

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.

M42B MLB NO_LDO SCHEMATIC
3/22/2007

REV	ZONE	ECN	DESCRIPTION OF CHANGE	CK APPD DATE	ENG APPD DATE
07		355269	ENGINEERING RELEASED	12/10/04	?

Page	Contents	DRI	Sync	Date
1	Table of Contents	RX	N/A	N/A
2	SYSTEM BLOCK DIAGRAM	RX	MASTER	5/23/05
3	Power Block Diagram	MK	POWER	06/30/2005
4	CONFIGURATION OPTIONS	RX	SMC	07/18/2005
5	FUNC TEST 1 OF 2	RX	TP	07/25/2005
6	SIGNAL ALIAS /RESET	RX	ENET	08/19/2005
7	CPU 1 OF 2-FSB	RX	MASTER	05/03/2005
8	CPU 2 OF 2-PWR/GND	MK	MASTER	05/03/2005
9	CPU DECAPS & VID<>	MK	SMC	08/19/2005
10	CPU MISC1-TEMP SENSOR	ES	ENET	08/19/2005
11	CPU ITP700FLEX DEBUG	RX	MASTER	5/23/05
12	NB CPU Interface	MK	NB	07/25/2005
13	NB PEG / Video Interfaces	DK	NB	07/25/2005
14	NB Misc Interfaces	RX	NB	08/15/2005
15	NB DDR2 Interfaces	LT	NB	07/25/2005
16	NB Power 1	DK	NB	07/25/2005
17	NB Power 2	DK	NB	07/25/2005
18	NB Grounds	DK	NB	07/25/2005
19	NB (GM) Decoupling	DK	NB	06/22/2005
20	NB Config Straps	DK	NB	06/28/2005
21		RX	SB	08/05/2005
22		RX	ENET	11/16/2005
23		RX	ENET	11/28/2005
24		RX	SB	08/05/2005
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26	SB Misc	RX	NB	07/26/2005
27	M42 SMBUS CONNECTIONS	ES	ENET	08/30/2005
28	DDR2 SO-DIMM Connector A	LT	MEMORY	06/20/2005
29	DDR2 SO-DIMM Connector B	LT	MEMORY	06/20/2005
30	Memory Active Termination	LT	MEMORY	06/20/2005
31	Memory Vtt Supply	LT	(MASTER)	(MASTER)
32	CLOCKS	DK	CLOCK	06/03/2005
33	CLOCK TERMINATION	DK	CLOCK	06/06/2005
34	PATA CONNECTOR	ES	ENET	11/01/2005
35	SATA CONNECTOR	ES	ENET	11/14/2005
36	ETHERNET CONTROLLER	ES	ENET	12/06/2005
37	ETHERNET CONNECTOR	ES	ENET	11/14/2005
38	FIREWIRE CONTROLLER	ES	ENET	08/30/2005
39	FIREWIRE PORT	ES	ENET	11/16/2005
40	CONNECTOR MISC	ES	ENET	11/16/2005
41	IR CONTROLLER	ES	ENET	11/09/2005
42		ES	ENET	11/01/2005
43		ES	ENET	08/19/2005
44	BLUETOOTH INTERFACE	MK	ENET	08/29/2005
45	SMC	MK	SMC	08/18/2005
46	SMC SUPPORT	LD	SMC	08/23/2005
47	LPC+ Debug Connector	MK	NB	06/30/2005
48	CPU Current & Voltage Sense	ES	ENET	08/30/2005

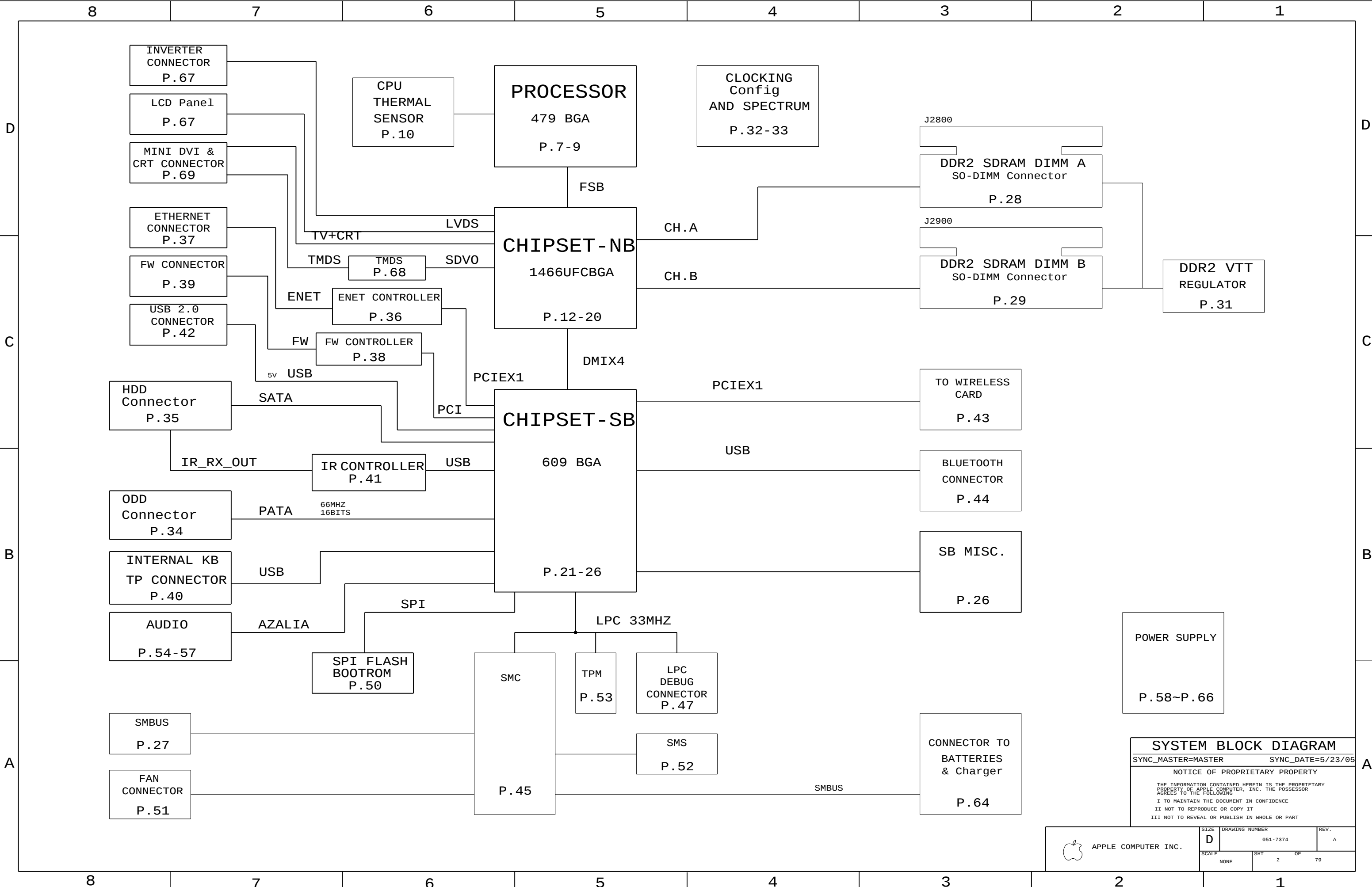
Page	(.csa)	Contents	DRI	Sync	Date
49	62	TEMPERATURE SENSE	RX	ENET	11/09/2005
50	63	SPI BOOTROM	ES	MASTER	5/23/05
51	65	Fan	MK	ENET	11/10/2005
52	66	SMS	RX	SMC	08/23/2005
53	67	TPM	DK	SMC	07/18/2005
54	68	AUDIO0: CODEC	DK	M42AUDIO	08/05/2006
55	72	AUDIO0: SPEAKER AMP	DK	M42AUDIO	08/05/2006
56	73	AUDIO0: JACK	DK	M42AUDIO	08/05/2006
57	74	AUDIO0: JACK TRANSLATORS	MK	M42AUDIO	08/05/2006
58	75	IMVP6 CPU VCore Regulator	MK	POWER	07/13/2005
59	76	5V / 3.3V Power Supply	MK	POWER	07/13/2005
60	77	2.5V/1.2V Regulator	MK	ENET	12/06/2005
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62	79	1.5V / 1.05V Power Supply	MK	POWER	07/13/2005
63	80	S3/S0 FETS, G3H SUPPLY	MK	ENET	08/30/2005
64	81	Power Conn / Alias	MK	ENET	11/16/2005
65	82	DC-In & Battery Connectors	MK	POWER	07/13/2005
66	83	PBUS Supply/Battery Charger	ES	SMC	08/19/2005
67	94	INVERTER, LVDS, TMDS	DK	GRAPHIC	06/06/2005
68	95	EXTERNAL TMDS	DK	GRAPHIC	06/06/2005
69	98	MINI-DVI CONNECTOR		EUGENE	05/21/05
70	99	Cross Reference Page			
71	100	Cross Reference Page			
72	101	Cross Reference Page			
73	102	Cross Reference Page			
74	103	Cross Reference Page			
75	104	Cross Reference Page			
76	105	Cross Reference Page			
77	106	Cross Reference Page			
78	107	Cross Reference Page			
79	108	Cross Reference Page			



EE DRIS:

RX-RAYMOND XU
DK-DINESH KUMAR
RC-RAY CHANG
MK-MARC KLINGELHOFFER
LT-LAWRENCE TAN
LD-LINDA DUNN

DIMENSIONS ARE IN MILLIMETERS XX ± _____ X.XX ± _____ X.XXX ± _____ ANGLES ± _____ DO NOT SCALE DRAWING	METRIC				 Apple Computer Inc.			
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	DRAFTER		DESIGN CK		TITLE SCHEM, MLB NO_LDO, M42B			
	ENG APPD		MFG APPD					
QA APPD		DESIGNER						
 THIRD ANGLE PROJECTION	RELEASE		SCALE NONE		DRAWING NUMBER 051-7374			REV. A
	MATERIAL/FINISH NOTED AS APPLICABLE		SIZE D	SHT 1			OF 79	



SYSTEM BLOCK DIAGRAM

SYNC_MASTER=MASTER

SYNC_DATE=5/23/05

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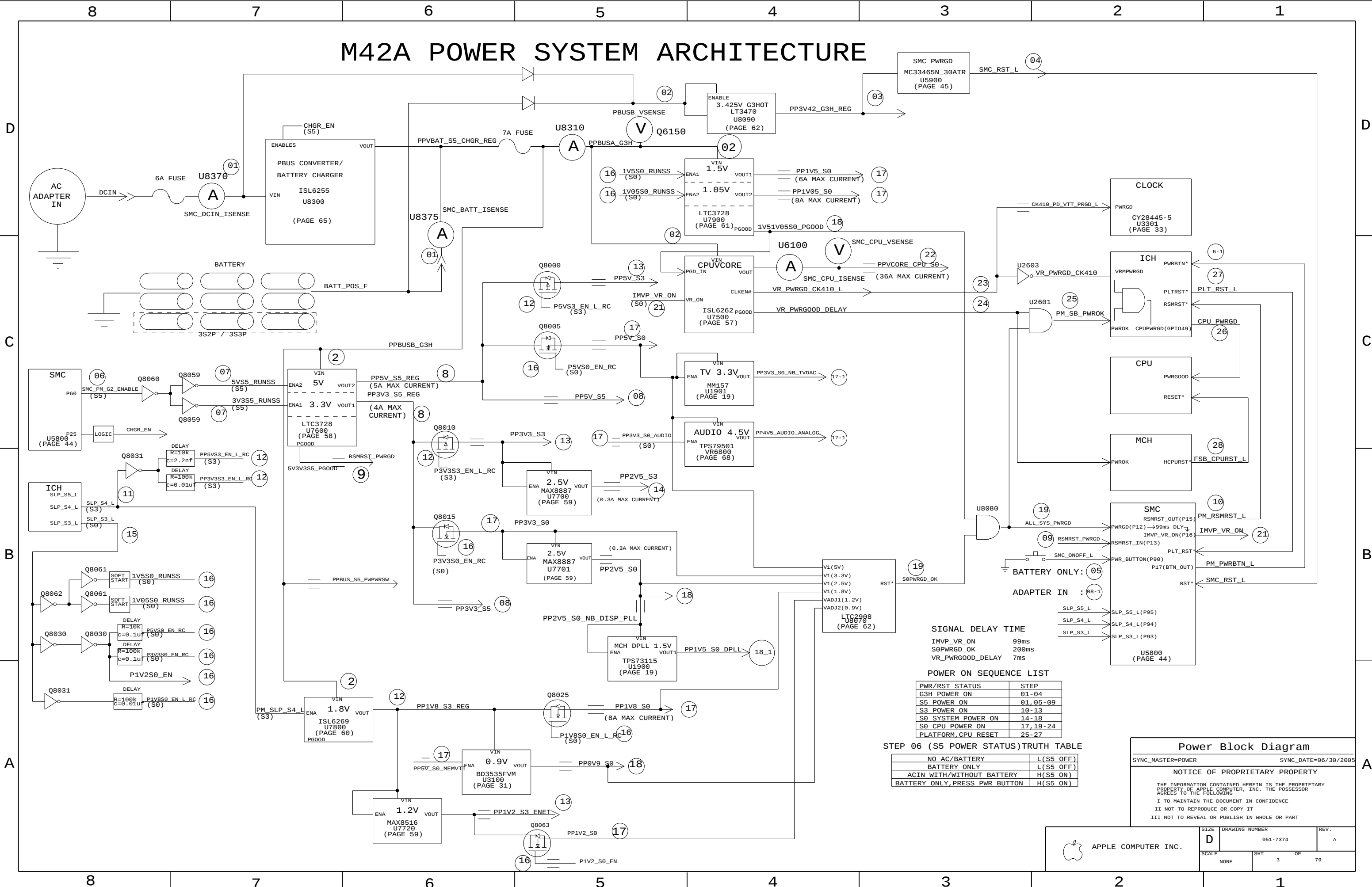
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APPLE COMPUTER INC.		SIZE	DRAWING NUMBER	REV.
D			051-7374	A
SCALE	NONE	SHT	2	OF 79



Page Notes

Power aliases required by this page:
(NONE)

Signal aliases required by this page:
(NONE)

BOM options provided by this page:
(NONE)



BOM OPTION

BOMOPTION	M42A GOOD ST MICRO 630-7795 EVT	M42A BETTER ST MICRO 630-7796 EVT	M42A BEST KIONIX 630-7799 EVT	M42A GOOD KIONIX 630-7798 EVT	M42A BETTER KIONIX 630-7736 EVT	M42A BEST ST MICRO 630-7797 EVT
1V51V05S0_C0NT						
1V51V05S0_SKIP	V	V	V	V	V	V
5V3V3S3_C0NT						
5V3V3S3_SKIP	V	V	V	V	V	V
ACCEL_KIONIX			V	V	V	
ACCEL_ST	V	V				V
INVERTER_BUF	V	V	V	V	V	V
INVERTER_UNBUF						
ITP						
LEMENU	V	V	V	V	V	V
MEMVTT_EN_PU	V	V	V	V	V	V
NBCFG_DMI_REVERSE						
NBCFG_DMI_X2						
NBCFG_DYN_ODT_DISABLE						
NBCFG_PEG_REVERSE						
NBCFG_SDVO_AND_PCIE						
NBCFG_VCC_1V5						
NO_REBOOT_MODE						
USB_C_OC_PU	V	V	V	V	V	V
USB_D_OC_PU	V	V	V	V	V	V
USB_E_OC_PU	V	V	V	V	V	V
GOOD	V			V		
BETTER		V			V	
BEST			V			V
M42A_PGM	V	V	V	V	V	V
ONEWIRE_PULLUP	V	V	V	V	V	V
ONEWIRE_PULLUP_OLD						
ONEWIRE_PU_PROT	V	V	V	V	V	V
ONEWIRE_PU_ACOK						
ONEWIRE_PWRCTL	V	V	V	V	V	V
ONEWIRE_ALWAYS0N						
3V3_IND_2MM8	V	V	V	V	V	V
3V3_IND_3MM						
NORMAL	V	V		V	V	
FANCY			V			V
STANDOFF	V	V	V	V	V	V
FET_FDN6296	V	V	V	V	V	V
FET_STL8NH3LL						
GOOD-ST	V					
BETTER-ST		V				
BEST-KIONIX			V			
GOOD-KIONIX				V		
BETTER-KIONIX					V	
BEST-ST						V
TPM						
PVT-DIMM						
POST-RAMP-DIMM35	V	V	V	V	V	V
M42						
M42A	V	V	V	V	V	V

BOARD STACK-UP AND CONSTRUCTION

Top	SIGNAL
2	GROUND
3	SIGNAL(High Speed)
4	SIGNAL(High Speed)
5	GROUND
6	POWER
7	POWER
8	GROUND
9	SIGNAL(High Speed)
10	SIGNAL(High Speed)
11	GROUND
BOTTOM	SIGNAL

LAYER	THICKNESS (MM)	TRACE WIDTH (MM)
CONFORMAL_COAT	0.018	
L1 SIGNAL(TOP)	0.047	0.1
L1-L2	0.07	
L2 GROUND	0.014	---
L2-L3	0.076	
L3 SIGNAL	0.014	0.079
L3-L4	0.156	
L4 SIGNAL	0.014	0.079
L4-L5	0.076	
L5 GND	0.014	---
L5-L6	0.07	
L6 POWER	0.031	---
L6-L7	0.076	
L7 POWER	0.031	---
L7-L8	0.07	
L8 GROUND	0.014	---
L8-L9	0.076	
L9 SIGNAL	0.014	0.1
L9-L10	0.156	
L10 SIGNAL	0.014	0.1
L10-L11	0.076	
L11 GROUND	0.014	0.1
L11-L12	0.07	
L12 SIGNAL(BOTTOM)	0.047	0.1
CONFORMAL_COAT	0.018	
TOTAL	1.276	---

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
337S3450	1	IC, MEROM, CPU L2 1.83GHZ, 479 PGA	U0700	GOOD
337S3389	1	IC, MEROM, CPU 2.06GHZ, 479 PGA	U0700	BETTER
337S3391	1	IC, MEROM, CPU 2.16GHZ, 479 PGA	U0700	BEST

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
338S0268	1	IC, FW32386, 1394A LINK, BGA, 129P	U4400	LEMENU
338S0270	1	IC, 88E8053, GIGABIT ENET XCVR, 64P QFN,	NO U4101	LEMENU
359S0109	1	IC, SLGBLP436, CLOCK GEN, 68PIN QFN	U3301	LEMENU

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
341S2131	1	IC, 16MBIT 8-PIN SPI SERIAL FLASH, 500C8	U6301	M42A_PGM
341S1797	1	IC, EEPROM, SERIAL IIC, 8KBIT, S08	U4102	M42A_PGM
341S2133	1	IC, SMC, 176P BGA, H58/2116	U5800	M42A_PGM
341S1899	1	IC, PSOC+W/USB, 56P, MLF, CY8C24794	U5100	M42A_PGM

341S2132 FOR M42B LOCKED BOOTROM

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:YCT	CRITICAL	BEST-KIONIX
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:YCS	CRITICAL	BETTER-KIONIX
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:YCR	CRITICAL	GOOD-KIONIX

CONFIGURATION OPTIONS

SYNC_MASTER=SMC	SYNC_DATE=07/18/2005
-----------------	----------------------

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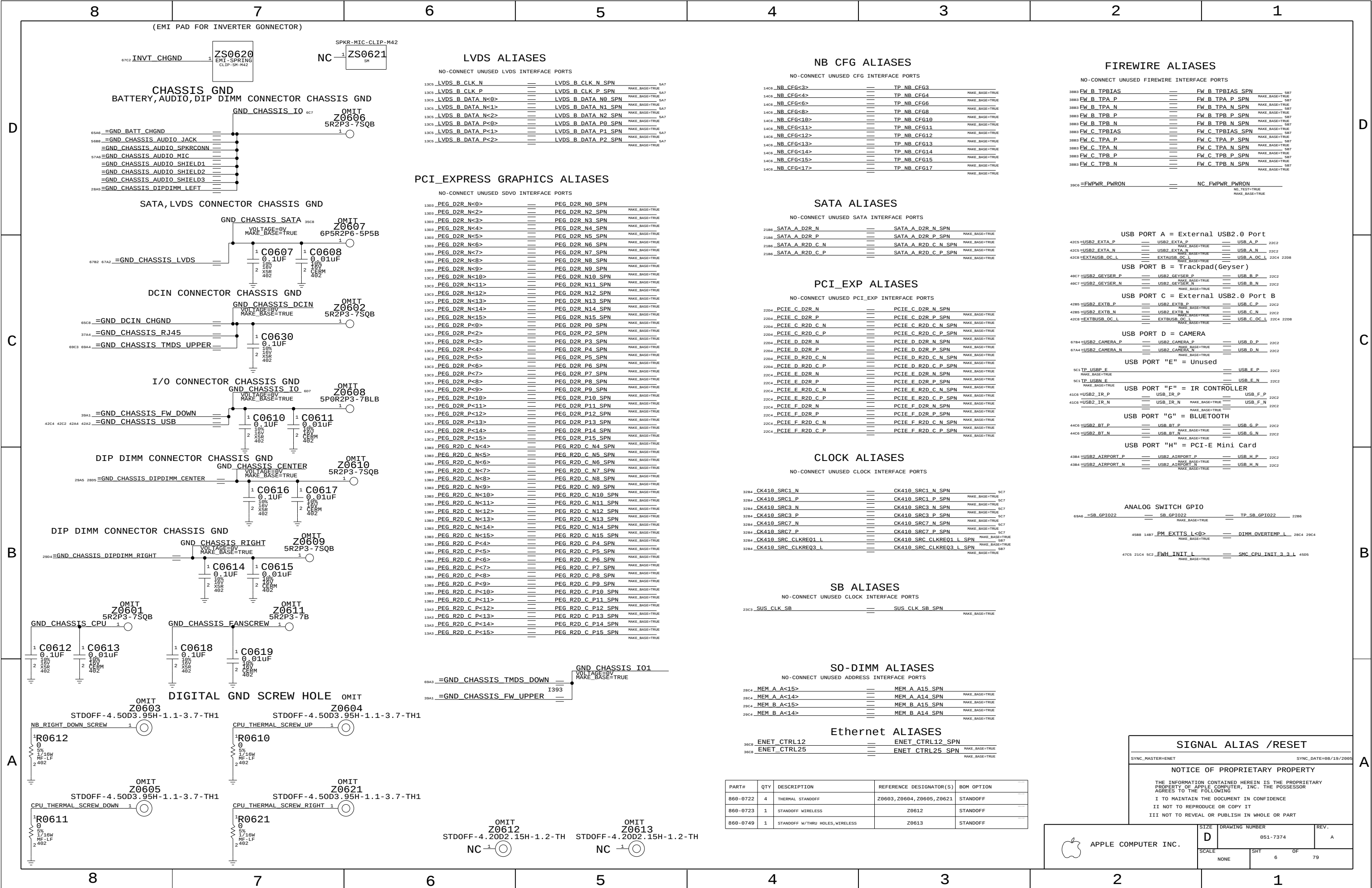
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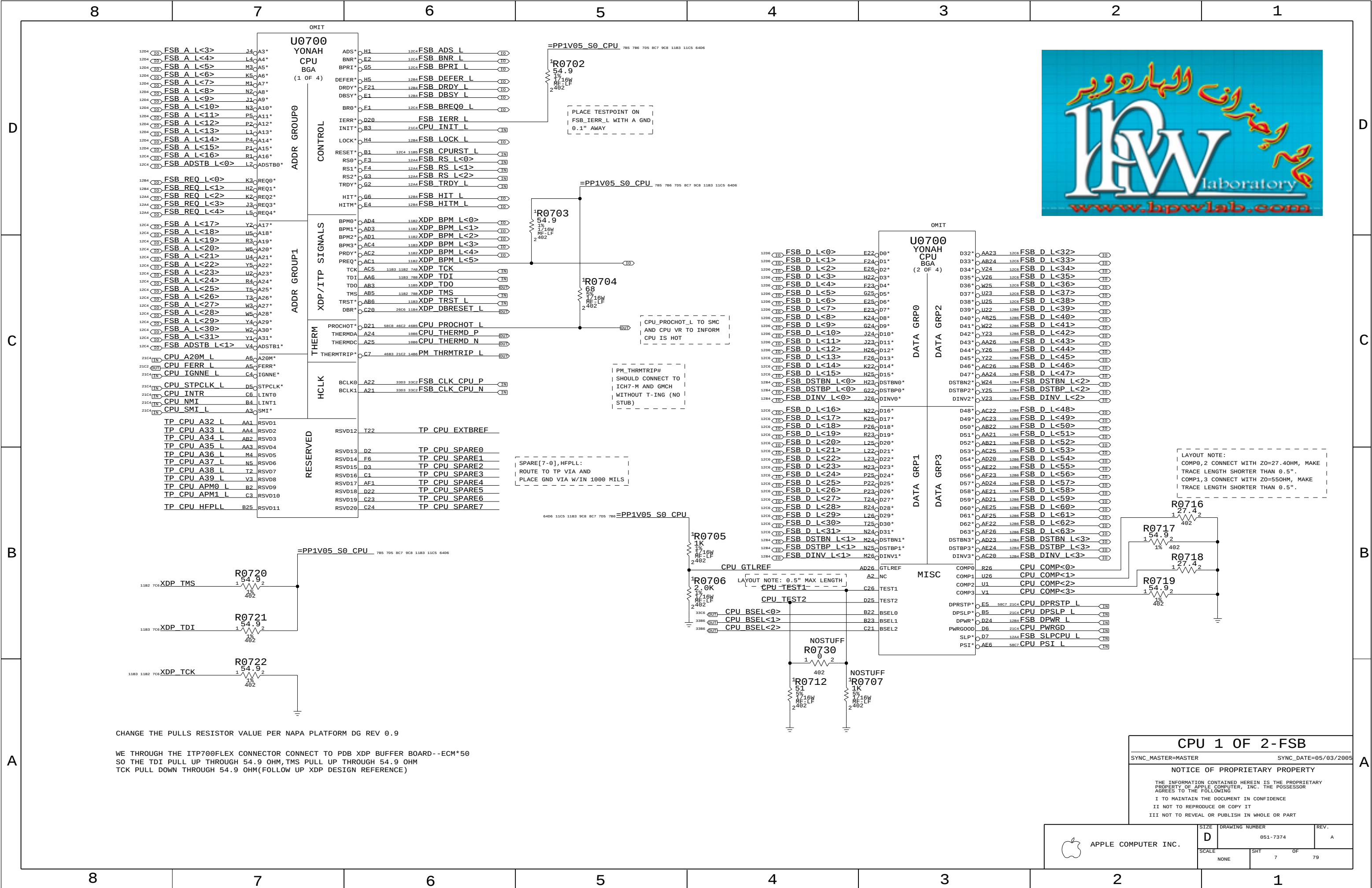


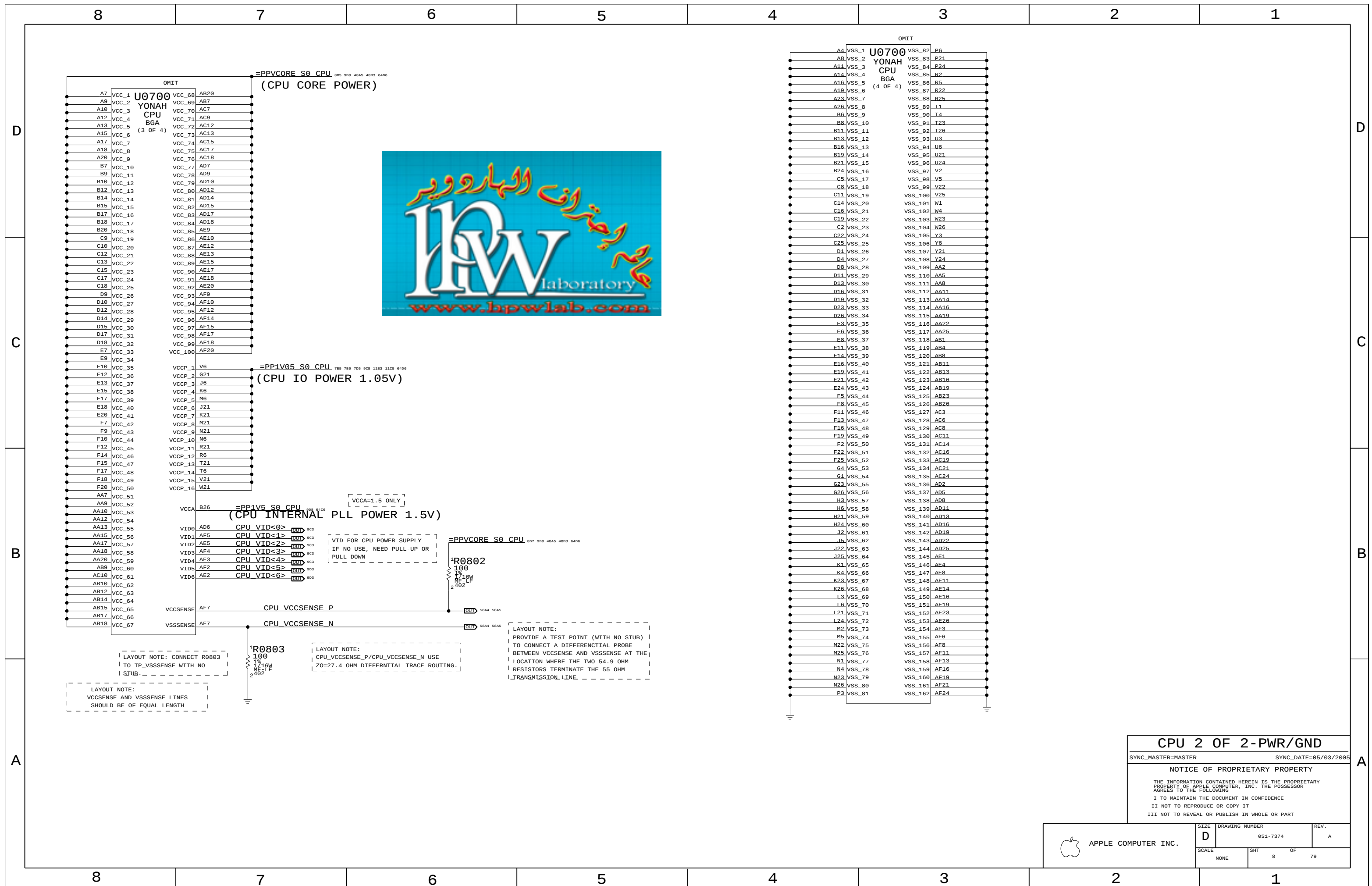
APPLE COMPUTER INC.

