

D



B

A

DRAWING NUMBER
051-0517

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

PAGE 2 OF 55

SHEET 2 OF 5

D



C

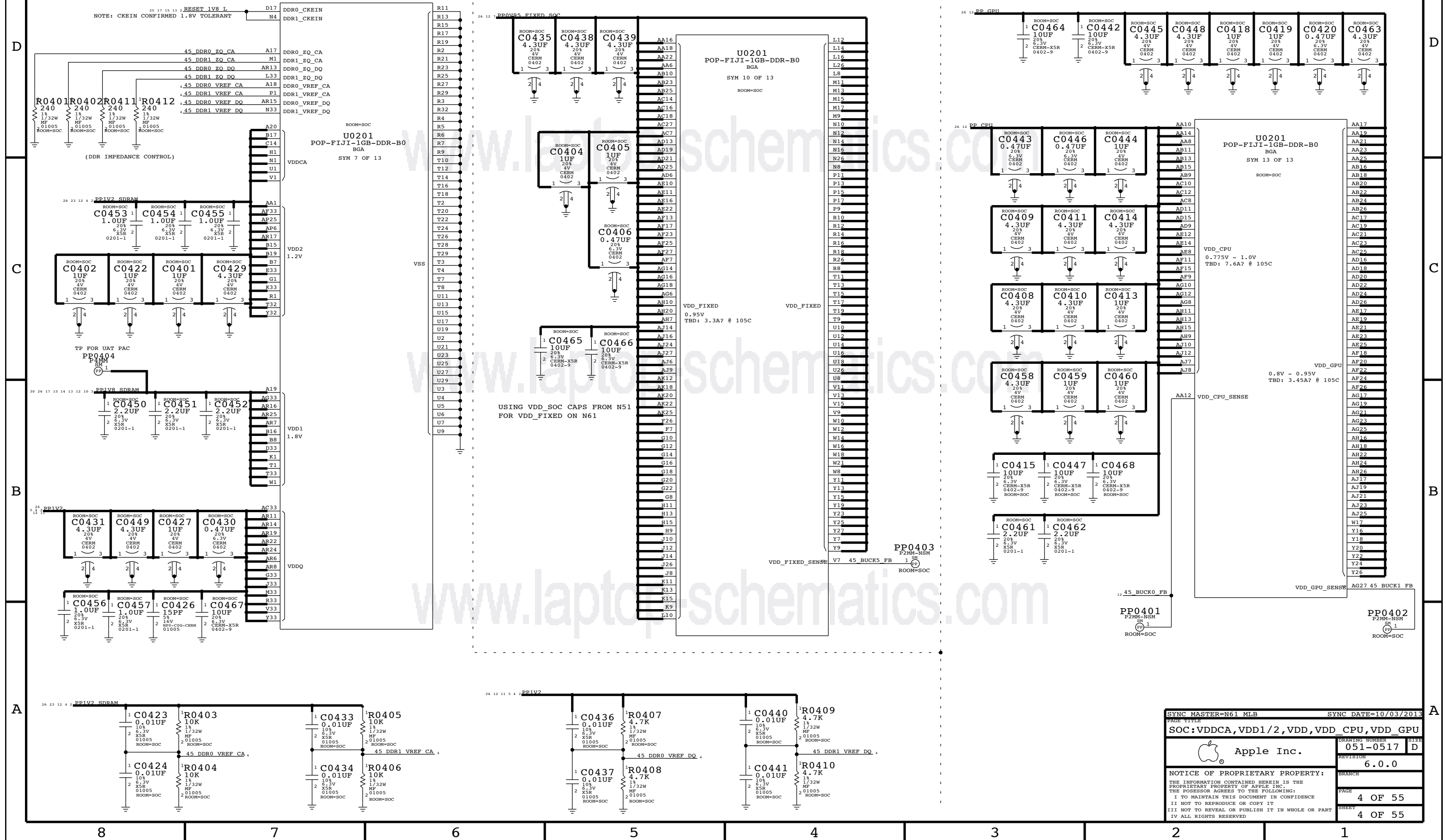
A

FIJI: VDDCA, VDD1/2, VDDQ, VDD, VDD_FIXED, VDD_CPU, VDD_GPU

VDDCA, VDD1/2, VDDQ

VDD

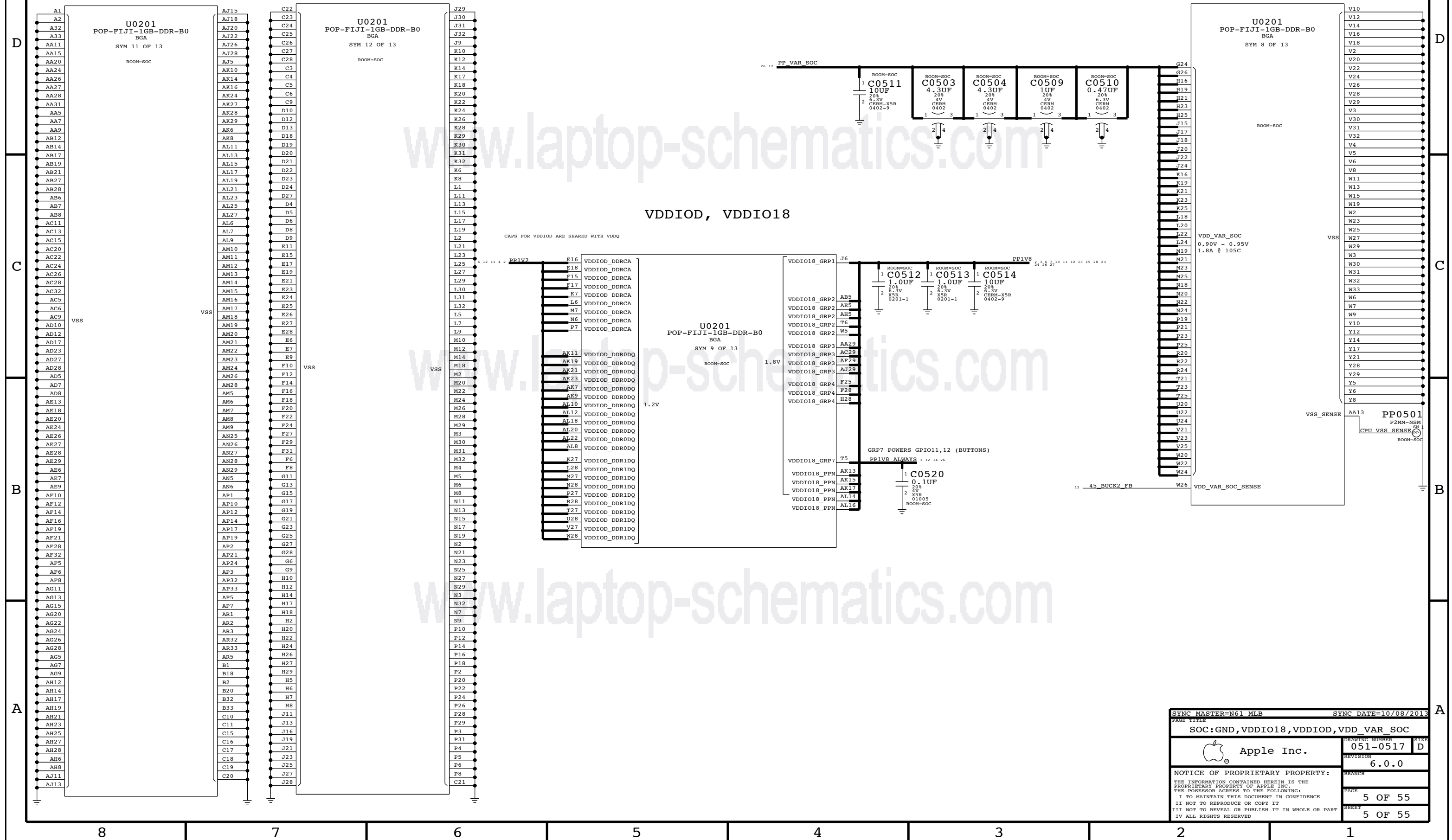
VDD_CPU, VDD_GPU



FIJI: VDDIOD,VDDIO18,VDD VAR SOC

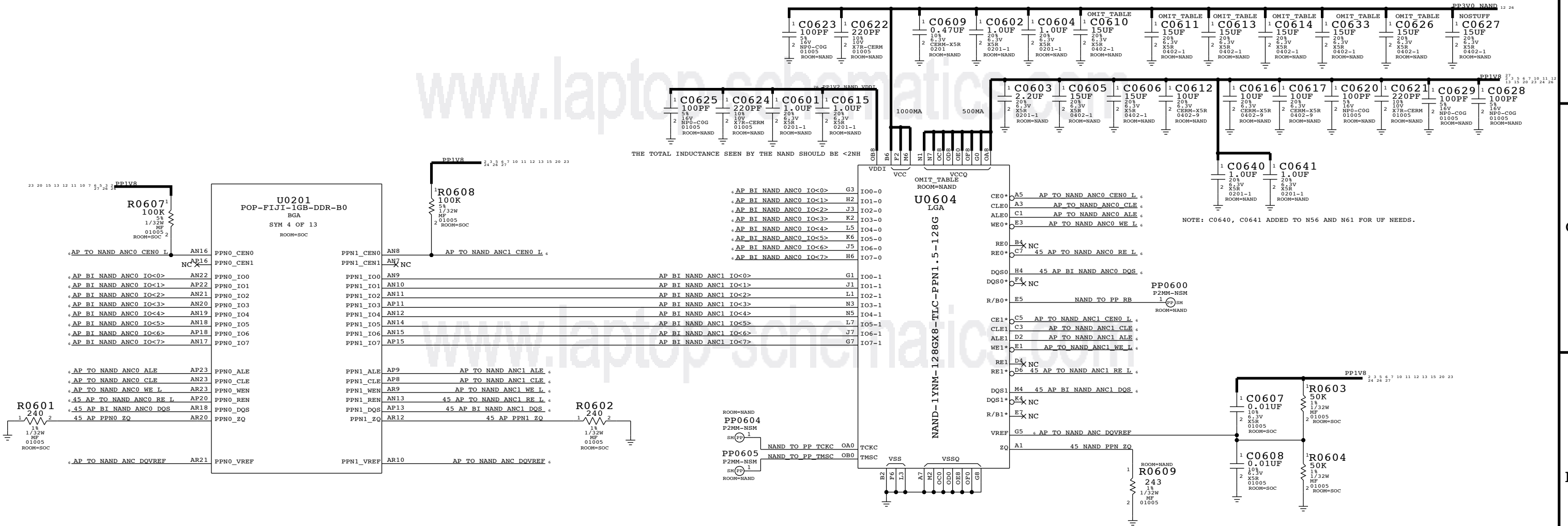
JUST A FEW GNDS

VDD_SRAM, VDD_SOC



FIJI: NAND + 12X17 NAND PKG

SUPPORT FOR PPN1.5 (1.8V IO) ONLY



NOTE: NAND PADS SHOULD BE SHIELDED FROM TRACES WITH A GROUND PLANE

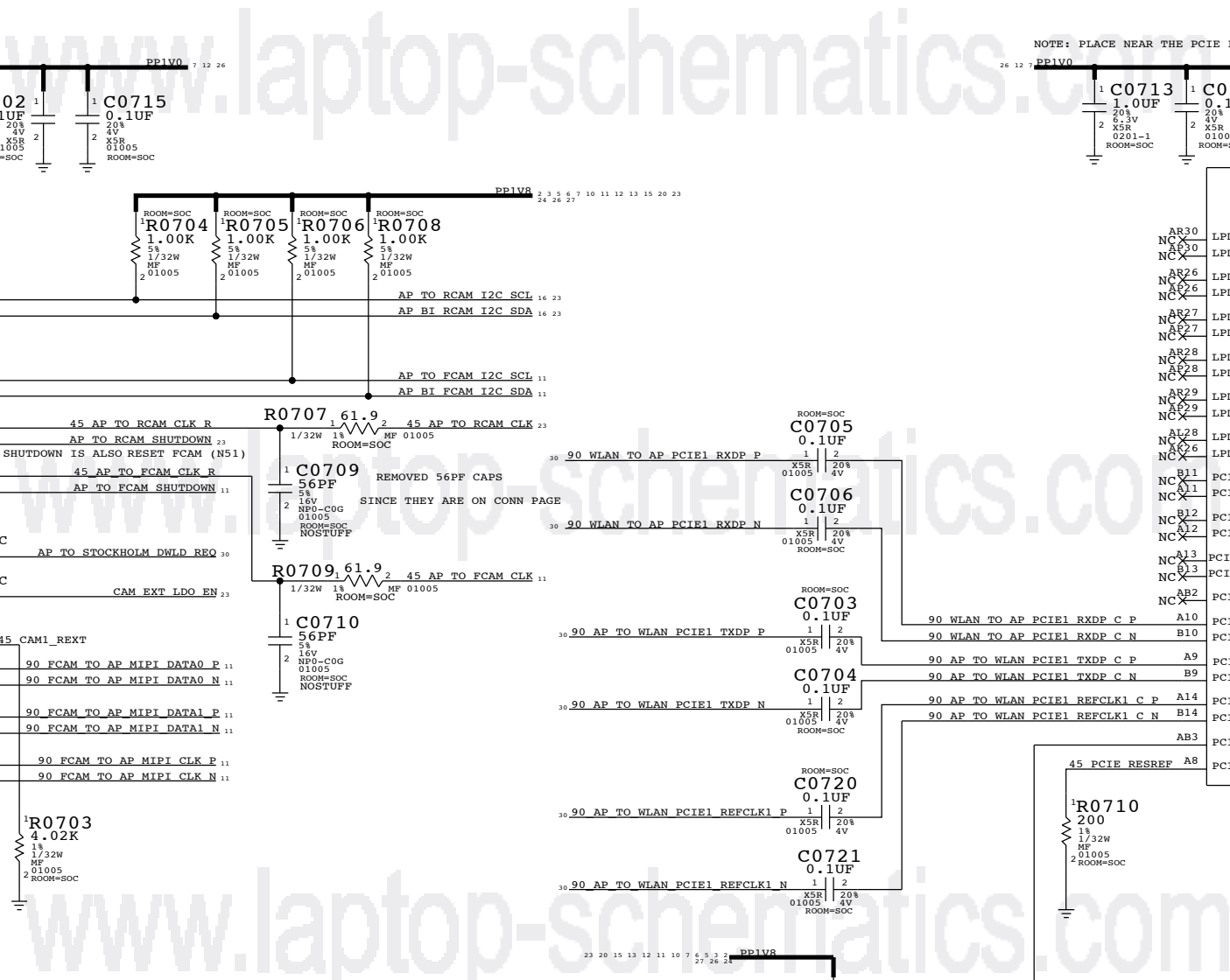
PP0601
P4MM-NSM
ROOM=SOC
1 45 AP BI NAND ANCO IO<6> ;

PP0602
P4MM-NSM
ROOM=SOC
1 45 AP TO NAND ANCO RE L ;

PP0603
P4MM-NSM
ROOM=SOC
1 45 AP BI NAND ANCO DQS ;

NOTE: IO<6> PREFERRED BY MATT BYOM (N51)
(IS A STATUS READY BIT)

SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
SOC : NAND			
 Apple Inc.		DRAWING NUMBER	051-0517
		SIZE	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:		PAGE	6 OF 55
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	6 OF 55
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			



SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
SOC:CAM,LCD,LPDP,PCIE			
	Apple Inc.		DRAWING NUMBER 051-0517
			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 I NOT TO REPRODUCE OR COPY IT I WILL NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART I ALL RIGHTS RESERVED		REVISION 6.0.0	
		BRANCH	
		PAGE 7 OF 55	
		SHEET 7 OF 55	

8 7 6 5 4 3 2 1

BUTTON FLEX (BUTTONS, ANC REF MIC, STROBE, STROBE_NTC, WIFI FLEX PAC)

MIC2 (ANC REF MIC):
MIC2/4 BIAS,
MIC2_P,_N

BUTTONS:
RINGER, HOLD,
VOL_UP/DOWN,

RIGHT BUTTON FLEX B2B

APN: 516S1187 (RCPT)

J0801
AA25D-S010VA1
F-ST-SM

PP STRB DRIVER TO LED WARM
RCAM TO STROBE NTC CONN
REARMIC2 TO CODEC P CONN
REARMIC2 TO CODEC N CONN
CODEC TO REARMIC2 BIAS CONN
BUTTON TO AP HOLD KEY CONN L
PP STRB DRIVER TO LED COOL

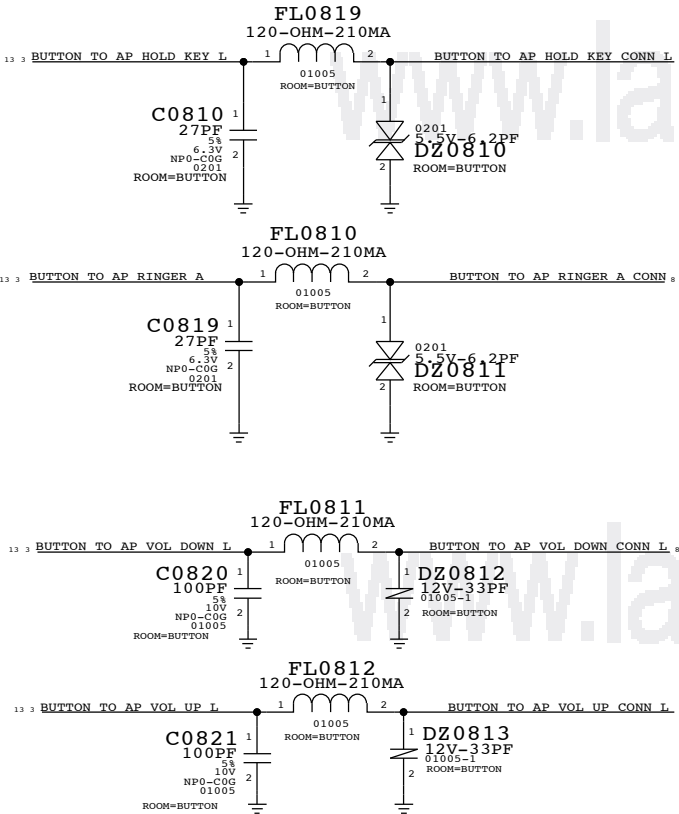
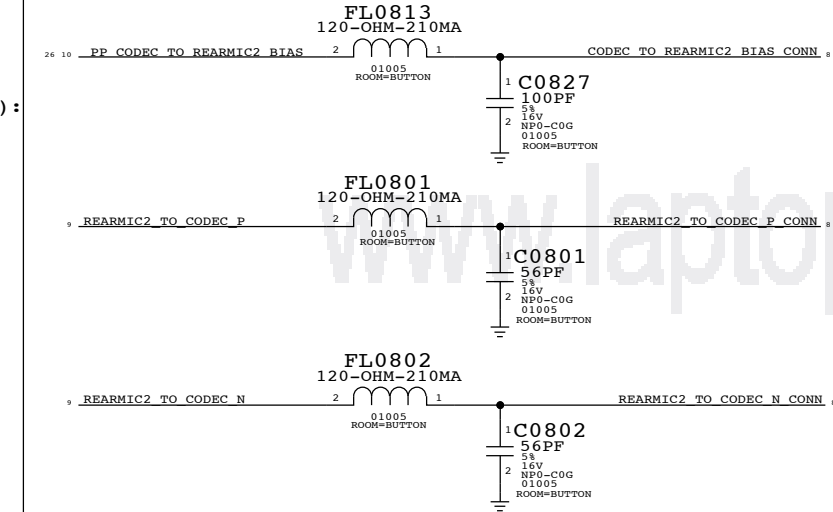
LEFT BUTTON FLEX B2B

APN: 516S1317 (RCPT)

J0802
505066-0610
F-ST-SH

BUTTON TO AP VOL DOWN CONN L
BUTTON TO AP VOL UP CONN L
BUTTON TO AP RINGER A CONN
BUTTON CONN GND

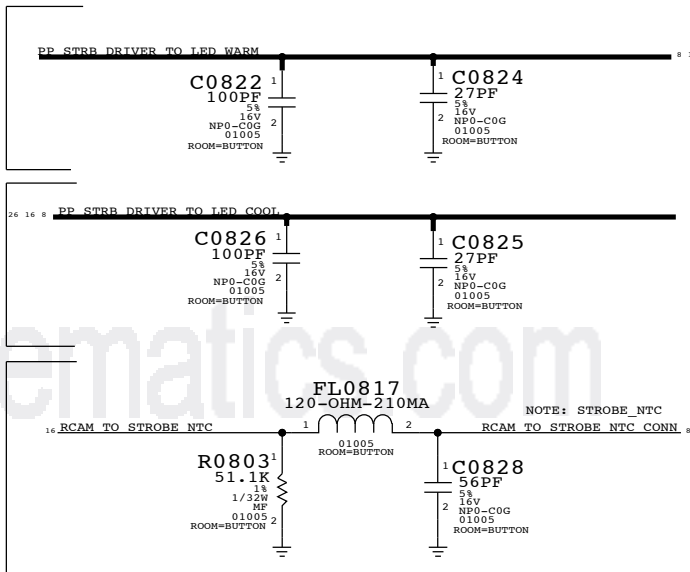
XW0801
SH
ROOM=BUTTON



STROBE:
LED WARM

STROBE:
LED COOL

STROBE:
NTC

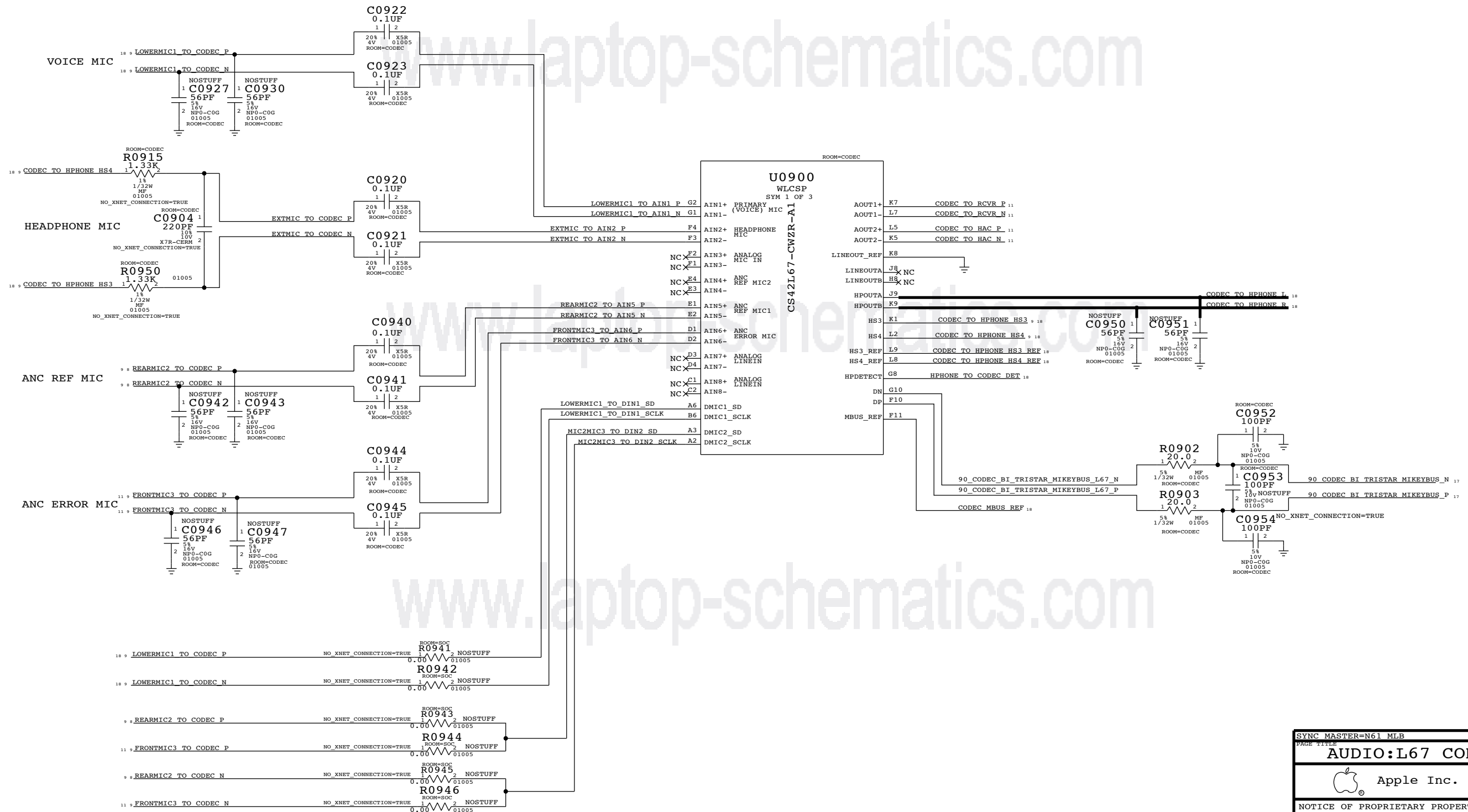


SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
IO:BUTTON FLEX CONN			
 Apple Inc.		DRAWING NUMBER	051-0517
		REVISION	6.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	8 OF 55
		SHEET	8 OF 55

L67 AUDIO CODEC

AUDIO I/O

(ANALOG MIC IN, DIG MIC IN, HPOUT, LINEOUT, RECEIVER OUT, MIKEYBUS)



SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
AUDIO:L67 CODEC (1/2)			
	DRAWING NUMBER		051-0517
	REVISION		6.0.0
	BRANCH		
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		9 OF 55	
SHEET		9 OF 55	

D

C

C

B

A

FRONT CAM FLEX B2B

(FCAM, PROX, ALS, RECEIVER, ANC ERROR MIC)

