

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

REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
A	000080153	PRODUCTION RELEASED		2010-03-23

N90 SINGLE_BRD PVT

Fri Apr 16 15:07:25 2010

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MCO 056-3008
 BRD 820-2548
 SCH 051-7921
 BOM 639-0648 (16GB,USI)
 BOM 630-9941 (16GB,MURATA)
 BOM 639-0437 (32GB,USI)
 BOM 639-0609 (32GB,MURATA)
 BOM 639-0608 (64GB,USI)
 BOM 639-0607 (64GB,MURATA)

H3P ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339S0123	339S0108	?	U52	H3P + ELFIDA 512MB
339S0126	339S0108	?	U52	H3P + HYNIX 512MB

L9 (STROBE) ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S1173	152S0979	?	L9	

VIDEO BUFFER ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
353S2684	353S2493	?	U9	INTERSIL BUFFER

G3_RF ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0371	197S0349	?	G3_RF	
197S0364	197S0349	?	G3_RF	

FL1_RF ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S0452	155S0435	?	FL1_RF	

G2_RF ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0334	197S0292	?	G2_RF	

Y1_RF ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0329	197S0299	?	Y1_RF	
197S0369	197S0299	?	Y1_RF	

Y2_RF ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0342	197S0297	?	Y2_PMU	

L2_PMU ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S1172	152S0928	?	L2_PMU	

L7_PMU ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S1051	152S0927	?	L7_PMU	

LCD BL DRIVER ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
376S0769	376S0768	?	Q1_PMU	LCD BL FET DRIVER

Y1_PMU ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0329	197S0299	?	Y1_PMU	
197S0369	197S0299	?	Y1_PMU	

PMU POWER IND ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
607-6810	607-6809	?	L1_L3_L16_L18_PMU	CYNTEC INDUCTORS
197S0369	197S0299	?	Y1_PMU	

SCH & PCB BOM CALLOUT

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-7921	1	N90_SCHEMATIC_TOP	SCH	Y	?
820-2548	1	N90_SINGLE_BOARD	PCB	Y	?

H3P BOM CALLOUT

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
339S0108	1	H3P WITH 512MB SAMSUNG DDR	U52	Y	?

BB MEMORY BOM CALLOUT

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
341S2509	1	BB_MEM_PROGRAMMED	U4_RF	Y	BB_MEM

N90 EEE BOM LABELS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-2029	1	EEE FOR 630-9941 (16G)	EEE_6LU	Y	GOOD_MURATA
825-2029	1	EEE FOR 639-0609 (32G)	EEE_D7F	Y	BETTER_MURATA
825-2029	1	EEE FOR 639-0607 (64G)	EEE_D7D	Y	BEST_MURATA
825-2029	1	EEE FOR 639-0648 (16G)	EEE_DFM	Y	GOOD_USI
825-2029	1	EEE FOR 639-0437 (32G)	EEE_BA0	Y	BETTER_USI
825-2029	1	EEE FOR 639-0608 (64G)	EEE_D7E	Y	BEST_USI

NAND BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S0682	1	16GB SAMSUNG 35NM FLASH WLG52	U1	Y	GOOD_MURATA
335S0665	1	32GB SAMSUNG 35NM FLASH TLGA52	U1	Y	BETTER_MURATA
335S0707	1	64GB SAMSUNG 35NM FLASH LGA52	U1	Y	BEST_MURATA
117S0161	2	64GB NAND CE7 CE8 JUMPERS	R101, R102	Y	BEST_MURATA
335S0682	1	16GB SAMSUNG 35NM FLASH WLG52	U1	Y	GOOD_USI
335S0665	1	32GB SAMSUNG 35NM FLASH TLGA52	U1	Y	BETTER_USI
335S0707	1	64GB SAMSUNG 35NM FLASH LGA52	U1	Y	BEST_USI
117S0161	2	64GB NAND CE7 CE8 JUMPERS	R101, R102	Y	BEST_USI

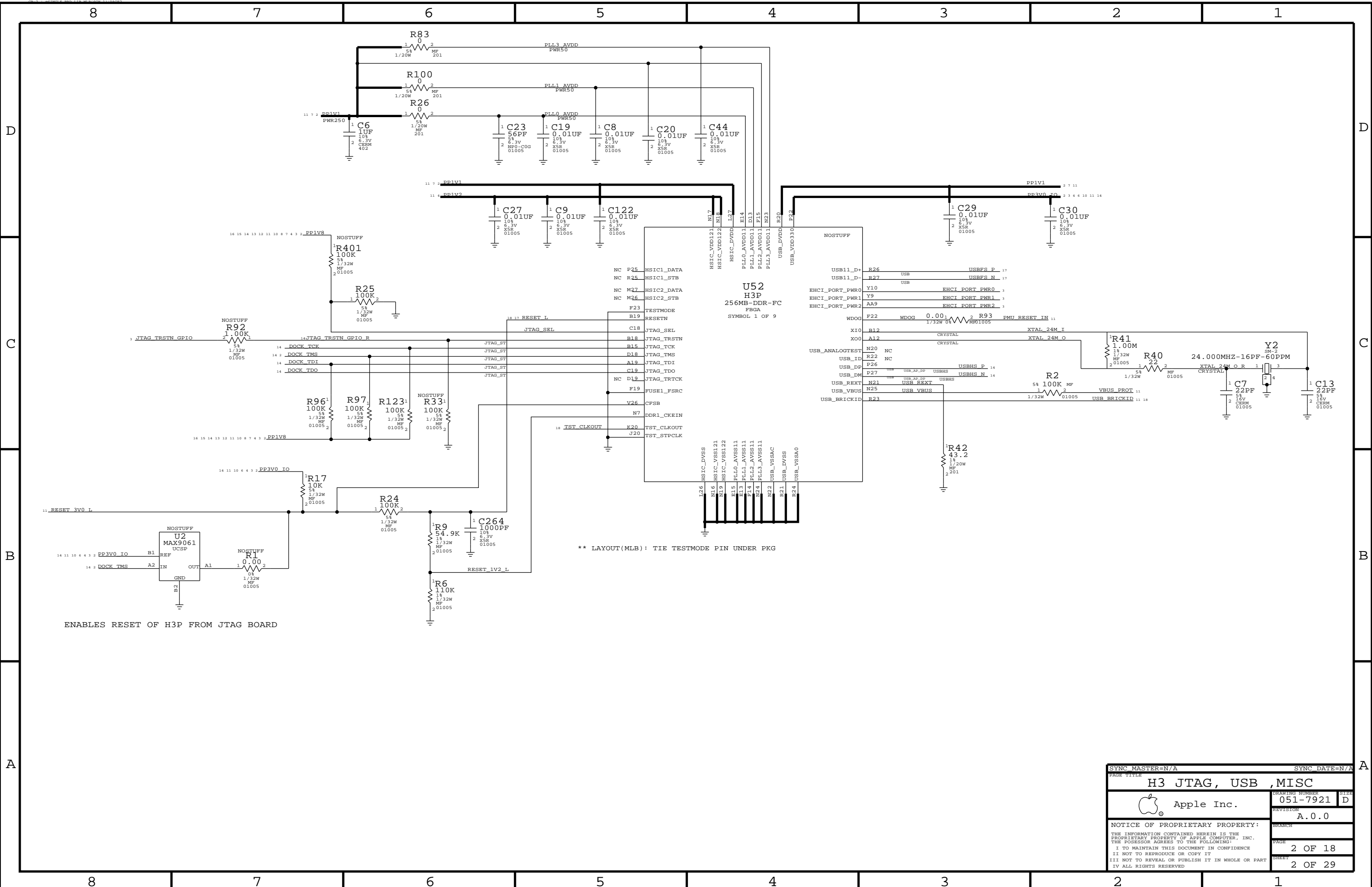
WIFI/BT BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
339S0092	1	MURATA WIFI_BT MODULE	U2_RF	Y	GOOD_MURATA
117S0161	1	MURATA ID RESISTOR	R47_RF	Y	GOOD_MURATA
339S0092	1	MURATA WIFI_BT MODULE	U2_RF	Y	BETTER_MURATA
117S0161	1	MURATA ID RESISTOR	R47_RF	Y	BETTER_MURATA
339S0092	1	MURATA WIFI_BT MODULE	U2_RF	Y	BEST_MURATA
117S0161	1	MURATA ID RESISTOR	R47_RF	Y	BEST_MURATA
339S0091	1	USI WIFI_BT MODULE	U2_RF	Y	GOOD_USI
117S0161	1	USI ID RESISTOR	R46_RF	Y	GOOD_USI
339S0091	1	USI WIFI_BT MODULE	U2_RF	Y	BETTER_USI
117S0161	1	USI ID RESISTOR	R46_RF	Y	BETTER_USI
339S0091	1	USI WIFI_BT MODULE	U2_RF	Y	BEST_USI
117S0161	1	USI ID RESISTOR	R46_RF	Y	BEST_USI

PMU POWER IND CALLOUT

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
607-6809	1	POWER INDUCTORS	L1_L3_L16_L18_PMU	Y	?

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DRAWING TITLE			
TABLE OF CONTENTS			
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** LAYOUT (MLB): TIE TESTMODE PIN UNDER PKG

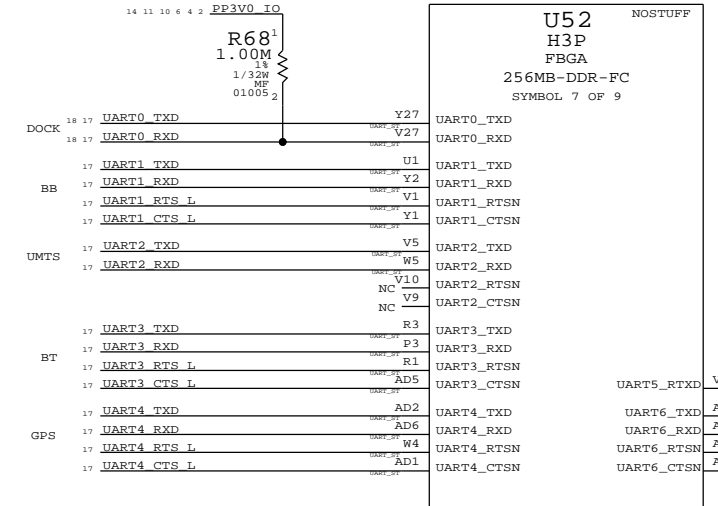
ENABLES RESET OF H3P FROM JTAG BOARD

SYNC MASTER=N/A		SYNC DATE=N/A	
H3 JTAG, USB, MISC			
Apple Inc.		DRAWING NUMBER	051-7921
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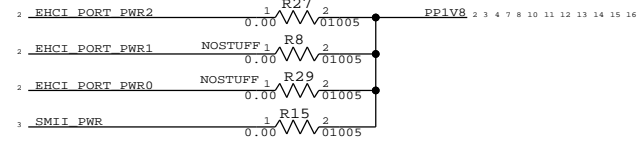
U52 H3P 256MB-DDR-FC FBGA SYMBOL 6 OF 9	
13 11 MENU_KEY_BUFF_L	F6 GPIO10
18 16 13 HOLD_KEY_L	B6 GPIO101
18 13 10 VOL_UP_L	B7 GPIO102
18 13 10 VOL_DWN_L	D9 GPIO103
18 13 11 RINGER_A	D5 GPIO104
12 GYRO_INT2	A6 GPIO105
17 WLAN_RESET_L	A7 GPIO106
17 BT_WAKE	B9 GPIO107
17 BT_RESET_L	E6 GPIO108
17 RADIO_ON	A9 GPIO109
17 BB_RESET_L	C5 GPIO1010
17 BB_RESET_DET_L	C9 GPIO1011
17 IPC_SRDY	C6 GPIO1012
17 PMU_IRO_L	D6 GPIO1013
CODEC_RESET_L	F5 GPIO1014
NC - DIF_MIC_SEL	E5 GPIO1015
AUDIENCE_RESET_L	F9 GPIO1016
JTAG_TRSTN_GPIO	F3 GPIO1017
CODEC_INT_L	F4 GPIO1018
KEEPACT	C10 GPIO1019
GRAPE_RESET_L	F10 GPIO1020
NIMBUS_INT_L	E10 GPIO1021
LCD_RESET_L	A4 GPIO1022
LCD_HIF_A	B4 GPIO1023
COMPASS_BRD_INT	E4 GPIO1024
NC - GPIO25_CONFIG1	E2 GPIO1025
FORCE_DFU	D10 GPIO1026
NC - DFU_STATUS	E9 GPIO1027
GPIO28_CONFIG2	L2 GPIO1028
GPIO29_CONFIG3	G1 GPIO1029
GPS_RESET_AP_L	G2 GPIO1030
GPS_STANDBY_AP_L	F1 GPIO1031
GPS_INTR_L	R3 GPIO1032
GYRO_INT1	A3 GPIO1033
CAM_VGA_SHUTDOWN_L	B2 GPIO1034
ACCEL_INT1_L	H2 GPIO1035
ACCEL_INT2_L	H1 GPIO1036
ALS_INT_L	H1 GPIO1037
ACCEL_INT2_L	E1 GPIO1038
VIDEO_AMP_EN_3V0	W24 GPIO_3V0
NC - SEL_SECURE_BOOT_3V0	W25 GPIO_3V1

U52 H3P 256MB-DDR-FC FBGA SYMBOL 6 OF 9	
SENSOR_CLK	W20 CAM_CLK 14
SENSOR_RST	V21 CAM_5MP_SHUTDOWN 14
SPDIF	R18 NC
TMR32_PWM0	AB25 L61HP_CLK_PWM 3 13
TMR32_PWM1	AB27 VIB_PWM_EN 11
TMR32_PWM2	AB26 CAM_STROBE_EN 12 14
SMII_CLKSEL0	K18 AP_PMU_EXTON 11 17
SMII_CLKSEL1	K19 GPS_SYNC 17
SMII_TXD	G18 A1_GND 4
SMII_RXD	J18 A27_GND 4
SMII_SYNC	G19 SPKR_AMP_EN 14
SMII_CLK	K21 AG1_GND 4
SMII_RRDY	K22 HP_GPIO_A 13
SMII_SRDY	K22 IPC_GPIO 17
SMII_WAKE	J19 AG27_GND 4
SMII_PWR	H19 SMII_PWR 3

TODO: DO WE NEED A SERIES R HERE (THERE IS ONE ON DEV2)



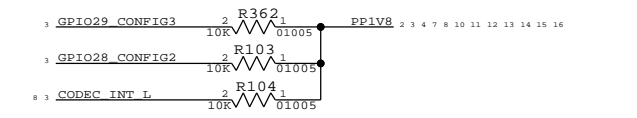
```
BOARD_REV[3:0]={EHCI_PORT_PWR2,EHCI_PORT_PWR1,EHCI_PORT_PWR0,SMII_PWR}
1111 PROTO0
1110 PROTO1
1101 PROTO2
1100 EVT1
1011 EVT2
1010 EVT2_COMPBUTTON
1001 DVT <---SELECTED
```



```
BOARD_ID[0:2]={SPI0_SCLK,SPI0_MOSI,SPI0_MISO}
000 N90 MLB <---SELECTED
100 N90 DEV
010 XXX AP
110 XXX DEV
001 XXX AP
101 XXX DEV
```

NOTE: NO COMPONENTS REQUIRED!

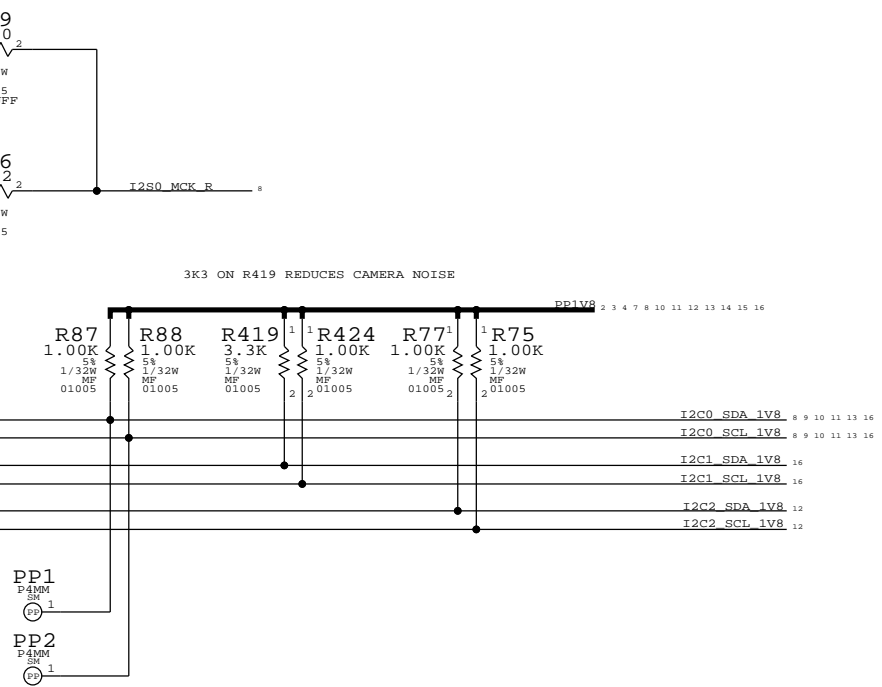
```
FLOAT=LOW, PULLUP=HIGH
BOOT_CONFIG[3:0]={GPIO29_CONFIG3,GPIO28_CONFIG2,GPIO25_CONFIG1,CODEC_INT_L}
0000 SPI0
0001 SPI3
0010 SPI0_W/TEST
0011 SPI3_W/TEST
0100 FMIO_2CS
0101 FMIO_4CS
0110 FMIO_4CS_W/TEST
0111 RESERVED
1000 FMIO_2_CS
1001 FMIO_4_CS
1010 FMIO_4CS_W/TEST
1100 FMIO/1_2/2_CS
1101 FMIO/1_4/4_CS <---SELECTED
1110 FMIO/1_4/4_CS_W/TEST
1111 RESERVED
```



U52 H3P FBGA 256MB-DDR-FC SYMBOL 5 OF 9	
17 WLAN_SDIO_DATA<3:0>	J24 SDIO0_DATA0
J25 SDIO0_DATA1	J25 SDIO0_DATA1
J26 SDIO0_DATA2	J26 SDIO0_DATA2
J27 SDIO0_DATA3	J27 SDIO0_DATA3
17 WLAN_SDIO_CMD	K25 SDIO0_CMD
17 WLAN_SDIO_CLK	J21 SDIO0_CLK
SPI0_SCLK	V4 SPI0_SCLK
SPI0_MOSI	W7 SPI0_MOSI
SPI0_MISO	V6 SPI0_MISO
SPI0_SSIN	W3 SPI0_SSIN
SPI1_SCLK	V3 SPI1_SCLK
SPI1_MOSI	W8 SPI1_MOSI
SPI1_MISO	U2 SPI1_MISO
SPI1_CS_L	V2 SPI1_SSIN
SPI2_SCLK	AA2 SPI2_SCLK
SPI2_MOSI	AA1 SPI2_MOSI
SPI2_MISO	V7 SPI2_MISO
SPI2_MRDY	W6 SPI2_SSIN