SIZE	DRAWING NUMBER
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SCALE	SHT	OF
NONE	4	7







D



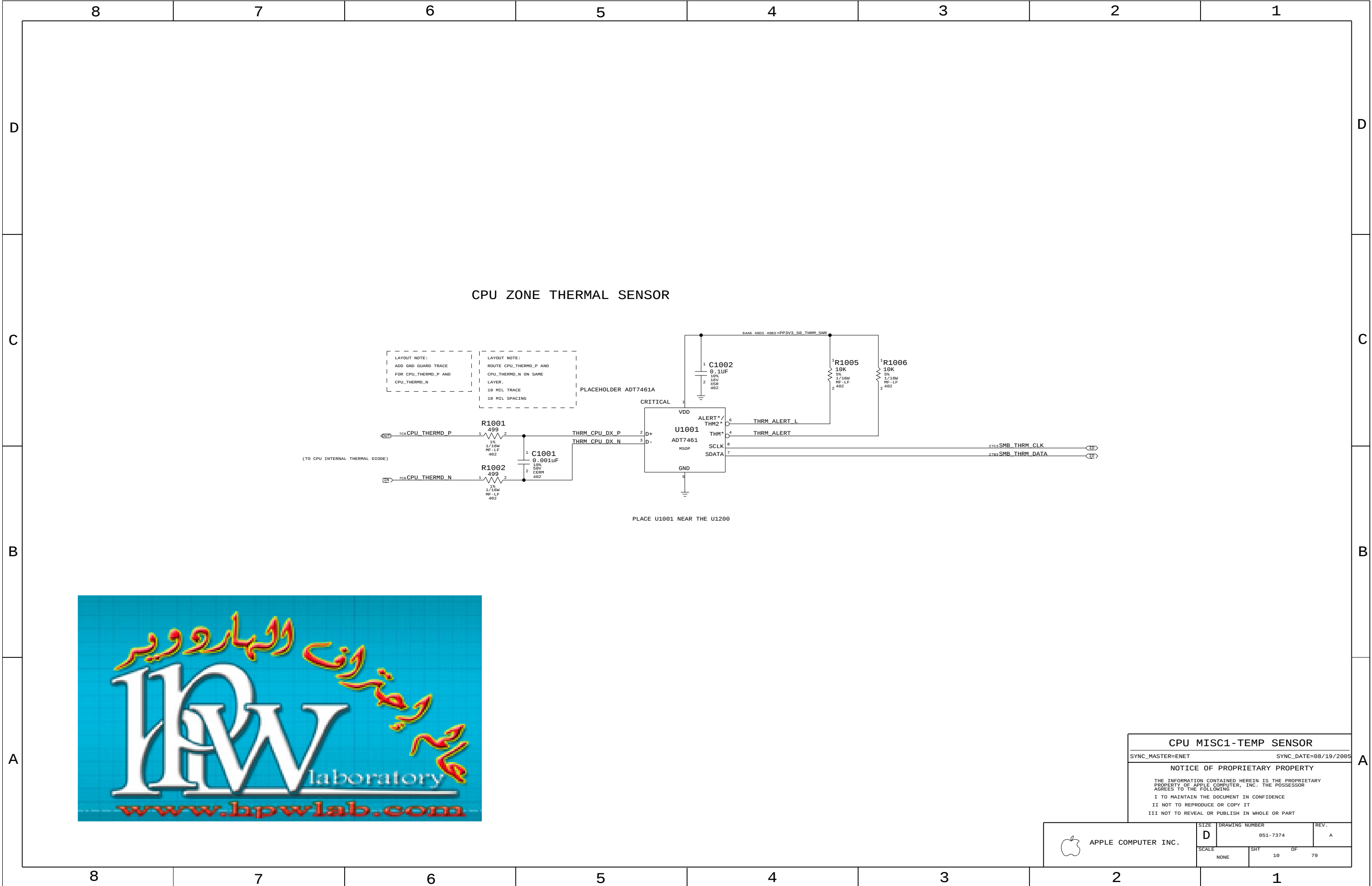
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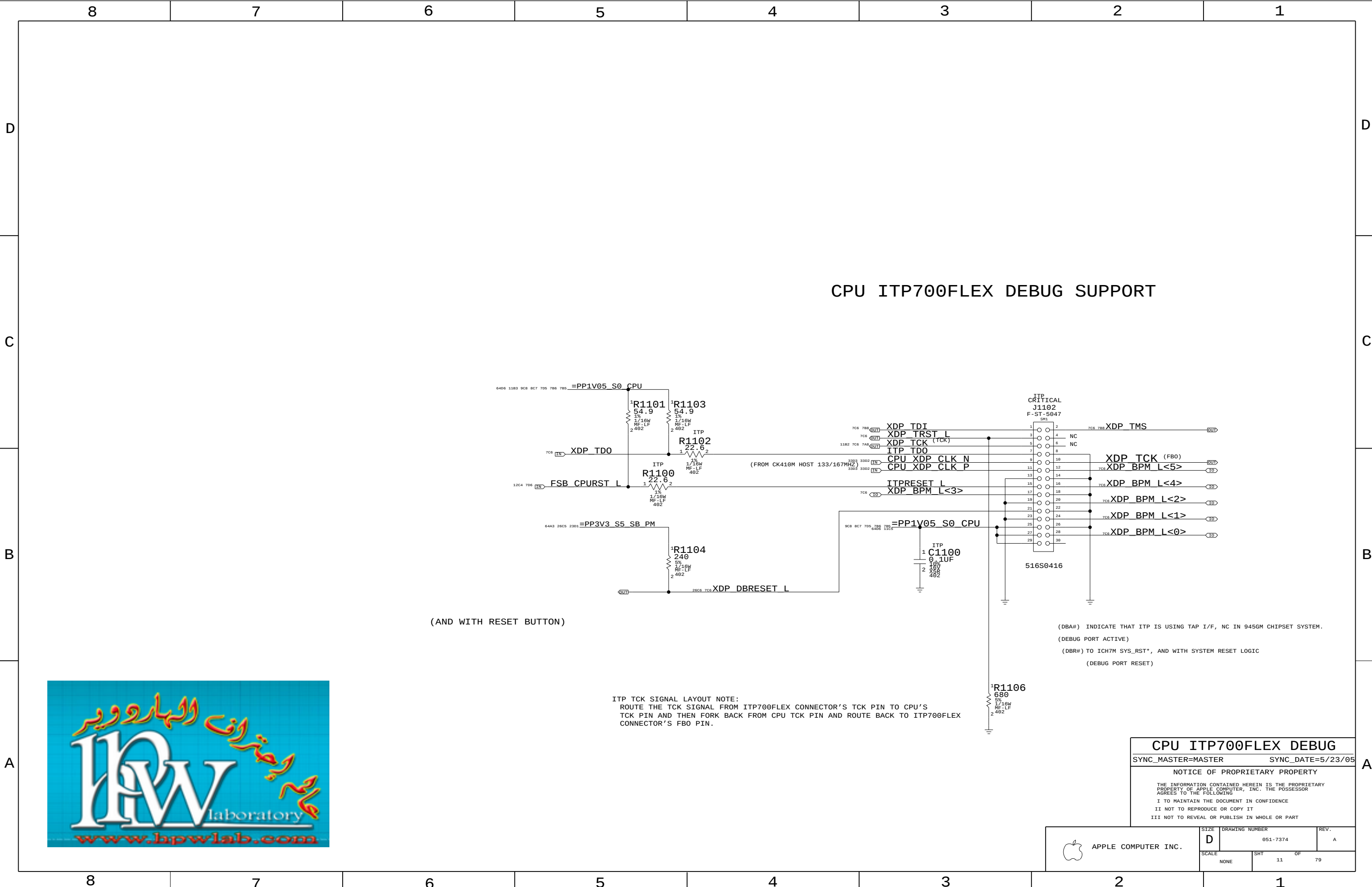
A



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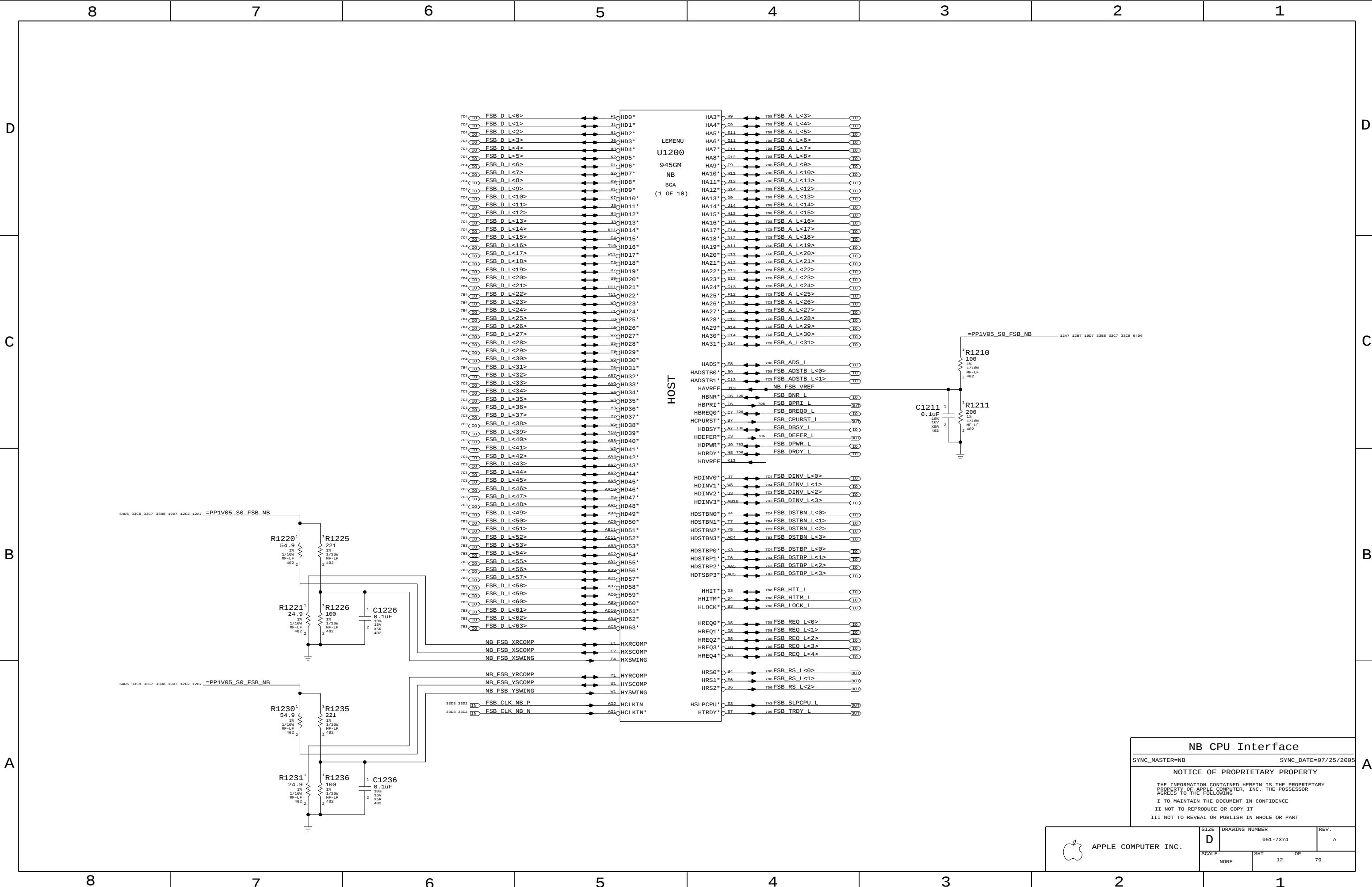
SIZE D	DRAWING NUMBER 051-7374	REV. A
SCALE NONE	SHT 9 OF 79	





CPU ITP700FLEX DEBUG		
SYNC_MASTER=MASTER		SYNC_DATE=5/23/05
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	SCALE NONE	SHT 11	OF 79



NB CPU Interface

SYNC_MASTER=NB

SYNC_DATE=07/25/2005

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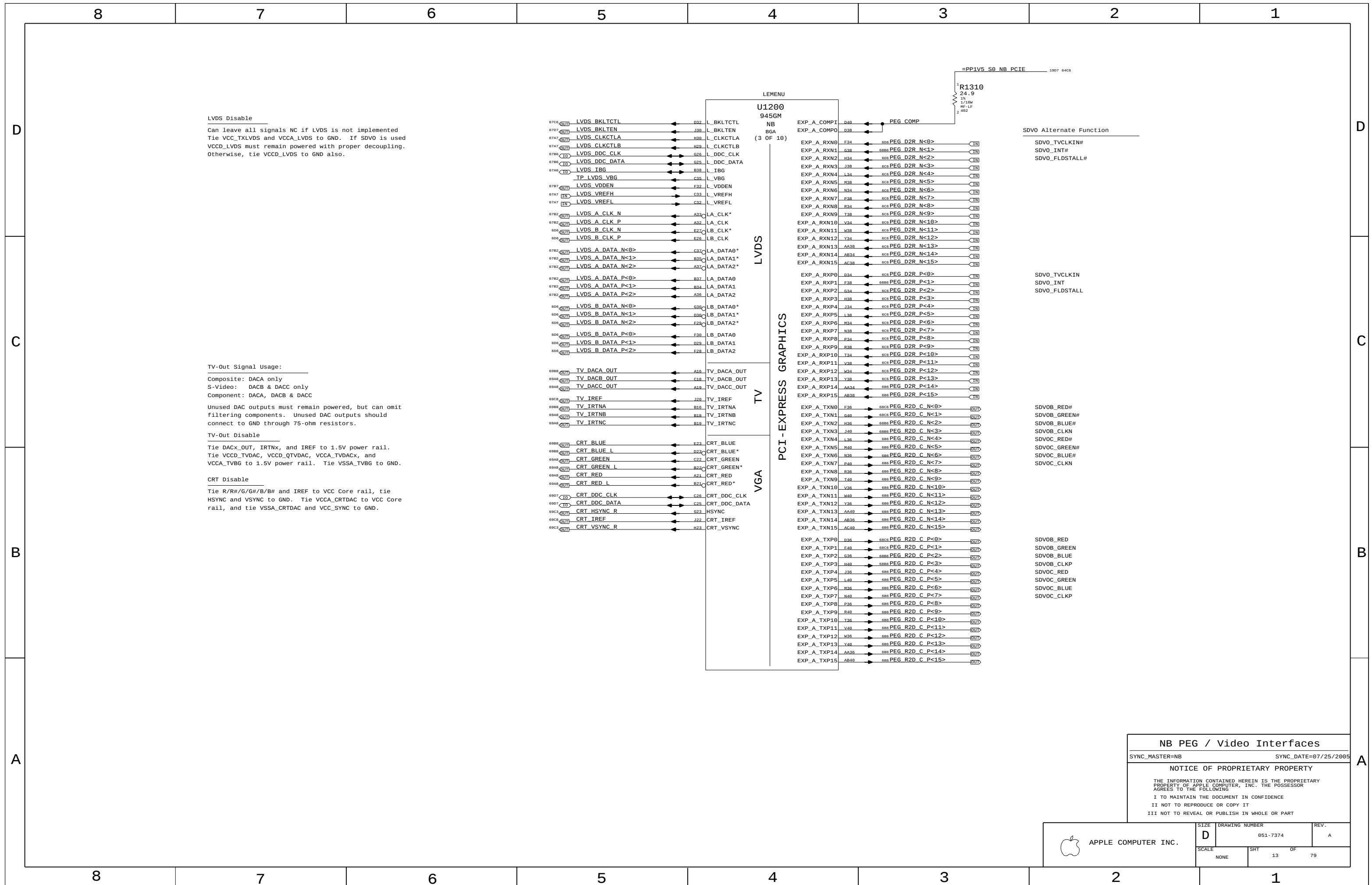
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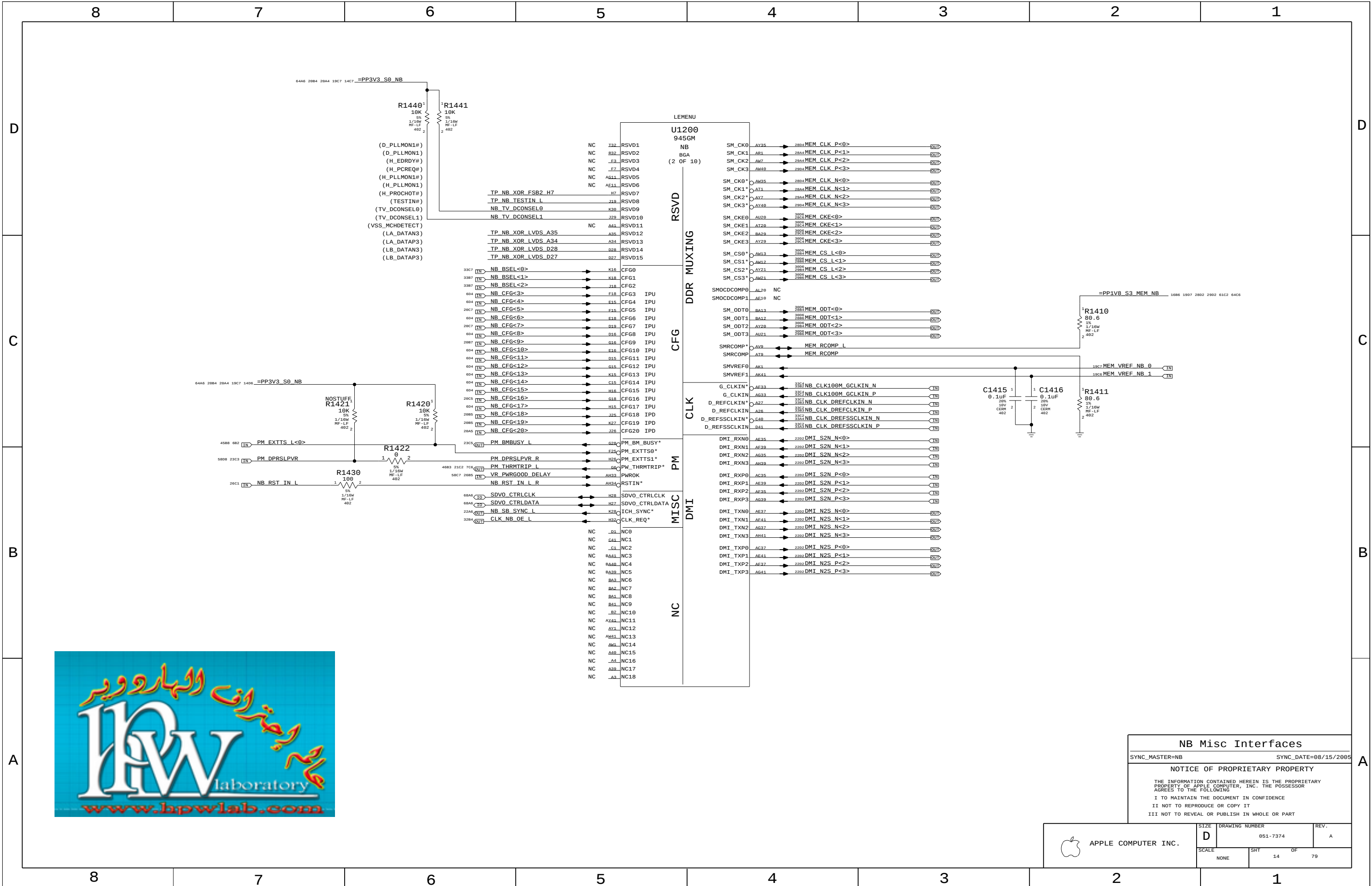
DRAWING NUMBER 051-7374

REV. A

SCALE NONE

SHT 12 OF 79





NB Misc Interfaces

SYNC_MASTER=NB

SYNC_DATE=08/15/2005

NOTICE OF PROPRIETARY PROPERTY

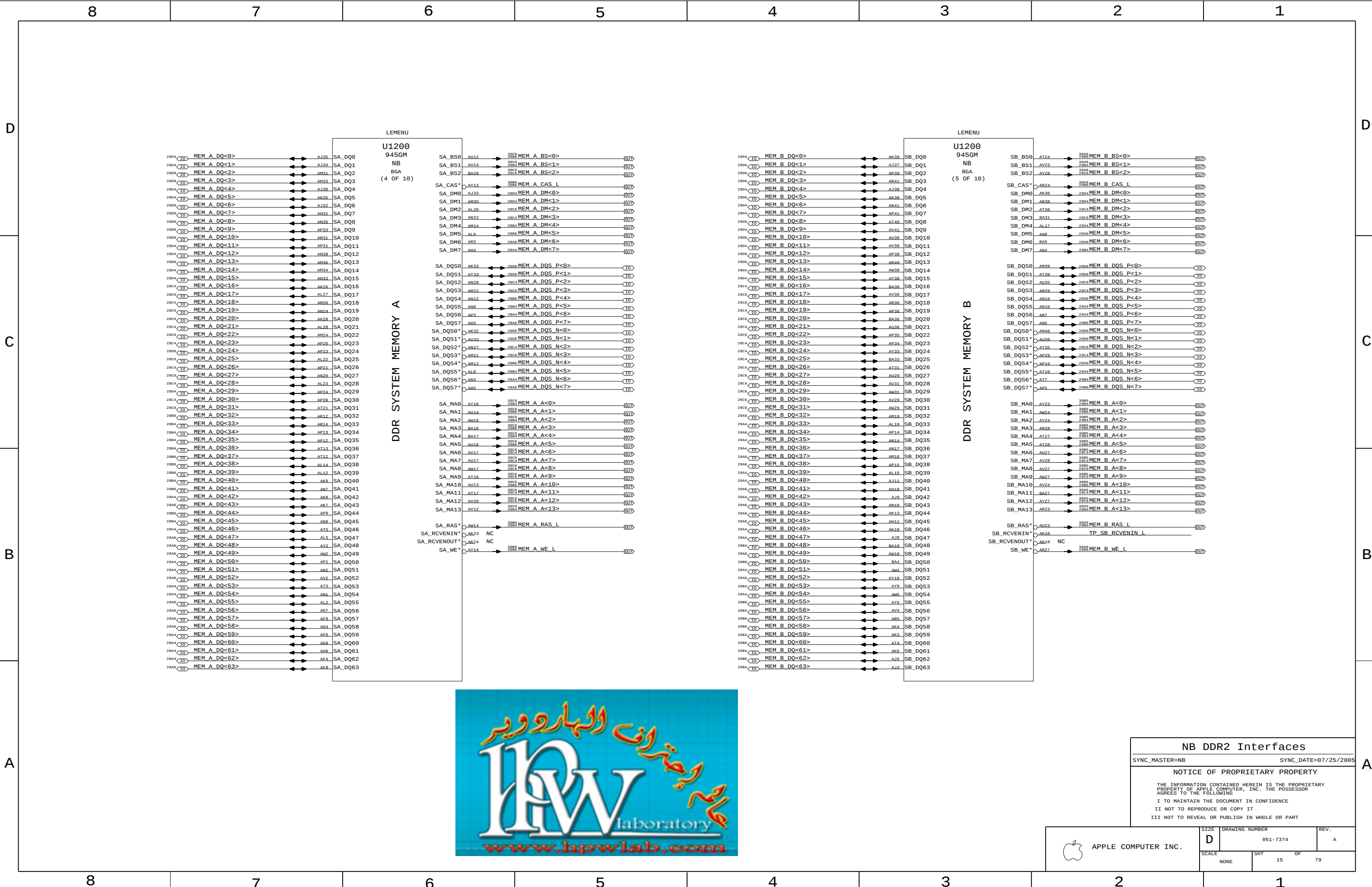
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	D	051-7374	A
SCALE	SHT		
	NONE	14	OF 79



