



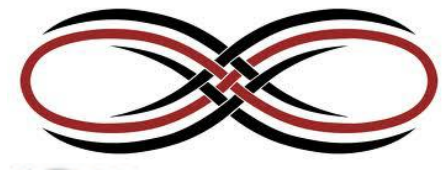
# iPhone 4 S



Special Thanks!  
 130877  
 TRALOL  
 weaver  
 wins200786  
 QueenSoft  
 Mihail\_tm

A1387/A1431 n94ap  
 Professional Schematic  
 Wites OM Tesla

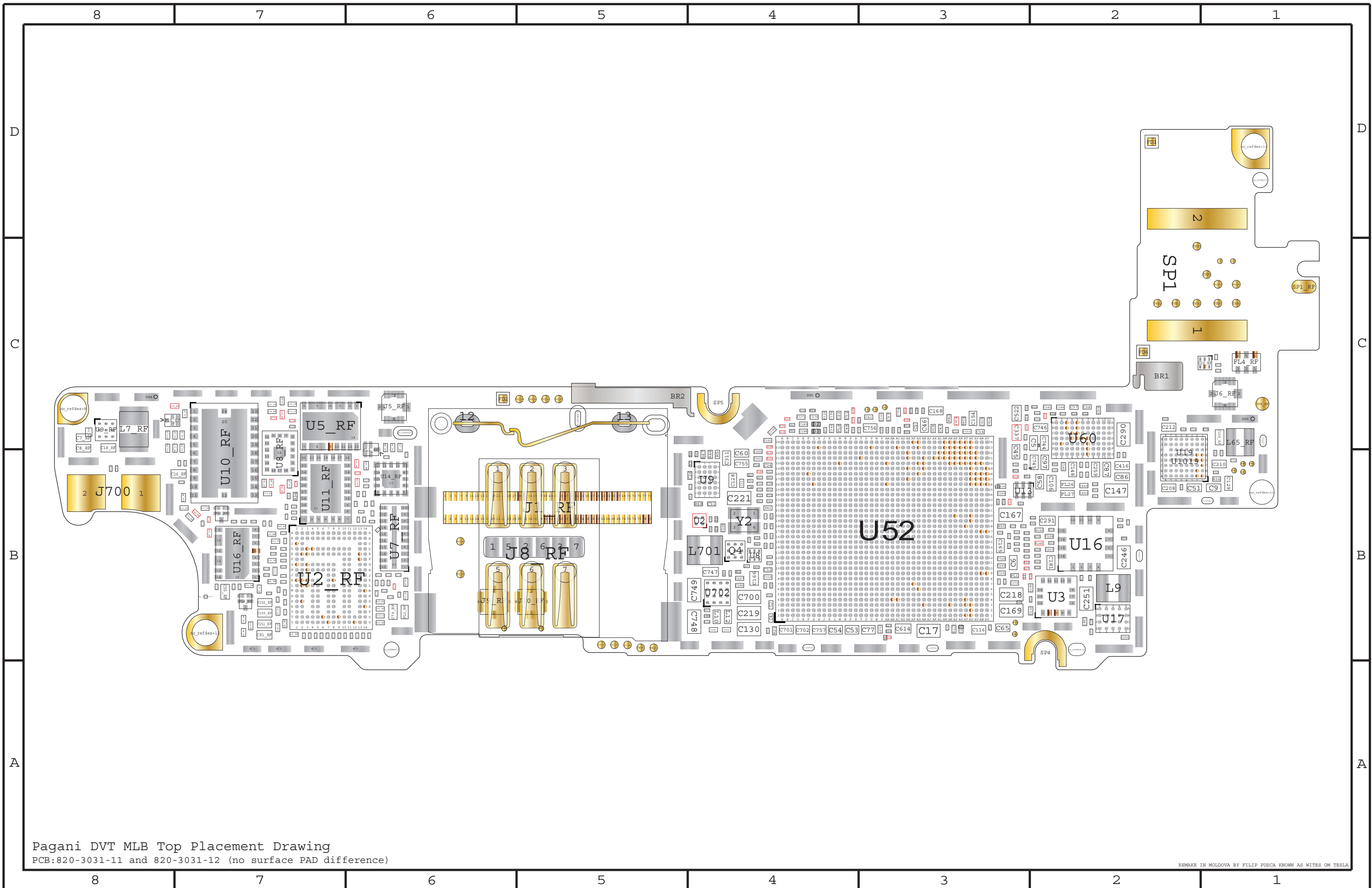
Special Thanks!  
 ...:Neo:...  
 ~AhmedLeO~  
 Gecko UK  
 Mobileinfo  
 Hobson  
 Noobfix  
 DataRus



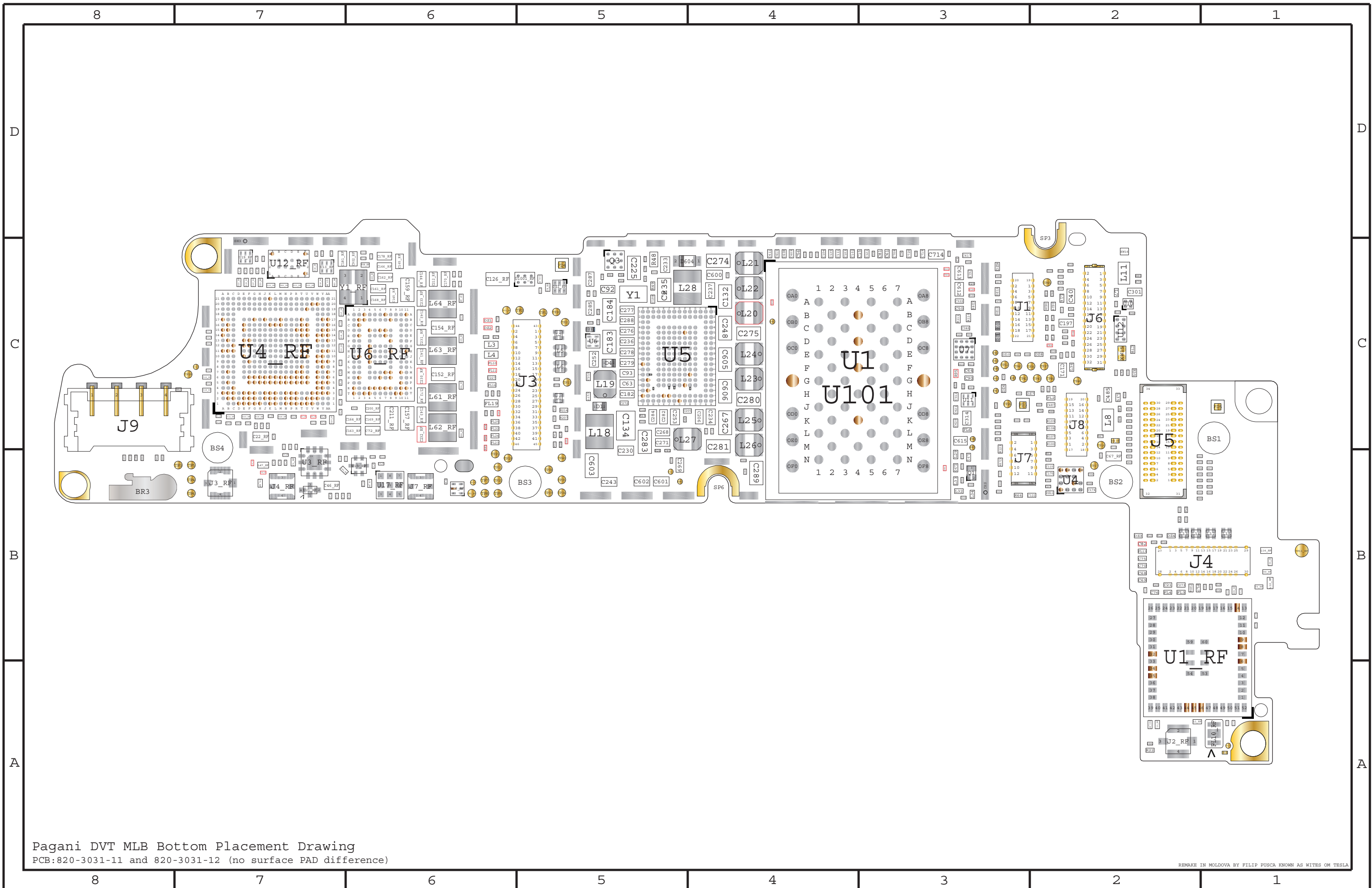
wmid:308096283017

wmz (Z181027884853)

wmr (R347142125623)



Pagani DVT MLB Top Placement Drawing  
PCB:820-3031-11 and 820-3031-12 (no surface PAD difference)



Pagani DVT MLB Bottom Placement Drawing  
 PCB:820-3031-11 and 820-3031-12 (no surface PAD difference)

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.

Tue Jul 5 21:36:16 2011

REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
12	0001170763	ENGINEERING RELEASED		2011-07-05

# N94 POR MLB\_V3 DVT FOR BOARD\_REV11/REV12

PDF PAGE	CSA PAGE	CONTENTS	SYNC MASTER	DATE
1	1	TABLE OF CONTENTS		
2	2	H4P JTAG, USB, PLL		
3	3	H4P GPIO, UART, SPI, I2S, I2C, SDIO		
4	4	H4P SDRAM POWER		
5	5	H4P SOC, CPU, IO POWER		
6	6	H4P NAND&GND, NAND		
7	7	H4P MIPI, CAMERA SENSOR		
8	8	H4P VIDEO OUT, FLEX CONNECTORS		
9	9	L63 AUDIO CODEC		
10	10	HEAD PHONE		
11	11	ANGELINA PMU(1/2)		
12	12	ANGELINA PMU(2/2)		
13	13	ACCEL, GYRO, COMPASS, SPK AMP		
14	14	DOCK CONNECTOR, SPK AMP		
15	15	NIMBUS, LCD		
16	16	FF&MAIN CAMERA, STROBE		
17	17	RF INTERFACE, SHIELD, STANDOFFS		
18	18	TEST POINTS		

## N94 EEEE BOM LABELS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-2029	1	EEEE FOR 639-1723 (16G)	EEEE_DJF1	Y	EEEE_16G_GUC_US
825-2029	1	EEEE FOR 639-1724 (32G)	EEEE_DJF2	Y	EEEE_32G_GUC_US
825-2029	1	EEEE FOR 639-1777 (64G)	EEEE_DR00	Y	EEEE_64G_GUC_US
825-2029	1	EEEE FOR 639-2727 (16G)	EEEE_DQ5M	Y	EEEE_16G_GU_US
825-2029	1	EEEE FOR 639-2728 (32G)	EEEE_DQ5D	Y	EEEE_32G_GU_US
825-2029	1	EEEE FOR 639-2729 (64G)	EEEE_DQ5G	Y	EEEE_64G_GU_US
825-2029	1	EEEE FOR 639-2788 (16G)	EEEE_DR42	Y	EEEE_16G_GU_EU
825-2029	1	EEEE FOR 639-2789 (32G)	EEEE_DR44	Y	EEEE_32G_GU_EU
825-2029	1	EEEE FOR 639-2790 (64G)	EEEE_DR41	Y	EEEE_64G_GU_EU

## N94 SCH & PCB BOM CALLOUT

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-8890	1	N94_MLB_V3 SCHEMATIC	SCH	Y	?
820-3031	1	N94_MLB_V3 PCB	PCB	Y	?

## NAND BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S0781	1	16G, HYNIX 26NM PPN10 TLGA52	U1	Y	NAND_16GB_PPN10
335S0782	1	32G, HYNIX 26NM PPN10 TLGA52	U1	Y	NAND_32GB_PPN10
335S0814	1	64G, HYNIX 26NM PPN10 TLGA52	U1	Y	NAND_64GB_PPN10

## WIFI/BT MODULE BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
339S0143	1	MURATA WIFI_BT MODULE	U1_RF	Y	WIFI_BT_MODULE

## WIFI/BT MODULE ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339S0154	339S0143	WIFI_BT_MODULE	U1_RF	USI WIFI_BT_MODULE
339S0155	339S0143	WIFI_BT_MODULE	U1_RF	SEMCO WIFI_BT_MODULE

## UPPER ANTENNA MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S0318	1	CAP_CER_COG, 1.6PF, +/-0.1PF, 25V, 0201, HQ	C6_RF	Y	UAT_US
152S0562	1	IND, WW, HF, 5.1NH, +/-0.2NH, 470MA, 03015	L12_RF	Y	UAT_US
C66_RF = NOSTUFF					
131S0364	1	CAP_CER, 4.7PF, +/-0.1PF, 25V, COG, 0201, HQ	C86_RF	Y	UAT_US
152S1240	1	IND, WW, HF, 4.3NH, +/-0.2NH, 530MA, 03015	L14_RF	Y	UAT_US
131S0279	1	CAP_CER_COG, 1.3PF, +/-0.1PF, 25V, 0201, HQ	C6_RF	Y	UAT_EU
152S0562	1	IND, WW, HF, 5.1NH, +/-0.2NH, 470MA, 03015	L12_RF	Y	UAT_EU
131S0278	1	CAP_CER_CCOG, HF, 1PF, +/-0.1PF, 25V, 0201, HQ	C66_RF	Y	UAT_EU
131S0449	1	CAP_CER, 3.6PF, +/-0.1PF, 25V, COG, 0201, HQ	C86_RF	Y	UAT_EU
152S1240	1	IND, WW, HF, 4.3NH, +/-0.2NH, 530MA, 03015	L14_RF	Y	UAT_EU

## VIDEO BUFFER ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
343S0539	343S0520		U9	INTERSIL VIDEO BUFFER

## 32KHZ XTAL ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0382	197S0392		Y1	TXC XTAL

## STROBE INDUCTOR ALTERNATE

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

## CHARGER INDUCTOR ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S1051	152S0927		L28	CYNTEC INDUCTOR

SCH 051-8890  
BRD 820-3031  
MCO 056-4257

BOM 639-1723 (16G, GUC, US)  
BOM 639-1724 (32G, GUC, US)  
BOM 639-1777 (64G, GUC, US)  
BOM 639-2727 (16G, GU, US)  
BOM 639-2728 (32G, GU, US)  
BOM 639-2729 (64G, GU, US)  
BOM 639-2788 (16G, GU, EU)  
BOM 639-2789 (32G, GU, EU)  
BOM 639-2790 (64G, GU, EU)

## 4.3UF CAP ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S0702	138S0657			MURATA 4.3UF CAP

## INVERTER GATE ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
311S0549	311S0539		U19_RF	TI INVERTER GATE

## AND GATE ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
311S0548	311S0398		U18_RF, U20_RF	TI 2-INPUT AND GATE

## 19.2MHZ ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0402	197S0340		Y1_RF	NDK 19.2MHZ XTAL

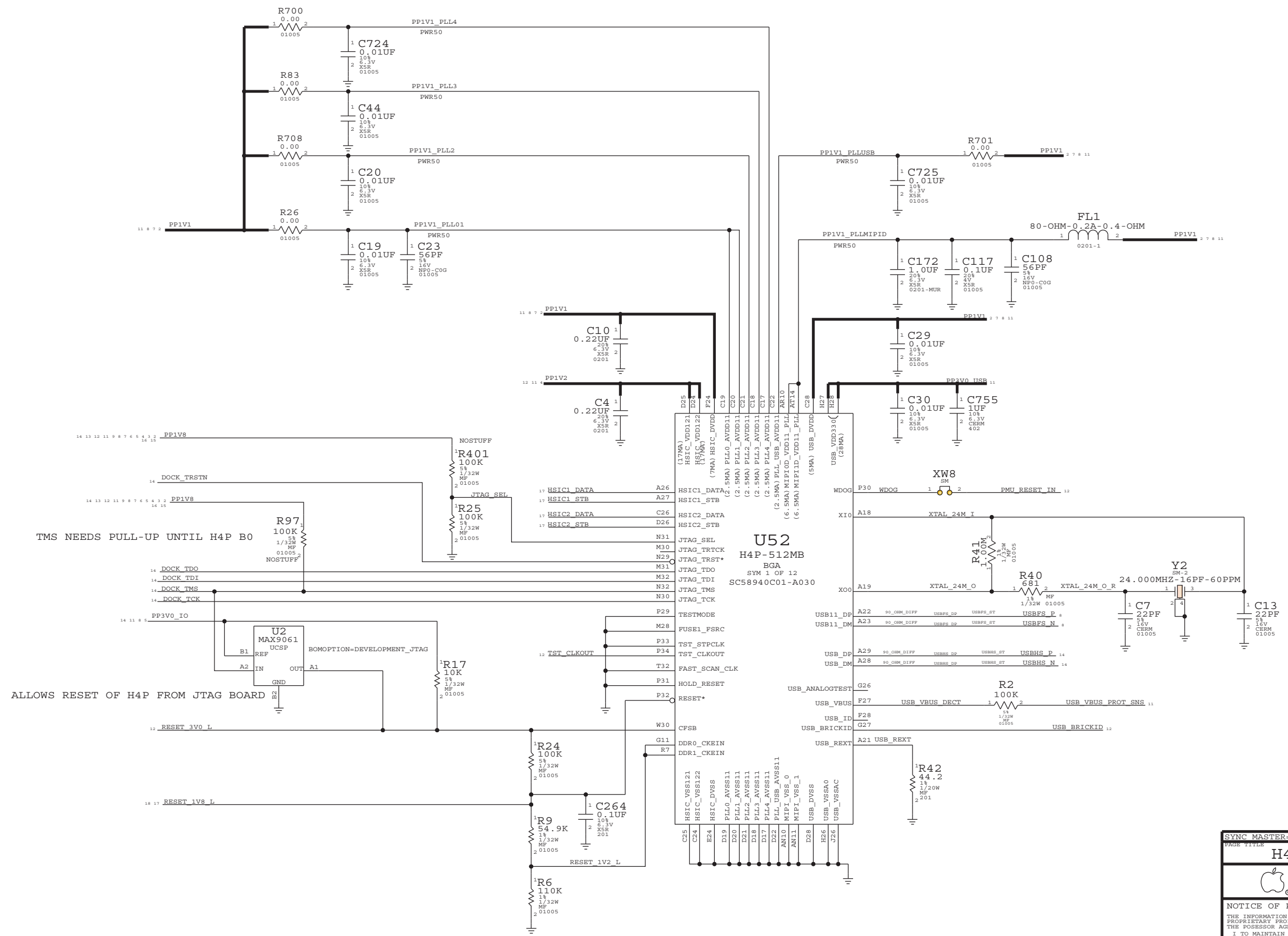
## LEVEL TRANSLATOR ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
311S0562	311S0372		U11	TI LEVEL TRANSLATOR

## THERMISTOR ALTERNATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
107S0208	107S0150		R21, R22, R34, R35	MURATA THERMISTOR

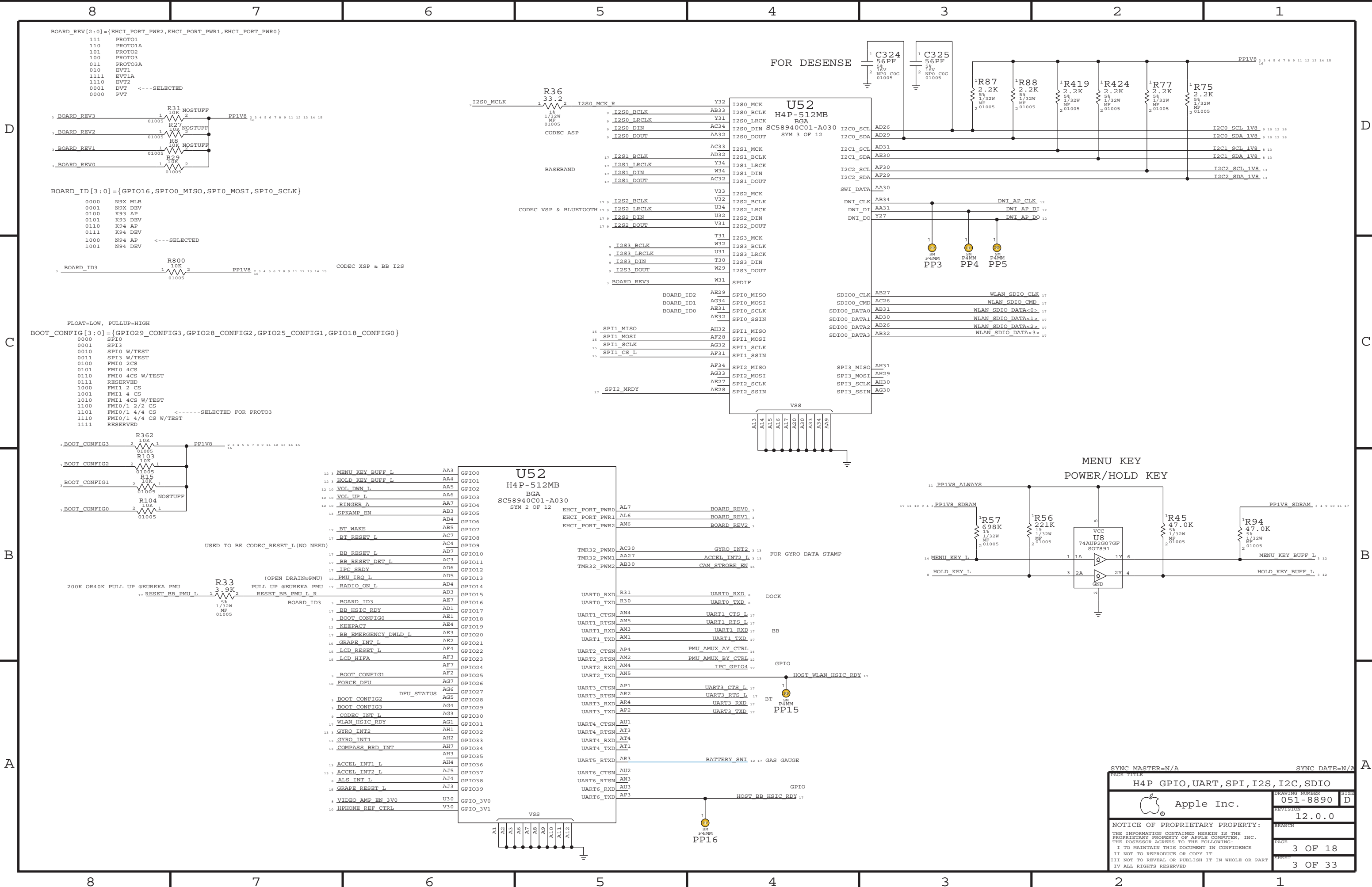
DRAWING TITLE		DRAWING NUMBER		SIZE
N94 MLB_V3		051-8890		D
DRAWING NUMBER		REVISION		
		12.0.0		
NOTICE OF PROPRIETARY PROPERTY:		BRANCH		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		1 OF 18		
II NOT TO REPRODUCE OR COPY IT		SHEET		
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		1 OF 33		
IV ALL RIGHTS RESERVED				



TMS NEEDS PULL-UP UNTIL H4P B0

ALLOWS RESET OF H4P FROM JTAG BOARD

PAGE TITLE		SYNC DATE=N/A	
<b>H4P JTAG, USB, PLL</b>			
Apple Inc.	DRAWING NUMBER	051-8890	SIZE
	REVISION	12.0.0	D
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		2 OF 18	
II NOT TO REPRODUCE OR COPY IT		SHEET	
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		2 OF 33	
IV ALL RIGHTS RESERVED			



```

BOARD_REV[2:0] = {EHCI_PORT_PWR2, EHCI_PORT_PWR1, EHCI_PORT_PWR0}
111  PROTO1
110  PROTO1A
101  PROTO2
100  PROTO3
011  PROTO3A
010  EVT1
1111  EVT1A
1110  EVT2
0001  DVT
0000  PVT
    
```

```

BOARD_ID[3:0] = {GPIO16, SPI0_MISO, SPI0_MOSI, SPI0_SCLK}
0000  N9X MLB
0001  N9X DEV
0100  K93 AP
0101  K93 DEV
0110  K94 AP
0111  K94 DEV
1000  N94 AP
1001  N94 DEV
    
```

```

FLOAT=LOW, PULLUP=HIGH
BOOT_CONFIG[3:0] = {GPIO29_CONFIG3, GPIO28_CONFIG2, GPIO25_CONFIG1, GPIO18_CONFIG0}
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  FM11 2 CS
1001  FM11 4 CS
1010  FM11 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
    
```

