

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	ENG APPD
07		355269	ENGINEERING RELEASED		
				DATE	DATE
				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
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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

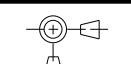
Page	(.csa)	Contents	M42A-DRI	Sync	Date
49	49	TEMPERATURE SENSE	RX	ENET	11/09/2005
50	50	SPI BOOTROM	ES	MASTER	5/23/05
51	51	Fan	MK	ENET	11/10/2005
52	52	SMS	RX	SMC	08/23/2005
53	53	TPM	DK	SMC	07/18/2005
54	54	AUDIO: CODEC	DK	M42AUDIO	08/05/2006
55	55	AUDIO: SPEAKER AMP	DK	M42AUDIO	08/05/2006
56	56	AUDIO: 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			

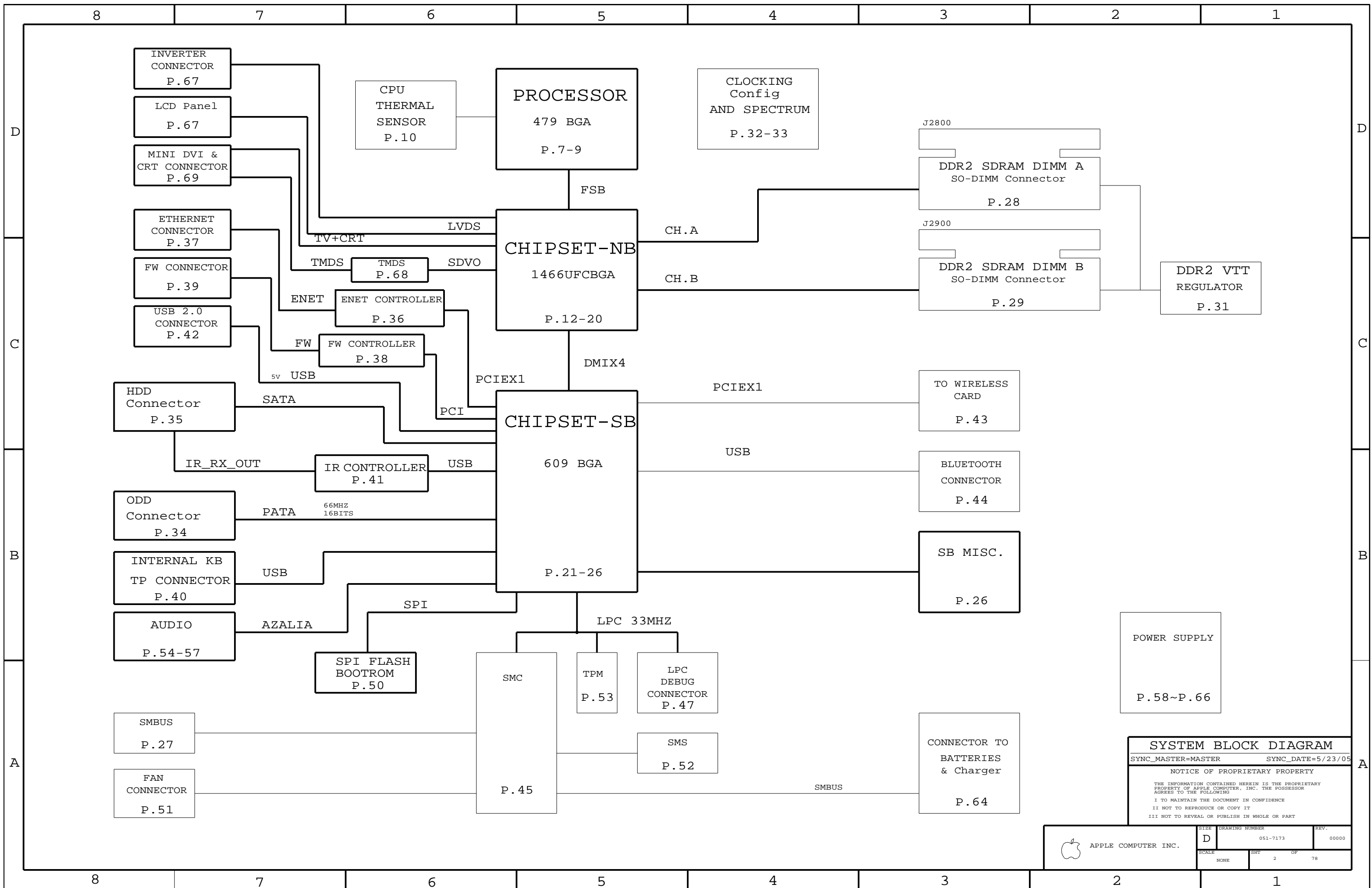
M42A EE DRIS:

- 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.	
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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

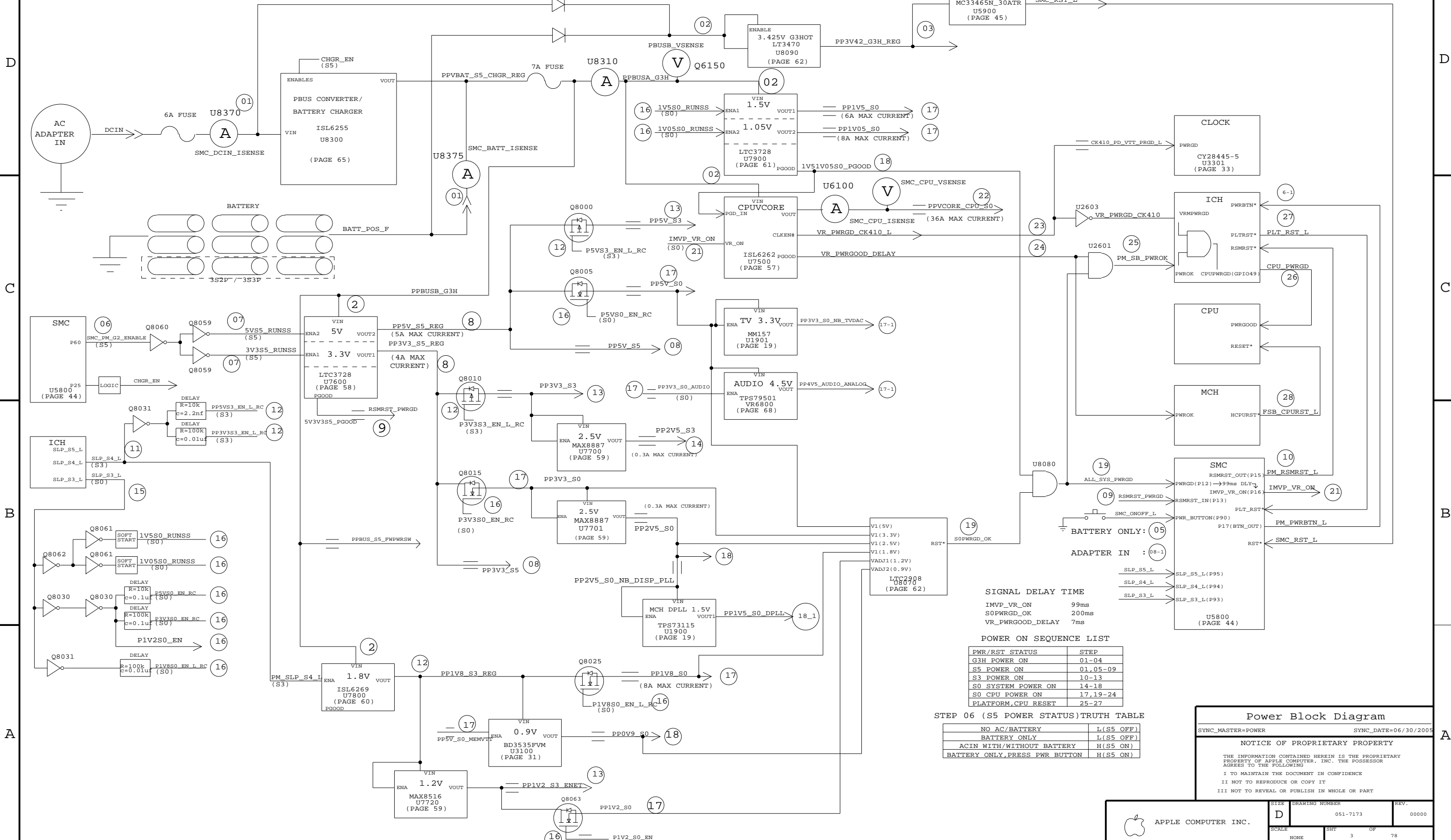
SYNC_MASTER=MASTER SYNC_DATE=5/23/05

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	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	2	78	

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

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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 LMK, 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

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	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 64
	TRUE ACZ_SDATAOUT		21 64
	TRUE ACZ_BITCLK		21 64
	TRUE ACZ_RST_L		21 54 57
	TRUE ACZ_SYNC		21 64

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

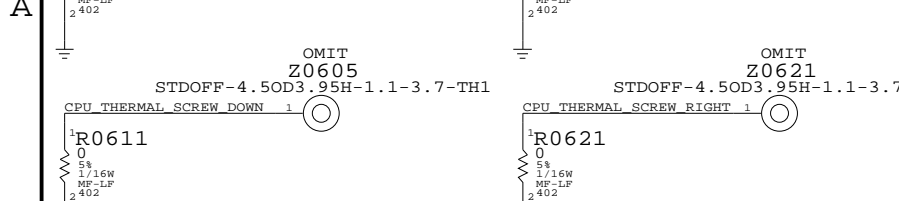
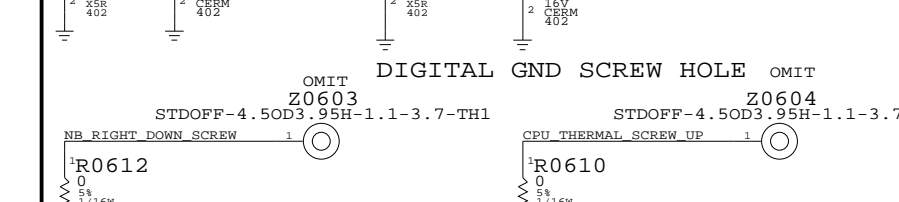
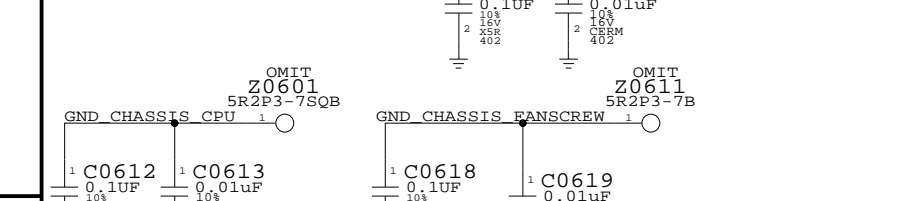
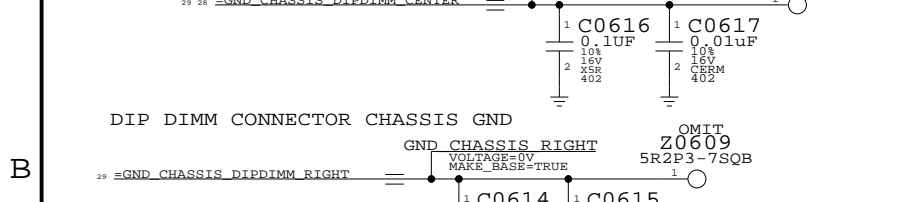
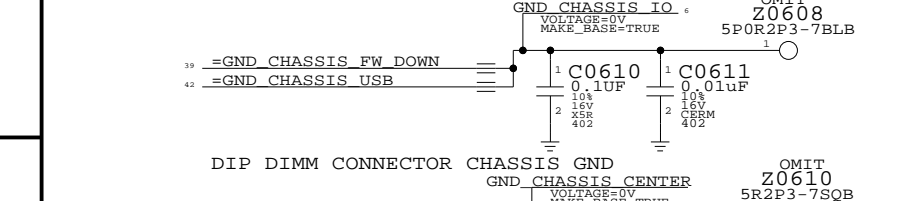
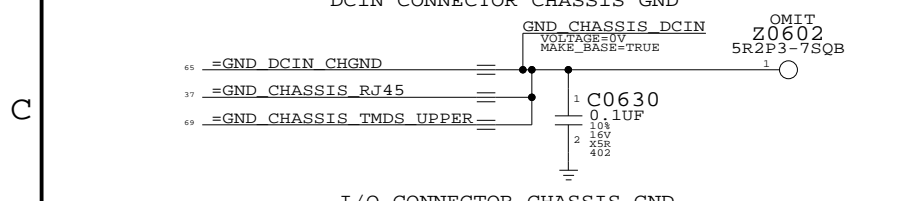
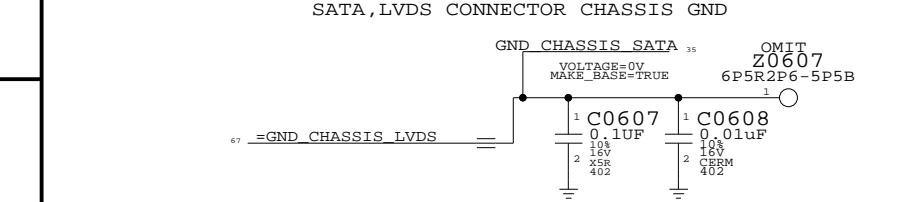
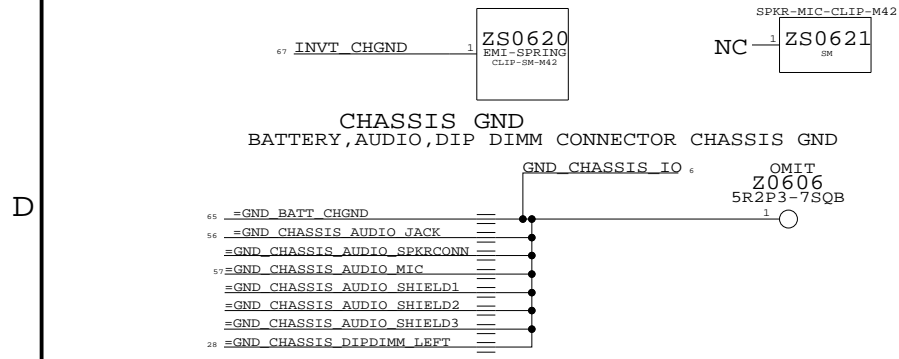
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D	051-7173	00000
SCALE	SHT	OF
NONE	5	78

(EMI PAD FOR INVERTER CONNECTOR)



LVDS ALIASES

NO-CONNECT UNUSED LVDS INTERFACE PORTS

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

PCI EXPRESS GRAPHICS ALIASES

NO-CONNECT UNUSED SDVO INTERFACE PORTS

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

PCI_EXP ALIASES

NO-CONNECT UNUSED PCI_EXP INTERFACE PORTS

22	PCIE C D2R N	PCIE C D2R N SPN	MAKE_BASE=TRUE
22	PCIE C D2R P	PCIE C D2R P SPN	MAKE_BASE=TRUE
22	PCIE C R2D C N	PCIE C R2D C N SPN	MAKE_BASE=TRUE
22	PCIE C R2D C P	PCIE C R2D C P SPN	MAKE_BASE=TRUE
22	PCIE D D2R N	PCIE D D2R N SPN	MAKE_BASE=TRUE
22	PCIE D D2R P	PCIE D D2R P SPN	MAKE_BASE=TRUE
22	PCIE D R2D C N	PCIE D R2D C N SPN	MAKE_BASE=TRUE
22	PCIE D R2D C P	PCIE D R2D C P SPN	MAKE_BASE=TRUE
22	PCIE E D2R N	PCIE E D2R N SPN	MAKE_BASE=TRUE
22	PCIE E D2R P	PCIE E D2R P SPN	MAKE_BASE=TRUE
22	PCIE E R2D C N	PCIE E R2D C N SPN	MAKE_BASE=TRUE
22	PCIE E R2D C P	PCIE E R2D C P SPN	MAKE_BASE=TRUE
22	PCIE F D2R N	PCIE F D2R N SPN	MAKE_BASE=TRUE
22	PCIE F D2R P	PCIE F D2R P SPN	MAKE_BASE=TRUE
22	PCIE F R2D C N	PCIE F R2D C N SPN	MAKE_BASE=TRUE
22	PCIE F R2D C P	PCIE F R2D C P SPN	MAKE_BASE=TRUE

CLOCK ALIASES

NO-CONNECT UNUSED CLOCK INTERFACE PORTS

32	CK410 SRC1 N	CK410 SRC1 N SPN	MAKE_BASE=TRUE
32	CK410 SRC1 P	CK410 SRC1 P SPN	MAKE_BASE=TRUE
32	CK410 SRC3 N	CK410 SRC3 N SPN	MAKE_BASE=TRUE
32	CK410 SRC3 P	CK410 SRC3 P SPN	MAKE_BASE=TRUE
32	CK410 SRC7 N	CK410 SRC7 N SPN	MAKE_BASE=TRUE
32	CK410 SRC7 P	CK410 SRC7 P SPN	MAKE_BASE=TRUE
32	CK410 SRC_CLKREQ1 L	CK410 SRC_CLKREQ1 L SPN	MAKE_BASE=TRUE
32	CK410 SRC_CLKREQ3 L	CK410 SRC_CLKREQ3 L SPN	MAKE_BASE=TRUE

SB ALIASES

NO-CONNECT UNUSED CLOCK INTERFACE PORTS

23	SUS_CLK_SB	SUS_CLK_SB SPN	MAKE_BASE=TRUE
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SO-DIMM ALIASES

NO-CONNECT UNUSED ADDRESS INTERFACE PORTS

28	MEM A A<15>	MEM A A15 SPN	MAKE_BASE=TRUE
28	MEM A A<14>	MEM A A14 SPN	MAKE_BASE=TRUE
29	MEM B A<15>	MEM B A15 SPN	MAKE_BASE=TRUE
29	MEM B A<14>	MEM B A14 SPN	MAKE_BASE=TRUE

Ethernet ALIASES

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

NB CFG ALIASES

NO-CONNECT UNUSED CFG INTERFACE PORTS

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

SATA ALIASES

NO-CONNECT UNUSED SATA INTERFACE PORTS

21	SATA A D2R N	SATA A D2R N SPN	MAKE_BASE=TRUE
21	SATA A D2R P	SATA A D2R P SPN	MAKE_BASE=TRUE
21	SATA A R2D C N	SATA A R2D C N SPN	MAKE_BASE=TRUE
21	SATA A R2D C P	SATA A R2D C P SPN	MAKE_BASE=TRUE

USB PORT ALIASES

USB PORT A = External USB2.0 Port

42	USB2_EXTA_P	USB2_EXTA_P	USB_A_P	22
42	USB2_EXTA_N	USB2_EXTA_N	USB_A_N	22
42	EXTRAUSB_OC_L	EXTRAUSB_OC_L	USB_A_OC_L	22

USB PORT B = Trackpad (Geyser)

40	USB2_GEYSER_P	USB2_GEYSER_P	USB_B_P	22
40	USB2_GEYSER_N	USB2_GEYSER_N	USB_B_N	22

USB PORT C = External USB2.0 Port B

42	USB2_EXTB_P	USB2_EXTB_P	USB_C_P	22
42	USB2_EXTB_N	USB2_EXTB_N	USB_C_N	22
42	EXTRUSB_OC_L	EXTRUSB_OC_L	USB_C_OC_L	22

USB PORT D = CAMERA

67	USB2_CAMERA_P	USB2_CAMERA_P	USB_D_P	22
67	USB2_CAMERA_N	USB2_CAMERA_N	USB_D_N	22

USB PORT "E" = Unused

5	TP_USB2_E	TP_USB2_E	USB_E_P	22
5	TP_USB2_N	TP_USB2_N	USB_E_N	22

USB PORT "F" = IR CONTROLLER

41	USB2_IR_P	USB2_IR_P	USB_F_P	22
41	USB2_IR_N	USB2_IR_N	USB_F_N	22

USB PORT "G" = BLUETOOTH

44	USB2_BT_P	USB2_BT_P	USB_G_P	22
44	USB2_BT_N	USB2_BT_N	USB_G_N	22

USB PORT "H" = PCI-E Mini Card

43	USB2_AIRPORT_P	USB2_AIRPORT_P	USB_H_P	22
43	USB2_AIRPORT_N	USB2_AIRPORT_N	USB_H_N	22

ANALOG SWITCH GPIO

69	SB_GPIO22	SB_GPIO22	TP_SB_GPIO22	22
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DIMM OVERTEMP I

45	PM_EXITS_I<0>	DIMM_OVRTMPEM_I	28	29
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FWH INIT L

47	FWH_INIT_L	SMC_CPU_INIT_3_3_L	45
----	------------	--------------------	----

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/THERM HOLES,WIRELESS	Z0613	STANDOFF

SIGNAL ALIAS /RESET

SYNC_MASTER=ENET
SYNC_DATE=08/19/2005

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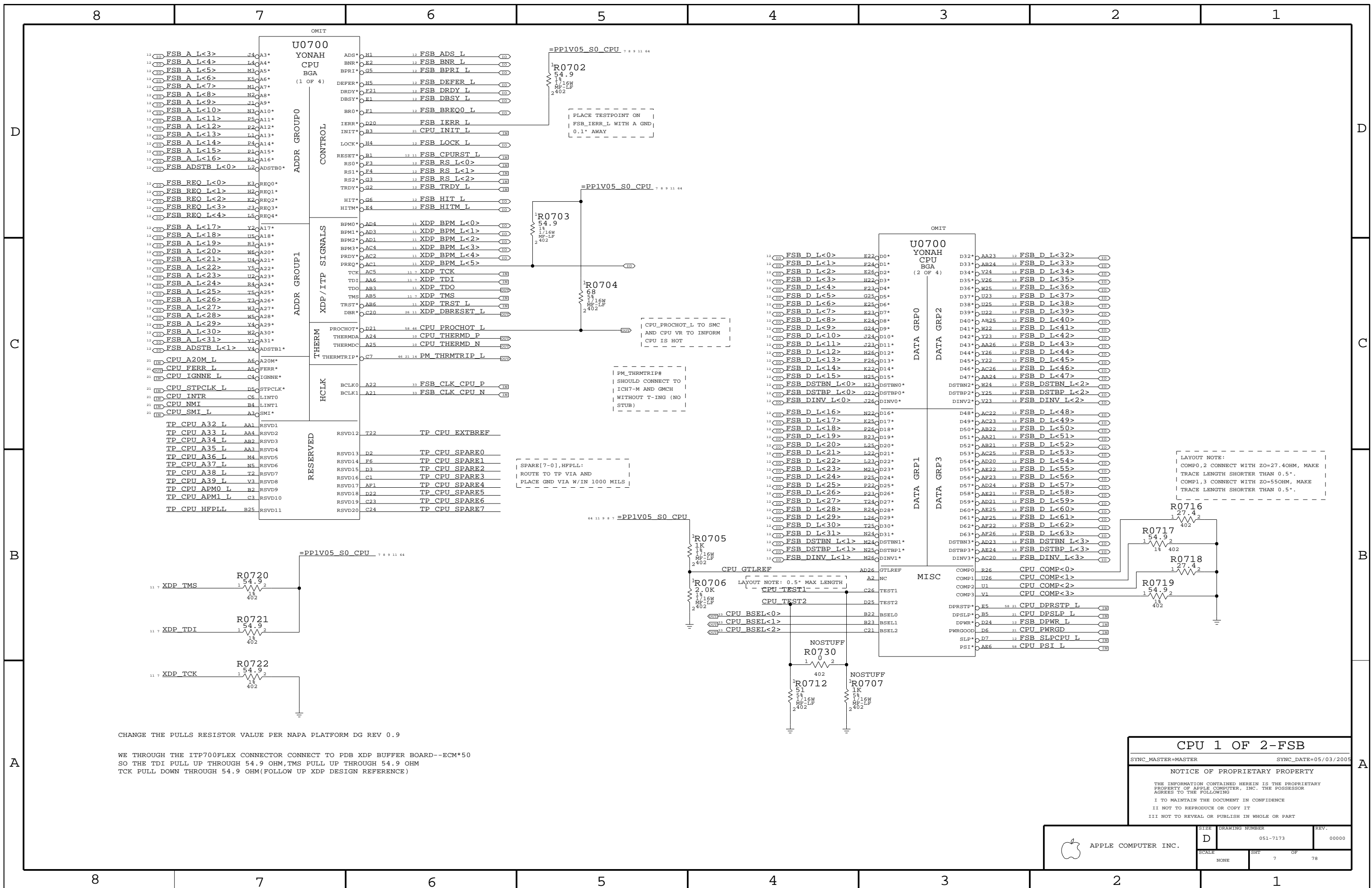
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	NONE	6	78	00000



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

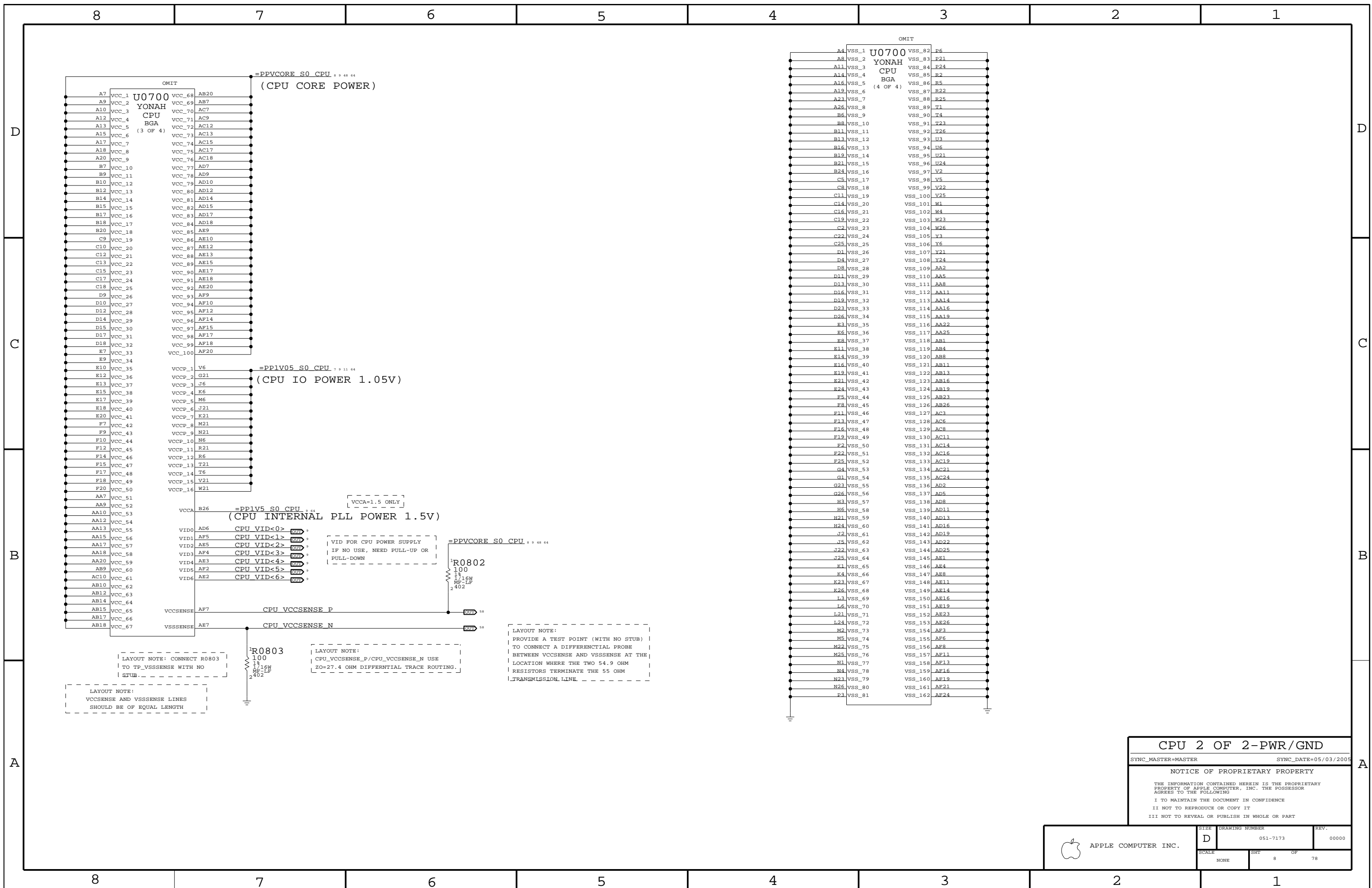
SYNC_MASTER=MASTER SYNC_DATE=05/03/2005

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NONE	7		



CPU 2 OF 2-PWR/GND

SYNC_MASTER=MASTER SYNC_DATE=05/03/2005

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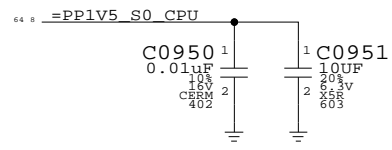
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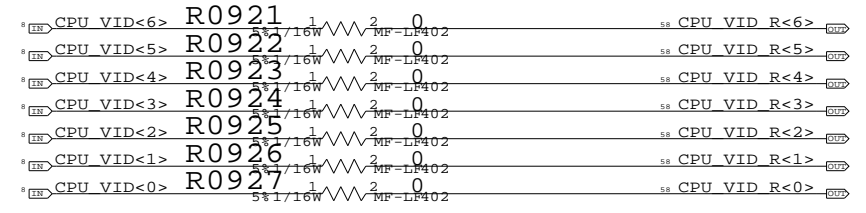
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	8		

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

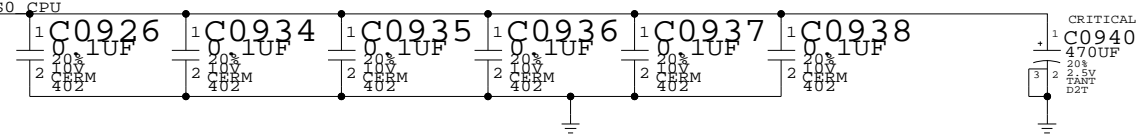


R0921~R0927 FOR CPU VOLTAGE MANUAL SETTING

VCCP CORE DECOUPLING (CPU IO POWER 1.05V)

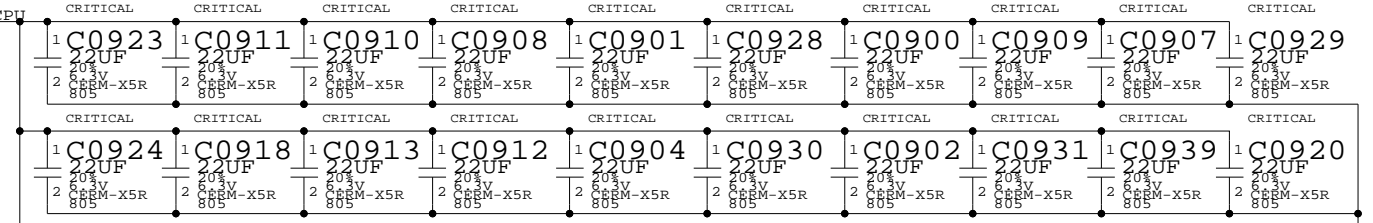
THIS 470UF FOR CPU, GMCH FSB BUS 1.05V

PLACE NEAR THE NORTH BRIDGE ON BOTTOM SIDE



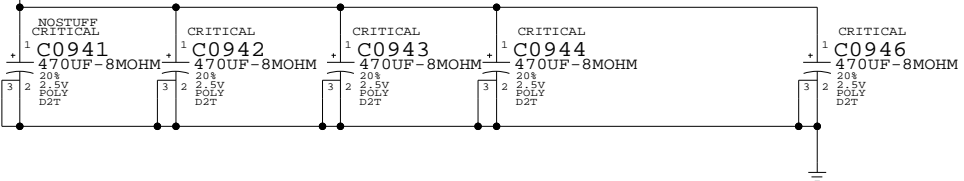
VCC CORE DECOUPLING (CPU CORE POWER)

