

M60 - PVT

08/01/06

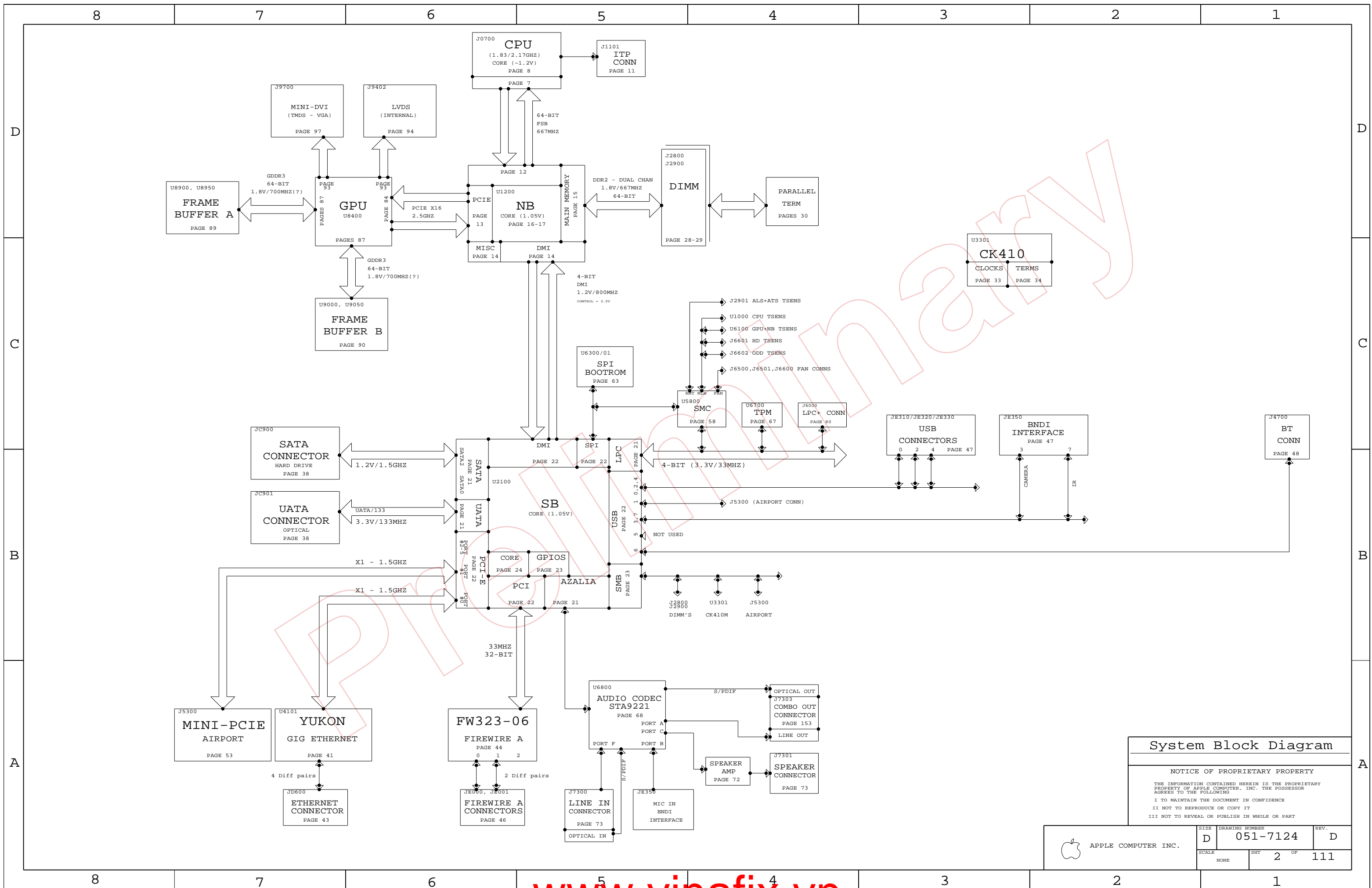
1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV	ZONE	ECN	DESCRIPTION OF CHANGE	CK APPD	ENG APPD
D		452633	PRODUCTION RELEASED		
				DATE	DATE
				08/01/06	06/22/04

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3	MY	3 POWER BLOCK DIAGRAM
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5	JD	5 FUNC TEST
6	MY	6 POWER CONNECTOR / POWER ALIAS
7	JD	7 CPU - BUS INTERFACE
8	JD	8 CPU - PWR & GND
9	JD	9 CPU - DECAPS
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11	JD	11 CPU - ITP CONN
12	JH	12 NB - CPU INTERFACE
13	JH	13 NB - VIDEO INTERFACE
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15	JH	15 NB - DDR2 INTERFACE
16	JH	16 NB - POWER 1
17	JH	17 NB - POWER 2
18	JH	18 NB - GROUNDS
19	JH	19 NB - DECAPS
20	JH	20 NB - CONFIG STRAPS
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22	JD	22 SB - PCIE, SPI, USB, DMI, PCI
23	JD	23 SB - SMB, GPIO, PM, CLKS
24	JD	24 SB - POWERS AND GROUNDS
25	JD	25 SB - DECAPS
26	JD	26 SB - MISC
27	JD	27 SB - SMB BUS CONNECTIONS
28	JD	28 DDR2 - SO-DIMM CONN A
29	JD	29 DDR2 - SO-DIMM CONN B (REVERSED)
30	JD	30 DDR2 - TERMINATION
31	MY	31 DDR2 - VTT SUPPLY
33	JD	32 CLOCKS - GENERATOR
34	JD	33 CLOCKS - TERMINATIONS
38	JD	34 ATA (SATA AND IDE) CONN'S
41	JD	35 LAN - YUKON'S PCIE INTERFACE
42	JD	36 LAN - YUKON'S PWR, MISC
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44	JD	38 FIREWIRE - FW323-06
45	JD	39 FIREWIRE - DECAPS
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47	JD	41 USB - CONN'S
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PAGE	PDF	CIRCUIT
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58	MY	45 SMC - H8S2116
59	MY	46 SMC - SMB BUSSES, MISC
60	MY	47 SMC - LPC+ CONN
61	MY	48 SMC - GPU/NB THERMAL SENSOR
63	MY	49 SMC - SPI BOOTROM
65	MY	50 SMC - FANS
66	MY	51 SMC - FANS
67	JD	52 SMC - TPM
68	TG	53 AUDIO - CODEC, VREG, MIC BIAS
72	TG	54 AUDIO - INTERNAL SPEAKER AMP
73	TG	55 AUDIO - I/O CONN'S, EMC
74	TG	56 AUDIO - DETECT TRANSLATORS
75	MY	57 VR - CPU CORE
76	MY	58 VR - CPU I-V SENSE CKT
77	MY	59 VR - "S3" 1.2V & "S0" 1.2V
78	MY	60 VR - "S0" 1.8V
79	MY	61 VR - "S3" 1.8V
80	MY	62 VR - "S0" 1.5V
81	MY	63 VR - "S0" 1.05V
82	MY	64 VR - "S5" 5V AND "S0" 4.5V
83	MY	65 VR - FETS FOR REMAINING RAILS
84	JH	66 GPU - M56 PCI-E
85	JH	67 GPU - VCORE SUPPLY
86	JH	68 GPU - M56 CORE PWR
87	JH	69 GPU - M56 FRAME BUFFER
88	JH	70 GPU - MISC
89	JH	71 GPU - GDDR SDRAM A
90	JH	72 GPU - GDDR SDRAM B
91	JH	73 GPU - M56 GPIO, DVO, MISC
92	JH	74 GPU - M56 CLOCKS
93	JH	75 GPU - M56 VIDEO INTERFACES
94	JH	76 GPU - INTERNAL DISPLAY CONN'S
95	JH	77 GPU - TP'S
96	JH	78 GPU - TMDS, INVERTER, EXT VGA
97	JH	79 GPU - EXTERNAL DISPLAY CONN'S

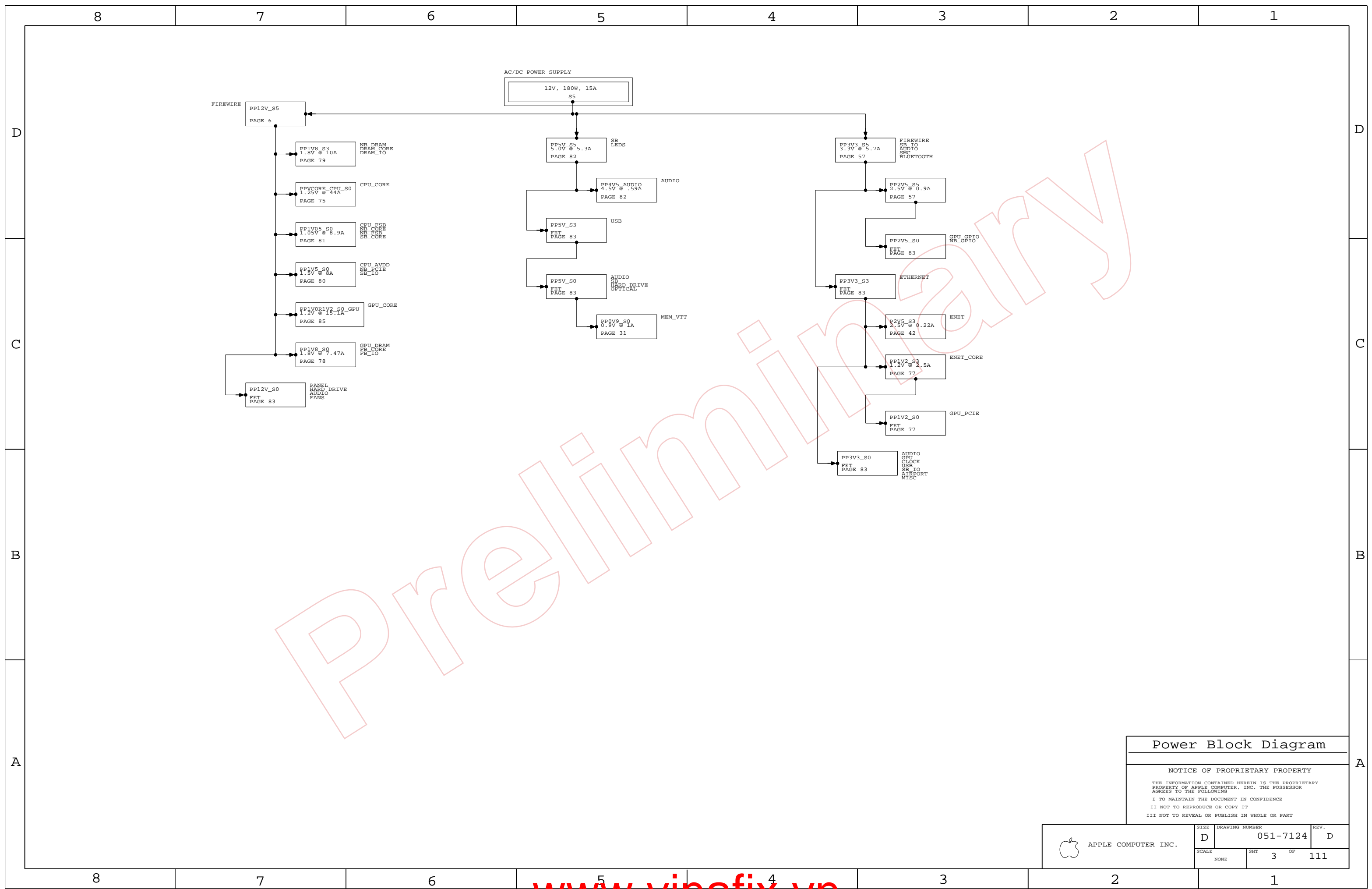
<p style="font-size: small;">DIMENSIONS ARE IN MILLIMETERS</p> <p>XX : _____</p> <p>X.XX : _____</p> <p>X.XXX : _____</p> <p>ANGLES : _____</p> <p style="font-size: x-small;">DO NOT SCALE DRAWING</p> <div style="text-align: center;"> <p style="font-size: x-small;">THIRD ANGLE PROJECTION</p> </div>	<p>METRIC</p>	<p>Apple Computer Inc.</p>
<p>DRAPTER</p> <p>ENG APPD</p> <p>QA APPD</p> <p>RELEASE</p>	<p>DESIGN CK</p> <p>MFG APPD</p> <p>DESIGNER</p> <p>SCALE</p>	<p>NOTICE OF PROPRIETARY PROPERTY</p> <p>THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING</p> <p>I TO MAINTAIN THE DOCUMENT IN CONFIDENCE</p> <p>II NOT TO REPRODUCE OR COPY IT</p> <p>III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART</p>
<p>SIZE D</p> <p>MATERIAL/FINISH NOTED AS APPLICABLE</p>		<p>TITLE</p> <p>SCH, MLB, M60</p>
<p>DRAWING NUMBER</p> <p>051-7124</p>		<p>REV. D</p>
<p>SHT 1 OF 111</p>		



System Block Diagram

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	SCALE NONE	SHEET 2 OF 111	



Preliminary

Power Block Diagram

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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	
338S0345	1	IC,ATI,M56D,GRAFIXCTLR,880BGA,LF	U8400	CRITICAL	
359S0101	1	IC,CY28445-5,CLK GEN,68PIN QFN	U3301	CRITICAL	
338S0270	1	IC,88E8053,1GIGABIT ENET XCVR,64P QFN,SMD	U4101	CRITICAL	
(335S0382) 341S1797	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 353S1465	1	IC,CPU VREG,1MVP,TWO PHASE	U7500	CRITICAL	
152S0138	2	IND,PWR,SMD,3.3OH,20%,6A,30MHZ,LF,SMD	L5703,L8203	CRITICAL	
128S0078	2	CAP,EL,AL,330UF,20%,16V,10X12.7MM,SMD,LF	C7517,C7518	CRITICAL	
825-6447	1	MLB LABEL,48.0X4.8	X14	CRITICAL	
155S0289	7	EMI CHOKE	FLR011,FLR021,FL4610,FL4620,L4712,L4722,L4732	CRITICAL	

(341S1904 - DEV)
 (341S1905 - PVT)
 (335S0384 - BLNK)
 (341S1903 - PROG)
 (338S0274 - BLNK)

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-7124	1	PCB,SCHEM,MLB,M60	SCH1		20_INCH_LCD
820-2031	1	PCB,FAB,MLB,M60	MLB1		20_INCH_LCD
341T0036	1	EPI ROM,M60	U6301	CRITICAL	20_INCH_LCD
341T0035	1	IC,SMC,M60	U5800	CRITICAL	20_INCH_LCD
338S0315	1	IC,ATI,M56LP,GRAFIX CTLR,880BGA,LF	U8400	CRITICAL	GPU_B26_LP
114S0264	1	3.01K,1%,1/16W,402,MP-LF	R8522		GPU_VCORE_1P2V
337S3390	1	2.16GHZ MEROM	CPU	CRITICAL	2P16_CPU
337S3392	1	2.33GHZ MEROM	CPU	CRITICAL	2P33_CPU

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
333S0354	4	IC,SDRAM,GDDR3,8MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_128M_SAMSUNG
333S0358	4	IC,SDRAM,GDDR3,8MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_128M_HYNIX
333S0376	4	IC,SDRAM,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,SDRAM,GDDR3,16MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_256M_SAMSUNG
333S0351	4	IC,SDRAM,GDDR3,16MX32,700MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_256M_HYNIX
333S0377	4	IC,SDRAM,GDDR3,16MX32,600MHZ,136FBGA	U8900,U8950,U9000,U9050	CRITICAL	ATI_FB_256M_INFINEON

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
126S0086	126S0078		C940,C1900,C1901,C1968	SANYO W6CE330FS 330UF 6.3V LF
128S0080	128S0078		C7517,C7518	SANYO 166VP330M 330UF 16V SMD LF
124-0338	124-0333			CAP,AL,EL,680UF,16V,RAD,10X12.5MM
138S0580	138S0552			22UF 0805
124-0361	124-0339		C7807	SANYO
353S1321	353S1105		U7910	LM339
338S0344	338S0345		U8400	MS6 B26 P - DIFF P/N
353S1461	353S1465		U7500	CPU REGULATOR - ISL9504
378S0141	378S0140		LED01,LED02,LED03	LED
138S0598	138S0512			SAMSUNG

Preliminary

Table Items

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SCALE	SHT	OF	REV.
NONE	4	111	

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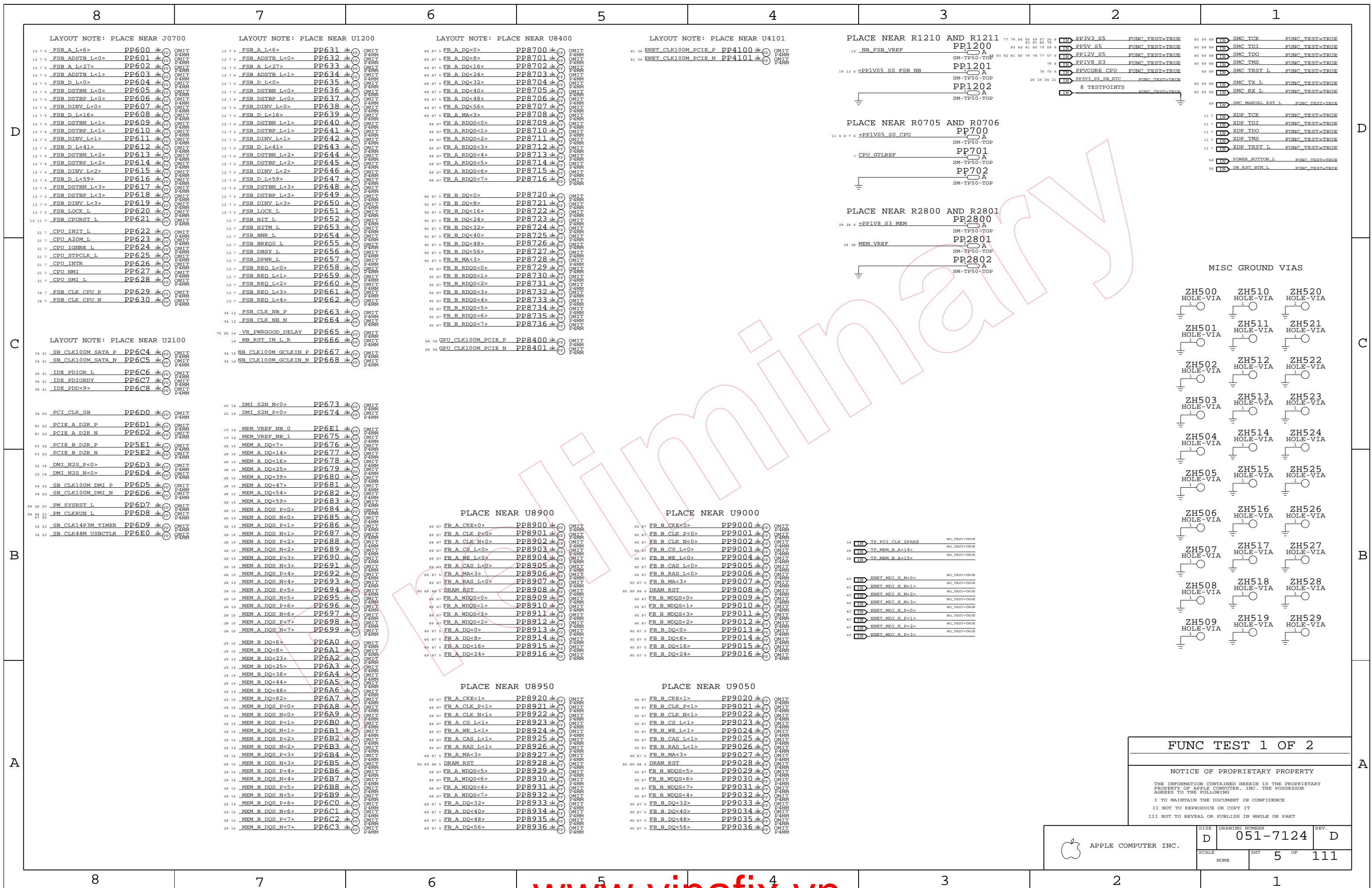
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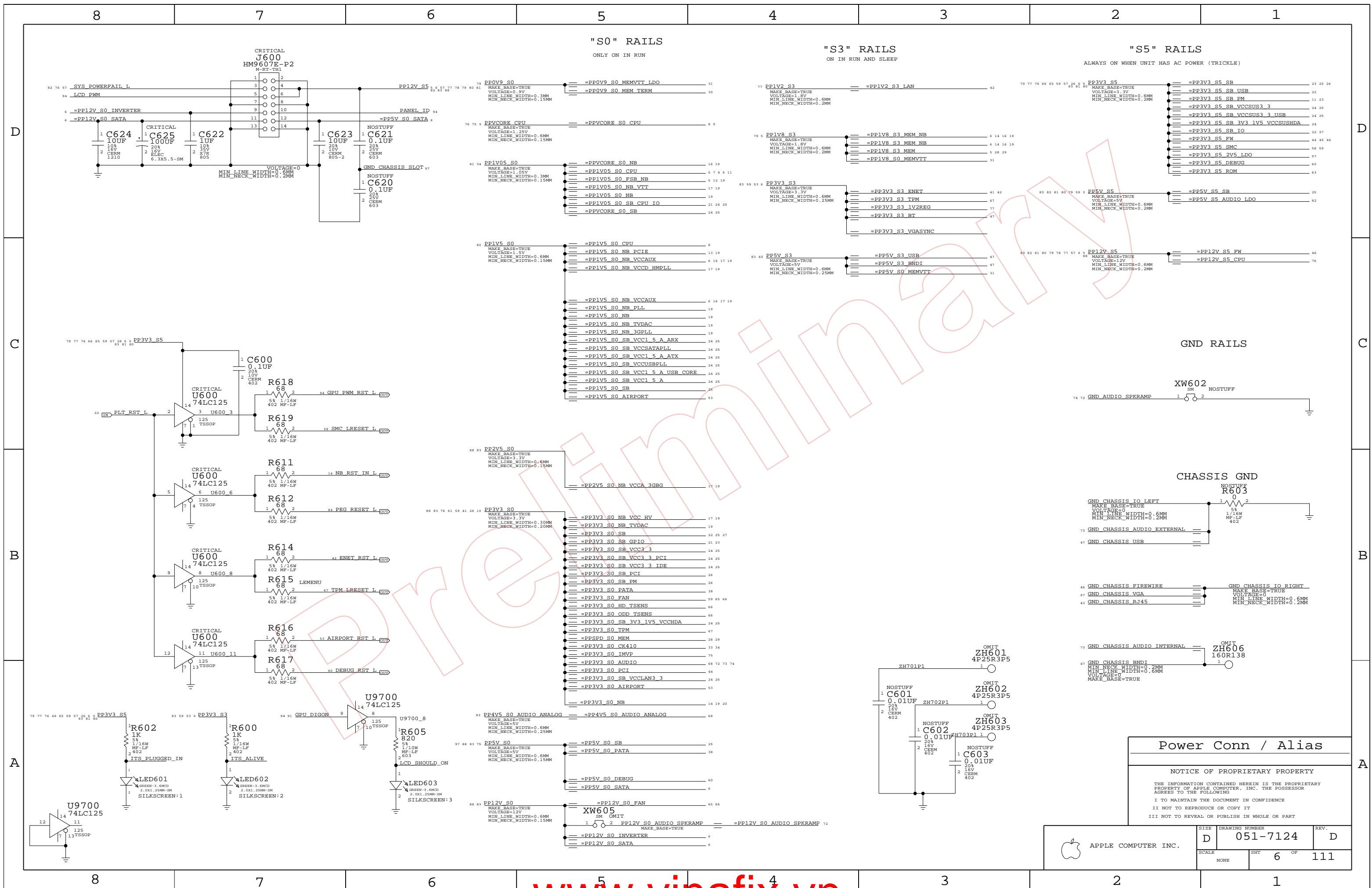


FUNC TEST 1 OF 2

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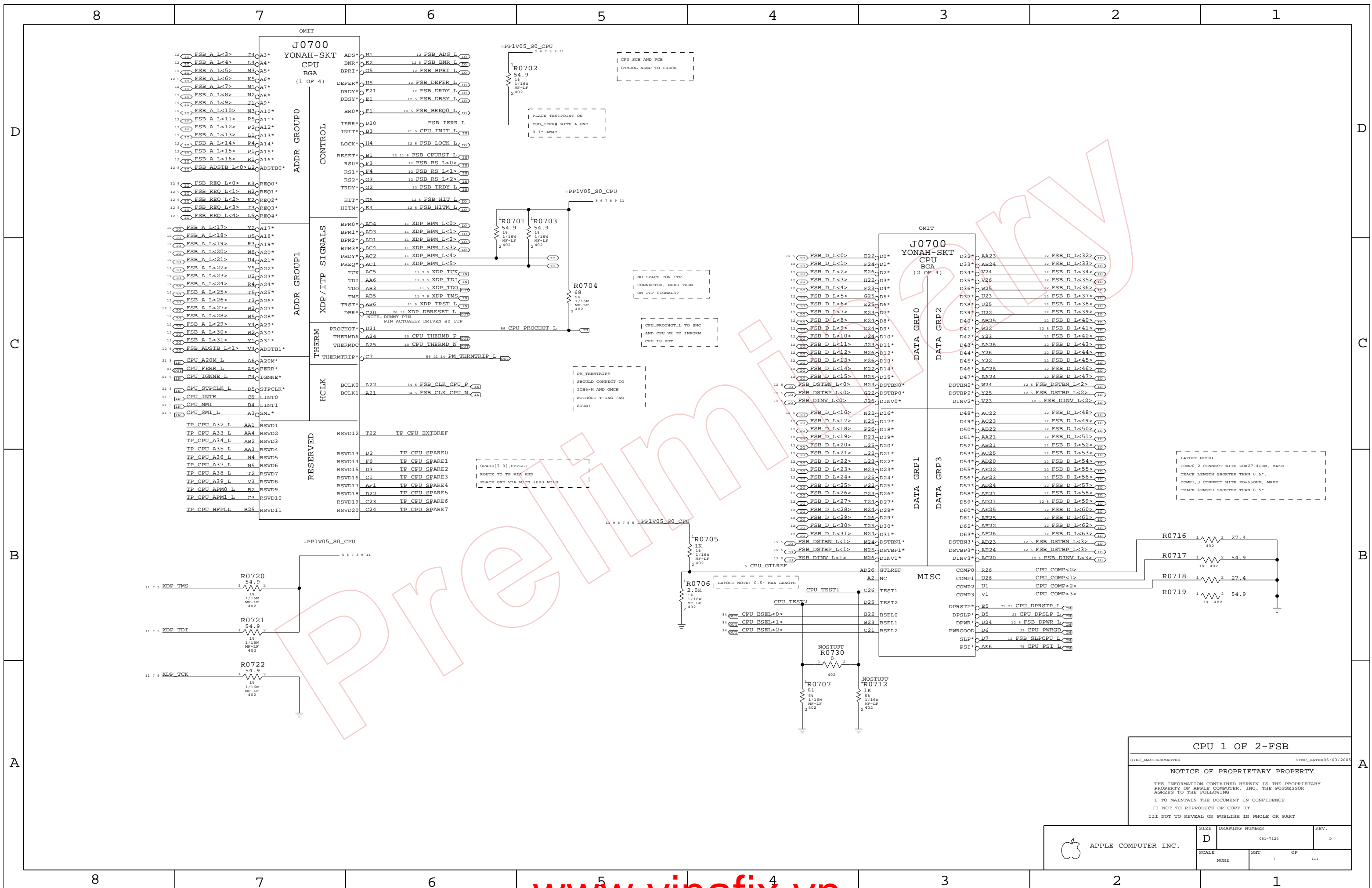


Power Conn / Alias

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CPU 1 OF 2-FSB

SYNC_MASTER=MASTER SYNC_DATE=05/03/2005

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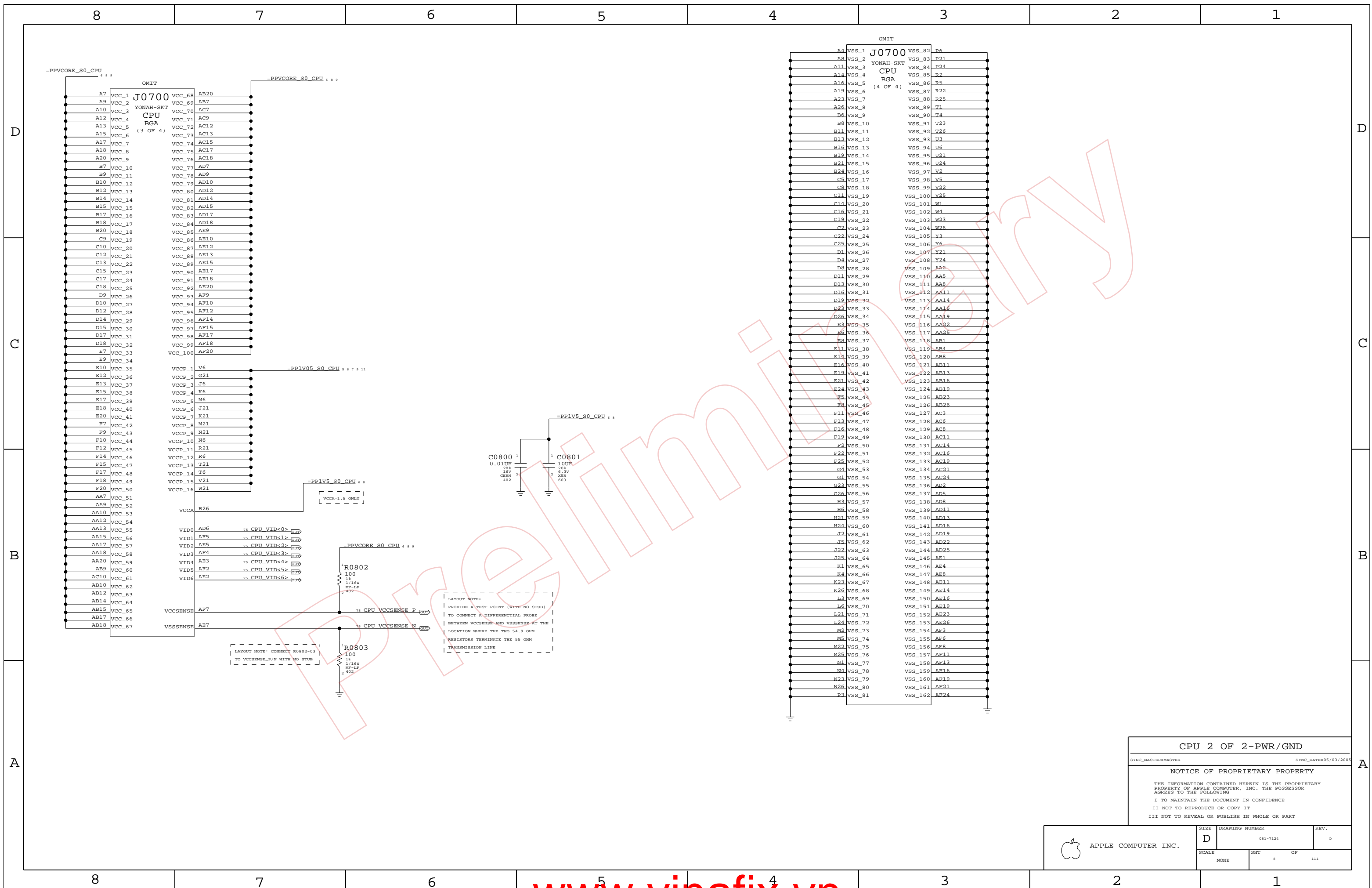
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CPU 2 OF 2-PWR/GND

SYNC_MASTER=MASTER SYNC_DATE=05/03/2005

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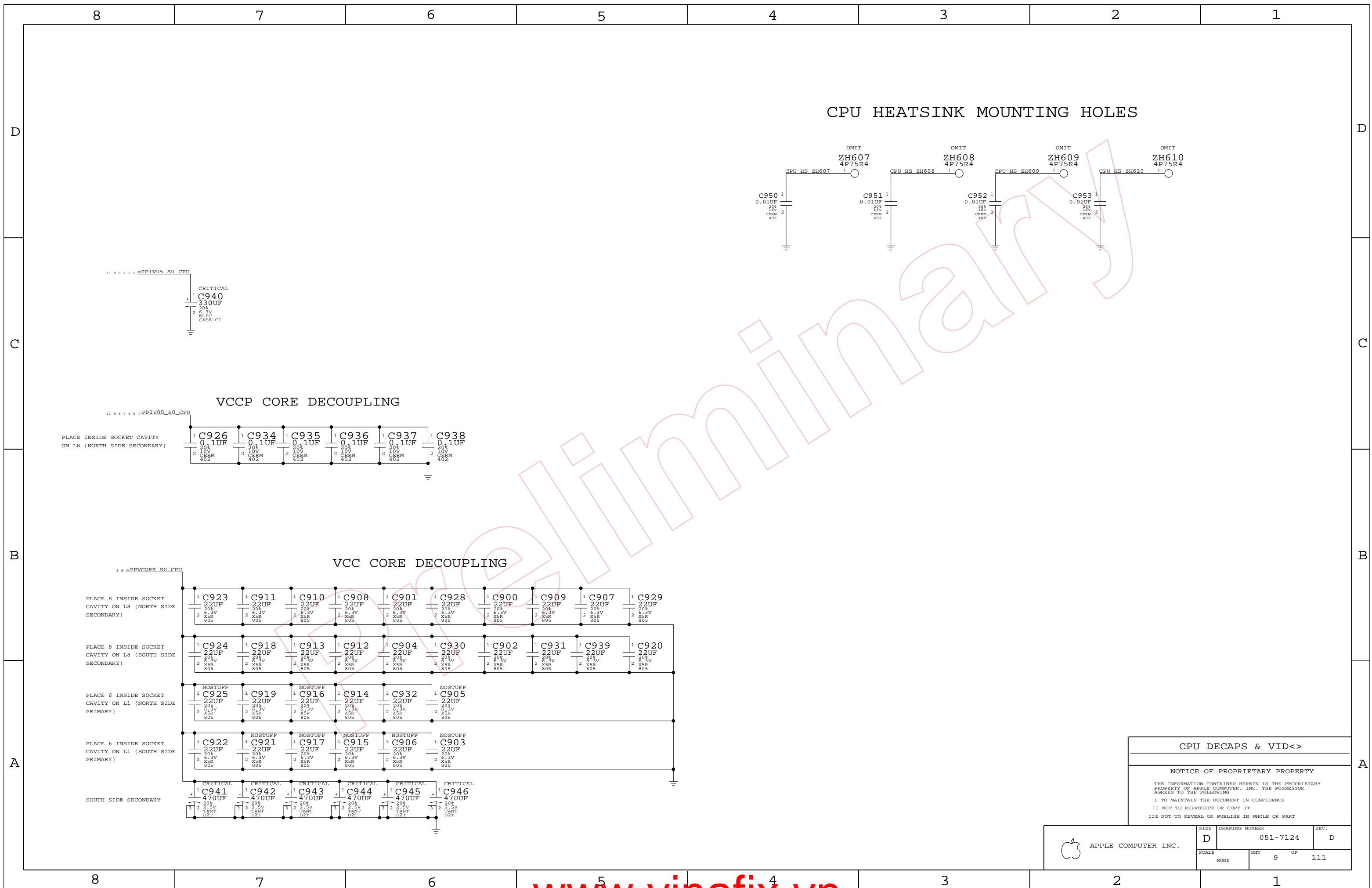
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CPU DECAPS & VID<>


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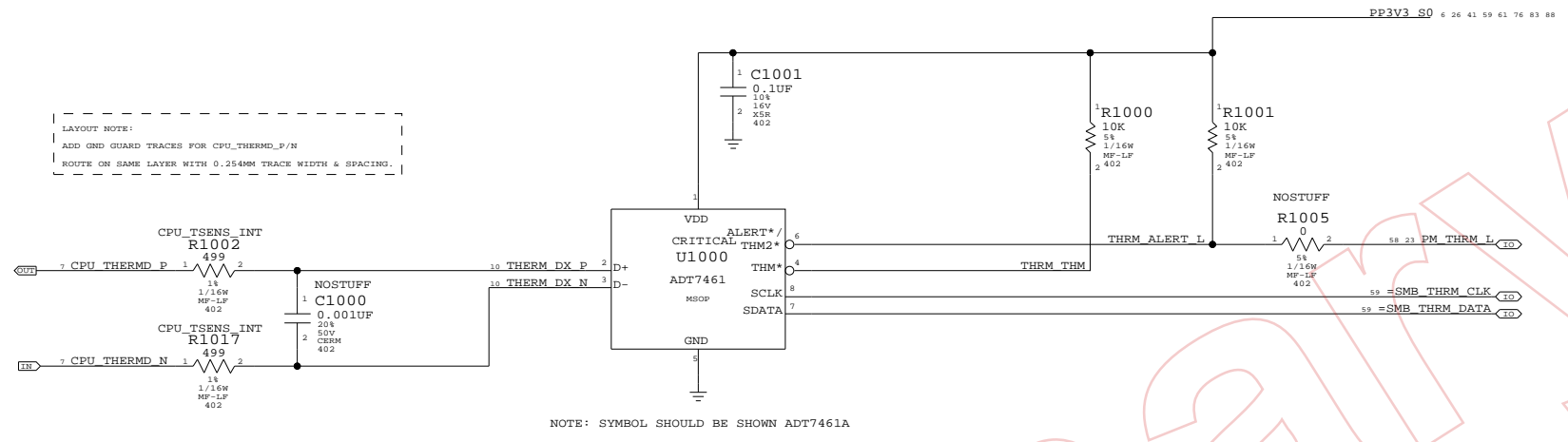
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SCALE	SHT	OF	REV.
NONE	9	111	

CPU THERMAL SENSOR

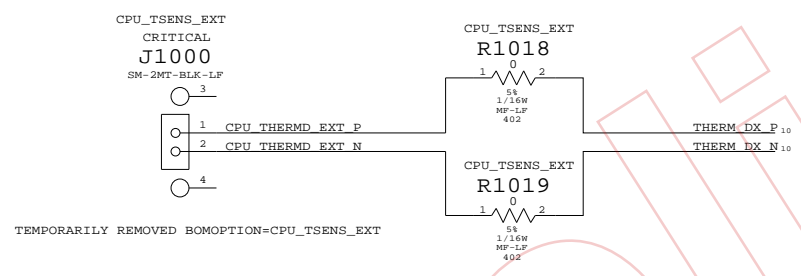
NOTE:
IF CPU T DIODE TO BE READ IN OFF STATE,
THEN THIS SHOULD BE S5

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

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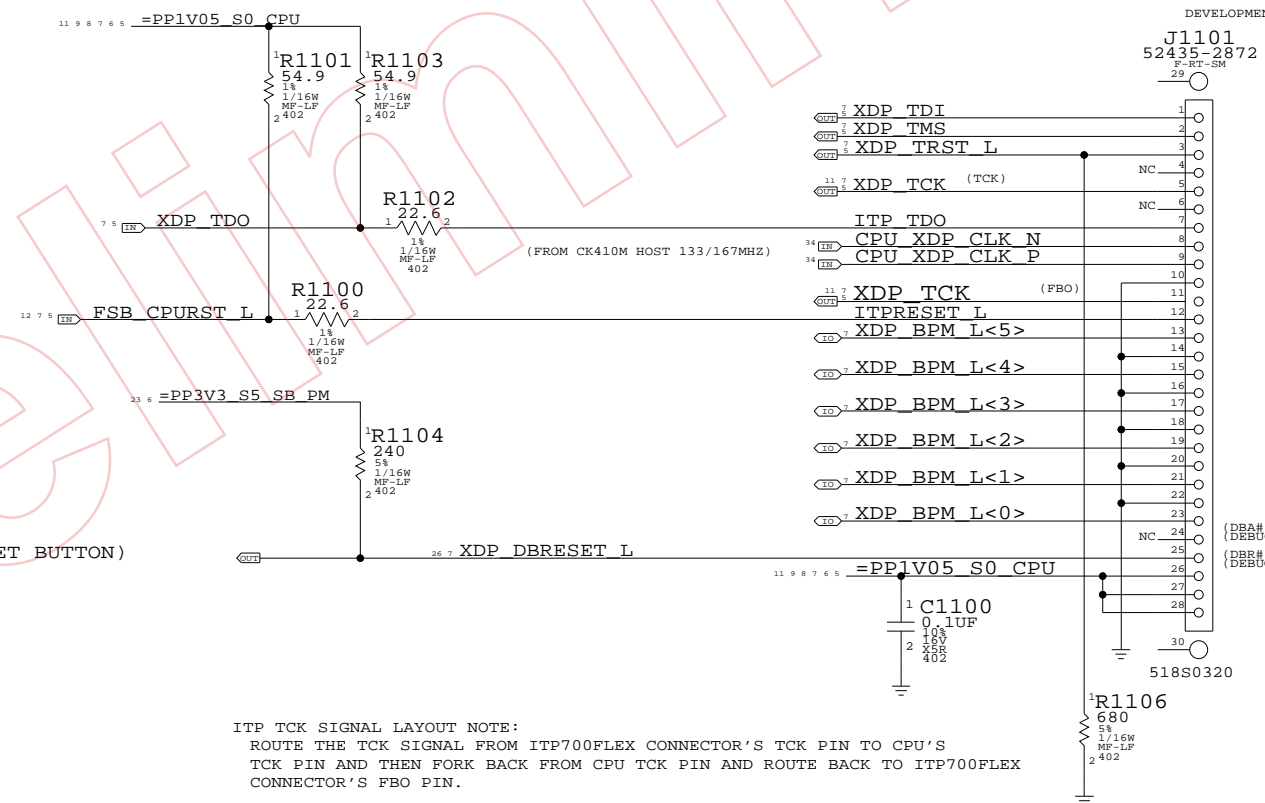
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NONE	10		

CPU ITP700FLEX DEBUG SUPPORT

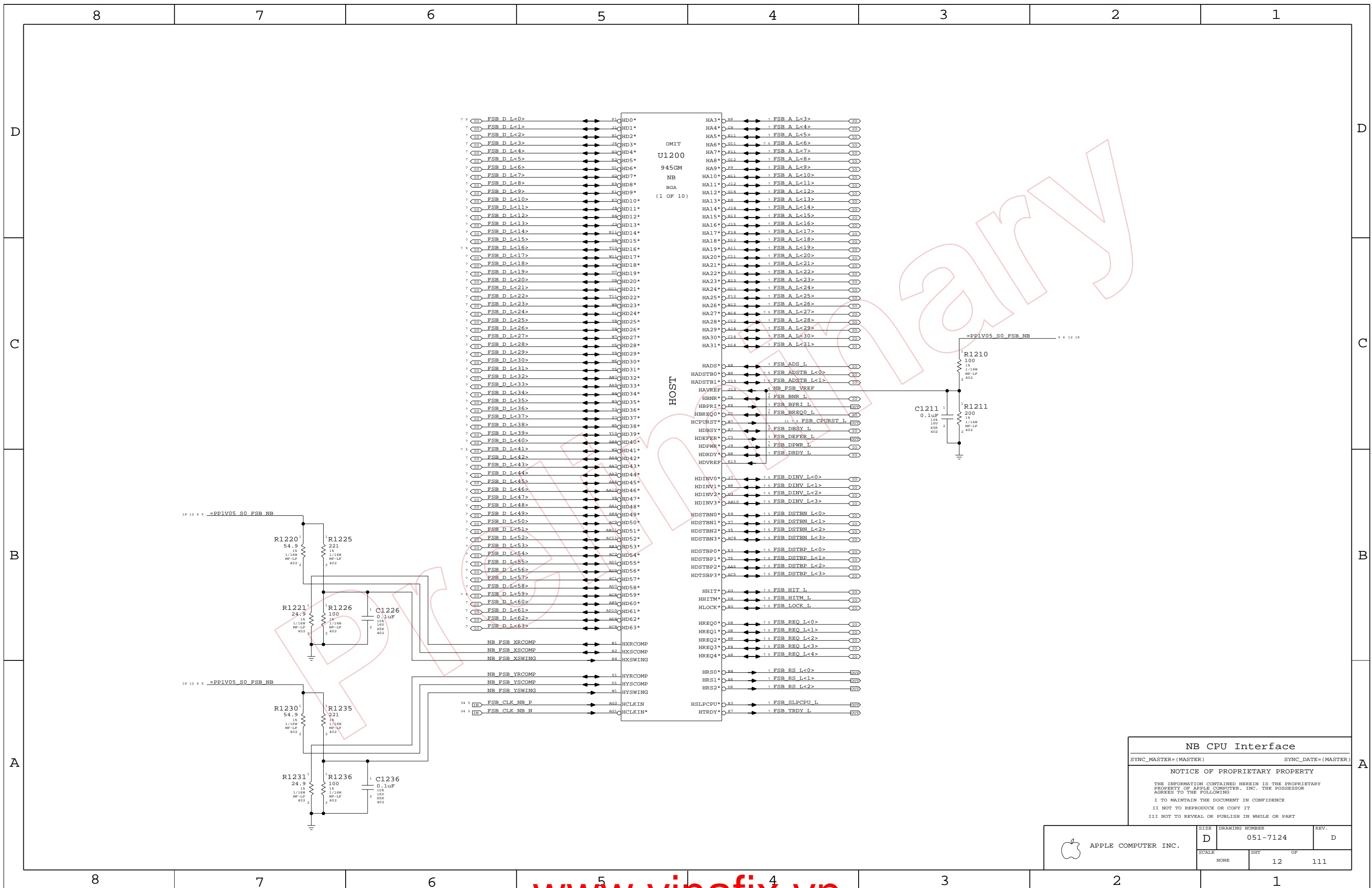


ITP TCK SIGNAL LAYOUT NOTE:
 ROUTE THE TCK SIGNAL FROM ITP700FLEX CONNECTOR'S TCK PIN TO CPU'S
 TCK PIN AND THEN FORK BACK FROM CPU TCK PIN AND ROUTE BACK TO ITP700FLEX
 CONNECTOR'S FBO PIN.

(DBA#) INDICATE THAT ITP IS USING TAP I/F, NC IN 945GM CHIPSET SYSTEM.
 (DEBUG PORT ACTIVE)
 (DBR#) TO ICH7M SYS_RST*, AND WITH SYSTEM RESET LOGIC
 (DEBUG PORT RESET)

CPU ITP700FLEX DEBUG
 SYNC_MASTER=MASTER SYNC_DATE=5/23/05
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SCALE	SHT	OF	111
NONE	11		



NB CPU Interface

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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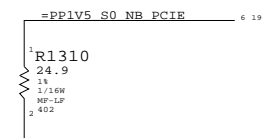
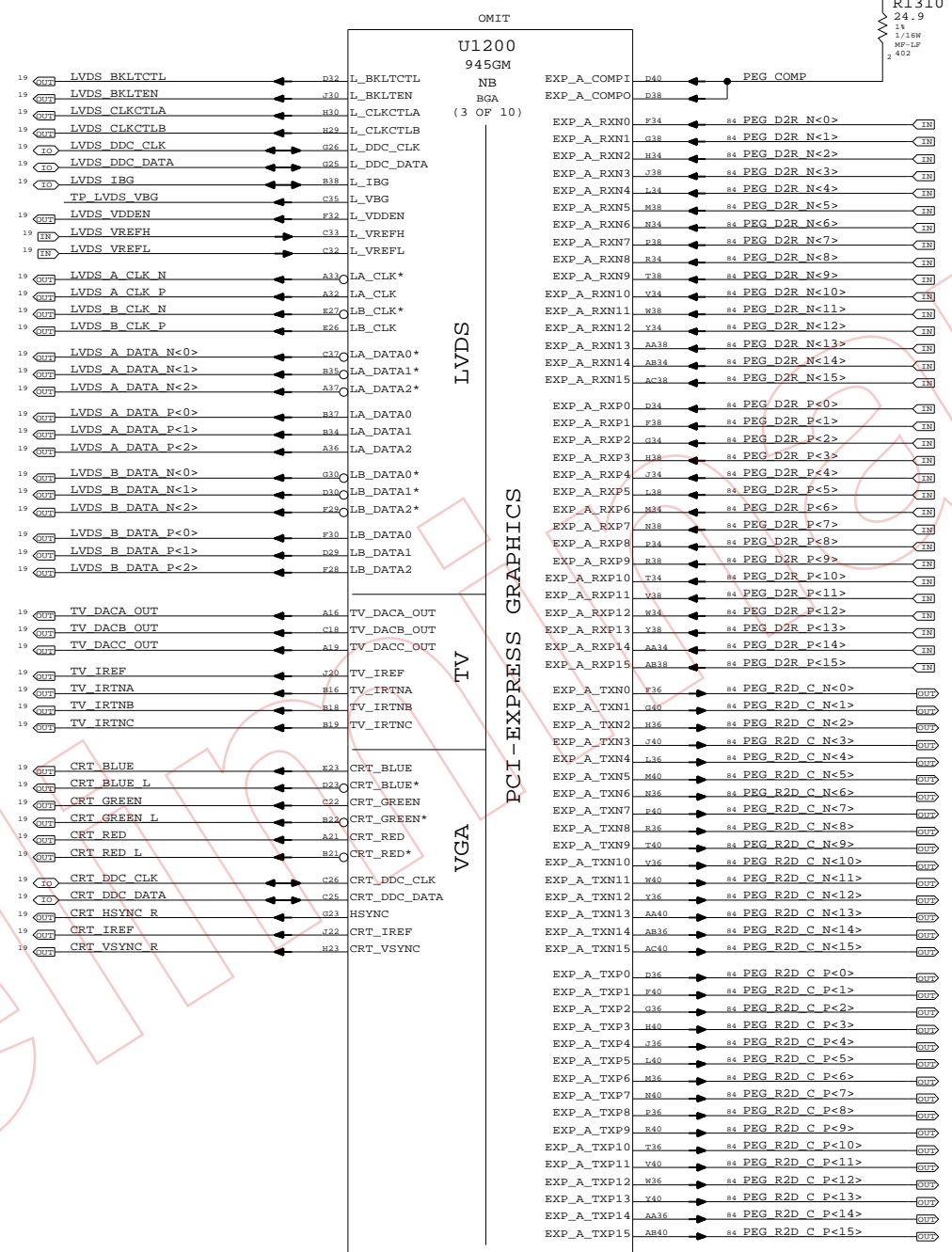
LVDS Disable
 Can leave all signals NC if LVDS is not implemented
 Tie VCC_TXLVDS and VCCA_LVDS to GND. If SDVO is used
 VCCD_LVDS must remain powered with proper decoupling.
 Otherwise, tie VCCD_LVDS to GND also.