U52 H3P FBGA 256MB-DDR-FC SYMBOL 5 OF 9	
I2S0_DIN	W21 I2S0_DIN 8
I2S0_DOUT	W22 I2S0_DOUT 8
I2S0_BCLK	V23 I2S0_BCLK 8
I2S0_LRCLK	V18 I2S0_LRCLK 8
I2S0_MCK	V20 I2S0_MCK 8
I2S1_DIN	V24 I2S1_DIN 13 17
I2S1_DOUT	W19 I2S1_DOUT 13 17
I2S1_BCLK	V25 I2S1_BCLK 13 17
I2S1_LRCLK	V15 I2S1_LRCLK 13 17
I2S1_MCK	AB22 I2S1_MCK 8
I2S2_DIN	R17 I2S2_DIN 13 17
I2S2_DOUT	R16 I2S2_DOUT 13 17
I2S2_BCLK	V26 I2S2_BCLK 13 17
I2S2_LRCLK	AB23 I2S2_LRCLK 13 17
I2S2_MCK	W23 I2S2_MCLK 13
I2C0_SDA	AB6 I2C0_SDA 1V8 8 9 10 11 13 16
I2C0_SCL	AB5 I2C0_SCL 1V8 8 9 10 11 13 16
I2C1_SDA	AB4 I2C1_SDA 1V8 16
I2C1_SCL	AB3 I2C1_SCL 1V8 16
I2C2_SDA	AD15 I2C2_SDA 1V8 12
I2C2_SCL	AC15 I2C2_SCL 1V8 12

** BACKUP IN CASE I2S0_MCK DOES NOT WORK



SYNC MASTER=N/A SYNC DATE=N/A

H3 GPIO, UART, SPI, I2S, I2C, SDIO

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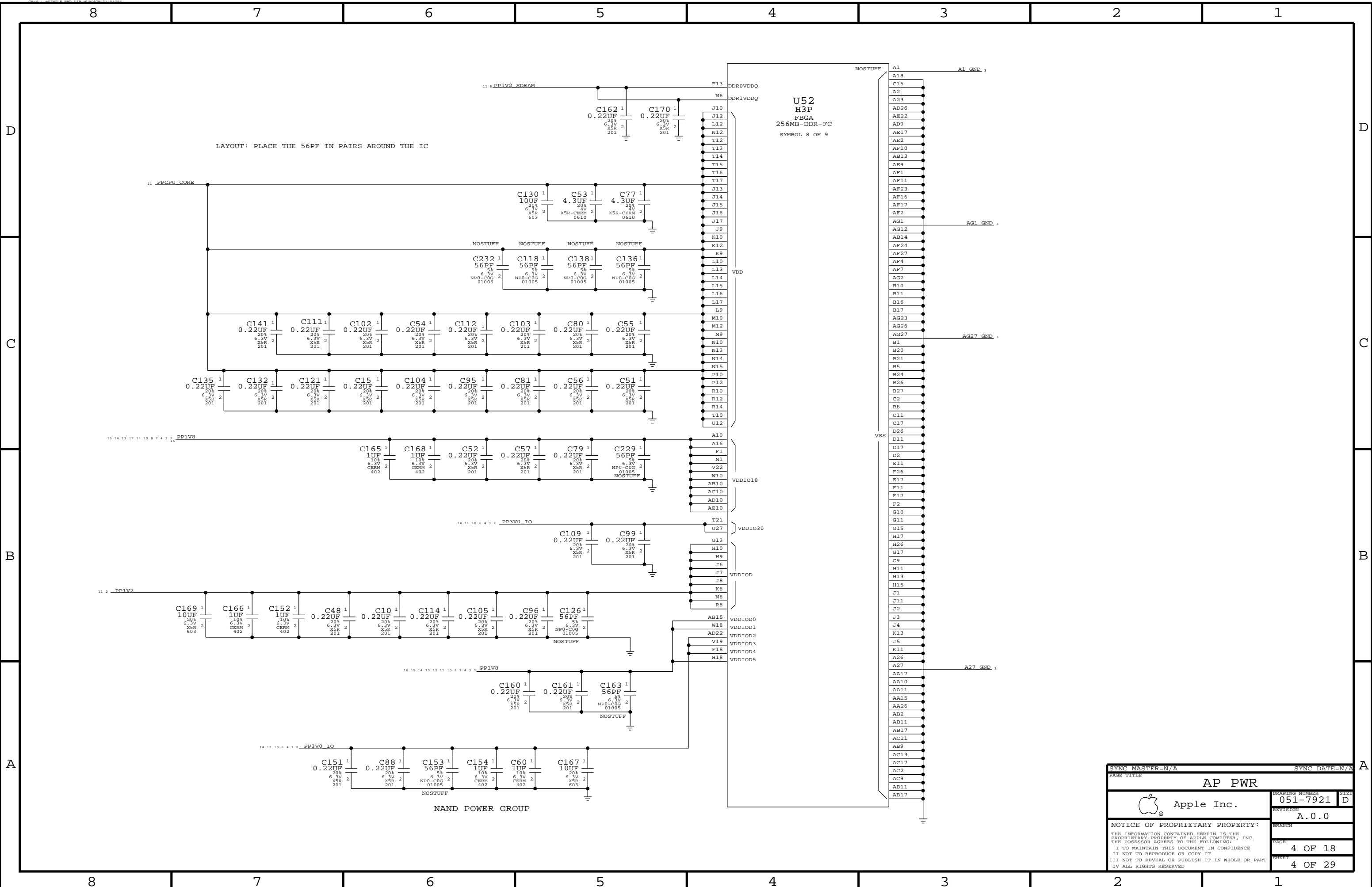
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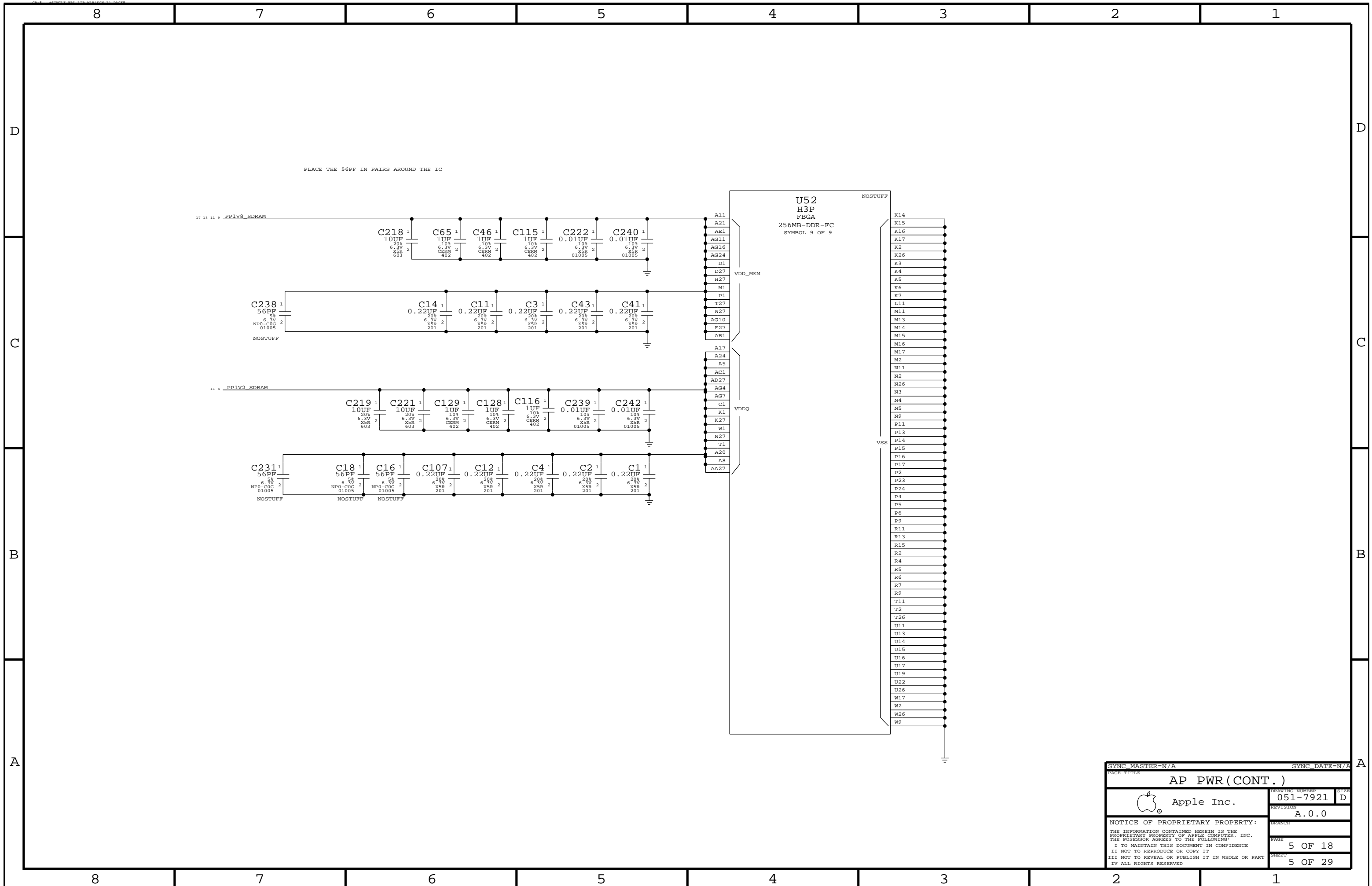
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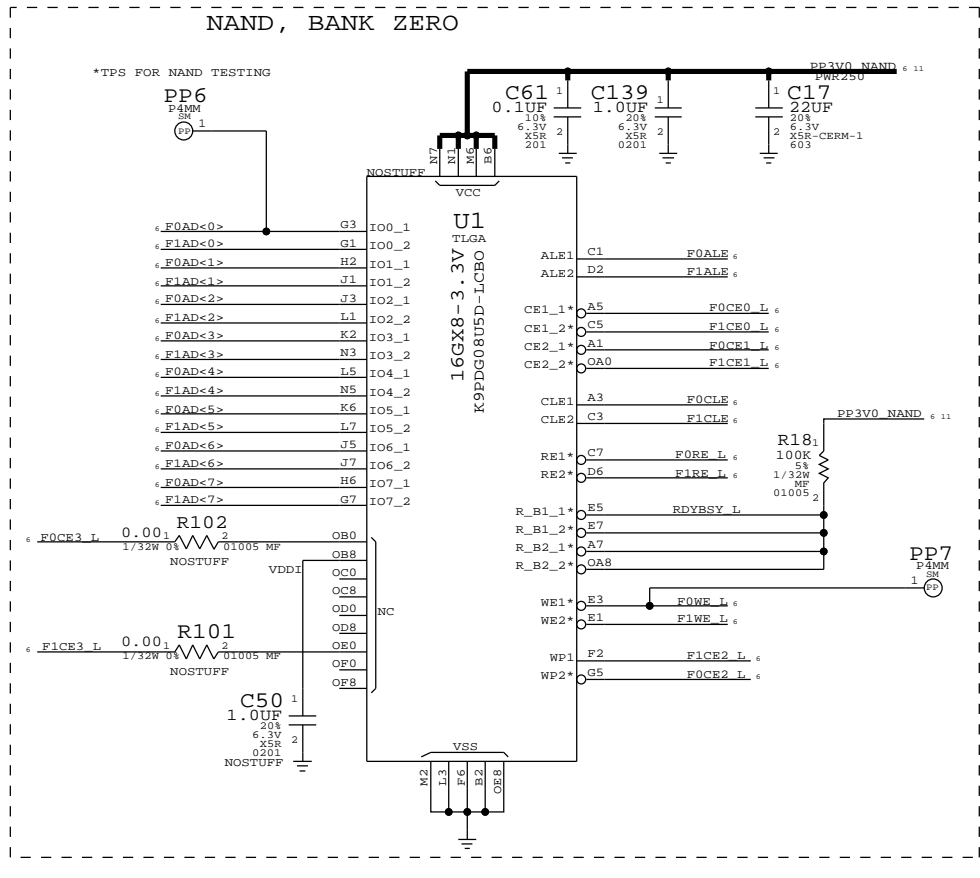
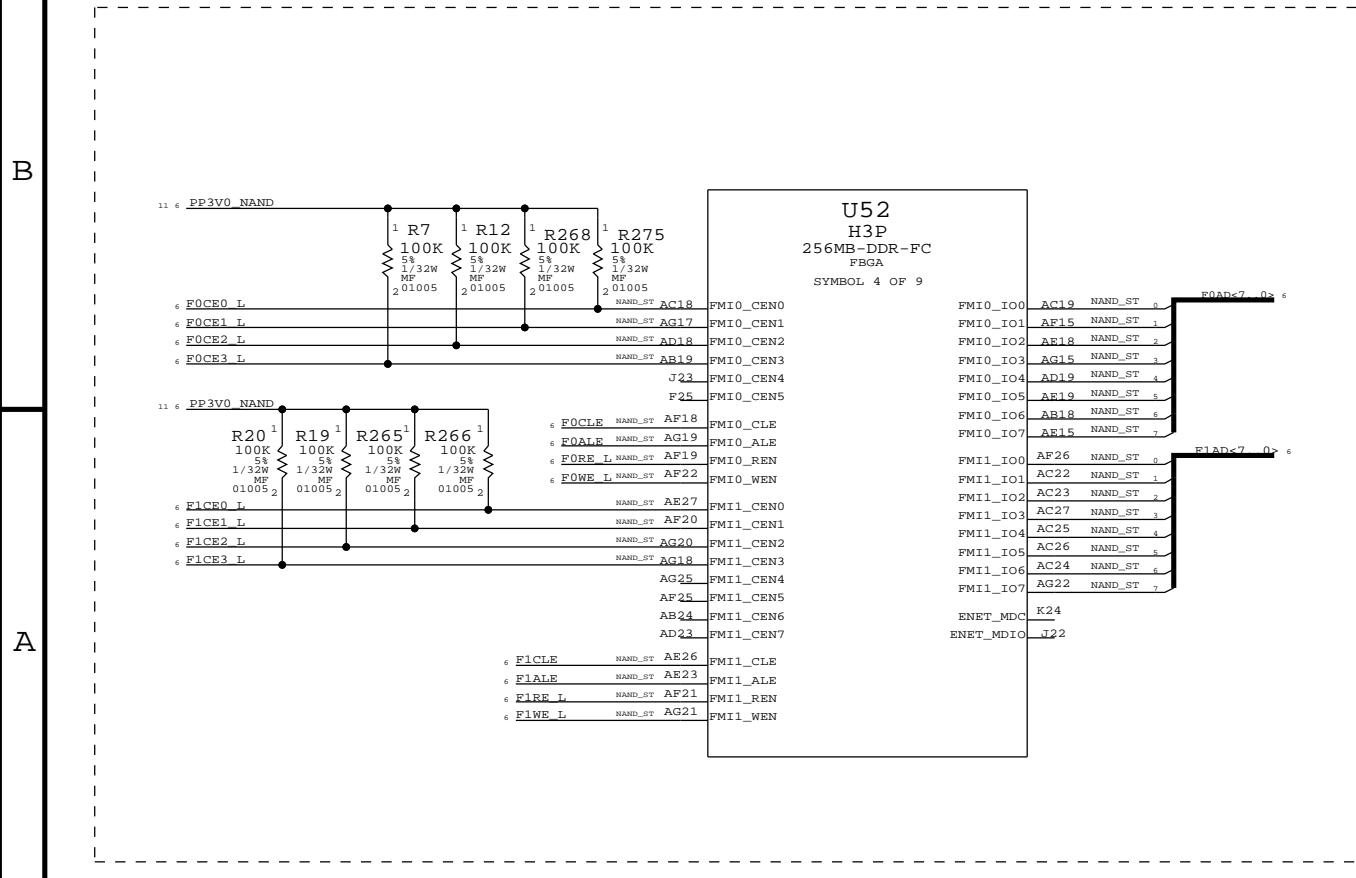
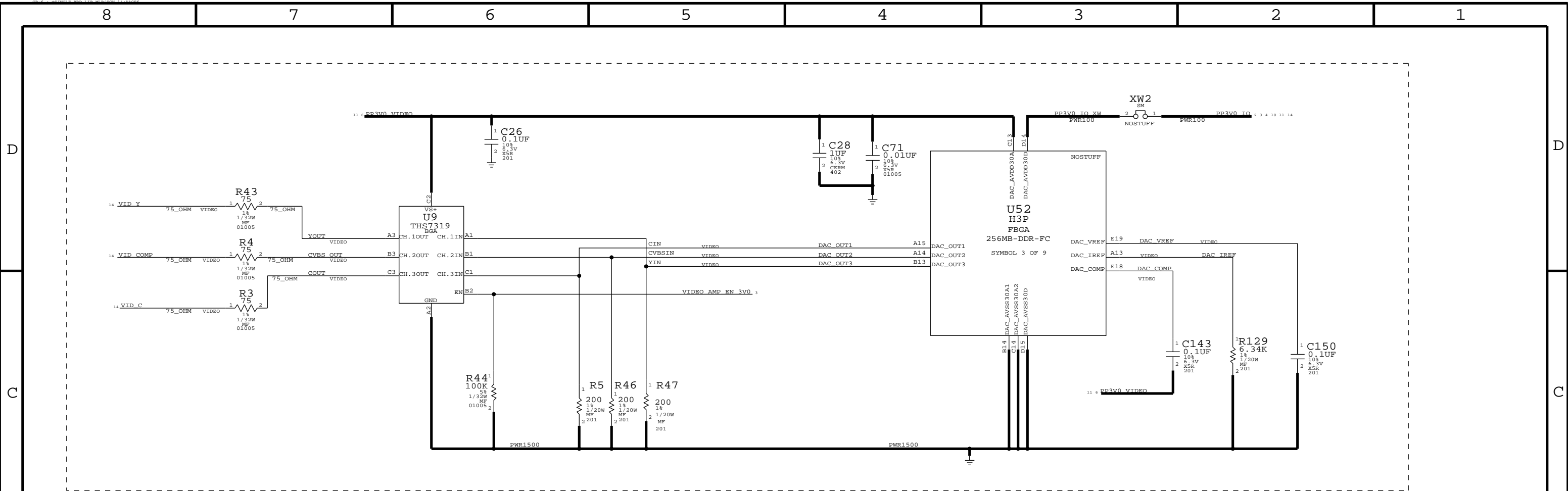
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ANALOG VIDEO,H3 NAND, NAND	
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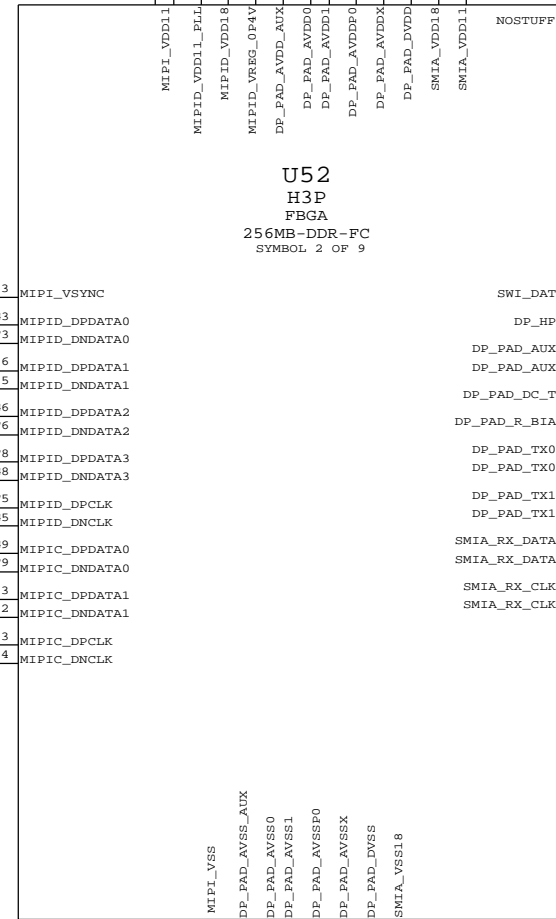
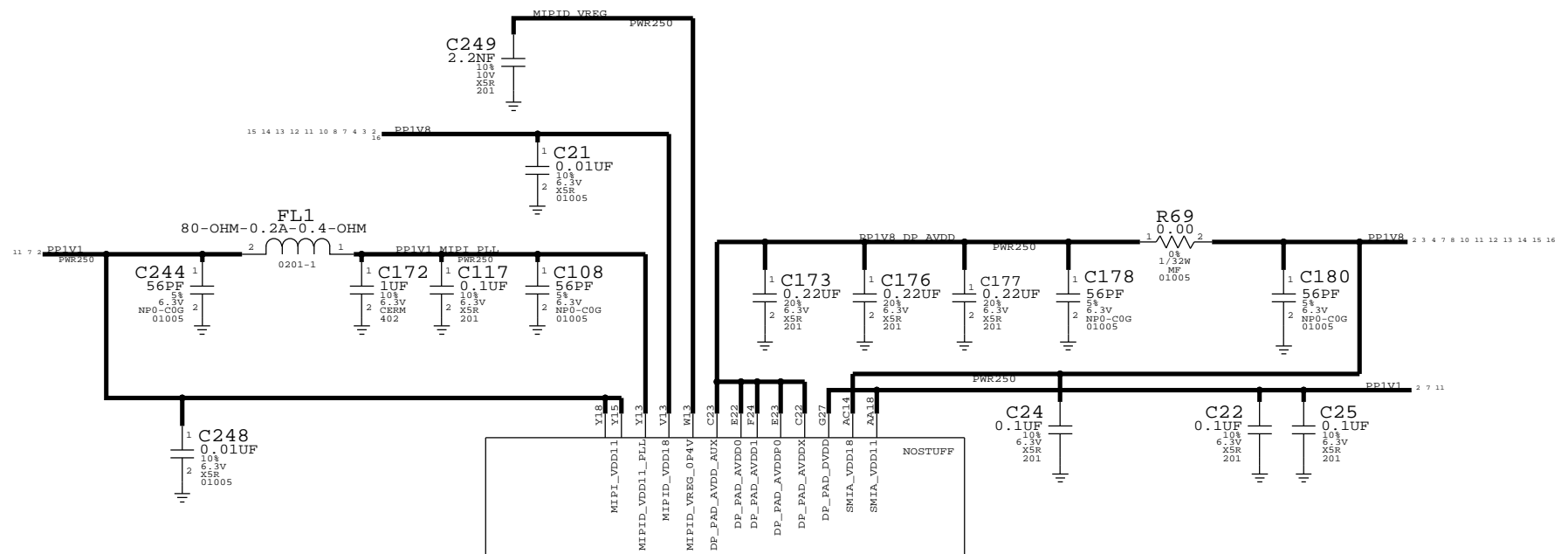
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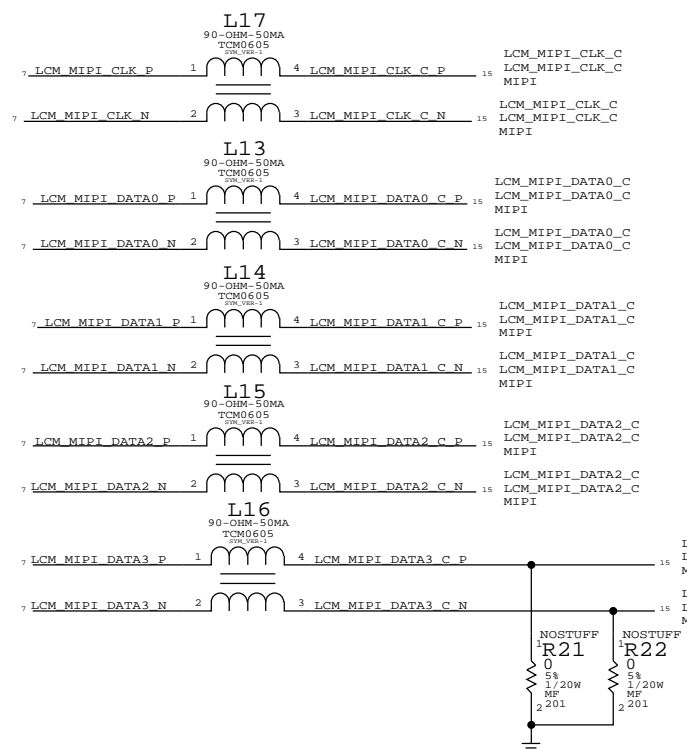
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A