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

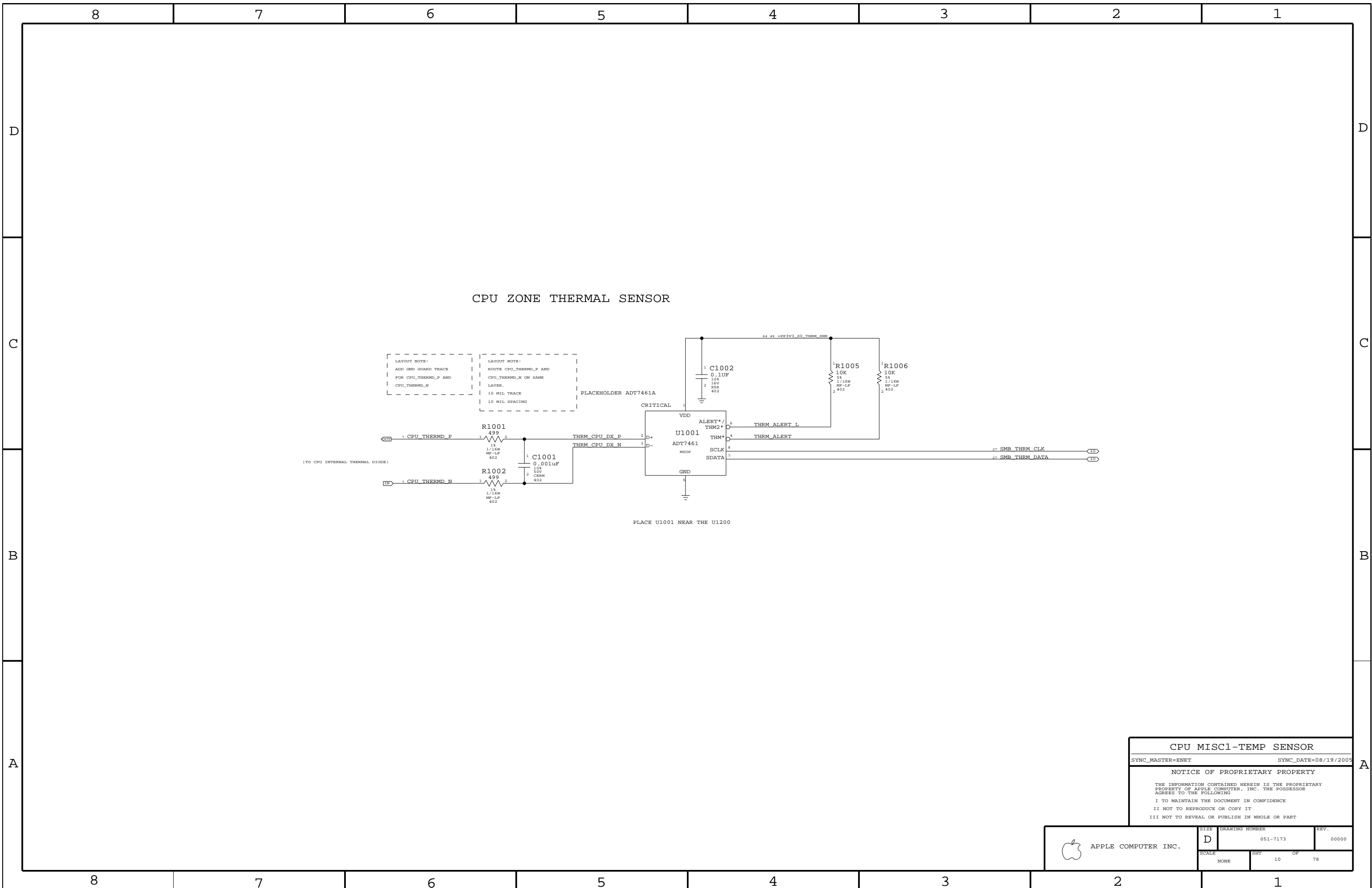
UNIT: V

- # 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<>

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	D	051-7173	00000
SCALE	NONE	SHT	9 OF 78



CPU MISC1-TEMP SENSOR

SYNC_MASTER=ENET SYNC_DATE=08/19/2005

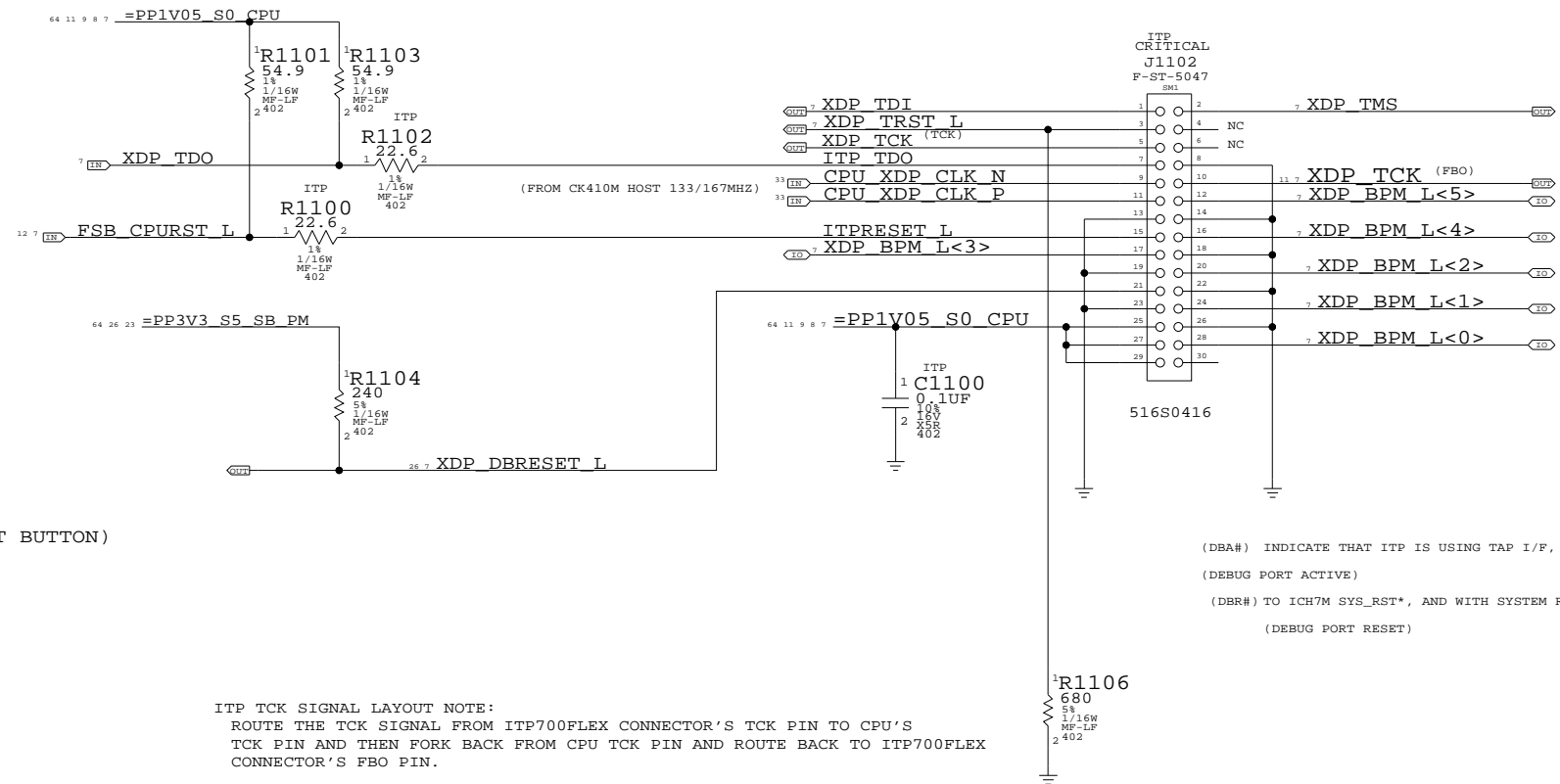
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	SCALE NONE	SHEETS 10	OF 78

CPU ITP700FLEX DEBUG SUPPORT



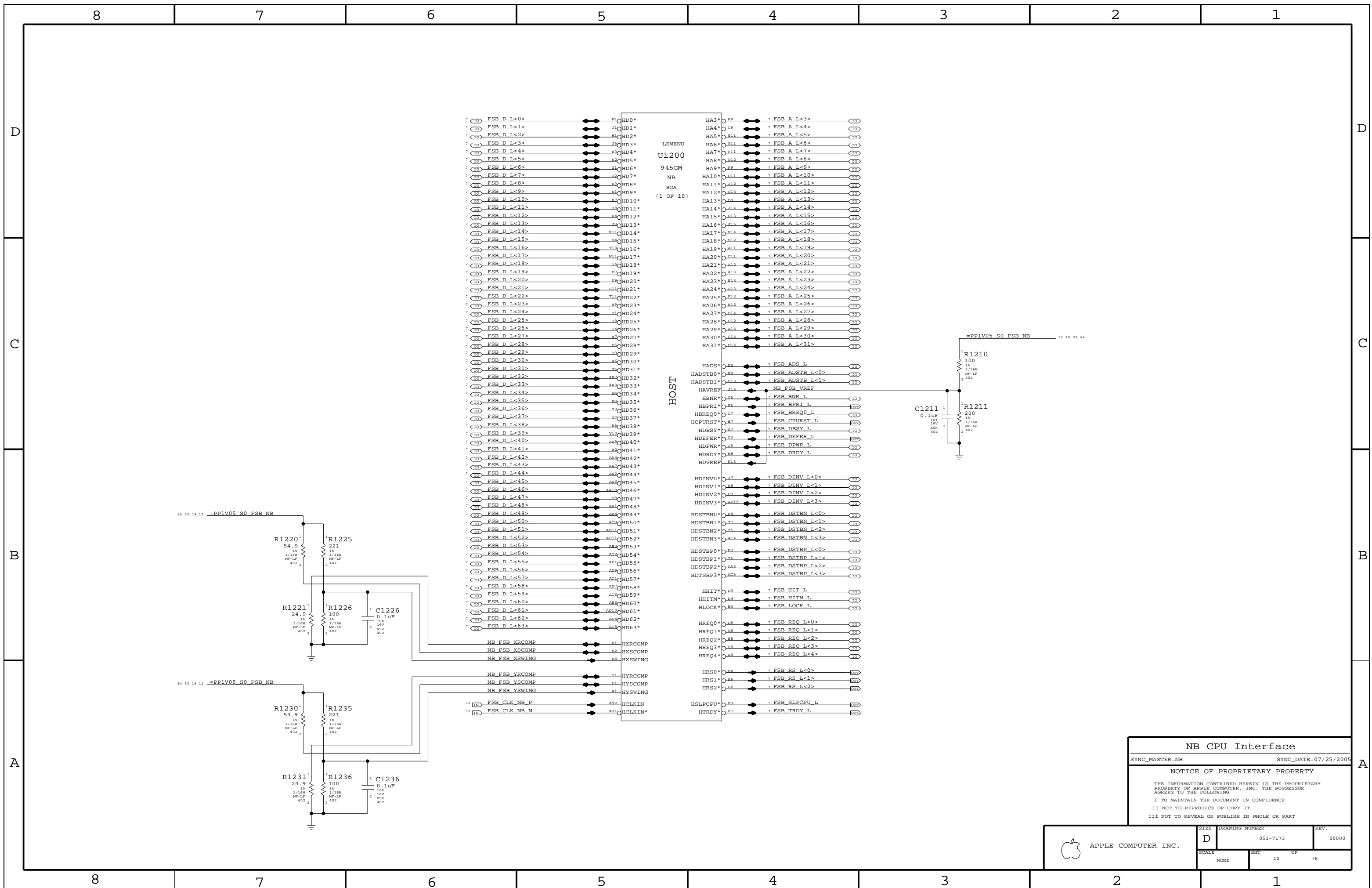
(AND WITH RESET BUTTON)

(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
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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

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

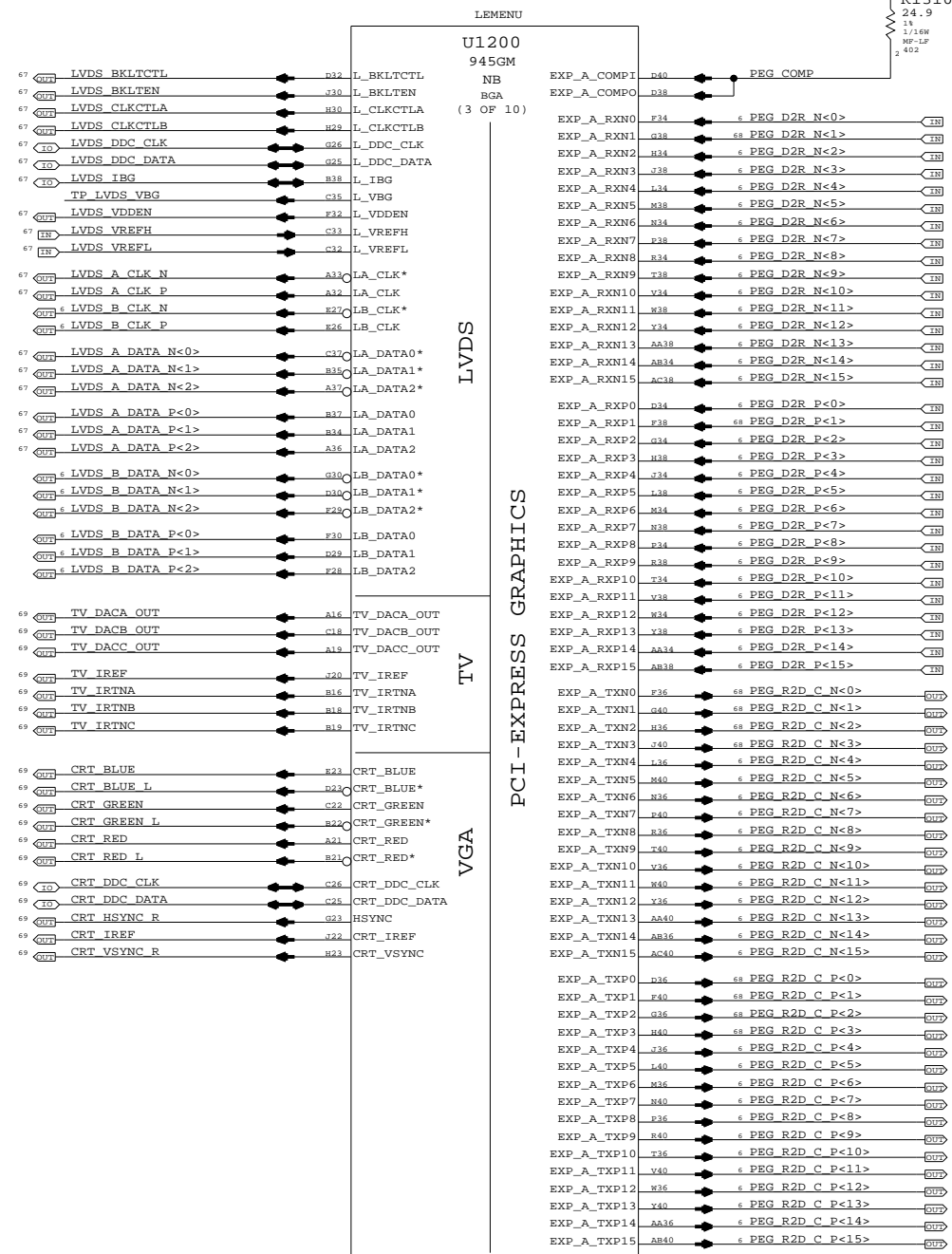
LVDS Disable
 Can leave all signals NC if LVDS is not implemented
 Tie VCC_TXLVDS and VCCA_LVDS to GND. If SDVO is used
 VCCD_LVDS must remain powered with proper decoupling.
 Otherwise, tie VCCD_LVDS to GND also.

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

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

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

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



SDVO Alternate Function

SDVO_TVCLKIN#
 SDVO_INT#
 SDVO_FLDSTALL#

SDVO_TVCLKIN
 SDVO_INT
 SDVO_FLDSTALL

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

SDVOB_RED
 SDVOB_GREEN
 SDVOB_BLUE
 SDVOB_CLKP
 SDVOC_RED
 SDVOC_GREEN
 SDVOC_BLUE
 SDVOC_CLKP

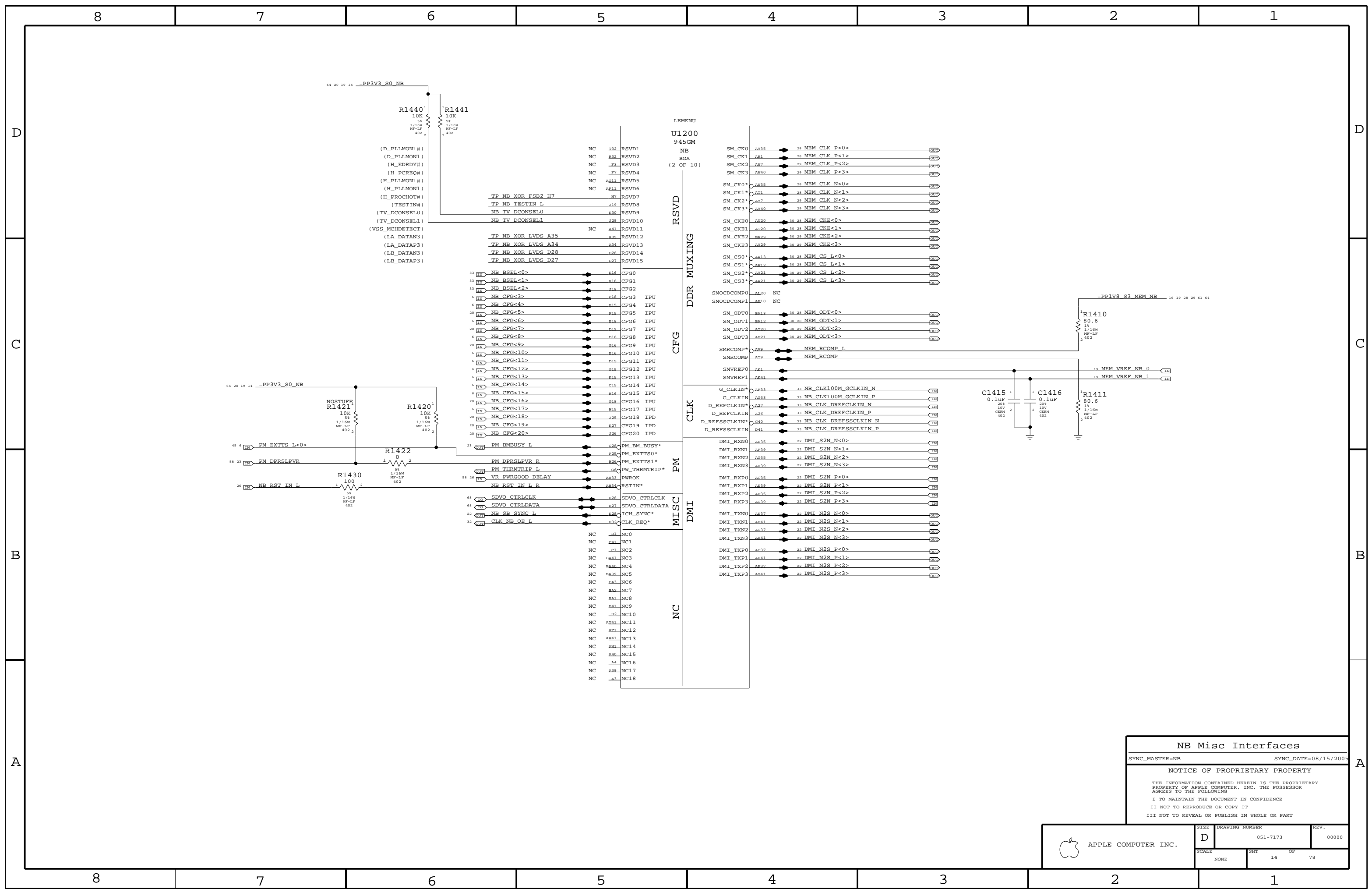
NB PEG / Video Interfaces

SYNC_MASTER=NB SYNC_DATE=07/25/2005

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



NB Misc Interfaces

SYNC_MASTER=NB SYNC_DATE=08/15/2005

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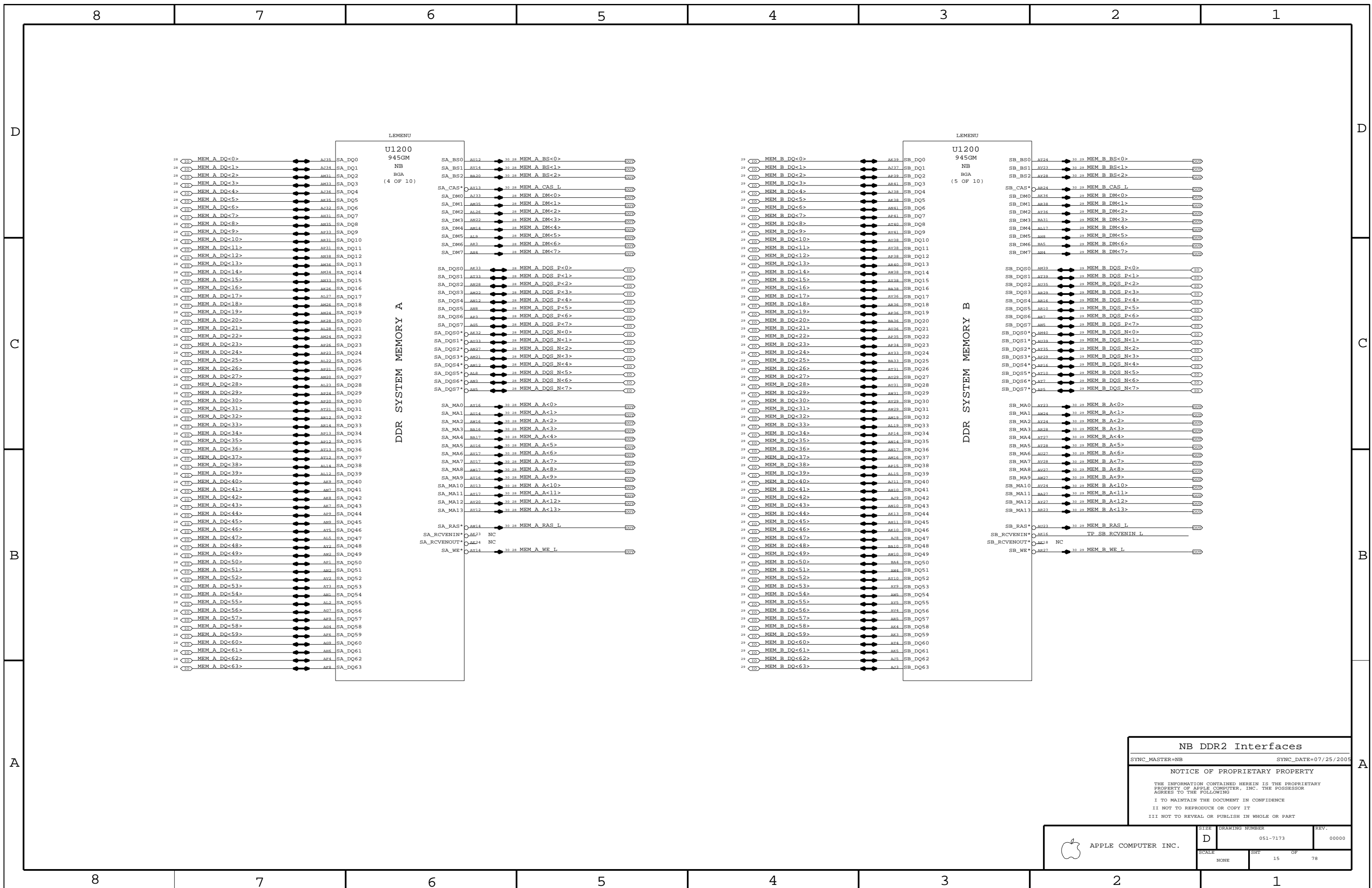
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	SCALE NONE	SHEET 14	OF 78



NB DDR2 Interfaces

SYNC_MASTER=NB SYNC_DATE=07/25/2005

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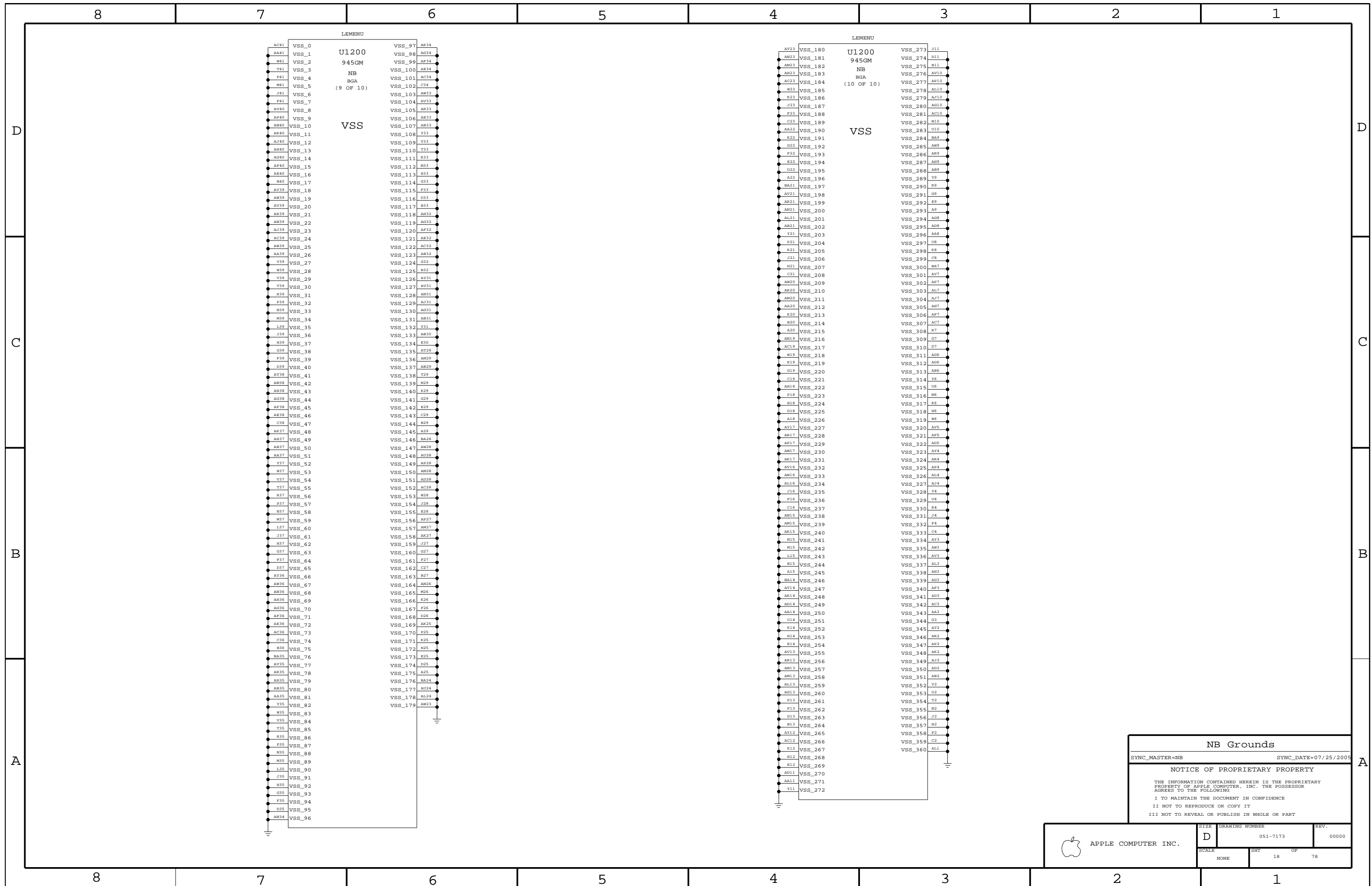
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APPLE COMPUTER INC.	SIZE: D DRAWING NUMBER: 051-7173	REV.: 00000
	SCALE: NONE	SHEET: 15 OF 78



NB Grounds

SYNC_MASTER=NB SYNC_DATE=07/25/2005

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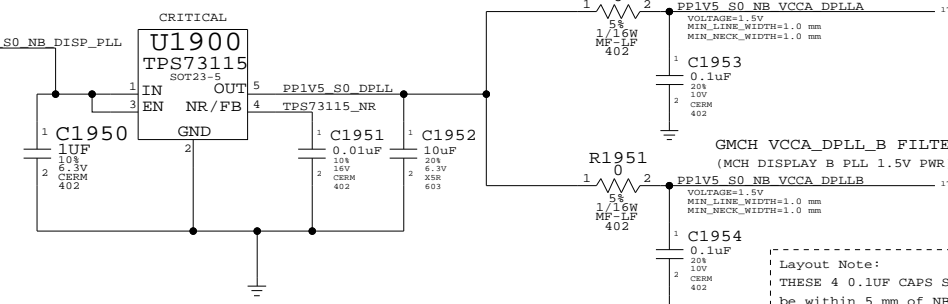
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	18	78	

Power Interface

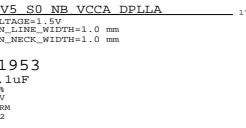
These are the power signals that leave the NB "block"

- =PP1V05_S0_FSB_NB
=PPVCORE_S0_NB
=PP1V05_S0_NB
=PP1V05_S0_NB_VTT
=PP1V5_S0_NB
=PP1V5_S0_NB_PCIE
=PP1V5_S0_NB_PLL
=PP1V5_S0_NB_TVDAC
=PP1V5_S0_NB_VCCD_HMPLL
=PP1V5_S0_NB_VCCD_LVDS
=PP1V5_S0_NB_VCCAUX
=PP1V8_S3_MEM_NB
=PP2V5_S0_NB_CRTDAC
=PP2V5_S0_NB_VCCSYNC
=PP2V5_S0_NB_VCC_TXLVDS
=PP2V5_S0_NB_VCCA_3GBG
=PP2V5_S0_NB_VCCA_LVDS
=PP3V3_S0_NB
=PP3V3_S0_NB_VCC_HV
=PP5V_S0_NB_TVDAC

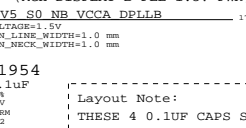
MCH DISPLAY PLL POWER LDO



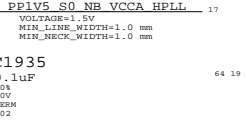
MCH VCCA_DPLL FILTER



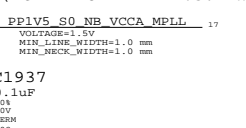
GMCH VCCA_DPLL_B FILTER



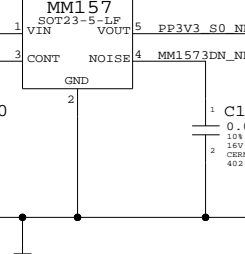
GMCH VCCA_HPLL FILTER



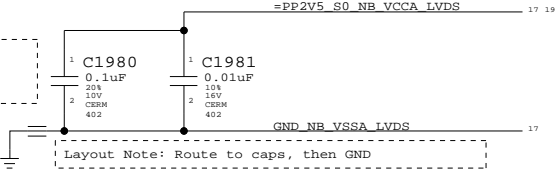
GMCH VCCA_MPLL FILTER



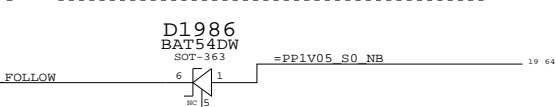
CRITICAL U1901 MM157



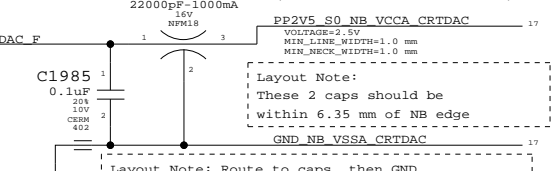
MCH VCCA_LVDS FILTER



Layout Note: This 0.1uF cap should be within 5 mm of NB edge

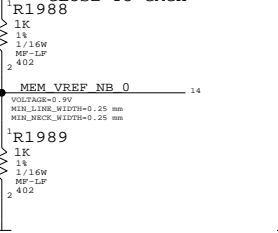


Layout Note: These 2 caps should be within 6.35 mm of NB edge

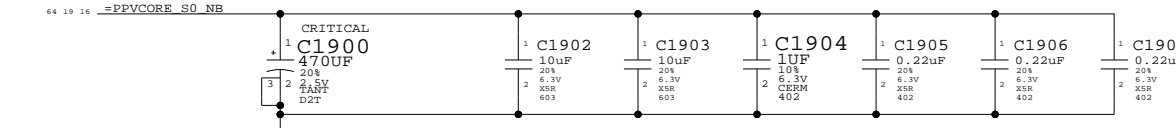


Layout Note: Route to caps, then GND

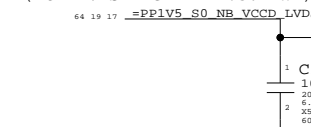
PLACE THOSE COMPONENT CLOSE TO GMCH



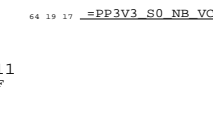
GMCH CORE PWR 1.05V BYPASS



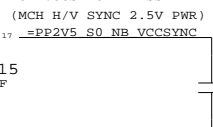
GMCH VCCD_LVDS BYPASS



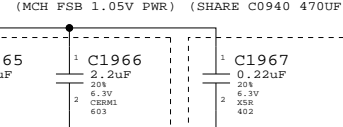
MCH VCC_HV BYPASS



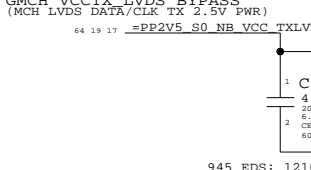
MCH VCCSYNC BYPASS



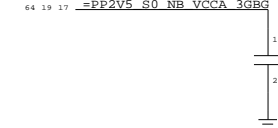
MCH VTT BYPASS



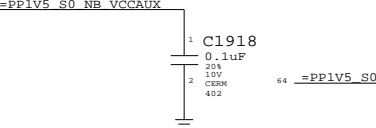
GMCH VCC_TX LVDS BYPASS



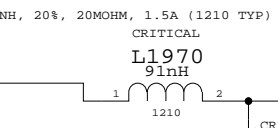
MCH VCCA_3GBG BYPASS



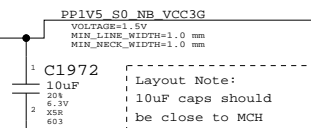
GMCH VCCAUX FILTER



CRITICAL L1970 91nH

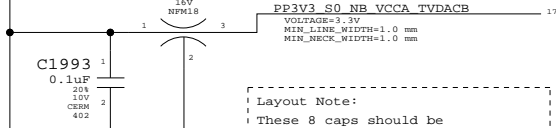


GMCH VCC3G FILTER



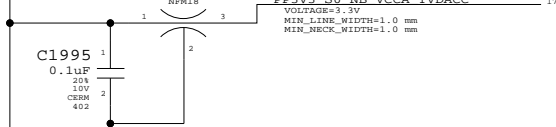
Layout Note: 10uF caps should be close to MCH on opposite side.

