

# M38A - PVT

## 08/01/06

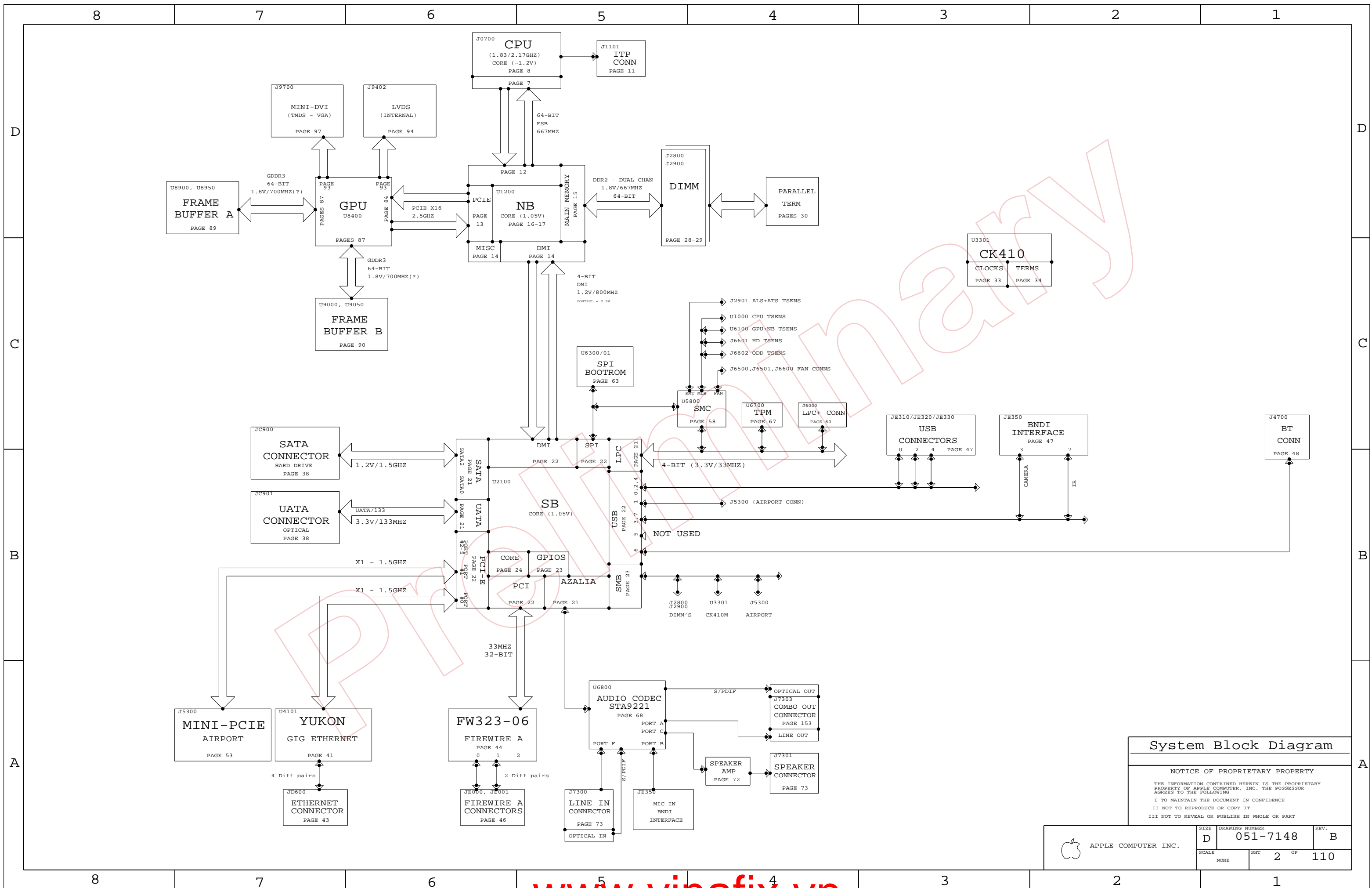
1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV	ZONE	ECN	DESCRIPTION OF CHANGE	CK APPD	ENG APPD
				DATE	DATE
B		452626	PRODUCTION RELEASED	08/01/06	06/22/04

PAGE	DRI	PDF	CIRCUIT
1	JD	JD	1 TABLE OF CONTENTS
2	JD	JD	2 SYSTEM BLOCK DIAGRAM
3	RT	RT	3 POWER BLOCK DIAGRAM
4	JD	JD	4 TABLE ITEMS & REVISION HISTORY
5	JD	JD	5 FUNC TEST
6	RT	RT	6 POWER CONNECTOR / POWER ALIAS
(M42) 7	MS	JD	7 CPU - BUS INTERFACE
(M42) 8	MS	JD	8 CPU - PWR & GND
9	MS	JD	9 CPU - DECAPS
(M42) 10	MS	JD	10 CPU - THERMAL SENSOR
M42 11	MS	JD	11 CPU - ITP CONN
M1 12	PS	JH	12 NB - CPU INTERFACE
M1 13	PS	JH	13 NB - VIDEO INTERFACE
14	PS	JH	14 NB - MISC INTERFACES
M1 15	PS	JH	15 NB - DDR2 INTERFACE
M1 16	PS	JH	16 NB - POWER 1
M1 17	PS	JH	17 NB - POWER 2
M1 18	PS	JH	18 NB - GROUNDS
19	PS	JH	19 NB - DECAPS
M1 20	PS	JH	20 NB - CONFIG STRAPS
21	JD	JD	21 SB - RTC, LAN, AUDIO, ATA, CPU, LPC
22	JD	JD	22 SB - PCIE, SPI, USB, DMI, PCI
23	JD	JD	23 SB - SMB, GPIO, PM, CLKS
24	JD	JD	24 SB - POWERS AND GROUNDS
25	JD	JD	25 SB - DECAPS
26	JD	JD	26 SB - MISC
27	JD	JD	27 SB - SMB BUS CONNECTIONS
28	PS	JD	28 DDR2 - SO-DIMM CONN A
29	PS	JD	29 DDR2 - SO-DIMM CONN B (REVERSED)
30	PS	JD	30 DDR2 - TERMINATION
M1 31	RT	RT	31 DDR2 - VTT SUPPLY
M42 33	JD	JD	33 CLOCKS - GENERATOR
34	JD	JD	34 CLOCKS - TERMINATIONS
38	JD	JD	38 ATA (SATA AND IDE) CONN'S
(M42) 41	JD	JD	41 LAN - YUKON'S PCIE INTERFACE
42	JD	JD	42 LAN - YUKON'S PWR, MISC
43	JD	JD	43 LAN - CONN
44	JD	JD	44 FIREWIRE - FW323-06
45	JD	JD	45 FIREWIRE - DECAPS
46	JD	JD	46 FIREWIRE - CONN'S
47	JD	JD	47 USB - CONN'S

PAGE	DRI	PDF	CIRCUIT
53	JD	JD	43 PCI-E - AIRPORT MINI-PCIE CONN
54	JD	JD	44 PCI-E - UNUSED PORTS
58	MS	MS	45 SMC - H8S2116
59	MS	MS	46 SMC - SMB BUSSES, MISC
60	MS	MS	47 SMC - LPC+ CONN
61	JH	JH	48 SMC - GPU/NB THERMAL SENSOR
RX 63	MS	JD	49 SMC - SPI BOOTROM
65	MS	MS	50 SMC - FANS
66	MS	MS	51 SMC - FANS
67	JD	JD	52 SMC - TPM
SO 68	PT	JD	53 AUDIO - CODEC, VREG, MIC BIAS
SO 72	PT	JD	54 AUDIO - INTERNAL SPEAKER AMP
SO 73	PT	JD	55 AUDIO - I/O CONN'S, EMC
SO 74	PT	JD	56 AUDIO - DETECT TRANSLATORS
RP 75	RT	RT	57 VR - CPU CORE
RP 76	RT	RT	58 VR - CPU I-V SENSE CKT
RP 77	RT	RT	59 VR - "S0" 1.2V & 2.5V (GRAFIX)
RP 78	RT	RT	60 VR - "S0" 1.8V
RP 79	RT	RT	61 VR - "S3" 1.8V
RP 80	RT	RT	62 VR - "S0" 1.5V
RP 81	RT	RT	63 VR - "S0" 1.05V
RP 83	RT	RT	64 VR - "S3" 3.3V AND 5V
JH 84	JH	JH	65 GPU - M56 PCI-E
M1 85	JH	JH	66 GPU - VCORE SUPPLY
M1 86	JH	JH	67 GPU - M56 CORE PWR
M1 87	JH	JH	68 GPU - M56 FRAME BUFFER
M1 88	JH	JH	69 GPU - MISC
M1 89	JH	JH	70 GPU - GDDR SDRAM A
M1 90	JH	JH	71 GPU - GDDR SDRAM B
M1 91	JH	JH	72 GPU - M56 GPIO, DVO, MISC
M1 92	JH	JH	73 GPU - M56 CLOCKS
M1 93	JH	JH	74 GPU - M56 VIDEO INTERFACES
JH 94	JH	JH	75 GPU - INTERNAL DISPLAY CONN'S
JH 95	JH	JH	76 GPU - TP'S
JH 96	JH	JH	77 GPU - TMDS, INVERTER, EXT VGA
JH 97	JH	JH	78 GPU - EXTERNAL DISPLAY CONN'S

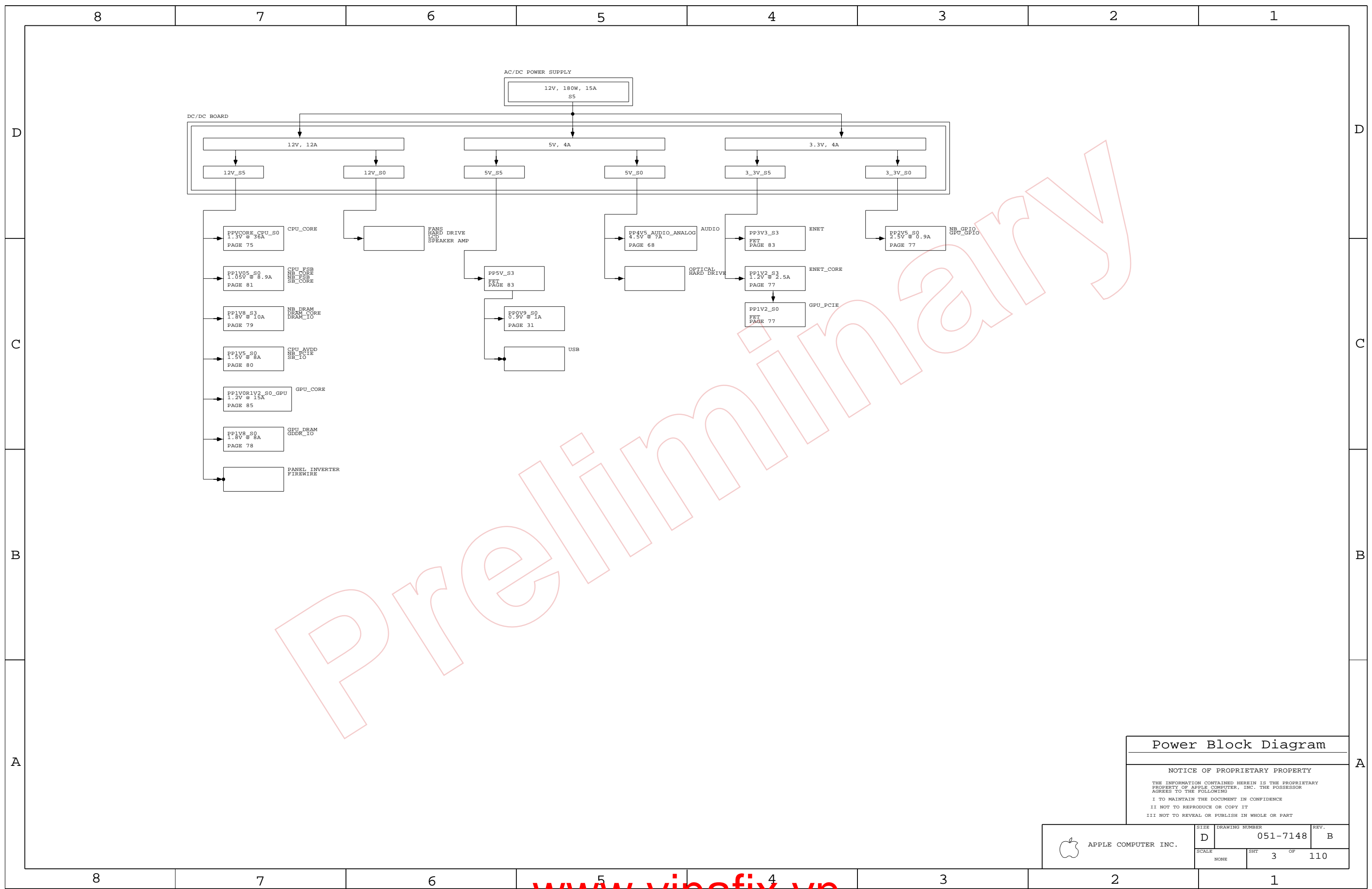
<p style="font-size: small;">DIMENSIONS ARE IN MILLIMETERS</p> <p>XX : _____</p> <p>X.XX : _____</p> <p>X.XXX : _____</p> <p>ANGLES : _____</p> <p style="text-align: center; font-size: x-small;">DO NOT SCALE DRAWING</p> <div style="text-align: center;"> <p style="font-size: x-small;">THIRD ANGLE PROJECTION</p> </div>	<p><b>METRIC</b></p>	<div style="text-align: right;"> <p>Apple Computer Inc.</p> </div> <p style="font-size: x-small; text-align: center;">NOTICE OF PROPRIETARY PROPERTY</p> <p style="font-size: x-small; text-align: center;">THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING</p> <p style="font-size: x-small; text-align: center;">I TO MAINTAIN THE DOCUMENT IN CONFIDENCE</p> <p style="font-size: x-small; text-align: center;">II NOT TO REPRODUCE OR COPY IT</p> <p style="font-size: x-small; text-align: center;">III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART</p> <div style="text-align: center;"> <p><b>TITLE</b></p> <p style="font-size: large;">SCH, MLB, M38A</p> </div> <div style="display: flex; justify-content: space-between;"> <p style="font-size: x-small;">DRAWING NUMBER</p> <p style="font-size: large;">051-7148</p> <p style="font-size: x-small;">REV.</p> <p style="font-size: large;">B</p> </div>
RELEASE	SCALE	NONE
MATERIAL/FINISH NOTED AS APPLICABLE	SIZE	D
SHEET 1 OF 110		



### System Block Diagram

**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	051-7148	B
SCALE	SHT	OF	REV.
NONE	2	110	



Preliminary

**Power Block Diagram**

**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	051-7148	B
SCALE	SHT	OF	
NONE	3	110	

8

7

6

5

4

3

2

1

COMMON

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
511S0025	1	IC,CPU-SKT,479BGA	J0700	CRITICAL	
338S0328	1	IC,945PM,NORTHBRIDGE	U1200	CRITICAL	
343S0385	1	IC,SB,652BGA	U2100	CRITICAL	
338S0344	1	IC,ATI,M56P,GRAFIXCTLR,880BGA,LF	U8400	CRITICAL	
359S0101	1	IC,CY28445-5,CLK GEN,68PIN QFN	U3301	CRITICAL	
338S0270	1	IC,88E8053,GIGABIT ENET XCVR,64P QFN,SMD	U4101	CRITICAL	
(335S0382)	1	IC,ENET LAN ROM	U4102	CRITICAL	
338S0279	1	IC,FW32306,1394A LINK,TQFP	U4400	CRITICAL	

341S1789	1	IC,TPM,TSSOP,28P	U6700	CRITICAL	LEMENU
UNSCREENED P/N 353S1235	1	IC,CPU VREG,IMVP,TWO PHASE	U7500	CRITICAL	

128S0078	3	CAP,EL,AL,330UF,20V,16V,10X12.7MM,SMD,LF	C7517,C7518,C7910	CRITICAL	
825-6447	1	MLB LABEL,48_0X4.8	X14	CRITICAL	
155S0289	7	EMI CHOKE	FLR011,FLR021,FL4610,FL4620,L4712,L4722,L4732	CRITICAL	

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
126S0096	126S0076		C7801	SANYO W16CK680EX 680UF 16V LP
126S0086	126S0078		C699,C940,C1900,C1901,C1968	SANYO W6CE330F8 330UF 6.3V LP
128S0080	128S0078		C7517,C7518,C7910	SANYO 166VP330W 330UF 16V SMD LP
124-0338	124-0333		C7501,C8014	CAP,AL,EL,680UF,16V,RAD,10X12.5MM
138S0580	138S0552			22UF 0805
353S1321	353S1105		U7910	LM339
378S0141	378S0140		LED001,LED602,LED603	SMD
353S1461	353S1465		U7500	CPU REGULATOR - ISL9504
138S0598	138S0512			SAMSUNG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-7148	1	PCB,SCHM,MLB,M38A	SCH1		17_INCH_LCD
820-2052	1	PCB,FAB,MLB,M38A	MLB1		17_INCH_LCD
341T0040	1	EFI ROM,M38A	U6301	CRITICAL	17_INCH_LCD
114S0264	1	3.01K,1%,1/16W,402,MF-LF	R8522		GPU_VCORE_IP2V
341T0039	1	IC,SMC,M38A	U5800	CRITICAL	17_INCH_LCD
338S0315	1	IC,ATI,M56LP,GRAFIX CTLR,880BGA,LF	U8400	CRITICAL	GPU_B26_LP
114S0287	1	5.11K,1%,1/16W,402,MF-LF	R8522		GPU_VCORE_0P953V
114S0281	1	4.53K,1%,1/16W,402,MF-LF	R8522		GPU_VCORE_IP0V
337S3388	1	2.00GHZ MEROM	CPU	CRITICAL	2P00_CPU
337S3390	1	2.16GHZ MEROM	CPU	CRITICAL	2P16_CPU

(341S1908 - DEVEL)  
(341S1909 - FINAL)  
(335S0384 - BLNK)

(341S1907 - PROG)  
(338S0274 - BLNK)

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
333S0354	4	IC,SURAM,GDDR3,8MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_128M_SAMSUNG
333S0358	4	IC,SURAM,GDDR3,8MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_128M_HYNIX
333S0376	4	IC,SURAM,GDDR3,8MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_128M_INFINEON

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
333S0350	4	IC,SURAM,GDDR3,16MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_256M_SAMSUNG
333S0351	4	IC,SURAM,GDDR3,16MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_256M_HYNIX
333S0377	4	IC,SURAM,GDDR3,16MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_256M_INFINEON

Table Items

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

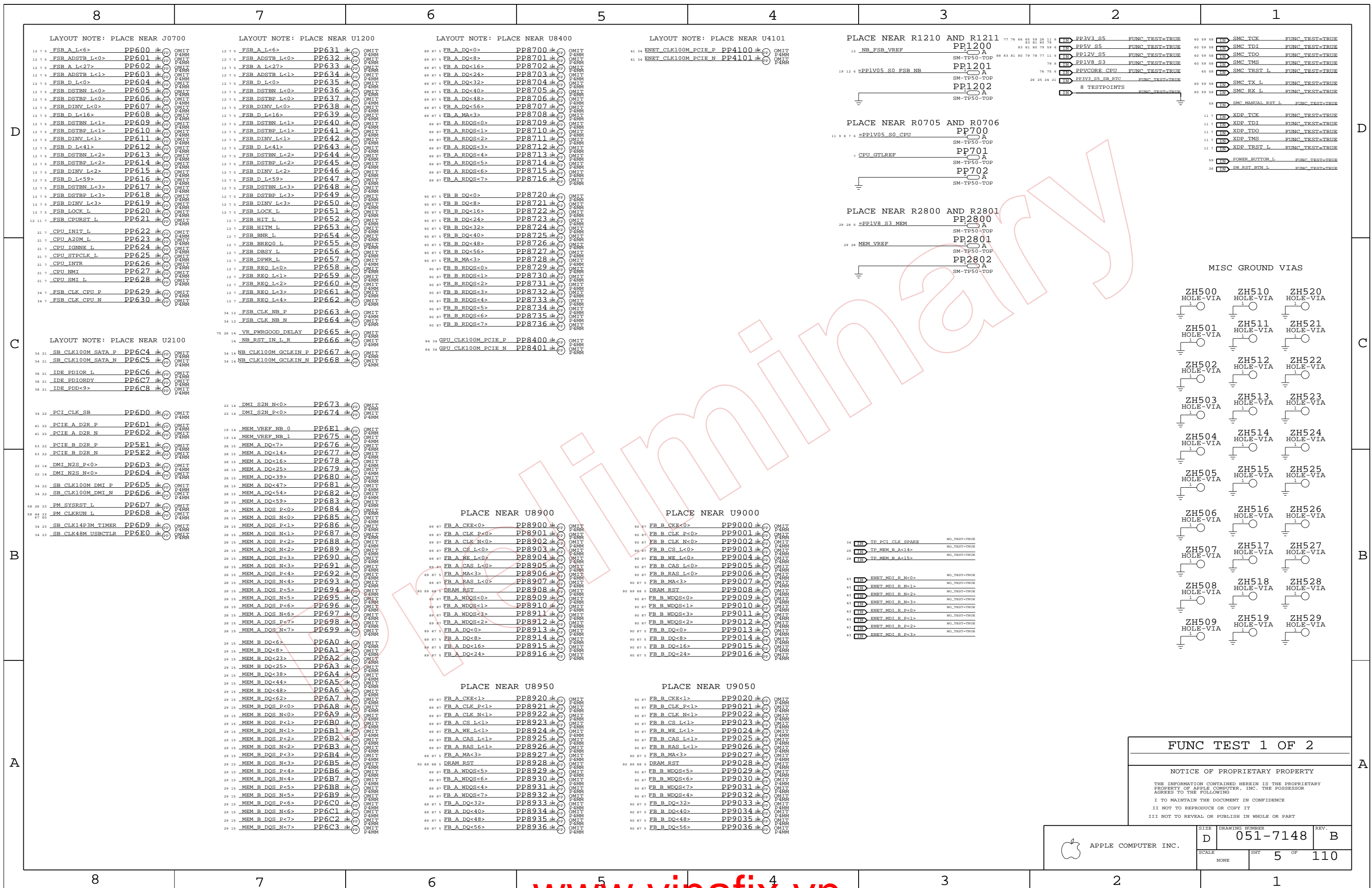
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART



APPLE COMPUTER INC.

SIZE D DRAWING NUMBER 051-7148 REV. B

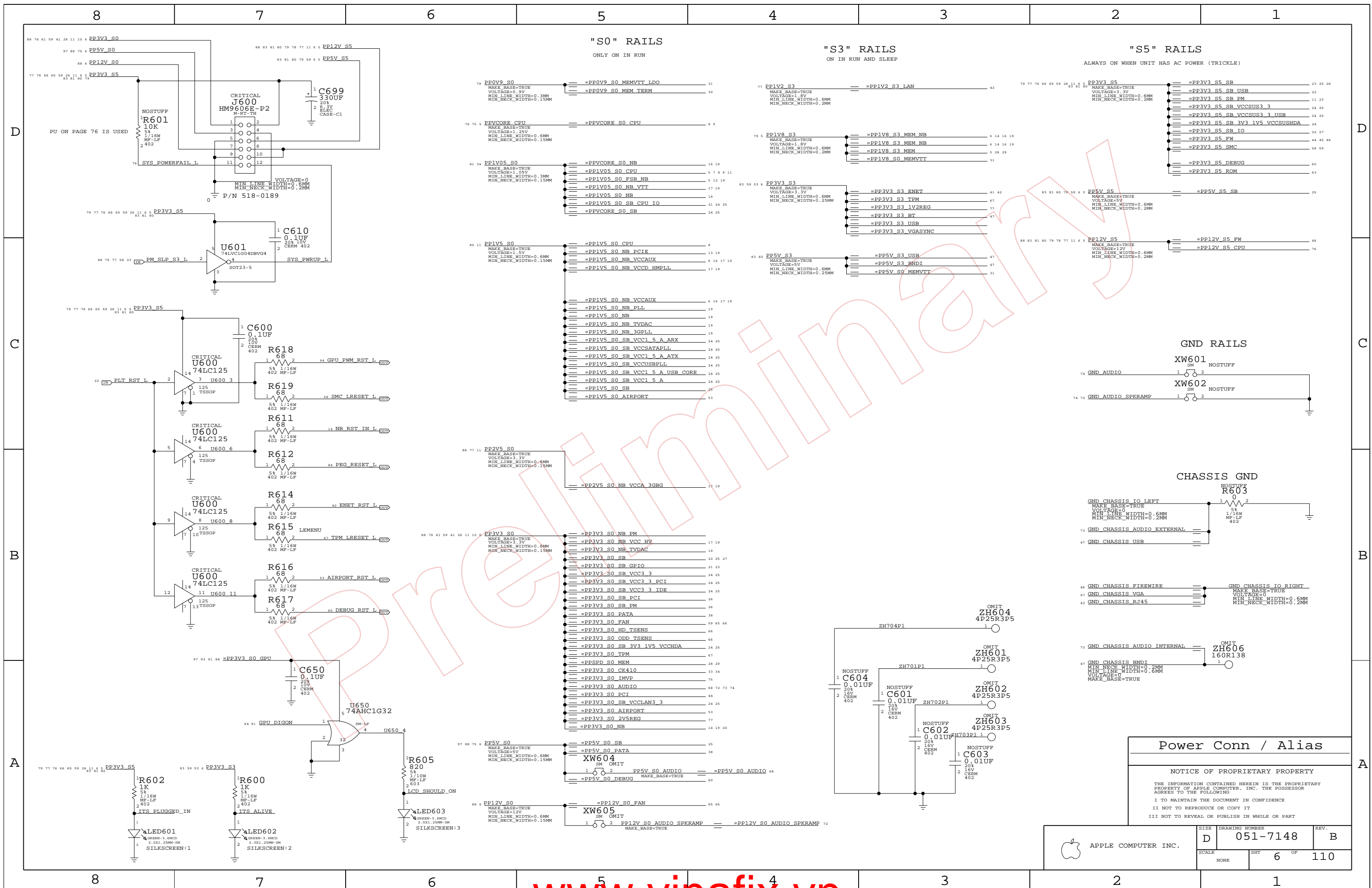
SCALE NONE SHIT 4 OF 110



FUNC TEST 1 OF 2

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	051-7148	B
SCALE	SHEET	OF	TOTAL
NONE	5	110	

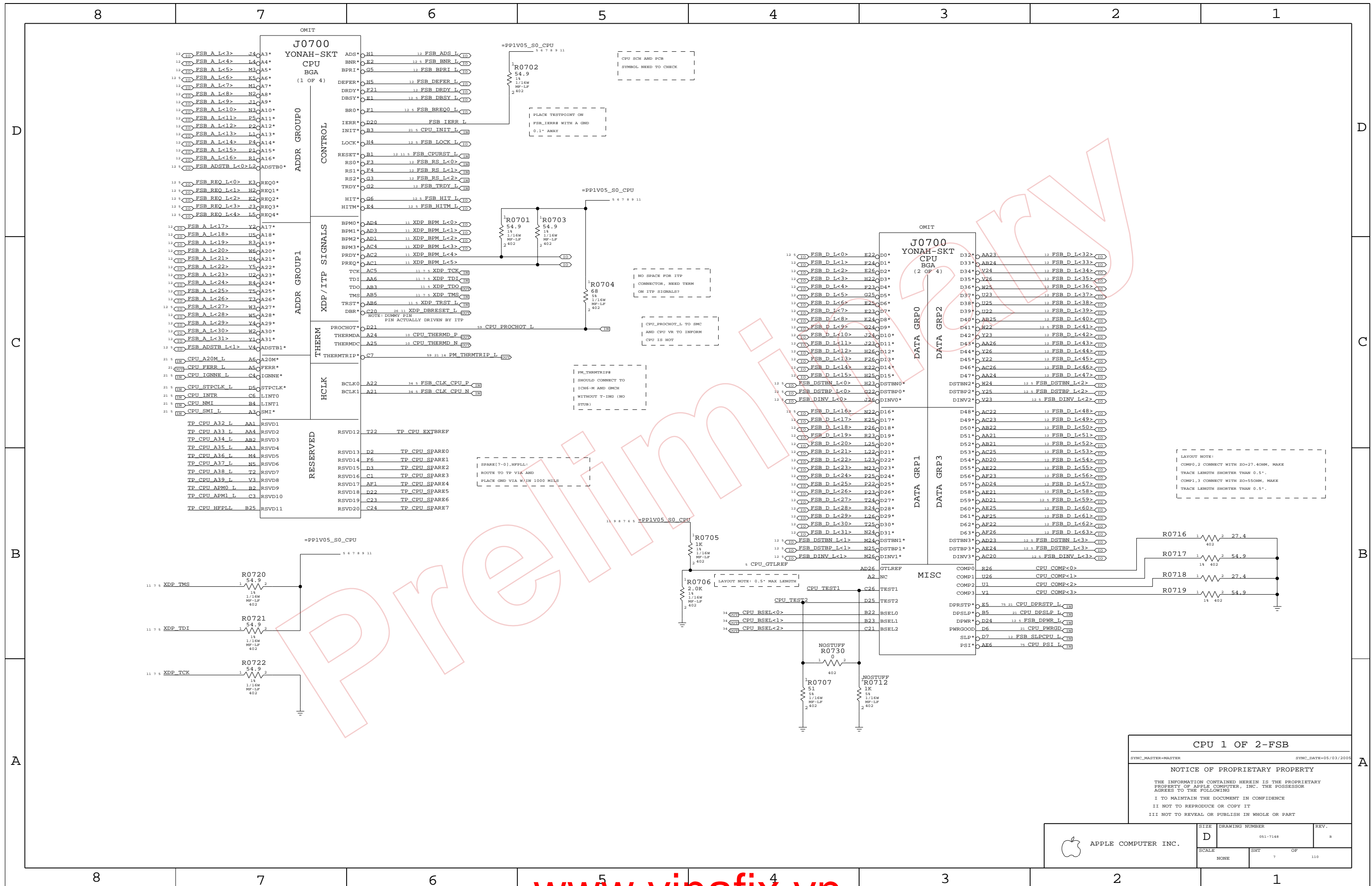


**Power Conn / Alias**

**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	051-7148	B
SCALE	SHT	OF	
NONE	6	110	



**CPU 1 OF 2-FSB**

SYNC\_MASTER=MASTER SYNC\_DATE=05/03/2005

**NOTICE OF PROPRIETARY PROPERTY**

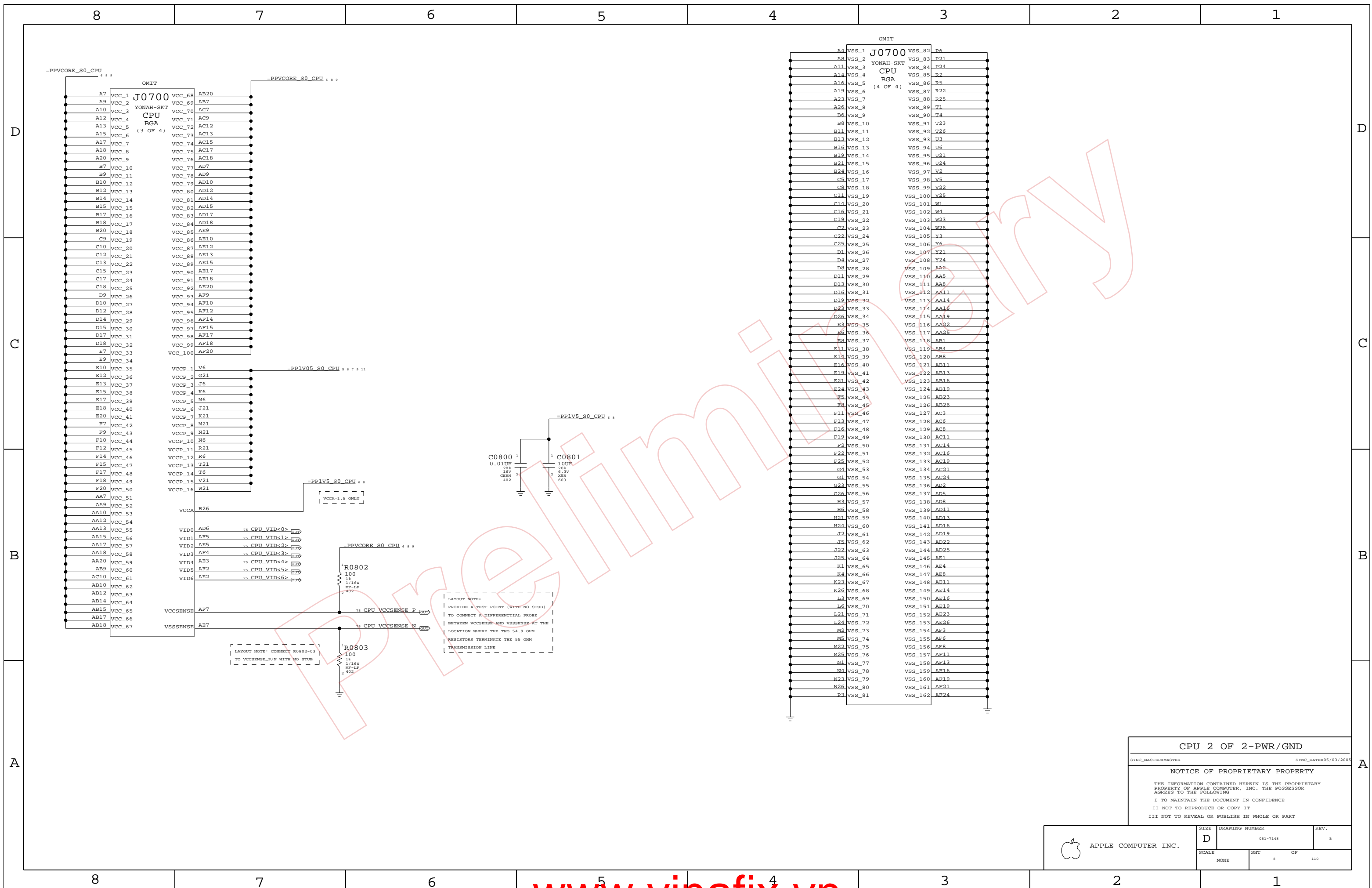
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

	DRAWING NUMBER		REV.
	D 051-7148		B
SCALE		SHT	OF
NONE		7	110



**CPU 2 OF 2-PWR/GND**

SYNC\_MASTER=MASTER      SYNC\_DATE=05/03/2005


**NOTICE OF PROPRIETARY PROPERTY**

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

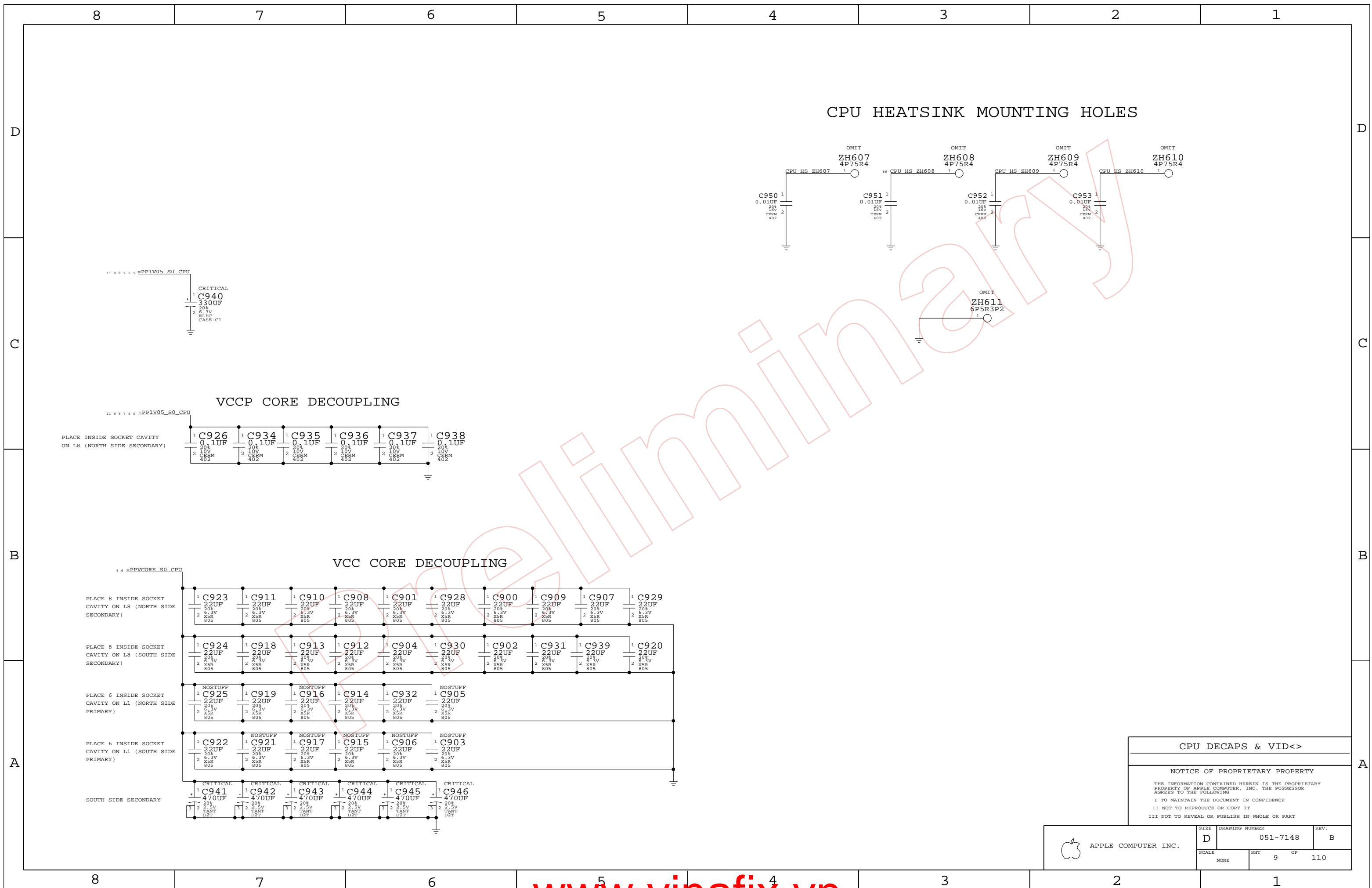
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

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	051-7148	B
SCALE	SHT	OF	REV.
NONE	8	110	





**CPU DECAPS & VID<>**

**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

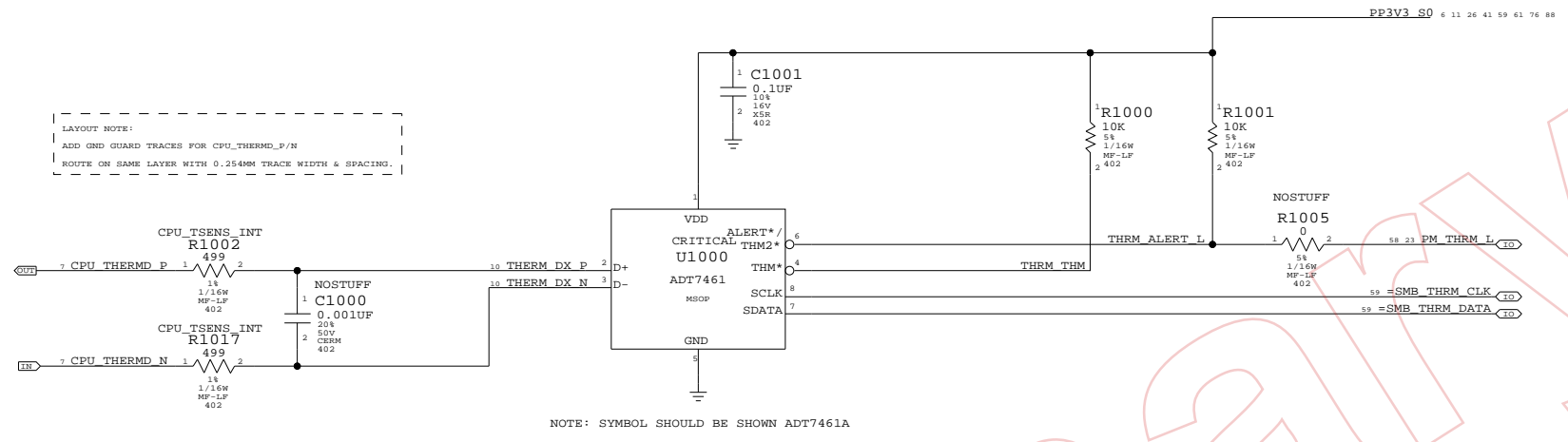
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	OF	110
NONE	9		

# CPU THERMAL SENSOR

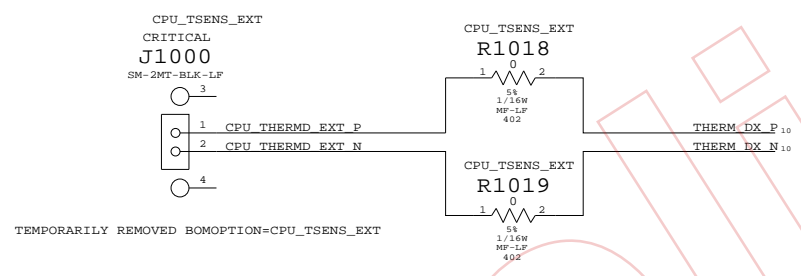
NOTE:  
IF CPU T DIODE TO BE READ IN OFF STATE,  
THEN THIS SHOULD BE S5

LAYOUT NOTE:  
ADD GND GUARD TRACKS FOR CPU\_THERMD\_P/N  
ROUTE ON SAME LAYER WITH 0.254MM TRACE WIDTH & SPACING.



NOTE: SYMBOL SHOULD BE SHOWN ADT7461A

LAYOUT NOTE:  
PLACE R1002 AND R1018 SUCH THAT THEY SHARE ONE PAD  
PLACE R1017 AND R1019 SUCH THAT THEY SHARE ONE PAD



**CPU TEMP SENSOR**

**NOTICE OF PROPRIETARY PROPERTY**

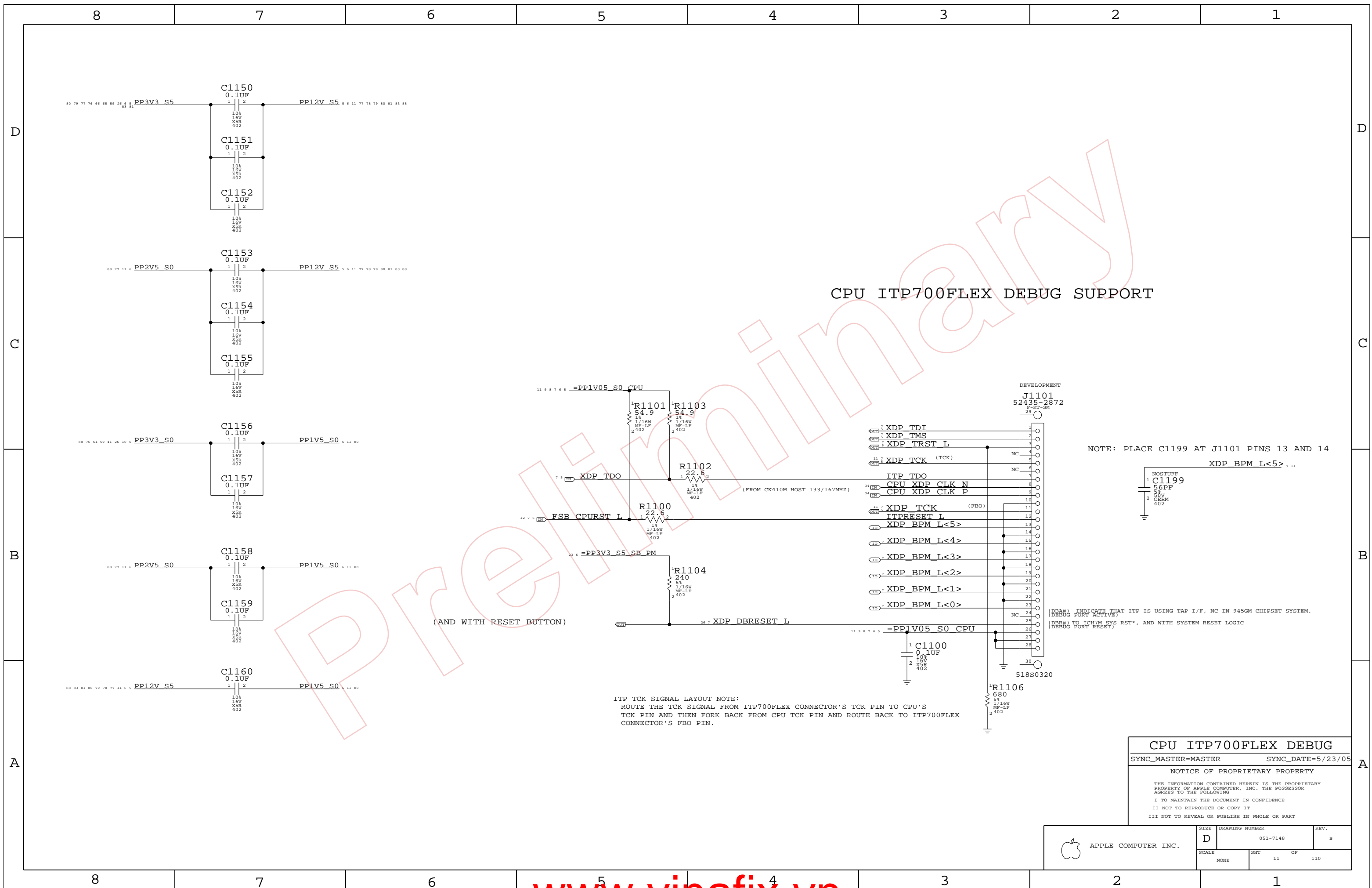
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

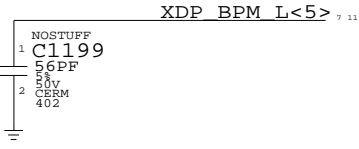
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT		OF
NONE	10		110



CPU ITP700FLEX DEBUG SUPPORT

NOTE: PLACE C1199 AT J1101 PINS 13 AND 14



(DBA#) INDICATE THAT ITP IS USING TAP I/F, NC IN 945GM CHIPSET SYSTEM.  
 (DBB#) TO ICH7M SYS\_RST\*, AND WITH SYSTEM RESET LOGIC  
 (DBB#) TO ICH7M SYS\_RST\*, AND WITH SYSTEM RESET LOGIC  
 (DBB#) TO ICH7M SYS\_RST\*, AND WITH SYSTEM RESET LOGIC

ITP TCK SIGNAL LAYOUT NOTE:  
 ROUTE THE TCK SIGNAL FROM ITP700FLEX CONNECTOR'S TCK PIN TO CPU'S  
 TCK PIN AND THEN FORK BACK FROM CPU TCK PIN AND ROUTE BACK TO ITP700FLEX  
 CONNECTOR'S FBO PIN.

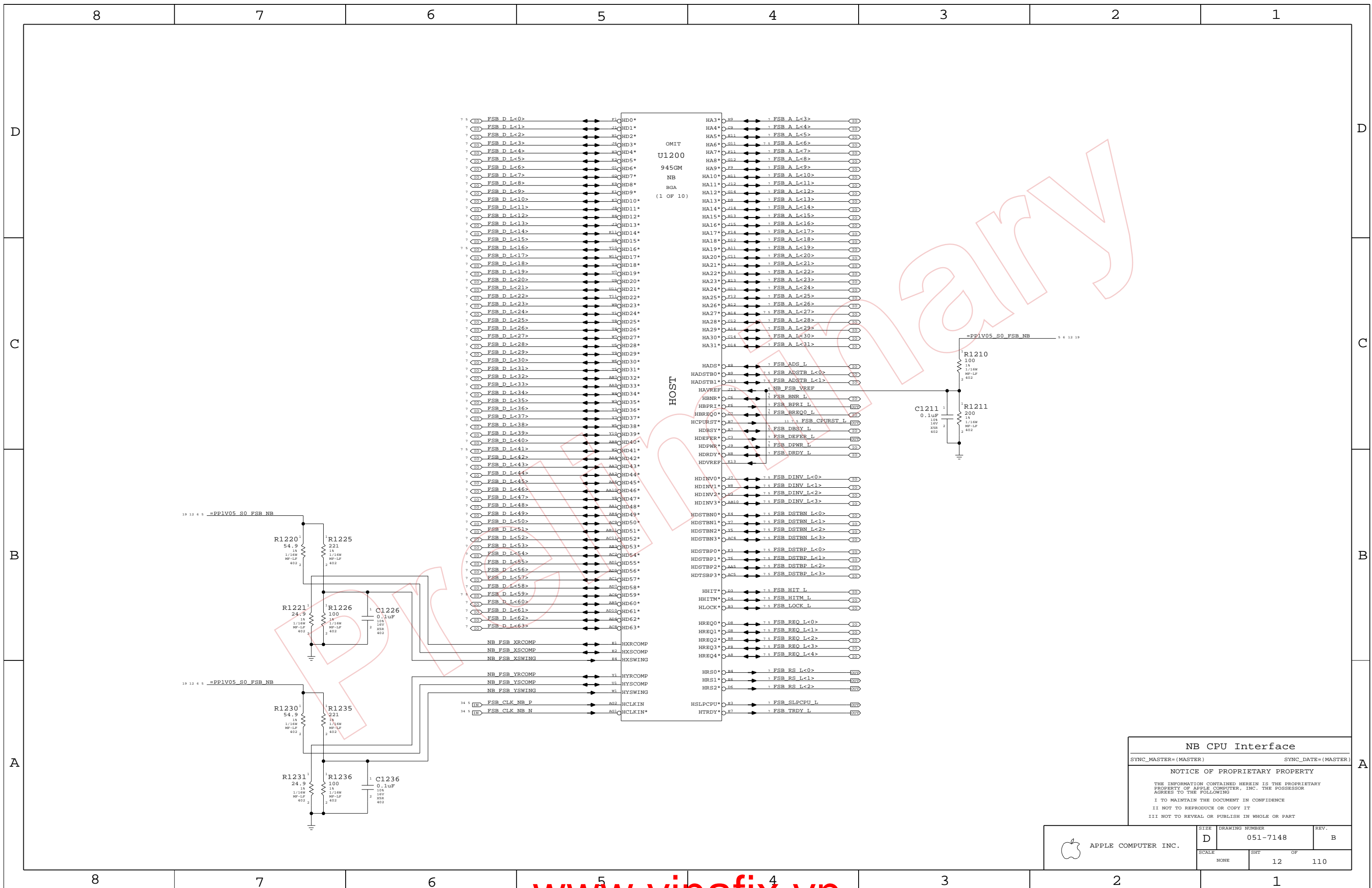
CPU ITP700FLEX DEBUG

SYNC\_MASTER=MASTER SYNC\_DATE=5/23/05

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	051-7148	B
SCALE	SHT	OF	110
NONE	11		



**NB CPU Interface**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

**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 051-7148	REV. B
	SCALE NONE	SHEET 12	OF 110

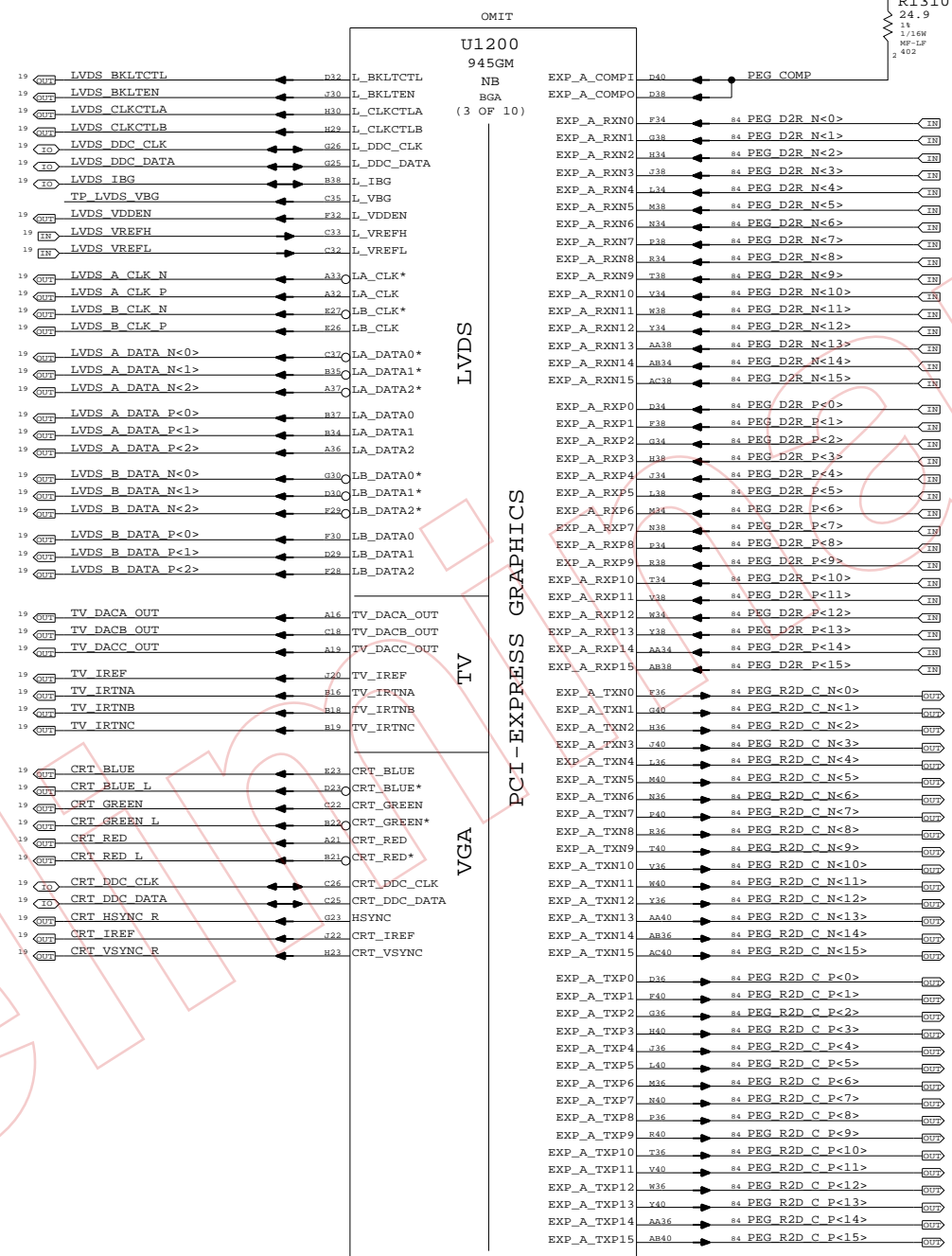
**LVDS Disable**  
 Can leave all signals NC if LVDS is not implemented  
 Tie VCC\_TXLVDS and VCCA\_LVDS to GND. If SDVO is used  
 VCCD\_LVDS must remain powered with proper decoupling.  
 Otherwise, tie VCCD\_LVDS to GND also.

**TV-Out Signal Usage:**  
 Composite: DACA only  
 S-Video: DACB & DACC only  
 Component: DACA, DACB & DACC

Unused DAC outputs must remain powered, but can omit  
 filtering components. Unused DAC outputs should  
 connect to GND through 75-ohm resistors.