12	MENU_KEY_BUFF_L	AA3	GPIO0
12	HOLD_KEY_BUFF_L	AA4	GPIO1
12	VOL_DWN_L	AA5	GPIO2
12	VOL_UP_L	AA6	GPIO3
12	RINGER_A	AA7	GPIO4
13	SPKAMP_EN	AB3	GPIO5
		AB4	GPIO6
17	BT_WAKE	AB5	GPIO7
		AC7	GPIO8
		AC4	GPIO9
17	BB_RESET_L	AD7	GPIO10
17	BB_RESET_DET_L	AC3	GPIO11
17	IPC_SRDY	AD6	GPIO12
		AD5	GPIO13
		AD4	GPIO14
		AD3	GPIO15
3	BOARD_ID3	AE7	GPIO16
17	BB_HSI_C_RDY	AD1	GPIO17
3	BOOT_CONFIG0	AE1	GPIO18
		AE4	GPIO19
17	BB_EMERGENCY_DWLD_L	AE3	GPIO20
15	GRAPE_INT_L	AE2	GPIO21
15	LCD_RESET_L	AF4	GPIO22
15	LCD_HIFA	AF3	GPIO23
		AF7	GPIO24
		AF2	GPIO25
18	BOOT_CONFIG1	AG7	GPIO26
		AG6	GPIO27
		AG5	GPIO28
3	BOOT_CONFIG2	AG4	GPIO29
9	CODEC_INT_L	AG3	GPIO30
17	WLAN_HSI_C_RDY	AG1	GPIO31
13	GYRO_INT2	AH1	GPIO32
13	GYRO_INT1	AH2	GPIO33
13	COMPASS_BRD_INT	AH7	GPIO34
		AH3	GPIO35
		AH4	GPIO36
13	ACCEL_INT1_L	AJ5	GPIO37
13	ACCEL_INT2_L	AJ5	GPIO38
8	ALS_INT_L	AJ4	GPIO39
15	GRAPE_RESET_L	AJ3	GPIO39
8	VIDEO_AMP_EN_3V0	U30	GPIO_3V0
10	HPHONE_REF_CTRL	V30	GPIO_3V1

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

H4P GPIO, UART, SPI, I2S, I2C, SDIO

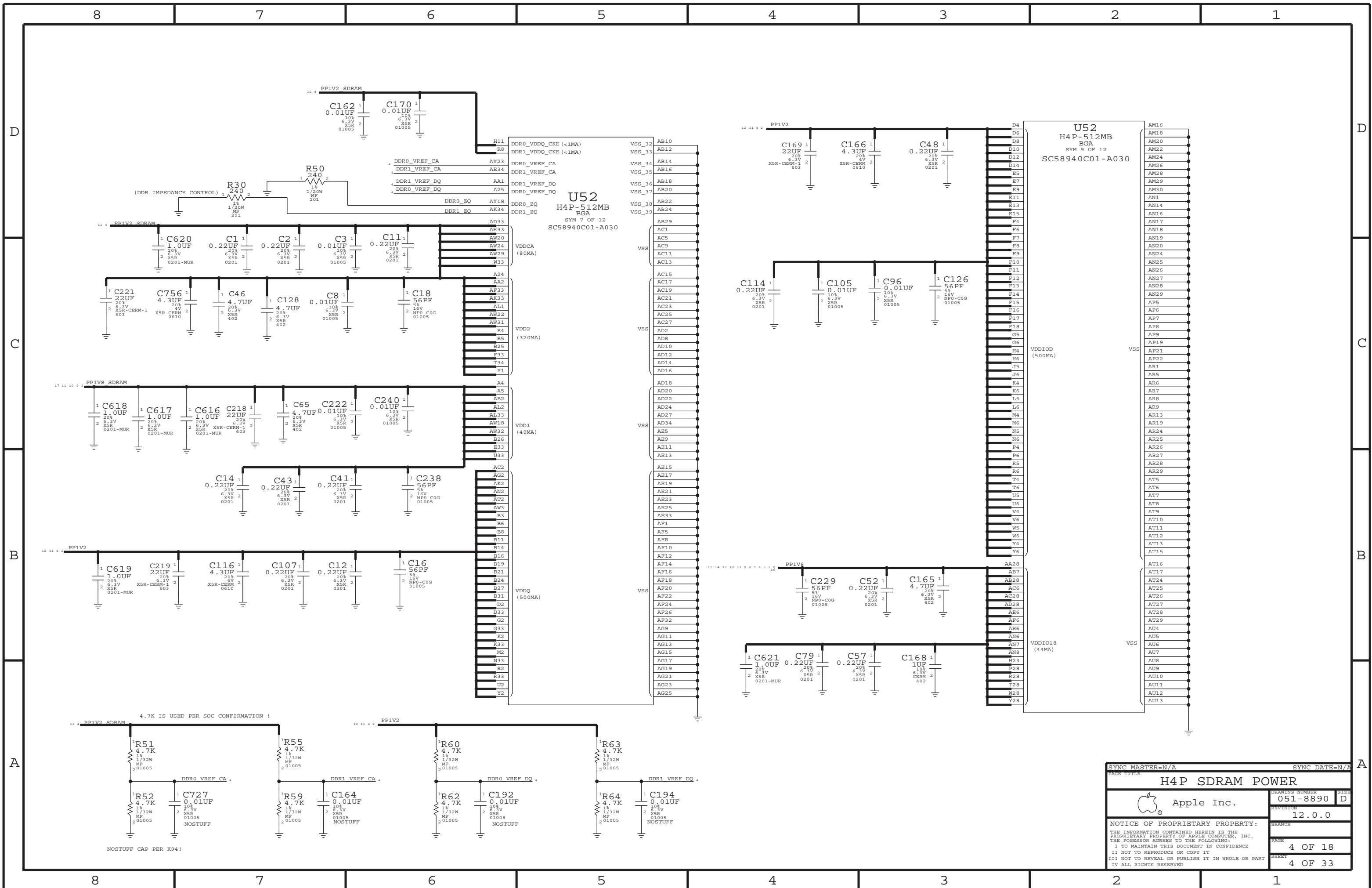
Apple Inc.

DRAWING NUMBER: 051-8890 SIZE: D

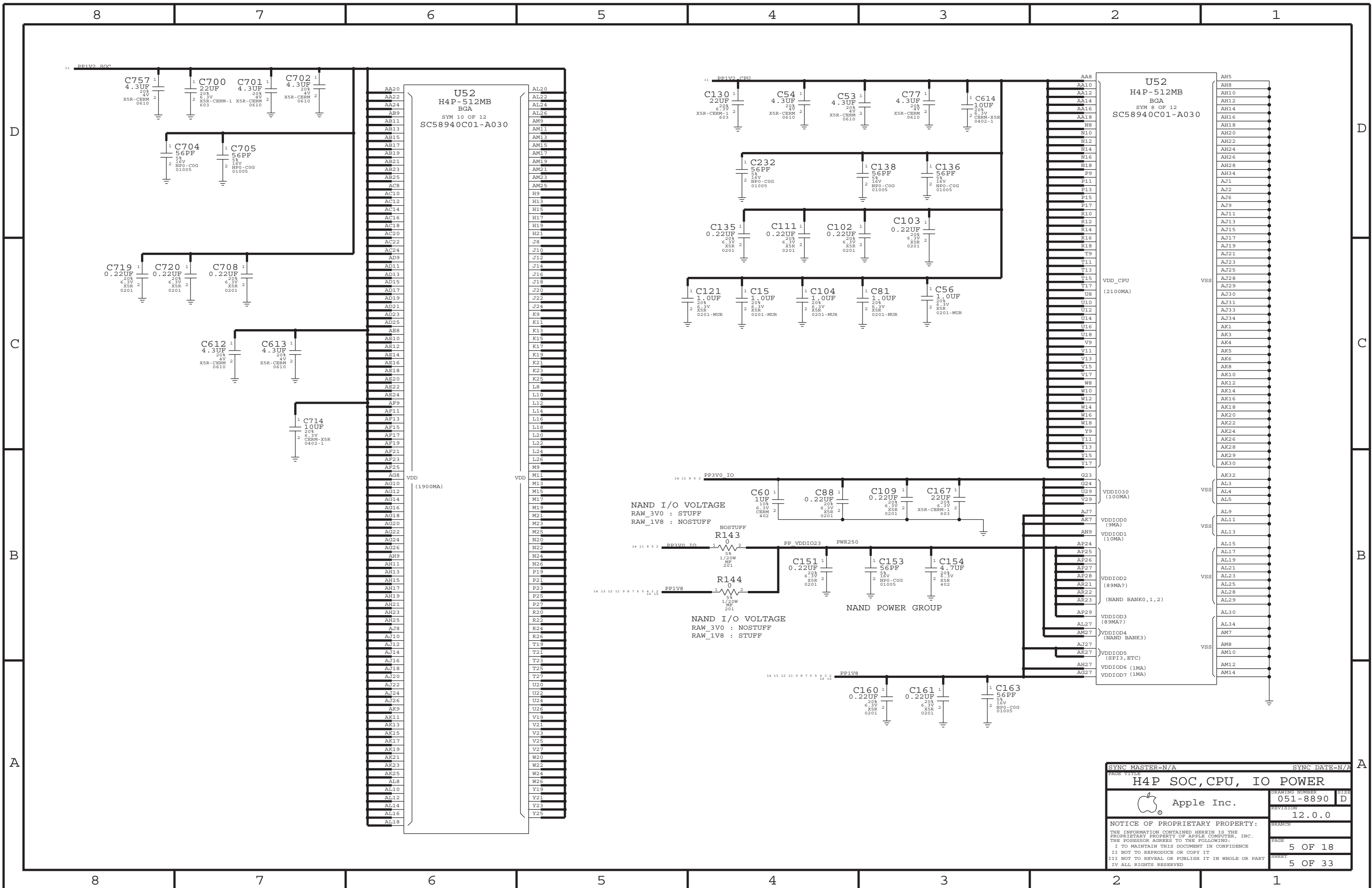
REVISION: 12.0.0

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

PAGE: 3 OF 18 SHEET: 3 OF 33

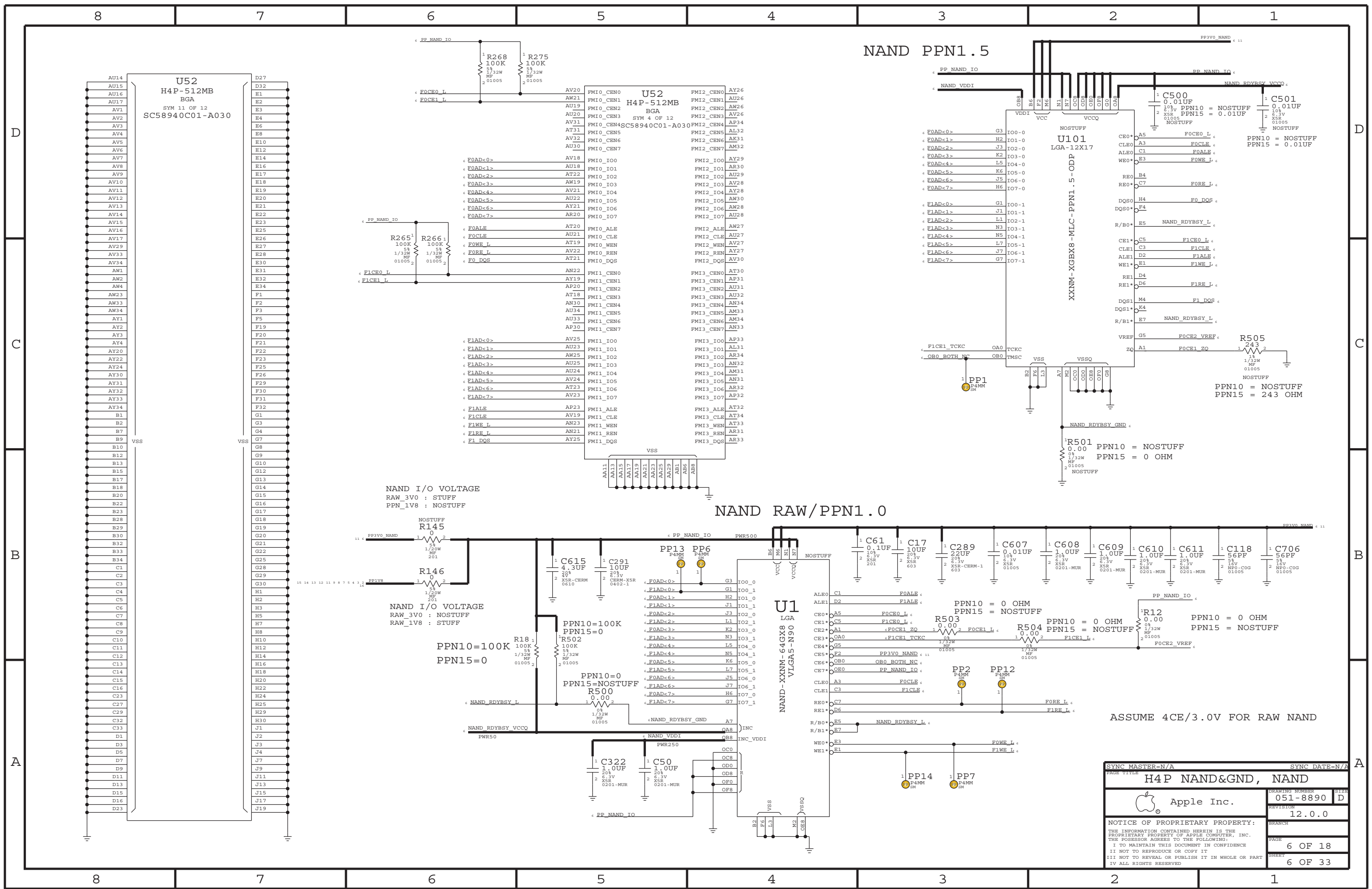


SYNC MASTER=N/A		SYNC DATE=N/A	
<b>H4P SDRAM POWER</b>			
Apple Inc.		DRAWING NUMBER	SIZE
		051-8890	D
		REVISION	
		12.0.0	
NOTICE OF PROPRIETARY PROPERTY:			
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:			
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		BRANCH	
II NOT TO REPRODUCE OR COPY IT		PAGE	4 OF 18
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		SHEET	4 OF 33
IV ALL RIGHTS RESERVED			



PAGE TITLE		SYNC DATE=N/A	
H4P SOC, CPU, IO POWER			
DRAWING NUMBER		SIZE	
051-8890		D	
REVISION		PAGE	
12.0.0		5 OF 18	
NOTICE OF PROPRIETARY PROPERTY:		SHEET	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		5 OF 33	
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE			
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			





NAND I/O VOLTAGE  
 RAW\_3V0 : STUFF  
 PPN\_1V8 : NOSTUFF

NAND I/O VOLTAGE  
 RAW\_3V0 : NOSTUFF  
 RAW\_1V8 : STUFF

PPN10=100K  
 PPN15=0

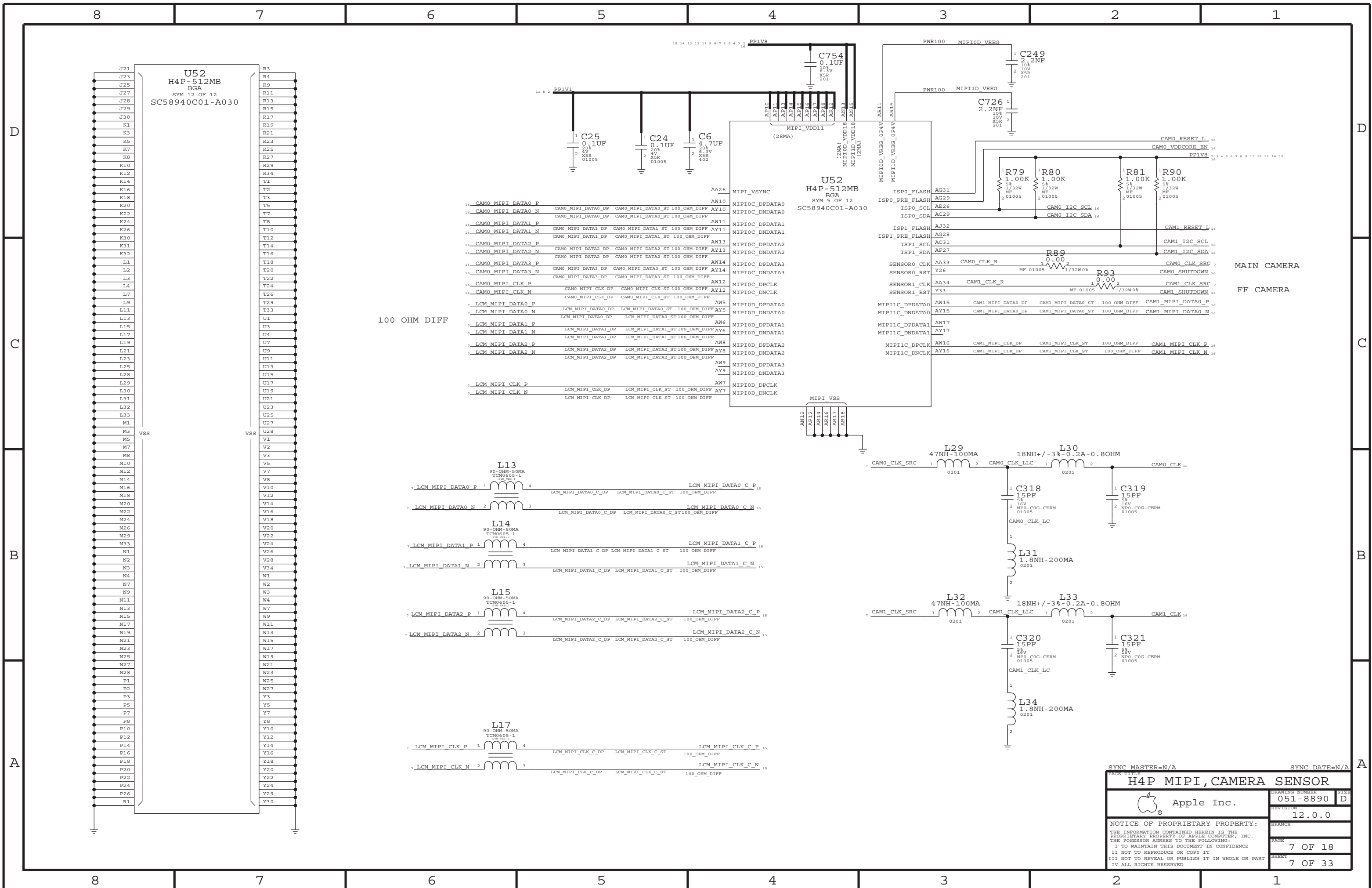
PPN10=100K  
 PPN15=0

PPN10=0  
 PPN15=NOSTUFF

NAND RAW/PPN1.0

ASSUME 4CE/3.0V FOR RAW NAND

PAGE TITLE		SYNC DATE=N/A	
<b>H4 P NAND&amp;GND, NAND</b>			
Apple Inc.		DRAWING NUMBER	051-8890
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		REVISION	12.0.0
		PAGE	6 OF 18
		SHEET	6 OF 33



Pin	Signal	Component	Value
AA26	MIPI_VSYNC		
AW10	MIPI0C_DPDATA0		
AY10	MIPI0C_DNDATA0		
AW11	MIPI0C_DPDATA1		
AY11	MIPI0C_DNDATA1		
AW13	MIPI0C_DPDATA2		
AY13	MIPI0C_DNDATA2		
AW14	MIPI0C_DPDATA3		
AY14	MIPI0C_DNDATA3		
AW12	MIPI0C_DPCLK		
AY12	MIPI0C_DNCLK		
AW5	MIPI0D_DPDATA0		
AY5	MIPI0D_DNDATA0		
AW6	MIPI0D_DPDATA1		
AY6	MIPI0D_DNDATA1		
AW8	MIPI0D_DPDATA2		
AY8	MIPI0D_DNDATA2		
AW9	MIPI0D_DPDATA3		
AY9	MIPI0D_DNDATA3		
AW7	MIPI0D_DPCLK		
AY7	MIPI0D_DNCLK		

Pin	Signal	Component	Value
AW15	CAMO_CLK_SRC	L29	47NH-100MA
AY15	CAMO_CLK_SRC	L30	18NH+/-3%-0.2A-0.8OHM
AW17	CAMO_CLK_SRC	L31	1.8NH-200MA
AY17	CAMO_CLK_SRC	L32	47NH-100MA
AW16	CAMO_CLK_SRC	L33	18NH+/-3%-0.2A-0.8OHM
AY16	CAMO_CLK_SRC	L34	1.8NH-200MA

MAIN CAMERA  
FF CAMERA

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

**H4P MIPI, CAMERA SENSOR**

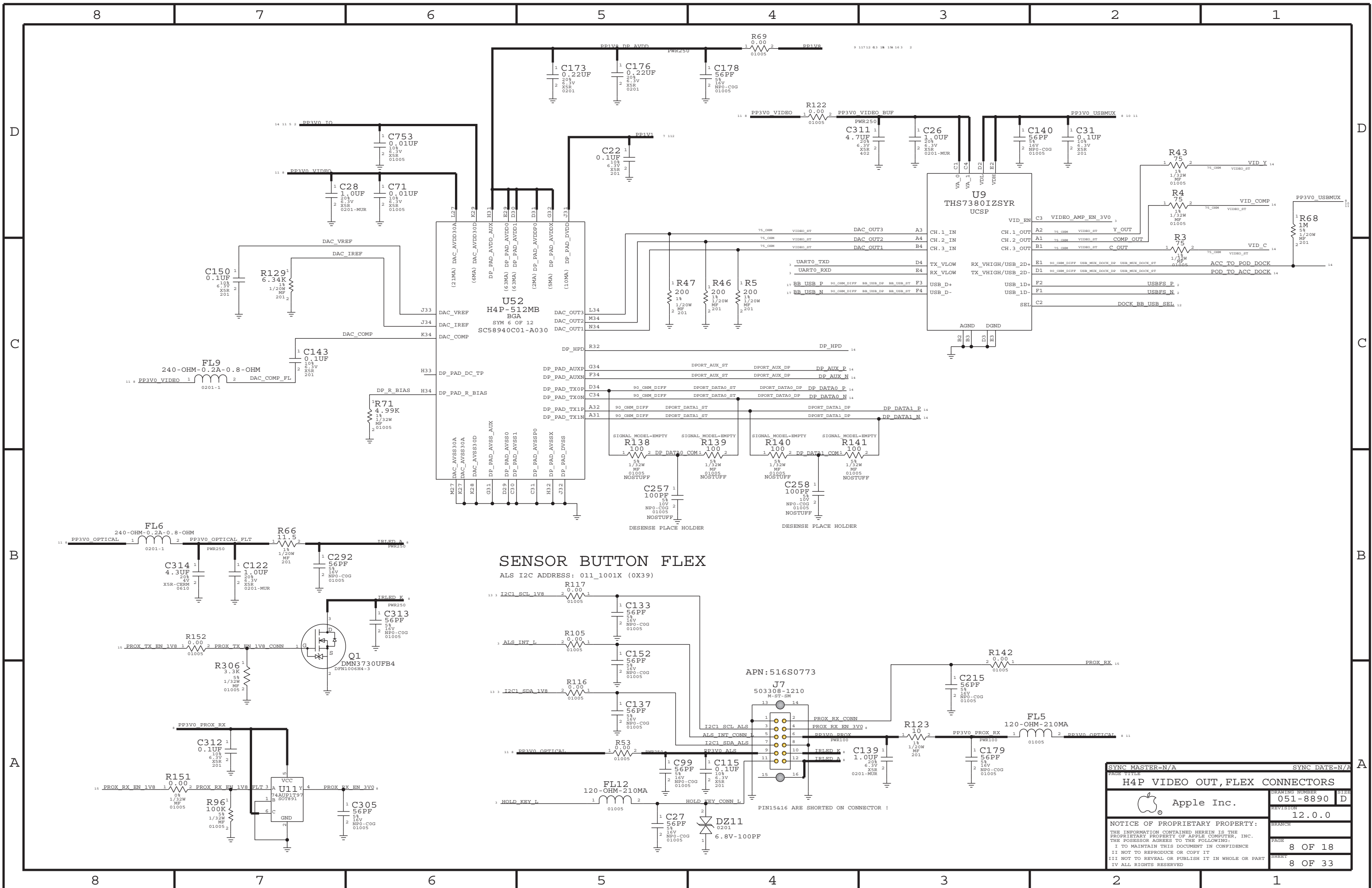
Apple Inc.

