
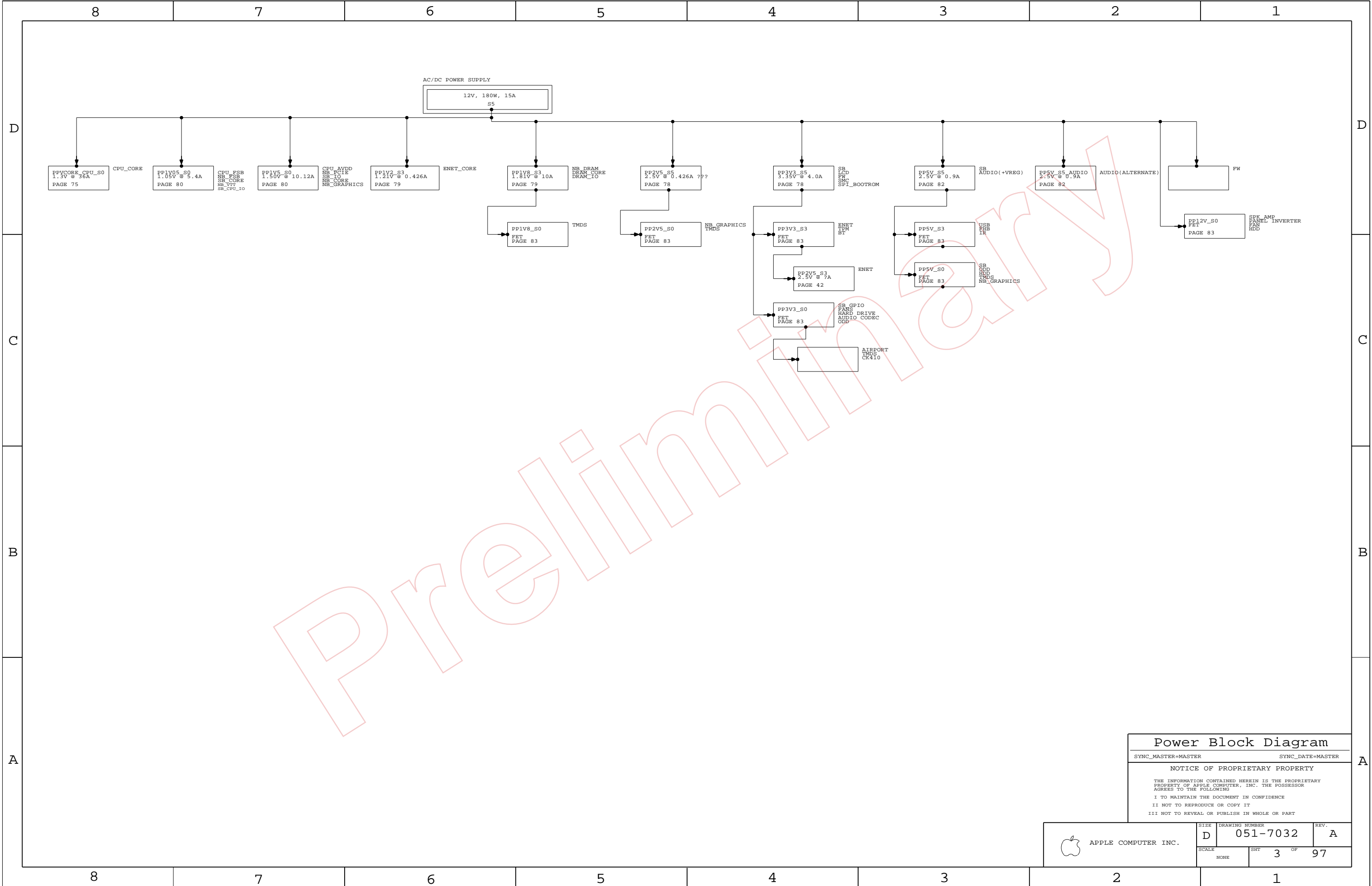


8		7		6		5		4		3		2		1			
1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%. 2. ALL CAPACITANCE VALUES ARE IN MICROFARADS. 3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.												REV	ZONE	ECN	DESCRIPTION OF CHANGE	CK APPD DATE	ENG APPD DATE
												A		440263	PRODUCTION RELEASED	05/18/06	06/22/04
D	PDF	CSA	CONTENTS	SYNC	MASTER	DATE	PDF	CSA	CONTENTS	SYNC	MASTER	DATE	<div>DRIFT</div>				
	2	2	System Block Diagram	MASTER	MASTER		38	44	FW: FW323-06	MASTER	MASTER						
	3	3	Power Block Diagram	MASTER	MASTER		39	45	FW: DECAPS	MASTER	MASTER						
	4	4	Table Items	MASTER	MASTER		40	46	FIREWIRE CONNECTORS	MASTER	MASTER						
	5	5	FUNC TEST 1 OF 2	MASTER	MASTER		41	47	USB Device Interfaces	MASTER	MASTER						
	6	6	Power Conn / Alias	MASTER	MASTER		42	53	AIRPORT CONN	MASTER	MASTER						
	7	7	CPU 1 OF 2-FSB	MASTER	MASTER		43	54	PCIE PORT ALIASES	MASTER	MASTER						
	8	8	CPU 2 OF 2-PWR/GND	MASTER	MASTER		44	58	SMC	M1	01/05/2006						
	9	9	CPU DECAPS & VID<>	MASTER	MASTER		45	59	SMC & TPM SUPPORT	(MASTER)	(MASTER)						
	10	10	CPU TEMP SENSOR	MASTER	MASTER		46	60	LPC+ CONN	M38	12/09/2005						
C	11	11	CPU ITP700FLEX DEBUG	M38	01/05/2006		47	61	NB THERMAL	MASTER	MASTER						
	12	12	NB CPU Interface	M1	01/05/2006		48	63	SPI BOOTROM	M38	01/05/2006						
	13	13	NB PEG / Video Interfaces	M1	01/05/2006		49	65	Fan 0, 1 & System Temp	MASTER	MASTER						
	14	14	NB Misc Interfaces	MASTER	MASTER		50	66	Fan 2 & HD Temp	MASTER	MASTER						
	15	15	NB DDR2 Interfaces	M1	01/05/2006		51	67	TPM	M38	01/05/2006						
	16	16	NB Power 1	MASTER	MASTER		52	68	AUDIO: CODEC	AUDIO	05/12/2006						
	17	17	NB Power 2	M40	01/05/2006		53	72	AUDIO: SPEAKER AMP	AUDIO	05/12/2006						
	18	18	NB Grounds	M1	01/05/2006		54	73	AUDIO: CONNECTORS	AUDIO	05/12/2006						
	19	19	NB (GM) Decoupling	(MASTER)	(MASTER)		55	74	AUDIO: POWER SUPPLIES	AUDIO	05/12/2006						
	20	20	NB Config Straps	M1	01/05/2006		56	75	IMVP6 CPU VCore Regulator	MASTER	MASTER						
B	21	21	SB: 1 OF 4	M38	01/05/2006		57	76	CPU & SYSTEM SENSE CIRCUITS	(MASTER)	(MASTER)						
	22	22	SB: 2 OF 4	MASTER	MASTER		58	77	PWR GOOD	(MASTER)	(MASTER)						
	23	23	SB: 3 OF 4	MASTER	MASTER		59	78	3V DC/DC 2.5V	(MASTER)	(MASTER)						
	24	24	SB: 4 OF 4	M38	01/05/2006		60	79	1.8V & 1.2V VREG	MASTER	MASTER						
	25	25	SB:DECOUPLING	MASTER	MASTER		61	80	1.5V_S0 & 1.05V_S0 VREG	MASTER	MASTER						
	26	26	SB: MISC	MASTER	MASTER		62	82	5V DC/DC	MASTER	MASTER						
	27	27	SB: SMB HUB AND ALIAS	MASTER	MASTER		63	83	S0 AND S3 FETS	MASTER	MASTER						
	28	28	DDR2 SO-DIMM Connector	AMASTER	MASTER		64	94	Internal Display Conns	MASTER	MASTER						
	29	29	DDR2 SO-DIMM Connector	BMASTER	MASTER		65	95	EXTERNAL TMDS	MASTER	MASTER						
	30	30	Memory Active Termination	MASTER	MASTER		66	96	TMDS/Inverter/ExtVGA	MASTER	MASTER						
A	31	31	Memory Vtt Supply	MASTER	MASTER		67	97	External Display Conns	MASTER	MASTER		<div>DIMENSIONS ARE IN MILLIMETERS</div> <div>XX : _____</div> <div>X.XX : _____</div> <div>X.XXX : _____</div> <div>ANGLES : _____</div> <div>DO NOT SCALE DRAWING</div> <div></div> <div>THIRD ANGLE PROJECTION</div>				
	32	33	CLOCKS	MASTER	MASTER												
	33	34	CLOCKS: TERMINATIONS	MASTER	MASTER												
	34	38	Disk Connectors	MASTER	MASTER												
	35	41	ETHERNET CONTROLLER	MASTER	MASTER												
	36	42	ETHERNET MISC	MASTER	MASTER												
	37	43	ETHERNET CONNECTOR	MASTER	MASTER												
8		7		6		5		4		3		2		1			





	8	7	6	5	4	3	2	1
D								
C								
B								
A								
	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	
338S0298	1	IC,945GT,NORTHBRIDGE	U1200	CRITICAL	
343S0385	1	IC,SB,652BGA	U2100	CRITICAL	
742-0048	1	BAT,COIN,3V,220MAH,CR2032	BT2600	CRITICAL	
359S0101	1	IC,CY28445-5,CLK GEN,68PIN QFP	U3301	CRITICAL	
338S0270	1	IC,88E8053,GIGABIT ENET XCVR,64P QFN,BD	U4101	CRITICAL	
(335S0382) 341S1797	1	IC,ENET LAN ROM	U4102	CRITICAL	
338S0279	1	IC,FW32306,1394A LINK,TQFP	U4400	CRITICAL	
338S0274 341T0022	1	IC,SMC,M50	U5800	CRITICAL	
341S1789	1	IC,TFM,TSSOP,28P	U6700	CRITICAL	LEMENU
353S1465	1	IC,CPU VREG,IMVP,TWO PHASE	U7500	CRITICAL	

(335S0384)

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-7032	1	PCB,SCHEM,MLB,M50	SCH1		
820-1960	1	PCB,FAB,MLB,M50	MLB1		
341T0021	1	EFI ROM,M50	U6301	CRITICAL	
337S3242	1	M38 CPU (C0)	CPU	CRITICAL	YONAH_1_83

341S1859 IC EFI BOOTROM DEV M50  
337S3242 M38 CPU(C0)  
337S3280 M50 I.83G LOW SPEED CPU (D0)  
  
USE BOM OPTION MEROM FOR MEROM PROCESSOR

OPS REQUESTED QUAL PARTS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
155S0295	1	CHOKE,COMMON_MODE,165OHM,4PIN	L9703	CRITICAL	
124-0359	3	PCAP,120UF,16V,20%,ELEC	C6505,C6504,C6602	CRITICAL	

ALTERNATE PARTS

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
126S0091	126S0092		C625	FACTORY SHORTAGE
353S1278	353S1381		U5940	SMC VREF
378S0141	378S0140		LEDK01,LEDK02,LEDK03	
353S1235	353S1465		U7500	CPU VREG, NON-SCREENED PART

MECHANICAL PARTS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
603-9187	1	SUBASSY, M50 NB HEATSINK	HS2	CRITICAL	
603-9186	1	SUBASSY, M50 CPU HEATSINK	HS1	CRITICAL	
725-0668	1	MYLAR WASHER	WASH1	CRITICAL	
725-0720	1	MYLAR BLACK LED CVR, M50	CVR1	CRITICAL	
825-6447	1	BARCODE LABEL, M50	[EEE:V3M]	CRITICAL	YONAH_1_83

Table Items

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.

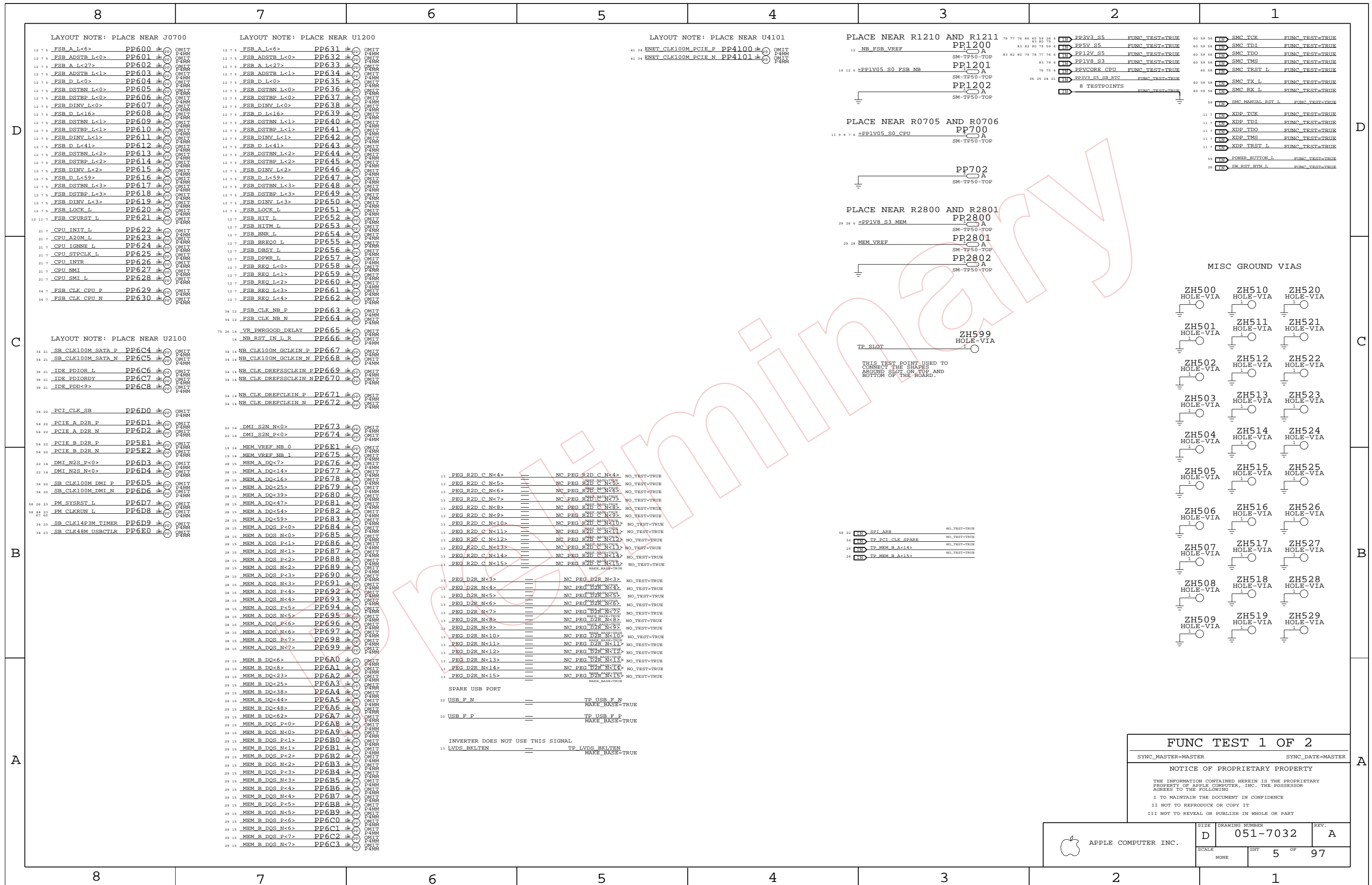
SIZE D

DRAWING NUMBER 051-7032

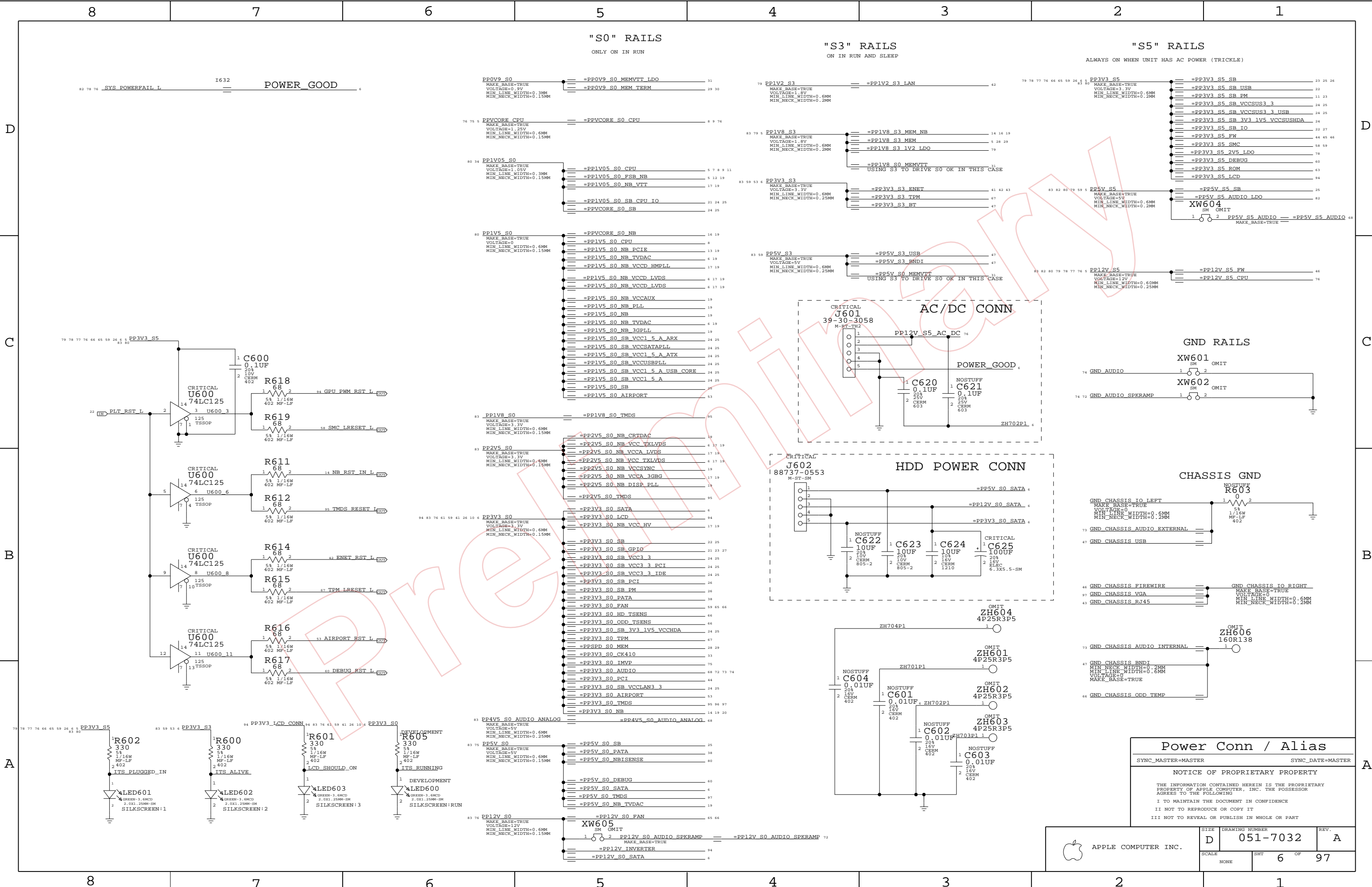
REV. A

SCALE NONE

SHT 4 OF 97

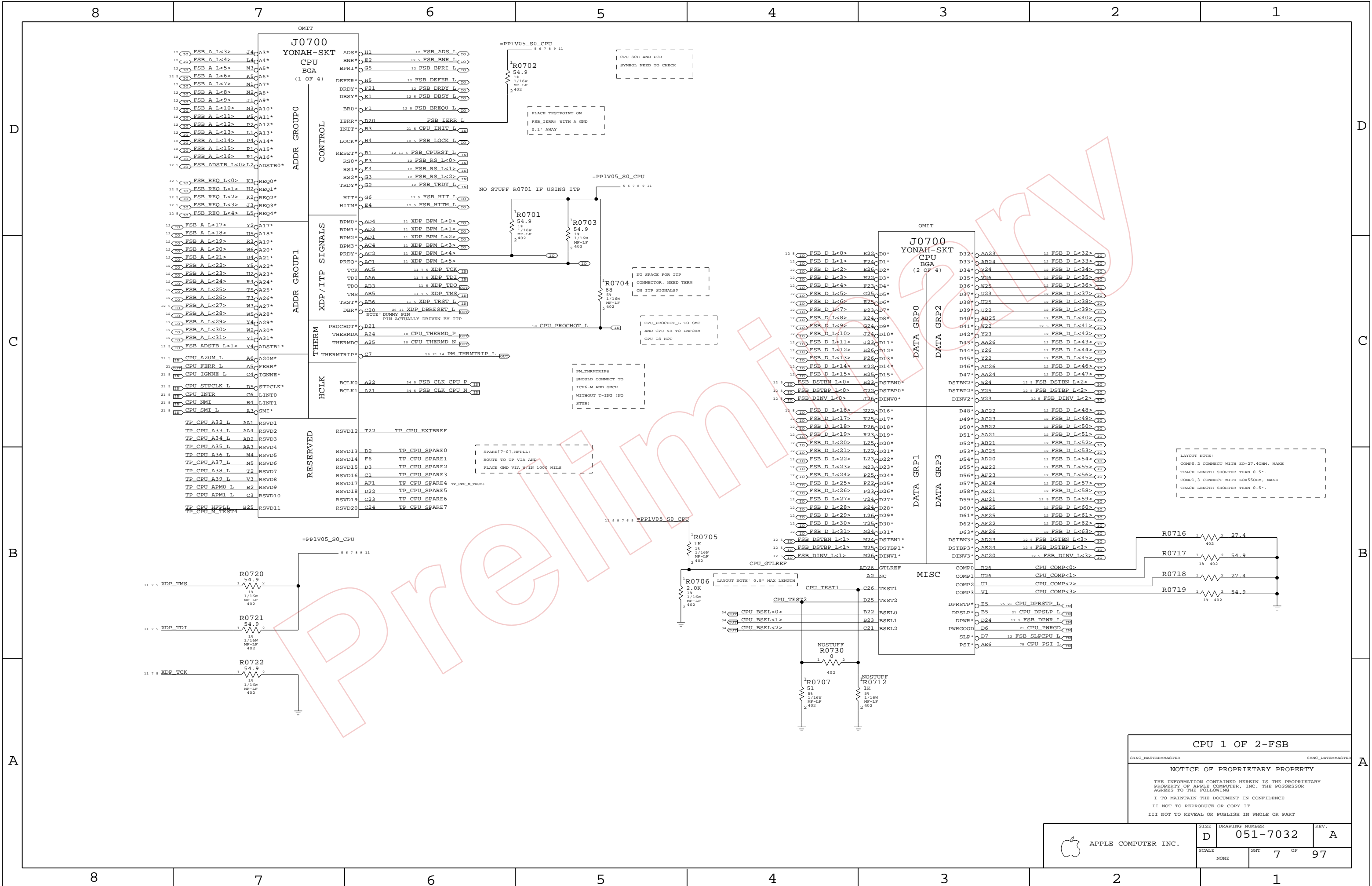






Power Conn / Alias	
SYNC_MASTER=MASTER	SYNC_DATE=MASTER
NOTICE OF PROPRIETARY PROPERTY	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING	
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE	
II NOT TO REPRODUCE OR COPY IT	
III NOT TO REVEAL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

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7032	REV. A
	SCALE NONE	SHT 6	OF 97



CPU 1 OF 2-FSB

SYNC\_MASTER=MASTER SYNC\_DATE=MASTER

NOTICE OF PROPRIETARY PROPERTY

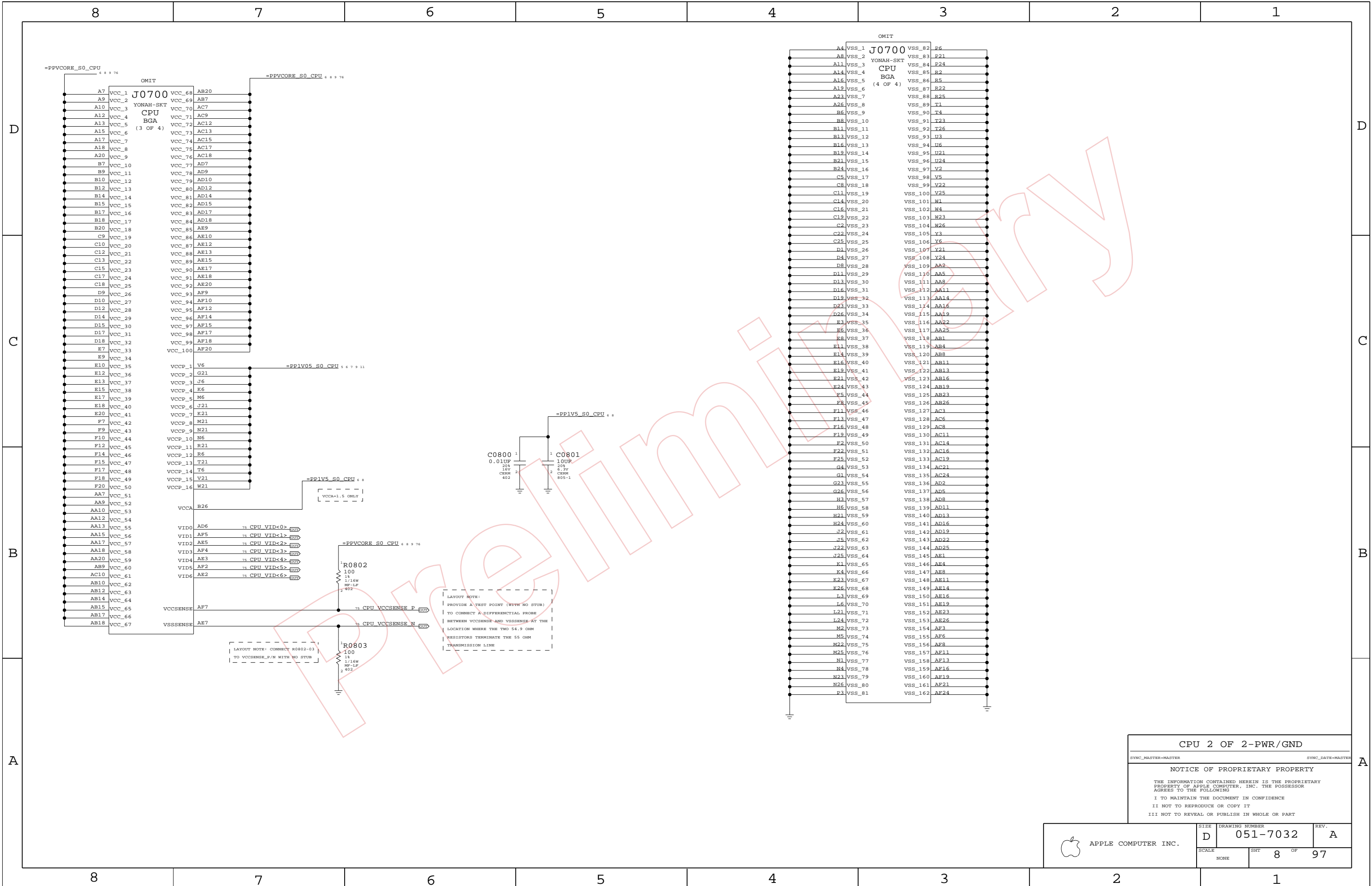
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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	051-7032	A
SCALE		SHT	7 OF 97
NONE			



CPU 2 OF 2-PWR/GND

SYNC\_MASTER=MASTER SYNC\_DATE=MASTER

NOTICE OF PROPRIETARY PROPERTY

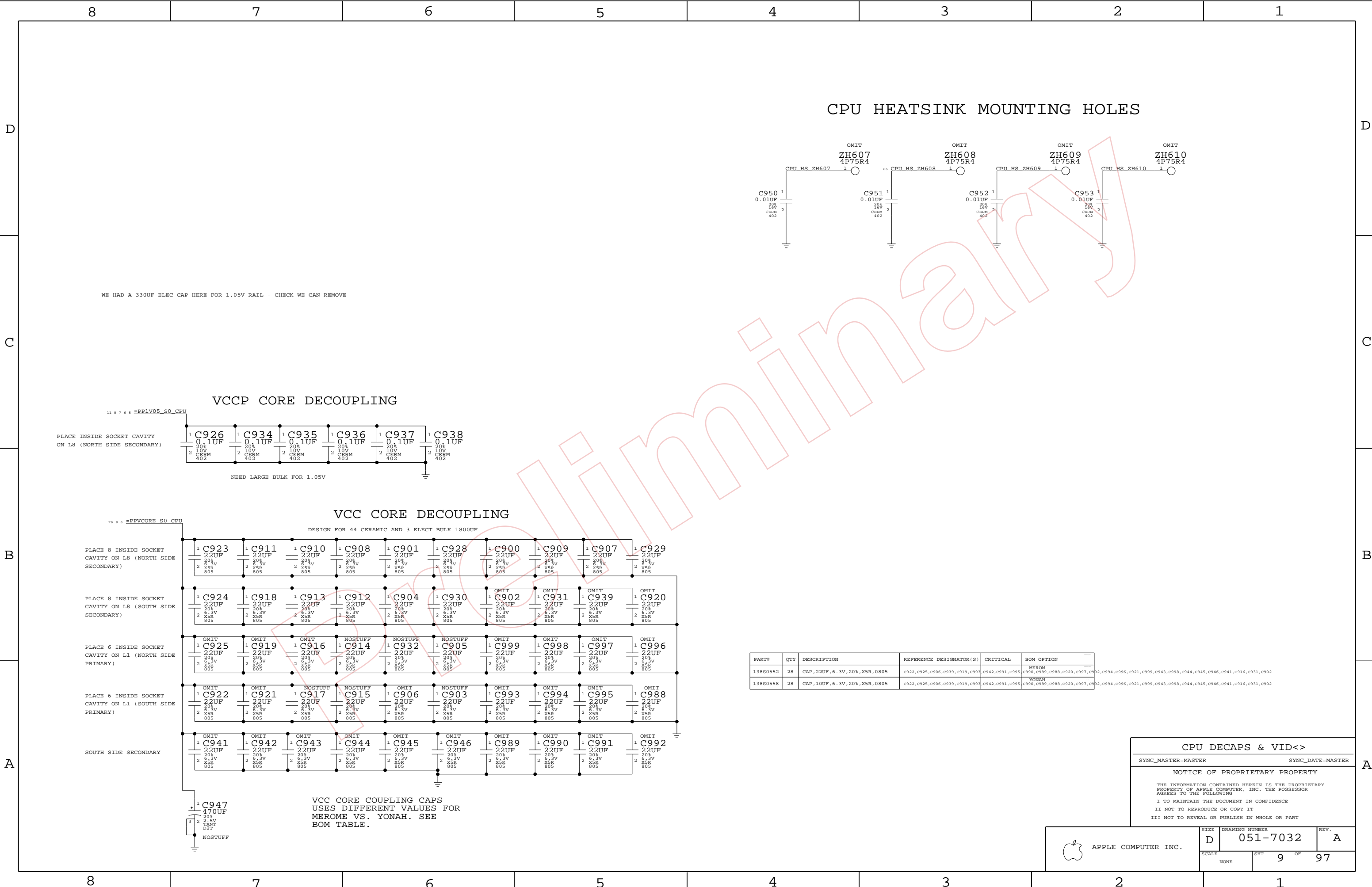
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART





PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S0552	28	CAP, 22UF, 6.3V, 20%, X5R, 0805	C922, C925, C906, C939, C919, C993, C942, C991, C995		MEROM
138S0558	28	CAP, 10UF, 6.3V, 20%, X5R, 0805	C922, C925, C906, C939, C919, C993, C942, C991, C995		YONAH

CPU DECAPS & VID<>

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.