MCH VCCA_TVDACC FILTER



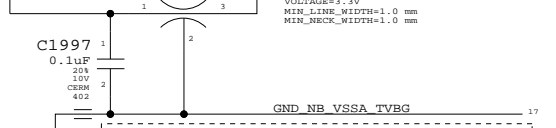
Layout Note: These 8 caps should be within 6.35 mm of NB edge

MCH VCCA_TVDACC FILTER



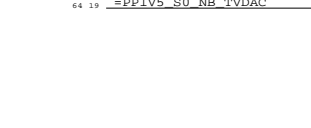
Layout Note: Route to caps, then GND

MCH VCCA_TVGB FILTER

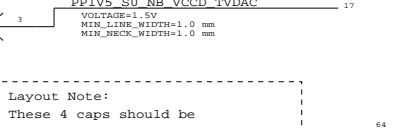


Layout Note: Route to caps, then GND

GMCH VCCD_TVDAC FILTER

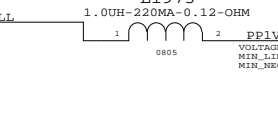


GMCH VCCD_QTVDAC FILTER

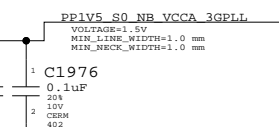


Layout Note: These 4 caps should be within 6.35 mm of NB edge

CRITICAL L1975 1.00uH



GMCH VCCA_3GPLL FILTER



Layout Note: 3GPLL 10uF cap should be placed in cavity

Layout Note: Route to caps, then GND

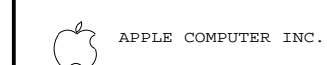
NB (GM) Decoupling

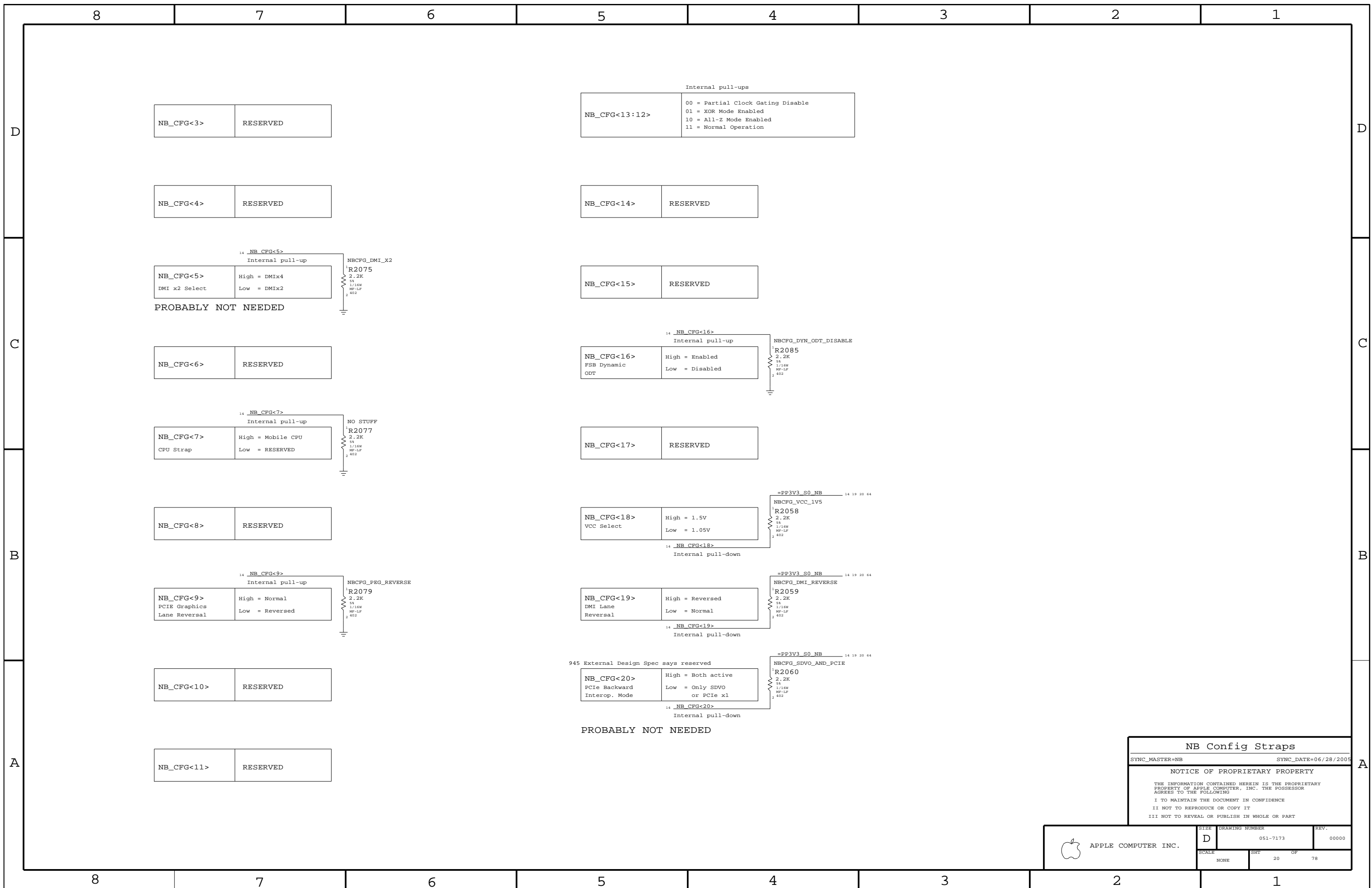
SYNC_MASTER=NB SYNC_DATE=06/22/2005

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Table with columns: SIZE, DRAWING NUMBER, REV., SCALE, SHEET, OF, PART NUMBER. Values: D, 051-7173, 00000, NONE, 19, 78.





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

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

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

14_NB_CFG<5> Internal pull-up	
NB_CFG<5>	High = DMIX4 DMI x2 Select Low = DMIX2

PROBABLY NOT NEEDED

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

14_NB_CFG<7> Internal pull-up	
NB_CFG<7>	High = Mobile CPU CPU Strap Low = RESERVED

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

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

=PP3V3_S0_NB NBCFG_VCC_LV5	
NB_CFG<18>	High = 1.5V VCC Select Low = 1.05V
14_NB_CFG<18> Internal pull-down	

14_NB_CFG<9> Internal pull-up	
NB_CFG<9>	High = Normal PCIe Graphics Lane Reversal Low = Reversed

=PP3V3_S0_NB NBCFG_DMI_REVERSE	
NB_CFG<19>	High = Reversed DMI Lane Reversal Low = Normal
14_NB_CFG<19> Internal pull-down	

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

945 External Design Spec says reserved =PP3V3_S0_NB NBCFG_SDVO_AND_PCIE	
NB_CFG<20>	High = Both active PCIe Backward Interop. Mode Low = Only SDVO or PCIe x1
14_NB_CFG<20> Internal pull-down	

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

PROBABLY NOT NEEDED

NB Config Straps

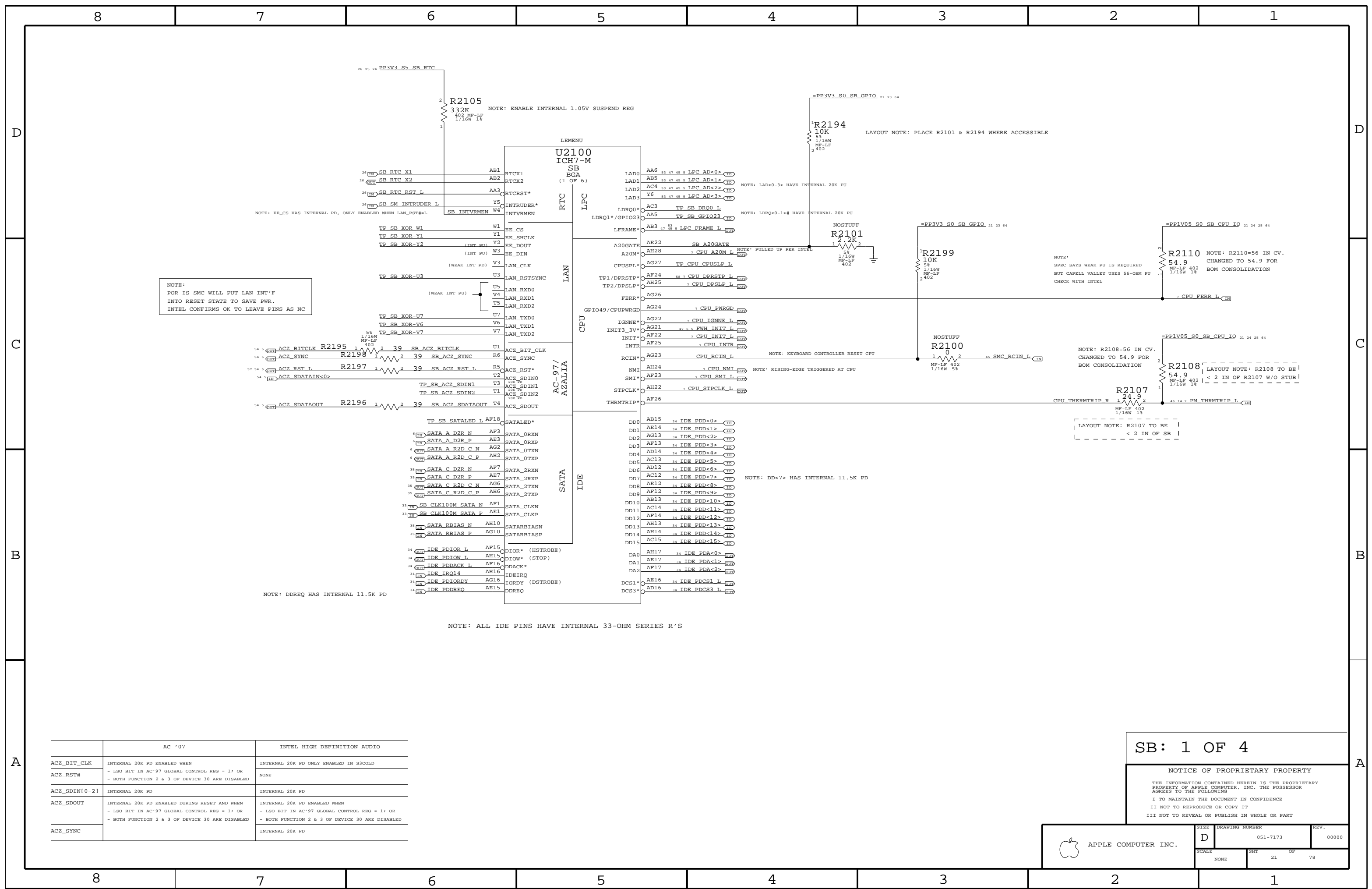
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	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	20	78	



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

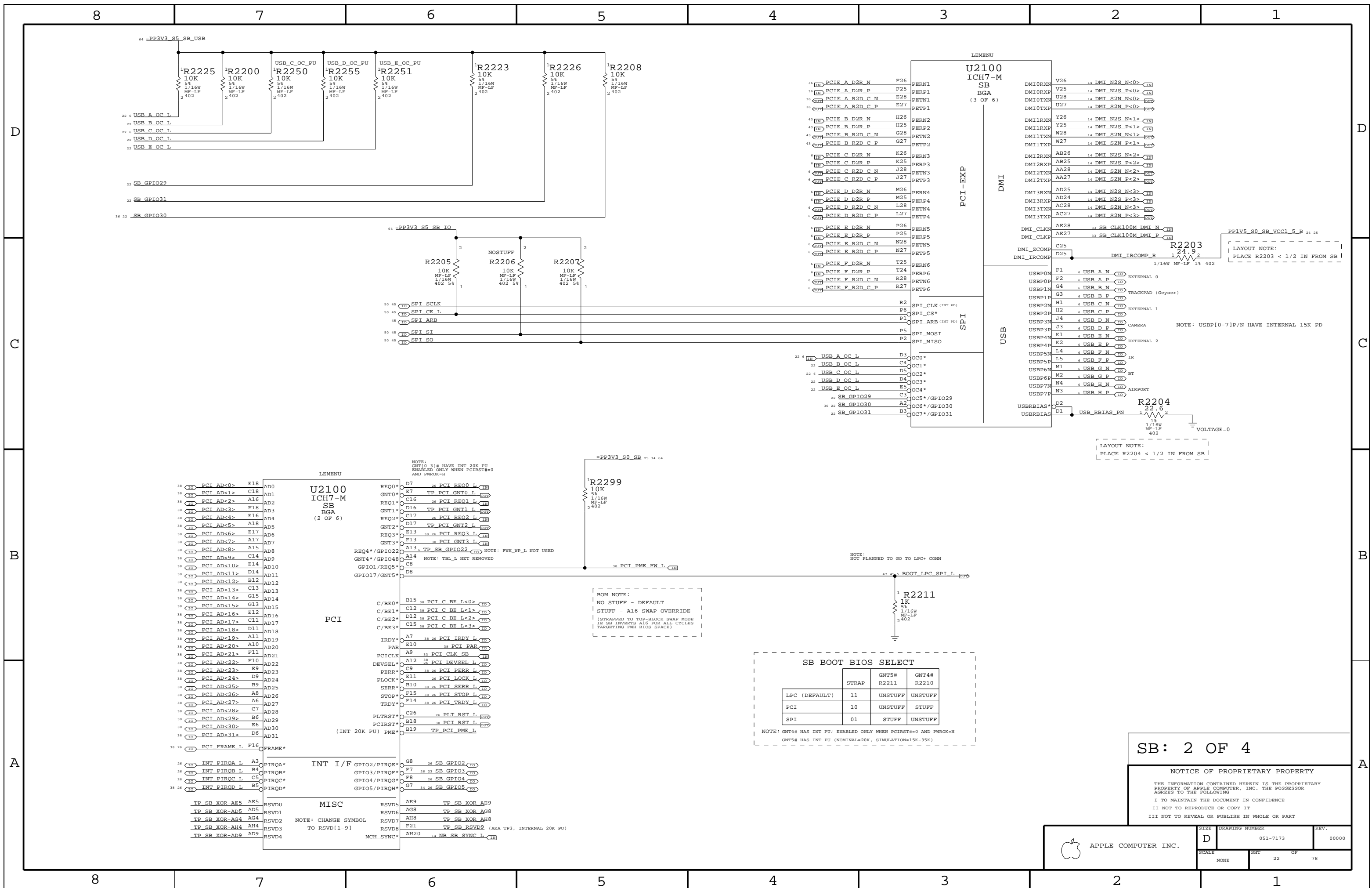
NOTE: ALL IDE PINS HAVE INTERNAL 33-OHM SERIES R'S

	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 - BOTH FUNCTION 2 & 3 OF DEVICE 30 ARE DISABLED	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

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NONE		21	



SB: 2 OF 4

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APPLE COMPUTER INC.	SCALE	SHT	OF	REV.
	NONE	22	78	00000

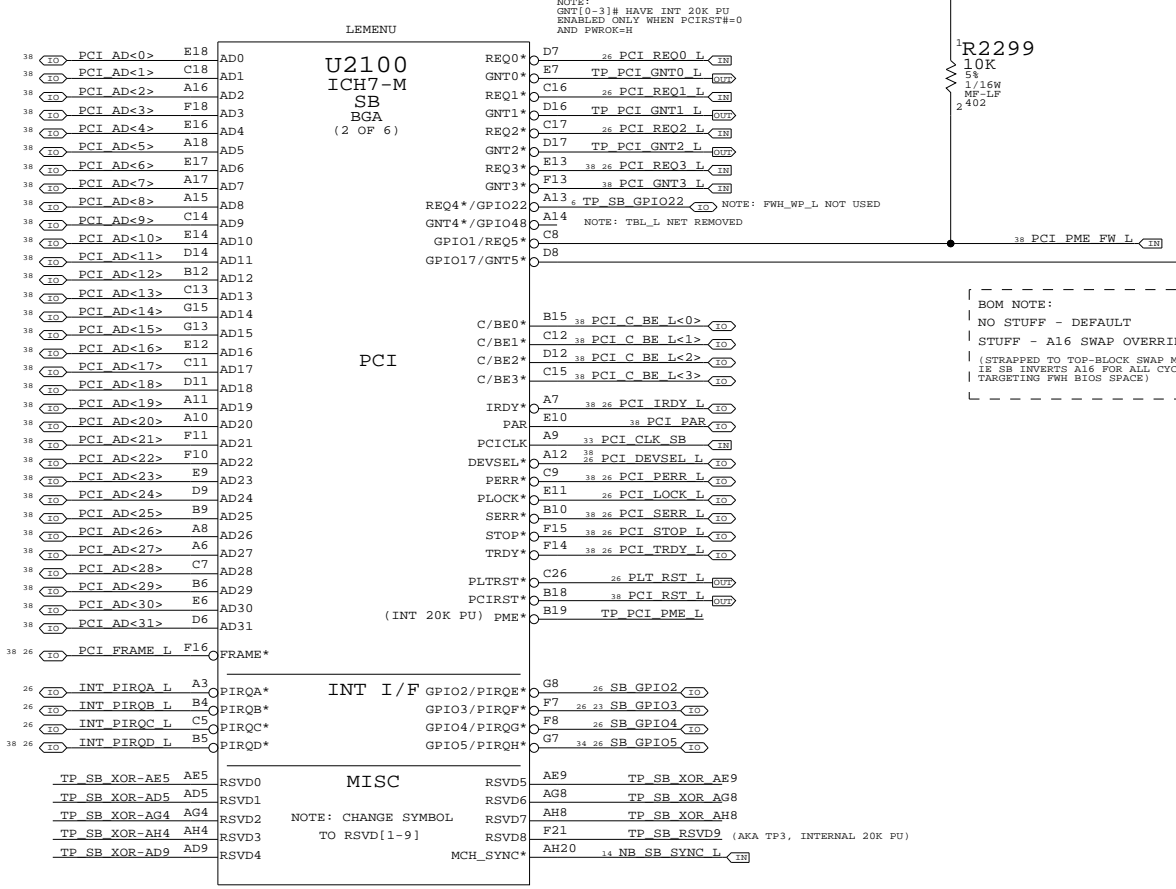
SB BOOT BIOS SELECT

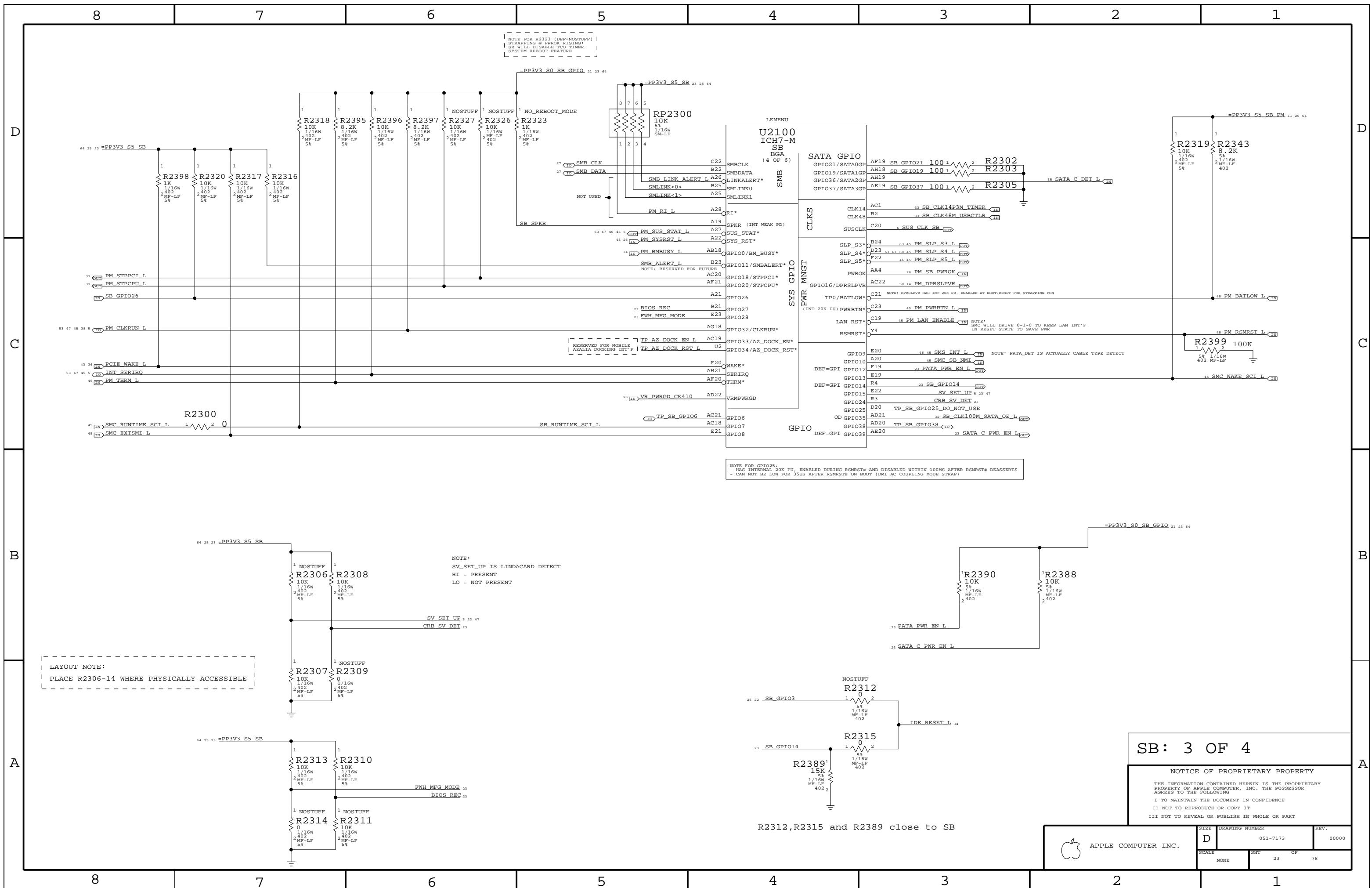
	STRAP	GNT5#	GNT4#
LPC (DEFAULT)	11	UNSTUFF	UNSTUFF
PCI	10	UNSTUFF	STUFF
SPI	01	STUFF	UNSTUFF

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

BOM NOTE:
 NO STUFF - DEFAULT
 STUFF - A16 SWAP OVERRIDE
 (STRAPPED TO TOP-BLOCK SWAP MODE
 IF SB INVERTS A16 FOR ALL CYCLES
 (TARGETING FWB BIOS SPACE))

NOTE: CHANGE SYMBOL TO RSV D[1-9]





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

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

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

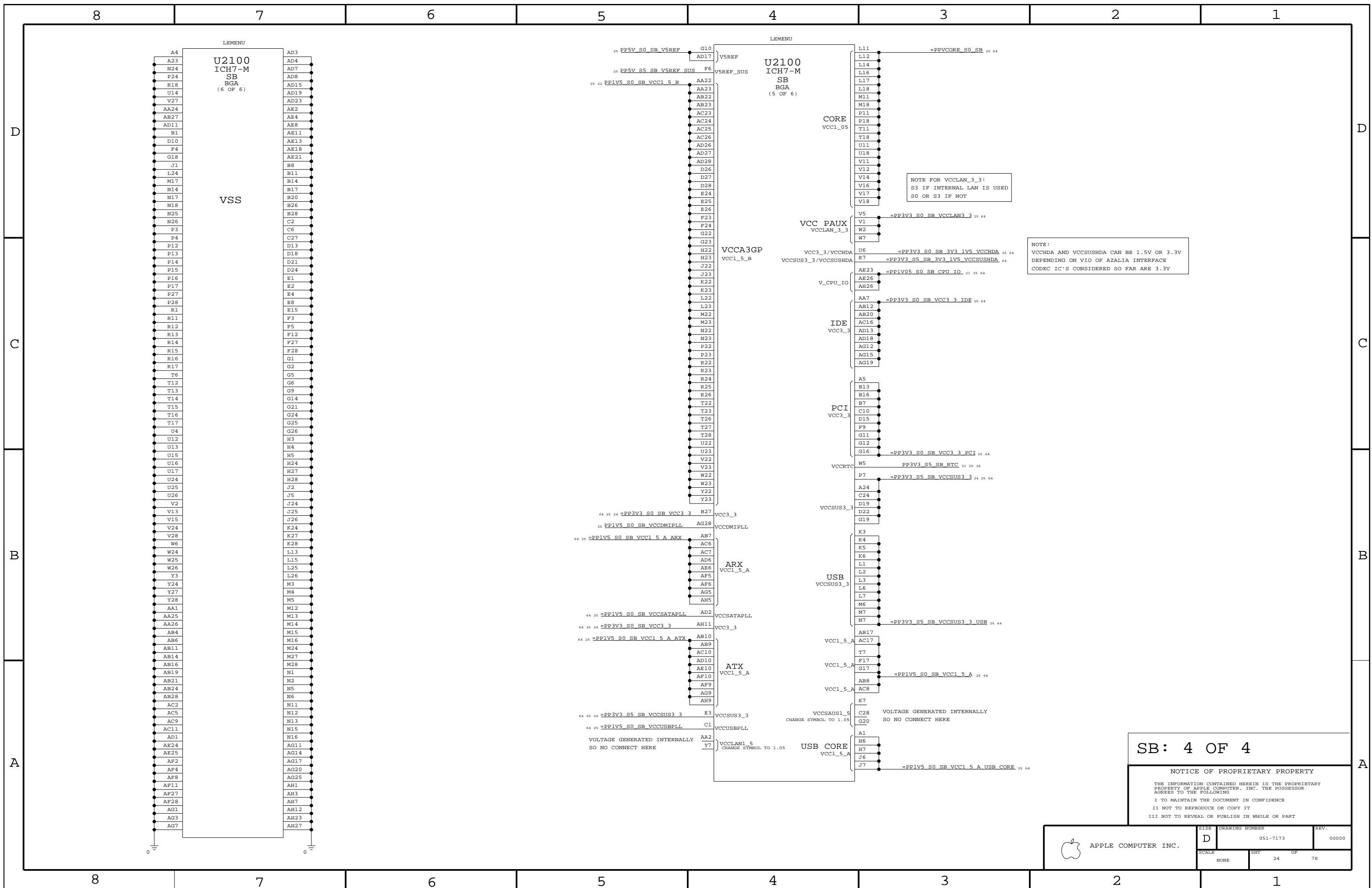
LAYOUT NOTE:
 PLACE R2306-14 WHERE PHYSICALLY ACCESSIBLE

SB: 3 OF 4

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	D	051-7173	00000
SCALE	NONE	SHT	23 OF 78