NC	AG13	MIPI_VSYNC	SWI_DATA	AA19	SWI_BLCCTRL	11
7	LCM_MIPI_DATA0_P	LCM_MIPI_DATA0	LCM_MIPI_DATA0	MIPI	AG3	MIPI_DPDATA0
7	LCM_MIPI_DATA0_N	LCM_MIPI_DATA0	LCM_MIPI_DATA0	MIPI	AF3	MIPI_DNDATA0
7	LCM_MIPI_DATA1_P	LCM_MIPI_DATA1	LCM_MIPI_DATA1	MIPI	AE6	MIPI_DPDATA1
7	LCM_MIPI_DATA1_N	LCM_MIPI_DATA1	LCM_MIPI_DATA1	MIPI	AE5	MIPI_DNDATA1
7	LCM_MIPI_DATA2_P	LCM_MIPI_DATA2	LCM_MIPI_DATA2	MIPI	AG6	MIPI_DPDATA2
7	LCM_MIPI_DATA2_N	LCM_MIPI_DATA2	LCM_MIPI_DATA2	MIPI	AF6	MIPI_DNDATA2
7	LCM_MIPI_DATA3_P	LCM_MIPI_DATA3	LCM_MIPI_DATA3	MIPI	AF8	MIPI_DPDATA3
7	LCM_MIPI_DATA3_N	LCM_MIPI_DATA3	LCM_MIPI_DATA3	MIPI	AG8	MIPI_DNDATA3
7	LCM_MIPI_CLK_P	LCM_MIPI_CLK	LCM_MIPI_CLK	MIPI	AF5	MIPI_DPCLK
7	LCM_MIPI_CLK_N	LCM_MIPI_CLK	LCM_MIPI_CLK	MIPI	AG5	MIPI_DNCLK
16	CAM_MIPI_DATA0_P	CAM_MIPI_DATA0	CAM_MIPI_DATA0	MIPI	AG9	MIPI_DPDATA0
16	CAM_MIPI_DATA0_N	CAM_MIPI_DATA0	CAM_MIPI_DATA0	MIPI	AF9	MIPI_DNDATA0
16	CAM_MIPI_DATA1_P	CAM_MIPI_DATA1	CAM_MIPI_DATA1	MIPI	AF13	MIPI_DPDATA1
16	CAM_MIPI_DATA1_N	CAM_MIPI_DATA1	CAM_MIPI_DATA1	MIPI	AF12	MIPI_DNDATA1
16	CAM_MIPI_CLK_P	CAM_MIPI_CLK	CAM_MIPI_CLK	MIPI	AE13	MIPI_DPCLK
16	CAM_MIPI_CLK_N	CAM_MIPI_CLK	CAM_MIPI_CLK	MIPI	AE14	MIPI_DNCLK

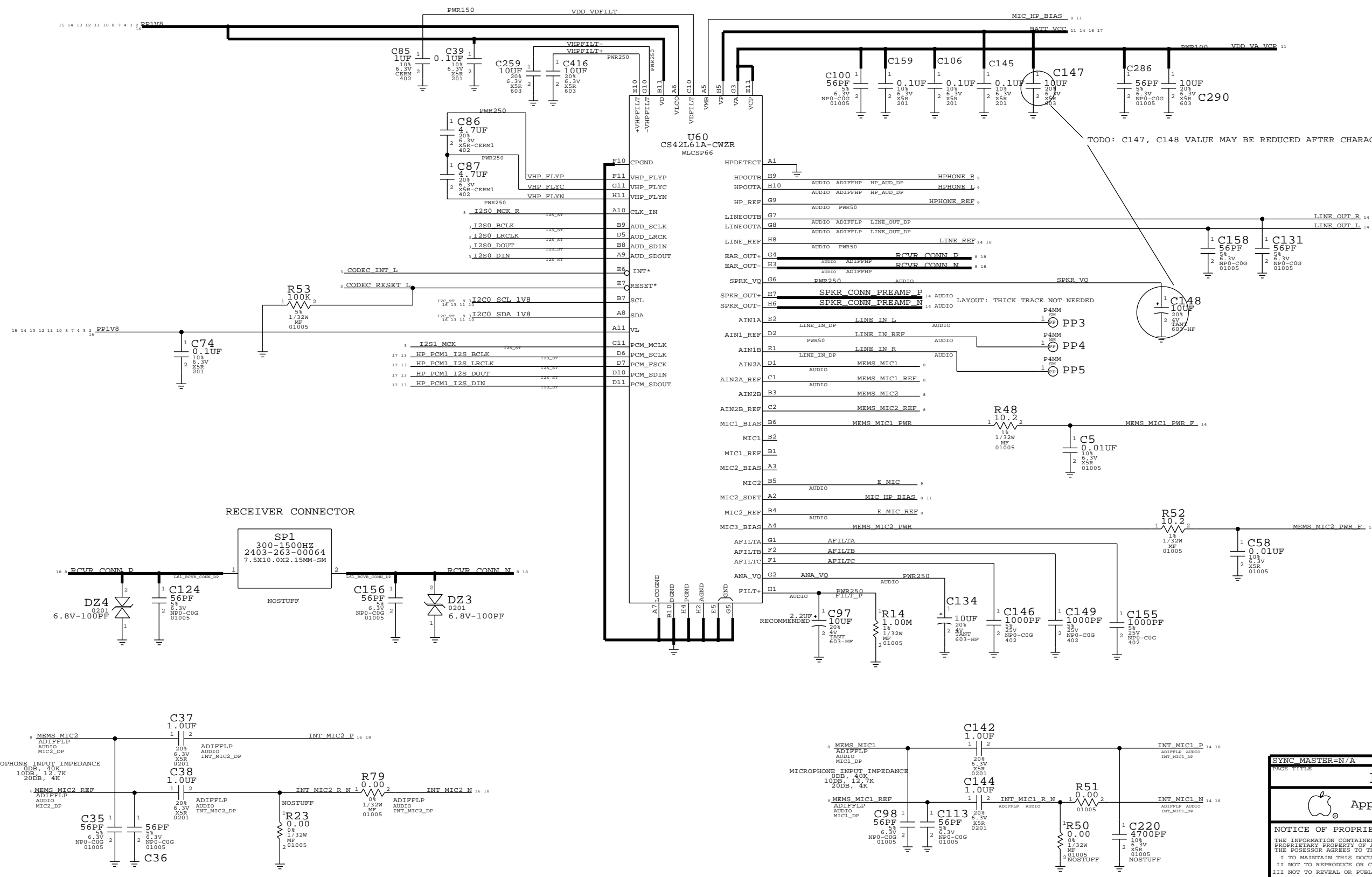
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DP_PAD_AUXN	E26 <td>DPORT <td>DP_AUX <td>DP_AUX <td>DP_AUX_N</td> <td>14</td> </td></td></td>	DPORT <td>DP_AUX <td>DP_AUX <td>DP_AUX_N</td> <td>14</td> </td></td>	DP_AUX <td>DP_AUX <td>DP_AUX_N</td> <td>14</td> </td>	DP_AUX <td>DP_AUX_N</td> <td>14</td>	DP_AUX_N	14
DP_PAD_DC_TP	A22	NC				
DP_PAD_R_BIAS	E25	DP_R_BIAS				
DP_PAD_TX0+	C27	DPORT <td>DP_DATA0</td> <td>DPORT_D0_ST</td> <td>DP_DATA0_P</td> <td>14</td>	DP_DATA0	DPORT_D0_ST	DP_DATA0_P	14
DP_PAD_TX0-	C26	DPORT <td>DP_DATA0</td> <td>DPORT_D0_ST</td> <td>DP_DATA0_N</td> <td>14</td>	DP_DATA0	DPORT_D0_ST	DP_DATA0_N	14
DP_PAD_TX1+	A25	DPORT <td>DP_DATA1</td> <td>DPORT_D1_ST</td> <td>DP_DATA1_P</td> <td>14</td>	DP_DATA1	DPORT_D1_ST	DP_DATA1_P	14
DP_PAD_TX1-	B25	DPORT <td>DP_DATA1</td> <td>DPORT_D1_ST</td> <td>DP_DATA1_N</td> <td>14</td>	DP_DATA1	DPORT_D1_ST	DP_DATA1_N	14
SMIA_RX_DATA+	AD14	SMIA	SMIA_D	SMIA_D_ST	SMIA_DATA_P	16
SMIA_RX_DATA-	AD13	SMIA	SMIA_D	SMIA_D_ST	SMIA_DATA_N	16
SMIA_RX_CLK+	AF14	SMIA	SMIA_CLK	SMIA_CLK_ST	SMIA_CLK_P	16
SMIA_RX_CLK-	AG14	SMIA	SMIA_CLK	SMIA_CLK_ST	SMIA_CLK_N	16



SYNC MASTER=N/A		SYNC DATE=N/A	
H3 MIPI, DPORT, SMIA			
Apple Inc.		DRAWING NUMBER	051-7921
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		PAGE	7 OF 18
		SHEET	7 OF 29

L61 AUDIO INTERFACE

I2C ADDRESS: 1001010X



TODO: C147, C148 VALUE MAY BE REDUCED AFTER CHARACTERIZATION

RECEIVER CONNECTOR

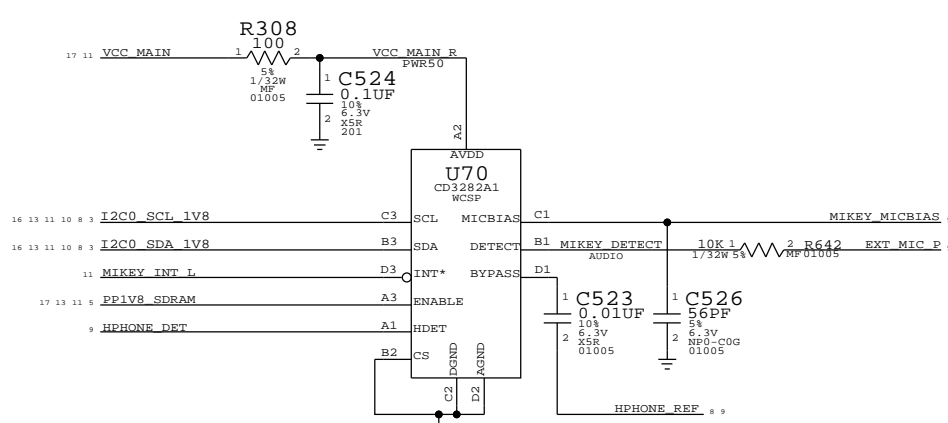
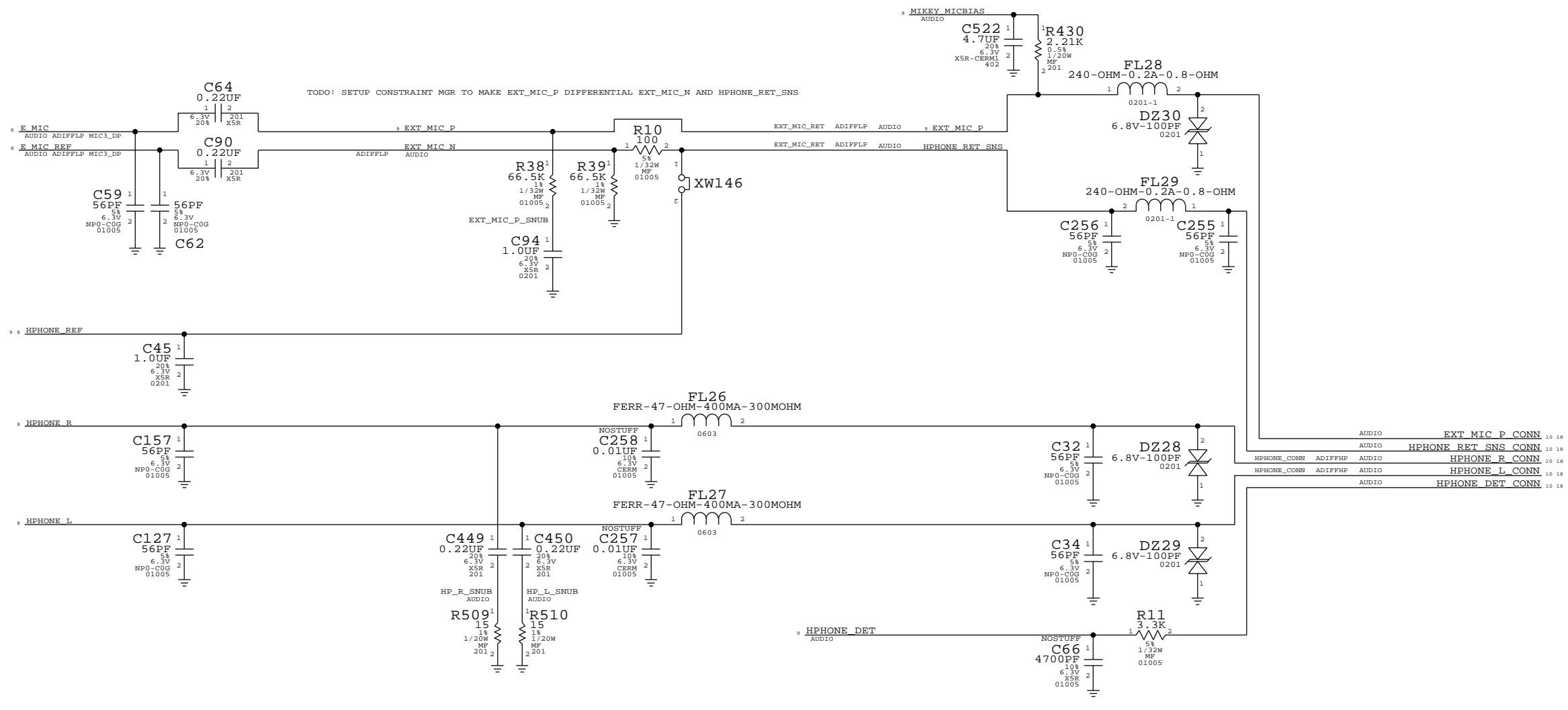
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L61 CODEC			
Apple Inc.		DRAWING NUMBER	051-7921
		REVISION	A.0.0
		PAGE	8 OF 18
		SHEET	8 OF 29
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8 7 6 5 4 3 2 1