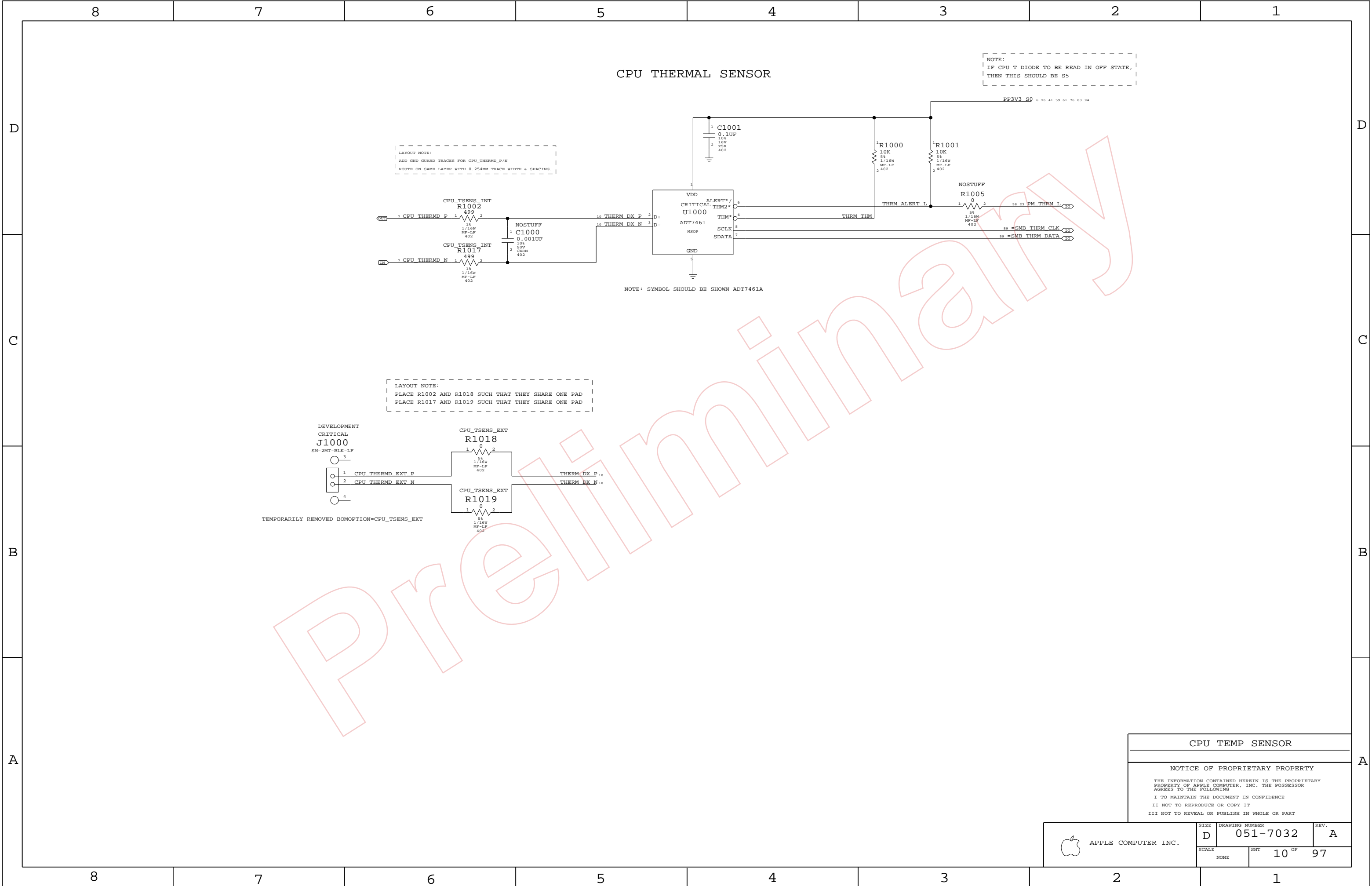
SIZE D

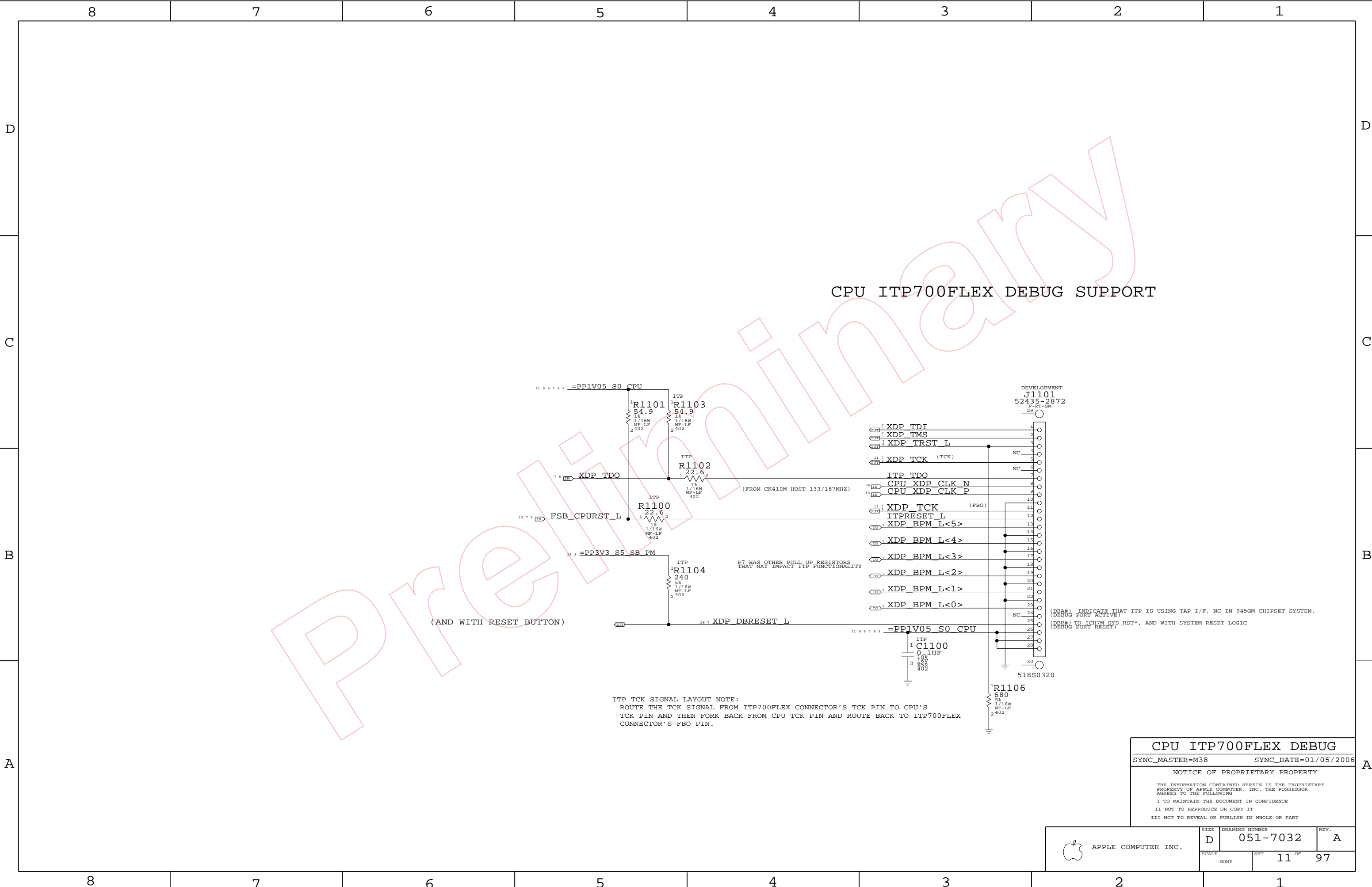
DRAWING NUMBER 051-7032

REV. A

SCALE NONE

SHT 9 OF 97





CPU ITP700FLEX DEBUG

SYNC\_MASTER=M38 SYNC\_DATE=01/05/2006

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 D	DRAWING NUMBER 051-7032	REV. A
	SCALE NONE	SHT 11 OF 97	

D

C

B

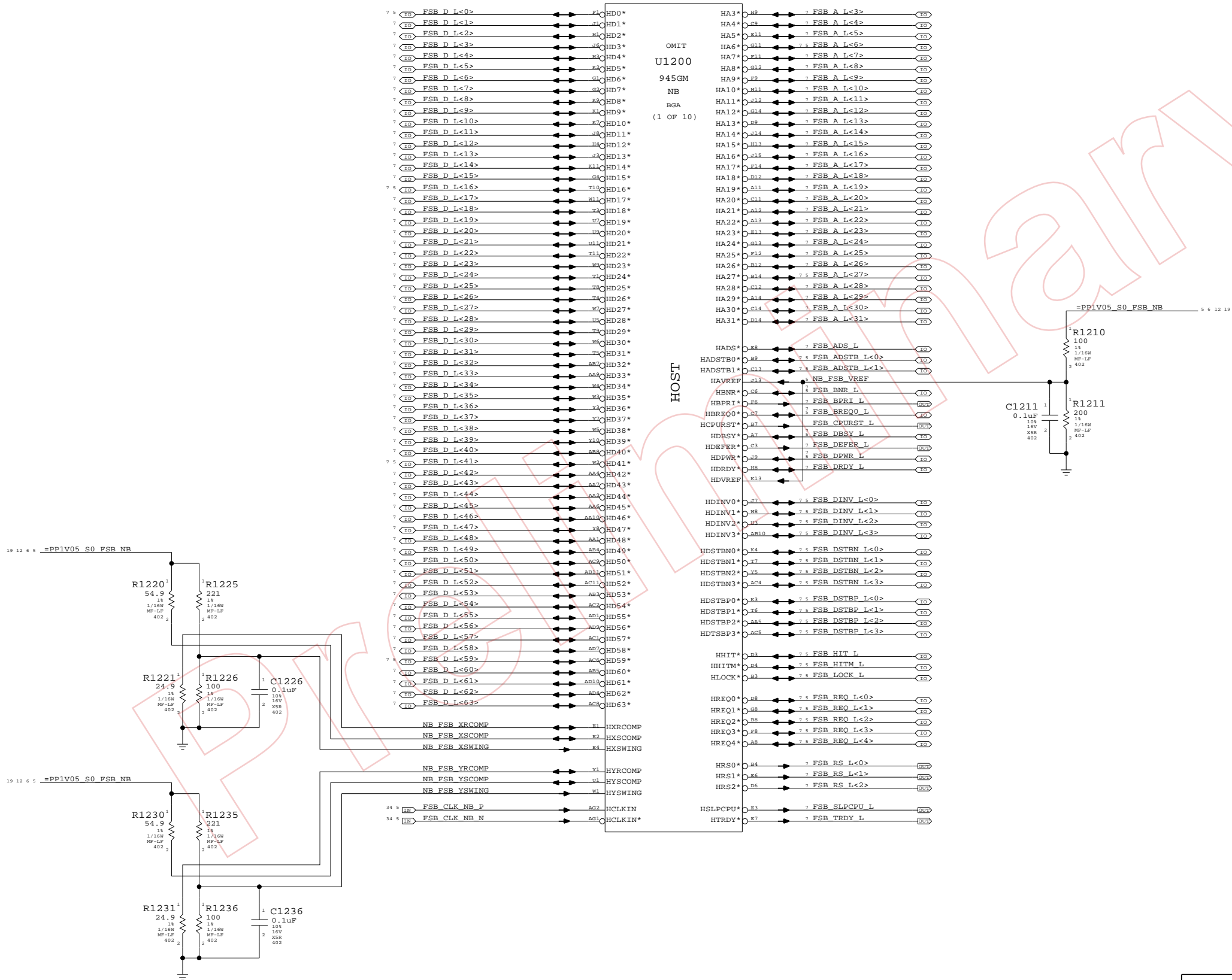
A

D

C

B

A



NB CPU Interface

SYNC\_MASTER=M1 SYNC\_DATE=01/05/2006

NOTICE OF PROPRIETARY PROPERTY

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

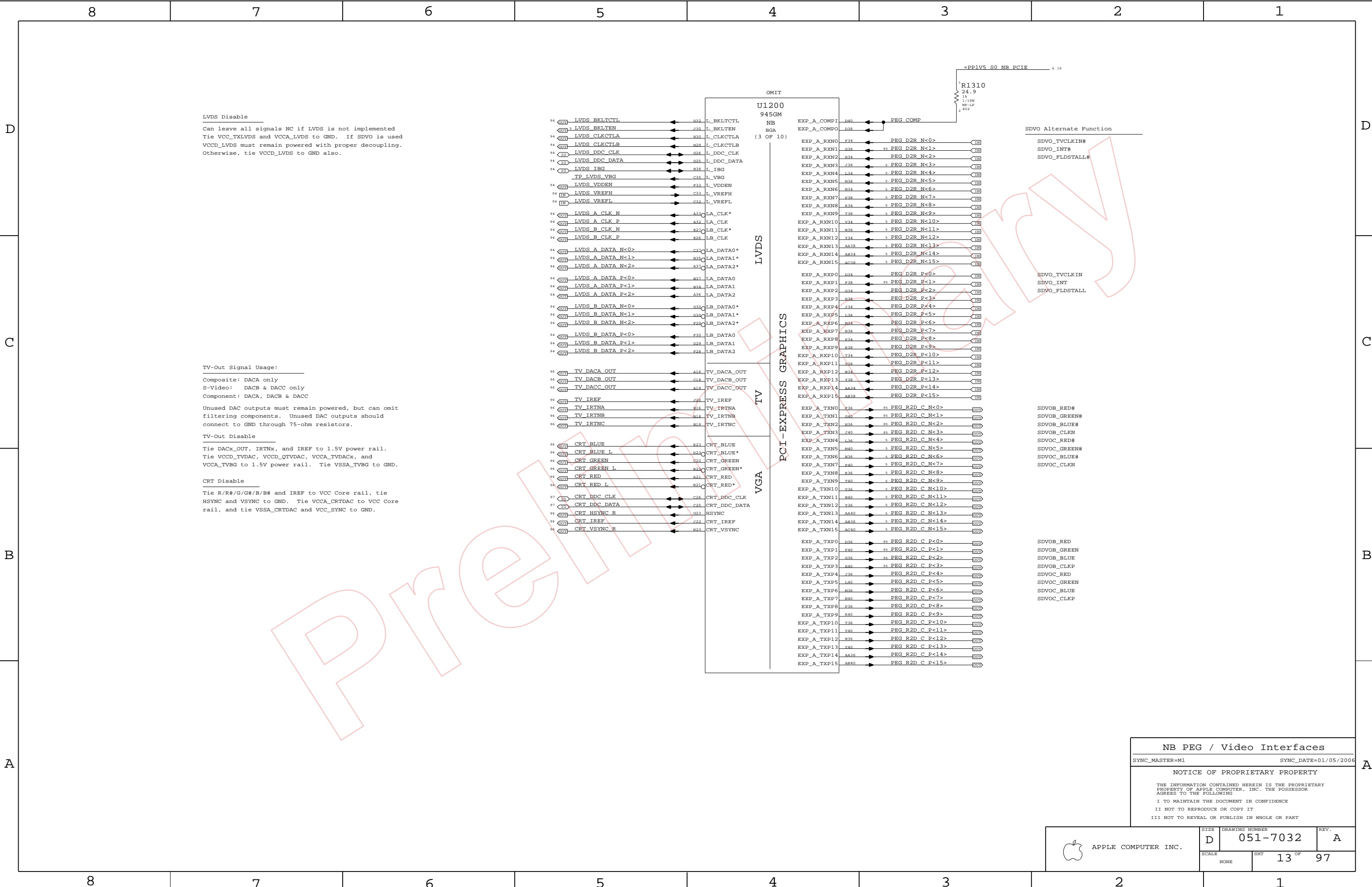
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

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	051-7032	A
SCALE		SHT	12 OF 97
NONE			





**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.

NB PEG / Video Interfaces

SYNC\_MASTER=M1

SYNC\_DATE=01/05/2006

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

D

DRAWING NUMBER

051-7032

REV.

A

SCALE

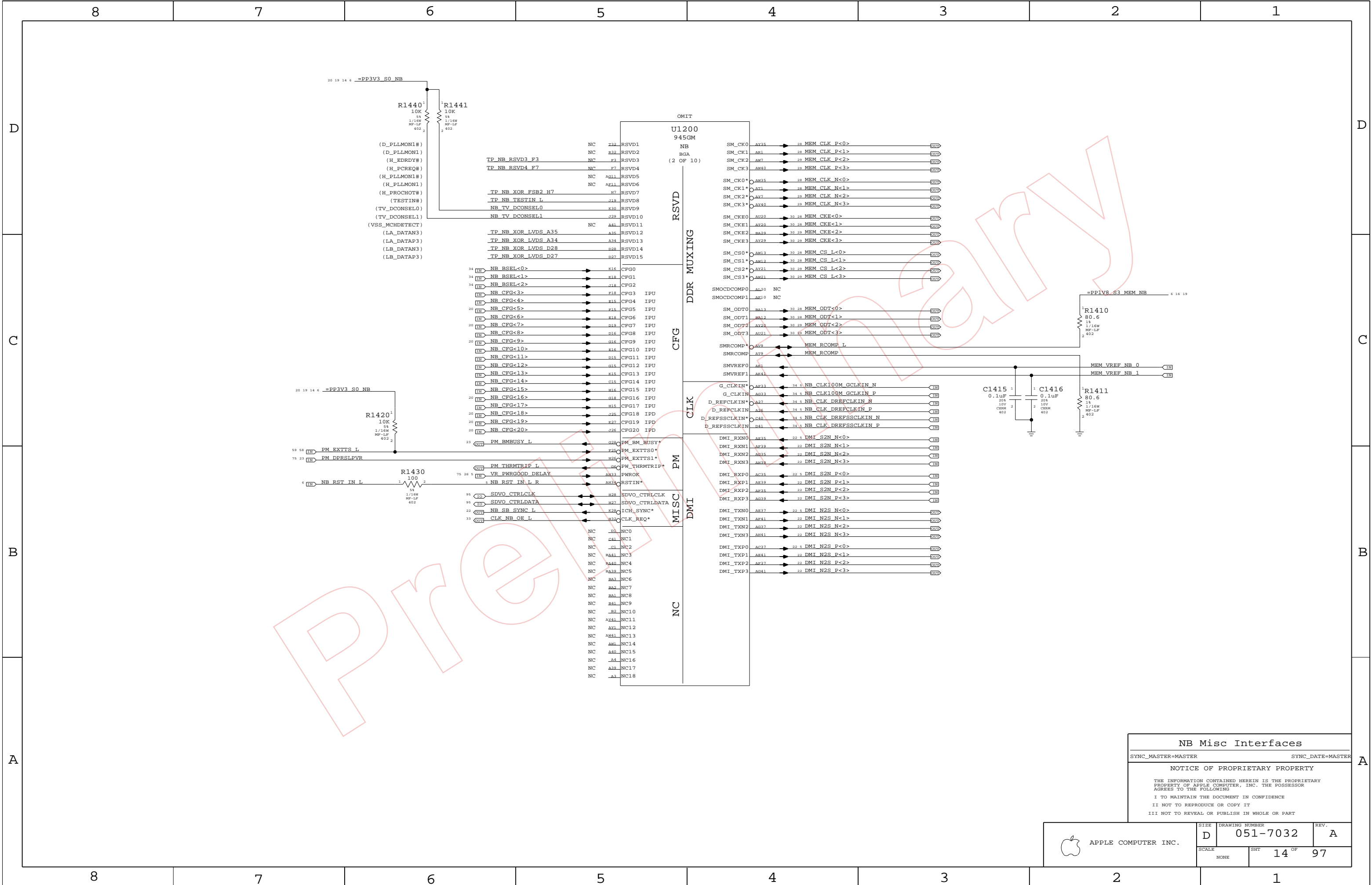
NONE

SHT

13

OF

97



NB Misc Interfaces

SYNC\_MASTER=MASTER

SYNC\_DATE=MASTER

NOTICE OF PROPRIETARY PROPERTY

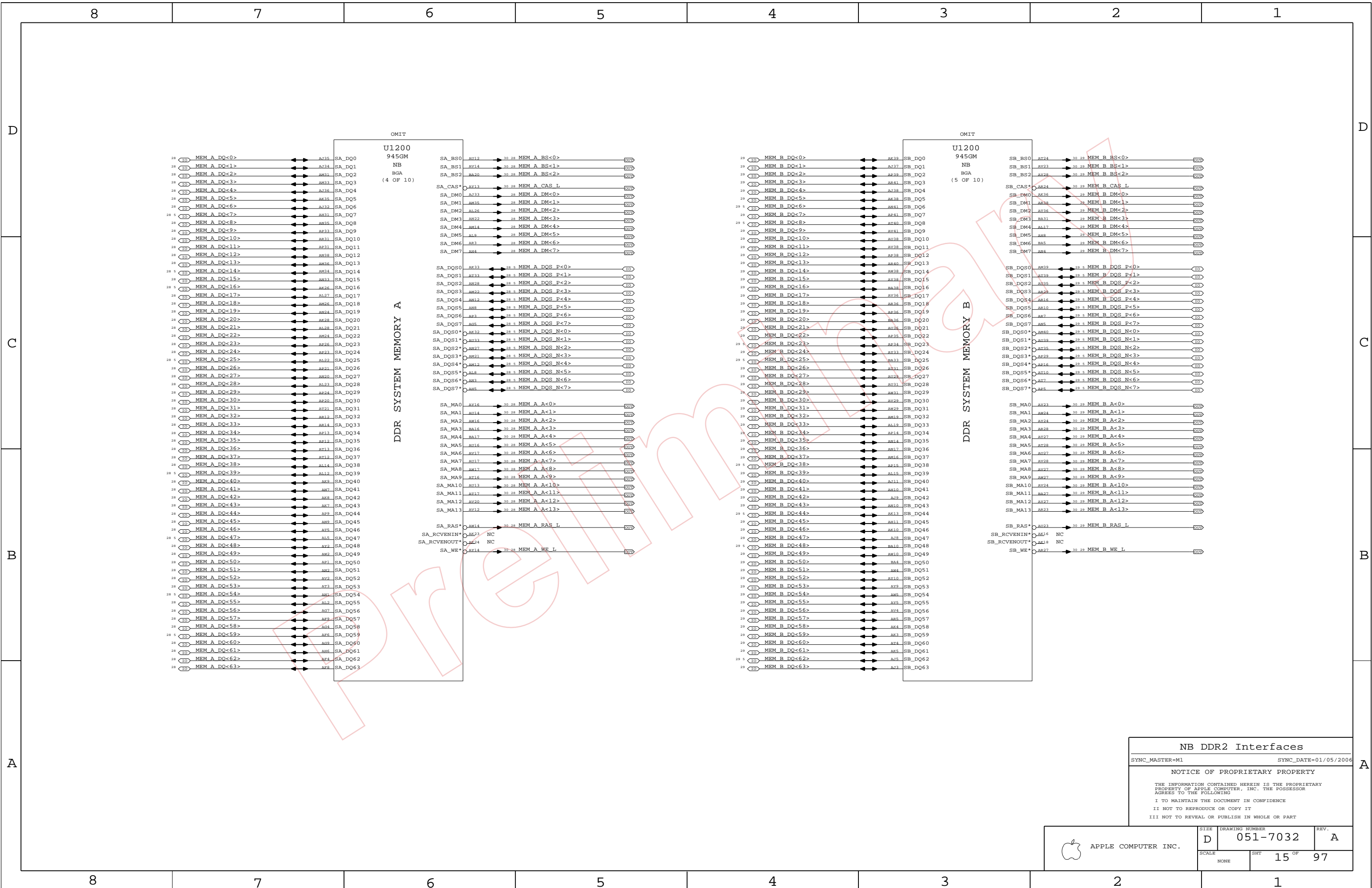
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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	051-7032	A
SCALE		SHT	14 OF 97
NONE			



NB DDR2 Interfaces

SYNC\_MASTER=M1 SYNC\_DATE=01/05/2006

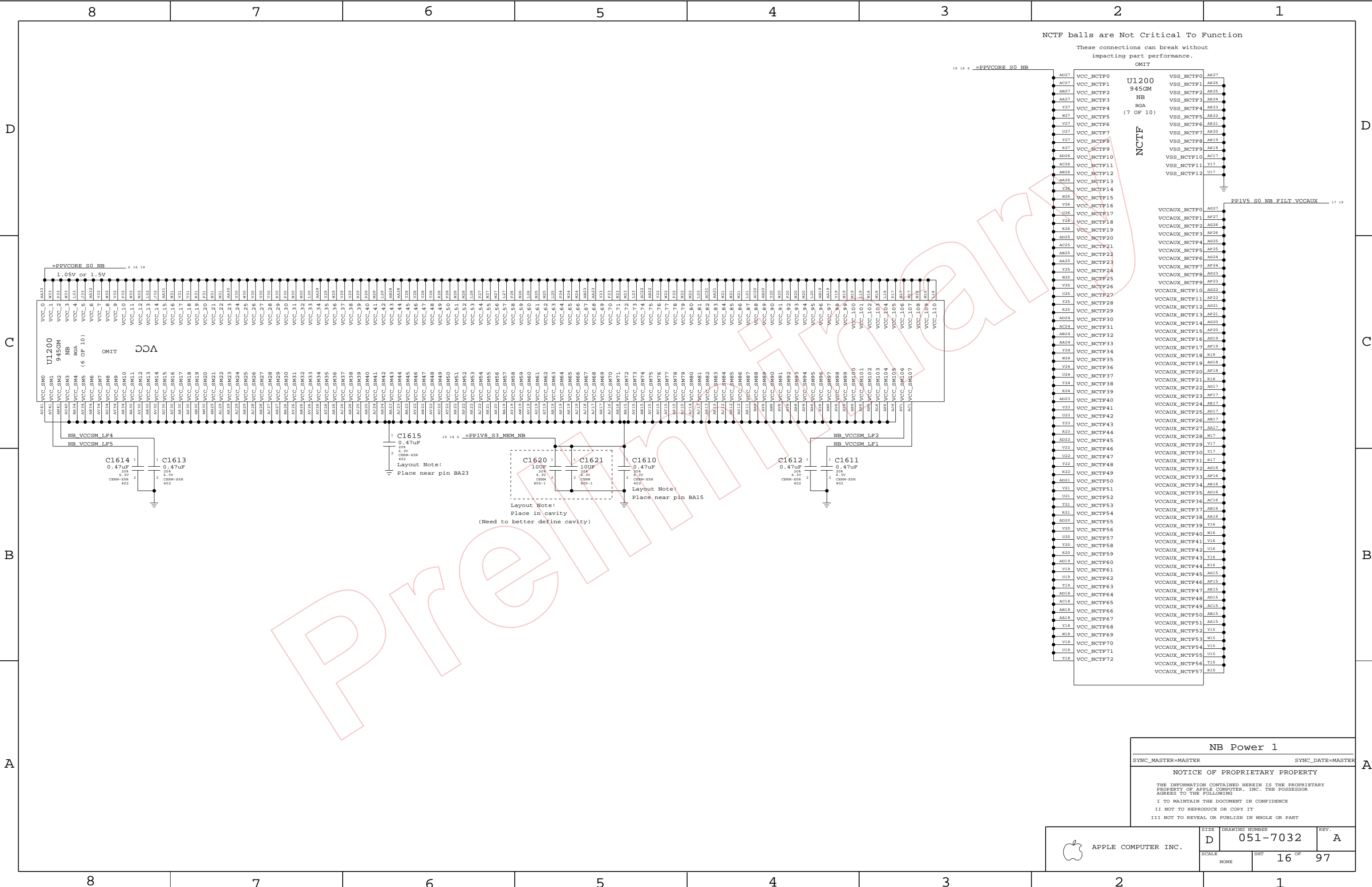
NOTICE OF PROPRIETARY PROPERTY

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.

