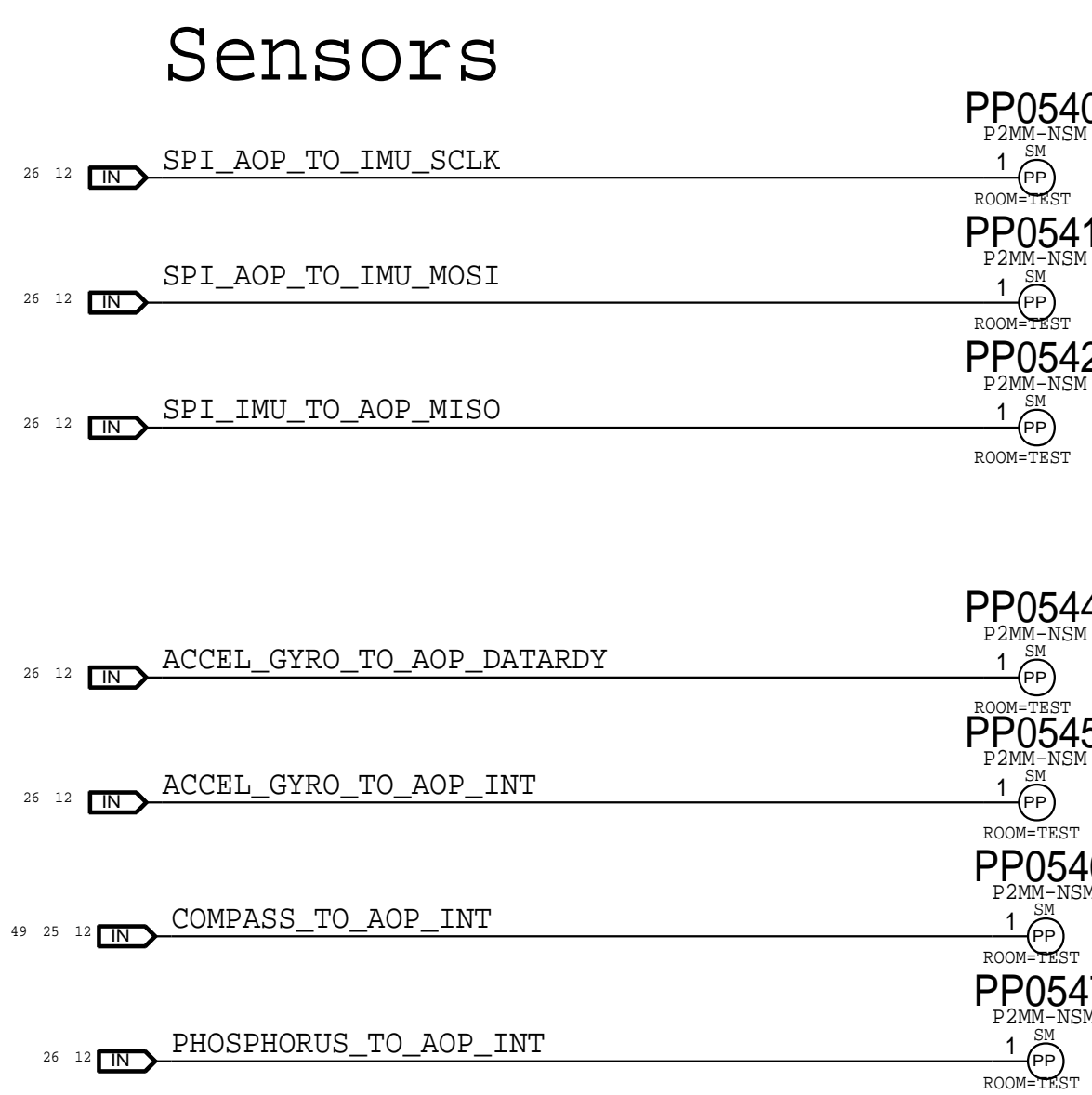
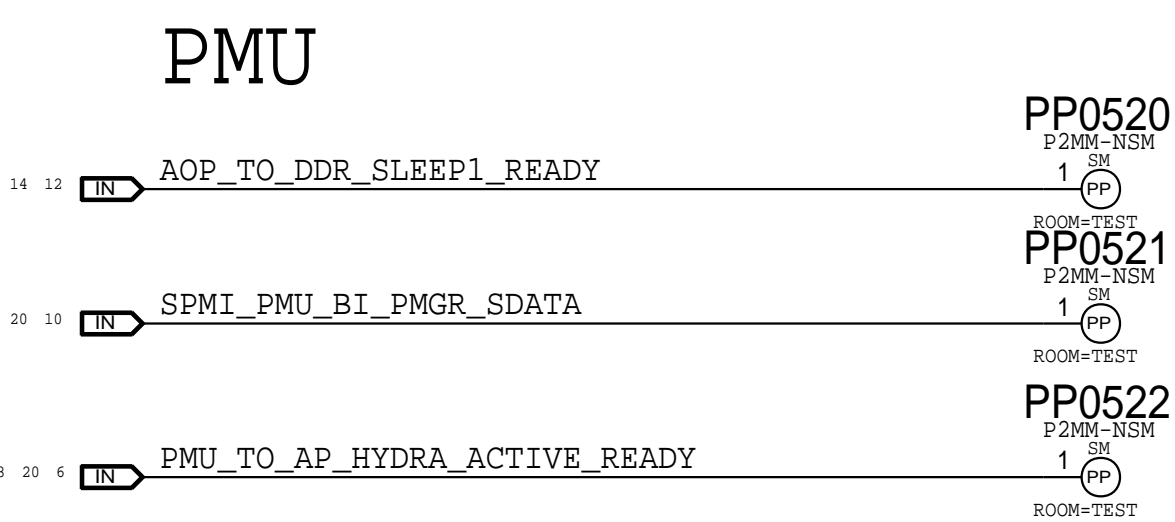
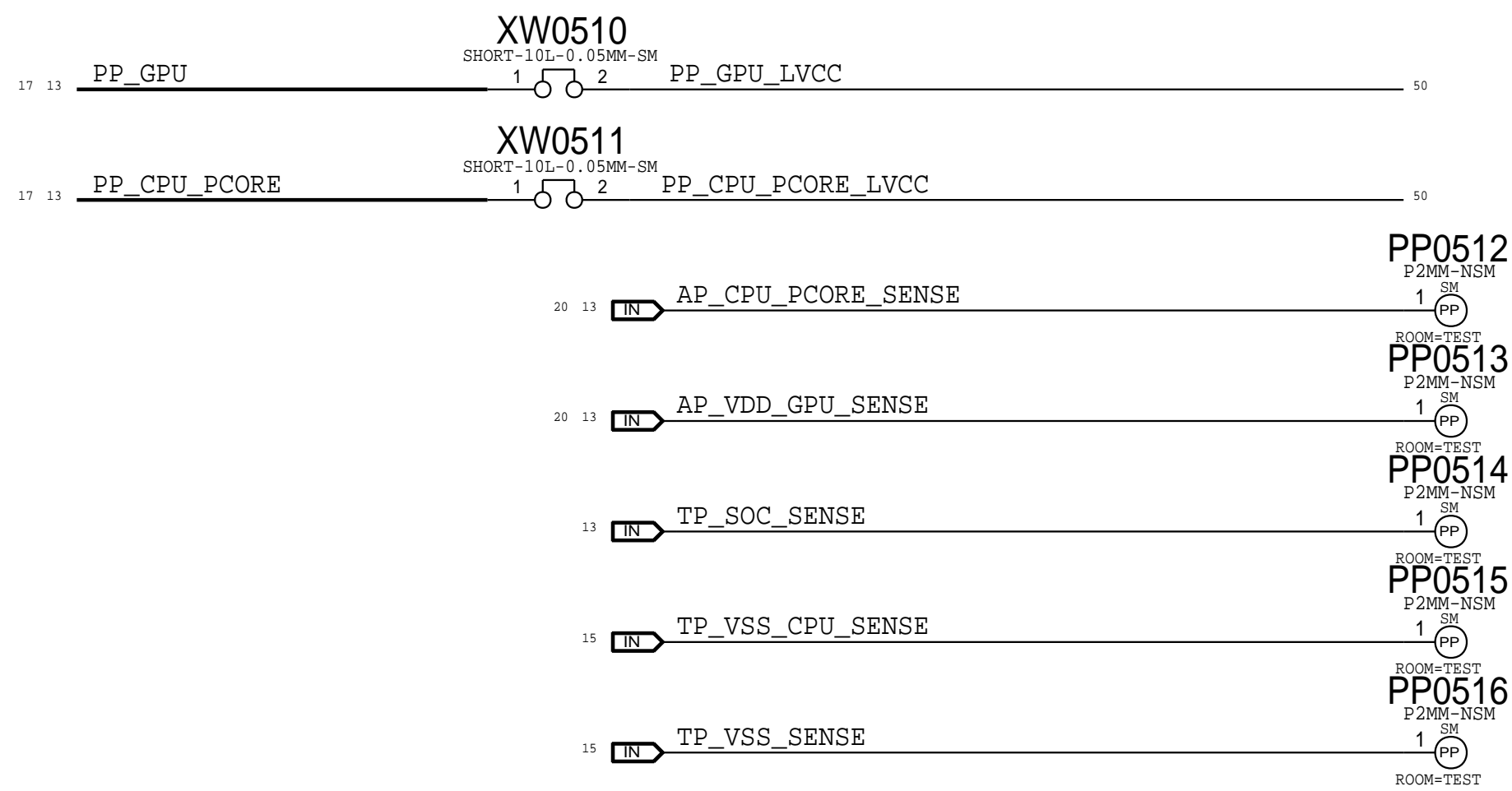
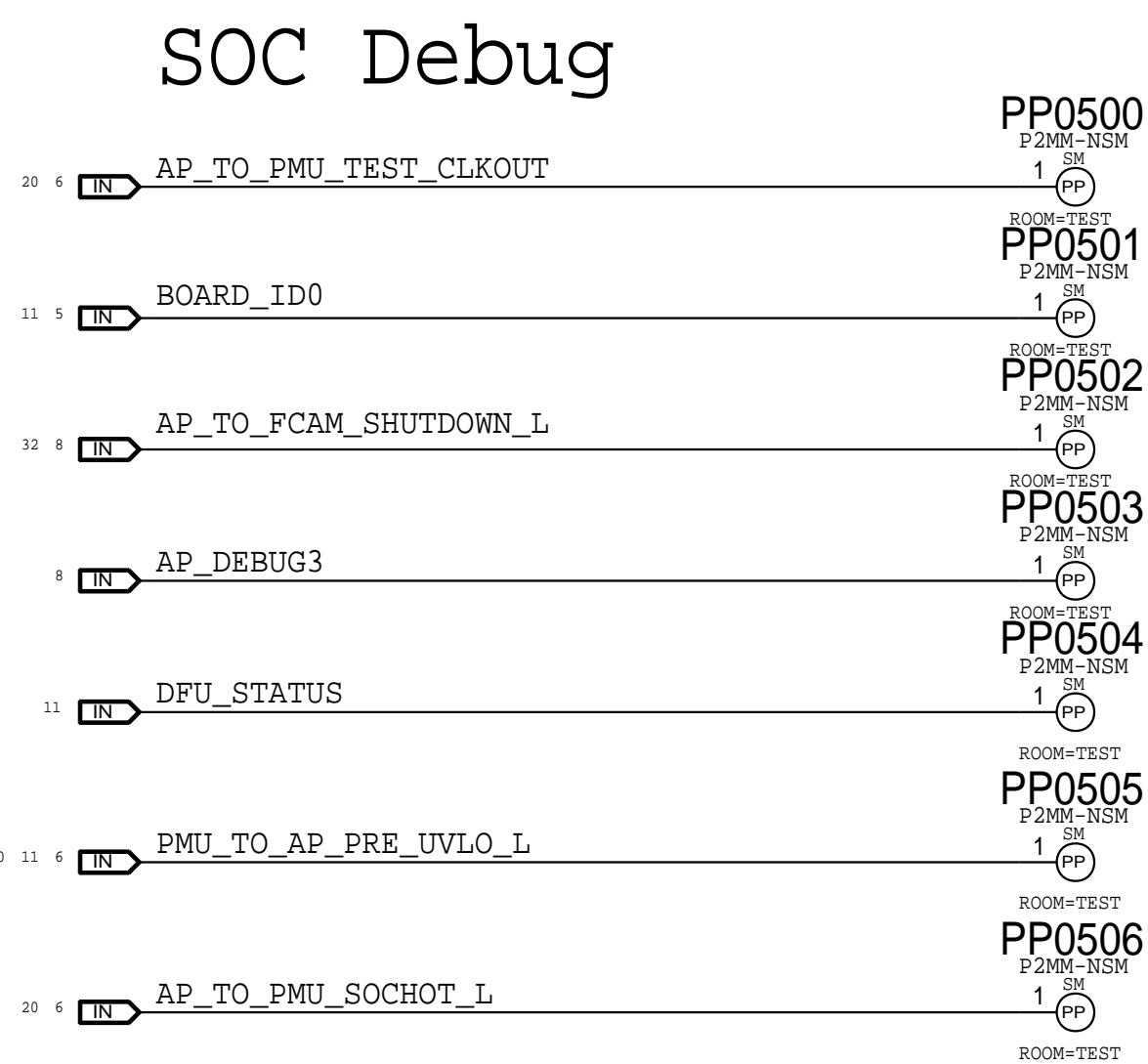
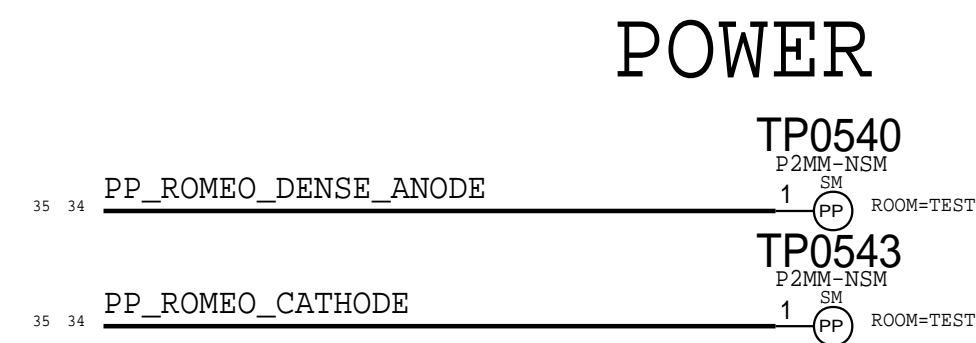
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00160	1	CAP,SOFT-TERM,10UF,10V,0402,NEBRATA	C3710	CRITICAL	SOFT_CAP
138S0979	1	CAP,TYPICAL,10UF,10V,0402,NEB/KYO	C3710	CRITICAL	TYPICAL_CAP

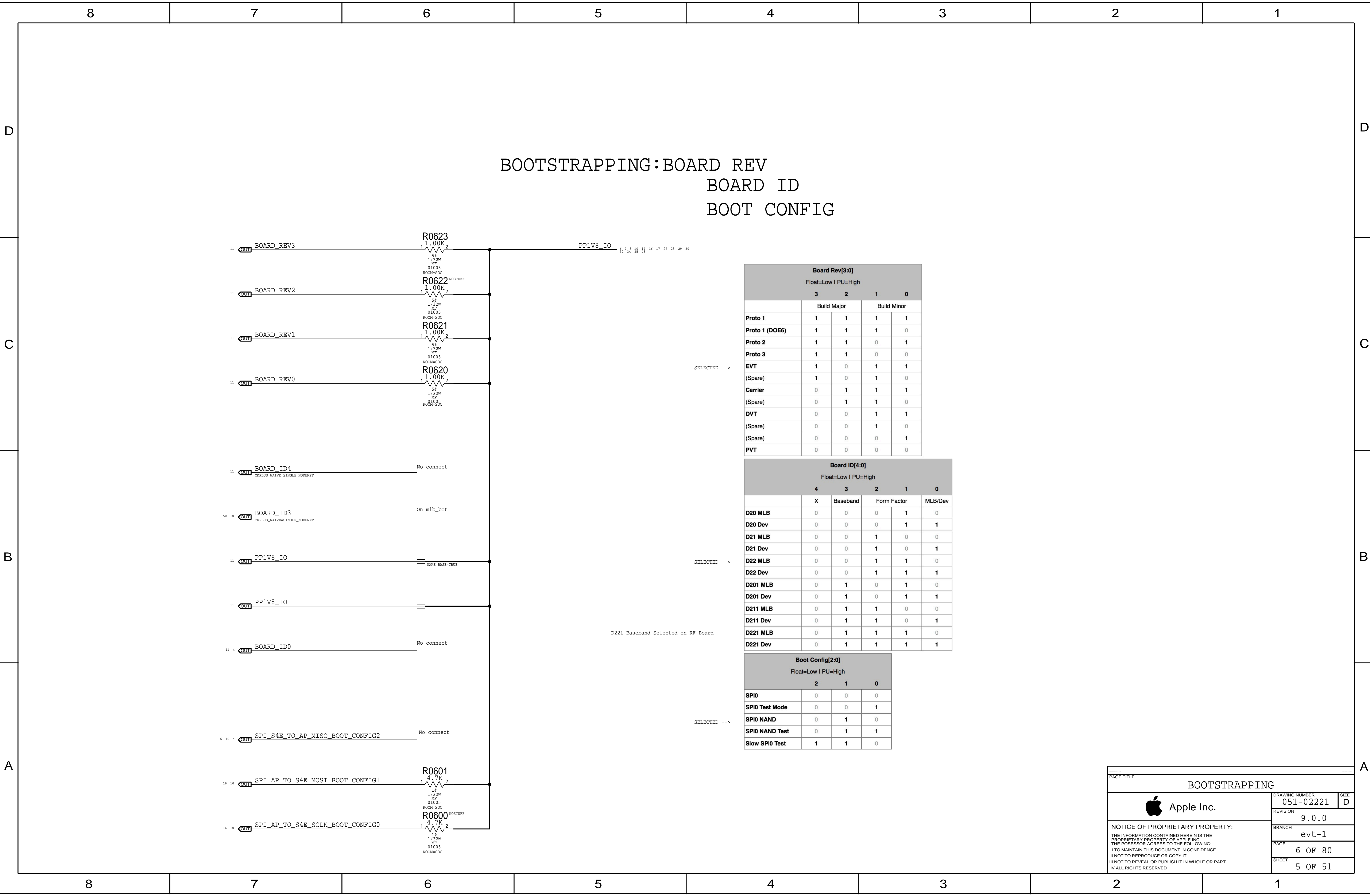
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
68S-00156	68S-00155	BOM_TABLE_ALTS	SUBBOM_CAP	SUBBOM,MLB_TOP,CAP,SOFT,XB91

PAGE TITLE			
SYSTEM:BOM Tables			
 Apple Inc.		DRAWING NUMBER	051-02221
		REVISION	9.0.0
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	evt-1
		PAGE	2 OF 80
		SHEET	2 OF 51



PAGE TITLE		SYSTEM: Mechanical Components	
 Apple Inc.	DRAWING NUMBER		SIZ
	051-02221		D
	REVISION		
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		9.0.0	
		BRANCH	
		evt-1	
		PAGE	
		4 OF 80	
		SHEET	
		3 OF 51	





BOOTSTRAPPING

BOARD ID

BOOT CONFIG

Apple Inc.

051-02221

9.0.0

evt-1

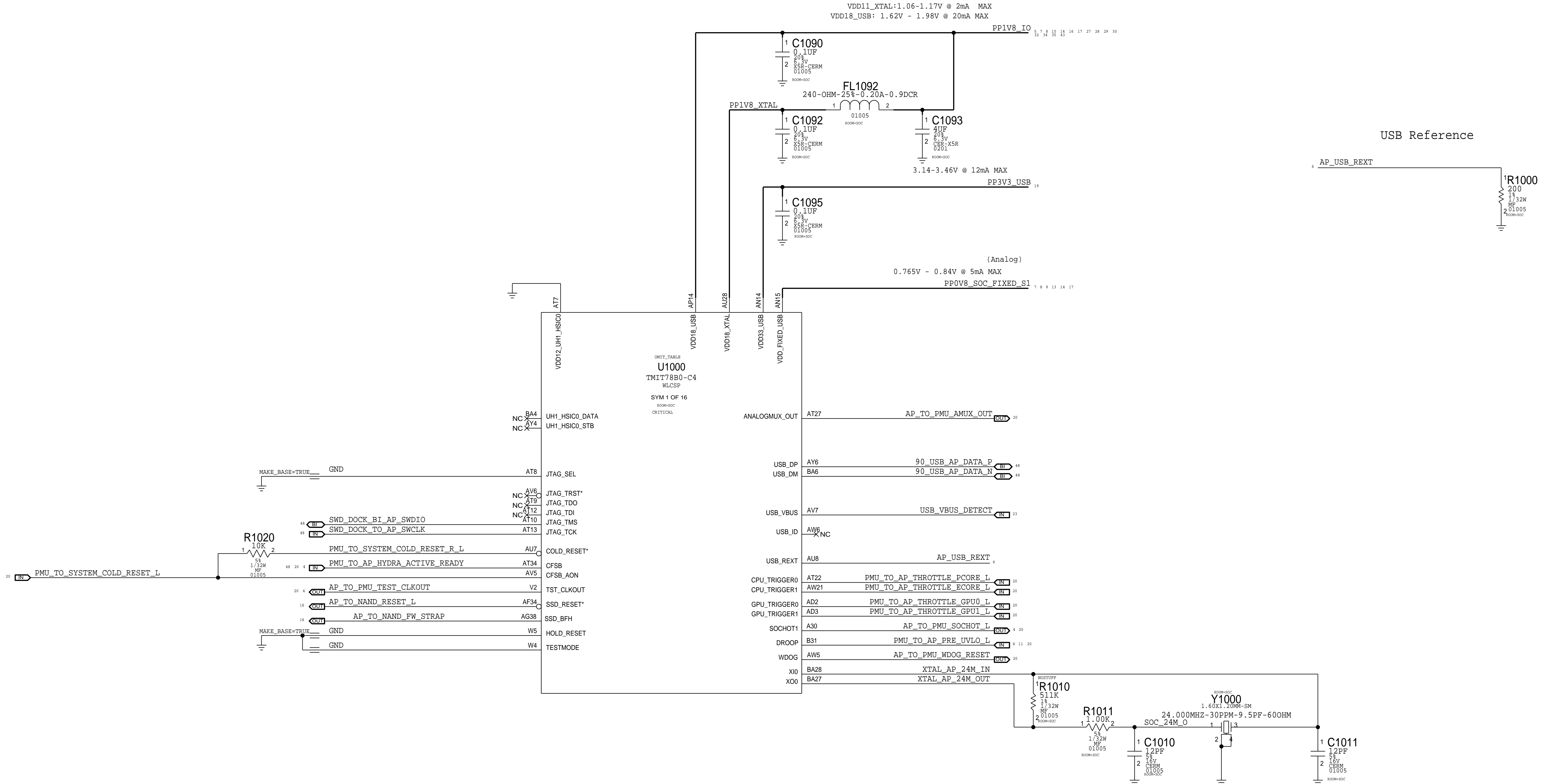
6 OF 80

5 OF 51

NOTICE OF PROPRIETARY PROPERTY:

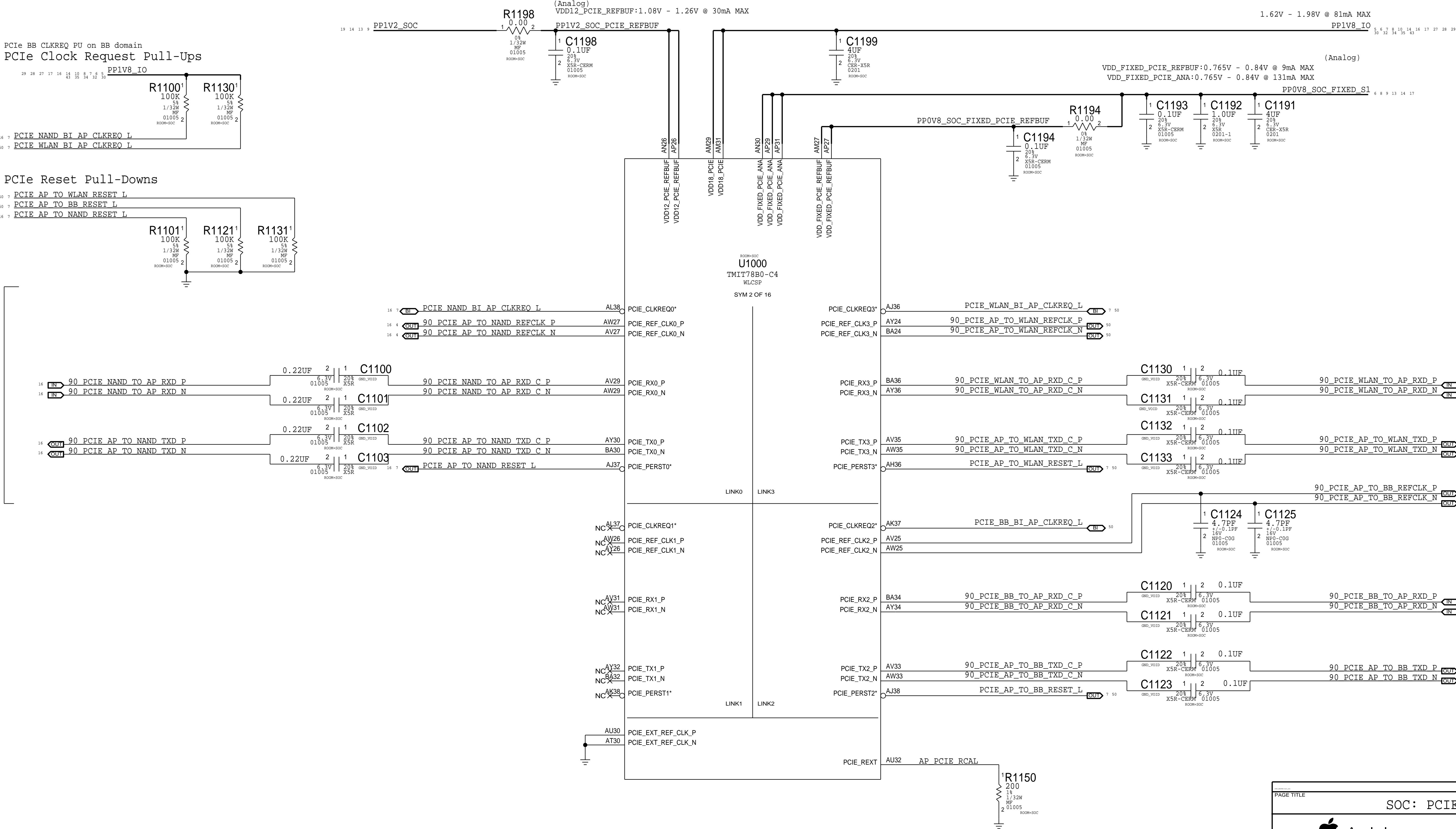
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED


SOC - USB, JTAG, XTAL



PAGE TITLE		
SOC: JTAG, USB, XTAL		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
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	evt-1
	PAGE	10 OF 80
	SHEET	6 OF 51

SOC - PCIE INTERFACES



PAGE TITLE		
SOC: PCIE		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
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	evt-1
	PAGE	11 OF 80
	SHEET	7 OF 51

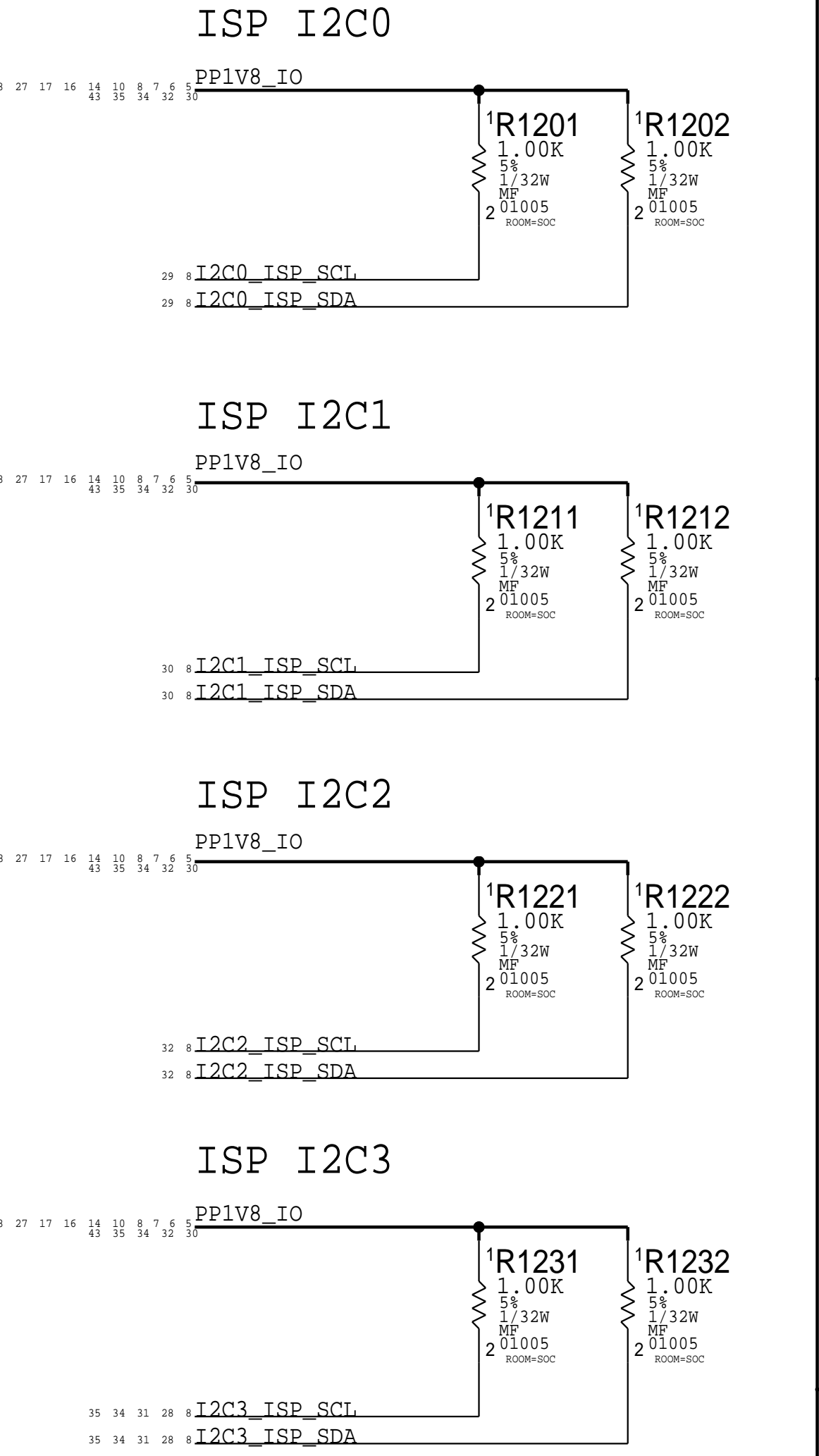
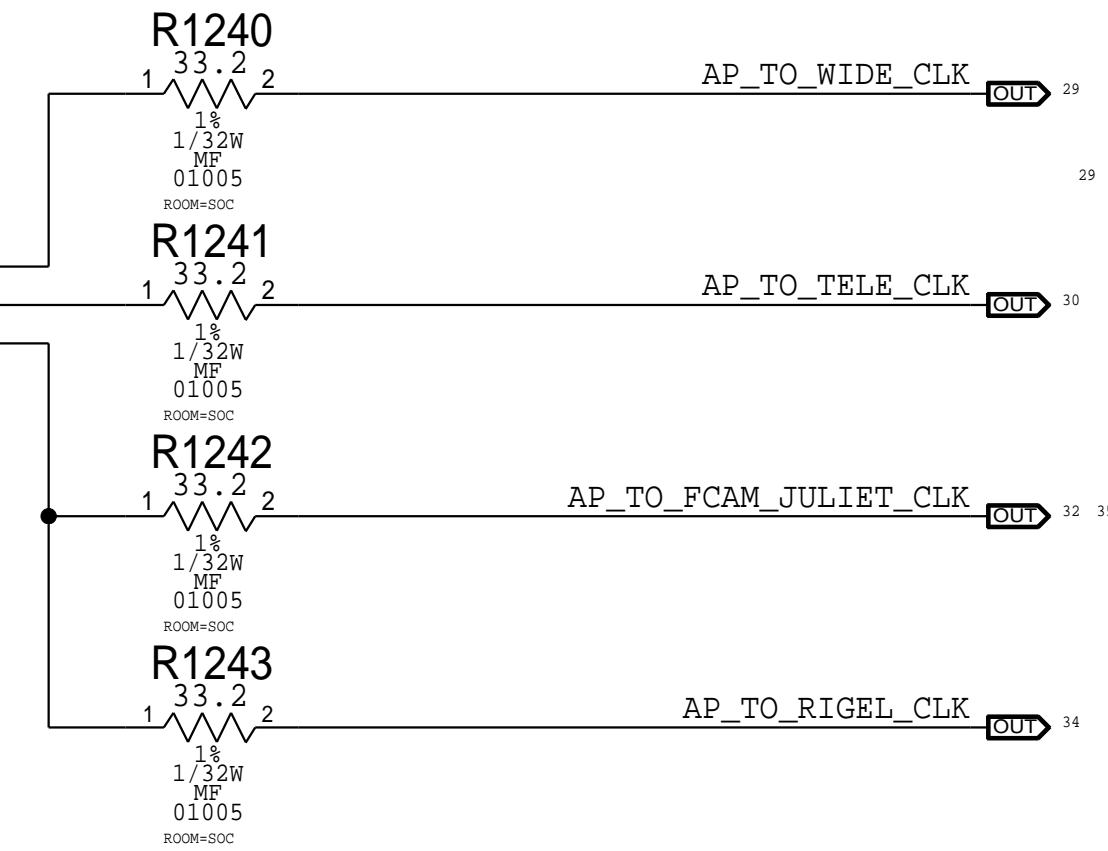
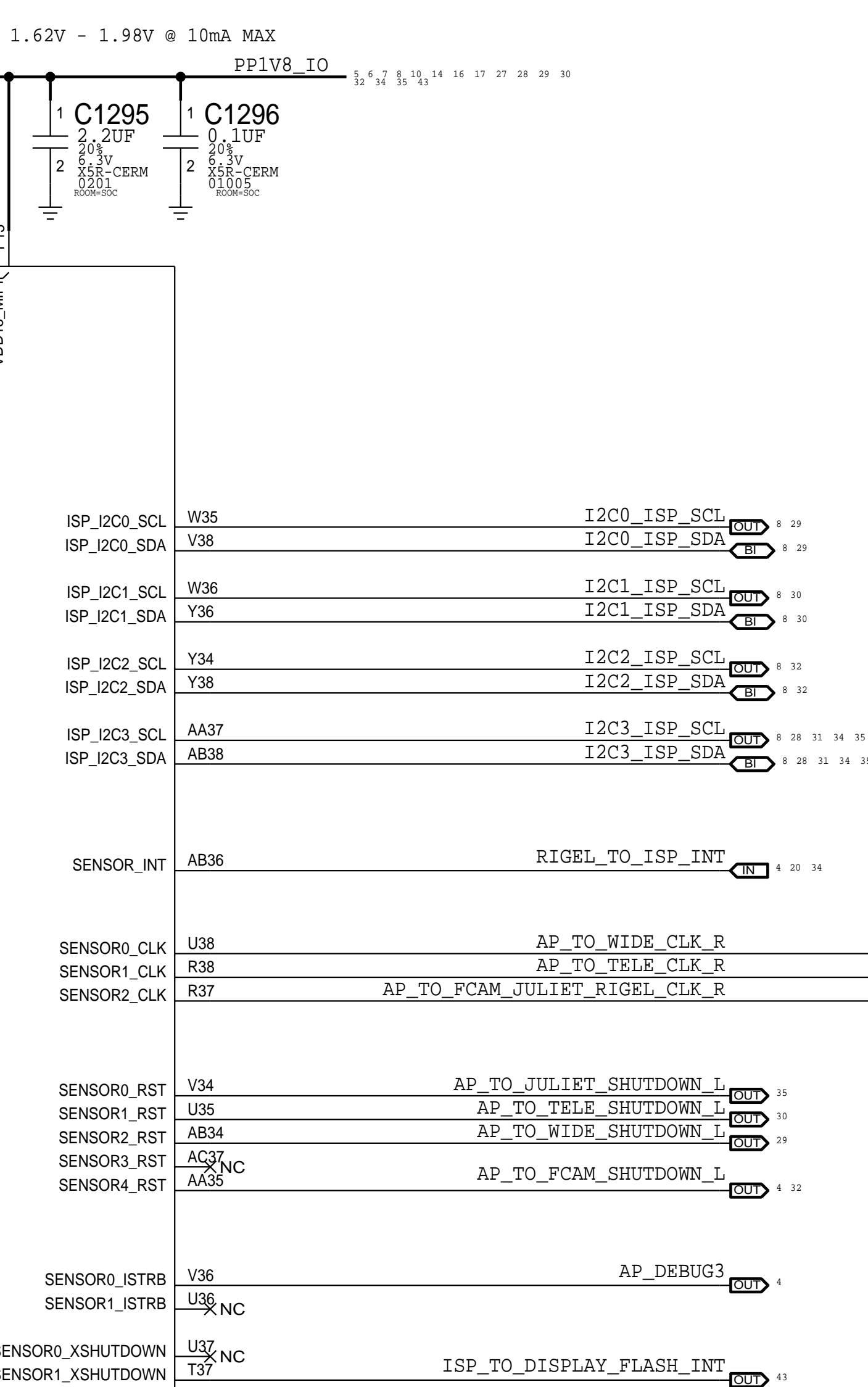
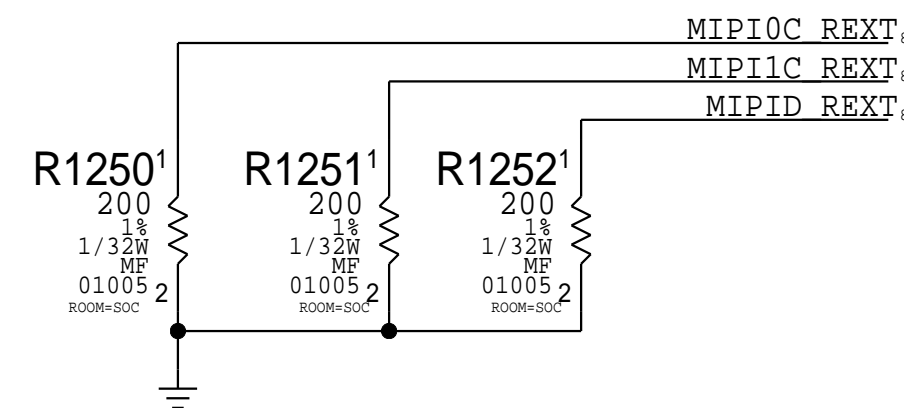
SOC - MIPI & ISP INTERFACES


MIPI Lane & Polarity Swapping

Program	Function	SOC LANE	DISTAL LANE	Lane Swap	Polarity Swap
X891	Display	Clock_P	Clock_N		✓
		Clock_N	Clock_P		
		Lane_0_P	Lane_0_N		
		Lane_0_N	Lane_0_P		
		Lane_1_P	Lane_1_N		
		Lane_1_N	Lane_1_P		
	FCAM	Lane_2_P	Lane_2_N	✓	
		Lane_2_N	Lane_2_P		
		Lane_3_P	Lane_3_N	✓	✓
		Lane_3_N	Lane_3_P		
		Lane_2_P	Lane_2_N	✓	✓
		Lane_2_N	Lane_2_P		
JULIET	FCAM	Clock_P	Clock_N		
		Clock_N	Clock_P		
		Lane_0_P	Lane_0_N		
		Lane_0_N	Lane_0_P		✓
		Lane_1_P	Lane_1_N		✓
		Lane_1_N	Lane_1_P		
	JULIET	Clock_P	Clock_N		✓
		Clock_N	Clock_P		
		Lane_0_P	Lane_0_N		
		Lane_0_N	Lane_0_P		
		Lane_1_P	Lane_1_N		
		Lane_1_N	Lane_1_P		

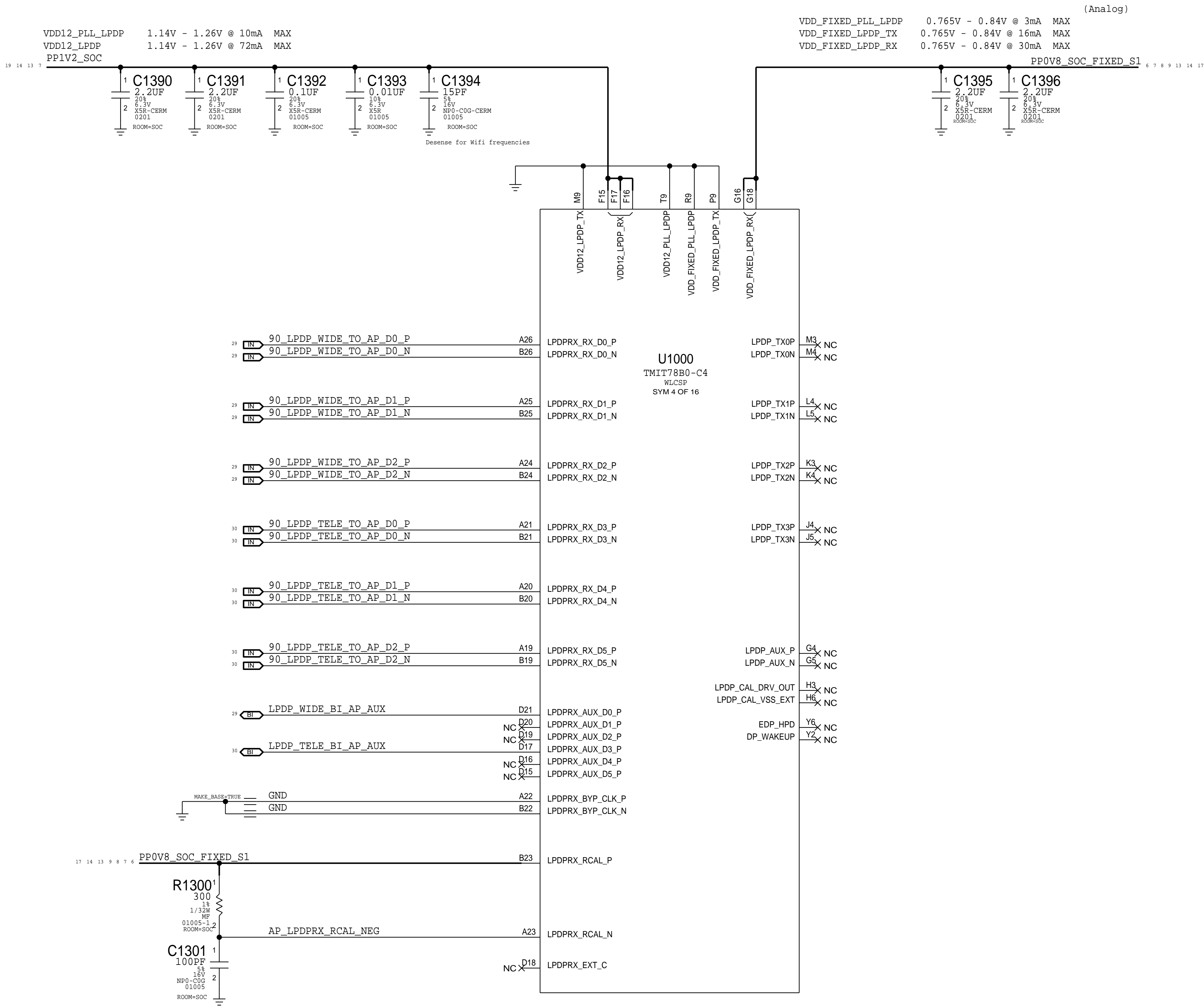



MIPI Reference



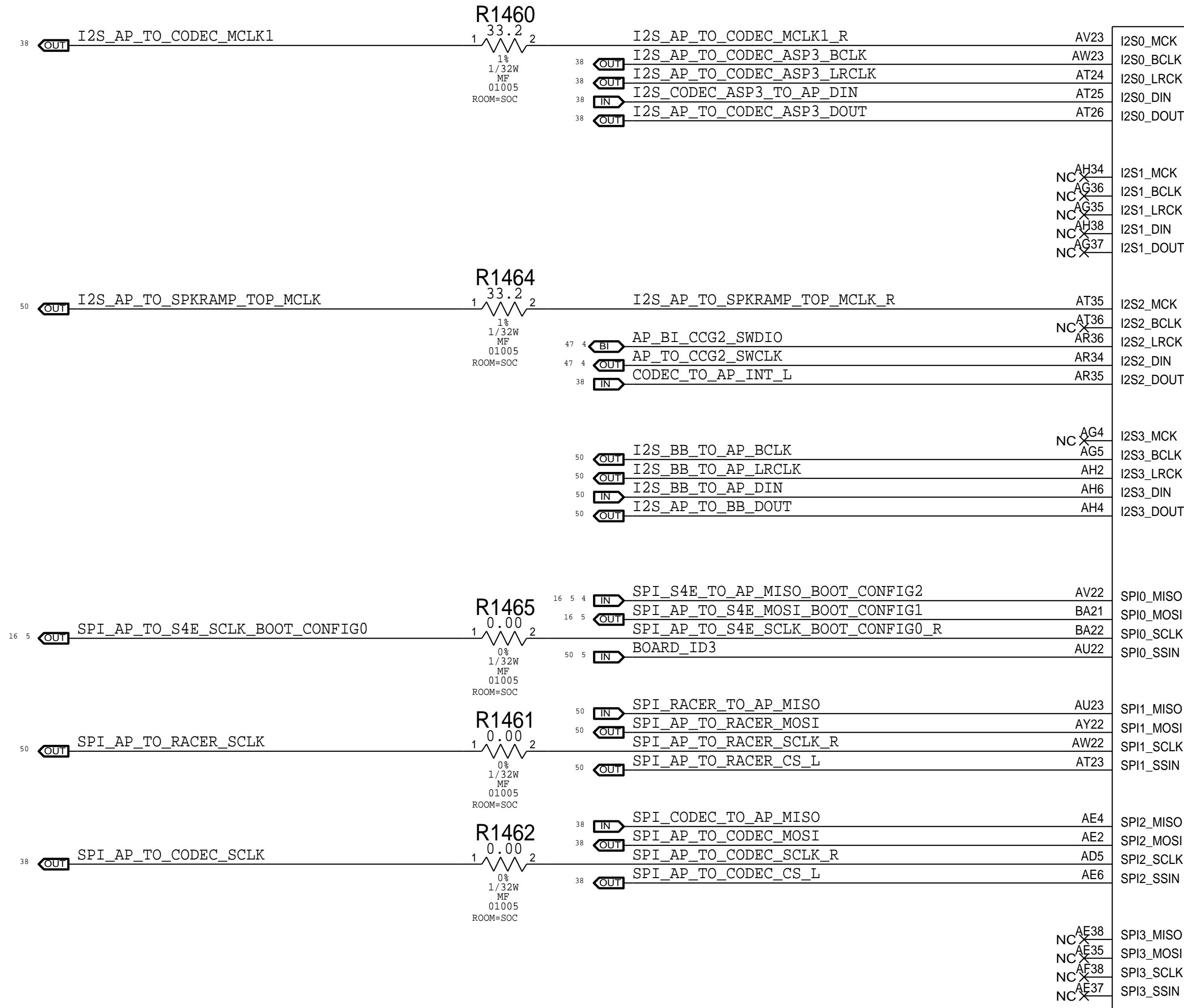
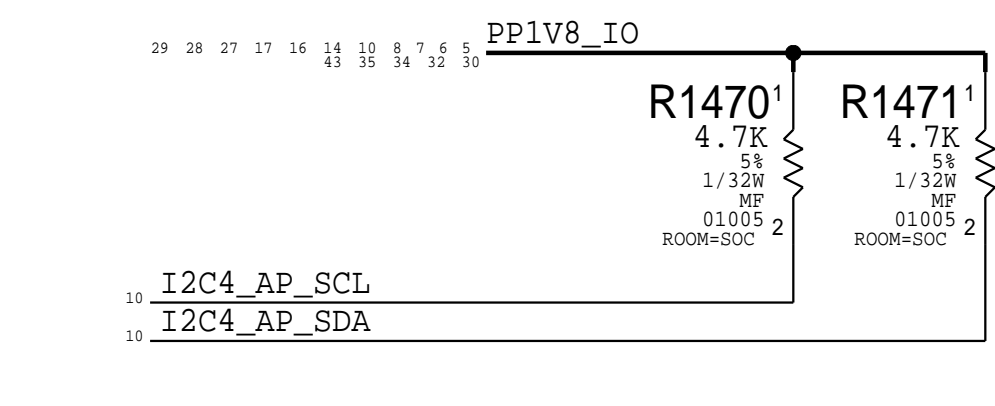
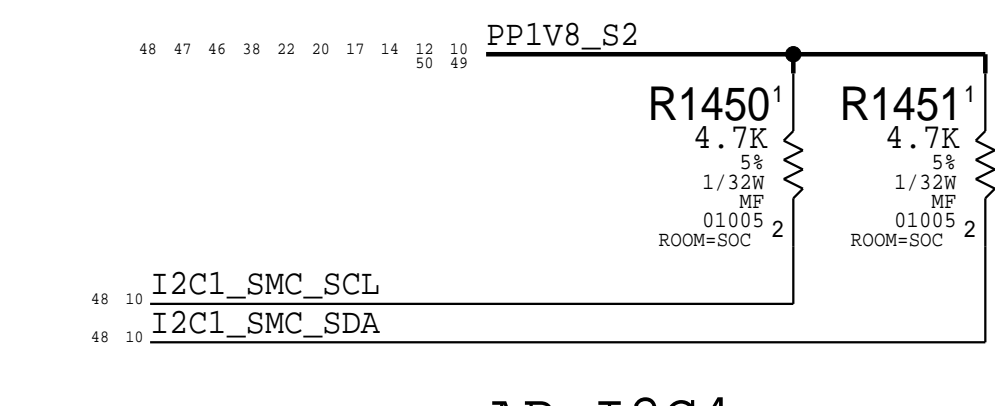
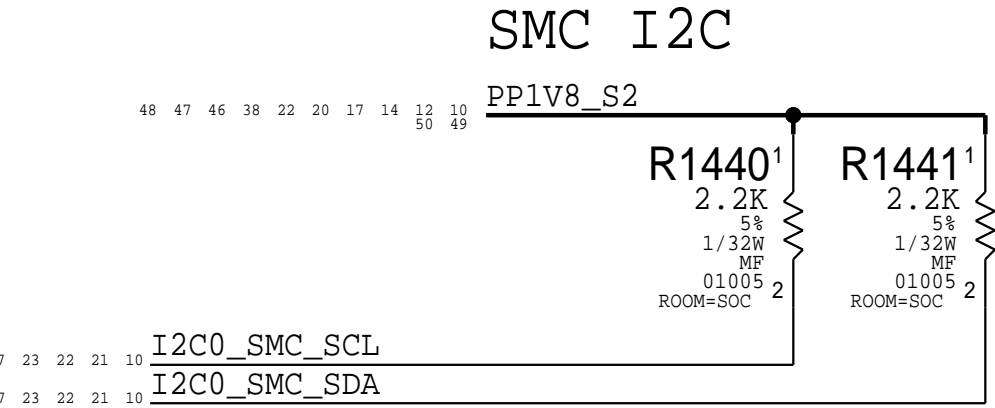
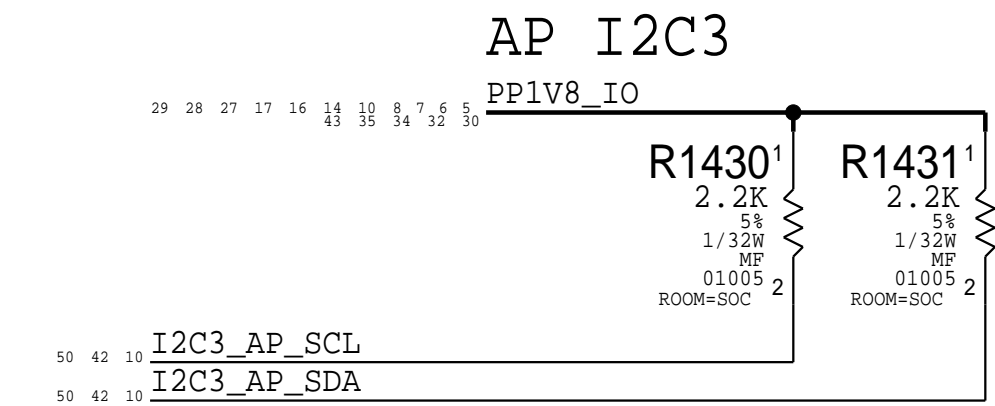
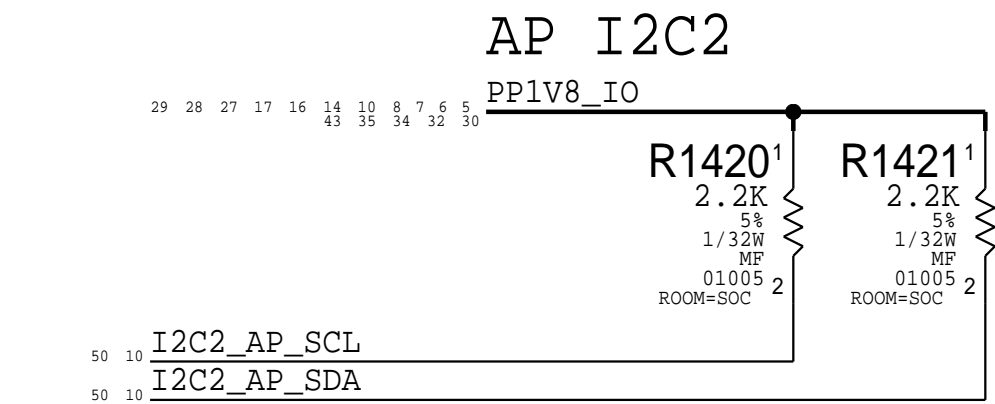
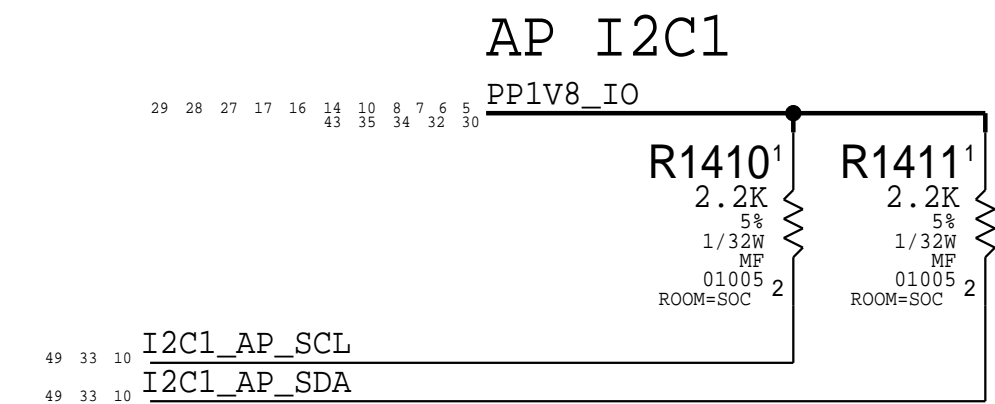
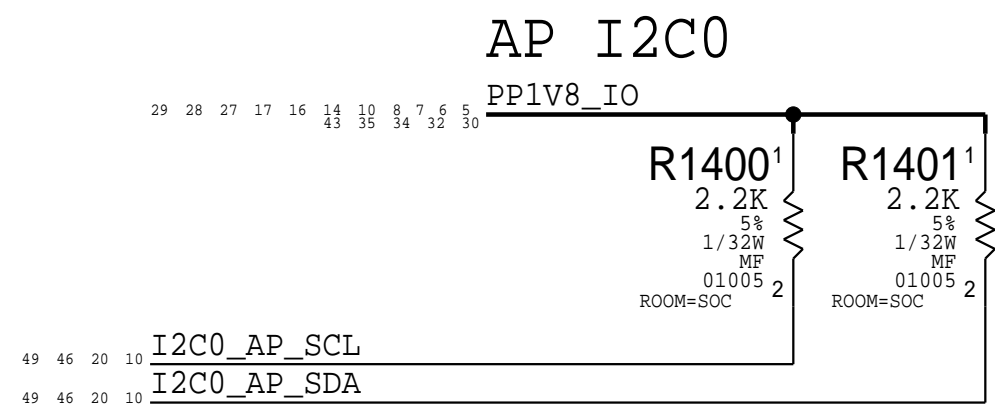
PAGE TITLE		
SOC: MIPI & ISP		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	12 OF 80
	SHEET	8 OF 51

SOC - LPDP

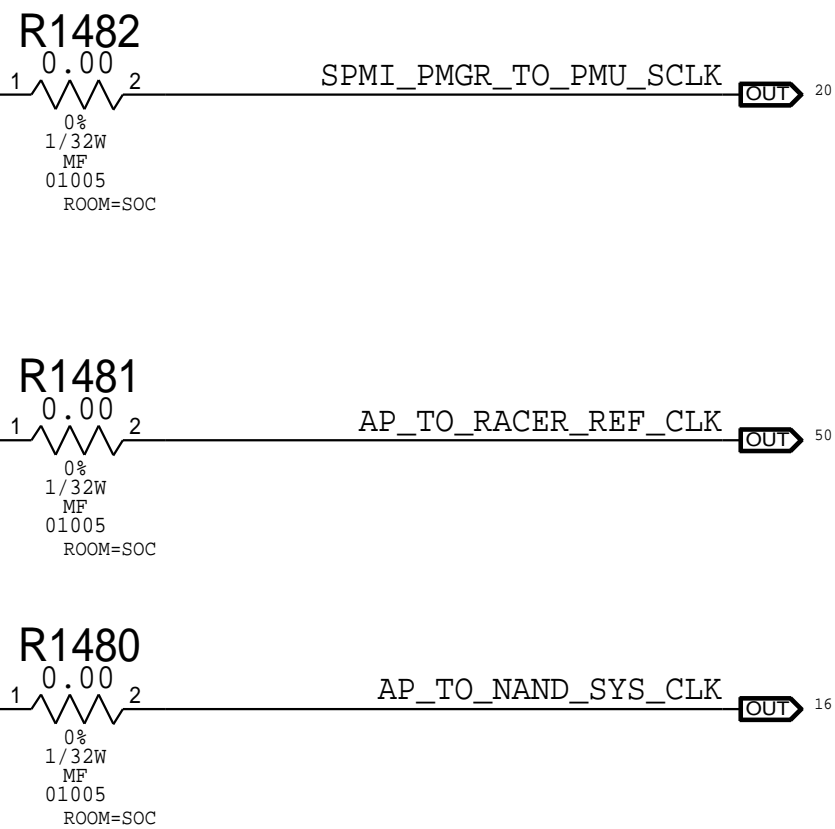
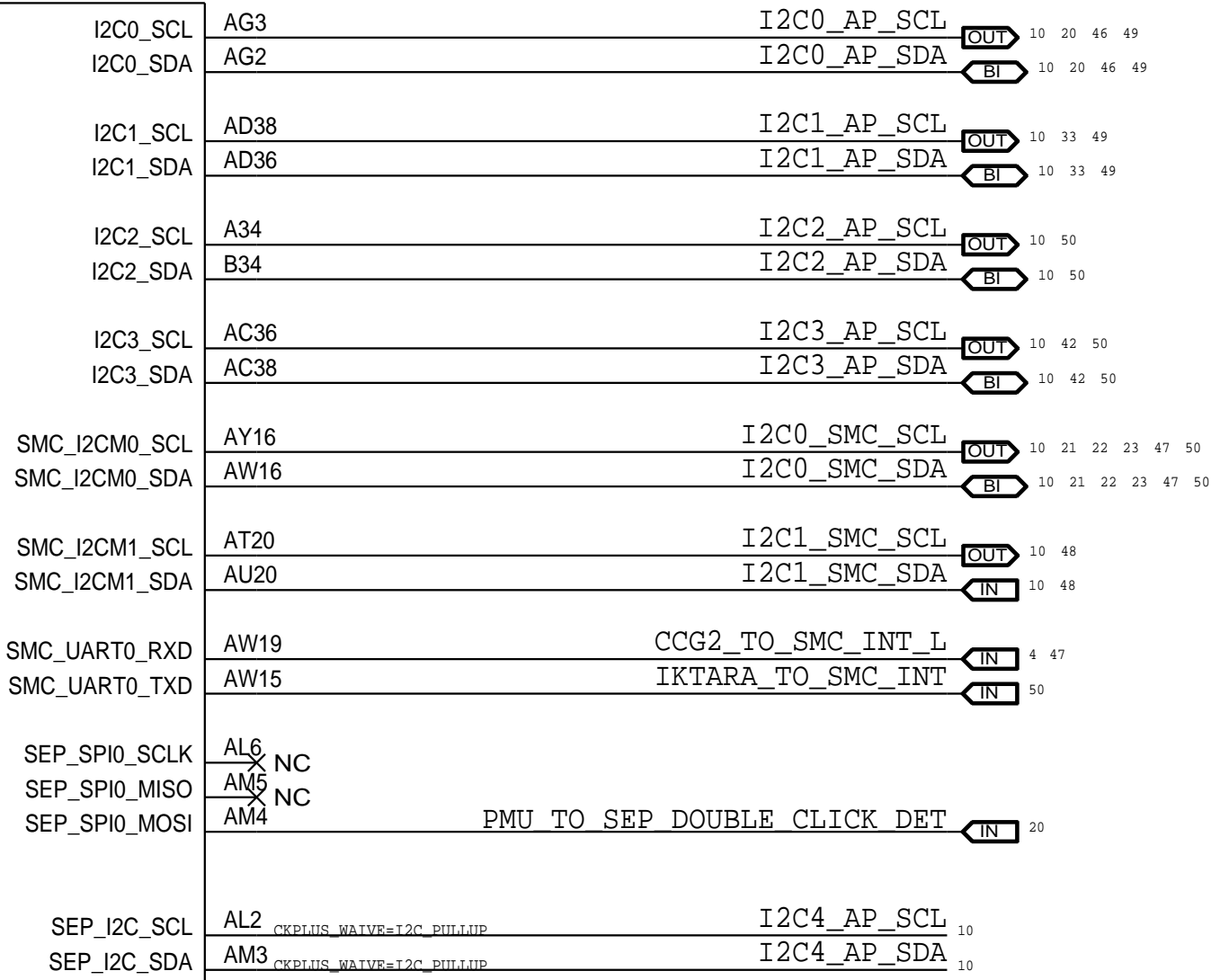


PAGE TITLE			
SOC: LPDP			
 Apple Inc.	DRAWING NUMBER	051-02221	SIZE
	REVISION	9.0.0	D
	BRANCH	evt-1	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE	13 OF 80
		SHEET	9 OF 51

SOC - SERIAL INTERFACES

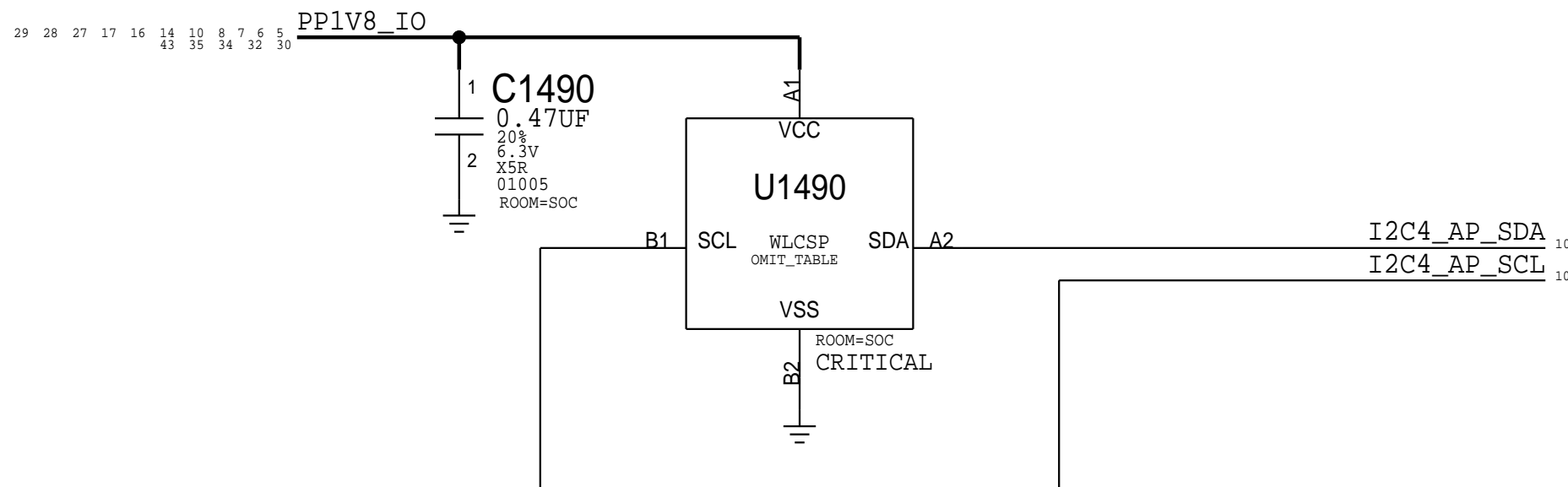


U1000
TMIT78B0-C4
WLCSP
SYM 6 OF 16
ROOM=SOC




SPI: Route as Daisy-Chain. No T's Allowed

Place series terminations close to SoC Pins



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00234	1	WLCSP	U1490	CRITICAL	COMMON

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00233	335S00234	BOM_TABLE_ALTS	U1490	U1490

PAGE TITLE		
SOC: Serial		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
	BRANCH	evt-1
	PAGE	14 OF 80
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		SHEET 10 OF 51

D



C

C

B

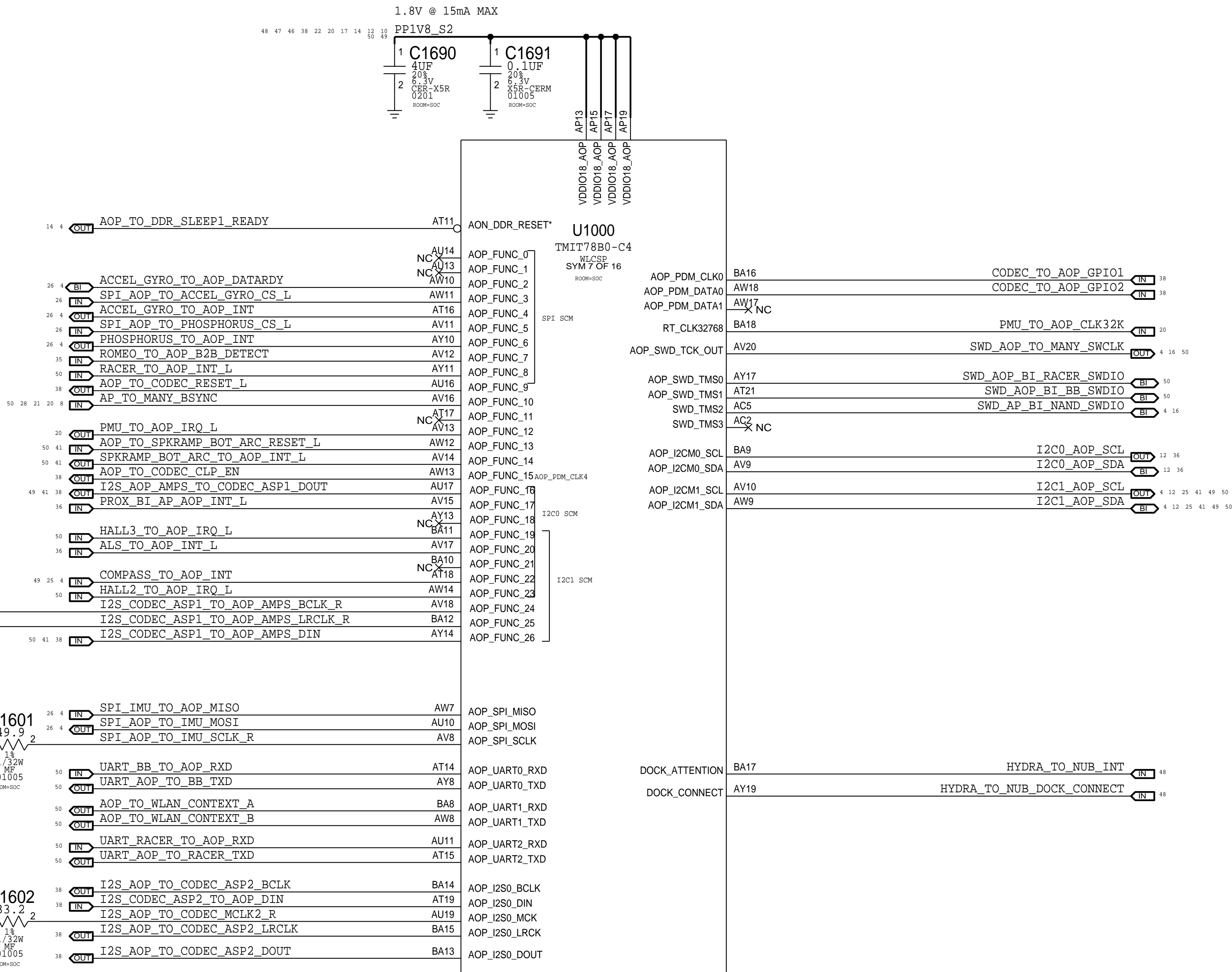
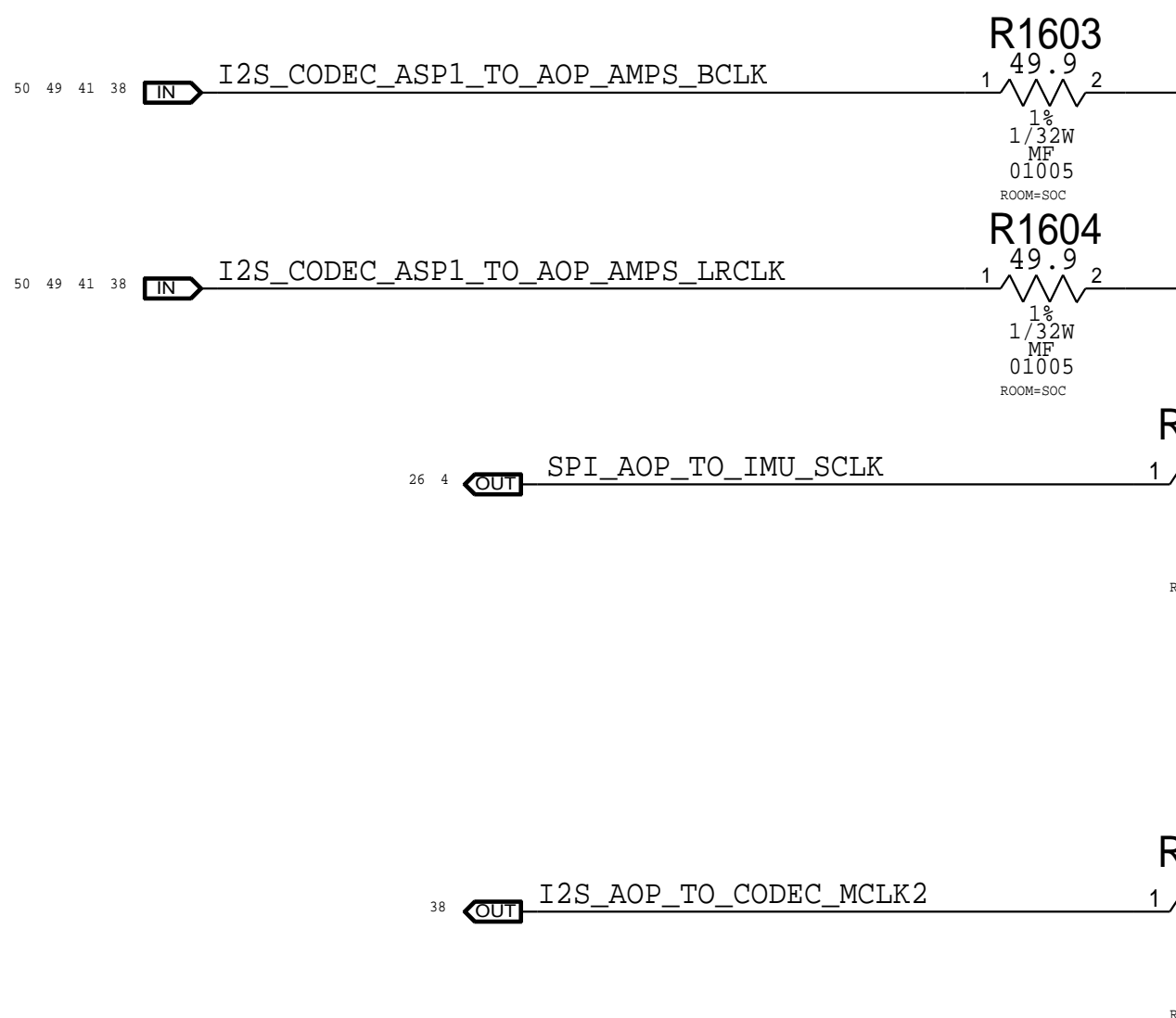
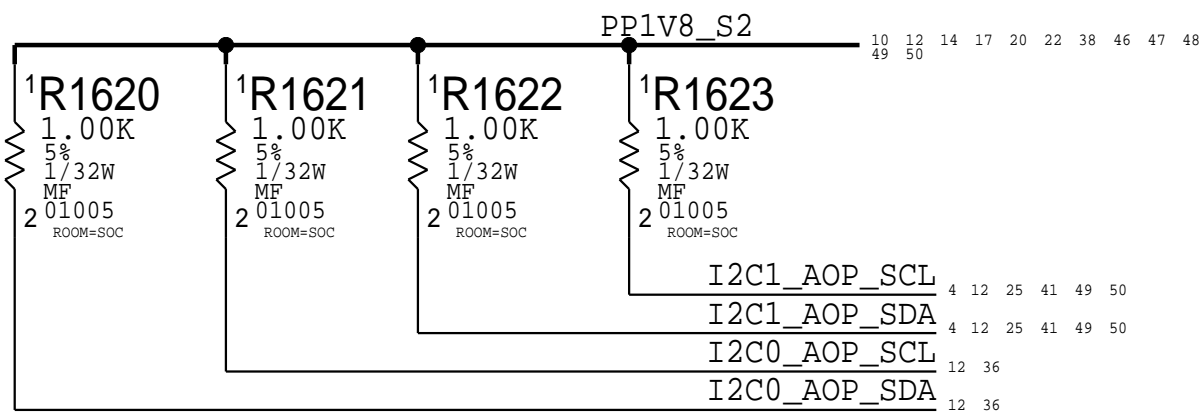
B


