

VICE MLB

2/4/2010 PVT K48-DRI

REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
B	0000854735	PRODUCTION RELEASED		2010-02-04

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.

D
C
B
A

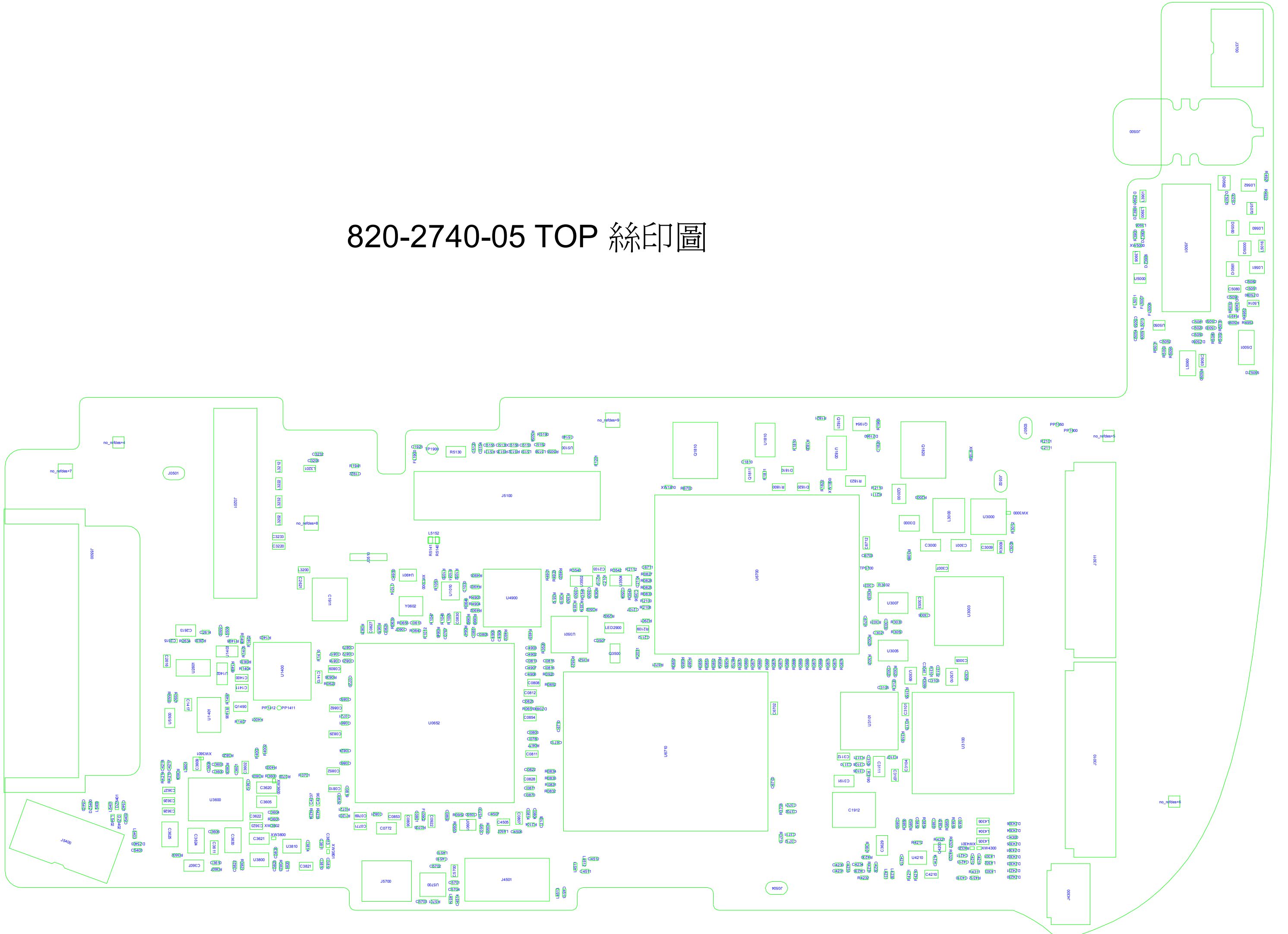
D
C
B
A

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24	31	GRAPE 2 OF 2	JAMES	12/21/2009					
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26	34	MOTION, GYRO, COMPASS/THERM	MIAMI	09/16/2009					
27	35	USB MUX/BRK DET	MIAMI	09/16/2009					
28	36	L61 AUDIO INTERFACE	AUDIO	12/04/2009					
29	37	AUDIO: SPEAKER AMP	AUDIO	12/04/2009					
30	38	AUDIO: HEADPHONE OUT	AUDIO	12/04/2009					
31	39	AUDIO: LINE OUT DOCK ESD CIRCUIT	AUDIO	12/04/2009					

DRAWING
TITLE=0230
ASSEMBLY DRAWING
LAST_MODIFIED=Thu Feb 4 09:41:44 2010

DRAWING TITLE		VICE MLB	
Apple Inc.	DRAWING NUMBER	051-8245	SIZE
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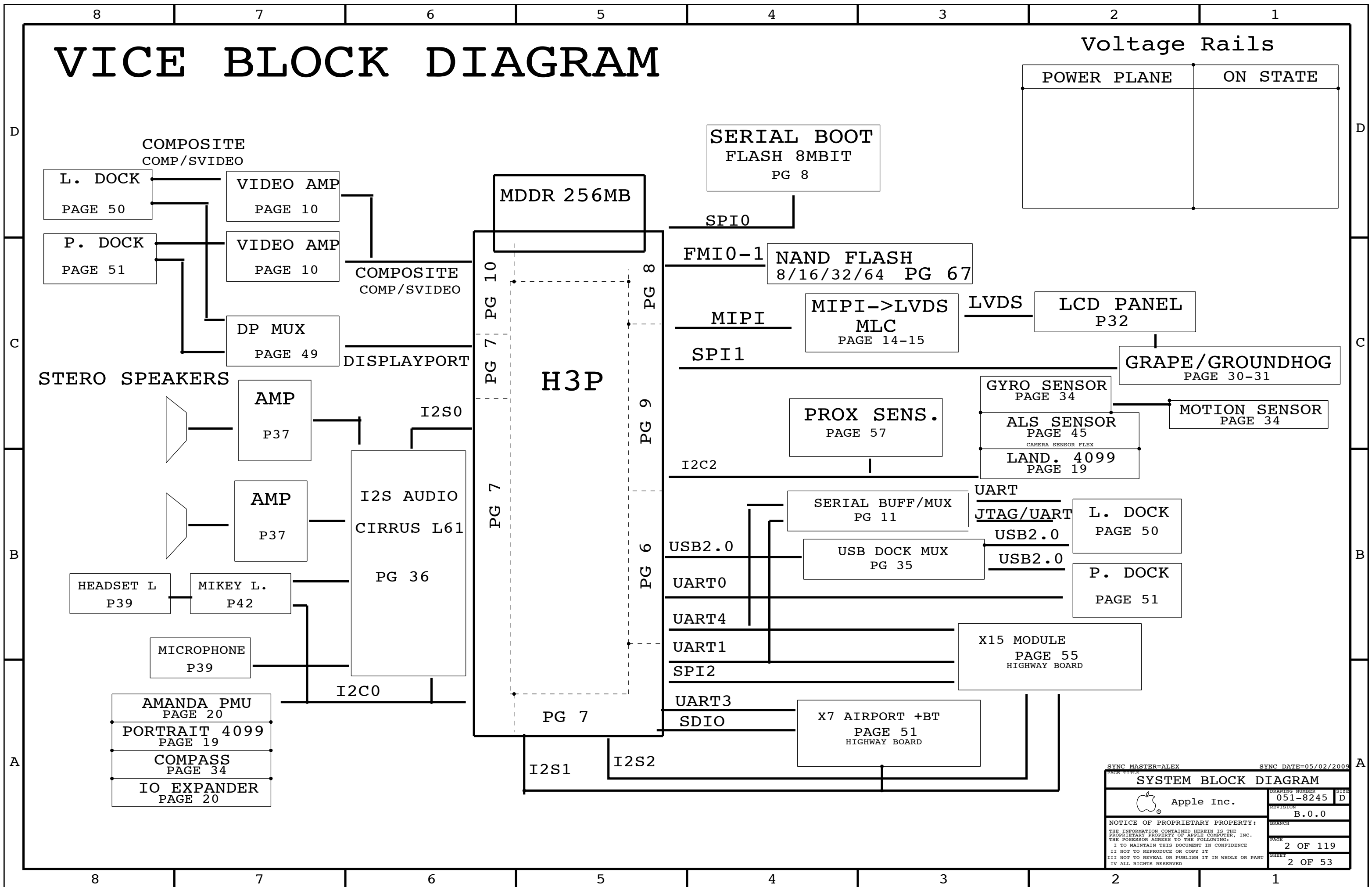
820-2740-05 TOP 絲印圖



VICE BLOCK DIAGRAM

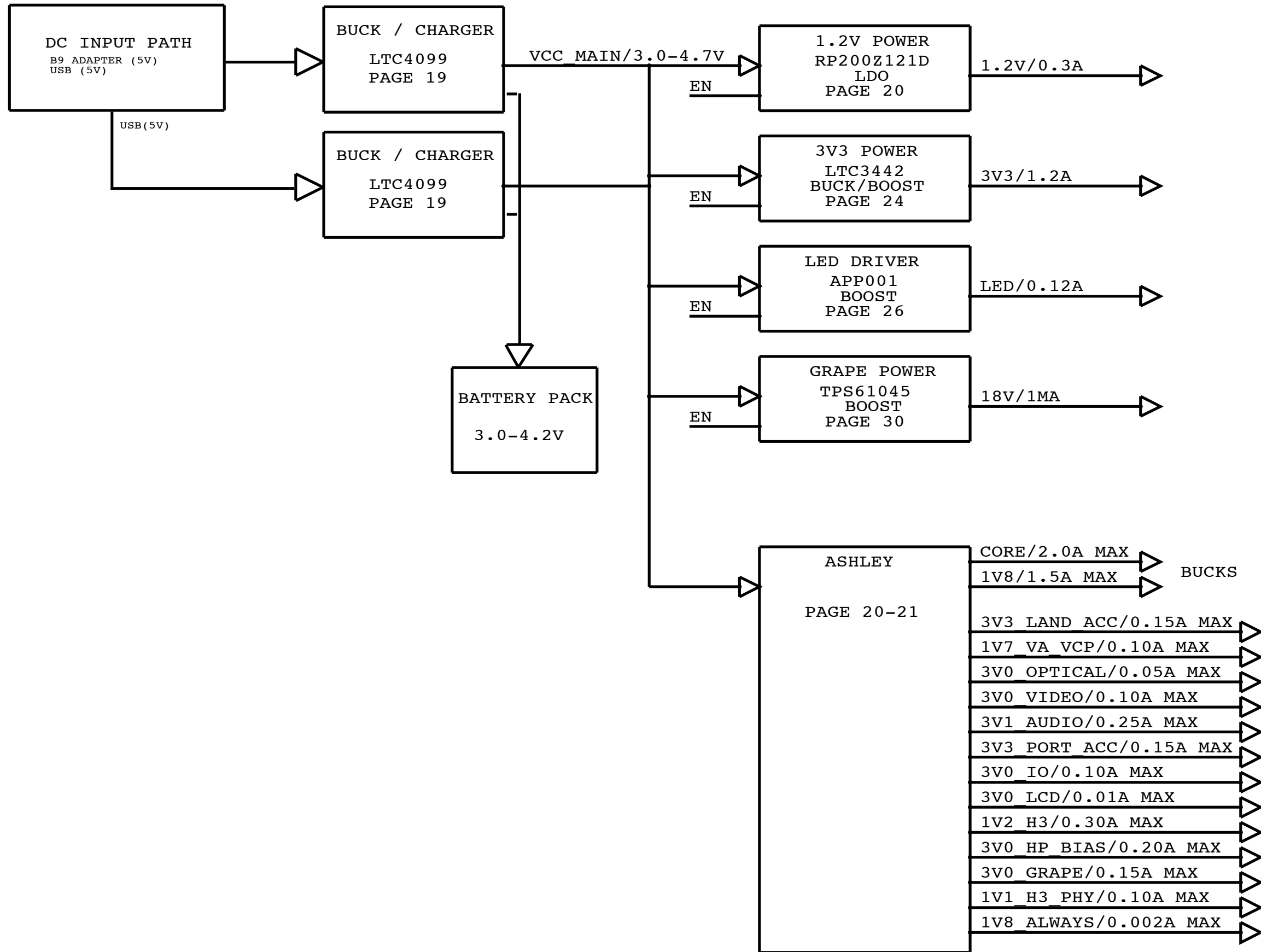
Voltage Rails

POWER PLANE	ON STATE



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SYSTEM BLOCK DIAGRAM			
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POWER BLOCK DIAGRAM



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POWER BLOCK DIAGRAM

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Page Notes

Power aliases required by this page:
(NONE)

Signal aliases required by this page:
(NONE)

BOM options provided by this page:

ALL AVAIL BOM OPTIONS

COMMON
ALTERNATE
DEMUX
32GB_FLASH_SAM
32GB_FLASH
16GB_FLASH
16GB_FLASH_TOSH
8GB_FLASH
8GB_FLASH_SAM
BKLT_PLL
CAMERA
JTAG_2_WIRE
JTAG_1_WIRE
PRODUCTION
DEVELOPMENT
ADD19
MIKEY
INTERNAL_MIC
LANDSCAPE_DOCK
LEFT_HS
LINE_OUT_1
LINE_OUT_2
PORTRAIT_DOCK

SPEAKER

ADD DEVELOPMENT AND OTHER BOMS ONCE YOU GET BOM NUMBERS

BOM GROUP	BOM OPTIONS
BASIC	COMMON, ALTERNATE
AUDIO	LEFT_HS, SPEAKER, INTERNAL_MIC

USE SCHUTIL BOMCONFIG TO GENERATE CONFIG FILE.
PUT CONFIG FILE AT SAME LEVEL AS .CPM FILE
USE "READ BOM-CONFIG" BUTTON ON DMS TO READ IN BOMS

BOM OPTIONS

PROGRAMMABLE PARTS

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

SCH AND BOARD P/N

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
051-8245	1	SCHEM, VICE, MLB, K48	SCH1	
820-2740	1	PCBA, VICE, MLB, K48	PCB1	

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
085-1028	1	DEV, VICE, MLB, K48	DEV1	K48_DEV
085-1133	1	DEV, VICE, MLB, K48H	DEV1	K48M_DEV

VICE BOM OPTIONS

USE 825-6447
NEED MORE LINE ITEMS FOR OTHER CONFIGURATIONS
BARCODE LABEL/EEE CODES

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-7456	1	EEE FOR 639-0455 (16G)	EEE_BWY	CRITICAL	EEE_16G
825-7456	1	EEE FOR 639-0601 (32G)	EEE_D66	CRITICAL	EEE_32G
825-7456	1	EEE FOR 639-0598 (64G)	EEE_D61	CRITICAL	EEE_64G
825-7456	1	EEE FOR 639-0602 (16G)M	EEE_D67	CRITICAL	EEE_16G_M
825-7456	1	EEE FOR 639-0599 (32G)M	EEE_D62	CRITICAL	EEE_32G_M
825-7456	1	EEE FOR 639-0600 (64G)M	EEE_D63	CRITICAL	EEE_64G_M

SYNC MASTER=MIAMI SYNC DATE=08/06/2009

CONFIGURATION OPTIONS

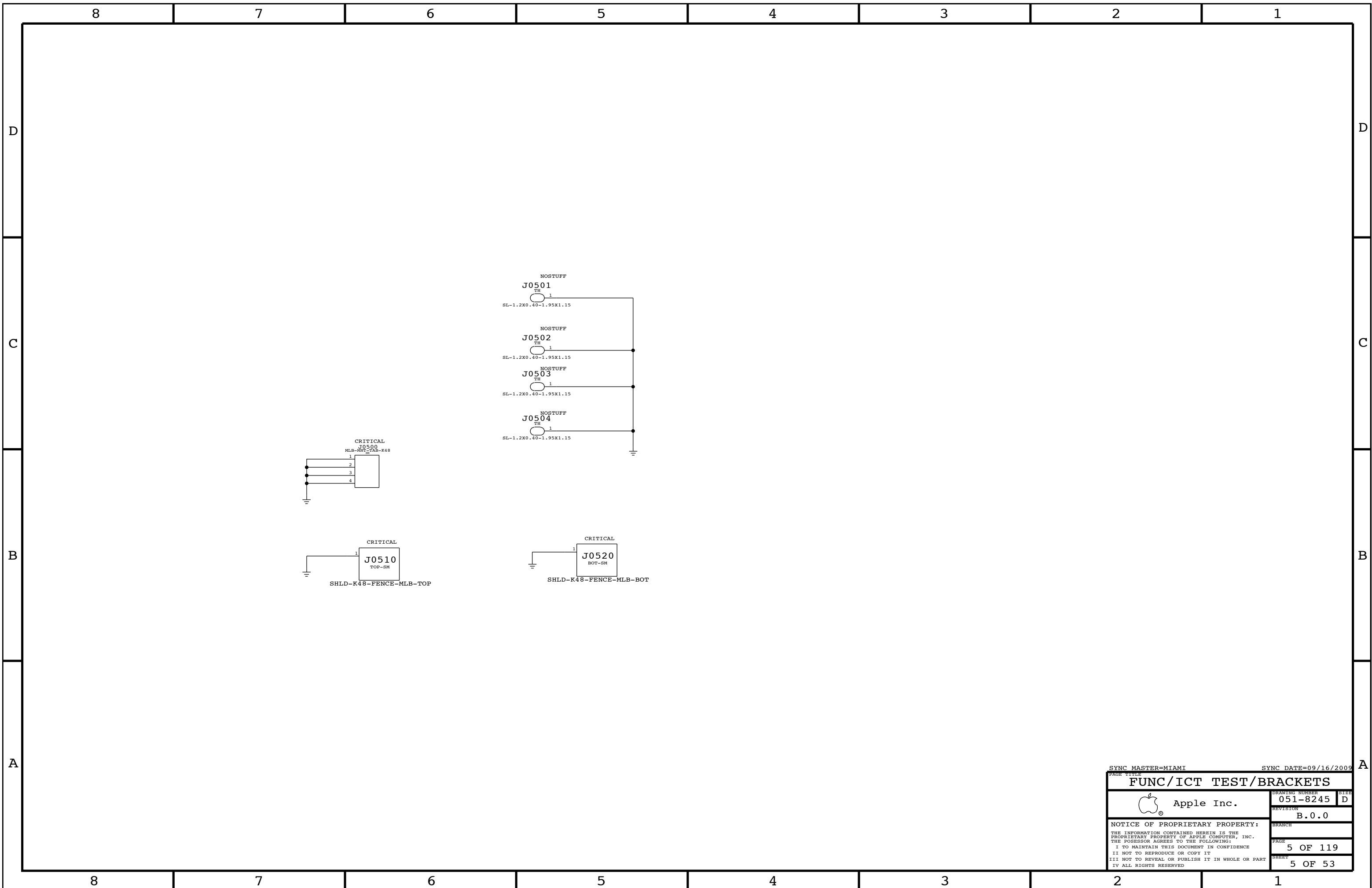
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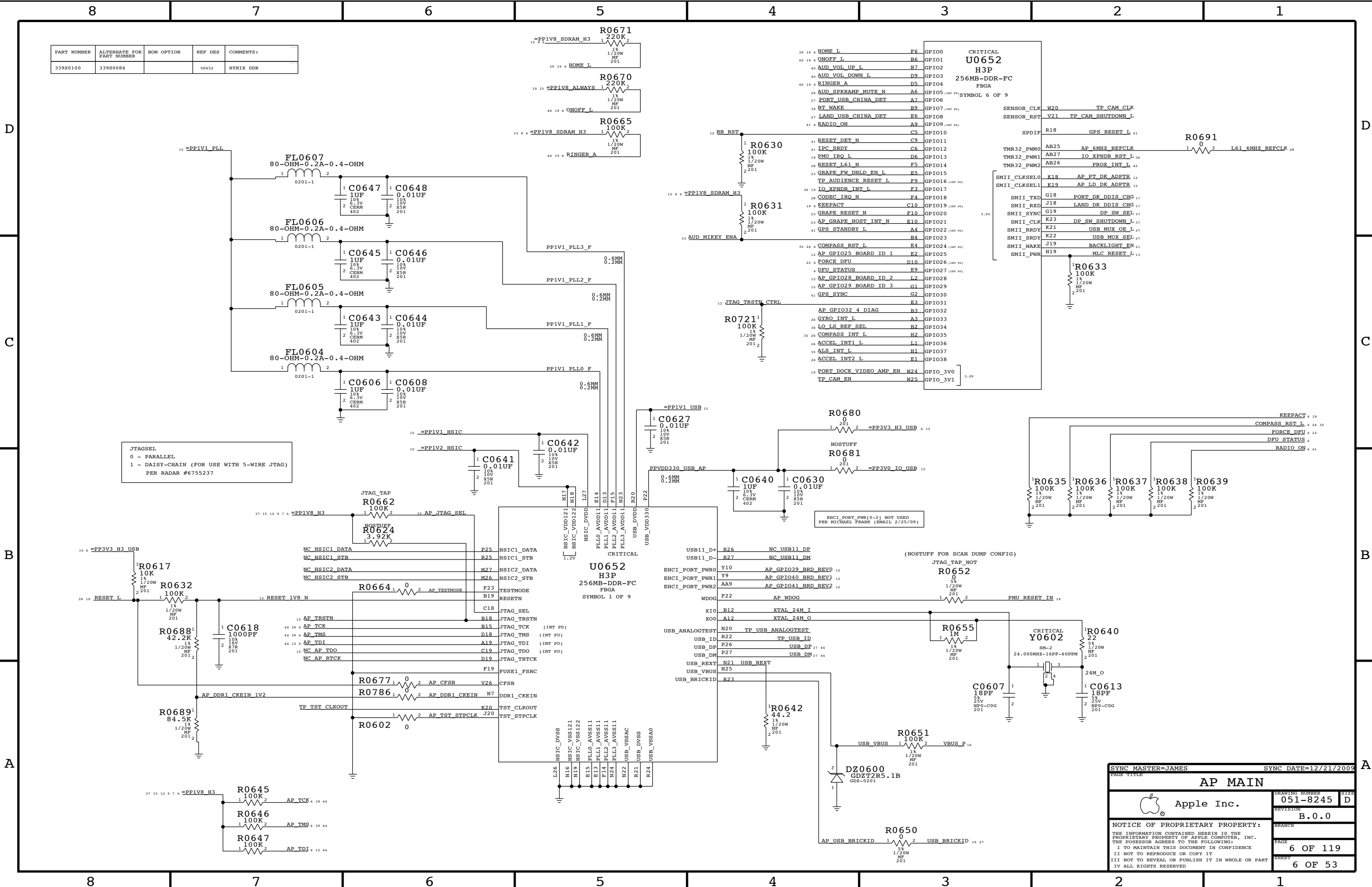
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SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
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PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339S0100	339S0084		U0652	HYNIX DDR



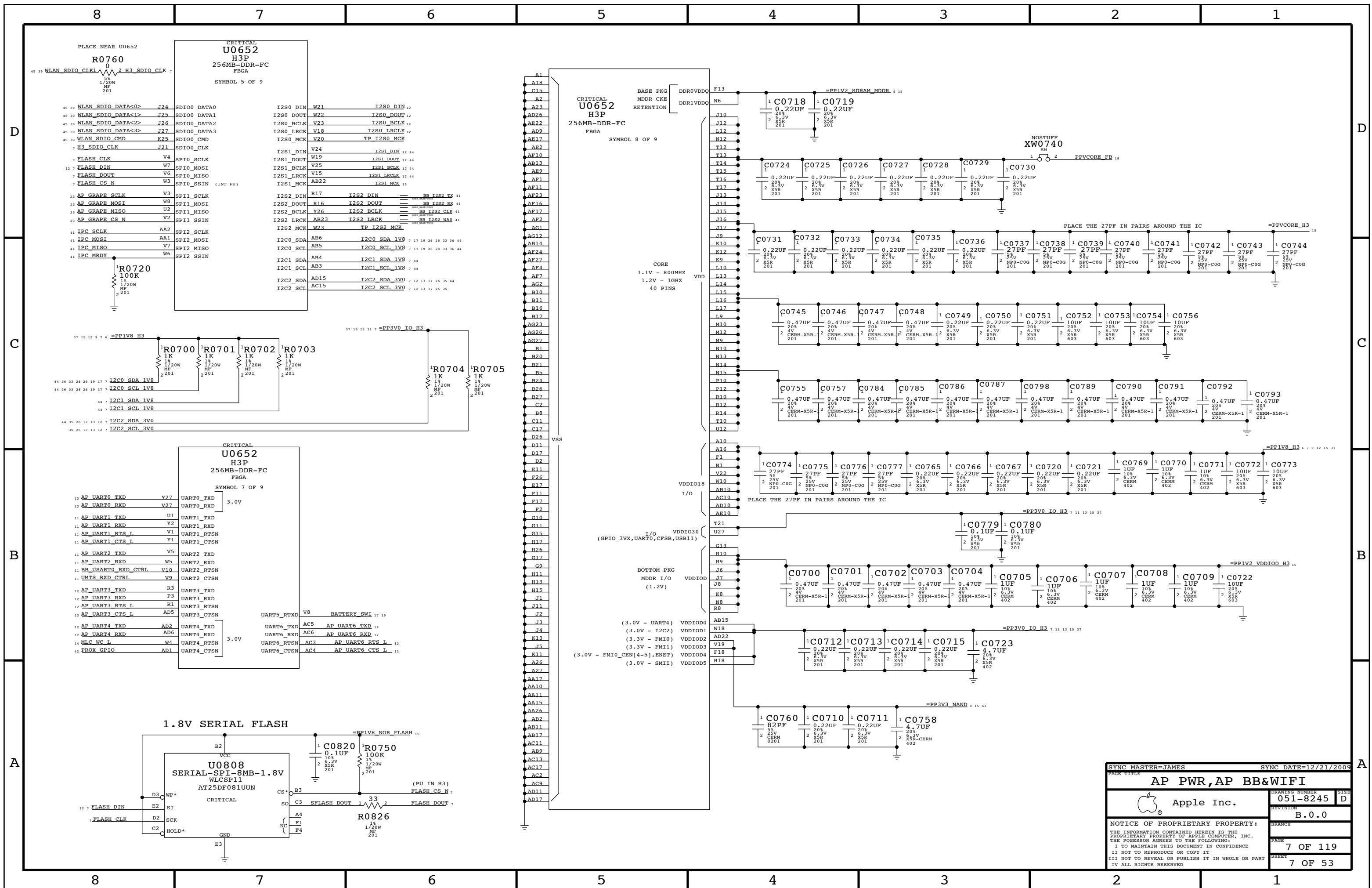
JTAGSEL
 0 - PARALLEL
 1 - DAISY-CHAIN (FOR USE WITH 5-WIRE JTAG)
 PER RADAR #6755237

EHCI PORT PWR(0-2) NOT USED
 PER MICHAEL FRANK (EMAIL 2/25/09)

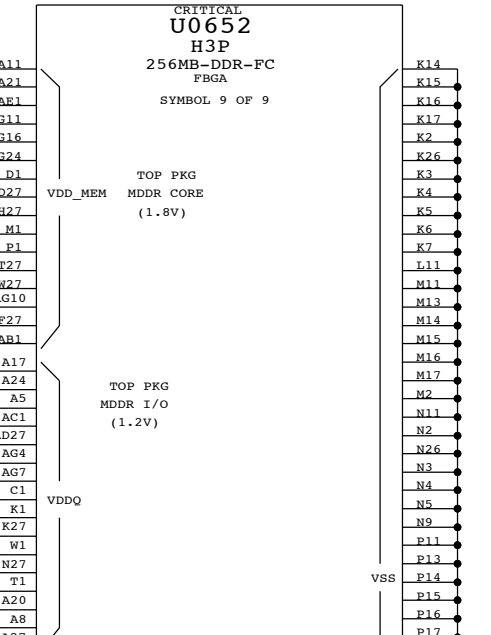
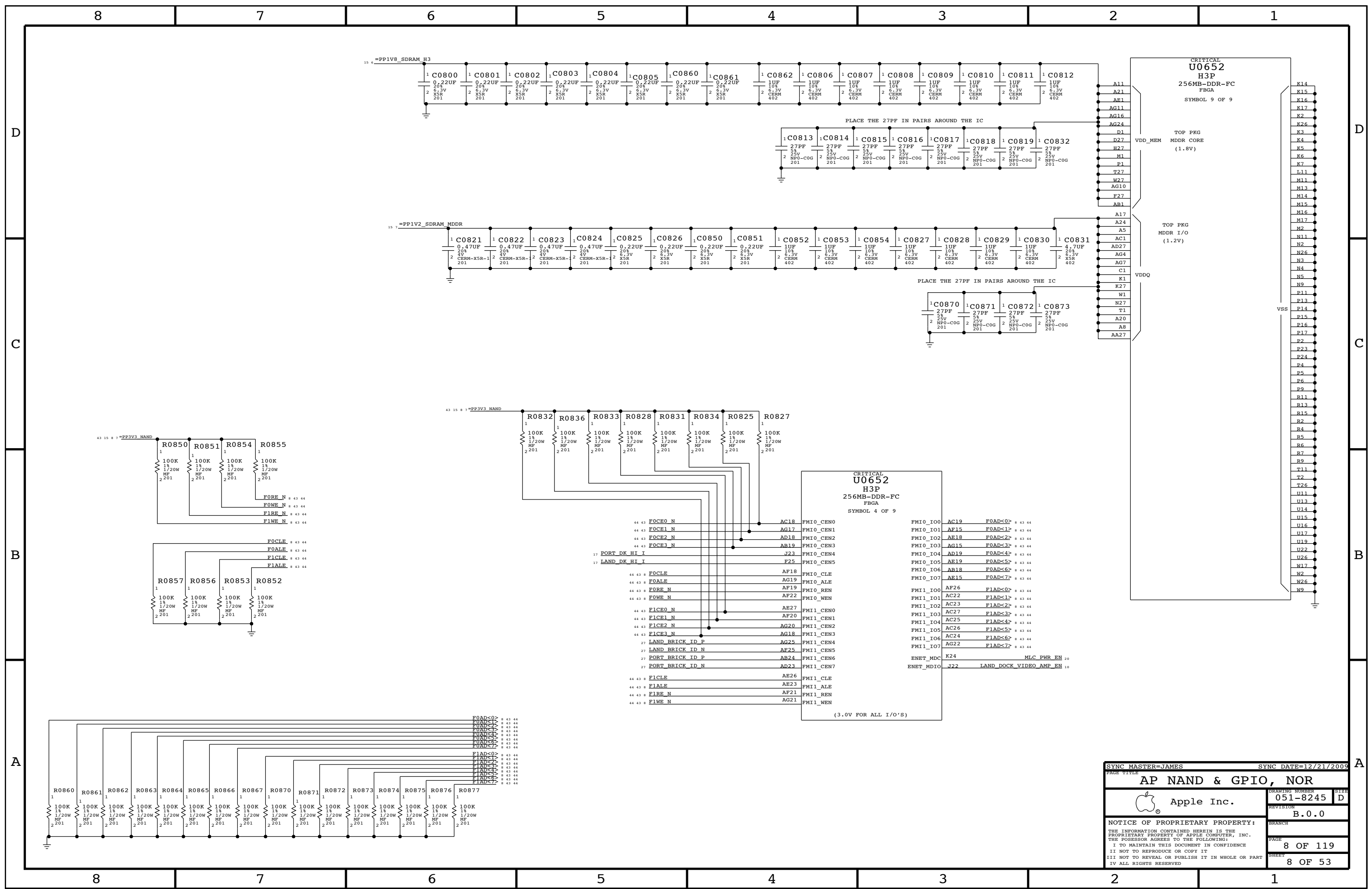
(NOSTUFF FOR SCAN DUMP CONFIG)

Pin	Signal	IC
Y10	AP GPIO39 BRD REV0	U0652
Y9	AP GPIO40 BRD REV1	U0652
AA9	AP GPIO41 BRD REV2	U0652
F22	AP WDOG	U0652
X10	XTAL 24M I	U0652
X00	XTAL 24M O	U0652
N20	TP USB ANALOGTEST	U0652
R22	TP USB ID	U0652
P26	USB DP ID	U0652
P27	USB DP 27 44	U0652
F27	USB DM 27 44	U0652
N21	USB REXT	U0652
N25	USB VBUS	U0652
R23	USB BRICKID	U0652

PAGE TITLE		SYNC DATE=12/21/2009	
AP MAIN			
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PAGE TITLE		SYNC DATE=12/21/2009	
AP PWR, AP BB&WiFi			
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CRITICAL U0652 H3P 256MB-DDR-FC FBGA
 SYMBOL 4 OF 9

44 43	FOCE0_N	AC18	FMIO_CEN0	FMIO_I00	AC19	FOAD<0>	43 44
44 43	FOCE1_N	AG17	FMIO_CEN1	FMIO_I01	AF15	FOAD<1>	43 44
44 43	FOCE2_N	AD18	FMIO_CEN2	FMIO_I02	AE18	FOAD<2>	43 44
44 43	FOCE3_N	AB19	FMIO_CEN3	FMIO_I03	AG15	FOAD<3>	43 44
17	PORT_DK_HI_I	J23	FMIO_CEN4	FMIO_I04	AD19	FOAD<4>	43 44
17	LAND_DK_HI_I	F25	FMIO_CEN5	FMIO_I05	AE19	FOAD<5>	43 44
44 43	FOCLE	AF18	FMIO_CLE	FMIO_I06	AB18	FOAD<6>	43 44
44 43	FOALE	AG19	FMIO_ALE	FMIO_I07	AE15	FOAD<7>	43 44
44 43	FORE_N	AF19	FMIO_REN	FMII_I00	AF26	FIAD<0>	43 44
44 43	FOWE_N	AF22	FMIO_WEN	FMII_I01	AC22	FIAD<1>	43 44
44 43	FICE0_N	AE27	FMII_CEN0	FMII_I02	AC23	FIAD<2>	43 44
44 43	FICE1_N	AF20	FMII_CEN1	FMII_I03	AC27	FIAD<3>	43 44
44 43	FICE2_N	AG20	FMII_CEN2	FMII_I04	AC25	FIAD<4>	43 44
44 43	FICE3_N	AG18	FMII_CEN3	FMII_I05	AC26	FIAD<5>	43 44
27	LAND_BRICK_ID_P	AG25	FMII_CEN4	FMII_I06	AC24	FIAD<6>	43 44
27	LAND_BRICK_ID_N	AE25	FMII_CEN5	FMII_I07	AG22	FIAD<7>	43 44
27	PORT_BRICK_ID_P	AB24	FMII_CEN6	ENET_MDC	K24	MLC_PWR_EN	20
27	PORT_BRICK_ID_N	AD23	FMII_CEN7	ENET_MDIO	J22	LAND_DOCK_VIDEO_AMP_EN	10
44 43	FICLE	AE26	FMII_CLE				
44 43	FIALE	AE23	FMII_ALE				
44 43	FIRE_N	AF21	FMII_REN				
44 43	FIWE_N	AG21	FMII_WEN				

(3.0V FOR ALL I/O'S)

SYNC MASTER=JAMES SYNC DATE=12/21/2009

AP NAND & GPIO, NOR

Apple Inc.

