

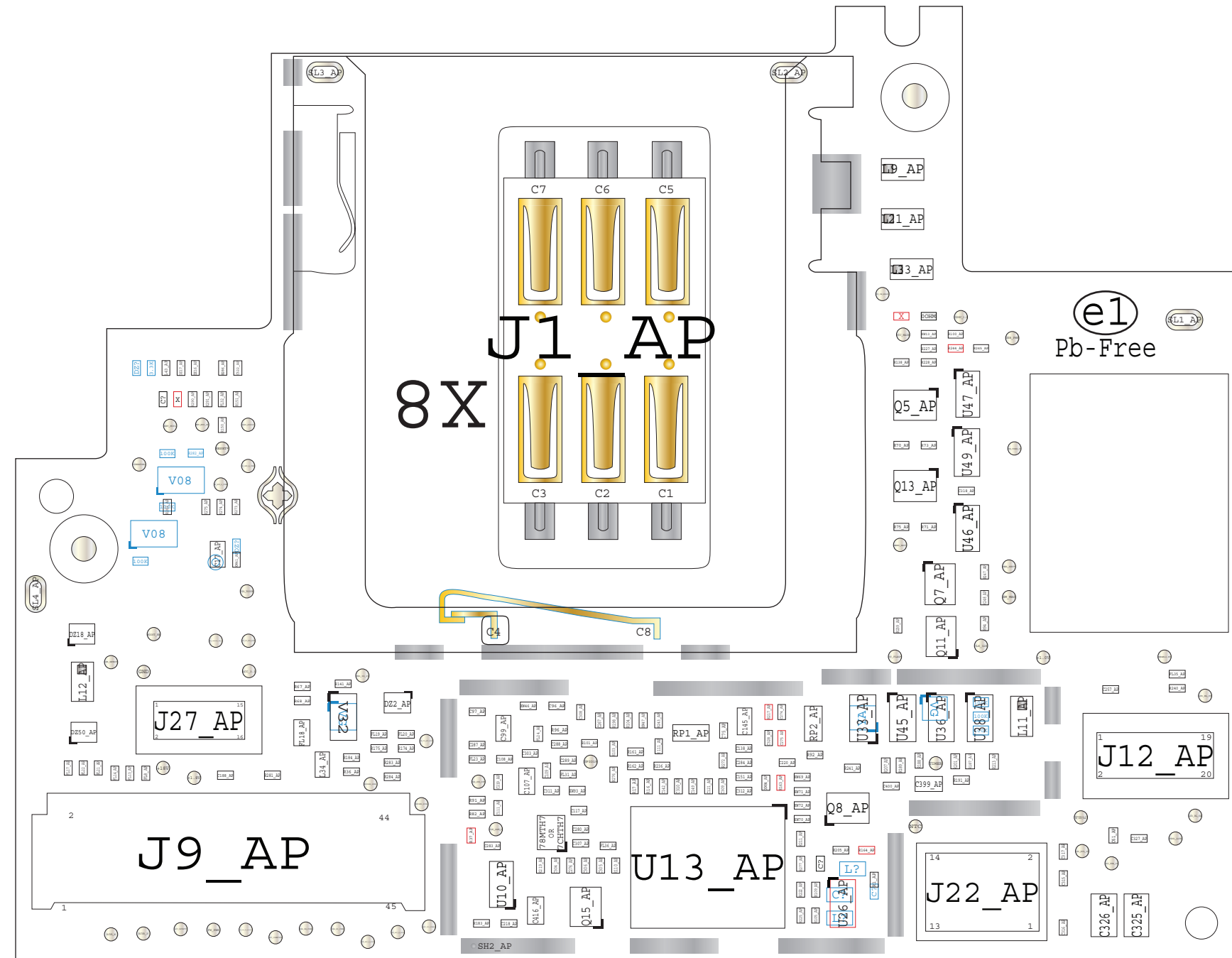
# iPhone 2G Advanced Schematic

Remake By Wites OM Tesla



Big Thanks to Nikola Tesla  
for everything we have today!

# M68 - APPLICATION - TOP










IPOD M68 AP MLB 8-LAYER -11/10/06 (A) DVT (AMPHENOL)

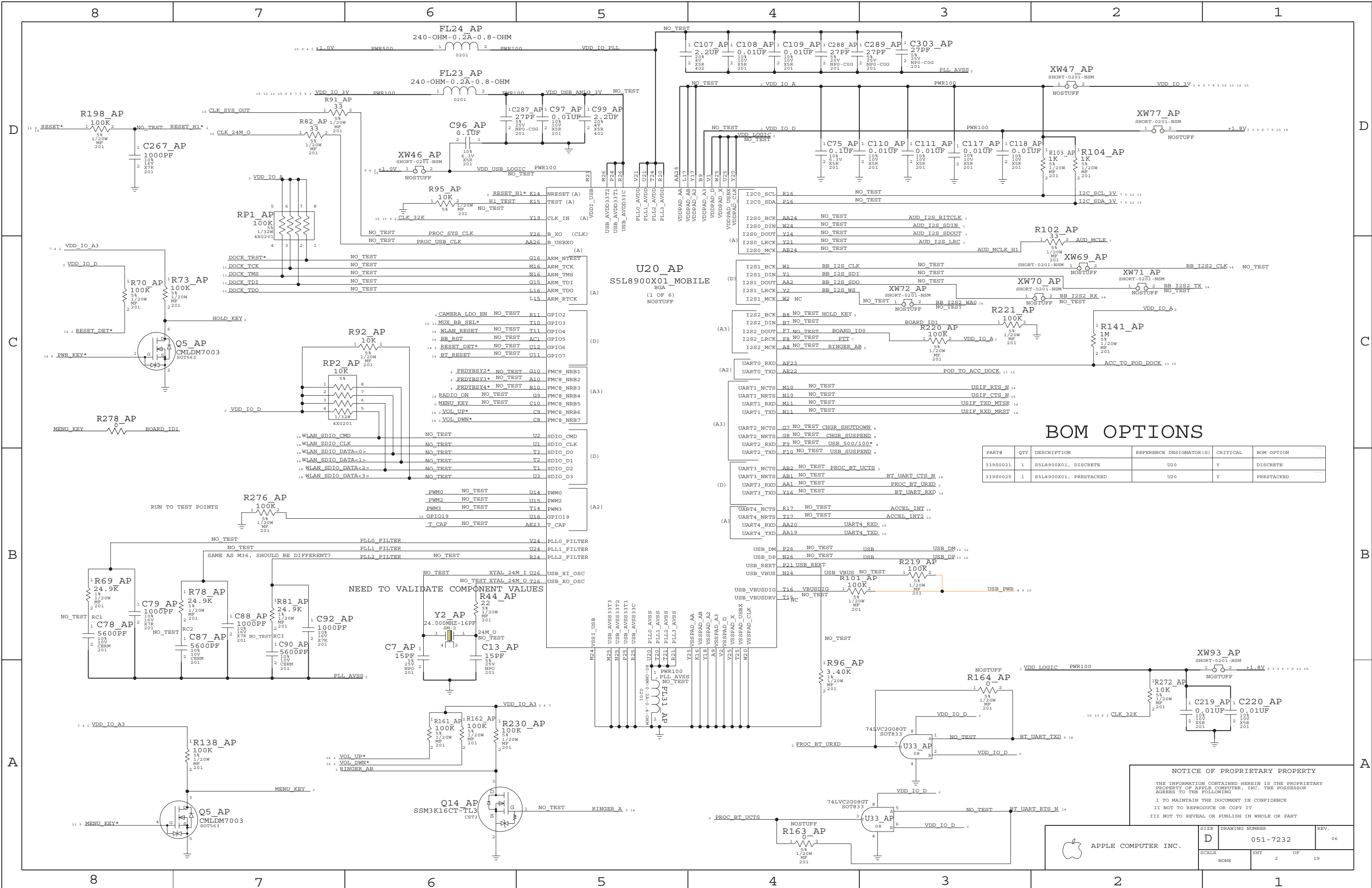
THIS PAGE	CONTENTS
02	H1 PERIPH INTERFACES (UART/SDIO)
03	H1 DDR SDRAM INTERFACE , NOR
04	H1 NAND, NAND FLASH (MASS STORAGE)
05	H1 CORE POWER & GND, MPL CLCD INTERFACE
06	H1 CAMERA, VIDEO OUT
07	WM8758
08	FIREWIRE PWR, USB OVERVOLTAGE, 4066 CHARGER
09	POWER MANAGER (+CHARGER +LED BOOST)
10	HEADPHONE CONECTOR
11	DOCK
12	1A USB BRICK DETECT, ACCELEROMETER
13	LCM CONNECTOR, TOUCH PANEL (TP) CONNECTOR, MISC CONN.
14	RADIO->AP BOARD TO BOARD
15	FUNCTIONAL TEST

4GB BOM - 630-7888  
 8GB BOM - 630-7890  
 BOARD - 820-2106  
 SCHEMATIC - 051-7232

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-7232	1	M68_MLB_SCHEMATIC	SCH	Y	
820-2106	1	M68_MLB_PCB	PCB	Y	
825-2029	1	EEE	EEE:???	Y	
805-7511	1	SHIELD_FENCE	SH1	Y	
805-7513	1	SHIELD_BOTTOM	SH2	Y	
805-7514	1	SHIELD_BOTTOM	SH2	Y	

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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

 APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7232	REV. 06
	SCALE NONE	SHT 1	OF 19



### BOM OPTIONS

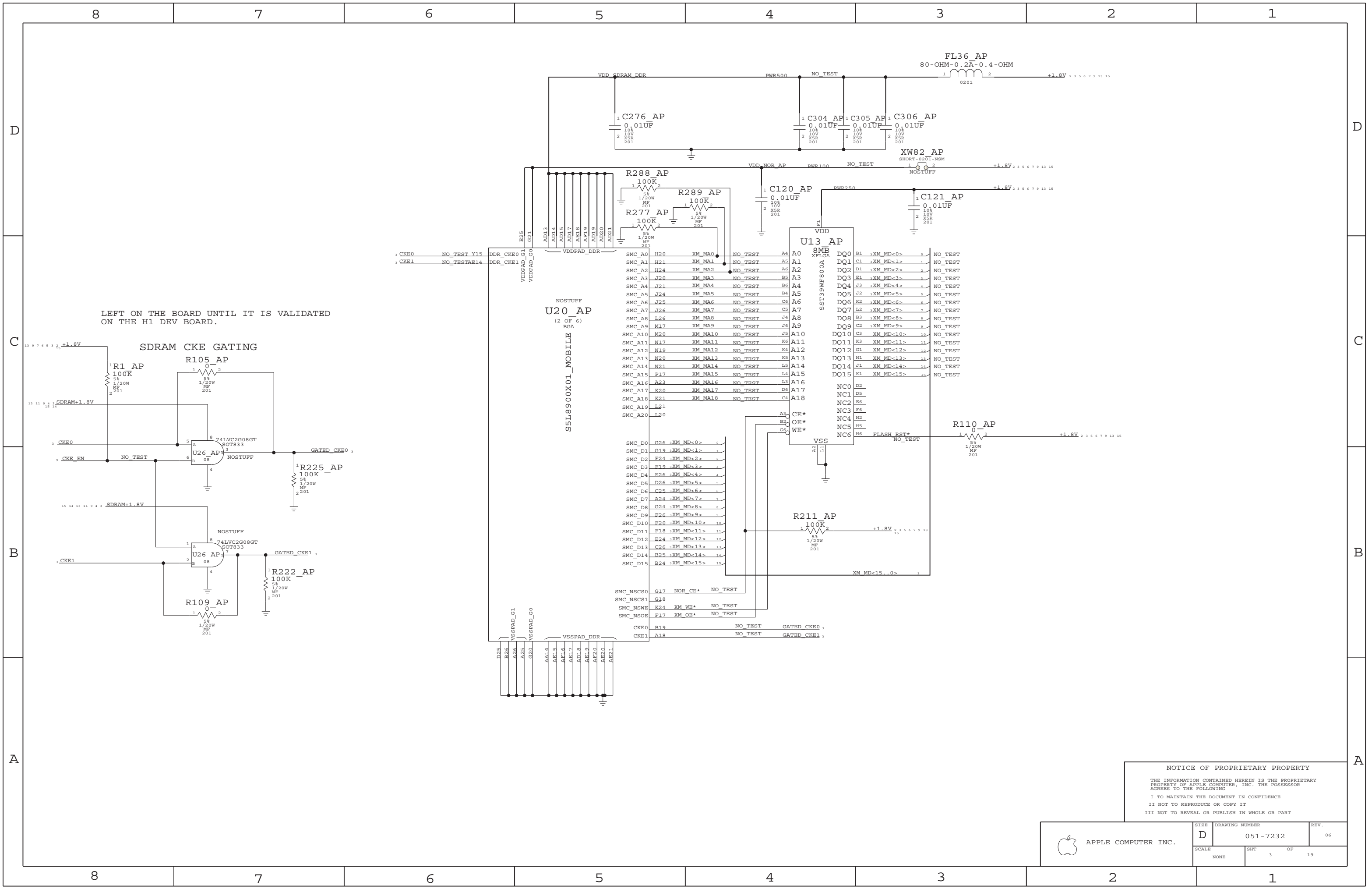
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
339S0021	1	S5L8900X01, DISCRETE	U20	Y	DISCRETE
339S0025	1	S5L8900X01, PRESTACKED	U20	Y	PRESTACKED

**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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART





8 7 6 5 4 3 2 1

D

D

C

C

B

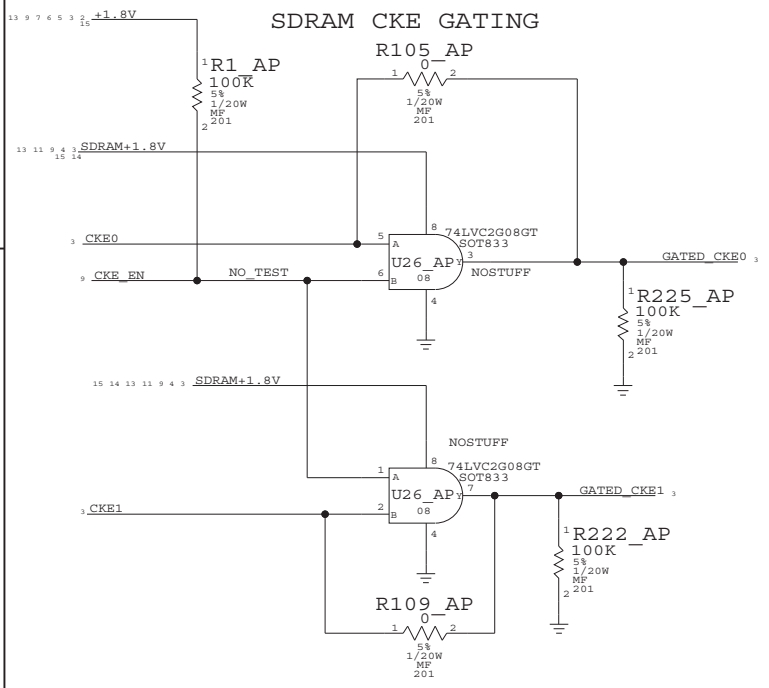
B

A

A

LEFT ON THE BOARD UNTIL IT IS VALIDATED ON THE H1 DEV BOARD.

SDRAM CKE GATING



U20 AP

(2 OF 6)

55L8900X01\_MOBILE

SMC_A0	H20	XM_MA0	NO_TEST	A4	A0
SMC_A1	H21	XM_MA1	NO_TEST	A5	A1
SMC_A2	H24	XM_MA2	NO_TEST	A6	A2
SMC_A3	J20	XM_MA3	NO_TEST	B5	A3
SMC_A4	J21	XM_MA4	NO_TEST	B6	A4
SMC_A5	J24	XM_MA5	NO_TEST	B4	A5
SMC_A6	J25	XM_MA6	NO_TEST	C6	A6
SMC_A7	J26	XM_MA7	NO_TEST	C5	A7
SMC_A8	L26	XM_MA8	NO_TEST	J4	A8
SMC_A9	M17	XM_MA9	NO_TEST	J6	A9
SMC_A10	M20	XM_MA10	NO_TEST	J5	A10
SMC_A11	N17	XM_MA11	NO_TEST	K6	A11
SMC_A12	N19	XM_MA12	NO_TEST	K4	A12
SMC_A13	N20	XM_MA13	NO_TEST	K5	A13
SMC_A14	N21	XM_MA14	NO_TEST	L5	A14
SMC_A15	F17	XM_MA15	NO_TEST	L4	A15
SMC_A16	A23	XM_MA16	NO_TEST	L3	A16
SMC_A17	K20	XM_MA17	NO_TEST	D6	A17
SMC_A18	K21	XM_MA18	NO_TEST	C4	A18
SMC_A19	L21				
SMC_A20	L20				
SMC_D0	G26	XM_MD<0>			
SMC_D1	G19	XM_MD<1>			
SMC_D2	F24	XM_MD<2>			
SMC_D3	F19	XM_MD<3>			
SMC_D4	E26	XM_MD<4>			
SMC_D5	D26	XM_MD<5>			
SMC_D6	C26	XM_MD<6>			
SMC_D7	A24	XM_MD<7>			
SMC_D8	G24	XM_MD<8>			
SMC_D9	F26	XM_MD<9>			
SMC_D10	F20	XM_MD<10>			
SMC_D11	F18	XM_MD<11>			
SMC_D12	E24	XM_MD<12>			
SMC_D13	C26	XM_MD<13>			
SMC_D14	B25	XM_MD<14>			
SMC_D15	B24	XM_MD<15>			
SMC_NSCS0	G17	NOR_CE*	NO_TEST		
SMC_NSCS1	G18				
SMC_NSWE	K24	XM_WE*	NO_TEST		
SMC_NSOE	F17	XM_OE*	NO_TEST		
CKE0	B19	NO_TEST	GATED_CKE0		
CKE1	A18	NO_TEST	GATED_CKE1		

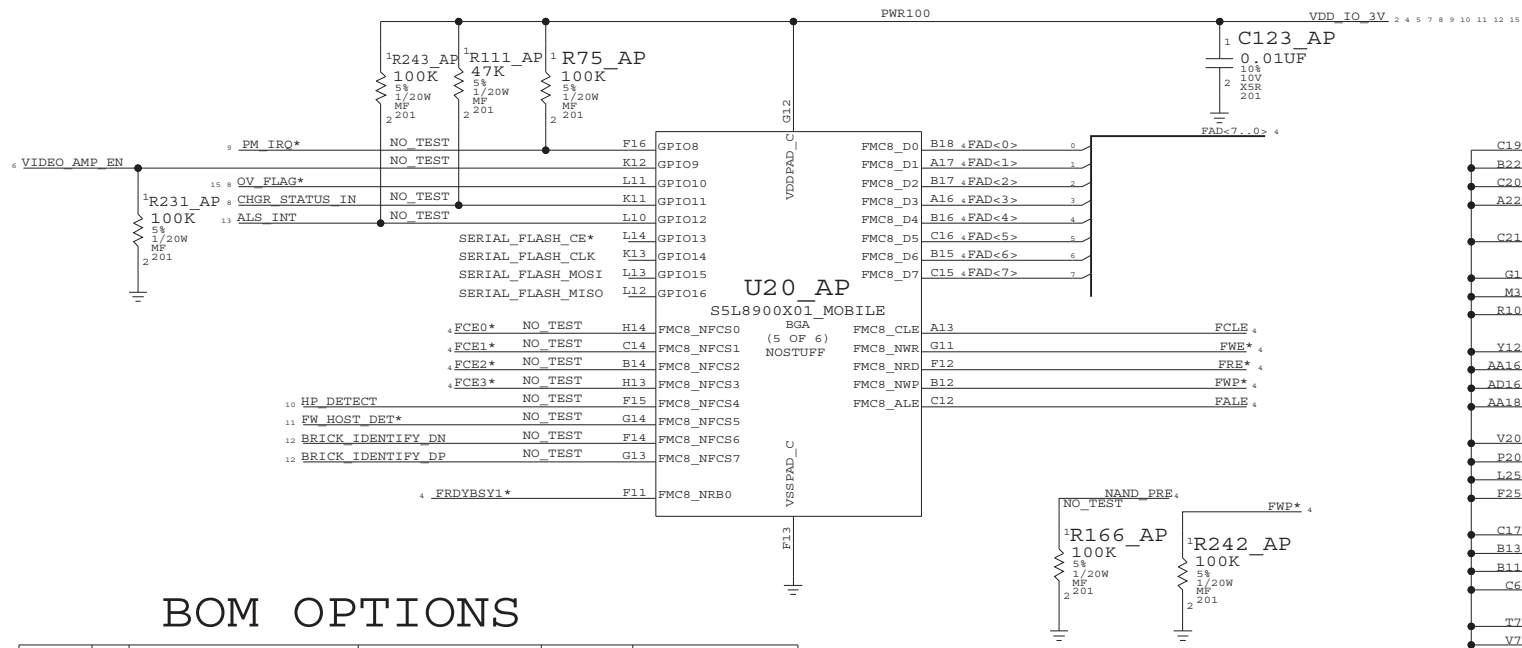
NOTICE OF PROPRIETARY PROPERTY  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	SHT	OF	REV.
NONE	3	19	