A

A

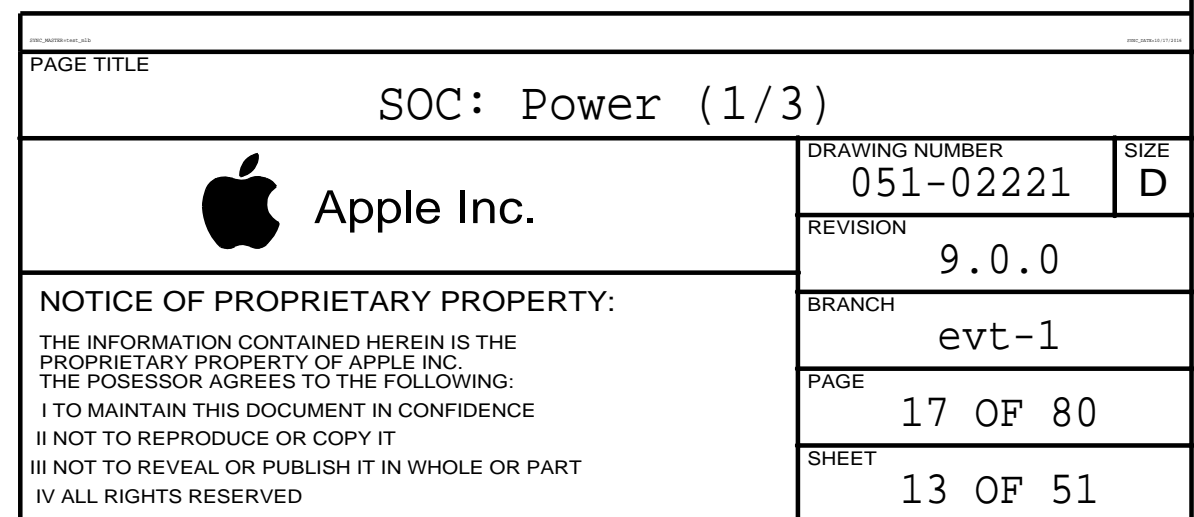
SOC - AOP

AOP I2C Pull-Ups

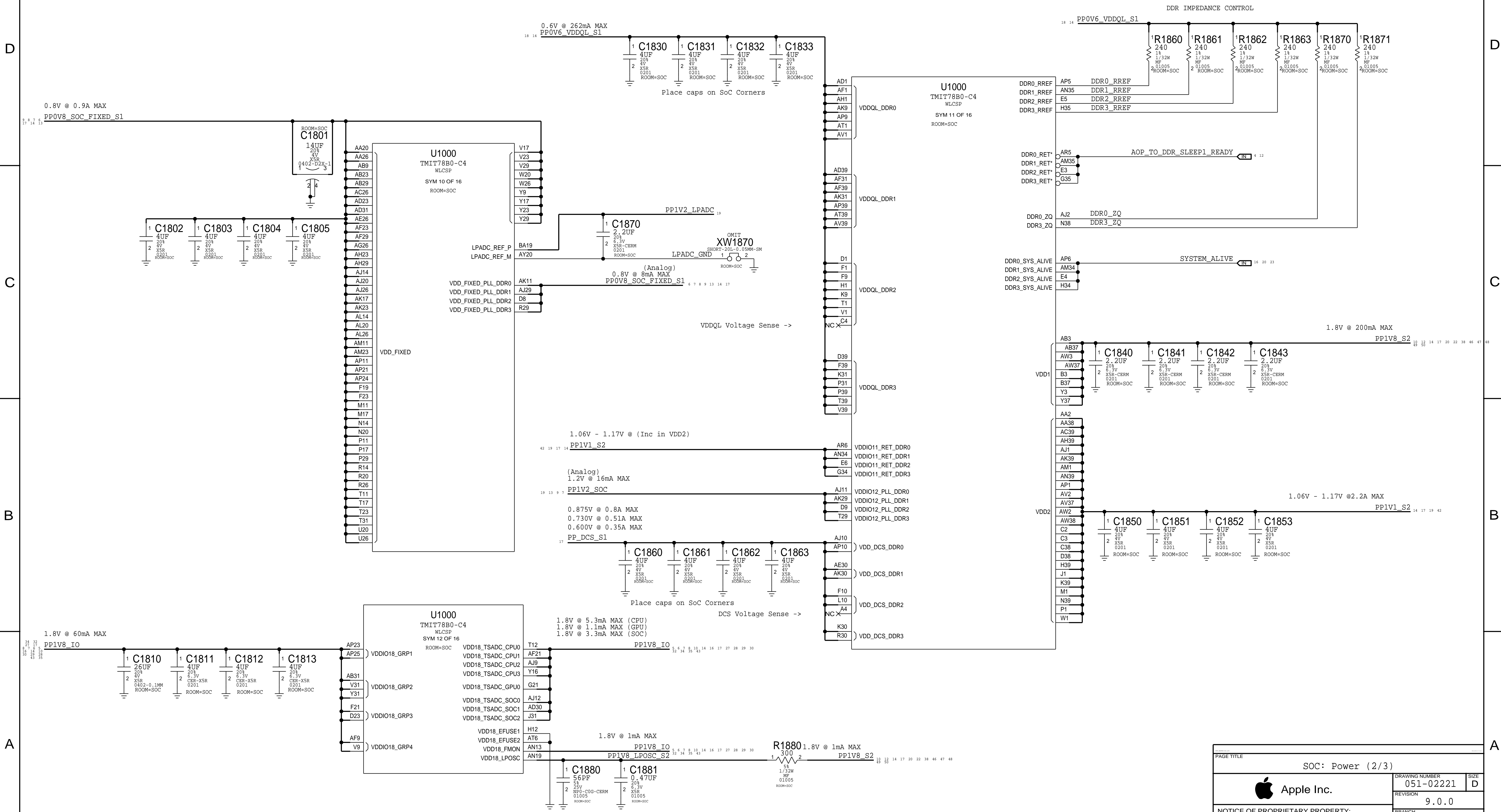


PAGE TITLE		
SOC: AOP		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
	BRANCH	evt-1
	PAGE	16 OF 80
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		SHEET 12 OF 51

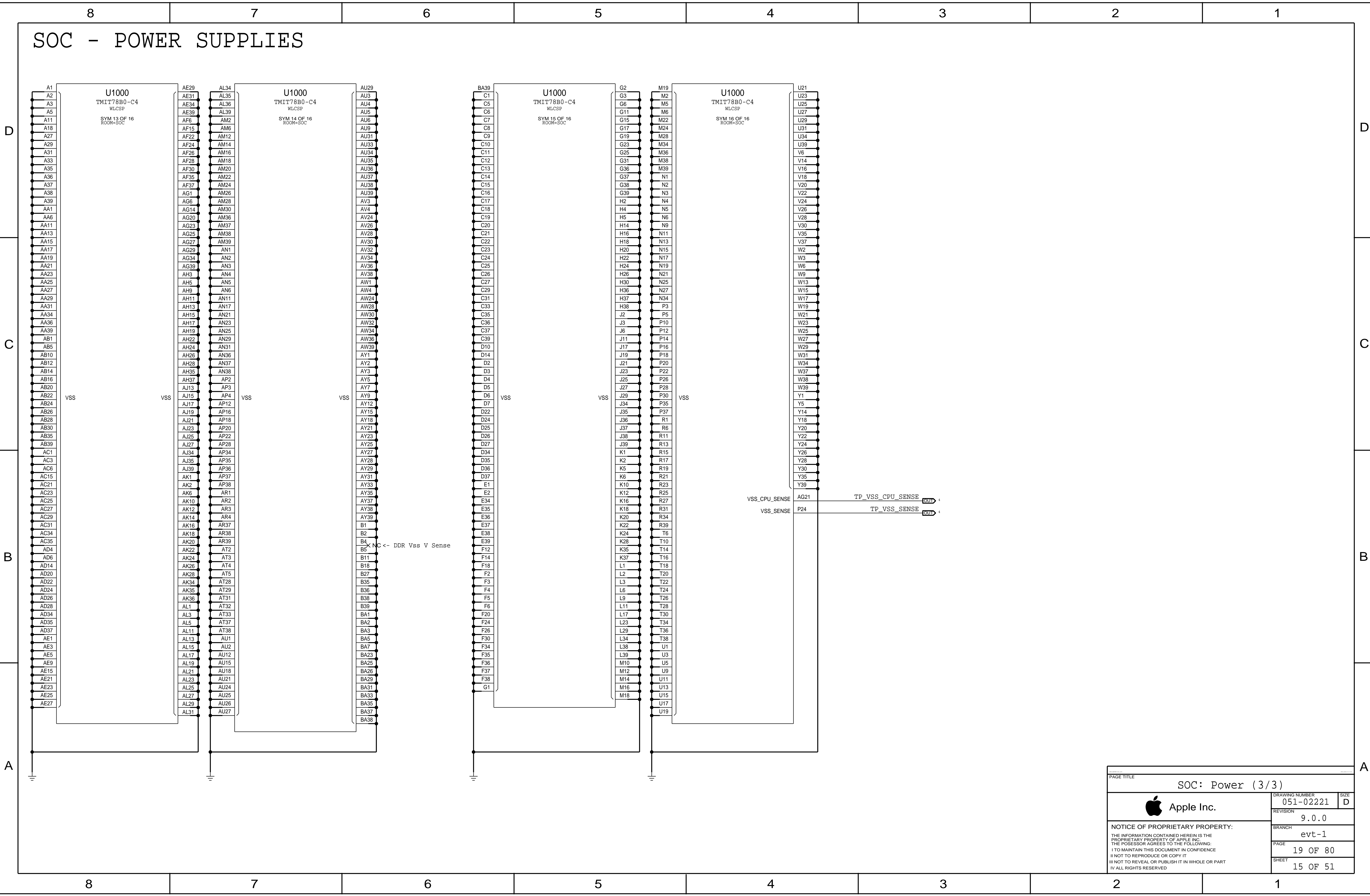
13.4 PP_CPU_PCORE



SOC - POWER SUPPLIES



SOC - POWER SUPPLIES



S4E NAND

D

D

C

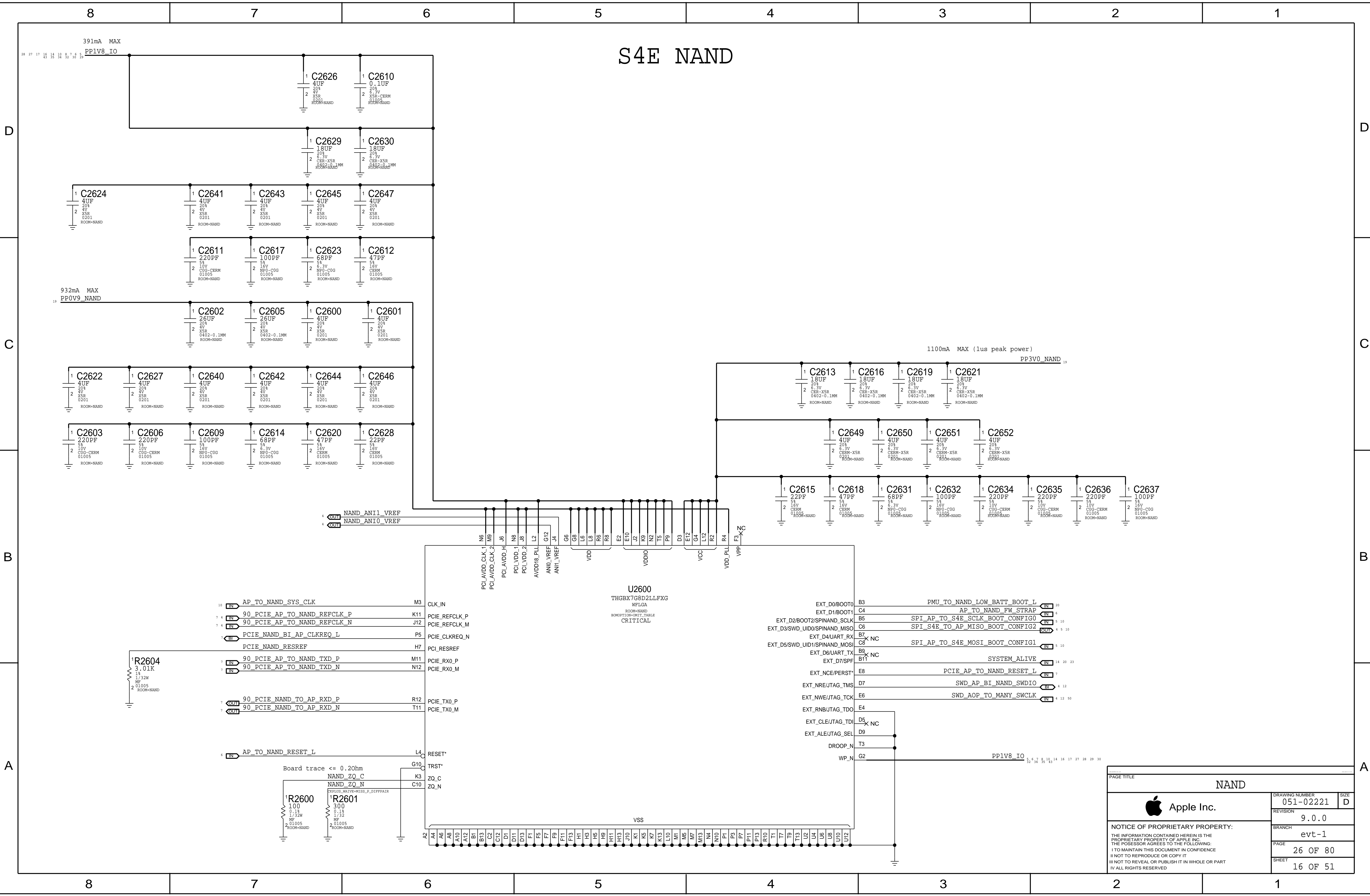
C

B

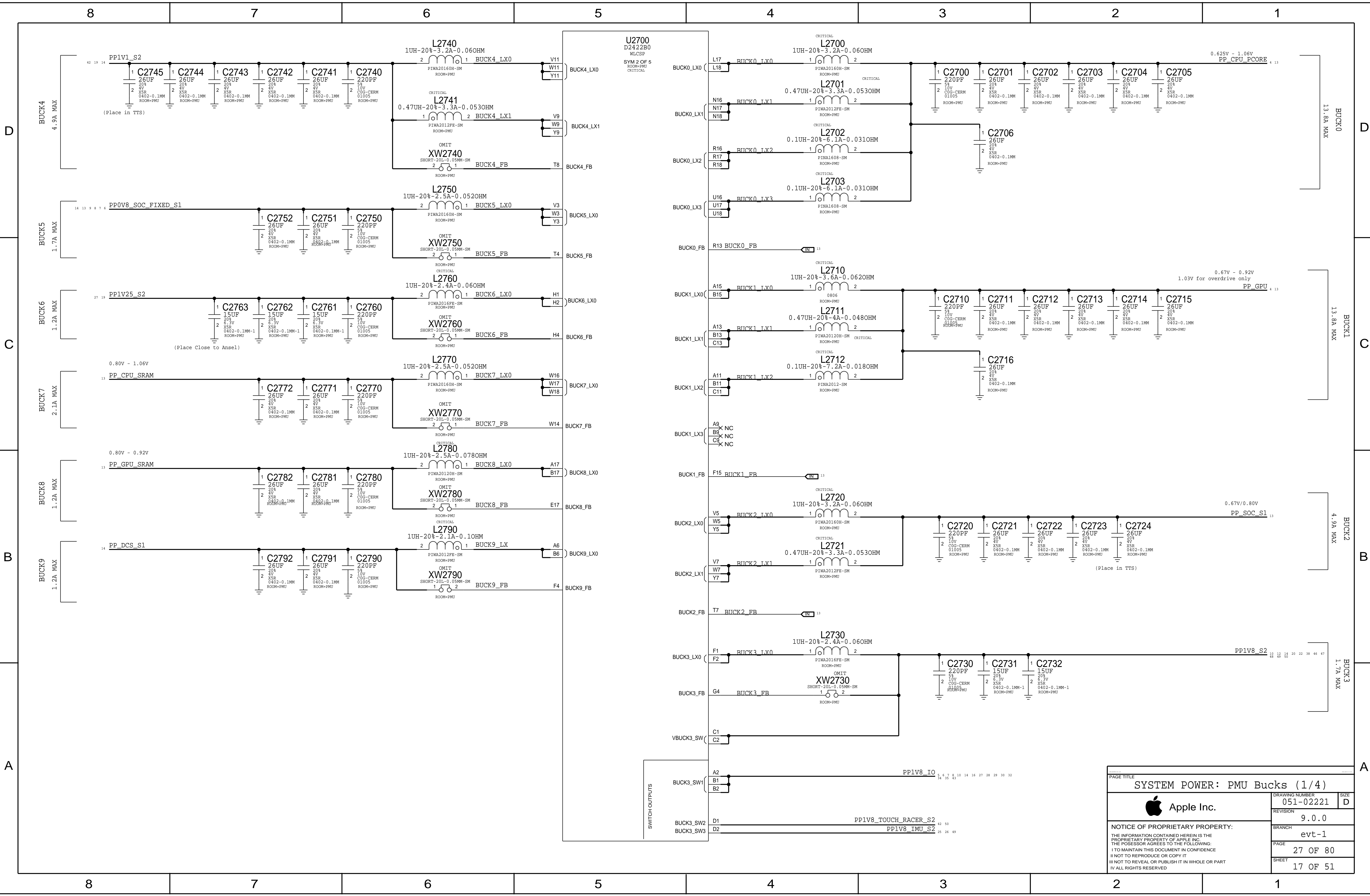
B

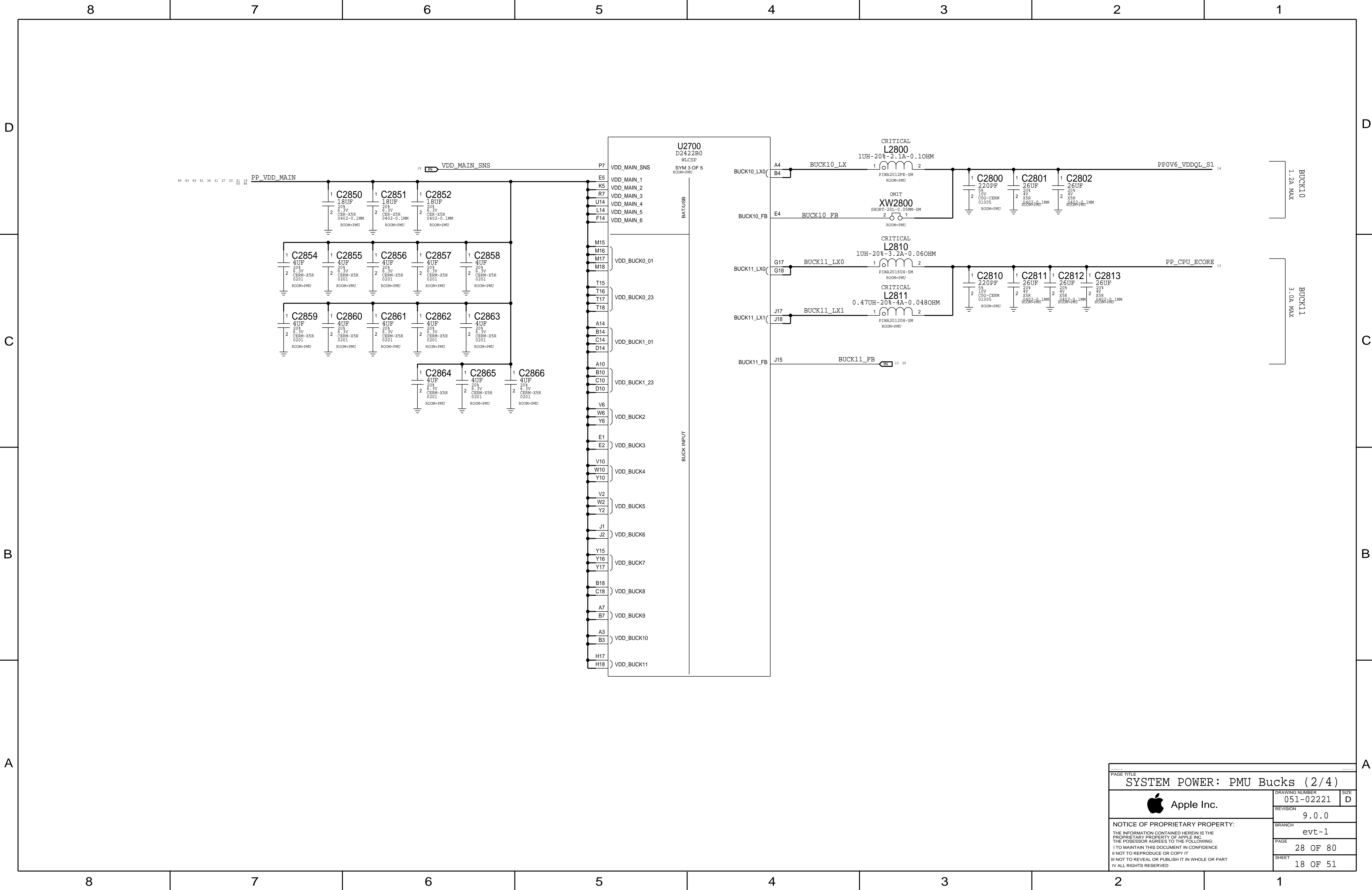
A

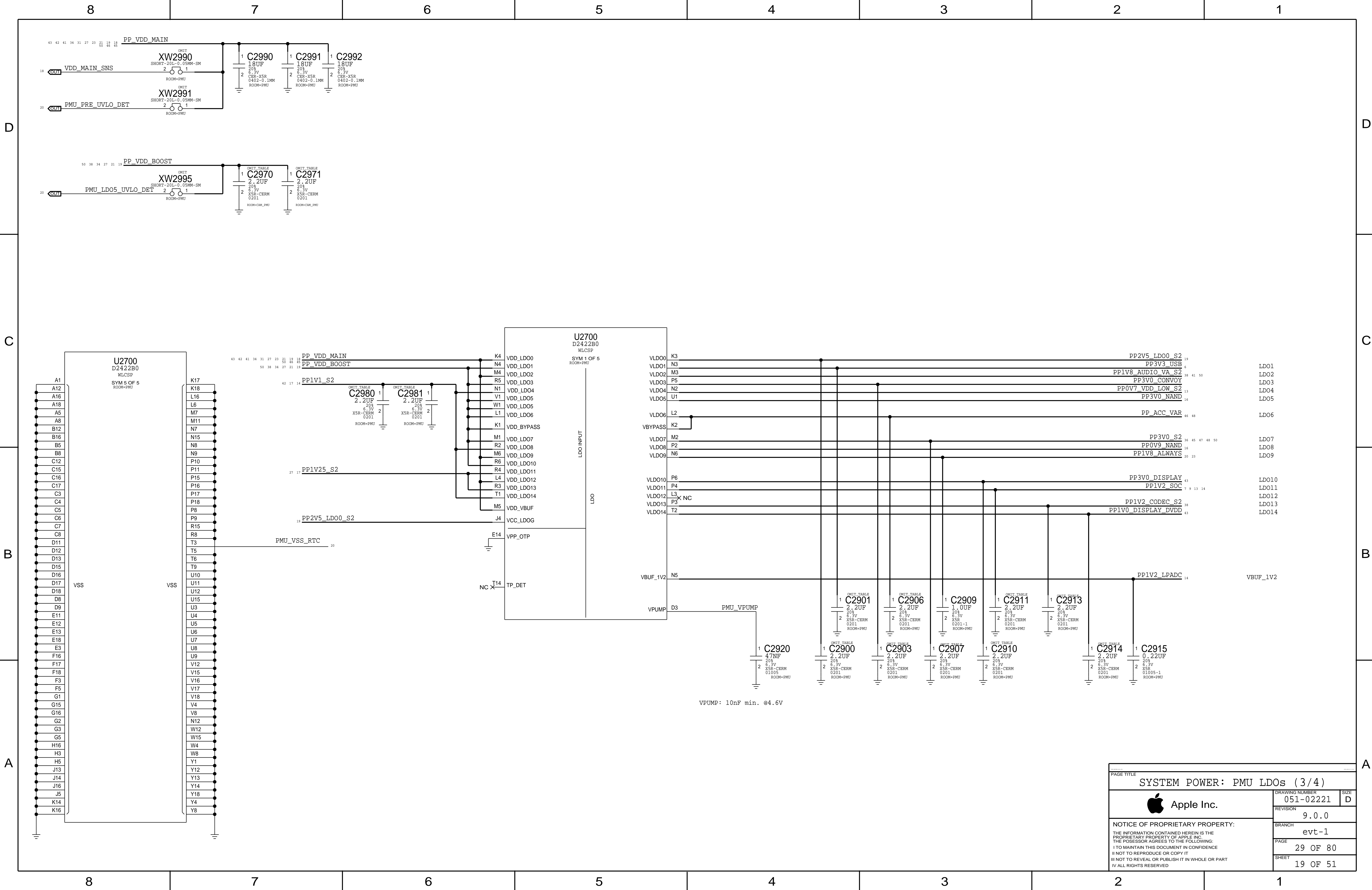
A




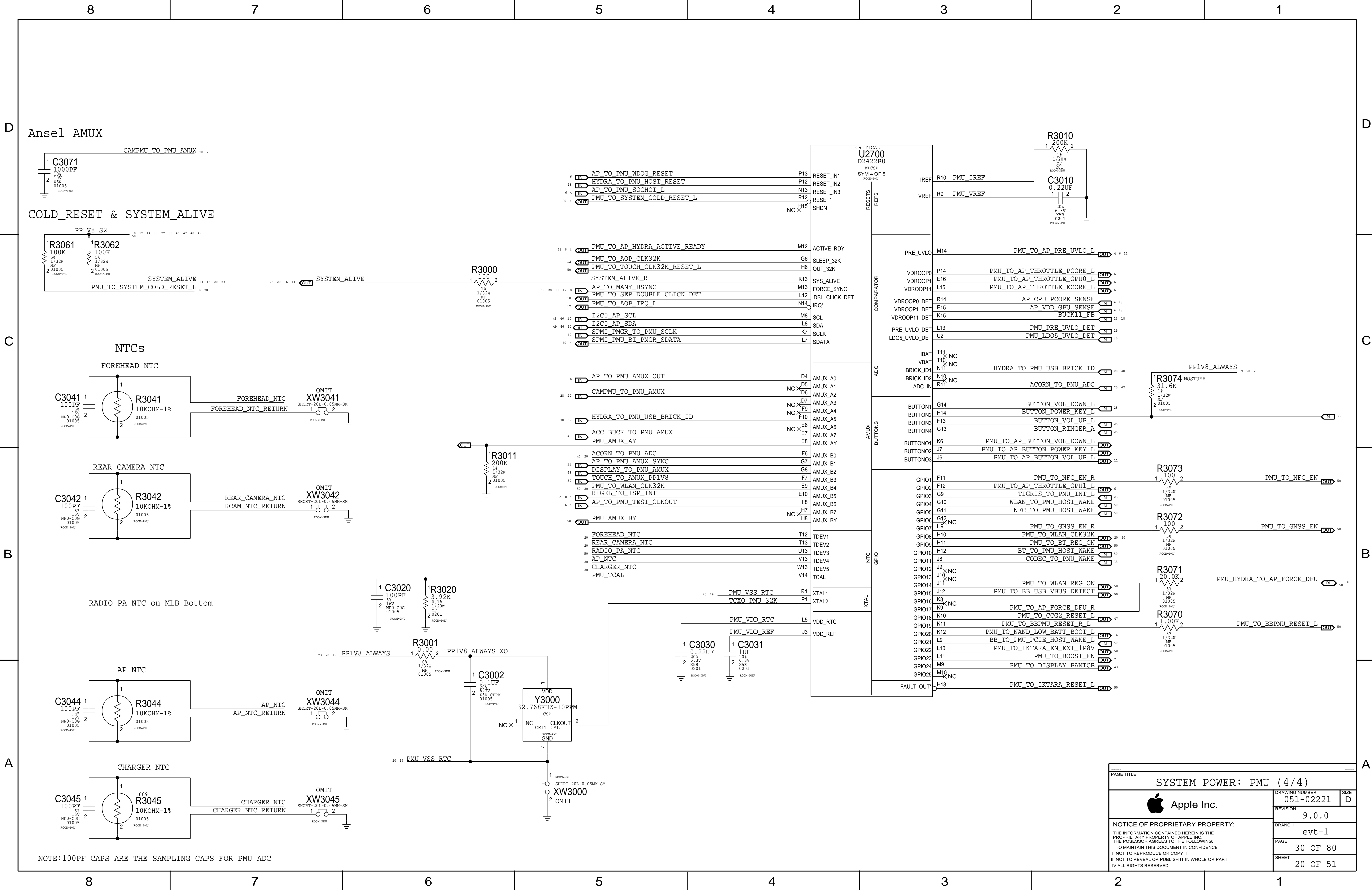
PAGE TITLE		
NAND		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
	BRANCH	evt-1
	PAGE	26 OF 80
NOTICE OF PROPRIETARY PROPERTY:		SHEET
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		16 OF 51
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		
II NOT TO REPRODUCE OR COPY IT		
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		
IV ALL RIGHTS RESERVED		

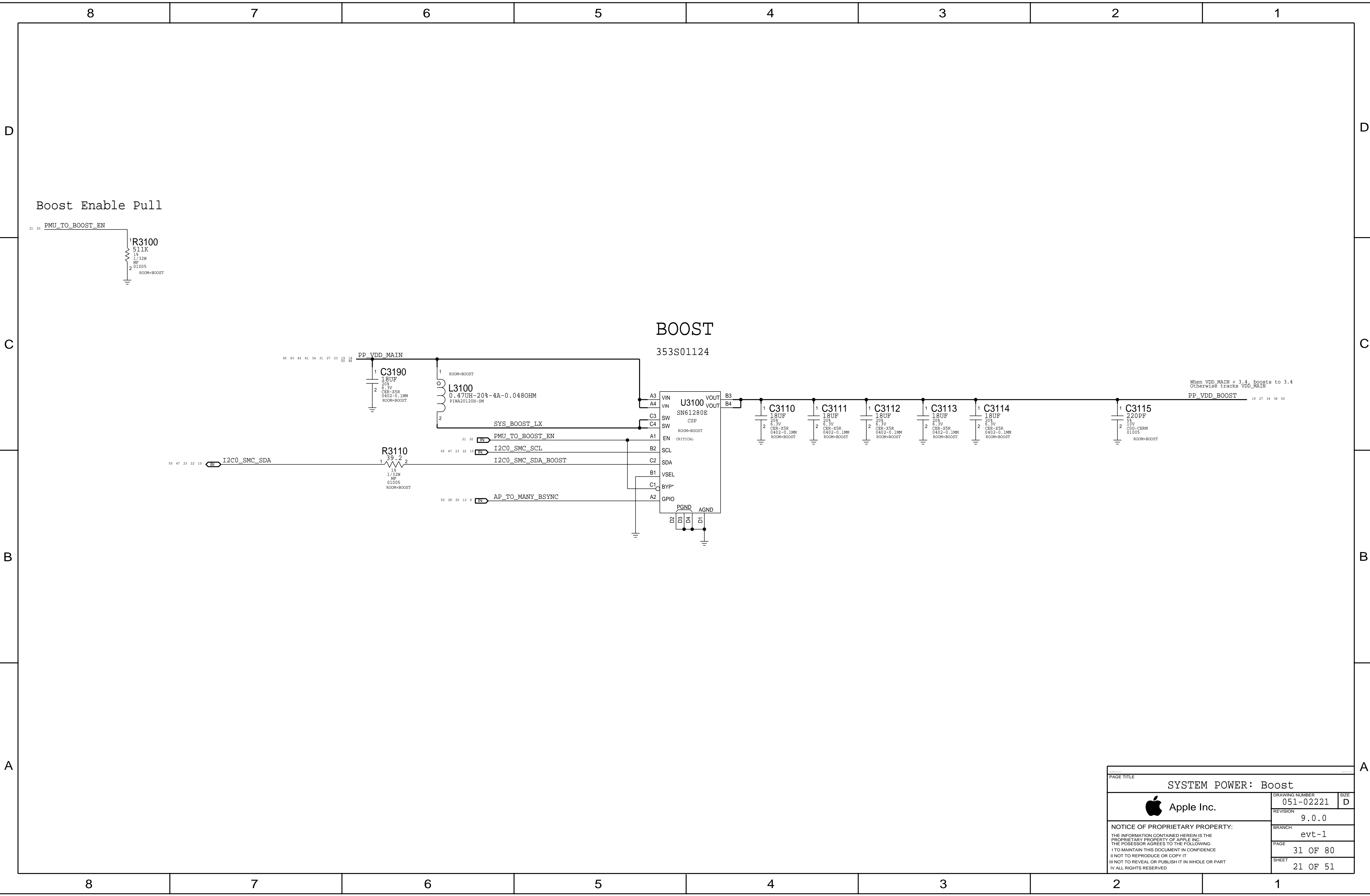





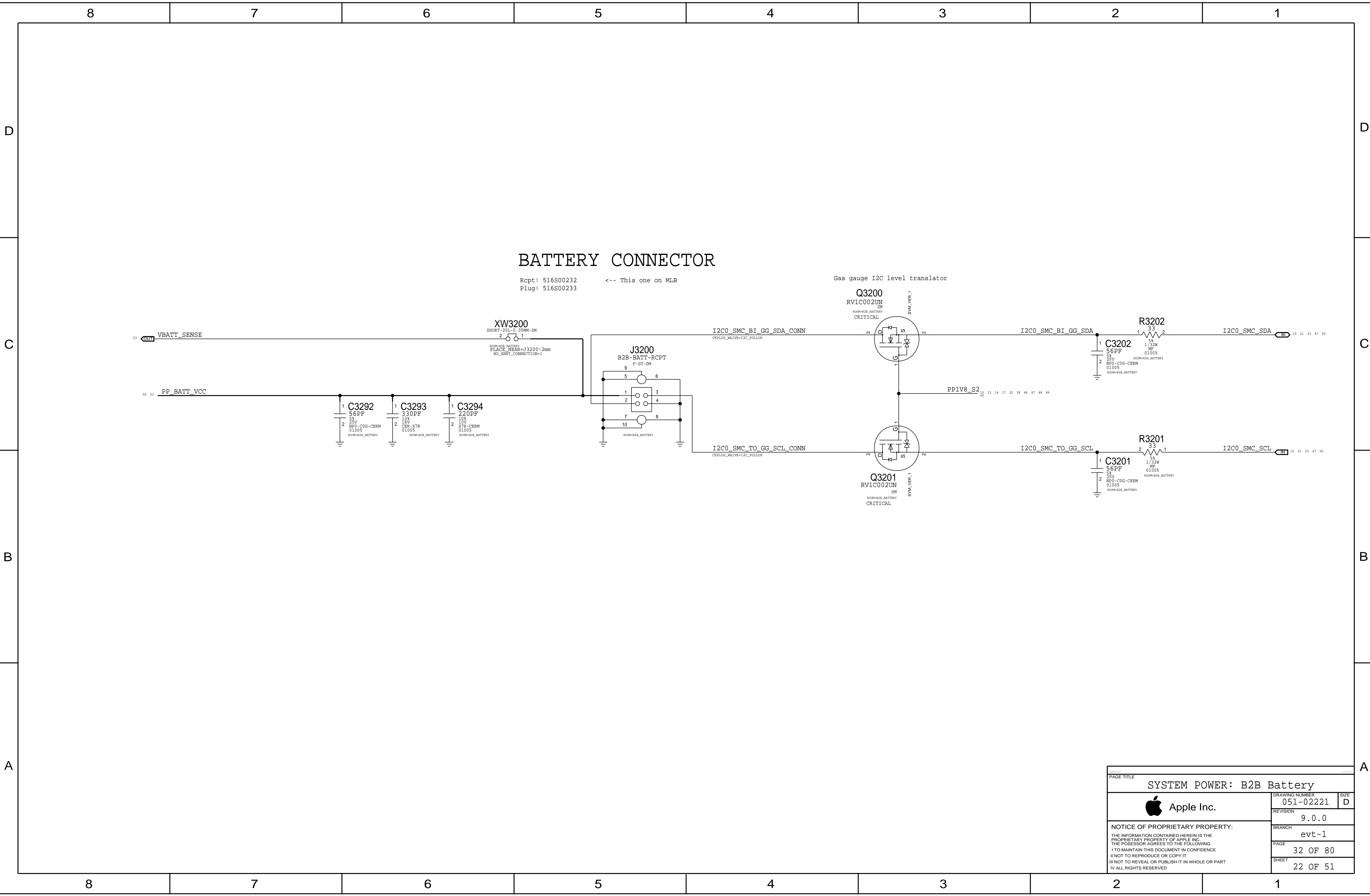



PAGE TITLE		
SYSTEM POWER: PMU LDOs (3/4)		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
	BRANCH	evt-1
	PAGE	29 OF 80
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		SHEET 19 OF 51



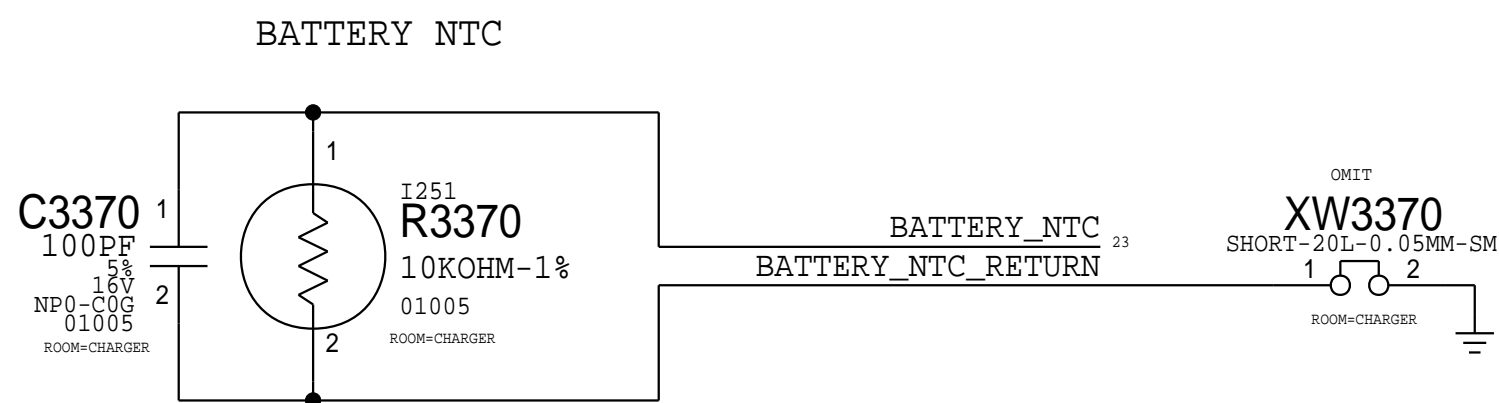
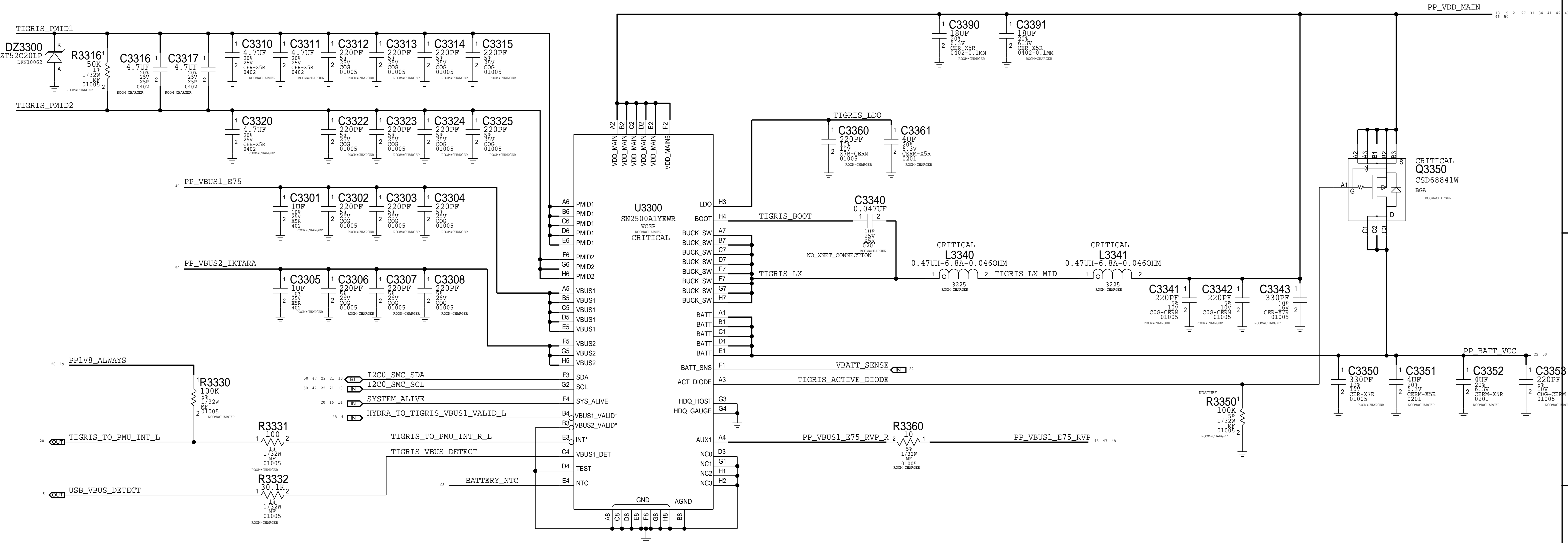



PAGE TITLE		
SYSTEM POWER: Boost		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	31 OF 80
	SHEET	21 OF 51



PAGE TITLE		
SYSTEM POWER: B2B Battery		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
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	evt-1
	PAGE	32 OF 80
	SHEET	22 OF 51


TIGRIS2 CHARGER




PAGE TITLE		
SYSTEM POWER: Charger		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
	BRANCH	evt-1
	PAGE	33 OF 80
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		SHEET 23 OF 51

8		7		6		5		4		3		2		1			
D																D	
C																C	
B																B	
A																A	
8		7		6		5		4		3		2		1			

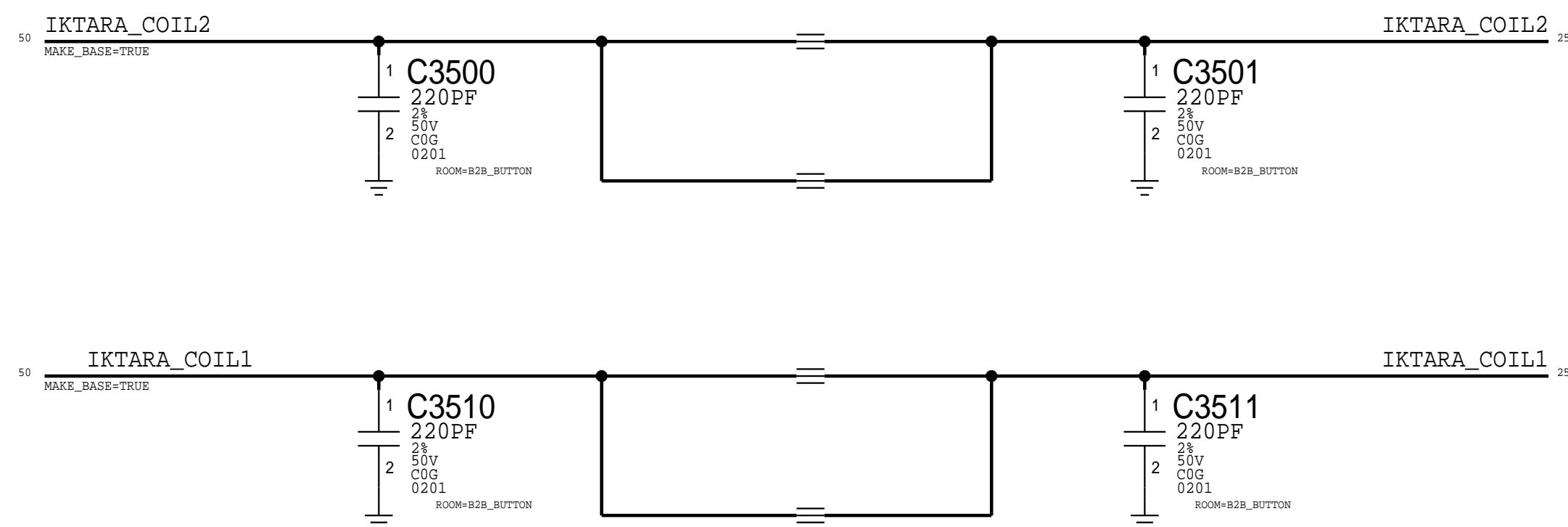
Iktara Components on MLB Bottom

PAGE TITLE			SYSTEM POWER: Iktara		
 Apple Inc.		DRAWING NUMBER		051-02221	
		REVISION		9.0.0	
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		evt-1	
		PAGE		34 OF 80	
		SHEET		24 OF 51	

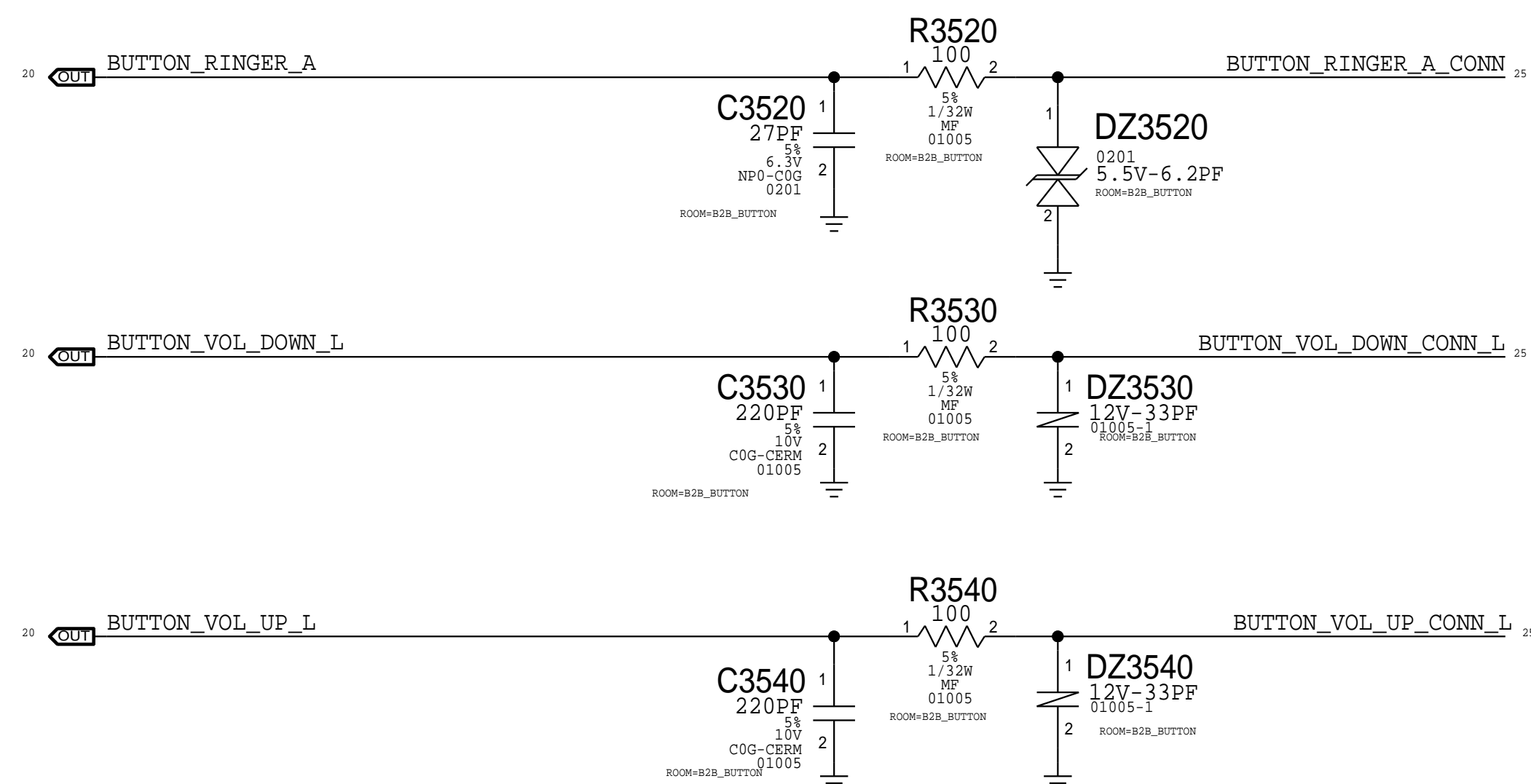
Iktara Components on MLB Bottom

PAGE TITLE SYSTEM POWER: Iktara		
 Apple Inc.	DRAWING NUMBER 051-02221	SIZE D
	REVISION 9.0.0	
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 evt-1	
	PAGE 34 OF 80	
	SHEET 24 OF 51	

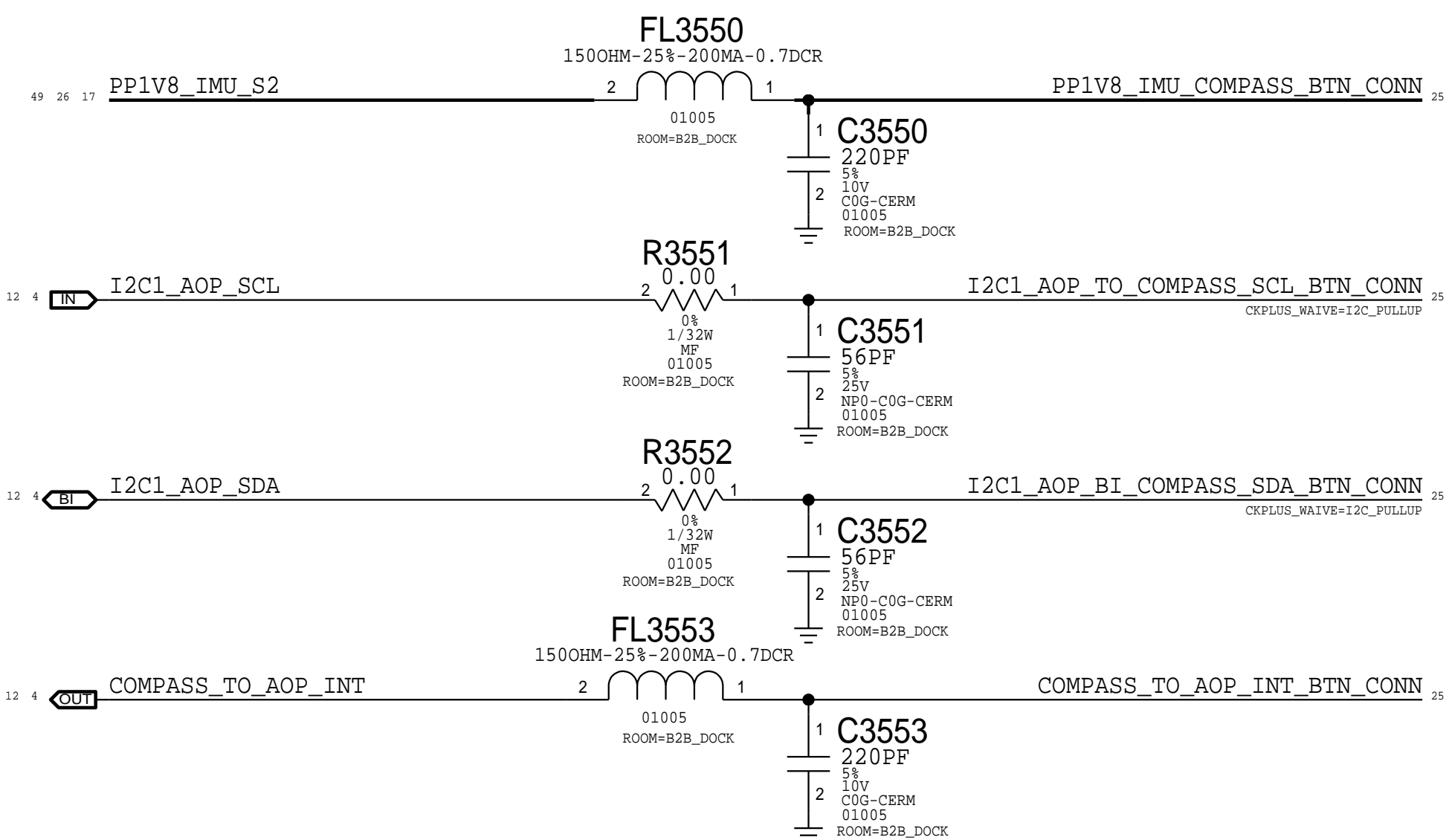
Cyclone Filtering



BUTTONS

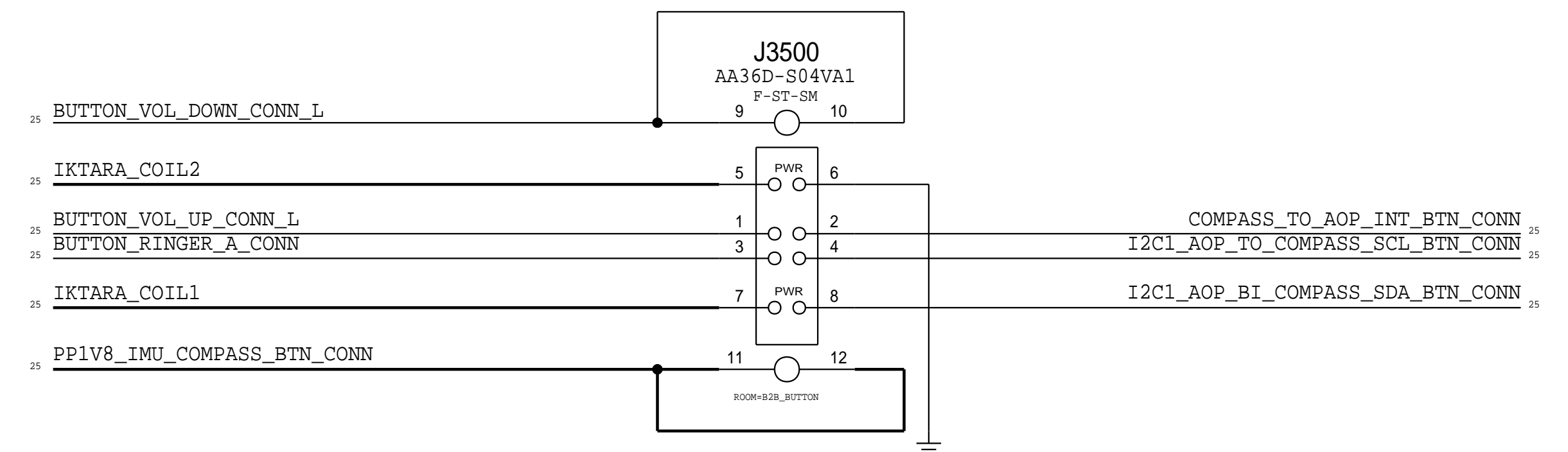


Compass (Button Flex Location)

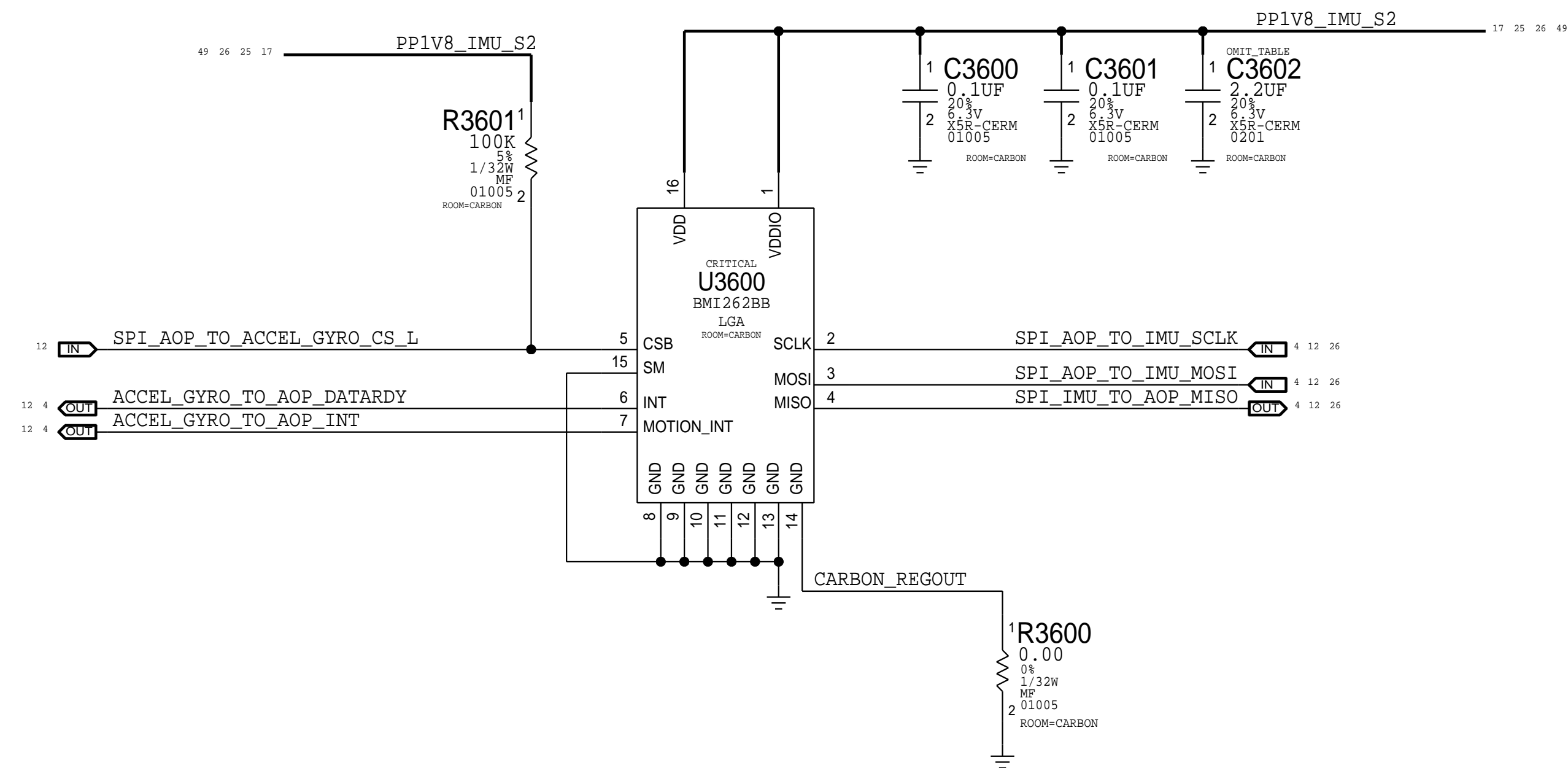


Cyclone + Button Connector

```
Rcpt: 516S00289      <-- This one on MLB
Plug: 516S00290
```

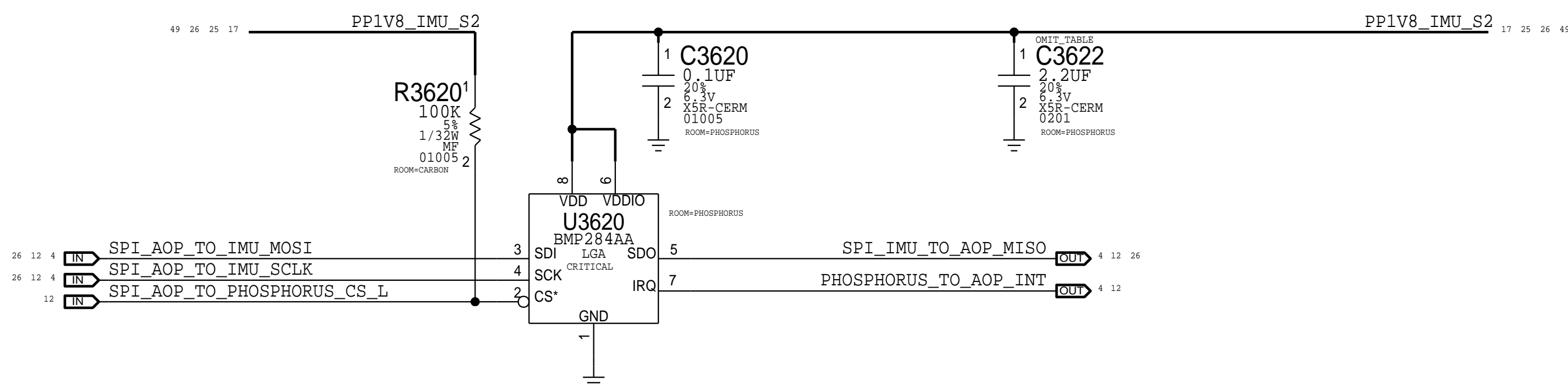



APN: 338S00304



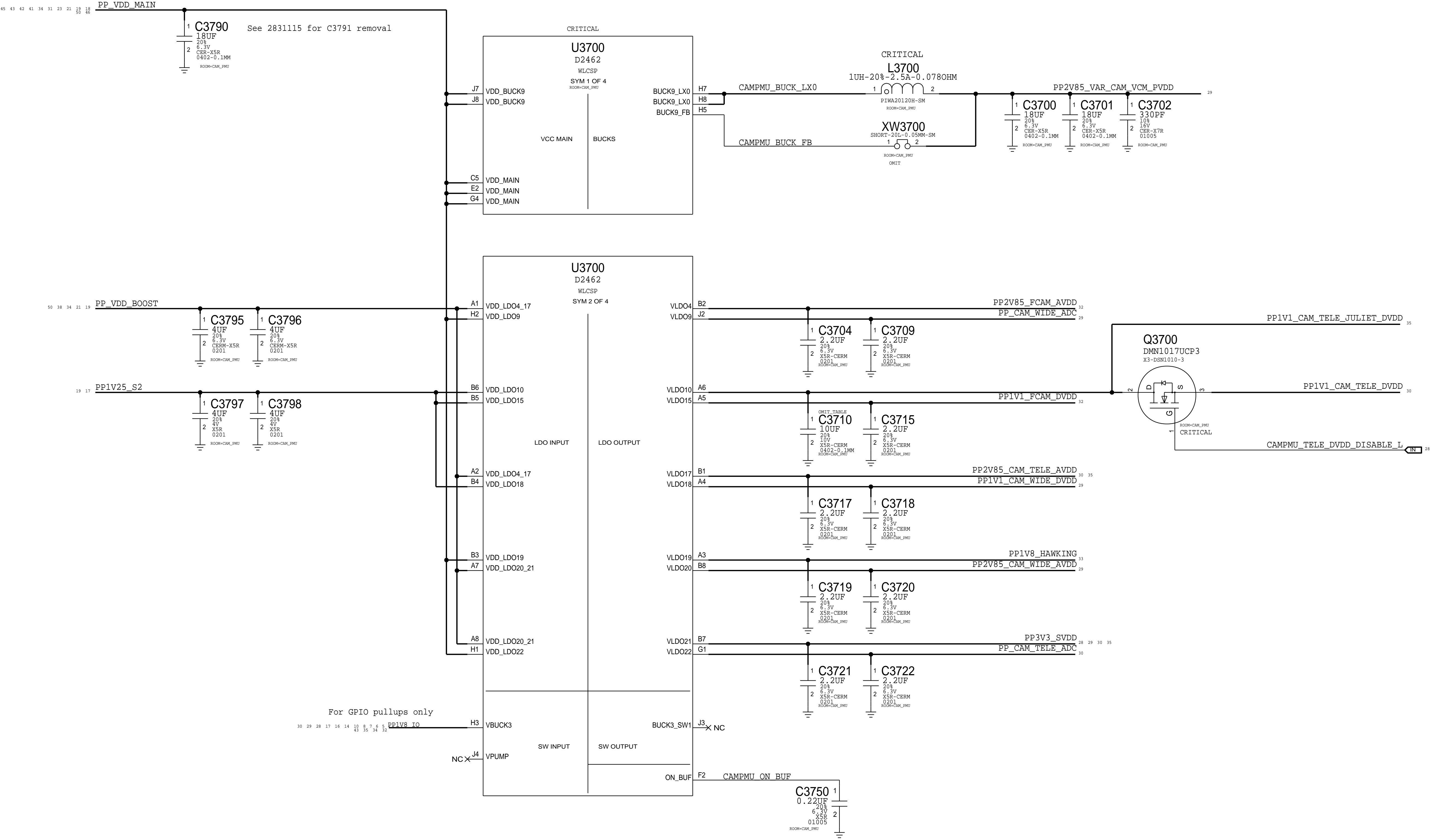
(On Dock or Button Flex)


BOSCH (APN:338S00188)
ST (APN:338S00230)



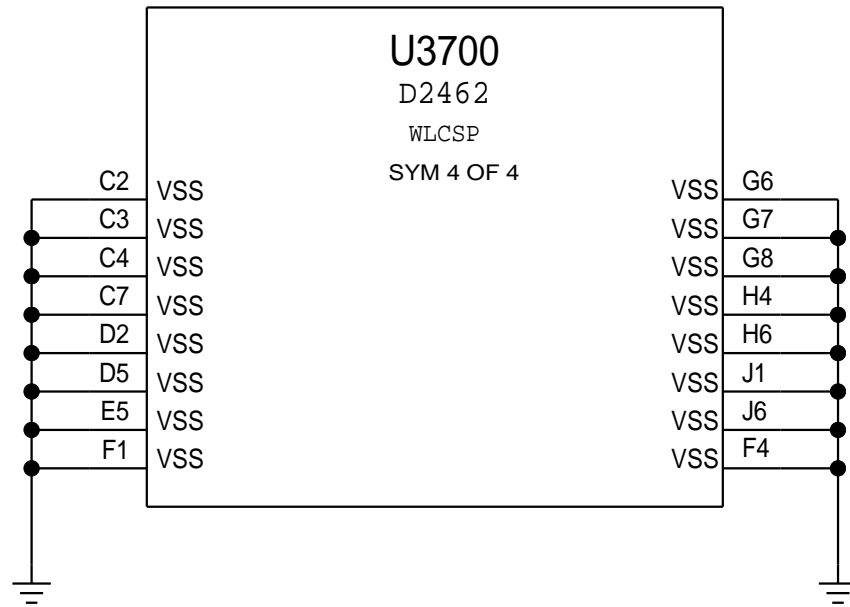
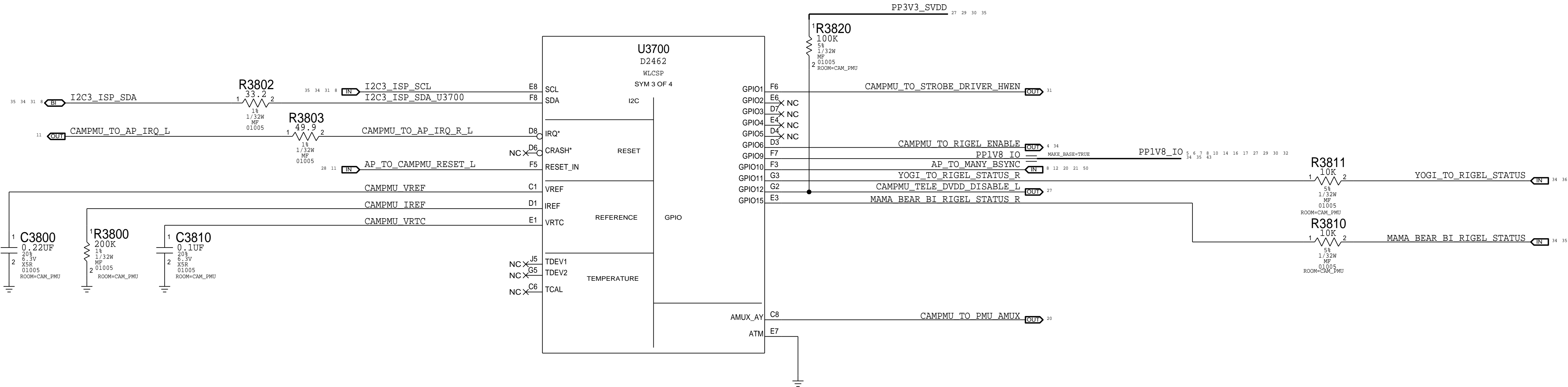
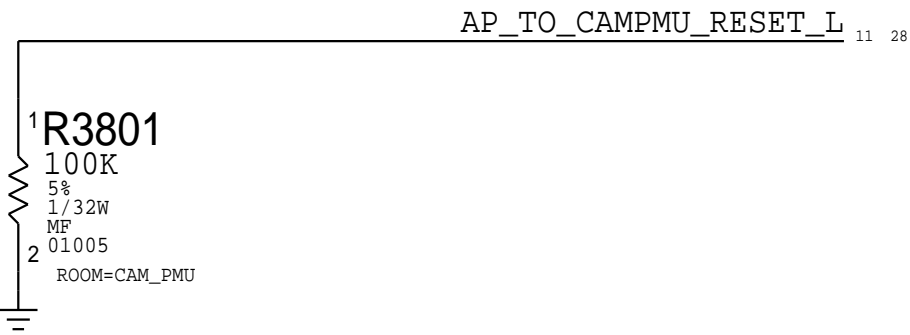
PAGE TITLE		SENSORS	
 Apple Inc.	DRAWING NUMBER	051-02221	SIZE
	REVISION	9.0.0	D
	NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
BRANCH		evt-1	
PAGE		36 OF 80	
SHEET		26 OF 51	