NB DDR2 Interfaces

SYNC_MASTER=NB SYNC_DATE=07/25/2005

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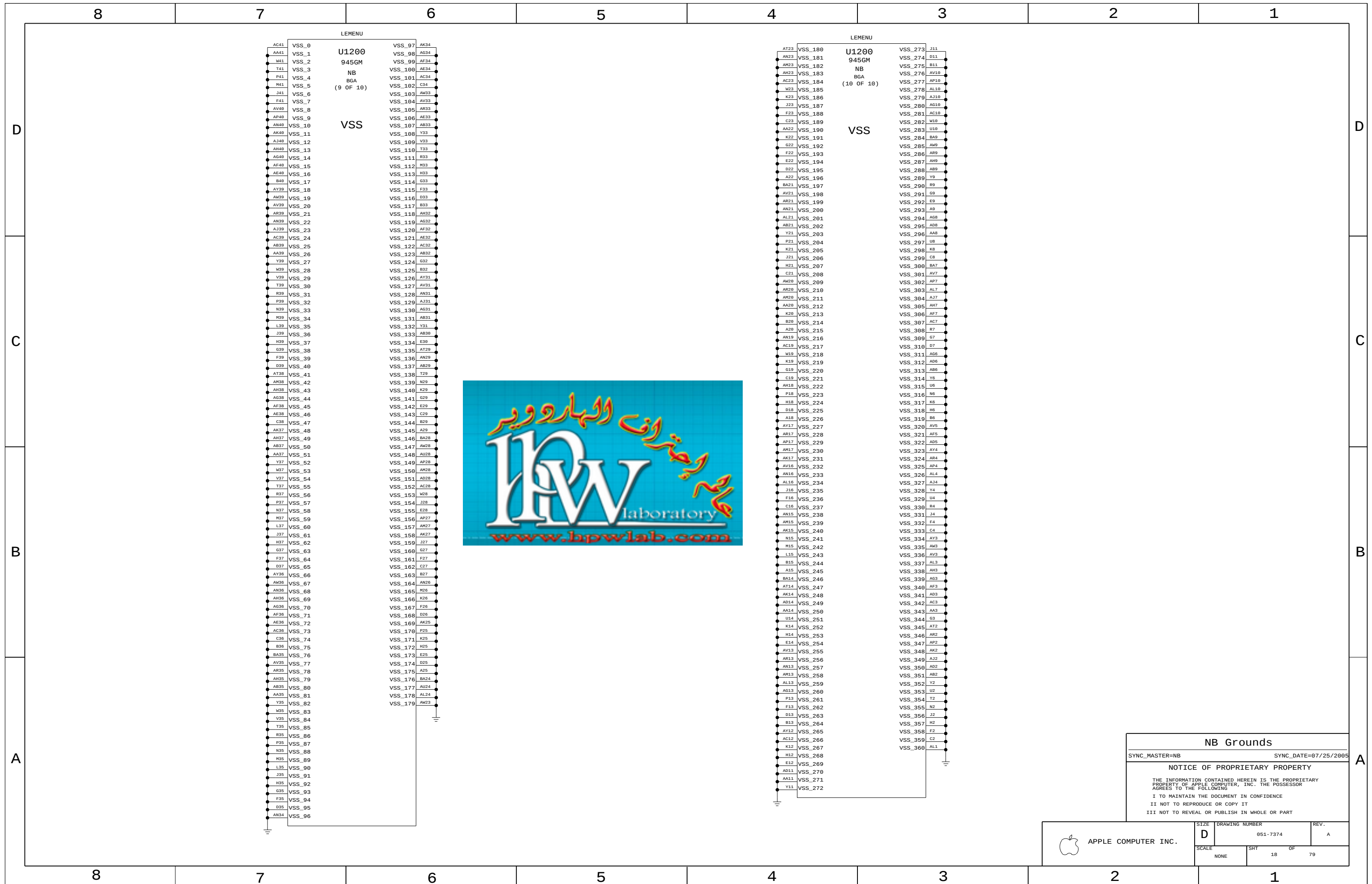
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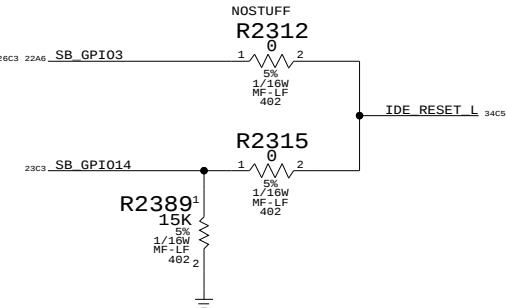
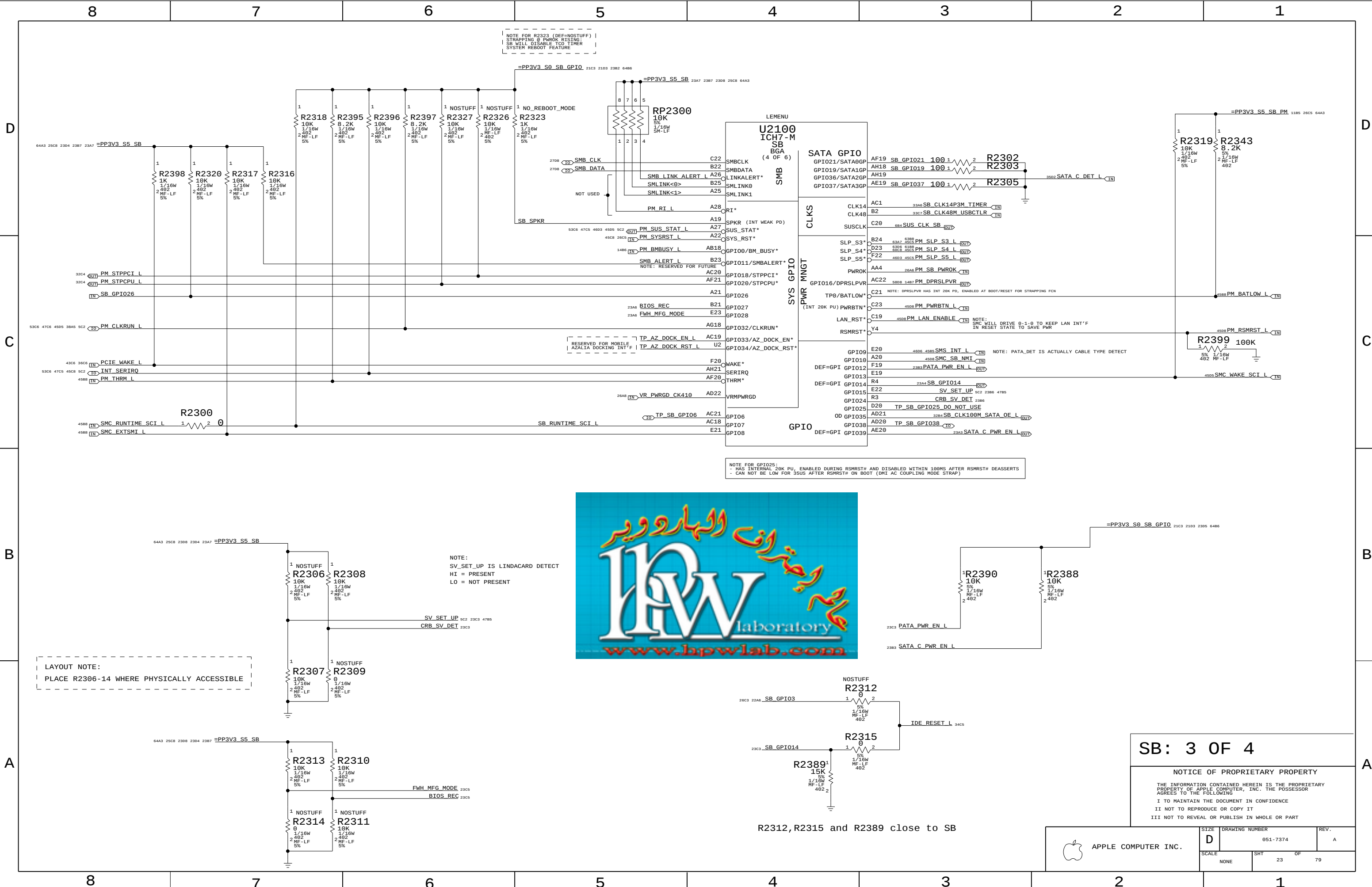
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SCALE	SHT OF		
	NONE	15	79





R2312,R2315 and R2389 close to SB

SB: 3 OF 4

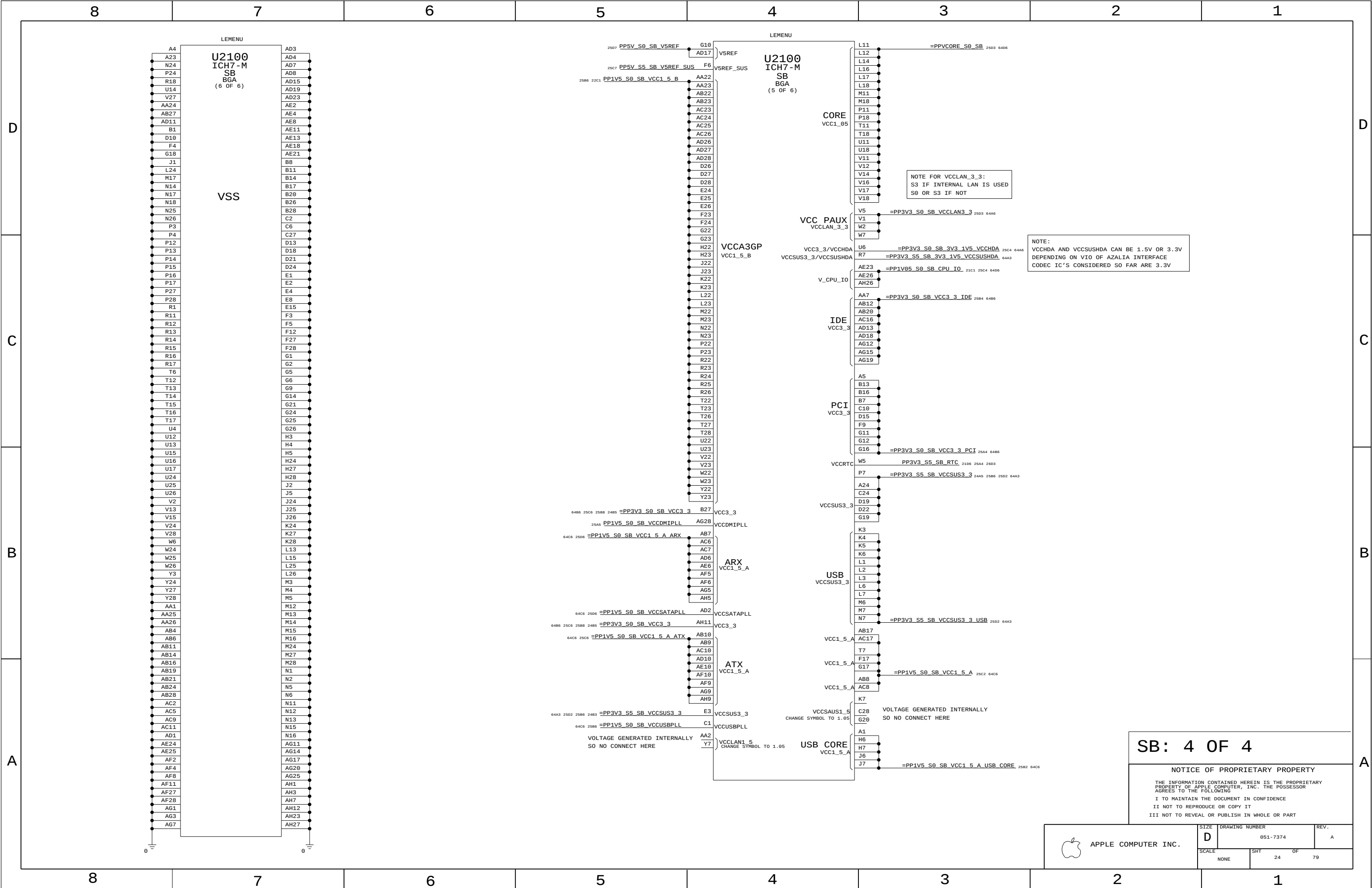
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SCALE	SHT	OF
NONE	23	79



D

C

B

A

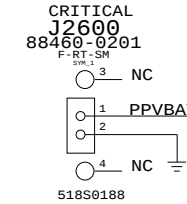
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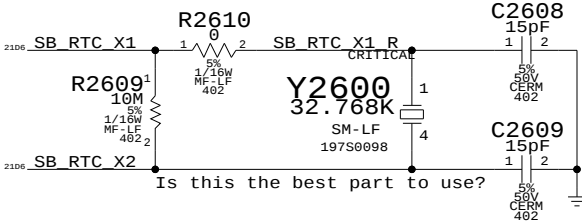
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A

RTC Battery Connector



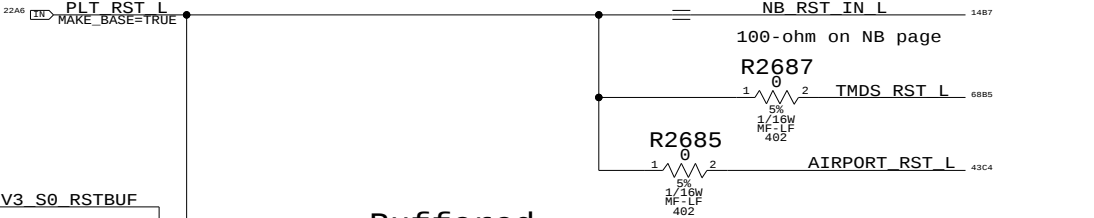
SB RTC Crystal Circuit



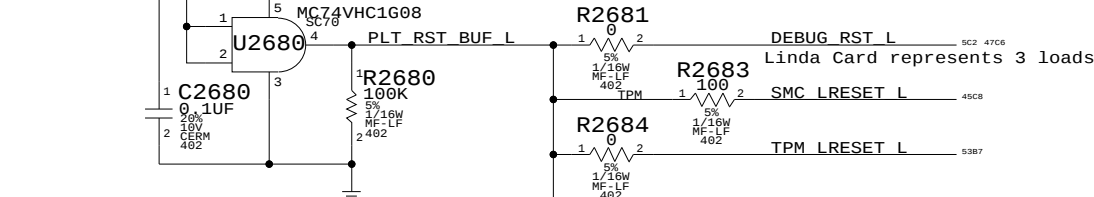
This part is never stuffed, it provides a set of pads on the board to short or to solder a reset button.

Silk: "SYS RST"

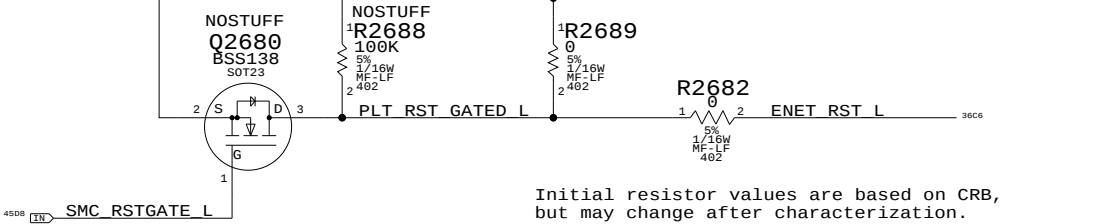
Platform Reset Connections
Unbuffered



Buffered



Gated



Initial resistor values are based on CRB, but may change after characterization.

SB Misc

SYNC_MASTER=NB SYNC_DATE=07/26/2005

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APPLE COMPUTER INC.

SIZE

D

DRAWING NUMBER

051-7374

REV.

A

SCALE

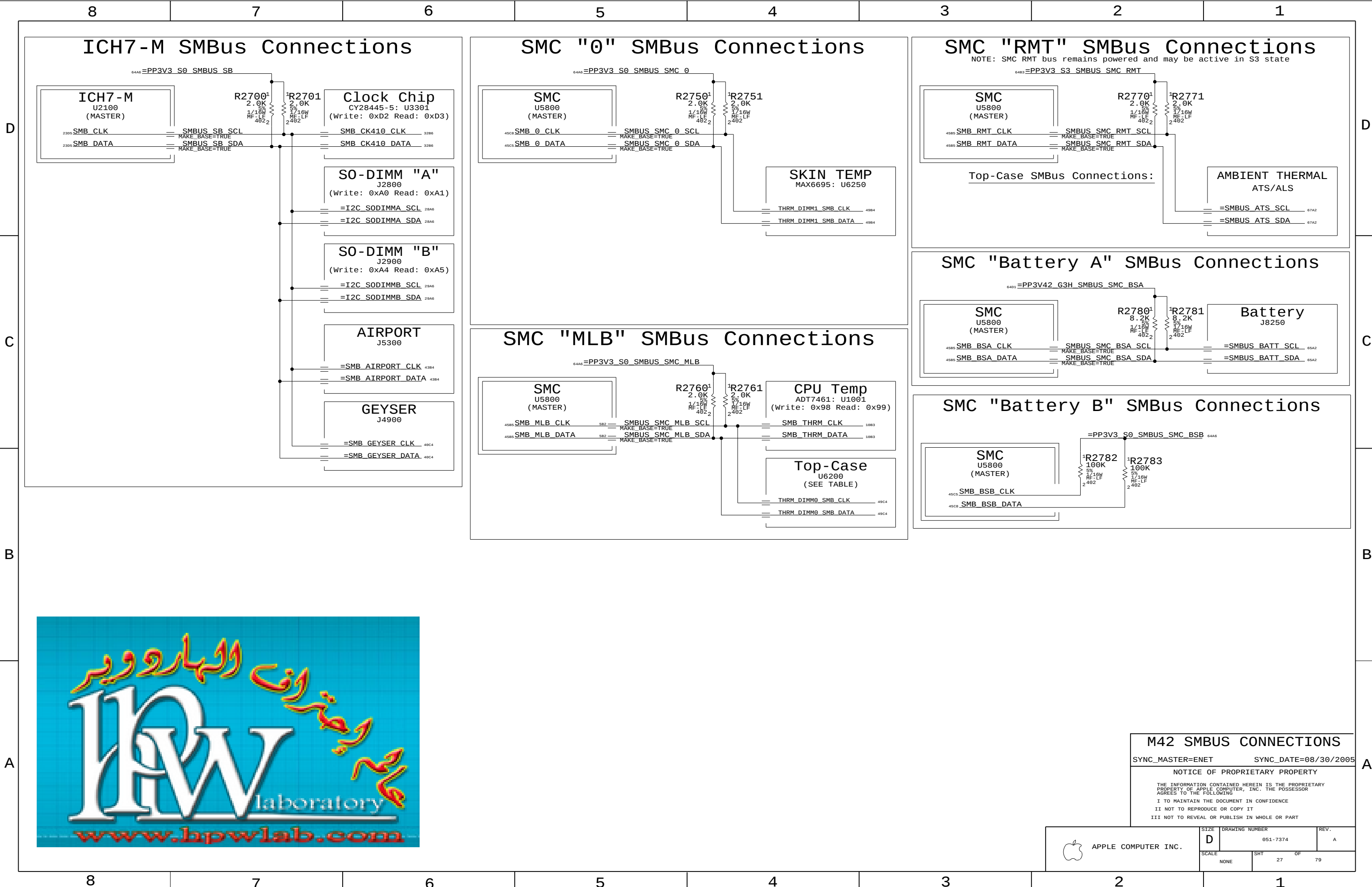
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SHT

26

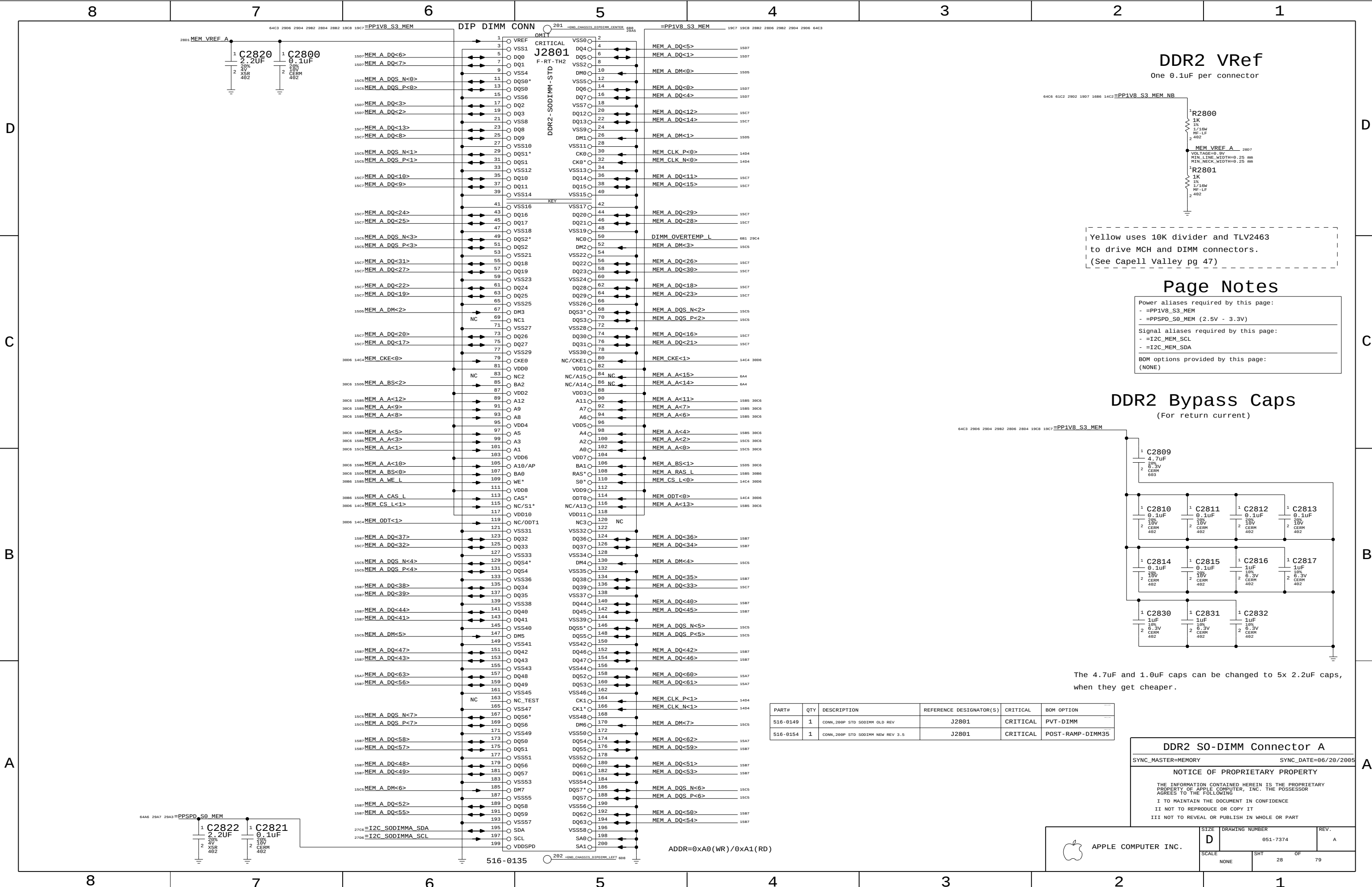
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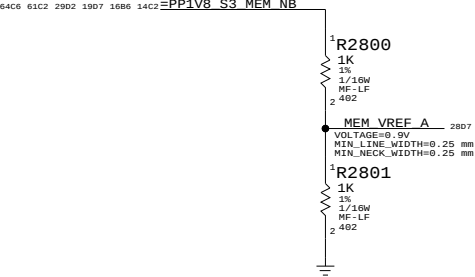
M42 SMBUS CONNECTIONS
SYNC_MASTER=ENET SYNC_DATE=08/30/2005
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7374	REV. A
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DDR2 VRef

One 0.1uF per connector



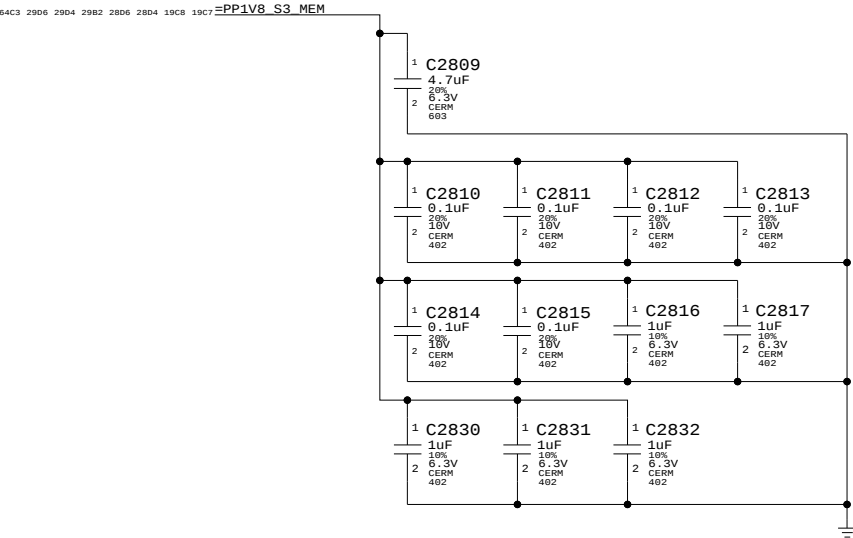
Yellow uses 10K divider and TLV2463 to drive MCH and DIMM connectors.
(See Capell Valley pg 47)

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)

DDR2 Bypass Caps

(For return current)



The 4.7uF and 1.0uF caps can be changed to 5x 2.2uF caps, when they get cheaper.