8 7 6 5 4 3 2 1



# NAND FLASH & GPIO

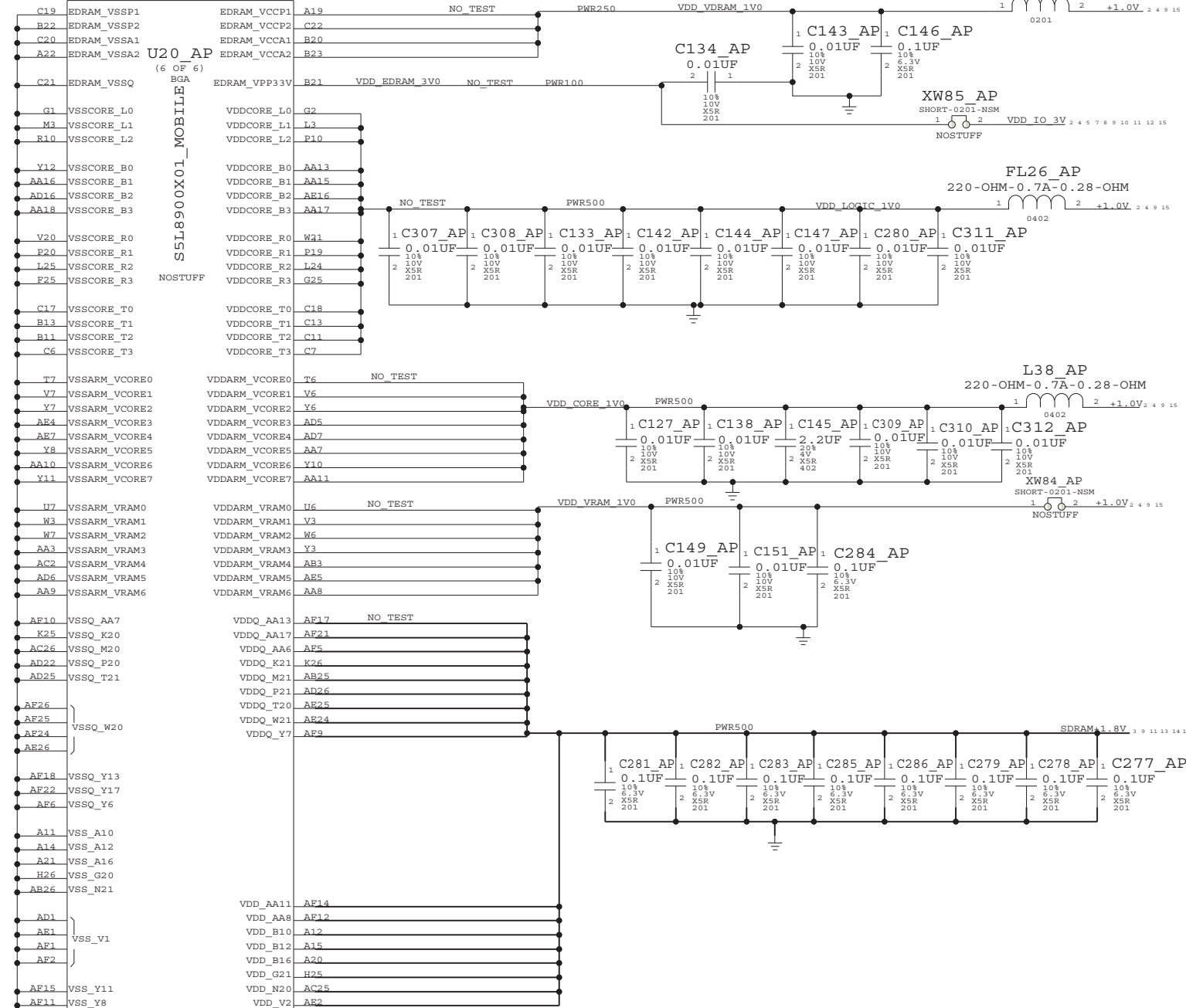
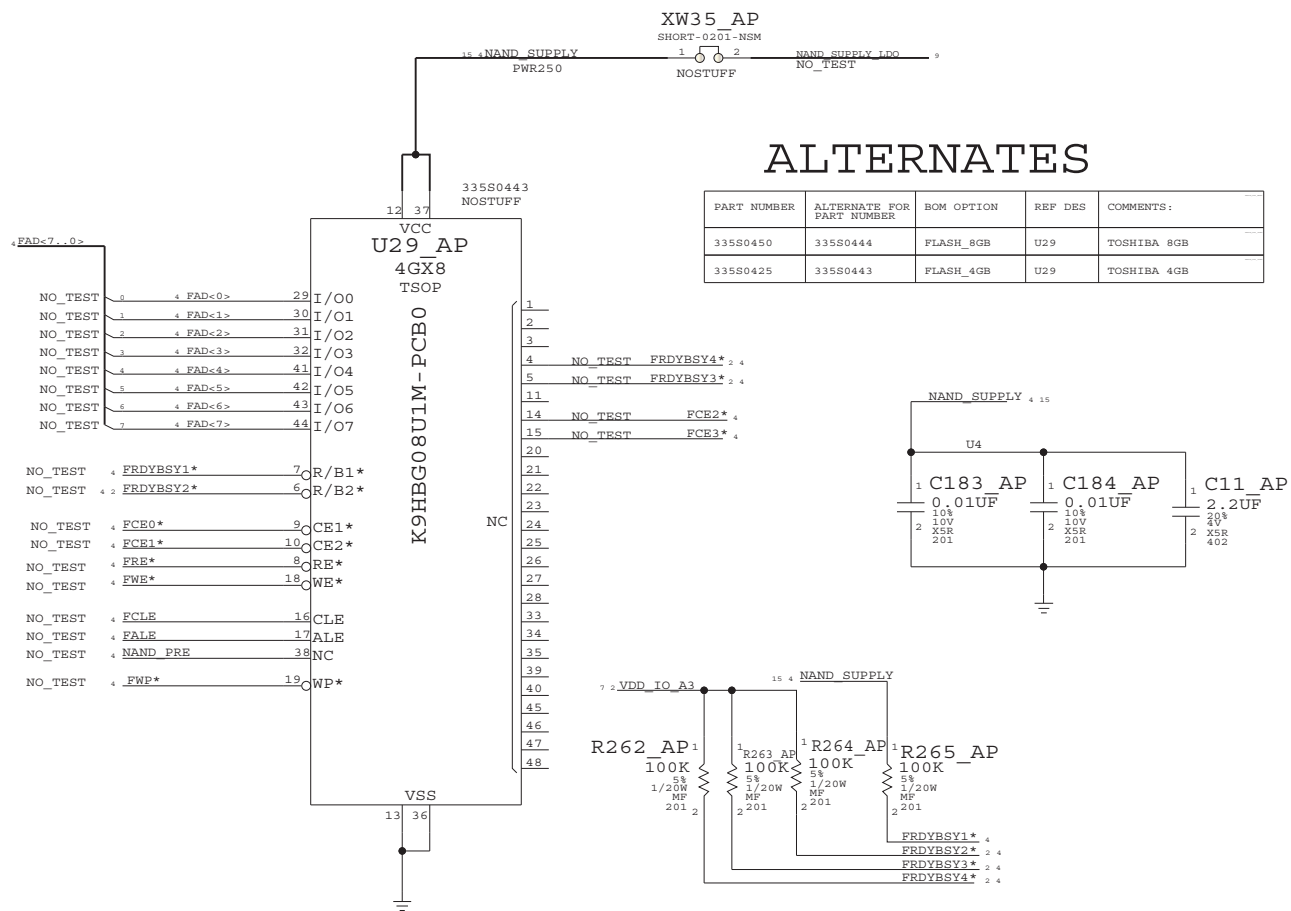


## BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S0443	1	4GB SAMSUNG, 63NM FLASH	U29	Y	FLASH_4GB
335S0444	1	8GB SAMSUNG, 63NM FLASH	U29	Y	FLASH_8GB

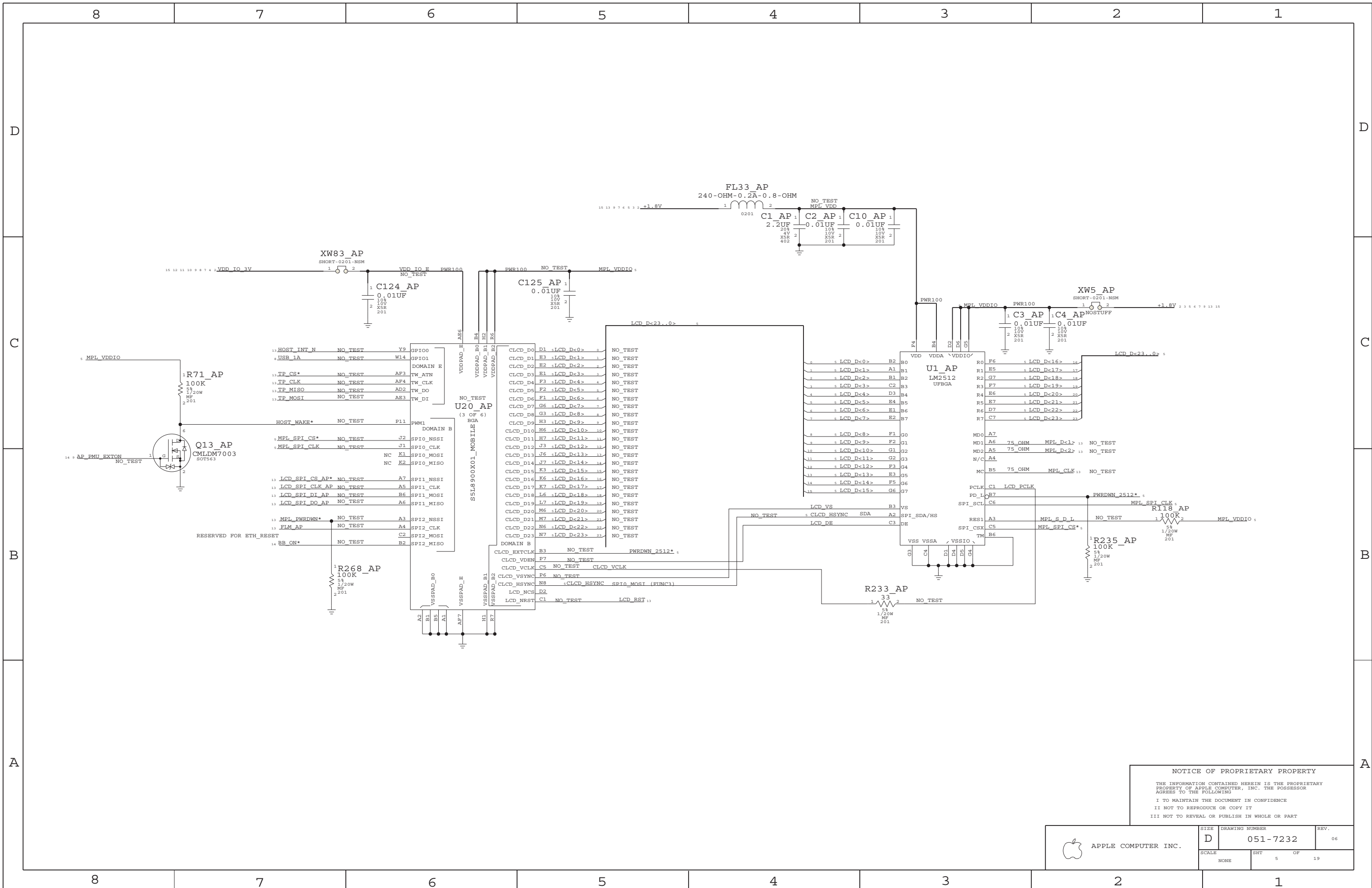
## ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S0450	335S0444	FLASH_8GB	U29	TOSHIBA 8GB
335S0425	335S0443	FLASH_4GB	U29	TOSHIBA 4GB



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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	SHT	OF	19
NONE	4		



NOTICE OF PROPRIETARY PROPERTY

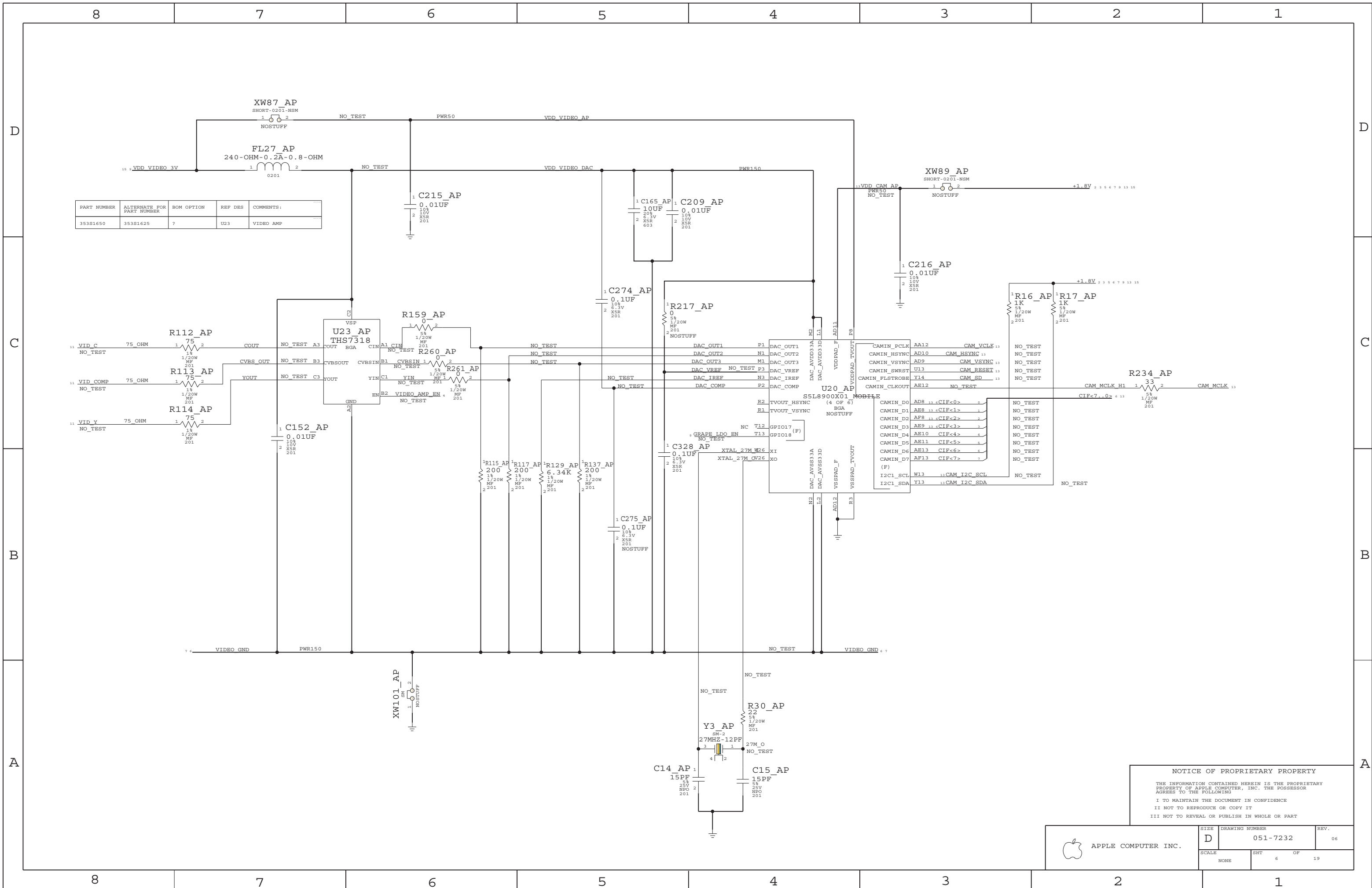
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

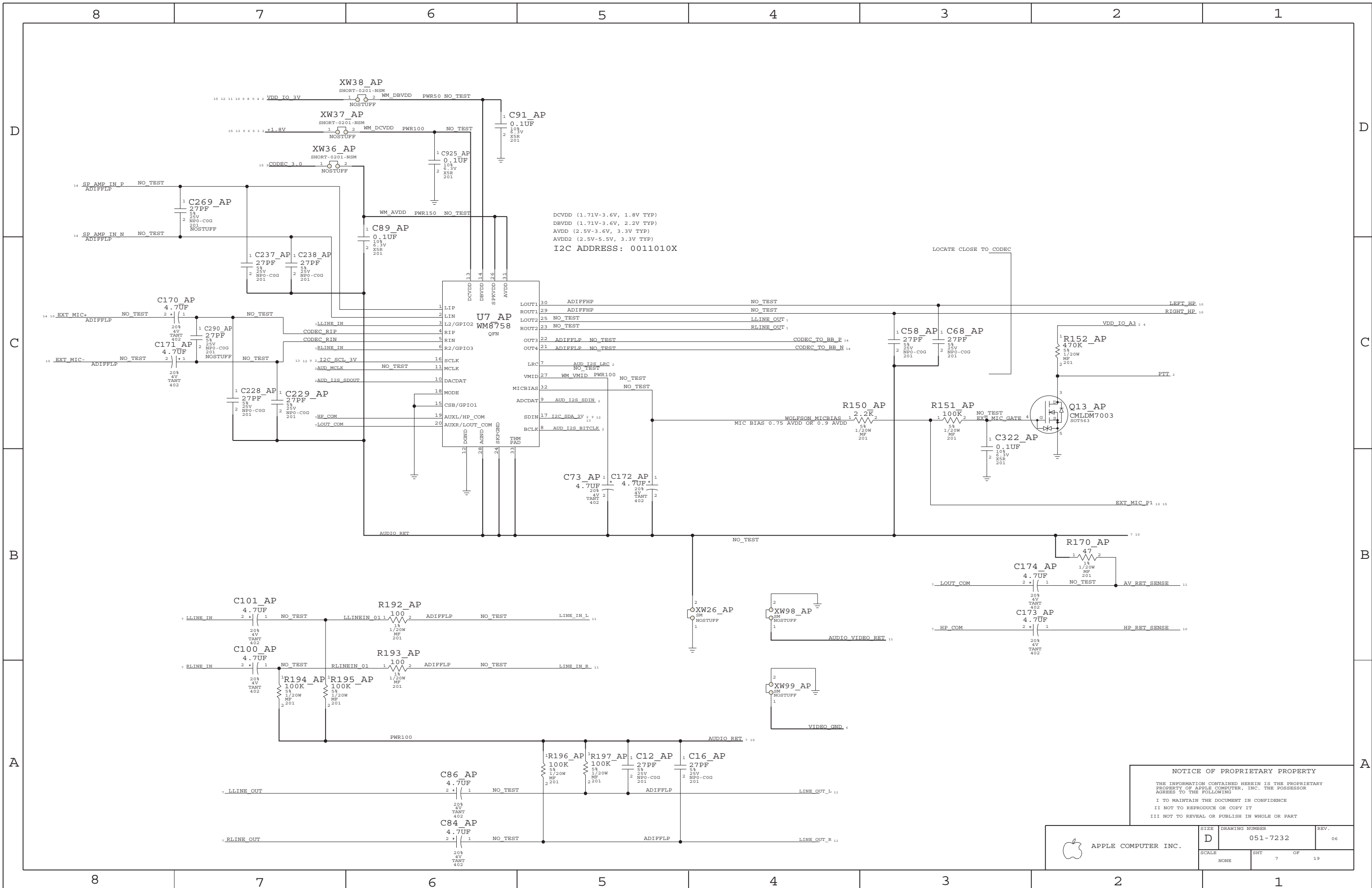
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	SHT 5 OF 19		
NONE			