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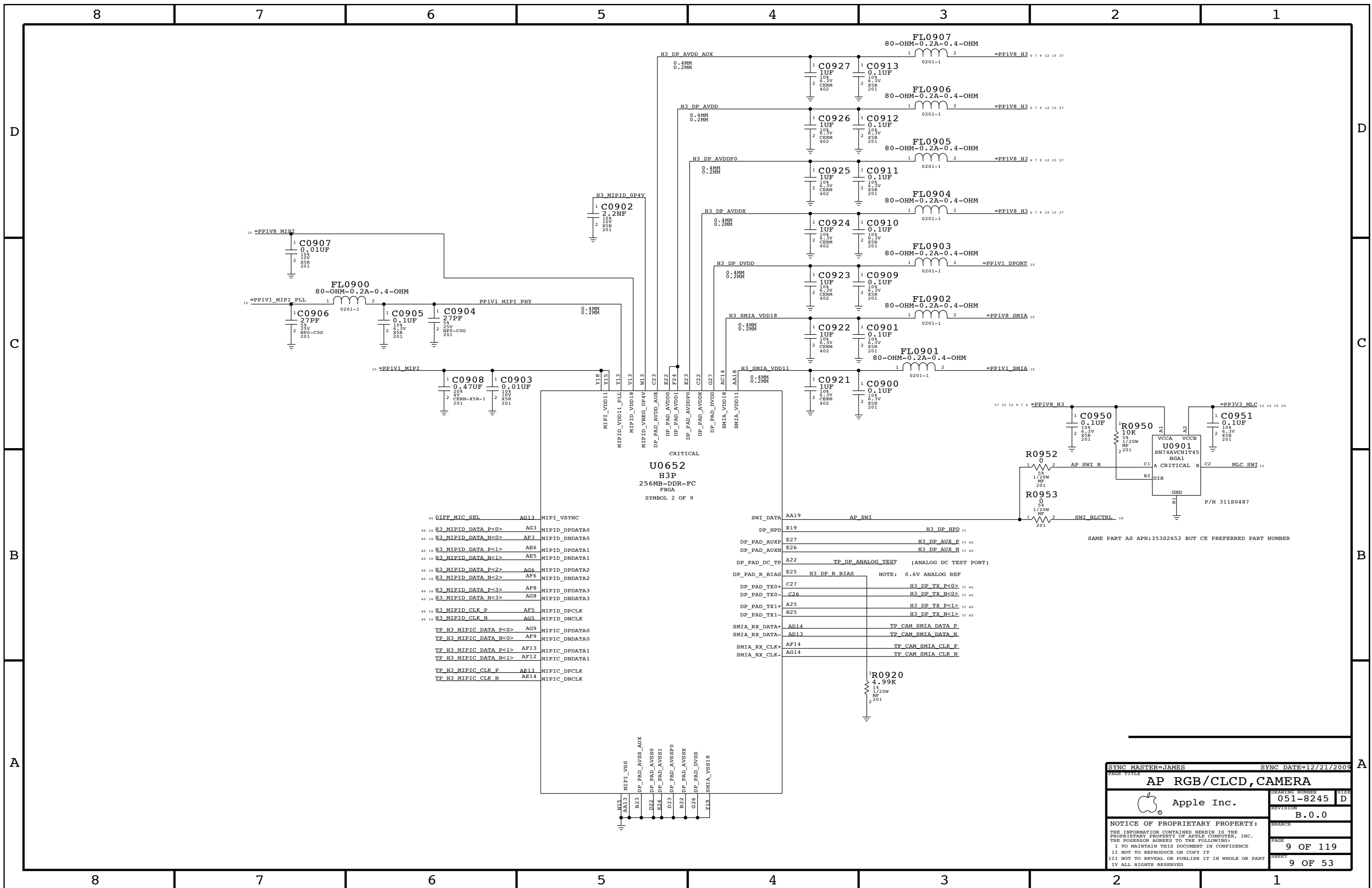
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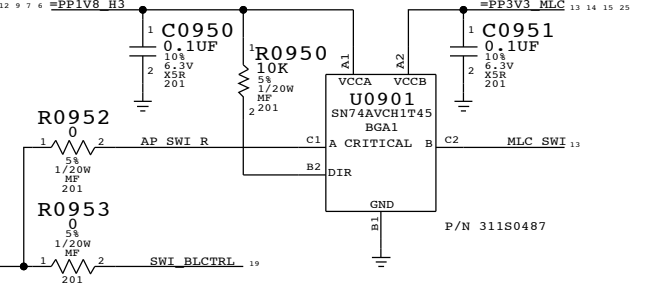
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34 DIFF MIC SEL	AG13	MIPI_VSYNC
45 H3_MIPID_DATA_P<0>	AG3	MIPI_DPDATA0
45 H3_MIPID_DATA_N<0>	AF3	MIPI_DNDATA0
45 H3_MIPID_DATA_P<1>	AE6	MIPI_DPDATA1
45 H3_MIPID_DATA_N<1>	AE5	MIPI_DNDATA1
45 H3_MIPID_DATA_P<2>	AG6	MIPI_DPDATA2
45 H3_MIPID_DATA_N<2>	AF6	MIPI_DNDATA2
45 H3_MIPID_DATA_P<3>	AF8	MIPI_DPDATA3
45 H3_MIPID_DATA_N<3>	AG8	MIPI_DNDATA3
45 H3_MIPID_CLK_P	AF5	MIPI_DPCLK
45 H3_MIPID_CLK_N	AG5	MIPI_DNCLK
TP H3_MIPIC_DATA_P<0>	AG9	MIPI_DPDATA0
TP H3_MIPIC_DATA_N<0>	AF9	MIPI_DNDATA0
TP H3_MIPIC_DATA_P<1>	AF13	MIPI_DPDATA1
TP H3_MIPIC_DATA_N<1>	AF12	MIPI_DNDATA1
TP H3_MIPIC_CLK_P	AE13	MIPI_DPCLK
TP H3_MIPIC_CLK_N	AE14	MIPI_DNCLK

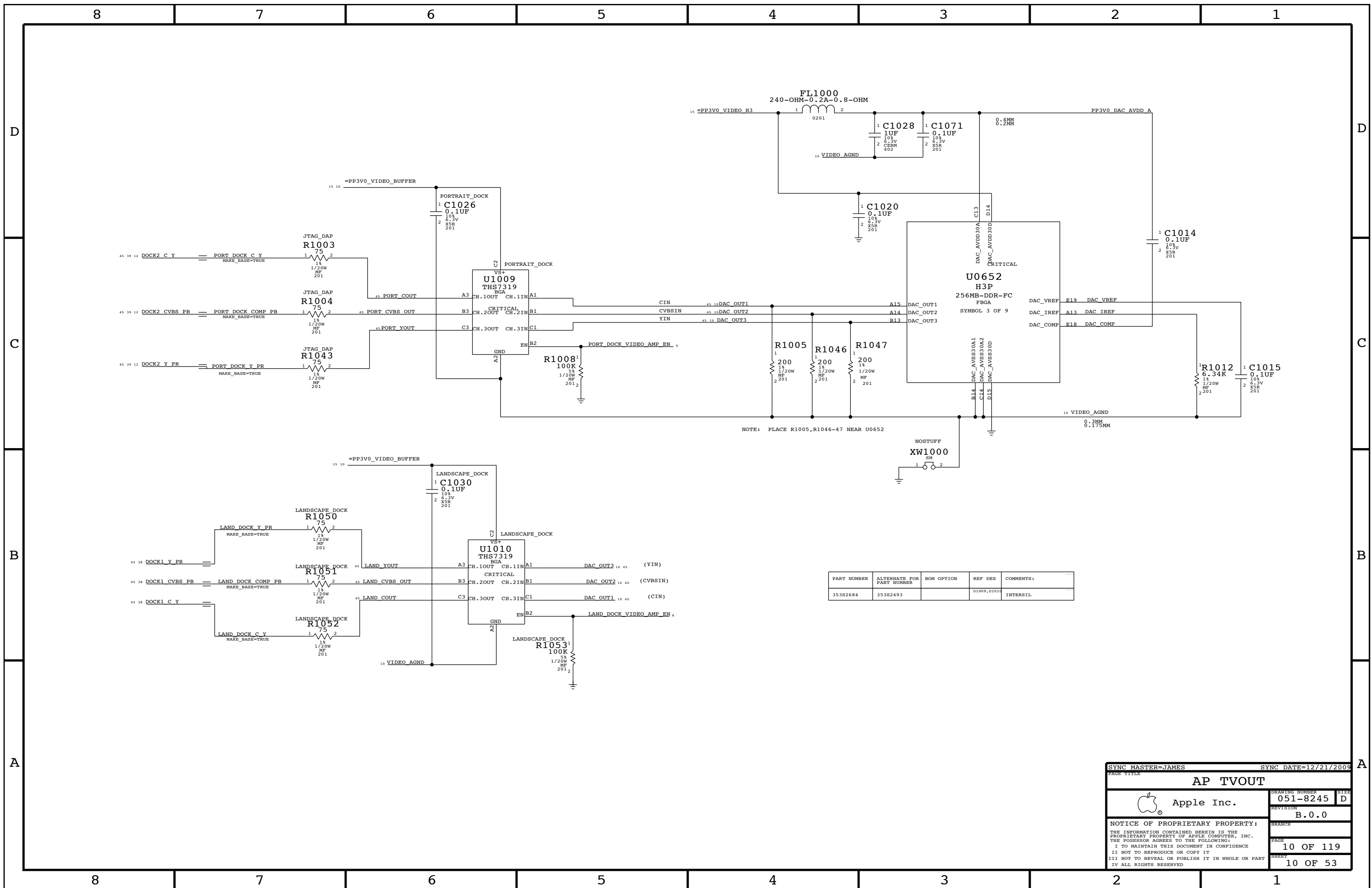
CRITICAL
U0652
H3P
 256MB-DDR-FC
 FBGA
 SYMBOL 2 OF 9

SWI_DATA	AA19	AP_SWI
DP_HPD	R19	H3_DP_HPD
DP_PAD_AUXP	E27	H3_DP_AUX_P
DP_PAD_AUXN	E26	H3_DP_AUX_N
DP_PAD_DC_TP	A22	TP_DP_ANALOG_TEST (ANALOG DC TEST PORT)
DP_PAD_R_BIAS	E25	H3_DP_R_BIAS NOTE: 0.6V ANALOG REF
DP_PAD_TX0+	C27	H3_DP_TX_P<0>
DP_PAD_TX0-	C26	H3_DP_TX_N<0>
DP_PAD_TX1+	A25	H3_DP_TX_P<1>
DP_PAD_TX1-	B25	H3_DP_TX_N<1>
SMIA_RX_DATA+	AD14	TP_CAM_SMIA_DATA_P
SMIA_RX_DATA-	AD13	TP_CAM_SMIA_DATA_N
SMIA_RX_CLK+	AF14	TP_CAM_SMIA_CLK_P
SMIA_RX_CLK-	AG14	TP_CAM_SMIA_CLK_N



SAME PART AS APN:353S2652 BUT CE PREFERRED PART NUMBER

SYNC MASTER=JAMES		SYNC DATE=12/21/2009	
PAGE TITLE AP RGB/CLCD, CAMERA			
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NOTE: PLACE R1005,R1046-47 NEAR U0652

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
35382684	35382493		U1009,U1010	INTERSIL

SYNC MASTER=JAMES SYNC DATE=12/21/2009

AP TVOUT

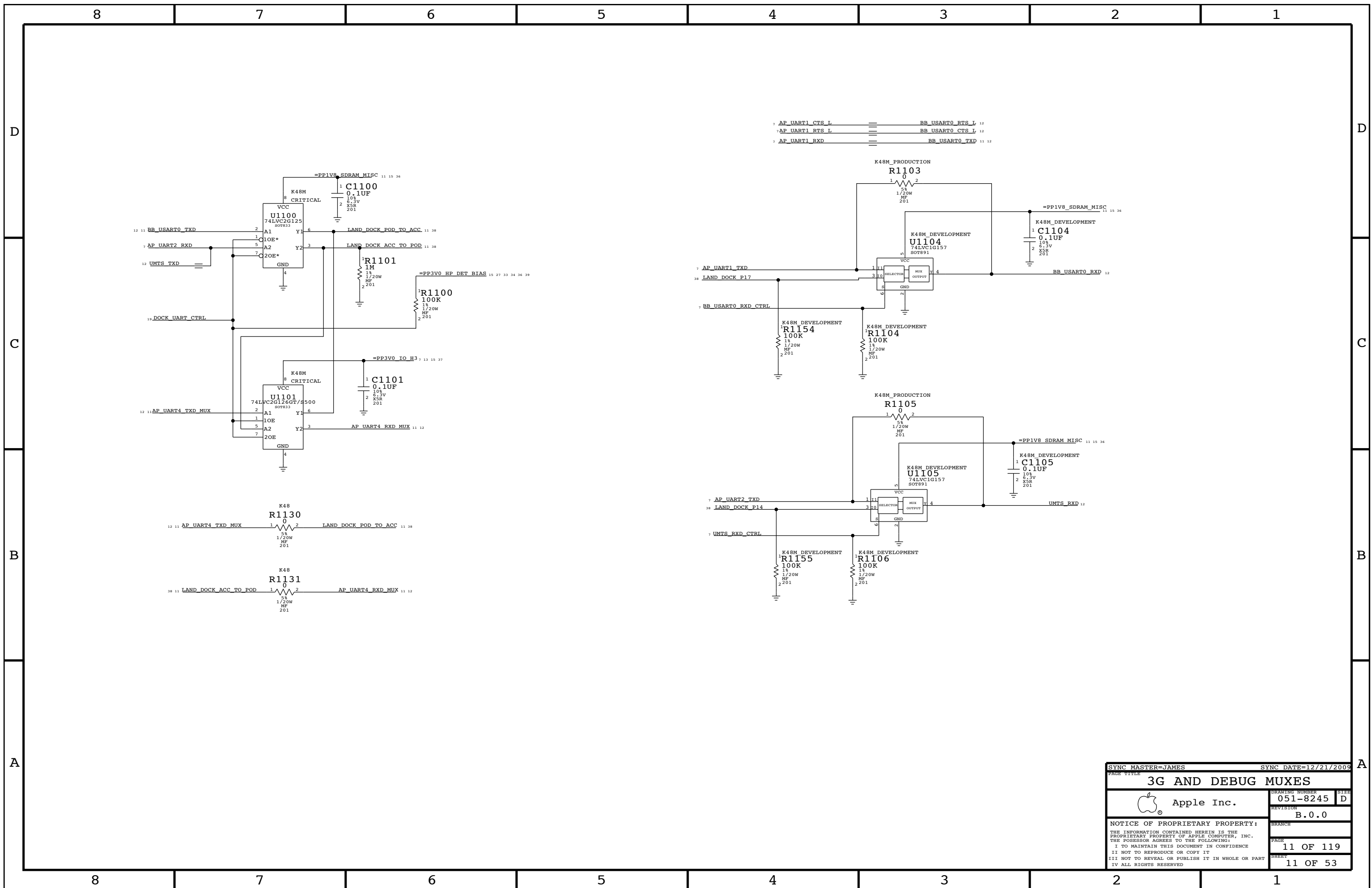
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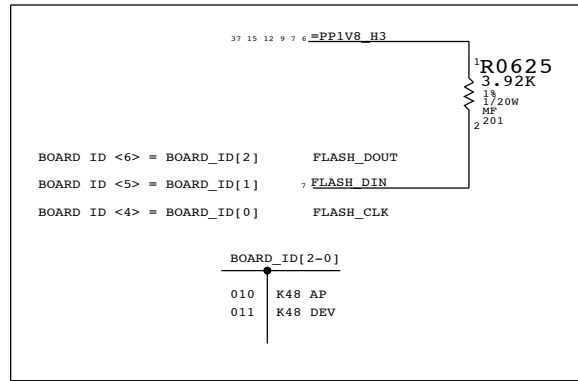
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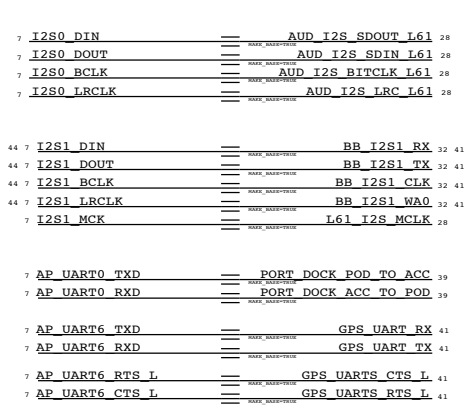


SYNC MASTER=JAMES		SYNC DATE=12/21/2009	
PAGE TITLE 3G AND DEBUG MUXES			
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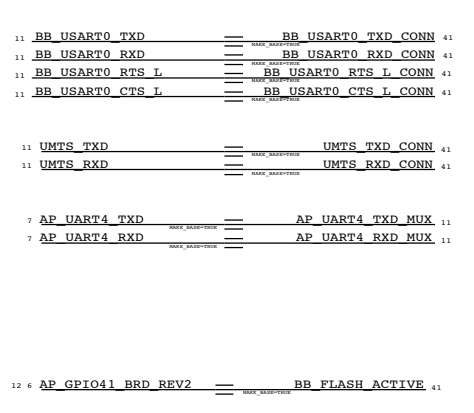
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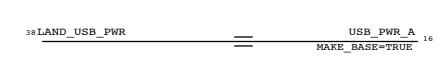
ALIASES FROM PAGE 7



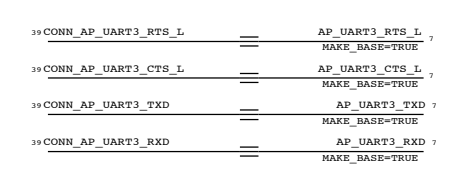
ALIASES FROM PAGE 11



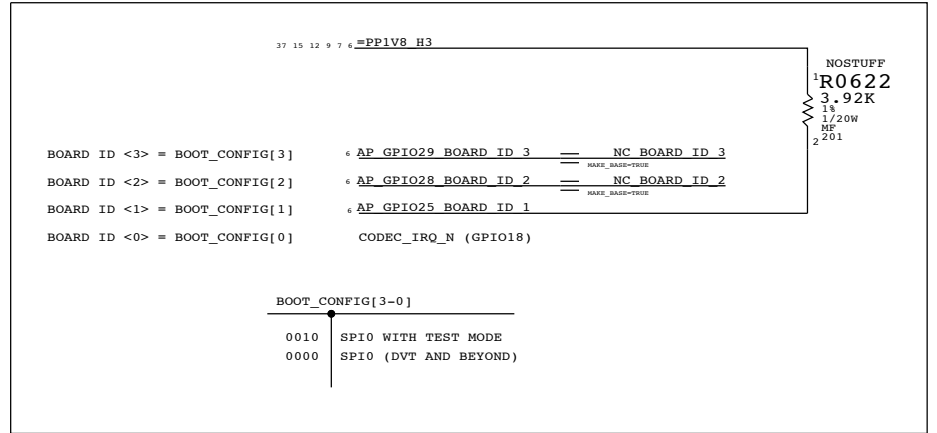
ALIASES FROM PAGE 50



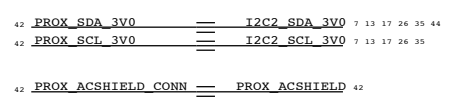
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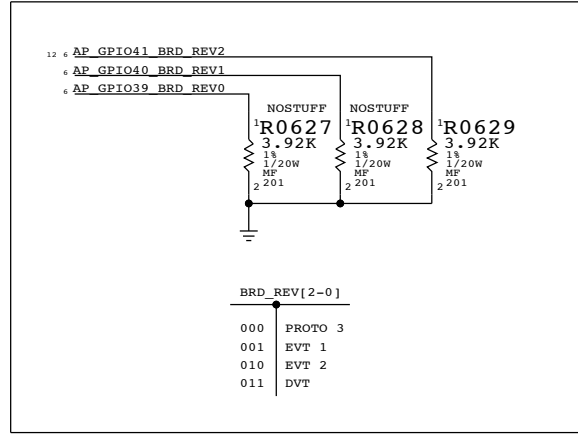
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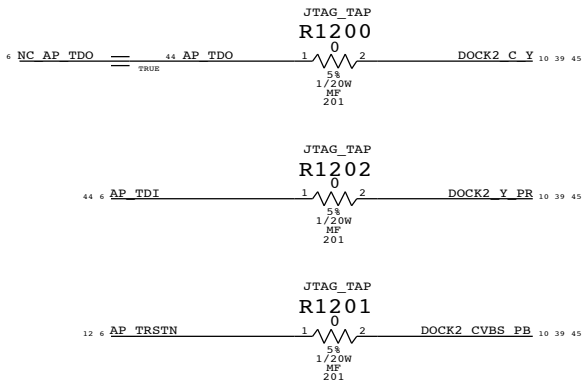
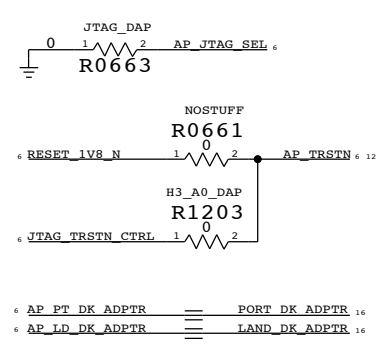
ALIASES FOR PAGE 57



BOARD REVISION



NOTE: JTAG SCAN DUMP



CURRENT SETTING ->

FOR REFERENCE

0000 SPI0	BOARD_ID[2:0]
0001 SPI1	010 K48AP
0010 SPI0 W/TEST	011 K48 DEV
0011 SPI1 W/TEST	
0100 FMIO 2CS	BOARD_REV[2:0]
0101 FMIO 4CS	000 PROTO3
0110 FMIO 4CS W/TEST	
0111 RESERVED	
1000 FMIO 2 CS	
1001 FMIO 4 CS	
1010 FMIO 4CS W/TEST	
1100 FMIO/1 2/2 CS	
1101 FMIO/1 4/4 CS	
1110 FMIO/1 4/4 CS W/TEST	
1111 RESERVED	

SYNC MASTER=JAMES		SYNC DATE=12/21/2009	
PAGE TITLE			
AP MISC & ALIASES			
Apple Inc.		DRAWING NUMBER	051-8245
		REVISION	B.0.0
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		PAGE	12 OF 119
		SHEET	12 OF 53