SCALE  
NONE

D

SHEET  
16 OF 97

A

REV.

NB Power 1

SYNC\_MASTER=MASTER

SYNC\_DATE=MASTER

NOTICE OF PROPRIETARY PROPERTY

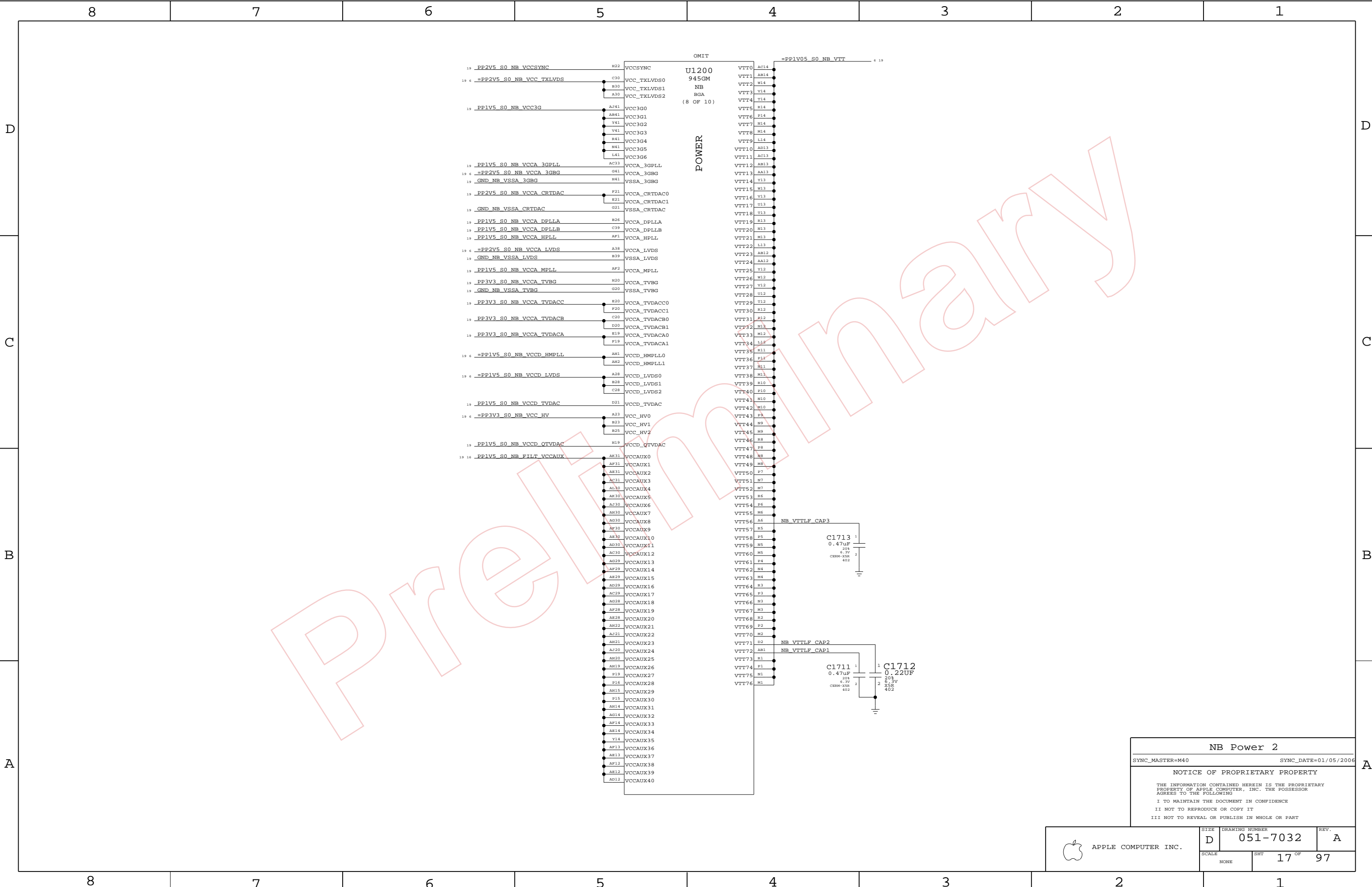
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART





NB Power 2

SYNC\_MASTER=M40

SYNC\_DATE=01/05/2006

NOTICE OF PROPRIETARY PROPERTY

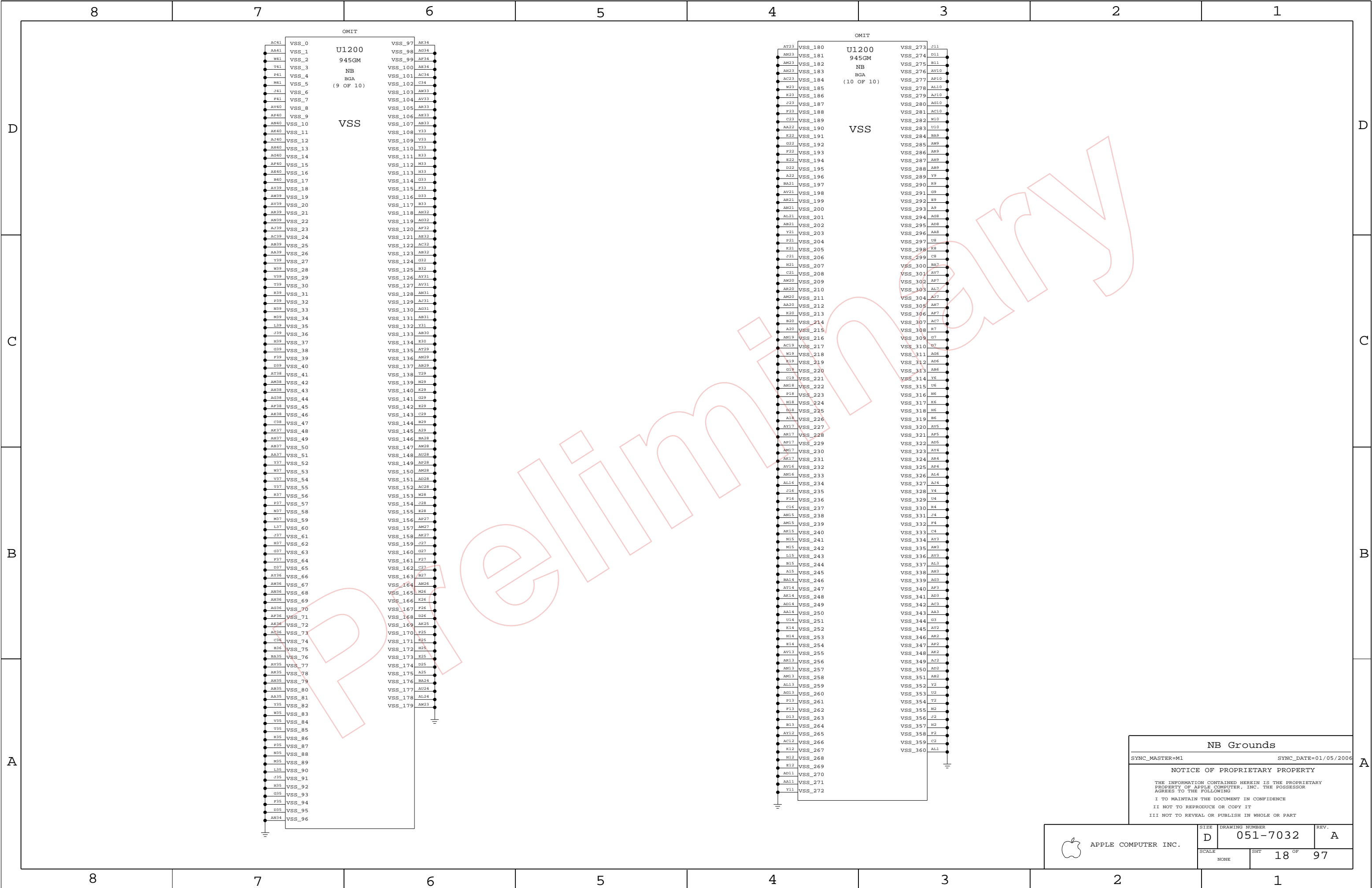
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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	051-7032	A
SCALE		SHT	17 OF 97
NONE			



D

C

B

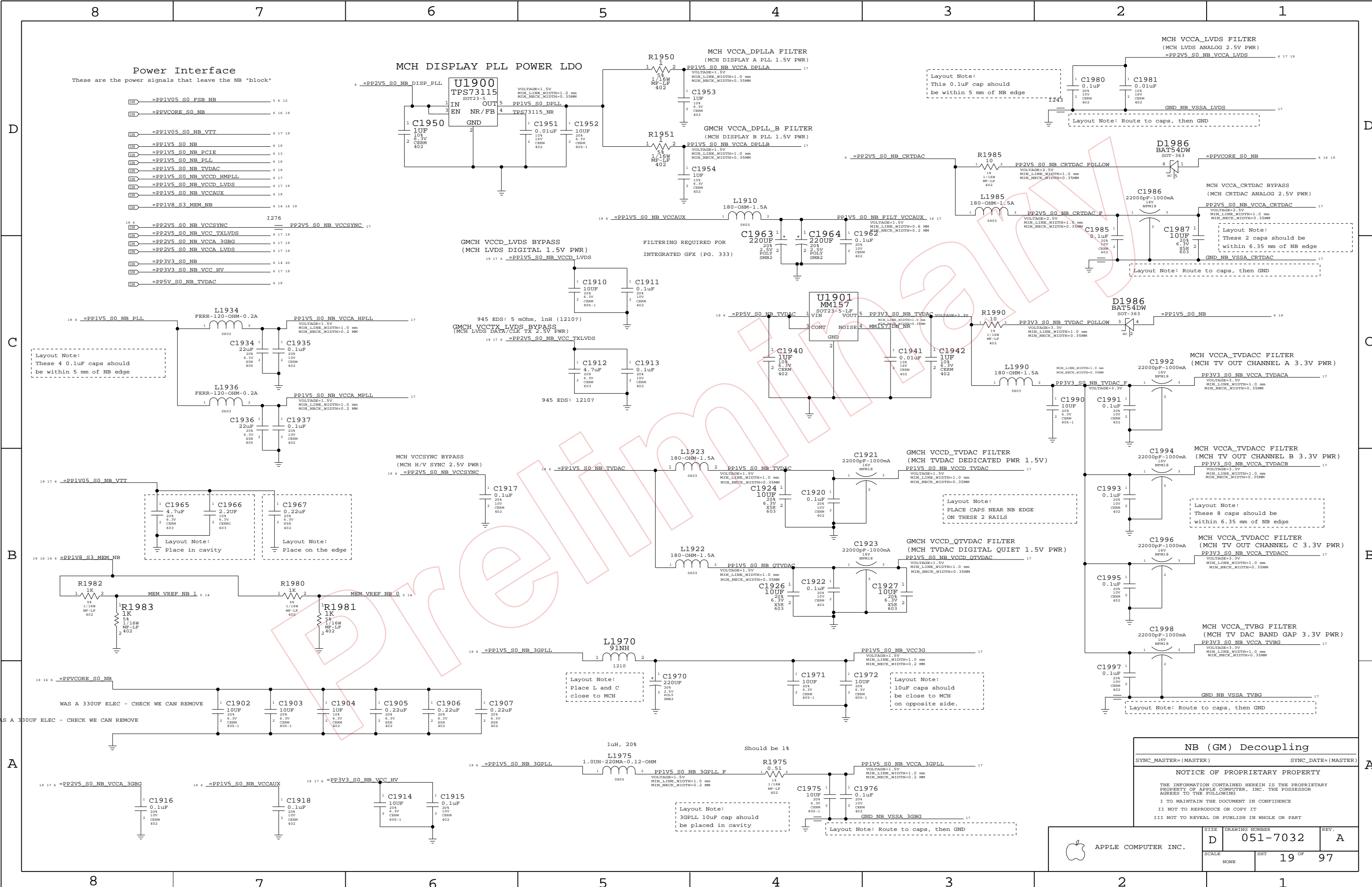
A

D

C

B

A



NB (GM) Decoupling		
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		

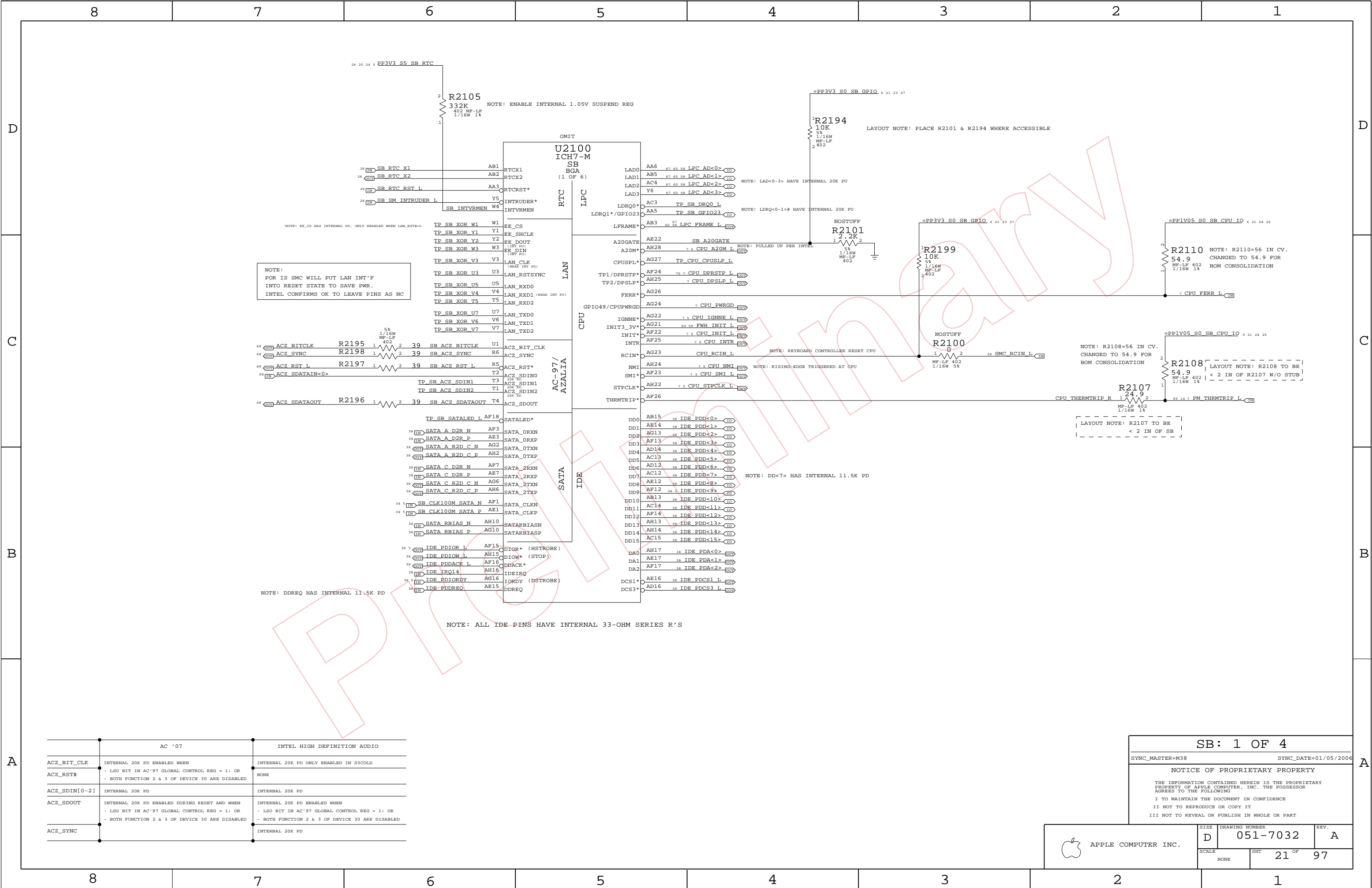
SIZE	DRAWING NUMBER	REV.
D	051-7032	A
SCALE	SHT	19 OF 97
NONE		

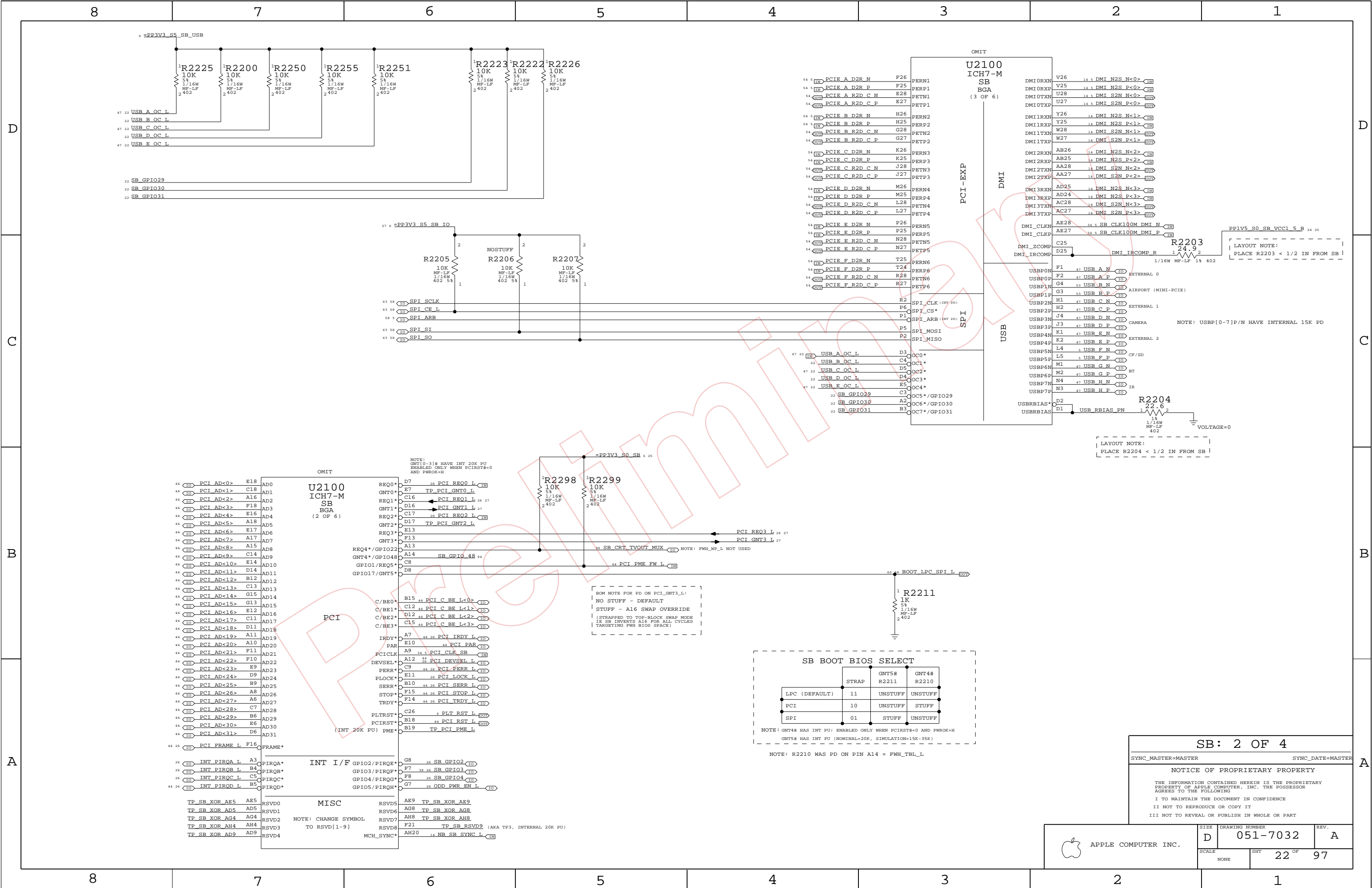


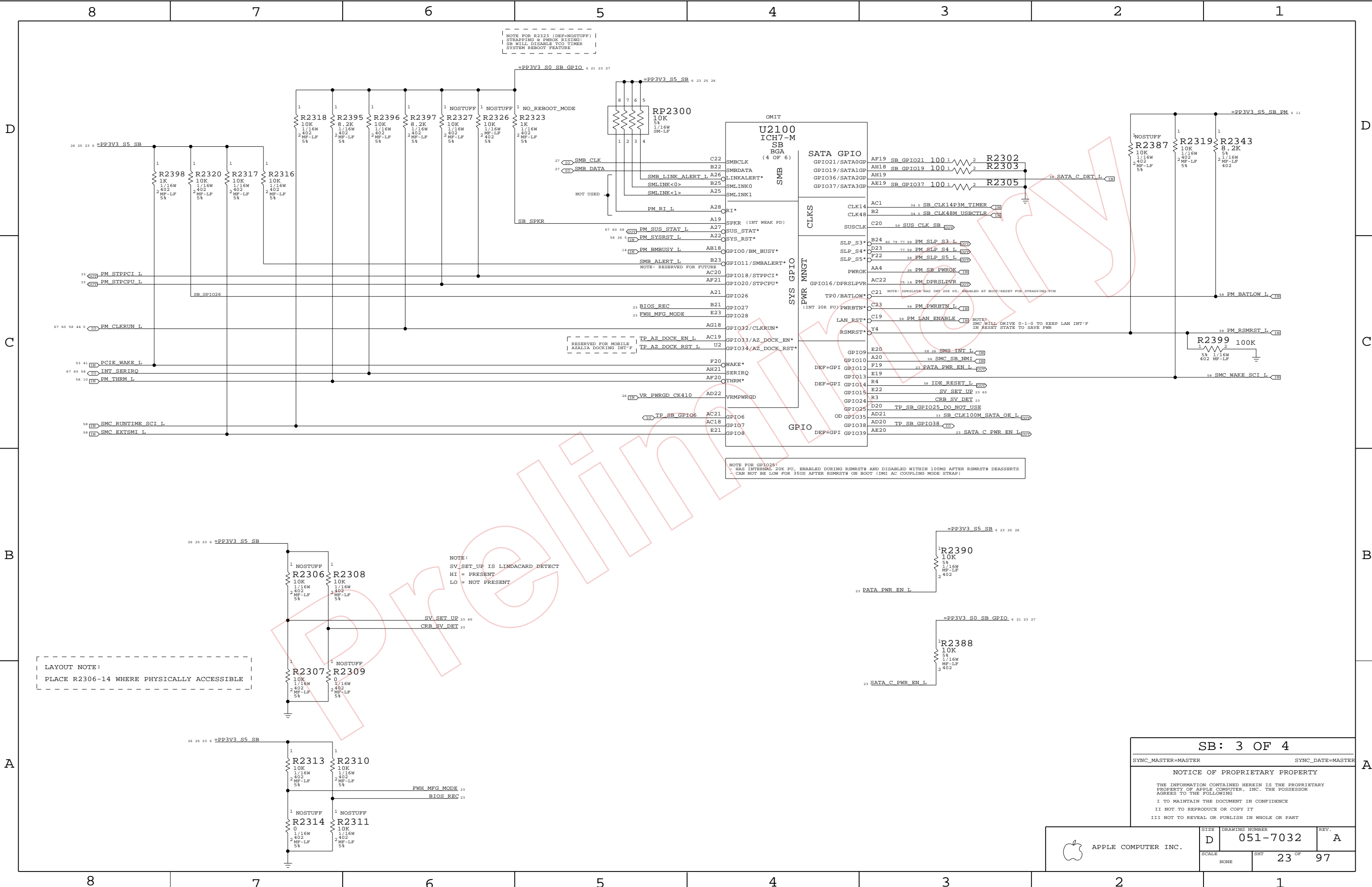
APPLE COMPUTER INC.











NOTE FOR R2323 (DEF-NOSTUFF)  
STRAPPING & PWROK RISING:  
SB WILL DISABLE TCO 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