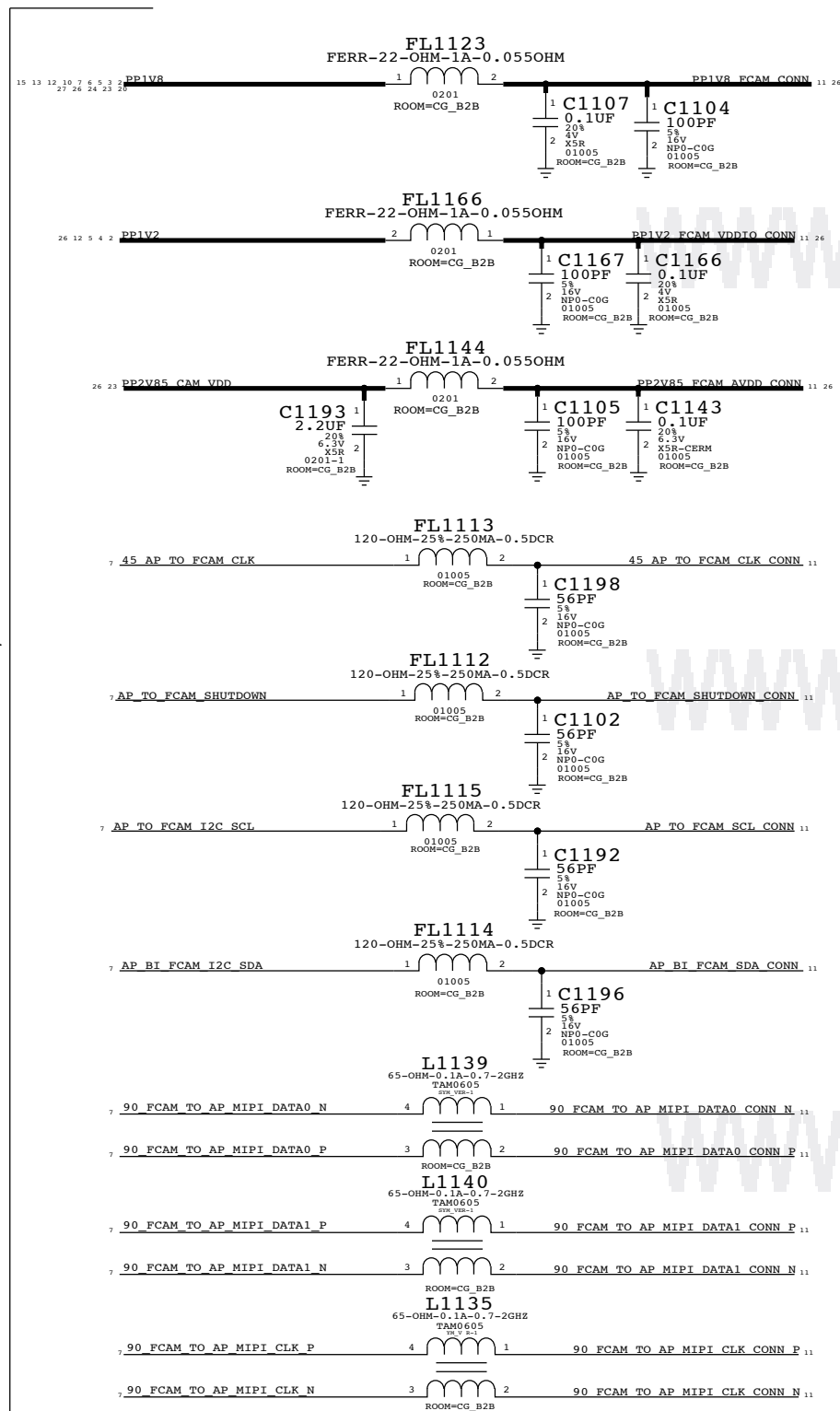
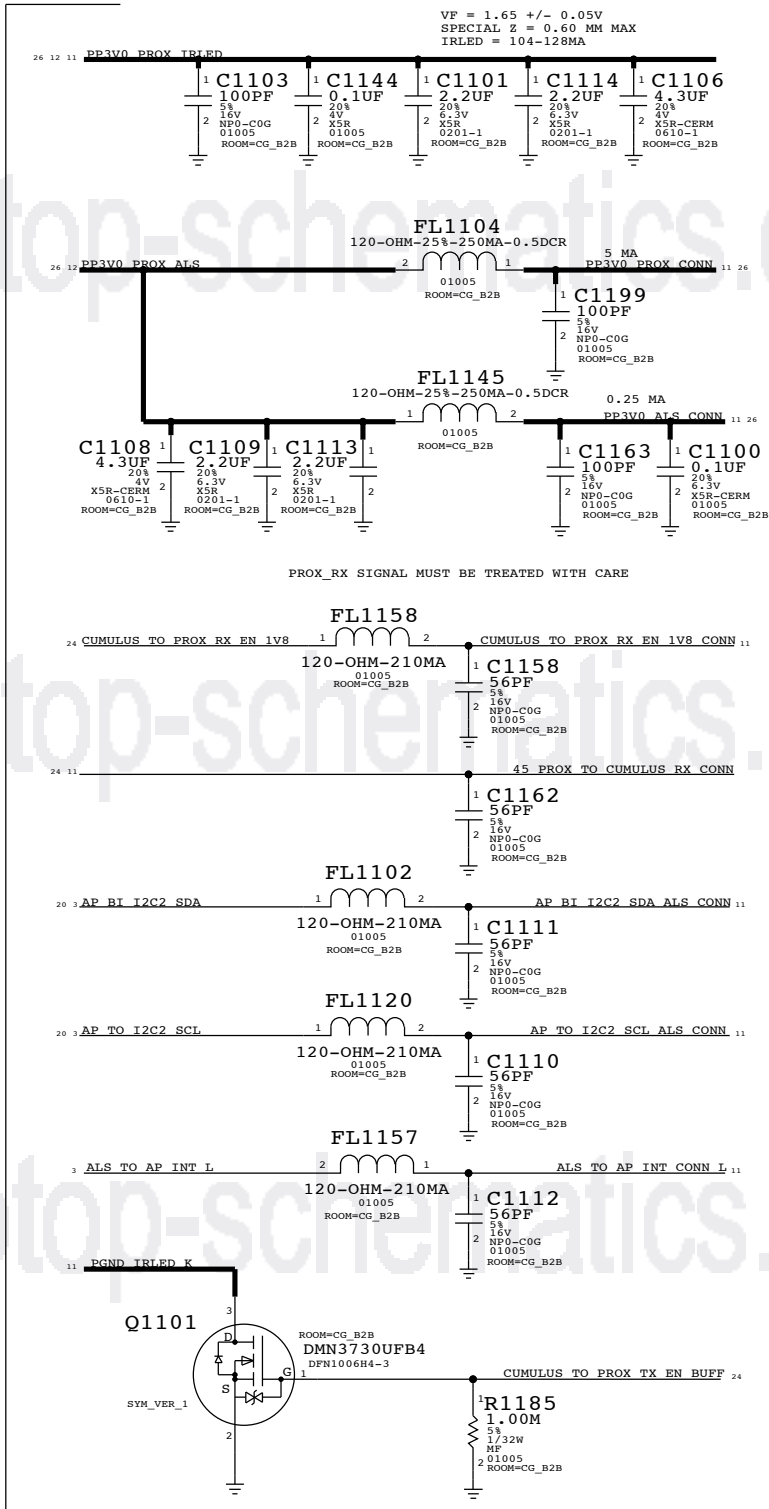
D

C

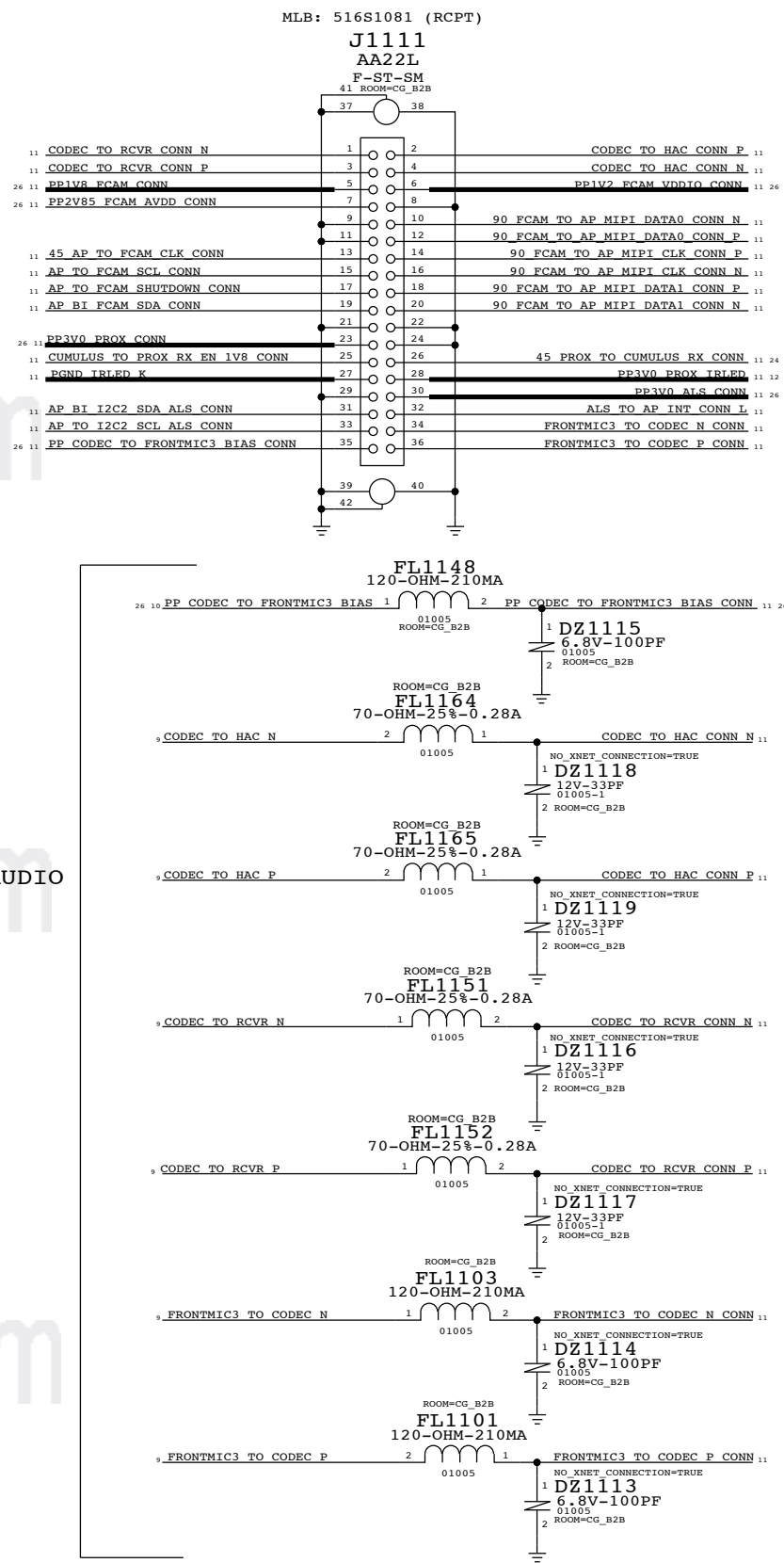
CAMERA

B

A

ALS,
PROX

AUDIO



SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
CAMERA:FRONT FLEX CONN			
 Apple Inc.		DRAWING NUMBER	051-0517
		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:		PAGE	11 OF 55
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	11 OF 55
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

ADI PMU

(BUCK, LDO, VIBE DRIVER, 32K, CHARGER)

REVISIT VCC_MAIN CAPS

NOTE: L1210, L1212 BOMPTIONS
CONTROLLED ON PAGE1

APN: 338S1251 (ADI AZ)

U1202 ROOM=PMU
D2186AZE0FJAVAC
FCCSP-N56-N61
SYM 1 OF 3

D

C

B

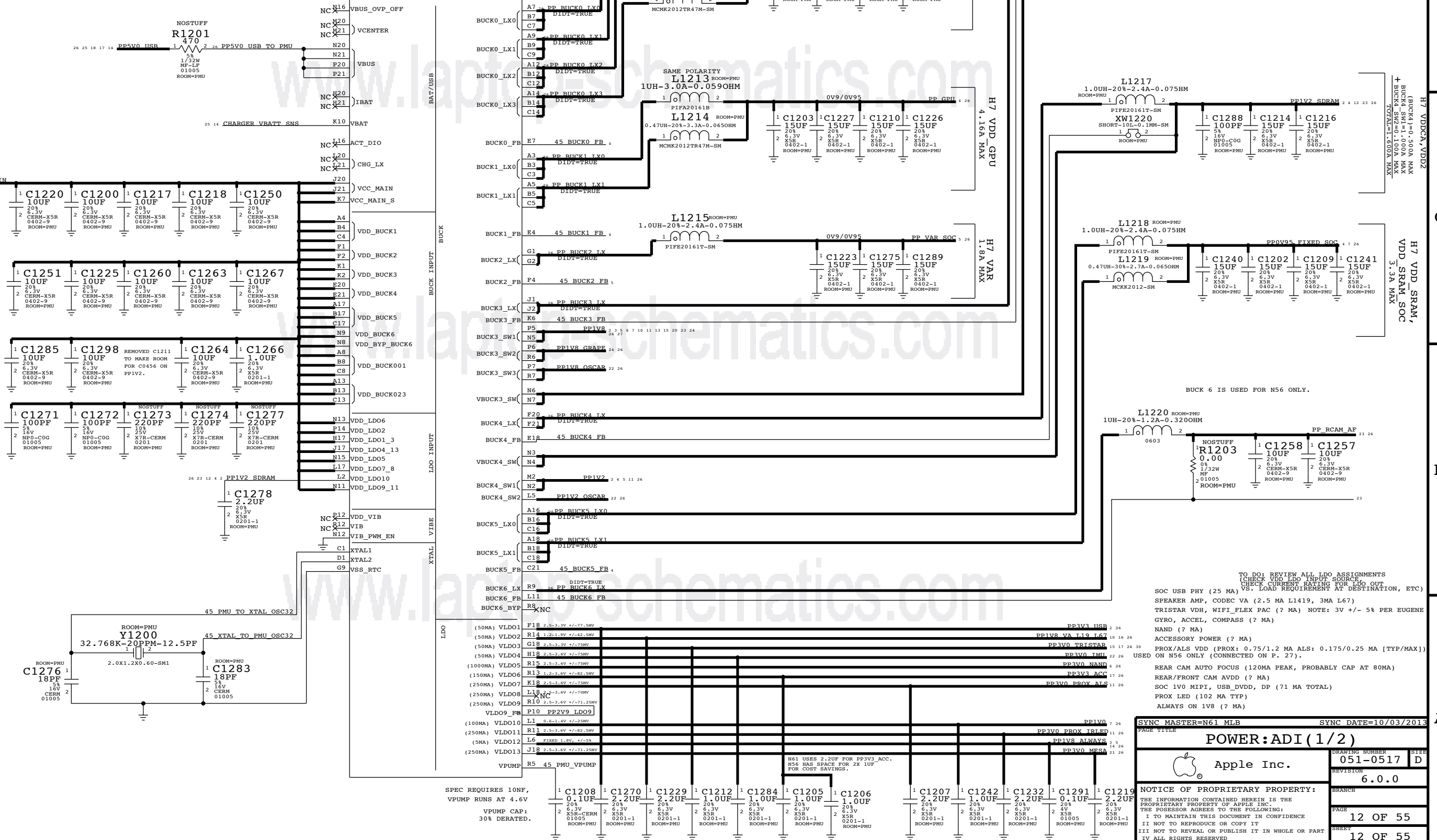
A

D

C

B

A



TO DO: REVIEW ALL LDO ASSIGNMENTS
(CHECK VDD LDO INPUT SOURCE)
CHECK CURRENT RATING FOR LDO OUT
VS. LOAD REQUIREMENT AT DESTINATION, ETC)

SOC USB PHY (25 MA)
SPEAKER AMP, CODEC VA (2.5 MA L1419, 3MA L67)
TRISTAR VDH, WIFI_FLEX PAC (? MA) NOTE: 3V +/- 5% PER EUGENE
GYRO, ACCEL, COMPASS (? MA)
NAND (? MA)
ACCESSORY POWER (? MA)
PROX/ALS VDD (PROX: 0.75/1.2 MA ALS: 0.175/0.25 MA (TYP/MAX))
USED ON N56 ONLY (CONNECTED ON P. 27).
REAR CAM AUTO FOCUS (120MA PEAK, PROBABLY CAP AT 80MA)
REAR/FRONT CAM AVDD (? MA)
SOC IVO MIPI, USB_DVDD, DP (71 MA TOTAL)
PROX LED (102 MA TYP)
ALWAYS ON I1V8 (? MA)

SYNC MASTER=N61 MLB		SYNC DATE=10/03/2013	
PAGE TITLE			
POWER:ADI (1/2)			
Apple Inc.		DRAWING NUMBER	051-0517
		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:		PAGE	12 OF 55
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	12 OF 55
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

ADI PMU

(AMUX, GPIO, BUTTONS, ADC, THERMISTORS, SYSTEM I/F, GND)

D

D

C

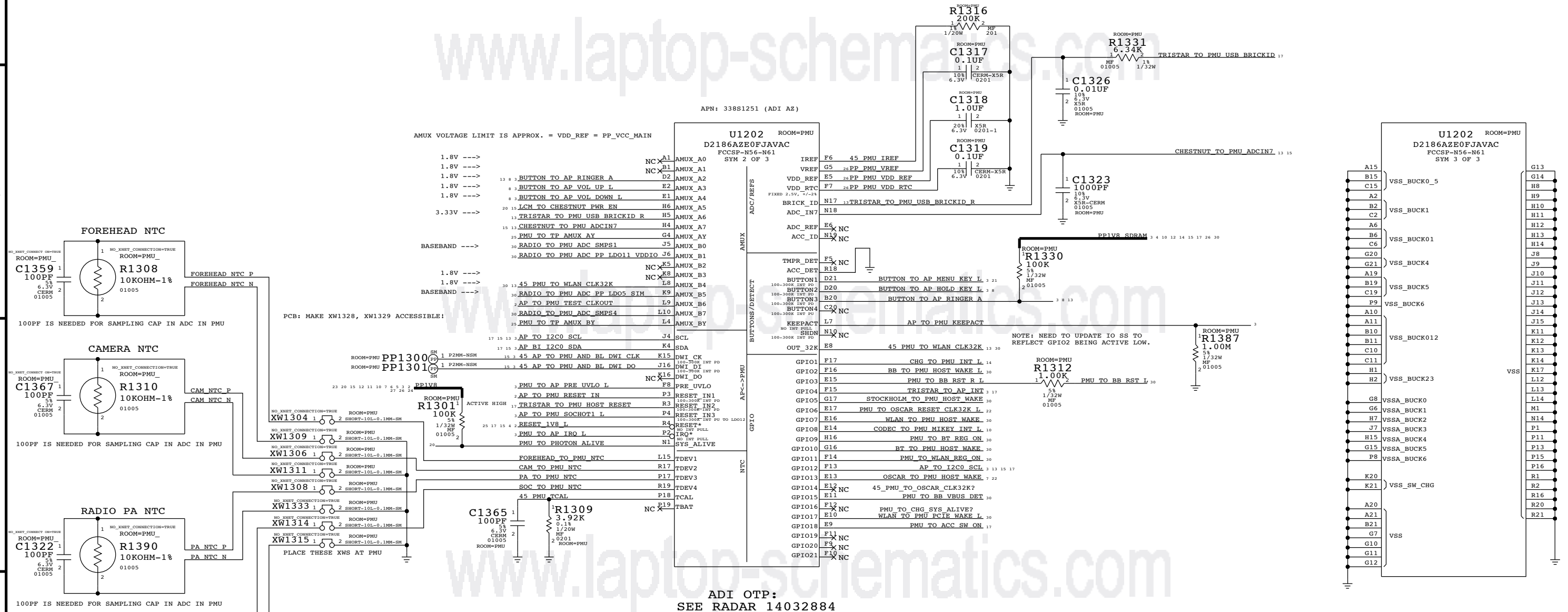
C

B

B

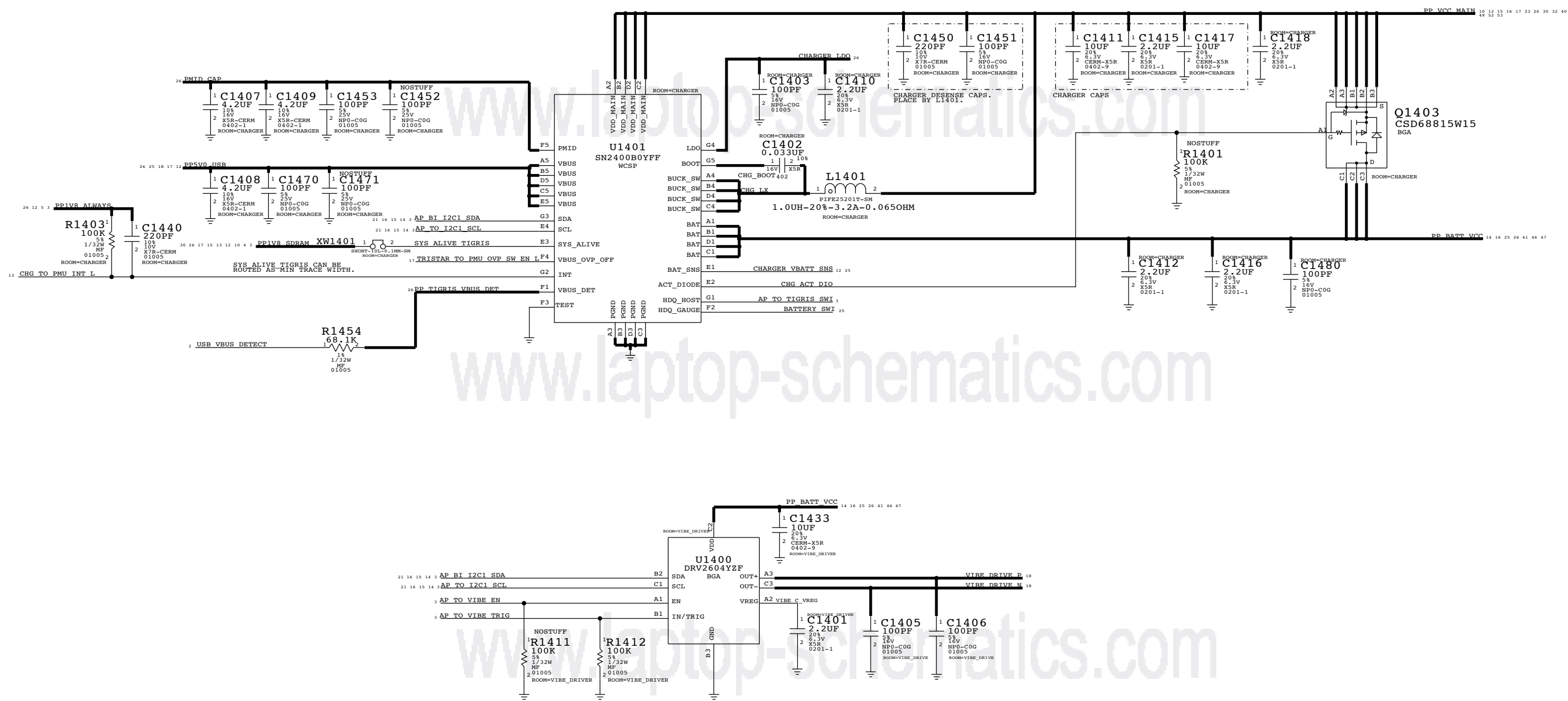
A

A



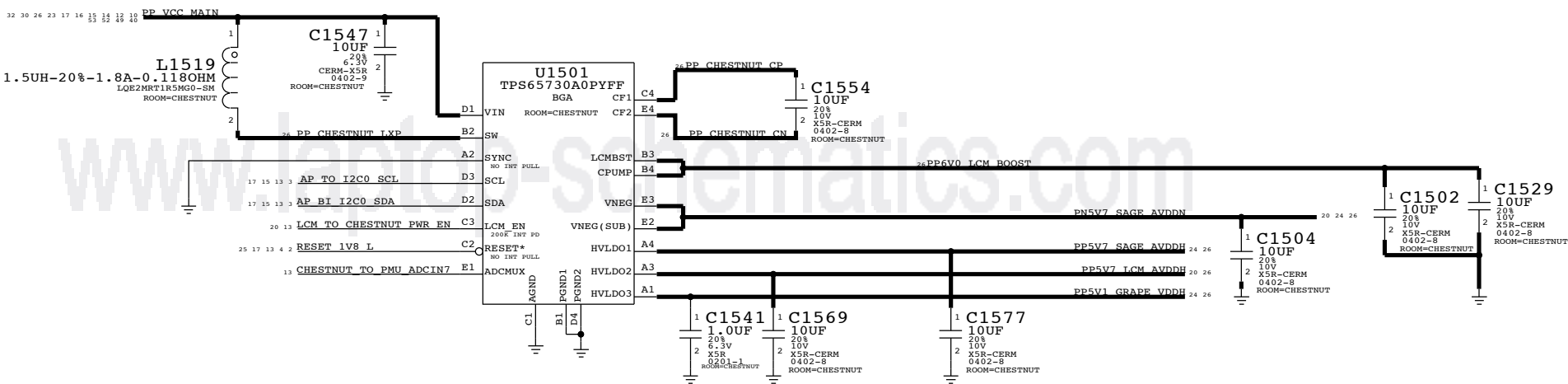
SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
POWER:ADI (2 / 2)			
 Apple Inc.	DRAWING NUMBER	051-0517	SIZE D
	REVISION	6.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	13 OF 55
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	13 OF 55
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