Camera PMU



PAGE TITLE			
CAMERA: PMU (1/2)			
 Apple Inc.	DRAWING NUMBER		SIZE
	051-02221		D
	REVISION		
	9.0.0		
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		evt-1	
		PAGE	
		37 OF 80	
		SHEET	
		27 OF 51	

Pull Downs



PAGE TITLE		
CAMERA: PMU (2/2)		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
	BRANCH	evt-1
	PAGE	38 OF 80
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		SHEET 28 OF 51


```
Rcpt: 516S00313      <-- This one on MLB
Plug: 516S00314
```



C

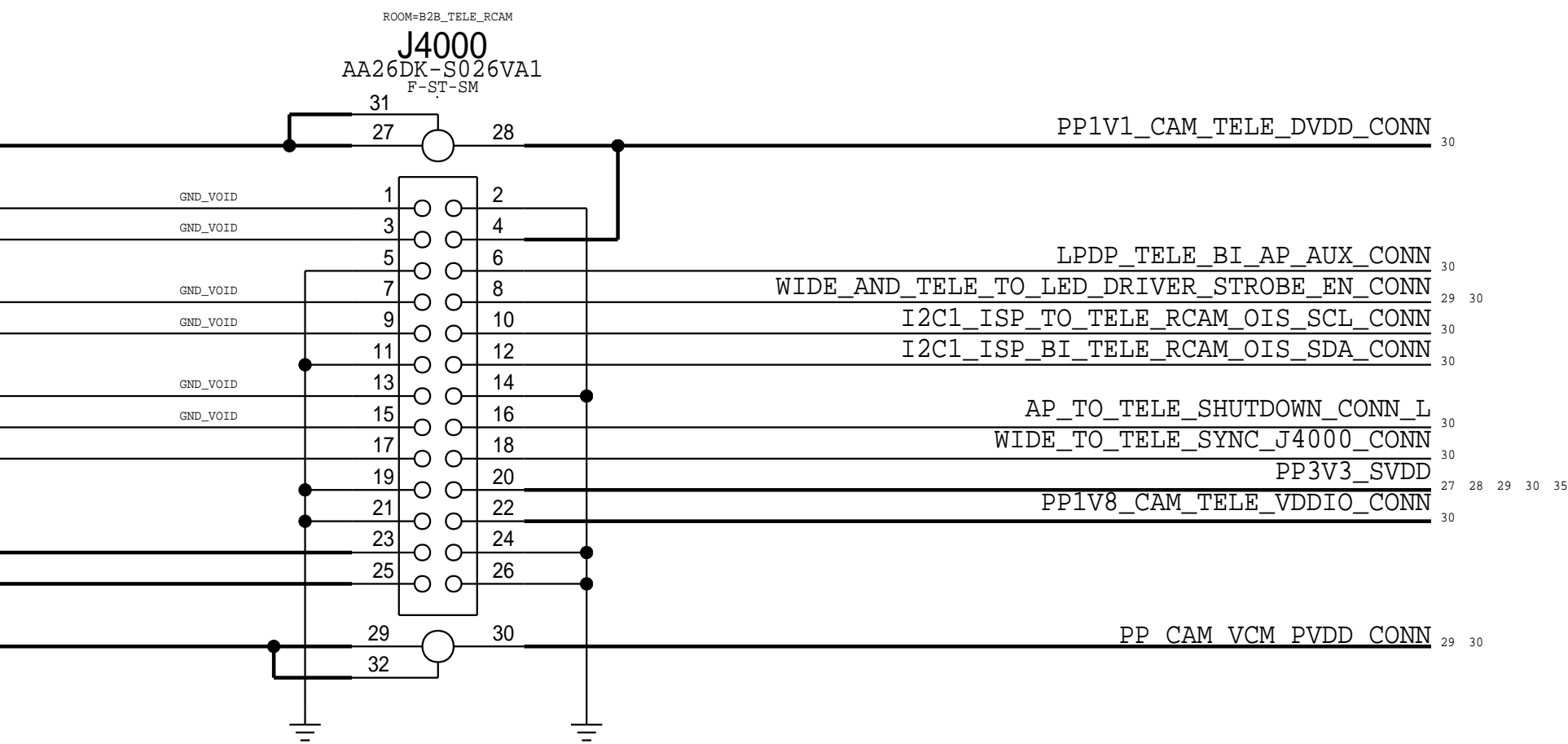


A

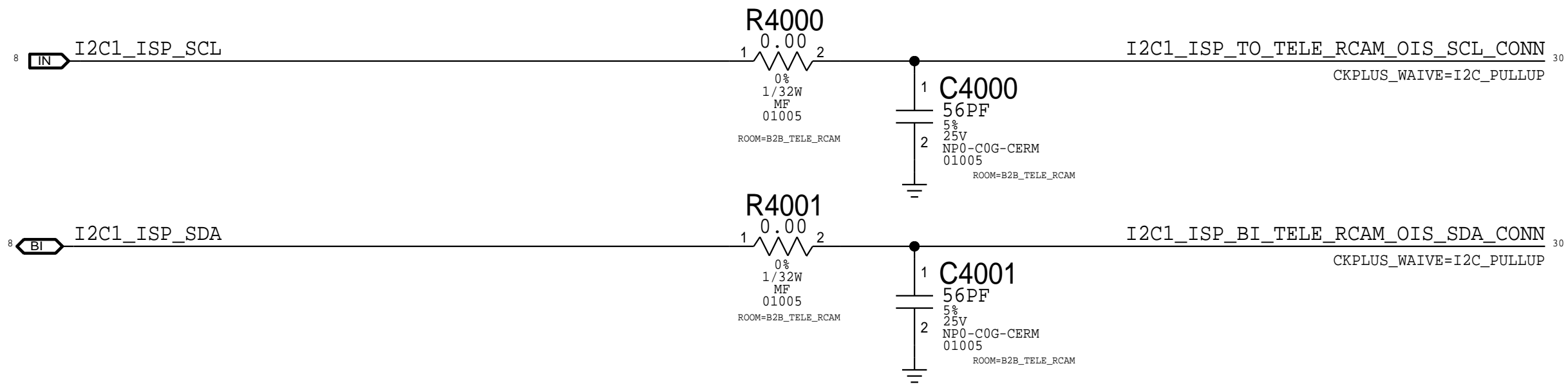


Tele Camera Connector

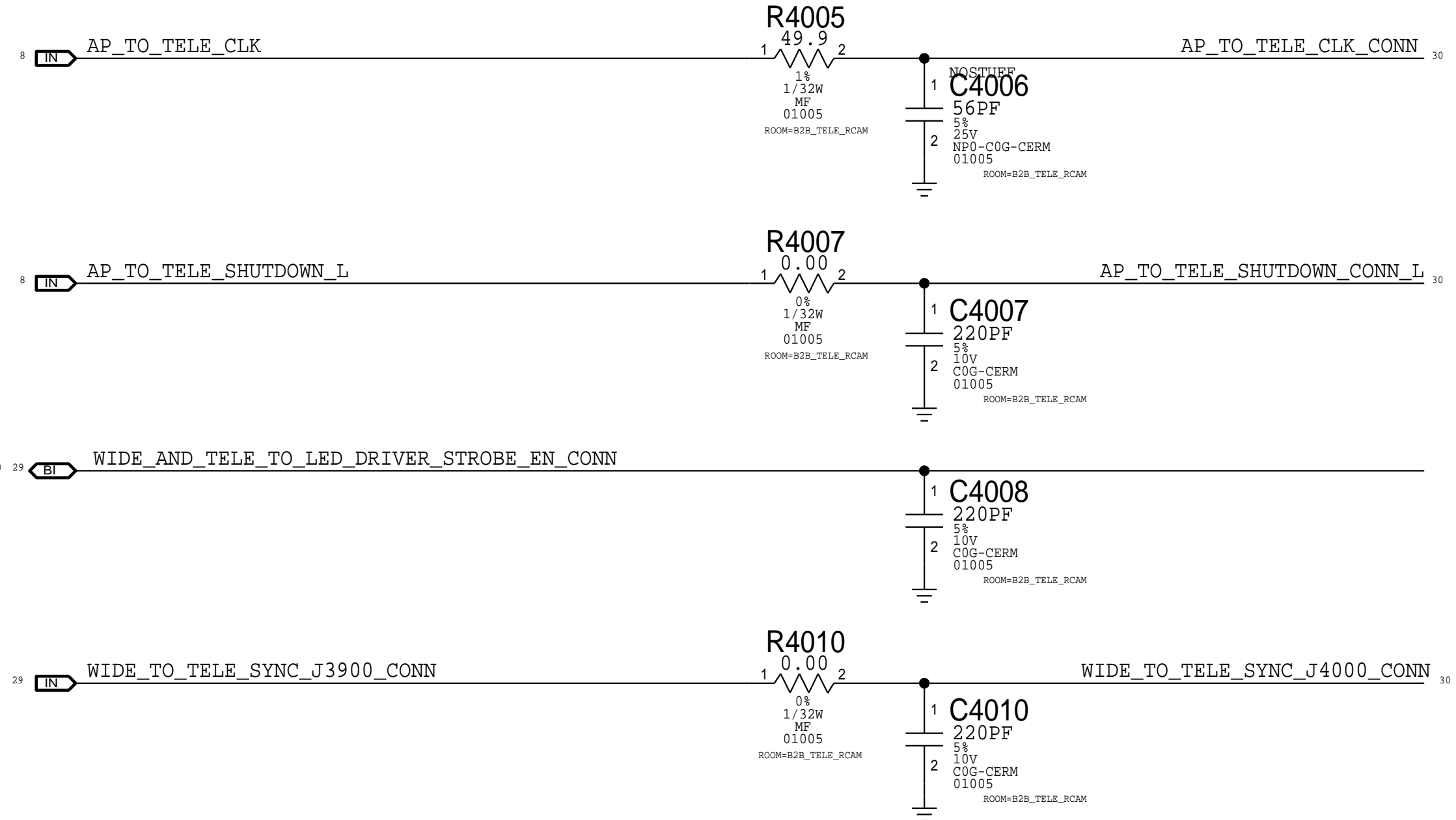
Rcpt: 516S00313
Plug: 516S00314



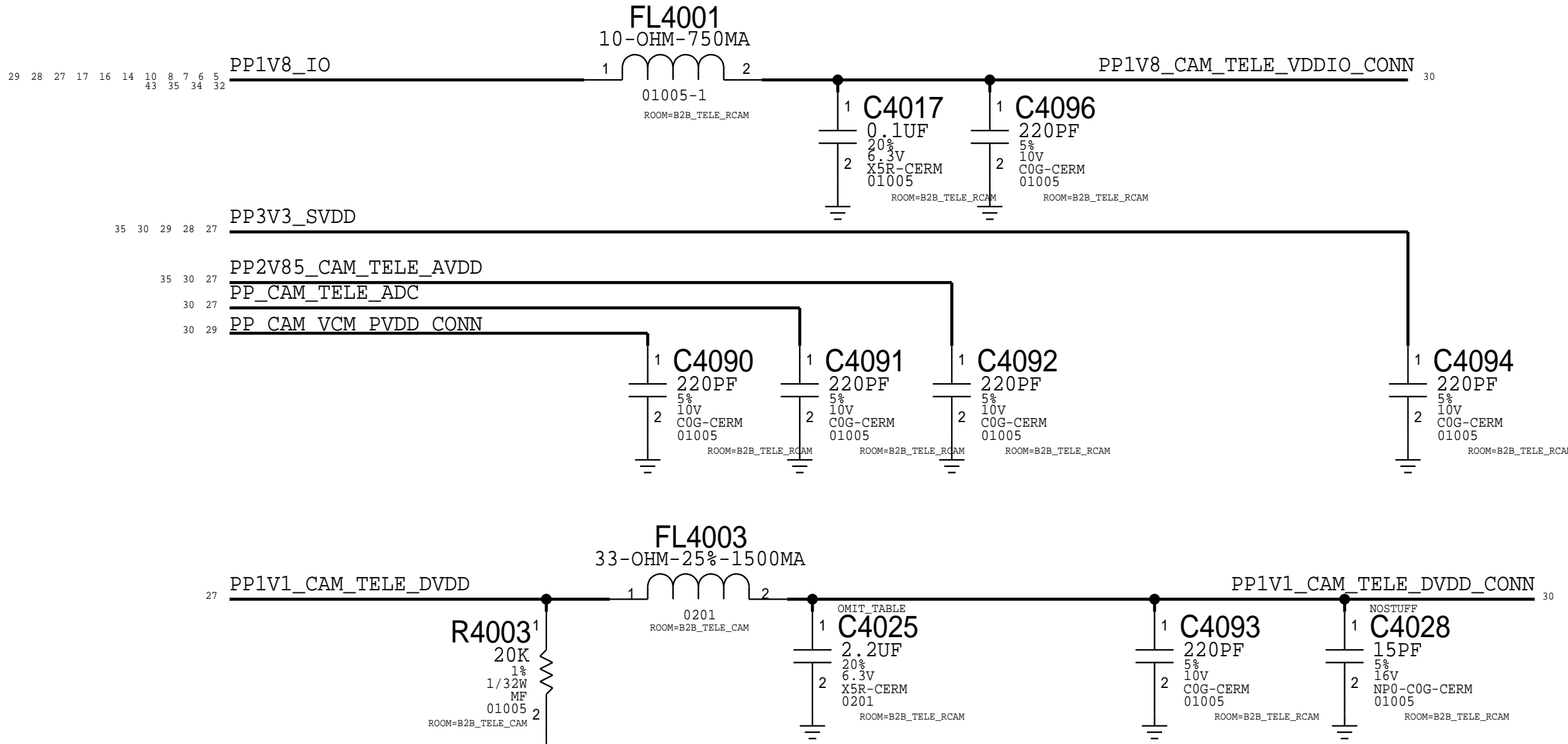
ISP I2C



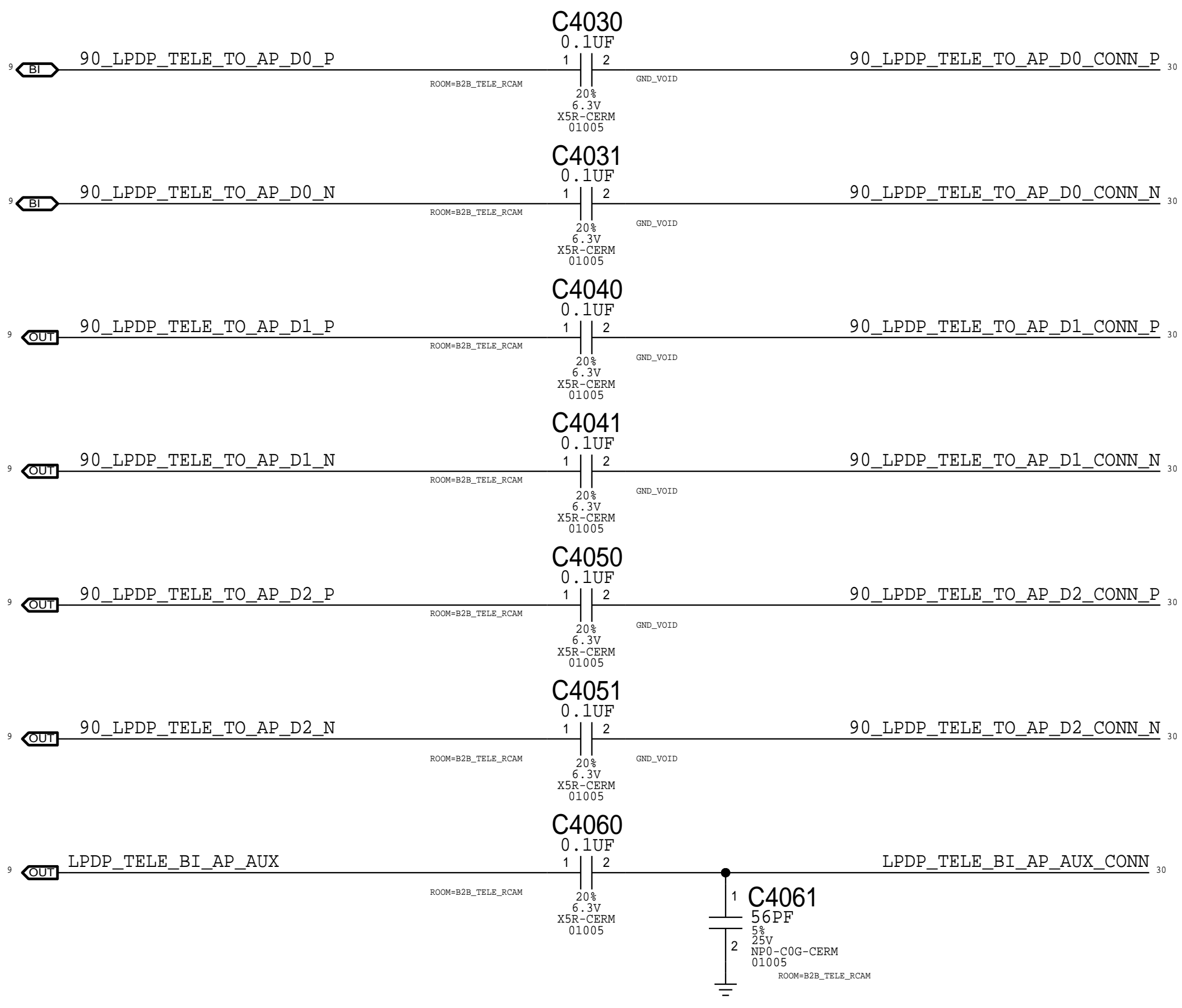
IO Filters



Power Filtering



LPDP

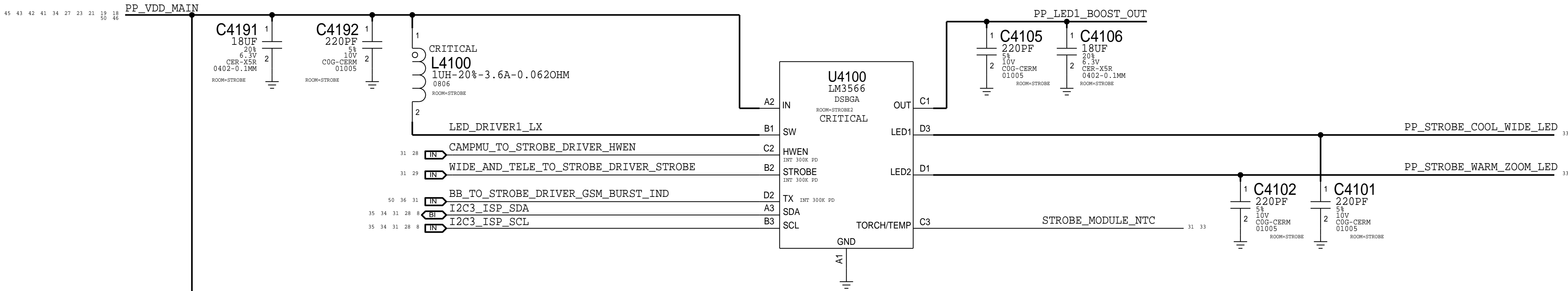


PAGE TITLE		
CAMERA: B2B Tele (MT)		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	40 OF 80
	SHEET	30 OF 51

LED STROBE DRIVERS (NEON)

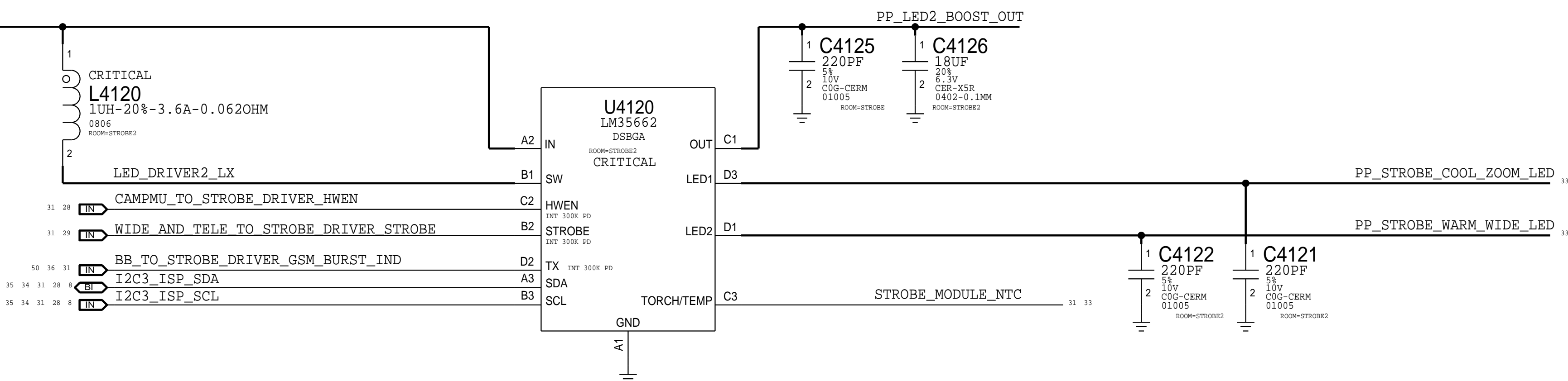
APN:353S00558

I2C Address (7-bit): 0x63



APN:353S00868

I2C Address (7-bit): 0x67

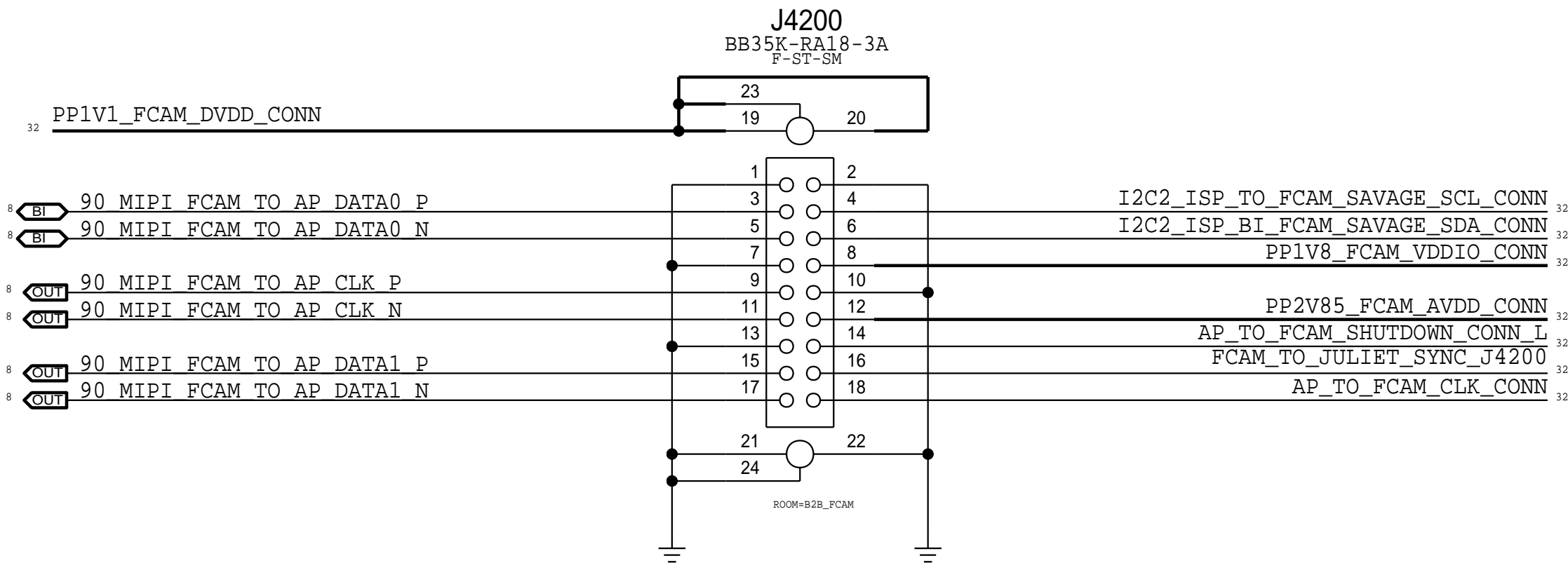
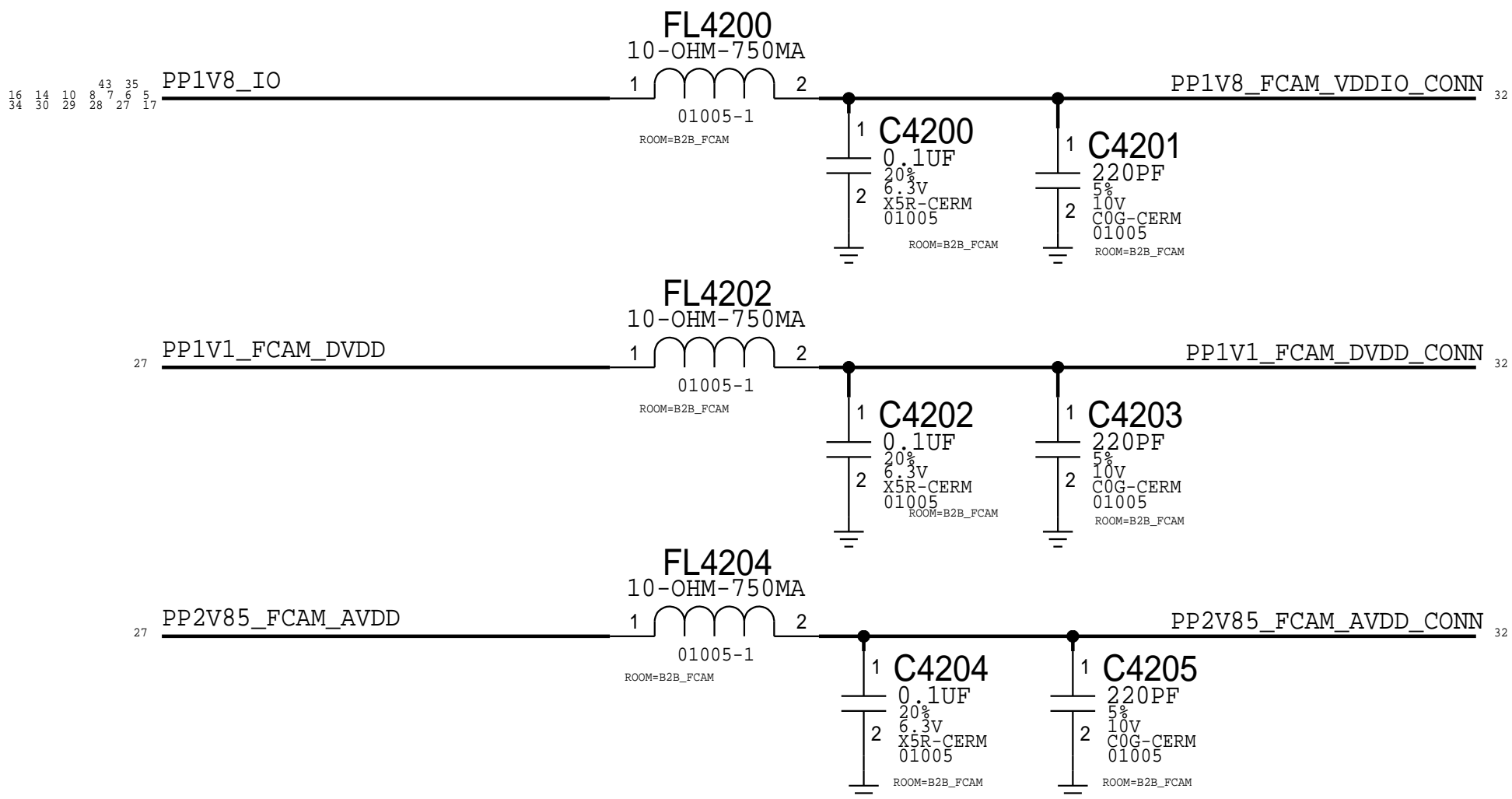


PAGE TITLE		
CAMERA: Strobe Drivers		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	41 OF 80
	SHEET	31 OF 51

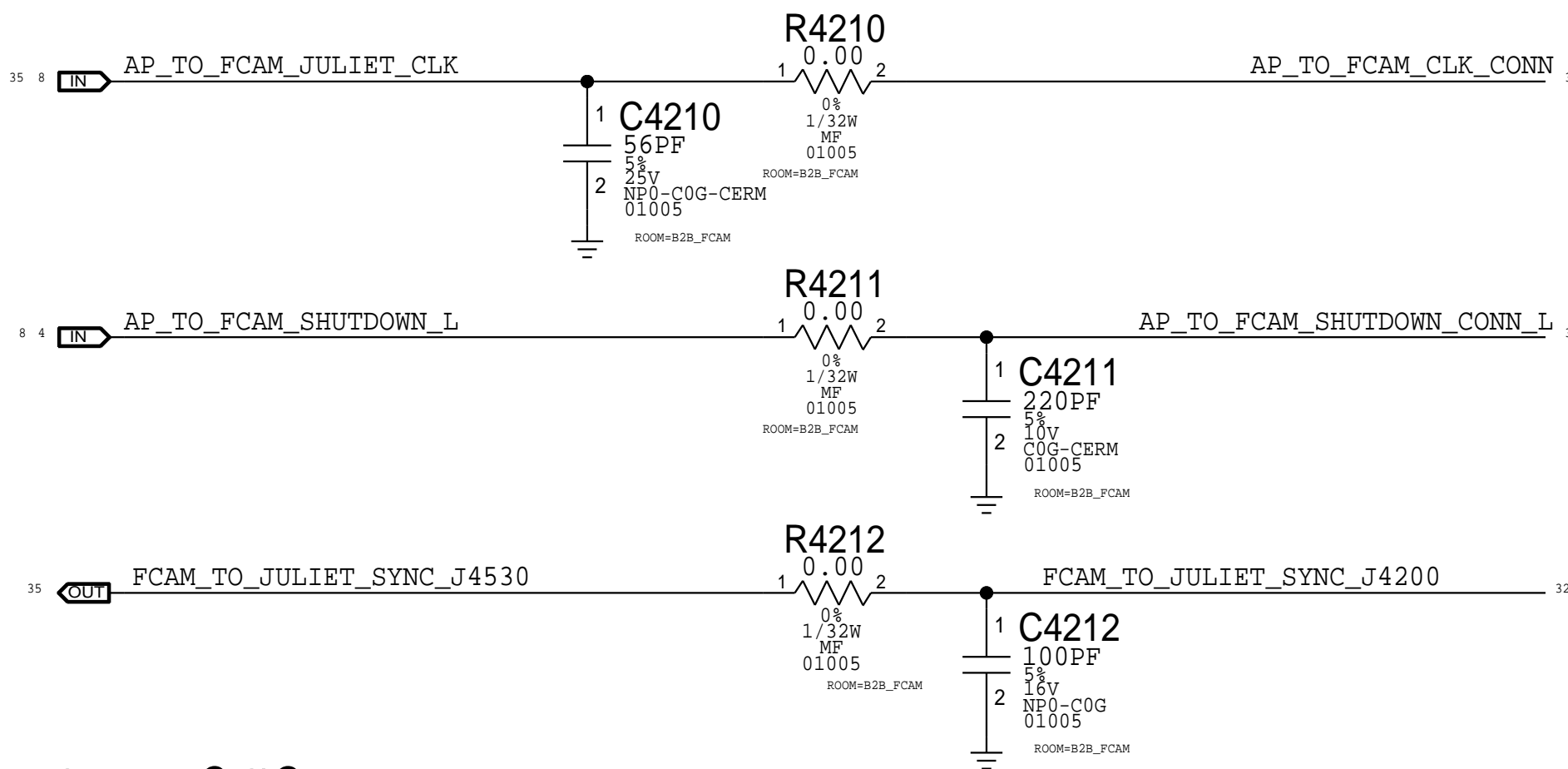
NEW HAMPSHIRE POWER

FCAM Connector

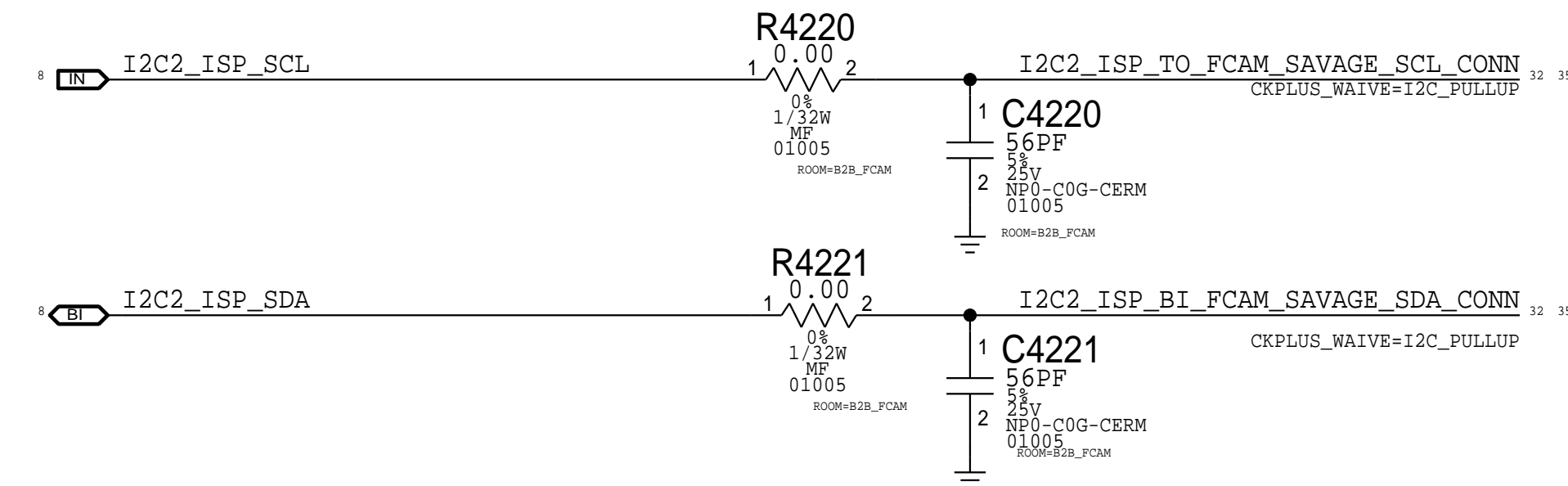
Rcpt: 516S00244 <-- This one on MLB
Plug: 516S00245




FCAM I/O

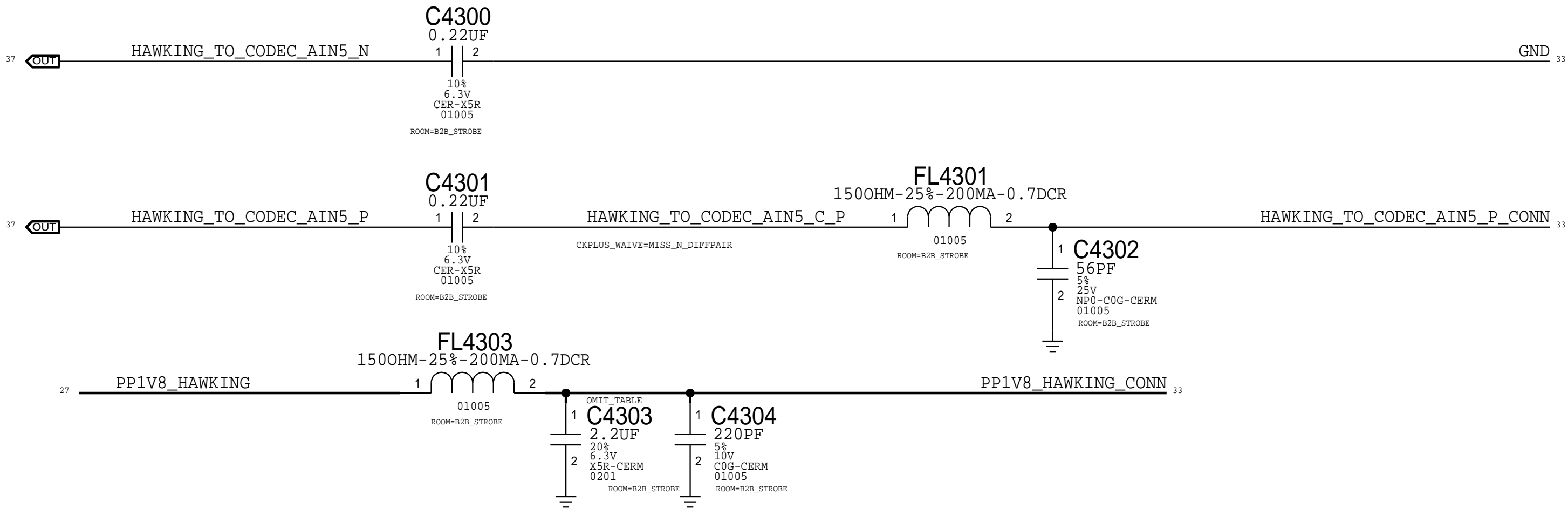


ISP I2C2

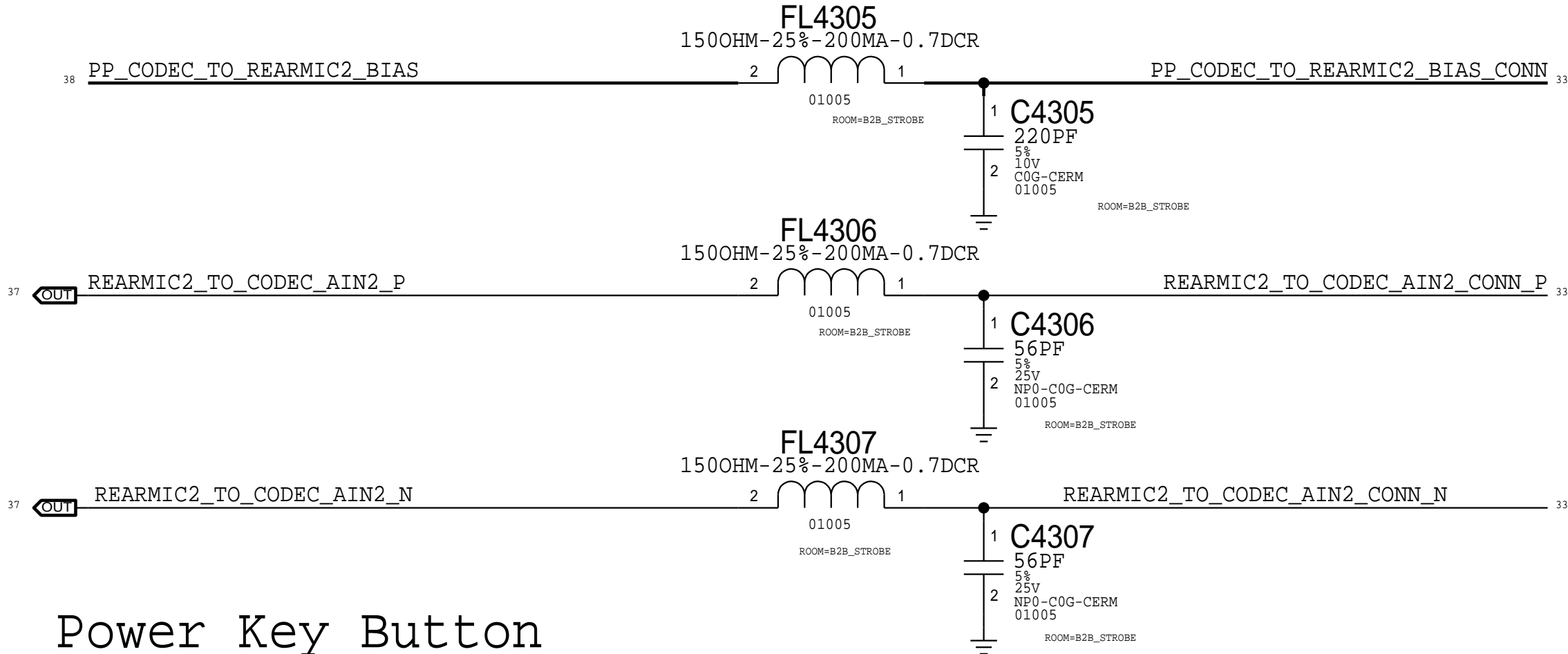


PAGE TITLE		
CAMERA: B2B FCAM		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	42 OF 80
	SHEET	32 OF 51

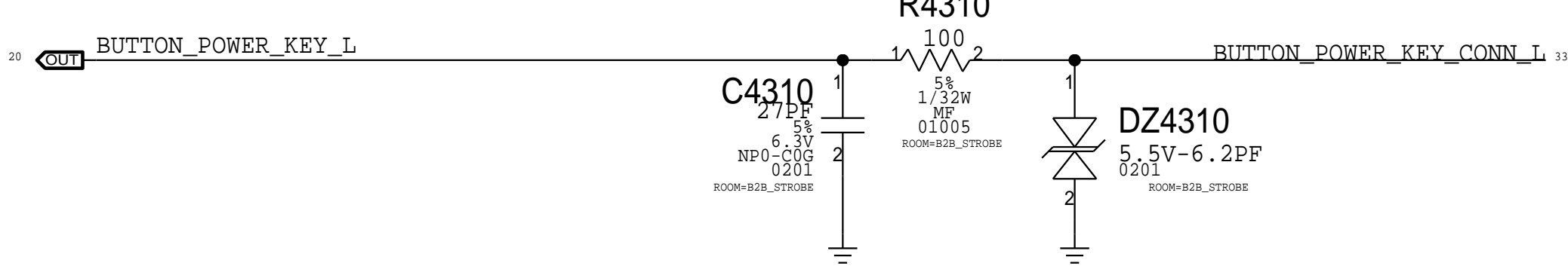
HAWKING



MIC2 (ANC REF)

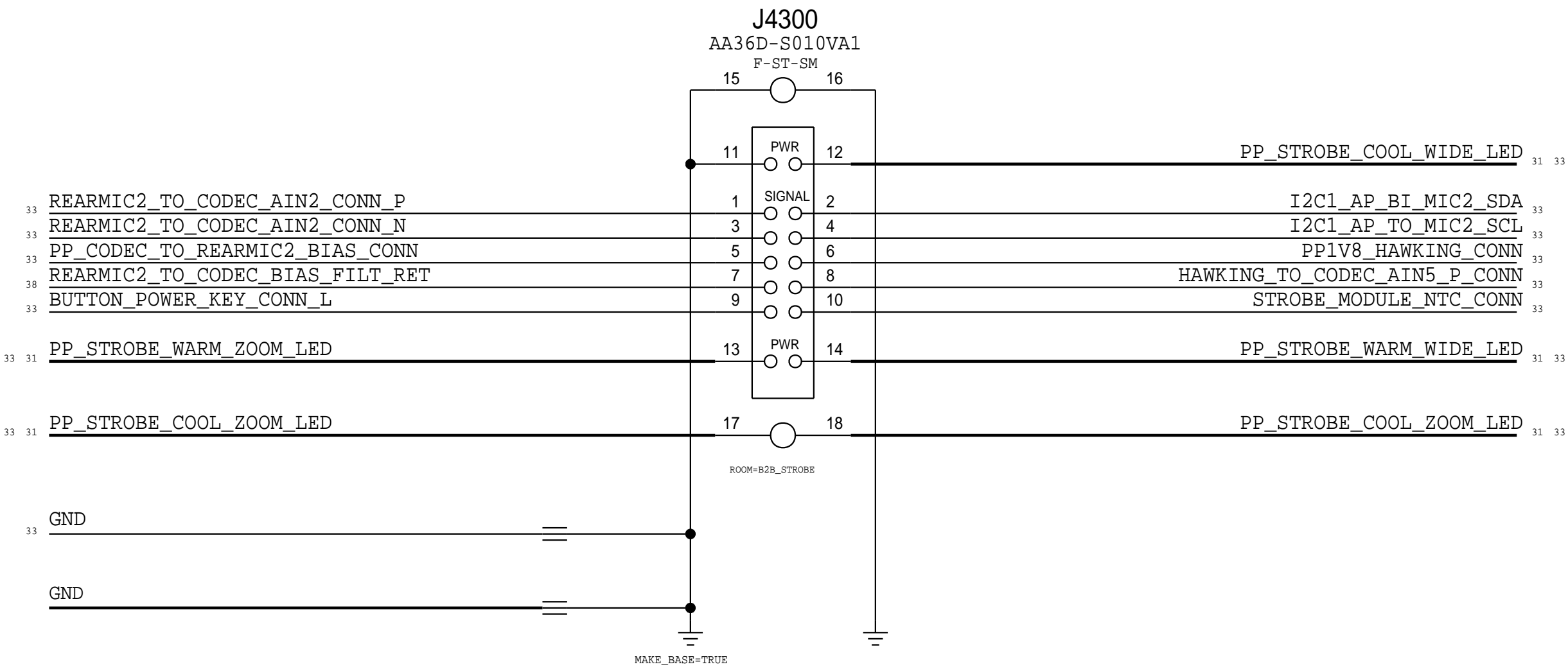


Power Key Button

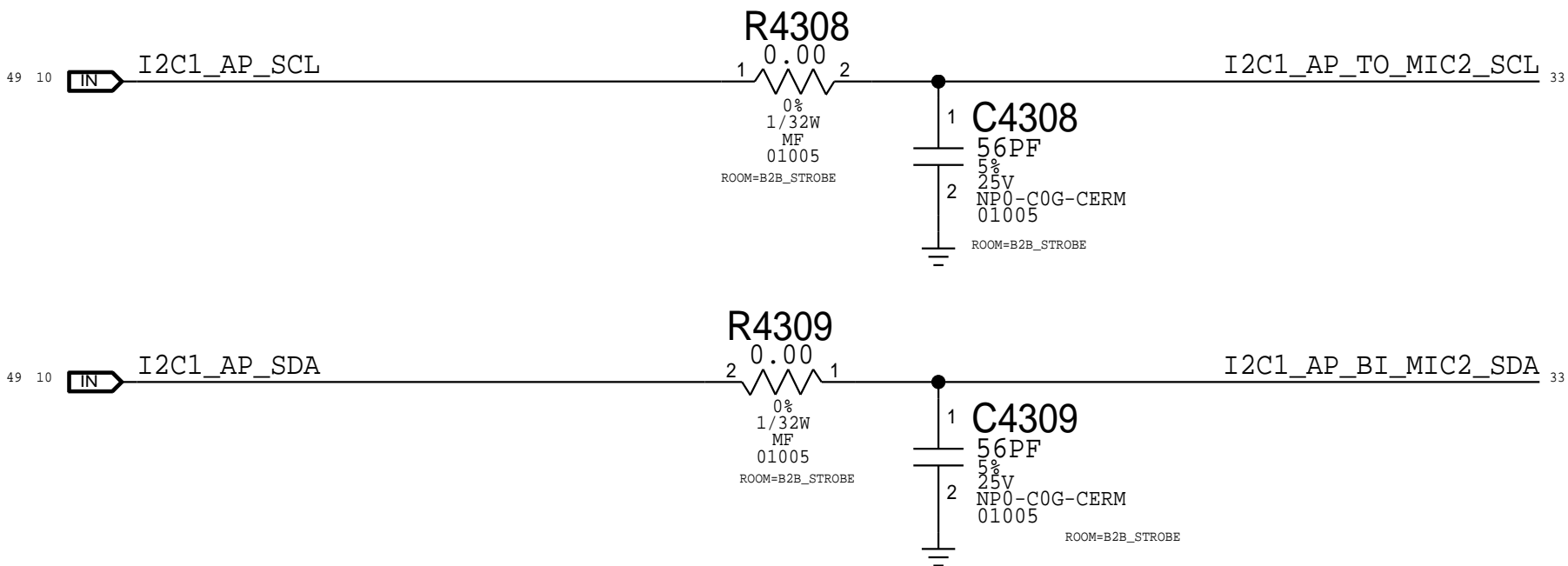
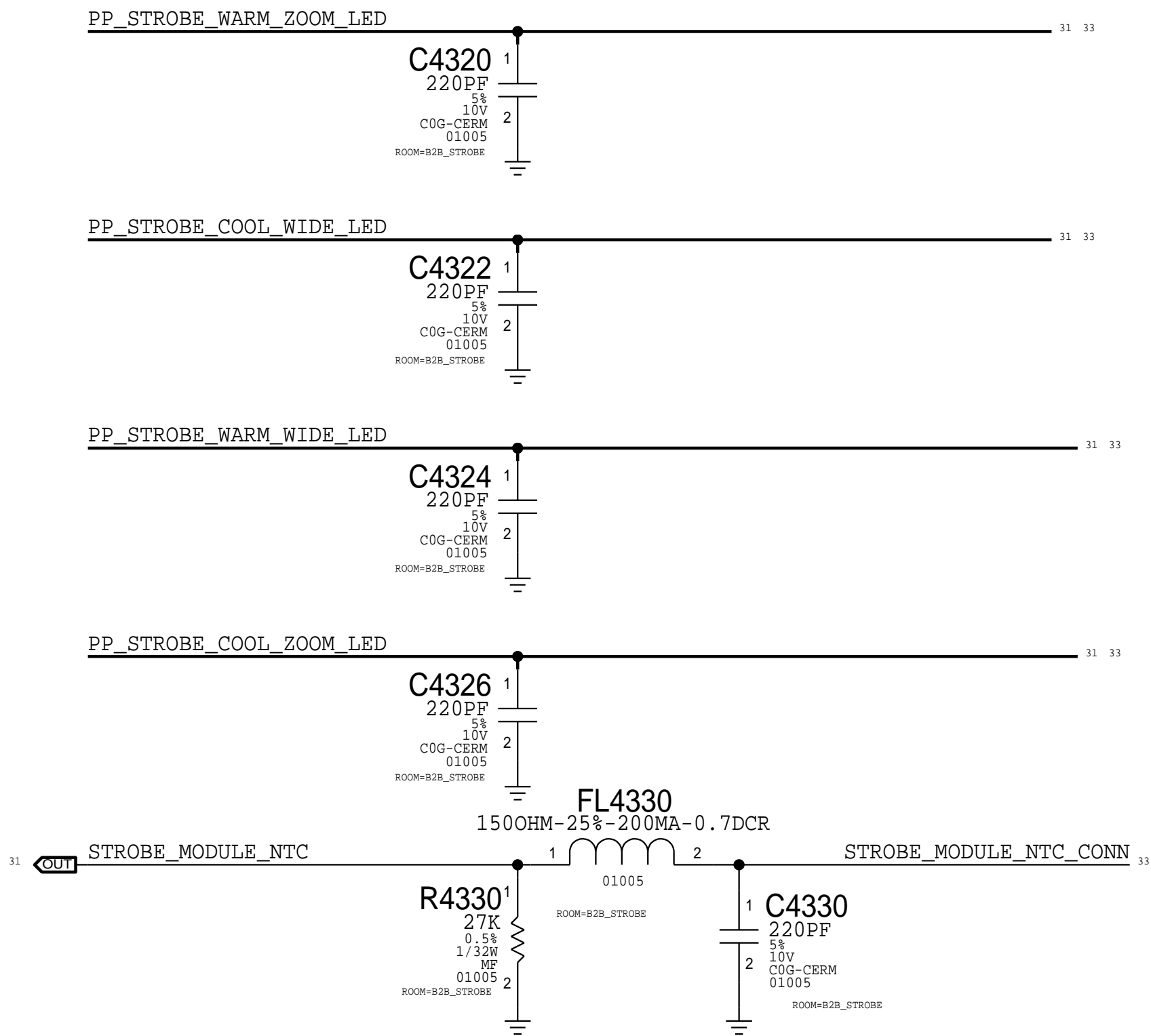


Strobe Connector

Rcpt: 516S00267 <-- This one on MLB
Plug: 516S00268

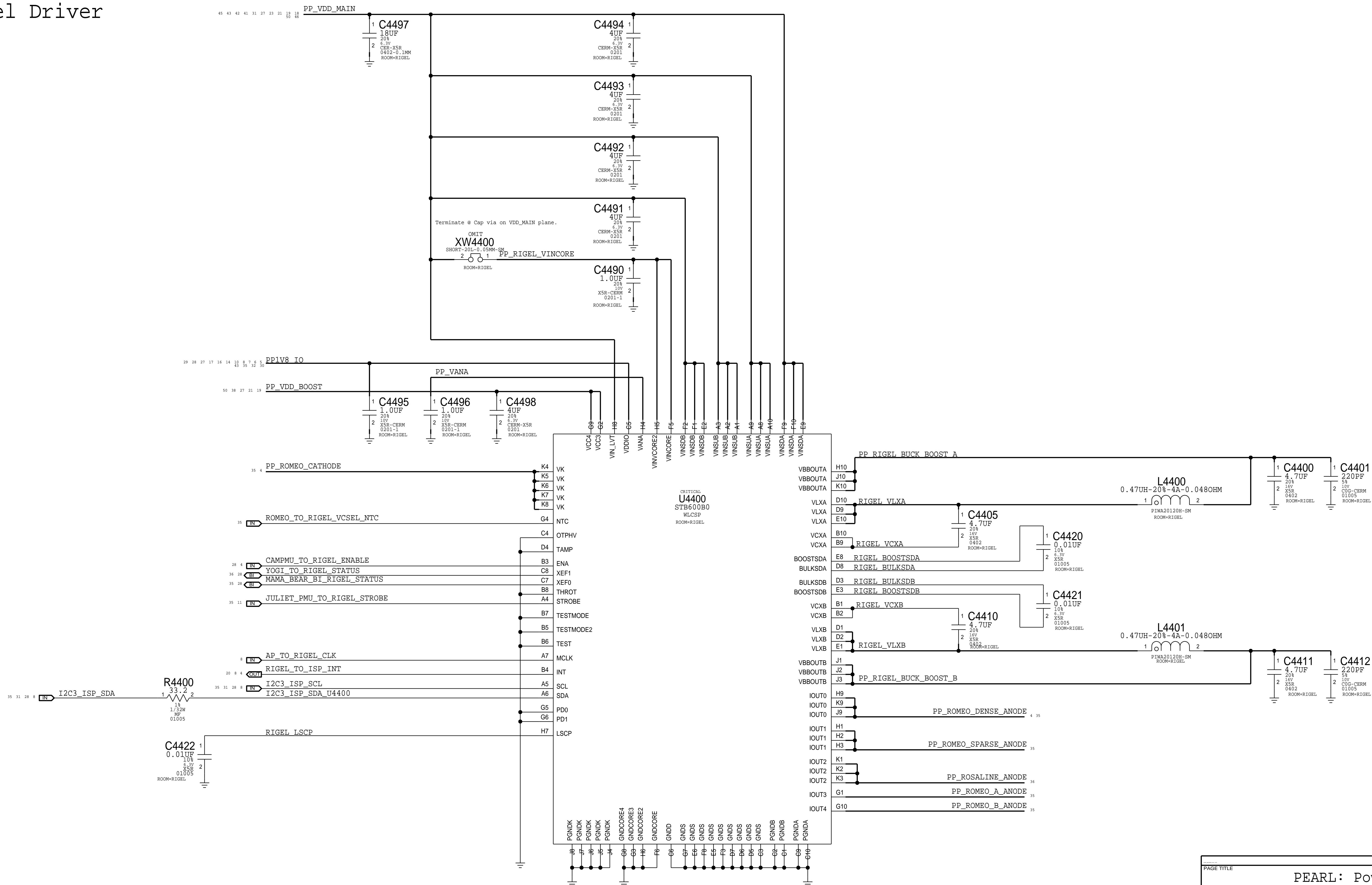



Strobe Filtering



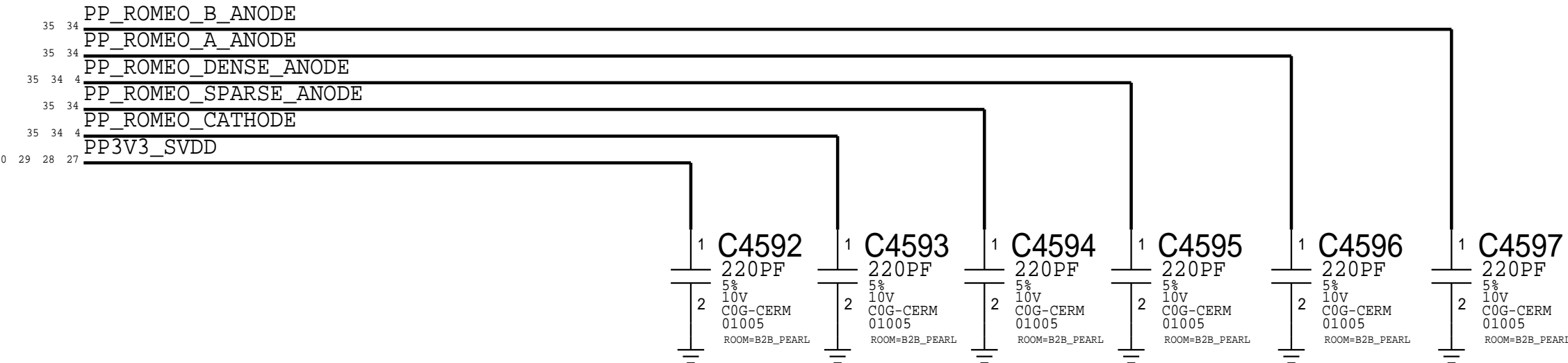
PAGE TITLE		
CAMERA: B2B Strobe + Hold Button		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	43 OF 80
	SHEET	33 OF 51

Rigel Driver

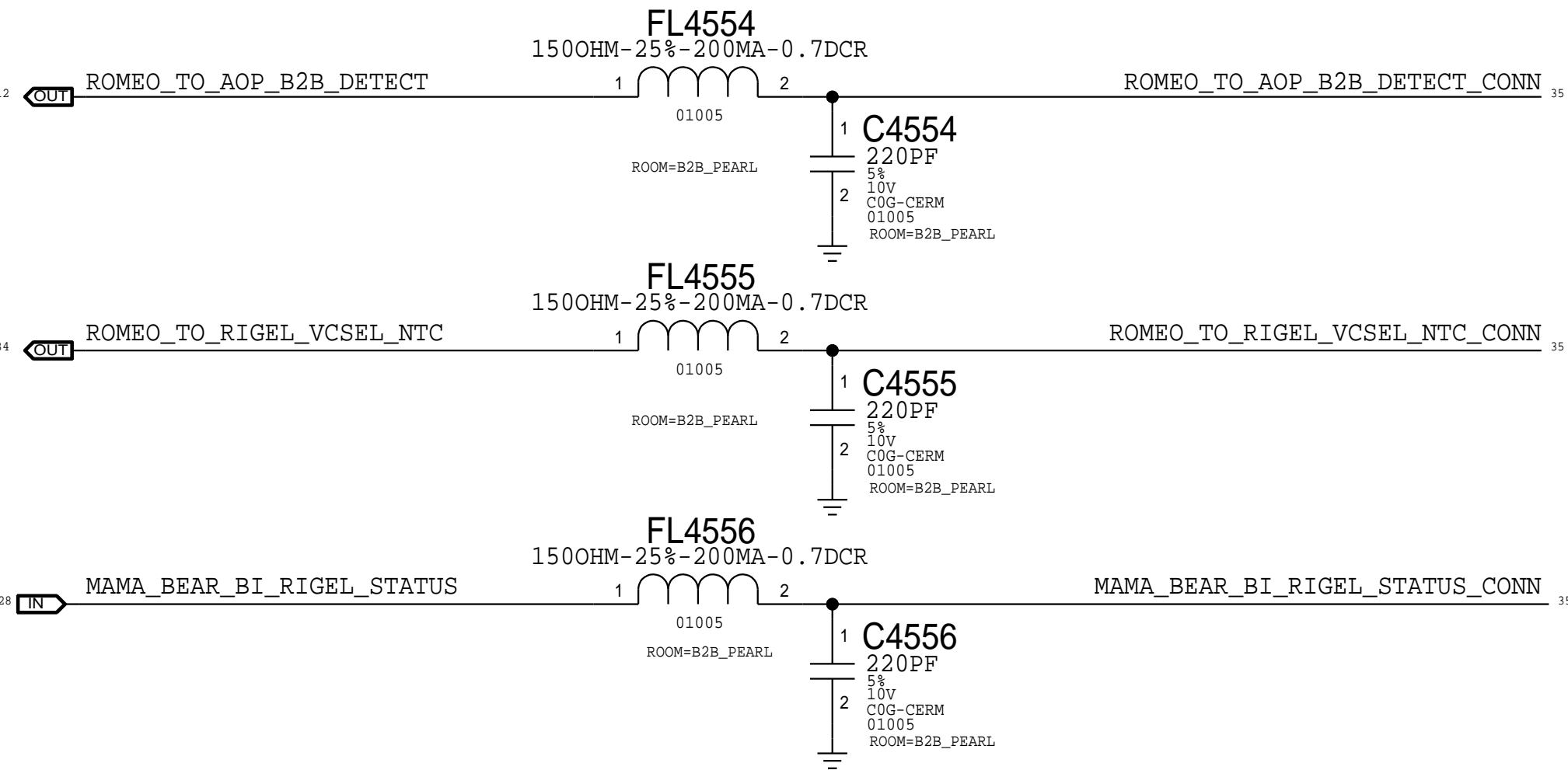


PAGE TITLE		DRAWING NUMBER		SIZE	
PEARL: Power		051-02221		D	
 Apple Inc.		REVISION		9.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH		evt-1	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE		44 OF 80	
II NOT TO REPRODUCE OR COPY IT		SHEET		34 OF 51	
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART					
IV ALL RIGHTS RESERVED					

