

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.

M42A MLB-GM-CS

10/16/2006 PVT

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

Page	(.csa)	Contents	M42A-DRI	Sync	Date
1	1	Table of Contents	RX	N/A	N/A
2	2	SYSTEM BLOCK DIAGRAM	RX	MASTER	5/23/05
3	3	Power Block Diagram	MK	POWER	06/30/2005
4	4	CONFIGURATION OPTIONS	RX	SMC	07/18/2005
5	5	FUNC TEST 1 OF 2	RX	TP	07/25/2005
6	6	SIGNAL ALIAS /RESET	RX	ENET	08/19/2005
7	7	CPU 1 OF 2-FSB	RX	MASTER	05/03/2005
8	8	CPU 2 OF 2-PWR/GND	MK	MASTER	05/03/2005
9	9	CPU DECAPS & VID<>	MK	SMC	08/19/2005
10	10	CPU MISC1-TEMP SENSOR	ES	ENET	08/19/2005
11	11	CPU ITP700FLEX DEBUG	RX	MASTER	5/23/05
12	12	NB CPU Interface	MK	NB	07/25/2005
13	13	NB PEG / Video Interfaces	DK	NB	07/25/2005
14	14	NB Misc Interfaces	RX	NB	08/15/2005
15	15	NB DDR2 Interfaces	LT	NB	07/25/2005
16	16	NB Power 1	DK	NB	07/25/2005
17	17	NB Power 2	DK	NB	07/25/2005
18	18	NB Grounds	DK	NB	07/25/2005
19	19	NB (GM) Decoupling	DK	NB	06/22/2005
20	20	NB Config Straps	DK	NB	06/28/2005
21	21		RX	SB	08/05/2005
22	22		RX	ENET	11/16/2005
23	23		RX	ENET	11/28/2005
24	24		RX	SB	08/05/2005
25	25		RX	SB	06/28/2005
26	26	SB Misc	RX	NB	07/26/2005
27	27	M42 SMBUS CONNECTIONS	ES	ENET	08/30/2005
28	28	DDR2 SO-DIMM Connector A	LT	MEMORY	06/20/2005
29	29	DDR2 SO-DIMM Connector B	LT	MEMORY	06/20/2005
30	30	Memory Active Termination	LT	MEMORY	06/20/2005
31	31	Memory Vtt Supply	LT	(MASTER)	(MASTER)
32	32	CLOCKS	DK	CLOCK	06/03/2005
33	33	CLOCK TERMINATION	DK	CLOCK	06/06/2005
34	34	PATA CONNECTOR	ES	ENET	11/01/2005
35	35	SATA CONNECTOR	ES	ENET	11/14/2005
36	36	ETHERNET CONTROLLER	ES	ENET	12/06/2005
37	37	ETHERNET CONNECTOR	ES	ENET	11/14/2005
38	38	FIREWIRE CONTROLLER	ES	ENET	08/30/2005
39	39	FIREWIRE PORT	ES	ENET	11/16/2005
40	40	CONNECTOR MISC	ES	ENET	11/16/2005
41	41	IR CONTROLLER	ES	ENET	11/09/2005
42	42		ES	ENET	11/01/2005
43	43		ES	ENET	08/19/2005
44	44	BLUETOOTH INTERFACE	MK	ENET	08/29/2005
45	45	SMC	MK	SMC	08/18/2005
46	46	SMC SUPPORT	LD	SMC	08/23/2005
47	47	LPC+ Debug Connector	MK	NB	06/30/2005
48	48	CPU Current & Voltage Sense	ES	ENET	08/30/2005

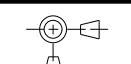
Page	(.csa)	Contents	M42A-DRI	Sync	Date
49	49	TEMPERATURE SENSE	RX	ENET	11/09/2005
50	50	SPI BOOTROM	ES	MASTER	5/23/05
51	51	Fan	MK	ENET	11/10/2005
52	52	SMS	RX	SMC	08/23/2005
53	53	TPM	DK	SMC	07/18/2005
54	54	AUDIO: CODEC	DK	M42AUDIO	08/05/2006
55	55	AUDIO: SPEAKER AMP	DK	M42AUDIO	08/05/2006
56	56	AUDIO: JACK	DK	M42AUDIO	08/05/2006
57	57	AUDIO: JACK TRANSLATORS	MK	M42AUDIO	08/05/2006
58	58	IMVP6 CPU VCore Regulator	MK	POWER	07/13/2005
59	59	5V / 3.3V Power Supply	MK	POWER	07/13/2005
60	60	2.5V/1.2V Regulator	MK	ENET	12/06/2005
61	61	1.8V Supply	MK	POWER	07/13/2005
62	62	1.5V / 1.05V Power Supply	MK	POWER	07/13/2005
63	63	S3/S0 FETS, G3H SUPPLY	MK	ENET	08/30/2005
64	64	Power Conn / Alias	MK	ENET	11/16/2005
65	65	DC-In & Battery Connectors	MK	POWER	07/13/2005
66	66	PBUS Supply/Battery Charger	ES	SMC	08/19/2005
67	67	INVERTER, LVDS, TMDS	DK	GRAPHIC	06/06/2005
68	68	EXTERNAL TMDS	DK	GRAPHIC	06/06/2005
69	69	MINI-DVI CONNECTOR		EUGENE	05/21/05
70	70	Cross Reference Page			
71	71	Cross Reference Page			
72	72	Cross Reference Page			
73	73	Cross Reference Page			
74	74	Cross Reference Page			
75	75	Cross Reference Page			
76	76	Cross Reference Page			
77	77	Cross Reference Page			
78	78	Cross Reference Page			

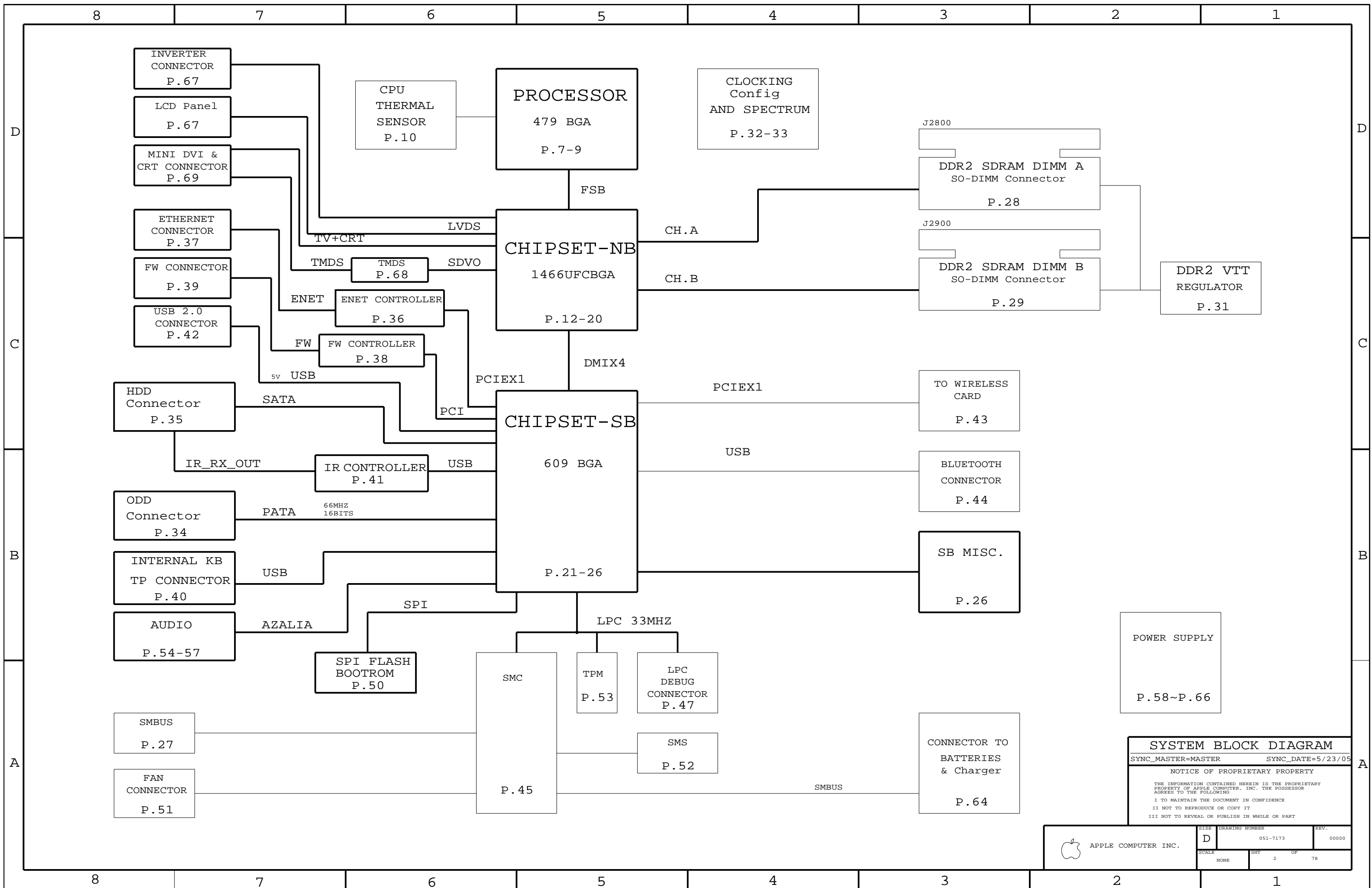
M42A EE DRIS:

- RX-RAYMOND XU
- DK-DINESH KUMAR
- RC-RAY CHANG
- MK-MARC KLINGELHOFER
- LT-LAWRENCE TAN
- ES-ERIC SMITH
- LD-LINDA DUNN

Schematic / PCB #'s

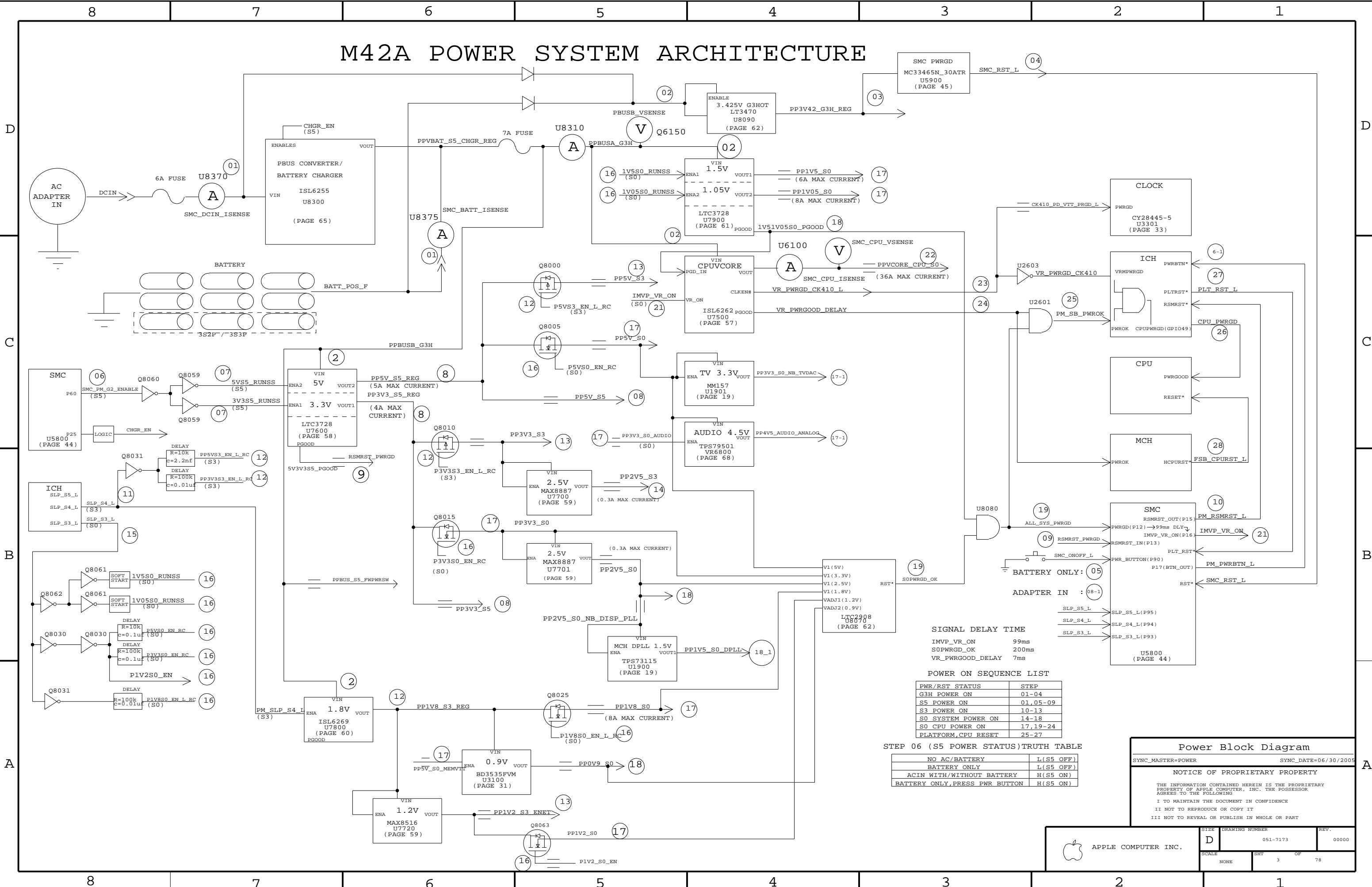
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
051-7173	1	SCHEM, M42A, MLB	SCH	
820-1889	1	PCBF, M42, MLB	PCB	

DIMENSIONS ARE IN MILLIMETERS		METRIC		Apple Computer Inc.	
XX : _____		DRAPPER	DESIGN CR	NOTICE OF PROPRIETARY PROPERTY THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING: I. TO MAINTAIN THE DOCUMENT IN CONFIDENCE II. NOT TO REPRODUCE OR COPY IT III. NOT TO REVEAL OR PUBLISH IN WHOLE OR PART	
X.XX : _____		ENG APPD	MFG APPD		
X.XXX : _____		QA APPD	DESIGNER		
ANGLES : _____		RELEASE	SCALE		
DO NOT SCALE DRAWING		NONE		TITLE	
 THIRD ANGLE PROJECTION		MATERIAL/FINISH NOTED AS APPLICABLE		DRAWING NUMBER	
		D		051-7173	
				REV. 00000	
				SHT 1 OF 78	



SYSTEM BLOCK DIAGRAM
 SYNC_MASTER=MASTER SYNC_DATE=5/23/05
 NOTICE OF PROPRIETARY PROPERTY
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

M42A POWER SYSTEM ARCHITECTURE



SIGNAL DELAY TIME

IMVP_VR_ON	99ms
SOPWRGD_OK	200ms
VR_PWRGOOD_DELAY	7ms

POWER ON SEQUENCE LIST

PWR/RST STATUS	STEP
G3H POWER ON	01-04
S5 POWER ON	01,05-09
S3 POWER ON	10-13
S0 SYSTEM POWER ON	14-18
S0 CPU POWER ON	17,19-24
PLATFORM,CPU RESET	25-27

STEP 06 (S5 POWER STATUS) TRUTH TABLE

NO AC/BATTERY	L(S5 OFF)
BATTERY ONLY	L(S5 OFF)
ACIN WITH/WITHOUT BATTERY	H(S5 ON)
BATTERY ONLY,PRESS PWR BUTTON	H(S5 ON)

Power Block Diagram

SYNC_MASTER=POWER SYNC_DATE=06/30/2005

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

APPLE COMPUTER INC.

SCALE	SHEET	OF	REV.
NONE	3	78	00000

Page Notes

Power aliases required by this page:
(NONE)

Signal aliases required by this page:
(NONE)

BOM options provided by this page:
(NONE)

BOM OPTION

BOMOPTION	M42A GOOD ST MICRO 630-7795 EVT	M42A BETTER ST MICRO 630-7796 EVT	M42A BEST KIONIX 630-7799 EVT	M42A GOOD KIONIX 630-7798 EVT	M42A BETTER KIONIX 630-7736 EVT	M42A BEST ST MICRO 630-7797 EVT
1V51V05S0_CONT						
1V51V05S0_SKIP	v	v	v	v	v	v
5V3V3S3_CONT						
5V3V3S3_SKIP	v	v	v	v	v	v
ACCEL_KIONIX			v	v	v	
ACCEL_ST	v	v				v
INVERTER_BUF	v	v	v	v	v	v
INVERTER_UNBUF						
ITP						
LEMENU	v	v	v	v	v	v
MEMVIT_EN_PU	v	v	v	v	v	v
NBCFG_DMI_REVERSE						
NBCFG_DMI_X2						
NBCFG_DYN_ODT_DISABLE						
NBCFG_PEG_REVERSE						
NBCFG_SDVO_AND_PCIE						
NBCFG_VCC_1V5						
NO_REBOOT_MODE						
USB_C_OC_PU	v	v	v	v	v	v
USB_D_OC_PU	v	v	v	v	v	v
USB_E_OC_PU	v	v	v	v	v	v
GOOD	v			v		
BETTER		v			v	
BEST			v			v
M42A_PGM	v	v	v	v	v	v
ONEWIRE_PULLUP	v	v	v	v	v	v
ONEWIRE_PULLUP_OLD						
ONEWIRE_PU_PROT	v	v	v	v	v	v
ONEWIRE_PU_ACOK						
ONEWIRE_PWRCTL	v	v	v	v	v	v
ONEWIRE_ALWAYSON						
3V3_IND_2MM8	v	v	v	v	v	v
3V3_IND_3MM						
NORMAL	v	v		v	v	
FANCY			v			v
STANDOFF	v	v	v	v	v	v
FET_FDN6296	v	v	v	v	v	v
FET_STL8NH3LL						
GOOD-ST	v					
BETTER-ST		v				
BEST-KIONIX			v			
GOOD-KIONIX				v		
BETTER-KIONIX					v	
BEST-ST						v
TPM						
PVT-DIMM						
POST-RAMP-DIMM35	v	v	v	v	v	v
M42						
M42A	v	v	v	v	v	v

BOARD STACK-UP AND CONSTRUCTION

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

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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
337S3387	1	IC, MEMOM, CPU B2 DC 1.83GHZ, 479 PGA	U0700	GOOD
337S3389	1	IC, MEMOM, CPU B2 DC 2.0GHZ, 479 PGA	U0700	BETTER
337S3389	1	IC, MEMOM, CPU B2 DC 2.0GHZ, 479 PGA	U0700	BEST

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
338S0268	1	IC, FW32306, 1394A LIME, BGA, 129P	U4400	LEMENU
338S0270	1	IC, 88E8053, GIGABIT ENET XCVR, 64P QFN, NO	U4101	LEMENU
359S0109	1	IC, SLOBLP436, CLOCK GEN, 68PIN QFN	U3301	LEMENU

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
341S1941	1	IC, 16MBIT 8-PIN SPI SERIAL FLASH, 8028	U6301	M42A_PGM
341S1797	1	IC, EEPROM, SERIAL IIC, 8KBIT, 808	U4102	M42A_PGM
341S1946	1	IC, SMC, 176P BGA, MS8/2116	U5800	M42A_PGM
341S1890	1	IC, PSOC-W/USB, 56P, MLP, CY8C24794	U5100	M42A_PGM

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:WES	CRITICAL	GOOD-ST
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:WET	CRITICAL	BETTER-ST
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:WEW	CRITICAL	BEST-KIONIX
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:WEV	CRITICAL	GOOD-KIONIX
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:W6V	CRITICAL	BETTER-KIONIX
826-4393	1	LBL, P/N LABEL, PCB, 28MMX6MM	EEE:WEU	CRITICAL	BEST-ST

CONFIGURATION OPTIONS

SYNC_MASTER=SMC SYNC_DATE=07/18/2005

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
	SCALE	SHT	OF
	NONE	4	78

Functional Test Points

Power Supply NO_TESTs

NO_TEST	TEST	VALUE	LOC
	IMVP6_RBIAS		58
	IMVP6_COMP		58
	5VS5_RUNSS		59 63
	1V5S0_RUNSS		52 63
	1V8S3_COMP		61
	1V8S3_FSET		61
	TRUE 3V3S5_COMP		
	TRUE 3V3S5_FSET		
	TRUE 1V05S0_COMP		
	TRUE 1V05S0_FSET		
	TRUE P3V42G3H_FB		63

CLOCK NO_TESTs

NO_TEST	TEST	VALUE	LOC
	TRUE CK410_CPU0_N		32 33
	TRUE CK410_CPU0_P		32 33
	TRUE CK410_CPU1_N		32 33
	TRUE CK410_CPU1_P		32 33
	TRUE CK410_CPU2_ITP_SRC10_N		32 33
	TRUE CK410_CPU2_ITP_SRC10_P		32 33
	TRUE CK410_DOT96_27M_N		32 33
	TRUE CK410_DOT96_27M_P		32 33
	TRUE CK410_LVDS_N		32 33
	TRUE CK410_LVDS_P		32 33
	TRUE CK410_PCI4_CLK_SPN		
	TRUE CK410_PCF1_CLK		32 33
	TRUE CK410_SRC1_N_SPN		6
	TRUE CK410_SRC1_P_SPN		6
	TRUE CK410_SRC2_N		32 33
	TRUE CK410_SRC2_P		32 33
	TRUE CK410_SRC3_N_SPN		6
	TRUE CK410_SRC3_P_SPN		6
	TRUE CK410_SRC4_N		32 33
	TRUE CK410_SRC4_P		32 33
	TRUE CK410_SRC5_N		32 33
	TRUE CK410_SRC5_P		32 33
	TRUE CK410_SRC6_N		32 33
	TRUE CK410_SRC6_P		32 33
	TRUE CK410_SRC7_N_SPN		6
	TRUE CK410_SRC7_P_SPN		6
	TRUE CK410_SRC8_N		32 33
	TRUE CK410_SRC8_P		32 33
	TRUE CK410_SRC_CLKREQ01_L_SPN		6
	TRUE CK410_SRC_CLKREQ03_L_SPN		6
	TRUE CK410_SRC_CLKREQ08_L		32 33

FIREWARE NO_TESTs

NO_TEST	TEST	VALUE	LOC
	TRUE FW_B_TPA_N_SPN		6
	TRUE FW_B_TPA_P_SPN		6
	TRUE FW_B_TPBIAS_SPN		6
	TRUE FW_B_TPB_N_SPN		6
	TRUE FW_B_TPB_P_SPN		6
	TRUE FW_C_TPA_N_SPN		6
	TRUE FW_C_TPA_P_SPN		6
	TRUE FW_C_TPBIAS_SPN		6
	TRUE FW_C_TPB_N_SPN		6
	TRUE FW_C_TPB_P_SPN		6

LVDS NO_TESTs

NO_TEST	TEST	VALUE	LOC
	TRUE LVDS_B_CLK_N_SPN		6
	TRUE LVDS_B_CLK_P_SPN		6
	TRUE LVDS_B_DATA_N0_SPN		6
	TRUE LVDS_B_DATA_N1_SPN		6
	TRUE LVDS_B_DATA_N2_SPN		6
	TRUE LVDS_B_DATA_P1_SPN		6
	TRUE LVDS_B_DATA_P2_SPN		6

ETHERNET NO_TESTs

NO_TEST	TEST	VALUE	LOC
	TRUE ENET_MDI_TRAN_P<2>		37
	TRUE ENET_MDI_TRAN_N<2>		37
	TRUE ENET_MDI_TRAN_P<3>		37

NO_TEST	TEST	VALUE	LOC
	TRUE SMC_FAN_3_TACH		45 46
	TRUE ALS_LEFT		45 46

Fan Connectors

FUNC_TEST	TEST	VALUE	LOC
	TRUE =PP5V_S0_FAN_RT		51 64
	TRUE FAN_RT_PWM		51
	TRUE FAN_RT_TACH		51
	TRUE =PP3V3_S0_FAN_RT		51 64
	TRUE SMC_FAN_1_CTL		45 51
	TRUE SMC_FAN_1_TACH		45 51

LPC+ Debug Connector

FUNC_TEST	TEST	VALUE	LOC
	TRUE =PP3V42_G3H_LPCPLUS		47 64
	TRUE =PP5V_S0_LPCPLUS		47 64
	TRUE LPC_AD<0>		21 45 47 53
	TRUE LPC_AD<1>		21 45 47 53
	TRUE LPC_FRAME_L		21 45 47 53
	TRUE PM_CLKRUN_L		23 38 45 47 53
	TRUE BOOT_LPC_SPI_L		22 45 47
	TRUE SMC_TMS		45 46 47
	TRUE DEBUG_RST_L		26 47
	TRUE SMC_TRST_L		45 47
	TRUE SMC_TDO		45 46 47
	TRUE SMC_MD1		45 47
	TRUE SMC_TX_L		45 46 47
	TRUE FWH_INIT_L		5 21 47
	TRUE PCI_CLK_PORT80_LPC		33 47
	TRUE LPC_AD<2>		21 45 47 53
	TRUE LPC_AD<3>		21 45 47 53
	TRUE INT_SERIRO		23 45 47 53
	TRUE PM_SUS_STAT_L		23 45 46 47 53
	TRUE SMC_TDI		45 46 47
	TRUE SMC_TCK		45 46 47
	TRUE SMC_RST_L		45 46 47
	TRUE SMC_NMI		45 47
	TRUE SMC_RX_L		45 46 47
	TRUE SV_SET_UP		23 47

Other Func Test Points

FUNC_TEST	TEST	VALUE	LOC
	TRUE =PP1V05_S0_REG		52 64
	SMBus FUNC_TEST		
	TRUE SMBUS_SMC_MLB_SCL		27
	TRUE SMBUS_SMC_MLB_SDA		27
	FIREWIRE FUNC_TEST		
	TRUE PPFW_SWITCH		39
	SLEEP_LED_FUNC_TEST		
	TRUE SYS_LED_ANODE		35 46
	SMC FUNC_TEST		
	TRUE SMC_LID		40 45 46 65
	TRUE SMC_MANUAL_RST_L		46
	TRUE SMC_CPU_VSENSE		45 48
	Power Supply FUNC_TEST		
	TRUE ALL_SYS_PWRGD		26 45 63
	TRUE PPVCORE_CPU_S0		64
	TRUE PP1V05_S0		64
	TRUE PP1V5_S0		64
	TRUE PP1V8_S0		64
	TRUE PP2V5_S0		64
	TRUE PP3V3_S0		64
	TRUE PP5V_S0		64
	TRUE PP1V2_S3		64
	TRUE PP1V8_S3		64
	TRUE PP2V5_S3		64
	TRUE PP3V3_S3		64
	TRUE PP5V_S3		64
	TRUE PP3V3_S5		64
	TRUE PP5V_S5		64
	TRUE PP3V42_G3H		64
	TRUE PPBUSA_G3H		64
	TRUE PPBUSB_G3H		64
	TRUE PP18V5_G3H		64
	TRUE PP0V9_S0		64

Battery Digital Connector

FUNC_TEST	TEST	VALUE	LOC
	TRUE SMC_BS_ALRT_L		45 46 65
	TRUE SMBUS_BATT_SCL_F		65
	TRUE SMBUS_BATT_SDA_F		65
	TRUE BATT_IN		65
	TRUE BATT_POS		65
	TRUE BATT_NEG		65

Audio FUNC_TEST

FUNC_TEST	TEST	VALUE	LOC
	TRUE PP5V_S0_AUDIO_PWR		64
	TRUE PP5V_S0_AUDIO		64
	TRUE GND_AUDIO_PWR		64
	TRUE GND_AUDIO_CODEC		64
	TRUE ACZ_SDATAIN<0>		21 54
	TRUE ACZ_SDATAOUT		21 54
	TRUE ACZ_BITCLK		21 54
	TRUE ACZ_RST_L		21 54 57
	TRUE ACZ_SYNC		21 54

Battery FUNC_TEST

FUNC_TEST	TEST	VALUE	LOC
	TRUE SMC_BATT_ISET		45 66
	TRUE SMC_BATT_CHG_EN		45 46 66
	TRUE SMC_BC_ACOK		45 46 65 66
	TRUE SMC_PS_ON		39 45 46 65
	TRUE SMC_BATT_TRICKLE_EN_L		45 46 66
	TRUE SYS_ONEWIRE		45 46 65

USB FUNC_TEST

FUNC_TEST	TEST	VALUE	LOC
	TRUE TP_USBP_E		6
	TRUE TP_USBN_E		6
	TRUE TP_USBP_F		6
	TRUE TP_USBN_F		6

DC-JACK FUNC_TEST

FUNC_TEST	TEST	VALUE	LOC
	TRUE ACIN_ENABLE_GATE		65

Battery charger FUNC_TEST

FUNC_TEST	TEST	VALUE	LOC
	TRUE PPVBAT_G3H_CHGR_OUT		66

INVERTER CONNECTOR FUNC_TEST

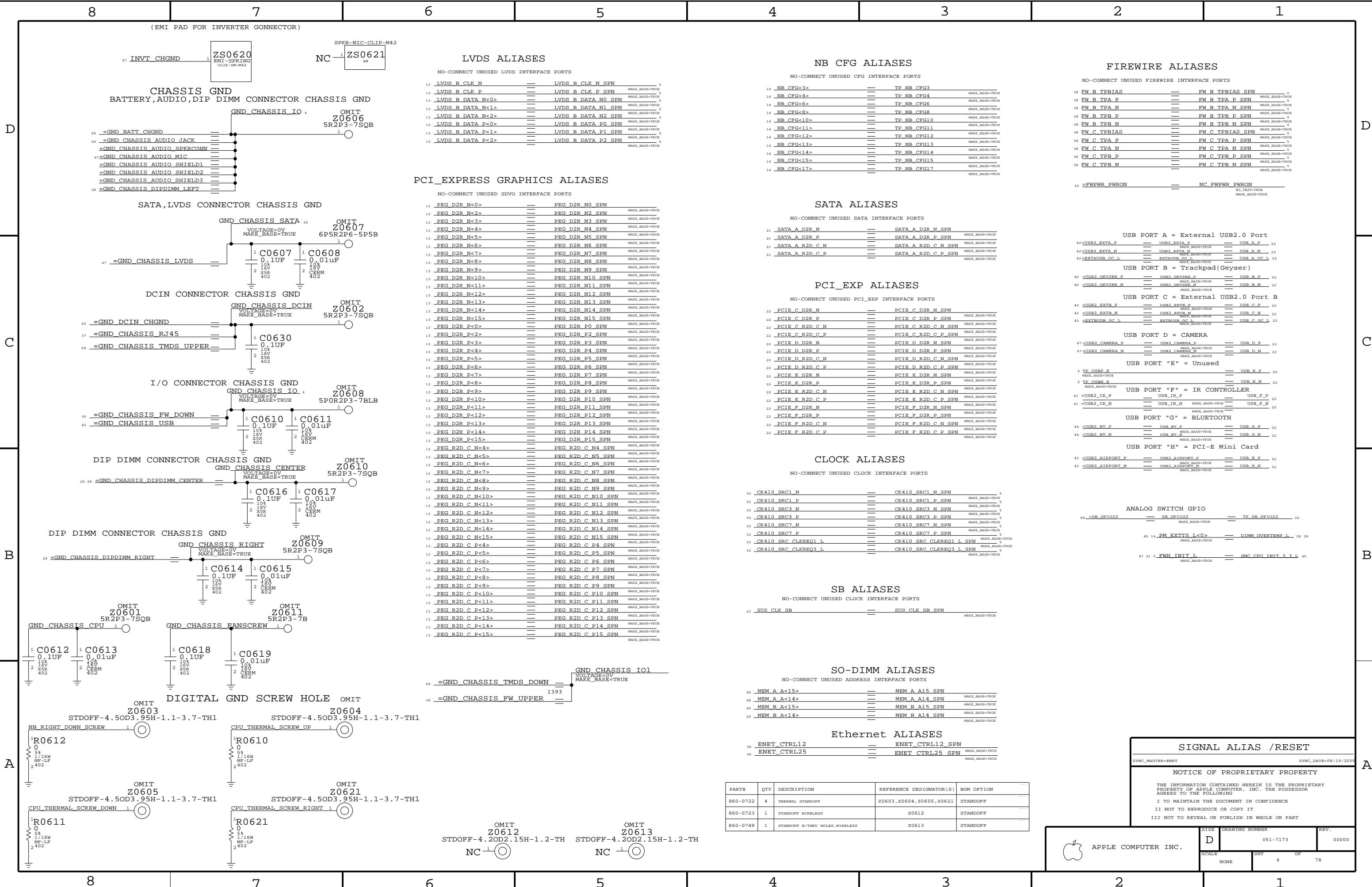
FUNC_TEST	TEST	VALUE	LOC
	TRUE PPBUS_ALL_INV_CONN		67
	TRUE INV_GND		67
	TRUE PP5V_INV_F		67
	TRUE INV_BKLIGHT_PWM_L		67

FUNC TEST 1 OF 2

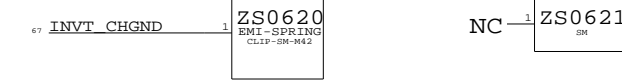
NOTICE OF PROPRIETARY PROPERTY

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

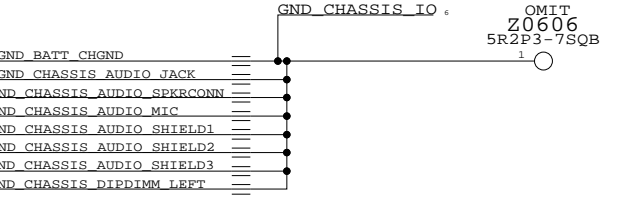
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	NONE	SHT	5 OF 78



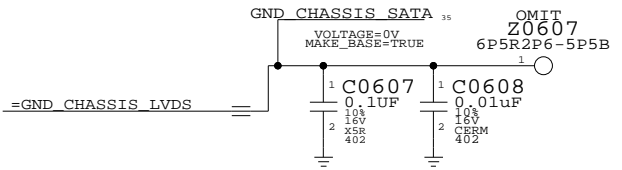
(EMI PAD FOR INVERTER CONNECTOR)



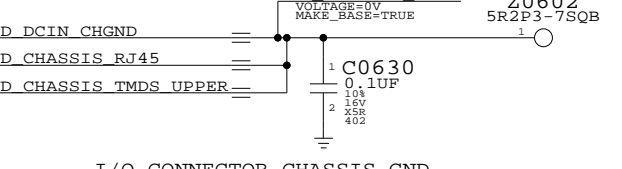
CHASSIS GND
BATTERY, AUDIO, DIP DIMM CONNECTOR CHASSIS GND



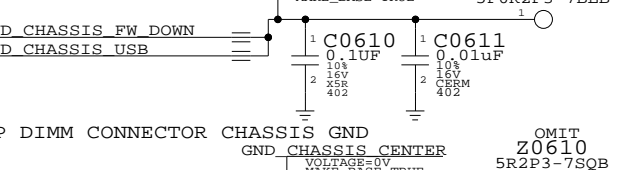
SATA, LVDS CONNECTOR CHASSIS GND



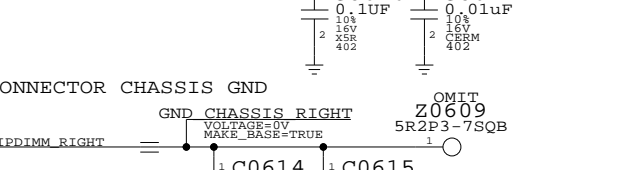
DCIN CONNECTOR CHASSIS GND



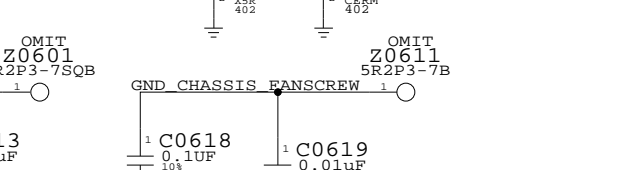
I/O CONNECTOR CHASSIS GND



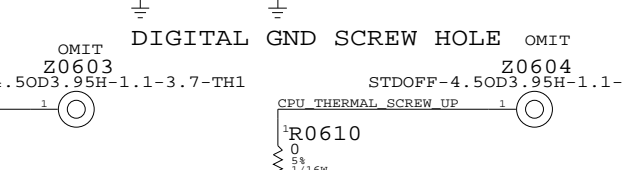
DIP DIMM CONNECTOR CHASSIS GND



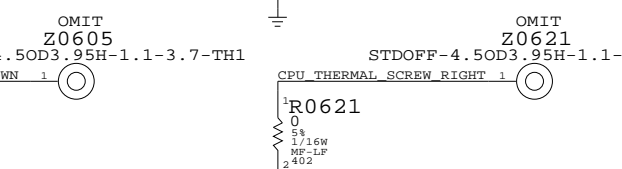
DIP DIMM CONNECTOR CHASSIS GND



DIGITAL GND SCREW HOLE



CPU THERMAL SCREW DOWN / UP



CPU THERMAL SCREW DOWN / RIGHT

LVDS ALIASES

NO-CONNECT UNUSED LVDS INTERFACE PORTS

13	LVDS B CLK N	LVDS B CLK N SPN	MAKE_BASE=TRUE	5
13	LVDS B CLK P	LVDS B CLK P SPN	MAKE_BASE=TRUE	5
13	LVDS B DATA N<0>	LVDS B DATA N0 SPN	MAKE_BASE=TRUE	5
13	LVDS B DATA N<1>	LVDS B DATA N1 SPN	MAKE_BASE=TRUE	5
13	LVDS B DATA N<2>	LVDS B DATA N2 SPN	MAKE_BASE=TRUE	5
13	LVDS B DATA P<0>	LVDS B DATA P0 SPN	MAKE_BASE=TRUE	5
13	LVDS B DATA P<1>	LVDS B DATA P1 SPN	MAKE_BASE=TRUE	5
13	LVDS B DATA P<2>	LVDS B DATA P2 SPN	MAKE_BASE=TRUE	5

PCI EXPRESS GRAPHICS ALIASES

NO-CONNECT UNUSED SDVO INTERFACE PORTS

13	PEG_D2R N<0>	PEG_D2R N0 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<2>	PEG_D2R N2 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<3>	PEG_D2R N3 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<4>	PEG_D2R N4 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<5>	PEG_D2R N5 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<6>	PEG_D2R N6 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<7>	PEG_D2R N7 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<8>	PEG_D2R N8 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<9>	PEG_D2R N9 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<10>	PEG_D2R N10 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<11>	PEG_D2R N11 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<12>	PEG_D2R N12 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<13>	PEG_D2R N13 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<14>	PEG_D2R N14 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R N<15>	PEG_D2R N15 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<0>	PEG_D2R P0 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<2>	PEG_D2R P2 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<3>	PEG_D2R P3 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<4>	PEG_D2R P4 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<5>	PEG_D2R P5 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<6>	PEG_D2R P6 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<7>	PEG_D2R P7 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<8>	PEG_D2R P8 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<9>	PEG_D2R P9 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<10>	PEG_D2R P10 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<11>	PEG_D2R P11 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<12>	PEG_D2R P12 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<13>	PEG_D2R P13 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<14>	PEG_D2R P14 SPN	MAKE_BASE=TRUE	5
13	PEG_D2R P<15>	PEG_D2R P15 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<4>	PEG_R2D C N4 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<5>	PEG_R2D C N5 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<6>	PEG_R2D C N6 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<7>	PEG_R2D C N7 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<8>	PEG_R2D C N8 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<9>	PEG_R2D C N9 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<10>	PEG_R2D C N10 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<11>	PEG_R2D C N11 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<12>	PEG_R2D C N12 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<13>	PEG_R2D C N13 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<14>	PEG_R2D C N14 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C N<15>	PEG_R2D C N15 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<4>	PEG_R2D C P4 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<5>	PEG_R2D C P5 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<6>	PEG_R2D C P6 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<7>	PEG_R2D C P7 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<8>	PEG_R2D C P8 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<9>	PEG_R2D C P9 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<10>	PEG_R2D C P10 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<11>	PEG_R2D C P11 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<12>	PEG_R2D C P12 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<13>	PEG_R2D C P13 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<14>	PEG_R2D C P14 SPN	MAKE_BASE=TRUE	5
13	PEG_R2D C P<15>	PEG_R2D C P15 SPN	MAKE_BASE=TRUE	5

NB CFG ALIASES

NO-CONNECT UNUSED CFG INTERFACE PORTS

14	NB_CFG<3>	TP_NB_CFG3	MAKE_BASE=TRUE	5
14	NB_CFG<4>	TP_NB_CFG4	MAKE_BASE=TRUE	5
14	NB_CFG<6>	TP_NB_CFG6	MAKE_BASE=TRUE	5
14	NB_CFG<8>	TP_NB_CFG8	MAKE_BASE=TRUE	5
14	NB_CFG<10>	TP_NB_CFG10	MAKE_BASE=TRUE	5
14	NB_CFG<11>	TP_NB_CFG11	MAKE_BASE=TRUE	5
14	NB_CFG<12>	TP_NB_CFG12	MAKE_BASE=TRUE	5
14	NB_CFG<13>	TP_NB_CFG13	MAKE_BASE=TRUE	5
14	NB_CFG<14>	TP_NB_CFG14	MAKE_BASE=TRUE	5
14	NB_CFG<15>	TP_NB_CFG15	MAKE_BASE=TRUE	5
14	NB_CFG<17>	TP_NB_CFG17	MAKE_BASE=TRUE	5

FIREWIRE ALIASES

NO-CONNECT UNUSED FIREWIRE INTERFACE PORTS

38	FW_B_TPBIA	FW_B_TPBIA SPN	MAKE_BASE=TRUE	5
38	FW_B_TPA P	FW_B_TPA P SPN	MAKE_BASE=TRUE	5
38	FW_B_TPA N	FW_B_TPA N SPN	MAKE_BASE=TRUE	5
38	FW_B_TPB P	FW_B_TPB P SPN	MAKE_BASE=TRUE	5
38	FW_B_TPB N	FW_B_TPB N SPN	MAKE_BASE=TRUE	5
38	FW_C_TPBIA	FW_C_TPBIA SPN	MAKE_BASE=TRUE	5
38	FW_C_TPA P	FW_C_TPA P SPN	MAKE_BASE=TRUE	5
38	FW_C_TPA N	FW_C_TPA N SPN	MAKE_BASE=TRUE	5
38	FW_C_TPB P	FW_C_TPB P SPN	MAKE_BASE=TRUE	5
38	FW_C_TPB N	FW_C_TPB N SPN	MAKE_BASE=TRUE	5
39	FWPWR_PWRON	NC_FWPWR_PWRON	MAKE_TEST=TRUE	5

SATA ALIASES

NO-CONNECT UNUSED SATA INTERFACE PORTS

21	SATA_A_D2R N	SATA_A_D2R N SPN	MAKE_BASE=TRUE	5
21	SATA_A_D2R P	SATA_A_D2R P SPN	MAKE_BASE=TRUE	5
21	SATA_A_R2D C N	SATA_A_R2D C N SPN	MAKE_BASE=TRUE	5
21	SATA_A_R2D C P	SATA_A_R2D C P SPN	MAKE_BASE=TRUE	5

PCI_EXP ALIASES

NO-CONNECT UNUSED PCI_EXP INTERFACE PORTS

22	PCIE_C_D2R N	PCIE_C_D2R N SPN	MAKE_BASE=TRUE	5
22	PCIE_C_D2R P	PCIE_C_D2R P SPN	MAKE_BASE=TRUE	5
22	PCIE_C_R2D C N	PCIE_C_R2D C N SPN	MAKE_BASE=TRUE	5
22	PCIE_C_R2D C P	PCIE_C_R2D C P SPN	MAKE_BASE=TRUE	5
22	PCIE_D_D2R N	PCIE_D_D2R N SPN	MAKE_BASE=TRUE	5
22	PCIE_D_D2R P	PCIE_D_D2R P SPN	MAKE_BASE=TRUE	5
22	PCIE_D_R2D C N	PCIE_D_R2D C N SPN	MAKE_BASE=TRUE	5
22	PCIE_D_R2D C P	PCIE_D_R2D C P SPN	MAKE_BASE=TRUE	5
22	PCIE_E_D2R N	PCIE_E_D2R N SPN	MAKE_BASE=TRUE	5
22	PCIE_E_D2R P	PCIE_E_D2R P SPN	MAKE_BASE=TRUE	5
22	PCIE_E_R2D C N	PCIE_E_R2D C N SPN	MAKE_BASE=TRUE	5
22	PCIE_E_R2D C P	PCIE_E_R2D C P SPN	MAKE_BASE=TRUE	5
22	PCIE_F_D2R N	PCIE_F_D2R N SPN	MAKE_BASE=TRUE	5
22	PCIE_F_D2R P	PCIE_F_D2R P SPN	MAKE_BASE=TRUE	5
22	PCIE_F_R2D C N	PCIE_F_R2D C N SPN	MAKE_BASE=TRUE	5
22	PCIE_F_R2D C P	PCIE_F_R2D C P SPN	MAKE_BASE=TRUE	5

CLOCK ALIASES

NO-CONNECT UNUSED CLOCK INTERFACE PORTS

32	CK410_SRC1 N	CK410_SRC1 N SPN	MAKE_BASE=TRUE	5
32	CK410_SRC1 P	CK410_SRC1 P SPN	MAKE_BASE=TRUE	5
32	CK410_SRC3 N	CK410_SRC3 N SPN	MAKE_BASE=TRUE	5
32	CK410_SRC3 P	CK410_SRC3 P SPN	MAKE_BASE=TRUE	5
32	CK410_SRC7 N	CK410_SRC7 N SPN	MAKE_BASE=TRUE	5
32	CK410_SRC7 P	CK410_SRC7 P SPN	MAKE_BASE=TRUE	5
32	CK410_SRC_CLKREQ1 L	CK410_SRC_CLKREQ1 L SPN	MAKE_BASE=TRUE	5
32	CK410_SRC_CLKREQ3 L	CK410_SRC_CLKREQ3 L SPN	MAKE_BASE=TRUE	5

SB ALIASES

NO-CONNECT UNUSED CLOCK INTERFACE PORTS

23	SUS_CLK_SB	SUS_CLK_SB SPN	MAKE_BASE=TRUE	5
----	------------	----------------	----------------	---

SO-DIMM ALIASES

NO-CONNECT UNUSED ADDRESS INTERFACE PORTS

28	MEM_A_A<15>	MEM_A A15 SPN	MAKE_BASE=TRUE	5
28	MEM_A_A<14>	MEM_A A14 SPN	MAKE_BASE=TRUE	5
29	MEM_B_A<15>	MEM_B A15 SPN	MAKE_BASE=TRUE	5
29	MEM_B_A<14>	MEM_B A14 SPN	MAKE_BASE=TRUE	5

Ethernet ALIASES

36	ENET_CTRL12	ENET_CTRL12 SPN	MAKE_BASE=TRUE	5
36	ENET_CTRL25	ENET_CTRL25 SPN	MAKE_BASE=TRUE	5

SIGNAL ALIAS /RESET

SYNC_MASTER=ENET SYNC_DATE=09/19/2005

NOTICE OF PROPRIETARY PROPERTY

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

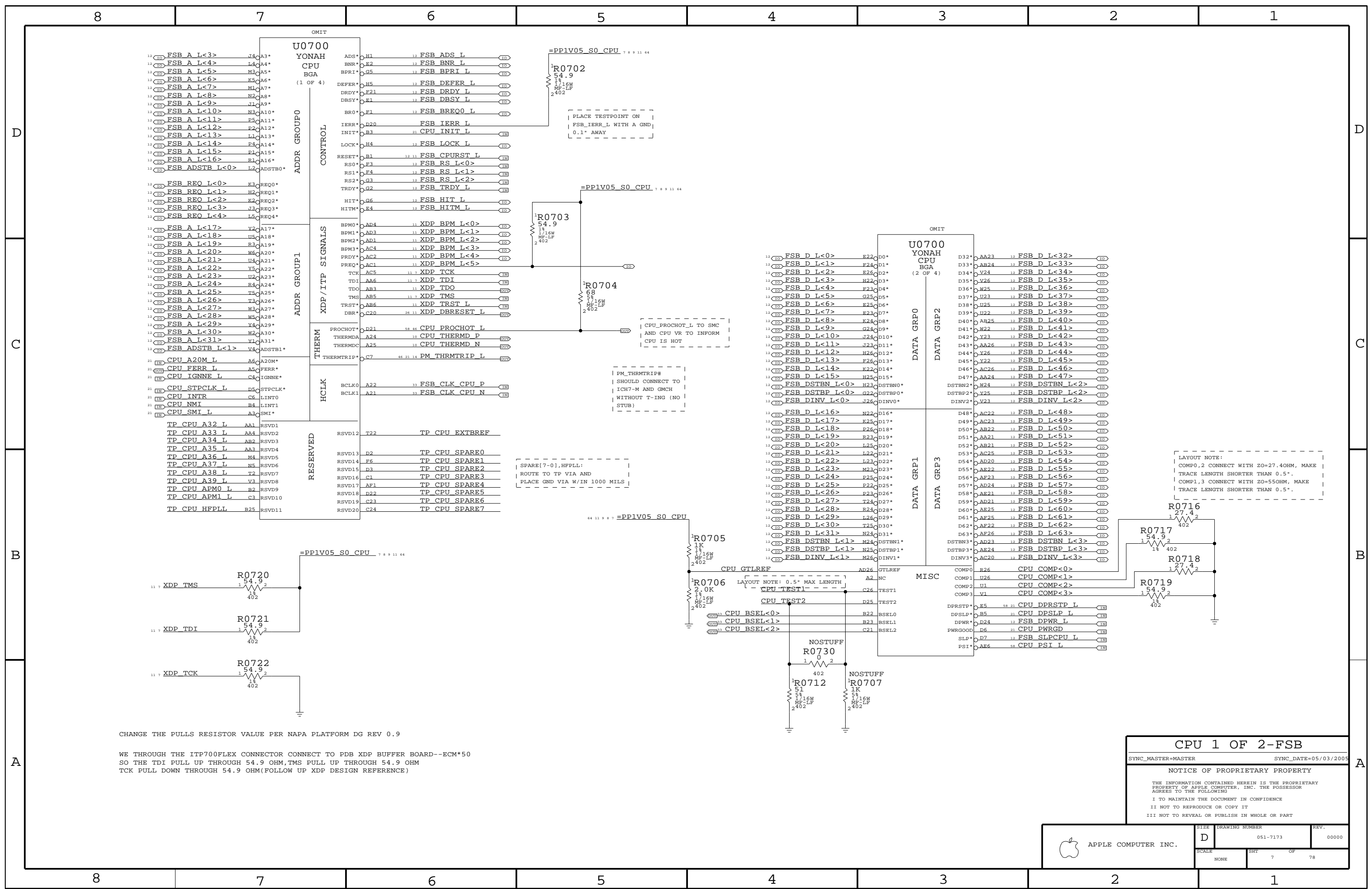
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
860-0722	4	THERMAL STANDOFF	Z0603,Z0604,Z0605,Z0621	STANDOFF
860-0723	1	STANDOFF WIRELESS	Z0612	STANDOFF
860-0749	1	STANDOFF W/TWO HOLES,WIRELESS	Z0613	STANDOFF

APPLE COMPUTER INC.