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
353S1650	353S1625	?	U23	VIDEO AMP

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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

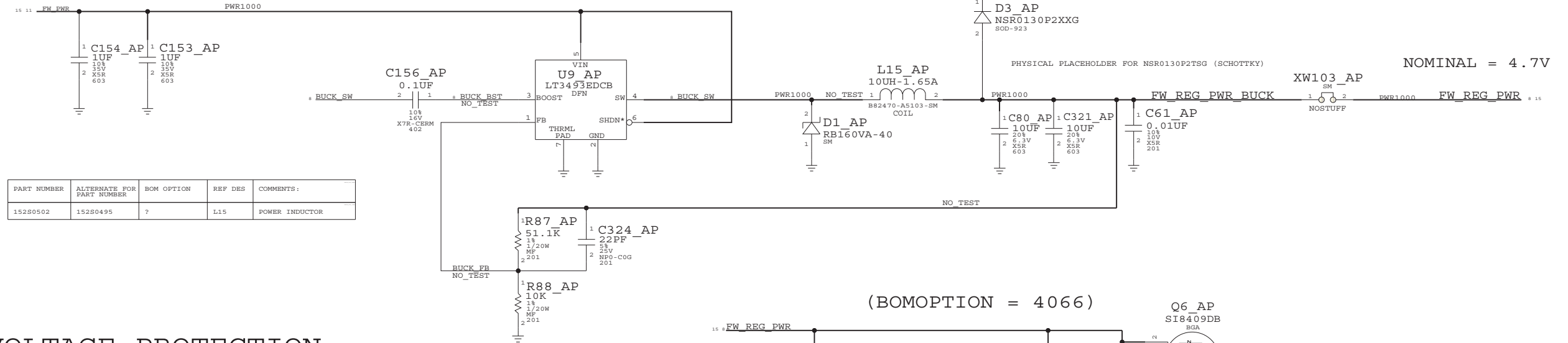
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	NONE	SHT	6 OF 19



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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

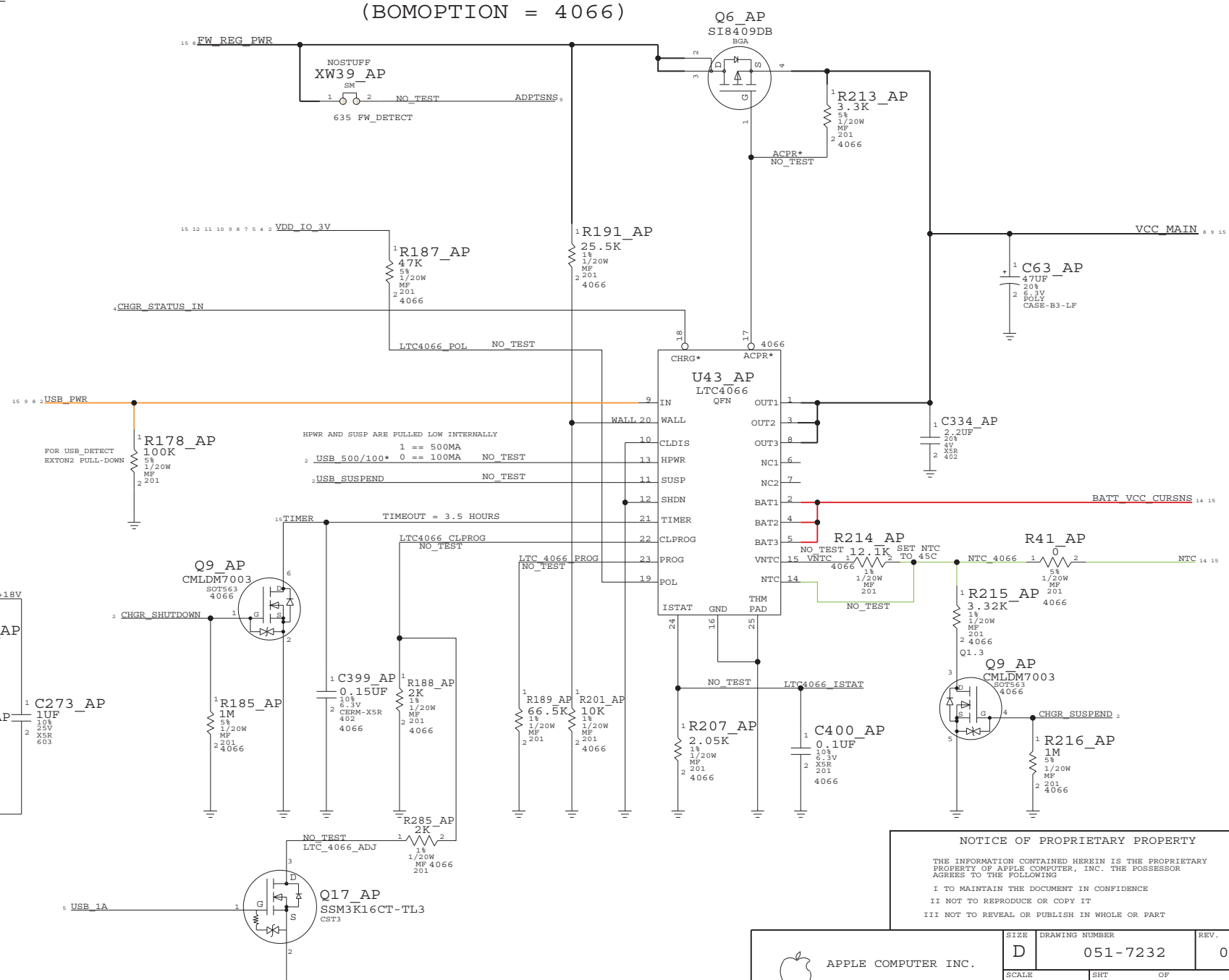
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	NONE	SHT	7 OF 19

# FIREWIRE INPUT POWER

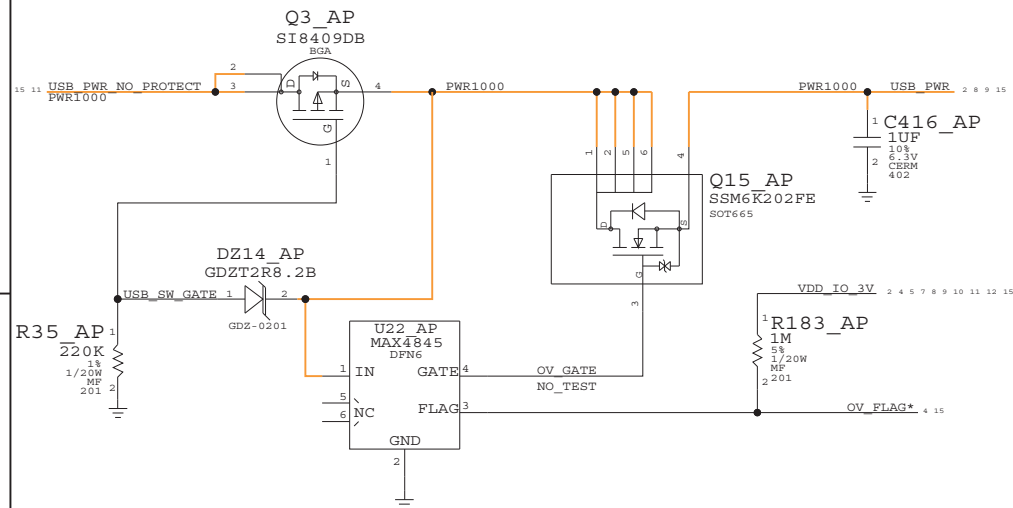


PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
152S0502	152S0495	?	L15	POWER INDUCTOR

(BOMOPTION = 4066)

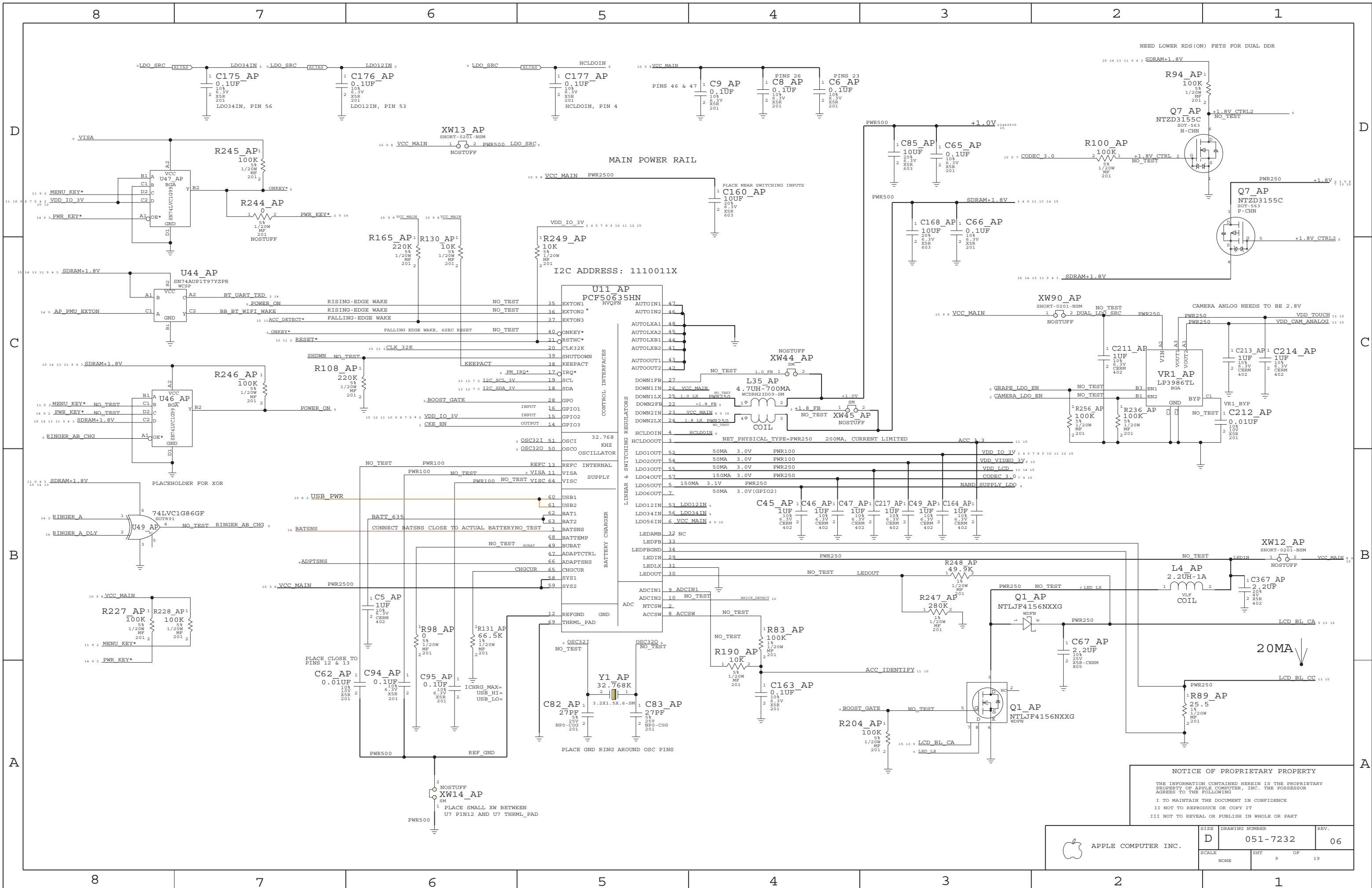


# USB OVER VOLTAGE PROTECTION



**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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	SHT	OF	19
NONE	8		



**NOTICE OF PROPRIETARY PROPERTY**

THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:

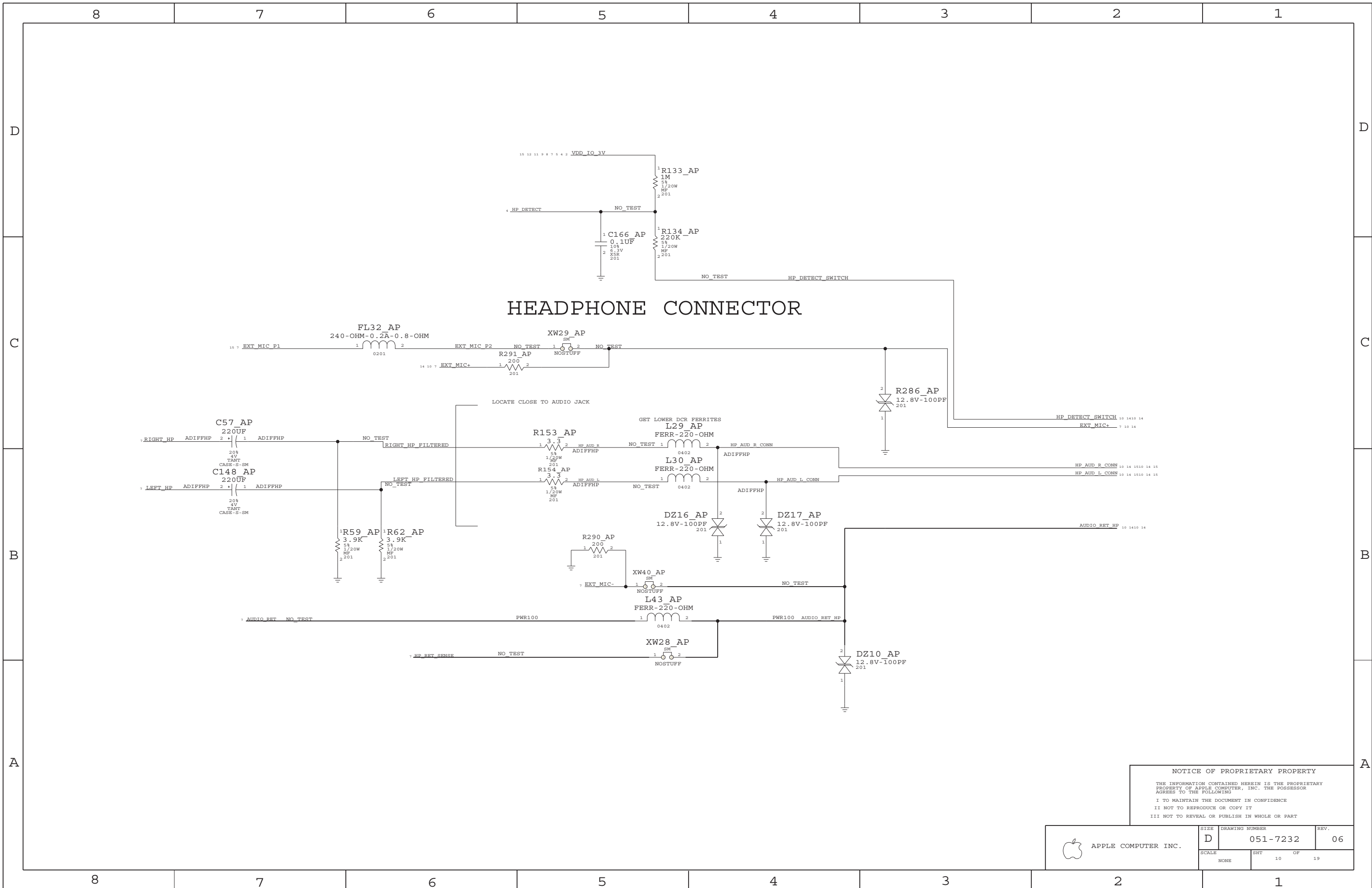
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER <b>051-7232</b>	REV. <b>06</b>
	SCALE NONE	SHT 9	OF 19

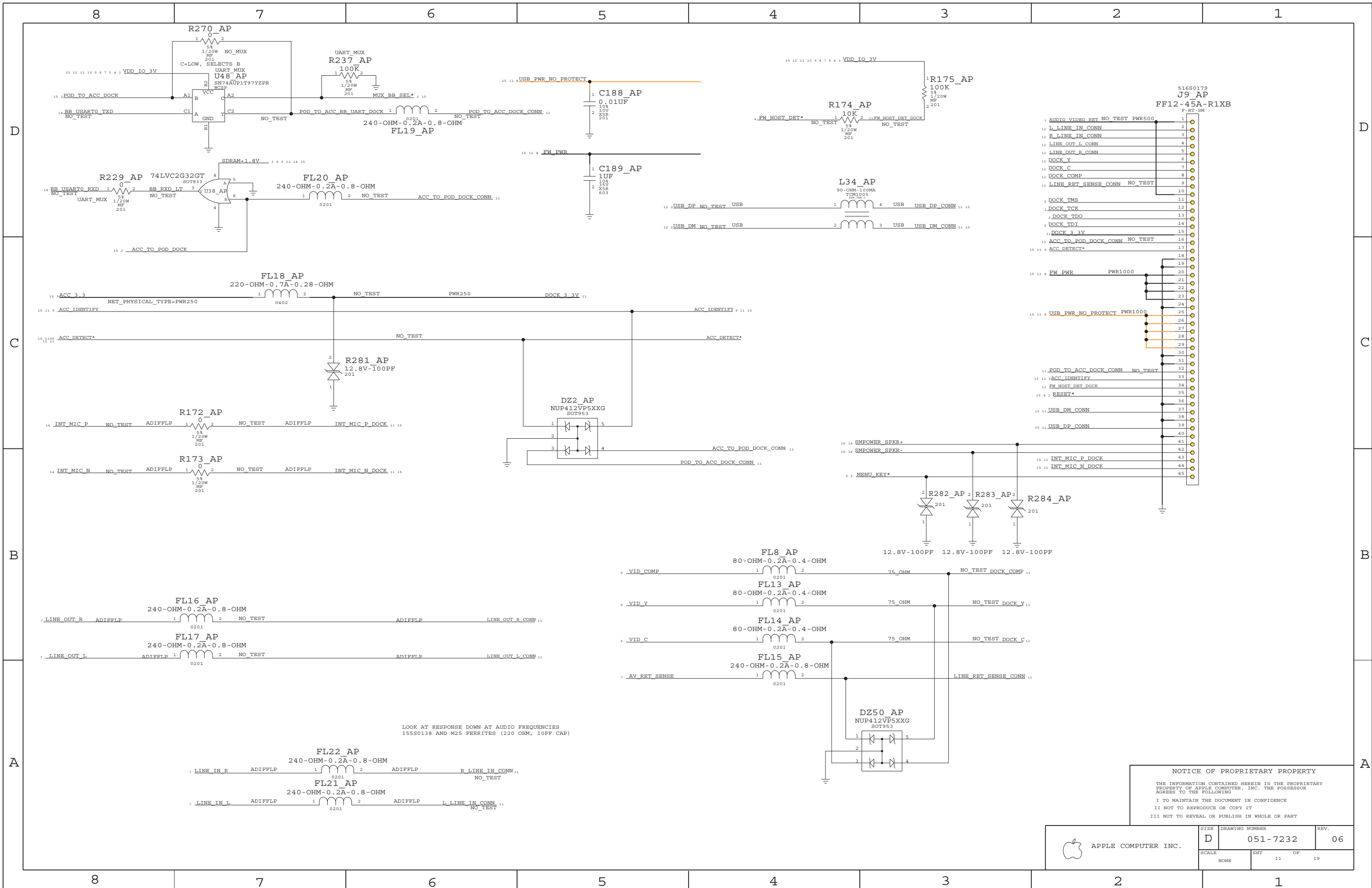




**NOTICE OF PROPRIETARY PROPERTY**  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER <b>051-7232</b>	REV. <b>06</b>
	SCALE NONE	SHT 10	OF 19