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
516-0149	1	CONN, 200P STD SODIMM OLD REV	J2801	CRITICAL	PVT-DIMM
516-0154	1	CONN, 200P STD SODIMM NEW REV 3.5	J2801	CRITICAL	POST-RAMP-DIMM35

DDR2 SO-DIMM Connector A

SYNC_MASTER=MEMORY SYNC_DATE=06/20/2005

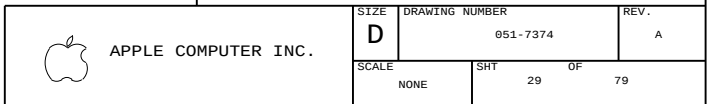
NOTICE OF PROPRIETARY PROPERTY

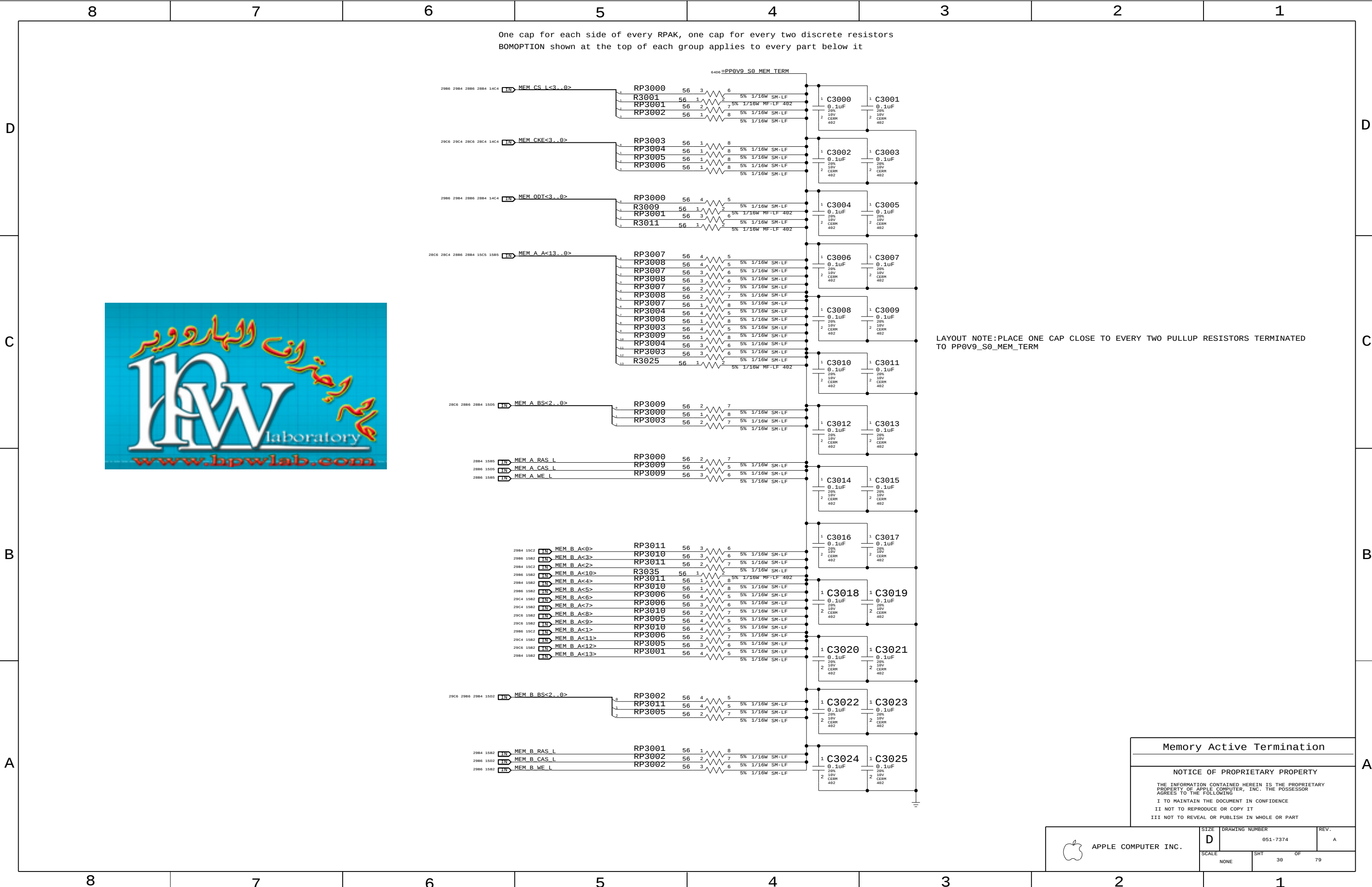
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SIZE	DRAWING NUMBER	REV.
D	051-7374	A
SCALE	SHT	OF
NONE	28	79





Memory Active Termination

NOTICE OF PROPRIETARY PROPERTY

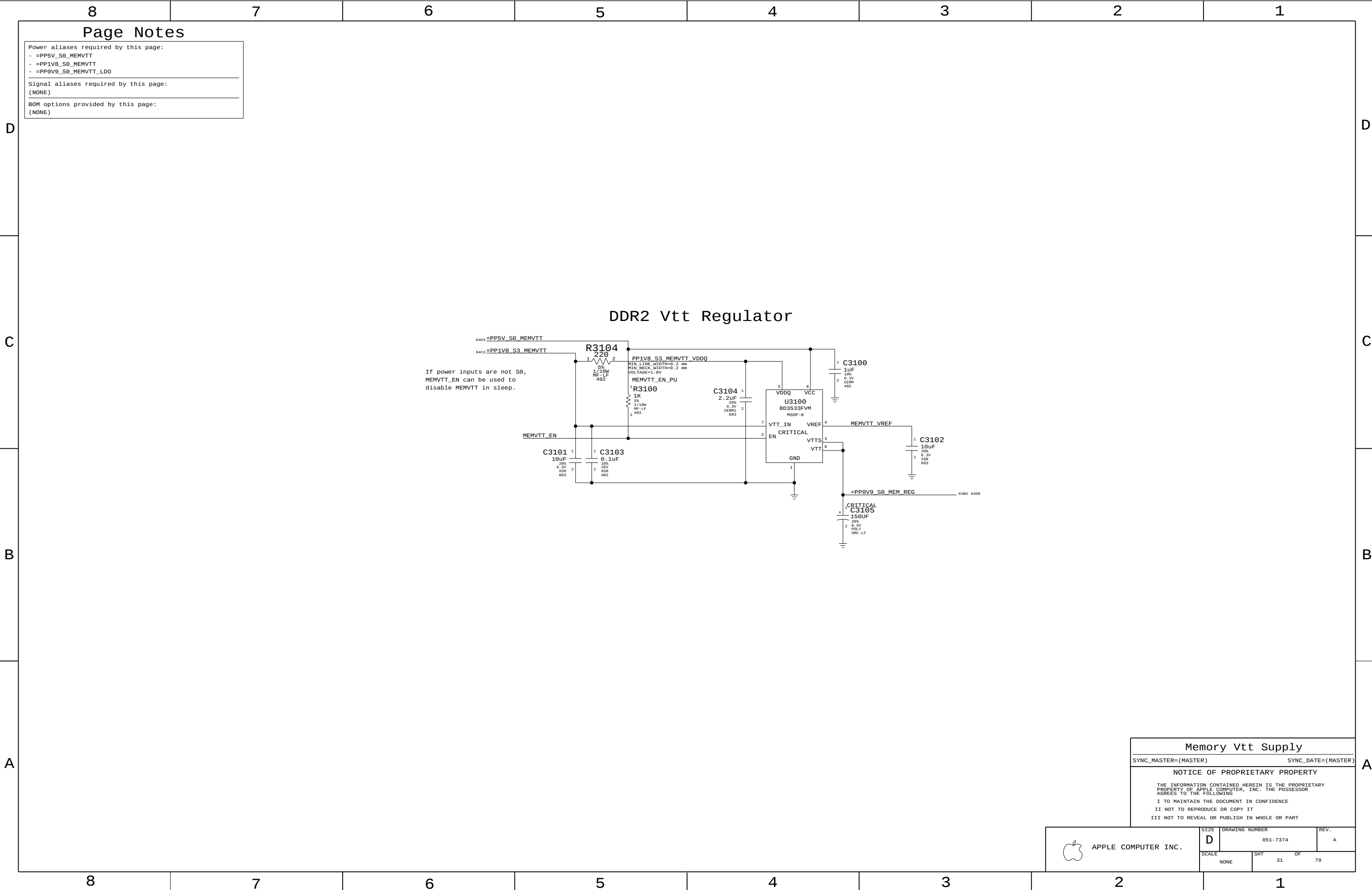
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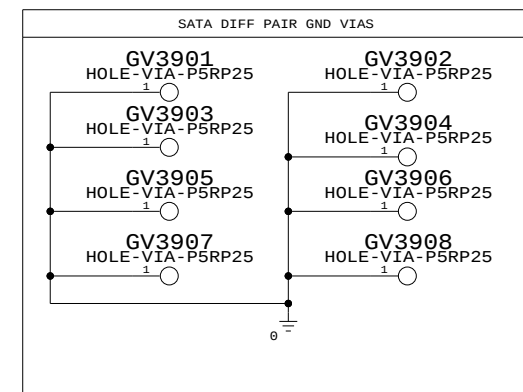
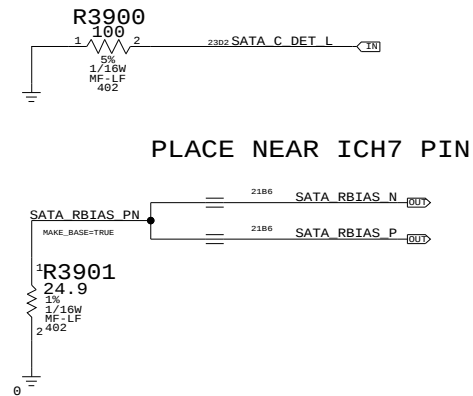
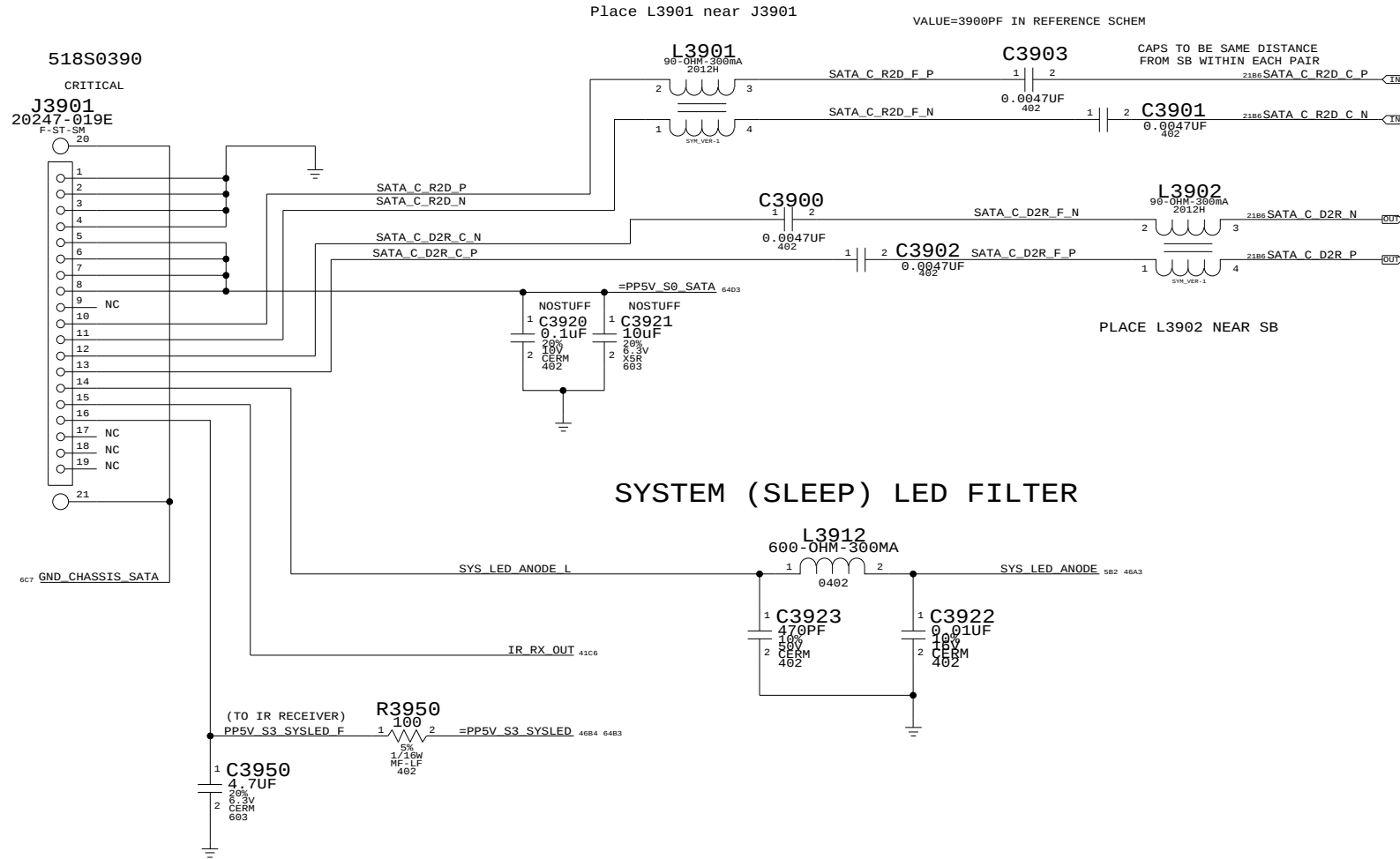
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
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SCALE		SHT	OF
NONE		30	79



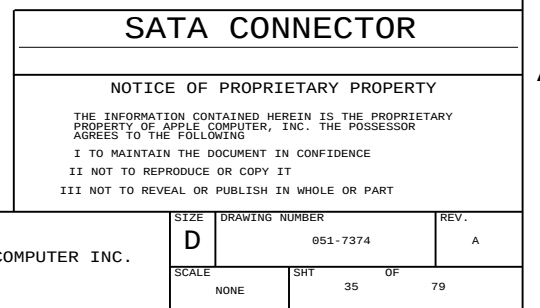


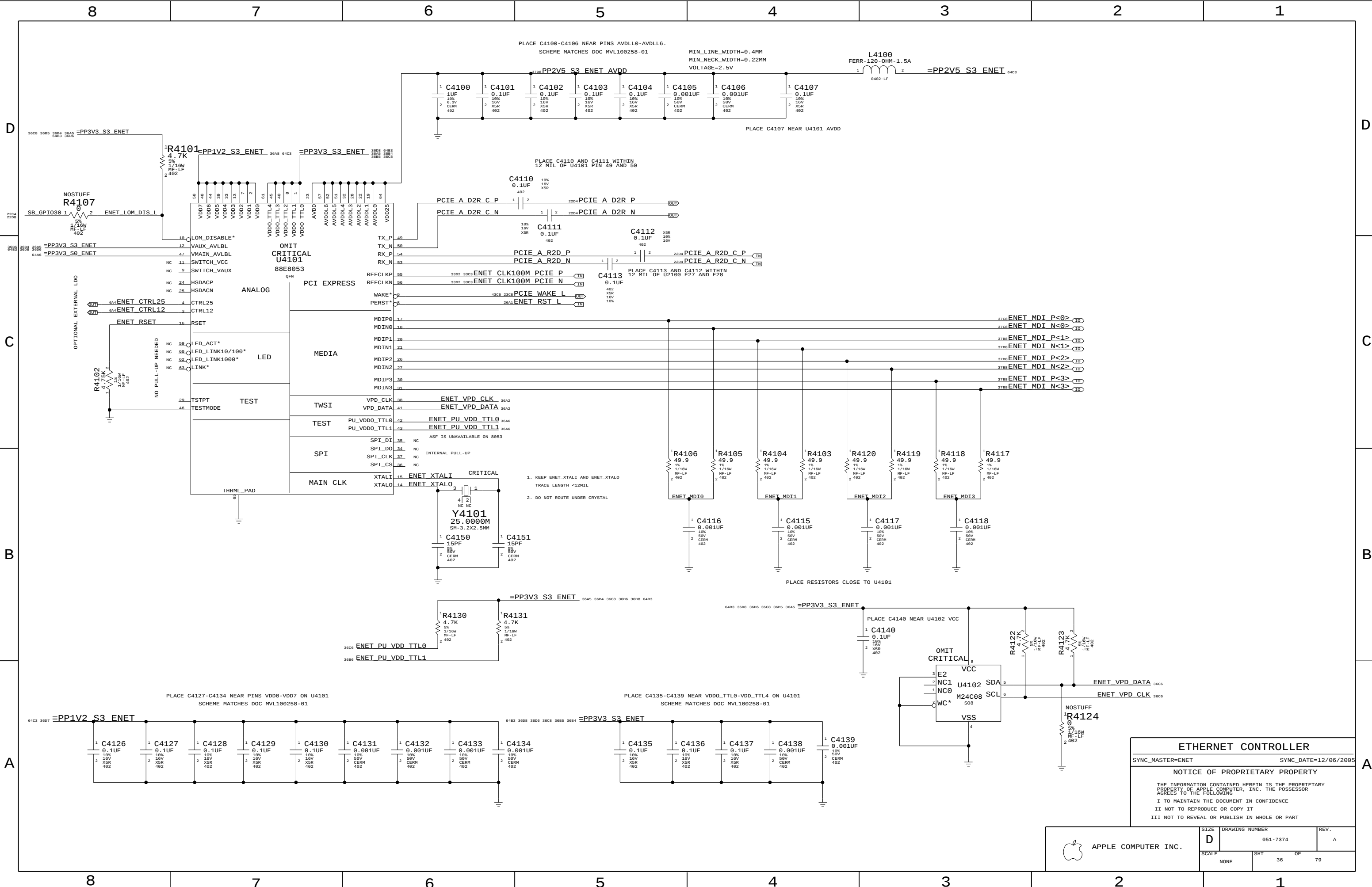
* FOR EXT. GRAPHIC SYSTEM

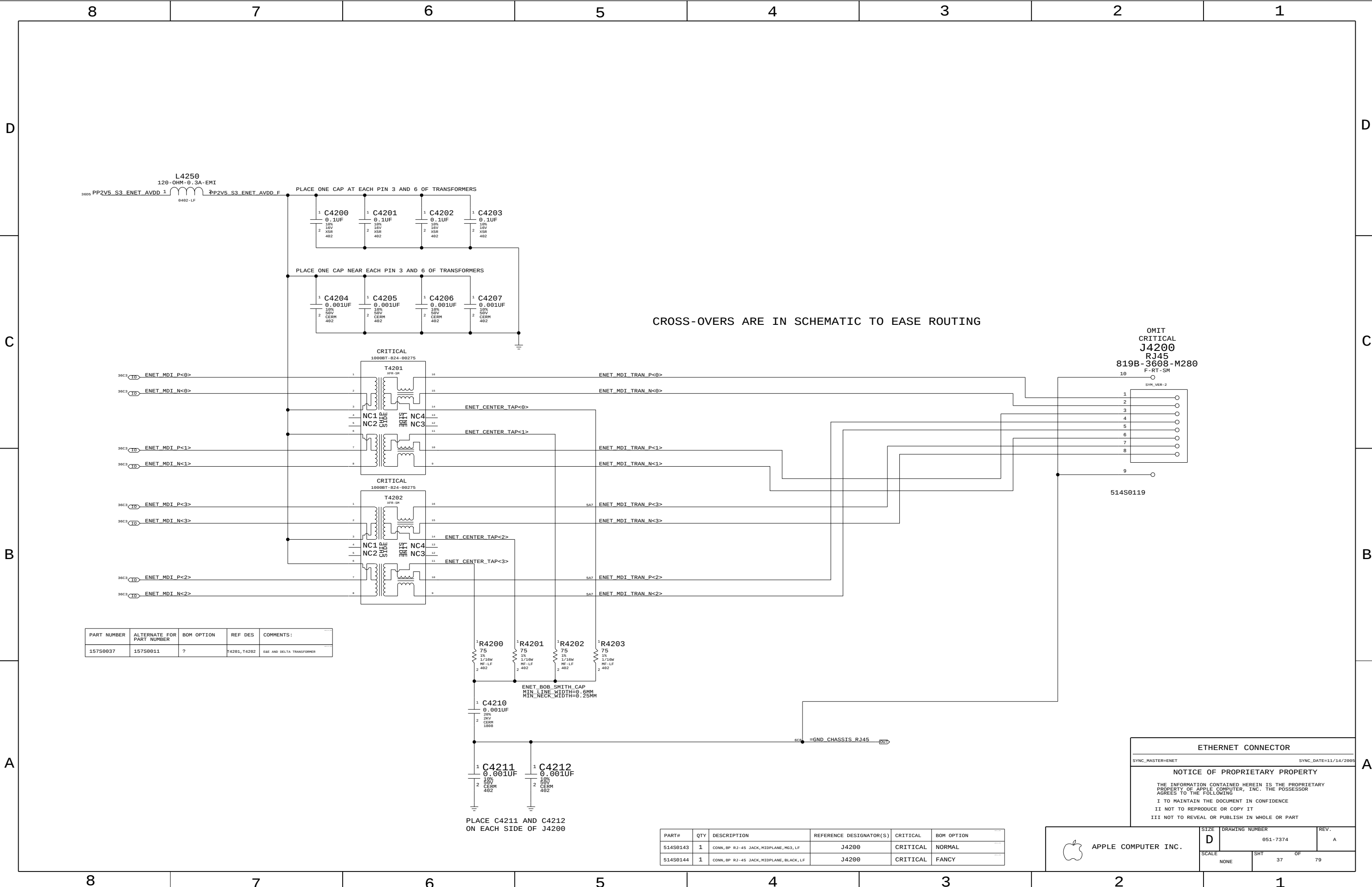
OF



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S0227	155S0164	?	L3901, L3902	KEEP MAG. LAYER IN BOM







PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
157S0037	157S0011	?	T4201, T4202	EEE AND DELTA TRANSFORMER

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514S0143	1	CONN, BP RJ-45 JACK, MIDPLANE, M03, LF	J4200	CRITICAL	NORMAL
514S0144	1	CONN, BP RJ-45 JACK, MIDPLANE, BLACK, LF	J4200	CRITICAL	FANCY

ETHERNET CONNECTOR

SYNC_MASTER=ENET

SYNC_DATE=11/14/2009

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SIZE D

DRAWING NUMBER 051-7374

REV. A

SCALE NONE

SHT 37 OF 79

PAGE NOTES

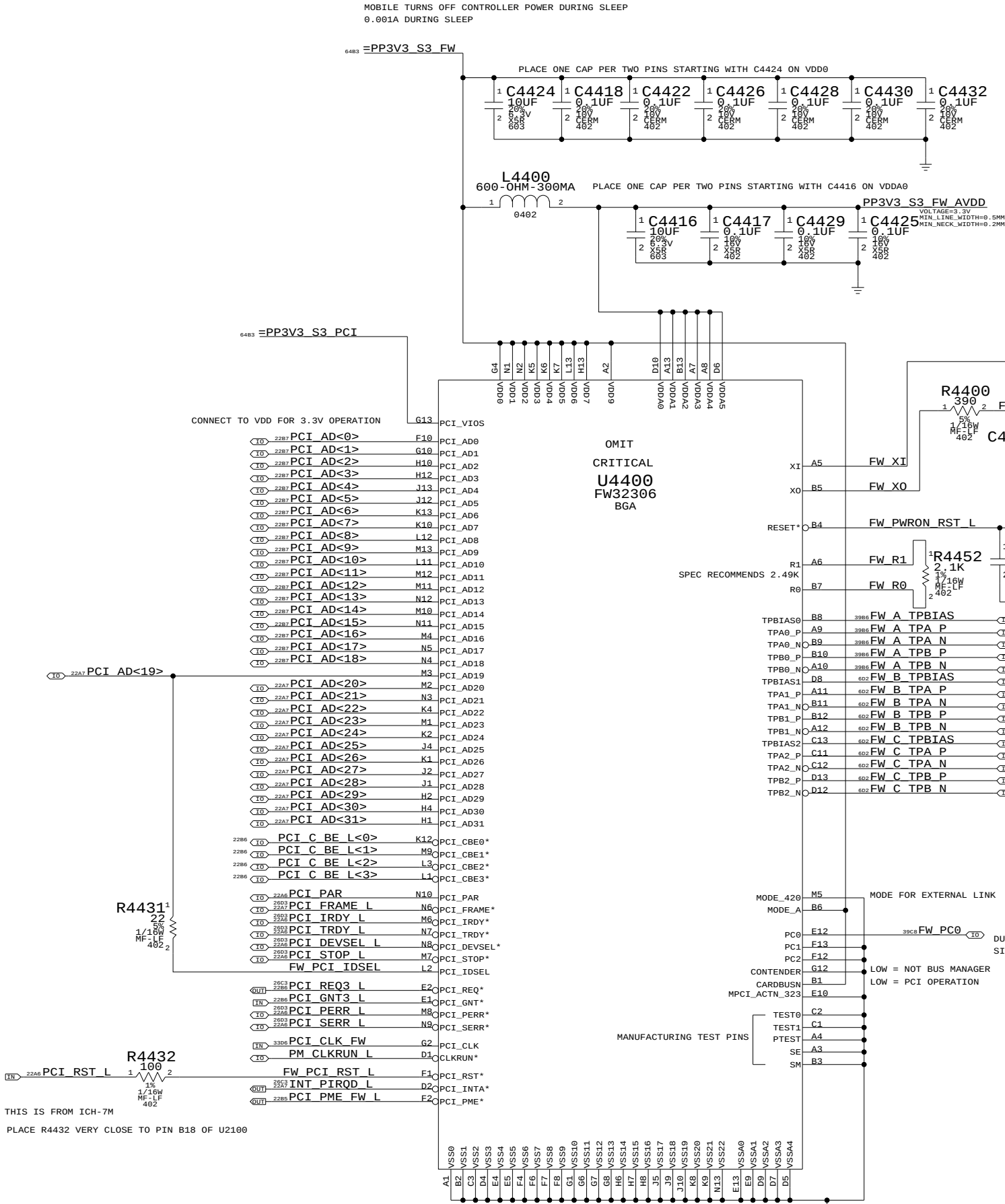
INPUT
=PP3V3_S0_FW - 3.3V POWER FOR FIREWIRE (MOBILE: OFF DURING SLEEP)
=PP3V3_S0_PCI - 3.3V POWER FOR PCI FIREWIRE (MOBILE: OFF DURING SLEEP)
PCI_GNT3_L - PCI GRANT FROM SB
PCI_CLK_FW - NEED TO REFERENCE TO ALIAS PAGE
PCI_RST_L - PCI RESET FROM SB
FW_PC0 - FIREWIRE POWER CLASS IDENTIFIER

INPUT/OUTPUT
PCI_AD<0..31>, PCI_C_BE_L<0..3>, PCI_FRAME_L, PCI_IRDY_L, PCI_TRDY_L,
PCI_DEVSEL_L, PCI_STOP_L, PCI_PAR, PCI_PERR_L, PCI_SERR_L
FW_A_TPA_P/N, FW_A_TPB_P/N, FW_A_TPBIAS - PORT 0 FIREWIRE DIFF PAIRS
FW_B_TPA_P/N, FW_B_TPB_P/N, FW_B_TPBIAS - PORT 1 FIREWIRE DIFF PAIRS
FW_C_TPA_P/N, FW_C_TPB_P/N, FW_C_TPBIAS - PORT 2 FIREWIRE DIFF PAIRS

OUTPUT
PCI_REQ3_L - PCI REQUEST TO SB
PM_CLKRUN_L - CLOCK-RUN PCI PROTOCOL
INT_PIRQD_L - INTERRUPT TO SB
PCI_PME_FW_L - DEDICATED PME FOR FIREWIRE (SB GPIO1)

PAGE HISTORY

5/19/2005 - FIRST REVISION OF PAGE
6/26/2005 - BGA VERSION OF FW323-96 ADDED
6/21/2005 - CHANGED INT TO INT_PIRQD (PER ARCHITECTURAL DEFINITION)
6/21/2005 - CHANGED PCI_TRDY_L TO REQ3 (PER ARCHITECTURAL DEFINITION)
6/21/2005 - CHANGED FW_A_TPB_P/N TO REQ3 (PER ARCHITECTURAL DEFINITION)
6/21/2005 - ADDED S10K FULL-DOWN ON RST3 AND REMOVED CONNECTION TO PLY_RST_L
6/21/2005 - CHANGED FW_A_TPB_P/N TO REQ3 (PER ARCHITECTURAL DEFINITION)
6/21/2005 - REMOVED CONSTRAINT SETS AS THEY WILL BE MANAGED ON BOARD SIDE
6/21/2005 - REMOVED C4421 - REDUNDANT
6/26/2005 - BRING OUT PCB CONNECTION TO BE CONNECTED ON PORT PAGE
7/26/2005 - CONNECTED PIN E10 TO GND