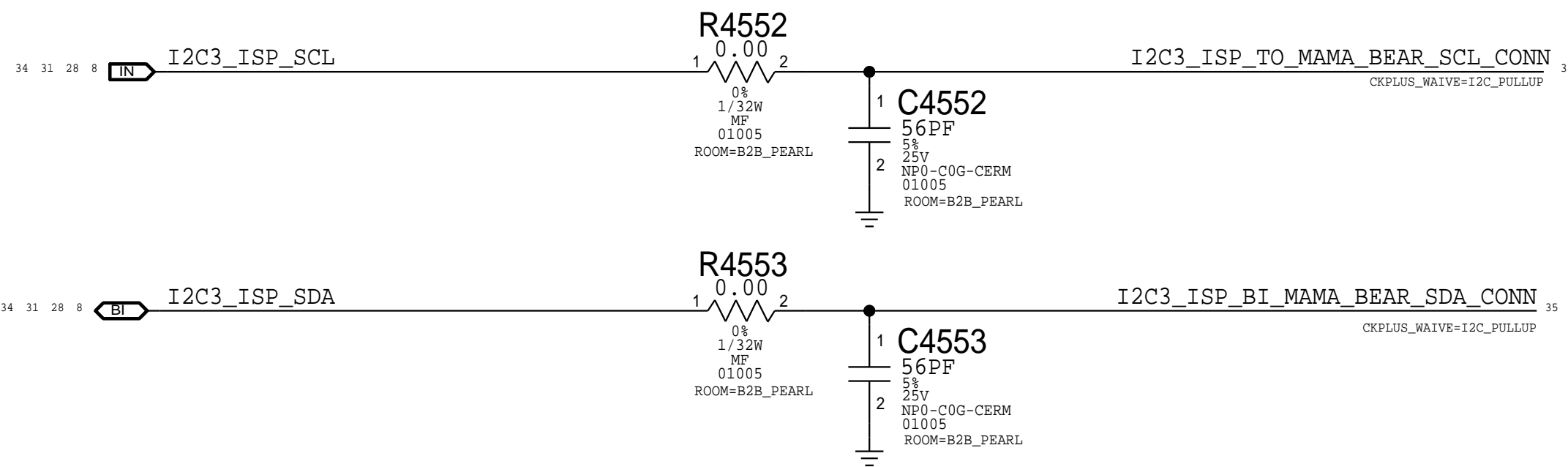
Romeo Power Filtering



Romeo I/O

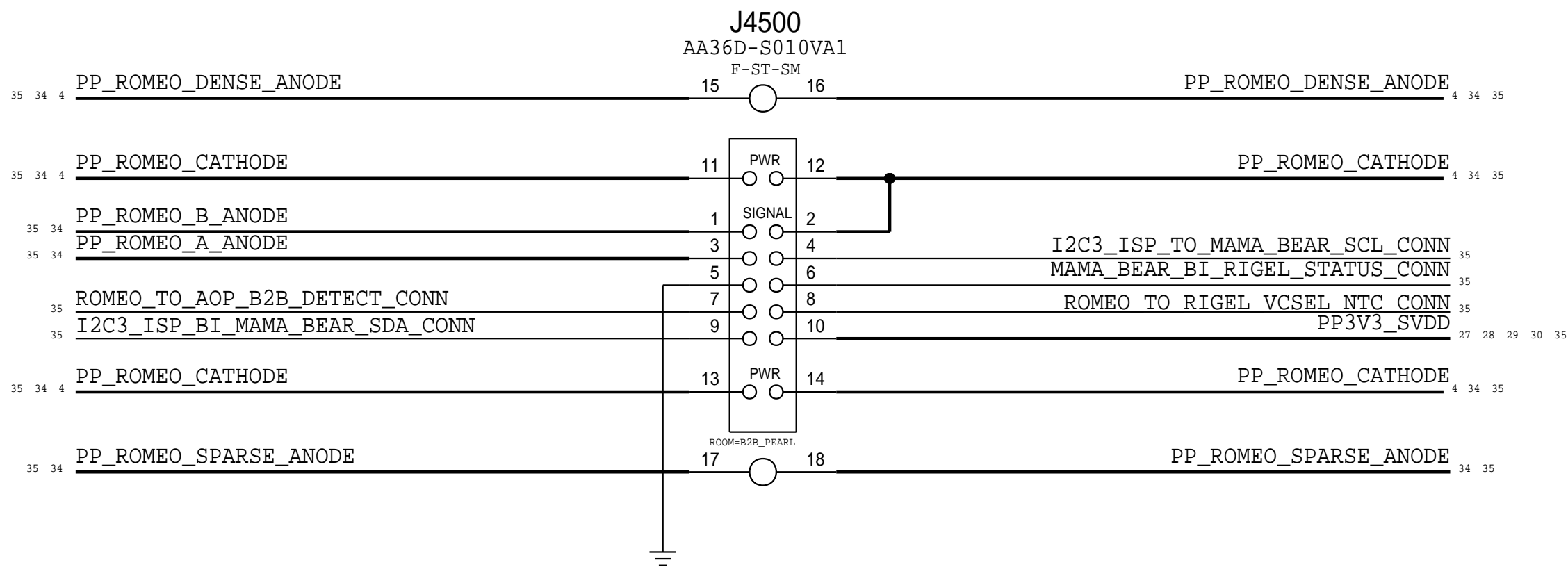


ISP I2C3

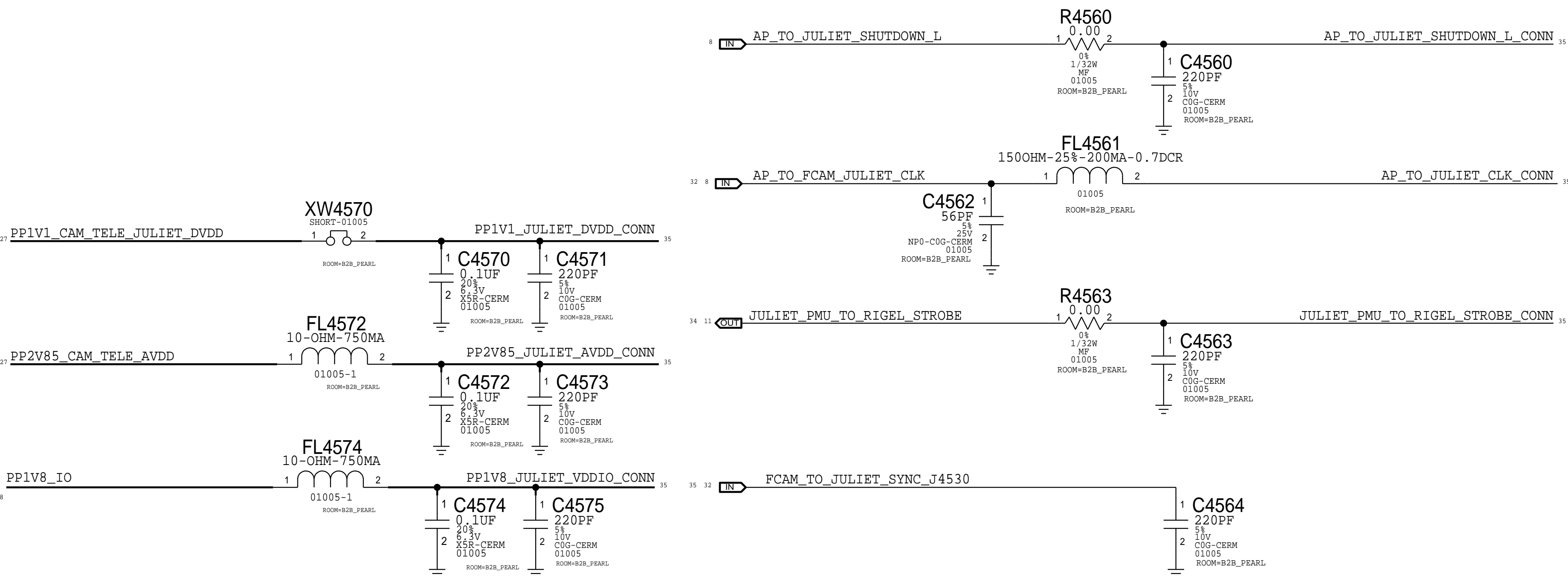


Romeo Connector

Rcpt: 516S00267 <-- This one on MLB
Plug: 516S00268

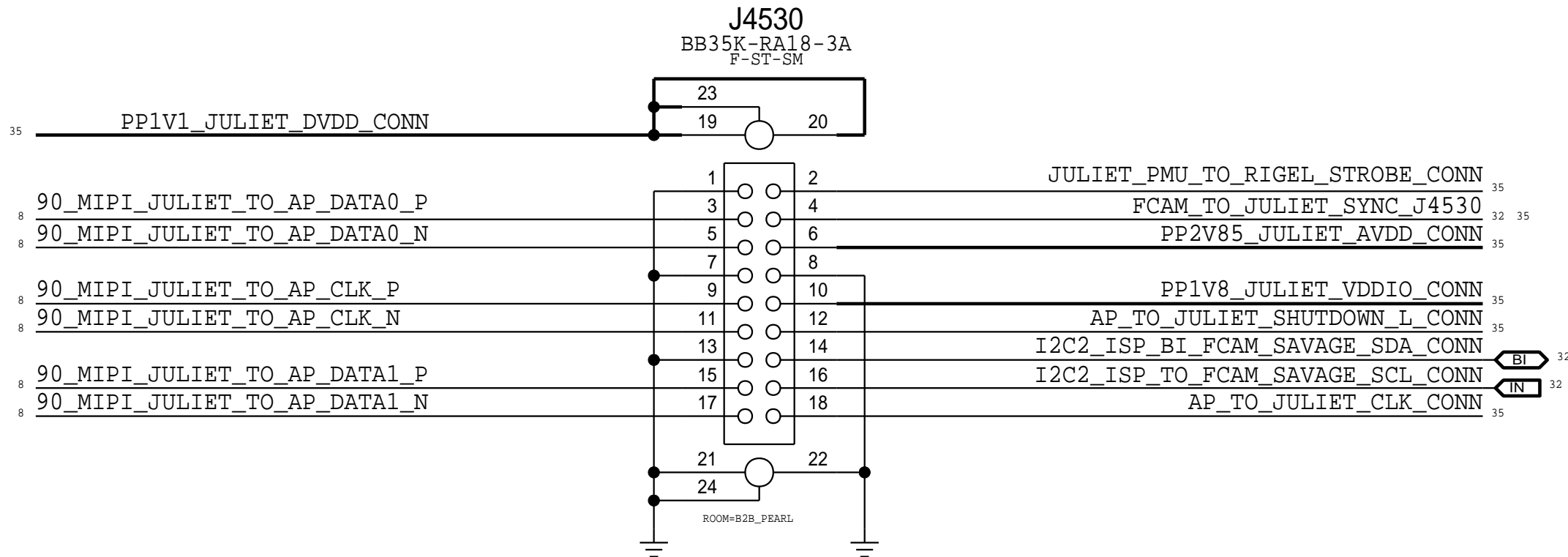


Juliet Power and I/O



Juliet Connector

Rcpt: 516S00244 <-- This one on MLB
Plug: 516S00245

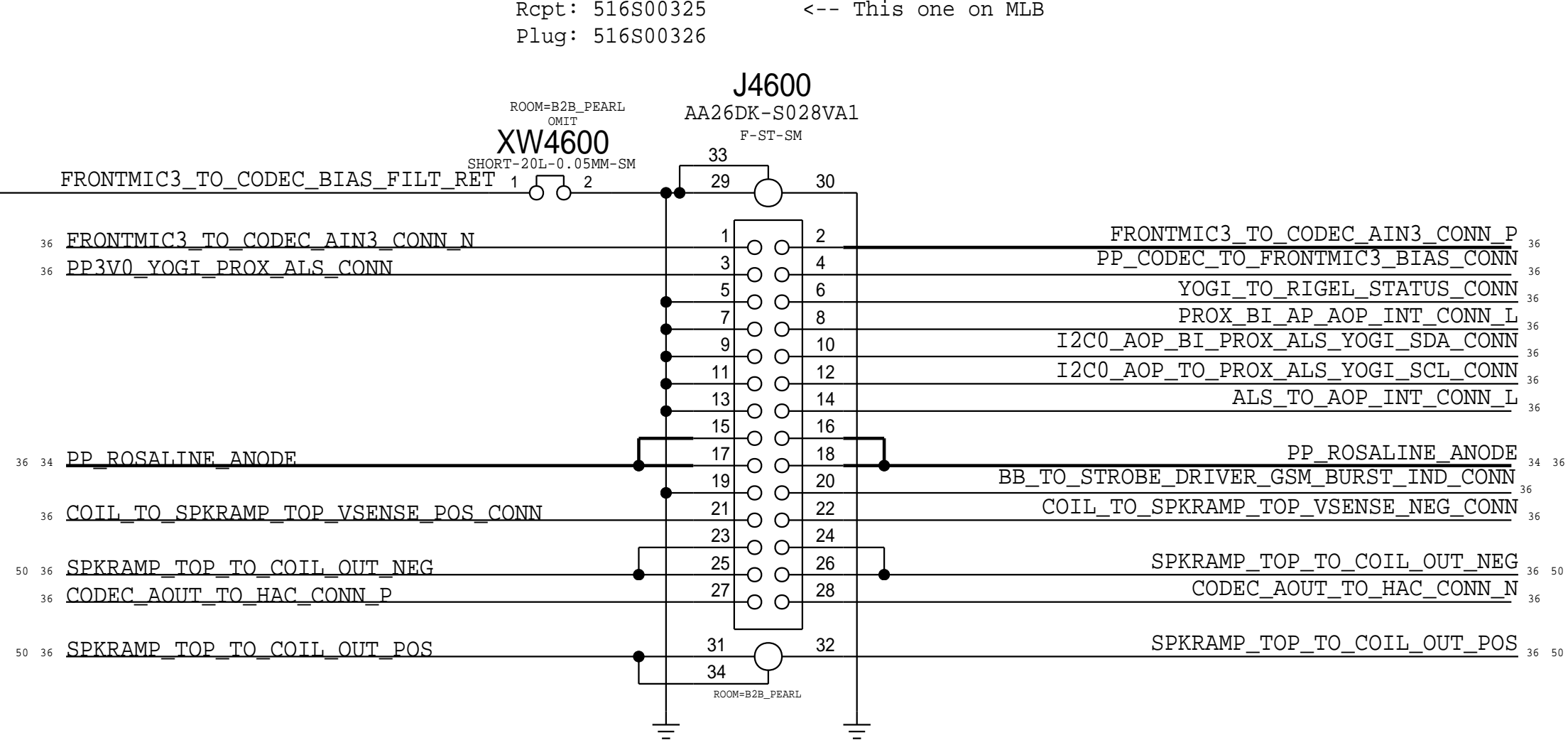
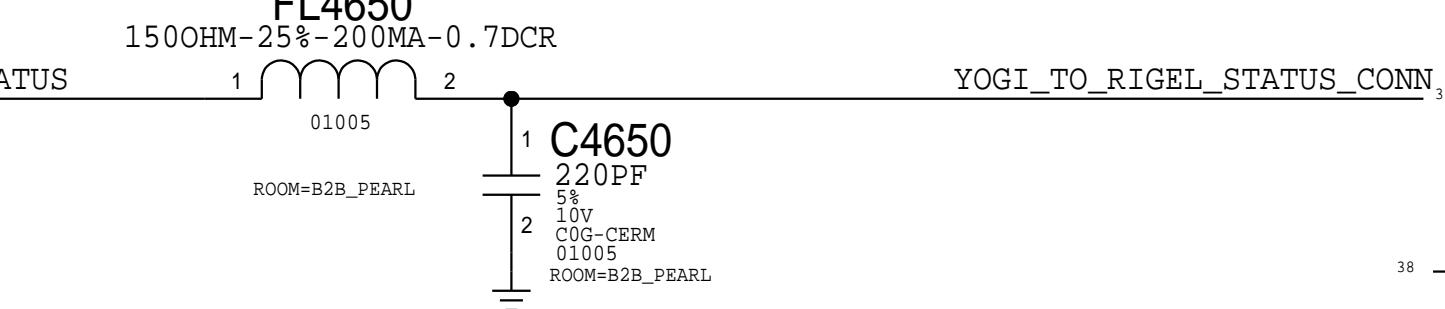
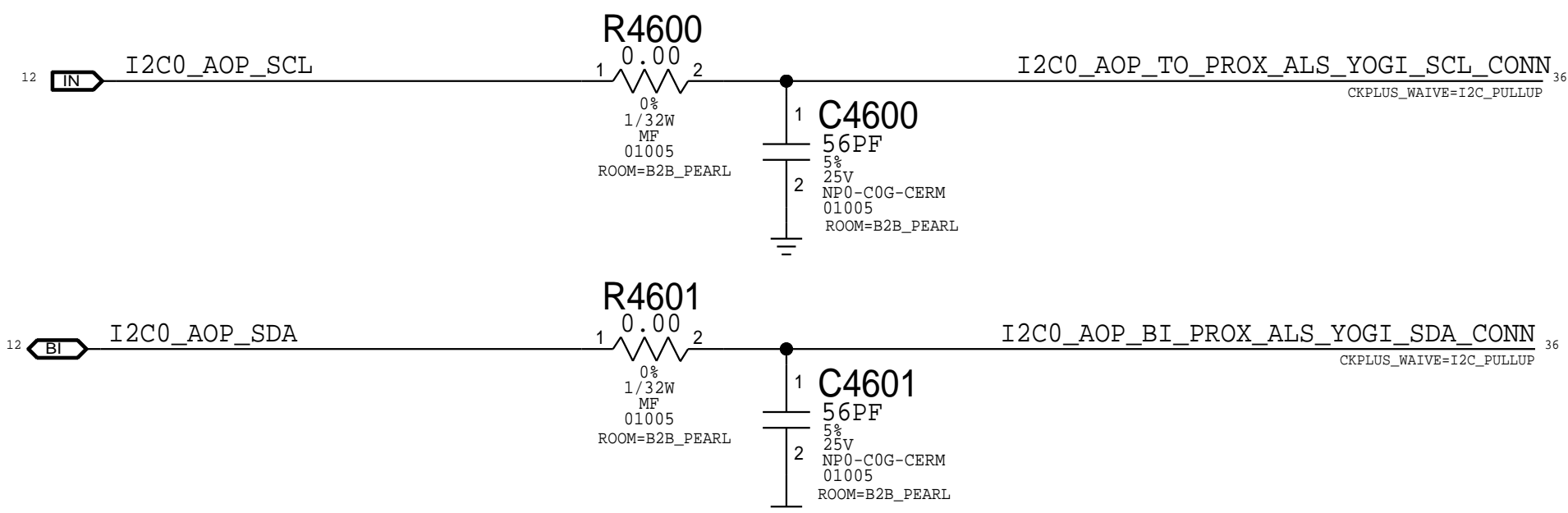


PAGE TITLE		
PEARL: B2B Romeo + Juliet		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	45 OF 80
	SHEET	35 OF 51

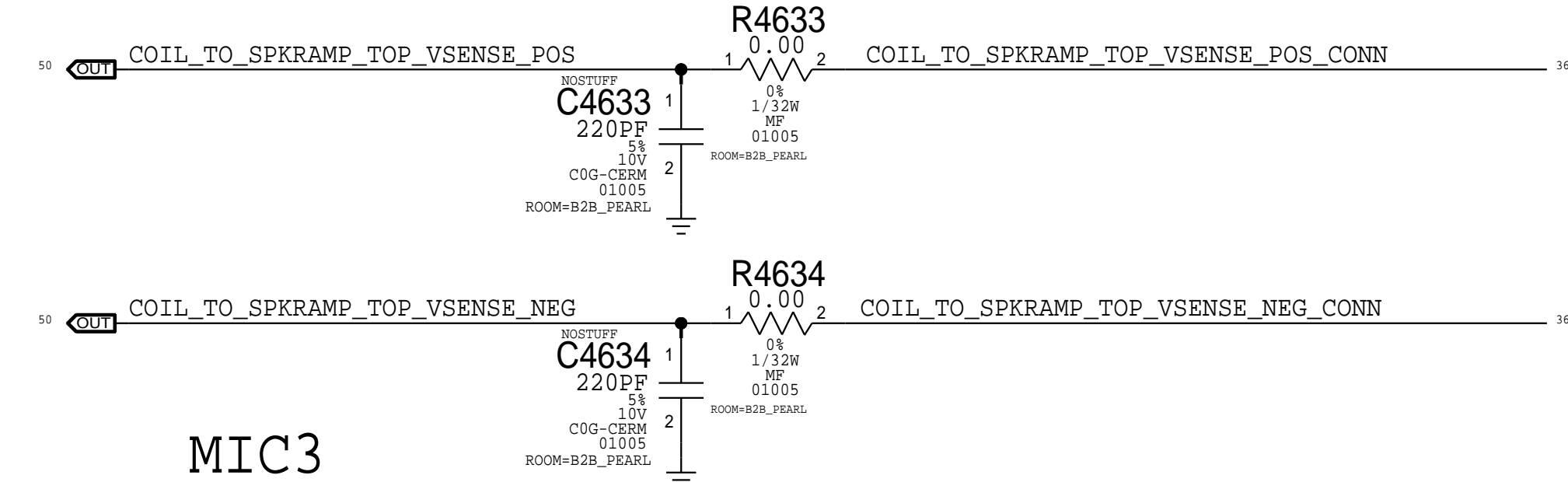
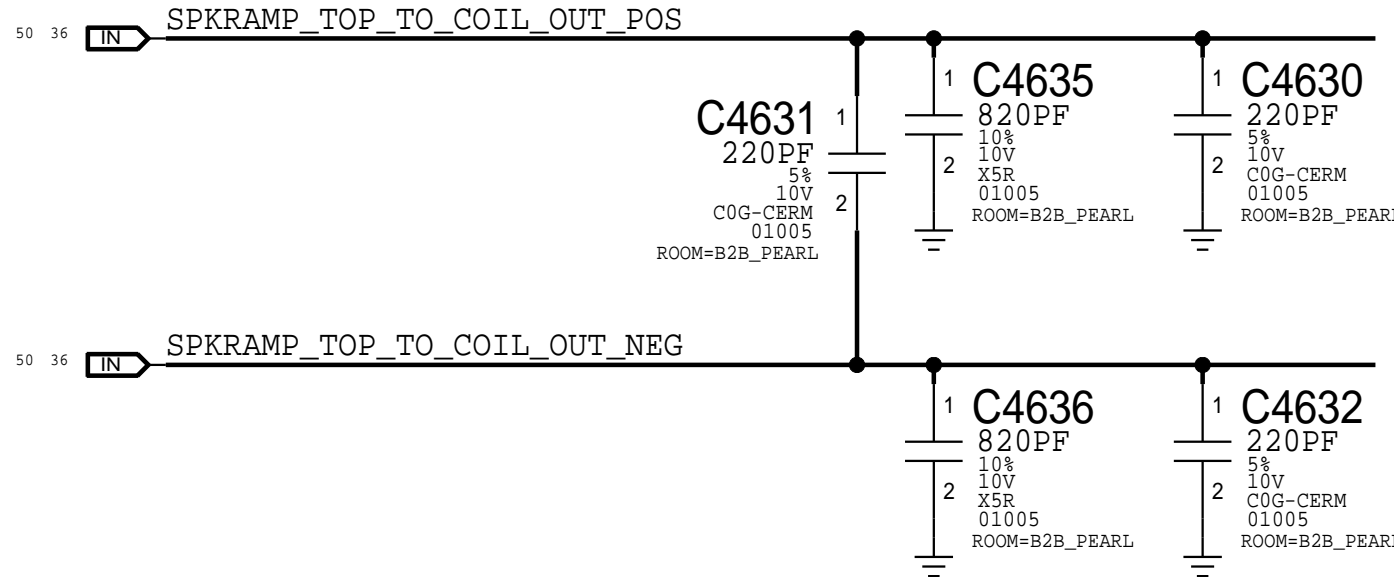
AOP I2C

Yogi Signals

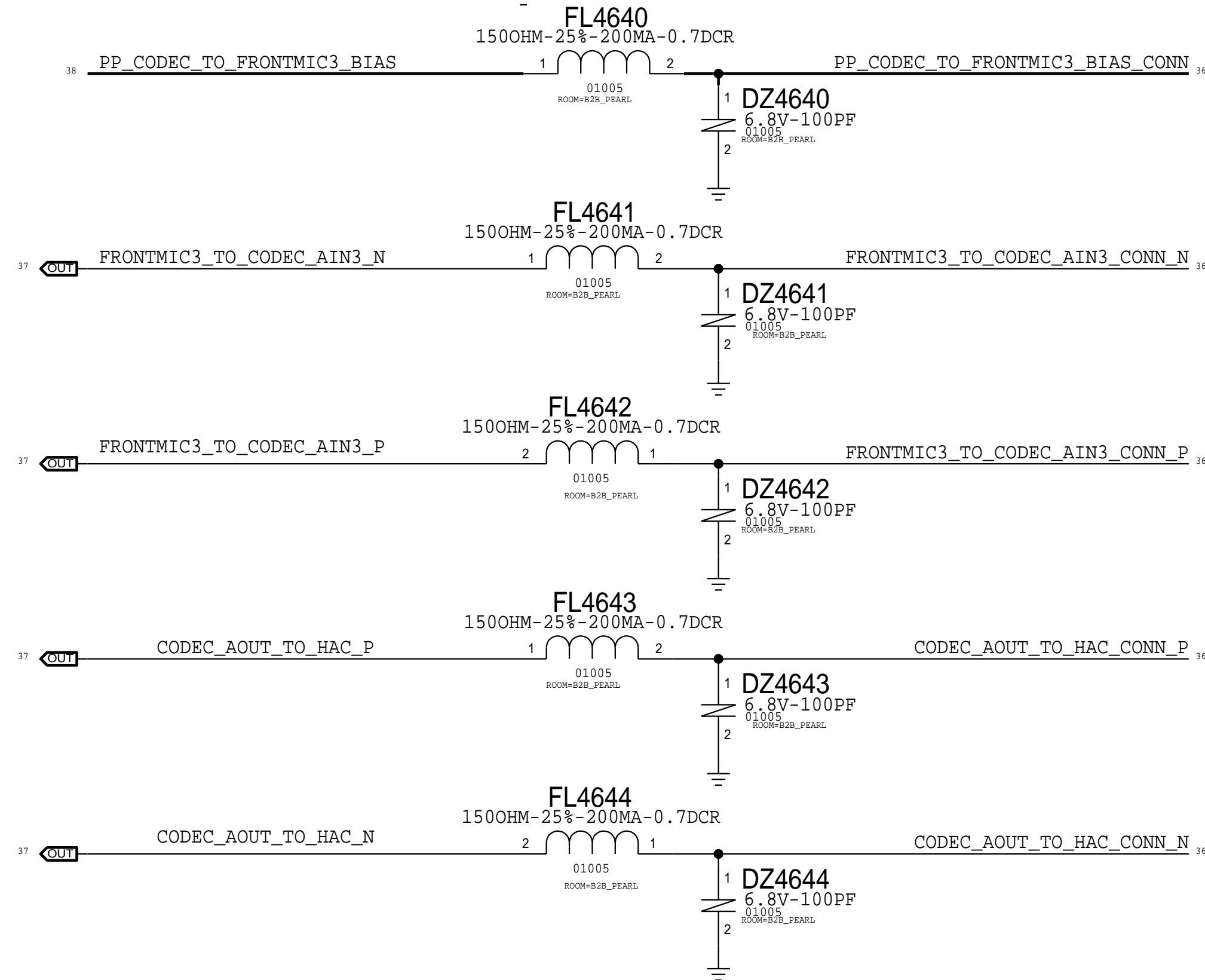
Rosaline + Misc Connector



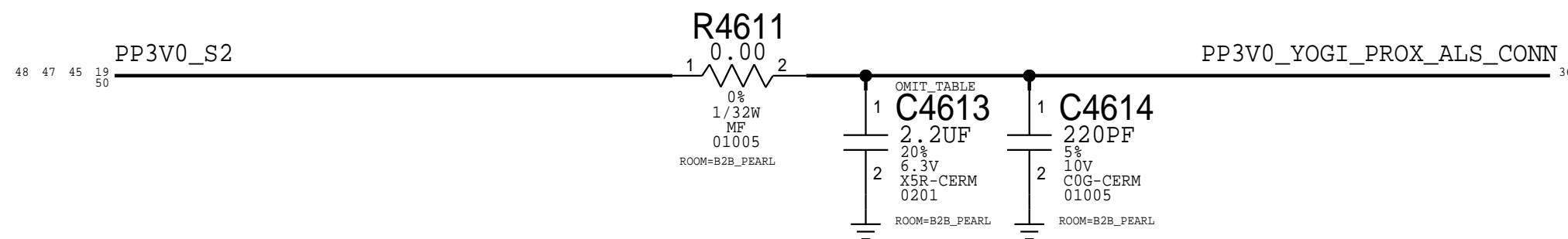
SPEAKER2



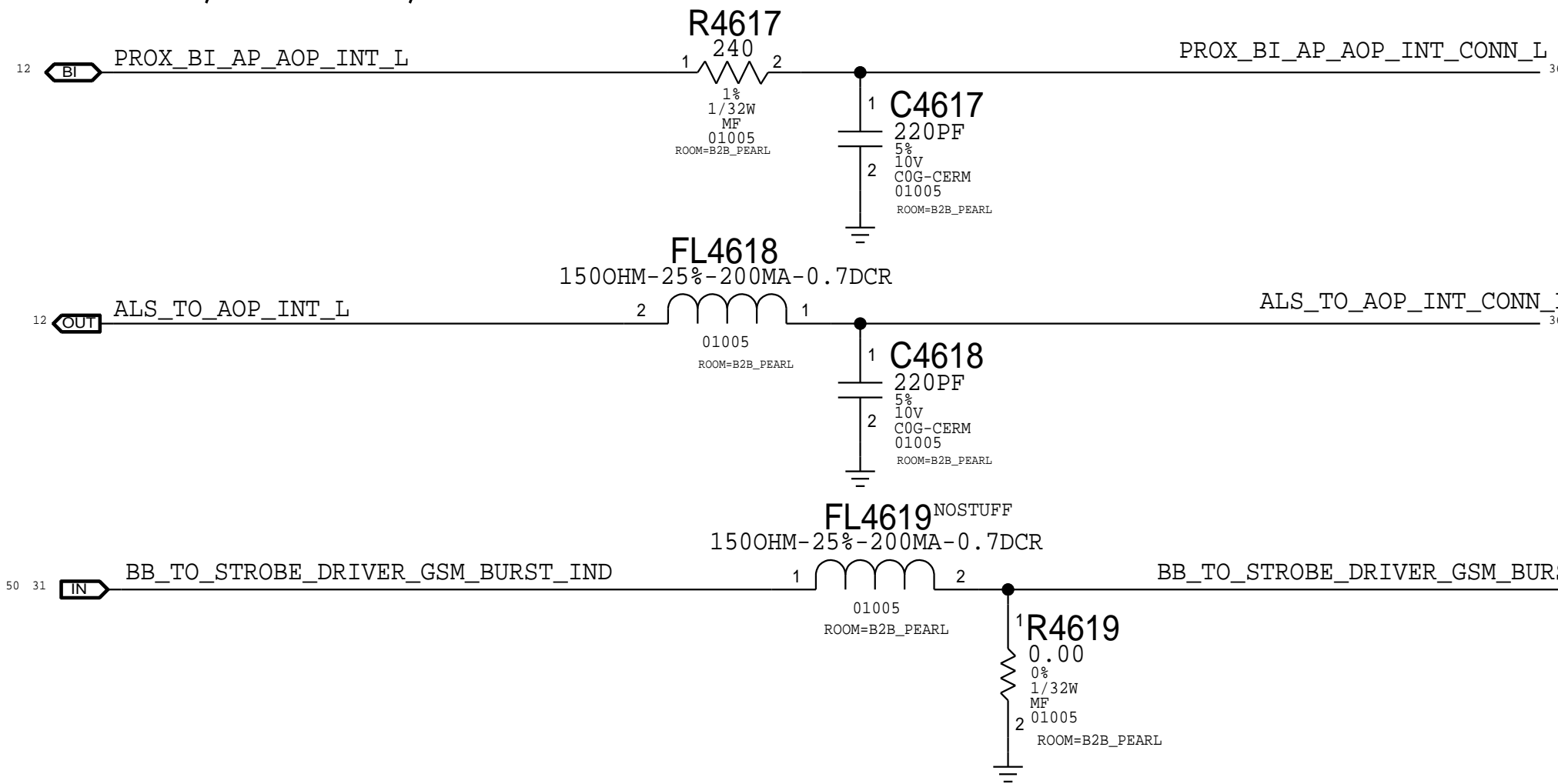
MIC3



PROX & ALS POWER

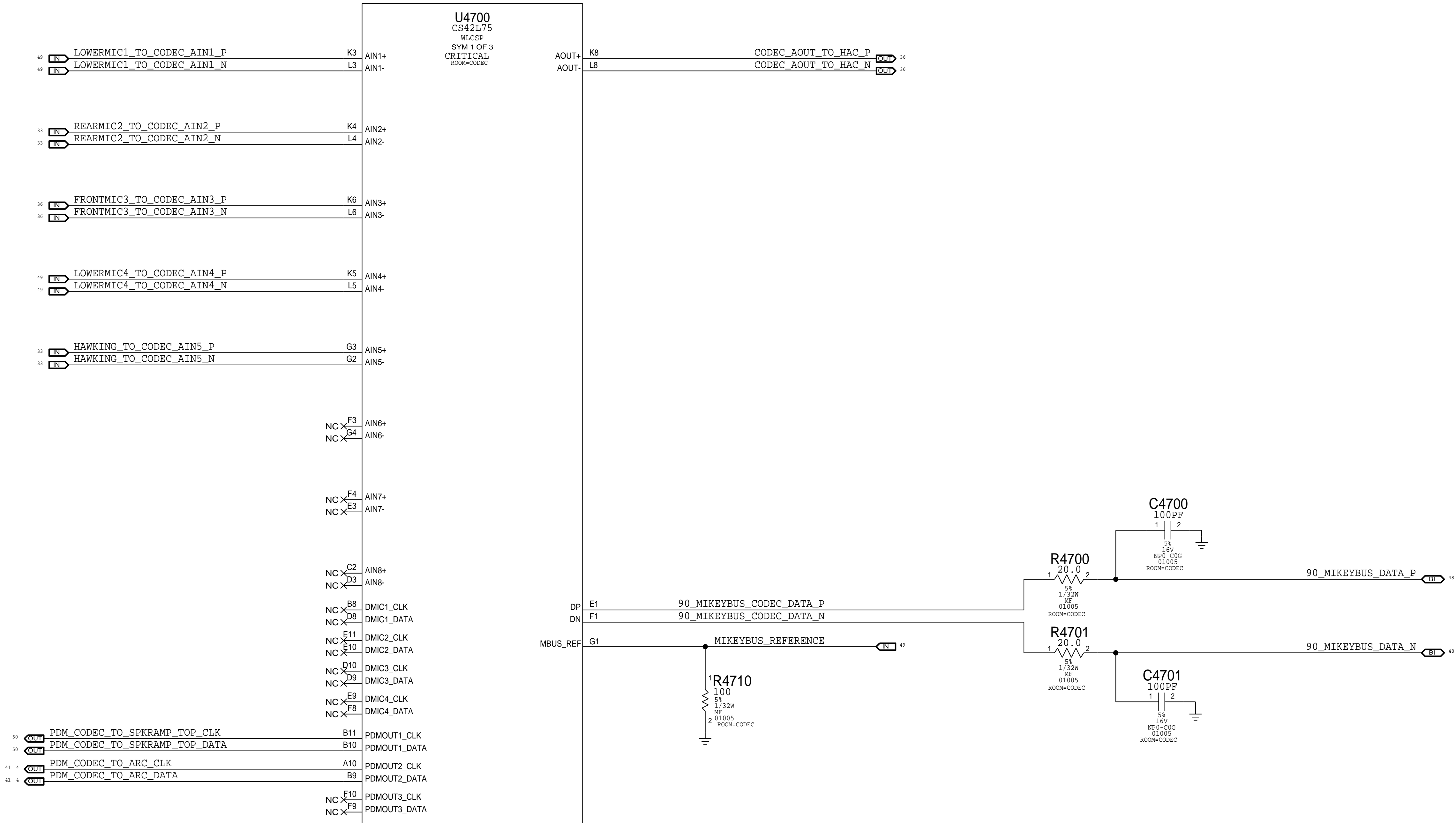



PROX/ALS I/O



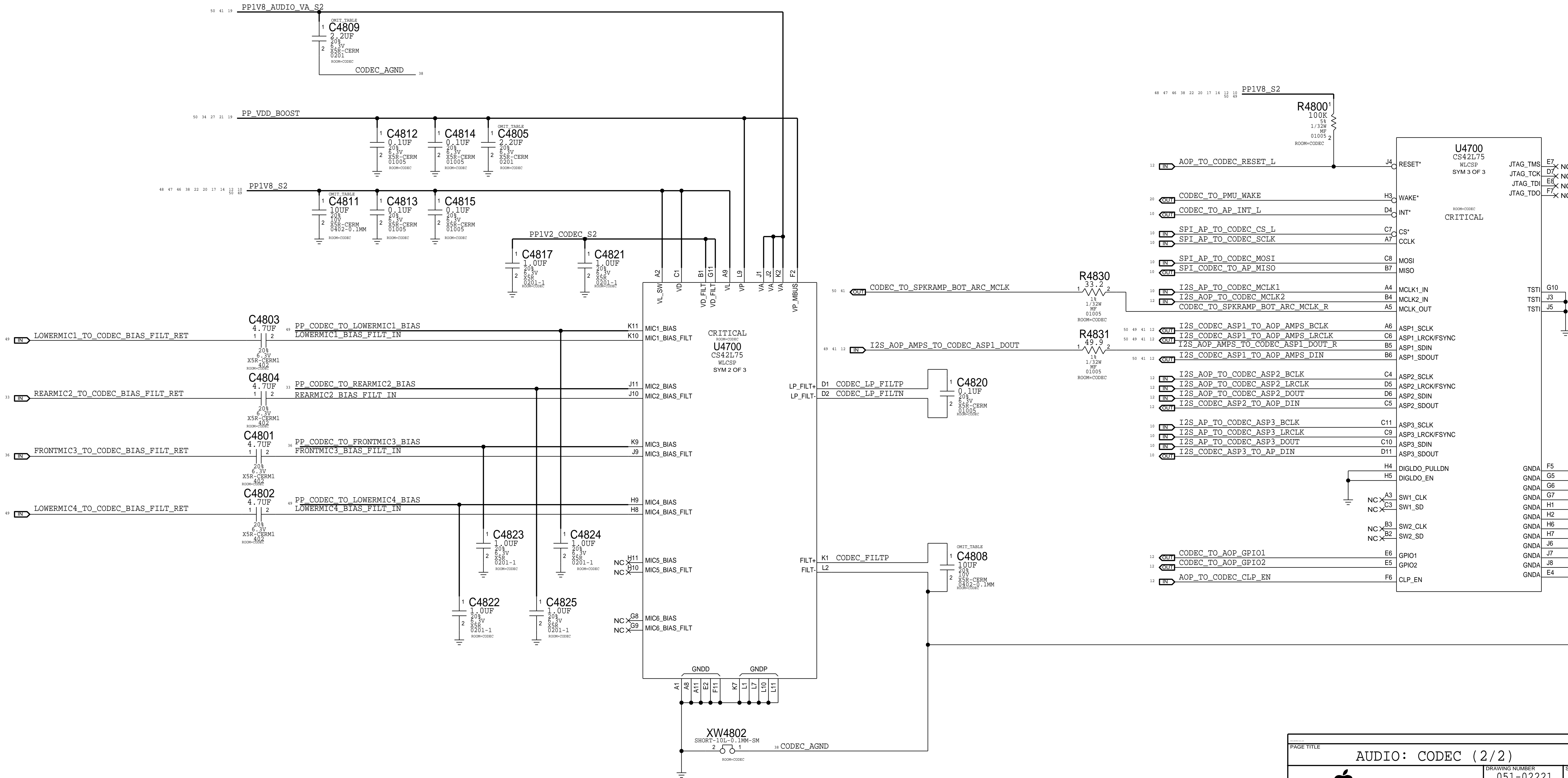
PAGE TITLE		
PEARL: B2B Rosaline + Misc		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	46 OF 80
	SHEET	36 OF 51


CALLAN AUDIO CODEC (ANALOG INPUTS & OUTPUTS)



PAGE TITLE		
AUDIO: CODEC (1/2)		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
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	evt-1
	PAGE	47 OF 80
	SHEET	37 OF 51

CALLAN AUDIO CODEC (POWER & I/O)




PAGE TITLE			AUDIO: CODEC (2/2)		
 Apple Inc.		DRAWING NUMBER	051-02221	SIZE	D
		REVISION	9.0.0		
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	evt-1		
		PAGE	48 OF 80		
		SHEET	38 OF 51		

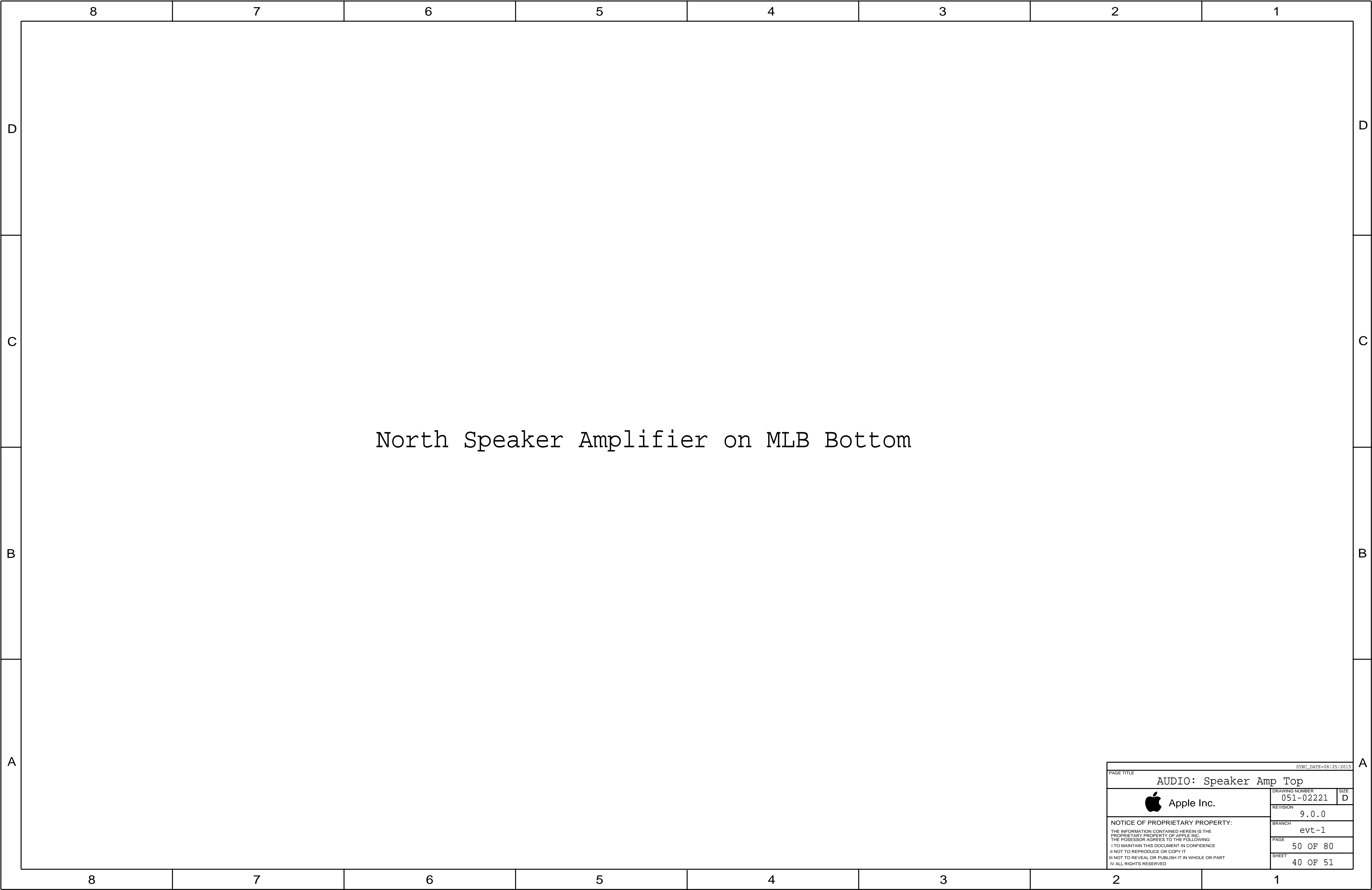
8		7		6		5		4		3		2		1			
D																D	
C																C	
B																B	
A																A	
8		7		6		5		4		3		2		1			


South Speaker Amplifier on MLB Bottom

PAGE TITLE			AUDIO: Speaker Amp Bottom			DRAWING NUMBER			051-02221			SIZE			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			REVISION			9.0.0			BRANCH			evt-1					
			PAGE			49 OF 80			SHEET			39 OF 51					

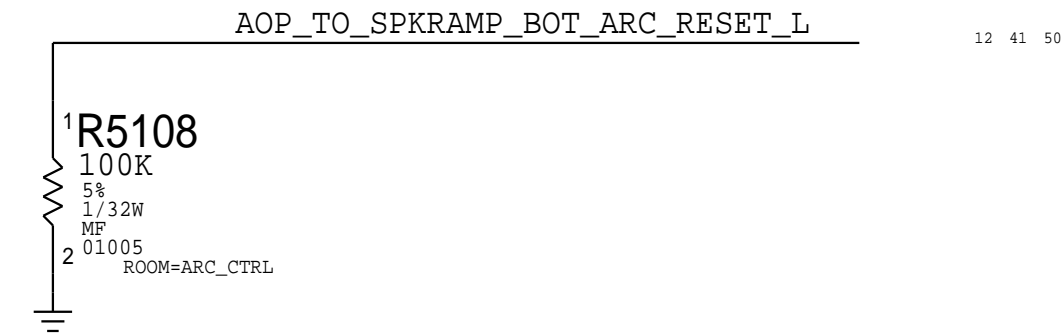
South Speaker Amplifier on MLB Bottom

PAGE TITLE			SYNC_DATE=08/25/2015	
AUDIO: Speaker Amp Bottom				
 Apple Inc.	DRAWING NUMBER	051-02221	SIZE	D
	REVISION	9.0.0		
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	evt-1
			PAGE	49 OF 80
			SHEET	39 OF 51



PAGE TITLE			SYNC_DATE=08/25/2015	
AUDIO: Speaker Amp Top				
 Apple Inc.	DRAWING NUMBER		051-02221	SIZE D
	REVISION		9.0.0	
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		evt-1	
	PAGE		50 OF 80	
	SHEET		40 OF 51	

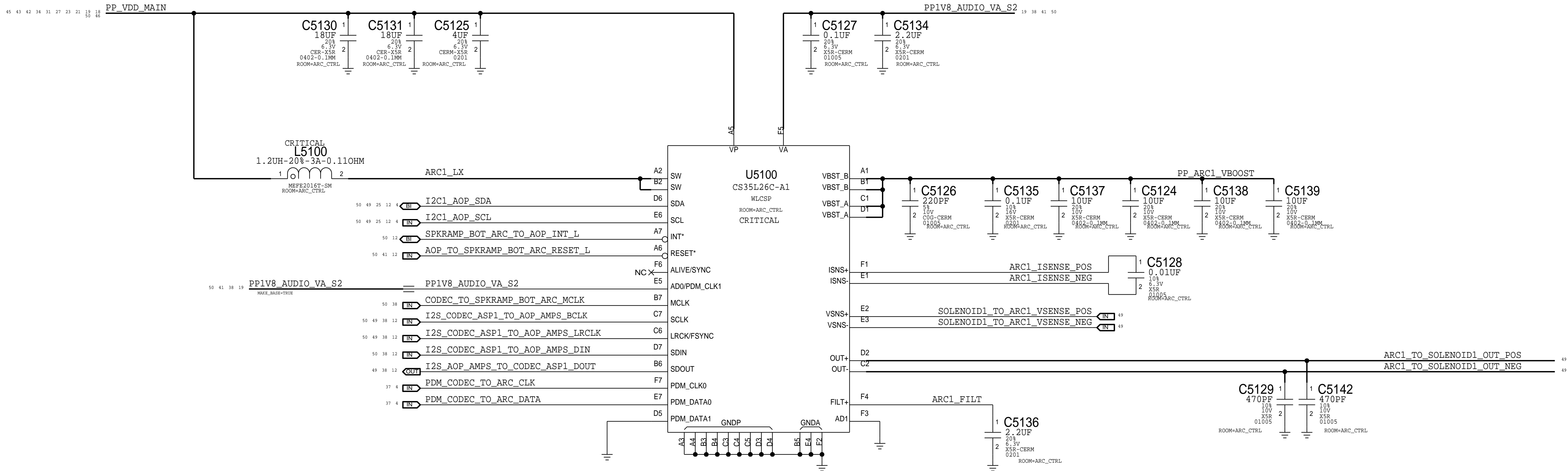
Pull Downs




ARC DRIVER

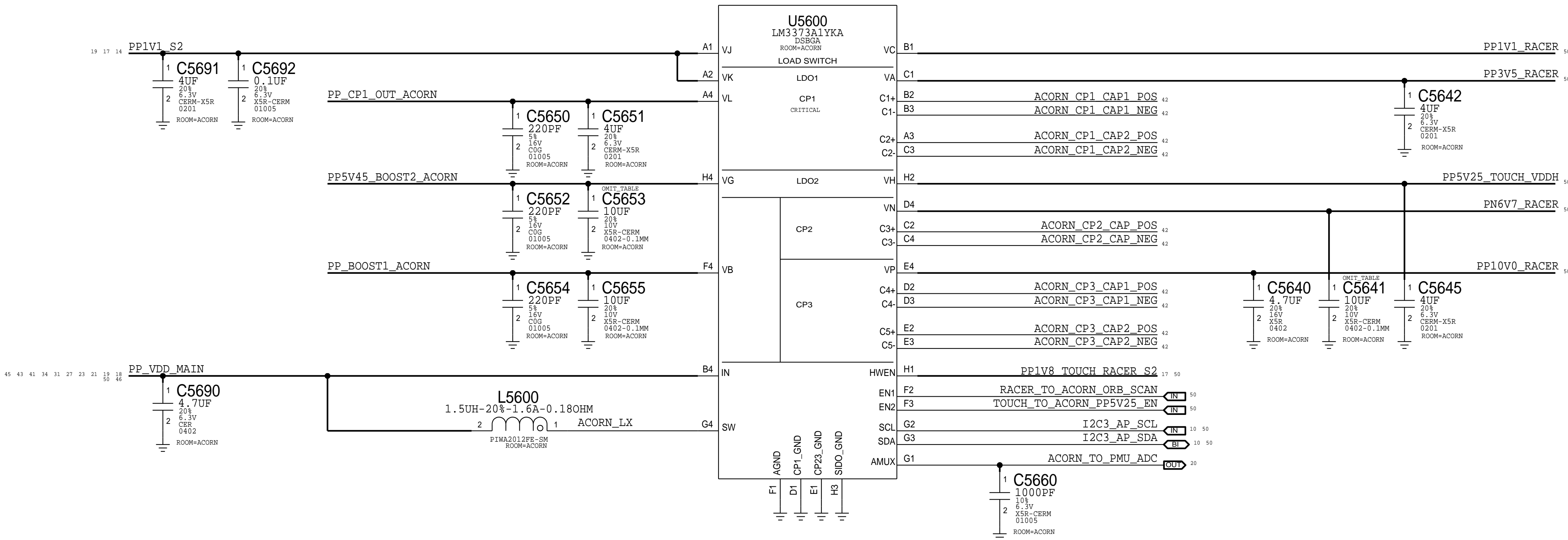
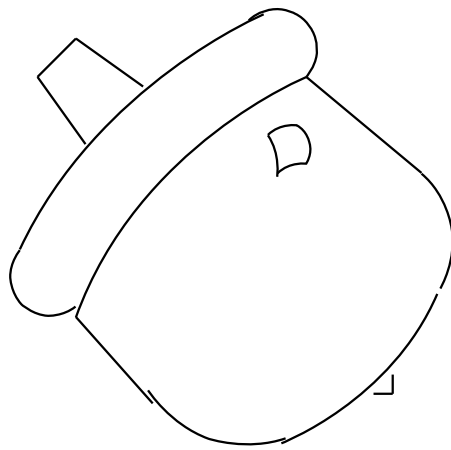
APN: 338S00296

I2C ADDRESS: 1000 001x
0x82

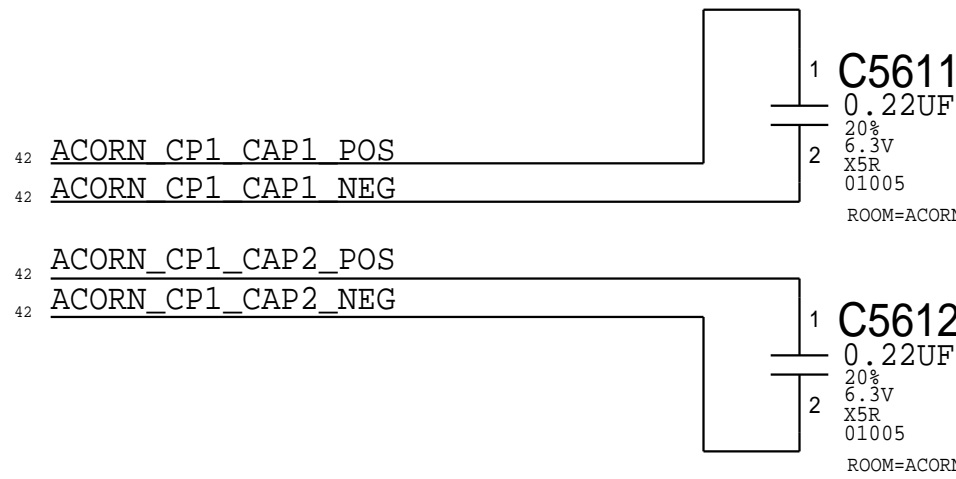


PAGE TITLE		
ARC: Driver		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
	BRANCH	evt-1
	PAGE	51 OF 80
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		SHEET 41 OF 51

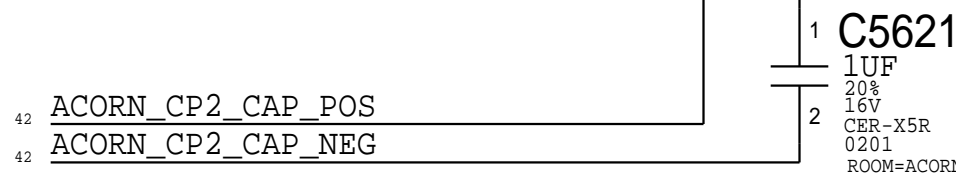
Acorn PMU



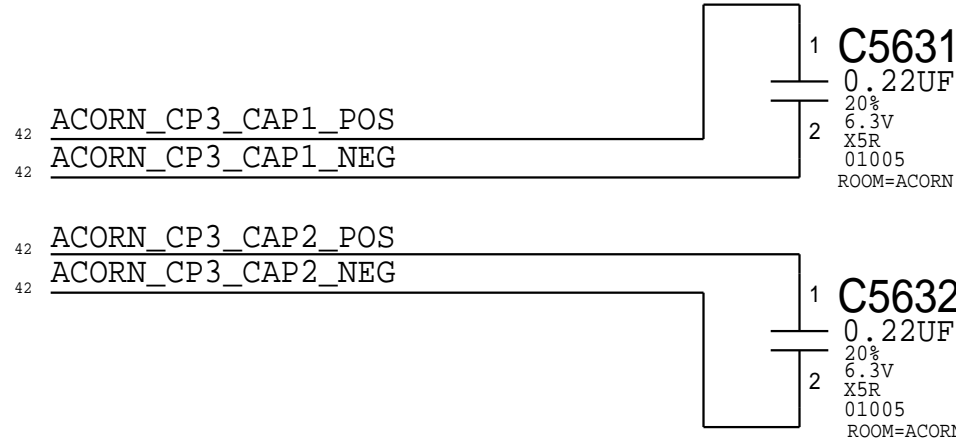
Charge Pump 1 Caps



Charge Pump 2 Caps

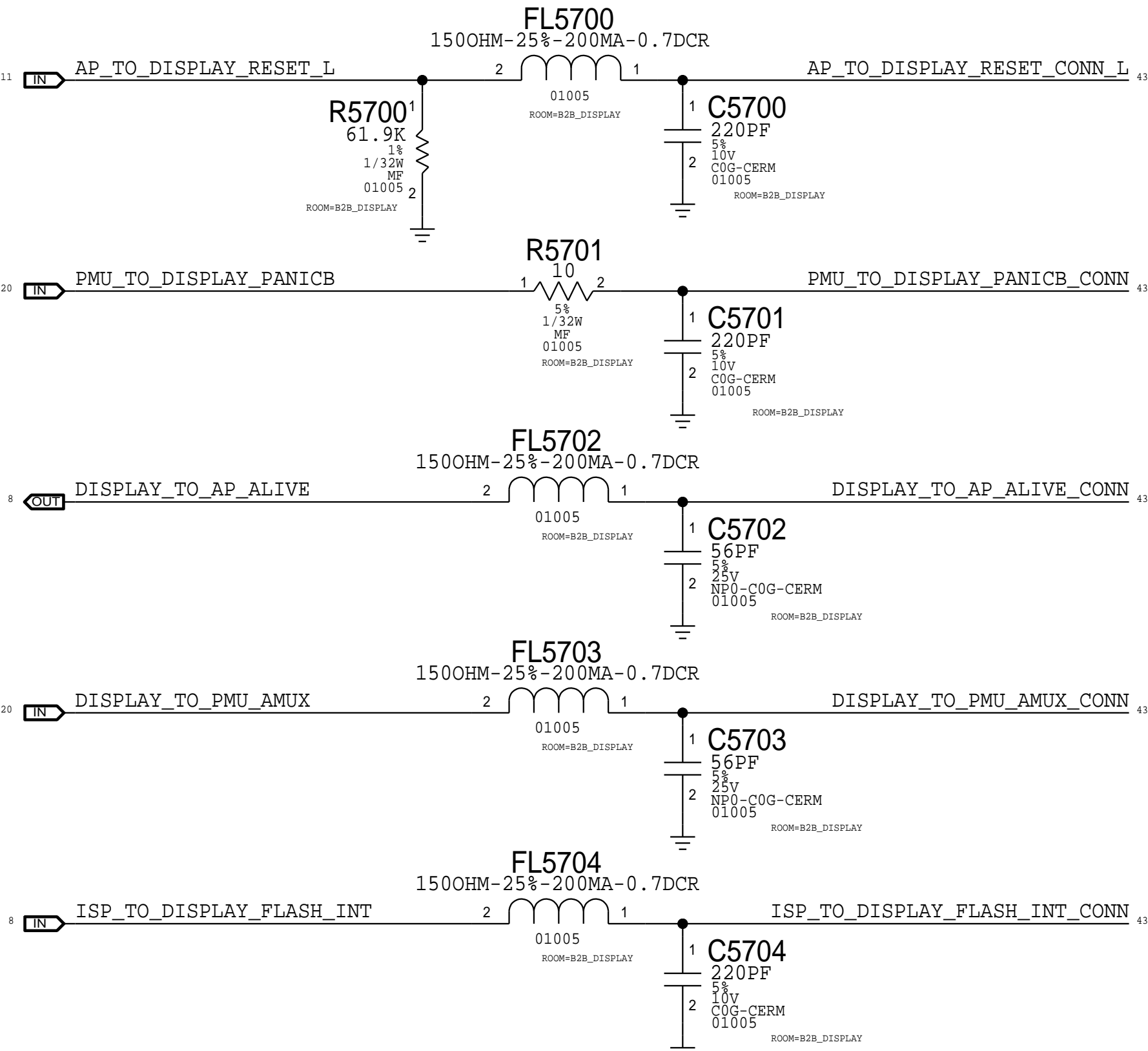


Charge Pump 3 Caps

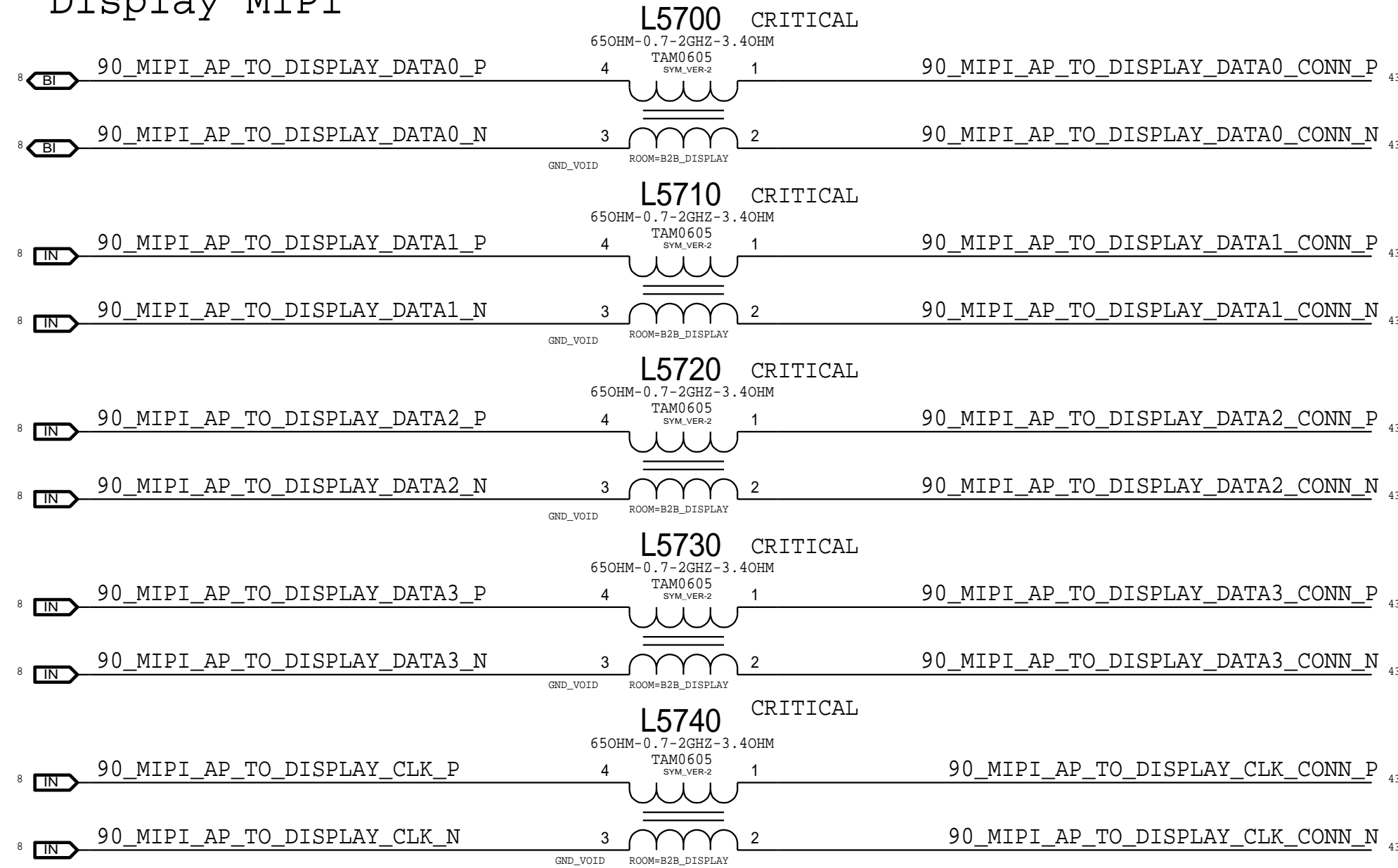


PAGE TITLE		
CG: Power Supplies - Touch & Display		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		
II NOT TO REPRODUCE OR COPY IT		
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		
IV ALL RIGHTS RESERVED		
BRANCH	evt-1	
PAGE	56 OF 80	
SHEET	42 OF 51	

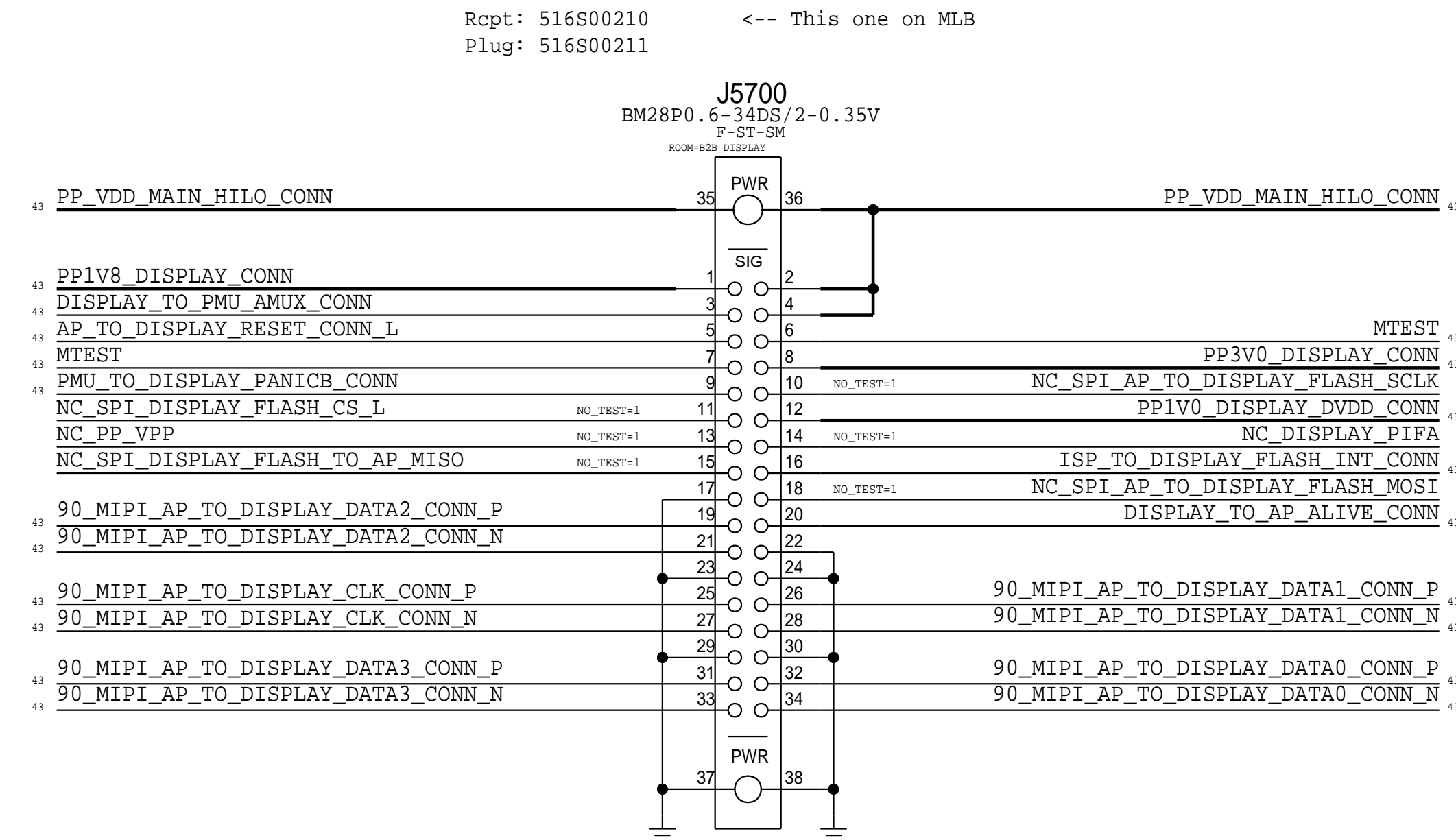
Display Control Signals



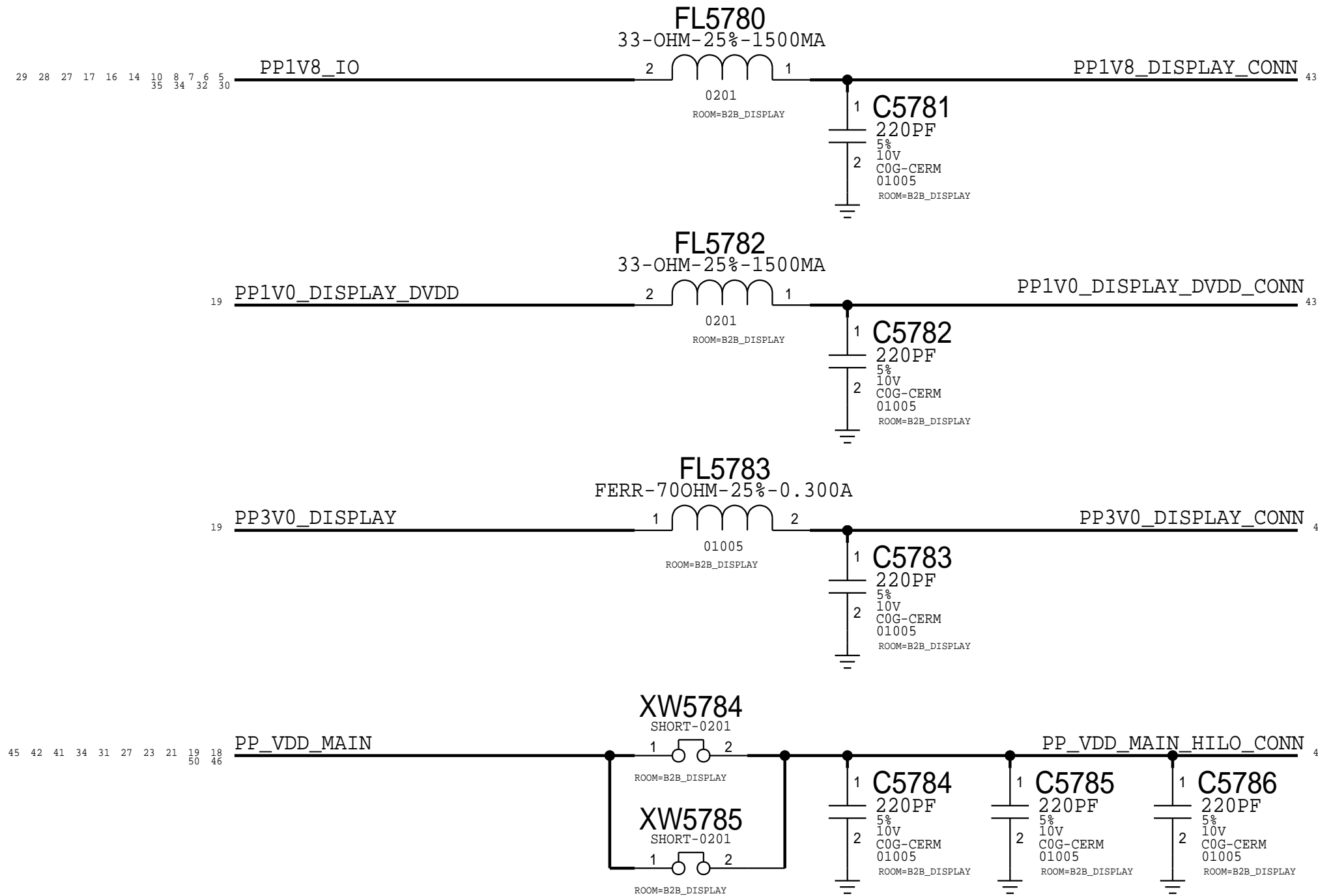
Display MIPI



Display Flex Connector




Display Power




PAGE TITLE		
CG: B2B Display		
	DRAWING NUMBER	051-02221
	REVISION	9.0.0
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	evt-1
	PAGE	57 OF 80
	SHEET	43 OF 51

8		7		6		5		4		3		2		1	
D														D	
C														C	
B														B	
A														A	
8		7		6		5		4		3		2		1	

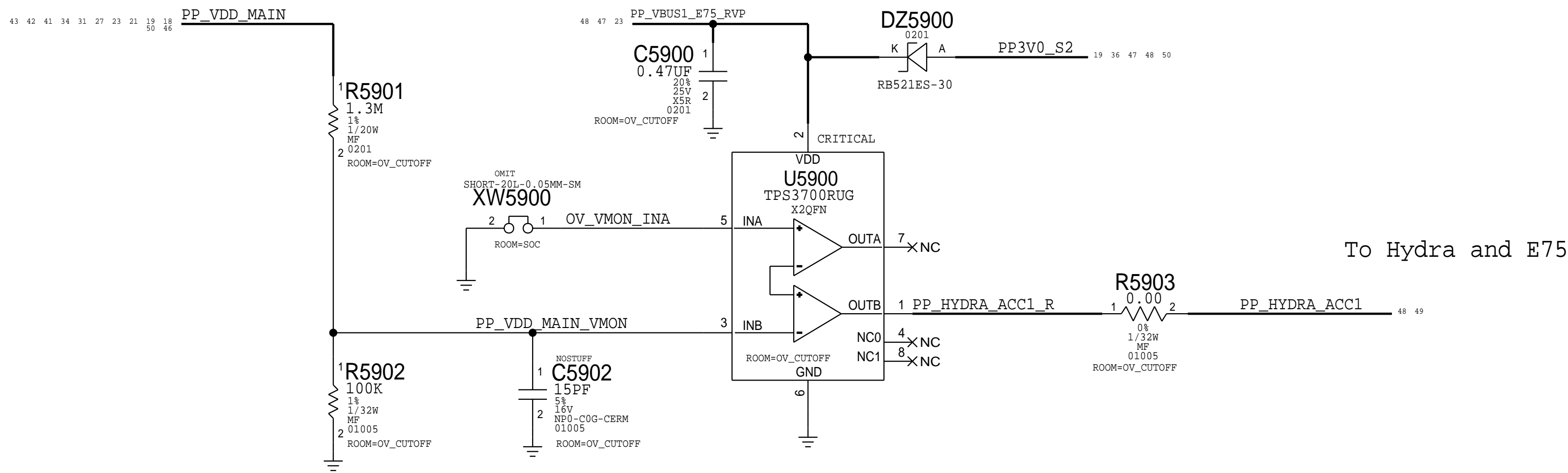
Orb + Touch Connector on MLB Bottom


PAGE TITLE			CG: B2B Orb & Touch		
 Apple Inc.		DRAWING NUMBER		051-02221	
		REVISION		9.0.0	
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		evt-1	
		PAGE		58 OF 80	
		SHEET		44 OF 51	

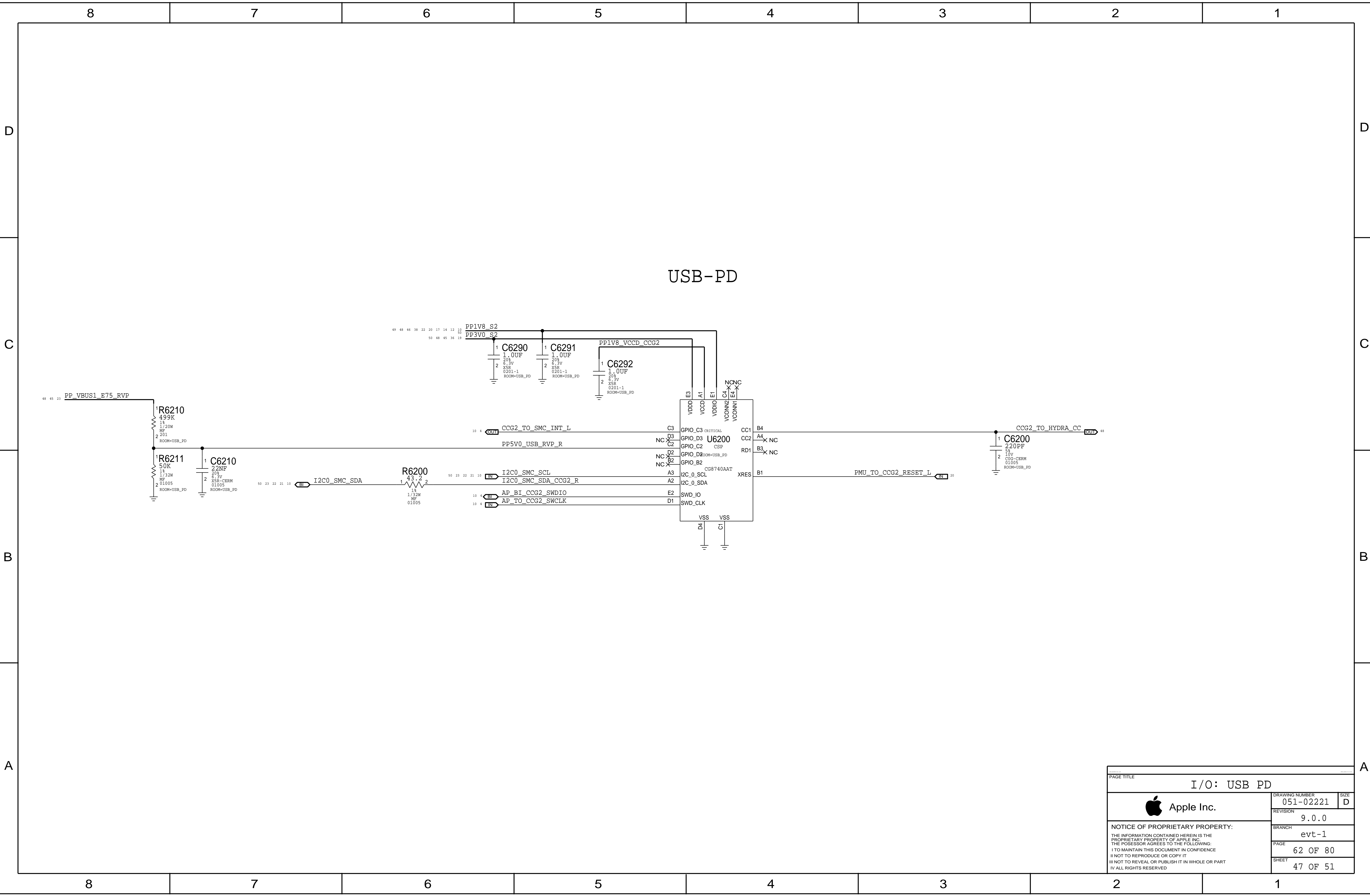
Orb + Touch Connector on MLB Bottom

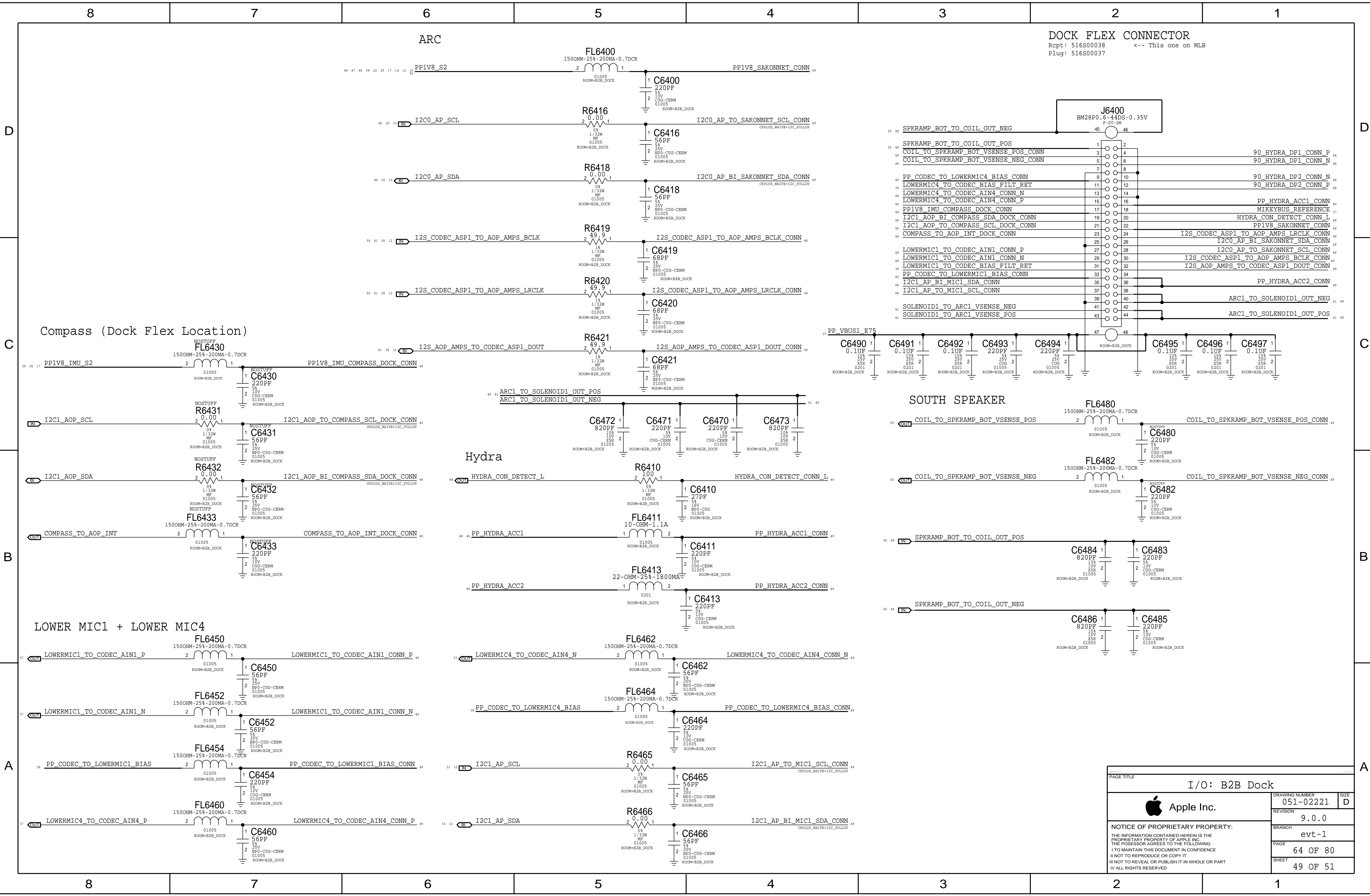
PAGE TITLE			SYNC_DATE=08/25/2015		
CG: B2B Orb & Touch					
 Apple Inc.		DRAWING NUMBER		SIZE	
		051-02221		D	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		REVISION		9.0.0	
		BRANCH		evt-1	
		PAGE		58 OF 80	
		SHEET		44 OF 51	