MLC ALIASES

```

45 9 H3 MIPID_CLK_P == MLC MIPID_CLK_P 13
45 9 H3 MIPID_CLK_N MAKE_BASE=TRUE == MLC MIPID_CLK_N 13
45 9 H3 MIPID_DATA_P<0> MAKE_BASE=TRUE == MLC MIPID_DATA_P<0> 13
45 9 H3 MIPID_DATA_N<0> MAKE_BASE=TRUE == MLC MIPID_DATA_N<0> 13
45 9 H3 MIPID_DATA_P<1> MAKE_BASE=TRUE == MLC MIPID_DATA_P<1> 13
45 9 H3 MIPID_DATA_N<1> MAKE_BASE=TRUE == MLC MIPID_DATA_N<1> 13
45 9 H3 MIPID_DATA_P<2> MAKE_BASE=TRUE == MLC MIPID_DATA_P<2> 13
45 9 H3 MIPID_DATA_N<2> MAKE_BASE=TRUE == MLC MIPID_DATA_N<2> 13
45 9 H3 MIPID_DATA_P<3> MAKE_BASE=TRUE == MLC MIPID_DATA_P<3> 13
45 9 H3 MIPID_DATA_N<3> MAKE_BASE=TRUE == MLC MIPID_DATA_N<3> 13

13 MLC_MUX_SDA_3V3 == MLC_2MUX_SDA_3V3 13
13 MLC_MUX_SCL_3V3 MAKE_BASE=TRUE == MLC_2MUX_SCL_3V3 13
13 MLC_2WC_L MAKE_BASE=TRUE == MLC_WC_L 7
13 =PP3V3_MLC_EEPROM MAKE_BASE=TRUE ==PP3V3_MLC 9 13 15 25

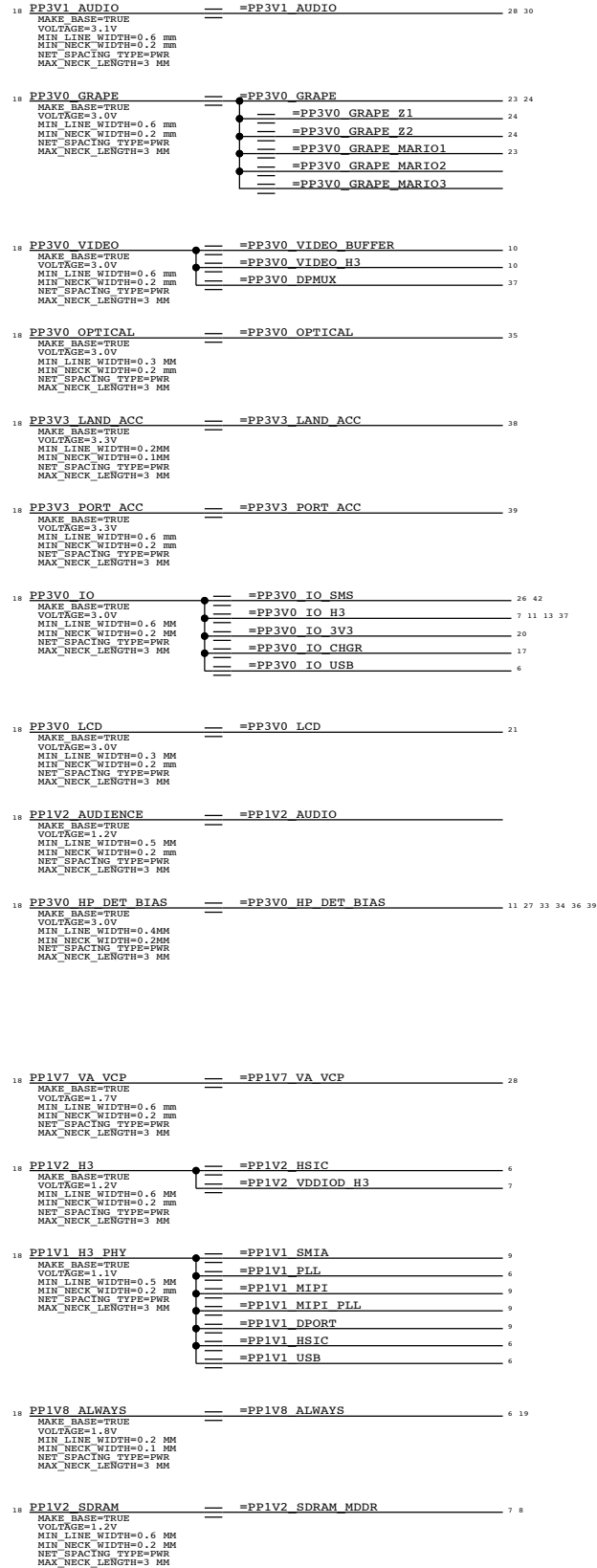
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SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
PAGE TITLE			
MLC ALIASES			
 Apple Inc.		DRAWING NUMBER	051-8245
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		PAGE	15 OF 119
		SHEET	14 OF 53
		SIZE	D

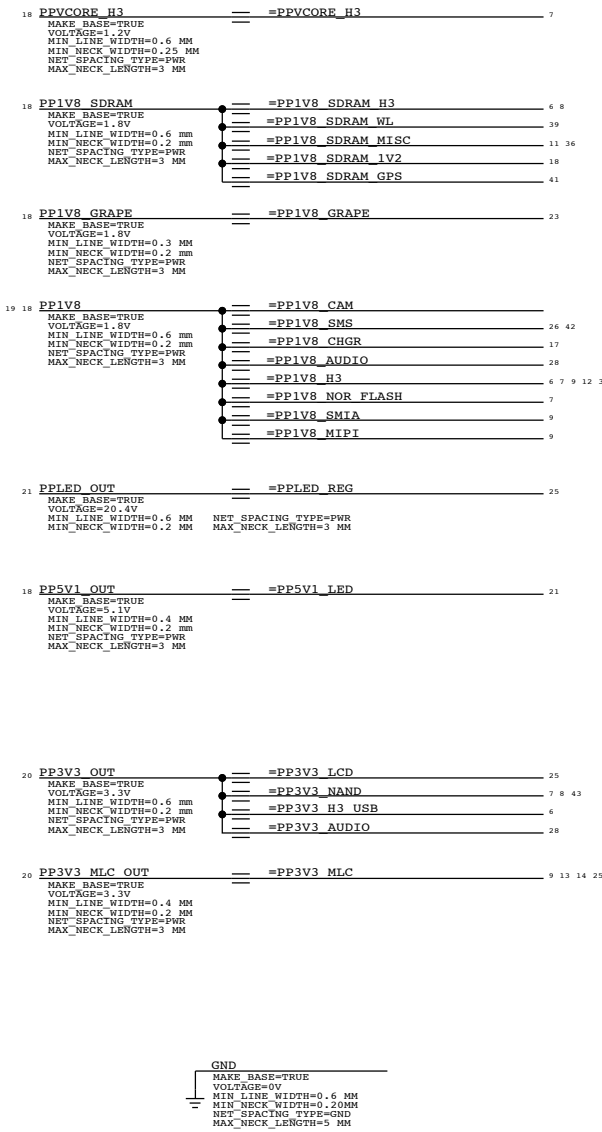
POWER CONN / ALIAS

LDO RAILS

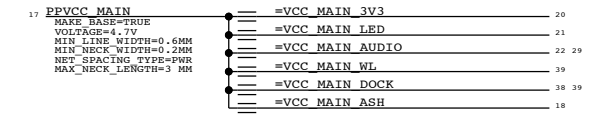
PROGRAMMABLE ON/OFF



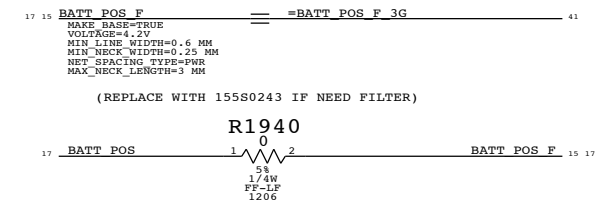
BUCK RAILS



CHARGER MAIN



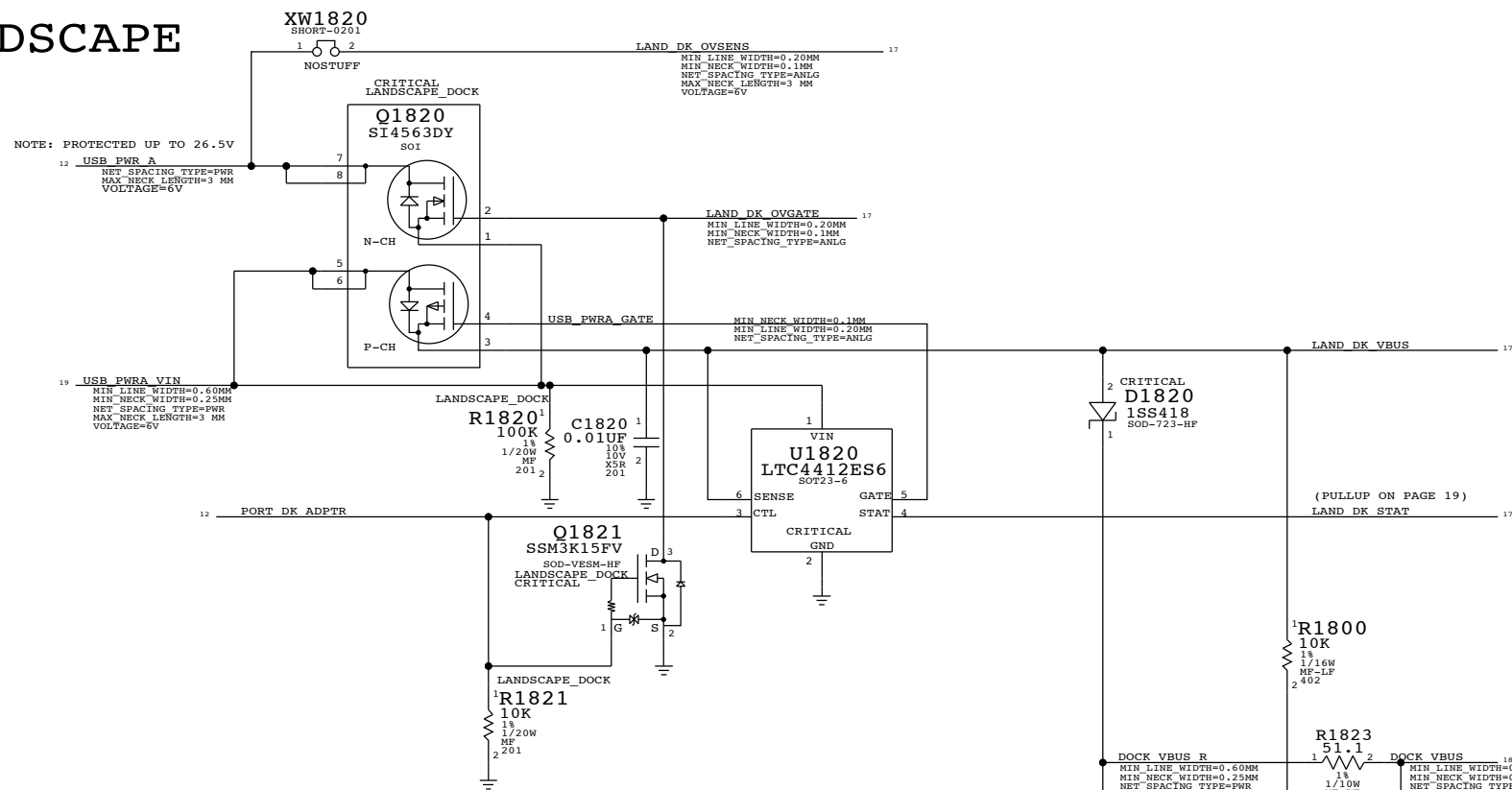
BATTERY



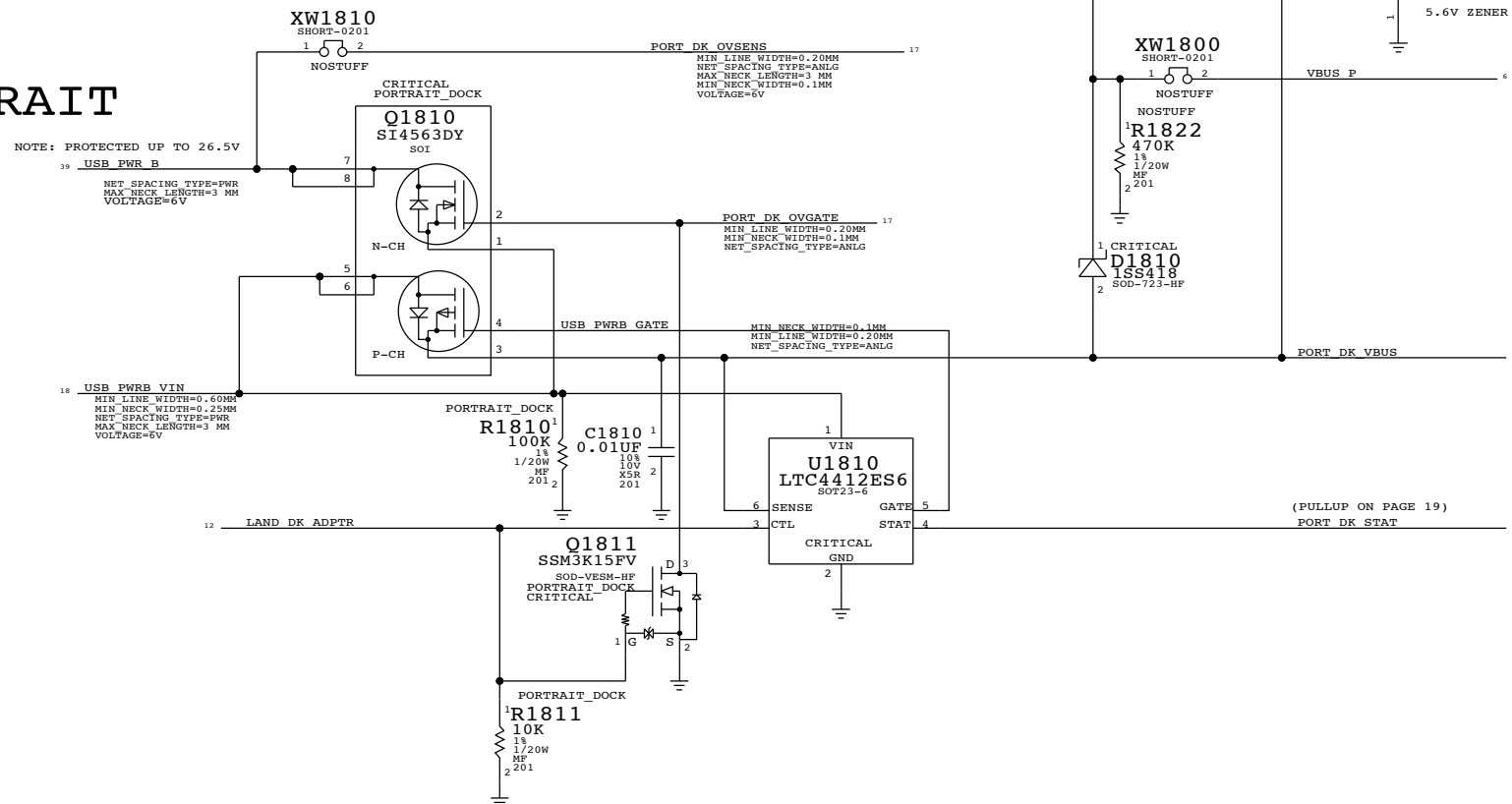
SYNC MASTER=MARK		SYNC DATE=12/04/2009	
Power Conn / Alias			
DRAWING NUMBER		SIZE	
051-8245		D	
REVISION		BRANCH	
B.0.0		PAGE	
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DCIN POWER PATH

LANDSCAPE



PORTRAIT



SO-8 DUAL P/N FETS

MOSFET	SI4563DY
CHANNEL	N-TYPE
RDS (ON)	15 MOHM @4.5V
IMAX	8 A
VGS MAX	+/- 16V

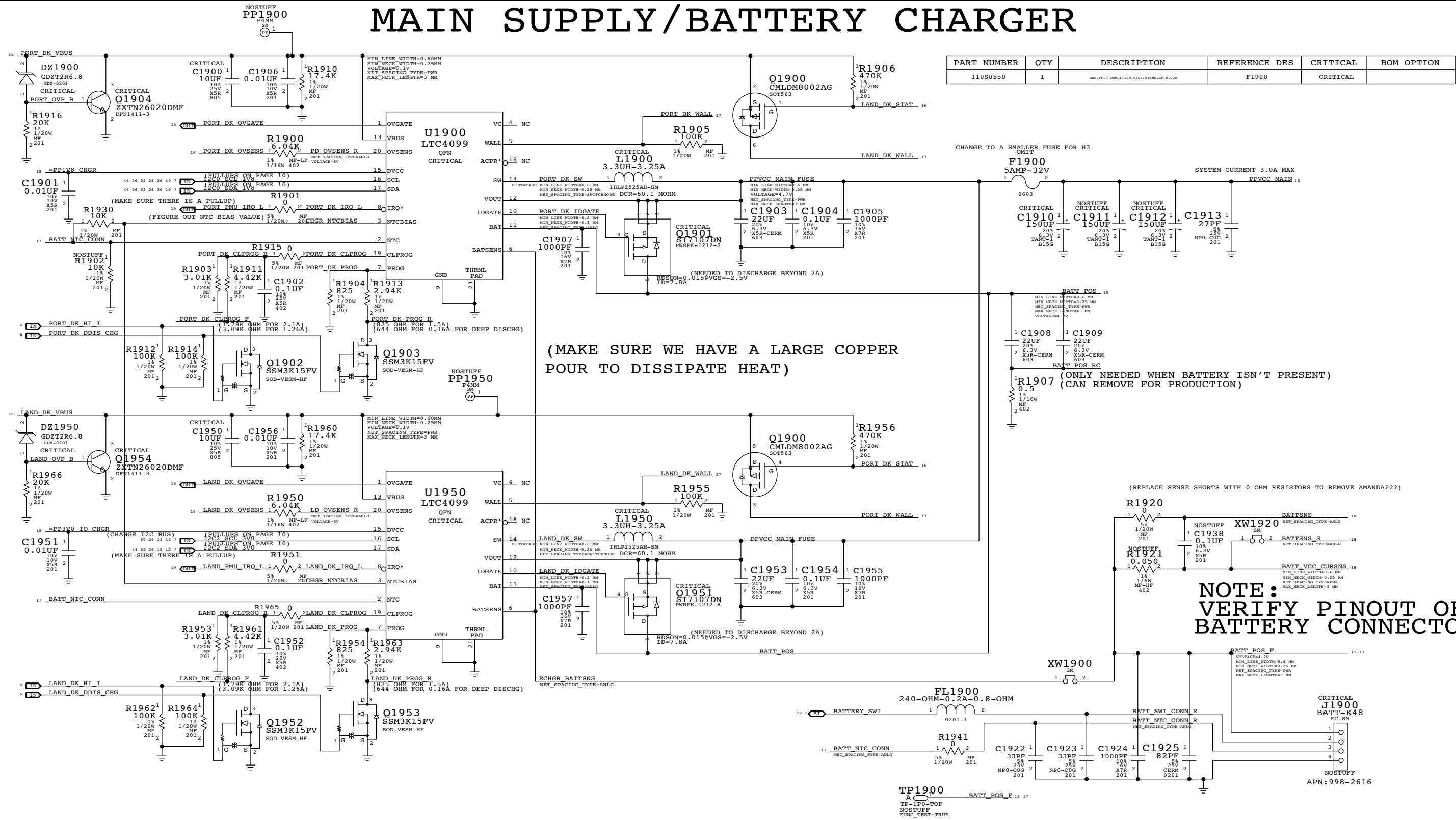
SO-8 DUAL P/N FETS

MOSFET	SI4563DY
CHANNEL	P-TYPE
RDS (ON)	25 MOHM @-4.5V
IMAX	8 A
VGS MAX	+/- 16V

SYNC MASTER=MARK		SYNC DATE=12/04/2009	
PAGE TITLE			
DCIN POWER PATH			
DRAWING NUMBER		051-8245	SIZE
REVISION		B.0.0	D
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PAGE		18 OF 119	
SHEET		16 OF 53	

MAIN SUPPLY/BATTERY CHARGER

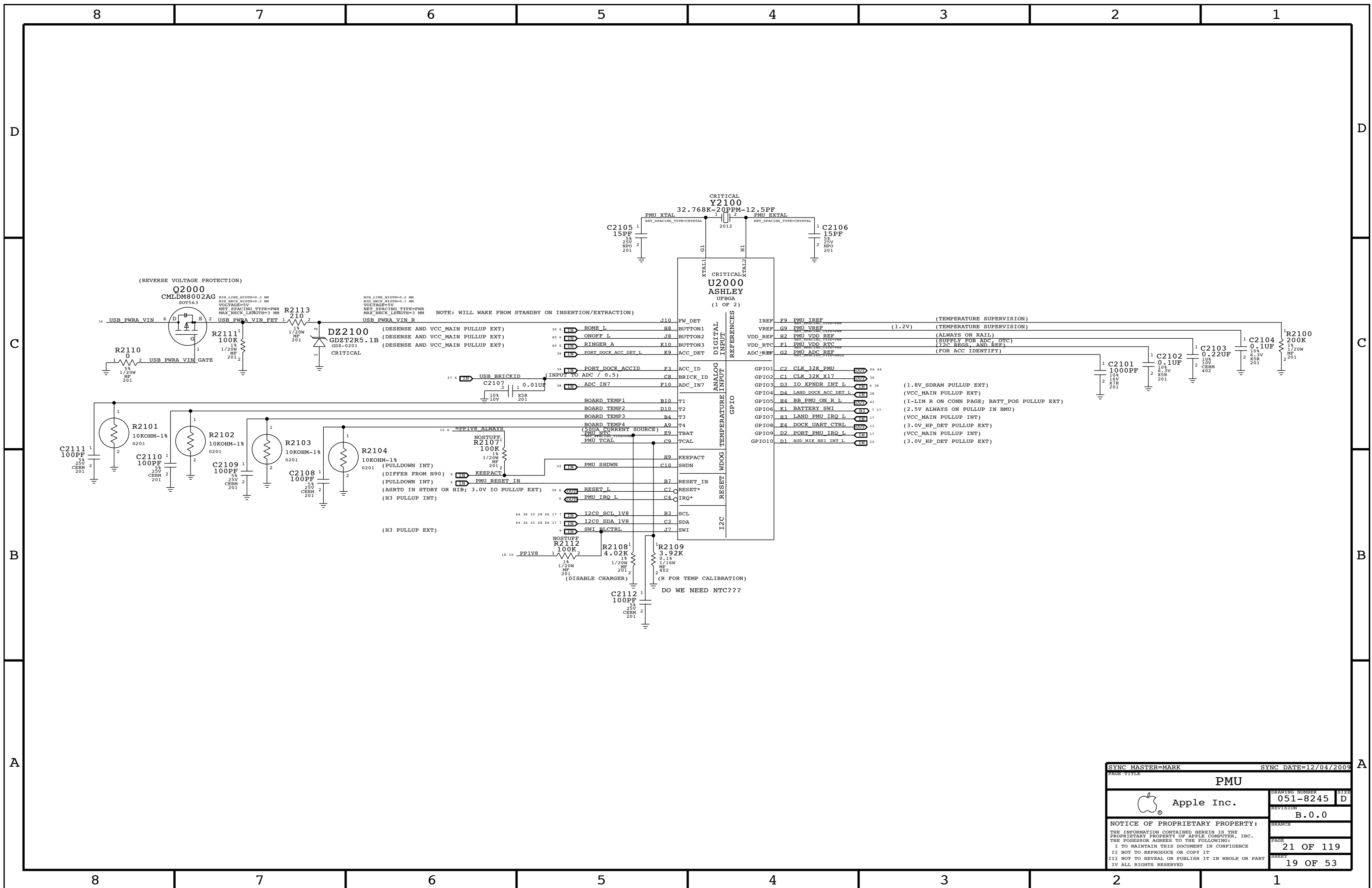
PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
11080550	1	REG.PP.0 00M,1/100,003,1938M,LP.0.020	F1900	CRITICAL	



(MAKE SURE WE HAVE A LARGE COPPER POUR TO DISSIPATE HEAT)

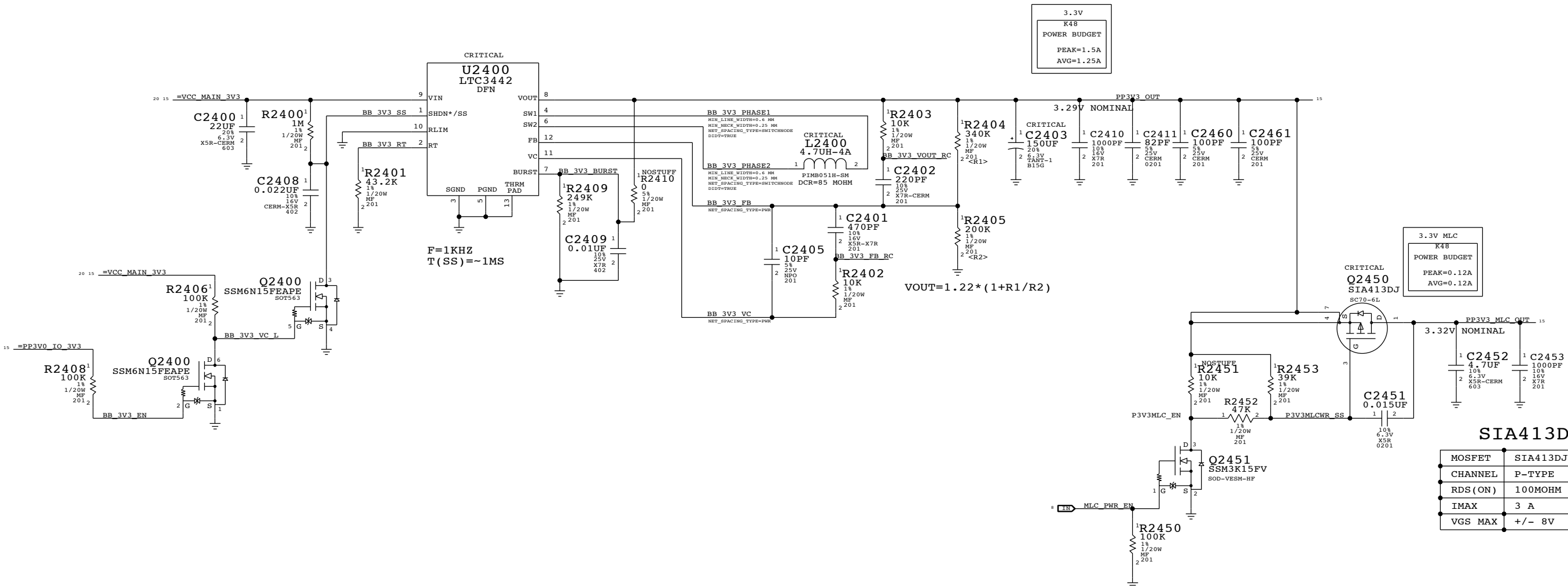
NOTE: VERIFY PINOUT OF BATTERY CONNECTOR

SYNC MASTER=MARK		SYNC DATE=12/04/2009	
CHARGER			
Apple Inc.		DRAWING NUMBER	SIZE
Apple Logo		051-8245	D
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		B.0.0	
		PAGE	SHEET
		19 OF 119	17 OF 53



SYNC MASTER=MARK		SYNC DATE=12/04/2009	
PMU			
Apple Inc.		DRAWING NUMBER	SIZE
		051-8245	D
		REVISION	
		B.0.0	
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		PAGE	21 OF 119
		SHEET	19 OF 53

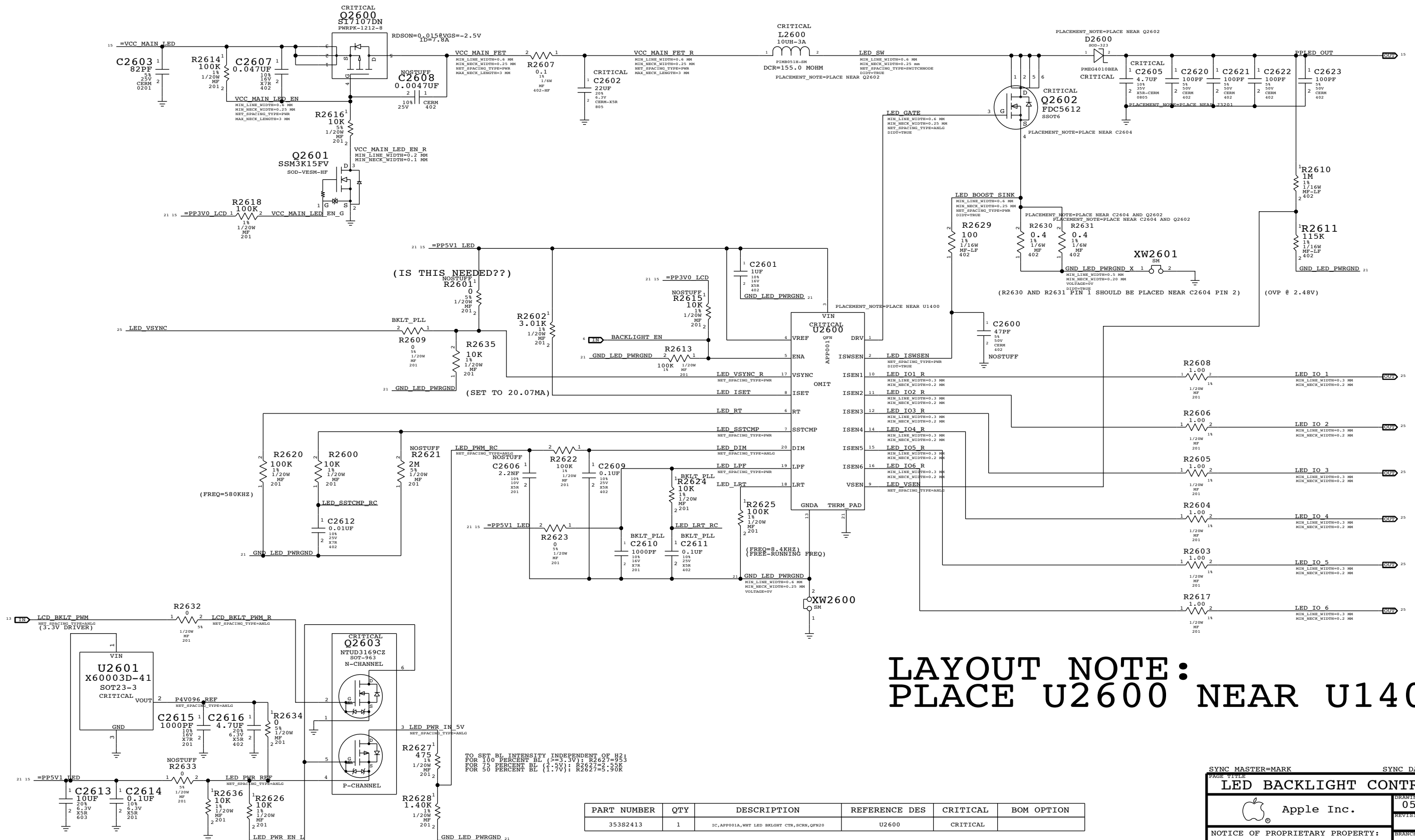
3.3V SUPPLY



SYNC MASTER=MARK SYNC DATE=12/04/2009

PAGE TITLE		3.3V SUPPLY	
Apple Inc.	DRAWING NUMBER	051-8245	SIZE D
	REVISION	B.0.0	
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IV ALL RIGHTS RESERVED			

LED BOOST/BACKLIGHT CONTROLLER



LAYOUT NOTE:
PLACE U2600 NEAR U1400

TO SET BL INTENSITY INDEPENDENT OF H₂
FOR 100 PERCENT BL (3.3V): R2627=953
FOR 75 PERCENT BL (1.5V): R2627=2.55K
FOR 50 PERCENT BL (1.7V): R2627=3.90K

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
35382413	1	IC,APP001A,MHT LED BKLGHT CTR,SCRN,OPN20	U2600	CRITICAL	

SYNC MASTER=MARK SYNC DATE=12/04/2009

LED BACKLIGHT CONTROLLER

Apple Inc.

DRAWING NUMBER: 051-8245 SIZE: D

REVISION: B.0.0

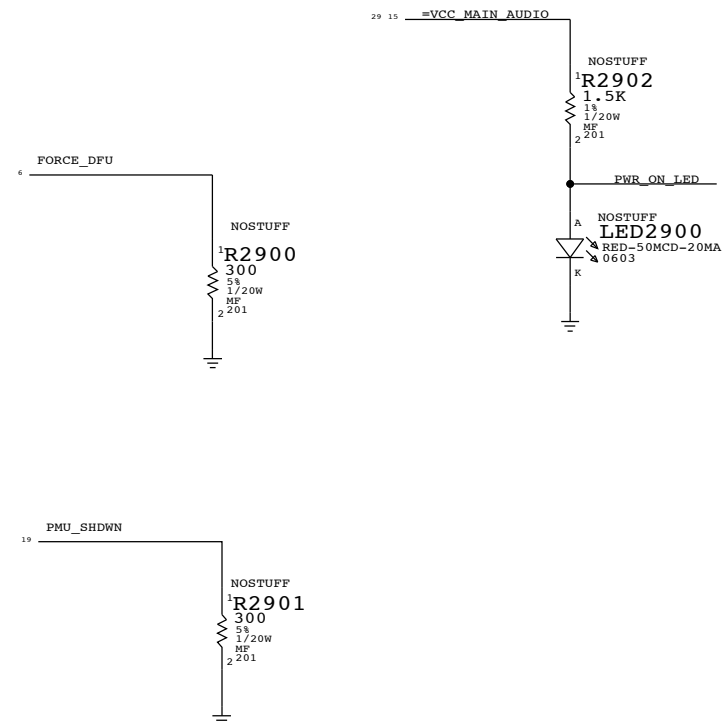
BRANCH:

PAGE: 26 OF 119

SHEET: 21 OF 53

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DEBUG RESET ACCESS



PAGE TITLE		DRAWING NUMBER		SIZE
DEBUG RESET ACCESS		051-8245		D
REVISION		BRANCH		
B.0.0				
PAGE		SHEET		
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Apple Inc.

D

D

C

C

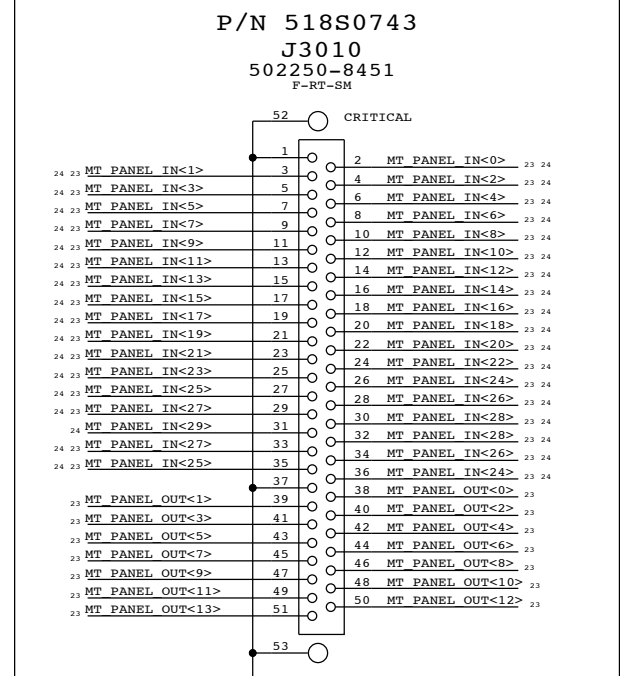
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B

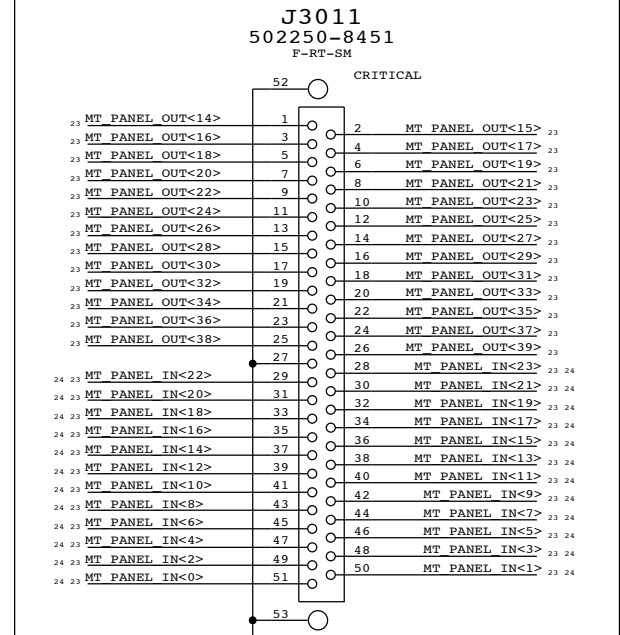
A

A

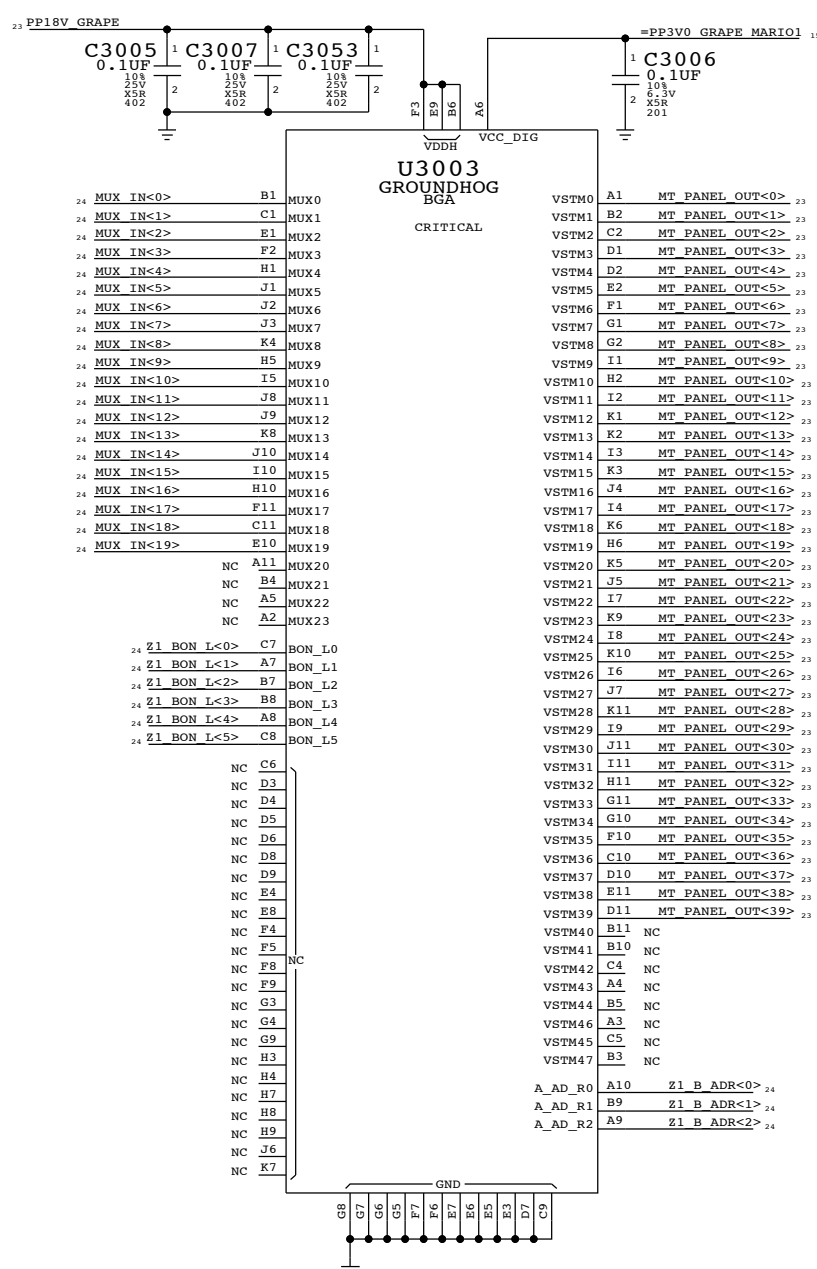
CONNECTORS TO GRAPE FLEX



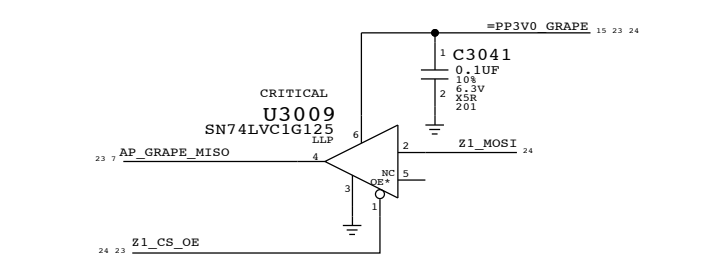
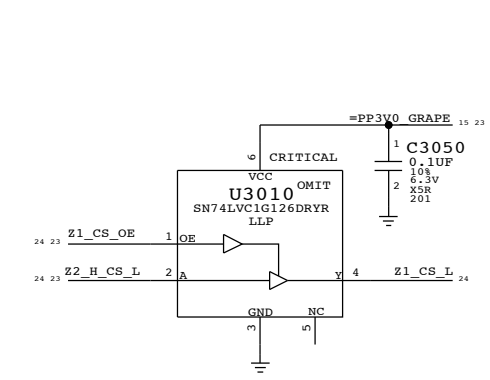
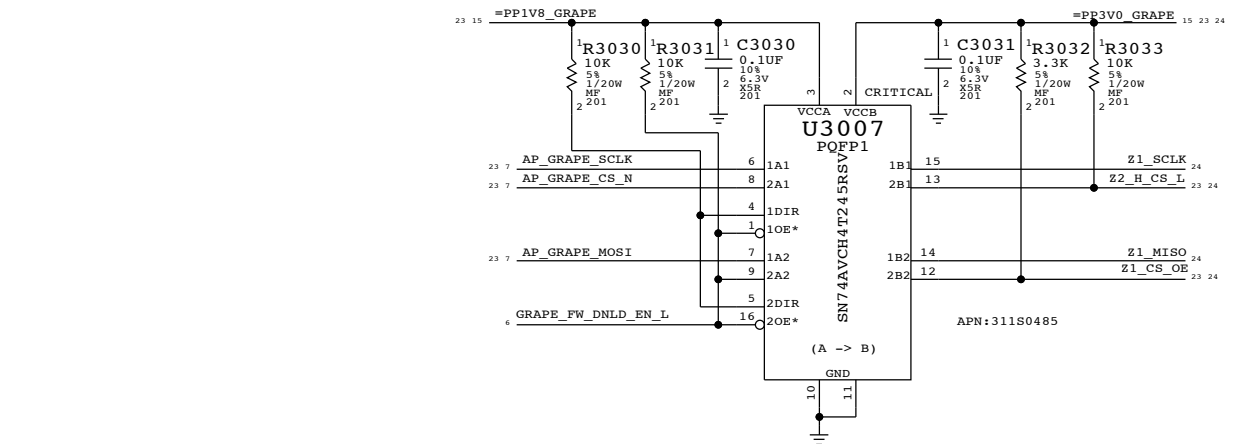
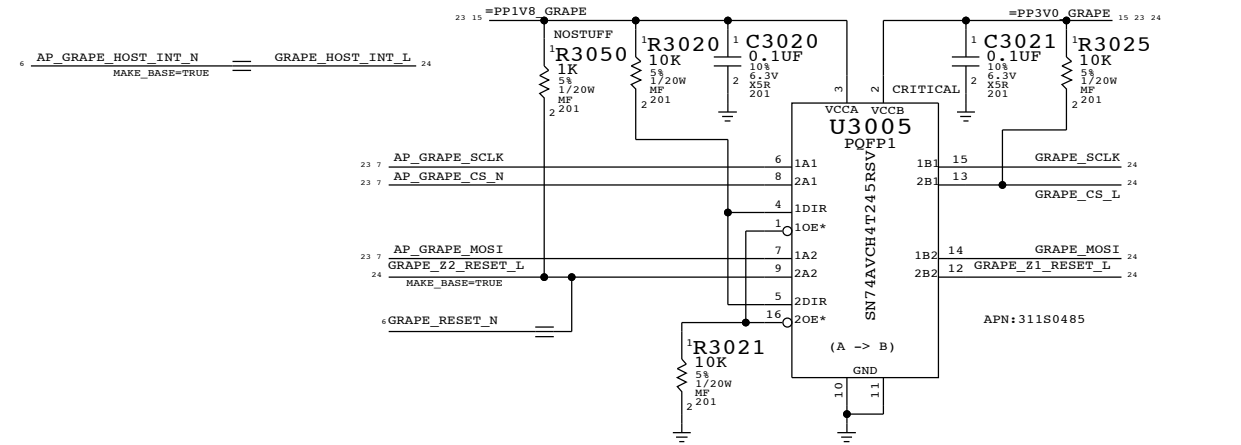
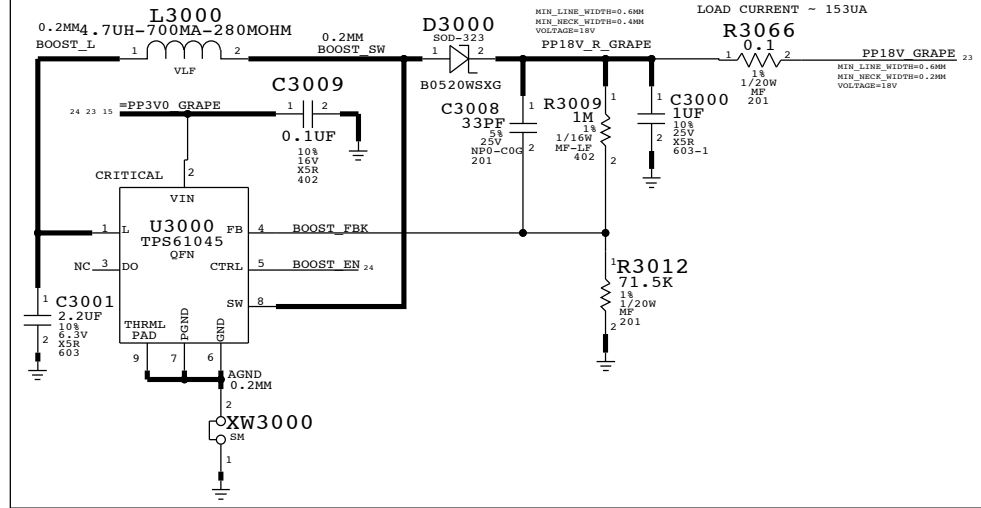
MATES WITH LEFTMOST GRAPE FLEX TAIL



MATES WITH RIGHTMOST GRAPE FLEX TAIL



BOOST CONVERTOR



PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
311S0506	1	IC, SNGL 3-STATE BUFFER, 5-PIN, DRY	U3010	CRITICAL	

SYNC MASTER=JAMES SYNC DATE=12/21/2009

GRAPE 1 OF 2

Apple Inc.

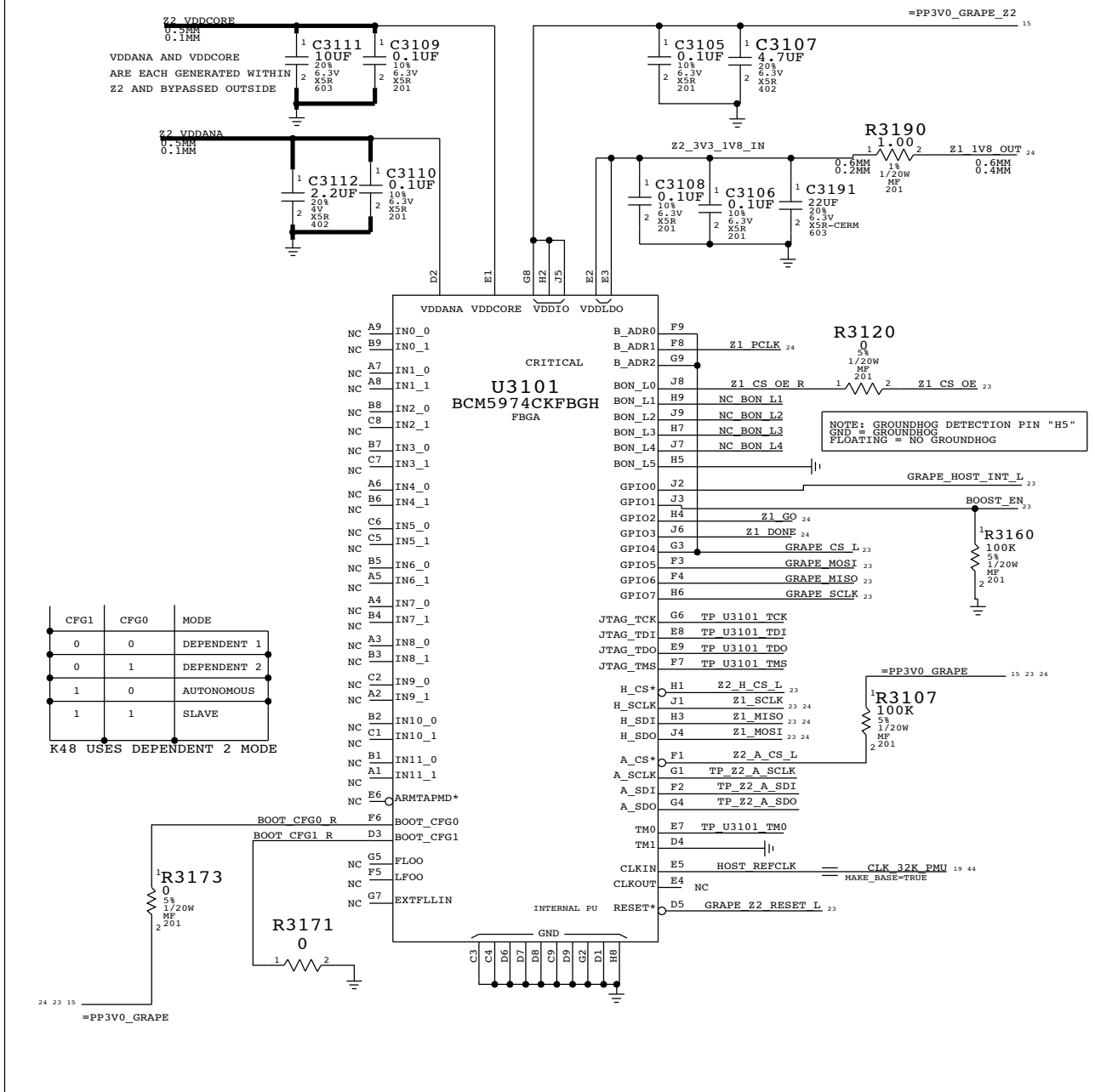
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REVISION: B.0.0

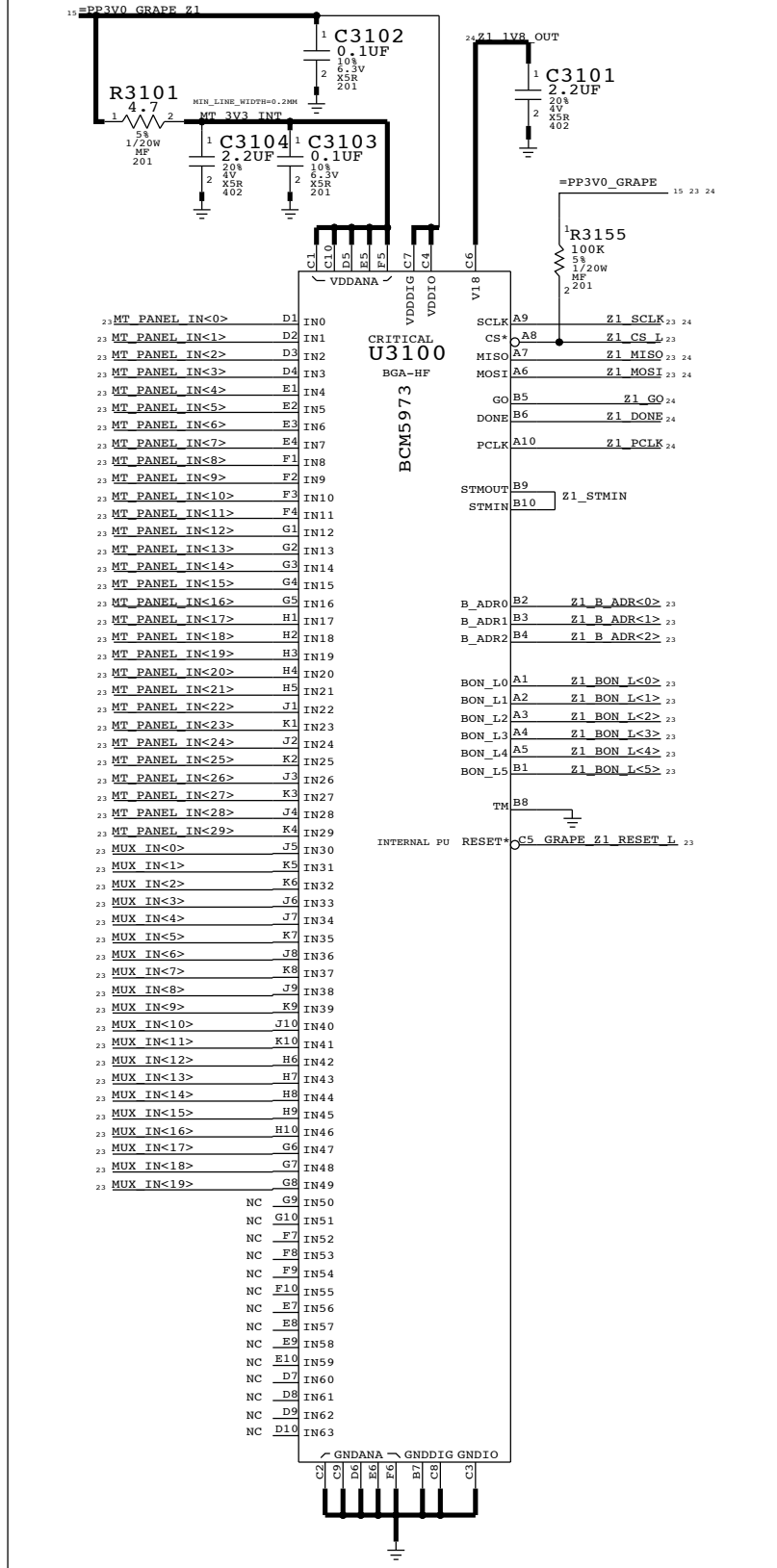
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PAGE: 30 OF 119 SHEET: 23 OF 53

ARM9 MCU (Z2 BASED)



ZEPHYR 1+ ASIC



SYNC MASTER=JAMES SYNC DATE=12/21/2009

GRAPE 2 OF 2

Apple Inc.

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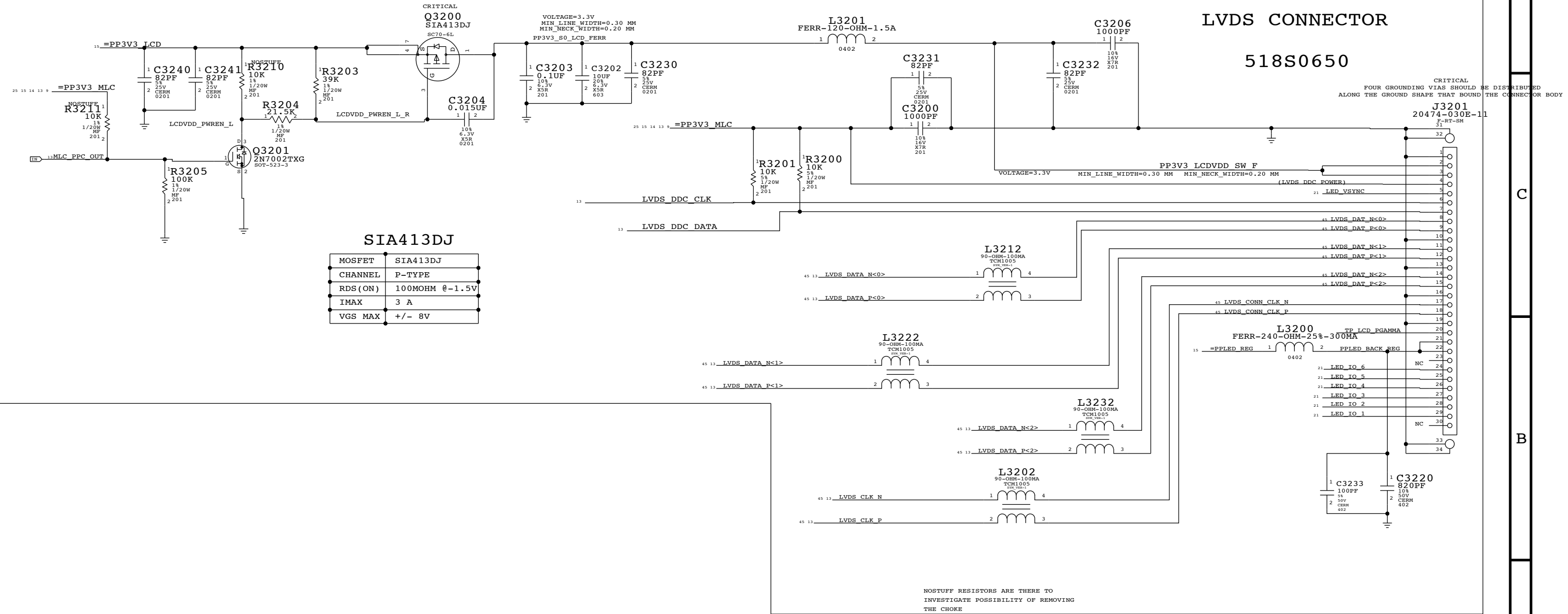
PAGE: 31 OF 119

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LVDS CONNECTOR

SIMILAR TO M97

LVDS CONNECTOR
518S0650



SIA413DJ

MOSFET	SIA413DJ
CHANNEL	P-TYPE
RDS (ON)	100MOHM @-1.5V
IMAX	3 A
VGS MAX	+/- 8V

NOSTUFF RESISTORS ARE THERE TO INVESTIGATE POSSIBILITY OF REMOVING THE CHOKE

SYNC MASTER=MIAMI SYNC DATE=09/16/2009

LVDS CONNECTOR

Apple Inc.

051-8245 D

REVISION B.0.0

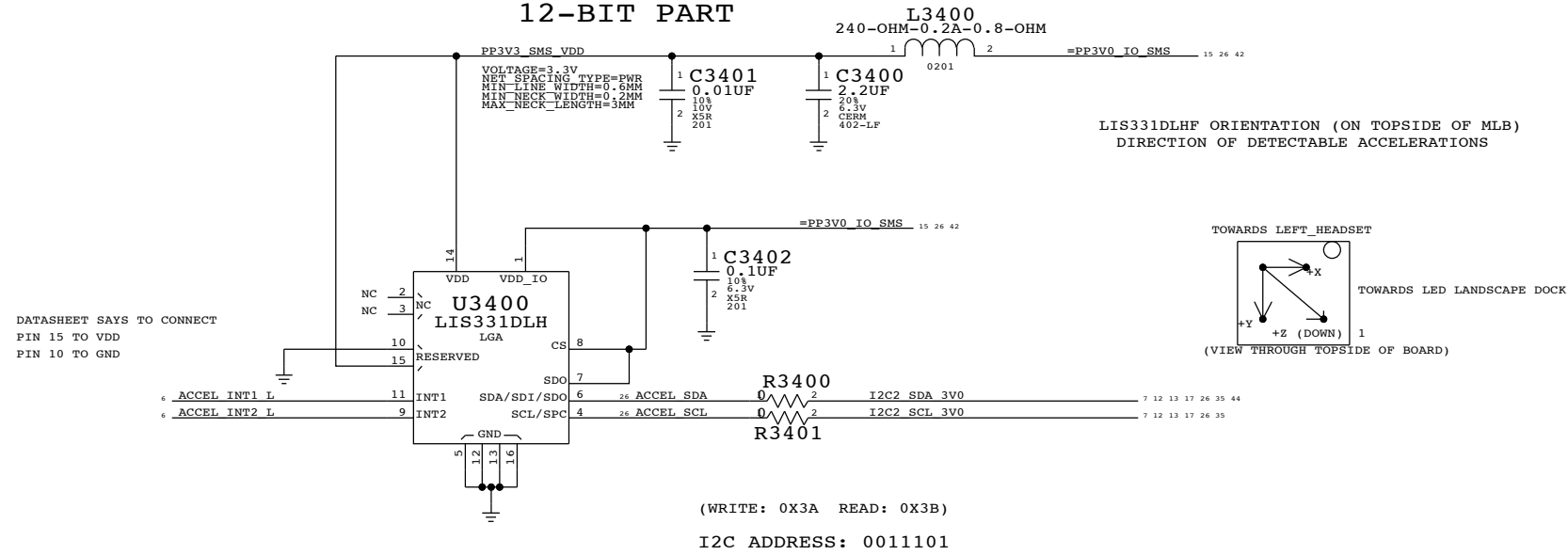
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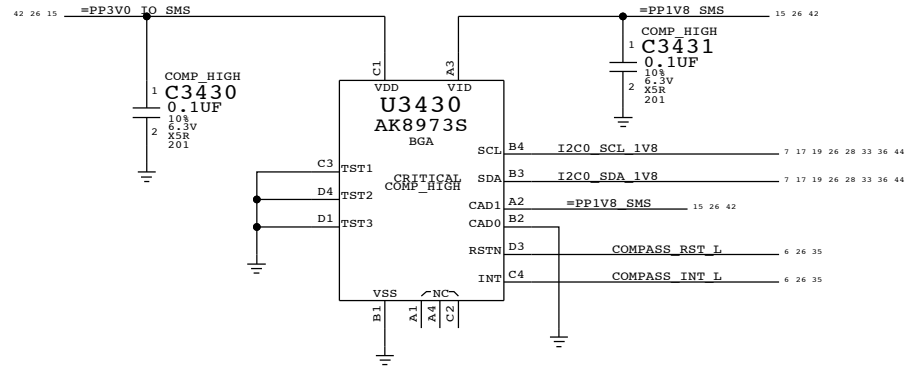
MOTION/GYRO/COMPASS SENSORS

ST MICRO LIS331DLHF MOTION SENSOR 12-BIT PART



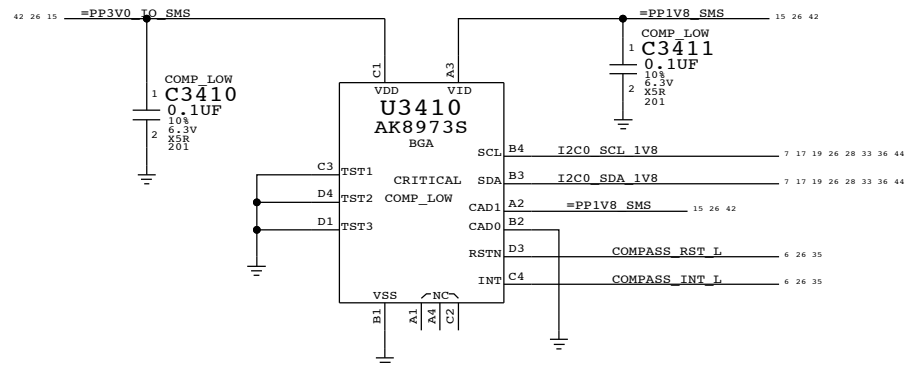
COMPASS HIGH

(HAS THERMAL SENSOR IN IT)
I2C ADDR: 0011110
WRITE: 0X3C READ: 0X3D



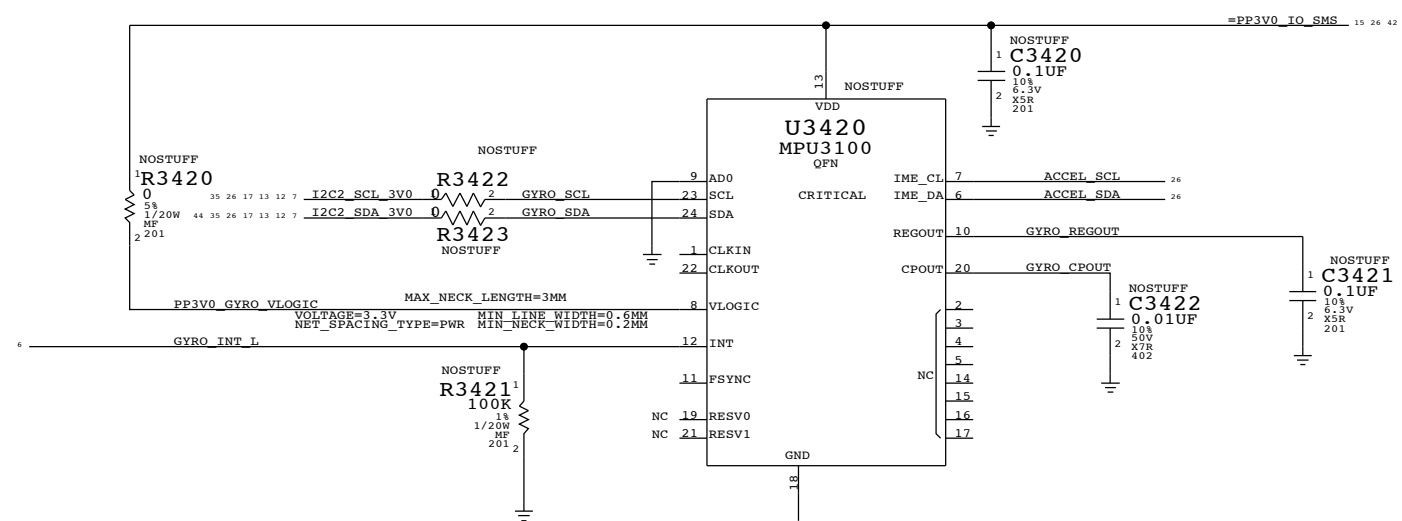
COMPASS LOW

(HAS THERMAL SENSOR IN IT)
I2C ADDR: 0011110
WRITE: 0X3C READ: 0X3D



GYRO

(WRITE: 0XD0 READ: 0XD1)
I2C ADDRESS: 1101000

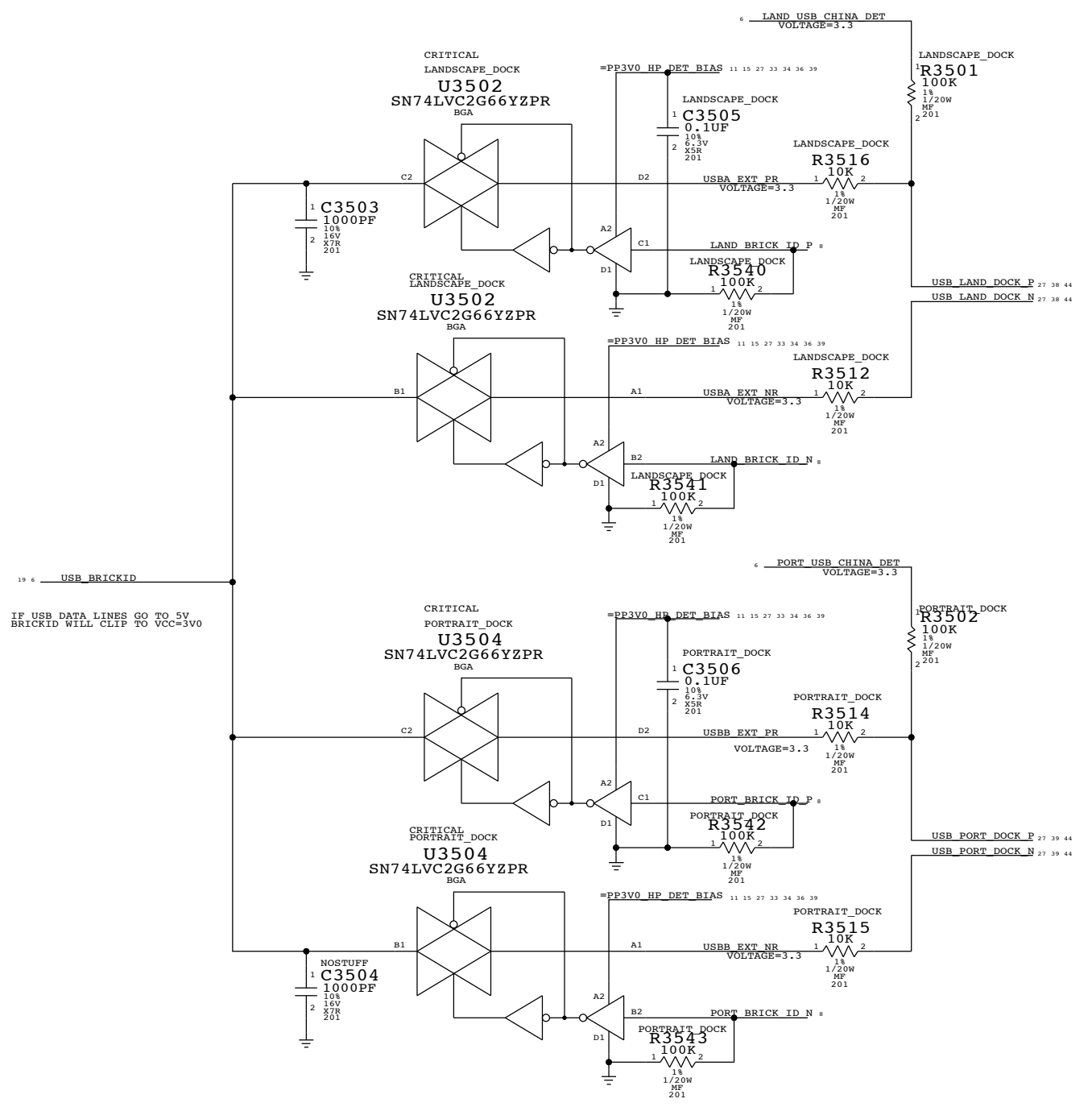


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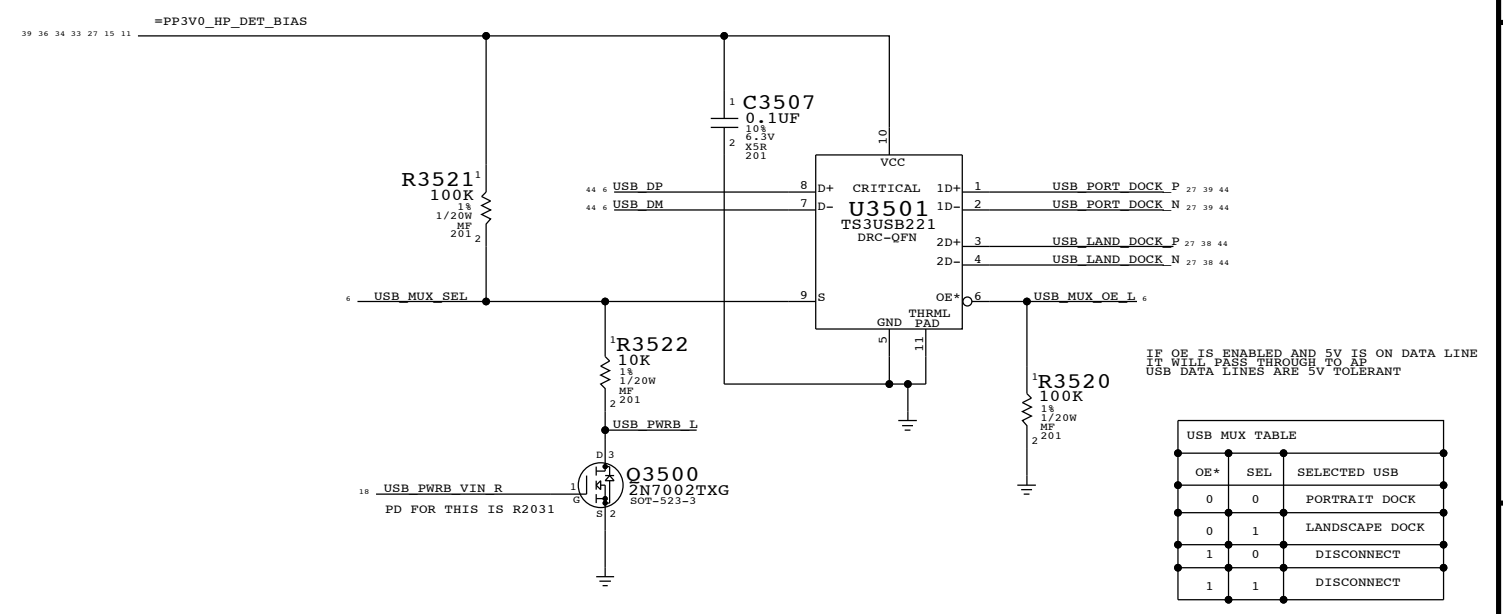
PAGE TITLE MOTION, GYRO, COMPASS/THERM		DRAWING NUMBER 051-8245	SIZE D
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USB MUX/BRICK DETECTION

MAKE SURE RESISTORS ARE ON TOP OF TRACE TO REDUCE STUB



USB MUX FOR DOCK USB



SYNC MASTER=MIAMI SYNC DATE=09/16/2009

USB MUX/BRK DET

Apple Inc.

DRAWING NUMBER: 051-8245 SIZE: D

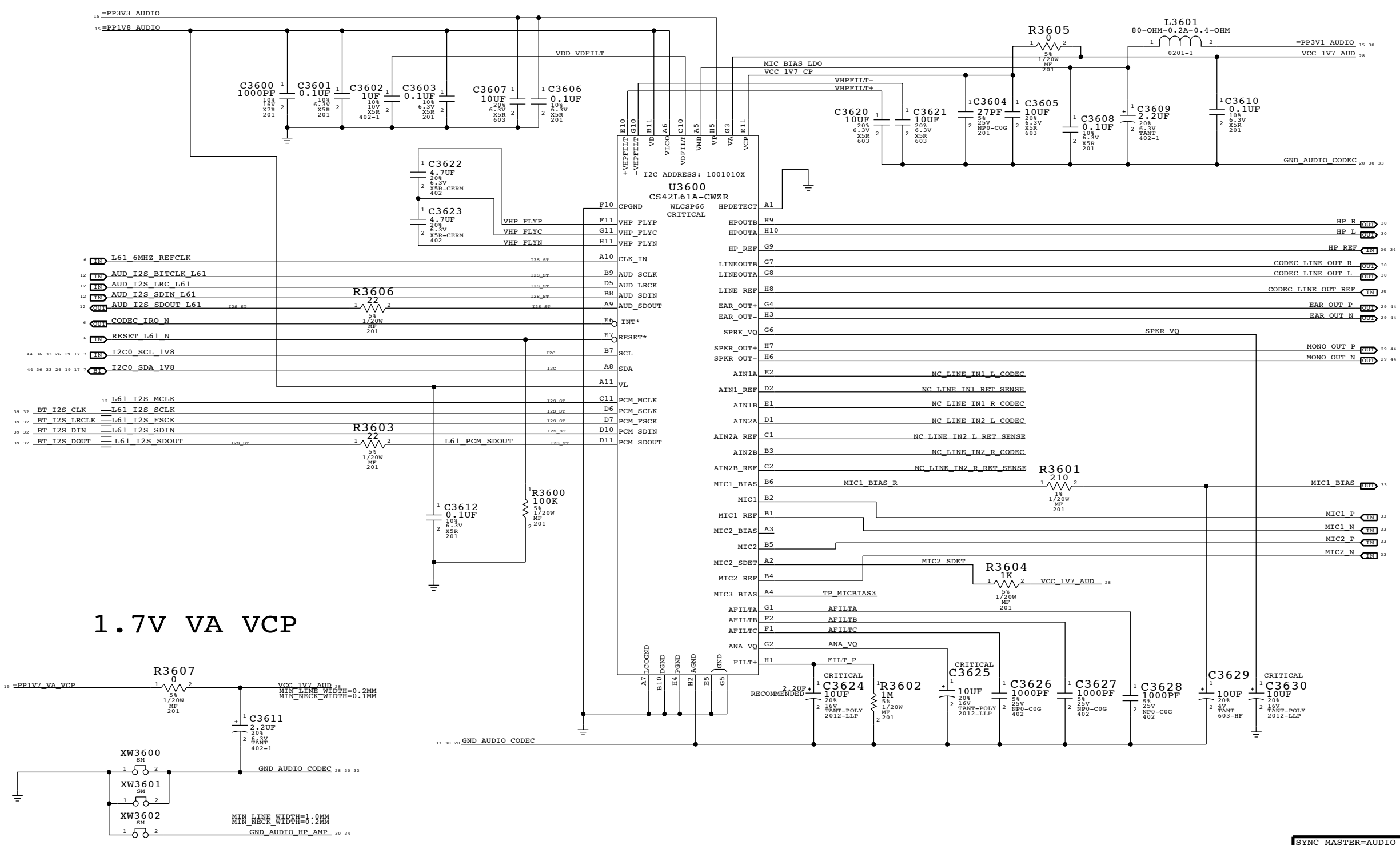
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L61 AUDIO CODEC

APN:338S0589



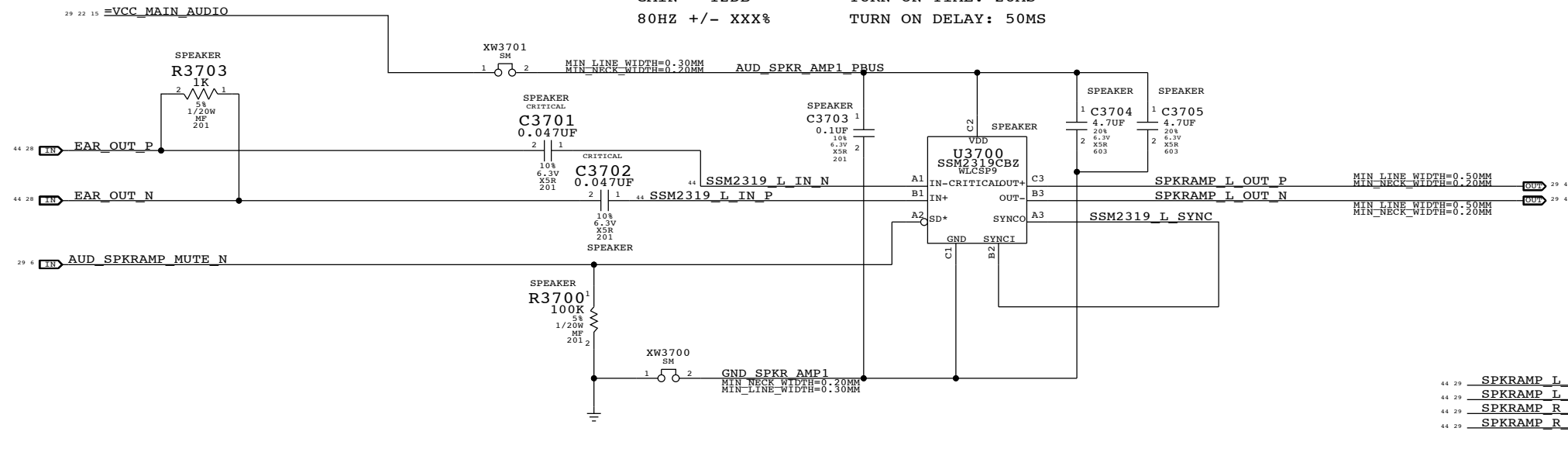
1.7V VA VCP

SYNC MASTER=AUDIO		SYNC DATE=12/04/2009	
L61 AUDIO INTERFACE			
Apple Inc.		DRAWING NUMBER	051-8245
		REVISION	B.0.0