R2312, R2315 and R2389 close to SB



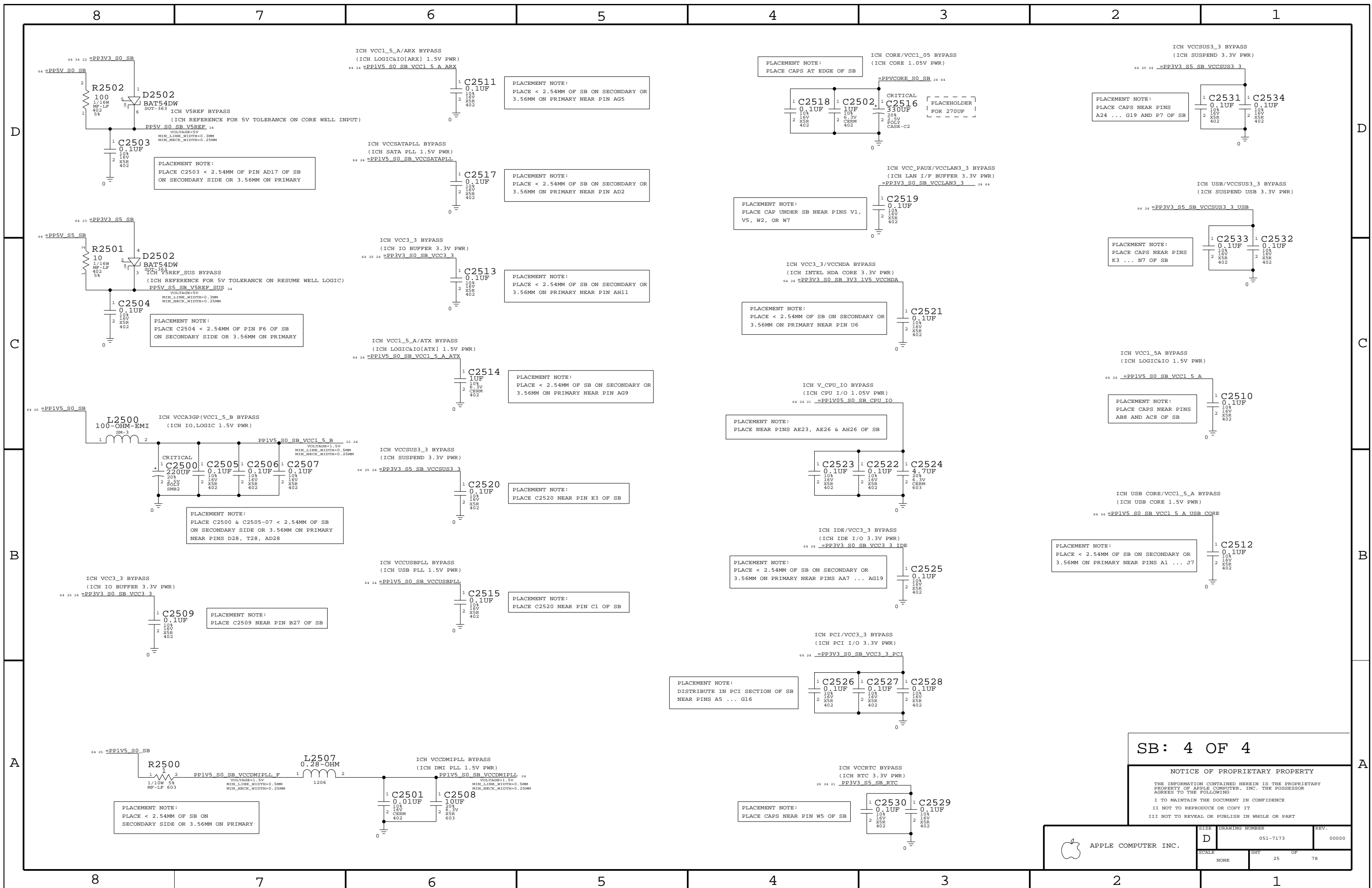
NOTE FOR VCCLAN_3_3:
S3 IF INTERNAL LAN IS USED
S0 OR S3 IF NOT

NOTE:
VCC3_3/VCC3_3 IDE
VCC3_3/VCC3_3 PCI
VCC3_3/VCC3_3 USB
VOLTAGE GENERATED INTERNALLY
SO NO CONNECT HERE

SB: 4 OF 4

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SCALE	SHT	OF	78
NONE		24	



SB: 4 OF 4

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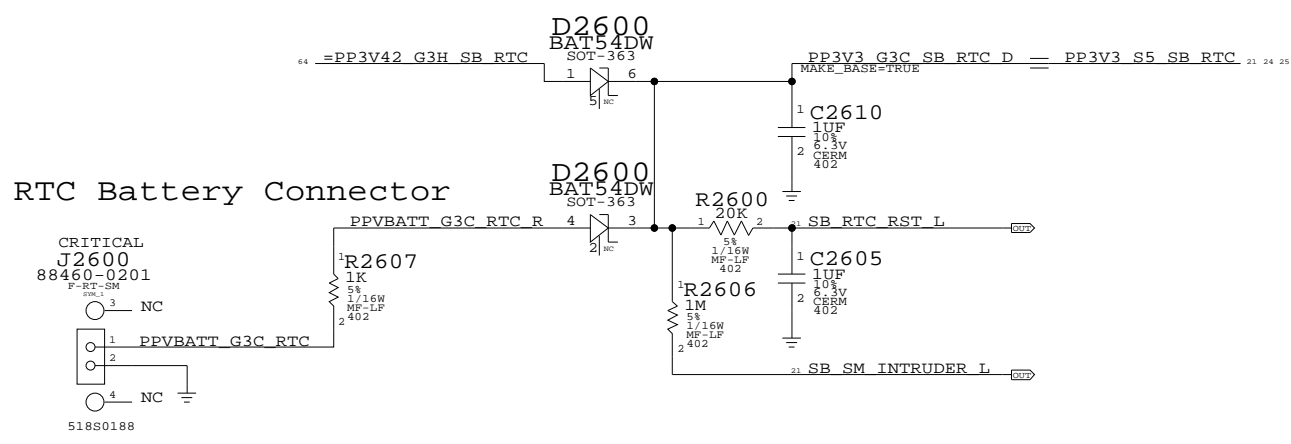
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

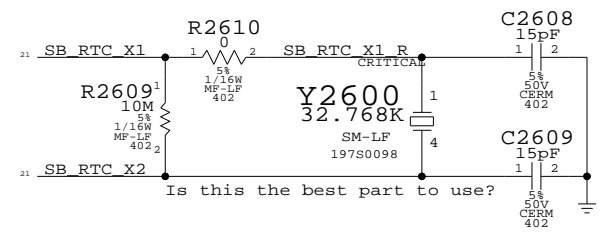
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

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

RTC Battery Connector

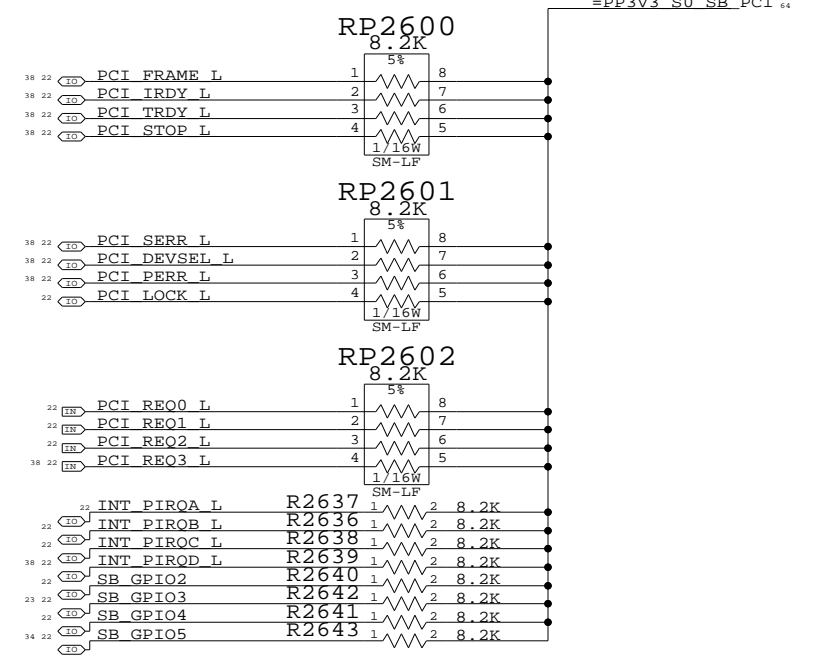
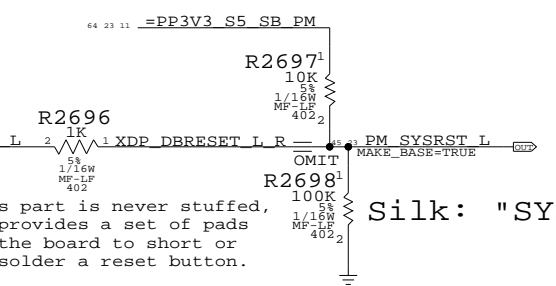


SB RTC Crystal Circuit

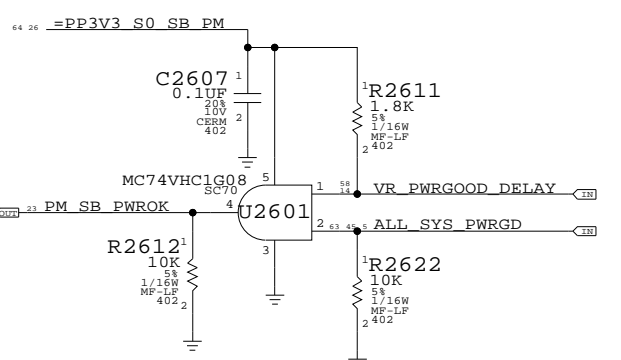
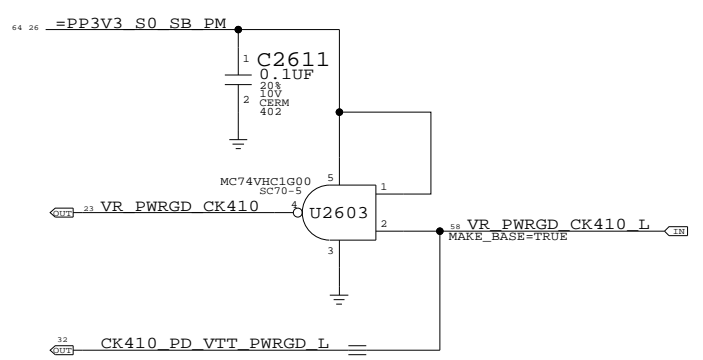
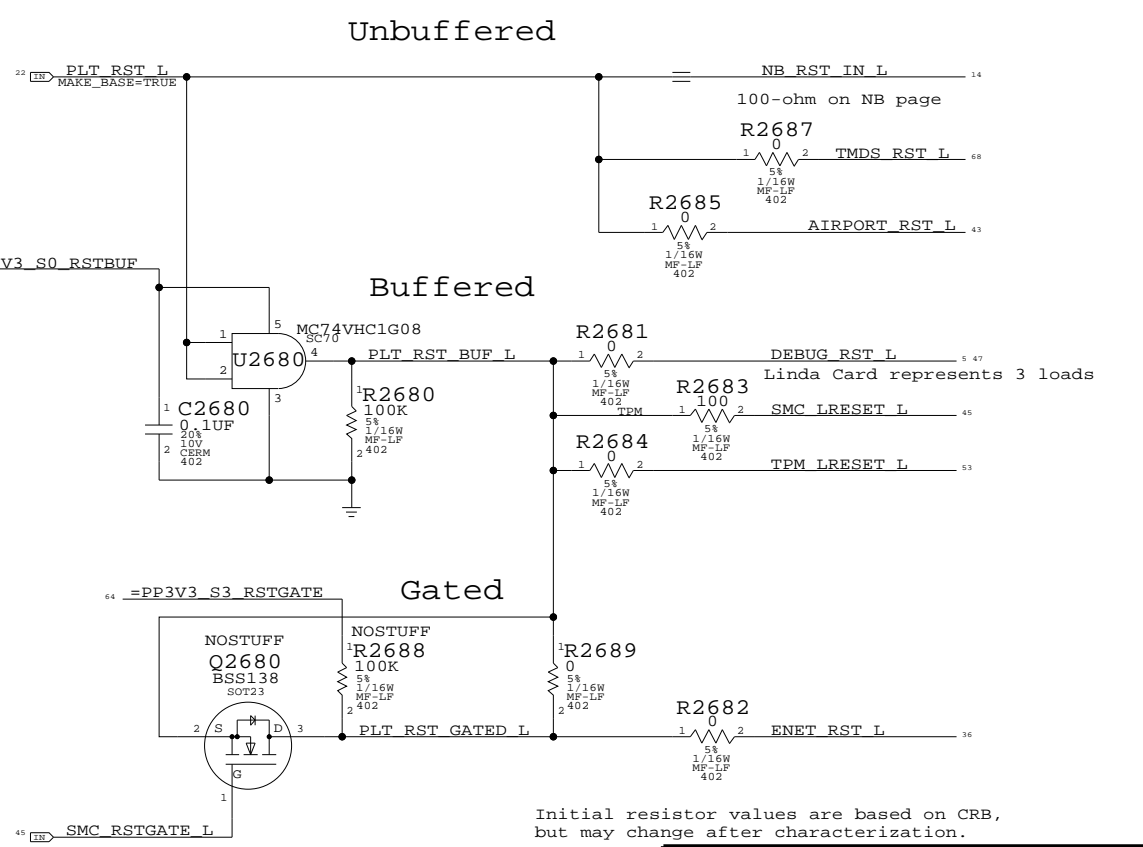


This part is never stuffed, it provides a set of pads on the board to short or to solder a reset button.

Silk: "SYS RST"



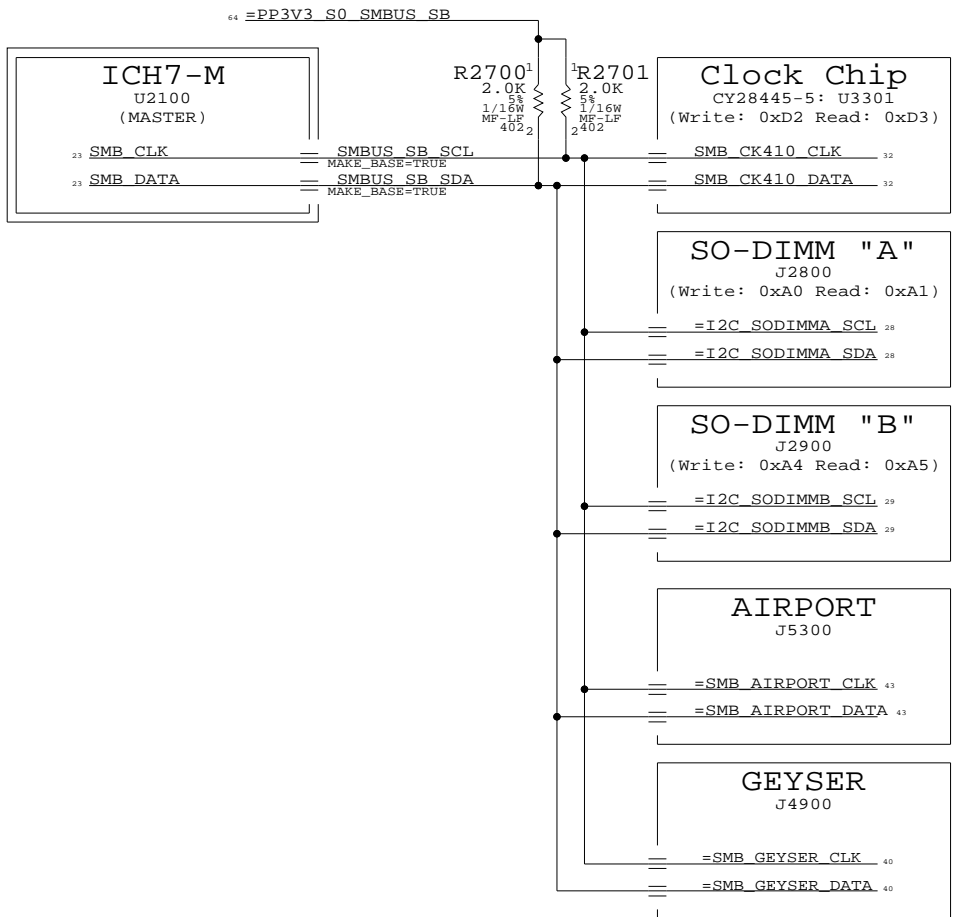
Platform Reset Connections



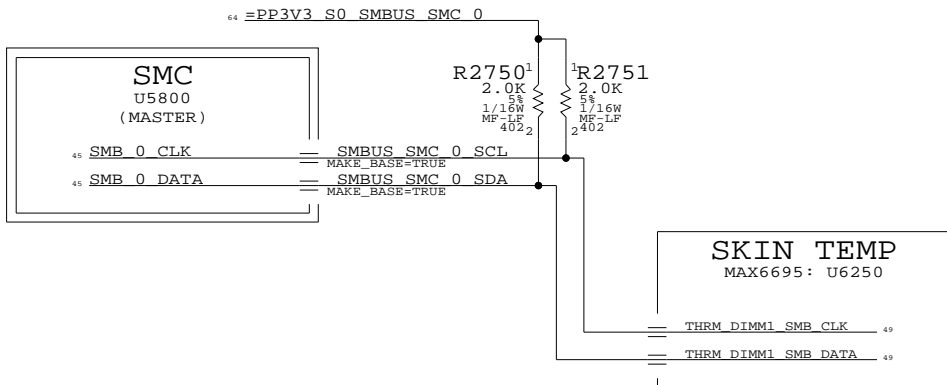
SB Misc		
SYNC_MASTER=NB	SYNC_DATE=07/26/2005	
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	D	051-7173	00000
SCALE	SHT	OF	78
NONE	26		

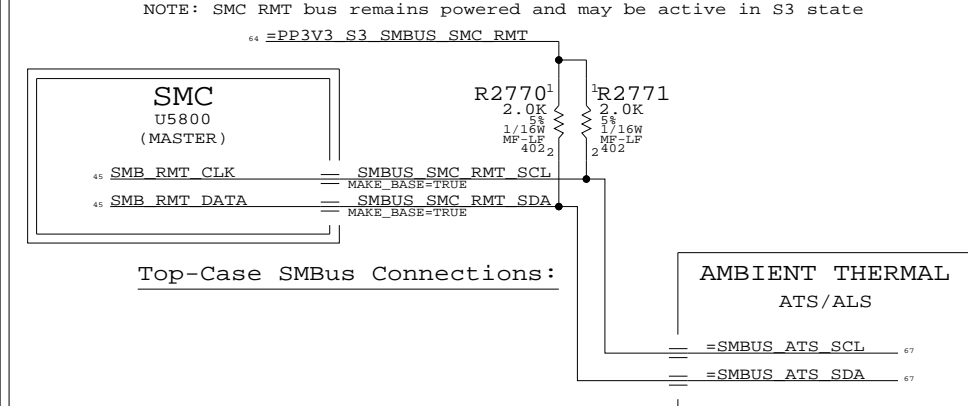
ICH7-M SMBus Connections



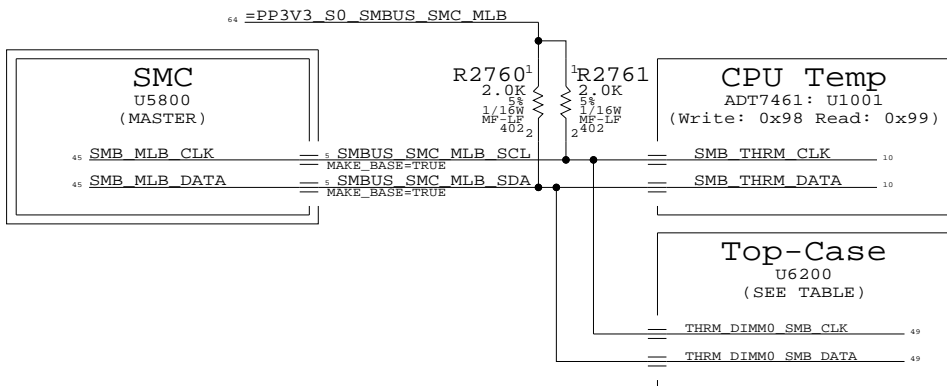
SMC "0" SMBus Connections



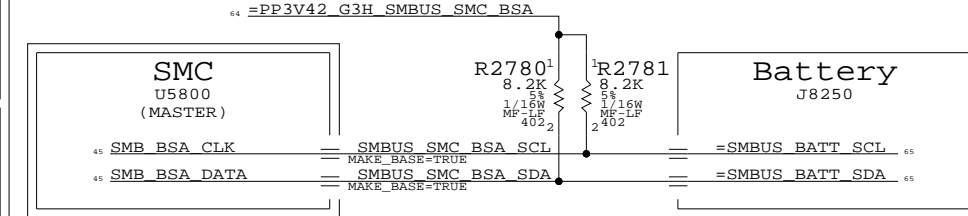
SMC "RMT" SMBus Connections



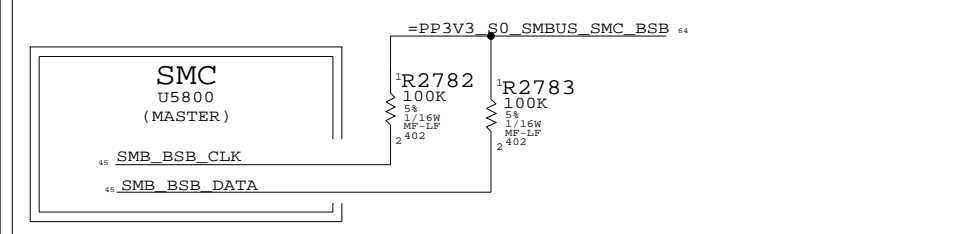
SMC "MLB" SMBus Connections



SMC "Battery A" SMBus Connections



SMC "Battery B" SMBus Connections



M42 SMBUS CONNECTIONS

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

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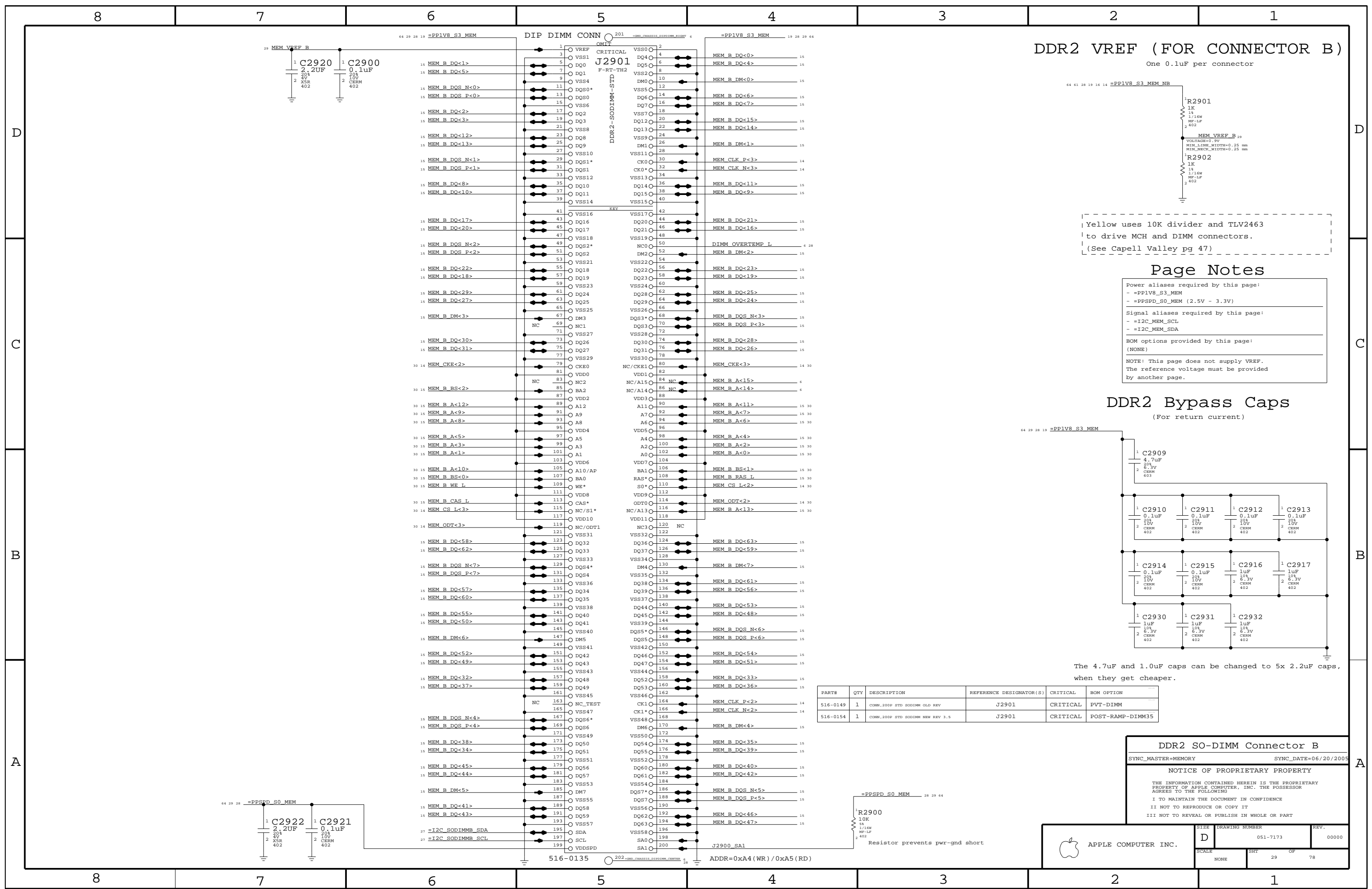
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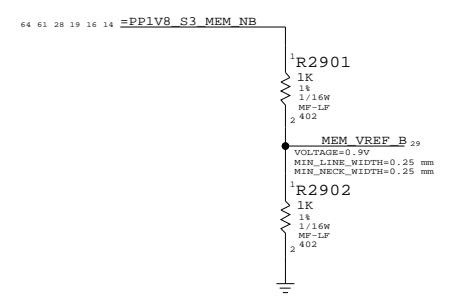
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	27	78	



DDR2 VREF (FOR CONNECTOR B)

One 0.1uF per connector

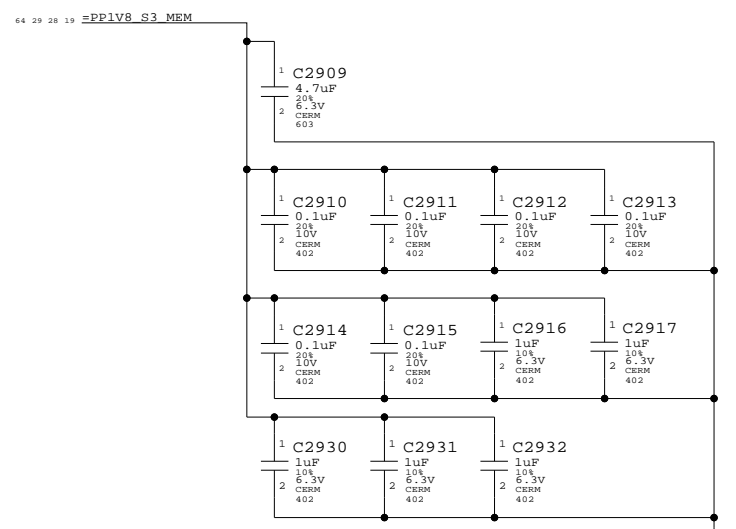


Yellow uses 10K divider and TLV2463 to drive MCH and DIMM connectors. (See Capell Valley pg 47)

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

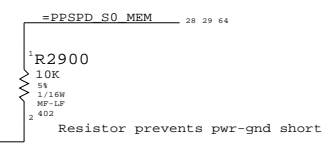
DDR2 SO-DIMM Connector B

SYNC_MASTER=MEMORY SYNC_DATE=06/20/2005

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APPLE COMPUTER INC.	SCALE	DRAWING NUMBER	REV.
	NONE	D 051-7173	00000
	SHT	OF	
	29	78	



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

8

7

6

5

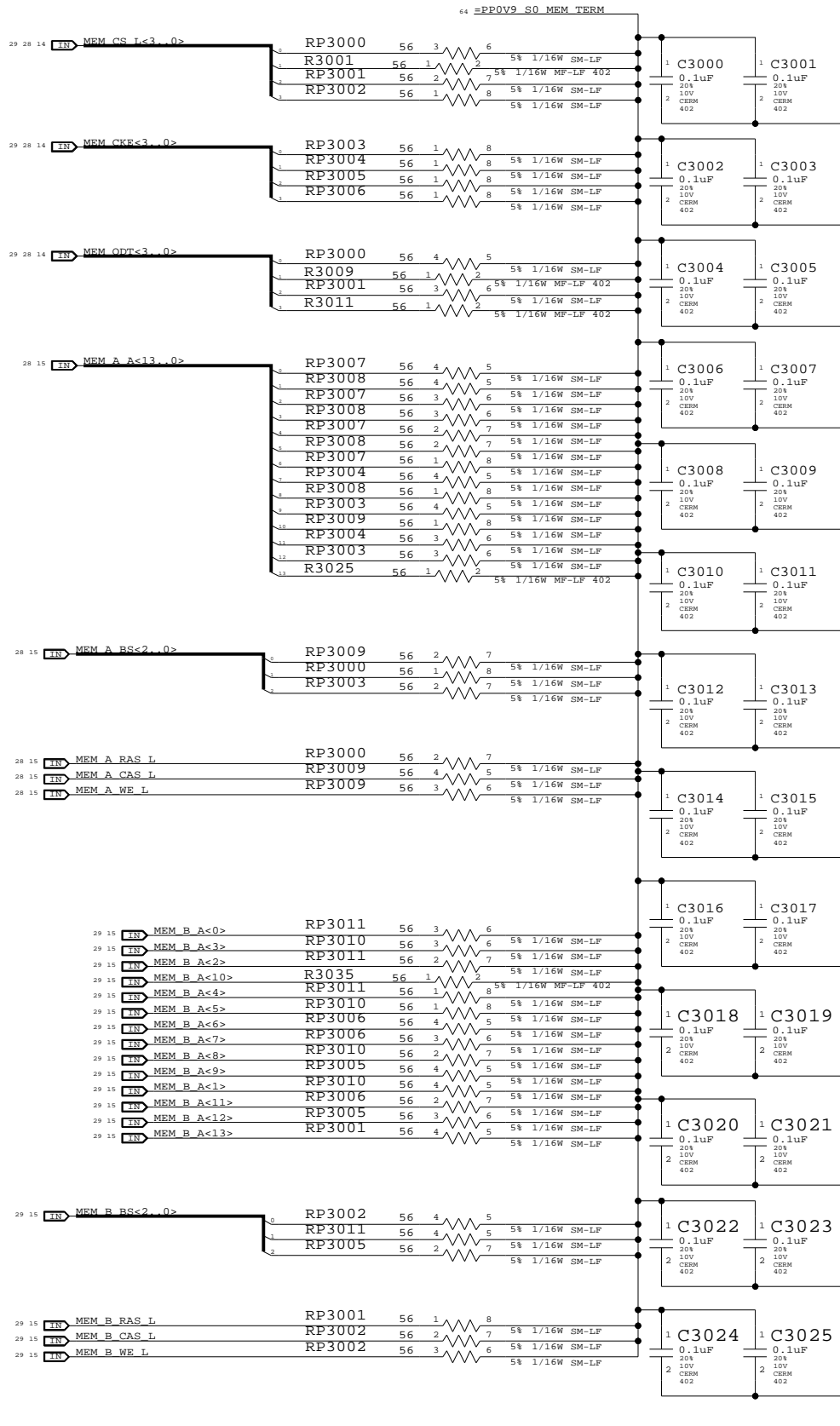
4

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

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	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	30	78	