VDD_MAIN OV CUT-OFF CIRCUIT



PAGE TITLE		
I/O: Overvoltage Cut-Off Circuit		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
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	evt-1
	PAGE	59 OF 80
	SHEET	45 OF 51





DOCK FLEX CONNECTOR


Rcpt: 516S00038
Plug: 516S00037

J6400
BM28P0.6-44DS-0.35V
F-ST-SM

SOUTH SPEAKER

Hydra

LOWER MIC1 + LOWER MIC4

PAGE TITLE		
I/O: B2B Dock		
 Apple Inc.	DRAWING NUMBER	051-02221
	REVISION	9.0.0
	BRANCH	evt-1
	PAGE	64 OF 80
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		SHEET 49 OF 51




8		7		6		5		4		3		2		1	
D														D	
C														C	
B														B	
A														A	
8		7		6		5		4		3		2		1	

Radios on MLB Bottom

PAGE TITLE			RADIO			DRAWING NUMBER			051-02221			SIZE			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			REVISION			9.0.0			BRANCH			evt-1					
			PAGE			80 OF 80			SHEET			51 OF 51					

Radios on MLB Bottom

PAGE TITLE			RADIO			SYNC DATE=06/04/2015					
 Apple Inc.						DRAWING NUMBER		051-02221		SIZE	
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		9.0.0			
						BRANCH		evt-1			
						PAGE		80 OF 80			
						SHEET		51 OF 51			

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
6	0008416016	ENGINEERING RELEASED	2017-04-06

X891 MLB Bottom: EVT

LAST_MODIFICATION=Wed Apr 5 18:45:28 2017

PAGE	CSA	CONTENTS	SYNC	DATE
1	1	TABLE OF CONTENTS		
2	2	SYSTEM: BOM Tables		11/03/2016
3	4	SYSTEM: Mechanical Components		11/03/2016
4	6	BOOTSTRAPPING		11/03/2016
5	7	SYSTEM: Testpoints (Bottom)	test_mlb	11/09/2016
6	34	SYSTEM POWER: Iktara	test_mlb	11/09/2016
7	49	AUDIO: Speaker Amp Bottom	test_mlb	11/09/2016
8	50	AUDIO: Speaker Amp Top	test_mlb	11/09/2016
9	55	HALL EFFECT	test_mlb	03/23/2017
10	58	CG: B2B Luna & Touch	test_mlb	11/09/2016
11	66	I/O: Interposer (Top)	test_mlb	11/10/2016
12	80	RADIOS	test_mlb	08/19/2016
13	1	pagel		
14	2	BOM_OMIT_TABLE		
15	3	PMIC: BUCKS & LDOS		
16	4	PMIC: CLOCKS & CONTROL		
17	5	BB: POWER		
18	6	BB: CONTROL & HS PERIPHERALS		
19	7	BB: GPIOs & QLINK		
20	8	XCVR		
21	9	XCVR		
22	10	QPOET MODULE		
23	11	LB PAD		
24	12	HB PAD		
25	13	UHB PAD		
26	14	2G PA		
27	15	LB DSM		
28	16	HB DSM		
29	17	COUPLER2		
30	18	GNSS		
31	19	METROCIRC		
32	20	LOWER ANTENNA		
33	21	UPPER ANTENNA		
34	22	SIM, EUICC, DEBUG CONN	SIM TRAY	07/05/2016
35	23	TEST POINTS	PROBE POINTS	07/06/2016
36	24	RFFE TO GPO TRANSLATOR		
37	1	pagel		
38	75	NFC		
39	1	SymbolPorts		
40	4	Guinness	WIFI	01/30/2014
41	5	WiFiANTFeeds		


[illegible]

BOM:639-03222 (ROW)
BOM:639-03410 (JPN)
MCO:056-04079

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-02222	1	SCH, MLB_BOT, X891	SCH	NO	COMMON
820-00864	1	PCB, MLB_BOT, X891	PCB	NO	COMMON

Sub Designs

SOURCE PROJECT	SUB-DESIGN NAME	VERSION	HARD/ SOFT	SYNC_DATE/TIME
D22	RADIO_MLB	0.149.0	S	2017_04_05_18:45:19
D22	NFC_MLB	0.22.0	S	2017_03_22_22:10:24
D22	WIFI_MLB	0.20.0	S	2017_04_04_08:01:02

DRAWING TITLE			
SCH, MLB, BOT, X891			
 Apple Inc.	DRAWING NUMBER		SIZE
	051-02222		D
	REVISION		
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		6.0.0	
		BRANCH	
		evt-1	
		PAGE	1 OF 80
		SHEET	1 OF 41

EEEE Codes

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-7691	1	EEEE FOR (MLB_BOT, 639-03410, JPN)	EEEE_HP27	NO	JPN
825-7691	1	EEEE FOR (MLB_BOT, 639-03222, ROW)	EEEE_HL79	NO	ROW

Global Capacitors

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00148	138S00149	BOM_TABLE_ALTS	ALL	0402-3T,10.5uF@1V, Kyocera
138S00150	138S00149	BOM_TABLE_ALTS	ALL	0402-3T,10.5uF@1V, SEMCO
138S00151	138S00149	BOM_TABLE_ALTS	ALL	0402-3T,10.5uF@1V, TT

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00143	138S00144	BOM_TABLE_ALTS	ALL	0402,16uF@1V, Kyocera
138S00163	138S00144	BOM_TABLE_ALTS	ALL	0402,16uF@1V, Taiyo

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00138	138S00139	BOM_TABLE_ALTS	ALL	0201,3uF@1V, Kyocera
138S00164	138S00139	BOM_TABLE_ALTS	ALL	0201,3uF@1V, Taiyo

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00145	138S00146	BOM_TABLE_ALTS	ALL	0402,5.1uF@3V, Kyocera
138S00165	138S00146	BOM_TABLE_ALTS	ALL	0402,5.1uF@3V, Taiyo

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S00140	138S00141	BOM_TABLE_ALTS	ALL	0201,1.1uF@3V, Kyocera
138S00142	138S00141	BOM_TABLE_ALTS	ALL	0201,1.1uF@3V, SEMCO
138S00166	138S00141	BOM_TABLE_ALTS	ALL	0201,1.1uF@3V, Taiyo

CRITICAL PART#	COMMENT
138S00149	0402-3T,10.5uF@1V

CRITICAL PART#	COMMENT
138S00144	0402,16uF@1V

CRITICAL PART#	COMMENT
138S00139	0201,3uF@1V

CRITICAL PART#	COMMENT
138S00146	0402,5.1uF@3V

CRITICAL PART#	COMMENT
138S00141	0201,1.1uF@3V

Global Ferrites

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S00558	152S00557	BOM_TABLE_ALTS	ALL	IND_MLD,0.47UH,20H,2.5A,80MD,1608
155S00194	155S0610	BOM_TABLE_ALTS	ALL	FERR_BD,150 OHM,25H,200MA,0.7 DCR,01005
155S00200	155S0610	BOM_TABLE_ALTS	ALL	FERR_BD,150 OHM,25H,200MA,0.7 DCR,01005

CRITICAL PART#	COMMENT
152S00557	IND_MLD,0.47UH,20H,2.5A,80MD,1608
155S0610	FERR_BD,150 OHM,25H,200MA,0.7 DCR,01005

Global R/C Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S0648	138S0652	BOM_TABLE_ALTS	ALL	CAP_XSR,4.7UF,6.3V,2.05MM,0402,TAIYO
138S00024	138S0986	BOM_TABLE_ALTS	ALL	CAP_CER,3-TERRM,7.5UF,20H,4V,0402,TAIYO/TDK
138S0706	138S0739	BOM_TABLE_ALTS	ALL	CAP_CER,1UF,20H,10V,XSR,0201,MURATA
138S0945	138S0739	BOM_TABLE_ALTS	ALL	CAP_CER,1UF,20H,10V,XSR,0201,MURATA
138S0739	138S0706	BOM_TABLE_ALTS	ALL	CAP_CER,XSR,0.22UF,20H,6.3V,20H
132S0436	132S0400	BOM_TABLE_ALTS	ALL	CAP_CER,XSR,0.22UF,20H,6.3V,01005
138S00049	138S0831	BOM_TABLE_ALTS	ALL	CAP_CER,XSR,2.2UF,20H,6.3V,0201

CRITICAL PART#	COMMENT
138S0652	CAP_XSR,4.7UF,6.3V,0.65MM,0402,TAIYO
138S0986	CAP_CER,3-TERRM,7.5UF,20H,4V,0402,TAIYO/TDK
138S0739	CAP_CER,1UF,20H,10V,XSR,0201,MURATA

138S0706	CAP_CER,XSR,0.22UF,20H,6.3V,20H
132S0400	CAP_CER,XSR,0.22UF,20H,6.3V,01005
138S0831	CAP_CER,XSR,2.2UF,20H,6.3V,0201

Global Inductors

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S00653	152S00651	BOM_TABLE_ALTS	ALL	IND,1.20H,3A,2016,0.65Z
152S00654	152S00652	BOM_TABLE_ALTS	ALL	IND,1.20H,3A,2016,0.8Z

CRITICAL PART#	COMMENT
152S00651	IND,1.20H,3A,2016,0.65Z
152S00652	IND,1.20H,3A,2016,0.8Z

Multi-Vendor Criticals

CRITICAL PART#	COMMENT	CRITICAL PART#	COMMENT
138S0979	CAP_CER,XSR,10UF,20H,10V,0402,B=0.65MM	132S00008	CAP_CER,0.1UF,10H,50V,X7R,0402
138S0683	CAP_CER,XSR,1UF,10H,25V,0402	131S0804	CAP_CER,27PF,5H,C0G,25V,0201
132S0663	CAP_CER,XSR,1UF,10H,25V,0402	131S0307	CAP_CER,NP0/C0G,100PF,5H,16V,01005
132S0288	CAP_CER,XSR,0.1UF,10H,16V,0201	131S00053	CAP_CER,C0G,220PF,5H,10V,01005
132S0275	CAP_CER,XSR,470PF,10H,10V,01005	117S0055	RES,NF,1/20W,2M OHM,5,0201,SMD
132S0245	CAP_CER,XSR,0.01UF,10H,6.3V,01005	107S0257	THERMISTOR,NTC,10K OHM,1H,B=4335,01005

Iktara

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
132S00021	8	CAP_CER,0.082UF,10H,50V,X7R,0402	C3451,C3452,C3453,C3454,C3451,C3452,C3453,C3454	NO	COMMON
132S0423	2	CAP_CER,0.022UF,50V,X7R,10H,0402	C3455,C3465	CRITICAL	COMMON
132S0423	2	CAP_CER,0.022UF,50V,X7R,10H,0402	C3456,C3466	CRITICAL	NOSTUFF

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
685-00183	685-00182	BOM_TABLE_ALTS	SUBBOM_DS	888888,MLB_BOT,02083,02083,08881

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
685-00182	1	SUBBOM,MLB_BOT,DIODES,DIODES,X891	SUBBOM_DS	CRITICAL	COMMON
371S00133	4	DIODES,SHOTTKY DIODE,30V,2A,0603	D3400,D3401,D3402,D3403	CRITICAL	DIODES_DS
371S00132	4	ONSEMI,SHOTTKY DIODE,30V,2A,0603	D3400,D3401,D3402,D3403	CRITICAL	ONSEMI_DS


Soft-Term Cap Sub BOMs

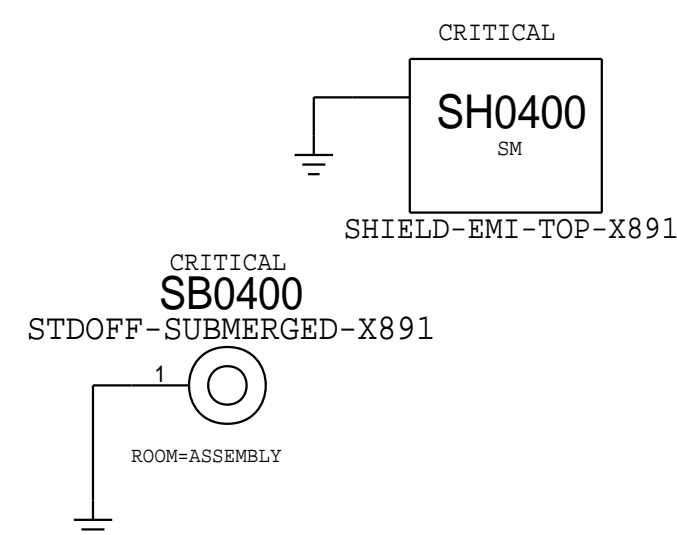
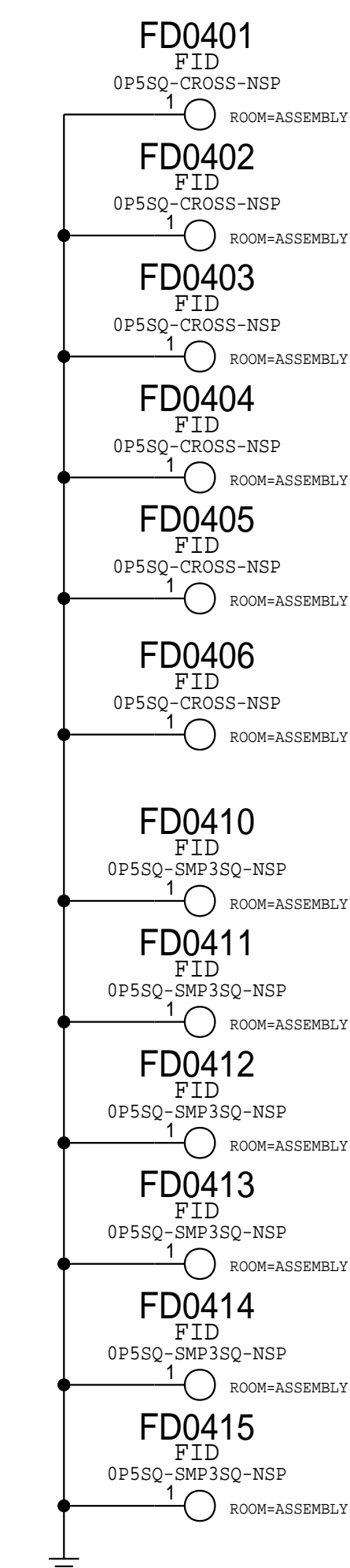
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
685-00157	1	SUBBOM,MLB_BOT,CAP,TYPICAL,X891	SUBBOM_CAP	CRITICAL	COMMON


Touch/Luna B2B

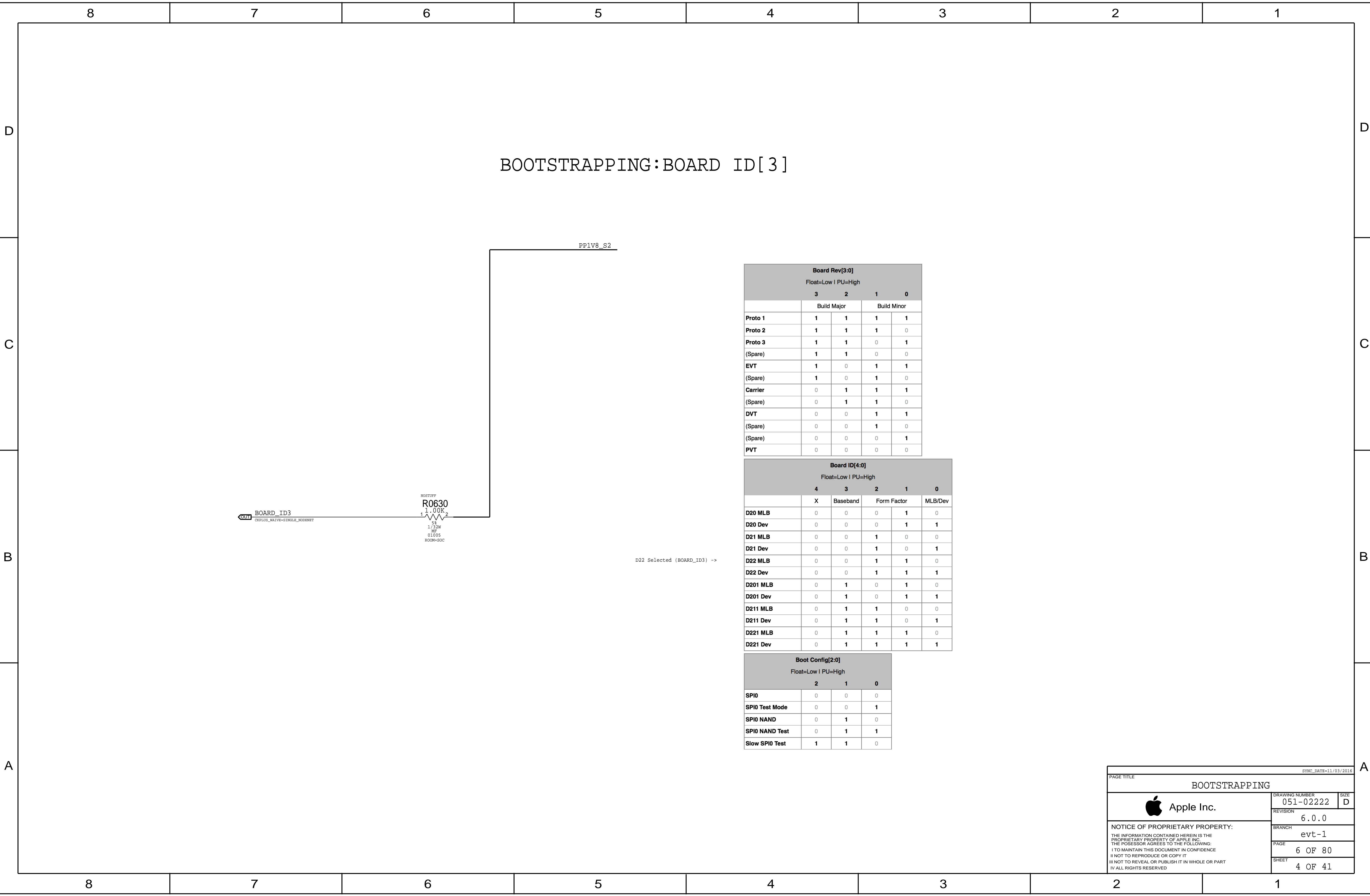
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	1	CAP,SOFT-TERM,2.2UF,6.3V,0201,KYOCERA	C5890	CRITICAL	SOFT_CAP
138S0831	1	CAP,TYPICAL,2.2UF,6.3V,0201,MURATA	C5890	CRITICAL	TYPICAL_CAP

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
685-00158	685-00157	BOM_TABLE_ALTS	SUBBOM_CAP	888888,MLB_BOT,CAP,SOFT,X891

SYNC_MASTER=		SYNC_DATE=11/03/2016	
PAGE TITLE			
SYSTEM: BOM Tables			
 Apple Inc.	DRAWING NUMBER		SIZE
	051-02222		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	REVISION		
	6.0.0		
	BRANCH		
	evt-1		
	PAGE		
2 OF 80			
SHEET			
2 OF 41			



PAGE TITLE		SYSC_DATE=11/03/2016	
SYSTEM: Mechanical Components			
 Apple Inc.	DRAWING NUMBER		SIZE
	051-02222		D
	REVISION		
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		6.0.0	
		BRANCH	
		evt-1	
		PAGE	
		4 OF 80	
		SHEET	
		3 OF 41	



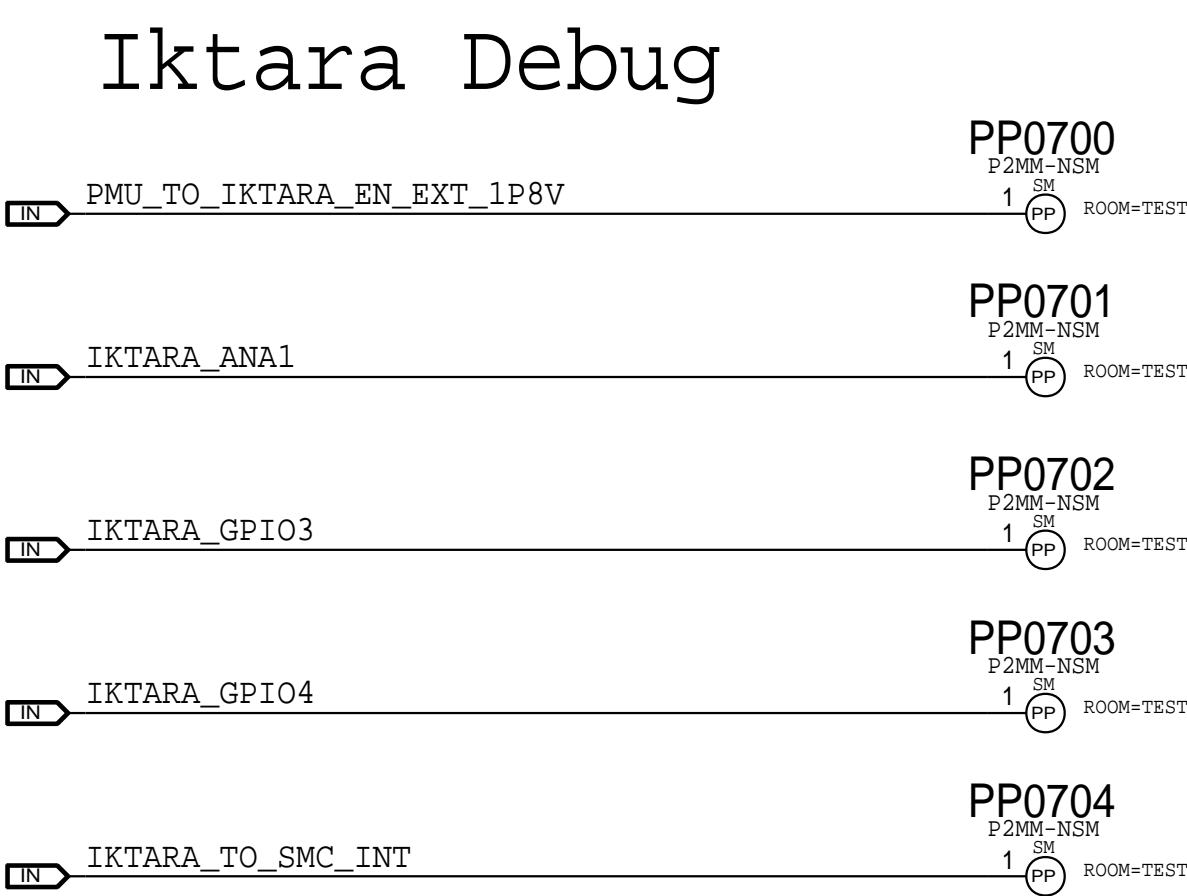
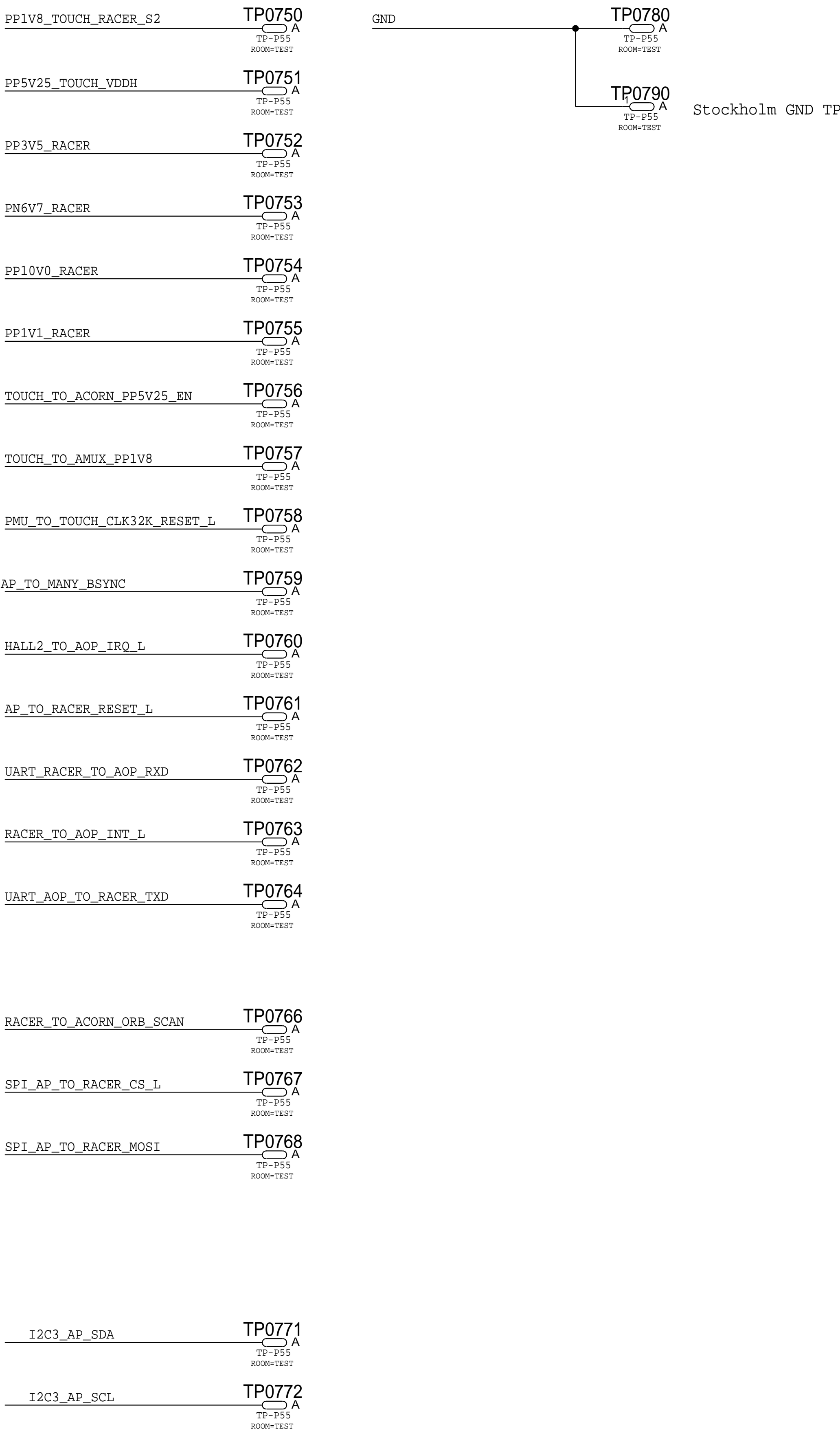
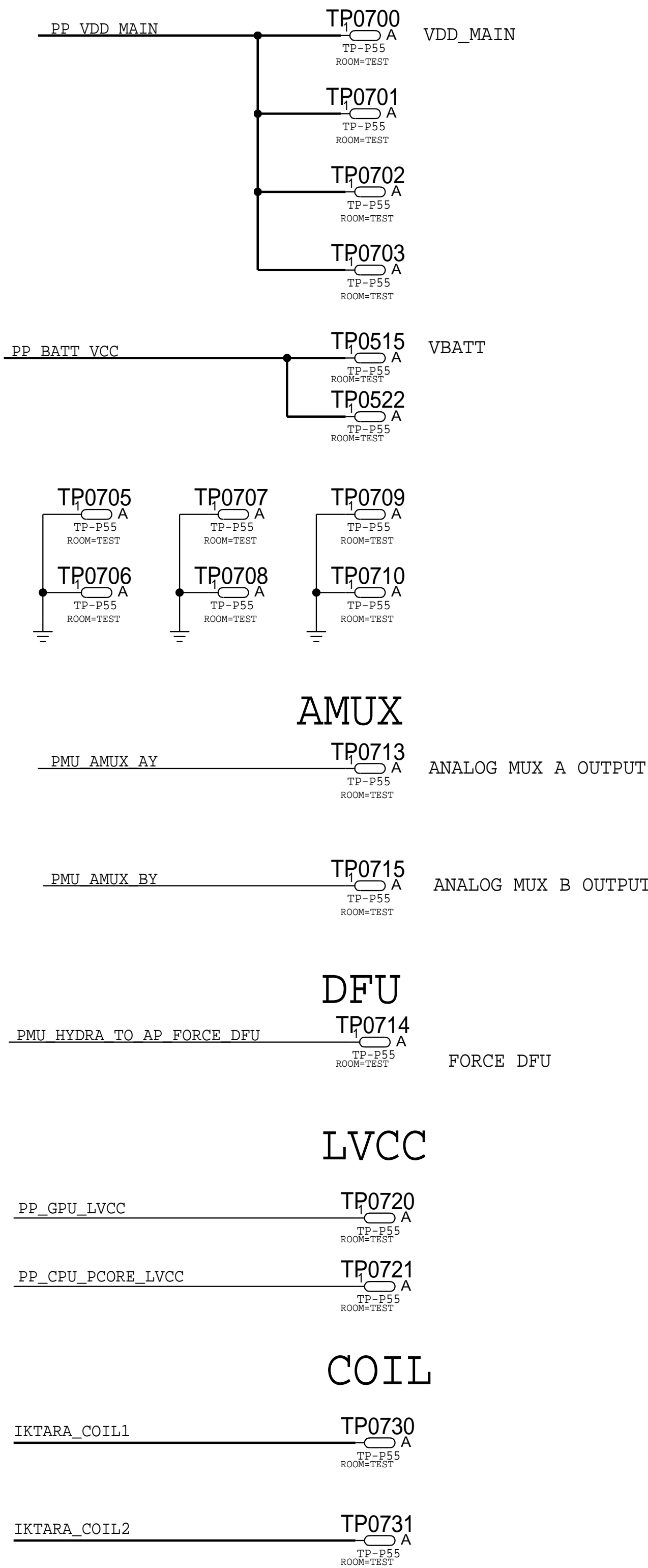
Board Rev[3:0]				
Float=Low I PU=High				
	3	2	1	0
	Build Major		Build Minor	
Proto 1	1	1	1	1
Proto 2	1	1	1	0
Proto 3	1	1	0	1
(Spare)	1	1	0	0
EVT	1	0	1	1
(Spare)	1	0	1	0
Carrier	0	1	1	1
(Spare)	0	1	1	0
DVT	0	0	1	1
(Spare)	0	0	1	0
(Spare)	0	0	0	1
PVT	0	0	0	0


Board ID[4:0]					
Float=Low I PU=High					
	4	3	2	1	0
	X	Baseband	Form Factor	MLB/Dev	
D20 MLB	0	0	0	1	0
D20 Dev	0	0	0	1	1
D21 MLB	0	0	1	0	0
D21 Dev	0	0	1	0	1
D22 MLB	0	0	1	1	0
D22 Dev	0	0	1	1	1
D201 MLB	0	1	0	1	0
D201 Dev	0	1	0	1	1
D211 MLB	0	1	1	0	0
D211 Dev	0	1	1	0	1
D221 MLB	0	1	1	1	0
D221 Dev	0	1	1	1	1

Boot Config[2:0]			
Float=Low I PU=High			
	2	1	0
SPI0	0	0	0
SPI0 Test Mode	0	0	1
SPI0 NAND	0	1	0
SPI0 NAND Test	0	1	1
Slow SPI0 Test	1	1	0

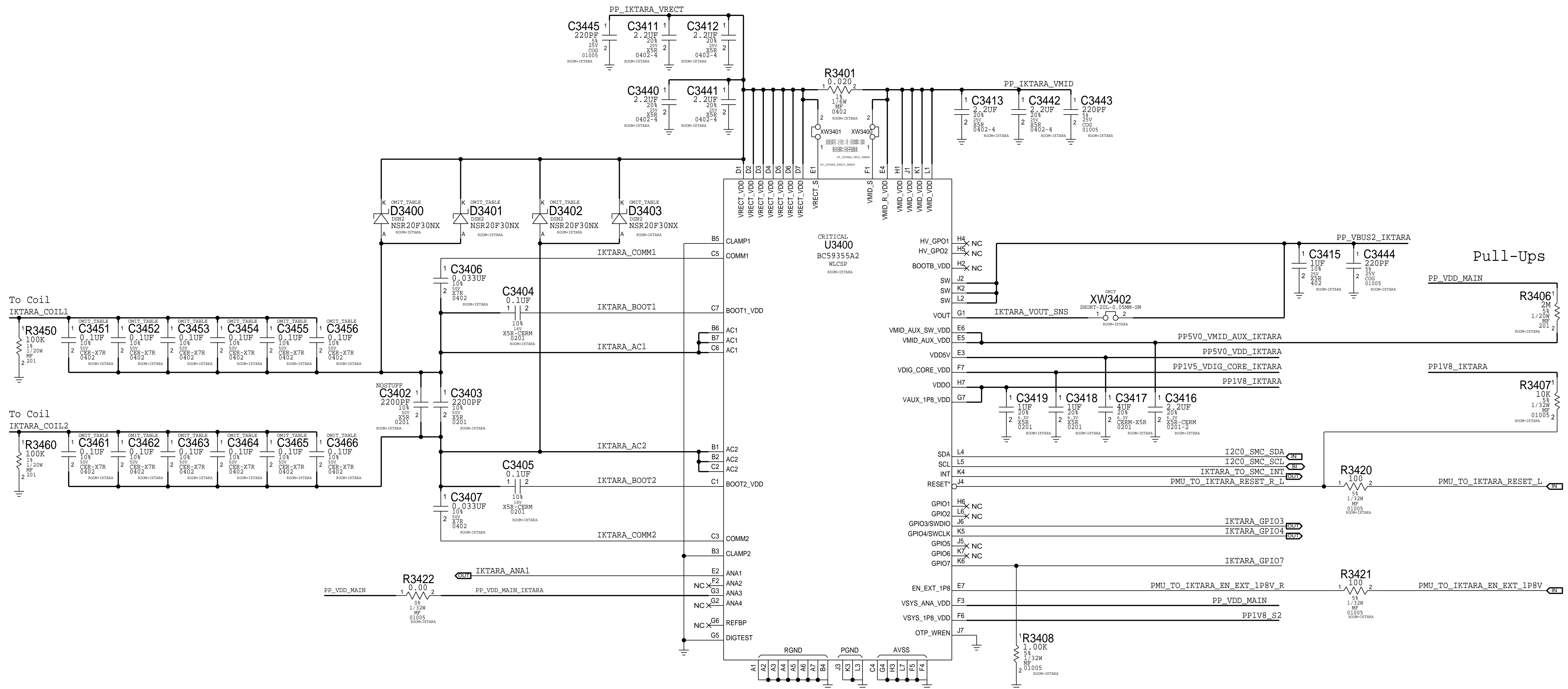
Test Points


Probe Points



SYNC_MASTER=test_mib			SYNC_DATE=11/09/2016		
PAGE TITLE					
SYSTEM: Testpoints (Bottom)					
 Apple Inc.			DRAWING NUMBER		SIZE
			051-02222		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			REVISION		
			6.0.0		
			BRANCH		
			evt-1		
			PAGE		
			7 OF 80		
			SHEET		
			5 OF 41		

Iktara

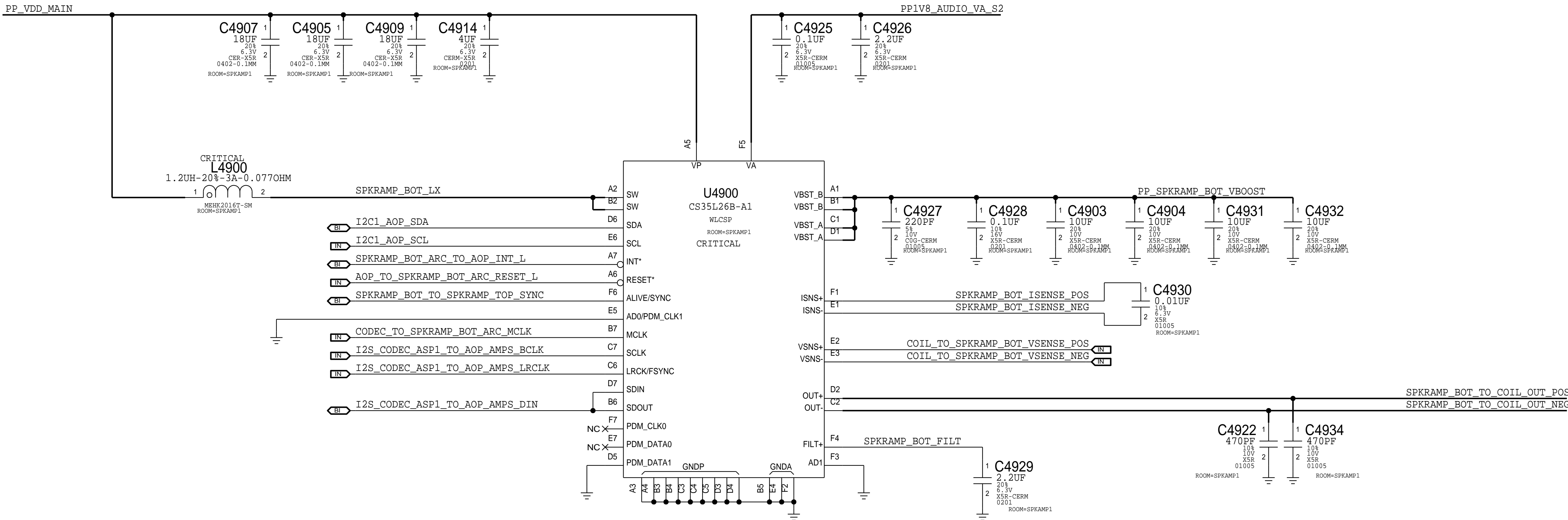



PAGE NUMBER: 0001		PAGE TOTAL: 0002	
PAGE TITLE SYSTEM POWER: Iktara			
 Apple Inc.	DRAWING NUMBER 051-02222		SIZE D
	REVISION 6.0.0		
	BRANCH evt-1		
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO 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 34 OF 80		
	SHEET 6 OF 41		

South Speaker Amplifier

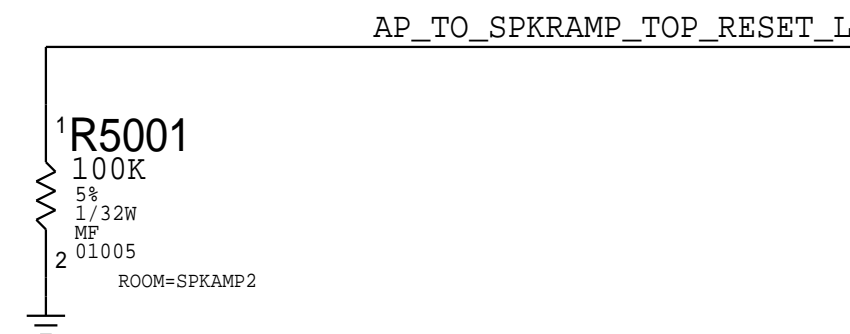
APN: 338S00295

I2C ADDRESS: 1000 000x
0x80



PAGE TITLE		
AUDIO: Speaker Amp Bottom		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
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	evt-1
	PAGE	49 OF 80
	SHEET	7 OF 41

Pull Downs

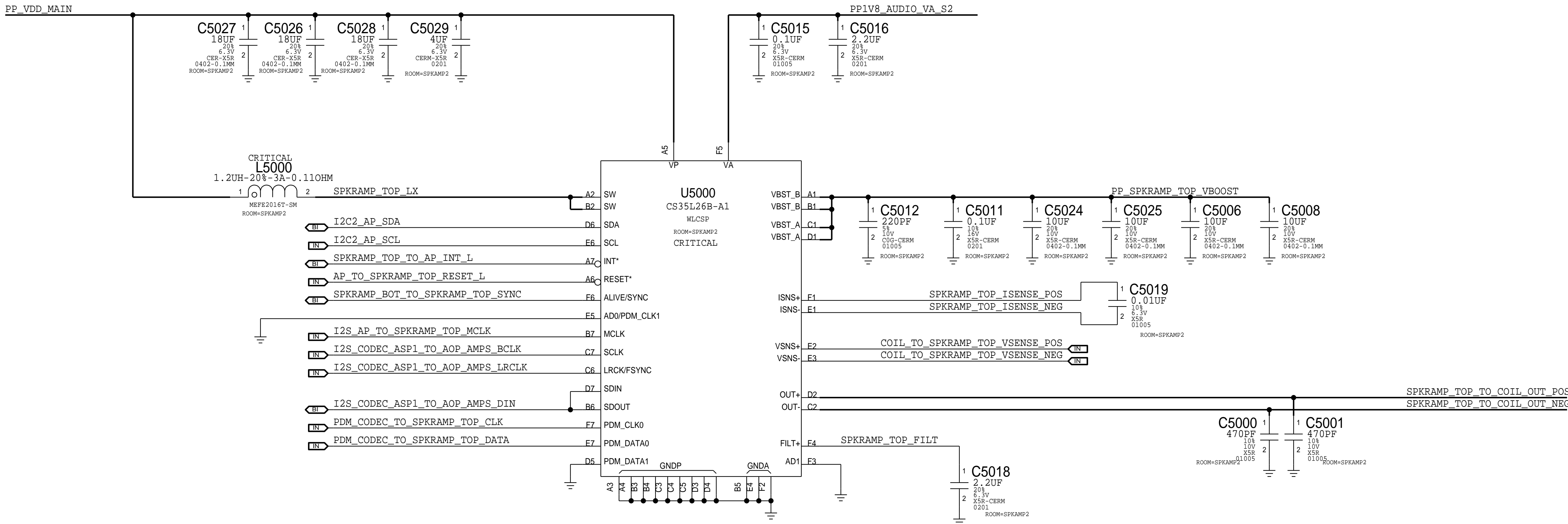



North Speaker Amplifier

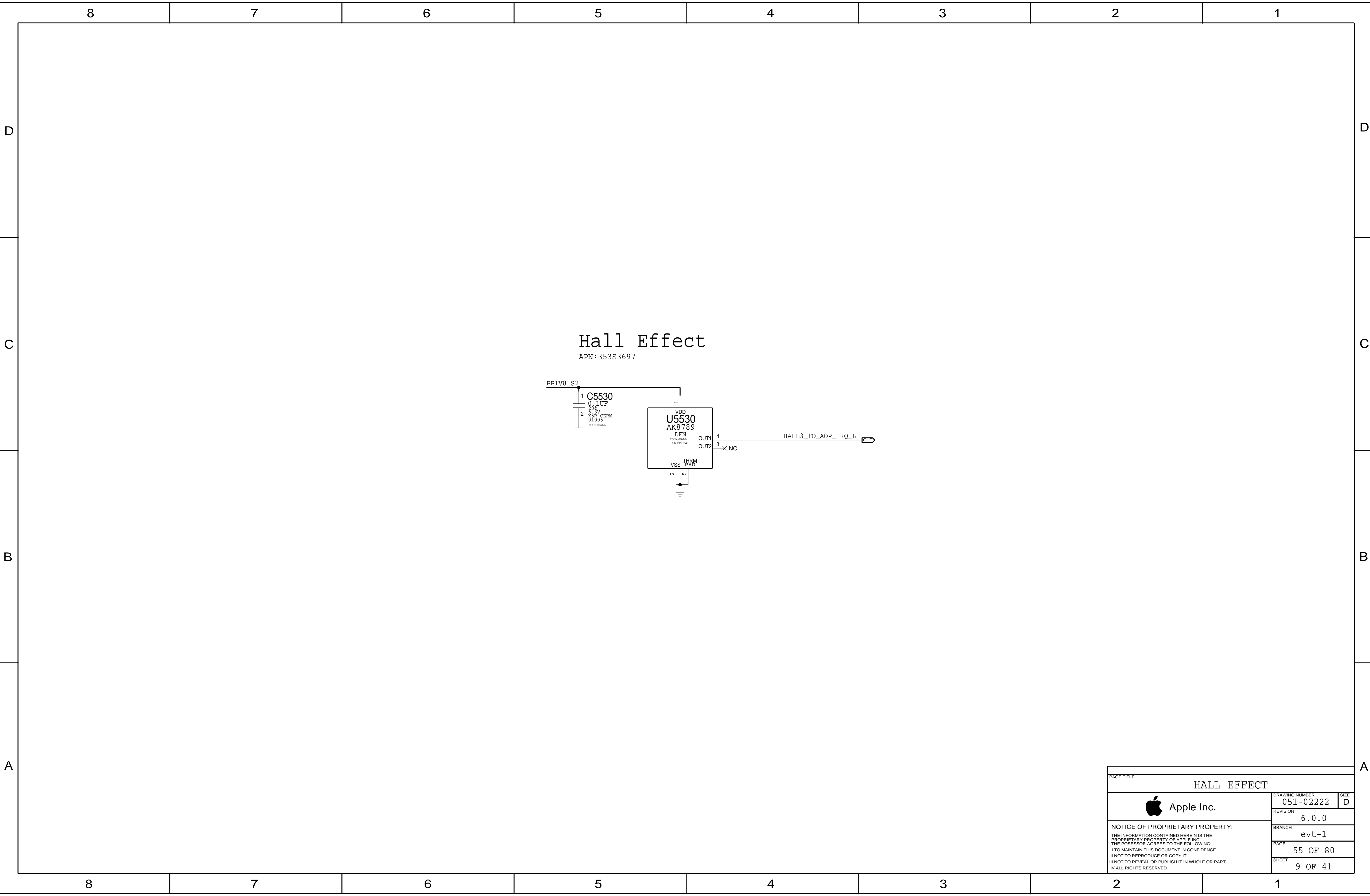
APN: 338S00295

I2C ADDRESS: 1000 000x

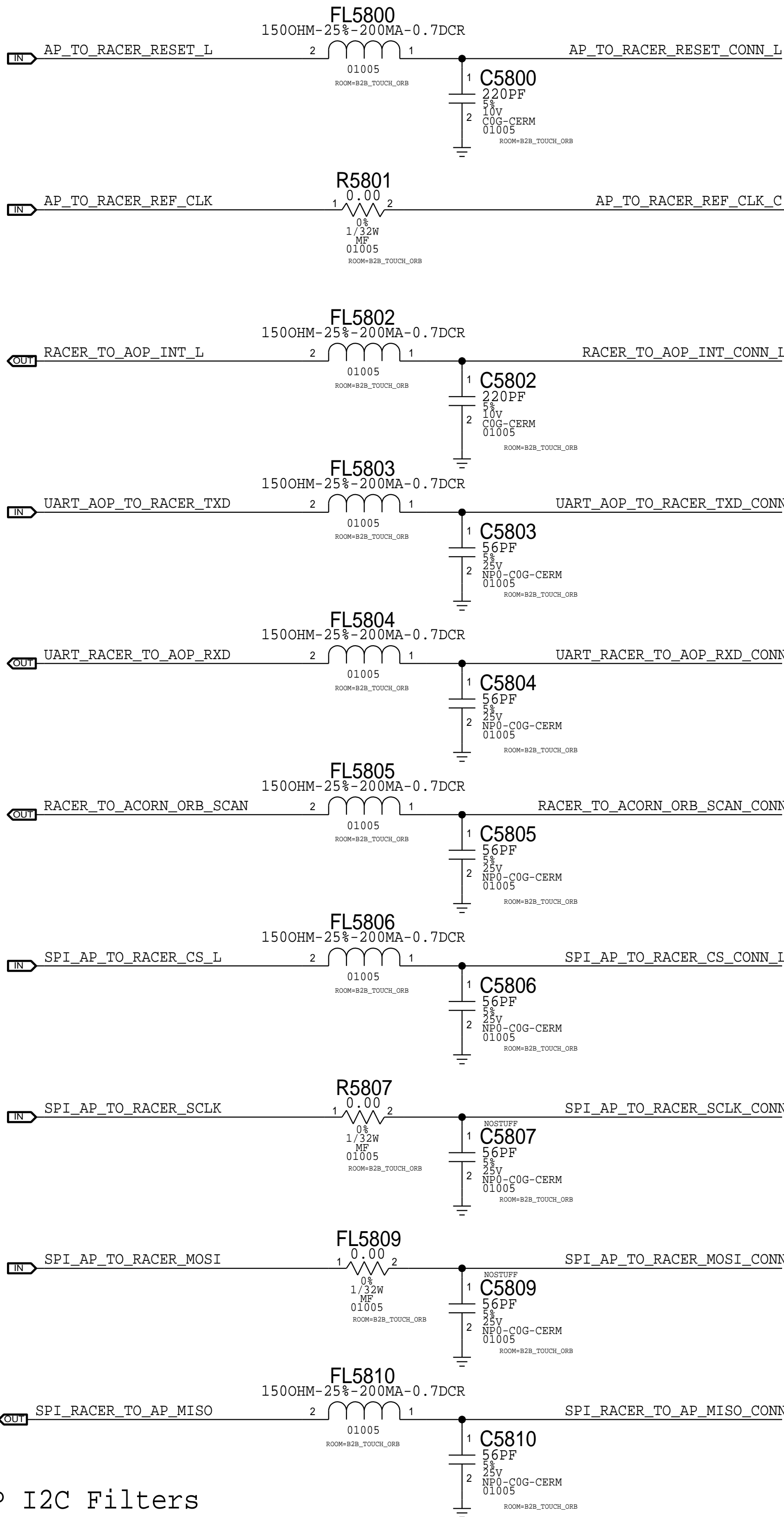
0x80



PAGE TITLE		
AUDIO: Speaker Amp Top		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
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	evt-1
	PAGE	50 OF 80
	SHEET	8 OF 41

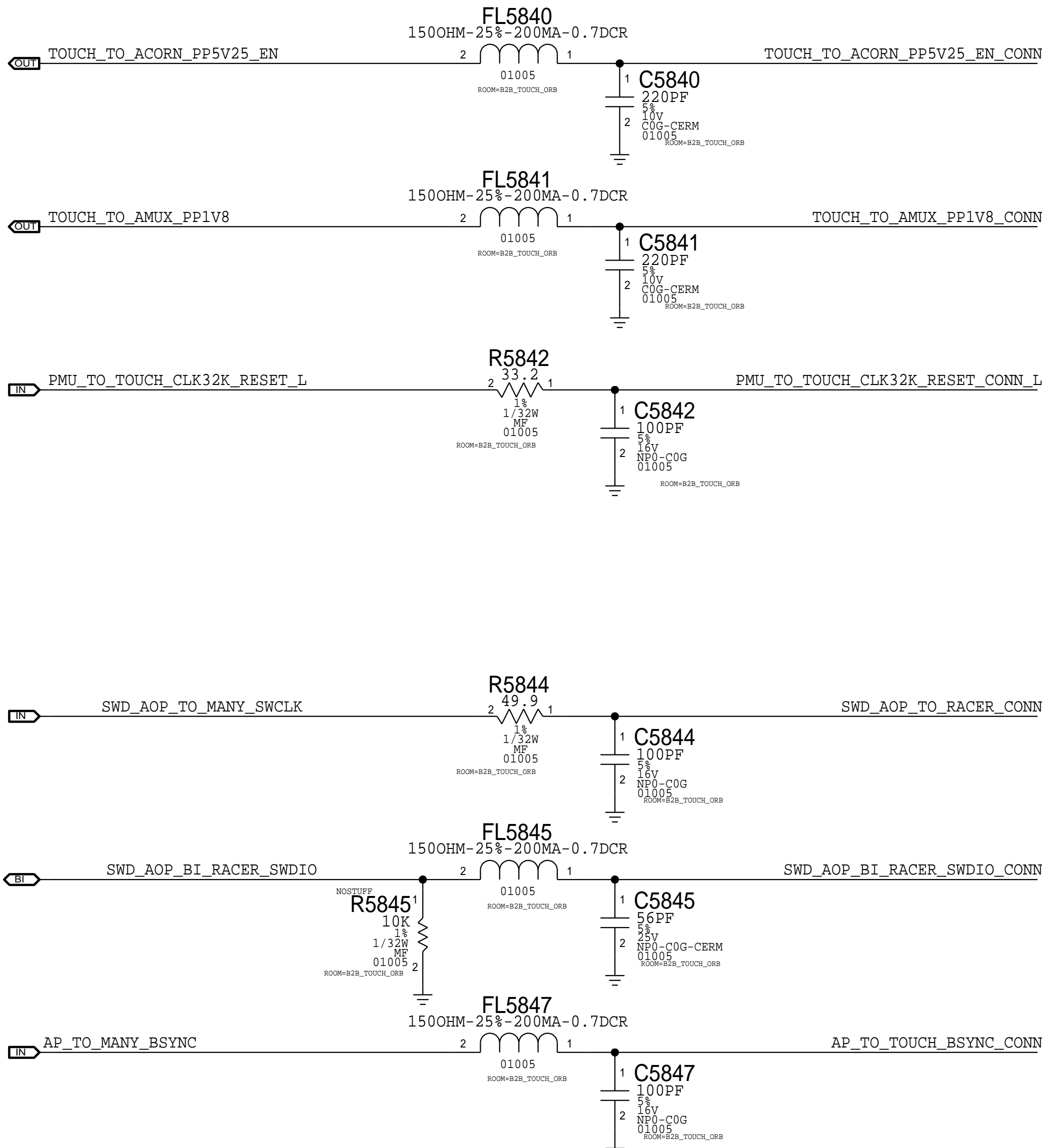


Racer I/O

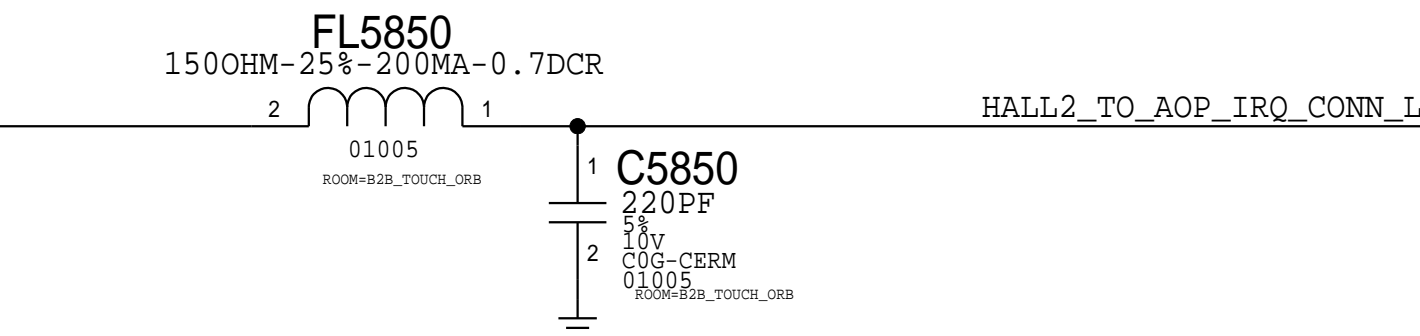


AP I2C Filters

Touch and Misc I/O



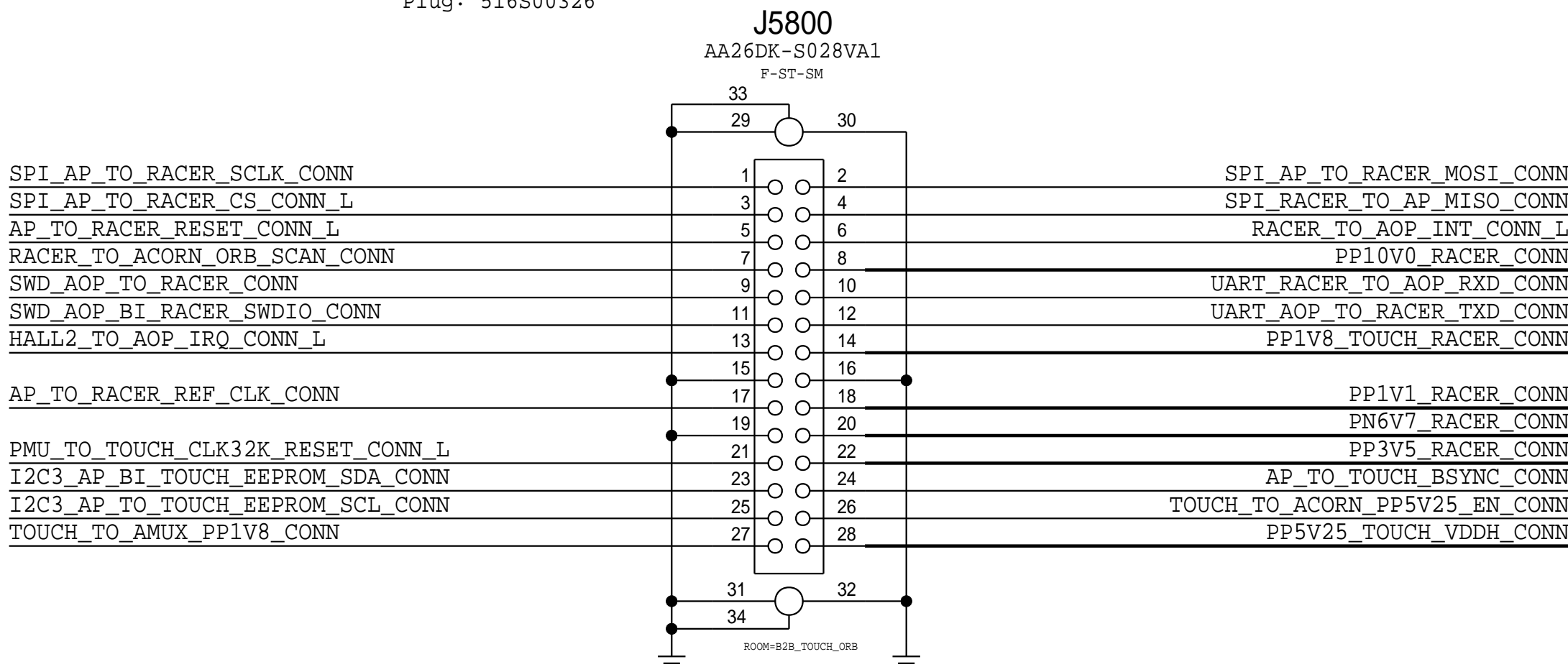
Hall Effect



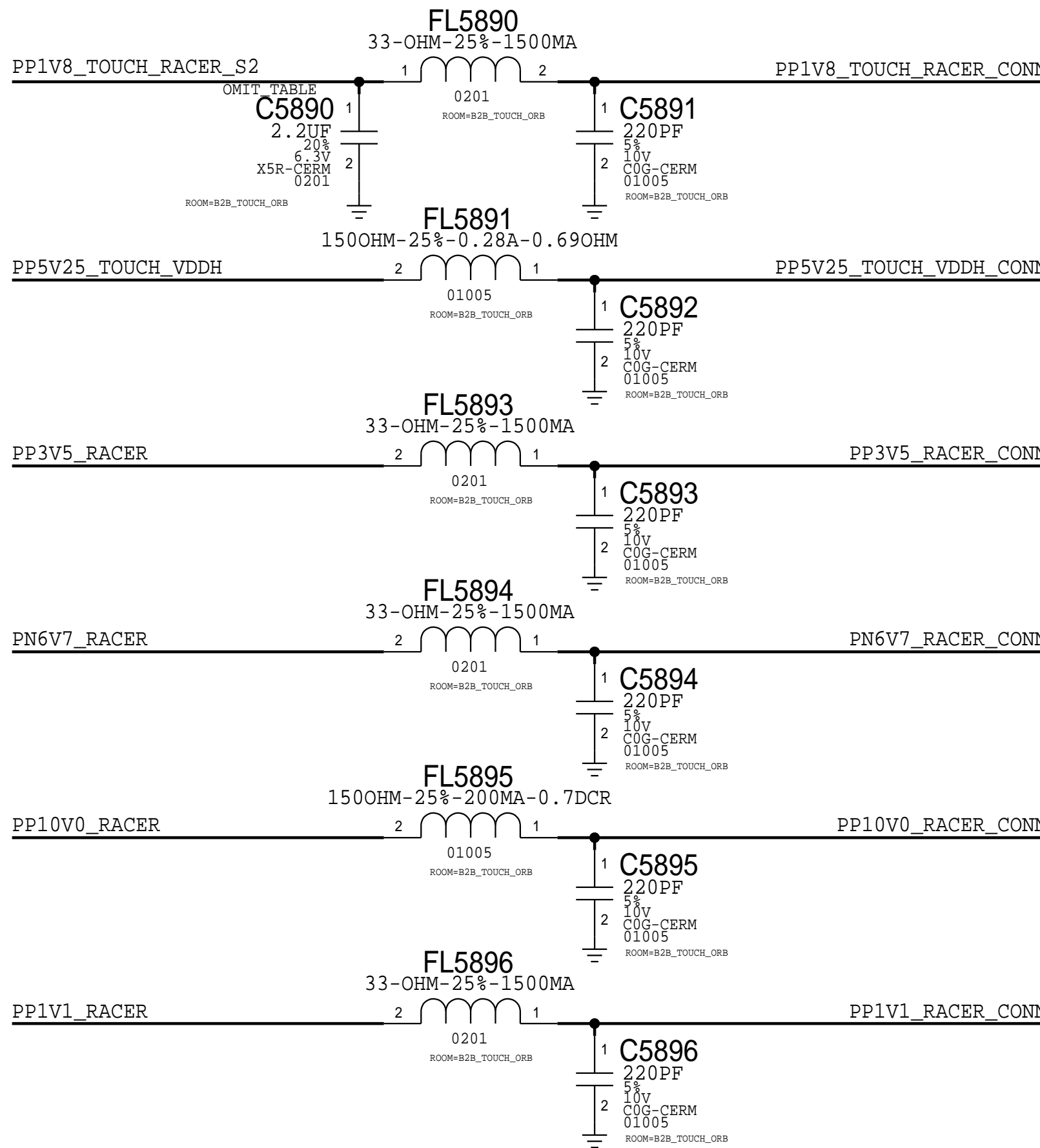
Luna + Touch Connector

Rcpt: 516S00325
Plug: 516S00326

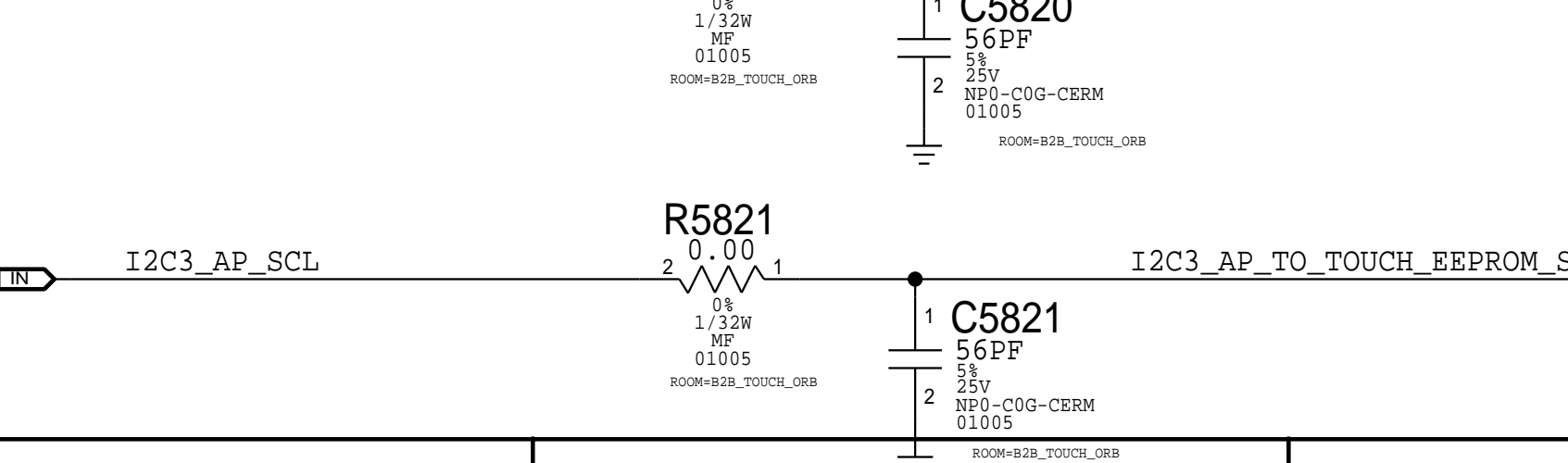
<-- This one on MLB



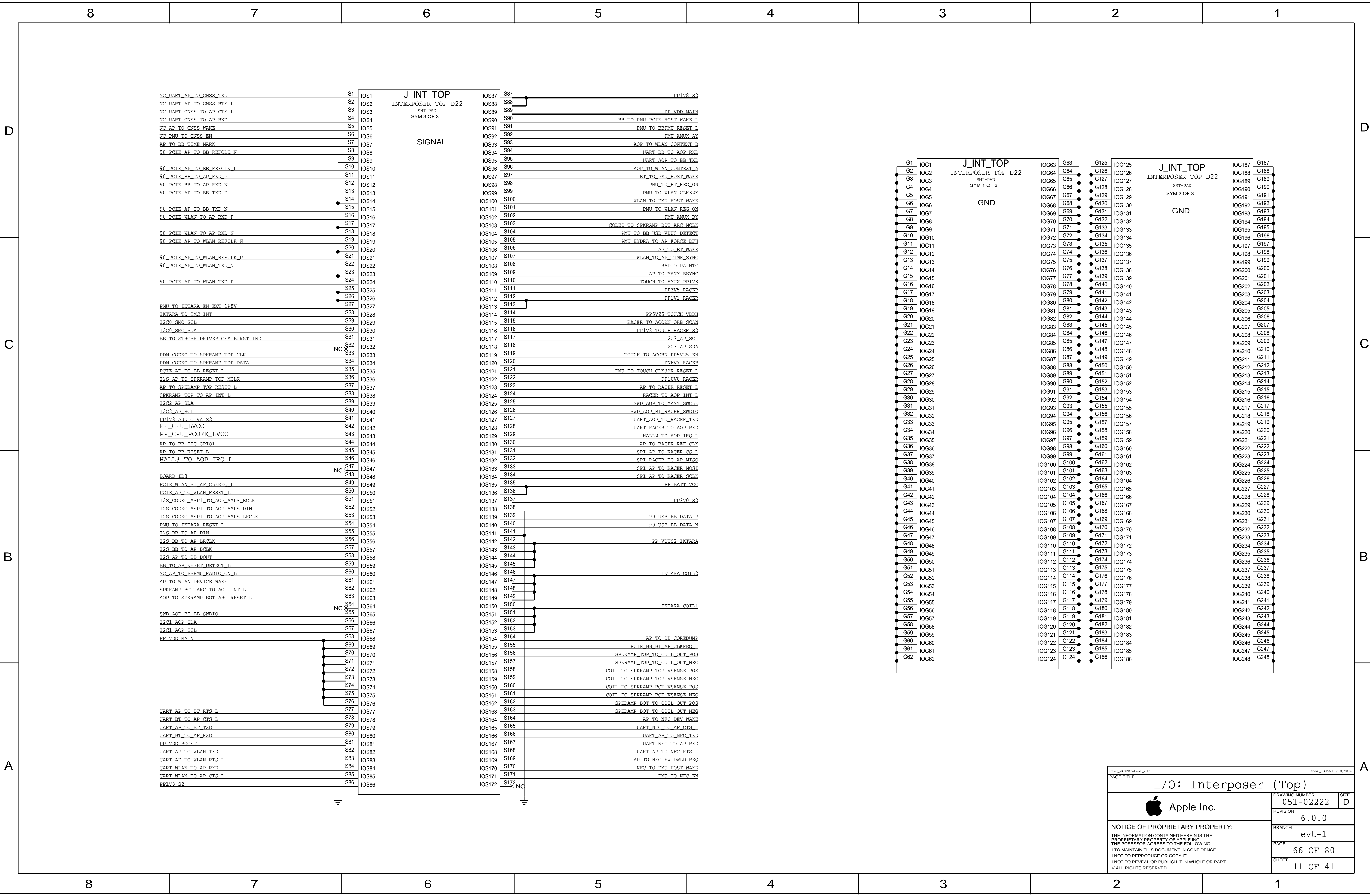
Touch And Racer Power

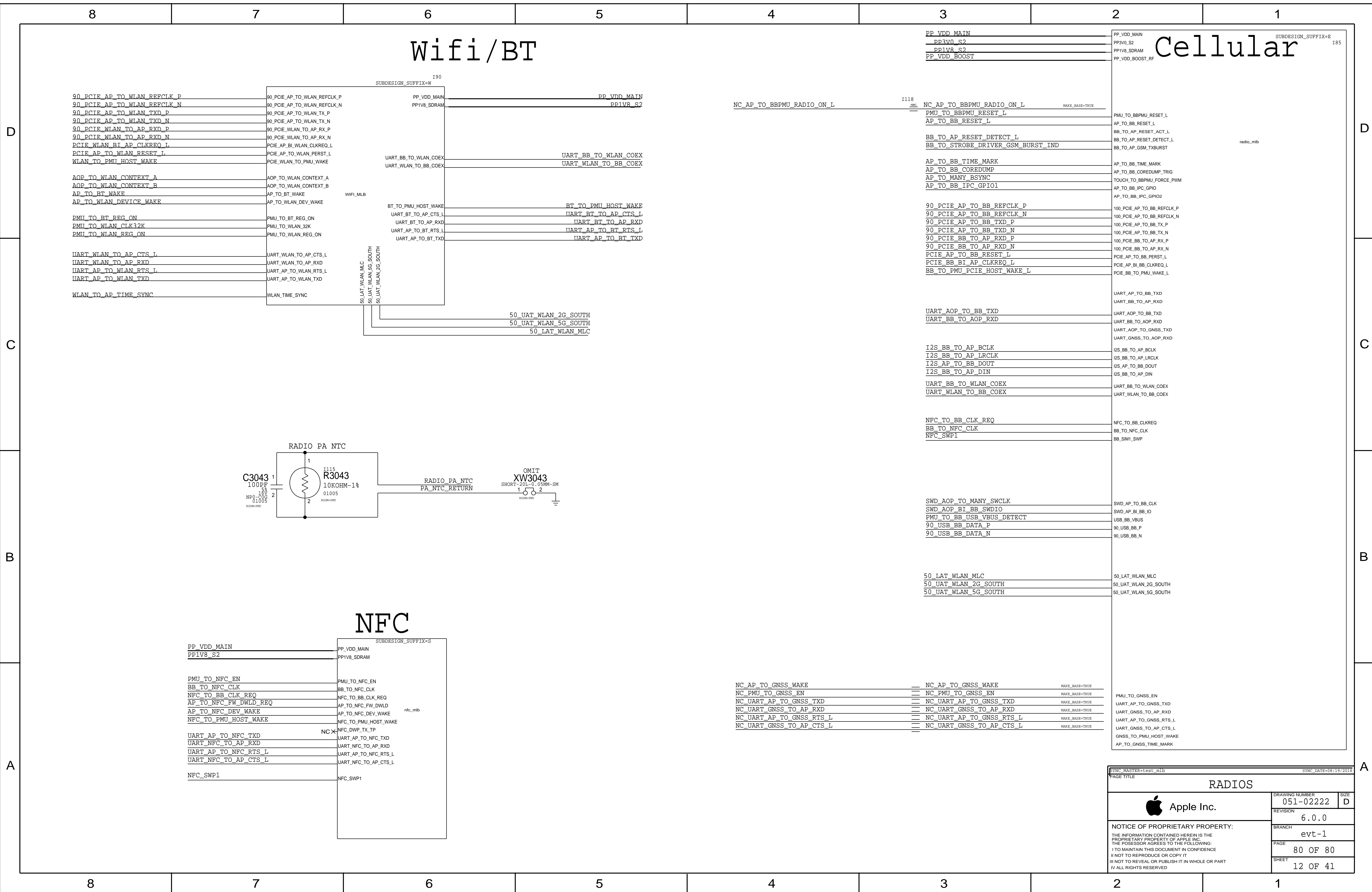


AP I2C Filters



PAGE TITLE		
CG: B2B Luna & Touch		
	DRAWING NUMBER	051-02222
	REVISION	6.0.0
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	evt-1
	PAGE	58 OF 80
	SHEET	10 OF 41