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#

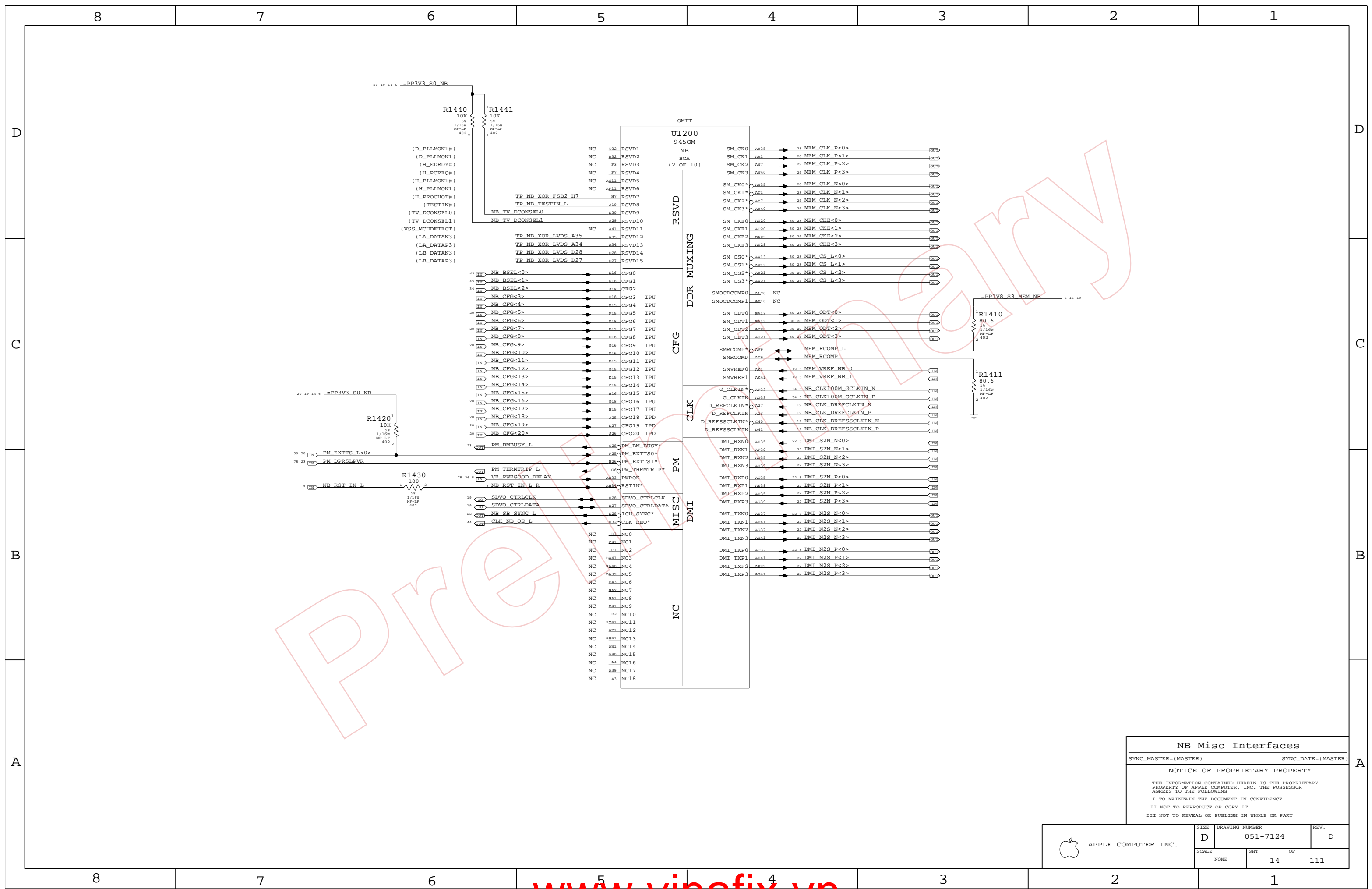
SDVO_TVCLKIN
 SDVO_INT
 SDVO_FLDSTALL

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)
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NONE	13	111	



NB Misc Interfaces

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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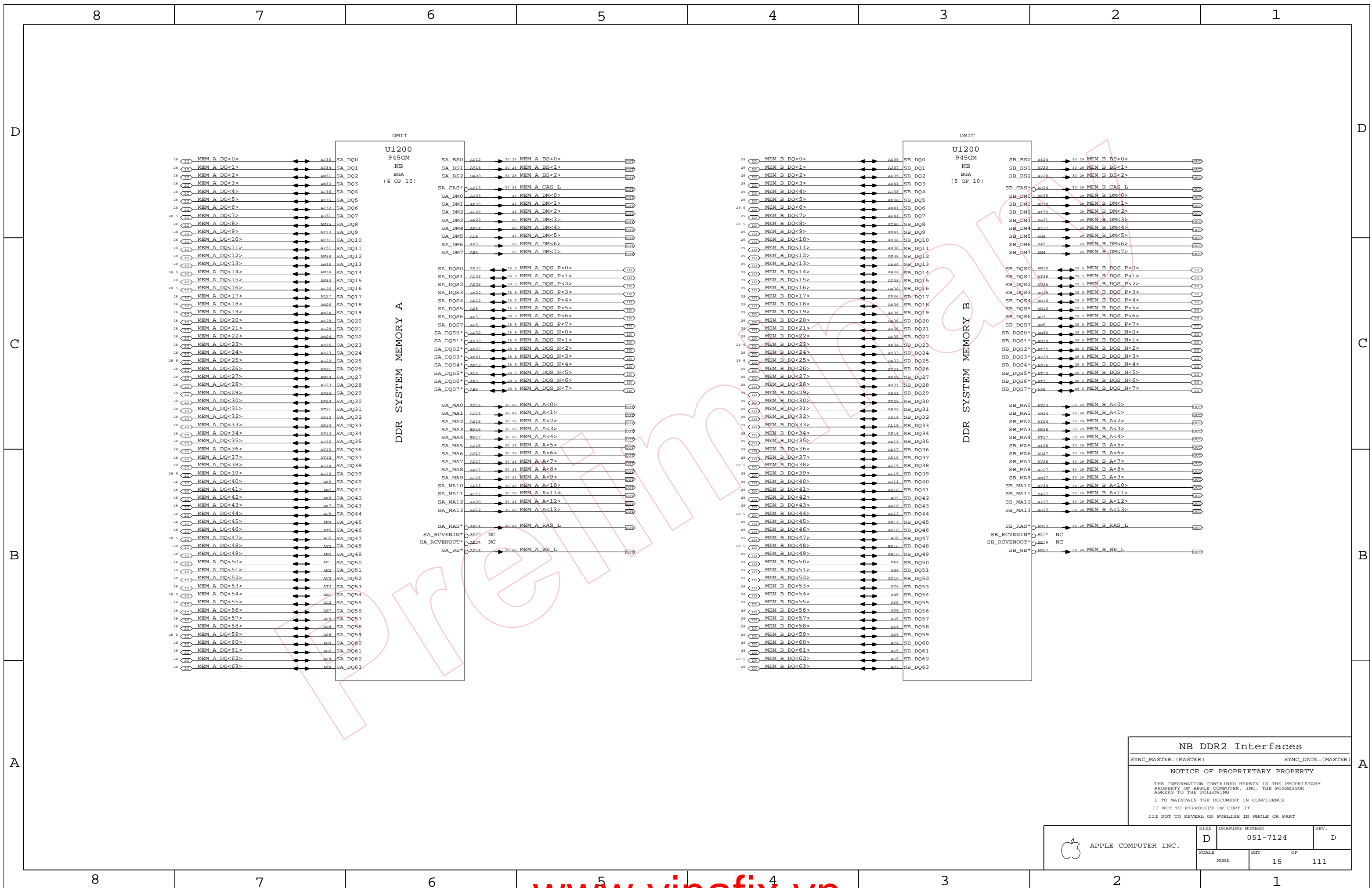
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SCALE	SHT	OF	
NONE	14	111	



NB DDR2 Interfaces

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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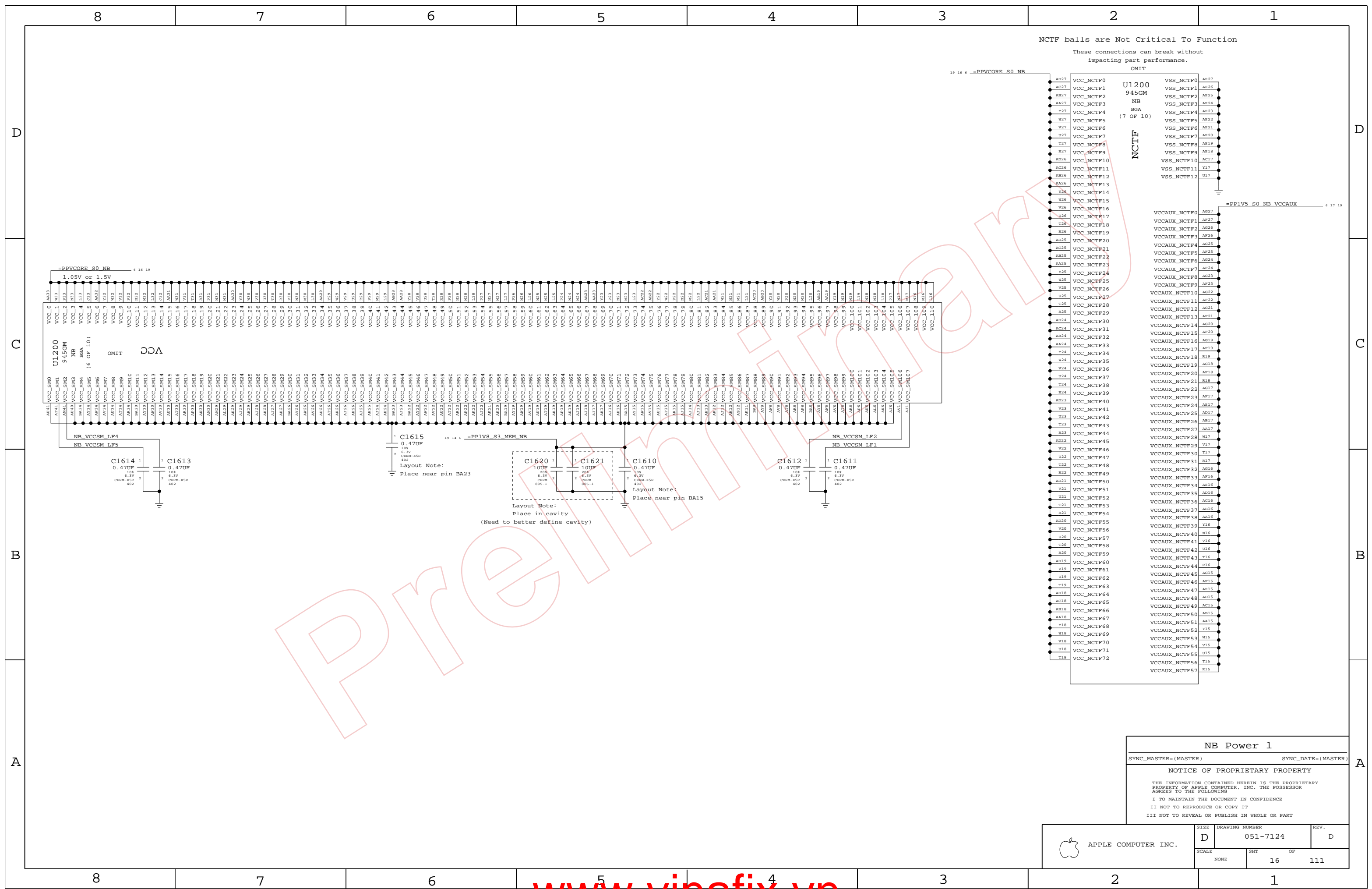
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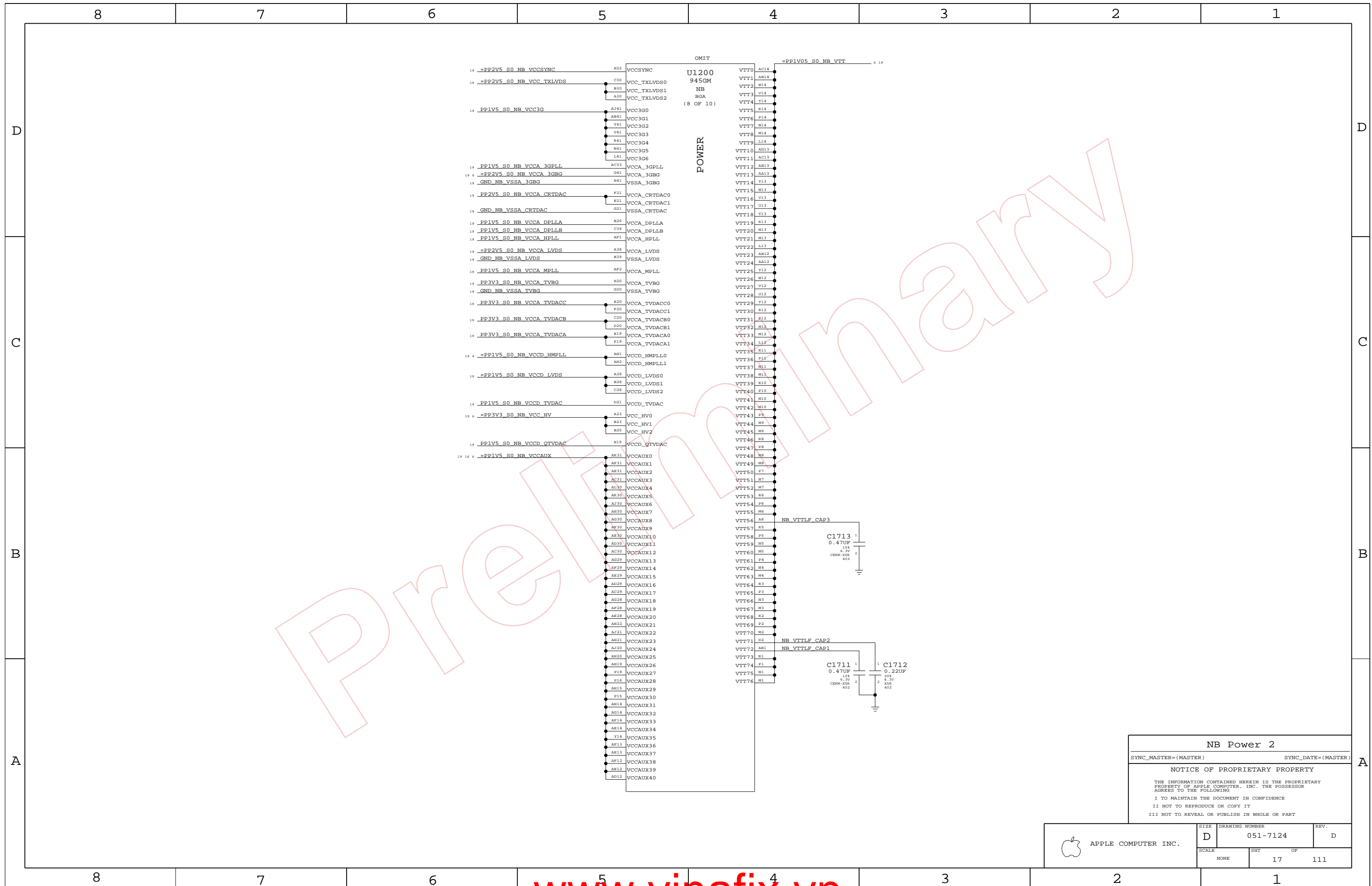
NCTF balls are Not Critical To Function
 These connections can break without impacting part performance.
 OMIT

U1200
 945GM
 NB
 BGA
 (7 OF 10)
 NCTF

VCCAUX_NCTF0
 VCCAUX_NCTF1
 VCCAUX_NCTF2
 VCCAUX_NCTF3
 VCCAUX_NCTF4
 VCCAUX_NCTF5
 VCCAUX_NCTF6
 VCCAUX_NCTF7
 VCCAUX_NCTF8
 VCCAUX_NCTF9
 VCCAUX_NCTF10
 VCCAUX_NCTF11
 VCCAUX_NCTF12
 VCCAUX_NCTF13
 VCCAUX_NCTF14
 VCCAUX_NCTF15
 VCCAUX_NCTF16
 VCCAUX_NCTF17
 VCCAUX_NCTF18
 VCCAUX_NCTF19
 VCCAUX_NCTF20
 VCCAUX_NCTF21
 VCCAUX_NCTF22
 VCCAUX_NCTF23
 VCCAUX_NCTF24
 VCCAUX_NCTF25
 VCCAUX_NCTF26
 VCCAUX_NCTF27
 VCCAUX_NCTF28
 VCCAUX_NCTF29
 VCCAUX_NCTF30
 VCCAUX_NCTF31
 VCCAUX_NCTF32
 VCCAUX_NCTF33
 VCCAUX_NCTF34
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 VCCAUX_NCTF38
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 VCCAUX_NCTF40
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 VCCAUX_NCTF42
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 VCCAUX_NCTF45
 VCCAUX_NCTF46
 VCCAUX_NCTF47
 VCCAUX_NCTF48
 VCCAUX_NCTF49
 VCCAUX_NCTF50
 VCCAUX_NCTF51
 VCCAUX_NCTF52
 VCCAUX_NCTF53
 VCCAUX_NCTF54
 VCCAUX_NCTF55
 VCCAUX_NCTF56
 VCCAUX_NCTF57

NB Power 1
 SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	16	111	



NB Power 2

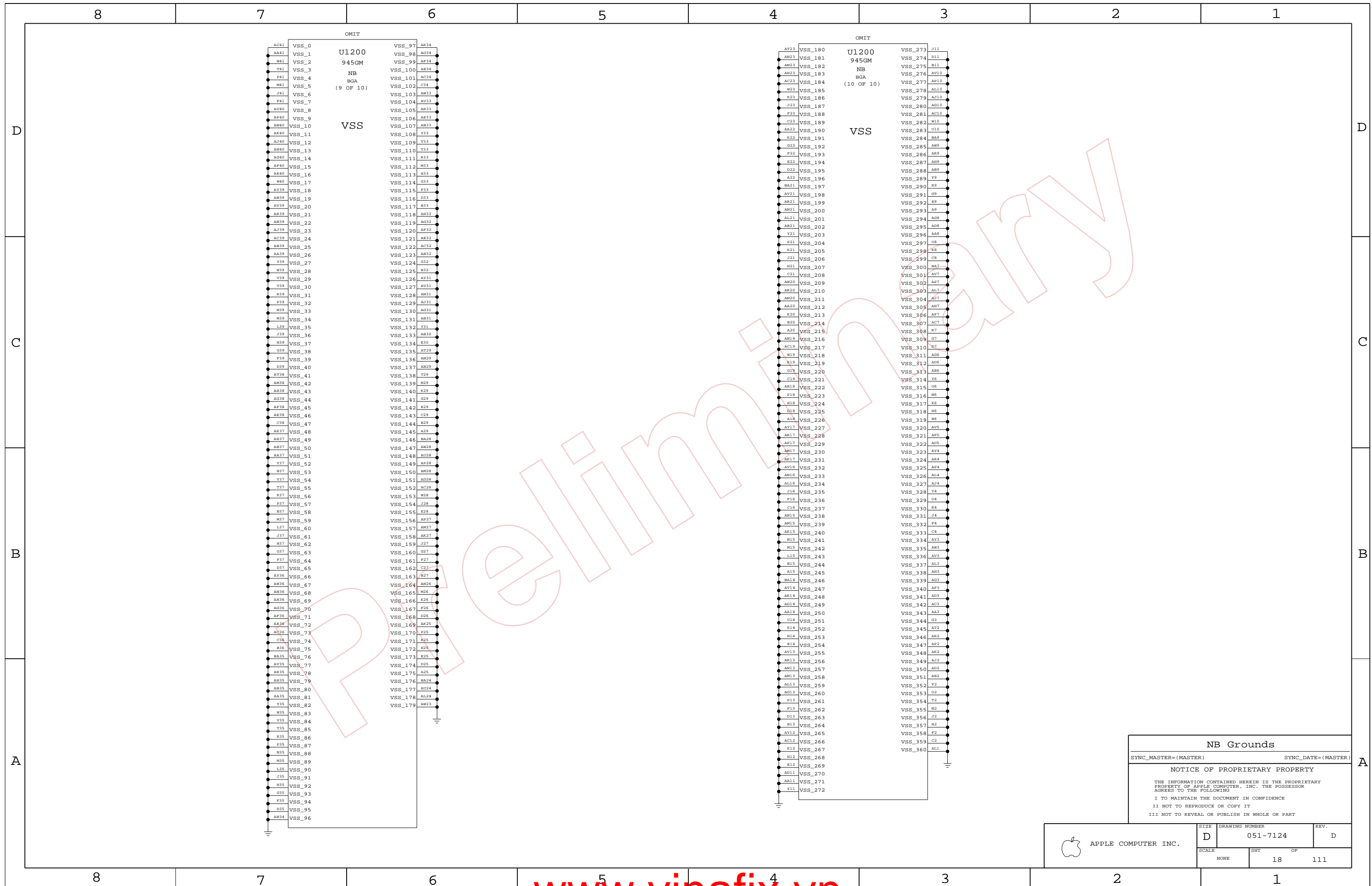
SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7124	REV. D
	SCALE NONE	SHEET 17	OF 111



NB Grounds

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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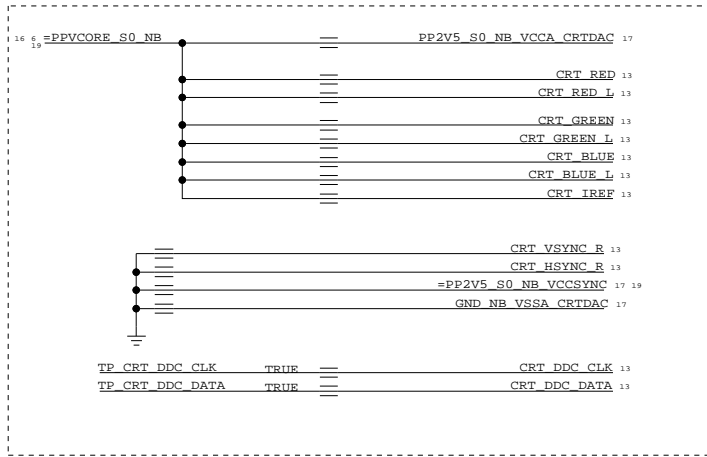
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	18		111

Power Interface

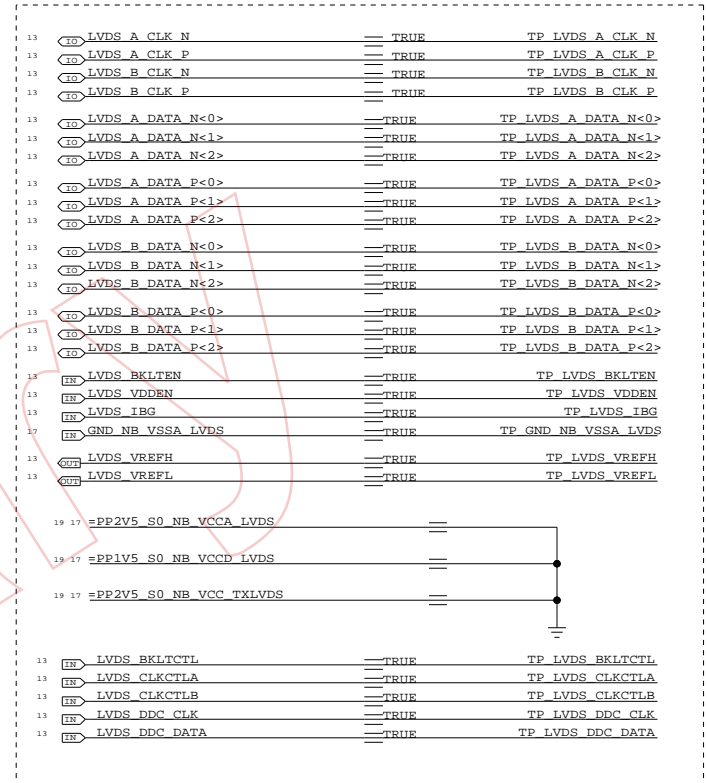
These are the power signals that leave the NB "block"

IN	=PP1V05_S0_FSB_NB	5 6 12
IN	=PPVCORE_S0_NB	6 16 19
IN	=PP1V05_S0_NB	6
IN	=PP1V05_S0_NB_VTT	6 17 19
IN	=PP1V5_S0_NB	6 19
IN	=PP1V5_S0_NB_PCIE	6 13
IN	=PP1V5_S0_NB_PLL	6 19
IN	=PP1V5_S0_NB_TVDAC	6 19
IN	=PP1V5_S0_NB_VCCD_HMPLL	6 19
IN	=PP1V5_S0_NB_VCCD_HV	6 17
IN	=PP1V5_S0_NB_VCCD_LVDS	17 19
IN	=PP1V5_S0_NB_VCCAUX	6 16 17 19
IN	=PP1V8_S3_MEM_NB	6 14 16 19
IN	=PP2V5_S0_NB_VCCSYNCR	17 19
IN	=PP2V5_S0_NB_VCC_TXLVDS	17 19
IN	=PP2V5_S0_NB_VCCA_3GBG	6 17 19
IN	=PP2V5_S0_NB_VCCA_LVDS	17 19
IN	=PP3V3_S0_NB	6 14 20
IN	=PP3V3_S0_NB_TVDAC	6
IN	=PP3V3_S0_NB_VCC_HV	6 17 19

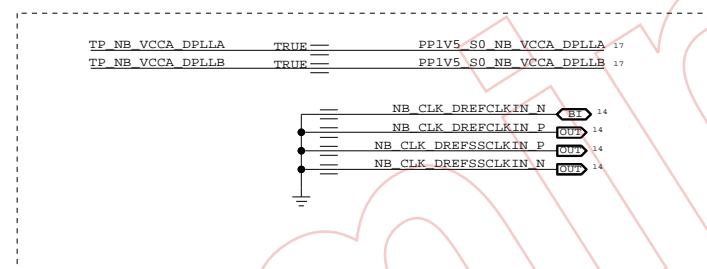
TVOUT DISABLE



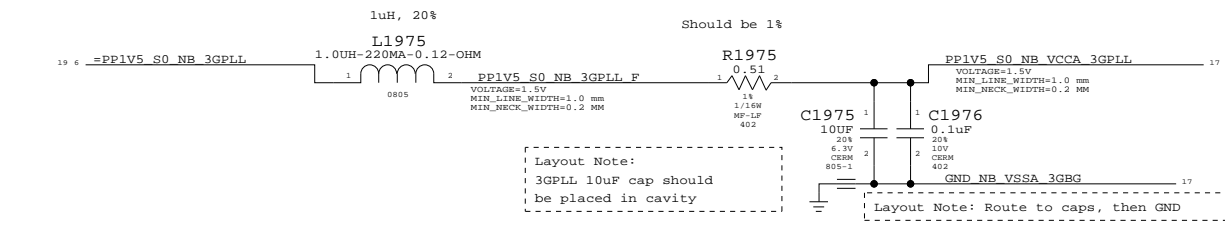
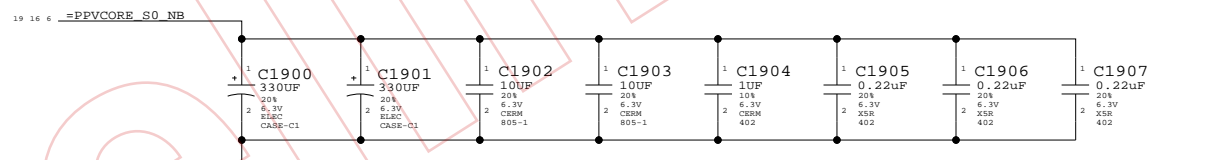
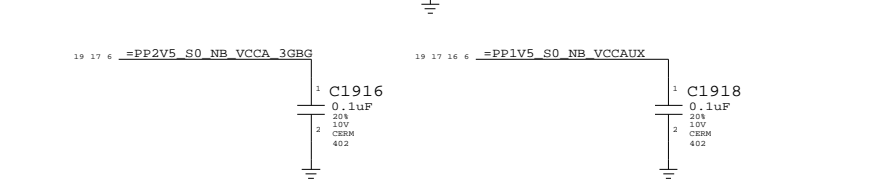
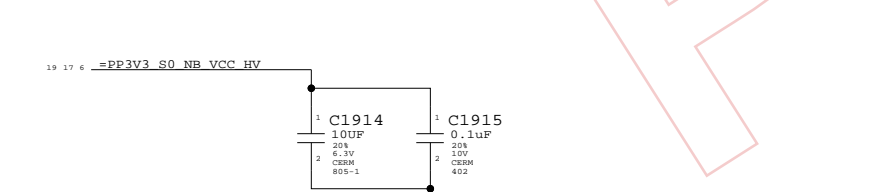
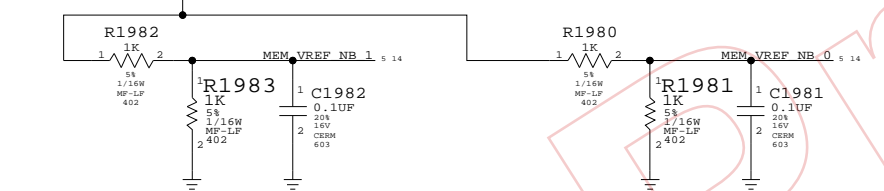
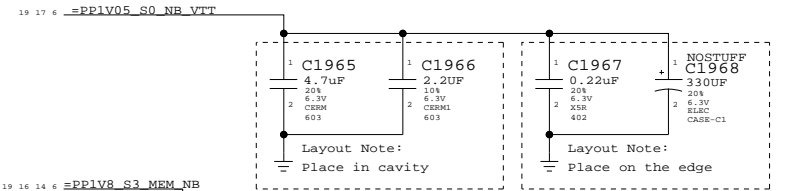
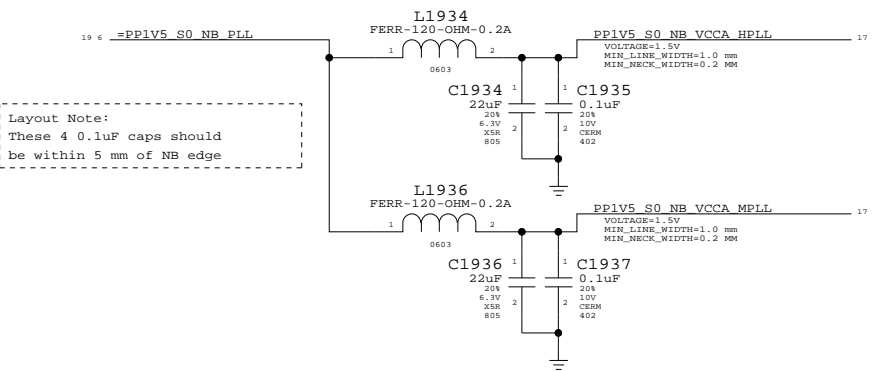
LVDS DISABLE



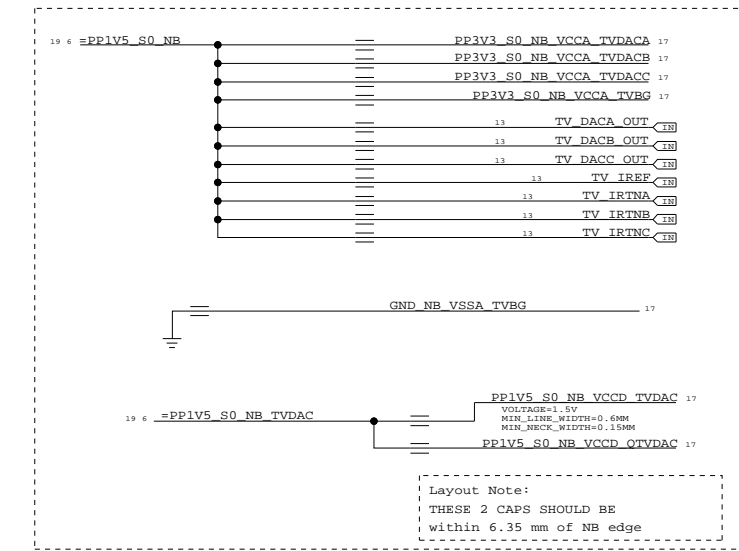
DISPLAY DISABLE



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



TVOUT DISABLE



Layout Note:
THESE 2 CAPS SHOULD BE WITHIN 6.35 mm OF NB EDGE

NB (GM) Decoupling

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

NOTICE OF PROPRIETARY PROPERTY

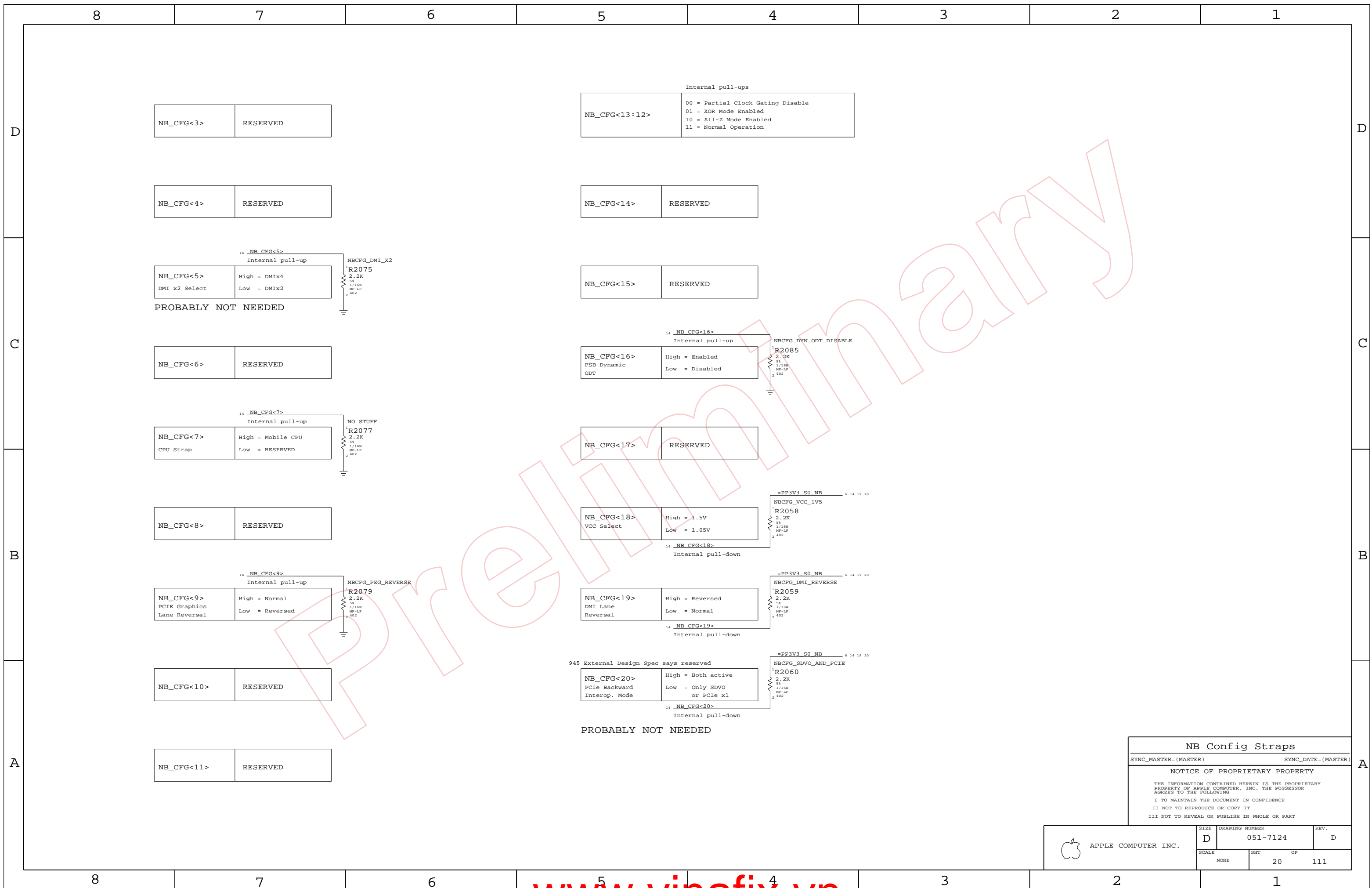
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SCALE	SHT	OF	
NONE	19	111	



NB Config Straps

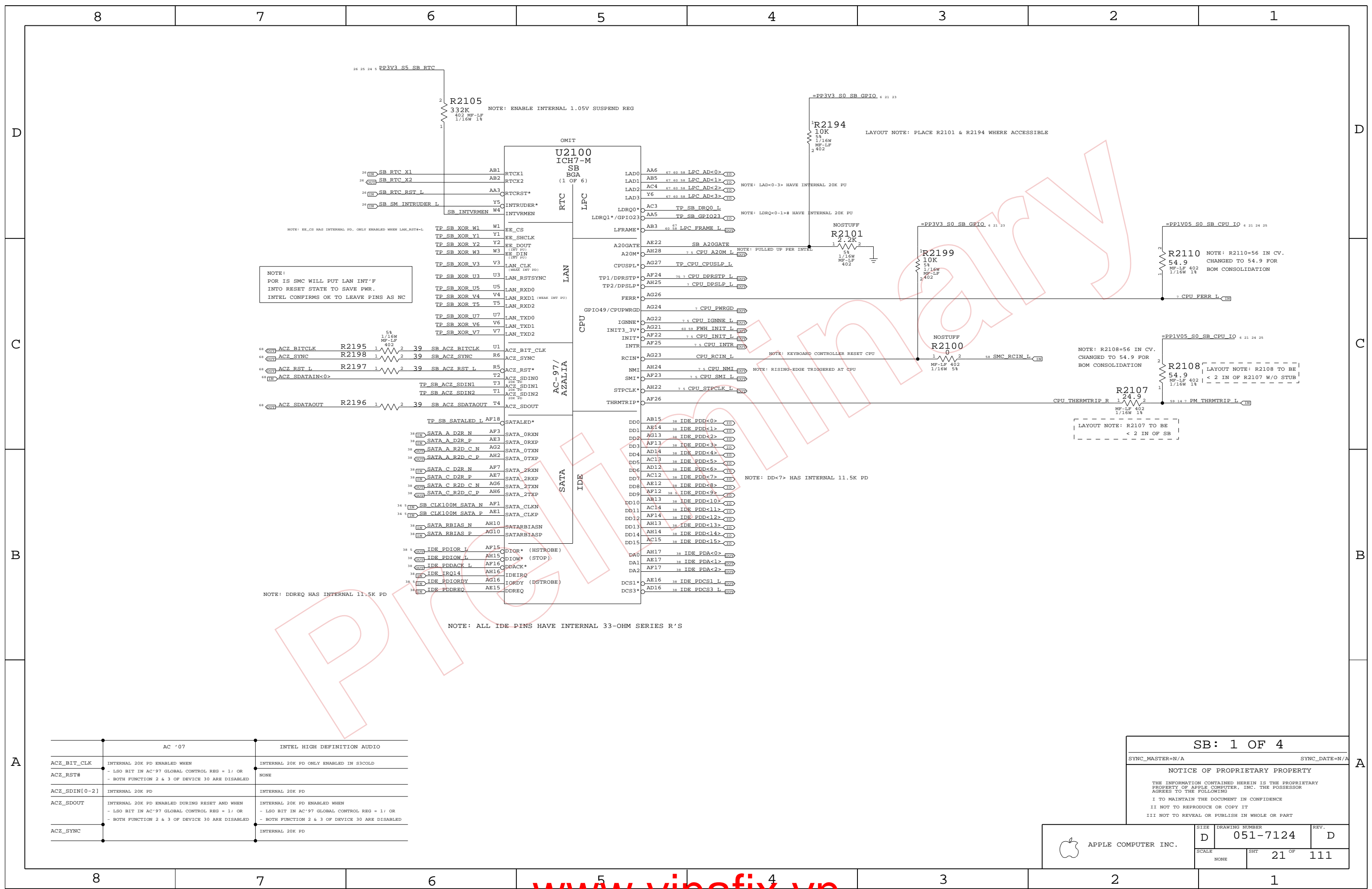
SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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	D	051-7124	D
SCALE	SHT	OF	
NONE	20	111	



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 INTERNAL 20K PD ONLY ENABLED IN S3COLD
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

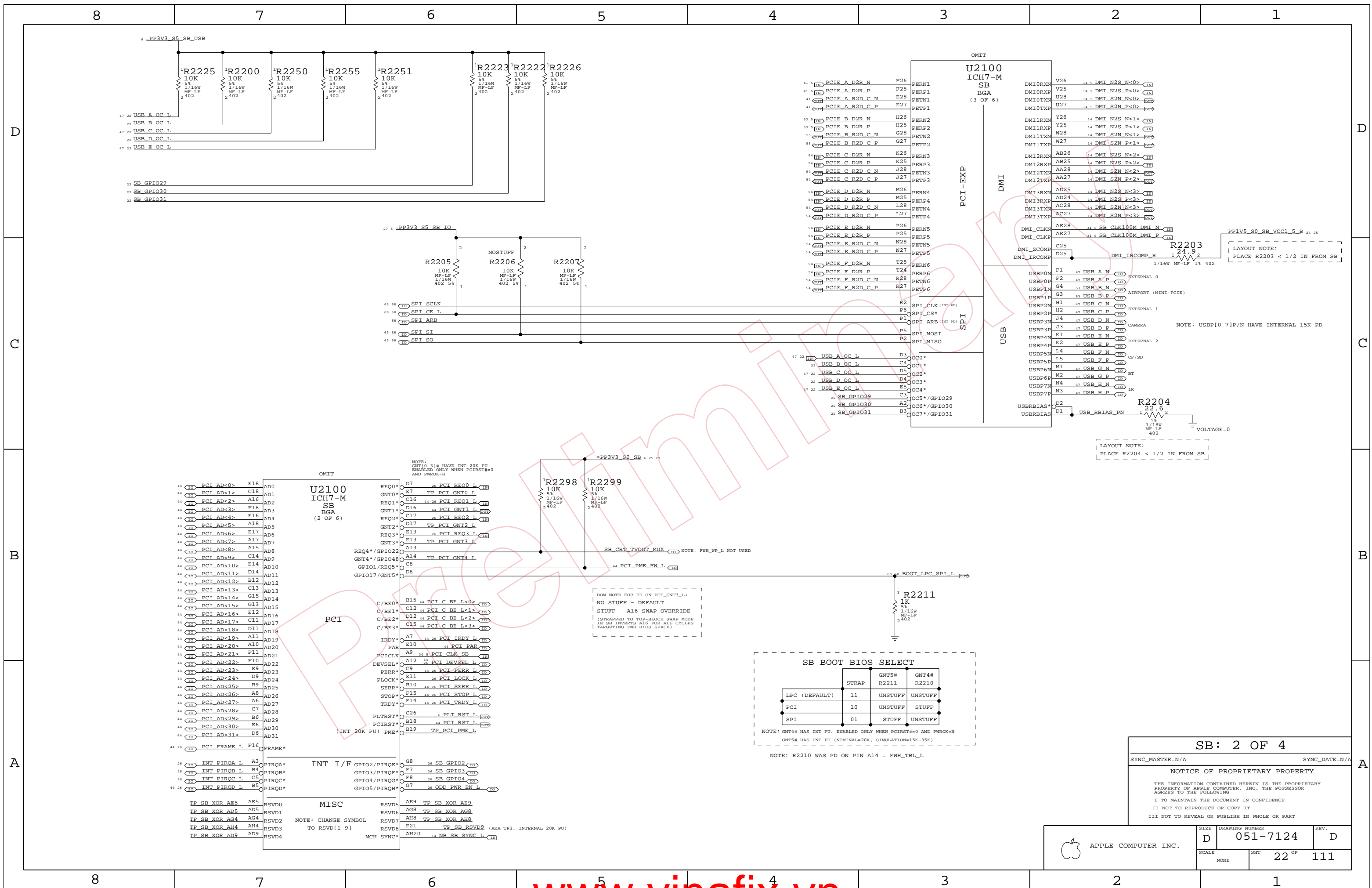
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	D	051-7124	D
SCALE	SHT	21 OF	111
NONE			



SB BOOT BIOS SELECT

	STRAP	GNT5# R2211	GNT4# R2210
LPC (DEFAULT)	11	UNSTUFF	UNSTUFF
PCI	10	UNSTUFF	STUFF
SPI	01	STUFF	UNSTUFF

NOTE: GNT4# HAS INT PU; ENABLED ONLY WHEN PCIRST#=0 AND FWR0K=H
GNT5# HAS INT PU (NOMINAL=20K, SIMULATION=15K-35K)