**TV-Out Disable**  
 Tie DACx\_OUT, IRTNx, and IREF to 1.5V power rail.  
 Tie VCCD\_TVDAC, VCCD\_QTVDAC, VCCA\_TVDACx, and  
 VCCA\_TVVBG to 1.5V power rail. Tie VSSA\_TVVBG to GND.

**CRT Disable**  
 Tie R/R#/G/G#/B/B# and IREF to VCC Core rail, tie  
 HSYNC and VSYNC to GND. Tie VCCA\_CRTDAC to VCC Core  
 rail, and tie VSSA\_CRTDAC and VCC\_SYNC to GND.



SDVO Alternate Function

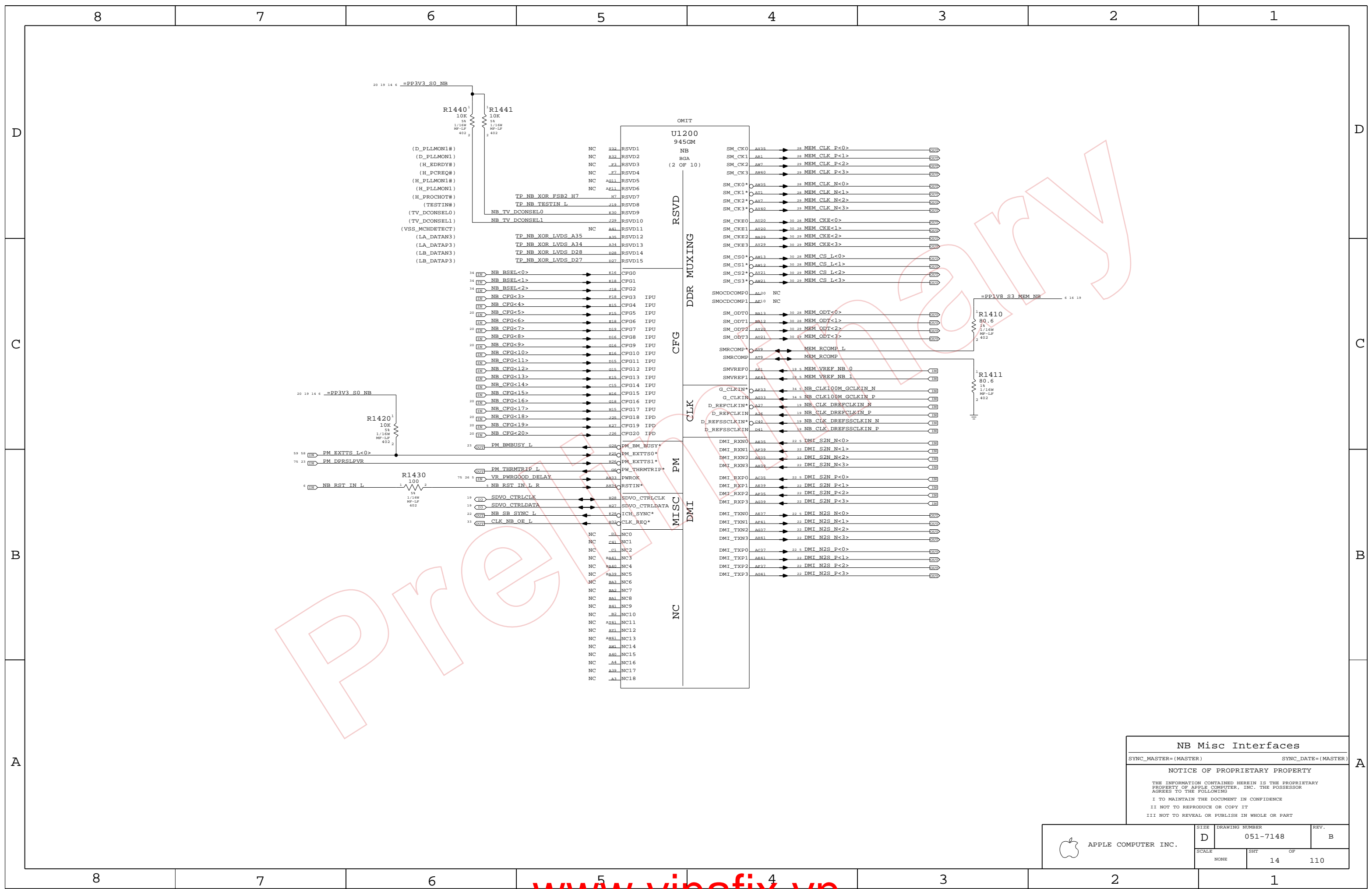
SDVO\_TVCLKIN#  
 SDVO\_INT#  
 SDVO\_FLDSTALL#

SDVOB\_RED#  
 SDVOB\_GREEN#  
 SDVOB\_BLUE#  
 SDVOB\_CLKN  
 SDVOC\_RED#  
 SDVOC\_GREEN#  
 SDVOC\_BLUE#  
 SDVOC\_CLKN

SDVOB\_RED  
 SDVOB\_GREEN  
 SDVOB\_BLUE  
 SDVOB\_CLKP  
 SDVOC\_RED  
 SDVOC\_GREEN  
 SDVOC\_BLUE  
 SDVOC\_CLKP

**NB PEG / Video Interfaces**  
 SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)  
**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	051-7148	B
SCALE	SHT OF		
NONE	13	110	



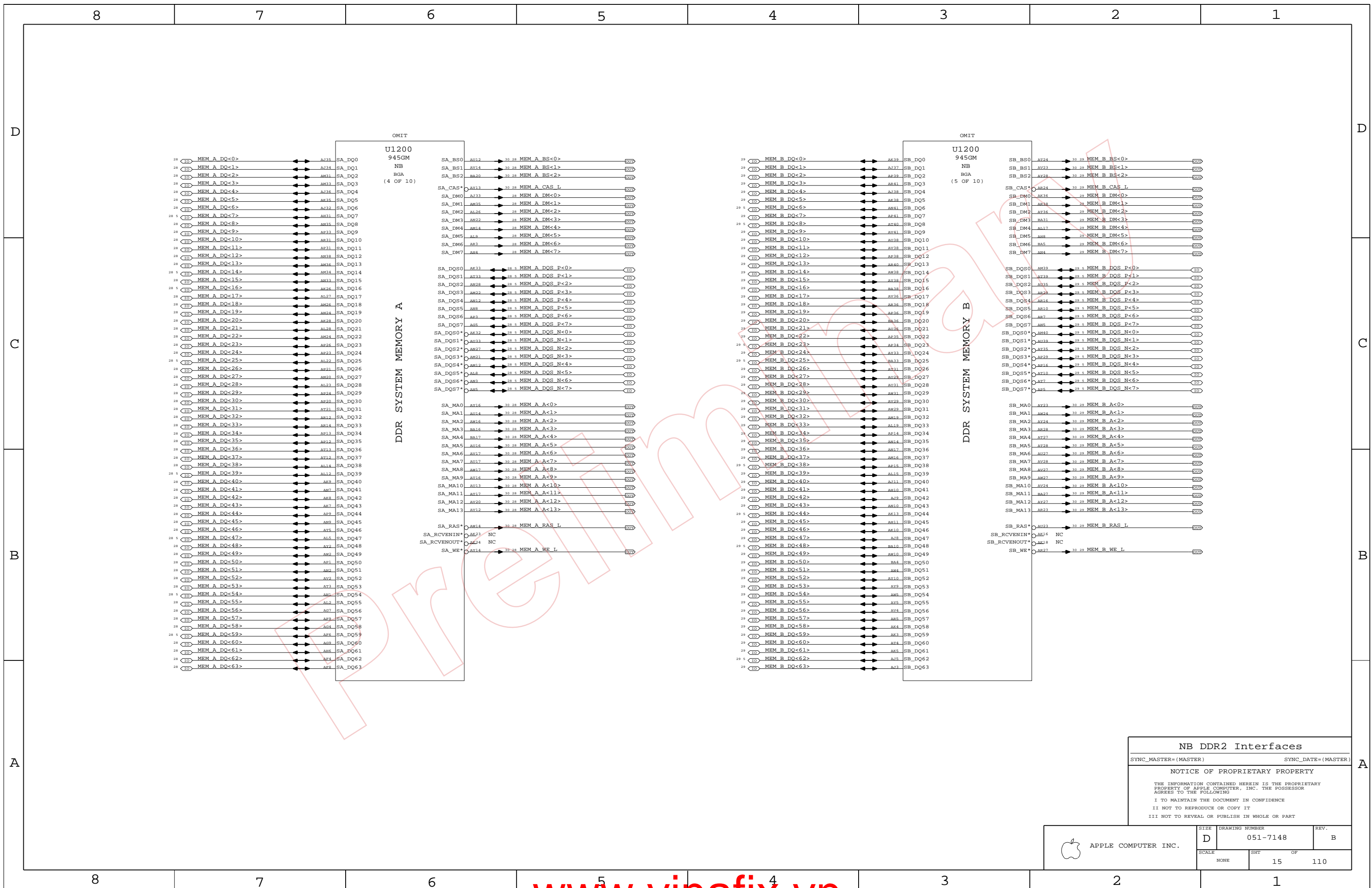
**NB Misc Interfaces**

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

**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	051-7148	B
SCALE	SHT	OF	
NONE	14		110



**NB DDR2 Interfaces**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

**NOTICE OF PROPRIETARY PROPERTY**

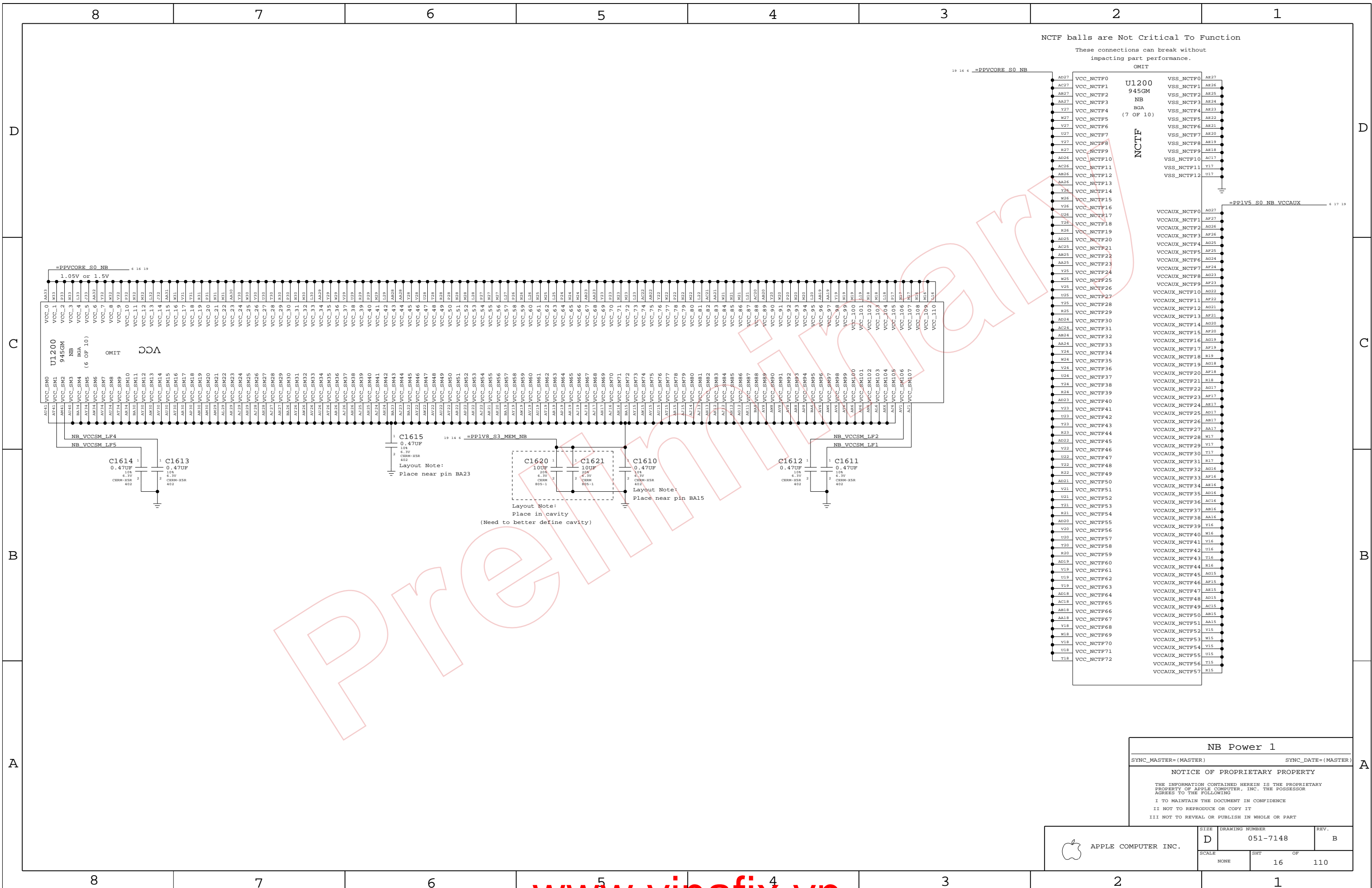
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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 051-7148	REV. B
	SCALE NONE	SHEET 15	OF 110



**NB Power 1**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

**NOTICE OF PROPRIETARY PROPERTY**

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

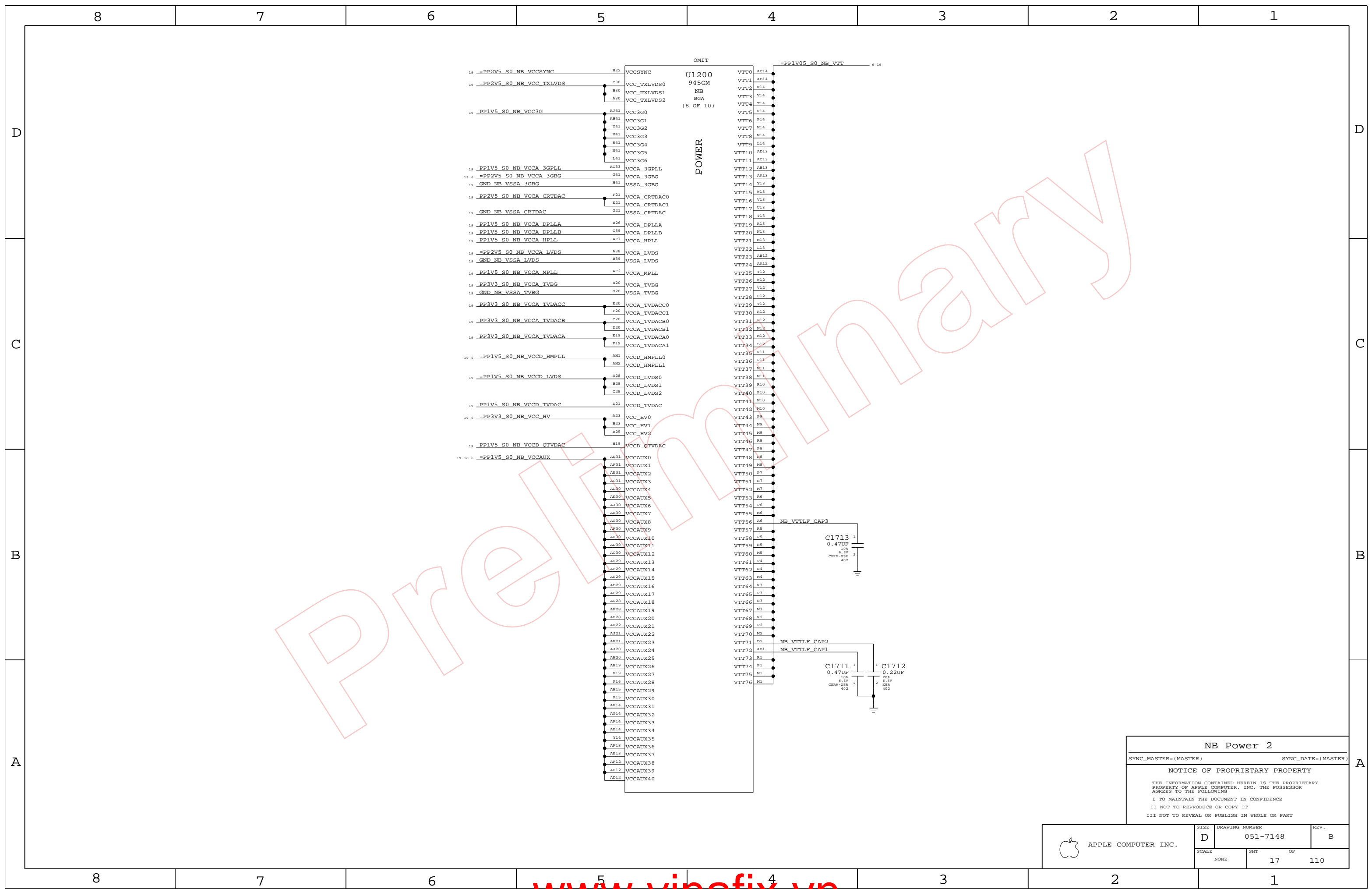
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

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	051-7148	B
SCALE	SHT	OF	
NONE	16	110	





Pre-release material

**NB Power 2**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

**NOTICE OF PROPRIETARY PROPERTY**

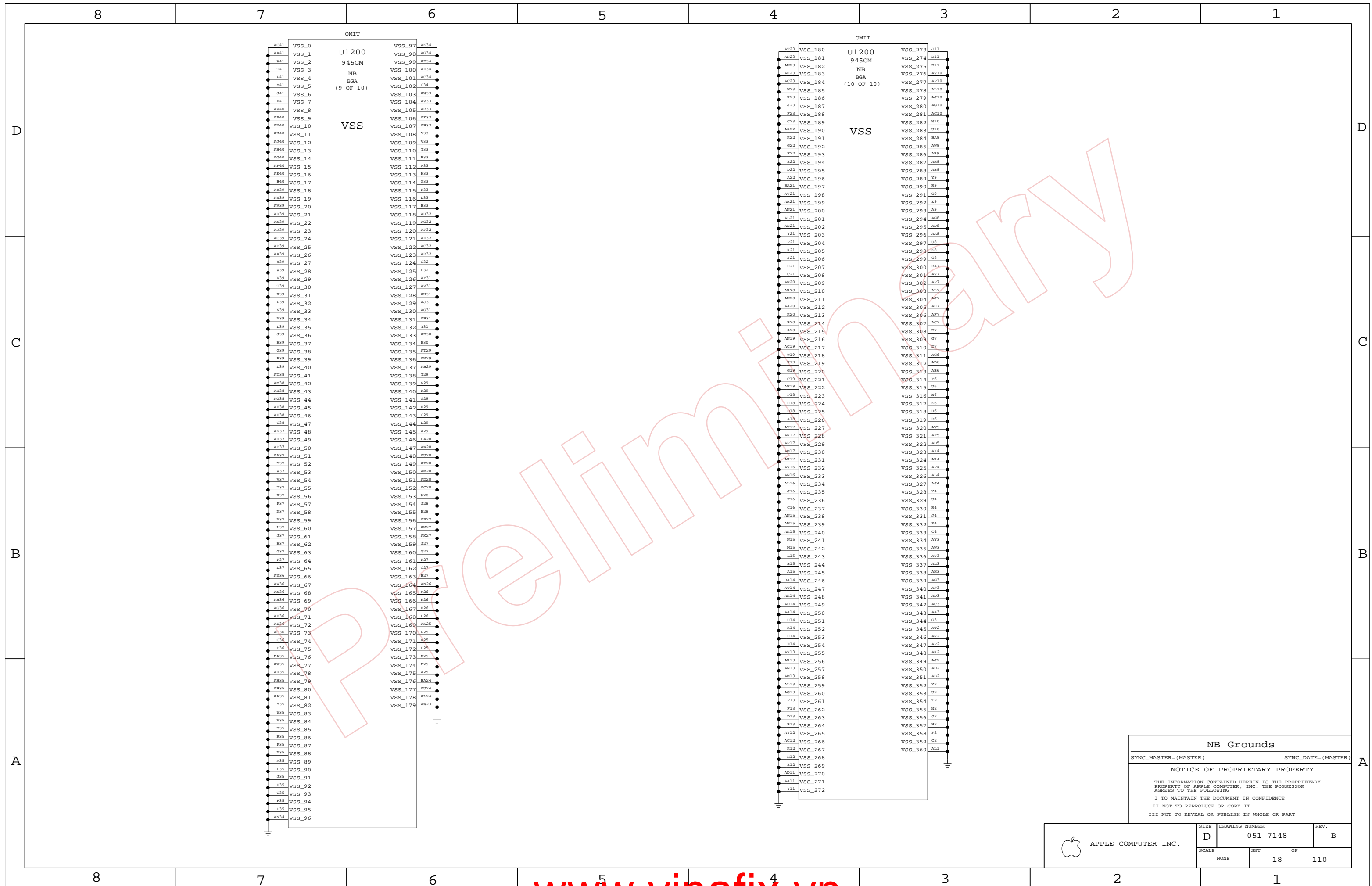
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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>051-7148</b>	REV. <b>B</b>
	SCALE NONE	SHT 17	OF 110



D

C

B

A

D

C

B

A

**NB Grounds**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

**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

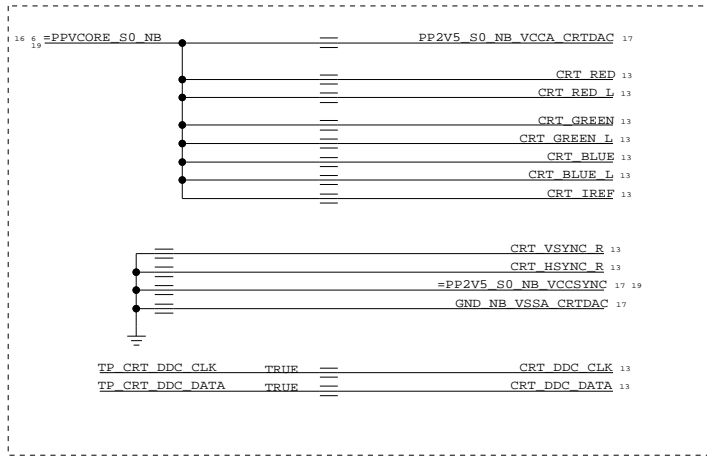
APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER 051-7148	REV. B
	SCALE NONE	SHIT 18	OF 110

### Power Interface

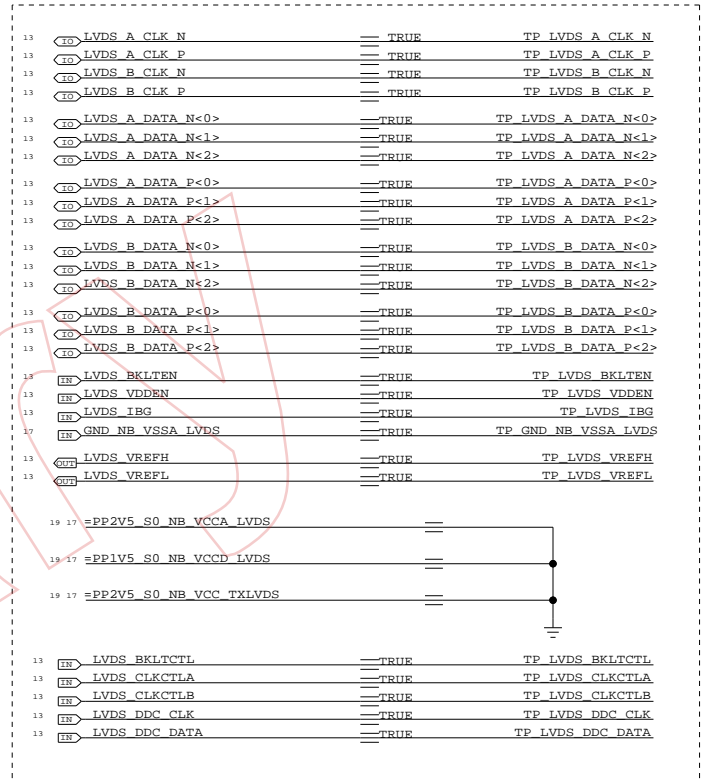
These are the power signals that leave the NB "block"

- =PP1V05\_S0\_FSB\_NB 5 6 12
- =PPVCORE\_S0\_NB 6 16 19
- =PP1V05\_S0\_NB 6 16
- =PP1V05\_S0\_NB\_VTT 6 17 19
- =PP1V5\_S0\_NB 6 19
- =PP1V5\_S0\_NB\_PCIE 6 13
- =PP1V5\_S0\_NB\_PLL 6 19
- =PP1V5\_S0\_NB\_TVDAC 6 19
- =PP1V5\_S0\_NB\_VCCD\_HMPLL 6 19
- =PP1V5\_S0\_NB\_VCCD\_LVDS 17 19
- =PP1V5\_S0\_NB\_VCCAUX 6 16 17 19
- =PP1V8\_S3\_MEM\_NB 6 14 16 19
- =PP2V5\_S0\_NB\_VCCSYNCR 17 19
- =PP2V5\_S0\_NB\_VCC\_TXLVDS 17 19
- =PP2V5\_S0\_NB\_VCCA\_3GBG 6 17 19
- =PP2V5\_S0\_NB\_VCCA\_LVDS 17 19
- =PP3V3\_S0\_NB 6 14 20
- =PP3V3\_S0\_NB\_TVDAC 6
- =PP3V3\_S0\_NB\_VCC\_HV 6 17 19

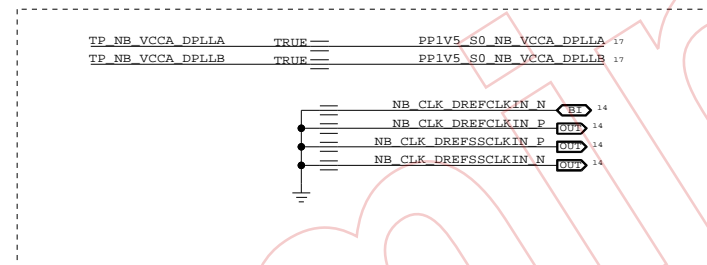
### TVOUT DISABLE



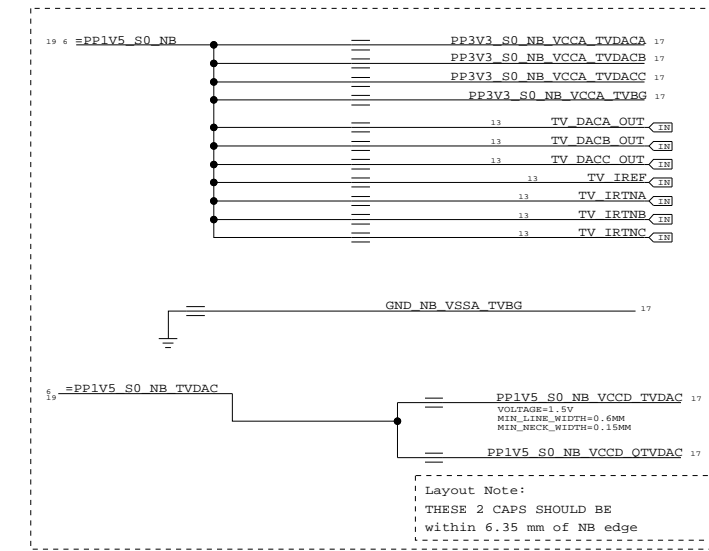
### LVDS DISABLE



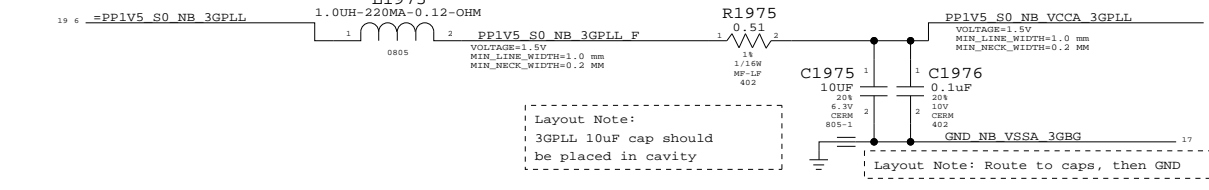
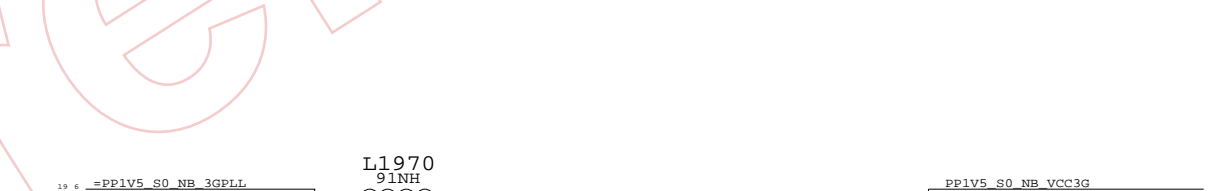
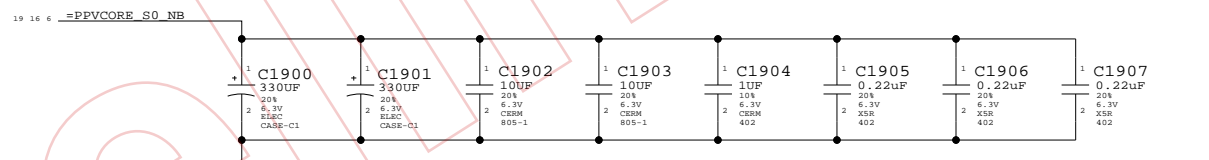
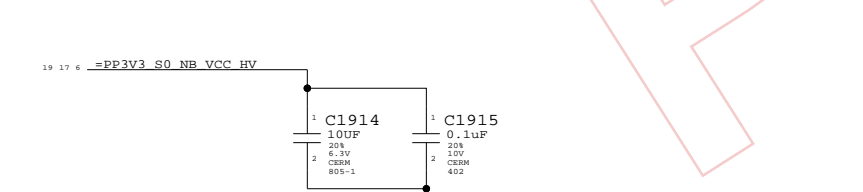
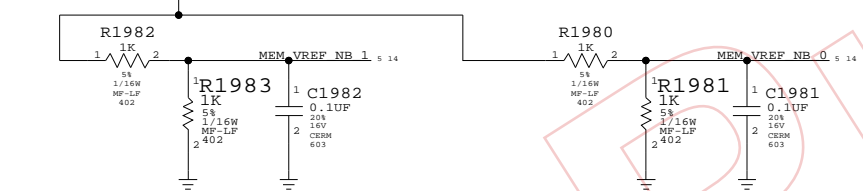
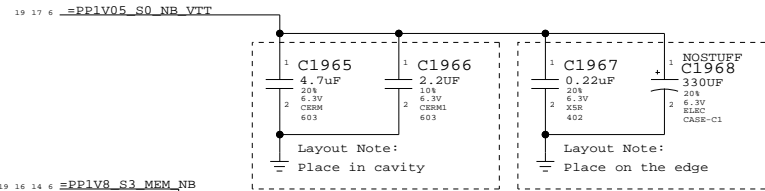
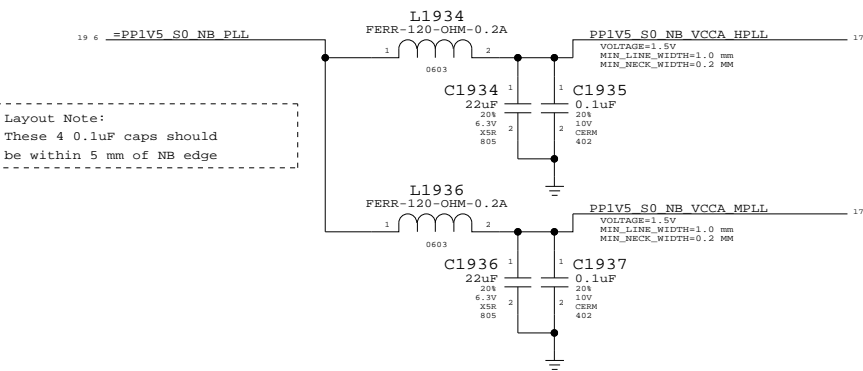
### DISPLAY DISABLE



### TVOUT DISABLE



Layout Note:  
These 4 0.1uF caps should be within 5 mm of NB edge



**NB (GM) Decoupling**

SYNC\_MASTER=(MASTER) SYNC\_DATA=(MASTER)

**NOTICE OF PROPRIETARY PROPERTY**

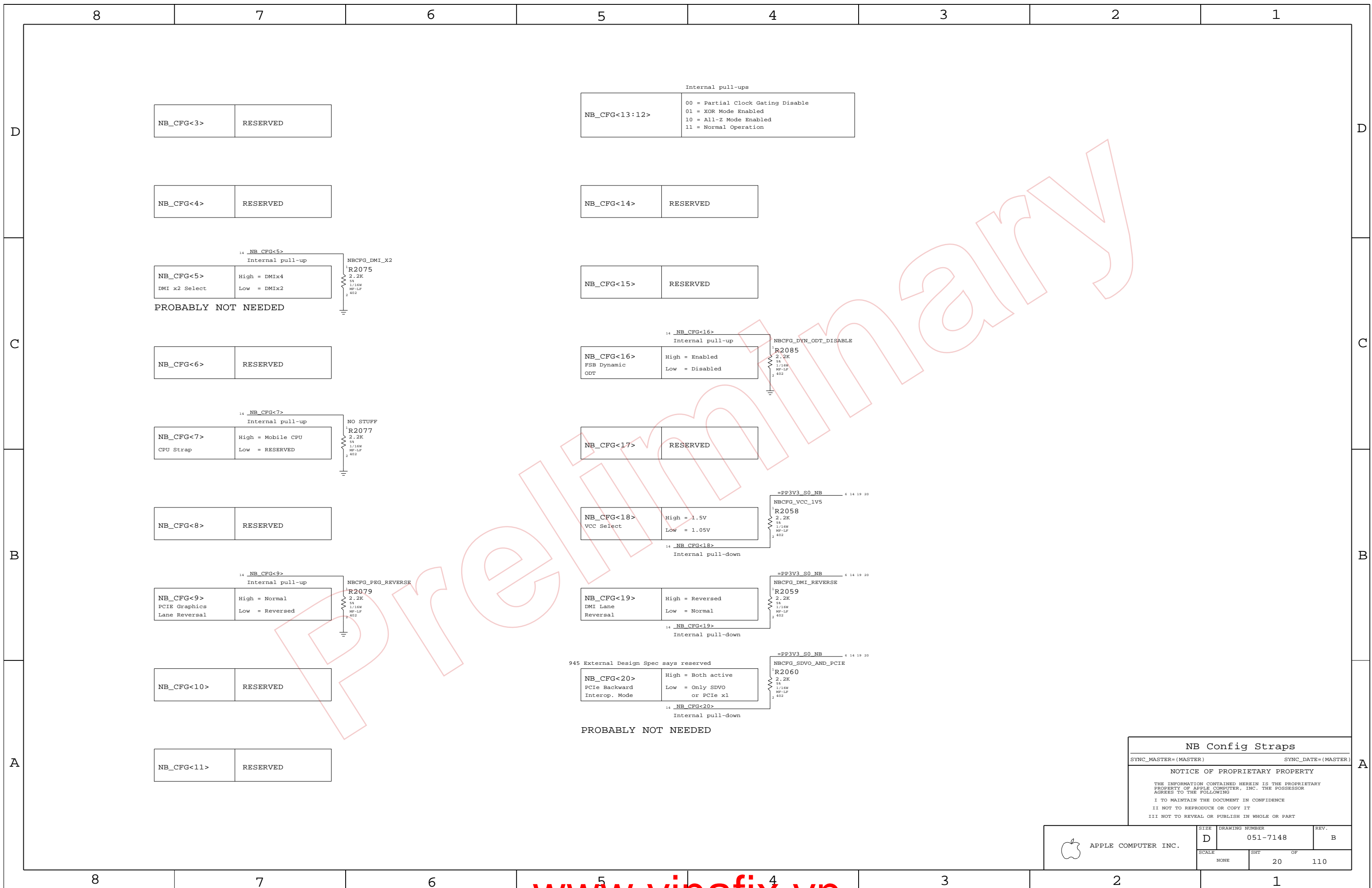
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

SIZE	DRAWING NUMBER	REV.
D	051-7148	B
SCALE	SHT	OF
NONE	19	110



**NB Config Straps**

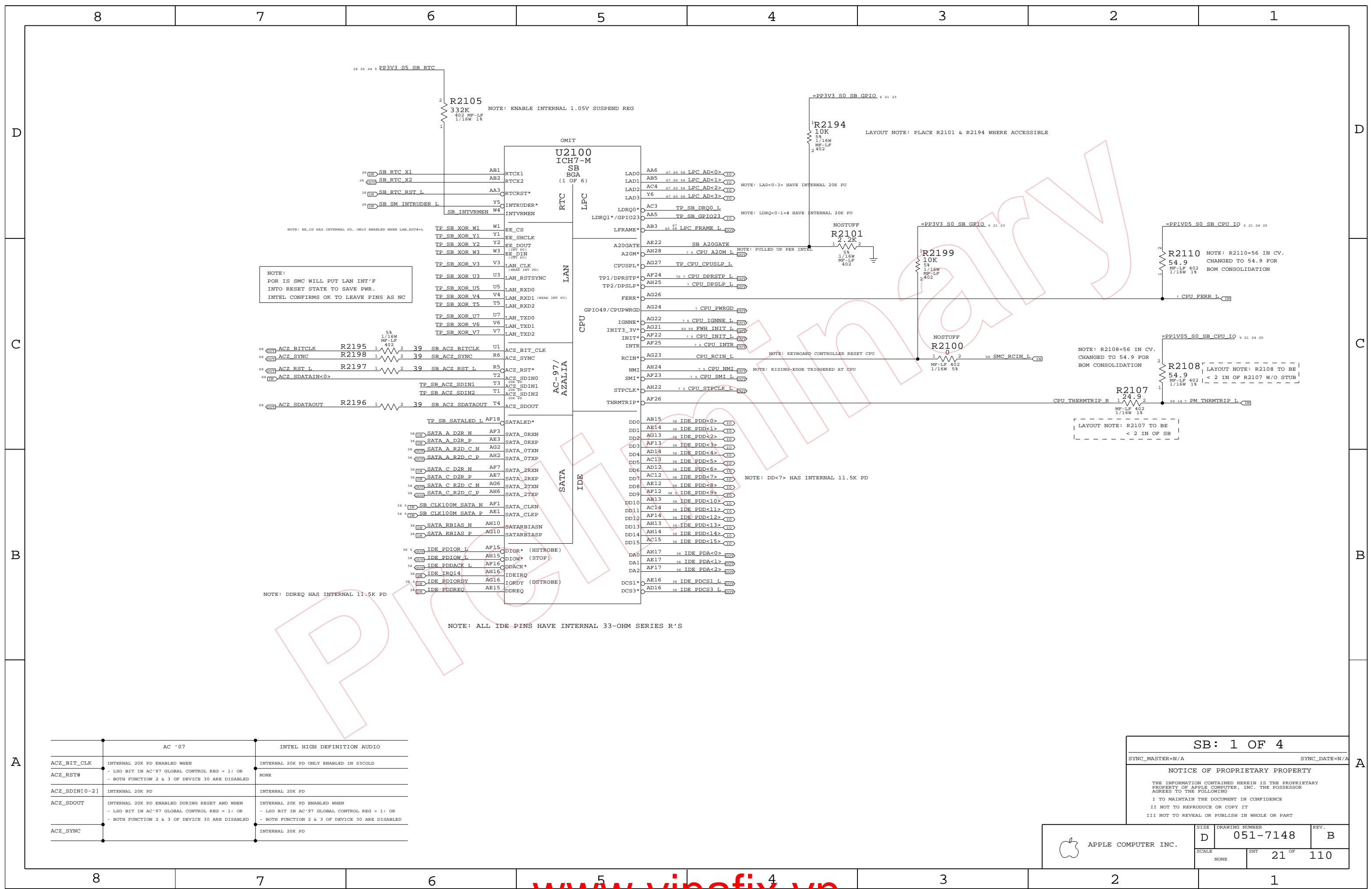
SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

**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	051-7148	B
SCALE	SHT	OF	
NONE	20	110	



NOTE:  
 POR IS SMC WILL PUT LAN INT'F  
 INTO RESET STATE TO SAVE PWR.  
 INTEL CONFIRMS OK TO LEAVE PINS AS NC

NOTE: DDREQ HAS INTERNAL 11.5K PD

NOTE: ALL IDE PINS HAVE INTERNAL 33-OHM SERIES R'S

AC '07	INTEL HIGH DEFINITION AUDIO
ACZ_BIT_CLK	INTERNAL 20K PD ENABLED WHEN - LSO BIT IN AC'97 GLOBAL CONTROL REG = 1; OR
ACZ_RST#	NONE
ACZ_SDIN[0-2]	INTERNAL 20K PD
ACZ_SDOUT	INTERNAL 20K PD ENABLED DURING RESET AND WHEN - LSO BIT IN AC'97 GLOBAL CONTROL REG = 1; OR - BOTH FUNCTION 2 & 3 OF DEVICE 30 ARE DISABLED
ACZ_SYNC	INTERNAL 20K PD

**SB: 1 OF 4**

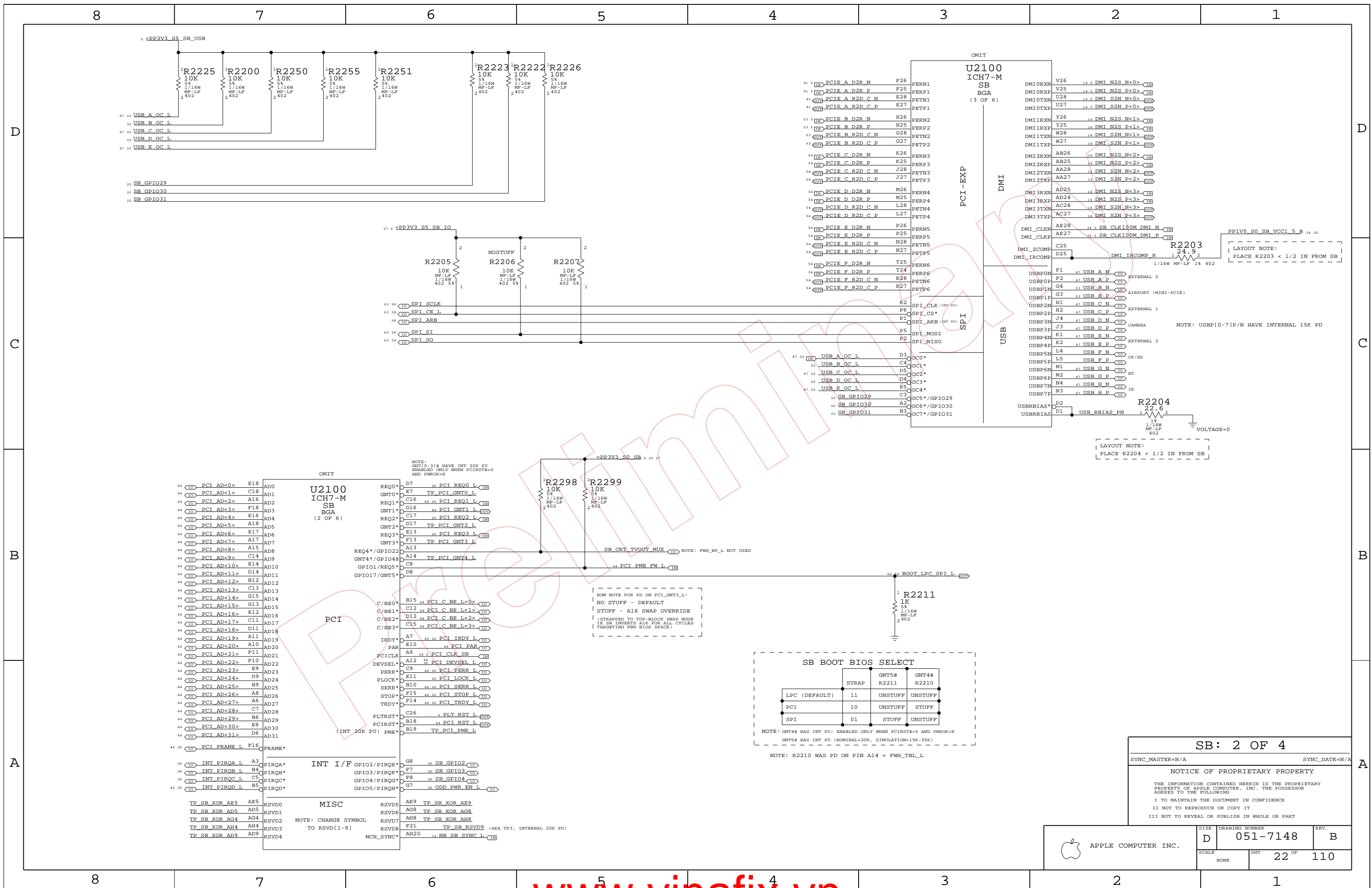
SYNC\_MASTER=N/A SYNC\_DATE=N/A

**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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	21 OF 110	
NONE			



**NOTICE OF PROPRIETARY PROPERTY**

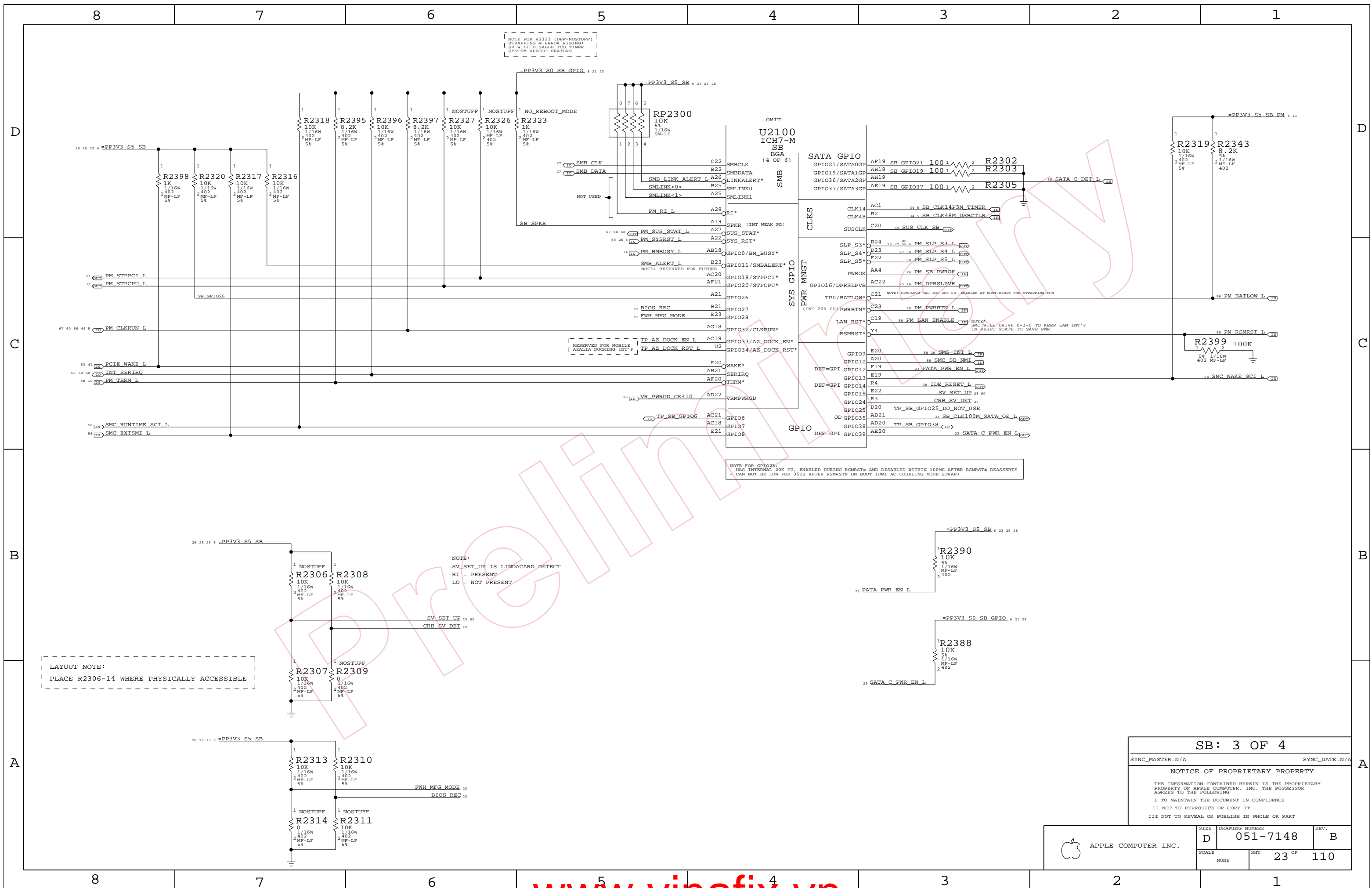
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:

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	051-7148	B
SCALE	SHT	22 OF	110
NONE			



NOTE FOR R2323 (DEF-NOSTUFF)  
STRAPPING & PWROK RISING:  
SB WILL DISABLE TOO TIMER  
SYSTEM REBOOT FEATURE

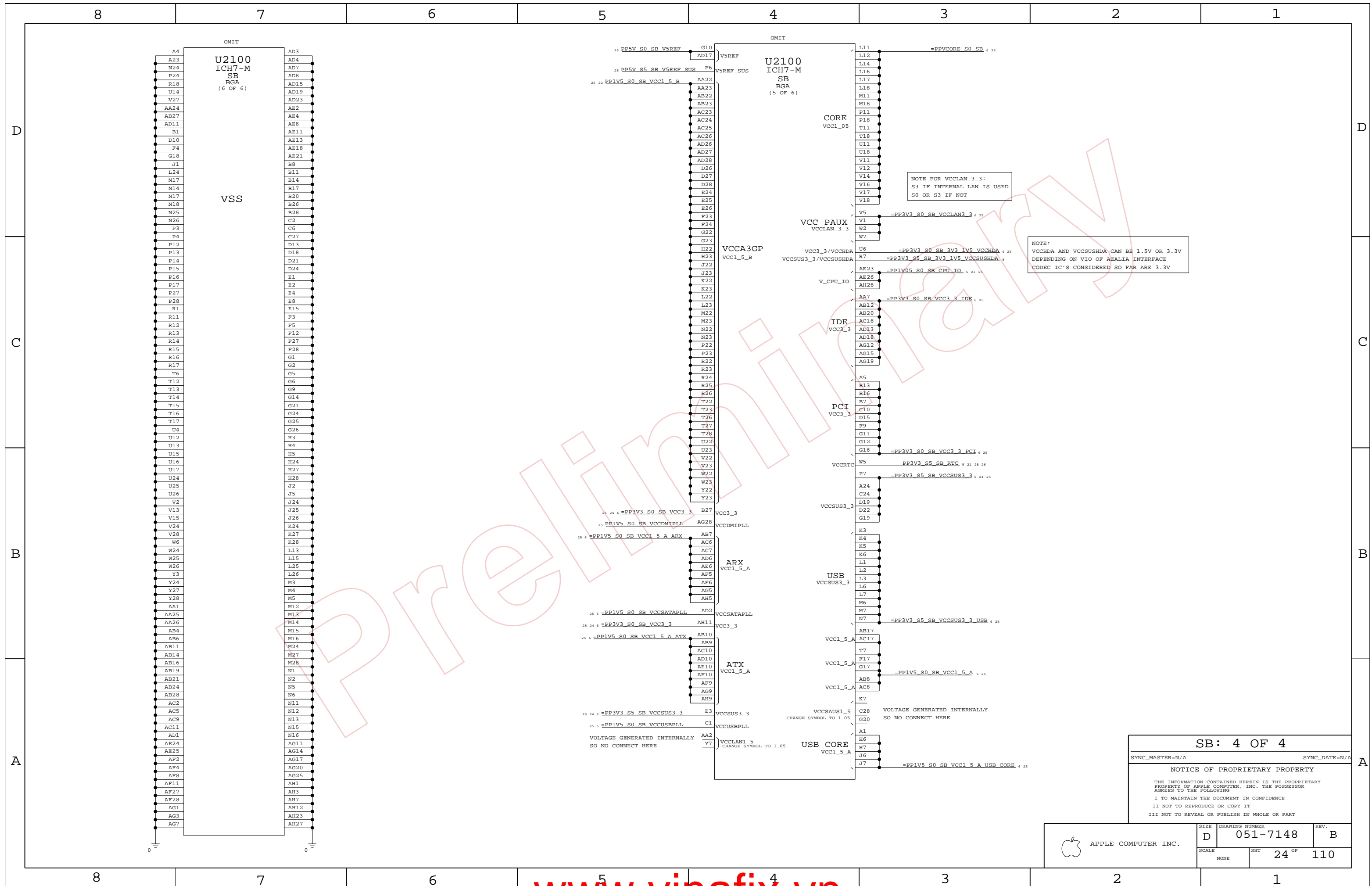
NOTE FOR GPIO25:  
\* HAS INTERNAL 20K PU, ENABLED DURING RSMRST# AND DISABLED WITHIN 100MS AFTER RSMRST# DEASSERTS  
\* CAN NOT BE LOW FOR 35US AFTER RSMRST# ON BOOT (DMI AC COUPLING MODE STRAP)

LAYOUT NOTE:  
PLACE R2306-14 WHERE PHYSICALLY ACCESSIBLE

NOTE:  
SV\_SET\_UP IS LINDACARD DETECT  
HI = PRESENT  
LO = NOT PRESENT

SB: 3 OF 4  
SYNC\_MASTER=N/A SYNC\_DATE=N/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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	NONE	SHT	23 OF 110



SB: 4 OF 4

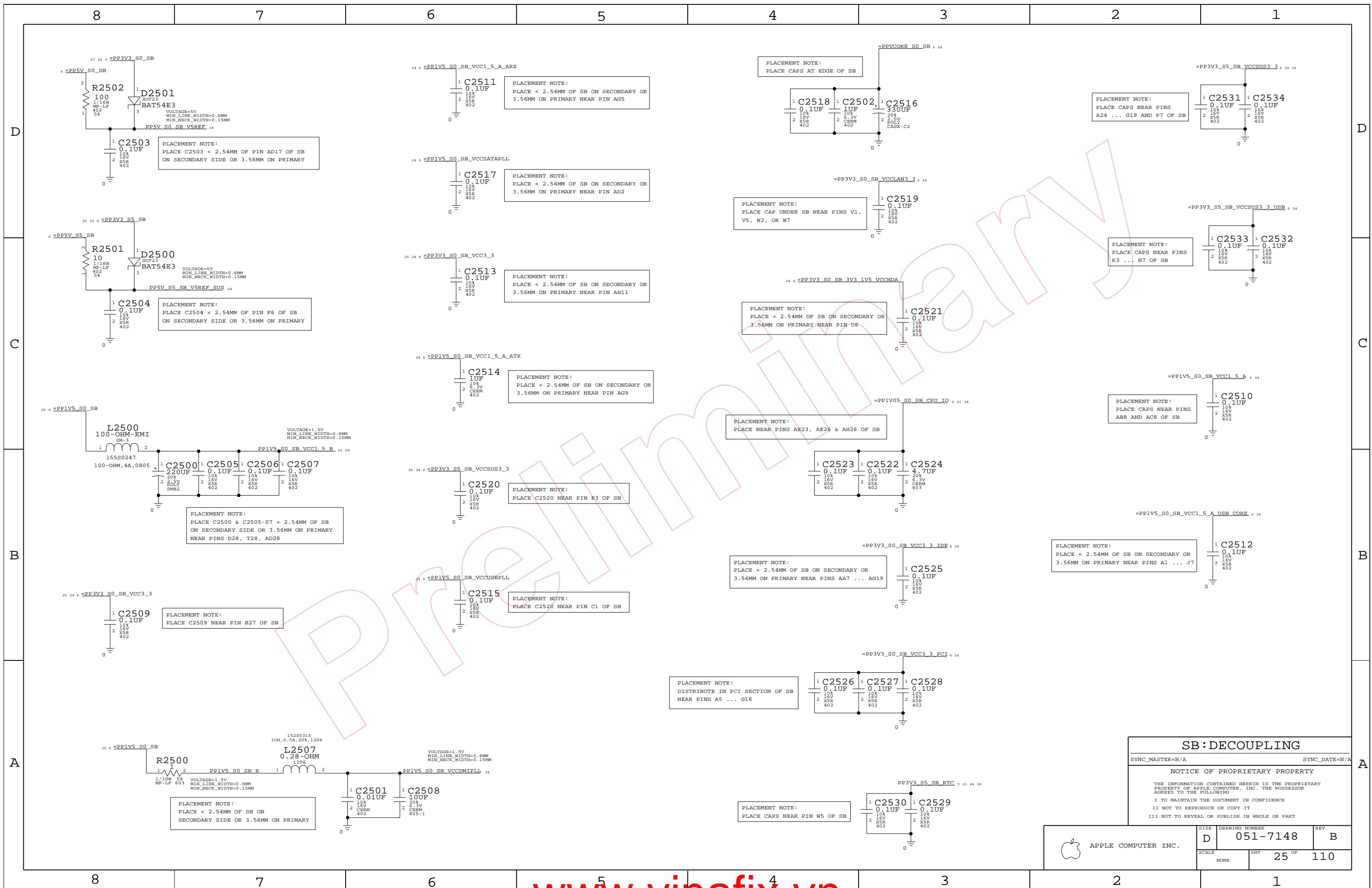
SYNC\_MASTER=N/A SYNC\_DATE=N/A

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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	REV.	
NONE	24 OF 110		