SB: 3 OF 4

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 D

DRAWING NUMBER 051-7032

REV. A

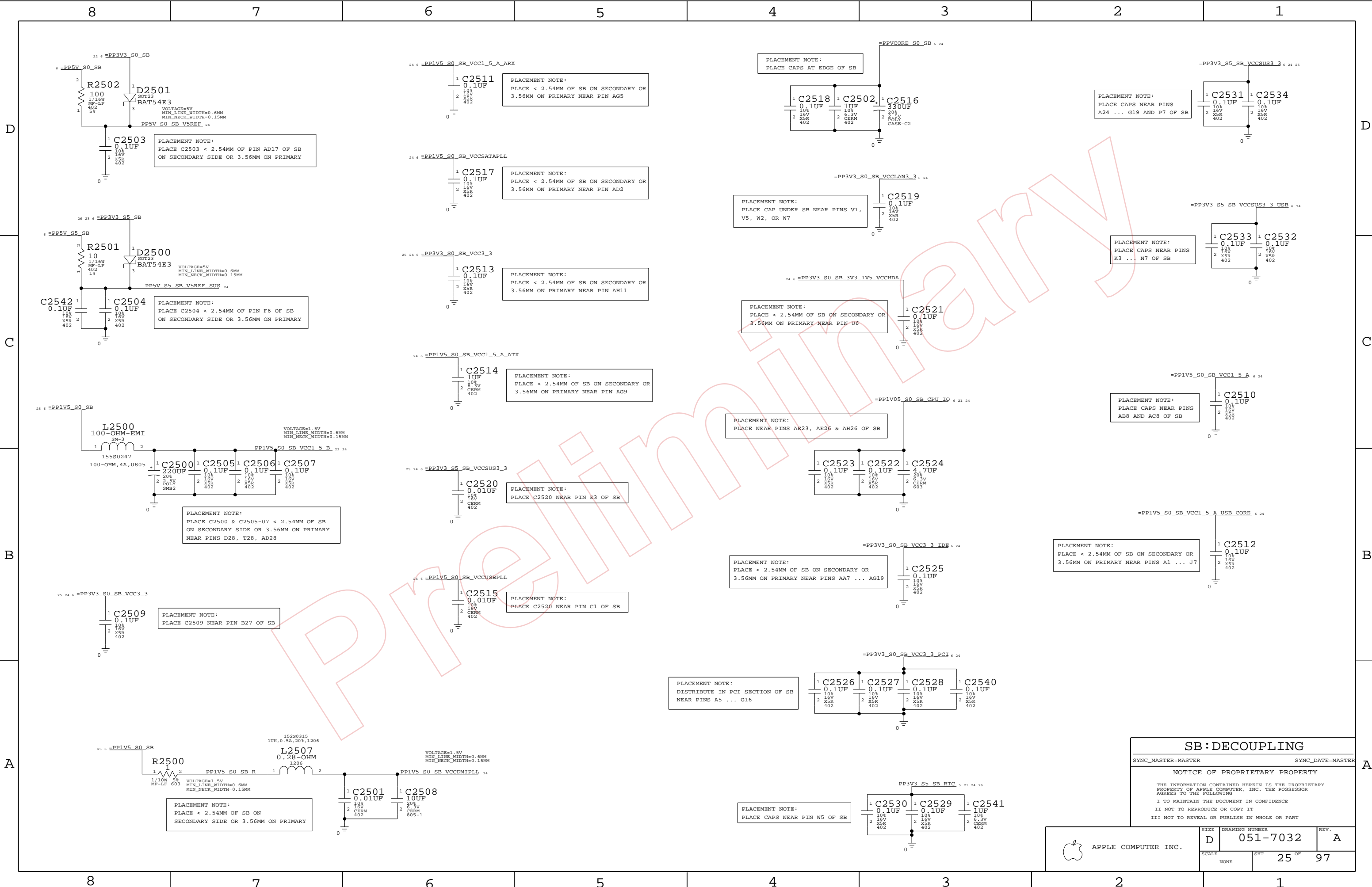
SCALE NONE

SHT 23

OF 97







**SB: DECOUPLING**

SYNC\_MASTER=MASTER SYNC\_DATE=MASTER

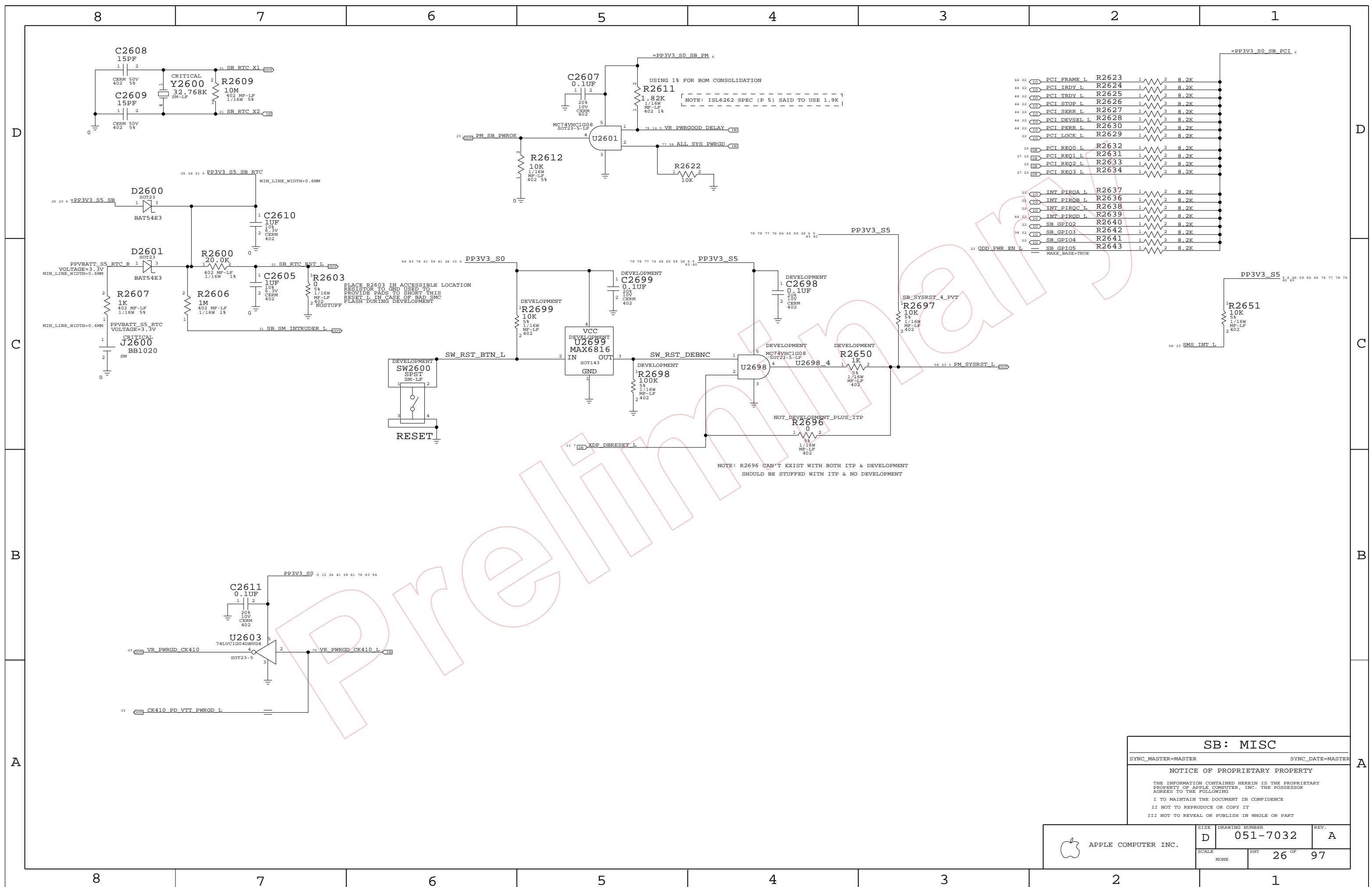
**NOTICE OF PROPRIETARY PROPERTY**

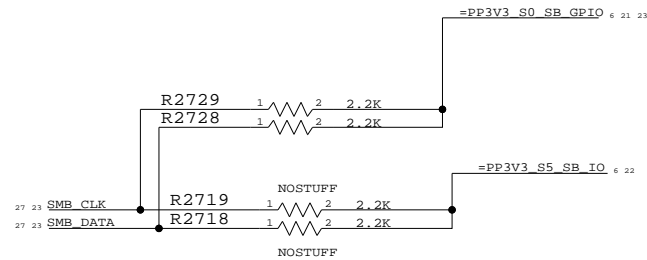
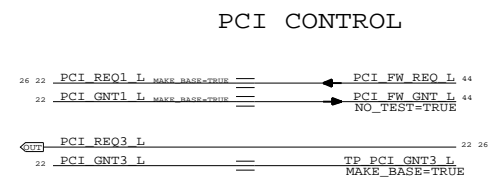
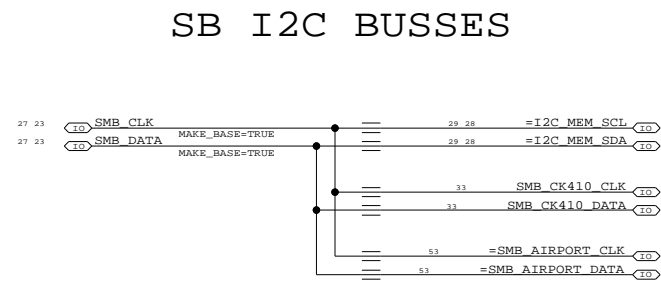
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

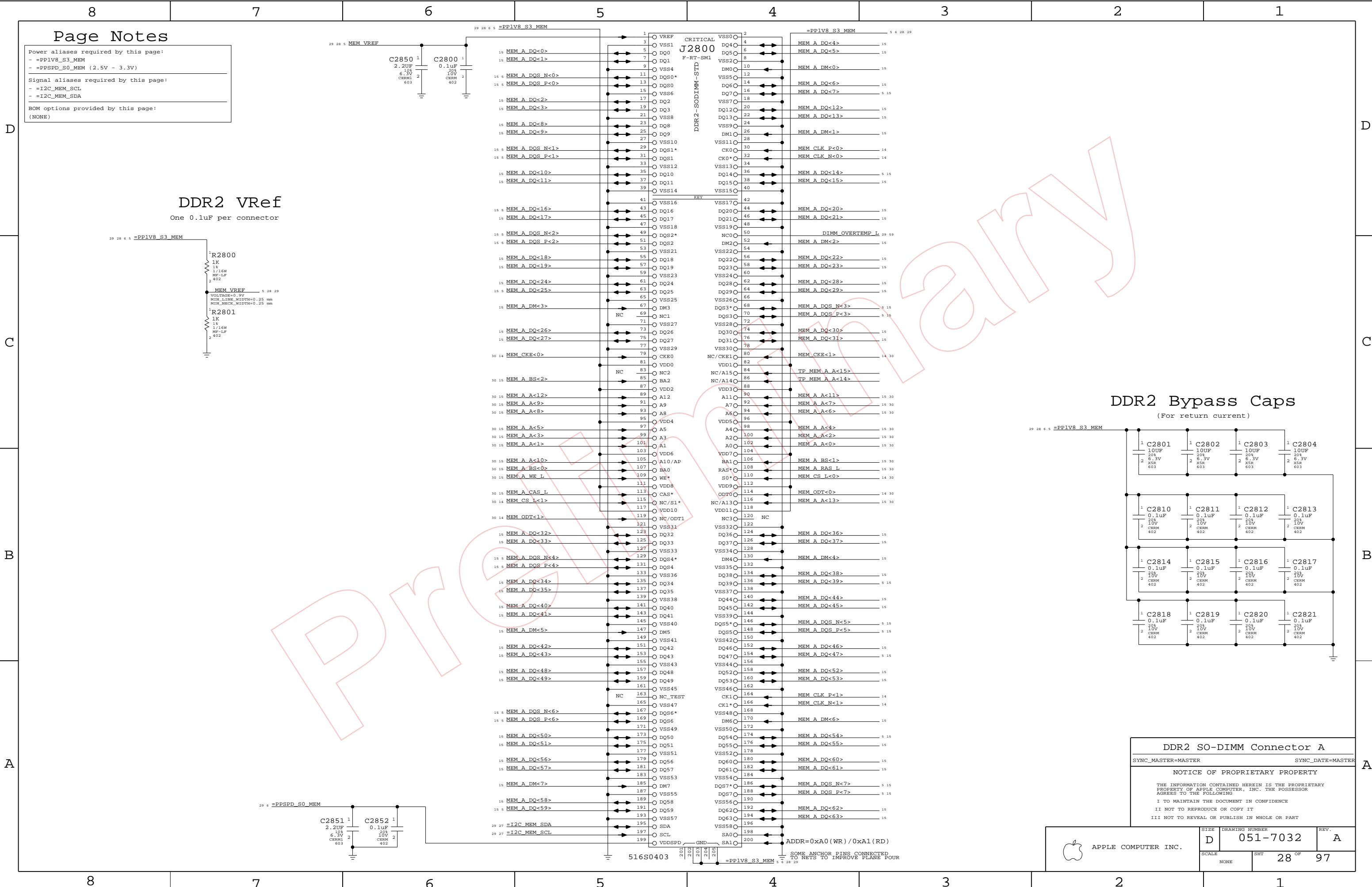
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART







Page Notes

Power aliases required by this page:

- =P1V8\_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

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.

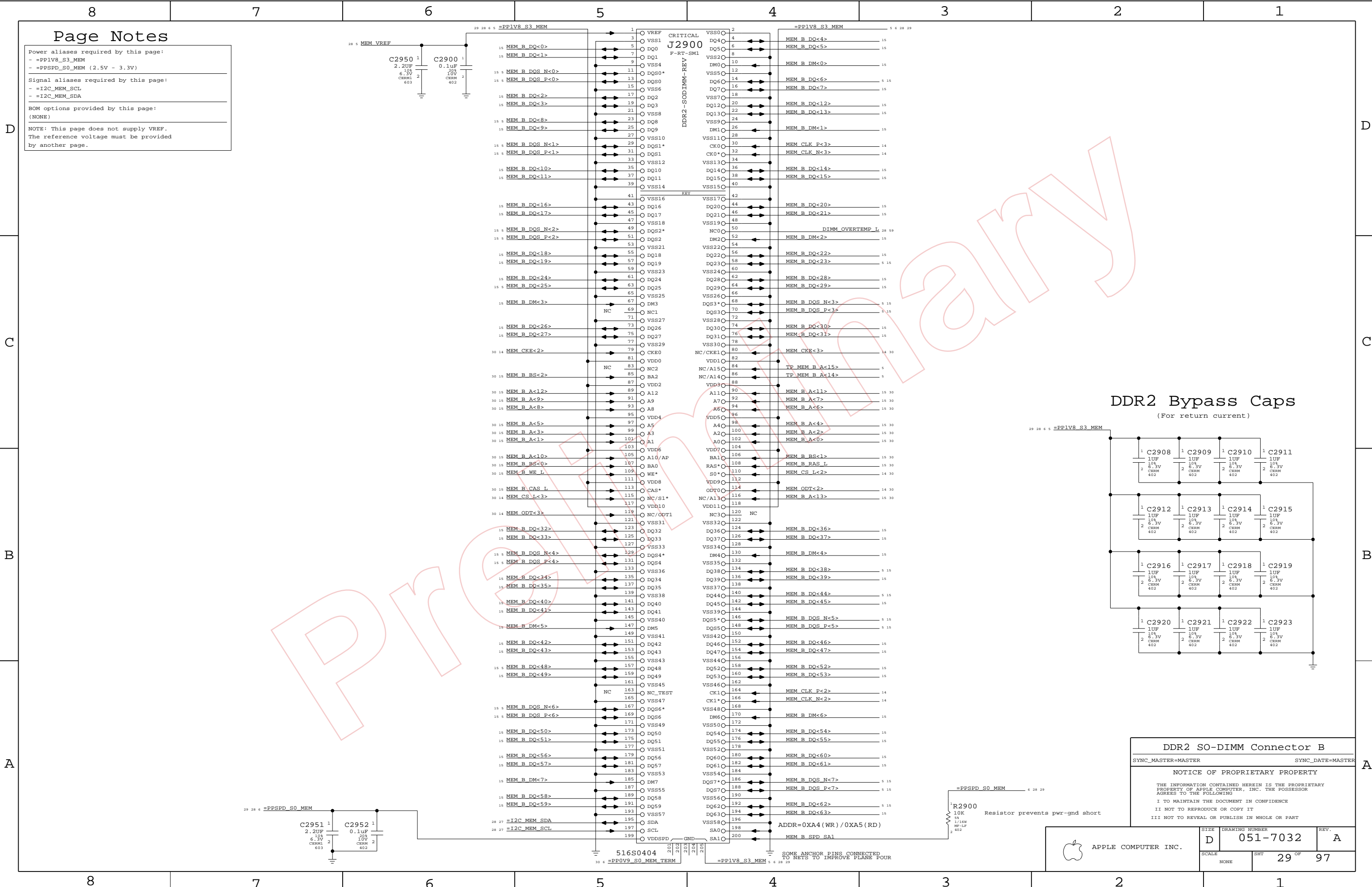
SIZE D

DRAWING NUMBER 051-7032

REV. A

SCALE NONE

SHT 28 OF 97



Page Notes

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

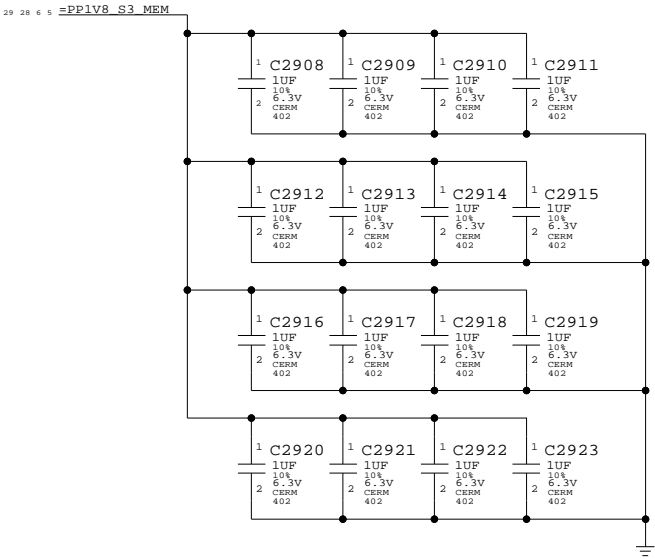
Signal aliases required by this page:  
- =I2C\_MEM\_SCL  
- =I2C\_MEM\_SDA

BOM options provided by this page:  
(NONE)

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

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  
D

DRAWING NUMBER  
051-7032

REV.  
A

SCALE  
NONE

SHT  
29

OF  
97

=PPSPD\_S0\_MEM

1R2900

10K

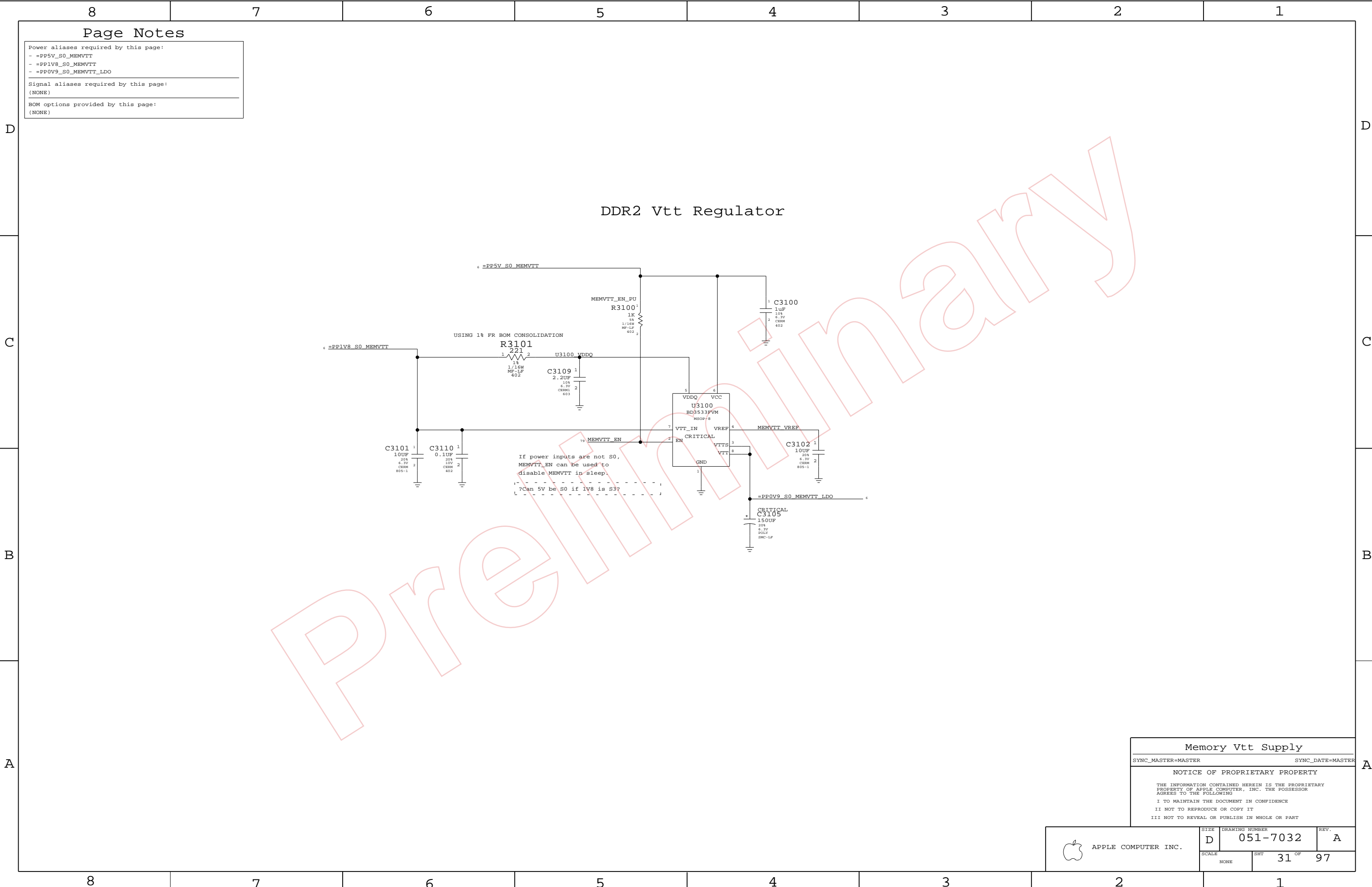
5% 1/16W NF-1P

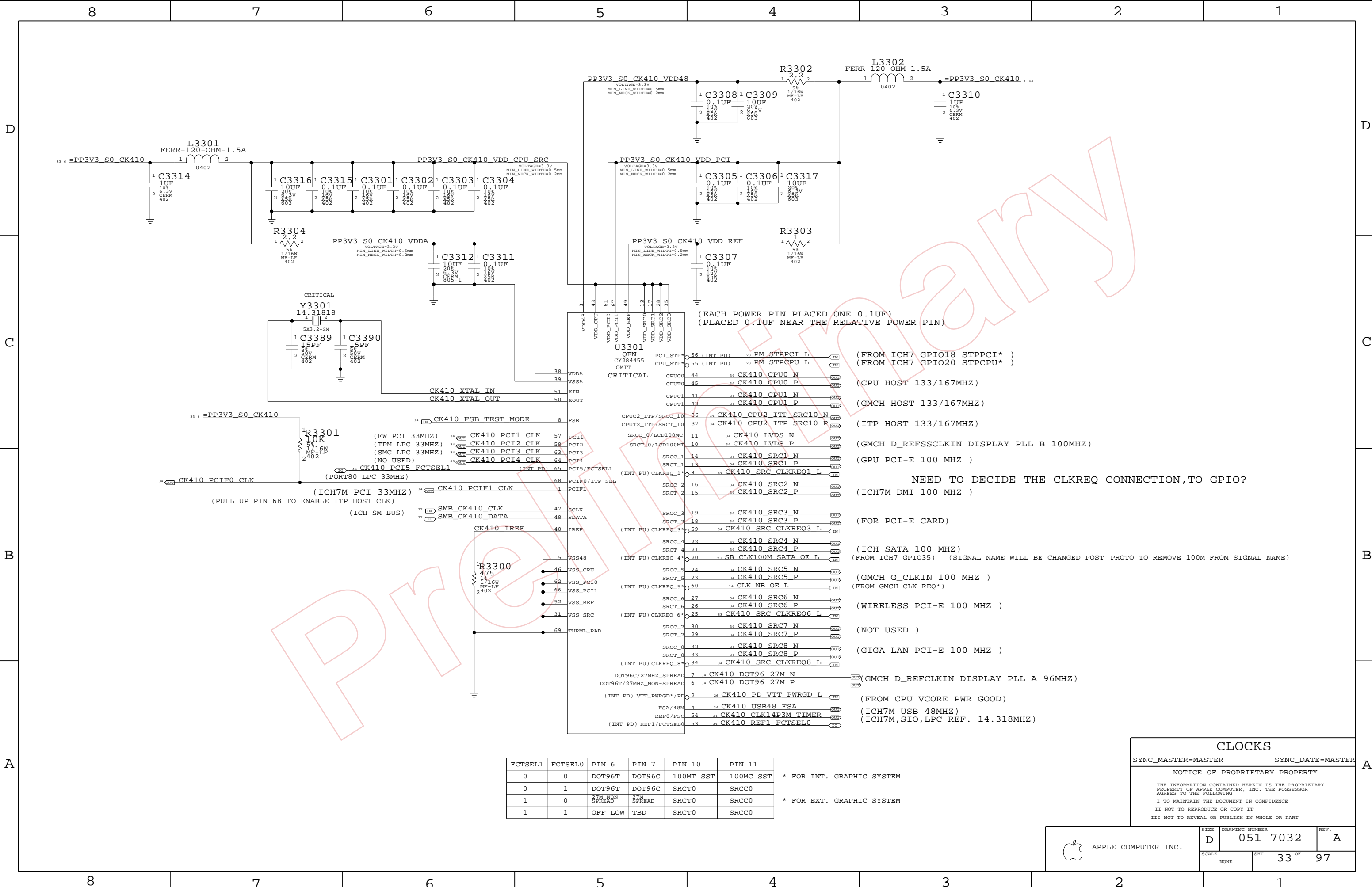
Resistor prevents pwr-gnd short

SOME ANCHOR PINS CONNECTED TO NETS TO IMPROVE PLANE POUR









FCTSEL1	FCTSEL0	PIN 6	PIN 7	PIN 10	PIN 11
0	0	DOT96T	DOT96C	100MT_SST	100MC_SST
0	1	DOT96T	DOT96C	SRCT0	SRCC0
1	0	27M_NON_SPREAD	27M_SPREAD	SRCT0	SRCC0
1	1	OFF LOW	TBD	SRCT0	SRCC0

\* FOR INT. GRAPHIC SYSTEM

\* FOR EXT. GRAPHIC SYSTEM

CLOCKS

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.

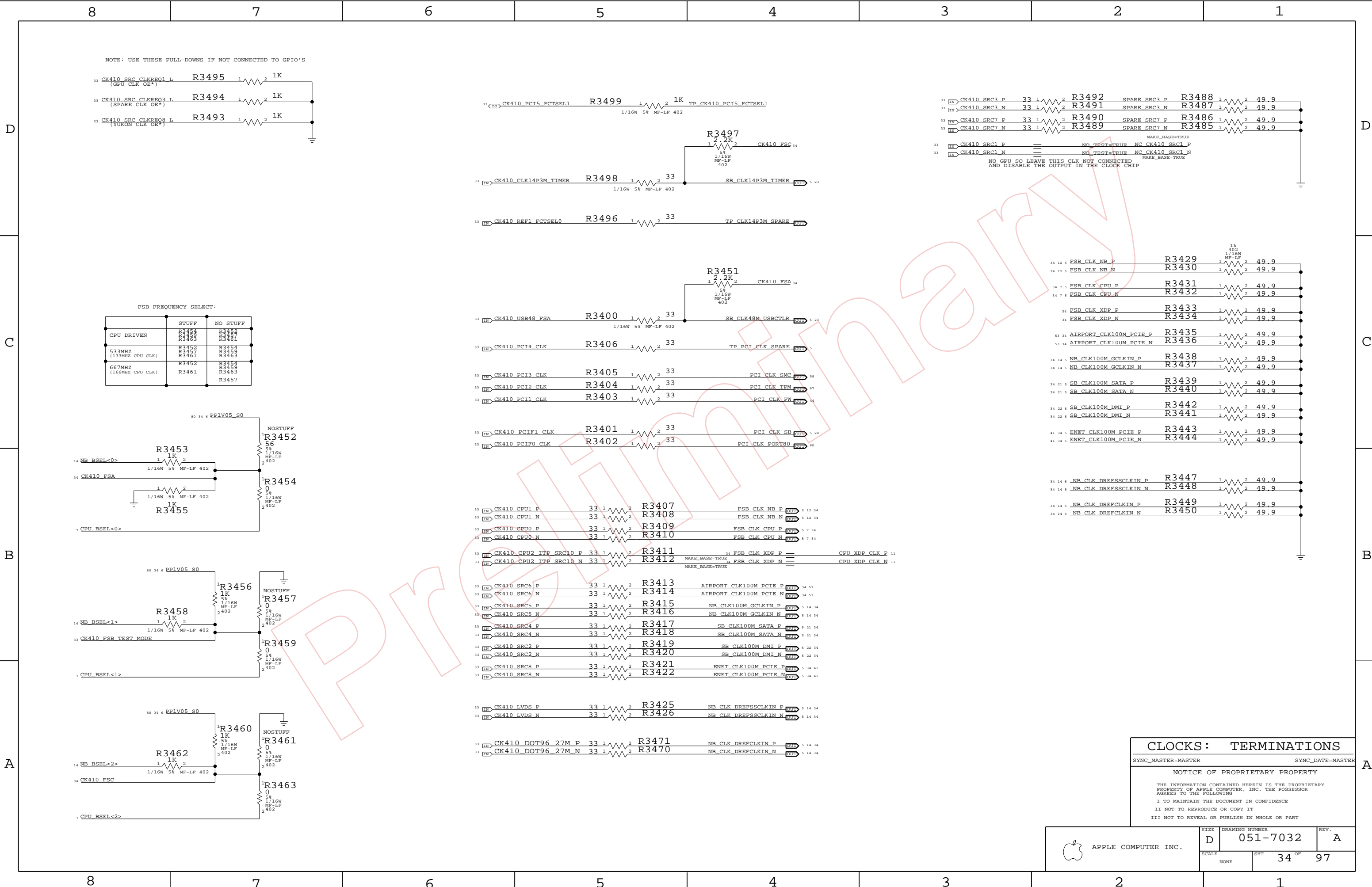
SIZE D

DRAWING NUMBER 051-7032

REV. A

SCALE NONE

SHT 33 OF 97



CLOCKS: TERMINATIONS

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

D

DRAWING NUMBER

051-7032

REV.

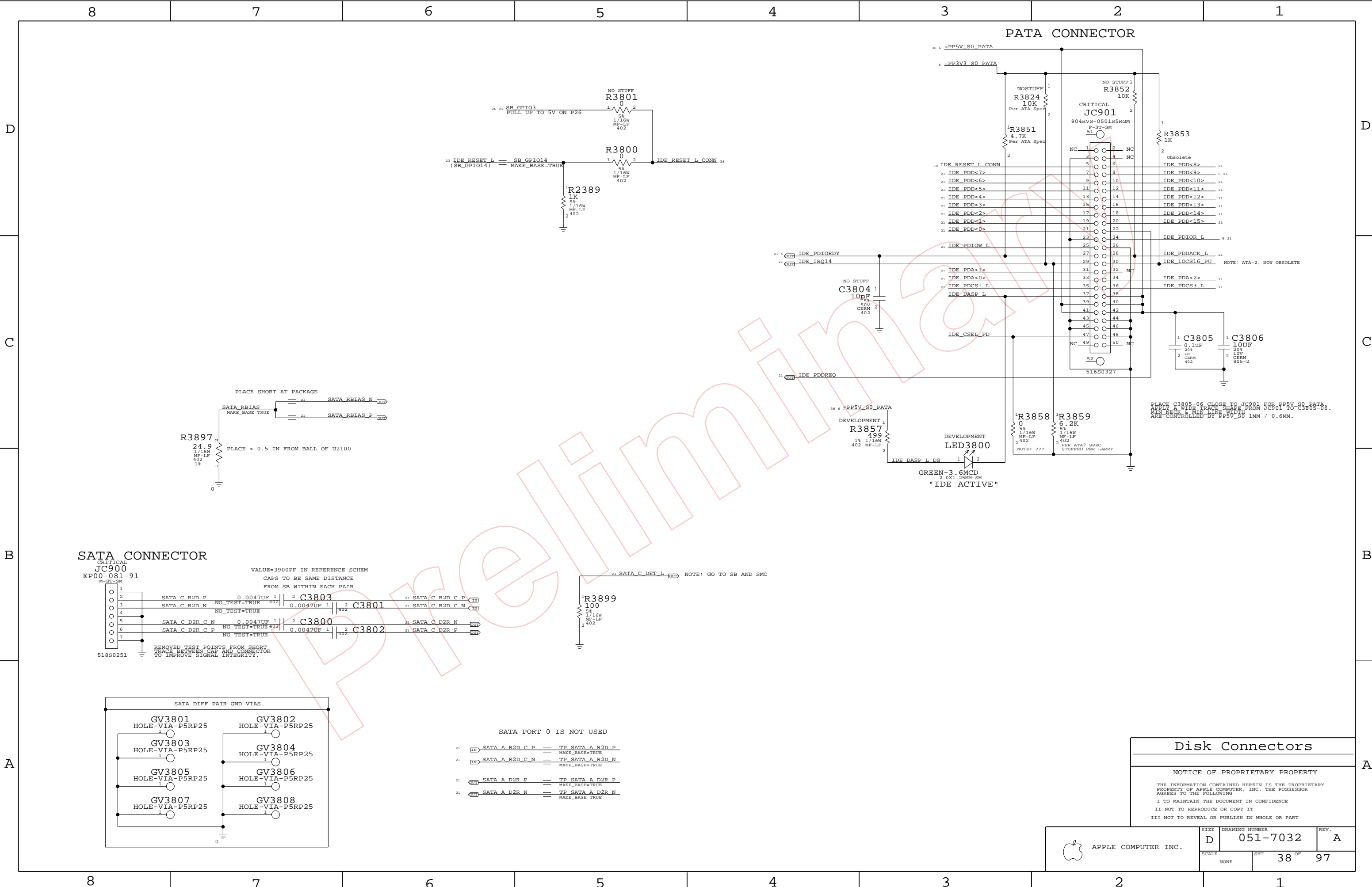
A

SCALE

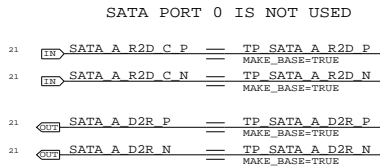
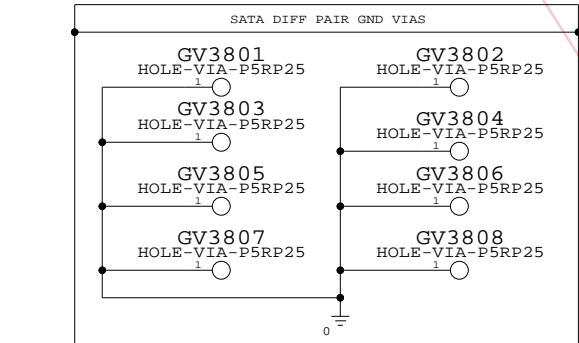
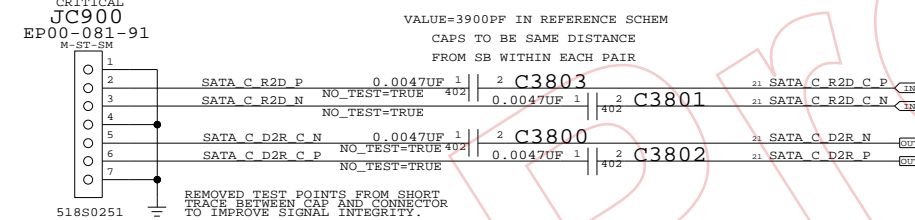
NONE

SHT

34 OF 97



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

D

DRAWING NUMBER

051-7032

REV.