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		PAGE	36 OF 119
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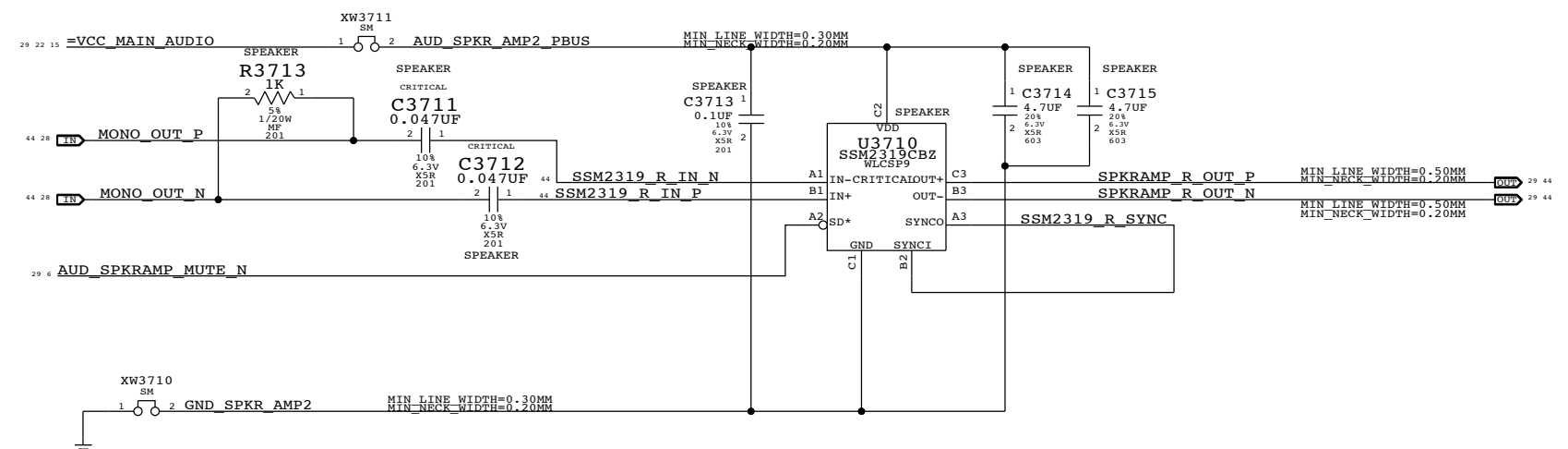
SPEAKER AMPLIFIER

SSM2319 APN:353S2136

GAIN = 12DB TURN ON TIME: 28MS
 80HZ +/- XXX% TURN ON DELAY: 50MS

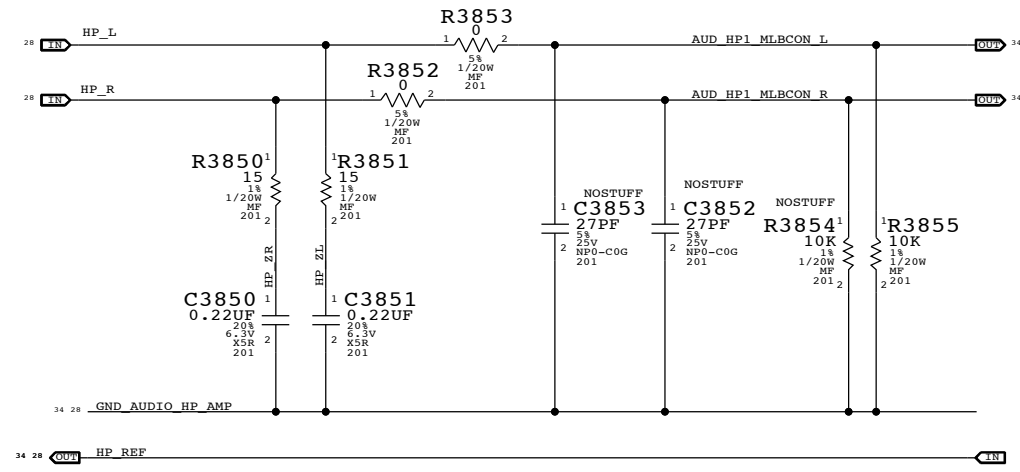


L61 RECEIVER OUTPUT IS CONNECTED TO U3700
 L61 SPEAKER OUTPUT IS CONNECTED TO U3710

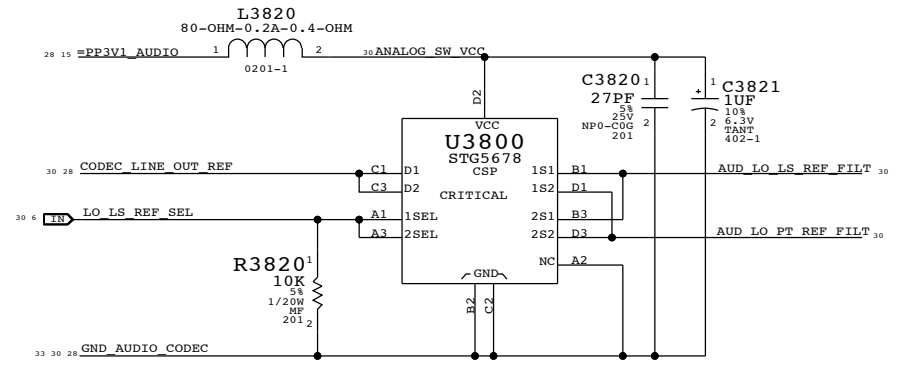


PAGE TITLE		SYNC DATE=12/04/2009	
AUDIO: SPEAKER AMP			
Apple Inc.		DRAWING NUMBER	SIZE
		051-8245	D
		REVISION	
		B.0.0	
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HEADPHONE OUTPUT ZOBEL NETWORK



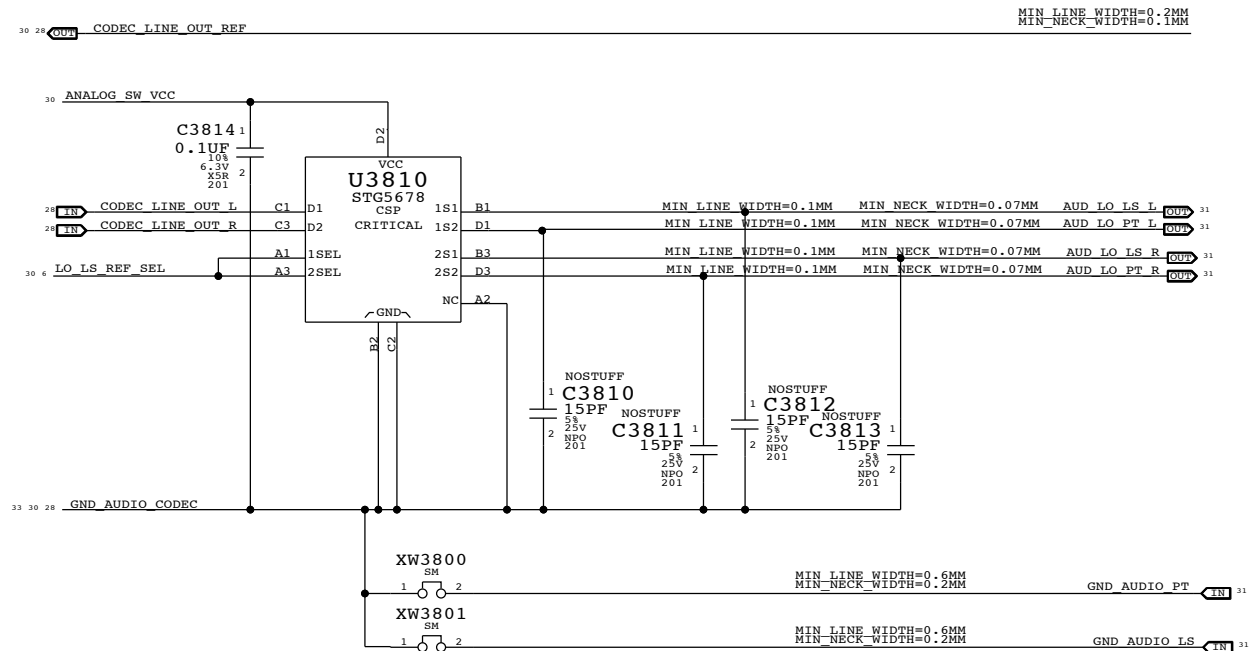
LINE OUTPUT REF SENSE DOCK SELECTOR



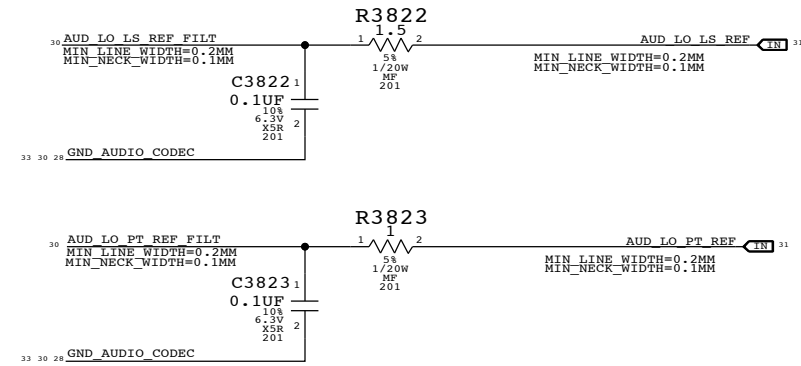
OUTPUT REF SENSE LINE SHOULD BE SWITCHED TO ACTIVE PORT
 LO_LS_REF_SEL = 0: PORTRAIT DOCK SELECTED
 LO_LS_REF_SEL = 1: LANDSCAPE DOCK SELECTED

LINE OUTPUT DOCK SELECTOR

LO_LS_REF_SEL = 0: DAC OUTPUT CONNECTED TO PORTRAIT DOCK
 LO_LS_REF_SEL = 1: DAC OUTPUT CONNECTED TO LANDSCAPE DOCK



LINE OUTPUT REF SENSE FILTER



PAGE TITLE		SYNC MASTER=AUDIO		SYNC DATE=12/04/2009	
AUDIO: HEADPHONE OUT					
Apple Inc.		DRAWING NUMBER	051-8245	SIZE	D
		REVISION	B.0.0		
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8

7

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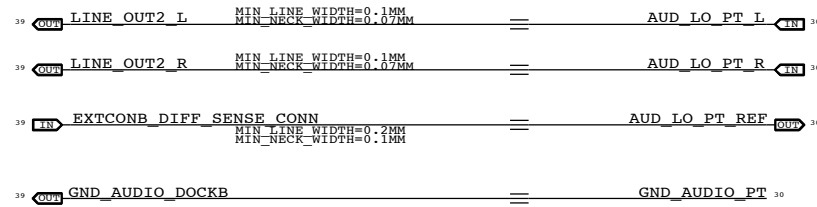
1

DOCKS OUTPUTS

NOTE: PORTRAIT DOCK IS PRIMARY DOCK

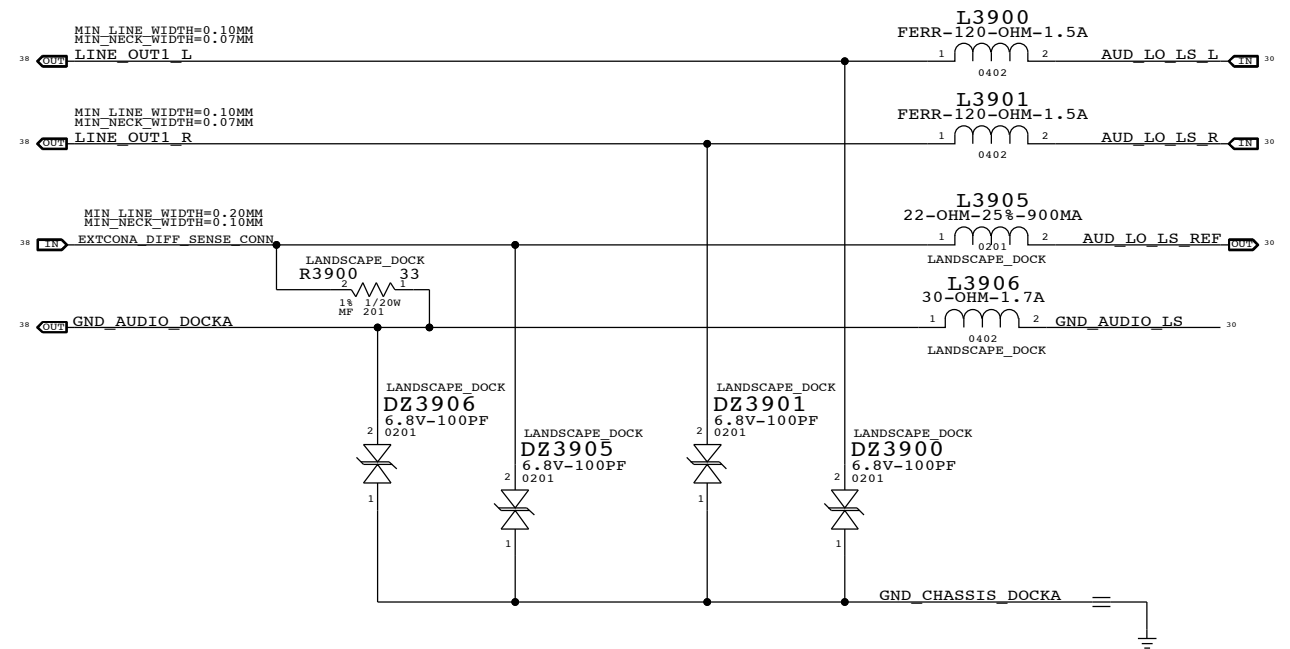
PORTRAIT DOCK LINE OUTPUT

TO PORTRAIT DOCK MLB CONNECTOR



LANDSCAPE DOCK LINE OUTPUT ESD CIRCUIT

TO LANDSCAPE DOCK MLB CONNECTOR



SYNC MASTER=AUDIO SYNC DATE=12/04/2009
AUDIO: LINE OUT DOCK ESD CIRCUIT
 Apple Inc.
 DRAWING NUMBER: 051-8245 SIZE: D
 REVISION: B.0.0
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 PAGE: 39 OF 119
 SHEET: 31 OF 53

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C

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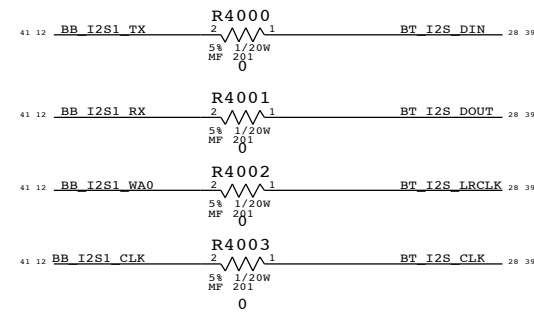
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AUDIENCE BYPASS SHUNTS



SYNC MASTER=AUDIO SYNC DATE=12/04/2009

PAGE TITLE AUDIO: AUDIENCE		DRAWING NUMBER 051-8245	SIZE D
Apple Inc.		REVISION B.0.0	BRANCH
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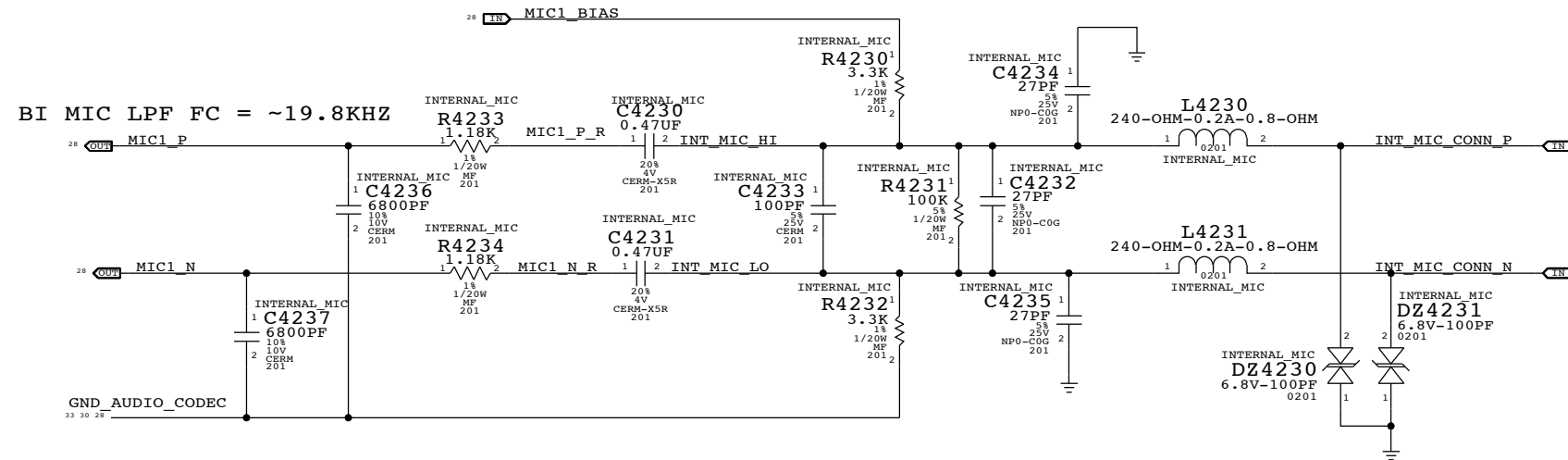
2

1

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D

INTERNAL (BUILT-IN) ANALOG MIC BIAS & FILTER



C

C

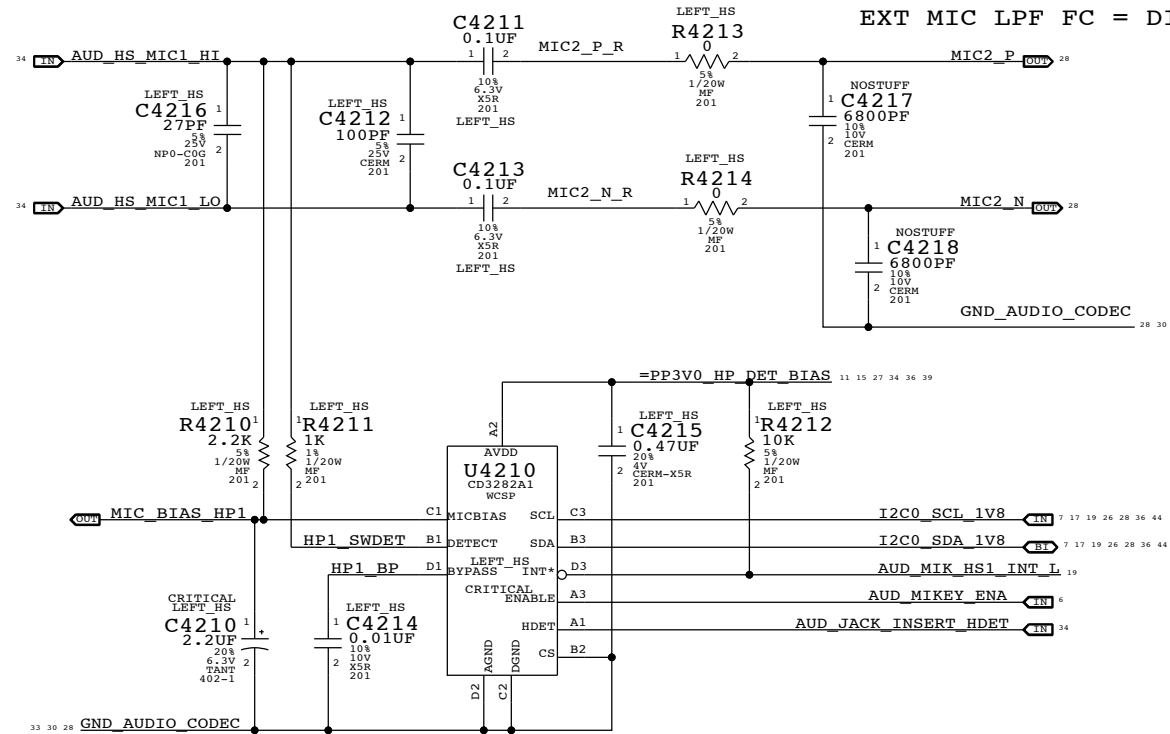
EXTERNAL MIC INPUT CIRCUITRY

APN:353S2640

I2C ADD: READ=72H, WRITE=73H

NOTE: INT IS OPEN DRAIN, PULL UP ON MIKEY SIDE

EXT MIC LPF FC = DISABLED



B

B

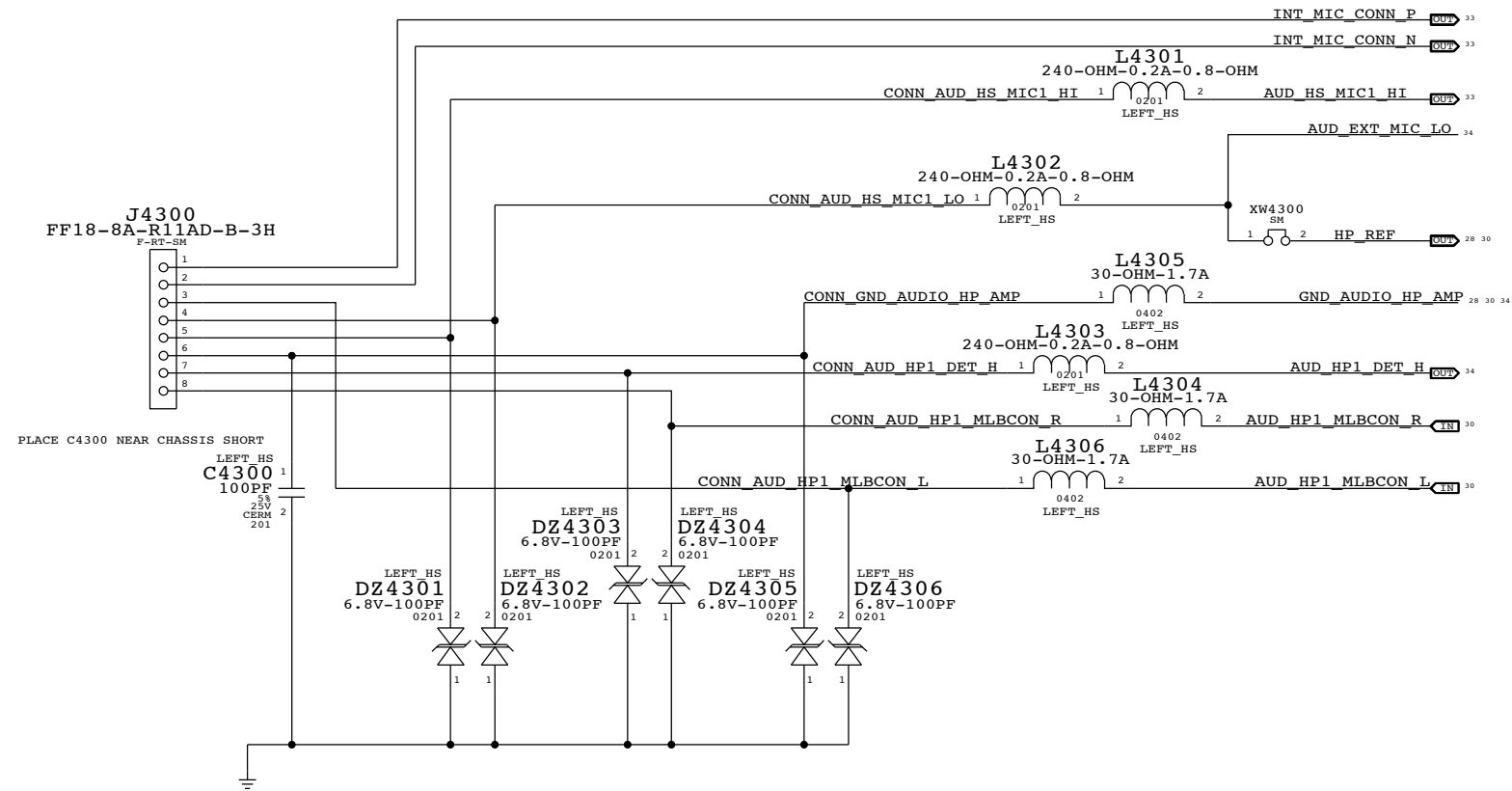
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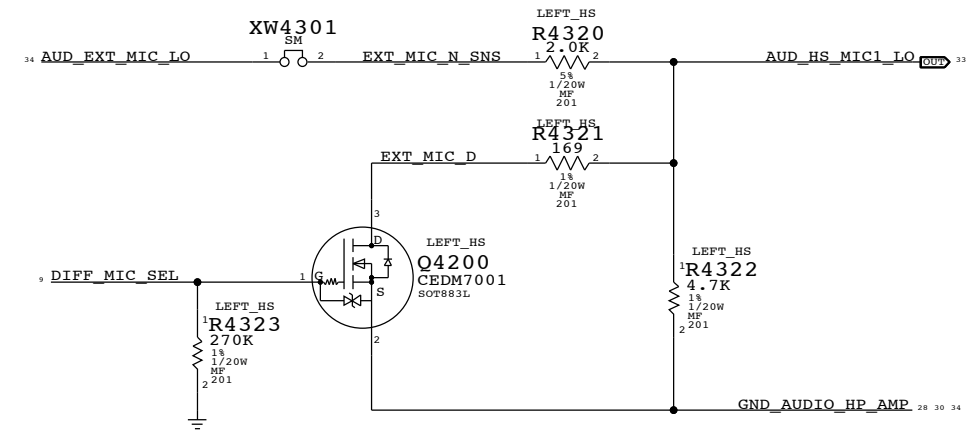
SYNC MASTER=AUDIO SYNC DATE=12/04/2009

PAGE TITLE		
AUDIO: DETECT/MIC BIAS		
DRAWING NUMBER	051-8245	SIZE D
REVISION	B.0.0	
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BRANCH		
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SHEET	33 OF 53	

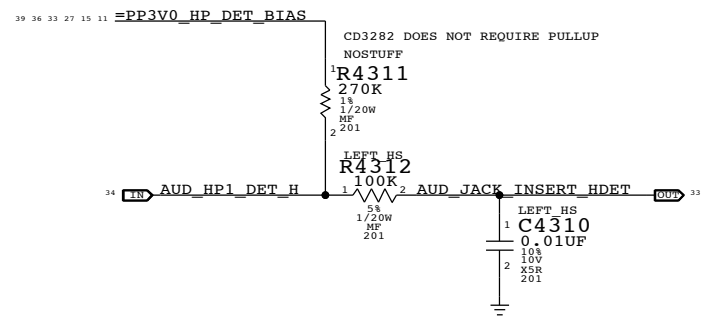
JACK 1 MLB CONNECTOR: HEADPHONE/HS_MIC/INT_MIC
 APN: 518S0693



HEADSET HP/MIC CROSSTALK MITIGATION (NOT USED)



HEADSET JACK INSERTION DETECT

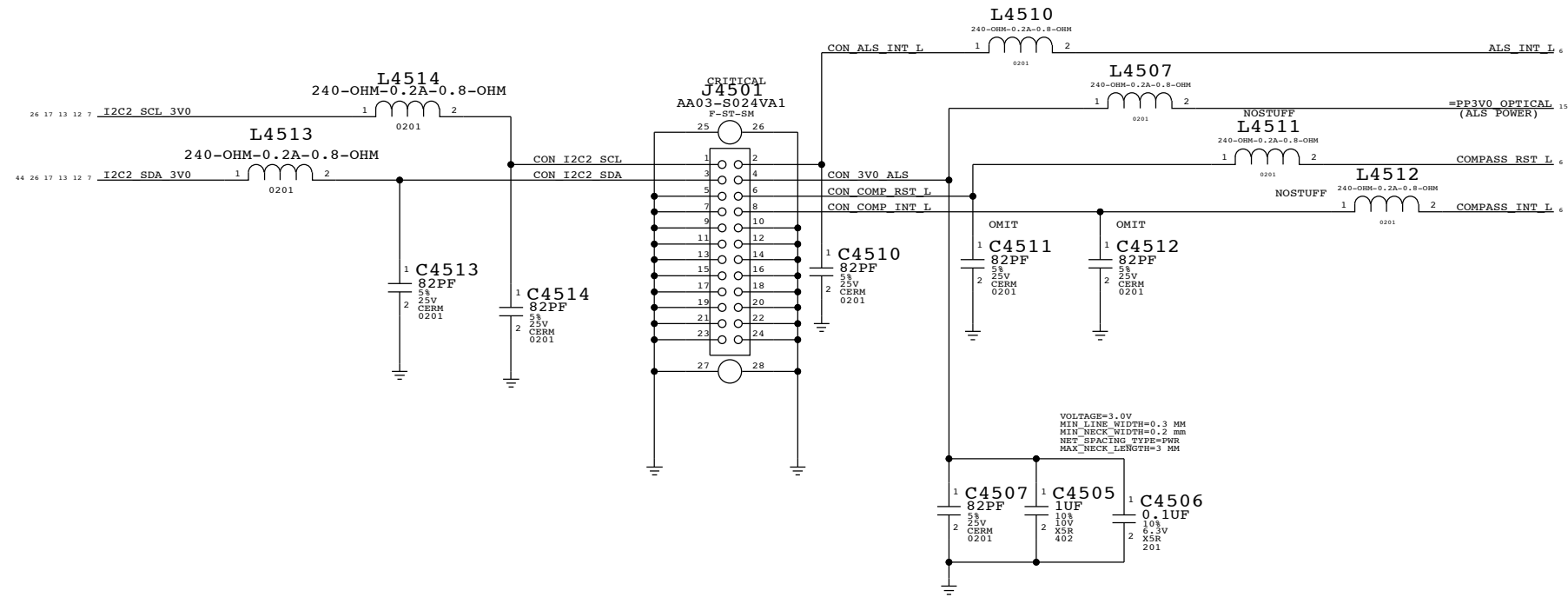


PAGE TITLE		SYNC DATE=12/04/2009	
AUDIO: HP CONN			
	Apple Inc.		DRAWING NUMBER 051-8245
	REVISION B.0.0		SIZE D
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ALS CONN.

FPC CONNECTOR

APN: 516S0498



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
11780002	2	0-OHM, 5%, 1/20W, MF, 0201	C4511, C4512	

SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
ALS CONNECTOR			
Apple Inc.		DRAWING NUMBER	051-8245
		REVISION	B.0.0
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		PAGE	45 OF 119
		SHEET	35 OF 53
		SIZE	D

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C

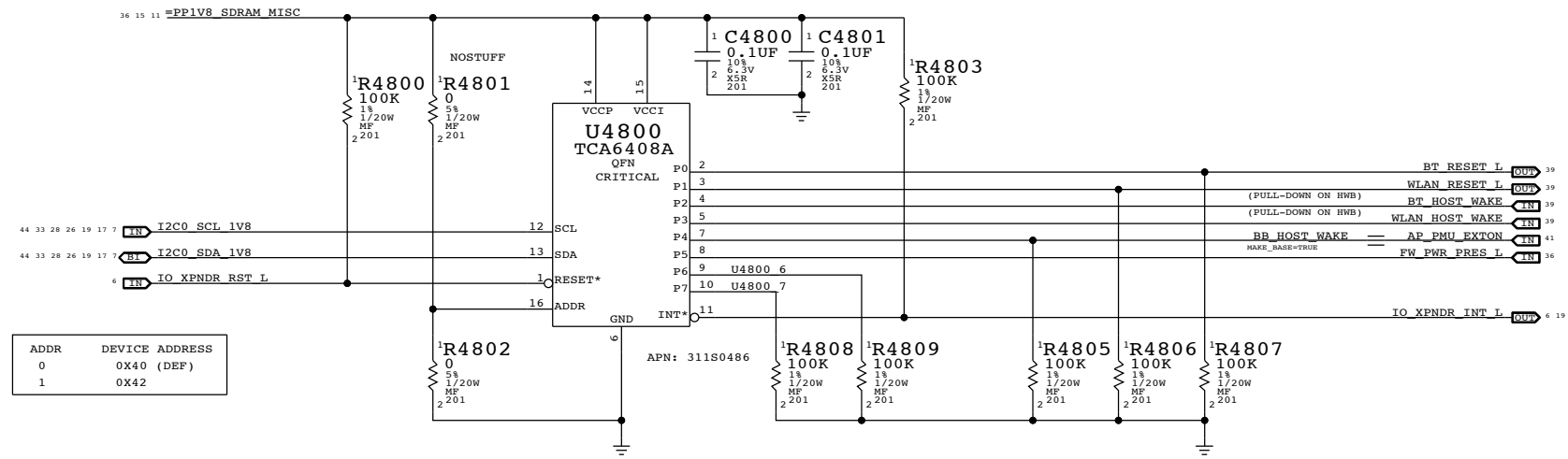
C

B

B

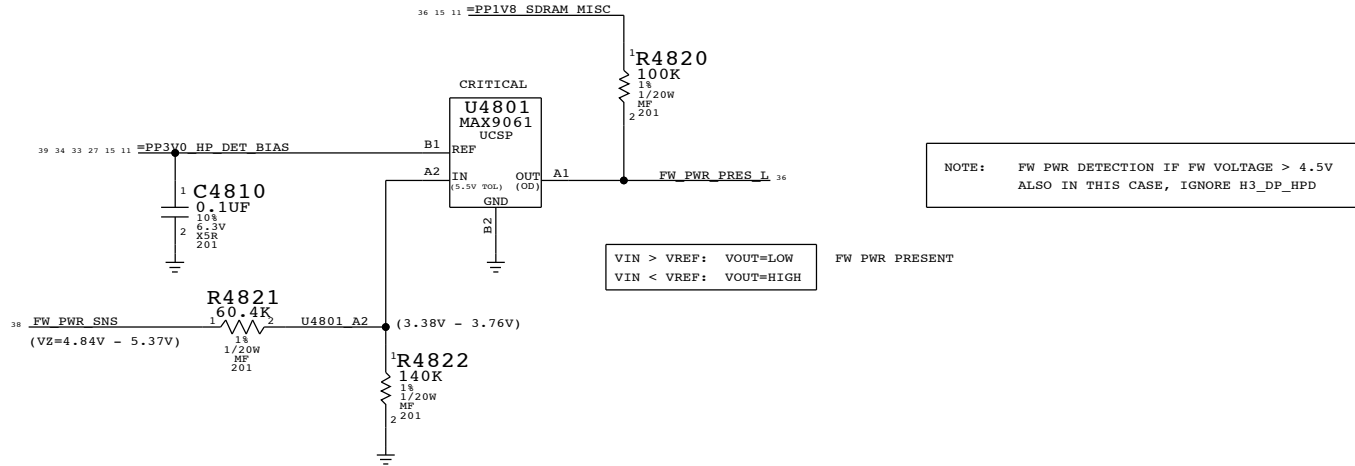
A

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THIS IS SAME AS PREVIOUS, BUT CE APPROVED APN NUMBER (SAME PART)

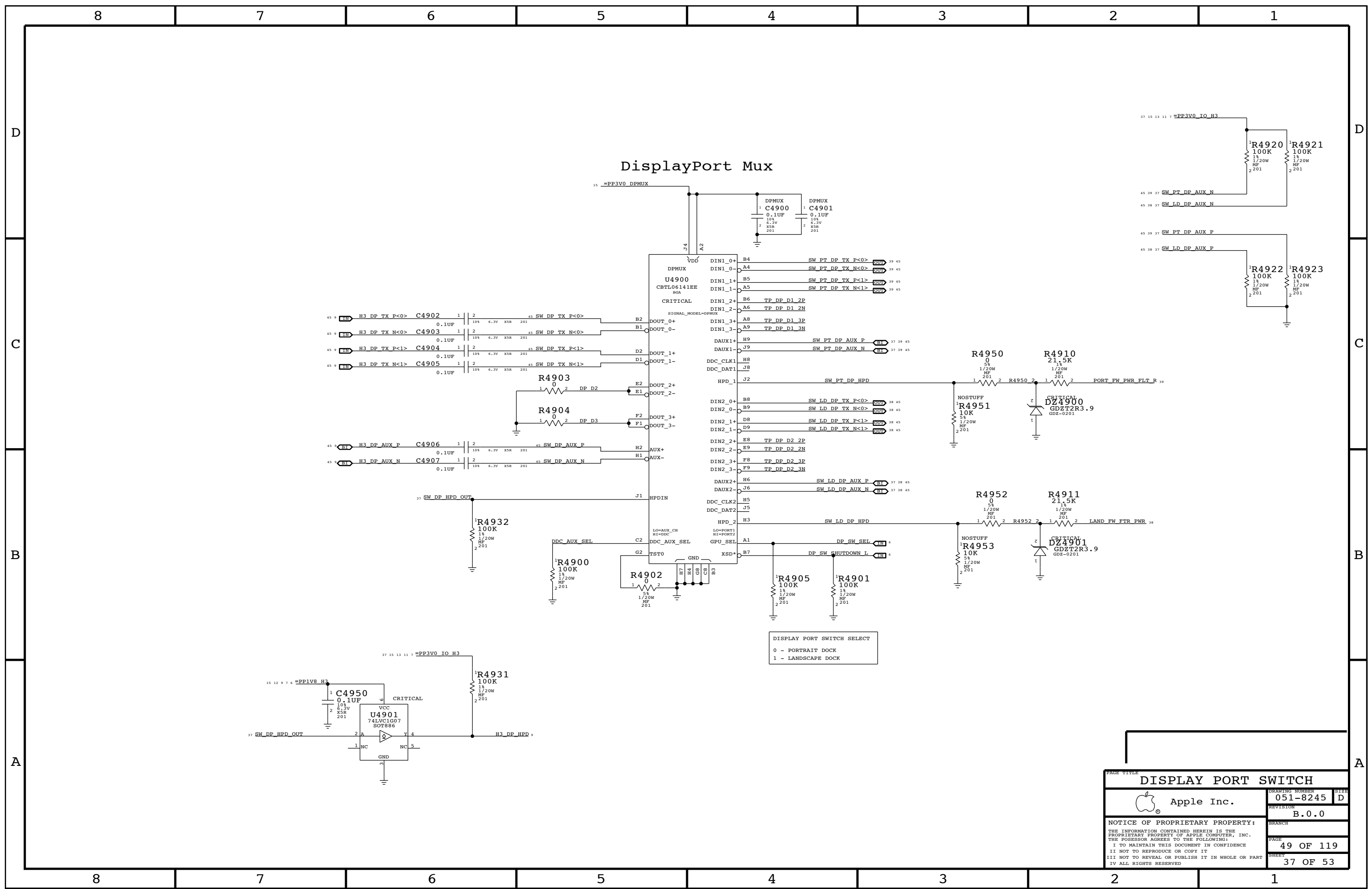
ADDR	DEVICE ADDRESS
0	0X40 (DEF)
1	0X42




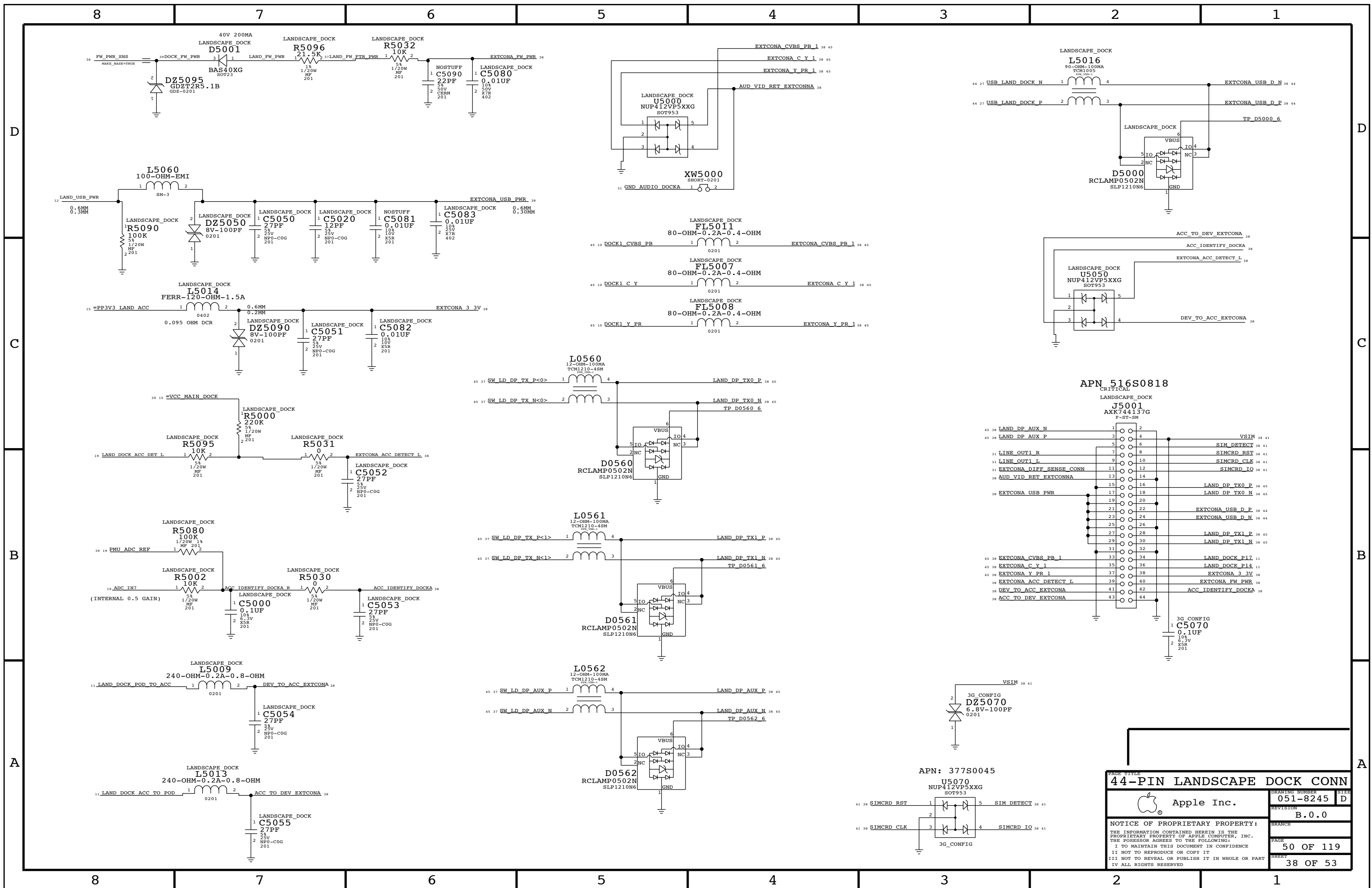
VIN > VREF: VOUT=LOW FW PWR PRESENT
 VIN < VREF: VOUT=HIGH

NOTE: FW PWR DETECTION IF FW VOLTAGE > 4.5V
 ALSO IN THIS CASE, IGNORE H3_DP_HPD

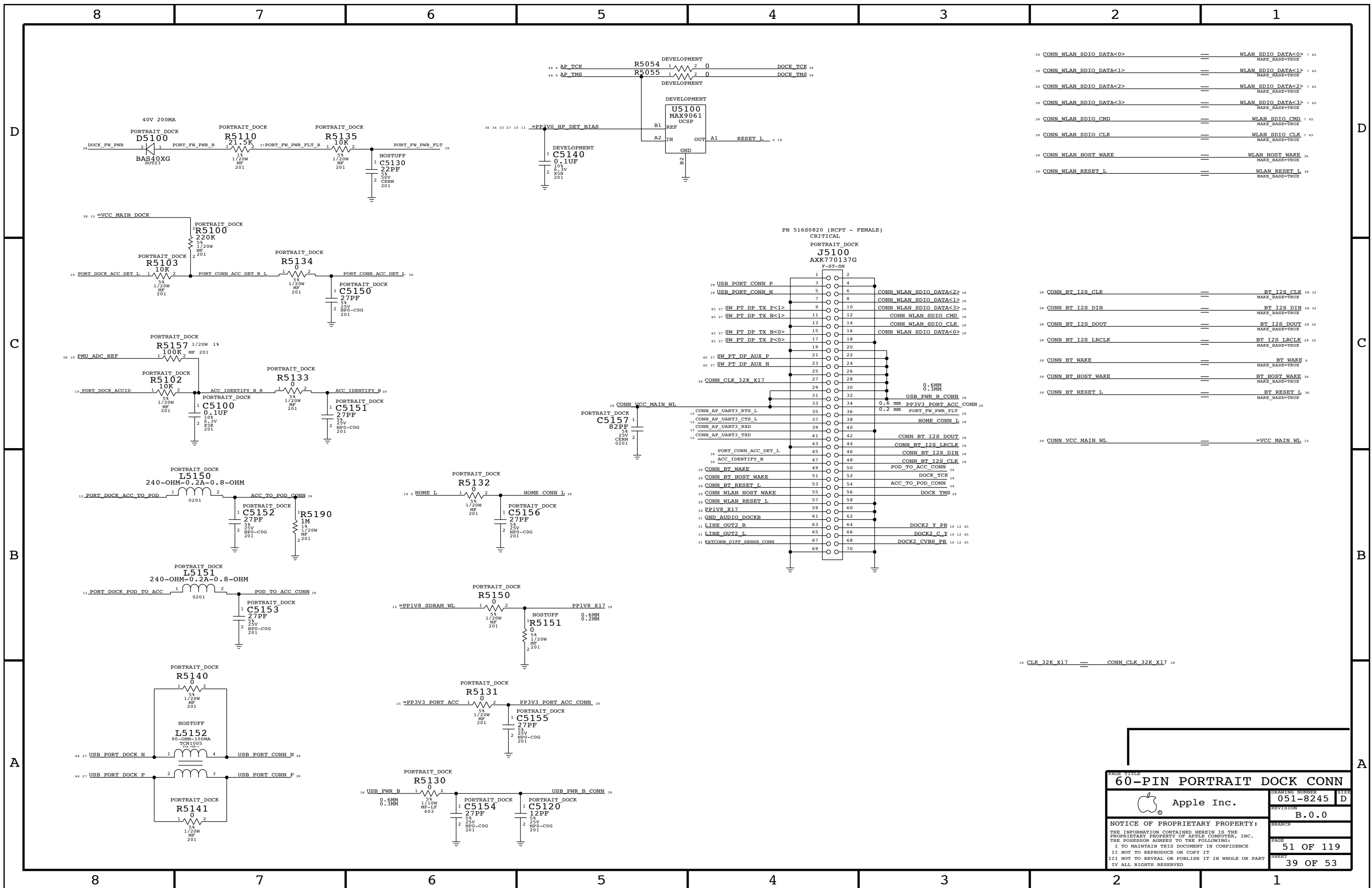
PAGE TITLE		
I/O EXPANDER		
Apple Inc.	DRAWING NUMBER	051-8245
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PAGE TITLE		
DISPLAY PORT SWITCH		
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44-PIN LANDSCAPE DOCK CONN Apple Inc.		DRAWING NUMBER 051-8245	SIZE D
REVISION B.0.0		BRANCH	
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39	CONN WLAN SDIO DATA<0>	==	WLAN SDIO DATA<0>	7 45
			MAKE_BASE=TRUE	
39	CONN WLAN SDIO DATA<1>	==	WLAN SDIO DATA<1>	7 45
			MAKE_BASE=TRUE	
39	CONN WLAN SDIO DATA<2>	==	WLAN SDIO DATA<2>	7 45
			MAKE_BASE=TRUE	
39	CONN WLAN SDIO DATA<3>	==	WLAN SDIO DATA<3>	7 45
			MAKE_BASE=TRUE	
39	CONN WLAN SDIO CMD	==	WLAN SDIO CMD	7 45
			MAKE_BASE=TRUE	
39	CONN WLAN SDIO CLK	==	WLAN SDIO CLK	7 45
			MAKE_BASE=TRUE	
39	CONN WLAN HOST WAKE	==	WLAN HOST WAKE	36
			MAKE_BASE=TRUE	
39	CONN WLAN RESET L	==	WLAN RESET L	36
			MAKE_BASE=TRUE	

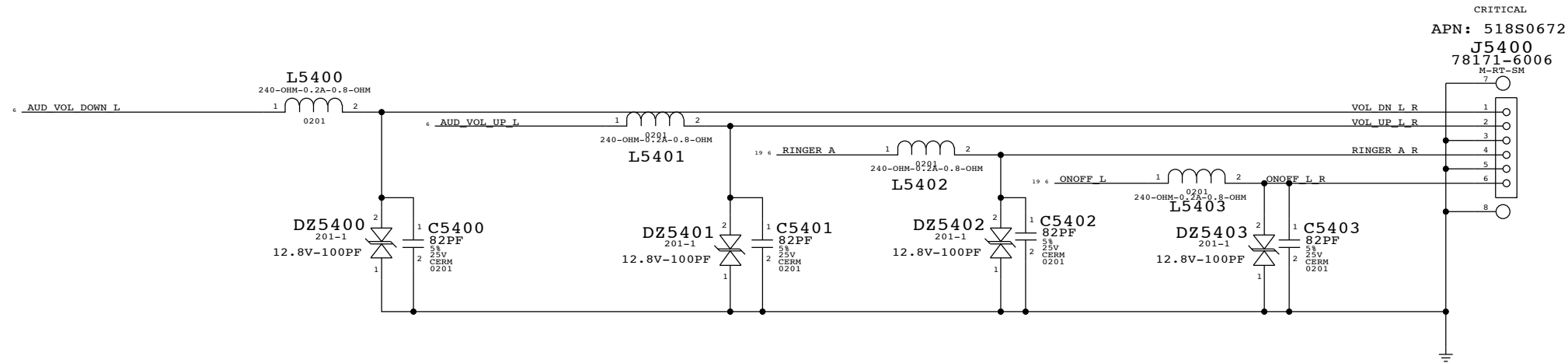
39	CONN BT I2S CLK	==	BT I2S CLK	28 32
			MAKE_BASE=TRUE	
39	CONN BT I2S DIN	==	BT I2S DIN	28 32
			MAKE_BASE=TRUE	
39	CONN BT I2S DOUT	==	BT I2S DOUT	28 32
			MAKE_BASE=TRUE	
39	CONN BT I2S LRCLK	==	BT I2S LRCLK	28 32
			MAKE_BASE=TRUE	
39	CONN BT WAKE	==	BT WAKE	6
			MAKE_BASE=TRUE	
39	CONN BT_HOST WAKE	==	BT_HOST WAKE	36
			MAKE_BASE=TRUE	
39	CONN BT RESET L	==	BT RESET L	36
			MAKE_BASE=TRUE	


39	CONN VCC MAIN WL	==	=VCC MAIN WL	15
----	------------------	----	--------------	----

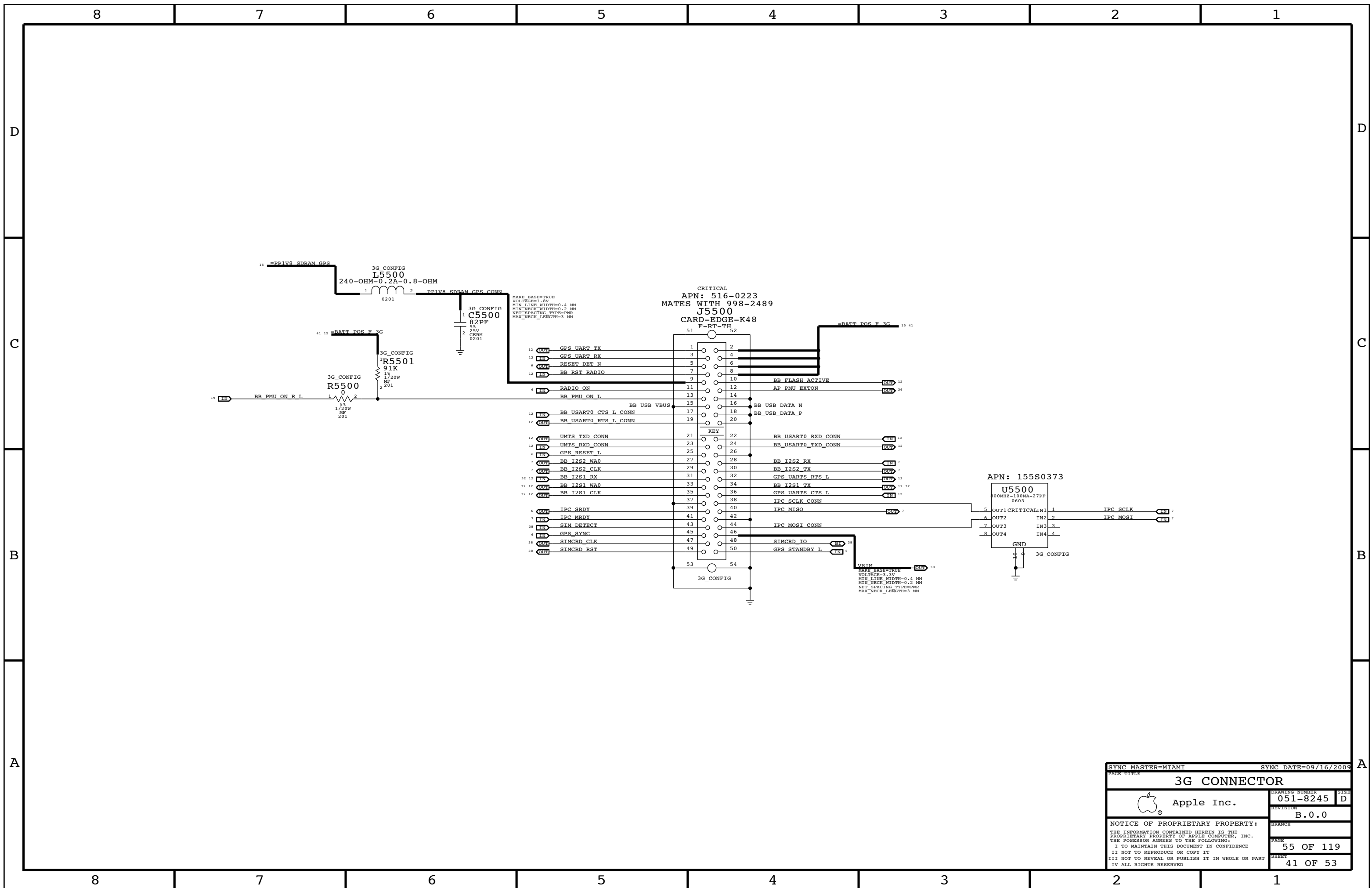
19 CLK 32K X17 == CONN_CLK_32K_X17 39

PAGE TITLE		
60-PIN PORTRAIT DOCK CONN		
Apple Inc.	DRAWING NUMBER	051-8245
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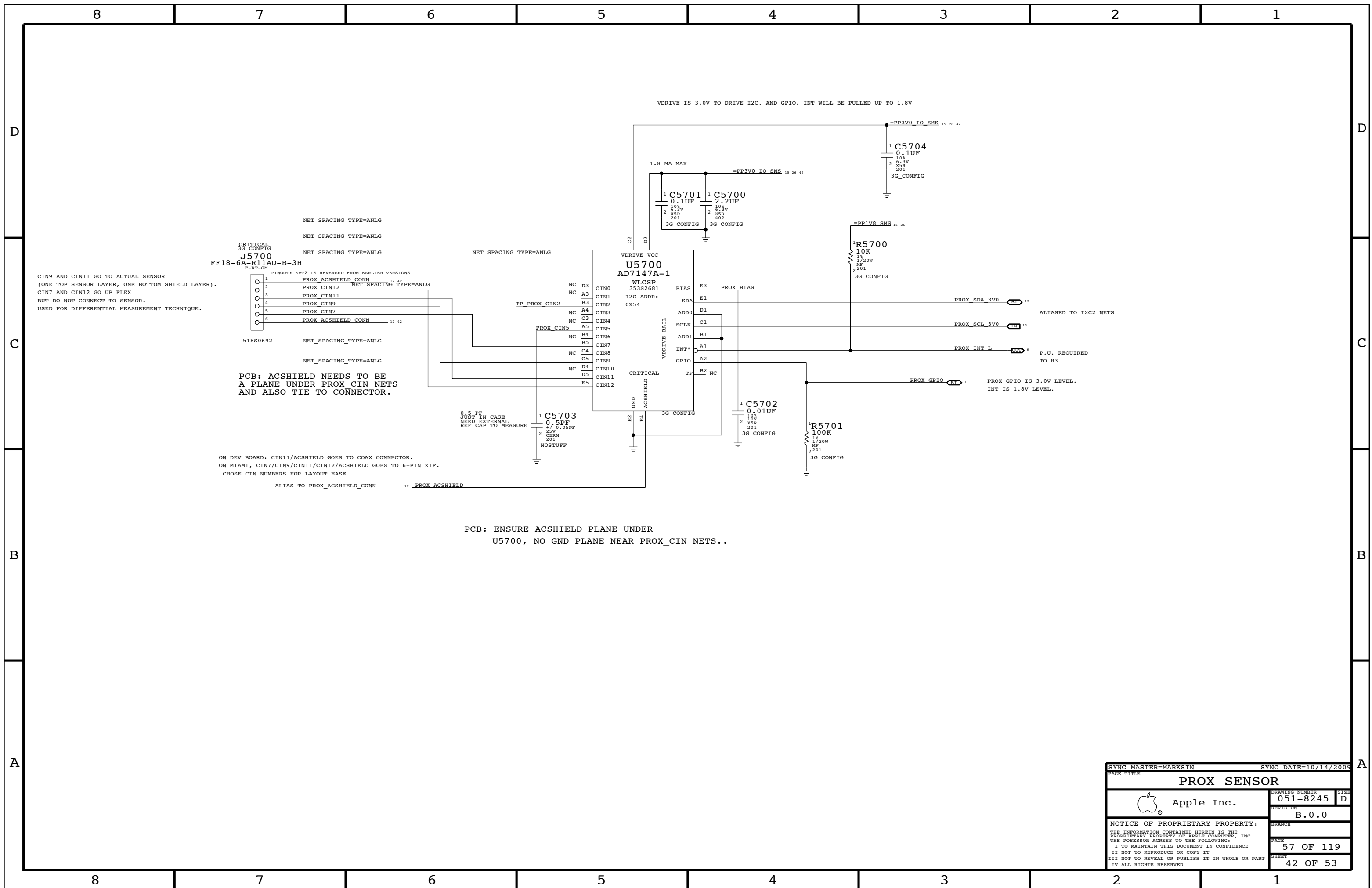
BUTTON CONNECTOR



SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
BUTTONS CONNECTOR			
 Apple Inc.		DRAWING NUMBER	051-8245
		REVISION	B.0.0
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		PAGE	54 OF 119
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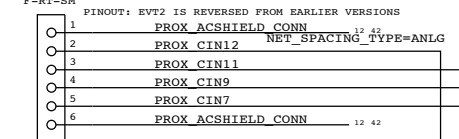
SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
3G CONNECTOR			
Apple Inc.		DRAWING NUMBER	SIZE
		051-8245	D
		REVISION	
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VDRIVE IS 3.0V TO DRIVE I2C, AND GPIO. INT WILL BE PULLED UP TO 1.8V

CIN9 AND CIN11 GO TO ACTUAL SENSOR
(ONE TOP SENSOR LAYER, ONE BOTTOM SHIELD LAYER).
CIN7 AND CIN12 GO UP FLEX
BUT DO NOT CONNECT TO SENSOR.
USED FOR DIFFERENTIAL MEASUREMENT TECHNIQUE.