TIGRIS CHARGER & VIBE DRIVER

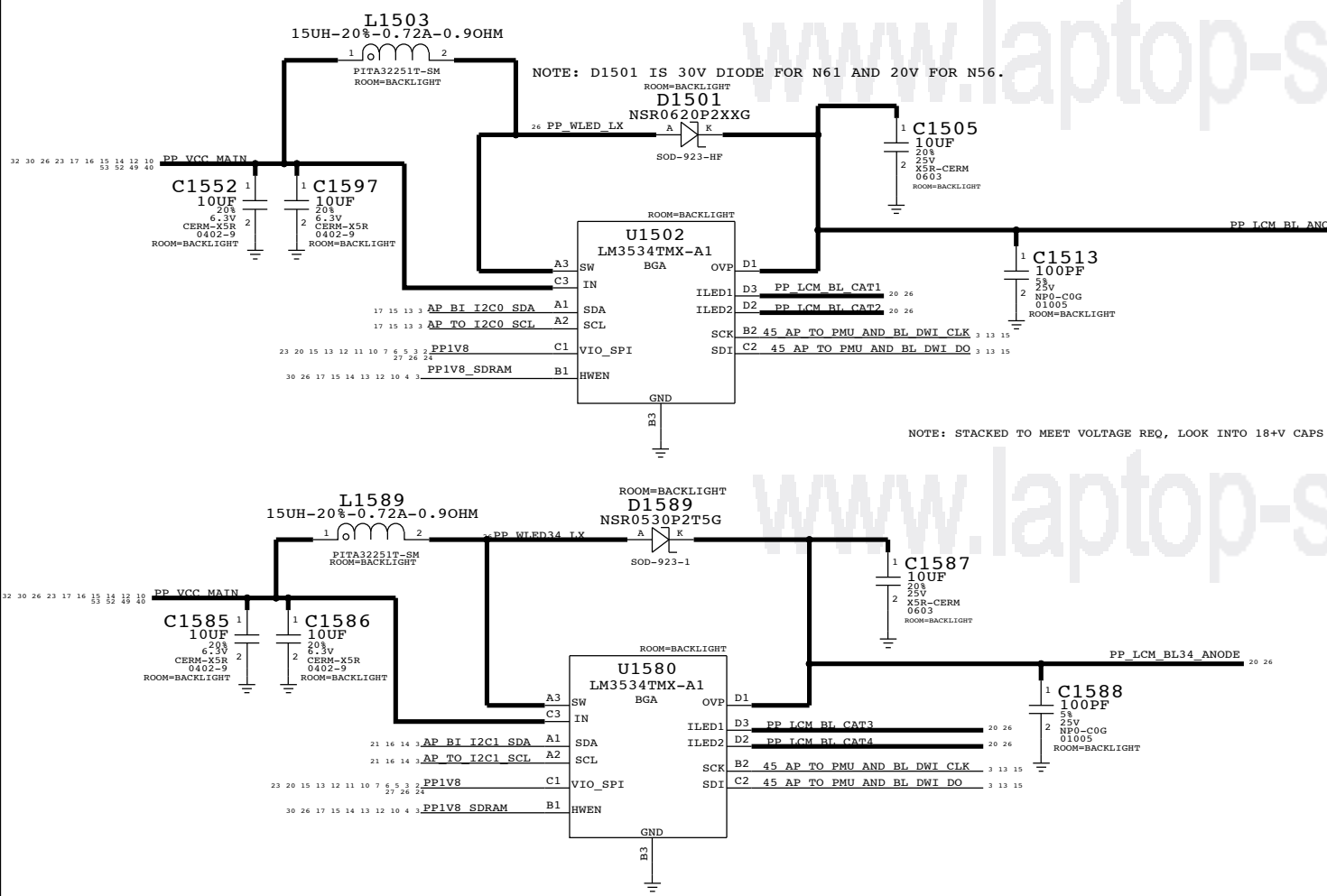


CHESTNUT, BACKLIGHT DRIVER, MESA BOOST

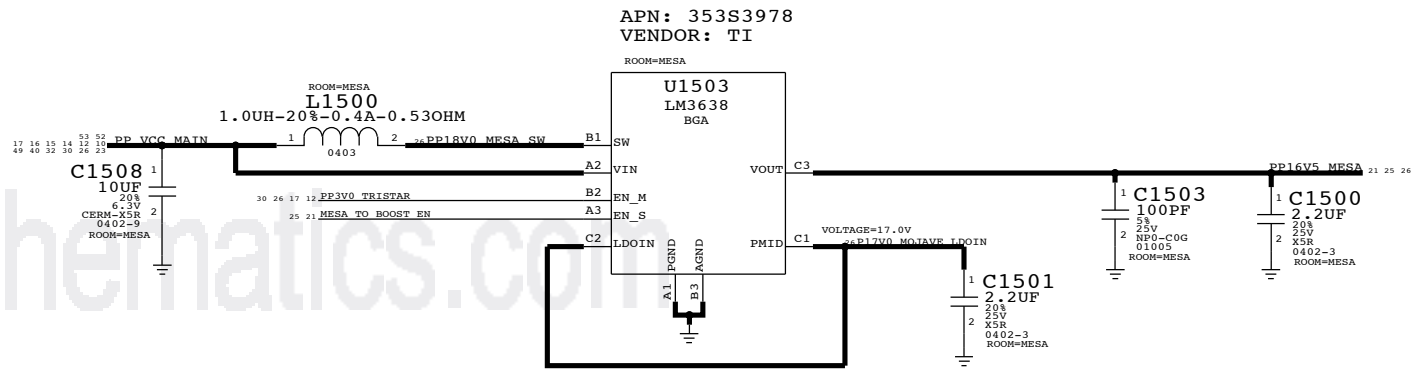
DISPLAY PMU (TI CHESTNUT, 338S1149)



BACKLIGHT DRIVERS



MESA BOOST

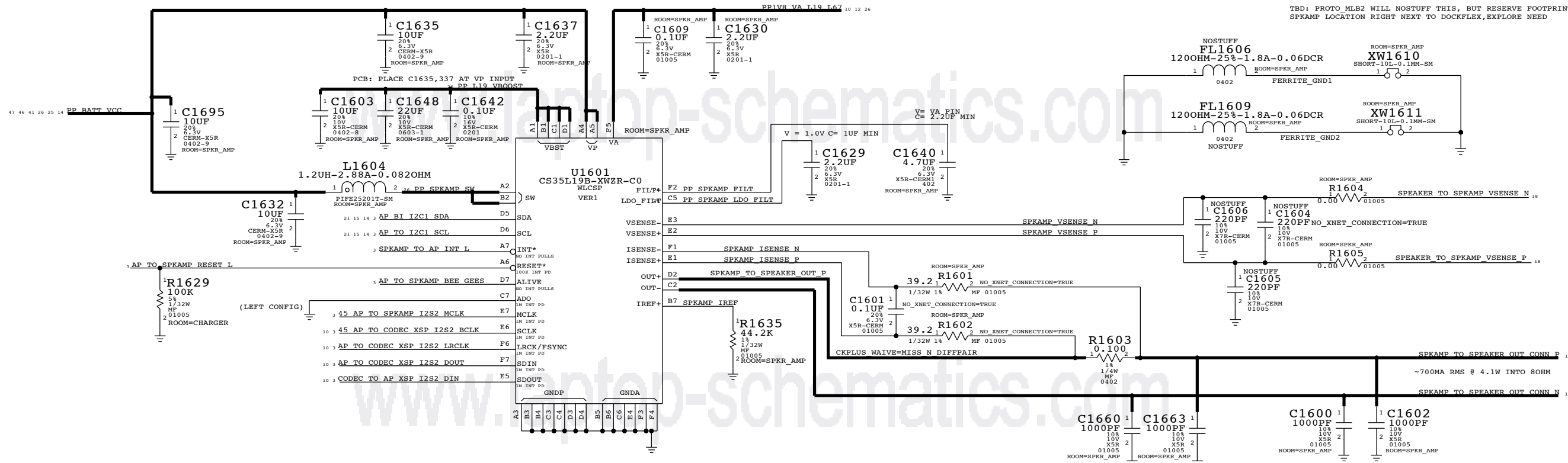


PAGE TITLE		PAGE NUMBER	
DISC:CHESTNUT, BACKLIGHT DRIVER		051-0517	
REVISION		6.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		15 OF 55	
II NOT TO REPRODUCE OR COPY IT		SHEET	
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		15 OF 55	
IV ALL RIGHTS RESERVED			

SPEAKER AMP, LED DRIVER

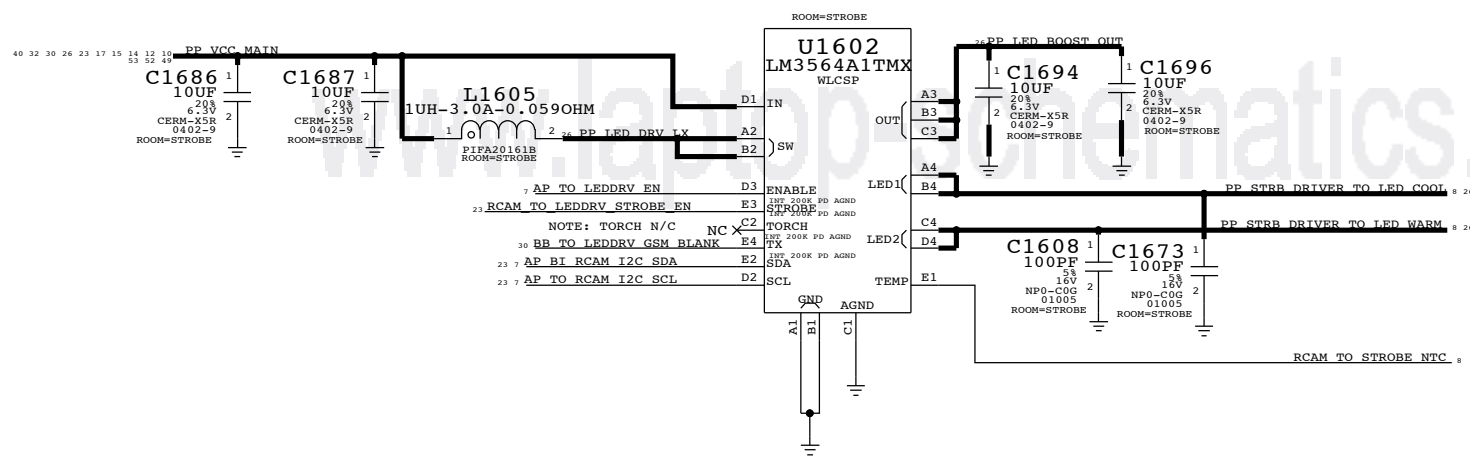
SPEAKER AMP

I2C ADDRESS: 1000000X



STROBE DRIVER

TI: APN 353S3899



SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
AUDIO:SPKR AMP, STROBE			
 Apple Inc.		DRAWING NUMBER	051-0517
		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:		PAGE	16 OF 55
I I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	16 OF 55
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

www.laptop-schematics.com

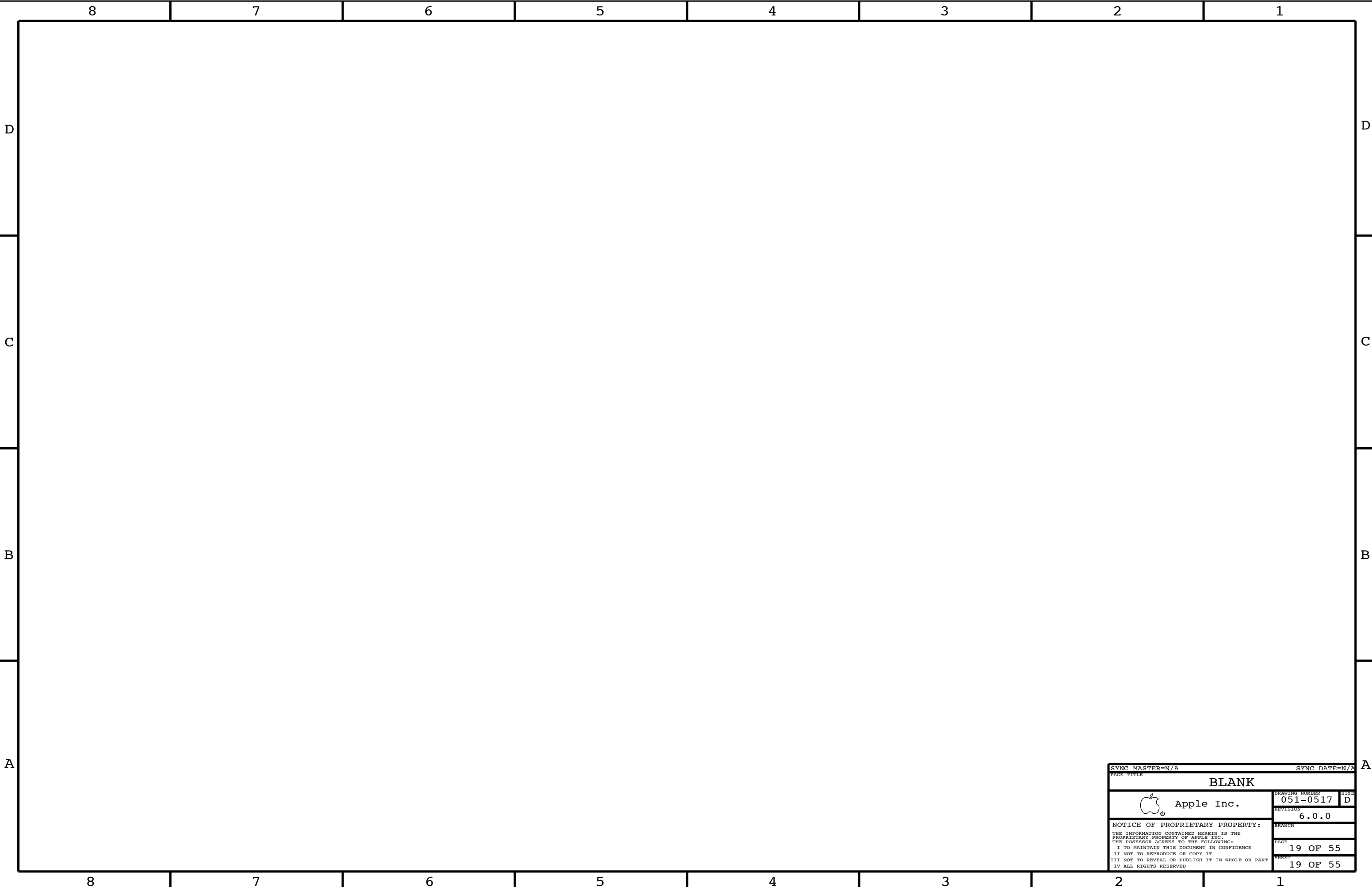


SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
IO:TRISTAR2			
 Apple Inc.		DRAWING NUMBER 051-0517	SIZE D
		REVISION 6.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:			
I TO MAINTAIN 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			
		PAGE 17 OF 55	
		SHEET 17 OF 55	

8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---



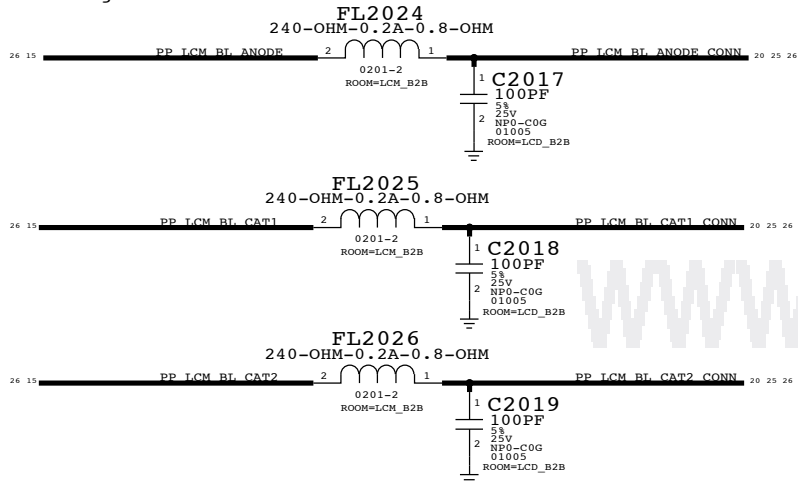
8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---



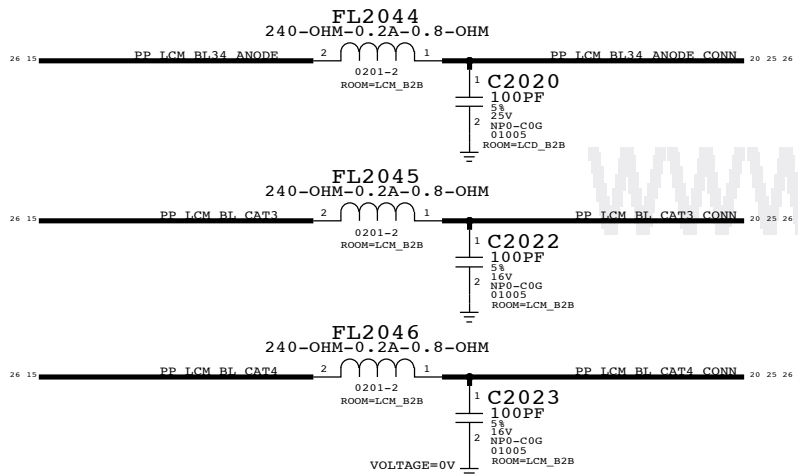
SYNC MASTER=N/A		SYNC DATE=N/A	
PAGE TITLE			
BLANK			
 Apple Inc.		DRAWING NUMBER	051-0517
		REVISION	6.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	19 OF 55
		SHEET	19 OF 55

LCD B2B

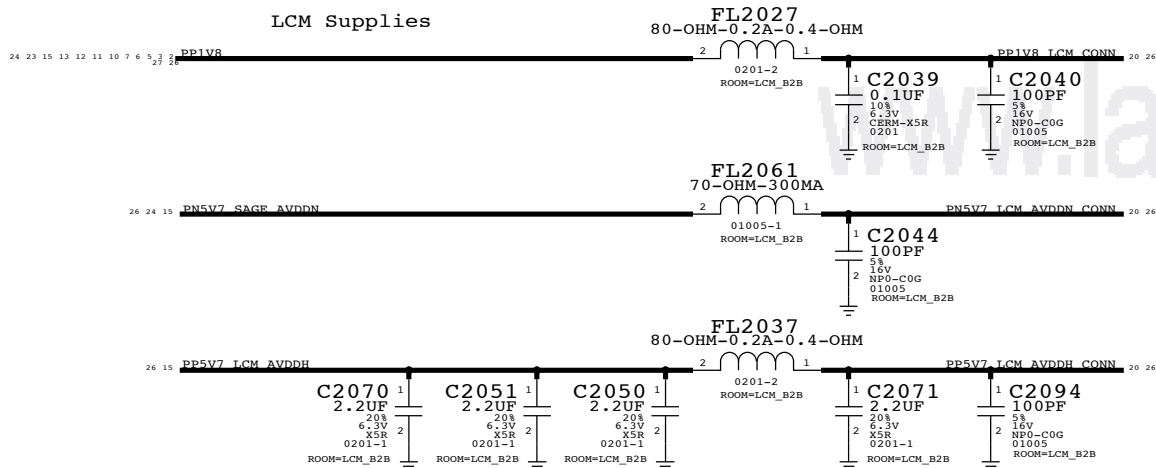
Backlight



BACKLIGHT 2 (N56 ONLY)



LCM Supplies

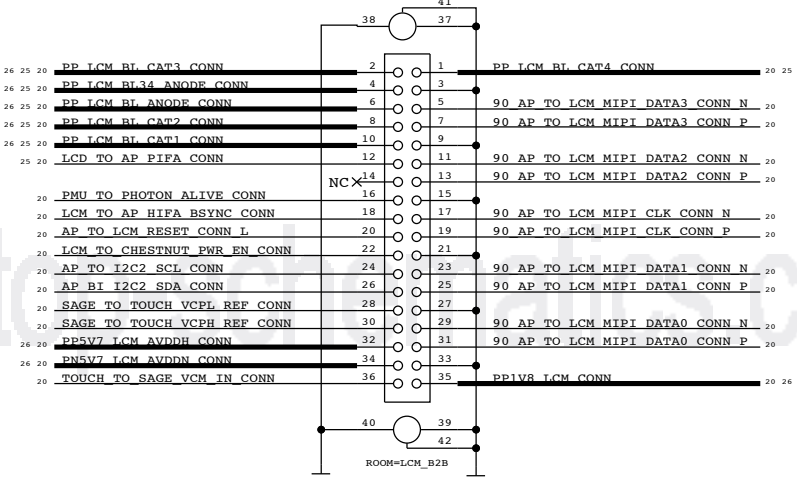


MLB: 516S1185 (RCPT)
(516S1184 ON FLEX)

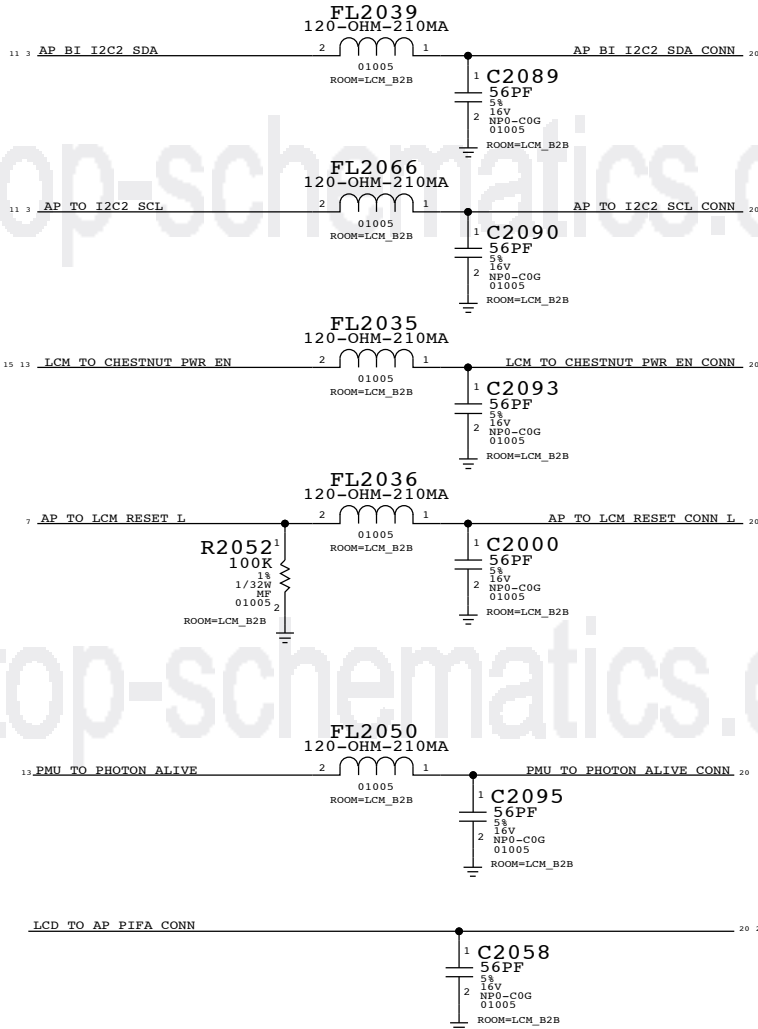
J2019

20-5857-036-001-829

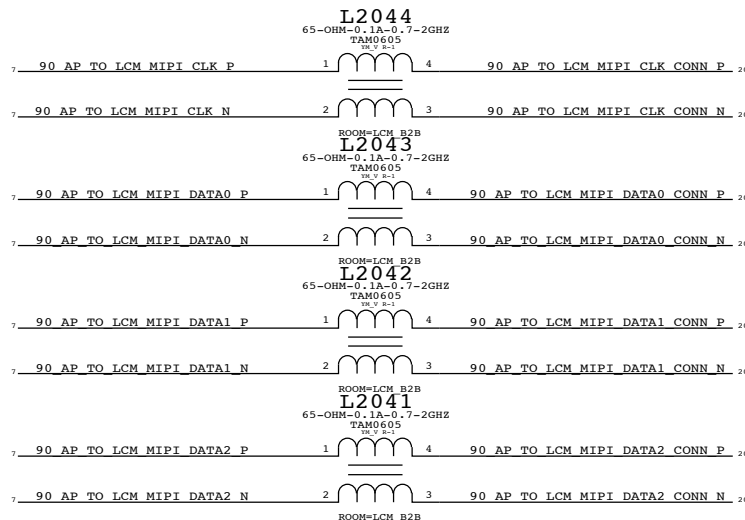
F-ST-SM



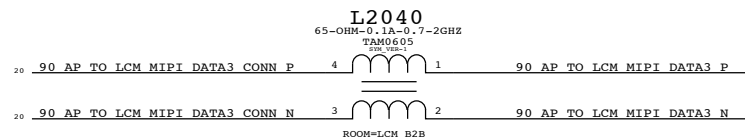
Digital Interfaces



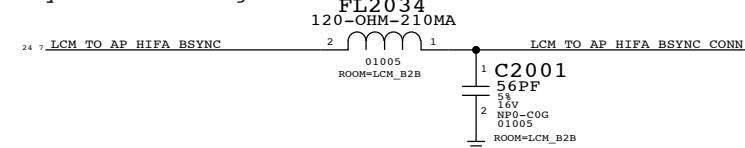
MIPI Common Mode Chokes



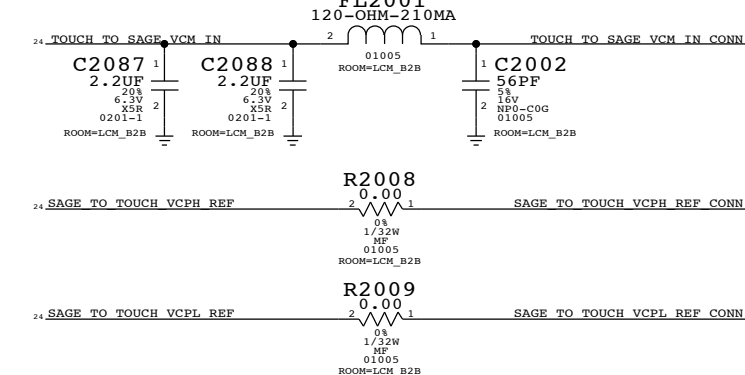
MIPI LANE 3 (N56 ONLY)



Sync/Reset/Debug

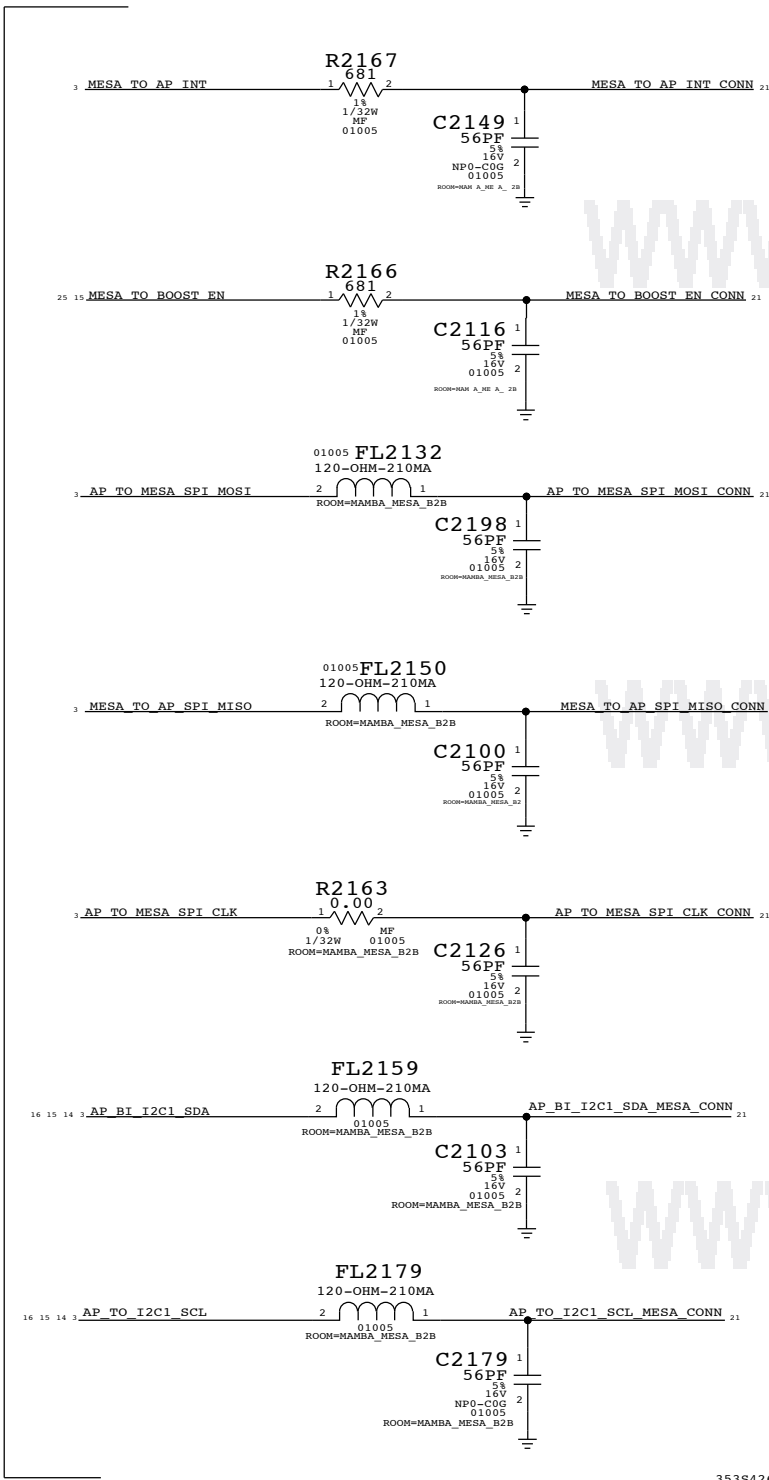


Touch



SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE		DISPLAY:FLEX CONN	
Apple Inc.		DRAWING NUMBER	051-0517
NOTICE OF PROPRIETARY PROPERTY:		REVISION	6.0.0
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		BRANCH	
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		PAGE	20 OF 55
II NOT TO REPRODUCE OR COPY IT		SHEET	20 OF 55
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