FIREWIRE CONTROLLER

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

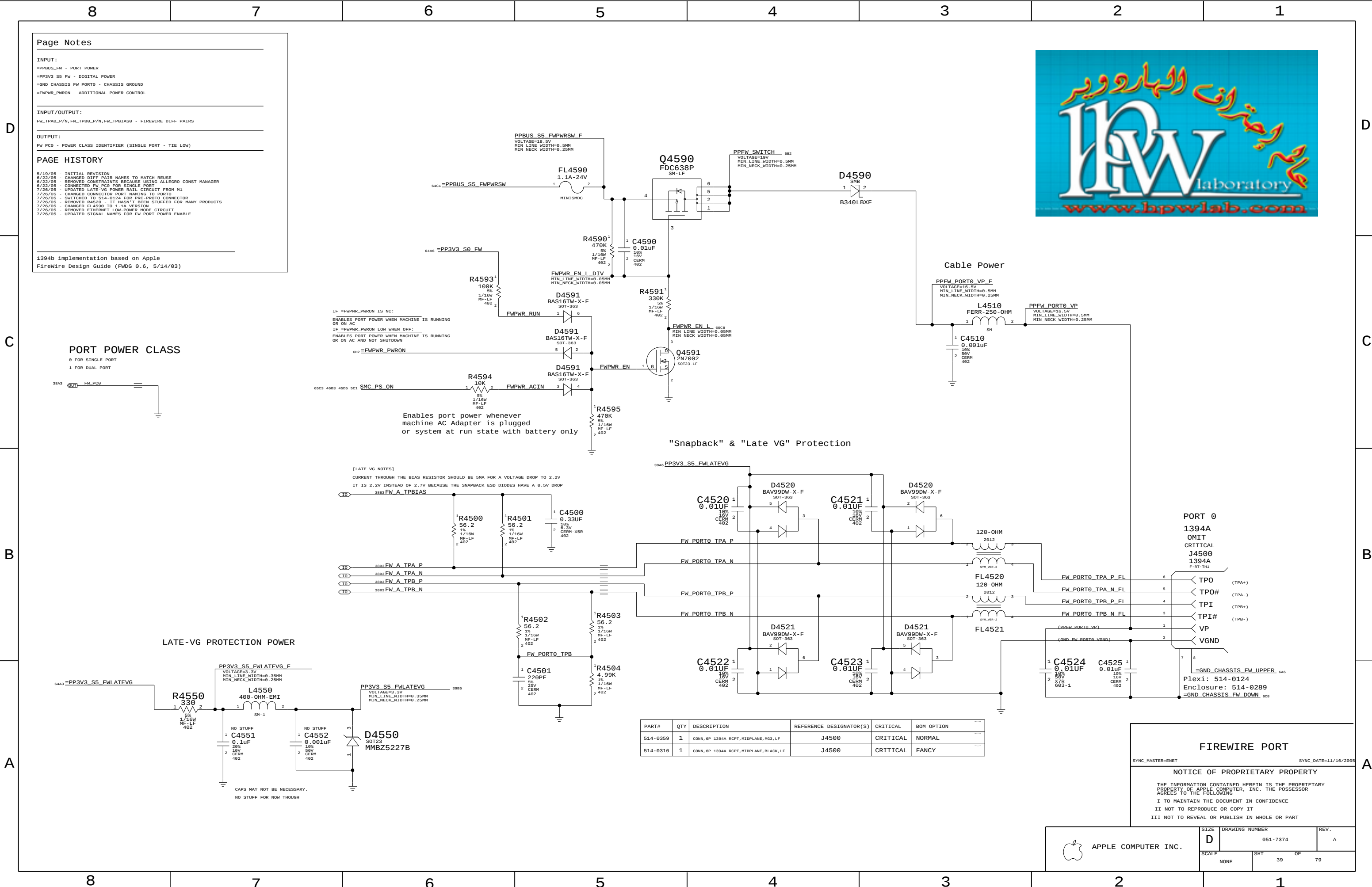
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NONE	38	79



Page Notes

INPUT:
=PPBUS_FW - PORT POWER
=PP3V3_S5_FW - DIGITAL POWER
=GND_CHASSIS_FW_PORT0 - CHASSIS GROUND
=FWPWR_PWRON - ADDITIONAL POWER CONTROL

INPUT/OUTPUT:
FW_TPA0_P/N, FW_TPB0_P/N, FW_TPBIA0 - FIREWIRE DIFF PAIRS

OUTPUT:
FW_PC0 - POWER CLASS IDENTIFIER (SINGLE PORT - TIE LOW)

PAGE HISTORY

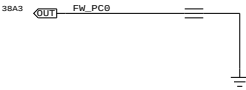
5/19/05 - INITIAL REVISION
6/22/05 - CHANGED DIFF PAIR NAMES TO MATCH REUSE
6/22/05 - REMOVED CONSTRAINTS BECAUSE USING ALLEGRO CONST MANAGER
6/22/05 - CONNECTED FW_PC0 FOR SINGLE PORT
7/26/05 - UPDATED LATE-VG POWER RAIL CIRCUIT FROM M1
7/26/05 - CHANGED CONNECTOR PORT NAMING TO PORT0
7/26/05 - SWITCHED TO 514-0124 FOR PRE-PROTO CONNECTOR
7/26/05 - REMOVED R4520 - IT HASN'T BEEN STUFFED FOR MANY PRODUCTS
7/26/05 - CHANGED FL4500 TO 1.1A VERSION
7/26/05 - REMOVED ETHERNET LOW-POWER MODE CIRCUIT
7/26/05 - UPDATED SIGNAL NAMES FOR FW PORT POWER ENABLE

1394b implementation based on Apple
FireWire Design Guide (FWDG 0.6, 5/14/03)

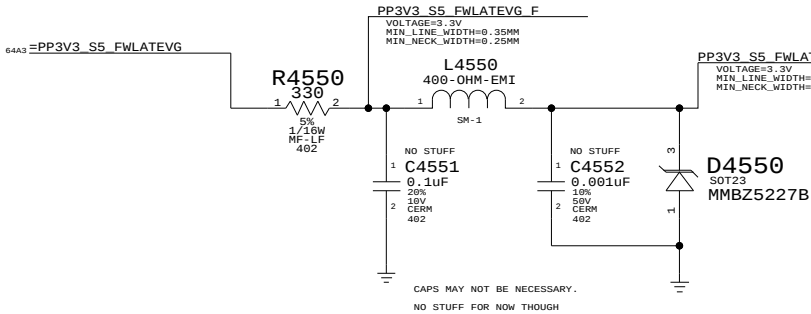


PORT POWER CLASS

0 FOR SINGLE PORT
1 FOR DUAL PORT

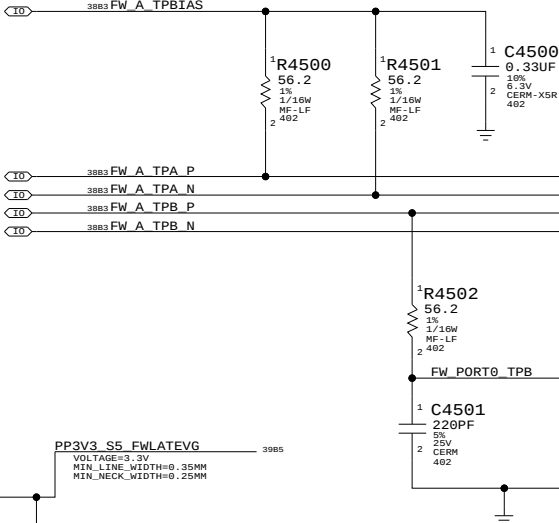


LATE-VG PROTECTION POWER



"Snapback" & "Late VG" Protection

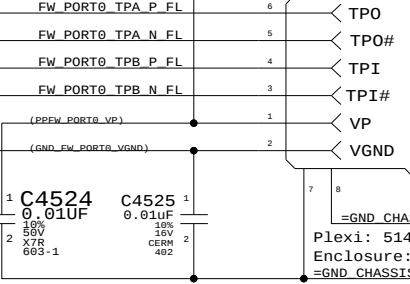
[LATE VG NOTES]
CURRENT THROUGH THE BIAS RESISTOR SHOULD BE 5MA FOR A VOLTAGE DROP TO 2.2V
IT IS 2.2V INSTEAD OF 2.7V BECAUSE THE SNAPBACK ESD DIODES HAVE A 0.5V DROP



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0359	1	CONN, 6P 1394A RCPT, MIDPLANE, MG3, LF	J4500	CRITICAL	NORMAL
514-0316	1	CONN, 6P 1394A RCPT, MIDPLANE, BLACK, LF	J4500	CRITICAL	FANCY

PORT 0

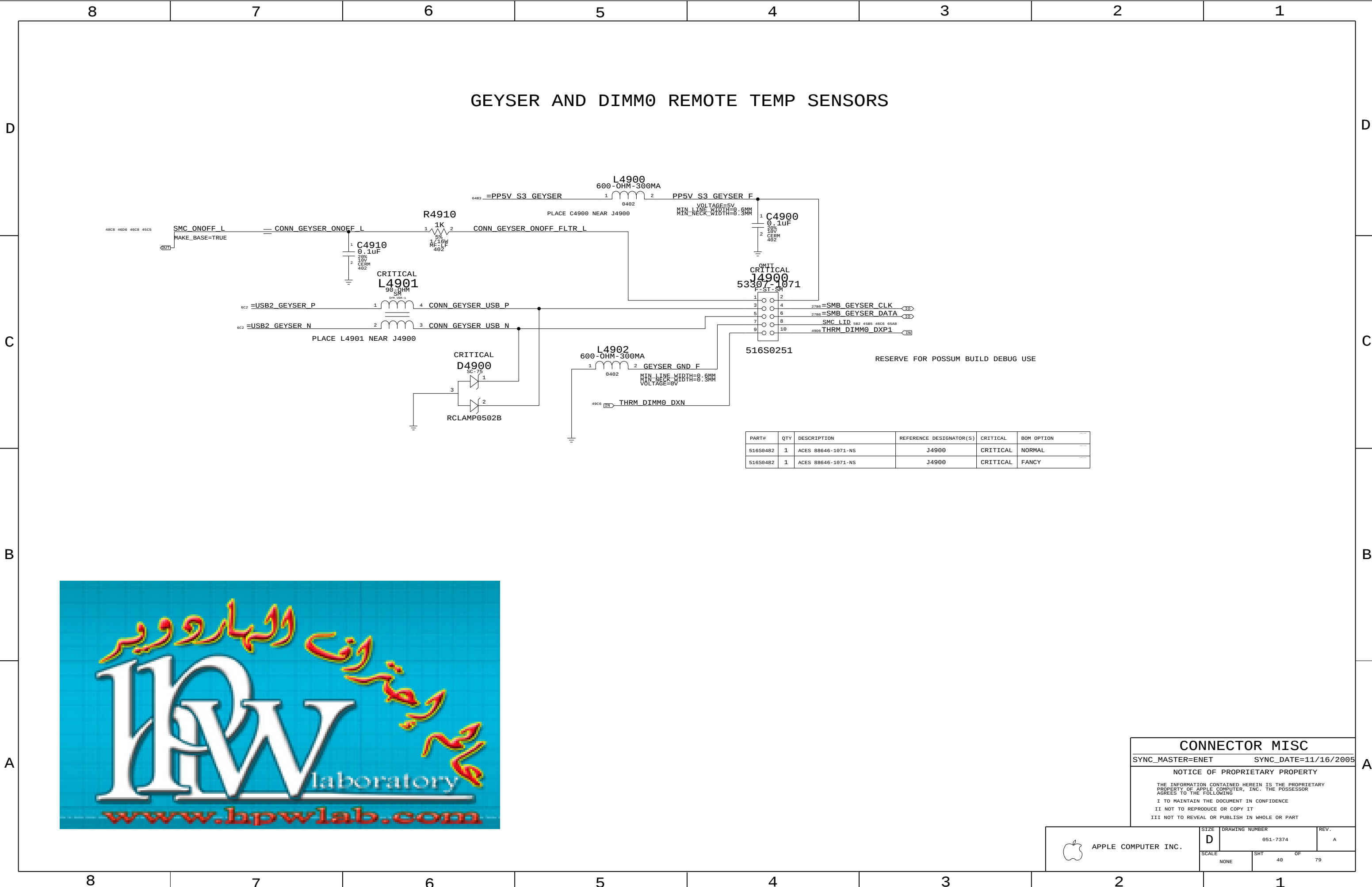
1394A
OMIT
CRITICAL
J4500
1394A
F-RT-TH1



FIREWIRE PORT

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	SCALE NONE	SHT 39	OF 79



CONNECTOR MISC

SYNC_MASTER=ENET SYNC_DATE=11/16/2005

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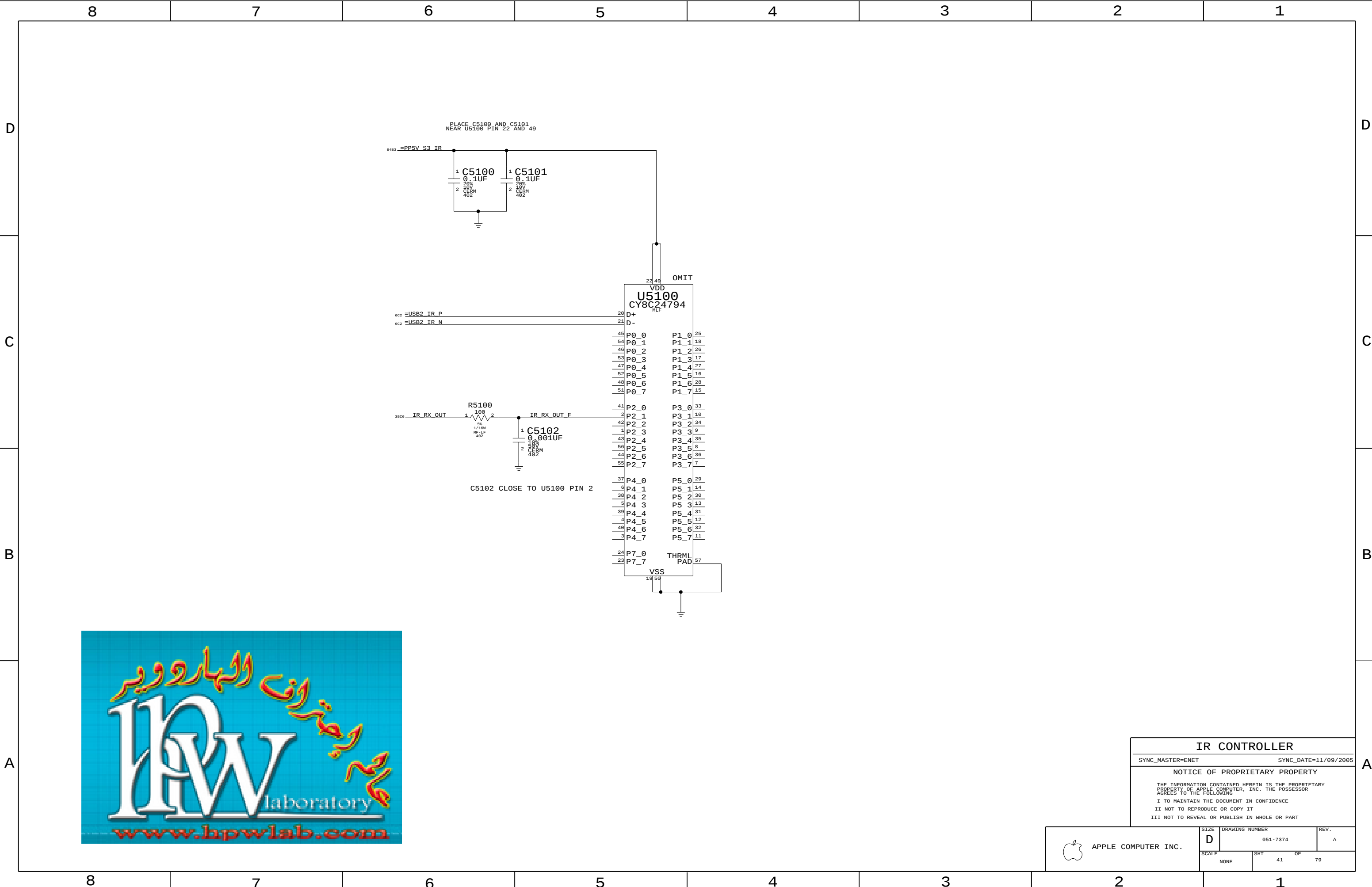
SIZE D

DRAWING NUMBER 051-7374

REV. A

SCALE NONE

SHT 40 OF 79



IR CONTROLLER

SYNC_MASTER=ENET

SYNC_DATE=11/09/2005

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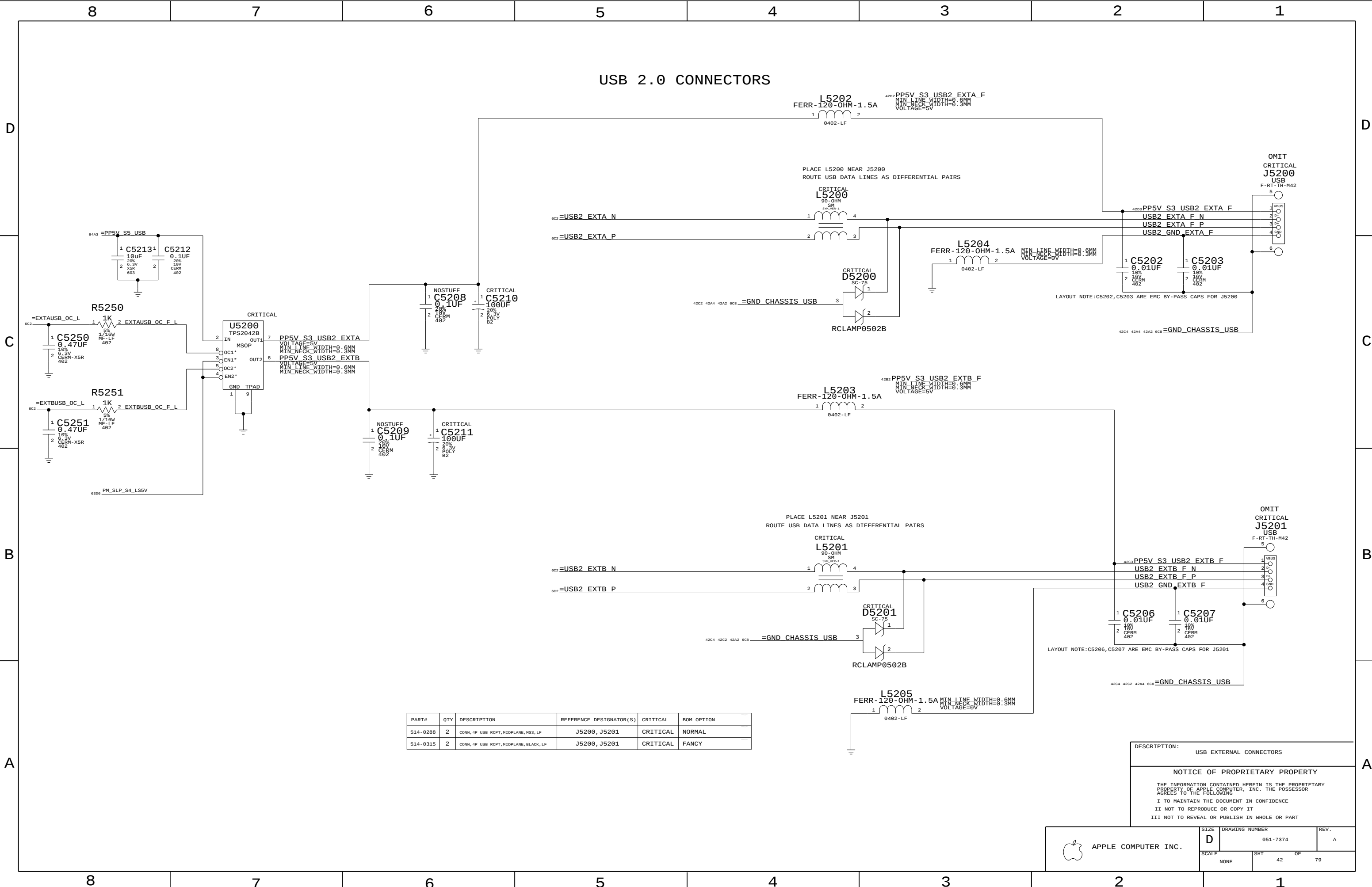
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	D	051-7374	A
SCALE		SHT	OF
NONE		41	79



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0288	2	CONN, 4P USB RCP1,MIDPLANE,PG3,LF	J5200, J5201	CRITICAL	NORMAL
514-0315	2	CONN, 4P USB RCP1,MIDPLANE,BLACK,LF	J5200, J5201	CRITICAL	FANCY

DESCRIPTION:
USB EXTERNAL CONNECTORS

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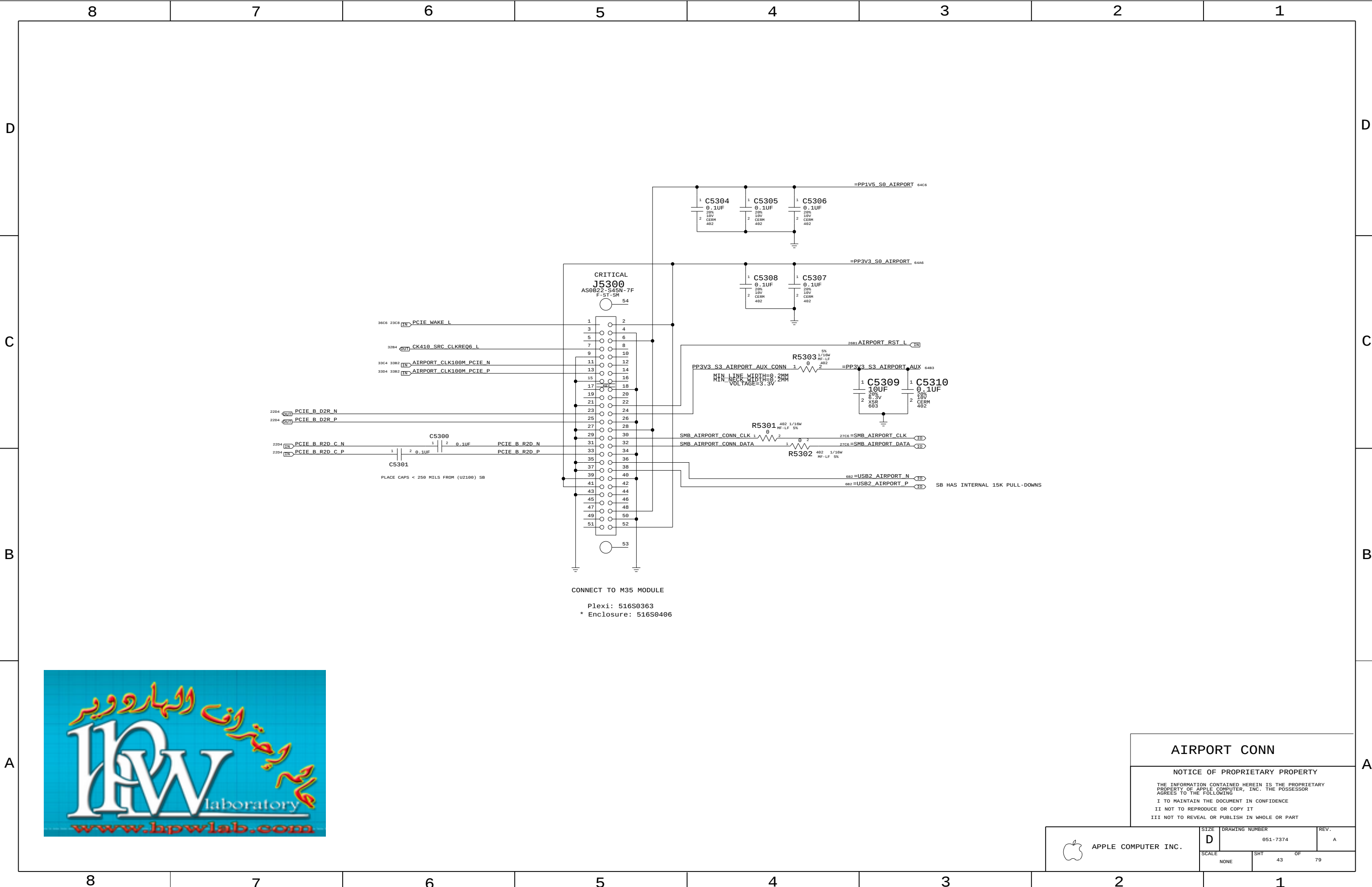
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	SCALE NONE	SHT 42	OF 79



CONNECT TO M35 MODULE

Plexi: 516S0363
* Enclosure: 516S0406



AIRPORT CONN

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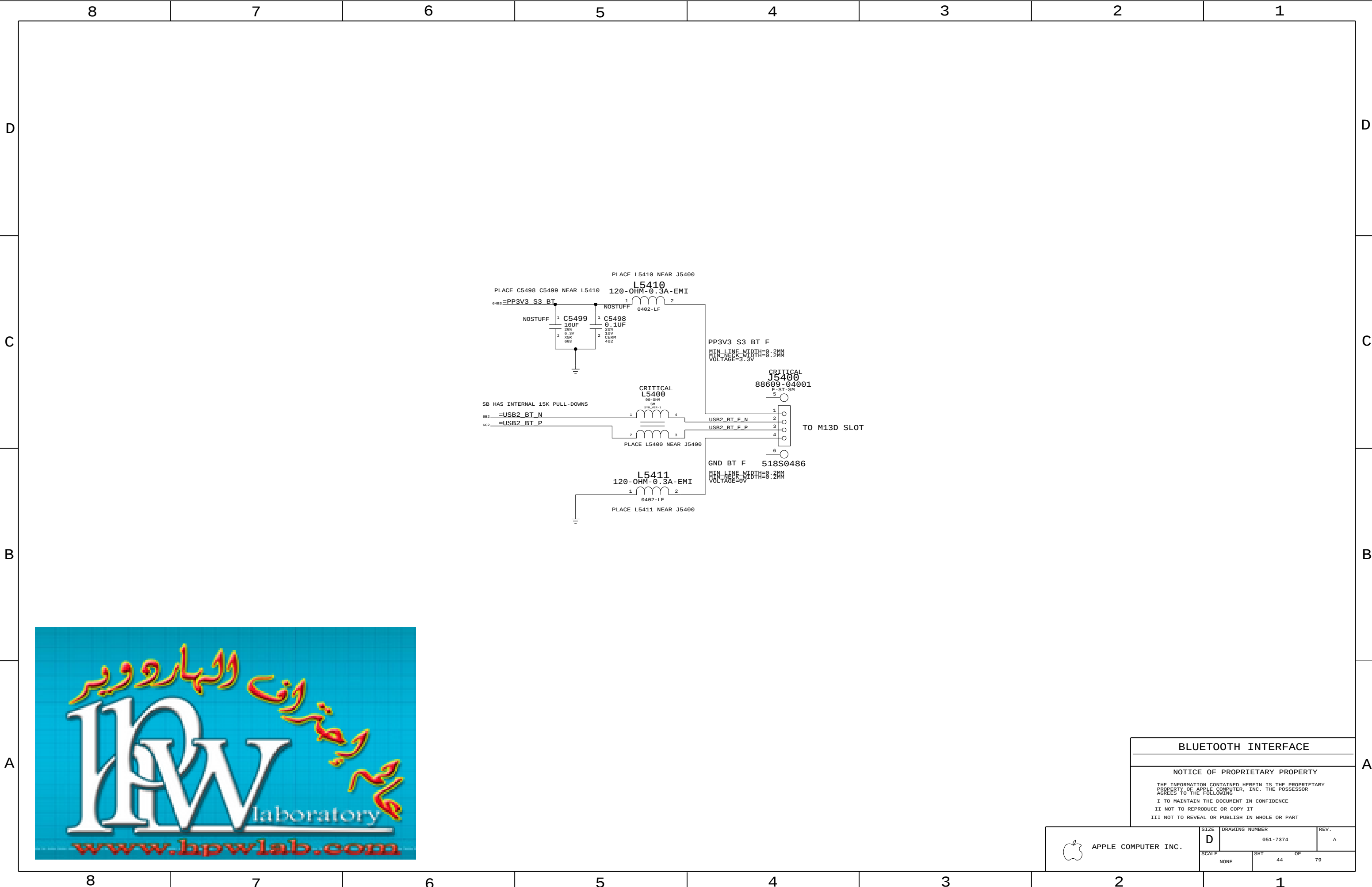
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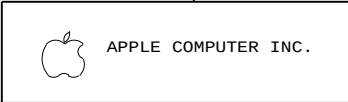
II NOT TO REPRODUCE OR COPY IT