SCALE: NONE SHIT: 6 OF 78

DRAWING NUMBER: 051-7173

REV: 00000



CHANGE THE PULLS RESISTOR VALUE PER NAPA PLATFORM DG REV 0.9

WE THROUGH THE ITP700FLEX CONNECTOR CONNECT TO PDB XDP BUFFER BOARD--ECM*50 SO THE TDI PULL UP THROUGH 54.9 OHM, TMS PULL UP THROUGH 54.9 OHM TCK PULL DOWN THROUGH 54.9 OHM(FOLLOW UP XDP DESIGN REFERENCE)

CPU 1 OF 2-FSB

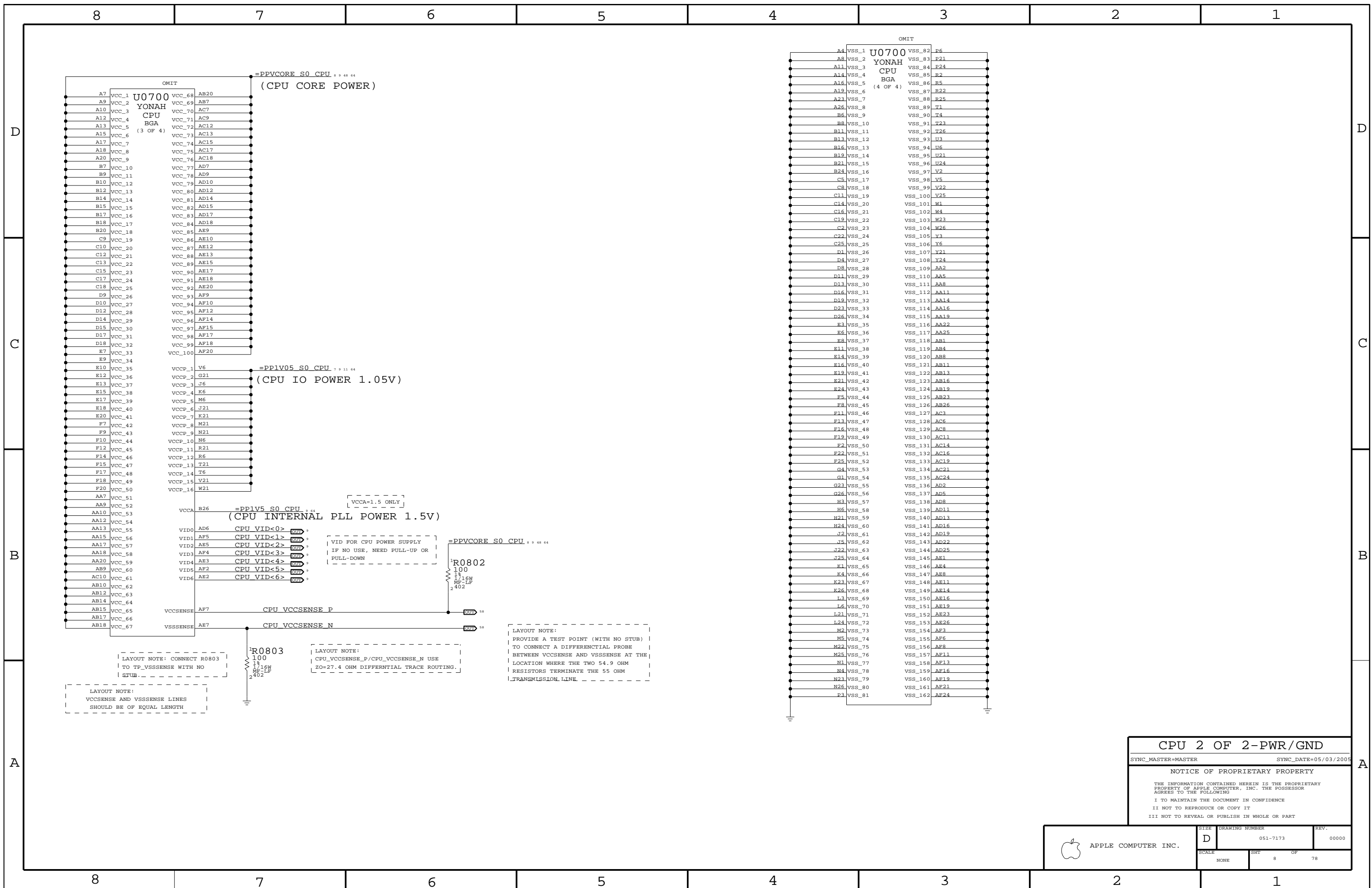
SYNC_MASTER=MASTER SYNC_DATE=05/03/2005

NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SIZE: D SCALE: NONE	DRAWING NUMBER: 051-7173 SHEET: 7 OF 78	REV: 00000
---------------------	------------------------	--	------------



OMIT		
A4	VSS_1	P6
A8	VSS_2	P21
A11	VSS_3	P24
A14	VSS_4	R2
A16	VSS_5	R5
A19	VSS_6	R22
A23	VSS_7	R25
A26	VSS_8	T1
B6	VSS_9	T4
B8	VSS_10	T23
B11	VSS_11	T26
B13	VSS_12	U3
B16	VSS_13	U6
B19	VSS_14	U21
B21	VSS_15	U24
B24	VSS_16	V2
C5	VSS_17	V5
C8	VSS_18	V22
C11	VSS_19	V25
C14	VSS_20	W1
C16	VSS_21	W4
C19	VSS_22	W23
C2	VSS_23	W26
C22	VSS_24	Y3
C25	VSS_25	Y6
D1	VSS_26	Y21
D4	VSS_27	Y24
D8	VSS_28	AA2
D11	VSS_29	AA5
D13	VSS_30	AA8
D16	VSS_31	AA11
D19	VSS_32	AA14
D23	VSS_33	AA16
D26	VSS_34	AA19
E3	VSS_35	AA22
E6	VSS_36	AA25
ER	VSS_37	AB1
E11	VSS_38	AB4
E14	VSS_39	AB8
E16	VSS_40	AB11
E19	VSS_41	AB13
E21	VSS_42	AB16
E24	VSS_43	AB19
E5	VSS_44	AB23
ER	VSS_45	AB26
F11	VSS_46	AC3
F13	VSS_47	AC6
F16	VSS_48	AC8
F19	VSS_49	AC11
F2	VSS_50	AC14
F22	VSS_51	AC16
F25	VSS_52	AC19
G4	VSS_53	AC21
G1	VSS_54	AC24
G23	VSS_55	AD2
G26	VSS_56	AD5
H3	VSS_57	AD8
H6	VSS_58	AD11
H21	VSS_59	AD13
H24	VSS_60	AD16
J2	VSS_61	AD19
J5	VSS_62	AD22
J22	VSS_63	AD25
J25	VSS_64	AE1
K1	VSS_65	AE4
K4	VSS_66	AE8
K23	VSS_67	AE11
K26	VSS_68	AE14
L3	VSS_69	AE16
L6	VSS_70	AE19
L21	VSS_71	AE23
L24	VSS_72	AE26
M2	VSS_73	AF3
M5	VSS_74	AF6
M22	VSS_75	AF8
M25	VSS_76	AF11
N1	VSS_77	AF13
N4	VSS_78	AF16
N23	VSS_79	AF19
N26	VSS_80	AF21
P1	VSS_81	AF24

CPU 2 OF 2-PWR/GND

SYNC_MASTER=MASTER SYNC_DATE=05/03/2005

NOTICE OF PROPRIETARY PROPERTY

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

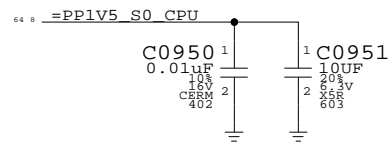
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

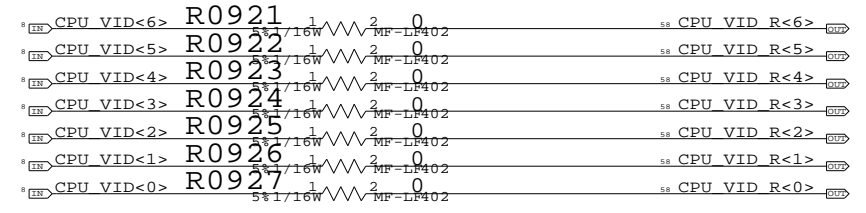
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	8		

VCCA DECOUPLING
(CPU INTERNAL PLL POWER 1.5V)



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S0603	138S0602	?	ALL	USE SAMSUNG AND MURATA ONLY

CPU CORE VID<> SETTINGS

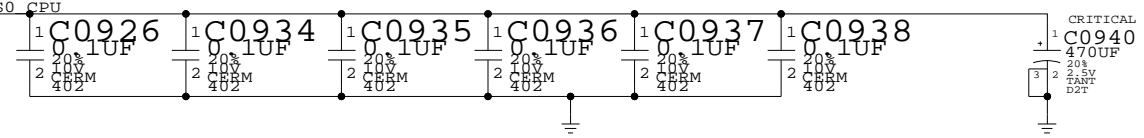


R0921~R0927 FOR CPU VOLTAGE MANUAL SETTING

VCCP CORE DECOUPLING
(CPU IO POWER 1.05V)

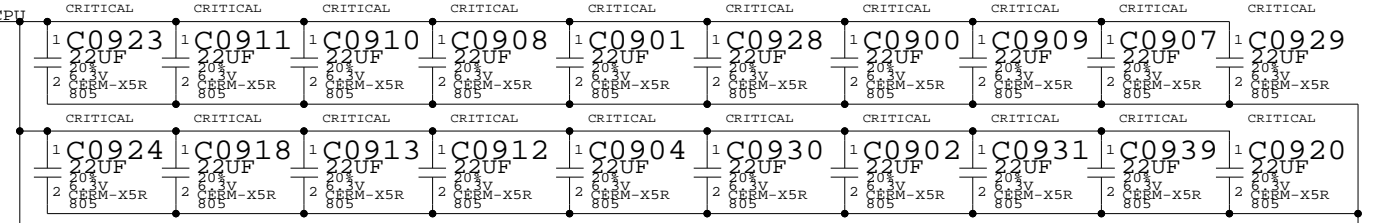
THIS 470UF FOR CPU, GMCH FSB BUS 1.05V

PLACE NEAR THE NORTH BRIDGE ON BOTTOM SIDE



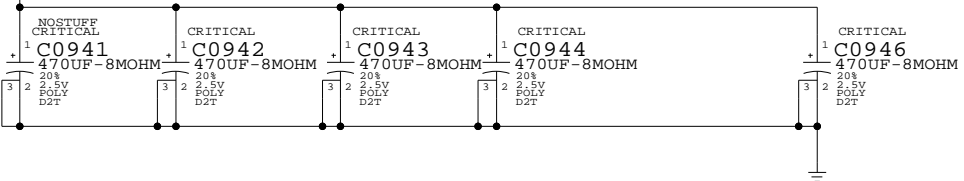
VCC CORE DECOUPLING
(CPU CORE POWER)

PLACE NEAR THE CPU ON BOTTOM SIDE (10 PCS ON NORTH SIDE 10 PCS ON SOUTH SIDE)



IF WE USE LOW ESL CAP, THEN WE CAN USE 20 PCS 22UF CAP

(2 PCS ON NORTH SIDE 2 PCS ON SOUTH SIDE)



	MIN	TYP	MAX
DUAL CORE SV CPU	VCCHFM	1.1625	1.30
	VCCLFM	TBD	TBD
SINGLE CORE SV CPU	VCCHFM	1.1625	1.30
	VCCLFM	TBD	TBD
DUAL CORE LV CPU	VCCHFM	1.0	1.1625
	VCCLFM	TBD	TBD
ULV CPU	VCCHFM	TBD	TBD
	VCCLFM	TBD	TBD

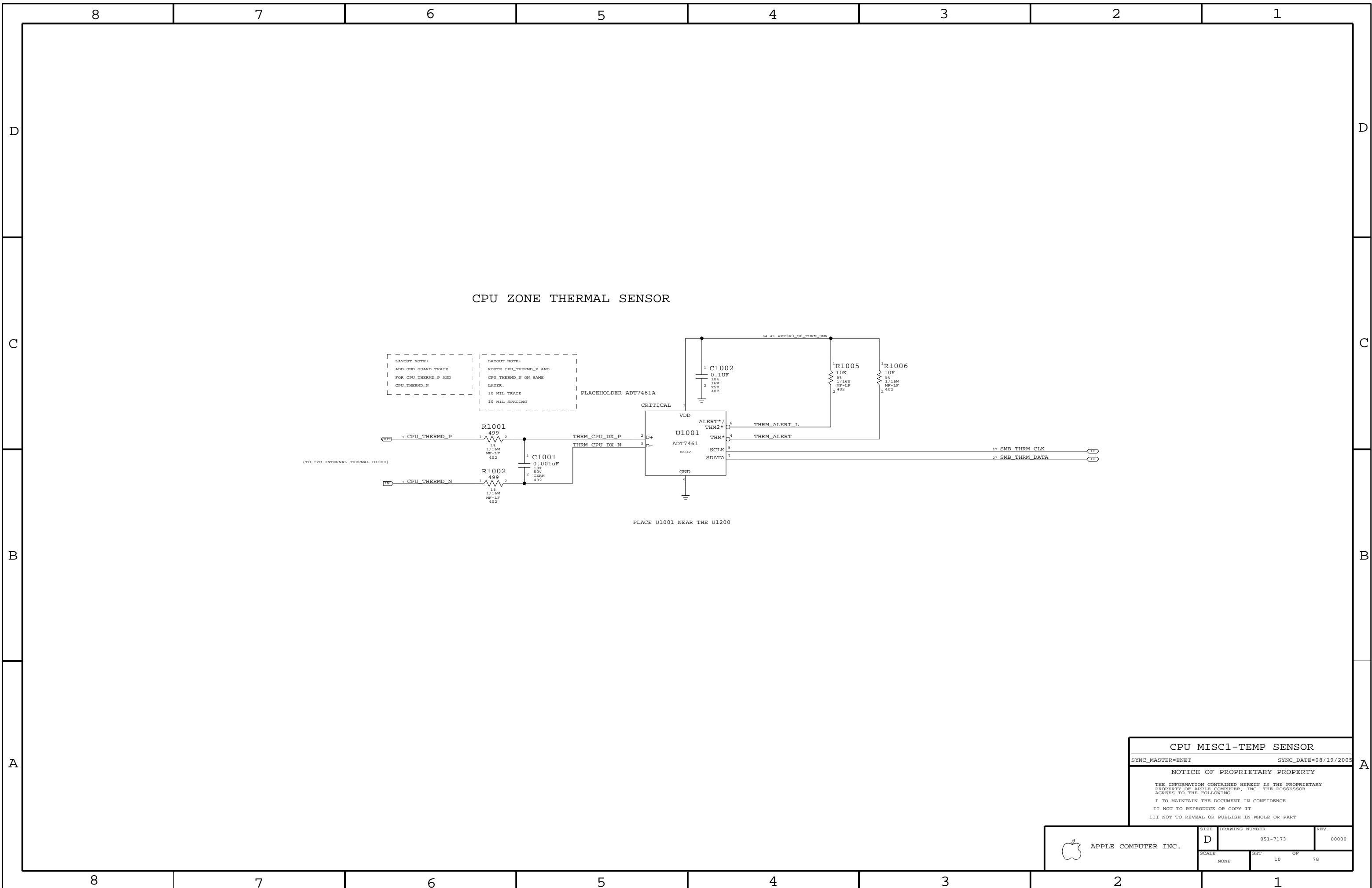
UNIT: V

- # ALL PROCESSOR DEFAULT VCORE FOR INITIAL POWER UP IS 1.2V
- # TWO PROCESSORS AT THE SAME FREQUENCY MAY HAVE DIFFERENT SETTING WITH THE VID RANGE (VCORE VOLTAGE)!
- # REFER TO YONAH PROCESSOR EMTS REV 1.0
- # VCCHFM: VCORE AT HIGHEST FREQUENCY MODE
- # VCCLFM: VCORE AT LOWEST FREQUENCY MODE

CPU DECAPS & VID<>

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	9	78	



CPU MISC1-TEMP SENSOR

SYNC_MASTER=ENET SYNC_DATE=08/19/2005

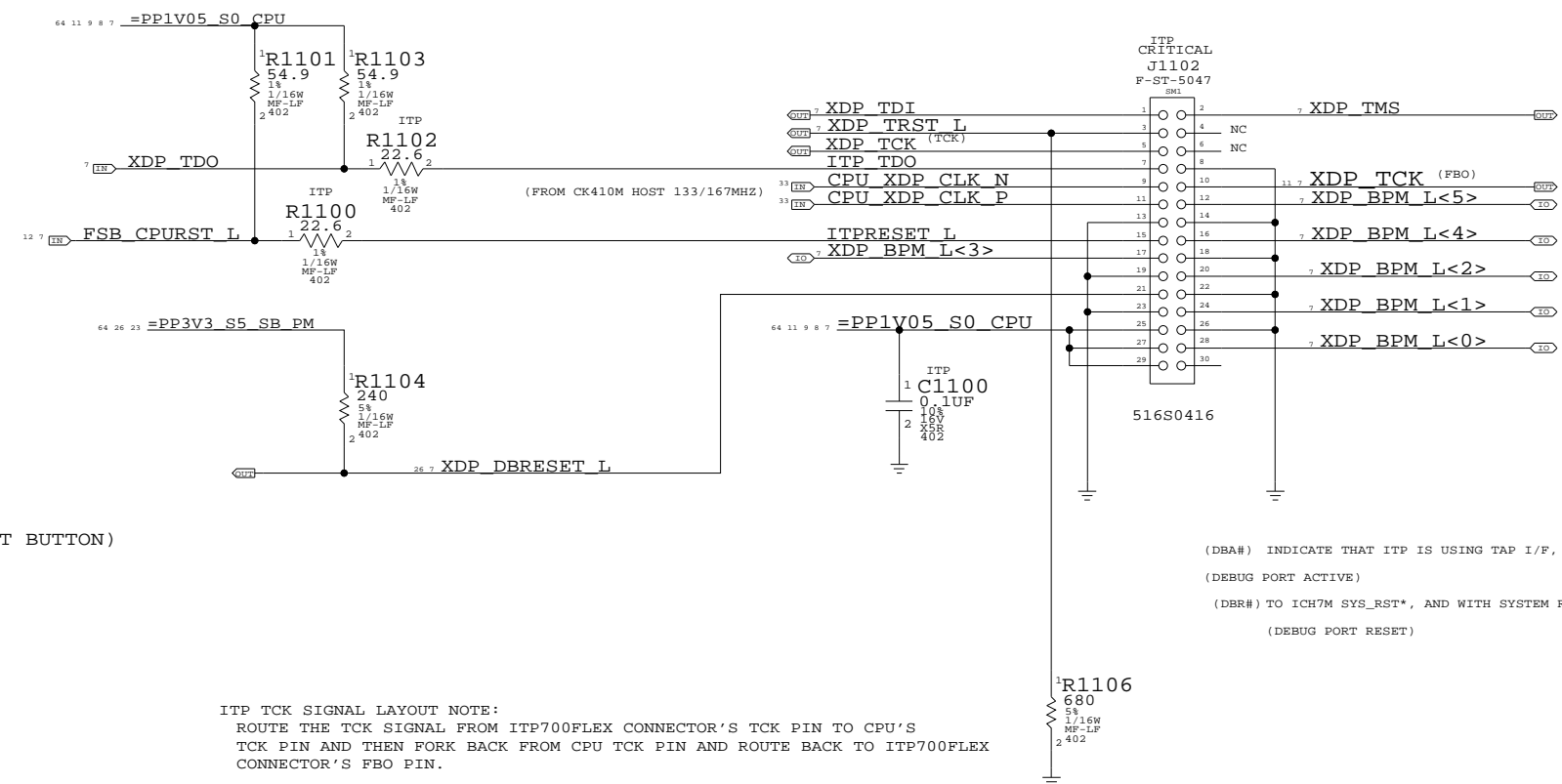
NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	10	10	78

CPU ITP700FLEX DEBUG SUPPORT



(AND WITH RESET BUTTON)

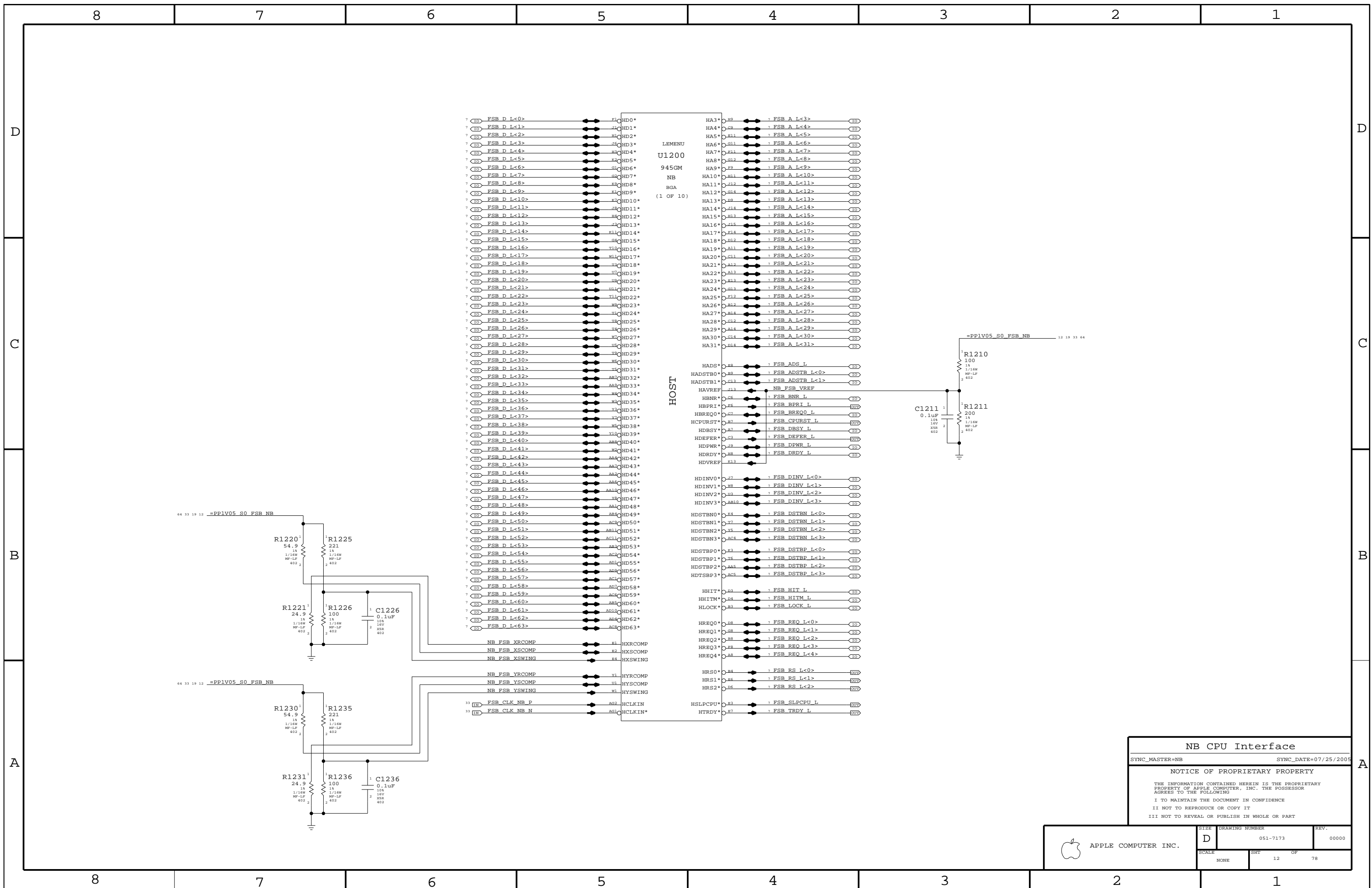
(DBA#) INDICATE THAT ITP IS USING TAP I/F, NC IN 945GM CHIPSET SYSTEM.
 (DEBUG PORT ACTIVE)
 (DBR#) TO ICH7M SYS_RST*, AND WITH SYSTEM RESET LOGIC
 (DEBUG PORT RESET)

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

CPU ITP700FLEX DEBUG
 SYNC_MASTER=MASTER SYNC_DATE=5/23/05

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	11		



NB CPU Interface

SYNC_MASTER=NB SYNC_DATE=07/25/2005

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	12		

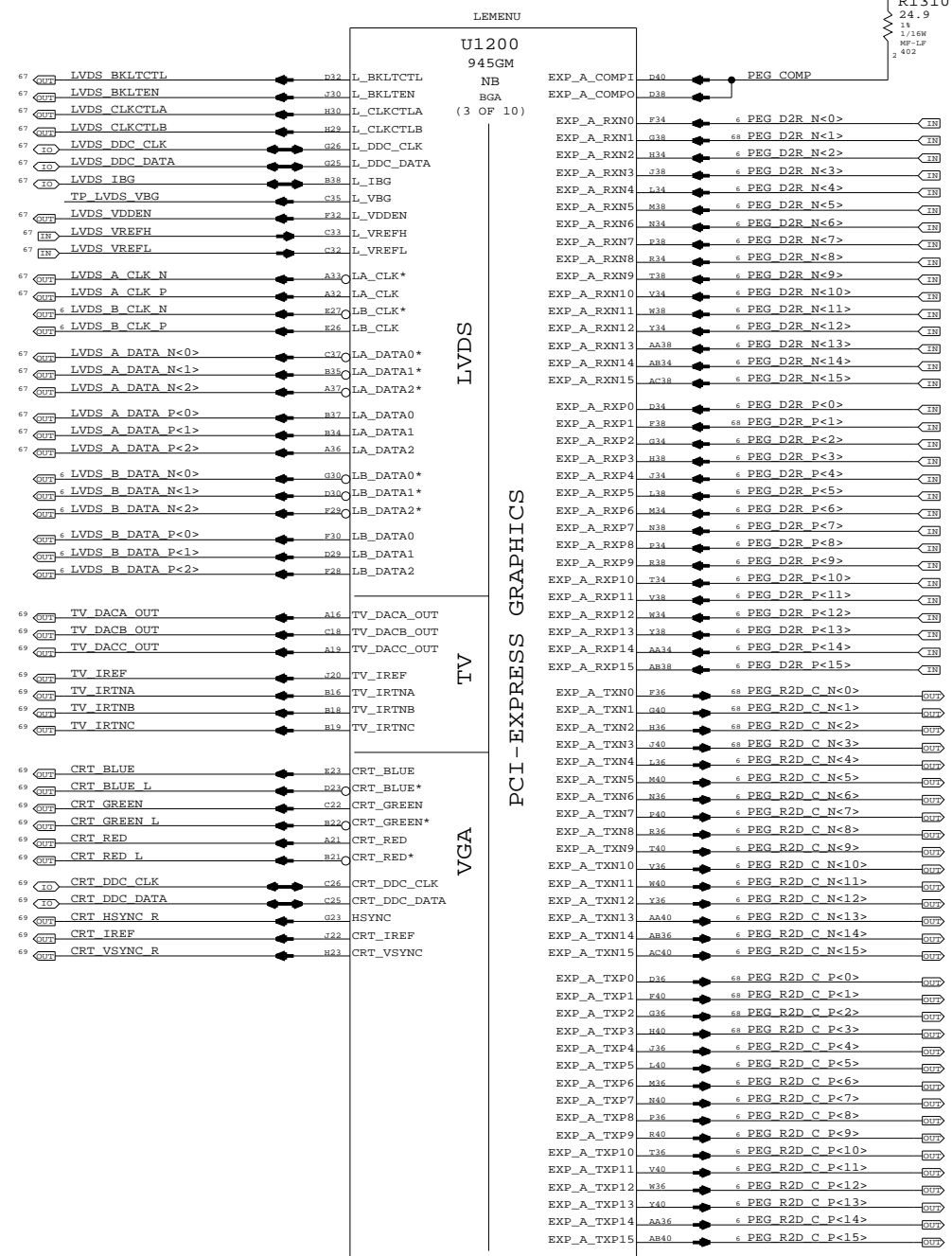
LVDS Disable
 Can leave all signals NC if LVDS is not implemented
 Tie VCC_TXLVDS and VCCA_LVDS to GND. If SDVO is used
 VCCD_LVDS must remain powered with proper decoupling.
 Otherwise, tie VCCD_LVDS to GND also.

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

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

TV-Out Disable
 Tie DACx_OUT, IRTNx, and IREF to 1.5V power rail.
 Tie VCCD_TVDAC, VCCD_QTVDAC, VCCA_TVDACx, and
 VCCA_TVVBG to 1.5V power rail. Tie VSSA_TVVBG to GND.

CRT Disable
 Tie R/R#/G/G#/B/B# and IREF to VCC Core rail, tie
 HSYNC and VSYNC to GND. Tie VCCA_CRTDAC to VCC Core
 rail, and tie VSSA_CRTDAC and VCC_SYNC to GND.



SDVO Alternate Function

SDVO_TVCLKIN#
 SDVO_INT#
 SDVO_FLDSTALL#

SDVOB_RED#
 SDVOB_GREEN#
 SDVOB_BLUE#
 SDVOB_CLKN
 SDVOC_RED#
 SDVOC_GREEN#
 SDVOC_BLUE#
 SDVOC_CLKN

SDVOB_RED
 SDVOB_GREEN
 SDVOB_BLUE
 SDVOB_CLKP
 SDVOC_RED
 SDVOC_GREEN
 SDVOC_BLUE
 SDVOC_CLKP

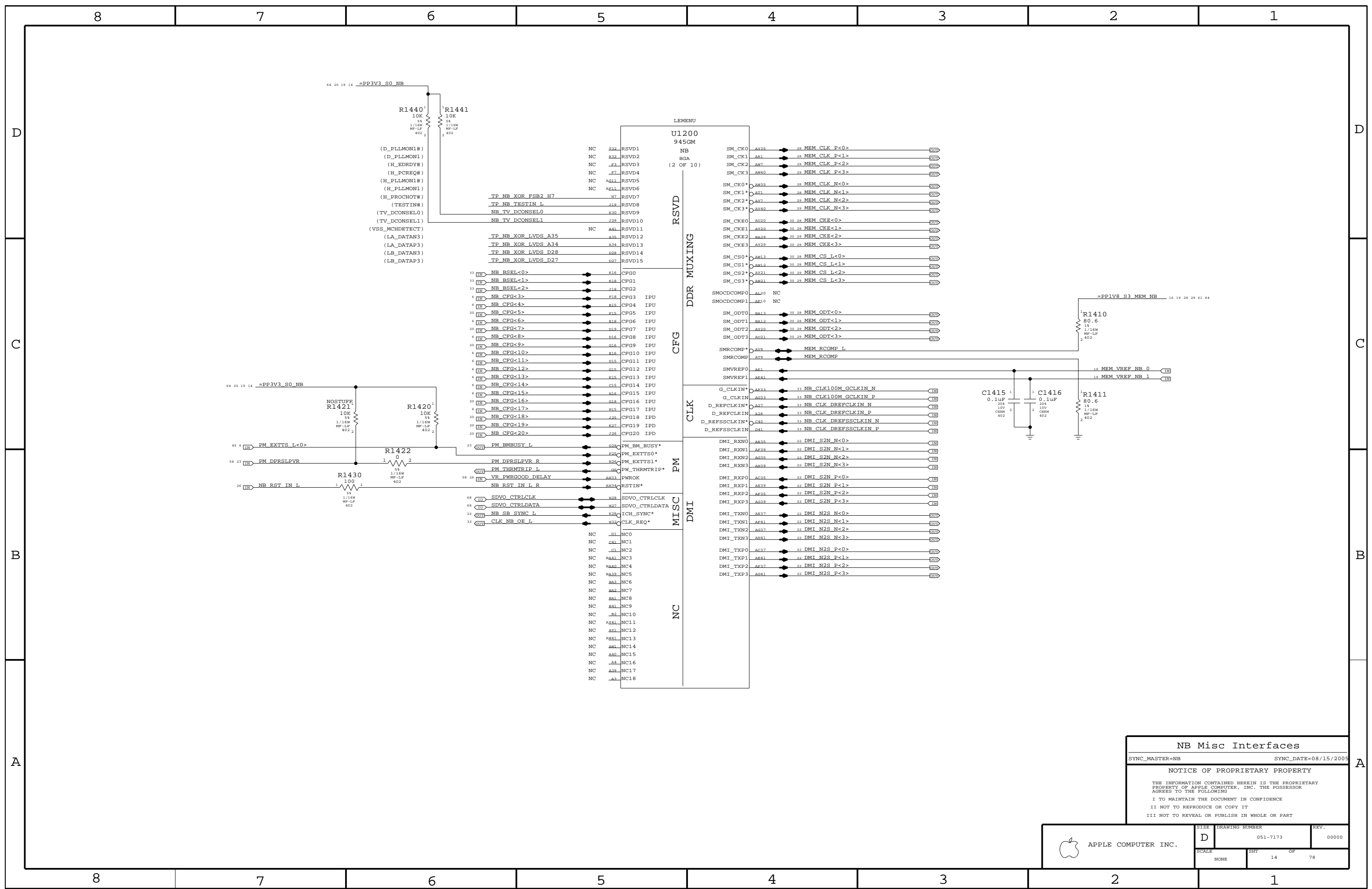
NB PEG / Video Interfaces

SYNC_MASTER=NB SYNC_DATE=07/25/2005

NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	13		



NB Misc Interfaces

SYNC_MASTER=NB SYNC_DATE=08/15/2005

NOTICE OF PROPRIETARY PROPERTY

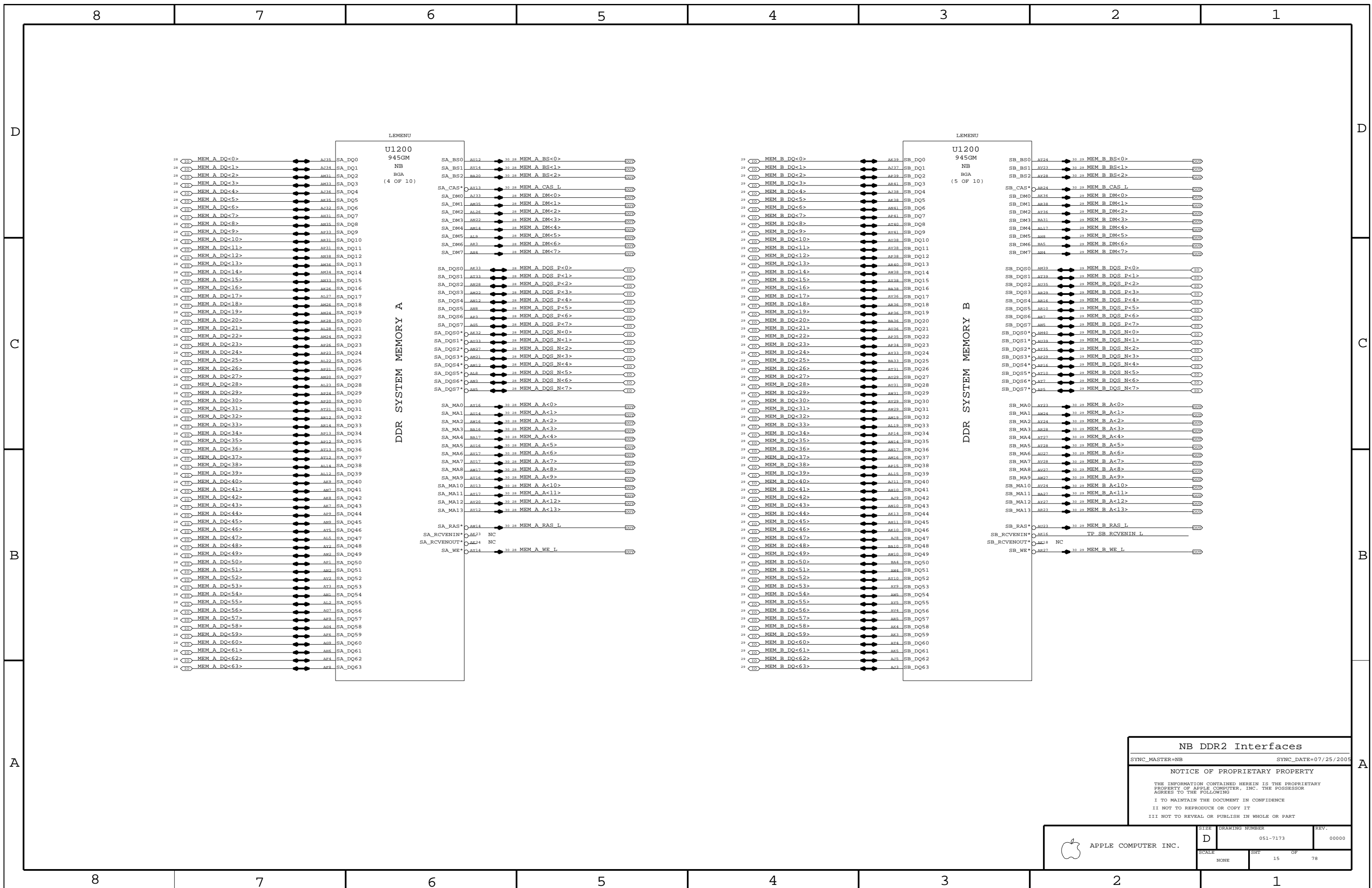
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 14	OF 78



NB DDR2 Interfaces

SYNC_MASTER=NB SYNC_DATE=07/25/2005

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

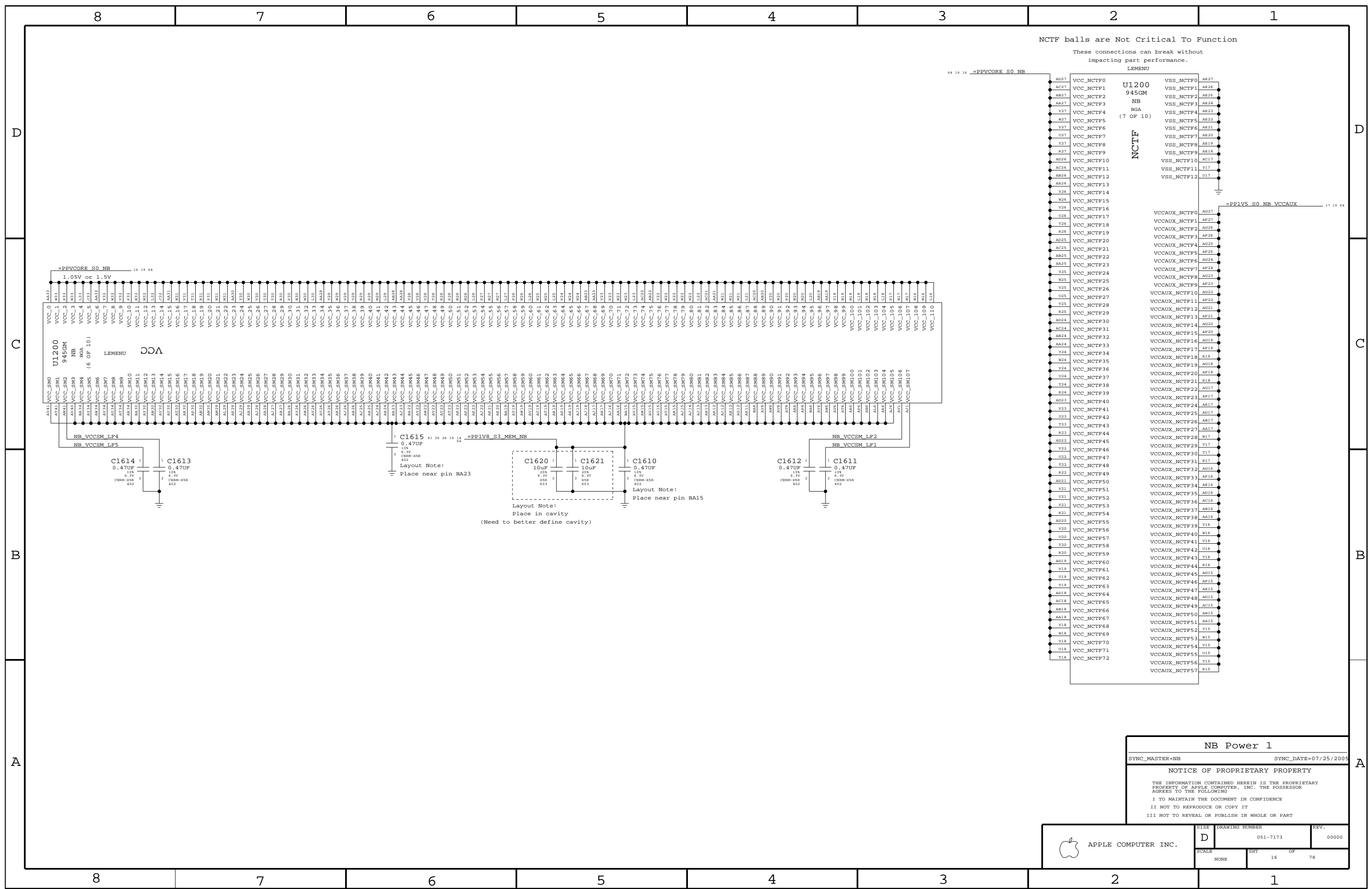
II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	15	78	

NCTF balls are Not Critical To Function

These connections can break without impacting part performance.

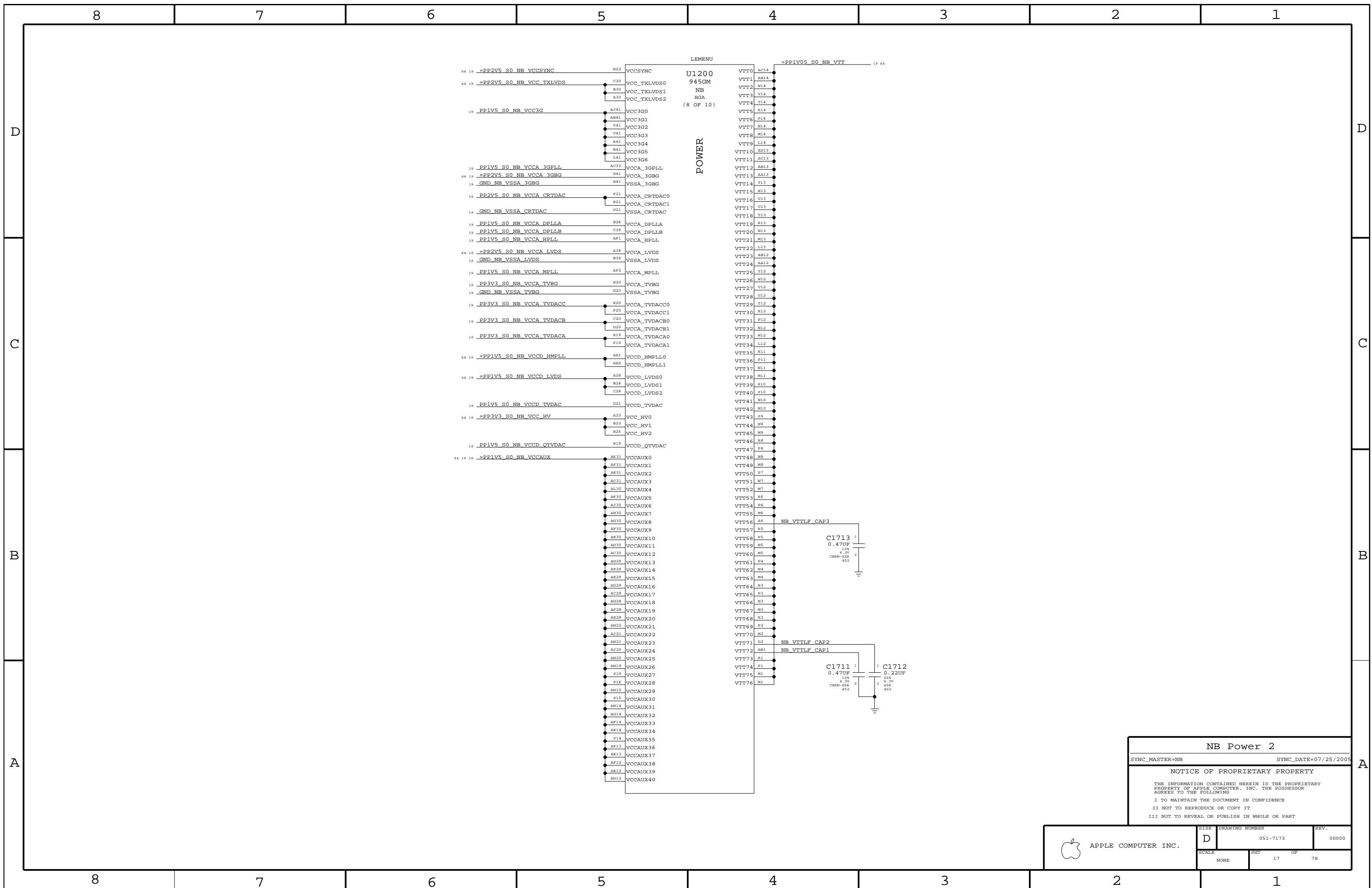


NB Power 1
SYNC_MASTER=NB SYNC_DATE=07/25/2005

NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	16	78	



NB Power 2

SYNC_MASTER=NB SYNC_DATE=07/25/2005

NOTICE OF PROPRIETARY PROPERTY

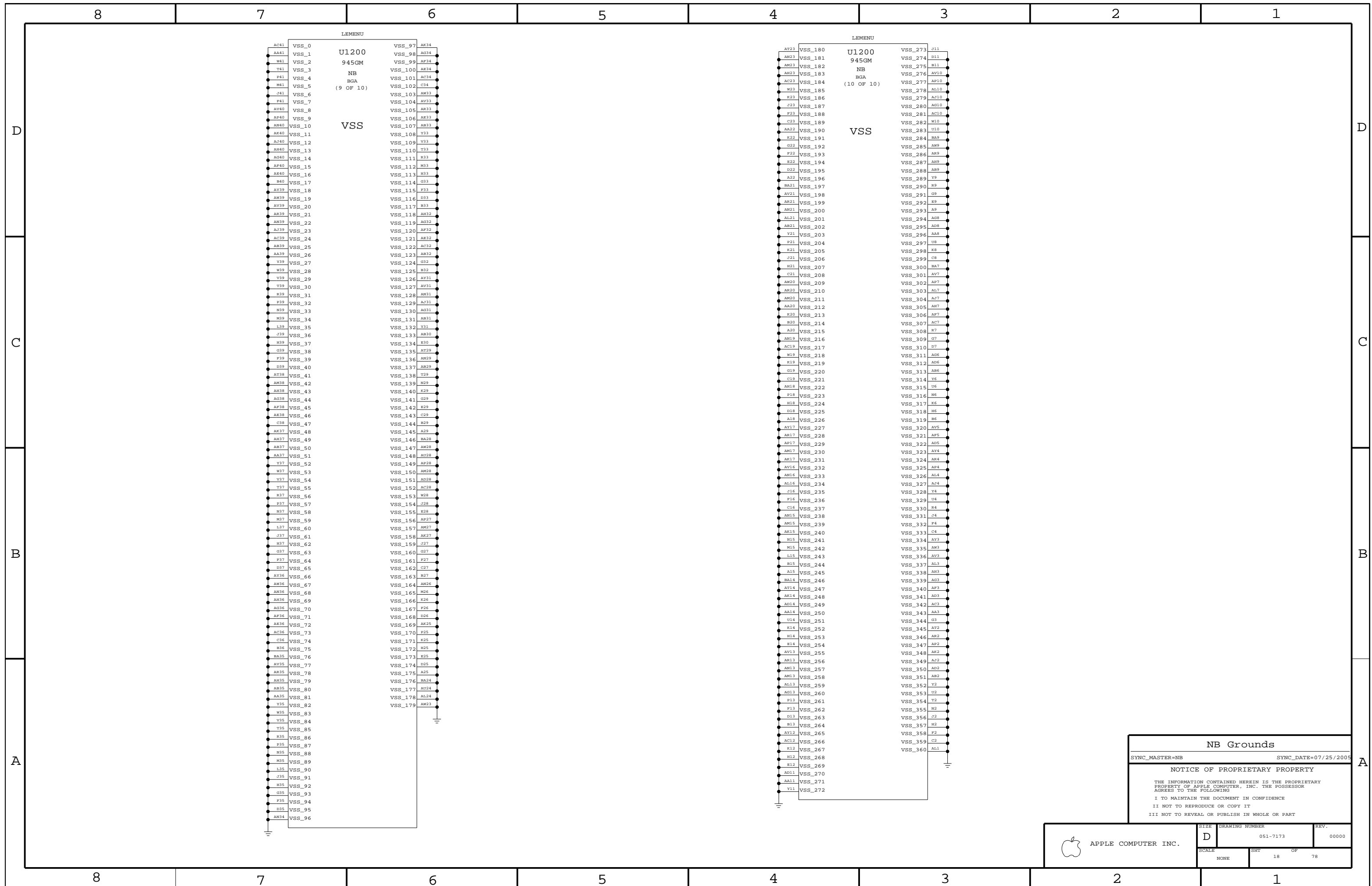
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 17	OF 78



NB Grounds

SYNC_MASTER=NB SYNC_DATE=07/25/2005

NOTICE OF PROPRIETARY PROPERTY

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

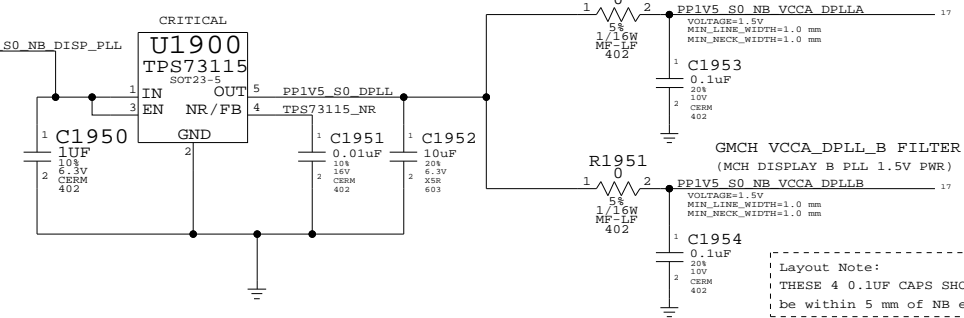
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	18		

Power Interface

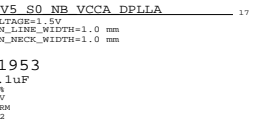
These are the power signals that leave the NB "block"

- PP1V05_S0_FSB_NB 12 33 64
- PPVCORE_S0_NB 16 19 64
- PP1V05_S0_NB 17 19 64
- PP1V05_S0_NB_VTT 17 19 64
- PP1V5_S0_NB 19 64
- PP1V5_S0_NB_PCIE 19 64
- PP1V5_S0_NB_PLL 19 64
- PP1V5_S0_NB_TV DAC 19 64
- PP1V5_S0_NB_VCCD_HMPLL 17 19 64
- PP1V5_S0_NB_VCCD_LVDS 17 19 64
- PP1V5_S0_NB_VCCAUX 16 17 19 64
- PP1V8_S3_MEM_NB 14 16 28 29 61 64
- PP2V5_S0_NB_CRTDAC 19 64
- PP2V5_S0_NB_VCCSYNC 17 19 64
- PP2V5_S0_NB_VCC_TXLVDS 17 19 64
- PP2V5_S0_NB_VCCA_3GBG 17 19 64
- PP2V5_S0_NB_VCCA_LVDS 17 19 64
- PP3V3_S0_NB 14 20 64
- PP3V3_S0_NB_VCC_HV 17 19 64
- PP5V_S0_NB_TV DAC 19 64

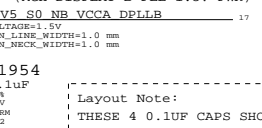
MCH DISPLAY PLL POWER LDO



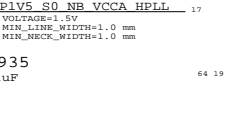
MCH VCCA_DPLL FILTER
(MCH DISPLAY A PLL 1.5V PWR)



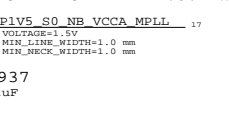
GMCH VCCA_DPLL_B FILTER
(MCH DISPLAY B PLL 1.5V PWR)



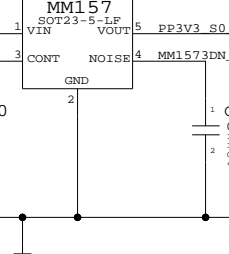
GMCH VCCA_HPLL FILTER
(HOST PLL 1.5V PWR)



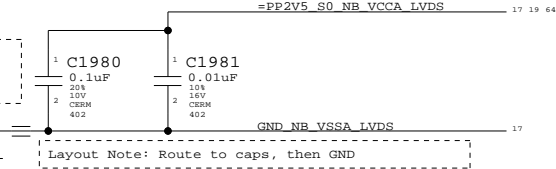
GMCH VCCA_MPLL FILTER
(MCH MEMORY PLL 1.5V PWR)



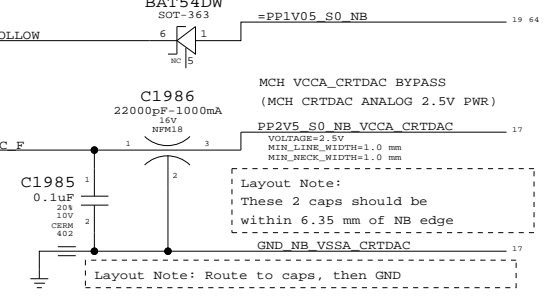
CRITICAL U1901 MM157



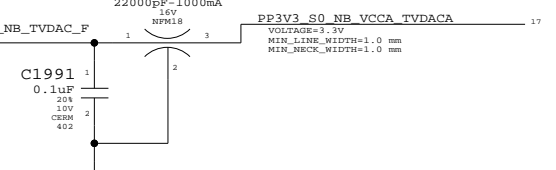
MCH VCCA_LVDS FILTER
(MCH LVDS ANALOG 2.5V PWR)



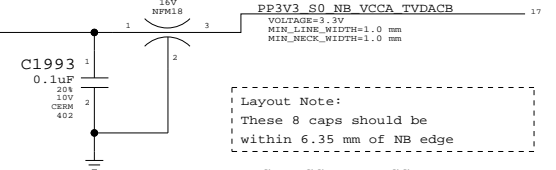
MCH VCCA_CRTDAC BYPASS
(MCH CRTDAC ANALOG 2.5V PWR)



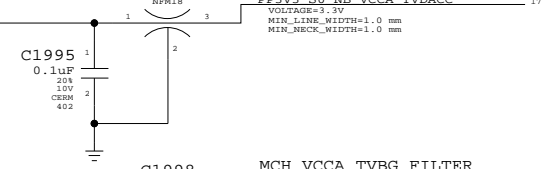
MCH VCCA_TV DAC FILTER
(MCH TV OUT CHANNEL A 3.3V PWR)



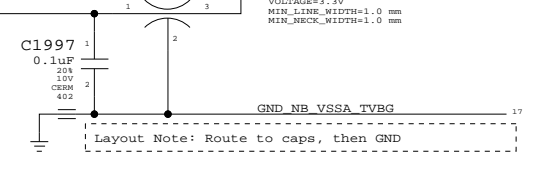
MCH VCCA_TV DAC FILTER
(MCH TV OUT CHANNEL B 3.3V PWR)



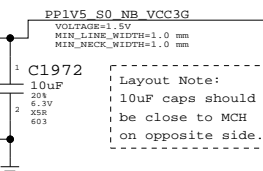
MCH VCCA_TV DAC FILTER
(MCH TV OUT CHANNEL C 3.3V PWR)



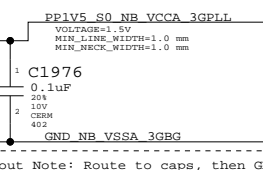
MCH VCCA_TV DAC FILTER
(MCH TV DAC BAND GAP 3.3V PWR)