8

7

6

5

4

3

2

1

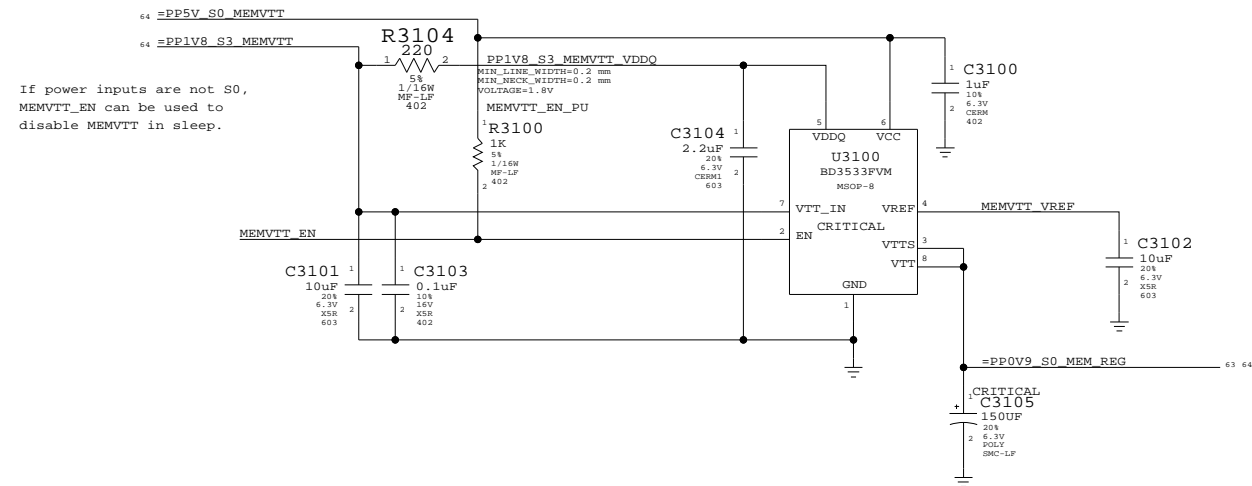
Page Notes

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

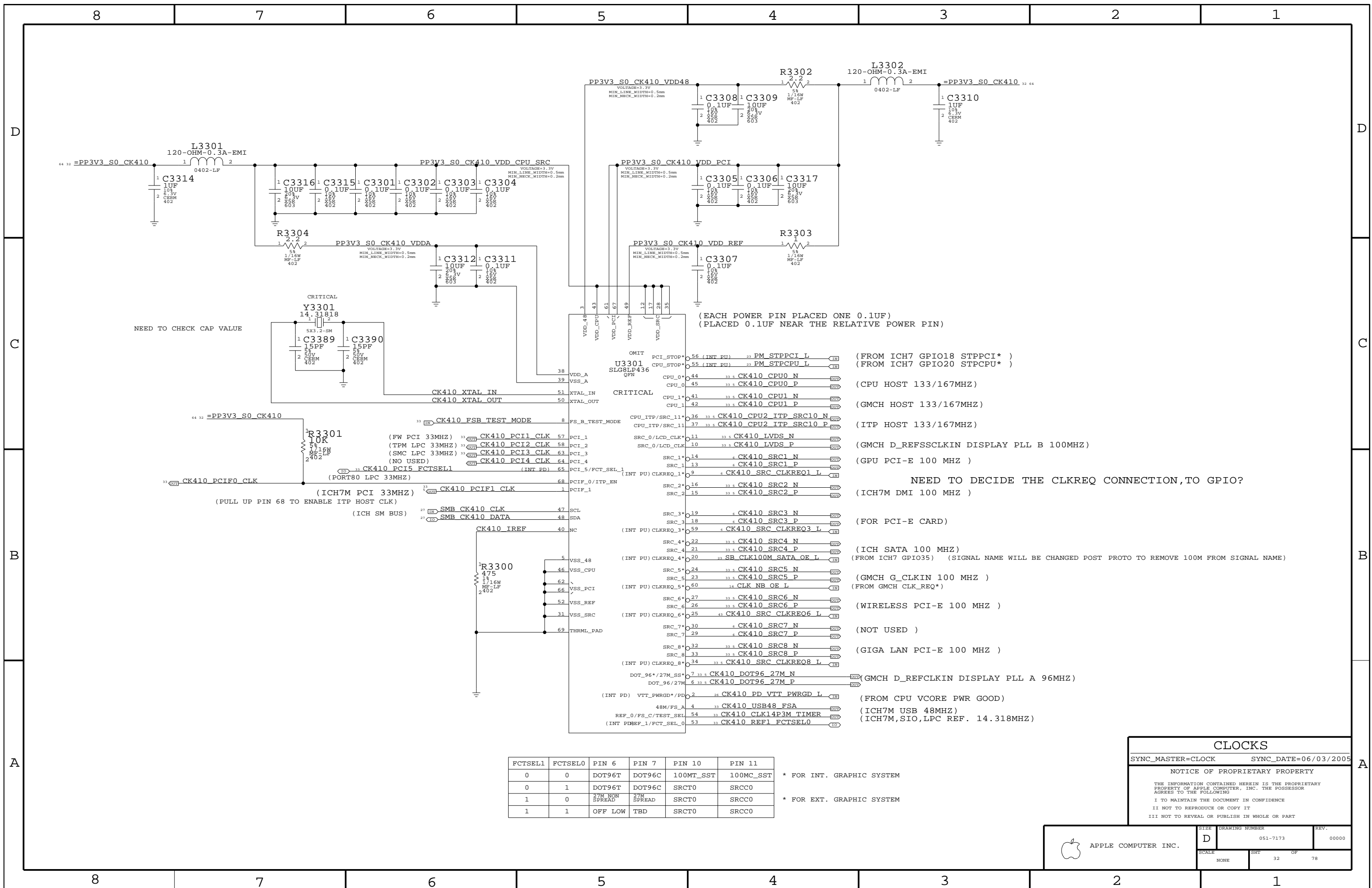
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	D	051-7173	00000
SCALE	SHT	OF	REV.
NONE	31	78	



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	FCTSELO	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

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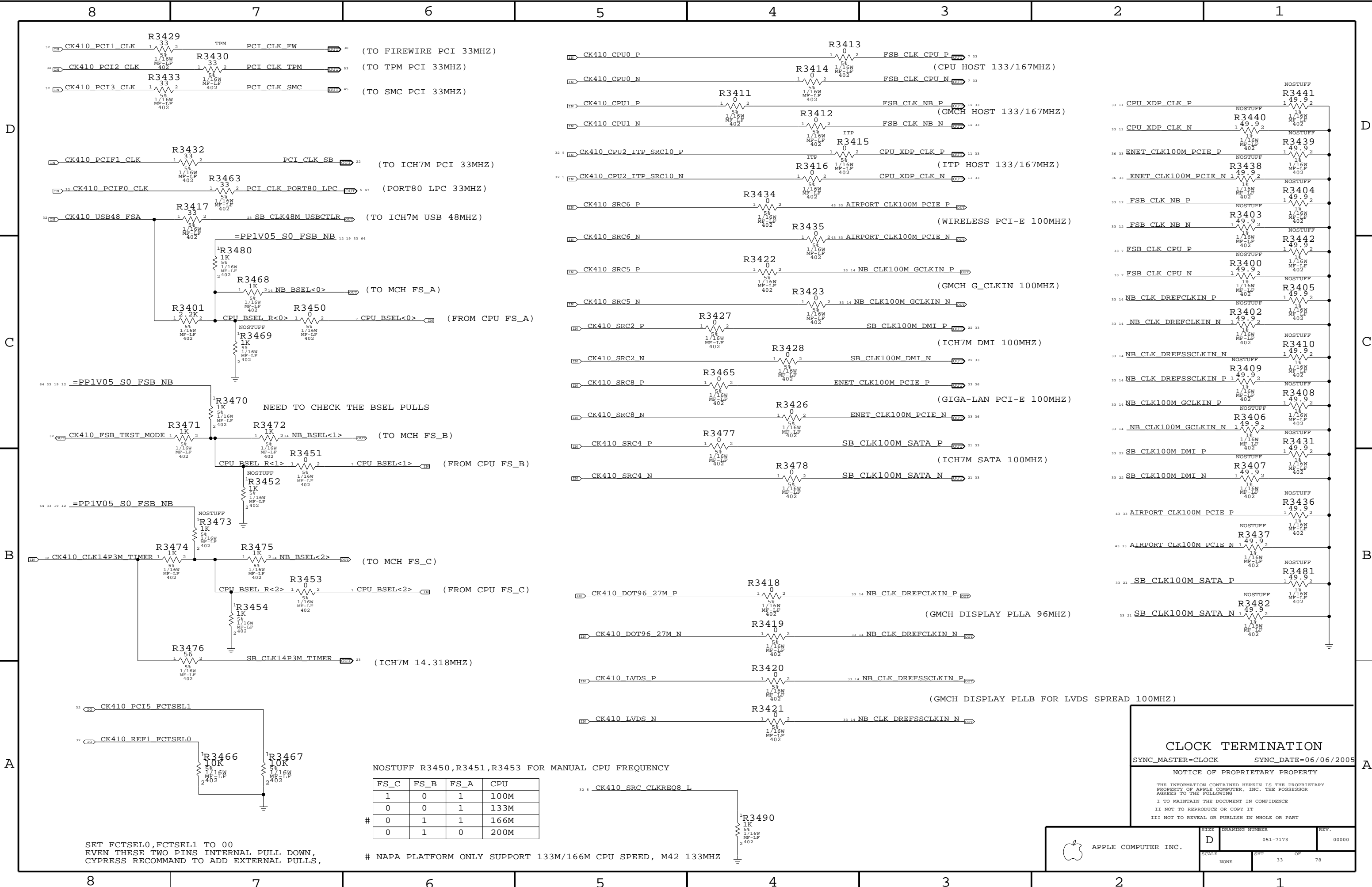
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APPLE COMPUTER INC.

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



D

C

B

A

D

C

B

A

R3429
CK410_PCI1_CLK → PCI_CLK_FW (TO FIREWIRE PCI 33MHZ)
R3430
CK410_PCI2_CLK → PCI_CLK_TPM (TO TPM PCI 33MHZ)
R3433
CK410_PCI3_CLK → PCI_CLK_SMC (TO SMC PCI 33MHZ)

R3413
CK410_CPU0_P → FSB_CLK_CPU_P (CPU HOST 133/167MHZ)
R3414
CK410_CPU0_N → FSB_CLK_CPU_N (CPU HOST 133/167MHZ)
R3411
CK410_CPU1_P → FSB_CLK_NB_P (GMCH HOST 133/167MHZ)
R3412
CK410_CPU1_N → FSB_CLK_NB_N (GMCH HOST 133/167MHZ)
R3415
CK410_CPU2_ITP_SRC10_P → CPU_XDP_CLK_P (ITP HOST 133/167MHZ)
R3416
CK410_CPU2_ITP_SRC10_N → CPU_XDP_CLK_N (ITP HOST 133/167MHZ)

R3441
CPU_XDP_CLK_P → NOSTUFF
R3440
CPU_XDP_CLK_N → NOSTUFF
R3439
ENET_CLK100M_PCIE_P → NOSTUFF
R3438
ENET_CLK100M_PCIE_N → NOSTUFF
R3404
FSB_CLK_NB_P → NOSTUFF
R3403
FSB_CLK_NB_N → NOSTUFF
R3442
FSB_CLK_CPU_P → NOSTUFF
R3400
FSB_CLK_CPU_N → NOSTUFF
R3405
NB_CLK_DREFCLKIN_P → NOSTUFF
R3402
NB_CLK_DREFCLKIN_N → NOSTUFF
R3410
NB_CLK_DREFSSCLKIN_N → NOSTUFF
R3409
NB_CLK_DREFSSCLKIN_P → NOSTUFF
R3408
NB_CLK100M_GCLKIN_P → NOSTUFF
R3406
NB_CLK100M_GCLKIN_N → NOSTUFF
R3431
SB_CLK100M_DMI_P → NOSTUFF
R3407
SB_CLK100M_DMI_N → NOSTUFF
R3436
AIRPORT_CLK100M_PCIE_P → NOSTUFF
R3437
AIRPORT_CLK100M_PCIE_N → NOSTUFF
R3481
SB_CLK100M_SATA_P → NOSTUFF
R3482
SB_CLK100M_SATA_N → NOSTUFF

R3434
CK410_SRC6_P → AIRPORT_CLK100M_PCIE_P (WIRELESS PCI-E 100MHZ)
R3435
CK410_SRC6_N → AIRPORT_CLK100M_PCIE_N (WIRELESS PCI-E 100MHZ)
R3422
CK410_SRC5_P → NB_CLK100M_GCLKIN_P (GMCH G_CLKIN 100MHZ)
R3423
CK410_SRC5_N → NB_CLK100M_GCLKIN_N (GMCH G_CLKIN 100MHZ)
R3427
CK410_SRC2_P → SB_CLK100M_DMI_P (ICH7M DMI 100MHZ)
R3428
CK410_SRC2_N → SB_CLK100M_DMI_N (ICH7M DMI 100MHZ)
R3465
CK410_SRC8_P → ENET_CLK100M_PCIE_P (GIGA-LAN PCI-E 100MHZ)
R3426
CK410_SRC8_N → ENET_CLK100M_PCIE_N (GIGA-LAN PCI-E 100MHZ)
R3477
CK410_SRC4_P → SB_CLK100M_SATA_P (ICH7M SATA 100MHZ)
R3478
CK410_SRC4_N → SB_CLK100M_SATA_N (ICH7M SATA 100MHZ)

R3470
NEED TO CHECK THE BSEL PULLS
R3471
CK410_FSB_TEST_MODE → NB_BSEL<1> (TO MCH FS_B)
R3451
CPU_BSEL_R<1> → CPU_BSEL<1> (FROM CPU FS_B)
R3473
NOSTUFF
R3475
CK410_CLK14P3M_TIMER → NB_BSEL<2> (TO MCH FS_C)
R3453
CPU_BSEL_R<2> → CPU_BSEL<2> (FROM CPU FS_C)
R3454
NOSTUFF
R3476
SB_CLK14P3M_TIMER → ICH7M 14.318MHZ

R3418
CK410_DOT96_27M_P → NB_CLK_DREFCLKIN_P (GMCH DISPLAY PLLA 96MHZ)
R3419
CK410_DOT96_27M_N → NB_CLK_DREFCLKIN_N (GMCH DISPLAY PLLA 96MHZ)
R3420
CK410_LVDS_P → NB_CLK_DREFSSCLKIN_P (GMCH DISPLAY PLLB FOR LVDS SPREAD 100MHZ)
R3421
CK410_LVDS_N → NB_CLK_DREFSSCLKIN_N (GMCH DISPLAY PLLB FOR LVDS SPREAD 100MHZ)

R3490
CK410_SRC_CLKREQ08_L → NOSTUFF

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,

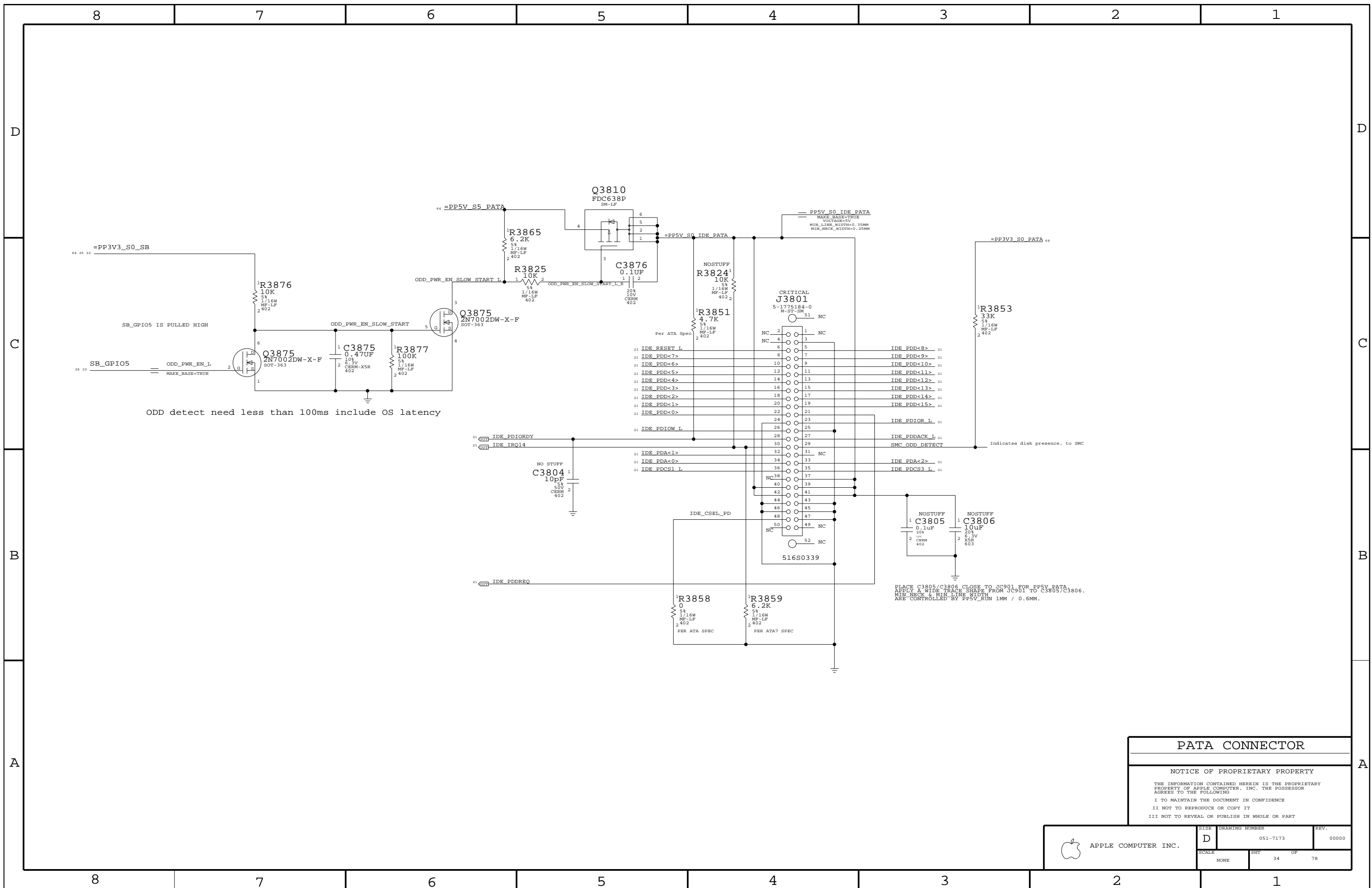
CLOCK TERMINATION

SYNC_MASTER=CLOCK SYNC_DATE=06/06/2005

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	NONE	33	78	00000



PATA CONNECTOR

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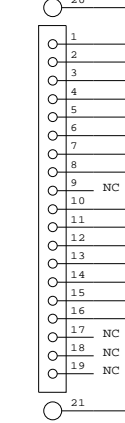
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	SCALE NONE	SHEET 34	OF 78

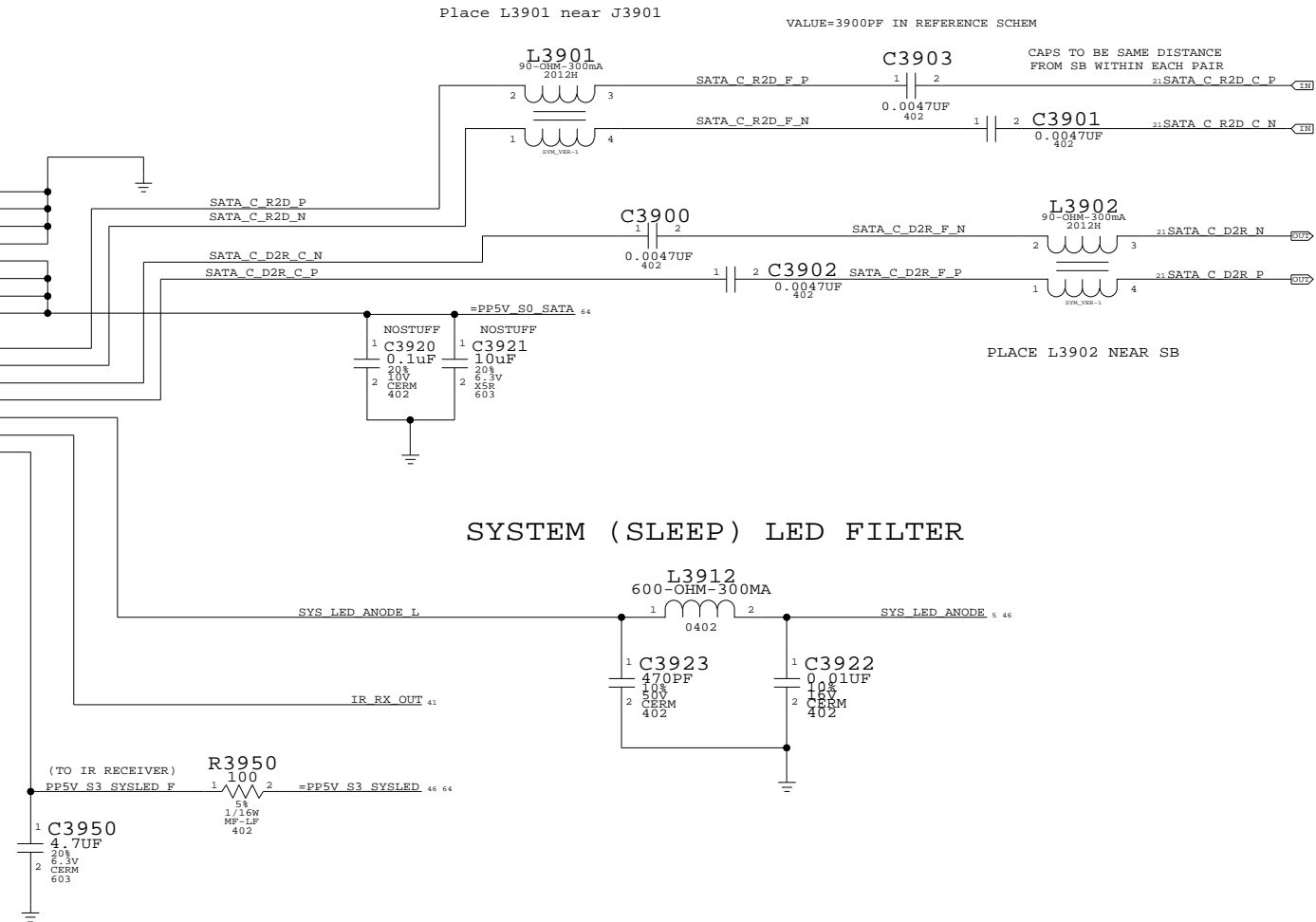
SATA CONNECTOR

518S0390

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

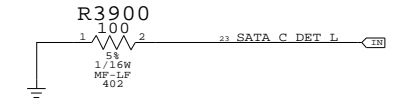


GND_CHASSIS_SATA

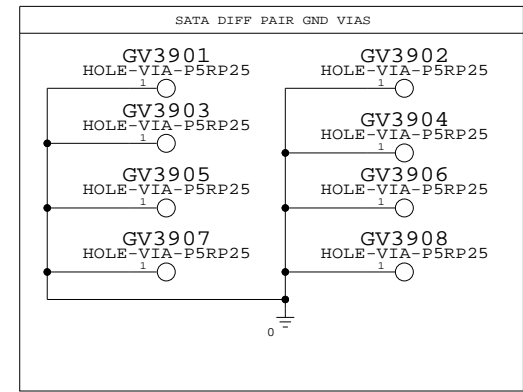
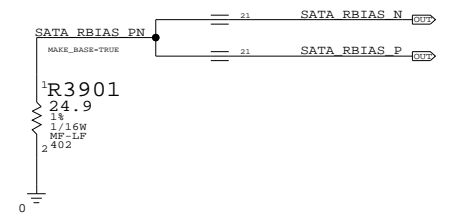


SYSTEM (SLEEP) LED FILTER

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



PLACE NEAR ICH7 PIN

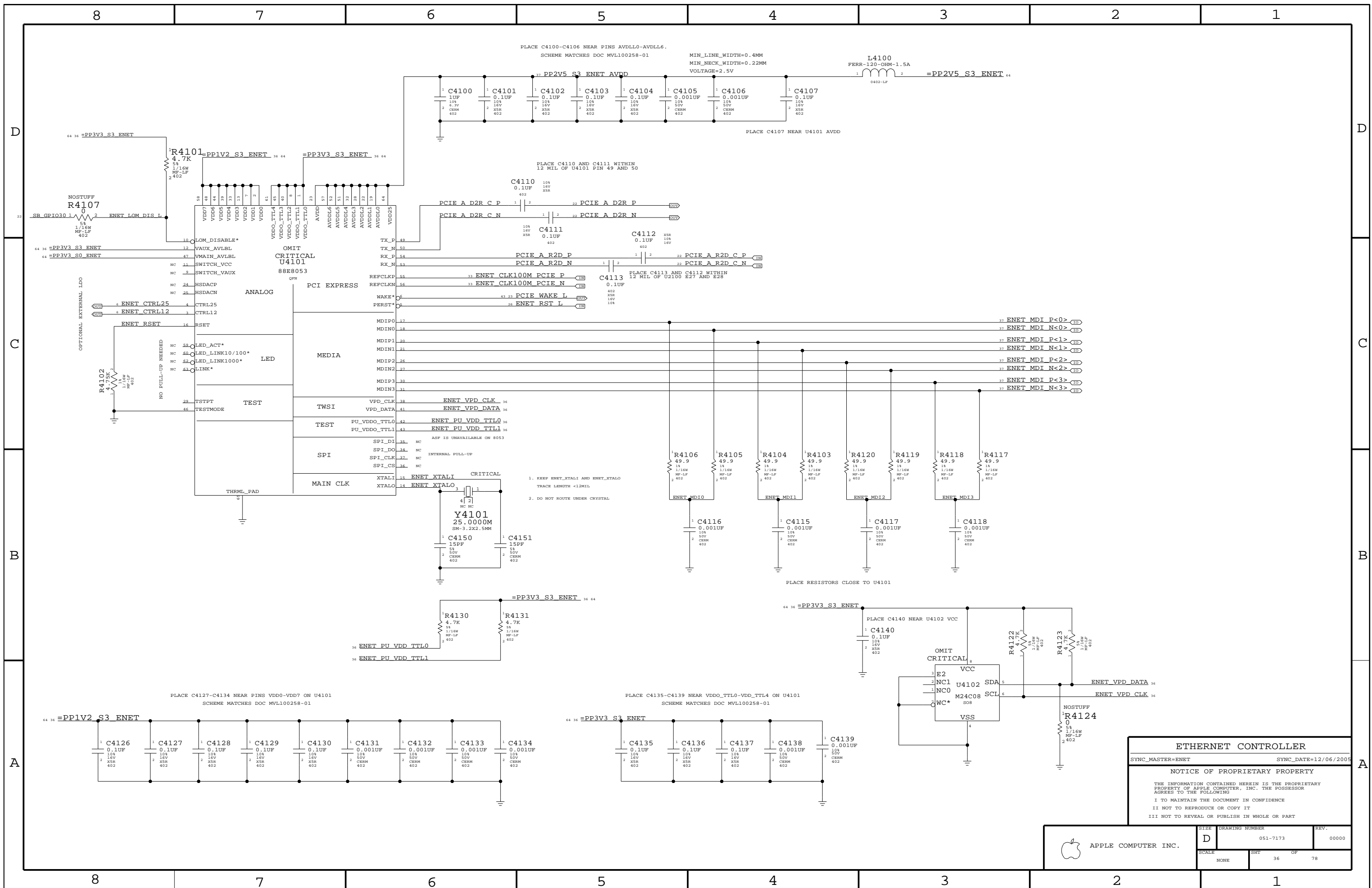


SATA CONNECTOR

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NONE		35	



ETHERNET CONTROLLER

SYNC_MASTER=ENET SYNC_DATE=12/06/2005

NOTICE OF PROPRIETARY PROPERTY

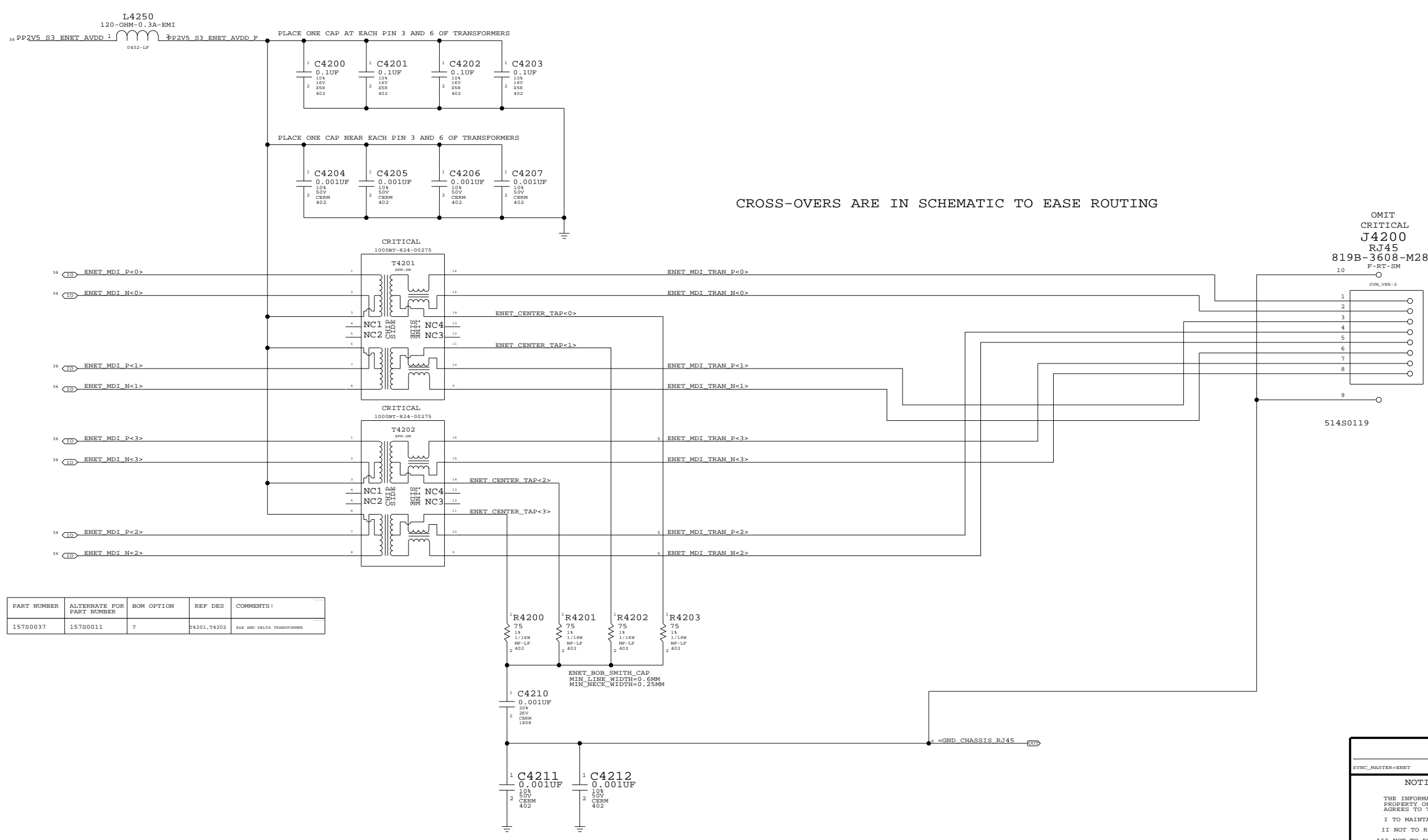
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	D	051-7173	00000
SCALE	SHT	OF	78
NONE		36	

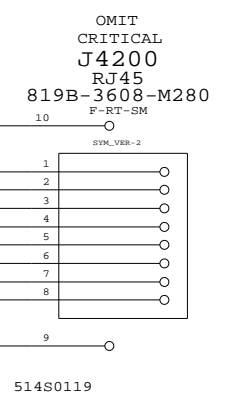


CROSS-OVERS ARE IN SCHEMATIC TO EASE ROUTING

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

ENET_BOB_SMITH_CAP
MIN LINE WIDTH=0.6MM
MIN NECK WIDTH=0.25MM

PLACE C4211 AND C4212
ON EACH SIDE OF J4200



ETHERNET CONNECTOR
SYNC_MASTER=ENET SYNC_DATE=11/14/2005
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PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514S0143	1	CONN, SP RJ-45 JACK, MIDDLEPLANE, BLACK, LF	J4200	CRITICAL	NORMAL
514S0144	1	CONN, SP RJ-45 JACK, MIDDLEPLANE, BLACK, LF	J4200	CRITICAL	FANCY

APPLE COMPUTER INC.