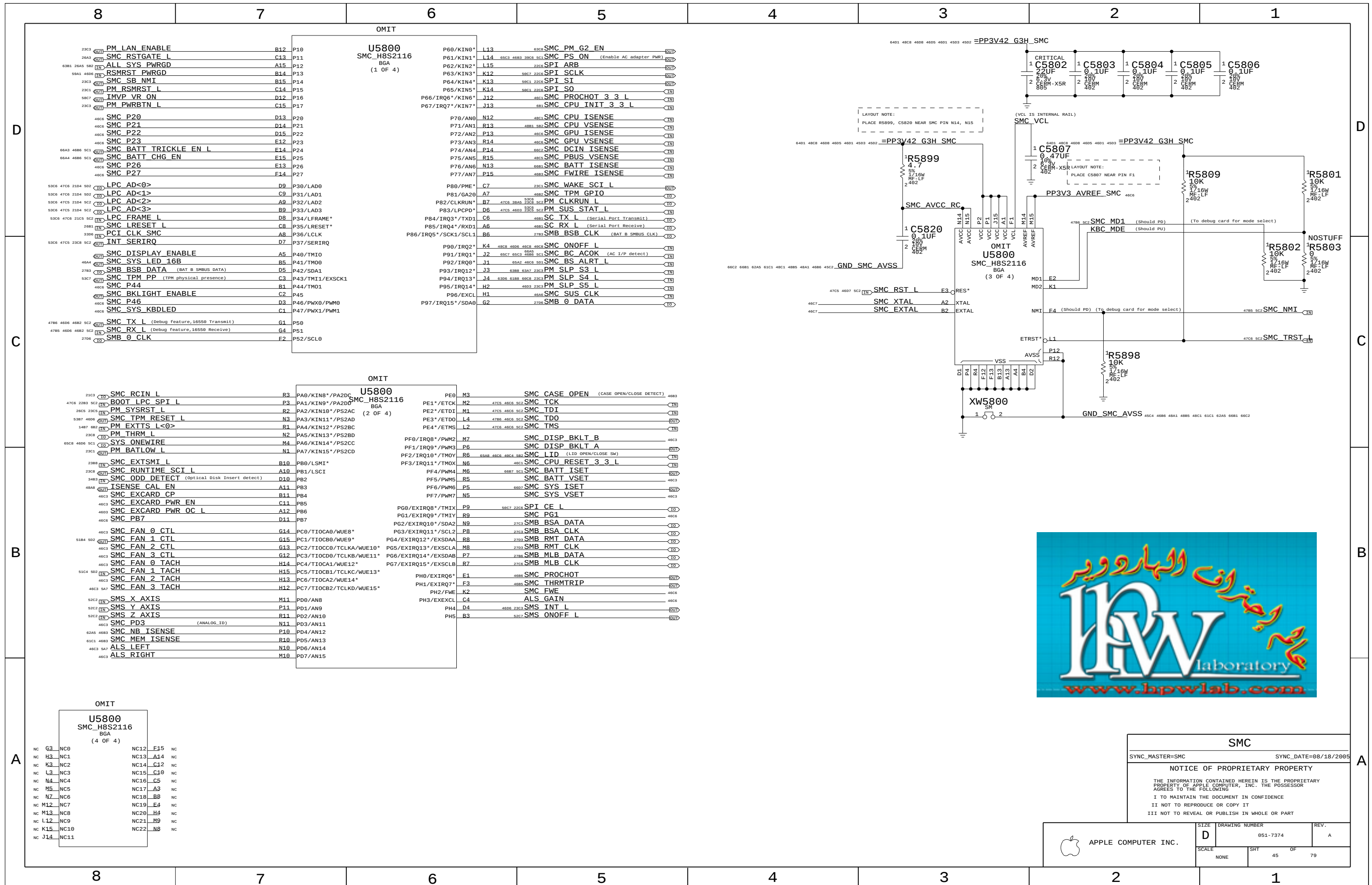
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

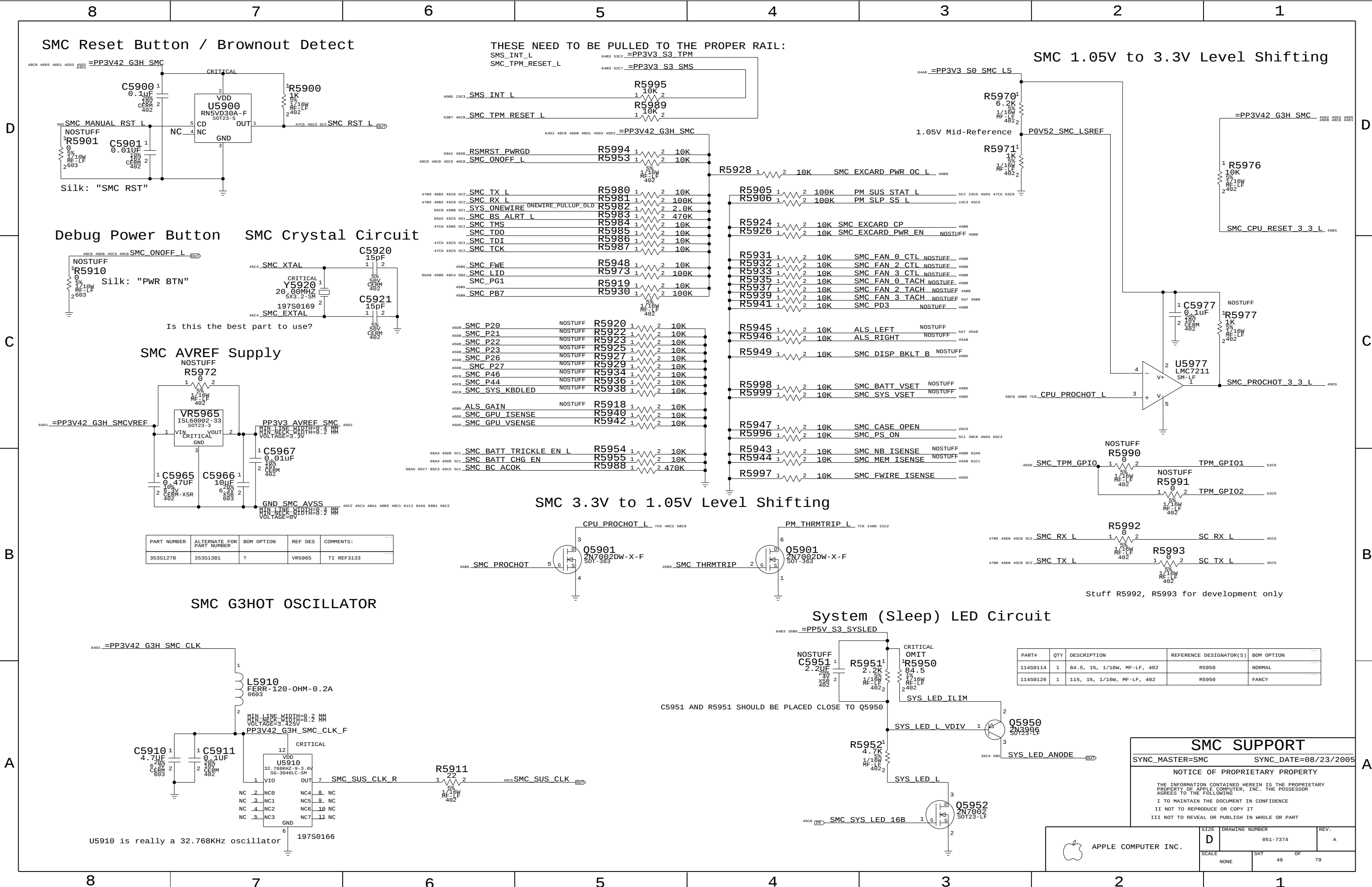
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BLUETOOTH INTERFACE		
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SCALE NONE	DRAWING NUMBER 051-7374	
	REV. A	
SHT 44		OF 79







SMC Reset Button / Brownout Detect

THESE NEED TO BE PULLED TO THE PROPER RAIL:
SMS_INT_L
SMC_TPM_RESET_L

SMC 1.05V to 3.3V Level Shifting

Debug Power Button SMC Crystal Circuit

SMC AVREF Supply

SMC G3HOT OSCILLATOR

SMC 3.3V to 1.05V Level Shifting

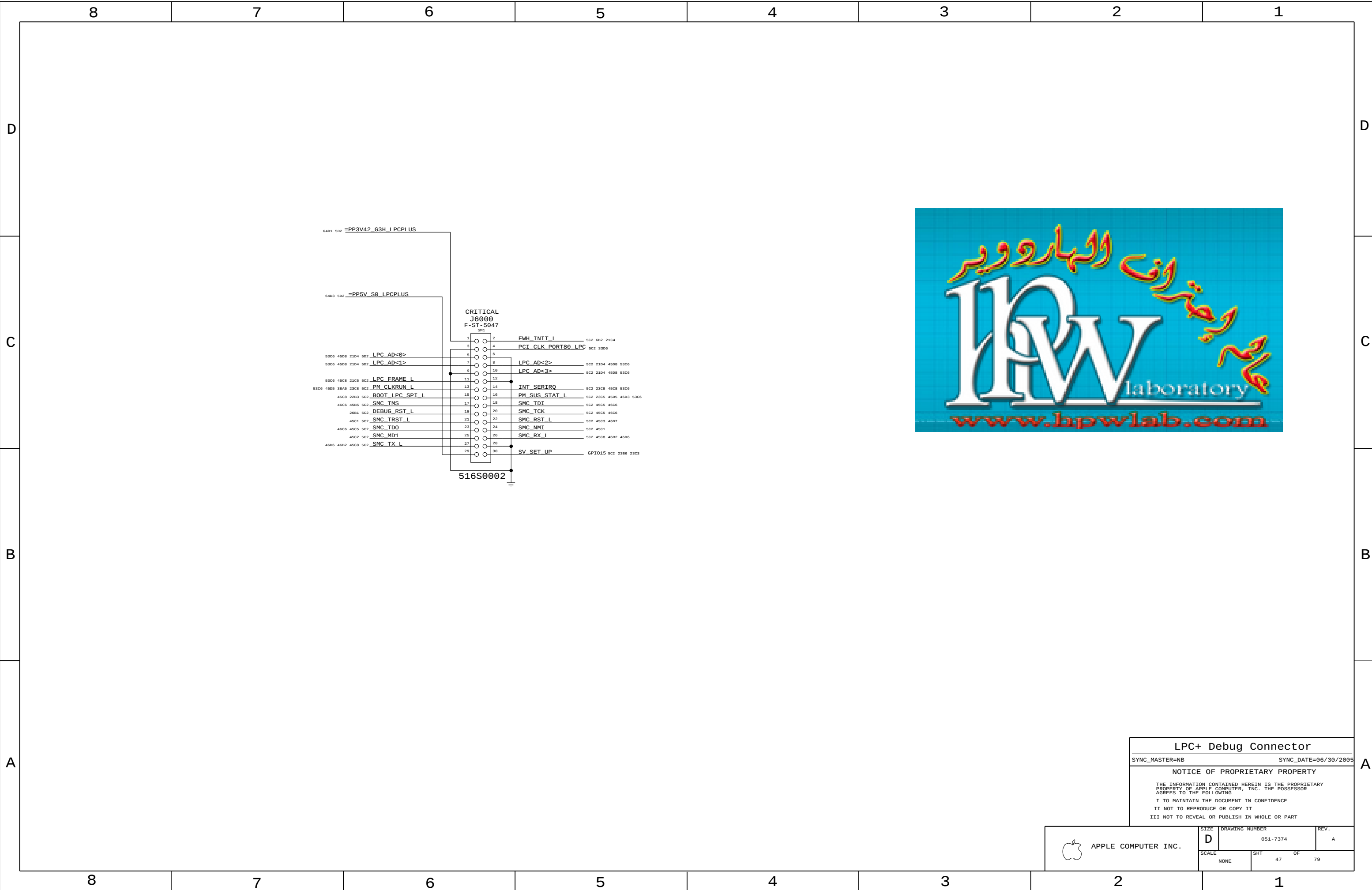
System (Sleep) LED Circuit

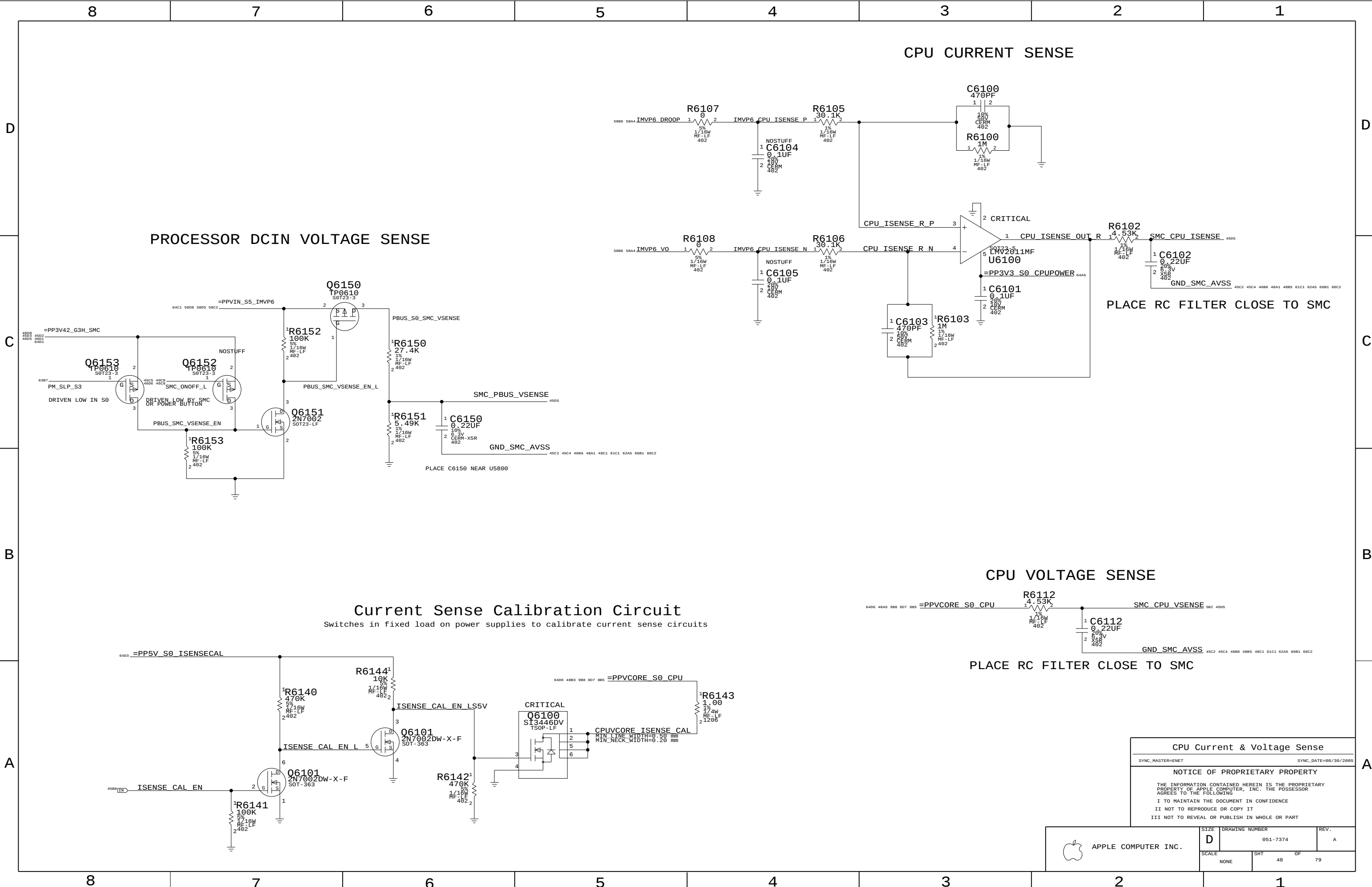
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
353S1278	353S1381	?	VR5965	TI REF3133

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
114S0114	1	84.5, 1%, 1/16W, MF-LF, 402	R5950	NORMAL
114S0126	1	115, 1%, 1/16W, MF-LF, 402	R5950	FANCY

SMC SUPPORT	
SYNC_MASTER=SMC	SYNC_DATE=08/23/2005
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	SCALE NONE	SHT 46	OF 79





PROCESSOR DCIN VOLTAGE SENSE

CPU CURRENT SENSE

CPU VOLTAGE SENSE

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

CPU Current & Voltage Sense

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

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	NONE		48	79

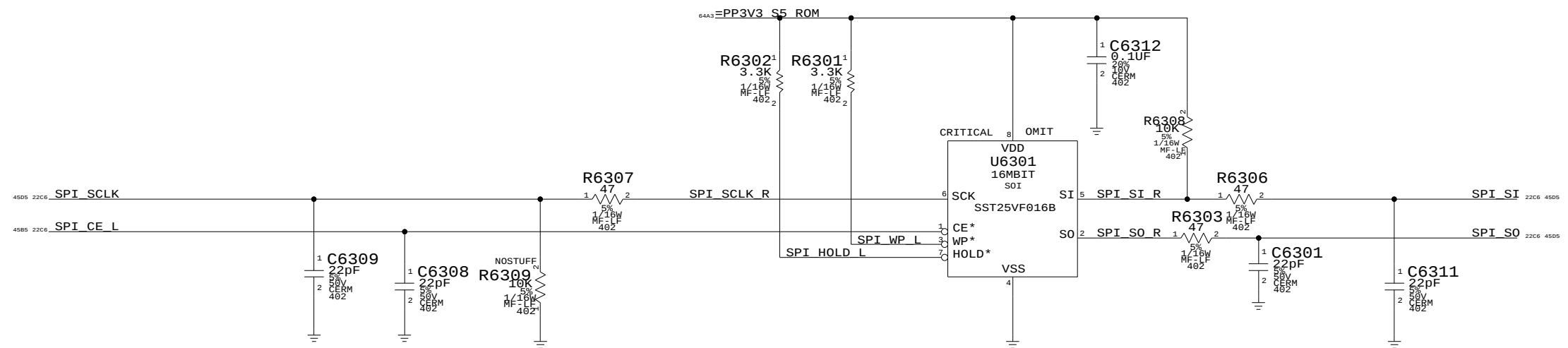
[illegible]

DIMM1 TEMPERATURE ZONE



TEMPERATURE SENSE	
SYNC_MASTER=ENET	SYNC_DATE=11/09/2005
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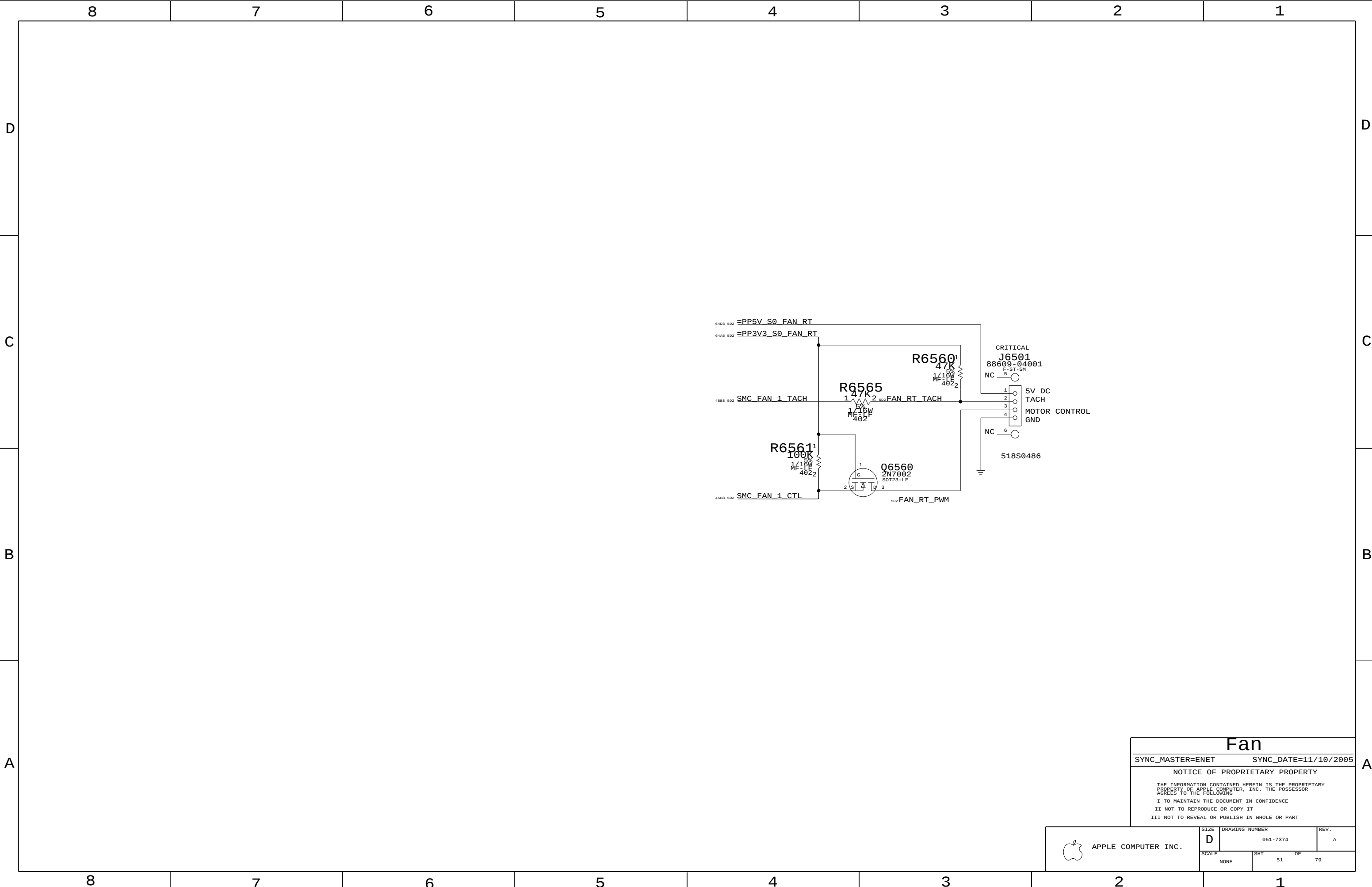
R6309 IS NOT NEEDED WHEN SHARING SPI FLASH WITH ICH7M AND TEK0A(LAN CHIP)

R6307 AND R6306 SHOULD BE PLACED LESS THAN 100 MILS FORM ICH7M
R6303 SHOULD BE PLACED LESS THAN 100 MILS FORM FLASH ROM



SPI BOOTROM	
SYNC_MASTER=MASTER	SYNC_DATE=5/23/95
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	SCALE NONE	SHT OF 50 79	



Fan

SYNC_MASTER=ENET SYNC_DATE=11/10/2005

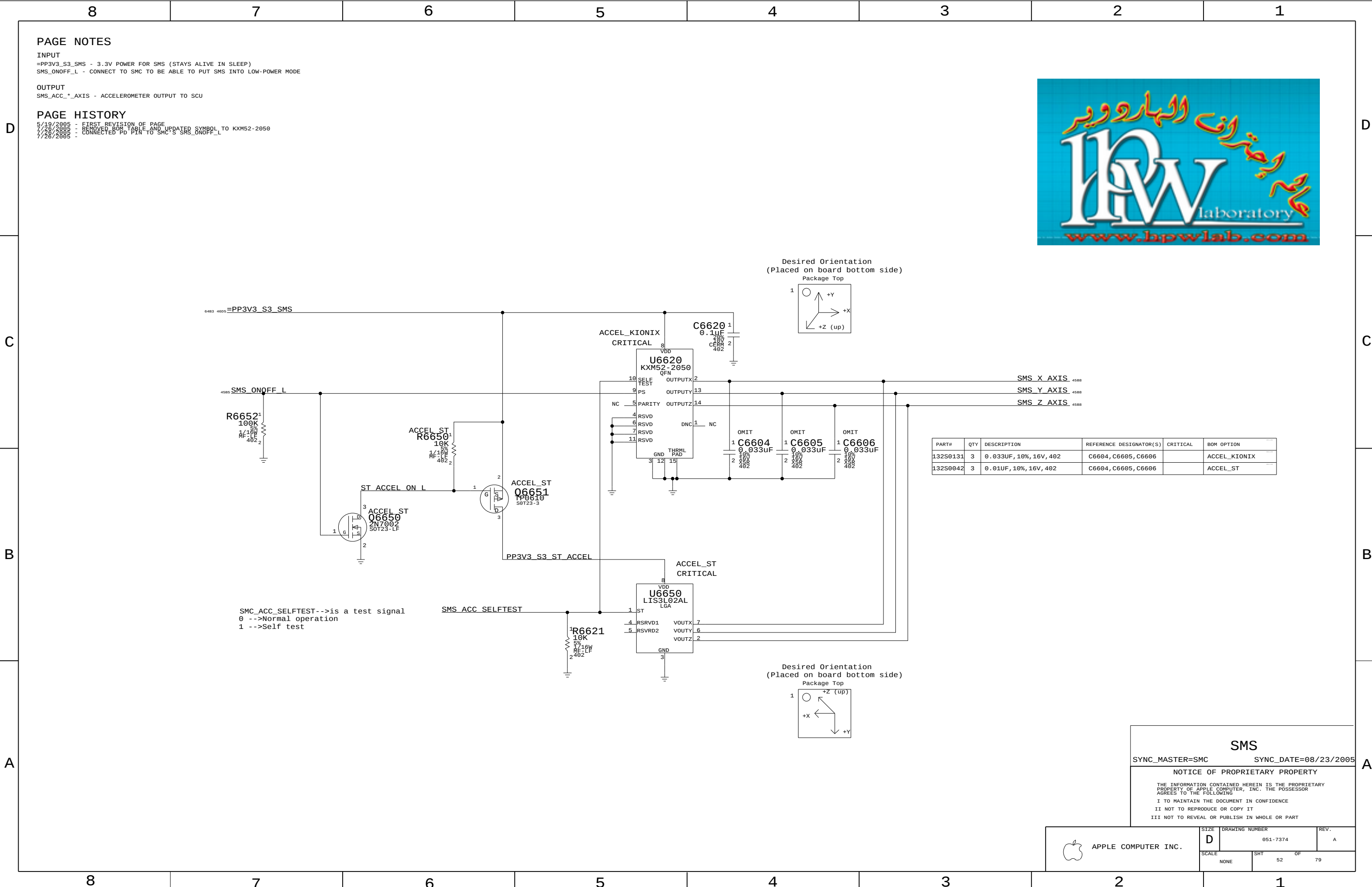
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SCALE	SHT	OF
NONE	51	79