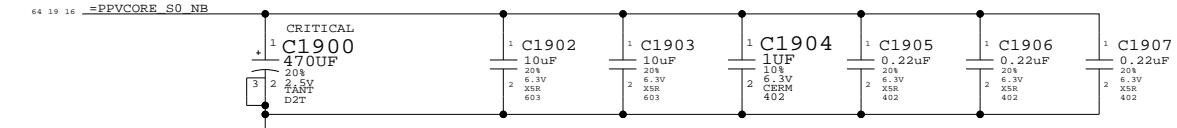
GMCH VCC3G FILTER
(PCI-E/DMI ANALOG 1.5V PWR)



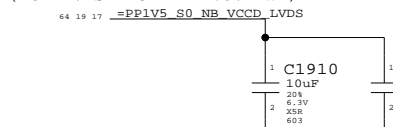
GMCH VCCA_3GPLL FILTER
(3GIO PLL 1.5V PWR)



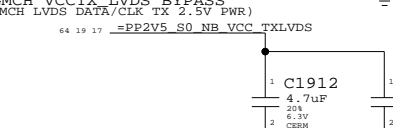
GMCH CORE PWR 1.05V BYPASS
THIS 470UF FOR GMCH CORE 1.05V



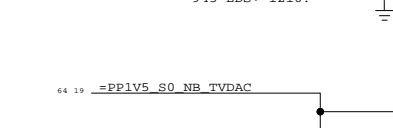
GMCH VCCD_LVDS BYPASS
(MCH LVDS DIGITAL 1.5V PWR)



GMCH VCCD_LVDS BYPASS
(MCH LVDS DATA/CLK TX 2.5V PWR)



GMCH VCCA_3GBG BYPASS
(MCH PCIE/DMI BAND GAP 2.5V PWR)



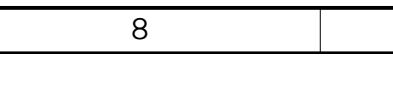
GMCH VCCAUX FILTER
(MCH DDR DLL&IO, FSB HSI0&IO PWR 1.5V)



GMCH VCCD_TV DAC FILTER
(MCH TV DAC DEDICATED PWR 1.5V)



GMCH VCCD_QTV DAC FILTER
(MCH TV DAC DIGITAL QUIET 1.5V PWR)



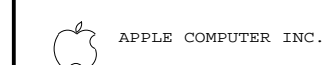
NB (GM) Decoupling

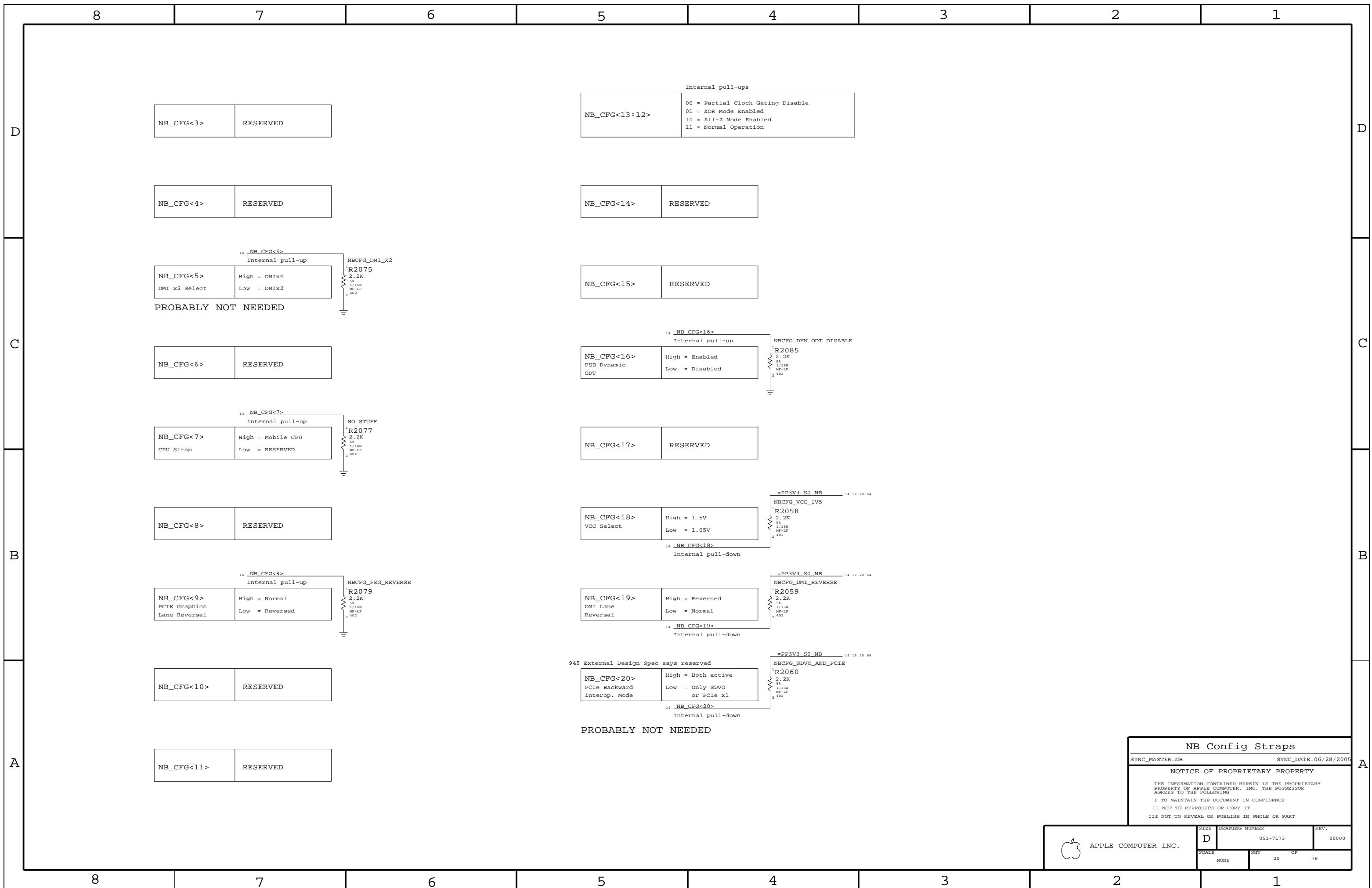
SYNC_MASTER=NB SYNC_DATE=06/22/2005

NOTICE OF PROPRIETARY PROPERTY

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

SIZE	DRAWING NUMBER	REV.
D	051-7173	00000
SCALE	SHT	OF
NONE	19	78





Internal pull-ups

NB_CFG<13:12>	00 = Partial Clock Gating Disable 01 = XOR Mode Enabled 10 = All-Z Mode Enabled 11 = Normal Operation
---------------	--

NB_CFG<3>	RESERVED
-----------	----------

NB_CFG<14>	RESERVED
------------	----------

NB_CFG<4>	RESERVED
-----------	----------

14 NB_CFG<5>
Internal pull-up

NB_CFG<5>	High = DMIX4 DMI x2 Select Low = DMIX2
-----------	--

PROBABLY NOT NEEDED

NBCFG_DMI_X2
R2075
2.2K
5%
1/16W
MF-LP
402

NB_CFG<15>	RESERVED
------------	----------

NB_CFG<6>	RESERVED
-----------	----------

14 NB_CFG<16>
Internal pull-up

NB_CFG<16>	High = Enabled FSB Dynamic ODT Low = Disabled
------------	--

NBCFG_DYN_ODT_DISABLE
R2085
2.2K
5%
1/16W
MF-LP
402

14 NB_CFG<7>
Internal pull-up

NB_CFG<7>	High = Mobile CPU CPU Strap Low = RESERVED
-----------	--

NO STUFF
R2077
2.2K
5%
1/16W
MF-LP
402

NB_CFG<17>	RESERVED
------------	----------

NB_CFG<8>	RESERVED
-----------	----------

14 NB_CFG<18>
Internal pull-down

NB_CFG<18>	High = 1.5V VCC Select Low = 1.05V
------------	--

=PP3V3_S0_NB
NBCFG_VCC_LV5
R2058
2.2K
5%
1/16W
MF-LP
402

14 NB_CFG<9>
Internal pull-up

NB_CFG<9>	High = Normal PCIe Graphics Lane Reversal Low = Reversed
-----------	---

NBCFG_PEG_REVERSE
R2079
2.2K
5%
1/16W
MF-LP
402

14 NB_CFG<19>
Internal pull-down

NB_CFG<19>	High = Reversed DMI Lane Reversal Low = Normal
------------	---

=PP3V3_S0_NB
NBCFG_DMI_REVERSE
R2059
2.2K
5%
1/16W
MF-LP
402

NB_CFG<10>	RESERVED
------------	----------

945 External Design Spec says reserved

14 NB_CFG<20>
Internal pull-down

NB_CFG<20>	High = Both active PCIe Backward Interop. Mode Low = Only SDVO or PCIe x1
------------	---

=PP3V3_S0_NB
NBCFG_SDVO_AND_PCIE
R2060
2.2K
5%
1/16W
MF-LP
402

NB_CFG<11>	RESERVED
------------	----------

NB Config Straps

SYNC_MASTER=NB SYNC_DATE=06/28/2005

NOTICE OF PROPRIETARY PROPERTY

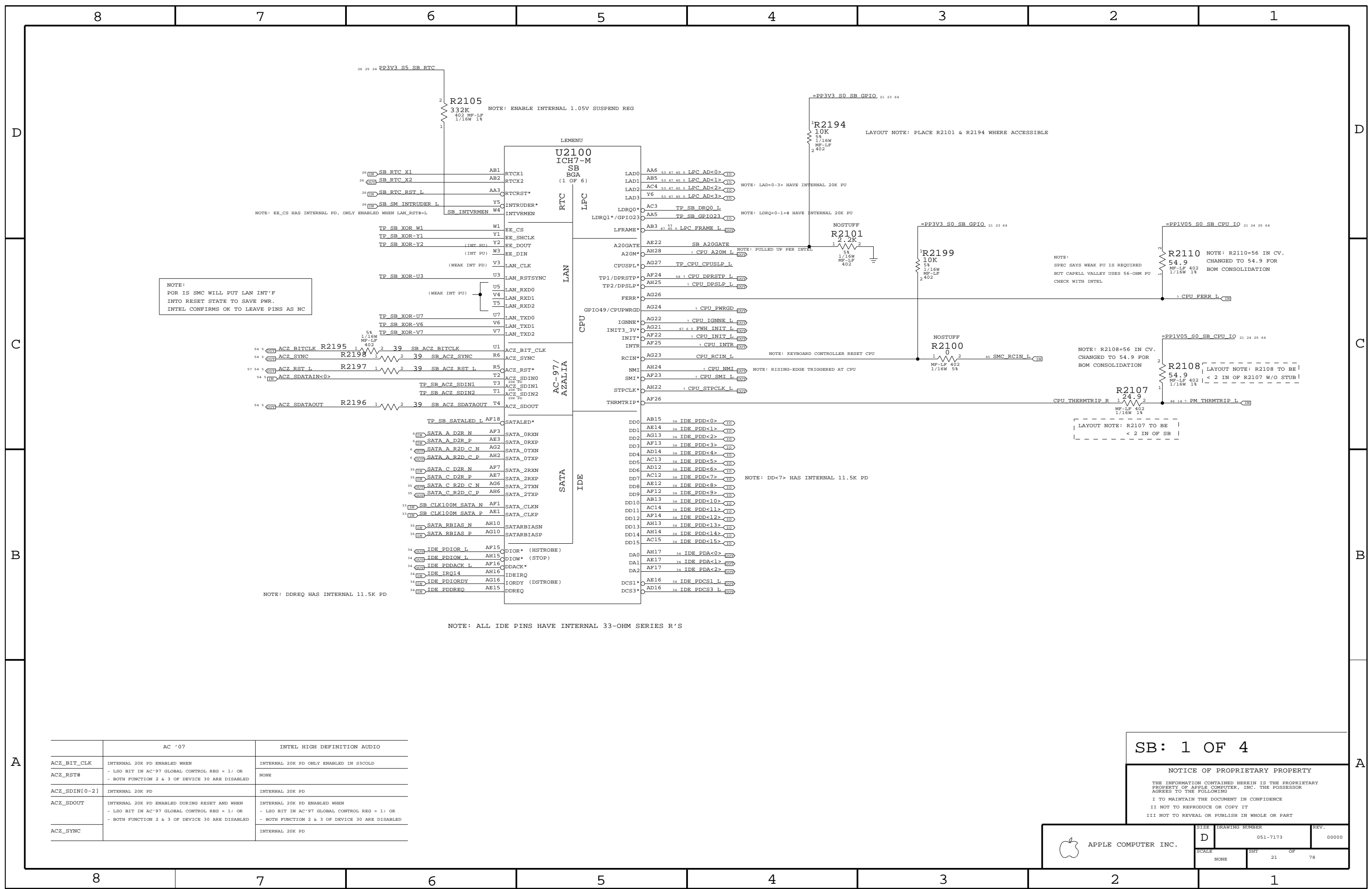
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	20		



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

NOTE: ER_CS HAS INTERNAL PD, ONLY ENABLED WHEN LAN_RST#*L

NOTE: LAD<0-3> HAVE INTERNAL 20K PU

NOTE: LDRQ<0-1># HAVE INTERNAL 20K PU

NOTE: PULLED UP PER INTEL

NOTE: KEYBOARD CONTROLLER RESET CPU

NOTE: RISING-EDGE TRIGGERED AT CPU

NOTE: DD<7> HAS INTERNAL 11.5K PD

LAYOUT NOTE: PLACE R2101 & R2194 WHERE ACCESSIBLE

NOTE:
SPEC SAYS WEAK PU IS REQUIRED
BUT CAPELL VALLEY USES 56-OHM PU
CHECK WITH INTEL

NOTE: R2108=56 IN CV.
CHANGED TO 54.9 FOR
BOM CONSOLIDATION

LAYOUT NOTE: R2107 TO BE
< 2 IN OF SB

NOTE: DDREQ HAS INTERNAL 11.5K PD

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

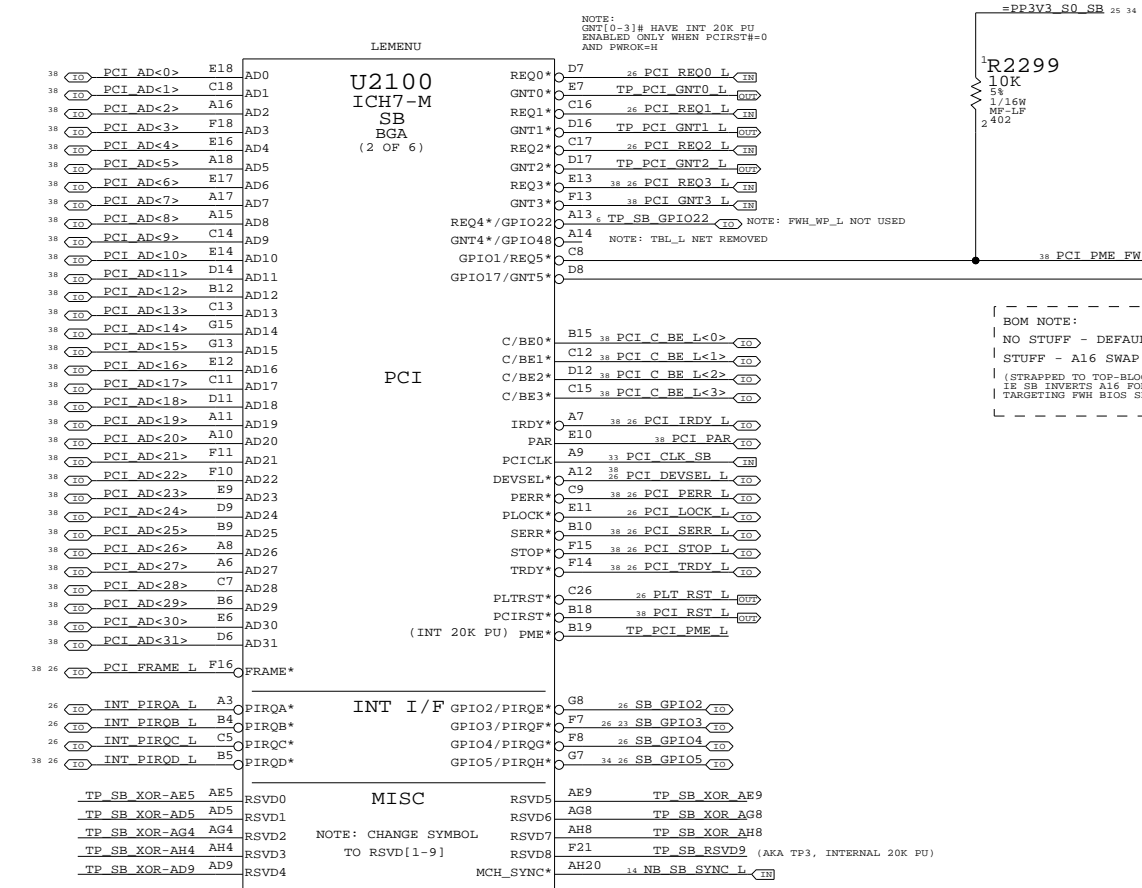
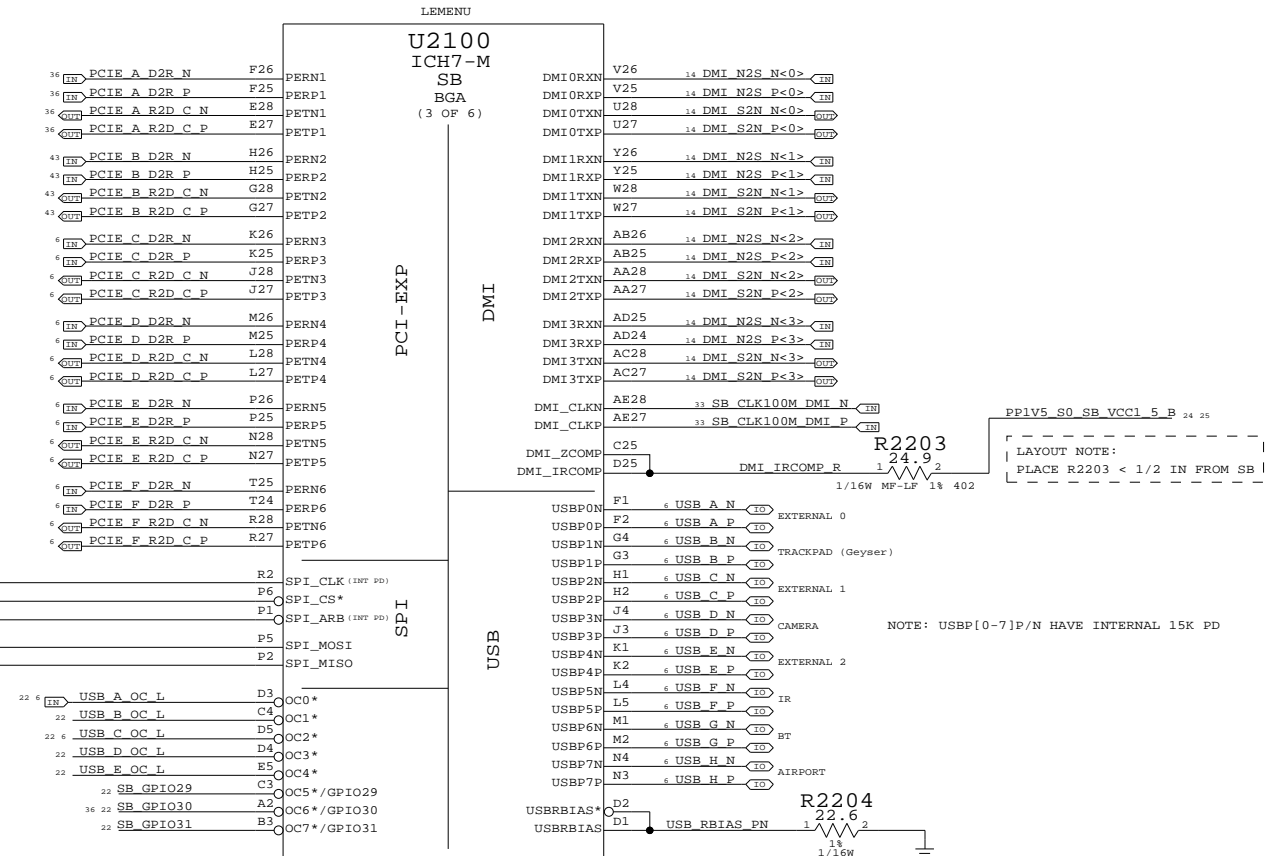
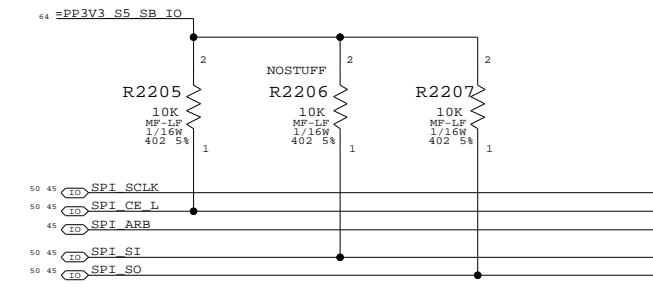
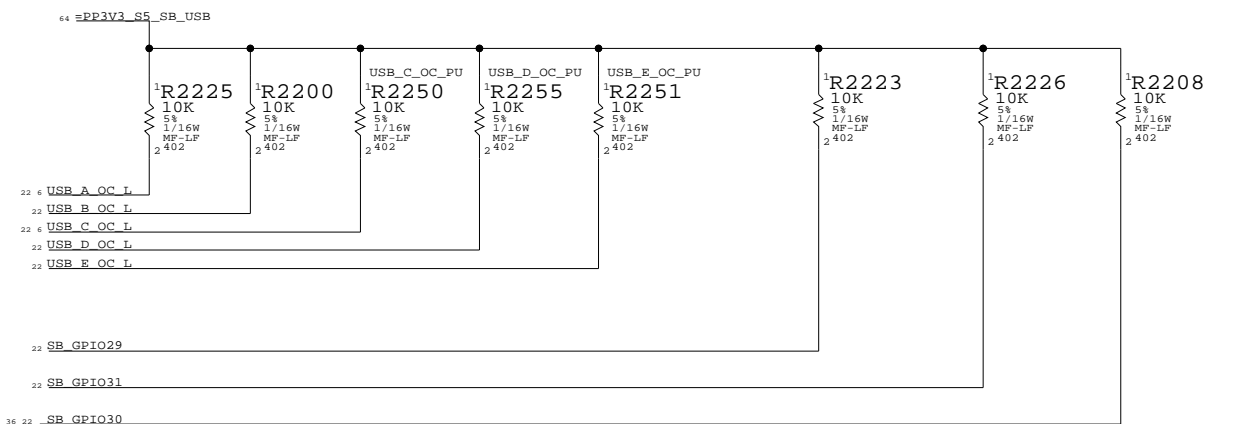
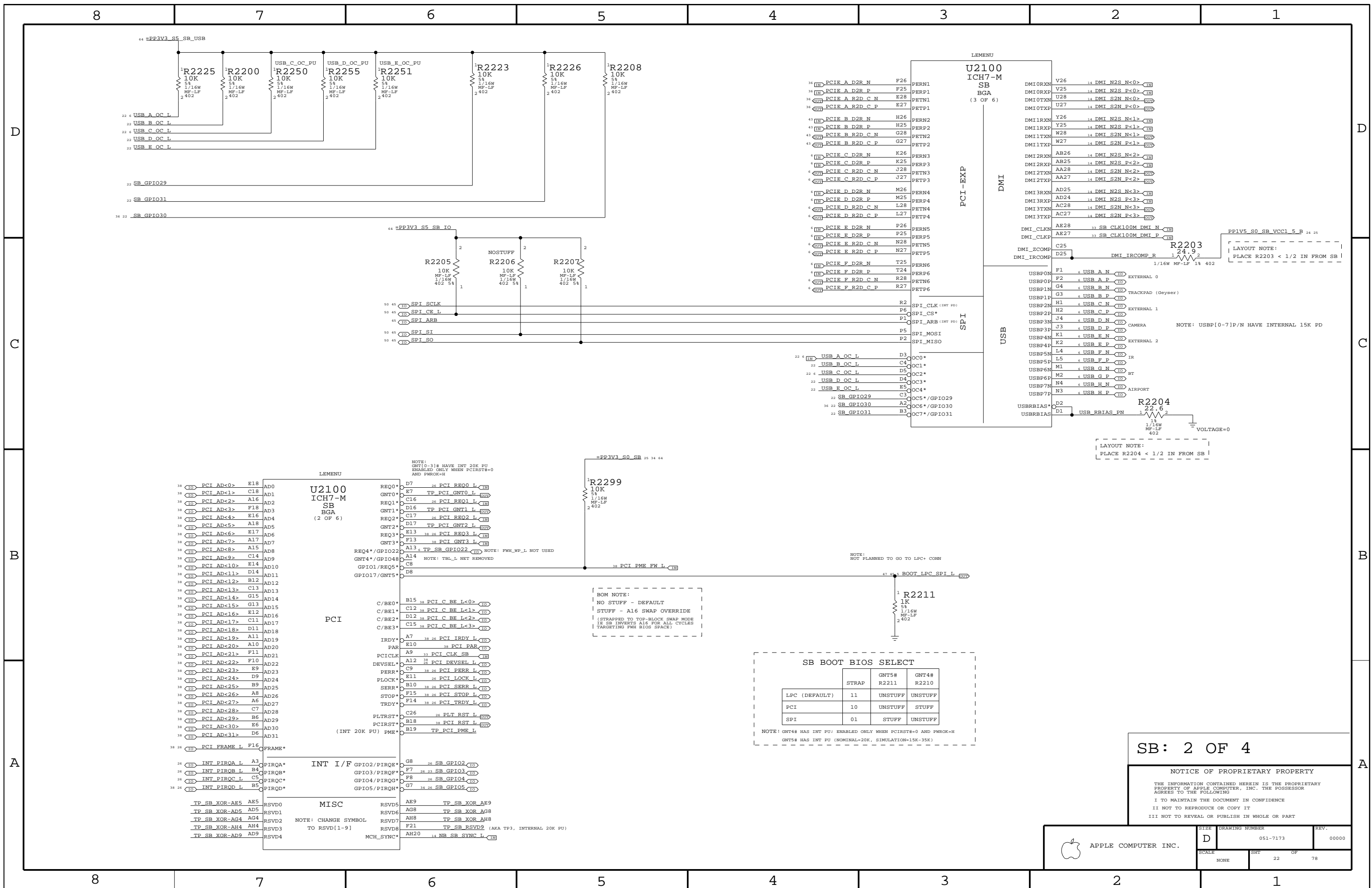
	AC '07	INTEL HIGH DEFINITION AUDIO
ACZ_BIT_CLK	INTERNAL 20K PD ENABLED WHEN - LSO BIT IN AC'97 GLOBAL CONTROL REG = 1; OR	INTERNAL 20K PD ONLY ENABLED IN S3COLD
ACZ_RST#	NONE	NONE
ACZ_SDIN[0-2]	INTERNAL 20K PD	INTERNAL 20K PD
ACZ_SDOUT	INTERNAL 20K PD ENABLED DURING RESET AND WHEN - LSO BIT IN AC'97 GLOBAL CONTROL REG = 1; OR - BOTH FUNCTION 2 & 3 OF DEVICE 30 ARE DISABLED	INTERNAL 20K PD ENABLED 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	INTERNAL 20K PD

SB: 1 OF 4

NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	NONE	SHT	21 OF 78



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 FWROK=H
GNT5# HAS INT PU (NOMINAL=20K, SIMULATION=15K-35K)

SB: 2 OF 4

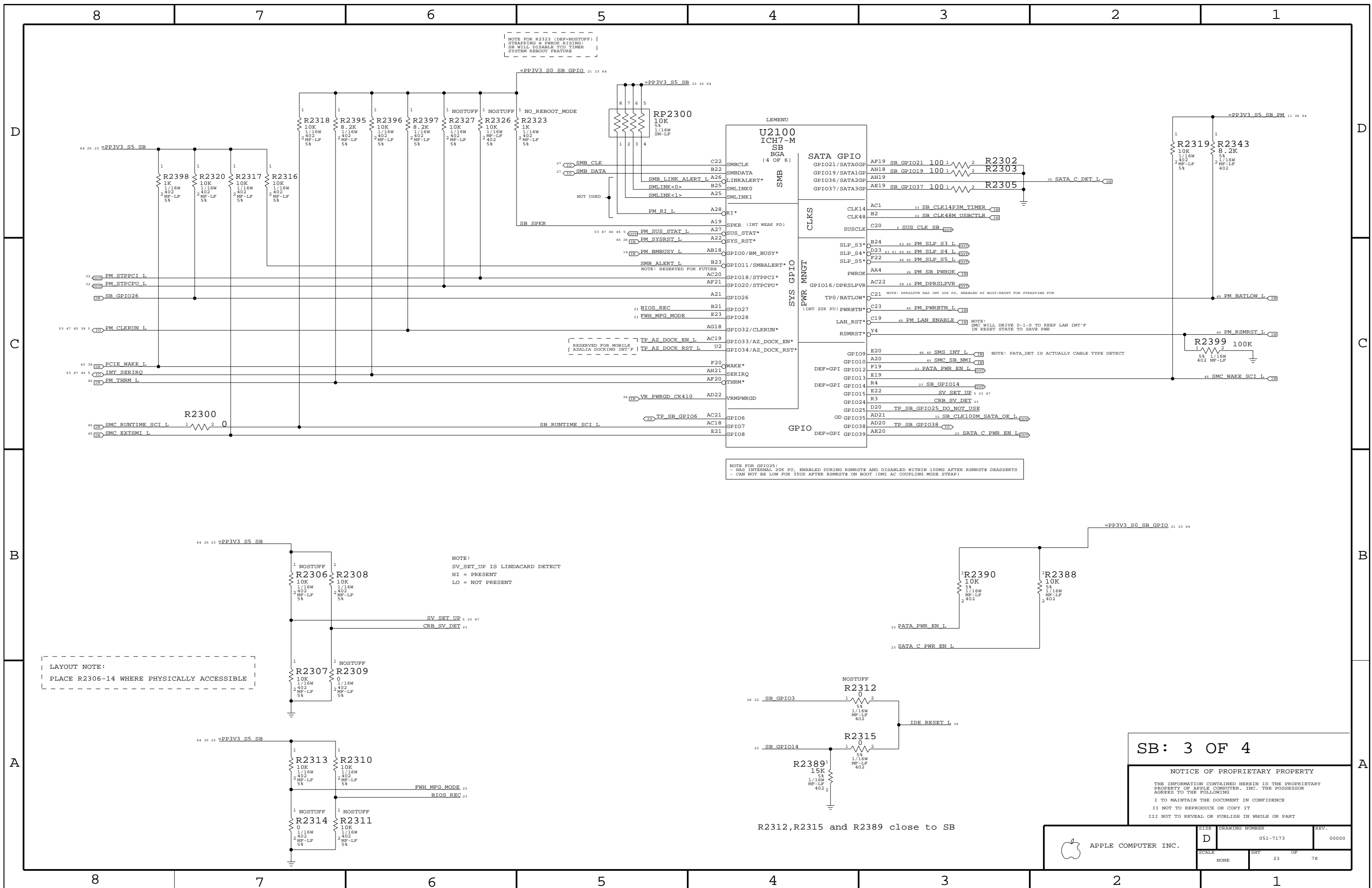
NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART



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

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

LAYOUT NOTE:
 PLACE R2306-14 WHERE PHYSICALLY ACCESSIBLE

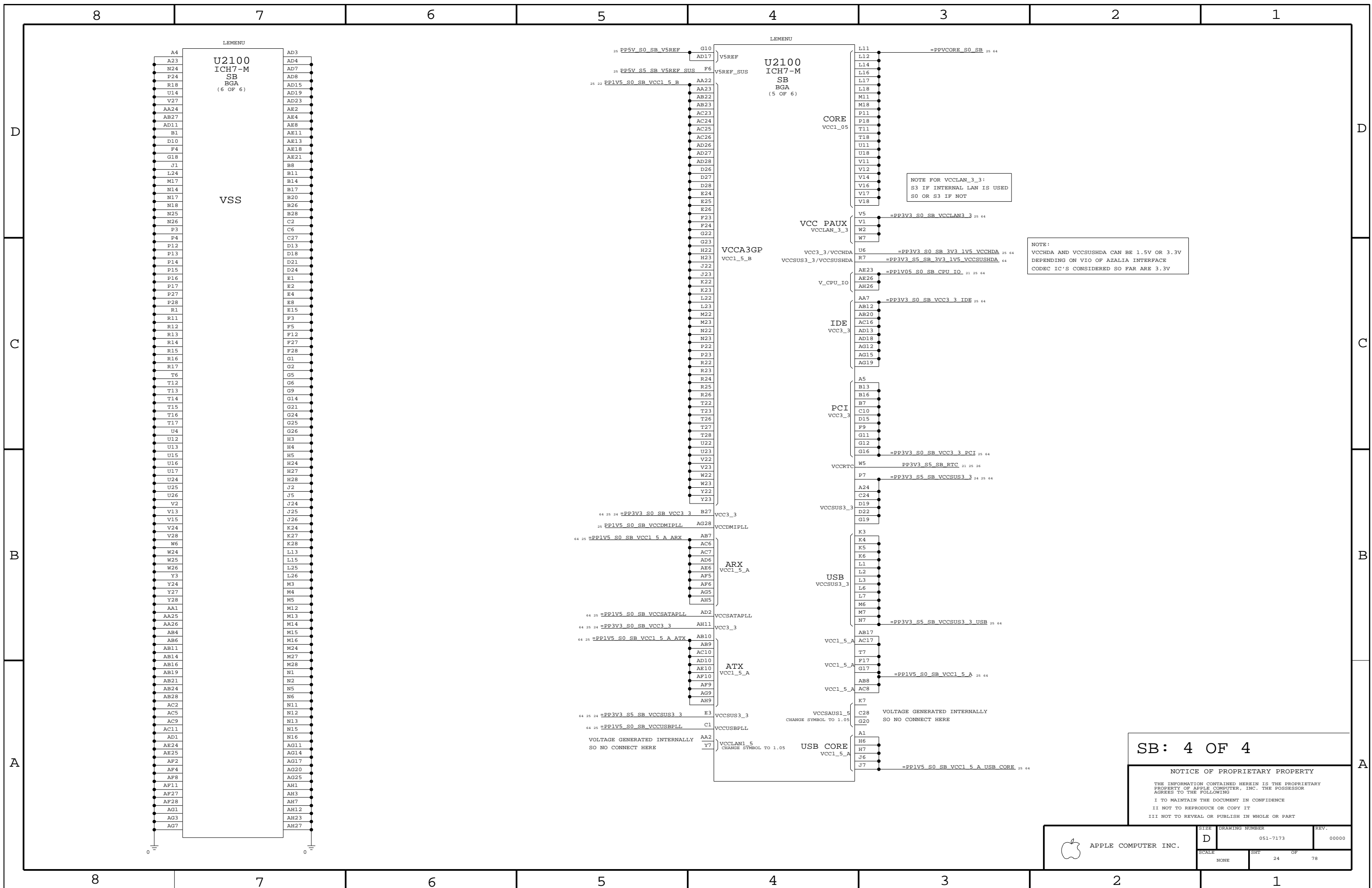
NOTE:
 SV_SET_UP IS LINDACARD DETECT
 HI = PRESENT
 LO = NOT PRESENT

SB: 3 OF 4

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	NONE	SHT	23 OF 78

R2312, R2315 and R2389 close to SB



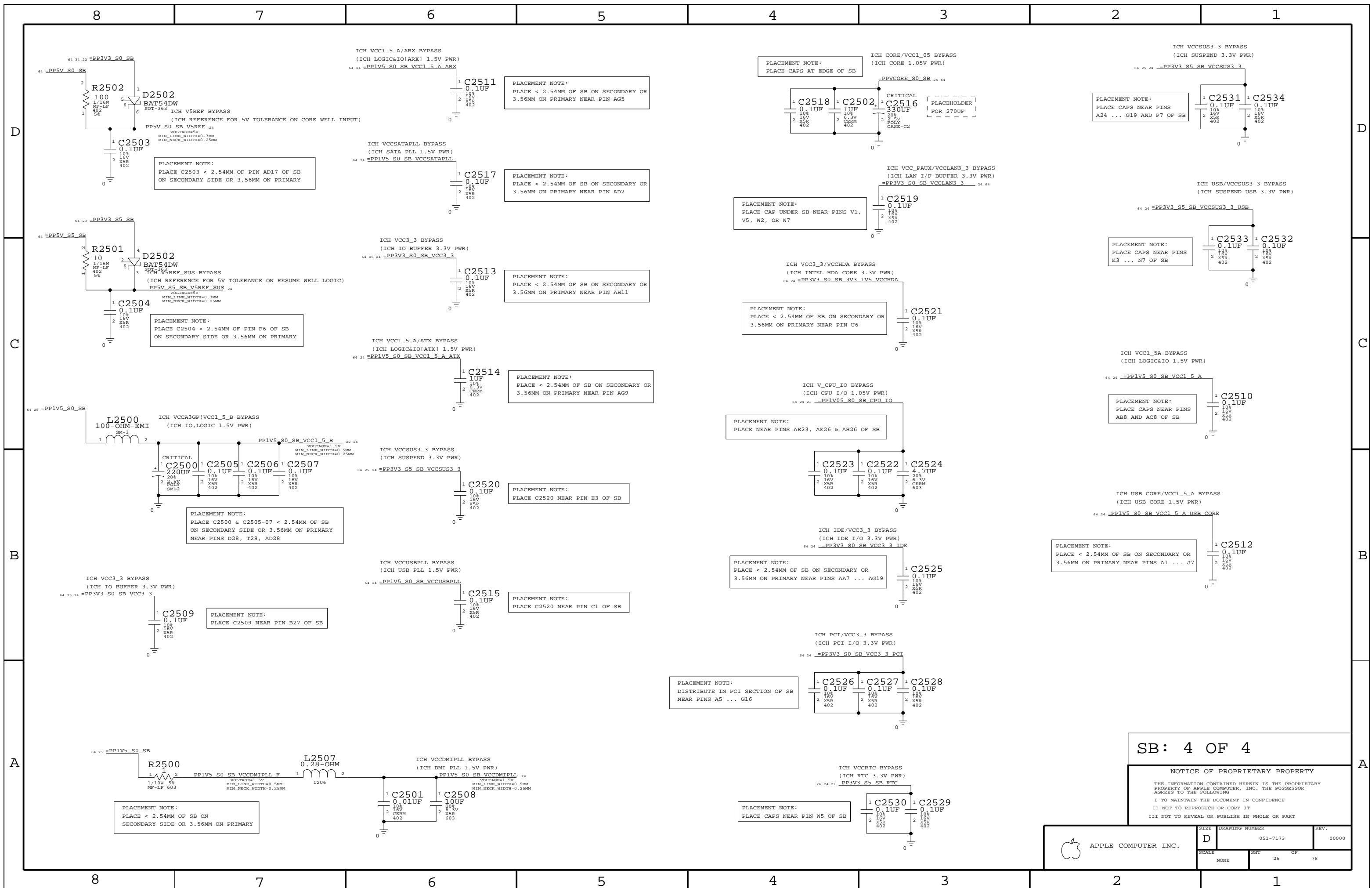
NOTE FOR VCCLAN_3_3:
S3 IF INTERNAL LAN IS USED
S0 OR S3 IF NOT

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

SB: 4 OF 4

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT		OF
NONE	24		78



SB: 4 OF 4

NOTICE OF PROPRIETARY PROPERTY

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

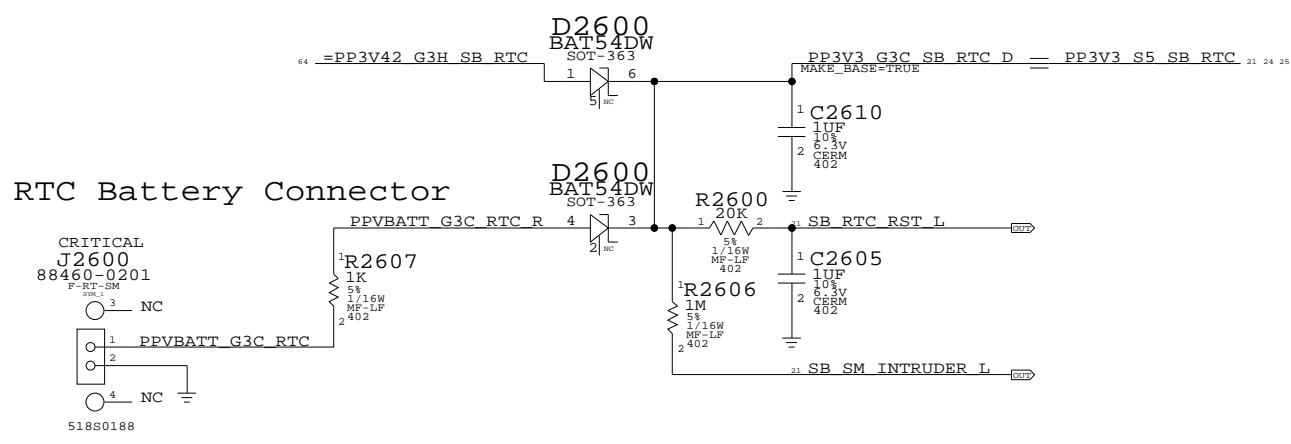
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

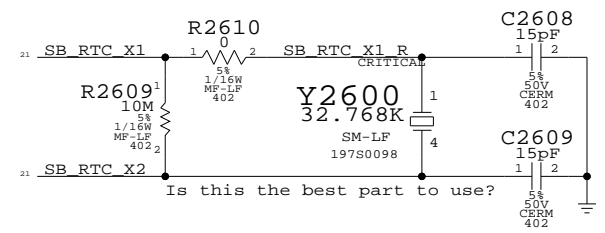
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 25	OF 78

RTC Battery Connector

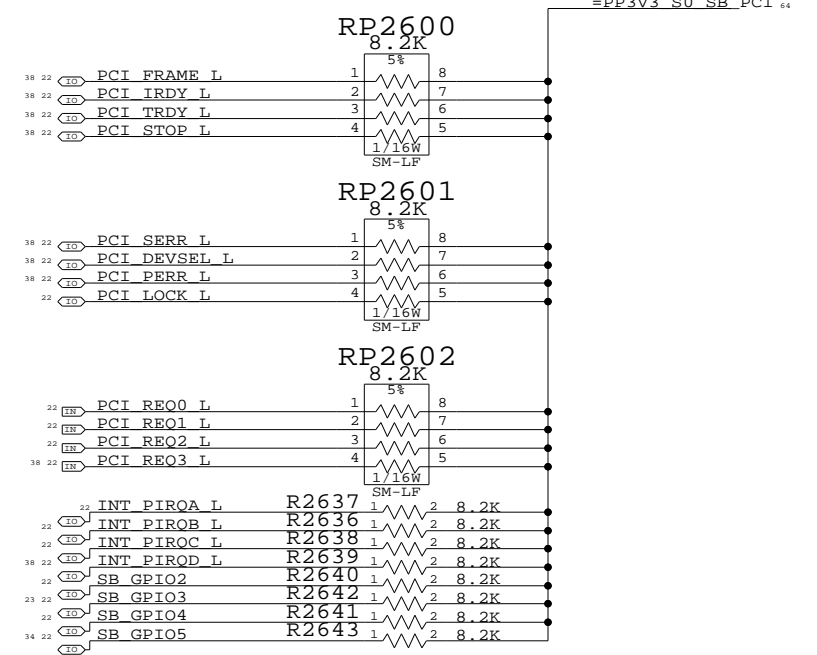
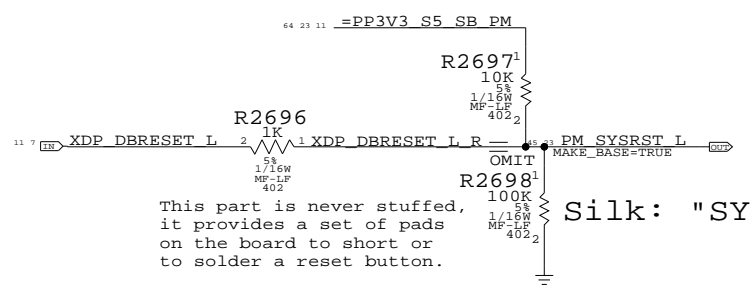


SB RTC Crystal Circuit



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

Silk: "SYS RST"



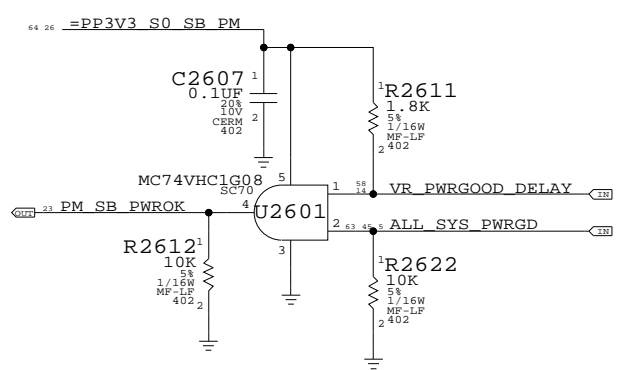
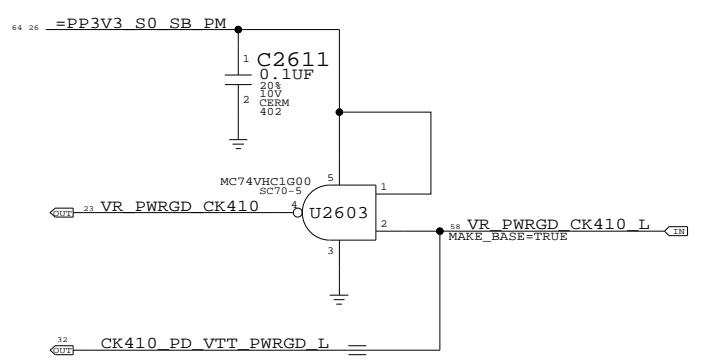
Platform Reset Connections

Unbuffered

Buffered

Gated

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



SB Misc

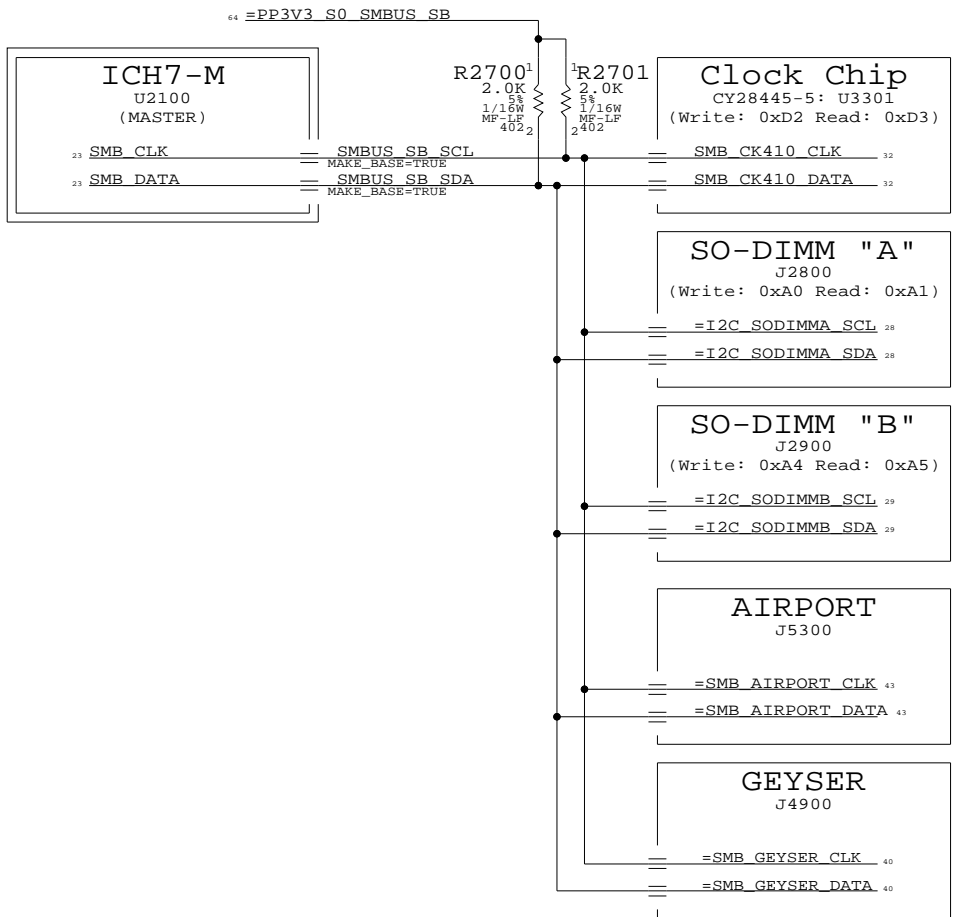
SYNC_MASTER=NB SYNC_DATE=07/26/2005

NOTICE OF PROPRIETARY PROPERTY

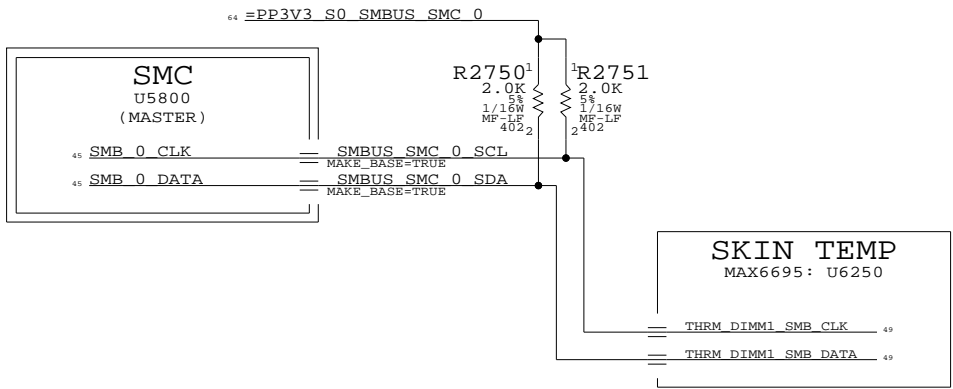
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE
II NOT TO REPRODUCE OR COPY IT
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	26		

ICH7-M SMBus Connections

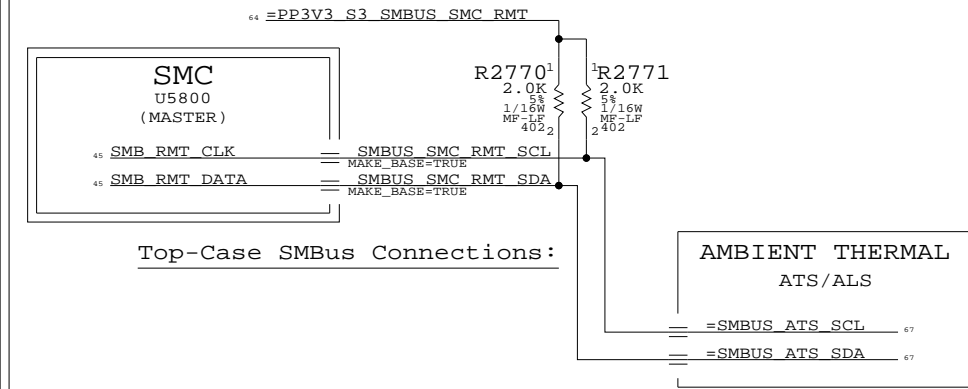


SMC "0" SMBus Connections

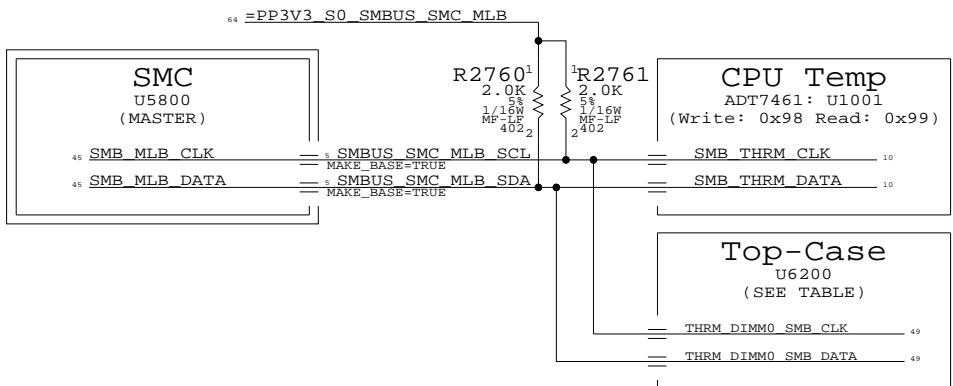


SMC "RMT" SMBus Connections

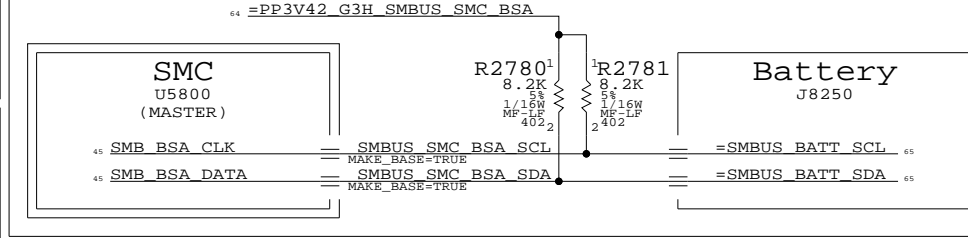
NOTE: SMC RMT bus remains powered and may be active in S3 state