PLACED AT CODEC

PLACED IN CODEC AREA

PLACED BY B2B

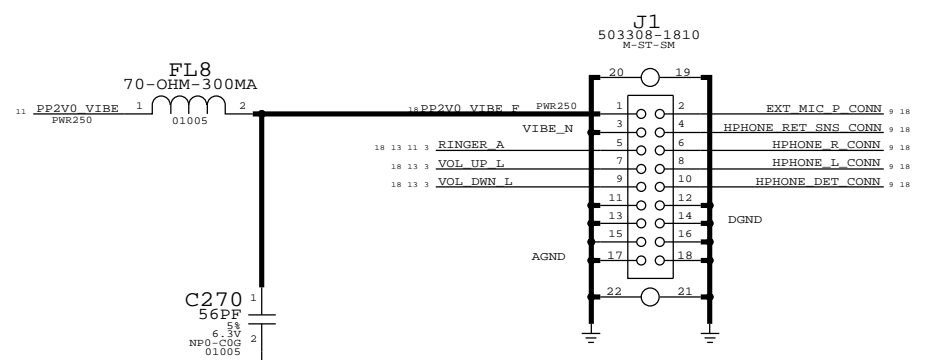
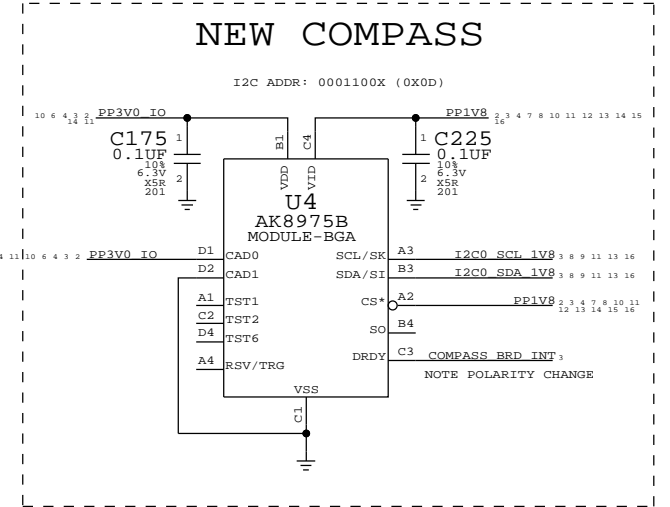


I2C ADDRESS: 0111001X (0X39)

DRAWING NUMBER		051-7921		SIZE	D
REVISION		A.0.0		BRANCH	
PAGE		9 OF 18		SHEET	
PAGE		9 OF 29		SHEET	

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8 7 6 5 4 3 2 1



BUTTON FLEX CONNECTOR

D
C
B
A

D
C
B
A

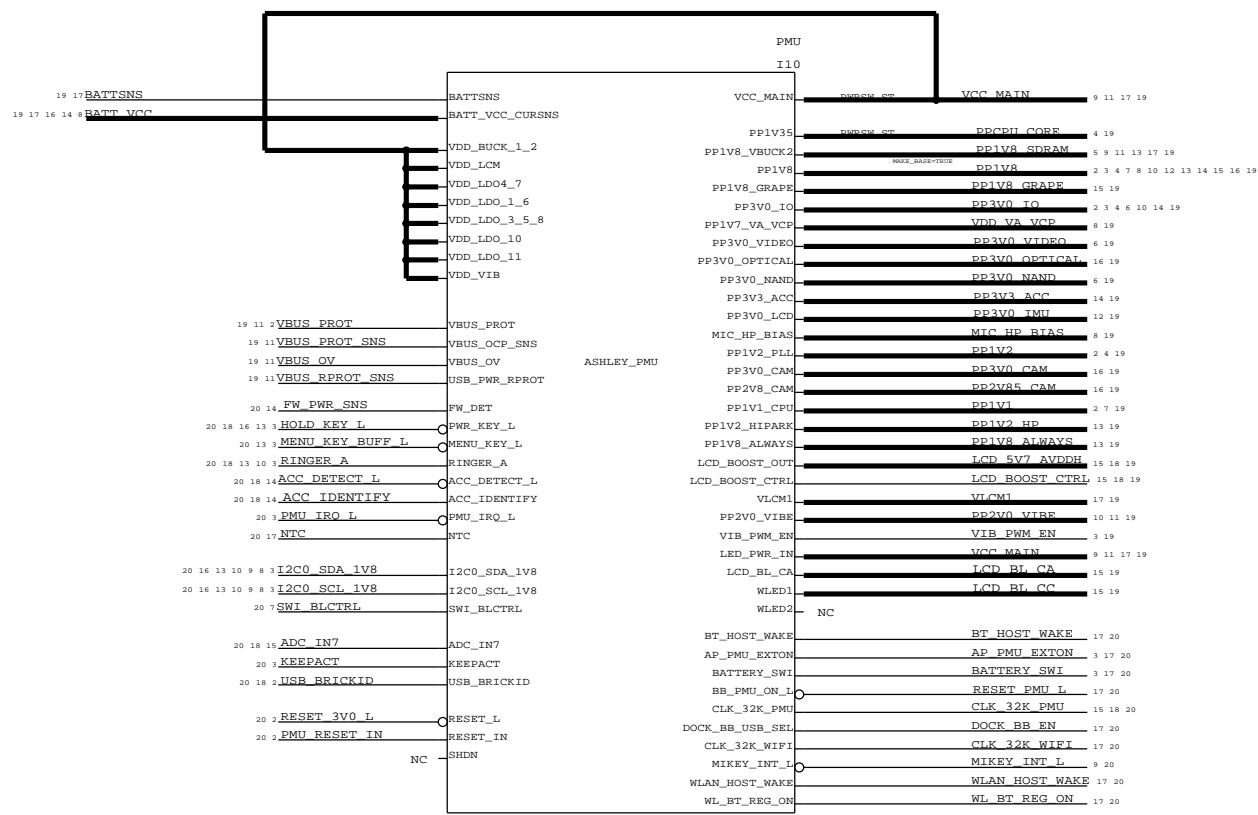
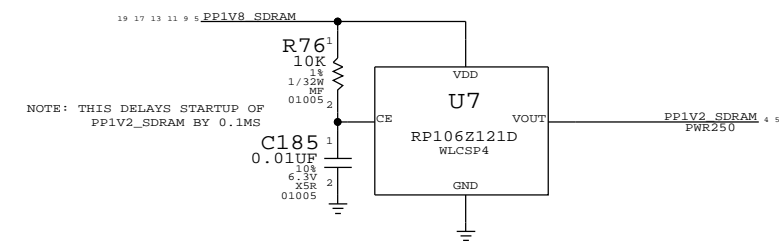
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DRAWING NUMBER: 051-7921		SIZE: D	
REVISION: A.0.0		BRANCH:	
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PAGE: 10 OF 18		SHEET: 10 OF 29	

D

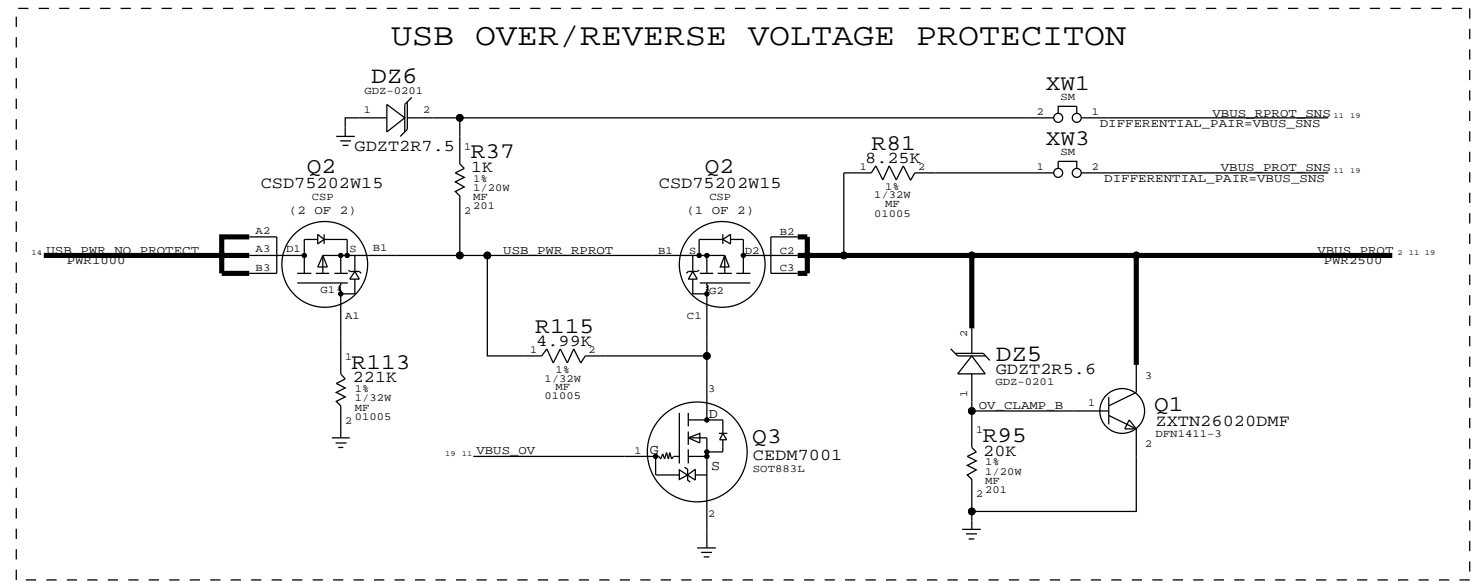
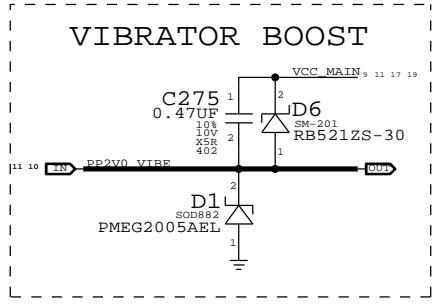
C

B

A



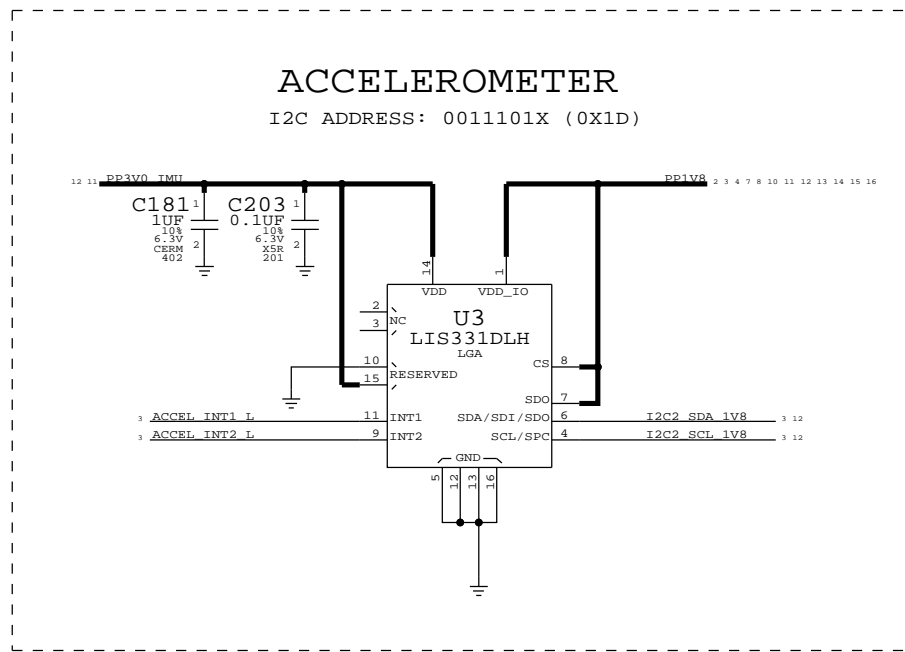
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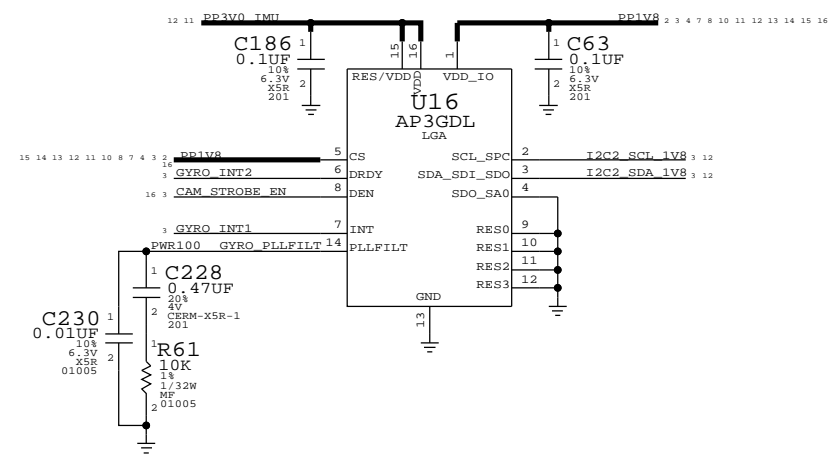
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ASHLEY PMU	
Apple Inc.	DRAWING NUMBER: 051-7921
REVISION: A.0.0	SIZE: D
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I ALL RIGHTS RESERVED	
PAGE: 11 OF 18	SHEET: 11 OF 29

ACCELEROMETER

I2C ADDRESS: 0011101X (0X1D)



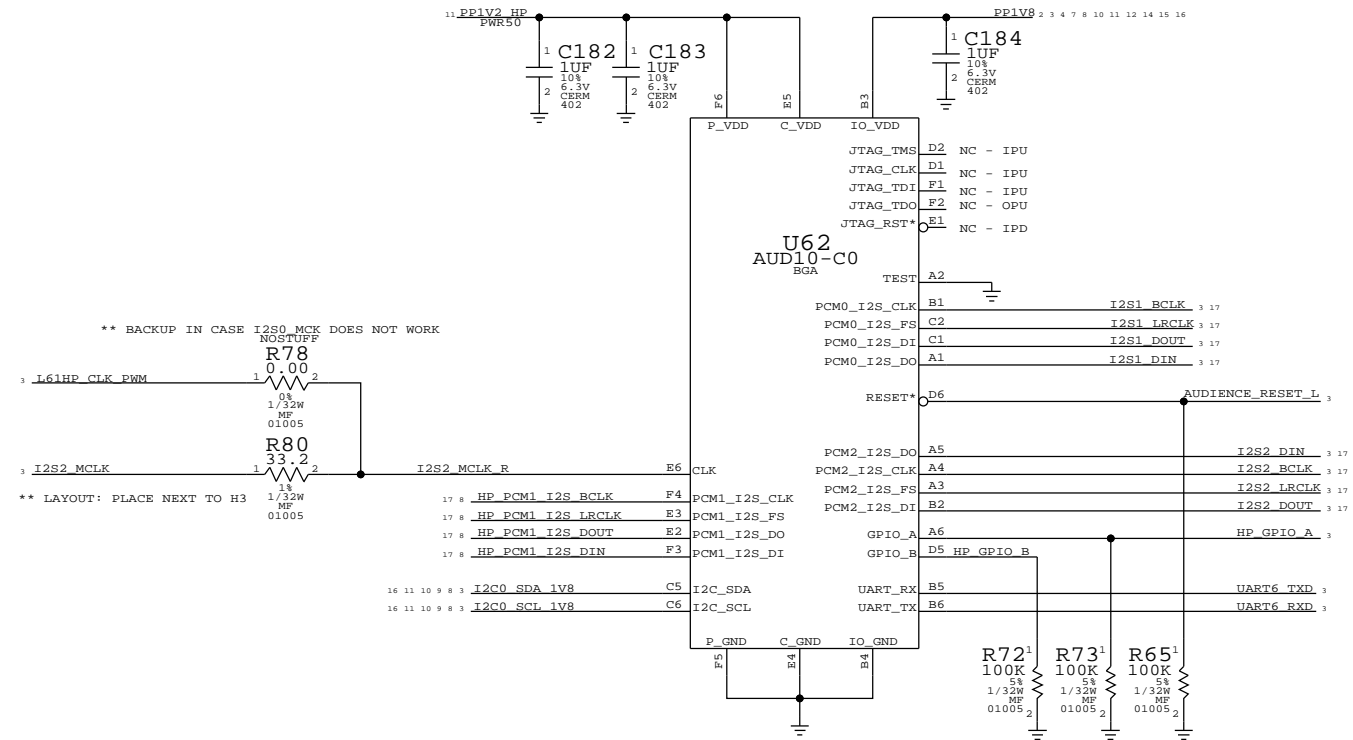
GYRO



SYNC MASTER=N/A		SYNC DATE=N/A	
PAGE TITLE			
ACCEL, GYRO			
DRAWING NUMBER		051-7921	SIZE
REVISION		A.0.0	D
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PAGE		12 OF 18	
SHEET		12 OF 29	

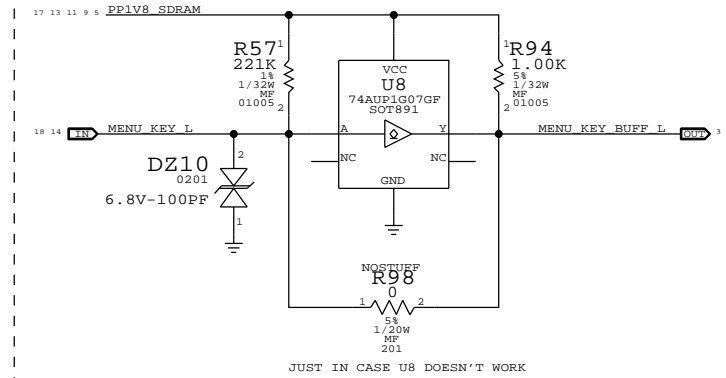
HIGHLAND PARK

I2C ADDRESS: 0111110X (0X3E)

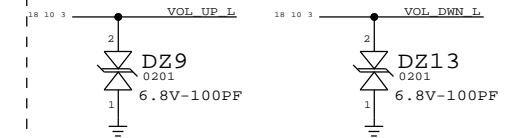


MENU KEY PU, ESD AND BUFFER

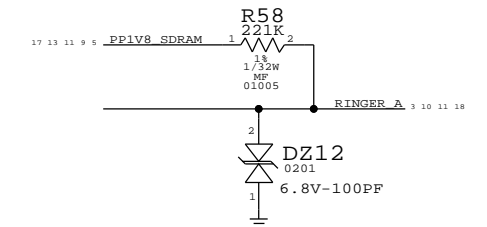
BUFFER IS NEEDED BECAUSE OF IT'S LOW V_{IH} AND LEAKAGE
IT MUST BE OPEN DRAIN SO THAT WHEN PPIV8_SDRAM IS DOWN,
MENU_KEY_BUFF_L IS PULLED LOW THROUGH R94 AND INTERNAL
PULLDOWN IN ASHLEY.