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
132S0131	3	0.033UF, 10%, 16V, 402	C6604, C6605, C6606		ACCEL_KIONIX
132S0042	3	0.01UF, 10%, 16V, 402	C6604, C6605, C6606		ACCEL_ST

SMS

SYNC_MASTER=SMC SYNC_DATE=08/23/2005

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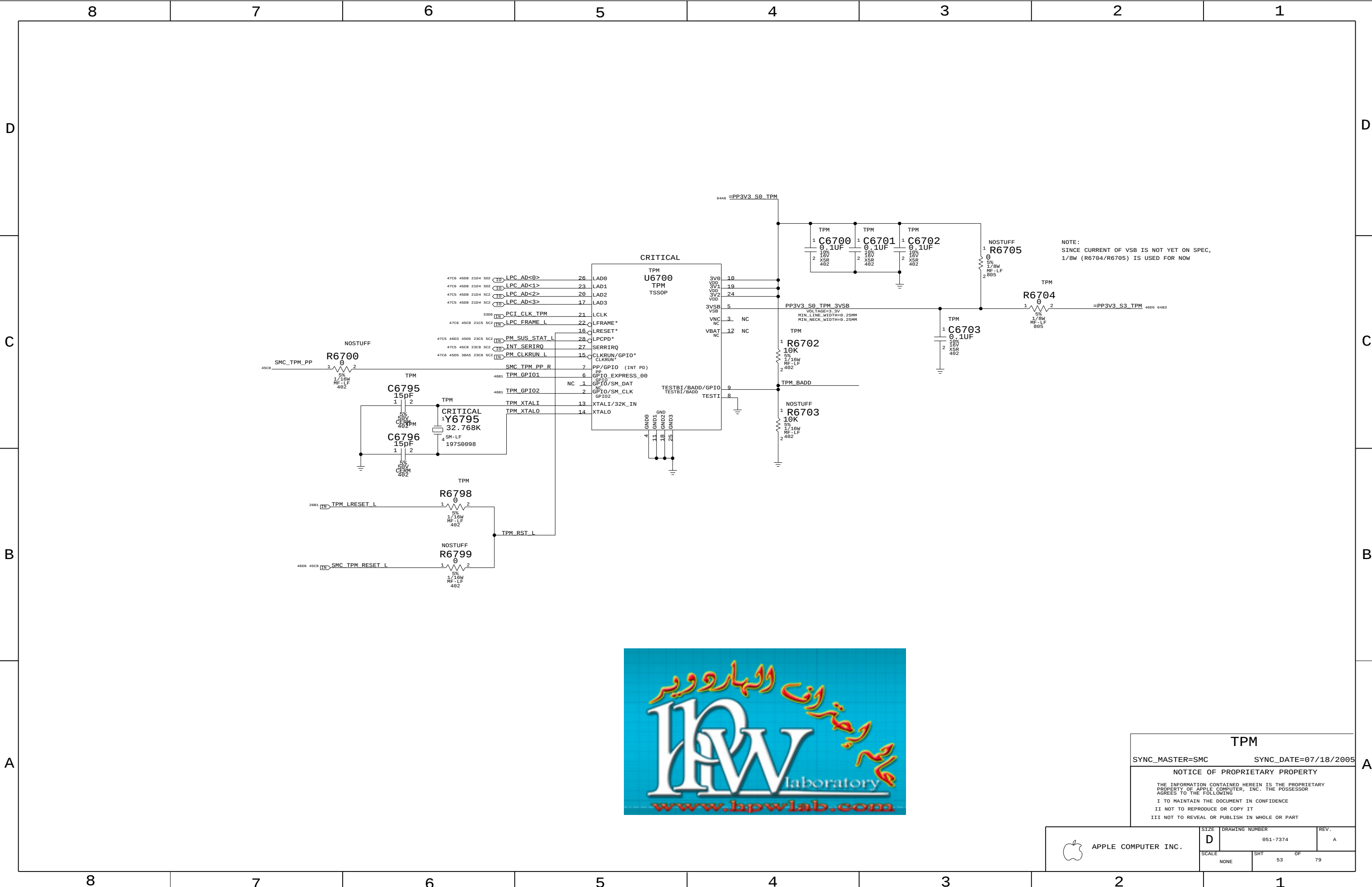
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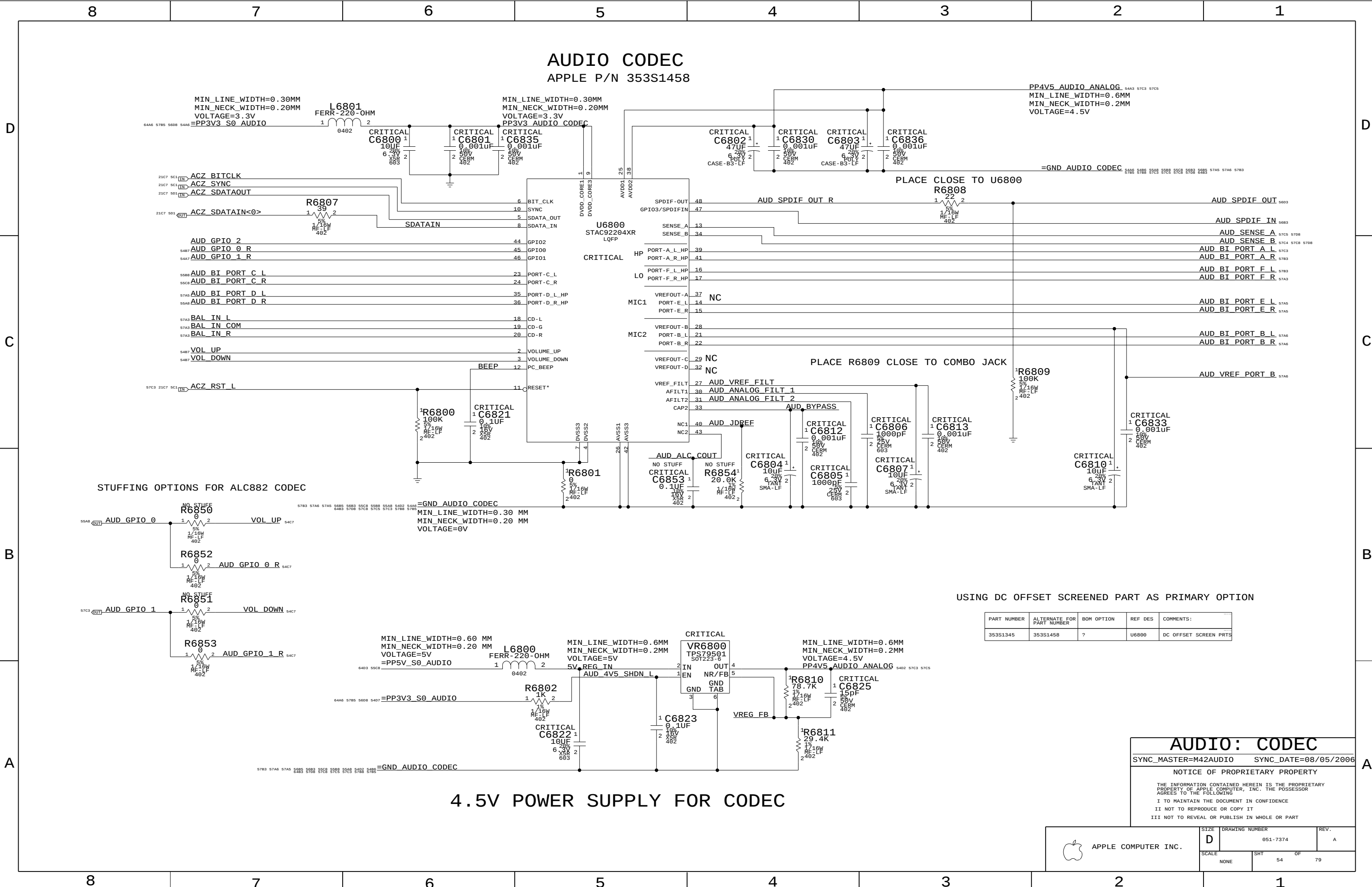
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7374	REV. A
	SCALE NONE	SHT 52	OF 79



TPM		
SYNC_MASTER=SMC		SYNC_DATE=07/18/2005
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	D	051-7374	A
SCALE		SHT	OF
NONE		53	79



AUDIO CODEC
APPLE P/N 353S1458

4.5V POWER SUPPLY FOR CODEC

USING DC OFFSET SCREENED PART AS PRIMARY OPTION

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
353S1345	353S1458	?	U6800	DC OFFSET SCREEN PRTS

AUDIO: CODEC

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

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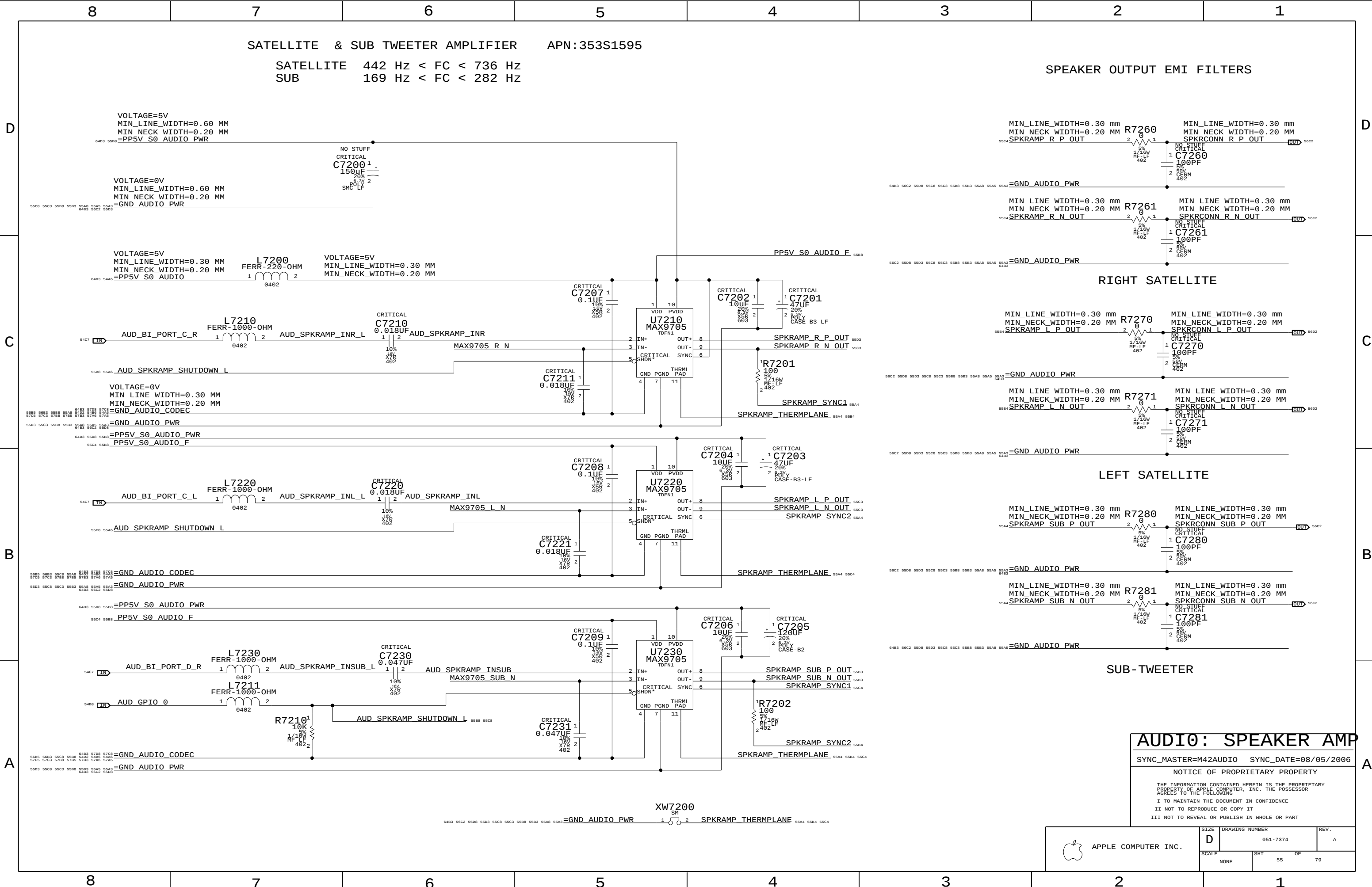
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APPLE COMPUTER INC.

SIZE D DRAWING NUMBER 051-7374 REV. A

SCALE NONE SHT 54 OF 79



AUDIO: SPEAKER AMP

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

NOTICE OF PROPRIETARY PROPERTY

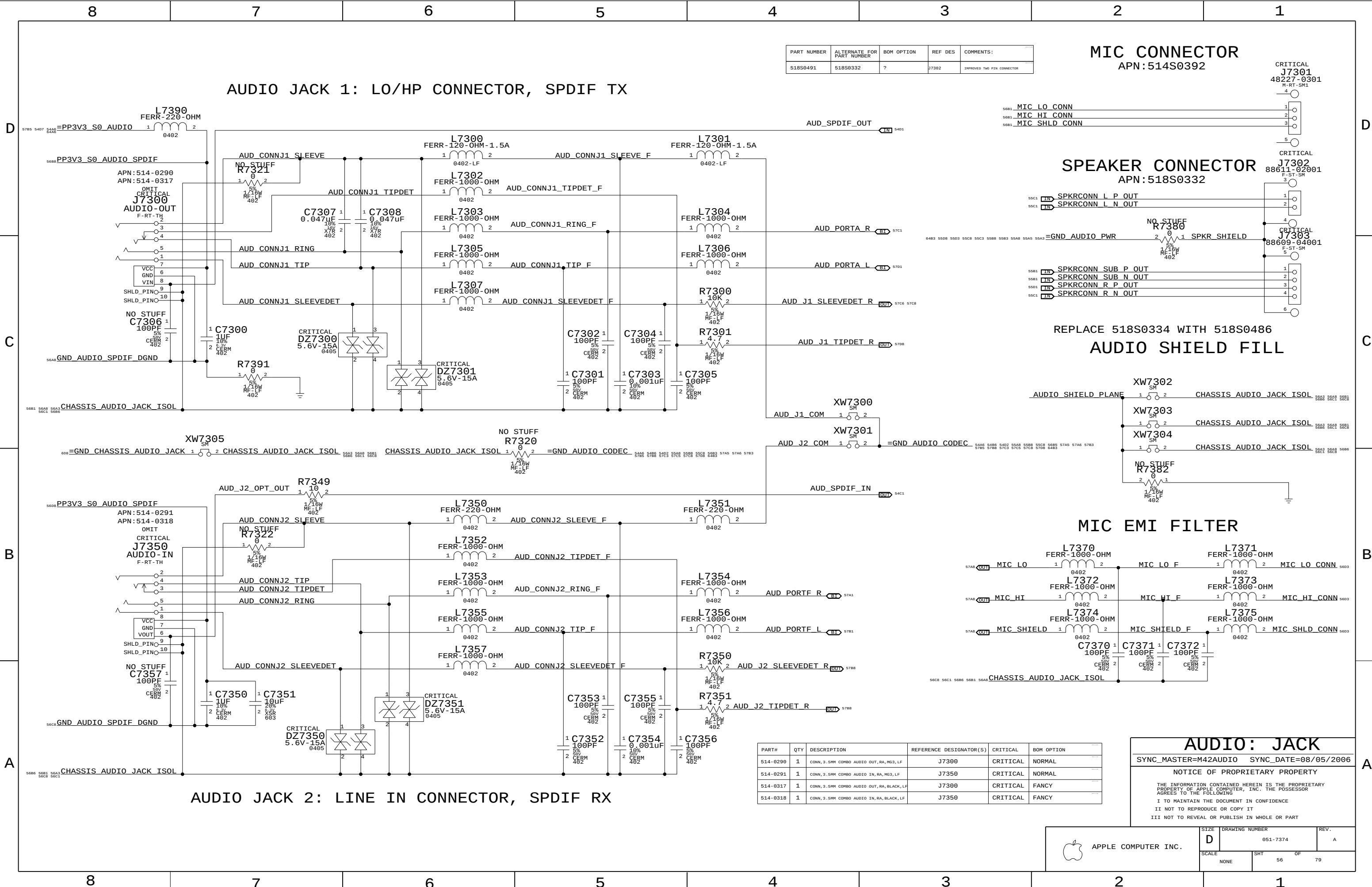
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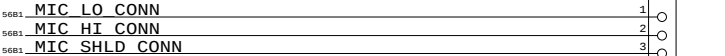
APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
D	051-7374	A
SCALE	SHT	OF
NONE	55	79

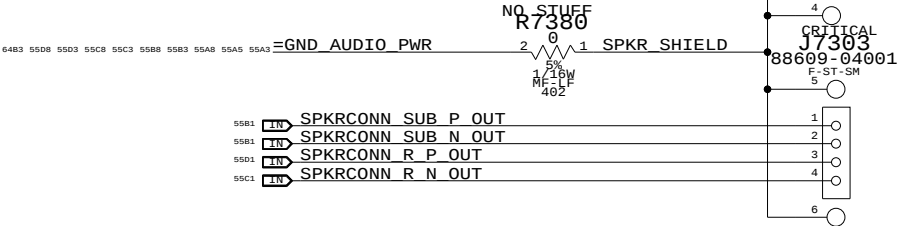


PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
518S0491	518S0332	?	J7302	IMPROVED TWO PIN CONNECTOR

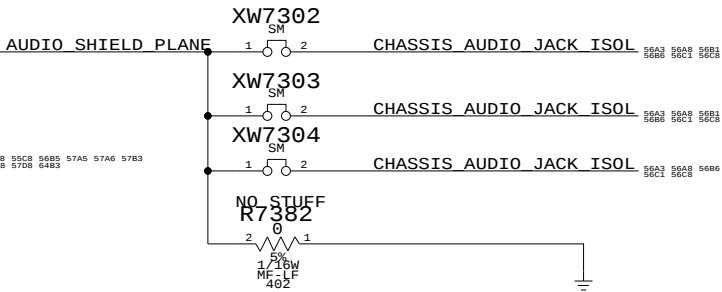
MIC CONNECTOR
APN:514S0392



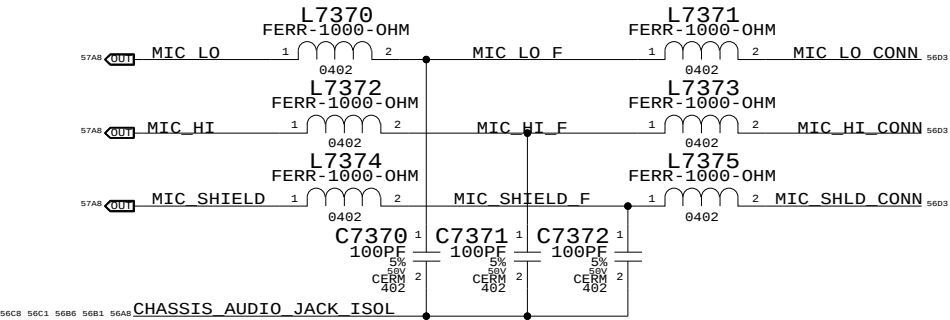
SPEAKER CONNECTOR
APN:518S0332



REPLACE 518S0334 WITH 518S0486
AUDIO SHIELD FILL



MIC EMI FILTER



AUDIO JACK 2: LINE IN CONNECTOR, SPDIF RX

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0290	1	CONN, 3.5MM COMBO AUDIO OUT, RA, MG3, LF	J7300	CRITICAL	NORMAL
514-0291	1	CONN, 3.5MM COMBO AUDIO IN, RA, MG3, LF	J7350	CRITICAL	NORMAL
514-0317	1	CONN, 3.5MM COMBO AUDIO OUT, RA, BLACK, LF	J7300	CRITICAL	FANCY
514-0318	1	CONN, 3.5MM COMBO AUDIO IN, RA, BLACK, LF	J7350	CRITICAL	FANCY

AUDIO: JACK

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

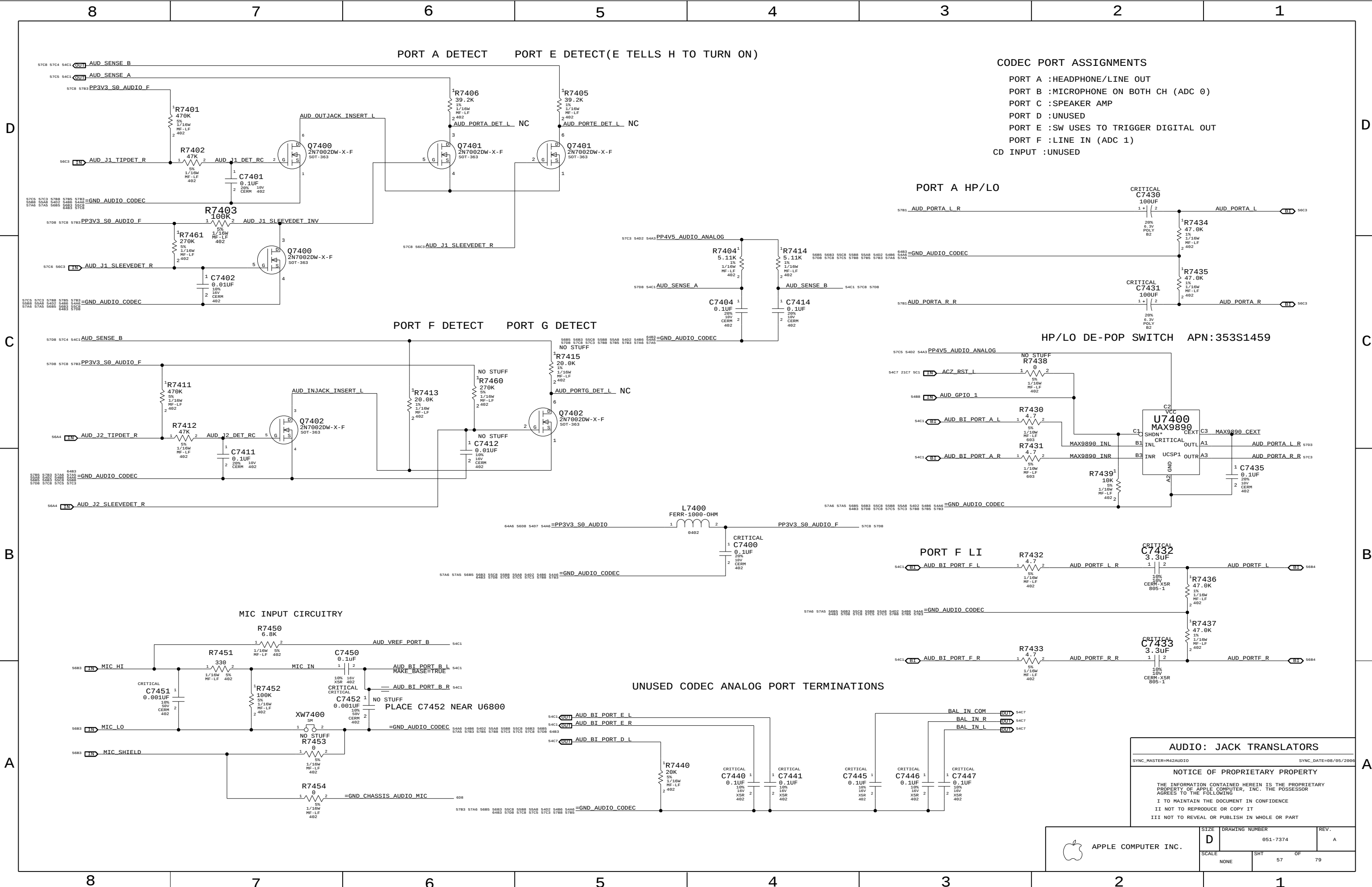
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SIZE	DRAWING NUMBER	REV.
D	051-7374	A
SCALE	SHT	OF
NONE	56	79



CODEC PORT ASSIGNMENTS

PORT A :HEADPHONE/LINE OUT
PORT B :MICROPHONE ON BOTH CH (ADC 0)
PORT C :SPEAKER AMP
PORT D :UNUSED
PORT E :SW USES TO TRIGGER DIGITAL OUT
PORT F :LINE IN (ADC 1)
CD INPUT :UNUSED

HP/LO DE-POP SWITCH APN:353S1459

AUDIO: JACK TRANSLATORS		
SYNC_MASTER=M42AUDIO		SYNC_DATE=08/05/2006
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7374	REV. A
	SCALE NONE	SHT 57	OF 79

D

B

A



D



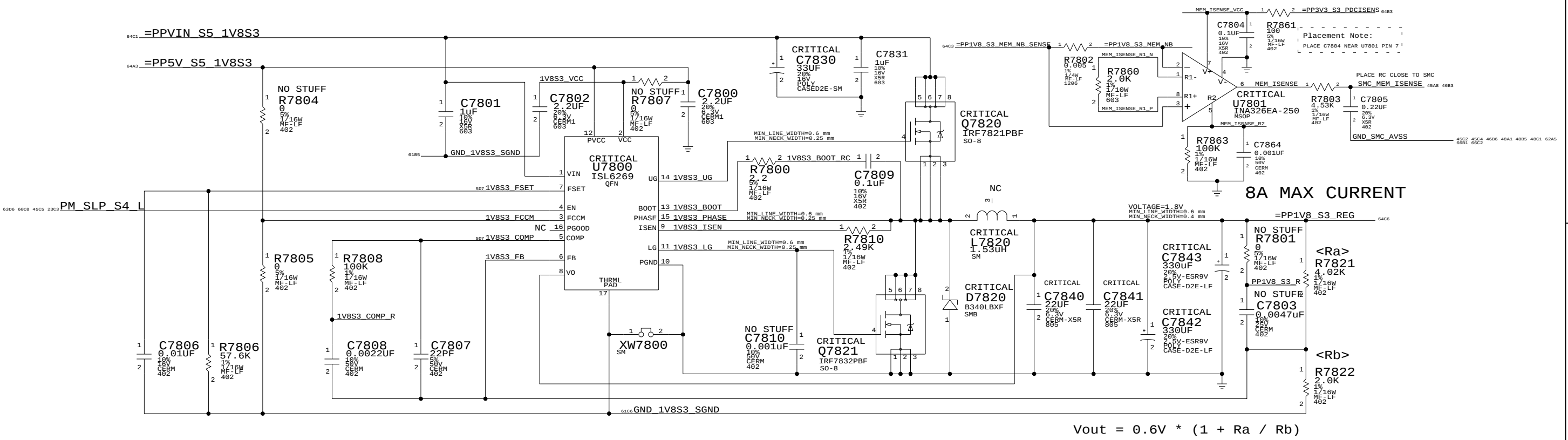
B



A

 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7374	A
	SCALE	SHT	OF
	NONE	60	79

1.8V POWER SUPPLY



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0093	128S0092	?	C7830	KEWET T520V330M15ATE0457850