A

SCALE

NONE

SHT

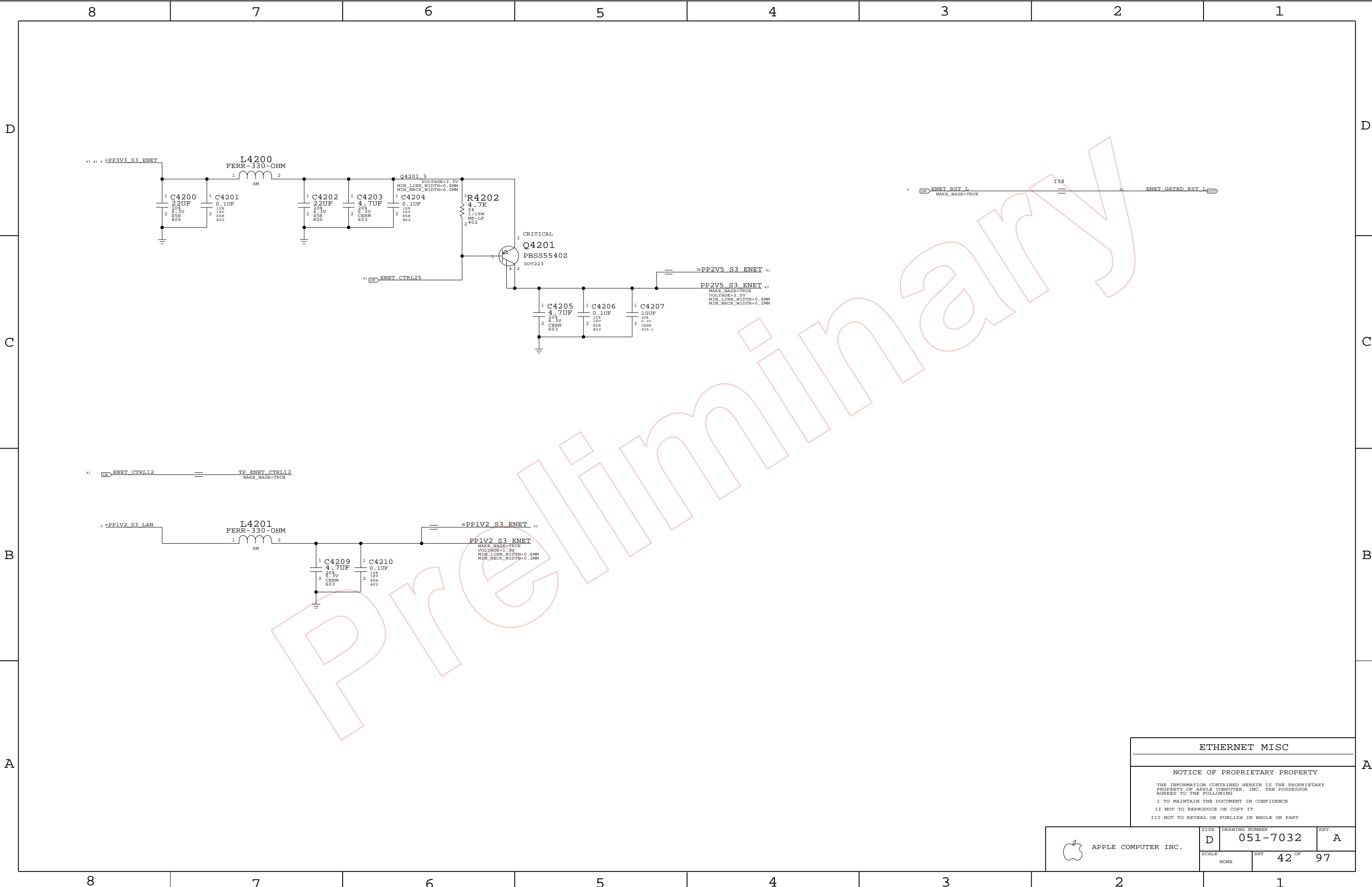
38

OF

97







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

D

DRAWING NUMBER

051-7032

REV.

A

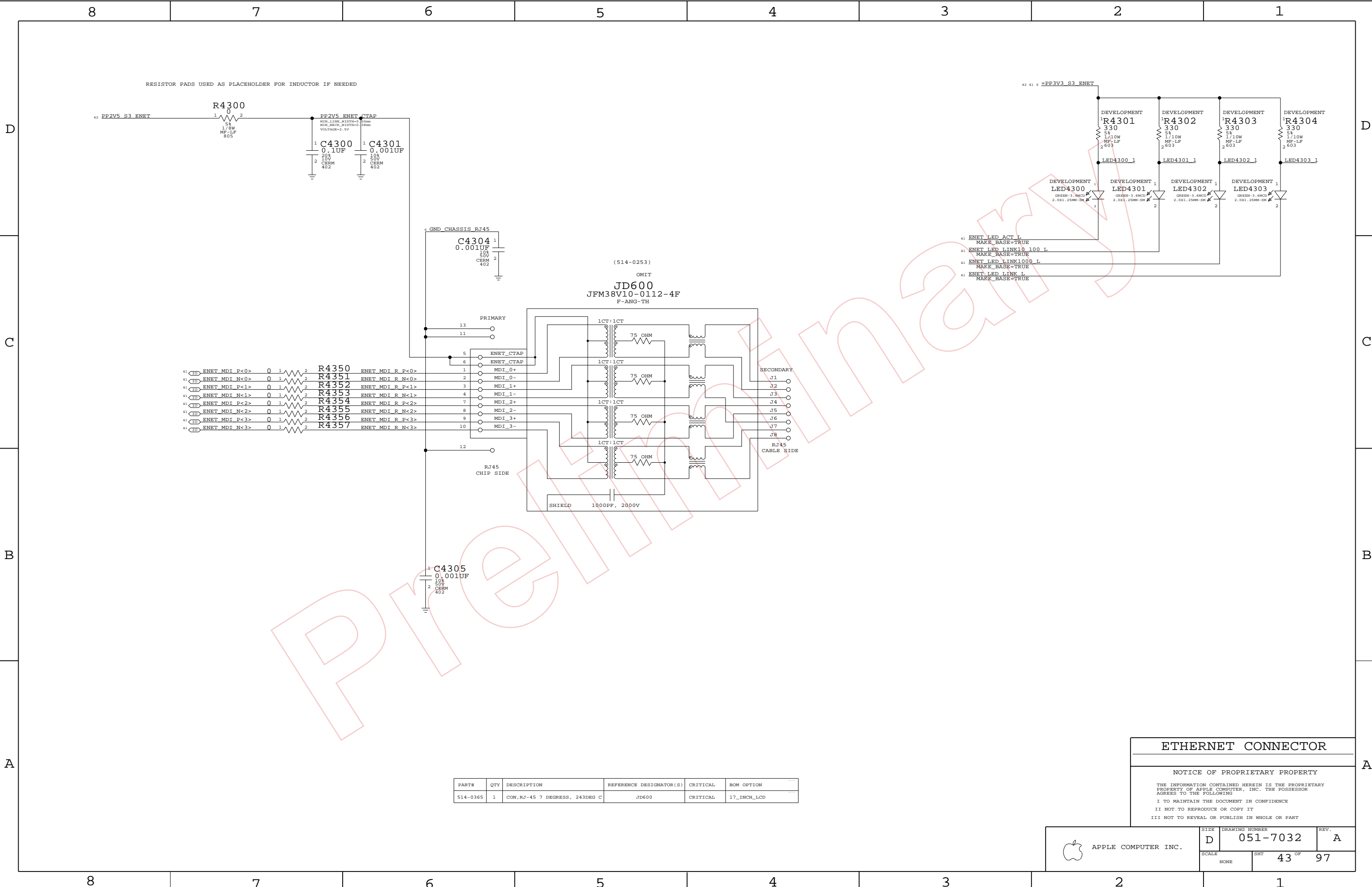
SCALE

NONE

SHT

42 OF

97



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0365	1	CON,RJ-45 7 DEGRESS, 243DEG C	JD600	CRITICAL	17_INCH_LCD

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

D

DRAWING NUMBER

051-7032

REV.

A

SCALE

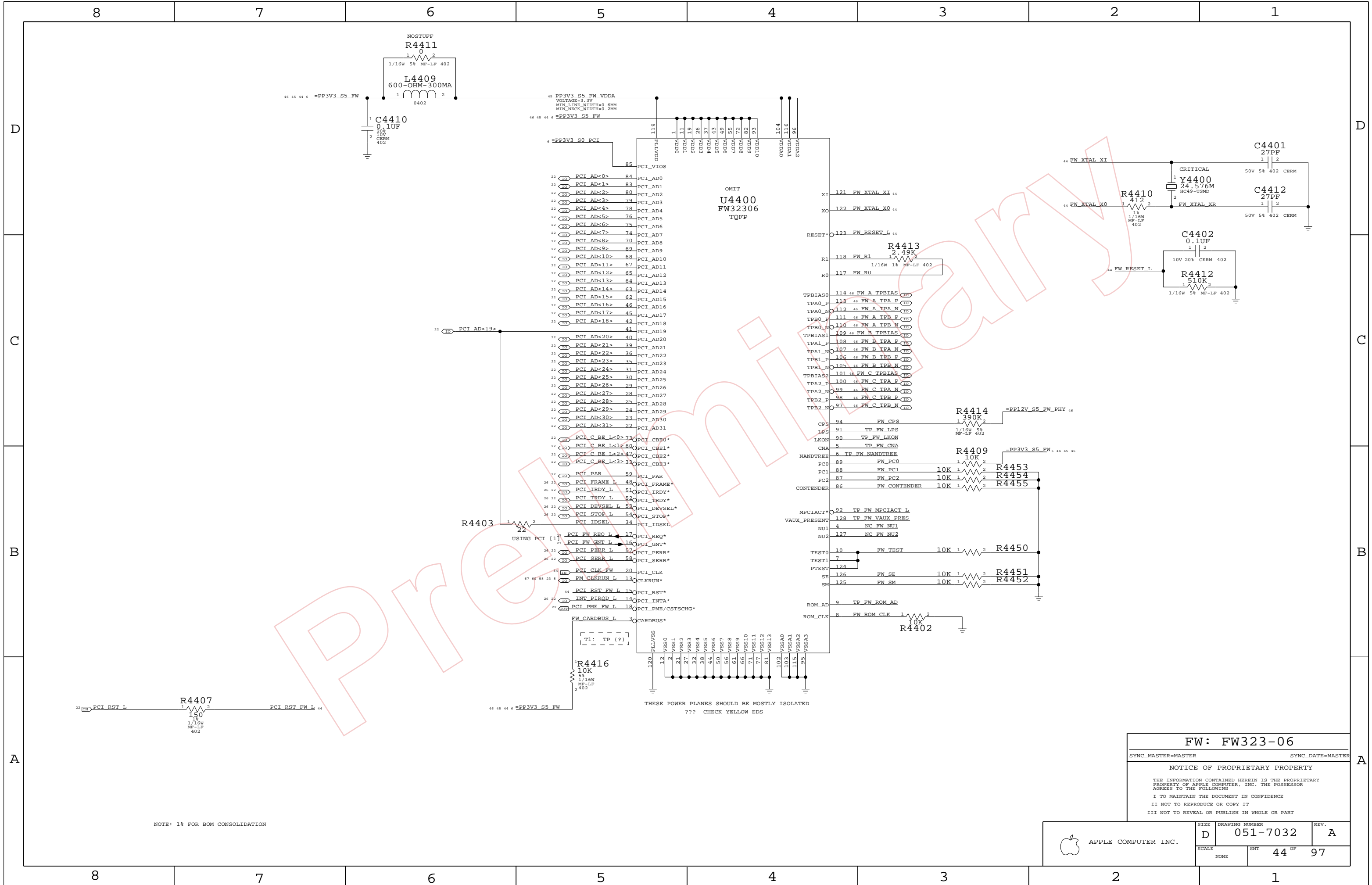
NONE

SHT

43

OF

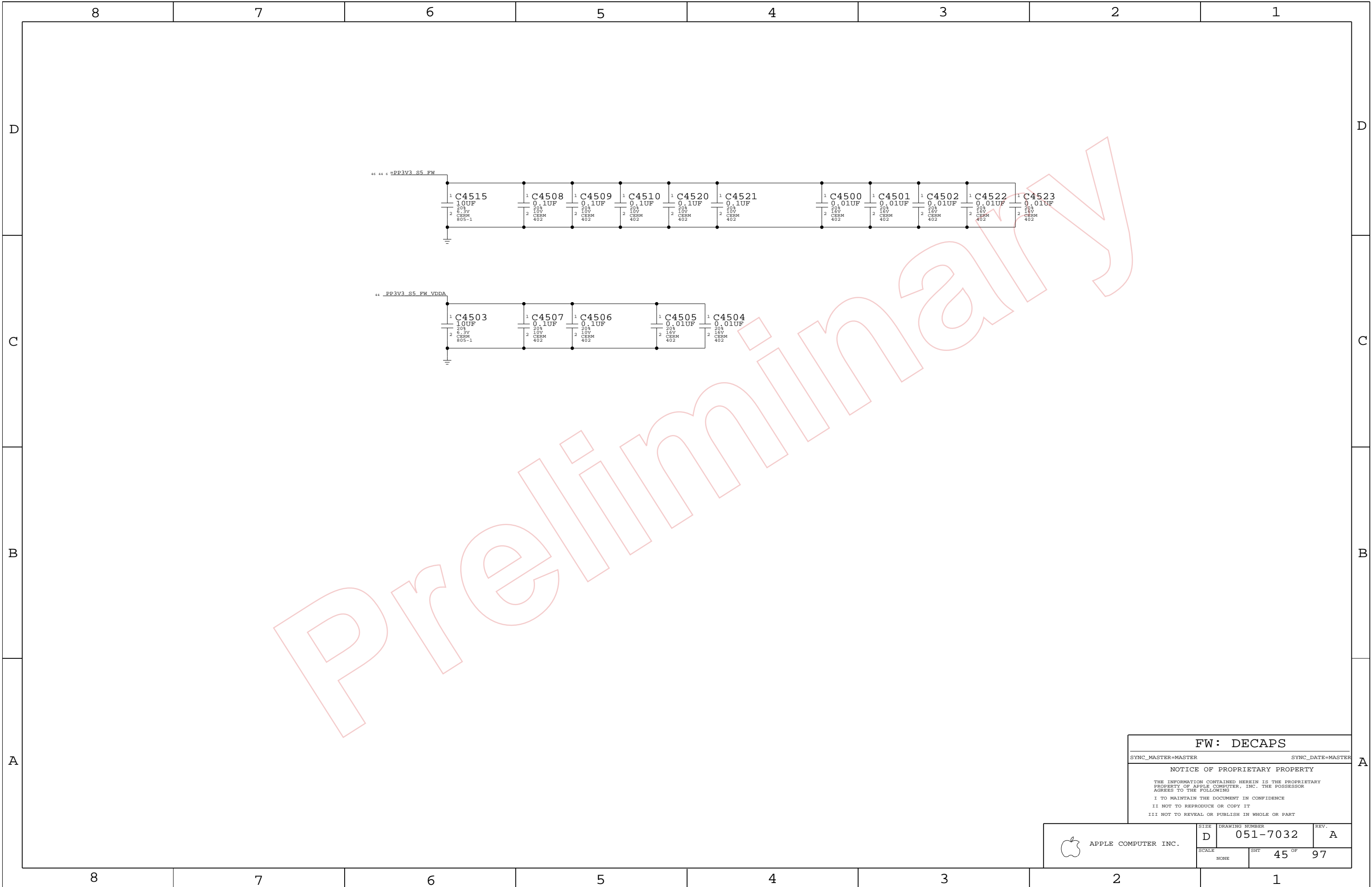
97



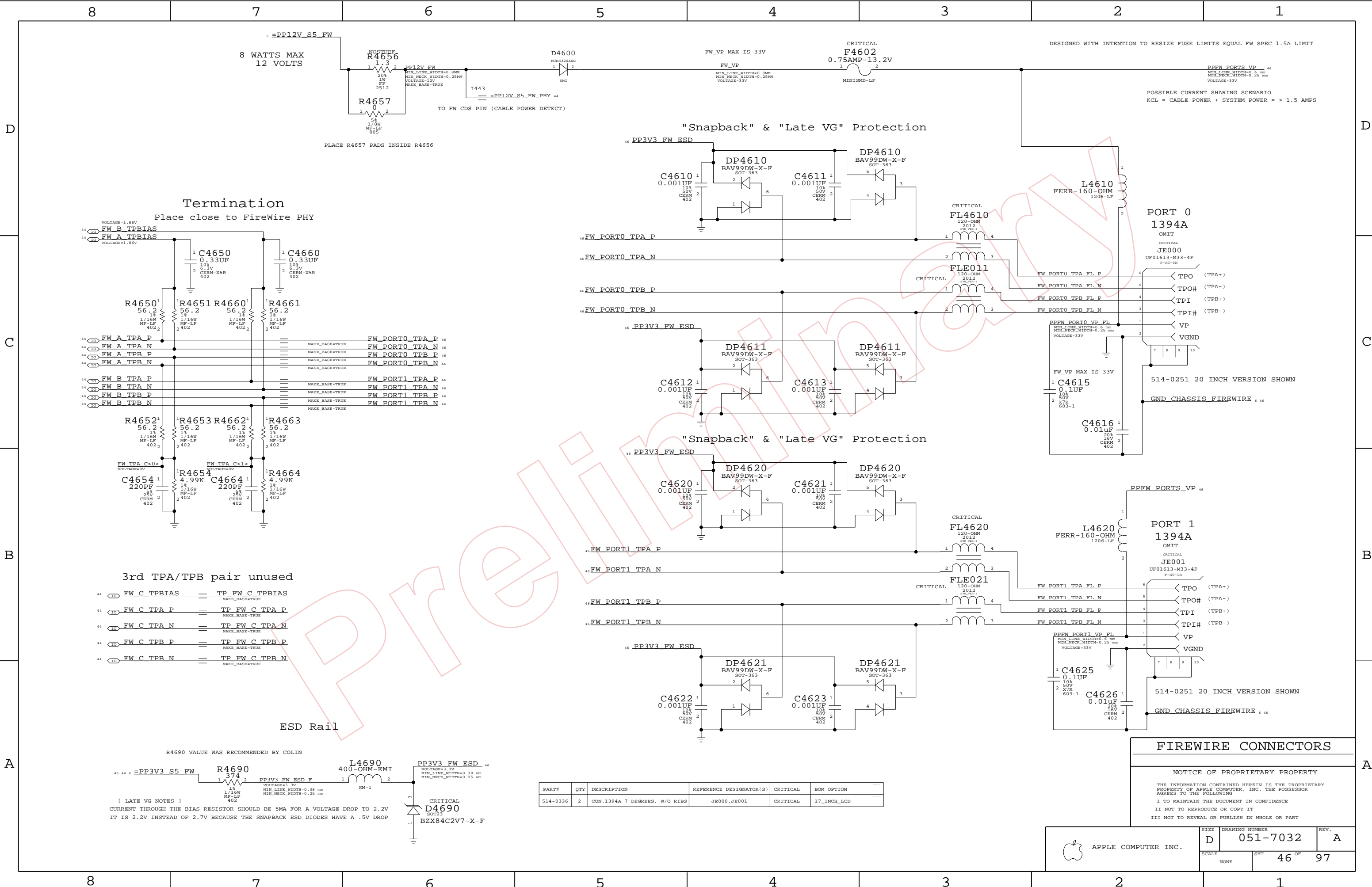
FW: FW323-06	
SYNC_MASTER=MASTER	SYNC_DATE=MASTER
NOTICE OF PROPRIETARY PROPERTY	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING	
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE	
II NOT TO REPRODUCE OR COPY IT	
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART	

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7032	A
SCALE		SHT	44 OF 97
NONE			

NOTE: 1% FOR BOM CONSOLIDATION







PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0336	2	CON,1394A 7 DEGREES, W/O RIBS	JE000,JE001	CRITICAL	17_INCH_LCD

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 051-7032

REV. A

SCALE NONE

SHT 46

OF 97

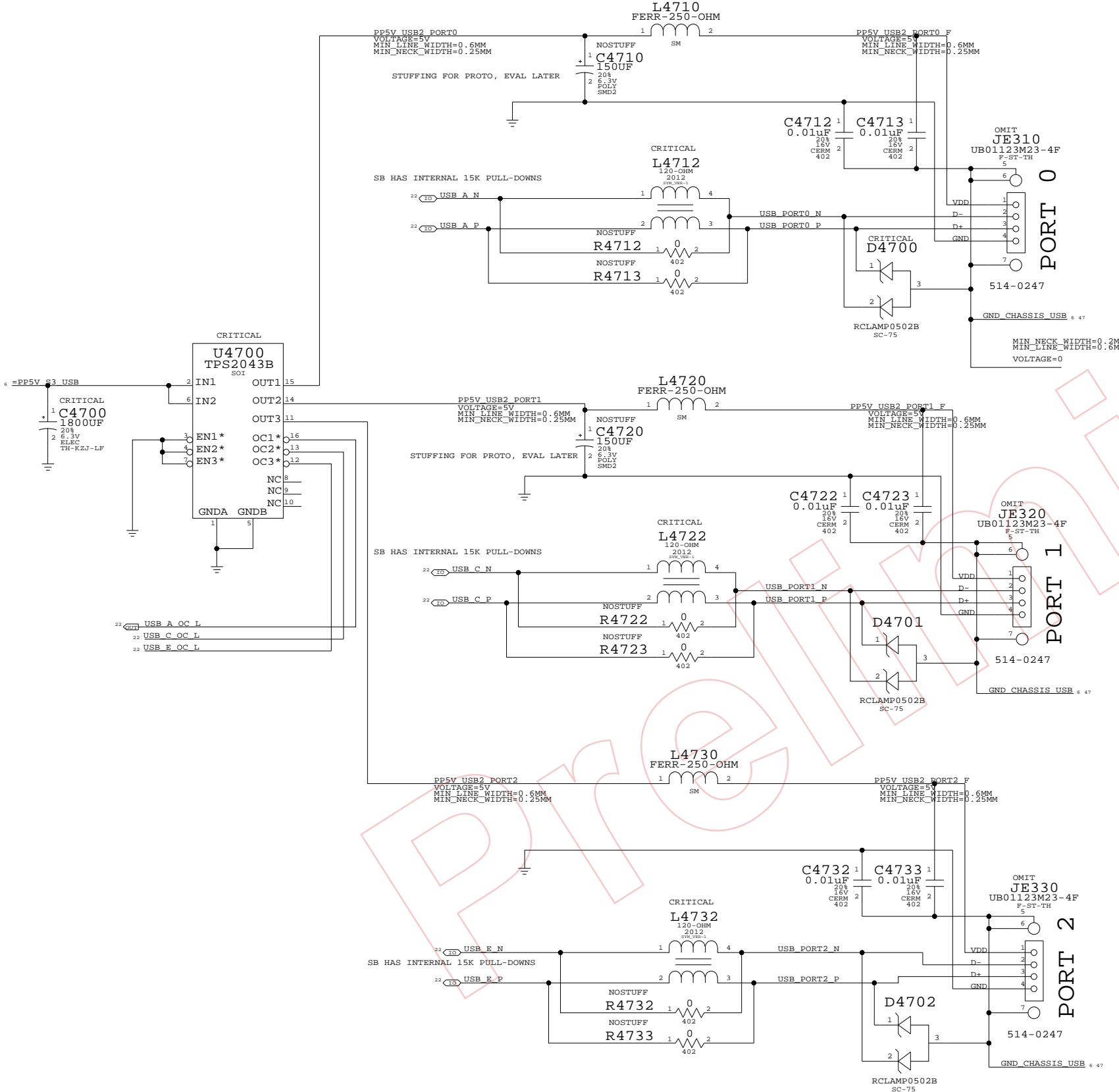
External USB Ports

D

C

B

A



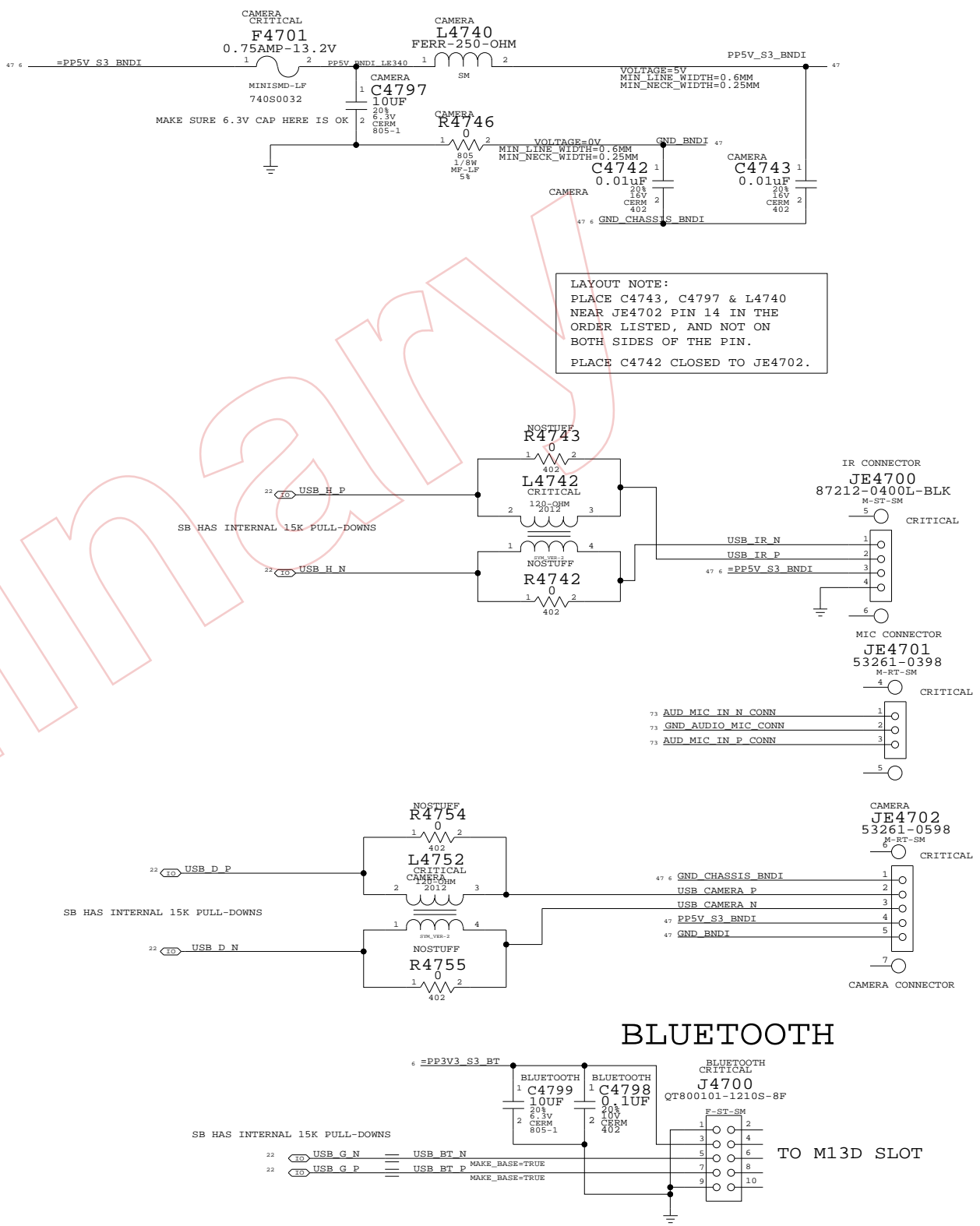
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0339	3	USB RECEPTACLE,4P,UB1123-M50-4F	JE310,JE320,JE330	CRITICAL	17_INCH_LCD