DRAWING NUMBER: 051-8890 SIZE: D

REVISION: 12.0.0

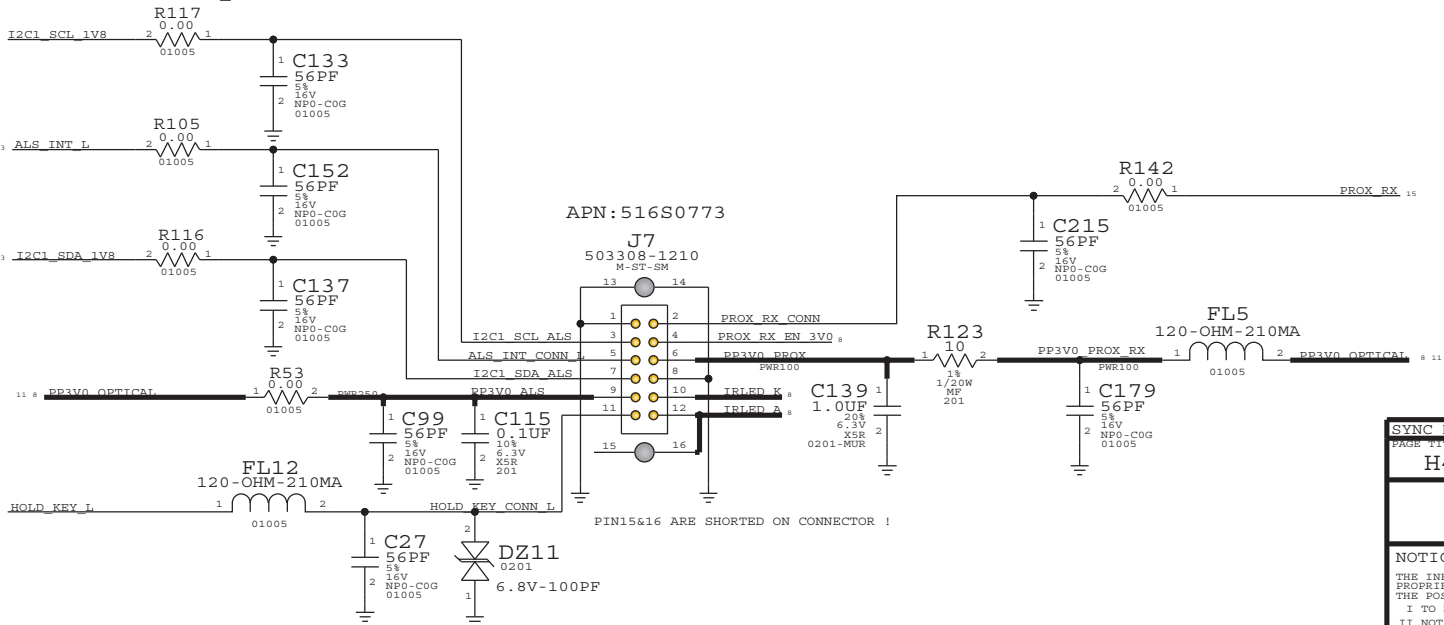
NOTICE OF PROPRIETARY PROPERTY:  
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE  
II NOT TO REPRODUCE OR COPY IT  
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART  
IV ALL RIGHTS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

PAGE: 7 OF 18  
SHEET: 7 OF 33



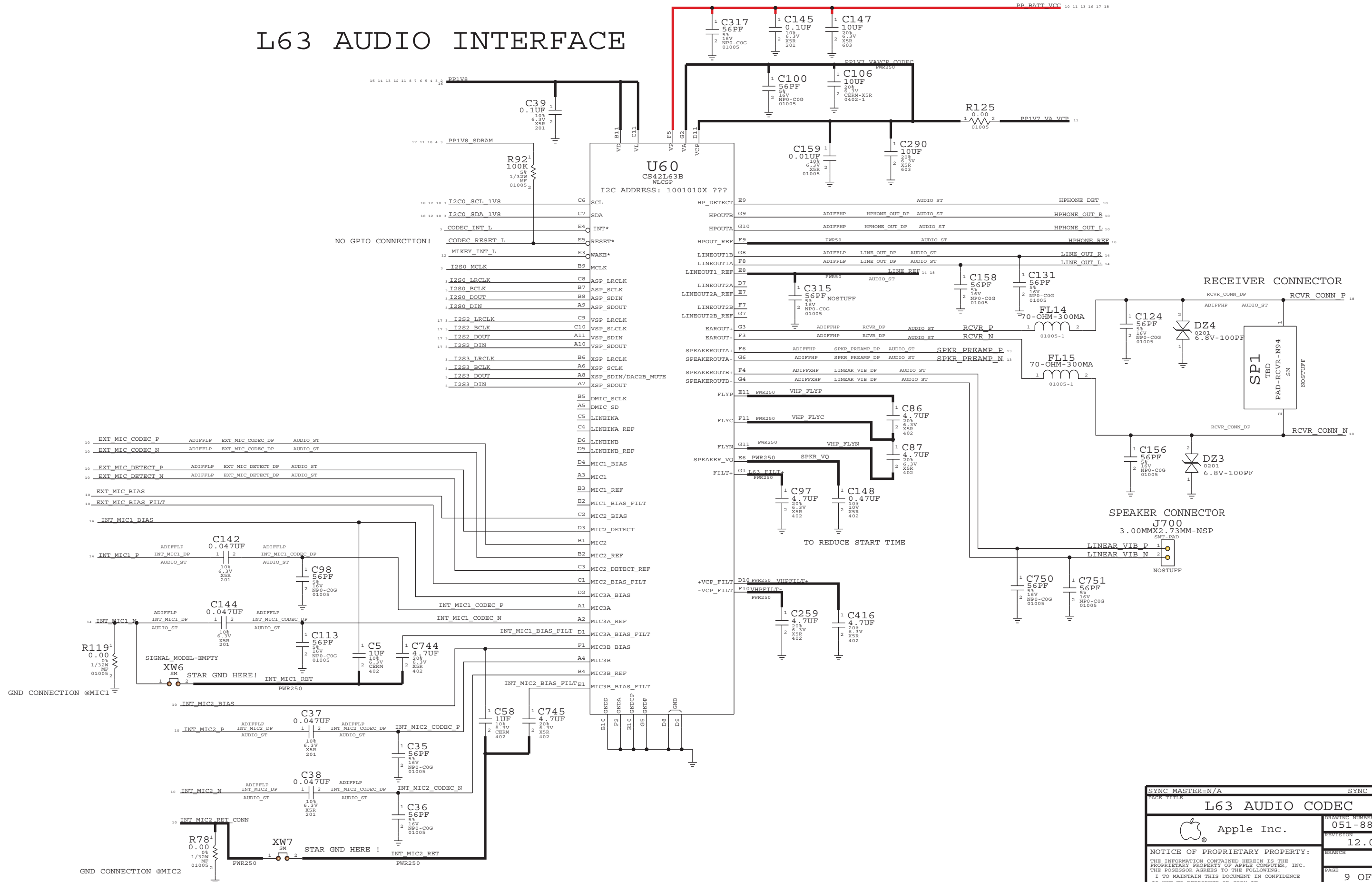
### SENSOR BUTTON FLEX

ALS I2C ADDRESS: 011\_1001X (0X39)

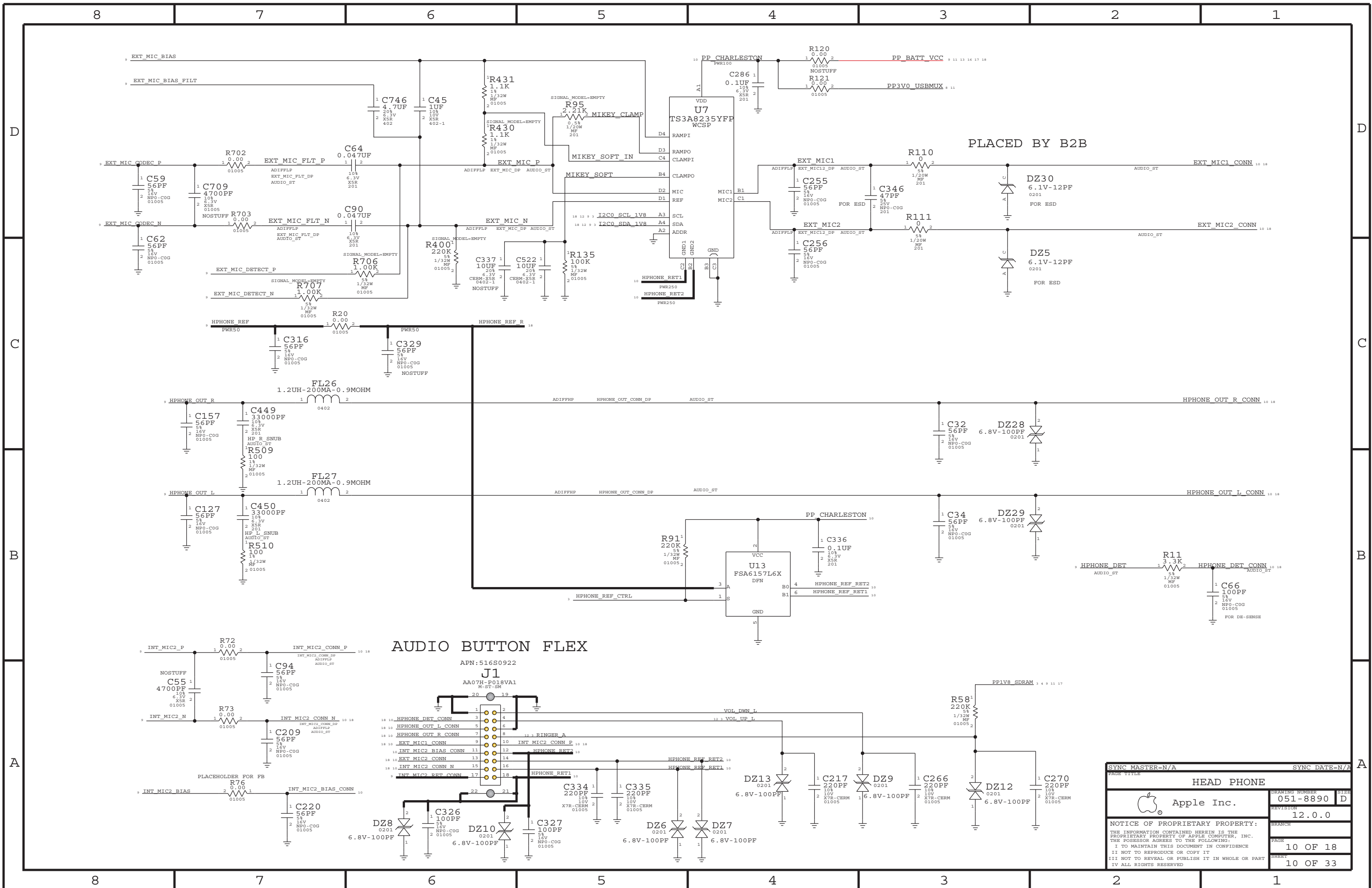


SYNC MASTER=N/A		SYNC DATE=N/A	
<b>H4P VIDEO OUT, FLEX CONNECTORS</b>			
Apple Inc.		DRAWING NUMBER	051-8890
		REVISION	12.0.0
		BRANCH	
		PAGE	8 OF 18
		SHEET	8 OF 33
<small>NOTICE OF PROPRIETARY PROPERTY:          THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:          I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE          II NOT TO REPRODUCE OR COPY IT          III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART          IV ALL RIGHTS RESERVED</small>			

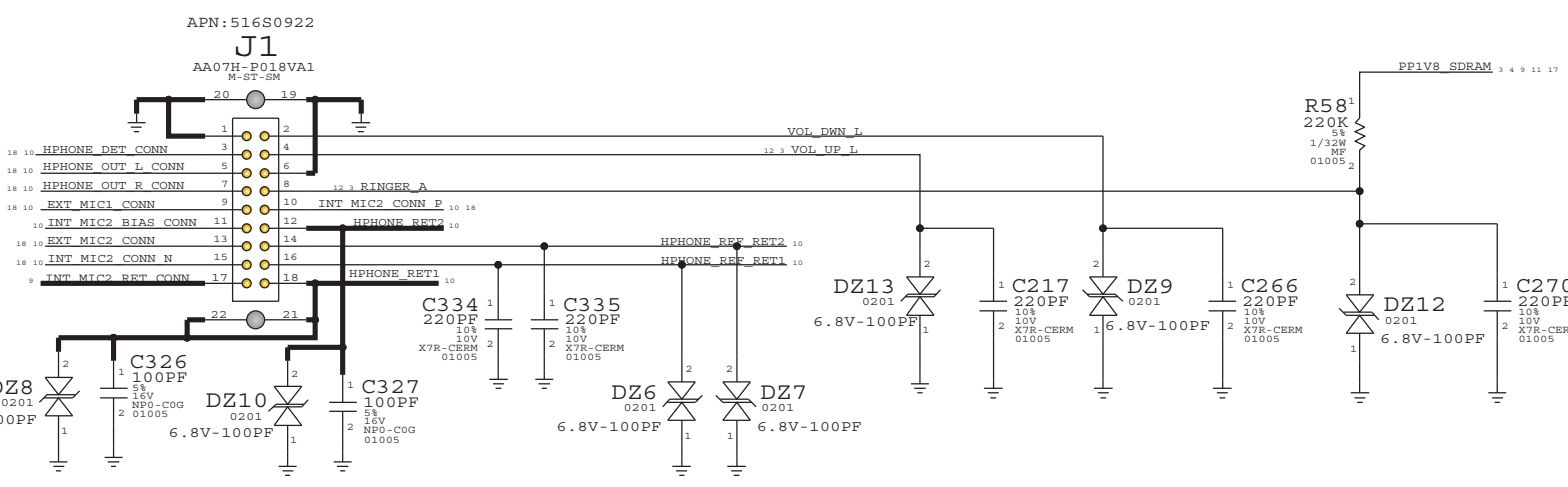
# L63 AUDIO INTERFACE



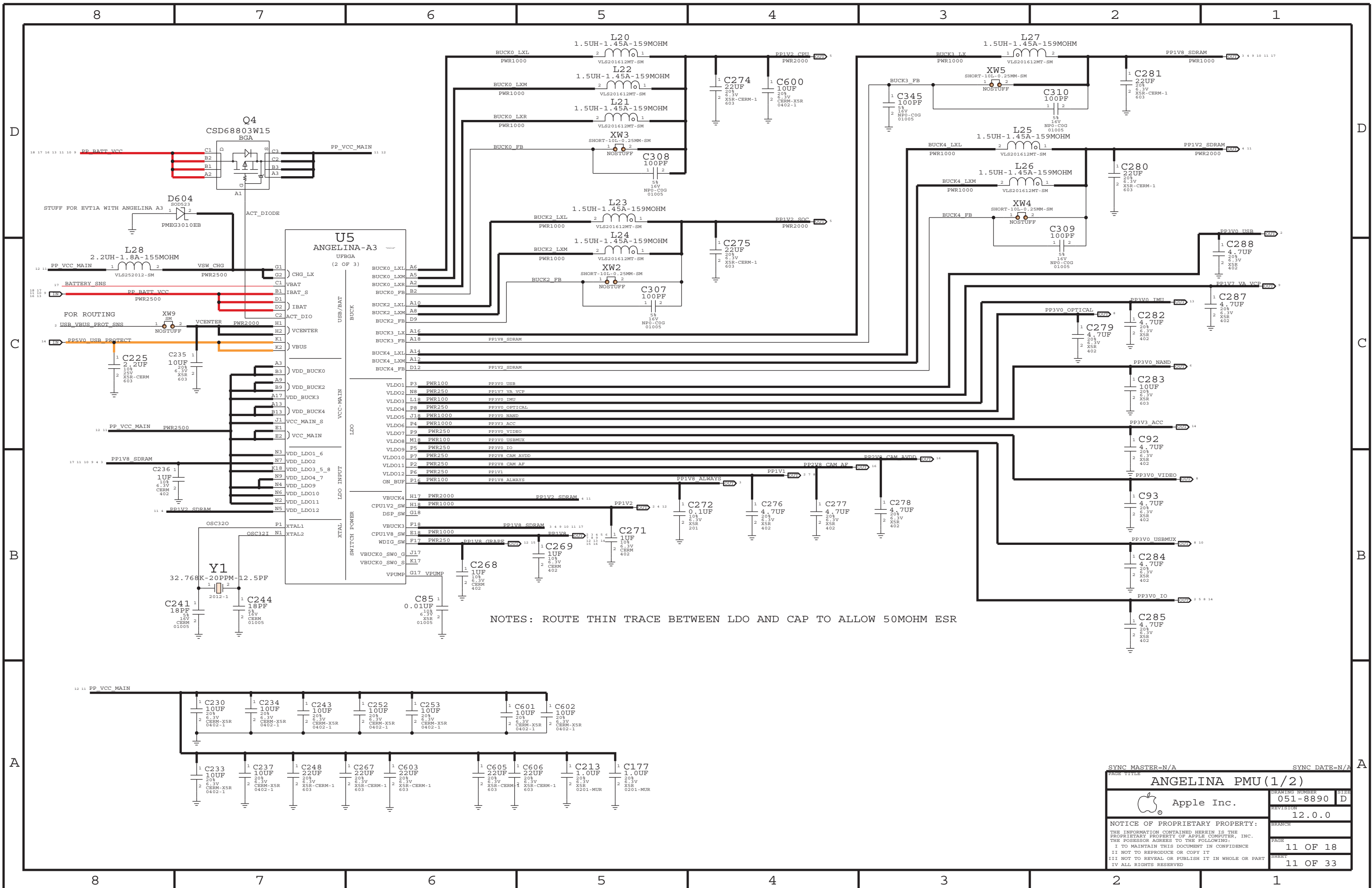
PAGE TITLE		SYNC DATE=N/A	
<b>L63 AUDIO CODEC</b>			
Apple Inc.		DRAWING NUMBER	051-8890
		REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	9 OF 18
		SHEET	9 OF 33



**AUDIO BUTTON FLEX**

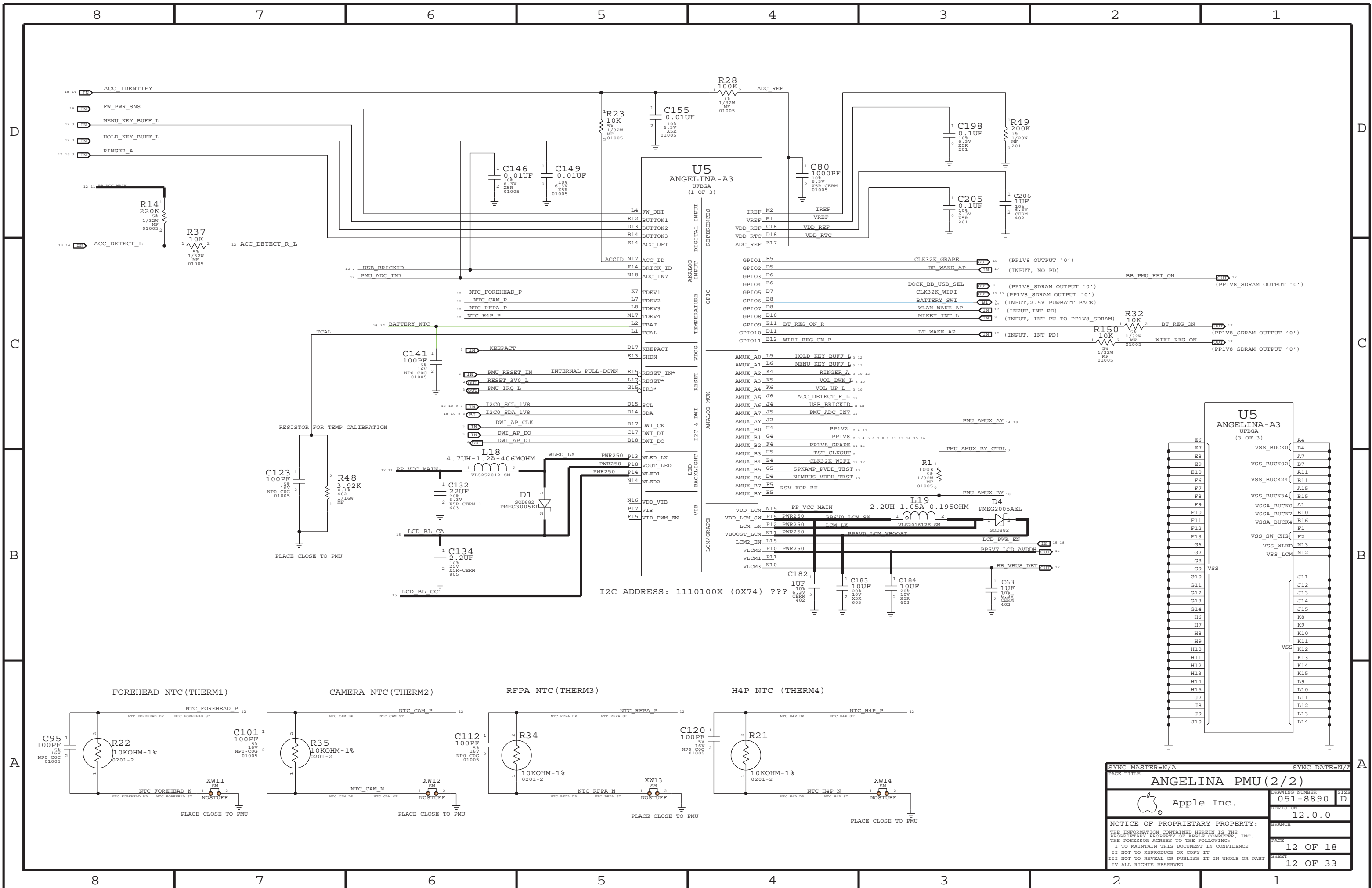


SYNC MASTER=N/A		SYNC DATE=N/A	
<b>HEAD PHONE</b>			
Apple Inc.		DRAWING NUMBER	SIZE
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		051-8890	D
		REVISION	
PAGE		10 OF 18	
SHEET		10 OF 33	