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

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

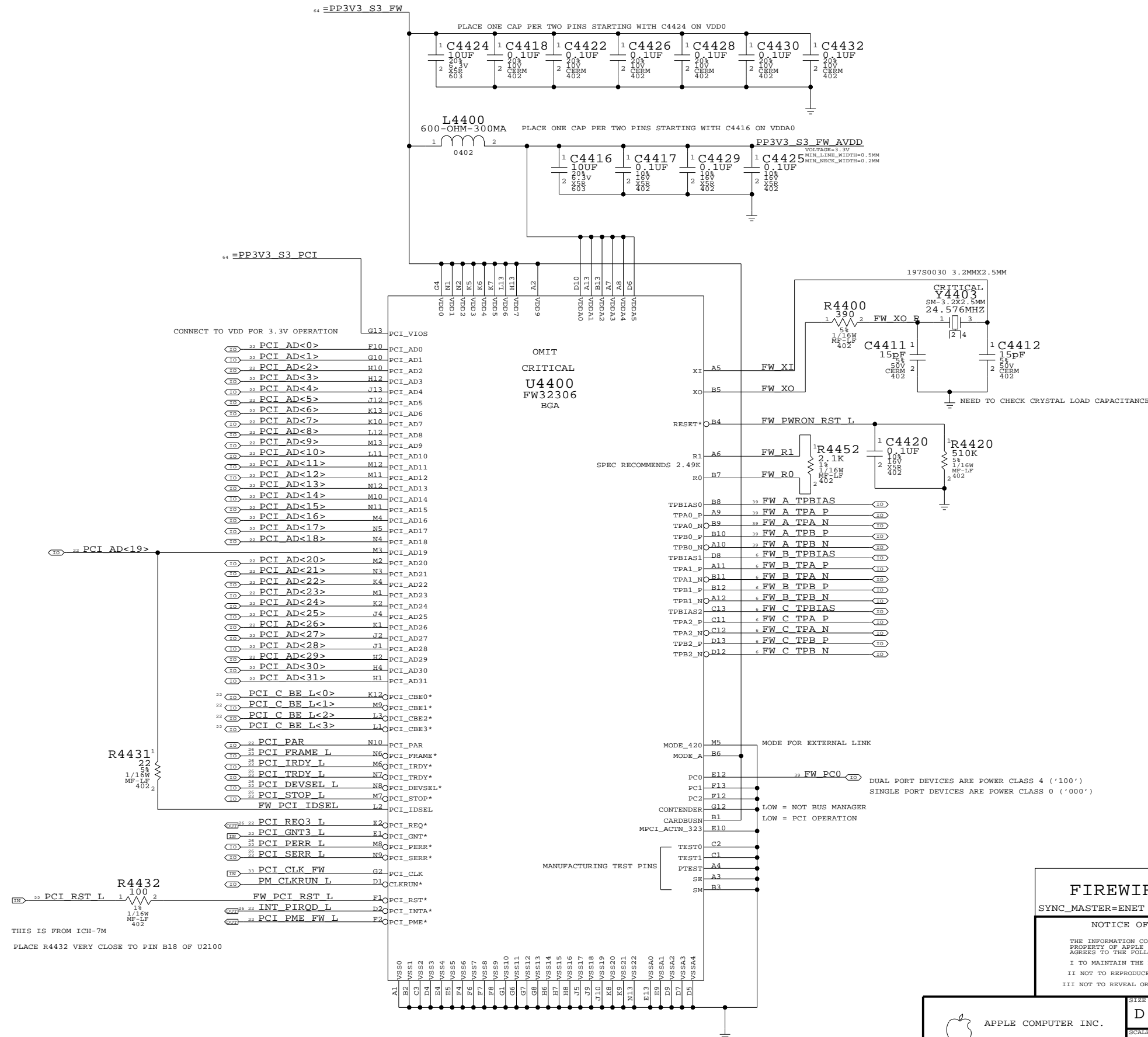
INPUT/OUTPUT
PCI_AD<0..31>, PCI_C_BE_L<0..3>, PCI_FRAME_L, PCI_IRDY_L, PCI_TRDY_L,
PCI_DEVSEL_L, PCI_STOP_L, PCI_PAR, PCI_PERR_L, PCI_SERR_L
FW_A_TPA_P/N, FW_A_TPB_P/N, FW_A_TPBIAS - PORT 0 FIREWIRE DIFF PAIRS
FW_B_TPA_P/N, FW_B_TPB_P/N, FW_B_TPBIAS - PORT 1 FIREWIRE DIFF PAIRS
FW_C_TPA_P/N, FW_C_TPB_P/N,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



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

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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_TP0_P/N,FW_TP0_P/N,FW_TPBAS0 - FIREWIRE DIFF PAIRS

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

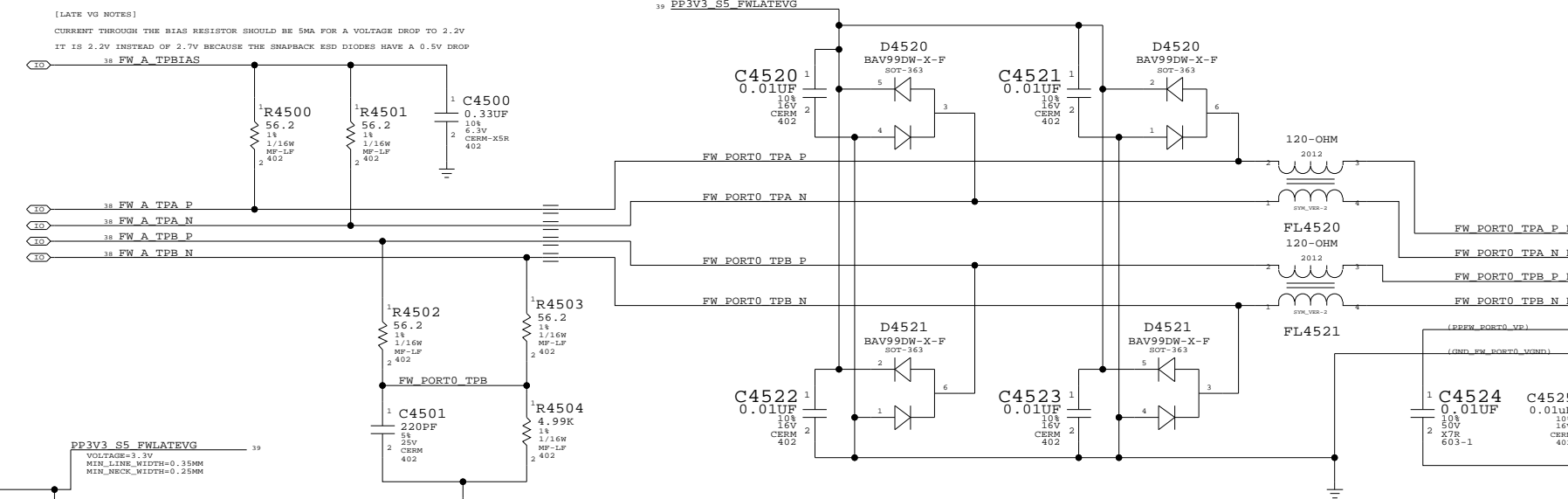
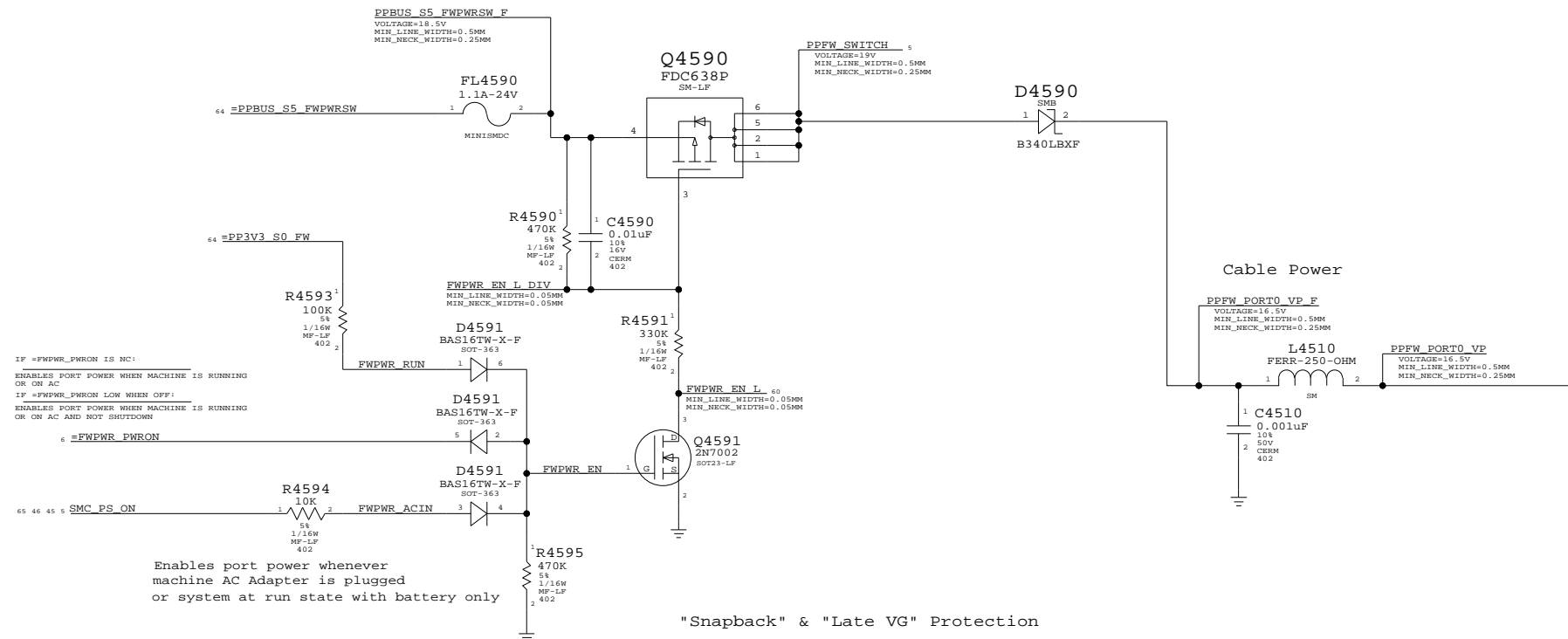
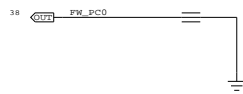
PAGE HISTORY

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 FIRE-PROTD 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

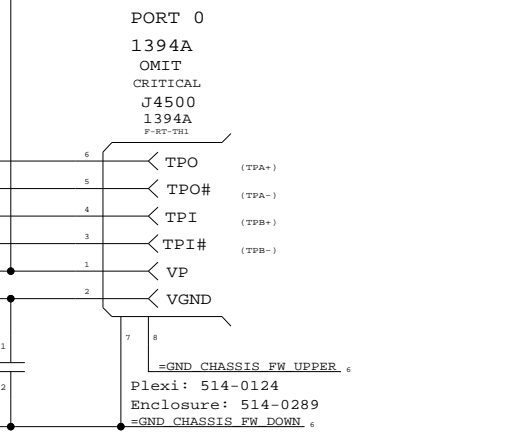
1394b implementation based on Apple
 FireWire Design Guide (FWDG 0.6, 5/14/03)

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, MIDDLELINE, M3, LF	J4500	CRITICAL	NORMAL
514-0316	1	CONN, 6P 1394A RCPT, MIDDLELINE, BLACK, LF	J4500	CRITICAL	FANCY



FIREWIRE PORT

SYNC_MASTER=ENET SYNC_DATE=11/16/2005

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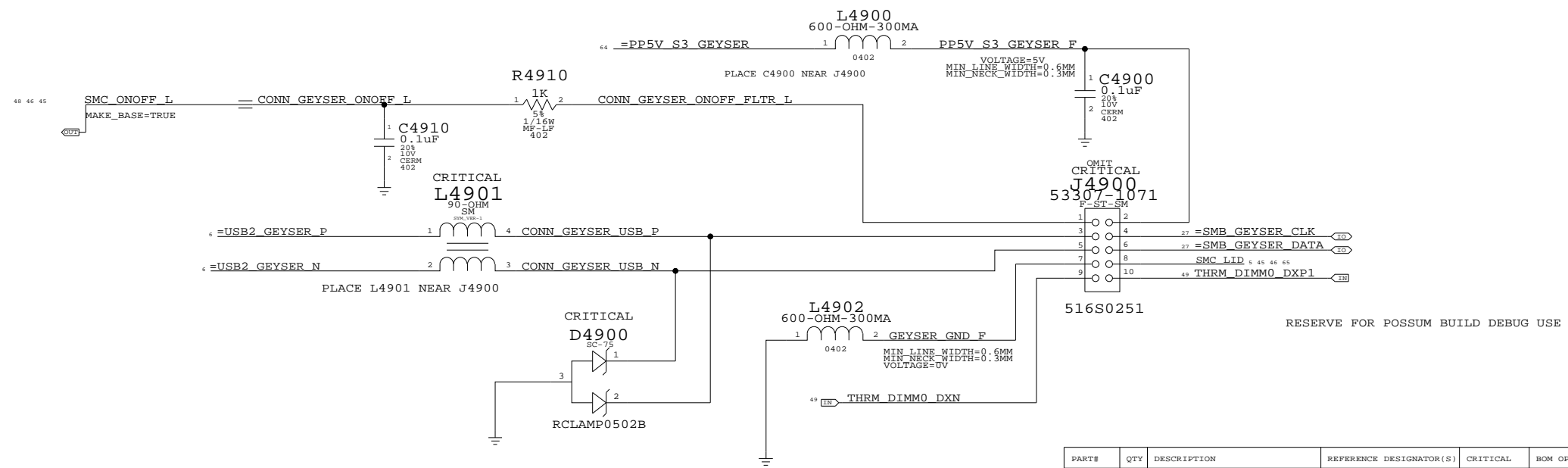
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.

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

SCALE: NONE SHEET: 39 OF 78

GEYSER AND DIMMO REMOTE TEMP SENSORS

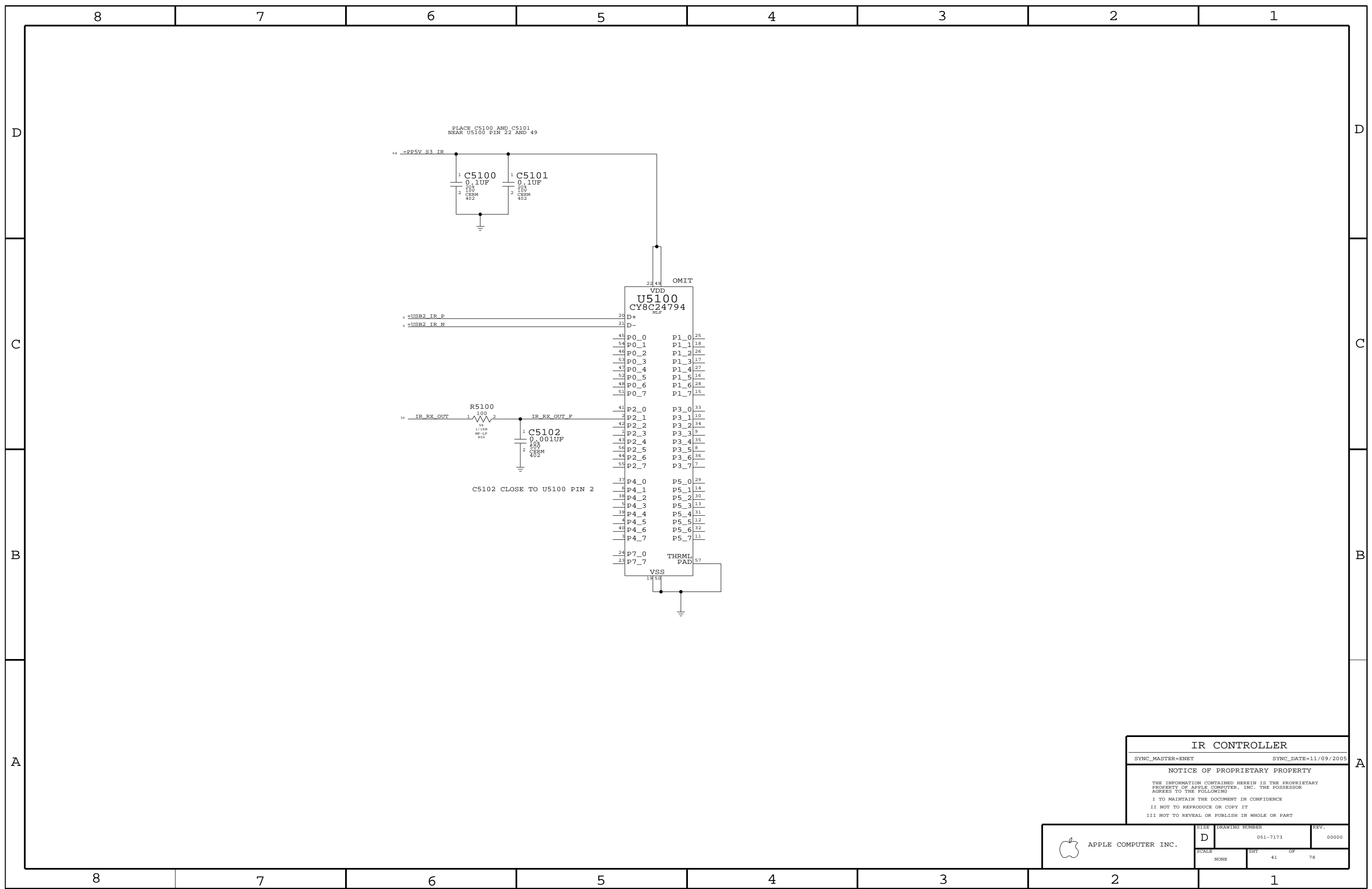


PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
516S0482	1	ACES 88646-1071-NS	J4900	CRITICAL	NORMAL
516S0482	1	ACES 88646-1071-NS	J4900	CRITICAL	FANCY

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

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



PLACE C5100 AND C5101
NEAR U5100 PIN 22 AND 49

C5102 CLOSE TO U5100 PIN 2

IR CONTROLLER

SYNC_MASTER=ENET SYNC_DATE=11/09/2005

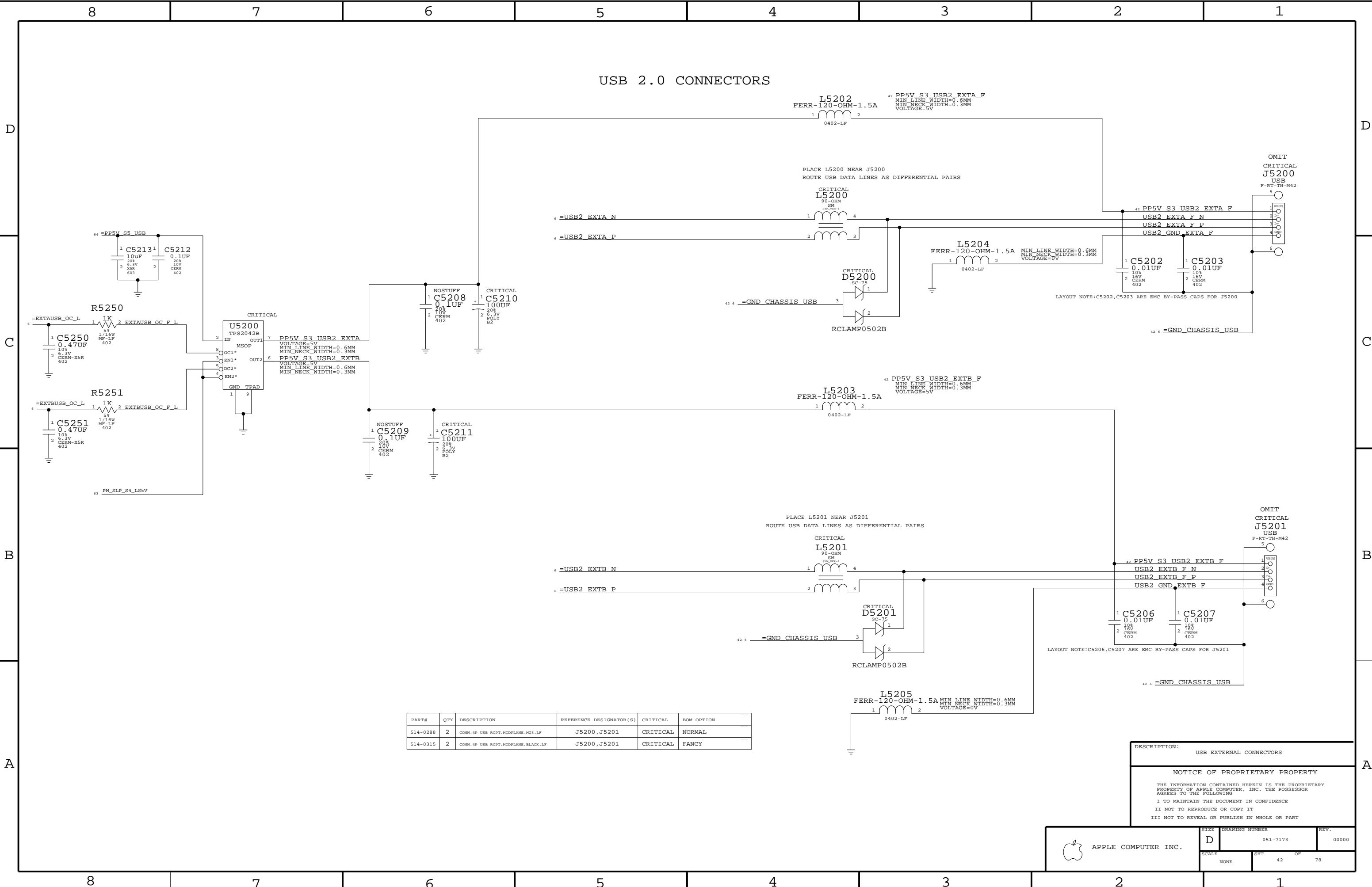
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	SCALE NONE	SHEET 41	OF 78

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

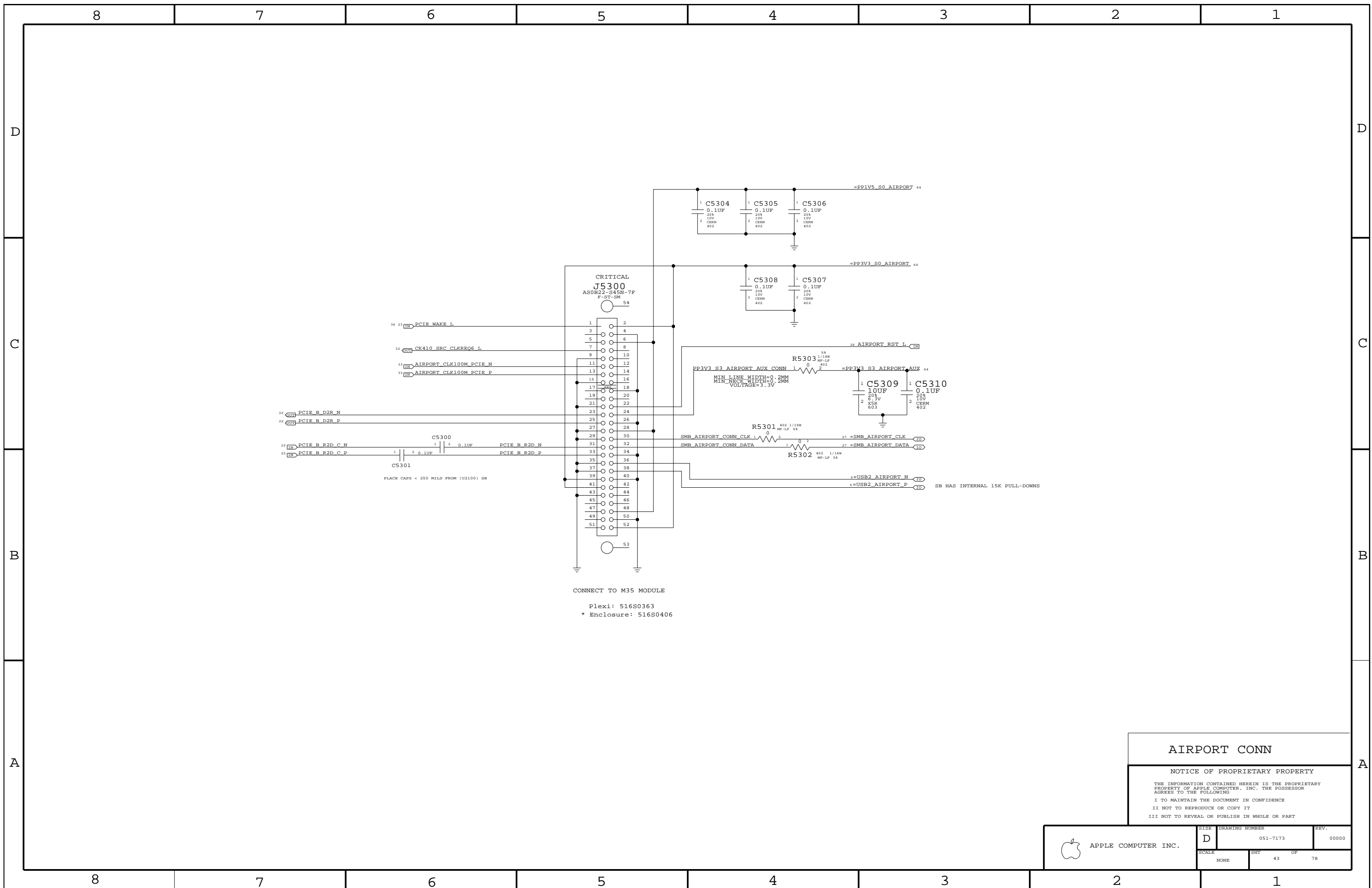
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APPLE COMPUTER INC.

SCALE	DRAWING NUMBER	REV.
NONE	D 051-7173	00000
SHT	42	OF 78

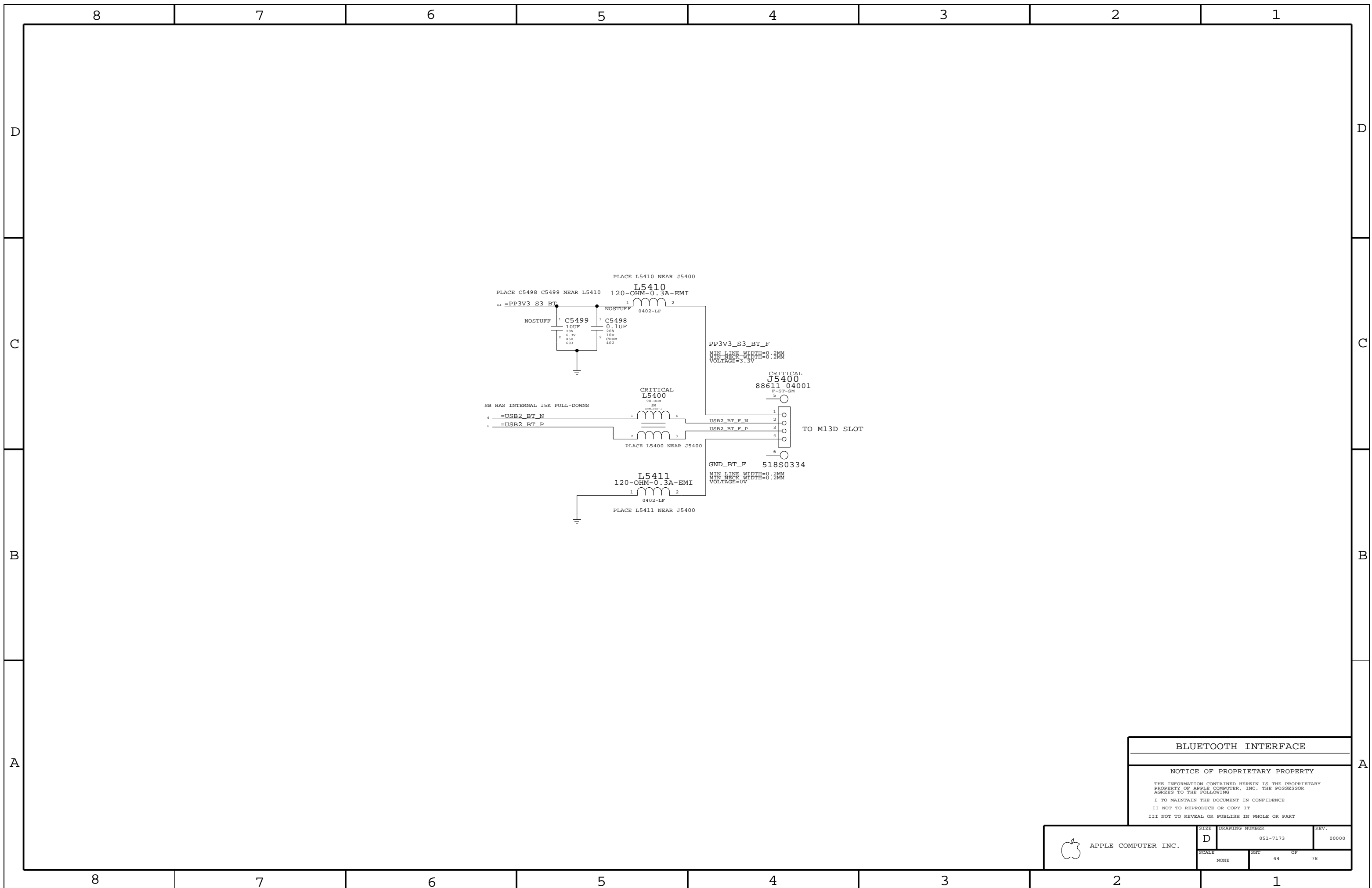


AIRPORT CONN

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



BLUETOOTH INTERFACE

NOTICE OF PROPRIETARY PROPERTY

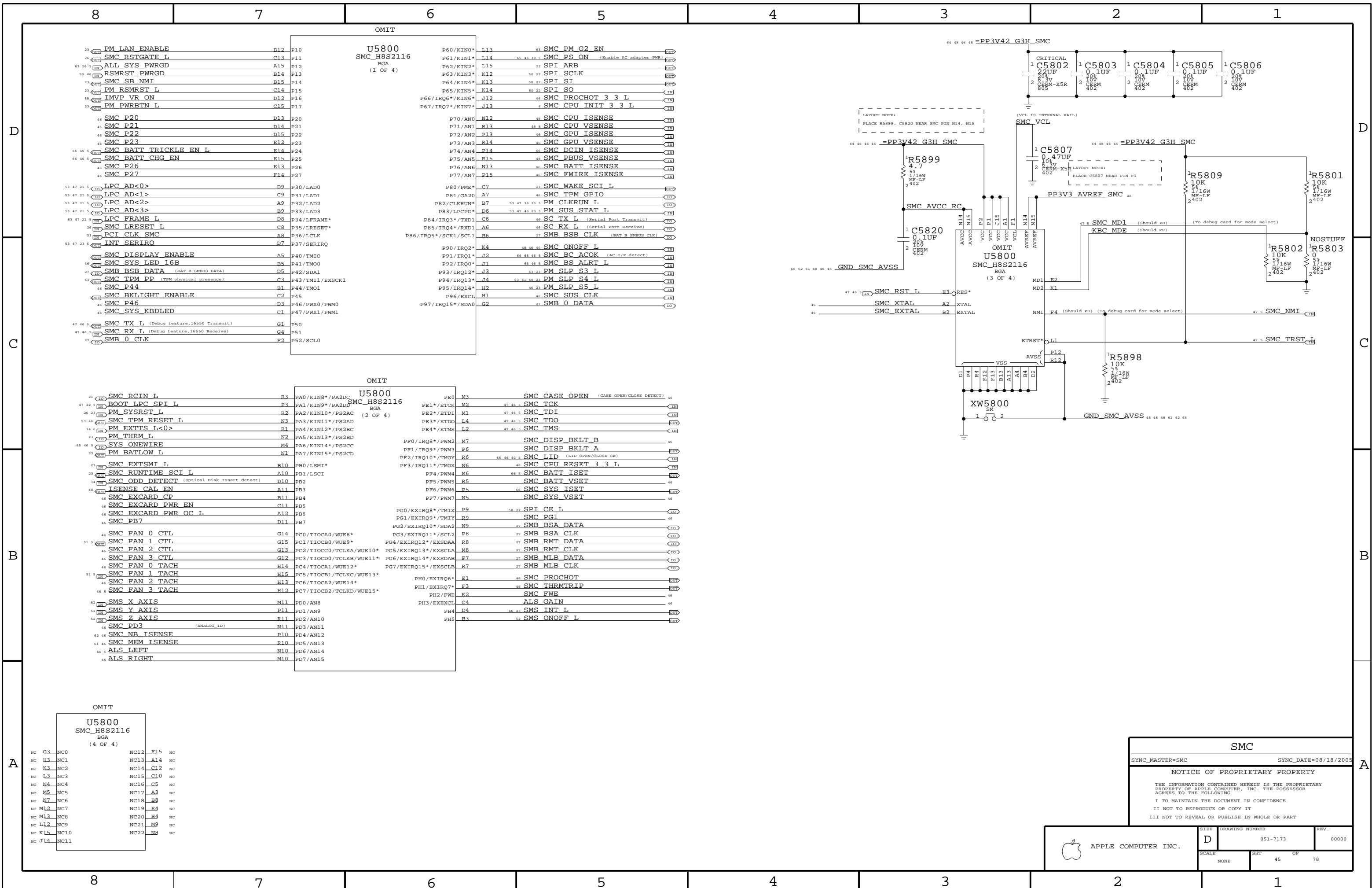
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