D

C

B

A

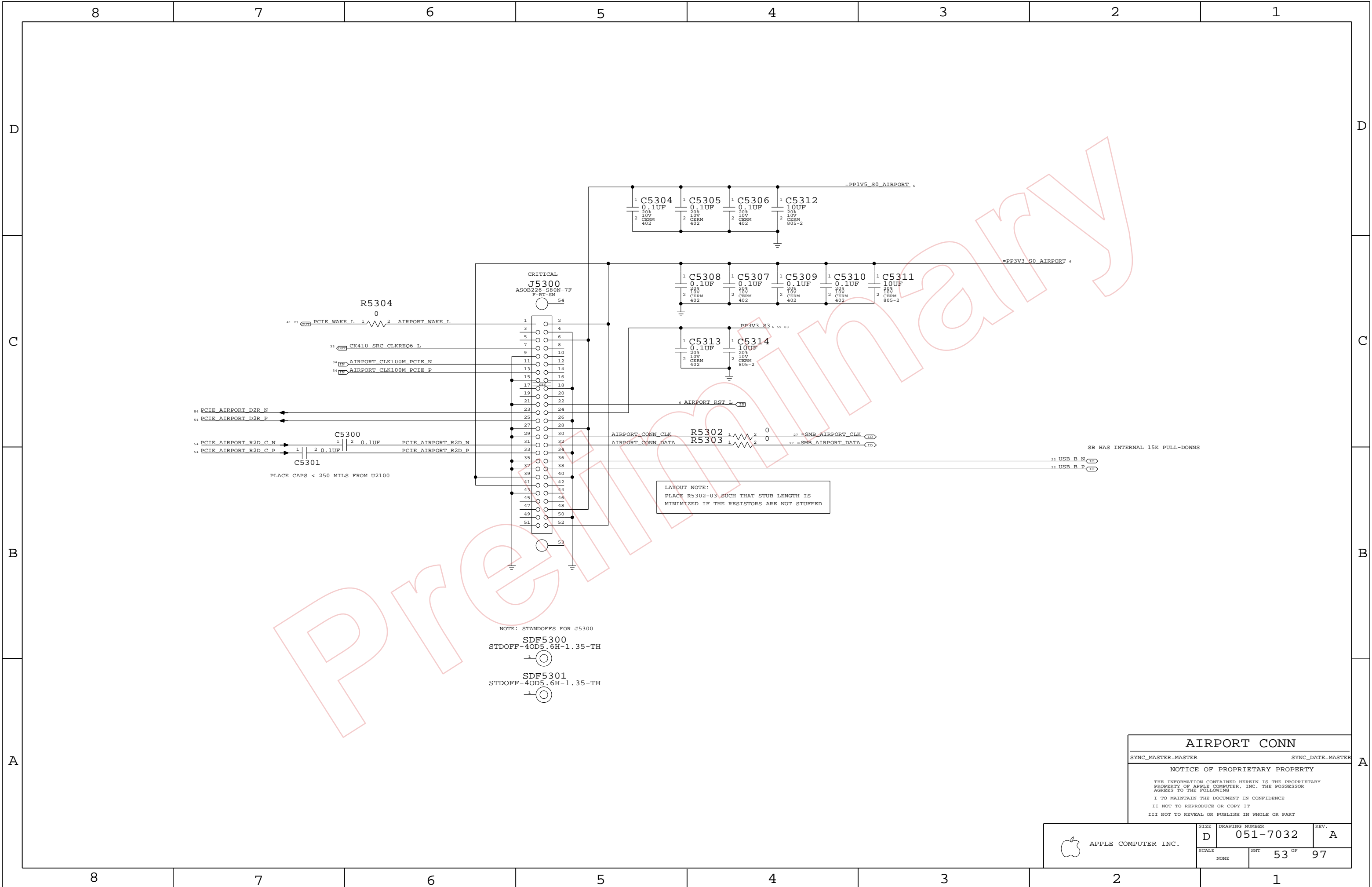


NOTE: STANDOFFS FOR J4700  
SDF4700  
STDOFF-40D4.5H-1.35-TH  
SDF4701  
STDOFF-40D4.5H-1.35-TH

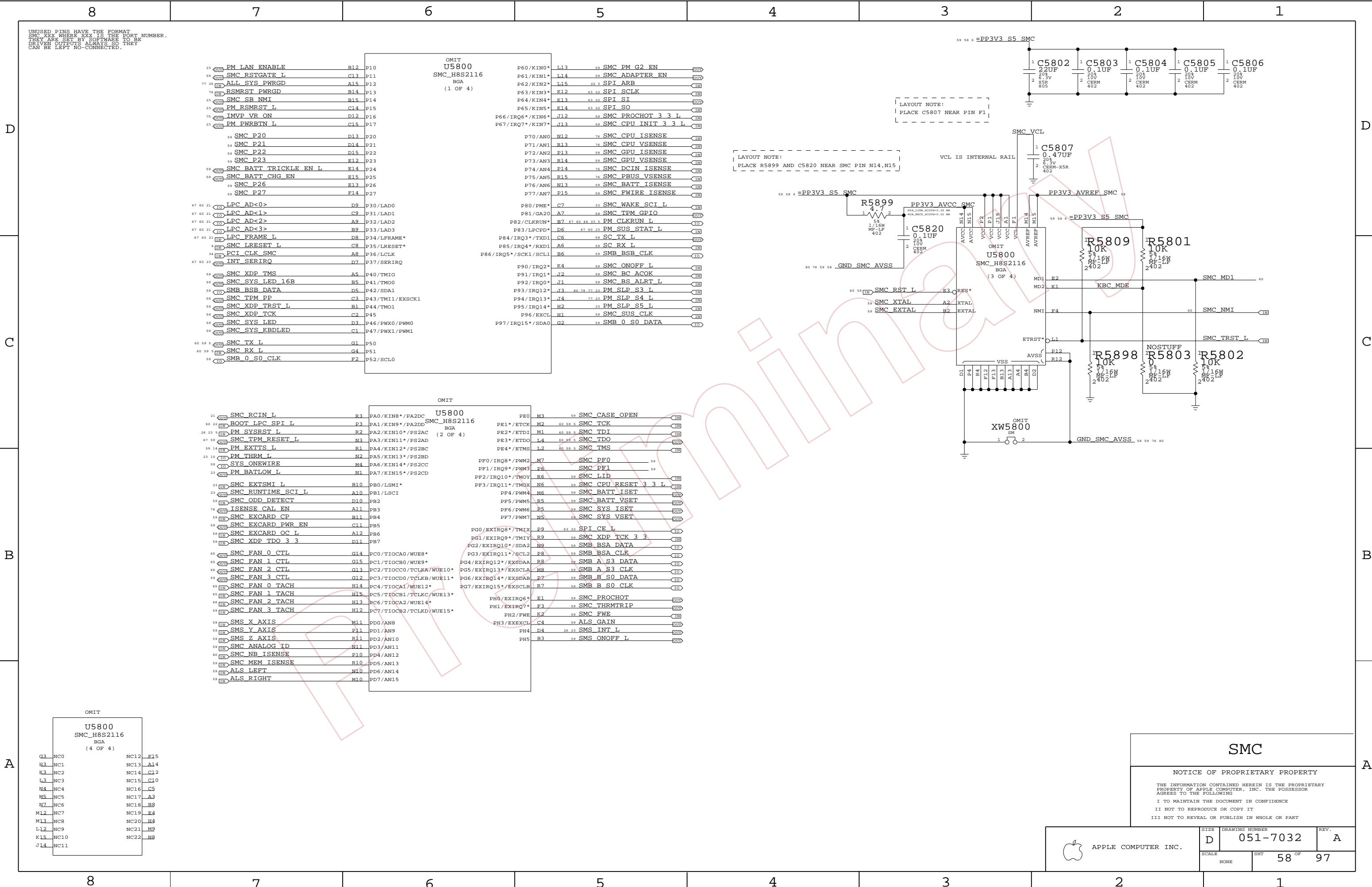
USB Device Interfaces

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

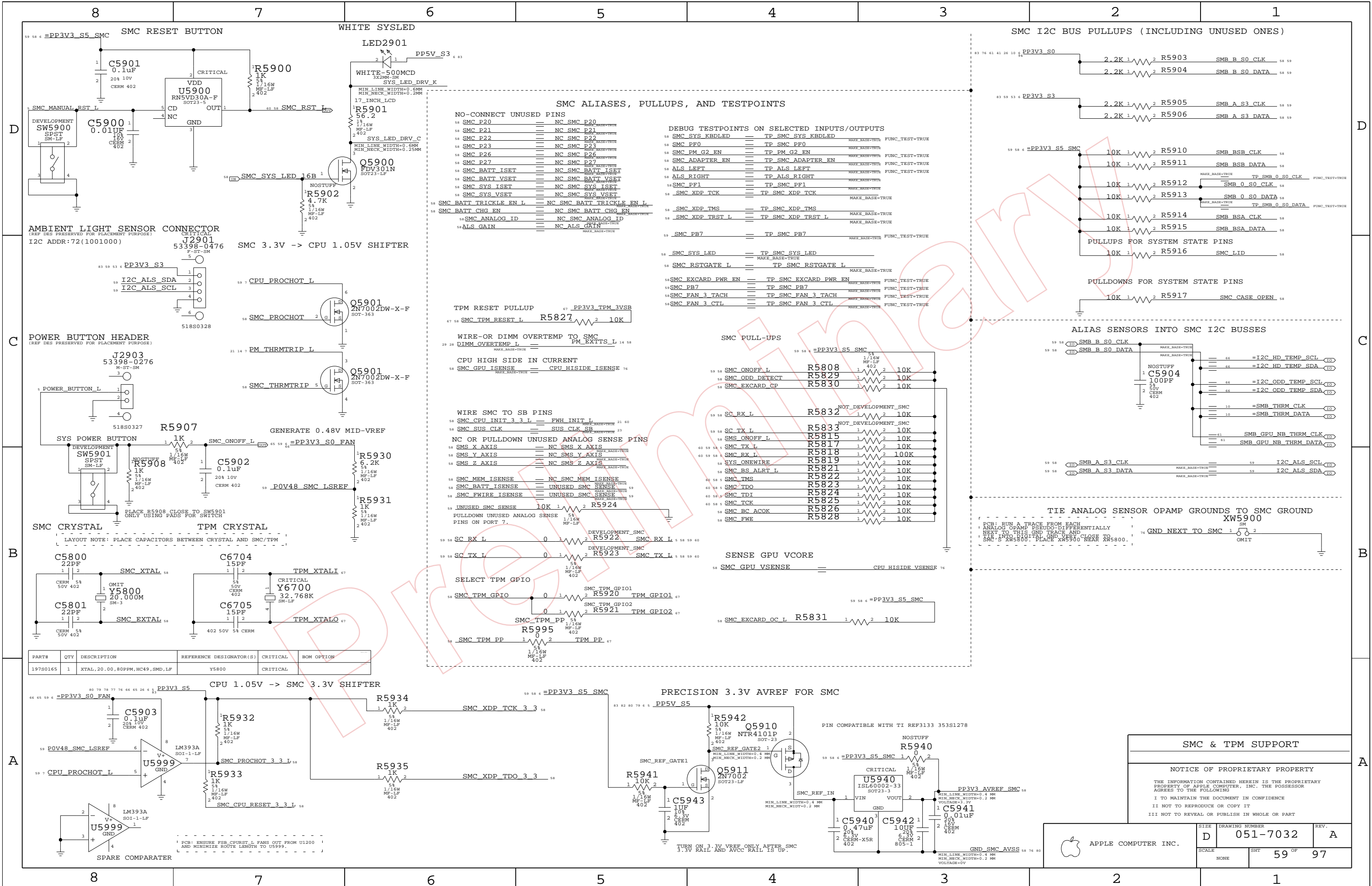
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7032	A
SCALE	NONE	SHT	47 OF 97

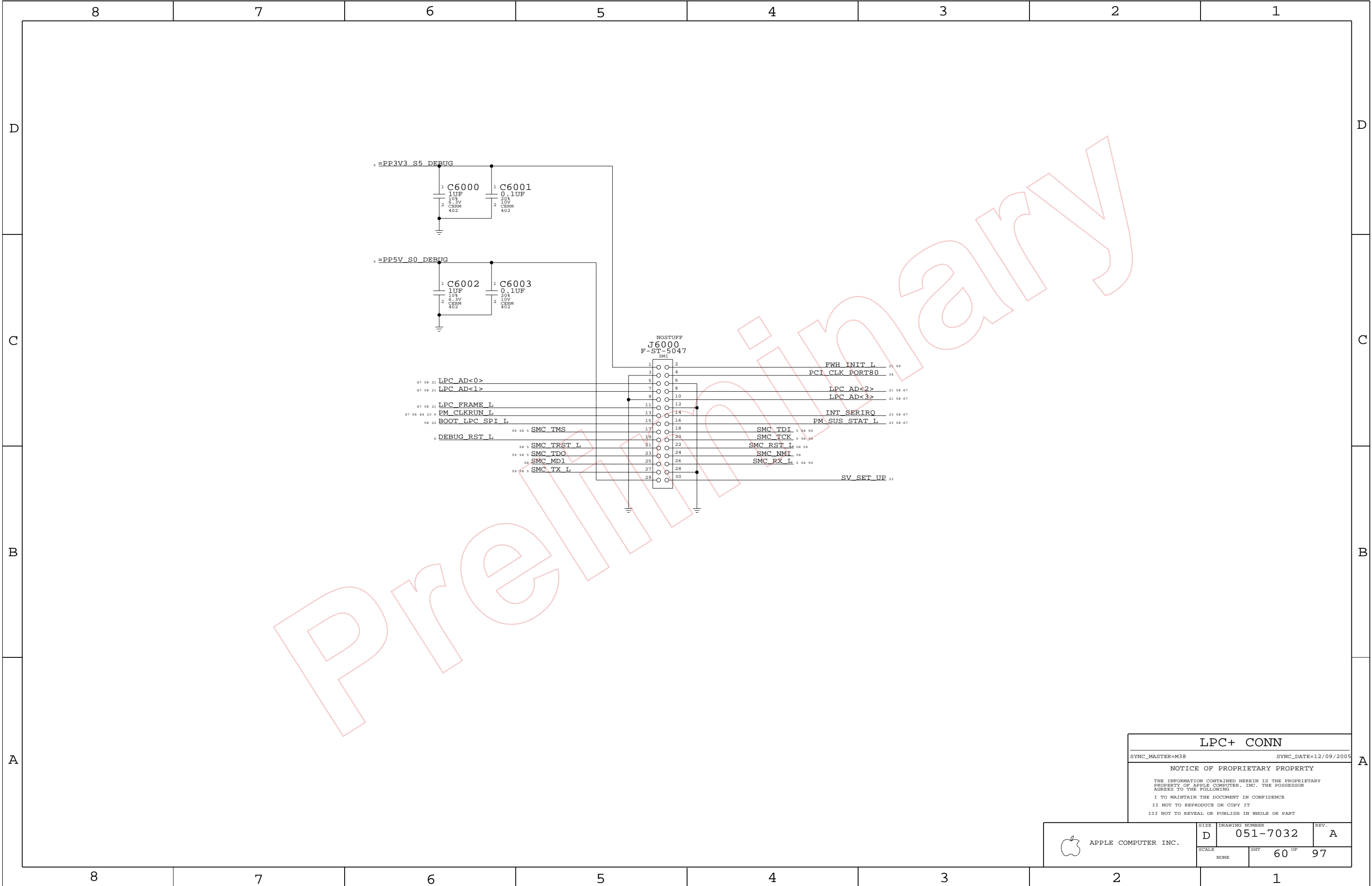












LPC+ CONN

SYNC\_MASTER=M38 SYNC\_DATE=12/09/2005

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

D

DRAWING NUMBER

051-7032

REV.

A

SCALE

NONE

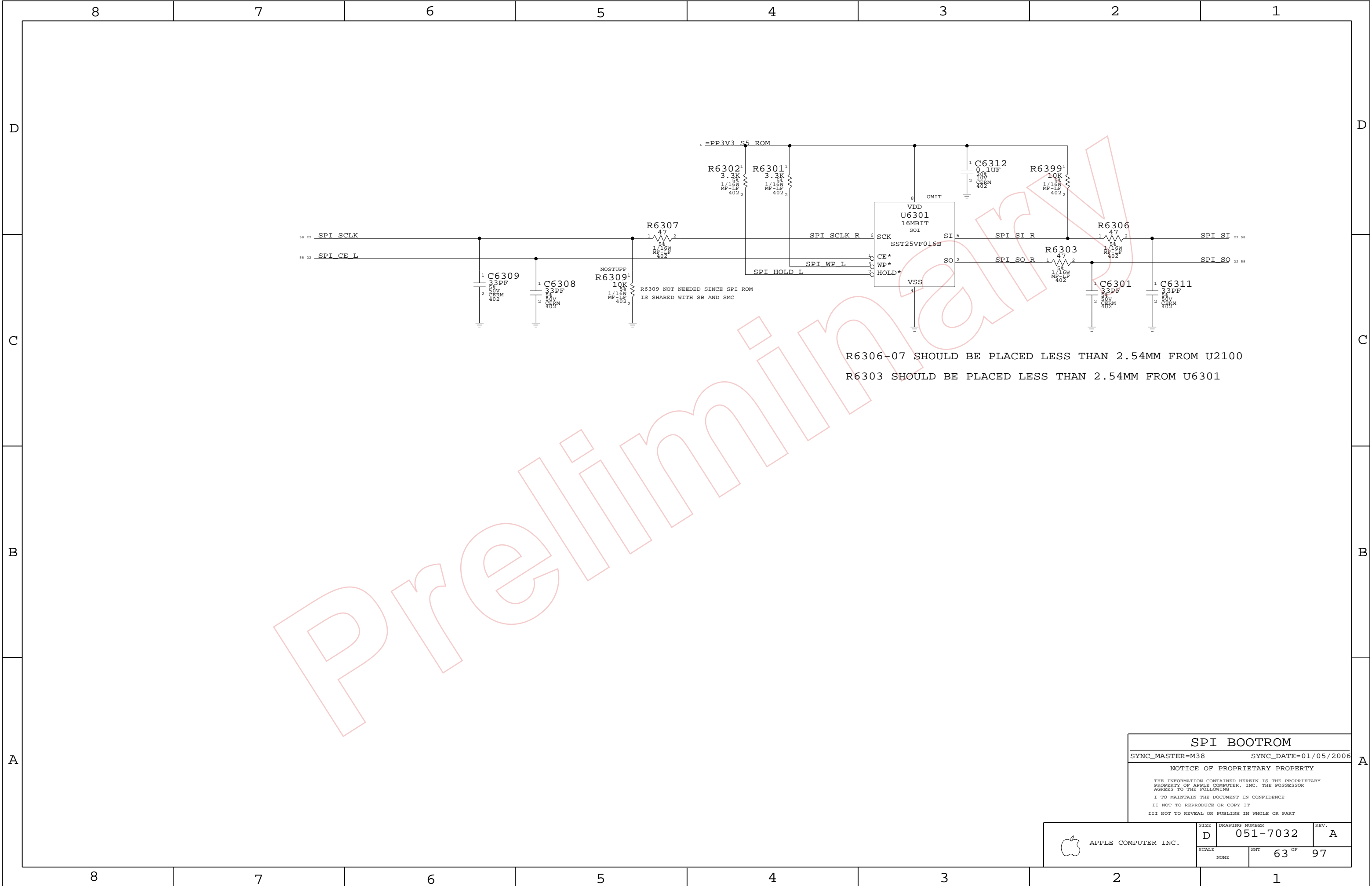
SHT

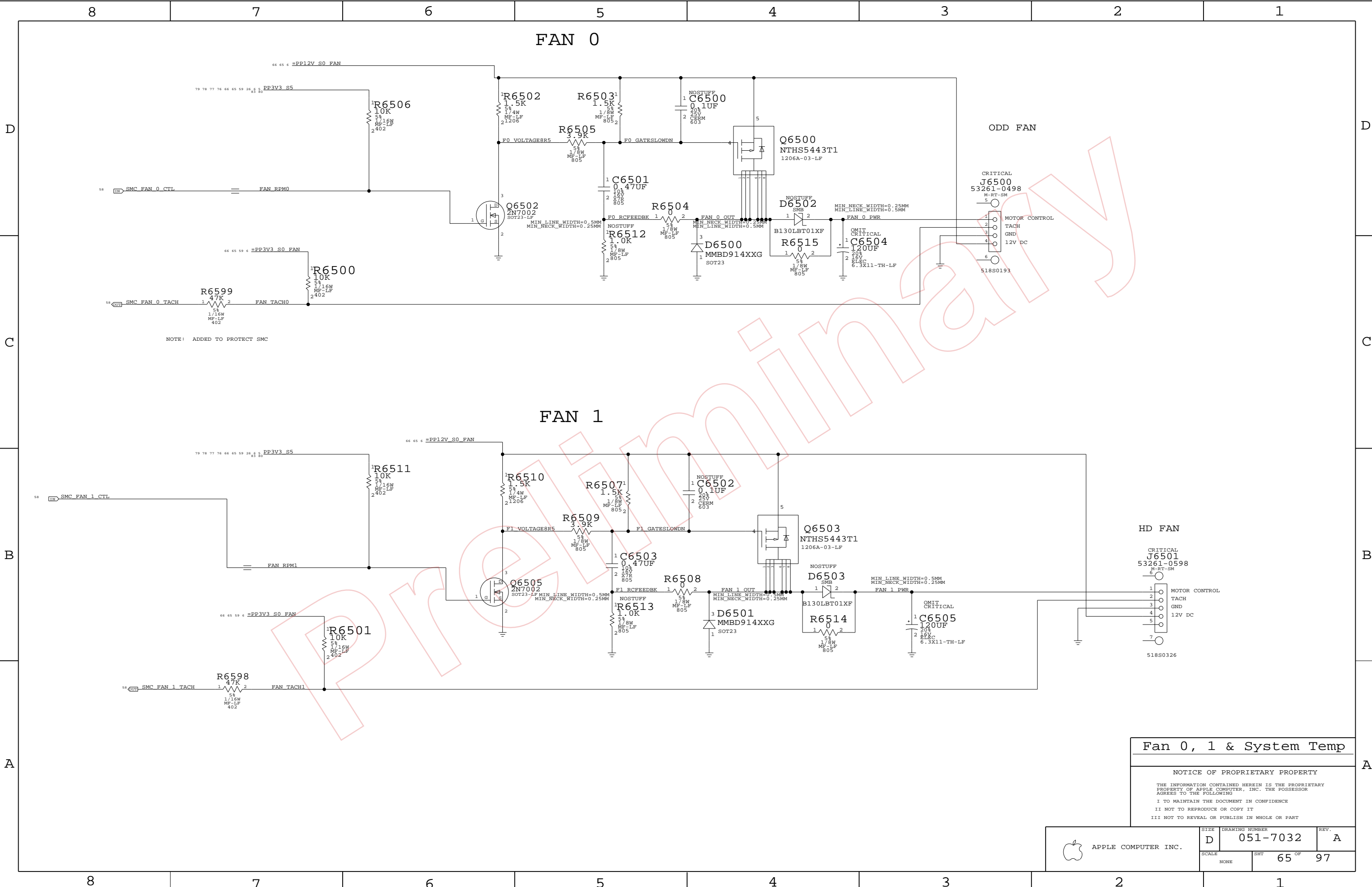
60

OF

97







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

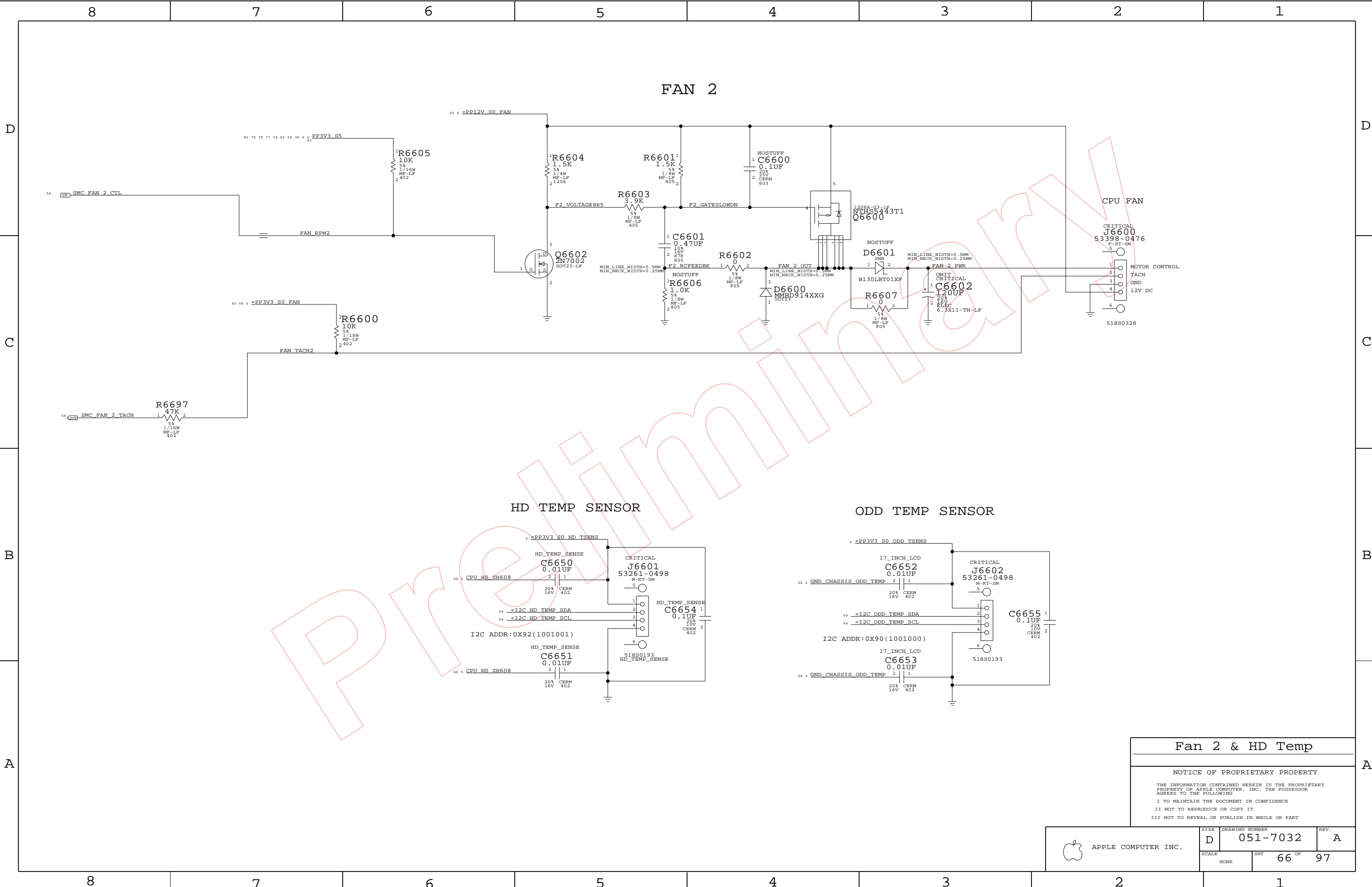
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

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	051-7032	A
SCALE		SHT	65 OF 97
NONE			





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	051-7032	A
SCALE		SHT	66 OF 97
NONE			