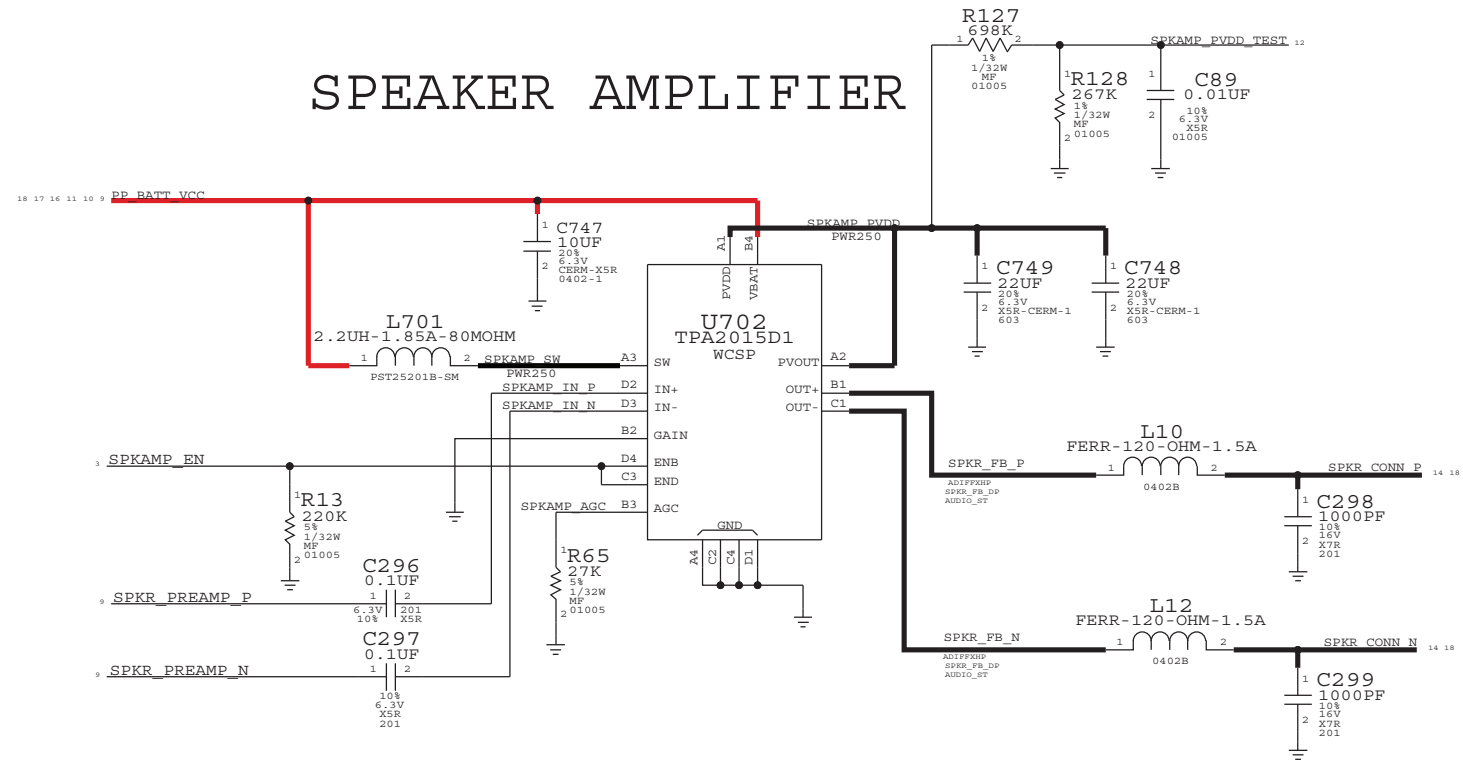
NOTES: ROUTE THIN TRACE BETWEEN LDO AND CAP TO ALLOW 50MOHM ESR

PAGE TITLE		SYNC DATE=N/A	
<b>ANGELINA PMU (1/2)</b>			
Apple Inc.		DRAWING NUMBER	SIZE
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		051-8890	D
		REVISION	
		BRANCH	
		PAGE	11 OF 18
		SHEET	11 OF 33

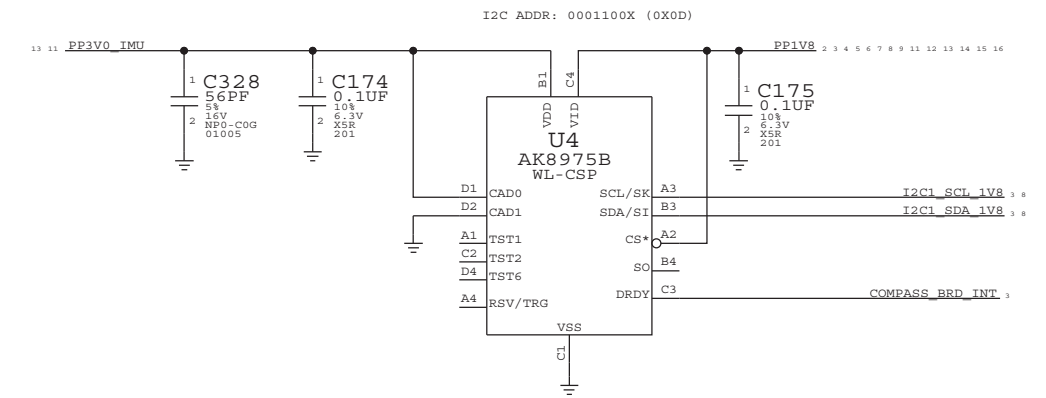


SYNC MASTER=N/A		SYNC DATE=N/A	
<b>ANGELINA PMU (2/2)</b>			
Apple Inc.		DRAWING NUMBER	051-8890
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		REVISION	12.0.0
		PAGE	12 OF 18
		SHEET	12 OF 33

# SPEAKER AMPLIFIER

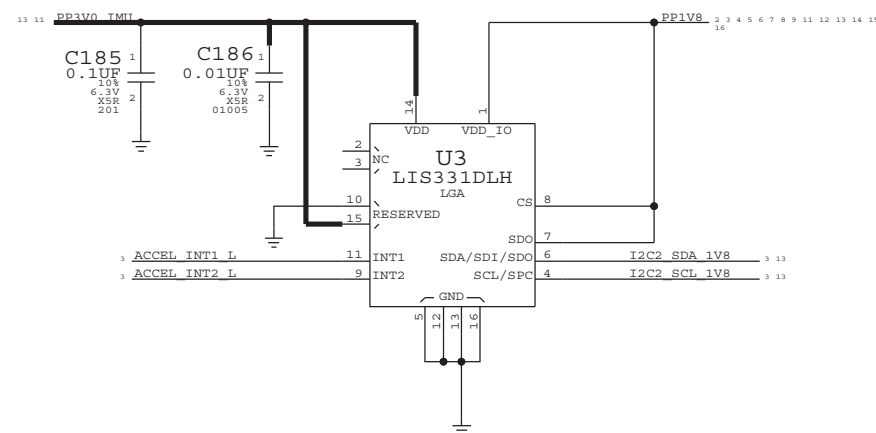


# COMPASS OPTION1



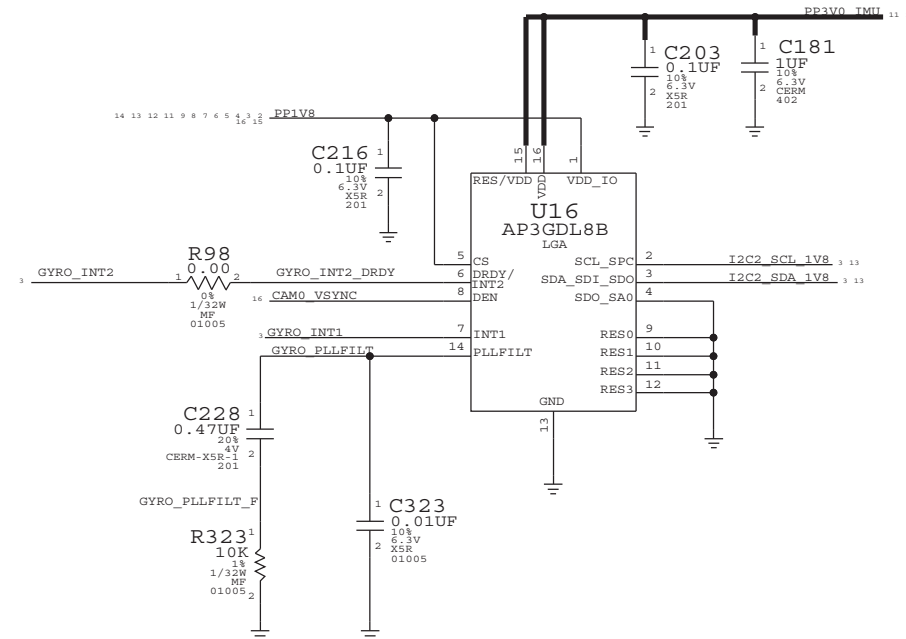
# ACCELEROMETER

I2C ADDRESS: 0011101X (0X1D)



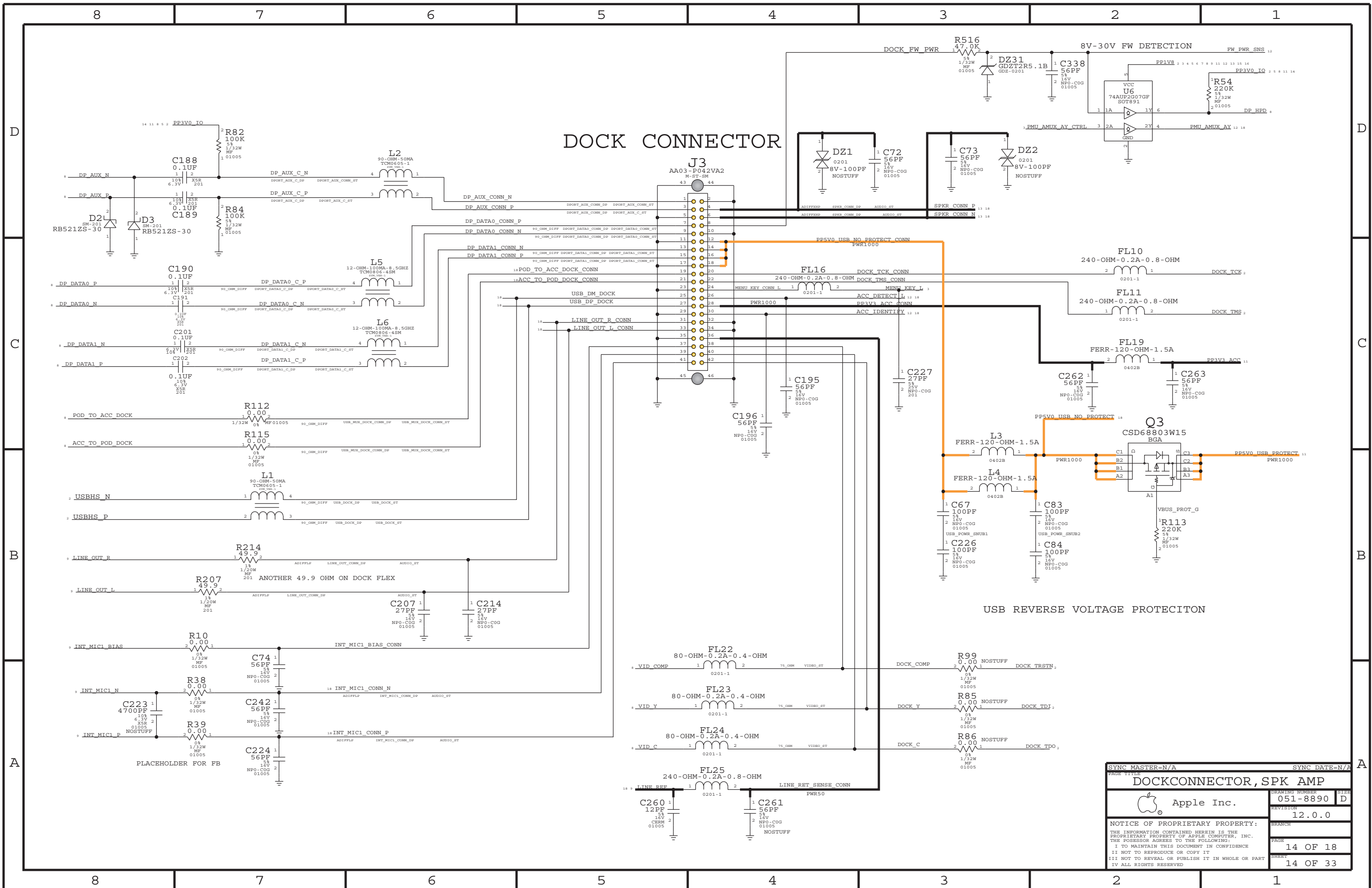
# GYRO 8KHZ

I2C ADDRESS: 0XD0



PAGE TITLE		SYNC DATE=N/A	
ACCEL, GYRO, COMPASS, SPK AMP			
DRAWING NUMBER		051-8890	SIZE D
REVISION		12.0.0	
NOTICE OF PROPRIETARY PROPERTY:			
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:			
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE			
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			
BRANCH		PAGE	
		13 OF 18	
SHEET		13 OF 33	

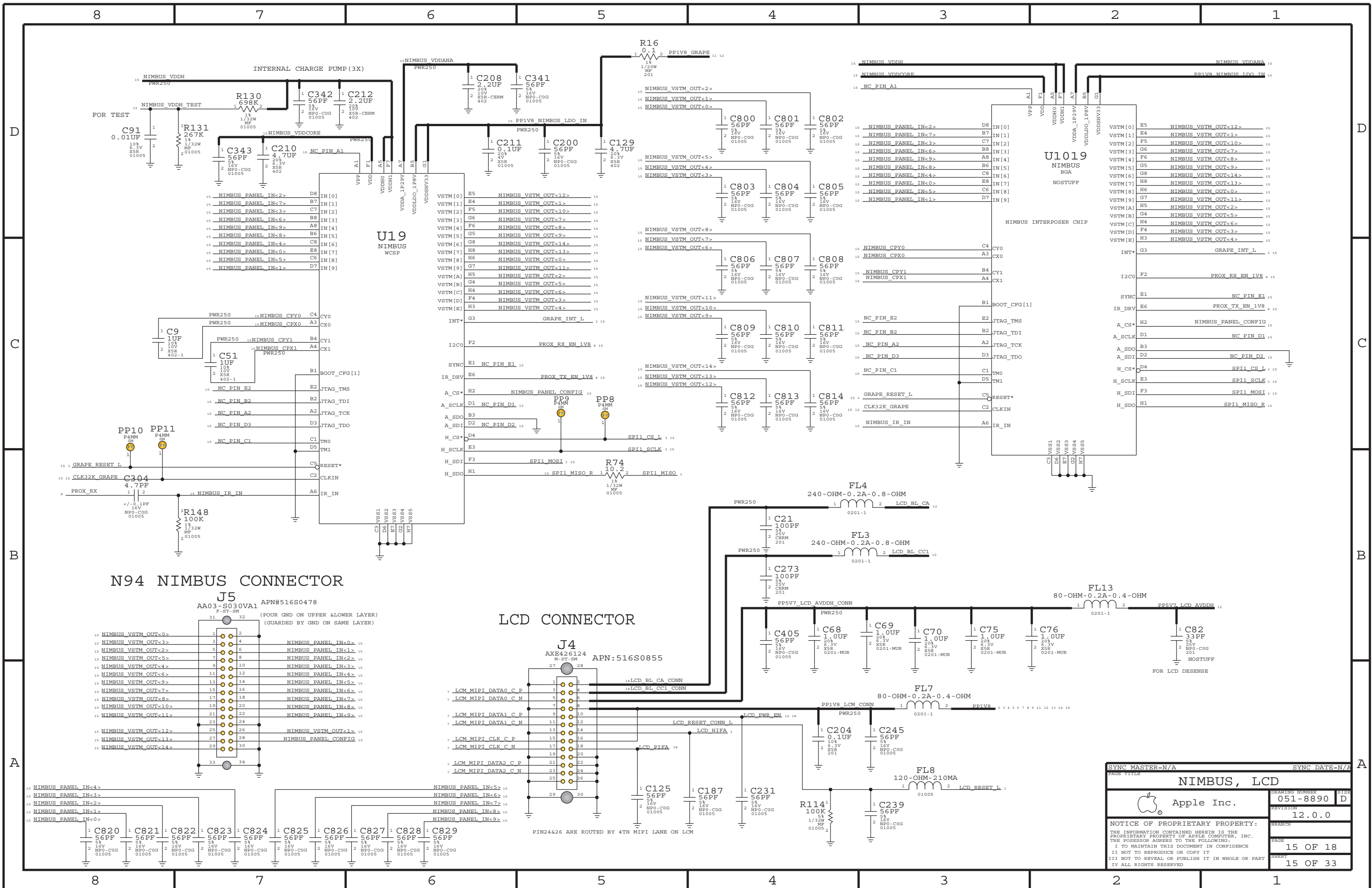




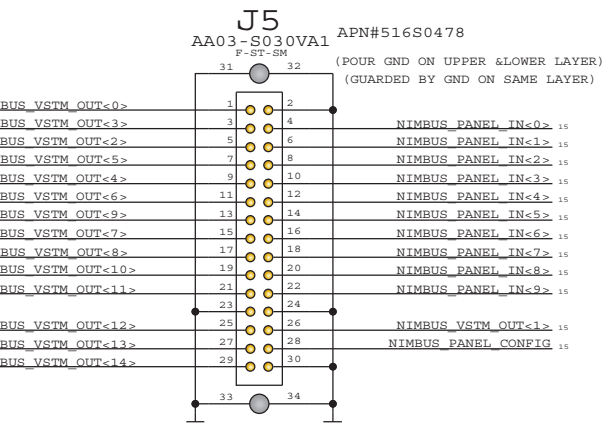
# DOCK CONNECTOR

## USB REVERSE VOLTAGE PROTECTITON

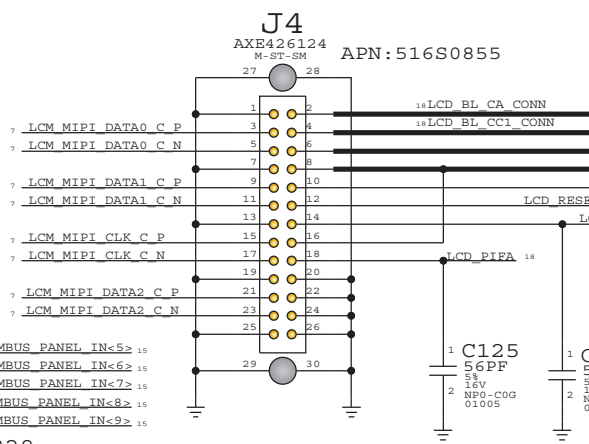
PAGE TITLE		SYNC DATE=N/A	
<b>DOCKCONNECTOR, SPK AMP</b>			
Apple Inc.		DRAWING NUMBER	051-8890
		REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	14 OF 18
		SHEET	14 OF 33
		SIZE	D



**N94 NIMBUS CONNECTOR**

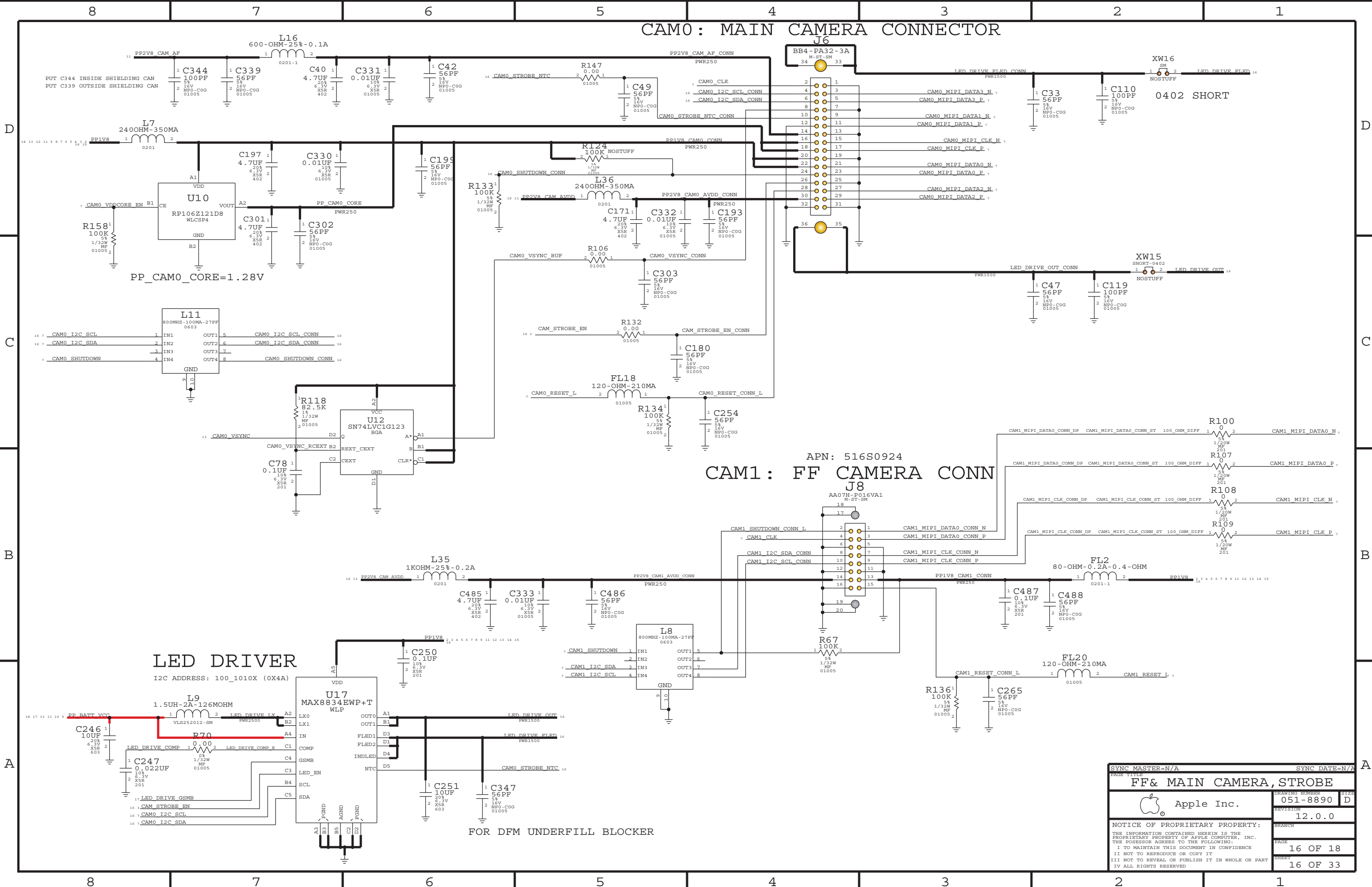


**LCD CONNECTOR**



PAGE TITLE		SYNC DATE=N/A	
<b>NIMBUS, LCD</b>			
Apple Inc.		DRAWING NUMBER	SIZE
		051-8890	D
		REVISION	
		12.0.0	
		BRANCH	
		PAGE	15 OF 18
		SHEET	15 OF 33
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED			

# CAMO: MAIN CAMERA CONNECTOR



## CAM1: FF CAMERA CONN

APN: 516S0924

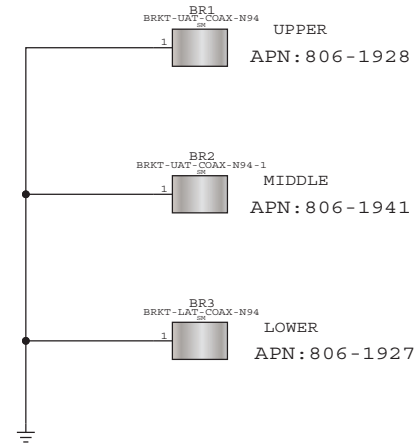
## LED DRIVER

I2C ADDRESS: 100\_1010X (0X4A)

FOR DFM UNDERFILL BLOCKER

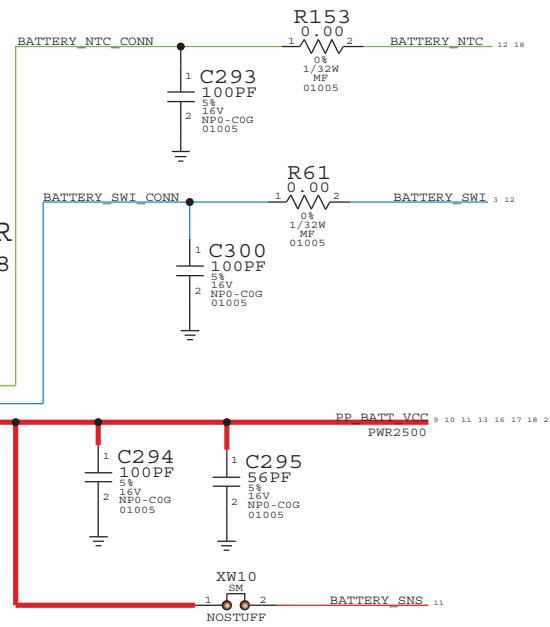
PAGE TITLE		SYNC DATE=N/A	
<b>FF &amp; MAIN CAMERA, STROBE</b>			
Apple Inc.		DRAWING NUMBER	SIZE
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		051-8890	D
		REVISION	
		12.0.0	
		PAGE	
		16 OF 18	
		SHEET	
		16 OF 33	