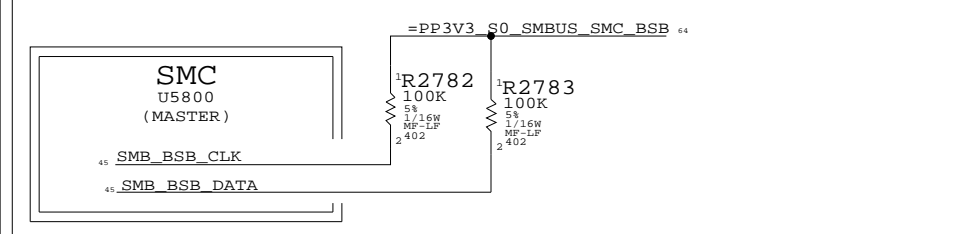
SMC "MLB" SMBus Connections



SMC "Battery A" SMBus Connections



SMC "Battery B" SMBus Connections



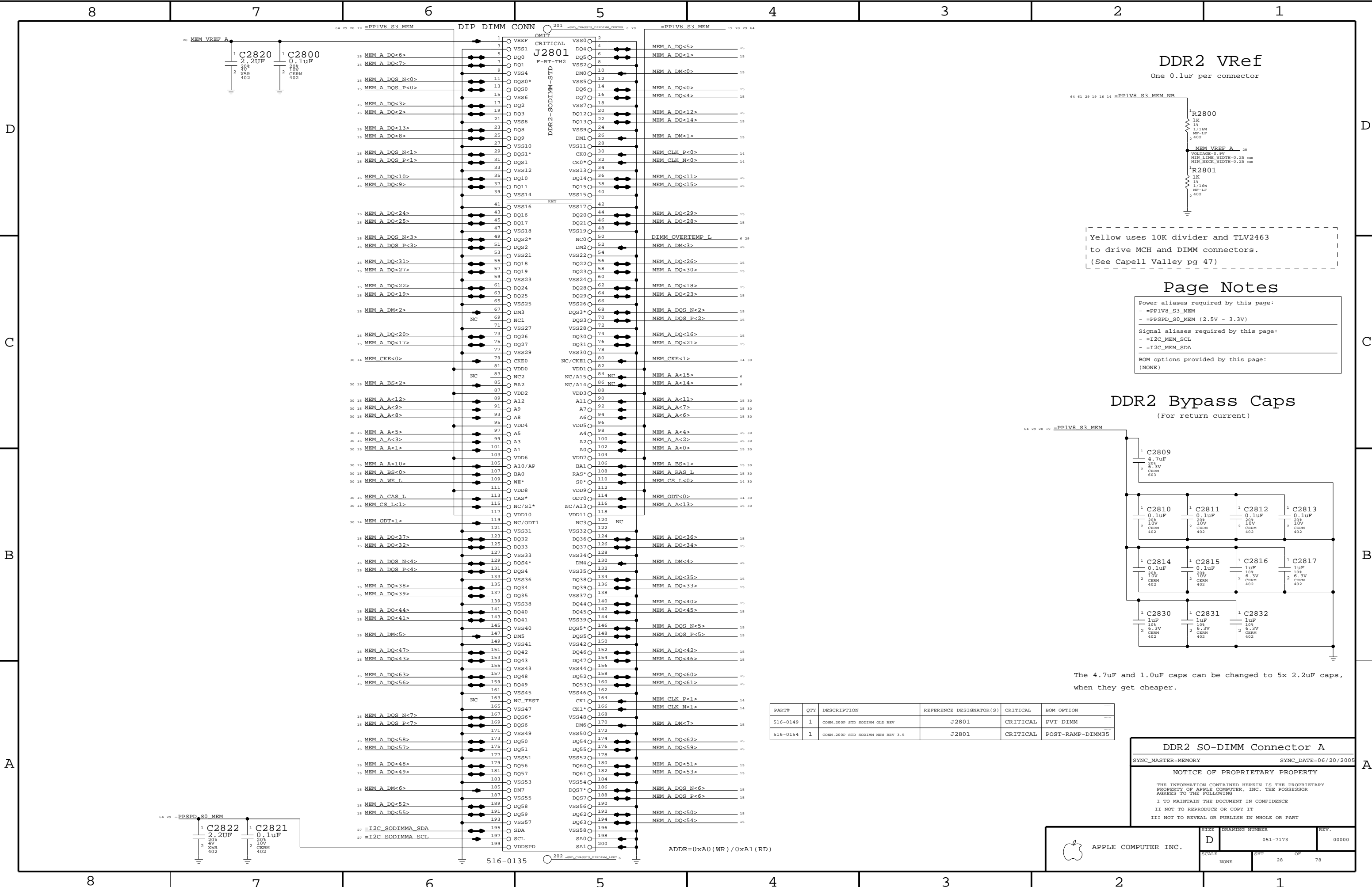
M42 SMBUS CONNECTIONS

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

NOTICE OF PROPRIETARY PROPERTY

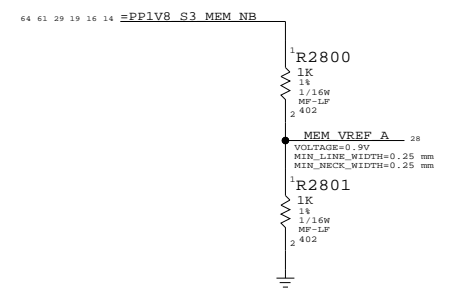
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	NONE	SHT	27 OF 78



DDR2 Vref

One 0.1uF per connector



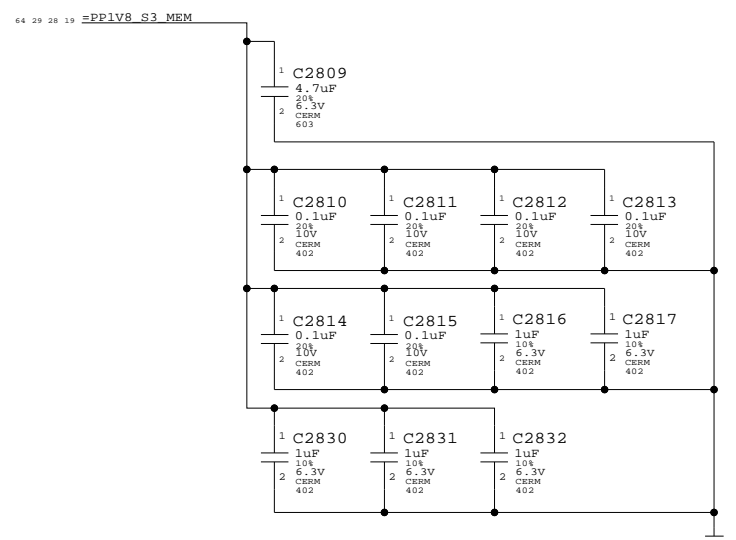
Yellow uses 10K divider and TLV2463 to drive MCH and DIMM connectors. (See Capell Valley pg 47)

Page Notes

- Power aliases required by this page:
 - =PP1V8_S3_MEM
 - =PPSPD_S0_MEM (2.5V - 3.3V)
- Signal aliases required by this page:
 - =I2C_MEM_SCL
 - =I2C_MEM_SDA
- BOM options provided by this page:
 - (NONE)

DDR2 Bypass Caps

(For return current)



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

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

DDR2 SO-DIMM Connector A

SYNC_MASTER=MEMORY SYNC_DATE=06/20/2005

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

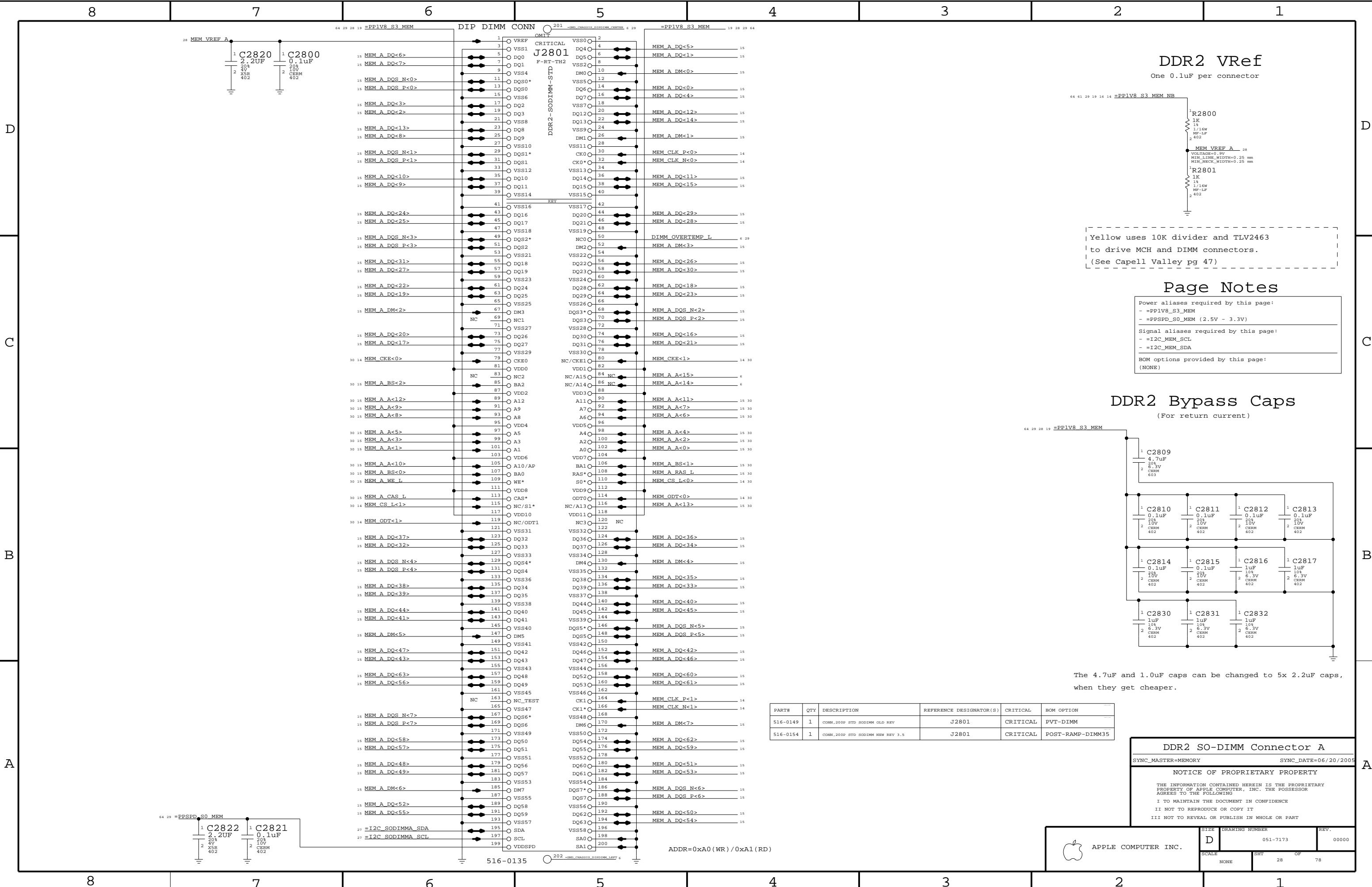
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

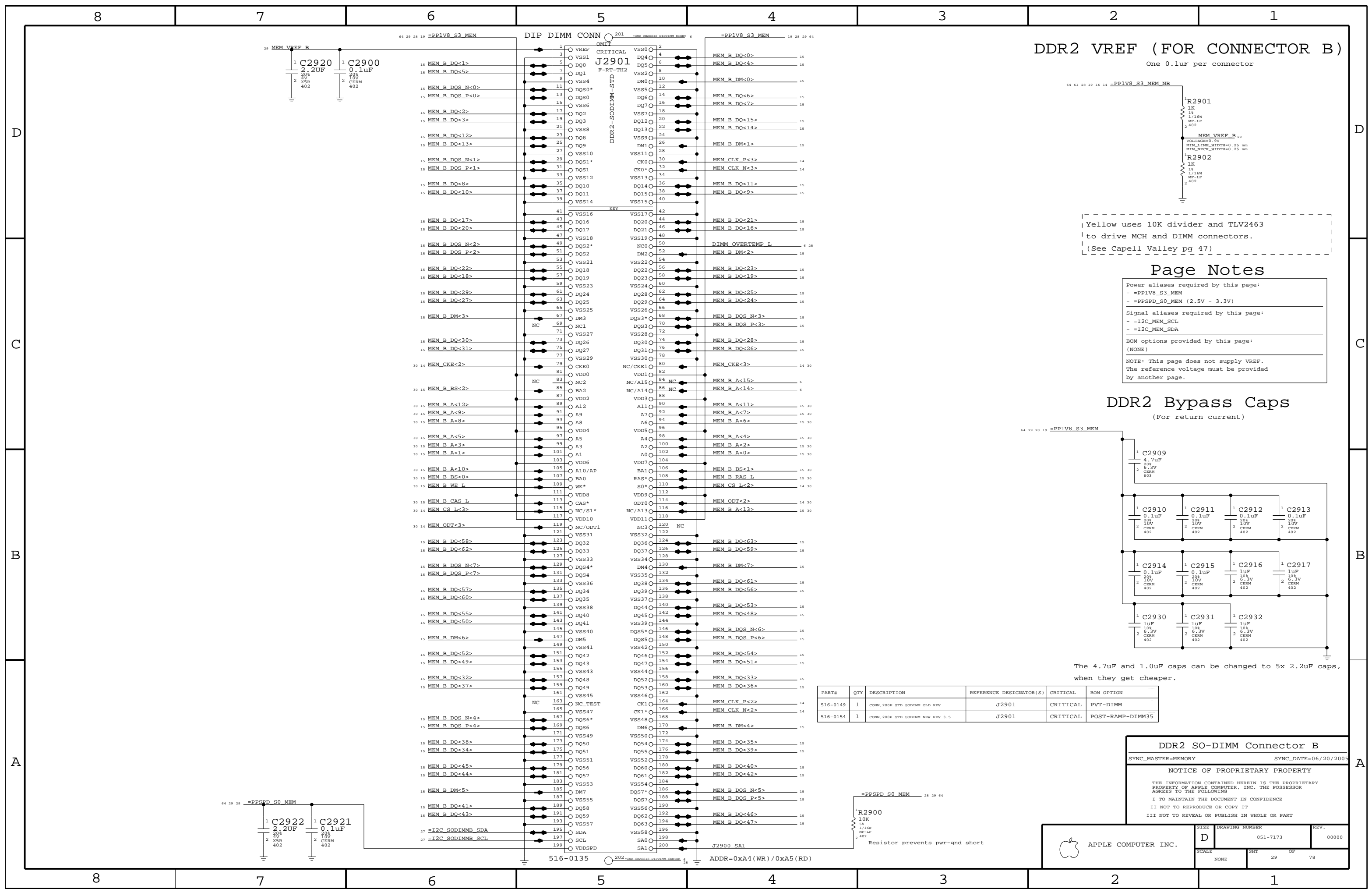
APPLE COMPUTER INC.

DRAWING NUMBER: 051-7173 REV. 00000

SCALE: NONE SHEET: 28 OF 78

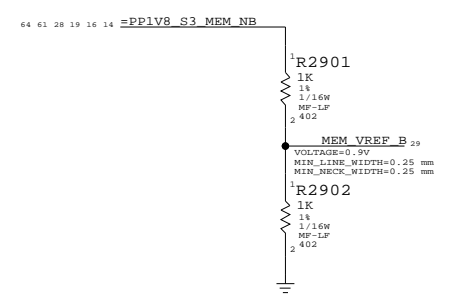
ADDR=0xA0 (WR) / 0xA1 (RD)





DDR2 VREF (FOR CONNECTOR B)

One 0.1uF per connector

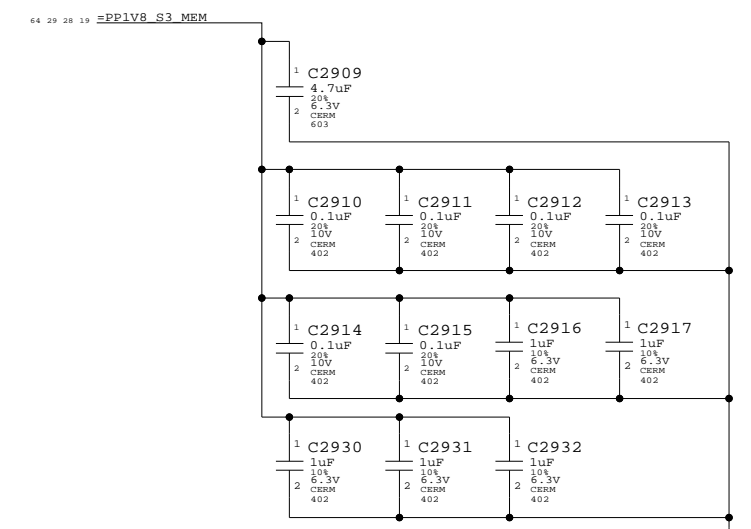


Yellow uses 10K divider and TLV2463 to drive MCH and DIMM connectors.
(See Capell Valley pg 47)

Page Notes

- Power aliases required by this page:
 - =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)
- NOTE: This page does not supply VREF. The reference voltage must be provided by another page.

DDR2 Bypass Caps (For return current)



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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
516-0149	1	CONN,200P STD SODIMM OLD REV	J2901	CRITICAL	PVT-DIMM
516-0154	1	CONN,200P STD SODIMM NEW REV 1.5	J2901	CRITICAL	POST-RAMP-DIMM35

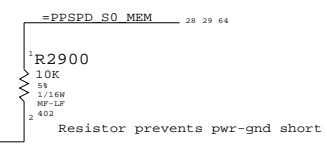
DDR2 SO-DIMM Connector B

SYNC_MASTER=MEMORY SYNC_DATE=06/20/2005

NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SCALE	SHT	OF	REV.
	NONE	29	78	00000



516-0135 ADDR=0xA4 (WR) / 0xA5 (RD)

8

7

6

5

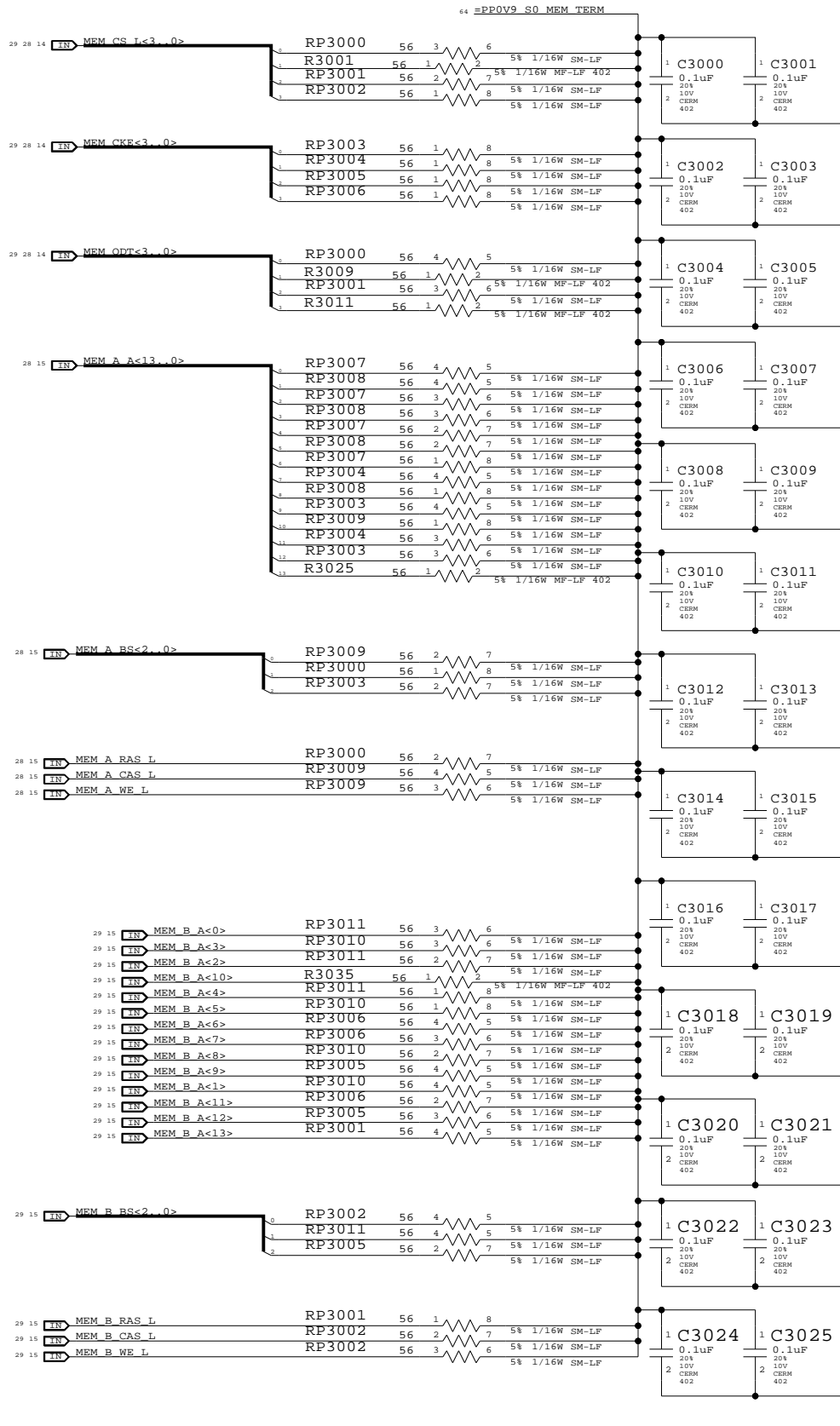
4

3

2

1

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



LAYOUT NOTE: PLACE ONE CAP CLOSE TO EVERY TWO PULLUP RESISTORS TERMINATED TO PP0V9_S0_MEM_TERM

Memory Active Termination

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	30	78	

8

7

6

5

4

3

2

1

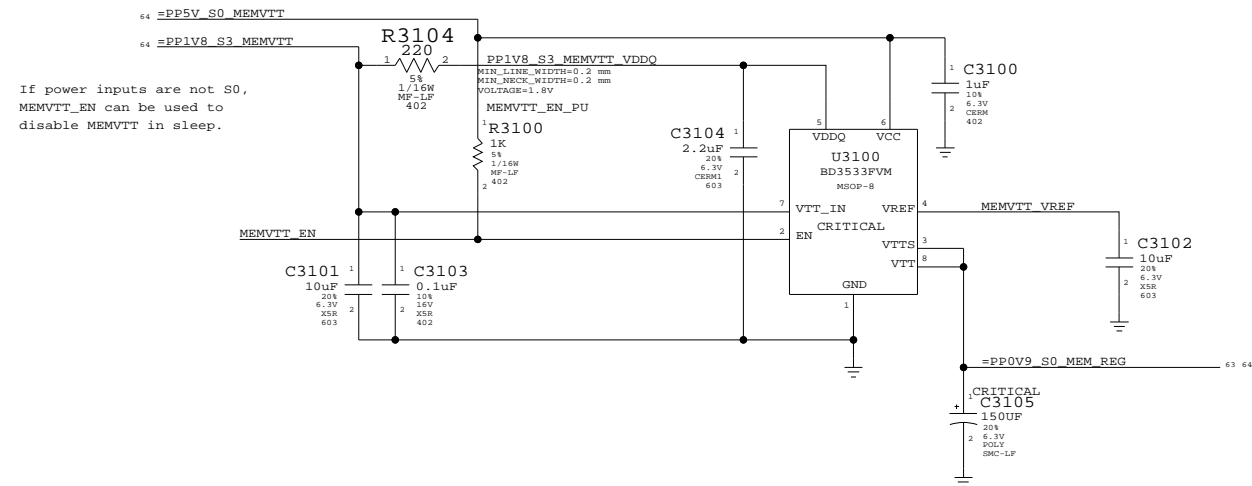
Page Notes

Power aliases required by this page:
 - =PP5V_S0_MEMVTT
 - =PP1V8_S0_MEMVTT
 - =PP0V9_S0_MEMVTT_LDO

Signal aliases required by this page:
 (NONE)

BOM options provided by this page:
 (NONE)

DDR2 Vtt Regulator



Memory Vtt Supply

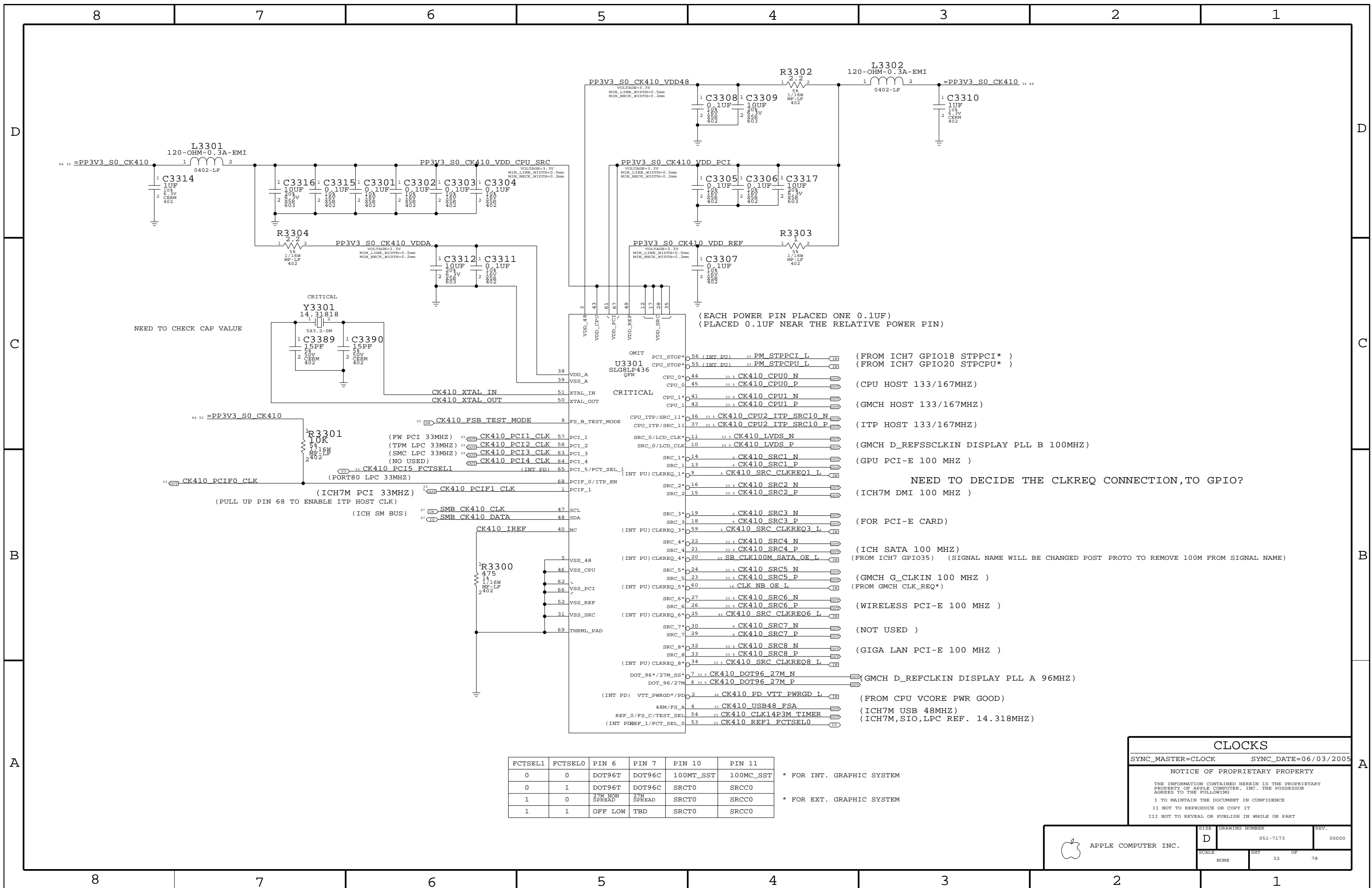
SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	31	78	



NEED TO CHECK CAP VALUE

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

(FROM ICH7 GPIO18 STPPCI*)
(FROM ICH7 GPIO20 STPCPU*)

(CPU HOST 133/167MHZ)

(GMCH HOST 133/167MHZ)

(ITP HOST 133/167MHZ)

(GMCH D_REFSSCLKIN DISPLAY PLL B 100MHZ)

(GPU PCI-E 100 MHZ)

NEED TO DECIDE THE CLKREQ CONNECTION, TO GPIO?

(ICH7M DMI 100 MHZ)

(FOR PCI-E CARD)

(FROM ICH7 GPIO35) (SIGNAL NAME WILL BE CHANGED POST PROTO TO REMOVE 100M FROM SIGNAL NAME)

(GMCH G_CLKIN 100 MHZ)

(FROM GMCH CLK_REQ*)

(WIRELESS PCI-E 100 MHZ)

(NOT USED)

(GIGA LAN PCI-E 100 MHZ)

(GMCH D_REFCLKIN DISPLAY PLL A 96MHZ)

(FROM CPU VCORE PWR GOOD)

(ICH7M USB 48MHZ)

(ICH7M,SIO,LPC REF. 14.318MHZ)

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

* FOR INT. GRAPHIC SYSTEM

* FOR EXT. GRAPHIC SYSTEM

CLOCKS

SYNC_MASTER=CLOCK SYNC_DATE=06/03/2005

NOTICE OF PROPRIETARY PROPERTY

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

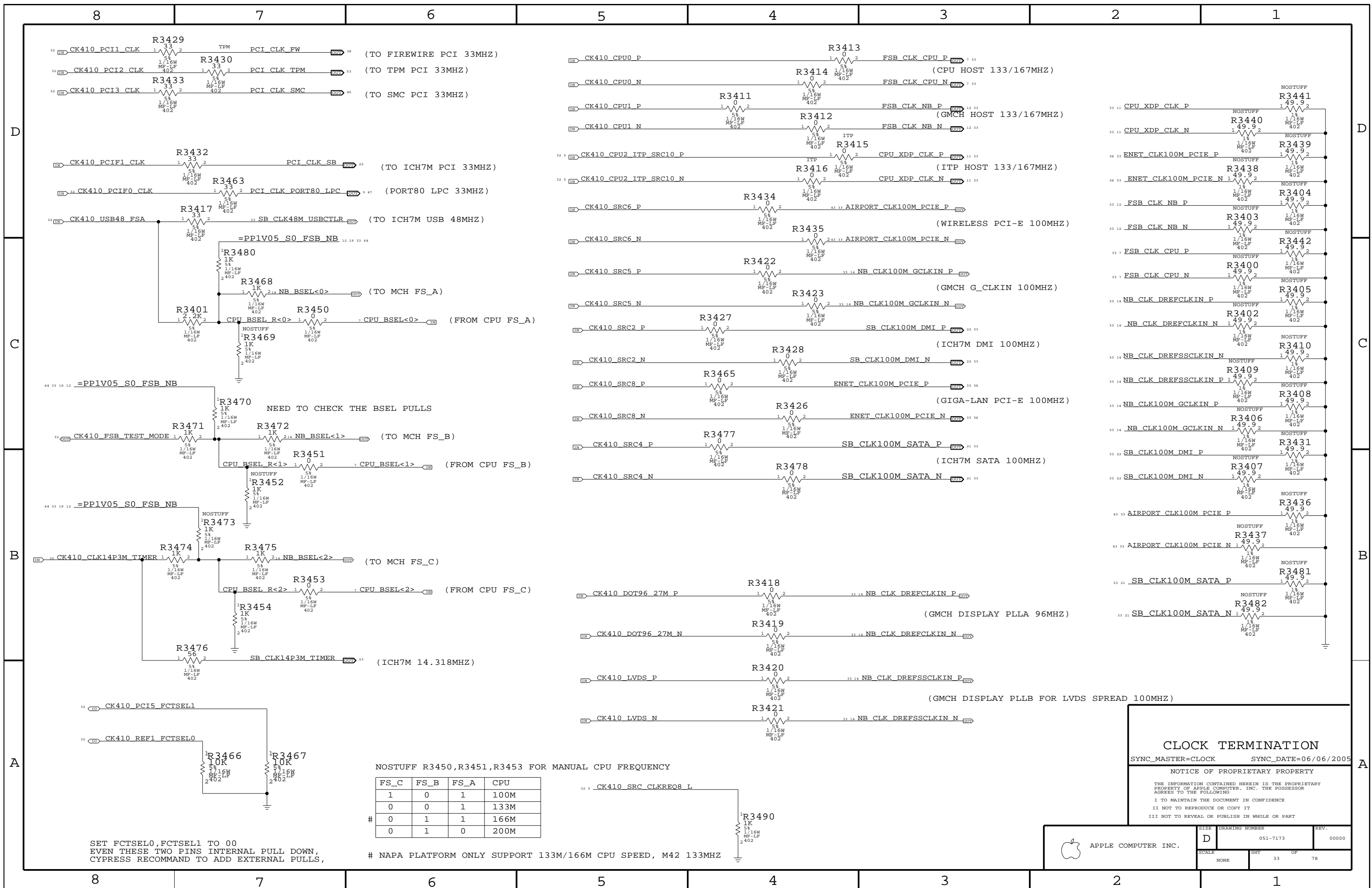
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
D	051-7173	00000
SCALE	SHT	OF
NONE	32	78



NOSTUFF R3450, R3451, R3453 FOR MANUAL CPU FREQUENCY

FS_C	FS_B	FS_A	CPU
1	0	1	100M
0	0	1	133M
0	1	1	166M
0	1	0	200M

NAPA PLATFORM ONLY SUPPORT 133M/166M CPU SPEED, M42 133MHZ

SET FCTSEL0, FCTSEL1 TO 00
EVEN THESE TWO PINS INTERNAL PULL DOWN,
CYPRESS RECOMMEND TO ADD EXTERNAL PULLS,

CLOCK TERMINATION

SYNC_MASTER=CLOCK SYNC_DATE=06/06/2005

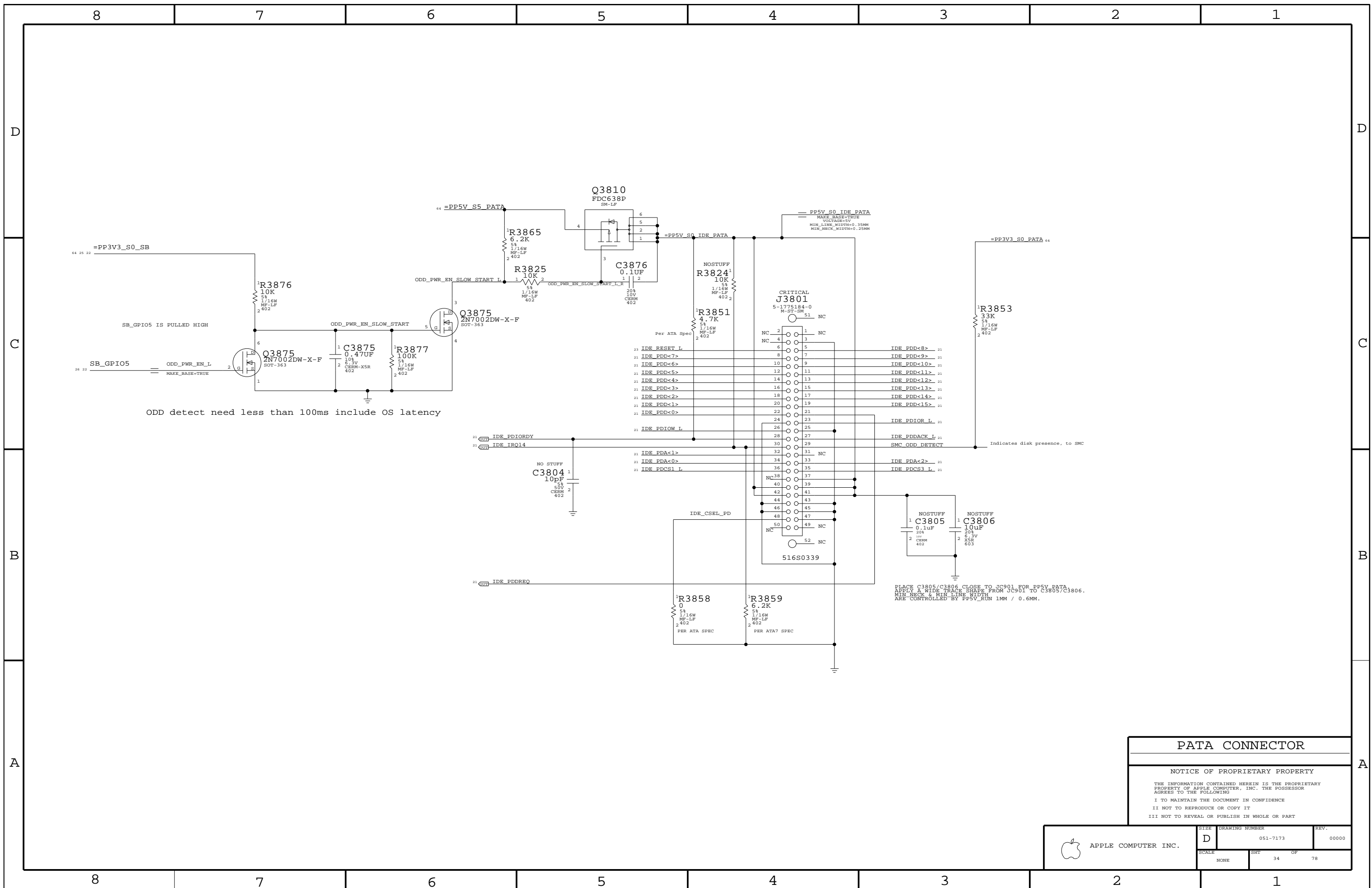
NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SCALE	SHT	OF	REV.
	NONE	33	78	00000

D	051-7173	00000
---	----------	-------



PATA CONNECTOR

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

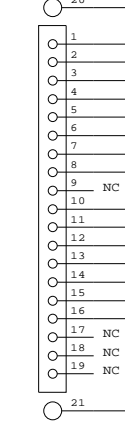
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 34	OF 78

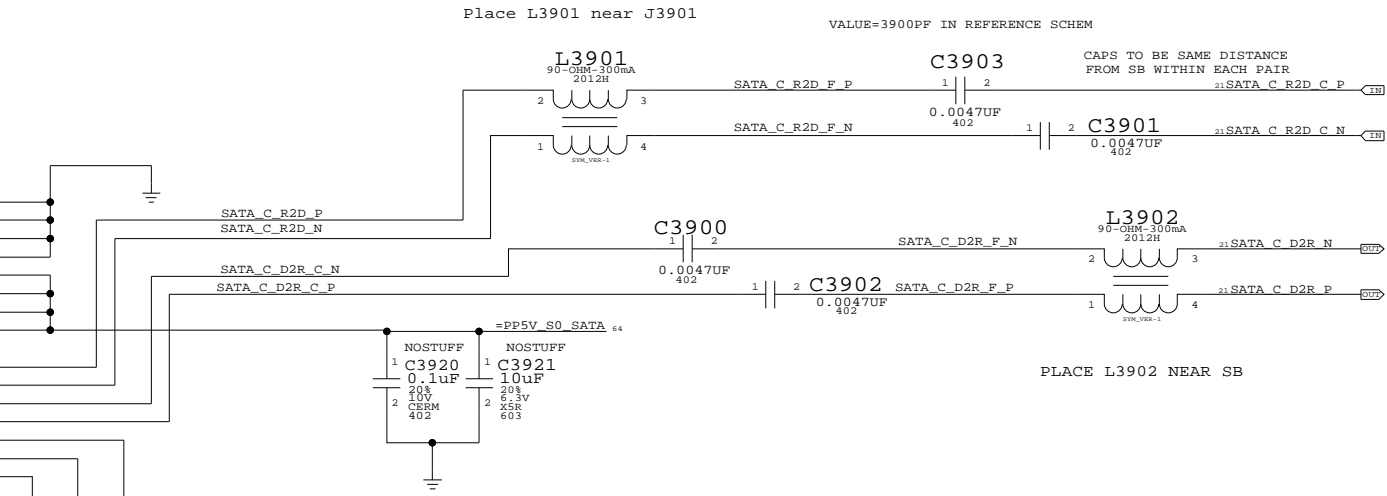
SATA CONNECTOR

518S0390

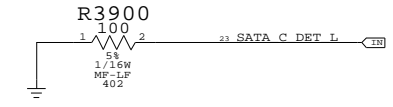
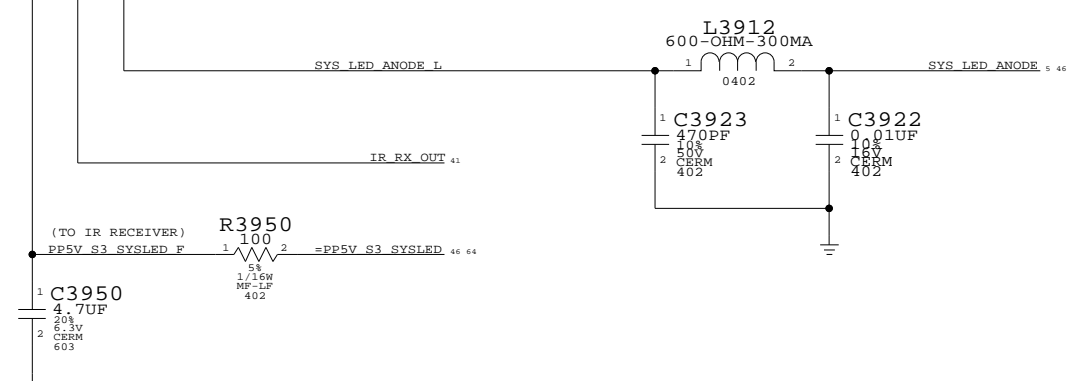
CRITICAL
J3901
20247-019E
F-ST-2M
20



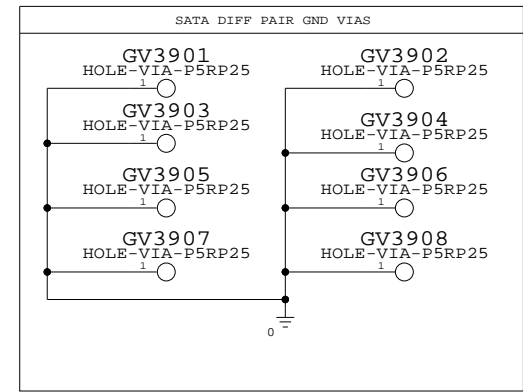
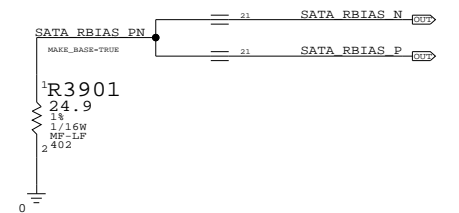
GND_CHASSIS_SATA



SYSTEM (SLEEP) LED FILTER



PLACE NEAR ICH7 PIN



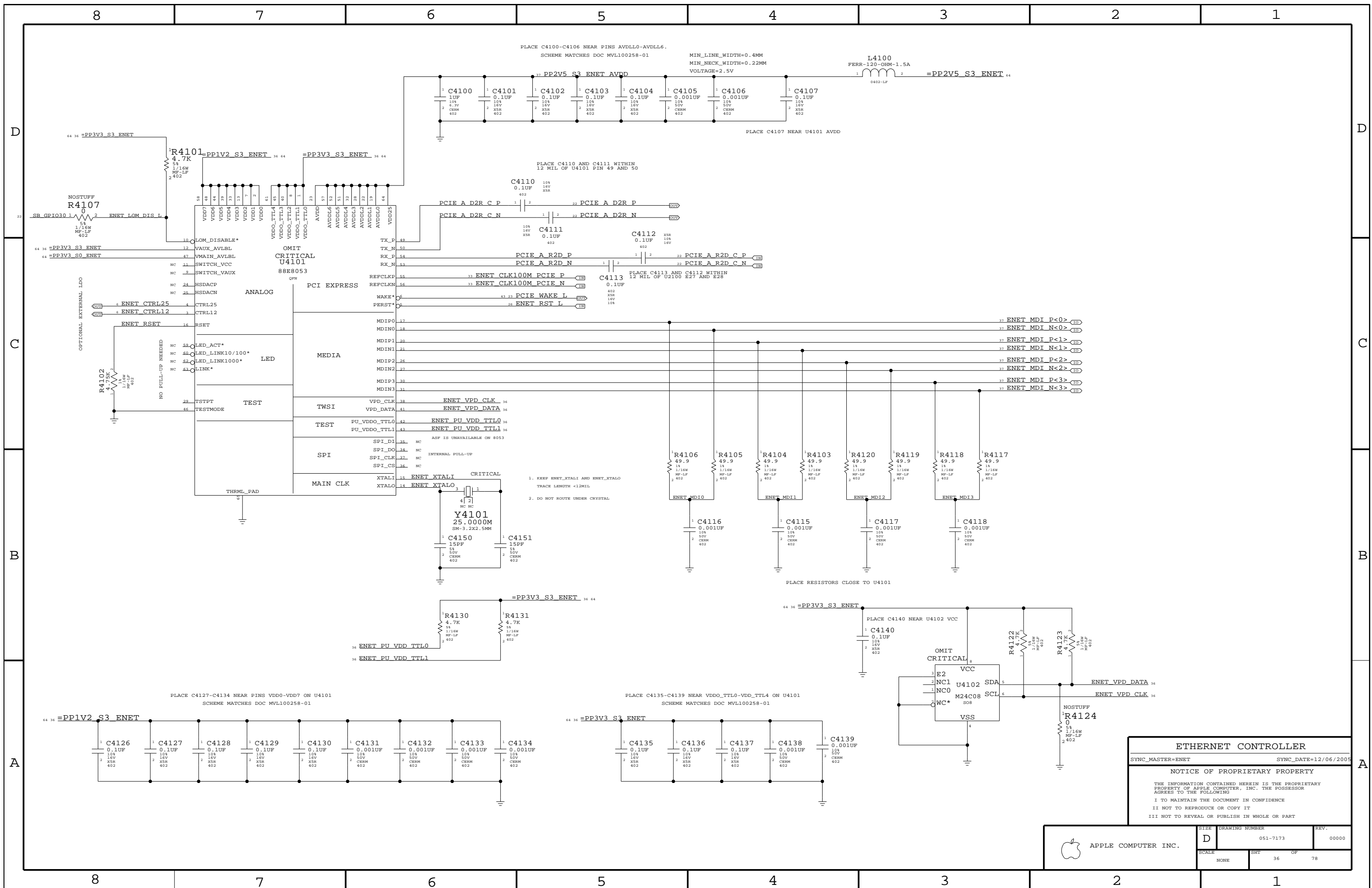
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S0227	155S0164	?	L3901, L3902	KEEP MAG. LAYER IN BOM

SATA CONNECTOR

NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SIZE: D	DRAWING NUMBER: 051-7173	REV.: 00000
	SCALE: NONE	SHEET: 35	OF: 78



D

D

C

C

B

B

A

A

Pin	Signal	Notes
58	VDD7	
59	VDD6	
60	VDD5	
61	VDD4	
62	VDD3	
63	VDD2	
64	VDD1	
65	VDD0	
66	VDDO_TTL4	
67	VDDO_TTL3	
68	VDDO_TTL2	
69	VDDO_TTL1	
70	VDDO_TTL0	
71	AVDD	
72	AVDDL6	
73	AVDDL5	
74	AVDDL4	
75	AVDDL3	
76	AVDDL2	
77	AVDDL1	
78	AVDDL0	
79	VDD25	
80	TX_P	
81	TX_N	
82	RX_P	
83	RX_N	
84	REFCLKP	
85	REFCLKN	
86	WAKE*	
87	PERST*	
88	MDIP0	
89	MDIN0	
90	MDIP1	
91	MDIN1	
92	MDIP2	
93	MDIN2	
94	MDIP3	
95	MDIN3	
96	VPD_CLK	ENET VPD_CLK
97	VPD_DATA	ENET VPD_DATA
98	PU_VDDO_TTL0	ENET PU_VDD_TTL0
99	PU_VDDO_TTL1	ENET PU_VDD_TTL1
100	SPI_DI	NC
101	SPI_DO	NC
102	SPI_CLK	INTERNAL PULL-UP
103	SPI_CS	NC
104	XTALI	ENET XTALI
105	XTALO	ENET XTALO
106	THRML_PAD	

- KEEP ENET_XTALI AND ENET_XTALO TRACE LENGTH <12MIL
- DO NOT ROUTE UNDER CRYSTAL

ETHERNET CONTROLLER

SYNC_MASTER=ENET SYNC_DATE=12/06/2005

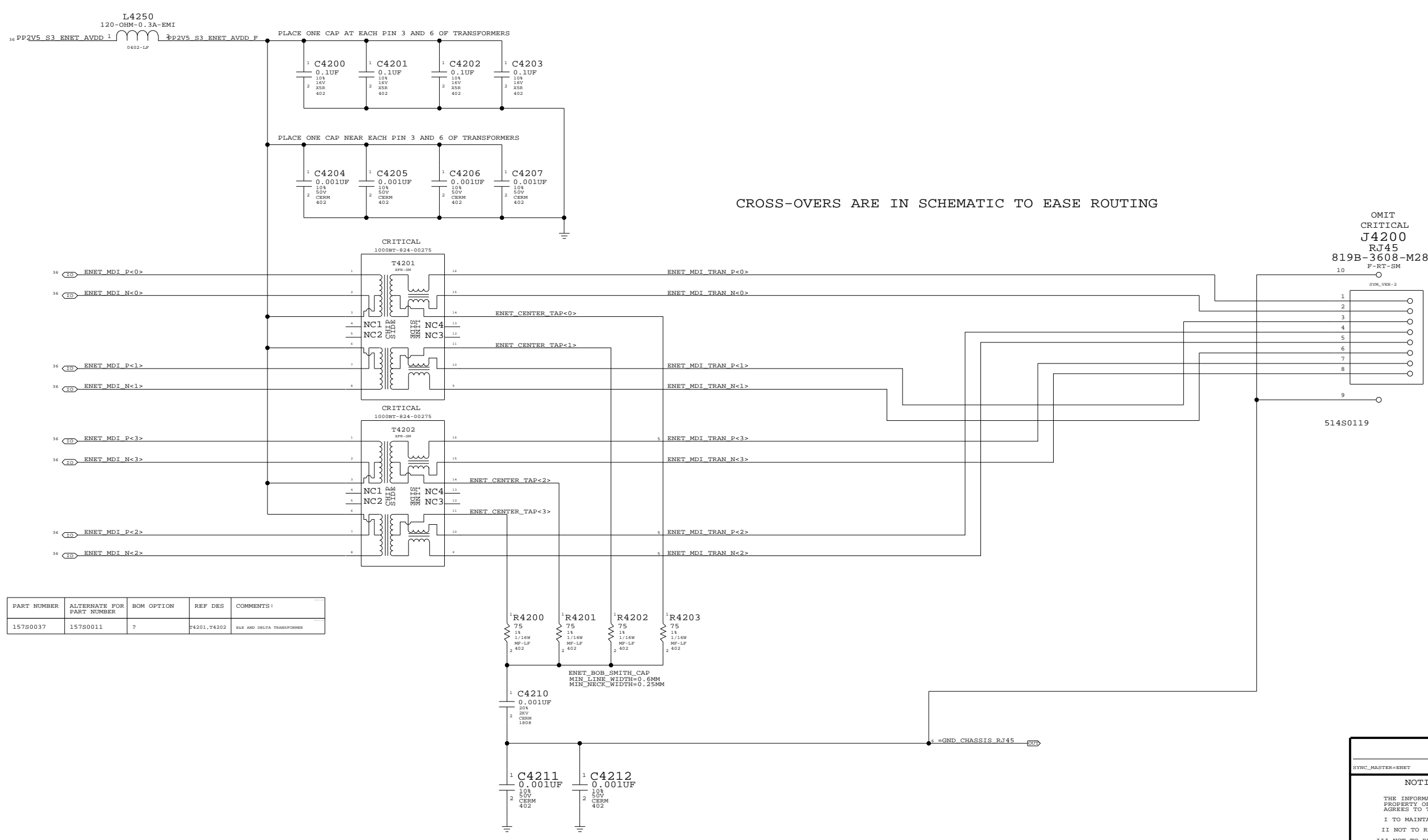
NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	NONE	SHT	OF
		36	78

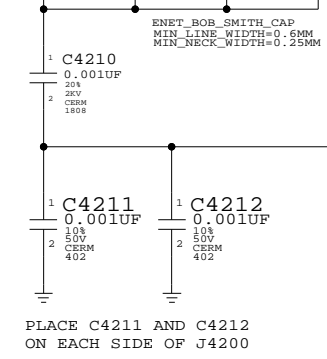
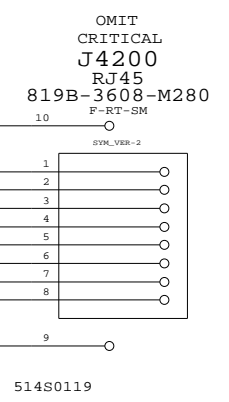
8 7 6 5 4 3 2 1

D
C
B
A



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

CROSS-OVERS ARE IN SCHEMATIC TO EASE ROUTING



ETHERNET CONNECTOR
 SYNC_MASTER=ENET SYNC_DATE=11/14/2005
 NOTICE OF PROPRIETARY PROPERTY
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514S0143	1	CONN, SP RJ-45 JACK, MIDDLEPLANE, BK3, LP	J4200	CRITICAL	NORMAL
514S0144	1	CONN, SP RJ-45 JACK, MIDDLEPLANE, BLACK, LP	J4200	CRITICAL	FANCY

APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
D	051-7173	00000
SCALE	SHT	OF
NONE	37	78

8 7 6 5 4 3 2 1

PAGE NOTES

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

INPUT/OUTPUT

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

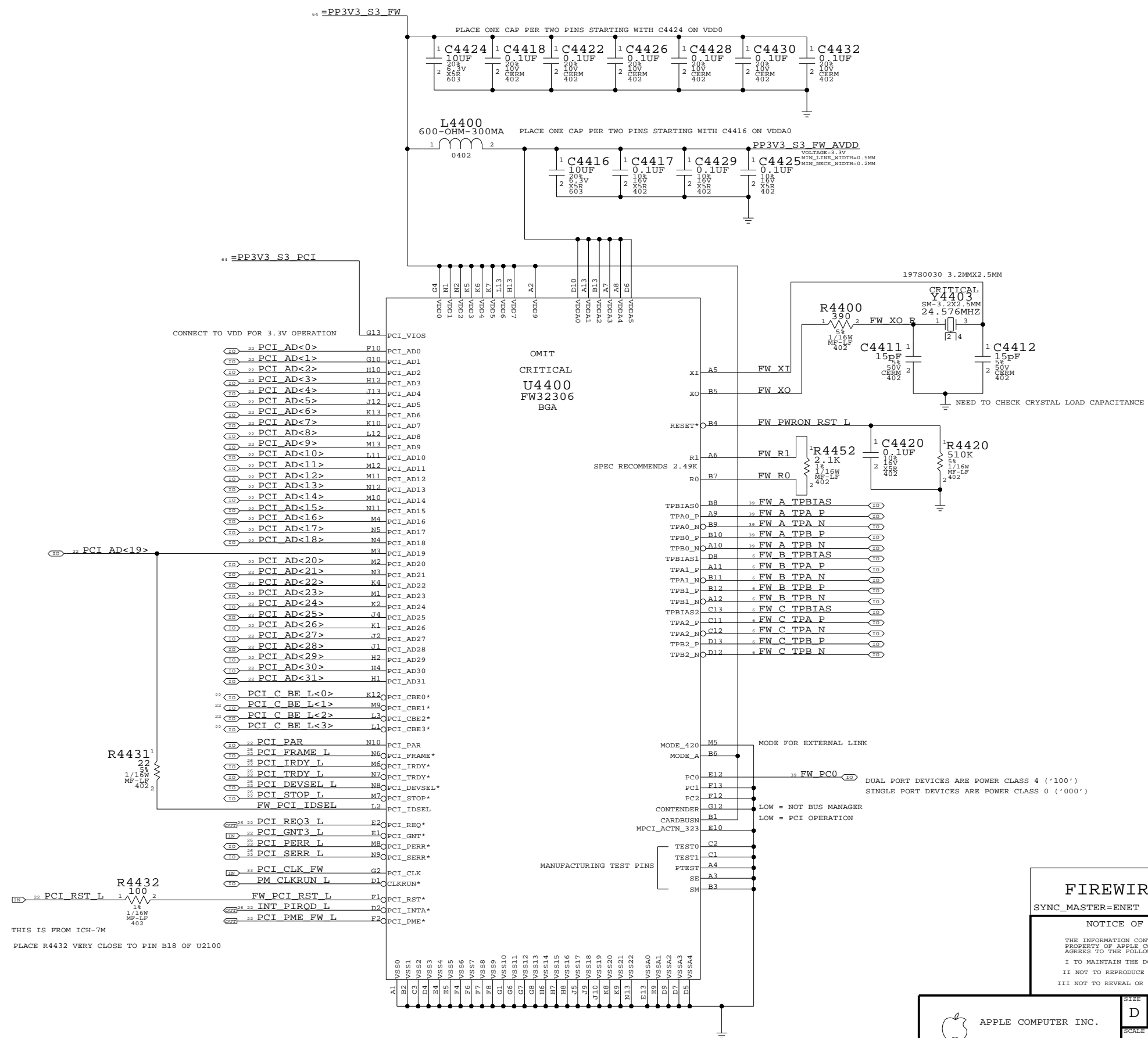
OUTPUT

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

PAGE HISTORY

5/19/2005 - FIRST REVISION OF PAGE
6/20/2005 - BGA VERSION OF FW323-06 ADDED
6/21/2005 - CHANGED INT* TO INT_PIRQD (PER ARCHITECTURAL DEFINITION)
6/21/2005 - CHANGED PCI_ID TO AD19 (PER ARCHITECTURAL DEFINITION)
6/21/2005 - CHANGED REQ3/GNT3 TO REQ3/GNT1 (PER ARCHITECTURAL DEFINITION)
6/22/2005 - ADDED 510K PULL-DOWN ON RST* AND REMOVED CONNECTION TO PLT_RST_L
6/22/2005 - CHANGED CLK_PME DIFF PAIR NAMES TO BE RE-USE COMPLIANT
6/22/2005 - REMOVED CONSTRAINT SETS AS THEY WILL BE MANAGED ON BOARD SIDE
6/22/2005 - CHANGED CLK_PME DIFF PAIR NAMES TO BE RE-USE COMPLIANT
6/22/2005 - REMOVED C4421 - REDUNDANT
6/22/2005 - BRING OUT PC0 CONNECTION TO BE CONNECTED ON PORT PAGE
7/26/2005 - CONNECTED PIN E10 TO GND

MOBILE TURNS OFF CONTROLLER POWER DURING SLEEP
0.001A DURING SLEEP



THIS IS FROM ICH-7M
PLACE R4432 VERY CLOSE TO PIN B18 OF U2100

FIREWIRE CONTROLLER
SYNC_MASTER=ENET SYNC_DATE=08/30/2005

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

Apple Computer Inc. logo and drawing information: DRAWING NUMBER 051-7173, REV. 00000, SCALE NONE, SHEET 38 OF 78.