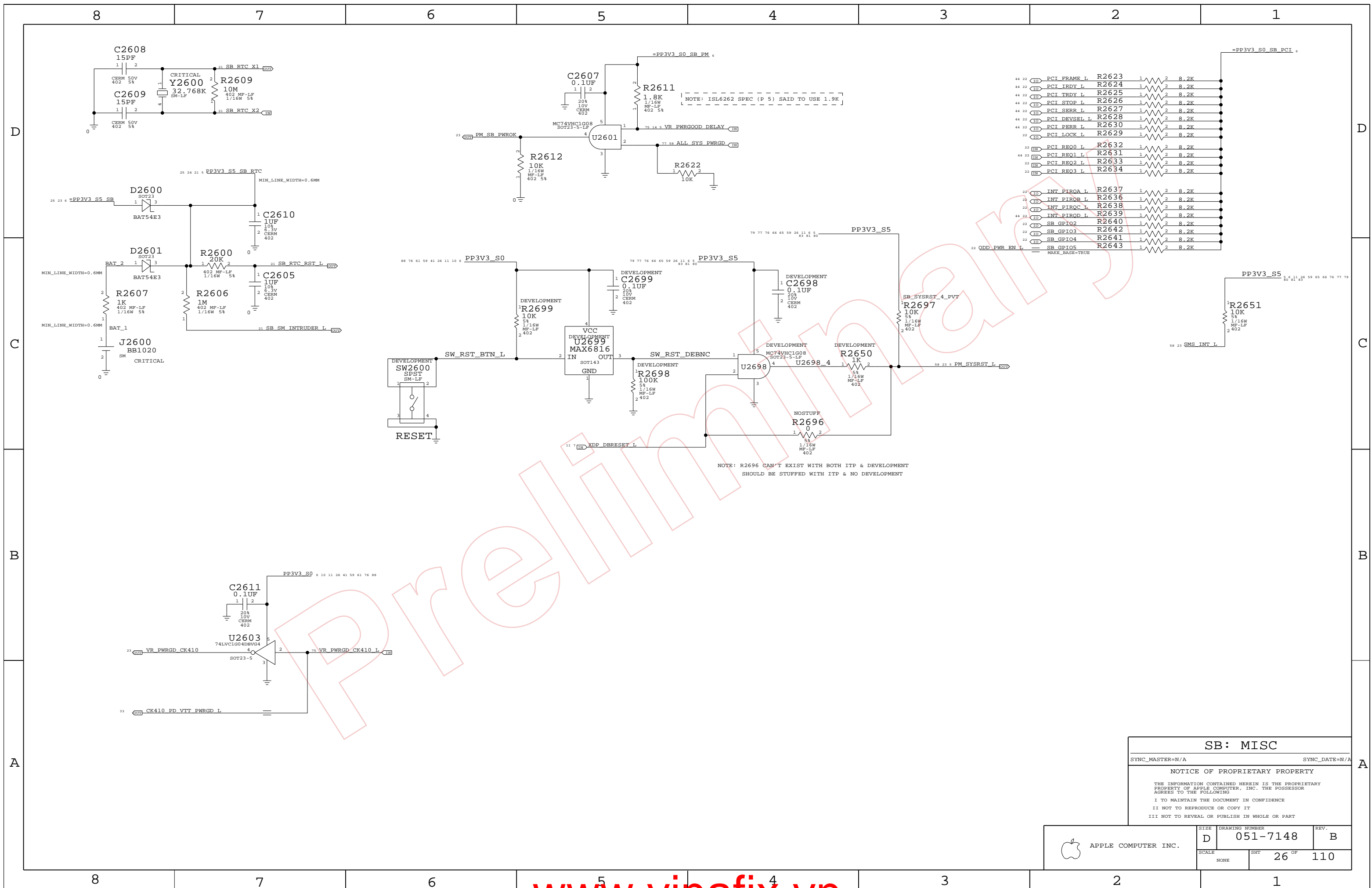
**SB: DECOUPLING**

SYNC\_MASTER=N/A SYNC\_DATE=N/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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	25 OF	110
NONE			

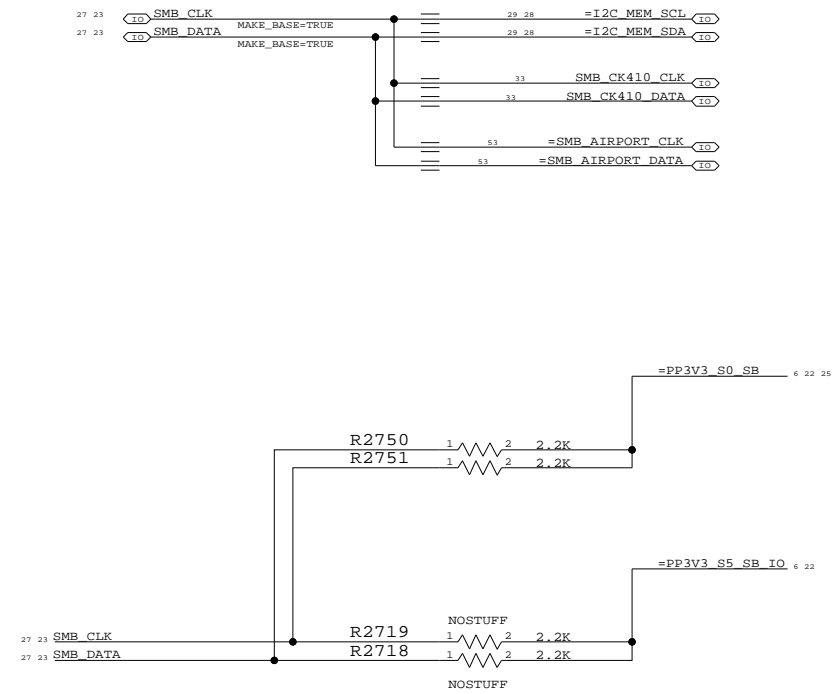


NOTE: R2696 CAN'T EXIST WITH BOTH ITP & DEVELOPMENT  
SHOULD BE STUFFED WITH ITP & NO DEVELOPMENT

SB: MISC  
 SYNC\_MASTER=N/A SYNC\_DATE=N/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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	26 OF	110
NONE			

### SB I2C BUSSES



Preliminary


#### SB: SMB HUB

SYNC\_MASTER=N/A SYNC\_DATE=N/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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	27 OF 110	
NONE			

# Page Notes

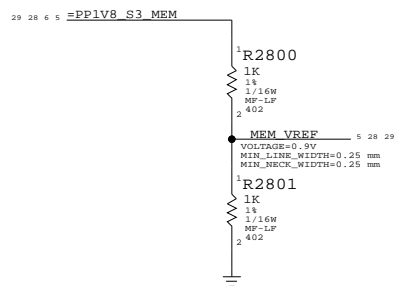
Power aliases required by this page:  
 - =PPIV8\_S3\_MEM  
 - =PPSPD\_S0\_MEM (2.5V - 3.3V)

Signal aliases required by this page:  
 - =I2C\_MEM\_SCL  
 - =I2C\_MEM\_SDA

BOM options provided by this page:  
 (NONE)

## DDR2 VRef

One 0.1uF per connector



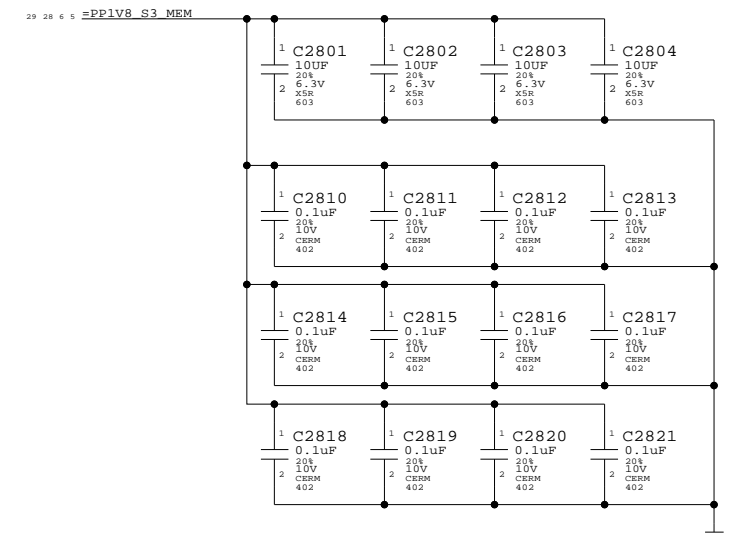
Yellow uses 10K divider and TLV2463 to drive MCH and DIMM connectors.  
 (See Capell Valley pg 47)



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
51680503	1	DDR2 SODIMM STD CONN	J2800	CRITICAL	

## DDR2 Bypass Caps

(For return current)



**DDR2 SO-DIMM Connector A**

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

**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	051-7148	B
SCALE	SHT	OF	
NONE	28	110	

# Page Notes

Power aliases required by this page:  
 - =PP1V8\_S3\_MEM  
 - =PPSPD\_S0\_MEM (2.5V - 3.3V)

Signal aliases required by this page:  
 - =I2C\_MEM\_SCL  
 - =I2C\_MEM\_SDA

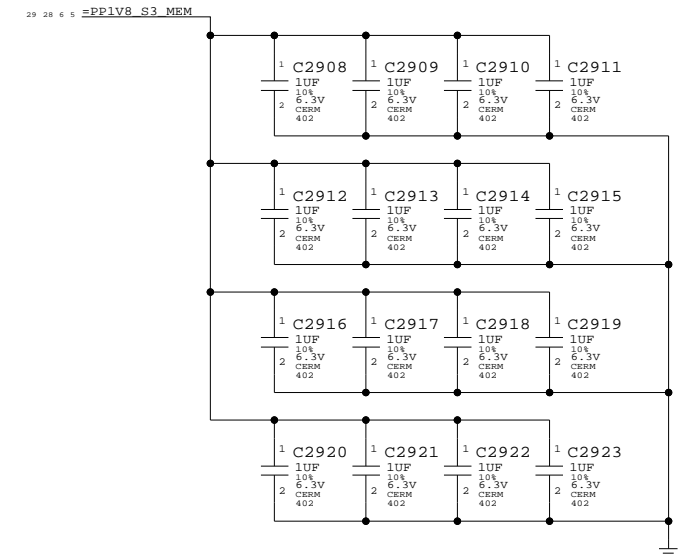
BOM options provided by this page:  
 (NONE)

NOTE: This page does not supply VREF.  
 The reference voltage must be provided by another page.



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
516S0504	1	DDR2 SODIMM REV CONN	J2900	CRITICAL	

## DDR2 Bypass Caps (For return current)



## DDR2 SO-DIMM Connector B

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

**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 051-7148	REV. B
	SCALE NONE	SHEET 29	OF 110

8

7

6

5

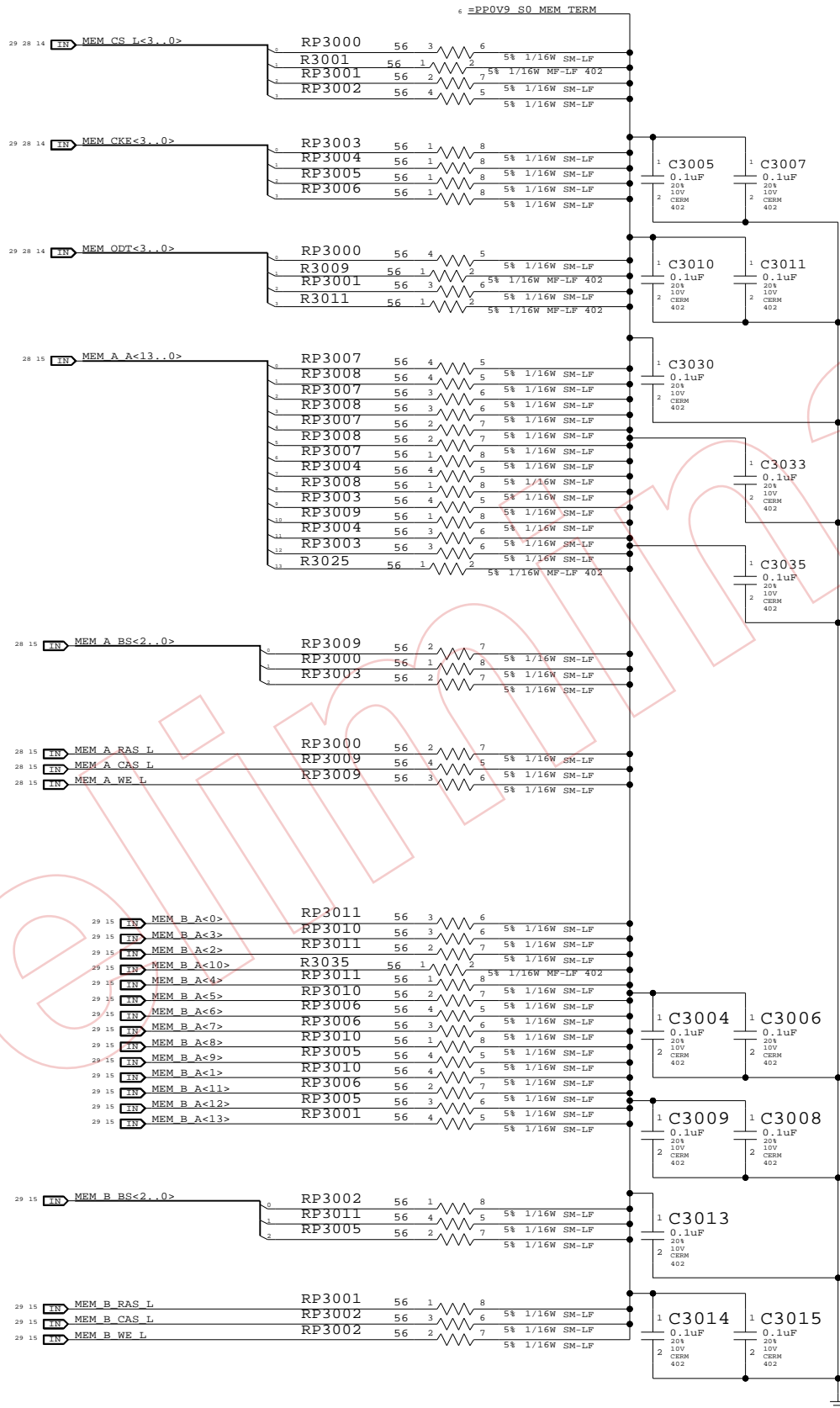
4

3

2

1

One cap for each side of every RPAK, one cap for every two discrete resistors  
BOMOPTION shown at the top of each group applies to every part below it



Memory Active Termination

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	051-7148	B
SCALE	SHT	OF	
NONE	30	110	

8

7

6

5

4

3

2

1

Page Notes

Power aliases required by this page:  
 - =PP5V\_S0\_MEMVTT  
 - =PP1V8\_S0\_MEMVTT  
 - =PP0V9\_S0\_MEMVTT\_LDO

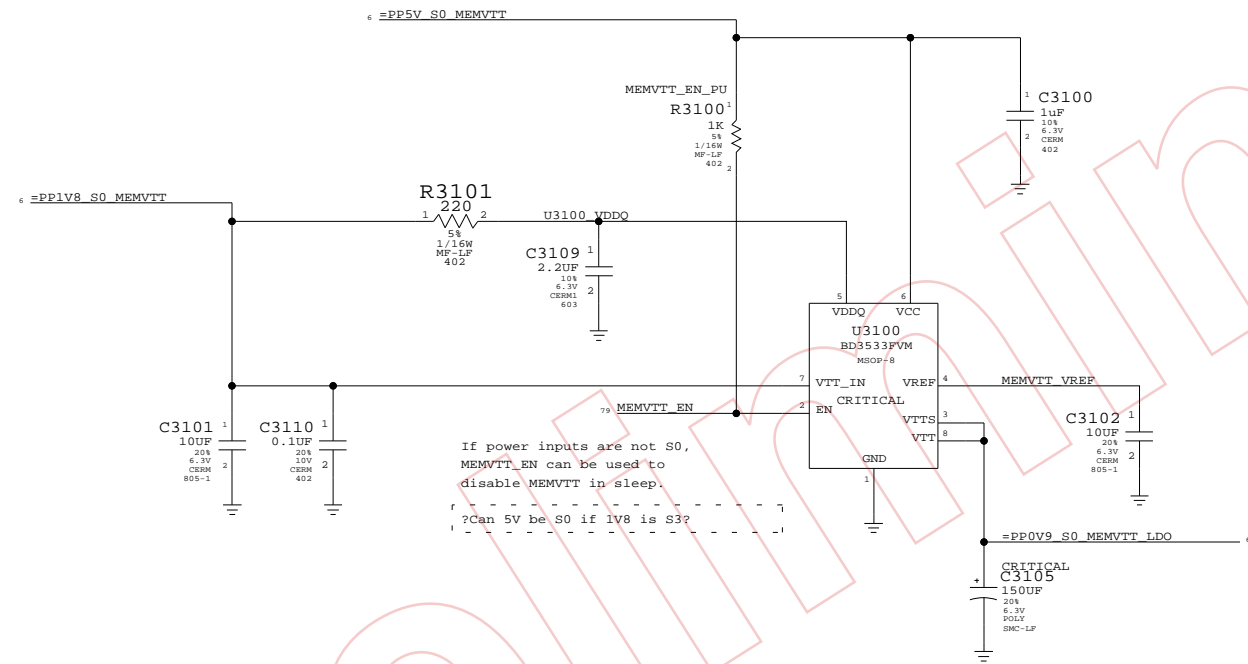
---

Signal aliases required by this page:  
 (NONE)

---

BOM options provided by this page:  
 (NONE)

DDR2 Vtt Regulator



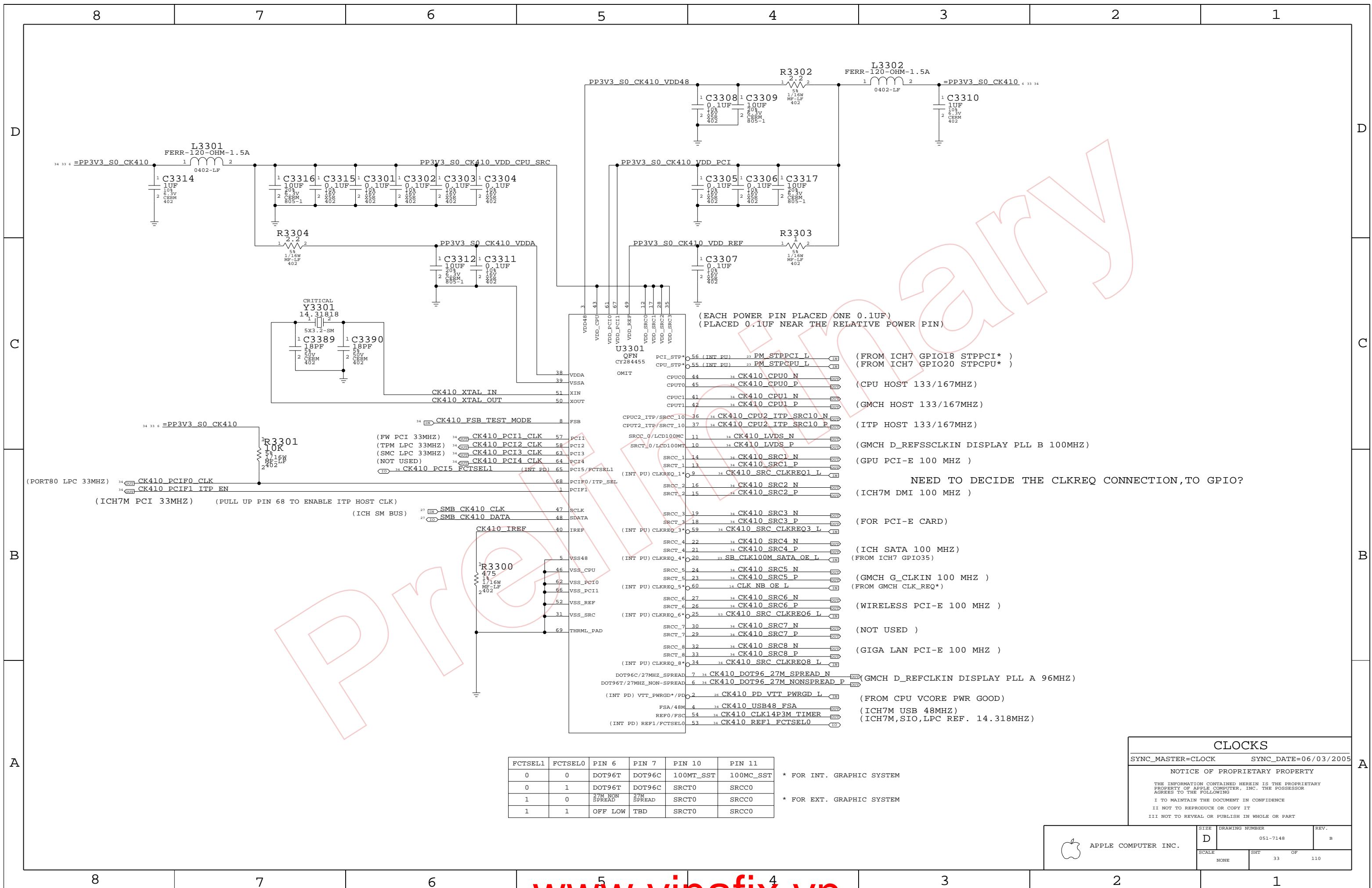
Memory Vtt Supply

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

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	051-7148	B
SCALE		SHT	OF
NONE		31	110



(EACH POWER PIN PLACED ONE 0.1UF)  
(PLACED 0.1UF NEAR THE RELATIVE POWER PIN)

U3301	QFN	CY284455	PC1_STP*	56 (INT PU)	23	PM_STPPCI L	(FROM ICH7 GPIO18 STPPCI*)
			CPU_STP*	55 (INT PU)	23	PM_STPCPU L	(FROM ICH7 GPIO20 STPCPU*)
			OMIT				
			CPUC0	44	34	CK410 CPU0 N	(CPU HOST 133/167MHZ)
			CPUT0	45	34	CK410 CPU0 P	
			CPUC1	41	34	CK410 CPU1 N	(GMCH HOST 133/167MHZ)
			CPUT1	42	34	CK410 CPU1 P	
			CPUC2_ITP/SRCC_10	36	34	CK410 CPU2 ITP_SRC10_N	(ITP HOST 133/167MHZ)
			CPUT2_ITP/SRCC_10	37	34	CK410 CPU2 ITP_SRC10_P	
			SRCC_0/LCD100MC	11	34	CK410 LVDS N	(GMCH D_REFSSCLKIN DISPLAY PLL B 100MHZ)
			SRCT_0/LCD100MT	10	34	CK410 LVDS P	
			SRCC_1	14	34	CK410 SRC1 N	(GPU PCI-E 100 MHZ )
			SRCT_1	13	34	CK410 SRC1 P	
			(INT PU) CLKREQ_1*	9	34	CK410 SRC CLKREQ1 L	NEED TO DECIDE THE CLKREQ CONNECTION, TO GPIO?
			SRCC_2	16	34	CK410 SRC2 N	(ICH7M DMI 100 MHZ )
			SRCT_2	15	34	CK410 SRC2 P	
			SRCC_3	19	34	CK410 SRC3 N	(FOR PCI-E CARD)
			SRCT_3	18	34	CK410 SRC3 P	
			(INT PU) CLKREQ_3*	59	34	CK410 SRC CLKREQ3 L	
			SRCC_4	22	34	CK410 SRC4 N	(ICH SATA 100 MHZ)
			SRCT_4	21	34	CK410 SRC4 P	(FROM ICH7 GPIO35)
			(INT PU) CLKREQ_4*	20	34	SB_CLK100M SATA OE L	
			SRCC_5	24	34	CK410 SRC5 N	(GMCH G_CLKIN 100 MHZ )
			SRCT_5	23	34	CK410 SRC5 P	(FROM GMCH CLK_REQ*)
			(INT PU) CLKREQ_5*	60	34	CLK_NB OE L	
			SRCC_6	27	34	CK410 SRC6 N	(WIRELESS PCI-E 100 MHZ )
			SRCT_6	26	34	CK410 SRC6 P	
			(INT PU) CLKREQ_6*	25	34	CK410 SRC CLKREQ6 L	
			SRCC_7	30	34	CK410 SRC7 N	(NOT USED )
			SRCT_7	29	34	CK410 SRC7 P	
			SRCC_8	32	34	CK410 SRC8 N	(GIGA LAN PCI-E 100 MHZ )
			SRCT_8	33	34	CK410 SRC8 P	
			(INT PU) CLKREQ_8*	34	34	CK410 SRC CLKREQ8 L	
			DOT96C/27MHZ_SPREAD	7	34	CK410 DOT96 27M SPREAD N	(GMCH D_REFCLKIN DISPLAY PLL A 96MHZ)
			DOT96T/27MHZ_NON-SPREAD	6	34	CK410 DOT96 27M NONSPREAD P	
			(INT PD) VTT_PWRGD*/PD	2	34	CK410 PD VTT_PWRGD L	(FROM CPU VCORE PWR GOOD)
			FSA/48M	4	34	CK410 USB48 FSA	(ICH7M USB 48MHZ)
			REF0/FSC	54	34	CK410 CLK14P3M_TIMER	(ICH7M, SIO, LPC REF. 14.318MHZ)
			(INT PD) REF1/FCTSEL0	53	34	CK410 REF1_FCTSEL0	

(FW PCI 33MHZ) CK410 PCI1 CLK  
(TPM LPC 33MHZ) CK410 PCI2 CLK  
(SMC LPC 33MHZ) CK410 PCI3 CLK  
(NOT USED) CK410 PCI4 CLK  
(INT PD) CK410 PCI5 FCTSEL1

(ICH7M PCI 33MHZ) CK410 PCIF0\_CLK  
(PULL UP PIN 68 TO ENABLE ITP HOST CLK) CK410 PCIF1\_ITP\_EN

FCTSEL1	FCTSEL0	PIN 6	PIN 7	PIN 10	PIN 11	
0	0	DOT96T	DOT96C	100MT_SST	100MC_SST	* FOR INT. GRAPHIC SYSTEM
0	1	DOT96T	DOT96C	SRCT0	SRCC0	
1	0	27M NON SPREAD	27M SPREAD	SRCT0	SRCC0	* FOR EXT. GRAPHIC SYSTEM
1	1	OFF LOW	TBD	SRCT0	SRCC0	

**CLOCKS**

SYNC\_MASTER=CLOCK      SYNC\_DATE=06/03/2005

**NOTICE OF PROPRIETARY PROPERTY**

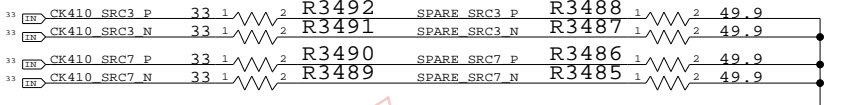
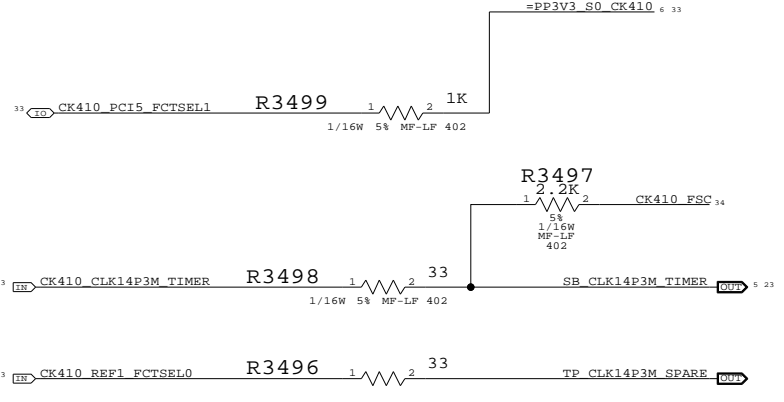
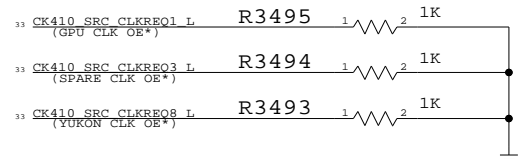
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:

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	051-7148	B
SCALE	SHT	OF	110
NONE	33		

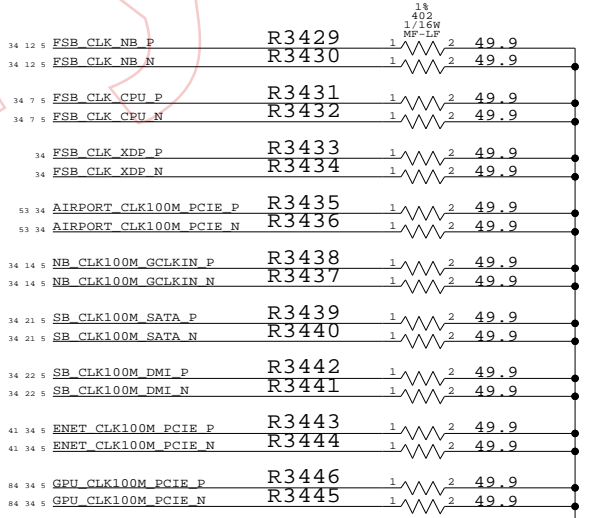
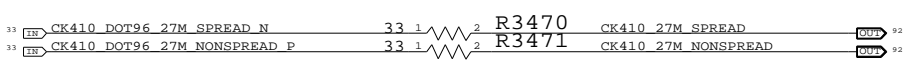
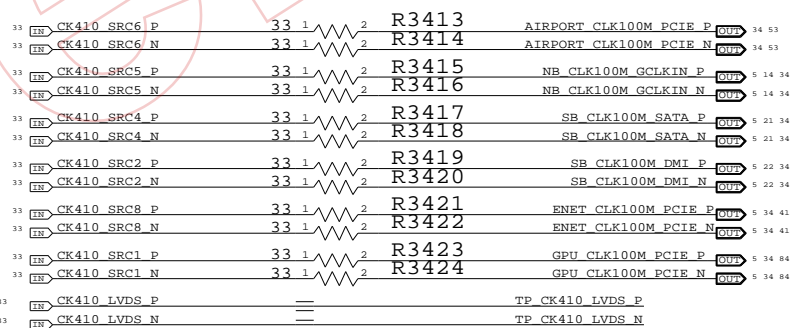
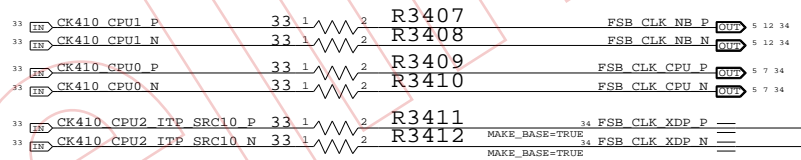
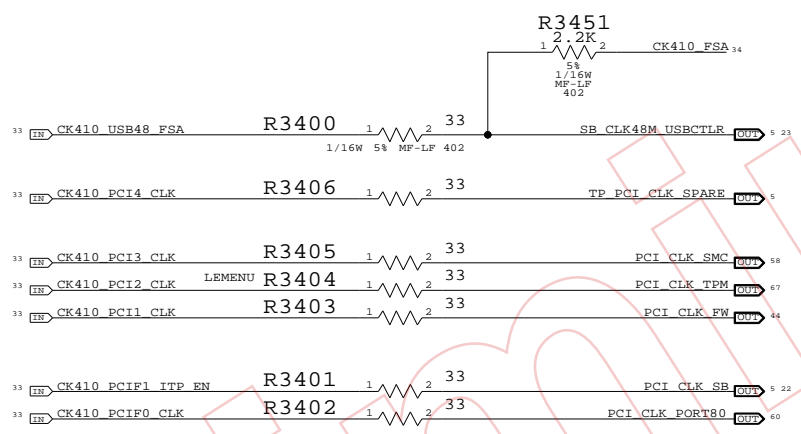
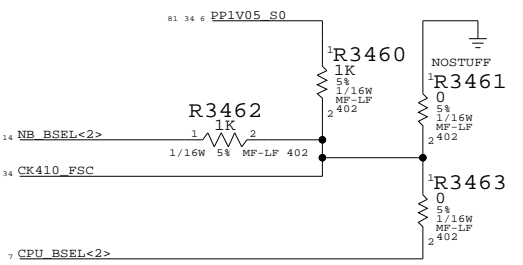
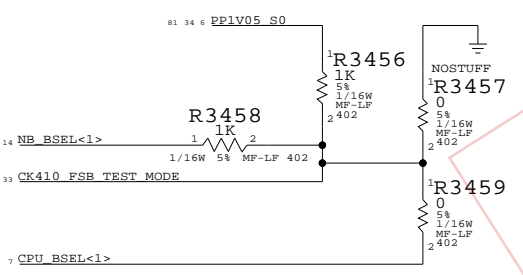
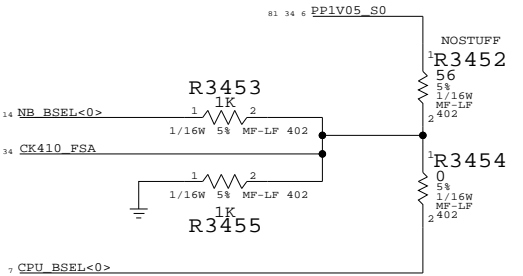


NOTE: USE THESE PULL-DOWNS IF NOT CONNECTED TO GPIO'S



FSB FREQUENCY SELECT:

	STUFF	NO STUFF
CPU DRIVEN	R3452 R3453 R3454 R3455	R3456 R3457 R3458 R3459
533MHZ (133MHZ CPU CLK)	R3452 R3453 R3454 R3455	R3456 R3457 R3458 R3459
667MHZ (166MHZ CPU CLK)	R3452 R3453 R3454 R3455	R3456 R3457 R3458 R3459



**CLOCKS: TERMINATIONS**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

NOTICE OF PROPRIETARY PROPERTY

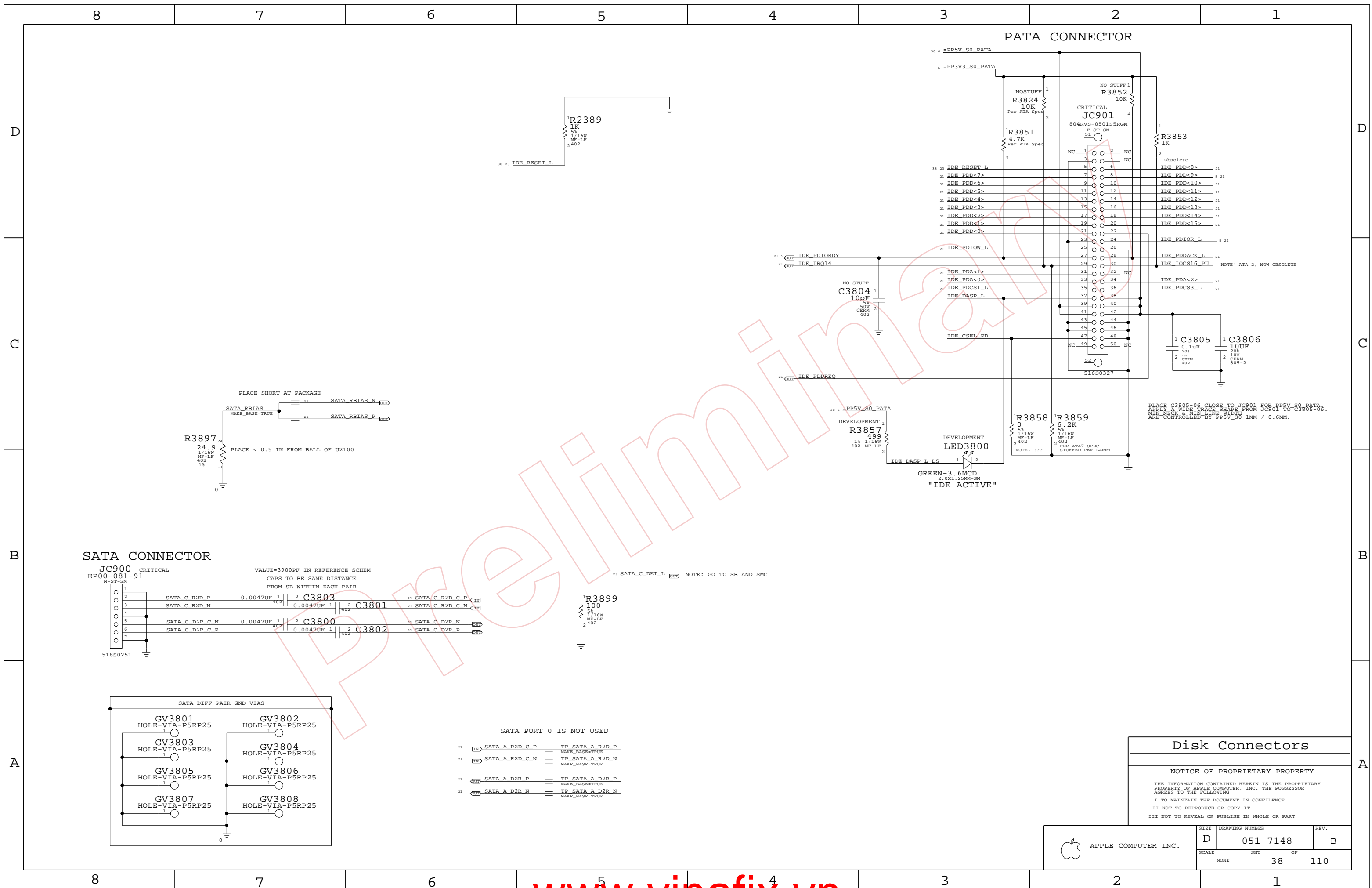
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	OF	110
NONE	34		



PATA CONNECTOR

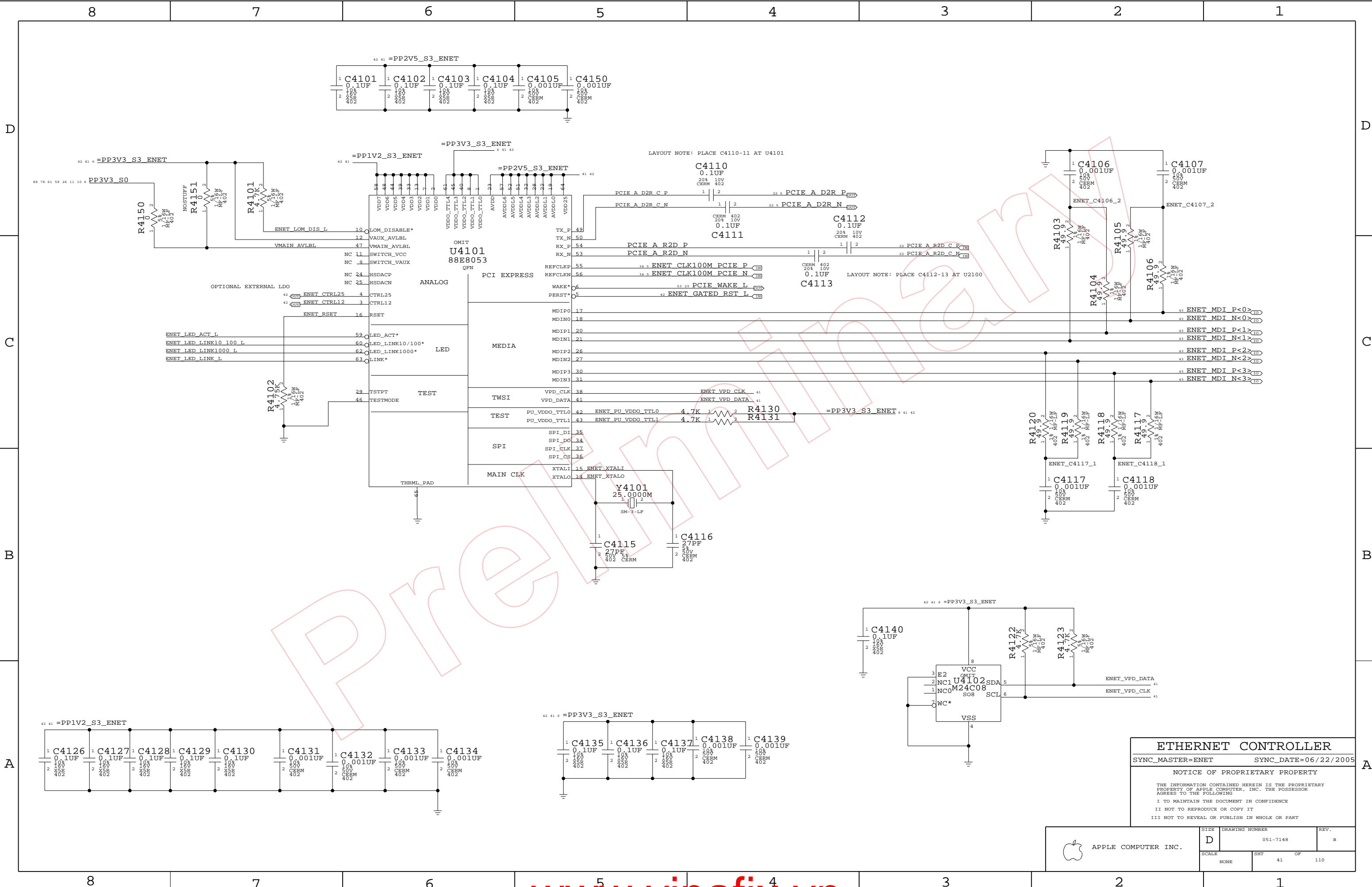
SATA CONNECTOR

Disk Connectors

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	051-7148	B
SCALE	NONE	SHT	OF
		38	110



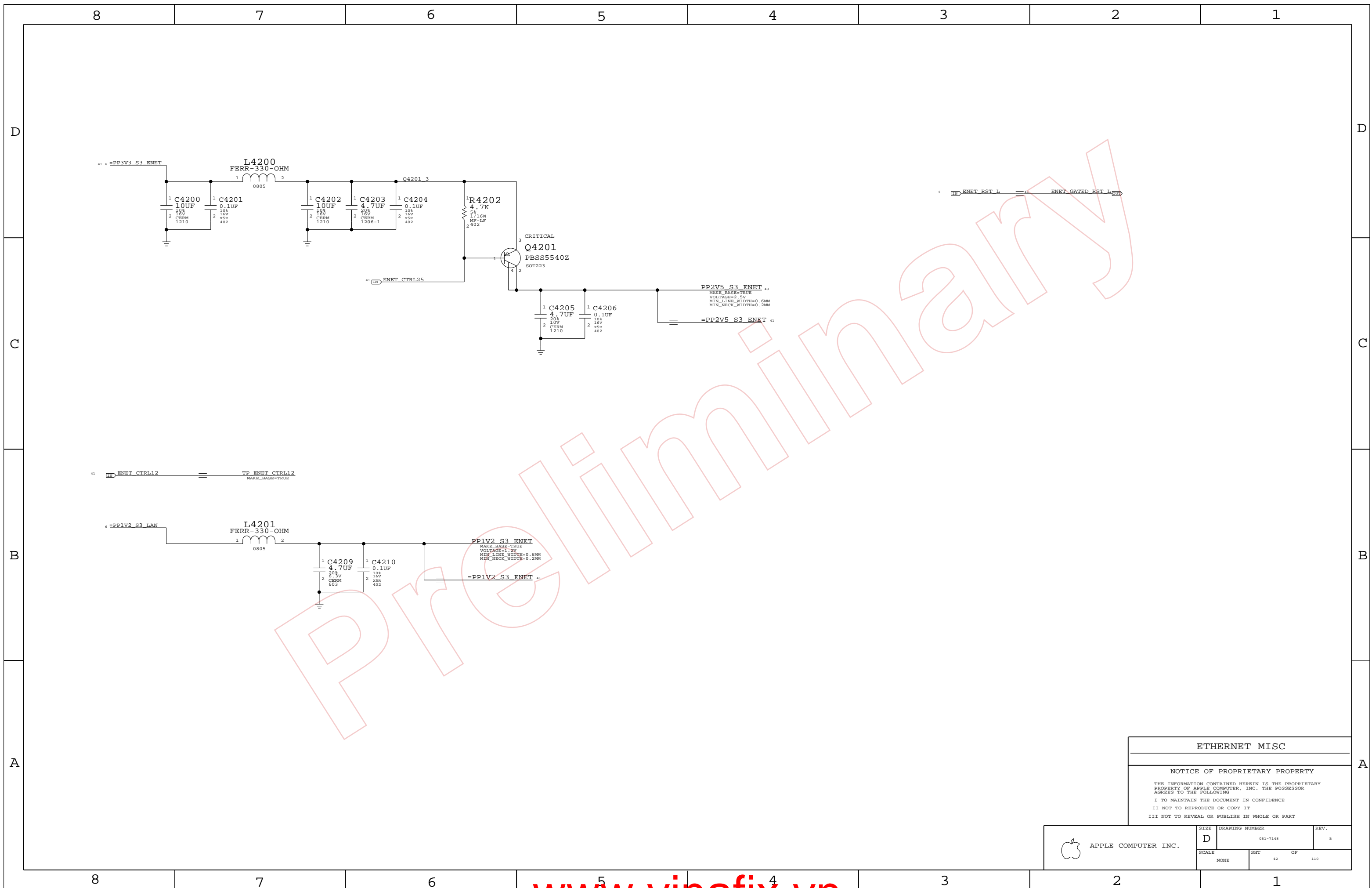
**ETHERNET CONTROLLER**

SYNC\_MASTER=ENET SYNC\_DATE=06/22/2005

**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 051-7148	REV. B
	SCALE NONE	SHEET 41	OF 110



**ETHERNET MISC**

---

**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 051-7148	REV. B
	SCALE NONE	SHEET 42	OF 110

D

D

C

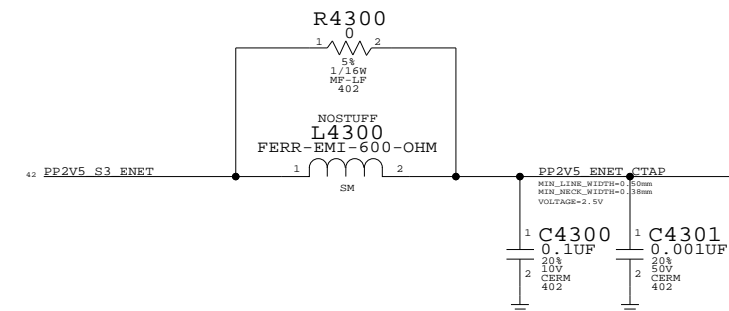
C

B

B

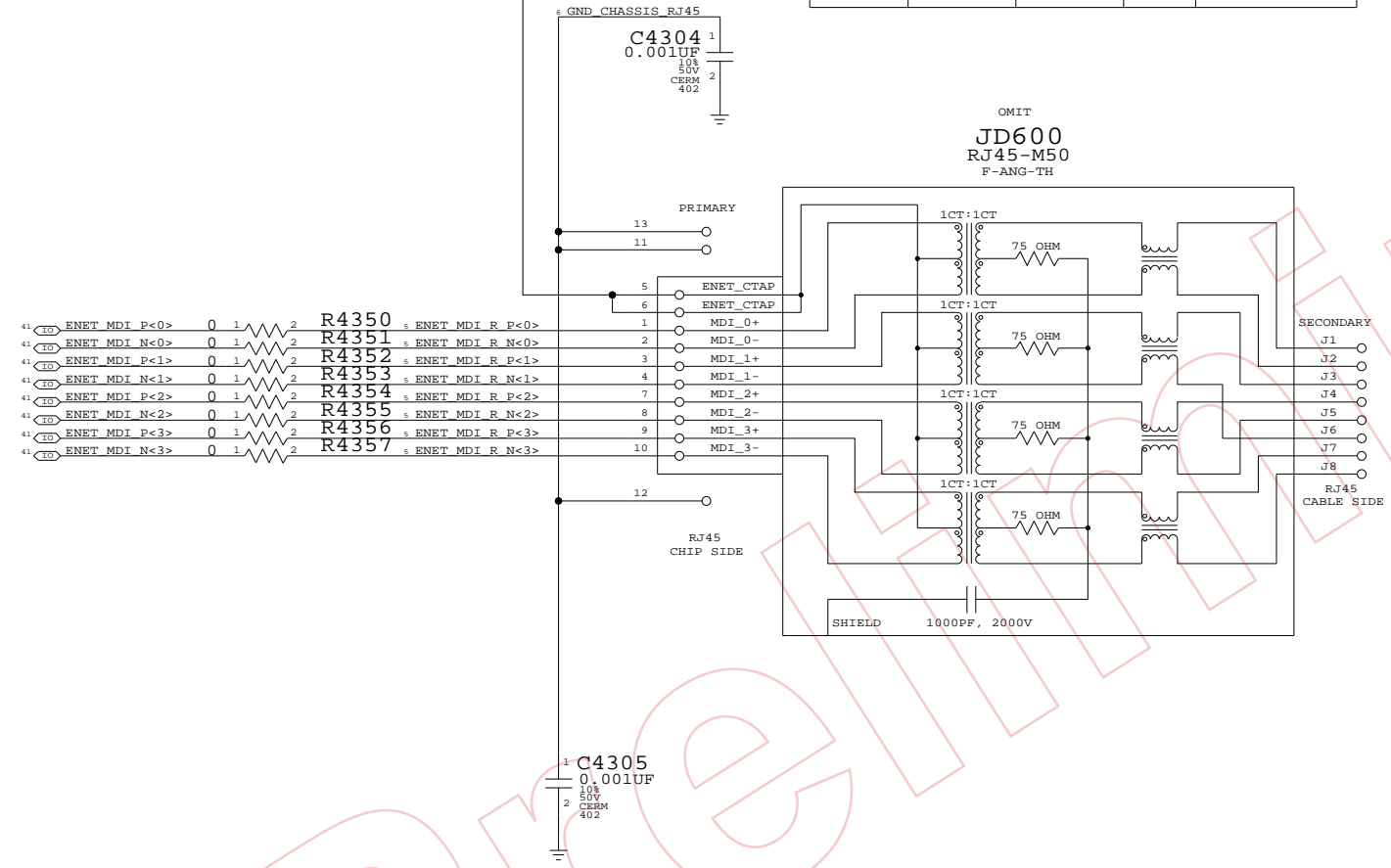
A

A



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0366	1	FOXCONN AND DELTA RJ45	JD600	CRITICAL	

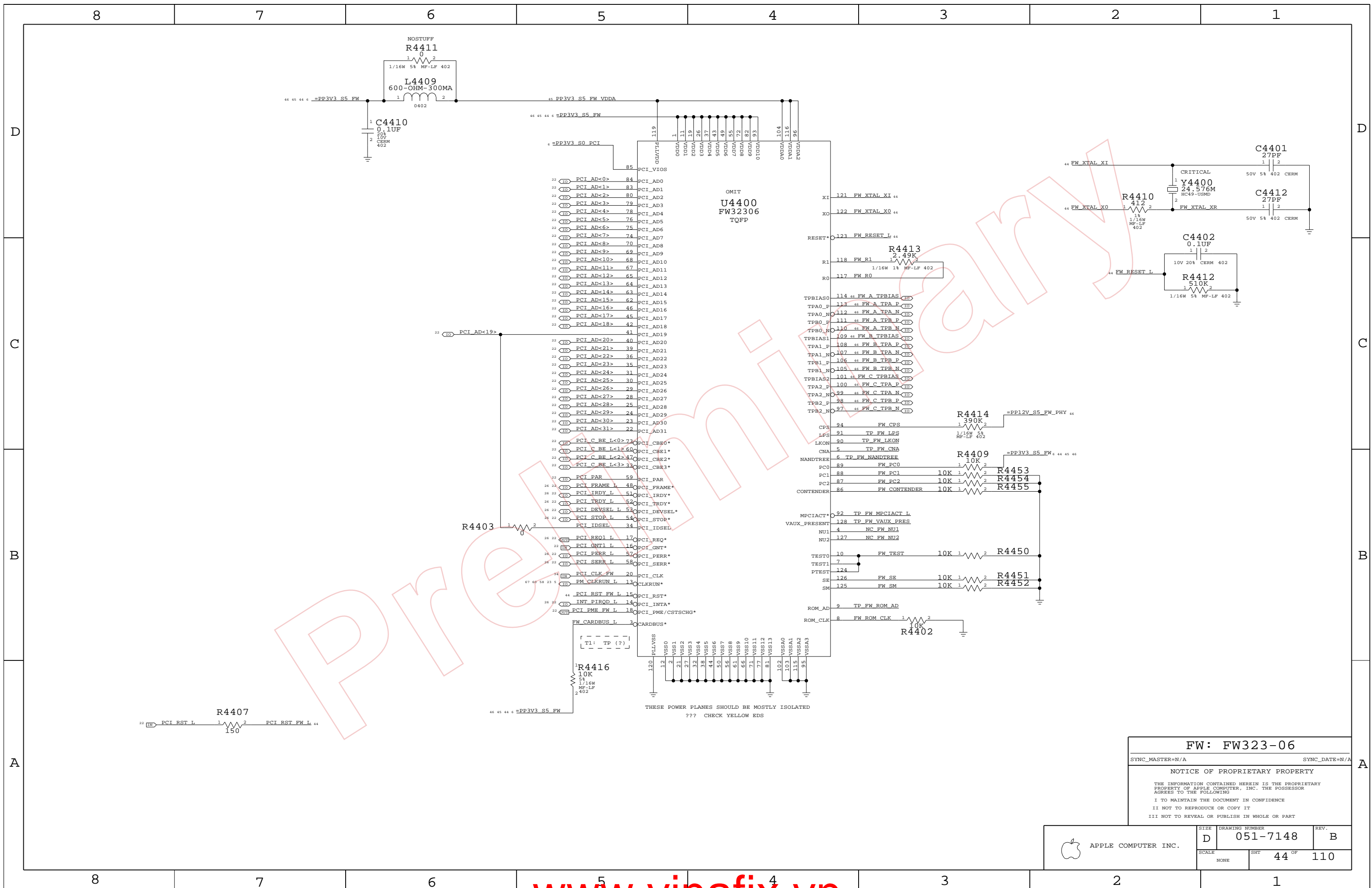
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:



**ETHERNET CONNECTOR**

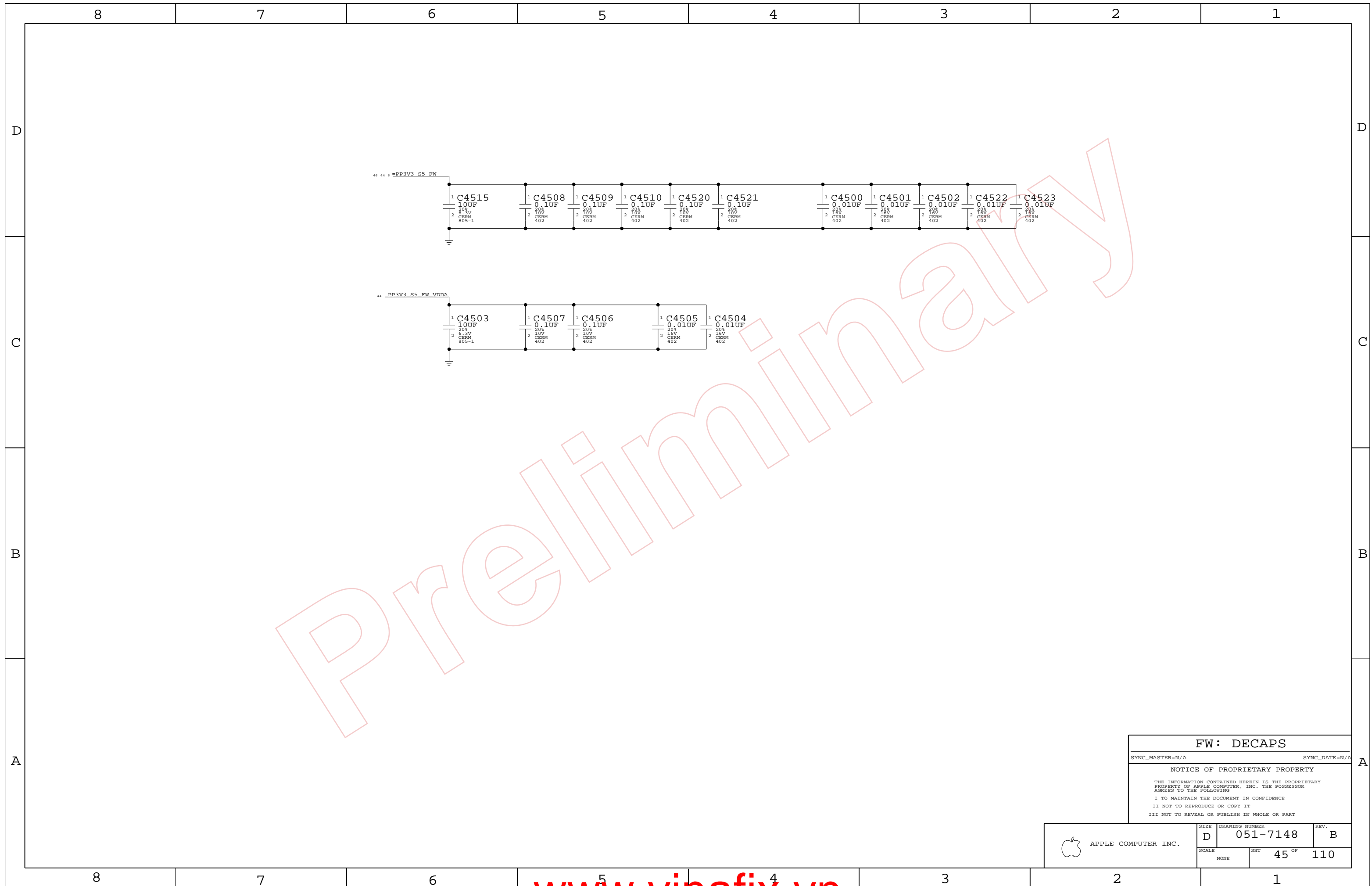
NOTICE OF PROPRIETARY PROPERTY  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT OF		
NONE	43 OF 110		



FW: FW323-06  
 SYNC\_MASTER=N/A SYNC\_DATE=N/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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	44 OF	110
NONE			



Preliminary

**FW: DECAPS**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

**NOTICE OF PROPRIETARY PROPERTY**

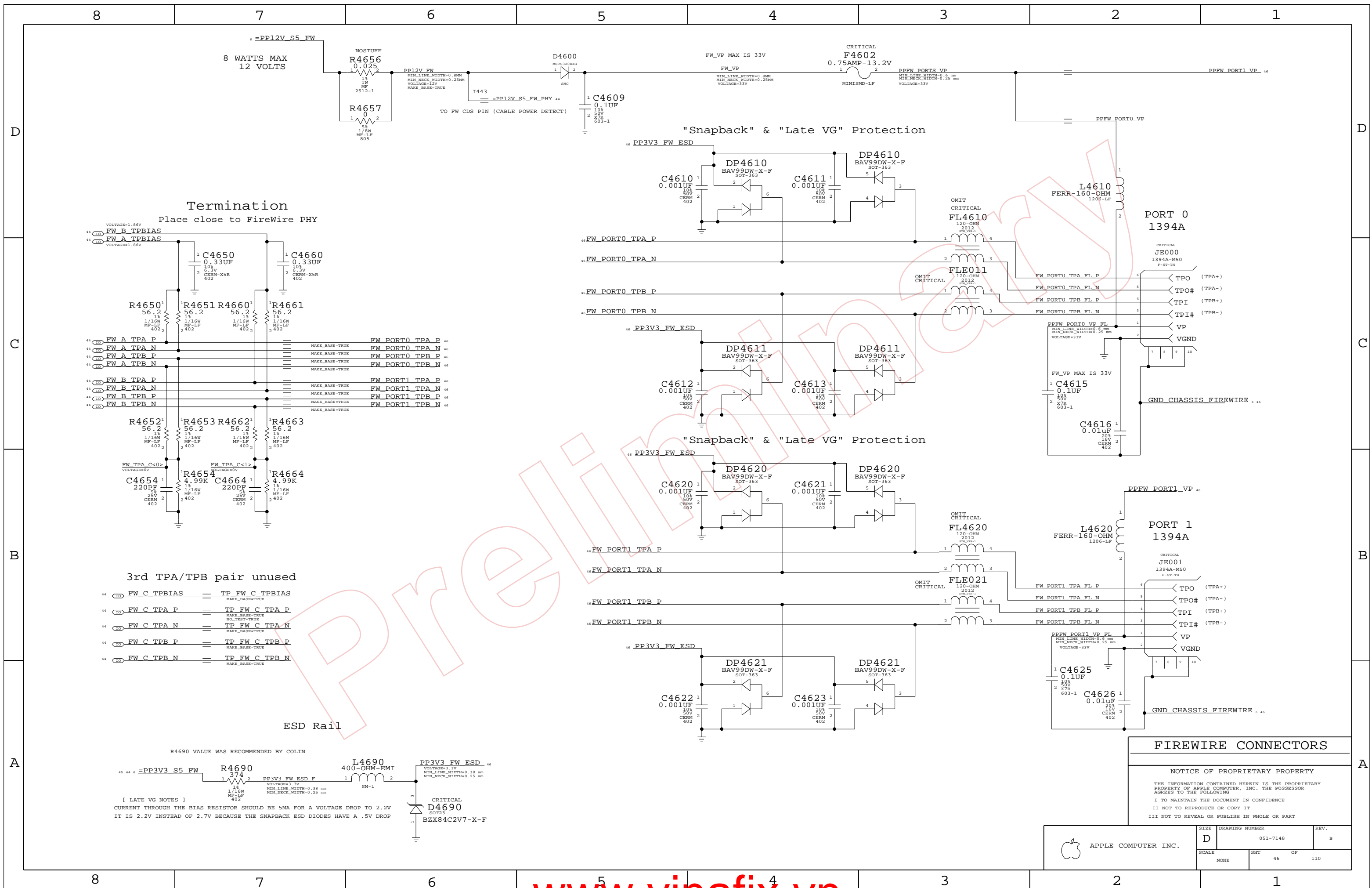
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	OF	
NONE	45	110	



**Termination**  
Place close to FireWire PHY

"Snapback" & "Late VG" Protection

"Snapback" & "Late VG" Protection

3rd TPA/TPB pair unused

ESD Rail

**FIREWIRE CONNECTORS**

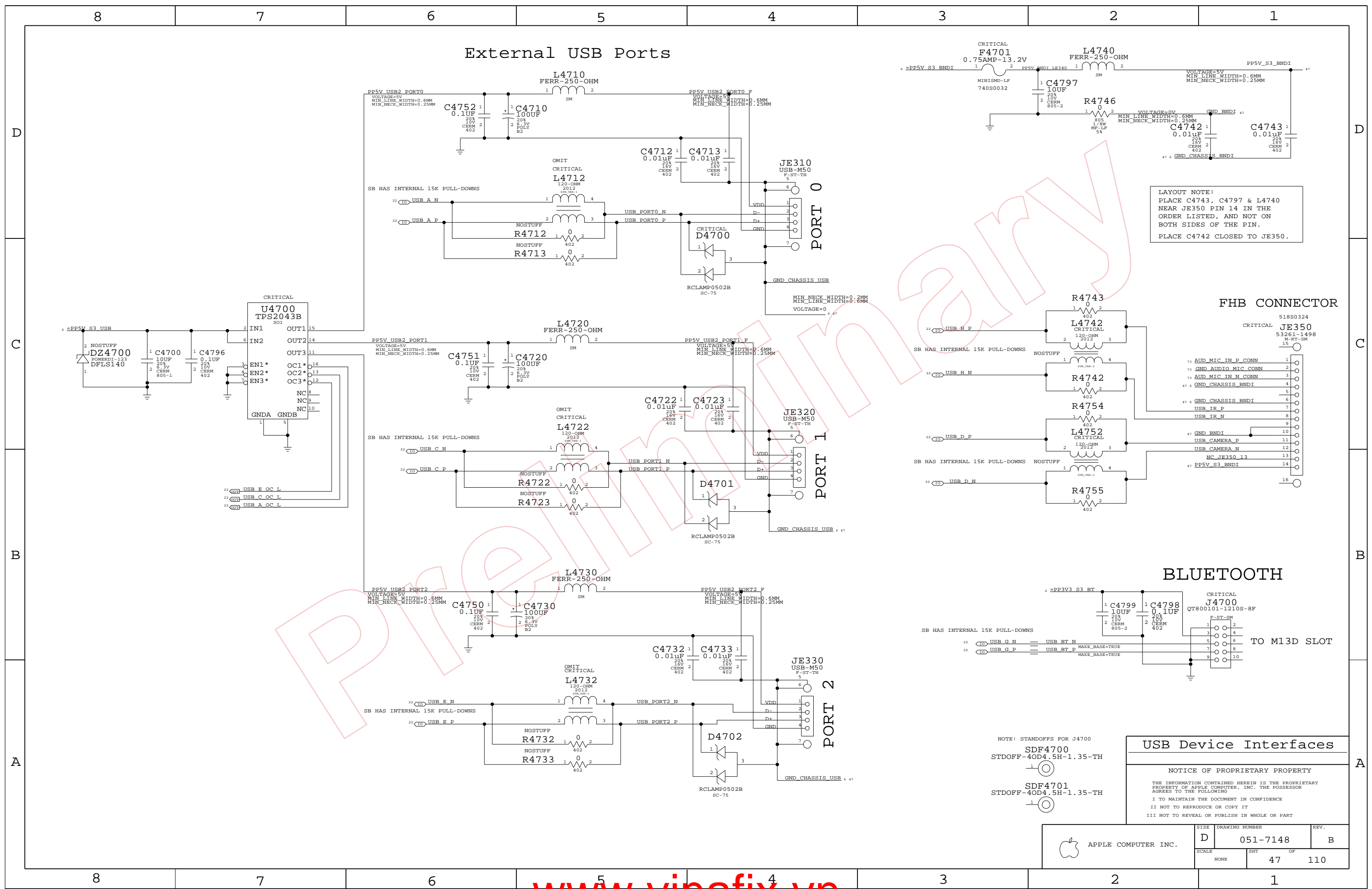
**NOTICE OF PROPRIETARY PROPERTY**

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 051-7148	REV. B
	SCALE NONE	SHEET 46	OF 110

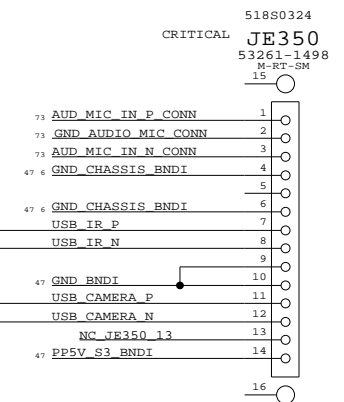


# External USB Ports

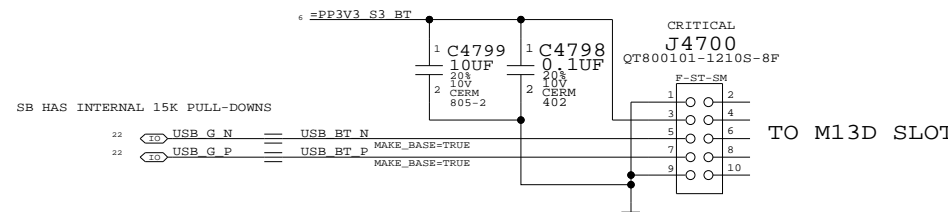


LAYOUT NOTE:  
 PLACE C4743, C4797 & L4740  
 NEAR JE350 PIN 14 IN THE  
 ORDER LISTED, AND NOT ON  
 BOTH SIDES OF THE PIN.  
 PLACE C4742 CLOSED TO JE350.

## FHB CONNECTOR



## BLUETOOTH



NOTE: STANDOFFS FOR J4700  
 SDF4700  
 STDOFF-40D4.5H-1.35-TH  
 SDF4701  
 STDOFF-40D4.5H-1.35-TH

## USB Device Interfaces

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	051-7148	B
SCALE	SHT	OF	
NONE	47	110	



**BLANK**

---

**NOTICE OF PROPRIETARY PROPERTY**

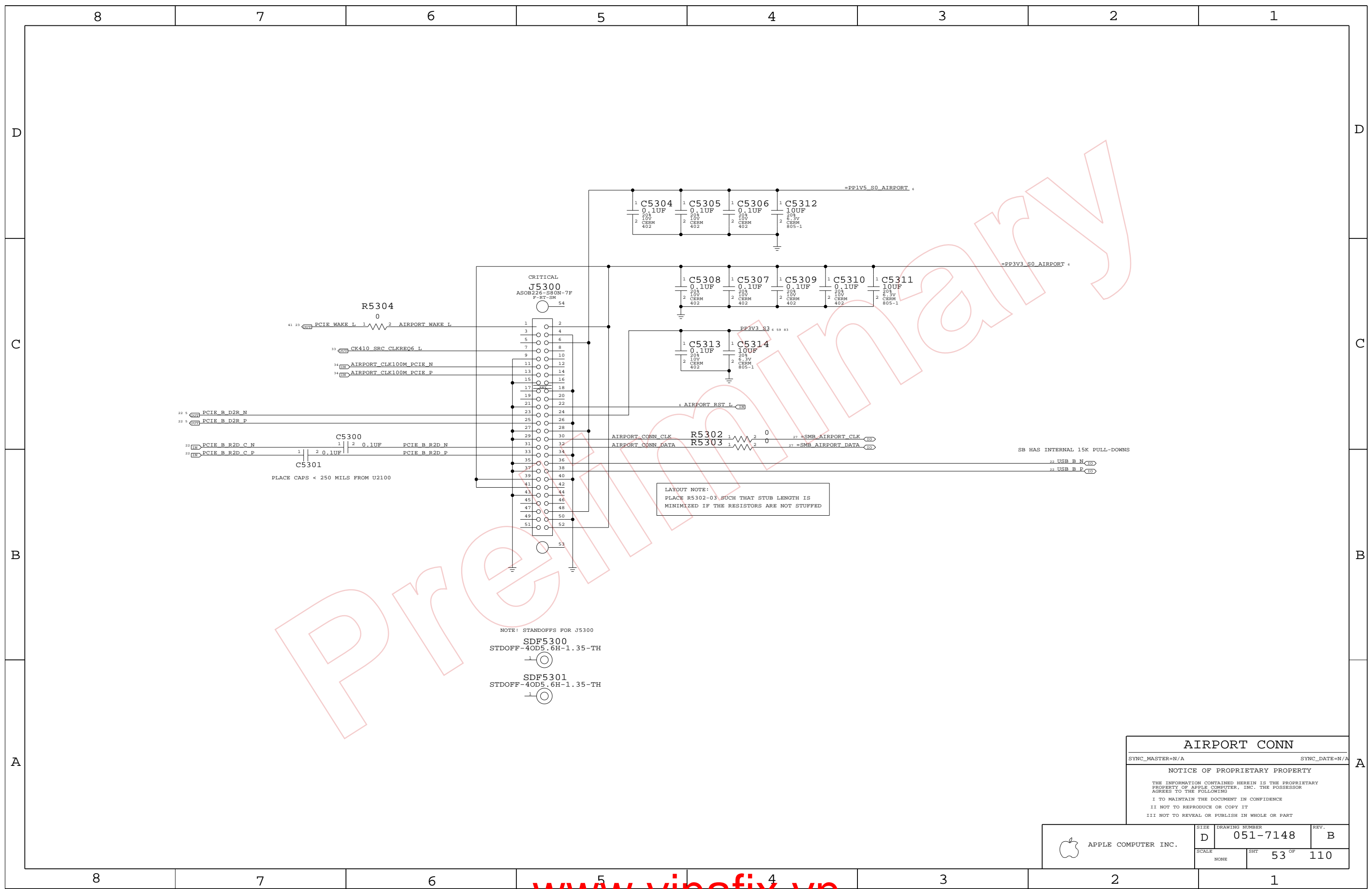
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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.	<small>SIZE</small> <b>D</b>	<small>DRAWING NUMBER</small> <b>051-7148</b>	<small>REV.</small> <b>B</b>
	<small>SCALE</small> NONE	<small>SHT</small> 48 OF	<small>110</small>



PROTECTED

LAYOUT NOTE:  
 PLACE R5302-03 SUCH THAT STUB LENGTH IS  
 MINIMIZED IF THE RESISTORS ARE NOT STUFFED

NOTE: STANDOFFS FOR J5300  
 SDF5300  
 STDOFF-40D5.6H-1.35-TH  
  
 SDF5301  
 STDOFF-40D5.6H-1.35-TH  


PLACE CAPS < 250 MILS FROM U2100

SB HAS INTERNAL 15K PULL-DOWNS

**AIRPORT CONN**

SYNC\_MASTER=N/A SYNC\_DATE=N/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>051-7148</b>	REV. <b>B</b>
	SCALE NONE	SHEET 53 OF 110	

8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

22	IN	PCIE C R2D C N	==	TP PCIE C R2D C N	MAKE_BASE=TRUE
22	IN	PCIE C R2D C P	==	TP PCIE C R2D C P	MAKE_BASE=TRUE
22	OUT	PCIE C D2R N	==	TP PCIE C D2R N	MAKE_BASE=TRUE
22	OUT	PCIE C D2R P	==	TP PCIE C D2R P	MAKE_BASE=TRUE
22	IN	PCIE D R2D C N	==	TP PCIE D R2D C N	MAKE_BASE=TRUE
22	IN	PCIE D R2D C P	==	TP PCIE D R2D C P	MAKE_BASE=TRUE
22	OUT	PCIE D D2R N	==	TP PCIE D D2R N	MAKE_BASE=TRUE
22	OUT	PCIE D D2R P	==	TP PCIE D D2R P	MAKE_BASE=TRUE
22	IN	PCIE E R2D C N	==	TP PCIE E R2D C N	MAKE_BASE=TRUE
22	IN	PCIE E R2D C P	==	TP PCIE E R2D C P	MAKE_BASE=TRUE
22	OUT	PCIE E D2R N	==	TP PCIE E D2R N	MAKE_BASE=TRUE
22	OUT	PCIE E D2R P	==	TP PCIE E D2R P	MAKE_BASE=TRUE
22	IN	PCIE F R2D C N	==	TP PCIE F R2D C N	MAKE_BASE=TRUE
22	IN	PCIE F R2D C P	==	TP PCIE F R2D C P	MAKE_BASE=TRUE
22	OUT	PCIE F D2R N	==	TP PCIE F D2R N	MAKE_BASE=TRUE
22	OUT	PCIE F D2R P	==	TP PCIE F D2R P	MAKE_BASE=TRUE

Preliminary

**PCIE UNUSED PORTS**  
 SYNC\_MASTER=N/A SYNC\_DATE=N/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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	OF	
NONE	54	110	

8

7

6

5

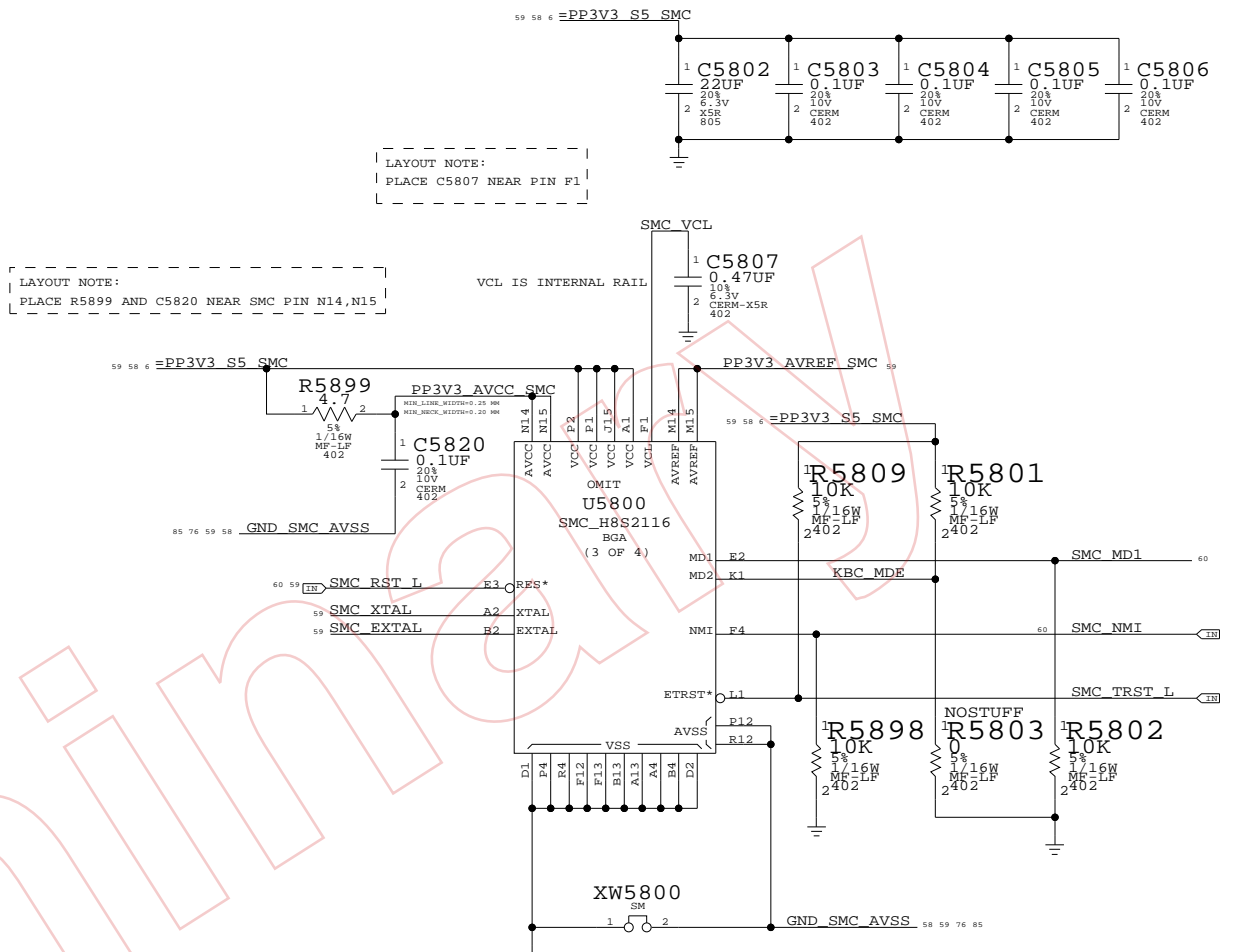
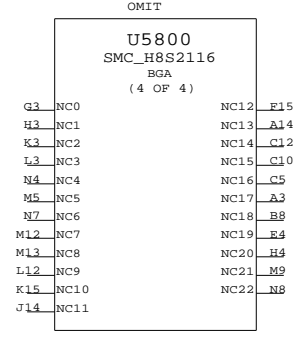
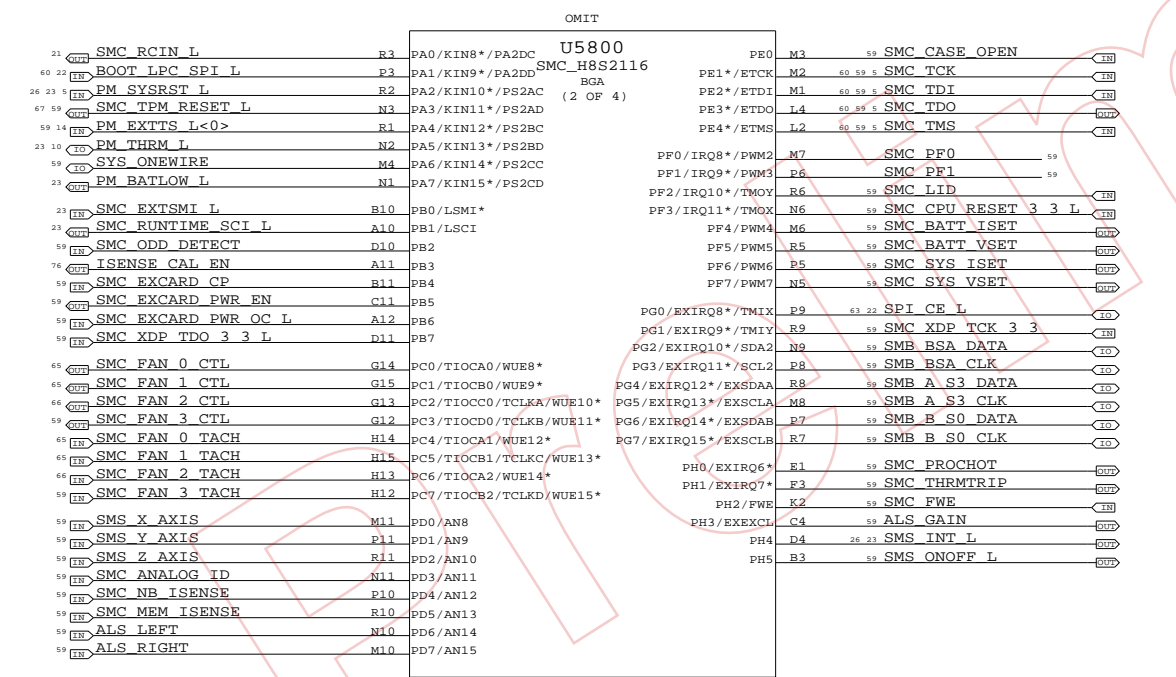
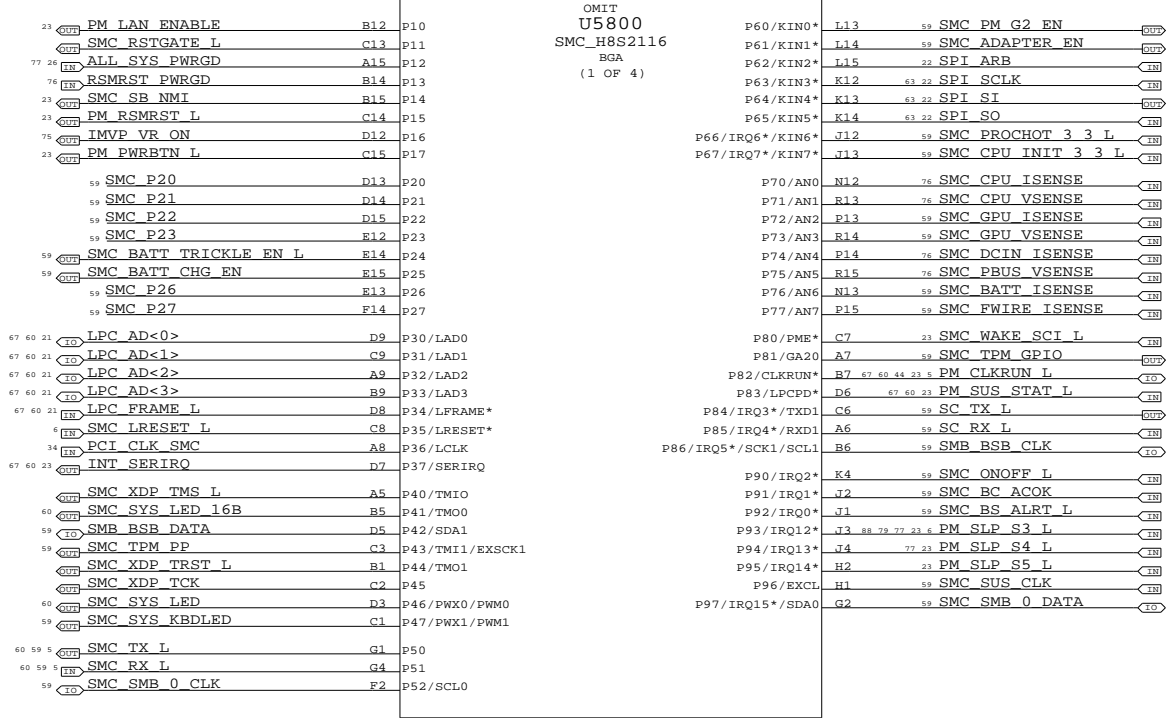
4

3

2

1

UNUSED PINS HAVE THE FORMAT SMC\_XXX WHERE XXX IS THE PORT NUMBER. THEY ARE SET BY SOFTWARE TO BE DRIVEN OUTPUTS ALWAYS SO THEY CAN BE LEFT NO-CONNECTED.



**SMC**

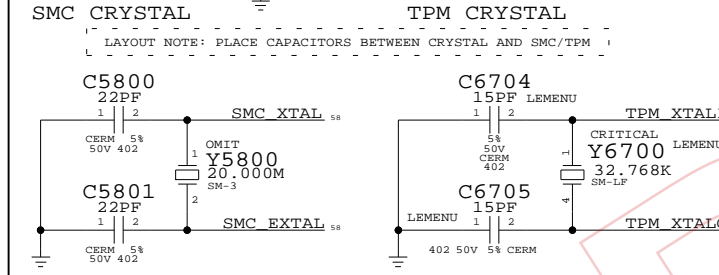
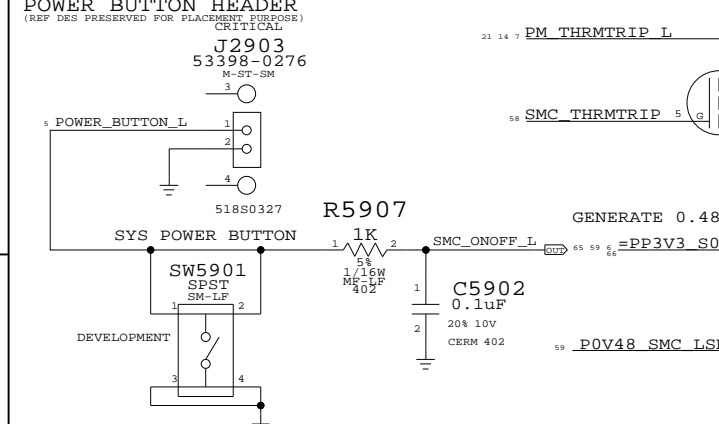
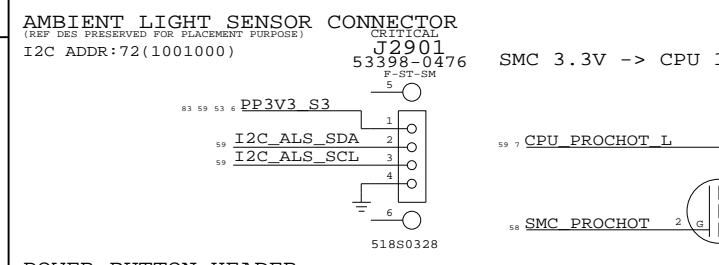
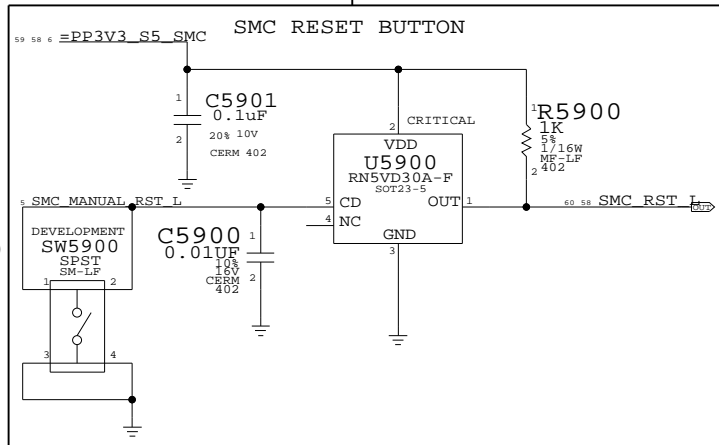
SYNC\_MASTER=N/A SYNC\_DATE=N/A

**NOTICE OF PROPRIETARY PROPERTY**

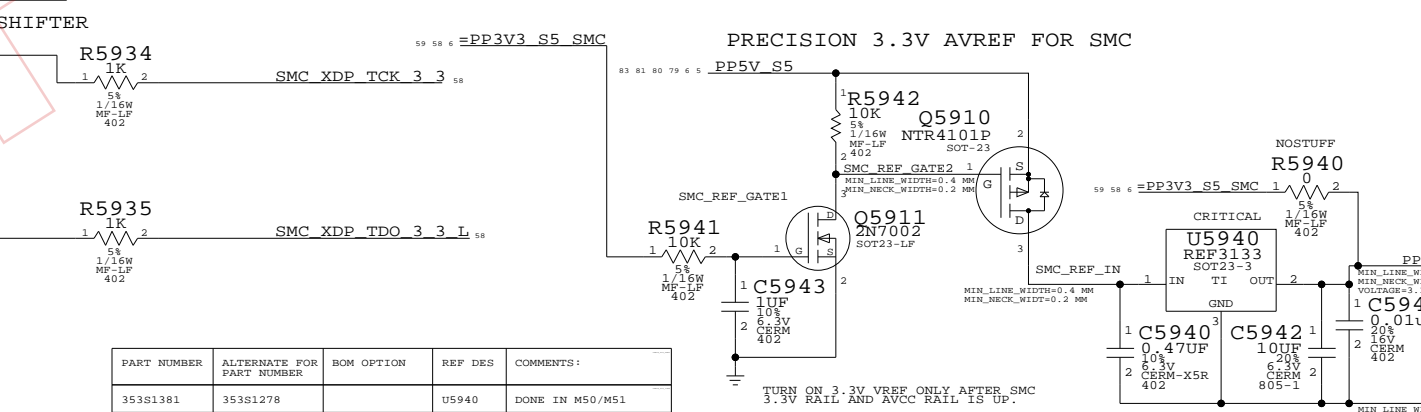
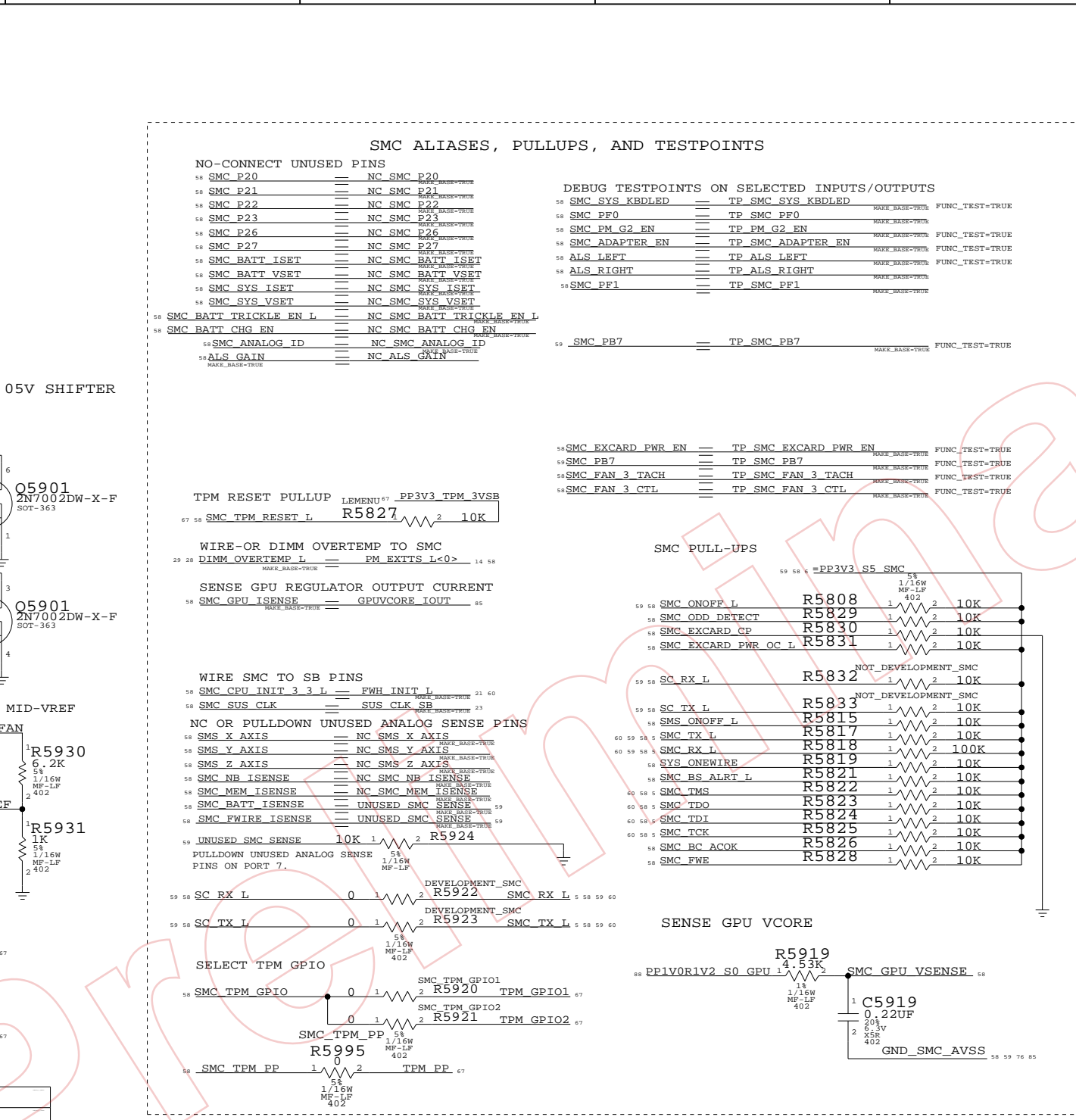
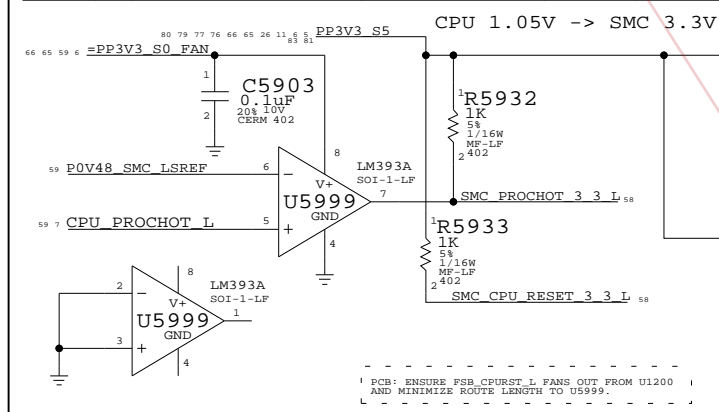
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:

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

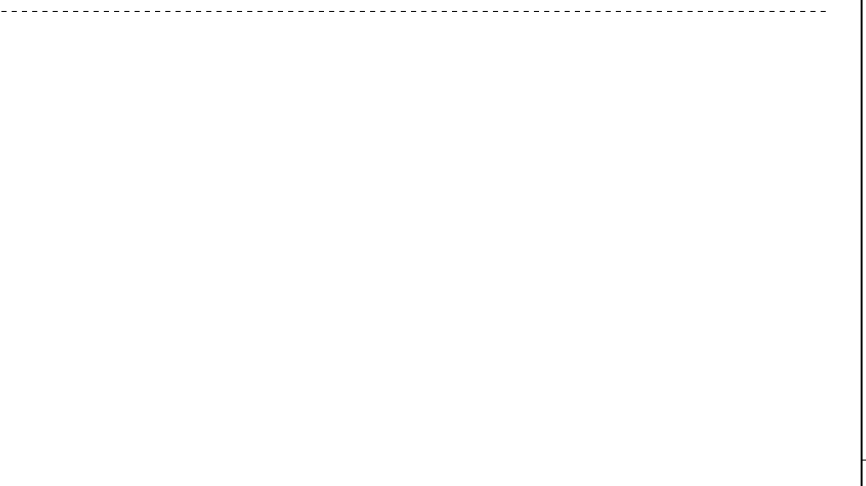
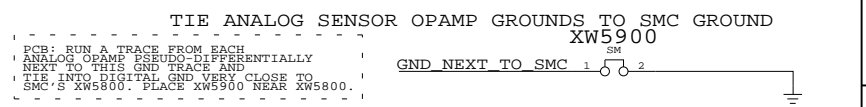
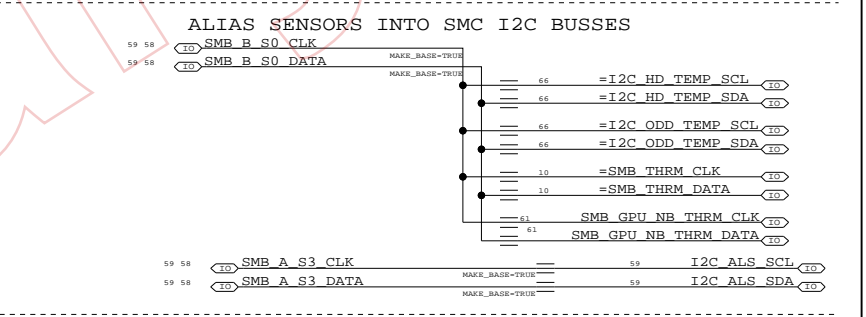
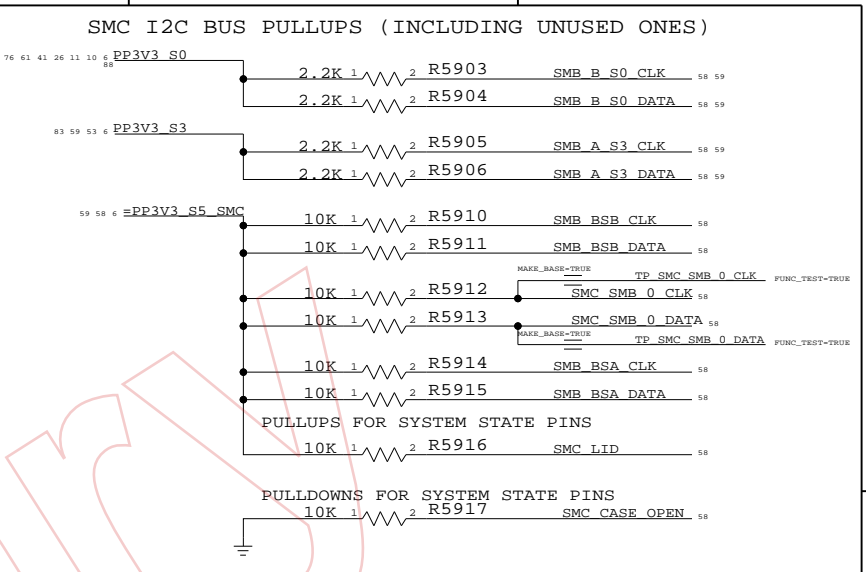
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	58 OF	110
NONE			



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
197S0165	1	XTAL, 20.00, 80PPM, HC49, SMD, LF	Y5800	CRITICAL	

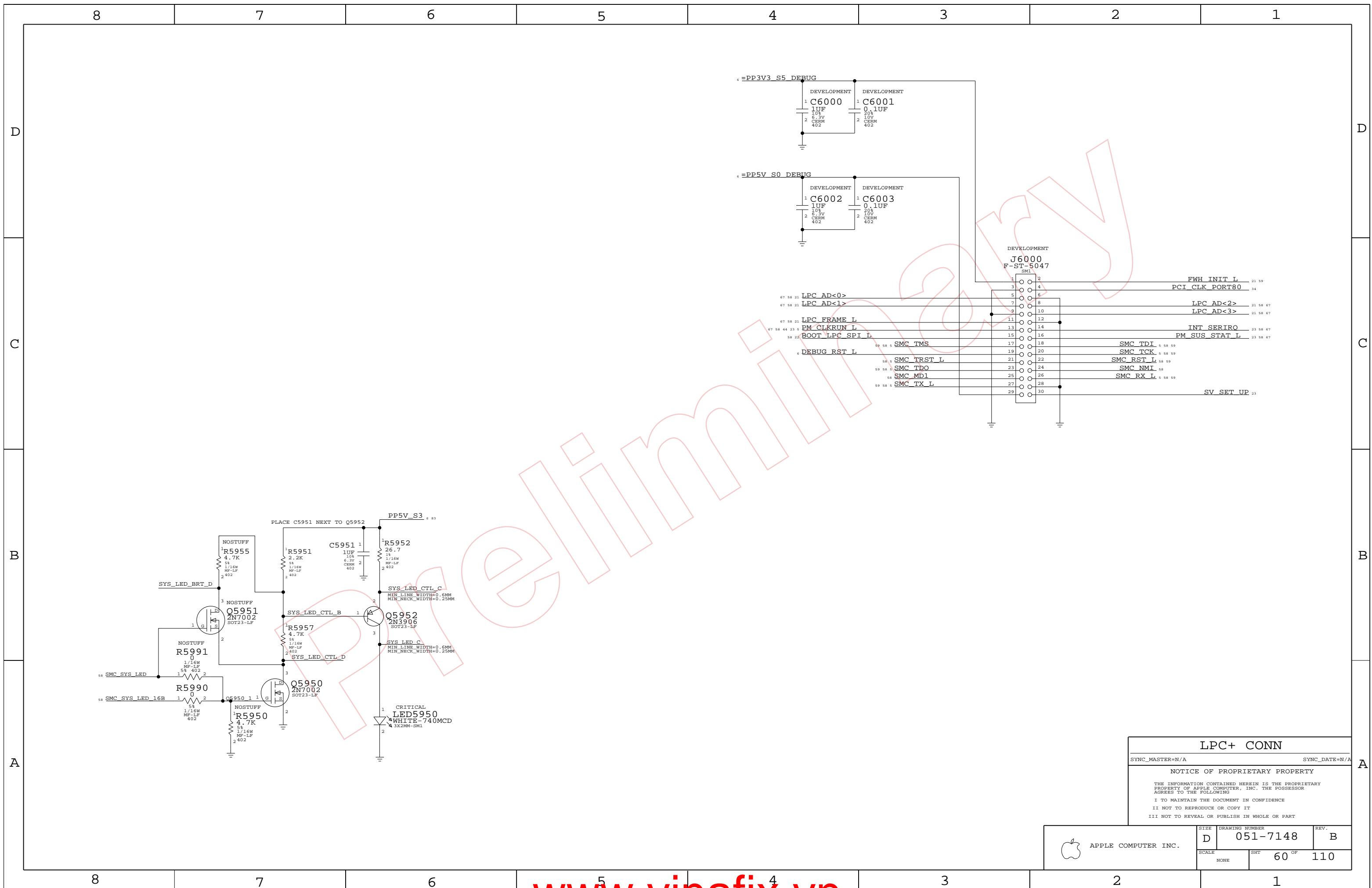


PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
353S1381	353S1278		U5940	DONE IN M50/M51



SIZE	DRAWING NUMBER	REV.
D	051-7148	B

SCALE: NONE    SHEET: 59 OF 110



**LPC+ CONN**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

**NOTICE OF PROPRIETARY PROPERTY**

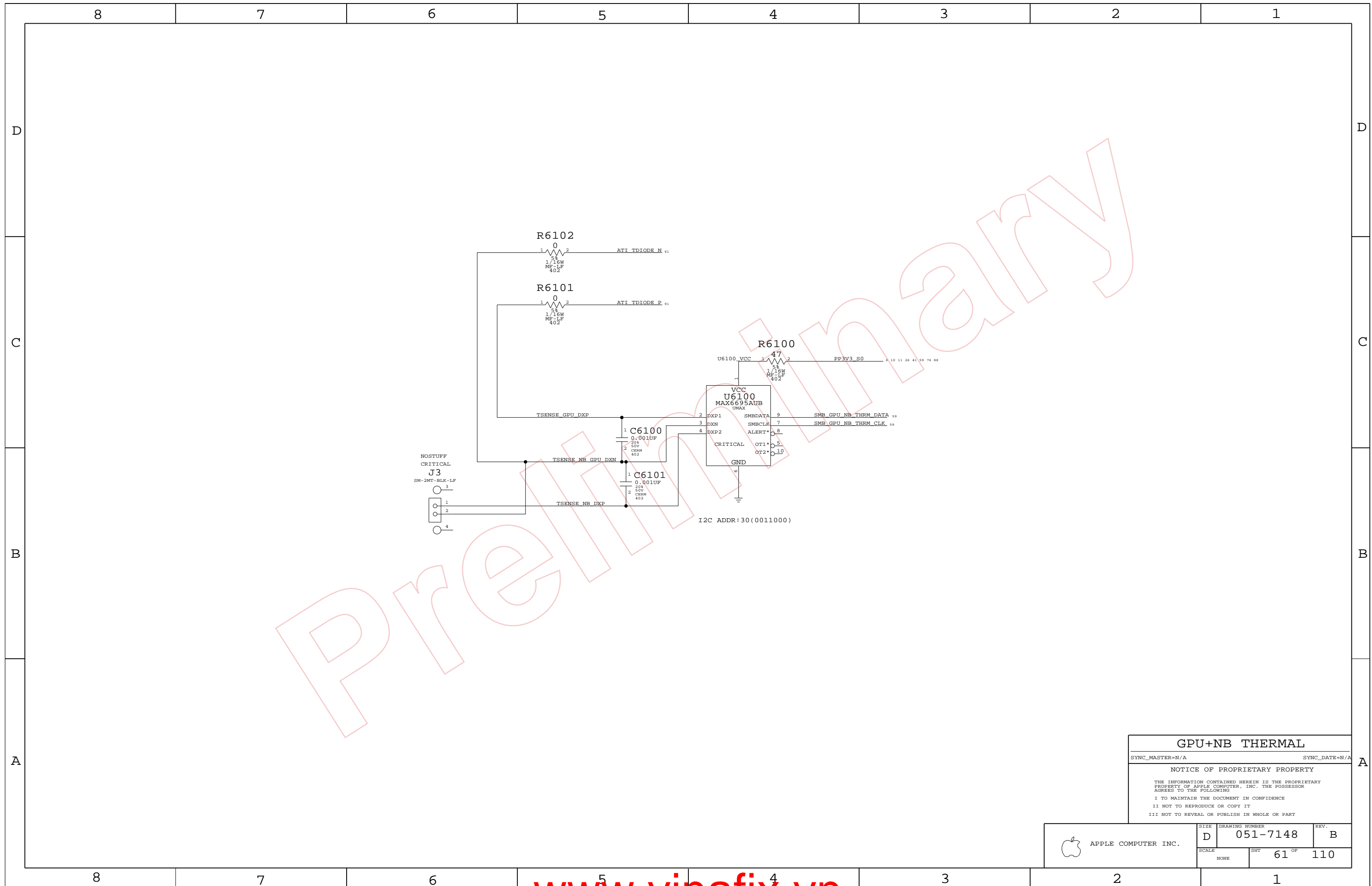
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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>051-7148</b>	REV. <b>B</b>
	SCALE NONE	SHT 60 OF	110



Preiminary

**GPU+NB THERMAL**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

**NOTICE OF PROPRIETARY PROPERTY**

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

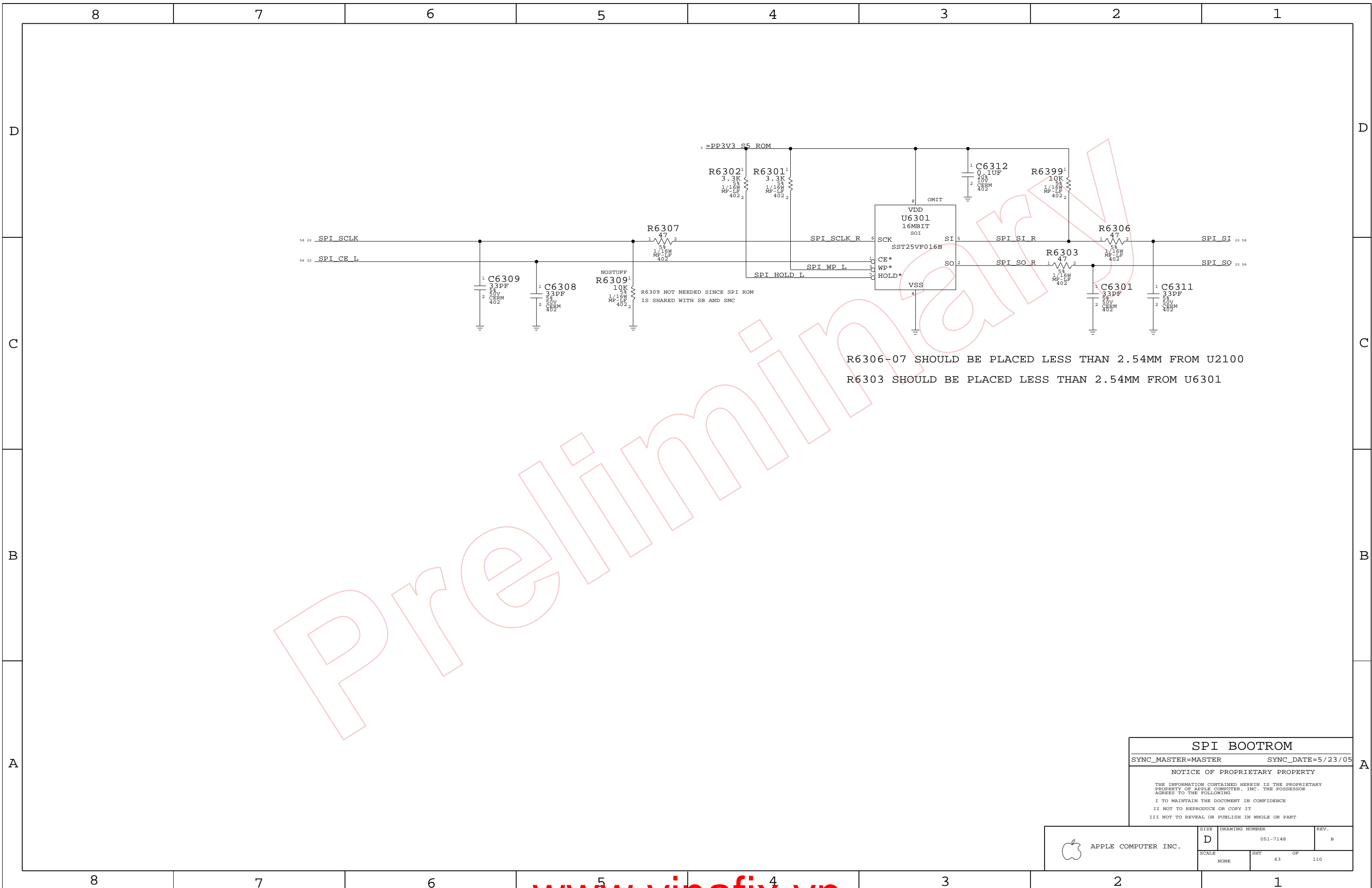
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