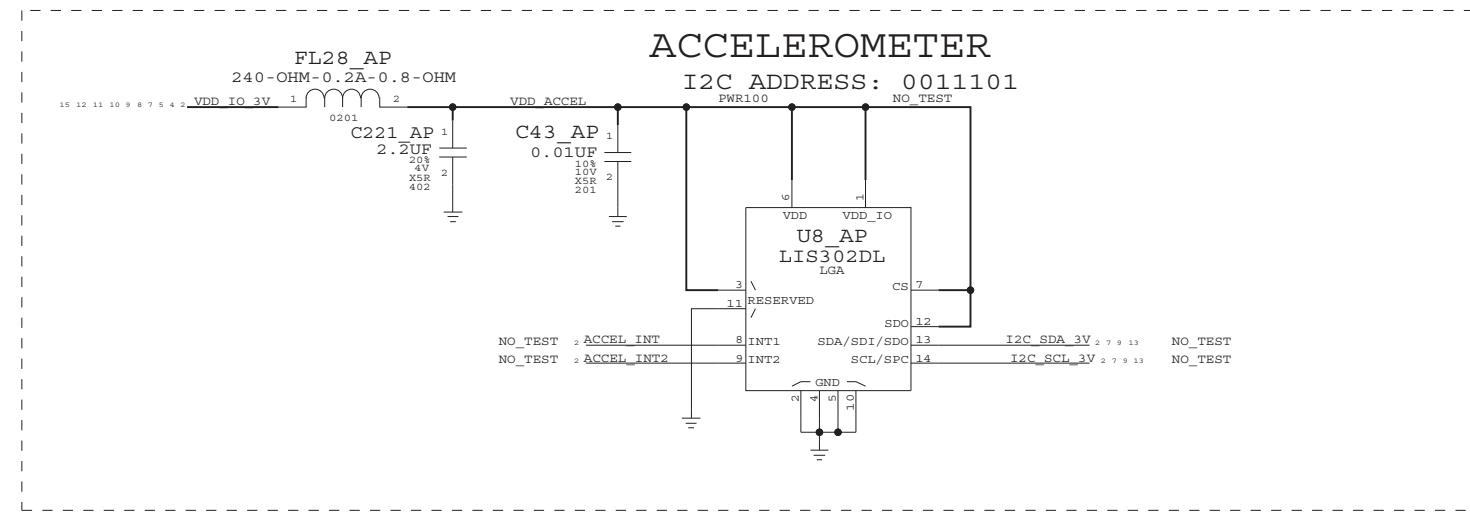
LOOK AT RESPONSE DOWN AT AUDIO FREQUENCIES  
155S0138 AND M25 FERRITES (220 OHM, 10PF CAP)

**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 THE DOCUMENT IN CONFIDENCE  
II NOT TO REPRODUCE OR COPY IT  
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	SHT 11 OF 19		
NONE			

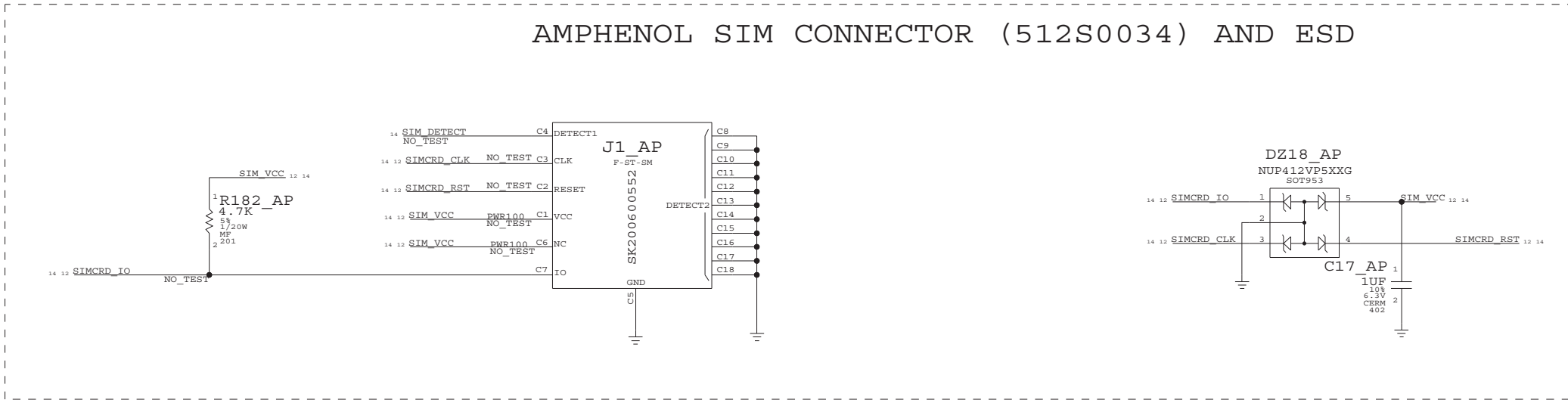
D

D



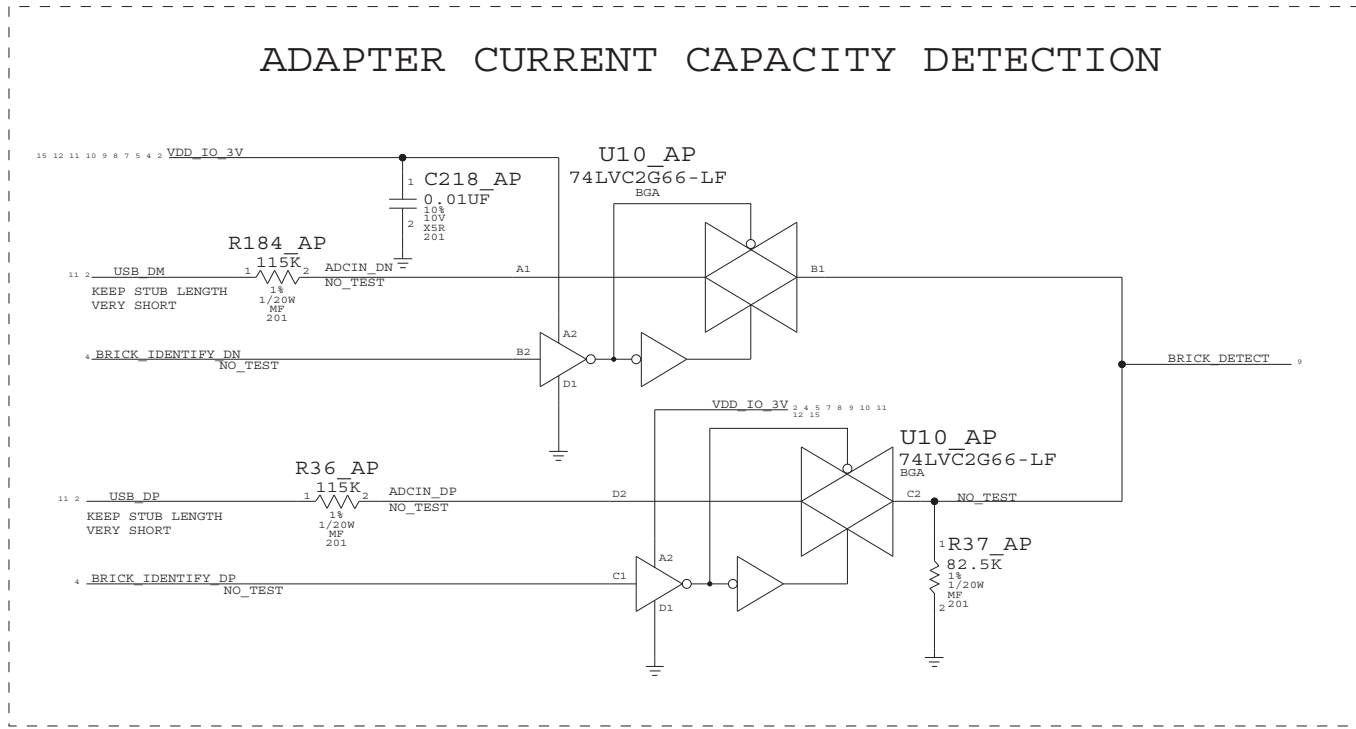
C

C



B

B



A

A

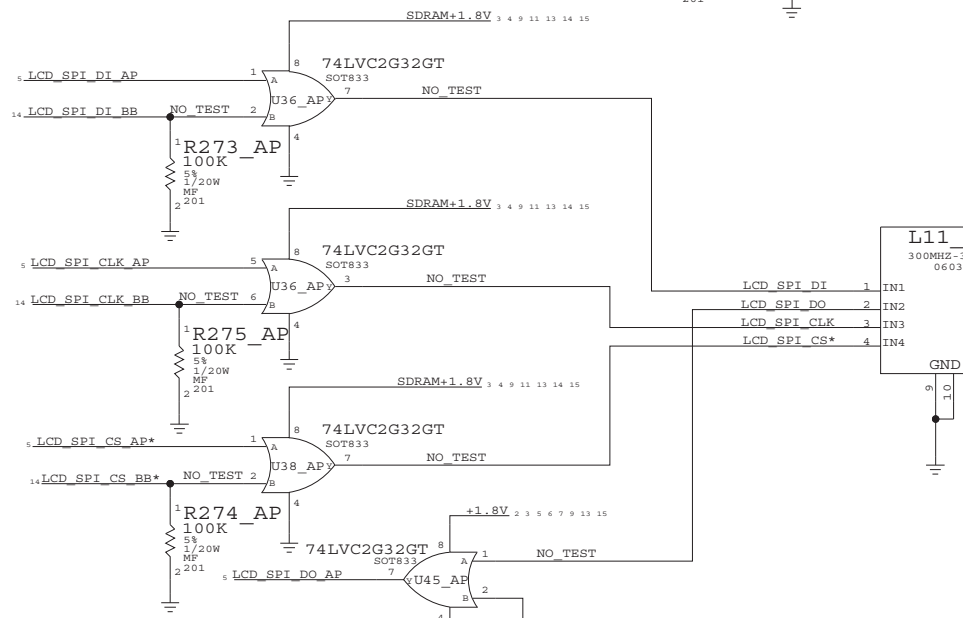
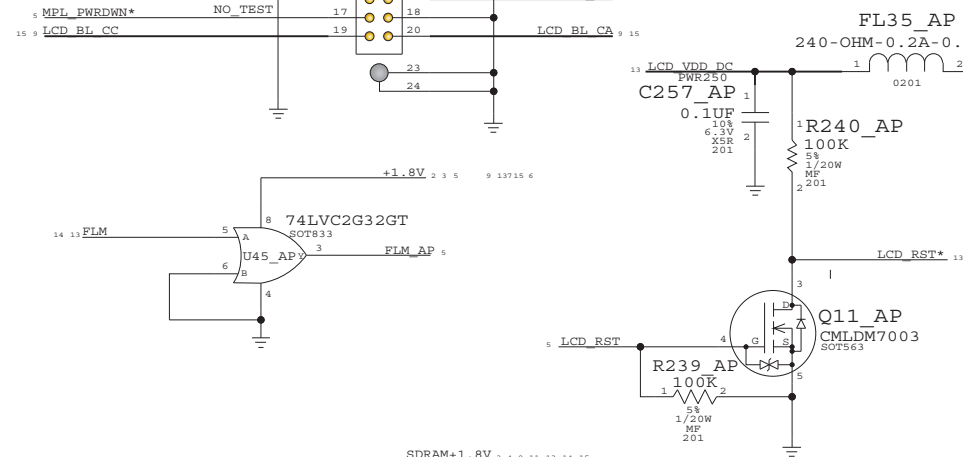
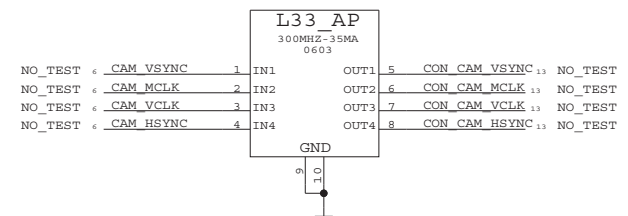
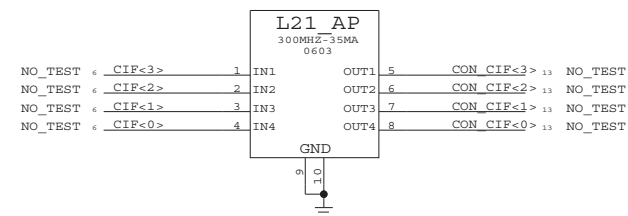
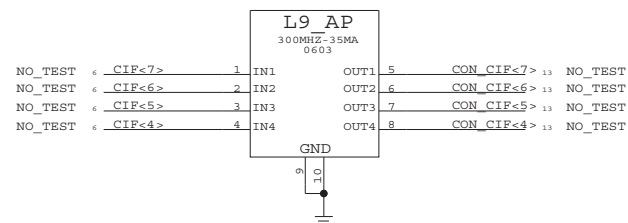
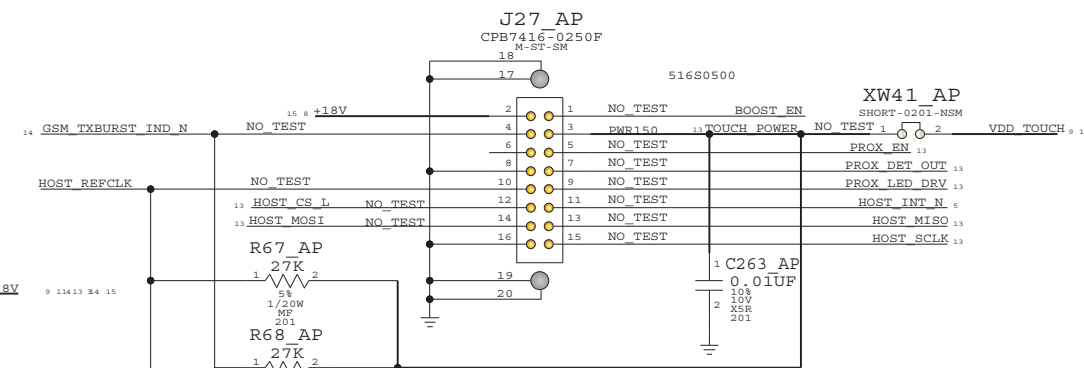
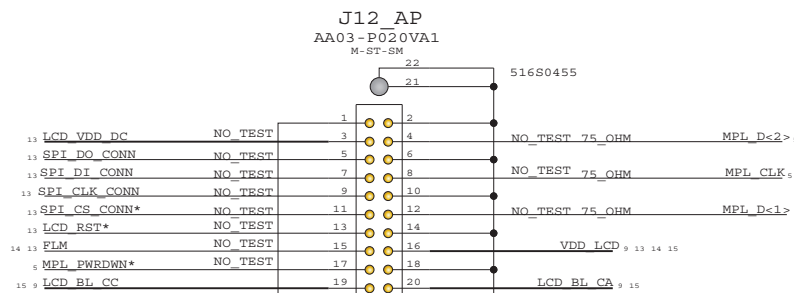
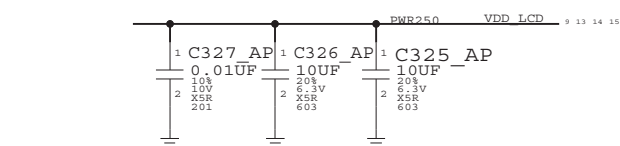
**NOTICE OF PROPRIETARY PROPERTY**  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER <b>051-7232</b>	REV. <b>06</b>
	SCALE NONE	SHT 12	OF 19

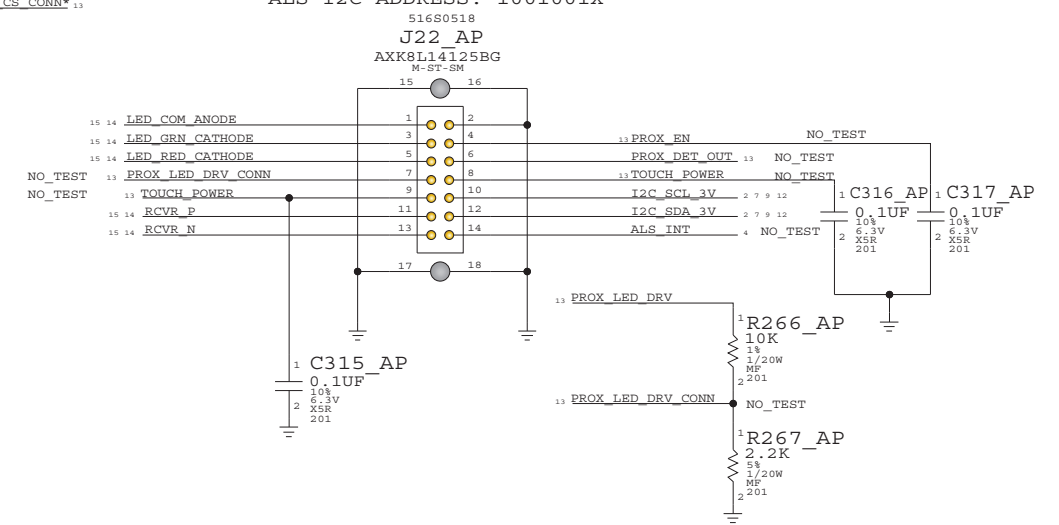
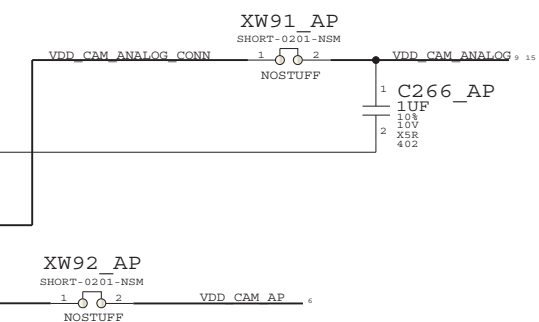
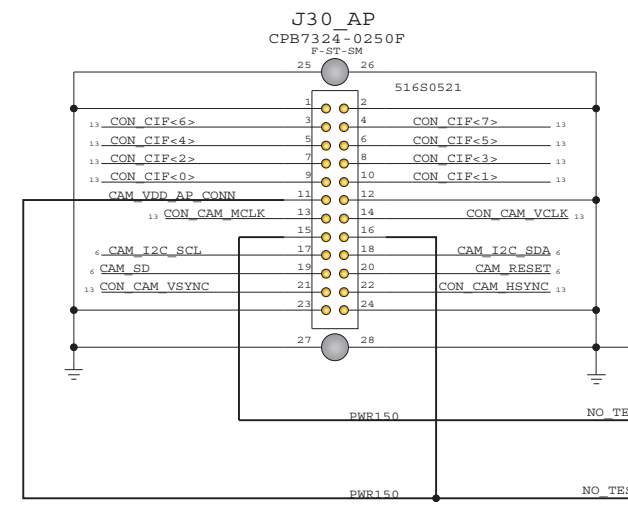
# LCD CONNECTOR

# GRAPE CONNECTOR (POR)

# PROX/RECV CONNECTOR



# CAMERA CONNECTOR



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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	SHT	OF	19
NONE	13		