NOTE: R2210 WAS PD ON PIN A14 = FWH_TBL_L

SB: 2 OF 4

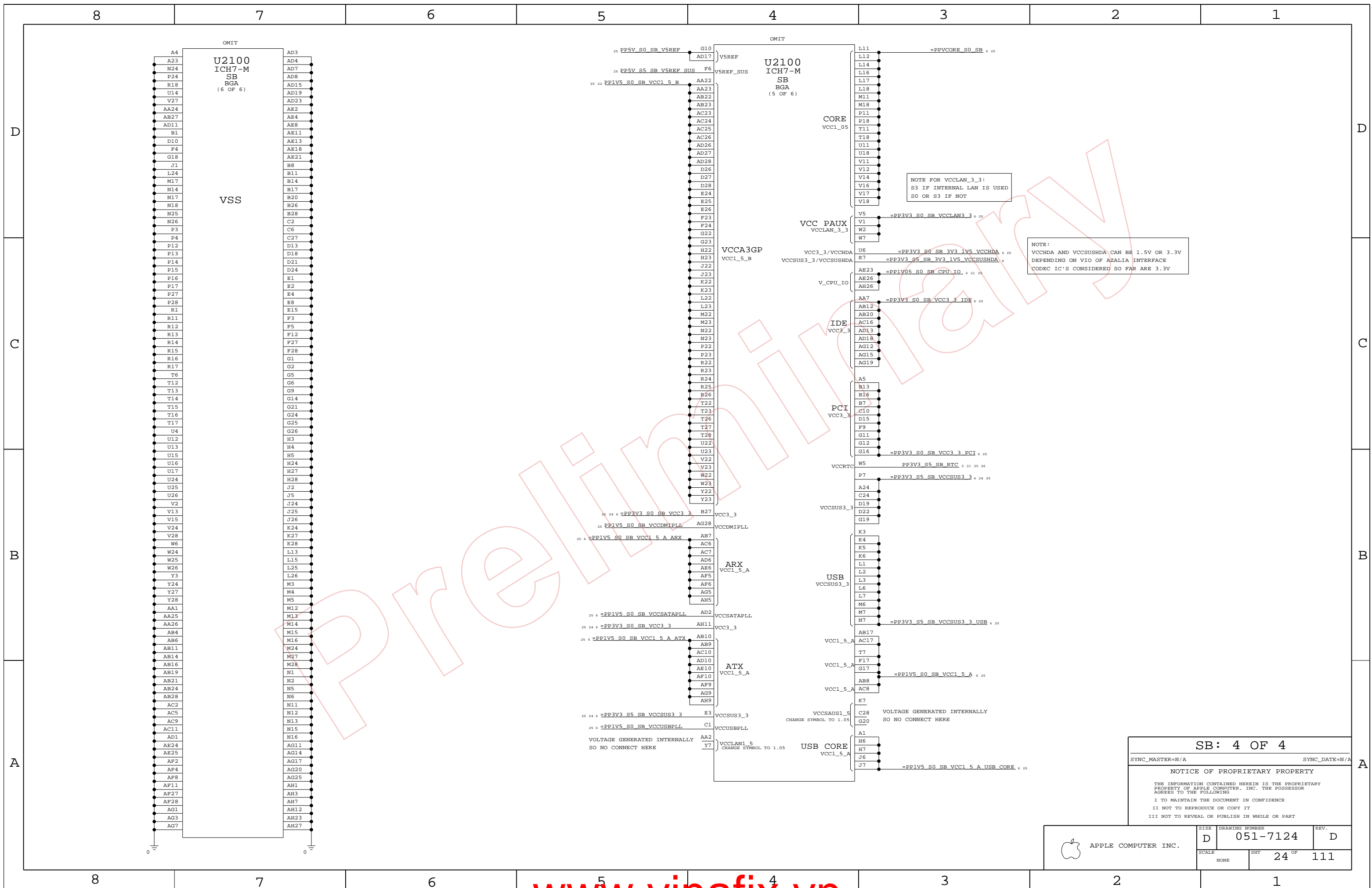
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	D	051-7124	D
SCALE	SHT	22 OF	111
NONE			



NOTE FOR VCCLAN_3_3:
S3 IF INTERNAL LAN IS USED
S0 OR S3 IF NOT

NOTE:
VCCCHDA AND VCCSUS3_3 CAN BE 1.5V OR 3.3V
DEPENDING ON VIO OF AZALIA INTERFACE
CODER IC'S CONSIDERED SO FAR ARE 3.3V

SB: 4 OF 4

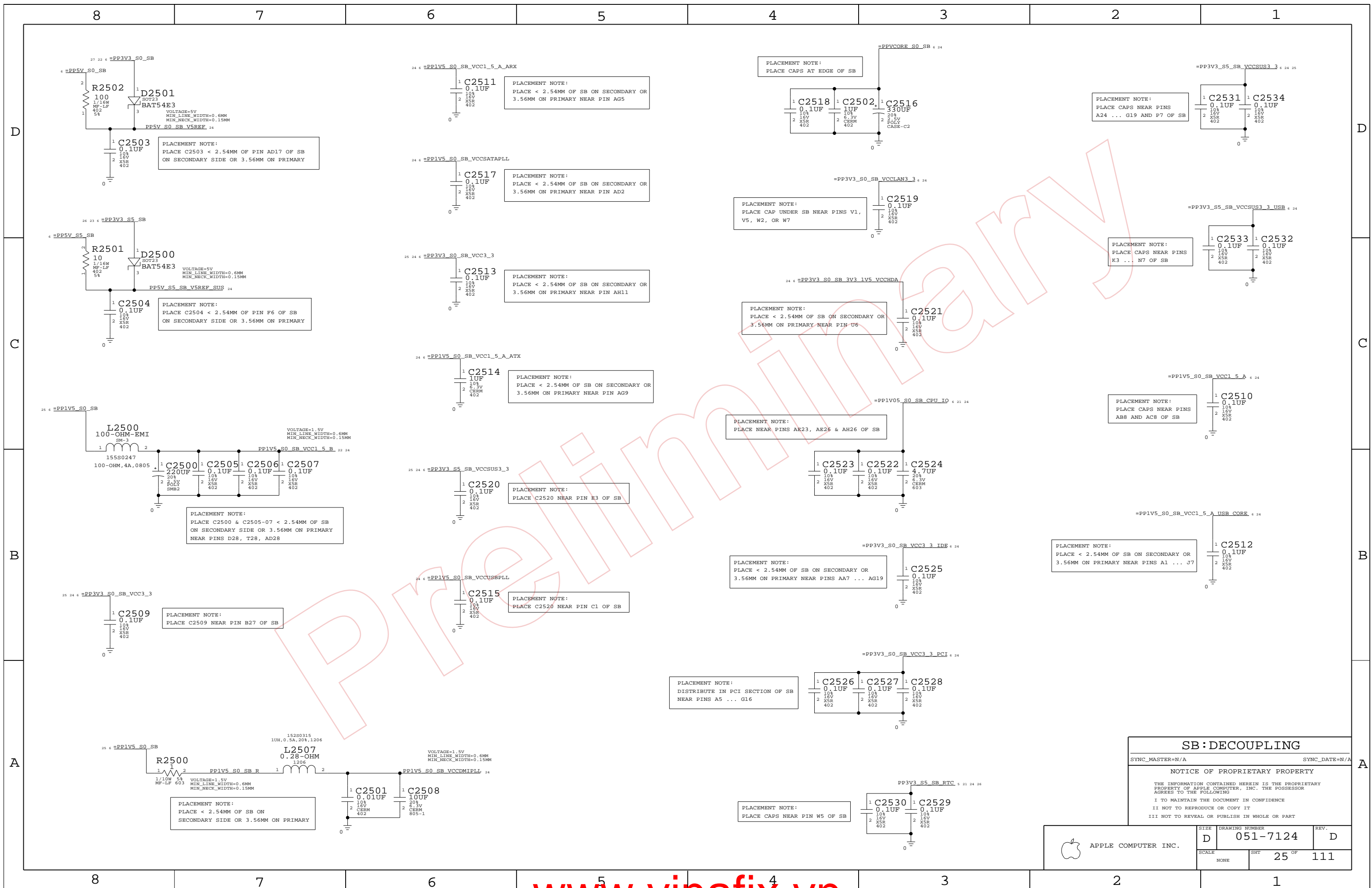
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	D	051-7124	D
SCALE	SHT	REV.	
NONE	24 OF	111	



SB: DECOUPLING

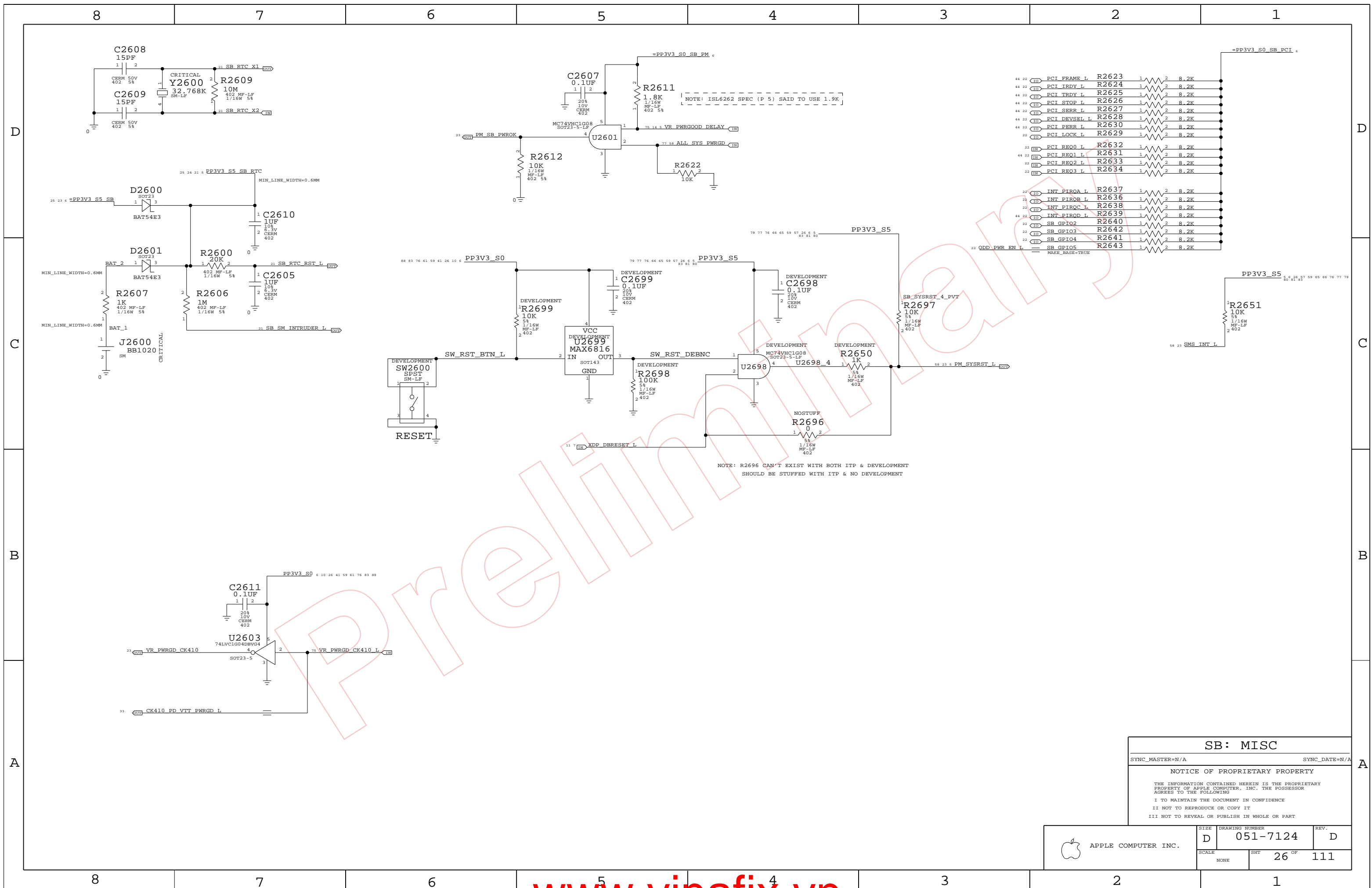
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	D	051-7124	D
SCALE	SHT	25 OF	111
NONE			



SB: MISC

SYNC_MASTER=N/A SYNC_DATE=N/A

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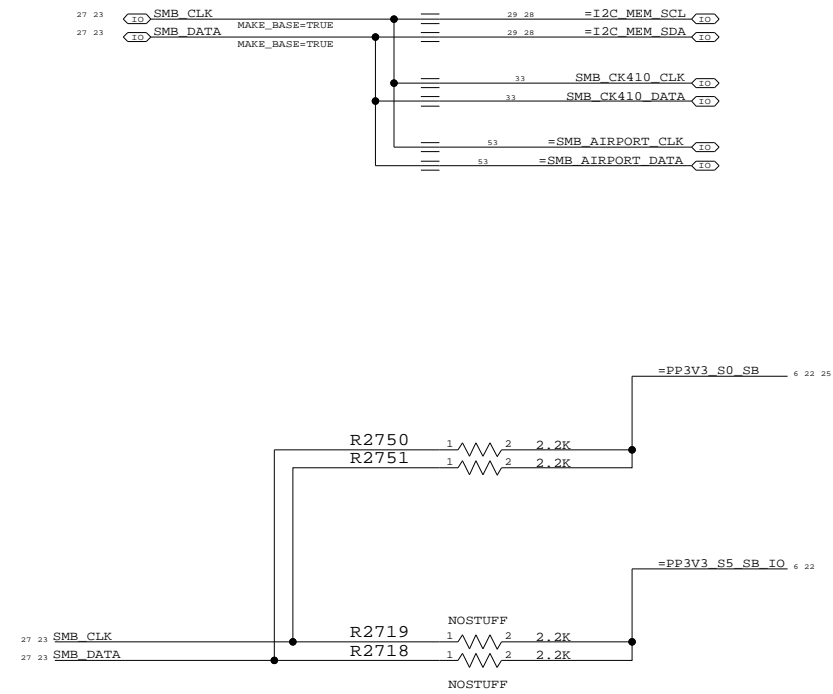
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III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	26 OF	111
NONE			

SB I2C BUSSES



Preliminary


SB: SMB HUB

SYNC_MASTER=N/A SYNC_DATE=N/A

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 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	27 OF 111	
NONE			

Page Notes

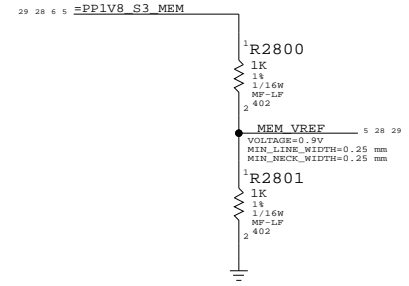
Power aliases required by this page:
 - =PPIV8_S3_MEM
 - =PPSPD_S0_MEM (2.5V - 3.3V)

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



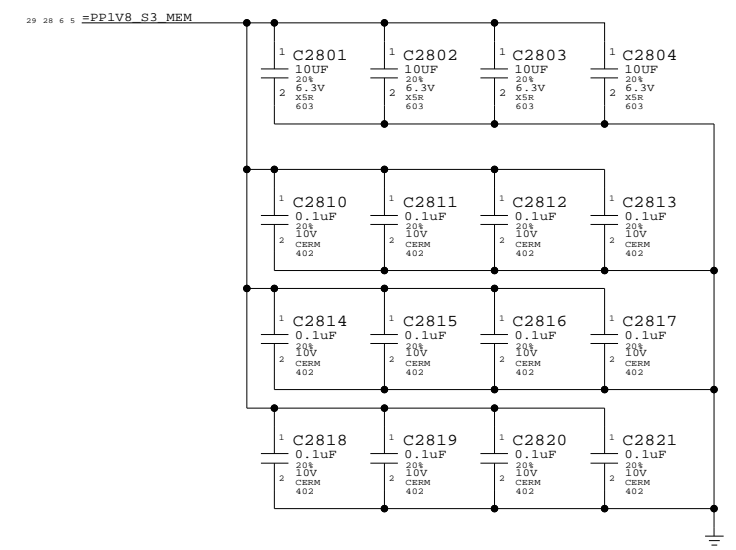
Yellow uses 10K divider and TLV2463 to drive MCH and DIMM connectors.
 (See Capell Valley pg 47)



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
516S0503	1	DDR2 SODIMM STD	J2800	CRITICAL	

DDR2 Bypass Caps

(For return current)



DDR2 SO-DIMM Connector A

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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	D	051-7124	D
SCALE	SHT	OF	
NONE	28	111	

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

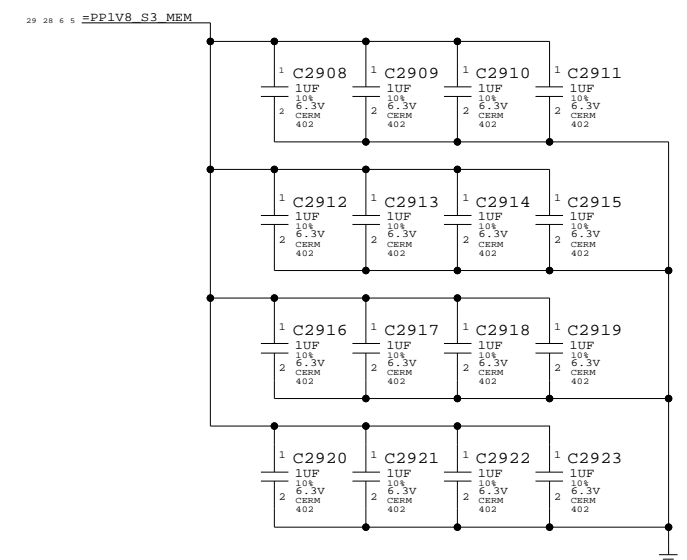
BOM options provided by this page:
 (NONE)

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	J2900	CRITICAL	



DDR2 Bypass Caps (For return current)



DDR2 SO-DIMM Connector B

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

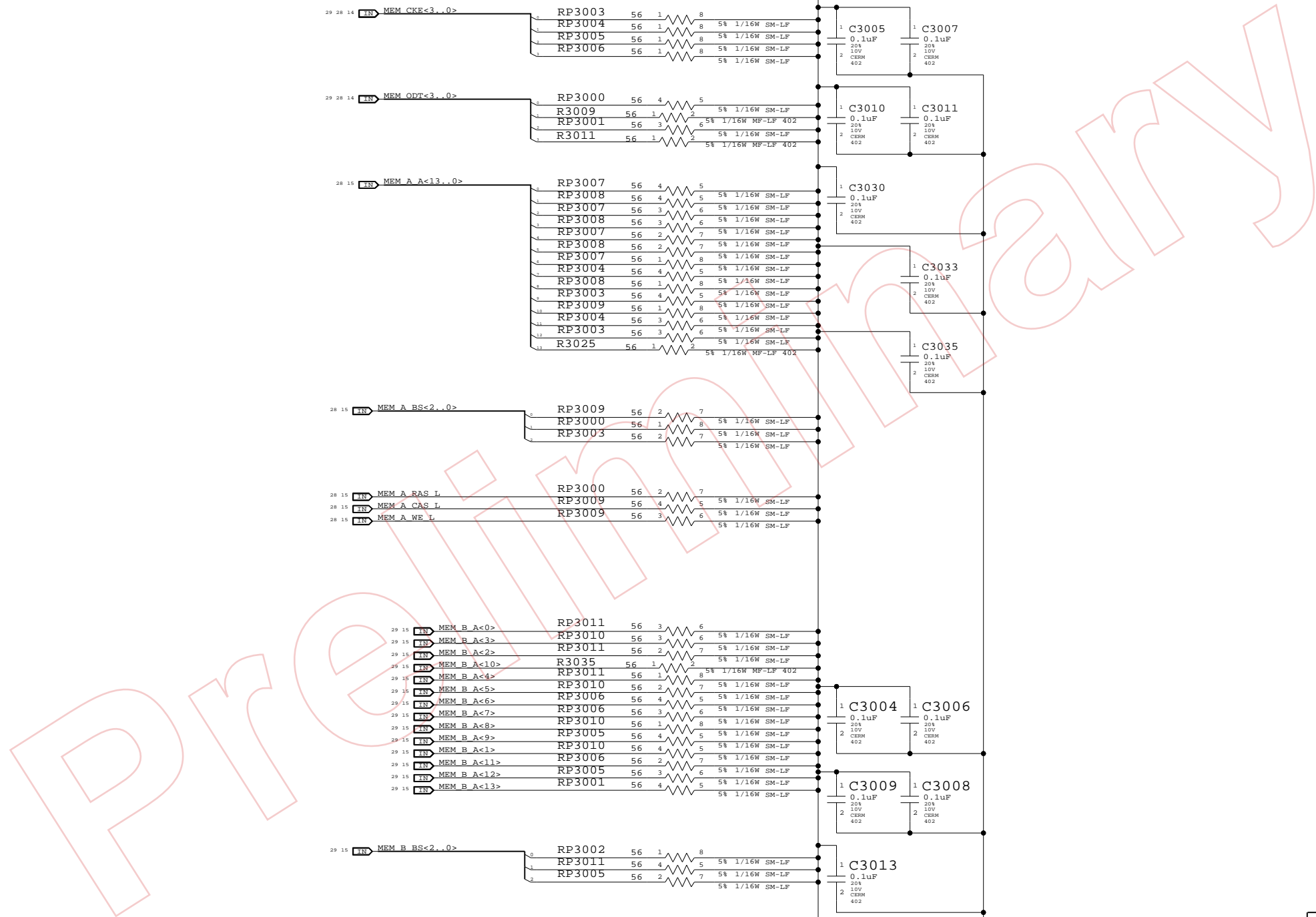
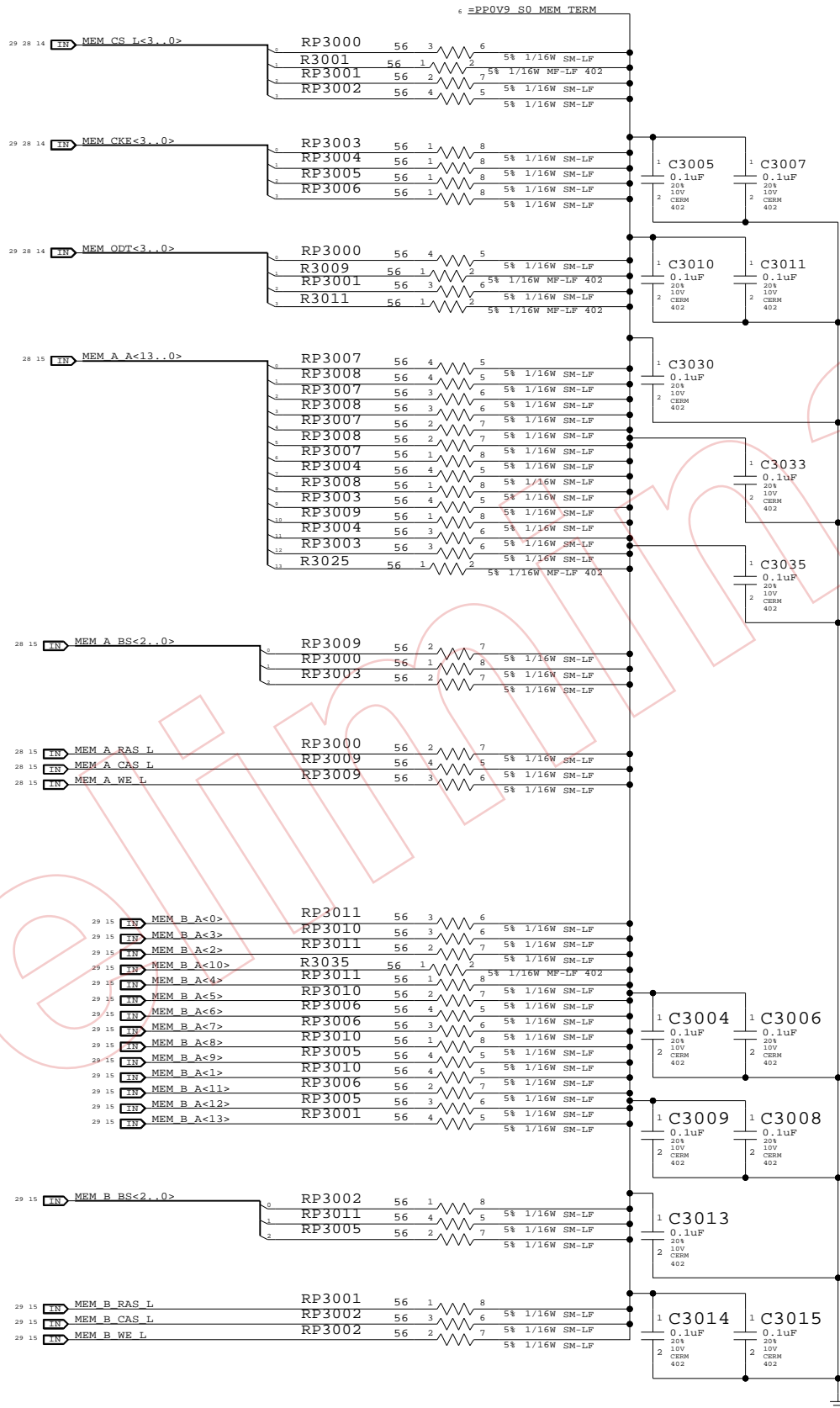
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	D	051-7124	D
SCALE	SHT	OF	
NONE	29	111	

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

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	D	051-7124	D
SCALE	SHT	OF	REV.
NONE	30	111	

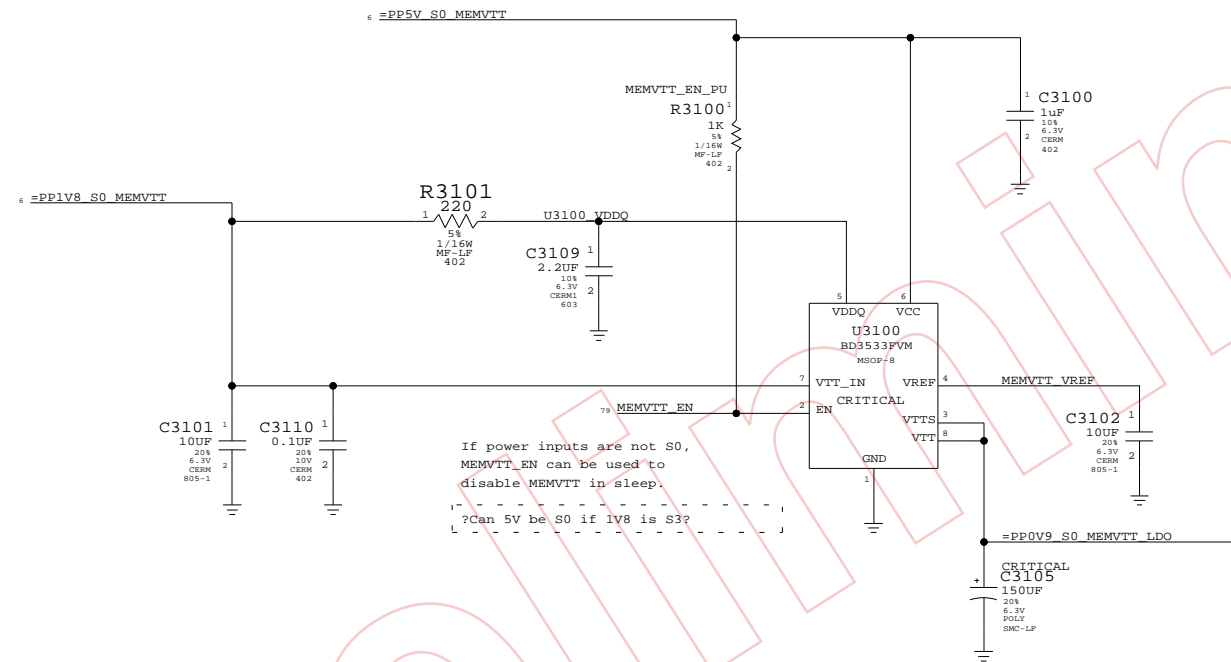
Page Notes

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




Pre-release

Memory Vtt Supply

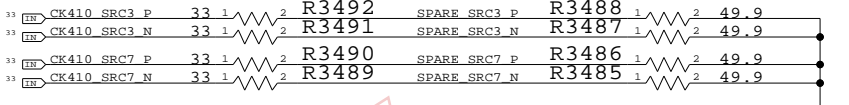
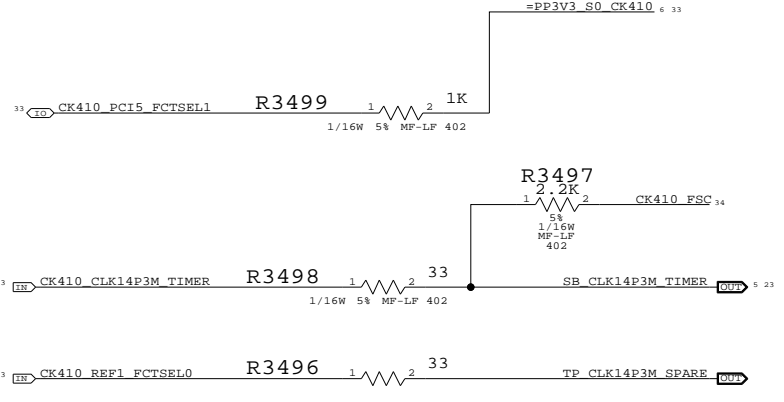
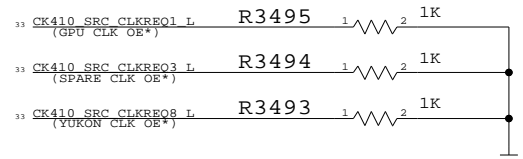
SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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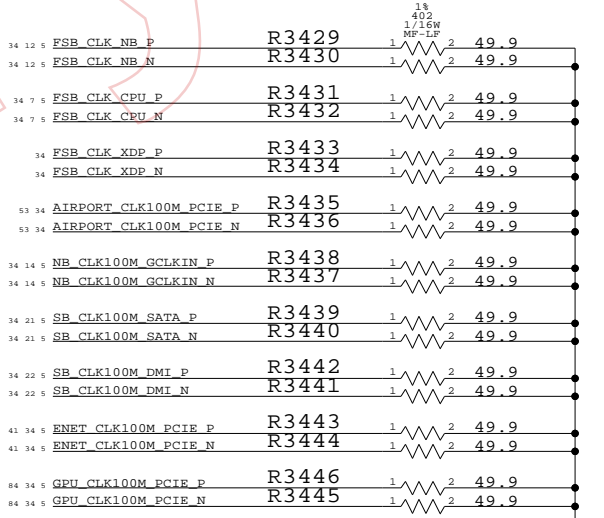
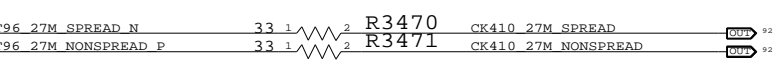
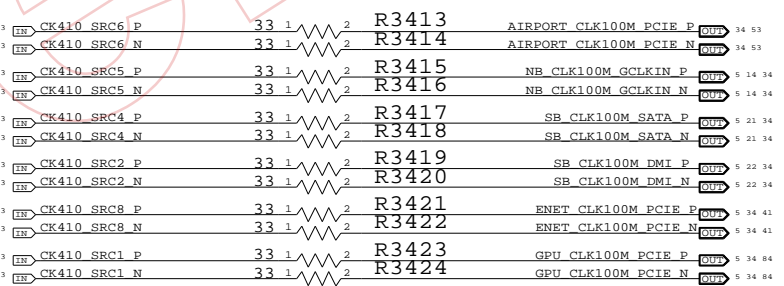
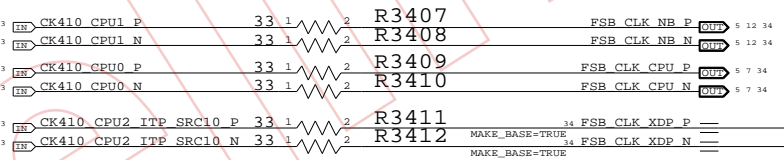
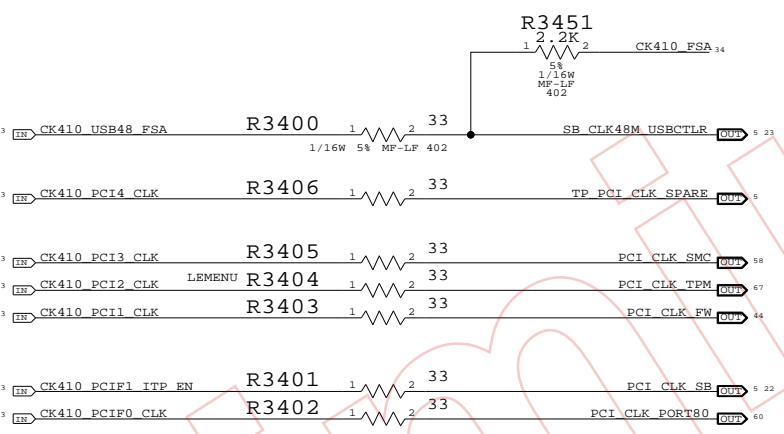
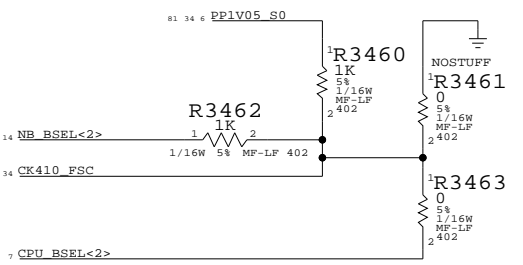
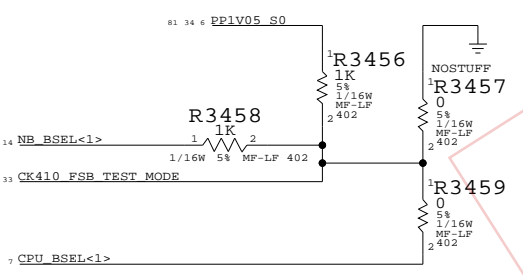
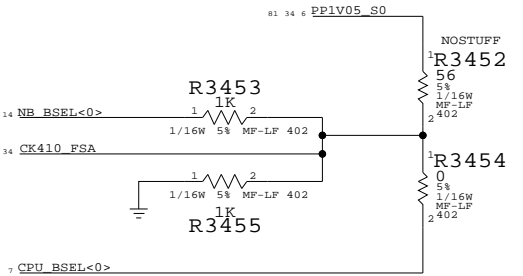
 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	REV.
NONE	31	111	

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



FSB FREQUENCY SELECT:

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



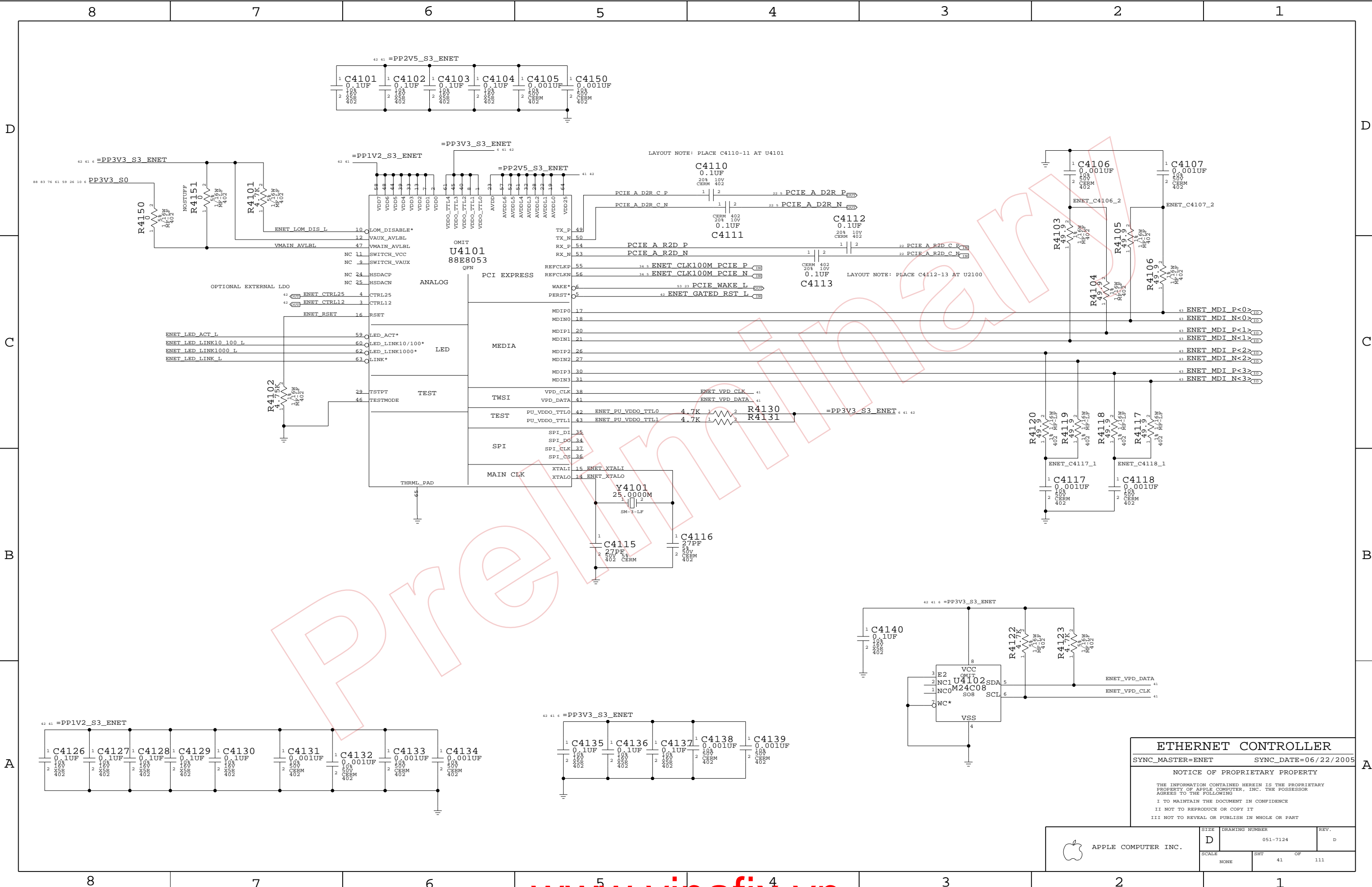
CLOCKS: TERMINATIONS

SYNC_MASTER=N/A SYNC_DATE=N/A

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SCALE	SHT	OF	REV.
NONE	34	111	



PRELIMINARY

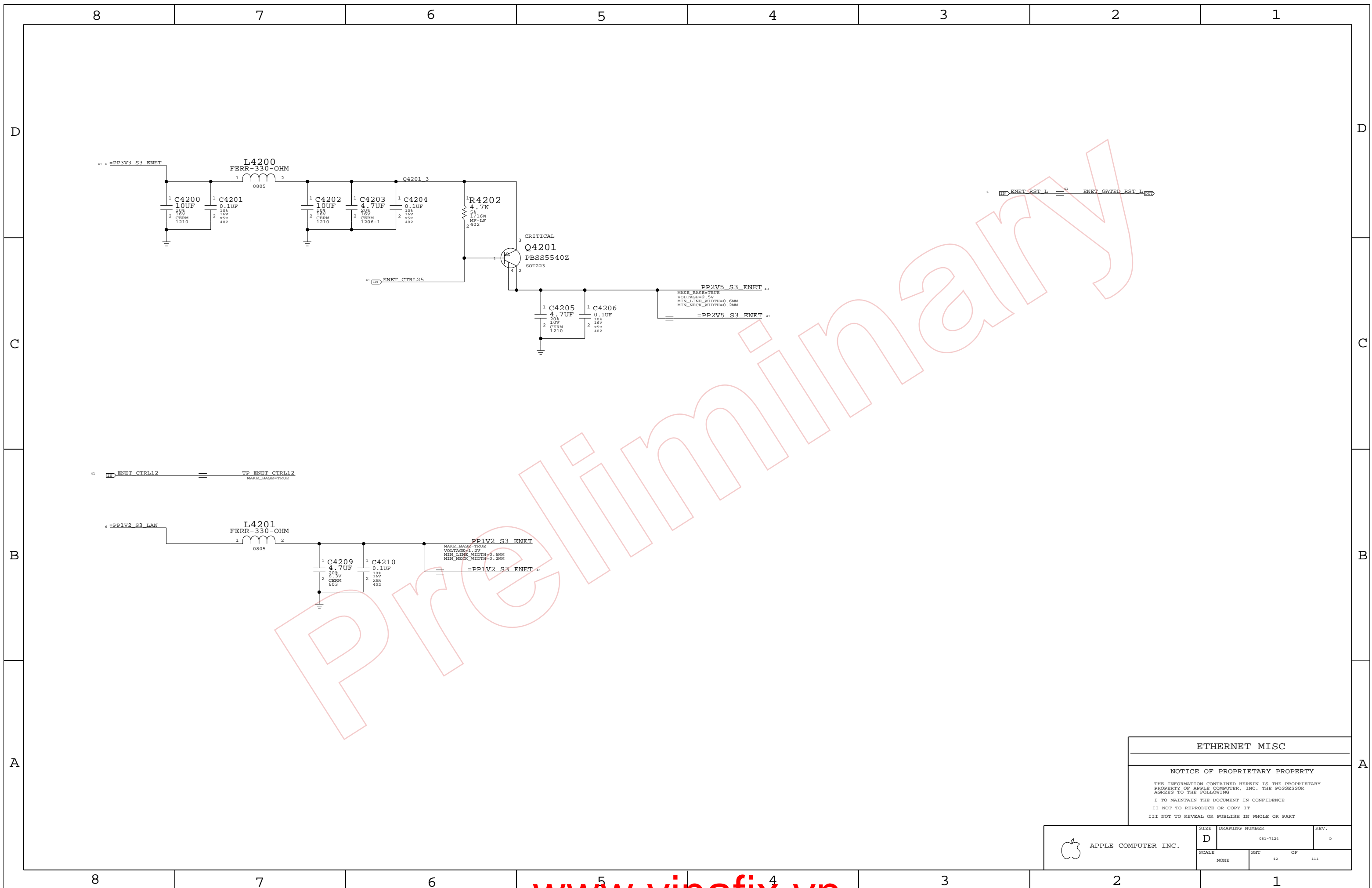
ETHERNET CONTROLLER

SYNC_MASTER=ENET SYNC_DATE=06/22/2005

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	REV.
NONE	41	111	



ETHERNET MISC

NOTICE OF PROPRIETARY PROPERTY

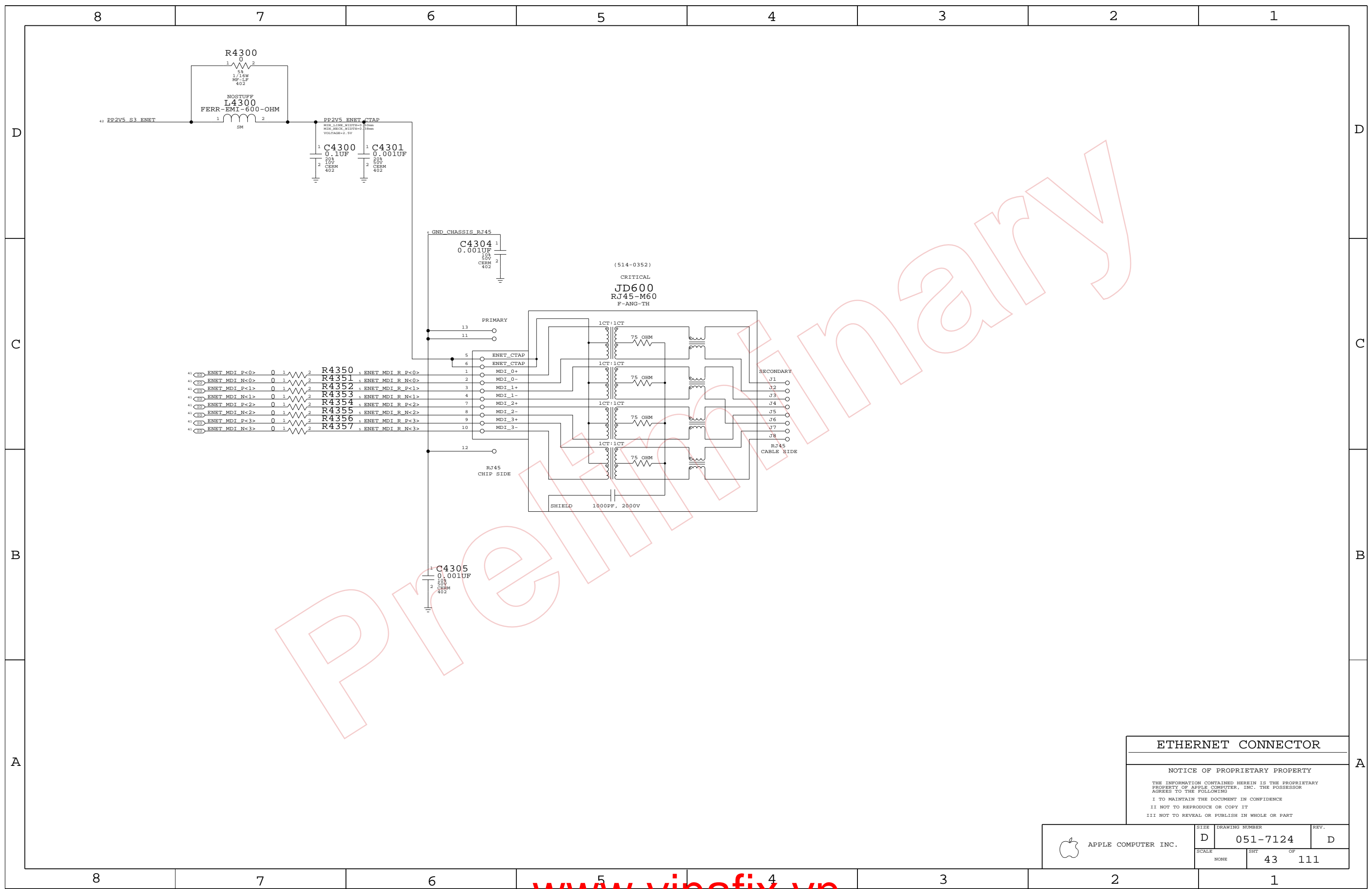
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7124	REV. D
	SCALE NONE	SHEET 42	OF 111



ETHERNET CONNECTOR

NOTICE OF PROPRIETARY PROPERTY

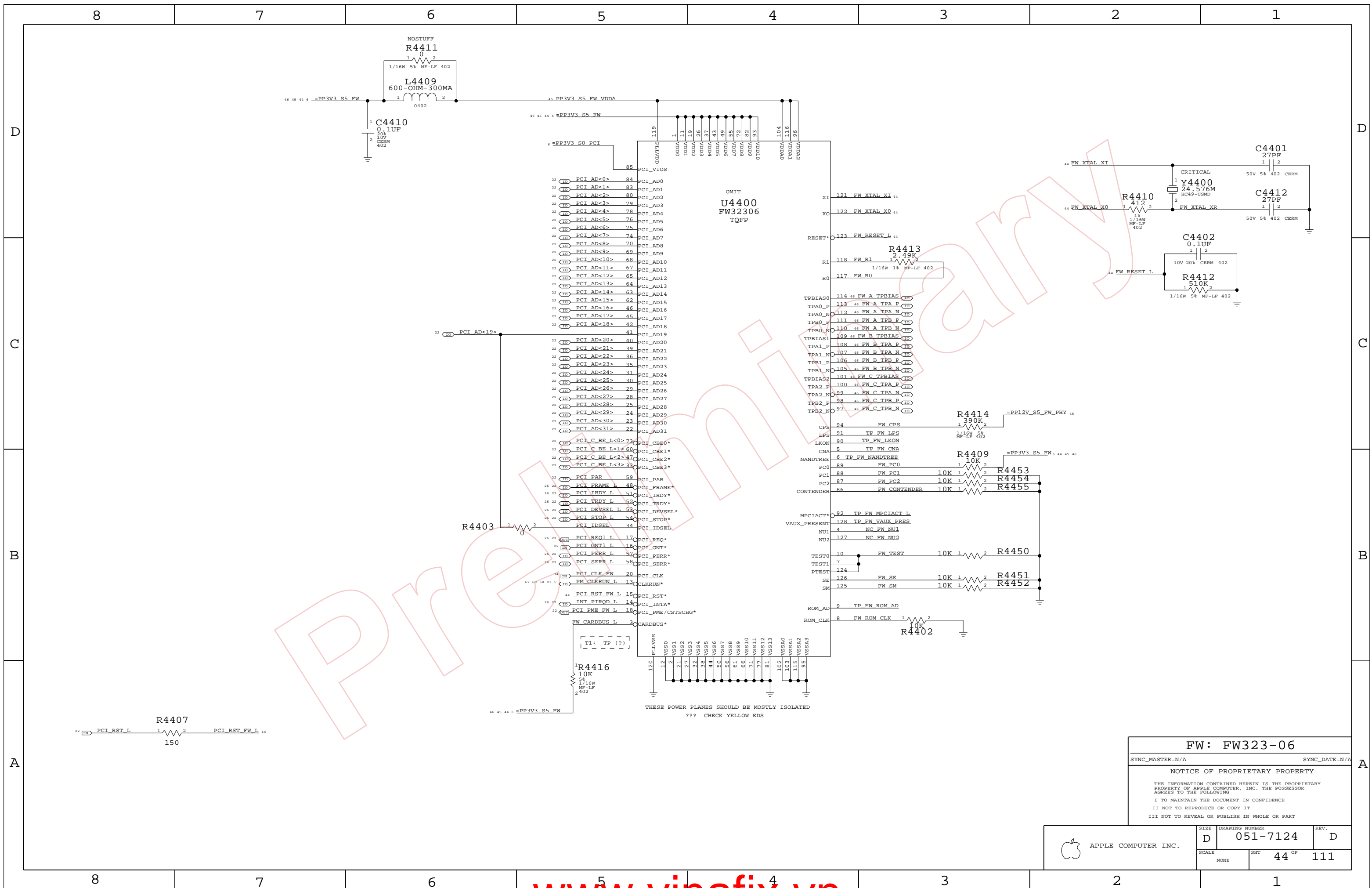
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7124	REV. D
	SCALE NONE	SHT 43	OF 111