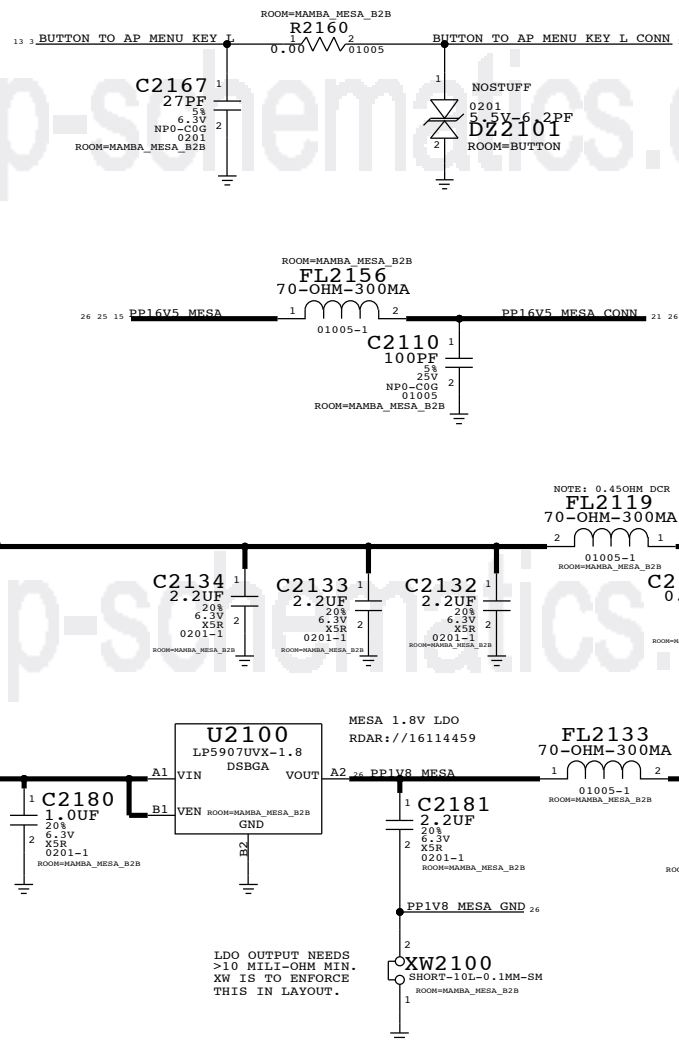
MESA CONNECTOR



MESA:
INT, EN, SPI, I2C

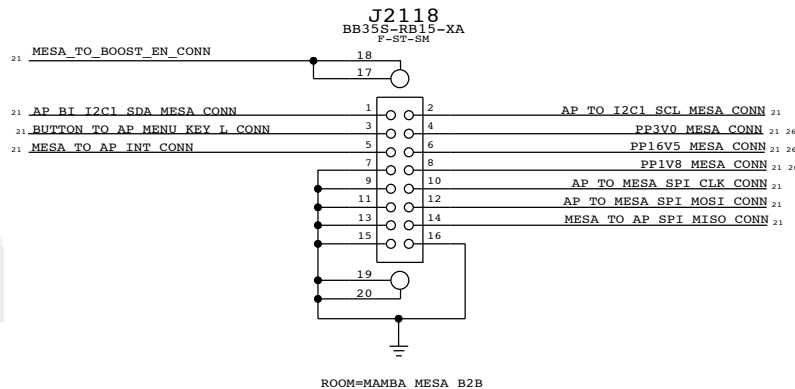
MENU
BUTTON

MESA:
POWER



LDO OUTPUT NEEDS
>10 MILLI-OHM MIN.
XW IS TO ENFORCE
THIS IN LAYOUT.

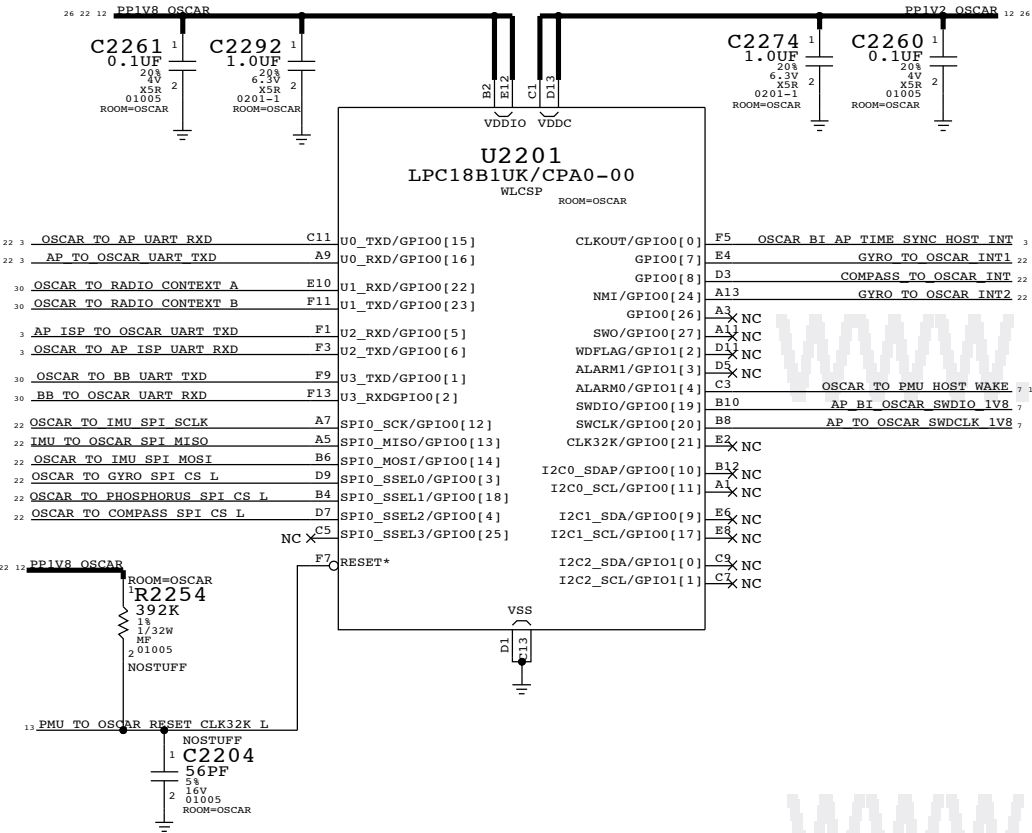
516S1319 (RECEPTACLE)



PAGE TITLE		
SENSORS:MESA FLEX CONN		
Apple Inc.	DRAWING NUMBER	051-0517
	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:		PAGE
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		21 OF 55
II NOT TO REPRODUCE OR COPY IT		SHEET
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		21 OF 55
IV ALL RIGHTS RESERVED		

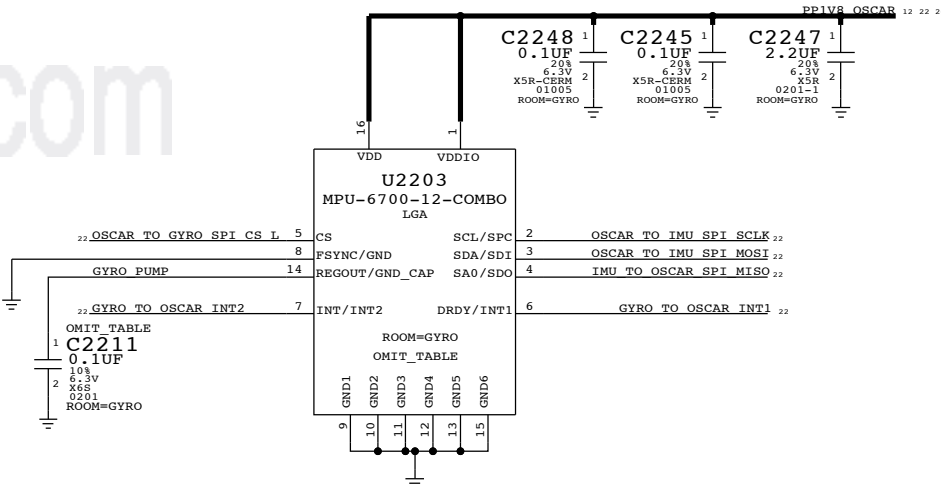
OSCAR + SENSORS

OSCAR VDDIO = 1.8V ALWAYS ON (NEED TO MAKE HOST & RUN PLL)
OSCAR CORE = 1.2V ALWAYS ON (NEED TO RUN IN 2SRAM)



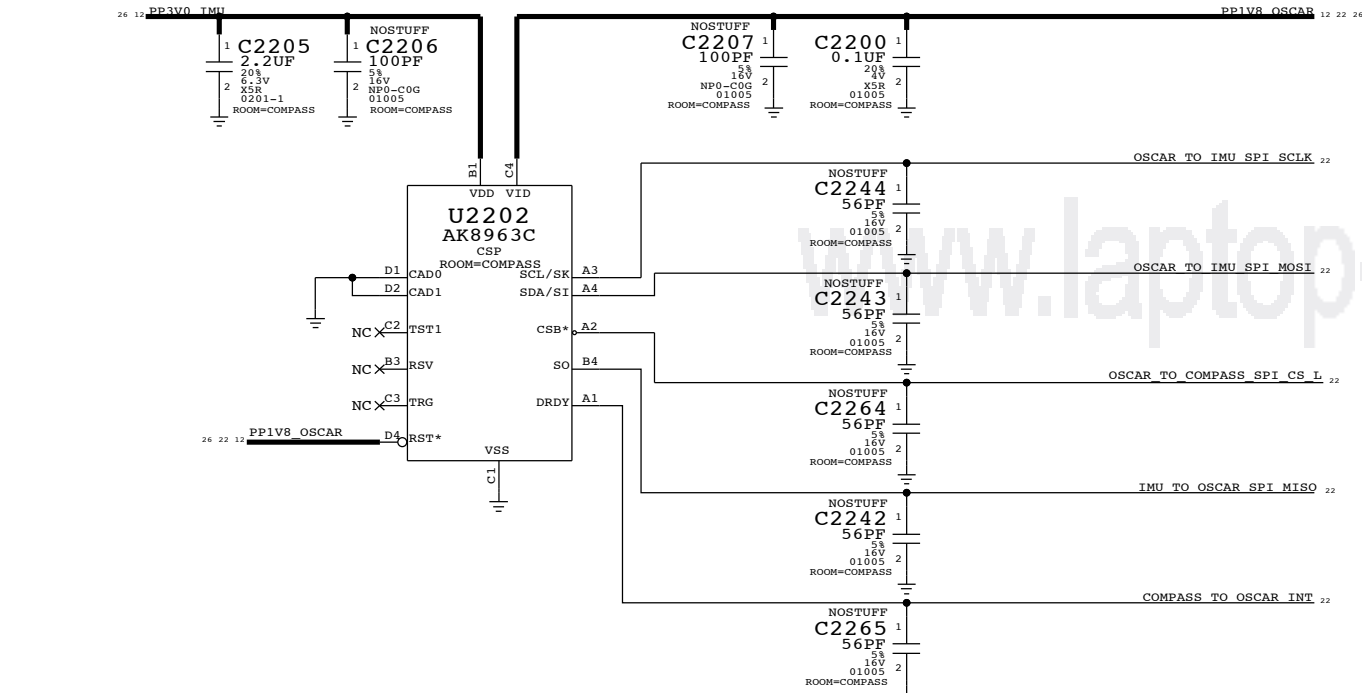
CARBON (ACCEL GYRO COMBO)

INVENSENSE, APN 338S00017, C2211=0.1UF (132S0395)
BOSCH, APN 338S00028, C2211=0.1UF (132S0395)
ST, APN 338S00029, C2211=0.01UF,25V (132S0391)



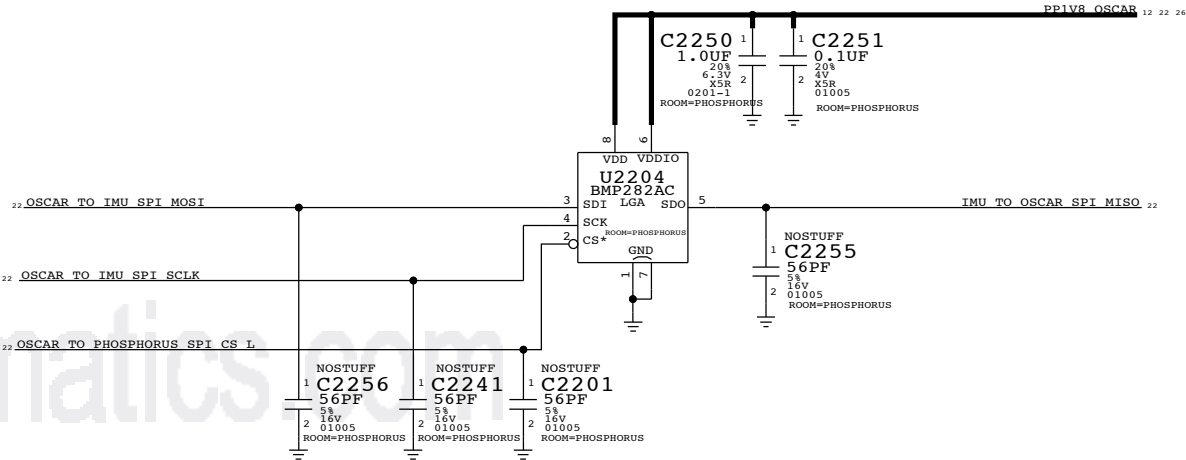
THIS PART OUTSIDE OF SHIELD ON THE PENINSULA

COMPASS



THIS IS OUTSIDE OF SHIELD IN
TO THE RIGHT OF THE NAND

PHOSPHORUS



SYNC MASTER=N61 MLB		SYNC DATE=10/08/2013	
PAGE TITLE		SENSORS:OSCAR,CARBON,PHOS,MAGNESIUM	
Apple Inc.		DRAWING NUMBER	051-0517
		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:		PAGE	22 OF 55
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	22 OF 55
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

A

RCAM:
DIGITAL I/F
(I2C, CTRL, CLK)

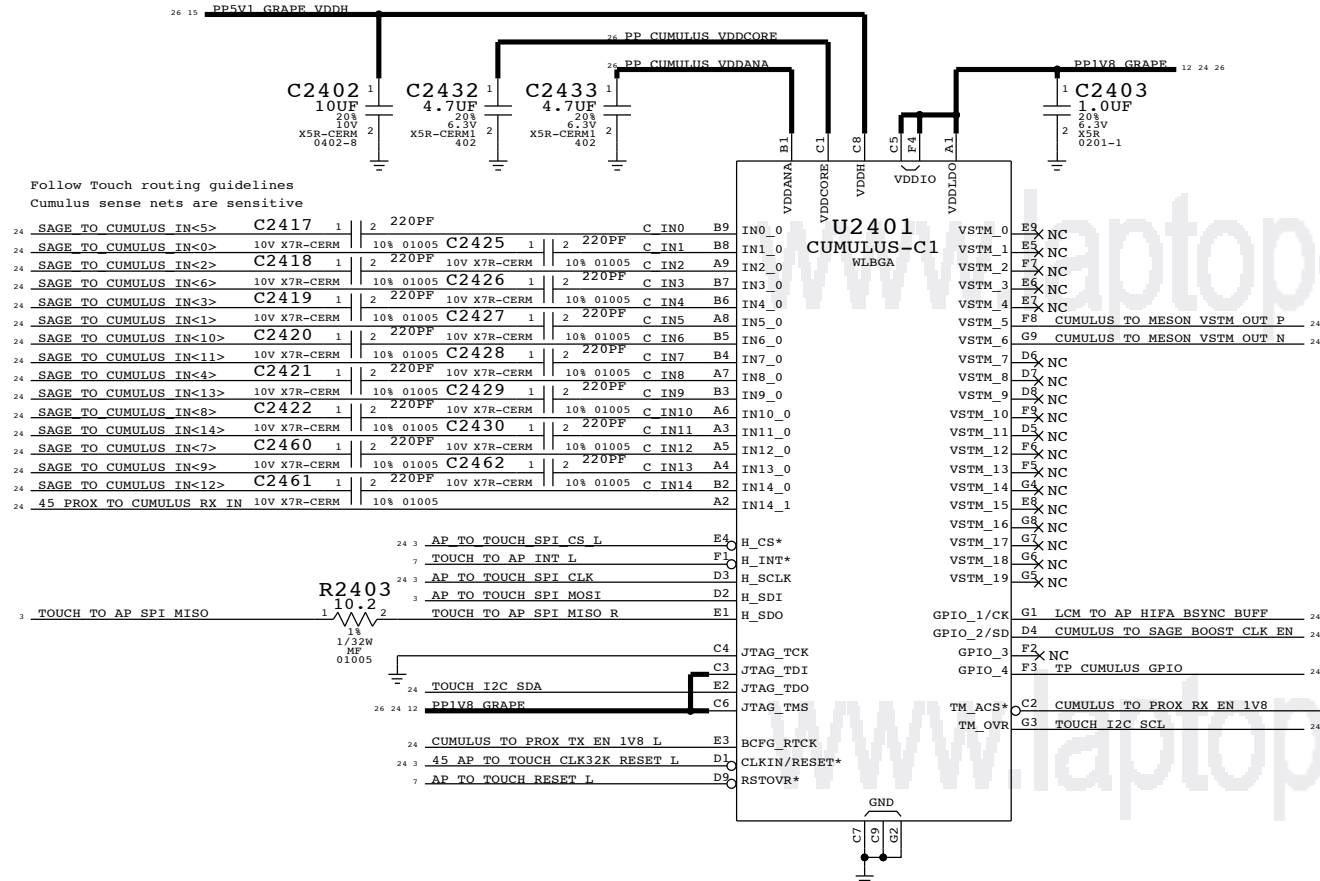
SYNC MASTER=N61 MLB		SYNC DATE=11/01/2013	
PAGE TITLE			
CAMERA:REAR FLEX CONN			
 Apple Inc.		DRAWING NO 051-0517	SIZE D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE 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	
		PAGE 23 OF 55	
		SHEET 23 OF 55	

Touch (B2B, Driver ICs)

Cumulus

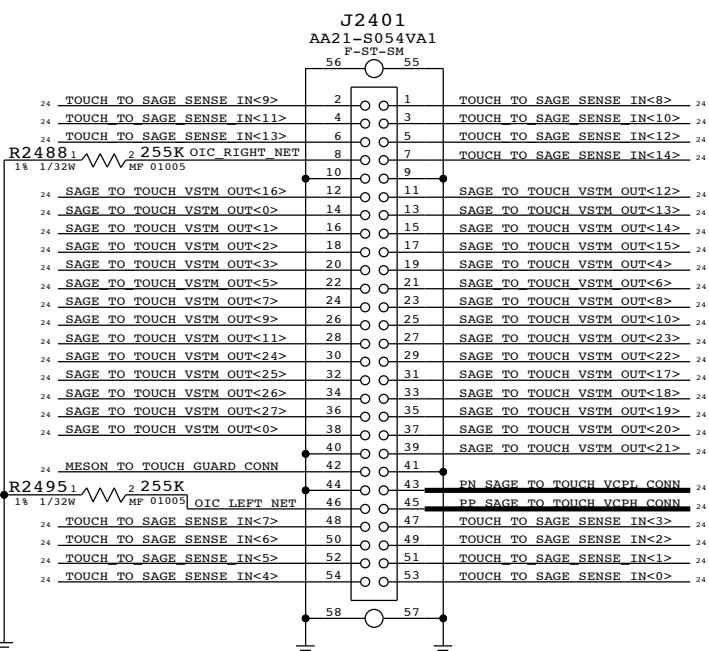
APN: 343S0638

Turn on is later than PPIV8_GRAPE
Turn off is same time as PPIV8_GRAPE

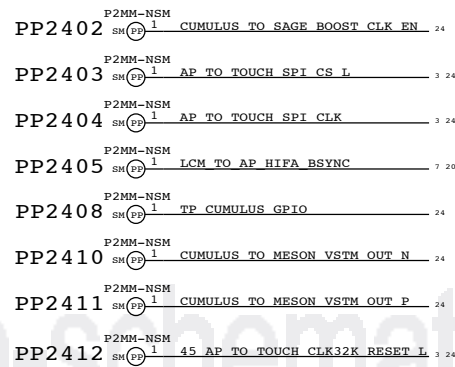


Touch B2B

MLB APN : 516S1183 (Receptacle)
Flex APN: 516S1182 (Plug)

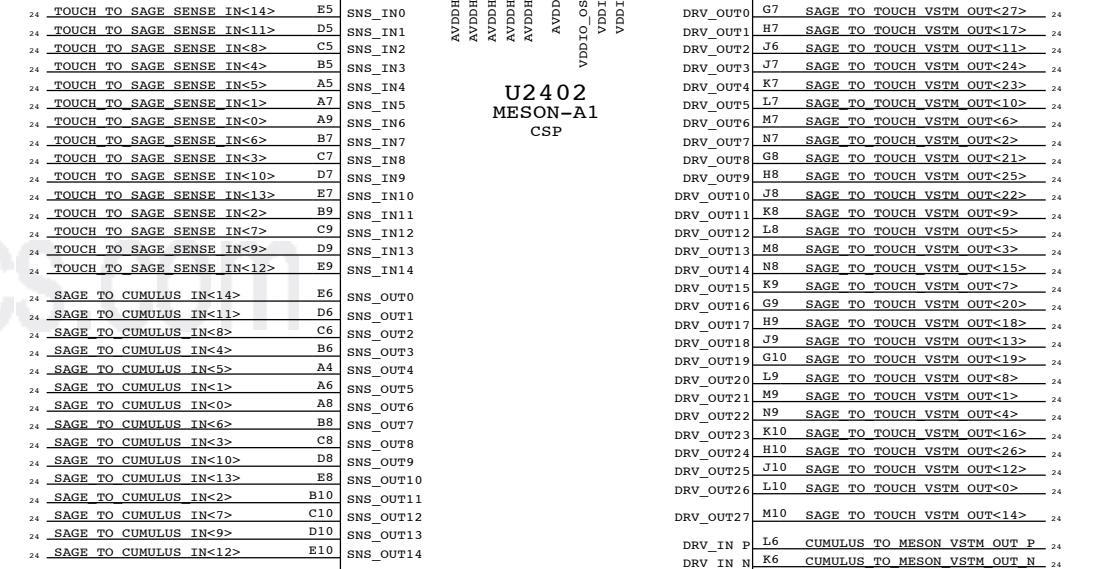


Touch probe points



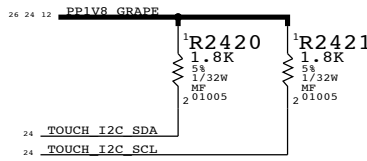
Meson

APN: 343S0694

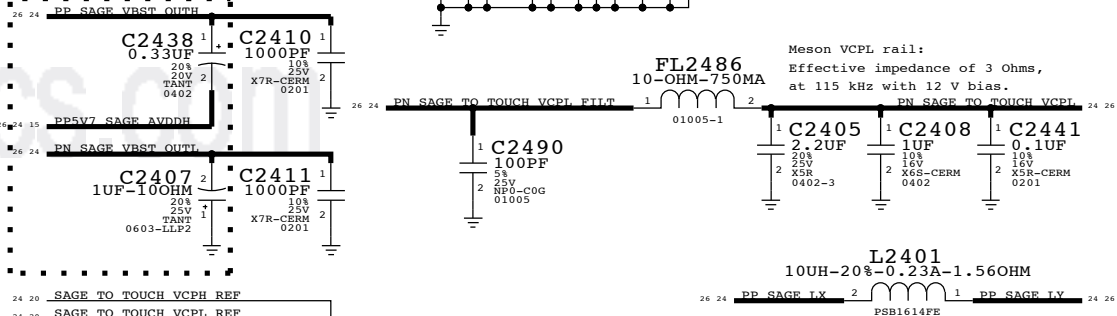


Tantalums solved singing caps issue. Validate issue is resolved with Meson and replace with 0402 ceramics.

I2C pull-ups



Meson decoupling



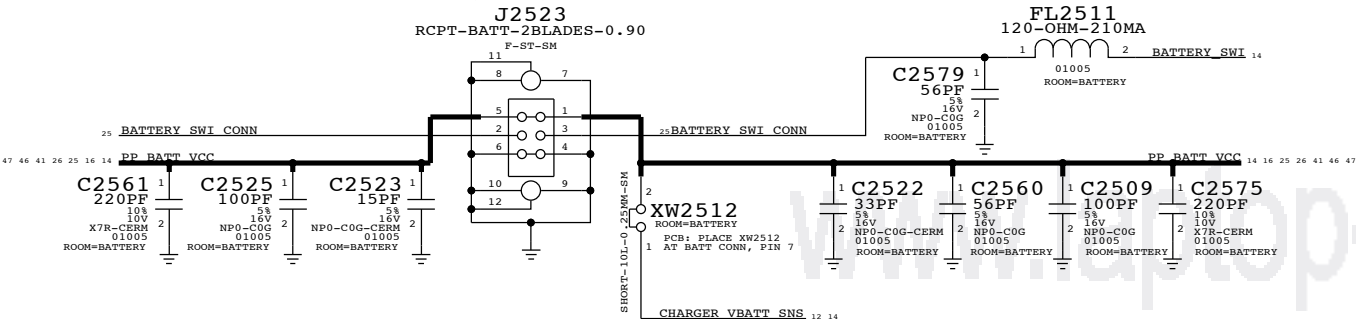
Meson VCPL rail:
Effective impedance of 3 Ohms,
at 115 kHz with 12 V bias.

PAGE TITLE		SYNC DATE=N/A	
TOUCH:CUMULUS, MESON			
Apple Inc.		DRAWING NUMBER	051-0517
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:		PAGE	24 OF 55
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	24 OF 55
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

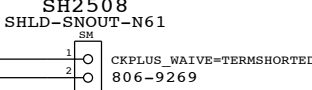
BATT CONN, TPS, STANDOFFS/SHIELDS/FIDUCIALS

BATTERY CONN

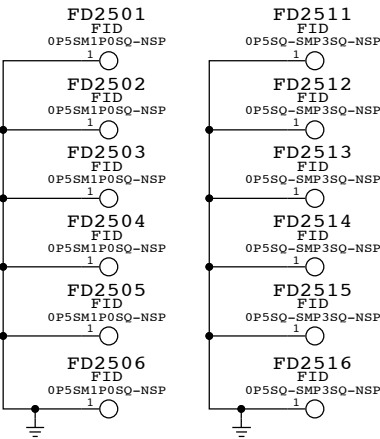
THIS ONE ON MLB ---> 516S1080 RCPT
SCHEMATIC SYMBOL(PIN ORDER) IS WIERD !!