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>051-7148</b>	REV. <b>B</b>
	SCALE NONE	SHEET 61 OF 110	





R6306-07 SHOULD BE PLACED LESS THAN 2.54MM FROM U2100  
 R6303 SHOULD BE PLACED LESS THAN 2.54MM FROM U6301

**SPI BOOTROM**

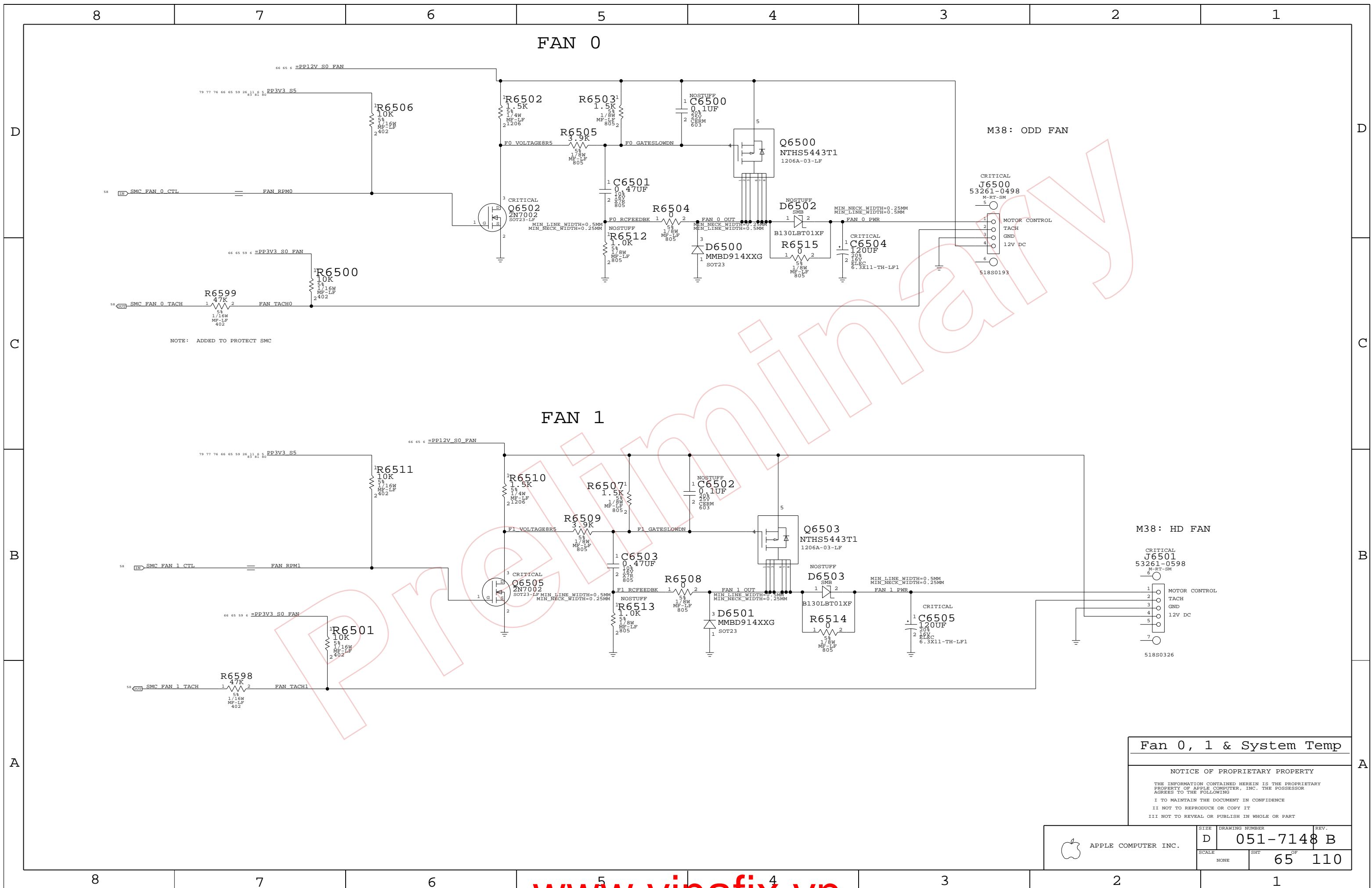
SYNC\_MASTER=MASTER      SYNC\_DATE=5/23/05

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	051-7148	B
SCALE	SHT		OF
NONE	63		110

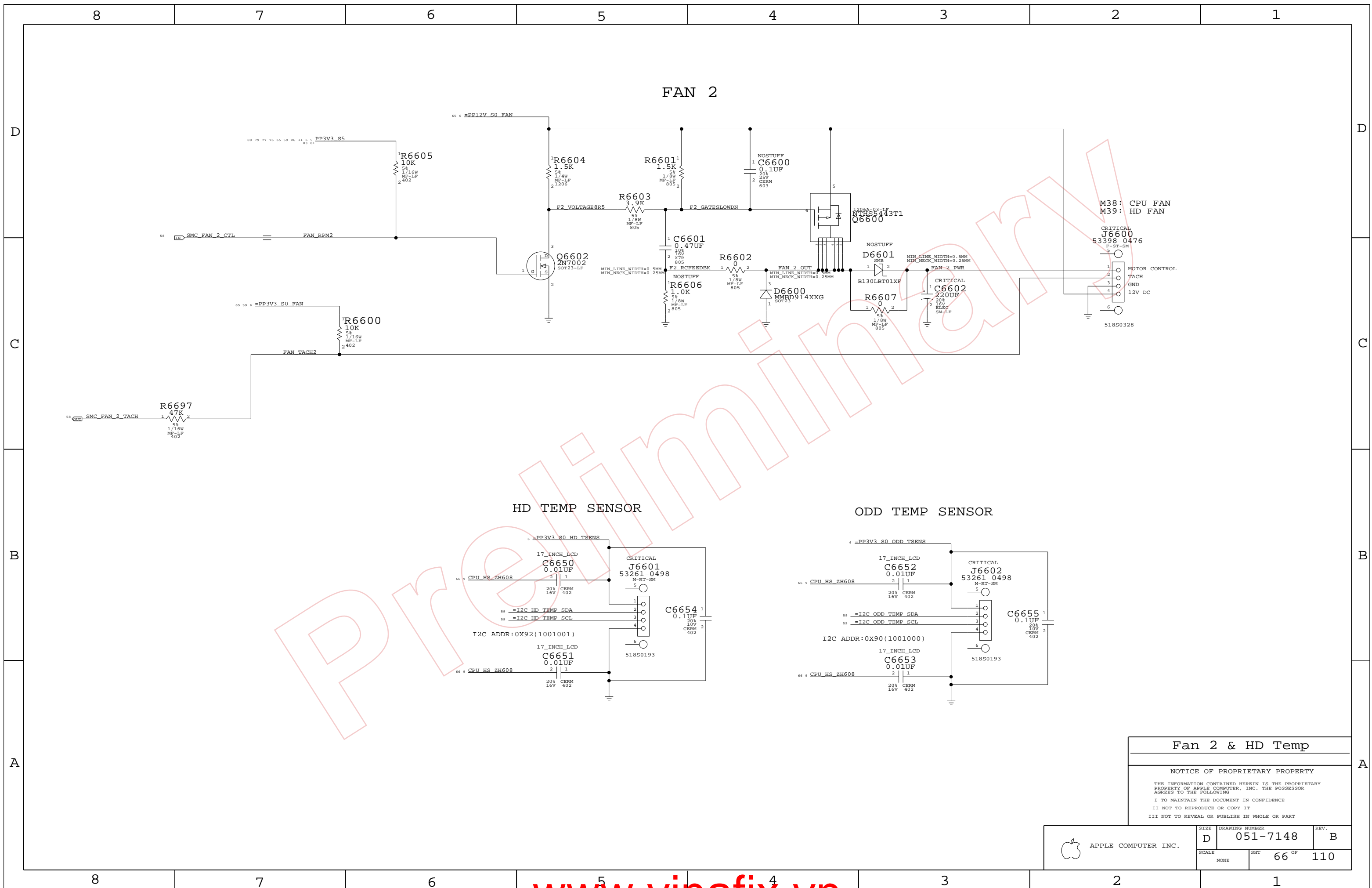


Fan 0, 1 & System Temp

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	051-7148 B	
SCALE	NONE	SHT	OF
		65	110



Fan 2 & HD Temp

NOTICE OF PROPRIETARY PROPERTY

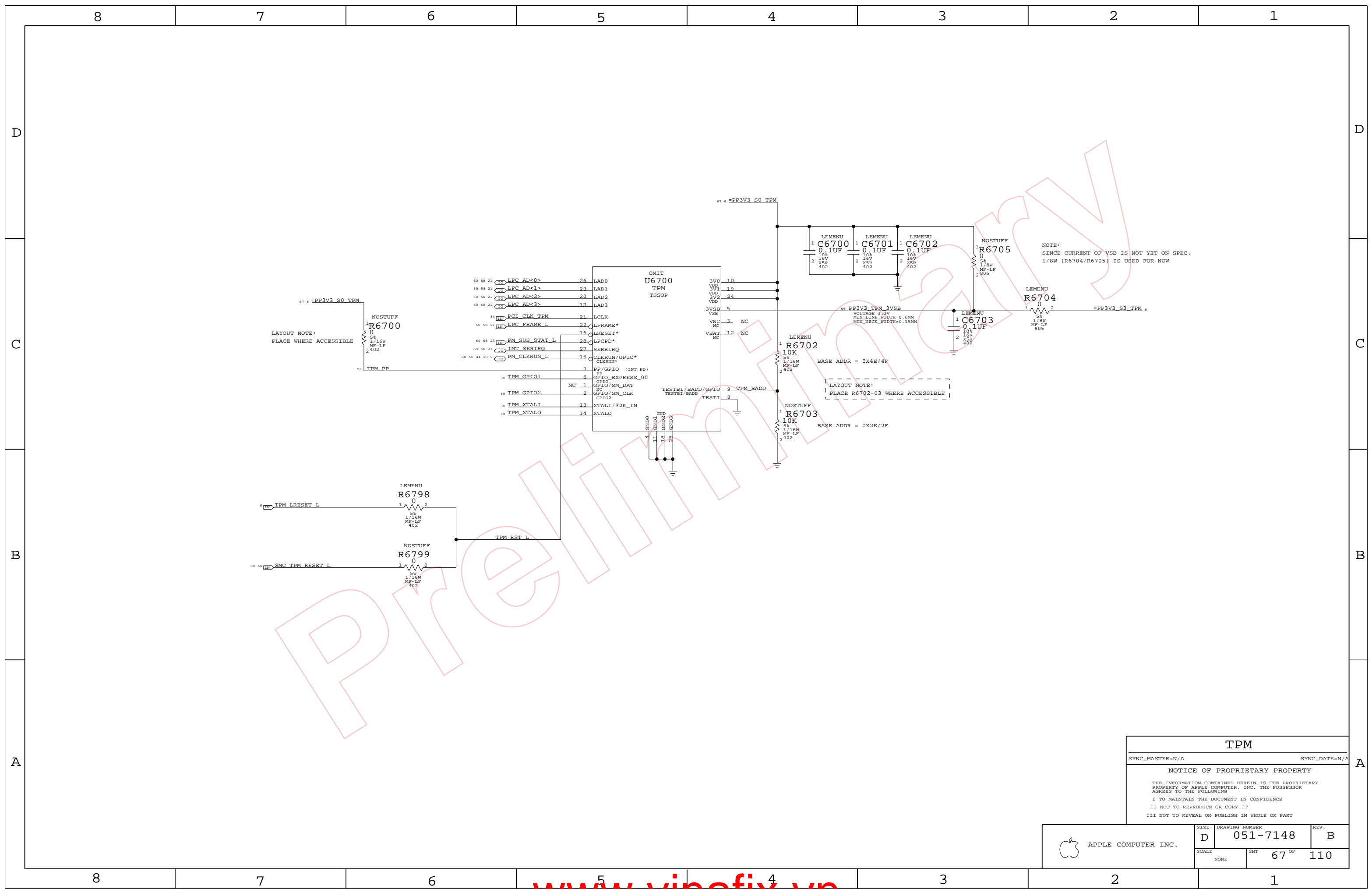
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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	051-7148	B
SCALE	SHT	66 OF	110
NONE			



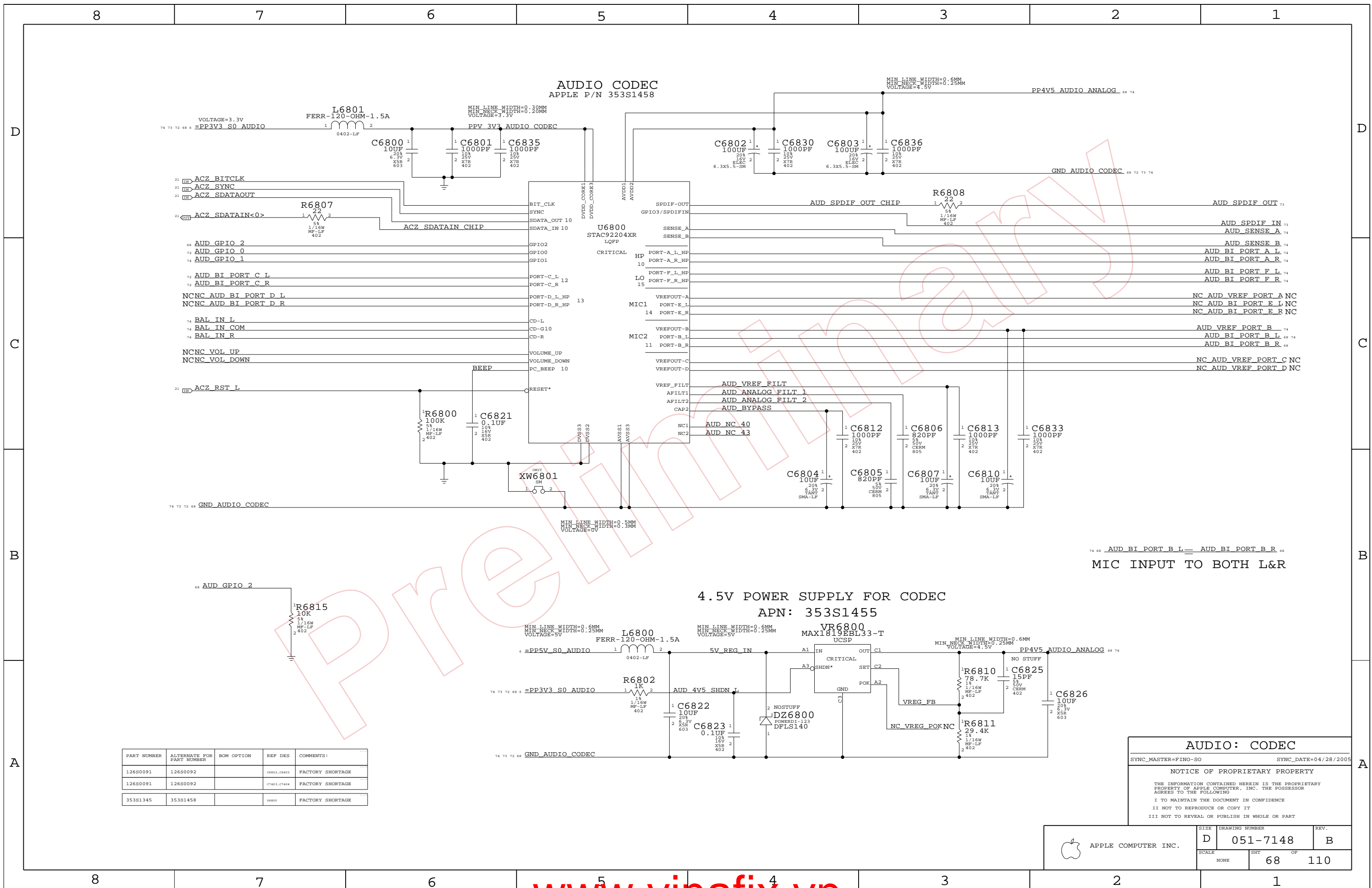
LAYOUT NOTE:  
PLACE WHERE ACCESSIBLE

LAYOUT NOTE:  
PLACE R6702-03 WHERE ACCESSIBLE

NOTE:  
SINCE CURRENT OF VSB IS NOT YET ON SPEC,  
1/8W (R6704/R6705) IS USED FOR NOW

TPM	
SYNC_MASTER=N/A	SYNC_DATE=N/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	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	67 OF 110	
NONE			



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
126S0091	126S0092		C6802, C6803	FACTORY SHORTAGE
126S0091	126S0092		C7403, C7404	FACTORY SHORTAGE
353S1345	353S1458		U6800	FACTORY SHORTAGE

**AUDIO: CODEC**

SYNC\_MASTER=FINO-SO      SYNC\_DATE=04/28/2005

**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

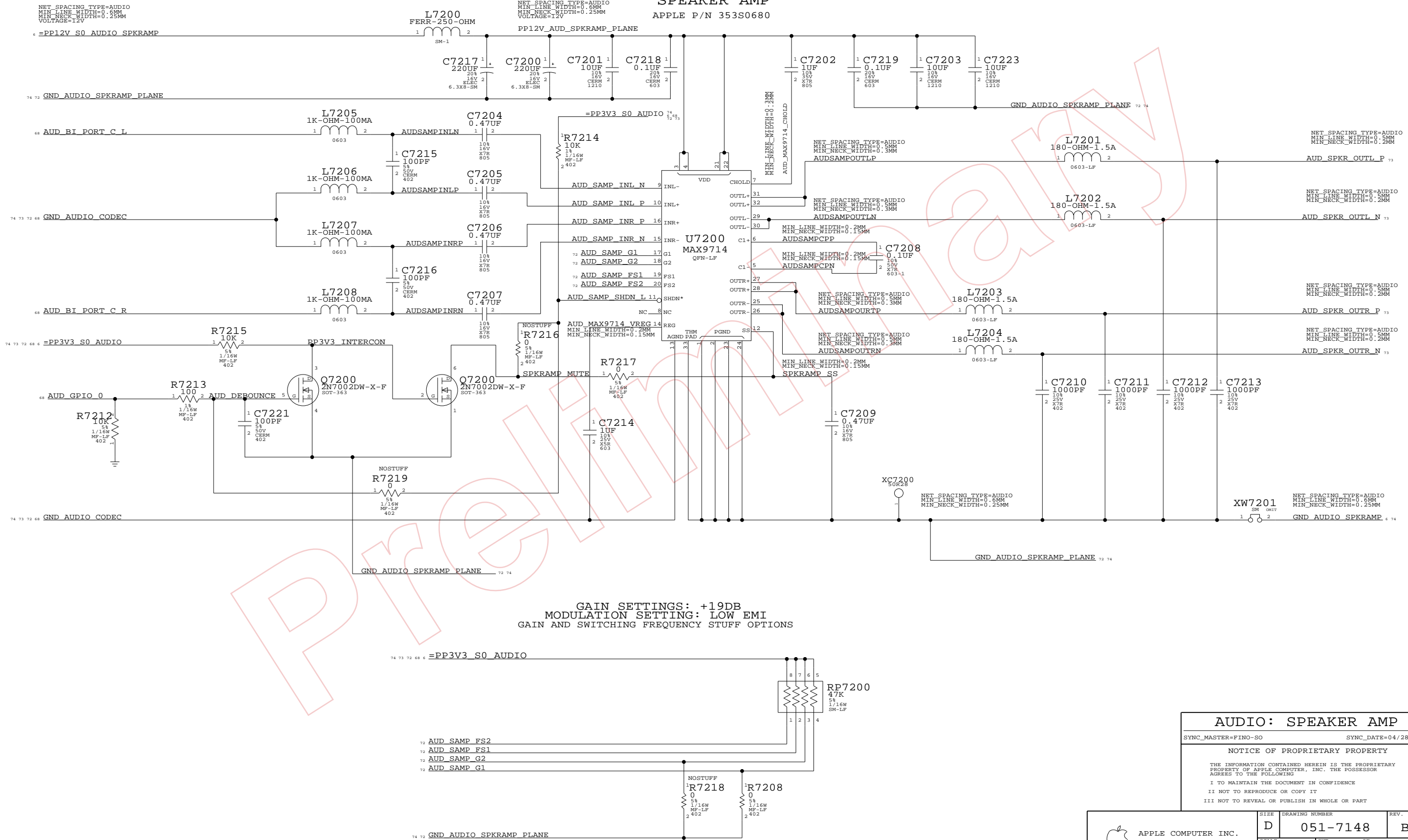
II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHEET OF		
NONE	68 OF 110		

## SPEAKER AMP

APPLE P/N 353S0680



**AUDIO: SPEAKER AMP**

SYNC\_MASTER=FINO-SO      SYNC\_DATE=04/28/2005

NOTICE OF PROPRIETARY PROPERTY

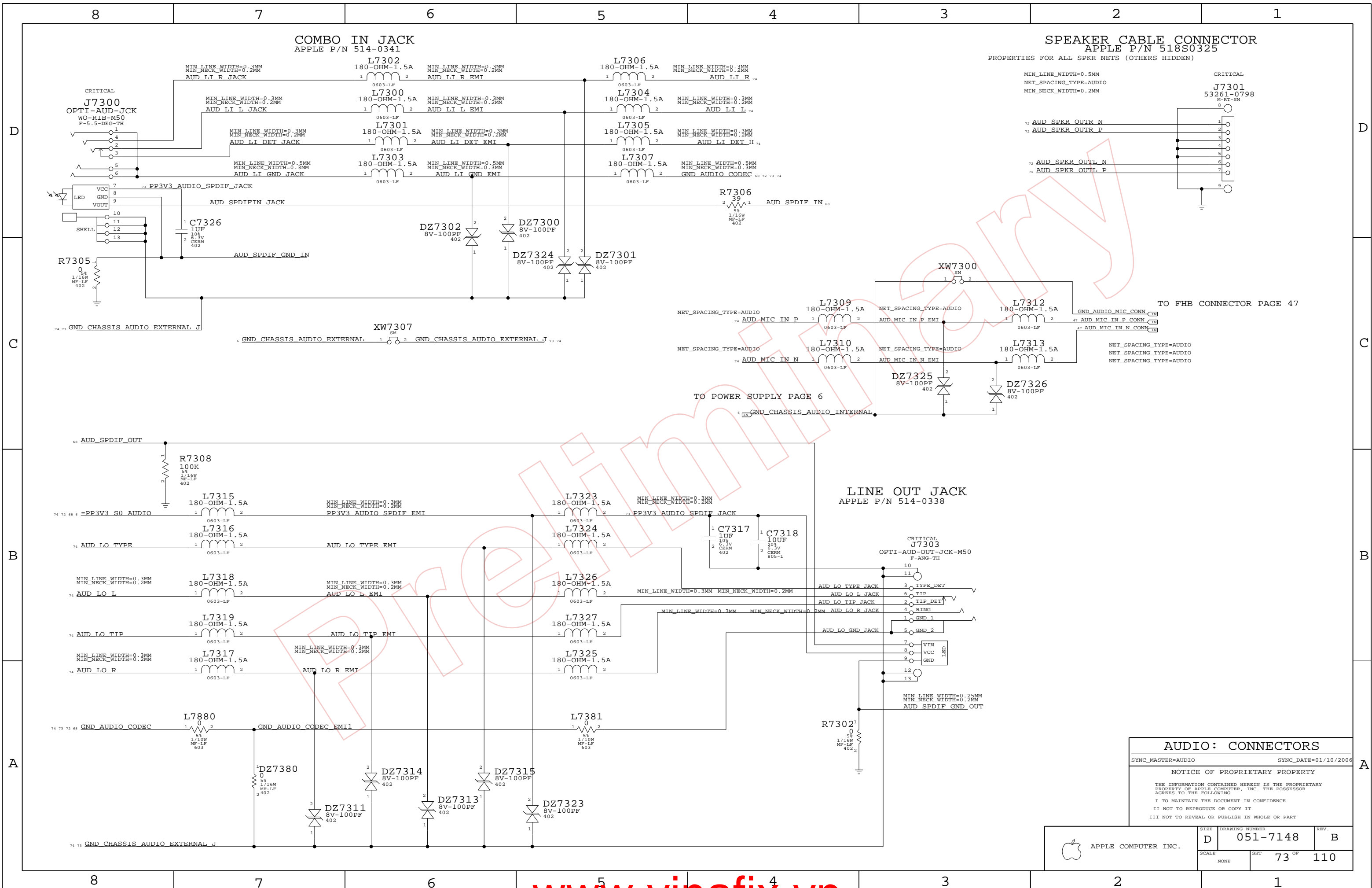
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

- 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.	<b>D</b>	<b>051-7148</b>	<b>B</b>
SCALE NONE	SHEET 72	OF 110	REV. B

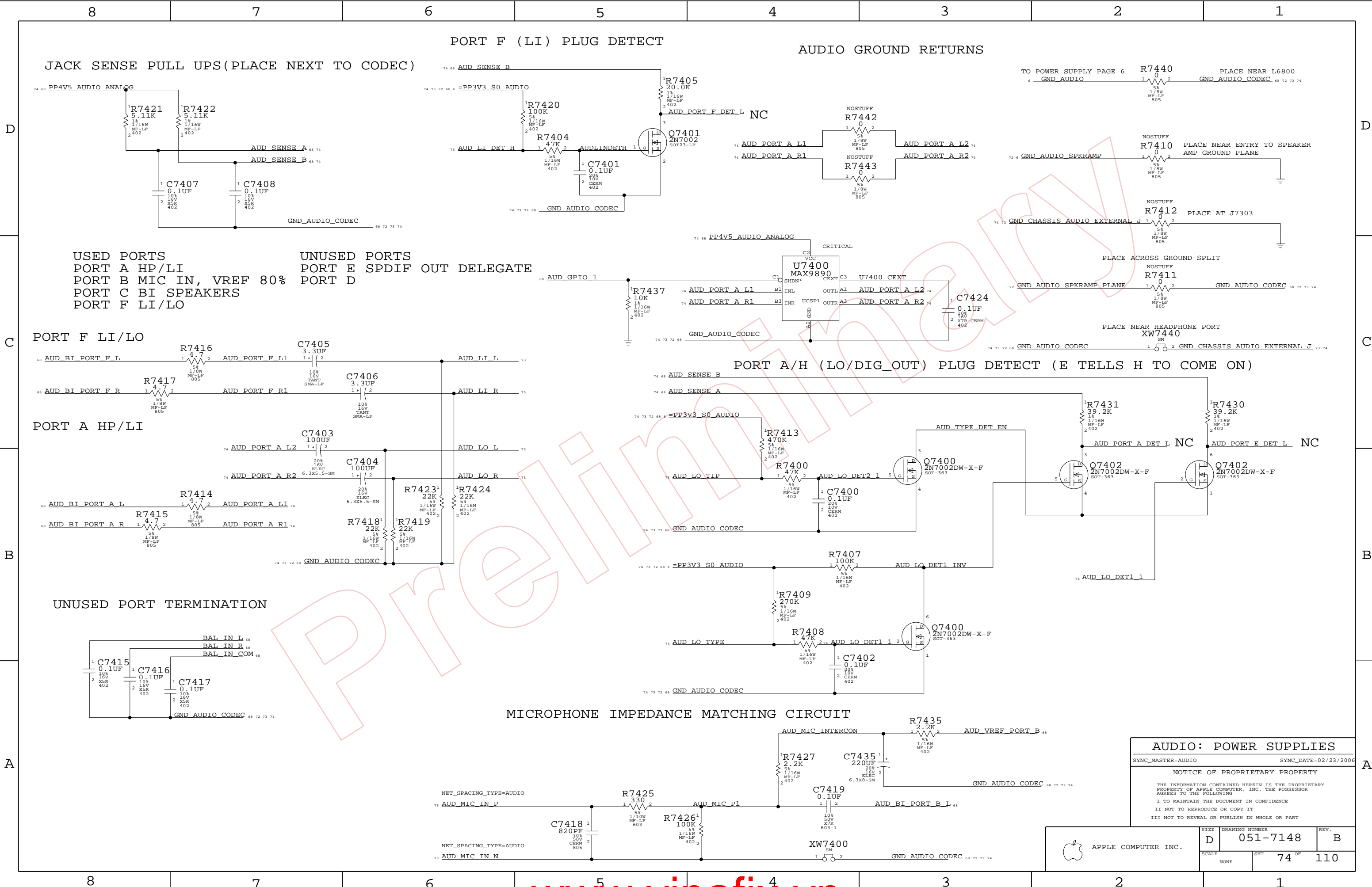
D  
  
C  
  
B  
  
A

D  
  
C  
  
B  
  
A

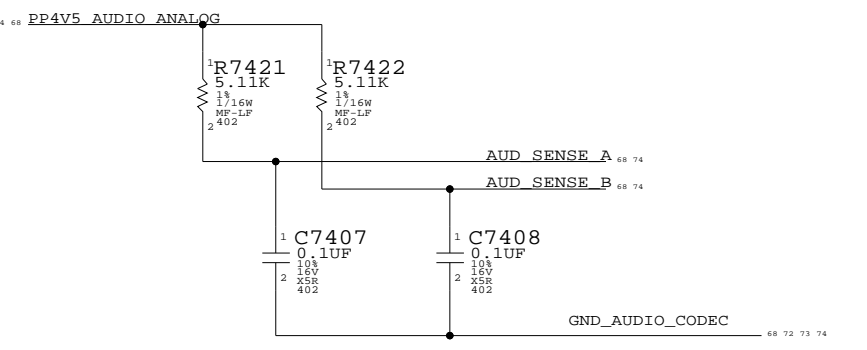


**AUDIO: CONNECTORS**  
 SYNC\_MASTER=AUDIO SYNC\_DATE=01/10/2006  
 NOTICE OF PROPRIETARY PROPERTY  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	73 OF 110	
NONE			



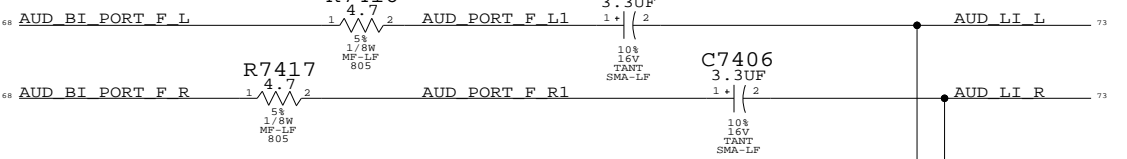
JACK SENSE PULL UPS (PLACE NEXT TO CODEC)



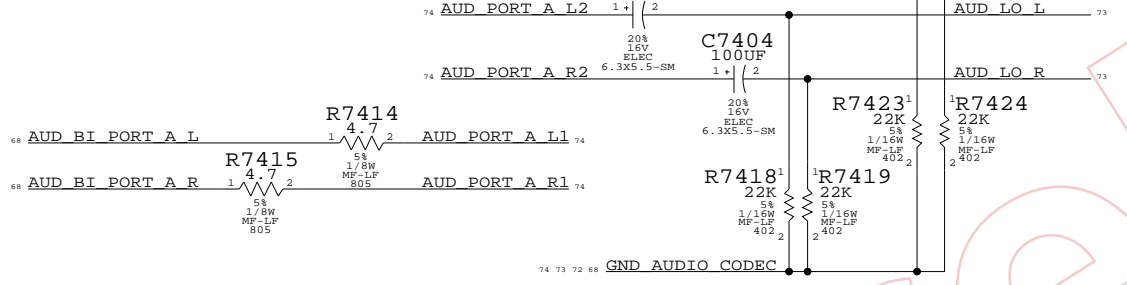
USED PORTS  
 PORT A HP/LI  
 PORT B MIC IN, VREF 80%  
 PORT C BI SPEAKERS  
 PORT F LI/LO

UNUSED PORTS  
 PORT E SPDIF OUT DELEGATE  
 PORT D

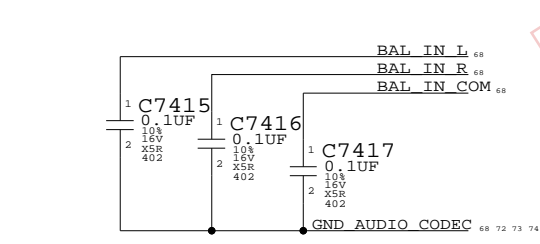
PORT F LI/LO



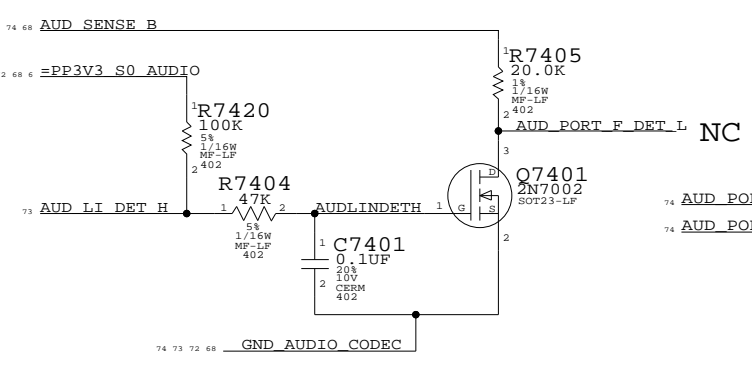
PORT A HP/LI



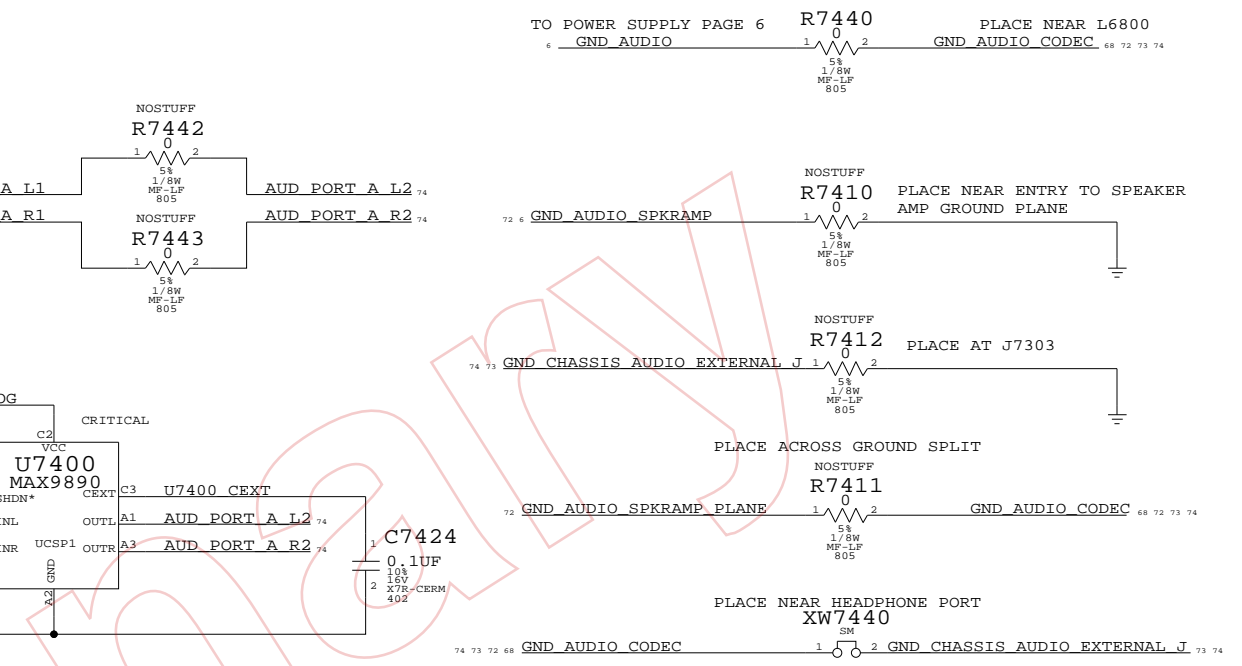
UNUSED PORT TERMINATION



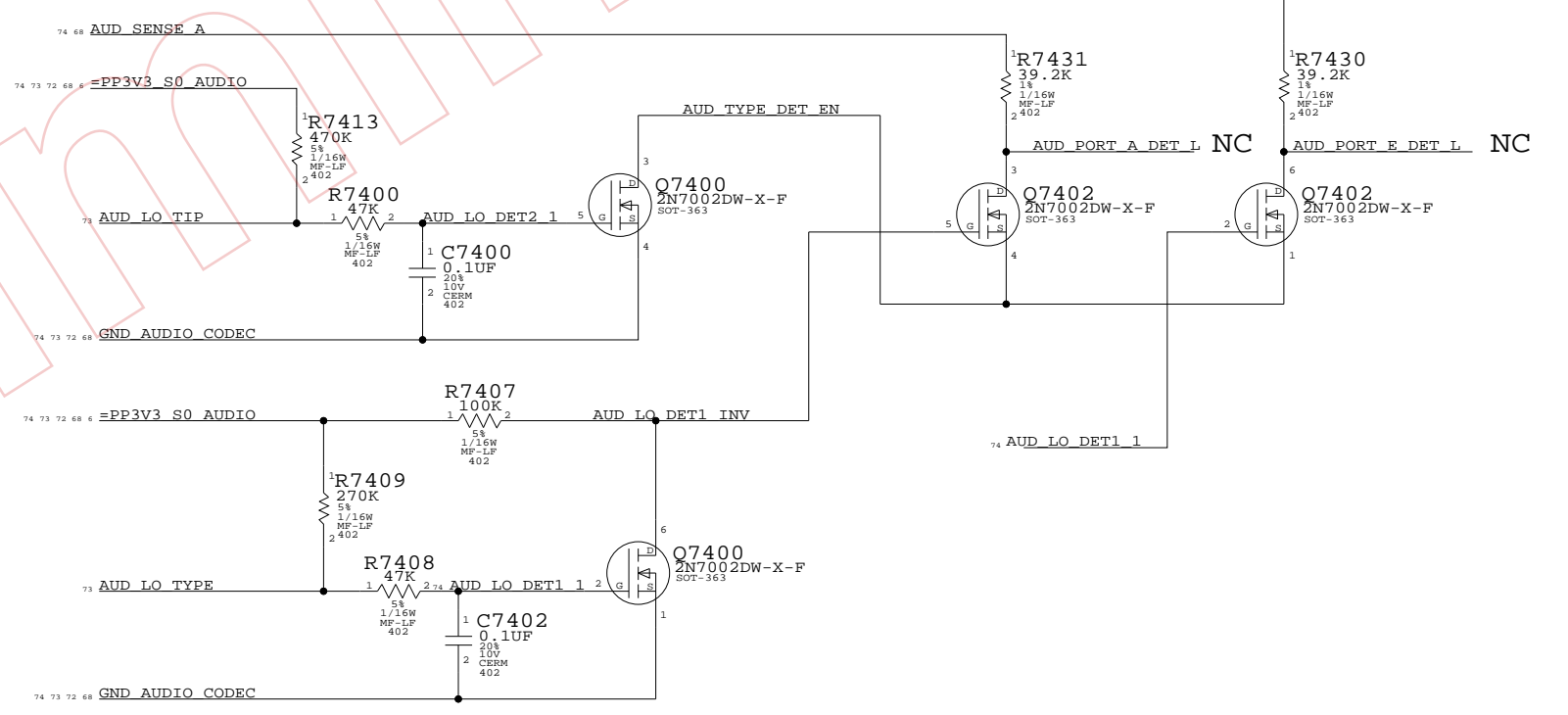
PORT F (LI) PLUG DETECT



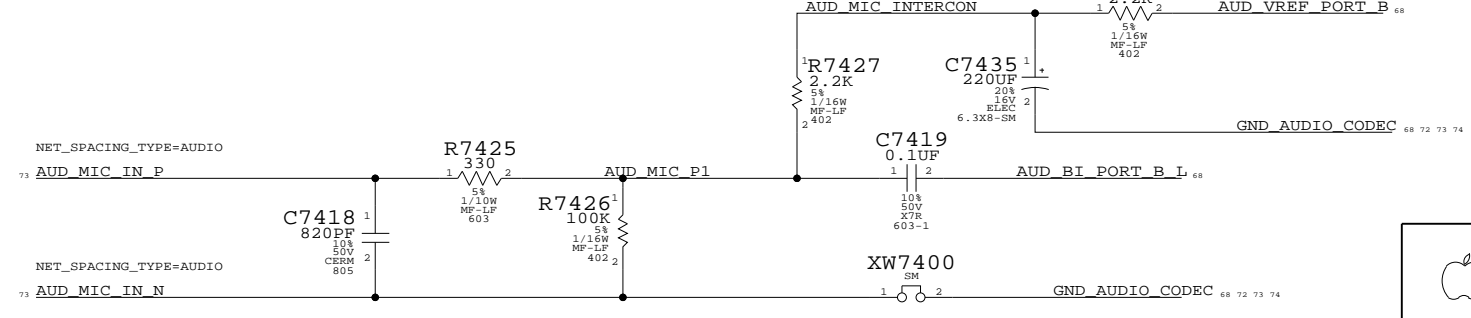
AUDIO GROUND RETURNS



PORT A/H (LO/DIG\_OUT) PLUG DETECT (E TELLS H TO COME ON)



MICROPHONE IMPEDANCE MATCHING CIRCUIT

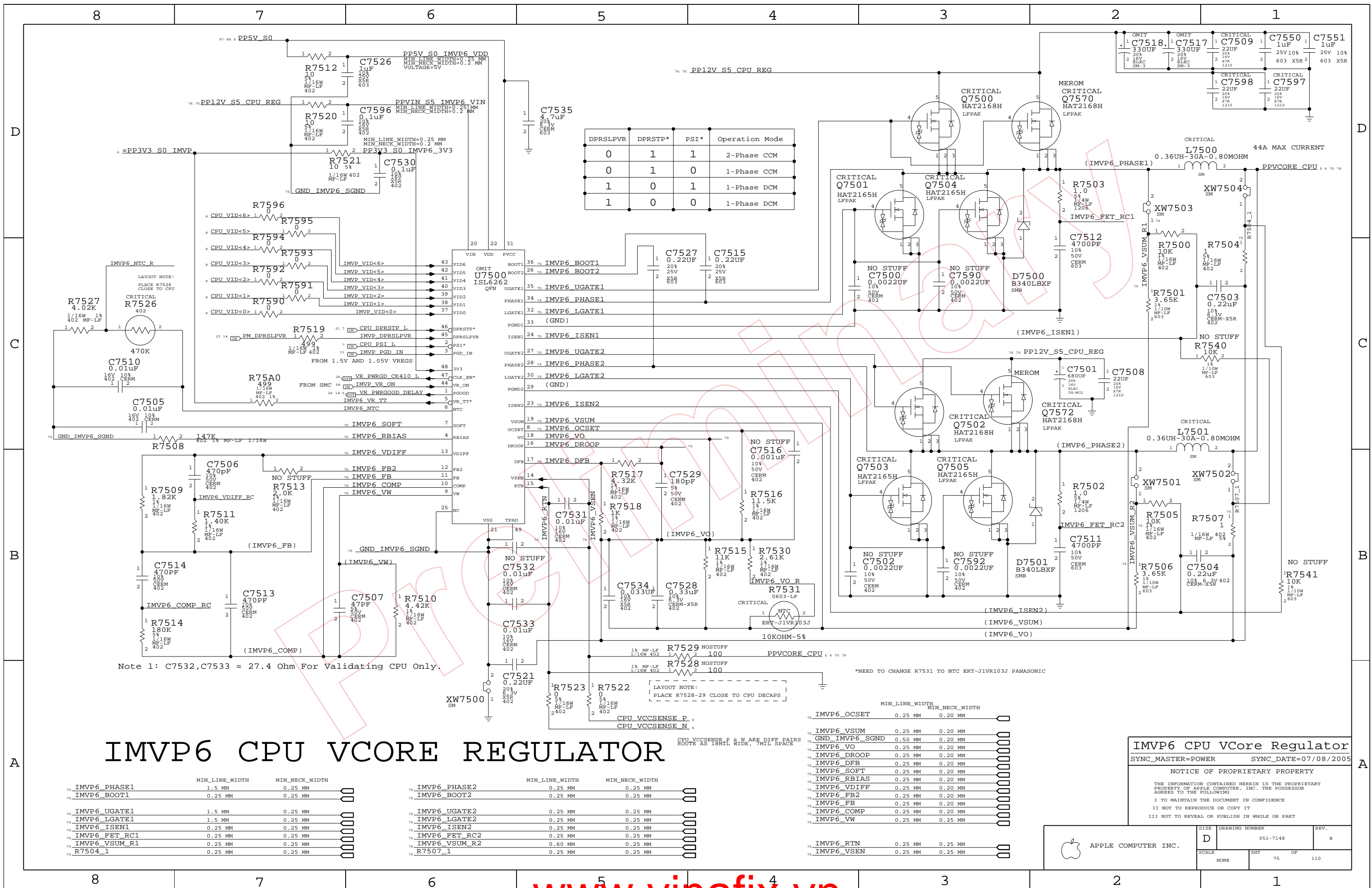


**AUDIO: POWER SUPPLIES**  
 SYNC\_MASTER=AUDIO SYNC\_DATE=02/23/2006

**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	051-7148	B
SCALE	SHT	74 OF	110
NONE			





DPRSLPVR	DPRSTP*	PSI*	Operation Mode
0	1	1	2-Phase CCM
0	1	0	1-Phase CCM
1	0	1	1-Phase DCM
1	0	0	1-Phase DCM

IMVP6_PHASE1	IMVP6_ISEN1	IMVP6_UGATE1	IMVP6_LGATE1	IMVP6_BOOT1	IMVP6_BOOT2
NO STUFF	NO STUFF	NO STUFF	NO STUFF	NO STUFF	NO STUFF

IMVP6_PHASE2	IMVP6_ISEN2	IMVP6_UGATE2	IMVP6_LGATE2	IMVP6_DROOP	IMVP6_DFB
NO STUFF	NO STUFF	NO STUFF	NO STUFF	NO STUFF	NO STUFF

IMVP6_VSUM	IMVP6_VO	IMVP6_VSEN	IMVP6_RTN
NO STUFF	NO STUFF	NO STUFF	NO STUFF

# IMVP6 CPU VCore Regulator

	MIN_LINE_WIDTH	MIN_NECK_WIDTH
75 IMVP6_PHASE1	1.5 MM	0.25 MM
75 IMVP6_BOOT1	0.25 MM	0.25 MM
75 IMVP6_UGATE1	1.5 MM	0.25 MM
75 IMVP6_LGATE1	1.5 MM	0.25 MM
75 IMVP6_ISEN1	0.25 MM	0.25 MM
75 IMVP6_FET_RC1	0.25 MM	0.25 MM
75 IMVP6_VSUM_R1	0.25 MM	0.25 MM
75 R7504_1	0.25 MM	0.25 MM

	MIN_LINE_WIDTH	MIN_NECK_WIDTH
75 IMVP6_PHASE2	0.25 MM	0.25 MM
75 IMVP6_BOOT2	0.25 MM	0.25 MM
75 IMVP6_UGATE2	0.25 MM	0.25 MM
75 IMVP6_LGATE2	0.25 MM	0.25 MM
75 IMVP6_ISEN2	0.25 MM	0.25 MM
75 IMVP6_FET_RC2	0.25 MM	0.25 MM
75 IMVP6_VSUM_R2	0.60 MM	0.25 MM
75 R7507_1	0.25 MM	0.25 MM

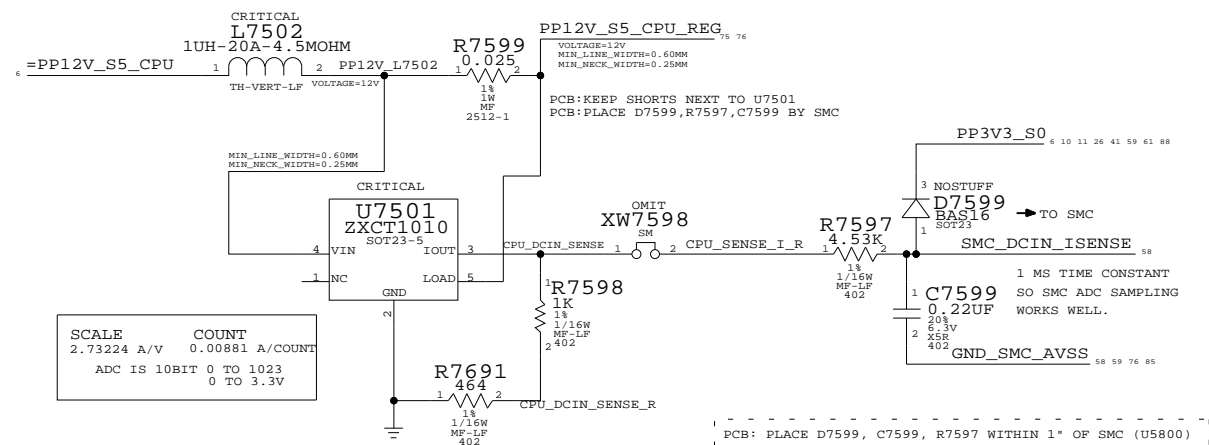
	MIN_LINE_WIDTH	MIN_NECK_WIDTH
75 IMVP6_OCSET	0.25 MM	0.20 MM
75 IMVP6_VSUM	0.25 MM	0.20 MM
75 GND_IMVP6_SGND	0.50 MM	0.20 MM
75 IMVP6_VO	0.25 MM	0.20 MM
75 IMVP6_DROOP	0.25 MM	0.20 MM
75 IMVP6_DFB	0.25 MM	0.20 MM
75 IMVP6_SOFT	0.25 MM	0.20 MM
75 IMVP6_RBIAS	0.25 MM	0.20 MM
75 IMVP6_VDIFF	0.25 MM	0.20 MM
75 IMVP6_FB2	0.25 MM	0.20 MM
75 IMVP6_FB	0.25 MM	0.20 MM
75 IMVP6_COMP	0.25 MM	0.20 MM
75 IMVP6_VW	0.25 MM	0.25 MM
75 IMVP6_RTN	0.25 MM	0.25 MM
75 IMVP6_VSEN	0.25 MM	0.25 MM

IMVP6 CPU VCore Regulator  
 SYNC\_MASTER=POWER SYNC\_DATE=07/08/2005

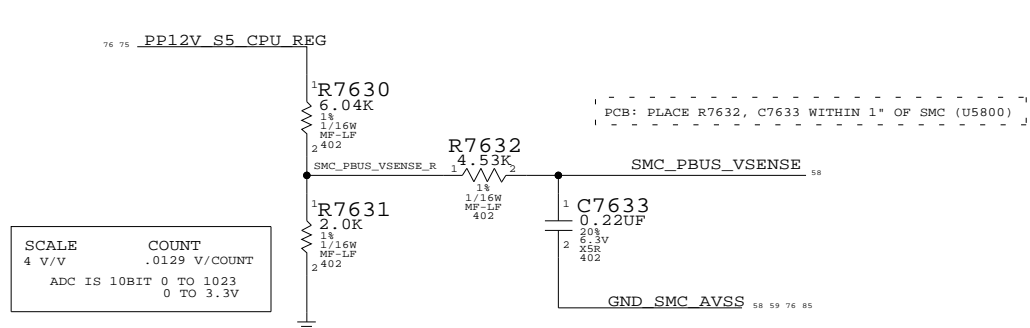
NOTICE OF PROPRIETARY PROPERTY  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHEET	OF	
NONE	75	110	

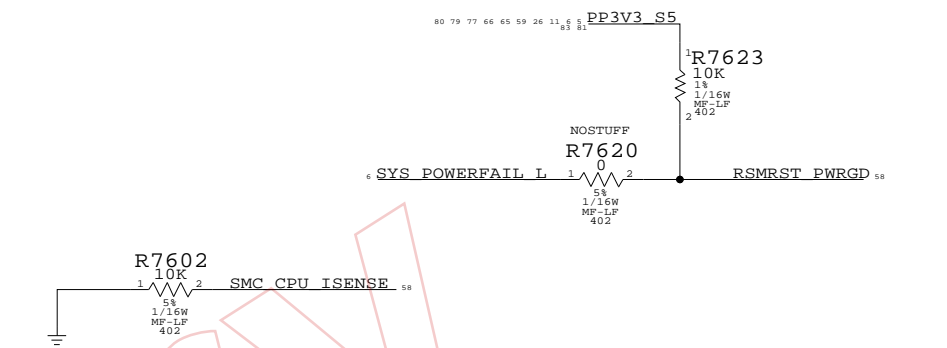
**PROCESSOR VCORE CURRENT SENSE**  
(USING 12V INPUT CURRENT TO DERIVE CPU CURRENT)



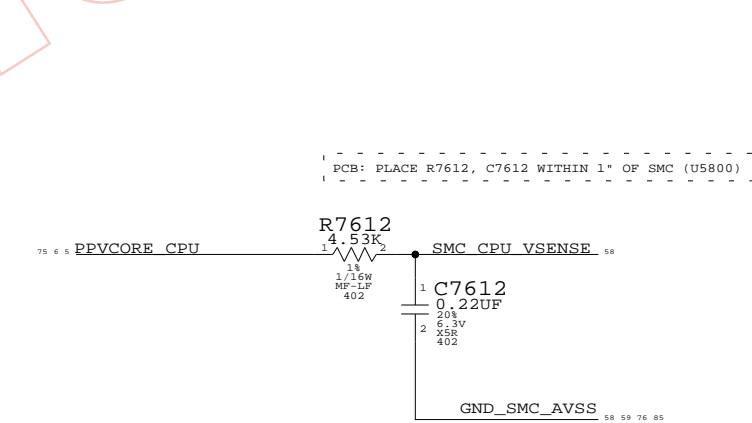
**PROCESSOR DCIN VOLTAGE SENSE**  
(SCALING 12V INPUT VOLTAGE TO SMC)