D

D

C

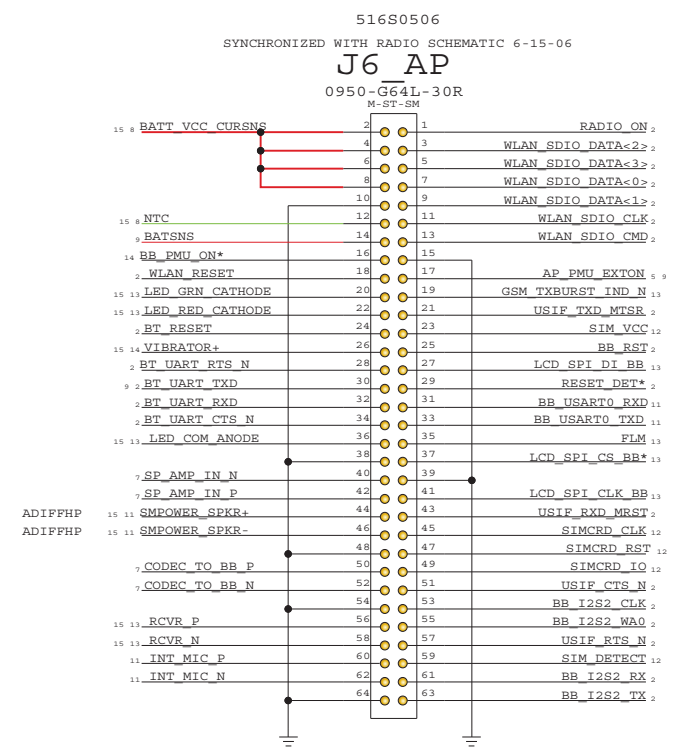
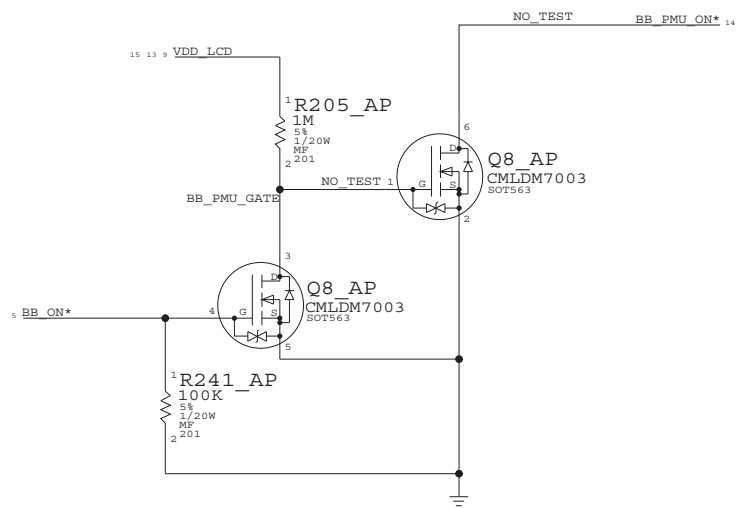
C

B

B

A

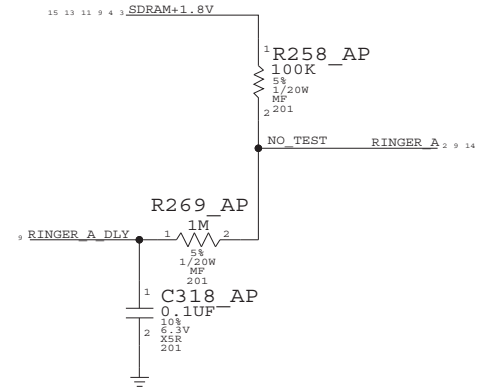
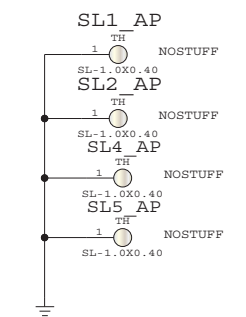
A



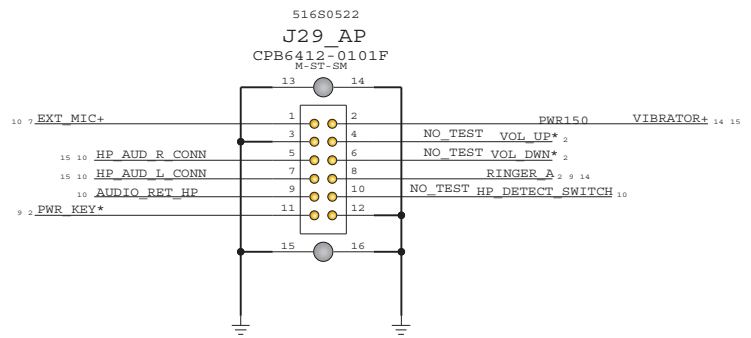
SHIELD CAN



SHIELD CAN ALIGNMENT SLOTS



HOLD/VOLUME UP&DOWN



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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	SHT 14 OF 19		
NONE			

# TEST POINTS

## GPIO

FUNC\_TEST MUX\_BB\_SEL\* 2 11

FUNC\_TEST GPIO19 2

## AUDIO

FUNC\_TEST EXT\_MIC\_P1 7 10

### SPEAKER

FUNC\_TEST SMPPOWER\_SPKR+ 11 14

FUNC\_TEST SMPPOWER\_SPKR- 11 14

### RECEIVER

FUNC\_TEST RCVR\_P 13 14

FUNC\_TEST RCVR\_N 13 14

### INT MIC

FUNC\_TEST HP\_AUD\_R\_CONN 10 14

FUNC\_TEST HP\_AUD\_L\_CONN 10 14

FUNC\_TEST INT\_MIC\_P\_DOCK 11

FUNC\_TEST INT\_MIC\_N\_DOCK 11

## CLOCK

FUNC\_TEST CLK\_24M\_O 2

FUNC\_TEST CLK\_SYS\_OUT 2

FUNC\_TEST CLK\_32K 2 9 13

## LED

FUNC\_TEST LED\_GRN\_CATHODE 13 14

FUNC\_TEST LED\_RED\_CATHODE 13 14

FUNC\_TEST LED\_COM\_ANODE 13 14

## VIBE

FUNC\_TEST VIBRATOR+ 14

## UART

FUNC\_TEST POD\_TO\_ACC\_DOCK 2 11

FUNC\_TEST ACC\_TO\_POD\_DOCK 2 11

FUNC\_TEST UART4\_RXD 2

FUNC\_TEST UART4\_TXD 2

## USB

FUNC\_TEST USB\_DP\_CONN 11

FUNC\_TEST USB\_DM\_CONN 11

## POWER

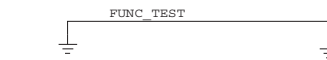
FUNC\_TEST +1.8V 8 13

FUNC\_TEST VCC\_MAIN 8 9

FUNC\_TEST FW\_PWR 8 11

FUNC\_TEST USB\_PWR\_NO\_PROTECT 8 11

FUNC\_TEST BATT\_VCC\_CURSENS 8 14



FUNC\_TEST FW\_REG\_PWR 8

FUNC\_TEST USB\_PWR 2 8 9

FUNC\_TEST +1.0V 2 4 9

FUNC\_TEST SDRAM+1.8V 3 4 9 11 13 14

FUNC\_TEST +1.8V 2 3 5 6 7 9 13

FUNC\_TEST ACC\_3.3 9 11

FUNC\_TEST VDD\_IO\_3V 2 4 5 7 8 9 10 11 12

FUNC\_TEST VDD\_VIDEO\_3V 6 9

FUNC\_TEST VDD\_LCD 9 13 14

FUNC\_TEST CODEC\_3.0 7 9

FUNC\_TEST NAND\_SUPPLY 4

FUNC\_TEST VDD\_TOUCH 9 13

FUNC\_TEST VDD\_CAM\_ANALOG 9 13

FUNC\_TEST LCD\_BL\_CC 9 13

FUNC\_TEST LCD\_BL\_CA 9 13

FUNC\_TEST OV\_FLAG\* 4 8

FUNC\_TEST NTC 8 14

FUNC\_TEST TIMER 8

## RESET

FUNC\_TEST RESET\* 2 9 11

## ACCESSORY DETECT

FUNC\_TEST ACC\_DETECT\* 9 11

FUNC\_TEST ACC\_IDENTIFY 9 11

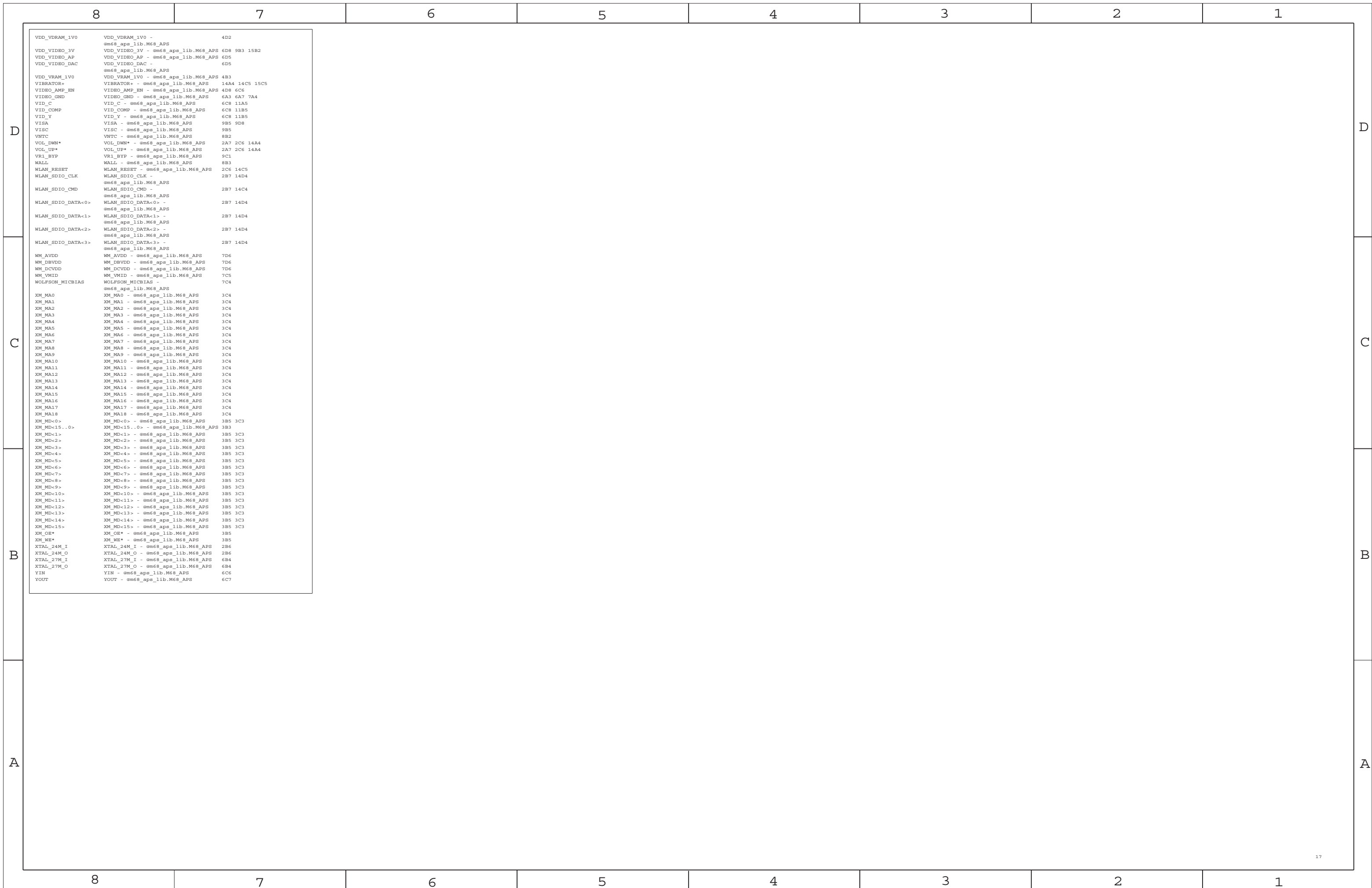
### NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7232	06
SCALE	SHT	OF	19
NONE	15		