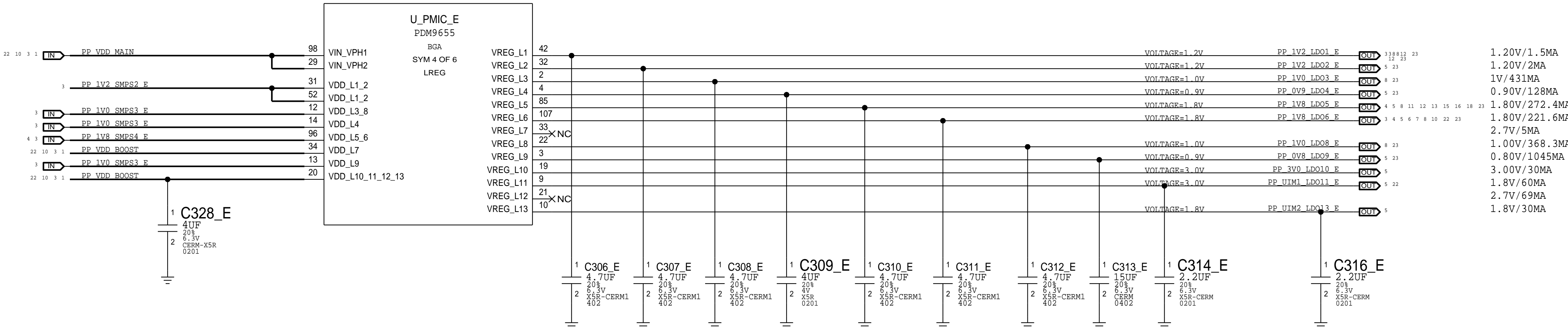
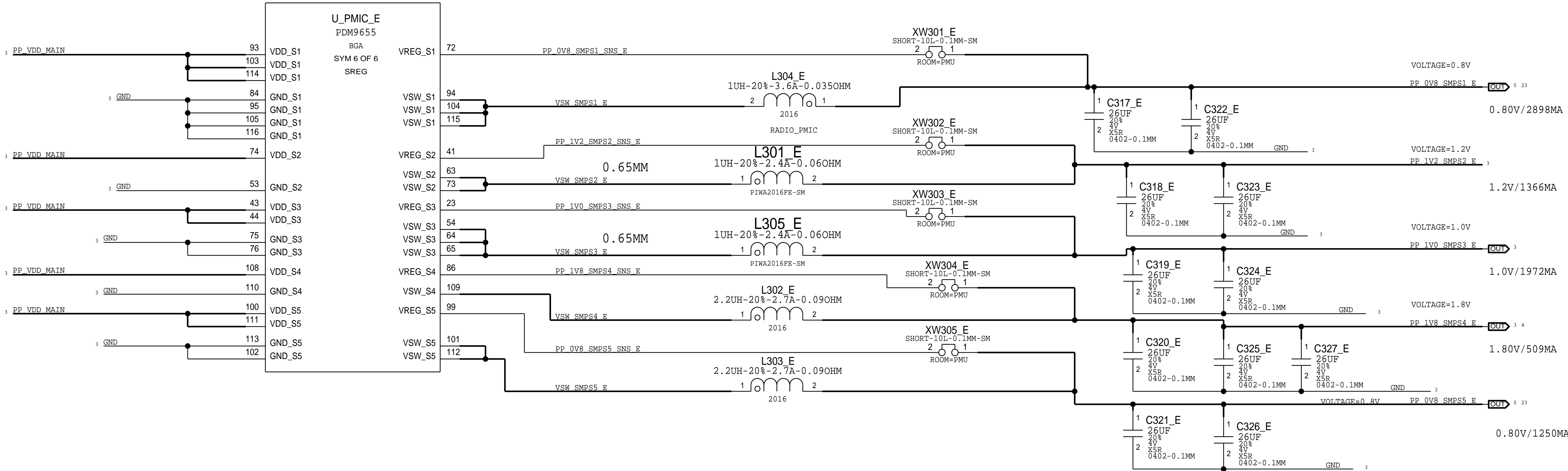
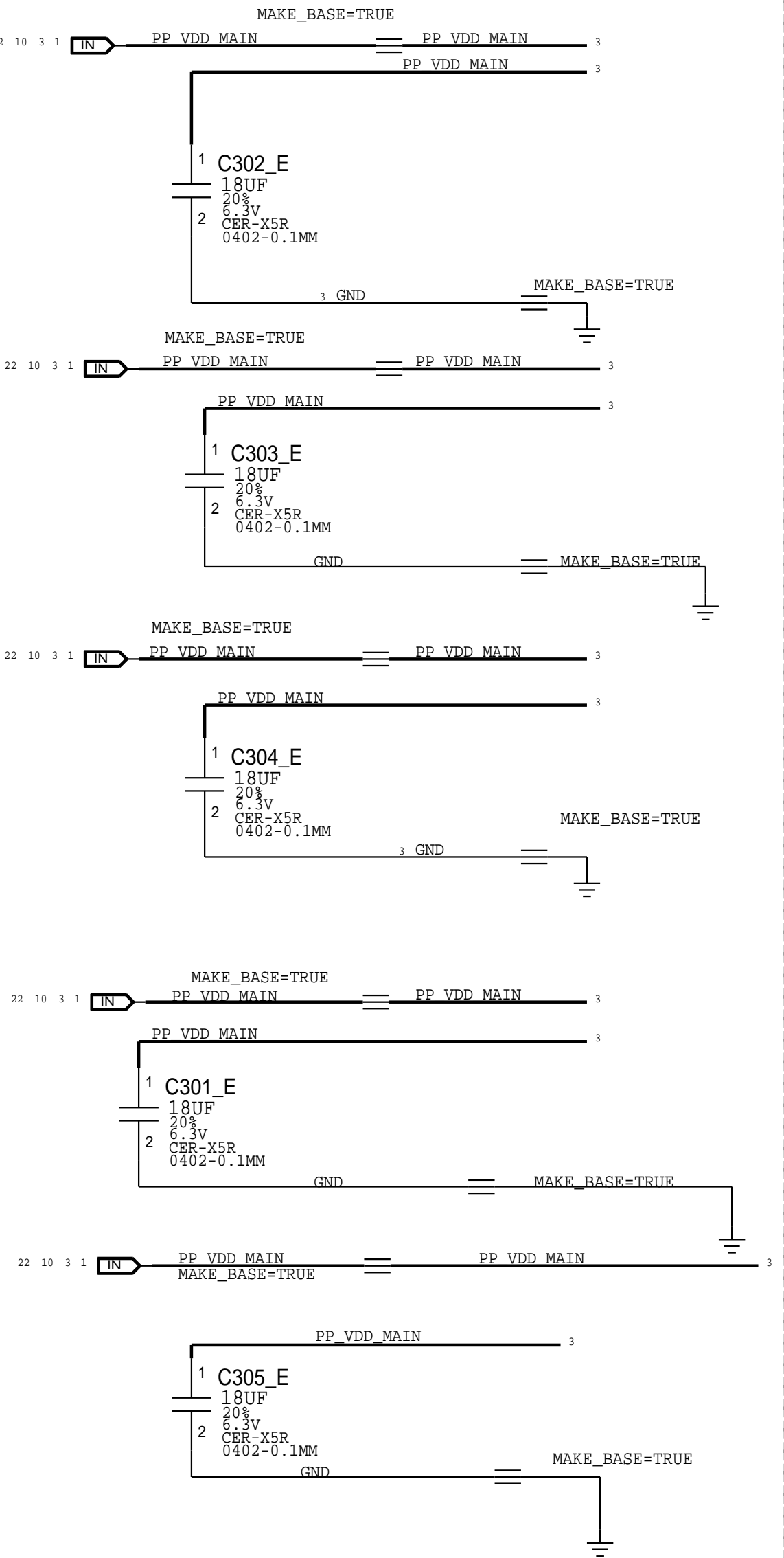




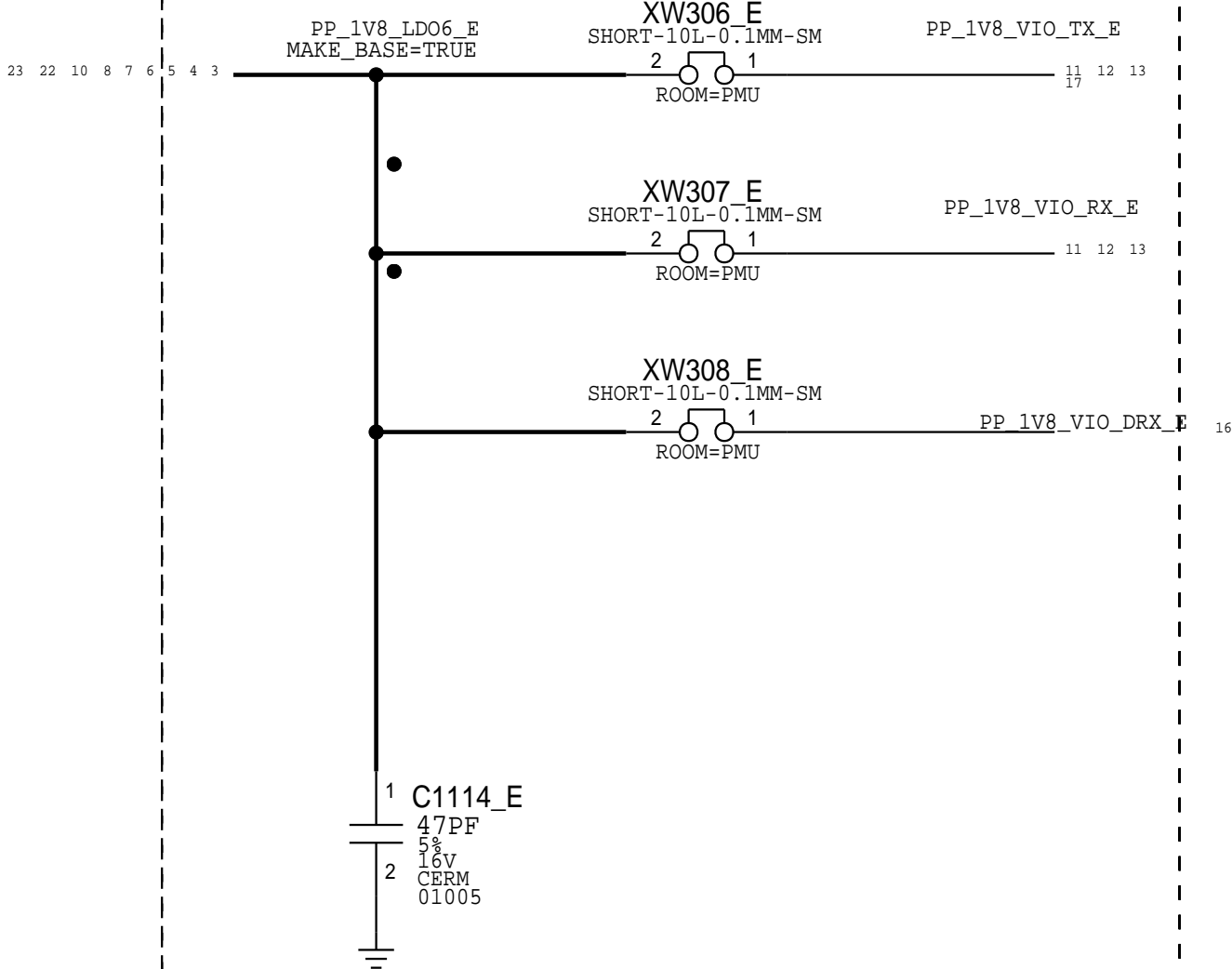
RF PMIC: SWITCHERS & LDOS


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

SWITCHERS BULK CAPS



VIO TX & RX



PAGE TITLE		
PMIC: BUCKS & LDOS		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
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 I V ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	3 OF 24
	SHEET	15 OF 41

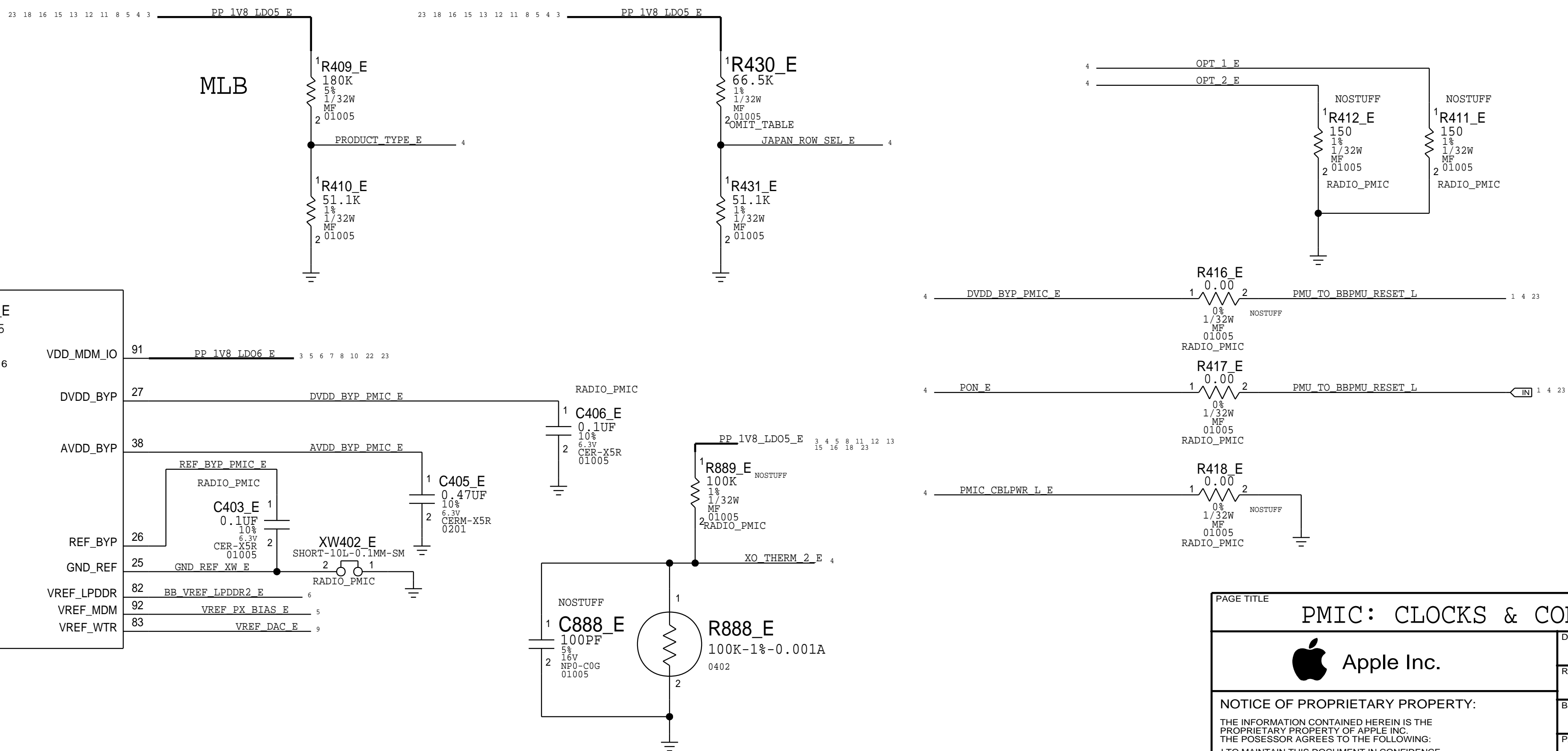
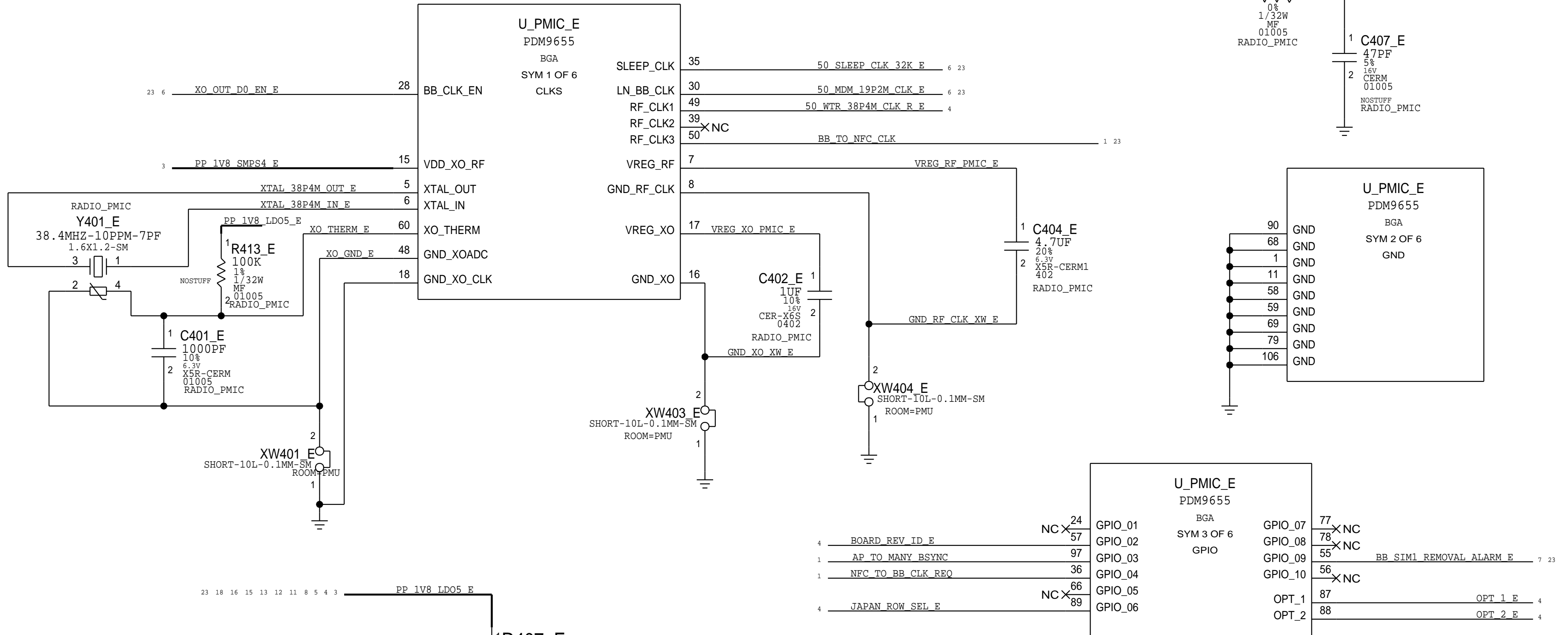
RF PMIC: XTAL, CLOCKS AND MISCELLANEOUS


HW_REV_ID	R407	R408	MLB/RADIO_DEV
<0.10V	NOSTUFF	51.1K	T500/DEV1
0.15V-0.25V	422K	51.1K	PROTO1.5
0.35V-0.45V	180K	51.1K	PROTO2.5/DEV2
0.55V-0.65V	105K	51.1K	PROTO1/DEV3
0.75V-0.85V	66.5K	51.1K	PROTO2/DEV4
0.95V-1.05V	44.2K	51.1K	EVT
1.15V-1.25V	28K	51.1K	CARRIER/DEV5
1.35V-1.45V	16.5K	51.1K	DVT/DEV6
1.55V-1.65V	7.87K	51.1K	PVT/DEV7
1.75V-1.85V	10K	NOSTUFF	PROTO3

PA_THERM2	R409	R410	PRODUCT TYPE	Y
0.00V-0.10V	NOSTUFF	51.1K	RADIO DEV	1
0.15V-0.25V	422K	51.1K	3RD TYPE	2
0.35V-0.45V	180K	51.1K	POR MLB (FF)	3
0.55V-0.65V	105K	51.1K	SPARE	4
0.75V-0.85V	66.5K	51.1K	SPARE	5
0.95V-1.05V	44.2K	51.1K	SPARE	6
1.15V-1.25V	28K	51.1K	SPARE	7
1.35V-1.45V	16.5K	51.1K	SPARE	8
1.55V-1.65V	7.87K	51.1K	SPARE	9
1.75V-1.85V	10K	NOSTUFF	SPARE	A

JPN_ROW_SEL	R430	R431	MAV PLATFORM	Y	SKU
<0.10V	NOSTUFF	51.1K	MAV17.0	0	ROW
0.15V-0.25V	422K	51.1K	MAV17.1	1	JPN
0.35V-0.45V	180K	51.1K	MAV17.2	2	ROW
0.55V-0.65V	105K	51.1K	MAV17.3	3	JPN
0.75V-0.85V	66.5K	51.1K	MAV17.4	4	ROW
0.95V-1.05V	44.2K	51.1K	MAV17.5	5	JPN
1.15V-1.25V	28K	51.1K	MAV17.6	6	ROW
1.35V-1.45V	16.5K	51.1K	MAV17.7	7	JPN
1.55V-1.65V	7.87K	51.1K	MAV17.8	8	ROW
1.75V-1.85V	10K	NOSTUFF	MAV17.9	9	JPN

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
118S0743	1	RESISTOR 01005, 44.2K OHMS 1%	R430_E	CRITICAL	JPN
118S0612	1	RESISTOR 01005, 66.5K OHMS 1%	R430_E	CRITICAL	ROW



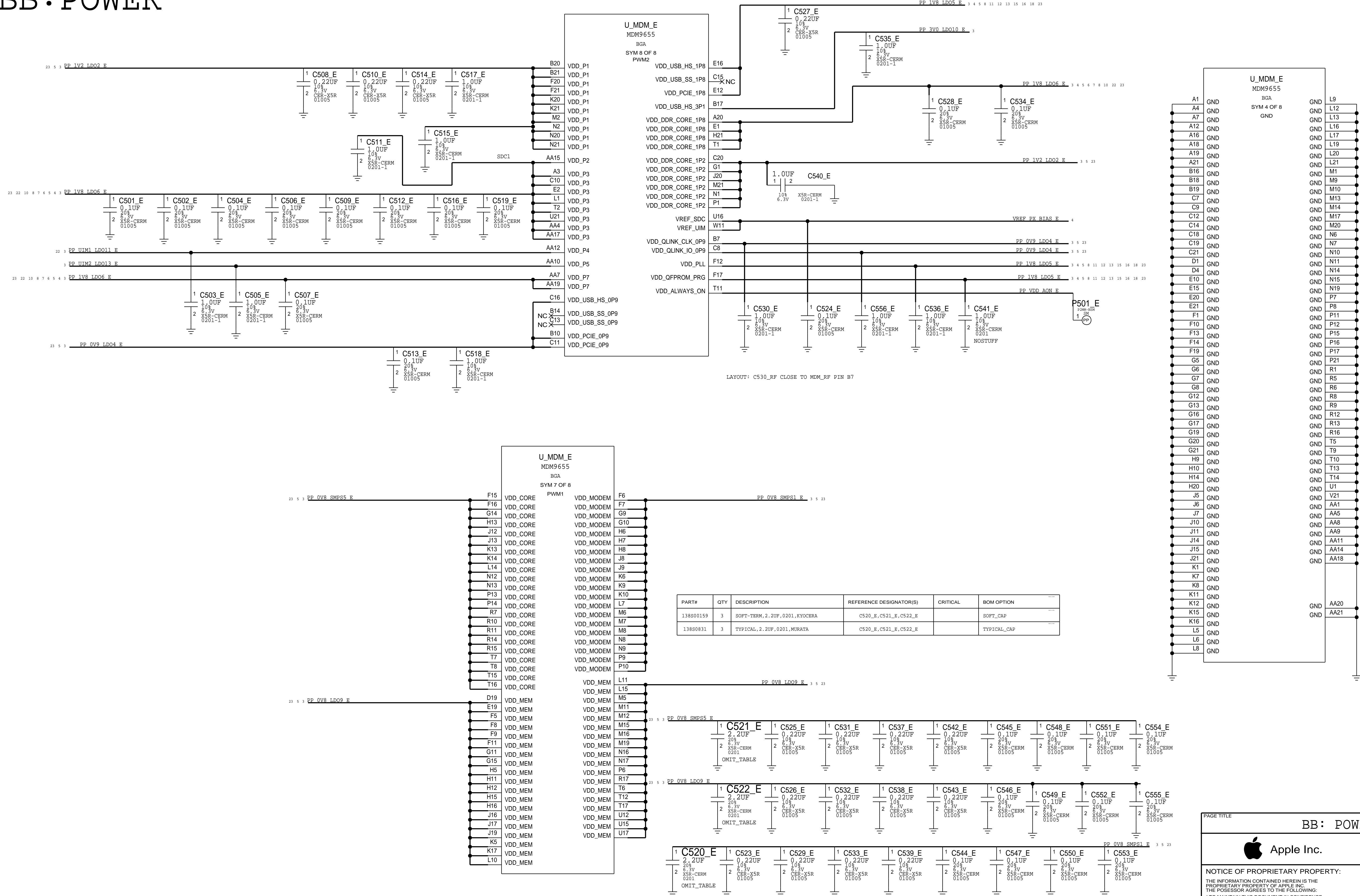
PAGE TITLE		
PMIC: CLOCKS & CONTROL		
 Apple Inc.	DRAWING NUMBER	SIZE
	051-02222	D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	REVISION	
	6.0.0	
	BRANCH	evt-1
	PAGE	4 OF 24
	SHEET	16 OF 41

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

OPT CONFIG

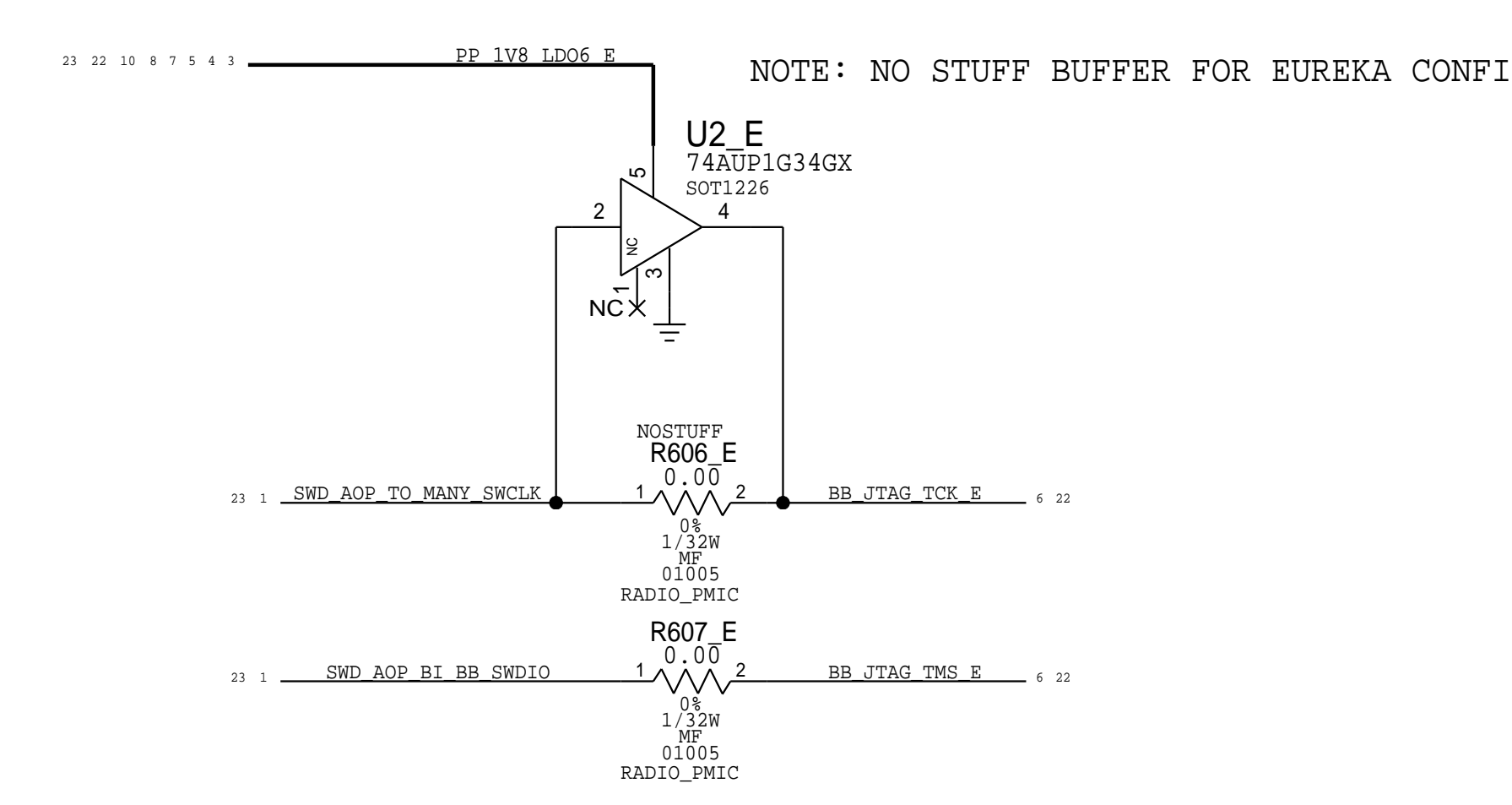
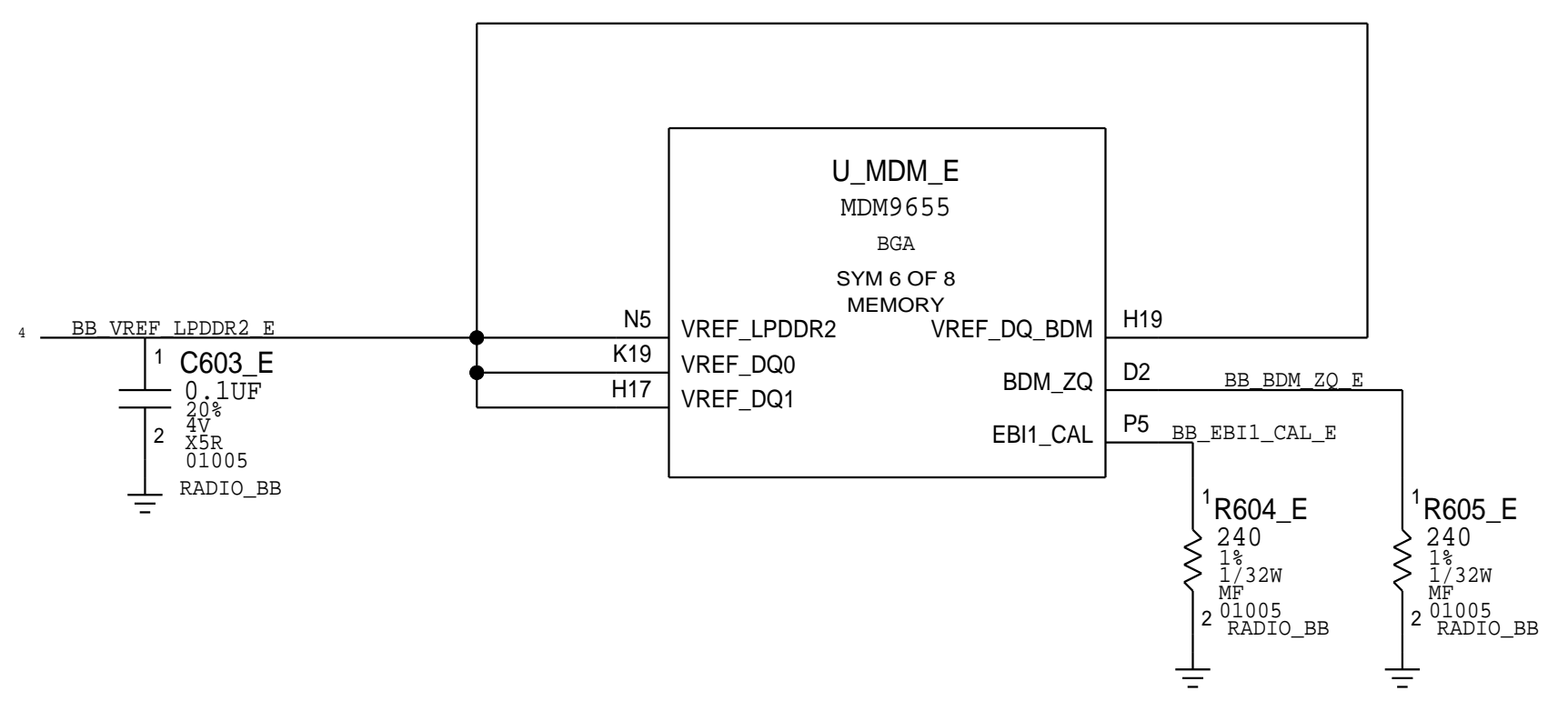
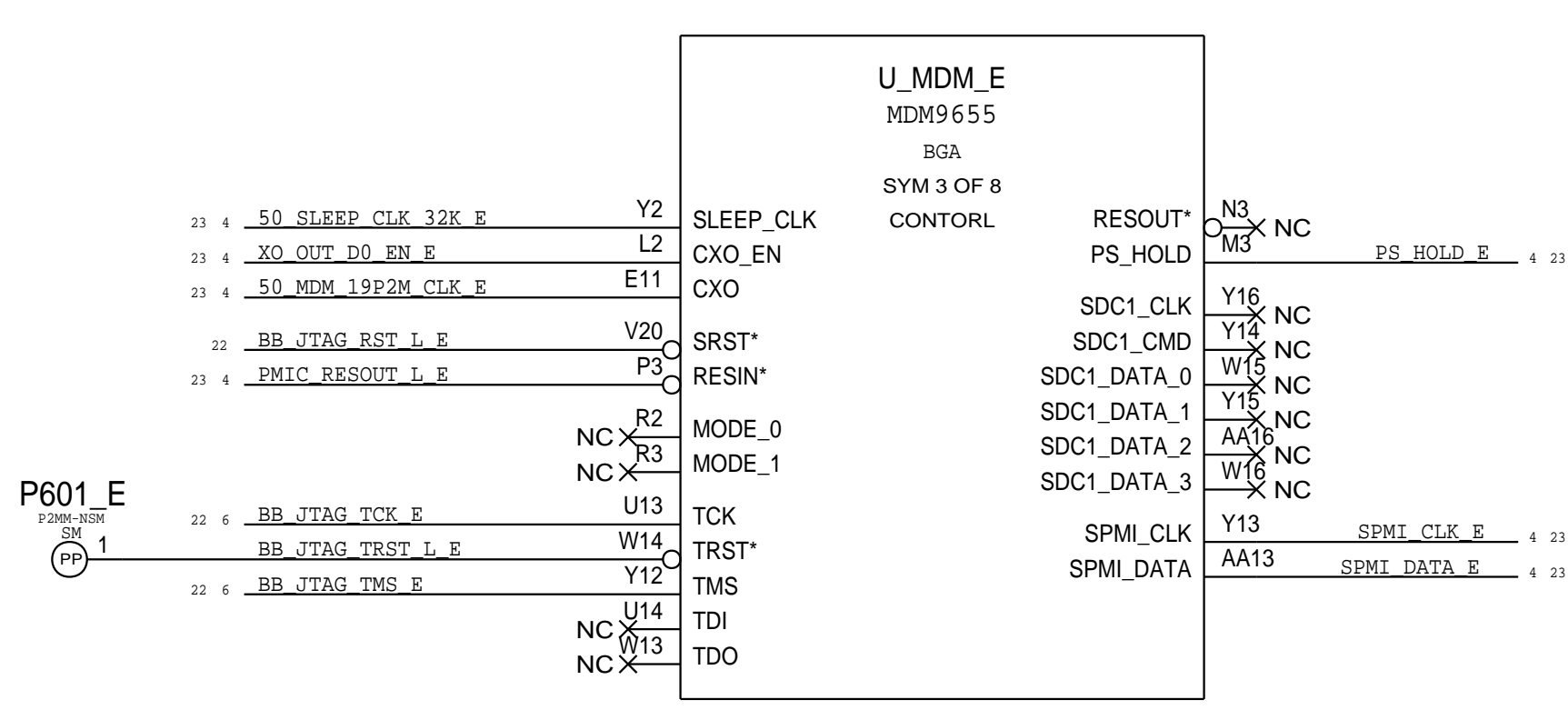
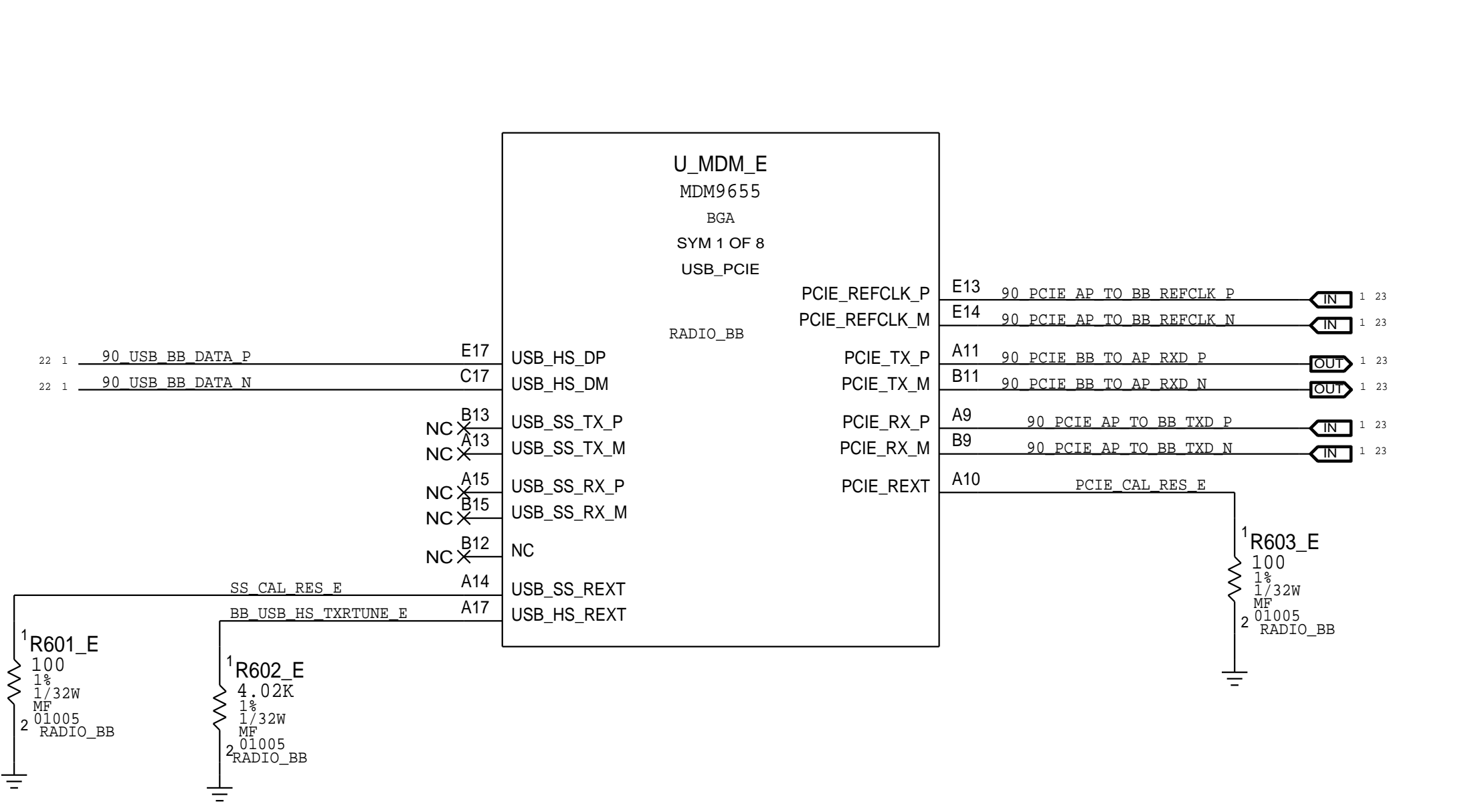
BB : POWER

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



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	3	SOFT-TERM, 2.2UF, 0201, KYOCERA	C520_E, C521_E, C522_E		SOFT_CAP
138S0831	3	TYPICAL, 2.2UF, 0201, MURATA	C520_E, C521_E, C522_E		TYPICAL_CAP

BB:CONTROL & HS PERIPHERALS

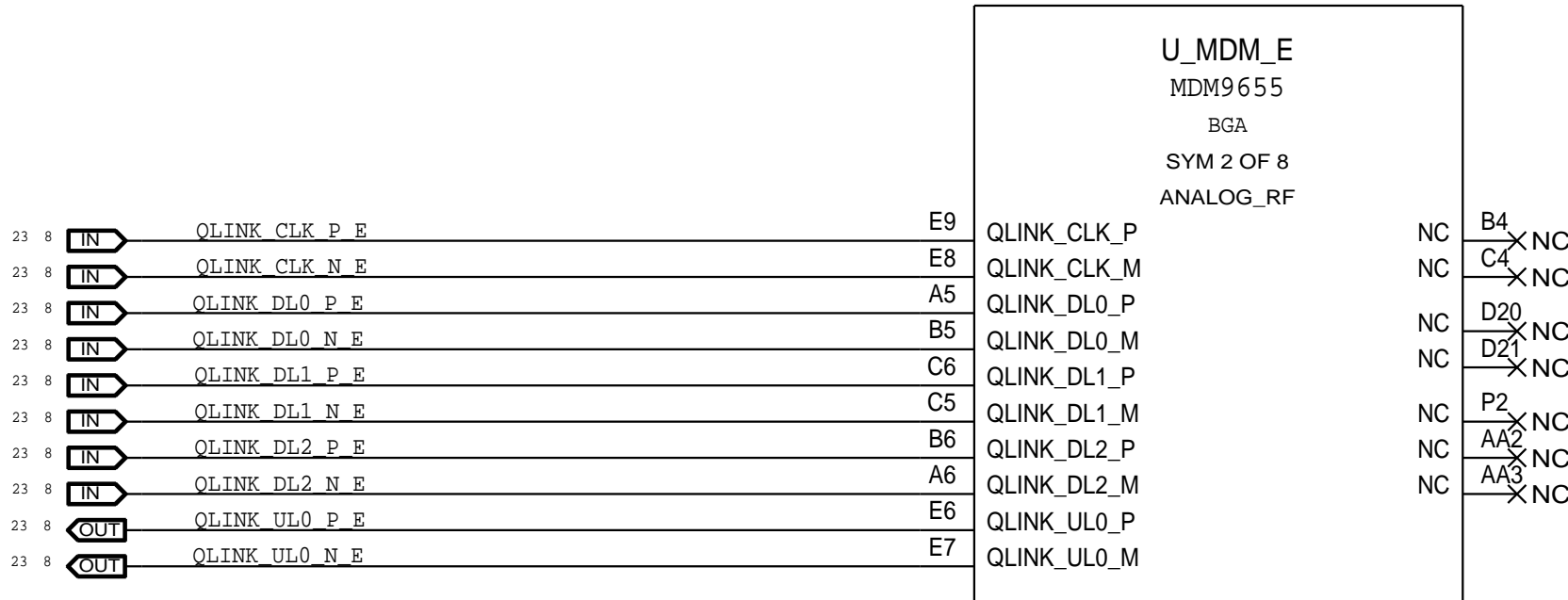
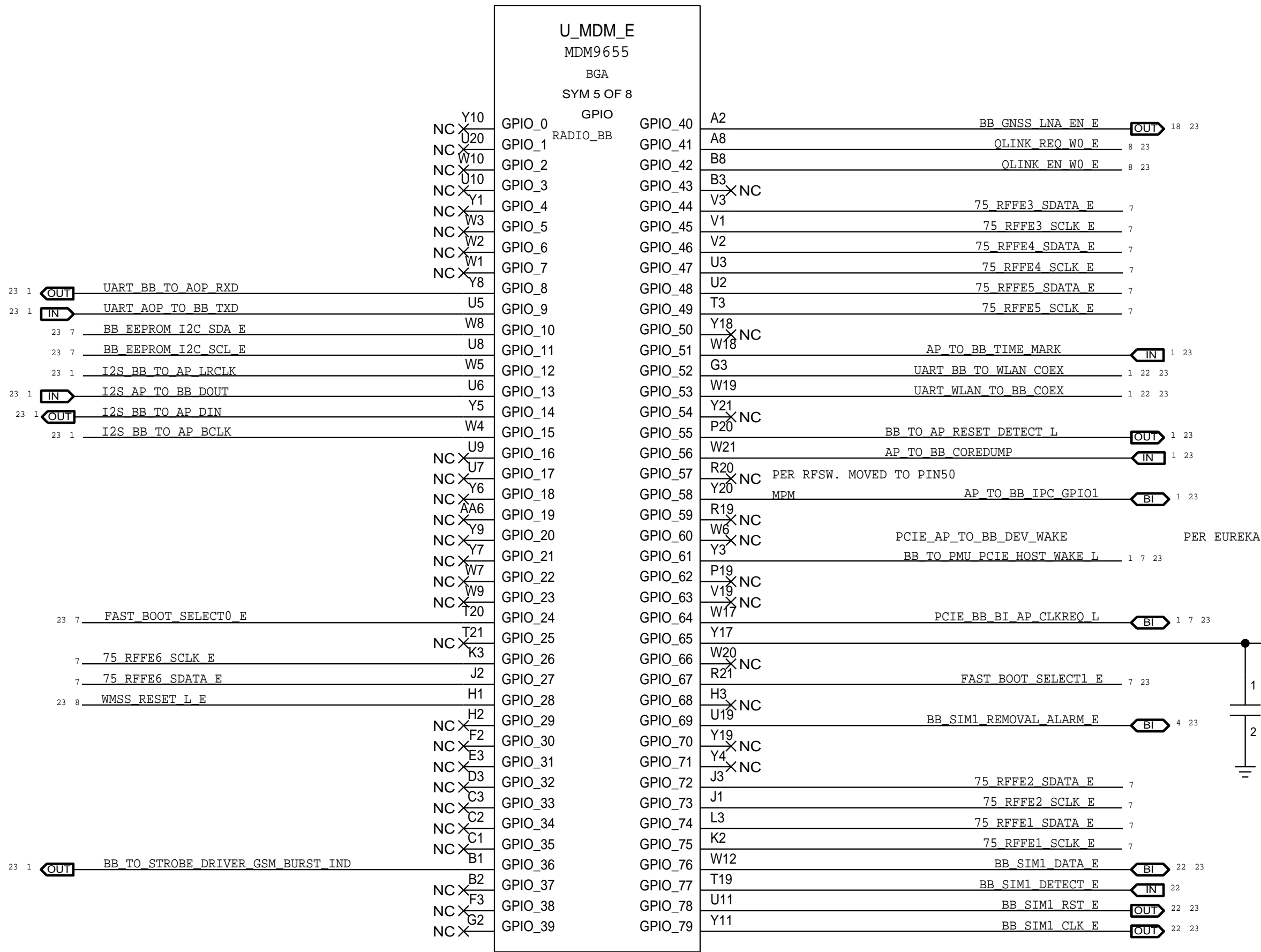


CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE ONLY - NOT A CHANGE REQUEST

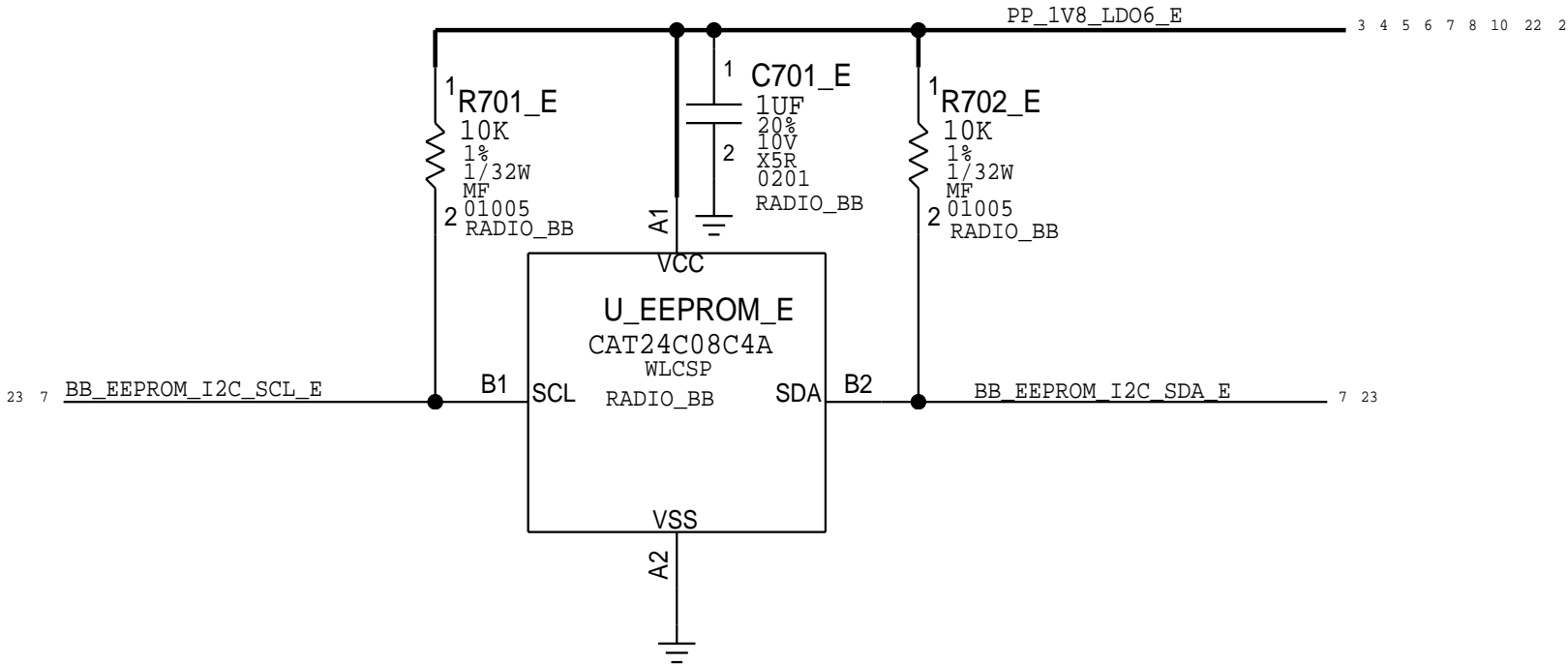
PAGE TITLE BB: CONTROL & HS PERIPHERALS		
	DRAWING NUMBER 051-02222	SIZE D
	REVISION 6.0.0	BRANCH evt-1
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	PAGE 6 OF 24	SHEET 18 OF 41

BB:GPIOs & QLINK

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

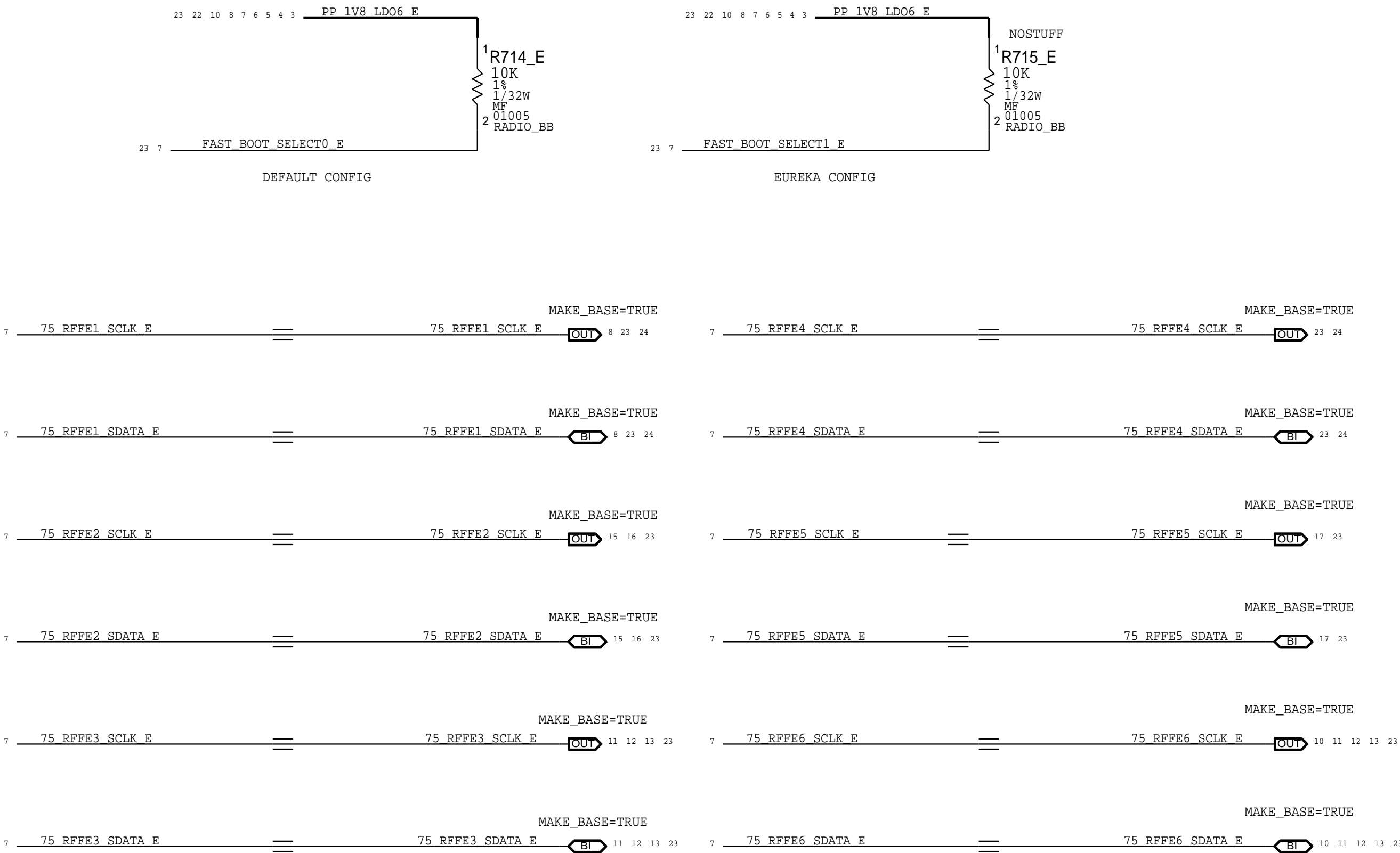


BB EEPROM



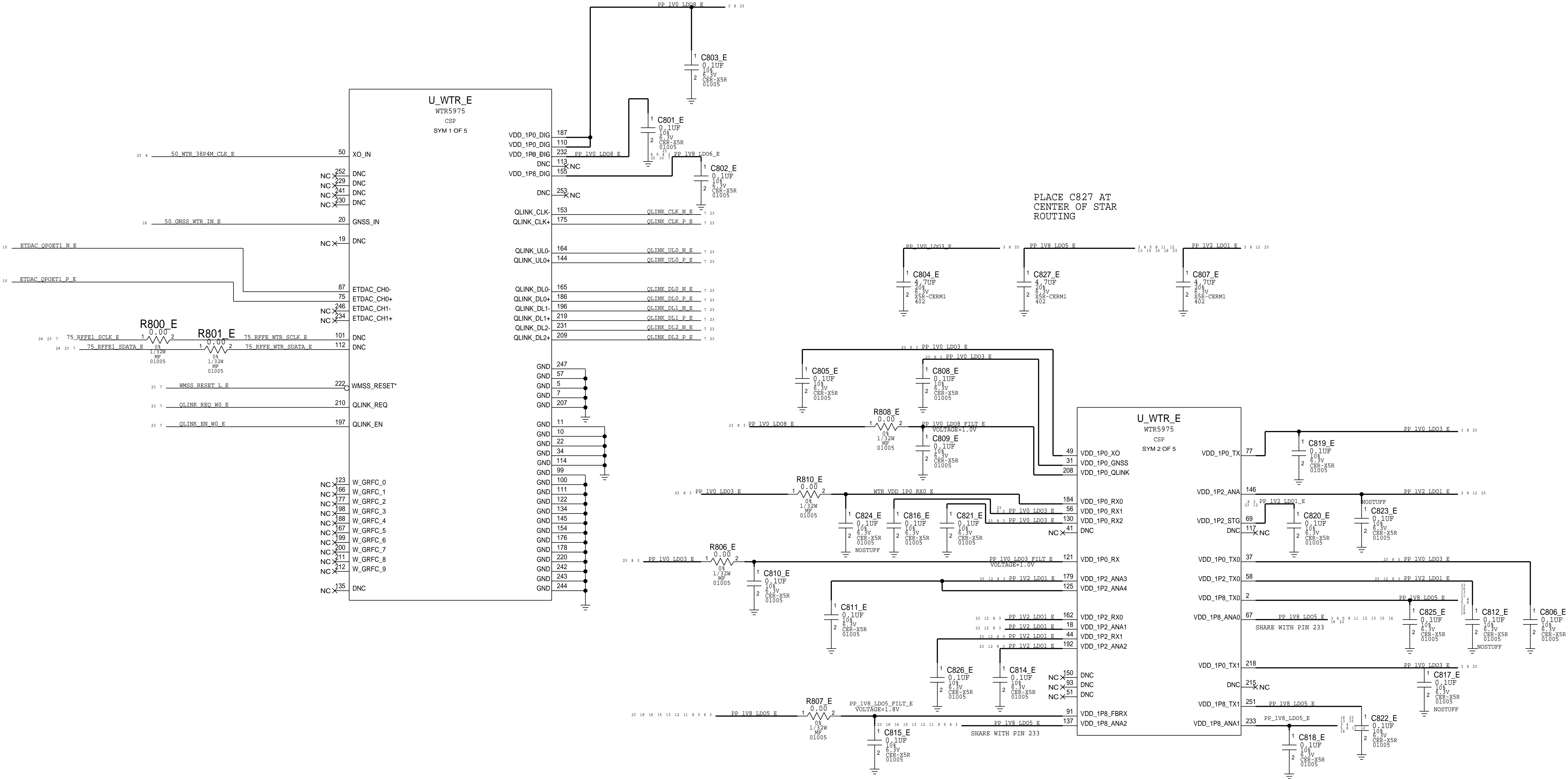
RFFE MAP


- RFFE1 - WTR, LATGPO, LATUNE
- RFFE2 - HB DSM, LB DSM
- RFFE3 - UHB, HB, LB PAD LNA
- RFFE4 - UATGPO, UATUNE
- RFFE5 - CPL
- RFFE6 - QET, 2G PA/UHB, HB, LA PAD



PAGE TITLE		
BB: GPIOs & QLINK		
	DRAWING NUMBER	051-02222
	REVISION	6.0.0
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	evt-1
	PAGE	7 OF 24
	SHEET	19 OF 41

TRANSCEIVER: QLINK & POWER



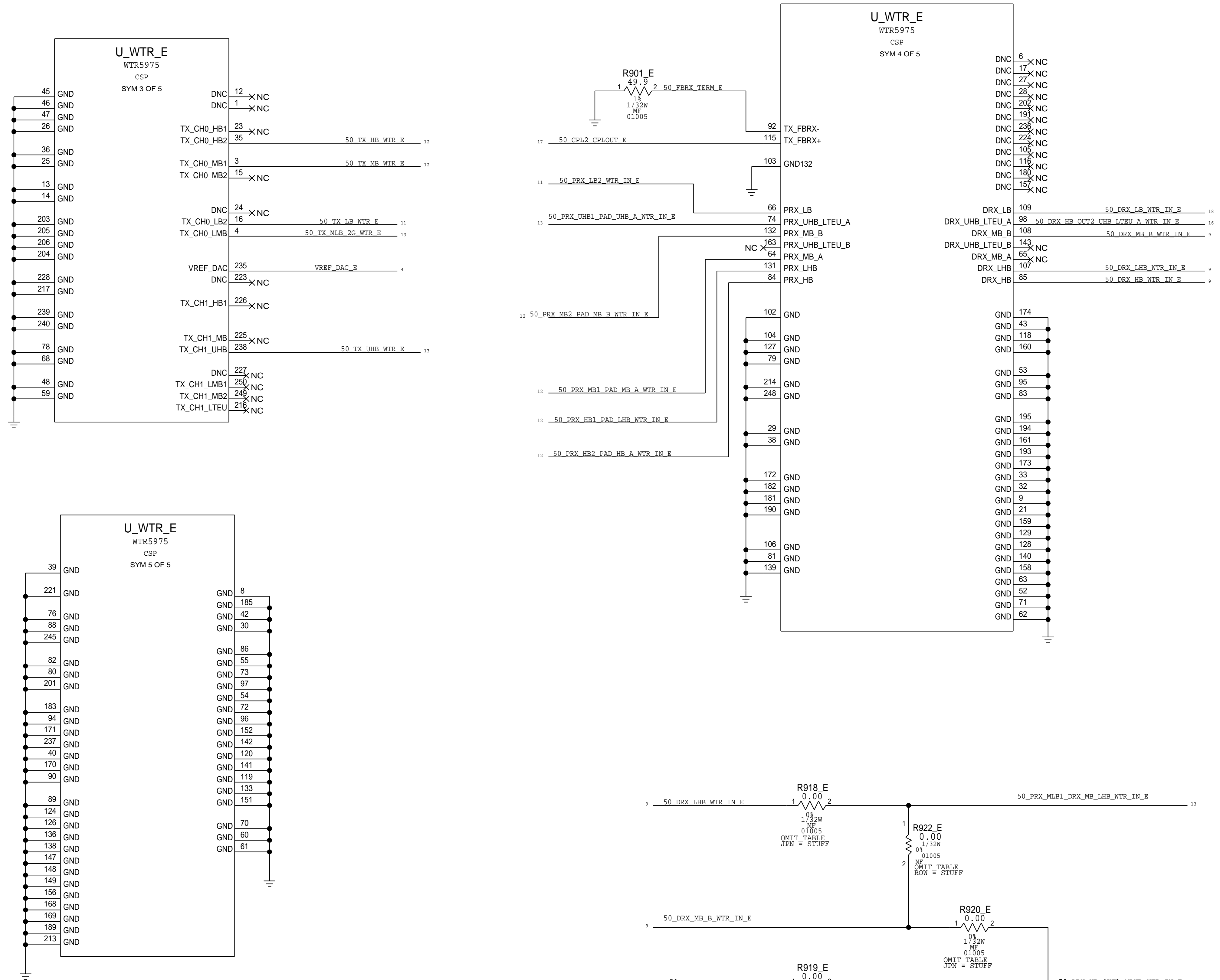
PAGE TITLE		
XCVR		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
	BRANCH	evt-1
	PAGE	8 OF 24
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		SHEET 20 OF 41


TRANSCEIVER: TX & RX

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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
117S0161	1	01005 0R	R919_B	CRITICAL	ROW
117S0161	1	01005 0R	R922_B	CRITICAL	ROW

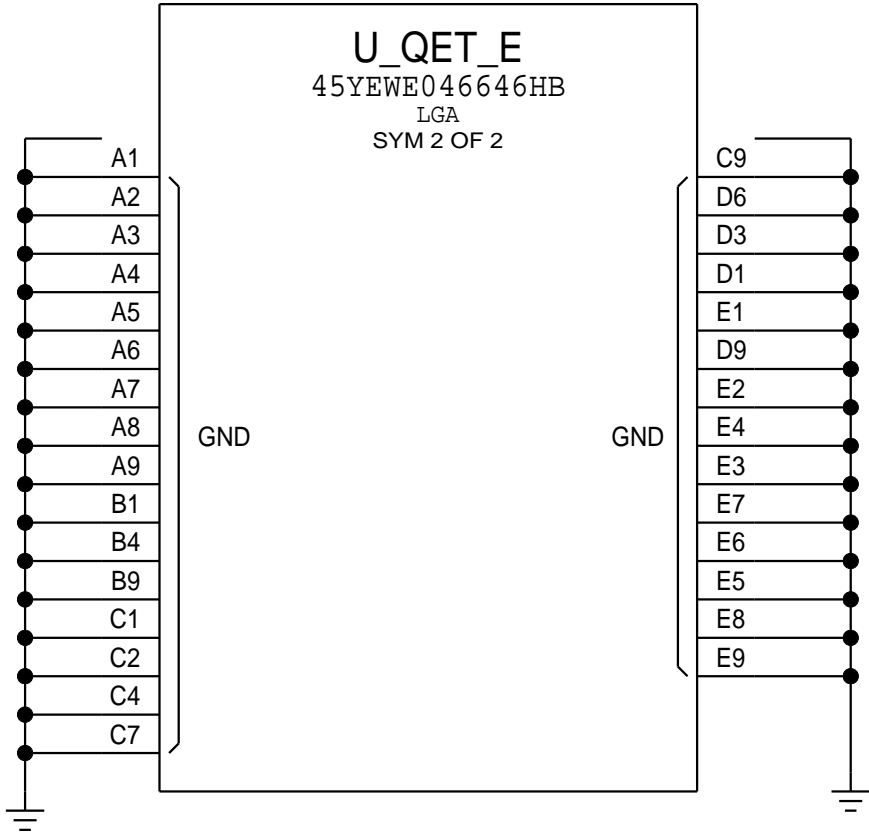
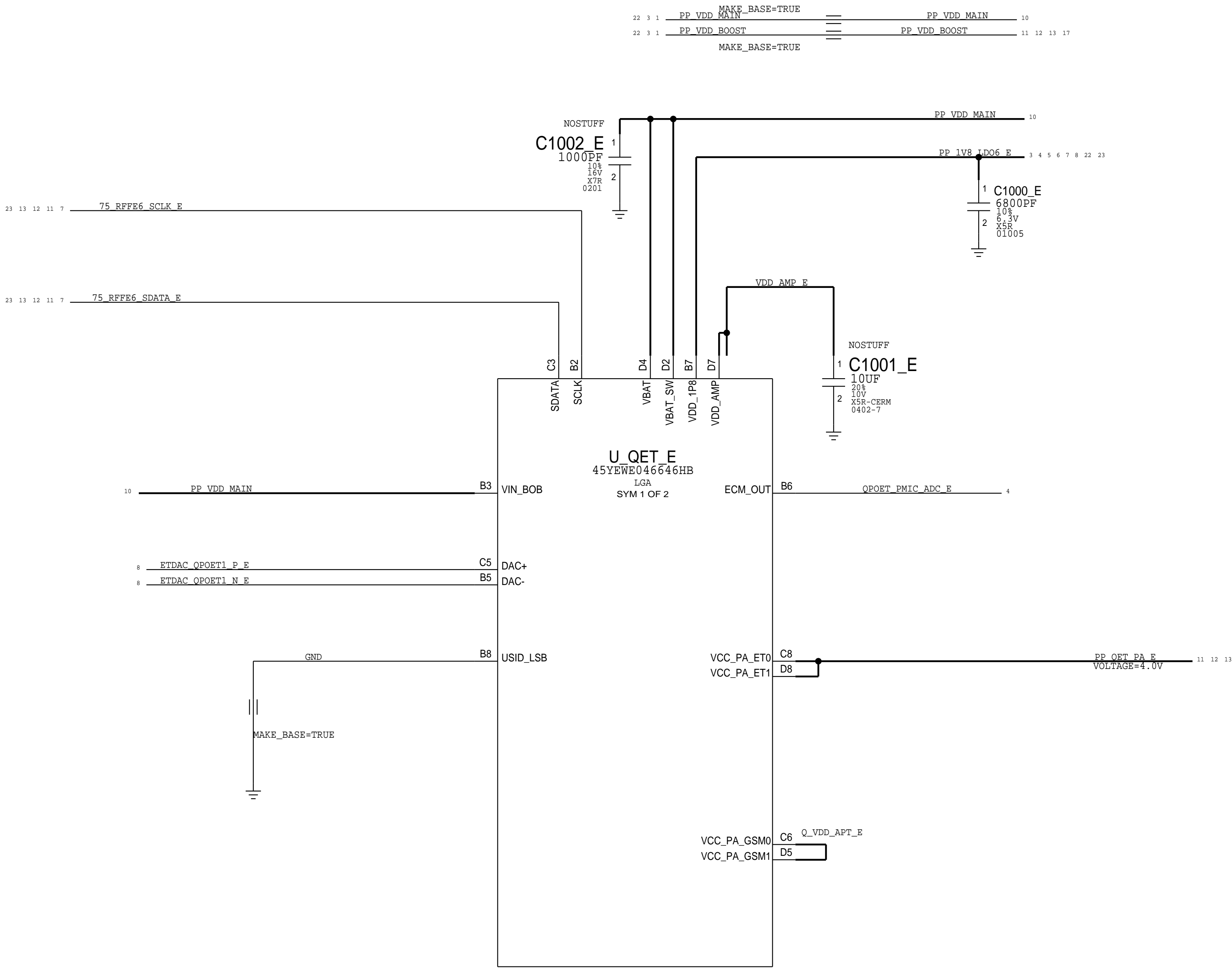
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
117S0161	1	01005 0R	R918_E	CRITICAL	JPN
117S0161	1	01005 0R	R920_E	CRITICAL	JPN




PAGE TITLE		
XCVR		
 Apple Inc.	DRAWING NUMBER	SIZE
	051-02222	D
	REVISION	
	6.0.0	
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		
evt-1		
PAGE		
9 OF 24		
SHEET		
21 OF 41		

QET:MODULE

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



PAGE TITLE			
QPOET MODULE			
 Apple Inc.	DRAWING NUMBER	051-02222	SIZE D
	REVISION	6.0.0	
	BRANCH	evt-1	
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 10 OF 24	SHEET 22 OF 41

LB PAD

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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
155S00316	1	2G CPLB JPN	CPL2GB_E	CRITICAL	JPN