NET_SPACING_TYPE=ANLG
NET_SPACING_TYPE=ANLG
NET_SPACING_TYPE=ANLG



518S0692 NET_SPACING_TYPE=ANLG
NET_SPACING_TYPE=ANLG

PCB: ACSHIELD NEEDS TO BE
A PLANE UNDER PROX CIN NETS
AND ALSO TIE TO CONNECTOR.

ON DEV BOARD: CIN11/ACSHIELD GOES TO COAX CONNECTOR.
ON MIAMI, CIN7/CIN9/CIN11/CIN12/ACSHIELD GOES TO 6-PIN ZIF.
CHOSE CIN NUMBERS FOR LAYOUT EASE

ALIAS TO PROX_ACSHIELD_CONN 12 _PROX_ACSHIELD

PCB: ENSURE ACSHIELD PLANE UNDER
U5700, NO GND PLANE NEAR PROX_CIN NETS..

SYNC MASTER=MARKSIN		SYNC DATE=10/14/2009	
PROX SENSOR			
		DRAWING NUMBER	051-8245
		REVISION	B.0.0
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16GB FLASH CONFIGURATIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
335S0648	2	TOSHIBA 43NM 8GB	U6700,U6710	16GB_PROD

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S0683	335S0648	16GB_PROD	U6700,U6710	SAMSUNG 35NM 8GB

32GB FLASH CONFIGURATIONS

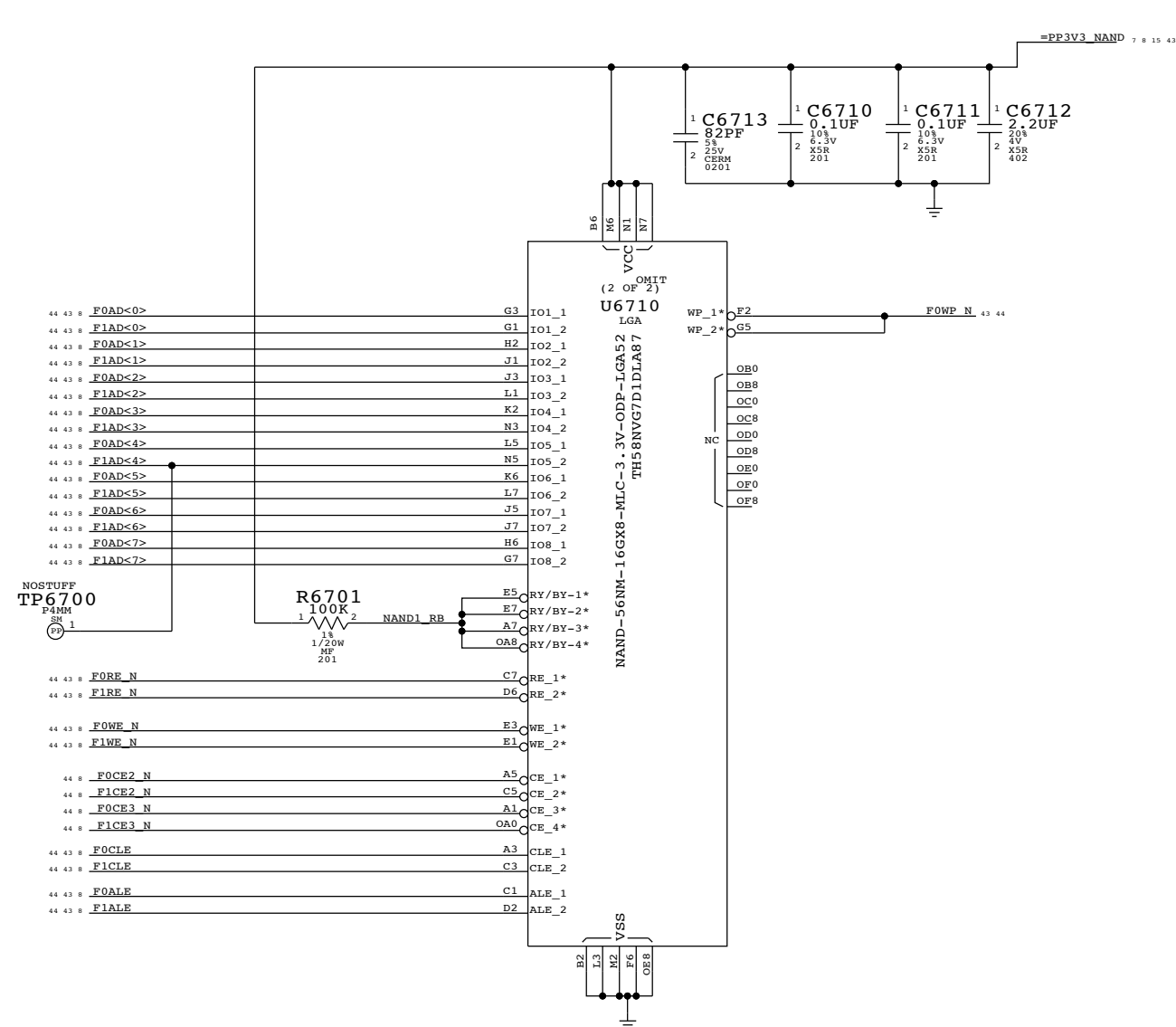
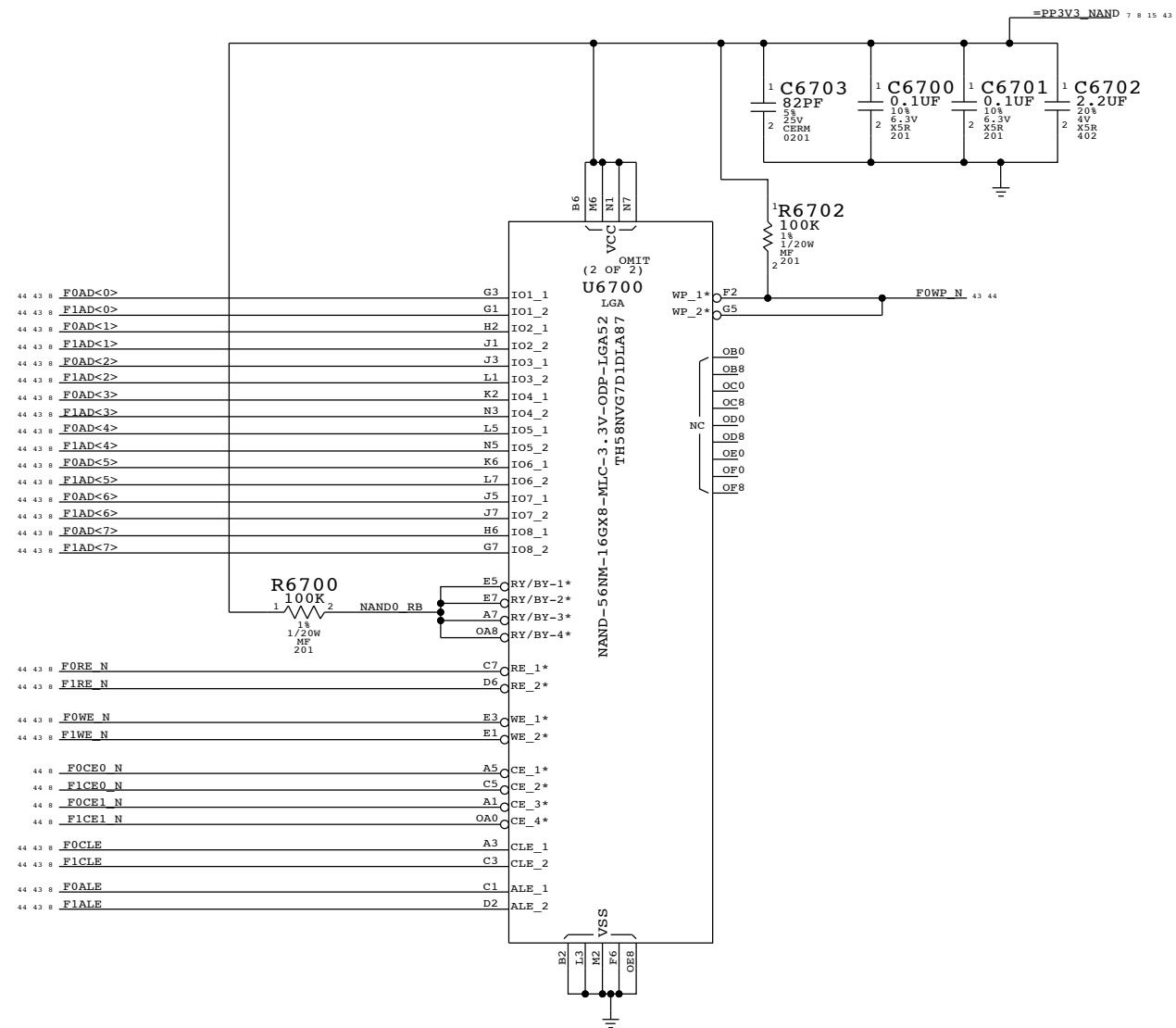
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
335S0649	2	TOSHIBA 43NM 16GB	U6700,U6710	32GB_PROD

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S0682	335S0649	32GB_PROD	U6700,U6710	SAMSUNG 35NM 16GB

64GB FLASH CONFIGURATIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
335S0650	2	TOSHIBA 43NM 32GB	U6700,U6710	64GB_PROD

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S0665	335S0650	64GB_PROD	U6700,U6710	SAMSUNG 35NM 32GB



SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
PAGE TITLE			
FLASH			
		DRAWING NUMBER	051-8245
		REVISION	B.0.0
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Clock Signal Constraints

NET_PHYSICAL_TYPE	AREA_TYPE	PHYSICAL_RULE_SET
CLK_50S	*	50_OHM_SE

NET_SPACING_TYPE1	NET_SPACING_TYPE2	AREA_TYPE	SPACING_RULE_SET
CLK	*	*	0P5MM_SPACING

USB 2.0 Interface Constraints

NET_PHYSICAL_TYPE	AREA_TYPE	PHYSICAL_RULE_SET
USB_90D	*	90_OHM_DIFF

NET_SPACING_TYPE1	NET_SPACING_TYPE2	AREA_TYPE	SPACING_RULE_SET
USB	*	*	0P5MM_SPACING

OTHER CONSTRAINTS


NET_PHYSICAL_TYPE	AREA_TYPE	PHYSICAL_RULE_SET
I2C_50S	*	50_OHM_SE
NAND_50S	*	50_OHM_SE
AUDIO	*	1:1_DIFFPAIR
SPEAKER	*	SPEAKER

NET_SPACING_TYPE1	NET_SPACING_TYPE2	AREA_TYPE	SPACING_RULE_SET
NAND	*	*	1.5:1_SPACING
I2C	*	*	1.5:1_SPACING
AUDIO	*	*	3:1_SPACING

ELECTRICAL_CONSTRAINT_SET	NET_TYPE			
	PHYSICAL	SPACING		
E115		JTAG	AP_TCK	6 39
E116		JTAG	AP_TMS	6 39
E117		JTAG	AP_TDI	6 12
E118		JTAG	AP_TDO	12
E120		JTAG	AP_RTCK	
E18	USB	USB_90D	USB_LAND DOCK P	27 38
E19	USB	USB_90D	USB_LAND DOCK N	27 38
E20	USB	USB_90D	USB_PORT DOCK P	27 39
E21	USB	USB_90D	USB_PORT DOCK N	27 39
E22		USB_90D	EXTCONA USB D P	38
E23		USB_90D	EXTCONA USB D N	38
E24	USB	USB_90D	USB_DP	6 27
E25	USB	USB_90D	USB_DM	6 27
E227			I2S1_DOUT	7 12
E228			I2S1_DIN	7 12
E229			I2S1_BCLK	7 12
E230			I2S1_LRCLK	7 12
E231			I2S1_MCLK	
E233		CLK_50S	CLK	CLK_32K_PMU 19 24
E349		NAND_50S	NAND	F1AD<7..0> 8 43
E350		NAND_50S	NAND	F0AD<7..0> 8 43
E351		NAND_50S	NAND	F0CE0_N 8 43
E352		NAND_50S	NAND	F0CE1_N 8 43
E353		NAND_50S	NAND	F0CE2_N 8 43
E354		NAND_50S	NAND	F0CE3_N 8 43
E355		NAND_50S	NAND	F0CLE 8 43
E356		NAND_50S	NAND	F0ALE 8 43
E357		NAND_50S	NAND	F0RE_N 8 43
E358		NAND_50S	NAND	F0WE_N 8 43
E359		NAND_50S	NAND	F0WP_N 43
E361		NAND_50S	NAND	F1CE0_N 8 43
E362		NAND_50S	NAND	F1CE1_N 8 43
E363		NAND_50S	NAND	F1CE2_N 8 43
E364		NAND_50S	NAND	F1CE3_N 8 43
E365		NAND_50S	NAND	F1CLE 8 43
E366		NAND_50S	NAND	F1ALE 8 43
E367		NAND_50S	NAND	F1RE_N 8 43
E368		NAND_50S	NAND	F1WE_N 8 43
E369		NAND_50S	NAND	F1WP_N 8 43
E370	SPEAKER	AUDIO	SPKRAMP_L_OUT_P	29
E371	SPEAKER	AUDIO	SPKRAMP_L_OUT_N	29
E372	SPEAKER	AUDIO	SPKRAMP_R_OUT_P	29
E373	SPEAKER	AUDIO	SPKRAMP_R_OUT_N	29
E374	SPEAKER_ECS	AUDIO	EAR_OUT_P	28 29
E375	AUDIO	AUDIO	EAR_OUT_N	28 29
E376	AUDIO	AUDIO	SSM2319_L_IN_P	29
E377	AUDIO	AUDIO	SSM2319_L_IN_N	29
E378	SPEAKER_ECS	AUDIO	MONO_OUT_P	28 29
E379	AUDIO	AUDIO	MONO_OUT_N	28 29
E380	AUDIO	AUDIO	SSM2319_R_IN_P	29
E381	AUDIO	AUDIO	SSM2319_R_IN_N	29

I2C BUS NET PROPERTIES

ELECTRICAL_CONSTRAINT_SET	NET_TYPE			
	PHYSICAL	SPACING		
E11	I2C1_ECS	I2C_50S	I2C	I2C1_SDA_1V8 7
E12	I2C1_ECS	I2C_50S	I2C	I2C1_SCL_1V8 7
E13	I2C0_ECS	I2C_50S	I2C	I2C0_SDA_1V8 7 17 19 26 28 33 36
E14	I2C0_ECS	I2C_50S	I2C	I2C0_SCL_1V8 7 17 19 26 28 33 36
E15	I2C2_ECS	I2C_50S	I2C	I2C2_SDA_3V0 7 12 13 17 26 35 44
E16	I2C2_ECS	I2C_50S	I2C	I2C2_SCL_3V0 7 12 13 17 26 35 44

SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
CONSTRAINTS			
 Apple Inc.		DRAWING NUMBER	051-8245
		REVISION	B.0.0
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Video Signal Constraints

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
VID_50S	*	Y	=50_OHM_SE	=50_OHM_SE	=50_OHM_SE	=STANDARD	=STANDARD

NET_PHYSICAL_TYPE	AREA_TYPE	PHYSICAL_RULE_SET
LVDS_100D	*	90_OHM_DIFF
MIPI_100D	*	90_OHM_DIFF
SMIA_100D	*	90_OHM_DIFF
DP_100D	*	90_OHM_DIFF

NET_SPACING_TYPE1	NET_SPACING_TYPE2	AREA_TYPE	SPACING_RULE_SET
ANALOG_VIDEO	*	*	2.5:1_SPACING
LVDS	*	*	4:1_SPACING
MIPI	*	*	4:1_SPACING
SMIA	*	*	4:1_SPACING
DP	*	*	4:1_SPACING

SDIO SIGNAL CONSTRAINTS

NET_PHYSICAL_TYPE	AREA_TYPE	PHYSICAL_RULE_SET
SDIO_50S	*	50_OHM_SE

NET_SPACING_TYPE1	NET_SPACING_TYPE2	AREA_TYPE	SPACING_RULE_SET
SDIO	*	*	1.5:1_SPACING

ANALOG VIDEO CONSTRAINTS

ELECTRICAL_CONSTRAINT_SET	NET_TYPE			
	PHYSICAL	SPACING		
E230	VID_50S	ANALOG_VIDEO	DAC_OUT1	10
E231	VID_50S	ANALOG_VIDEO	DAC_OUT2	10
E232	VID_50S	ANALOG_VIDEO	DAC_OUT3	10
E233	VID_50S	ANALOG_VIDEO	LAND_YOUT	10
E234	VID_50S	ANALOG_VIDEO	LAND_CVBS_OUT	10
E235	VID_50S	ANALOG_VIDEO	LAND_COUT	10
E236	VID_50S	ANALOG_VIDEO	PORT_YOUT	10
E237	VID_50S	ANALOG_VIDEO	PORT_CVBS_OUT	10
E238	VID_50S	ANALOG_VIDEO	PORT_COUT	10
E239	VID_50S	ANALOG_VIDEO	DOCK1_CVBS_PB	10 38
E240	VID_50S	ANALOG_VIDEO	DOCK1_C_Y	10 38
E241	VID_50S	ANALOG_VIDEO	DOCK1_Y_PR	10 38
E242	VID_50S	ANALOG_VIDEO	EXTCONA_CVBS_PB_1	38
E243	VID_50S	ANALOG_VIDEO	EXTCONA_C_Y_1	38
E244	VID_50S	ANALOG_VIDEO	EXTCONA_Y_PR_1	38
E245	VID_50S	ANALOG_VIDEO	DOCK2_CVBS_PB	10 12 39
E246	VID_50S	ANALOG_VIDEO	DOCK2_C_Y	10 12 39
E247	VID_50S	ANALOG_VIDEO	DOCK2_Y_PR	10 12 39

MIPI, SMIA AND DISPLAYPORT BUS CONSTRAINTS


ELECTRICAL_CONSTRAINT_SET	NET_TYPE				
	PHYSICAL	SPACING			
E248	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID DATA P<0>	9 14
E249	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID DATA N<0>	9 14
E250	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID DATA P<1>	9 14
E251	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID DATA N<1>	9 14
E252	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID DATA P<2>	9 14
E253	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID DATA N<2>	9 14
E254	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID DATA P<3>	9 14
E255	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID DATA N<3>	9 14
E256	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID CLK P	9 14