8			7			6			5			4			3			2			1		
Title: Cref Part Report Design: m68_aps Date: Nov 10 11:08:47 2006			C263 CAP_201 m68_aps [13D2] C266 CAP_402 m68_aps [13A3] C267 CAP_201 m68_aps [2D8] C269 CAP_201 m68_aps [7D7] C270 CAP_201 m68_aps [8A7] C271 CAP_402 m68_aps [8A7] C272 CAP_0201 m68_aps [8A6] C273 CAP_603 m68_aps [8A5] C274 CAP_201 m68_aps [6C5] C275 CAP_201 m68_aps [6B5] C276 CAP_201 m68_aps [3D5] C277 CAP_201 m68_aps [4B1] C278 CAP_201 m68_aps [4B1] C279 CAP_201 m68_aps [4B1] C280 CAP_201 m68_aps [4C2] C281 CAP_201 m68_aps [4B2] C282 CAP_201 m68_aps [4B2] C283 CAP_201 m68_aps [4B2] C284 CAP_201 m68_aps [4B2] C285 CAP_201 m68_aps [4B2] C286 CAP_201 m68_aps [4B2] C287 CAP_201 m68_aps [2D6] C288 CAP_201 m68_aps [2D4] C289 CAP_201 m68_aps [2D4] C290 CAP_201 m68_aps [7C7] C303 CAP_201 m68_aps [2D3] C304 CAP_201 m68_aps [3D4] C305 CAP_201 m68_aps [3D4] C306 CAP_201 m68_aps [3D3] C307 CAP_201 m68_aps [4C3] C308 CAP_201 m68_aps [4C3] C309 CAP_201 m68_aps [4C2] C310 CAP_201 m68_aps [4C1] C311 CAP_201 m68_aps [4C1] C312 CAP_201 m68_aps [4C1] C315 CAP_201 m68_aps [13A2] C316 CAP_201 m68_aps [13B1] C317 CAP_201 m68_aps [13B1] C318 CAP_201 m68_aps [14A6] C321 CAP_603 m68_aps [8D3] C322 CAP_201 m68_aps [7B3] C324 CAP_201 m68_aps [8C5] C325 CAP_603 m68_aps [13D7] C326 CAP_603 m68_aps [13D7] C327 CAP_201 m68_aps [13D7] C328 CAP_201 m68_aps [6B5] C399 CAP_402 m68_aps [8A4] C400 CAP_201 m68_aps [8A2] C416 CAP_402 m68_aps [8C6] C925 CAP_201 m68_aps [7D6] D1 DIODE_SCHOT_SM m68_aps [8D4] D2 DIODE_SCHOT_SOD-323 m68_aps [8B6] D3 DIODE_SCHOT_2P_SOD-9 m68_aps [8D3] 23 DZ2 SUPPR_NUP412VPS_SOT9 m68_aps [11C5] 53 DZ10 SUPPR_TRANSIENT1_201 m68_aps [10B4] DZ16 SUPPR_TRANSIENT1_201 m68_aps [10B4] DZ17 SUPPR_TRANSIENT1_201 m68_aps [10B4] DZ18 SUPPR_NUP412VPS_SOT9 m68_aps [12C4] 53 FL8 FILTER_2P_0201 m68_aps [11B4] FL13 FILTER_2P_0201 m68_aps [11B4] FL14 FILTER_2P_0201 m68_aps [11A4] FL15 FILTER_2P_0201 m68_aps [11A4] FL16 FILTER_2P_0201 m68_aps [11B7] FL17 FILTER_2P_0201 m68_aps [11A7] FL18 FILTER_2P_0402 m68_aps [11C7] FL19 FILTER_2P_0201 m68_aps [11D6] FL20 FILTER_2P_0201 m68_aps [11D7] FL21 FILTER_2P_0201 m68_aps [11A7] FL22 FILTER_2P_0201 m68_aps [11A7] FL23 FILTER_2P_0201 m68_aps [2D6] FL24 FILTER_2P_0201 m68_aps [2D6] FL25 FILTER_2P_0201 m68_aps [4D1] FL26 FILTER_2P_0402 m68_aps [4C1] FL27 FILTER_2P_0201 m68_aps [6D7] FL28 FILTER_2P_0201 m68_aps [12D6] FL31 FILTER_2P_0201 m68_aps [2A5] FL32 FILTER_2P_0201 m68_aps [10C6] FL33 FILTER_2P_0201 m68_aps [5D4] FL35 FILTER_2P_0201 m68_aps [13D4] FL36 FILTER_2P_0201 m68_aps [3D3] J1 CON_F18ST_SDCARD_SM m68_aps [12C6] F-ST-SM J6 CON_M64ST_D_SM_M-ST- m68_aps [14D5] SM J9 CON_F45RT_D_SM_F-RT- m68_aps [11D2] SM J12 CON_M20ST_D4MT_SM_M- m68_aps [13D5] ST-SM J22 CON_M14ST_D4MT_SM_M- m68_aps [13B2] ST-SM J27 CON_M16ST_D4MT_SM_M- m68_aps [13D2] ST-SM J29 CON_M12ST_D4MT_SM_M- m68_aps [14B5] ST-SM J30 CON_F24ST_D4MT_SM_F- m68_aps [13A5] ST-SM L4 IND_VLF m68_aps [9B2] L9 FILTER_10P_0603 m68_aps [13C7] L10 FILTER_10P_0603 m68_aps [13B4] L11 FILTER_10P_0603 m68_aps [13C2] L12 FILTER_10P_0603 m68_aps [13C2] L15 IND_B82470-AS103-SM m68_aps [8D4] L21 FILTER_10P_0603 m68_aps [13C7] L29 IND_0402 m68_aps [10C5] L30 IND_0402 m68_aps [10C5] L33 FILTER_10P_0603 m68_aps [13B7] L34 FILTER_4P_TCM1005 m68_aps [11C4] L35 IND_4P_2CO1L_WCDRH23 m68_aps [9C4] D9-SM L38 FILTER_2P_0402 m68_aps [4C1] L39 IND_VLF3010AT-SM m68_aps [8B6] L43 IND_0402 m68_aps [10B5] Q1 TRA_NCH_SCHOT_6P_WDF m68_aps [9B3 9A3] N Q5 TRA_DUAL_CMLDM7003_S m68_aps [2A7 2C8] OT563 Q6 TRA_S18409DB_BGA m68_aps [8C2] Q7 TRA_DUAL_NPCH_NTZD31 m68_aps [9C1 9D1] S5C_SOT-563 Q8 TRA_DUAL_CMLDM7003_S m68_aps [14C7 14C8] OT563 Q9 TRA_DUAL_CMLDM7003_S m68_aps [8A2 8B4] OT563 Q11 TRA_DUAL_CMLDM7003_S m68_aps [13C3 13C4] OT563 Q13 TRA_DUAL_CMLDM7003_S m68_aps [15B8] OT563 Q14 TRA_MOSFET_NCHN_3P_C m68_aps [2A6] OT563 ST3 Q15 TRA_NCH_SSM6K202FE_S m68_aps [8B7] OT665 Q17 TRA_MOSFET_NCHN_3P_C m68_aps [8A4] ST3 R1 RES_201 m68_aps [13C9] R16 RES_201 m68_aps [6C3] R17 RES_201 m68_aps [6C2] R30 RES_201 m68_aps [6A4] R36 RES_201 m68_aps [12A5] R37 RES_201 m68_aps [12A4] R41 RES_201 m68_aps [8B1] R44 RES_201 m68_aps [2B6] R59 RES_201 m68_aps [10B6] R62 RES_201 m68_aps [10B6] R67 RES_201 m68_aps [13D3] R68 RES_201 m68_aps [13C3] R69 RES_201 m68_aps [2B8] R70 RES_201 m68_aps [2C8] R71 RES_201 m68_aps [5C7] R73 RES_201 m68_aps [2C8] R75 RES_201 m68_aps [4D7] R78 RES_201 m68_aps [2B7] R81 RES_201 m68_aps [2B7] R82 RES_201 m68_aps [2D7] R83 RES_201 m68_aps [9A4] R87 RES_201 m68_aps [8C5] R88 RES_201 m68_aps [8C5] R89 RES_201 m68_aps [9A2] R91 RES_201 m68_aps [2D7] R92 RES_201 m68_aps [2C6] R94 RES_201 m68_aps [9D1] R95 RES_201 m68_aps [2D6] R96 RES_201 m68_aps [2A4] R98 RES_201 m68_aps [9A6] R100 RES_201 m68_aps [9D1] R101 RES_201 m68_aps [2B4] R102 RES_201 m68_aps [2C2] R103 RES_201 m68_aps [2D2] R104 RES_201 m68_aps [2D2] R105 RES_201 m68_aps [13C7] R108 RES_201 m68_aps [9C6] R109 RES_201 m68_aps [3B7] R110 RES_201 m68_aps [3B3] R111 RES_201 m68_aps [4D7] R112 RES_201 m68_aps [6C7] R113 RES_201 m68_aps [6C7] R114 RES_201 m68_aps [6C7] R115 RES_201 m68_aps [6B6] R117 RES_201 m68_aps [6B6] R118 RES_201 m68_aps [5B2] R129 RES_201 m68_aps [6B5] R130 RES_201 m68_aps [9C6] R131 RES_201 m68_aps [9A6] R132 RES_201 m68_aps [10D5] R133 RES_201 m68_aps [10D5] R137 RES_201 m68_aps [6B5] R138 RES_201 m68_aps [2A7] R141 RES_201 m68_aps [2C2] R150 RES_201 m68_aps [7C3] R151 RES_201 m68_aps [7C3] R152 RES_201 m68_aps [7C2] R153 RES_201 m68_aps [10C5] R154 RES_201 m68_aps [10C5] R161 RES_201 m68_aps [2A6] R162 RES_201 m68_aps [2A6] R163 RES_201 m68_aps [2A4] R164 RES_201 m68_aps [2A3] R165 RES_201 m68_aps [9C6] R166 RES_201 m68_aps [4C6] R170 RES_201 m68_aps [7B2] R172 RES_201 m68_aps [11C7] R173 RES_201 m68_aps [11B7] R174 RES_201 m68_aps [11D4] R175 RES_201 m68_aps [11D3] R178 RES_201 m68_aps [8B5] R182 RES_201 m68_aps [12C7] R183 RES_201 m68_aps [8B6] R184 RES_201 m68_aps [12B6] R185 RES_201 m68_aps [8A4] R187 RES_201 m68_aps [8C4] R188 RES_201 m68_aps [8A4] R189 RES_201 m68_aps [8A3] R190 RES_201 m68_aps [9A4] R193 RES_201 m68_aps [8C3] R192 RES_201 m68_aps [7B6] R193 RES_201 m68_aps [7A6] R194 RES_201 m68_aps [7A7] R195 RES_201 m68_aps [7A7] R196 RES_201 m68_aps [7A5] R197 RES_201 m68_aps [7A5] R198 RES_201 m68_aps [2D8] R199 RES_201 m68_aps [18B2] R201 RES_201 m68_aps [8A3] R204 RES_201 m68_aps [9A3] R205 RES_201 m68_aps [14C8] R207 RES_201 m68_aps [8A3] R209 RES_201 m68_aps [8A5] R210 RES_201 m68_aps [8A5] R211 RES_201 m68_aps [3B4] R213 RES_201 m68_aps [8C2] R214 RES_201 m68_aps [8B2] R215 RES_201 m68_aps [8B2] R216 RES_201 m68_aps [8A1] R217 RES_201 m68_aps [6C5] R219 RES_201 m68_aps [2B3] R220 RES_201 m68_aps [2C3] R221 RES_201 m68_aps [2C3] R222 RES_201 m68_aps [3B7] R225 RES_201 m68_aps [3B7] R226 RES_201 m68_aps [8A6] R227 RES_201 m68_aps [9B8] R228 RES_201 m68_aps [9B7] R229 RES_201 m68_aps [11D8] R230 RES_201 m68_aps [2A6] R231 RES_201 m68_aps [4D8] R233 RES_201 m68_aps [5B3] R234 RES_201 m68_aps [6C2] R235 RES_201 m68_aps [5B2] R236 RES_201 m68_aps [9C2] R237 RES_201 m68_aps [11D6] R239 RES_201 m68_aps [13C4] R240 RES_201 m68_aps [13C4] R241 RES_201 m68_aps [14C8] R242 RES_201 m68_aps [4C5] R243 RES_201 m68_aps [4D7] R244 RES_201 m68_aps [9D7] R245 RES_201 m68_aps [9D7] R246 RES_201 m68_aps [9C7] R247 RES_201 m68_aps [9B3] R248 RES_201 m68_aps [9B3] R249 RES_201 m68_aps [9C5] R256 RES_201 m68_aps [9C2] R258 RES_201 m68_aps [14B6] R260 RES_201 m68_aps [6C6] R261 RES_201 m68_aps [6C6] R262 RES_201 m68_aps [4A6] R263 RES_201 m68_aps [4A6] R264 RES_201 m68_aps [4A6] R265 RES_201 m68_aps [4A6] R266 RES_201 m68_aps [13A1] R267 RES_201 m68_aps [13A1] R268 RES_201 m68_aps [5B7] R269 RES_201 m68_aps [14A6] R270 RES_201 m68_aps [11D7] R272 RES_201 m68_aps [2A2] R273 RES_201 m68_aps [13C6] R274 RES_201 m68_aps [13B6] R275 RES_201 m68_aps [13B6] R276 RES_201 m68_aps [2B7] R277 RES_201 m68_aps [3D4] R281 SUPPR_TRANSIENT1_201 m68_aps [11C7] R282 SUPPR_TRANSIENT1_201 m68_aps [11B3] R283 SUPPR_TRANSIENT1_201 m68_aps [11B3] R284 SUPPR_TRANSIENT1_201 m68_aps [11B3] R285 RES_201 m68_aps [8A4] R286 SUPPR_TRANSIENT1_201 m68_aps [10C3] RP1 RPAK4P_4X0201 m68_aps [2C7] RP2 RPAK4P_4X0201 m68_aps [2C7] SL1 SLOT_TH m68_aps [14D2] SL2 SLOT_TH m68_aps [14D2] SL4 SLOT_TH m68_aps [14D2] SL5 SLOT_TH m68_aps [14D2] U1 LM2512_UFBGA m68_aps [5C3] U7 WM8758_QFN m68_aps [7C6] U8 L18302DL_LGA m68_aps [12D5] U9 SWREG_LT3493_DFN m68_aps [8D5] U10 74LVC2G66_BGA m68_aps [12A4 12B5] U11 PEPR_S5T39LFP800A_XFL m68_aps [13C4] GA U20 S5L8900X01_MOBILE_BG m68_aps [2D5] A U20 S5L8900X01_MOBILE_BG m68_aps [3C6] A U20 S5L8900X01_MOBILE_BG m68_aps [4D4 4D7] A U20 S5L8900X01_MOBILE_BG m68_aps [5C6] A U20 S5L8900X01_MOBILE_BG m68_aps [6C4] A U22 MAX4845_DFN6 m68_aps [8B8] U23 THS7318_BGA m68_aps [6C6] U26 74LVC2G08_SOT833 m68_aps [3B7 3B7] U29 FLASH_4GX8_48P4_TSOP m68_aps [4B7] U33 74LVC2G08_SOT833 m68_aps [2A3 2A3] U36 74LVC2G32GT_SOT833 m68_aps [13B5 13C5] U38 74LVC2G32GT_SOT833 m68_aps [11D7] U38 74LVC2G32GT_SOT833 m68_aps [13B5] U41 TP8E1045_QFN m68_aps [8A7] U43 LTC4066_QFN m68_aps [8B3] U44 SN74AUP179T_WCSP m68_aps [9C8] U45 74LVC2G32GT_SOT833 m68_aps [13C5 13B5] U46 SN74LVC1G99_BGA m68_aps [9C8] U47 SN74LVC1G99_BGA m68_aps [9D8] U48 SN74AUP179T_WCSP m68_aps [11D7] U49 74LVC1G86_SOT891 m68_aps [9B8] U50 SUPPR_NUP412VPS_SOT9 m68_aps [11A3] 53 V81 VREG_LP3986_BGA m68_aps [9C2] X65 SHORT_SHORT-0201-NSM m68_aps [5C2] XW12 SHORT_SHORT-0201-NSM m68_aps [9B1] XW13 SHORT_SHORT-0201-NSM m68_aps [9D6] XW14 SHORT_SM m68_aps [9A6] XW26 SHORT8L25_WITH_ALTS m68_aps [7B4] SM XW28 SHORT_SM m68_aps [10B5] XW29 SHORT_SM m68_aps [10C5] XW35 SHORT_SHORT-0201-NSM m68_aps [4B6] XW36 SHORT_SHORT-0201-NSM m68_aps [7D7] XW37 SHORT_SHORT-0201-NSM m68_aps [7D7] XW38 SHORT_SHORT-0201-NSM m68_aps [7D6] XW39 SHORT_SM m68_aps [8C4] XW40 SHORT_SM m68_aps [10B5] XW41 SHORT_SHORT-0201-NSM m68_aps [13D1] XW44 SHORT_SM m68_aps [9C4] XW45 SHORT_SM m68_aps [9C4] XW46 SHORT_SHORT-0201-NSM m68_aps [12D6] XW47 SHORT_SHORT-0201-NSM m68_aps [9D2] XW69 SHORT_SHORT-0201-NSM m68_aps [2C2] XW70 SHORT_SHORT-0201-NSM m68_aps [2C2] XW71 SHORT_SHORT-0201-NSM m68_aps [2C2] XW72 SHORT_SHORT-0201-NSM m68_aps [2C3] XW77 SHORT_SHORT-0201-NSM m68_aps [2D2] XW82 SHORT_SHORT-0201-NSM m68_aps [3D3] XW83 SHORT_SHORT-0201-NSM m68_aps [5C7] XW84 SHORT_SHORT-0201-NSM m68_aps [4B1] XW85 SHORT_SHORT-0201-NSM m68_aps [4C1] XW87 SHORT_SHORT-0201-NSM m68_aps [6D7] XW89 SHORT_SHORT-0201-NSM m68_aps [6D3] XW90 SHORT_SHORT-0201-NSM m68_aps [9C2] XW91 SHORT_SHORT-0201-NSM m68_aps [13A3] XW92 SHORT_SHORT-0201-NSM m68_aps [13A4] XW93 SHORT_SHORT-0201-NSM m68_aps [2A1] XW98 SHORT_SM m68_aps [7B4] XW99 SHORT_SM m68_aps [7A4] XW101 SHORT_SM m68_aps [6A6] XW103 SHORT_SM m68_aps [7C7] Y1 CRYSTAL_3_2X1.5X.6-5 m68_aps [9A5] M Y2 CRYSTAL_4PIN_SM-2 m68_aps [2B6] Y3 CRYSTAL_4PIN_SM-2 m68_aps [6A4]																				

D

C

B

A

D

C

B

A

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	ZONE	ECN	DESCRIPTION OF CHANGE	CK APPD DATE	ENG APPD DATE
27		472272	ENGINEERING RELEASED	11/07/06	?



# IPOD M68 RADIO

## DVT - 11/06/06

THIS PAGE	CONTENTS
02	BASEBAND
03	BASEBAND + MEMORY
04	BASEBAND PMU
05	GSM RF
06	SYSTEM CONNECTORS
07	BLUETOOTH
08	WLAN RADIO
09	FUNCTIONAL TEST POINTS

BOARD - 820-2021  
 SCHEMATIC - 051-7111  
 BOM - 630-7588

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-7111	1	M68_RADIO_SCHEMATIC	SCH	Y	
820-2021	1	M68_RADIO_PCB	PCB	Y	
825-2029	1	EEE	EEE-VKT	Y	

DIMENSIONS ARE IN MILLIMETERS XX : _____ X.XX : _____ X.XXX : _____ ANGLES : _____ DO NOT SCALE DRAWING  THIRD ANGLE PROJECTION	<b>METRIC</b>		 Apple Computer Inc.  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 THE DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART  <b>TITLE</b> <h2 style="text-align: center;">M68</h2>	
	DRAPTR	DESIGN CR		<b>DRAWING NUMBER</b> 051-7111
	ENG APPD	MFG APPD		
	QA APPD	DESIGNER		
RELEASE	SCALE	<b>SIZE</b> D	<b>REV.</b> 27	
MATERIAL/FINISH NOTED AS APPLICABLE		SHT 1 OF 11		

# GSM BB

HW ID RESISTOR (R41)  
 3.3K = M62 DEV  
 6.8K = M68 RADIO PROTO1 & 2  
 10K = TBD  
 15K = TBD  
 22K = TBD  
 33K = TBD