FW: FW323-06

SYNC_MASTER=N/A SYNC_DATE=N/A

NOTICE OF PROPRIETARY PROPERTY

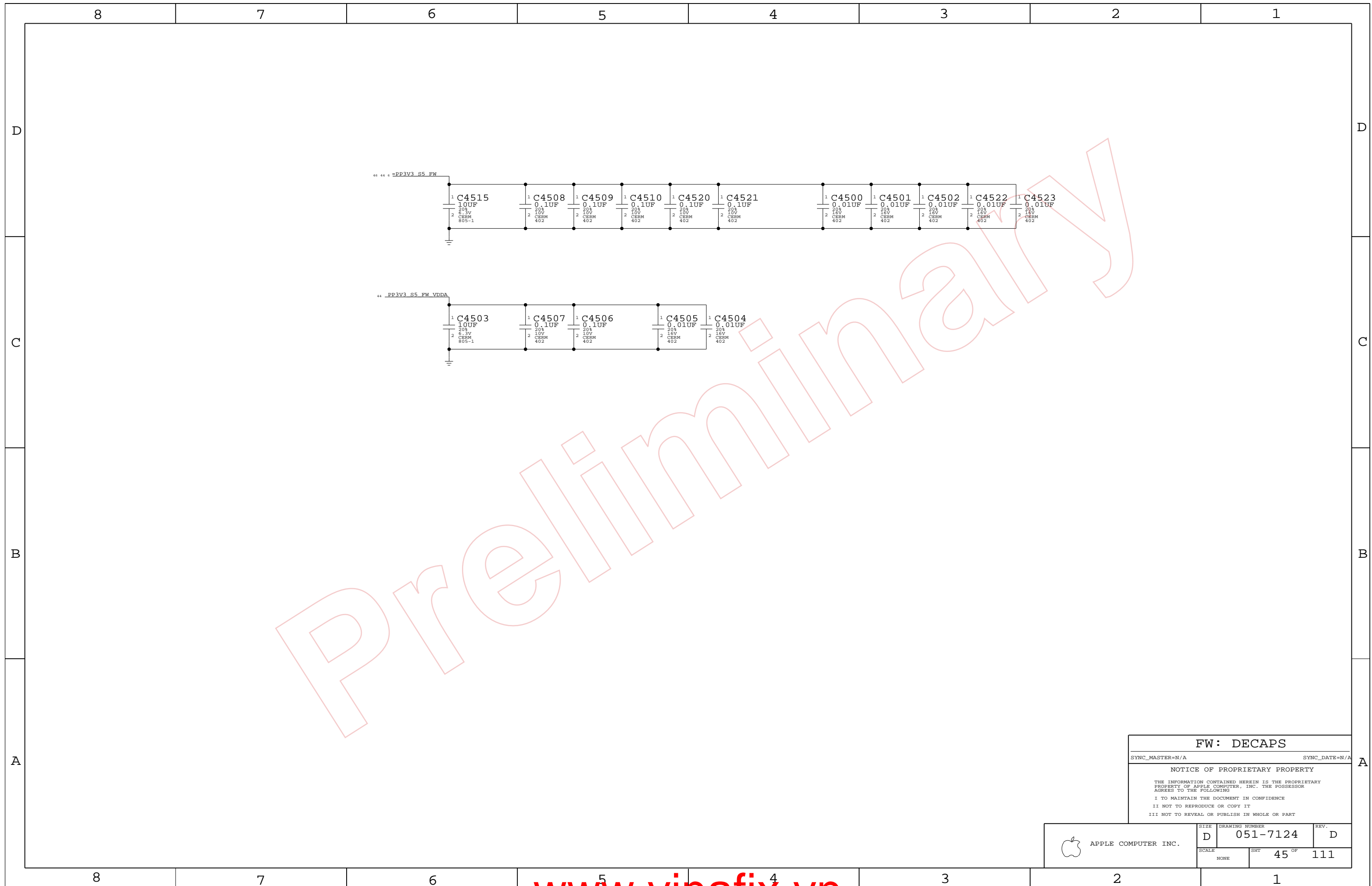
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7124	REV. D
	SCALE NONE	SHEET 44 OF 111	



Preliminary

FW: DECAPS

SYNC_MASTER=N/A SYNC_DATE=N/A

NOTICE OF PROPRIETARY PROPERTY

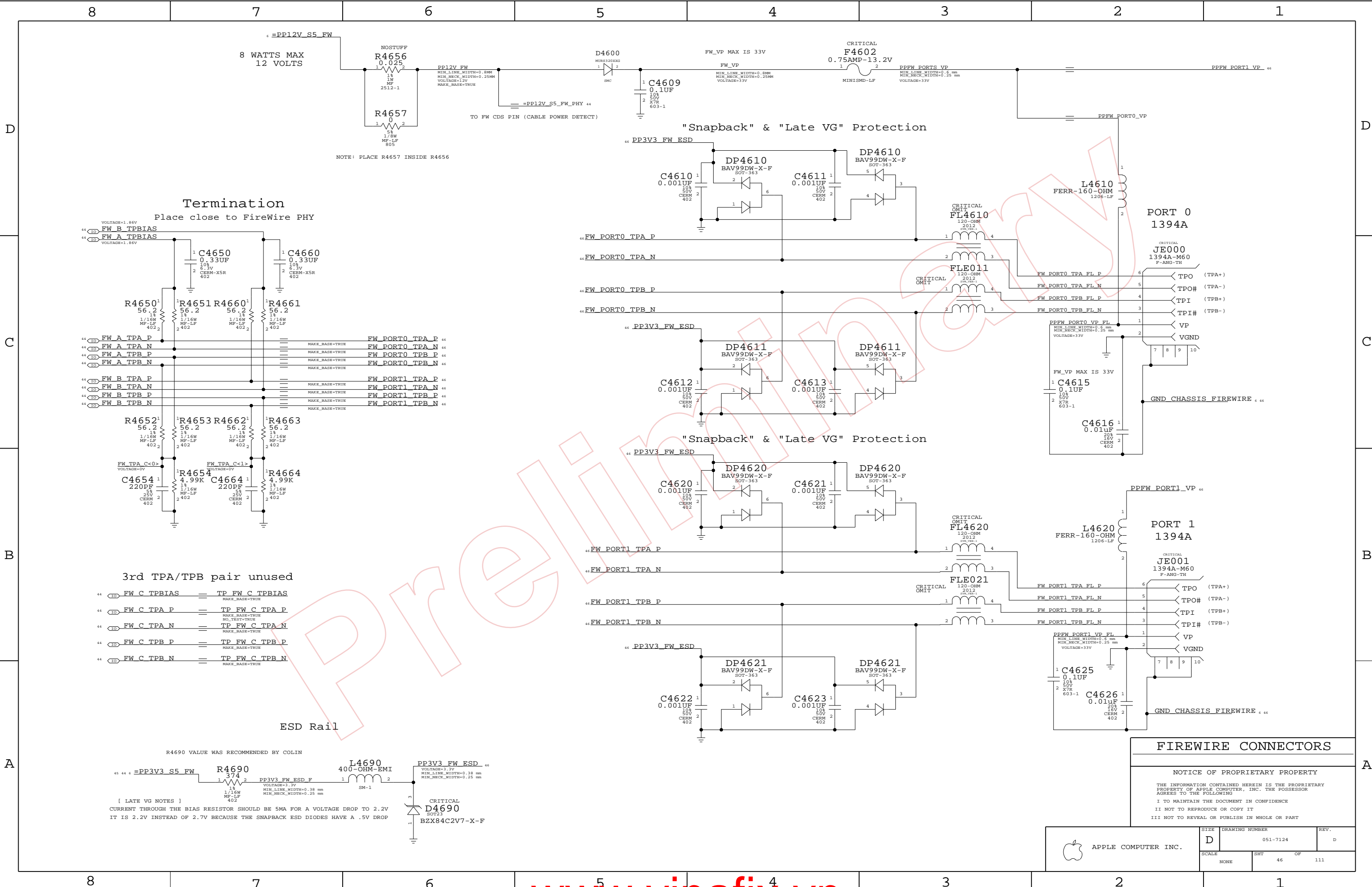
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7124	REV. D
	SCALE NONE	SHT 45 OF	111



8 WATTS MAX
12 VOLTS

Termination
Place close to FireWire PHY

"Snapback" & "Late VG" Protection

"Snapback" & "Late VG" Protection

3rd TPA/TPB pair unused

ESD Rail

R4690 VALUE WAS RECOMMENDED BY COLIN

[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 .5V DROP

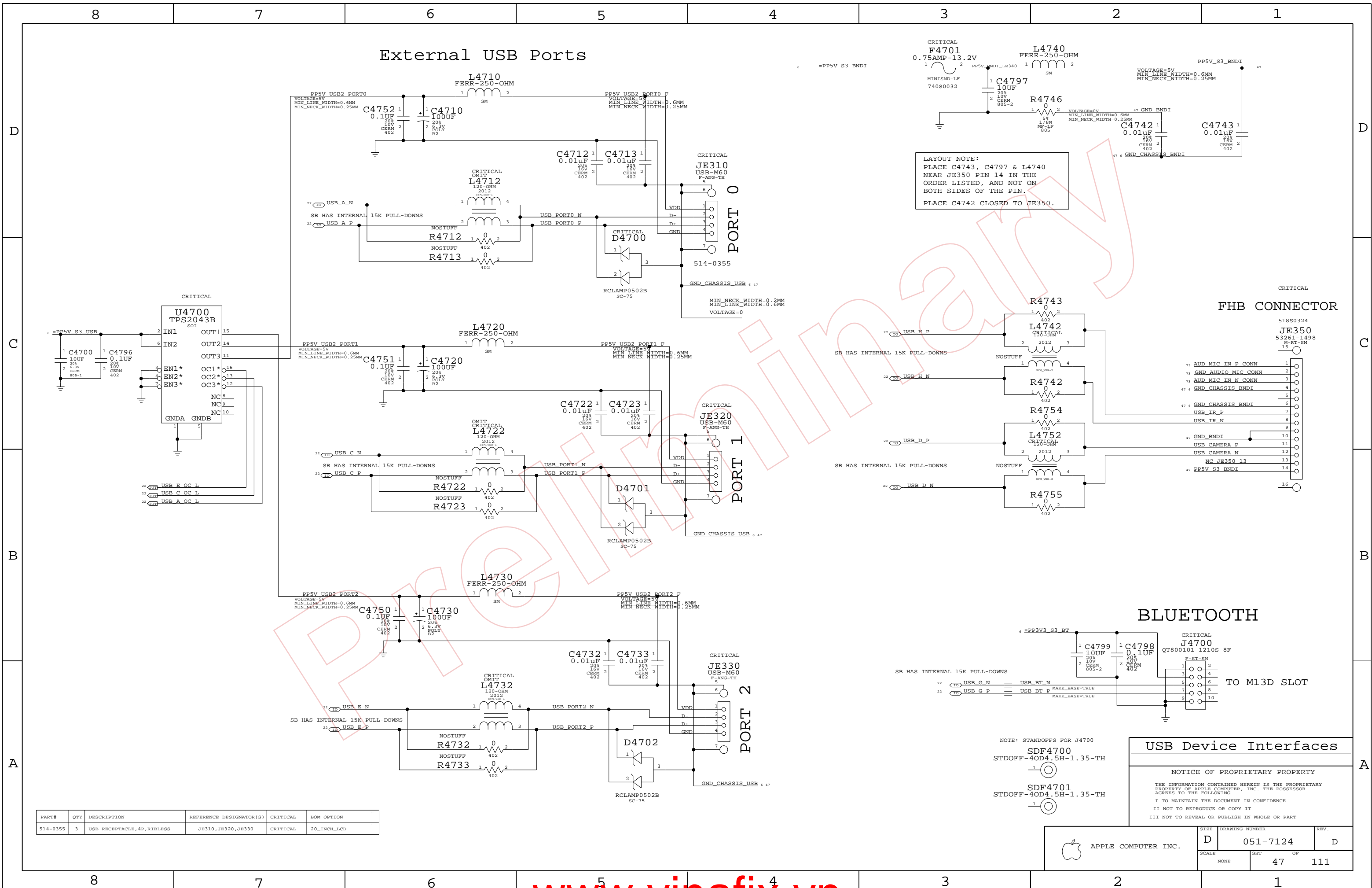
FIREWIRE CONNECTORS

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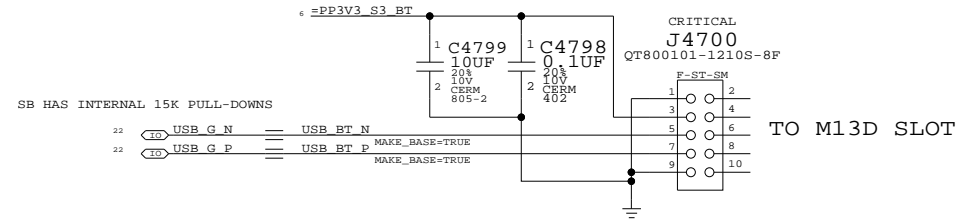
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	111
NONE	46		

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.

BLUETOOTH



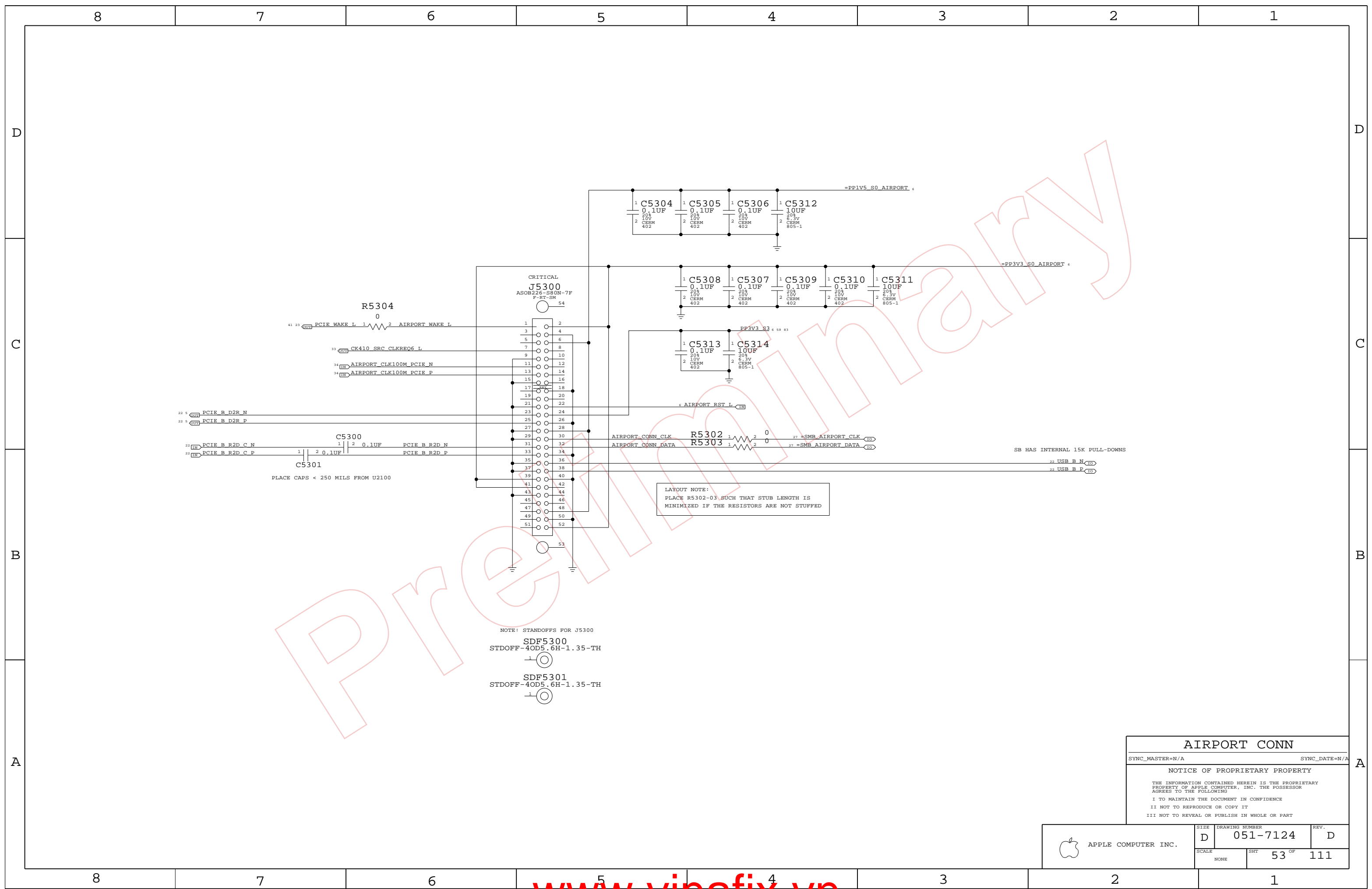
NOTE: STANDOFFS FOR J4700
SDF4700
STDOFF-40D4.5H-1.35-TH
SDF4701
STDOFF-40D4.5H-1.35-TH

USB Device Interfaces

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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0355	3	USB RECEPTACLE, 4P, RIBLESS	JE310, JE320, JE330	CRITICAL	20_INCH_LCD

APPLE COMPUTER INC.	SCALE	SHT	OF	REV.
	NONE	47	111	D



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

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 APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7124	REV. D
	SCALE NONE	SHEET 53 OF	TOTAL SHEETS 111

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
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	54	111	

8

7

6

5

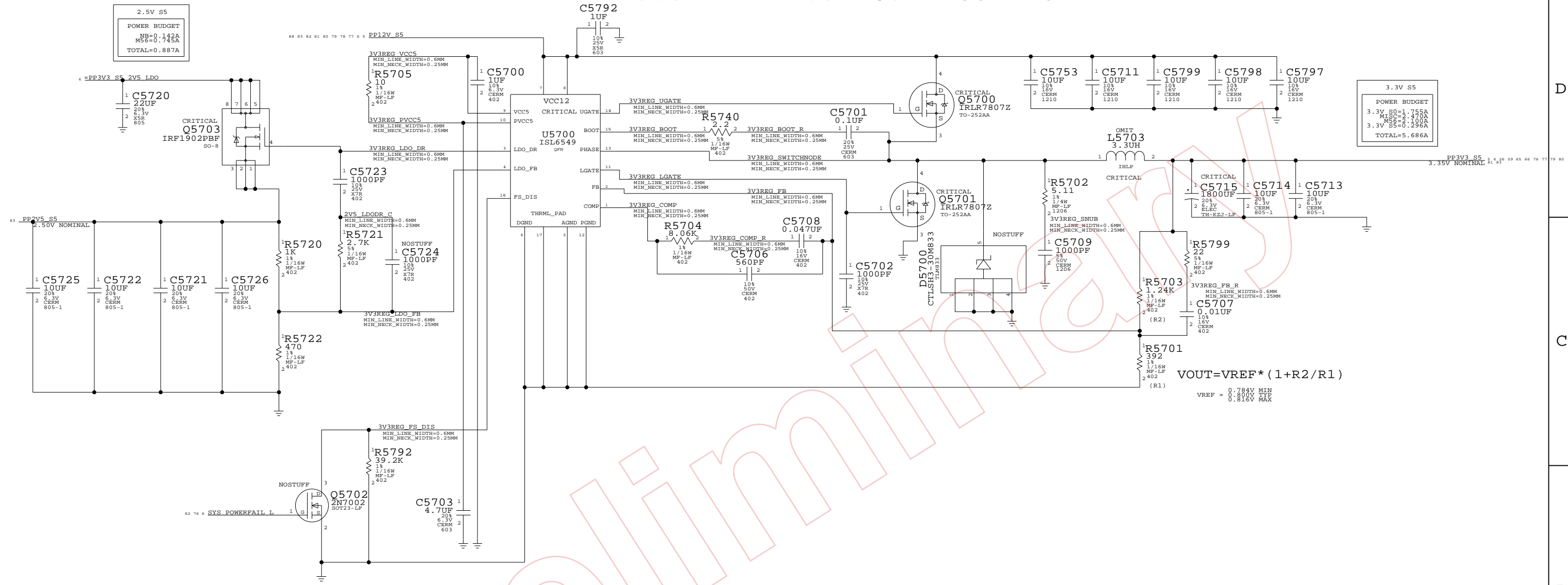
4

3

2

1

3.3V AND 2.5V S5 REGULATOR



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

$V_{REF} = 0.784V \text{ MIN}$
 $0.800V \text{ TYP}$
 $0.816V \text{ MAX}$

3.3V DC/DC 2.5V

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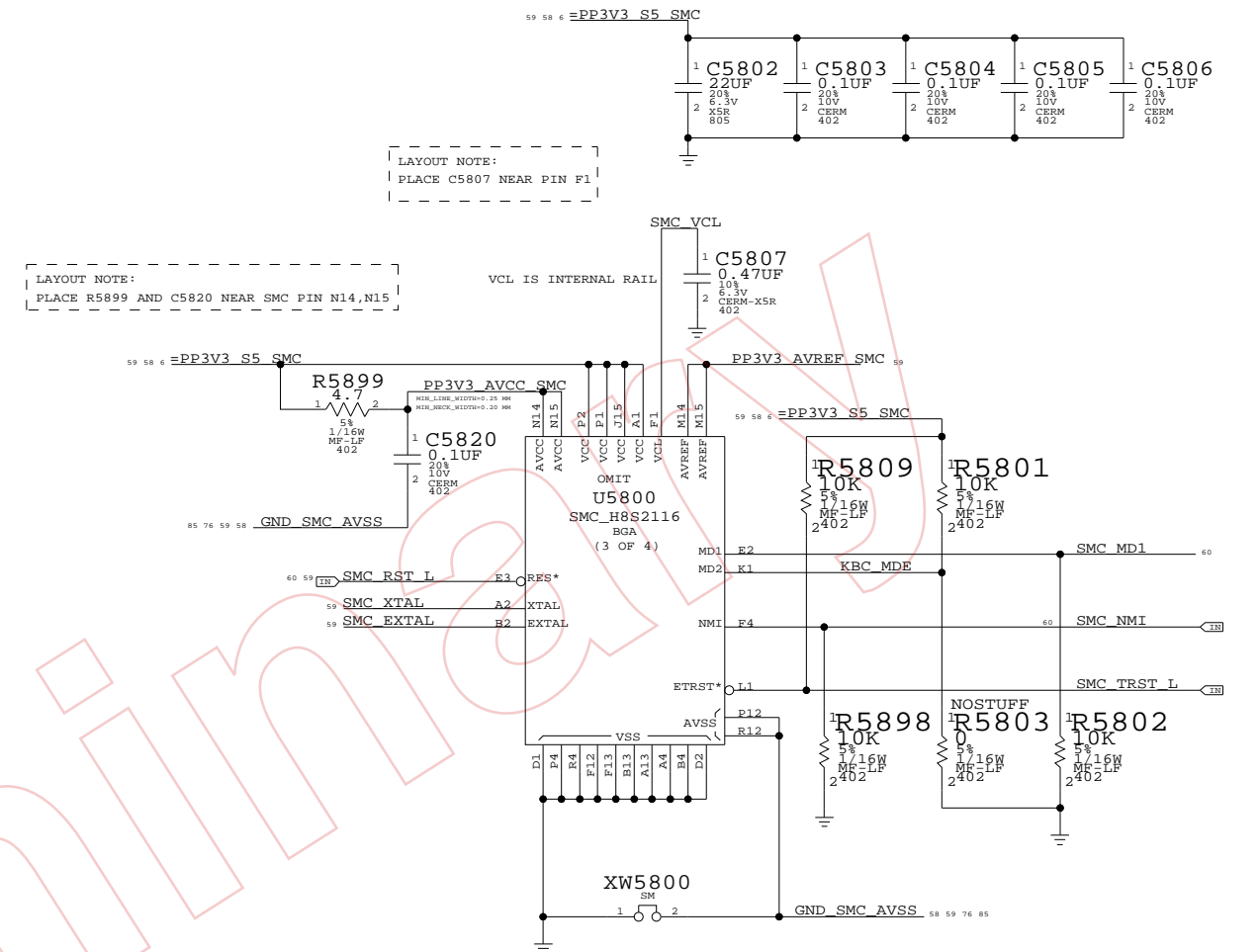
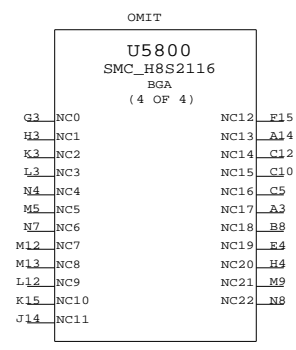
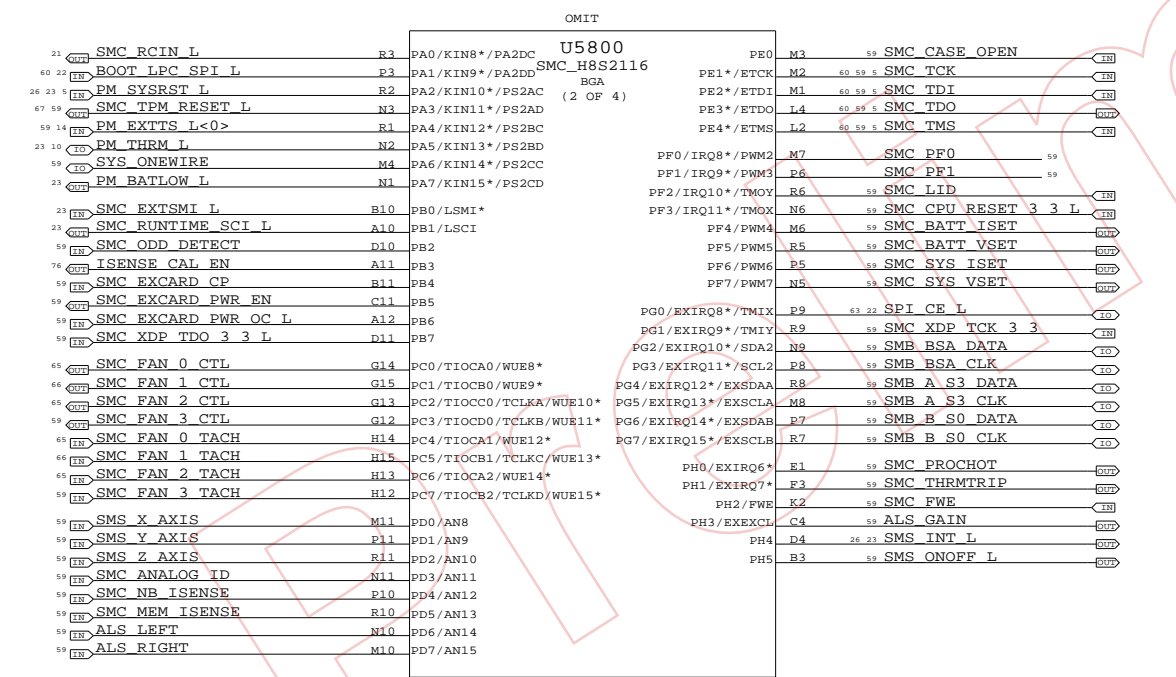
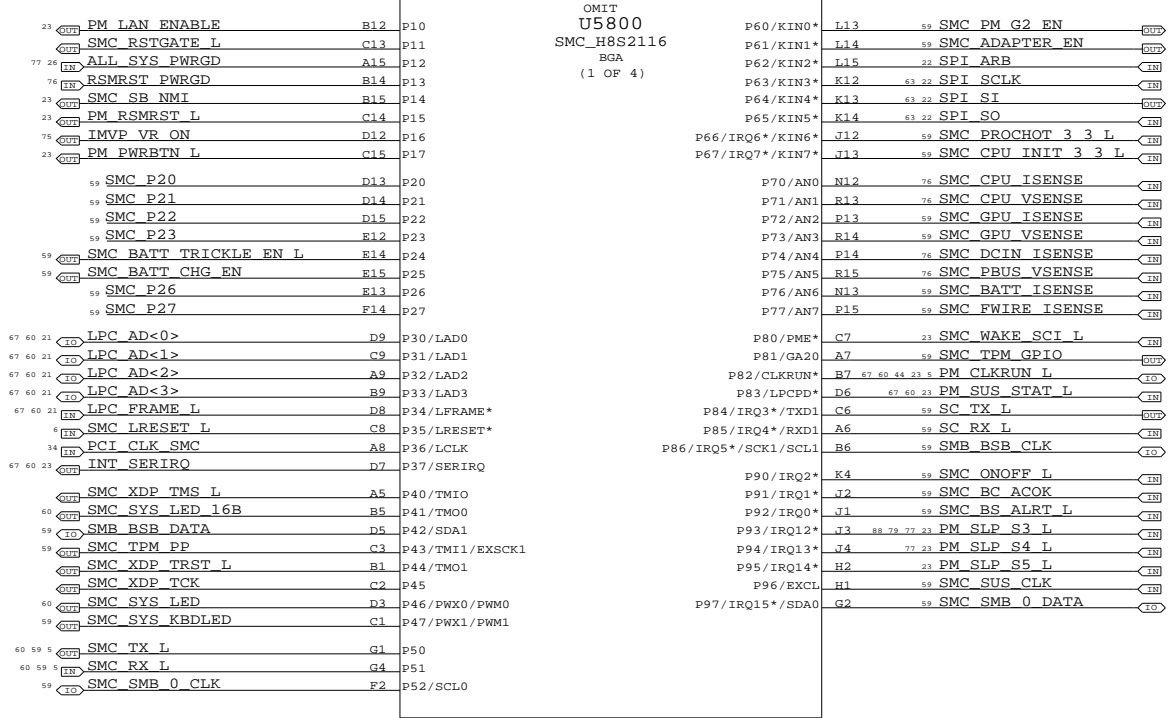
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	57 OF	111
NONE			

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

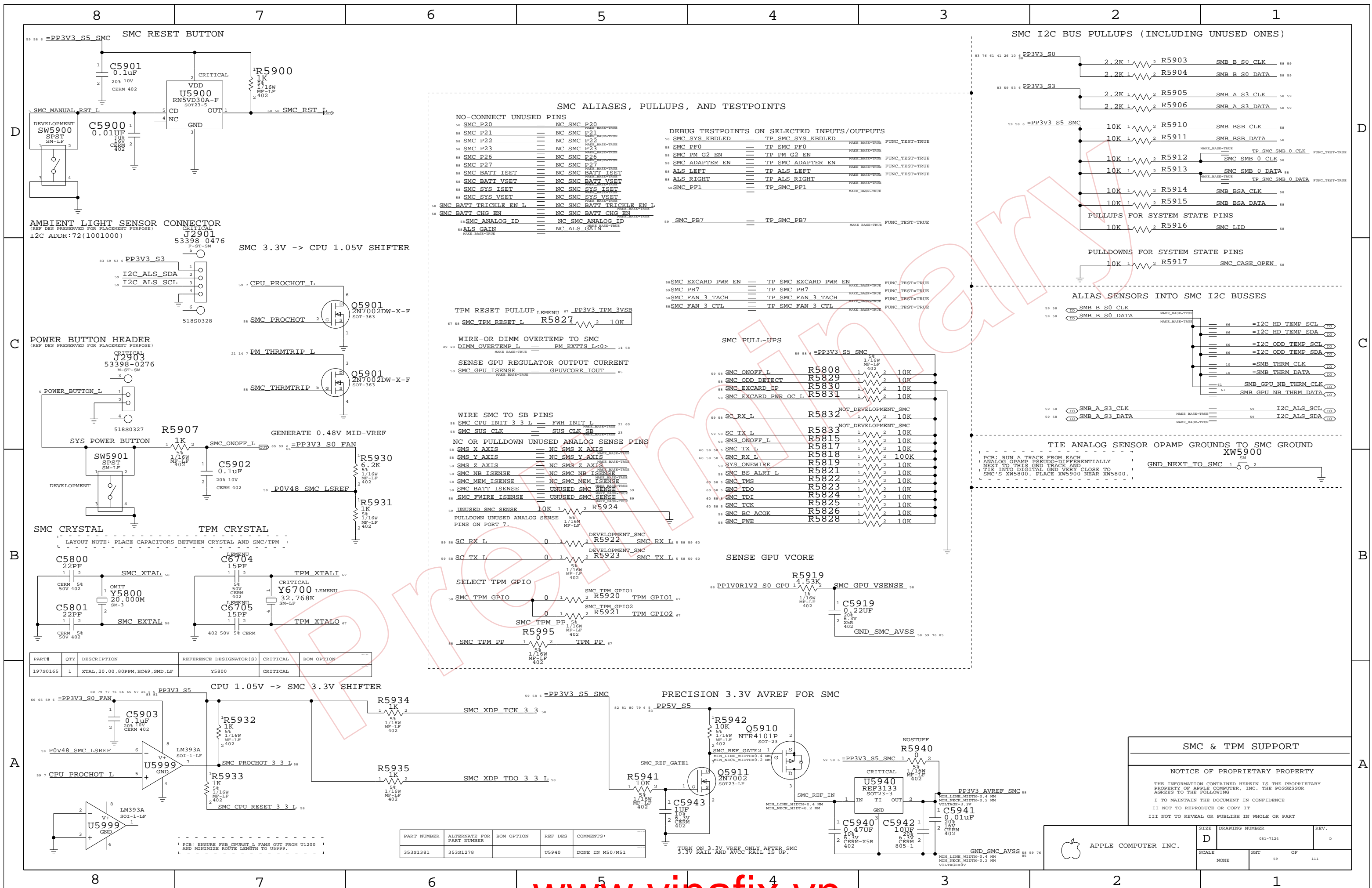
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7124	REV. D
	SCALE NONE	SHT 58 OF 111	



SMC ALIASES, PULLUPS, AND TESTPOINTS

NO-CONNECT UNUSED PINS		DEBUG TESTPOINTS ON SELECTED INPUTS/OUTPUTS	
58 SMC P20	== NC SMC P20	58 SMC SYS_KBDLED	== TP_SMC_SYS_KBDLED
58 SMC P21	== NC SMC P21	58 SMC PF0	== TP_SMC_PF0
58 SMC P22	== NC SMC P22	58 SMC_PM_G2_EN	== TP_PM_G2_EN
58 SMC P23	== NC SMC P23	58 SMC_ADAPTER_EN	== TP_SMC_ADAPTER_EN
58 SMC P26	== NC SMC P26	58 ALS_LEFT	== TP_ALS_LEFT
58 SMC P27	== NC SMC P27	58 ALS_RIGHT	== TP_ALS_RIGHT
58 SMC_BATT_ISET	== NC SMC_BATT_ISET	58 SMC_FF1	== TP_SMC_FF1
58 SMC_BATT_VSET	== NC SMC_BATT_VSET		
58 SMC_SYS_ISET	== NC SMC_SYS_ISET		
58 SMC_SYS_VSET	== NC SMC_SYS_VSET		
58 SMC_BATT_TRICKLE_EN_L	== NC SMC_BATT_TRICKLE_EN_L		
58 SMC_BATT_CHG_EN	== NC SMC_BATT_CHG_EN		
58 SMC_ANALOG_ID	== NC SMC_ANALOG_ID		
58 ALS_GAIN	== NC ALS_GAIN		

SMC PULL-UPS	
58 SMC_ONOFF_L	R5808 10K
58 SMC_ODD_DETECT	R5829 10K
58 SMC_EXCARD_CP	R5830 10K
58 SMC_EXCARD_PWR_OC_L	R5831 10K
58 SC_RX_L	R5832 10K
58 SC_TX_L	R5833 10K
58 SMC_ONOFF_L	R5815 10K
58 SMC_TX_L	R5817 10K
58 SMC_RX_L	R5818 100K
58 SMC_ONWIRE	R5819 10K
58 SMC_BS_ALERT_L	R5821 10K
58 SMC_TMS	R5822 10K
58 SMC_TDO	R5823 10K
58 SMC_TDI	R5824 10K
58 SMC_TCK	R5825 10K
58 SMC_BC_ACOK	R5826 10K
58 SMC_FWE	R5828 10K

SMC PULL-DOWNS FOR SYSTEM STATE PINS	
58 SMC_CASE_OPEN	R5917 10K

SMC PULL-DOWNS FOR SYSTEM STATE PINS	
58 SMC_CASE_OPEN	R5917 10K

SMC PULL-DOWNS FOR SYSTEM STATE PINS	
58 SMC_CASE_OPEN	R5917 10K

SMC & TPM SUPPORT

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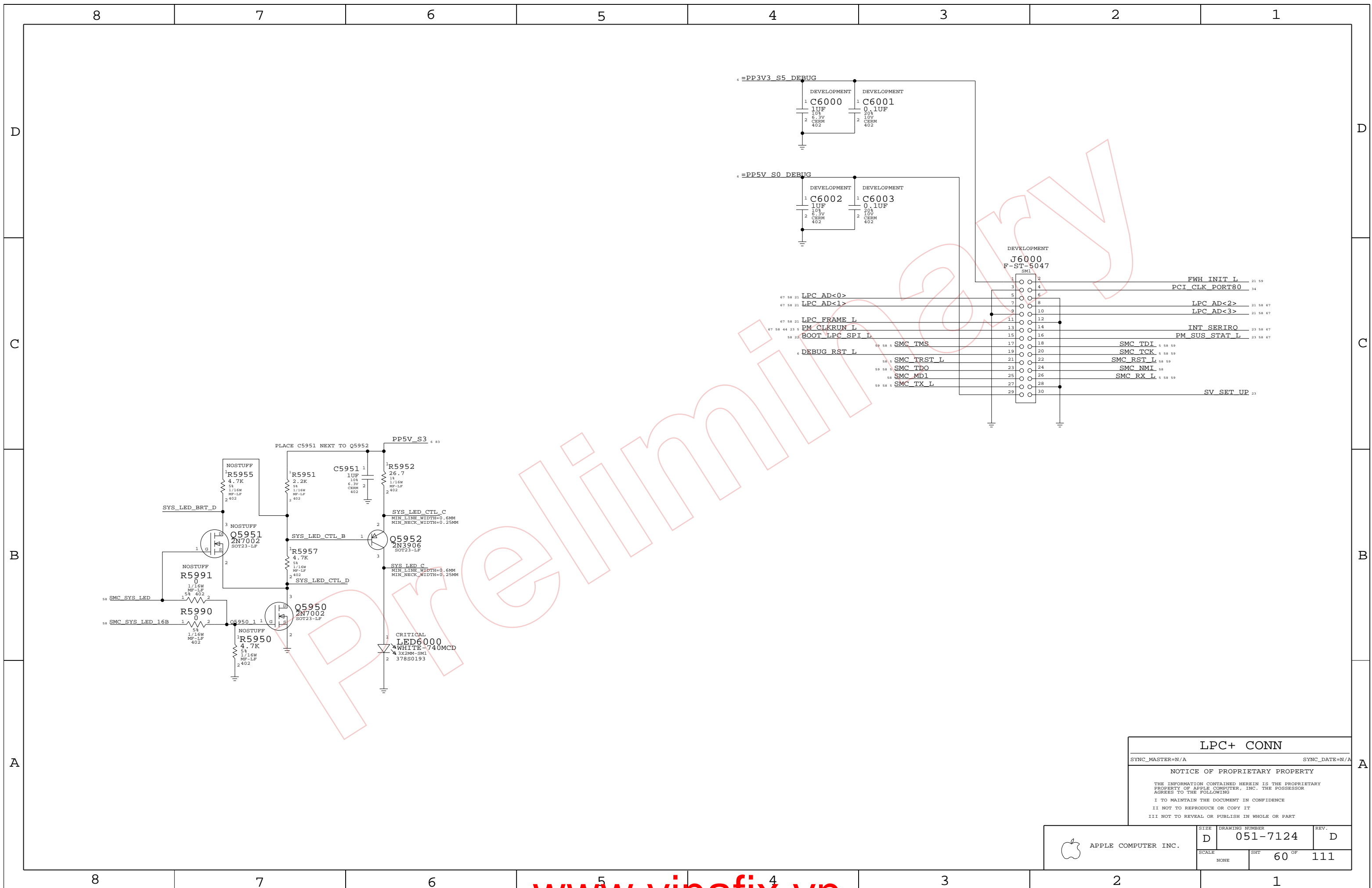
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SIZE	DRAWING NUMBER	REV.
D	051-7124	D

SCALE	SHT	OF
NONE	59	111

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



LPC+ CONN

SYNC_MASTER=N/A SYNC_DATE=N/A

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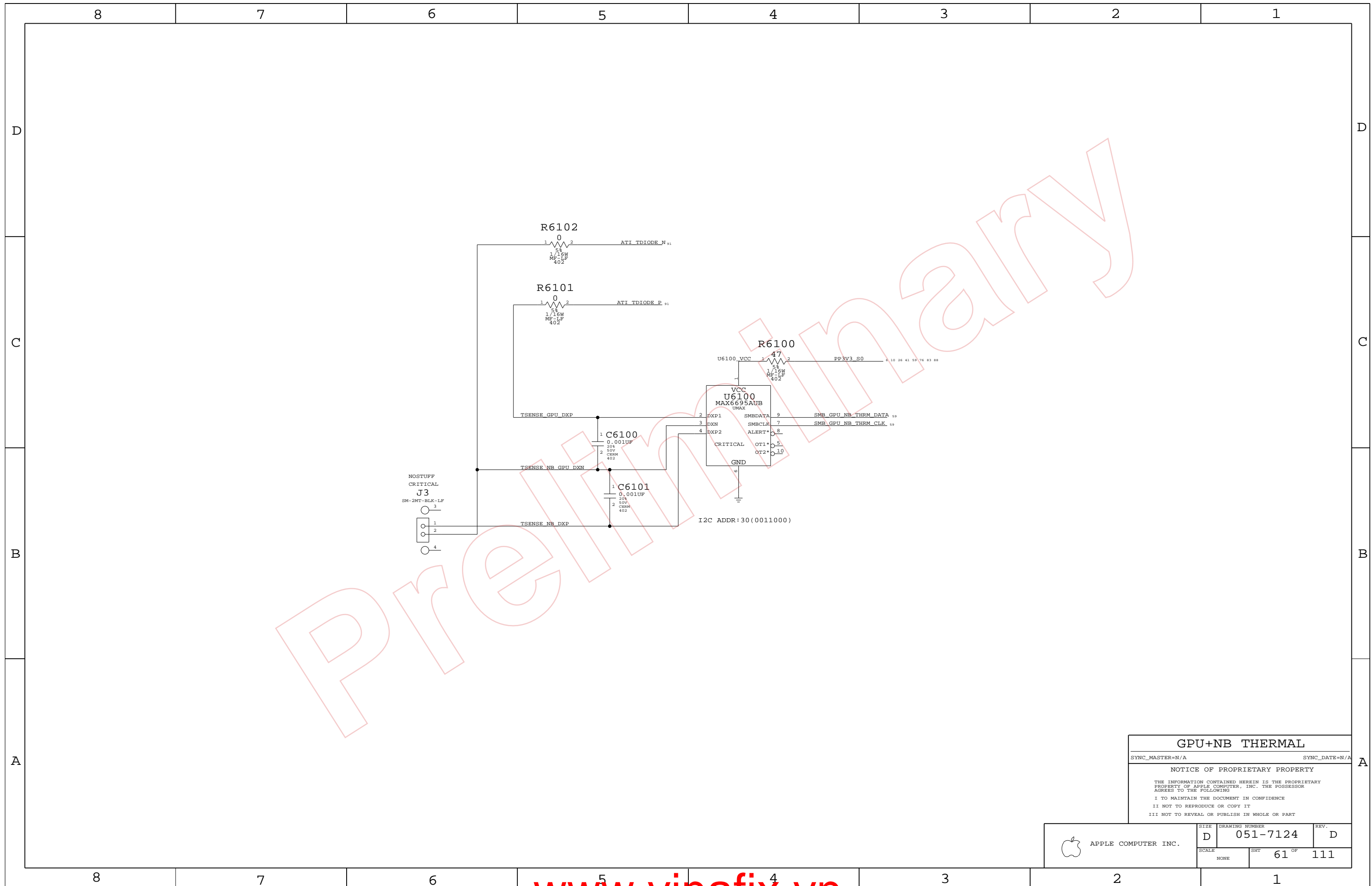
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	D	051-7124	D
SCALE	SHT	60 OF	111
NONE			



Pre-release

GPU+NB THERMAL

SYNC_MASTER=N/A SYNC_DATE=N/A

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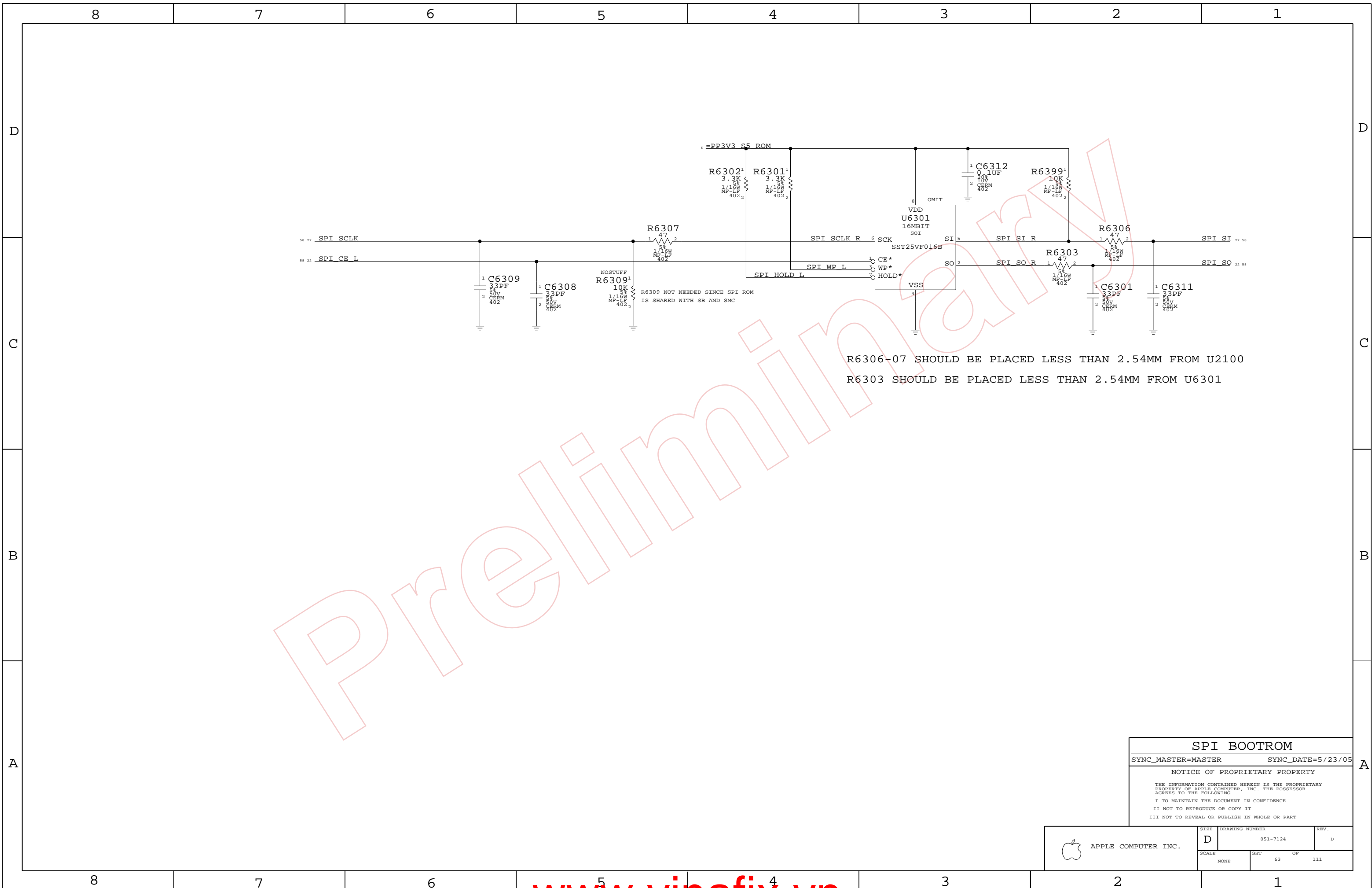
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7124	REV. D
	SCALE NONE	SHIT 61 OF 111	