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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

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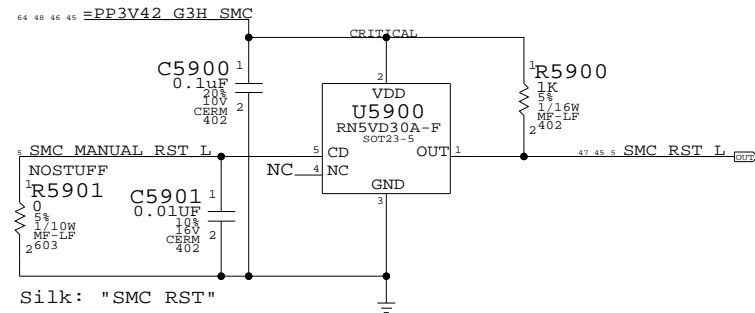
I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

II NOT TO REPRODUCE OR COPY IT

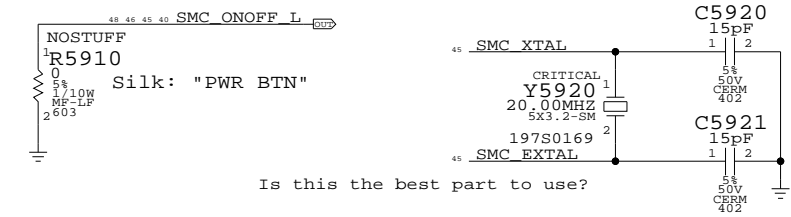
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

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

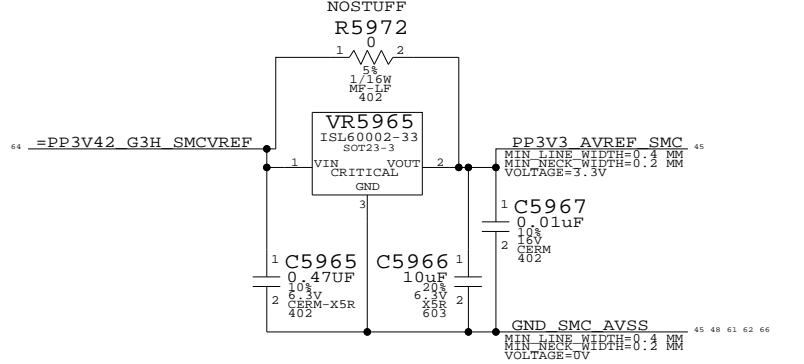
SMC Reset Button / Brownout Detect



Debug Power Button SMC Crystal Circuit

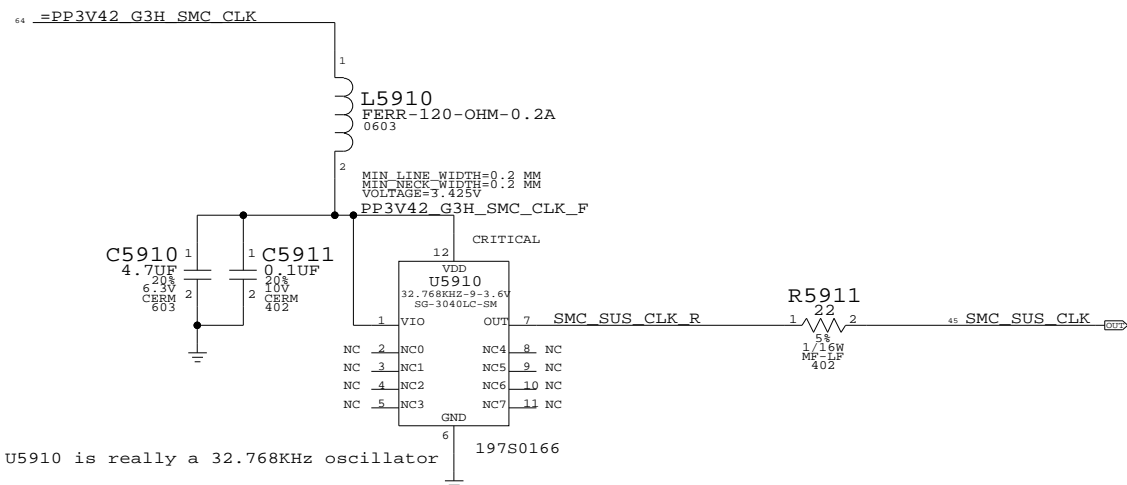


SMC AVREF Supply



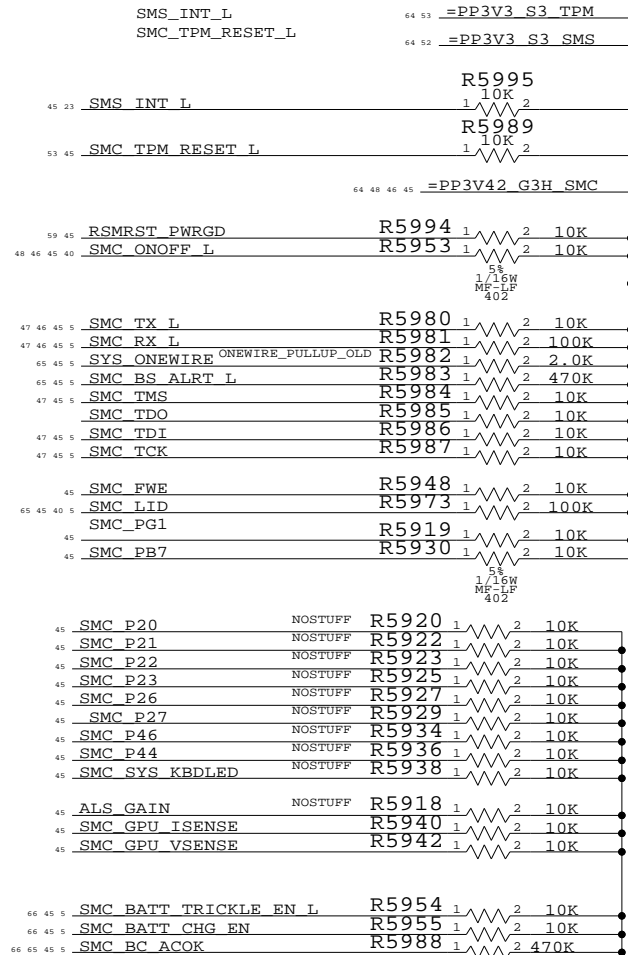
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
353S1278	353S1381	?	VR5965	TI REF3133

SMC G3HOT OSCILLATOR

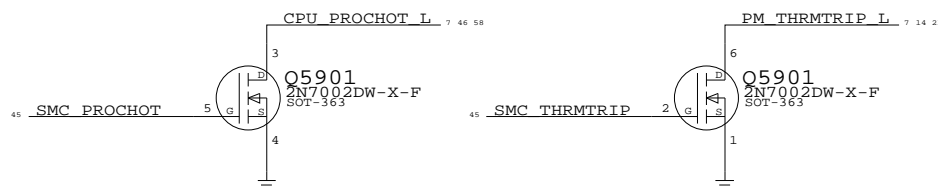


U5910 is really a 32.768KHz oscillator 197S0166

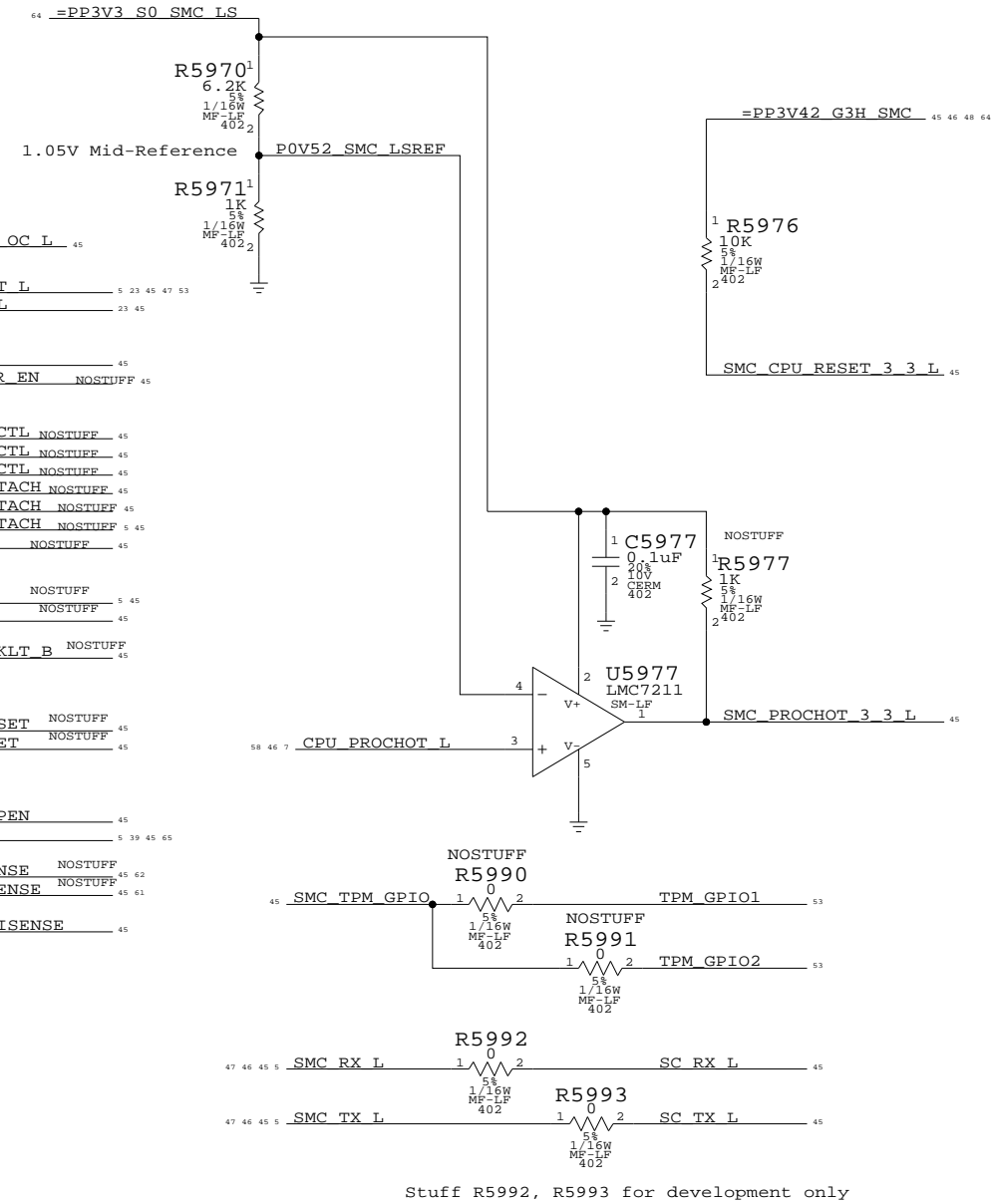
THESE NEED TO BE PULLED TO THE PROPER RAIL:



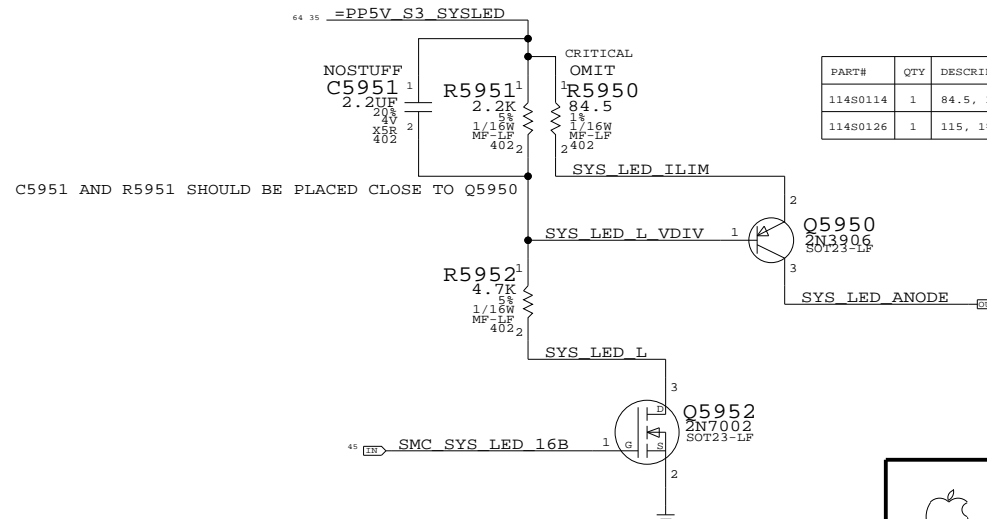
SMC 3.3V to 1.05V Level Shifting



SMC 1.05V to 3.3V Level Shifting



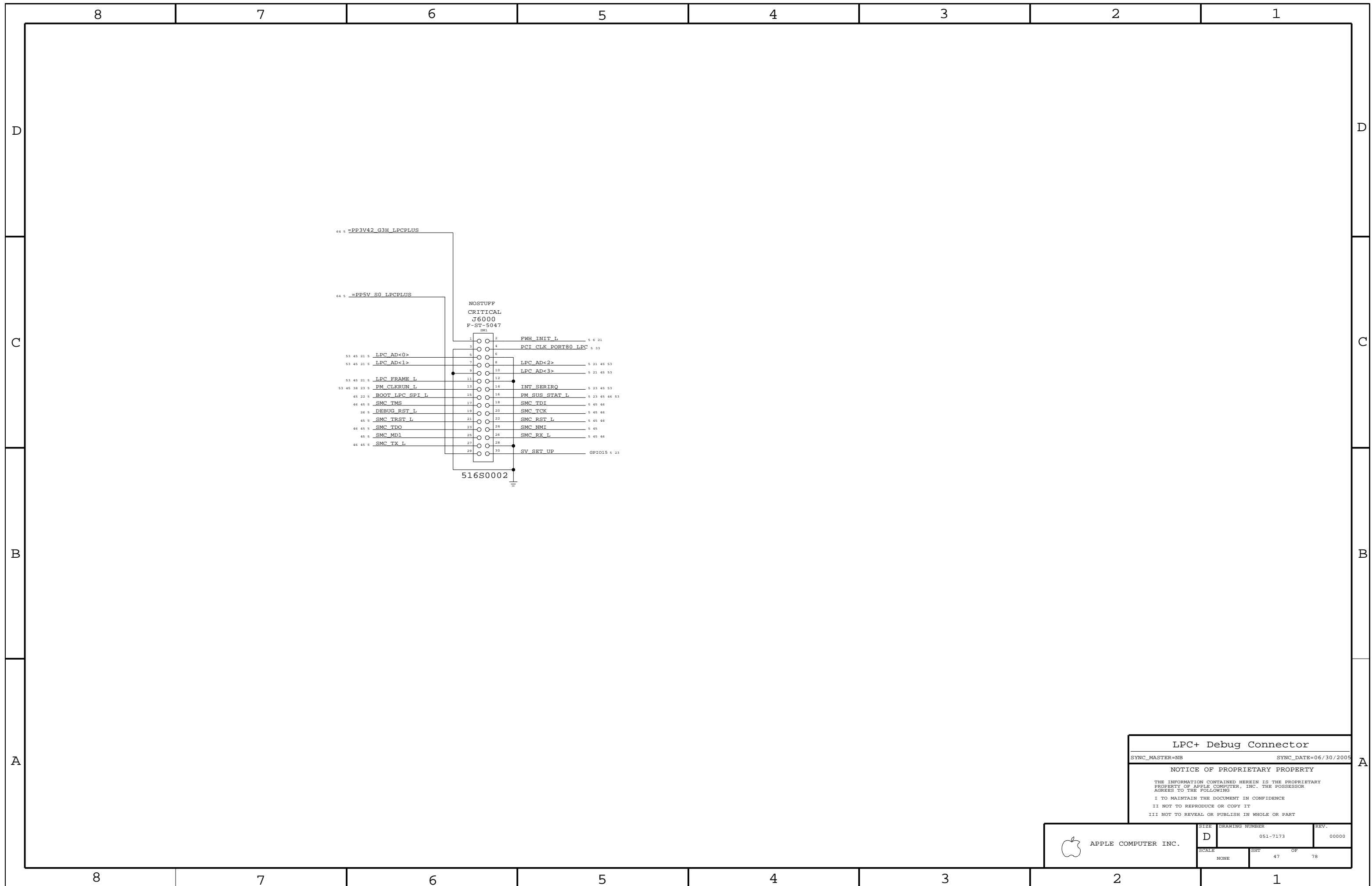
System (Sleep) LED Circuit



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
11480114	1	84.5, 18, 1/16W, MF-LF, 402	R5950	NORMAL
11480126	1	115, 18, 1/16W, MF-LF, 402	R5950	FANCY

SMC SUPPORT
 SYNC_MASTER=SMC SYNC_DATE=08/23/2005
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APPLE COMPUTER INC.
 DRAWING NUMBER: D 051-7173
 SCALE: NONE SHEET: 46 OF 78
 REV: 00000



LPC+ Debug Connector

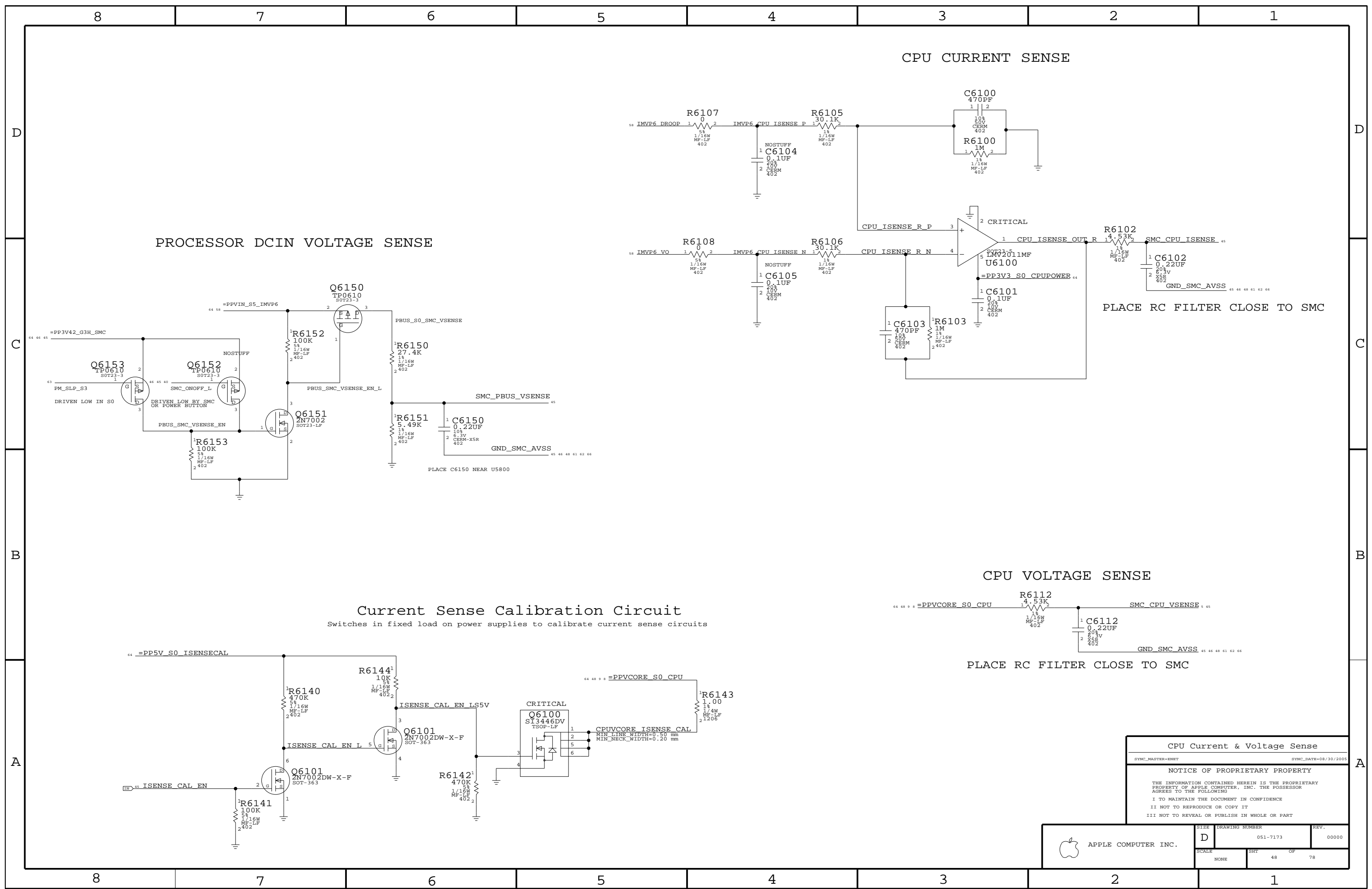
SYNC_MASTER=NB SYNC_DATE=06/30/2005

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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

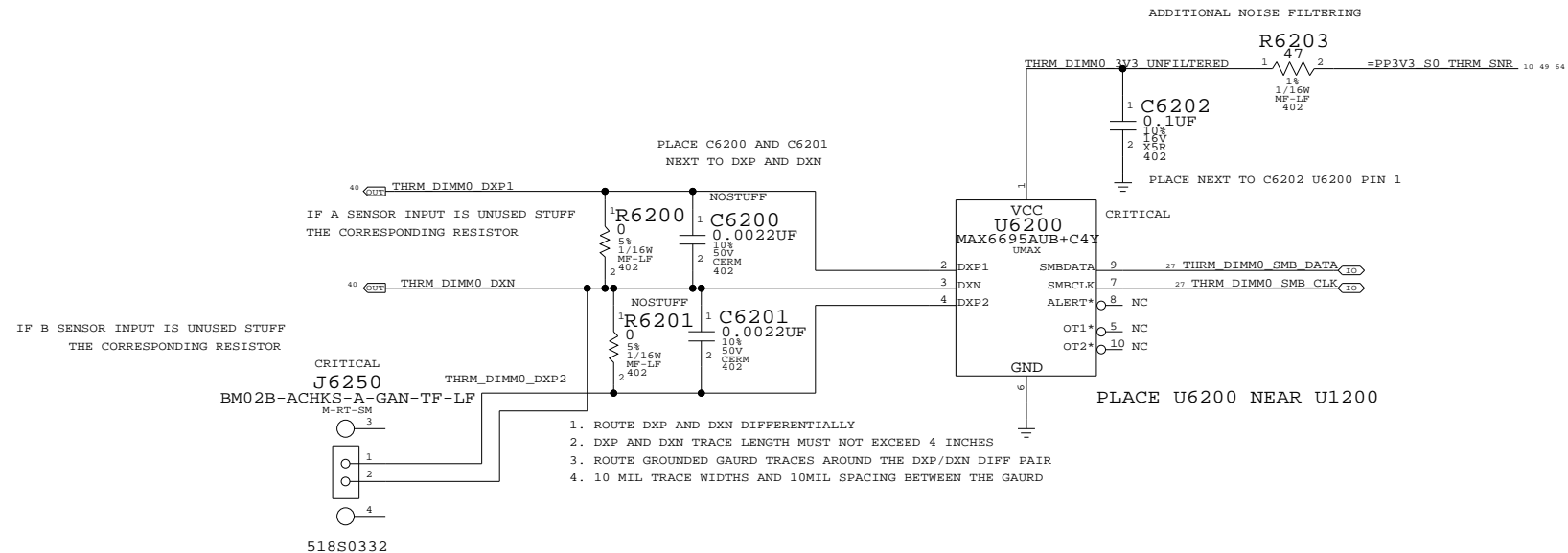
PLACE RC FILTER CLOSE TO SMC

PLACE RC FILTER CLOSE TO SMC

CPU Current & Voltage Sense
 SYNC_MASTER=EMBT SYNC_DATE=08/30/2005
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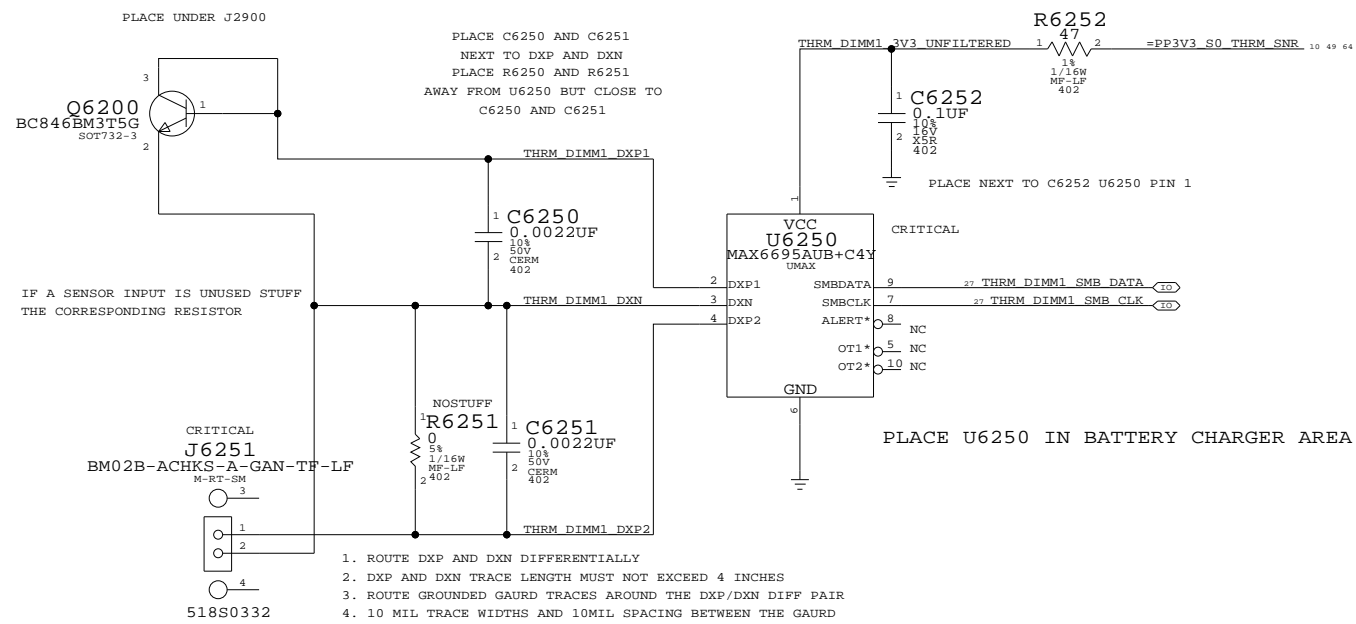
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT	OF	78
NONE	48		

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.