E257	MIPI_ECS	MIPI_100D	MIPI	H3 MIPID CLK N	9 14
E258	SMIA_ECS	SMIA_100D	SMIA	CAM SMIA DATA P	
E259	SMIA_ECS	SMIA_100D	SMIA	CAM SMIA DATA N	
E260	SMIA_ECS	SMIA_100D	SMIA	CAM SMIA CLK P	
E261	SMIA_ECS	SMIA_100D	SMIA	CAM SMIA CLK N	
E262	SMIA_ECS	SMIA_100D	SMIA	CONN SMIA CLK P	
E263	SMIA_ECS	SMIA_100D	SMIA	CONN SMIA CLK N	
E264	DP_H3_ECS	DP_100D	DP	H3 DP TX P<0>	9 37
E265	DP_H3_ECS	DP_100D	DP	H3 DP TX N<0>	9 37
E266	DP_H3_ECS	DP_100D	DP	H3 DP TX P<1>	9 37
E267	DP_H3_ECS	DP_100D	DP	H3 DP TX N<1>	9 37
E268	DP_H3_ECS	DP_100D	DP	H3 DP AUX P	9 37
E269	DP_H3_ECS	DP_100D	DP	H3 DP AUX N	9 37
E270	DP_H3_ECS	DP_100D	DP	SW DP TX P<0>	37
E271	DP_H3_ECS	DP_100D	DP	SW DP TX N<0>	37
E272	DP_H3_ECS	DP_100D	DP	SW DP TX P<1>	37
E273	DP_H3_ECS	DP_100D	DP	SW DP TX N<1>	37
E274	DP_H3_ECS	DP_100D	DP	SW DP AUX P	37
E275	DP_H3_ECS	DP_100D	DP	SW DP AUX N	37
E276	DP_PORT_ECS	DP_100D	DP	SW_PT DP TX P<0>	37 39
E277	DP_PORT_ECS	DP_100D	DP	SW_PT DP TX N<0>	37 39
E278	DP_PORT_ECS	DP_100D	DP	SW_PT DP TX P<1>	37 39
E279	DP_PORT_ECS	DP_100D	DP	SW_PT DP TX N<1>	37 39
E280	DP_PORT_ECS	DP_100D	DP	SW_PT DP AUX P	37 39
E281	DP_PORT_ECS	DP_100D	DP	SW_PT DP AUX N	37 39
E282	DP_LAND_ECS	DP_100D	DP	SW_LD DP TX P<0>	37 38
E283	DP_LAND_ECS	DP_100D	DP	SW_LD DP TX N<0>	37 38
E284	DP_LAND_ECS	DP_100D	DP	SW_LD DP TX P<1>	37 38
E285	DP_LAND_ECS	DP_100D	DP	SW_LD DP TX N<1>	37 38
E286	DP_LAND_ECS	DP_100D	DP	SW_LD DP AUX P	37 38
E287	DP_LAND_ECS	DP_100D	DP	SW_LD DP AUX N	37 38
E288	DP_LAND_ECS	DP_100D	DP	LAND DP TX0 P	38
E289	DP_LAND_ECS	DP_100D	DP	LAND DP TX0 N	38
E290	DP_LAND_ECS	DP_100D	DP	LAND DP TX1 P	38
E291	DP_LAND_ECS	DP_100D	DP	LAND DP TX1 N	38
E292	DP_LAND_ECS	DP_100D	DP	LAND DP AUX P	38
E293	DP_LAND_ECS	DP_100D	DP	LAND DP AUX N	38

LVDS CONSTRAINTS

ELECTRICAL_CONSTRAINT_SET	NET_TYPE				
	PHYSICAL	SPACING			
E294	LVDS_ECS	LVDS_100D	LVDS	LVDS DATA P<2..0>	13 25
E295	LVDS_ECS	LVDS_100D	LVDS	LVDS DATA N<2..0>	13 25
E296	LVDS_ECS	LVDS_100D	LVDS	LVDS CLK P	13 25
E297	LVDS_ECS	LVDS_100D	LVDS	LVDS CLK N	13 25
E298	LVDS_ECS	LVDS_100D	LVDS	LVDS CONN CLK P	25
E299	LVDS_ECS	LVDS_100D	LVDS	LVDS CONN CLK N	25
E300	LVDS_ECS	LVDS_100D	LVDS	LVDS DAT P<2..0>	25
E301	LVDS_ECS	LVDS_100D	LVDS	LVDS DAT N<2..0>	25

HX SDIO CONSTRAINTS

ELECTRICAL_CONSTRAINT_SET	NET_TYPE				
	PHYSICAL	SPACING			
E302	WLAN_SDIO_ECS	SDIO_50S	SDIO	WLAN SDIO CLK	7 39
E303	WLAN_SDIO_CMD_ECS	SDIO_50S	SDIO	WLAN SDIO CMD	7 39
E304	WLAN_SDIO_ECS	SDIO_50S	SDIO	WLAN SDIO DATA<3..0>	7 39

SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
MORE CONSTRAINTS			
 Apple Inc.		DRAWING NUMBER	051-8245
		REVISION	B.0.0
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MIAMI BOARD-SPECIFIC SPACING & PHYSICAL CONSTRAINTS (10-LAYER)

BOARD LAYERS		BOARD AREAS		BOARD UNITS (MIL OR MM)	ALLEGRO VERSION
TOP, ISL2, ISL3, ISL4, ISL5, ISL6, ISL7, ISL8, ISL9, BOTTOM		NO_TYPE, BGA		MM	15.2

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
DEFAULT	*	Y	=50_OHM_SE	=50_OHM_SE	30 MM	0 MM	0 MM
STANDARD	*	Y	=DEFAULT	=DEFAULT	12.7 MM	=DEFAULT	=DEFAULT

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
50_OHM_SE	TOP, BOTTOM	Y	0.230 MM	0.070 MM	3.0 MM		
50_OHM_SE	ISL2, ISL9	Y	0.076 MM	0.070 MM	3.0 MM		
50_OHM_SE	ISL4, ISL7	Y	0.076 MM	0.070 MM	3.0 MM		
50_OHM_SE	*	N	0.070 MM	0.070 MM	3.0 MM		

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
BGA	*	Y	0.075 MM	0.075 MM	=STANDARD	0.076 MM	0.075 MM

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
90_OHM_DIFF	*	Y	=STANDARD	=STANDARD	=STANDARD	=STANDARD	=STANDARD
90_OHM_DIFF	ISL4, ISL7	Y	0.070 MM	0.070 MM		0.200 MM	0.100 MM
90_OHM_DIFF	TOP, BOTTOM	Y	0.070 MM	0.070 MM		0.200 MM	0.200 MM

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
1:1_DIFFPAIR	*	Y	=STANDARD	=STANDARD	=STANDARD	0.075 MM	0.075 MM
SPEAKER	*	Y	0.3 MM	0.19MM	10 MM	0.075 MM	0.075 MM

SPACING_RULE_SET	LAYER	LINE-TO-LINE SPACING	WEIGHT
DEFAULT	*	0.08 MM	?
STANDARD	*	=DEFAULT	?
BGA	*	=DEFAULT	?

NET_SPACING_TYPE1	NET_SPACING_TYPE2	AREA_TYPE	SPACING_RULE_SET
*	*	BGA	BGA
CLK	*	BGA	BGA
PWR	*	*	PWR_P1SPACING
GND	*	*	GND_P1SPACING
SWITCHNODE	*	*	SWITCHNODE
PWR	*	*	PWR_P1SPACING
ANLG	*	*	3:1_SPACING
CRYSTAL	*	*	3:1_SPACING
JTAG	*	*	2:1_SPACING
I2S_ST	*	*	2:1_SPACING
I2S_ST	I2S_ST	*	1.5:1_SPACING

NET_PHYSICAL_TYPE	AREA_TYPE	PHYSICAL_RULE_SET
*	BGA	BGA

NOTES:

- 0.075 MM ~ 3 MIL
- 0.089 MM ~ 3.5 MIL
- 0.102 MM ~ 4 MIL
- 0.114 MM ~ 4.5 MIL
- 0.125 MM ~ 5 MIL
- 0.140 MM ~ 5.5 MIL
- 0.15 MM ~ 6 MIL
- 0.18 MM ~ 7 MIL
- 0.2 MM ~ 8 MIL
- 0.25 MM ~ 10 MIL
- 0.3 MM ~ 12 MIL
- 0.33 MM ~ 13 MIL
- 0.4 MM ~ 16 MIL
- 1.0 MM = 39.37 MIL

SPACING_RULE_SET	LAYER	LINE-TO-LINE SPACING	WEIGHT
1:1_SPACING	*	0.075 MM	?
1.5:1_SPACING	*	0.114 MM	?
1.8:1_SPACING	*	0.136 MM	?
2:1_SPACING	*	0.152 MM	?
2.5:1_SPACING	*	0.190 MM	?
3:1_SPACING	*	0.228 MM	?
4:1_SPACING	*	0.304 MM	?
0P64MM_SPACING	*	0.64 MM	?
0P5MM_SPACING	*	0.5 MM	?
PWR_P1SPACING	*	0.1 MM	900
GND_P1SPACING	*	0.1 MM	950
SWITCHNODE	*	0.5 MM	1000
SWITCHNODE	TOP, BOTTOM	0.2 MM	1000


SYNC MASTER=MIAMI		SYNC DATE=09/16/2009	
PHYSICAL/SPACING RULES			
 Apple Inc.		DRAWING NUMBER	051-8245
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Table with 14 columns and multiple rows of hardware component names and addresses. Columns are labeled 1 through 14 at the top and bottom. The table contains detailed lists of components such as FFLAG_R, FILT_CVBS_PB, FSB_D_L<15>, HDA_RST_L_AUDIO, MEM_BS<2>, MIC_BIAS_HP1, and MT_PANEL_IN<0>.

D

C

B

A

D

C

B

A

Table with columns labeled 8, 7, 6, 5, 4, 3, 2, 1. Each column contains a list of hardware components, their identifiers, and associated numerical values. The table is organized into a grid with letters A, B, C, D marking specific sections.

	8	7	6	5	4	3	2	1
	TP_LVDS_DATAP3 TP_LVDS_VSYNC_OUT TP_PCIE_PER1_N TP_PCIE_PER1_P TP_PCIE_PER2_N TP_PCIE_PER2_P TP_PCIE_PET1_N TP_PCIE_PET1_P TP_PCIE_PET2_N TP_PCIE_PET2_P TP_SCART_CVBS TP_SCART_VGA_B TP_SCART_VGA_G TP_SCART_VGA_R TP_SCH_CLK_LPC_1 TP_SCH_CLK_LPC_2 TP_SCH_GPIOSUB0 TP_SCH_GPIO_9 TP_SCH_PILMON1 TP_SCH_PILMON1_L TP_SCH_RESVRD0 TP_SCH_RESVRD8 TP_SCH_SD0_DATA6 TP_SCH_SD1_CLK TP_SCH_SD2_CLK TP_U0600_G28 TP_U0600_R27 TP_U0600_U30 TP_U0600_V27 TP_U3101_TCK TP_U3101_TDI TP_U3101_TDO TP_U3101_TMS TP_USB_D_N TP_USB_D_P TP_USB_G_N TP_USB_G_P TP_USB_H_N TP_USB_H_P TP_WL_TCK TP_WL_TDI TP_WL_TDO TP_WL_TMS TP_WL_TRST_L TVCLK_N TVCLK_P TVOUT_DOCKS_EN U6700_R1 U6700_R2 U6700_R3 U6700_R4 U6710_R1 U6710_R2 U6710_R3 U6710_R4 USBA_EXT_NR USBA_EXT_PR USBA_GATE USBA_GATE_D USBA_PWR_DETECT_L USBA_PWR_SLCT USBB_EXT_NR USBB_EXT_PR USBB_GATE USBB_GATE_D USBB_PWR_DETECT_L USBB_PWR_SLCT USBCC USB_BT_N USB_BT_P USB_CAMERA_CONN_N USB_CAMERA_CONN_P USB_CAMERA_N USB_CAMERA_P USB_C_N USB_C_P USB_DOCKS_MUX_N USB_DOCKS_MUX_P USB_FLASH_CON_N USB_FLASH_CON_P USB_FLASH_N USB_FLASH_P USB_GRAPE_N USB_GRAPE_P USB_LAND_DOCK_N USB_LAND_DOCK_P