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

D

C

B

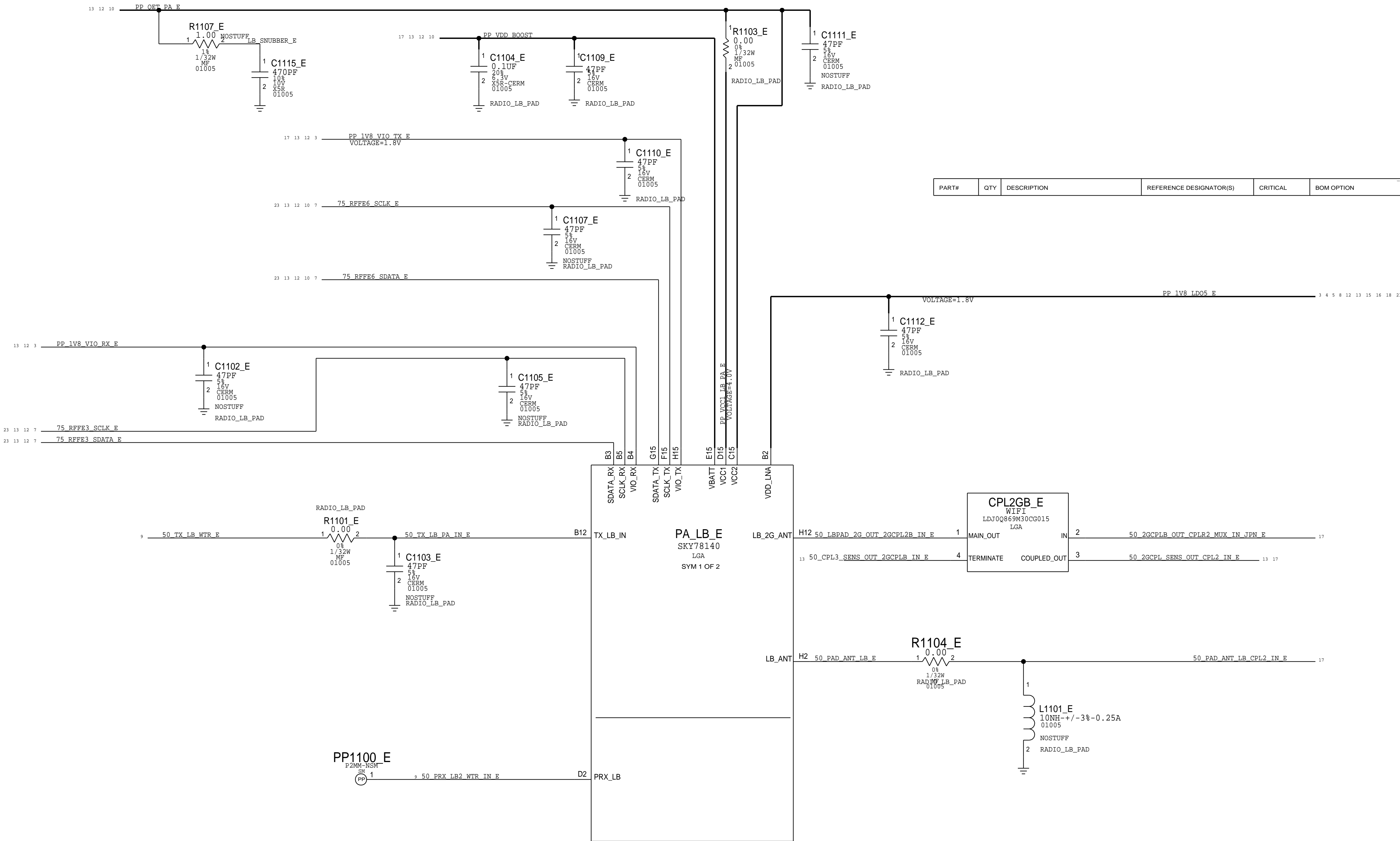
A


D

C

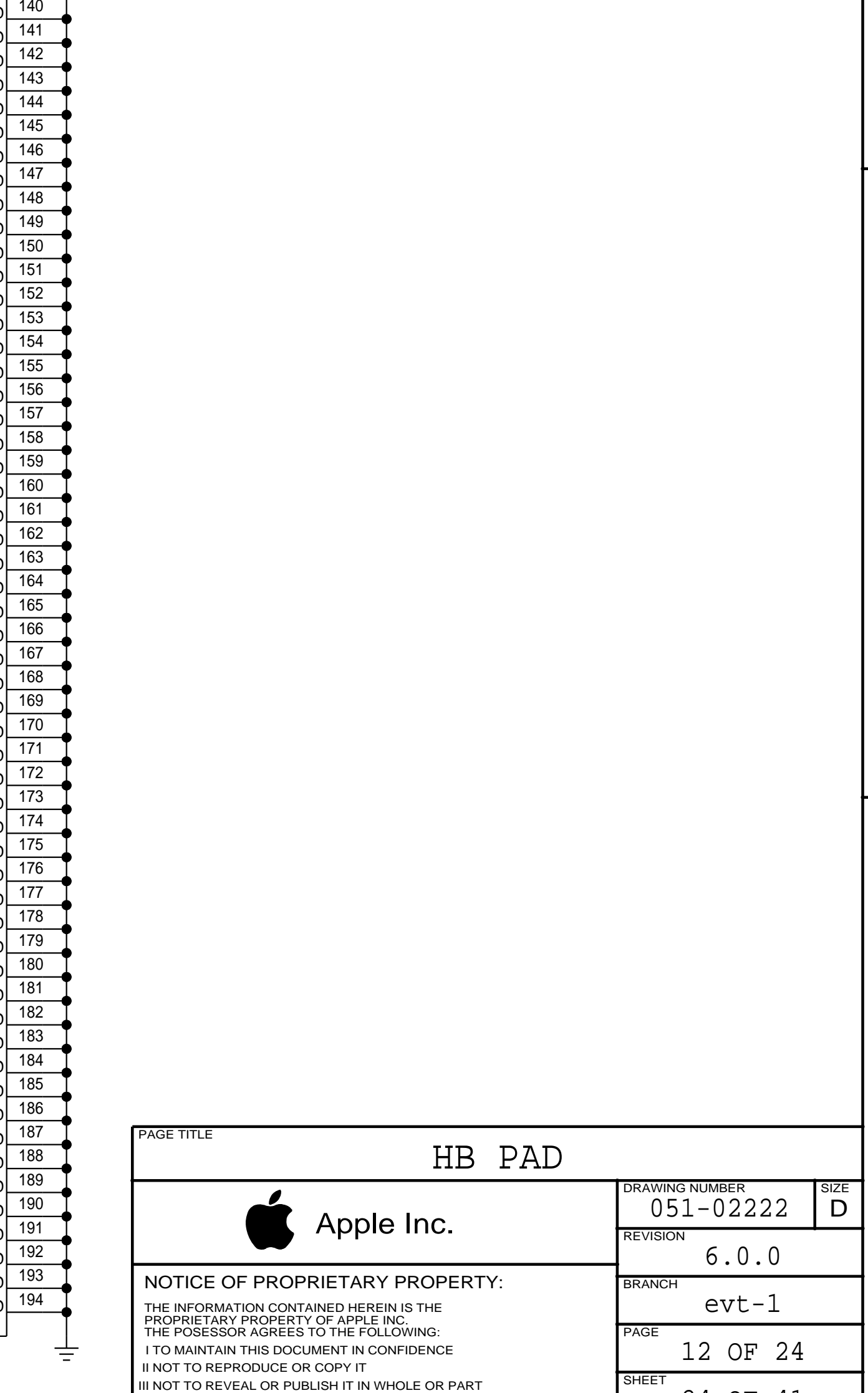
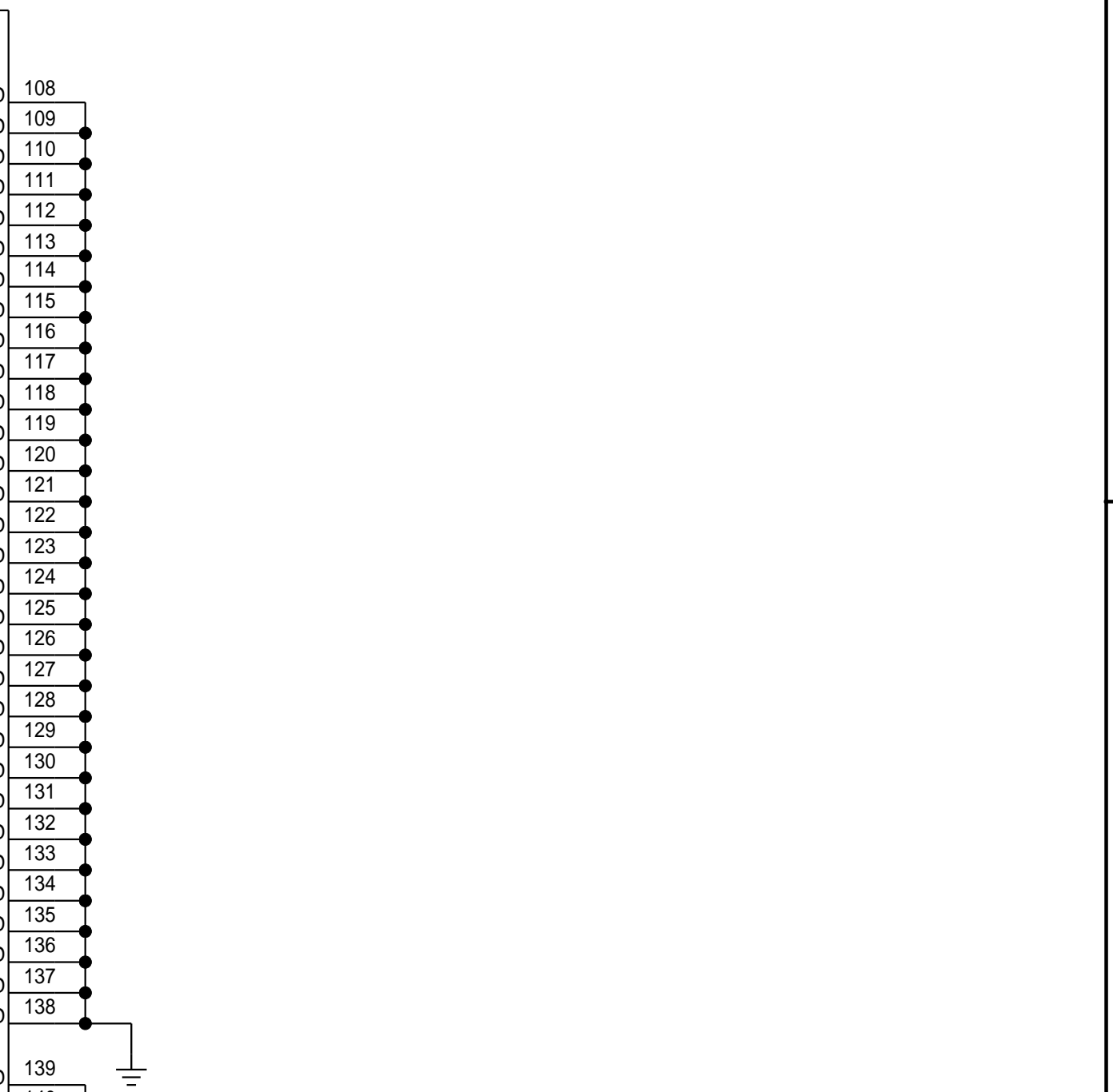
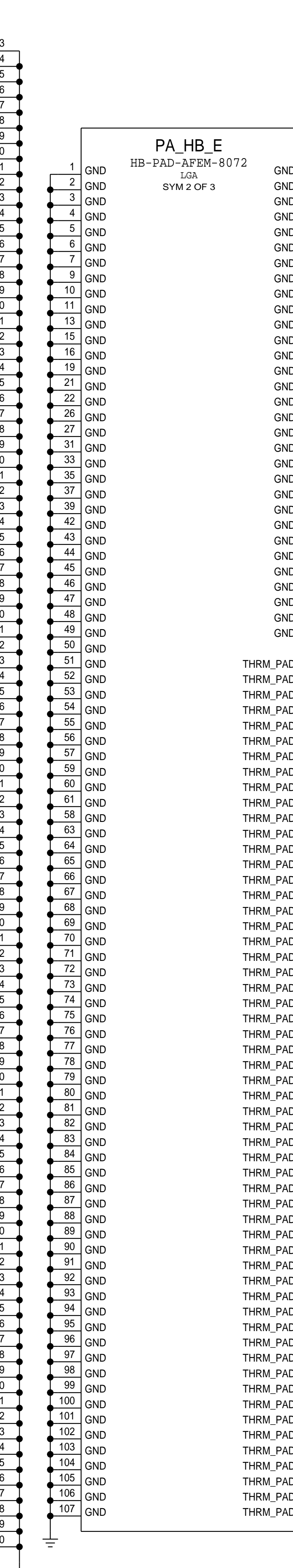
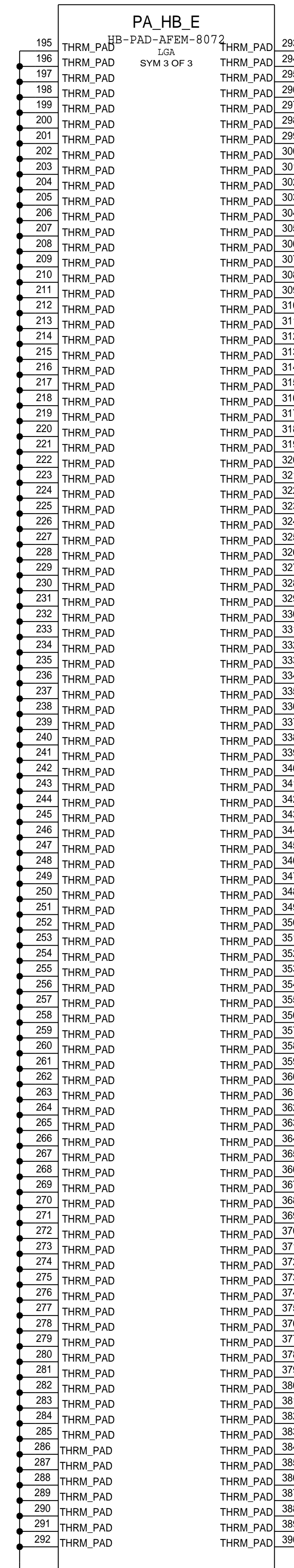
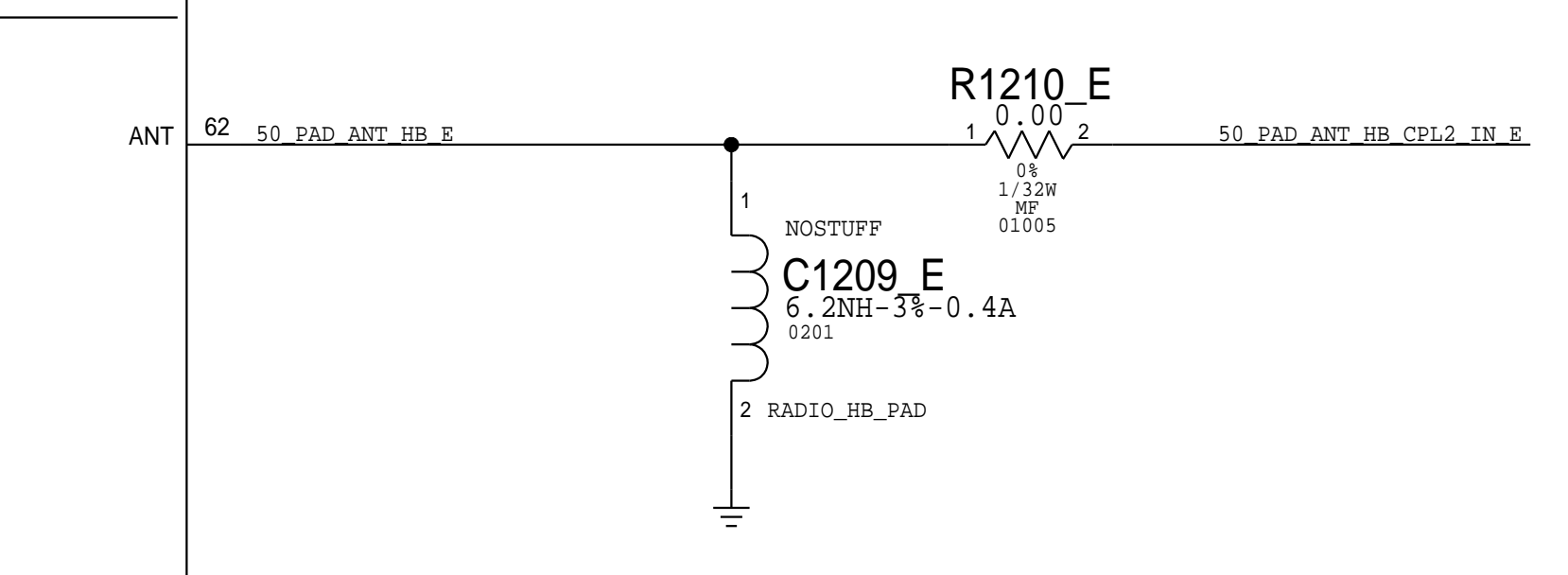
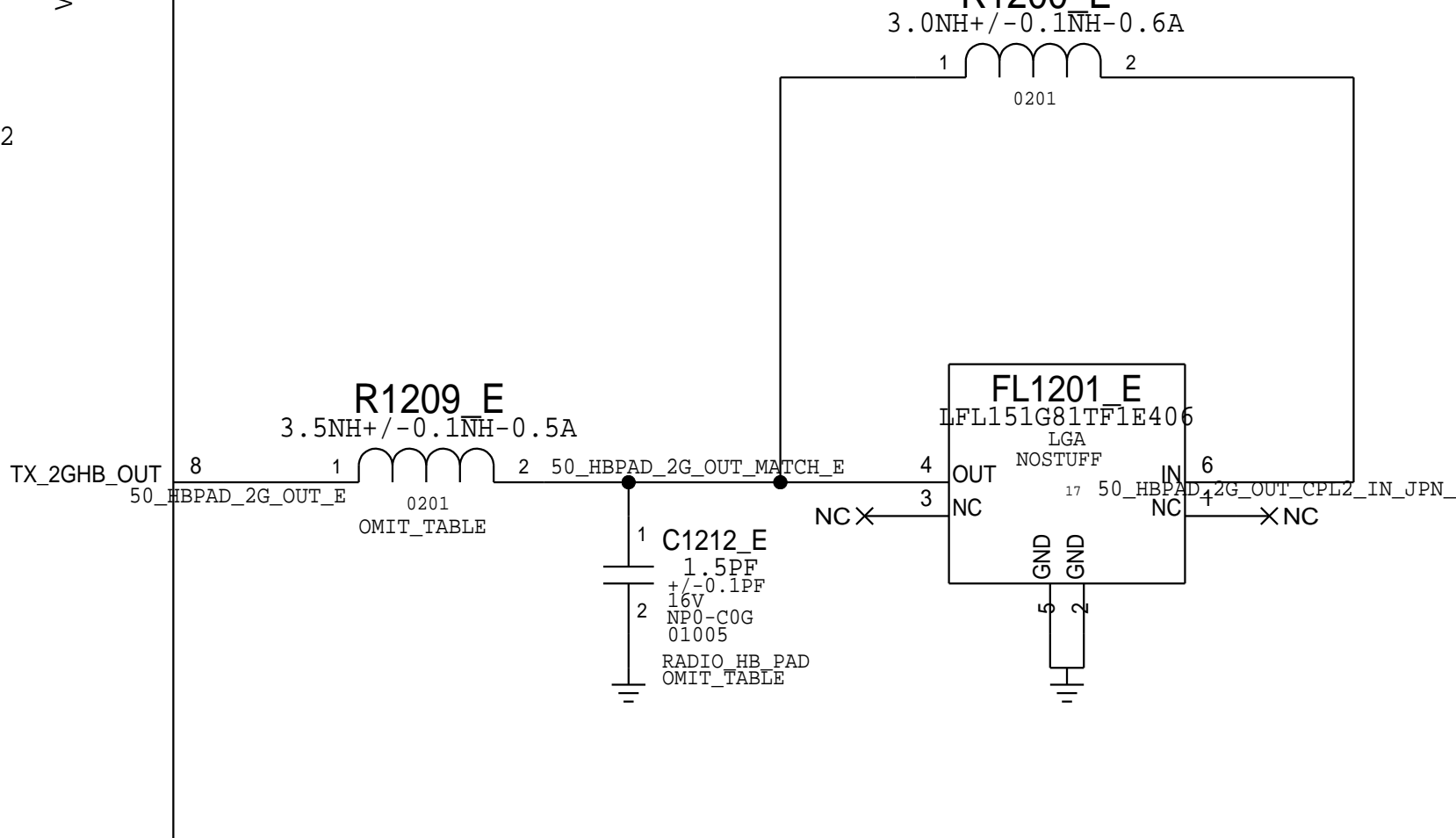
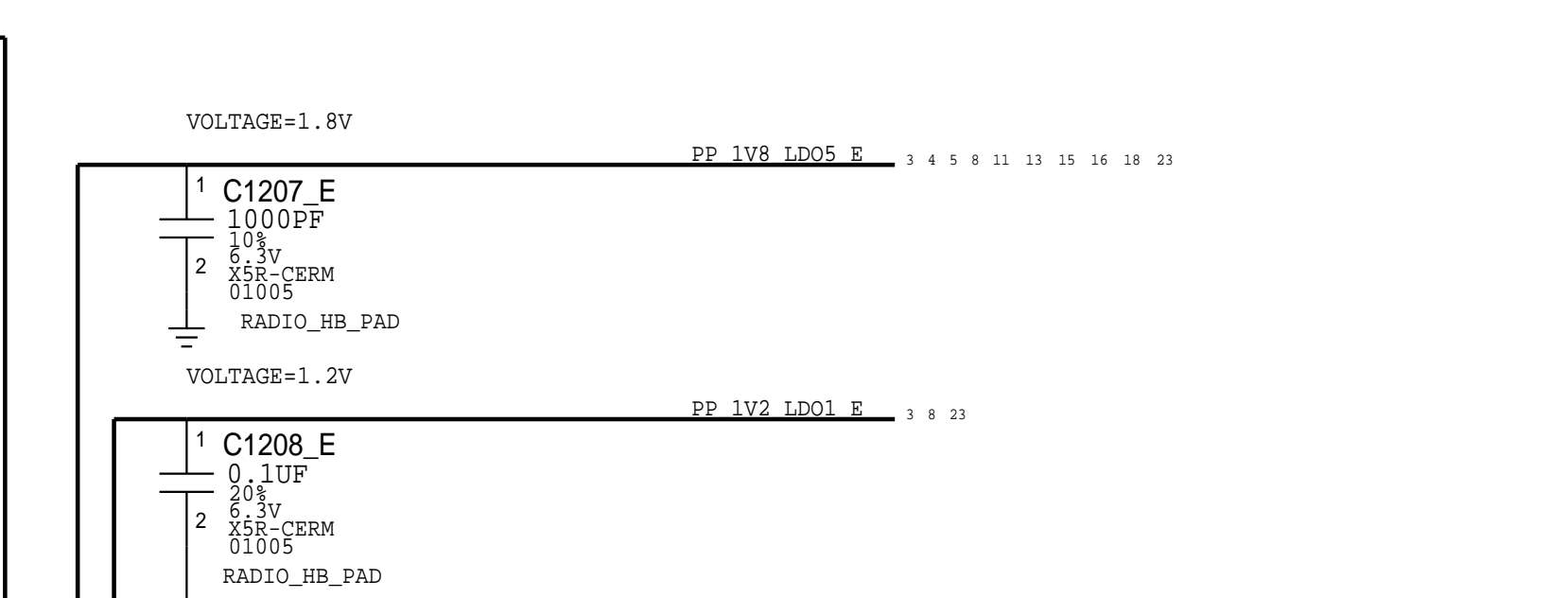
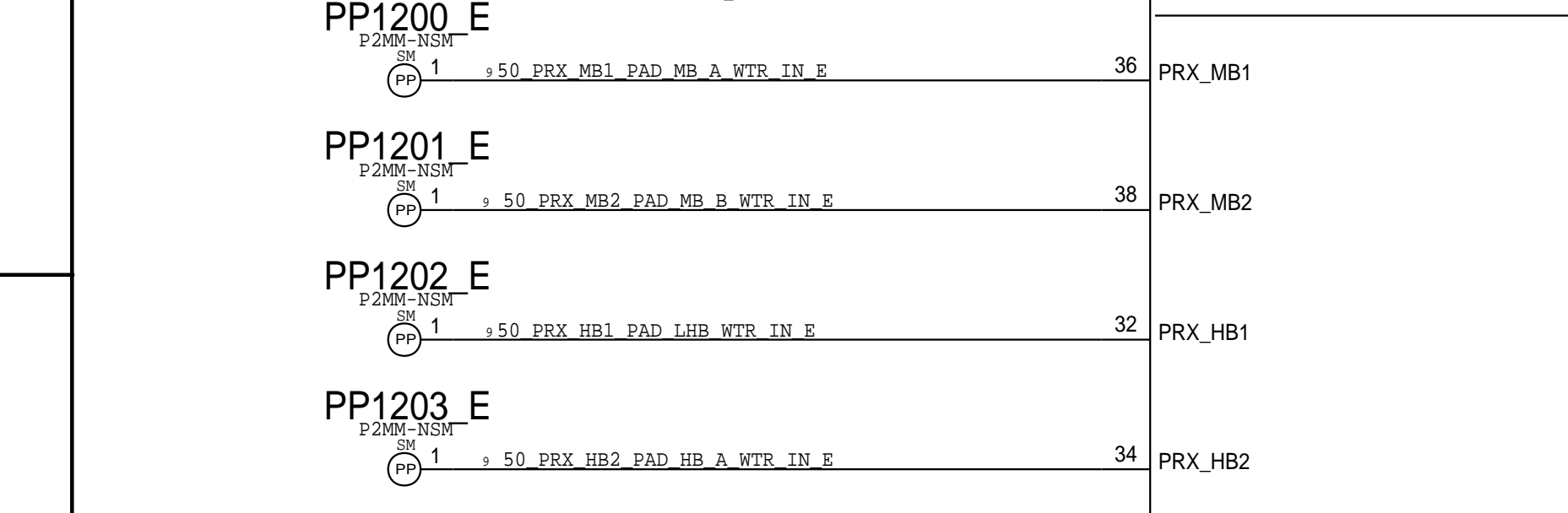
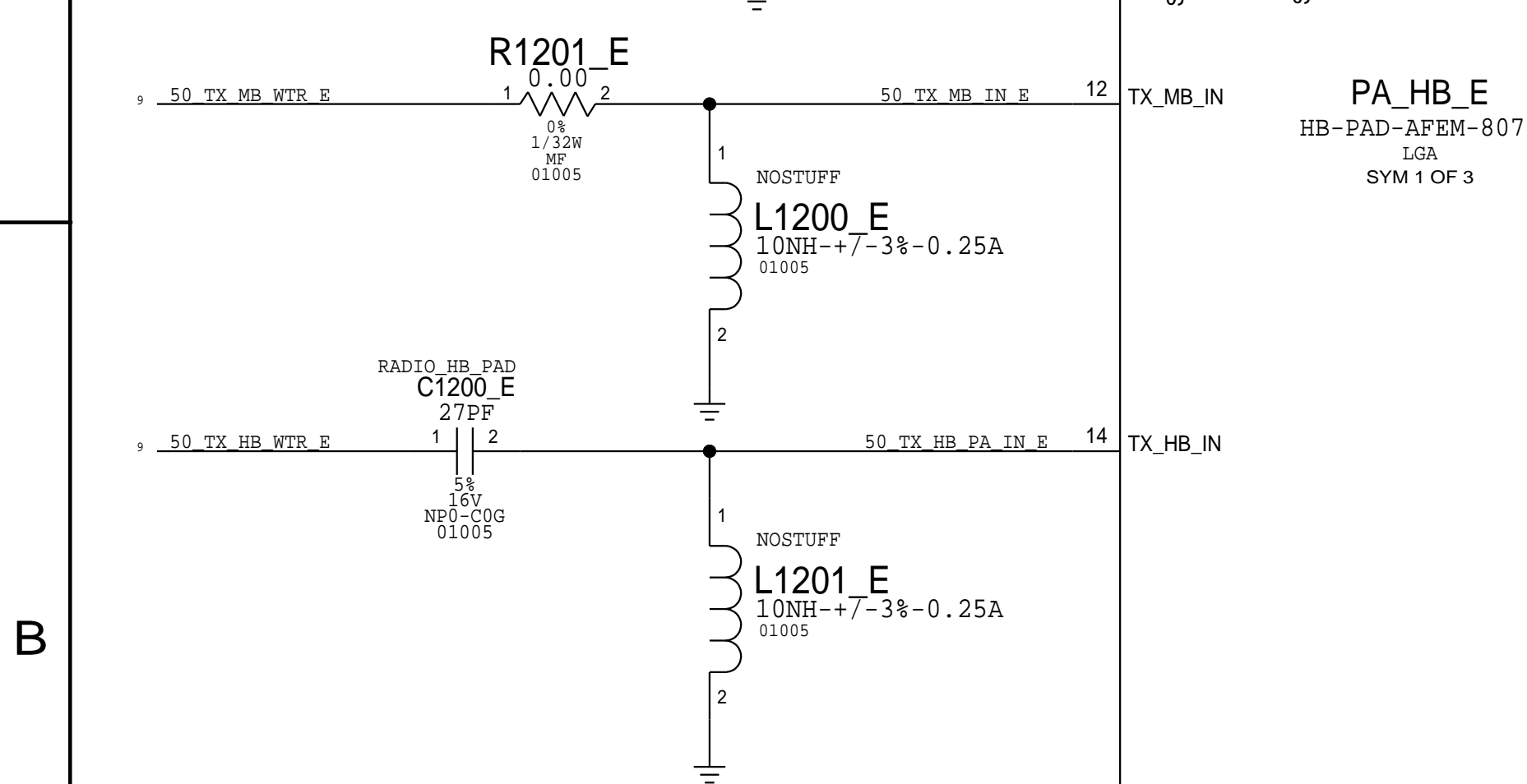
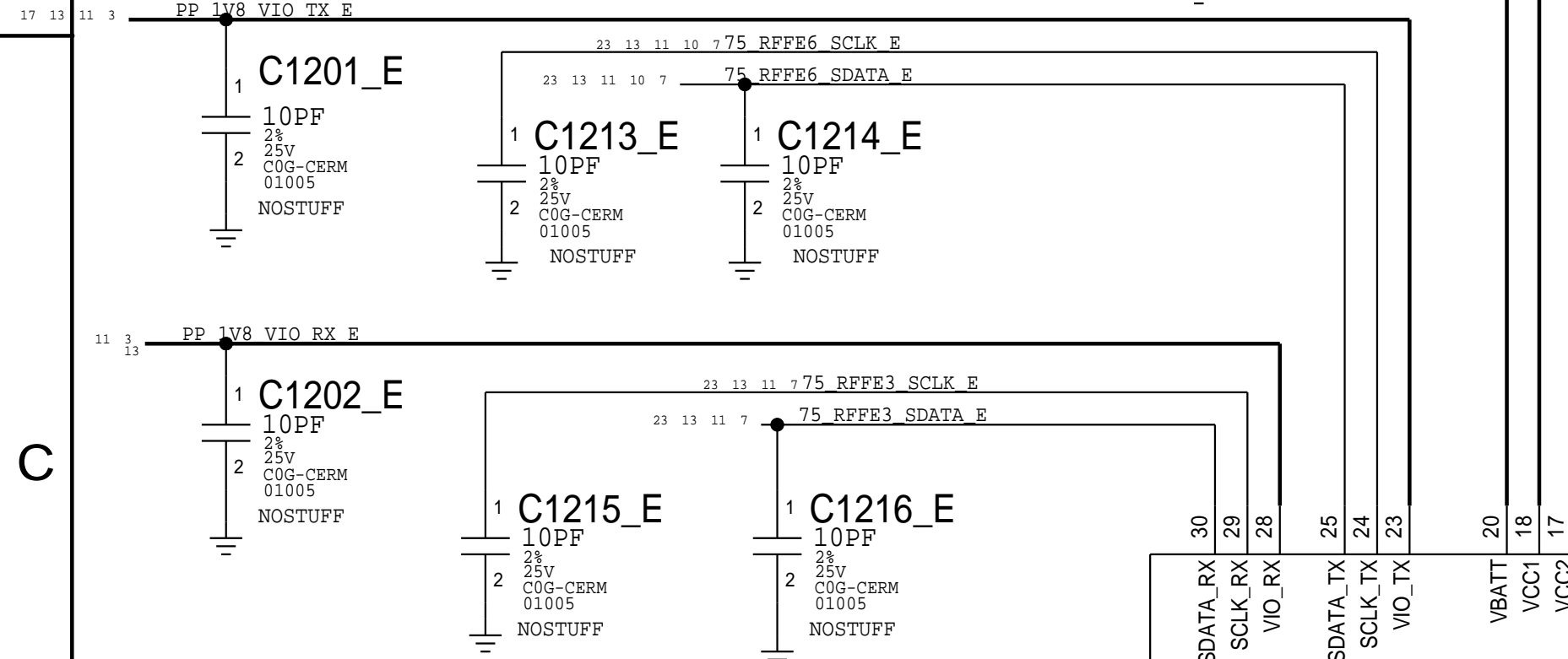
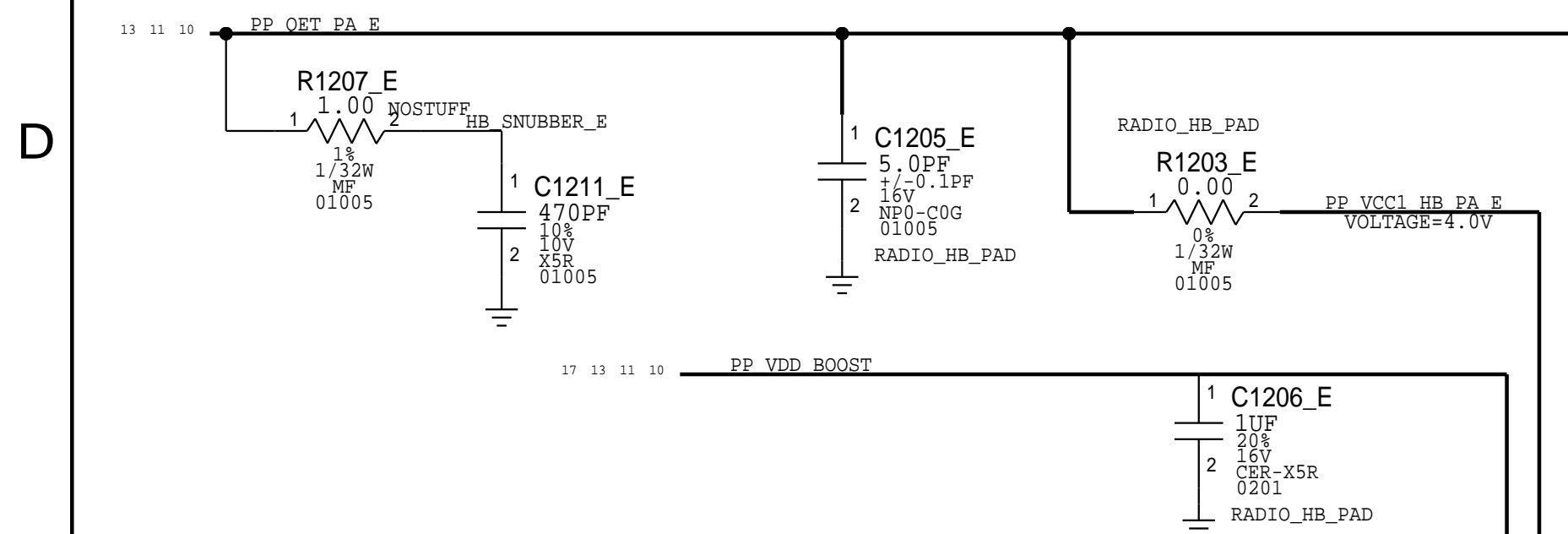
B

A




PAGE TITLE		
LB PAD		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
	BRANCH	evt-1
	PAGE	11 OF 24
NOTICE OF PROPRIETARY PROPERTY:		SHEET
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		23 OF 41

HB PAD



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152S00026	1	0201 2G HB MATCH, 3.5NH 0.5A	R1209_E	CRITICAL	JPN
152S2045	1	0201 2G HB MATCH, 3.0NH 0.6A	R1200_E	CRITICAL	JPN
131S0246	1	01005 2G HB MATCH, 1.5PF	C1212_E	CRITICAL	JPN

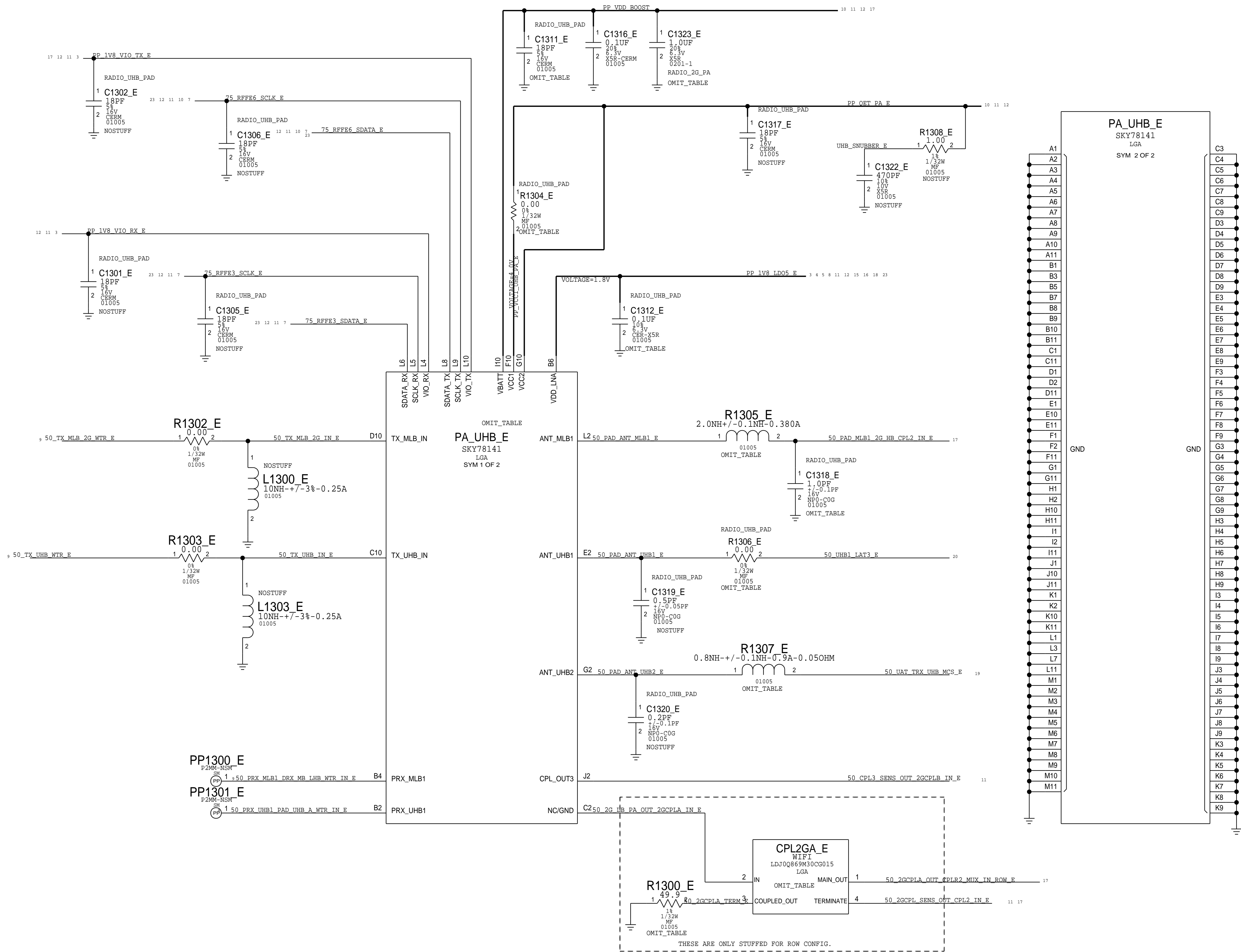
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
-------	-----	-------------	-------------------------	----------	------------


PAGE TITLE			HB PAD	
 Apple Inc.		DRAWING NUMBER	051-02222	
		REVISION	6.0.0	
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	evt-1	
		PAGE	12 OF 24	
		SHEET	24 OF 41	

8	7	6
---	---	---

	4	3	2
--	---	---	---

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
353801243	1	UHB PAD MP	PA_UHB_E	CRITICAL	JPN
11780161	1	MLB/2GTX IN MCH2, 0 OHMS	R1302_E	CRITICAL	JPN
11780161	1	UHB INPUT MCH1, 0 OHMS	R1303_E	CRITICAL	JPN
11780161	1	MLB/2G MB OUT MCH1 01005 0R	R1305_E	CRITICAL	JPN
11780161	1	UHB1 OUTPUT MCH1, 0 OHMS	R1306_E	CRITICAL	JPN
152800494	1	UHB2 OUT/DRX BP MCH1, 0.8NH 0.9A	R1307_E	CRITICAL	JPN
13280683	1	UHB LNA DECOUPLING, 0.1UF 6.3V 10%	C1312_E	CRITICAL	JPN
13180214	1	VBAT DECOUPLING,18PF	C1311_E	CRITICAL	JPN
13880692	1	VBAT DECOUPLING, 1UF	C1323_E	CRITICAL	JPN
11780161	1	VCC2/VCC1 RESISTOR OPTION, 0 OHM	R1304_E	CRITICAL	JPN
13180375	1	MLB OUTPUT MCH UAT, 01005 1.0PF	C1318_E	CRITICAL	JPN

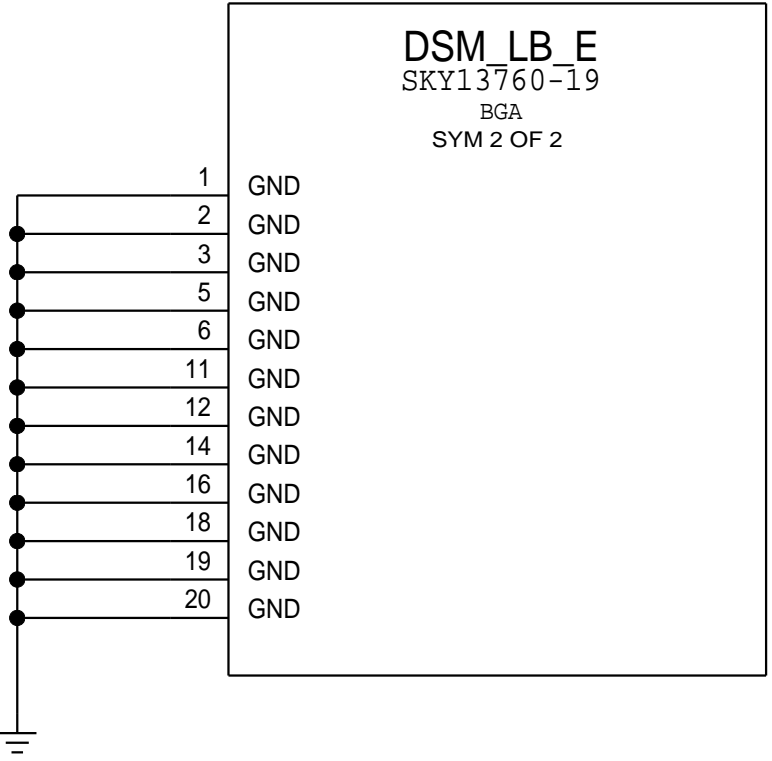
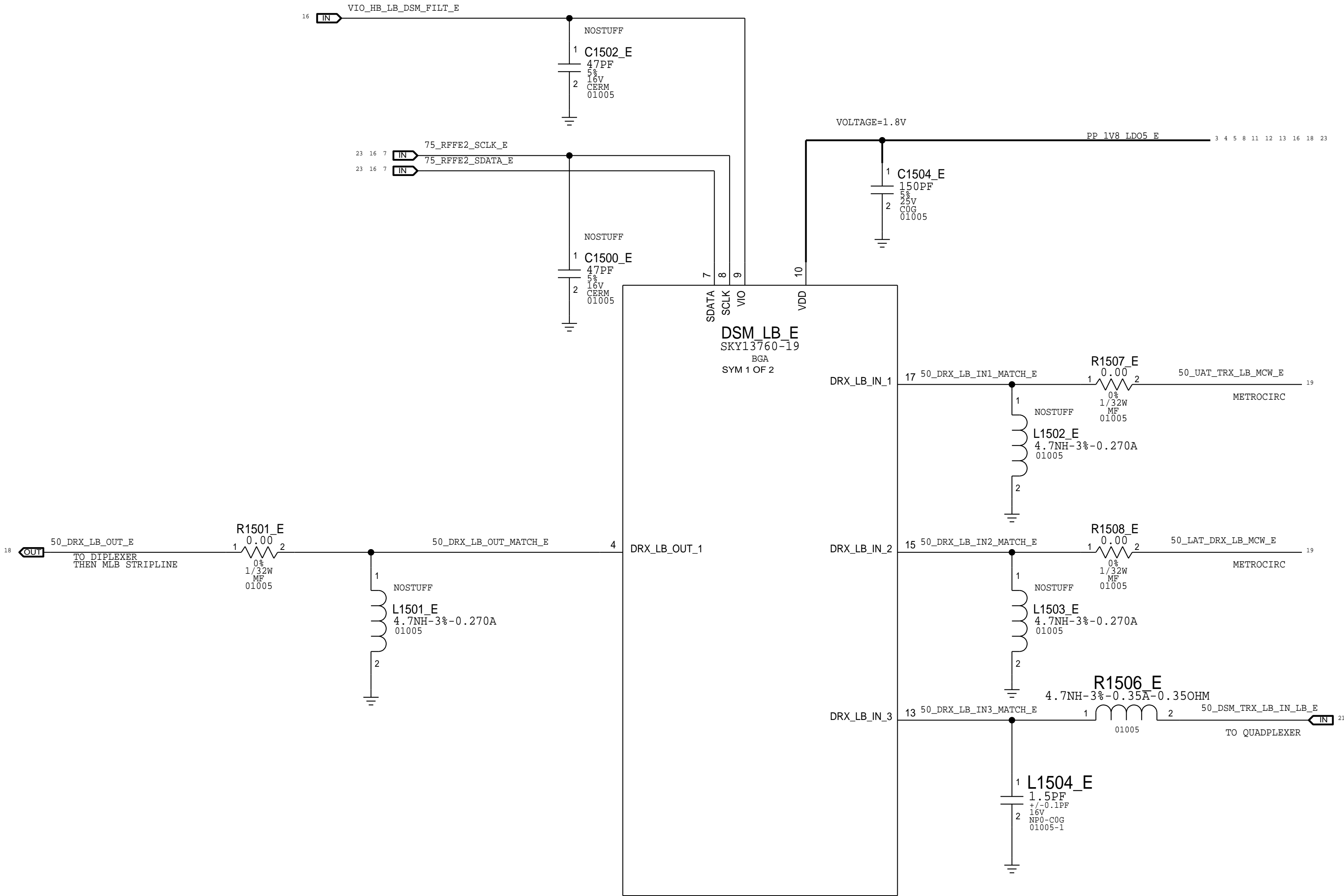



PAGE TITLE		UHB PAD	
 Apple Inc.	DRAWING NUMBER		SIZE
	051-02222		D
	REVISION		
		6.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		evt-1	
		PAGE	
		13 OF 24	
		SHEET	
		25 OF 41	

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
353S01247	1	2G PA MP	PA_UHB_E	CRITICAL	ROW
117S0161	1	MLB/2GTX IN MCH2, 0 OHMS	R1302_E	CRITICAL	ROW
117S0161	1	UHB INFUT MCH1, 0 OHMS	R1303_E	CRITICAL	ROW
152S1917	1	01005 2.0NH 0.6A	R1305_E	CRITICAL	ROW
117S0161	1	UHB2 OUT/DRX BP MCH1, 0 OHMS	R1307_E	CRITICAL	ROW
131S0214	1	VBAT DECOUPLING,18PF	C1311_E	CRITICAL	ROW
138S0692	1	VBAT DECOUPLING, 1UF	C1323_E	CRITICAL	ROW
117S0161	1	VCC2/VCC1 RESISTOR OPTION, 0 OHM	R1304_E	CRITICAL	ROW
155S00316	1	ROW CLPA	CPL2GA_E	CRITICAL	ROW
118S0652	1	01005 49.9R	R1300_E	CRITICAL	ROW

LB DSM

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



PAGE TITLE		
LB DSM		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
	BRANCH	evt-1
	PAGE	15 OF 24
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		SHEET 27 OF 41

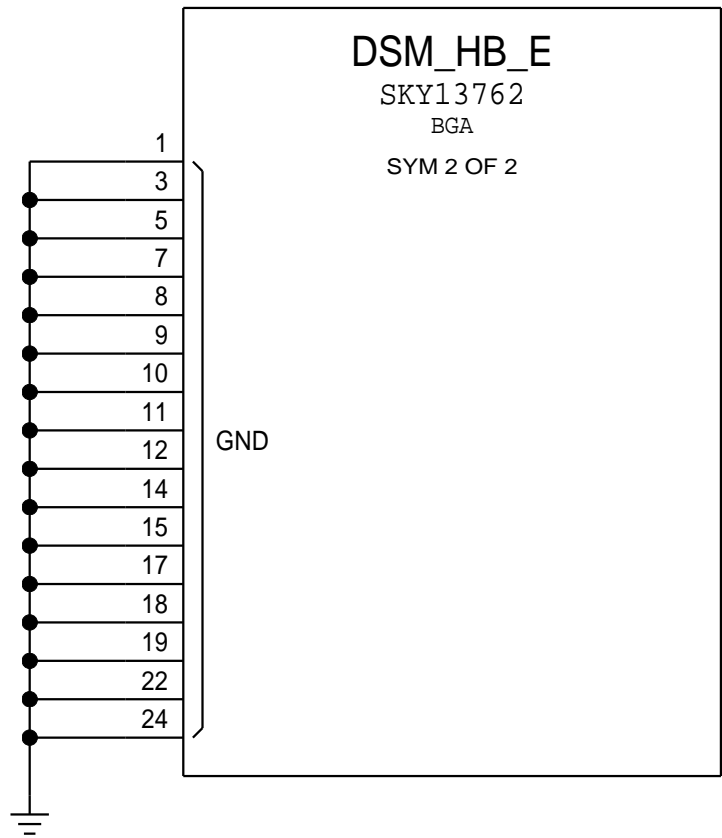
HB DSM


DECOUPLING SHARED WITH LB DSM

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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
117S0161	1	01005 0R	R1600_E	CRITICAL	ROW
117S0161	1	01005 0R	R1602_E	CRITICAL	ROW

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
117S0161	1	01005 0R	R1603_E	CRITICAL	JPN
117S0161	1	01005 0R	R1612_E	CRITICAL	JPN



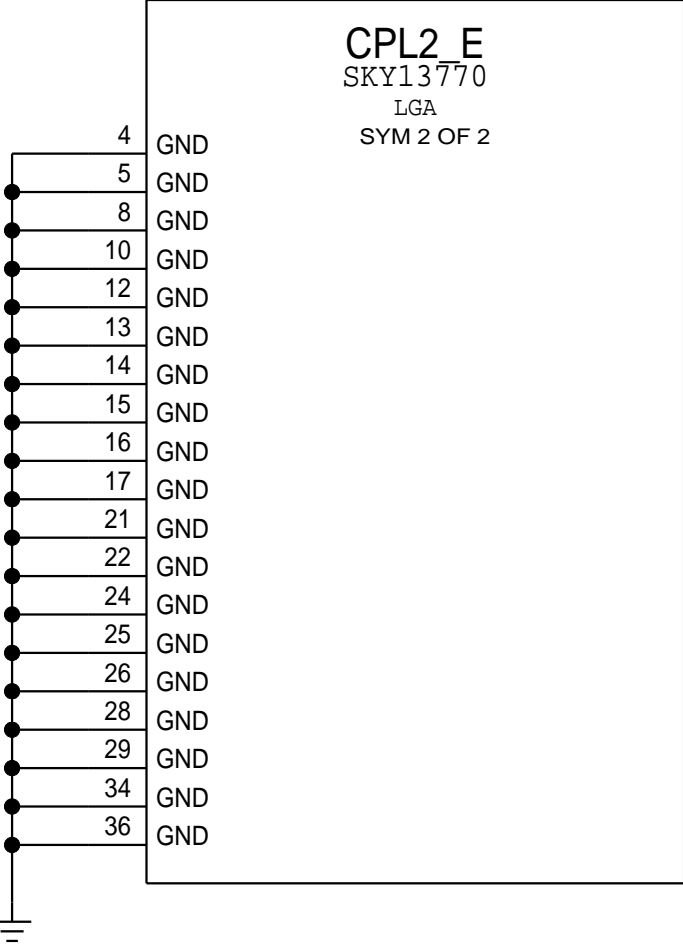
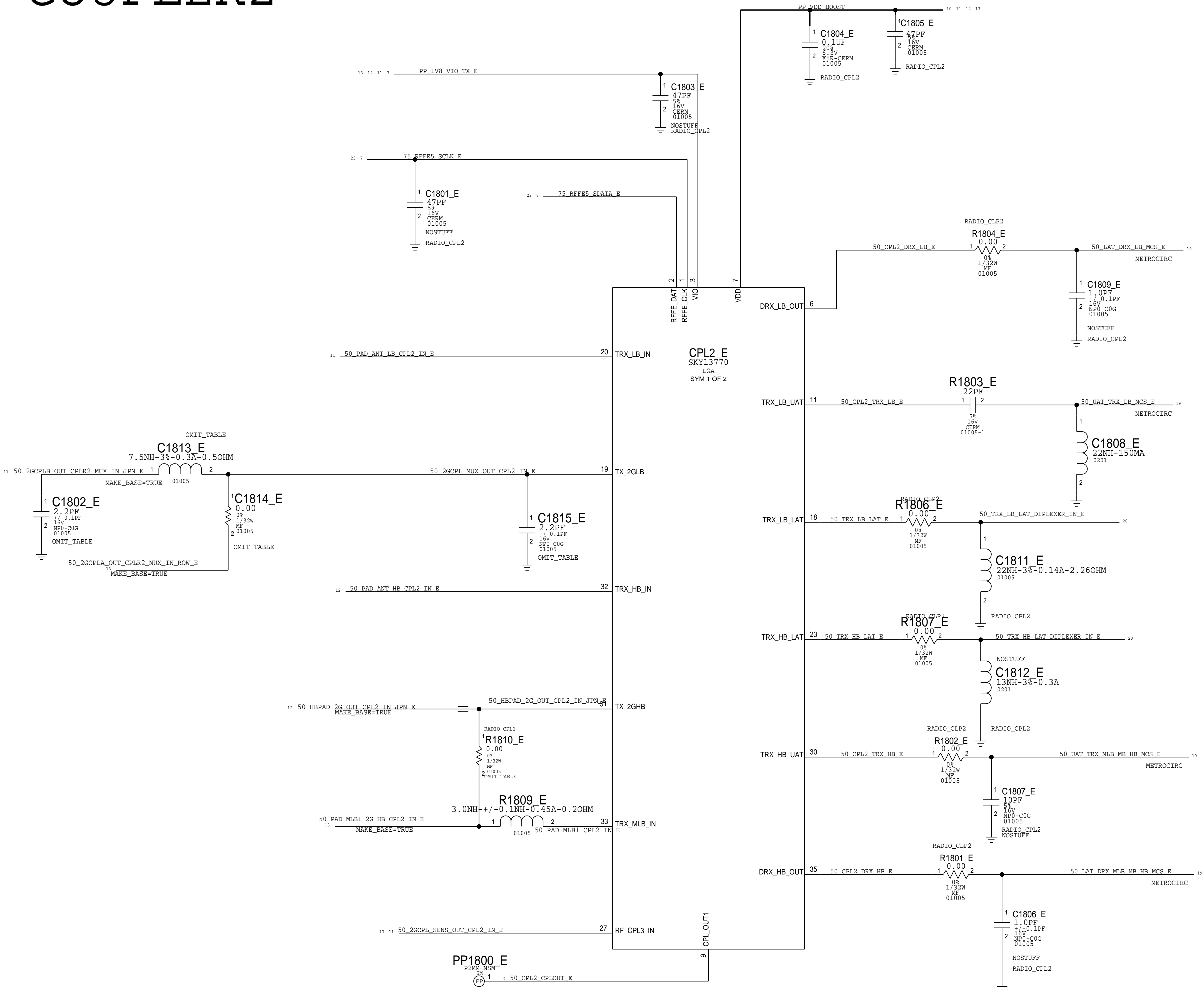
PAGE TITLE		
HB DSM		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
	BRANCH	evt-1
	PAGE	16 OF 24
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		SHEET 28 OF 41

COUPLER2

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

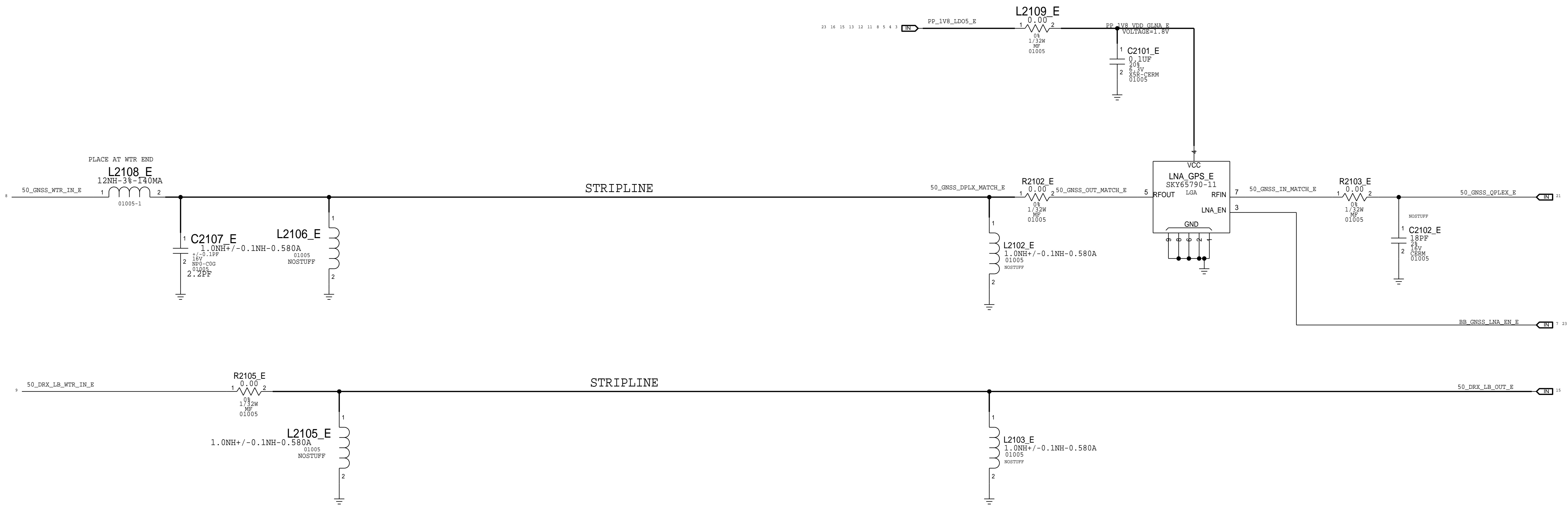
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152800504	1	01005 3.0NH 0.45A	R1809_E	CRITICAL	JPN
152800524	1	01005 7NSH 300MA	C1813_E	CRITICAL	JPN
131S0249	1	01005 2.2PF 0.1PF	C1815_E	CRITICAL	JPN
131S0249	1	01005 2.2PF 0.1PF	C1802_E	CRITICAL	JPN


PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
117S0161	1	01005 0R	R1810_E	CRITICAL	ROW
117S0161	1	01005 0R	C1814_E	CRITICAL	ROW



PAGE TITLE		
COUPLER2		
	DRAWING NUMBER	051-02222
	REVISION	6.0.0
	BRANCH	evt-1
	PAGE	17 OF 24
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 I ALL RIGHTS RESERVED		SHEET 29 OF 41

GPS & GPS/LB DIPLEXER

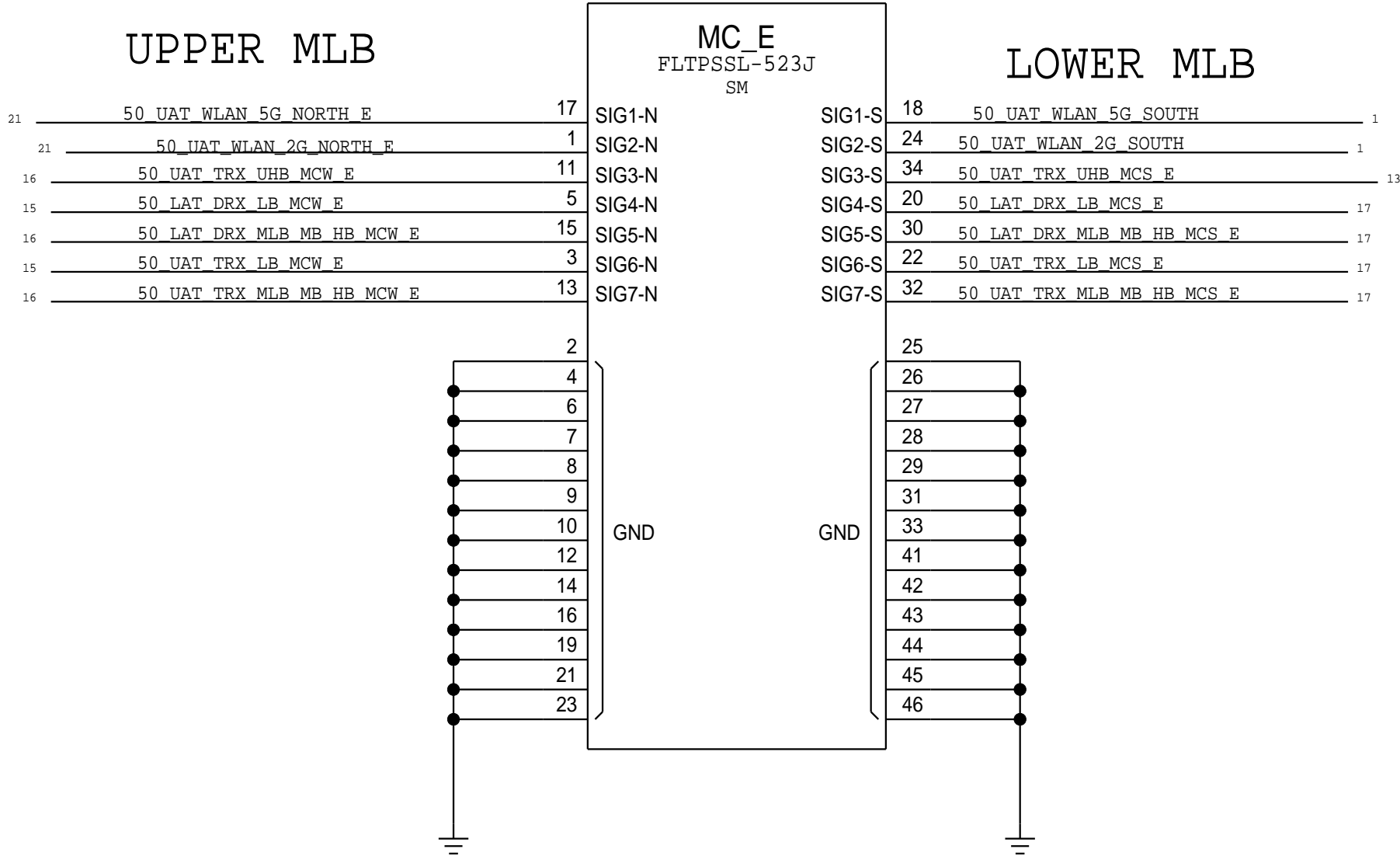



PAGE TITLE		
GNSS		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
	BRANCH	evt-1
	PAGE	18 OF 24
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		SHEET 30 OF 41

METROCIRC

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

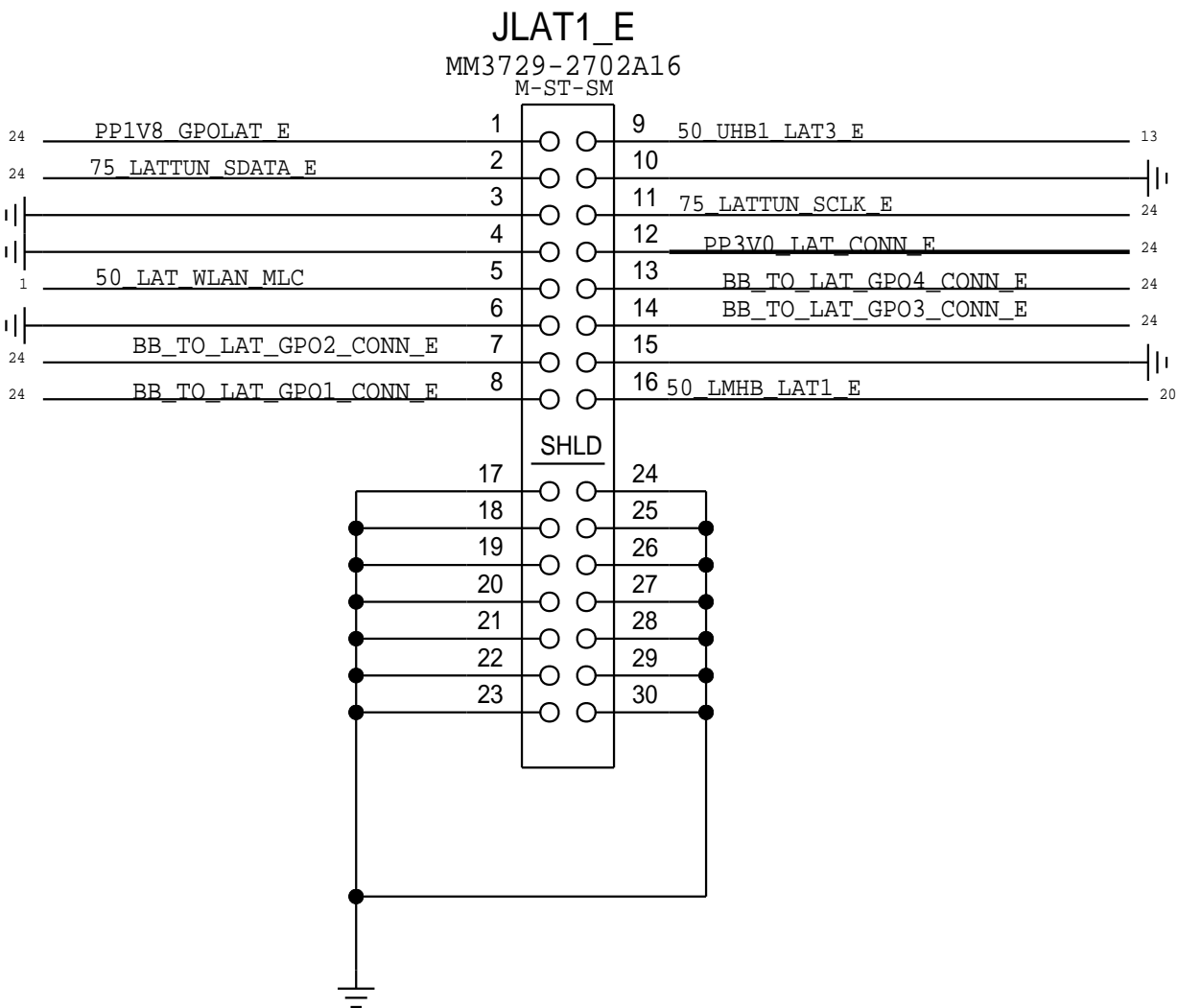
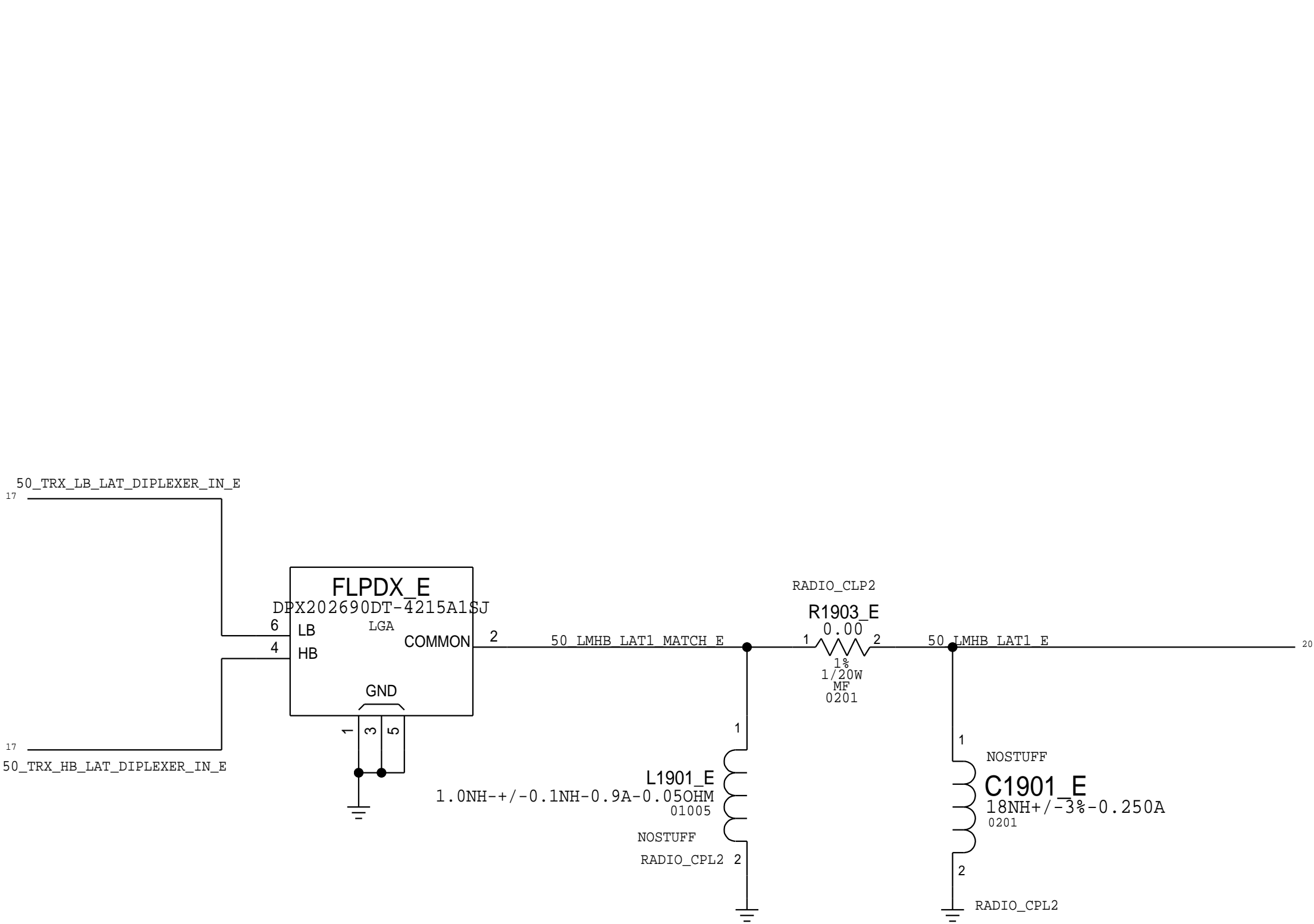
METROCIRC