### STRAIN RELIEF BRACKET



### BATTERY CONNECTOR

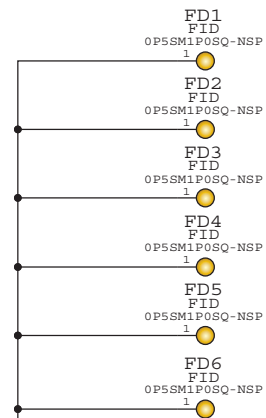
APN: 516S0908  
J9  
1.8 PITCH  
F-ST-SM



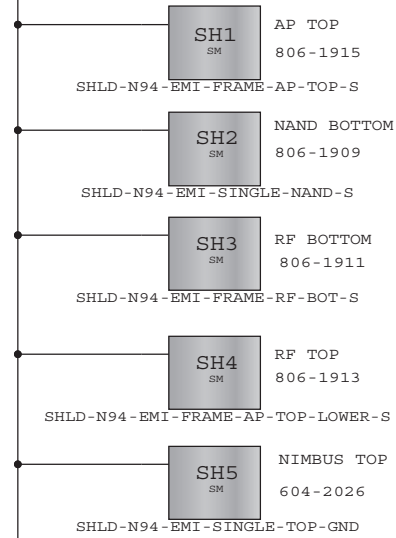
### AP/RADIO INTERFACE

REF	VALUE	MAKE BASE=TRUE	NAME
23 18	PP_BATT_VCC	MAKE BASE=TRUE	BATT_VCC
23 3	RADIO_ON_L	MAKE BASE=TRUE	RADIO_ON_N
20 3	BB_RESET_DET_L	MAKE BASE=TRUE	RESET_DET_N
23 12	BB_PMU_FET_ON	MAKE BASE=TRUE	FET_ON (ANGELINA)
23 3	RESET_BB_PMU_L	MAKE BASE=TRUE	RESET_PMU_N (AP - H4P)
20 3	BB_RESET_L	MAKE BASE=TRUE	BB_RST_N
20 11	BB_WAKE_AP	MAKE BASE=TRUE	BB_WAKE_AP
25 18 2	RESET_IV8_L	MAKE BASE=TRUE	RF_RESET_N
20 14	LED_DRIVE_GSM	MAKE BASE=TRUE	GSM_TXBURST_IND
20 3	SPI2_MRDY	MAKE BASE=TRUE	IPC_MRDY
20 1	IPC_SRDY	MAKE BASE=TRUE	IPC_SRDY
20 1	IPC_GPIO4	MAKE BASE=TRUE	IPC_GPIO4
20 12	BB_VBUS_DET	MAKE BASE=TRUE	BB_USB_VBUS
20 4	BB_USB_N	MAKE BASE=TRUE	BB_USB_DN
20 4	BB_USB_P	MAKE BASE=TRUE	BB_USB_DP
20 3	UART1_RTS_L	MAKE BASE=TRUE	BB_UART_CTS_N
20 3	UART1_CTS_L	MAKE BASE=TRUE	BB_UART_RTS_N
20 3	UART1_TXD	MAKE BASE=TRUE	BB_UART_RXD
20 3	UART1_RXD	MAKE BASE=TRUE	BB_UART_TXD
20 3	I2S1_BCLK	MAKE BASE=TRUE	BB_I2S_CLK
20 3	I2S1_DOUT	MAKE BASE=TRUE	BB_I2S_RXD
20 3	I2S1_DIN	MAKE BASE=TRUE	BB_I2S_TXD
20 3	I2S1_LRCLK	MAKE BASE=TRUE	BB_I2S_WS
32 11 10 9 4 3	PP1V8_SDRAM	MAKE BASE=TRUE	WL_BT_VDDIO
32 12	BT_REG_ON	MAKE BASE=TRUE	BT_REG_ON
32 12	WIFI_REG_ON	MAKE BASE=TRUE	WLAN_REG_ON
32 12	WLAN_SDIO_CLK	MAKE BASE=TRUE	WLAN_SDIO_CLK
32 1	WLAN_SDIO_CMD	MAKE BASE=TRUE	WLAN_SDIO_CMD
32 1	WLAN_SDIO_DATA<3..0>	MAKE BASE=TRUE	WLAN_SDIO_DATA<3..0>
32 12	WLAN_WAKE_AP	MAKE BASE=TRUE	HOST_WAKE_WLAN
32 3	BT_WAKE	MAKE BASE=TRUE	BT_WAKE
32 3	CLK32K_WIFI	MAKE BASE=TRUE	CLK32K_AP
32 3	BT_RESET_L	MAKE BASE=TRUE	BT_RESET_N
32 12	BT_WAKE_AP	MAKE BASE=TRUE	HOST_WAKE_BT
32 3	UART3_RTS_L	MAKE BASE=TRUE	BT_UART_CTS_N
32 3	UART3_CTS_L	MAKE BASE=TRUE	BT_UART_RTS_N
32 3	UART3_TXD	MAKE BASE=TRUE	BT_UART_RXD
32 3	UART3_RXD	MAKE BASE=TRUE	BT_UART_TXD
32 9 1	I2S2_BCLK	MAKE BASE=TRUE	BT_PCM_CLK
32 9 1	I2S2_DOUT	MAKE BASE=TRUE	BT_PCM_IN
32 9 1	I2S2_DIN	MAKE BASE=TRUE	BT_PCM_OUT
32 9 1	I2S2_LRCLK	MAKE BASE=TRUE	BT_PCM_SYNC
20 2	HSIC1_DATA	50_OHM HSIC_ST	HSIC_BB_DATA
20 2	HSIC1_STB	50_OHM HSIC_ST	HSIC_BB_STROBE
20 3	HOST_BB_HSIC_RDY	MAKE BASE=TRUE	HOST_BB_HSIC_RDY
20 3	HOST_WLAN_HSIC_RDY	MAKE BASE=TRUE	HOST_WLAN_HSIC_RDY
20 3	BB_HSIC_RDY	MAKE BASE=TRUE	BB_HSIC_RDY
32 2	HSIC2_DATA	50_OHM HSIC_ST	HSIC_WLAN_DATA
32 2	HSIC2_STB	50_OHM HSIC_ST	HSIC_WLAN_STROBE
20 3	BB_EMERGENCY_DWLD_L	MAKE BASE=TRUE	BB_EMERGENCY_DWLD
32 3	WLAN_HSIC_RDY	MAKE BASE=TRUE	WLAN_HSIC_RDY

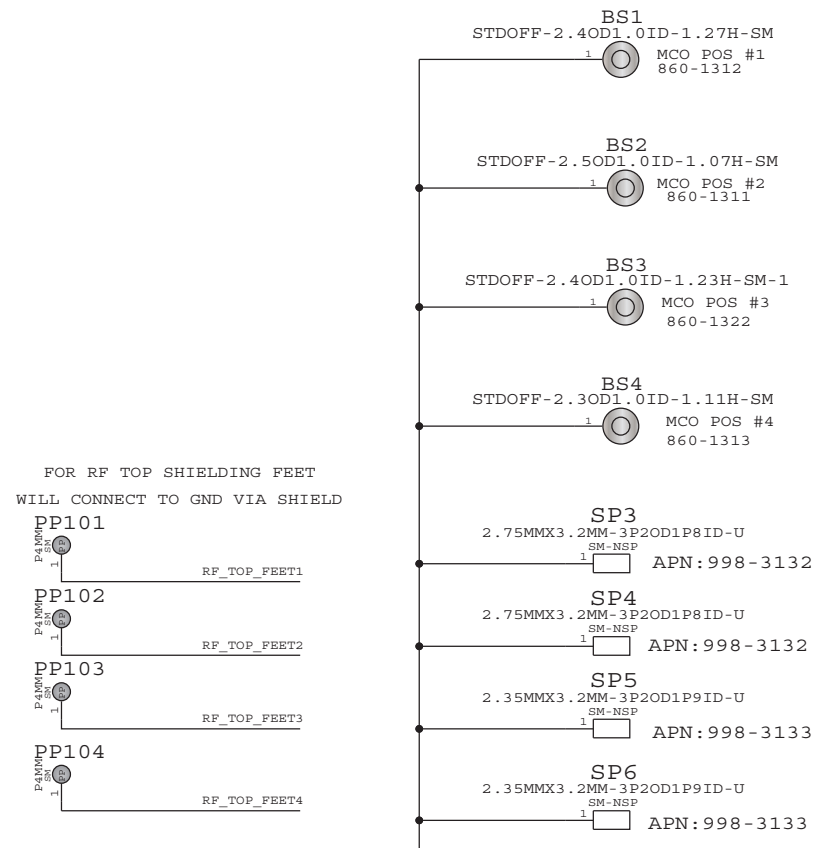
### FIDUCIALS



### SHIELDS



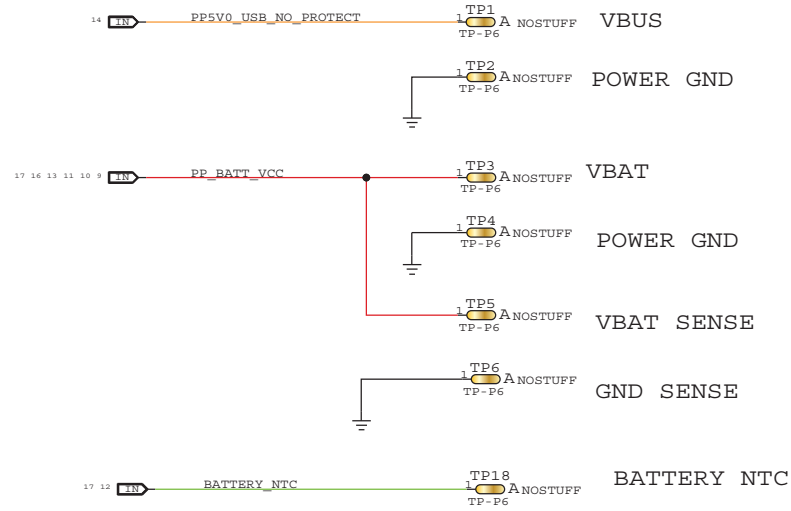
### STANDOFFS



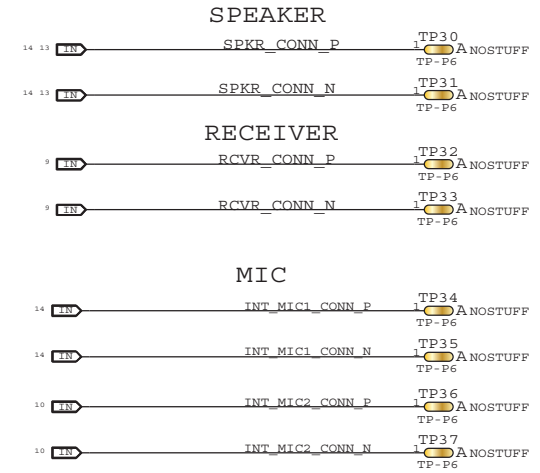
PAGE TITLE		SYNC DATE=N/A	
RF INT, SHIELD, STNDOFFS			
Apple Inc.	DRAWING NUMBER	051-8890	SIZE
	REVISION	12.0.0	
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		17 OF 18	
II NOT TO REPRODUCE OR COPY IT		SHEET	
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		17 OF 33	
IV ALL RIGHTS RESERVED			

# TEST POINTS

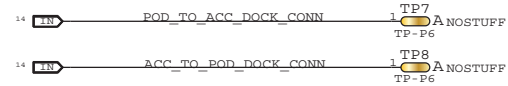
## POWER



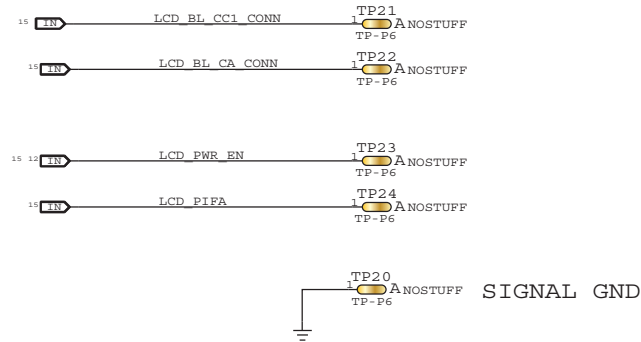
## AUDIO



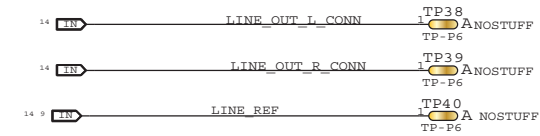
## UART



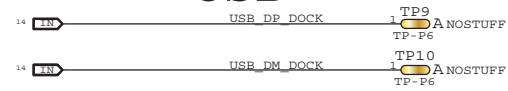
## GRAPE/LCM



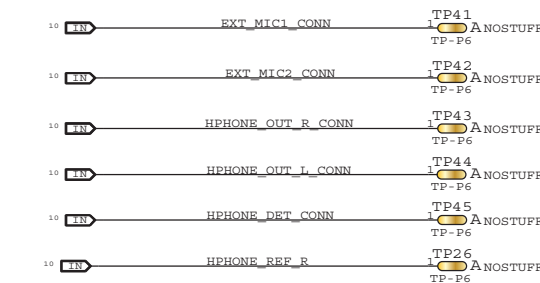
## LINE OUT



## USB



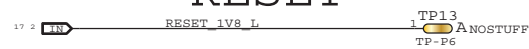
## HEADPHONE



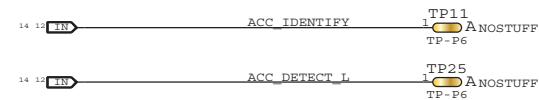
## DFU



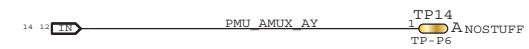
## RESET



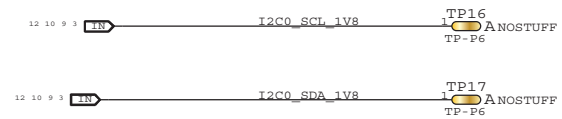
## ACCESSORY



## SUPER TP



## I2C0 BUS



SYNC MASTER=N/A		SYNC DATE=N/A	
<b>TEST POINTS</b>			
Apple Inc.		DRAWING NUMBER	051-8890
		REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		BRANCH	
		PAGE	18 OF 18
		SHEET	18 OF 33

8

7

6

5

4

3

2

1

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.

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

REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
12	0001170763	ENGINEERING RELEASED		2011-07-05

# N94 RADIO\_MLB\_V3 SUBDESIGN

## RADIO - 07/05/2011: SUBDESIGN

THIS PAGE	CONTENTS
02	BASEBAND
03	BASEBAND MEMORY
04	BASEBAND POWER
05	POWER1: CONTROL
06	POWER2: DIGITAL, ANALOG, RF
07	AP INTERFACE AND DEBUG CONNECTOR
08	RF TRANSCEIVER - RX AND TX
09	RF TRANSCEIVER - POWER DECOUPLING
10	RF TRANSCEIVER AND ASM
11	MMPA AND PA DC/DC CONVERTER
12	B2 AND B5 PADS
13	DIVERSITY AND EXTERNAL GPS LNA
14	WLAN/BT/FM
15	DIVERSITY ANTENNA SWITCH AND SIM

SCH #: 951-1604

BASED ON RADIO\_MLB\_EVT2\_RFPE

DRAWING TITLE			
N94 RADIO MLB V3 SUBDESIGN			
DRAWING NUMBER		SIZE	
051-8890		D	
REVISION		PAGE	
12.0.0		1 OF 15	
BRANCH		SHEET	
		19 OF 33	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED			

8

7

6

5

4

3

2

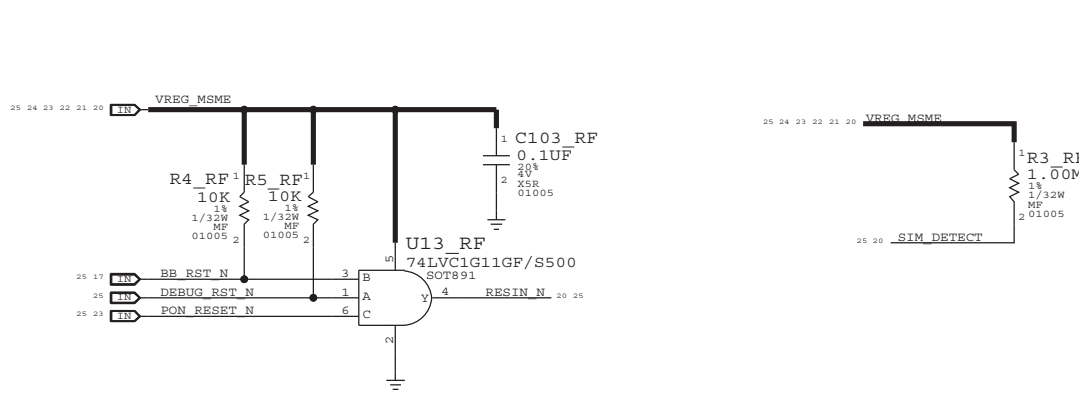
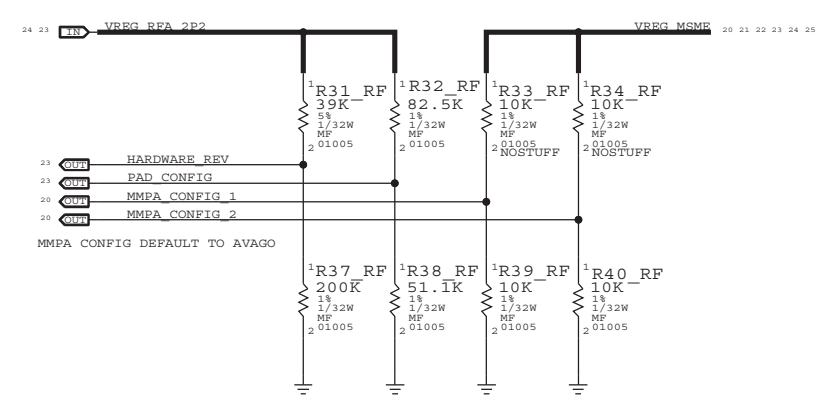
1

# BASEBAND

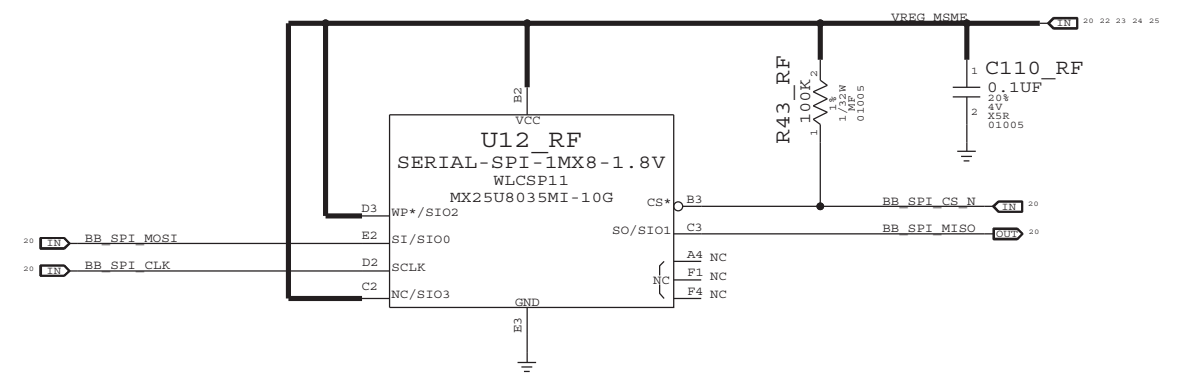
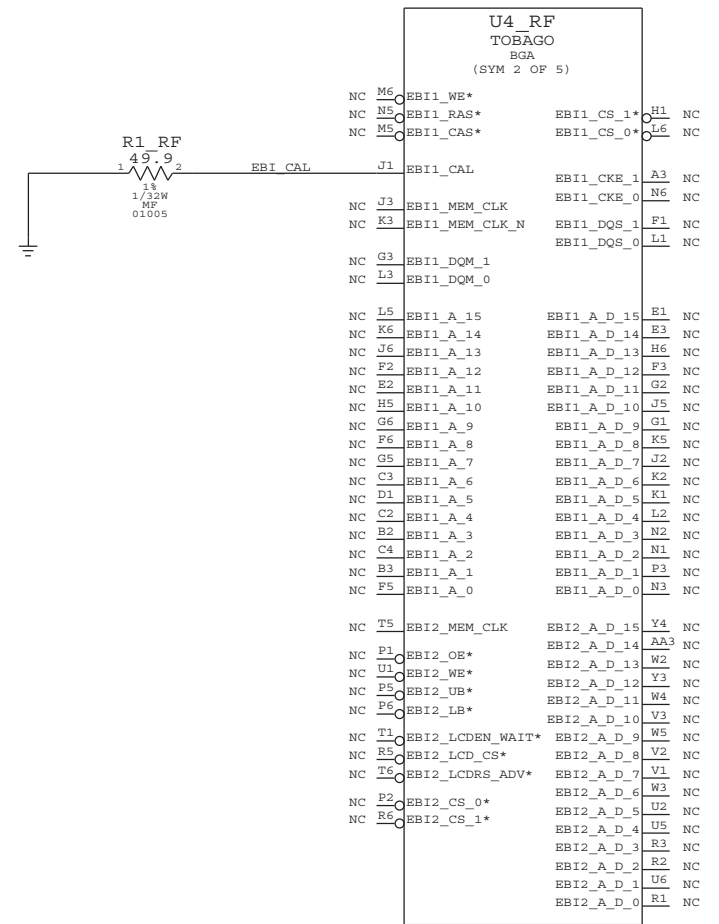
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSE ONLY - NOT A CHANGE REQUEST



DEFAULT TO DVT - AVAGO MMPA; TQNT B2; SKWS B5



PAGE TITLE		
BASEBAND		SIZE
Apple Inc.		D
DRAWING NUMBER	051-8890	REVISION
		12.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		2 OF 15
II NOT TO REPRODUCE OR COPY IT		SHEET
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		20 OF 33
IV ALL RIGHTS RESERVED		