D

C

B

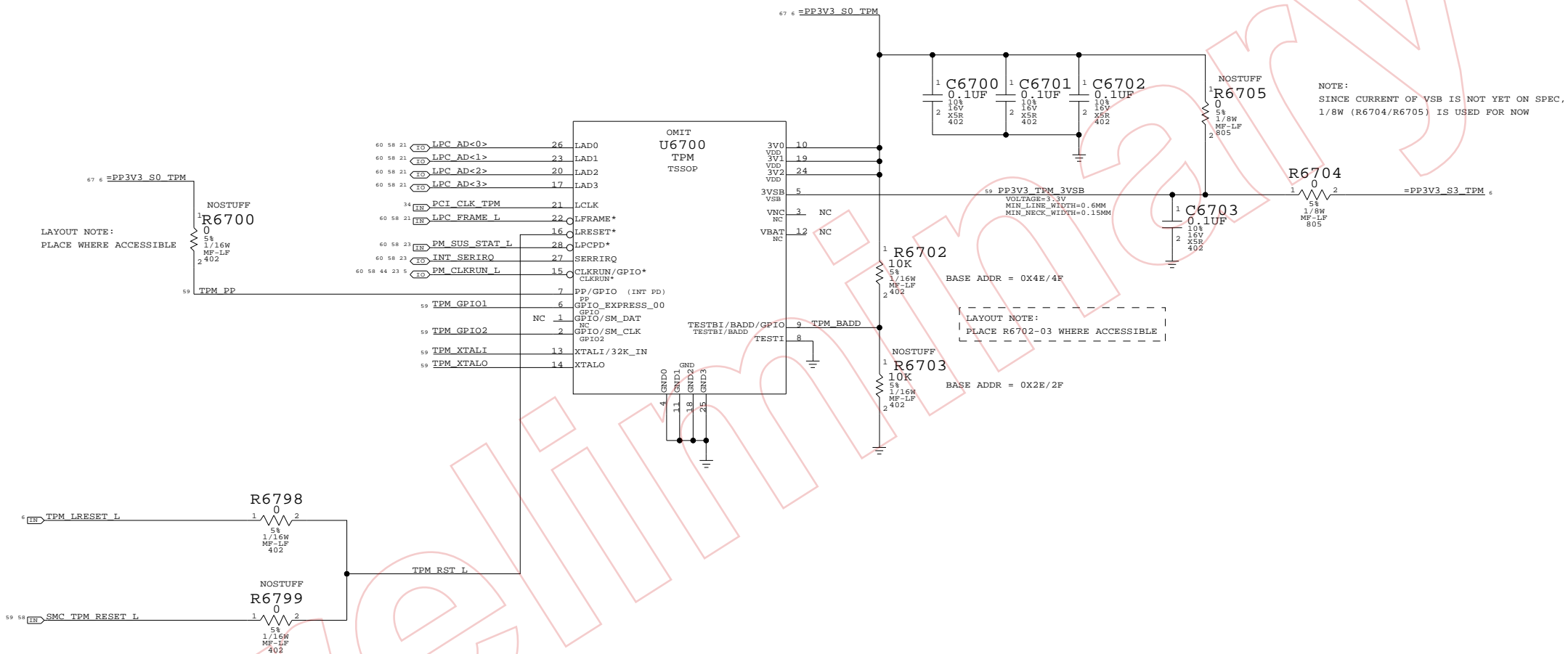
A

D

C

B

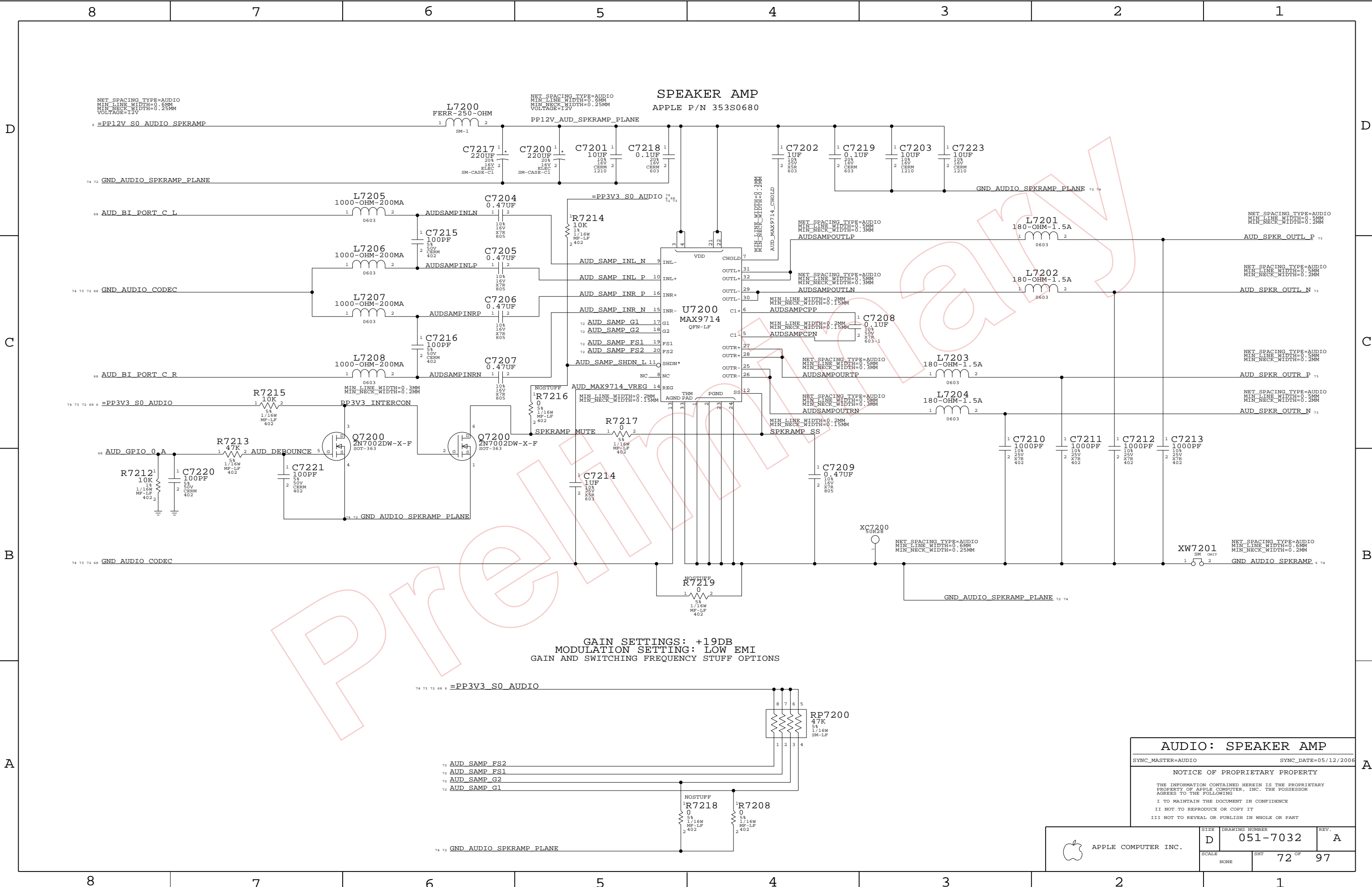
A



TPM	
SYNC_MASTER=M38	SYNC_DATE=01/05/2006
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 D	DRAWING NUMBER 051-7032	REV. A
	SCALE NONE	SHT 67 OF 97	

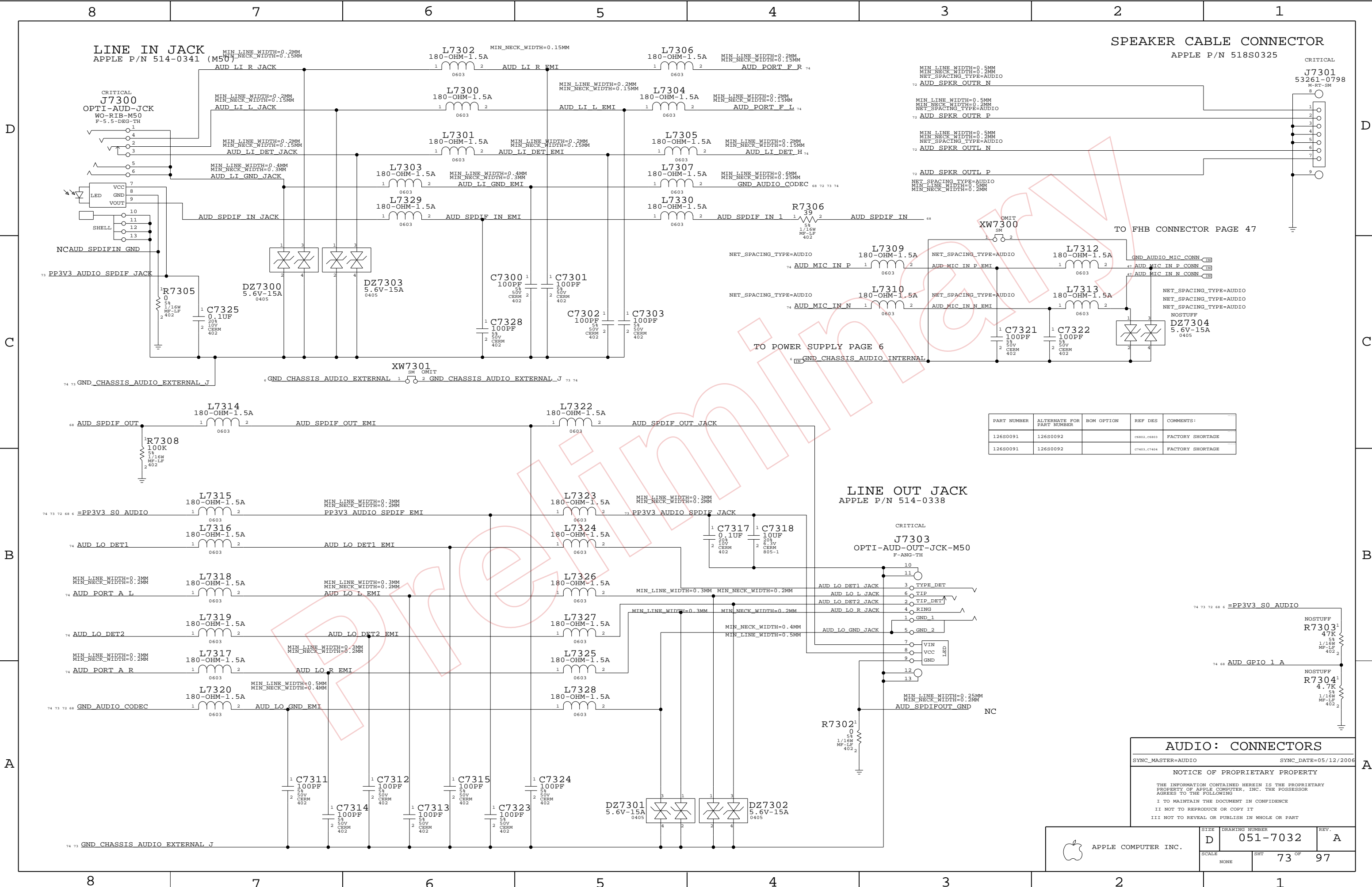




GAIN SETTINGS: +19DB  
MODULATION SETTING: LOW EMI  
GAIN AND SWITCHING FREQUENCY STUFF OPTIONS

**AUDIO: SPEAKER AMP**  
SYNC\_MASTER=AUDIO SYNC\_DATE=05/12/2006  
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 D	DRAWING NUMBER 051-7032	REV. A
	SCALE NONE	SHT 72 OF 97	



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
126S0091	126S0092		C8002, C8003	FACTORY SHORTAGE
126S0091	126S0092		C7403, C7404	FACTORY SHORTAGE

AUDIO: CONNECTORS

SYNC\_MASTER=AUDIO

SYNC\_DATE=05/12/2006

NOTICE OF PROPRIETARY PROPERTY

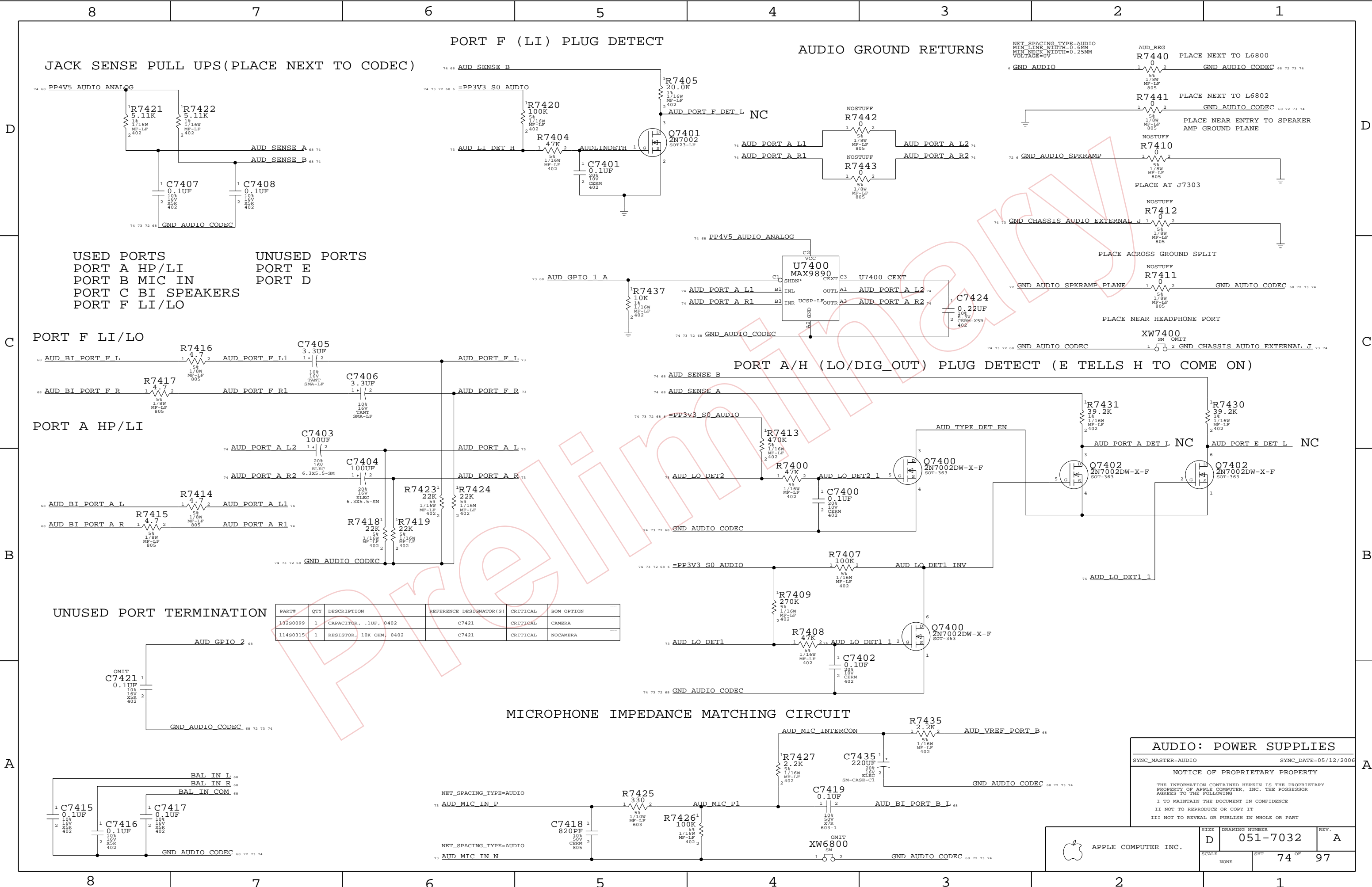
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART





JACK SENSE PULL UPS(PLACE NEXT TO CODEC)

PORT F (LI) PLUG DETECT

AUDIO GROUND RETURNS

NET SPACING TYPE=AUDIO  
MIN LINE WIDTH=0.6MM  
MIN NECK WIDTH=0.25MM  
VOLTAGE=0V

AUD\_REG  
R7440 PLACE NEXT TO L6800  
GND AUDIO CODEC

R7441 PLACE NEXT TO L6802  
GND AUDIO CODEC

PLACE NEAR ENTRY TO SPEAKER  
AMP GROUND PLANE

PLACE AT J7303

PLACE ACROSS GROUND SPLIT

PLACE NEAR HEADPHONE PORT

XW7400

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

USED PORTS  
PORT A HP/LI  
PORT B MIC IN  
PORT C BI SPEAKERS  
PORT F LI/LO

UNUSED PORTS  
PORT E  
PORT D

PORT F LI/LO

PORT A HP/LI

UNUSED PORT TERMINATION

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
132S0099	1	CAPACITOR, .1UF, 0402	C7421	CRITICAL	CAMERA
114S0315	1	RESISTOR, 10K OHM, 0402	C7421	CRITICAL	NOCAMERA

MICROPHONE IMPEDANCE MATCHING CIRCUIT

AUDIO: POWER SUPPLIES

SYNC\_MASTER=AUDIO SYNC\_DATE=05/12/2006

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

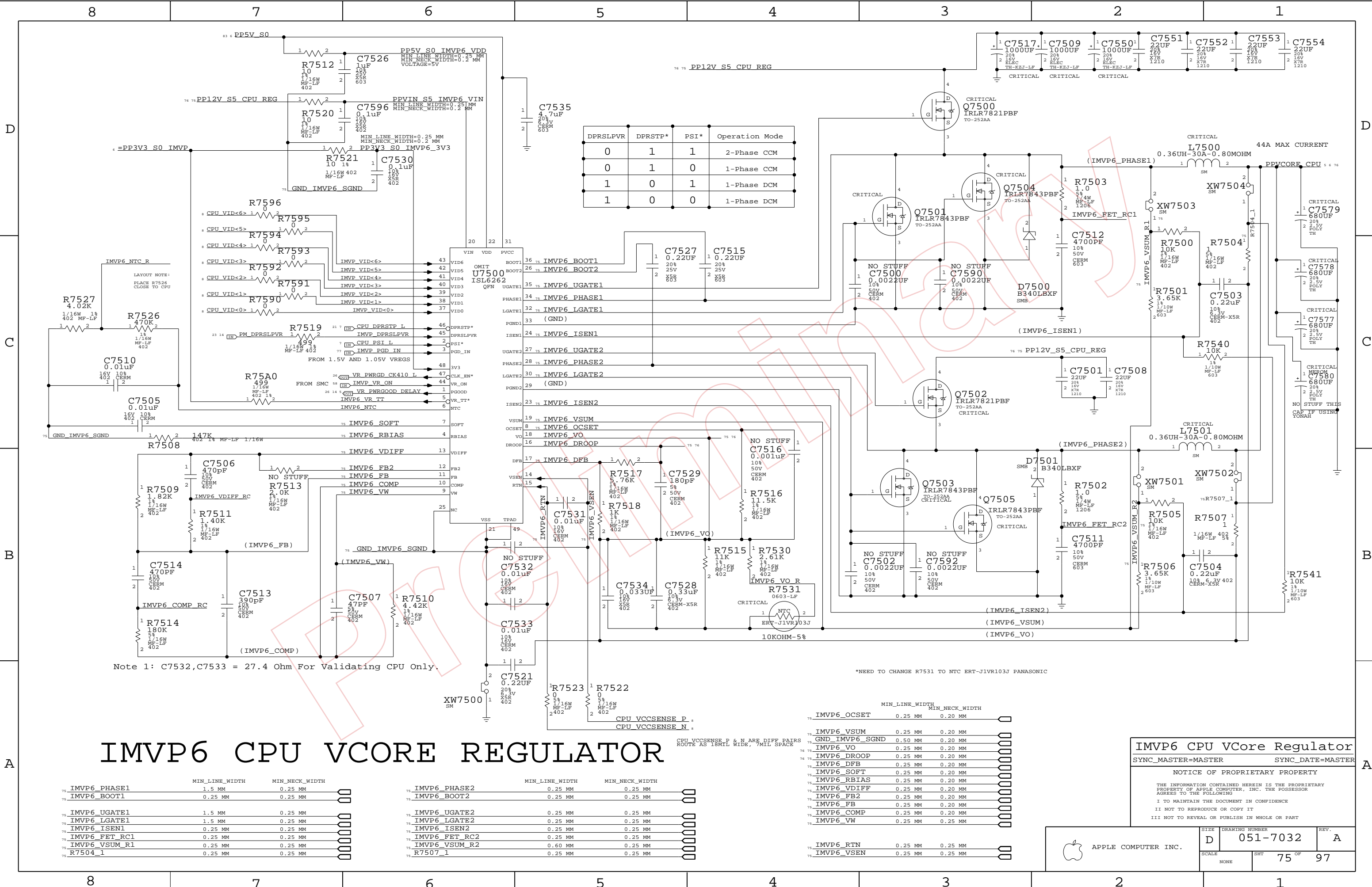
051-7032

A

SCALE

SHT

74 OF 97



# IMVP6 CPU VCore Regulator

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

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

	MIN_LINE_WIDTH	MIN_NECK_WIDTH
IMVP6_OCSET	0.25 MM	0.20 MM
IMVP6_VSUM	0.25 MM	0.20 MM
GND_IMVP6_SGND	0.50 MM	0.20 MM
IMVP6_VO	0.25 MM	0.20 MM
IMVP6_DROOP	0.25 MM	0.20 MM
IMVP6_DFB	0.25 MM	0.20 MM
IMVP6_SOFT	0.25 MM	0.20 MM
IMVP6_RBIAS	0.25 MM	0.20 MM
IMVP6_VDIFF	0.25 MM	0.20 MM
IMVP6_FB2	0.25 MM	0.20 MM
IMVP6_FB	0.25 MM	0.20 MM
IMVP6_COMP	0.25 MM	0.20 MM
IMVP6_VW	0.25 MM	0.25 MM
IMVP6_RTIN	0.25 MM	0.25 MM
IMVP6_VSEN	0.25 MM	0.25 MM

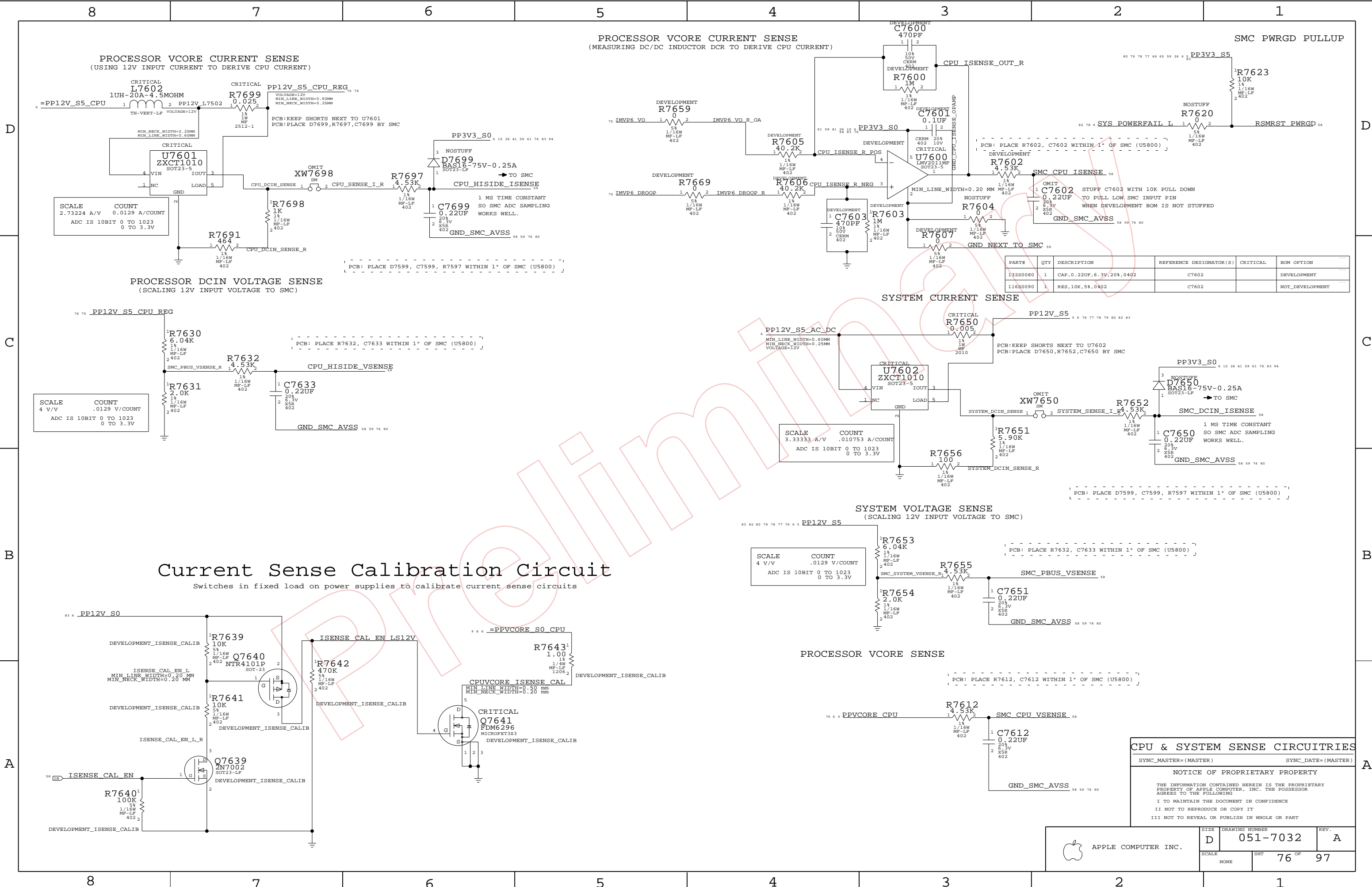
## IMVP6 CPU VCore Regulator

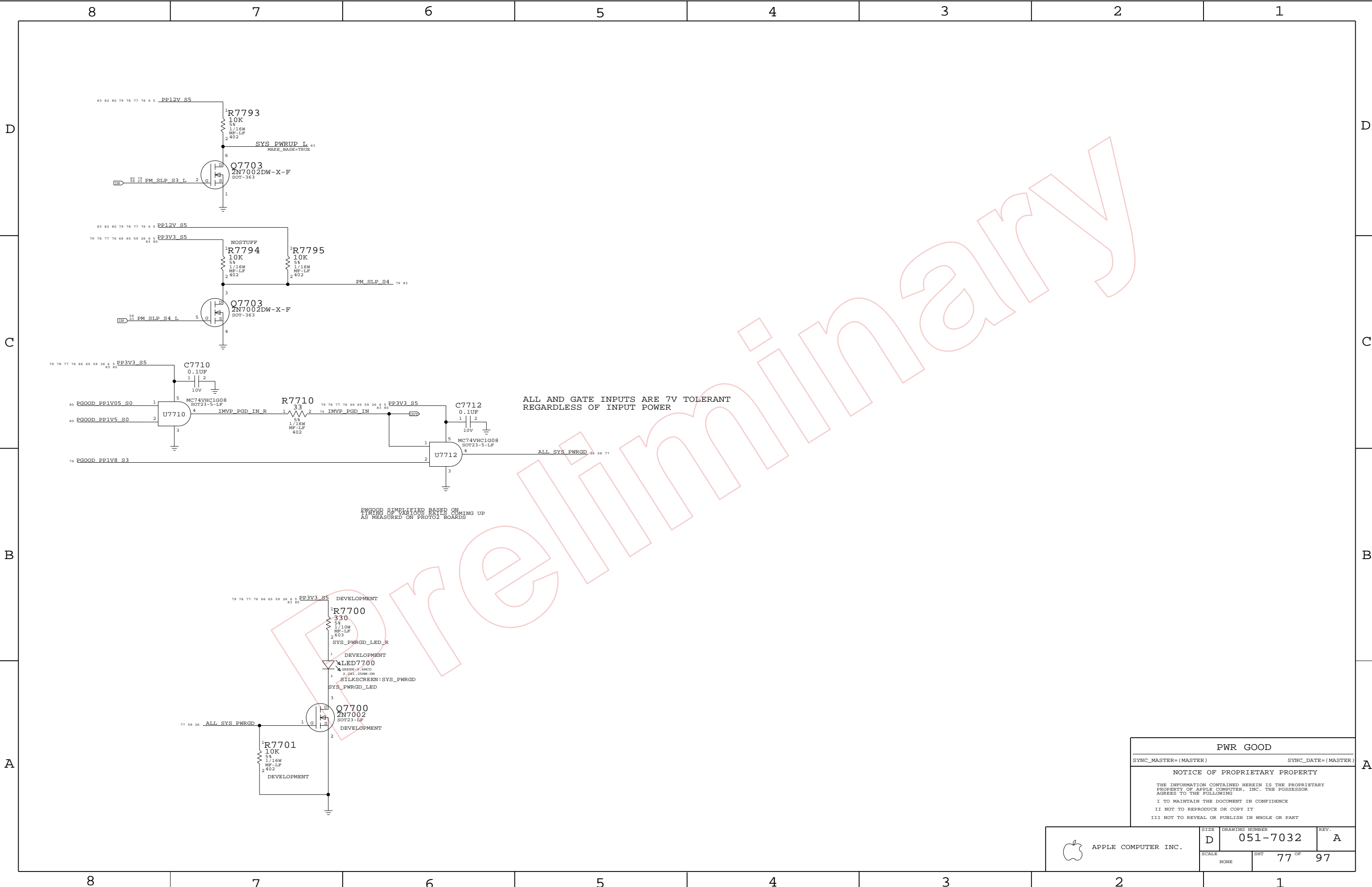
SYNC\_MASTER=MASTER SYNC\_DATE=MASTER

### 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 D	DRAWING NUMBER 051-7032	REV. A
	SCALE NONE	SHT 75 OF 97	





PWR\_GOOD

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

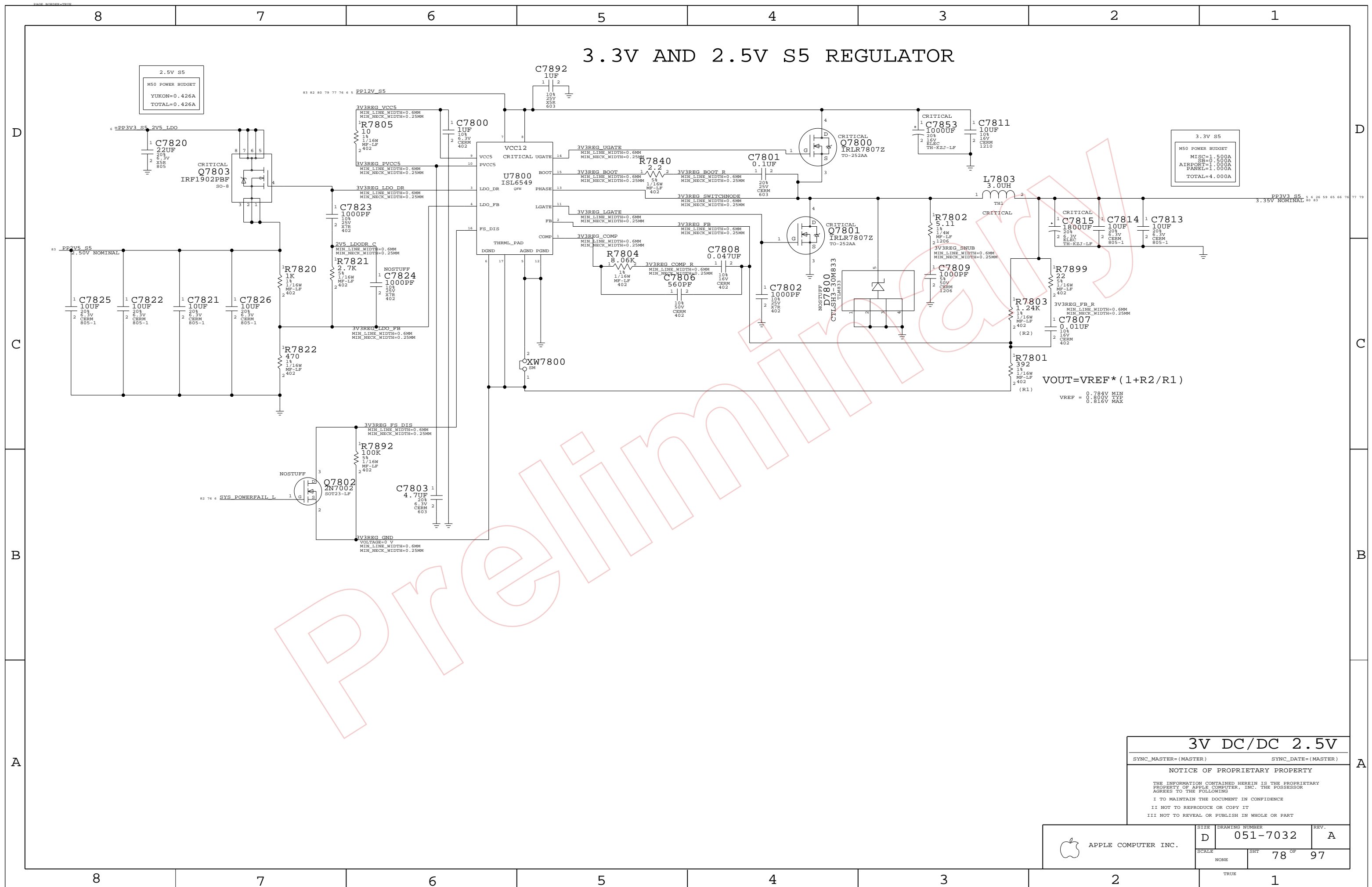
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