PAGE TITLE		
METROCIRC		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
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	evt-1
	PAGE	19 OF 24
	SHEET	31 OF 41

LOWER ANTENNA

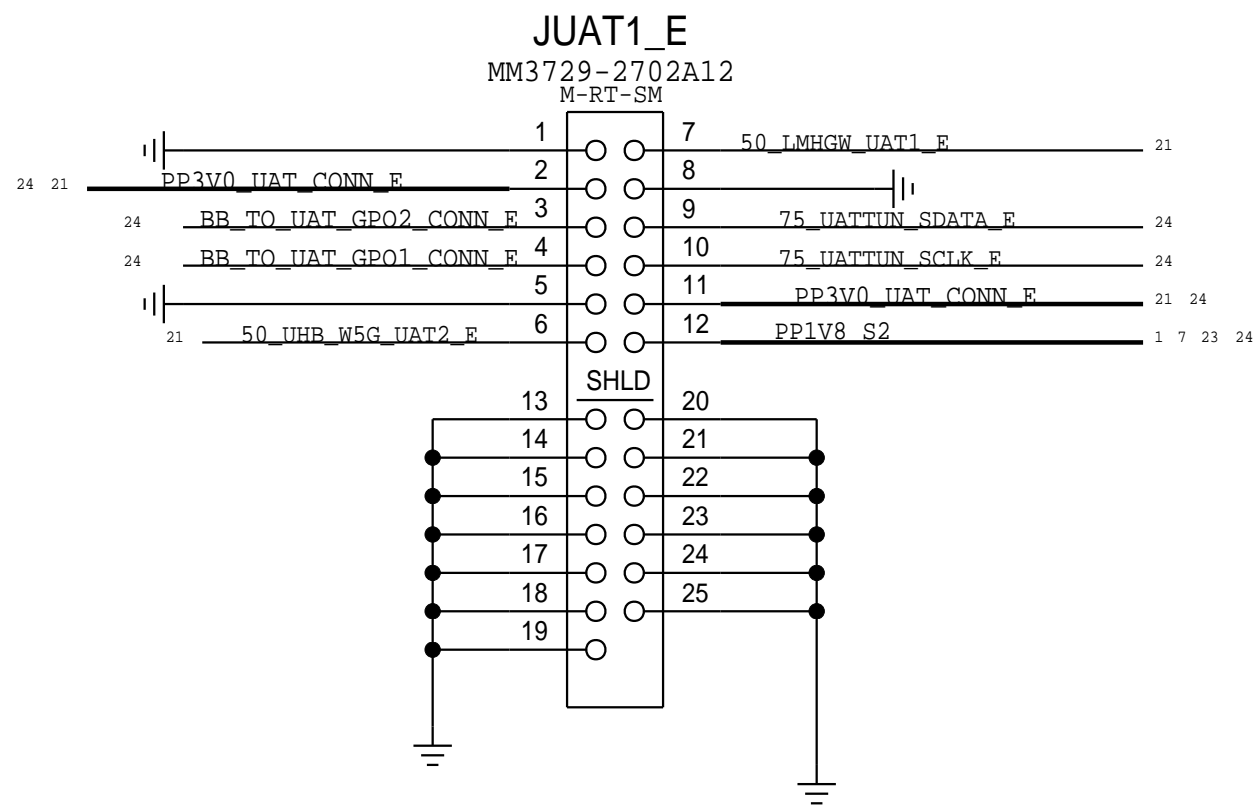
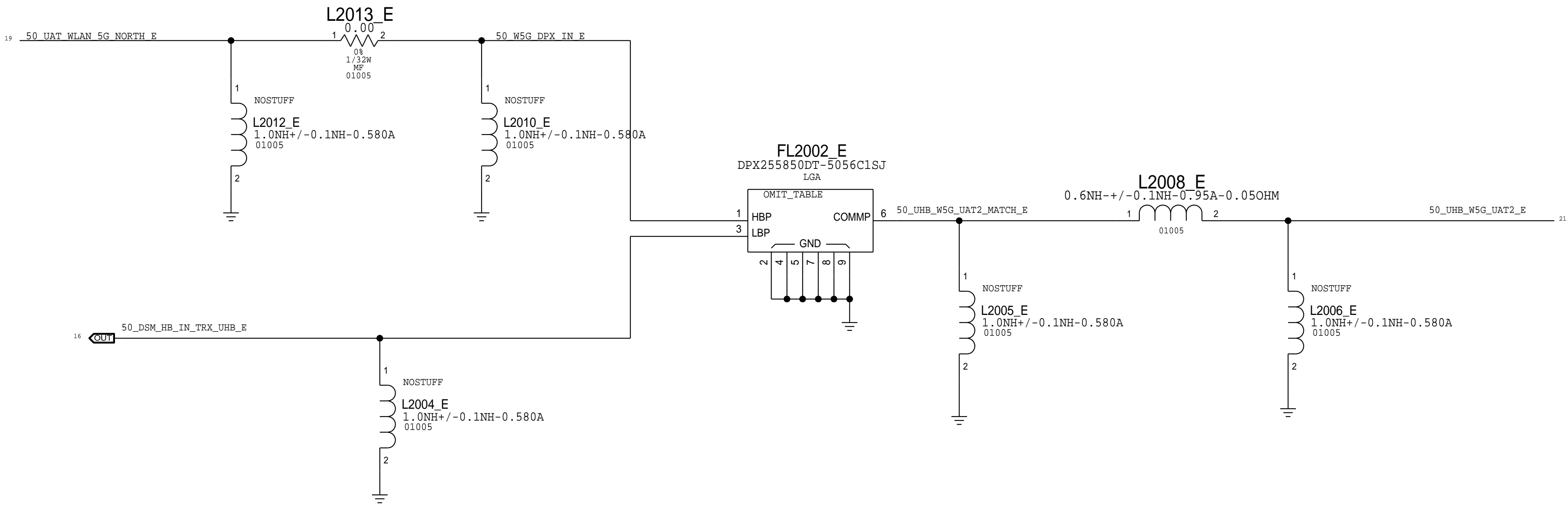
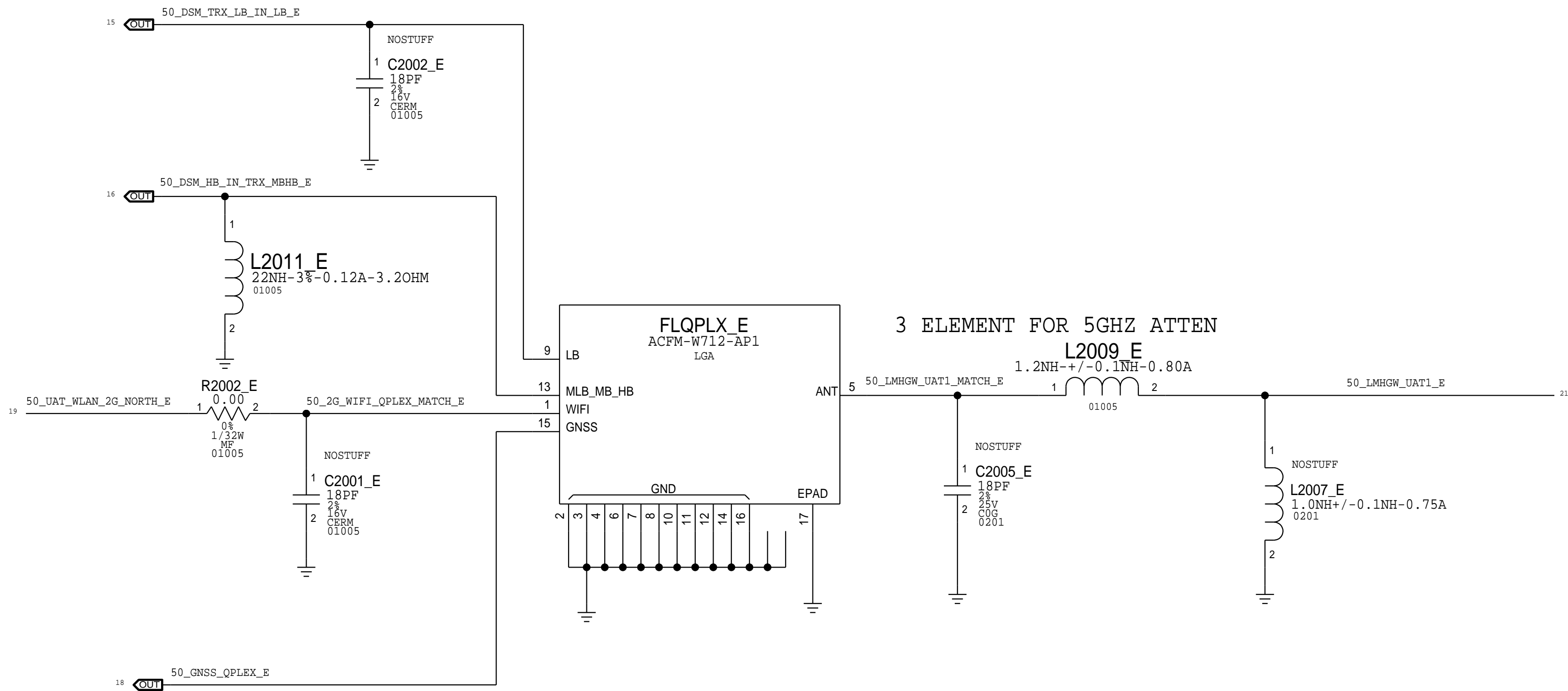
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE ONLY - NOT A CHANGE REQUEST




UAT & LB/UHB DIPLEXER

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

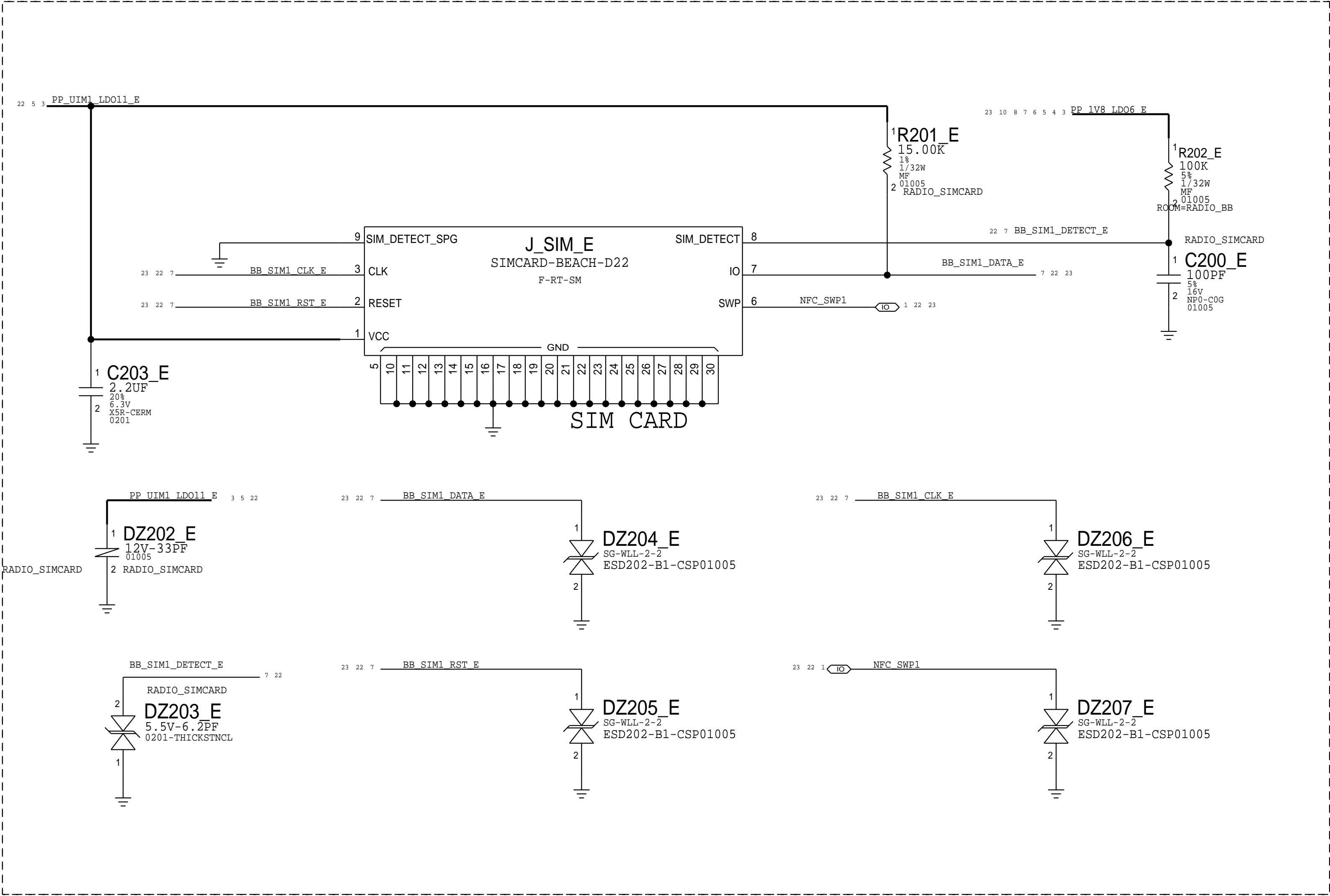
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
155S00280	1	B42_WIF15_DPX	FL2002_E	CRITICAL	JFN
155S00290	1	B42_WIF15_DPX_PASSTHRU	FL2002_E	CRITICAL	ROW



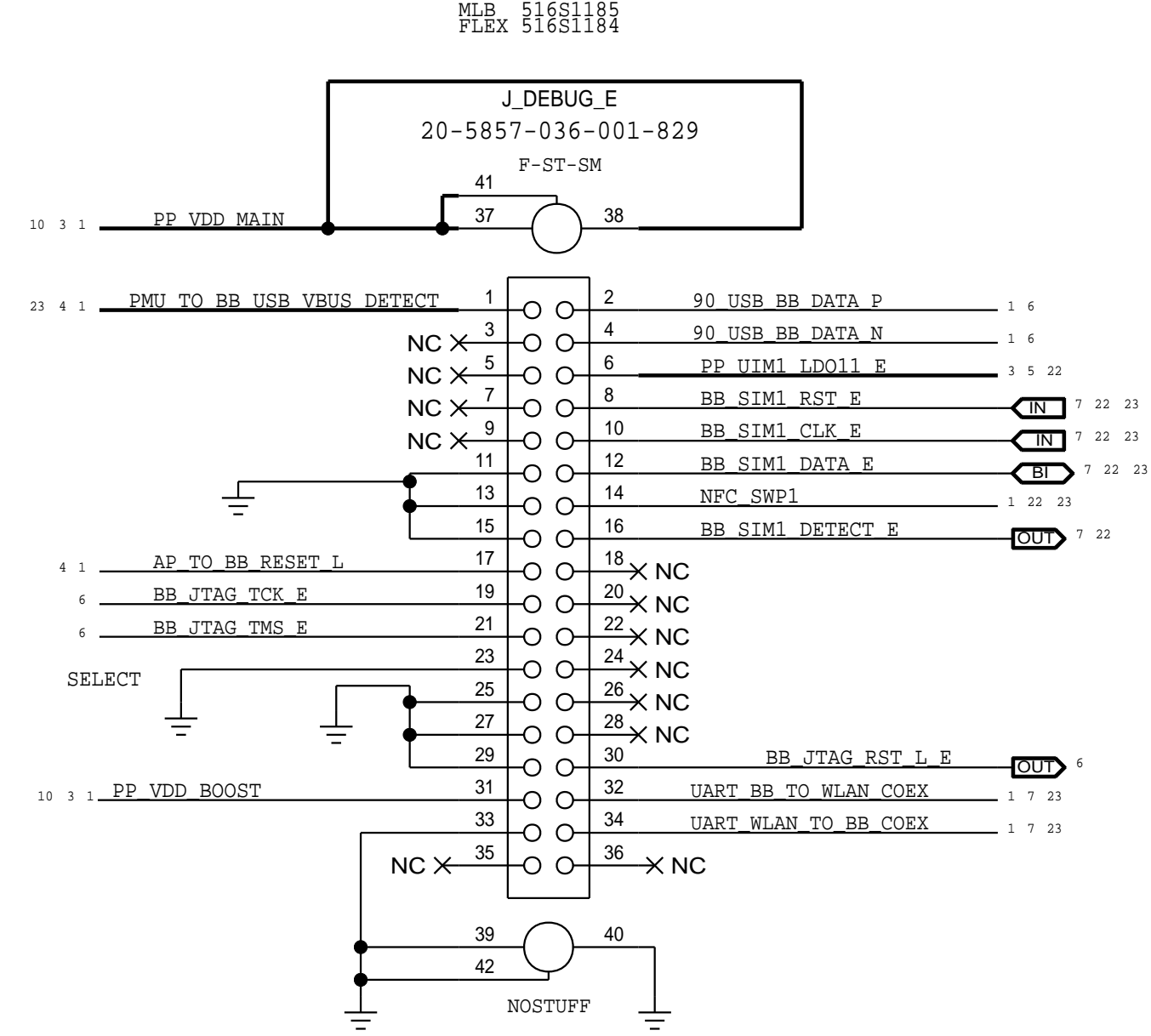
PAGE TITLE		
UPPER ANTENNA		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	21 OF 24
	SHEET	33 OF 41

SIM CONN EUICC & DEBUG CONN

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

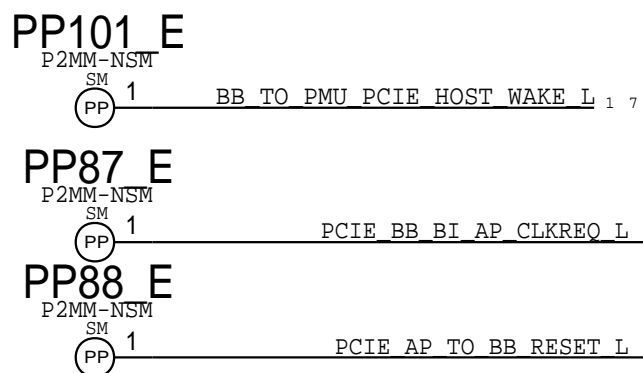


DEBUG CONNECTOR



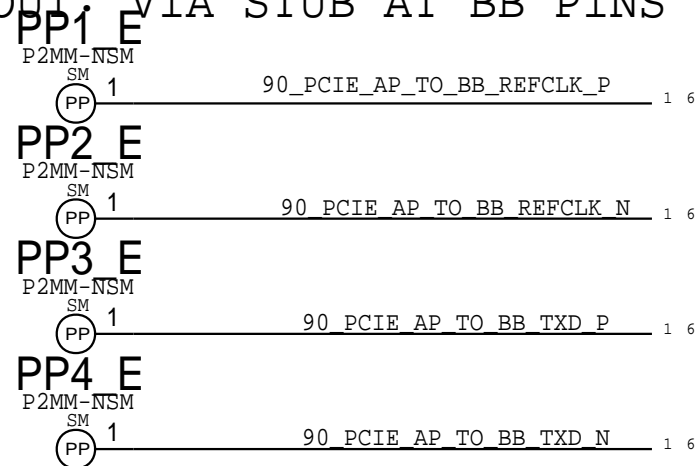
SIM, EUICC, DEBUG CONN		DRAWING NUMBER		REVISION	
051-02222		051-02222		6.0.0	
Apple Inc.		BRANCH		PAGE	
NOTICE OF PROPRIETARY PROPERTY:		evt-1		22 OF 24	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		SHEET		34 OF 41	
I TO MAINTAIN 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					

BB PROBE POINTS

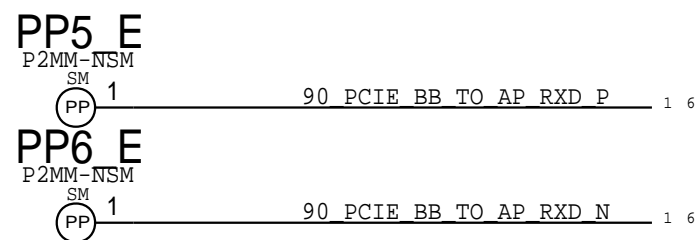


PCIE

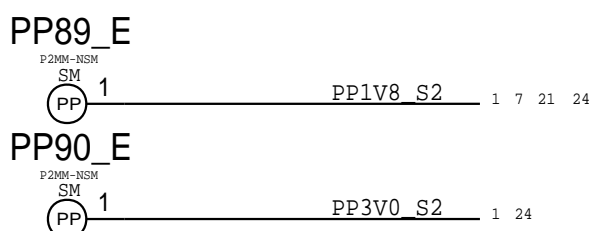
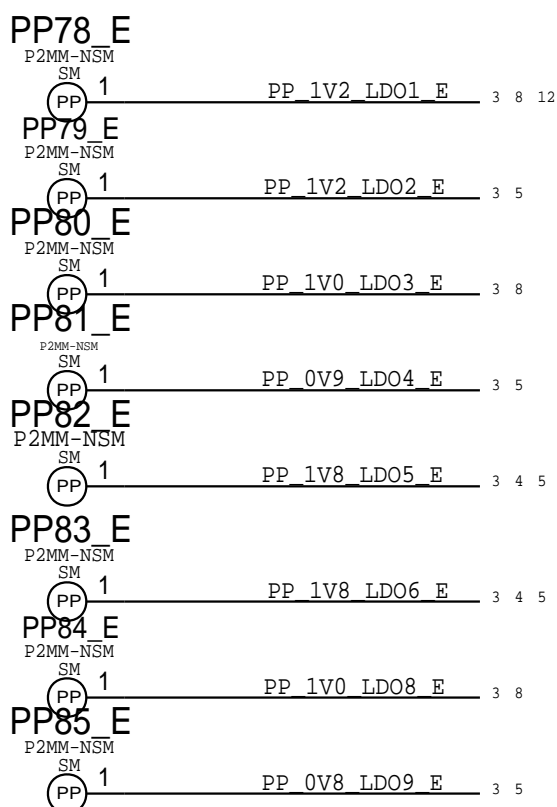
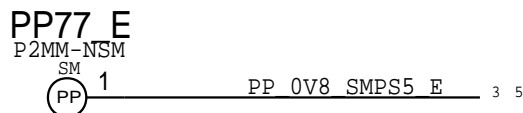
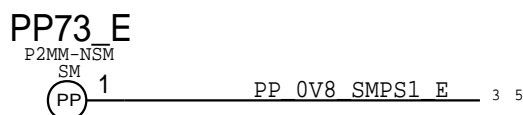
LAYOUT: VIA STUB AT BB PINS



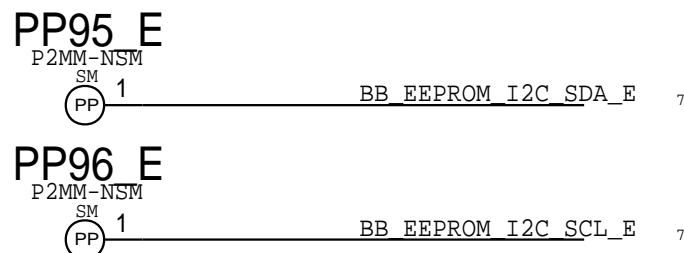
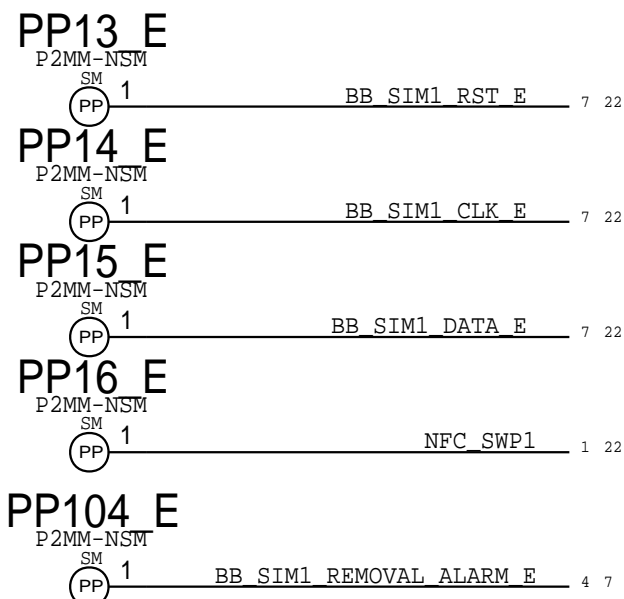
LAYOUT: VIA STUB AT PADS



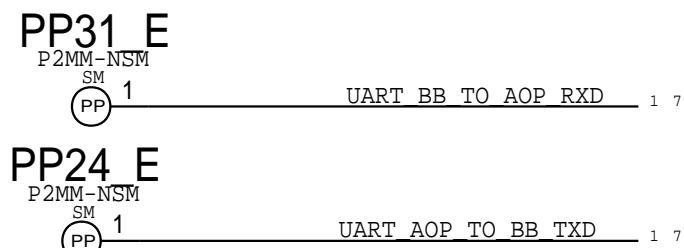
PWR



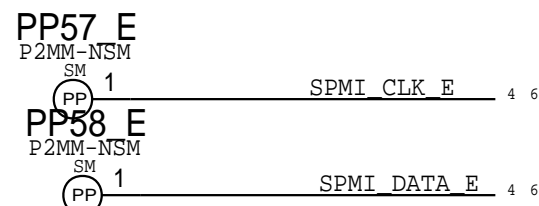
SIM



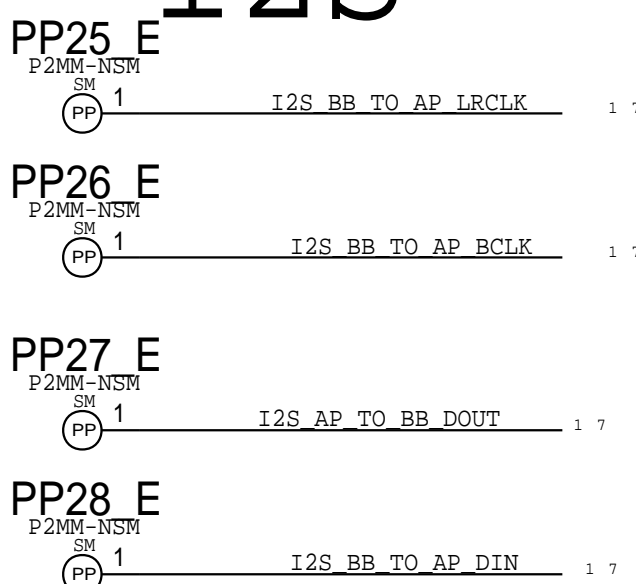
UART



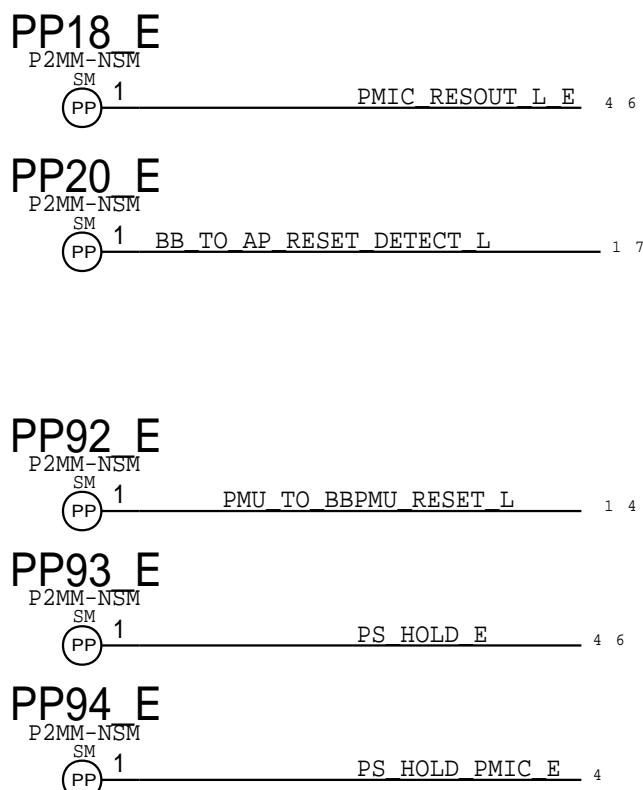
SPMI



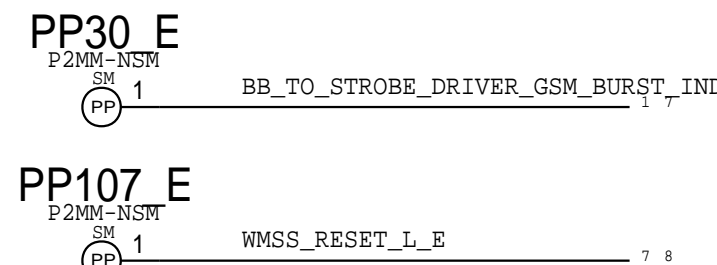
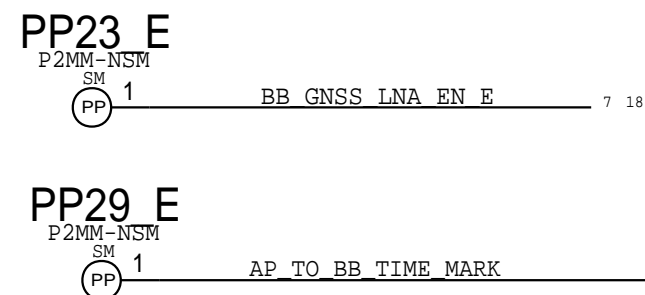
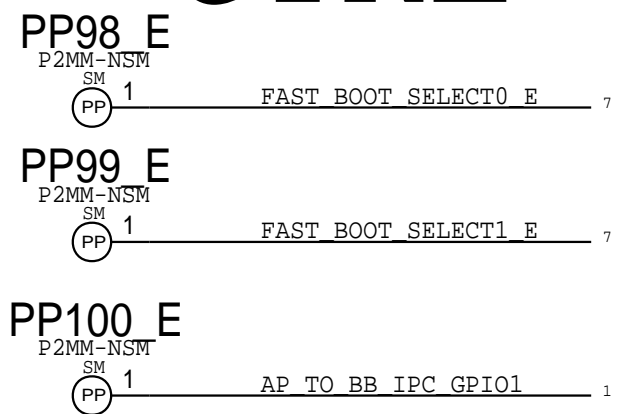
I2S



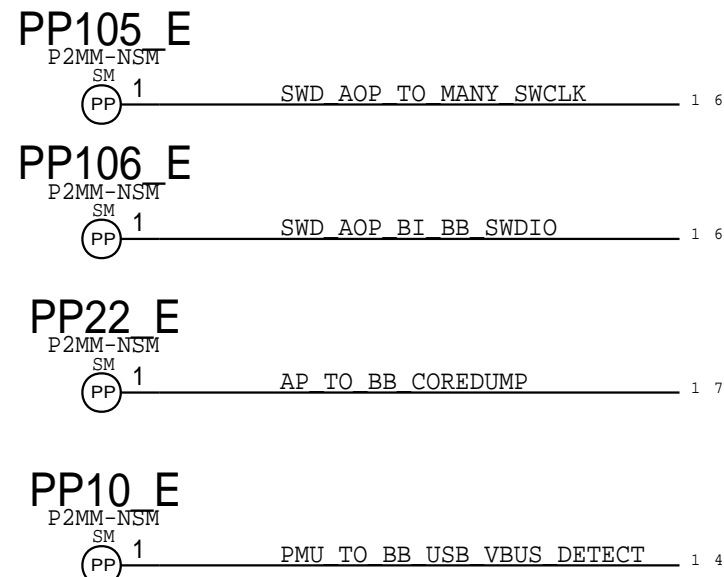
PWR SEQ



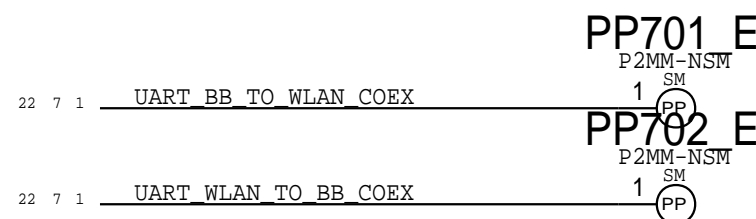
CTRL



DEBUG

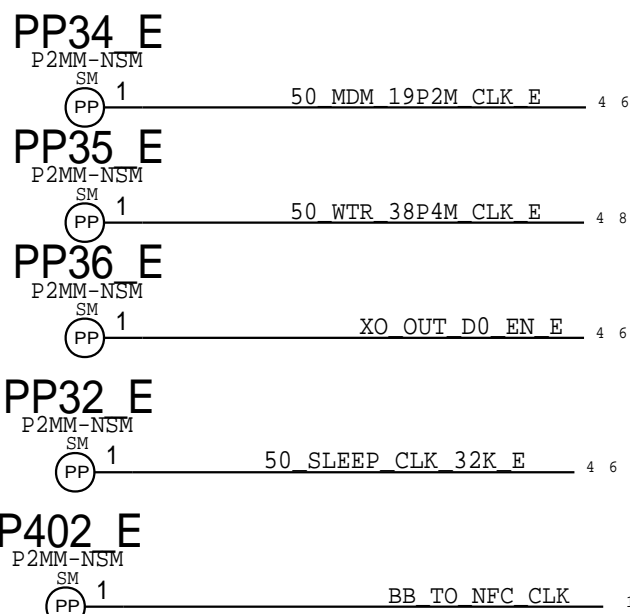


COEX

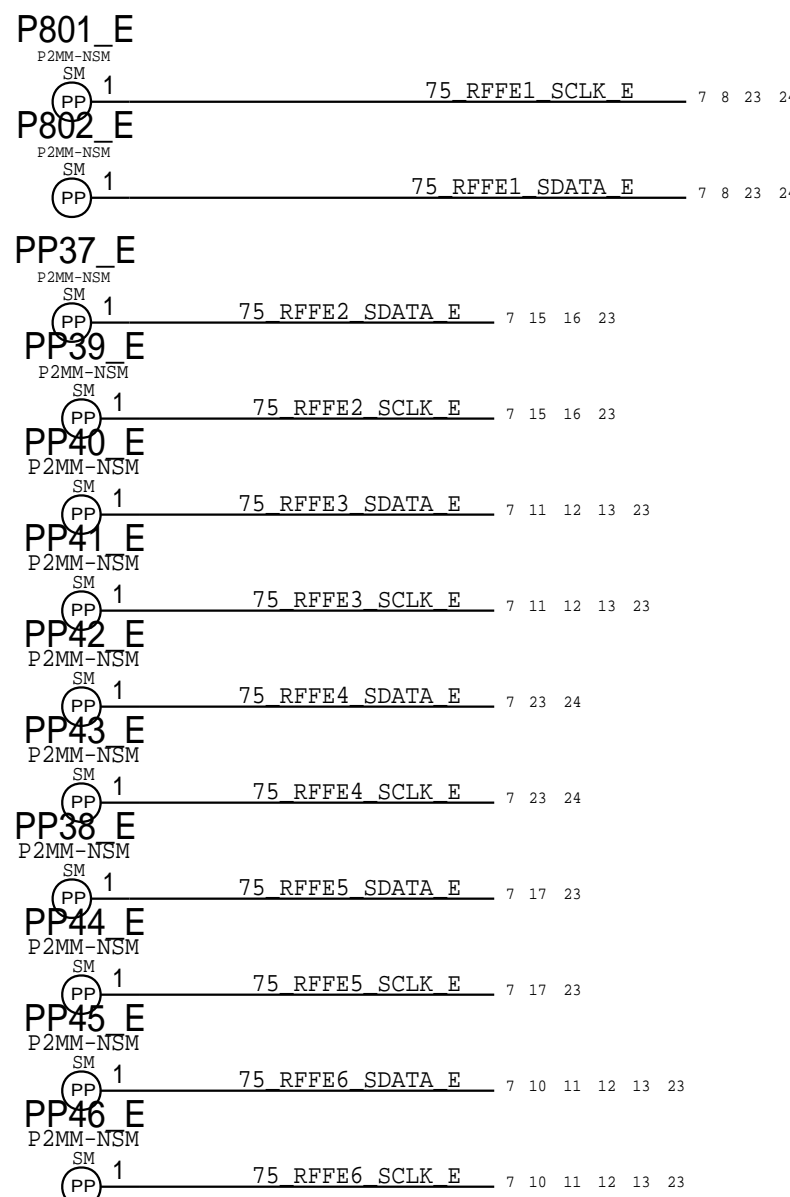


BASEBAND

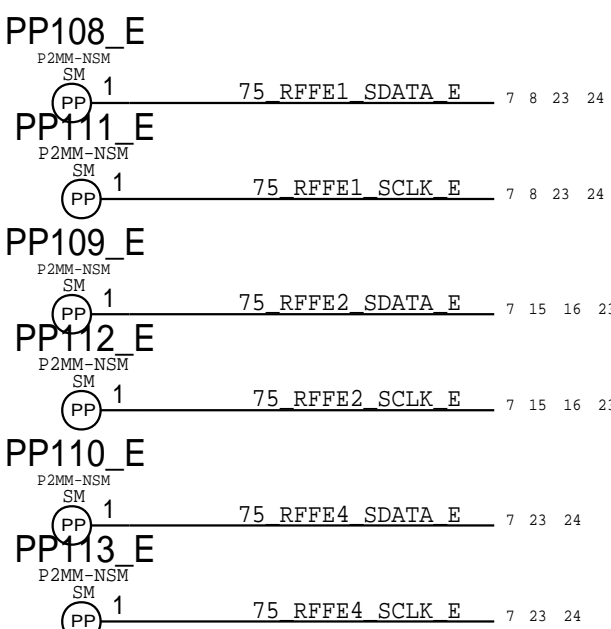
CLK



RFFE

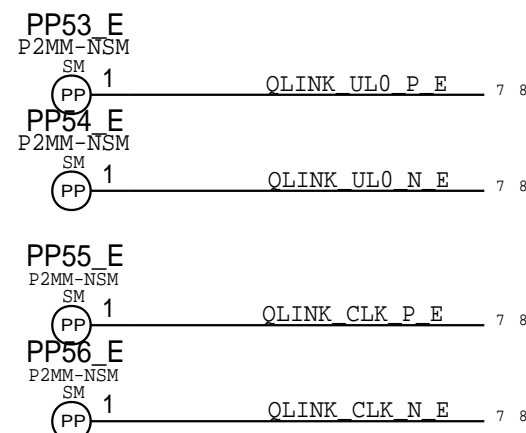


RFFE BB

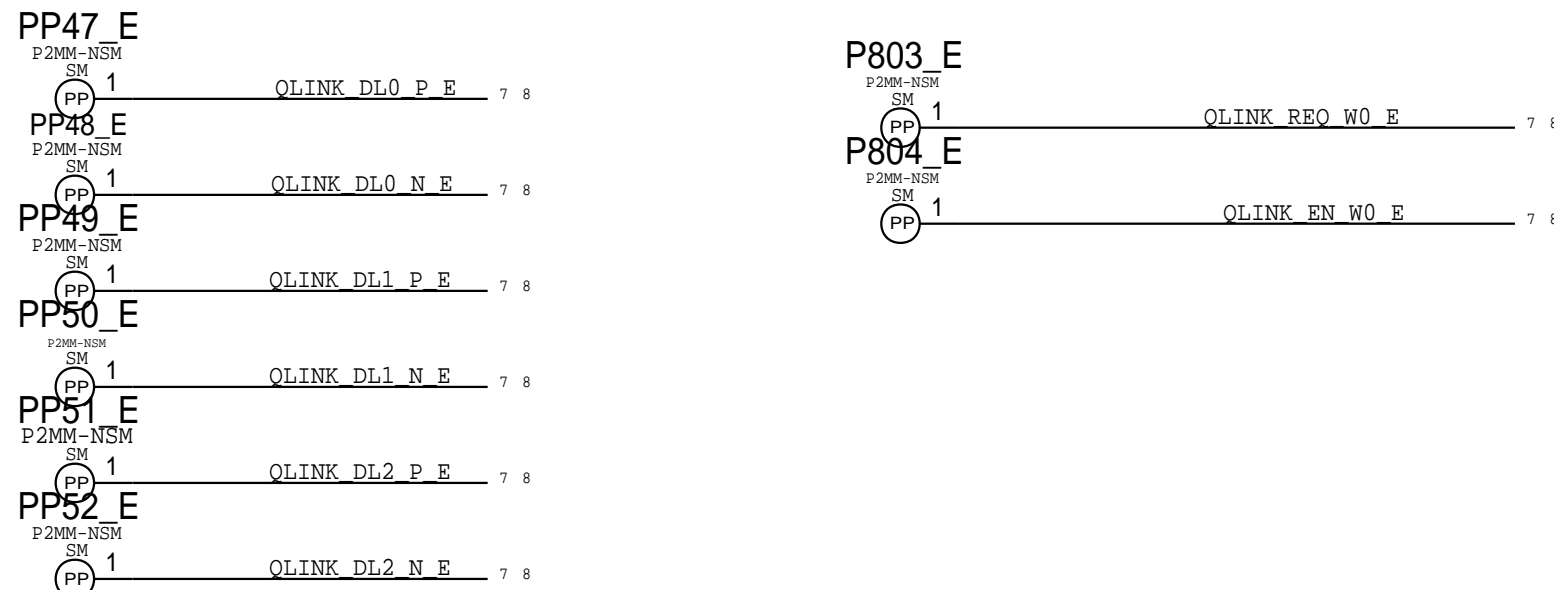


QLINK

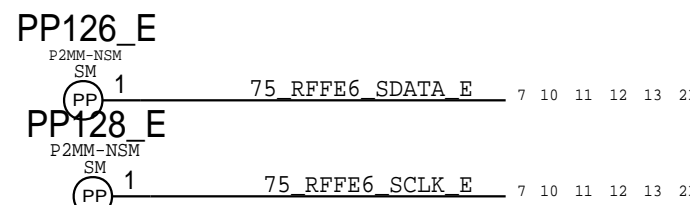
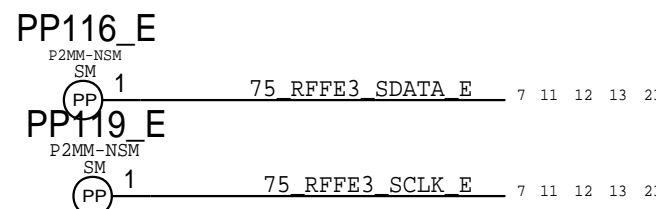
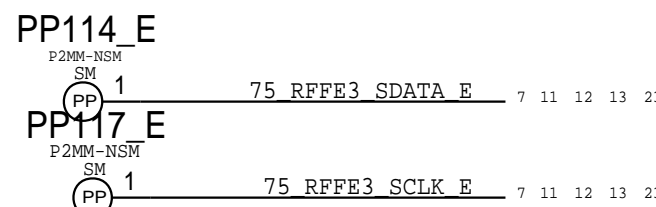
LAYOUT: VIA STUB AT WTR PINS



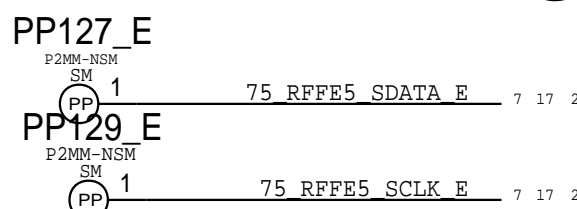
LAYOUT: VIA STUB AT BB PINS




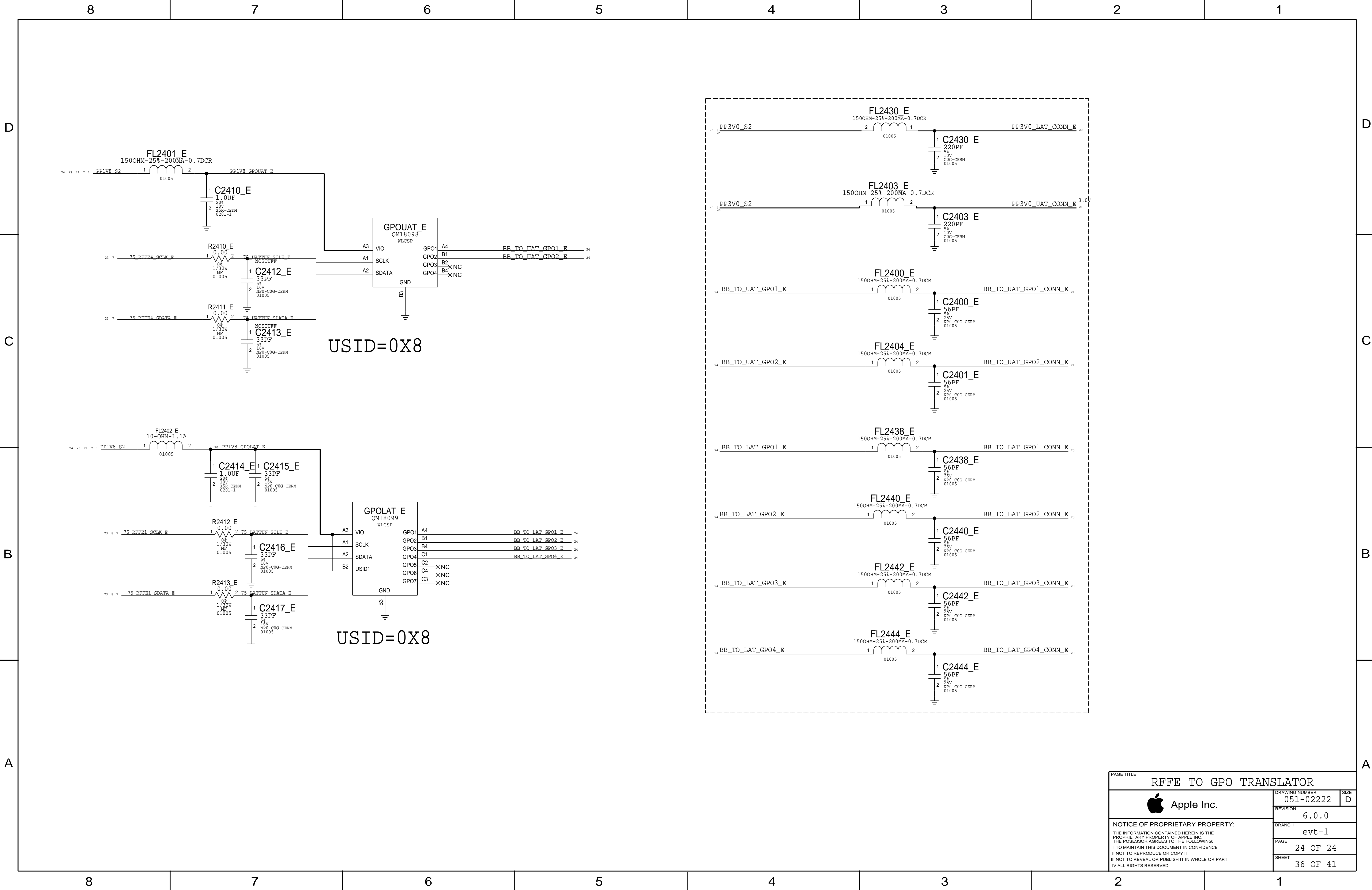
RFFE PA/LNA




RFFE CPL



SYNC_MASTER=PROBE_POINTS			SYNC_DATE=07/06/2016			
PAGE TITLE						
TEST_POINTS						
 Apple Inc.			DRAWING NUMBER		SIZE	
			051-02222		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 I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED			REVISION		6.0.0	
			BRANCH		evt-1	
			PAGE		23 OF 24	
			SHEET		35 OF 41	

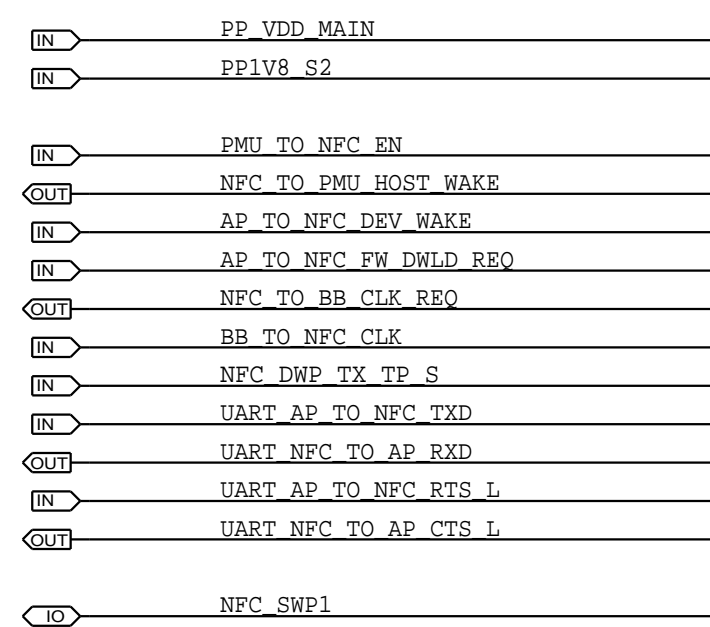


PAGE TITLE		
RFFE TO GPO TRANSLATOR		
 Apple Inc.	DRAWING NUMBER	051-02222
	REVISION	6.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	24 OF 24
	SHEET	36 OF 41

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
6	0008416016	ENGINEERING RELEASED	2017-04-06

D22 NFC_MLB
MARCH 22, 2017



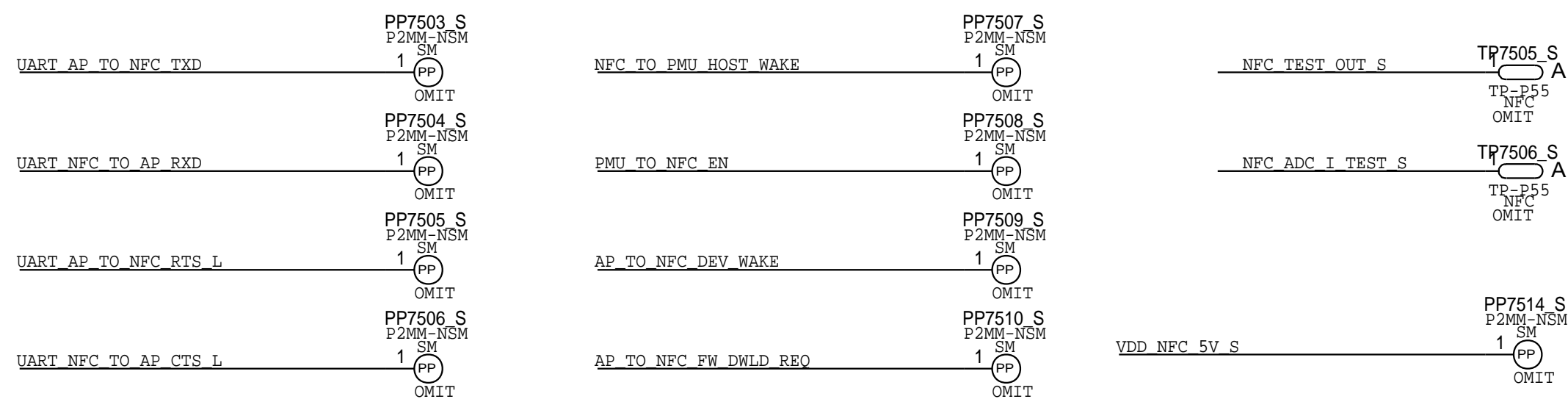
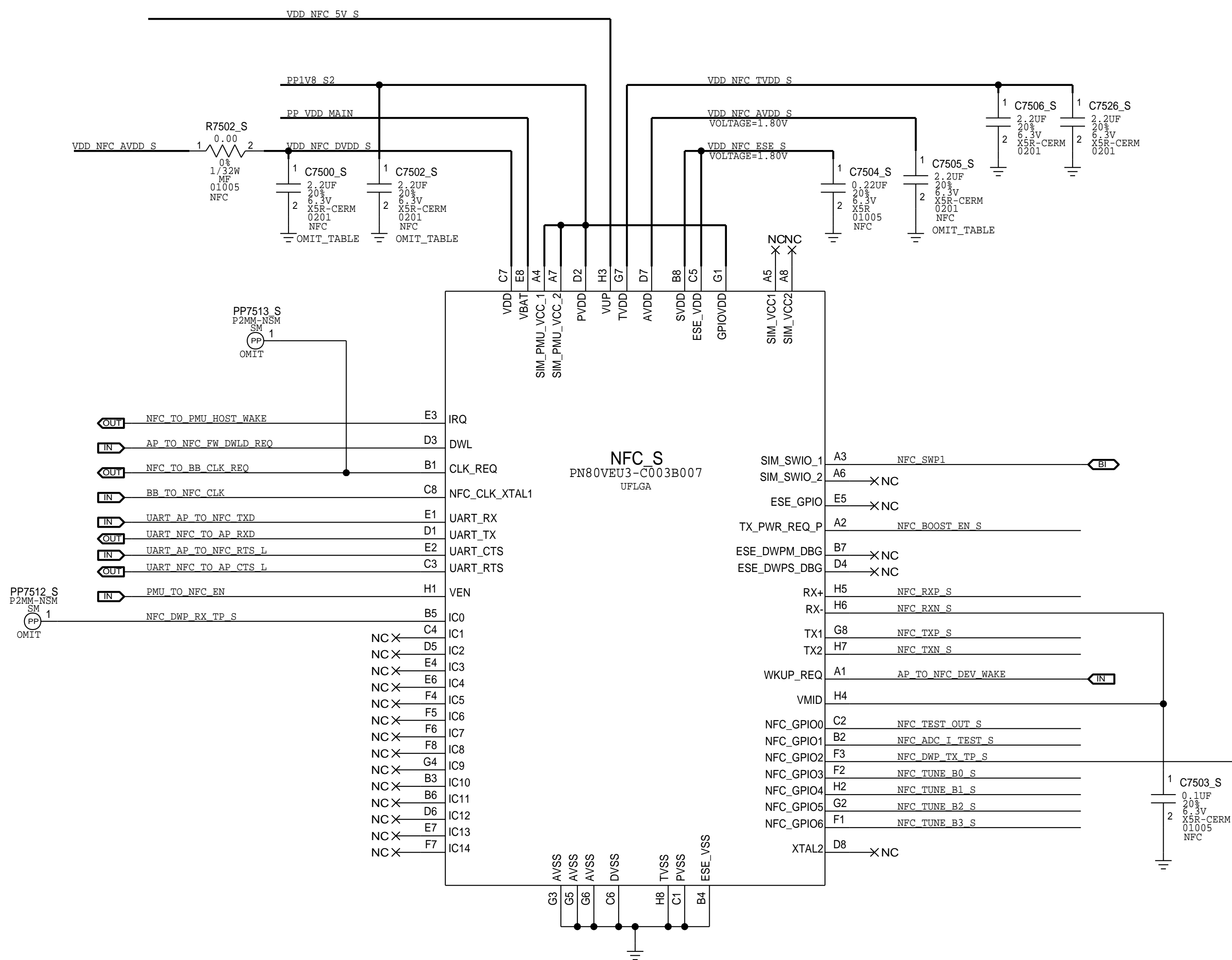
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S00159	3	CAP,SOFT-TERM, 2.2UF, 6.3V,0201	C7500_S,C7502_S,C7505_S	CRITICAL	SOFT_CAP
138S0831	3	CAP,TYPICAL, 2.2UF, 6.3V,0201	C7500_S,C7502_S,C7505_S	CRITICAL	TYPICAL_CAP

page1

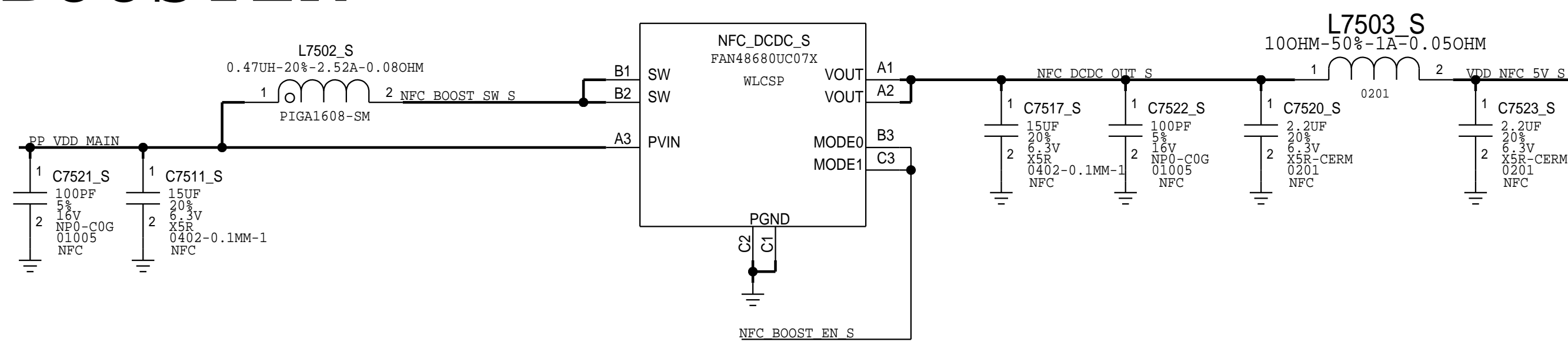
DRAWING TITLE		SCH, MLB, BOT, X891	
 Apple Inc.	DRAWING NUMBER	051-02222	SIZE D
	REVISION	6.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	evt-1
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART I ALL RIGHTS RESERVED		PAGE	1 OF 75
		SHEET	37 OF 41

STOCKHOLM

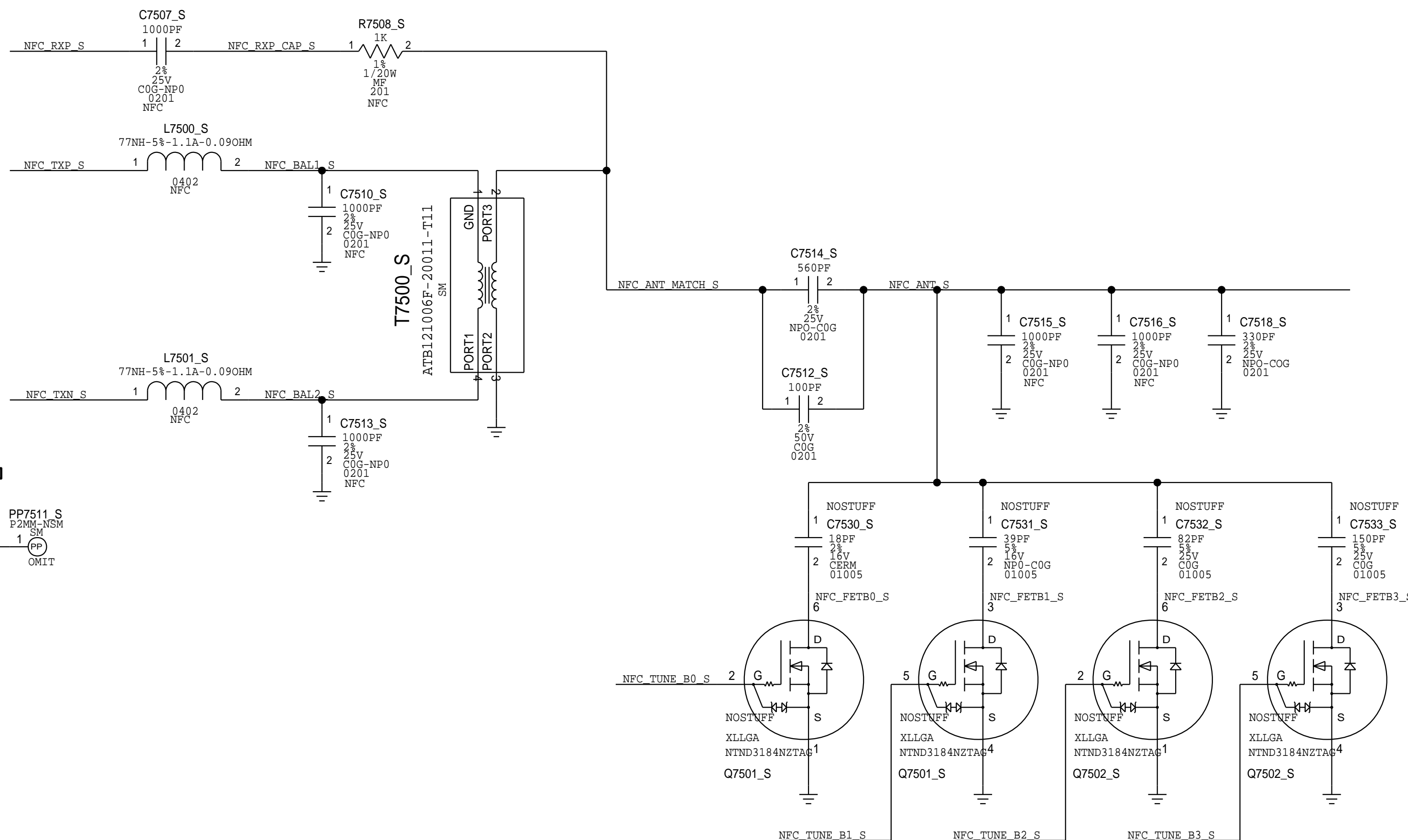
NFC CONTROLLER



5V BOOSTER

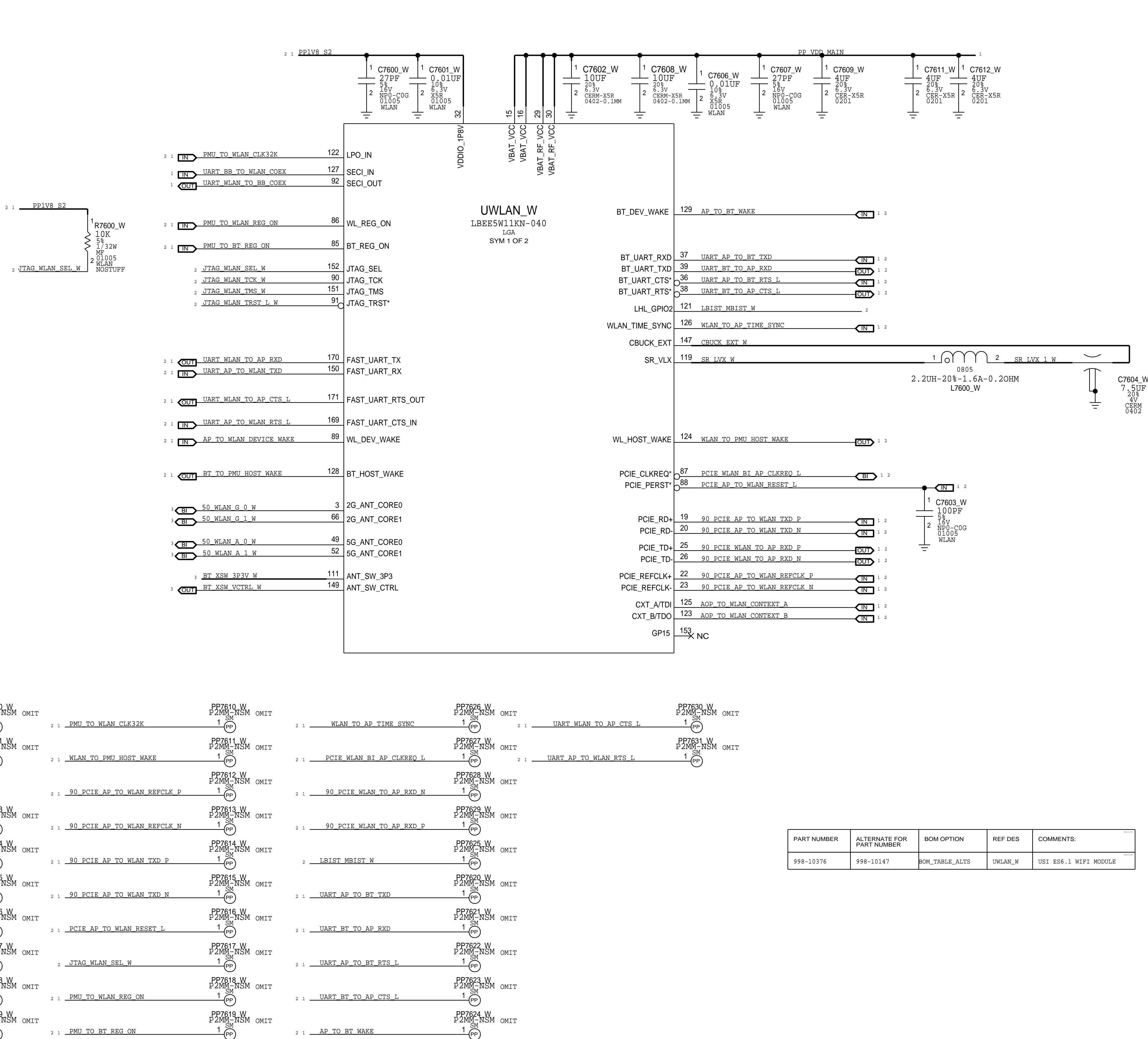


NFC FRONT END

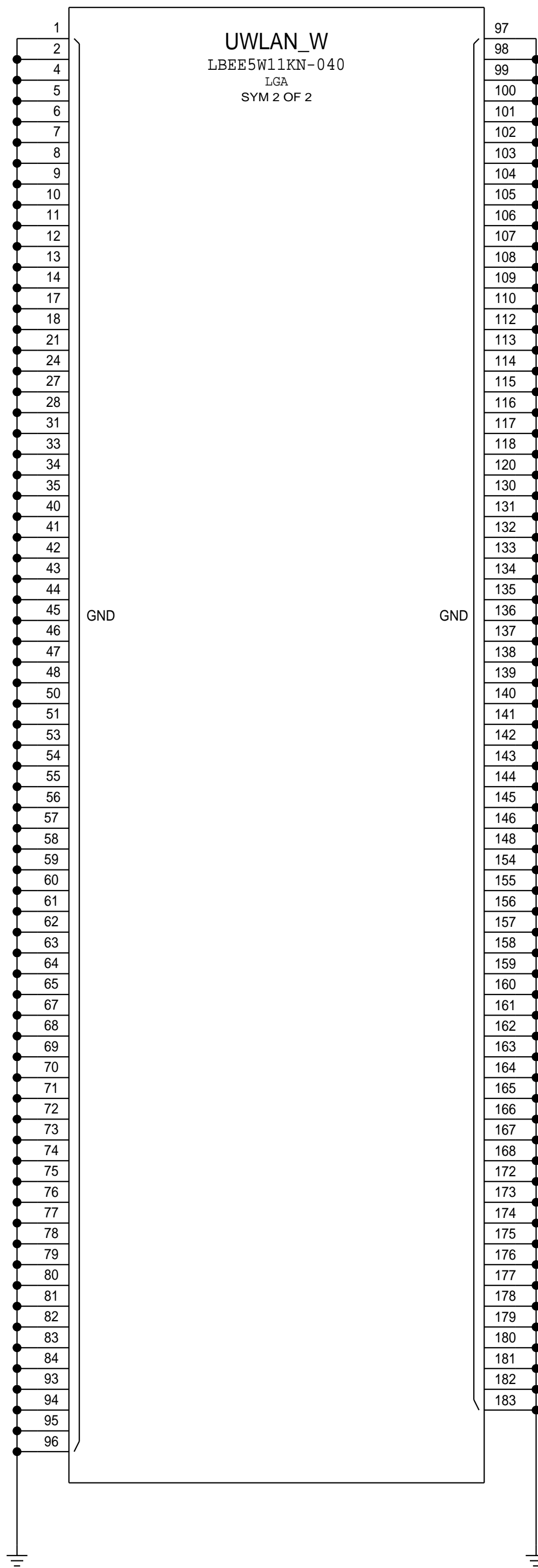



PAGE TITLE		
NFC		
	DRAWING NUMBER	051-02222
	REVISION	6.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART I ALL RIGHTS RESERVED	BRANCH	evt-1
	PAGE	75 OF 75
	SHEET	38 OF 41

WIFI/BT

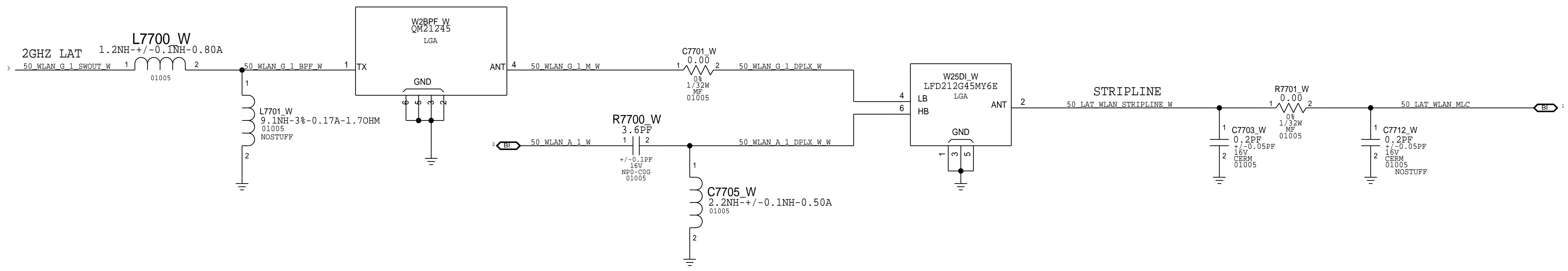


PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
998-10376	998-10147	BOM_TABLE_ALTS	UWLAN_W	USI ES6.1 WIFI MODULE

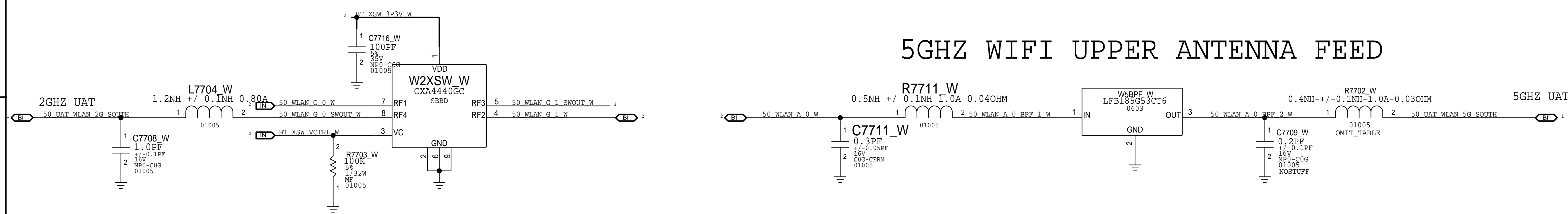


SYNC_MASTER=WIFI		SYNC_DATE=01/30/2014	
PAGE TITLE			
Guinness			
 Apple Inc.		DRAWING NUMBER 051-02222	SIZE D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		REVISION	6.0.0
		BRANCH	evt-1
		PAGE	4 OF 5
		SHEET	40 OF 41

WIFI LOWER ANTENNA FEED



5GHZ WIFI UPPER ANTENNA FEED



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
11750161	1	5GHZ CO BPF OUTPUT MATCH	R7702_W	CRITICAL	D221
152800498	1	5GHZ CO BPF OUTPUT MATCH	R7702_W	CRITICAL	ROW
152800498	1	5GHZ CO BPF OUTPUT MATCH	R7702_W	CRITICAL	UPN

WIFIANTFeeds

Apple Inc.

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

DRAWING NUMBER
051-02222

REVISION
6.0.0

BRANCH
evt-1

PAGE
5 OF 5

SHEET
41 OF 41

SIZE
D