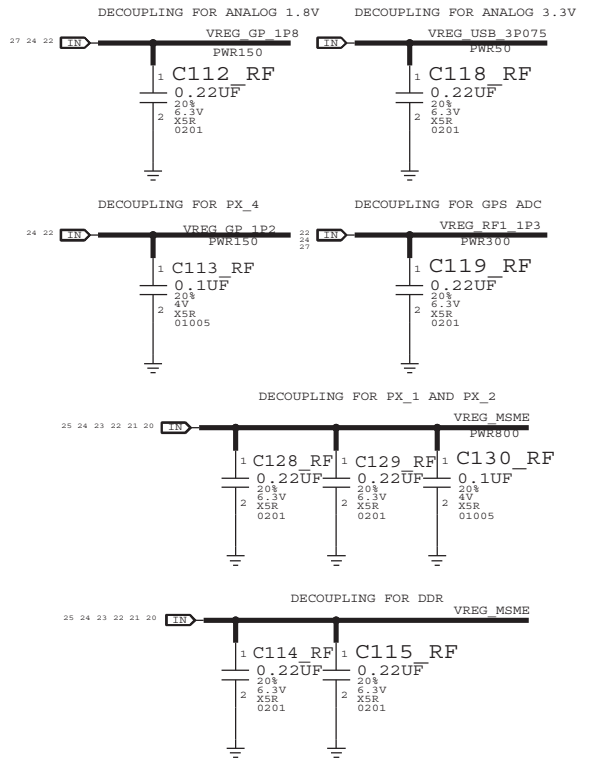
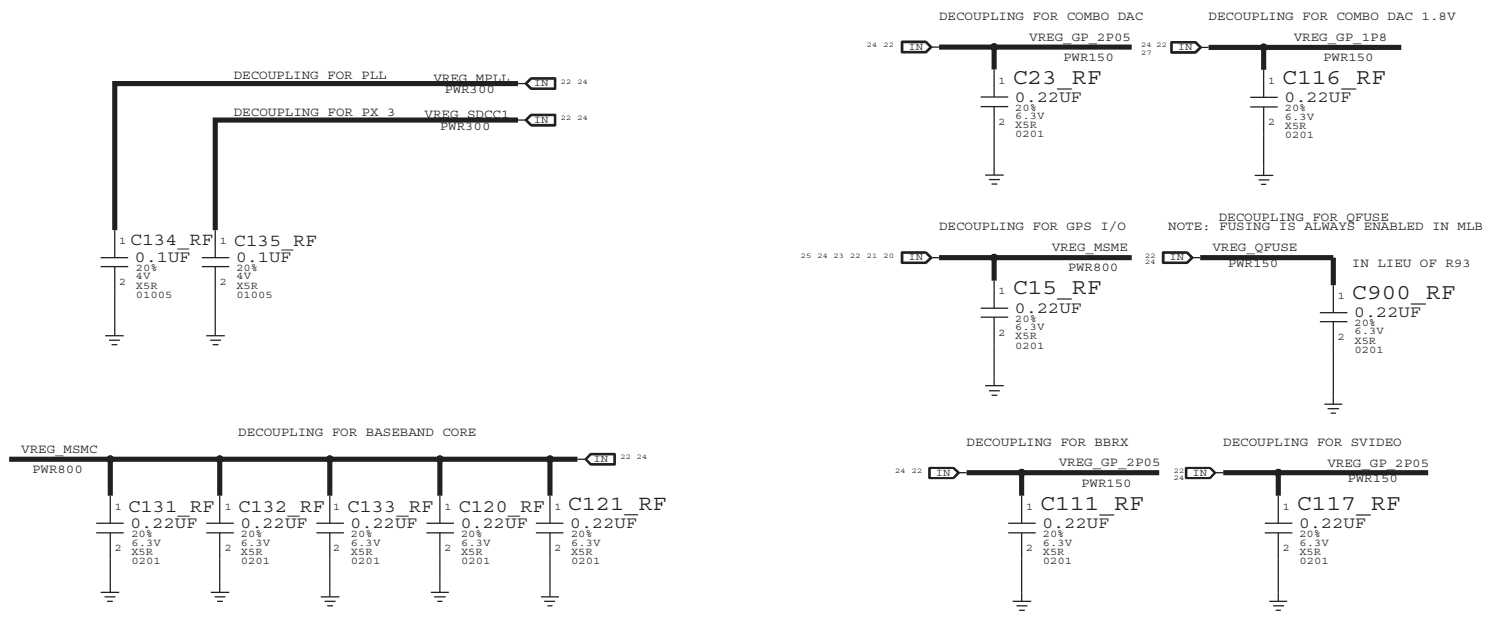
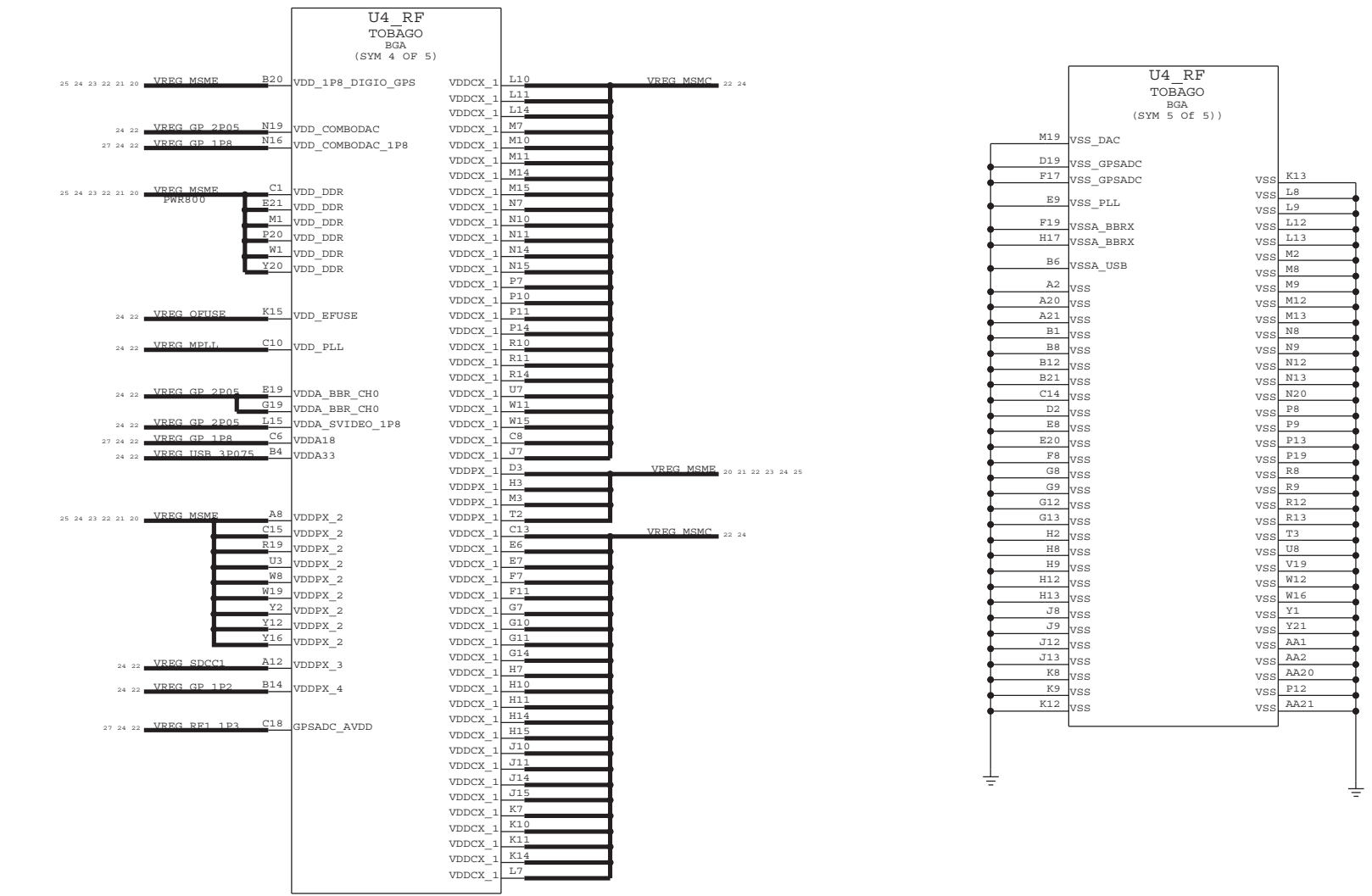
PAGE TITLE		
<b>BASEBAND MEMORY</b>		
Apple Inc.	DRAWING NUMBER	051-8890
	REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		
II NOT TO REPRODUCE OR COPY IT		
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		
IV ALL RIGHTS RESERVED		
PAGE	3 OF 15	
SHEET	21 OF 33	



8 7 6 5 4 3 2 1

D C B A

D C B A

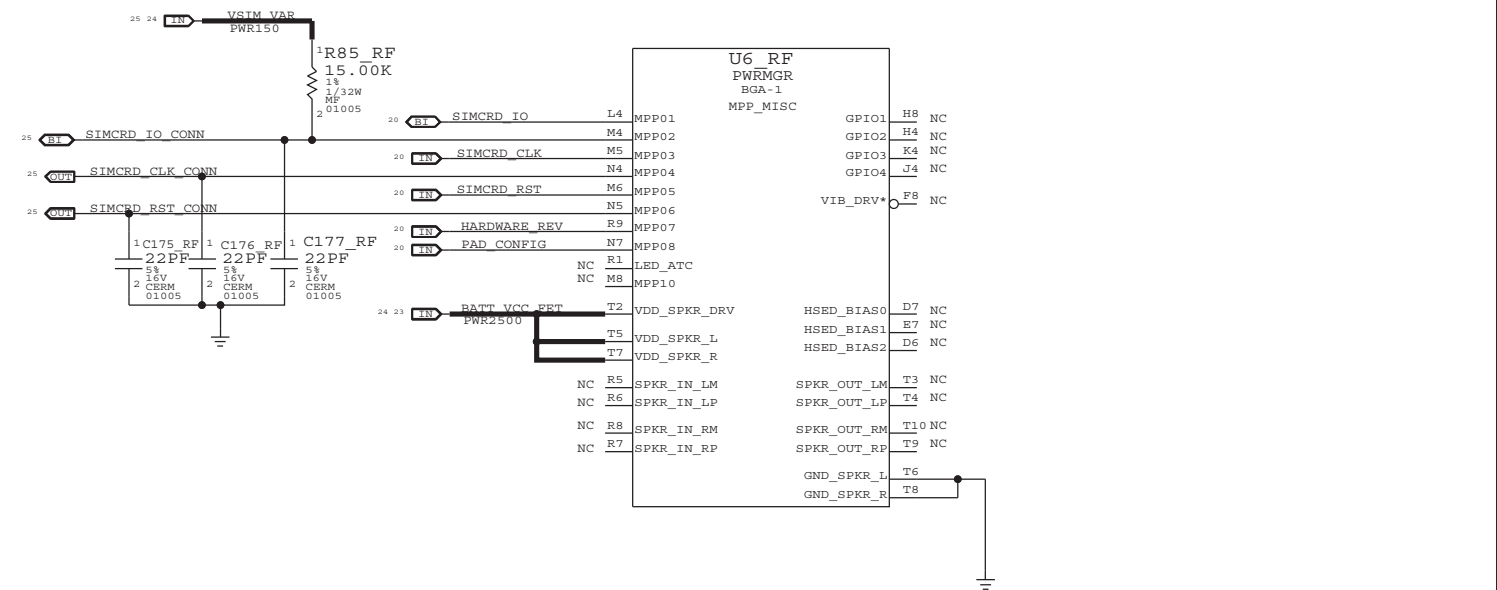
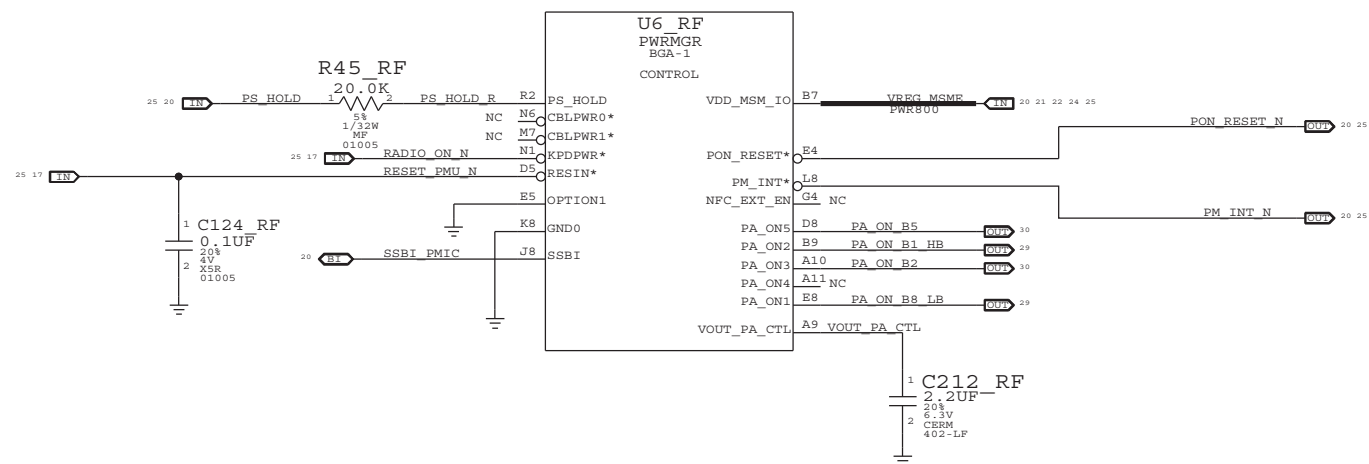
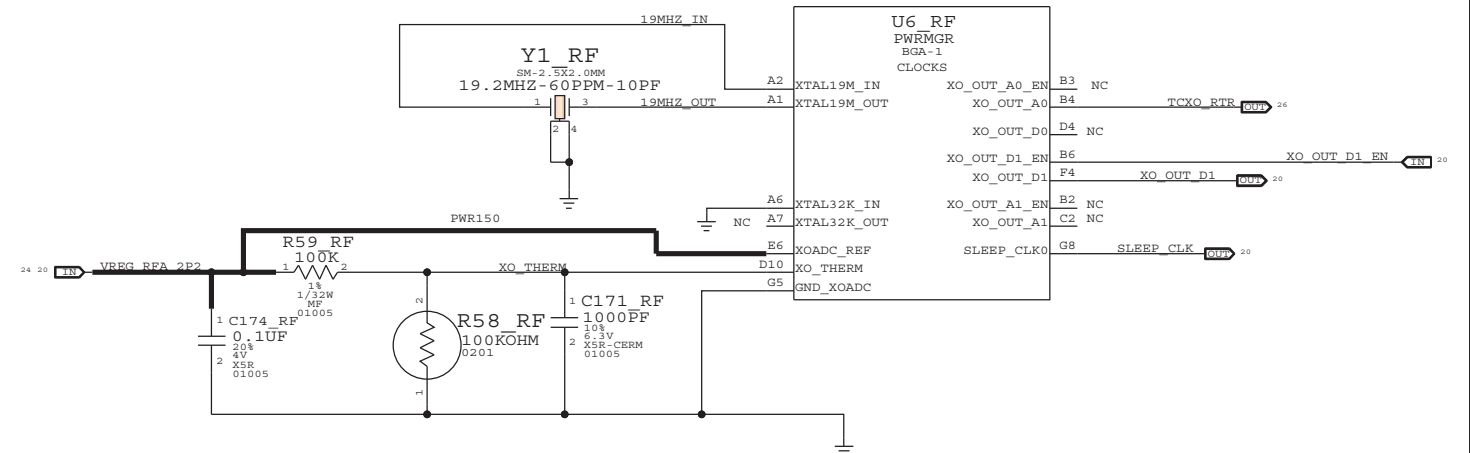
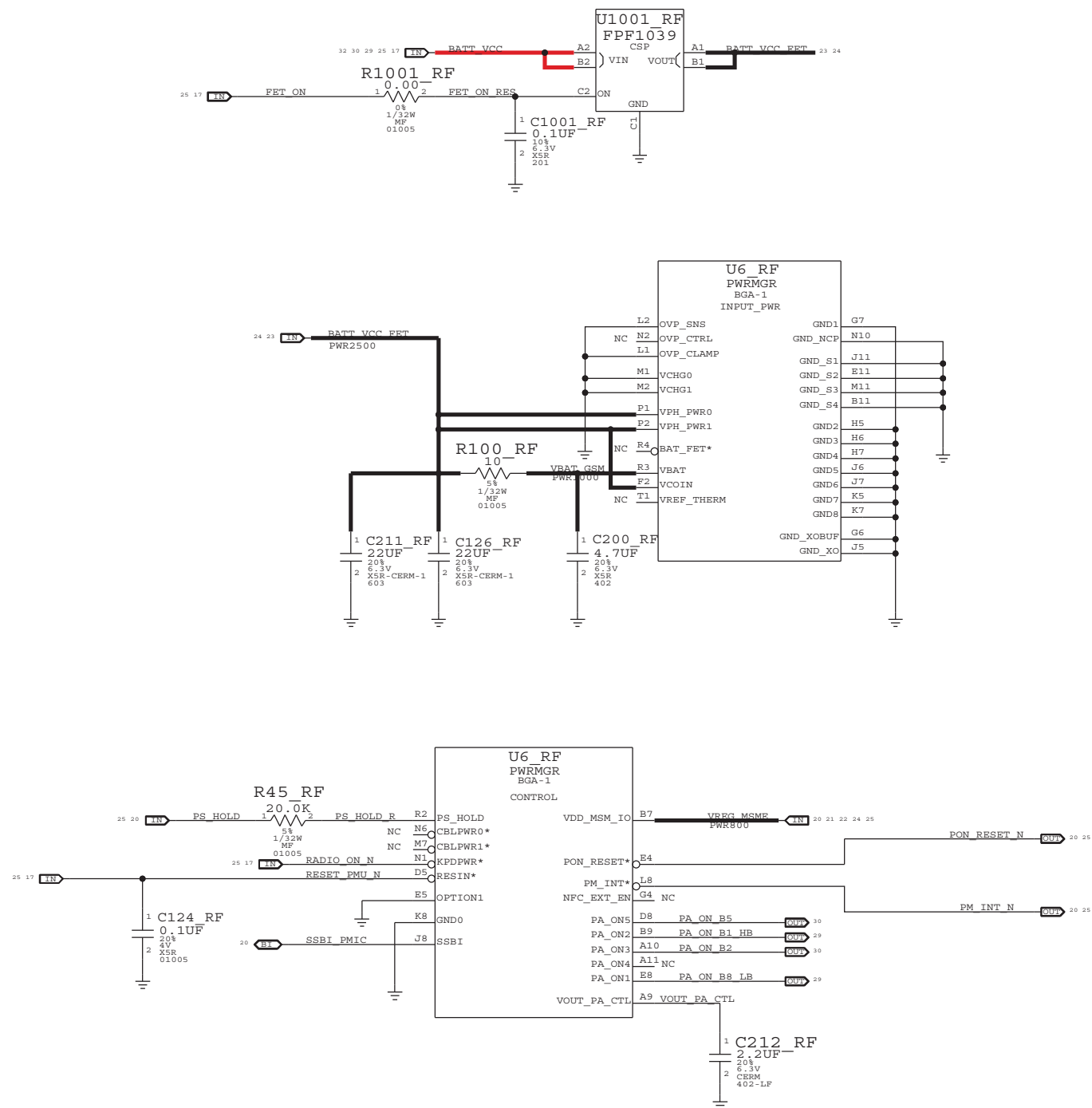


BASEBAND POWER/DECOUPLING	
Apple Inc.	DRAWING NUMBER 051-8890 SIZE D
<small>NOTICE OF PROPRIETARY PROPERTY:</small> THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	REVISION 12.0.0
	PAGE 4 OF 15
	SHEET 22 OF 33

8 7 6 5 4 3 2 1

# BASEBAND PMU

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

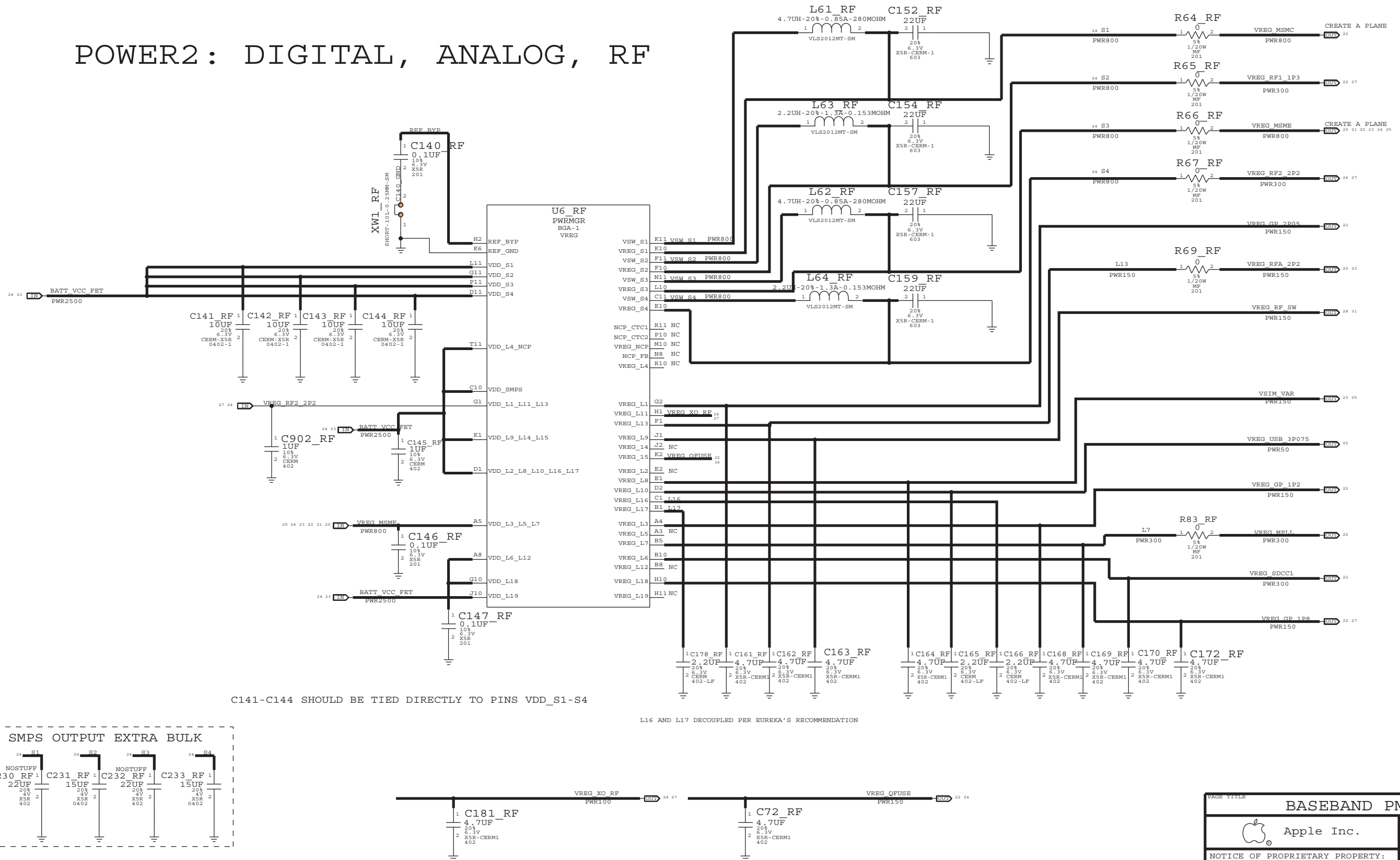


PAGE TITLE		
<b>BASEBAND PMU</b>		
Apple Inc.	DRAWING NUMBER	SIZE
	051-8890	D
REVISION		
12.0.0		
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		
II NOT TO REPRODUCE OR COPY IT		
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		
IV ALL RIGHTS RESERVED		
BRANCH	PAGE	SHEET
	5 OF 15	23 OF 33

# BASEBAND PMU CONT.

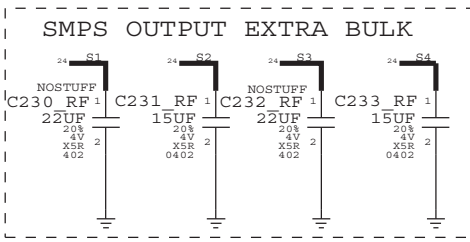
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSE ONLY - NOT A CHANGE REQUEST