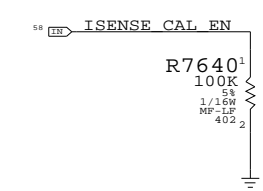
**SMC PWRGD PULLUP**



**PROCESSOR VCORE SENSE**

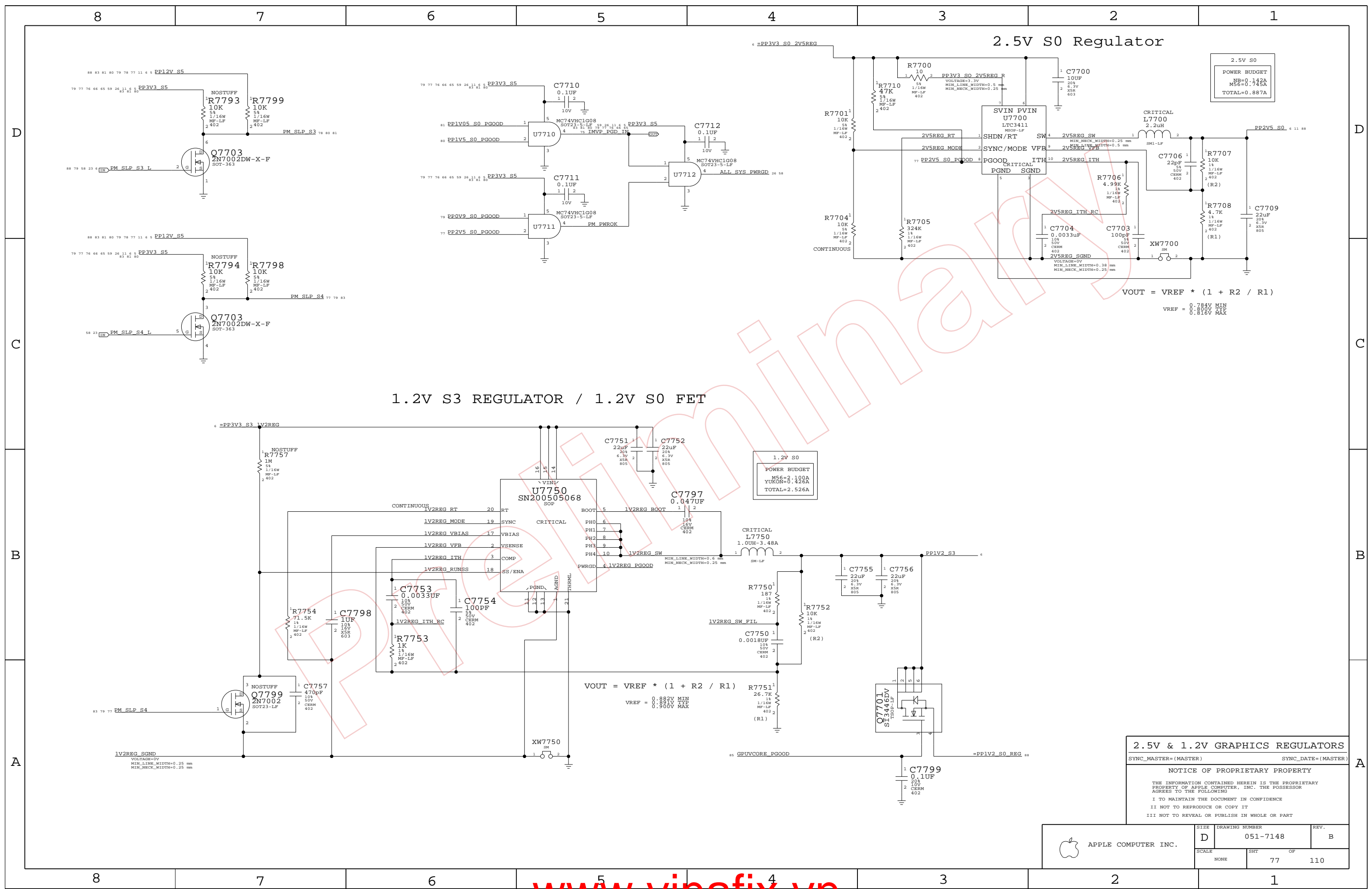


**Current Sense Calibration Circuit**  
Switches in fixed load on power supplies to calibrate current sense circuits



**CPU SENSE CIRCUITRIES**  
SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)  
**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	051-7148	B
SCALE	SHT	76 OF	110
NONE			



2.5V S0 Regulator

2.5V S0	
POWER BUDGET	
NS=0.142A	
MS=0.745A	
TOTAL=0.887A	

$$V_{OUT} = V_{REF} * (1 + R2 / R1)$$

$$V_{REF} = 0.784V \text{ MIN}$$

$$V_{REF} = 0.800V \text{ TYP}$$

$$V_{REF} = 0.816V \text{ MAX}$$

1.2V S3 REGULATOR / 1.2V S0 FET

1.2V S0	
POWER BUDGET	
M56=2.100A	
YUKON=0.426A	
TOTAL=2.526A	

$$V_{OUT} = V_{REF} * (1 + R2 / R1)$$

$$V_{REF} = 0.882V \text{ MIN}$$

$$V_{REF} = 0.881V \text{ TYP}$$

$$V_{REF} = 0.900V \text{ MAX}$$

2.5V & 1.2V GRAPHICS REGULATORS

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

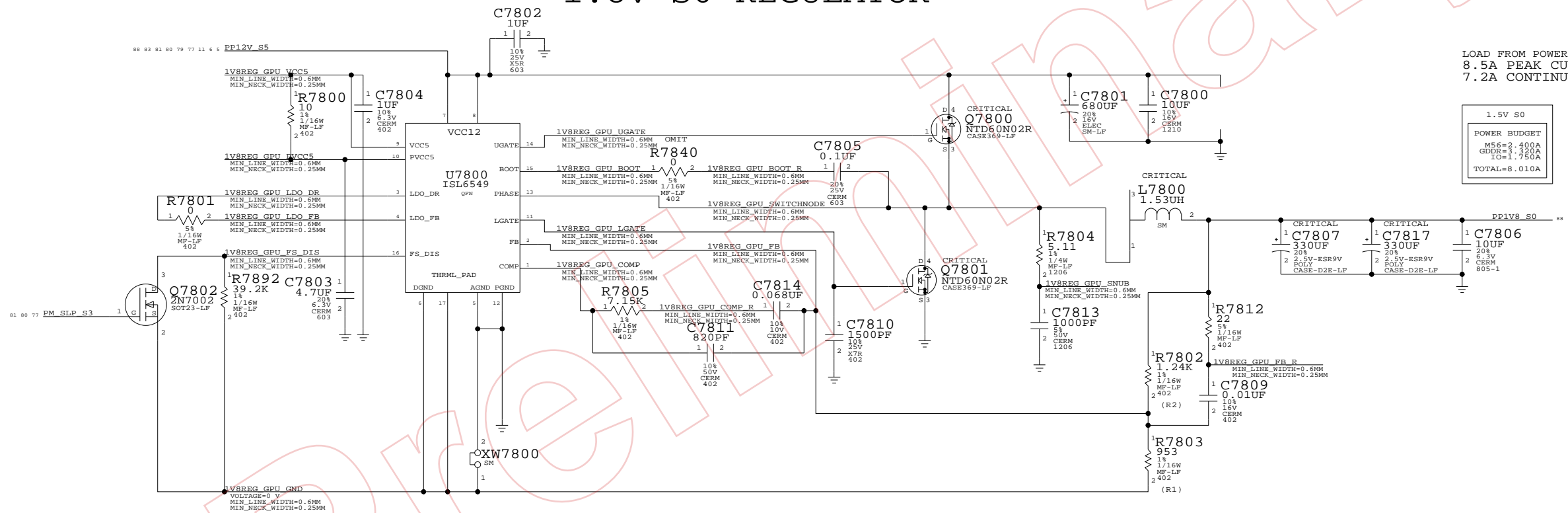
NOTICE OF PROPRIETARY PROPERTY

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	051-7148	B
SCALE	SHT	OF	
NONE	77	110	

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
11480514	1	5.11 OHM 0402 1% 1/16W LF	R7840		

### 1.8V S0 REGULATOR



LOAD FROM POWER BUDGET  
8.5A PEAK CURRENT DRAW  
7.2A CONTINUOUS CURRENT DRAW

1.5V S0
POWER BUDGET
M56=2.400A
GDDR=3.300A
IO=1.700A
TOTAL=8.010A

$$V_{OUT} = V_{REF} * (1 + R2/R1)$$

VREF = 0.784V MIN  
VREF = 0.800V TYP  
VREF = 0.816V MAX

**1.8V GDDR REGULATOR**

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

NOTICE OF PROPRIETARY PROPERTY

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

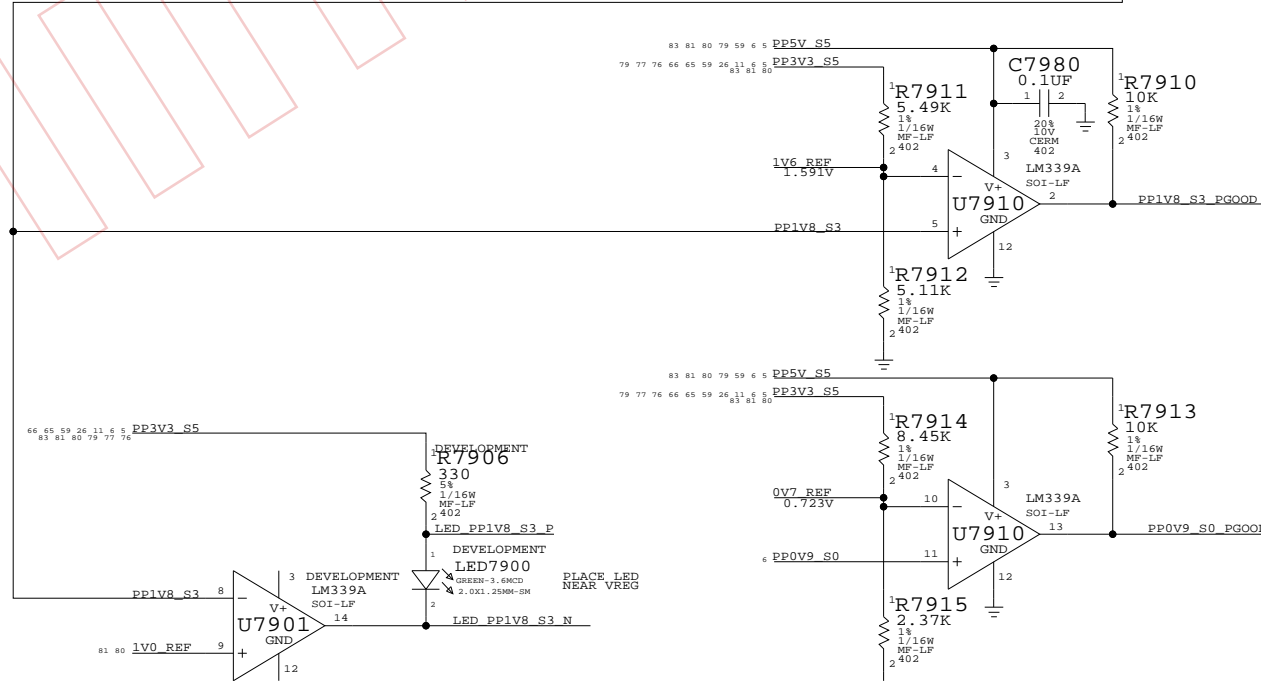
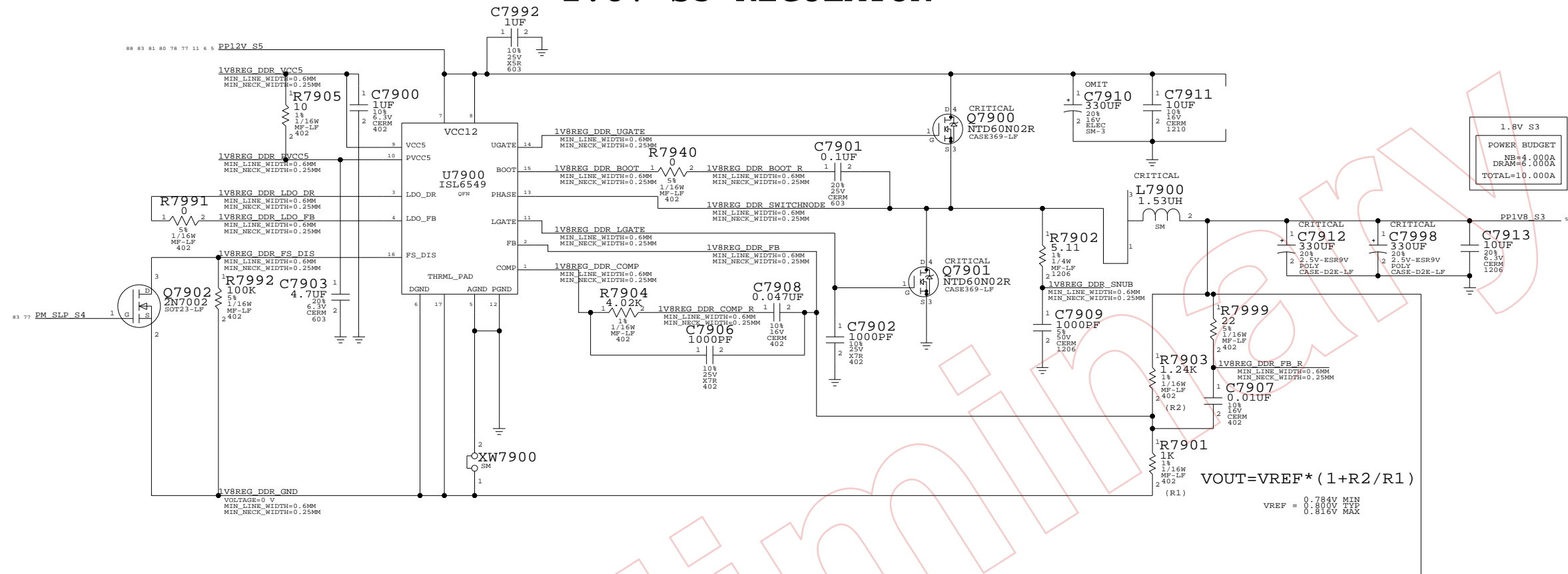
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

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	051-7148	B
SCALE	SHT	78 OF 110	
NONE			

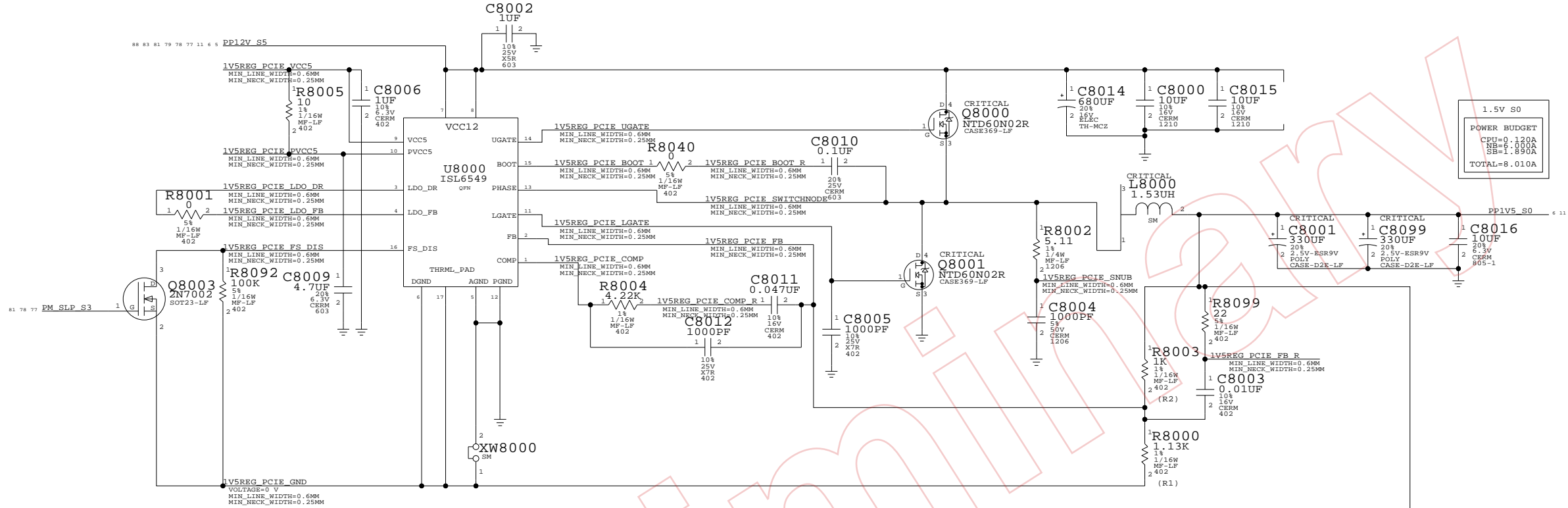
# 1.8V S3 REGULATOR



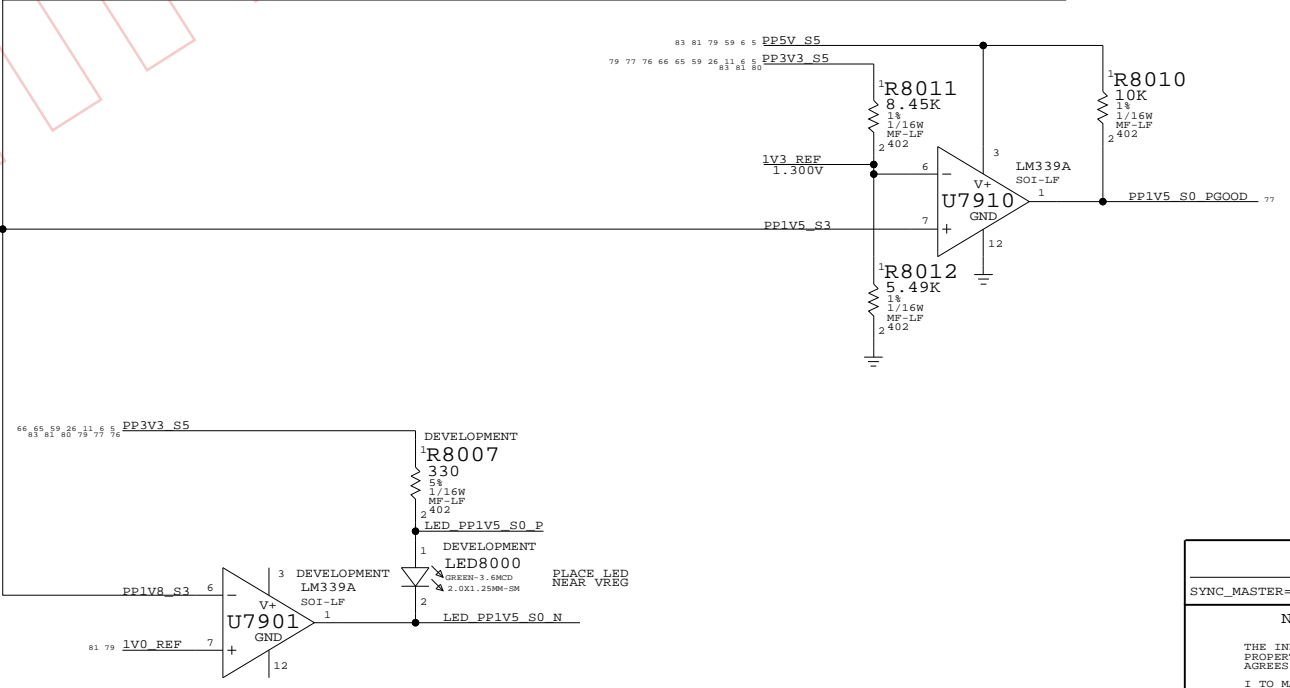
**1.8V Vreg**  
 SYNC\_MASTER=M23-PC SYNC\_DATE=04/12/2005  
**NOTICE OF PROPRIETARY PROPERTY**  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	79 OF	110
NONE			

# 1.5V S0 REGULATOR



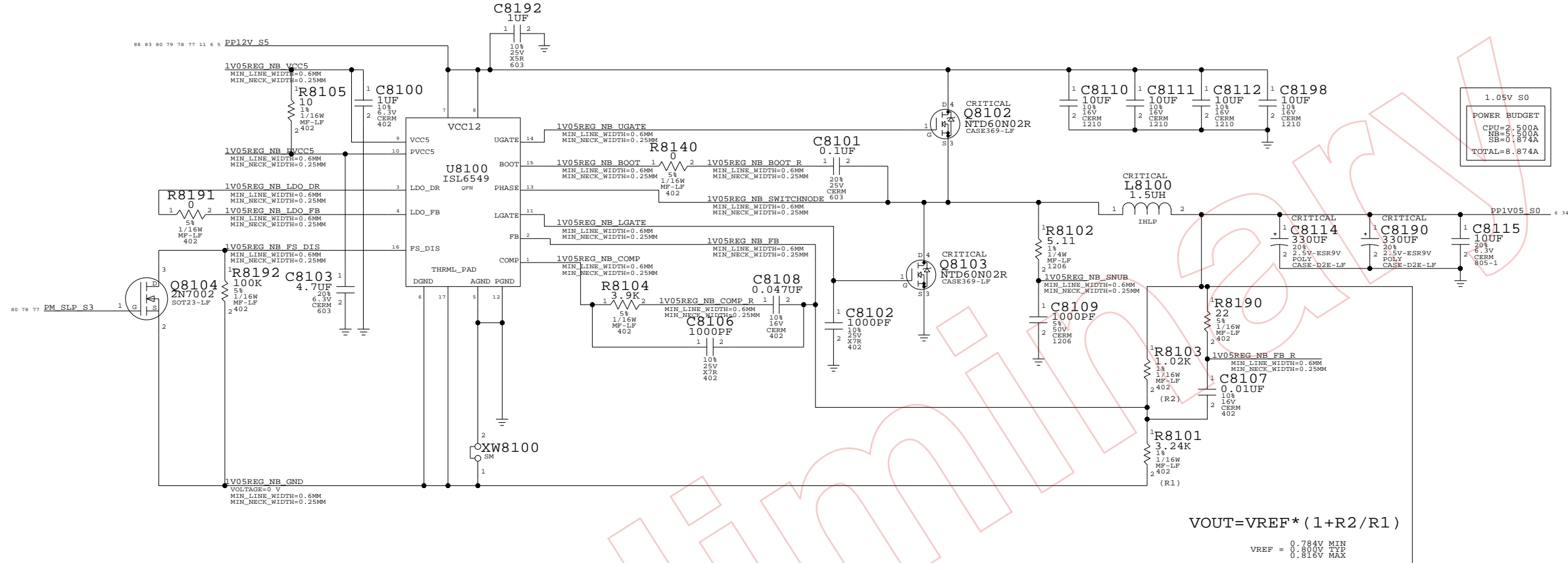
$V_{OUT} = V_{REF} * (1 + R2/R1)$   
 $V_{REF} = 0.784V \text{ MIN}$   
 $0.800V \text{ TYP}$   
 $0.816V \text{ MAX}$



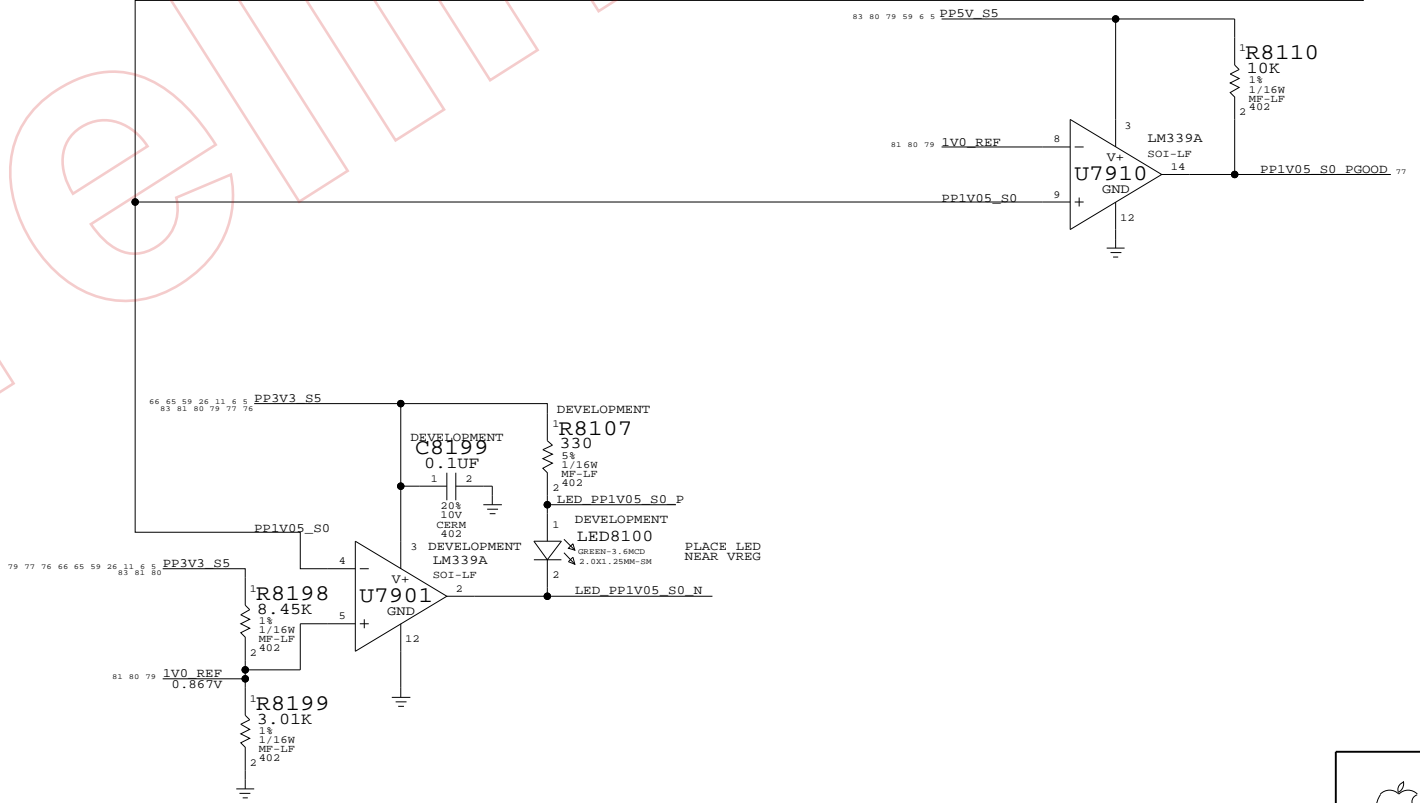
**1.5V Vreg**  
 SYNC\_MASTER=FINO-PC SYNC\_DATE=05/18/2005  
**NOTICE OF PROPRIETARY PROPERTY**  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	80 OF	110
NONE			

# 1.05V S0 REGULATOR

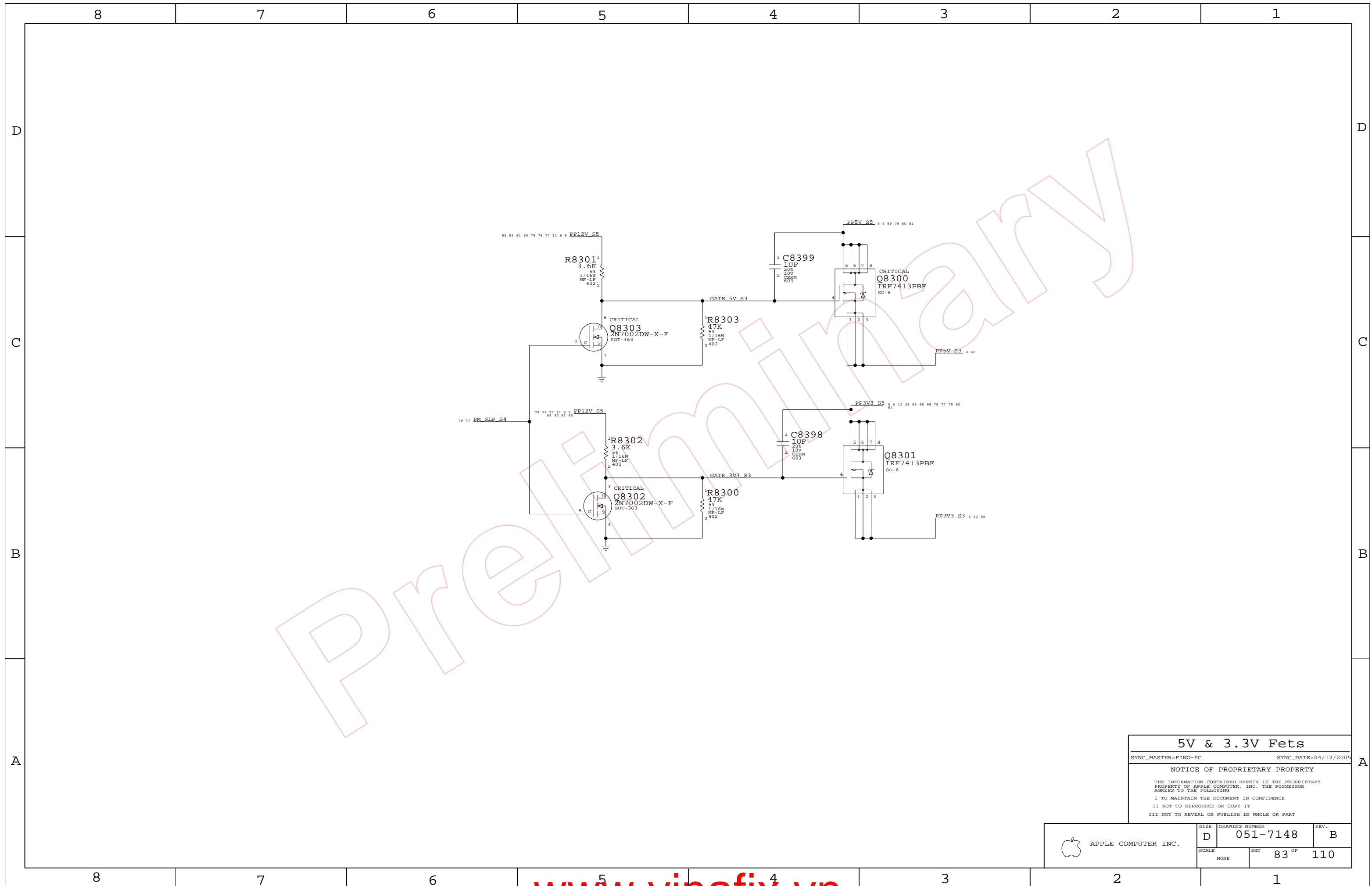


$V_{OUT} = V_{REF} * (1 + R2/R1)$   
 $V_{REF} = 0.784V \text{ MIN}$   
 $0.800V \text{ TYP}$   
 $0.816V \text{ MAX}$



1.05V VREG	
SYNC_MASTER=M38-RT	SYNC_DATE=05/18/2005
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	051-7148	B
SCALE	SHT	81 OF	110
NONE			



**5V & 3.3V Fets**

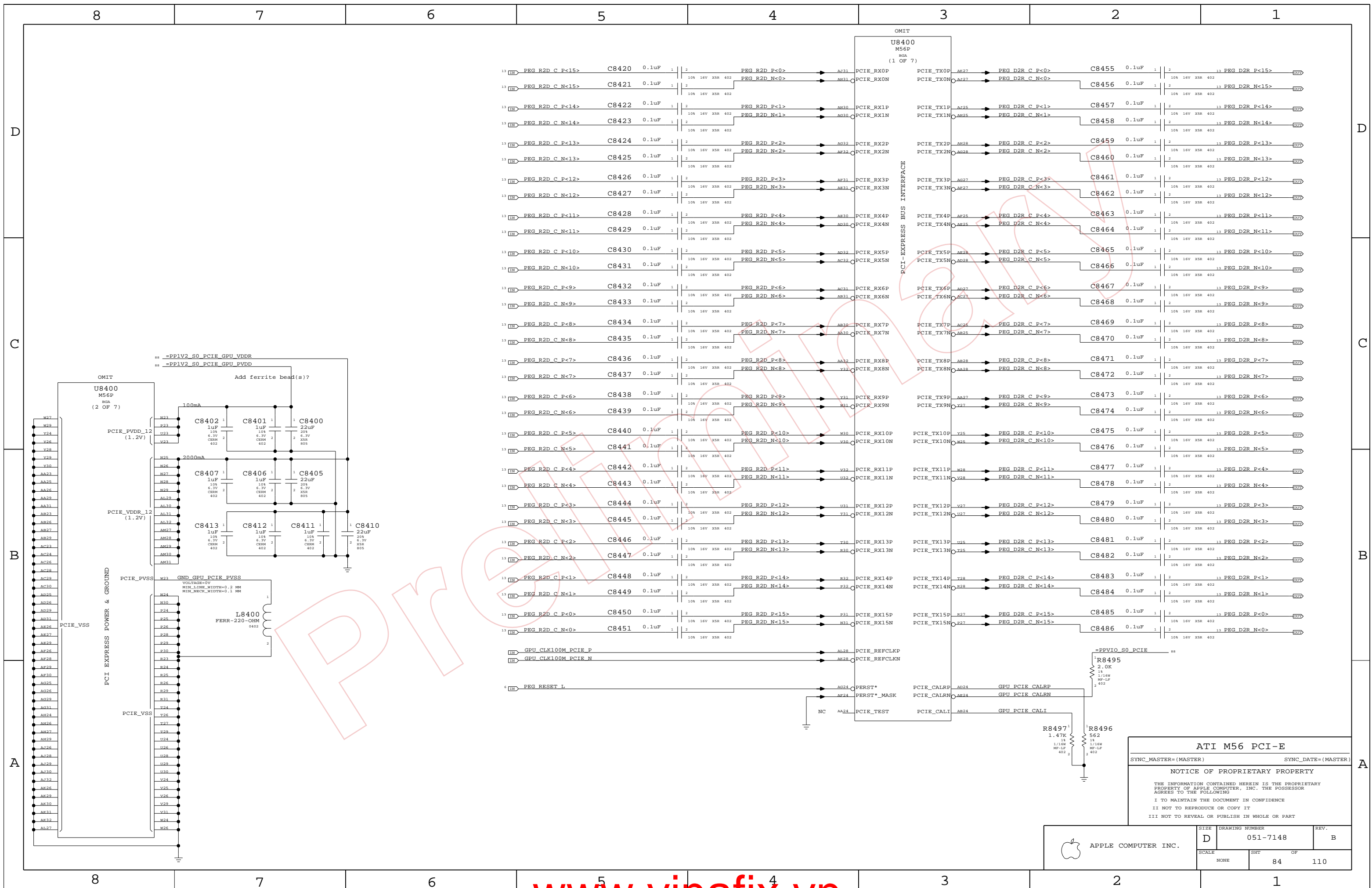
SYNC\_MASTER=FINO-PC SYNC\_DATE=04/12/2005

**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	051-7148	B
SCALE	SHT	83 OF 110	
NONE			





ATI M56 PCI-E

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

NOTICE OF PROPRIETARY PROPERTY

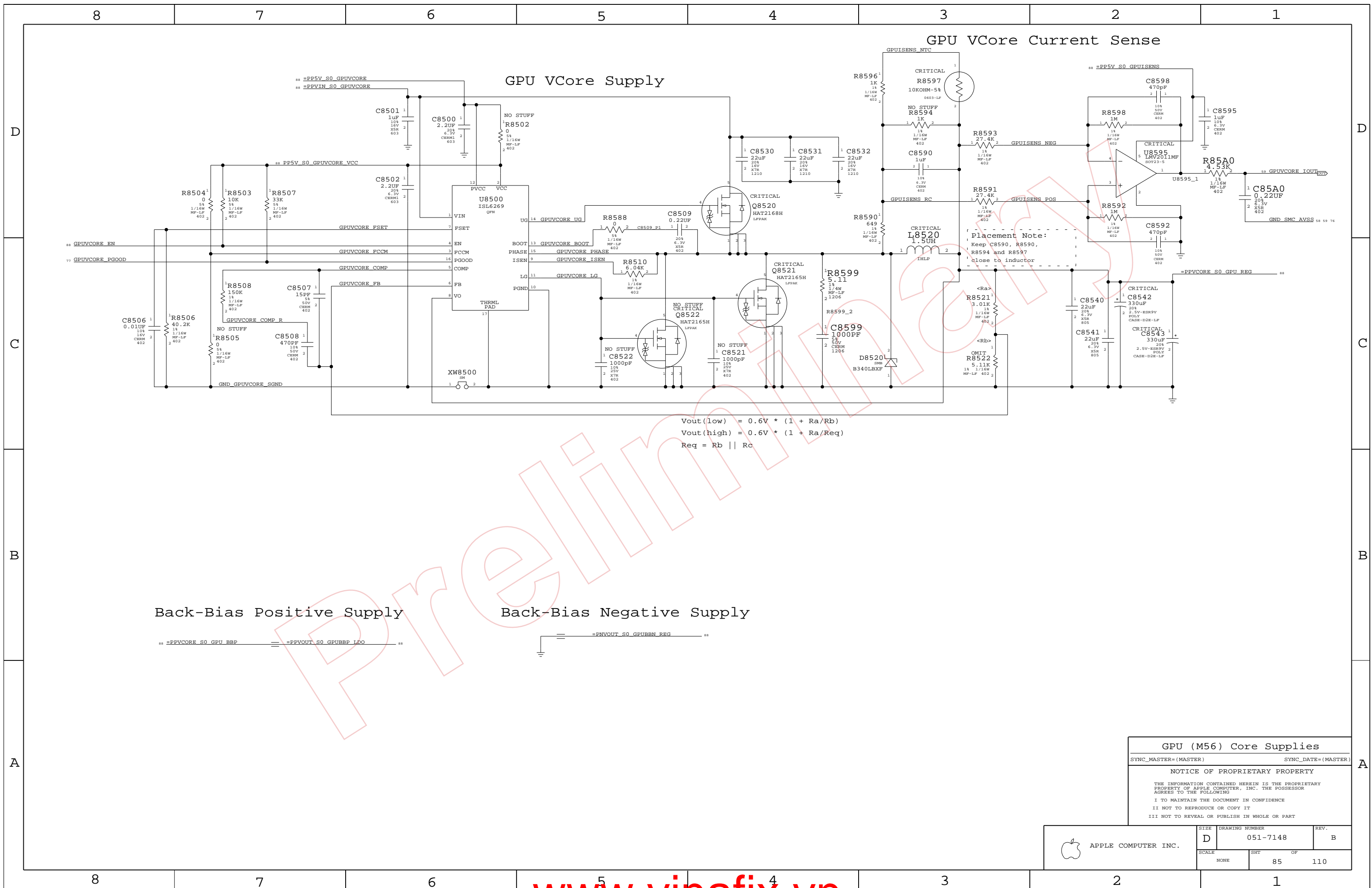
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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	051-7148	B
SCALE	SHT	OF	
NONE	84	110	



GPU VCore Current Sense

GPU VCore Supply

Placement Note:  
 Keep C8590, R8590,  
 R8594 and R8597  
 close to inductor

$$V_{out(low)} = 0.6V * (1 + R_a/R_b)$$

$$V_{out(high)} = 0.6V * (1 + R_a/R_{eq})$$

$$R_{eq} = R_b || R_c$$

Back-Bias Positive Supply

Back-Bias Negative Supply

GPU (M56) Core Supplies  
 SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)  
 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

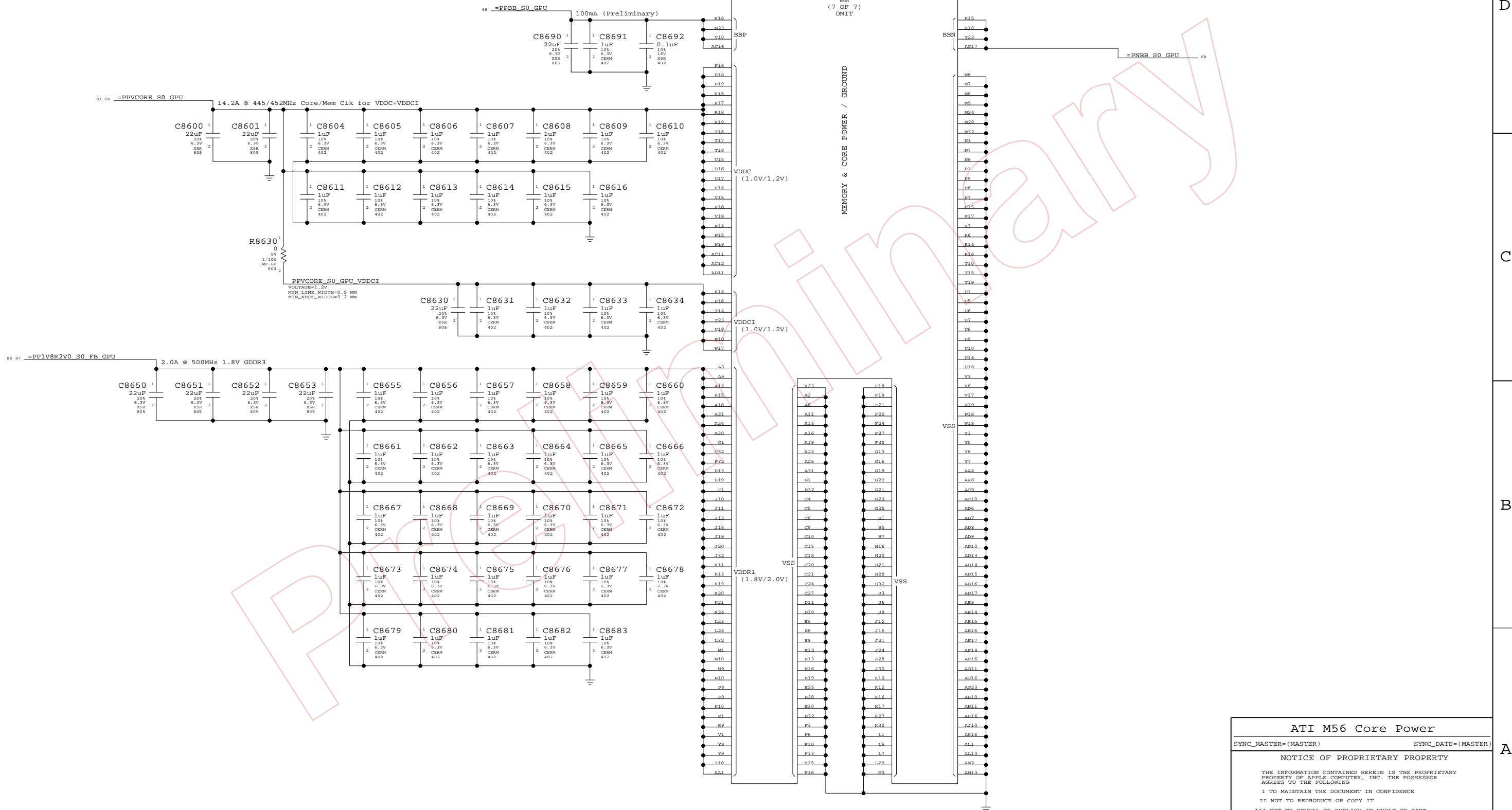
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	OF	
NONE	85	110	

Page Notes

Power aliases required by this page:  
 - =PP1V5\_GPU\_VDD15  
 - =PP1VR1V3\_GPU\_VCORE

Signal aliases required by this page:  
 (NONE)

BOM options provided by this page:  
 (NONE)

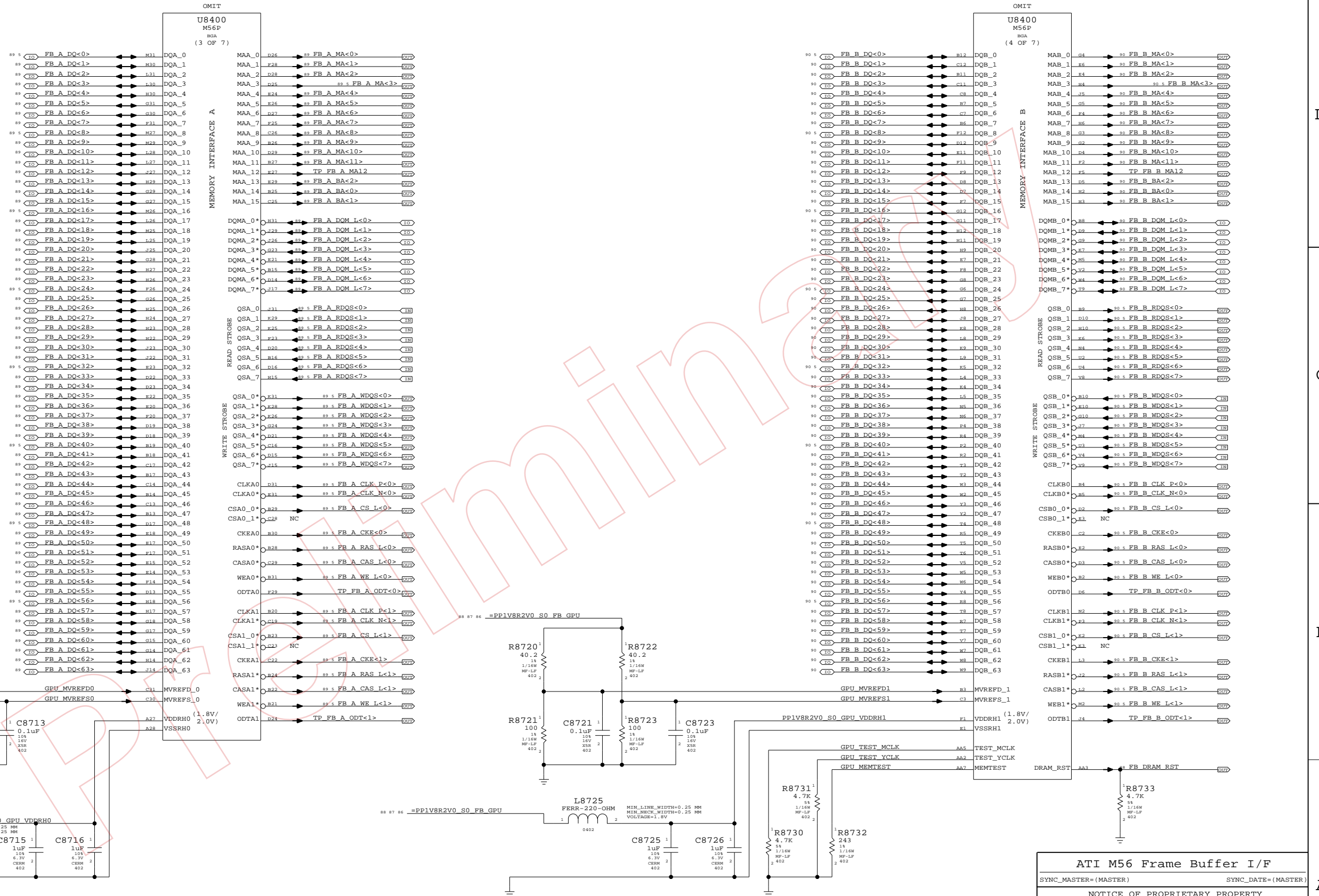


ATI M56 Core Power  
 SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)  
 NOTICE OF PROPRIETARY PROPERTY  
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING  
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	NONE	SHT OF	86 110

Page Notes

Power aliases required by this page:
- =PP1V8R2V0\_S0\_FB\_GPU
Signal aliases required by this page:
(NONE)
BOM options provided by this page:
(NONE)



ATI M56 Frame Buffer I/F

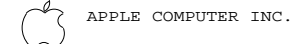
SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

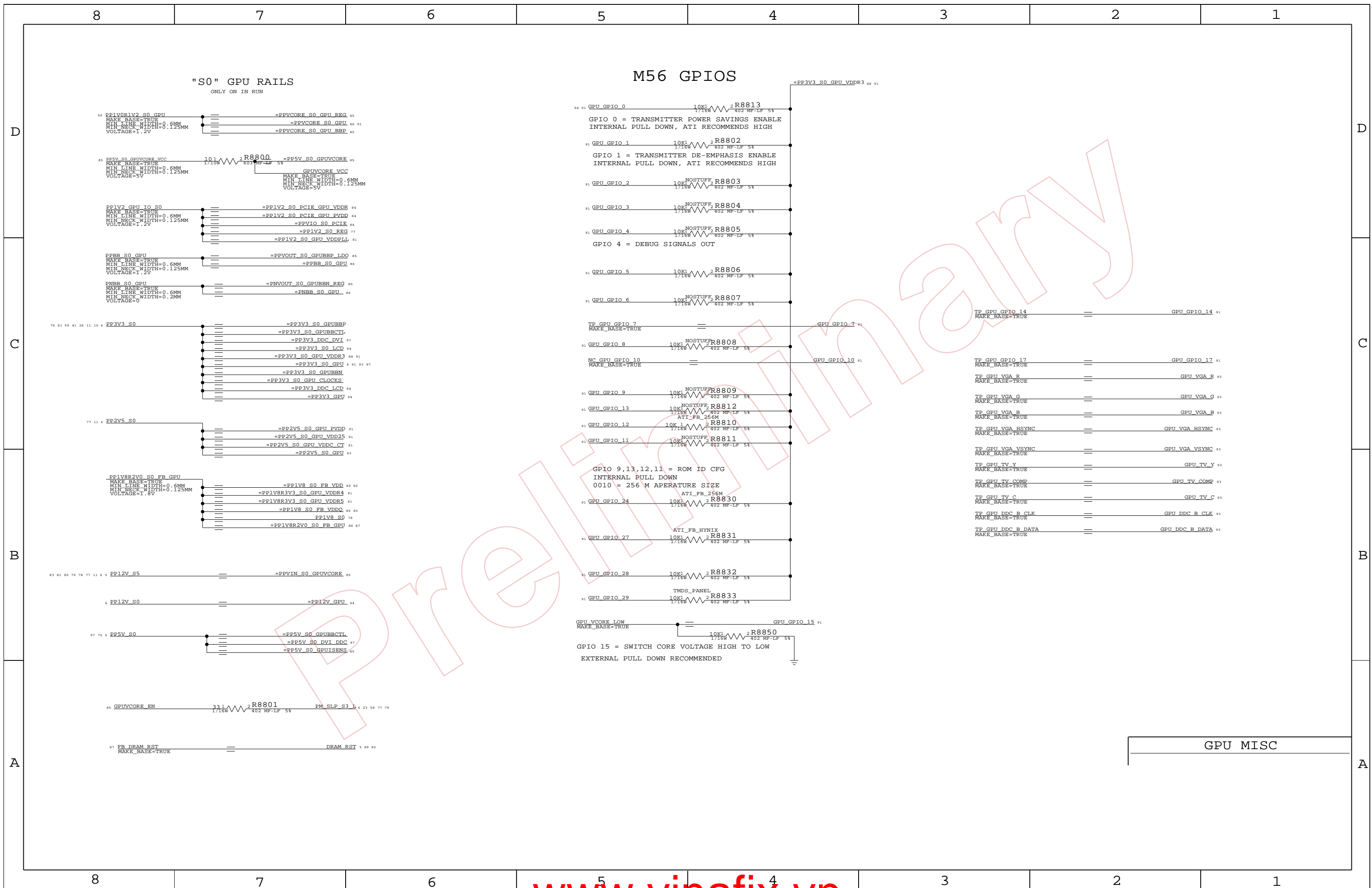
NOTICE OF PROPRIETARY PROPERTY

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

Table with columns: SIZE (D), DRAWING NUMBER (051-7148), REV. (B), SCALE (NONE), SHEET (87 OF 110).