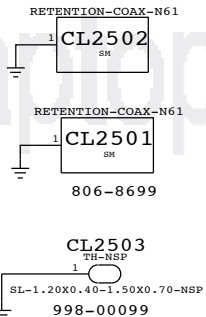
SHIELDS



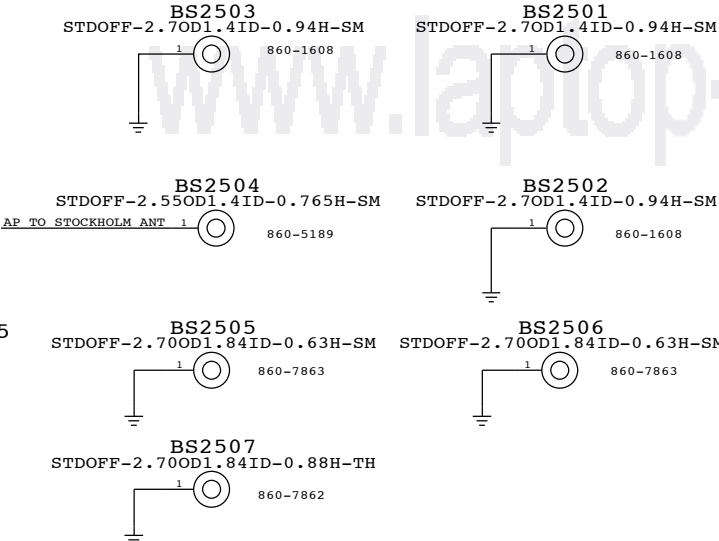
FIDUCIALS



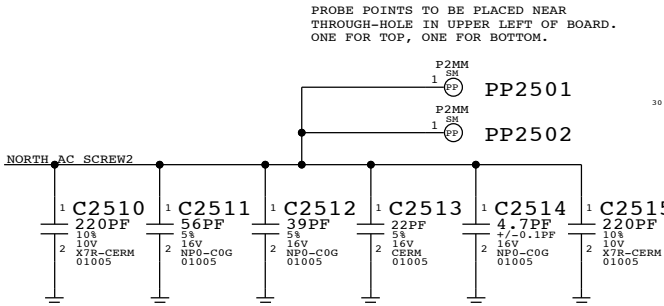
RF CLIPS



STANDOFFS

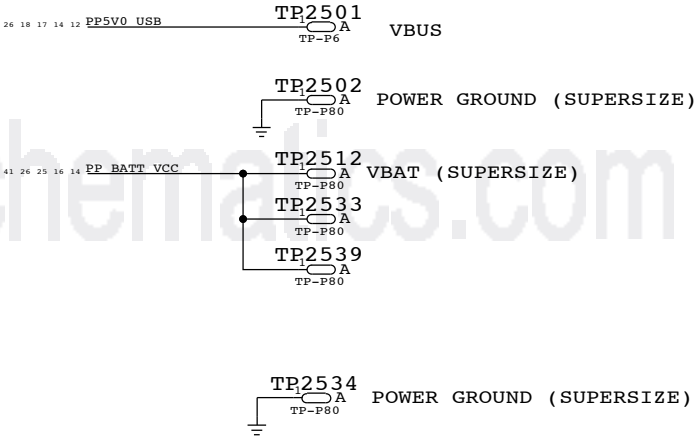


SCREW HOLES + STANDOFFS

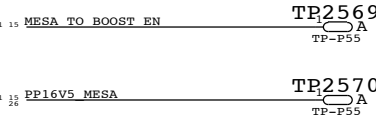


TESTPOINTS

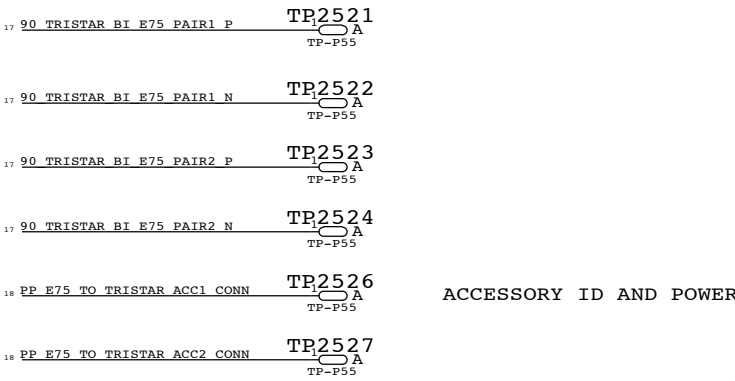
POWER TP



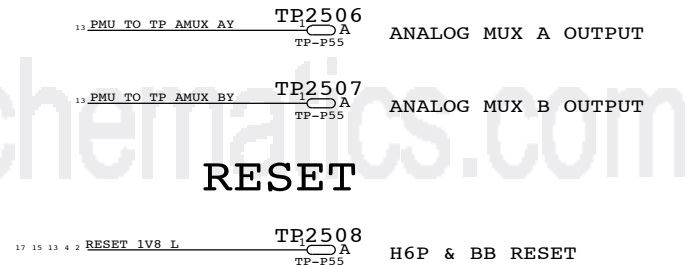
MOJAVE TP



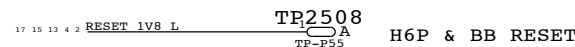
E75 - USB/UART/ID/POWER



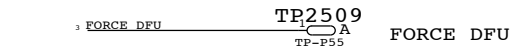
SUPER TP



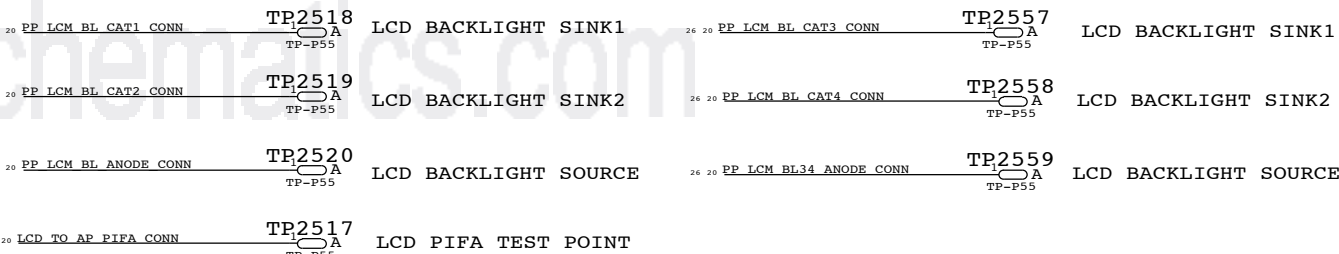
RESET



DFU



LCM BACKLIGHT



PAGE TITLE		SYNC DATE=N/A	
POWER:BATT CONN,TPS,PD FEATURES		DRAWING NUMBER	
Apple Inc.		051-0517	
NOTICE OF PROPRIETARY PROPERTY:		REVISION	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING:		6.0.0	
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		BRANCH	
II NOT TO REPRODUCE OR COPY IT		PAGE	
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		25 OF 55	
IV ALL RIGHTS RESERVED		SHEET	
		25 OF 55	

VOLTAGE PROPERTIES

E55	VOLTAGE=3.3V	PP3V3 USB	2 12
E56	VOLTAGE=1.8V	PP1V8 VA I19 I67	10 12 16
E57	VOLTAGE=3.0V	PP3V0 TRISTAR	12 15 17 30
E58	VOLTAGE=3.0V	PP3V0 IMU	12 22
E60	VOLTAGE=3.0V	PP3V0 NAND	6 12
E59	VOLTAGE=3.0V	PP3V3 ACC	12 17
E61	VOLTAGE=3.0V	PP3V0 PROX ALS	11 12
E62	VOLTAGE=3.0V	PP2V9 LDO9	12

E64	VOLTAGE=4.6V	PP VCC MAIN	10 12 14 15 16 17 23 30 32
E65	VOLTAGE=1.0V	PP1V0	7 12
E66	VOLTAGE=3.0V	PP3V0 PROX TRIED	11 12
E68	VOLTAGE=1.8V	PP1V8 ALWAYS	3 5 12 14
E69	VOLTAGE=3.0V	PP3V0 MESA	12 21
E70	VOLTAGE=1.1V	PP CPU	4 12
E63	VOLTAGE=1.1V	PP GPU	4 12

E91	VOLTAGE=1.2V	PP1V2 SDRAM	2 4 12 23
E92	VOLTAGE=1.8V	PP1V8 SDRAM	3 4 10 12 13 14 15 17 30
E93	VOLTAGE=1.8V	PP1V8	2 4 12 23
E94	VOLTAGE=1.8V	PP1V8 GRAPE	12 24
E95	VOLTAGE=1.8V	PP1V8 OSCAR	12 22
E96	VOLTAGE=1.2V	PP1V2 NAND VDDT	6

E94	VOLTAGE=1.8V	PP EXTMIC BIAS FILT IN	10
E95	VOLTAGE=1.8V	BOARD ID2	3 27
E96	VOLTAGE=1.2V	PP1V2	2 4 5 11 12
E80	VOLTAGE=5.0V	PP E75 TO TRISTAR ACC1 CONN	18 25
E81	VOLTAGE=5.0V	PP E75 TO TRISTAR ACC1	17 18
E82	VOLTAGE=22.0V	PP LCM BL ANODE	15 20
E83	VOLTAGE=0.2V	PP LCM BL CAT2	15 20
E84	VOLTAGE=0.2V	PP LCM BL CAT1	15 20
E85	VOLTAGE=0.2V	PP LCM BL CAT2 CONN	20 25
E86	VOLTAGE=0.2V	PP LCM BL CAT1 CONN	20 25

E87	VOLTAGE=-5.7V	PN5V7 SAGE AVDDN	15 20 24
E88	VOLTAGE=1.2V	PP1V2 OSCAR	12 22
E89	VOLTAGE=3.0V	PP3V0 MESA CONN	21
E90	VOLTAGE=6V	PP6V0 LCM BOOST	8 16
E91	VOLTAGE=5.0V	PP STRB DRIVER TO LED WARM	8 16
E92	VOLTAGE=5.0V	PP STRB DRIVER TO LED COOL	8 16

E93	VOLTAGE=1.8V	PP CODEC TO MIC1 BIAS	10 18
E94	VOLTAGE=1.8V	PP EXTMIC BIAS IN	10
E95	VOLTAGE=1.8V	PP EXTMIC BIAS FILT	10
E96	VOLTAGE=1.8V	PP CODEC TO FRONTMIC3 BIAS	10 11
E97	VOLTAGE=1.8V	PP CODEC TO REARMIC2 BIAS	8 10
E98	VOLTAGE=1.8V	PP CODEC FILT4	10
E99	VOLTAGE=2.2V	PP CODEC SPKR VO	10
E100	VOLTAGE=2.5V	PP CODEC VCPFILT	10
E101	VOLTAGE=2.5V	PP CODEC VCPFILT4	10
E102	VOLTAGE=2.5V	PP CODEC VHP ELYN	10
E103	VOLTAGE=0.2V	PP CODEC VHP ELYC	10
E104	VOLTAGE=2.5V	PP CODEC VHP ELYP	10
E105	VOLTAGE=1.8V	PP1V8 FCAM CONN	11
E106	VOLTAGE=3.0V	PP2V85 FCAM AVDD CONN	11
E107	VOLTAGE=1.8V	PP CODEC TO FRONTMIC1 BIAS CONN	11
E108	VOLTAGE=3.0V	PP3V0 ALS CONN	11
E109	VOLTAGE=1.2V	PP1V2 FCAM VDDIO CONN	11
E110	VOLTAGE=5.0V	PP5V0 USB	12 14 17 18 25
E111	VOLTAGE=5.0V	PP5V0 USB TO PMU	12
E112	VOLTAGE=4.6V	PP BUCK5 LX0	12
E113	VOLTAGE=4.6V	PP BUCK3 LX	12
E114	VOLTAGE=4.6V	PP BUCK4 LX	12
E115	VOLTAGE=4.6V	PP BUCK2 LX	12
E116	VOLTAGE=4.6V	PP BUCK1 LX1	12
E117	VOLTAGE=4.6V	PP BUCK1 LX0	12
E118	VOLTAGE=4.6V	PP BUCK0 LX3	12
E119	VOLTAGE=4.6V	PP BUCK0 LX2	12
E120	VOLTAGE=4.6V	PP BUCK0 LX1	12
E121	VOLTAGE=4.6V	PP BUCK0 LX0	12
E122	VOLTAGE=6.0V	PP CHESTNUT LXP	15
E123	VOLTAGE=6.0V	PP CHESTNUT CP	15
E124	VOLTAGE=6.0V	PP CHESTNUT CN	15
E125	VOLTAGE=5.7V	PP5V7 SAGE AVDDH	15 24
E126	VOLTAGE=5.7V	PP5V7 LCM AVDDH	15 20
E127	VOLTAGE=5.1V	PP5V1 GRAPE VDDH	15 24
E128	VOLTAGE=22.0V	PP WLED LX	15
E129	VOLTAGE=18.0V	PP18V0 MESA SW	15
E130	VOLTAGE=17.0V	PP17V0 MESA JRAIN	15
E131	VOLTAGE=16.5V	PP16V5 MESA	15 21 25
E132	VOLTAGE=8.0V	PP SPKAMP SW	16
E133	VOLTAGE=8.0V	PP I19 VBOOST	16
E134	VOLTAGE=1.8V	PP SPKAMP FILT	16
E135	VOLTAGE=1.8V	PP SPKAMP LDO FILT	16

E16	VOLTAGE=5.0V	PP LED DRV LX	14
E17	VOLTAGE=5.0V	PP LED BOOST OUT	14
E18	VOLTAGE=2.7V	PP RB VDD 2V7 CONN	18
E19	VOLTAGE=1.8V	PP CODEC TO MIC1 BIAS CONN	18
E20	VOLTAGE=4.6V	PP E75 TO TRISTAR ACC2	17 18
E21	VOLTAGE=4.6V	PP E75 TO TRISTAR ACC2 CONN	18 25

E10	VOLTAGE=1.8V	PP1V8 LCM CONN	20
E11	VOLTAGE=22.0V	PP LCM BL ANODE CONN	20 25
E12	VOLTAGE=-5.7V	PN5V7 LCM AVDDN CONN	20
E13	VOLTAGE=5.7V	PP5V7 LCM AVDDH CONN	20
E14	VOLTAGE=2.95V	PP I2013 GPS	21
E15	VOLTAGE=1.8V	PP1V8 MESA	21
E16	VOLTAGE=16.5V	PP16V5 MESA CONN	21

E135	VOLTAGE=5.0V	PP TRISTAR PIN	17
------	--------------	----------------	----

E20	VOLTAGE=1.2V	PP1V2 RCAM CONN	23
E21	VOLTAGE=1.8V	PP1V8 RCAM CONN	23
E22	VOLTAGE=3.0V	PP2V85 CAM VDD	23 25
E23	VOLTAGE=1.8V	PP2V85 RCAM AVDD CONN	23
E24	VOLTAGE=1.8V	PP CUMULUS VDDCORE	24
E25	VOLTAGE=1.2V	PP CUMULUS VPDANA	24
E26	VOLTAGE=13.5V	PP SAGE TO TOUCH VCPH CONN	24
E27	VOLTAGE=-12V	PN SAGE TO TOUCH VCPH CONN	24
E28	VOLTAGE=13.5V	PP SAGE TO TOUCH VCPH	24
E29	VOLTAGE=-12V	PN SAGE TO TOUCH VCPH	24

E30	VOLTAGE=-12V	PN SAGE VCPH F	24
E31	VOLTAGE=5.7V	PP SAGE LX	24
E32	VOLTAGE=17.0V	PP SAGE LX	24
E33	VOLTAGE=1.8V	PP PMU VREF	13
E34	VOLTAGE=14V	PP SAGE VBST OUTH	24

E40	VOLTAGE=5.0V	PP TIGRIS VBUS DET	14
-----	--------------	--------------------	----

E41	VOLTAGE=2.5V	PP PMU VDD REF	13
E42	VOLTAGE=1.8V	PP EXTMIC BIAS	10
E43	VOLTAGE=1.8V	PP1V8 XTAL	2
E44	VOLTAGE=1.8V	PP PMU VDD RTC	13

E45	VOLTAGE=3.80V	PP BATT VCC	14 16 25 41 46 47
E46	VOLTAGE=1.8V	PP1V8 MESA CONN	21
E47	VOLTAGE=3.0V	PP3V0 PROX CONN	11

E50	VOLTAGE=1.0V	PP0V95 FIXED SOC	4 7 12
E51	VOLTAGE=1.0V	PP0V95 FIXED SOC PCIE	7
E52	VOLTAGE=1.2V	PP1V2 PLL	2
E53	VOLTAGE=1.0V	PP BUCK5 LX1	12
E54	VOLTAGE=1.0V	PP VAR SOC	5 12

E55	VOLTAGE=3.00V	PP PN65 STM PMU	53 55
-----	---------------	-----------------	-------

E137	VOLTAGE=1.8V	PP1V8 HALL CONN	21
E138	VOLTAGE=1.8V	PP1V8 MESA GND	21
E139	VOLTAGE=5.0V	CHARGER LDO	14
E140	VOLTAGE=5.0V	PMID_CAP	14

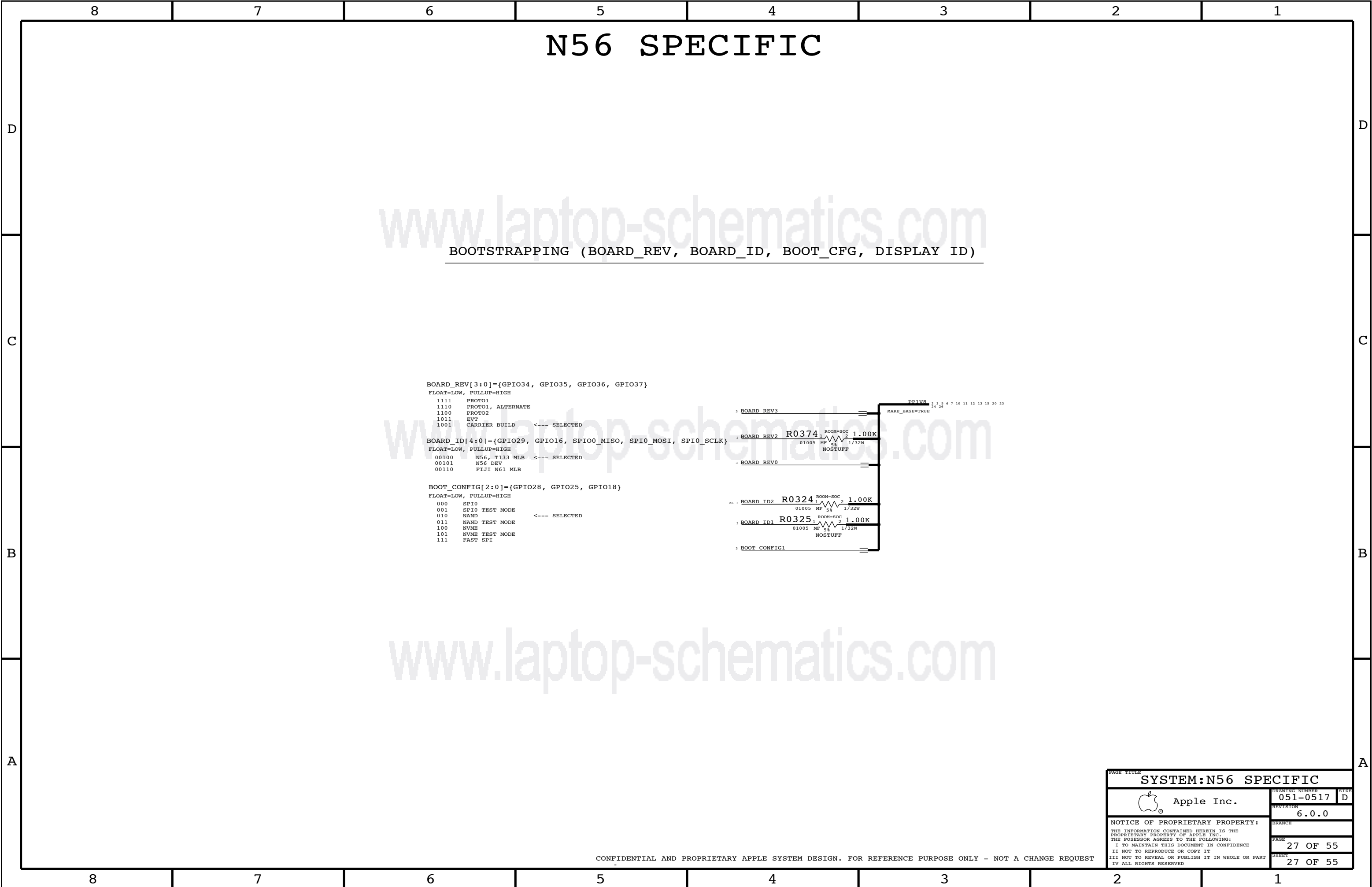
N56 SPECIFIC VOLTAGE PROPERTIES

E151	VOLTAGE=22.0V	PP WLED14 LX	15
E152	VOLTAGE=22.0V	PP LCM BL34 ANODE	15 20
E153	VOLTAGE=22.0V	PP LCM BL34 ANODE CONN	20 25
E154	VOLTAGE=0.2V	PP LCM BL CAT3	15 20
E155	VOLTAGE=0.2V	PP LCM BL CAT4	15 20
E156	VOLTAGE=0.2V	PP LCM BL CAT3 CONN	20 25
E157	VOLTAGE=0.2V	PP LCM BL CAT4 CONN	20 25

E158	VOLTAGE=-12V	PN SAGE TO TOUCH VCPH FILT	24
E159	VOLTAGE=2.0V	PP RCAM AF	12 23
E160	VOLTAGE=2.0V	PP RCAM AF CONN	23

E161	VOLTAGE=-14.0V	PN SAGE VBST OUTH	24
E162	VOLTAGE=-5.7V	PN5V7 SAGE AVDDN FILT	24
E163	VOLTAGE=2.0V	PP BUCK6 LX	12

PAGE TITLE		
SYSTEM:VOLTAGE PROPERTIES		
 Apple Inc.	DRAWING NUMBER	051-0517
	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:		PAGE
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		26 OF 55
II NOT TO REPRODUCE OR COPY IT		SHEET
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		26 OF 55
IV ALL RIGHTS RESERVED		



8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

8

7

6

5

4

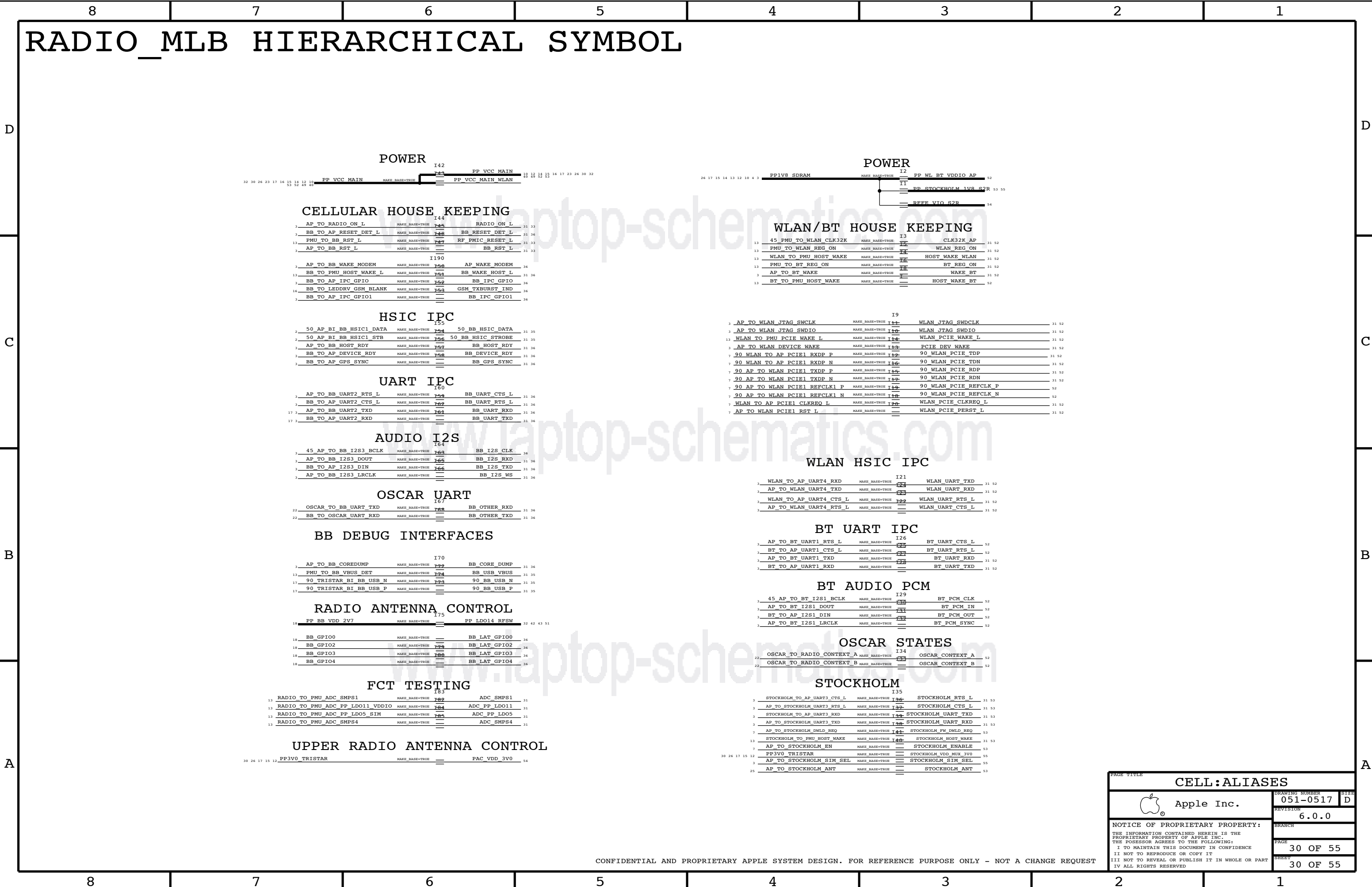
3

2

1

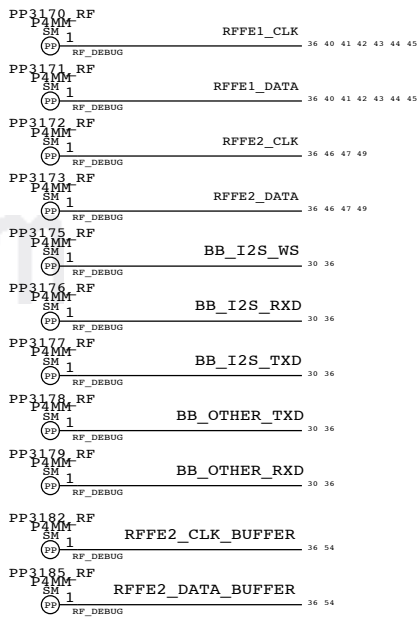
PAGE TITLE		DRAWING NUMBER		SIZE
 Apple Inc.		051-0517		D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I I NOT TO REPRODUCE OR COPY IT I I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART I I ALL RIGHTS RESERVED		REVISION		
		6.0.0		
		BRANCH		
		PAGE	28 OF 55	
		SHEET	28 OF 55	

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



D

C



```

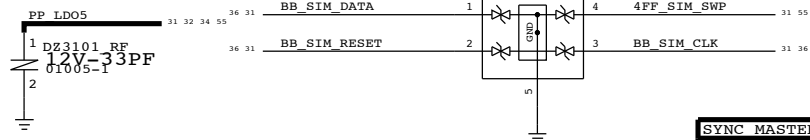
40 39 38 37 36 35 34 32 31
PP LDO11
RADIO_BB
R3102 RF1
10K
1/32W
MF
010052
RADIO_BB
R3103 RF1
10K
1/32W
MF
010052
RADIO_BB
R3104 RF1
10K
1/32W
MF
010052
36 31
BOOT HSIC
36
BOOT HSIC USB
36
WATCHDOG_DISABLE

```

B

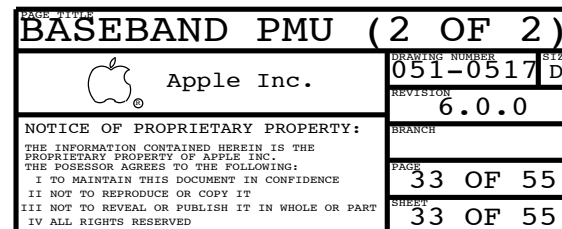


SIM CARD ESD PROTECTION

A

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

BOARD	REVISION
0.00V	N61 PROTO MLB1
0.50V	N61 DEV3
0.70V	N61 DEV4
0.90V	N61 PROTO MLB2
1.10V	N61/N56 PROTO1
1.30V	N61/N56 PROTO2
1.40V	N61/N56 EVT1
1.50V	N61/N56 EVT2 (CARRIER)
1.60V	N61/N56 DVT
1.70V	N61/N56 PVT



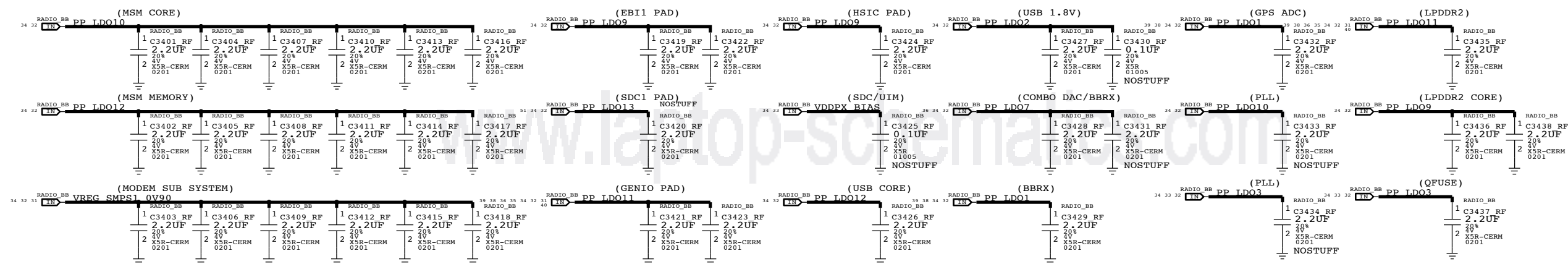
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSES ONLY - NOT A CHANGE REQUEST.