Page Notes

INPUT:
 =PPBUS_S5_FWPWRSW - PORT POWER
 =PP3V3_S5_FW - DIGITAL POWER
 =GND_CHASSIS_FW_PORT0 - CHASSIS GROUND
 =FWPWR_PWRON - ADDITIONAL POWER CONTROL

INPUT/OUTPUT:
 FW_TPA0_P/N,FW_TPB0_P/N,FW_TPB1A0 - FIREWIRE DIFF PAIRS

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

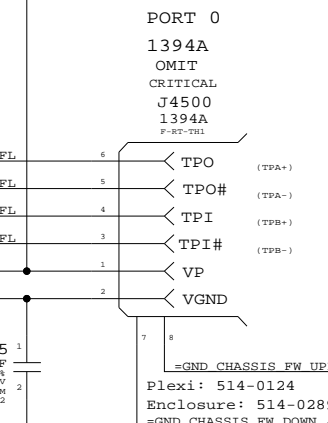
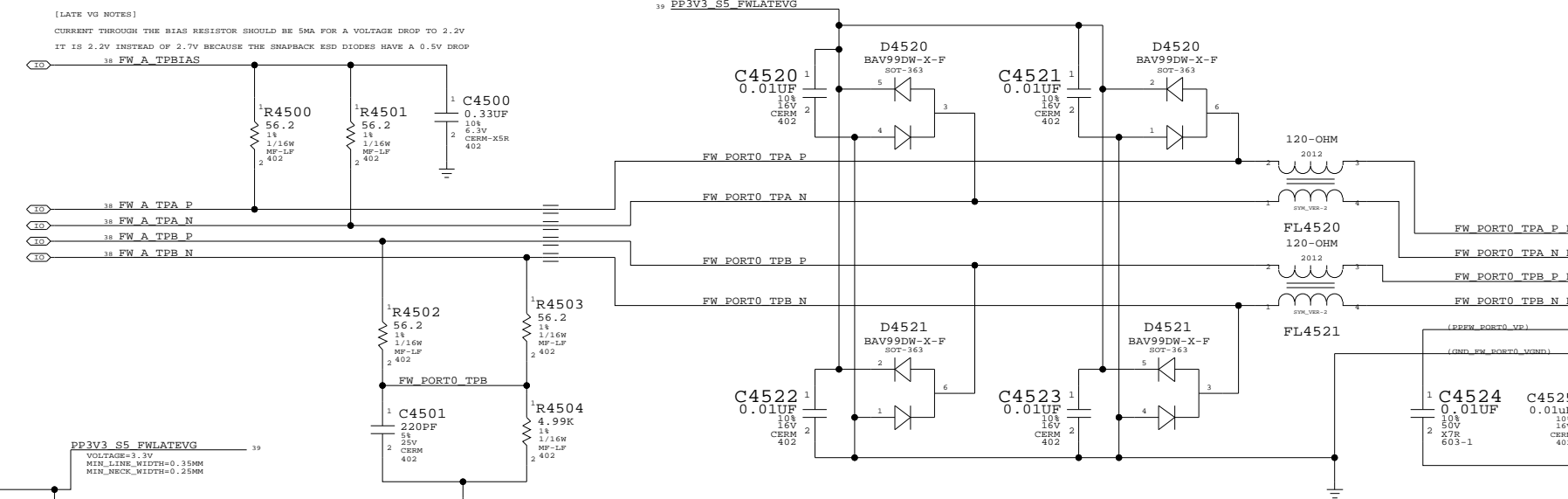
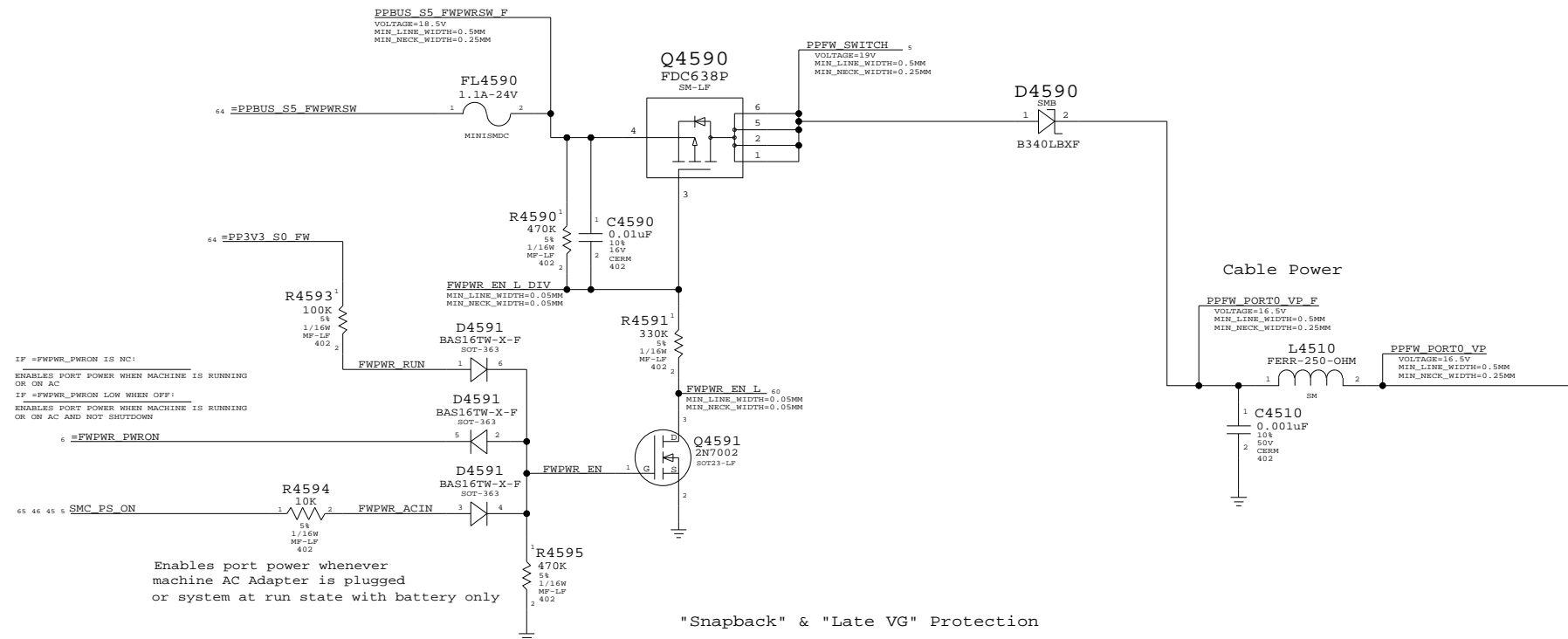
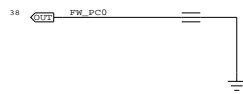
PAGE HISTORY

5/19/05 - INITIAL REVISION
 6/22/05 - CHANGED DIFF PAIR NAMES TO MATCH REUSE
 6/22/05 - REMOVED CONSTRAINTS BECAUSE USING ALLEGRO CONST MANAGER
 6/22/05 - CONNECTED FW_PCO FOR SINGLE PORT
 7/26/05 - UPDATED LATE-VG POWER RAIL CIRCUIT FROM M1
 7/26/05 - CHANGED CONNECTOR PORT NAMING TO PORT0
 7/26/05 - SWITCHED TO 514-0124 FOR FIREWIRE CONNECTOR
 7/26/05 - REMOVED R4520 - IT HASN'T BEEN STUFFED FOR MANY PRODUCTS
 7/26/05 - CHANGED FL4590 TO 1.1A VERSION
 7/26/05 - REMOVED ETHERNET LOW-POWER MODE CIRCUIT
 7/26/05 - UPDATED SIGNAL NAMES FOR FW PORT POWER ENABLE

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

PORT POWER CLASS

0 FOR SINGLE PORT
 1 FOR DUAL PORT



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0359	1	CONN,6P 1394A RCPT,MIDPLANE,MQ3_LF	J4500	CRITICAL	NORMAL
514-0316	1	CONN,6P 1394A RCPT,MIDPLANE,BLACK_LF	J4500	CRITICAL	FANCY

FIREWIRE PORT

SYNC_MASTER=ENET SYNC_DATE=11/16/2005

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

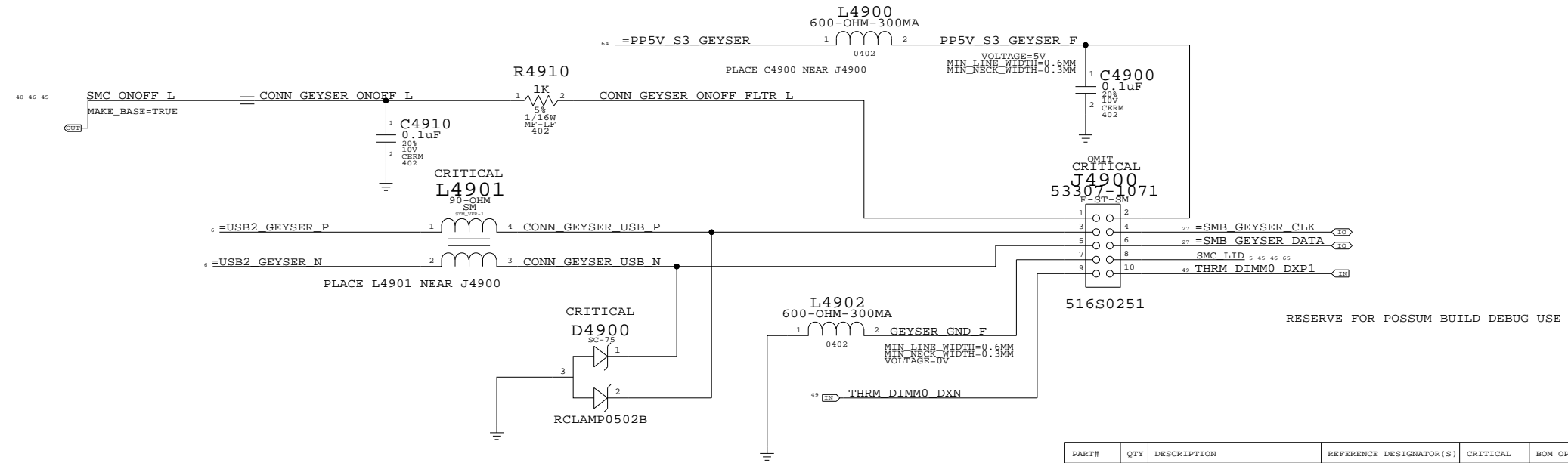
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.

SIZE: DRAWING NUMBER: REV. D 051-7173 00000

SCALE: NONE SHEET: 39 OF 78

GEYSER AND DIMMO REMOTE TEMP SENSORS



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
516S0482	1	ACES 88646-1071-NS	J4900	CRITICAL	NORMAL
516S0482	1	ACES 88646-1071-NS	J4900	CRITICAL	FANCY

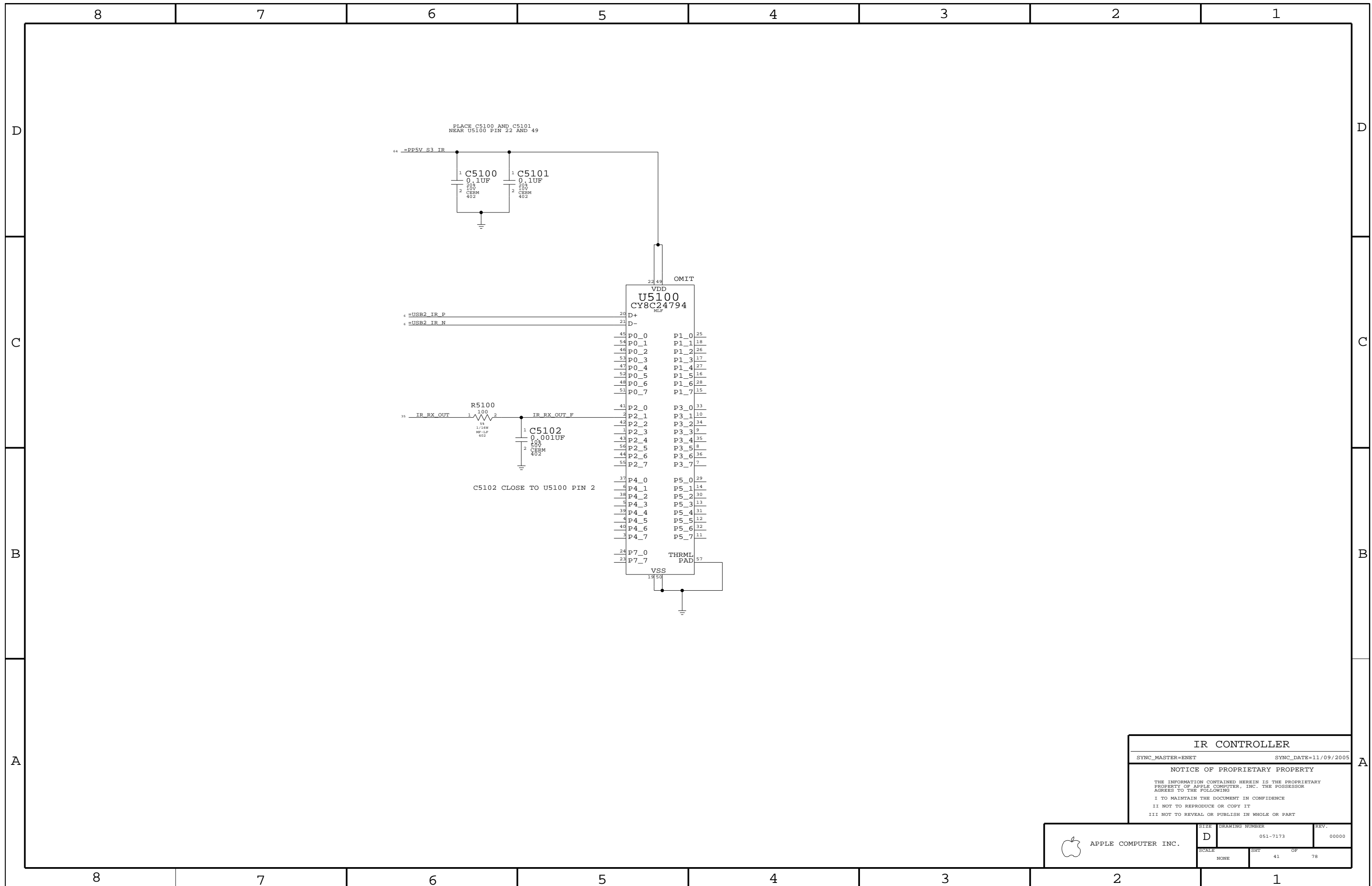
CONNECTOR MISC
 SYNC_MASTER=ENET SYNC_DATE=11/16/2005

NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SIZE: D	DRAWING NUMBER: 051-7173	REV.: 00000
	SCALE: NONE	SHEETS: 40 OF 78	



IR CONTROLLER

SYNC_MASTER=ENET SYNC_DATE=11/09/2005

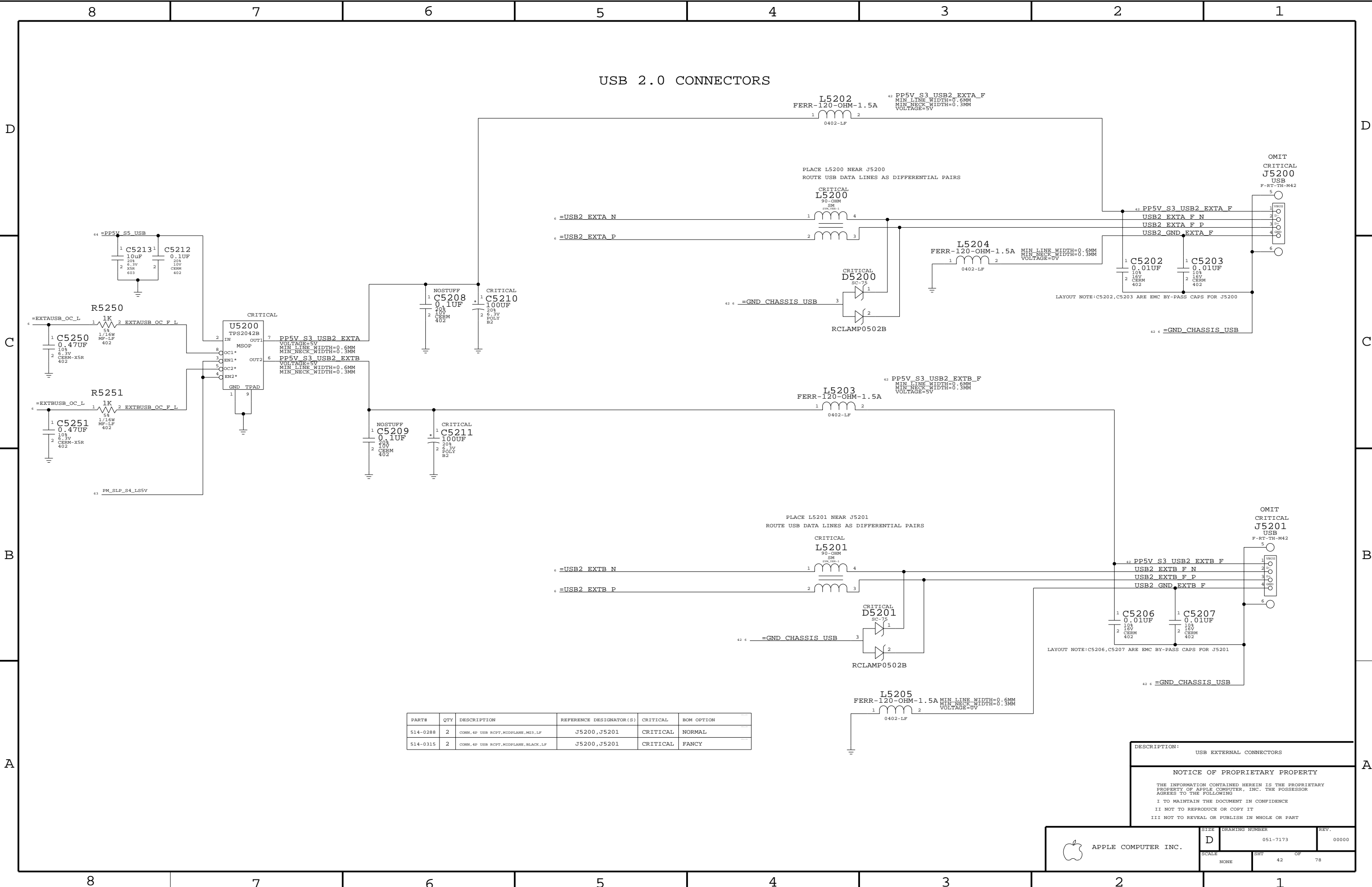
NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 41	OF 78

USB 2.0 CONNECTORS



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0288	2	CONN, 4P USB RCPT, MIDPLANE, W3, LF	J5200, J5201	CRITICAL	NORMAL
514-0315	2	CONN, 4P USB RCPT, MIDPLANE, BLACK, LF	J5200, J5201	CRITICAL	FANCY

DESCRIPTION:
USB EXTERNAL CONNECTORS

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

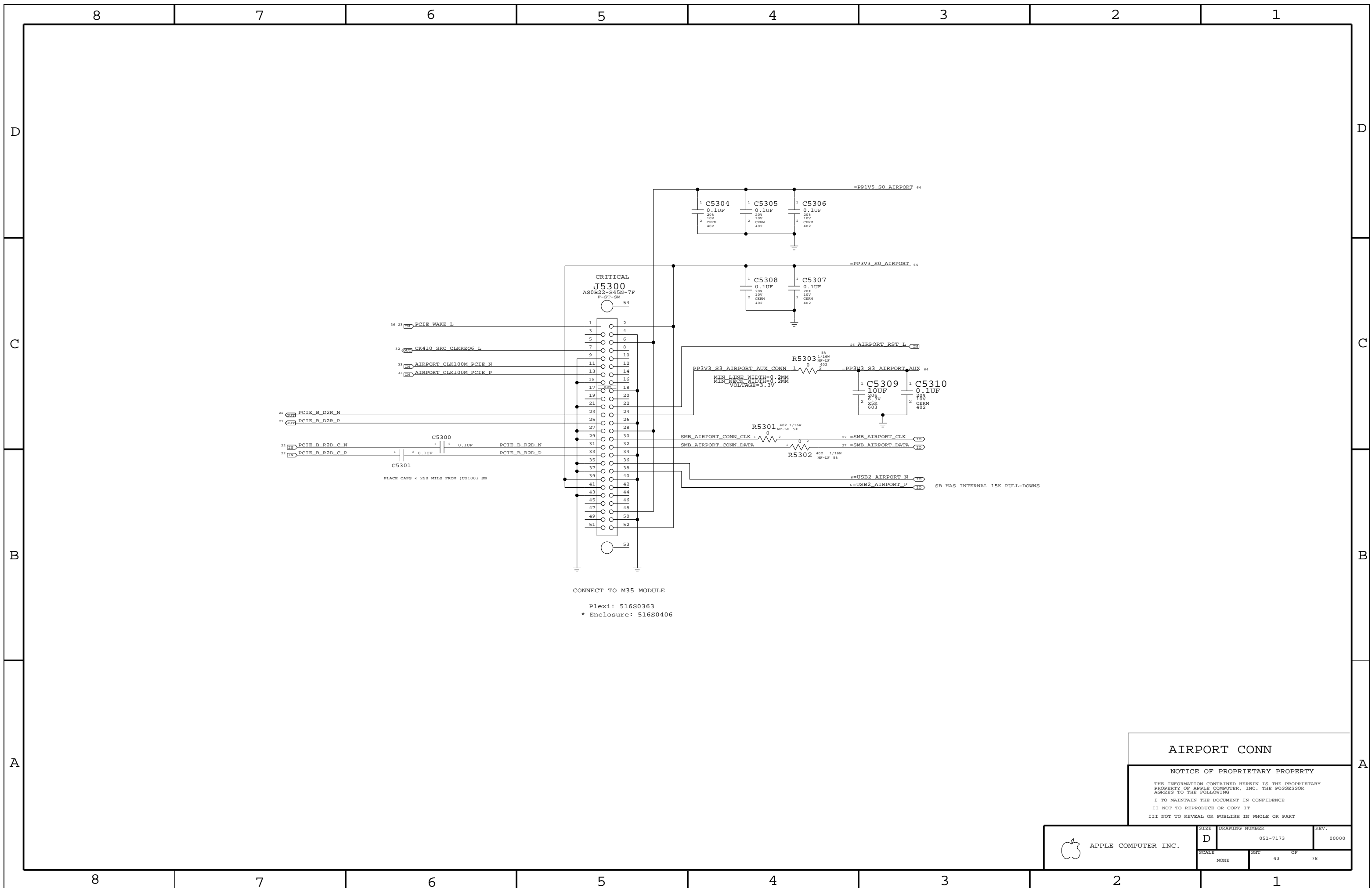
APPLE COMPUTER INC.

SCALE: NONE

SHEET: 42 OF 78

DRAWING NUMBER: 051-7173

REV: 00000




CONNECT TO M35 MODULE

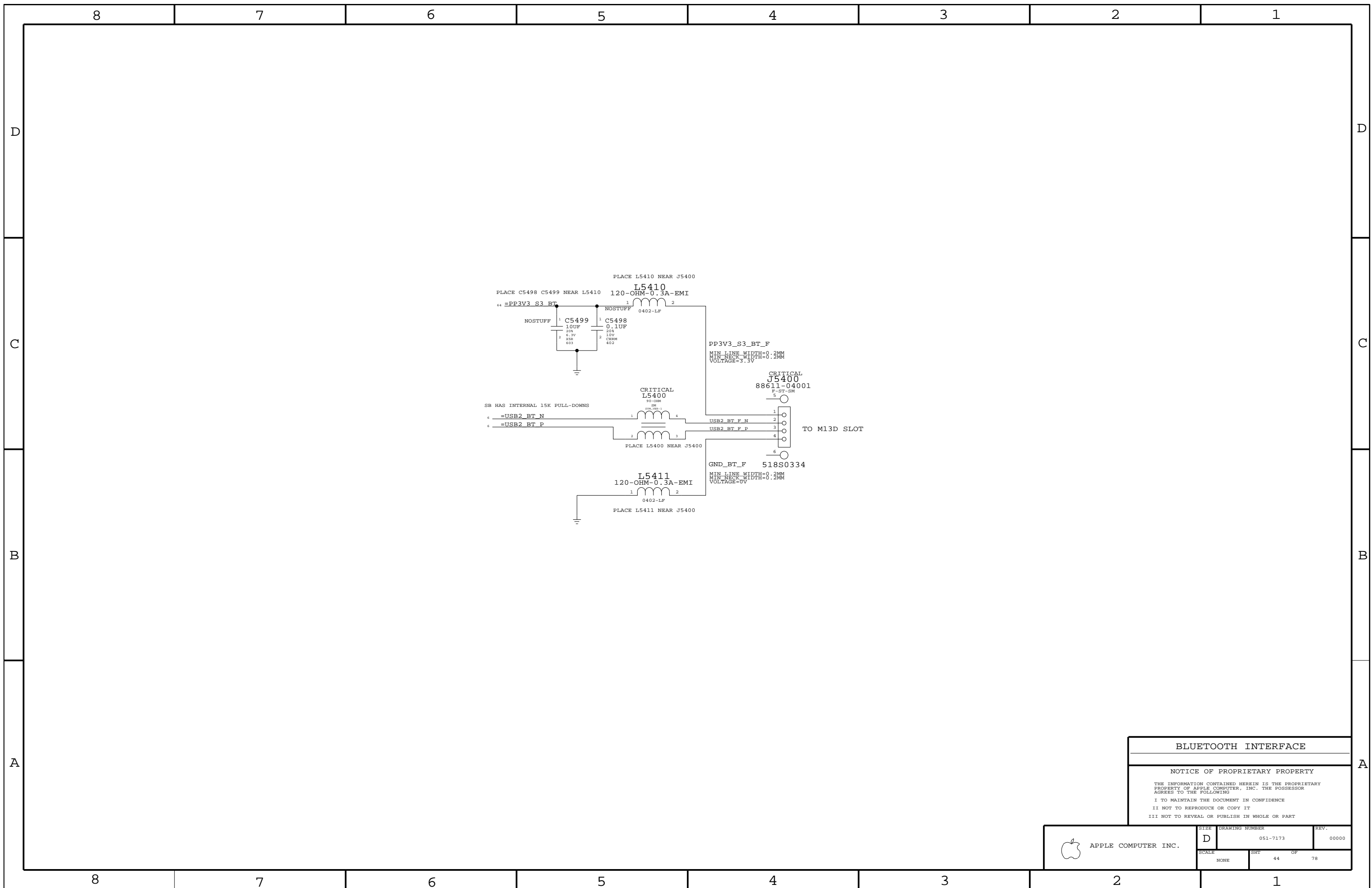
Plexi: 516S0363
 * Enclosure: 516S0406

AIRPORT CONN

NOTICE OF PROPRIETARY PROPERTY

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

 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	43	78	



BLUETOOTH INTERFACE

NOTICE OF PROPRIETARY PROPERTY

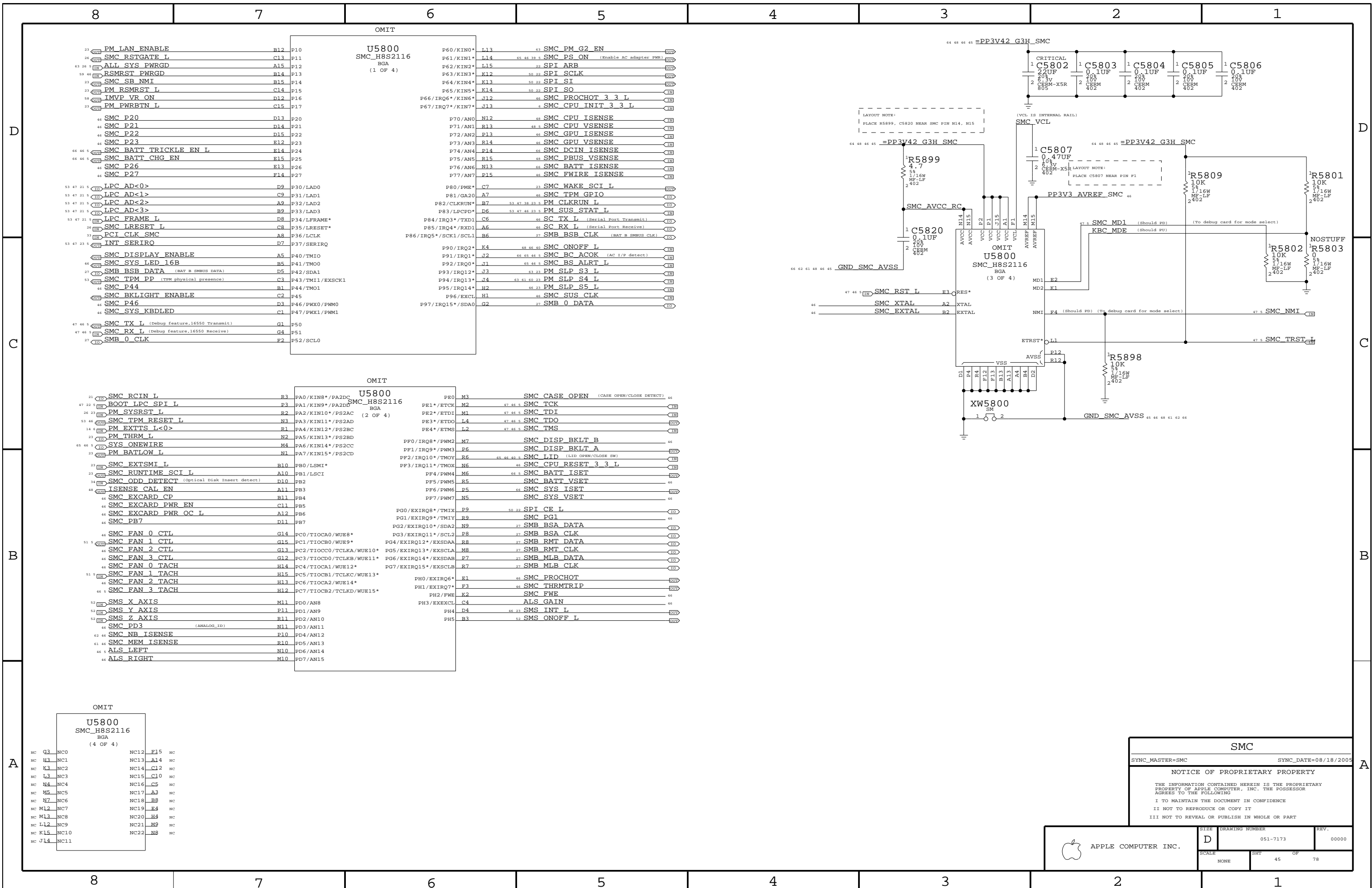
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 44	OF 78



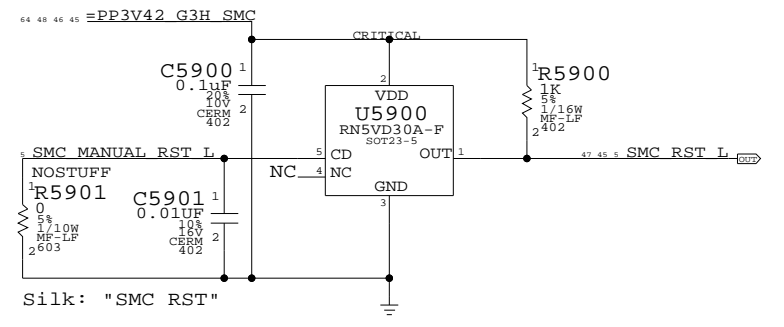
SMC
 SYNC_MASTER=SMC SYNC_DATE=08/18/2005

NOTICE OF PROPRIETARY PROPERTY

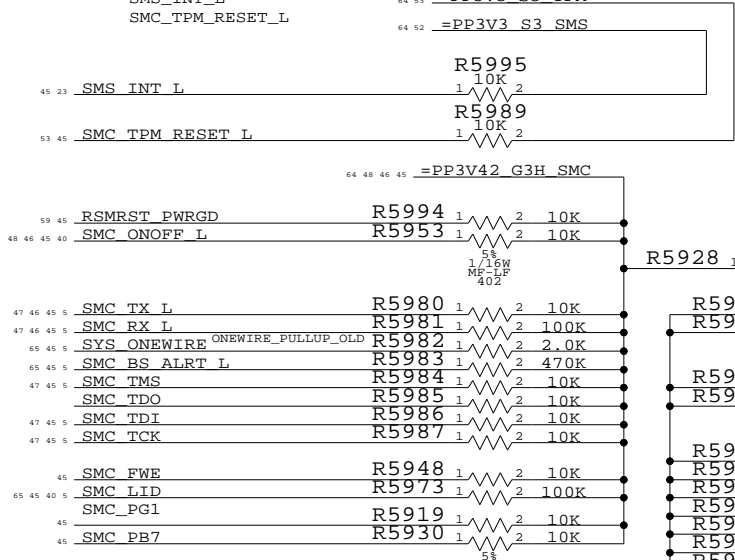
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	
NONE	45	78	

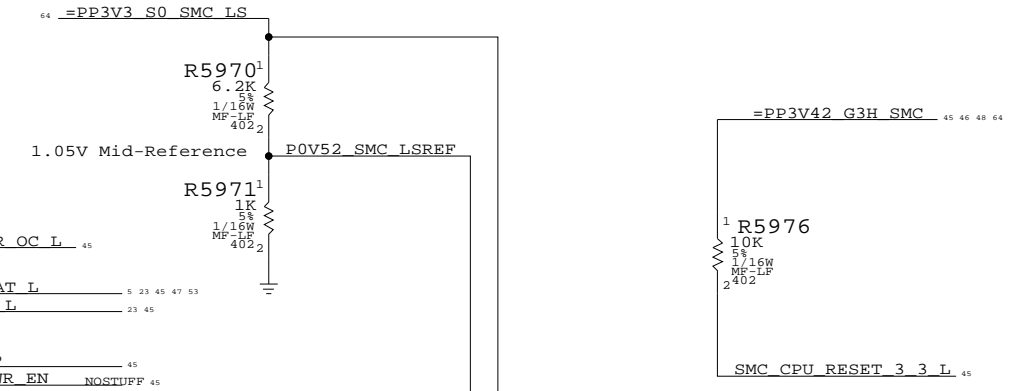
SMC Reset Button / Brownout Detect



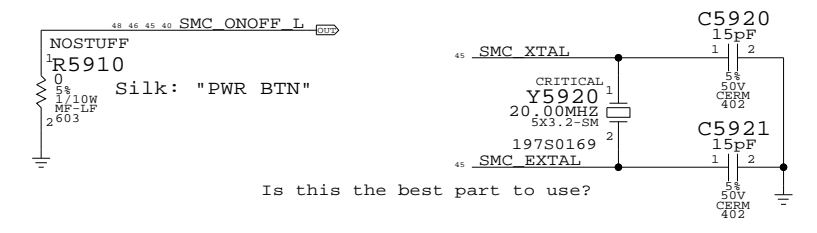
THESE NEED TO BE PULLED TO THE PROPER RAIL:
SMS_INT_L
SMS_TPM_RESET_L



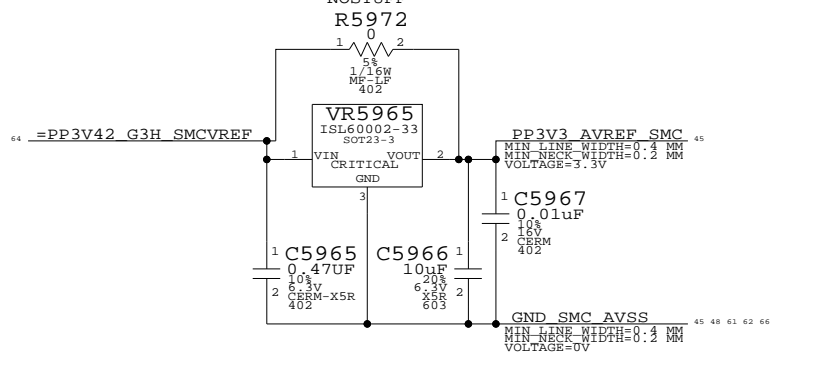
SMC 1.05V to 3.3V Level Shifting



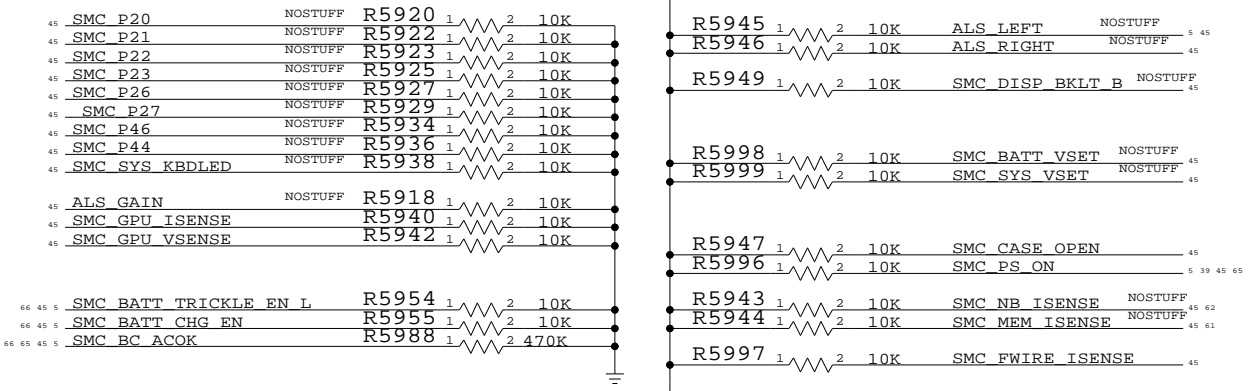
Debug Power Button SMC Crystal Circuit



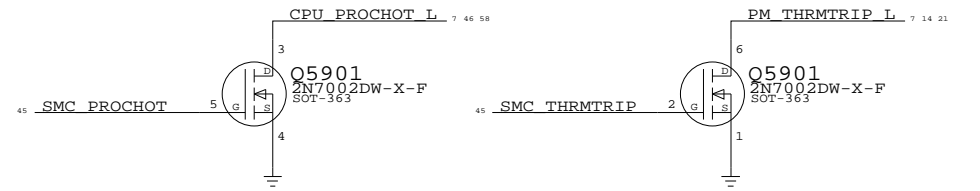
SMC AVREF Supply



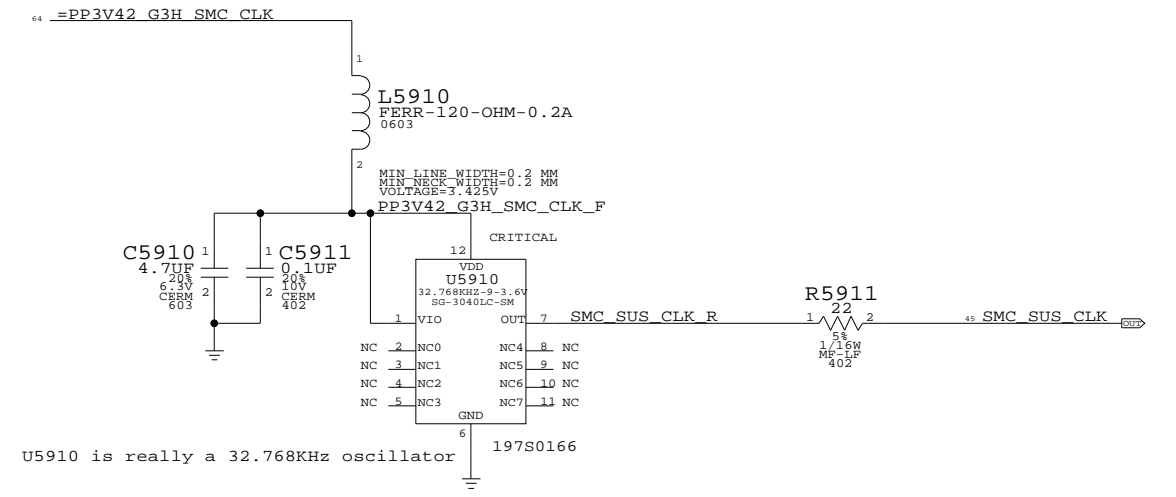
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
353S1278	353S1381	?	VR5965	TI REF3133



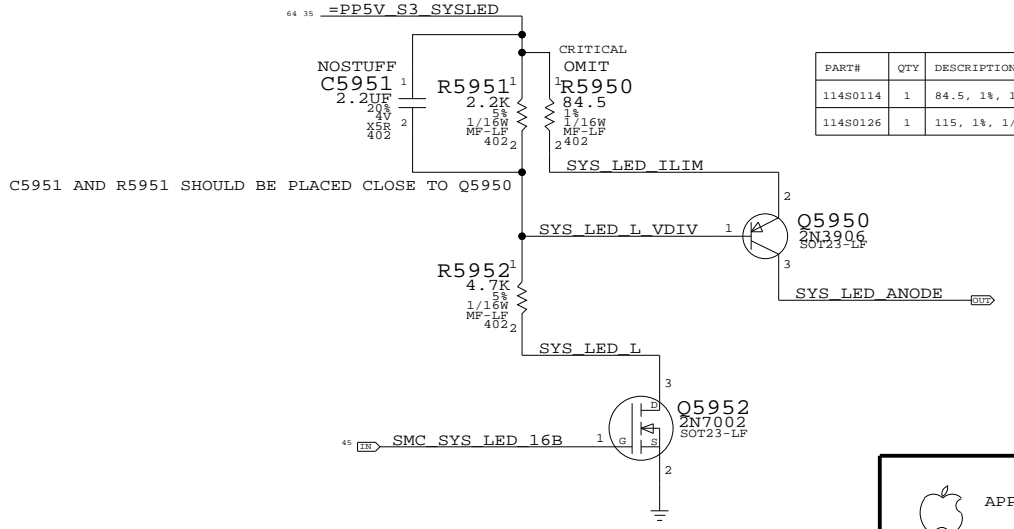
SMC 3.3V to 1.05V Level Shifting



SMC G3HOT OSCILLATOR



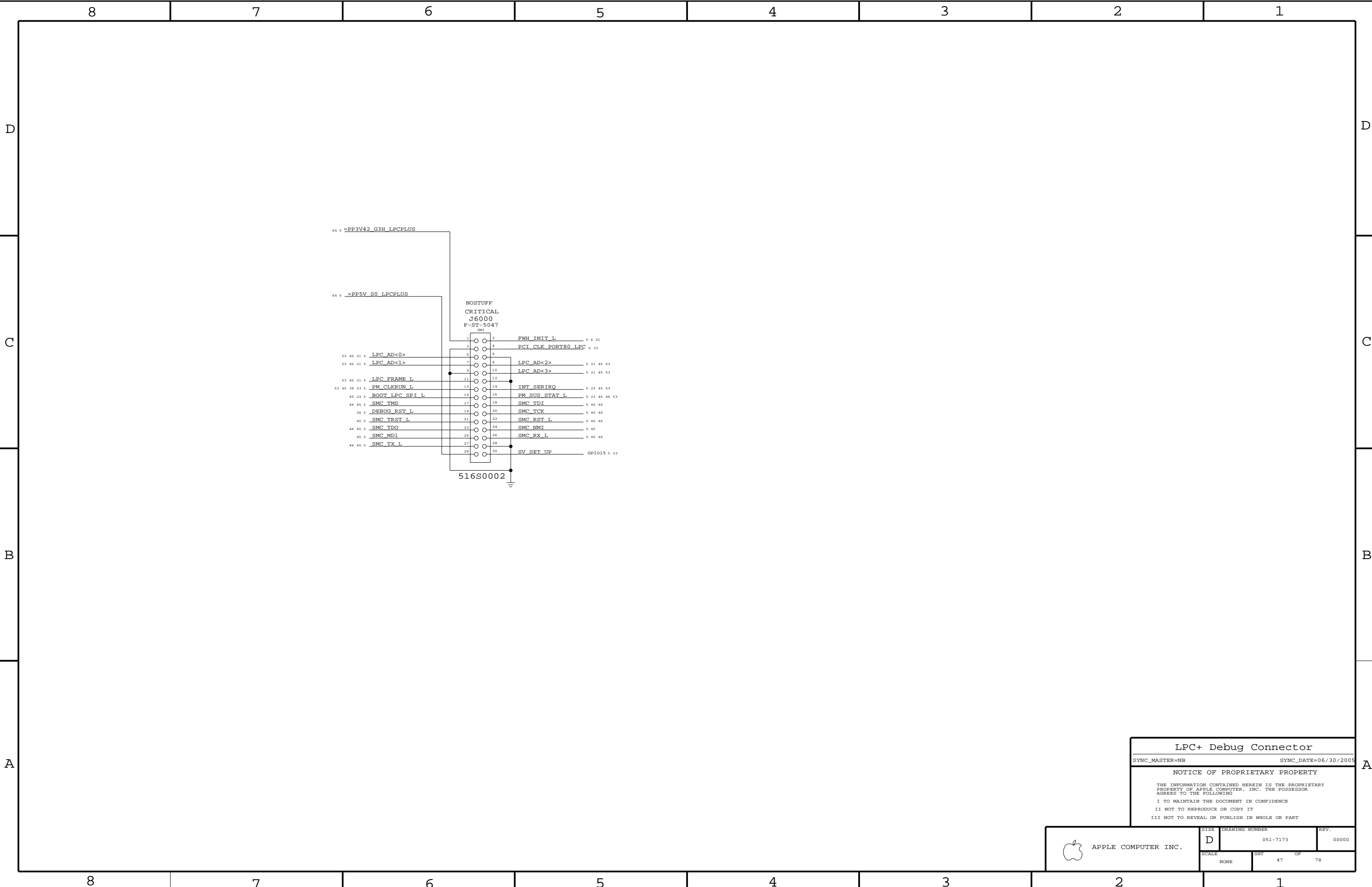
System (Sleep) LED Circuit



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
11480114	1	84.5, 1%, 1/16W, MF-LF, 402	R5950	NORMAL
11480126	1	115, 1%, 1/16W, MF-LF, 402	R5950	FANCY

SMC SUPPORT
 SYNC_MASTER=SMC SYNC_DATE=08/23/2005
NOTICE OF PROPRIETARY PROPERTY
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.
 DRAWING NUMBER: D 051-7173
 SCALE: NONE SHEET: 46 OF 78
 REV: 00000