## POWER2: DIGITAL, ANALOG, RF



C141-C144 SHOULD BE TIED DIRECTLY TO PINS VDD\_S1-S4

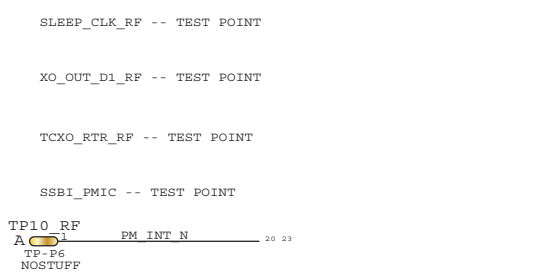
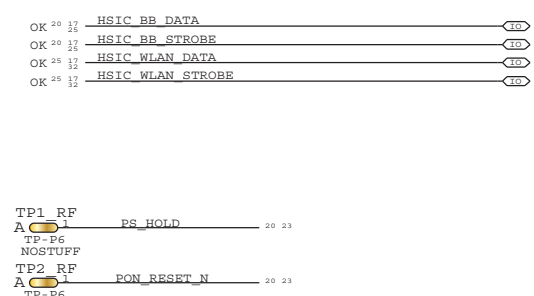
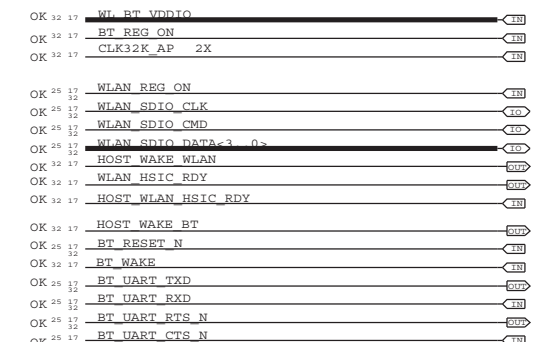
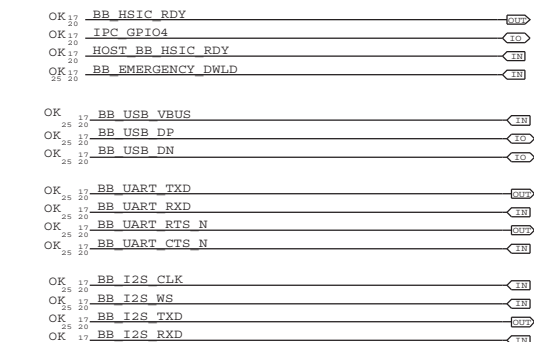
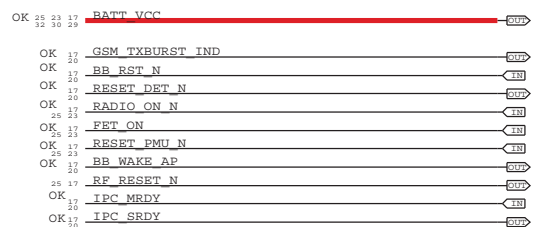
L16 AND L17 DECOUPLED PER EUREKA'S RECOMMENDATION



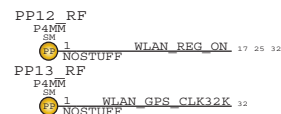
PAGE TITLE		BASEBAND PMU	
Apple Inc.		DRAWING NUMBER	051-8890
		REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY:		BRANCH	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	6 OF 15
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	24 OF 33
II NOT TO REPRODUCE OR COPY IT			
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART			
IV ALL RIGHTS RESERVED			

# DEBUG CONNECTOR

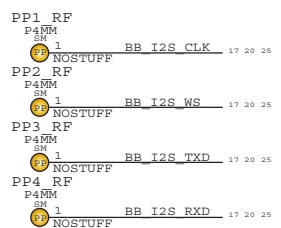
## AP CONNECTIONS



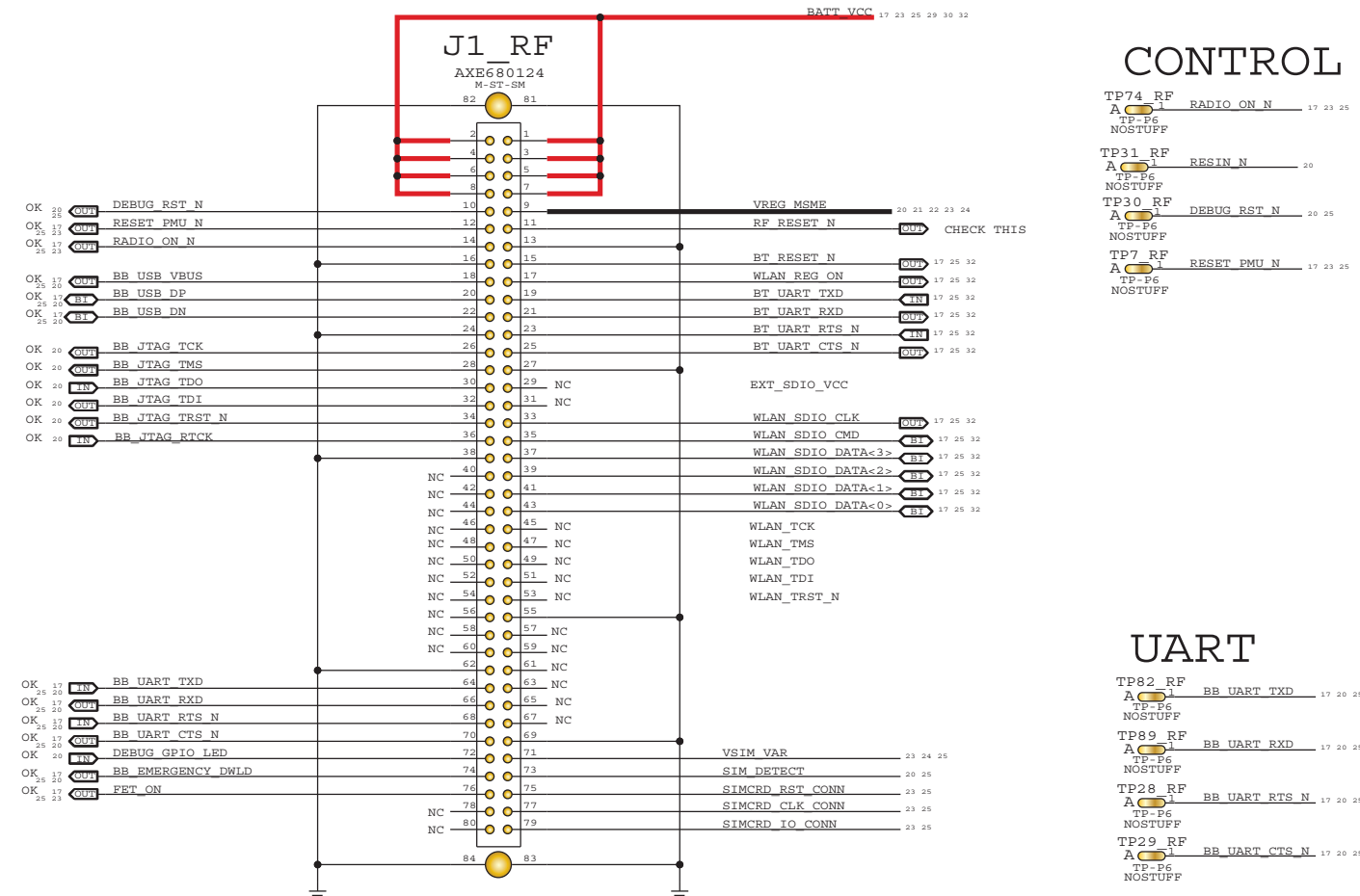
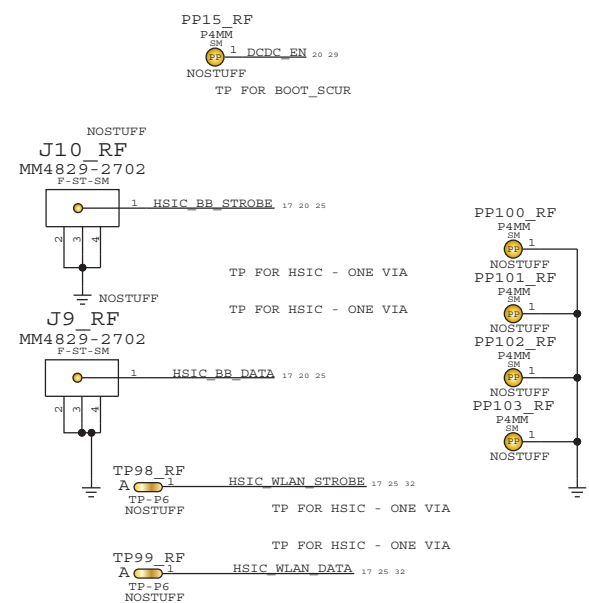
## WLAN



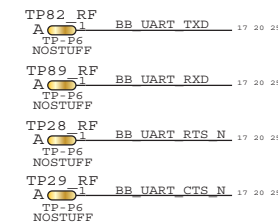
## DIGITAL AUDIO



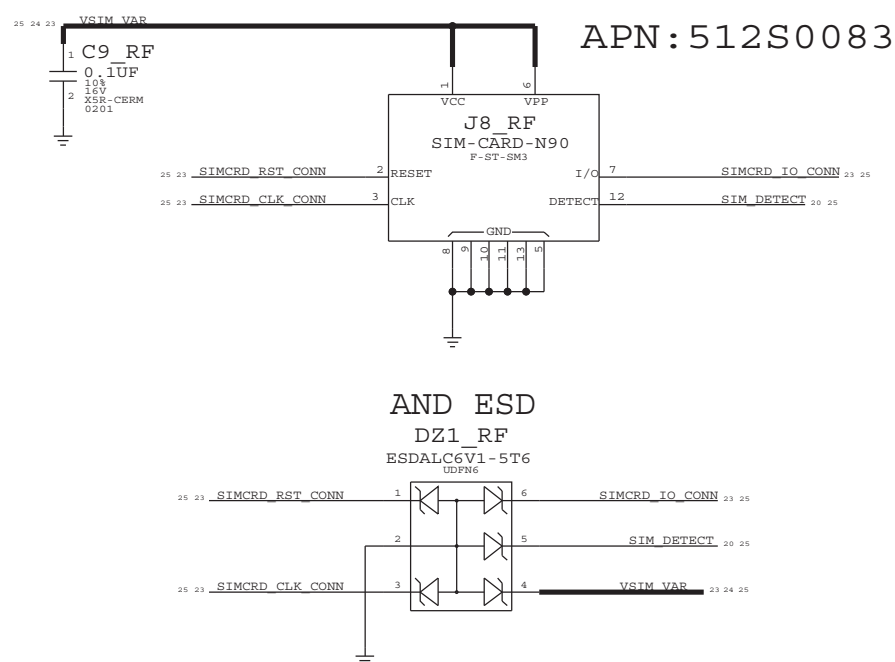
## POWER DOMAINS



## UART



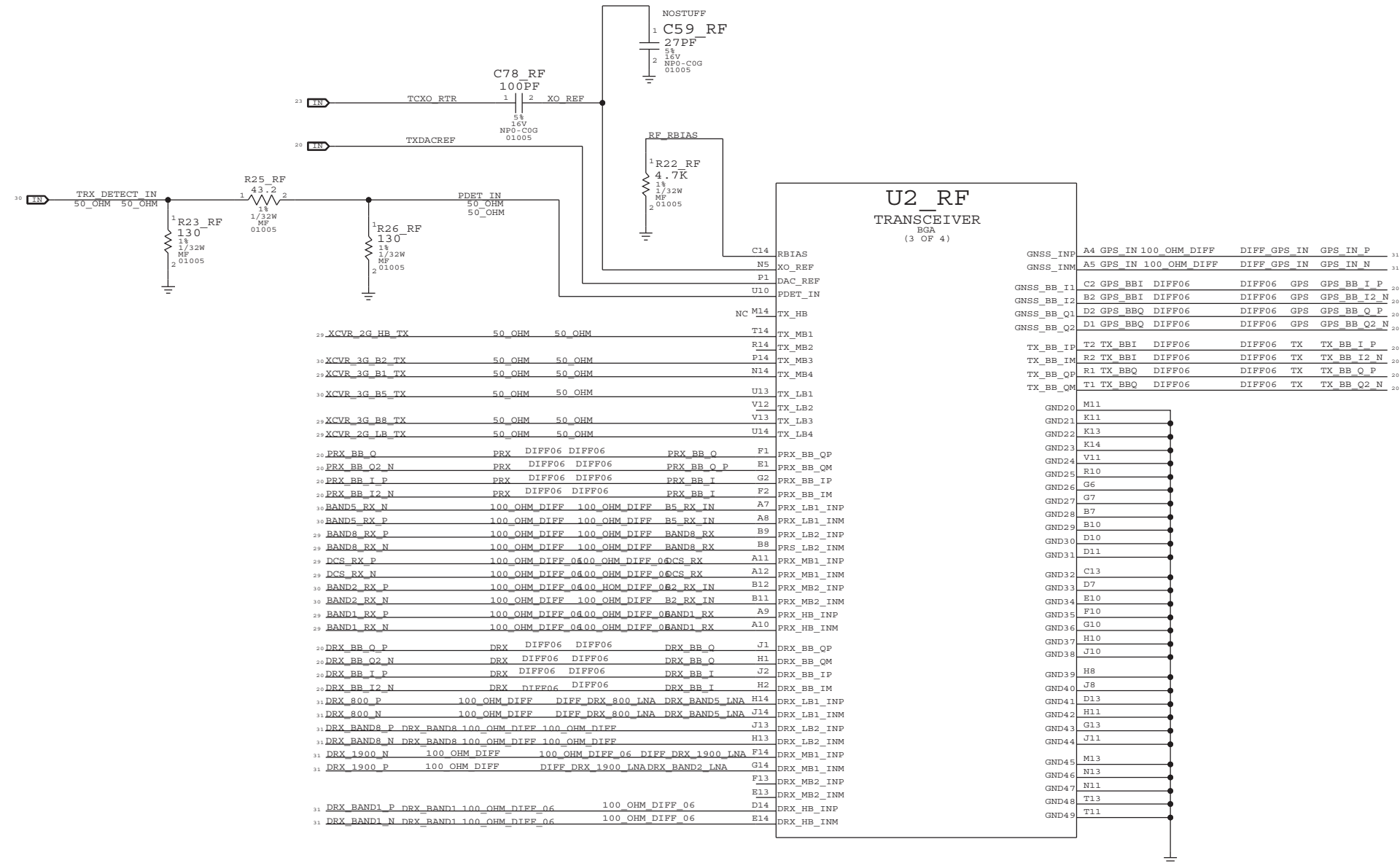
## SIM CARD CONNECTOR



SYSTEM & DEBUG CONNECTORS		DRAWING NUMBER	051-8890	SIZE	D
Apple Inc.		REVISION	12.0.0		
NOTICE OF PROPRIETARY PROPERTY:		BRANCH			
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		PAGE	7 OF 15		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		SHEET	25 OF 33		
II NOT TO REPRODUCE OR COPY IT					
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART					
IV ALL RIGHTS RESERVED					

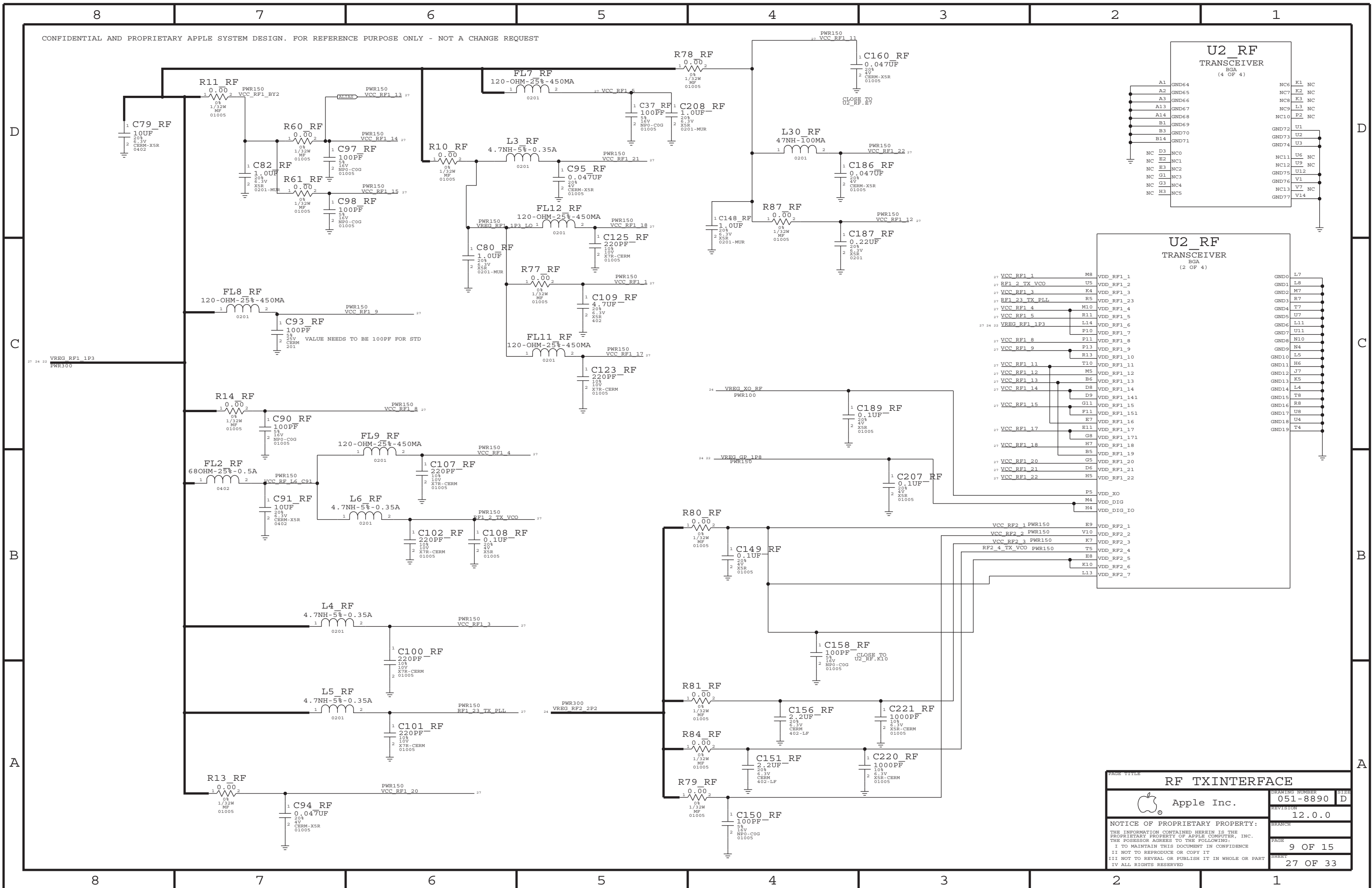
# RF TRANSCEIVER

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



RF RX/TX INTERFACE	
Apple Inc.	DRAWING NUMBER 051-8890
	REVISION 12.0.0
NOTICE OF PROPRIETARY PROPERTY:	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:	
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE	
II NOT TO REPRODUCE OR COPY IT	
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART	
IV ALL RIGHTS RESERVED	
PAGE 8 OF 15	SHEET 26 OF 33

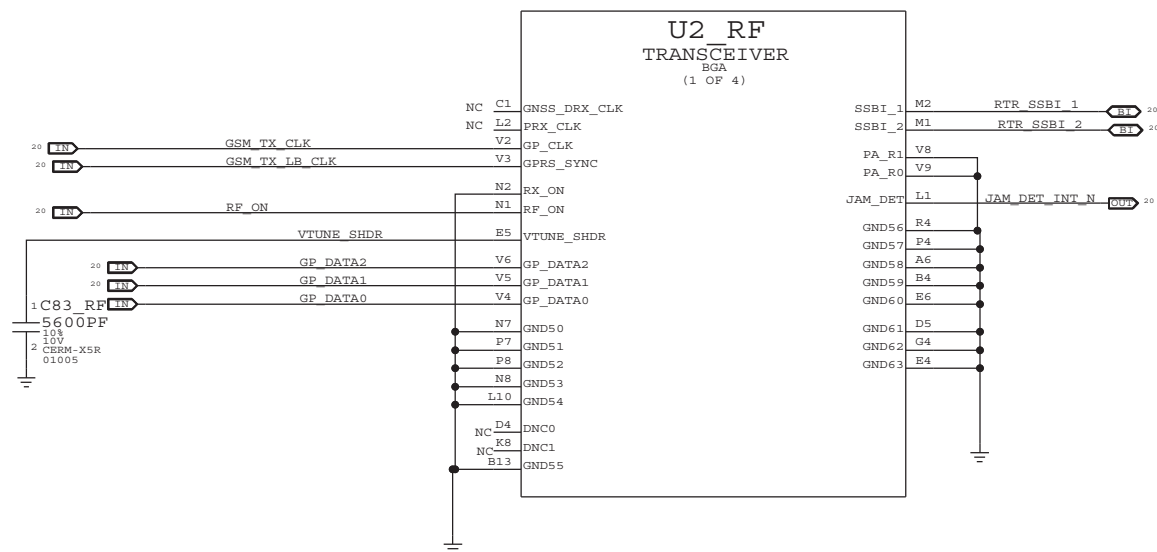
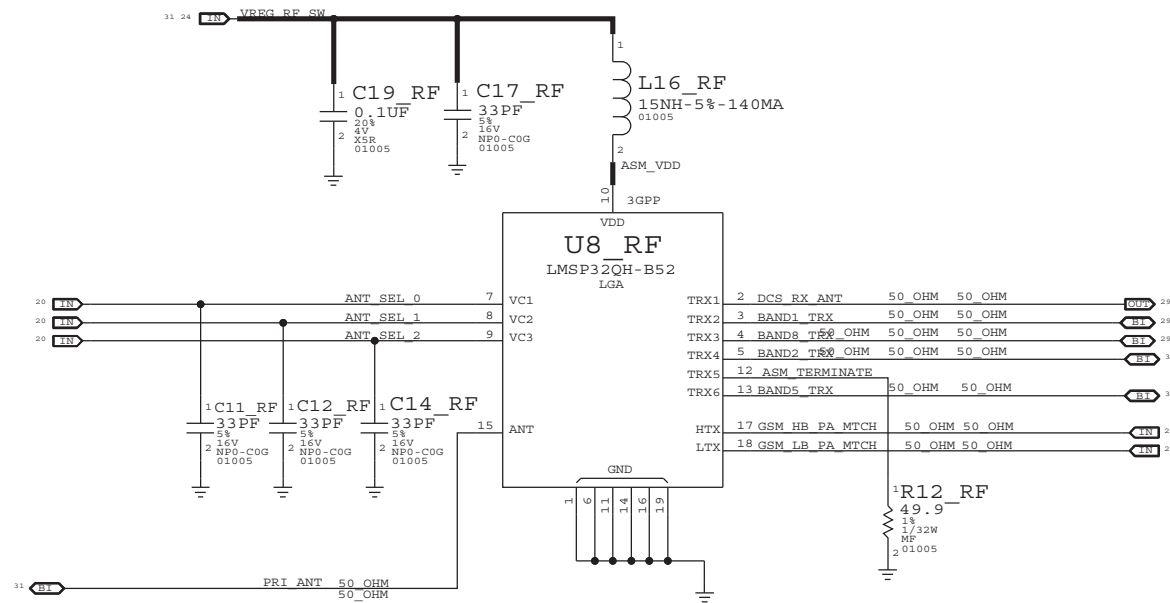
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSE ONLY - NOT A CHANGE REQUEST