C538
R500
L500
U502



C

B



A

PAGE 11111		BASEBAND (1 OF 2)	
 Apple Inc.		DRAWING NUMBER	SHEET
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		051-0517	D
		REVISION	
		6.0.0	
		BRANCH	
		PAGE	34 OF 55
		SHEET	34 OF 55

D

C

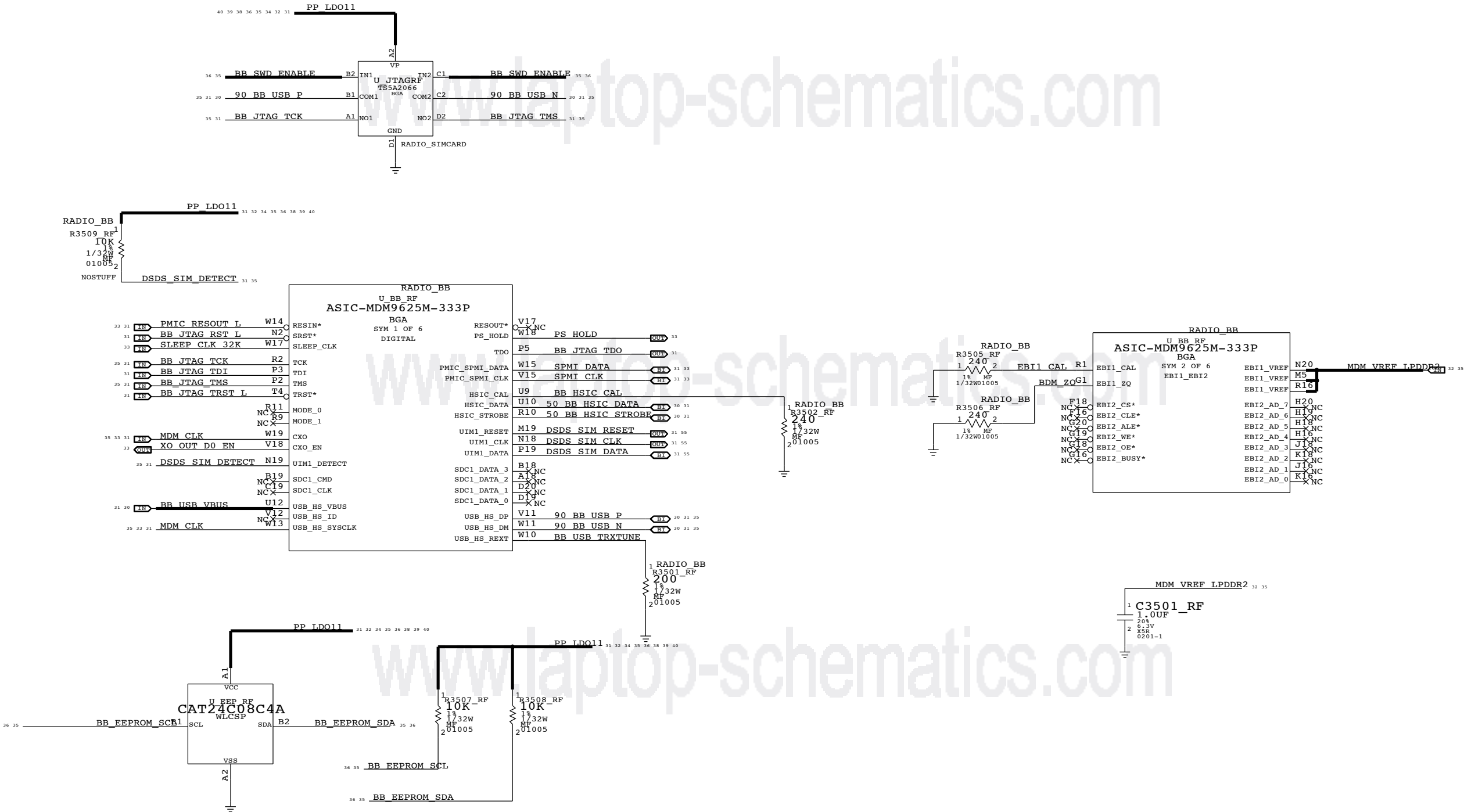
B

A

BASEBAND (2 OF 3)

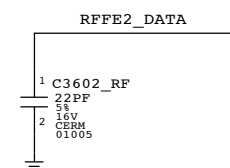
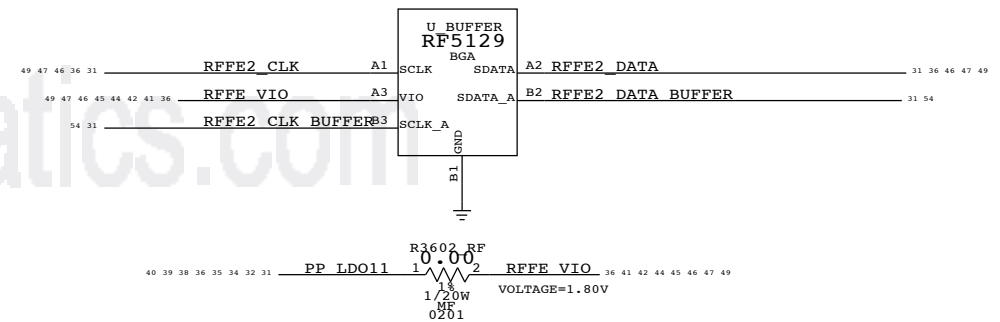
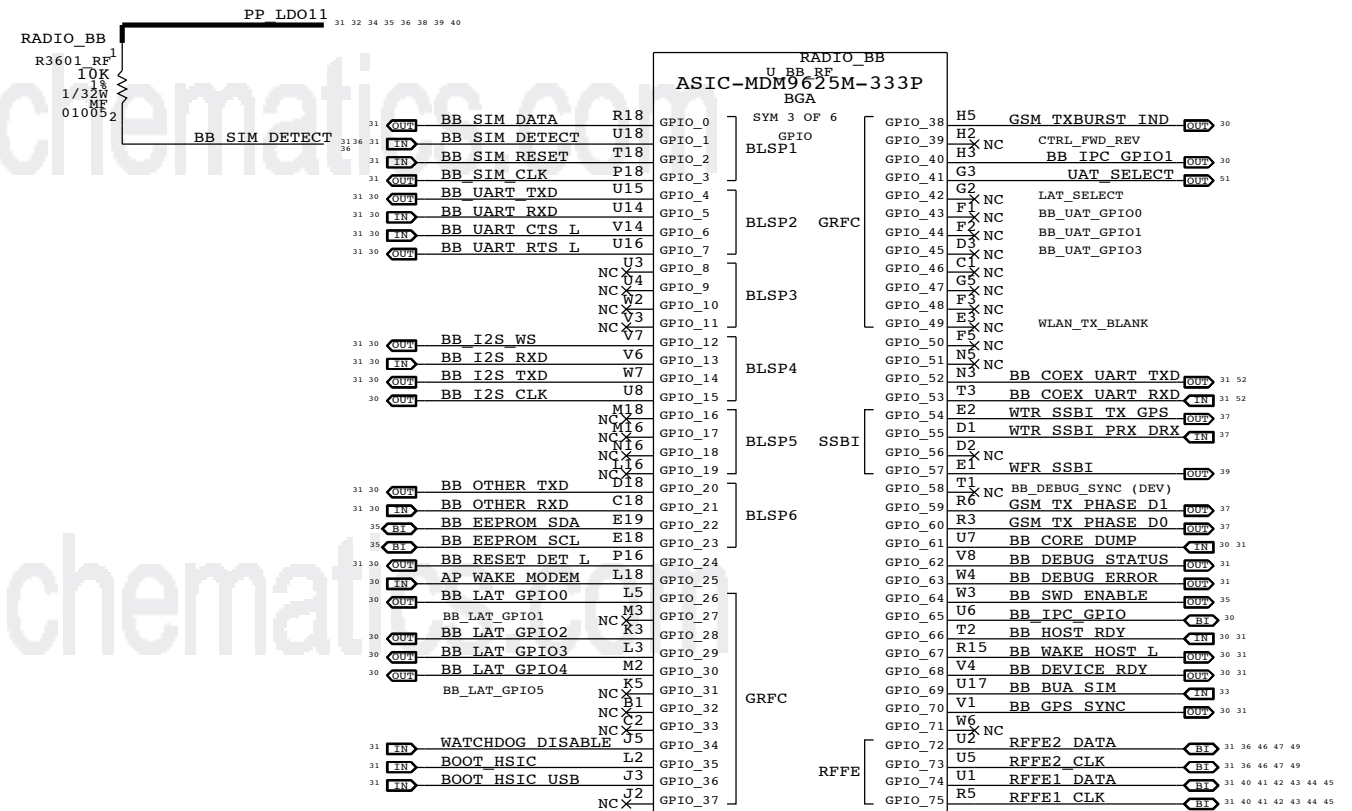
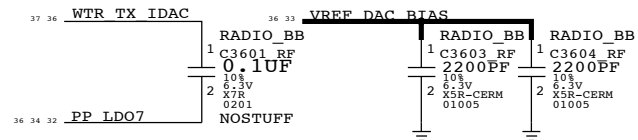
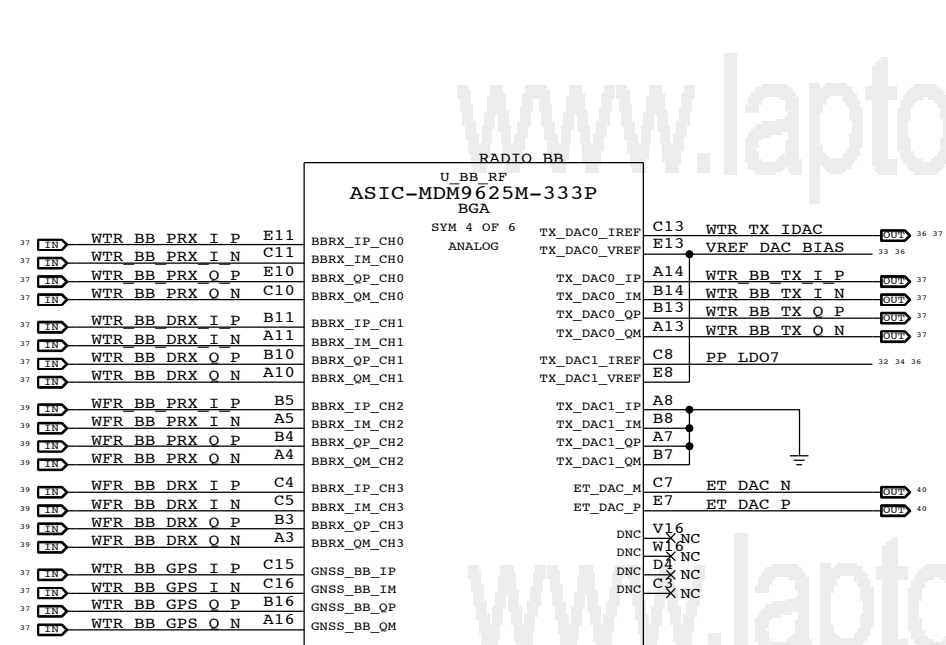
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSES ONLY - NOT A CHANGE REQUEST.

C600
R606
L600
U602



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

C704
R700
L700
U702



MOBILE DATA MODEM (2 OF 2)



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	SIZE
051-0517	D
REVISION	
6.0.0	

BRANCH

PAGE 36 OF 55

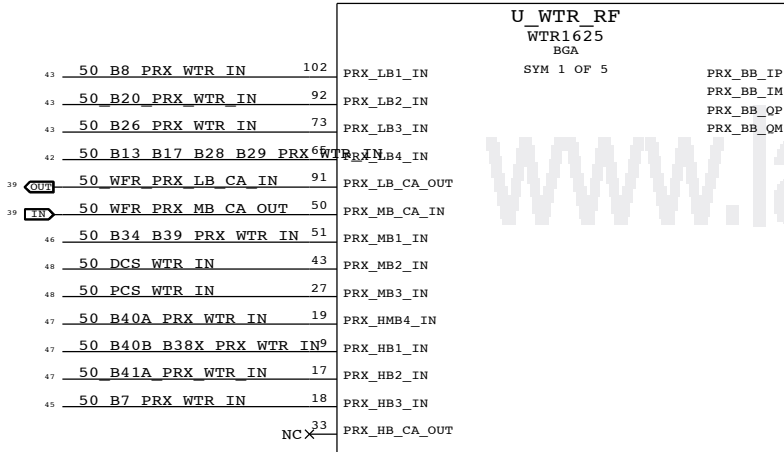
SHEET
36 OF 55

WTR TRANSCEIVER (1 OF 2)

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

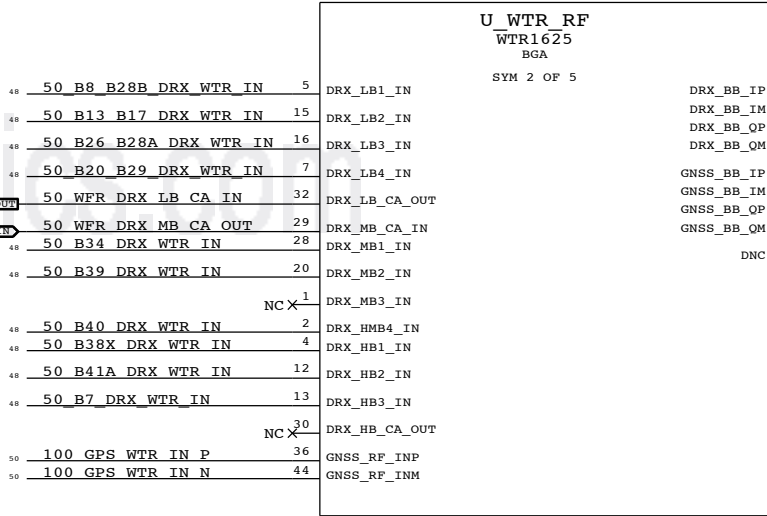
C802
R802
L800
U803

LB1	DC
LB2	DC
LB3	DC
LB4	DC
MB1	NO DC
MB2	DC
MB3	DC
HB1	NO DC
HB2	DC
HB3	DC
HMB4	NO DC



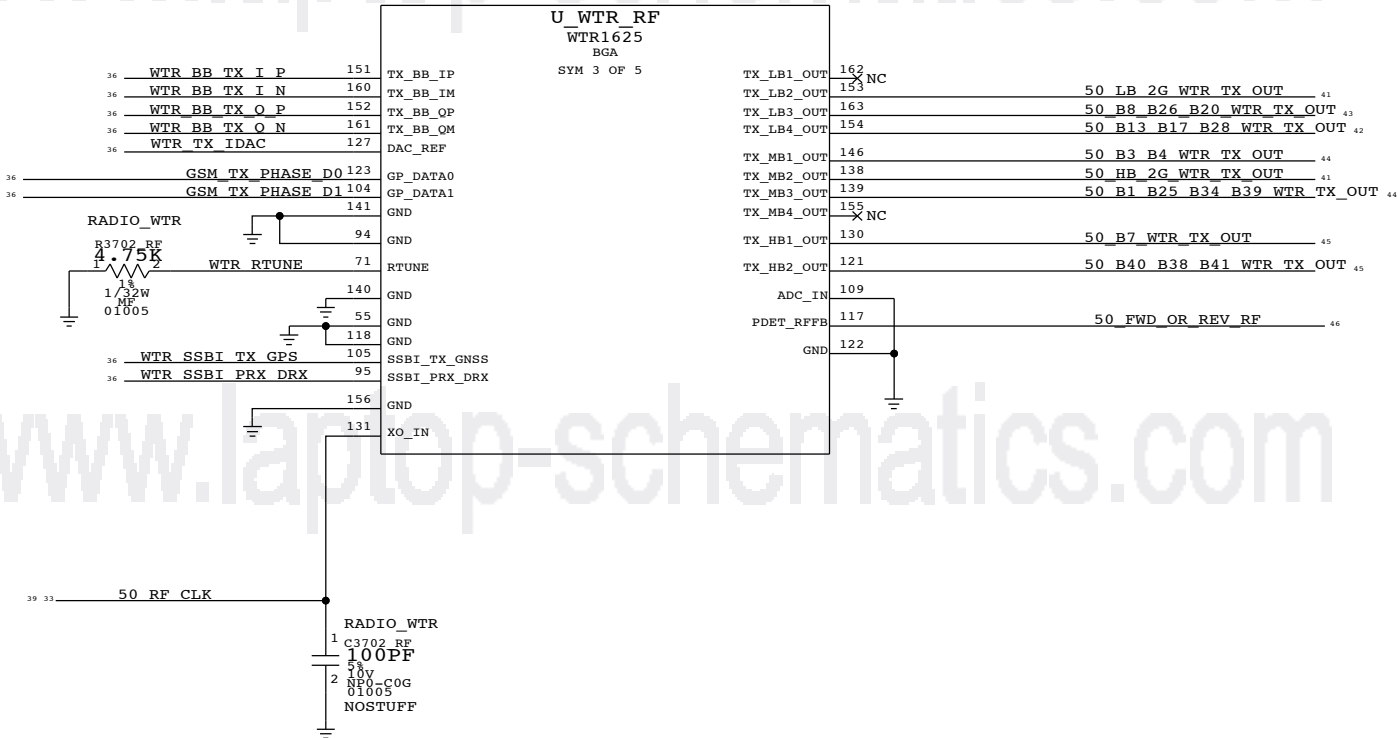
PRX_BB_IP	99	WTR_BB_PRX_I_P	36
PRX_BB_IM	108	WTR_BB_PRX_I_N	36
PRX_BB_QP	107	WTR_BB_PRX_Q_P	36
PRX_BB_QM	97	WTR_BB_PRX_Q_N	36

LB1	DC
LB2	DC
LB3	DC
LB4	DC
MB1	NO DC
MB2	DC
MB3	DC
HB1	NO DC
HB2	DC
HB3	DC
HMB4	NO DC



DRX_BB_IP	76	WTR_BB_DRX_I_P	36	RADIO_WTR
DRX_BB_IM	86	WTR_BB_DRX_I_N	36	RADIO_WTR
DRX_BB_QP	61	WTR_BB_DRX_Q_P	36	RADIO_WTR
DRX_BB_QM	68	WTR_BB_DRX_Q_N	36	RADIO_WTR
GNSS_BB_IP	60	WTR_BB_GPS_I_P	36	RADIO_WTR
GNSS_BB_IM	53	WTR_BB_GPS_I_N	36	RADIO_WTR
GNSS_BB_QP	67	WTR_BB_GPS_Q_P	36	RADIO_WTR
GNSS_BB_QM	85	WTR_BB_GPS_Q_N	36	RADIO_WTR

DNC



RF_CLK IS SHARED BETWEEN WTR AND WFR. LENGTH DIFFERENCE BETWEEN THE TWO SHOULD BE < 5MM.

RF TRANSCEIVER (1 OF 3)

 Apple Inc.	DRAWING NUMBER	051-0517
	REVISION	6.0.0
	BRANCH	
	PAGE	37 OF 55
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 37 OF 55

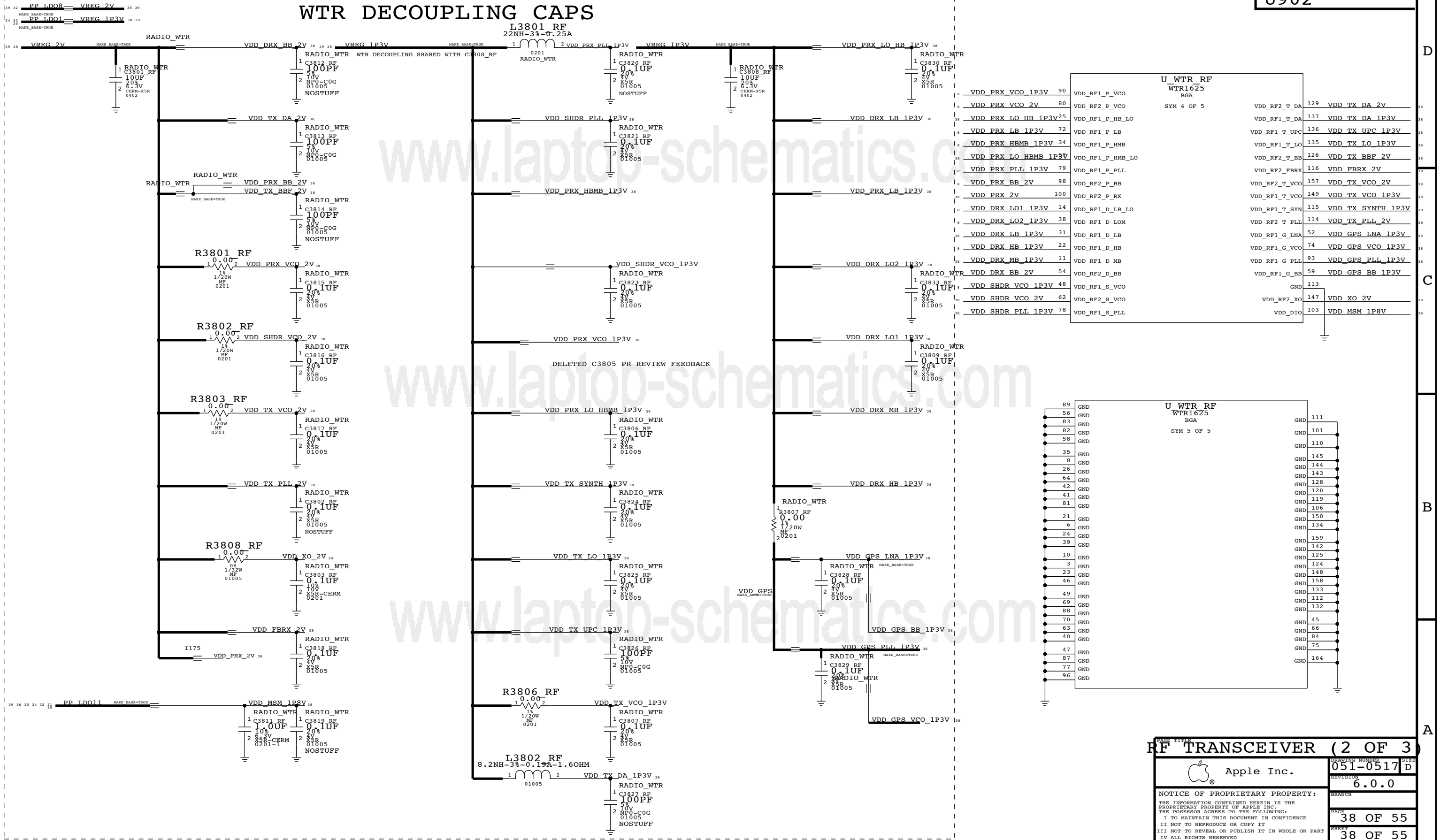
WTR TRANSCEIVER (2 OF 2)

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

C934
R926
L3802 RF
U902

WTR DECOUPLING CAPS

L3801 RF
22NH-3%-0.25A



RF TRANSCEIVER (2 OF 3)



Apple Inc.