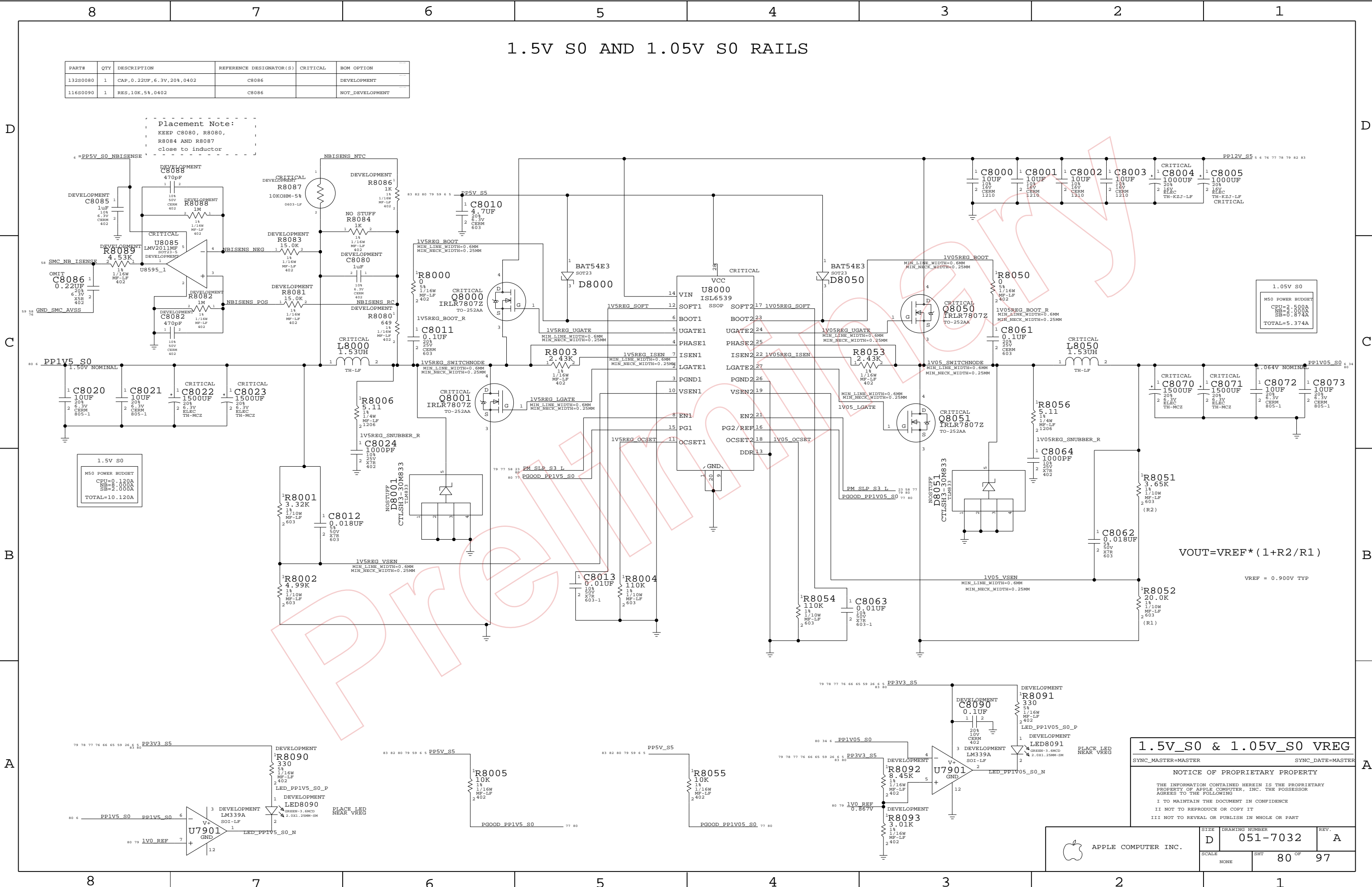
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7032	A
SCALE		SHT	77 OF 97
NONE			











1.5V S0 AND 1.05V S0 RAILS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
132S0080	1	CAP,0.22UF,6.3V,20%,0402	C8086		DEVELOPMENT
116S0090	1	RES,10K,5%,0402	C8086		NOT_DEVELOPMENT

Placement Note:  
KEEP C8080, R8080,  
R8084 AND R8087  
close to inductor

1.05V S0
M50 POWER BUDGET
CPU=2.500A
NB=3.000A
SB=0.874A
TOTAL=5.374A

1.5V S0
M50 POWER BUDGET
CPU=0.120A
NB=8.000A
SB=2.000A
TOTAL=10.120A

1.5V\_S0 & 1.05V\_S0 VREG

SYNC\_MASTER=MASTER SYNC\_DATE=MASTER

NOTICE OF PROPRIETARY PROPERTY

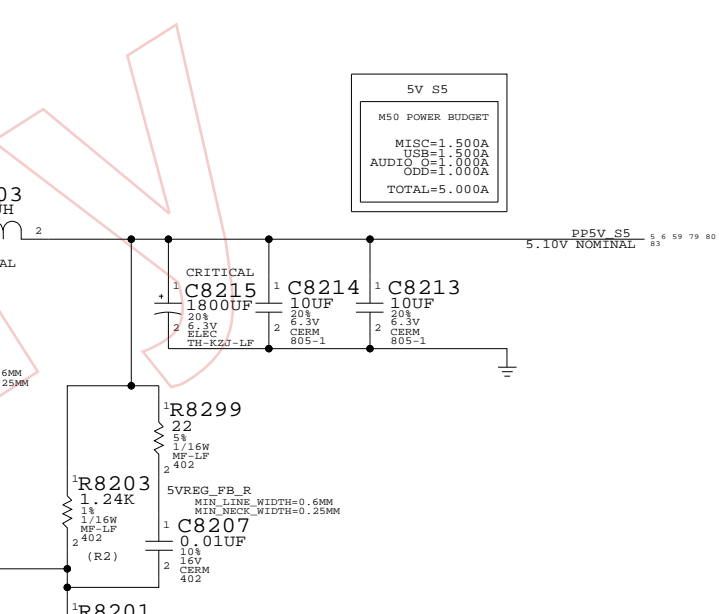
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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 D	DRAWING NUMBER 051-7032	REV. A
SCALE NONE	SHT 80	OF 97	



---

5V DC/DC

NOTICE OF PROPRIETARY PROPERTY

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE  
II NOT TO REPRODUCE OR COPY IT

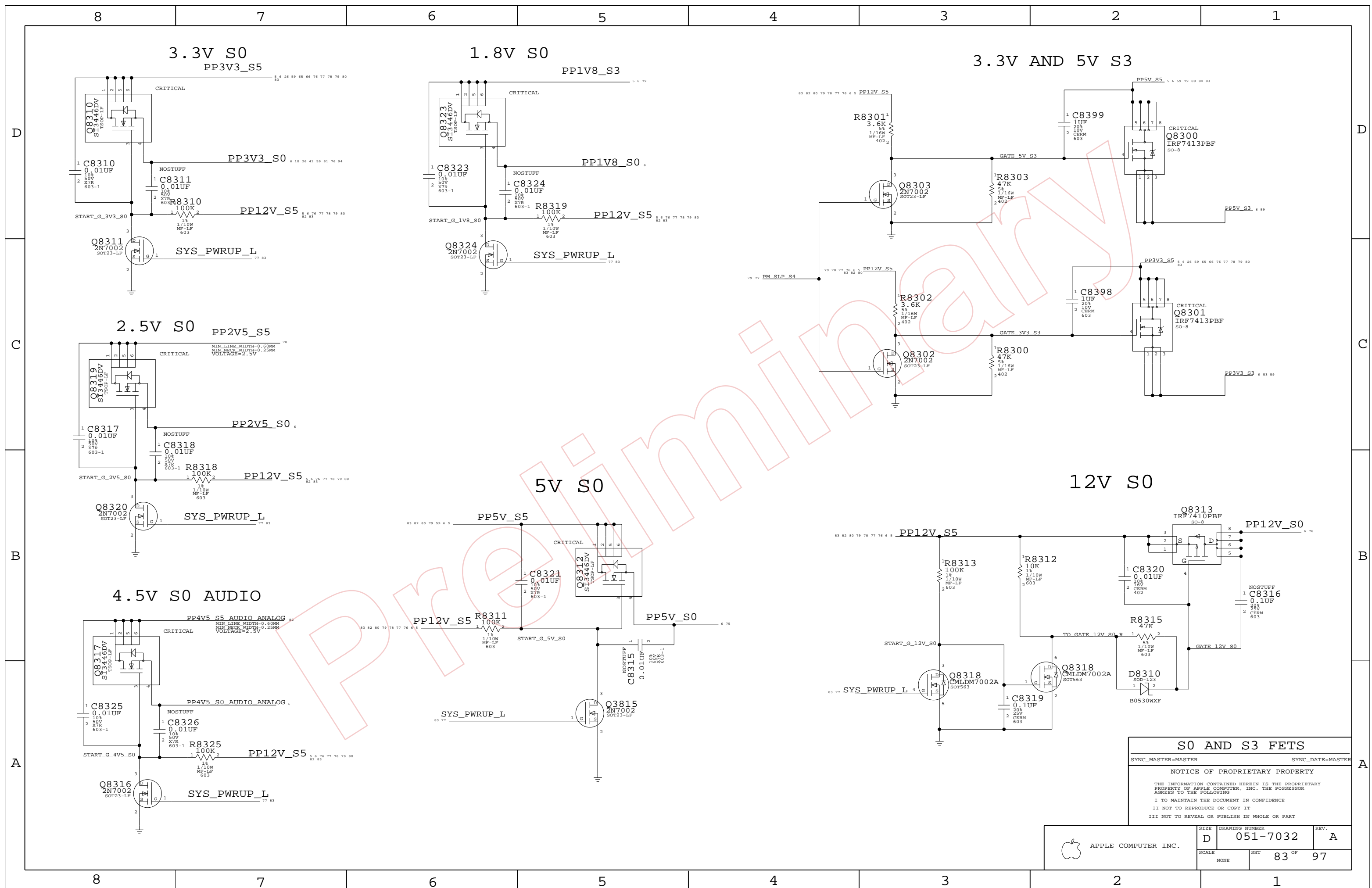
---

SIZE	DRAWING NUMBER
—	051 7030

APPLE COMPUTER INC.

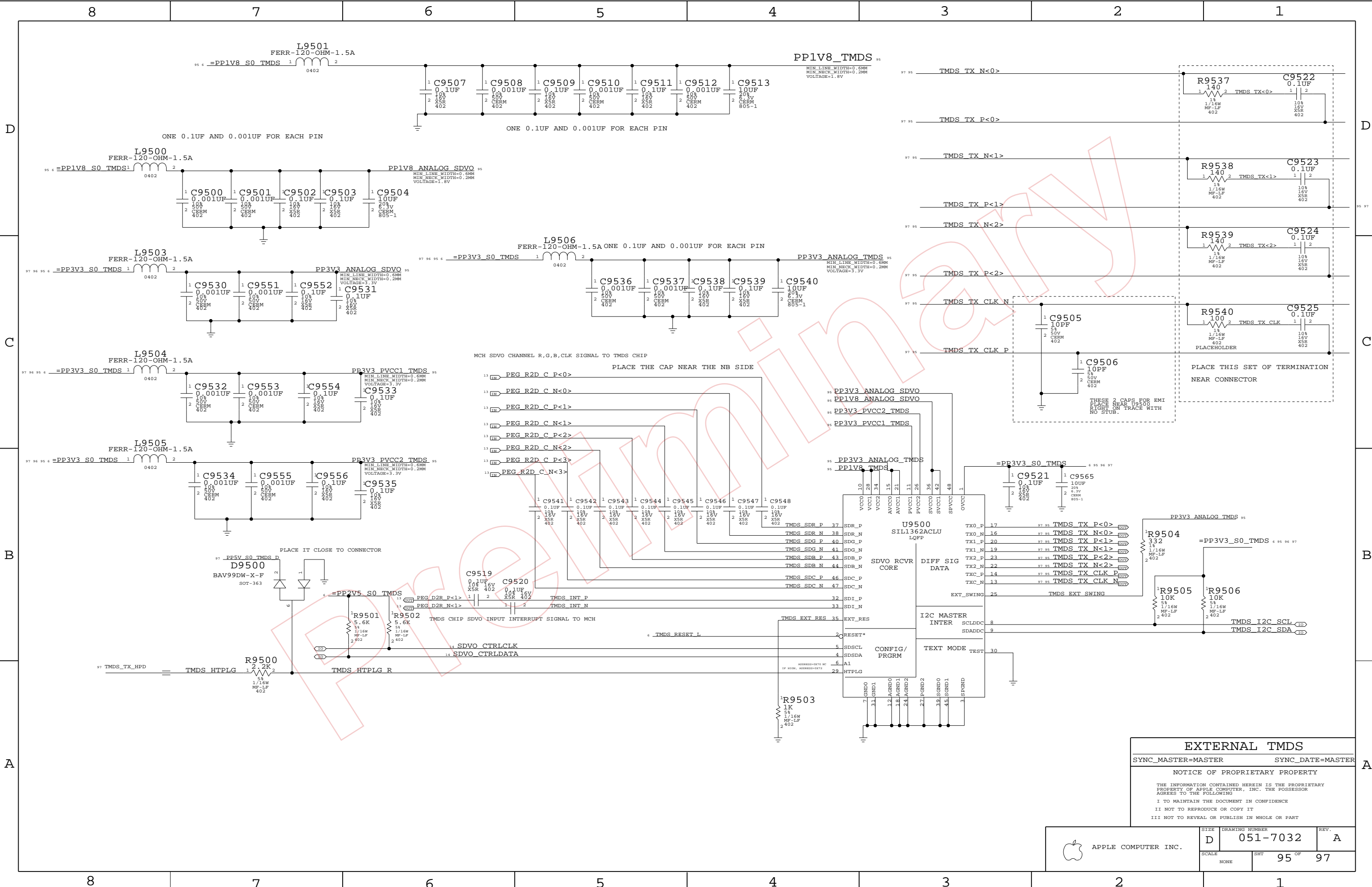
SCALE	SHT	82	OF	97
-------	-----	----	----	----

	NONE	1
--	------	---









EXTERNAL TMSD

SYNC\_MASTER=MASTER SYNC\_DATE=MASTER

NOTICE OF PROPRIETARY PROPERTY

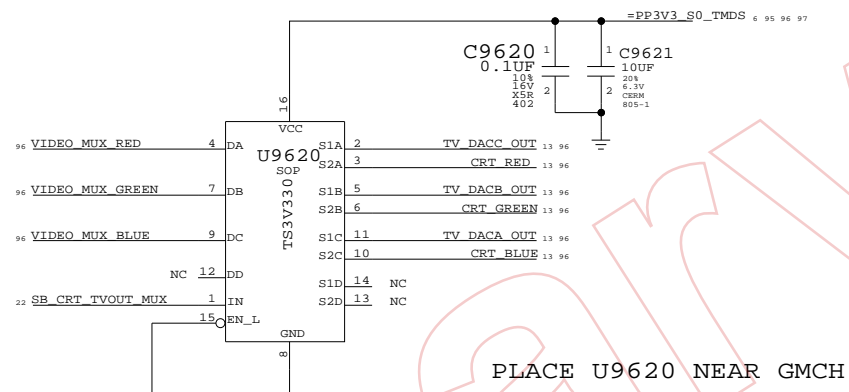
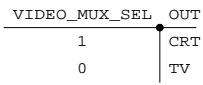
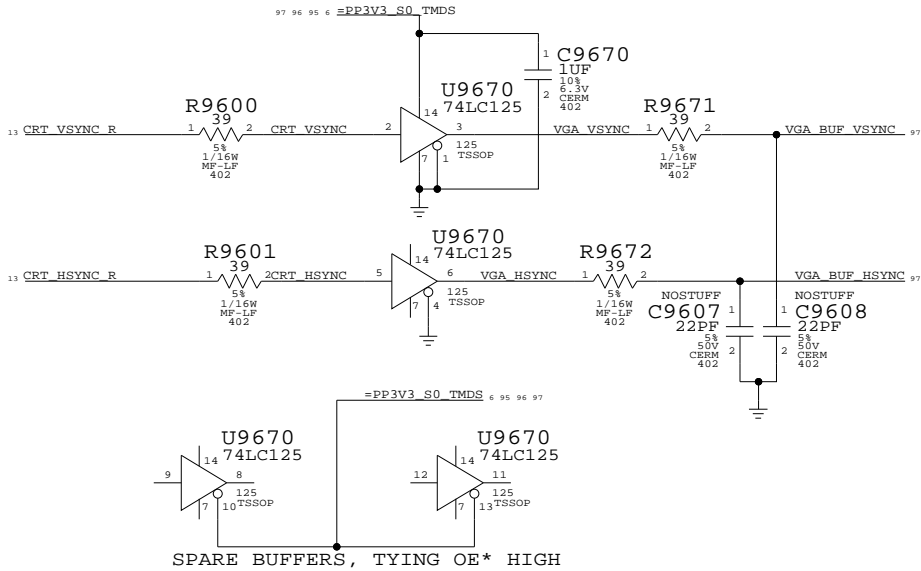
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

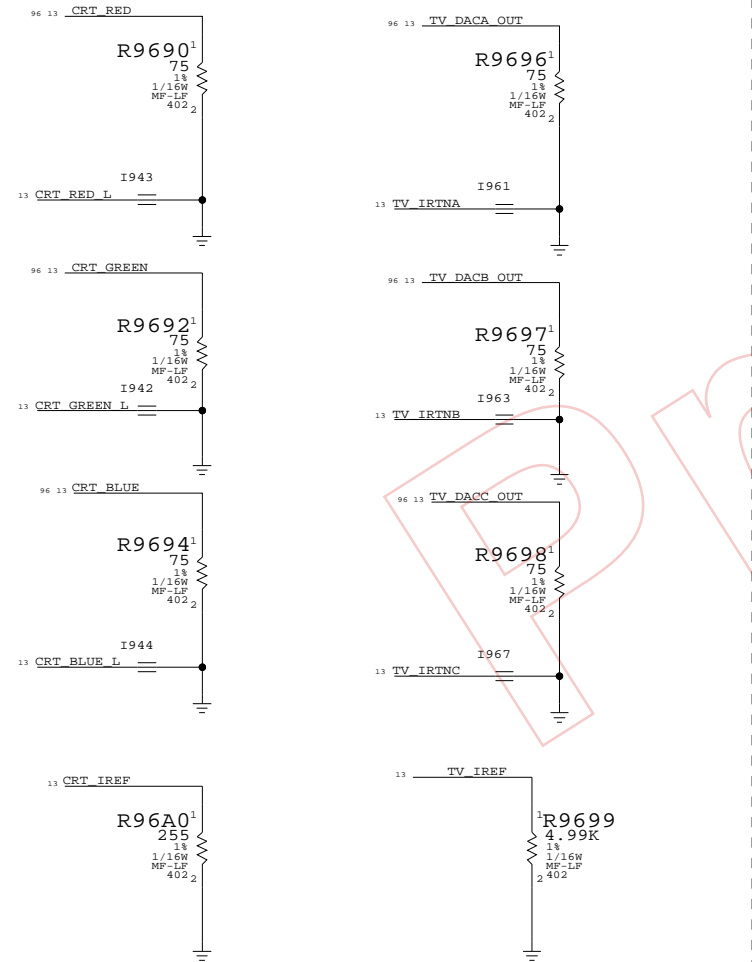
II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

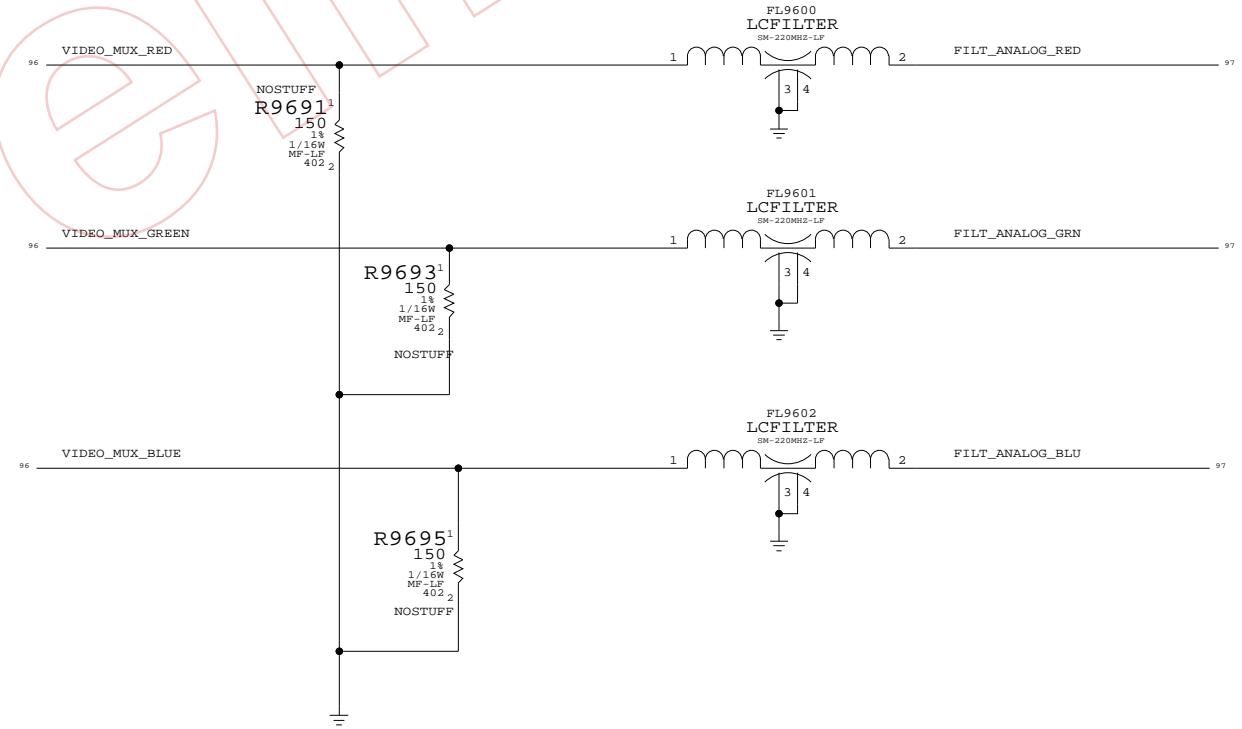
VGA SYNC BUFFERS



PLACE RESISTORS AT NORTHBRIDGE

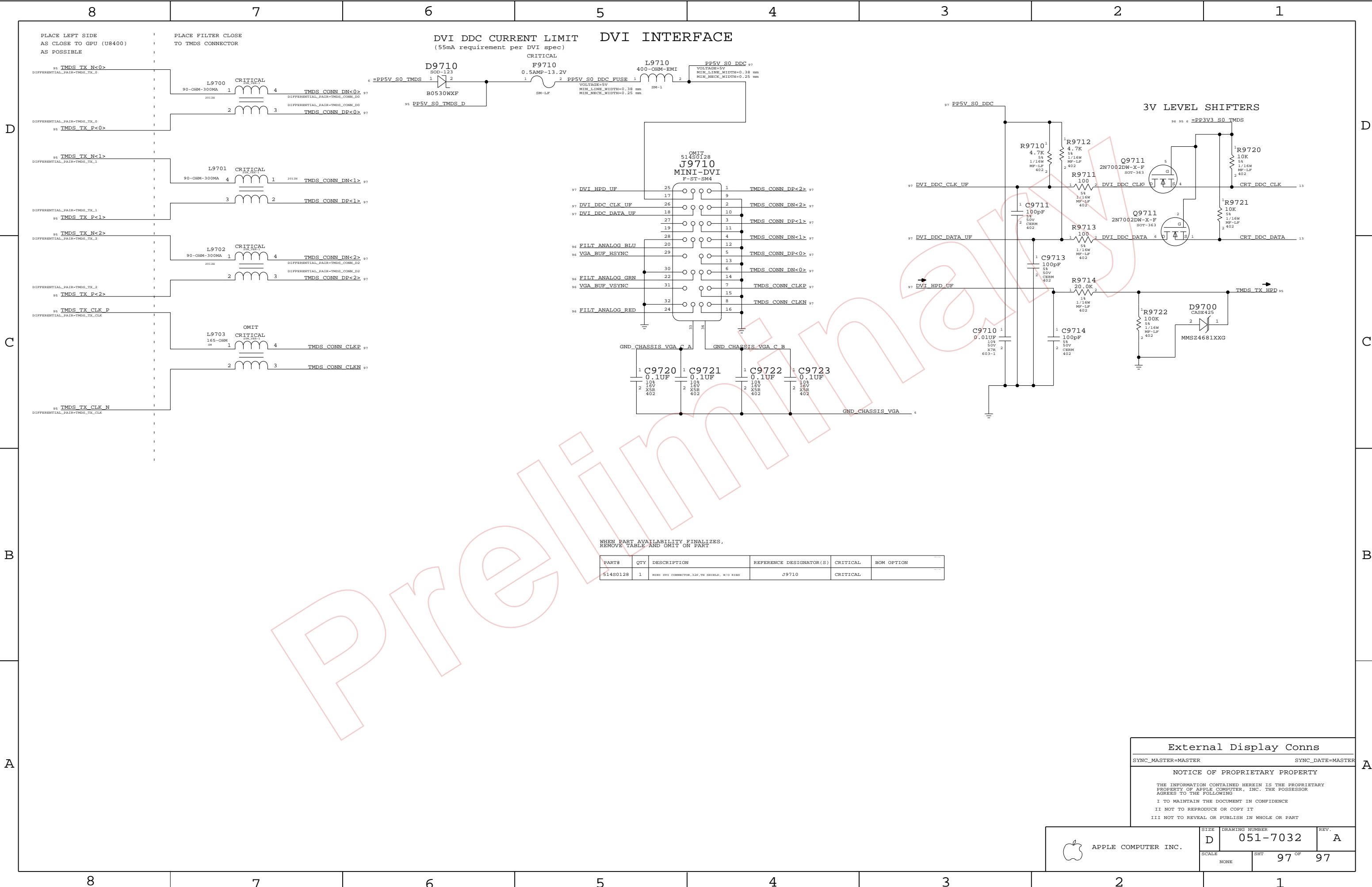


ANALOG FILTERING  
PLACE BY CONNECTOR



TMDS/Inverter/ExtVGA  
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 D	DRAWING NUMBER 051-7032	REV. A
	SCALE NONE	SHT 96 OF 97	



WHEN PART AVAILABILITY FINALIZES,  
REMOVE TABLE AND OMIT ON PART

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514S0128	1	MINI DVI CONNECTOR, 32P, TM SHIELD, W/O RING	J9710	CRITICAL	

External Display Conns

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 051-7032 A

SCALE NONE SHT 97 OF 97