LPC+ Debug Connector

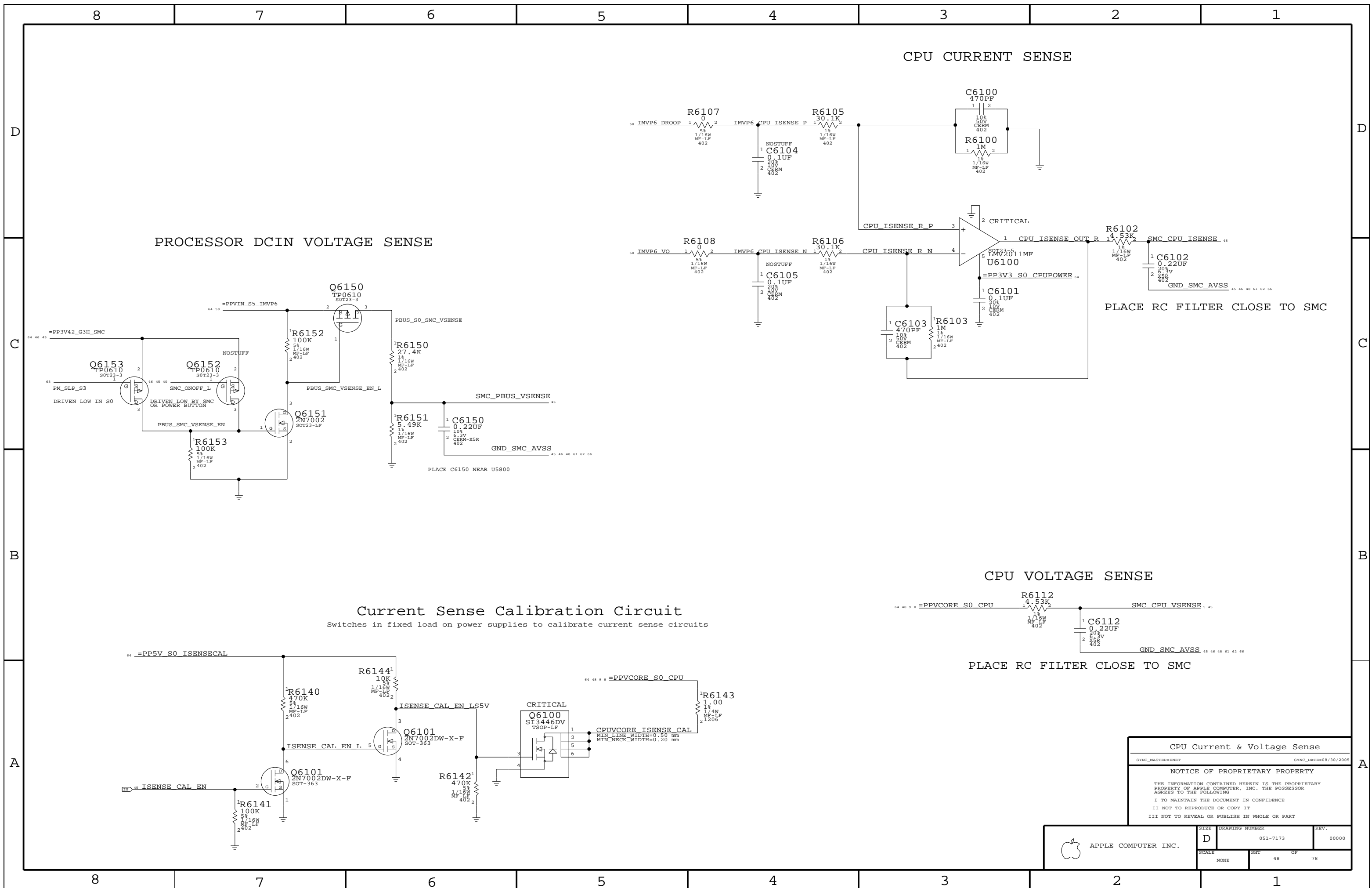
SYNC_MASTER=NB SYNC_DATE=06/30/2005

NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 47	OF 78



PROCESSOR DCIN VOLTAGE SENSE

CPU CURRENT SENSE

CPU VOLTAGE SENSE

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

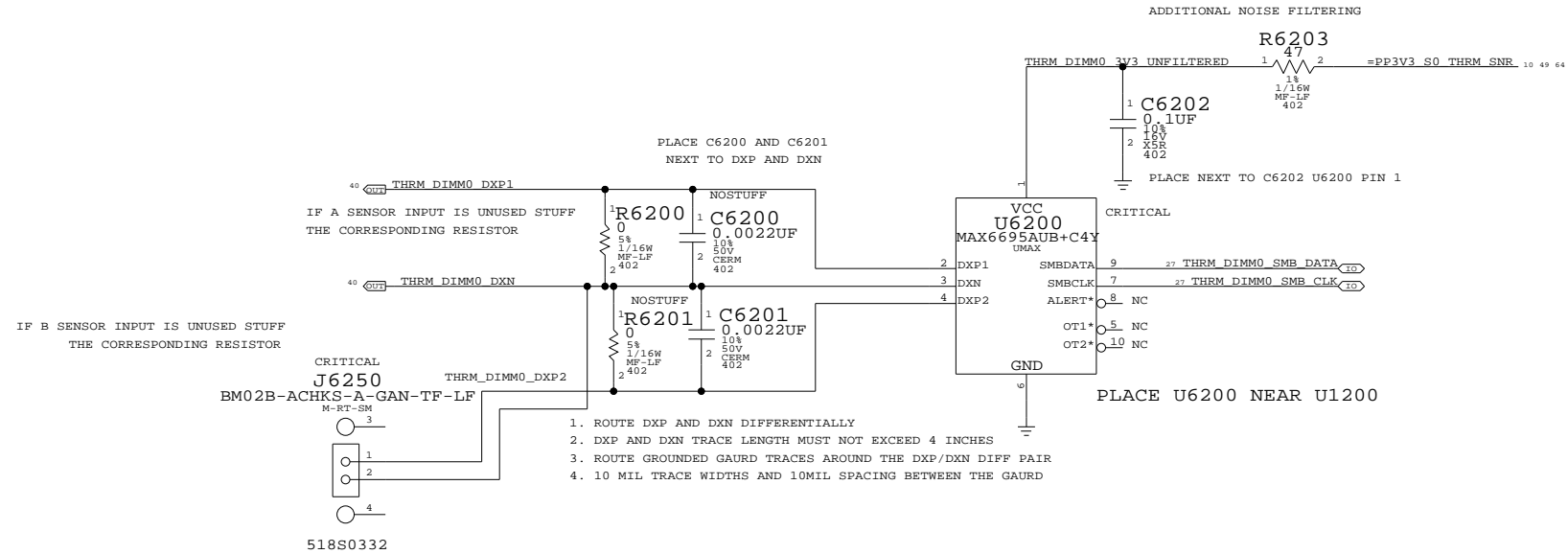
PLACE RC FILTER CLOSE TO SMC

PLACE RC FILTER CLOSE TO SMC

CPU Current & Voltage Sense		
SYNC_MASTER=EMBT	SYNC_DATE=08/30/2005	
NOTICE OF PROPRIETARY PROPERTY		
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING		
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE		
II NOT TO REPRODUCE OR COPY IT		
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART		

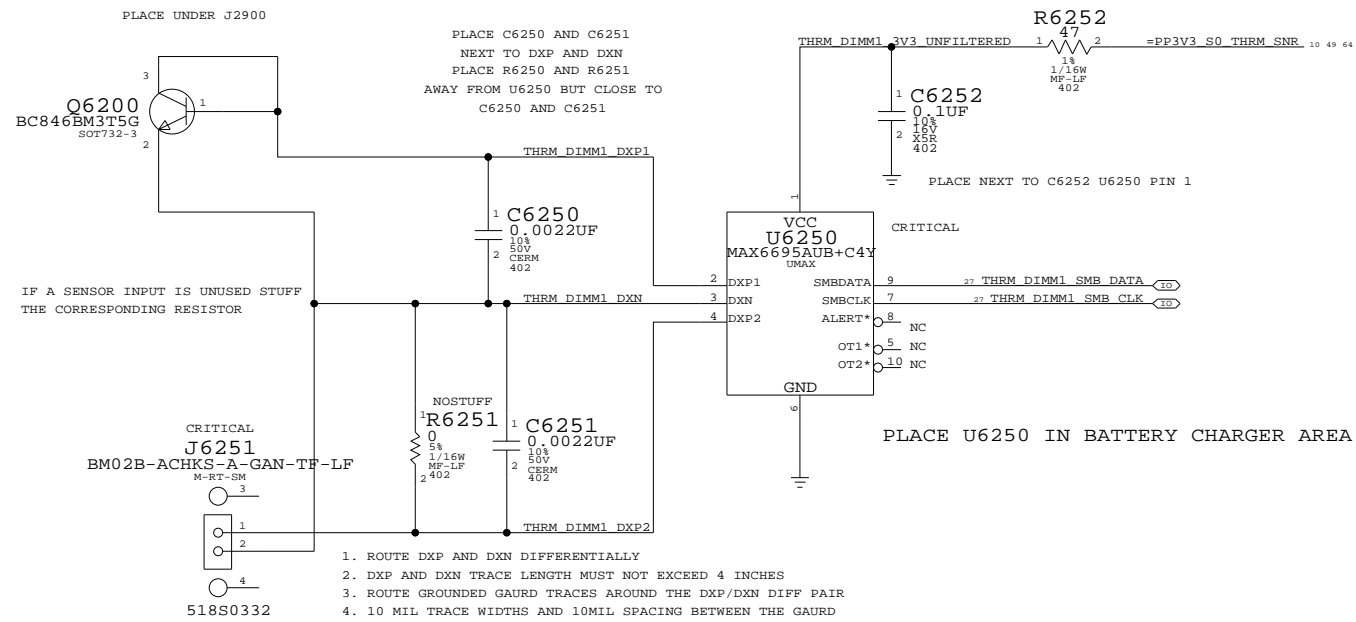
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	48	78	

DIMM0 TEMPERATURE ZONE



NOTE: REPLACE J6250 AND J6251 FROM 518S0332 TO 518S0452
 AFTER THIS CHANGE, THE SCHEAMTIC DOES NOT MATCH THE PCB ON THESE TWO LOCATIONS.

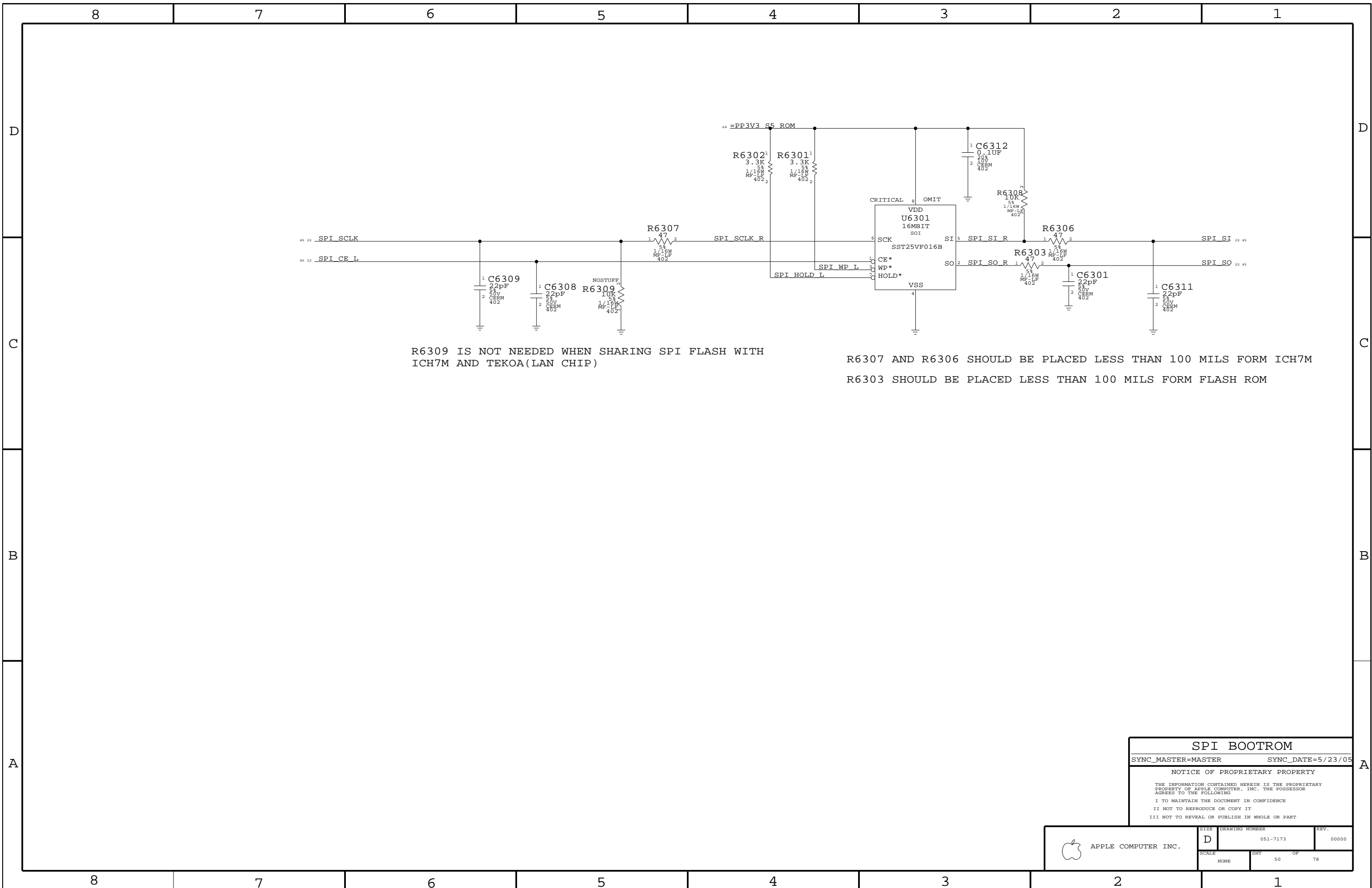
DIMM1 TEMPERATURE ZONE



NOTE: REPLACE J6250 AND J6251 FROM 518S0332 TO 518S0452
 AFTER THIS CHANGE, THE SCHEAMTIC DOES NOT MATCH THE PCB ON THESE TWO LOCATIONS.

TEMPERATURE SENSE	
SYNC_MASTER=ENET	SYNC_DATE=11/09/2005
NOTICE OF PROPRIETARY PROPERTY	
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING	
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE	
II NOT TO REPRODUCE OR COPY IT	
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART	

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	49		



R6309 IS NOT NEEDED WHEN SHARING SPI FLASH WITH ICH7M AND TEKOA(LAN CHIP)


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

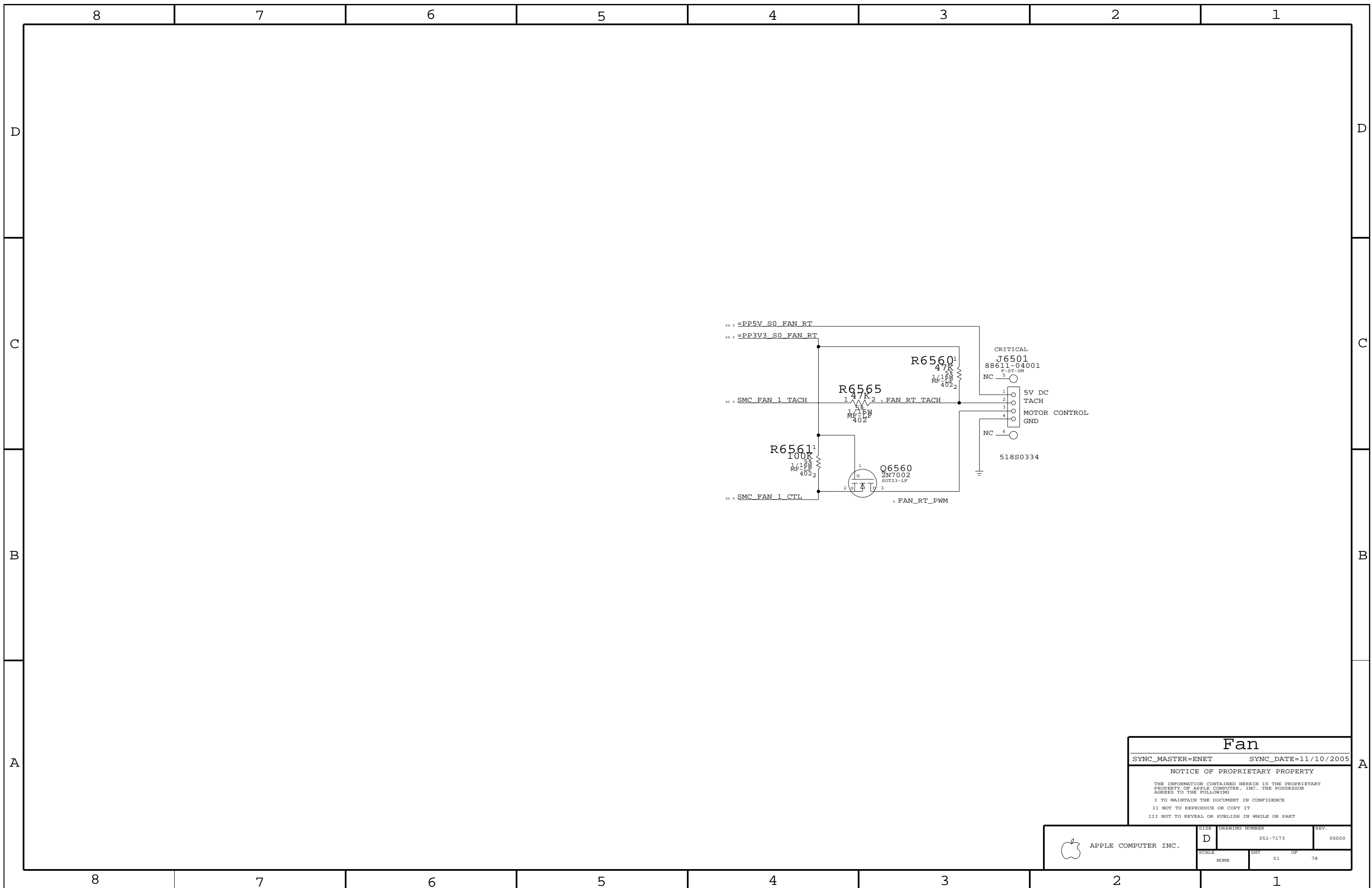
SPI BOOTROM
 SYNC_MASTER=MASTER SYNC_DATE=5/23/05

NOTICE OF PROPRIETARY PROPERTY

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

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

 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT		OF
NONE	50		78



Fan

SYNC_MASTER=ENET SYNC_DATE=11/10/2005

NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 51	OF 78

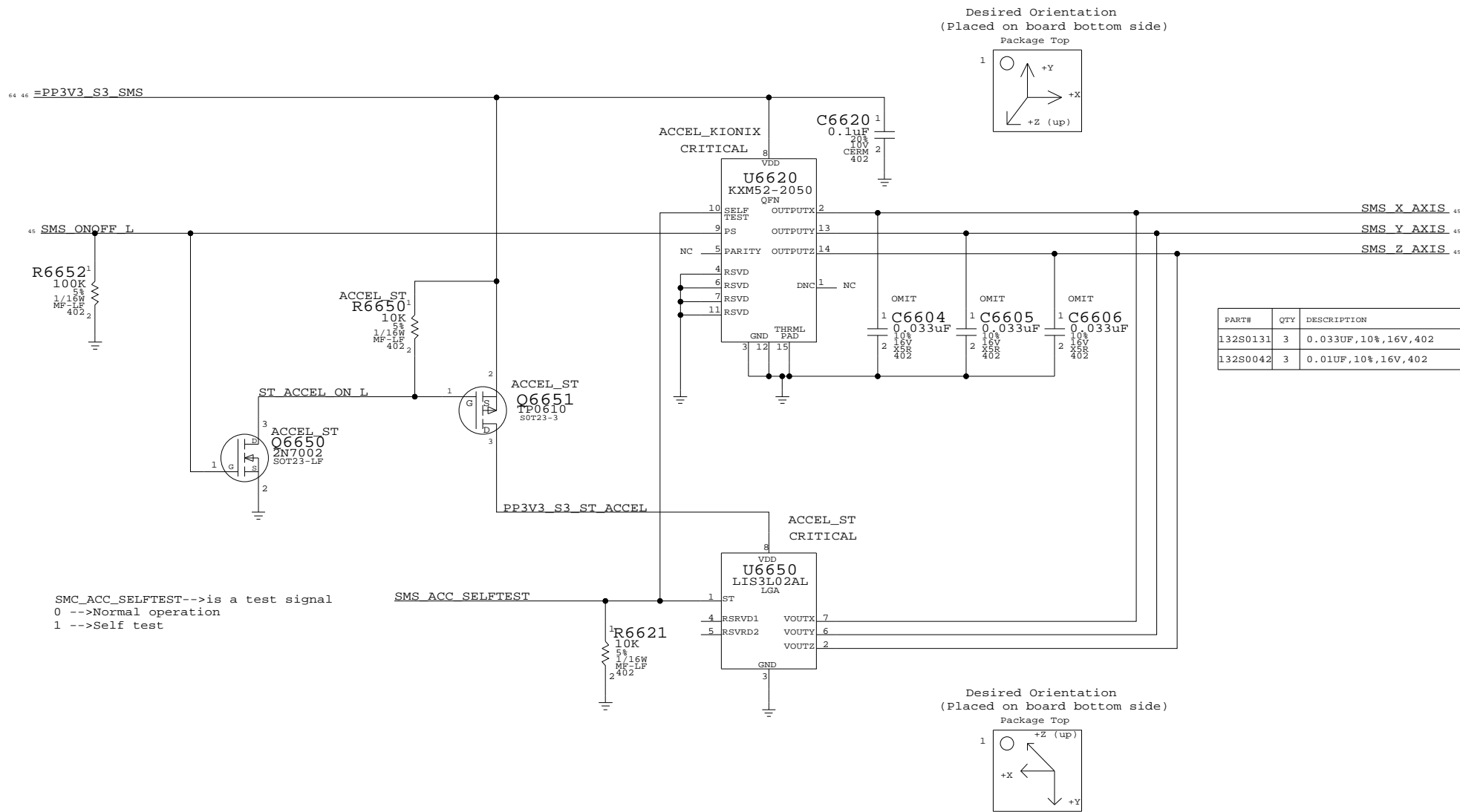
PAGE NOTES

INPUT
 =PP3V3_S3_SMS - 3.3V POWER FOR SMS (STAYS ALIVE IN SLEEP)
 SMS_ONOFF_L - CONNECT TO SMC TO BE ABLE TO PUT SMS INTO LOW-POWER MODE

OUTPUT
 SMS_ACC_*_AXIS - ACCELEROMETER OUTPUT TO SCU

PAGE HISTORY

5/19/2005 - FIRST REVISION OF PAGE
 7/26/2005 - REMOVED BOM TABLE AND UPDATED SYMBOL TO KXM52-2050
 7/26/2005 - CONNECTED PD PIN TO SMC'S SMS_ONOFF_L
 7/26/2005 -

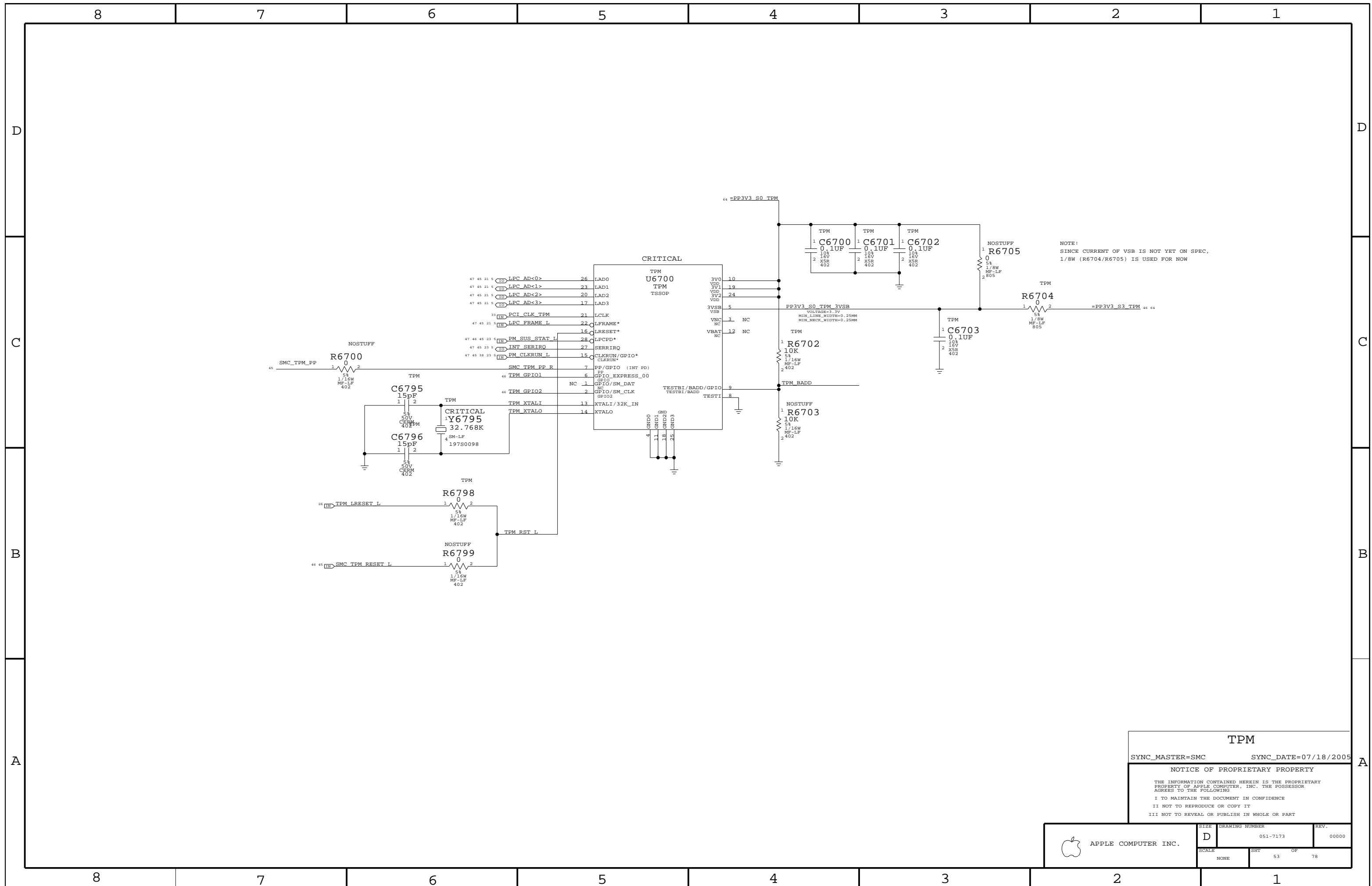


PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
132S0131	3	0.033UF,10%,16V,402	C6604,C6605,C6606		ACCEL_KIONIX
132S0042	3	0.01UF,10%,16V,402	C6604,C6605,C6606		ACCEL_ST

SMS
 SYNC_MASTER=SMC SYNC_DATE=08/23/2005

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	52	78	



APPLE COMPUTER INC.		SIZE	DRAWING NUMBER	REV.
		D	051-7173	00000
SCALE	SHT	OF		
NONE	53	78		

TPM

SYNC_MASTER=SMC SYNC_DATE=07/18/2005

NOTICE OF PROPRIETARY PROPERTY

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

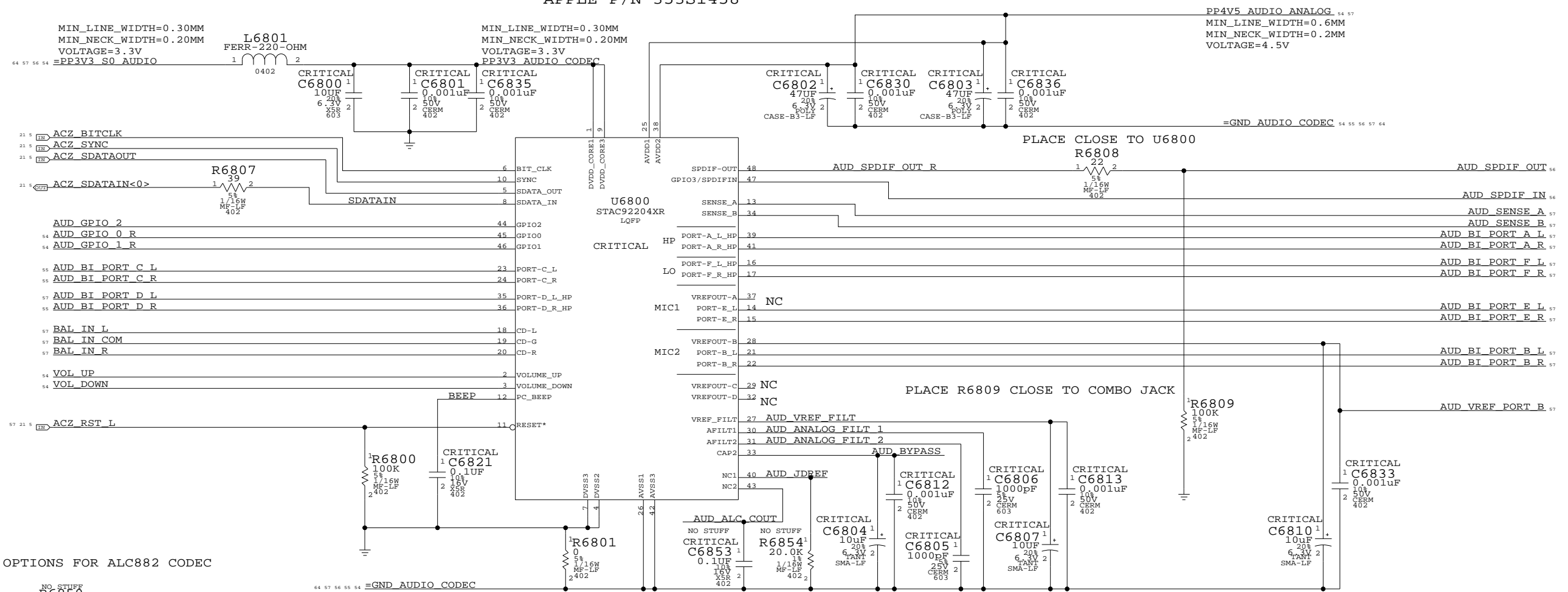
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

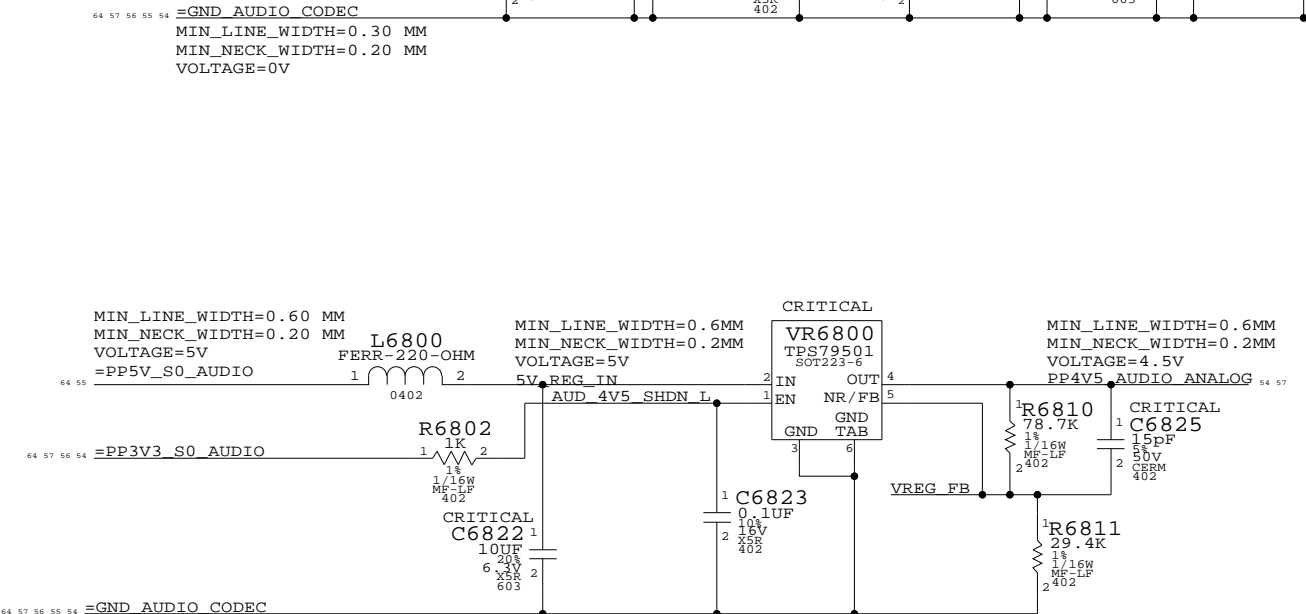
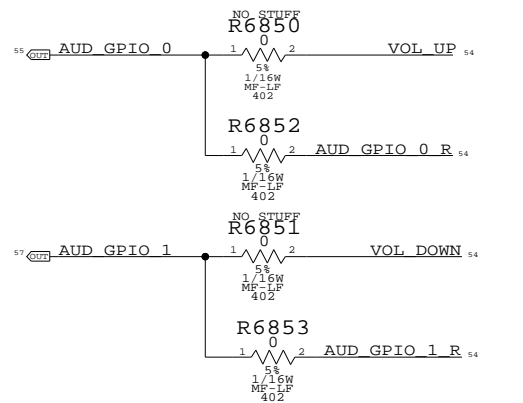
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

AUDIO CODEC

APPLE P/N 353S1458



STUFFING OPTIONS FOR ALC882 CODEC



4.5V POWER SUPPLY FOR CODEC

USING DC OFFSET SCREENED PART AS PRIMARY OPTION

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

AUDIO: CODEC

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

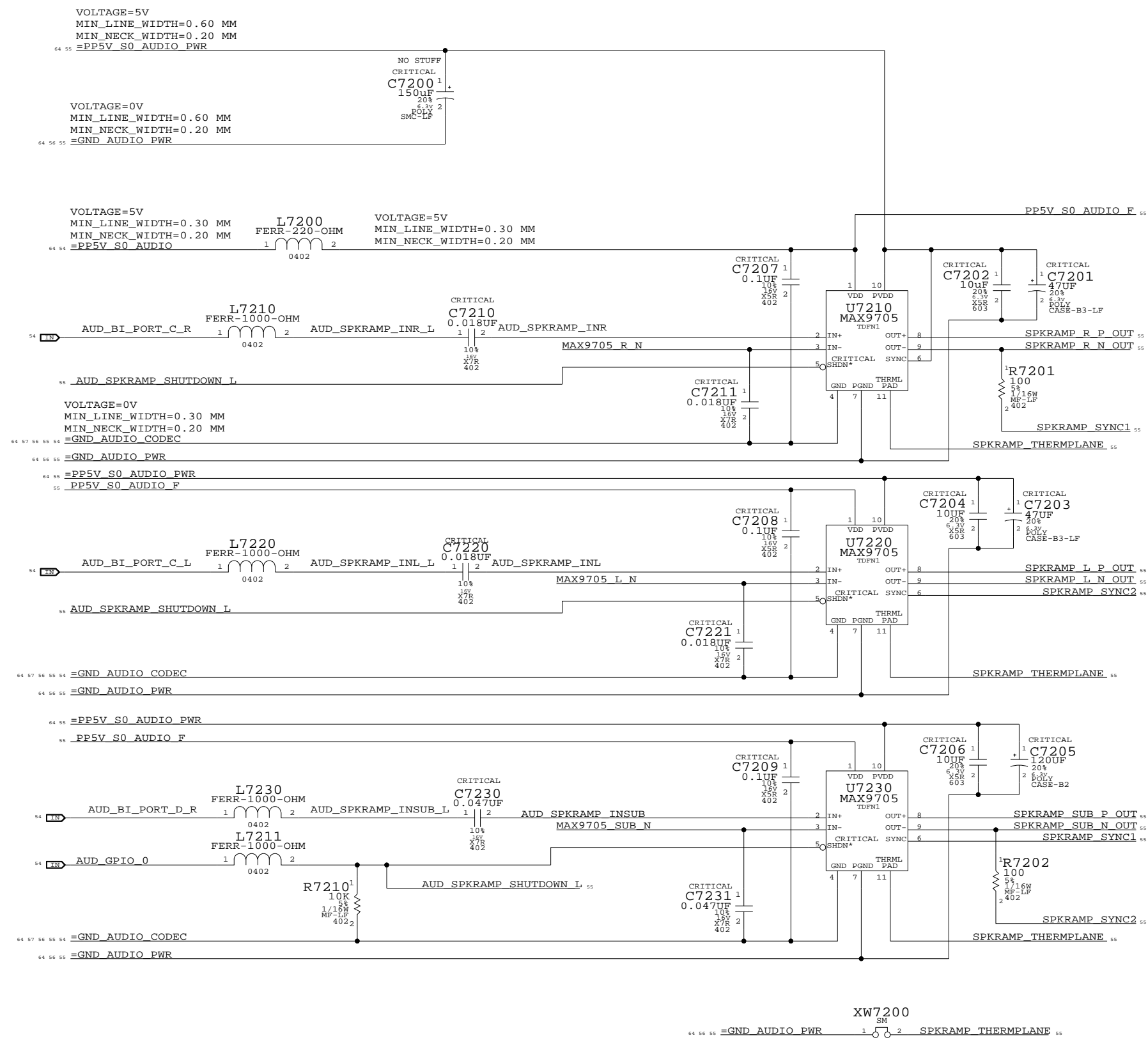
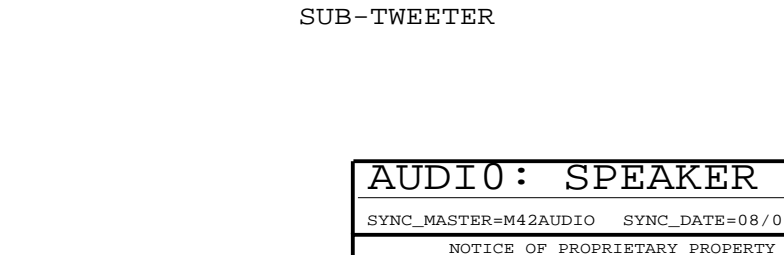
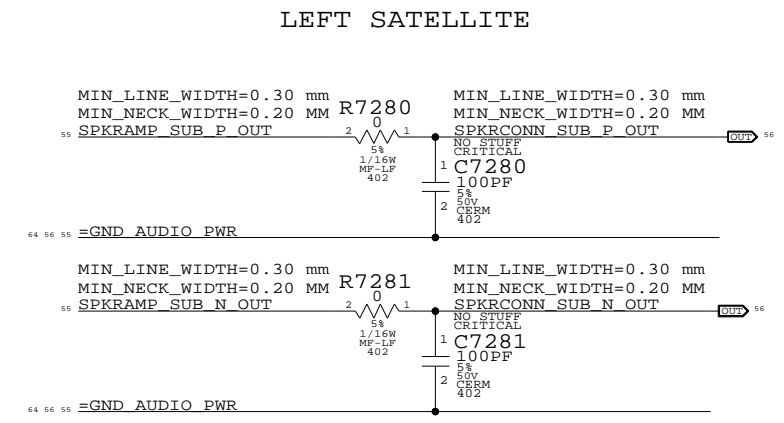
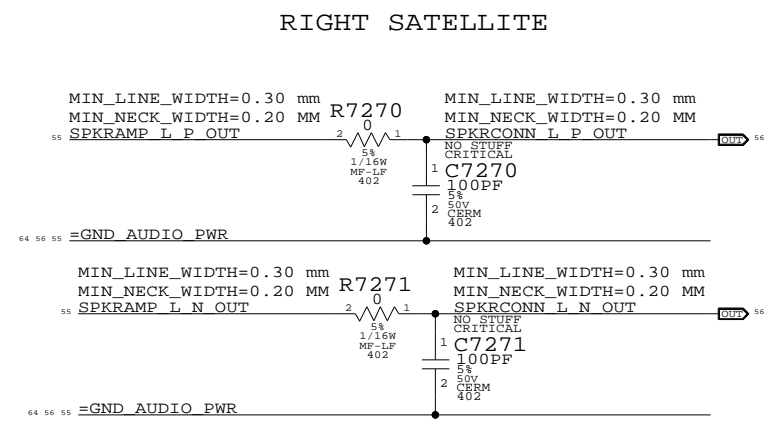
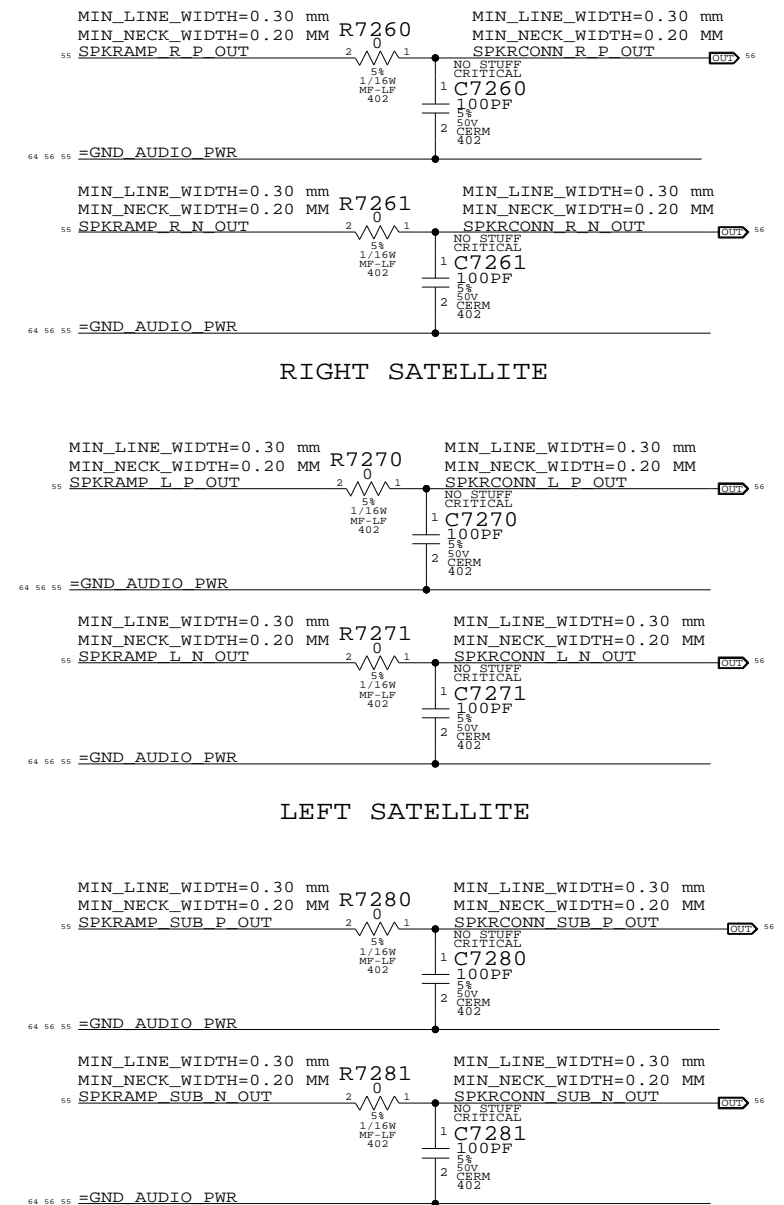
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	NONE	051-7173	00000
SCALE	SHT	OF	78
		54	

SATELLITE & SUB TWEETER AMPLIFIER APN:353S1595

SATELLITE 442 Hz < FC < 736 Hz
 SUB 169 Hz < FC < 282 Hz

SPEAKER OUTPUT EMI FILTERS



AUDIO: SPEAKER AMP
 SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006
 NOTICE OF PROPRIETARY PROPERTY
 THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:
 I TO MAINTAIN THE DOCUMENT IN CONFIDENCE
 II NOT TO REPRODUCE OR COPY IT
 III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	NONE	SHT	OF
		55	78



XW7200

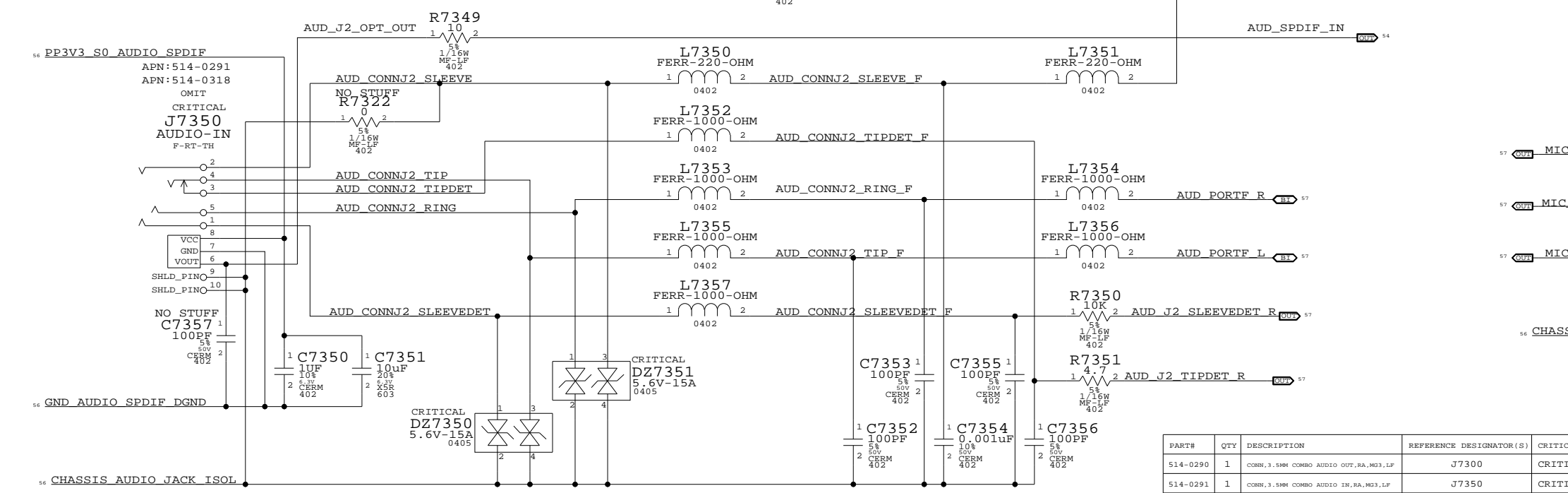
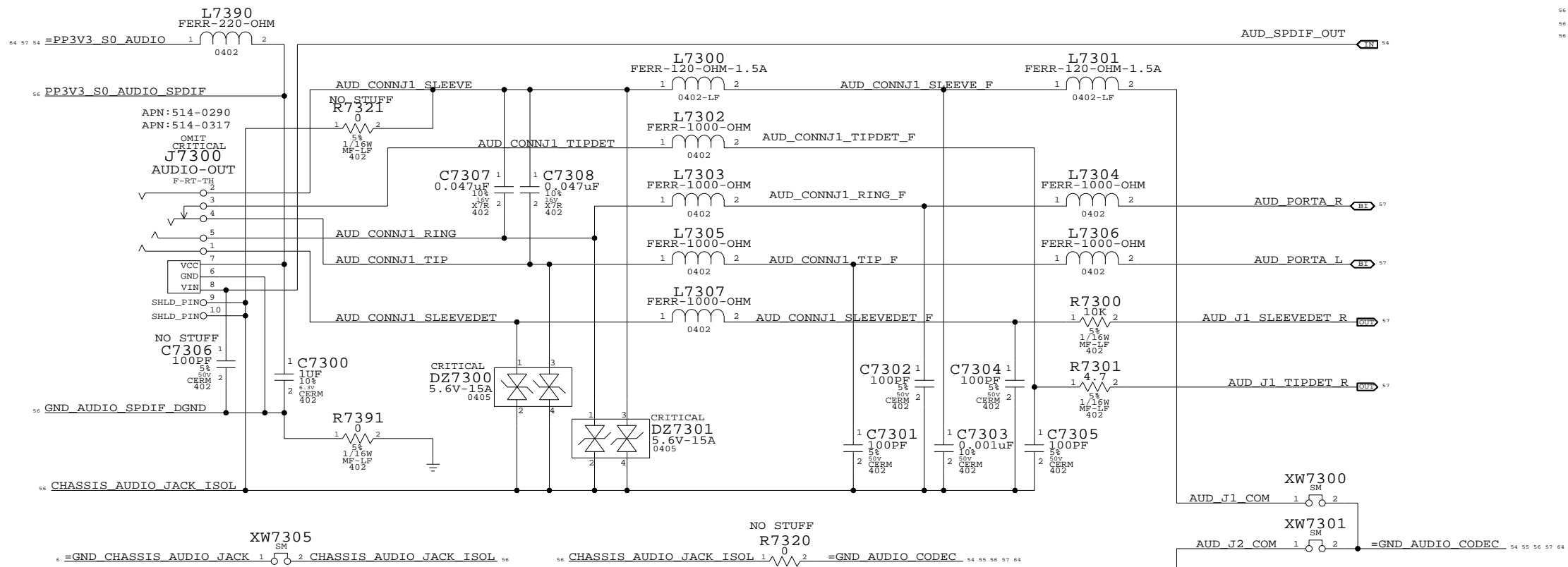
D
C
B
A