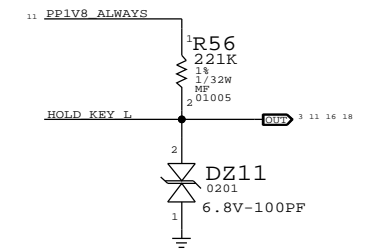
VOLUME SWITCH ESD



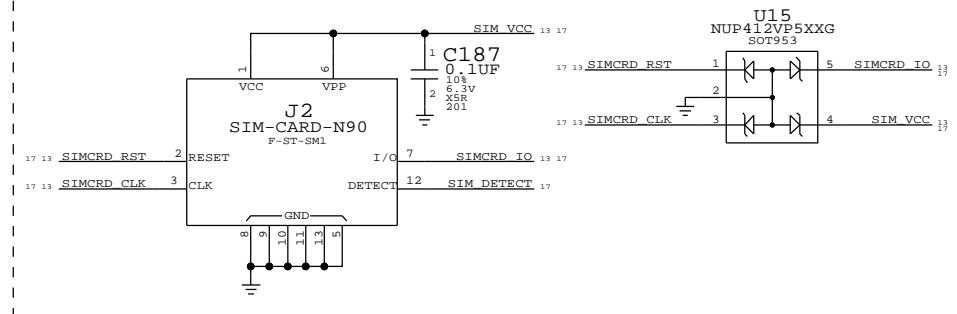
RINGER A/B SWITCH PU AND ESD



POWER/HOLD KEY PU AND ESD

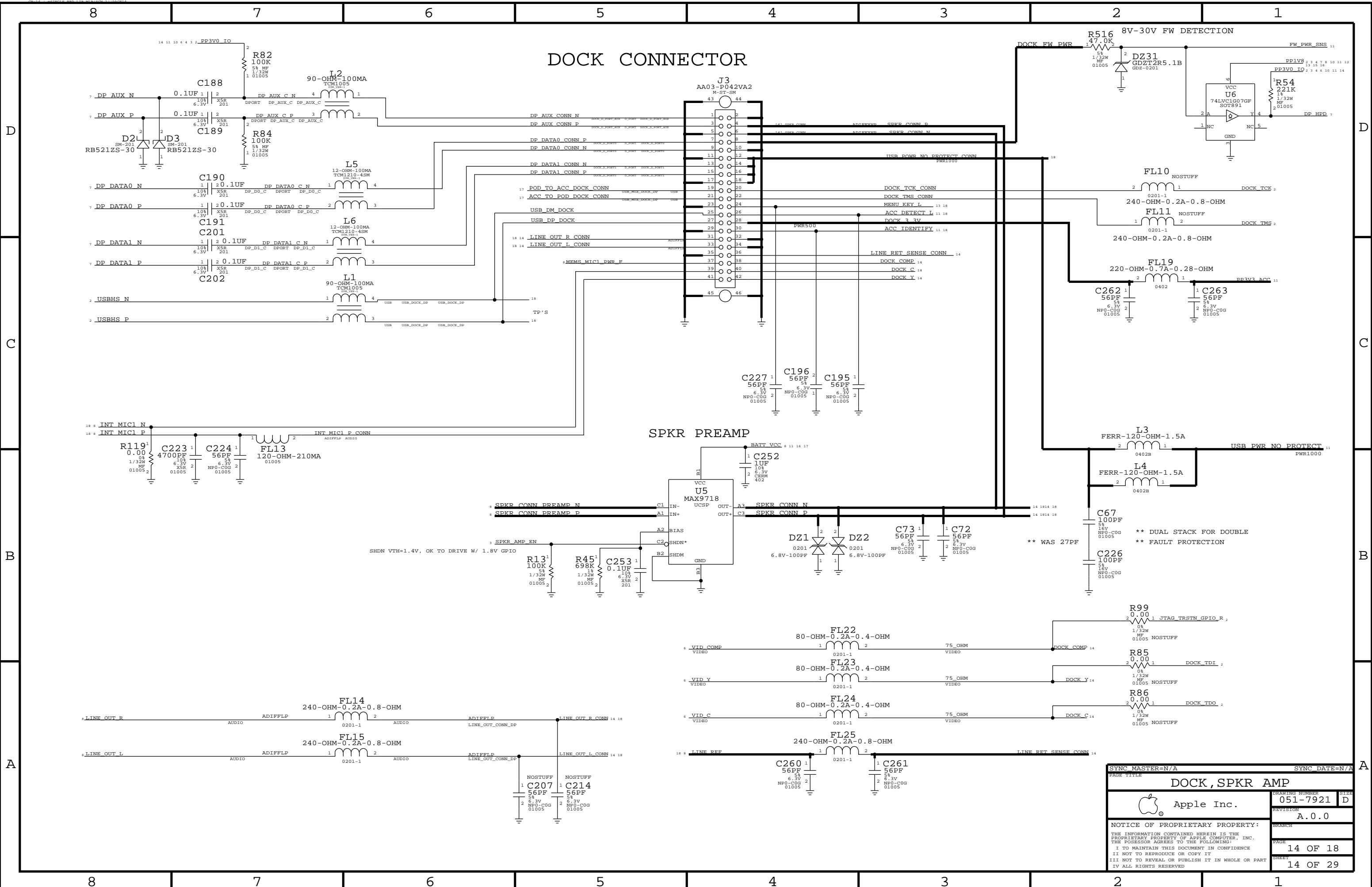


SIM CARD SLOT AND ESD



SYNC MASTER=N/A	SYNC DATE=N/A
PAGE TITLE HPARK, SWITCH ESD, SIM CARD	
DRAWING NUMBER 051-7921	SIZE D
REVISION A.0.0	BRANCH
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PAGE 13 OF 18	SHEET 13 OF 29

DOCK CONNECTOR

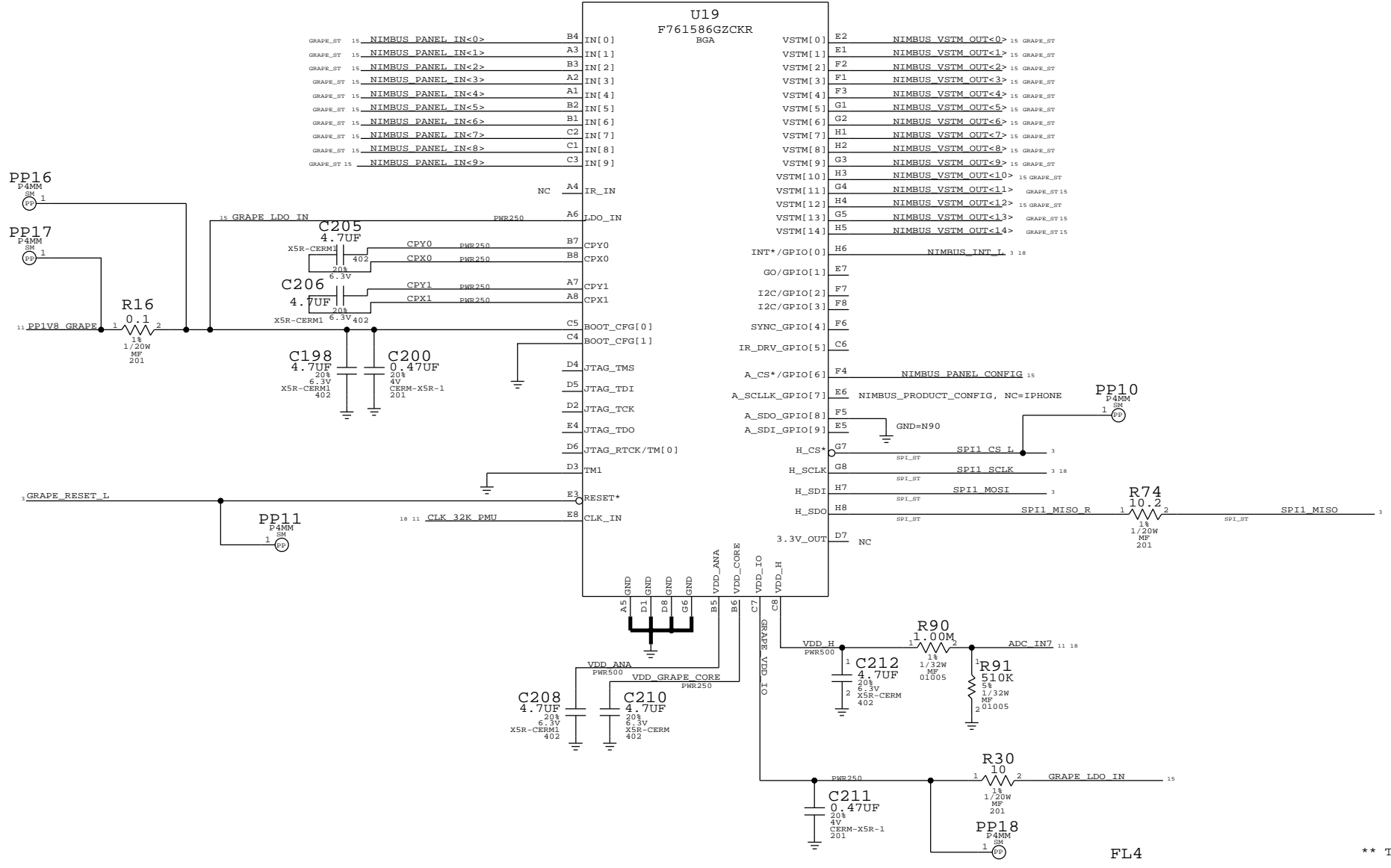
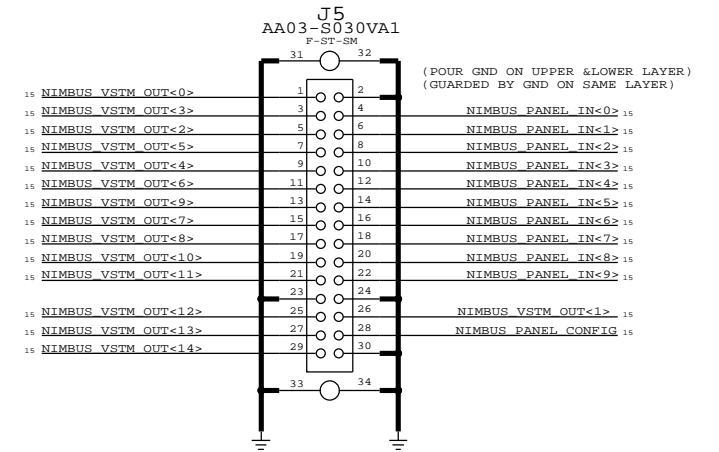


SPKR PREAMP

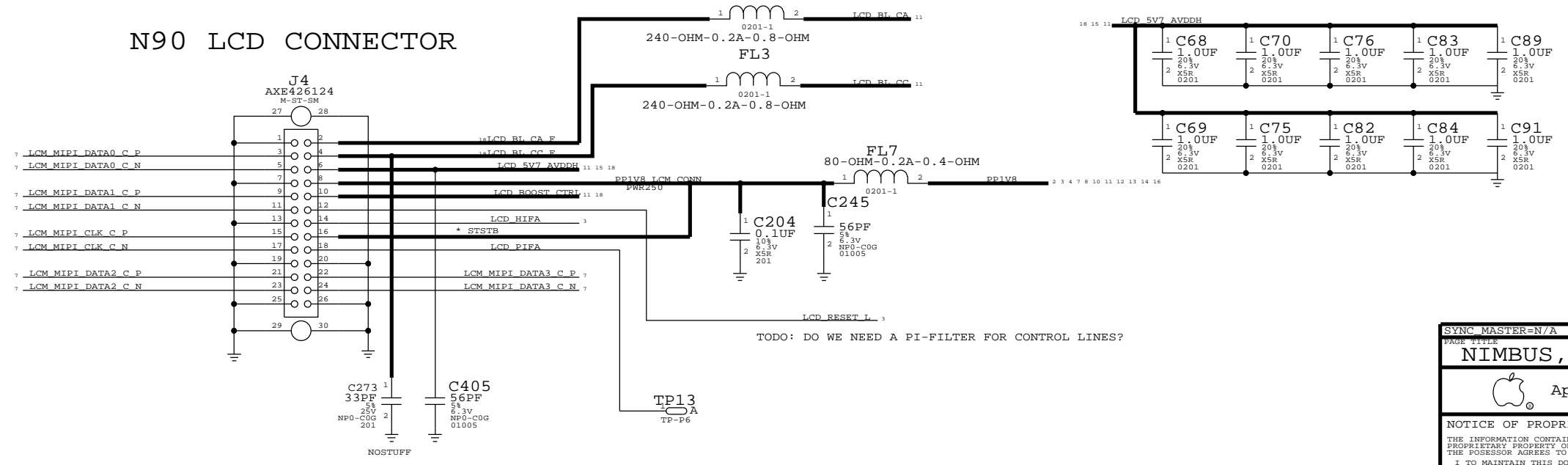
PAGE TITLE		DRAWING NUMBER	
DOCK, SPKR AMP		051-7921	
DRAWING NUMBER		REVISION	
051-7921		A.0.0	
NOTICE OF PROPRIETARY PROPERTY:		PAGE	
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IV ALL RIGHTS RESERVED			

NIMBUS

GRAPE CONNECTOR N90 NIMBUS CONNECTOR



N90 LCD CONNECTOR

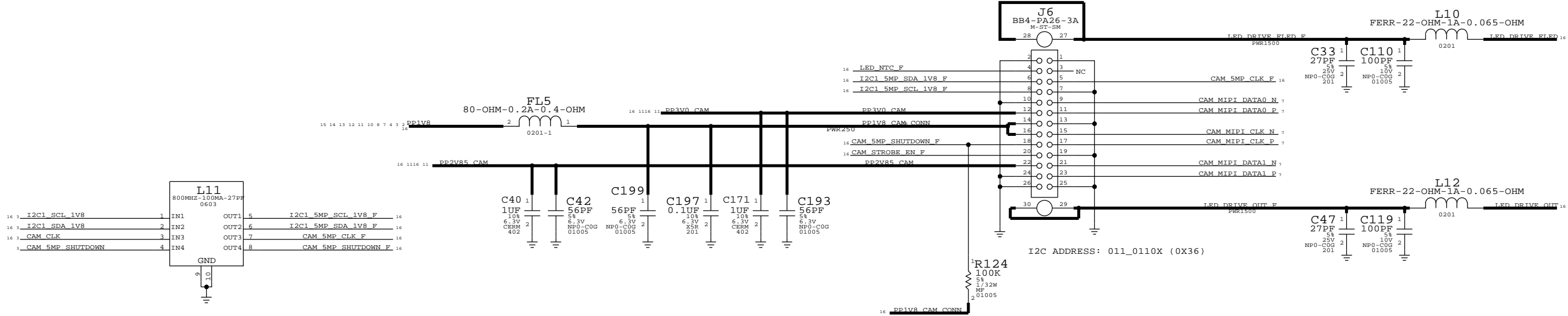


** THESE 10 CAPS ARE TO REPLACE 1 4.7 UF CAP IN ORDER TO REDUCE HEIGHT IN THE FORHEAD AREA

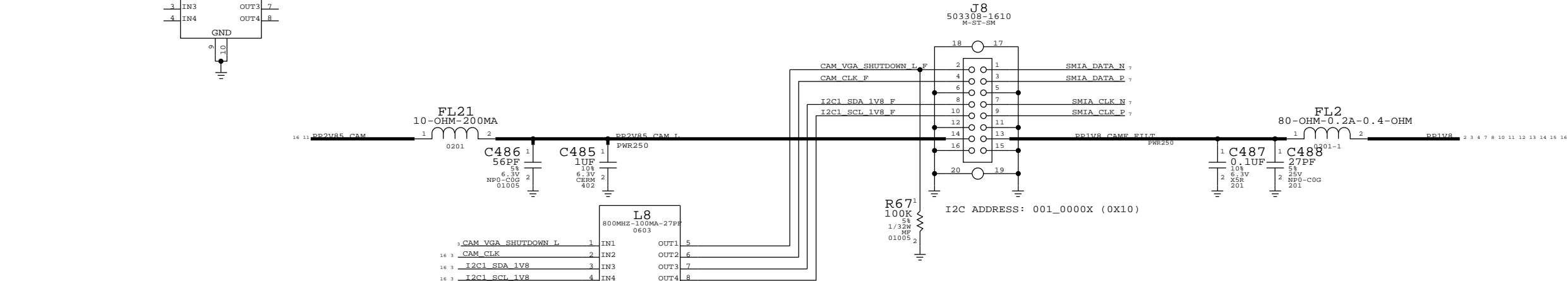
TODO: DO WE NEED A PI-FILTER FOR CONTROL LINES?