USB_PORT_DOCK_N USB_PORT_DOCK_P USB_PSOC_N USB_PSOC_P USB_PWR_A USB_PWR_B USB_RBIA_PN VCORE_BG VCORE_BOOST VCORE_BOOST_RCD VCORE_CLSET VCORE_CS VCORE_CSN VCORE_CSP VCORE_CSP_R VCORE_DAC VCORE_DRN VCORE_ERRROUT VCORE_FBN VCORE_FBP VCORE_GND VCORE_HYS VCORE_RAMP VCORE_SS VCORE_TG VCORE_TTRIP VCORE_VCCA VCORE_VREF VR_PWRGD_CLKEN_L VSSAPCIEBG WL_HOST_WAKE WL_RESET_L WL_WAKE_L XDP_BPM_L<0> XDP_BPM_L<4..0> XDP_BPM_L<1> XDP_BPM_L<2> XDP_BPM_L<3>	TP_LVDS_DATAP3 - @lost_lib.LOST 9C6 TP_LVDS_VSYNC_OUT - @lost_lib.LOST 5D6 32C2 TP_PCIE_PER1_N - @lost_lib.LOST 9B4 TP_PCIE_PER1_P - @lost_lib.LOST 9B4 TP_PCIE_PER2_N - @lost_lib.LOST 9B4 TP_PCIE_PER2_P - @lost_lib.LOST 9B4 TP_PCIE_PET1_N - @lost_lib.LOST 9B4 TP_PCIE_PET1_P - @lost_lib.LOST 9B4 TP_PCIE_PET2_N - @lost_lib.LOST 9B4 TP_PCIE_PET2_P - @lost_lib.LOST 9B4 TP_SCART_CVBS - @lost_lib.LOST 94C5 TP_SCART_VGA_B - @lost_lib.LOST 94C5 TP_SCART_VGA_G - @lost_lib.LOST 94C5 TP_SCART_VGA_R - @lost_lib.LOST 94C5 TP_SCH_CLK_LPC_1 - @lost_lib.LOST 9D6 TP_SCH_CLK_LPC_2 - @lost_lib.LOST 9D6 TP_SCH_GPIOSUB0 - @lost_lib.LOST 10C5 TP_SCH_GPIO_9 - @lost_lib.LOST 10B5 TP_SCH_PILMON1 - @lost_lib.LOST 8A6 TP_SCH_PILMON1_L - @lost_lib.LOST 8A6 TP_SCH_RESVRD0 - @lost_lib.LOST 9D4 TP_SCH_RESVRD8 - @lost_lib.LOST 9D4 TP_SCH_SD0_DATA6 - @lost_lib.LOST 9B6 TP_SCH_SD1_CLK - @lost_lib.LOST 9B6 TP_SCH_SD2_CLK - @lost_lib.LOST 9B6 TP_U0600_G28 - @lost_lib.LOST 6B5 TP_U0600_R27 - @lost_lib.LOST 6B7 TP_U0600_U30 - @lost_lib.LOST 6B5 TP_U0600_V27 - @lost_lib.LOST 6B5 TP_U3101_TCK - @lost_lib.LOST 31C6 TP_U3101_TDI - @lost_lib.LOST 31C6 TP_U3101_TDO - @lost_lib.LOST 31C6 TP_U3101_TMS - @lost_lib.LOST 31C6 TP_USB_D_N - @lost_lib.LOST 10D7 103B4 TP_USB_D_P - @lost_lib.LOST 10D7 103B4 TP_USB_G_N - @lost_lib.LOST 10D7 103B4 TP_USB_G_P - @lost_lib.LOST 10D7 103B4 TP_USB_H_N - @lost_lib.LOST 10D7 103B4 TP_USB_H_P - @lost_lib.LOST 10C7 103B4 TP_WL_TCK - @lost_lib.LOST 96B3 TP_WL_TDI - @lost_lib.LOST 96B3 TP_WL_TDO - @lost_lib.LOST 96B3 TP_WL_TMS - @lost_lib.LOST 96B3 TP_WL_TRST_L - @lost_lib.LOST 96B3 TVCLK_N - @lost_lib.LOST 94B7 101B4 TVCLK_P - @lost_lib.LOST 94B7 101B4 TVOUT_DOCKS_EN - @lost_lib.LOST 10B4 10C2 75B8 U6700_R1 - @lost_lib.LOST 67B6 U6700_R2 - @lost_lib.LOST 67B6 U6700_R3 - @lost_lib.LOST 67B6 U6700_R4 - @lost_lib.LOST 67B6 U6710_R1 - @lost_lib.LOST 67B3 U6710_R2 - @lost_lib.LOST 67B3 U6710_R3 - @lost_lib.LOST 67B3 U6710_R4 - @lost_lib.LOST 67B3 USBA_EXT_NR - @lost_lib.LOST 35D6 USBA_EXT_PR - @lost_lib.LOST 35D6 USBA_GATE - @lost_lib.LOST 18D3 USBA_GATE_D - @lost_lib.LOST 18C3 USBA_PWR_DETECT_L - @lost_lib.LOST 18D2 28B8 USBA_PWR_SLCT - @lost_lib.LOST 18C2 28C8 USBB_EXT_NR - @lost_lib.LOST 35B6 USBB_EXT_PR - @lost_lib.LOST 35C6 USBB_GATE - @lost_lib.LOST 18C5 USBB_GATE_D - @lost_lib.LOST 18C4 USBB_PWR_DETECT_L - @lost_lib.LOST 18C3 28B8 USBB_PWR_SLCT - @lost_lib.LOST 18C4 28C8 USBCC - @lost_lib.LOST 10B5 28B5 USB_BT_N - @lost_lib.LOST 10D7 97C5 103C4 USB_BT_P - @lost_lib.LOST 10D7 97C5 103C4 USB_CAMERA_CONN_N - @lost_lib.LOST 5B6 46C6 103D4 USB_CAMERA_CONN_P - @lost_lib.LOST 5B6 46C6 103D4 USB_CAMERA_N - @lost_lib.LOST 10D7 46C6 103D4 USB_CAMERA_P - @lost_lib.LOST 10D7 46C6 103D4 USB_C_N - @lost_lib.LOST 10D7 35A4 103D4 USB_C_P - @lost_lib.LOST 10D7 35A4 103D4 USB_DOCKS_MUX_N - @lost_lib.LOST 10D7 USB_DOCKS_MUX_P - @lost_lib.LOST 10D7 USB_FLASH_CON_N - @lost_lib.LOST 65B5 103D4 USB_FLASH_CON_P - @lost_lib.LOST 65C5 103D4 USB_FLASH_N - @lost_lib.LOST 10D7 65B6 103D4 USB_FLASH_P - @lost_lib.LOST 10D7 65C6 103D4 USB_GRAPE_N - @lost_lib.LOST 10D7 30D4 103C4 USB_GRAPE_P - @lost_lib.LOST 10D7 30D4 103C4 USB_LAND_DOCK_N - @lost_lib.LOST 35A3 35D5 50D3 103D4 USB_LAND_DOCK_P - @lost_lib.LOST 35A3 35D5 50D3 103D4 USB_PORT_DOCK_N - @lost_lib.LOST 35A3 35C5 51D3 103D4 USB_PORT_DOCK_P - @lost_lib.LOST 35A3 35C5 51D3 103D4 USB_PSOC_N - @lost_lib.LOST 30D3 USB_PSOC_P - @lost_lib.LOST 30D3 USB_PWR_A - @lost_lib.LOST 18D2 50D7 USB_PWR_B - @lost_lib.LOST 18C3 51D7 USB_RBIA_PN - @lost_lib.LOST 10C7 VCORE_BG - @lost_lib.LOST 20C5 VCORE_BOOST - @lost_lib.LOST 20C5 VCORE_BOOST_RCD - @lost_lib.LOST 20D4 VCORE_CLSET - @lost_lib.LOST 20C6 VCORE_CS - @lost_lib.LOST 20B2 VCORE_CSN - @lost_lib.LOST 20C6 VCORE_CSP - @lost_lib.LOST 20C6 VCORE_CSP_R - @lost_lib.LOST 20B3 VCORE_DAC - @lost_lib.LOST 20C6 VCORE_DRN - @lost_lib.LOST 20C5 VCORE_ERRROUT - @lost_lib.LOST 20C5 VCORE_FBN - @lost_lib.LOST 20C6 VCORE_FBP - @lost_lib.LOST 20C6 VCORE_GND - @lost_lib.LOST 20A4 20B6 20C8 VCORE_HYS - @lost_lib.LOST 20C6 VCORE_RAMP - @lost_lib.LOST 20B5 VCORE_SS - @lost_lib.LOST 20C6 VCORE_TG - @lost_lib.LOST 20C5 VCORE_TTRIP - @lost_lib.LOST 20C6 VCORE_VCCA - @lost_lib.LOST 20D6 VCORE_VREF - @lost_lib.LOST 20C4 20C8 VR_PWRGD_CLKEN_L - @lost_lib.LOST 20A7 20C4 VSSAPCIEBG - @lost_lib.LOST 12B2 WL_HOST_WAKE - @lost_lib.LOST 28A8 96B3 WL_RESET_L - @lost_lib.LOST 28D5 96B3 WL_WAKE_L - @lost_lib.LOST 29B4 XDP_BPM_L<0> - @lost_lib.LOST 6C5 90C6 XDP_BPM_L<4..0> - @lost_lib.LOST 100A3 XDP_BPM_L<1> - @lost_lib.LOST 6C5 90C6 XDP_BPM_L<2> - @lost_lib.LOST 6C5 90C6 XDP_BPM_L<3> - @lost_lib.LOST 6C5 90C6	XDP_BPM_L<4> XDP_BPM_L<5> XDP_CPURST_L XDP_DDBRESET_L XDP_PWRGD XDP_SCH_TCK<1> XDP_SCH_TDI XDP_SCH_TDO XDP_SCH_TMS XDP_SCL XDP_SDA XDP_TCK XDP_TDI XDP_TDO XDP_TRST_L XTAL_FLASH_IN XTAL_FLASH_OUT Y9400_2 Y_PR Z1_IV8_OUT Z1_BON_L<0> Z1_BON_L<1> Z1_BON_L<2> Z1_BON_L<3> Z1_BON_L<4> Z1_BON_L<5> Z1_B_ADDR<0> Z1_B_ADDR<1> Z1_B_ADDR<2> Z1_CS_L Z1_DONE Z1_GO Z1_MISO Z1_MOSI Z1_PCLK Z1_SCLK Z1_STWIN Z2_3V3_IV8_IN Z2_VDDANA Z2_VDDCORE	XDP_BPM_L<4> - @lost_lib.LOST 6C5 90C6 XDP_BPM_L<5> - @lost_lib.LOST 6C5 6C5 90C6 100A3 XDP_CPURST_L - @lost_lib.LOST 90B3 XDP_DDBRESET_L - @lost_lib.LOST 6C5 28A5 90B3 100A3 XDP_PWRGD - @lost_lib.LOST 90C6 XDP_SCH_TCK<1> - @lost_lib.LOST 10C5 90B6 100C1 XDP_SCH_TDI - @lost_lib.LOST 10C5 90A5 100C1 XDP_SCH_TDO - @lost_lib.LOST 10C5 90A4 90B3 100C1 XDP_SCH_TMS - @lost_lib.LOST 10C5 90A4 100C1 XDP_TMS - @lost_lib.LOST 6A8 6C5 90A5 90B3 100B3 XDP_SCL - @lost_lib.LOST 90B5 XDP_SDA - @lost_lib.LOST 90B5 XDP_TCK - @lost_lib.LOST 6A8 6C5 90B6 100A3 XDP_TDI - @lost_lib.LOST 6A8 6C5 90A4 90B3 100B3 XDP_TDO - @lost_lib.LOST 6A8 6C5 90A5 100B3 XDP_TRST_L - @lost_lib.LOST 6C5 10C5 90B3 100A3 XTAL_FLASH_IN - @lost_lib.LOST 66C6 XTAL_FLASH_OUT - @lost_lib.LOST 66C6 Y9400_2 - @lost_lib.LOST 94A7 Y_PR - @lost_lib.LOST 75B8 94B3 101B7 Z1_IV8_OUT - @lost_lib.LOST 31D4 31D5 Z1_BON_L<0> - @lost_lib.LOST 30C8 31C3 Z1_BON_L<1> - @lost_lib.LOST 30C8 31C3 Z1_BON_L<2> - @lost_lib.LOST 30C7 31C3 Z1_BON_L<3> - @lost_lib.LOST 30C7 31C3 Z1_BON_L<4> - @lost_lib.LOST 30D6 31C3 Z1_BON_L<5> - @lost_lib.LOST 30D6 31C3 Z1_B_ADDR<0> - @lost_lib.LOST 30C8 30D6 30D7 31C3 Z1_B_ADDR<1> - @lost_lib.LOST 30C8 30D6 30D7 31C3 Z1_B_ADDR<2> - @lost_lib.LOST 30C8 30D6 30D7 31C3 Z1_CS_L - @lost_lib.LOST 31C6 31D3 Z1_DONE - @lost_lib.LOST 31C3 31C6 Z1_GO - @lost_lib.LOST 31C3 31C6 Z1_MISO - @lost_lib.LOST 31B6 31C3 Z1_MOSI - @lost_lib.LOST 31B6 31C3 Z1_PCLK - @lost_lib.LOST 31C3 31C6 Z1_SCLK - @lost_lib.LOST 31C6 31D3 Z1_STWIN - @lost_lib.LOST 31C3 Z2_3V3_IV8_IN - @lost_lib.LOST 31D6 Z2_VDDANA - @lost_lib.LOST 31D8 Z2_VDDCORE - @lost_lib.LOST 31A6 31D8	6C5 90C6 6C5 6C5 90C6 100A3 90B3 6C5 28A5 90B3 100A3 90C6 10C5 90B6 100C1 10C5 90A5 100C1 10C5 90A4 90B3 100C1 10C5 90A4 100C1 6A8 6C5 90A5 90B3 100B3 90B5 90B5 6A8 6C5 90B6 100A3 6A8 6C5 90A4 90B3 100B3 6A8 6C5 90A5 100B3 6C5 10C5 90B3 100A3 66C6 66C6 94A7 75B8 94B3 101B7 31D4 31D5 30C8 31C3 30C8 31C3 30C7 31C3 30C7 31C3 30D6 31C3 30D6 31C3 30C8 30D6 30D7 31C3 30C8 30D6 30D7 31C3 30C8 30D6 30D7 31C3 31C6 31D3 31C3 31C6 31C3 31C6 31B6 31C3 31B6 31C3 31C3 31C6 31C6 31D3 31C3 31D6 31D8 31A6 31D8			