"S0" GPU RAILS  
ONLY ON IN RUN

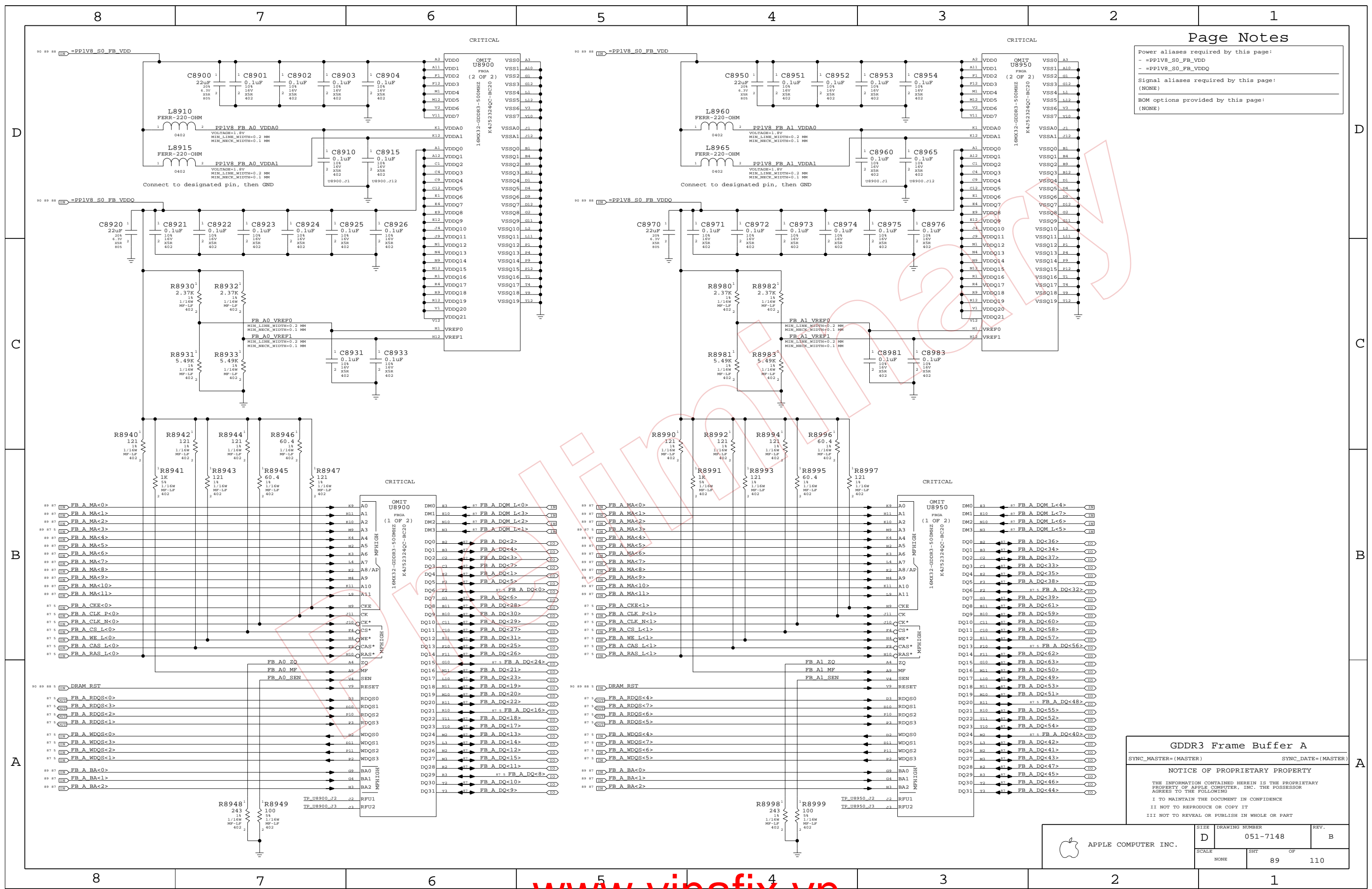
M56 GPIOs

GPU MISC

Power aliases required by this page:  
 - =PPIV8\_S0\_FB\_VDD  
 - =PPIV8\_S0\_FB\_VDDQ

Signal aliases required by this page:  
 (NONE)

BOM options provided by this page:  
 (NONE)



**GDDR3 Frame Buffer A**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

**NOTICE OF PROPRIETARY PROPERTY**

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

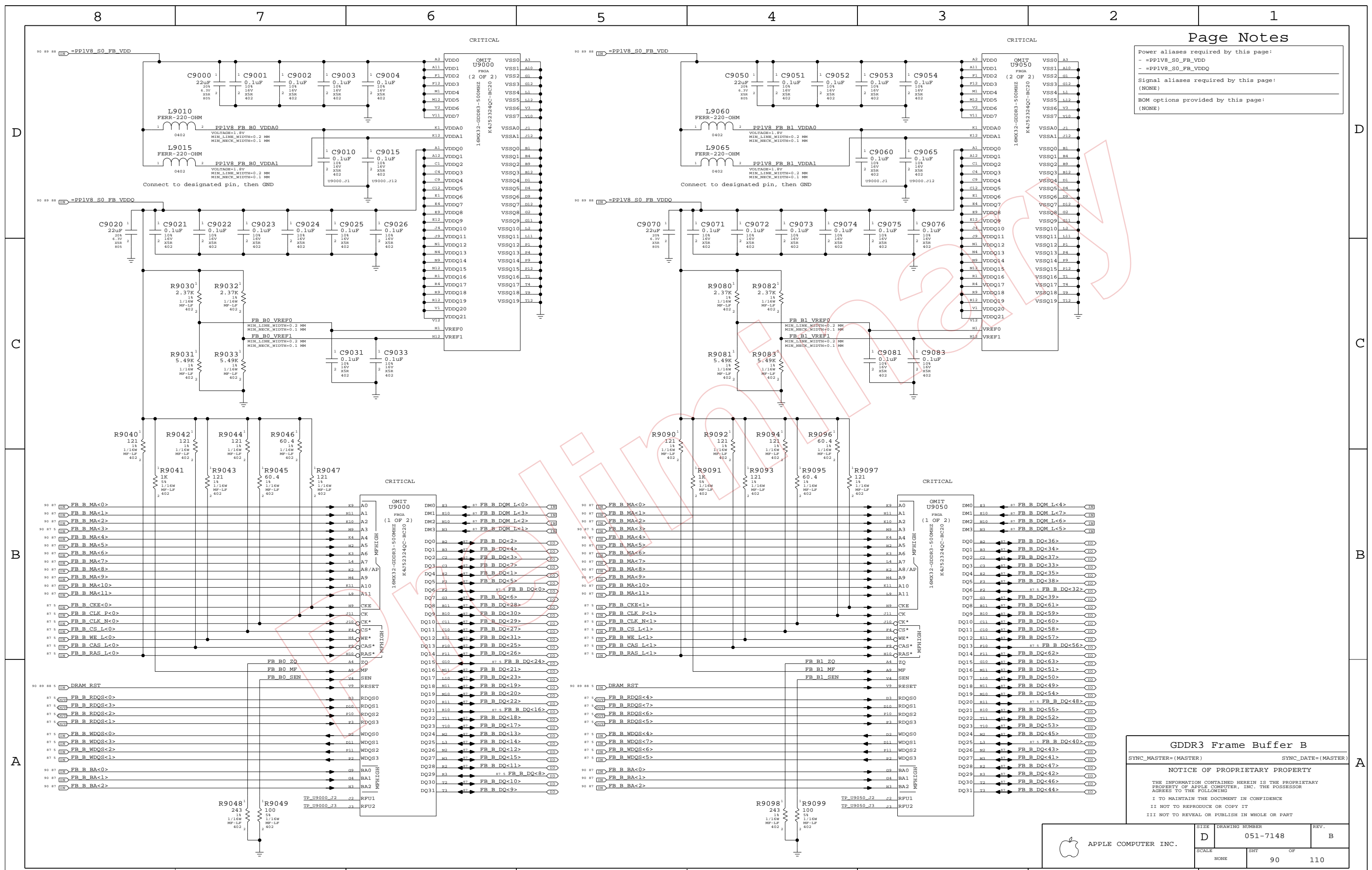
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
 II NOT TO REPRODUCE OR COPY IT  
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

SCALE	SIZE	DRAWING NUMBER	REV.
	NONE	D 051-7148	B
NONE		SHT	OF
NONE		89	110

Power aliases required by this page:  
 - =PPIV8\_S0\_FB\_VDD  
 - =PPIV8\_S0\_FB\_VDDQ

Signal aliases required by this page:  
 (NONE)

BOM options provided by this page:  
 (NONE)



**GDDR3 Frame Buffer B**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

**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

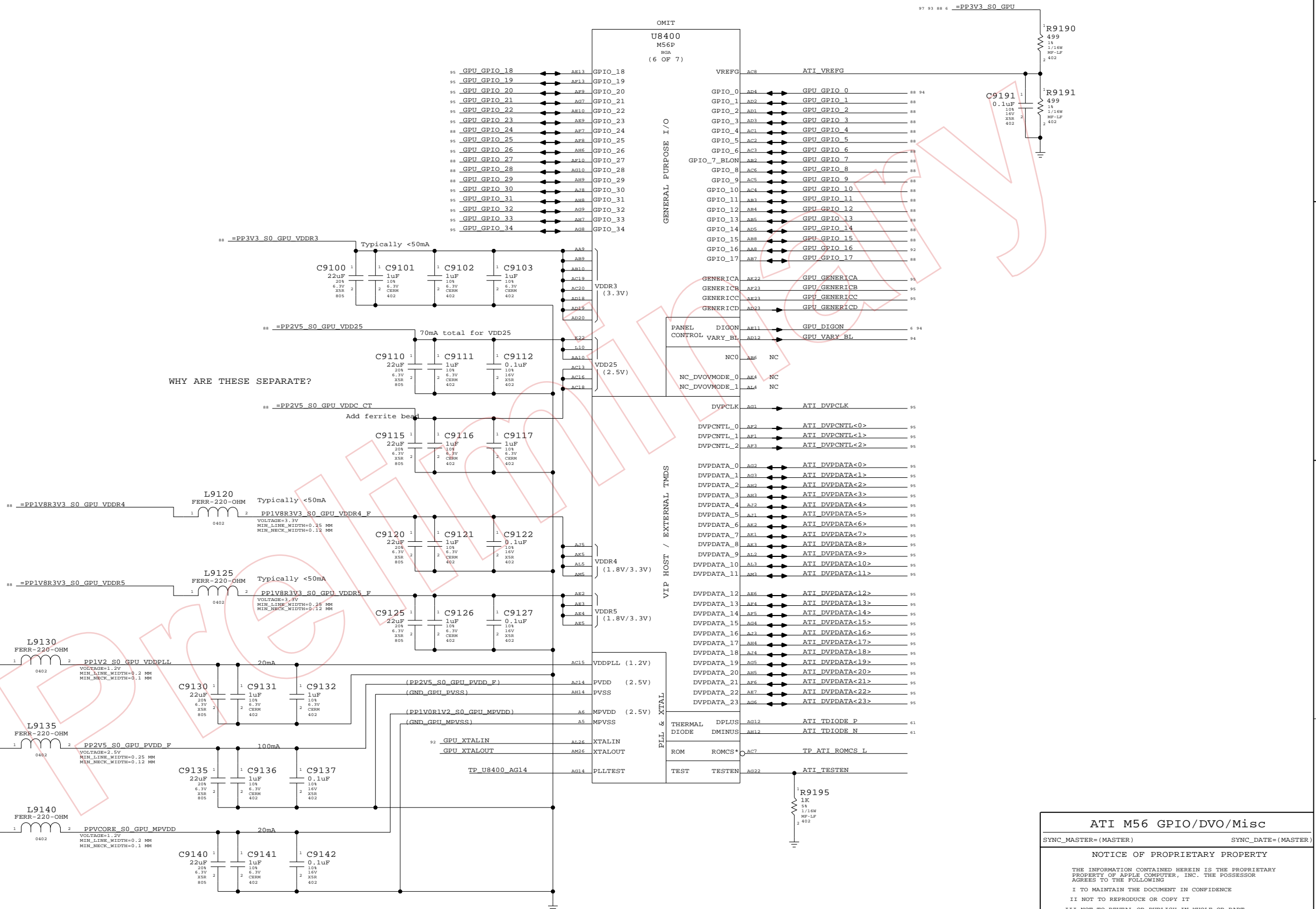
	SIZE	DRAWING NUMBER	REV.
	D	051-7148	B
SCALE	SHT	OF	
NONE	90	110	

### Page Notes

Power aliases required by this page:  
 - =PP3V3\_GPU\_GPIOS  
 - =PP2V5\_PVDD  
 - =PP1V8\_GPU\_LVDS\_PLL

Signal aliases required by this page:  
 - =I2C\_GPU\_TMDS\_SDA - I2C data line for external TMDS transmitters  
 - =I2C\_GPU\_TMDS\_SCL - I2C clock line for external TMDS transmitters

BOM options provided by this page:  
 (NONE)



**ATI M56 GPIO/DVO/Misc**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

**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	051-7148	B
SCALE	SHT	OF	
NONE	91	110	



8

7

6

5

4

3

2

1

### Page Notes

Power aliases required by this page:

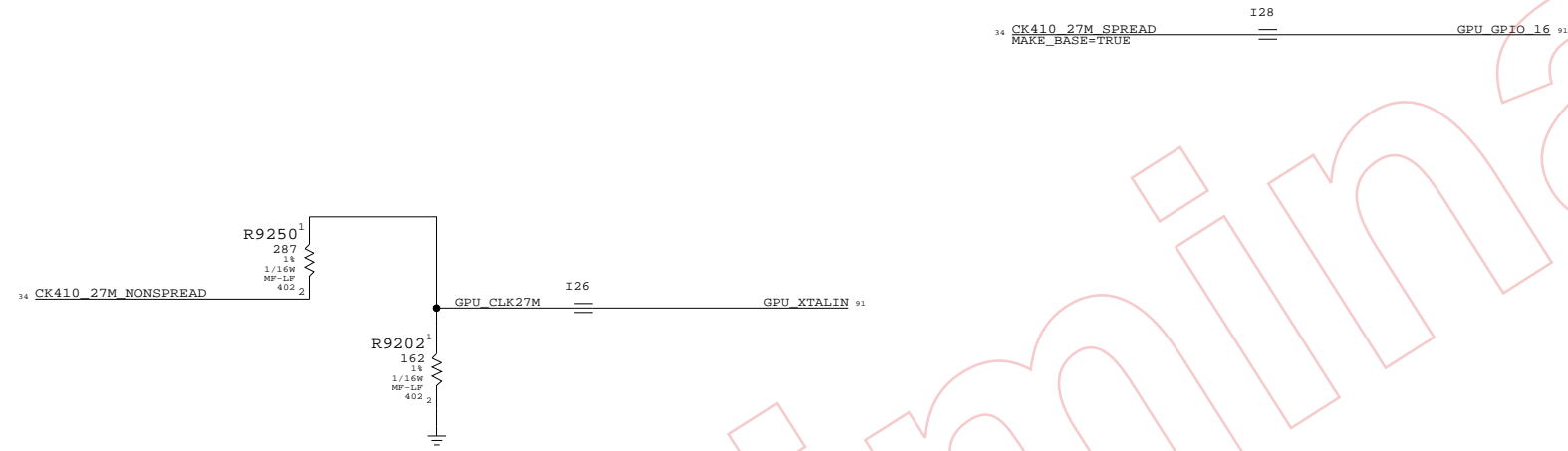
- =PP3V3\_GPU\_CLOCKS      - =PP3V3\_GPU\_PWRSEQ
- =PPVIN\_GPU\_LVDDR\_LDO    - =PP2V5\_GPU\_PWRSEQ
- =PP2V5\_GPU\_LVDDR\_LDO    - =PP1V8\_GPU\_PWRSEQ
- =PP1V5\_GPU\_PWRSEQ

Signal aliases required by this page:

(NONE)

BOM options provided by this page:

- GPU\_SS                      - GPU\_LVDDR\_2V8



Preliminary

### GPU CLOCKS

SYNC\_MASTER=BOZEMAN      SYNC\_DATE=05/21/2005

#### 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	051-7148	B
SCALE	SHT	OF	
NONE	92	110	

8

7

6

5

4

3

2

1

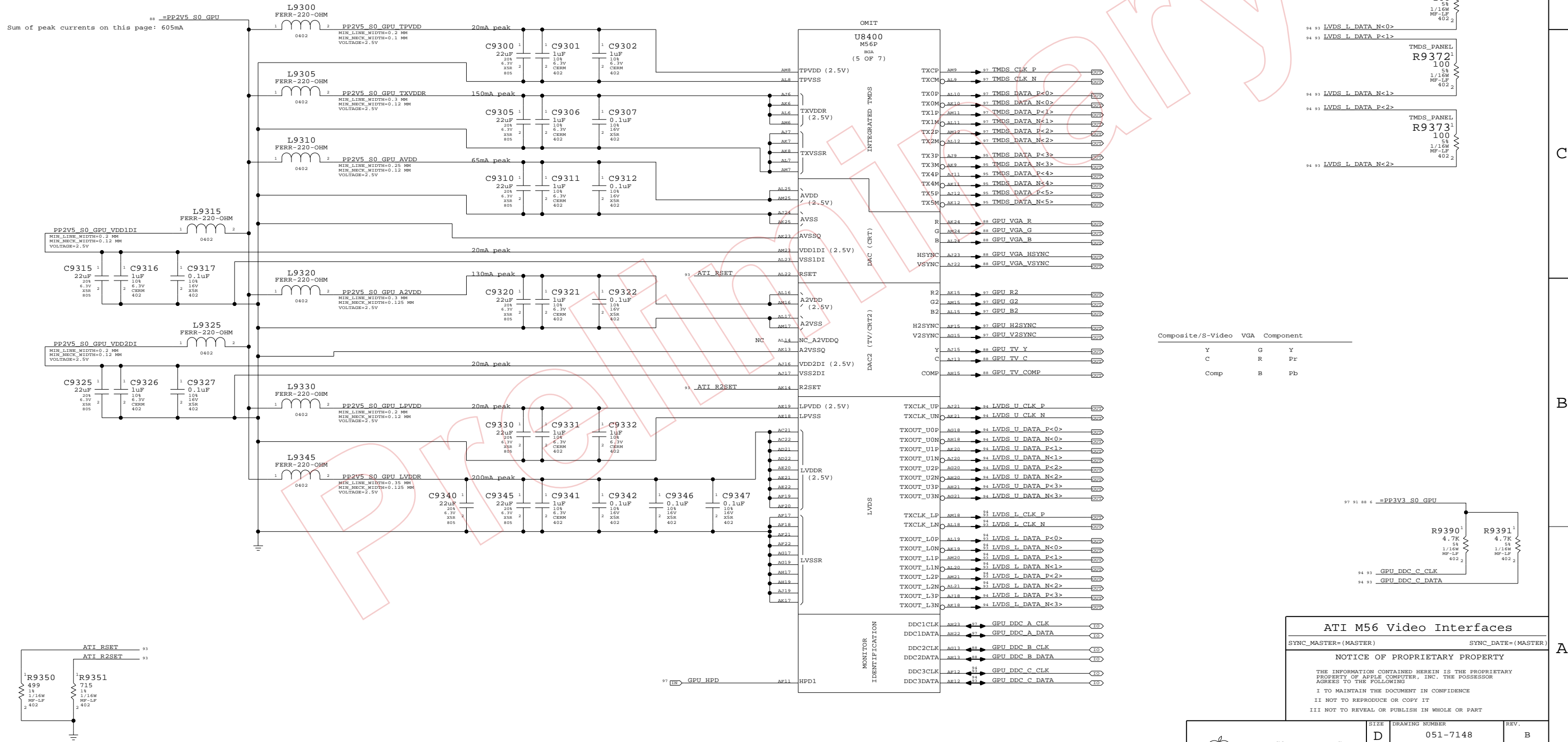
Page Notes

Power aliases required by this page:  
 - =PP2V5\_S0\_GPU  
 - =PP1V8R2V5\_S0\_GPU\_LVDDR

Signal aliases required by this page:  
 (NONE)

BOM options provided by this page:  
 (NONE)

TERMINATION FOR TMDS USAGE OF LVDS PINS  
 PLACE CLOSE TO GPU (U8400)



Composite/S-Video	VGA	Component
Y	G	Y
C	R	Pr
Comp	B	Pb

ATI M56 Video Interfaces

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

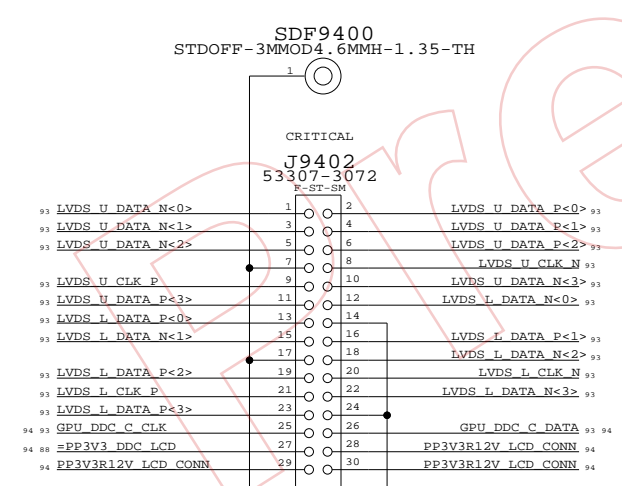
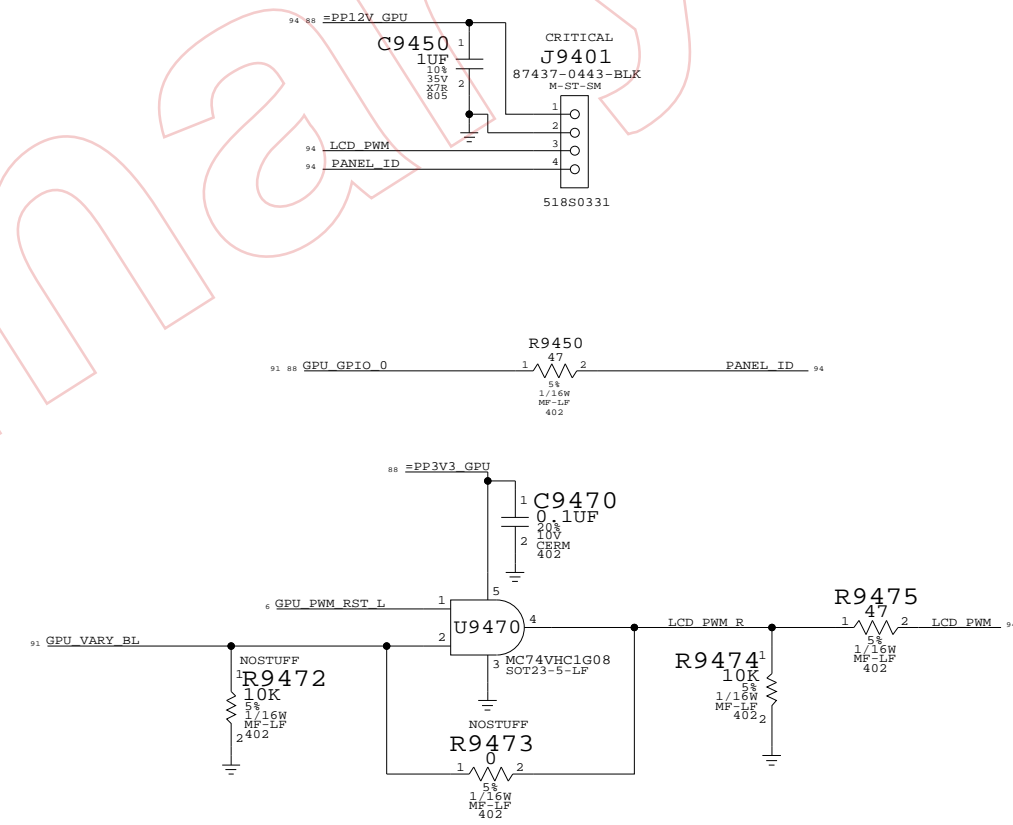
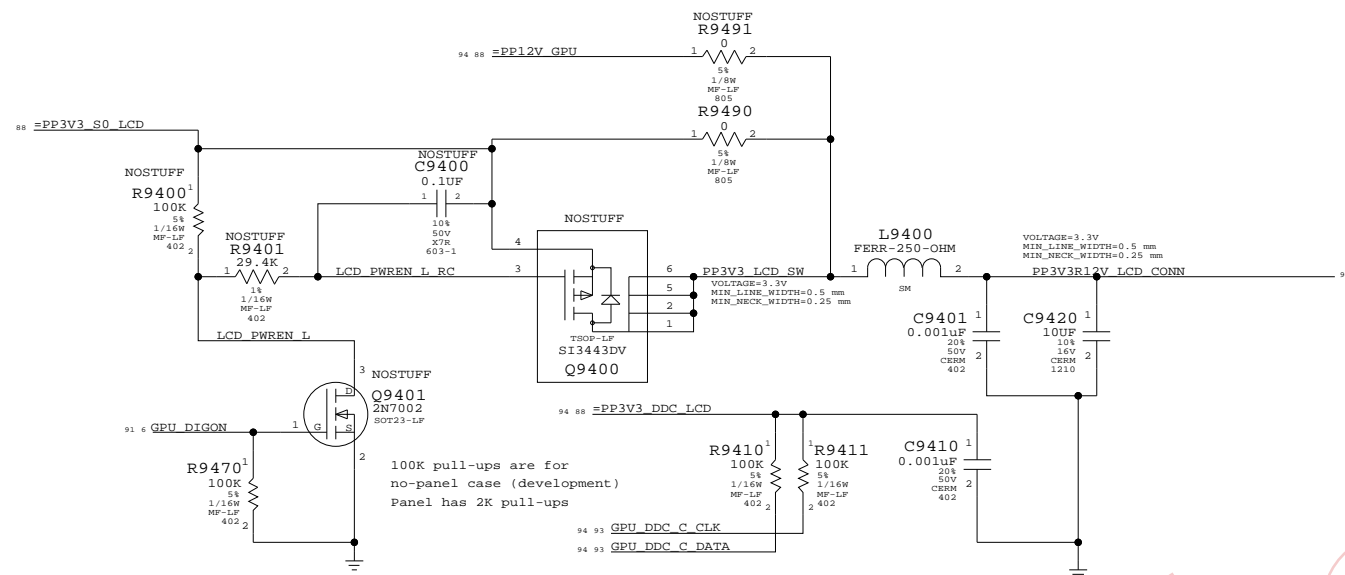
NOTICE OF PROPRIETARY PROPERTY

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.	SCALE	SHT	OF	REV.
	NONE	93	110	B

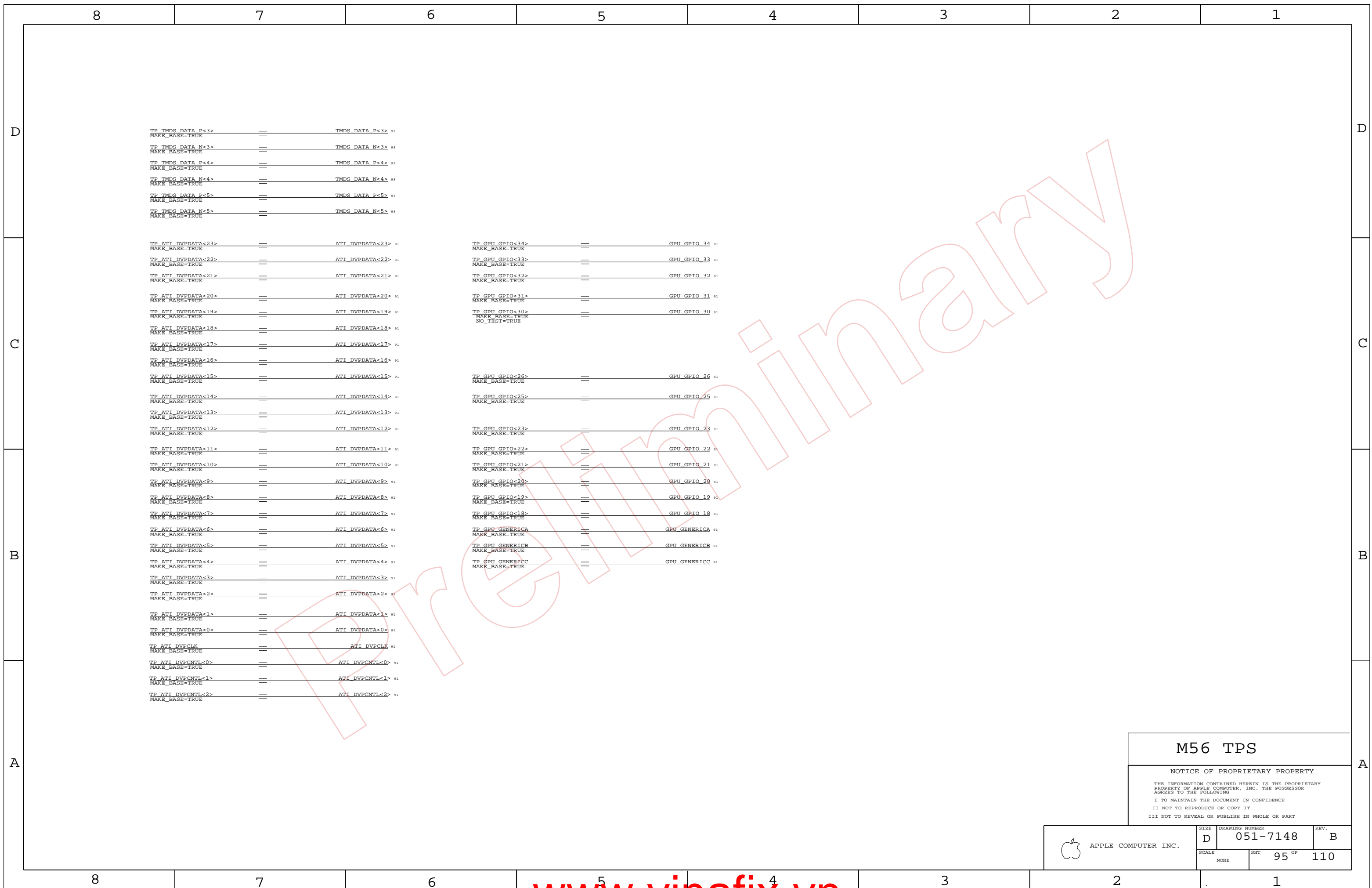
# LCD (LVDS) INTERFACE

# INVERTER INTERFACE



**Internal Display Conns**  
 SYNC\_MASTER=BOZEMAN SYNC\_DATE=04/27/2005  
**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	051-7148	B
SCALE	SHT	OF	
NONE	94	110	



**M56 TPS**

NOTICE OF PROPRIETARY PROPERTY

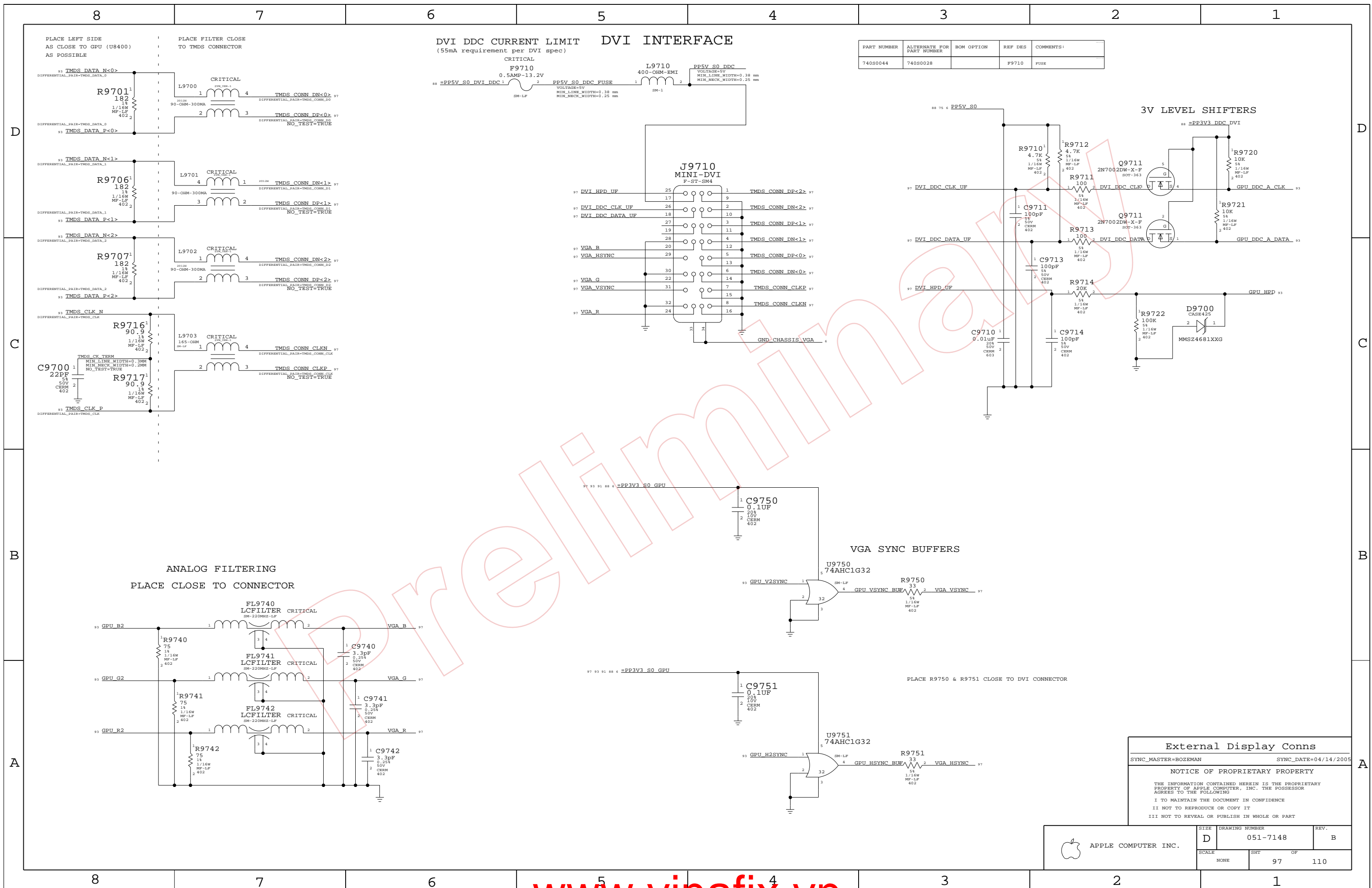
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

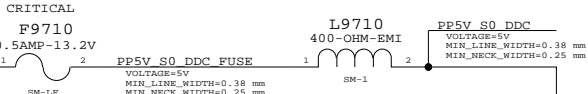
APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER <b>051-7148</b>	REV. <b>B</b>
	SCALE NONE	SHT 95 OF	110



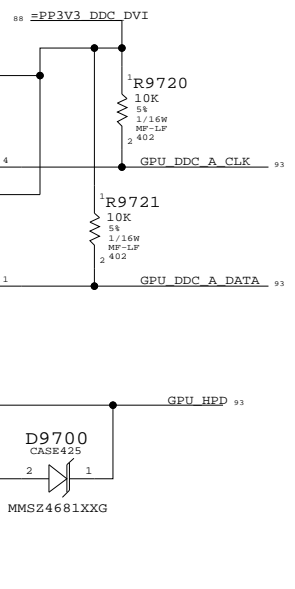
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
740S0044	740S0028		F9710	FUSE

**DVI DDC CURRENT LIMIT DVI INTERFACE**

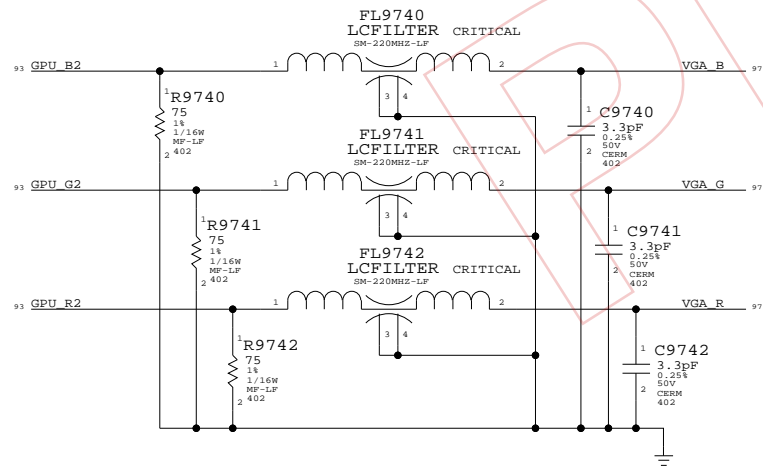
(55mA requirement per DVI spec)



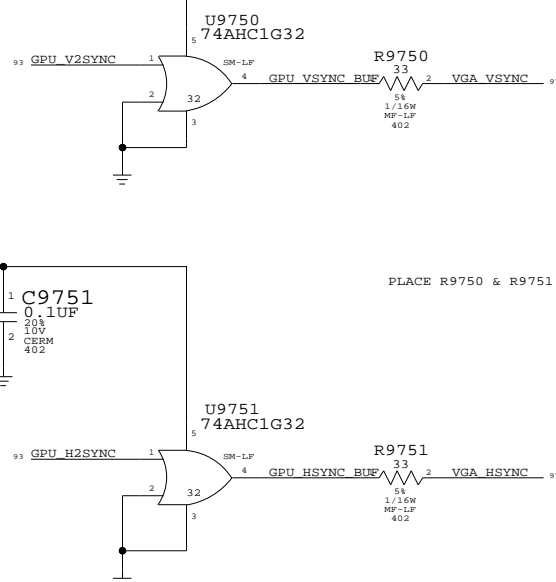
**3V LEVEL SHIFTERS**



**ANALOG FILTERING**  
PLACE CLOSE TO CONNECTOR



**VGA SYNC BUFFERS**



**External Display Conns**

SYNC\_MASTER=BOZEMAN SYNC\_DATE=04/14/2005

**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	051-7148	B
SCALE	SHT	OF	
NONE	97	110	















8			7			6			5			4			3			2			1		
Title: Cref Part Report Design: m38a Date: Jun 21 19:41:15 2006			C2503 CAP_402 m38a[25D8] C2504 CAP_402 m38a[25C8] C2505 CAP_402 m38a[25B7] C2506 CAP_402 m38a[25B7] C2507 CAP_402 m38a[25B7] C2508 CAP_402 m38a[25A6] C2509 CAP_402 m38a[25B8] C2510 CAP_402 m38a[25C1] C2511 CAP_402 m38a[25D6] C2512 CAP_402 m38a[25B1] C2513 CAP_402 m38a[25C6] C2514 CAP_402 m38a[25C6] C2515 CAP_402 m38a[25B6] C2516 CAP_P_CASE-C2 m38a[25D3] C2517 CAP_402 m38a[25D6] C2518 CAP_402 m38a[25D4] C2519 CAP_402 m38a[25D3] C2520 CAP_402 m38a[25B6] C2521 CAP_402 m38a[25C3] C2522 CAP_402 m38a[25B3] C2523 CAP_402 m38a[25B4] C2524 CAP_603 m38a[25B3] C2525 CAP_402 m38a[25B3] C2526 CAP_402 m38a[25A4] C2527 CAP_402 m38a[25A3] C2528 CAP_402 m38a[25A3] C2529 CAP_402 m38a[25A3] C2530 CAP_402 m38a[25A3] C2531 CAP_402 m38a[25D1] C2532 CAP_402 m38a[25C1] C2533 CAP_402 m38a[25C1] C2534 CAP_402 m38a[25D1] C2605 CAP_402 m38a[26C7] C2607 CAP_402 m38a[26D5] C2608 CAP_402 m38a[26D8] C2609 CAP_402 m38a[26C7] C2610 CAP_402 m38a[26C7] C2611 CAP_402 m38a[26B7] C2698 CAP_402 m38a[26C4] C2699 CAP_402 m38a[26C5] C2800 CAP_402 m38a[28D6] C2801 CAP_603 m38a[28B2] C2802 CAP_603 m38a[28B2] C2803 CAP_603 m38a[28B1] C2804 CAP_603 m38a[28B1] C2810 CAP_402 m38a[28B2] C2811 CAP_402 m38a[28B2] C2812 CAP_402 m38a[28B1] C2813 CAP_402 m38a[28B1] C2814 CAP_402 m38a[28B2] C2815 CAP_402 m38a[28B2] C2816 CAP_402 m38a[28B1] C2817 CAP_402 m38a[28B1] C2818 CAP_402 m38a[28B2] C2819 CAP_402 m38a[28B2] C2820 CAP_402 m38a[28B1] C2821 CAP_402 m38a[28B1] C2850 CAP_603 m38a[28D6] C2851 CAP_603 m38a[28A6] C2852 CAP_402 m38a[28A6] C2900 CAP_402 m38a[29D6] C2908 CAP_402 m38a[29B2] C2909 CAP_402 m38a[29B2] C2910 CAP_402 m38a[29B1] C2911 CAP_402 m38a[29B1] C2912 CAP_402 m38a[29B2] C2913 CAP_402 m38a[29B2] C2914 CAP_402 m38a[29B1] C2915 CAP_402 m38a[29B1] C2916 CAP_402 m38a[29B2] C2917 CAP_402 m38a[29B2] C2918 CAP_402 m38a[29B1] C2919 CAP_402 m38a[29B1] C2920 CAP_402 m38a[29B2] C2921 CAP_402 m38a[29B2] C2922 CAP_402 m38a[29B1] C2923 CAP_402 m38a[29B1] C2950 CAP_603 m38a[29D6] C2951 CAP_603 m38a[29A7] C2952 CAP_402 m38a[29A6] C3004 CAP_402 m38a[30B4] C3005 CAP_402 m38a[30D4] C3006 CAP_402 m38a[30B3] C3007 CAP_402 m38a[30D3] C3008 CAP_402 m38a[30A3] C3009 CAP_402 m38a[30A4] C3010 CAP_402 m38a[30D4] C3011 CAP_402 m38a[30D3] C3013 CAP_402 m38a[30A4] C3014 CAP_402 m38a[30A4] C3015 CAP_402 m38a[30A3] C3030 CAP_402 m38a[30C4] C3033 CAP_402 m38a[30C3] C3035 CAP_402 m38a[30C3] C3100 CAP_402 m38a[31C4] C3101 CAP_805-1 m38a[31B6] C3102 CAP_805-1 m38a[31B4] C3105 CAP_P_SMC-LF m38a[31B4] C3109 CAP_603 m38a[31C5] C3110 CAP_402 m38a[31B6] C3301 CAP_402 m38a[33D6] C3302 CAP_402 m38a[33D6] C3303 CAP_402 m38a[33D6] C3304 CAP_402 m38a[33D6] C3305 CAP_402 m38a[33D4] C3306 CAP_402 m38a[33D4] C3307 CAP_402 m38a[33C4] C3308 CAP_402 m38a[33D4] C3309 CAP_805-1 m38a[33D4] C3310 CAP_402 m38a[33D3] C3311 CAP_402 m38a[33C6] C3312 CAP_805-1 m38a[33C6] C3314 CAP_402 m38a[33D8] C3315 CAP_402 m38a[33D7] C3316 CAP_805-1 m38a[33D7] C3317 CAP_805-1 m38a[33D4] C3389 CAP_402 m38a[33C7] C3390 CAP_402 m38a[33C7] C3800 CAP_402 m38a[38B7] C3801 CAP_402 m38a[38B7] C3802 CAP_402 m38a[38B7] C3803 CAP_402 m38a[38B7] C3804 CAP_402 m38a[38C3] C3805 CAP_402 m38a[38C2]			C3806 CAP_805-2 m38a[38C1] C4101 CAP_402 m38a[41D7] C4102 CAP_402 m38a[41D7] C4103 CAP_402 m38a[41D6] C4104 CAP_402 m38a[41D6] C4105 CAP_402 m38a[41D5] C4106 CAP_402 m38a[41D2] C4107 CAP_402 m38a[41D2] C4110 CAP_402 m38a[41D4] C4111 CAP_402 m38a[41D4] C4112 CAP_402 m38a[41C4] C4113 CAP_402 m38a[41C4] C4115 CAP_402 m38a[41B5] C4116 CAP_402 m38a[41B5] C4117 CAP_402 m38a[41B2] C4118 CAP_402 m38a[41B2] C4126 CAP_402 m38a[41A8] C4127 CAP_402 m38a[41A8] C4128 CAP_402 m38a[41A8] C4129 CAP_402 m38a[41A8] C4130 CAP_402 m38a[41A7] C4131 CAP_402 m38a[41A7] C4132 CAP_402 m38a[41A7] C4133 CAP_402 m38a[41A6] C4134 CAP_402 m38a[41A6] C4135 CAP_402 m38a[41A5] C4136 CAP_402 m38a[41A5] C4137 CAP_402 m38a[41A5] C4138 CAP_402 m38a[41A4] C4139 CAP_402 m38a[41A4] C4140 CAP_402 m38a[41B3] C4150 CAP_402 m38a[41D5] C4200 CAP_1210 m38a[42D8] C4201 CAP_402 m38a[42D7] C4202 CAP_1210 m38a[42D7] C4203 CAP_1206-1 m38a[42D6] C4204 CAP_402 m38a[42D6] C4205 CAP_1210 m38a[42C5] C4206 CAP_402 m38a[42C5] C4209 CAP_603 m38a[42B7] C4210 CAP_402 m38a[42B6] C4300 CAP_402 m38a[43D7] C4301 CAP_402 m38a[43D6] C4304 CAP_402 m38a[43C6] C4305 CAP_402 m38a[43B6] C4401 CAP_402 m38a[44D1] C4402 CAP_402 m38a[44D1] C4410 CAP_402 m38a[44D6] C4412 CAP_402 m38a[44D1] C4500 CAP_402 m38a[45D4] C4501 CAP_402 m38a[45D3] C4502 CAP_402 m38a[45D3] C4503 CAP_805-1 m38a[45C6] C4504 CAP_402 m38a[45C4] C4505 CAP_402 m38a[45C5] C4506 CAP_402 m38a[45C5] C4507 CAP_402 m38a[45C5] C4508 CAP_402 m38a[45D5] C4509 CAP_402 m38a[45D5] C4510 CAP_402 m38a[45D5] C4515 CAP_805-1 m38a[45D6] C4520 CAP_402 m38a[45D5] C4521 CAP_402 m38a[45D4] C4522 CAP_402 m38a[45D3] C4523 CAP_402 m38a[45D3] C4529 CAP_603-1 m38a[46D5] C4610 CAP_402 m38a[46D4] C4611 CAP_402 m38a[46D4] C4612 CAP_402 m38a[46C4] C4613 CAP_402 m38a[46C4] C4615 CAP_603-1 m38a[46C2] C4616 CAP_402 m38a[46B2] C4620 CAP_402 m38a[46B4] C4621 CAP_402 m38a[46B4] C4622 CAP_402 m38a[46A4] C4623 CAP_402 m38a[46A4] C4625 CAP_603-1 m38a[46A2] C4626 CAP_402 m38a[46A2] C4650 CAP_402 m38a[46C7] C4654 CAP_402 m38a[46B8] C4660 CAP_402 m38a[46C7] C4664 CAP_402 m38a[46B7] C4700 CAP_805-1 m38a[47C8] C4710 CAP_402 m38a[47D6] C4712 CAP_402 m38a[47D5] C4713 CAP_402 m38a[47D4] C4720 CAP_P_B2 m38a[47C6] C4722 CAP_402 m38a[47C4] C4723 CAP_402 m38a[47C4] C4730 CAP_P_B2 m38a[47B5] C4732 CAP_402 m38a[47A4] C4733 CAP_402 m38a[47A4] C4742 CAP_402 m38a[47D1] C4743 CAP_402 m38a[47D1] C4750 CAP_402 m38a[47D6] C4751 CAP_402 m38a[47C6] C4752 CAP_402 m38a[47D6] C4796 CAP_402 m38a[47C7] C4797 CAP_805-2 m38a[47D2] C4798 CAP_402 m38a[47B2] C4799 CAP_805-2 m38a[47B2] C5300 CAP_402 m38a[53B7] C5301 CAP_402 m38a[53B7] C5304 CAP_402 m38a[53D5] C5305 CAP_402 m38a[53D5] C5306 CAP_402 m38a[53D4] C5307 CAP_402 m38a[53C4] C5308 CAP_402 m38a[53C5] C5309 CAP_402 m38a[53C4] C5310 CAP_402 m38a[53C4] C5311 CAP_805-1 m38a[53C3] C5312 CAP_805-1 m38a[53D4] C5313 CAP_402 m38a[53C5] C5314 CAP_805-1 m38a[53C4] C5800 CAP_402 m38a[58B8] C5801 CAP_402 m38a[58B8] C5802 CAP_805 m38a[58D3] C5803 CAP_402 m38a[58D2] C5804 CAP_402 m38a[58D2] C5805 CAP_402 m38a[58D2] C5806 CAP_402 m38a[58D1] C5807 CAP_402 m38a[58D2] C5820 CAP_402 m38a[58C3] C5900 CAP_402 m38a[59D8]			C5901 CAP_402 m38a[59D8] C5902 CAP_402 m38a[59B7] C5903 CAP_402 m38a[59A8] C5919 CAP_402 m38a[59B4] C5940 CAP_402 m38a[59A4] C5941 CAP_402 m38a[59A3] C5942 CAP_805-1 m38a[59A3] C5943 CAP_402 m38a[59A5] C5951 CAP_402 m38a[59B6] C6000 CAP_402 m38a[60D4] C6001 CAP_402 m38a[60D4] C6002 CAP_402 m38a[60D4] C6003 CAP_402 m38a[60D4] C6100 CAP_402 m38a[61B5] C6101 CAP_402 m38a[61B5] C6301 CAP_402 m38a[63C2] C6308 CAP_402 m38a[63C5] C6309 CAP_402 m38a[63C5] C6311 CAP_402 m38a[63C2] C6312 CAP_402 m38a[63D3] C6500 CAP_603 m38a[65D5] C6501 CAP_805 m38a[65D5] C6502 CAP_603 m38a[65B4] C6503 CAP_805 m38a[65B5] C6504 CAP_P_6_3X11-TH-LF1 m38a[65C4] C6505 CAP_P_6_3X11-TH-LF1 m38a[66B3] C6600 CAP_603 m38a[66D4] C6601 CAP_805 m38a[66C5] C6602 CAP_P_SM-LF m38a[66C3] C6650 CAP_402 m38a[66B5] C6651 CAP_402 m38a[66A5] C6652 CAP_402 m38a[66B3] C6653 CAP_402 m38a[66A3] C6654 CAP_402 m38a[66B4] C6655 CAP_402 m38a[66B2] C6700 CAP_402 m38a[67C4] C6701 CAP_402 m38a[67C4] C6702 CAP_402 m38a[67C3] C6703 CAP_402 m38a[67C3] C6704 CAP_402 m38a[67C3] C6705 CAP_402 m38a[59B7] C6800 CAP_603 m38a[68D6] C6801 CAP_402 m38a[68D6] C6802 CAP_P_6_3X5.5-SM m38a[68D4] C6803 CAP_P_6_3X5.5-SM m38a[68D3] C6804 CAP_P_SMA-LF m38a[68B4] C6805 CAP_805 m38a[68B3] C6806 CAP_805 m38a[68B3] C6807 CAP_P_SMA-LF m38a[68B3] C6810 CAP_P_SMA-LF m38a[68B3] C6812 CAP_402 m38a[68B4] C6813 CAP_402 m38a[68B3] C6821 CAP_402 m38a[68C6] C6822 CAP_603 m38a[68A5] C6823 CAP_402 m38a[68A4] C6825 CAP_402 m38a[68A3] C6826 CAP_603 m38a[68D2] C6830 CAP_402 m38a[68D4] C6833 CAP_402 m38a[68B3] C6835 CAP_402 m38a[68D6] C6836 CAP_402 m38a[68D3] C7200 CAP_P_6_3X8-SM m38a[72D5] C7201 CAP_1210 m38a[72D5] C7202 CAP_805 m38a[72D4] C7203 CAP_1210 m38a[72D3] C7204 CAP_805 m38a[72D6] C7205 CAP_805 m38a[72C6] C7206 CAP_805 m38a[72C6] C7207 CAP_805 m38a[72C6] C7208 CAP_603-1 m38a[72C4] C7209 CAP_805 m38a[72B4] C7210 CAP_402 m38a[72B3] C7211 CAP_402 m38a[72B2] C7212 CAP_402 m38a[72B2] C7213 CAP_402 m38a[72B2] C7214 CAP_603 m38a[72B5] C7215 CAP_402 m38a[72C6] C7216 CAP_402 m38a[72C6] C7217 CAP_P_6_3X8-SM m38a[72D6] C7218 CAP_603 m38a[72D5] C7219 CAP_603 m38a[72D4] C7221 CAP_402 m38a[72B7] C7223 CAP_1210 m38a[72D3] C7317 CAP_402 m38a[73B4] C7318 CAP_805-1 m38a[73B4] C7319 CAP_402 m38a[73C7] C7400 CAP_402 m38a[74A4] C7401 CAP_402 m38a[74D5] C7402 CAP_402 m38a[74A4] C7403 CAP_P_6_3X5.5-SM m38a[74B7] C7404 CAP_P_6_3X5.5-SM m38a[74B6] C7405 CAP_P_SMA-LF m38a[74C7] C7406 CAP_P_SMA-LF m38a[74C6] C7407 CAP_402 m38a[74D8] C7408 CAP_402 m38a[74D7] C7415 CAP_402 m38a[74A8] C7416 CAP_402 m38a[74A8] C7417 CAP_402 m38a[74A8] C7418 CAP_805 m38a[74A5] C7419 CAP_603-1 m38a[74A4] C7424 CAP_402 m38a[74C3] C7435 CAP_P_6_3X8-SM m38a[74A3] C7500 CAP_402 m38a[75C4] C7501 CAP_P_TH-MCZ m38a[75C2] C7502 CAP_402 m38a[75B4] C7503 CAP_402 m38a[75C1] C7504 CAP_402 m38a[75B1] C7505 CAP_402 m38a[75C8] C7506 CAP_402 m38a[75B7] C7507 CAP_402 m38a[75B7] C7508 CAP_1210 m38a[75C2] C7509 CAP_1210 m38a[75D1] C7510 CAP_402 m38a[75C8] C7511 CAP_603 m38a[75B2] C7512 CAP_603 m38a[75C2] C7513 CAP_402 m38a[75B7] C7514 CAP_402 m38a[75B8] C7515 CAP_603 m38a[75C4] C7516 CAP_402 m38a[75B4] C7517 CAP_P_SM-3 m38a[75D2] C7518 CAP_P_SM-3 m38a[75D2] C7521 CAP_402 m38a[75A6] C7526 CAP_603 m38a[75D6] C7527 CAP_603 m38a[75C5]														