SYNC MASTER=N/A		SYNC DATE=N/A	
PAGE TITLE NIMBUS, GRAPE, LCD CONN.			
DRAWING NUMBER 051-7921		SIZE D	
REVISION A.0.0		BRANCH	
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5MP CAMERA CONNECTOR

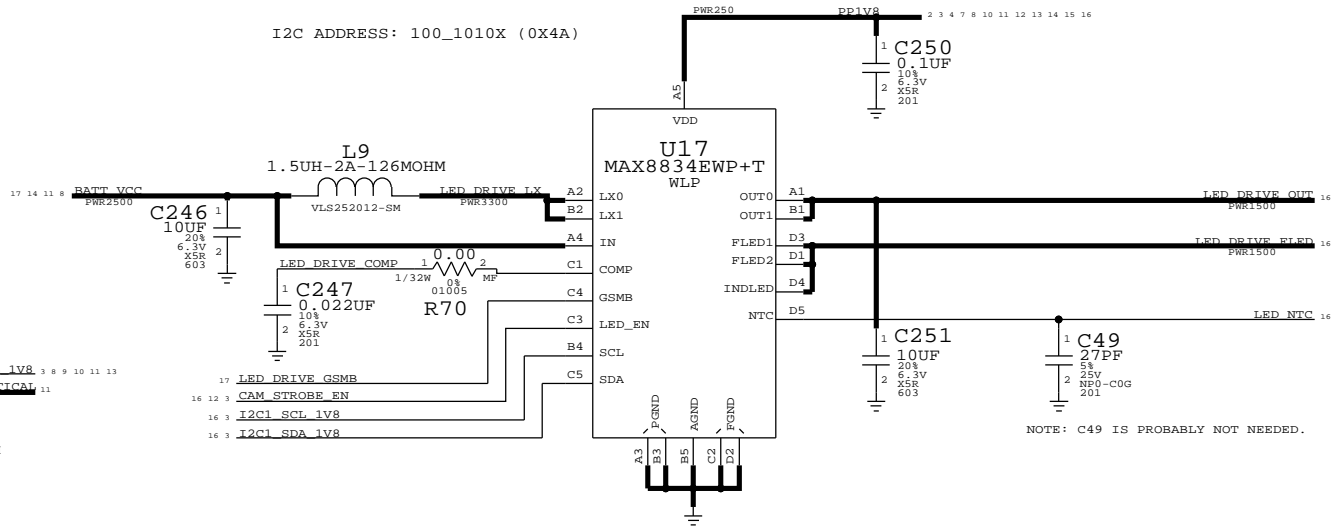


VGA CAMERA CONN



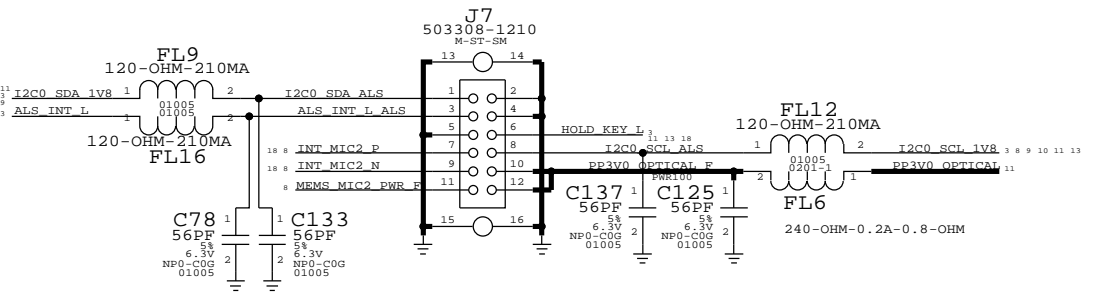
LED DRIVER

* PLACE CLOSE TO BATTERY *

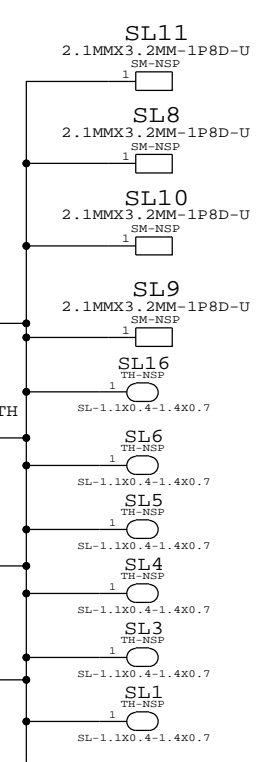
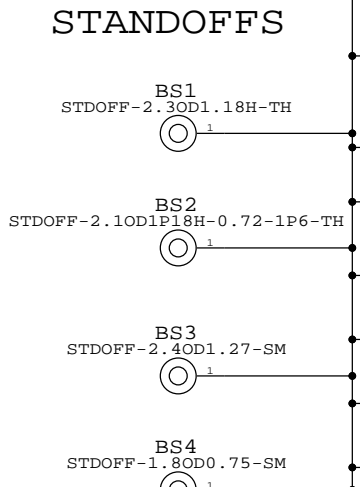
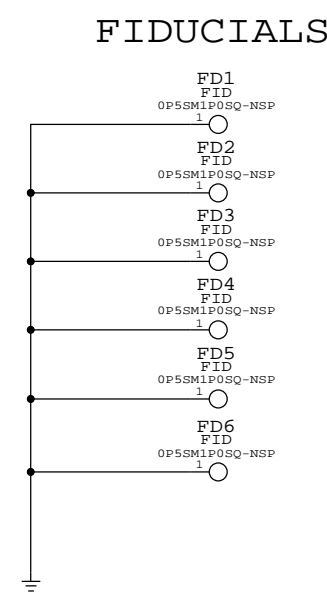
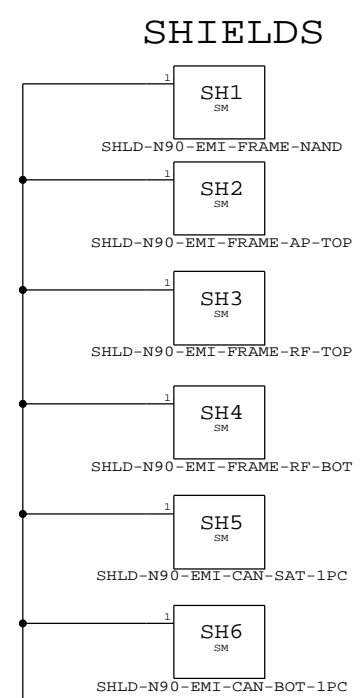
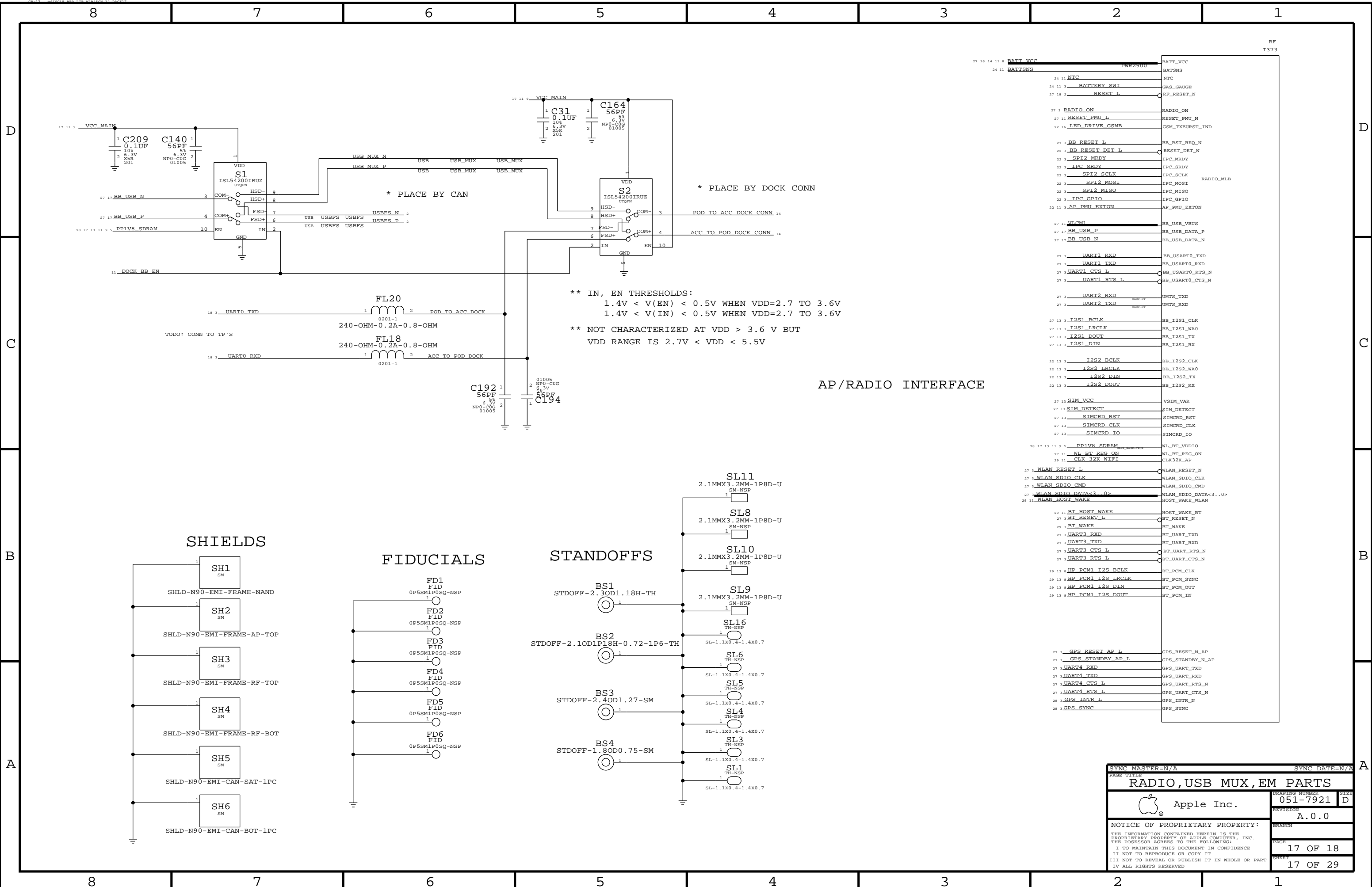


ALS/PROX

I2C ADDRESS: 011_1001X (0X39)

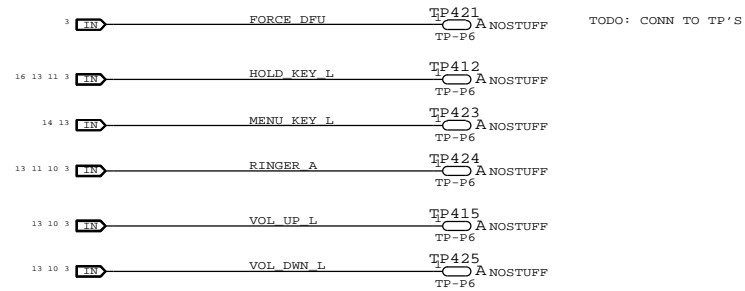


SYNC MASTER=N/A		SYNC DATE=N/A	
CAMERA, STROBE, SENSOR B2B			
Apple Inc.		DRAWING NUMBER	051-7921
		REVISION	A.0.0
		PAGE	16 OF 18
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SYNC MASTER=N/A		SYNC DATE=N/A	
DRAWING TITLE RADIO, USB MUX, EM PARTS			
DRAWING NUMBER 051-7921		SIZE D	
REVISION A.0.0		BRANCH	
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GPIO

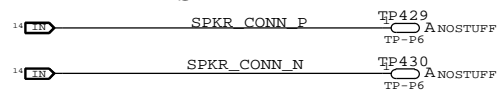


TEST

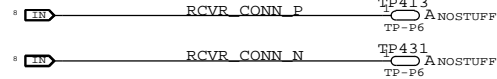


AUDIO

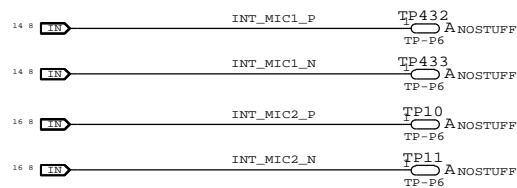
SPEAKER



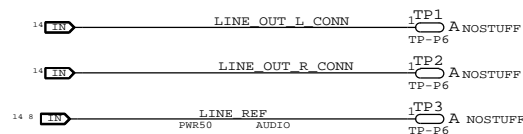
RECEIVER



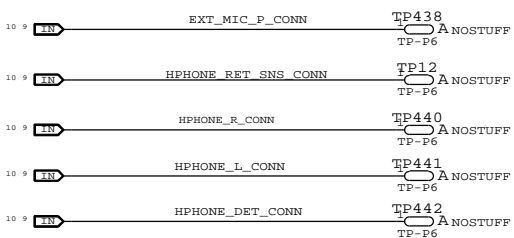
MIC



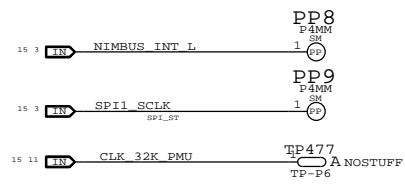
LINE OUT



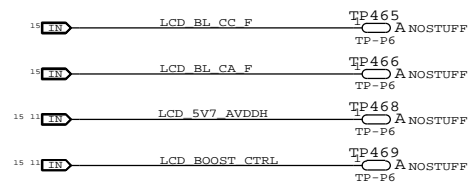
HEADPHONE



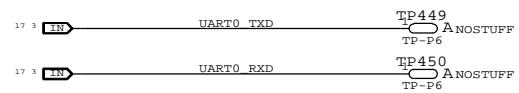
GRAPE



LCM



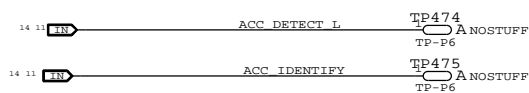
UART



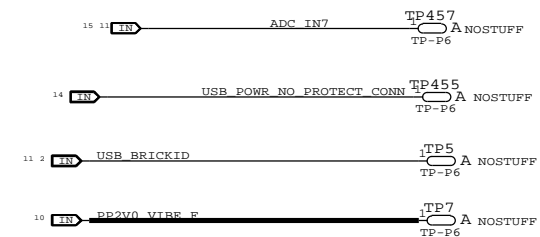
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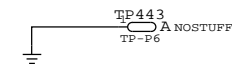
ACCESSORY DETECT



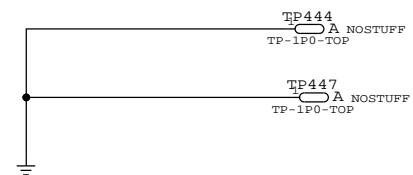
POWER



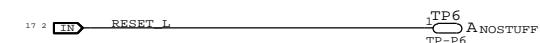
SIGNAL GND (SENSE)



POWER GND



RESET



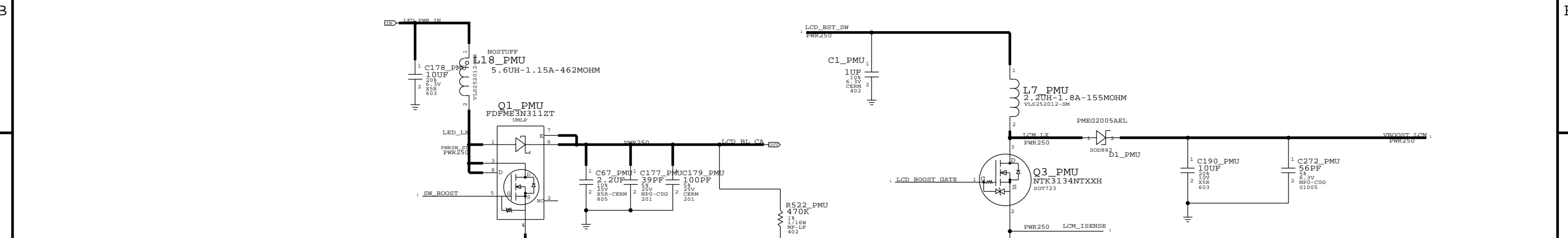
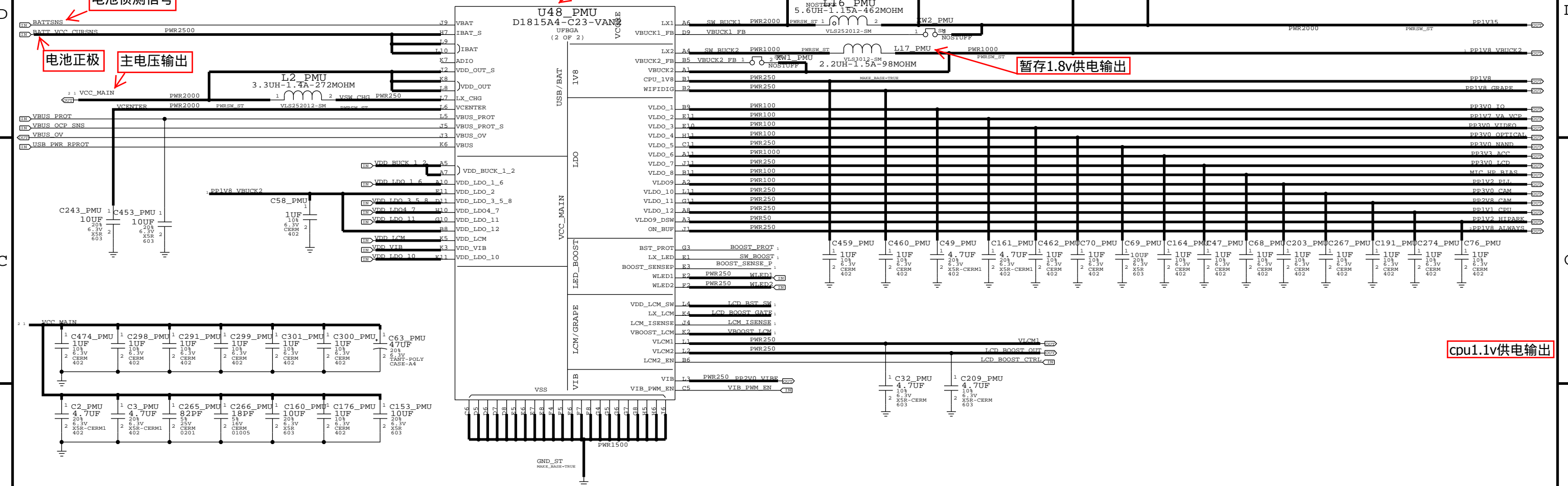
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SHEET	18 OF 29		

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.

N90 ASHLEY_PMU SUB-DESIGN

Thu Mar 18 14:15:23 2010

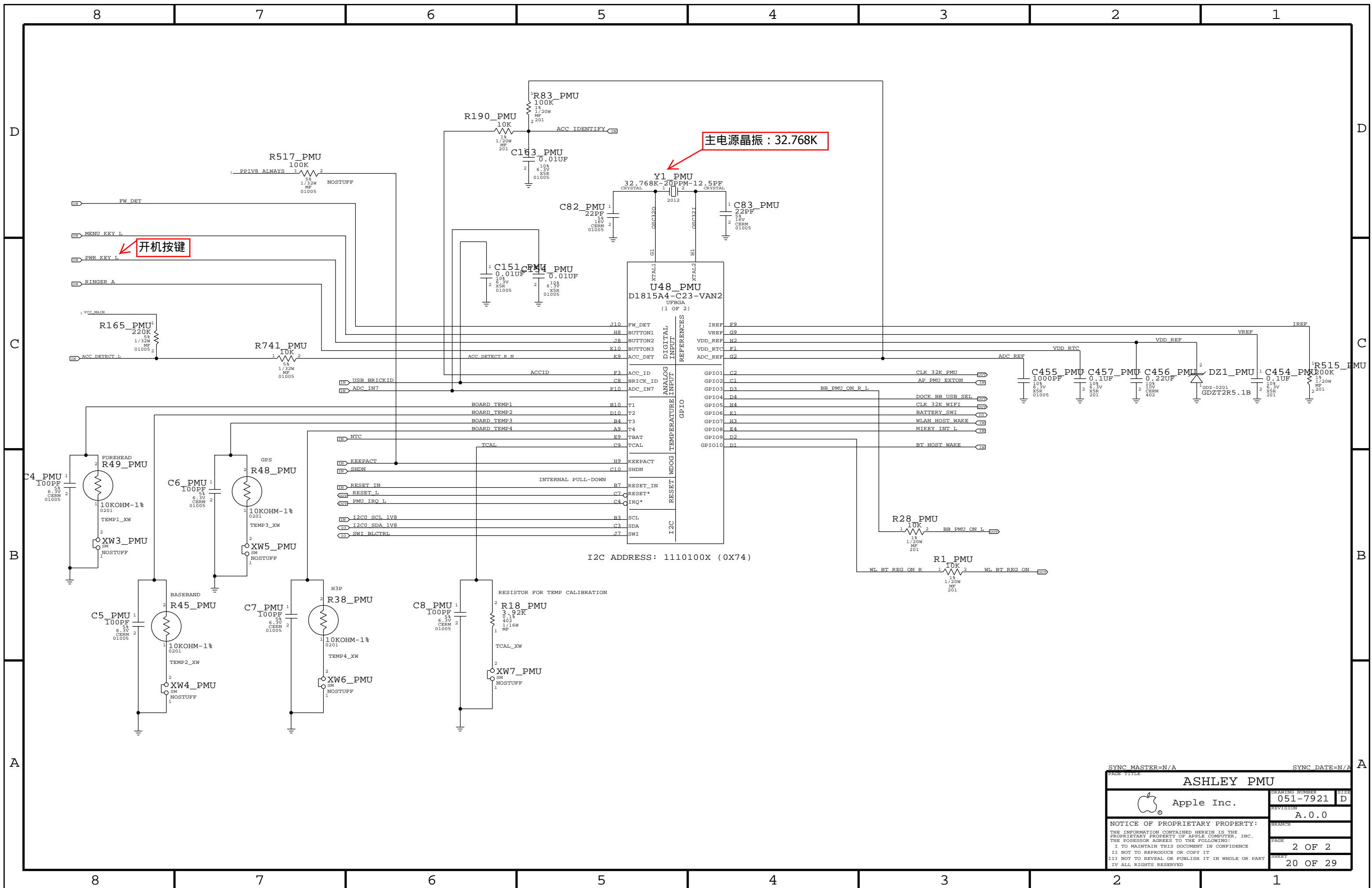
REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
A	0000880153	PRODUCTION RELEASED		2010-03-23




SCH # : 051-8351

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
607-6809	1	TDK POWER INDUCTORS	L1_PMU, L3_PMU, L16_PMU, L18_PMU	Y	?