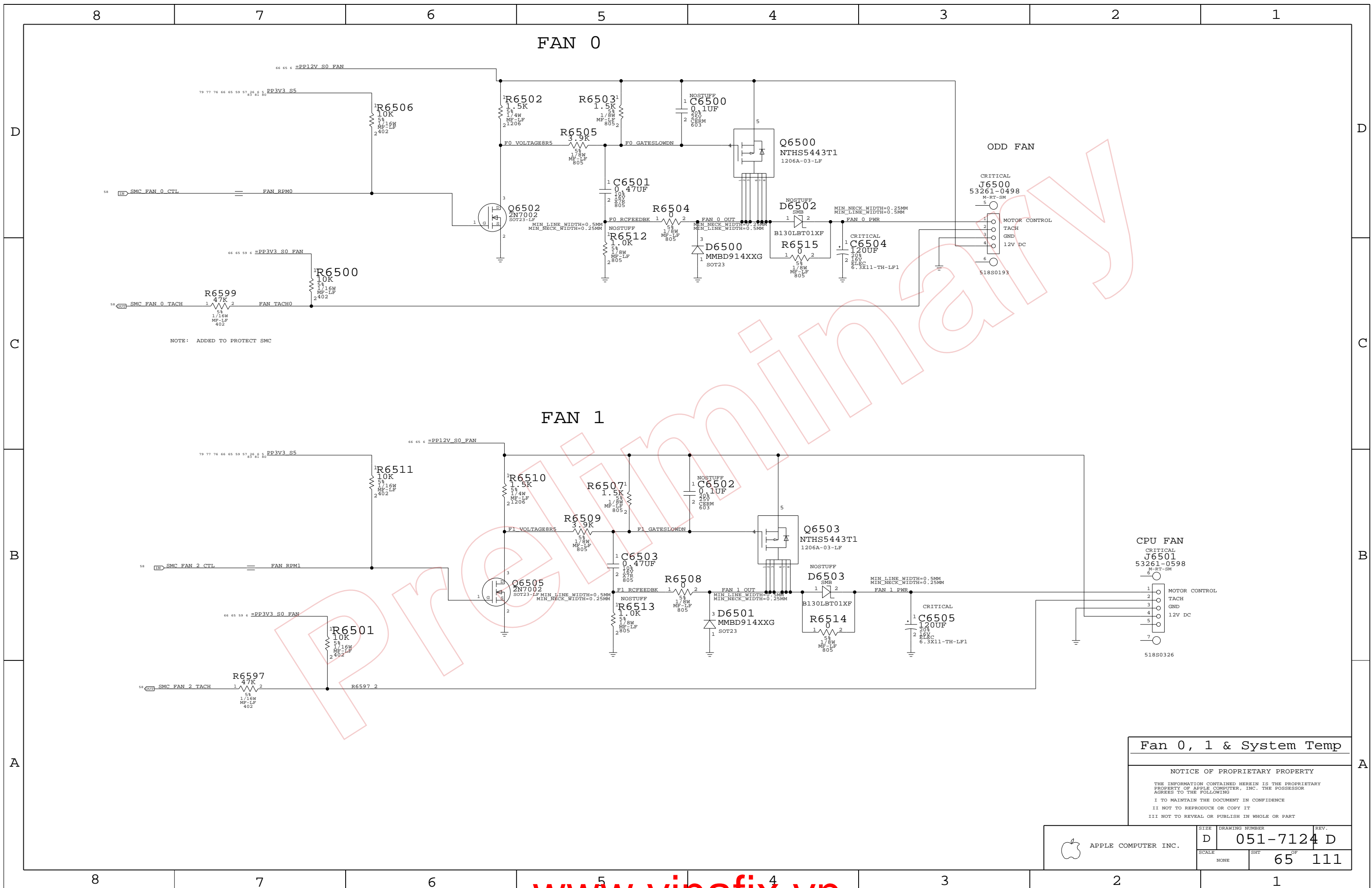
R6306-07 SHOULD BE PLACED LESS THAN 2.54MM FROM U2100
 R6303 SHOULD BE PLACED LESS THAN 2.54MM FROM U6301

Preliminary

SPI BOOTROM
 SYNC_MASTER=MASTER SYNC_DATE=5/23/05

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	SCALE NONE	SHEET 63	OF 111

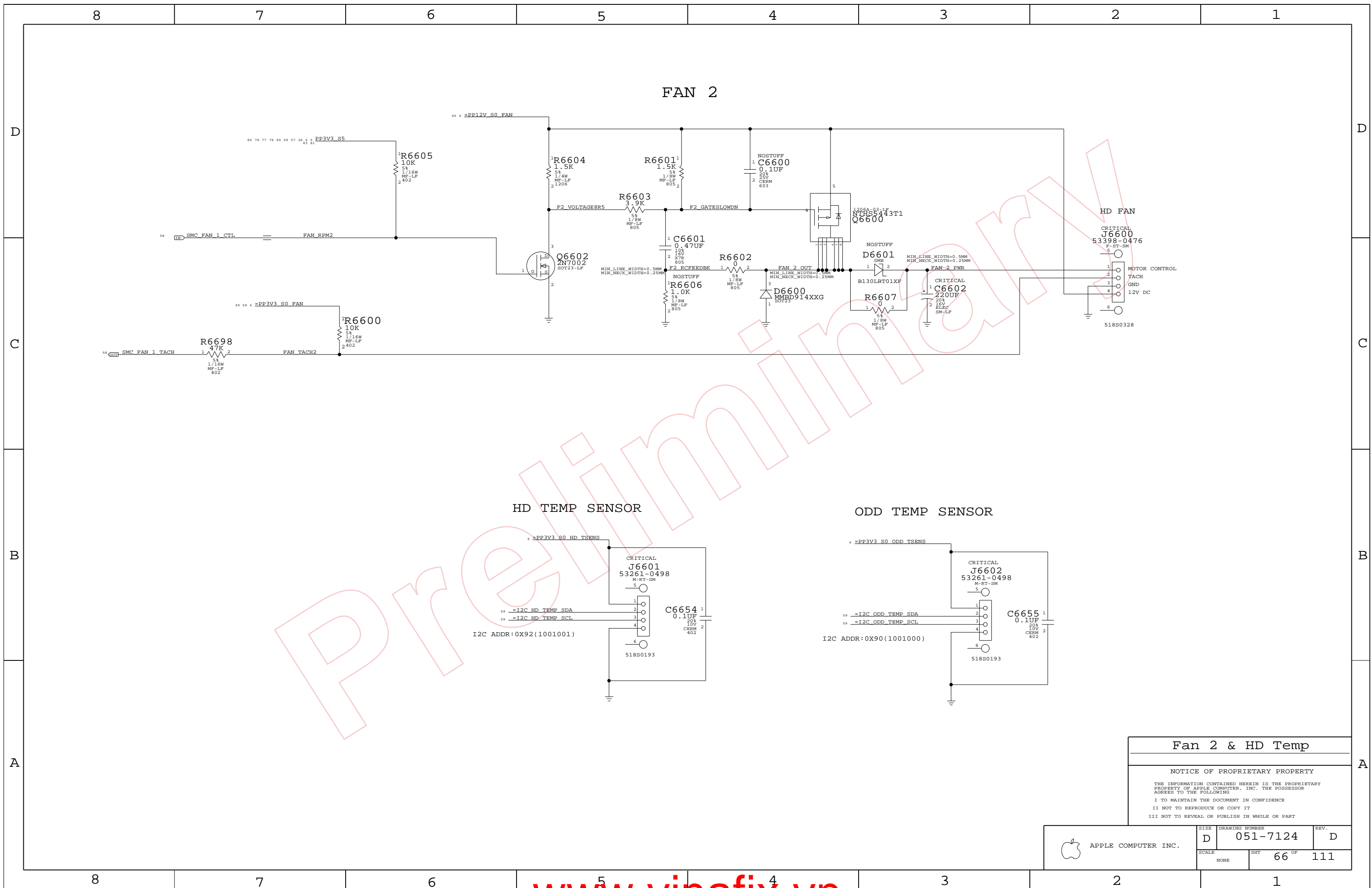


NOTE: ADDED TO PROTECT SMC

Fan 0, 1 & System Temp

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124 D	D
SCALE	NONE	SHT	OF
		65	111



FAN 2

HD TEMP SENSOR

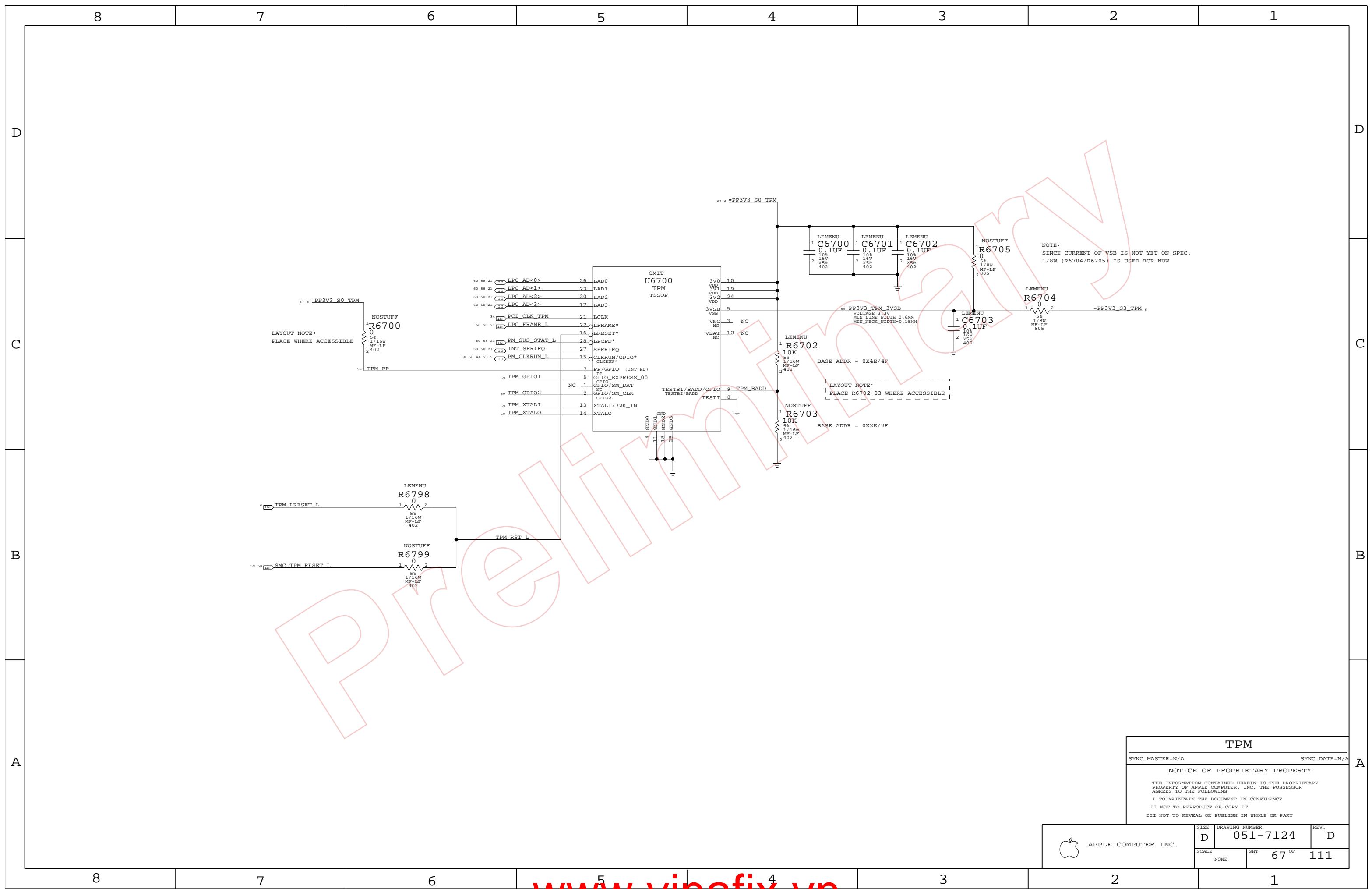
ODD TEMP SENSOR

Fan 2 & HD Temp

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SCALE	SHT	OF	REV.
NONE	66	111	



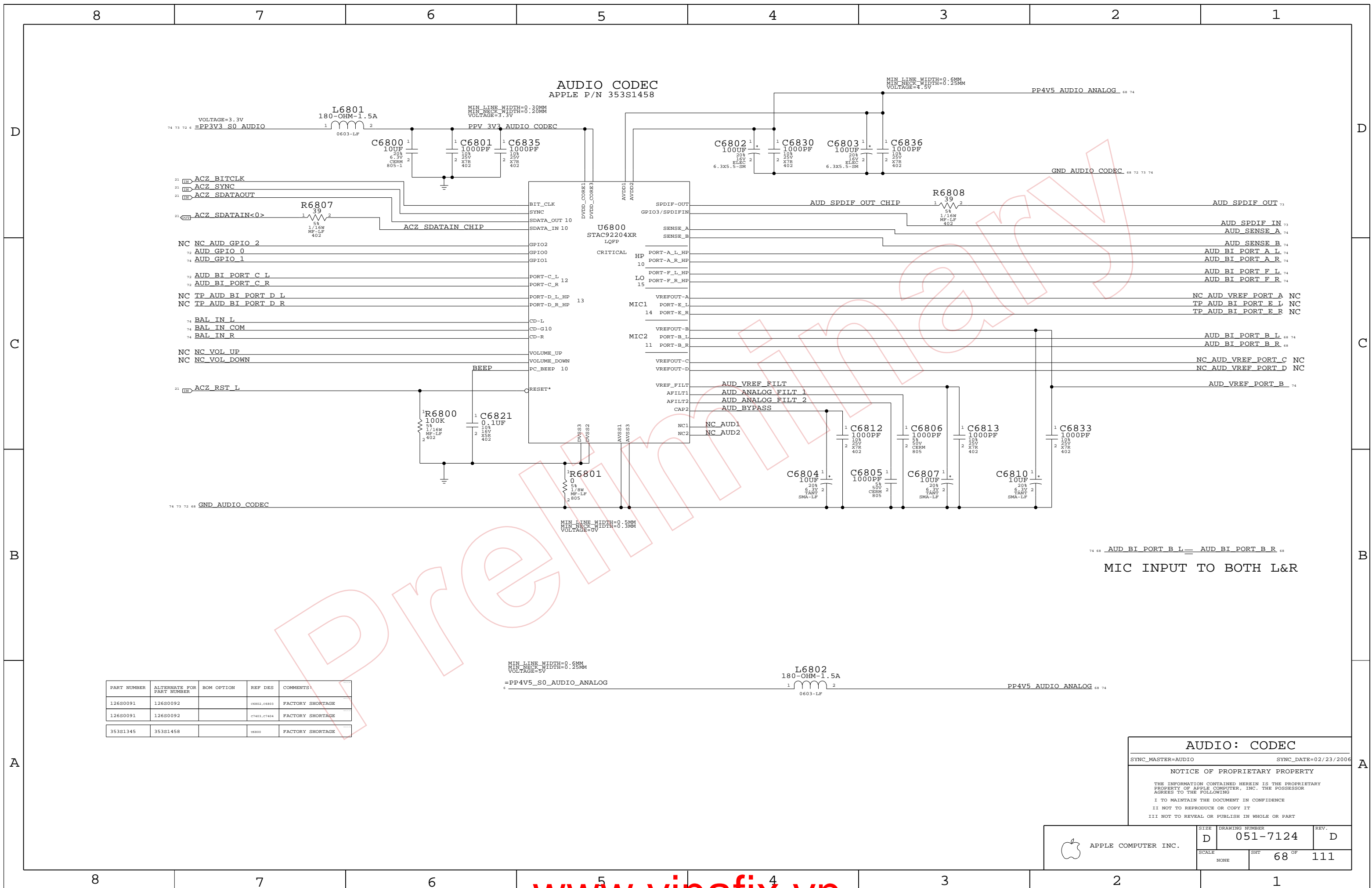
LAYOUT NOTE:
PLACE WHERE ACCESSIBLE

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
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	D	051-7124	D
SCALE	SHT	67 OF	111
NONE			



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
126S0091	126S0092		C802,C803	FACTORY SHORTAGE
126S0091	126S0092		C7403,C7404	FACTORY SHORTAGE
353S1345	353S1458		U6800	FACTORY SHORTAGE

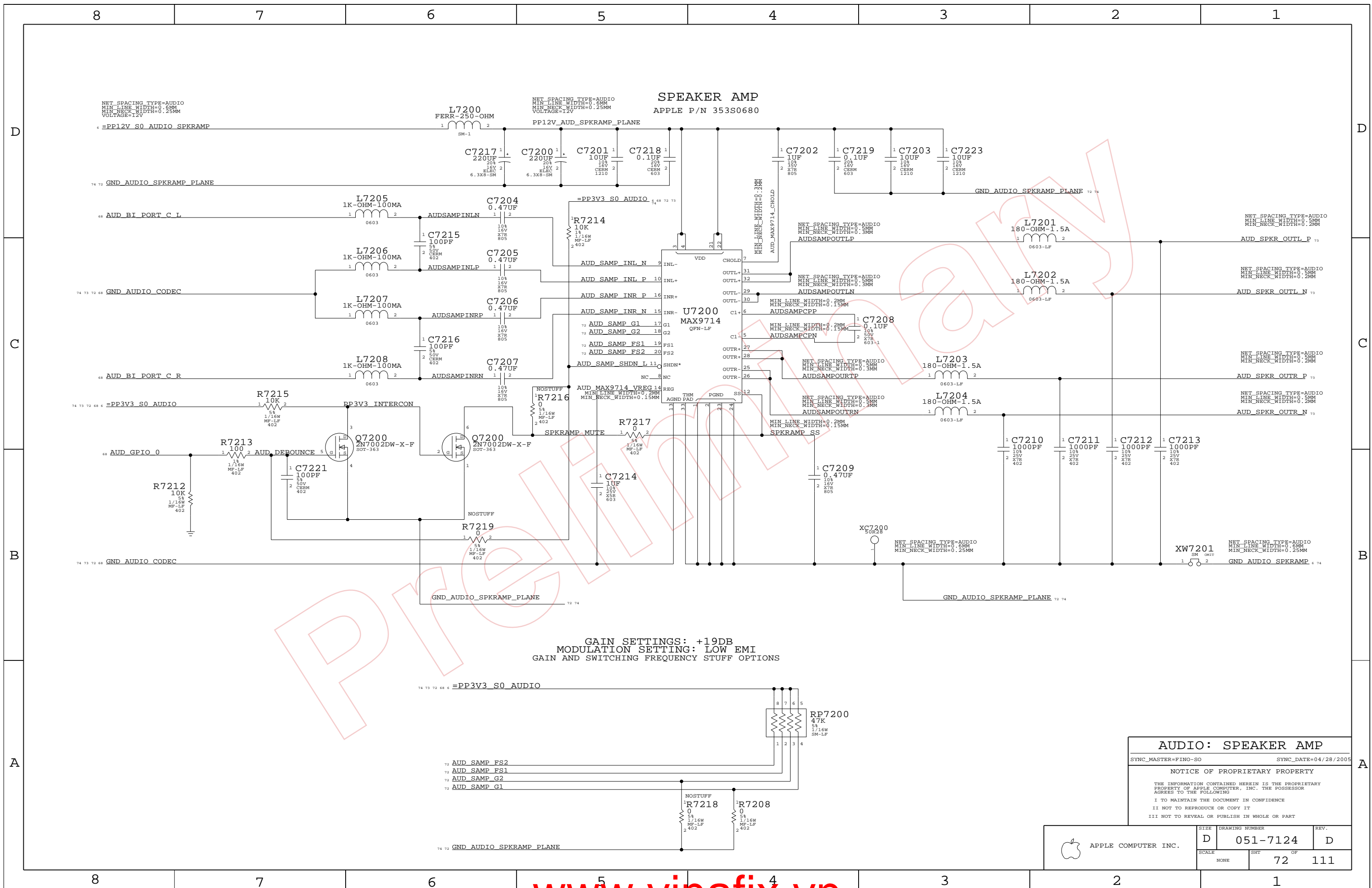
MIN LINE WIDTH=0.6MM
MIN NECK WIDTH=0.3MM
VOLTAGE=0V
=PP4V5_S0_AUDIO_ANALOG

L6802
180-OHM-1.5A
0603-LF

74 68 AUD BI PORT B L = AUD BI PORT B R 68
MIC INPUT TO BOTH L&R

AUDIO: CODEC
 SYNC_MASTER=AUDIO SYNC_DATE=02/23/2006
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	D	051-7124	D
SCALE	SHT	68 OF	111
NONE			

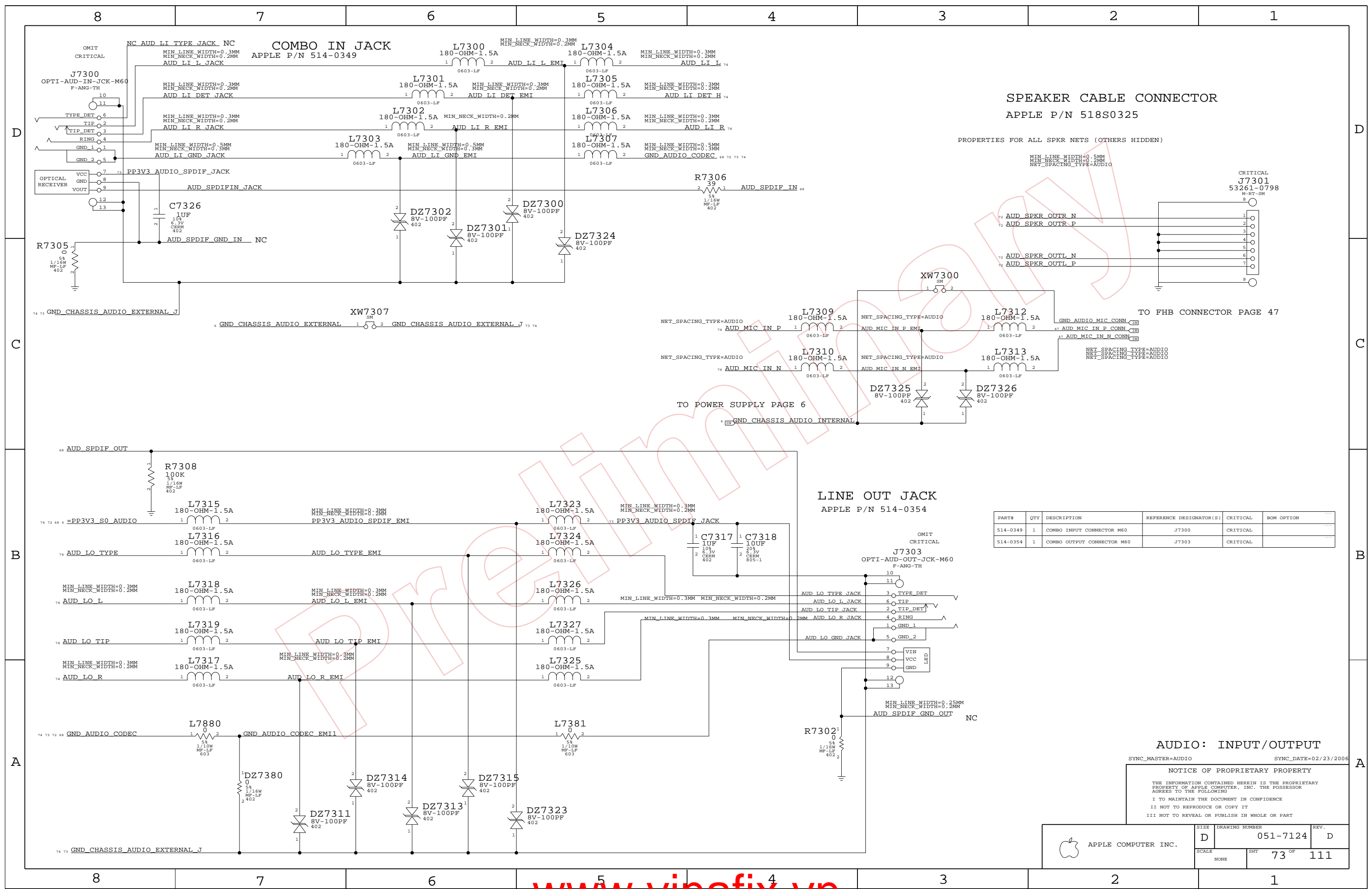


SPEAKER AMP
APPLE P/N 353S0680

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

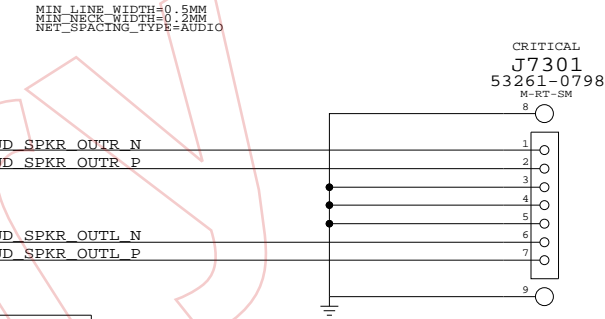
AUDIO: SPEAKER AMP
SYNC_MASTER=FINO-SO SYNC_DATE=04/28/2005
NOTICE OF PROPRIETARY PROPERTY
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	NONE	SHT OF	72 OF 111

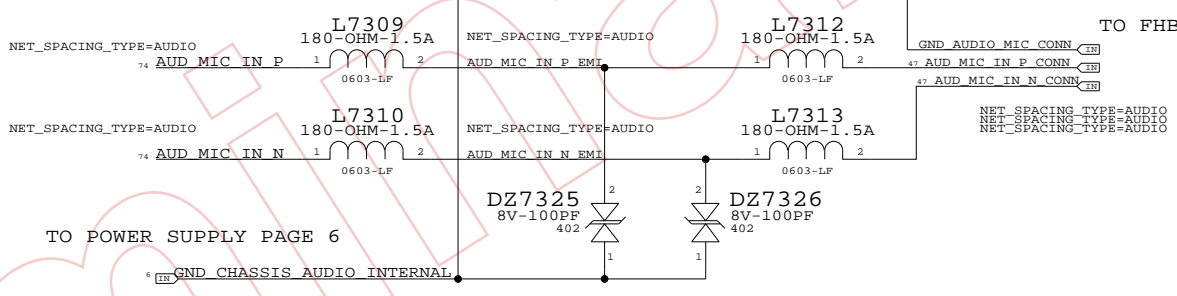


SPEAKER CABLE CONNECTOR
APPLE P/N 518S0325

PROPERTIES FOR ALL SPKR NETS (OTHERS HIDDEN)



TO FHB CONNECTOR PAGE 47



TO POWER SUPPLY PAGE 6

LINE OUT JACK
APPLE P/N 514-0354

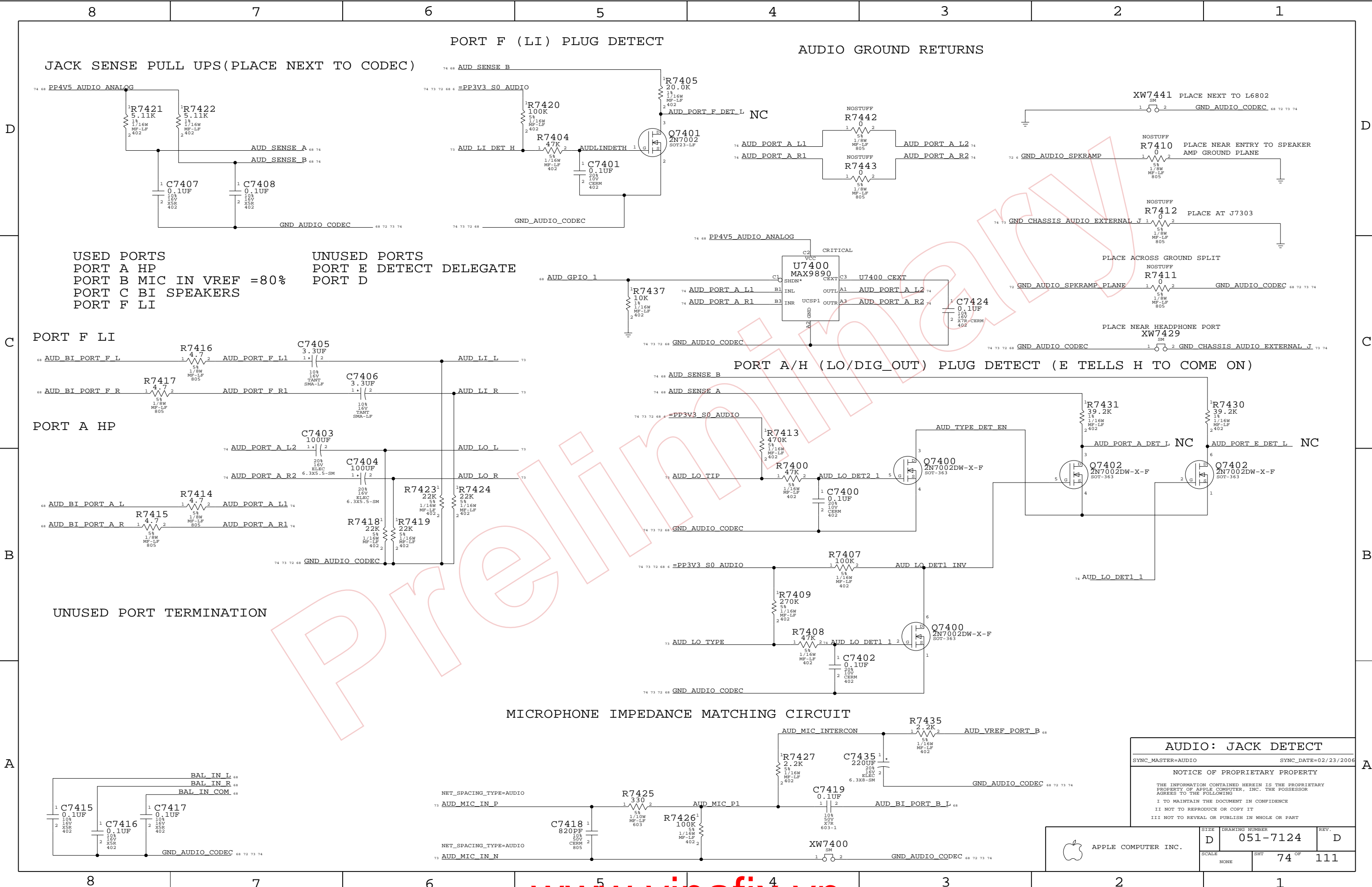
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0349	1	COMBO INPUT CONNECTOR M60	J7300	CRITICAL	
514-0354	1	COMBO OUTPUT CONNECTOR M60	J7303	CRITICAL	

AUDIO: INPUT/OUTPUT

SYNC_MASTER=AUDIO SYNC_DATE=02/23/2006

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	73 OF	111
NONE			



JACK SENSE PULL UPS (PLACE NEXT TO CODEC)

AUDIO GROUND RETURNS

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

UNUSED PORTS
 PORT E DETECT DELEGATE
 PORT D

PORT F LI

PORT A HP

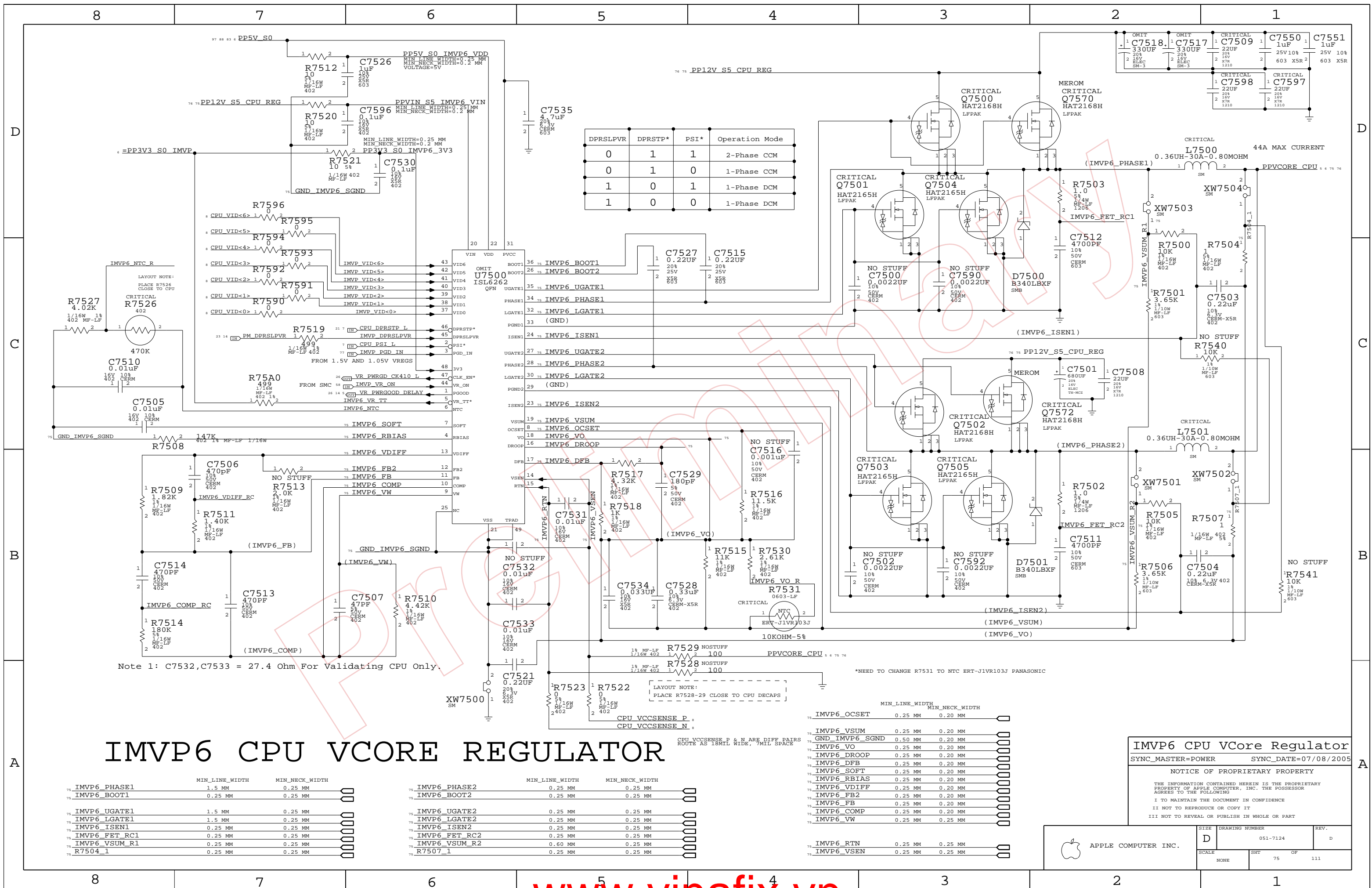
UNUSED PORT TERMINATION

PORT A/H (LO/DIG_OUT) PLUG DETECT (E TELLS H TO COME ON)

MICROPHONE IMPEDANCE MATCHING CIRCUIT

AUDIO: JACK DETECT
 SYNC_MASTER=AUDIO SYNC_DATE=02/23/2006
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	74 OF	111
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

Note 1: C7532, C7533 = 27.4 Ohm For Validating CPU Only.

*NEED TO CHANGE R7531 TO NTC ERT-J1VR103J PANASONIC

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

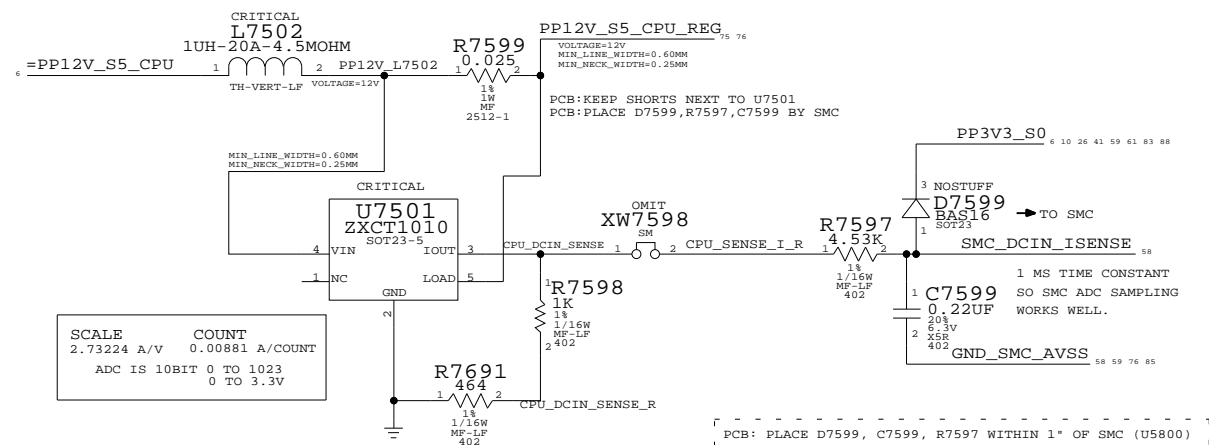
	MIN_LINE_WIDTH	MIN_NECK_WIDTH
75 IMVP6_OCSET	0.25 MM	0.20 MM
75 IMVP6_VSUM	0.25 MM	0.20 MM
75 GND_IMVP6_SGND	0.50 MM	0.20 MM
75 IMVP6_VO	0.25 MM	0.20 MM
75 IMVP6_DROOP	0.25 MM	0.20 MM
75 IMVP6_DFB	0.25 MM	0.20 MM
75 IMVP6_SOFT	0.25 MM	0.20 MM
75 IMVP6_RBIAS	0.25 MM	0.20 MM
75 IMVP6_VDIFF	0.25 MM	0.20 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_RTIN	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

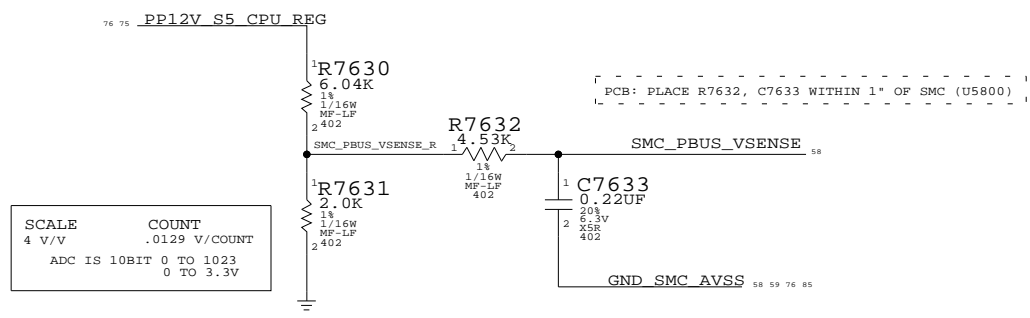
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHEET	OF	111
NONE	75		

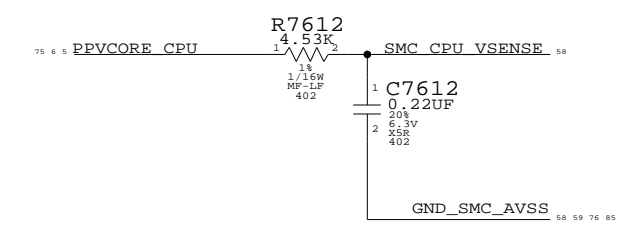
PROCESSOR VCORE CURRENT SENSE
(USING 12V INPUT CURRENT TO DERIVE CPU CURRENT)



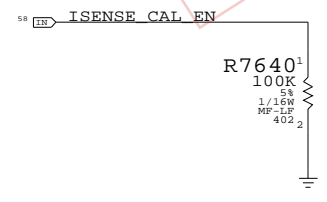
PROCESSOR DCIN VOLTAGE SENSE
(SCALING 12V INPUT VOLTAGE TO SMC)



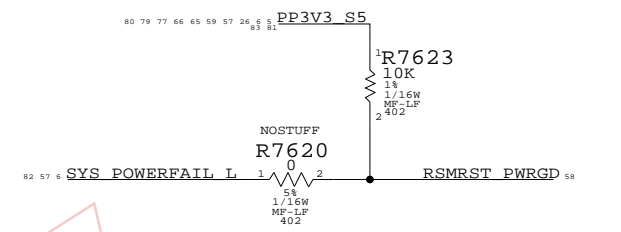
PROCESSOR VCORE SENSE



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



SMC PWRGD PULLUP



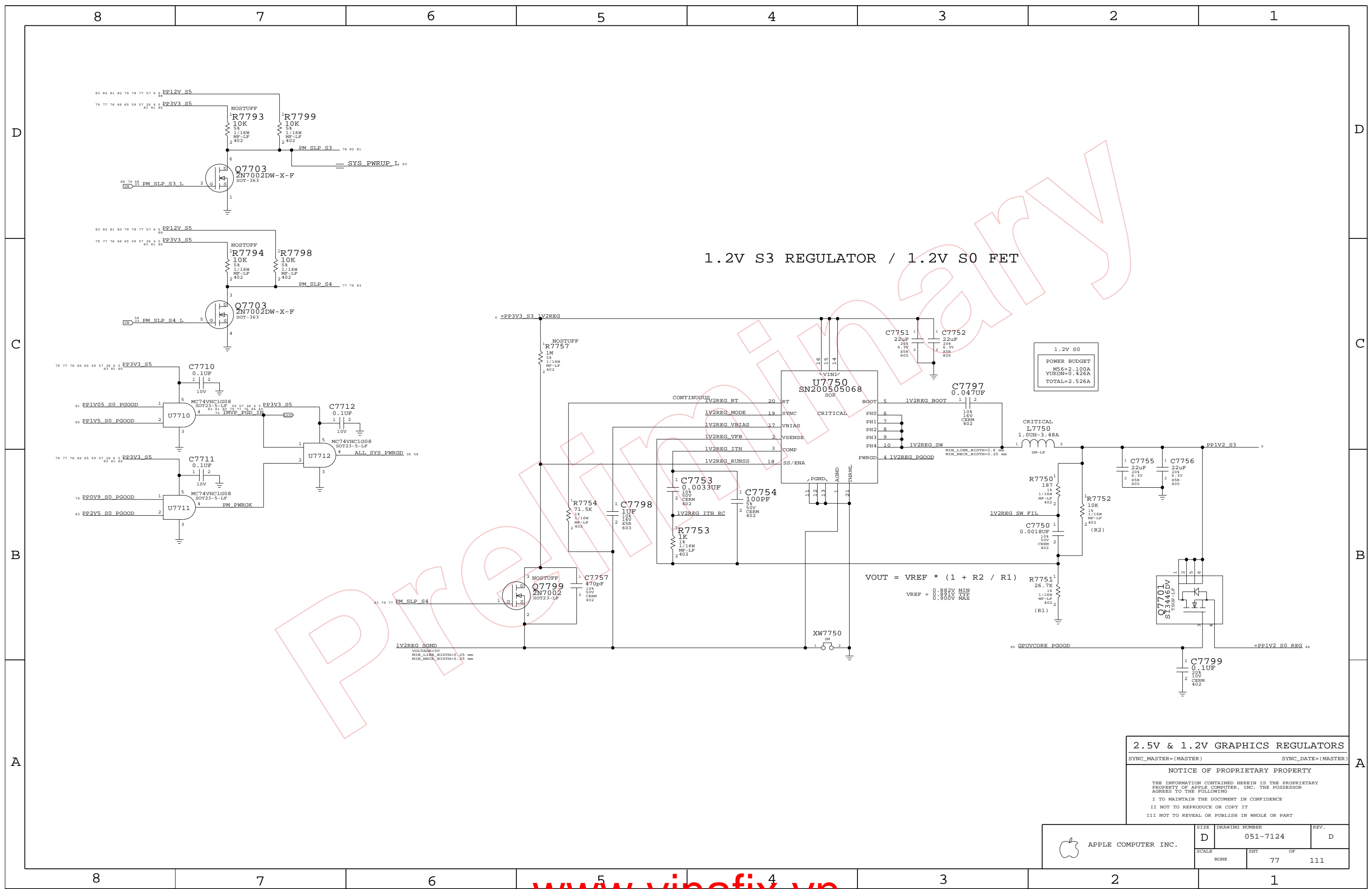
CPU SENSE CIRCUITRIES

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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	D	051-7124	D
SCALE	SHT	76 OF	111
NONE			



1.2V S3 REGULATOR / 1.2V S0 FET

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

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

$$V_{REF} = 0.82V \text{ MIN}$$

$$0.891V \text{ TYP}$$

$$0.900V \text{ MAX}$$

2.5V & 1.2V GRAPHICS REGULATORS

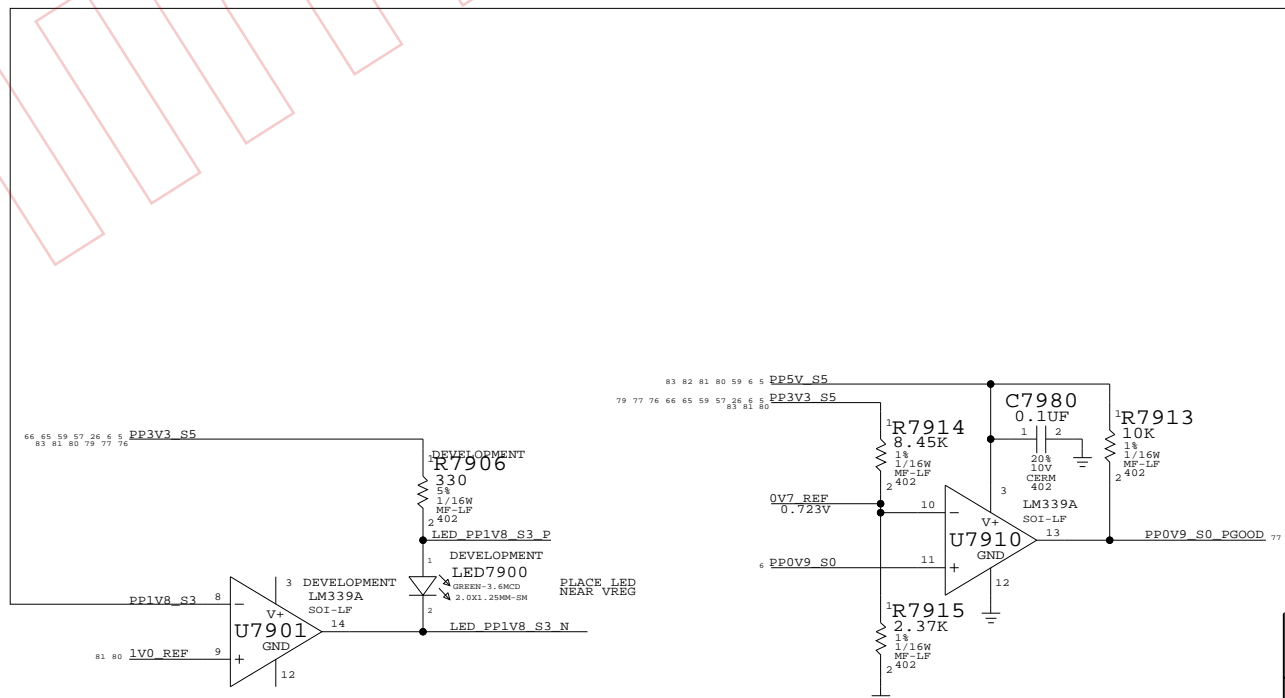
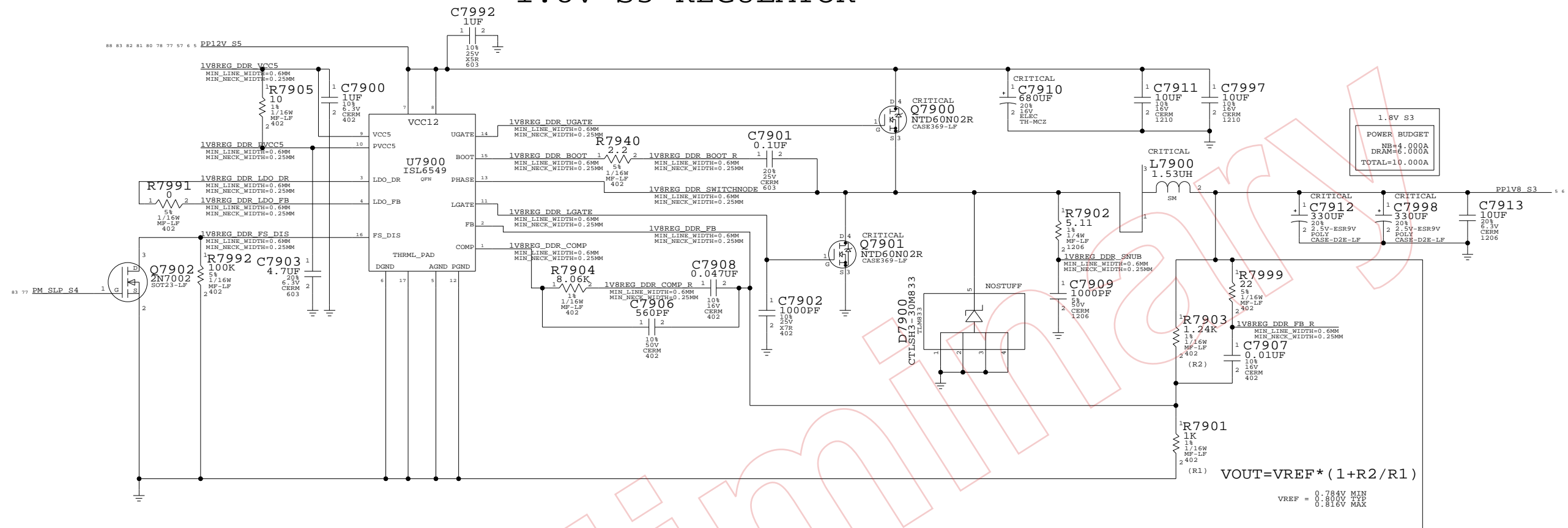
SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
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SCALE	SHT	OF	
NONE	77	111	