27 VCC RF1 1	M8	VDD_RF1_1	L7
27 RF1 2 TX VCO	U5	VDD_RF1_2	L8
27 VCC RF1 3	K4	VDD_RF1_3	M7
27 RF1 23 TX PLL	R5	VDD_RF1_23	R7
27 VCC RF1 4	M10	VDD_RF1_4	T7
27 VCC RF1 5	R11	VDD_RF1_5	U7
27 VREG RF1 1P3	L14	VDD_RF1_6	L11
27 VCC RF1 8	P11	VDD_RF1_8	U11
27 VCC RF1 9	P13	VDD_RF1_9	N10
27 VCC RF1 11	T10	VDD_RF1_10	N4
27 VCC RF1 12	M5	VDD_RF1_11	L5
27 VCC RF1 13	B6	VDD_RF1_12	H6
27 VCC RF1 14	D8	VDD_RF1_13	J7
27 VCC RF1 15	D9	VDD_RF1_14	K5
27 VCC RF1 17	G11	VDD_RF1_15	L4
27 VCC RF1 18	E7	VDD_RF1_16	T8
27 VCC RF1 20	E11	VDD_RF1_17	R8
27 VCC RF1 21	G8	VDD_RF1_18	U8
27 VCC RF1 22	H7	VDD_RF1_19	U4
	B5	VDD_RF1_20	T4
	G5	VDD_RF1_21	
	D6	VDD_RF1_22	
	H5	VDD_RF1_22	
	P5	VDD_XO	
	M4	VDD_DIG	
	H4	VDD_DIG_IO	
	E9	VDD_RF2_1	
VCC RF2 1 PWR150	V10	VDD_RF2_2	
VCC RF2 2 PWR150	K7	VDD_RF2_3	
VCC RF2 3 PWR150	T5	VDD_RF2_4	
RF2 4 TX VCO PWR150	E8	VDD_RF2_5	
	K10	VDD_RF2_6	
	L13	VDD_RF2_7	

PAGE TITLE		
RF TXINTERFACE		
Apple Inc.	DRAWING NUMBER	051-8890
	REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE	BRANCH	
II NOT TO REPRODUCE OR COPY IT	PAGE	9 OF 15
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART	SHEET	27 OF 33
IV ALL RIGHTS RESERVED		

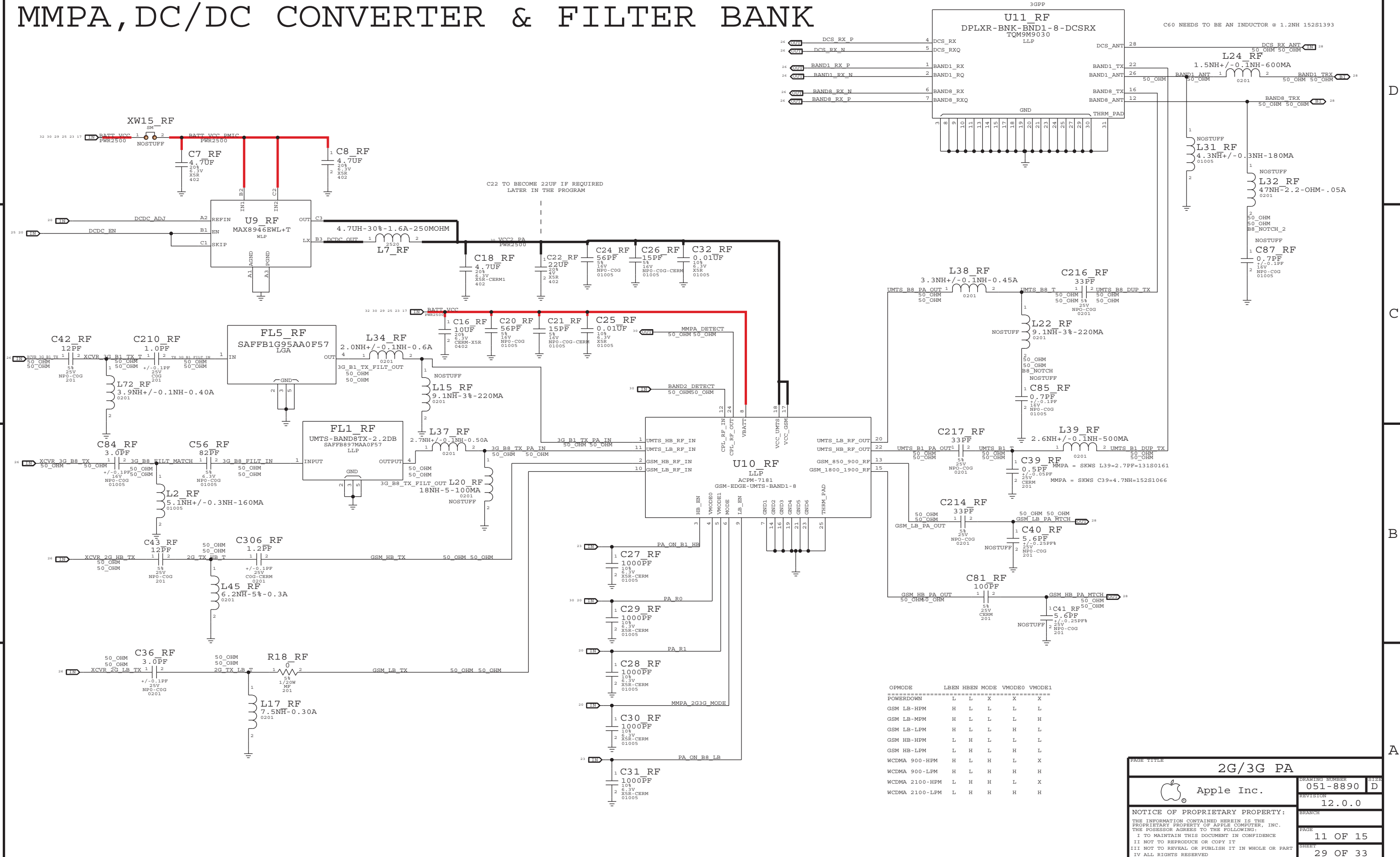
# RF TRANSCEIVER AND ASM



RF TRANSCEIVER AND ASM		
Apple Inc.	DRAWING NUMBER 051-8890	SIZE D
	REVISION 12.0.0	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED		
	PAGE 10 OF 15	SHEET 28 OF 33

# MMPA, DC/DC CONVERTER & FILTER BANK

D  
C  
B  
A



OPMODE	LBEN	HBEN	MODE	VMODE0	VMODE1
POWERDOWN	L	L	X	X	X
GSM LB-HPM	H	L	L	L	L
GSM LB-MPM	H	L	L	L	H
GSM LB-LPM	H	L	L	H	L
GSM HB-HPM	L	H	L	L	L
GSM HB-LPM	L	H	L	H	L
WCDMA 900-HPM	H	L	H	L	X
WCDMA 900-LPM	H	L	H	H	H
WCDMA 2100-HPM	L	H	H	L	X
WCDMA 2100-LPM	L	H	H	H	H

2G/3G PA

Apple Inc.

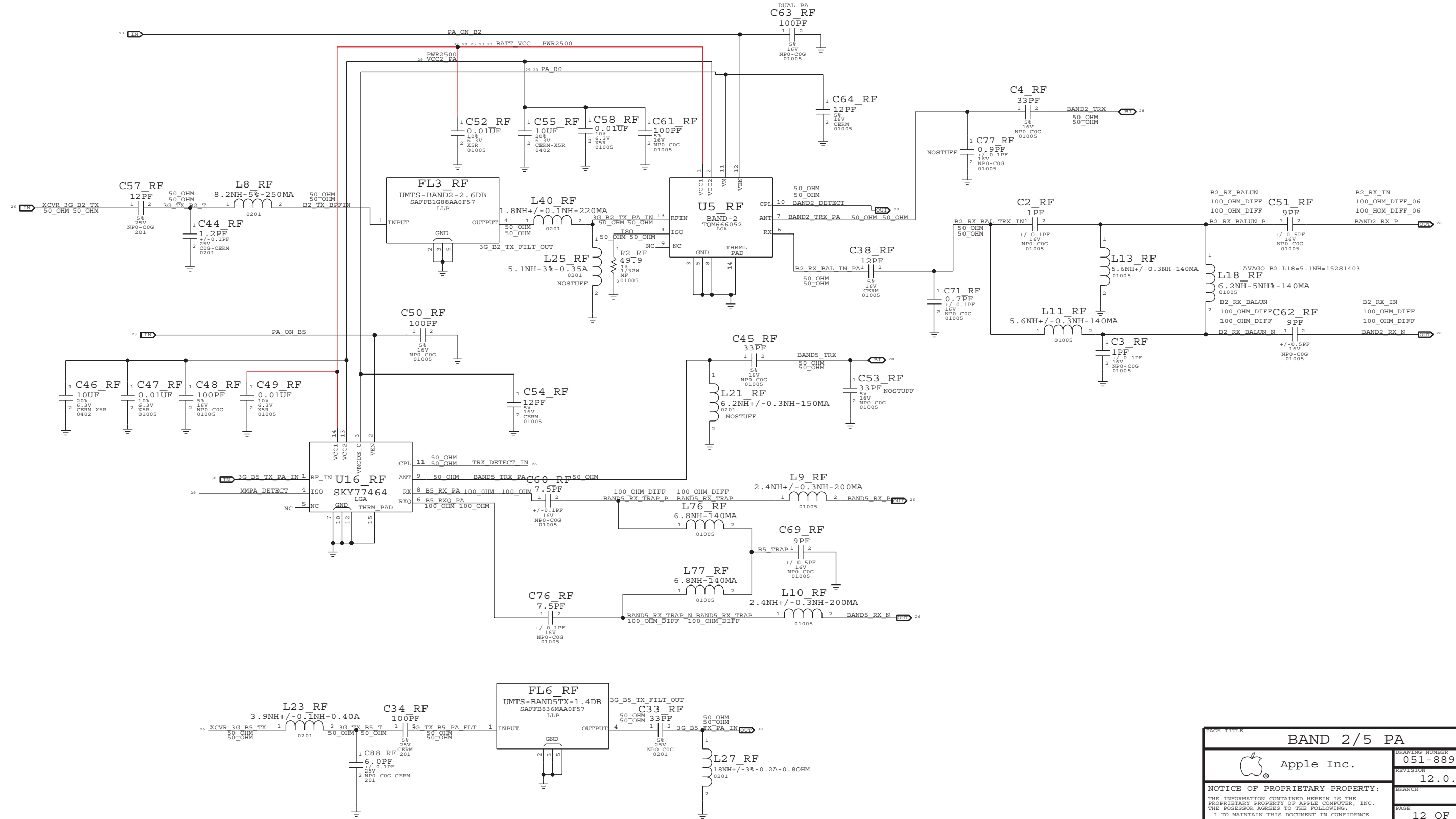
DRAWING NUMBER: 051-8890  
REVISION: 12.0.0


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

PAGE: 11 OF 15  
SHEET: 29 OF 33



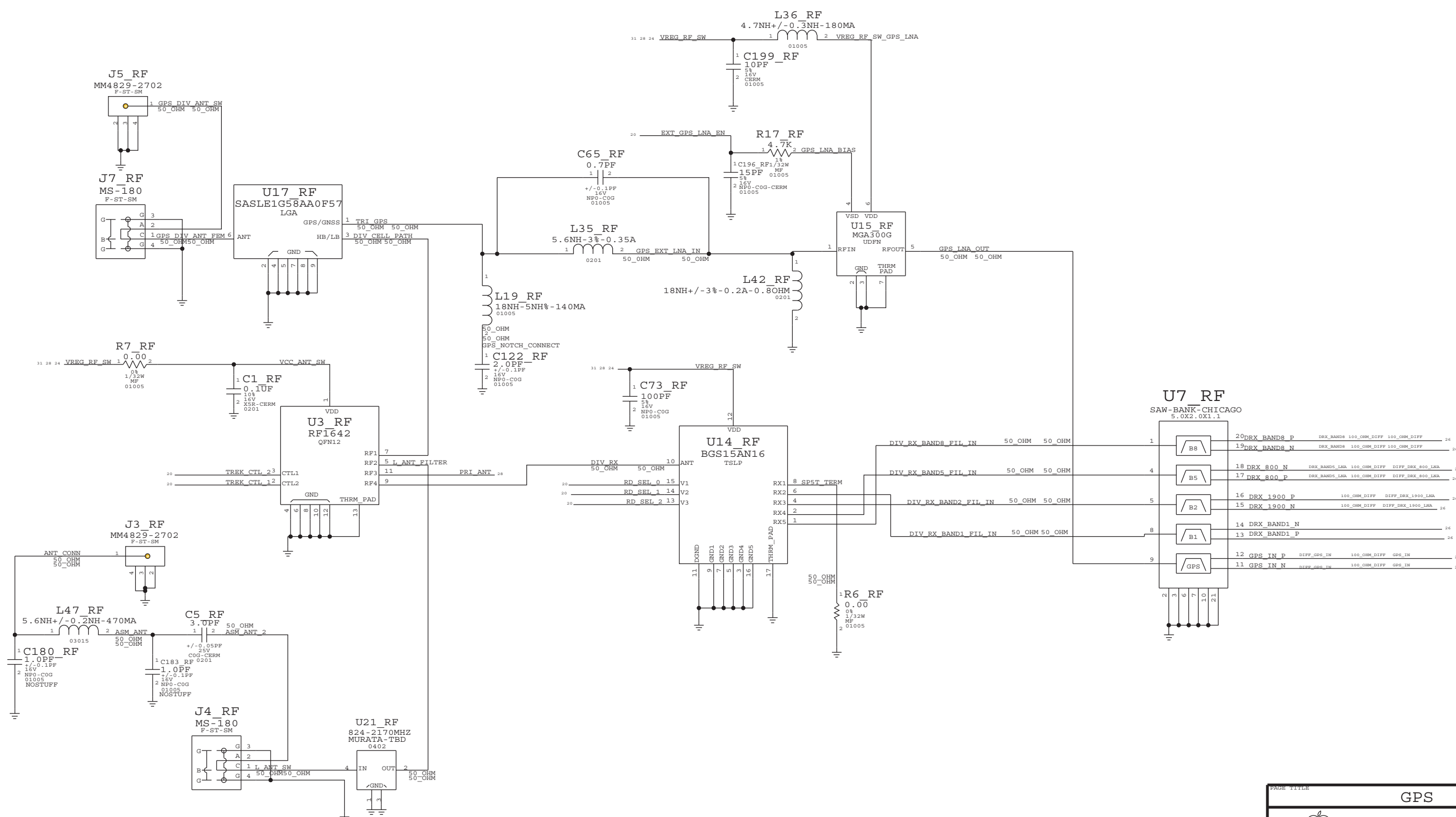
# BAND 2 AND BAND 5 PAD



PAGE TITLE		
<b>BAND 2/5 PA</b>		
 Apple Inc.	DRAWING NUMBER	051-8890
	REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		
II NOT TO REPRODUCE OR COPY IT		
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		
IV ALL RIGHTS RESERVED		
BRANCH	PAGE	12 OF 15
SHEET	30 OF 33	

# DIVERSITY AND EXTERNAL GPS LNA

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

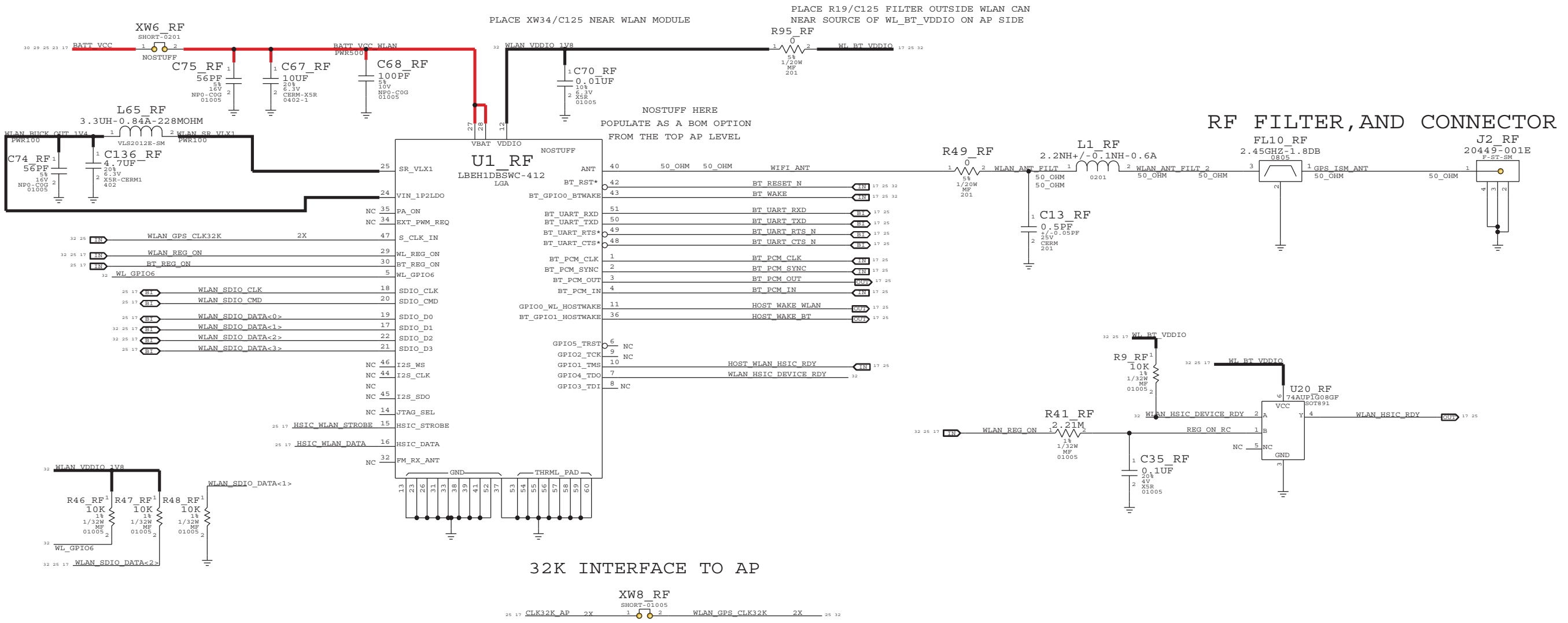


CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSES ONLY - NOT A CHANGE REQUEST.

PAGE TITLE		
<b>GPS</b>		
	DRAWING NUMBER	051-8890
	REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		
II NOT TO REPRODUCE OR COPY IT		
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		
IV ALL RIGHTS RESERVED		
BRANCH	PAGE	13 OF 15
SHEET	31 OF 33	

# WLAN/BLUETOOTH

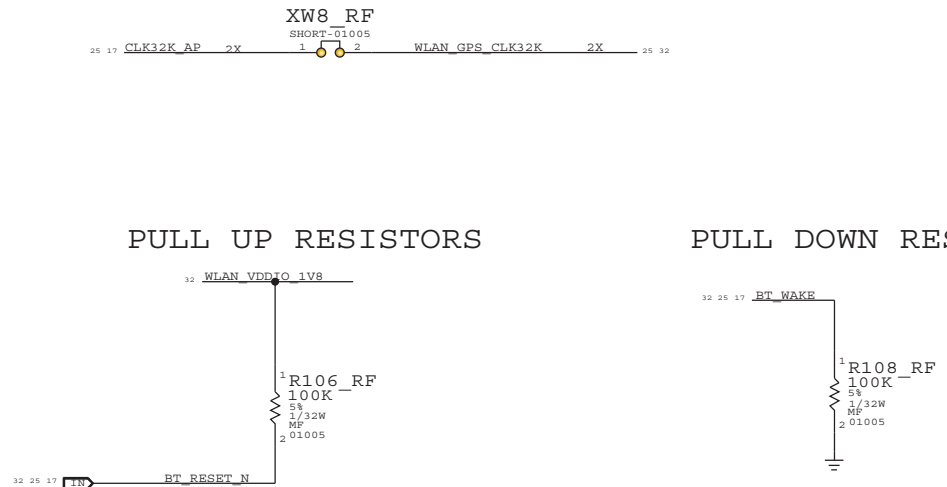
CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSE ONLY - NOT A CHANGE REQUEST



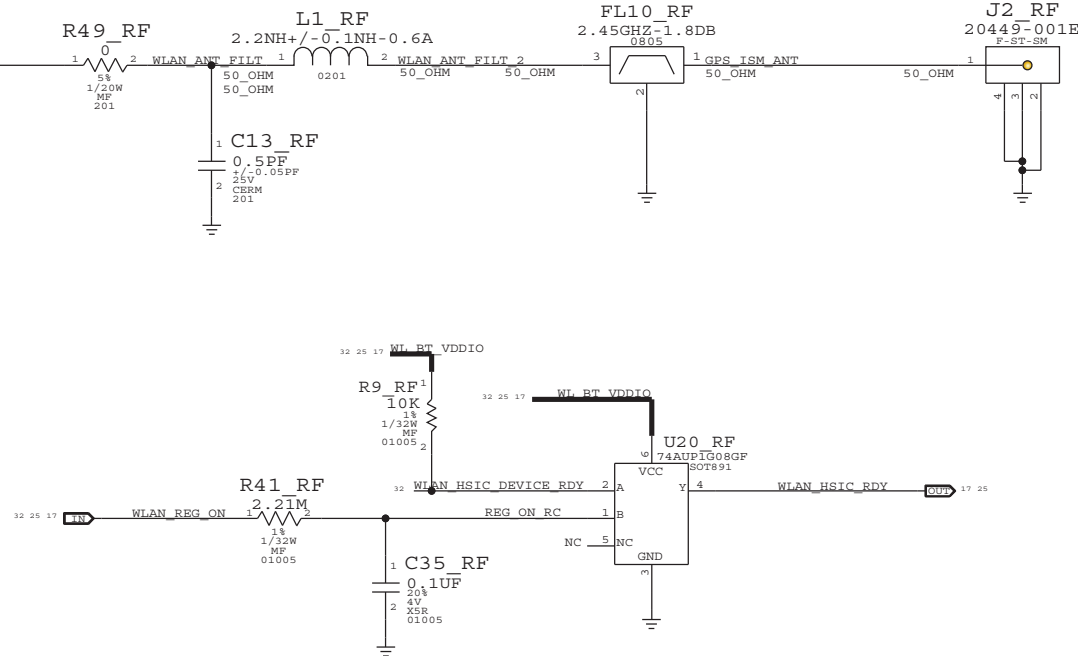
## 32K INTERFACE TO AP

## PULL UP RESISTORS

## PULL DOWN RESISTORS

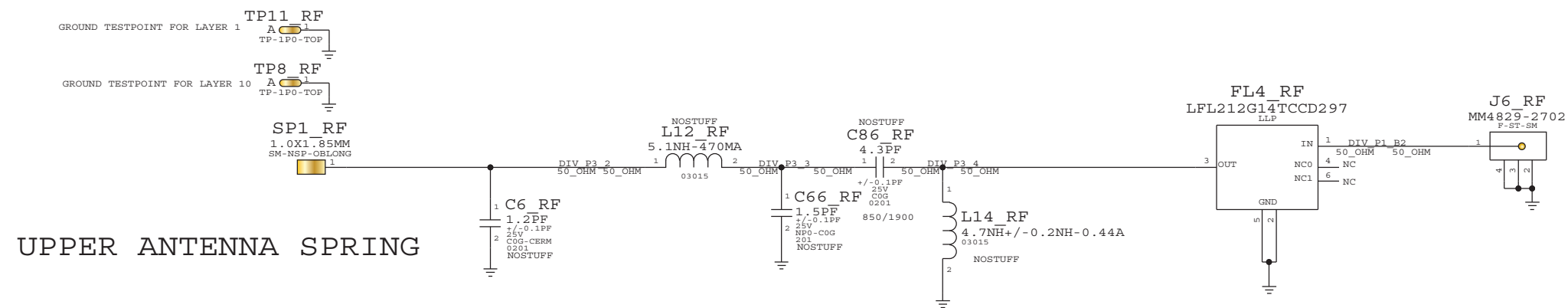


## RF FILTER, AND CONNECTOR



PAGE TITLE		
WIFI/BLUEOOTH/FM RADIO		
Apple Inc.	DRAWING NUMBER	051-8890
	REVISION	12.0.0
NOTICE OF PROPRIETARY PROPERTY:		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:		
I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE		
II NOT TO REPRODUCE OR COPY IT		
III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART		
IV ALL RIGHTS RESERVED		
PAGE	14 OF 15	
SHEET	32 OF 33	

# ANTENNA MATCHING



NOTUFF ALL HERE !  
 SPECIFIED IN TOP LEVEL FOR US/EU VALUE

PAGE TITLE ?		
Apple Inc.	DRAWING NUMBER 051-8890	SIZE D
	REVISION 12.0.0	
NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED	BRANCH	
	PAGE	15 OF 15
	SHEET	33 OF 33