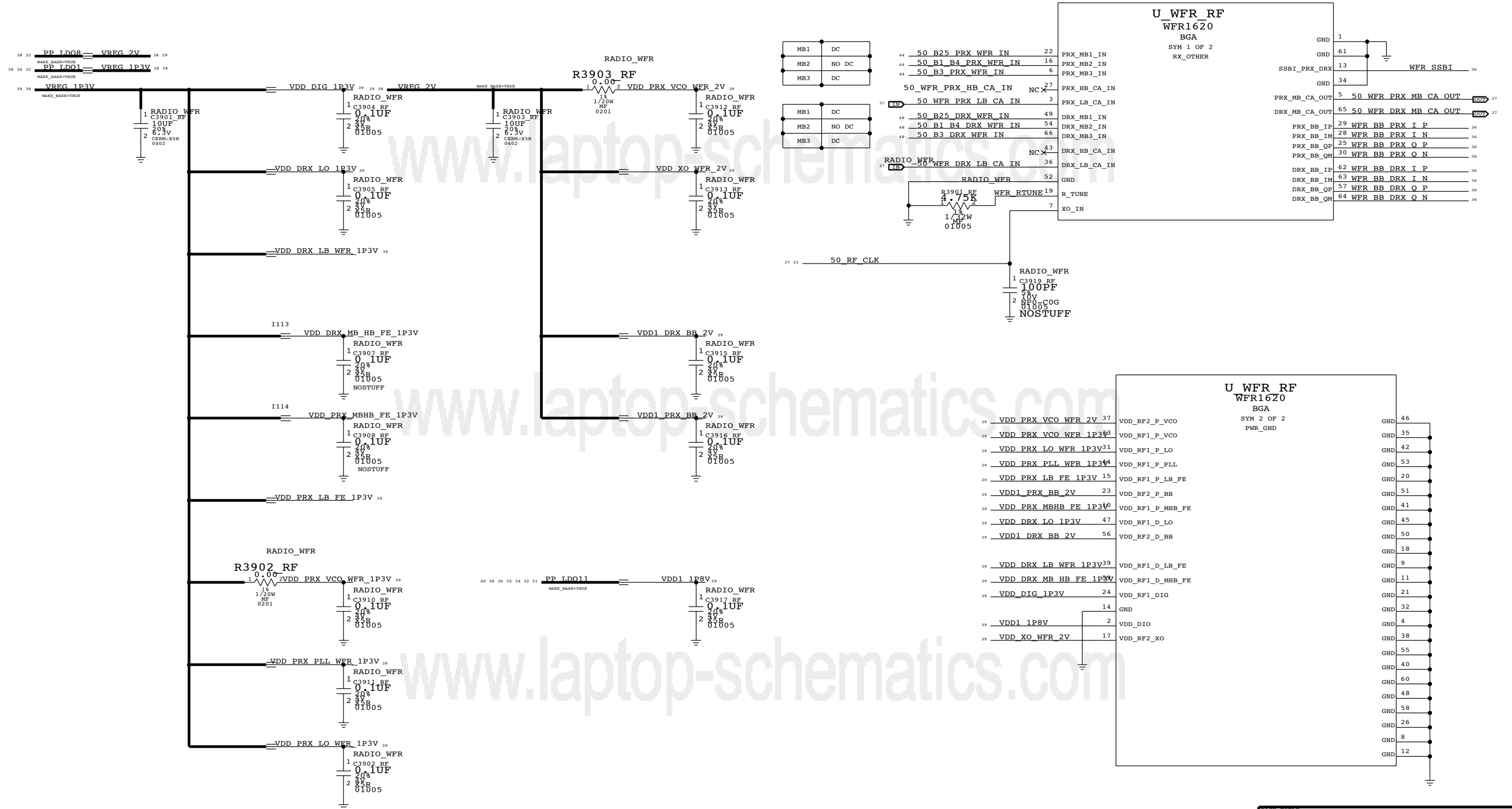
NOTICE OF PROPRIETARY PROPERTY:
THE INFORMATION CONTAINED HEREIN IS THE
PROPRIETARY PROPERTY OF APPLE INC.
THE POSSESSOR AGREES TO THE FOLLOWING:
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE
II NOT TO REPRODUCE OR COPY IT
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART
IV ALL RIGHTS RESERVED

DRAWING NUMBER		SIZE
051-0517		D
REVISION		
6.0.0		
BRANCH		
PAGE		
38 OF 55		
SHEET		
38 OF 55		

WFR TRANSCEIVER

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

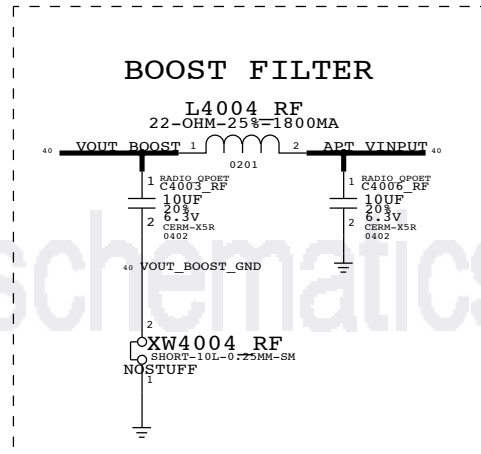
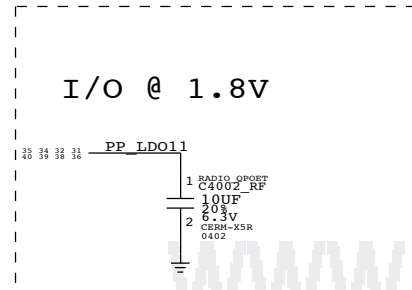
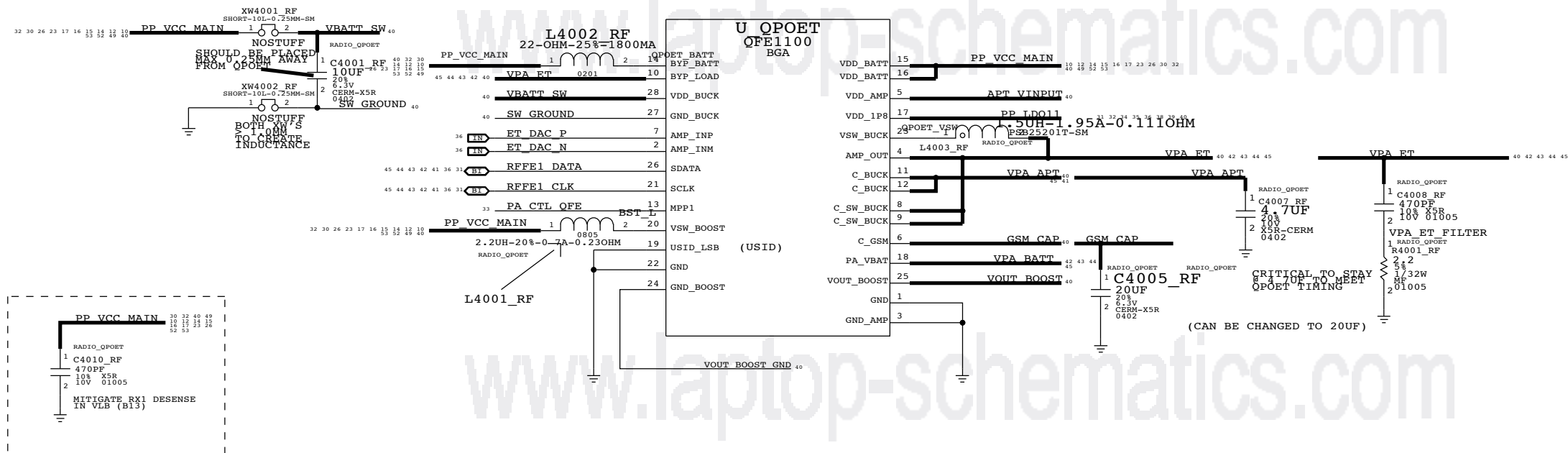
C1019
R1016
L1000
U1002



PAGE TITLE		PAGE TITLE	
RF TRANSCEIVER (3 OF 3)			
 Apple Inc.	DRAWING NUMBER		SIZE
	051-0517		D
	REVISION		
		6.0.0	
BRANCH			
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		PAGE	
39		55	
SHEET		SHEET	
39		55	

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

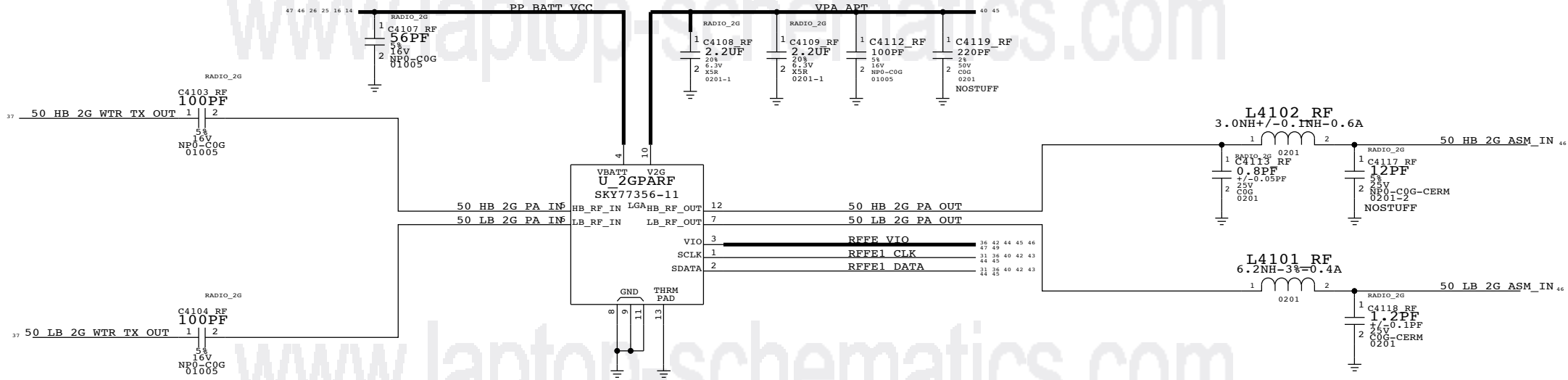
C1110
R1102
L1104
U1101



2G PA

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

C1208
R1200
L1204
U1201



PAGE TITLE		
2G PA		
 Apple Inc.	DRAWING NUMBER	051-0517
	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	
	PAGE	41 OF 55
	SHEET	41 OF 55

VERY LOW BAND PAD (B13, B17, B28)

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

C1332
R1300
L4215 RF
U1304

D

C

B

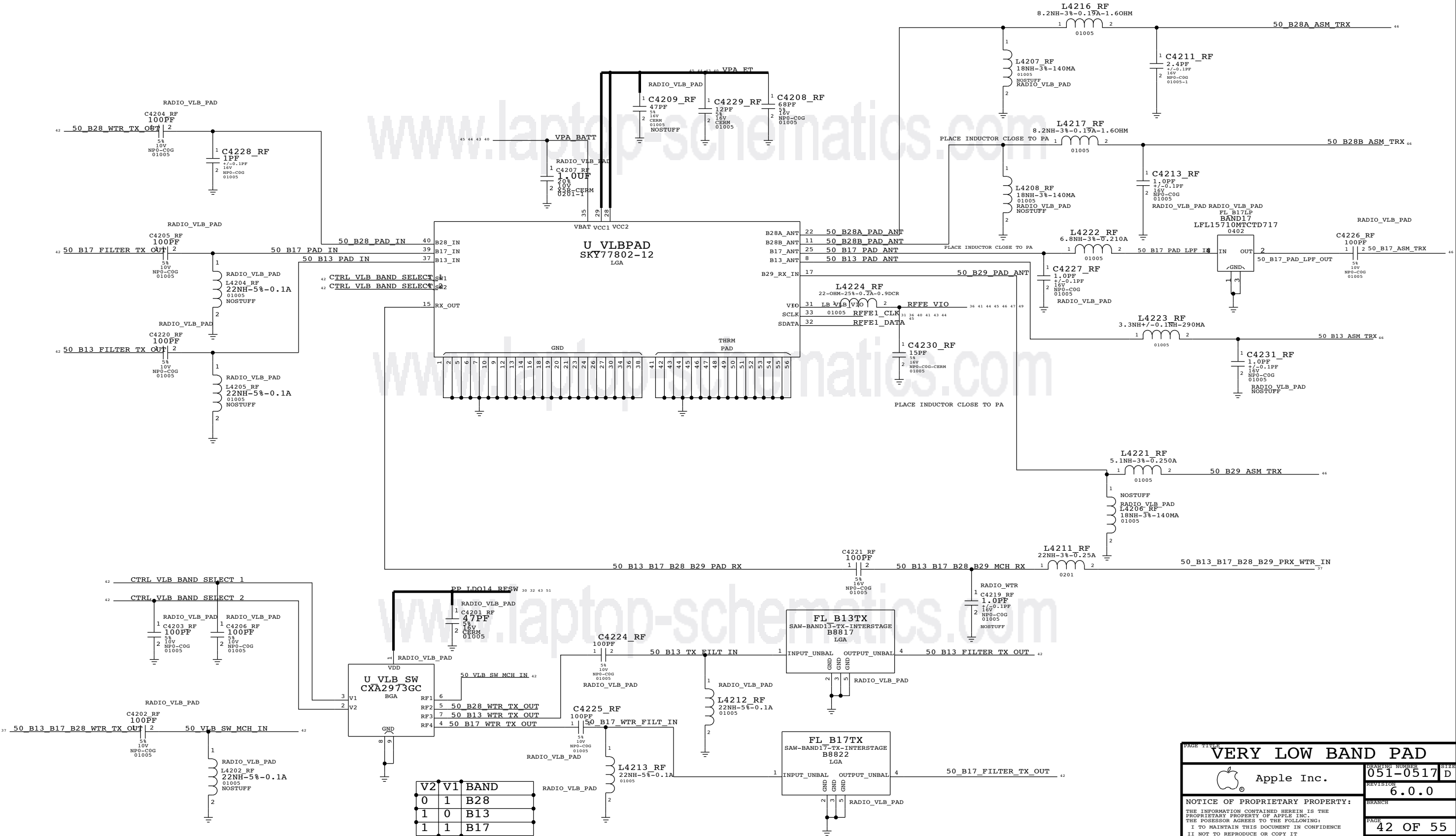
A

D

C

B

A



VERY LOW BAND PAD	
Apple Inc.	DRAWING NUMBER 051-0517
REVISION 6.0.0	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	
PAGE 42 OF 55	SHEET 42 OF 55

LOW BAND PAD (B8, B26, B20)

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

C4318	RF
R1400	
L4322	RF
U1402	

D

C

B

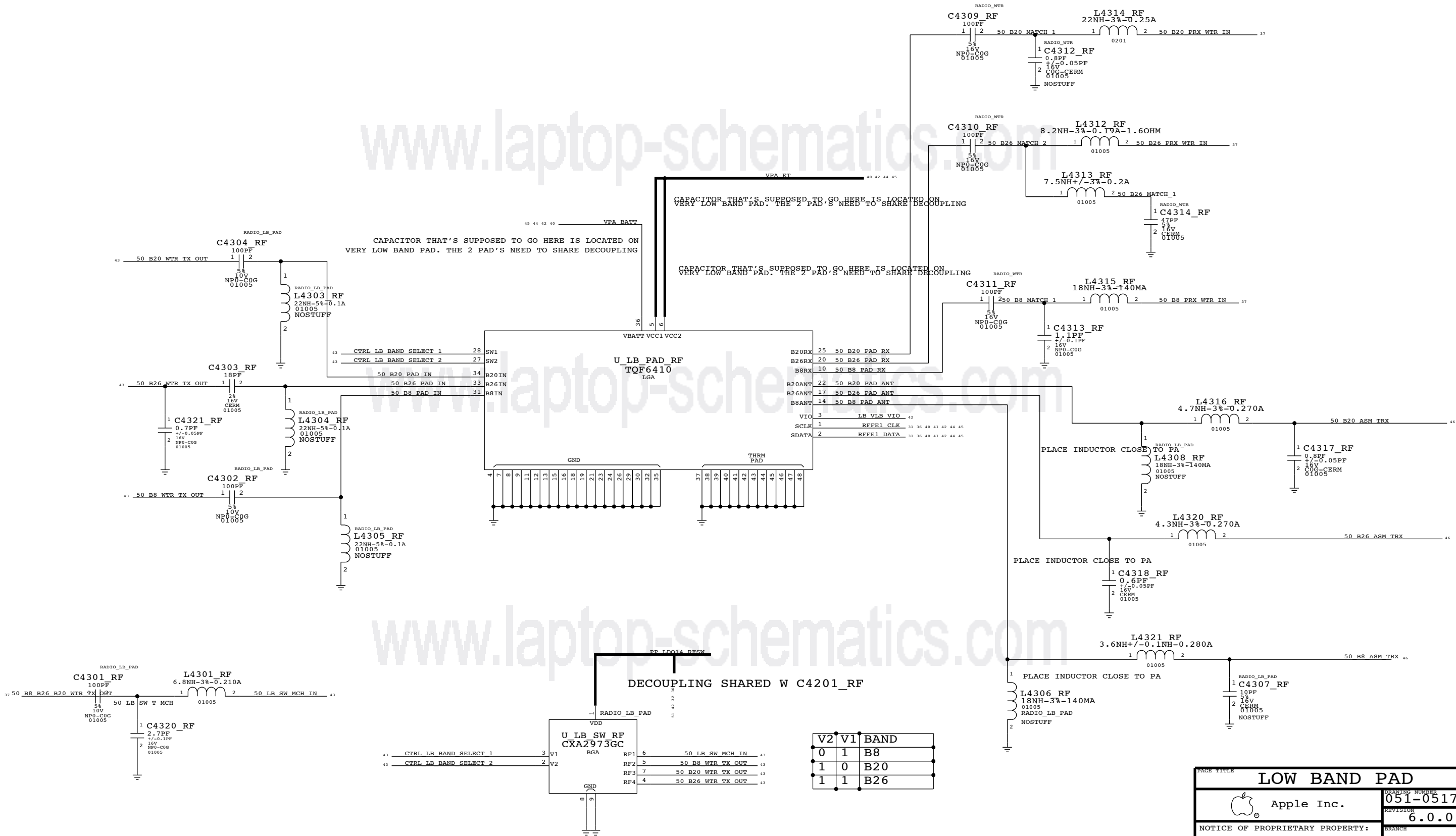
A

D

C

B

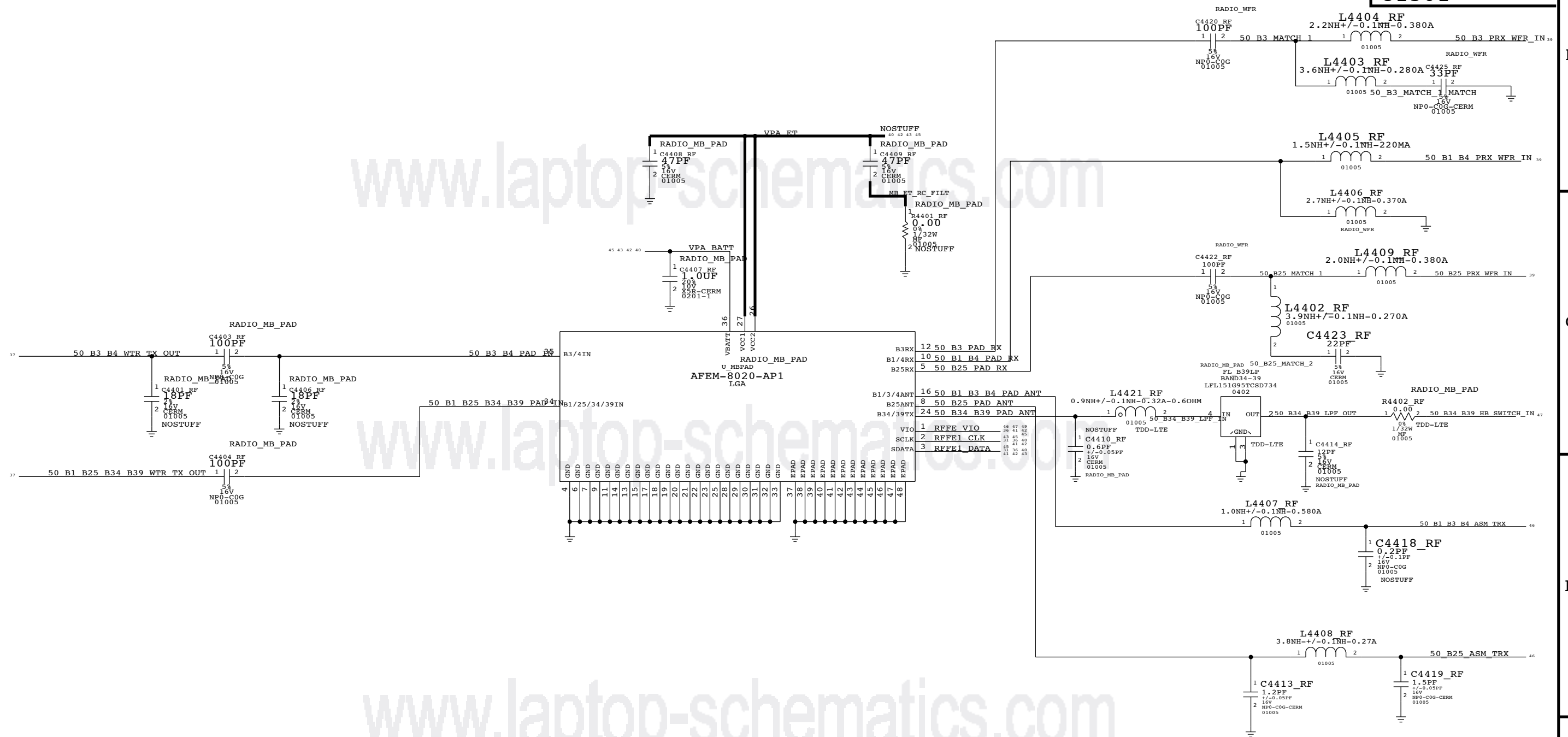
A



PAGE TITLE		LOW BAND PAD	
Apple Inc.		DRAWING NUMBER	051-0517
		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:		PAGE	43 OF 55
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	43 OF 55
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

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

C4426	RF
R1500	
L4409	RF
U1501	

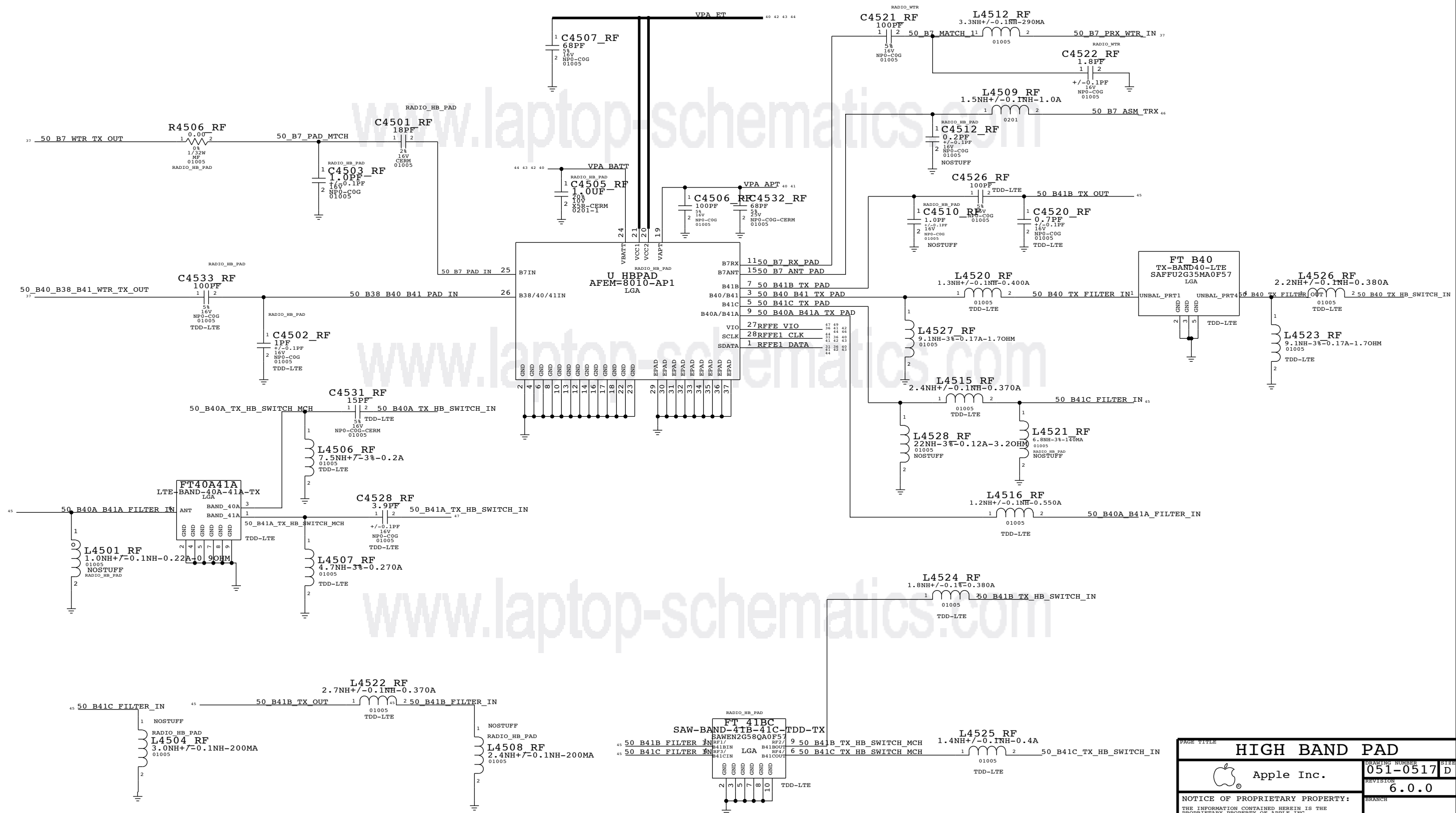


PAGE TITLE		MID BAND PAD		DRAWING NUMBER		051-0517		SIZE		D	
 Apple Inc.		NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I I NOT TO REPRODUCE OR COPY IT I I I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART I I I I ALL RIGHTS RESERVED		REVISION		6.0.0		BRANCH			
				PAGE		44 OF 55		SHEET		44 OF 55	

HIGH BAND PAD (B7, B38, B40, B41, XGP)