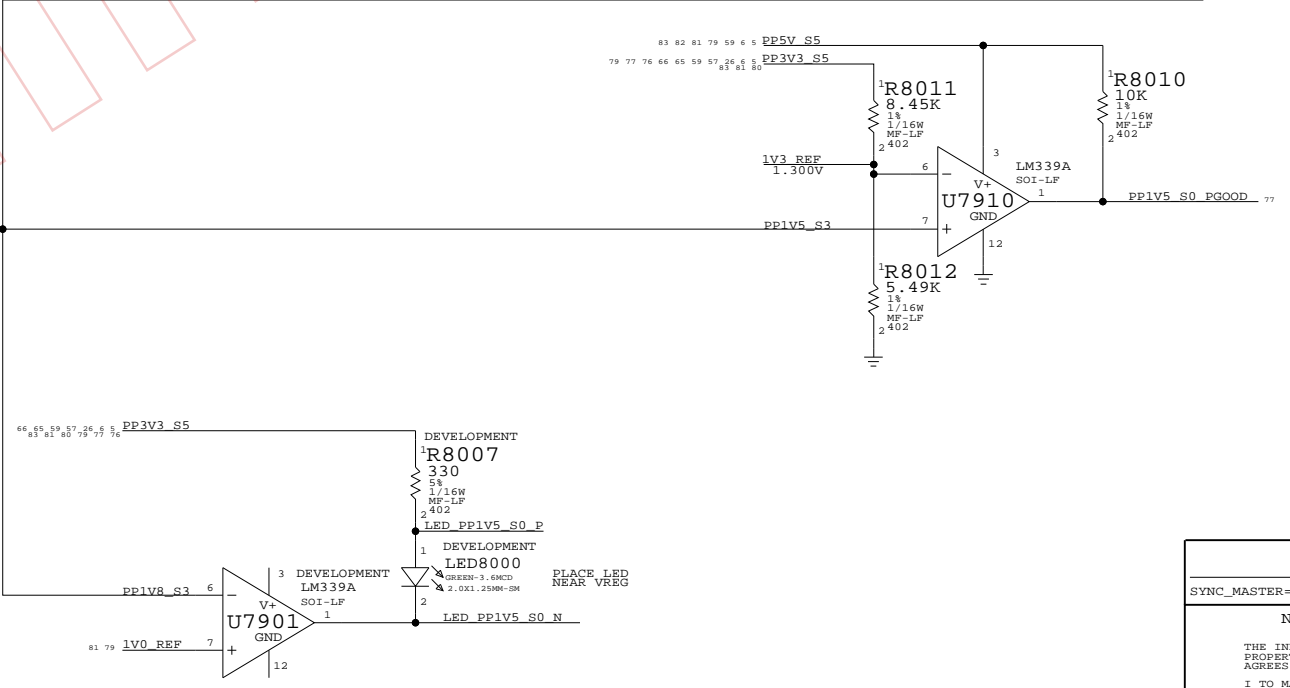
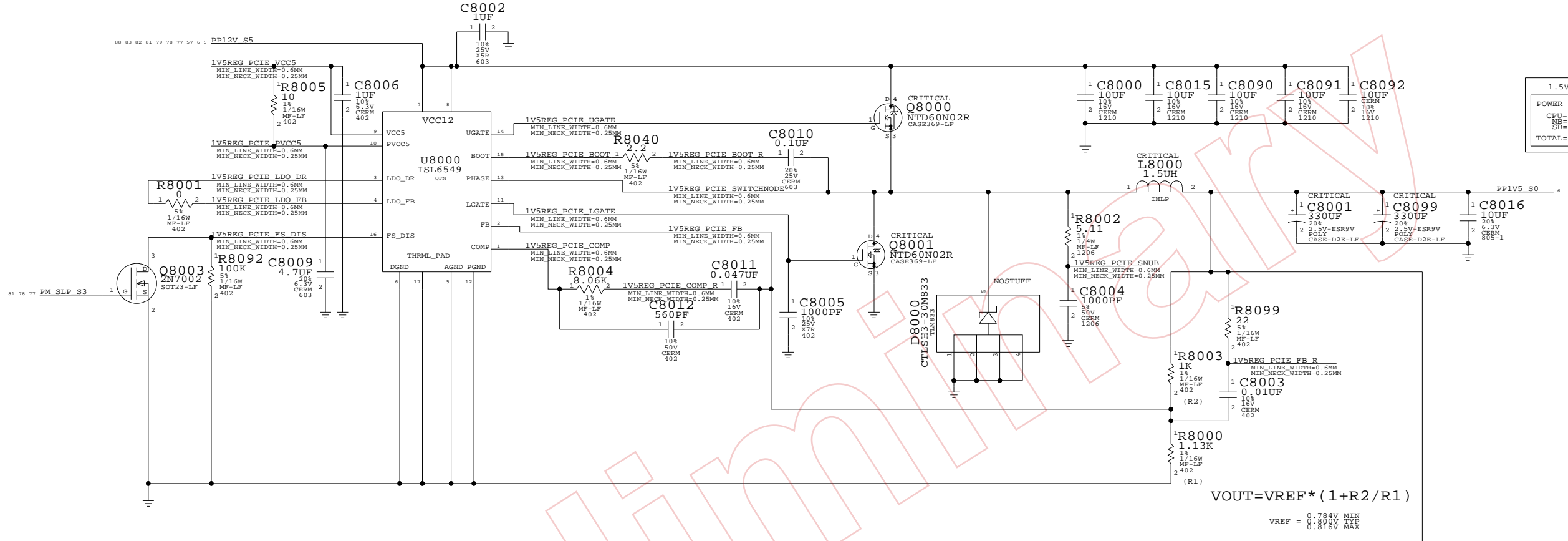
1.8V S3 REGULATOR



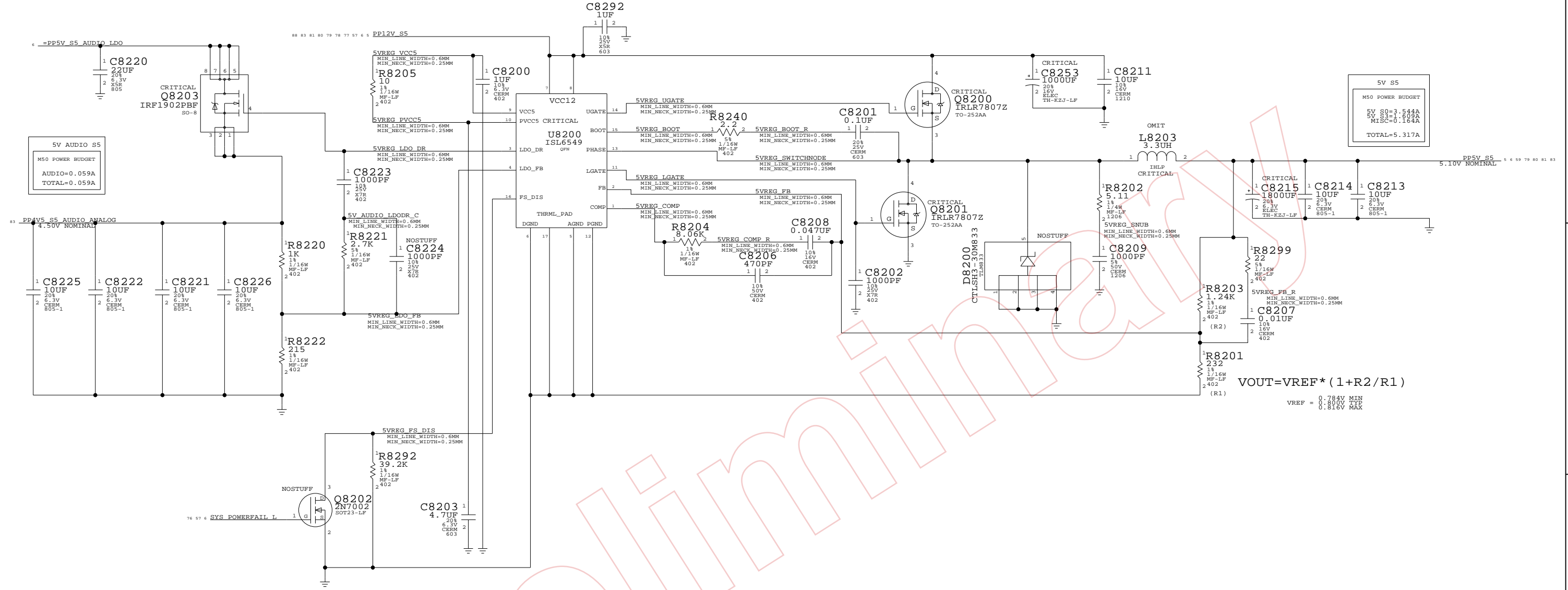
1.8V Vreg
 SYNC_MASTER=M23-PC SYNC_DATE=04/12/2005
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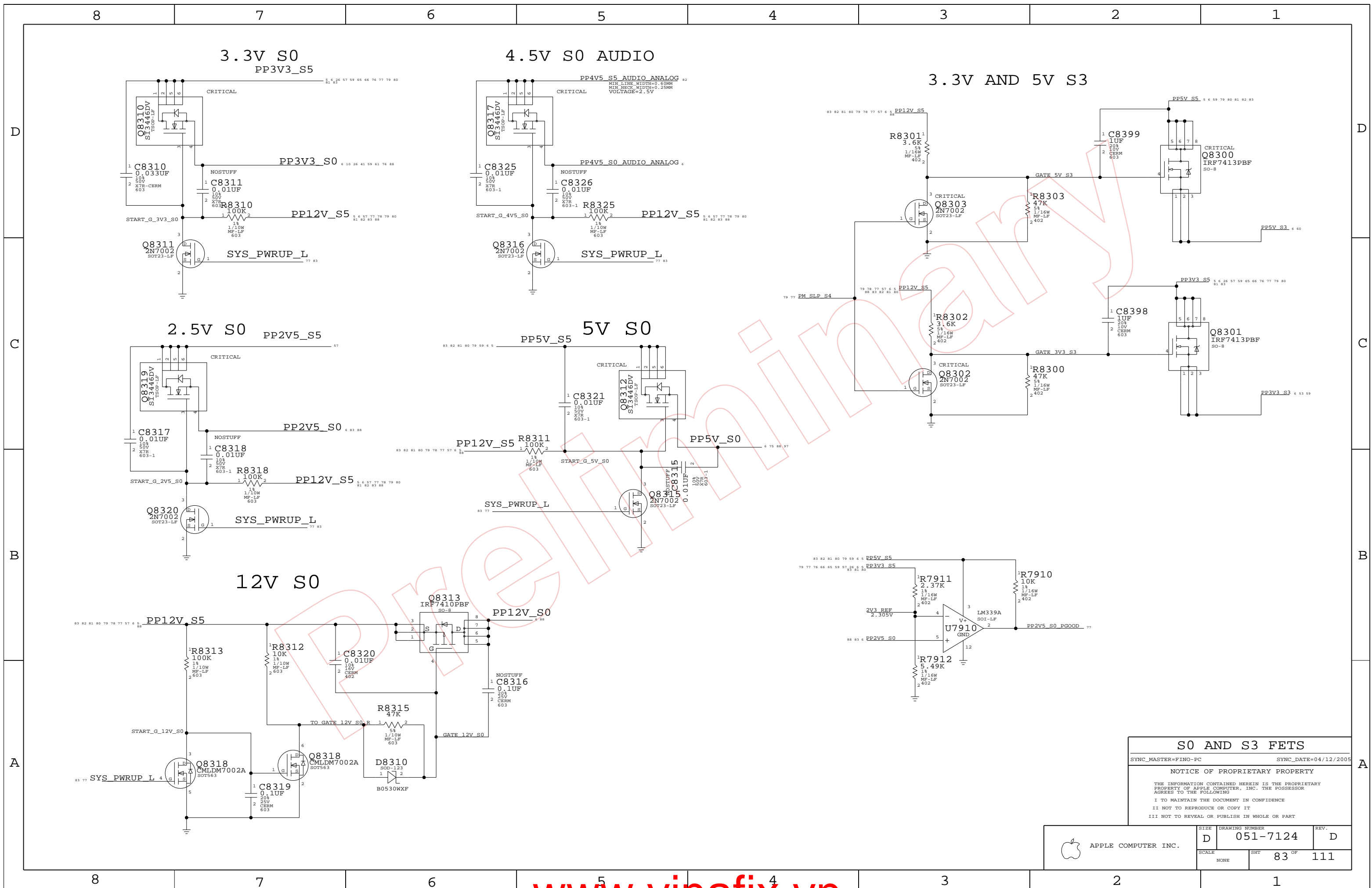
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	79 OF	111
NONE			

1.5V S0 REGULATOR



5V S5 AND 5V AUDIO S5 REGULATOR





S0 AND S3 FETS

SYNC_MASTER=FINO-PC SYNC_DATE=04/12/2005

NOTICE OF PROPRIETARY PROPERTY

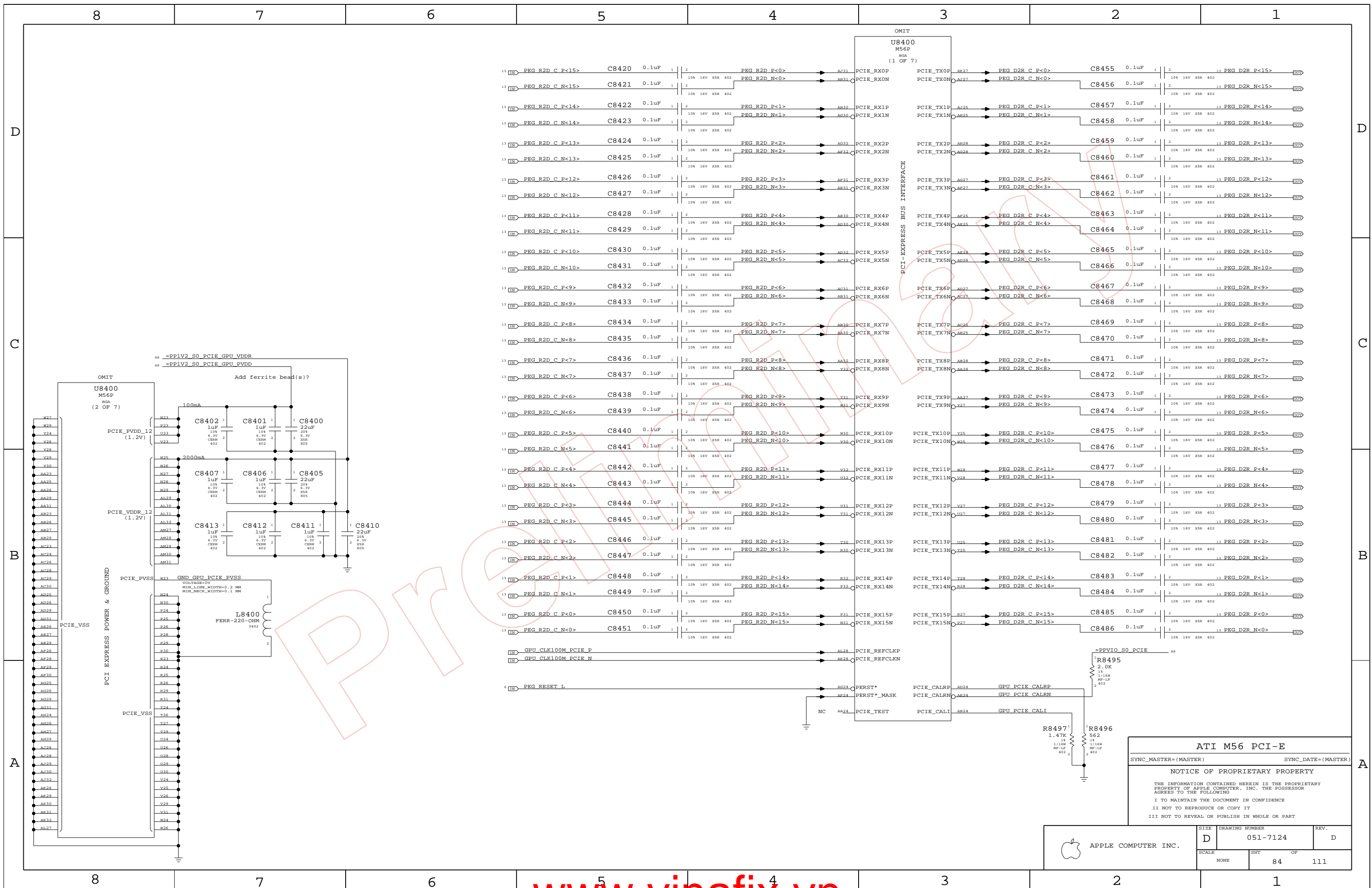
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	83 OF	111
NONE			



ATI M56 PCI-E

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

NOTICE OF PROPRIETARY PROPERTY

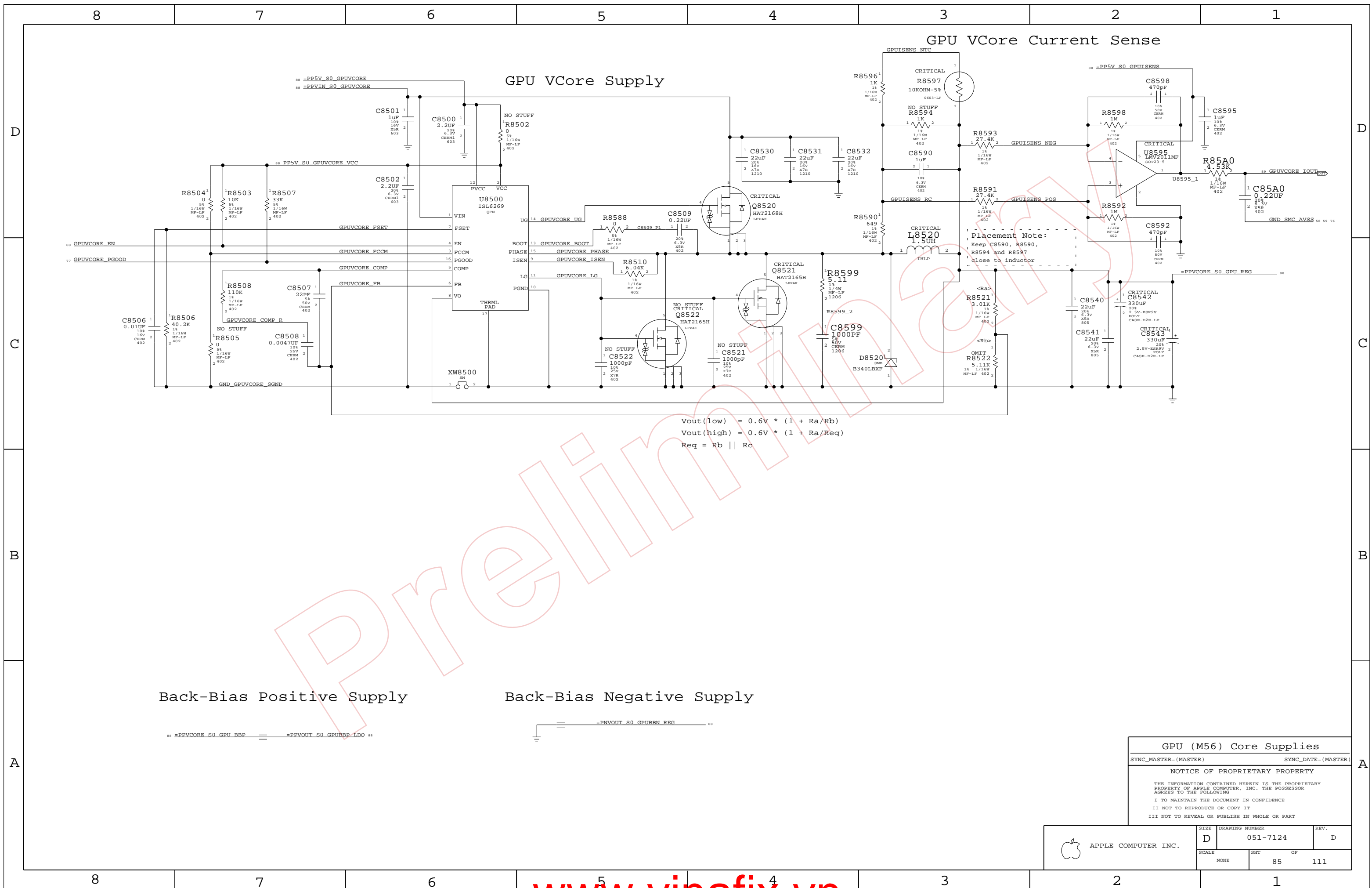
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 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	84	111	



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)
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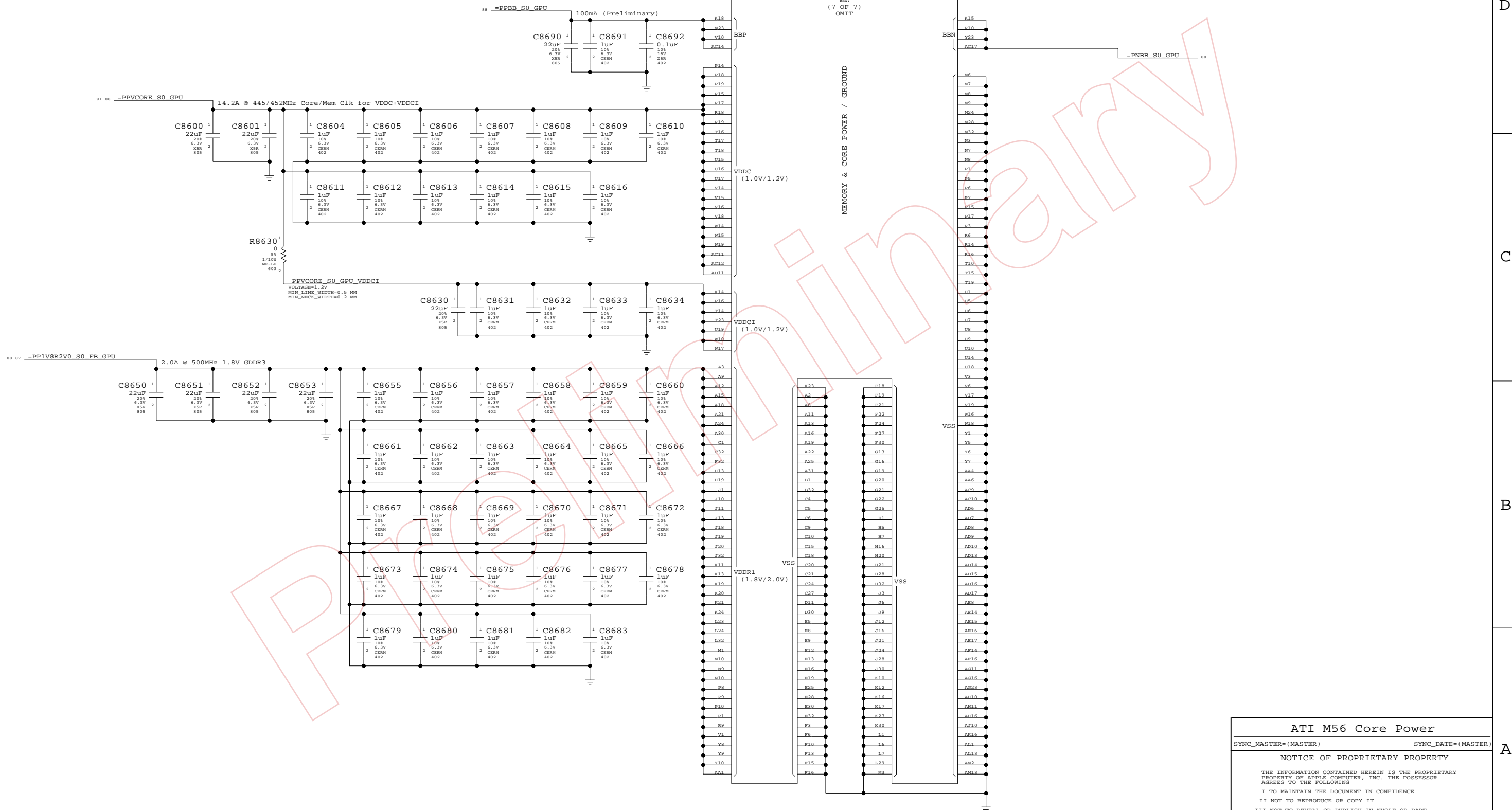
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	85	111	

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)

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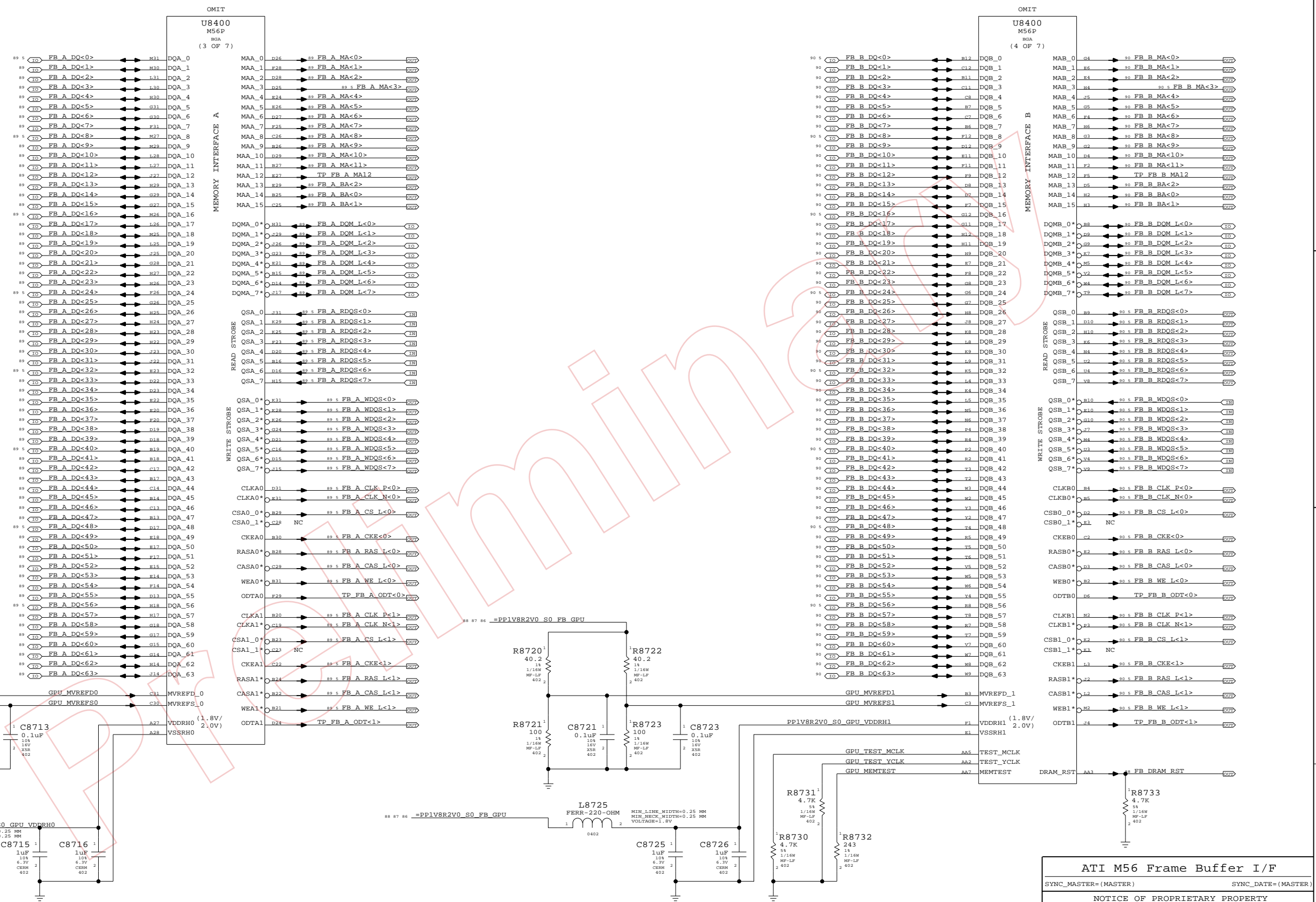
II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	NONE	SHT	OF
		86	111

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)
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Table with columns: SIZE (D), DRAWING NUMBER (051-7124), REV. (D), SCALE (NONE), SHEET (87 OF 111).

8

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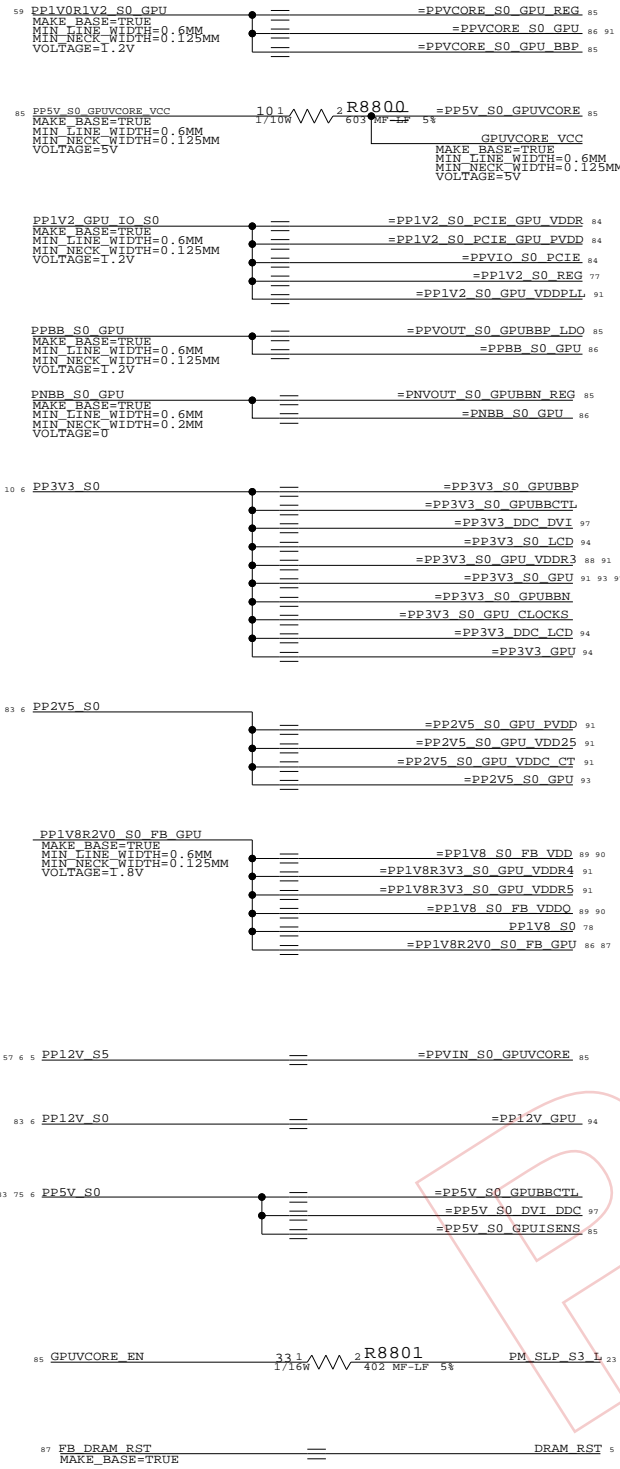
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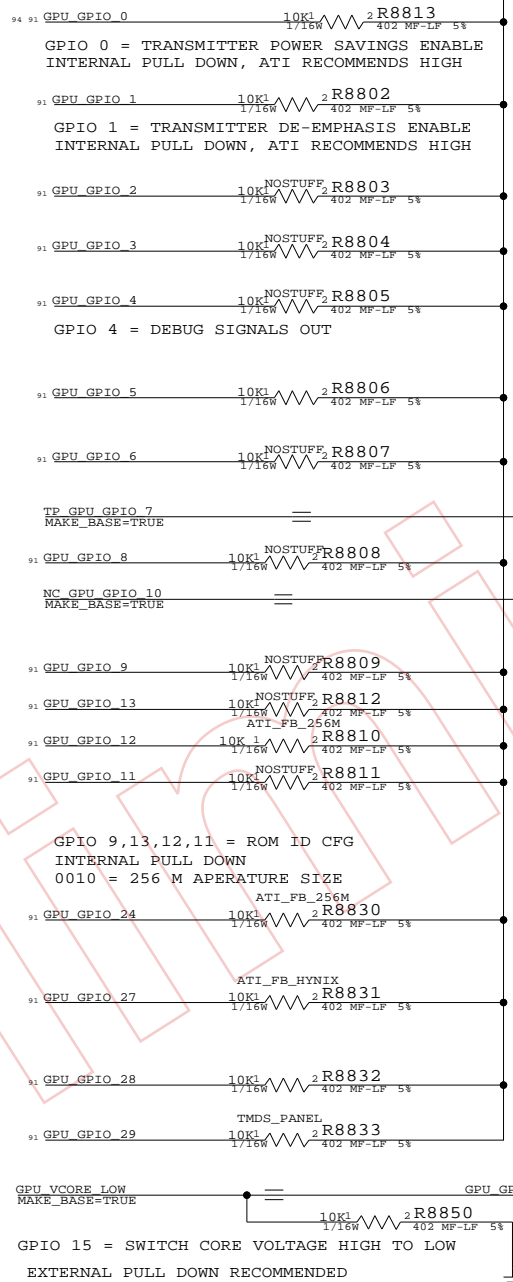
1

"S0" GPU RAILS

ONLY ON IN RUN



M56 GPIOs



=PP3V3_S0_GPU_VDDR3 88 91

TP_GPU_GPIO_14
MAKE_BASE=TRUE
GPU_GPIO_14 91

TP_GPU_GPIO_17
MAKE_BASE=TRUE
GPU_GPIO_17 91

TP_GPU_VGA_R
MAKE_BASE=TRUE
GPU_VGA_R 93

TP_GPU_VGA_G
MAKE_BASE=TRUE
GPU_VGA_G 93

TP_GPU_VGA_B
MAKE_BASE=TRUE
GPU_VGA_B 93

TP_GPU_VGA_HSYNC
MAKE_BASE=TRUE
GPU_VGA_HSYNC 93

TP_GPU_VGA_VSYNC
MAKE_BASE=TRUE
GPU_VGA_VSYNC 93

TP_GPU_TV_Y
MAKE_BASE=TRUE
GPU_TV_Y 93

TP_GPU_TV_COMP
MAKE_BASE=TRUE
GPU_TV_COMP 93

TP_GPU_TV_C
MAKE_BASE=TRUE
GPU_TV_C 93

TP_GPU_DDC_B_CLK
MAKE_BASE=TRUE
GPU_DDC_B_CLK 93

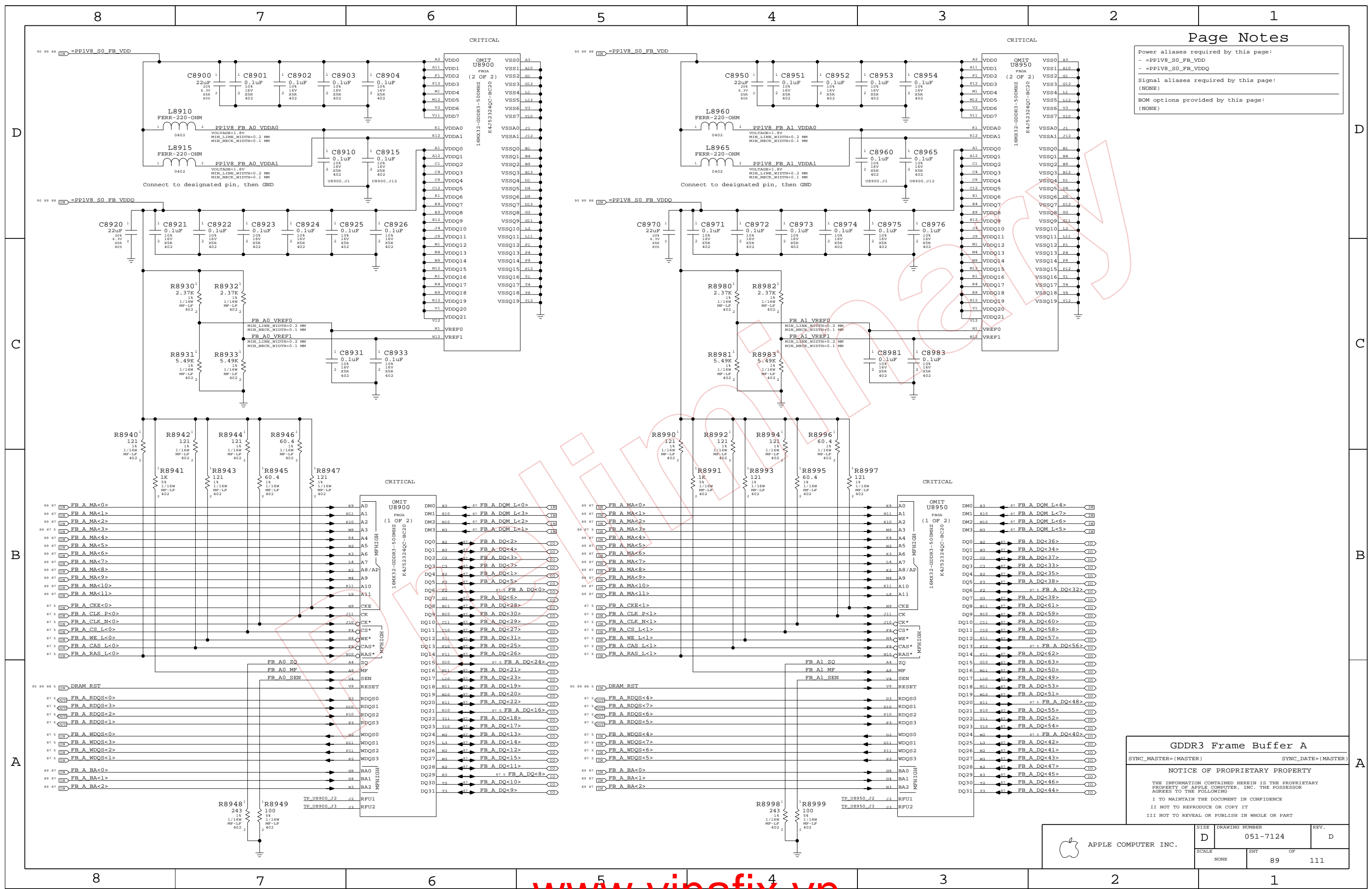
TP_GPU_DDC_B_DATA
MAKE_BASE=TRUE
GPU_DDC_B_DATA 93

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)

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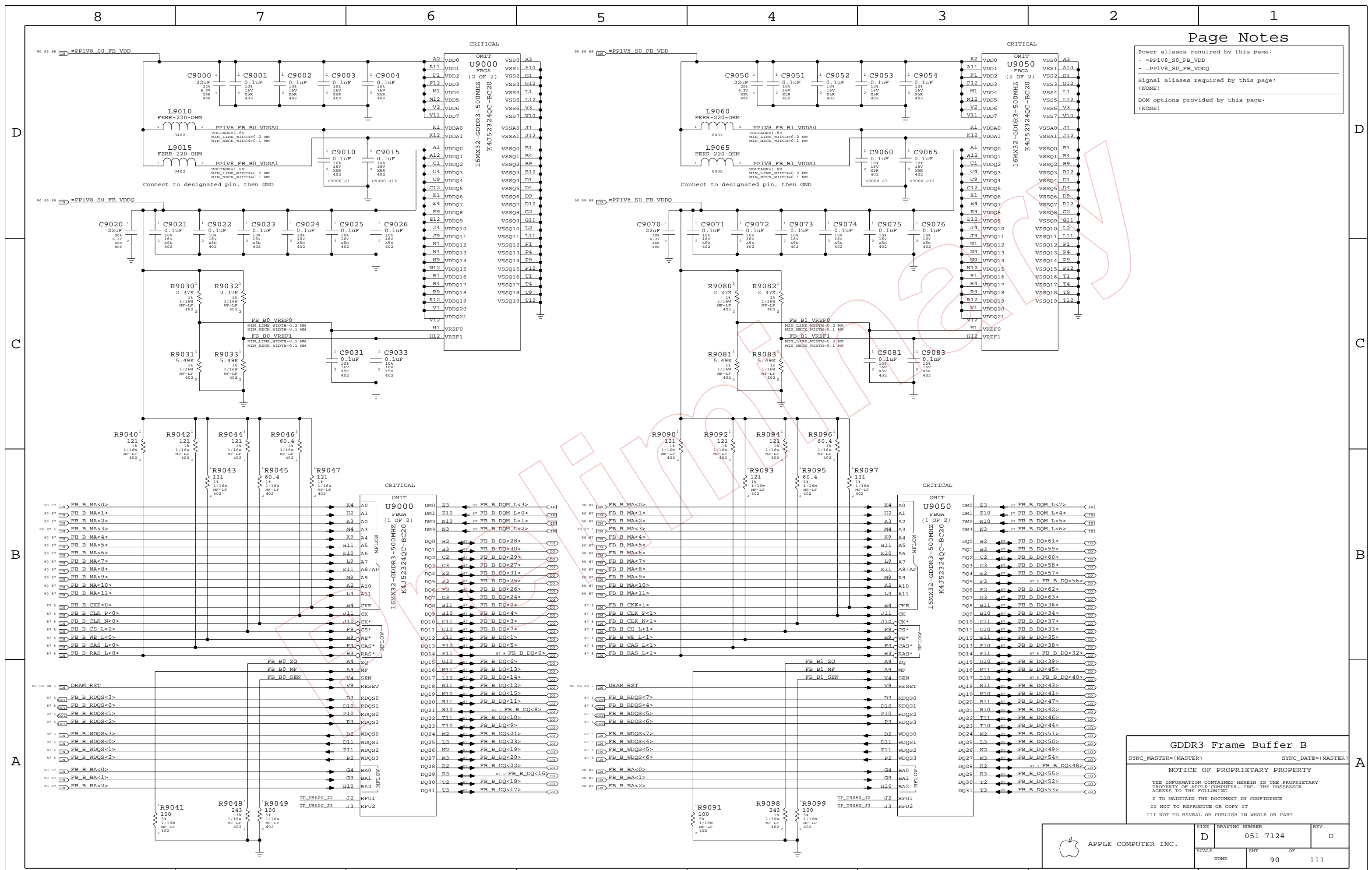
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	89	111	

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)

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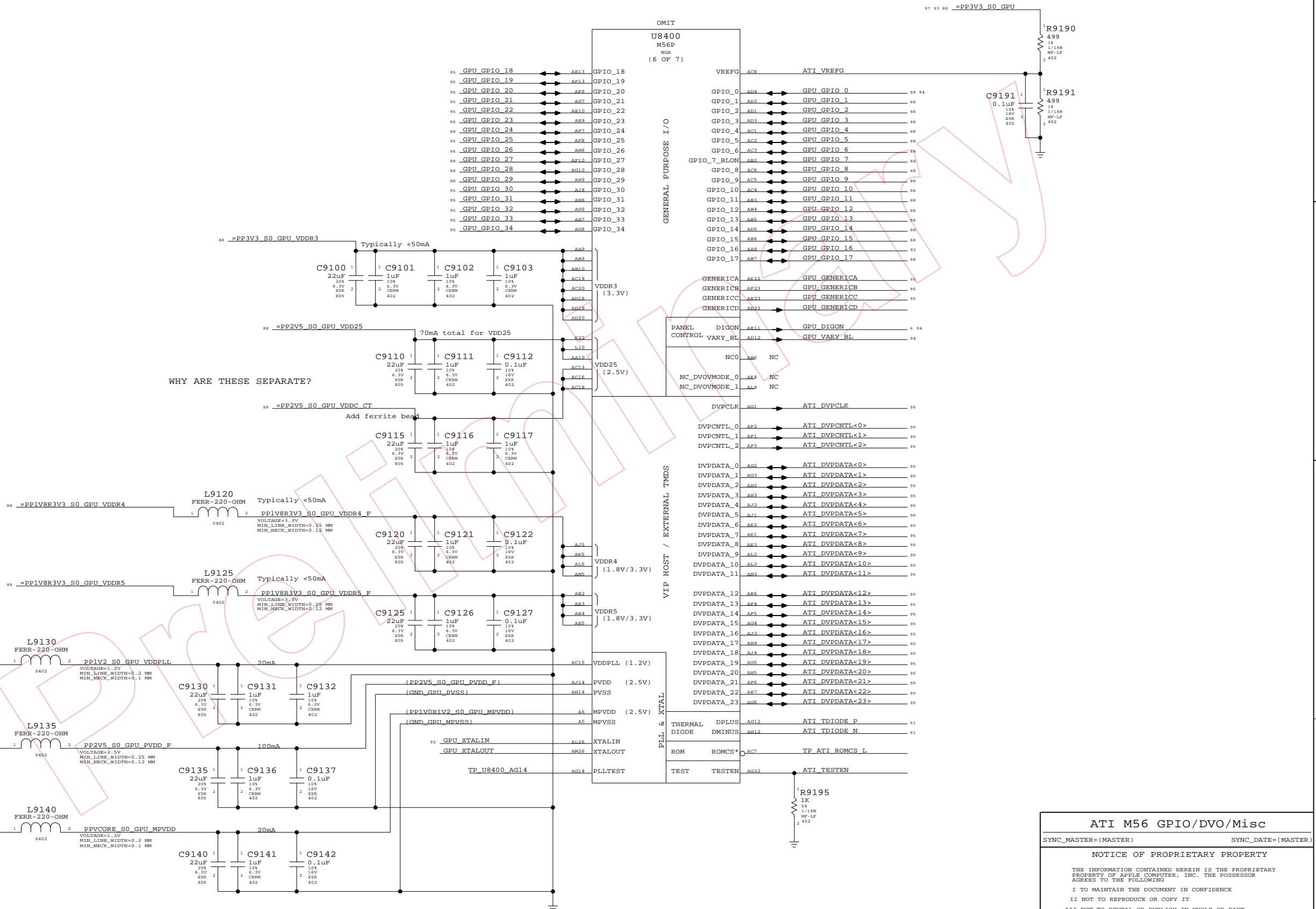
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	90	111	

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)

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	91	111	

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Page Notes

Power aliases required by this page:

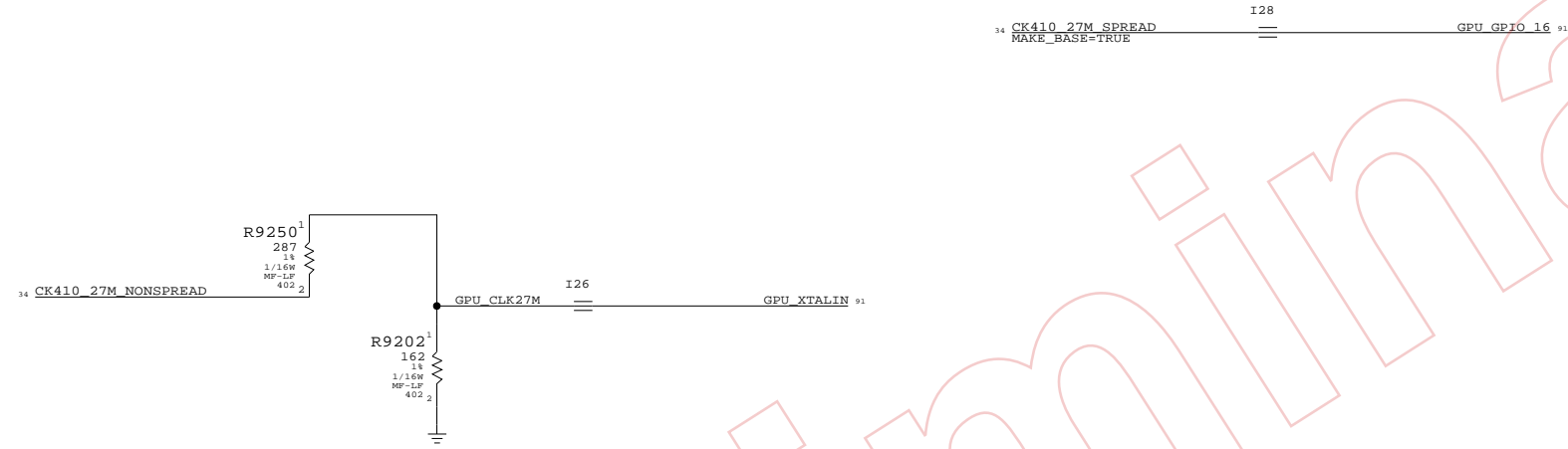
- =PP3V3_GPU_CLOCKS - =PP3V3_GPU_PWRSEQ
- =PPVIN_GPU_LVDDR_LDO - =PP2V5_GPU_PWRSEQ
- =PP2V5_GPU_LVDDR_LDO - =PP1V8_GPU_PWRSEQ
- =PP1V5_GPU_PWRSEQ

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

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	92	111	

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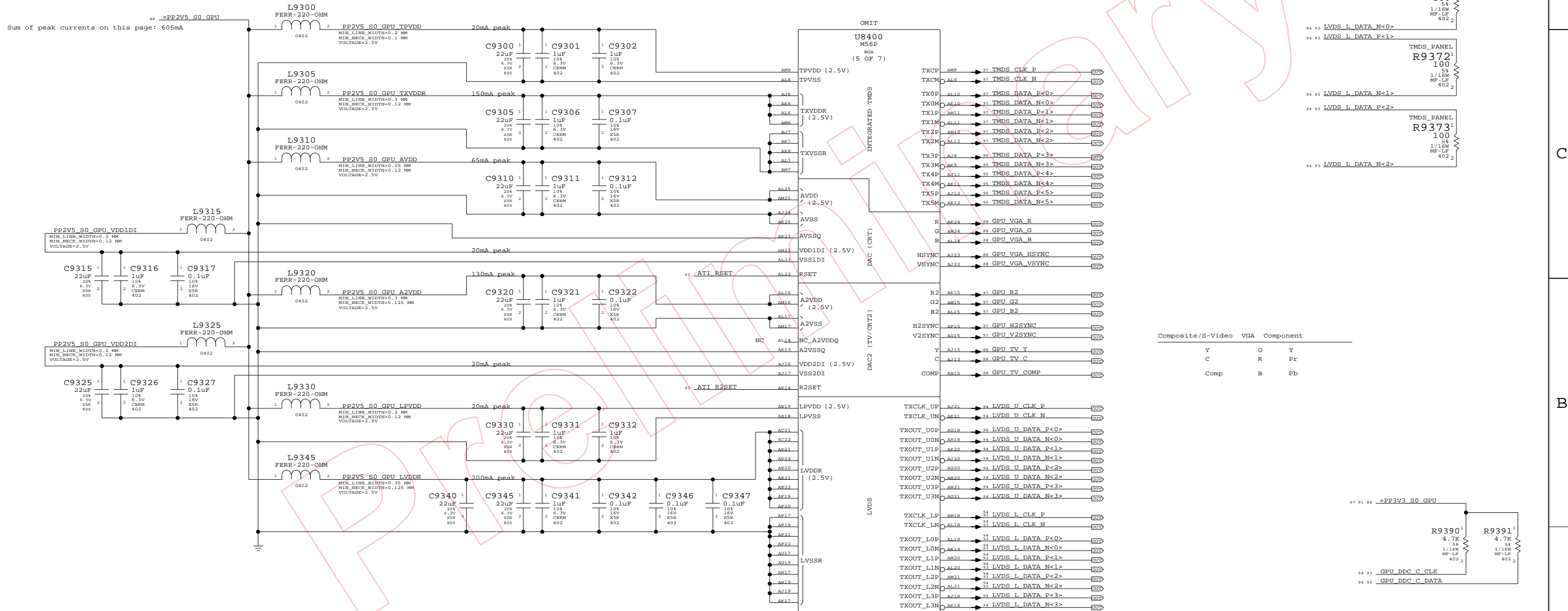
Page Notes

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)

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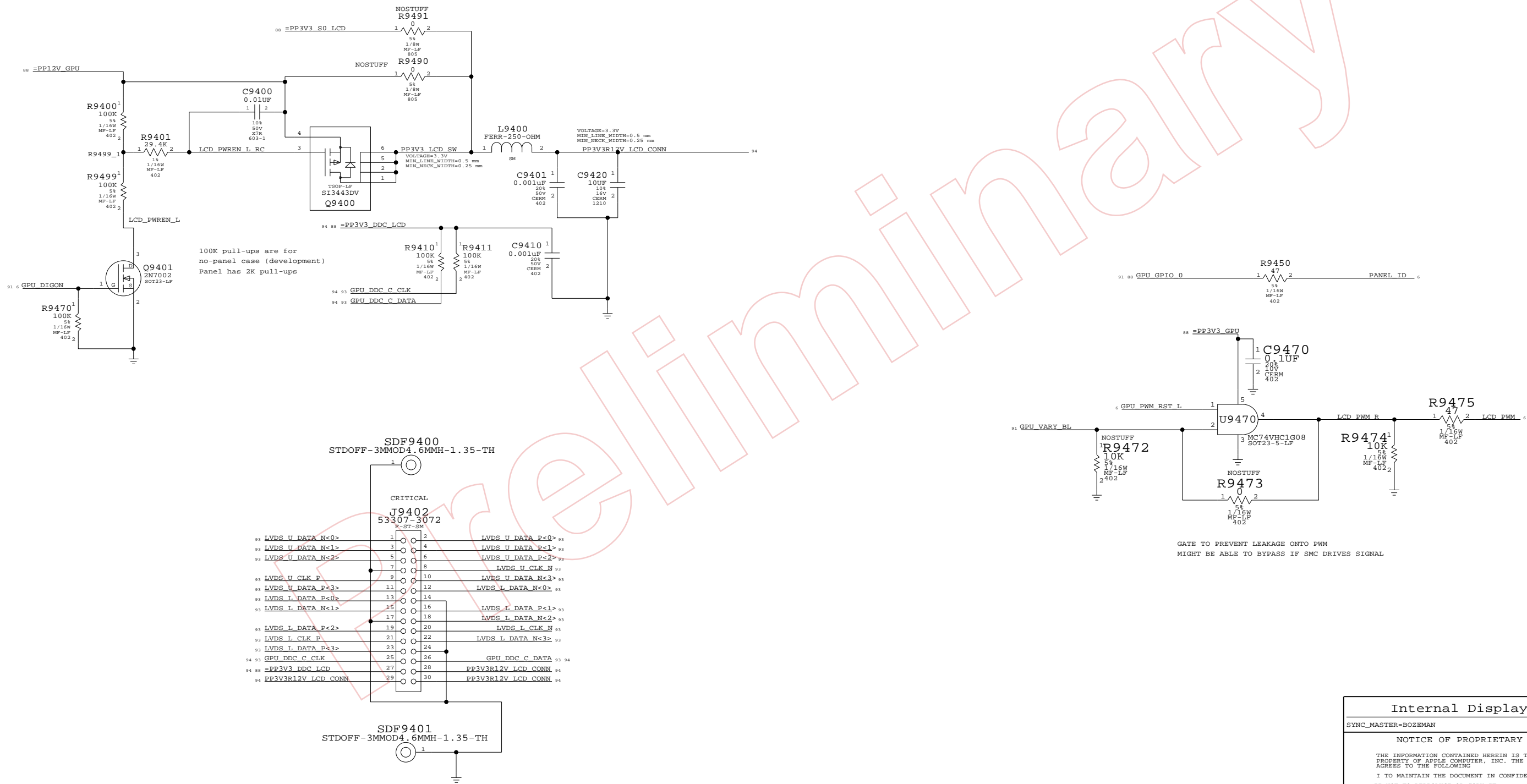
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III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SCALE	SHT	OF	REV.
	NONE	93	111	D

LCD (LVDS) INTERFACE



Internal Display Conns
 SYNC_MASTER=BOZEMAN SYNC_DATE=04/27/2005
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	
NONE	94	111	

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D

D

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TP ATI DVPDATA<0> == ATI DVPDATA<0> 91
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TP ATI DVPCLK == ATI DVPCLK 91
 MAKE_BASE=TRUE

TP ATI DVPNTL<0> == ATI DVPNTL<0> 91
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TP ATI DVPNTL<1> == ATI DVPNTL<1> 91
 MAKE_BASE=TRUE

TP ATI DVPNTL<2> == ATI DVPNTL<2> 91
 MAKE_BASE=TRUE

TP GPU GPIO<34> == GPU_GPIO_34 91
 MAKE_BASE=TRUE

TP GPU GPIO<33> == GPU_GPIO_33 91
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TP GPU GPIO<32> == GPU_GPIO_32 91
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TP GPU GPIO<31> == GPU_GPIO_31 91
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TP GPU GPIO<30> == GPU_GPIO_30 91
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TP GPU GPIO<25> == GPU_GPIO_25 91
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TP GPU GPIO<23> == GPU_GPIO_23 91
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TP GPU GPIO<22> == GPU_GPIO_22 91
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TP GPU GPIO<21> == GPU_GPIO_21 91
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TP GPU GPIO<19> == GPU_GPIO_19 91
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TP GPU GPIO<18> == GPU_GPIO_18 91
 MAKE_BASE=TRUE

TP GPU GENERIC A == GPU_GENERIC A 91
 MAKE_BASE=TRUE

TP GPU GENERIC B == GPU_GENERIC B 91
 MAKE_BASE=TRUE

TP GPU GENERIC C == GPU_GENERIC C 91
 MAKE_BASE=TRUE

C

C

B

B

A

A

8

7

6

5

4

3

2

1

M56 TPS

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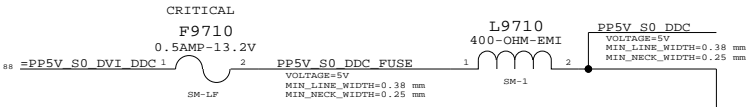
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7124	D
SCALE	SHT	OF	111
NONE	95		

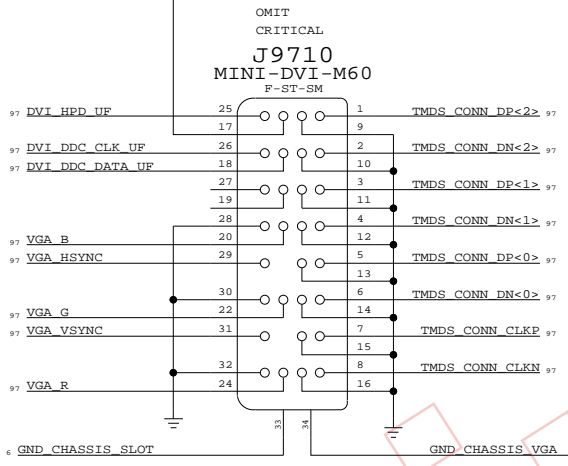
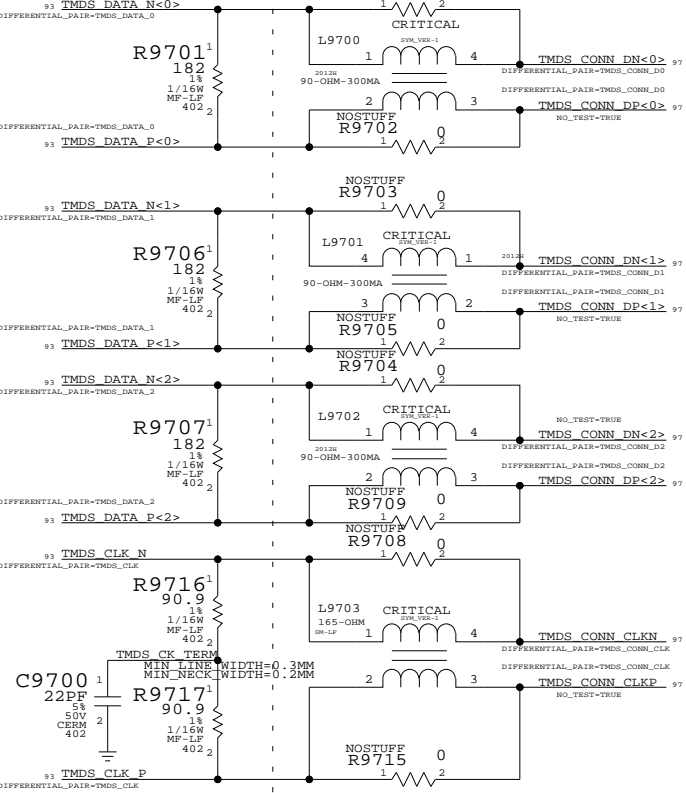
PLACE LEFT SIDE AS CLOSE TO GPU (U8400) AS POSSIBLE

PLACE FILTER CLOSE TO TMD5 CONNECTOR

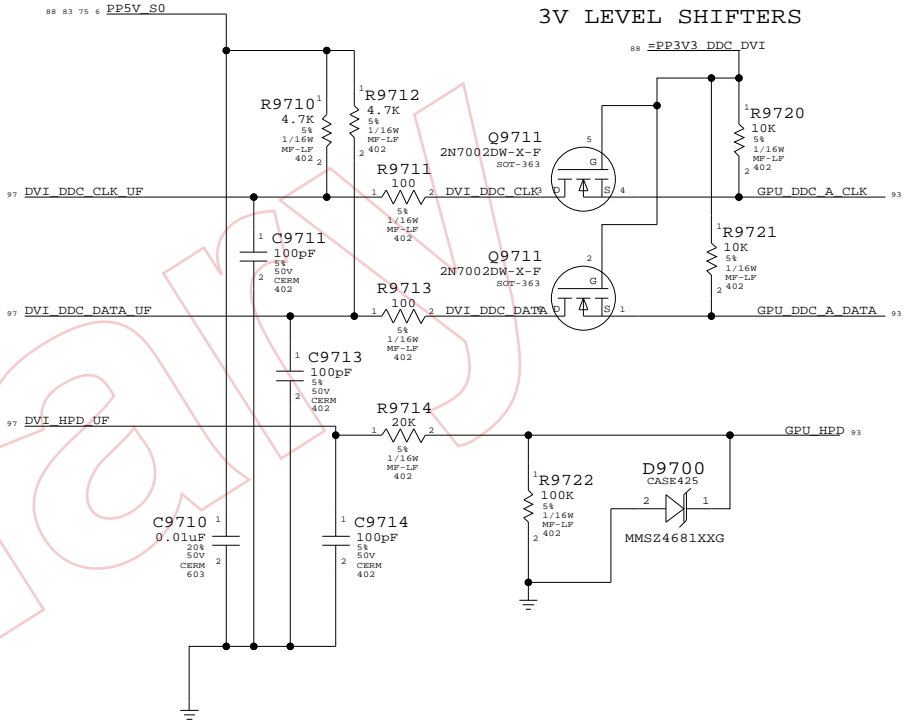
DVI DDC CURRENT LIMIT DVI INTERFACE



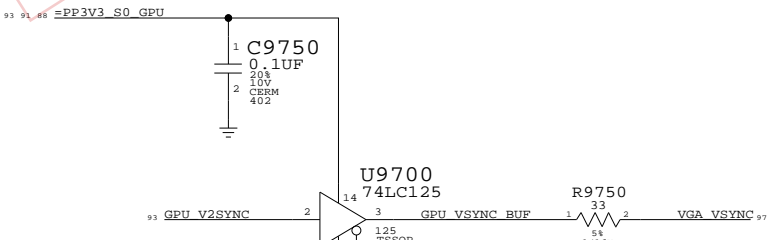
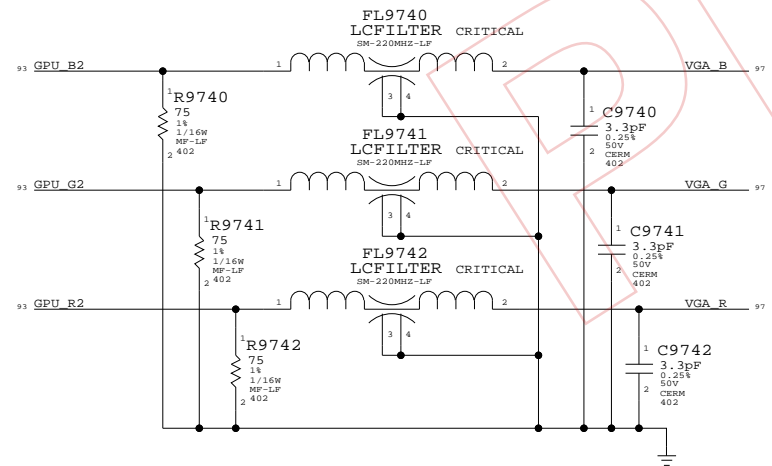
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
740S0044	740S0028		F9710	FUSE



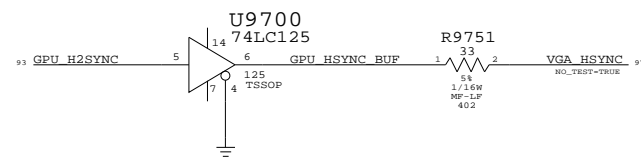
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
514S0125	1	M39 MINI-DVI CONN	J9710	



ANALOG FILTERING PLACE CLOSE TO CONNECTOR



VGA SYNC BUFFERS



External Display Conns
 SYNC_MASTER=BOZEMAN SYNC_DATE=04/14/2005
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APPLE COMPUTER INC.	SCALE	SHT	OF	REV.
	NONE	97	111	D

	8	7	6	5	4	3	2	1	
D	START_G_2V5_S0	START_G_2V5_S0 - @m60_lib.M60	8388	TP_SB_XOR_AE5	TP_SB_XOR_AE5 - @m60_lib.M60	22A7	U9700_8	U9700_8 - @m60_lib.M60	6A6
	START_G_3V3_S0	START_G_3V3_S0 - @m60_lib.M60	8388	TP_SB_XOR_AE9	TP_SB_XOR_AE9 - @m60_lib.M60	22A6	USB_A_N	USB_A_N - @m60_lib.M60	22C2 47D7
	START_G_4V5_S0	START_G_4V5_S0 - @m60_lib.M60	8386	TP_SB_XOR_AG4	TP_SB_XOR_AG4 - @m60_lib.M60	22A7	USB_A_OC_L	USB_A_OC_L - @m60_lib.M60	22C4 22D8 47B8
	START_G_5V_S0	START_G_5V_S0 - @m60_lib.M60	8385	TP_SB_XOR_AG8	TP_SB_XOR_AG8 - @m60_lib.M60	22A6	USB_A_P	USB_A_P - @m60_lib.M60	22C2 47C7
	START_G_12V_S0	START_G_12V_S0 - @m60_lib.M60	83A8	TP_SB_XOR_AH4	TP_SB_XOR_AH4 - @m60_lib.M60	22A7	USB_B_N	USB_B_N - @m60_lib.M60	22C2 53B2
	SUS_CLK_SB	SUS_CLK_SB - @m60_lib.M60	23C3 59B5	TP_SB_XOR_AH8	TP_SB_XOR_AH8 - @m60_lib.M60	22A6	USB_B_OC_L	USB_B_OC_L - @m60_lib.M60	22C4 22D8
	SV_SET_UP	SV_SET_UP - @m60_lib.M60	58C5 59B6	TP_SB_XOR_T5	TP_SB_XOR_T5 - @m60_lib.M60	21C6	USB_B_P	USB_B_P - @m60_lib.M60	22C2 53B2
	SW_RST_BRT_L	SW_RST_BRT_L - @m60_lib.M60	23B6 23C3 60C1	TP_SB_XOR_U3	TP_SB_XOR_U3 - @m60_lib.M60	21C6	USB_CAMERA_N	USB_CAMERA_N - @m60_lib.M60	47B2
	SW_RST_DEBNC	SW_RST_DEBNC - @m60_lib.M60	5D1 26C6	TP_SB_XOR_U5	TP_SB_XOR_U5 - @m60_lib.M60	21C6	USB_CAMERA_P	USB_CAMERA_P - @m60_lib.M60	47B2
	SW_RST_BRT_D	SW_RST_BRT_D - @m60_lib.M60	26C4	TP_SB_XOR_U7	TP_SB_XOR_U7 - @m60_lib.M60	21C6	USB_C_N	USB_C_N - @m60_lib.M60	22C2 47B7
SYS_LED_BRT_D	SYS_LED_BRT_D - @m60_lib.M60	60B8	TP_SB_XOR_V3	TP_SB_XOR_V3 - @m60_lib.M60	21C6	USB_C_OC_L	USB_C_OC_L - @m60_lib.M60	22C4 22D8 47B8	
SYS_LED_C	SYS_LED_C - @m60_lib.M60	60B6	TP_SB_XOR_V4	TP_SB_XOR_V4 - @m60_lib.M60	21C6	USB_C_P	USB_C_P - @m60_lib.M60	22C2 47B7	
SYS_LED_CTL_B	SYS_LED_CTL_B - @m60_lib.M60	60B7	TP_SB_XOR_V6	TP_SB_XOR_V6 - @m60_lib.M60	21C6	USB_D_N	USB_D_N - @m60_lib.M60	22C2 47B3	
SYS_LED_CTL_C	SYS_LED_CTL_C - @m60_lib.M60	60B6	TP_SB_XOR_V7	TP_SB_XOR_V7 - @m60_lib.M60	21C6	USB_D_OC_L	USB_D_OC_L - @m60_lib.M60	22C4 22D8	
SYS_LED_CTL_D	SYS_LED_CTL_D - @m60_lib.M60	60B6	TP_SB_XOR_W1	TP_SB_XOR_W1 - @m60_lib.M60	21C6	USB_D_P	USB_D_P - @m60_lib.M60	22C2 47B3	
SYS_ONEWIRE	SYS_ONEWIRE - @m60_lib.M60	58B7 59B4	TP_SB_XOR_W3	TP_SB_XOR_W3 - @m60_lib.M60	21C6	USB_E_N	USB_E_N - @m60_lib.M60	22C2 47A7	
SYS_POWERFAIL_L	SYS_POWERFAIL_L - @m60_lib.M60	6D8 57B7 76D2 82B7	TP_SB_XOR_Y1	TP_SB_XOR_Y1 - @m60_lib.M60	21C6	USB_E_OC_L	USB_E_OC_L - @m60_lib.M60	22C4 22D8 47B8	
THRM_DX_N	THRM_DX_N - @m60_lib.M60	10B5 10C5	TP_SB_XOR_Y2	TP_SB_XOR_Y2 - @m60_lib.M60	21C6	USB_E_P	USB_E_P - @m60_lib.M60	22C2 47A7	
THRM_DX_P	THRM_DX_P - @m60_lib.M60	10B5 10C5	TP_U8400_AG14	TP_U8400_AG14 - @m60_lib.M60	91A5	USB_F_N	USB_F_N - @m60_lib.M60	22C2	
THRM_ALERT_L	THRM_ALERT_L - @m60_lib.M60	10D3	TP_U8900_J2	TP_U8900_J2 - @m60_lib.M60	89A7	USB_F_P	USB_F_P - @m60_lib.M60	22C2	
THRM_THM	THRM_THM - @m60_lib.M60	10C4	TP_U8900_J3	TP_U8900_J3 - @m60_lib.M60	89A7	USB_G_N	USB_G_N - @m60_lib.M60	22C2 47A3	
TMD5_CHK_TERM	TMD5_CHK_TERM - @m60_lib.M60	97C8	TP_U8950_J2	TP_U8950_J2 - @m60_lib.M60	89A4	USB_BT_N	USB_BT_N - @m60_lib.M60	47A3	
TMD5_CLK_N	TMD5_CLK_N - @m60_lib.M60	93C3 97C8	TP_U8950_J3	TP_U8950_J3 - @m60_lib.M60	89A4	USB_G_P	USB_G_P - @m60_lib.M60	22C2 47A3	
TMD5_CLK_P	TMD5_CLK_P - @m60_lib.M60	93C3 97C8	TP_U9000_J2	TP_U9000_J2 - @m60_lib.M60	90A7	USB_BT_P	USB_BT_P - @m60_lib.M60	47A3	
TMD5_CONN_CLKN	TMD5_CONN_CLKN - @m60_lib.M60	97C4 97C7	TP_U9000_J3	TP_U9000_J3 - @m60_lib.M60	90A7	USB_H_N	USB_H_N - @m60_lib.M60	22C2 47C3	
TMD5_CONN_CLKP	TMD5_CONN_CLKP - @m60_lib.M60	97C4 97C7	TP_U9050_J2	TP_U9050_J2 - @m60_lib.M60	90A4	USB_H_P	USB_H_P - @m60_lib.M60	22C2 47C3	
TMD5_CONN_DM<0>	TMD5_CONN_DM<0> - @m60_lib.M60	97C4 97D7	TP_U9050_J3	TP_U9050_J3 - @m60_lib.M60	90A4	USB_IR_N	USB_IR_N - @m60_lib.M60	47C2	
TMD5_CONN_DM<1>	TMD5_CONN_DM<1> - @m60_lib.M60	97C4 97D7	TSNSSE_CPU_DXP	TSNSSE_CPU_DXP - @m60_lib.M60	61B5	USB_IR_P	USB_IR_P - @m60_lib.M60	47C2	
TMD5_CONN_DM<2>	TMD5_CONN_DM<2> - @m60_lib.M60	97C7 97D4	TSNSSE_NB_DXP	TSNSSE_NB_DXP - @m60_lib.M60	61B5	USB_PORT0_N	USB_PORT0_N - @m60_lib.M60	47D5	
TMD5_CONN_DP<0>	TMD5_CONN_DP<0> - @m60_lib.M60	97C4 97D7	TSNSSE_NB_DXP_DXN	TSNSSE_NB_DXP_DXN - @m60_lib.M60	61B5	USB_PORT0_P	USB_PORT0_P - @m60_lib.M60	47C5	
TMD5_CONN_DP<1>	TMD5_CONN_DP<1> - @m60_lib.M60	97C4 97D7	TV_DACA_OUT	TV_DACA_OUT - @m60_lib.M60	13C5 19B1	USB_PORT1_N	USB_PORT1_N - @m60_lib.M60	47B5	
TMD5_CONN_DP<2>	TMD5_CONN_DP<2> - @m60_lib.M60	97C7 97D4	TV_DACB_OUT	TV_DACB_OUT - @m60_lib.M60	13C5 19B1	USB_PORT1_P	USB_PORT1_P - @m60_lib.M60	47B5	
TMD5_DATA_N<0>	TMD5_DATA_N<0> - @m60_lib.M60	93C3 97D8	TV_DACC_OUT	TV_DACC_OUT - @m60_lib.M60	13C5 19B1	USB_PORT2_N	USB_PORT2_N - @m60_lib.M60	47A5	
TMD5_DATA_N<1>	TMD5_DATA_N<1> - @m60_lib.M60	93C3 97D8	TV_IRTRNA	TV_IRTRNA - @m60_lib.M60	13C5 19B1	USB_PORT2_P	USB_PORT2_P - @m60_lib.M60	47A5	
TMD5_DATA_N<2>	TMD5_DATA_N<2> - @m60_lib.M60	93C3 97C8	TV_IRTRNB	TV_IRTRNB - @m60_lib.M60	13C5 19B1	USB_RBIA5_PN	USB_RBIA5_PN - @m60_lib.M60	22C2	
TMD5_DATA_N<3>	TMD5_DATA_N<3> - @m60_lib.M60	93C3 95D6	TV_IRTRNC	TV_IRTRNC - @m60_lib.M60	13C5 19B1	VGA_B	VGA_B - @m60_lib.M60	97B6 97C5	
TMD5_DATA_N<4>	TMD5_DATA_N<4> - @m60_lib.M60	93C3 95D6	PP3V3_S0_NB_VCCA_TVDBG	PP3V3_S0_NB_VCCA_TVDBG - @m60_lib.M60	17C6 19B1	VGA_G	VGA_G - @m60_lib.M60	97A6 97C5	
TMD5_DATA_N<5>	TMD5_DATA_N<5> - @m60_lib.M60	93C3 95D6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1	VGA_HSYNCP	VGA_HSYNCP - @m60_lib.M60	97A3 97C5	
TMD5_DATA_P<0>	TMD5_DATA_P<0> - @m60_lib.M60	93C3 97D8	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1	VGA_R	VGA_R - @m60_lib.M60	97A6 97C5	
TMD5_DATA_P<1>	TMD5_DATA_P<1> - @m60_lib.M60	93C3 97C8	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1	VGA_VSYNCP	VGA_VSYNCP - @m60_lib.M60	97A3 97C5	
TMD5_DATA_P<2>	TMD5_DATA_P<2> - @m60_lib.M60	93C3 97C8	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1	VMAIN_AVLBL	VMAIN_AVLBL - @m60_lib.M60	41C7	
TMD5_DATA_P<3>	TMD5_DATA_P<3> - @m60_lib.M60	93C3 95D6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1	VR_PWRGD_CK410	VR_PWRGD_CK410 - @m60_lib.M60	23C5 26A8	
TMD5_DATA_P<4>	TMD5_DATA_P<4> - @m60_lib.M60	93C3 95D6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1	VR_PWRGOOD_DELAY	VR_PWRGOOD_DELAY - @m60_lib.M60	5C7 14B6 26D5 75C6	
TMD5_DATA_P<5>	TMD5_DATA_P<5> - @m60_lib.M60	93C3 95D6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1	XDP_BPM_L<0>	XDP_BPM_L<0> - @m60_lib.M60	7C6 11B3	
TO_GATE_12V_S0_R	TO_GATE_12V_S0_R - @m60_lib.M60	83A7	PP1V5_S0_NB_VCCD_TVDAC	PP1V5_S0_NB_VCCD_TVDAC - @m60_lib.M60	17C6 19B1	XDP_BPM_L<1>	XDP_BPM_L<1> - @m60_lib.M60	7C6 11B3	
TPM_BADD	TPM_BADD - @m60_lib.M60	67C4	PP1V5_S0_NB_VCCD_TVDAC	PP1V5_S0_NB_VCCD_TVDAC - @m60_lib.M60	17C6 19B1	XDP_BPM_L<2>	XDP_BPM_L<2> - @m60_lib.M60	7C6 11B3	
TPM_GP101	TPM_GP101 - @m60_lib.M60	59B5 67C6	PP1V5_S0_NB_VCCD_QTVDAC	PP1V5_S0_NB_VCCD_QTVDAC - @m60_lib.M60	17B6 19B1	XDP_BPM_L<3>	XDP_BPM_L<3> - @m60_lib.M60	7C6 11B3	
TPM_GP102	TPM_GP102 - @m60_lib.M60	59B5 67C6	PP1V5_S0_NB_VCCD_QTVDAC	PP1V5_S0_NB_VCCD_QTVDAC - @m60_lib.M60	17B6 19B1	XDP_BPM_L<4>	XDP_BPM_L<4> - @m60_lib.M60	7C6 11B3	
TPM_LRESET_L	TPM_LRESET_L - @m60_lib.M60	6B7 67B7	PP1V5_S0_AIRPORT	PP1V5_S0_AIRPORT - @m60_lib.M60	6C4 53D3	XDP_BPM_L<5>	XDP_BPM_L<5> - @m60_lib.M60	7C6 11B3	
TPM_PP	TPM_PP - @m60_lib.M60	59A5 67C6	PP1V5_S0	PP1V5_S0 - @m60_lib.M60	6C6 80C1	XDP_DBRESET_L	XDP_DBRESET_L - @m60_lib.M60	7C6 11B4 26B5	
TPM_RST_L	TPM_RST_L - @m60_lib.M60	67B6	PP1V5_S0	PP1V5_S0 - @m60_lib.M60	6C6 80A8	XDP_TCK	XDP_TCK - @m60_lib.M60	5D1 7A8 7C6 11B3 11B3	
TPM_XTALI	TPM_XTALI - @m60_lib.M60	59B7 67C6	PP1V5_S0_SB	PP1V5_S0_SB - @m60_lib.M60	6C4 25A8 25C8	XDP_TDI	XDP_TDI - @m60_lib.M60	5D1 7B8 7C6 11B3	
TPM_XTALO	TPM_XTALO - @m60_lib.M60	59B7 67C6	PP1V5_S0_SB_VCC1_5_A	PP1V5_S0_SB_VCC1_5_A - @m60_lib.M60	6C4 24A3 25C1	XDP_TDO	XDP_TDO - @m60_lib.M60	5D1 7C6 11B5	
TP_ATI_ROMCS_L	TP_ATI_ROMCS_L - @m60_lib.M60	91A3	PP1V5_S0_SB_VCC1_5_A_USR_CORE	PP1V5_S0_SB_VCC1_5_A_USR_CORE - @m60_lib.M60	6C4 24A3 25B1	XDP_TMS	XDP_TMS - @m60_lib.M60	5D1 7B8 7C6 11B3	
TP_AUD_BI_PORT_D_L	TP_AUD_BI_PORT_D_L - @m60_lib.M60	68C7	PP1V5_S0_SB_VCC1_5_A_USR_CORE	PP1V5_S0_SB_VCC1_5_A_USR_CORE - @m60_lib.M60	6C4 24A3 25B1	XDP_TRST_L	XDP_TRST_L - @m60_lib.M60	5D1 7C6 11B3	
TP_AUD_BI_PORT_D_R	TP_AUD_BI_PORT_D_R - @m60_lib.M60	68C7	PP1V5_S0_SB_VCCUSBPPLL	PP1V5_S0_SB_VCCUSBPPLL - @m60_lib.M60	6C4 24A5 25B6	ZH701P1	ZH701P1 - @m60_lib.M60	6A3	
TP_AUD_BI_PORT_E_L	TP_AUD_BI_PORT_E_L - @m60_lib.M60	68C1	PP1V5_S0_SB_VCC1_5_A_ATX	PP1V5_S0_SB_VCC1_5_A_ATX - @m60_lib.M60	6C4 24A5 25C6	ZH702P1	ZH702P1 - @m60_lib.M60	6A3	
TP_AUD_BI_PORT_E_R	TP_AUD_BI_PORT_E_R - @m60_lib.M60	68C1	PP1V5_S0_SB_VCC1_5_A_ARX	PP1V5_S0_SB_VCC1_5_A_ARX - @m60_lib.M60	6C4 24B5 25D6	ZH703P1	ZH703P1 - @m60_lib.M60	6A3	
TP_AZ_DOCK_EN_L	TP_AZ_DOCK_EN_L - @m60_lib.M60	23C5	PP1V5_S0_SB_VCC1_5_A_ARX	PP1V5_S0_SB_VCC1_5_A_ARX - @m60_lib.M60	6C4 24B5 25D6				
TP_AZ_DOCK_RST_L	TP_AZ_DOCK_RST_L - @m60_lib.M60	23C5	PP1V5_S0_NB_3GPLL	PP1V5_S0_NB_3GPLL - @m60_lib.M60	6C4 19A6 19A6				
TP_CLK14P3M_SPARE	TP_CLK14P3M_SPARE - @m60_lib.M60	34C4	PP1V5_S0_NB_PLL	PP1V5_S0_NB_PLL - @m60_lib.M60	6C4 19C8 19D7				
TP_CPU_A32_L	TP_CPU_A32_L - @m60_lib.M60	7C7	PP1V5_S0_NB_VCCAUX	PP1V5_S0_NB_VCCAUX - @m60_lib.M60	6C4 6C4 16D1 17B6 19A7 19D7				
TP_CPU_A33_L	TP_CPU_A33_L - @m60_lib.M60	7B7	PP1V5_S0_NB_VCCD_HMPLL	PP1V5_S0_NB_VCCD_HMPLL - @m60_lib.M60	6C4 17C6 19D7				
TP_CPU_A34_L	TP_CPU_A34_L - @m60_lib.M60	7B7	PP1V5_S0_NB_PCIE	PP1V5_S0_NB_PCIE - @m60_lib.M60	6C4 13D2 19D7				
TP_CPU_A35_L	TP_CPU_A35_L - @m60_lib.M60	7B7	PP1V5_S0_CPU	PP1V5_S0_CPU - @m60_lib.M60	6C4 8B6 8C5				
TP_CPU_A36_L	TP_CPU_A36_L - @m60_lib.M60	7B7	TV_IRTRNC	TV_IRTRNC - @m60_lib.M60	13C5 19B1				
TP_CPU_A37_L	TP_CPU_A37_L - @m60_lib.M60	7B7	TV_IRTRNB	TV_IRTRNB - @m60_lib.M60	13C5 19B1				
TP_CPU_A38_L	TP_CPU_A38_L - @m60_lib.M60	7B7	TV_IRTRNA	TV_IRTRNA - @m60_lib.M60	13C5 19B1				
TP_CPU_A39_L	TP_CPU_A39_L - @m60_lib.M60	7B7	TV_DACC_OUT	TV_DACC_OUT - @m60_lib.M60	13C5 19B1				
TP_CPU_APM0_L	TP_CPU_APM0_L - @m60_lib.M60	7B7	TV_DACB_OUT	TV_DACB_OUT - @m60_lib.M60	13C5 19B1				
TP_CPU_APM1_L	TP_CPU_APM1_L - @m60_lib.M60	7B7	TV_DACC_OUT	TV_DACC_OUT - @m60_lib.M60	13C5 19B1				
TP_CPU_CPUSLP_L	TP_CPU_CPUSLP_L - @m60_lib.M60	21C4	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_EXTBREF	TP_CPU_EXTBREF - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_HFPLL	TP_CPU_HFPLL - @m60_lib.M60	7B7	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_SPARE0	TP_CPU_SPARE0 - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_SPARE1	TP_CPU_SPARE1 - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_SPARE2	TP_CPU_SPARE2 - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_SPARE3	TP_CPU_SPARE3 - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_SPARE4	TP_CPU_SPARE4 - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_SPARE5	TP_CPU_SPARE5 - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_SPARE6	TP_CPU_SPARE6 - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_CPU_SPARE7	TP_CPU_SPARE7 - @m60_lib.M60	7B6	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_FB_A_MA12	TP_FB_A_MA12 - @m60_lib.M60	87D5	PP3V3_S0_NB_VCCA_TVDACC	PP3V3_S0_NB_VCCA_TVDACC - @m60_lib.M60	17C6 19B1				
TP_FB_A_ODT<0>	TP_FB_A_ODT<0> - @m60_lib.M60	87B5	PP3V3_S0_NB_VCCA_TVDBG	PP3V3_S0_NB_VCCA_TVDBG - @m60_lib.M60	17C6 19B1				
TP_FB_A_ODT<1>	TP_FB_A_ODT<1> - @m60_lib.M60	87B5	PP3V3_S0_NB_VCCA_TVDBG	PP3V3_S0_NB_VCCA_TVDBG - @m60_lib.M60	17C6 19B1				
TP_FB_B_MA12	TP_FB_B_MA12 - @m60_lib.M60	87D1	PP1V5_S0_NB_VCCD_TVDAC	PP1V5_S0_NB_VCCD_TVDAC - @m60_lib.M60	17B6 19B1				
TP_FB_B_ODT<0>	TP_FB_B_ODT<0> - @m60_lib.M60	87B1	PP1V5_S0_NB_VCCD_TVDAC	PP1V5_S0_NB_VCCD_TVDAC - @m60_lib.M60	17B6 19B1				
TP_FB_B_ODT<1>	TP_FB_B_ODT<1> - @m60_lib.M60	87B1	PP1V5_S0	PP1V5_S0 - @m60_lib.M60	6C6 80C1				

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Title: Cref Part Report			C2513 CAP_402 m60[25C6]			C4112 CAP_402 m60[41C4]			C5792 CAP_603 m60[57D5]														
Design: m60			C2514 CAP_402 m60[25C6]			C4113 CAP_402 m60[41C4]			C5797 CAP_1210 m60[57D2]														
Date: Jun 23 16:28:15 2006			C2515 CAP_402 m60[25B6]			C4115 CAP_402 m60[41B5]			C5798 CAP_1210 m60[57D2]														
			C2516 CAP_P_CASE-C2 m60[25D3]			C4116 CAP_402 m60[41B5]			C5799 CAP_1210 m60[57D3]														
C85A0 CAP_402 m60[85D1]			C2517 CAP_402 m60[25D6]			C4117 CAP_402 m60[41B2]			C5800 CAP_402 m60[59B8]														
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C601 CAP_402 m60[6A3]			C2519 CAP_402 m60[25D3]			C4126 CAP_402 m60[41A8]			C5802 CAP_805 m60[58D3]														
C602 CAP_402 m60[6A3]			C2520 CAP_402 m60[25B6]			C4127 CAP_402 m60[41A8]			C5803 CAP_402 m60[58D2]														
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C623 CAP_805-2 m60[6D7]			C2525 CAP_402 m60[25B3]			C4132 CAP_402 m60[41A7]			C5820 CAP_402 m60[58C3]														
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C916 CAP_805 m60[9A7]			C2803 CAP_603 m60[28B1]			C4304 CAP_402 m60[43C6]			C6312 CAP_402 m60[63D3]														
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C938 CAP_402 m60[9B6]			C2910 CAP_402 m60[29B1]			C4522 CAP_402 m60[45D3]			C6802 CAP_P_6_3X5.5-SM m60[68D4]														
C939 CAP_805 m60[9A5]			C2911 CAP_402 m60[29B1]			C4523 CAP_402 m60[45D3]			C6803 CAP_P_6_3X5.5-SM m60[68D3]														
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C942 CAP_P_3P_D2T m60[9A7]			C2914 CAP_402 m60[29B1]			C4611 CAP_402 m60[46D4]			C6806 CAP_805 m60[68B3]														
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C1713 CAP_402 m60[17B3]			C3033 CAP_402 m60[30C3]			C4742 CAP_402 m60[47D2]			C7215 CAP_402 m60[72C6]														
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C1903 CAP_805-1 m60[19B4]			C3102 CAP_805-1 m60[31B4]			C4752 CAP_402 m60[47D6]			C7219 CAP_603 m60[72D4]														
C1904 CAP_402 m60[19B4]			C3105 CAP_P_SMC-LF m60[31B4]			C4796 CAP_402 m60[47C8]			C7221 CAP_402 m60[72B7]														
C1905 CAP_402 m60[19B4]			C3109 CAP_603 m60[31C5]																				