SYNC MASTER=N/A		SYNC DATE=N/A	
DRAWING TITLE ?			
Apple Inc.		DRAWING NUMBER 051-7921	SIZE D
		REVISION A.0.0	BRANCH
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PAGE 1 OF 2		SHEET 19 OF 29	



PAGE TITLE		SYNC DATE=N/A	
ASHLEY PMU			
 Apple Inc.	DRAWING NUMBER	051-7921	SIZE
	REVISION	A.0.0	D
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		PAGE	2 OF 2
		SHEET	20 OF 29

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

REV	ECN	DESCRIPTION OF REVISION	CK APPD DATE
A	0000880153	PRODUCTION RELEASED	2010-03-23

N90 (ICE3) HSPA RADIO

PVT - 04/15/10:BRD REV9

PAGE	CONTENTS
02	BASEBAND I/O
03	BASEBAND + MEMORY
04	BASEBAND POWER SUPPLY
05	GSM & UMTS TRANSCEIVER
06	POWER AMPS AND RF FRONT END
07	SYSTEM CONNECTORS
08	A-GPS
09	WLAN/BLUETOOTH RADIO

BOARD - 920-XXXX
 SCHEMATIC - 951-XXXX
 BOM - 630-XXXX

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BASEBAND I/O

D

C

B

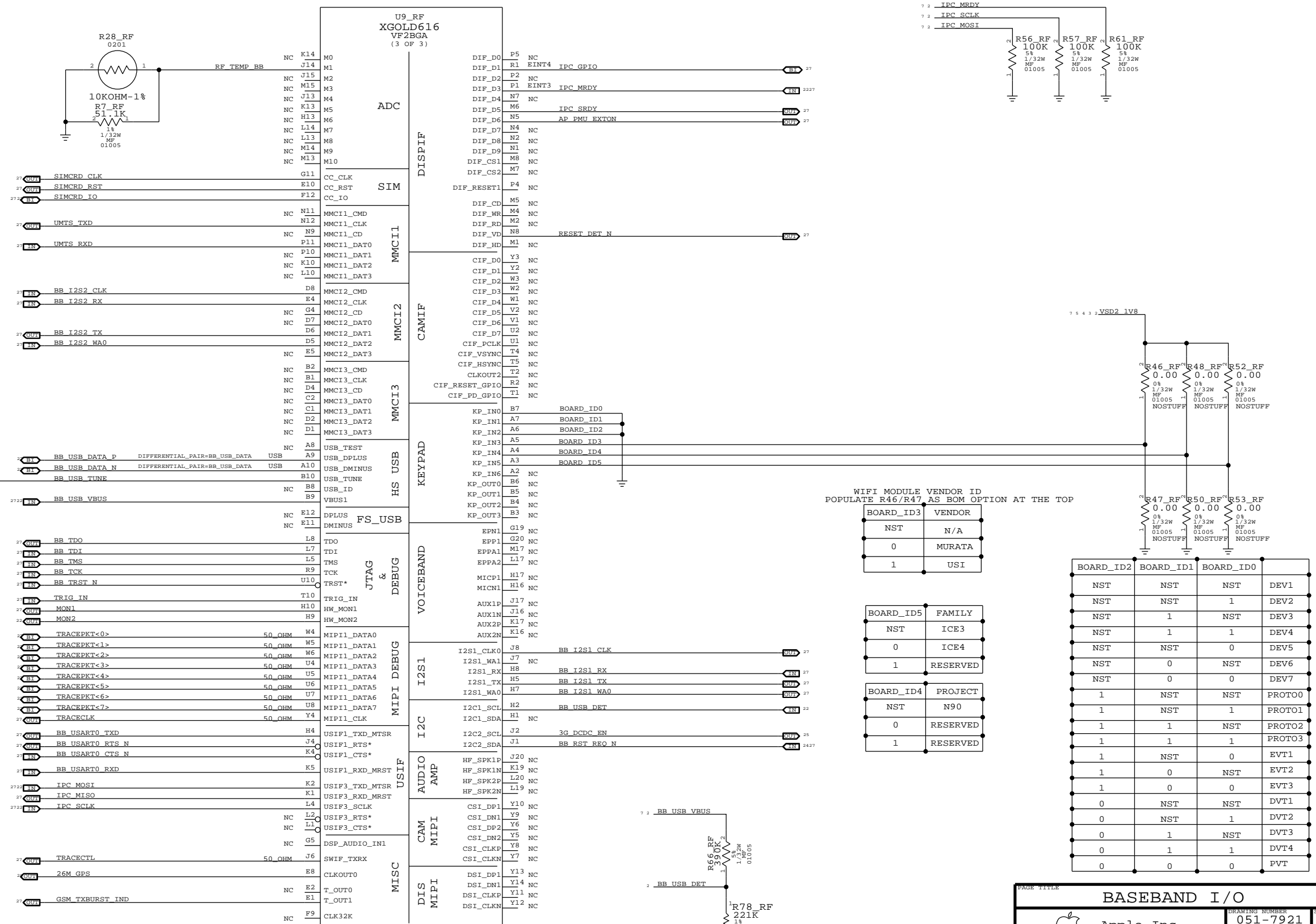
A

D

C

B

A



BOOT CONFIG DESCRIPTION
 DSP_AUDIO_IN1, MON1 AND MON2
 ARE ONLY ON TP AVAILABLE

DSP_AUDIO_IN1 HWCFG[3]	MON1 HWCFG[2]	MON2 HWCFG[1]	TRIG_IN HWCFG[0]	BOOT CONFIG DESCRIPTION
0	0	0	0	EXTERNAL BOOT VIA USB
0	0	0	1	NOR FLASH - EBU CONFIG: 16-BIT AD MUXED
0	0	1	0	NOR FLASH - EBU CONFIG: 16-BIT AAD MUXED

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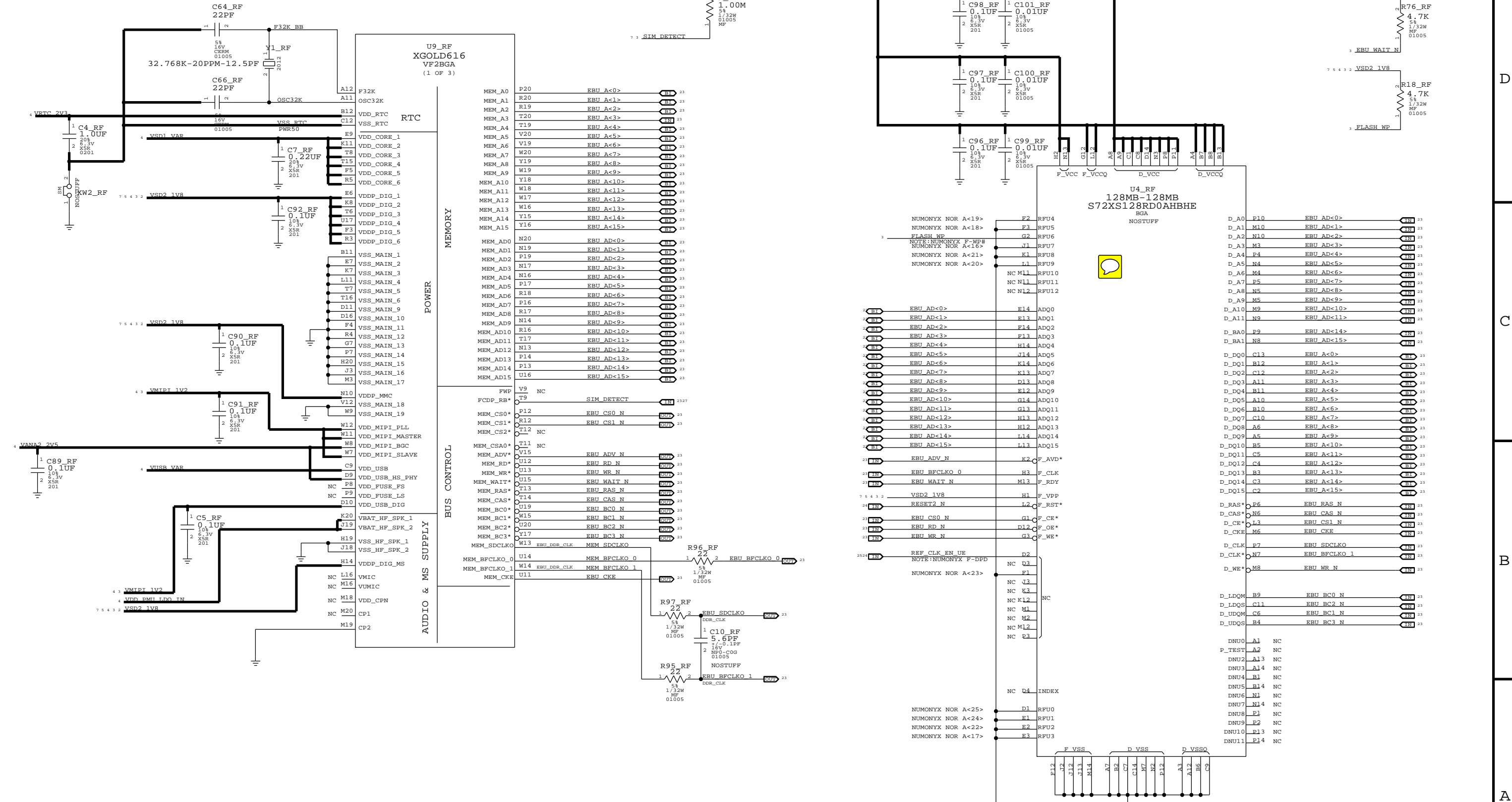
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BASEBAND MEMORY



BASEBAND MEMORY

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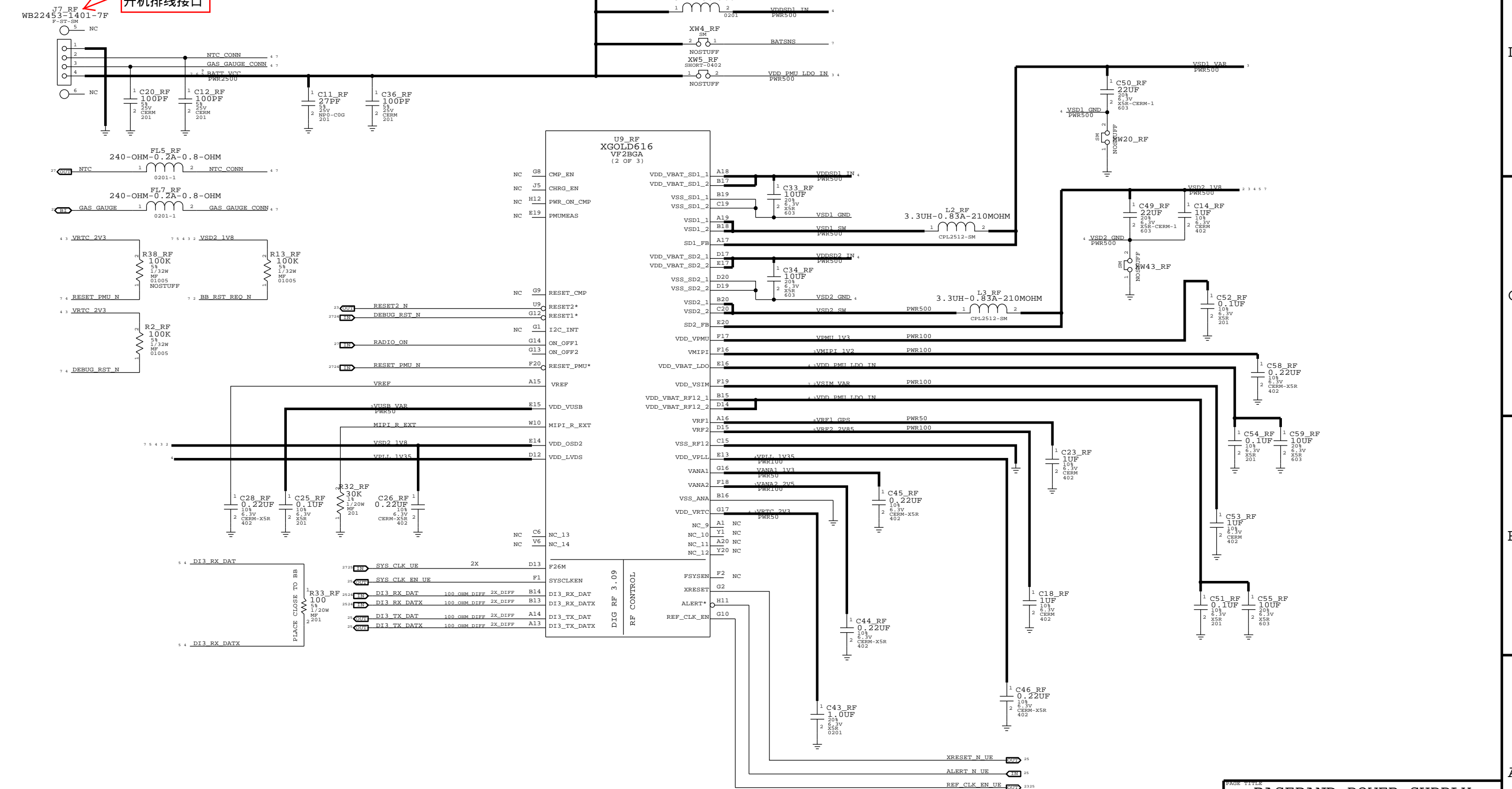
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BASEBAND POWER SUPPLY

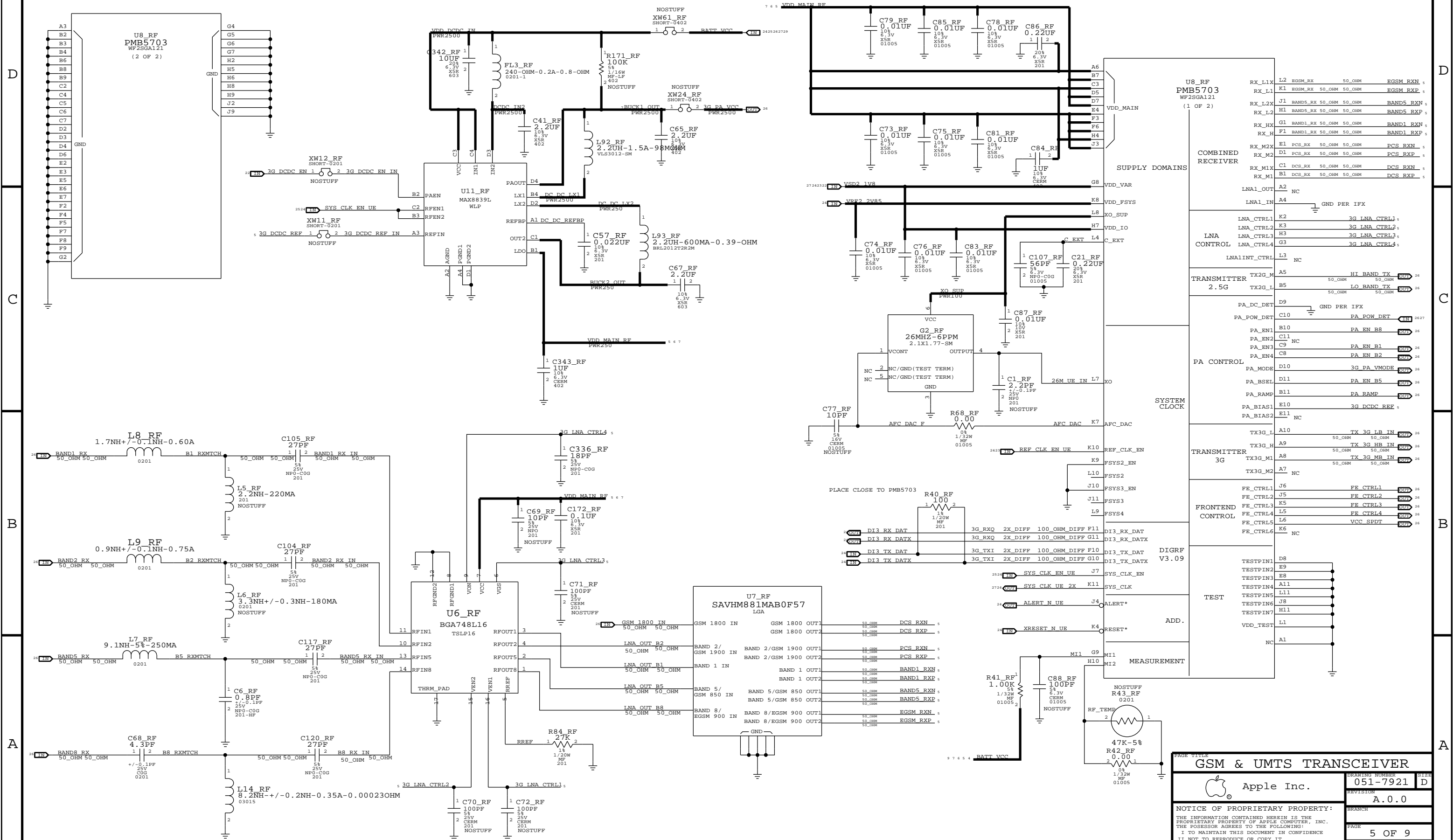
BATTERY CONNECTOR

开机排线接口



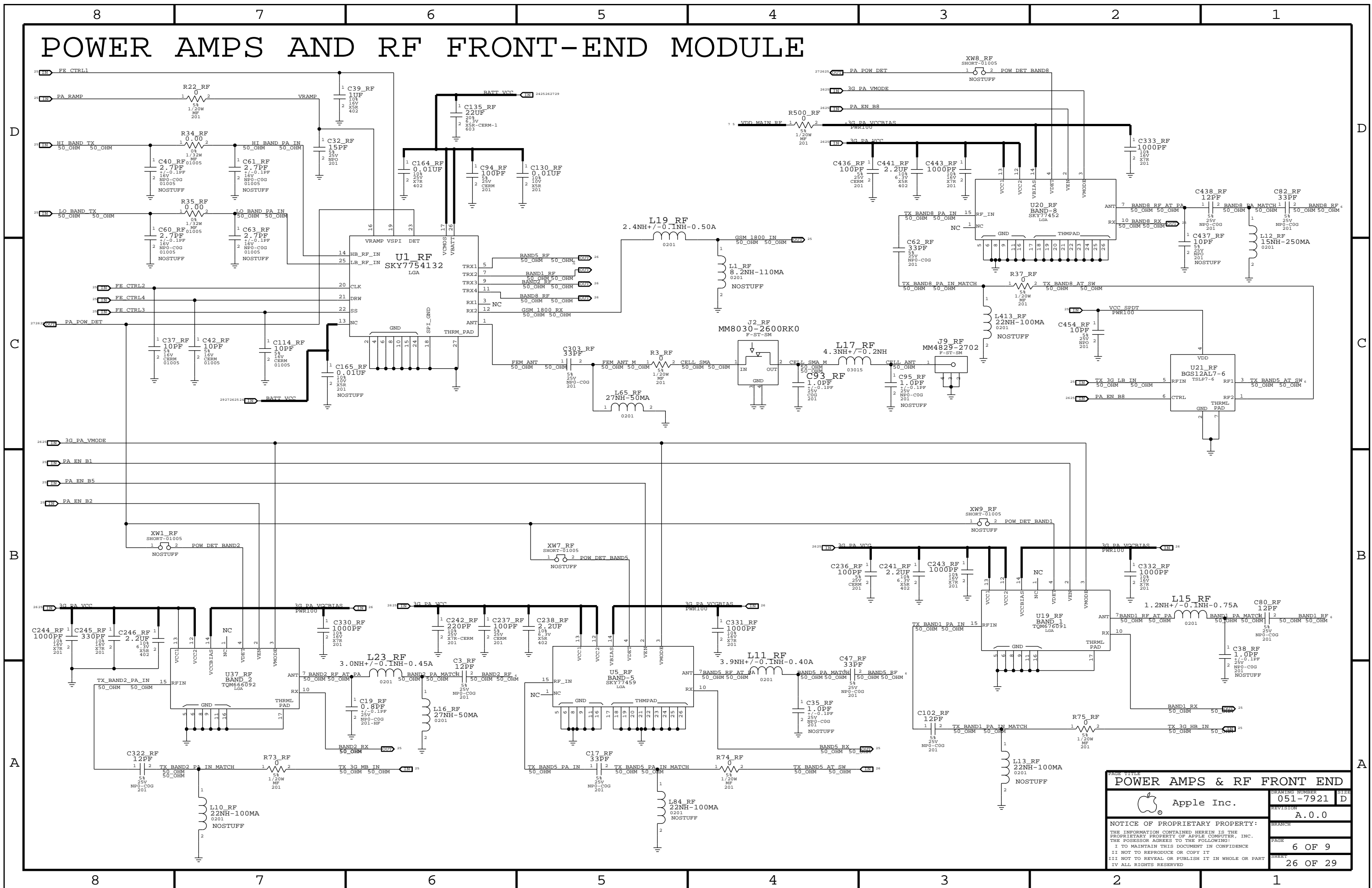
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GSM & UMTS TRANSCEIVER - SMARTI UE