D

C

B

A

D

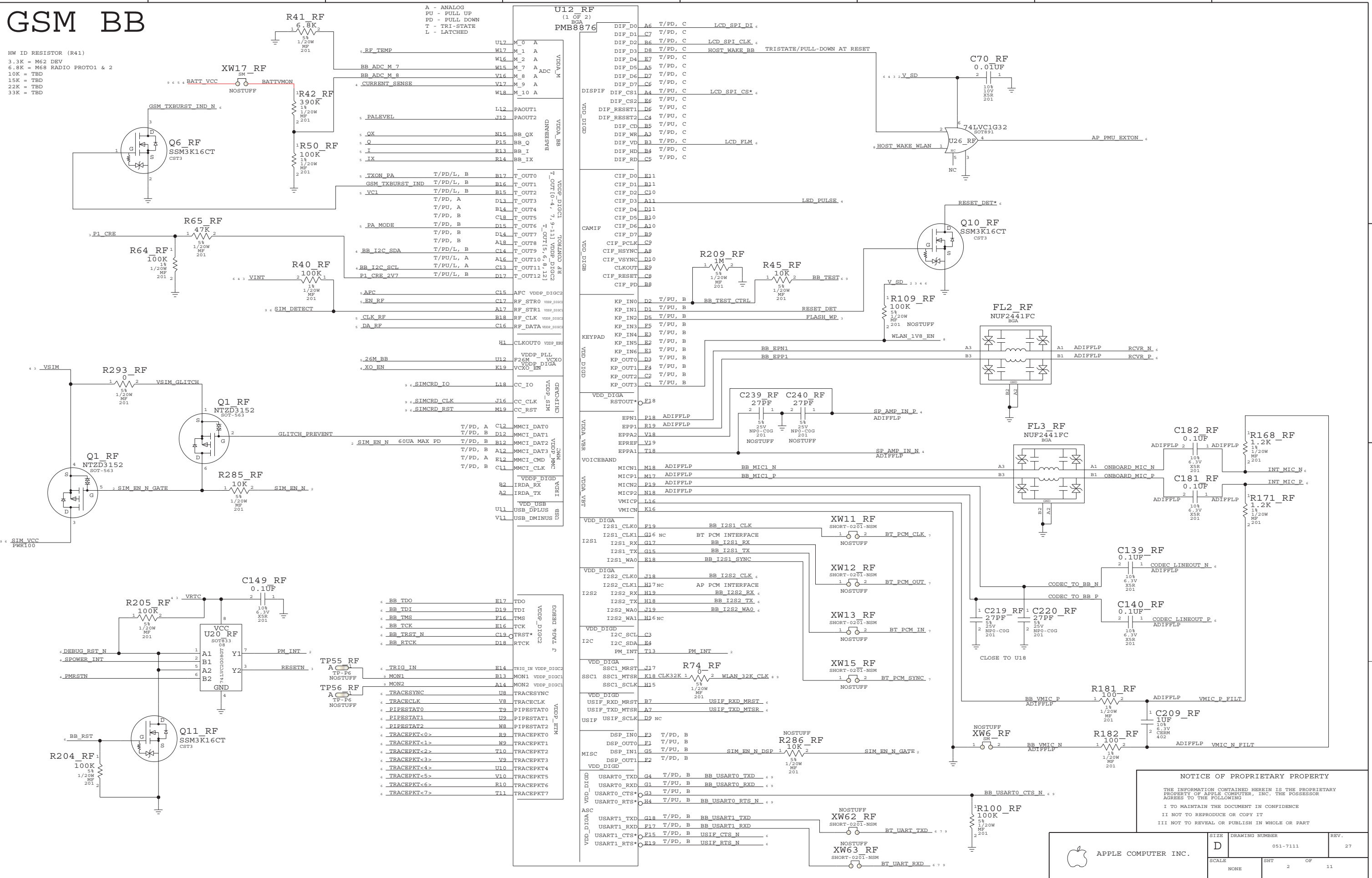
C

B

A

A - ANALOG  
 PU - PULL UP  
 PD - PULL DOWN  
 T - TRI-STATE  
 L - LATCHED

U12 RF  
 (1 OF 2)  
 BGA  
 PMB8876

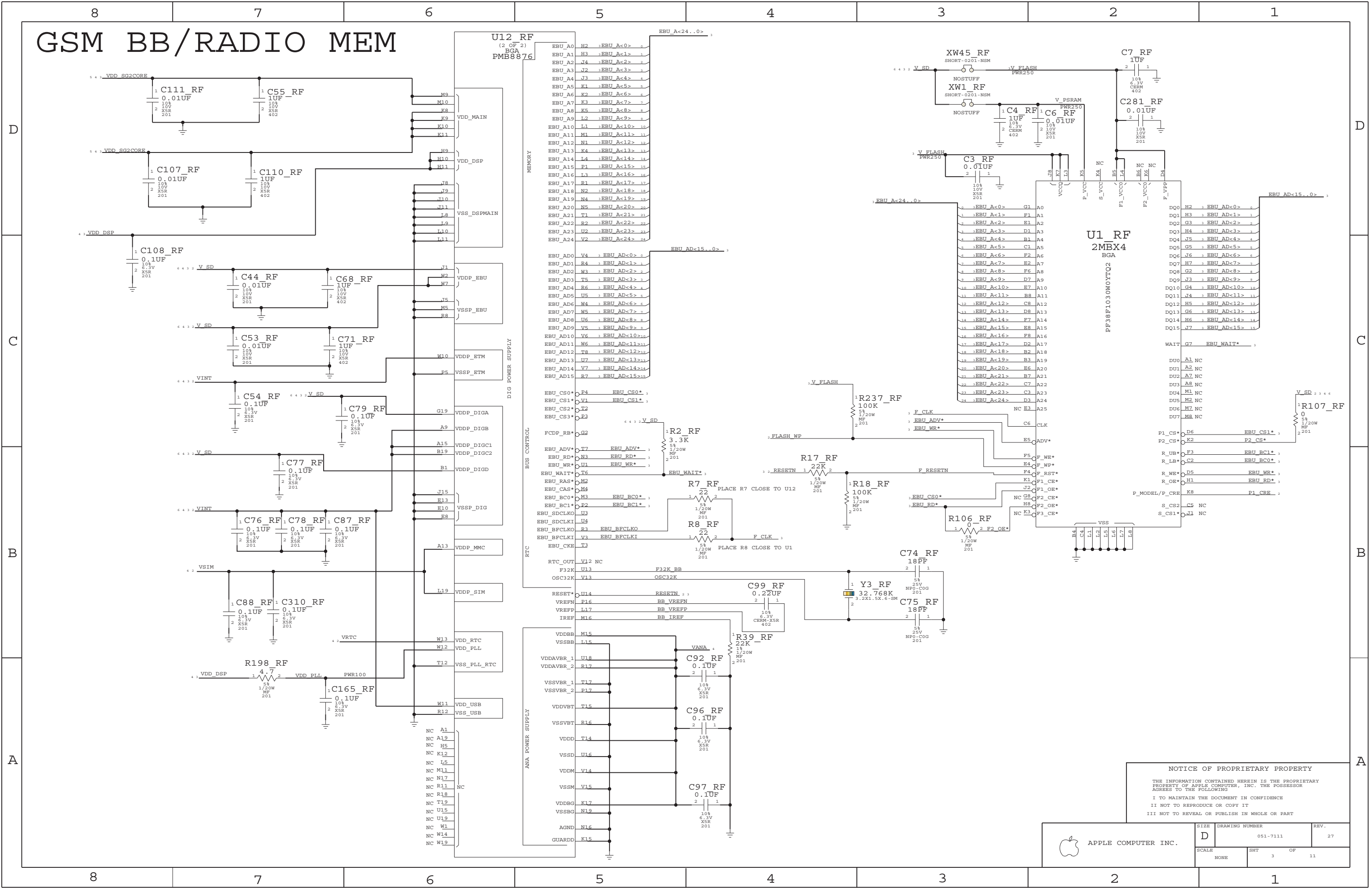


**NOTICE OF PROPRIETARY PROPERTY**  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

SCALE	SHT	DRAWING NUMBER		REV.
		051-7111		
NONE		2		OF 11



# GSM BB/RADIO MEM



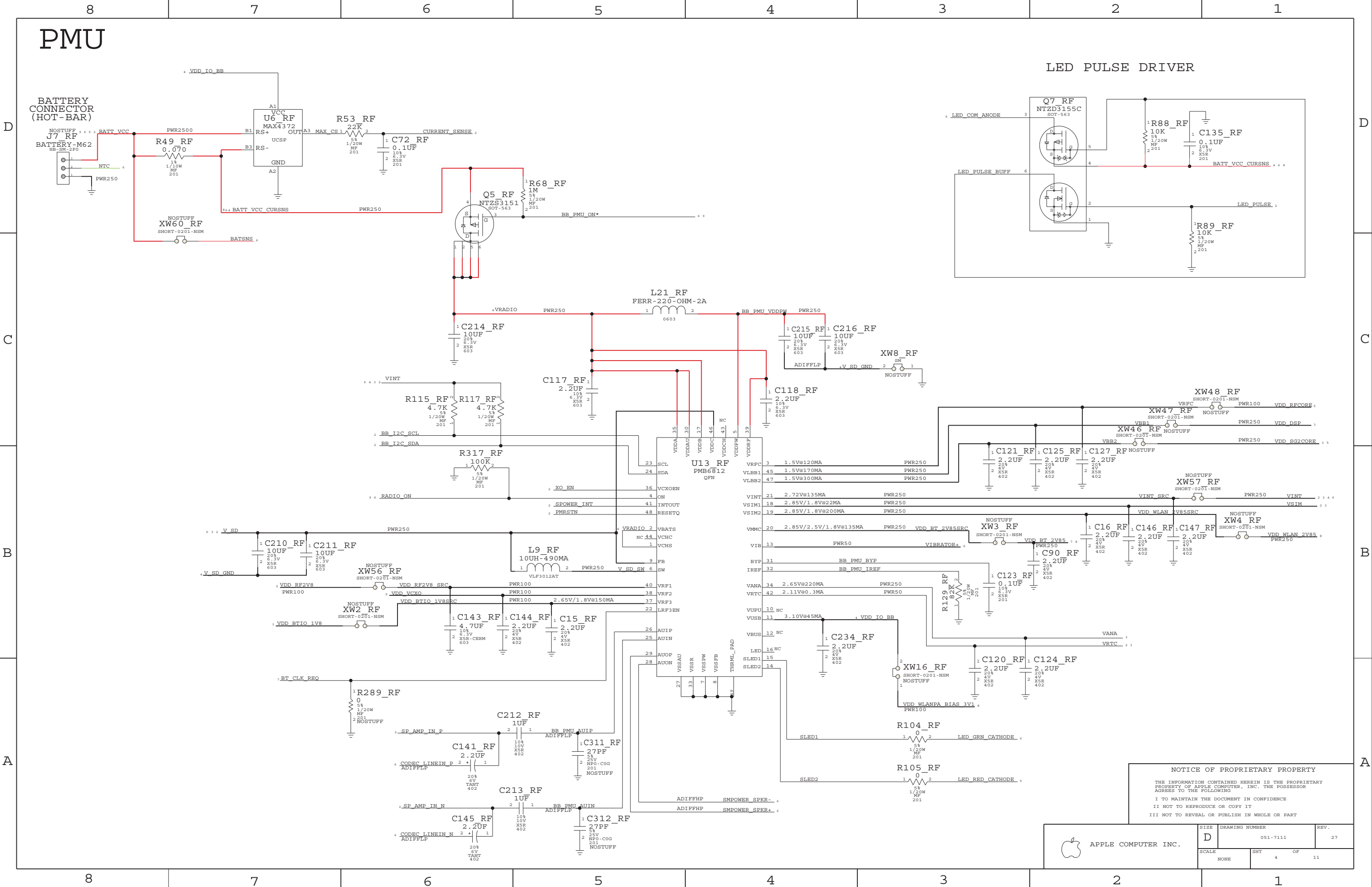
**NOTICE OF PROPRIETARY PROPERTY**

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

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7111	REV. 27
	SCALE NONE	SHT 3	OF 11

# PMU

## LED PULSE DRIVER

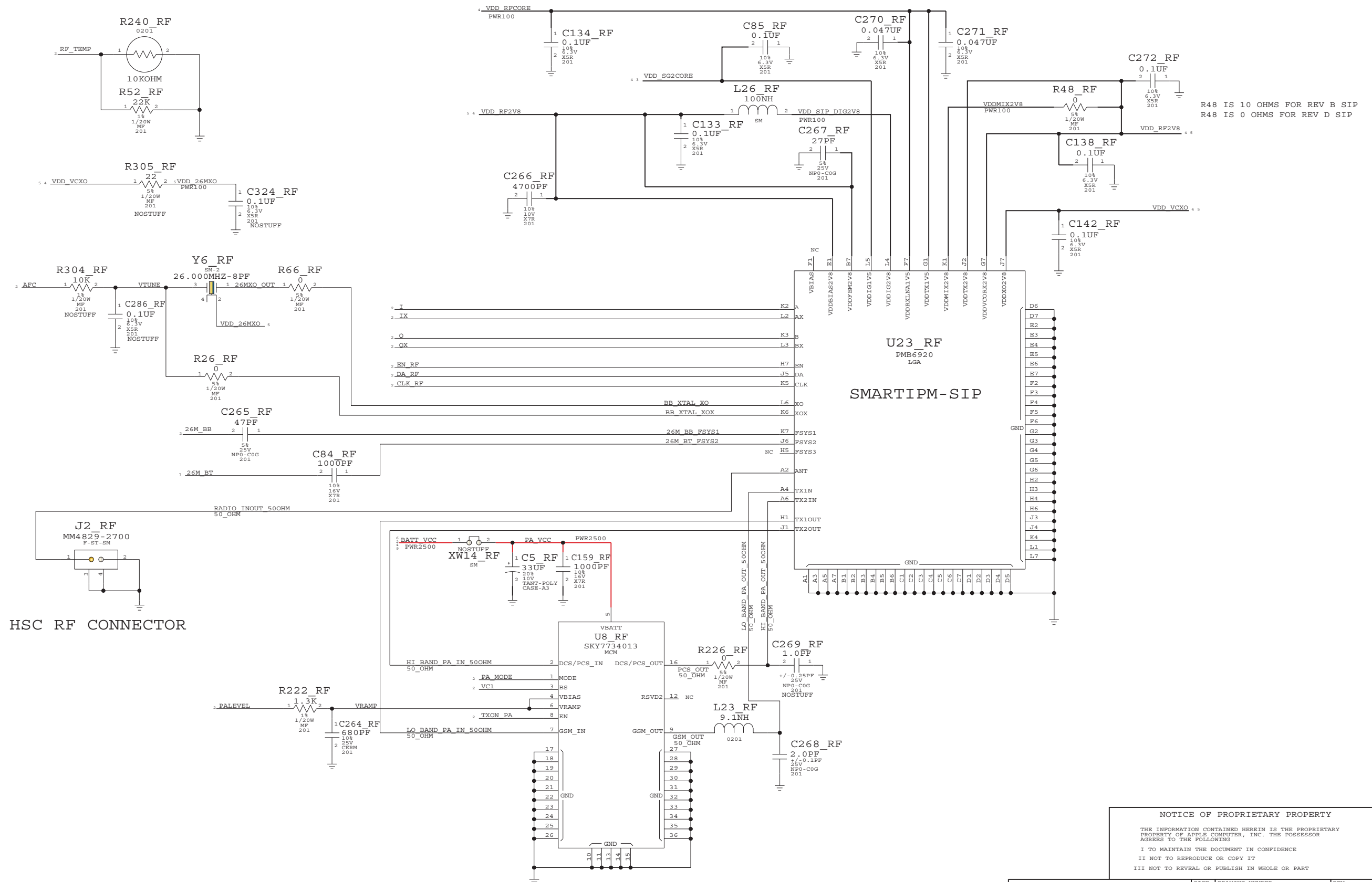


NOTICE OF PROPRIETARY PROPERTY  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7111	27
SCALE	NONE	SHT	4 OF 11



# GSM RF - SMARTIPM-SIP + SKYWORKS



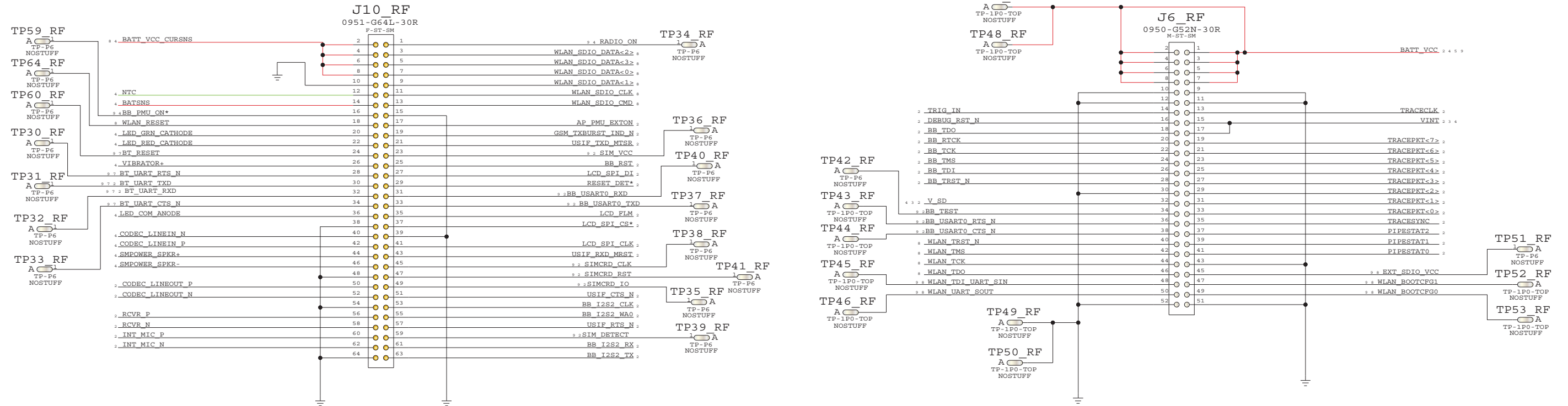
NOTICE OF PROPRIETARY PROPERTY  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7111	27
SCALE	NONE	SHT	5 OF 11

# SYSTEM CONNECTORS

## AP CONNECTOR 516S0505

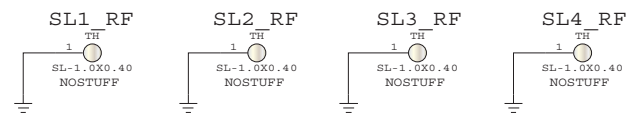
## DEBUG CONNECTOR 998-1410



### SHIELD CAN



### SHIELD CAN ALIGNMENT SLOTS

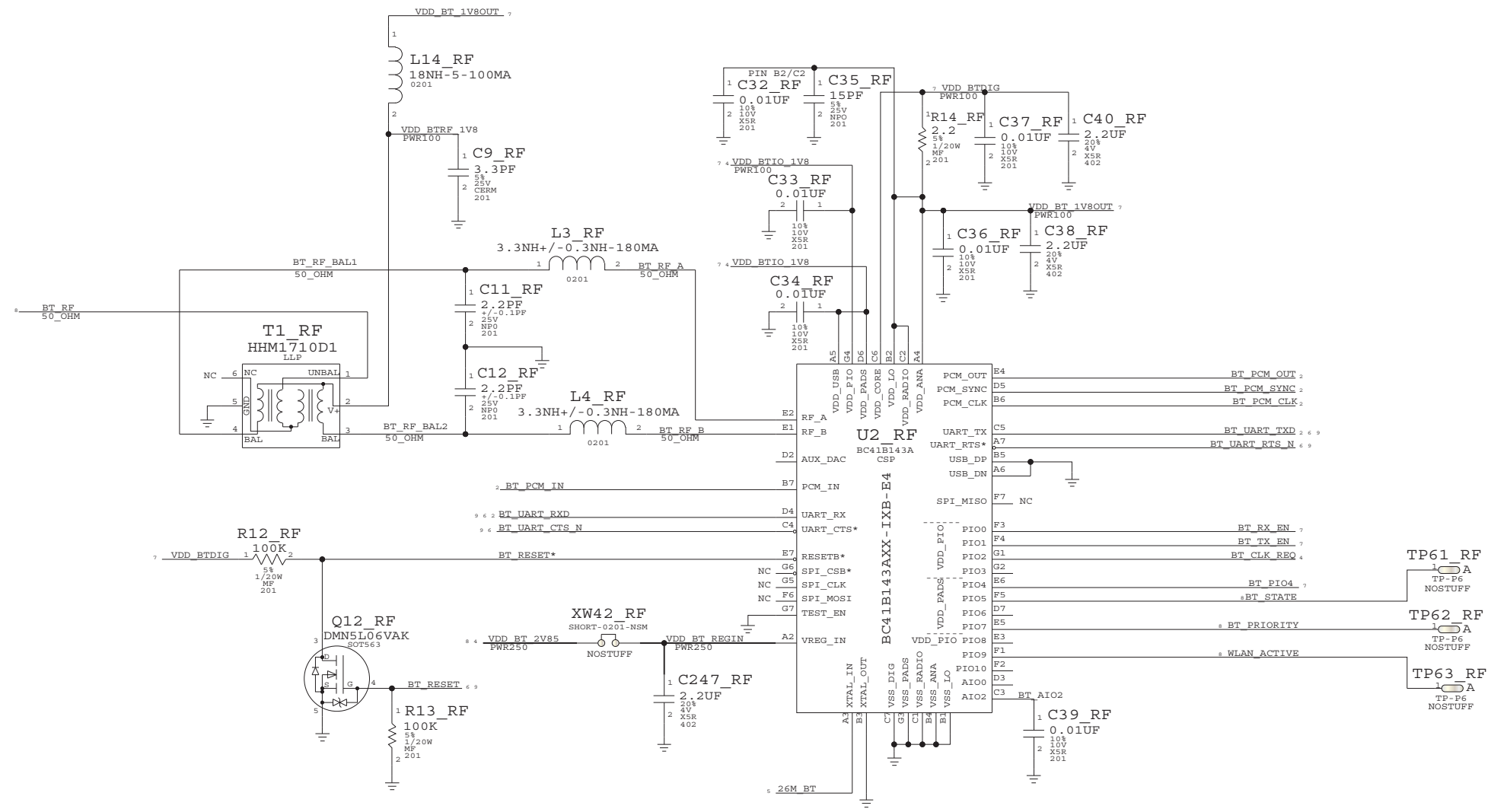


NOTICE OF PROPRIETARY PROPERTY  
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
II NOT TO REPRODUCE OR COPY IT  
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

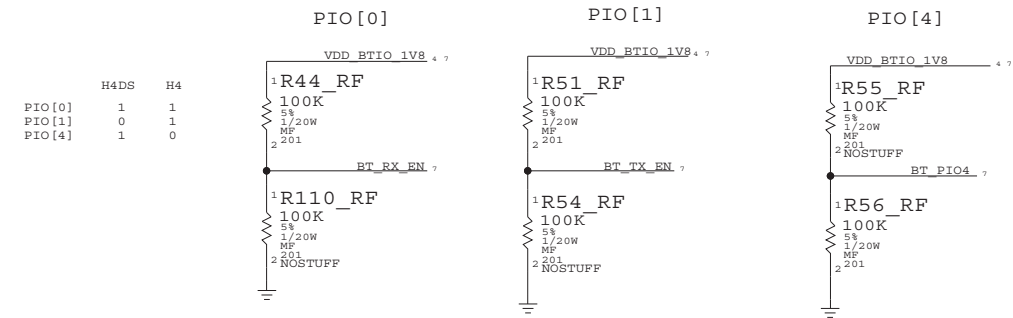
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7111	27
SCALE	NONE	SHT	6 OF 11



# BLUETOOTH RADIO



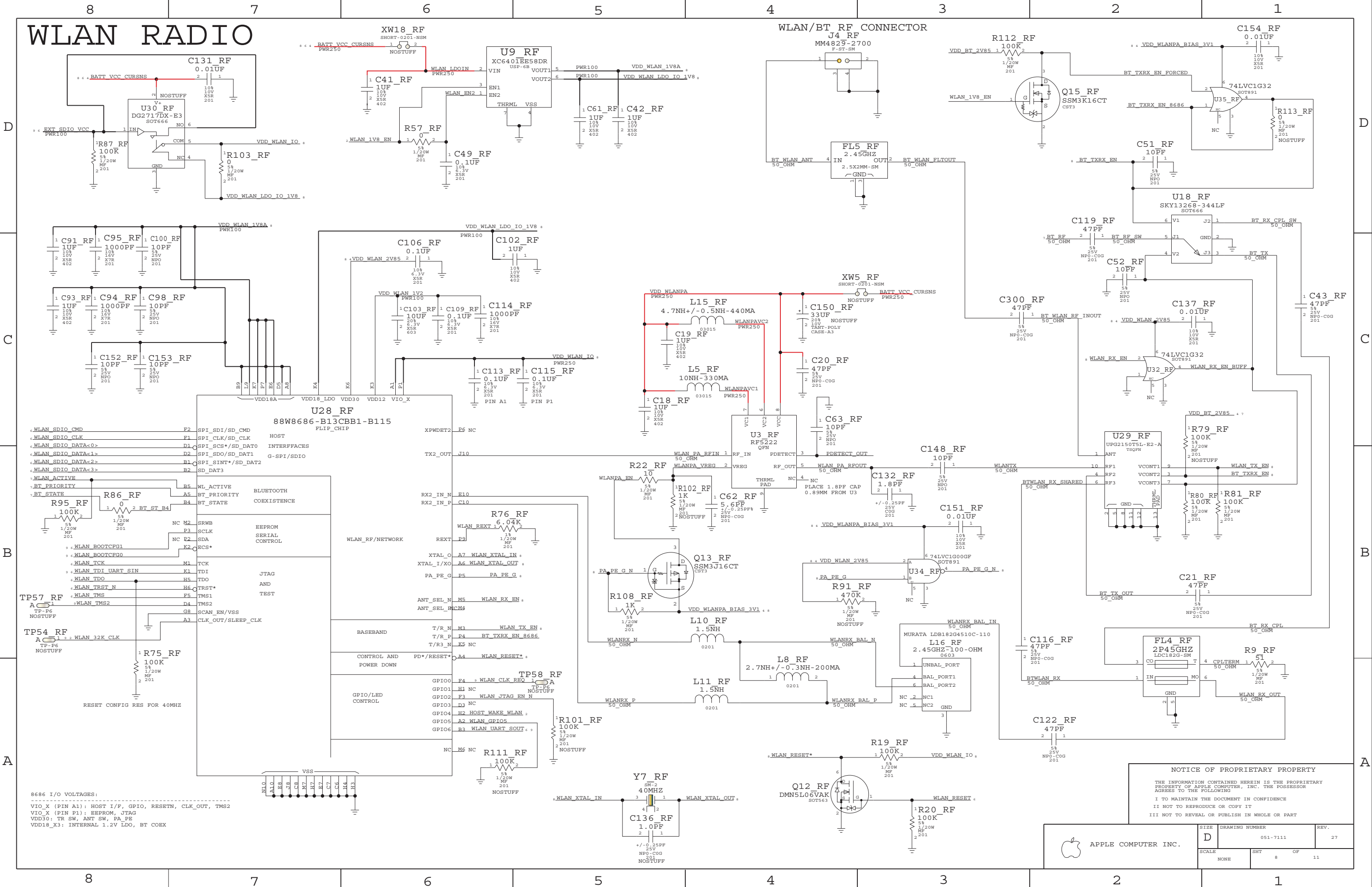
## HOST TRANSPORT CONFIGURATION RESISTORS



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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7111	27
SCALE	NONE	SHT	7 OF 11

# WLAN RADIO



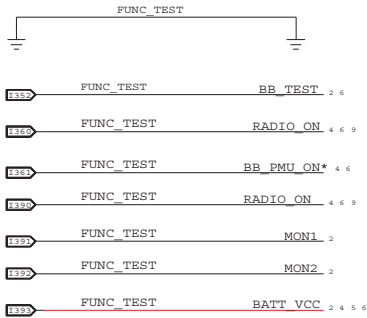
8686 I/O VOLTAGES:  
 VIO\_X (PIN A1): HOST I/F, GPIO, RESETN, CLK\_OUT, TMS2  
 VIO\_X (PIN P1): EEPROM, JTAG  
 VDD30: TR SW, ANT SW, PA\_PE  
 VDD18\_X3: INTERNAL 1.2V LDO, BT COEX

**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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

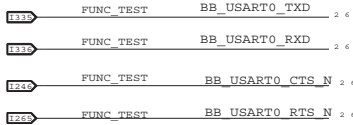
 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7111	27
SCALE	SHT	OF	11
NONE	8		

# FUNCTIONAL TEST POINTS

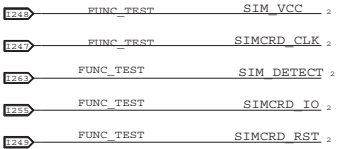
## BB CONTROL



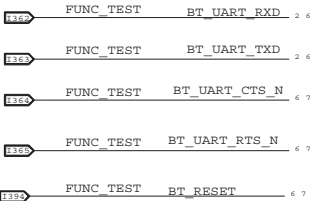
## BB USART TEST POINTS



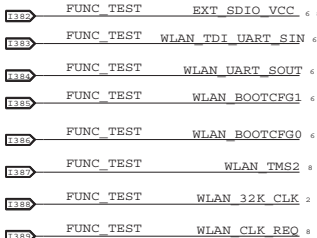
## SIM CARD TEST POINTS



## BLUETOOTH



## WLAN



### 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 THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART



APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
D	051-7111	27
SCALE	SHT	OF
NONE	9	11

Table with 2 columns: Base Signal, Location. Contains base nets and synonyms for m68.lib.M68. Includes sections for Title, Design, Date, and Base Signal.