	8			7			6			5			4			3			2			1		
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	GV3802	HOLE_VIA	m60[38A7]	L7325	IND_0603-LF	m60[73A5]	PP628	PROBEPOINT_SM	m60[5C8]	PP8909	PROBEPOINT_SM	m60[5B5]												
	GV3803	HOLE_VIA	m60[38A8]	L7326	IND_0603-LF	m60[73B5]	PP629	PROBEPOINT_SM	m60[5C8]	PP8910	PROBEPOINT_SM	m60[5B5]												
	GV3804	HOLE_VIA	m60[38A7]	L7327	IND_0603-LF	m60[73A5]	PP630	PROBEPOINT_SM	m60[5C8]	PP8911	PROBEPOINT_SM	m60[5B5]												
	GV3805	HOLE_VIA	m60[38A8]	L7381	IND_0603-LF	m60[73A5]	PP631	PROBEPOINT_SM	m60[5D6]	PP8912	PROBEPOINT_SM	m60[5B5]												
	GV3806	HOLE_VIA	m60[38A7]	L7500	IND_SM	m60[75D1]	PP632	PROBEPOINT_SM	m60[5D6]	PP8913	PROBEPOINT_SM	m60[5B5]												
	GV3807	HOLE_VIA	m60[38A8]	L7501	IND_SM	m60[75B2]	PP633	PROBEPOINT_SM	m60[5D6]	PP8914	PROBEPOINT_SM	m60[5A5]												
	GV3808	HOLE_VIA	m60[38A7]	L7502	IND_TH-VERT-LF	m60[76D8]	PP634	PROBEPOINT_SM	m60[5D6]	PP8915	PROBEPOINT_SM	m60[5A5]												
	J3	CON_2RTSM_125_SM-2MT	m60[61B6]	L7750	IND_SM-LF	m60[77B2]	PP635	PROBEPOINT_SM	m60[5D6]	PP8916	PROBEPOINT_SM	m60[5A5]												
	J600	CON_M14RT_D_THA_M-RT	m60[6D7]	L7800	IND_3P_SM	m60[78C3]	PP636	PROBEPOINT_SM	m60[5D6]	PP8920	PROBEPOINT_SM	m60[5A5]												
C	J0700	CPU_YONAH_SKT_BGA	m60[7C3 7D7]	L7880	IND_0603-LF	m60[73A7]	PP637	PROBEPOINT_SM	m60[5D6]	PP8921	PROBEPOINT_SM	m60[5A5]	C											
	J0700	CPU_YONAH_SKT_BGA	m60[8D4 8D8]	L7900	IND_3P_SM	m60[79C3]	PP638	PROBEPOINT_SM	m60[5D6]	PP8922	PROBEPOINT_SM	m60[5A5]												
	J1000	CON_2RTSM_125_SM-2MT	m60[10B7]	L8000	IND_IHLP	m60[80C3]	PP639	PROBEPOINT_SM	m60[5D6]	PP8923	PROBEPOINT_SM	m60[5A5]												
	J1101	CON_F28RT_S2MT_SM_F-	m60[11C2]	L8100	IND_IHLP	m60[81C3]	PP640	PROBEPOINT_SM	m60[5D6]	PP8924	PROBEPOINT_SM	m60[5A5]												
	J2600	BATTERY_2P_SM	m60[26C8]	L8203	IND_IHLP	m60[82D3]	PP641	PROBEPOINT_SM	m60[5D6]	PP8925	PROBEPOINT_SM	m60[5A5]												
	J2800	CON_F200RT_DDR2DIMM	m60[28D5]	L8400	IND_0402	m60[84B7]	PP642	PROBEPOINT_SM	m60[5D6]	PP8926	PROBEPOINT_SM	m60[5A5]												
	J2900	CON_F200RT_DDR2DIMM	m60[29D5]	L8520	IND_IHLP	m60[85C3]	PP643	PROBEPOINT_SM	m60[5D6]	PP8927	PROBEPOINT_SM	m60[5A5]												
	J2901	CON_F45T_S2MT_SM_F-S	m60[59C7]	L8715	IND_0402	m60[87A7]	PP644	PROBEPOINT_SM	m60[5D6]	PP8928	PROBEPOINT_SM	m60[5A5]												
	J2903	CON_M2ST_S2MT_SM_M-S	m60[59C8]	L8725	IND_0402	m60[87A4]	PP645	PROBEPOINT_SM	m60[5D6]	PP8929	PROBEPOINT_SM	m60[5A5]												
	J4700	CON_F10ST_D_SMA_F-ST	m60[47A2]	L8910	IND_0402	m60[89D7]	PP646	PROBEPOINT_SM	m60[5D6]	PP8930	PROBEPOINT_SM	m60[5A5]												
B	J5300	CON_F52RT_D2MT_SM_F-	m60[53C5]	L8915	IND_0402	m60[89D7]	PP647	PROBEPOINT_SM	m60[5D6]	PP8931	PROBEPOINT_SM	m60[5A5]	B											
	J6000	CON_F30STSM_5047_SM1	m60[60C3]	L8960	IND_0402	m60[89D4]	PP648	PROBEPOINT_SM	m60[5D6]	PP8932	PROBEPOINT_SM	m60[5A5]												
	J6500	CON_M4RT_S2MT_SM_M-R	m60[65D3]	L8965	IND_0402	m60[89D4]	PP649	PROBEPOINT_SM	m60[5D6]	PP8933	PROBEPOINT_SM	m60[5A5]												
	J6501	CON_M5RT_S2MT_SM_M-R	m60[65B2]	L9010	IND_0402	m60[90D7]	PP650	PROBEPOINT_SM	m60[5D6]	PP8934	PROBEPOINT_SM	m60[5A5]												
	J6600	CON_F45T_S2MT_SM_F-S	m60[66C2]	L9015	IND_0402	m60[90D7]	PP651	PROBEPOINT_SM	m60[5D6]	PP8935	PROBEPOINT_SM	m60[5A5]												
	J6601	CON_M4RT_S2MT_SM_M-R	m60[66B5]	L9065	IND_0402	m60[90D4]	PP652	PROBEPOINT_SM	m60[5C6]	PP8936	PROBEPOINT_SM	m60[5A5]												
	J6602	CON_M4RT_S2MT_SM_M-R	m60[66B3]	L9120	IND_0402	m60[91B6]	PP653	PROBEPOINT_SM	m60[5C6]	PP9000	PROBEPOINT_SM	m60[5B4]												
	J7300	CON_F9ANG_S4MT_TH3_F	m60[73D8]	L9125	IND_0402	m60[91B6]	PP654	PROBEPOINT_SM	m60[5C6]	PP9001	PROBEPOINT_SM	m60[5B4]												
	J7301	CON_M7RT_S2MT_SM_M-R	m60[73C1]	L9130	IND_0402	m60[91B7]	PP655	PROBEPOINT_SM	m60[5C6]	PP9002	PROBEPOINT_SM	m60[5B4]												
	J7303	CON_F9ANG_S4MT_TH1_F	m60[73B3]	L9135	IND_0402	m60[91A7]	PP656	PROBEPOINT_SM	m60[5C6]	PP9003	PROBEPOINT_SM	m60[5B4]												
A	J9402	CON_F30ST_D_SMA_F-ST	m60[94B6]	L9140	IND_0402	m60[91A7]	PP657	PROBEPOINT_SM	m60[5C6]	PP9004	PROBEPOINT_SM	m60[5B4]	A											
	J9710	CON_DVI_F32ST_Q2MT_S	m60[97D5]	L9140	IND_0402	m60[91A7]	PP658	PROBEPOINT_SM	m60[5C6]	PP9005	PROBEPOINT_SM	m60[5B4]												
	JC900	CON_M7ST_SATA_SM_M-S	m60[38B8]	L9300	IND_0402	m60[93C7]	PP659	PROBEPOINT_SM	m60[5C6]	PP9006	PROBEPOINT_SM	m60[5B4]												
	JC901	CON_M50SM_5MM_M-ST-S	m60[38C2]	L9305	IND_0402	m60[93C7]	PP660	PROBEPOINT_SM	m60[5C6]	PP9007	PROBEPOINT_SM	m60[5B4]												
	JD600	CON_R145_10ANG_S3MT	m60[43C6]	L9310	IND_0402	m60[93C7]	PP661	PROBEPOINT_SM	m60[5C6]	PP9008	PROBEPOINT_SM	m60[5B4]												
	JE000	CON_F6ANG_S4MT_TH1_F	m60[46C2]	L9315	IND_0402	m60[93C7]	PP662	PROBEPOINT_SM	m60[5C6]	PP9009	PROBEPOINT_SM	m60[5B4]												
	JE001	CON_F6ANG_S4MT_TH1_F	m60[46B2]	L9320	IND_0402	m60[93B7]	PP663	PROBEPOINT_SM	m60[5C6]	PP9010	PROBEPOINT_SM	m60[5B4]												
	JE310	CON_F4ANG_3MT_USB_TH	m60[47D4]	L9325	IND_0402	m60[93B7]	PP664	PROBEPOINT_SM	m60[5C6]	PP9011	PROBEPOINT_SM	m60[5B4]												
	JE320	CON_F4ANG_3MT_USB_TH	m60[47B4]	L9330	IND_0402	m60[93B7]	PP665	PROBEPOINT_SM	m60[5C6]	PP9012	PROBEPOINT_SM	m60[5B4]												
	JE330	CON_F4ANG_3MT_USB_TH	m60[47A4]	L9345	IND_0402	m60[93B7]	PP666	PROBEPOINT_SM	m60[5C6]	PP9013	PROBEPOINT_SM	m60[5B4]												
JE350	CON_M14RT_S2MT_SM_M-	m60[47C1]	L9400	IND_SM	m60[94C6]	PP667	PROBEPOINT_SM	m60[5C6]	PP9014	PROBEPOINT_SM	m60[5A4]													
A	L1934	IND_0603	m60[19C7]	L9700	FILTER_4P_2012H	m60[97D7]	PP668	PROBEPOINT_SM	m60[5C6]	PP9015	PROBEPOINT_SM	m60[5A4]	A											
	L1936	IND_0603	m60[19C7]	L9701	FILTER_4P_2012H	m60[97D7]	PP669	PROBEPOINT_SM	m60[5C6]	PP9016	PROBEPOINT_SM	m60[5A4]												
	L1970	IND_1210	m60[19A5]	L9702	FILTER_4P_2012H	m60[97C7]	PP670	PROBEPOINT_SM	m60[5C6]	PP9020	PROBEPOINT_SM	m60[5A4]												
	L1975	IND_0805	m60[19A5]	L9703	FILTER_4P_SM-LF	m60[97C7]	PP671	PROBEPOINT_SM	m60[5B6]	PP9021	PROBEPOINT_SM	m60[5A4]												
	L2500	IND_SM-3	m60[25B8]	L9710	IND_SM-1	m60[97D5]	PP672	PROBEPOINT_SM	m60[5B6]	PP9022	PROBEPOINT_SM	m60[5A4]												
	L2507	IND_1206	m60[25A7]	LED601	LED_2_0X1.25MM-SM	m60[60A6]	PP673	PROBEPOINT_SM	m60[5B6]	PP9023	PROBEPOINT_SM	m60[5A4]												
	L3301	IND_0402-LF	m60[33D7]	LED602	LED_2_0X1.25MM-SM	m60[60A7]	PP674	PROBEPOINT_SM	m60[5B6]	PP9024	PROBEPOINT_SM	m60[5A4]												
	L3302	IND_0402-LF	m60[33D3]	LED603	LED_2_0X1.25MM-SM	m60[60A6]	PP675	PROBEPOINT_SM	m60[5B6]	PP9025	PROBEPOINT_SM	m60[5A4]												
	L4200	IND_0805	m60[42D7]	LED3800	LED_2_0X1.25MM-SM	m60[38B3]	PP676	PROBEPOINT_SM	m60[5B6]	PP9026	PROBEPOINT_SM	m60[5A4]												
	L4201	IND_0805	m60[42B7]	LED6000	LED_4P4_SM	m60[60A6]	PP677	PROBEPOINT_SM	m60[5B6]	PP9027	PROBEPOINT_SM	m60[5A4]												
L4300	IND_SM	m60[43D7]	LED7900	LED_2_0X1.25MM-SM	m60[79A4]	PP678	PROBEPOINT_SM	m60[5B6]	PP9028	PROBEPOINT_SM	m60[5A4]													
L4409	IND_0402	m60[44D6]	LED8000	LED_2_0X1.25MM-SM	m60[80A4]	PP679	PROBEPOINT_SM	m60[5B6]	PP9029	PROBEPOINT_SM	m60[5A4]													
L4610	IND_1206-LF	m60[46D2]	LED8100	LED_2_0X1.25MM-SM	m60[81A4]	PP680	PROBEPOINT_SM	m60[5B6]	PP9030	PROBEPOINT_SM	m60[5A4]													
L4620	IND_1206-LF	m60[46B2]	PP5E1	PROBEPOINT_SM	m60[5B8]	PP681	PROBEPOINT_SM	m60[5B6]	PP9031	PROBEPOINT_SM	m60[5A4]													
L4690	IND_SM-1	m60[46A6]	PP5E2	PROBEPOINT_SM	m60[5B8]	PP682	PROBEPOINT_SM	m60[5B6]	PP9032	PROBEPOINT_SM	m60[5A4]													
L4710	IND_SM	m60[47B6]	PP5A0	PROBEPOINT_SM	m60[5A6]	PP683	PROBEPOINT_SM	m60[5B6]	PP9033	PROBEPOINT_SM	m60[5A4]													
L4712	FILTER_4P_2012	m60[47C6]	PP5A1	PROBEPOINT_SM	m60[5A6]	PP684	PROBEPOINT_SM	m60[5B6]	PP9034	PROBEPOINT_SM	m60[5A4]													
L4720	IND_SM	m60[47C6]	PP5A2	PROBEPOINT_SM	m60[5A6]	PP685	PROBEPOINT_SM	m60[5B6]	PP9035	PROBEPOINT_SM	m60[5A4]													
L4722	FILTER_4P_2012	m60[47B6]	PP5A3	PROBEPOINT_SM	m60[5A6]	PP686	PROBEPOINT_SM	m60[5B6]	PP9036	PROBEPOINT_SM	m60[5A4]													
L4730	IND_SM	m60[47B6]	PP5A4	PROBEPOINT_SM	m60[5A6]	PP687	PROBEPOINT_SM	m60[5B6]	Q4201	TRA_PBSS55402_SOT223	m60[42C6]													
L4732	FILTER_4P_2012	m60[47A6]	PP5A5	PROBEPOINT_SM	m60[5A6]	PP688	PROBEPOINT_SM	m60[5B6]	Q5700	TRA_IRLR78072_TO-252	m60[57D4]													
L4740	IND_SM	m60[47D2]	PP5A6	PROBEPOINT_SM	m60[5A6]	PP689	PROBEPOINT_SM	m60[5B6]	Q5701	TRA_IRLR78072_TO-252	m60[57C4]													
L4742	FILTER_4P_2012	m60[47C2]	PP5A7	PROBEPOINT_SM	m60[5A6]	PP690	PROBEPOINT_SM	m60[5B6]	Q5702	TRA_IRLR78072_TO-252	m60[57B7]													
L4752	FILTER_4P_2012	m60[47B2]	PP5A8	PROBEPOINT_SM	m60[5A6]	PP691	PROBEPOINT_SM	m60[5B6]	Q5703	TRA_IRF1902PBF_SO-8	m60[57D7]													
L5703	IND_IHLP	m60[57B3]	PP5A9	PROBEPOINT_SM	m60[5A6]	PP692	PROBEPOINT_SM	m60[5B6]	Q5910	TRA_2N7002M_SOT-363	m60[59C7]													
L6801	IND_0603-LF	m60[68B6]	PP5B0	PROBEPOINT_SM	m60[5A6]	PP693	PROBEPOINT_SM	m60[5B6]	Q5911	TRA_SINGLE_MOSFET_PC	m60[59A4]													
L6802	IND_0603-LF	m60[68A4]	PP5B1	PROBEPOINT_SM	m60[5A6]	PP694	PROBEPOINT_SM	m60[5B6]	Q5912	HN_SOT-23														
L7200	IND_SM-1	m60[72D6]	PP5B2	PROBEPOINT_SM	m60[5A6]	PP695	PROBEPOINT_SM	m60[5B6]	Q5913	TRA_2N7002_SOT23-LF	m60[59A4]													
L7201	IND_0603-LF	m60[72C2]	PP5B3	PROBEPOINT_SM	m60[5A6]	PP696	PROBEPOINT_SM	m60[5B6]	Q5950	TRA_2N7002_SOT23-LF	m60[60B7]													
L7202	IND_0603-LF	m60[72C2]	PP5B4	PROBEPOINT_SM	m60[5A6]	PP697	PROBEPOINT_SM	m60[5B6]	Q5951	TRA_2N7002_SOT23-LF	m60[60B7]													
L7203	IND_0603-LF	m60[72C3]	PP5B5	PROBEPOINT_SM	m60[5A6]	PP698	PROBEPOINT_SM	m60[5B6]	Q5952	TRA_2N3906_SOT23-LF	m60[60B6]													
L7204	IND_0603-LF	m60[72C3]	PP5B6	PROBEPOINT_SM	m60[5A6]	PP699	PROBEPOINT_SM	m60[5B6]	Q6500	TRA_NTHSS5443T1_1206A	m60[65D4]													
L7205	IND_0603	m60[72D6]	PP5B7	PROBEPOINT_SM	m60[5A6]	PP700	TP_SM-TP50-TOP	m60[5D3]	Q6502	TRA_2N7002_SOT23-LF	m60[65D6]													
L7206	IND_0603	m60[72C6]	PP5B8	PROBEPOINT_SM	m60[5A6]	PP701	TP_SM-TP50-TOP	m60[5D3]	Q6503	TRA_NTHSS5443T1_1206A	m60[65B4]													
L7207	IND_0603	m60[72C6]	PP5B9	PROBEPOINT_SM	m60[5A6]	PP702	TP_SM-TP50-TOP	m60[5D3]	Q6600	TRA_NTHSS5443T1_1206A	m60[66D4]													
L7208	IND_0603	m60[72C6]	PP5C0	PROBEPOINT_SM	m60[5A6]	PP1200	TP_SM-TP50-TOP	m60[5D3]	Q6602	TRA_2N7002_SOT23-LF	m60[66C5]													
L7300	IND_0603-LF	m60[73D6]	PP5C1	PROBEPOINT_SM	m60[5A6]	PP1201	TP_SM-TP50-TOP	m60[5D3]	Q7200	TRA_2N7002M_SOT-363	m60[72B6 72B7]													
L7301	IND_0603-LF	m60[73D6]	PP5C2	PROBEPOINT_SM	m60[5A6]	PP1202	TP_SM-TP50-TOP	m60[5D3]	Q7400	TRA_2N7002M_SOT-363	m60[74B3 74B3]													
L7302	IND_0603-LF	m60[73D6]	PP5C3	PROBEPOINT_SM	m60[5A6]	PP2801	TP_SM-TP50-TOP	m60[5C3]	Q7401	TRA_2N7002_SOT23-LF	m60[74D5]													
L7303	IND_0603-LF	m60[73D6]	PP5C4	PROBEPOINT_SM	m60[5A6]	PP2802	TP_SM-TP50-TOP	m60[5C3]	Q7402	TRA_2N7002M_SOT-363	m60[74B2 74B2]													
L7304	IND_0603-LF	m60[73D5]	PP5C5	PROBEPOINT_SM	m60[5A6]	PP4100	PROBEPOINT_SM	m60[5D4]	Q7500	TRA_HAT2165H_LFPAK	m60[75D3]													
L7305	IND_0603-LF	m60[73D5]	PP5C6	PROBEPOINT_SM	m60[5A6]	PP8400	PROBEPOINT_SM	m60[5C5]	Q7501</															

	8	7	6	5	4	3	2	1				
D	Q8300	TRA_IRF7413_SO-8	m6[83D2]	R2303	RES_402	m6[23D3]	R3446	RES_402	m6[34B1]	R5809	RES_402	m6[58C2]
	Q8301	TRA_IRF7413_SO-8	m6[83C2]	R2305	RES_402	m6[23D3]	R3451	RES_402	m6[34C4]	R5815	RES_402	m6[58B3]
	Q8302	TRA_2N7002_SOT23-LF	m6[83C3]	R2306	RES_402	m6[23B7]	R3452	RES_402	m6[34B7]	R5817	RES_402	m6[58B3]
	Q8303	TRA_2N7002_SOT23-LF	m6[83D3]	R2307	RES_402	m6[23A7]	R3453	RES_402	m6[34B8]	R5818	RES_402	m6[58B3]
	Q8310	TRA_S13446DV_TSOP-LF	m6[83D8]	R2308	RES_402	m6[23B7]	R3454	RES_402	m6[34B7]	R5819	RES_402	m6[58B3]
	Q8311	TRA_2N7002_SOT23-LF	m6[83C7]	R2309	RES_402	m6[23A7]	R3455	RES_402	m6[34B8]	R5821	RES_402	m6[58B3]
	Q8312	TRA_S13446DV_TSOP-LF	m6[83C5]	R2310	RES_402	m6[23A7]	R3456	RES_402	m6[34B7]	R5822	RES_402	m6[58B3]
	Q8313	TRA_IRF7410_SO-8	m6[83B6]	R2311	RES_402	m6[23A7]	R3457	RES_402	m6[34B7]	R5823	RES_402	m6[58B3]
	Q8315	TRA_2N7002_SOT23-LF	m6[83B5]	R2313	RES_402	m6[23A7]	R3458	RES_402	m6[34B8]	R5824	RES_402	m6[58B3]
	Q8316	TRA_2N7002_SOT23-LF	m6[83C5]	R2314	RES_402	m6[23A7]	R3459	RES_402	m6[34A7]	R5825	RES_402	m6[58B3]
	Q8317	TRA_S13446DV_TSOP-LF	m6[83D5]	R2316	RES_402	m6[23D7]	R3460	RES_402	m6[34A7]	R5826	RES_402	m6[58B3]
	Q8318	TRA_DUAL_2N7002A_SOT	m6[83A8 83A7] 563	R2317	RES_402	m6[23D7]	R3461	RES_402	m6[34A7]	R5827	RES_402	m6[58C5]
	Q8319	TRA_S13446DV_TSOP-LF	m6[83C8]	R2318	RES_402	m6[23D7]	R3462	RES_402	m6[34A8]	R5828	RES_402	m6[58B3]
	Q8320	TRA_2N7002_SOT23-LF	m6[83B7]	R2319	RES_402	m6[23D2]	R3463	RES_402	m6[34A7]	R5829	RES_402	m6[58C3]
	Q8520	TRA_HAT2168H_LFFPAK	m6[85D4]	R2320	RES_402	m6[23D7]	R3470	RES_402	m6[34A5]	R5830	RES_402	m6[58C3]
	Q8521	TRA_HAT2168H_LFFPAK	m6[85D4]	R2323	RES_402	m6[23D5]	R3471	RES_402	m6[34A5]	R5831	RES_402	m6[58C3]
	Q8522	TRA_HAT2165H_LFFPAK	m6[85C4]	R2326	RES_402	m6[23D6]	R3485	RES_402	m6[34D1]	R5832	RES_402	m6[58C3]
	Q9400	TRA_S13446DV_TSOP-LF	m6[94C7]	R2327	RES_402	m6[23D6]	R3486	RES_402	m6[34D1]	R5833	RES_402	m6[58C5]
	Q9401	TRA_2N7002_SOT23-LF	m6[94C8]	R2343	RES_402	m6[23D1]	R3487	RES_402	m6[34D1]	R5898	RES_402	m6[58C2]
	Q9711	TRA_2N7002DW_SOT-363	m6[97D2 97C2]	R2388	RES_402	m6[23A3]	R3488	RES_402	m6[34D1]	R5899	RES_402	m6[58D3]
	R75A0	RES_402	m6[75C7]	R2389	RES_402	m6[38D5]	R3489	RES_402	m6[34D2]	R5900	RES_402	m6[58D7]
R85A0	RES_402	m6[85D1]	R2390	RES_402	m6[23B3]	R3490	RES_402	m6[34D2]	R5903	RES_402	m6[58D2]	
R600	RES_402	m6[6A7]	R2395	RES_402	m6[23D7]	R3491	RES_402	m6[34D2]	R5904	RES_402	m6[58D2]	
R602	RES_402	m6[6A8]	R2396	RES_402	m6[23D6]	R3492	RES_402	m6[34D2]	R5905	RES_402	m6[58D2]	
R603	RES_402	m6[6B1]	R2397	RES_402	m6[23D6]	R3493	RES_402	m6[34D7]	R5906	RES_402	m6[58D2]	
R605	RES_603	m6[6A6]	R2398	RES_402	m6[23D8]	R3494	RES_402	m6[34D7]	R5907	RES_402	m6[58B7]	
R611	RES_402	m6[6B7]	R2399	RES_402	m6[23C1]	R3495	RES_402	m6[34D7]	R5910	RES_402	m6[58D2]	
R612	RES_402	m6[6B7]	R2500	RES_402	m6[25A8]	R3496	RES_402	m6[34C5]	R5911	RES_402	m6[58D2]	
R614	RES_402	m6[6B7]	R2501	RES_402	m6[25C8]	R3497	RES_402	m6[34D4]	R5912	RES_402	m6[58D2]	
R615	RES_402	m6[6B7]	R2502	RES_402	m6[25D8]	R3498	RES_402	m6[34D5]	R5913	RES_402	m6[58D2]	
R616	RES_402	m6[6A7]	R2503	RES_402	m6[25D8]	R3499	RES_402	m6[34D5]	R5914	RES_402	m6[58D2]	
R617	RES_402	m6[6A7]	R2504	RES_402	m6[26C7]	R3824	RES_402	m6[38D2]	R5915	RES_402	m6[58D2]	
R618	RES_402	m6[6C7]	R2606	RES_402	m6[26C7]	R3851	RES_402	m6[38D3]	R5916	RES_402	m6[58C2]	
R619	RES_402	m6[6B7]	R2607	RES_402	m6[26C8]	R3852	RES_402	m6[38D2]	R5917	RES_402	m6[58C2]	
R7071	RES_402	m6[7C6]	R2609	RES_402	m6[26D7]	R3853	RES_402	m6[38D2]	R5919	RES_402	m6[58A6]	
R7072	RES_402	m6[7C6]	R2611	RES_402	m6[26D5]	R3857	RES_402	m6[38B3]	R5920	RES_402	m6[58B5]	
R7073	RES_402	m6[7C5]	R2612	RES_402	m6[26D5]	R3858	RES_402	m6[38B3]	R5921	RES_402	m6[58B5]	
R7074	RES_402	m6[7C5]	R2622	RES_402	m6[26D2]	R3859	RES_402	m6[38B7]	R5922	RES_402	m6[58B5]	
R7075	RES_402	m6[7B4]	R2623	RES_402	m6[26D2]	R3897	RES_402	m6[38B7]	R5923	RES_402	m6[58B5]	
R7076	RES_402	m6[7B5]	R2624	RES_402	m6[26D2]	R3899	RES_402	m6[38B5]	R5924	RES_402	m6[58B5]	
R7077	RES_402	m6[7A4]	R2625	RES_402	m6[26D2]	R4101	RES_402	m6[41D7]	R5930	RES_402	m6[58B6]	
R7078	RES_402	m6[7A3]	R2626	RES_402	m6[26D2]	R4102	RES_402	m6[41C7]	R5931	RES_402	m6[58B6]	
R7079	RES_402	m6[7B1]	R2627	RES_402	m6[26D2]	R4103	RES_402	m6[41C2]	R5932	RES_402	m6[58A7]	
R7071	RES_402	m6[7B1]	R2628	RES_402	m6[26D2]	R4104	RES_402	m6[41C2]	R5933	RES_402	m6[58A7]	
R7072	RES_402	m6[7B1]	R2629	RES_402	m6[26D2]	R4105	RES_402	m6[41C2]	R5934	RES_402	m6[58A6]	
R7073	RES_402	m6[7B1]	R2630	RES_402	m6[26D2]	R4106	RES_402	m6[41C2]	R5935	RES_402	m6[58A6]	
R7074	RES_402	m6[7B7]	R2631	RES_402	m6[26D2]	R4117	RES_402	m6[41B2]	R5940	RES_402	m6[58A6]	
R7075	RES_402	m6[7B7]	R2632	RES_402	m6[26D2]	R4118	RES_402	m6[41B2]	R5941	RES_402	m6[58A5]	
R7076	RES_402	m6[7A7]	R2633	RES_402	m6[26D2]	R4119	RES_402	m6[41B2]	R5942	RES_402	m6[58A4]	
R7077	RES_402	m6[7A7]	R2634	RES_402	m6[26D2]	R4120	RES_402	m6[41B2]	R5943	RES_402	m6[58A4]	
R7078	RES_402	m6[7A4]	R2635	RES_402	m6[26D2]	R4121	RES_402	m6[41A3]	R5950	RES_402	m6[60A7]	
R7079	RES_402	m6[8B7]	R2636	RES_402	m6[26D2]	R4122	RES_402	m6[41A2]	R5951	RES_402	m6[60B7]	
R8082	RES_402	m6[8A7]	R2637	RES_402	m6[26D2]	R4123	RES_402	m6[41A2]	R5952	RES_402	m6[60B6]	
R8083	RES_402	m6[8A7]	R2638	RES_402	m6[26D2]	R4130	RES_402	m6[41C4]	R5953	RES_402	m6[60B7]	
R1000	RES_402	m6[10D3]	R2639	RES_402	m6[26D2]	R4131	RES_402	m6[41C4]	R5954	RES_402	m6[60B7]	
R1001	RES_402	m6[10D3]	R2640	RES_402	m6[26C2]	R4150	RES_402	m6[41C8]	R5955	RES_402	m6[60B7]	
R1002	RES_402	m6[10C6]	R2641	RES_402	m6[26C2]	R4151	RES_402	m6[41D7]	R5957	RES_402	m6[60B7]	
R1005	RES_402	m6[10D3]	R2642	RES_402	m6[26C2]	R4202	RES_402	m6[42D5]	R5991	RES_402	m6[58D2]	
R1017	RES_402	m6[10C6]	R2643	RES_402	m6[26C1]	R4300	RES_402	m6[43D7]	R6000	RES_402	m6[60A6]	
R1018	RES_402	m6[10B6]	R2650	RES_402	m6[26C4]	R4350	RES_402	m6[43C7]	R6001	RES_402	m6[60A6]	
R1019	RES_402	m6[10B6]	R2651	RES_402	m6[26C1]	R4351	RES_402	m6[43C7]	R6002	RES_402	m6[60A6]	
R1100	RES_402	m6[11B5]	R2652	RES_402	m6[26B4]	R4352	RES_402	m6[43C7]	R6003	RES_402	m6[60A6]	
R1101	RES_402	m6[11B5]	R2697	RES_402	m6[26C3]	R4353	RES_402	m6[43C7]	R6004	RES_402	m6[60B6]	
R1102	RES_402	m6[11C5]	R2698	RES_402	m6[26C5]	R4354	RES_402	m6[43C7]	R6005	RES_402	m6[60B5]	
R1103	RES_402	m6[11B4]	R2699	RES_402	m6[26C5]	R4355	RES_402	m6[43C7]	R6006	RES_402	m6[60A6]	
R1104	RES_402	m6[11C5]	R2718	RES_402	m6[27B7]	R4356	RES_402	m6[43C7]	R6007	RES_402	m6[60A6]	
R1106	RES_402	m6[11B3]	R2719	RES_402	m6[27B7]	R4357	RES_402	m6[43B7]	R6008	RES_402	m6[60A6]	
R1210	RES_402	m6[12C3]	R2750	RES_402	m6[27C7]	R4402	RES_402	m6[44B3]	R6100	RES_402	m6[61C3]	
R1211	RES_402	m6[12C3]	R2751	RES_402	m6[27C7]	R4403	RES_402	m6[44B3]	R6101	RES_402	m6[61C3]	
R1220	RES_402	m6[12B7]	R2800	RES_402	m6[28C7]	R4407	RES_402	m6[44A8]	R6301	RES_402	m6[63D4]	
R1221	RES_402	m6[12B7]	R2801	RES_402	m6[28C7]	R4409	RES_402	m6[44B3]	R6302	RES_402	m6[63D4]	
R1225	RES_402	m6[12B7]	R2900	RES_402	m6[29A3]	R4410	RES_402	m6[44D2]	R6303	RES_402	m6[63C2]	
R1226	RES_402	m6[12B7]	R3001	RES_402	m6[30D4]	R4411	RES_402	m6[44D6]	R6306	RES_402	m6[63C2]	
R1230	RES_402	m6[12A7]	R3009	RES_402	m6[30D4]	R4412	RES_402	m6[44C1]	R6307	RES_402	m6[63C5]	
R1231	RES_402	m6[12A7]	R3011	RES_402	m6[30C4]	R4413	RES_402	m6[44C3]	R6309	RES_402	m6[63C5]	
R1235	RES_402	m6[12A7]	R3025	RES_402	m6[30C4]	R4414	RES_402	m6[44C3]	R6399	RES_402	m6[63D2]	
R1236	RES_402	m6[12A7]	R3035	RES_402	m6[30B4]	R4416	RES_402	m6[44A5]	R6501	RES_402	m6[65A7]	
R1310	RES_402	m6[13D3]	R3100	RES_402	m6[31C5]	R4450	RES_402	m6[44B3]	R6502	RES_1206	m6[65D6]	
R1410	RES_402	m6[14C3]	R3101	RES_402	m6[31C5]	R4451	RES_402	m6[44B3]	R6503	RES_805	m6[65D5]	
R1411	RES_402	m6[14C3]	R3301	RES_402	m6[33B7]	R4452	RES_402	m6[44B3]	R6504	RES_805	m6[65C5]	
R1420	RES_402	m6[14B6]	R3302	RES_402	m6[33D4]	R4453	RES_402	m6[44B3]	R6505	RES_805	m6[65D5]	
R1430	RES_402	m6[14B6]	R3303	RES_402	m6[33C4]	R4454	RES_402	m6[44B3]	R6506	RES_402	m6[65D6]	
R1440	RES_402	m6[14D6]	R3304	RES_402	m6[33C7]	R4650	RES_402	m6[46C8]	R6507	RES_805	m6[65B5]	
R1441	RES_402	m6[14D6]	R3400	RES_402	m6[34C5]	R4651	RES_402	m6[46C7]	R6508	RES_805	m6[65B5]	
R1975	RES_402	m6[19A4]	R3401	RES_402	m6[34B5]	R4652	RES_402	m6[46B8]	R6509	RES_805	m6[65B5]	
R1980	RES_402	m6[19B7]	R3402	RES_402	m6[34B5]	R4653	RES_402	m6[46B7]	R6510	RES_402	m6[65C7]	
R1981	RES_402	m6[19B7]	R3403	RES_402	m6[34C5]	R4654	RES_402	m6[46B7]	R6511	RES_402	m6[65B6]	
R1982	RES_402											

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D	R7306 RES_402 m6[73D4]	R8007 RES_402 m6[80A4]	R8999 RES_402 m6[89A4]	R9030 RES_402 m6[90C7]	U2603 SM74VHC1G04_SOT23-5 m6[26A7]			
	R7308 RES_402 m6[73B8]	R8010 RES_402 m6[80B2]	R9031 RES_402 m6[90C7]	U2698 MC74VHC1G08_SOT23-5 m6[26C4]				
	R7400 RES_402 m6[74B4]	R8011 RES_402 m6[80B3]	R9032 RES_402 m6[90C7]	LF				
	R7404 RES_402 m6[74D5]	R8012 RES_402 m6[80B3]	R9033 RES_402 m6[90C7]	U2699 MAX6816_SOT143 m6[26C5]				
	R7405 RES_402 m6[74D5]	R8040 RES_402 m6[80C5]	R9040 RES_402 m6[90A8]	U3100 LREG_BD3533FVM_MSOP-8 m6[31C5]				
	R7407 RES_402 m6[74B4]	R8092 RES_402 m6[80C7]	R9041 RES_402 m6[90A8]	U3301 CLK_GEN_CY284455_QFN m6[33C5]				
	R7408 RES_402 m6[74A4]	R8099 RES_402 m6[80C3]	R9042 RES_402 m6[90A8]	U4101 88E8053_QFN m6[41D5]				
	R7409 RES_402 m6[74B4]	R8101 RES_402 m6[81B3]	R9043 RES_402 m6[90B7]	U4102 KEPS9M_M24C08_S08 m6[41A3]				
	R7410 RES_805 m6[74C2]	R8102 RES_1206 m6[81C3]	R9044 RES_402 m6[90B7]	U4400 FW32306_TQFP m6[44D5]				
	R7412 RES_805 m6[74C2]	R8104 RES_402 m6[81C5]	R9045 RES_402 m6[90B7]	U4700 SWI_TP2043_S01 m6[47C8]				
	R7413 RES_402 m6[74B4]	R8105 RES_402 m6[81D7]	R9046 RES_402 m6[90B7]	U5700 ISL6549_QFN m6[57D6]				
	R7414 RES_805 m6[74B7]	R8107 RES_402 m6[81A4]	R9047 RES_402 m6[90B7]	U5800 SMC_H8S2116_BGA m6[58A8 58C3 58C6 58D6]				
	R7415 RES_805 m6[74B8]	R8110 RES_402 m6[81B3]	R9048 RES_402 m6[90A7]	U5900 VDET_RNSVD_SOT23-5 m6[59D8]				
	R7416 RES_805 m6[74C7]	R8140 RES_402 m6[81C5]	R9049 RES_402 m6[90A7]	U5940 VREF_REF3133_SOT23-3 m6[59A4]				
	R7417 RES_805 m6[74C8]	R8190 RES_402 m6[81C3]	R9080 RES_402 m6[90C4]	U5999 COMPARATOR_LM393_S01 m6[59A8 59A8]				
	R7418 RES_402 m6[74B6]	R8191 RES_402 m6[81C7]	R9081 RES_402 m6[90C4]	-1-LF				
	R7419 RES_402 m6[74B5]	R8192 RES_402 m6[81C7]	R9082 RES_402 m6[90C4]	U6100 MAX695_UMAX m6[61C4]				
	R7420 RES_402 m6[74D5]	R8198 RES_402 m6[81A5]	R9083 RES_402 m6[90C4]	U6301 FLASH_SST25VF016B_SO m6[63D3]				
	R7421 RES_402 m6[74D8]	R8199 RES_402 m6[81A5]	R9090 RES_402 m6[90B5]	I_S01				
	R7422 RES_402 m6[74D7]	R8201 RES_402 m6[82C2]	R9091 RES_402 m6[90A4]	U6700 TFM_TSSOP m6[67C5]				
	R7423 RES_402 m6[74B6]	R8202 RES_1206 m6[82C3]	R9092 RES_402 m6[90B4]	U6800 AUDIO_STAC92204XR_LQ m6[68D5]				
	R7424 RES_402 m6[74B6]	R8203 RES_402 m6[82C2]	R9093 RES_402 m6[90B4]	FP				
	R7425 RES_603 m6[74A5]	R8204 RES_402 m6[82C5]	R9094 RES_402 m6[90B4]	U7200 MAX9714_QFN-LF m6[72C5]				
	R7426 RES_402 m6[74A4]	R8205 RES_402 m6[82D6]	R9095 RES_402 m6[90B4]	U7400 MAX9890_UCSP1 m6[74C4]				
	R7427 RES_402 m6[74A4]	R8220 RES_402 m6[82C7]	R9096 RES_402 m6[90B4]	U7500 ISL6262_QFN m6[75C6]				
	R7430 RES_402 m6[74C1]	R8221 RES_402 m6[82C7]	R9097 RES_402 m6[90B4]	U7501 ZXCT1010_SOT23-5 m6[75D7]				
	R7431 RES_402 m6[74C2]	R8222 RES_402 m6[82C2]	R9098 RES_402 m6[90A4]	U7710 MC74VHC1G08_SOT23-5 m6[77C7]				
	R7435 RES_402 m6[74A3]	R8240 RES_402 m6[82D5]	R9099 RES_402 m6[90A4]	LF				
	R7437 RES_402 m6[74C5]	R8292 RES_402 m6[82B6]	R9190 RES_402 m6[91D2]	U7711 MC74VHC1G08_SOT23-5 m6[77B7]				
	R7442 RES_805 m6[74D3]	R8299 RES_402 m6[82C2]	R9191 RES_402 m6[91D2]	LF				
	R7443 RES_805 m6[74D3]	R8300 RES_402 m6[83C3]	R9195 RES_402 m6[91A3]	U7712 MC74VHC1G08_SOT23-5 m6[77B7]				
	R7500 RES_402 m6[75C2]	R8301 RES_402 m6[83D3]	R9202 RES_402 m6[92C6]	LF				
	R7501 RES_603 m6[75C2]	R8302 RES_402 m6[83C3]	R9250 RES_402 m6[92C6]	U7750 SN200505068_SOP m6[77C4]				
	R7502 RES_1206 m6[75B2]	R8303 RES_402 m6[83D3]	R9350 RES_402 m6[93A8]	U7800 ISL6549_QFN m6[78C7]				
	R7503 RES_1206 m6[75D2]	R8310 RES_603 m6[83D7]	R9351 RES_402 m6[93A8]	U7900 ISL6549_QFN m6[79D6]				
	R7504 RES_402 m6[75C1]	R8311 RES_603 m6[83B5]	R9370 RES_402 m6[93D1]	U7901 COMPARATOR_LM339A_SO m6[79A5]				
	R7505 RES_402 m6[75B2]	R8312 RES_603 m6[83A7]	R9371 RES_402 m6[93D1]	I-LF				
	R7506 RES_603 m6[75B2]	R8313 RES_603 m6[83A7]	R9372 RES_402 m6[93C1]	U7901 COMPARATOR_LM339A_SO m6[80A4]				
	R7507 RES_402 m6[75B1]	R8315 RES_603 m6[83A6]	R9373 RES_402 m6[93C1]	I-LF				
	R7508 RES_402 m6[75B8]	R8318 RES_603 m6[83B7]	R9390 RES_402 m6[93A1]	U7901 COMPARATOR_LM339A_SO m6[81A5]				
	R7509 RES_402 m6[75B8]	R8325 RES_603 m6[83D5]	R9391 RES_402 m6[93A1]	I-LF				
	R7510 RES_402 m6[75B6]	R8495 RES_402 m6[84A2]	R9400 RES_402 m6[94C8]	U7910 COMPARATOR_LM339A_SO m6[79A3]				
	R7511 RES_402 m6[75B7]	R8496 RES_402 m6[84A2]	R9401 RES_402 m6[94C7]	I-LF				
	R7512 RES_402 m6[75D7]	R8497 RES_402 m6[84A2]	R9410 RES_402 m6[94C6]	U7910 COMPARATOR_LM339A_SO m6[80B2]				
	R7513 RES_402 m6[75B7]	R8502 RES_402 m6[85D6]	R9411 RES_402 m6[94C6]	I-LF				
	R7514 RES_402 m6[75B8]	R8503 RES_402 m6[85D7]	R9450 RES_402 m6[94C2]	U7910 COMPARATOR_LM339A_SO m6[81B3]				
	R7515 RES_402 m6[75B4]	R8504 RES_402 m6[85D7]	R9470 RES_402 m6[94B8]	I-LF				
	R7516 RES_402 m6[75B4]	R8505 RES_402 m6[85C7]	R9472 RES_402 m6[94B3]	U7910 COMPARATOR_LM339A_SO m6[83B3]				
	R7517 RES_402 m6[75B5]	R8506 RES_402 m6[85C8]	R9473 RES_402 m6[94B2]	I-LF				
	R7518 RES_402 m6[75B5]	R8507 RES_402 m6[85D7]	R9474 RES_402 m6[94B2]	U8000 ISL6549_QFN m6[80D6]				
	R7519 RES_402 m6[75C7]	R8508 RES_402 m6[85C7]	R9475 RES_402 m6[94B1]	U8100 ISL6549_QFN m6[81D6]				
	R7520 RES_402 m6[75D7]	R8510 RES_402 m6[85C5]	R9490 RES_805 m6[94C6]	U8200 ISL6549_QFN m6[82D6]				
	R7521 RES_402 m6[75D7]	R8521 RES_402 m6[85C3]	R9491 RES_805 m6[94D6]	U8400 ATI_M56P_BGA m6[84C8 84D4]				
	R7522 RES_402 m6[75A5]	R8522 RES_402 m6[85C3]	R9499 RES_402 m6[94C8]	U8400 ATI_M56P_BGA m6[86D4]				
	R7523 RES_402 m6[75A5]	R8598 RES_402 m6[85C5]	R9700 RES_402 m6[97D7]	U8400 ATI_M56P_BGA m6[87D2 87D6]				
	R7524 THERMISTER_402 m6[75C9]	R8590 RES_402 m6[85C3]	R9701 RES_402 m6[97D8]	U8400 ATI_M56P_BGA m6[91D4]				
	R7527 RES_402 m6[75C8]	R8591 RES_402 m6[85D3]	R9702 RES_402 m6[97D7]	U8400 ATI_M56P_BGA m6[93C4]				
	R7528 RES_402 m6[75A5]	R8592 RES_402 m6[85D2]	R9703 RES_402 m6[97D7]	U8500 ISL6269_QFN m6[85D6]				
	R7529 RES_402 m6[75A5]	R8593 RES_402 m6[85D3]	R9704 RES_402 m6[97C7]	U8595 OPAMP_LMV2011_SOT23-5 m6[85D2]				
	R7530 RES_402 m6[75B4]	R8594 RES_402 m6[85D3]	R9705 RES_402 m6[97C7]	5				
	R7531 THERMISTER_0603-LF m6[75B4]	R8596 RES_402 m6[85D3]	R9706 RES_402 m6[97D8]	U8900 SGRAM_16MX32_GDDR3_1 m6[89D6 89B6]				
	R7540 RES_603 m6[75C1]	R8597 THERMISTER_0603-LF m6[85D3]	R9707 RES_402 m6[97C8]	36H_FPGA				
	R7541 RES_603 m6[75B1]	R8598 RES_402 m6[85D2]	R9708 RES_402 m6[97C7]	U8950 SGRAM_16MX32_GDDR3_1 m6[89D3 89B3]				
	R7590 RES_402 m6[75C7]	R8599 RES_1206 m6[85C4]	R9709 RES_402 m6[97C7]	36H_FPGA				
	R7591 RES_402 m6[75C7]	R8630 RES_603 m6[86C7]	R9710 RES_402 m6[97D2]	U9000 SGRAM_16MX32_GDDR3_1 m6[90D6 90B6]				
	R7592 RES_402 m6[75C7]	R8710 RES_402 m6[87B8]	R9711 RES_402 m6[97D2]	36_FPGA				
	R7593 RES_402 m6[75C7]	R8711 RES_402 m6[87A8]	R9712 RES_402 m6[97D2]	U9050 SGRAM_16MX32_GDDR3_1 m6[90D3 90B3]				
	R7594 RES_402 m6[75C7]	R8712 RES_402 m6[87B7]	R9713 RES_402 m6[97C2]	36_FPGA				
	R7595 RES_402 m6[75C7]	R8713 RES_402 m6[87A7]	R9714 RES_402 m6[97C2]	U9470 MC74VHC1G08_SOT23-5 m6[94B2]				
	R7596 RES_402 m6[75D7]	R8720 RES_402 m6[87B4]	R9715 RES_402 m6[97C7]	LF				
	R7597 RES_402 m6[76D6]	R8721 RES_402 m6[87A4]	R9716 RES_402 m6[97C8]	U9700 74LCL125_TSSOP m6[97A4 97A4]				
	R7598 RES_402 m6[76D7]	R8722 RES_402 m6[87B4]	R9717 RES_402 m6[97C8]	U9700 74LCL125_TSSOP m6[97A4 97A4]				
	R7599 RES_2512-1 m6[76D7]	R8723 RES_402 m6[87A4]	R9720 RES_402 m6[97D1]	XC7200 MTGHOLE m6[72B3]				
	R7602 RES_402 m6[76D3]	R8730 RES_402 m6[87A3]	R9721 RES_402 m6[97D1]	XW602 SHORT_SM m6[60C2]				
	R7612 RES_402 m6[76B2]	R8731 RES_402 m6[87A3]	R9722 RES_402 m6[97C2]	XW605 SHORT_SM m6[60E5]				
	R7620 RES_402 m6[76D2]	R8732 RES_402 m6[87A3]	R9740 RES_402 m6[97A8]	XW5800 SHORT_SM m6[58B3]				
	R7623 RES_402 m6[76D1]	R8733 RES_402 m6[87A1]	R9741 RES_402 m6[97A8]	XW5900 SHORT_SM m6[59B1]				
	R7630 RES_402 m6[76C8]	R8800 RES_603 m6[88D7]	R9742 RES_402 m6[97A7]	XW7201 SHORT_SM m6[72B2]				
	R7631 RES_402 m6[76C8]	R8801 RES_402 m6[88A7]	R9750 RES_402 m6[97A3]	XW7300 SHORT_SM m6[73C3]				
	R7632 RES_402 m6[76C7]	R8802 RES_402 m6[88D4]	R9751 RES_402 m6[97A3]	XW7307 SHORT_SM m6[73C6]				
	R7640 RES_402 m6[76A6]	R8803 RES_402 m6[88D4]	RP2300 RPAK4P_SM-LF m6[23D5]	XW7400 SHORT_SM m6[74A4]				
	R7691 RES_402 m6[76C7]	R8804 RES_402 m6[88D4]	RP3000 RPAK4P_SM-LF m6[30B4 30C4 30D4 30D4]	XW7429 SHORT_SM m6[74C2]				
	R7750 RES_402 m6[77B2]	R8805 RES_402 m6[88C4]	RP3001 RPAK4P_SM-LF m6[30C4 30A4 30A4 30D4]	XW7441 SHORT_SM m6[74D2]				
	R7751 RES_402 m6[77B2]	R8806 RES_402 m6[88C4]	RP3002 RPAK4P_SM-LF m6[30A4 30A4 30A4 30D4]	XW7500 SHORT_SM m6[75A6]				
	R7752 RES_402 m6[77B2]	R8807 RES_402 m6[88C4]	RP3003 RPAK4P_SM-LF m6[30C4 30C4 30C4 30D4]	XW7501 SHORT_SM m6[75A2]				
	R7753 RES_402 m6[77B5]	R8808 RES_402 m6[88C4]	RP3004 RPAK4P_SM-LF m6[30C4 30C4 30D4]	XW7502 SHORT_SM m6[75B1]				
	R7754 RES_402 m6[77B5]	R8809 RES_402 m6[88C4]	RP3005 RPAK4P_SM-LF m6[30B4 30A4 30A4 30D4]	XW7503 SHORT_SM m6[75D2]				
	R7757 RES_402 m6[77C5]	R8810 RES_402 m6[88C4]	RP3006 RPAK4P_SM-LF m6[30B4 30B4 30A4 30D4]	XW7504 SHORT_SM m6[75D1]				
	R7793 RES_402 m6[77D7]	R8811 RES_402 m6[88B4]	RP3007 RPAK4P_SM-LF m6[30C4 30C4 30C4 30C4]	XW7598 SHORT_SM m6[76D7]				
	R7794 RES_402 m6[77C7]	R8812 RES_402 m6[88C4]	RP3008 RPAK4P_SM-LF m6[30C4 30C4 30C4 30C4]	XW7750 SHORT_SM m6[77A4]				
	R7798 RES_402 m6[77C7]	R8813 RES_402 m6[88D4]	RP3009 RPAK4P_SM-LF m6[30B4 30B4 30C4 30C4]	XW8500 SHORT_SM m6[85C6]				
	R7799 RES_402 m6[77D7]	R8830 RES_402 m6[88B4]	RP3010 RPAK4P_SM-LF m6[30B4 30B4 30B4 30B4]	Y2600 CRYSTAL_4PIN_SM-LF m6[26D8]				
	R7800 RES_402 m6[78C7]	R8831 RES_402 m6[88B4]	RP3011 RPAK4P_SM-LF m6[30B4 30A4 30B4 30B4]	Y3301 CRYSTAL_5X3.2-SM m6[33C7]				
	R7801 RES_402 m6[78B7]	R8832 RES_402 m6[88B4]	RP7200 RPAK4P_SM-LF m6[72A4]	Y4101 CRYSTAL_SM-3-LF m6[41B5]				
	R7802 RES_402 m6[78B3]	R8833 RES_402 m6[88B4]	SDF3800 PCB_STANDOFF m6[38B2]	Y4400 CRYSTAL_MC49-USMD m6[44D2]				
	R7803 RES_402 m6[78B3]	R8850 RES_402 m6[88B4]	SDF3801 PCB_STANDOFF m6[38A2]	Y5800 CRYSTAL_SM-3 m6[58B8]				
	R7804 RES_1206 m6[78B4]	R8930 RES_402 m6[89C7]	SDF4700 PCB_STANDOFF m6[47A2]	Y6700 CRYSTAL_4PIN_SM-LF m6[59B7]				
	R7805 RES_402 m6[78B6]	R8931 RES_402 m6[89C7]	SDF4701 PCB_STANDOFF m6[47A2]	ZH500 HOLE_VIA m6[50C1]				
	R7812 RES_402 m6[78B3]	R8932 RES_402 m6[89C7]	SDF5300 PCB_STANDOFF m6[53A5]	ZH501 HOLE_VIA m6[50C1]				

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ZH526	HOLE_VIA	m60[5B1]
ZH527	HOLE_VIA	m60[5B1]
ZH528	HOLE_VIA	m60[5B1]
ZH529	HOLE_VIA	m60[5B1]
ZH601	MTGHOLE	m60[6A3]
ZH602	MTGHOLE	m60[6A3]
ZH603	MTGHOLE	m60[6A3]
ZH606	MTGHOLE	m60[6A1]
ZH607	MTGHOLE	m60[9D4]
ZH608	MTGHOLE	m60[9D3]
ZH609	MTGHOLE	m60[9D2]
ZH610	MTGHOLE	m60[9D2]

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