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POWER AMPS AND RF FRONT-END MODULE

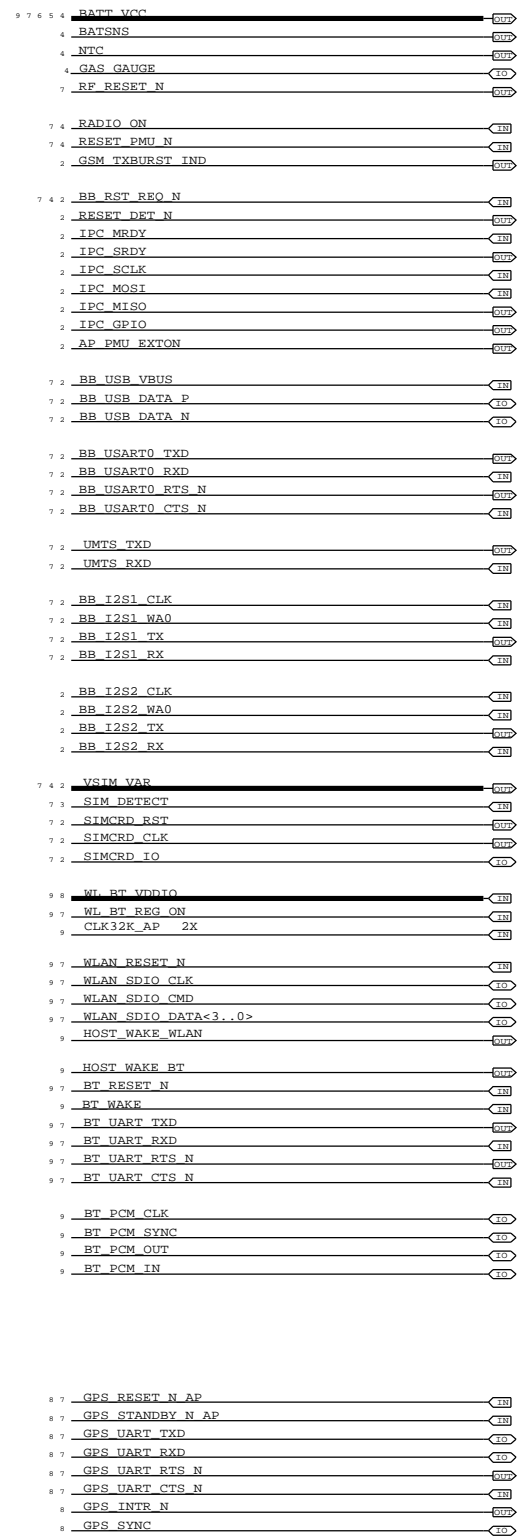


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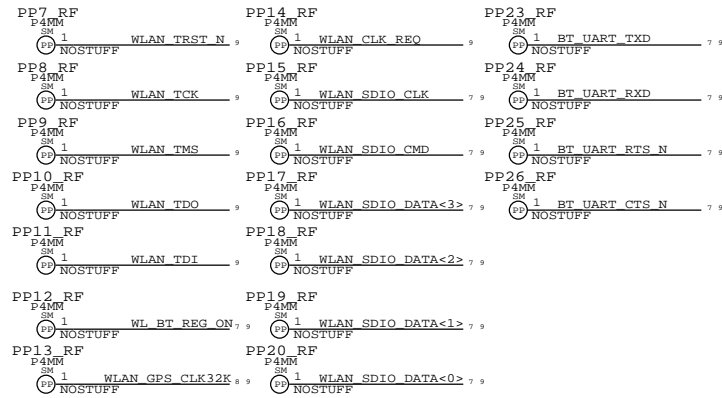
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SYSTEM CONNECTORS

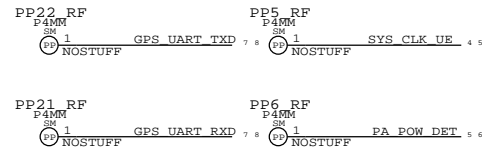
AP CONNECTIONS



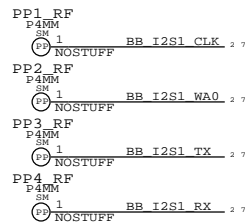
WLAN/BT



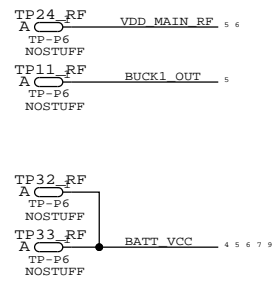
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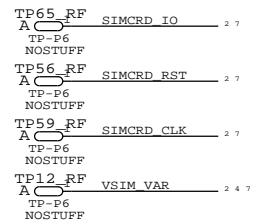
DIGITAL AUDIO



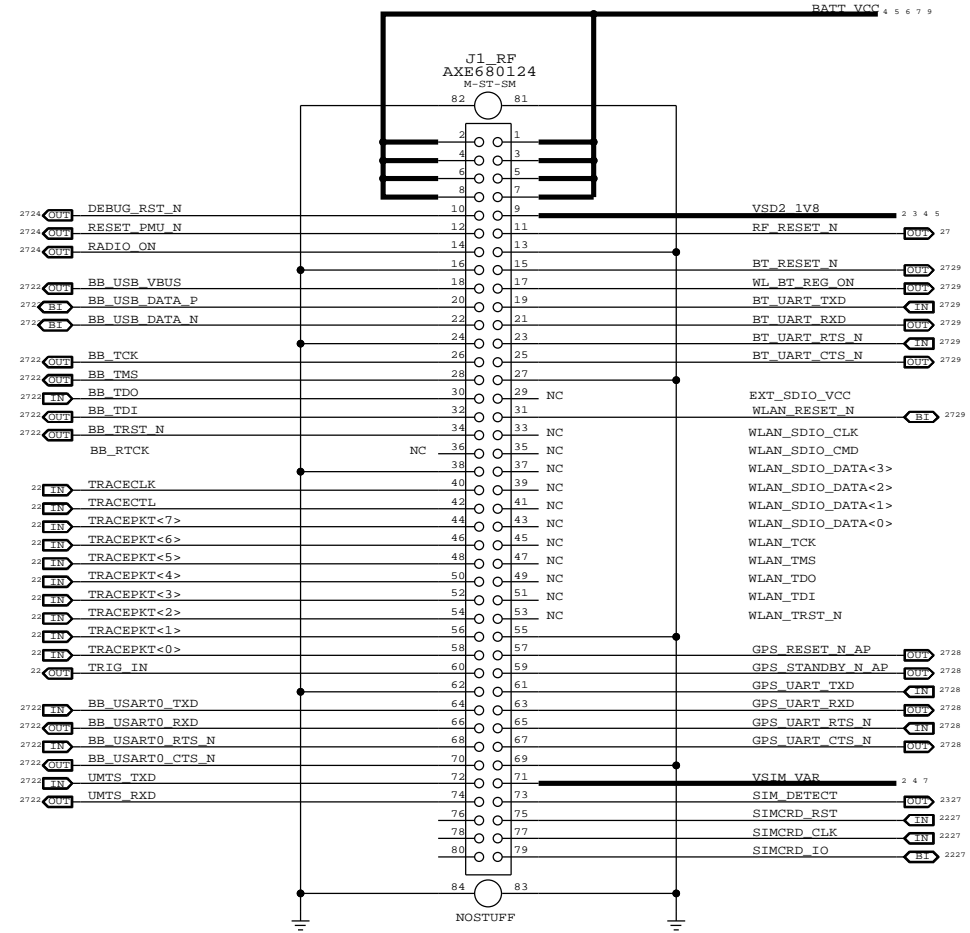
POWER DOMAINS



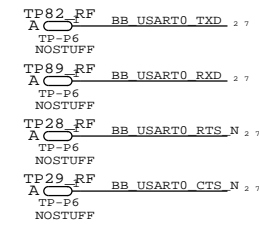
SIM



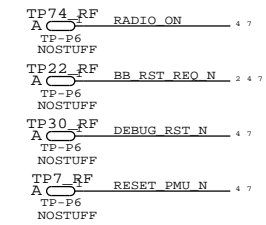
DEBUG CONNECTOR



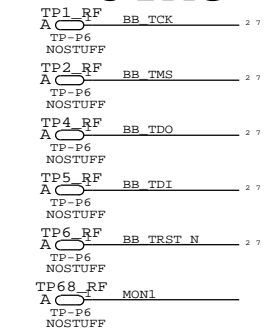
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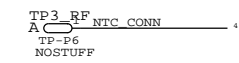
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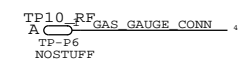
JTAG



NTC

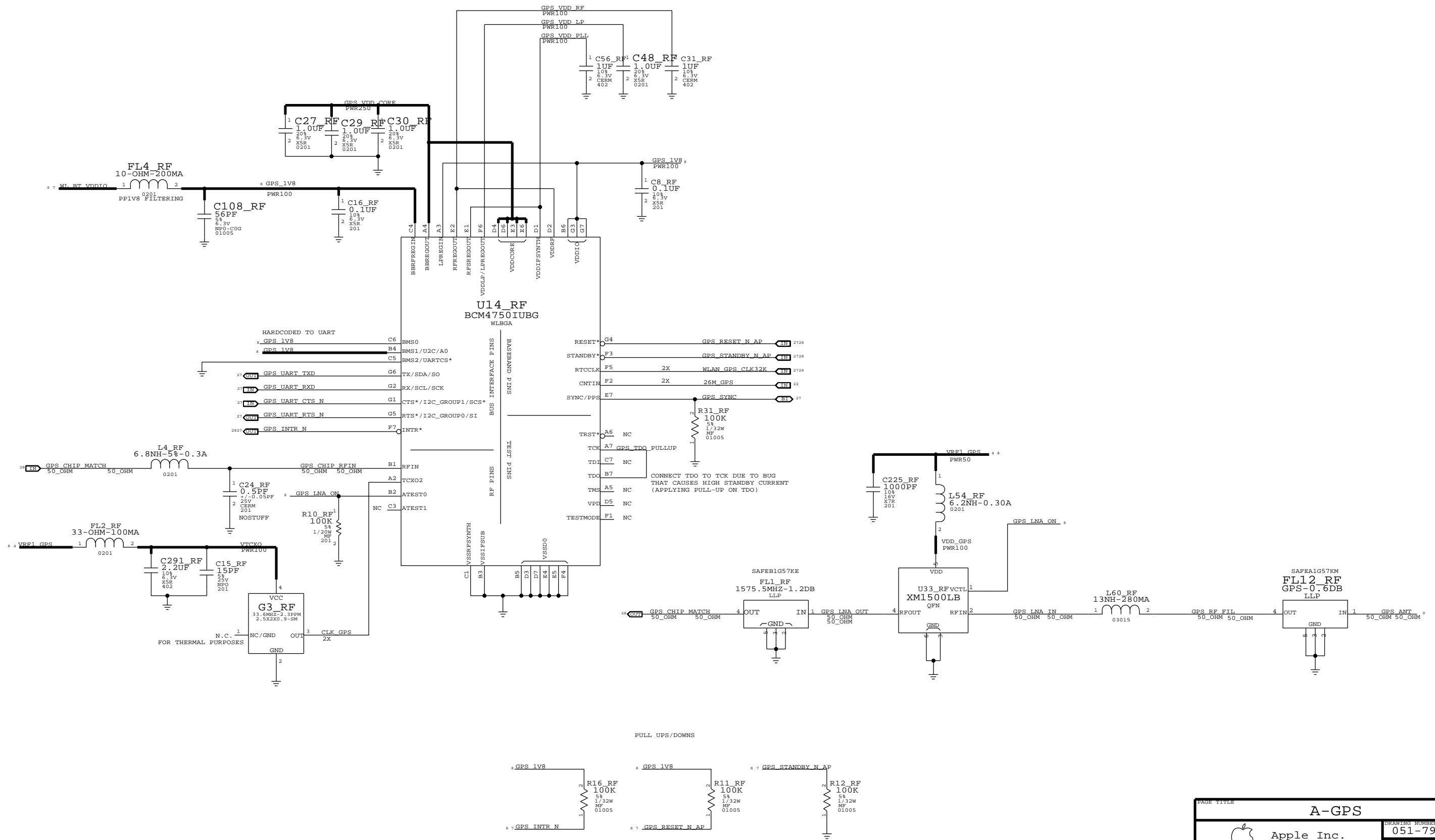


GAS GAUGE



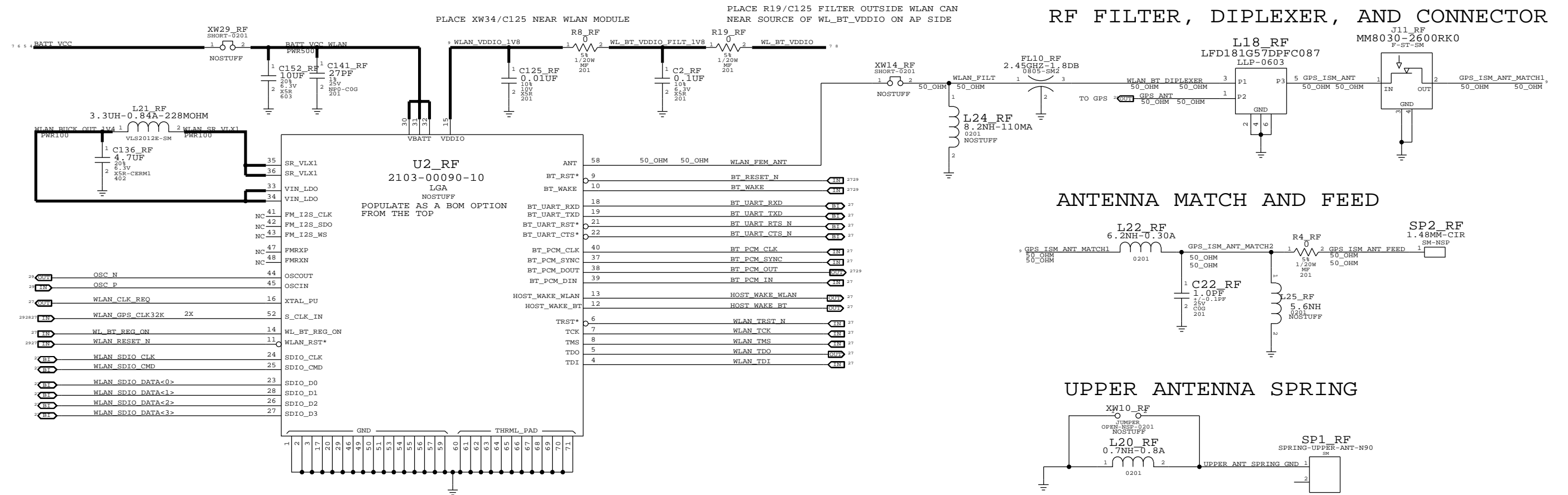
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A-GPS



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WLAN/BLUETOOTH/FM RADIO



RF FILTER, DIPLEXER, AND CONNECTOR

ANTENNA MATCH AND FEED

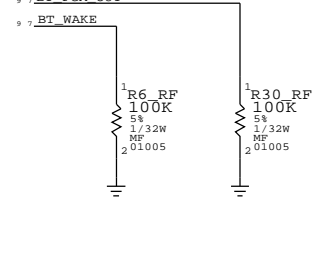
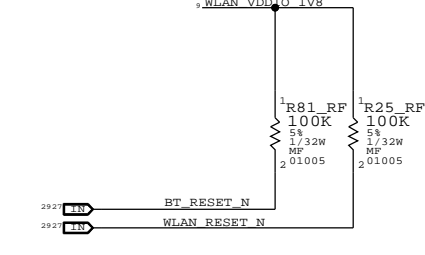
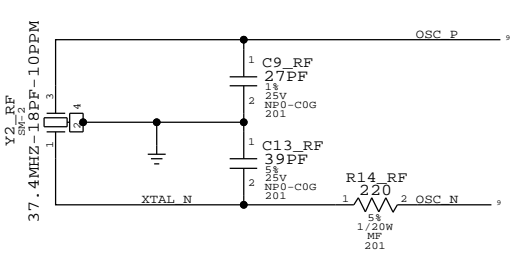
UPPER ANTENNA SPRING

32K INTERFACE TO AP

REFERENCE OSCILLATOR CRYSTAL

PULL UP RESISTORS

PULL DOWN RESISTORS



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