D
C
B
A

8 7 6 5 4 3 2 1

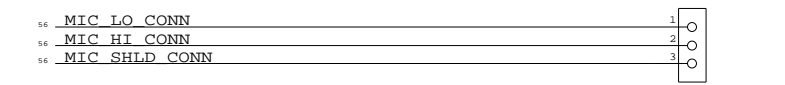
8 7 6 5 4 3 2 1

AUDIO JACK 1: LO/HP CONNECTOR, SPDIF TX



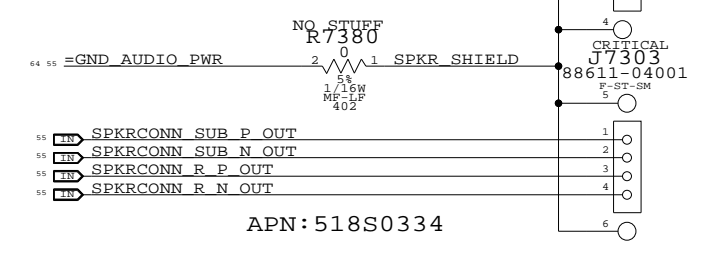
MIC CONNECTOR

APN: 514S0392

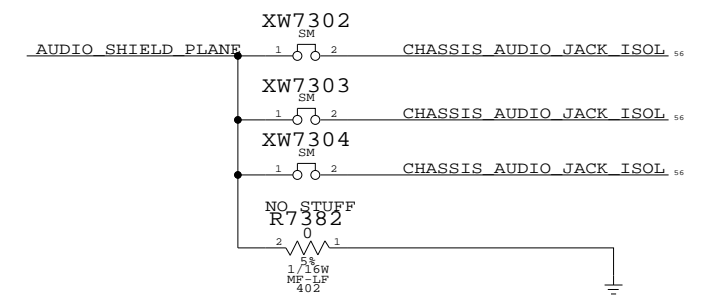


SPEAKER CONNECTOR

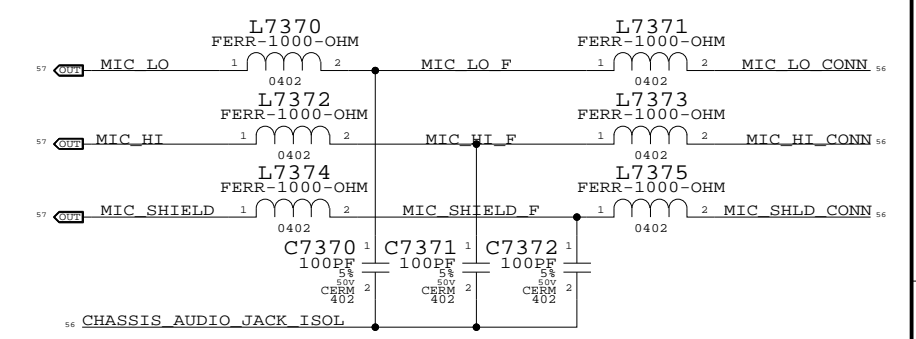
APN: 518S0332



AUDIO SHIELD FILL



MIC EMI FILTER



AUDIO JACK 2: LINE IN CONNECTOR, SPDIF RX

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

AUDIO: JACK

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

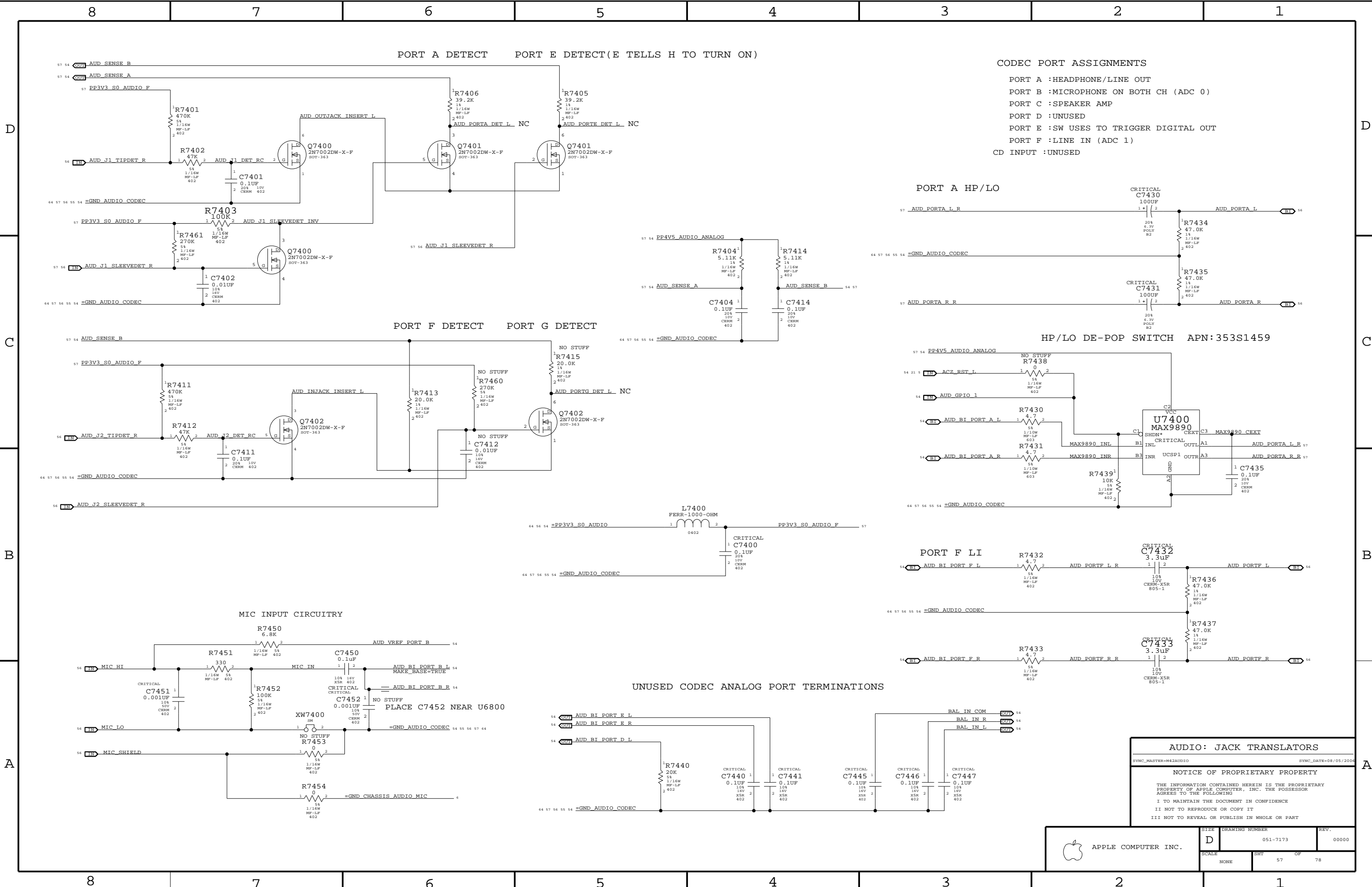
NOTICE OF PROPRIETARY PROPERTY

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

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

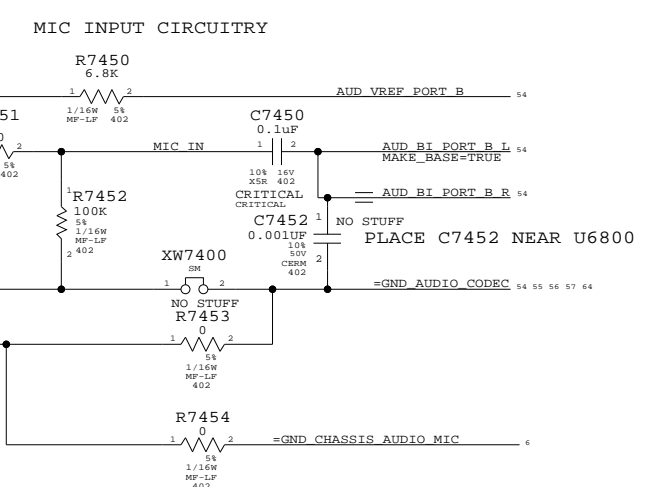
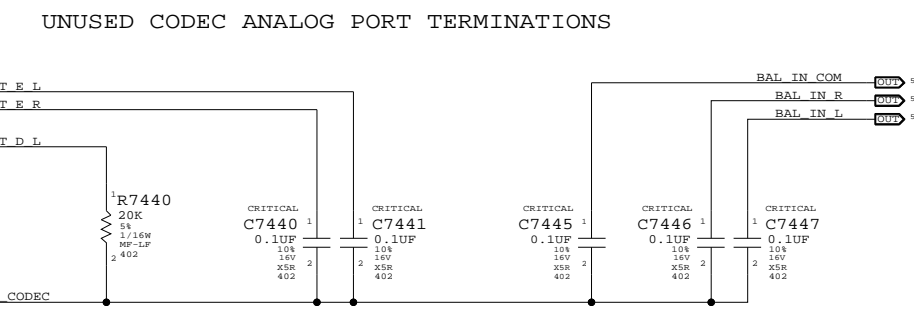
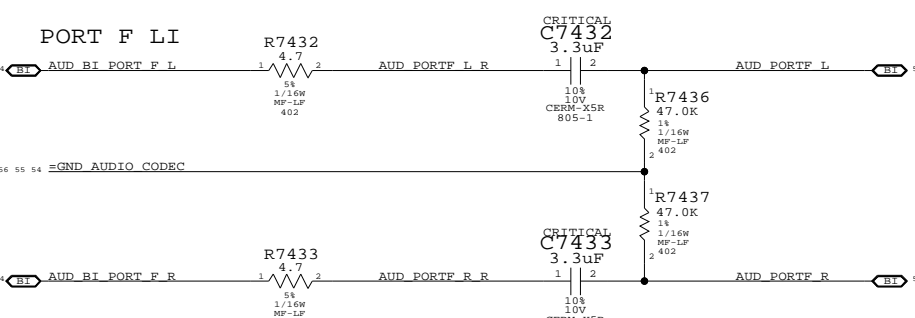
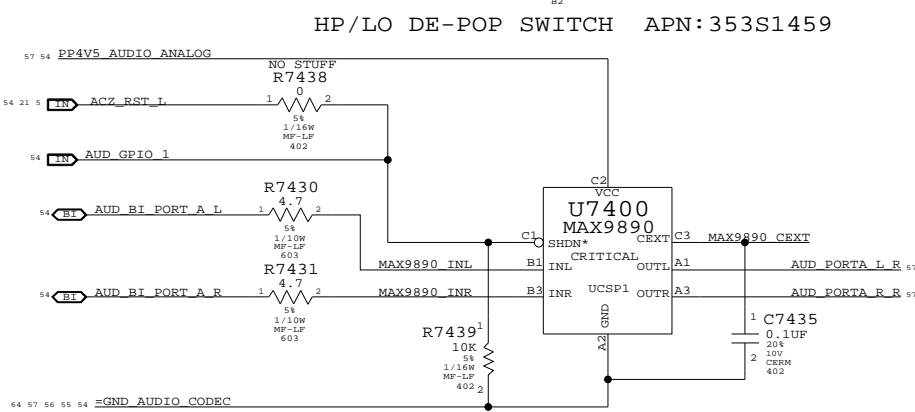
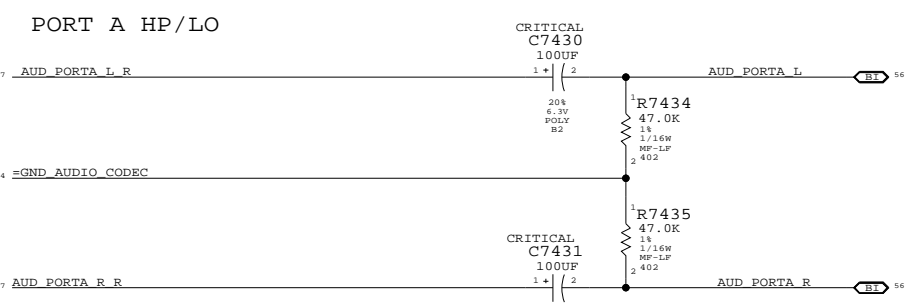
APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
D	051-7173	00000
SCALE	SHT	OF
NONE	56	78



CODEC PORT ASSIGNMENTS

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



AUDIO: JACK TRANSLATORS

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

NOTICE OF PROPRIETARY PROPERTY

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

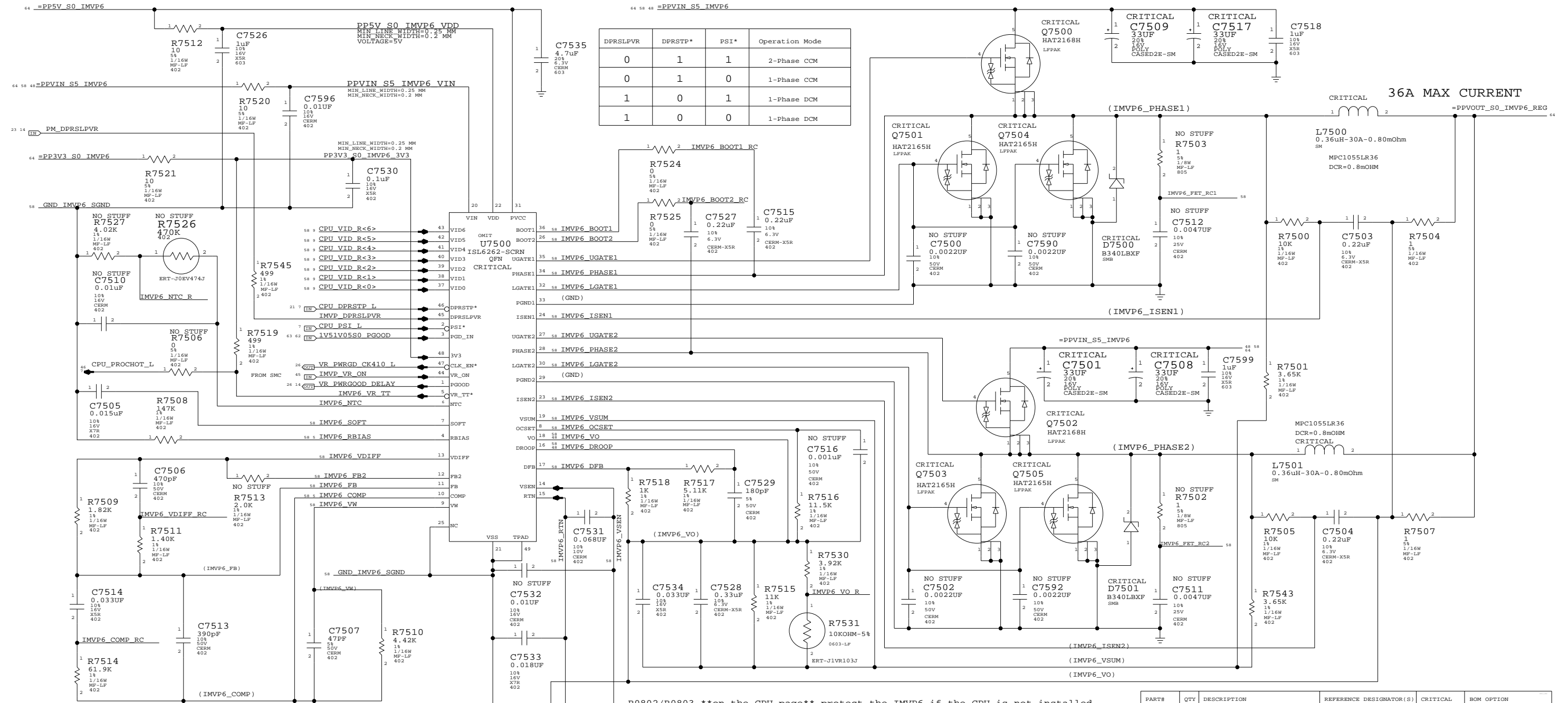
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
128S0093	128S0092	7	C7501_C7508	RENET T520V3300016AT0457650
128S0093	128S0092	7	C7509_C7517	RENET T520V3300016AT0457650

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.

R0802/R0803 **on the CPU page** protect the IMVP6 if the CPU is not installed

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
353S1465	1	ISL6262	U7500		M42
353S1461	1	ISL9504	U7500		M42A

IMVP6 CPU VCore Regulator

	MIN_LINE_WIDTH	MIN_NECK_WIDTH
58 IMVP6_PHASE1	1.5 MM	0.25 MM
58 IMVP6_BOOT1	0.25 MM	0.25 MM
58 IMVP6_UGATE1	1.5 MM	0.25 MM
58 IMVP6_LGATE1	1.5 MM	0.25 MM
58 IMVP6_ISEN1	0.25 MM	0.25 MM
58 IMVP6_FET_RC1	0.25 MM	0.25 MM
58 IMVP6_VSUM_R1	0.25 MM	0.25 MM
58 IMVP6_VO_R1	0.25 MM	0.25 MM

	MIN_LINE_WIDTH	MIN_NECK_WIDTH
58 IMVP6_PHASE2	0.25 MM	0.25 MM
58 IMVP6_BOOT2	0.25 MM	0.25 MM
58 IMVP6_UGATE2	0.25 MM	0.25 MM
58 IMVP6_LGATE2	0.25 MM	0.25 MM
58 IMVP6_ISEN2	0.25 MM	0.25 MM
58 IMVP6_FET_RC2	0.25 MM	0.25 MM
58 IMVP6_VSUM_R2	0.25 MM	0.25 MM
58 IMVP6_VO_R2	0.25 MM	0.25 MM

	MIN_LINE_WIDTH	MIN_NECK_WIDTH
58 IMVP6_OCSET	0.25 MM	0.20 MM
58 CPU_VID_R<0..6>	0.25 MM	0.20 MM
58 IMVP6_VSUM	0.25 MM	0.20 MM
58 GND_IMVP6_SGND	0.50 MM	0.20 MM
58 IMVP6_VO	0.25 MM	0.20 MM
58 IMVP6_DROOP	0.25 MM	0.20 MM
58 IMVP6_DFB	0.25 MM	0.20 MM
58 IMVP6_SOFT	0.25 MM	0.20 MM
58 IMVP6_RBIAS	0.25 MM	0.20 MM
58 IMVP6_VDIFF	0.25 MM	0.20 MM
58 IMVP6_FB2	0.25 MM	0.20 MM
58 IMVP6_FB	0.25 MM	0.20 MM
58 IMVP6_COMP	0.25 MM	0.20 MM
58 IMVP6_VW	0.25 MM	0.25 MM
58 CPU_VCCSENSE_P	0.25 MM	0.25 MM
58 CPU_VCCSENSE_N	0.25 MM	0.25 MM
58 IMVP6_RTIN	0.25 MM	0.25 MM
58 IMVP6_VSEN	0.25 MM	0.25 MM

IMVP6 CPU VCore Regulator

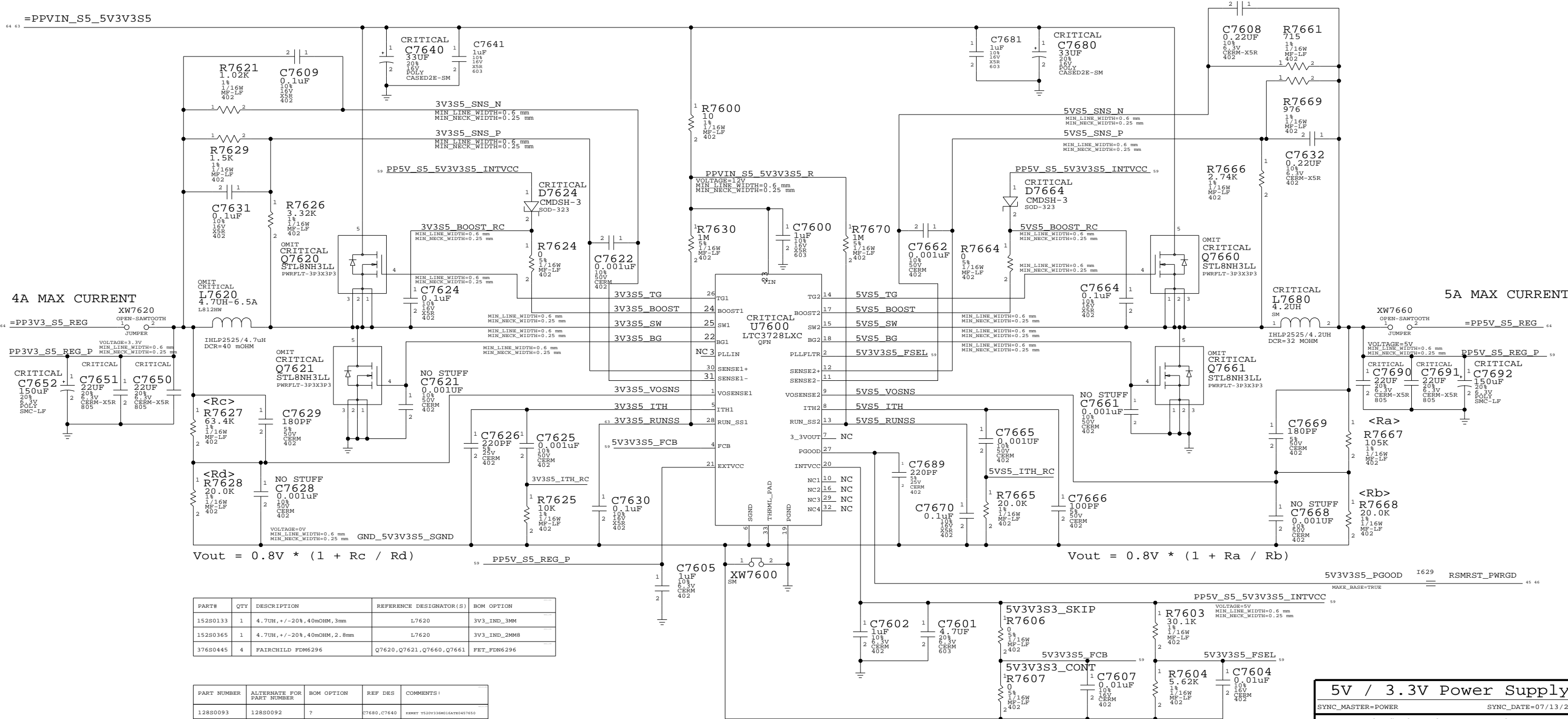
SYNC_MASTER=POWER SYNC_DATE=07/13/2005

NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SCALE	SHEET	OF	REV.
	NONE	58	78	00000

5V / 3.3V POWER SUPPLY



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S0133	1	4.7UH, +/-20%, 40mOHM, 3mm	L7620	3V3_IND_3MM
152S0365	1	4.7UH, +/-20%, 40mOHM, 2.8mm	L7620	3V3_IND_2MM8
376S0445	4	FAIRCHILD FDM6296	Q7620, Q7621, Q7660, Q7661	FET_FDM6296

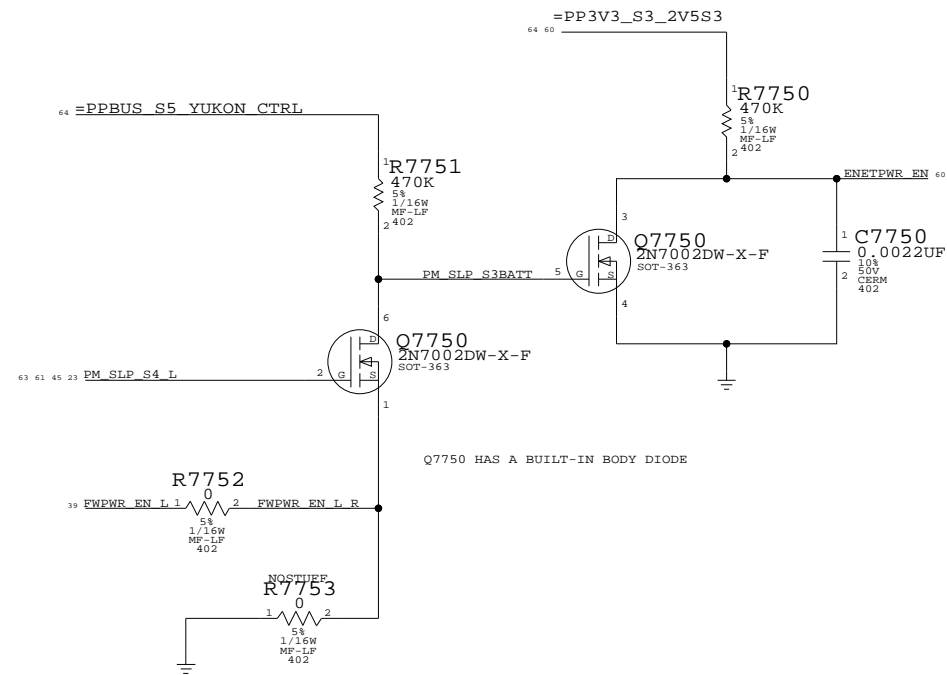
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0093	128S0092	?	C7680, C7640	RENET VS20V33M016ATE0487650
376S0448	376S0445	?	Q7620, Q7621	VISHAY SI7806ADN
376S0448	376S0445	?	Q7660, Q7661	VISHAY SI7806ADN

5V / 3.3V Power Supply
 SYNC_MASTER=POWER SYNC_DATE=07/13/2005

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

APPLE COMPUTER INC.	DRAWING NUMBER D 051-7173	REV. 00000
	SCALE NONE	SHEET 59 OF 78

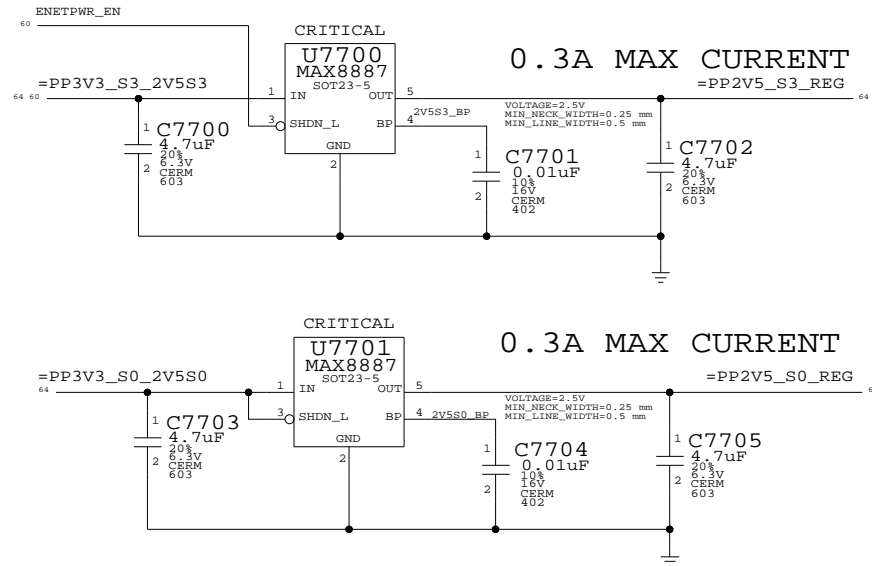
YUKON POWER CONTROL



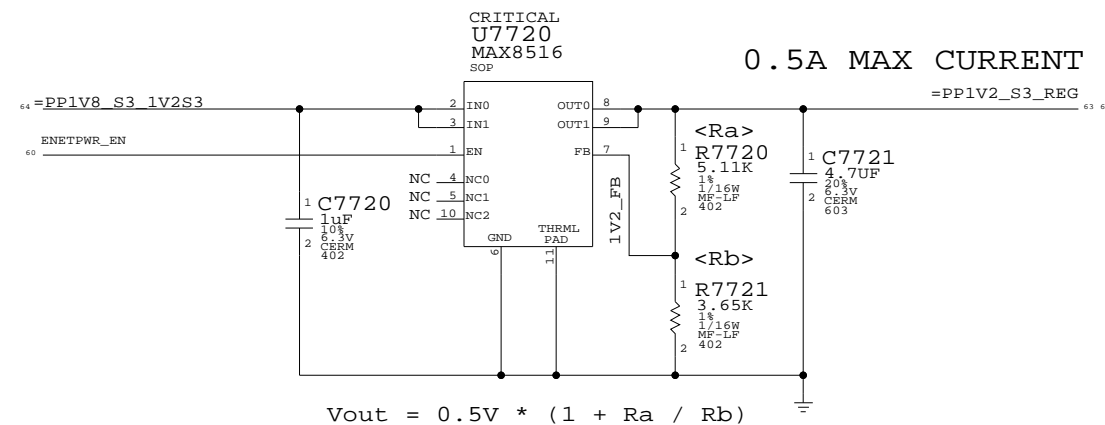
NAME	PM_SLP_S4_L	FWPWR_EN_L	PM_SLP_S3BATT	ENETPWR_EN
LOGIC	S3 S0	~S0 ~SMC_PS_ON		POWER YUKON
S3 ON BATTERY	TRUE (3.3V)	TRUE (PBUS 12.6V)	TRUE (PBUS 12.6V)	FALSE (0V)
S0 OR S3 ON AC	TRUE (3.3V)	FALSE (0V)	FALSE (0V)	TRUE (3.3V)
S5 ON AC	FALSE (0V)	TRUE (PBUS 12.6V)	TRUE (PBUS 12.6V)	FALSE (0V)
S5 ON BATT	FALSE (0V)	FALSE (0V)	TRUE (PBUS 12.6V)	FALSE (0V)

NOTE: IF CHANGE TO STUFFING R7753 THEN ENETPWR_EN IS BUFFERED PM_SLP_S4_L

2.5V REGULATORS



1.2V REGULATOR

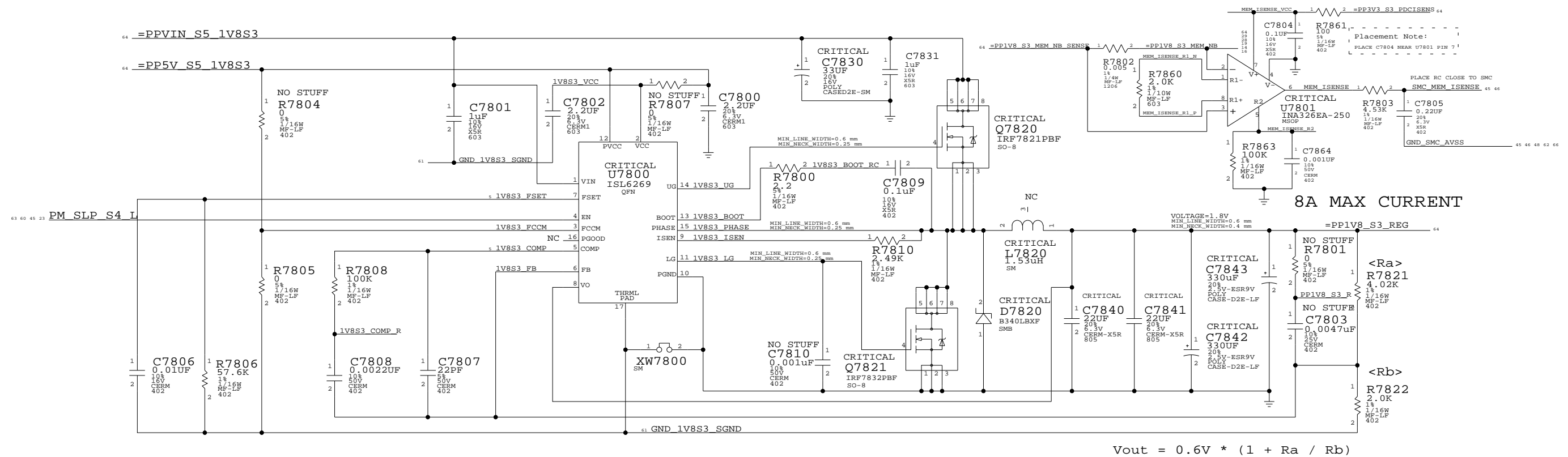


2.5V/1.2V Regulator
 SYNC_MASTER=ENET SYNC_DATE=12/06/2005

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE		60	

1.8V POWER SUPPLY



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0093	128S0092	?	C7830	ERRY 7520V330M16AT0457450

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0094	128S0060	?	C7842, C7843	PANASONIC KEPSX0D331ER
128S0095	128S0060	?	C7842, C7843	PANASONIC KEPSX0D331EK

1.8V Supply

SYNC_MASTER=POWER SYNC_DATE=07/13/2005

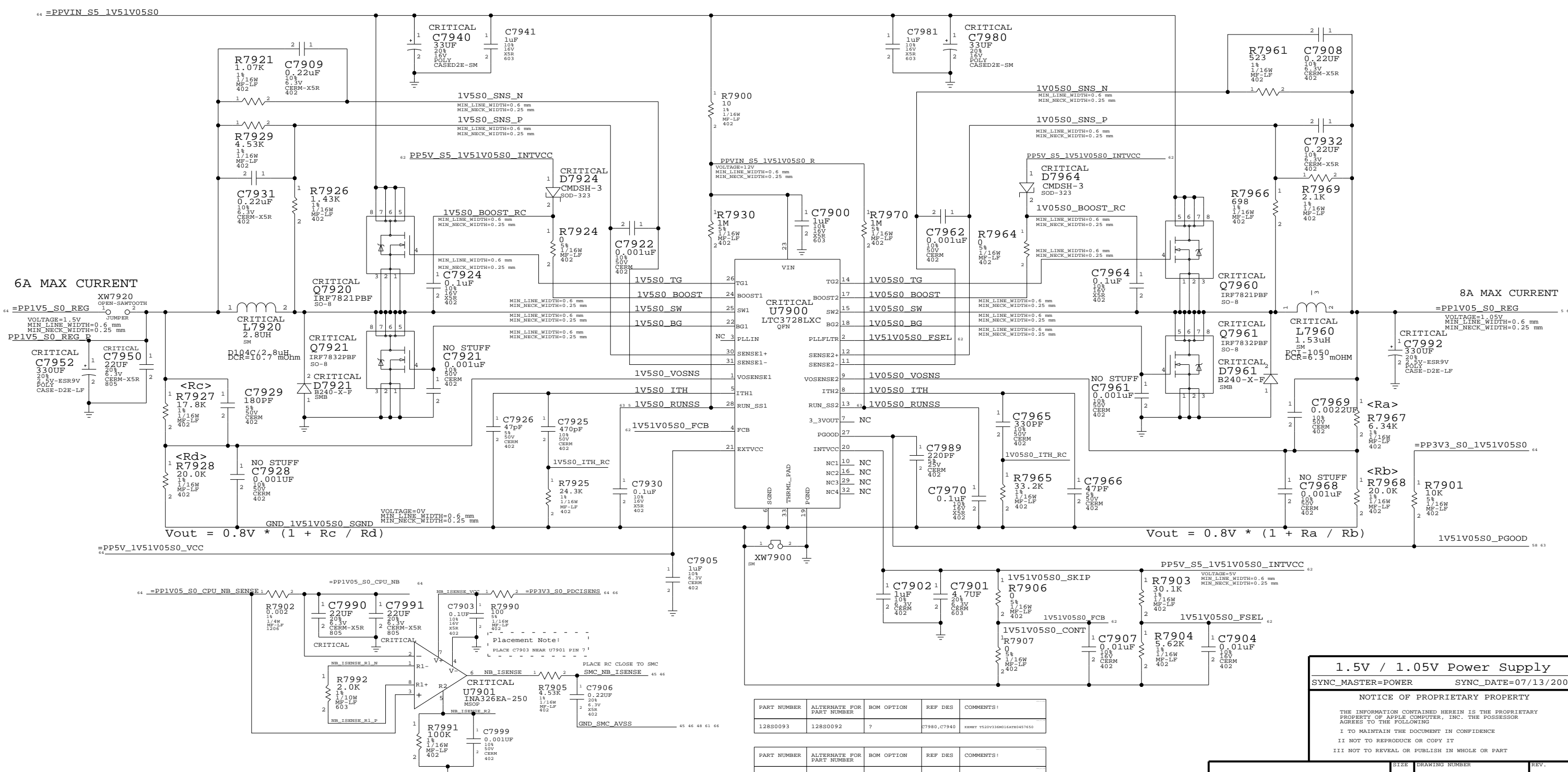
NOTICE OF PROPRIETARY PROPERTY

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

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE		61	

1.5V/1.05V POWER SUPPLY



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0093	128S0092	?	C7980, C7940	RENT 7520V3H001A040547650

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0094	128S0060	?	C7952, C7992	PANASONIC EFXK0D3311E
128S0095	128S0060	?	C7952, C7992	PANASONIC EFXK0D3311E

1.5V / 1.05V Power Supply
 SYNC_MASTER=POWER SYNC_DATE=07/13/2005

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

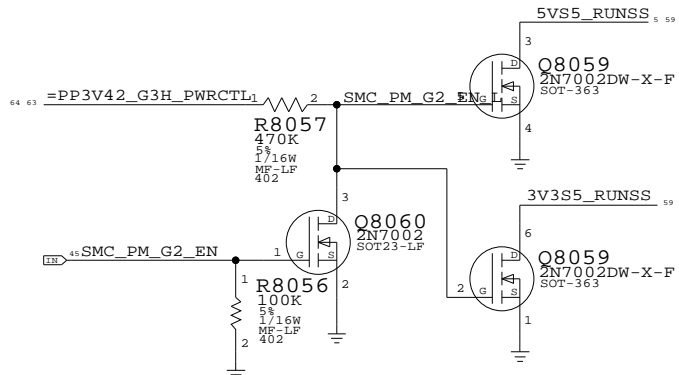
APPLE COMPUTER INC.	SCALE	SHT	OF	REV.
	NONE	62	78	00000

POWER CONTROL SIGNALS

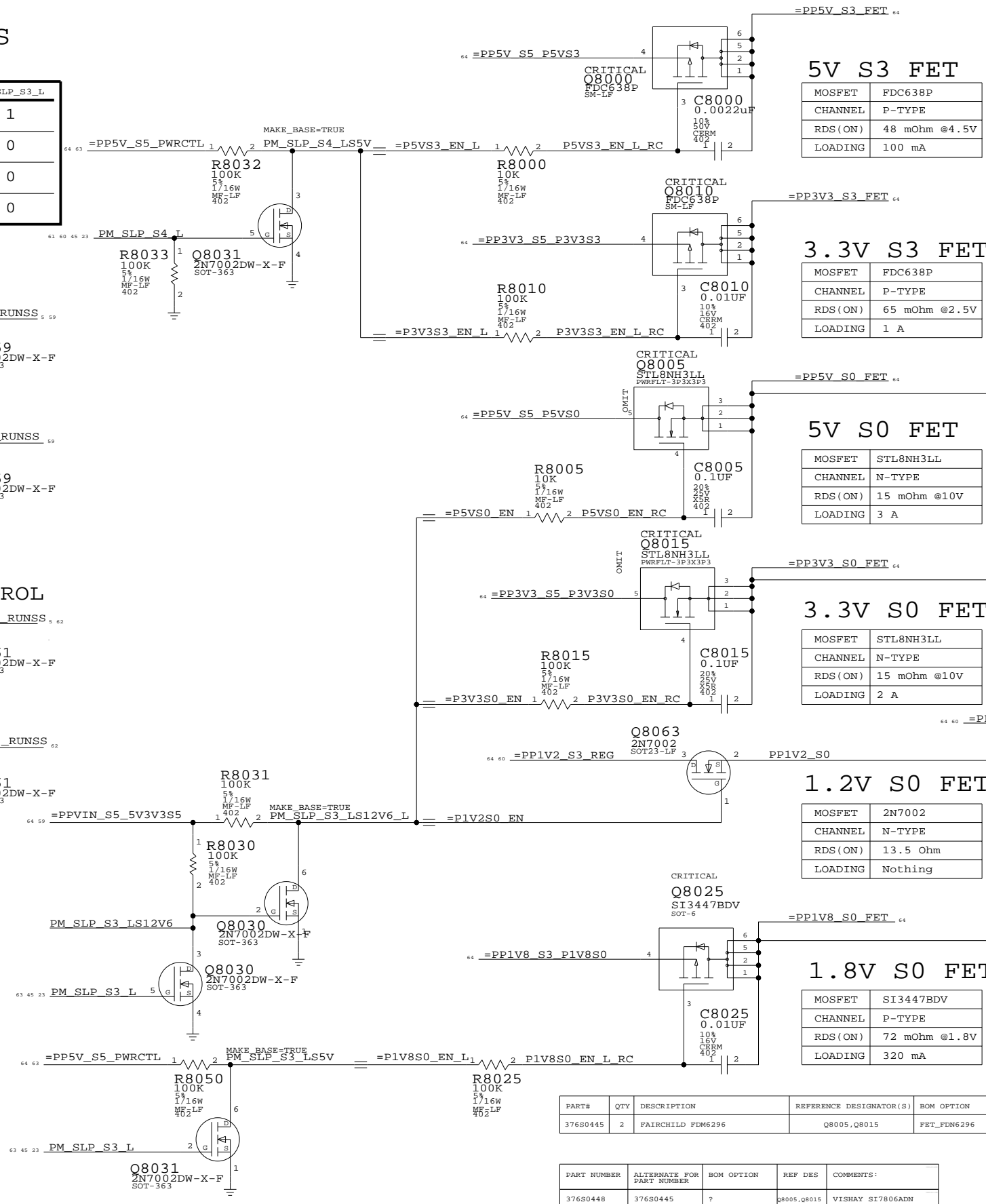
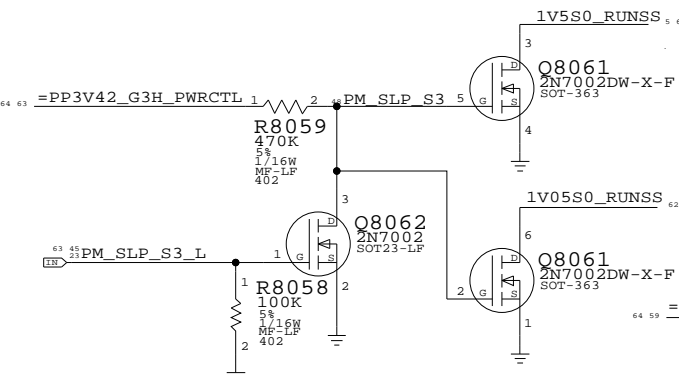
These rails are monitored by LTC2908

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

5V/3.3V S5 RUN/SS CONTROL

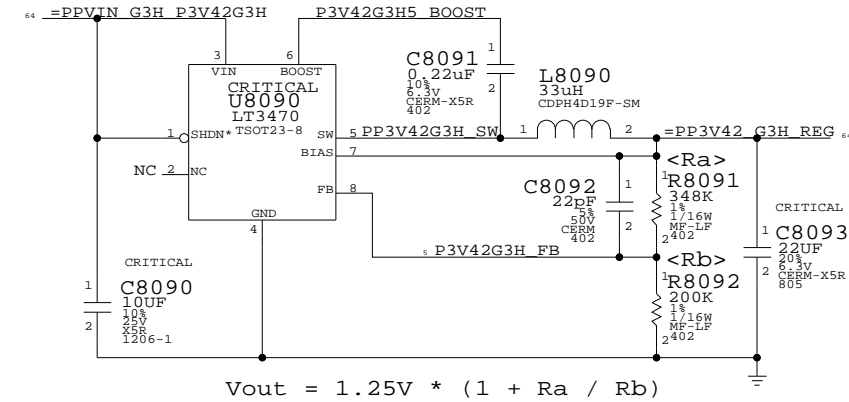


1.5V/1.05V S0 RUN/SS CONTROL

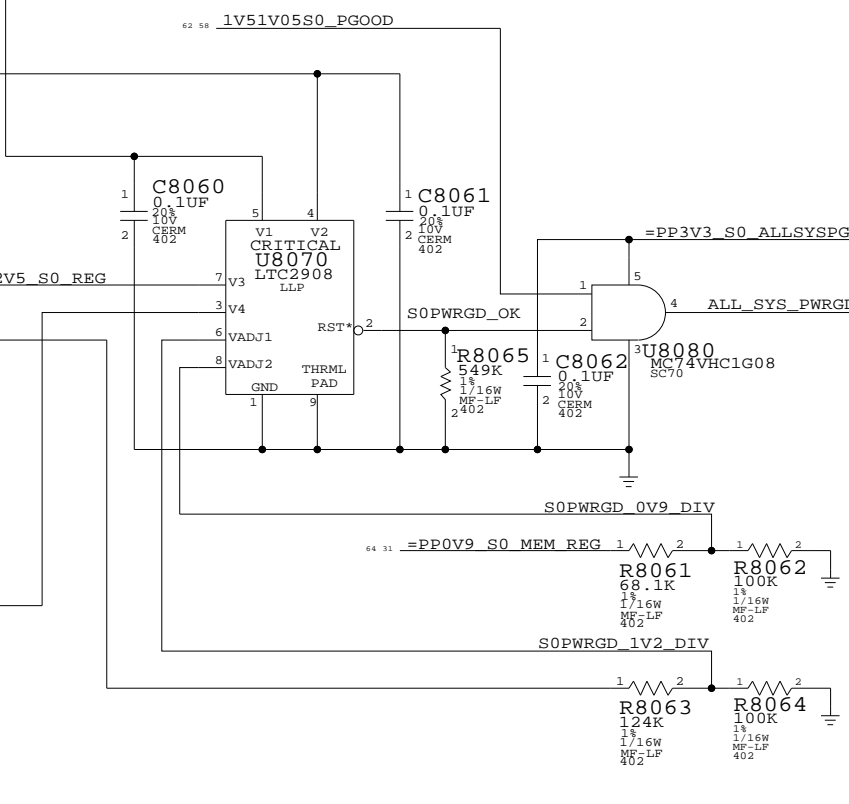


3.425V "G3Hot" SUPPLY

Supply needs to guarantee 3.31V delivered to SMC VRef generator



ALL SYSTEM PWRGD CIRCUIT



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

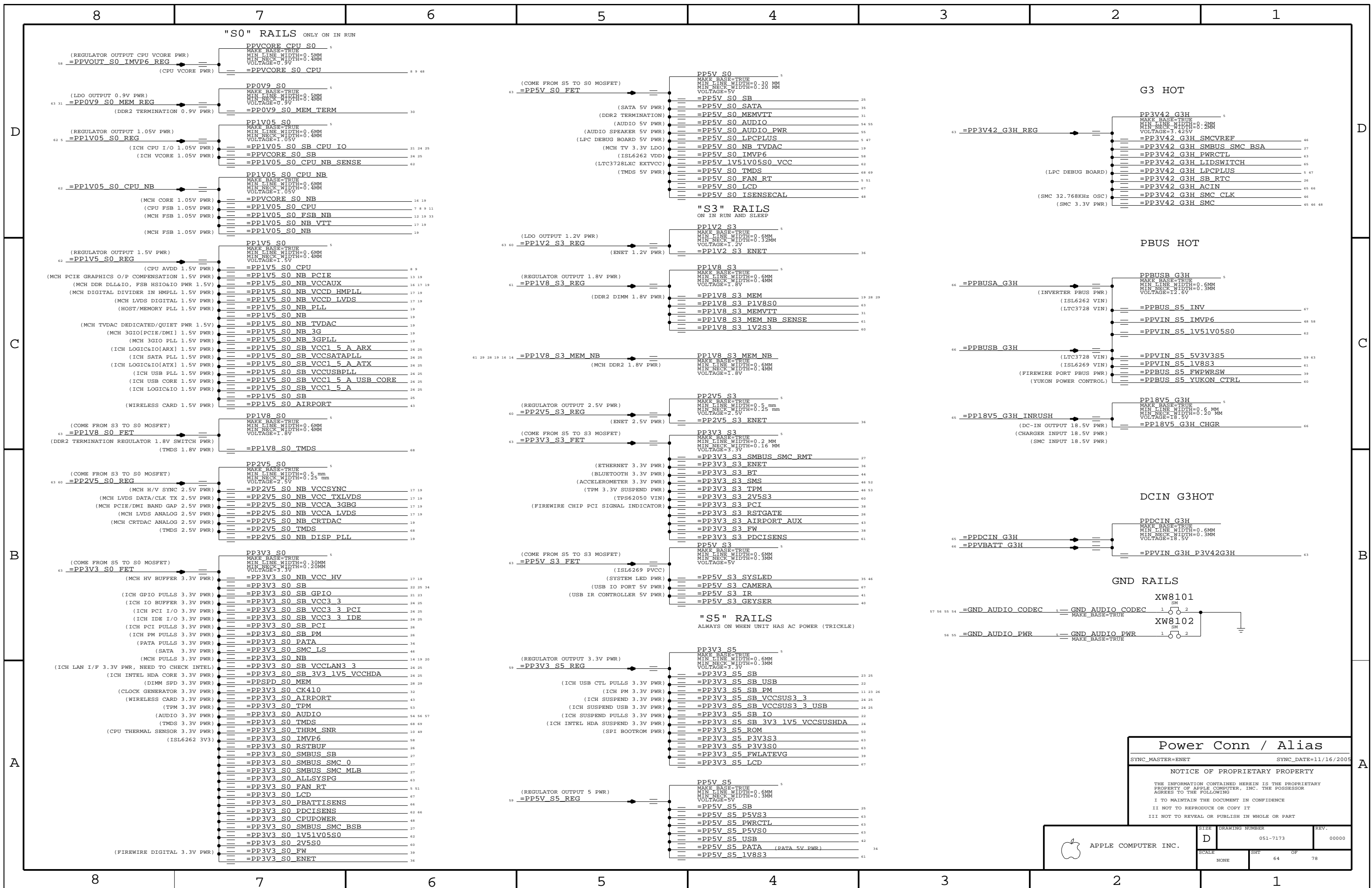
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
376S0448	376S0445	?	Q8005, Q8015	VISHAY SI7806ADN

S3/S0 FETS, G3H SUPPLY

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	63		



Power Conn / Alias

SYNC_MASTER=ENET SYNC_DATE=11/16/2005

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

	DRAWING NUMBER		REV.
	D	051-7173	00000
SCALE		SHT	OF
NONE		64	78

DC-JACK INTERFACE

8 7 6 5 4 3 2 1

D

D

C

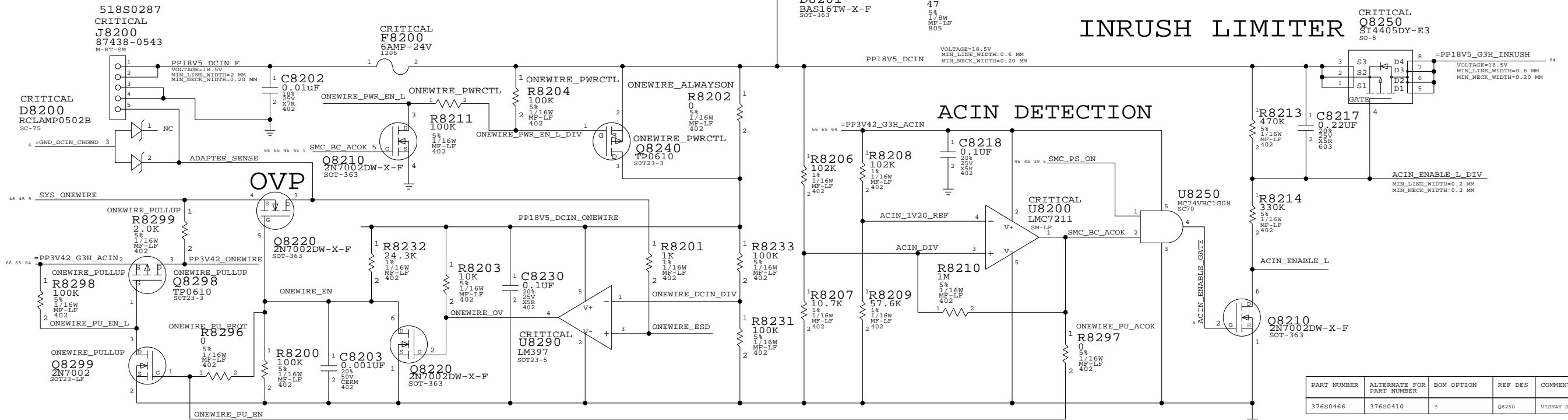
C

B

B

A

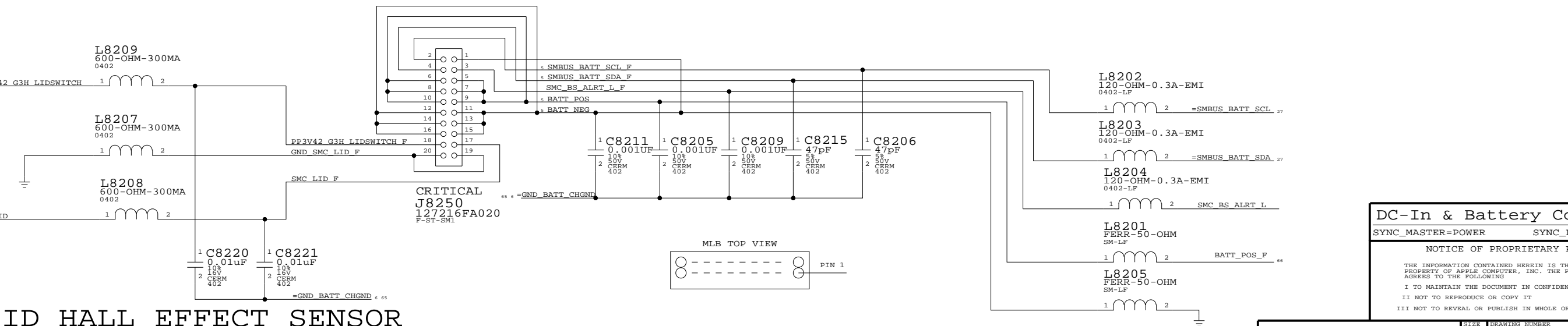
A



INRUSH LIMITER

ACIN DETECTION

BATTERY INTERFACE



LID HALL EFFECT SENSOR

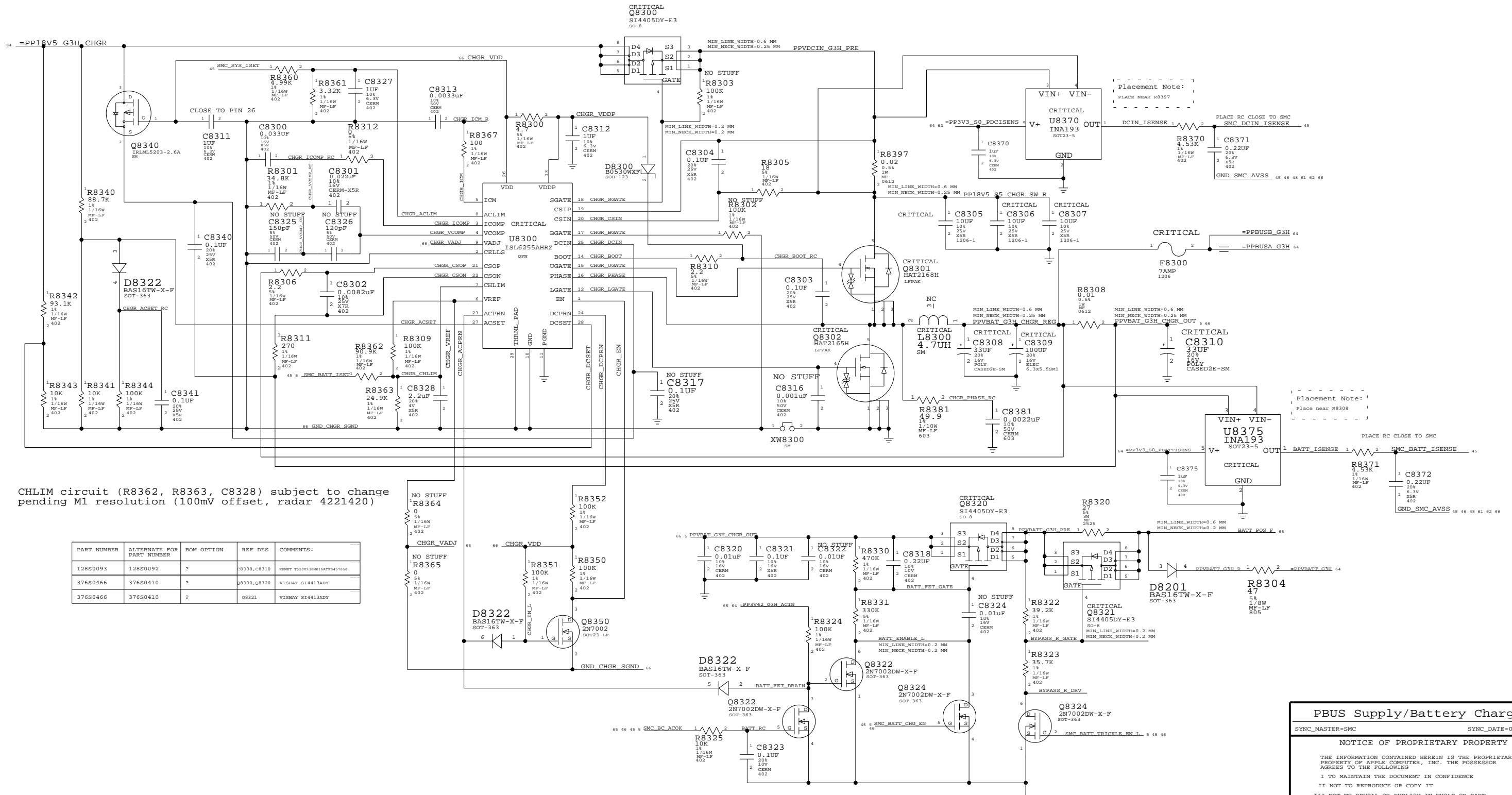
DC-In & Battery Connectors
 SYNC_MASTER=POWER SYNC_DATE=07/13/2005

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

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	65	78	

8 7 6 5 4 3 2 1

PBUS SUPPLY / BATTERY CHARGER



CHLIM circuit (R8362, R8363, C8328) subject to change pending M1 resolution (100mV offset, radar 4221420)

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0093	128S0092	?	C8308, C8310	KEMET T520V33M018AT040457650
376S0466	376S0410	?	Q8300, Q8320	VISHAY SI4413ADY
376S0466	376S0410	?	Q8321	VISHAY SI4413ADY