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

C4533 RF
R1600
L1616
U1601

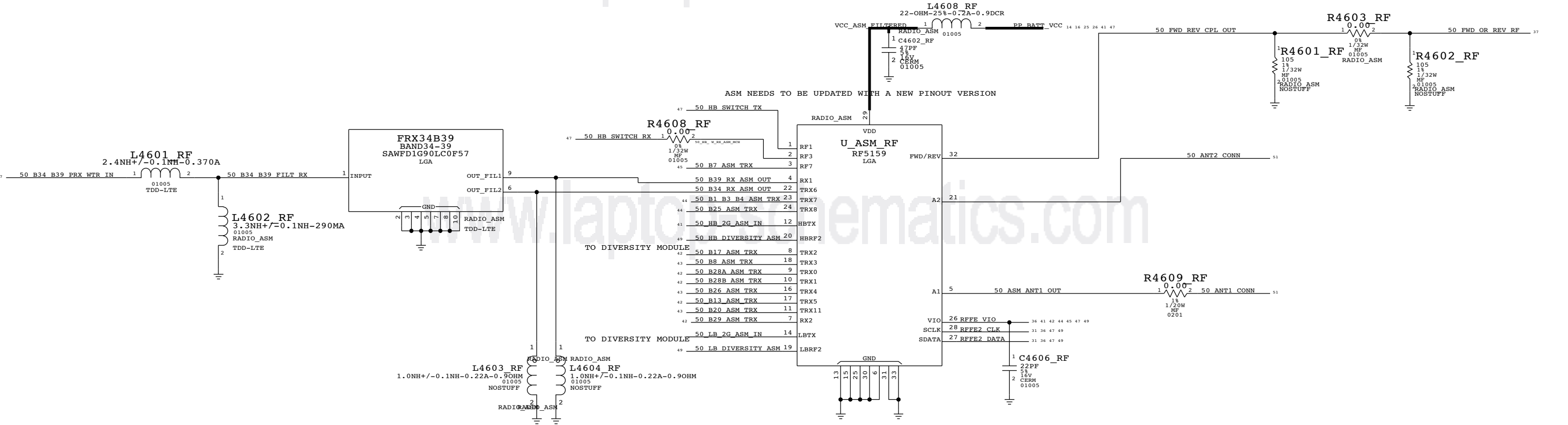


PAGE TITLE		HIGH BAND PAD	
 Apple Inc.	DRAWING NUMBER		SIZE
	051-0517		D
REVISION		6.0.0	
NOTICE OF PROPRIETARY PROPERTY:			
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I I NOT TO REPRODUCE OR COPY IT I I I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART I I I ALL RIGHTS RESERVED			
BRANCH		PAGE	
		45 OF 55	
SHEET		45 OF 55	

ANTENNA SWITCH

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

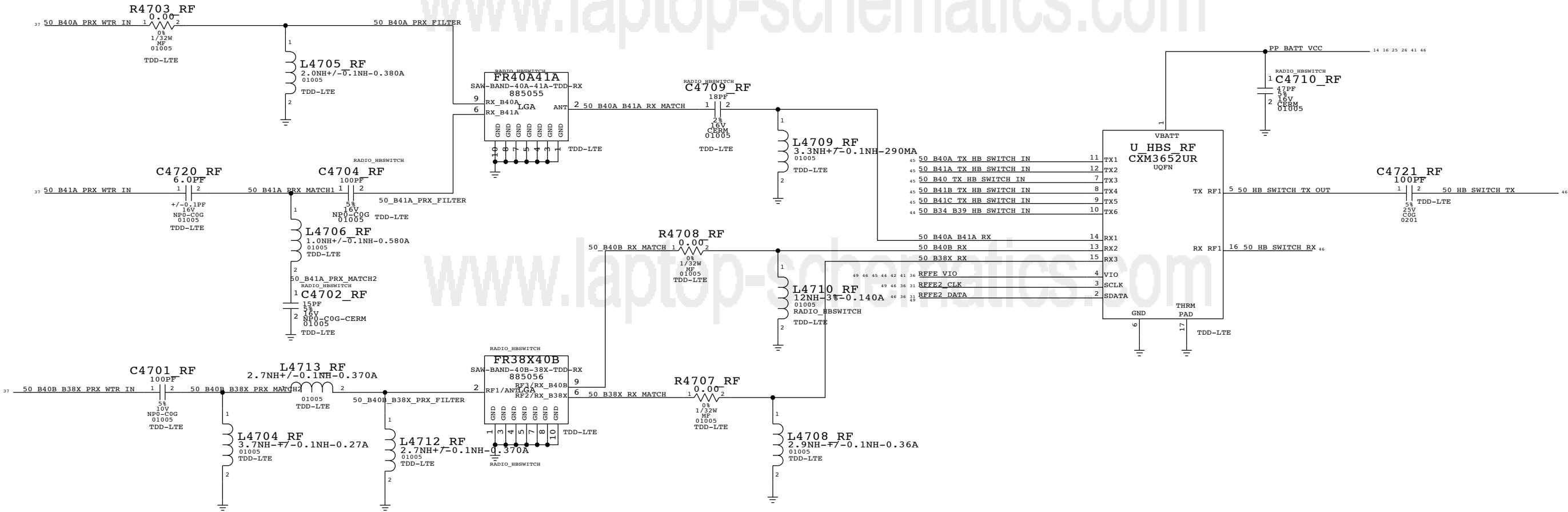
C1702
R1700
L4608 RF
U1702



PAGE TITLE		
ANTENNA SWITCH		
 Apple Inc.	DRAWING NUMBER	051-0517
	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	
	PAGE	46 OF 55
	SHEET	46 OF 55

HIGH BAND SWITCH

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



HIGH BAND SWITCH		
 Apple Inc.	DRAWING NUMBER	051-0517
	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	
	PAGE	47 OF 55
	SHEET	47 OF 55

RX DIVERSITY (1)

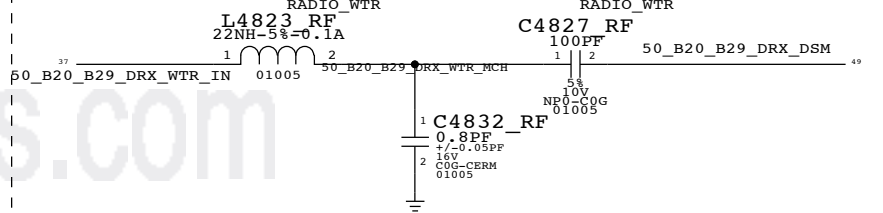
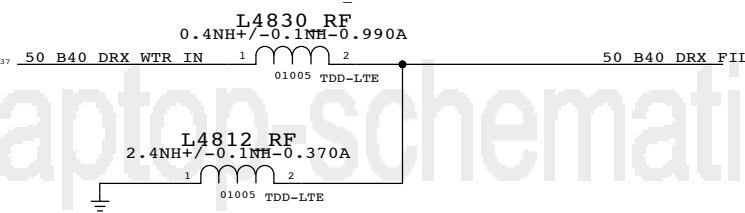
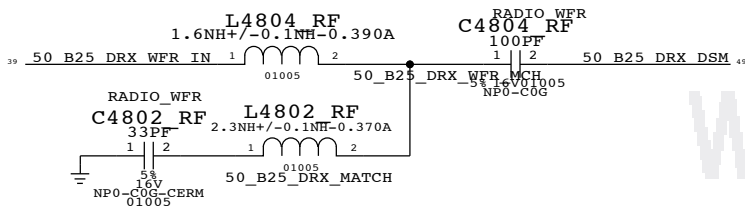
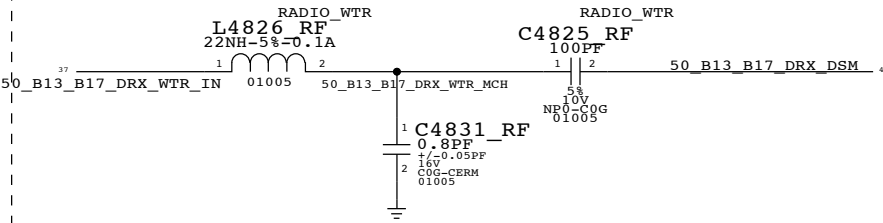
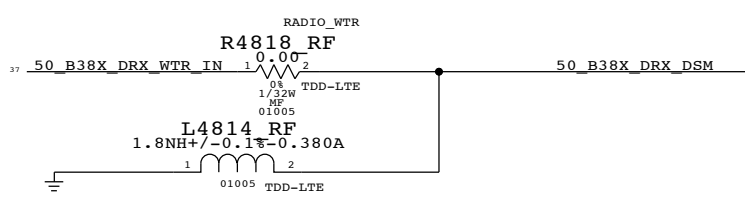
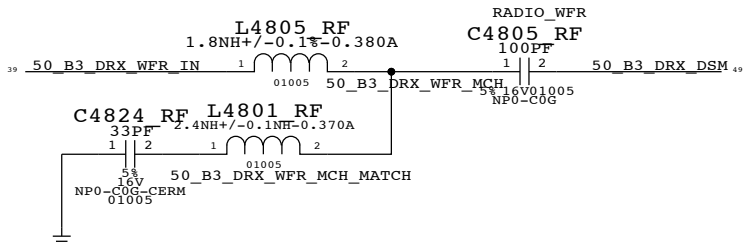
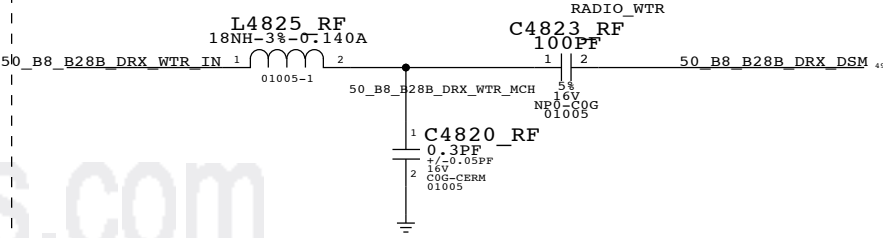
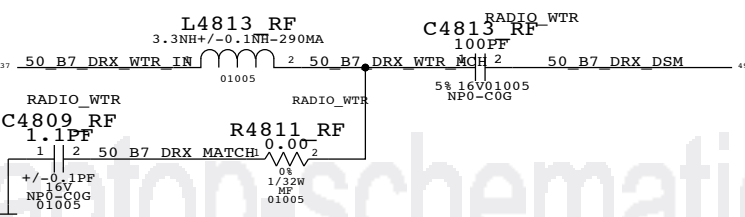
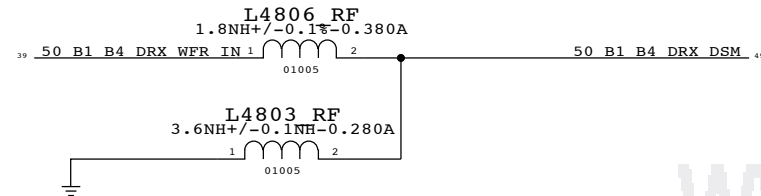
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSES ONLY - NOT A CHANGE REQUEST.

C4826 RF
R1800
L1829
U1801

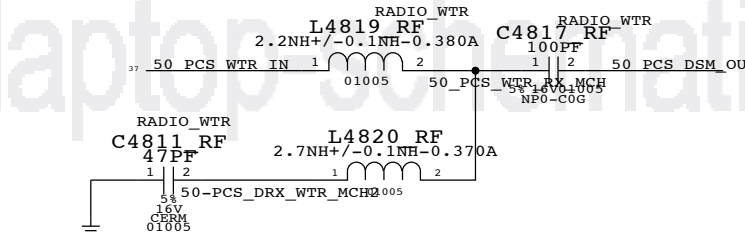
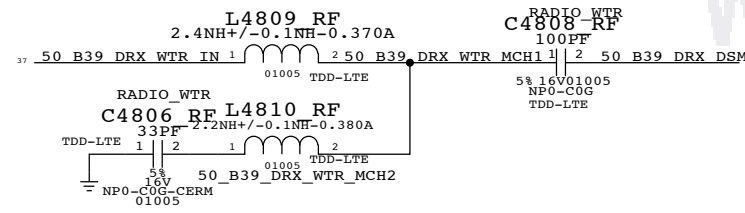
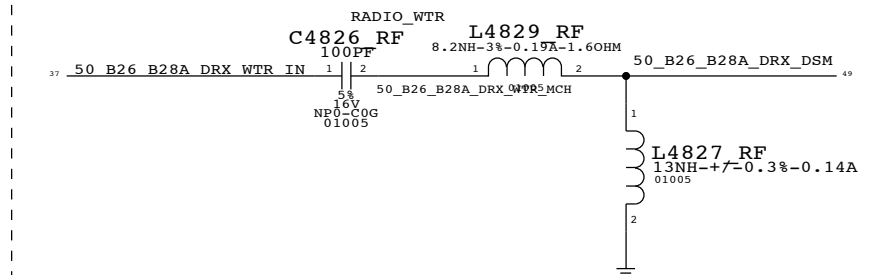
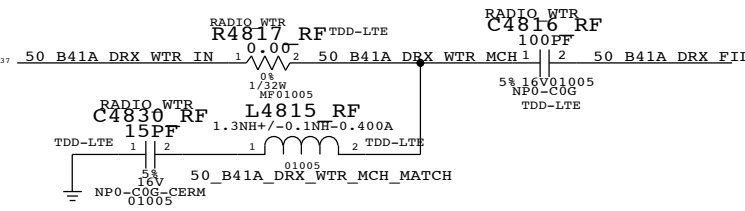
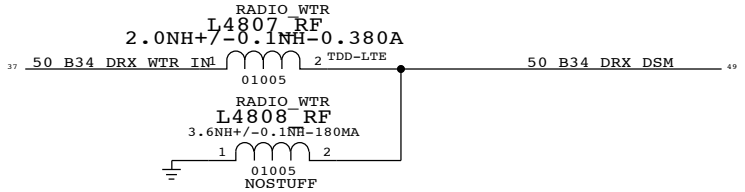
MIDBAND MIDBAND DIVERSITY - WFR

HIGHBAND DIVERSITY - WTR

LOWBAND DIVERSITY - WTR



MIDBAND DIVERSITY - WTR

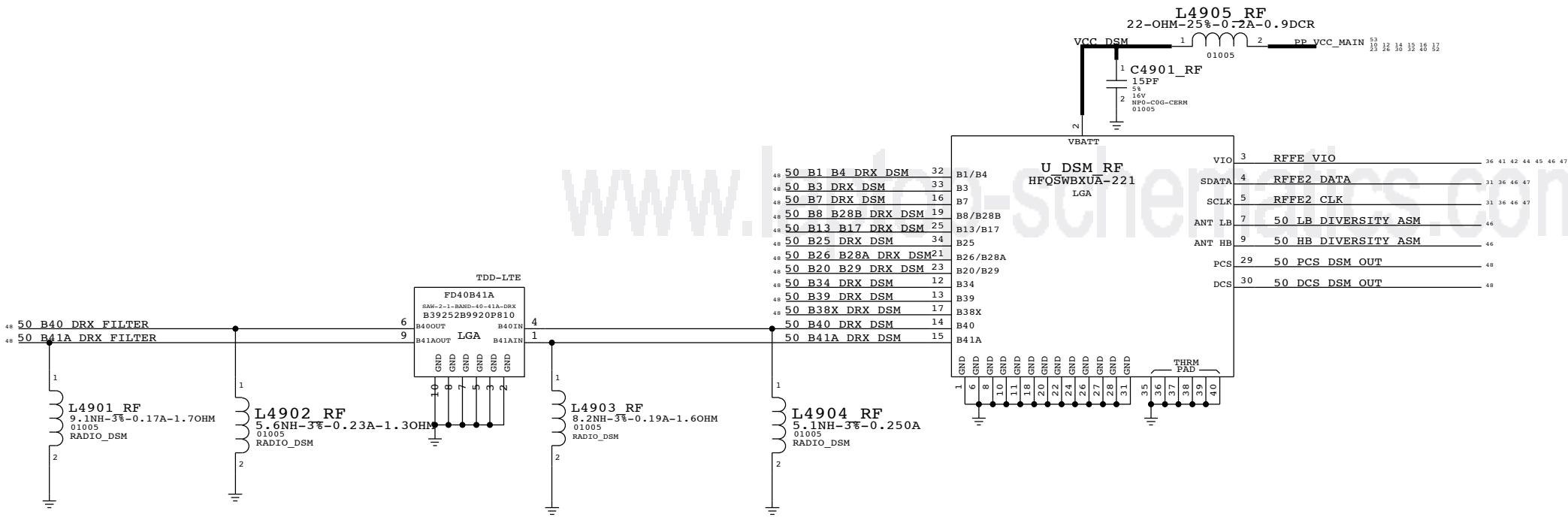


PAGE TITLE						
RX DIVERSITY						
	Apple Inc.		DRAWING NUMBER	051-0517	SIZE	D
	NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		REVISION		6.0.0	
			BRANCH			
			PAGE		48 OF 55	
			SHEET		48 OF 55	

RX DIVERSITY (2)

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

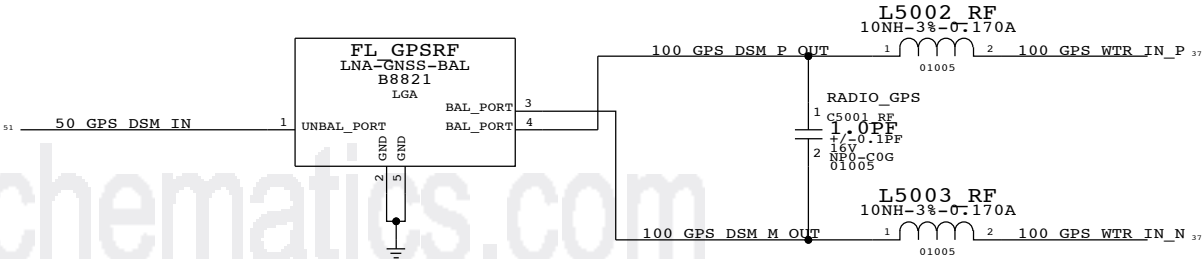
C1900
R1900
L1900
U1901



GPS

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

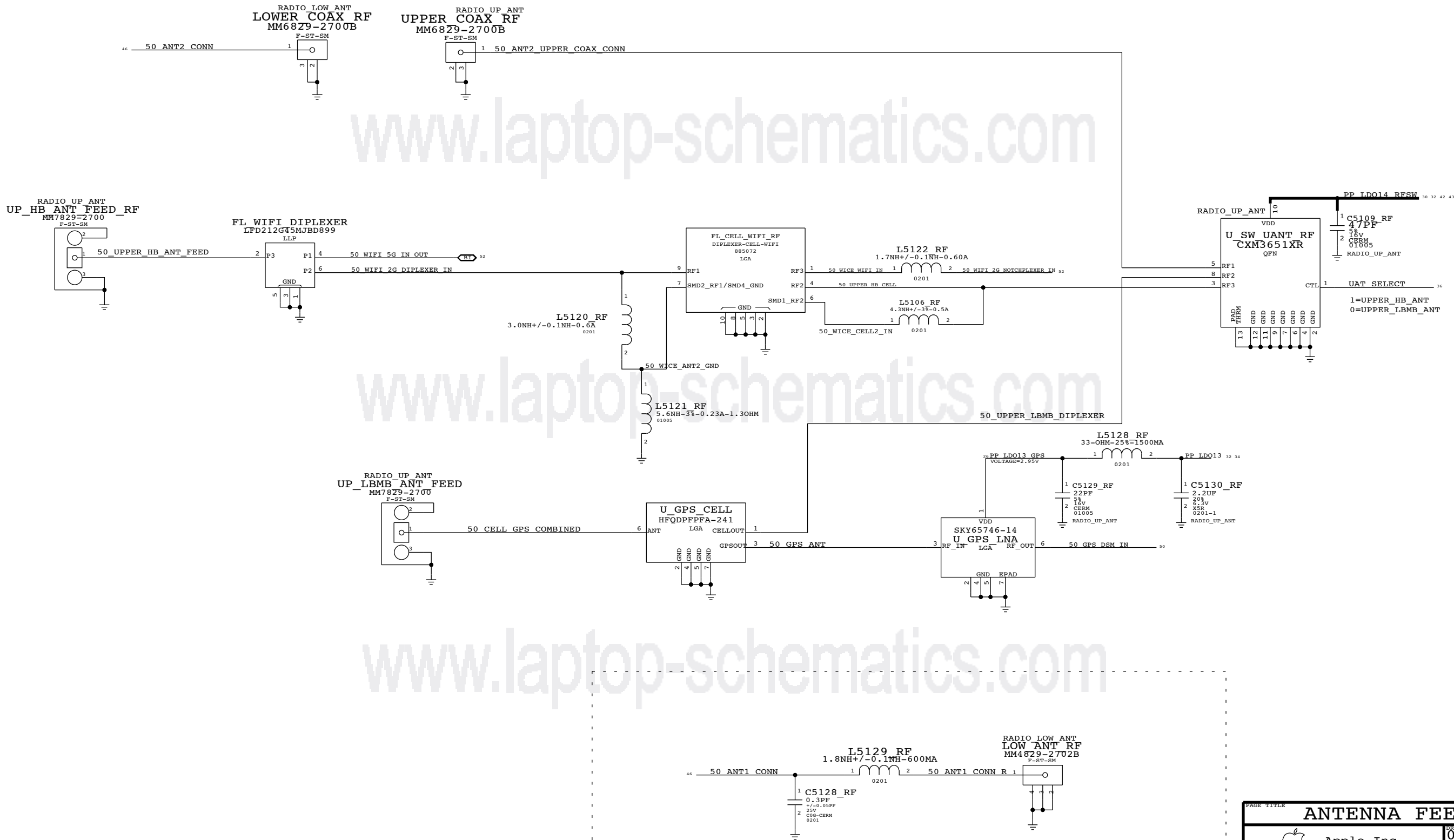
C1900
R1900
L1900
U1901



ANTENNA FEED'S

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

TEST & COAX CONNECTOR FOR LOWER SECTION OF MLB



PAGE TITLE		
ANTENNA FEEDS		
 Apple Inc.	DRAWING NUMBER	051-0517
	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:		PAGE
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		51 OF 55
II NOT TO REPRODUCE OR COPY IT		SHEET
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		51 OF 55
IV ALL RIGHTS RESERVED		

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



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

SYNC MASTER=N56 RADIO MLB PAGE 1 OF 1		SYNC DATE=05/07/2014 A	
WIFI/BT: MODULE AND FRONT END			
 Apple Inc.		DRAWING NUMBER 051-0517	SIZE D
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I 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 PAGE 52 OF 55
		SHEET 52 OF 55	

D

C

The schematic diagram illustrates the RF front end of the Stockholm_CDM2 module. Key components and connections include:

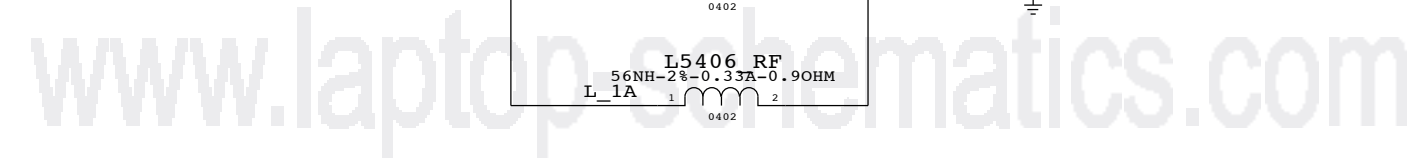
- Resistors:** R5316 (10K), R5303 (10K), R5302 (10K), R5311 (10K), and R5313 (10K).
- Capacitors:** C4 (10K), C3 (10K), and C5311 (10K).
- Inductors:** L5301 (10K), L5302 (10K), and L5303 (10K).
- RF Front End:** The diagram shows the connection of the RF input (RF1) and the RF output (RF2) to the module pins. The RF input is connected to the RF1 pin, and the RF output is connected to the RF2 pin.
- Power and Ground:** The diagram shows the connection of the power supply (VCC) and ground (GND) to the module pins.

B

A

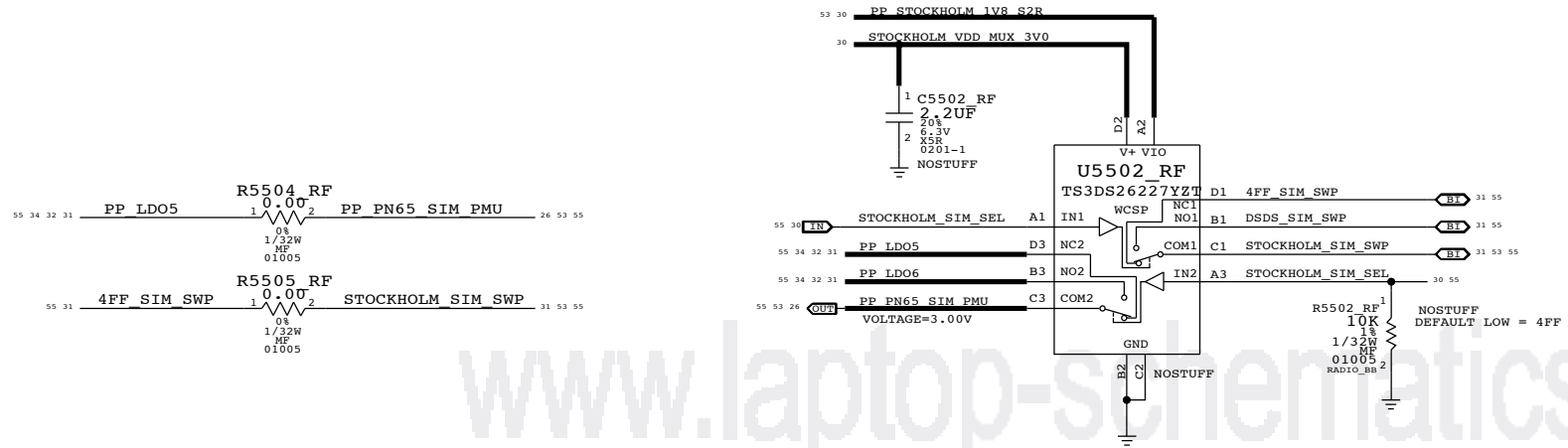
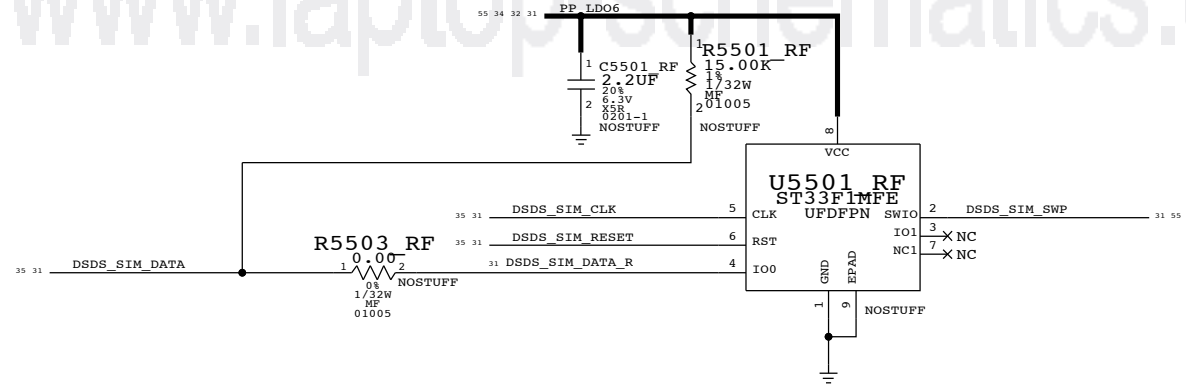
SYNC MASTER=N56 RADIO MLB		SYNC DATE=05/07/2014	
PAGE TITLE			
 Apple Inc.		DRAWING NUMBER 051-0517	
		REVISION 6.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		PAGE 53 OF 55	
		SHEET 53 OF 55	

www.laptop-schematics.com



DSDS

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



PAGE TITLE		DRAWING NUMBER		SIZE	
JUMPER		051-0517		D	
 Apple Inc.		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			
		PAGE		55 OF 55	
		SHEET		55 OF 55	