Table with 3 columns: EBU\_A<id>, EBU\_A<id>, 3C3 3D5. Lists various EBU\_A components and their locations.

Table with 3 columns: TRACEPKT<id>, TRACEPKT<id>, 2A6 6C1. Lists various TRACEPKT components and their locations.

Table with 3 columns: TRACEPKT<id>, TRACEPKT<id>, 2A6 6C1. Continuation of TRACEPKT components and their locations.

Title: Cref Part Report  
Design: m68  
Date: Nov 6 14:16:29 2006

D

C

B

A

D

C

B

A

C3	CAP_201	m68 [3D3]
C4	CAP_402	m68 [3D1]
C5	CAP_P_CASE-A3	m68 [5B5]
C6	CAP_201	m68 [3D2]
C7	CAP_402	m68 [3D2]
C9	CAP_201	m68 [7C6]
C11	CAP_201	m68 [7C6]
C12	CAP_201	m68 [7C6]
C15	CAP_402	m68 [4B5]
C16	CAP_402	m68 [4B2]
C18	CAP_402	m68 [8C5]
C19	CAP_402	m68 [8C5]
C20	CAP_201	m68 [8C4]
C21	CAP_201	m68 [8B2]
C32	CAP_201	m68 [7D5]
C33	CAP_201	m68 [7C5]
C34	CAP_201	m68 [7C5]
C35	CAP_201	m68 [7D5]
C36	CAP_201	m68 [7C4]
C37	CAP_201	m68 [7D4]
C38	CAP_402	m68 [7C4]
C39	CAP_201	m68 [7B4]
C40	CAP_402	m68 [7D4]
C41	CAP_402	m68 [8D6]
C42	CAP_402	m68 [8D5]
C43	CAP_201	m68 [8C1]
C44	CAP_201	m68 [3C7]
C49	CAP_201	m68 [8D6]
C51	CAP_201	m68 [8D2]
C52	CAP_201	m68 [8C2]
C53	CAP_201	m68 [3C7]
C54	CAP_201	m68 [3C7]
C55	CAP_402	m68 [3D7]
C61	CAP_402	m68 [8D5]
C62	CAP_201	m68 [8B4]
C63	CAP_201	m68 [8B4]
C65	CAP_201	m68 [8C3]
C68	CAP_402	m68 [3C7]
C70	CAP_201	m68 [2D3]
C71	CAP_402	m68 [3C7]
C72	CAP_201	m68 [4D6]
C74	CAP_201	m68 [3B3]
C75	CAP_201	m68 [3B3]
C76	CAP_201	m68 [3B7]
C77	CAP_201	m68 [3B7]
C78	CAP_201	m68 [3B7]
C79	CAP_201	m68 [3C7]
C84	CAP_201	m68 [5B6]
C85	CAP_201	m68 [5D4]
C87	CAP_201	m68 [3B7]
C88	CAP_201	m68 [3B7]
C90	CAP_402	m68 [4B2]
C91	CAP_402	m68 [8C8]
C92	CAP_201	m68 [3A4]
C93	CAP_402	m68 [8C8]
C94	CAP_201	m68 [8C8]
C95	CAP_201	m68 [8C8]
C96	CAP_201	m68 [3A4]
C97	CAP_201	m68 [3A4]
C98	CAP_201	m68 [8C8]
C99	CAP_402	m68 [3B4]
C100	CAP_201	m68 [8C8]
C102	CAP_402	m68 [8C5]
C103	CAP_603	m68 [8C6]
C106	CAP_201	m68 [8C6]
C107	CAP_201	m68 [3D8]
C108	CAP_201	m68 [3C8]
C109	CAP_201	m68 [8C6]
C110	CAP_402	m68 [3D7]
C111	CAP_201	m68 [3D8]
C113	CAP_201	m68 [8C6]
C114	CAP_201	m68 [8C6]
C115	CAP_201	m68 [8C5]
C116	CAP_201	m68 [8A3]
C117	CAP_603	m68 [4C5]
C118	CAP_603	m68 [4C4]
C119	CAP_201	m68 [8C2]
C120	CAP_201	m68 [4A3]
C121	CAP_402	m68 [4B3]
C122	CAP_201	m68 [8A2]
C123	CAP_201	m68 [4B3]
C124	CAP_402	m68 [4A3]
C125	CAP_402	m68 [4B2]
C127	CAP_402	m68 [4B2]
C131	CAP_201	m68 [8D7]
C132	CAP_201	m68 [8B3]
C133	CAP_201	m68 [5D4]
C134	CAP_201	m68 [5D5]
C135	CAP_201	m68 [4D2]
C136	CAP_201	m68 [8A5]
C137	CAP_201	m68 [8C2]
C138	CAP_201	m68 [5C2]
C139	CAP_201	m68 [2B2]
C140	CAP_201	m68 [2B2]
C141	CAP_P_402	m68 [4A6]
C142	CAP_201	m68 [5C2]
C143	CAP_603	m68 [4B6]
C144	CAP_402	m68 [4B6]
C145	CAP_P_402	m68 [4A6]
C146	CAP_402	m68 [4B2]
C147	CAP_402	m68 [4B2]
C148	CAP_201	m68 [8B3]
C149	CAP_201	m68 [2B7]
C150	CAP_P_CASE-A3	m68 [8C4]
C151	CAP_201	m68 [8B3]
C152	CAP_201	m68 [8C8]
C153	CAP_201	m68 [8C8]
C159	CAP_201	m68 [5B5]
C165	CAP_201	m68 [3A7]
C181	CAP_201	m68 [2B2]
C182	CAP_201	m68 [2B2]
C209	CAP_402	m68 [2A2]
C210	CAP_603	m68 [4B7]
C211	CAP_603	m68 [4B7]
C212	CAP_402	m68 [4A5]
C213	CAP_402	m68 [4A5]
C214	CAP_603	m68 [4C6]
C215	CAP_603	m68 [4C4]
C216	CAP_603	m68 [4C4]

C219	CAP_201	m68 [2B3]
C220	CAP_201	m68 [2B3]
C234	CAP_402	m68 [4A4]
C239	CAP_201	m68 [2C4]
C240	CAP_201	m68 [2C4]
C247	CAP_402	m68 [7B5]
C264	CAP_201	m68 [5A6]
C265	CAP_201	m68 [5B6]
C266	CAP_201	m68 [5C5]
C267	CAP_201	m68 [5D3]
C268	CAP_201	m68 [5A4]
C269	CAP_201	m68 [5A3]
C270	CAP_201	m68 [5D3]
C271	CAP_201	m68 [5D3]
C272	CAP_201	m68 [5D2]
C281	CAP_201	m68 [3D2]
C286	CAP_201	m68 [5C7]
C300	CAP_201	m68 [8C3]
C310	CAP_201	m68 [3B7]
C311	CAP_201	m68 [4A5]
C312	CAP_201	m68 [4A5]
C324	CAP_201	m68 [5C6]
FL2	FIL_NUP2441FC_SWAP_B	m68 [2C3]
	GA	
FL3	FIL_NUP2441FC_SWAP_B	m68 [2B2]
	GA	
FL4	FILTER_LDC182G_LDC18	m68 [8B2]
	2G-SM	
FL5	FILTER_LFB2H_2_5X2MM	m68 [8D4]
	-SM	
J2	CON_F2ST_COAX_S2MT_S	m68 [5B7]
	M_F-ST-SM	
J4	CON_F2ST_COAX_S2MT_S	m68 [8D4]
	M_F-ST-SM	
J6	CON_M52ST_D_SM_M-ST-	m68 [6C3]
	SM	
J7	CON_3HB_S_HB-SM-2P0	m68 [4D8]
J10	CON_F64ST_D_SM_F-ST-	m68 [6C6]
	SM	
L3	IND_0201	m68 [7C5]
L4	IND_0201	m68 [7C5]
L5	IND_03015	m68 [8C4]
L8	IND_0201	m68 [8A4]
L9	IND_VLF012AT	m68 [4B5]
L10	IND_0201	m68 [8A4]
L11	IND_0201	m68 [8A4]
L14	IND_0201	m68 [7D6]
L15	IND_03015	m68 [8C4]
L16	FIL_LDB18_0603	m68 [8A3]
L21	IND_0603	m68 [4C5]
L23	IND_0201	m68 [5A4]
L26	IND_SM	m68 [5D4]
Q1	TRA_DUAL_DCH_NTZD315	m68 [2B8 2B7]
	2_SOT-563	
Q5	TRA_PCH_NTZS3151_SOT	m68 [4C6]
	-563	
Q6	TRA_MOSFET_NCHN_3P_C	m68 [2D8]
	ST3	
Q7	TRA_DUAL_NPCH_NTZD31	m68 [4D2]
	55C_SOT-563	
Q10	TRA_MOSFET_NCHN_3P_C	m68 [2C3]
	ST3	
Q11	TRA_MOSFET_NCHN_3P_C	m68 [2A7]
	ST3	
Q12	TRA_DUAL_DMNSLO6VAK	m68 [7B6]
	SOTS563	
Q12	TRA_DUAL_DMNSLO6VAK	m68 [8A4]
	SOTS563	
Q13	TRA_PCH_SSM3J16CT_CS	m68 [8B5]
	T3	
R2	RES_201	m68 [3B5]
R7	RES_201	m68 [3B4]
R8	RES_201	m68 [3B4]
R9	RES_201	m68 [8A1]
R12	RES_201	m68 [7B6]
R13	RES_201	m68 [7B6]
R14	RES_201	m68 [7D4]
R17	RES_201	m68 [3B4]
R18	RES_201	m68 [3B4]
R19	RES_201	m68 [8A3]
R20	RES_201	m68 [8A3]
R22	RES_201	m68 [8B5]
R23	RES_201	m68 [8C3]
R24	RES_201	m68 [8C3]
R26	RES_201	m68 [5C6]
R39	RES_201	m68 [3A4]
R40	RES_201	m68 [2C7]
R41	RES_201	m68 [2D7]
R42	RES_201	m68 [2D7]
R44	RES_201	m68 [7A5]
R45	RES_201	m68 [2C4]
R48	RES_201	m68 [5D2]
R49	RES_201	m68 [4D7]
R50	RES_201	m68 [2D7]
R51	RES_201	m68 [7A5]
R52	RES_201	m68 [5D7]
R53	RES_201	m68 [4D6]
R54	RES_201	m68 [7A5]
R55	RES_201	m68 [7A4]
R56	RES_201	m68 [7A4]
R57	RES_201	m68 [8D6]
R64	RES_201	m68 [2C7]
R65	RES_201	m68 [2C7]
R66	RES_201	m68 [5C6]
R68	RES_201	m68 [4D5]
R74	RES_201	m68 [2A4]
R75	RES_201	m68 [8A8]
R76	RES_201	m68 [8B6]
R78	RES_201	m68 [8C3]
R79	RES_201	m68 [8B2]
R80	RES_201	m68 [8B2]
R81	RES_201	m68 [8B1]
R86	RES_201	m68 [8B8]
R87	RES_201	m68 [8D8]
R88	RES_201	m68 [4D2]
R89	RES_201	m68 [4C2]
R91	RES_201	m68 [8B4]
R95	RES_201	m68 [8B8]
R100	RES_201	m68 [2A3]
R101	RES_201	m68 [8A5]
R102	RES_201	m68 [8B5]
R103	RES_201	m68 [8D7]
R104	RES_201	m68 [4A3]
R105	RES_201	m68 [4A3]

R106	RES_201	m68 [3B3]
R107	RES_201	m68 [3C1]
R108	RES_201	m68 [8B5]
R109	RES_201	m68 [2C3]
R110	RES_201	m68 [7A5]
R111	RES_201	m68 [8A6]
R115	RES_201	m68 [4C6]
R117	RES_201	m68 [4C6]
R129	RES_201	m68 [4B3]
R168	RES_201	m68 [2B1]
R171	RES_201	m68 [2B1]
R181	RES_201	m68 [2A2]
R182	RES_201	m68 [2A2]
R198	RES_201	m68 [3A7]
R204	RES_201	m68 [2A8]
R205	RES_201	m68 [2B8]
R209	RES_201	m68 [2C4]
R222	RES_201	m68 [5A6]
R226	RES_201	m68 [5A4]
R237	RES_201	m68 [3C4]
R240	THERMISTER_0201	m68 [5D7]
R285	RES_201	m68 [2B7]
R286	RES_201	m68 [2A4]
R289	RES_201	m68 [4A6]
R293	RES_201	m68 [2C8]
R304	RES_201	m68 [5C7]
R305	RES_201	m68 [5C7]
R317	RES_201	m68 [4B6]
SH1	SHLD_1P_SM1	m68 [6A7]
SH2	SHLD_1P_SM1	m68 [6A6]
SL1	SLOT_TH	m68 [6A7]
SL2	SLOT_TH	m68 [6A7]
SL3	SLOT_TH	m68 [6A6]
SL4	SLOT_TH	m68 [6A6]
T1	XPR_HHM1710D1_LLP	m68 [7C7]
TP30	TP_TP-P6	m68 [6C8]
TP31	TP_TP-P6	m68 [6C8]
TP32	TP_TP-P6	m68 [6C8]
TP33	TP_TP-P6	m68 [6B8]
TP34	TP_TP-P6	m68 [6C5]
TP35	TP_TP-P6	m68 [6B5]
TP36	TP_TP-P6	m68 [6C5]
TP37	TP_TP-P6	m68 [6C5]
TP38	TP_TP-P6	m68 [6C5]
TP39	TP_TP-P6	m68 [6B5]
TP40	TP_TP-P6	m68 [6C5]
TP41	TP_TP-P6	m68 [6B5]
TP42	TP_TP-P6	m68 [6C4]
TP43	TP_TP-1P0-TOP	m68 [6C4]
TP44	TP_TP-1P0-TOP	m68 [6C4]
TP45	TP_TP-1P0-TOP	m68 [6B4]
TP46	TP_TP-1P0-TOP	m68 [6B4]
TP47	TP_TP-1P0-TOP	m68 [6C3]
TP48	TP_TP-1P0-TOP	m68 [6C3]
TP49	TP_TP-1P0-TOP	m68 [6B3]
TP50	TP_TP-1P0-TOP	m68 [6B3]
TP51	TP_TP-P6	m68 [6C1]
TP52	TP_TP-1P0-TOP	m68 [6B1]
TP53	TP_TP-1P0-TOP	m68 [6B1]
TP54	TP_TP-P6	m68 [8A8]
TP55	TP_TP-P6	m68 [2A6]
TP56	TP_TP-P6	m68 [2A6]
TP57	TP_TP-P6	m68 [8B8]
TP58	TP_TP-P6	m68 [8A5]
TP59	TP_TP-P6	m68 [6C8]
TP60	TP_TP-P6	m68 [6C8]
TP61	TP_TP-P6	m68 [7B2]
TP62	TP_TP-P6	m68 [7B2]
TP63	TP_TP-P6	m68 [7B2]
U1	FLASH_2MBX4_BGA88_1	m68 [3D2]
	BGA	
U2	BC41B143A_CSP	m68 [7C5]
U3	RFS222_QFN	m68 [8C4]
U6	MAX4372_UCSP5_UCSP	m68 [4D7]
U8	SKY77340_MCM	m68 [5B5]
U9	LREG_XC6401_USP_USP-	m68 [8D6]
	6B	
U12	PMB8876_BGA	m68 [2D5]
U12	PMB8876_BGA	m68 [3D6]
U13	PMB6812_QFN	m68 [4B5]
U18	SWI_SPDT_SKY13268_SO	m68 [8C2]
	T666	
U20	74LVC208_SOT833	m68 [2B7]
U23	PMB6920_LGA	m68 [5C3]
U26	74LVC1G32GF_SOT891	m68 [2D3]
U28	88W686_CSP67_FLIP_C	m68 [8C7]
	HIP	
U29	SWI_UPG2150T5L_TSQFN	m68 [8B2]
U30	SWI_SPDT_DQ2717_SOT6	m68 [8D8]
	66	
U32	74LVC1G32GF_SOT891	m68 [8C2]
U34	74LVC1G00_SOT891	m68 [8B3]
XW1	SHORT_SHORT-0201-NSM	m68 [3D3]
XW2	SHORT_SHORT-0201-NSM	m68 [4B6]
XW3	SHORT_SHORT-0201-NSM	m68 [4B3]
XW4	SHORT_SHORT-0201-NSM	m68 [4B1]
XW5	SHORT_SHORT-0201-NSM	m68 [8C3]
XW6	SHORT_SM	m68 [2A3]
XW8	SHORT6L25_WITH_ALTS	m68 [4C3]
	SM	
XW11	SHORT_SHORT-0201-NSM	m68 [2B4]
XW12	SHORT_SHORT-0201-NSM	m68 [2B4]
XW13	SHORT_SHORT-0201-NSM	m68 [2B4]
XW14	SHORT_SM	m68 [5B5]
XW15	SHORT_SHORT-0201-NSM	m68 [2A4]
XW16	SHORT_SHORT-0201-NSM	m68 [4A3]
XW17	SHORT_SM	m68 [2D7]
XW18	SHORT_SHORT-0201-NSM	m68 [8D6]
XW42	SHORT_SHORT-0201-NSM	m68 [7B5]
XW45	SHORT_SHORT-0201-NSM	m68 [3D3]
XW46	SHORT_SHORT-0201-NSM	m68 [4B2]
XW47	SHORT_SHORT-0201-NSM	m68 [4C2]