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D	Title: Cref Part Report Design: lost Date: Feb 19 11:01:06 2008		C1800 CAP_0805 lost[18C7] C1801 CAP_402 lost[18B5] C1802 CAP_402 lost[18C5] C1803 CAP_402 lost[18D4] C1910 CAP_805 lost[19D7] C1929 CAP_0805 lost[19D8] C1930 CAP_0805 lost[19D8] C1931 CAP_201 lost[19B7] C1932 CAP_201 lost[19B8] C1933 CAP_201 lost[19B8] C1934 CAP_402 lost[19D5] C1935 CAP_0805 lost[19D4] C1936 CAP_805 lost[19D5] C1937 CAP_P_SM lost[19C3] C1938 CAP_201 lost[19C2] C1941 CAP_0805 lost[19D6] C1942 CAP_201 lost[19C6] C1943 CAP_402 lost[19C7] C1944 CAP_201 lost[19C7] C1945 CAP_201 lost[19C6] C1946 CAP_201 lost[19B3] C1947 CAP_201 lost[19A4] C1948 CAP_201 lost[19B4] C1949 CAP_603 lost[19C2] C1950 CAP_201 lost[19B2] C1951 CAP_201 lost[19C6] C1952 CAP_201 lost[19C3] C1953 CAP_201 lost[19D2] C1954 CAP_201 lost[19C6] C1955 CAP_201 lost[19C3] C1956 CAP_201 lost[19B2] C1957 CAP_201 lost[19A3] C1958 CAP_402 lost[19D4] C1971 CAP_201 lost[19C2] C1990 CAP_201 lost[19A6] C1991 CAP_201 lost[19A6] C1992 CAP_201 lost[19A6] 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CAP_201 lost[97C5] C9703 CAP_603 lost[97C5] D1200 DIODE_SCHOT_SOT23 lost[12B3] D1801 DIODE_SCHOT_SOD882 lost[18A7] D1900 DIODE_SCHOT_SOD-323 lost[19D5] D1910 DIODE_SCHOT_2P_SOD-7 lost[19B7] 23 D1912 DIODE_SCHOT_SOD-323 lost[19D5] D1913 DIODE_SCHOT_SOD-323 lost[19D6] D1915 DIODE_ZENER_SOT523 lost[19C7] D1916 DIODE_SCHOT_2P_SOD-7 lost[19B6] 23 D2000 DIODE_SCHOT_2P_SOD-7 lost[20D5] 23 D2100 DIODE_SCHOT_SOD-323- lost[21D5] HF D2101 DIODE_SCHOT_SOD-323- lost[21D5] HF D2400 DIODE_SCHOT_2P_SOD-9 lost[24B2] 23	D											
	C										C						
		B											B				
			A												A		
					8		7	6	5	4		3		2		1	

	8	7	6	5	4	3	2	1					
D	D2600	DIODE_SCHOT_SOD-323	lost[26D4]	L7501	IND_0603	lost[75C5]	R0926	RES_201	lost[9B7]	R1955	RES_201	lost[19C5]	
	D3000	DIODE_SCHOT_SOD-323	lost[30B3]	L7502	IND_0603	lost[75B5]	R0934	RES_201	lost[9C3]	R1956	RES_201	lost[19B8]	
	D5000	RCLAMP0502N_SLP1210N	lost[50D2]	L7600	FILTER_2P_0201	lost[76D7]	R0936	RES_201	lost[9A2]	R1957	RES_1206	lost[19C2]	
C	D5023	DIODE_SCHOT_6P_4C_2A	lost[50D7]	L9400	IND_0402-LF	lost[94D7]	R0937	RES_201	lost[9D3]	R1960	RES_402	lost[19D7]	
	D5100	RCLAMP0502N_SLP1210N	lost[51D2]	L9401	IND_0402-LF	lost[94D7]	R0938	RES_201	lost[9D3]	R1961	RES_201	lost[19C7]	
	D5120	DIODE_SCHOT_6P_4C_2A	lost[51D7]	L9402	IND_0402-LF	lost[94D7]	R0940	RES_201	lost[9C6]	R1962	RES_201	lost[19B1]	
	DZ3900	SUPPR_TRANSIENT1_402	lost[39C6]	L9403	IND_0402-LF	lost[94C7]	R0941	RES_201	lost[9C6]	R1964	RES_402	lost[19A8]	
	DZ3901	SUPPR_TRANSIENT1_402	lost[39C6]	L9405	IND_0402-LF	lost[94D4]	R0942	RES_201	lost[9B6]	R1965	RES_201	lost[19A8]	
	DZ3902	SUPPR_TRANSIENT1_402	lost[39C7]	L9406	IND_0402-LF	lost[94C4]	R0943	RES_201	lost[9B6]	R1967	RES_201	lost[19B3]	
	DZ3903	SUPPR_TRANSIENT1_402	lost[39B7]	Q1801	TRA_DUAL_PWRPK_PCHN_6P_PWRPK-1212-8	lost[18B4 18C5]	R0944	RES_201	lost[9B6]	R1968	RES_201	lost[19D6]	
	DZ3904	SUPPR_TRANSIENT1_402	lost[39B6]	Q1803	TRA_DUAL_PWRPK_PCHN_6P_PWRPK-1212-8	lost[18B3 18D3]	R0945	RES_201	lost[9B6]	R1969	RES_201	lost[19B3]	
	DZ3905	SUPPR_TRANSIENT1_402	lost[39B6]	Q1807	TRA_DUAL_2N7002A_SOT	lost[18C4 18C4]	R0966	RES_201	lost[9C3]	R1970	RES_201	lost[19B3]	
	DZ3910	SUPPR_TRANSIENT1_402	lost[39C3]	Q1808	TRA_DUAL_2N7002A_SOT	lost[18A3 18A4]	R0967	RES_201	lost[9A1]	R1971	RES_201	lost[19C2]	
B	DZ3911	SUPPR_TRANSIENT1_402	lost[39C3]	Q1809	TRA_PWRPK_PCHN_5P_PWR	lost[18B6]	R0970	RES_201	lost[9A7]	R1972	RES_201	lost[19B3]	
	DZ3912	SUPPR_TRANSIENT1_402	lost[39C4]	Q1810	TRA_DUAL_2N7002A_SOT	lost[18A5 18A6]	R0971	RES_201	lost[9A7]	R1973	RES_201	lost[19C3]	
	DZ3913	SUPPR_TRANSIENT1_402	lost[39B3]	Q1816	TRA_DUAL_2N7002A_SOT	lost[18C3 18D2]	R0980	RES_201	lost[9D7]	R2000	RES_201	lost[20D6]	
	DZ3914	SUPPR_TRANSIENT1_402	lost[39B3]	Q1817	TRA_DUAL_2N7002A_SOT	lost[18B1 18B2]	R1001	RES_201	lost[10A5]	R2001	RES_201	lost[20D5]	
	DZ3915	SUPPR_TRANSIENT1_402	lost[39B3]	Q1910	TRA_SI7904DN_PWRPK-1	lost[19C5]	R1003	RES_201	lost[10A4]	R2002	RES_201	lost[20C5]	
	DZ5089	SUPPR_TRANSIENT1_402	lost[50B7]	Q1915	TRA_DUAL_2N7002A_SOT	lost[19B2 19A2]	R1004	RES_201	lost[10C4]	R2003	RES_201	lost[20B7]	
	DZ5090	SUPPR_TRANSIENT1_402	lost[50C4]	Q1916	TRA_DUAL_2N7002A_SOT	lost[19A3 19A1]	R1005	RES_201	lost[10C3]	R2005	RES_201	lost[20C4]	
	DZ5091	SUPPR_TRANSIENT1_402	lost[50C6]	Q1917	TRA_PWRPK_PCHN_5P_PWR	lost[19C2]	R1006	RES_201	lost[10A4]	R2006	RES_201	lost[20B6]	
	DZ5092	SUPPR_TRANSIENT1_402	lost[50D4]	Q2000	TRA_FDZ294N_BGA	lost[20C3]	R1007	RES_201	lost[10A3]	R2007	RES_201	lost[20B3]	
	DZ5093	SUPPR_TRANSIENT1_402	lost[50A7]	Q2001	TRA_FDZ294N_BGA	lost[20B4]	R1008	RES_201	lost[10C7]	R2008	RES_201	lost[20B3]	
A	DZ5189	SUPPR_TRANSIENT1_402	lost[51B7]	Q2002	TRA_2N7002T_SOT-523	lost[20A7]	R1009	RES_201	lost[10C4]	R2009	RES_201	lost[20B4]	
	DZ5190	SUPPR_TRANSIENT1_402	lost[51D4]	Q2100	TRA_SI7904DN_PWRPK-1	lost[21C4]	R1010	RES_201	lost[10C7]	R2010	RES_201	lost[20C7]	
	DZ5191	SUPPR_TRANSIENT1_402	lost[51C6]	Q2101	TRA_SI7904DN_PWRPK-1	lost[21C4]	R1011	RES_201	lost[10C4]	R2011	RES_201	lost[20B4]	
	DZ5192	SUPPR_TRANSIENT1_402	lost[51C4]	Q2102	TRA_DUAL_SSM6N15FE_S	lost[21C7 21C8]	R1012	RES_201	lost[10B2]	R2012	RES_201	lost[20C7]	
	DZ5193	SUPPR_TRANSIENT1_402	lost[51A7]	Q2103	TRA_DUAL_2N7002A_SOT	lost[21A7 21A6]	R1015	RES_201	lost[10B2]	R2013	RES_201	lost[20A4]	
	F1800	FUSE_603-HF	lost[18D7]	Q2200	TRA_SI7904DN_PWRPK-1	lost[22B3]	R1017	RES_201	lost[10B2]	R2014	RES_201	lost[20A7]	
	F1900	FUSE_1206	lost[19C2]	Q2400	TRA_SSM3K15FV_SOD-VE	lost[24B3]	R1019	RES_201	lost[10B2]	R2015	RES_201	lost[20A7]	
	FL5007	FILTER_2P_0201	lost[50B5]	Q2401	TRA_PCH_CEDM8001_SOT	lost[24B3]	R1020	RES_201	lost[10B2]	R2016	RES_201	lost[20B5]	
	FL5008	FILTER_2P_0201	lost[50A5]	Q2701	TRA_FDZ294N_BGA	lost[27C5]	R1021	RES_201	lost[10B3]	R2018	RES_201	lost[20C5]	
	FL5011	FILTER_2P_0201	lost[50B5]	Q2702	TRA_FDZ294N_BGA	lost[27C5]	R1022	RES_201	lost[10B3]	R2019	RES_201	lost[20B8]	