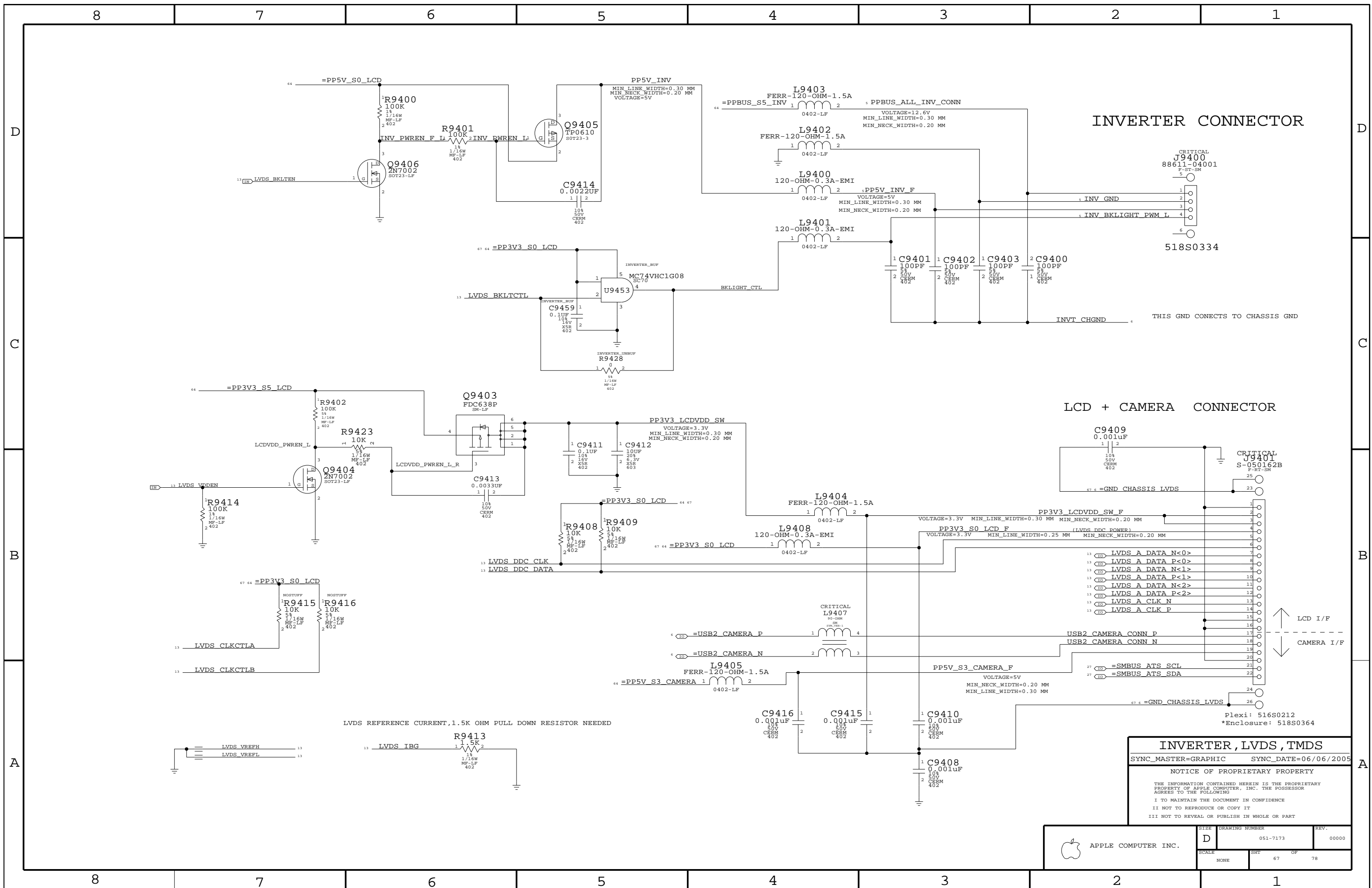
PBUS Supply/Battery Charger

SYNC_MASTER=SMC SYNC_DATE=08/19/2005

NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SIZE: D SCALE: NONE	DRAWING NUMBER: 051-7173 SHEET: 66 OF 78	REV.: 00000
---------------------	------------------------	---	-------------



INVERTER CONNECTOR

LCD + CAMERA CONNECTOR

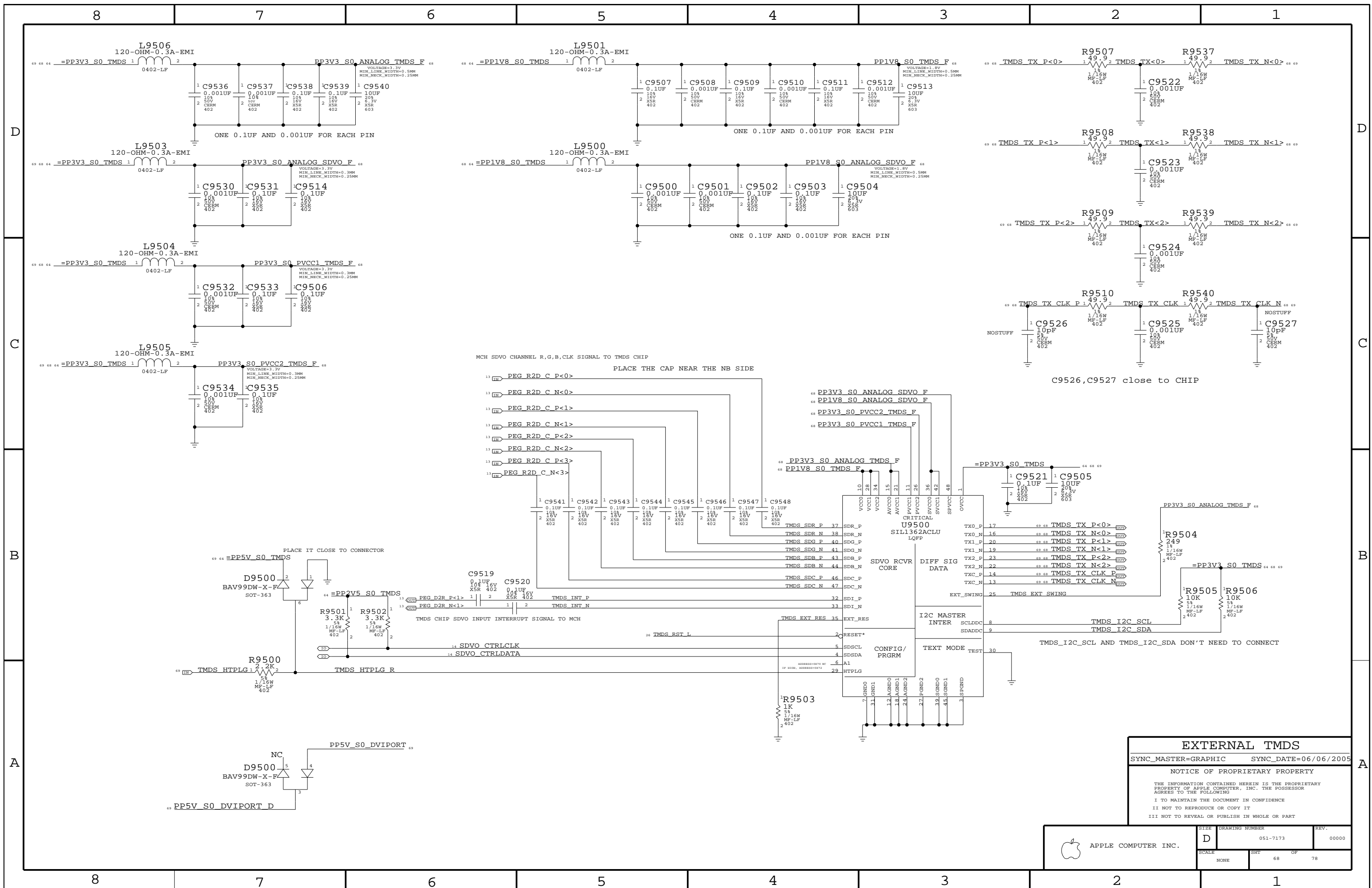
INVERTER, LVDS, TMDs

SYNC_MASTER=GRAPHIC SYNC_DATE=06/06/2005

NOTICE OF PROPRIETARY PROPERTY

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

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 67	OF 78



EXTERNAL TMSD

SYNC_MASTER=GRAPHIC SYNC_DATE=06/06/2005

NOTICE OF PROPRIETARY PROPERTY

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

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 68	OF 78

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
15580227	15580164	?	REF: 15580164	KEEP MAG LAYER IN BOX

Video Connectors

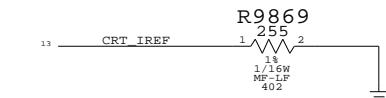
EXTERNAL VIDEO (VGA) INTERFACE

TMDS(MINI DVI) INTERFACE

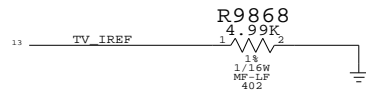
PLACE THE RESISTOR CLOSE TO GMCH AND THE CAP NEAR CONNECTOR

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

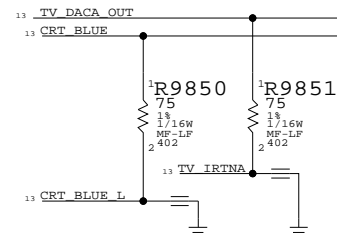
A 255 OHM 1% RESISTOR IS REQUIRED BETWEEN CRT_IREF AND GROUND



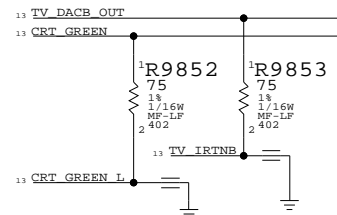
TV REFERENCE CURRENT, USES AN EXTERNAL RESISTOR OF 5K OHM 1% TO SET INTERNAL VOLTAGE LEVELS



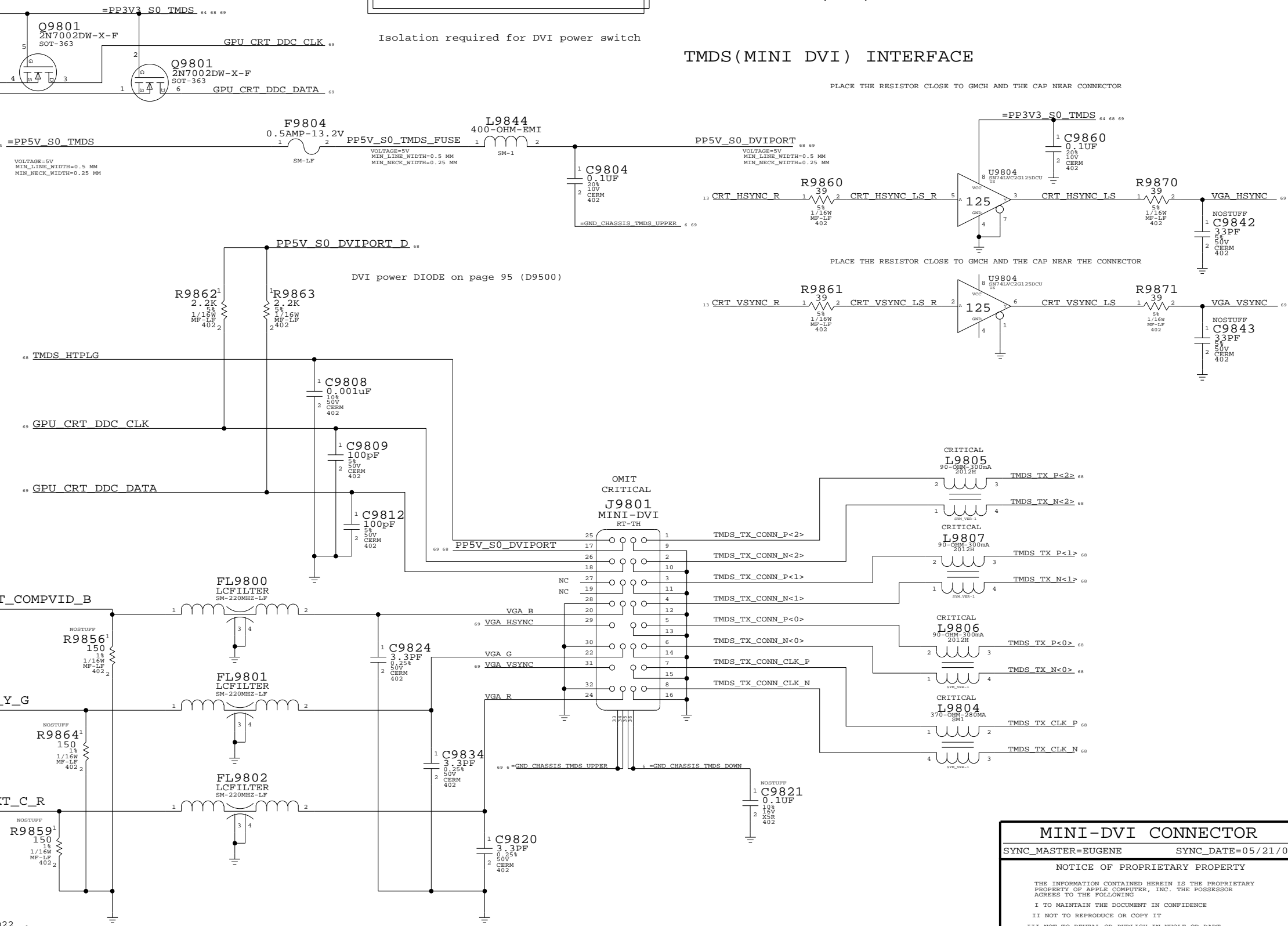
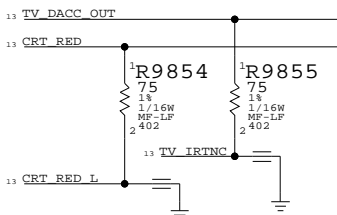
PLACE THE RESISTOR CLOSE TO GMCH



PLACE THE RESISTOR CLOSE TO GMCH



PLACE THE RESISTOR CLOSE TO GMCH



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

MINI-DVI CONNECTOR

SYNC_MASTER=EUGENE SYNC_DATE=05/21/05

NOTICE OF PROPRIETARY PROPERTY

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

	SCALE	SHT	OF	REV.
	NONE	69	78	00000

8	7	6	5	4	3	2	1
<pre> Title: Basenet Report Design: m42a Date: Aug 5 16:01:17 2006 Base nets and synonyms for m42a_lib.M42A(m42a_lib.m42a(sch.1)) Base Signal Synonyms Location((Zone) dir)) I_V2_FB I_V2_FB - @m42a_lib.M42A 60A3 I_V0550_BG I_V0550_BG - @m42a_lib.M42A 62B4 I_V0550_BOOST I_V0550_BOOST - @m42a_lib.M42A 62B4 I_V0550_BOOST_RC I_V0550_BOOST_RC - @m42a_lib.M42A 62C3 I_V0550_COMP I_V0550_COMP - @m42a_lib.M42A 5D7 I_V0550_FSET I_V0550_FSET - @m42a_lib.M42A 5D7 I_V0550_ITH I_V0550_ITH - @m42a_lib.M42A 62B4 I_V0550_ITH_RC I_V0550_ITH_RC - @m42a_lib.M42A 62B4 I_V0550_RUNSS I_V0550_RUNSS - @m42a_lib.M42A 62B4 63B7 I_V0550_SNS_N I_V0550_SNS_N - @m42a_lib.M42A 62C3 I_V0550_SNS_P I_V0550_SNS_P - @m42a_lib.M42A 62B4 I_V0550_SW I_V0550_SW - @m42a_lib.M42A 62C4 I_V0550_TG I_V0550_TG - @m42a_lib.M42A 62C4 I_V0550_VOSNS I_V0550_VOSNS - @m42a_lib.M42A 62B4 I_V550_BG I_V550_BG - @m42a_lib.M42A 62B5 I_V550_BOOST I_V550_BOOST - @m42a_lib.M42A 62B5 I_V550_BOOST_RC I_V550_BOOST_RC - @m42a_lib.M42A 62C6 I_V550_ITH I_V550_ITH - @m42a_lib.M42A 62B5 I_V550_ITH_RC I_V550_ITH_RC - @m42a_lib.M42A 62B5 I_V550_RUNSS I_V550_RUNSS - @m42a_lib.M42A 5D7 62B5 63B7 I_V550_SNS_N I_V550_SNS_N - @m42a_lib.M42A 62C6 I_V550_SNS_P I_V550_SNS_P - @m42a_lib.M42A 62B5 I_V550_SW I_V550_SW - @m42a_lib.M42A 62C5 I_V550_TG I_V550_TG - @m42a_lib.M42A 62B5 I_V550_VOSNS I_V550_VOSNS - @m42a_lib.M42A 61B5 I_V8S3_BOOT I_V8S3_BOOT - @m42a_lib.M42A 61C4 I_V8S3_BOOT_RC I_V8S3_BOOT_RC - @m42a_lib.M42A 5D7 61B6 I_V8S3_COMP I_V8S3_COMP - @m42a_lib.M42A 61B6 I_V8S3_FB I_V8S3_FB - @m42a_lib.M42A 61B6 I_V8S3_FPCCM I_V8S3_FPCCM - @m42a_lib.M42A 5D7 61C6 I_V8S3_FSET I_V8S3_FSET - @m42a_lib.M42A 61B5 I_V8S3_ISEN I_V8S3_ISEN - @m42a_lib.M42A 61B5 I_V8S3_LG I_V8S3_LG - @m42a_lib.M42A 61B5 I_V8S3_PHASE I_V8S3_PHASE - @m42a_lib.M42A 61C5 I_V8S3_UG I_V8S3_UG - @m42a_lib.M42A 61C6 I_V8S3_VCC I_V8S3_VCC - @m42a_lib.M42A 62A3 62B5 I_V51V0550_FCB I_V51V0550_FCB - @m42a_lib.M42A 62A2 62B4 I_V51V0550_FSEL I_V51V0550_FSEL - @m42a_lib.M42A 62A1 63C2 I_V51V0550_POODO I_V51V0550_POODO - @m42a_lib.M42A 60C3 I_V550_BP I_V550_BP - @m42a_lib.M42A 59B5 I_V553_BP I_V553_BP - @m42a_lib.M42A 59B5 I_V3V35_BG I_V3V35_BG - @m42a_lib.M42A 59C6 I_V3V35_BOOST I_V3V35_BOOST - @m42a_lib.M42A 5D7 I_V3V35_BOOST_RC I_V3V35_BOOST_RC - @m42a_lib.M42A 59B5 I_V3V35_COMP I_V3V35_COMP - @m42a_lib.M42A 5D7 I_V3V35_FSET I_V3V35_FSET - @m42a_lib.M42A 59B5 I_V3V35_ITH I_V3V35_ITH - @m42a_lib.M42A 59B5 I_V3V35_RUNSS I_V3V35_RUNSS - @m42a_lib.M42A 59B5 63C7 I_V3V35_SNS_N I_V3V35_SNS_N - @m42a_lib.M42A 59C6 I_V3V35_SNS_P I_V3V35_SNS_P - @m42a_lib.M42A 59C6 I_V3V35_SW I_V3V35_SW - @m42a_lib.M42A 59C5 I_V3V35_TG I_V3V35_TG - @m42a_lib.M42A 59B5 I_V3V35_VOSNS I_V3V35_VOSNS - @m42a_lib.M42A 59A3 59B5 I_V3V35_FCB I_V3V35_FCB - @m42a_lib.M42A 59A2 59B4 I_V3V35_FSEL I_V3V35_FSEL - @m42a_lib.M42A 59B4 I_V555_BG I_V555_BG - @m42a_lib.M42A 59B4 I_V555_BOOST I_V555_BOOST - @m42a_lib.M42A 59C3 I_V555_BOOST_RC I_V555_BOOST_RC - @m42a_lib.M42A 59B4 I_V555_ITH I_V555_ITH - @m42a_lib.M42A 59B3 I_V555_ITH_RC I_V555_ITH_RC - @m42a_lib.M42A 5D7 59B4 63C7 I_V555_RUNSS I_V555_RUNSS - @m42a_lib.M42A 59C3 I_V555_SNS_N I_V555_SNS_N - @m42a_lib.M42A 59C3 I_V555_SNS_P I_V555_SNS_P - @m42a_lib.M42A 59B4 I_V555_SW I_V555_SW - @m42a_lib.M42A 59C4 I_V555_TG I_V555_TG - @m42a_lib.M42A 59B4 I_V555_VOSNS I_V555_VOSNS - @m42a_lib.M42A 54A5 I_V555_REG_IN I_V555_REG_IN - @m42a_lib.M42A 6C2 42C8 I_V555_EXTUSB_OC_L I_V555_EXTUSB_OC_L - @m42a_lib.M42A 6C1 22C4 22D8 I_V555_EXTUSB_OC_L I_V555_EXTUSB_OC_L - @m42a_lib.M42A 6C2 I_V555_FWPWR_PWRON I_V555_FWPWR_PWRON - @m42a_lib.M42A 6D1 I_V555_GND_BATT_CHGND I_V555_GND_BATT_CHGND - @m42a_lib.M42A 6D8 65A6 65A6 I_V555_GND_CHASSIS_AUDIO_JACK I_V555_GND_CHASSIS_AUDIO_JACK - @m42a_lib.M42A 6D8 56B8 I_V555_GND_CHASSIS_AUDIO_MIC I_V555_GND_CHASSIS_AUDIO_MIC - @m42a_lib.M42A 6D8 57A6 I_V555_GND_CHASSIS_DIPDIMM_LEFT I_V555_GND_CHASSIS_DIPDIMM_LEFT - @m42a_lib.M42A 6D8 28A5 I_V555_GND_CHASSIS_DIPDIMM_RIGHT I_V555_GND_CHASSIS_DIPDIMM_RIGHT - @m42a_lib.M42A 6C7 6D7 I_V555_GND_CHASSIS_USB I_V555_GND_CHASSIS_USB - @m42a_lib.M42A 6C8 42A2 42A4 42C2 42C4 I_V555_GND_CHASSIS_FW_DOWN I_V555_GND_CHASSIS_FW_DOWN - @m42a_lib.M42A 6C8 39A1 I_V555_GND_CHASSIS_DIPDIMM_LEFT I_V555_GND_CHASSIS_DIPDIMM_LEFT - @m42a_lib.M42A 6D8 28A5 I_V555_GND_CHASSIS_AUDIO_SPKRCONN I_V555_GND_CHASSIS_AUDIO_SPKRCONN - @m42a_lib.M42A 6D8 I_V555_GND_CHASSIS_AUDIO_SHIELD3 I_V555_GND_CHASSIS_AUDIO_SHIELD3 - @m42a_lib.M42A 6D8 I_V555_GND_CHASSIS_AUDIO_SHIELD2 I_V555_GND_CHASSIS_AUDIO_SHIELD2 - @m42a_lib.M42A 6D8 I_V555_GND_CHASSIS_AUDIO_SHIELD1 I_V555_GND_CHASSIS_AUDIO_SHIELD1 - @m42a_lib.M42A 6D8 I_V555_GND_CHASSIS_AUDIO_MIC I_V555_GND_CHASSIS_AUDIO_MIC - @m42a_lib.M42A 6D8 57A6 I_V555_GND_CHASSIS_AUDIO_JACK I_V555_GND_CHASSIS_AUDIO_JACK - @m42a_lib.M42A 6D8 56B8 I_V555_GND_CHASSIS_DIPDIMM_CENTER I_V555_GND_CHASSIS_DIPDIMM_CENTER - @m42a_lib.M42A 6B8 28D5 29A5 I_V555_GND_CHASSIS_CENTER I_V555_GND_CHASSIS_CENTER - @m42a_lib.M42A 6B7 I_V555_GND_CHASSIS_DIPDIMM_RIGHT I_V555_GND_CHASSIS_DIPDIMM_RIGHT - @m42a_lib.M42A 6B8 29D4 I_V555_GND_CHASSIS_RIGHT I_V555_GND_CHASSIS_RIGHT - @m42a_lib.M42A 6B7 I_V555_GND_CHASSIS_FW_UPPER I_V555_GND_CHASSIS_FW_UPPER - @m42a_lib.M42A 6A6 39A1 I_V555_GND_CHASSIS_TMD5_DOWN I_V555_GND_CHASSIS_TMD5_DOWN - @m42a_lib.M42A 6A6 69A3 I_V555_GND_CHASSIS_IO1 I_V555_GND_CHASSIS_IO1 - @m42a_lib.M42A 6A5 I_V555_GND_CHASSIS_TMD5_DOWN I_V555_GND_CHASSIS_TMD5_DOWN - @m42a_lib.M42A 6A6 69A3 I_V555_GND_CHASSIS_LVDS I_V555_GND_CHASSIS_LVDS - @m42a_lib.M42A 6C8 67A2 67B2 </pre>							
8	7	6	5	4	3	2	1

D

D

C

C

B

B

A

A

Table with columns 8, 7, 6, 5, 4, 3, 2, 1 and rows of hardware identifiers and their corresponding values. The table is organized into four quadrants labeled A, B, C, and D.

D

C

B

A

D

C

B

A

<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1	<table border="1"> <tr><td>8</td></tr> <tr><td>7</td></tr> <tr><td>6</td></tr> <tr><td>5</td></tr> <tr><td>4</td></tr> <tr><td>3</td></tr> <tr><td>2</td></tr> <tr><td>1</td></tr> </table>	8	7	6	5	4	3	2	1
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																
8																																																																																
7																																																																																
6																																																																																
5																																																																																
4																																																																																
3																																																																																
2																																																																																
1																																																																																

8	7	6	5	4	3	2	1
D				D	C		C
C					B		B
B					A		A
A					8	7	6
8	7	6	5	4	3	2	1

	8	7	6	5	4	3	2	1
	TP_NB_XOR_LVDS_D27	TP_NB_XOR_LVDS_D27 - @m42a_lib.M42A	14C6					
	TP_NB_XOR_LVDS_D28	TP_NB_XOR_LVDS_D28 - @m42a_lib.M42A	14C6					
	TP_PCI_GNT0_L	TP_PCI_GNT0_L - @m42a_lib.M42A	22B6					
	TP_PCI_GNT1_L	TP_PCI_GNT1_L - @m42a_lib.M42A	22B6					
	TP_PCI_GNT2_L	TP_PCI_GNT2_L - @m42a_lib.M42A	22B6					
	TP_PCI_PME_L	TP_PCI_PME_L - @m42a_lib.M42A	22A6					
	TP_SB_ACZ_SDIN1	TP_SB_ACZ_SDIN1 - @m42a_lib.M42A	21C6					
	TP_SB_ACZ_SDIN2	TP_SB_ACZ_SDIN2 - @m42a_lib.M42A	21C6					
	TP_SB_DRQ0_L	TP_SB_DRQ0_L - @m42a_lib.M42A	21D4					
	TP_SB_GPI06	TP_SB_GPI06 - @m42a_lib.M42A	23C5					
	TP_SB_GPI022	TP_SB_GPI022 - @m42a_lib.M42A	6B1 22B6					
		=SB_GPI022 - @m42a_lib.M42A	6B2 69A6					
		SB_GPI022 - @m42a_lib.M42A	6B2					
		=SB_GPI022 - @m42a_lib.M42A	6B2 69A6					
	TP_SB_GPI023	TP_SB_GPI023 - @m42a_lib.M42A	21D5					
	TP_SB_GPI025_DO_NOT_USE	TP_SB_GPI025_DO_NOT_USE - @m42a_lib.M42A	23C3					
	TP_SB_GPI038	TP_SB_GPI038 - @m42a_lib.M42A	23C3					
	TP_SB_RCVENIN_L	TP_SB_RCVENIN_L - @m42a_lib.M42A	15B2					
	TP_SB_RSVD9	TP_SB_RSVD9 - @m42a_lib.M42A	22A6					
	TP_SB_SATALED_L	TP_SB_SATALED_L - @m42a_lib.M42A	21C6					
	TP_SB_XOR-AD5	TP_SB_XOR-AD5 - @m42a_lib.M42A	22A7					
	TP_SB_XOR-AD9	TP_SB_XOR-AD9 - @m42a_lib.M42A	22A7					
	TP_SB_XOR-AE5	TP_SB_XOR-AE5 - @m42a_lib.M42A	22A7					
	TP_SB_XOR-AG4	TP_SB_XOR-AG4 - @m42a_lib.M42A	22A7					
	TP_SB_XOR-AH4	TP_SB_XOR-AH4 - @m42a_lib.M42A	22A7					
	TP_SB_XOR-U3	TP_SB_XOR-U3 - @m42a_lib.M42A	21C6					
	TP_SB_XOR-U7	TP_SB_XOR-U7 - @m42a_lib.M42A	21C6					
	TP_SB_XOR-V6	TP_SB_XOR-V6 - @m42a_lib.M42A	21C6					
	TP_SB_XOR-V7	TP_SB_XOR-V7 - @m42a_lib.M42A	21C6					
	TP_SB_XOR-Y1	TP_SB_XOR-Y1 - @m42a_lib.M42A	21C6					
	TP_SB_XOR-Y2	TP_SB_XOR-Y2 - @m42a_lib.M42A	21C6					
	TP_SB_XOR-AE9	TP_SB_XOR-AE9 - @m42a_lib.M42A	22A6					
	TP_SB_XOR-AG8	TP_SB_XOR-AG8 - @m42a_lib.M42A	22A6					
	TP_SB_XOR-AH8	TP_SB_XOR-AH8 - @m42a_lib.M42A	22A6					
	TP_SB_XOR-W1	TP_SB_XOR-W1 - @m42a_lib.M42A	21C6					
	TP_USBN_F	TP_USBN_F - @m42a_lib.M42A	5C1					
	TP_USBP_F	TP_USBP_F - @m42a_lib.M42A	5C1					
	TV_DACA_OUT	TV_DACA_OUT - @m42a_lib.M42A	13C5 69B8					
	TV_DACB_OUT	TV_DACB_OUT - @m42a_lib.M42A	13C5 69A8					
	TV_DACC_OUT	TV_DACC_OUT - @m42a_lib.M42A	13C5 69A8					
	TV_IREF	TV_IREF - @m42a_lib.M42A	13C5 69C8					
	USB2_BT_F_N	USB2_BT_F_N - @m42a_lib.M42A	44C4					
	USB2_BT_F_P	USB2_BT_F_P - @m42a_lib.M42A	44B4					
	USB2_CAMERA_CONN_N	USB2_CAMERA_CONN_N - @m42a_lib.M42A	67A2					
	USB2_CAMERA_CONN_P	USB2_CAMERA_CONN_P - @m42a_lib.M42A	67B2					
	USB2_EXTA_F_N	USB2_EXTA_F_N - @m42a_lib.M42A	42C2					
	USB2_EXTA_F_P	USB2_EXTA_F_P - @m42a_lib.M42A	42C2					
	USB2_EXTB_F_N	USB2_EXTB_F_N - @m42a_lib.M42A	42B2					
	USB2_EXTB_F_P	USB2_EXTB_F_P - @m42a_lib.M42A	42B2					
	USB2_GND_EXTA_F	USB2_GND_EXTA_F - @m42a_lib.M42A	42C2					
	USB2_GND_EXTB_F	USB2_GND_EXTB_F - @m42a_lib.M42A	42B2					
	USB_A_N	USB_A_N - @m42a_lib.M42A	6C1 22C2					
		=USB2_EXTA_N - @m42a_lib.M42A	6C2 42C5					
		USB2_EXTA_N - @m42a_lib.M42A	6C2					
		=USB2_EXTA_N - @m42a_lib.M42A	6C2 42C5					
	USB_A_OC_L	USB_A_OC_L - @m42a_lib.M42A	6C1 22C4 22D8					
		=EXTAUSB_OC_L - @m42a_lib.M42A	6C2 42C8					
		EXTAUSB_OC_L - @m42a_lib.M42A	6C2					
		=EXTAUSB_OC_L - @m42a_lib.M42A	6C2 42C8					
	USB_A_P	USB_A_P - @m42a_lib.M42A	6C1 22C2					
		=USB2_EXTA_P - @m42a_lib.M42A	6C2 42C5					
		USB2_EXTA_P - @m42a_lib.M42A	6C2					
		=USB2_EXTA_P - @m42a_lib.M42A	6C2 42C5					
	USB_B_N	USB_B_N - @m42a_lib.M42A	6C1 22C2					
		=USB2_GEVSE_N - @m42a_lib.M42A	6C2 40C7					
		USB2_GEVSE_N - @m42a_lib.M42A	6C2					
		=USB2_GEVSE_N - @m42a_lib.M42A	6C2 40C7					
	USB_B_OC_L	USB_B_OC_L - @m42a_lib.M42A	22C4 22D8					
	USB_B_P	USB_B_P - @m42a_lib.M42A	6C1 22C2					
		=USB2_GEVSE_P - @m42a_lib.M42A	6C2 40C7					
		USB2_GEVSE_P - @m42a_lib.M42A	6C2					
		=USB2_GEVSE_P - @m42a_lib.M42A	6C2 40C7					
	USB_C_N	USB_C_N - @m42a_lib.M42A	6C1 22C2					
		=USB2_EXTB_N - @m42a_lib.M42A	6C2 42B5					
		USB2_EXTB_N - @m42a_lib.M42A	6C2					
		=USB2_EXTB_N - @m42a_lib.M42A	6C2 42B5					
	USB_C_P	USB_C_P - @m42a_lib.M42A	6C1 22C2					
		=USB2_EXTB_P - @m42a_lib.M42A	6C2 42B5					
		USB2_EXTB_P - @m42a_lib.M42A	6C2					
		=USB2_EXTB_P - @m42a_lib.M42A	6C2 42B5					
	USB_D_OC_L	USB_D_OC_L - @m42a_lib.M42A	22C4 22D8					
	USB_E_N	USB_E_N - @m42a_lib.M42A	6C1 22C2					
		TP_USBN_E - @m42a_lib.M42A	5C1 6C2					
		USB_E_OC_L - @m42a_lib.M42A	22C4 22D8					
		USB_E_P - @m42a_lib.M42A	6C1 22C2					
		TP_USBP_E - @m42a_lib.M42A	5C1 6C2					
	USB_F_N	USB_F_N - @m42a_lib.M42A	6C1 22C2					
		=USB2_IR_N - @m42a_lib.M42A	6C2 41C6					
		USB_IR_N - @m42a_lib.M42A	6C2					
		=USB2_IR_N - @m42a_lib.M42A	6C2 41C6					
	USB_F_P	USB_F_P - @m42a_lib.M42A	6C1 22C2					
		=USB2_IR_P - @m42a_lib.M42A	6C2 41C6					
		USB_IR_P - @m42a_lib.M42A	6C2					
		=USB2_IR_P - @m42a_lib.M42A	6C2 41C6					
	USB_G_N	USB_G_N - @m42a_lib.M42A	6B1 22C2					
		=USB2_BT_N - @m42a_lib.M42A	6B2 44C6					
		USB_BT_N - @m42a_lib.M42A	6B2					
		=USB2_BT_N - @m42a_lib.M42A	6B2 44C6					
	USB_G_P	USB_G_P - @m42a_lib.M42A	6B1 22C2					
		=USB2_BT_P - @m42a_lib.M42A	6C2 44C6					
		USB_BT_P - @m42a_lib.M42A	6C2					
		=USB2_BT_P - @m42a_lib.M42A	6C2 44C6					
	USB_RBIAS_PN	USB_RBIAS_PN - @m42a_lib.M42A	22C2					
	VGA_B	VGA_B - @m42a_lib.M42A	69B4					
	VGA_G	VGA_G - @m42a_lib.M42A	69B4					
	VGA_HSYNC	VGA_HSYNC - @m42a_lib.M42A	69B4 69C1					
	VGA_R	VGA_R - @m42a_lib.M42A	69A4					
	VGA_VSYNC	VGA_VSYNC - @m42a_lib.M42A	69B4 69C1					
	VOL_DOWN	VOL_DOWN - @m42a_lib.M42A	54B7 54C7					
	VOL_UP	VOL_UP - @m42a_lib.M42A	54B7 54C7					
	VREG_FB	VREG_FB - @m42a_lib.M42A	54A4					
	VR_PWRGD_CK410	VR_PWRGD_CK410 - @m42a_lib.M42A	23C5 26A8					
	VR_PWRGOOD_DELAY	VR_PWRGOOD_DELAY - @m42a_lib.M42A	14B6 26B5 58C7					
	XDP_BFM_L<0>	XDP_BFM_L<0> - @m42a_lib.M42A	7C6 11B2					
	XDP_BFM_L<1>	XDP_BFM_L<1> - @m42a_lib.M42A	7C6 11B2					
	XDP_BFM_L<2>	XDP_BFM_L<2> - @m42a_lib.M42A	7C6 11B2					
	XDP_BFM_L<3>	XDP_BFM_L<3> - @m42a_lib.M42A	7C6 11B3					
	XDP_BFM_L<4>	XDP_BFM_L<4> - @m42a_lib.M42A	7C6 11B2					
	XDP_BFM_L<5>	XDP_BFM_L<5> - @m42a_lib.M42A	7C6 11B2					
	XDP_DBRESET_L	XDP_DBRESET_L - @m42a_lib.M42A	7C6 11B4 26C6					
	XDP_TCK	XDP_TCK - @m42a_lib.M42A	7A8 7C6 11B2 11B3					
	XDP_TDI	XDP_TDI - @m42a_lib.M42A	7B8 7C6 11B3					
	XDP_TDO	XDP_TDO - @m42a_lib.M42A	7C6 11B5					
		XDP_TMS - @m42a_lib.M42A	7B8 7C6 11B2					
		XDP_TRST_L - @m42a_lib.M42A	7C6 11B3					

8				7				6				5				4				3				2				1			
Title: Cref Part Report Design: m42a Date: Aug 5 16:01:17 2006								C2500 CAP_P_SMB2 m42a[25B8] C2501 CAP_402 m42a[25A6] C2502 CAP_402 m42a[25D4] C2503 CAP_402 m42a[25D8] C2504 CAP_402 m42a[25C8] C2505 CAP_402 m42a[25B7] C2506 CAP_402 m42a[25B7] C2507 CAP_402 m42a[25B7] C2508 CAP_603 m42a[25A6] C2509 CAP_402 m42a[25B8] C2510 CAP_402 m42a[25C1] C2511 CAP_402 m42a[25D6] C2512 CAP_402 m42a[25B1] C2513 CAP_402 m42a[25C6] C2514 CAP_402 m42a[25C6] C2515 CAP_402 m42a[25B6] C2516 CAP_P_CASE-C2 m42a[25D3] C2517 CAP_402 m42a[25D6] C2518 CAP_402 m42a[25D4] C2519 CAP_402 m42a[25D3] C2520 CAP_402 m42a[25B6] C2521 CAP_402 m42a[25C3] C2522 CAP_402 m42a[25B3] C2523 CAP_402 m42a[25B4] C2524 CAP_603 m42a[25B3] C2525 CAP_402 m42a[25B3] C2526 CAP_402 m42a[25A4] C2527 CAP_402 m42a[25A3] C2528 CAP_402 m42a[25A3] C2529 CAP_402 m42a[25A3] C2530 CAP_402 m42a[25A3] C2531 CAP_402 m42a[25D1] C2532 CAP_402 m42a[25C1] C2533 CAP_402 m42a[25C1] C2534 CAP_402 m42a[25D1] C2605 CAP_402 m42a[26D4] C2607 CAP_402 m42a[26B5] C2608 CAP_402 m42a[26C7] C2609 CAP_402 m42a[26C7] C2610 CAP_402 m42a[26D4] C2611 CAP_402 m42a[26B8] C2680 CAP_402 m42a[26B3] C2800 CAP_402 m42a[28D7] C2809 CAP_603 m42a[28B2] C2810 CAP_402 m42a[28B2] C2811 CAP_402 m42a[28B2] C2812 CAP_402 m42a[28A7] C2813 CAP_402 m42a[28B1] C2814 CAP_402 m42a[28B2] C2815 CAP_402 m42a[28B2] C2816 CAP_402 m42a[28B1] C2817 CAP_402 m42a[28B1] C2820 CAP_402 m42a[28D7] C2821 CAP_402 m42a[28A7] C2822 CAP_402 m42a[28A7] C2830 CAP_402 m42a[28B2] C2831 CAP_402 m42a[28B2] C2832 CAP_402 m42a[28B1] C2900 CAP_402 m42a[29D7] C2909 CAP_603 m42a[29B2] C2910 CAP_402 m42a[29B2] C2911 CAP_402 m42a[29B2] C2912 CAP_402 m42a[29B1] C2913 CAP_402 m42a[29B1] C2914 CAP_402 m42a[29B2] C2915 CAP_402 m42a[29B2] C2916 CAP_603 m42a[29B1] C2917 CAP_402 m42a[29B1] C2920 CAP_402 m42a[29D7] C2921 CAP_402 m42a[29A7] C2922 CAP_402 m42a[29A7] C2930 CAP_402 m42a[29B2] C2931 CAP_402 m42a[29B2] C2932 CAP_402 m42a[29B1] C3000 CAP_402 m42a[30D4] C3001 CAP_402 m42a[30D3] C3002 CAP_402 m42a[30D4] C3003 CAP_402 m42a[30D3] C3004 CAP_402 m42a[30D4] C3005 CAP_402 m42a[30D3] C3006 CAP_402 m42a[30C4] C3007 CAP_402 m42a[30C3] C3008 CAP_402 m42a[30C4] C3009 CAP_402 m42a[30C3] C3010 CAP_402 m42a[30C4] C3011 CAP_402 m42a[30C3] C3012 CAP_402 m42a[30B4] C3013 CAP_402 m42a[30B3] C3014 CAP_402 m42a[30B4] C3015 CAP_402 m42a[42C2] C3016 CAP_402 m42a[30B4] C3017 CAP_402 m42a[30B3] C3018 CAP_402 m42a[30B4] C3019 CAP_402 m42a[30B3] C3020 CAP_402 m42a[30A4] C3021 CAP_402 m42a[30A3] C3022 CAP_402 m42a[30A4] C3023 CAP_402 m42a[30A3] C3024 CAP_402 m42a[30A4] C3025 CAP_402 m42a[30A3] C3100 CAP_402 m42a[31C4] C3101 CAP_603 m42a[31B5] C3102 CAP_603 m42a[31B3] C3103 CAP_402 m42a[31B5] C3104 CAP_402 m42a[31C4] C3105 CAP_P_SMC-LF m42a[31B4] C3301 CAP_402 m42a[32D6] C3302 CAP_402 m42a[32D6] C3303 CAP_402 m42a[32D6] C3304 CAP_402 m42a[32D6] C3305 CAP_402 m42a[32D4] C3306 CAP_402 m42a[32D4] C3307 CAP_402 m42a[32C4] C3308 CAP_402 m42a[32D4] C3309 CAP_603 m42a[32D4] C3310 CAP_402 m42a[32D3] C3311 CAP_402 m42a[32C6] C3312 CAP_603 m42a[32C6] C3314 CAP_402 m42a[32D8] C3315 CAP_402 m42a[32D7] C3316 CAP_603 m42a[32D7] C3317 CAP_603 m42a[32D4] C3389 CAP_402 m42a[32C7] C3390 CAP_402 m42a[32C7]								C3804 CAP_402 m42a[34B5] C3805 CAP_402 m42a[34B3] C3806 CAP_603 m42a[34B3] C3875 CAP_402 m42a[34C7] C3876 CAP_402 m42a[34C5] C3900 CAP_402 m42a[35D6] C3901 CAP_402 m42a[35D5] C3902 CAP_402 m42a[35C6] C3903 CAP_402 m42a[35D5] C3920 CAP_402 m42a[35C7] C3921 CAP_603 m42a[35C6] C3922 CAP_402 m42a[35C5] C3923 CAP_402 m42a[35C6] C3950 CAP_603 m42a[35B8] C4100 CAP_402 m42a[36D6] C4101 CAP_402 m42a[36D6] C4102 CAP_402 m42a[36D5] C4103 CAP_402 m42a[36D5] C4104 CAP_402 m42a[36D5] C4105 CAP_402 m42a[36D5] C4106 CAP_402 m42a[36D4] C4107 CAP_402 m42a[36D4] C4110 CAP_402 m42a[36D5] C4111 CAP_402 m42a[36D5] C4112 CAP_402 m42a[36C5] C4113 CAP_402 m42a[36C5] C4115 CAP_402 m42a[36B4] C4116 CAP_402 m42a[36B4] C4117 CAP_402 m42a[36B3] C4118 CAP_402 m42a[36B3] C4126 CAP_402 m42a[36A8] C4127 CAP_402 m42a[36A8] C4128 CAP_402 m42a[36A7] C4129 CAP_402 m42a[36A7] C4130 CAP_402 m42a[36A7] C4131 CAP_402 m42a[36A6] C4132 CAP_402 m42a[36A6] C4133 CAP_402 m42a[36A6] C4134 CAP_402 m42a[36A6] C4135 CAP_402 m42a[36A5] C4136 CAP_402 m42a[36A5] C4137 CAP_402 m42a[36A4] C4138 CAP_402 m42a[36A4] C4139 CAP_402 m42a[36A4] C4140 CAP_402 m42a[36B3] C4150 CAP_402 m42a[36B6] C4151 CAP_402 m42a[36B6] C4200 CAP_402 m42a[37C7] C4201 CAP_402 m42a[37C6] C4202 CAP_402 m42a[37C6] C4203 CAP_402 m42a[37C6] C4204 CAP_402 m42a[37C7] C4205 CAP_402 m42a[37C6] C4206 CAP_402 m42a[37C6] C4207 CAP_402 m42a[37C6] C4210 CAP_1808 m42a[37A6] C4211 CAP_402 m42a[37A6] C4212 CAP_402 m42a[37A5] C4213 CAP_402 m42a[37A5] C4214 CAP_402 m42a[38C2] C4215 CAP_402 m42a[38C2] C4216 CAP_603 m42a[38D4] C4217 CAP_402 m42a[38D4] C4218 CAP_402 m42a[38D4] C4420 CAP_402 m42a[38C3] C4422 CAP_402 m42a[38D4] C4423 CAP_603 m42a[38D5] C4424 CAP_402 m42a[38D3] C4425 CAP_402 m42a[38D4] C4426 CAP_402 m42a[38D3] C4427 CAP_402 m42a[38D3] C4428 CAP_402 m42a[38D3] C4429 CAP_402 m42a[38D4] C4430 CAP_402 m42a[38D3] C4432 CAP_402 m42a[38D3] C4500 CAP_402 m42a[39B5] C4501 CAP_402 m42a[39A5] C4510 CAP_402 m42a[39C3] C4520 CAP_402 m42a[39B4] C4521 CAP_402 m42a[39B3] C4522 CAP_402 m42a[39A4] C4523 CAP_402 m42a[39A3] C4524 CAP_603-1 m42a[39A2] C4525 CAP_402 m42a[39A2] C4551 CAP_402 m42a[39A7] C4552 CAP_402 m42a[39A7] C4590 CAP_402 m42a[39C5] C4900 CAP_402 m42a[40C4] C4910 CAP_402 m42a[40C5] C5100 CAP_402 m42a[41D6] C5101 CAP_402 m42a[41D6] C5102 CAP_402 m42a[41B5] C5202 CAP_402 m42a[42C2] C5203 CAP_402 m42a[42C2] C5206 CAP_402 m42a[42B2] C5207 CAP_402 m42a[42B2] C5208 CAP_402 m42a[42C6] C5209 CAP_402 m42a[42B6] C5210 CAP_P_B2 m42a[42C6] C5211 CAP_P_B2 m42a[42B6] C5212 CAP_402 m42a[42C8] C5213 CAP_603 m42a[42C8] C5250 CAP_402 m42a[42C8] C5251 CAP_402 m42a[42B8] C5300 CAP_402 m42a[43B6] C5301 CAP_402 m42a[43B6] C5304 CAP_402 m42a[43D4] C5305 CAP_402 m42a[43D4] C5306 CAP_402 m42a[43D4] C5307 CAP_402 m42a[43C4] C5308 CAP_402 m42a[43C4] C5309 CAP_603 m42a[43C3] C5310 CAP_402 m42a[43C3] C5498 CAP_402 m42a[44C5] C5499 CAP_603 m42a[44C5] C5802 CAP_805 m42a[45D3] C5803 CAP_402 m42a[45D2] C5804 CAP_402 m42a[45D2] C5805 CAP_402 m42a[45D2] C5806 CAP_402 m42a[45D1] C5807 CAP_402 m42a[45D2] C5820 CAP_402 m42a[45C3] C5900 CAP_402 m42a[46D8] C5901 CAP_402 m42a[46D8] C5910 CAP_603 m42a[46A7] C5911 CAP_402 m42a[46A7] C5920 CAP_402 m42a[46C6]								C5921 CAP_402 m42a[46C6] C5951 CAP_402 m42a[46A4] C5965 CAP_402 m42a[46B8] C5966 CAP_603 m42a[46B7] C5967 CAP_402 m42a[46B7] C5977 CAP_402 m42a[46C2] C6100 CAP_402 m42a[48D3] C6101 CAP_402 m42a[48C3] C6102 CAP_402 m42a[48C2] C6103 CAP_402 m42a[48C3] C6104 CAP_402 m42a[48D4] C6105 CAP_402 m42a[48C4] C6112 CAP_402 m42a[48B2] C6150 CAP_402 m42a[48C6] C6200 CAP_402 m42a[49C5] C6201 CAP_402 m42a[49C5] C6202 CAP_402 m42a[49D4] C6230 CAP_402 m42a[49A5] C6251 CAP_402 m42a[49A5] C6252 CAP_402 m42a[49B4] C6301 CAP_402 m42a[50C2] C6308 CAP_402 m42a[50C5] C6309 CAP_402 m42a[50C6] C6311 CAP_402 m42a[50C2] C6312 CAP_402 m42a[50D3] C6604 CAP_402 m42a[52B4] C6605 CAP_402 m42a[52B4] C6606 CAP_402 m42a[52B4] C6620 CAP_402 m42a[52C4] C6700 CAP_402 m42a[53C4] C6701 CAP_402 m42a[53C4] C6702 CAP_402 m42a[53C3] C6703 CAP_402 m42a[53C3] C6795 CAP_402 m42a[53C6] C6796 CAP_402 m42a[53B6] C6800 CAP_603 m42a[54D6] C6801 CAP_402 m42a[54B5] C6802 CAP_P_CASE-B3-LF m42a[54D4] C6803 CAP_P_CASE-B3-LF m42a[54D3] C6804 CAP_P_SMA-LF m42a[54B4] C6805 CAP_603 m42a[54B4] C6806 CAP_603 m42a[54B3] C6807 CAP_P_SMA-LF m42a[54B3] C6810 CAP_P_SMA-LF m42a[54B2] C6812 CAP_402 m42a[54B4] C6813 CAP_402 m42a[54B3] C6821 CAP_402 m42a[54D6] C6822 CAP_603 m42a[54A5] C6823 CAP_402 m42a[54A5] C6825 CAP_402 m42a[54A4] C6830 CAP_402 m42a[54D4] C6833 CAP_402 m42a[54B2] C6835 CAP_402 m42a[54D6] C6836 CAP_402 m42a[54D3] C6853 CAP_402 m42a[54B4] C7200 CAP_P_SMC-LF m42a[55D6] C7201 CAP_P_CASE-B3-LF m42a[55D4] C7202 CAP_603 m42a[55C4] C7203 CAP_P_CASE-B3-LF m42a[55B4] C7204 CAP_603 m42a[55B4] C7205 CAP_P_CASE-B2 m42a[55B4] C7206 CAP_603 m42a[55B4] C7207 CAP_402 m42a[55C5] C7208 CAP_402 m42a[55B5] C7209 CAP_402 m42a[55A5] C7210 CAP_402 m42a[55C6] C7211 CAP_402 m42a[55C5] C7220 CAP_402 m42a[55B6] C7221 CAP_402 m42a[55B5] C7230 CAP_402 m42a[55A6] C7231 CAP_402 m42a[55A5] C7260 CAP_402 m42a[55D2] C7261 CAP_402 m42a[55C2] C7270 CAP_402 m42a[55C2] C7271 CAP_402 m42a[55B2] C7280 CAP_402 m42a[55B2] C7281 CAP_402 m42a[55B2] C7300 CAP_402 m42a[56C7] C7301 CAP_402 m42a[56C5] C7302 CAP_402 m42a[56C5] C7303 CAP_402 m42a[56C5] C7304 CAP_402 m42a[56C5] C7305 CAP_402 m42a[56C5] C7306 CAP_402 m42a[56C8] C7307 CAP_402 m42a[56C6] C7318 CAP_402 m42a[57B2] C7350 CAP_402 m42a[56A7] C7351 CAP_603 m42a[56A7] C7352 CAP_402 m42a[56A5] C7353 CAP_402 m42a[56A5] C7354 CAP_402 m42a[56A5] C7355 CAP_402 m42a[56A5] C7356 CAP_402 m42a[56A5] C7357 CAP_402 m42a[56A8] C7370 CAP_402 m42a[56A2] C7371 CAP_402 m42a[56A2] C7372 CAP_402 m42a[56A1] C7400 CAP_402 m42a[57B4] C7401 CAP_402 m42a[57D7] C7402 CAP_402 m42a[57C7] C7404 CAP_402 m42a[57C4] C7411 CAP_402 m42a[57B7] C7412 CAP_402 m42a[57B6] C7414 CAP_402 m42a[57C4] C7430 CAP_P_B2 m42a[57D2] C7431 CAP_P_B2 m42a[57C2] C7432 CAP_805-1 m42a[57B2] C7433 CAP_805-1 m42a[57A2] C7435 CAP_402 m42a[57B1] C7440 CAP_402 m42a[57A4] C7441 CAP_402 m42a[57A4] C7445 CAP_402 m42a[57A3] C7446 CAP_402 m42a[57A3] C7447 CAP_402 m42a[57A3] C7450 CAP_402 m42a[57A6] C7451 CAP_402 m42a[57A7] C7452 CAP_402 m42a[57A6] C7500 CAP_402 m42a[58C4] C7501 CAP_P_CASED2E-SM m42a[58C3] C7502 CAP_402 m42a[58B4] C7503 CAP_402 m42a[58C2] C7504 CAP_402 m42a[58B2] C7505 CAP_402 m42a[58C8] C7506 CAP_402 m42a[58B8]							