	8	7	6	5	4	3	2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
D	C7528 CAP_402 m38a[75B5]	C7529 CAP_402 m38a[75B5]	C7530 CAP_402 m38a[75D6]	C7531 CAP_402 m38a[75B5]	C7532 CAP_402 m38a[75B6]	C7533 CAP_402 m38a[75B6]	C7534 CAP_402 m38a[75B5]	C7535 CAP_603 m38a[75D5]	C7550 CAP_603 m38a[75D1]	C7551 CAP_603 m38a[75D1]	C7590 CAP_402 m38a[75C3]	C7592 CAP_402 m38a[75B3]	C7596 CAP_402 m38a[75D6]	C7597 CAP_1210 m38a[75D1]	C7598 CAP_1210 m38a[75D1]	C7599 CAP_402 m38a[76D6]	C7612 CAP_402 m38a[76B2]	C7633 CAP_402 m38a[76C7]	C7700 CAP_603 m38a[77D2]	C7703 CAP_402 m38a[77C2]	C7704 CAP_402 m38a[77C2]	C7706 CAP_402 m38a[77D2]	C7709 CAP_805 m38a[77D1]	C7710 CAP_402 m38a[77D5]	C7711 CAP_402 m38a[77D5]	C7712 CAP_402 m38a[77D4]	C7750 CAP_402 m38a[77A4]	C7751 CAP_805 m38a[77B5]	C7752 CAP_805 m38a[77B5]	C7753 CAP_402 m38a[77B6]	C7754 CAP_402 m38a[77B6]	C7755 CAP_805 m38a[77B4]	C7756 CAP_805 m38a[77B3]	C7757 CAP_402 m38a[77A7]	C7797 CAP_402 m38a[77B4]	C7798 CAP_603 m38a[77B7]	C7799 CAP_402 m38a[77A3]	C7800 CAP_1210 m38a[78C3]	C7801 CAP_P_SM-LF m38a[78C4]	C7802 CAP_603 m38a[78C6]	C7803 CAP_603 m38a[78B6]	C7804 CAP_402 m38a[78C6]	C7805 CAP_603 m38a[78C4]	C7806 CAP_805-1 m38a[78B2]	C7807 CAP_P_CASE-D2E-LF m38a[78B3]	C7809 CAP_402 m38a[78B3]	C7810 CAP_402 m38a[78B4]	C7811 CAP_402 m38a[78B5]	C7813 CAP_1206 m38a[78B4]	C7814 CAP_402 m38a[78B5]	C7817 CAP_P_CASE-D2E-LF m38a[78B2]	C7900 CAP_402 m38a[79D6]	C7901 CAP_603 m38a[79D5]	C7902 CAP_402 m38a[79C5]	C7903 CAP_603 m38a[79C7]	C7906 CAP_402 m38a[79C5]	C7907 CAP_402 m38a[79C3]	C7908 CAP_402 m38a[79C5]	C7909 CAP_1206 m38a[79C4]	C7910 CAP_P_SM-3 m38a[79D4]	C7911 CAP_1210 m38a[79D3]	C7912 CAP_P_CASE-D2E-LF m38a[79C3]	C7913 CAP_1206 m38a[79C2]	C7980 CAP_402 m38a[79B3]	C7992 CAP_603 m38a[79D6]	C7998 CAP_P_CASE-D2E-LF m38a[79C3]	C8000 CAP_1210 m38a[80D3]	C8001 CAP_P_CASE-D2E-LF m38a[80C3]	C8002 CAP_603 m38a[80D6]	C8003 CAP_402 m38a[80C3]	C8004 CAP_1206 m38a[80C4]	C8005 CAP_402 m38a[80C4]	C8006 CAP_402 m38a[80D6]	C8009 CAP_603 m38a[80C6]	C8010 CAP_603 m38a[80C4]	C8011 CAP_402 m38a[80C5]	C8012 CAP_402 m38a[80C5]	C8014 CAP_P_TH-MC2 m38a[80D4]	C8015 CAP_1210 m38a[80D3]	C8016 CAP_805-1 m38a[80C2]	C8099 CAP_P_CASE-D2E-LF m38a[80C2]	C8100 CAP_402 m38a[81D6]	C8101 CAP_603 m38a[81C5]	C8102 CAP_402 m38a[81C5]	C8103 CAP_603 m38a[81C7]	C8106 CAP_402 m38a[81C5]	C8107 CAP_402 m38a[81C3]	C8108 CAP_402 m38a[81C5]	C8109 CAP_1206 m38a[81C4]	C8110 CAP_1210 m38a[81D4]	C8111 CAP_1210 m38a[81D3]	C8112 CAP_1210 m38a[81D3]	C8114 CAP_P_CASE-D2E-LF m38a[81C3]	C8115 CAP_805-1 m38a[81C2]	C8190 CAP_P_CASE-D2E-LF m38a[81C3]	C8192 CAP_603 m38a[81D6]	C8198 CAP_1210 m38a[81D3]	C8199 CAP_402 m38a[81A5]	C8398 CAP_603 m38a[83B4]	C8399 CAP_603 m38a[83C4]	C8400 CAP_805 m38a[84C7]	C8401 CAP_402 m38a[84C7]	C8402 CAP_402 m38a[84C7]	C8405 CAP_805 m38a[84B7]	C8406 CAP_402 m38a[84B7]	C8407 CAP_402 m38a[84B7]	C8410 CAP_805 m38a[84B6]	C8411 CAP_402 m38a[84B7]	C8412 CAP_402 m38a[84B7]	C8413 CAP_402 m38a[84B7]	C8420 CAP_402 m38a[84D5]	C8421 CAP_402 m38a[84D5]	C8422 CAP_402 m38a[84D5]	C8423 CAP_402 m38a[84D5]	C8424 CAP_402 m38a[84D5]	C8425 CAP_402 m38a[84D5]	C8426 CAP_402 m38a[84D5]	C8427 CAP_402 m38a[84D5]	C8428 CAP_402 m38a[84D5]	C8429 CAP_402 m38a[84C5]	C8430 CAP_402 m38a[84C5]	C8431 CAP_402 m38a[84C5]	C8432 CAP_402 m38a[84C5]	C8433 CAP_402 m38a[84C5]	C8434 CAP_402 m38a[84C5]	C8435 CAP_402 m38a[84C5]	C8436 CAP_402 m38a[84C5]	C8437 CAP_402 m38a[84C5]	C8438 CAP_402 m38a[84C5]	C8439 CAP_402 m38a[84C5]	C8440 CAP_402 m38a[84B5]	C8441 CAP_402 m38a[84B5]	C8442 CAP_402 m38a[84B5]	C8443 CAP_402 m38a[84B5]	C8444 CAP_402 m38a[84B5]	C8445 CAP_402 m38a[84B5]	C8446 CAP_402 m38a[84B5]	C8447 CAP_402 m38a[84B5]	C8448 CAP_402 m38a[84B5]	C8449 CAP_402 m38a[84B5]	C8450 CAP_402 m38a[84B5]	C8451 CAP_402 m38a[84B5]	C8455 CAP_402 m38a[84D2]	C8456 CAP_402 m38a[84D2]	C8457 CAP_402 m38a[84D2]	C8458 CAP_402 m38a[84D2]	C8459 CAP_402 m38a[84D2]	C8460 CAP_402 m38a[84D2]	C8461 CAP_402 m38a[84D2]	C8462 CAP_402 m38a[84D2]	C8463 CAP_402 m38a[84D2]	C8464 CAP_402 m38a[84C2]	C8465 CAP_402 m38a[84C2]	C8466 CAP_402 m38a[84C2]	C8467 CAP_402 m38a[84C2]	C8468 CAP_402 m38a[84C2]	C8469 CAP_402 m38a[84C2]	C8470 CAP_402 m38a[84C2]	C8471 CAP_402 m38a[84C2]	C8472 CAP_402 m38a[84C2]	C8473 CAP_402 m38a[84C2]	C8474 CAP_402 m38a[84C2]	C8475 CAP_402 m38a[84B2]	C8476 CAP_402 m38a[84B2]	C8477 CAP_402 m38a[84B2]	C8478 CAP_402 m38a[84B2]	C8479 CAP_402 m38a[84B2]	C8480 CAP_402 m38a[84B2]	C8481 CAP_402 m38a[84B2]	C8482 CAP_402 m38a[84B2]	C8483 CAP_402 m38a[84B2]	C8484 CAP_402 m38a[84B2]	C8485 CAP_402 m38a[84B2]	C8486 CAP_402 m38a[84B2]	C8500 CAP_603 m38a[85D6]	C8501 CAP_603 m38a[85D6]	C8502 CAP_603 m38a[85D6]	C8506 CAP_402 m38a[85C8]	C8507 CAP_402 m38a[85C7]	C8508 CAP_402 m38a[85C7]	C8509 CAP_402 m38a[85C5]	C8521 CAP_402 m38a[85C4]	C8522 CAP_402 m38a[85C5]	C8530 CAP_1210 m38a[85D4]	C8531 CAP_1210 m38a[85D4]	C8532 CAP_1210 m38a[85D4]	C8540 CAP_805 m38a[85C2]	C8541 CAP_805 m38a[85C2]	C8542 CAP_P_CASE-D2E-LF m38a[85C2]	C8543 CAP_P_CASE-D2E-LF m38a[85C2]	C8590 CAP_402 m38a[85D3]	C8592 CAP_402 m38a[85C2]	C8595 CAP_402 m38a[85D1]	C8598 CAP_402 m38a[85D2]	C8599 CAP_1206 m38a[85C4]	C8600 CAP_805 m38a[86C7]	C8601 CAP_805 m38a[86C7]	C8604 CAP_402 m38a[86C7]	C8605 CAP_402 m38a[86C6]	C8606 CAP_402 m38a[86C6]	C8607 CAP_402 m38a[86C6]	C8608 CAP_402 m38a[86C5]	C8609 CAP_402 m38a[86C5]	C8610 CAP_402 m38a[86C5]	C8611 CAP_402 m38a[86C7]	C8612 CAP_402 m38a[86C6]	C8613 CAP_402 m38a[86C6]	C8614 CAP_402 m38a[86C6]	C8615 CAP_402 m38a[86C5]	C8616 CAP_402 m38a[86C5]	C8630 CAP_805 m38a[86C6]	C8631 CAP_402 m38a[86C6]	C8632 CAP_402 m38a[86C5]	C8633 CAP_402 m38a[86C5]	C8634 CAP_402 m38a[86C5]	C8650 CAP_805 m38a[86B7]	C8651 CAP_805 m38a[86B7]	C8652 CAP_805 m38a[86B7]	C8653 CAP_805 m38a[86B6]	C8655 CAP_402 m38a[86B6]	C8656 CAP_402 m38a[86B6]	C8657 CAP_402 m38a[86B6]	C8658 CAP_402 m38a[86B5]	C8659 CAP_402 m38a[86B5]	C8660 CAP_402 m38a[86B5]	C8661 CAP_402 m38a[86B6]	C8662 CAP_402 m38a[86B6]	C8663 CAP_402 m38a[86B6]	C8664 CAP_402 m38a[86B5]	C8665 CAP_402 m38a[86B5]	C8666 CAP_402 m38a[86B5]	C8667 CAP_402 m38a[86B5]	C8668 CAP_402 m38a[86B6]	C8669 CAP_402 m38a[86B6]	C8670 CAP_402 m38a[86B5]	C8671 CAP_402 m38a[86B5]	C8672 CAP_402 m38a[86B5]	C8673 CAP_402 m38a[86B6]	C8674 CAP_402 m38a[86B6]	C8675 CAP_402 m38a[86B6]	C8676 CAP_402 m38a[86B5]	C8677 CAP_402 m38a[86B5]	C8678 CAP_402 m38a[86B5]	C8679 CAP_402 m38a[86A6]	C8680 CAP_402 m38a[86A6]	C8681 CAP_402 m38a[86A6]	C8682 CAP_402 m38a[86A5]	C8683 CAP_402 m38a[86A5]	C8690 CAP_805 m38a[86D5]	C8691 CAP_402 m38a[86D5]	C8692 CAP_402 m38a[86D5]	C8711 CAP_402 m38a[87B7]	C8713 CAP_402 m38a[87B7]	C8715 CAP_402 m38a[87A7]	C8716 CAP_402 m38a[87A6]	C8721 CAP_402 m38a[87B4]	C8722 CAP_402 m38a[87B4]	C8725 CAP_402 m38a[87A4]	C8726 CAP_402 m38a[87A3]	C8900 CAP_805 m38a[89D7]	C8901 CAP_402 m38a[89D7]	C8902 CAP_402 m38a[89D7]	C8903 CAP_402 m38a[89D7]	C8904 CAP_402 m38a[89D6]	C8910 CAP_402 m38a[89D7]	C8915 CAP_402 m38a[89C8]	C8920 CAP_805 m38a[89C8]	C8921 CAP_402 m38a[89C8]	C8922 CAP_402 m38a[89C7]	C8923 CAP_402 m38a[89C7]	C8924 CAP_402 m38a[89C7]	C8925 CAP_402 m38a[89C7]	C8926 CAP_402 m38a[89C6]	C8931 CAP_402 m38a[89C7]	C8933 CAP_402 m38a[89C6]	C8950 CAP_805 m38a[89D4]	C8951 CAP_402 m38a[89D4]	C8952 CAP_402 m38a[89D4]	C8953 CAP_402 m38a[89D3]	C8954 CAP_402 m38a[89D3]	C8960 CAP_402 m38a[89D3]	C8965 CAP_402 m38a[89D3]	C8970 CAP_805 m38a[89C5]	C8971 CAP_402 m38a[89C4]	C8972 CAP_402 m38a[89C4]	C8973 CAP_402 m38a[89C4]	C8974 CAP_402 m38a[89C4]	C8975 CAP_402 m38a[89C3]	C8976 CAP_402 m38a[89C3]	C8981 CAP_402 m38a[89C3]	C8983 CAP_402 m38a[89C3]	C9000 CAP_805 m38a[90D7]	C9001 CAP_402 m38a[90D7]	C9002 CAP_402 m38a[90D7]	C9003 CAP_402 m38a[90D7]	C9004 CAP_402 m38a[90D6]	C9010 CAP_402 m38a[90D7]	C9015 CAP_402 m38a[90D6]	C9020 CAP_805 m38a[90C8]	C9021 CAP_402 m38a[90C8]	C9022 CAP_402 m38a[90C7]	C9023 CAP_402 m38a[90C7]	C9024 CAP_402 m38a[90C7]	C9025 CAP_402 m38a[90C7]	C9026 CAP_402 m38a[90C6]	C9031 CAP_402 m38a[90C7]	C9033 CAP_402 m38a[90C6]	C9050 CAP_805 m38a[90D4]	C9051 CAP_402 m38a[90D4]	C9052 CAP_402 m38a[90D4]	C9053 CAP_402 m38a[90D3]	C9054 CAP_402 m38a[90D3]	C9060 CAP_402 m38a[90D3]	C9065 CAP_805 m38a[90D3]	C9070 CAP_402 m38a[90C4]	C9071 CAP_402 m38a[90C4]	C9072 CAP_402 m38a[90C4]	C9073 CAP_402 m38a[90C4]	C9074 CAP_402 m38a[90C4]	C9075 CAP_402 m38a[90C3]	C9076 CAP_402 m38a[90C3]	C9081 CAP_402 m38a[90C3]	C9083 CAP_402 m38a[90C3]	C9100 CAP_805 m38a[91C5]	C9101 CAP_402 m38a[91C5]	C9102 CAP_402 m38a[91C5]	C9103 CAP_402 m38a[91C5]	C9110 CAP_805 m38a[91C5]	C9111 CAP_402 m38a[91C5]	C9112 CAP_402 m38a[91C5]	C9115 CAP_805 m38a[91B5]	C9116 CAP_402 m38a[91B5]	C9117 CAP_402 m38a[91B5]	C9120 CAP_805 m38a[91B5]	C9121 CAP_402 m38a[91B5]	C9122 CAP_402 m38a[91B5]	C9125 CAP_805 m38a[91B5]	C9126 CAP_402 m38a[91B5]	C9127 CAP_402 m38a[91B5]	C9130 CAP_805 m38a[91A6]	C9131 CAP_402 m38a[91A6]	C9132 CAP_402 m38a[91A5]	C9135 CAP_805 m38a[91A5]	C9136 CAP_402 m38a[91A5]	C9137 CAP_402 m38a[91A5]	C9140 CAP_805 m38a[91A6]	C9141 CAP_402 m38a[91A6]	C9142 CAP_402 m38a[91A5]	C9191 CAP_402 m38a[91D2]	C9300 CAP_805 m38a[93C6]	C9301 CAP_402 m38a[93C6]	C9302 CAP_402 m38a[93C5]	C9305 CAP_805 m38a[93C5]	C9306 CAP_402 m38a[93C6]	C9307 CAP_402 m38a[93C5]	C9310 CAP_805 m38a[93C6]	C9311 CAP_402 m38a[93C6]	C9312 CAP_402 m38a[93C5]	C9315 CAP_805 m38a[93B8]	C9316 CAP_402 m38a[93B8]	C9317 CAP_402 m38a[93B7]	C9320 CAP_805 m38a[93B6]	C9321 CAP_805 m38a[93B6]	C9322 CAP_402 m38a[93B5]	C9325 CAP_805 m38a[93B8]	C9326 CAP_402 m38a[93B8]	C9327 CAP_402 m38a[93B7]	C9330 CAP_805 m38a[93B6]	C9331 CAP_402 m38a[93B6]	C9332 CAP_402 m38a[93B5]	C9340 CAP_805 m38a[93A6]	C9341 CAP_402 m38a[93A6]	C9342 CAP_402 m38a[93A5]	C9345 CAP_805 m38a[93A6]	C9346 CAP_402 m38a[93A5]	C9347 CAP_402 m38a[93A5]	C9400 CAP_603-1 m38a[94C7]	C9401 CAP_402 m38a[94C6]	C9410 CAP_402 m38a[94C6]	C9420 CAP_1210 m38a[94C5]	C9450 CAP_805 m38a[94C2]	C9470 CAP_402 m38a[94B2]	C9700 CAP_402 m38a[97C8]	C9710 CAP_603 m38a[97C3]	C9711 CAP_402 m38a[97D3]	C9713 CAP_402 m38a[97C2]	C9714 CAP_402 m38a[97C2]	C9740 CAP_402 m38a[97A7]	C9741 CAP_402 m38a[97A6]	C9742 CAP_402 m38a[97A6]	C9750 CAP_402 m38a[97B4]	C9751 CAP_402 m38a[97A4]	D2500 DIODE_SCHOT_SOT23 m38a[25C8]	D2501 DIODE_SCHOT_SOT23 m38a[25D8]	D2600 DIODE_SCHOT_SOT23 m38a[26D8]	D2601 DIODE_SCHOT_SOT23 m38a[26C8]	D4600 DIODE_SMC m38a[46D5]	D4690 ZENER_SOT23 m38a[46A6]	D4700 DIODE_SCHOT_3P_A_SC-75 m38a[47C4]	D4701 DIODE_SCHOT_3P_A_SC-75 m38a[47B4]	D4702 DIODE_SCHOT_3P_A_SC-75 m38a[47A4]	D6500 DIODE_SOT23 m38a[65C4]	D6501 DIODE_SOT23 m38a[65B4]	D6502 DIODE_SCHOT_SMB m38a[65C4]	D6503 DIODE_SCHOT_SMB m38a[65B4]	D6600 DIODE_SCHOT_SMB m38a[66C3]	D7500 DIODE_SCHOT_SMB m38a[75C3]	D7501 DIODE_SCHOT_SMB m38a[75B2]	D7599 DIODE_SOT23 m38a[76D6]	D8520 DIODE_SCHOT_SMB m38a[85C3]	D9700 ZENER_CASE425 m38a[97C1]	DP4610 DIODE_DUAL_6P_SOT-36 m38a[46D4 46D3]	DP4611 DIODE_DUAL_6P_SOT-36 m38a[46C4 46C3]	DP4620 DIODE_DUAL_6P_SOT-36 m38a[46B4 46B3]	DP4621 DIODE_DUAL_6P_SOT-36 m38a[46A4 46A3]	DZ4700 DIODE_SCHOT_POWERDI-123 m38a[47C8]	D26800 DIODE_SCHOT_POWERDI-123 m38a[68A4]	D27300 SUPPR_TRANSIENT1_402 m38a[73C6]	D27301 SUPPR_TRANSIENT1_402 m38a[73C5]	D27302 SUPPR_TRANSIENT1_402 m38a[73C6]	D27311 SUPPR_TRANSIENT1_402 m38a[73A7]	D27313 SUPPR_TRANSIENT1_402 m38a[73A6]	D27314 SUPPR_TRANSIENT1_402 m38a[73A6]	D27315 SUPPR_TRANSIENT1_402 m38a[73A6]	D27323 SUPPR_TRANSIENT1_402 m38a[73A5]	D27324 SUPPR_TRANSIENT1_402 m38a[73C5]	D27325 SUPPR_TRANSIENT1_402 m38a[73C3]	D27326 SUPPR_TRANSIENT1_402 m38a[73C3]	D4602 FUSE_MINISMD-LF m38a[46D3]	F4602 FUSE_MINISMD-LF m38a[46D3]	F4701 FUSE_MINISMD-LF m38a[47D3]	F9710 FUSE_SM-LF m38a[97D5]	FL4610 FILTER_4P_2012 m38a[46C3]	FL4620 FILTER_4P_2012 m38a[46B3]	FL9740 FILTER_LC_SM-220MHZ-LF m38a[97B7]	FL9741 FILTER_LC_SM-220MHZ-LF m38a[97A7]	FL9742 FILTER_LC_SM-220MHZ-LF m38a[97A7]	FL9743 FILTER_LC_SM-220MHZ-LF m38a[97A7]	FL9744 FILTER_LC_SM-220MHZ-LF m38a[97A7]	FL9745 FILTER_LC_SM-220MHZ-LF m38a[97A7]	FLE011 FILTER_4P_2012 m38a[46C3]	FLE021 FILTER_4P_2012 m38a[46B3]	GV3801 HOLE_VIA m38a[38A8]	GV3802 HOLE_VIA m38a[38A7]	GV3803 HOLE_VIA m38a[38A8]	GV3804 HOLE_VIA m38a[38A7]	GV3805 HOLE_VIA m38a[38A8]	GV3806 HOLE_VIA m38a[38A7]	GV3807 HOLE_VIA m38a[38A8]	GV3808 HOLE_VIA m38a[38A7]	J3 CON_2RTSM_125_SM-2MT -BLK-LF m38a[61B6]	J600 CON_M12RT_D_THA_M-RT -TH m38a[6D7]	J0700 CPU_YONAH_SKT_BGA m38a[7C3 7D7]	J0700 CPU_YONAH_SKT_BGA m38a[8D4 8D8]	J1000 CON_2RTSM_125_SM-2MT -BLK-LF m38a[10B7]	J1101 CON_F28RT_S2MT_SM_F-RT-SM m38a[11C2]	J2600 BATTERY_2P_SM m38a[26C8]	J2800 CON_F200RT_DDR2DIMM m38a[28D5]	J2900 CON_F200RT_DDR2DIMM m38a[29D5]	J2901 SMT_SM_F-RT-SM1 m38a[29D5]	J2901 SMT_SM_F-RT-SM1 m38a[29D5]	J2901 CON_F4ST_S2MT_SM_F-S-T-SM m38a[59C7]	J2903 CON_M2ST_S2MT_SM_M-S-T-SM m38a[59C8]	J4700 CON_F10ST_D_SMA_F-ST-SM m38a[47B1]	J5300 CON_F52RT_D2MT_SM_F-SM m38a[53C5]	J6000 CON_F30STSM_5047_SM1-RT-SM m38a[60C3]	J6500 CON_M4RT_S2MT_SM_M-R-T-SM m38a[65D3]	J6501 CON_M5RT_S2MT_SMA_M-R-T-SM m38a[65B2]	J6600 CON_F4ST_S2MT_SM_F-S-T-SM m38a[66C2]	J6601 CON_M4RT_S2MT_SM_M-R-T-SM m38a[66B5]	J6602 CON_M4RT_S2MT_SM_M-R-T-SM m38a[66B3]	J7300 CON_F9ANG_4MT_OPTAUD-JCK_TH1_F-5.5-DEG-TH m38a[73D8]

	8	7	6	5	4	3	2	1
D	J7301	CON_M7RT_S2MT_SM_M-R m38a[73D1] T-SM	L9702	FILTER_4P_2012H m38a[97C7] L9703	PP673	PROBEPOINT_SM m38a[5C6] PP674	PP9016	PROBEPOINT_SM m38a[5A4] PP9020
	J7303	CON_F9ANG_S4MT_TH1_F m38a[73B3] -ANG-TH	L9710	IND_SM-1 m38a[97D5] LED601	PP675	PROBEPOINT_SM m38a[5B6] PP676	PP9021	PROBEPOINT_SM m38a[5A4] PP9022
	J9401	CON_M4ST_S_SM_M-ST-S m38a[94C2] M	LED602	LED_2_0X1_25MM-SM m38a[6A8] LED603	PP677	PROBEPOINT_SM m38a[5B6] PP678	PP9023	PROBEPOINT_SM m38a[5A4] PP9024
	J9402	CON_F30ST_D_SM_F-ST- m38a[94B6] SM	LED604	LED_2_0X1_25MM-SM m38a[6A6] LED3800	PP679	PROBEPOINT_SM m38a[5B6] PP680	PP9025	PROBEPOINT_SM m38a[5A4] PP9026
	J9710	CON_DV1_F32ST_Q2MT_S m38a[97D5] M_F-ST-SM4	LED5950	LED_3X2MM-SM m38a[60A6] LED7900	PP681	PROBEPOINT_SM m38a[5B6] PP682	PP9027	PROBEPOINT_SM m38a[5A4] PP9028
	JC900	CON_M7ST_SATA_SM_M-S m38a[38B8] T-SM	LED8000	LED_2_0X1_25MM-SM m38a[80A4] LED8100	PP683	PROBEPOINT_SM m38a[5B6] PP684	PP9029	PROBEPOINT_SM m38a[5A4] PP9030
	JC901	CON_F50ST_D2MT_SM_F- m38a[38D2] ST-SM	PP5E1	PROBEPOINT_SM m38a[5B8] PP5E2	PP685	PROBEPOINT_SM m38a[5B6] PP686	PP9031	PROBEPOINT_SM m38a[5A4] PP9032
	JD600	CON_RJ45_10ANG_S3MT_ m38a[43C6] TH1_F-ANG-TH	PP6A0	PROBEPOINT_SM m38a[5A6] PP6A1	PP687	PROBEPOINT_SM m38a[5B6] PP688	PP9033	PROBEPOINT_SM m38a[5A4] PP9034
	JE000	CON_F6ST_S4MT_TH1_F- m38a[46C2] ST-TH	PP6A2	PROBEPOINT_SM m38a[5A6] PP6A3	PP689	PROBEPOINT_SM m38a[5B6] PP690	PP9035	PROBEPOINT_SM m38a[5A4] PP9036
	JE001	CON_F6ST_S4MT_TH1_F- m38a[46B2] ST-TH	PP6A4	PROBEPOINT_SM m38a[5A6] PP6A5	PP691	PROBEPOINT_SM m38a[5B6] PP692	Q4201	TRA_PSS55402_SOT23 m38a[42C6] Q5901
	JE310	CON_F4ST_USB_S3MT_TH m38a[47D4] _F-ST-TH	PP6A6	PROBEPOINT_SM m38a[5A6] PP6A7	PP693	PROBEPOINT_SM m38a[5B6] PP694	Q5910	TRA_2N7002DM_SOT-363 m38a[59C7 59C7] Q5910
	JE320	CON_F4ST_USB_S3MT_TH m38a[47B4] _F-ST-TH	PP6A8	PROBEPOINT_SM m38a[5A6] PP6A9	PP695	PROBEPOINT_SM m38a[5B6] PP696	Q5911	TRA_2N7002_SOT23-LF m38a[59A4] Q5950
	JE330	CON_F4ST_USB_S3MT_TH m38a[47A4] _F-ST-TH	PP6B0	PROBEPOINT_SM m38a[5A6] PP6B1	PP697	PROBEPOINT_SM m38a[5B6] PP698	Q5951	TRA_2N7002_SOT23-LF m38a[60A7] Q5951
	JE350	CON_M14ST_S2MT_SM_M- m38a[47C1] RT-SM	PP6B2	PROBEPOINT_SM m38a[5A6] PP6B3	PP699	PROBEPOINT_SM m38a[5B6] PP700	Q5952	TRA_2N3906_SOT23-LF m38a[60B6] Q6500
	L1934	IND_0603 m38a[19C7] L1936	PP6B4	PROBEPOINT_SM m38a[5A6] PP6B5	PP701	TP_SM-TF50-TOP m38a[5D3] PP702	Q6502	TRA_2N7002_SOT23-LF m38a[65D6] Q6503
	L1970	IND_1210 m38a[19A5] L1975	PP6B6	PROBEPOINT_SM m38a[5A6] PP6B7	PP703	TP_SM-TF50-TOP m38a[5D3] PP1200	Q6505	TRA_NTSS5443T1_1206A m38a[65B4] Q6600
	L2500	IND_SM-3 m38a[25B8] L2507	PP6B8	PROBEPOINT_SM m38a[5A6] PP6B9	PP1201	TP_SM-TF50-TOP m38a[5D3] PP1202	Q6605	TRA_2N7002_SOT23-LF m38a[65B6] Q6600
	L3302	IND_0402-LF m38a[33D3] L4200	PP6C0	PROBEPOINT_SM m38a[5A6] PP6C1	PP2801	TP_SM-TF50-TOP m38a[5C3] PP2802	Q6602	TRA_2N7002_SOT23-LF m38a[66D4] Q7200
	L4301	IND_0805 m38a[43B7] L4302	PP6C2	PROBEPOINT_SM m38a[5A6] PP6C3	PP4100	FROBEPOINT_SM m38a[5C4] PP4101	Q7200	TRA_2N7002DM_SOT-363 m38a[72B6 72B7] Q7401
	L4400	IND_SM m38a[43D7] L4409	PP6C4	PROBEPOINT_SM m38a[5C8] PP6C5	PP8400	FROBEPOINT_SM m38a[5C5] PP8401	Q7402	TRA_2N7002_SOT23-LF m38a[74D5] Q7402
	L4610	IND_1206-LF m38a[46D2] L4620	PP6C6	PROBEPOINT_SM m38a[5C8] PP6C7	PP8402	FROBEPOINT_SM m38a[5C5] PP8403	Q7500	TRA_HAT2168H_LFPAK m38a[75D3] Q7501
	L4690	IND_SM-1 m38a[46A6] L4710	PP6C8	PROBEPOINT_SM m38a[5C8] PP6D0	PP8700	FROBEPOINT_SM m38a[5D5] PP8701	Q7502	TRA_HAT2165H_LFPAK m38a[75D3] Q7503
	L4712	FILTER_4P_2012 m38a[47C5] L4720	PP6D1	PROBEPOINT_SM m38a[5C8] PP6D2	PP8702	FROBEPOINT_SM m38a[5D5] PP8703	Q7504	TRA_HAT2165H_LFPAK m38a[75D3] Q7505
	L4730	IND_SM m38a[47B5] L4732	PP6D3	PROBEPOINT_SM m38a[5B8] PP6D4	PP8704	FROBEPOINT_SM m38a[5D5] PP8705	Q7570	TRA_HAT2168H_LFPAK m38a[75D2] Q7572
	L4740	IND_SM m38a[47D2] L4742	PP6D5	PROBEPOINT_SM m38a[5B8] PP6D6	PP8706	FROBEPOINT_SM m38a[5D5] PP8707	Q7701	TRA_SI3446DV_TSOP-LF m38a[77A3] Q7703
	L4752	FILTER_4P_2012 m38a[47C2] L6800	PP6D7	PROBEPOINT_SM m38a[5B8] PP6D8	PP8708	FROBEPOINT_SM m38a[5D5] PP8709	Q7707	TRA_2N7002DM_SOT-363 m38a[77C7 77D7] Q7799
	L6801	IND_0402-LF m38a[68A5] L6801	PP6D9	PROBEPOINT_SM m38a[5B8] PP6D0	PP8710	FROBEPOINT_SM m38a[5D5] PP8711	Q7800	TRA_2N7002_SOT23-LF m38a[77A7] Q7800
	L7200	IND_SM-1 m38a[72D6] L7201	PP6E0	PROBEPOINT_SM m38a[5B8] PP6E1	PP8712	FROBEPOINT_SM m38a[5D5] PP8713	Q7801	TRA_NTD60N02R_CASE36 m38a[78C4] Q7801
	L7202	IND_0603-LF m38a[72C2] L7203	PP6E2	PROBEPOINT_SM m38a[5D8] PP6E3	PP8714	FROBEPOINT_SM m38a[5D5] PP8715	Q7802	TRA_2N7002_SOT23-LF m38a[78B7] Q7900
	L7204	IND_0603-LF m38a[72C3] L7205	PP6E4	PROBEPOINT_SM m38a[5D8] PP6E5	PP8716	FROBEPOINT_SM m38a[5D5] PP8717	Q7901	TRA_NTD60N02R_CASE36 m38a[79D4] Q7901
	L7206	IND_0603 m38a[72C6] L7207	PP6E6	PROBEPOINT_SM m38a[5D8] PP6E7	PP8722	FROBEPOINT_SM m38a[5D5] PP8723	Q7902	TRA_2N7002_SOT23-LF m38a[79C7] Q8000
	L7208	IND_0603 m38a[72C6] L7300	PP6E8	PROBEPOINT_SM m38a[5D8] PP6E9	PP8724	FROBEPOINT_SM m38a[5C5] PP8725	Q8001	TRA_NTD60N02R_CASE36 m38a[80D4] Q8001
	L7301	IND_0603-LF m38a[73D6] L7302	PP6E10	PROBEPOINT_SM m38a[5D8] PP6E11	PP8726	FROBEPOINT_SM m38a[5C5] PP8727	Q8003	TRA_2N7002_SOT23-LF m38a[80C4] Q8102
	L7303	IND_0603-LF m38a[73D6] L7304	PP6E12	PROBEPOINT_SM m38a[5D8] PP6E13	PP8728	FROBEPOINT_SM m38a[5C5] PP8729	Q8103	TRA_2N7002_SOT23-LF m38a[80C7] Q8102
	L7305	IND_0603-LF m38a[73D5] L7306	PP6E14	PROBEPOINT_SM m38a[5D8] PP6E15	PP8730	FROBEPOINT_SM m38a[5C5] PP8731	Q8104	TRA_NTD60N02R_CASE36 m38a[81C4] Q8104
	L7307	IND_0603-LF m38a[73D5] L7309	PP6E16	PROBEPOINT_SM m38a[5D8] PP6E17	PP8732	FROBEPOINT_SM m38a[5C5] PP8733	Q8104	TRA_2N7002_SOT23-LF m38a[81C7] Q8300
	L7310	IND_0603-LF m38a[73C4] L7312	PP6E18	PROBEPOINT_SM m38a[5D8] PP6E19	PP8734	FROBEPOINT_SM m38a[5C5] PP8735	Q8301	TRA_IRP7413_SO-8 m38a[83C4] Q8302
	L7313	IND_0603-LF m38a[73C3] L7314	PP6E20	PROBEPOINT_SM m38a[5D8] PP6E21	PP8736	FROBEPOINT_SM m38a[5C5] PP8737	Q8302	TRA_2N7002DM_SOT-363 m38a[83B5] Q8303
	L7316	IND_0603-LF m38a[73B7] L7317	PP6E22	PROBEPOINT_SM m38a[5C8] PP6E23	PP8900	FROBEPOINT_SM m38a[5B5] PP8901	Q8303	TRA_2N7002DM_SOT-363 m38a[83C5] Q8520
	L7318	IND_0603-LF m38a[73B7] L7319	PP6E24	PROBEPOINT_SM m38a[5C8] PP6E25	PP8902	FROBEPOINT_SM m38a[5B5] PP8903	Q8521	TRA_HAT2165H_LFPAK m38a[85C4] Q8522
	L7324	IND_0603-LF m38a[73B5] L7325	PP6E26	PROBEPOINT_SM m38a[5C8] PP6E27	PP8904	FROBEPOINT_SM m38a[5B5] PP8905	Q8522	TRA_HAT2165H_LFPAK m38a[85C5] Q9400
	L7326	IND_0603-LF m38a[73B5] L7327	PP6E28	PROBEPOINT_SM m38a[5C8] PP6E29	PP8906	FROBEPOINT_SM m38a[5B5] PP8907	Q9401	TRA_SI3443DV_TSOP-LF m38a[94C7] Q9401
	L7316	IND_0603-LF m38a[73B7] L7500	PP6E30	PROBEPOINT_SM m38a[5C8] PP6E31	PP8908	FROBEPOINT_SM m38a[5B5] PP8909	Q9711	TRA_2N7002DM_SOT-363 m38a[97D2 97C2] R7500
	L7501	IND_SM m38a[75D1] L7501	PP6E32	PROBEPOINT_SM m38a[5D6] PP6E33	PP8910	FROBEPOINT_SM m38a[5B5] PP8911	R7500	RES_402 m38a[85D1] R600
	L7502	IND_TH-VERT-LF m38a[76D8] L7700	PP6E34	PROBEPOINT_SM m38a[5D6] PP6E35	PP8912	FROBEPOINT_SM m38a[5B5] PP8913	R601	RES_402 m38a[6A7] R601
	L7700	IND_SM-LF m38a[77B4] L7800	PP6E36	PROBEPOINT_SM m38a[5D6] PP6E37	PP8914	FROBEPOINT_SM m38a[5A5] PP8915	R602	RES_402 m38a[6D8] R603
	L7800	IND_3P_SM m38a[78B3] L7880	PP6E38	PROBEPOINT_SM m38a[5D6] PP6E39	PP8916	FROBEPOINT_SM m38a[5A5] PP8917	R605	RES_402 m38a[6A7] R601
	L7900	IND_3P_SM m38a[79C3] L8000	PP6E40	PROBEPOINT_SM m38a[5D6] PP6E41	PP8918	FROBEPOINT_SM m38a[5A5] PP8919	R616	RES_402 m38a[6B7] R617
	L8000	IND_IHLP m38a[81C3] L8400	PP6E42	PROBEPOINT_SM m38a[5D6] PP6E43	PP8920	FROBEPOINT_SM m38a[5A5] PP8921	R618	RES_402 m38a[6C7] R619
	L8400	IND_0402 m38a[84B7] L8520	PP6E44	PROBEPOINT_SM m38a[5D6] PP6E45	PP8922	FROBEPOINT_SM m38a[5A5] PP8923	R619	RES_402 m38a[6C7] R620
	L8520	IND_IHLP m38a[85C3] L8715	PP6E46	PROBEPOINT_SM m38a[5D6] PP6E47	PP8924	FROBEPOINT_SM m38a[5A5] PP8925	R620	RES_402 m38a[6A7] R601
	L8715	IND_0402 m38a[87A7] L8725	PP6E48	PROBEPOINT_SM m38a[5D6] PP6E49	PP8926	FROBEPOINT_SM m38a[5A5] PP8927	R602	RES_402 m38a[6D8] R603
	L8910	IND_0402 m38a[89D7] L8915	PP6E50	PROBEPOINT_SM m38a[5D6] PP6E51	PP8928	FROBEPOINT_SM m38a[5A5] PP8929	R605	RES_402 m38a[6A6] R611
	L8915	IND_0402 m38a[89D7] L8960	PP6E52	PROBEPOINT_SM m38a[5D6] PP6E53	PP8930	FROBEPOINT_SM m38a[5A5] PP8931	R612	RES_402 m38a[6B7] R614
	L8960	IND_0402 m38a[89D4] L8965	PP6E54	PROBEPOINT_SM m38a[5D6] PP6E55	PP8932	FROBEPOINT_SM m38a[5A5] PP8933	R616	RES_402 m38a[6B7] R617
	L9010	IND_0402 m38a[90D7] L9015	PP6E56	PROBEPOINT_SM m38a[5D6] PP6E57	PP8934	FROBEPOINT_SM m38a[5A5] PP8935	R618	RES_402 m38a[6C7] R619
	L9060	IND_0402 m38a[90D4] L9065	PP6E58	PROBEPOINT_SM m38a[5D6] PP6E59	PP8936	FROBEPOINT_SM m38a[5A5] PP8937	R619	RES_402 m38a[6B7] R620
	L9120	IND_0402 m38a[91B6] L9125	PP6E60	PROBEPOINT_SM m38a[5D6] PP6E61	PP9000	FROBEPOINT_SM m38a[5B4] PP9001	R620	RES_402 m38a[6C7] R621
	L9130	IND_0402 m38a[91B7] L9135	PP6E62	PROBEPOINT_SM m38a[5D6] PP6E63	PP9002	FROBEPOINT_SM m38a[5B4] PP9003	R621	RES_402 m38a[6B7] R622
	L9140	IND_0402 m38a[91A7] L9140	PP6E64	PROBEPOINT_SM m38a[5D6] PP6E65	PP9004	FROBEPOINT_SM m38a[5B4] PP9005	R622	RES_402 m38a[6C7] R623
	L9140	IND_0402 m38a[91A7] L9140	PP6E66	PROBEPOINT_SM m38a[5D6] PP6E67	PP9006	FROBEPOINT_SM m38a[5B4] PP9007	R623	RES_402 m38a[6C7] R624
	L9140	IND_0402 m38a[91A7] L9140	PP6E68	PROBEPOINT_SM m38a[5D6] PP6E69	PP9008	FROBEPOINT_SM m38a[5B4] PP9009	R624	RES_402 m38a[6C7] R625
	L9140	IND_0402 m38a[91A7] L9140	PP6E70	PROBEPOINT_SM m38a[5D6] PP6E71	PP9010	FROBEPOINT_SM m38a[5B4] PP9011	R625	RES_402 m38a[6C7] R626
	L9140	IND_0402 m38a[91A7] L9140	PP6E72	PROBEPOINT_SM m38a[5D6] PP6E73	PP9012	FROBEPOINT_SM m38a[5B4] PP9013	R626	RES_402 m38a[6C7] R627
	L9140	IND_0402 m38a[91A7] L9140	PP6E74	PROBEPOINT_SM m38a[5D6] PP6E75	PP9014	FROBEPOINT_SM m38a[5B4] PP9015	R627	RES_402 m38a[6C7] R628
	L9140	IND_0402 m38a[91A7] L9140	PP6E76	PROBEPOINT_SM m38a[5D6] PP6E77	PP9016	FROBEPOINT_SM m38a[5B4] PP9017	R628	RES_402 m38a[6C7] R629
	L9140	IND_0402 m38a[91A7] L9140	PP6E78	PROBEPOINT_SM m38a[5D6] PP6E79	PP9018	FROBEPOINT_SM m38a[5B4] PP9019	R629	RES_402 m38a[6C7] R630
	L9140	IND_0402 m38a[91A7] L9140	PP6E80	PROBEPOINT_SM m38a[5D6] PP6E81	PP9020	FROBEPOINT_SM m38a[5B4] PP9021	R630	RES_402 m38a[6C7] R631
	L9140	IND_0402 m38a[91A7] L9140	PP6E82	PROBEPOINT_SM m38a[5D6] PP6E83	PP9022	FROBEPOINT_SM m38a[5B4] PP9023	R631	RES_402 m38a[6C7] R632
	L9140	IND_0402 m38a[91A7] L9140	PP6E84	PROBEPOINT_SM m38a[5D6] PP6E85	PP9024	FROBEPOINT_SM m38a[5B4] PP9025	R632	RES_402 m38a[6C7] R633
	L9140	IND_0402 m38a[91A7] L9140	PP6E86	PROBEPOINT_SM m38a[5D6] PP6E87	PP9026	FROBEPOINT_SM m38a[5B4] PP9027	R633	RES_402 m38a[6C7] R634
	L9140	IND_0402 m38a[91A7] L9140	PP6E88	PROBEPOINT_SM m38a[5D6] PP6E89	PP9028	FROBEPOINT_SM m38a[5B4] PP9029	R634	RES_402 m38a[6C7] R635
	L9140	IND_0402 m38a[91A7] L9140	PP6E90	PROBEPOINT_SM m38a[5D6] PP6E91	PP9030	FROBEPOINT_SM m38a[5B4] PP9031	R635	RES_402 m38a[6C7] R636
	L9140	IND_0402 m38a[91A7] L9140	PP6E92	PROBEPOINT_SM m38a[5D6] PP6E93	PP9032	FROBEPOINT_SM m38a[5B4] PP90		

8			7			6			5			4			3			2			1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
R1104	RES_402	m38a[1185]	R2719	RES_402	m38a[2787]	R4356	RES_402	m38a[43C7]	R6504	RES_805	m38a[65C5]	R1104	RES_402	m38a[11A3]	R2750	RES_402	m38a[27C7]	R4357	RES_402	m38a[43B7]	R6505	RES_805	m38a[65D5]	R1106	RES_402	m38a[11A3]	R2751	RES_402	m38a[27C7]	R4358	RES_402	m38a[44B3]	R6506	RES_402	m38a[65D6]	R11210	RES_402	m38a[12A7]	R2800	RES_402	m38a[28C7]	R4402	RES_402	m38a[44B3]	R6507	RES_805	m38a[65B5]	R1210	RES_402	m38a[12C3]	R2801	RES_402	m38a[28C7]	R4403	RES_402	m38a[44A7]	R6508	RES_805	m38a[65B5]	R1211	RES_402	m38a[12C3]	R2900	RES_402	m38a[29A3]	R4409	RES_402	m38a[44B3]	R6509	RES_805	m38a[65B5]	R1220	RES_402	m38a[12B7]	R3001	RES_402	m38a[30D4]	R4410	RES_402	m38a[44D2]	R6510	RES_1206	m38a[65B6]	R1221	RES_402	m38a[12B7]	R3009	RES_402	m38a[30D4]	R4411	RES_402	m38a[44D6]	R6511	RES_402	m38a[65B6]	R1225	RES_402	m38a[12A7]	R3011	RES_402	m38a[30C4]	R4412	RES_402	m38a[44C1]	R6512	RES_805	m38a[65C5]	R1230	RES_402	m38a[12A7]	R3025	RES_402	m38a[30C4]	R4413	RES_402	m38a[44C3]	R6513	RES_805	m38a[65B5]	R1231	RES_402	m38a[12A7]	R3035	RES_402	m38a[30B4]	R4414	RES_402	m38a[44C3]	R6514	RES_805	m38a[65B4]	R1235	RES_402	m38a[12A7]	R3100	RES_402	m38a[31C5]	R4416	RES_402	m38a[44A5]	R6515	RES_805	m38a[65C4]	R1236	RES_402	m38a[12A7]	R3101	RES_402	m38a[31C5]	R4450	RES_402	m38a[44B3]	R6518	RES_402	m38a[65A7]	R1310	RES_402	m38a[13D3]	R3300	RES_402	m38a[33B6]	R4451	RES_402	m38a[44B3]	R6519	RES_402	m38a[65C7]	R1410	RES_402	m38a[14C3]	R3301	RES_402	m38a[33B7]	R4452	RES_402	m38a[44B3]	R6600	RES_402	m38a[66C7]	R1411	RES_402	m38a[14C3]	R3302	RES_402	m38a[33D4]	R4453	RES_402	m38a[44B3]	R6601	RES_805	m38a[66D5]	R1420	RES_402	m38a[14B6]	R3303	RES_402	m38a[33C4]	R4454	RES_402	m38a[44B3]	R6602	RES_805	m38a[66C4]	R1430	RES_402	m38a[14B6]	R3304	RES_402	m38a[33C7]	R4455	RES_402	m38a[44B3]	R6603	RES_805	m38a[66D5]	R1440	RES_402	m38a[14D6]	R3400	RES_402	m38a[34C5]	R4650	RES_402	m38a[46C8]	R6604	RES_1206	m38a[66D5]	R1975	RES_402	m38a[19A4]	R3401	RES_402	m38a[34B5]	R4651	RES_402	m38a[46C7]	R6605	RES_402	m38a[66D6]	R1980	RES_402	m38a[19B7]	R3402	RES_402	m38a[34B5]	R4652	RES_402	m38a[46B8]	R6606	RES_805	m38a[66C5]	R1981	RES_402	m38a[19B7]	R3403	RES_402	m38a[34C5]	R4653	RES_402	m38a[46B7]	R6607	RES_805	m38a[66C3]	R1982	RES_402	m38a[19B8]	R3404	RES_402	m38a[34C5]	R4654	RES_402	m38a[46B7]	R6608	RES_402	m38a[66C8]	R1983	RES_402	m38a[19B8]	R3405	RES_402	m38a[34C5]	R4655	RES_2512-1	m38a[46D6]	R6609	RES_402	m38a[66C6]	R2058	RES_402	m38a[20B4]	R3406	RES_402	m38a[34C5]	R4657	RES_805	m38a[46D6]	R6702	RES_402	m38a[67C4]	R2059	RES_402	m38a[20B4]	R3407	RES_402	m38a[34B5]	R4660	RES_402	m38a[46C7]	R6703	RES_402	m38a[67C4]	R2060	RES_402	m38a[20A4]	R3408	RES_402	m38a[34B5]	R4661	RES_402	m38a[46C7]	R6704	RES_805	m38a[67C2]	R2075	RES_402	m38a[20C7]	R3409	RES_402	m38a[34B5]	R4662	RES_402	m38a[46B7]	R6705	RES_805	m38a[67C3]	R2077	RES_402	m38a[20B7]	R3410	RES_402	m38a[34B5]	R4663	RES_402	m38a[46B7]	R6706	RES_402	m38a[67C6]	R2079	RES_402	m38a[20B7]	R3411	RES_402	m38a[34B5]	R4664	RES_402	m38a[46B7]	R6707	RES_402	m38a[67C4]	R2085	RES_402	m38a[20C4]	R3412	RES_402	m38a[34B5]	R4690	RES_402	m38a[46A7]	R6708	RES_402	m38a[67C4]	R2100	RES_402	m38a[21C3]	R3413	RES_402	m38a[34B5]	R4712	RES_402	m38a[47C5]	R6800	RES_402	m38a[68C6]	R2101	RES_402	m38a[21C4]	R3414	RES_402	m38a[34B5]	R4713	RES_402	m38a[47C5]	R6802	RES_402	m38a[68A5]	R2105	RES_402	m38a[21D6]	R3415	RES_402	m38a[34B5]	R4722	RES_402	m38a[47B5]	R6807	RES_402	m38a[68D7]	R2107	RES_402	m38a[21C2]	R3416	RES_402	m38a[34B5]	R4723	RES_402	m38a[47B5]	R6808	RES_402	m38a[68D3]	R2110	RES_402	m38a[21C2]	R3417	RES_402	m38a[34B5]	R4732	RES_402	m38a[47A5]	R6810	RES_402	m38a[68A3]	R2111	RES_402	m38a[21C2]	R3418	RES_402	m38a[34B5]	R4733	RES_402	m38a[47A5]	R6811	RES_402	m38a[68A3]	R2194	RES_402	m38a[21D4]	R3419	RES_402	m38a[34A5]	R4742	RES_402	m38a[47C2]	R6812	RES_402	m38a[68B7]	R2195	RES_402	m38a[21C6]	R3420	RES_402	m38a[34A5]	R4743	RES_402	m38a[47C2]	R7208	RES_402	m38a[72A4]	R2196	RES_402	m38a[21C6]	R3421	RES_402	m38a[34A5]	R4746	RES_805	m38a[47D2]	R7212	RES_402	m38a[72B8]	R2197	RES_402	m38a[21C6]	R3422	RES_402	m38a[34A5]	R4754	RES_402	m38a[47C2]	R7213	RES_402	m38a[72B7]	R2198	RES_402	m38a[21C6]	R3423	RES_402	m38a[34A5]	R4755	RES_402	m38a[47B2]	R7214	RES_402	m38a[72C5]	R2199	RES_402	m38a[21C3]	R3424	RES_402	m38a[34A5]	R5302	RES_402	m38a[53B4]	R7215	RES_402	m38a[72C7]	R2200	RES_402	m38a[22D7]	R3429	RES_402	m38a[34C1]	R5303	RES_402	m38a[53B4]	R7216	RES_402	m38a[72C5]	R2203	RES_402	m38a[22C2]	R3430	RES_402	m38a[34C1]	R5304	RES_402	m38a[53C6]	R7217	RES_402	m38a[72B5]	R2204	RES_402	m38a[22C2]	R3431	RES_402	m38a[34C1]	R5801	RES_402	m38a[58C2]	R7218	RES_402	m38a[72A5]	R2205	RES_402	m38a[22C6]	R3432	RES_402	m38a[34C1]	R5802	RES_402	m38a[58C2]	R7219	RES_402	m38a[72B6]	R2206	RES_402	m38a[22C5]	R3433	RES_402	m38a[34C1]	R5803	RES_402	m38a[58C2]	R7302	RES_402	m38a[73A3]	R2207	RES_402	m38a[22C5]	R3434	RES_402	m38a[34C1]	R5808	RES_402	m38a[58C2]	R7306	RES_402	m38a[73C8]	R2211	RES_402	m38a[22B3]	R3435	RES_402	m38a[34C1]	R5809	RES_402	m38a[58C2]	R7306	RES_402	m38a[73D4]	R2222	RES_402	m38a[22D6]	R3436	RES_402	m38a[34C1]	R5815	RES_402	m38a[58B3]	R7308	RES_402	m38a[73B8]	R2223	RES_402	m38a[22D6]	R3437	RES_402	m38a[34C1]	R5817	RES_402	m38a[58B3]	R7400	RES_402	m38a[74B4]	R2225	RES_402	m38a[22D7]	R3438	RES_402	m38a[34C1]	R5818	RES_402	m38a[58B3]	R7404	RES_402	m38a[74D5]	R2226	RES_402	m38a[22D5]	R3439	RES_402	m38a[34C1]	R5819	RES_402	m38a[58B3]	R7405	RES_402	m38a[74D5]	R2250	RES_402	m38a[22D7]	R3440	RES_402	m38a[34C1]	R5821	RES_402	m38a[58B3]	R7407	RES_402	m38a[74B4]	R2251	RES_402	m38a[22D6]	R3441	RES_402	m38a[34C1]	R5822	RES_402	m38a[58B3]	R7408	RES_402	m38a[74A4]	R2255	RES_402	m38a[22D7]	R3442	RES_402	m38a[34C1]	R5823	RES_402	m38a[58B3]	R7409	RES_402	m38a[74B4]	R2298	RES_402	m38a[22B5]	R3443	RES_402	m38a[34B1]	R5824	RES_402	m38a[58B3]	R7410	RES_805	m38a[74D2]	R2299	RES_402	m38a[22B5]	R3444	RES_402	m38a[34B1]	R5825	RES_402	m38a[58B3]	R7411	RES_805	m38a[74C2]	R2302	RES_402	m38a[23D3]	R3445	RES_402	m38a[34B1]	R5826	RES_402	m38a[58B3]	R7412	RES_805	m38a[74C2]	R2303	RES_402	m38a[23D3]	R3446	RES_402	m38a[34B1]	R5827	RES_402	m38a[58C5]	R7413	RES_402	m38a[74B4]	R2305	RES_402	m38a[23D3]	R3451	RES_402	m38a[34C4]	R5828	RES_402	m38a[58B3]	R7414	RES_805	m38a[74B7]	R2306	RES_402	m38a[23B7]	R3452	RES_402	m38a[34B7]	R5829	RES_402	m38a[58C3]	R7415	RES_805	m38a[74B8]	R2307	RES_402	m38a[23A7]	R3453	RES_402	m38a[34B8]	R5830	RES_402	m38a[58C3]	R7416	RES_805	m38a[74C7]	R2308	RES_402	m38a[23B7]	R3454	RES_402	m38a[34B7]	R5831	RES_402	m38a[58C3]	R7417	RES_805	m38a[74C8]	R2309	RES_402	m38a[23A7]	R3455	RES_402	m38a[34B8]	R5832	RES_402	m38a[58C3]	R7418	RES_402	m38a[74B6]	R2310	RES_402	m38a[23A7]	R3456	RES_402	m38a[34B7]	R5833	RES_402	m38a[58B3]	R7419	RES_402	m38a[74B6]	R2311	RES_402	m38a[23A7]	R3457	RES_402	m38a[34B7]	R5838	RES_402	m38a[58C2]	R7420	RES_402	m38a[74D8]	R2313	RES_402	m38a[23A7]	R3458	RES_402	m38a[34B8]	R5899	RES_402	m38a[58D3]	R7422	RES_402	m38a[74D7]	R2314	RES_402	m38a[23A7]	R3459	RES_402	m38a[34A7]	R5900	RES_402	m38a[59D7]	R7423	RES_402	m38a[74B6]	R2316	RES_402	m38a[23D7]	R3460	RES_402	m38a[34A7]	R5903	RES_402	m38a[59D2]	R7424	RES_402	m38a[74B6]	R2317	RES_402	m38a[23D7]	R3461	RES_402	m38a[34A7]	R5904	RES_402	m38a[59D2]	R7425	RES_603	m38a[74A5]	R2318	RES_402	m38a[23D7]	R3462	RES_402	m38a[34A8]	R5905	RES_402	m38a[59D2]	R7426	RES_402	m38a[74A4]	R2319	RES_402	m38a[23D2]	R3463	RES_402	m38a[34A7]	R5906	RES_402	m38a[59D2]	R7427	RES_402	m38a[74A4]	R2320	RES_402	m38a[23D7]	R3470	RES_402	m38a[34A5]	R5907	RES_402	m38a[59B7]	R7430	RES_402	m38a[74C1]	R2323	RES_402	m38a[23D5]	R3471	RES_402	m38a[34A5]	R5910	RES_402	m38a[59C2]	R7431	RES_402	m38a[74C2]	R2326	RES_402	m38a[23D6]	R3485	RES_402	m38a[34D1]	R5911	RES_402	m38a[59D2]	R7435	RES_402	m38a[74A3]	R2327	RES_402	m38a[23D6]	R3486	RES_402	m38a[34D1]	R5912	RES_402	m38a[59D2]	R7437	RES_402	m38a[74C5]	R2343	RES_402	m38a[23D1]	R3487	RES_402	m38a[34D1]	R5913	RES_402	m38a[59D2]	R7440	RES_805	m38a[74D2]	R2388	RES_402	m38a[23A3]	R3488	RES_402	m38a[34D1]	R5914	RES_402	m38a[59D2]	R7442	RES_805	m38a[74D3]	R2389	RES_402	m38a[38D5]	R3489	RES_402	m38a[34D2]	R5915	RES_402	m38a[59D2]	R7443	RES_805	m38a[74D3]	R2390	RES_402	m38a[23B3]	R3490	RES_402	m38a[34D2]	R5916	RES_402	m38a[59C2]	R7500	RES_402	m38a[75C2]	R2395	RES_402	m38a[23D7]	R3491	RES_402	m38a[34D2]	R5917	RES_402	m38a[59C2]	R7501	RES_603	m38a[75C2]	R2396	RES_402	m38a[23D6]	R3492	RES_402	m38a[34D2]	R5919	RES_402	m38a[59B4]	R7502	RES_1206	m38a[75B2]	R2397	RES_402	m38a[23D6]	R3493	RES_402	m38a[34D7]	R5920	RES_402	m38a[59B5]	R7503	RES_1206	m38a[75D2]	R2398	RES_402	m38a[23D9]	R3494	RES_402	m38a[34D7]	R5921	RES_402	m38a[59B5]	R7504	RES_402	m38a[75C1]	R2399	RES_402	m38a[23C1]	R3495	RES_402	m38a[34D7]	R5922	RES_402	m38a[59B5]	R7505	RES_402	m38a[75B2]	R2500	RES_603	m38a[25A8]	R3496	RES_402	m38a[34C5]	R5923	RES_402	m38a[59B5]	R7506	RES_603	m38a[75B2]	R2501	RES_402	m38a[25C8]	R3497	RES_402	m38a[34D4]	R5924	RES_402	m38a[59B5]	R7507	RES_402	m38a[75B1]	R2502	RES_402	m38a[25D8]	R3498	RES_402	m38a[34D5]	R5930	RES_402	m38a[59B6]	R7508	RES_402	m38a[75B8]	R2600	RES_402	m38a[26C7]	R3499	RES_402	m38a[34D5]	R5931	RES_402	m38a[59B6]	R7509	RES_402	m38a[75B8]	R2606	RES_402	m38a[26C7]	R3824	RES_402	m38a[38D2]	R5932	RES_402	m38a[59A7]	R7510	RES_402	m38a[75B6]	R2607	RES_402	m38a[26C8]	R3851	RES_402	m38a[38D3]	R5933	RES_402	m38a[59A7]