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0094	128S0060	?	C7842, C7843	PANASONIC EEF5X00331ER
128S0095	128S0060	?	C7842, C7843	PANASONIC EEF5X00331XE



1.8V Supply

SYNC_MASTER=POWER SYNC_DATE=07/13/2005

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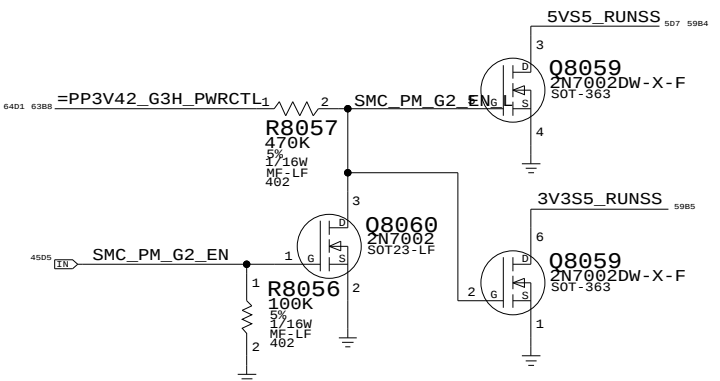
APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7374	REV. A
	SCALE NONE	SHT 61 OF 79	

POWER CONTROL SIGNALS

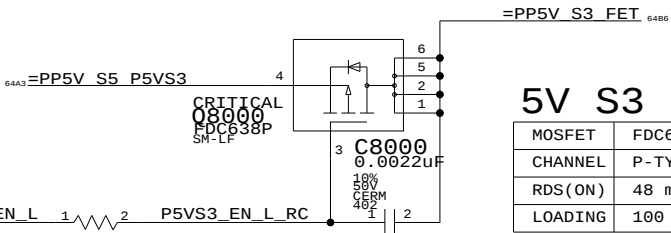
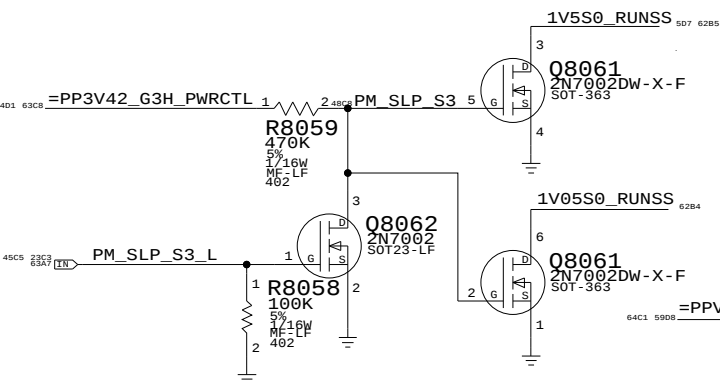
These rails are monitored by LTC2908

State	SMC_PM_G2_ENABLE	PM_SLP_S4_L	PM_SLP_S3_L
Run (S0)	1	1	1
Sleep (S3)	1	1	0
Soft-Off (S5)	1	0	0
Battery Off (G3Hot)	0	0	0

5V/3.3V S5 RUN/SS CONTROL

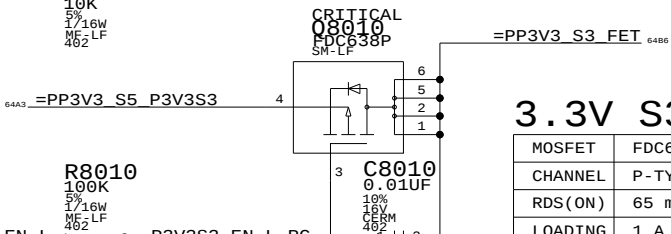


1.5V/1.05V S0 RUN/SS CONTROL



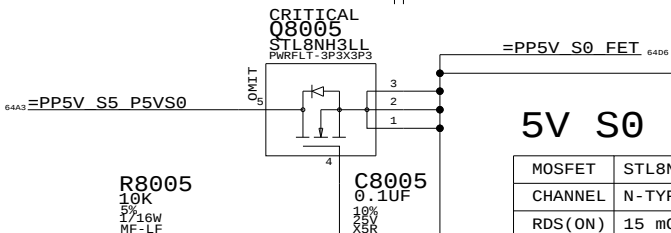
5V S3 FET

MOSFET	FDC638P
CHANNEL	P-TYPE
RDS(ON)	48 mOhm @4.5V
LOADING	100 mA



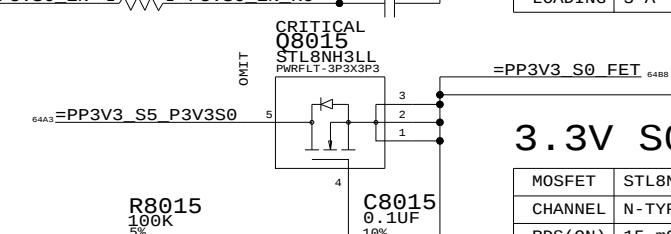
3.3V S3 FET

MOSFET	FDC638P
CHANNEL	P-TYPE
RDS(ON)	65 mOhm @2.5V
LOADING	1 A



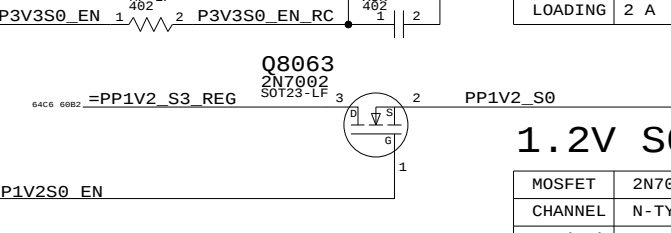
5V S0 FET

MOSFET	STL8NH3LL
CHANNEL	N-TYPE
RDS(ON)	15 mOhm @10V
LOADING	3 A



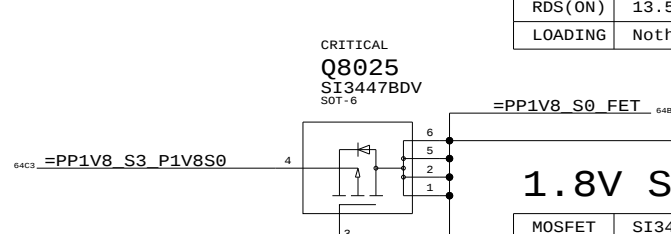
3.3V S0 FET

MOSFET	STL8NH3LL
CHANNEL	N-TYPE
RDS(ON)	15 mOhm @10V
LOADING	2 A



1.2V S0 FET

MOSFET	2N7002
CHANNEL	N-TYPE
RDS(ON)	13.5 Ohm
LOADING	Nothing

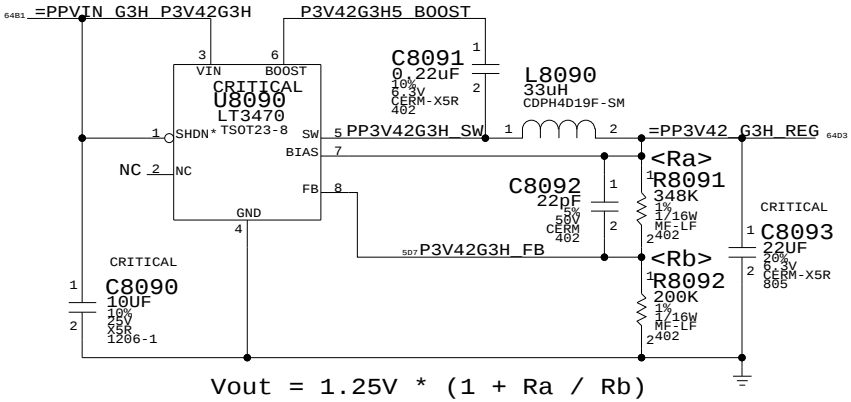


1.8V S0 FET

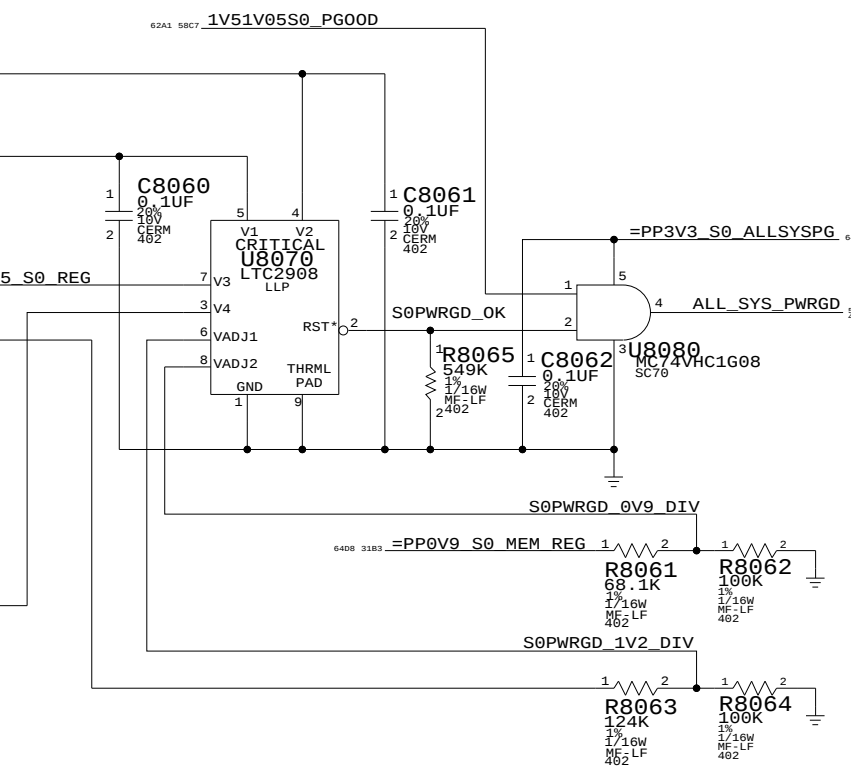
MOSFET	SI3447BDV
CHANNEL	P-TYPE
RDS(ON)	72 mOhm @1.8V
LOADING	320 mA

3.425V "G3Hot" SUPPLY

Supply needs to guarantee 3.31V delivered to SMC VRef generator



ALL SYSTEM PWRGD CIRCUIT



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
376S0445	2	FAIRCHILD FDM6296	Q8005, Q8015	FET_FDM6296

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
376S0448	376S0445	?	Q8005, Q8015	VISHAY SI7806ADN

S3/S0 FETS, G3H SUPPLY

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

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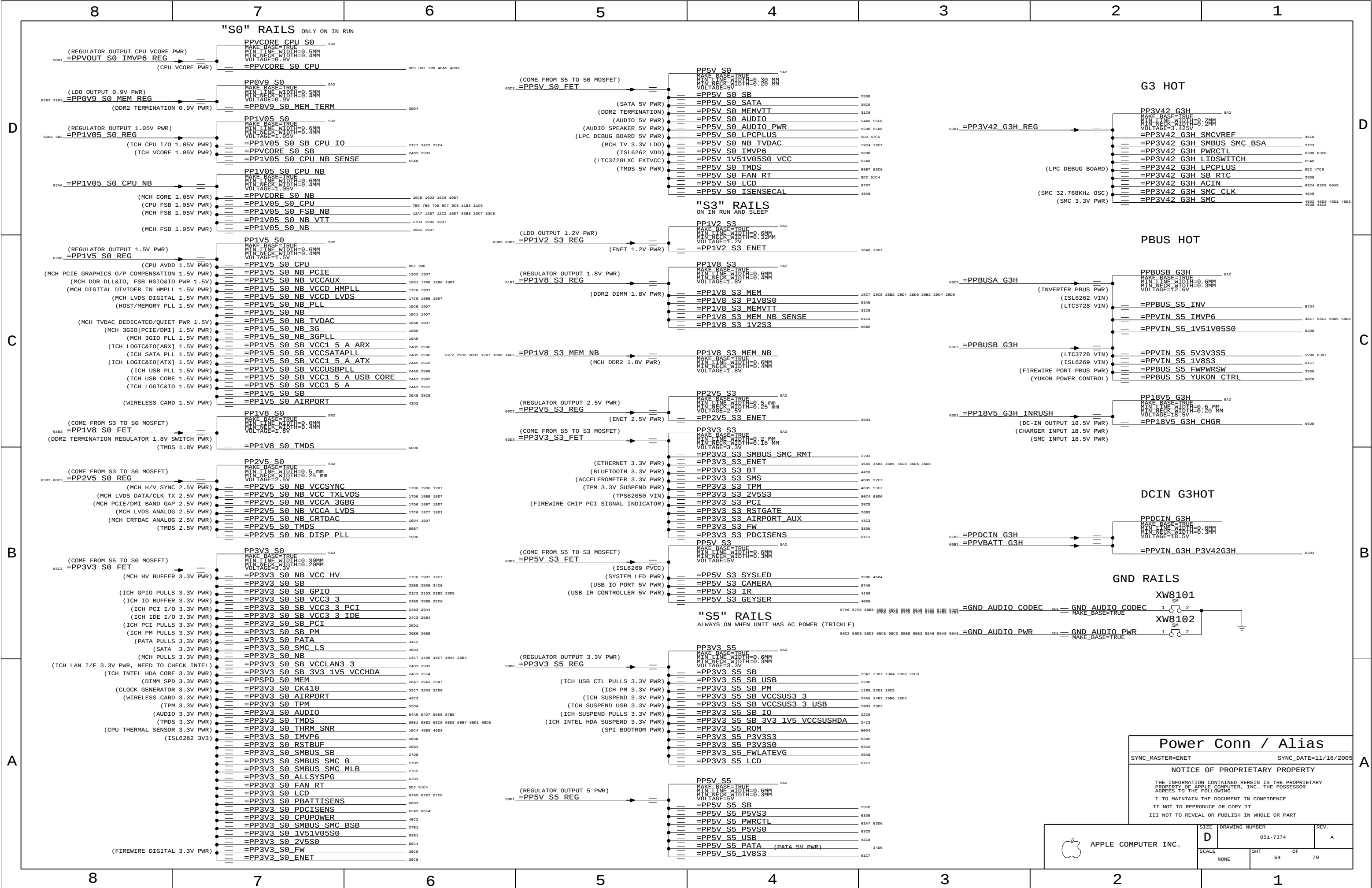
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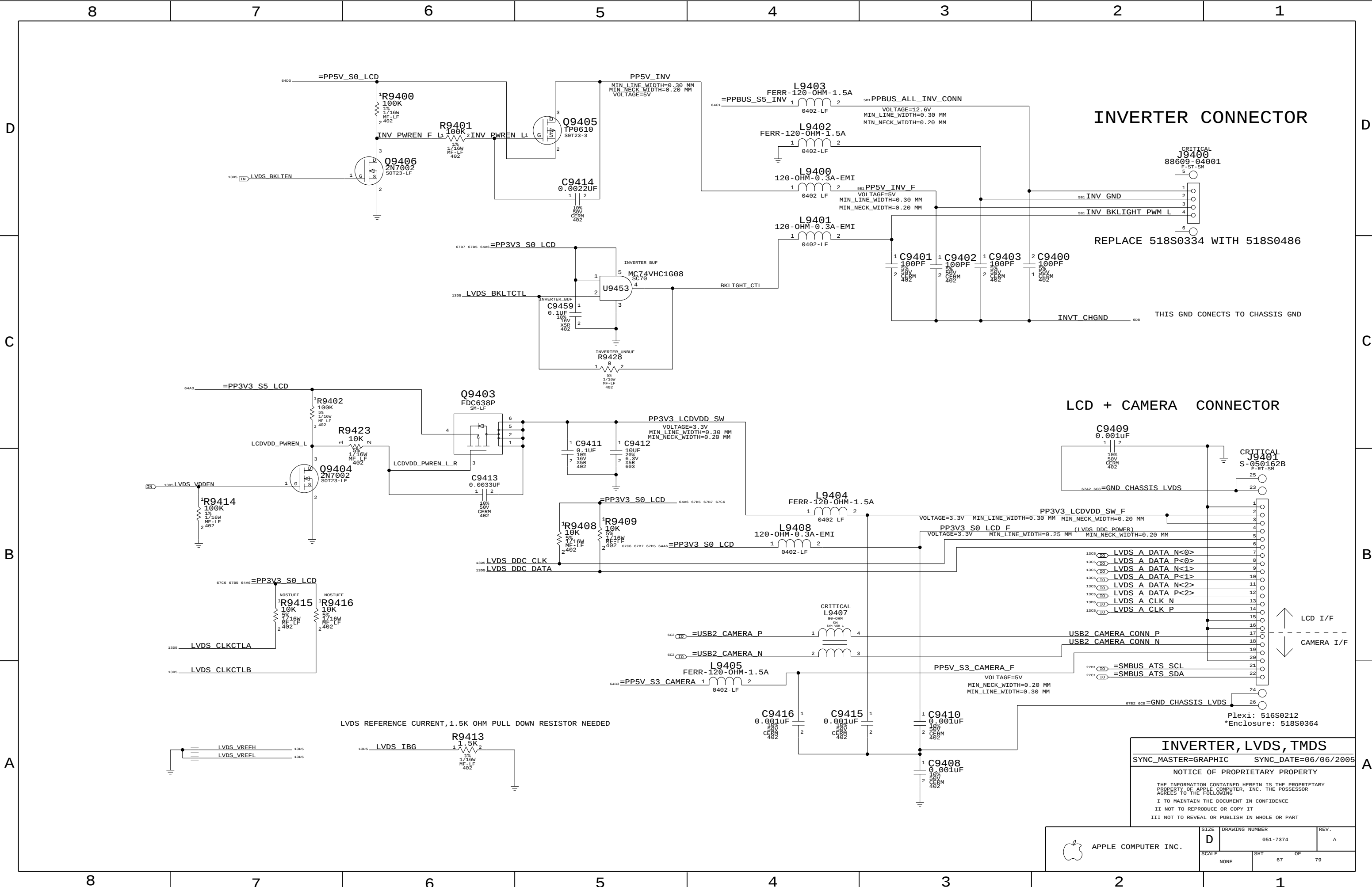
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SIZE	DRAWING NUMBER	REV.
D	051-7374	A
SCALE	SHT	OF
NONE	63	79





INVERTER CONNECTOR

REPLACE 518S0334 WITH 518S0486

THIS GND CONNECTS TO CHASSIS GND

LCD + CAMERA CONNECTOR

Plexi: 516S0212
*Enclosure: 518S0364

INVERTER, LVDS, TMDS

SYNC_MASTER=GRAPHIC SYNC_DATE=06/06/2005

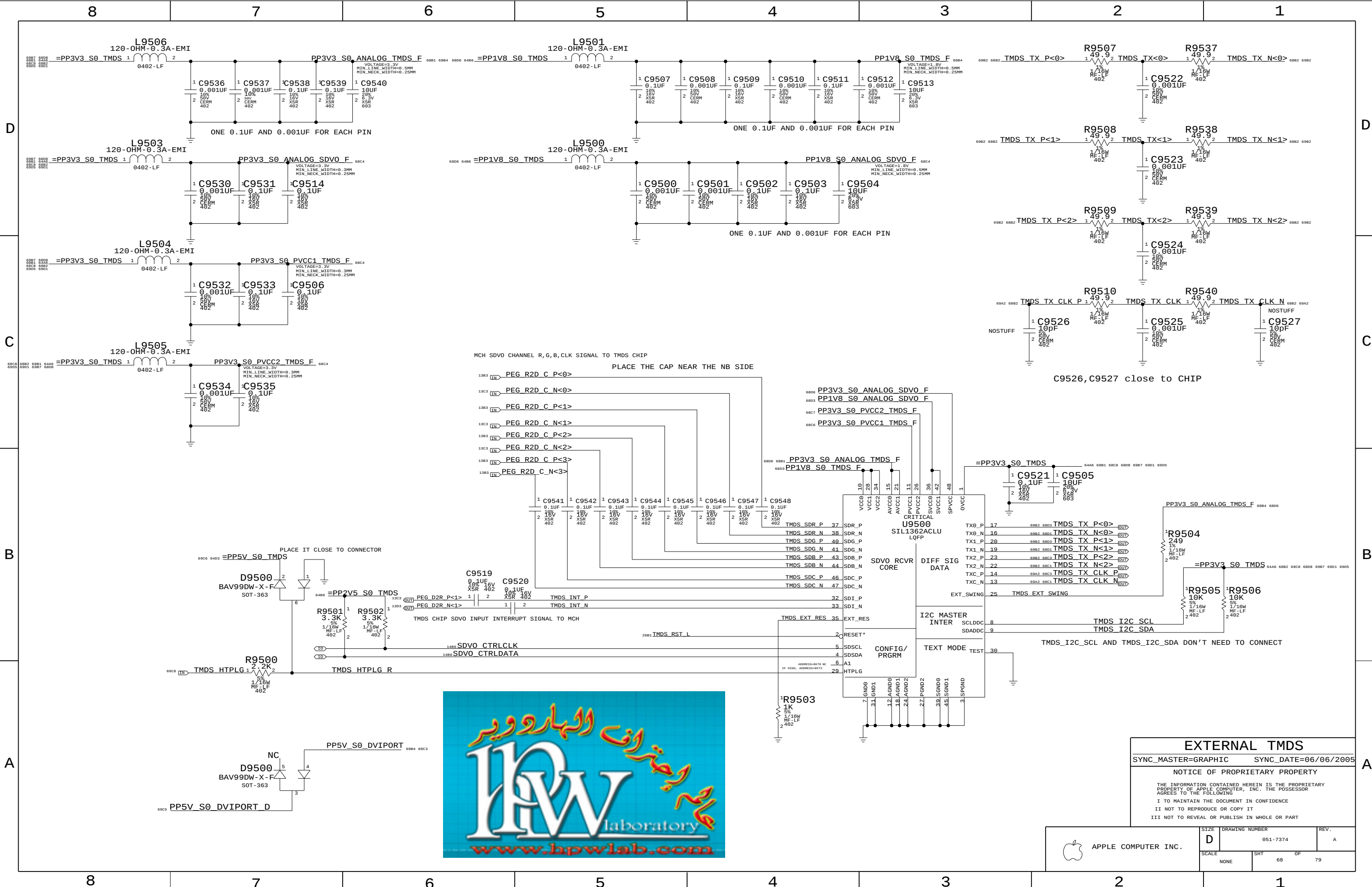
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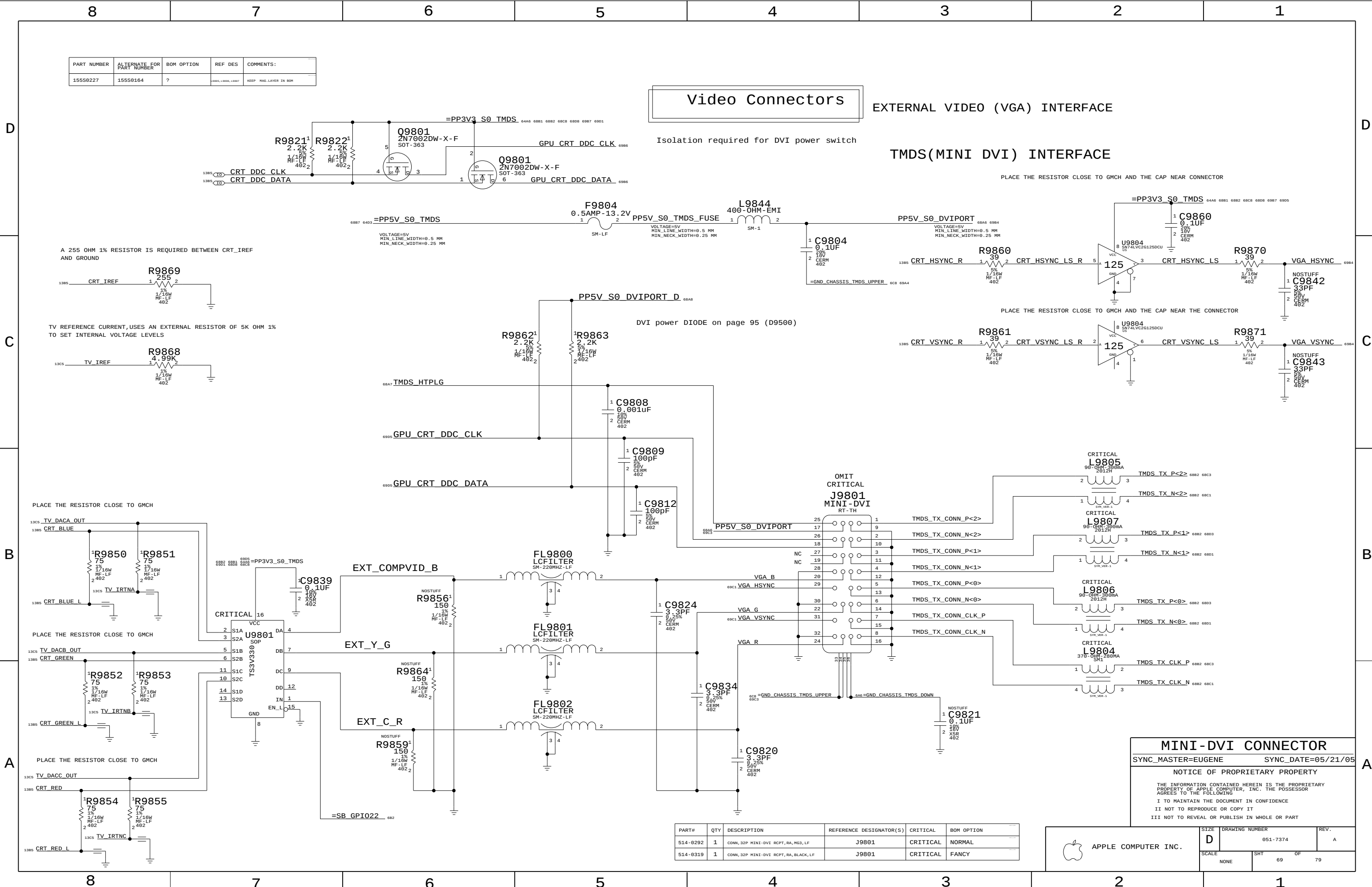
SIZE	DRAWING NUMBER	REV.
D	051-7374	A
SCALE	SHT	OF
NONE	67	79



EXTERNAL TMDs		
SYNC_MASTER=GRAPHIC		SYNC_DATE=06/06/2005
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SIZE D	DRAWING NUMBER 051-7374		REV. A
	SCALE NONE	SHT 68	OF 79





PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S0227	155S0164	?	988C, 1500H, 1500T	KEEP MAG LAYER IN BOM

Video Connectors

EXTERNAL VIDEO (VGA) INTERFACE

TMD5(MINI DVI) INTERFACE

PLACE THE RESISTOR CLOSE TO GMCH AND THE CAP NEAR CONNECTOR

PLACE THE RESISTOR CLOSE TO GMCH AND THE CAP NEAR THE CONNECTOR

Isolation required for DVI power switch

DVI power DIODE on page 95 (D9500)

MINI-DVI CONNECTOR

SYNC_MASTER=EUGENE SYNC_DATE=05/21/05

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PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0292	1	CONN, 32P MINI-DVI RCPT, RA, MG3, LF	J9801	CRITICAL	NORMAL
514-0319	1	CONN, 32P MINI-DVI RCPT, RA, BLACK, LF	J9801	CRITICAL	FANCY



APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
D	051-7374	A
SCALE	SHT	OF
NONE	69	79

[illegible]

[illegible]