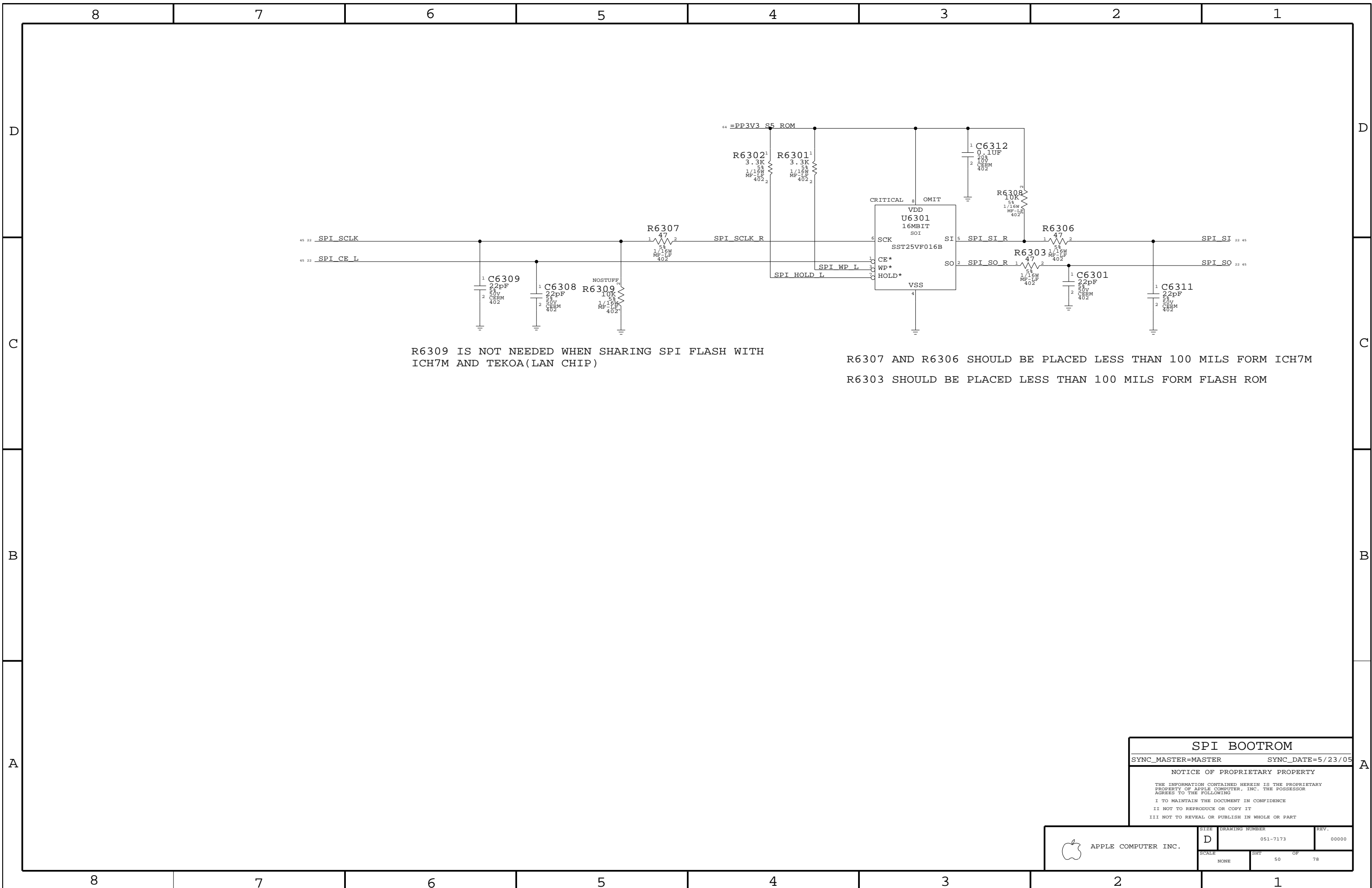
TEMPERATURE SENSE

SYNC_MASTER=ENET SYNC_DATE=11/09/2005

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



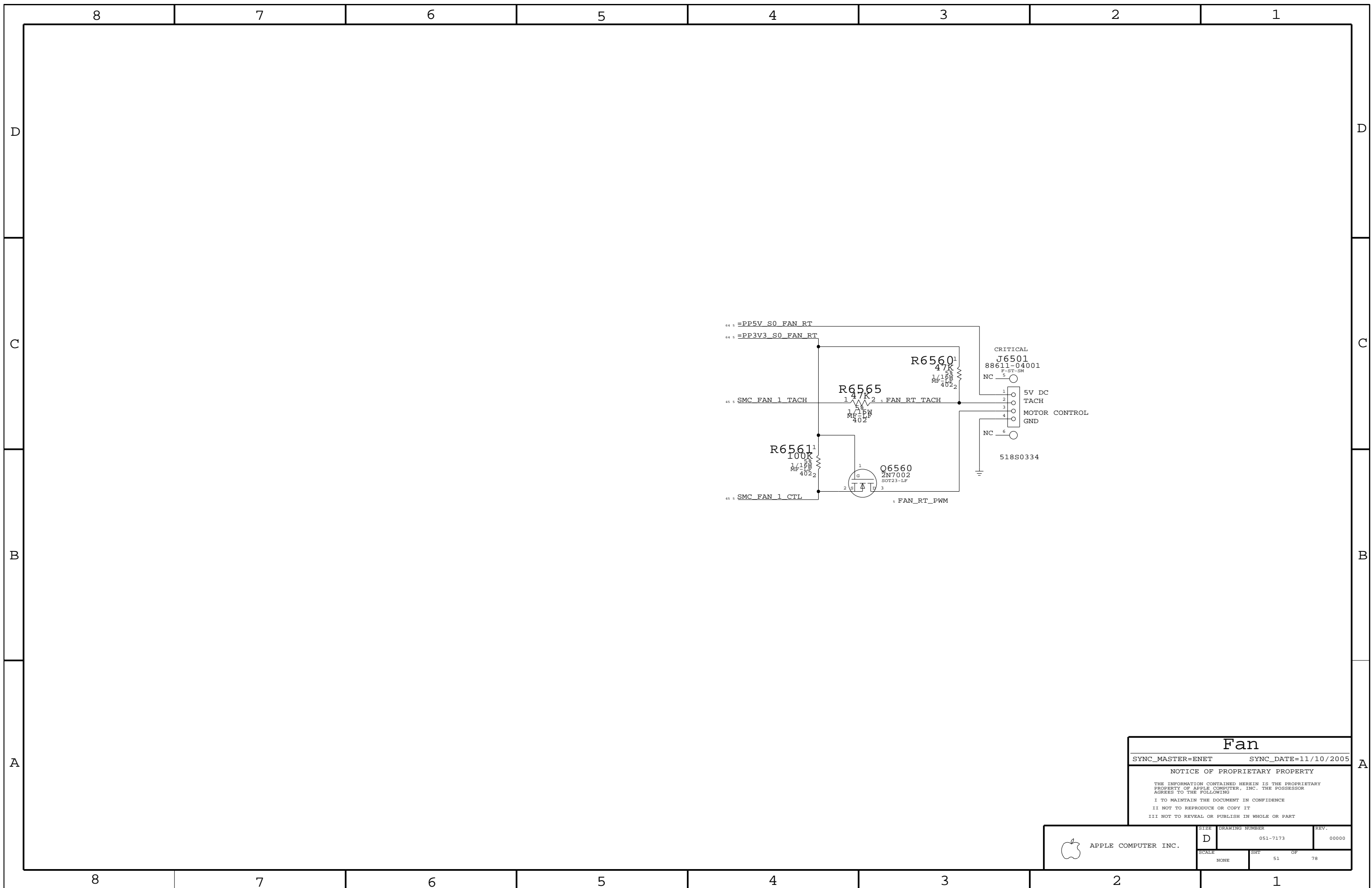
SPI BOOTROM

SYNC_MASTER=MASTER SYNC_DATE=5/23/05

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




Fan

SYNC_MASTER=ENET SYNC_DATE=11/10/2005

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SCALE	SHT	OF	
NONE	51	78	

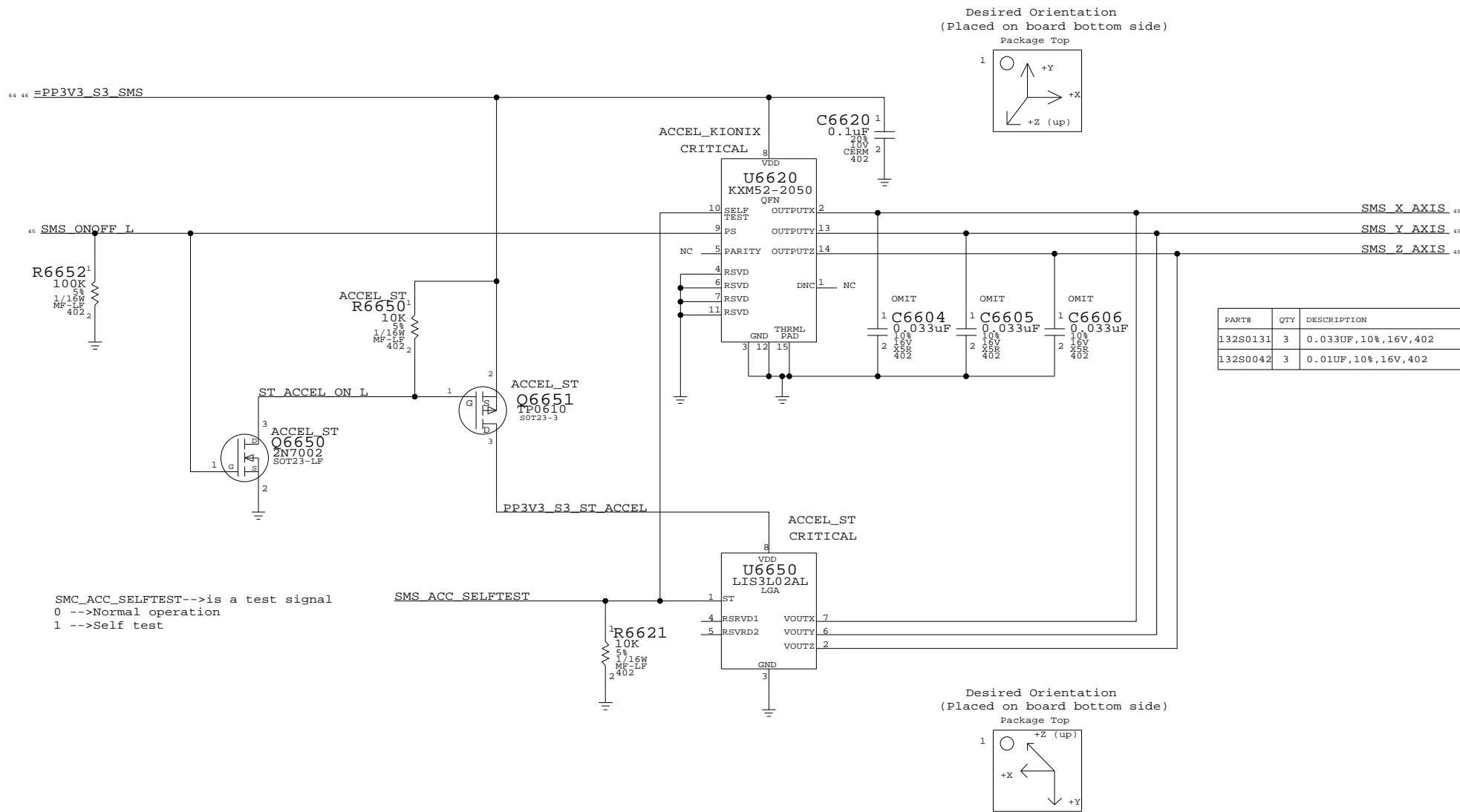
PAGE NOTES

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
 7/28/2005 - CONNECTED PD PIN TO SMC'S SMS_ONOFF_L
 7/28/2005 -



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

SMC_ACC_SELFTEST-->is a test signal
 0 -->Normal operation
 1 -->Self test

SMS

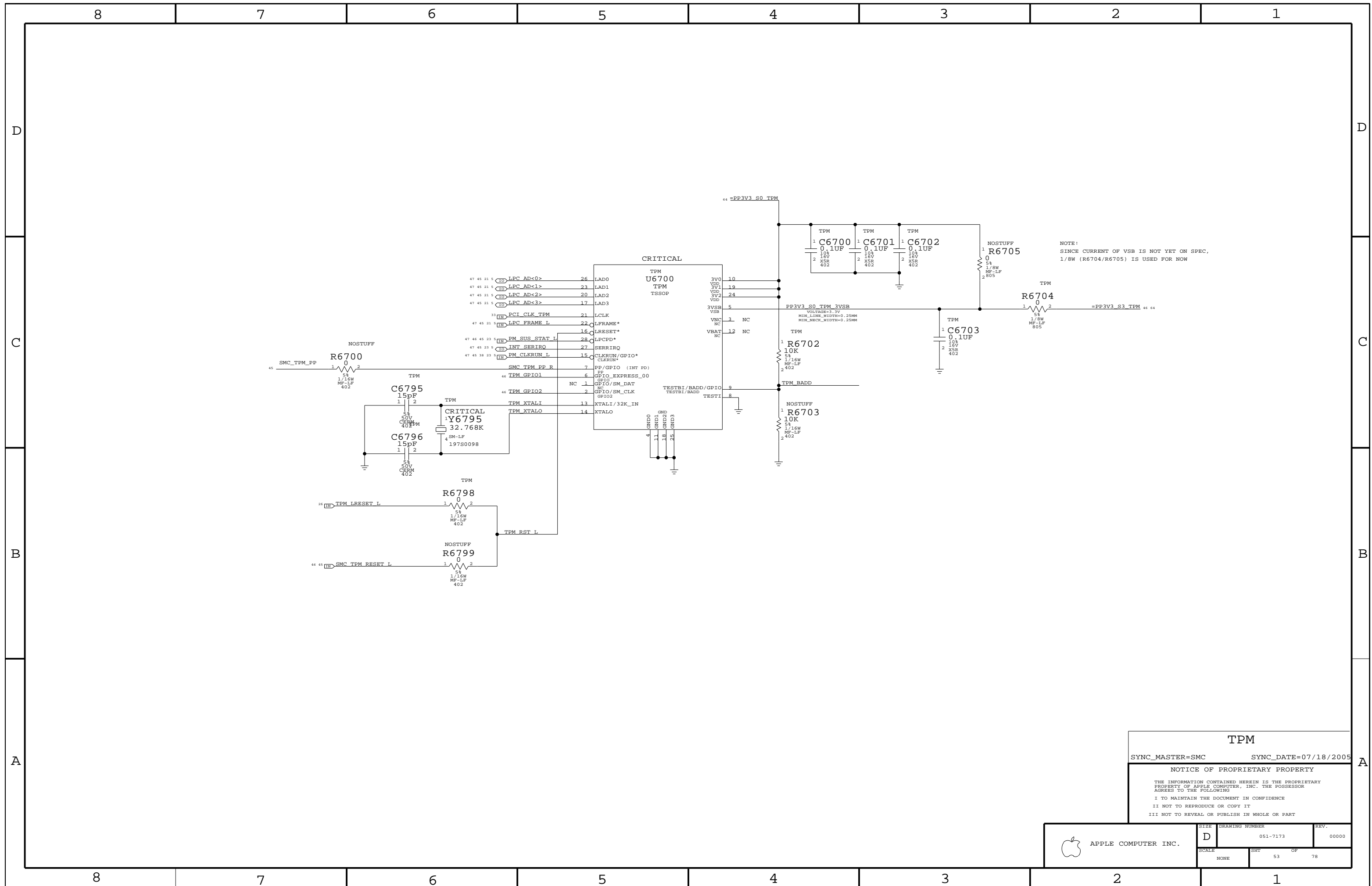
SYNC_MASTER=SMC SYNC_DATE=08/23/2005

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



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

TPM

SYNC_MASTER=SMC SYNC_DATE=07/18/2005


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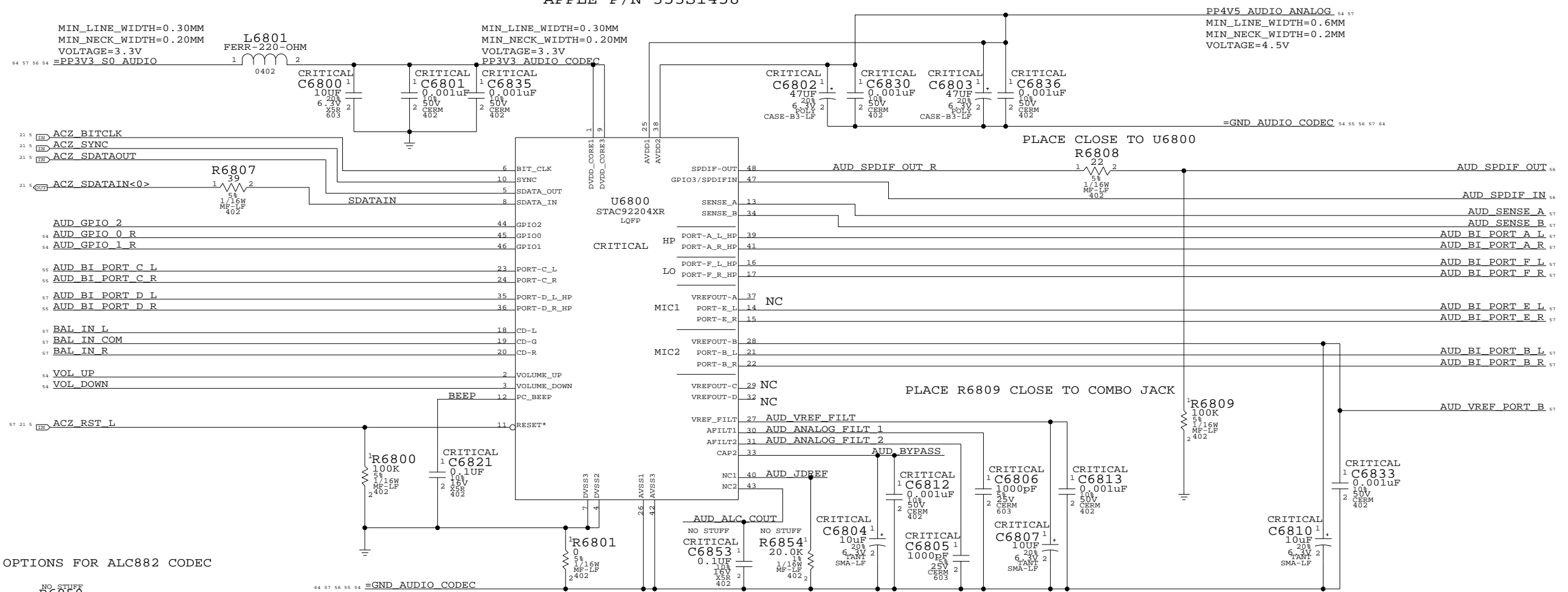
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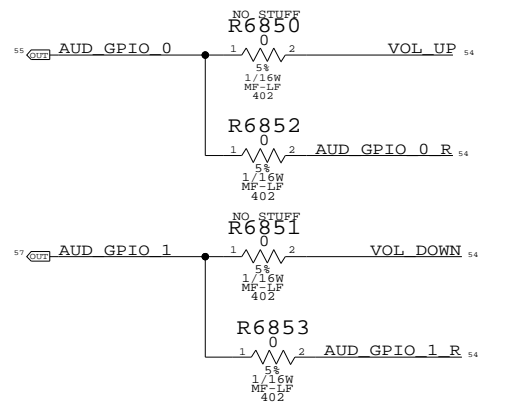
 APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. 00000
	SCALE NONE	SHEET 53	OF 78

AUDIO CODEC

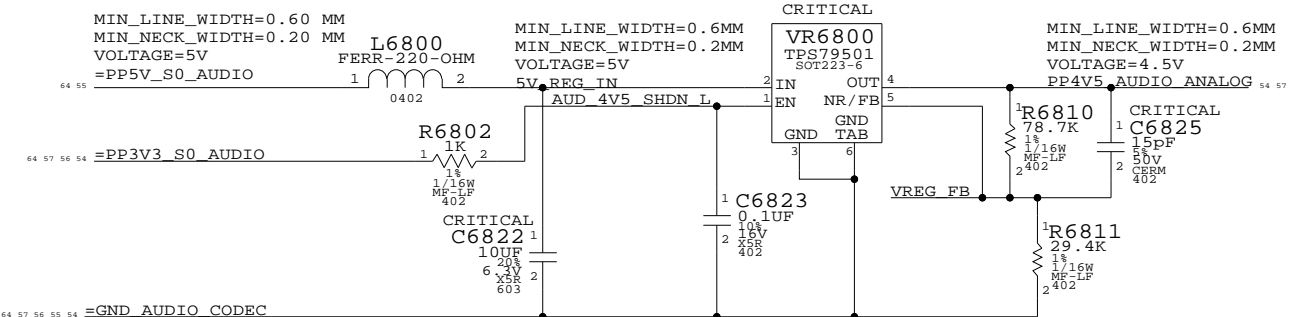
APPLE P/N 353S1458



STUFFING OPTIONS FOR ALC882 CODEC



64 57 56 55 54 =GND AUDIO CODEC
 MIN_LINE_WIDTH=0.30 MM
 MIN_NECK_WIDTH=0.20 MM
 VOLTAGE=0V



4.5V POWER SUPPLY FOR CODEC

64 57 56 55 54 =GND AUDIO CODEC

USING DC OFFSET SCREENED PART AS PRIMARY OPTION

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

AUDIO: CODEC

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

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

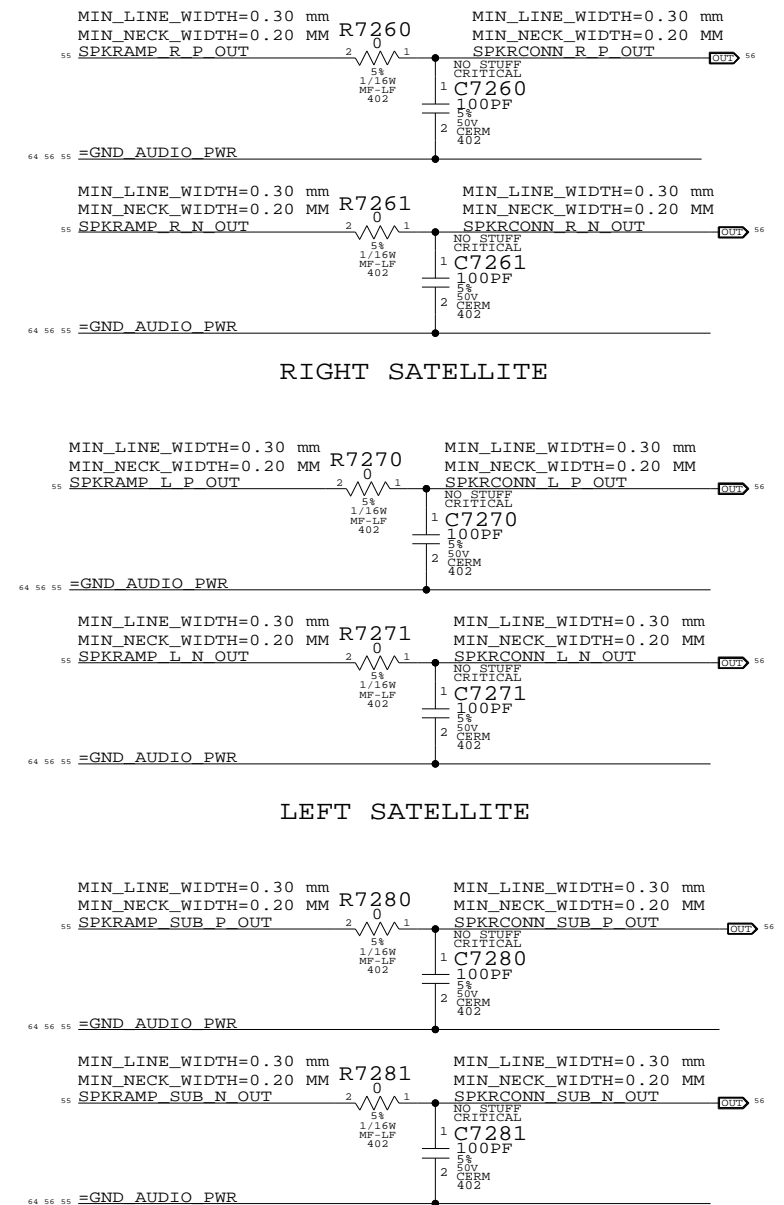
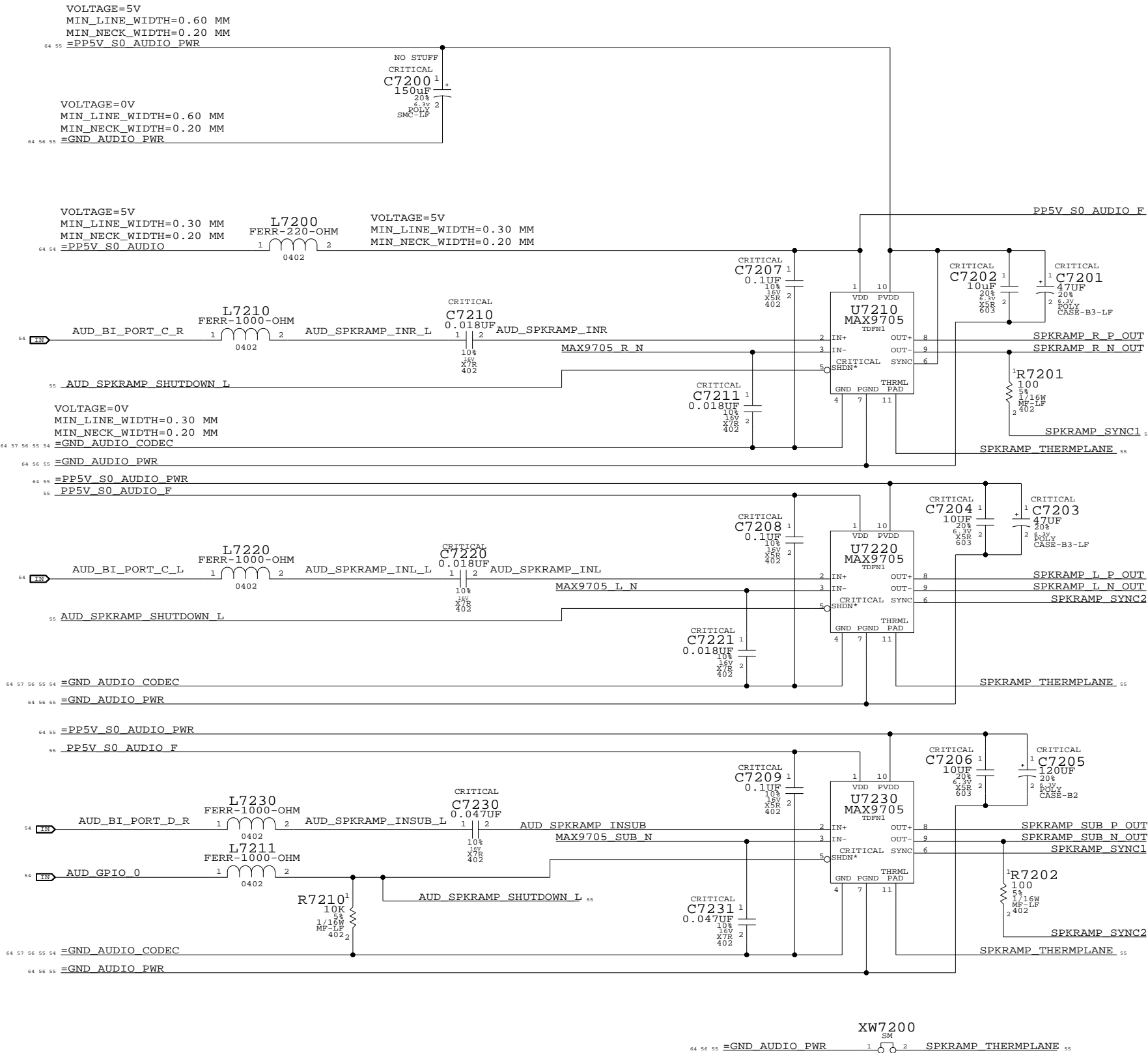
SATELLITE & SUB TWEETER AMPLIFIER APN:353S1595

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

SPEAKER OUTPUT EMI FILTERS

D
C
B
A

D
C
B
A



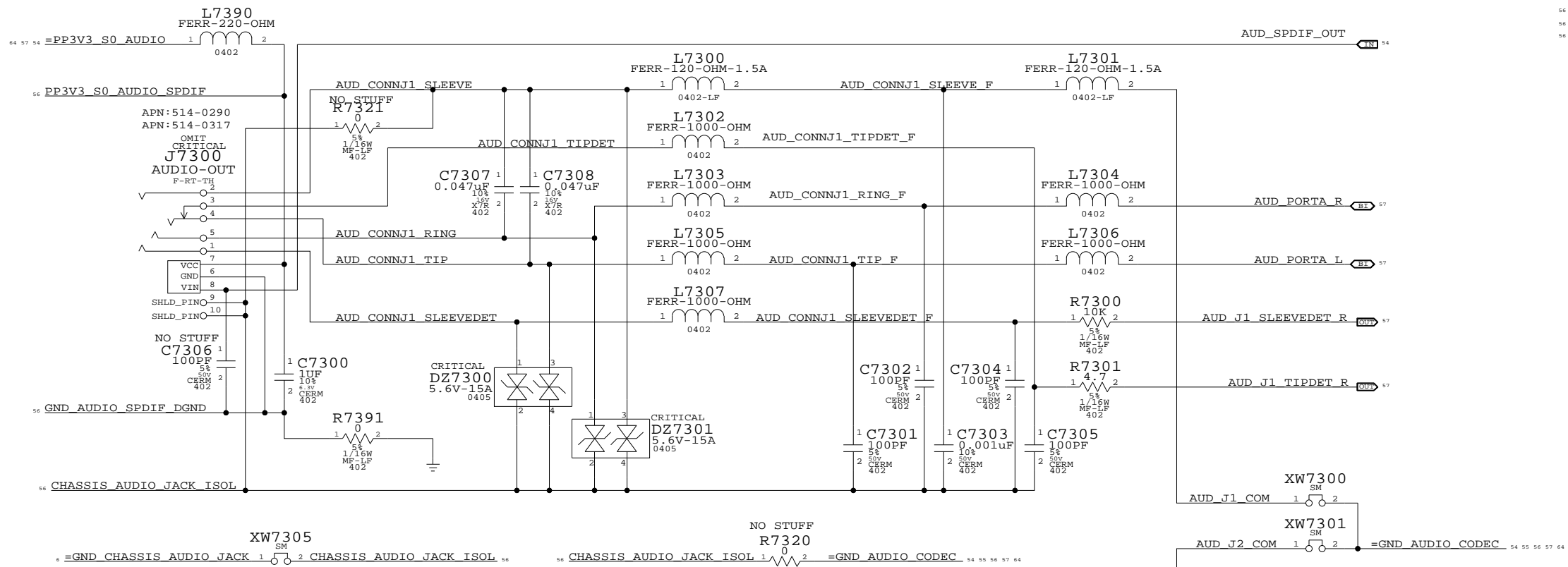
AUDIO: SPEAKER AMP

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006
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	D	051-7173	00000
SCALE	NONE	SHT	OF
		55	78

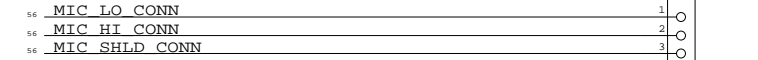
XW7200

AUDIO JACK 1: LO/HP CONNECTOR, SPDIF TX



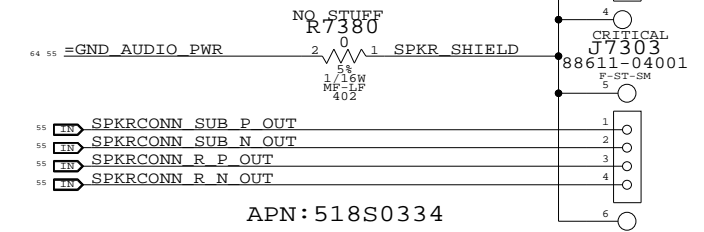
MIC CONNECTOR

APN: 514S0392

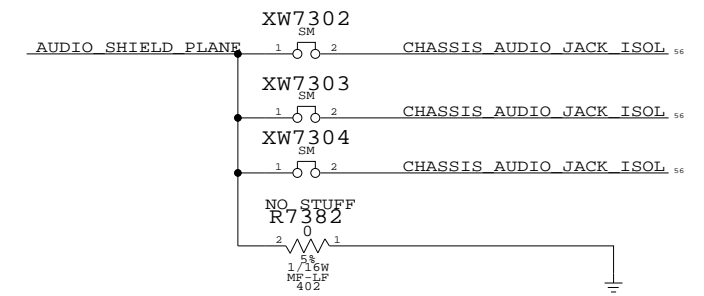


SPEAKER CONNECTOR

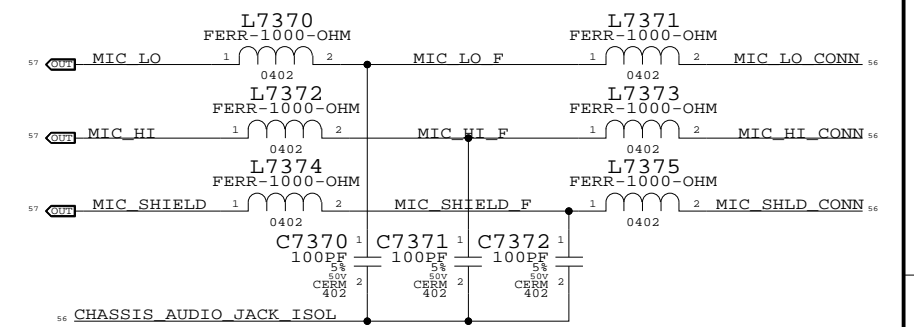
APN: 518S0332



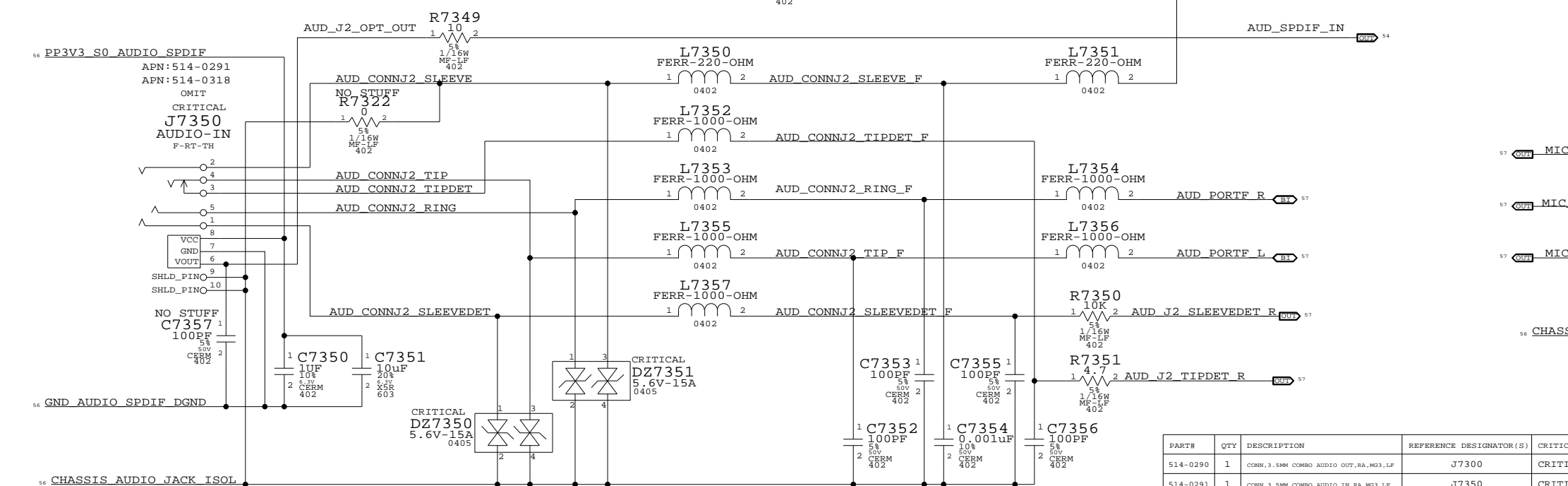
AUDIO SHIELD FILL



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

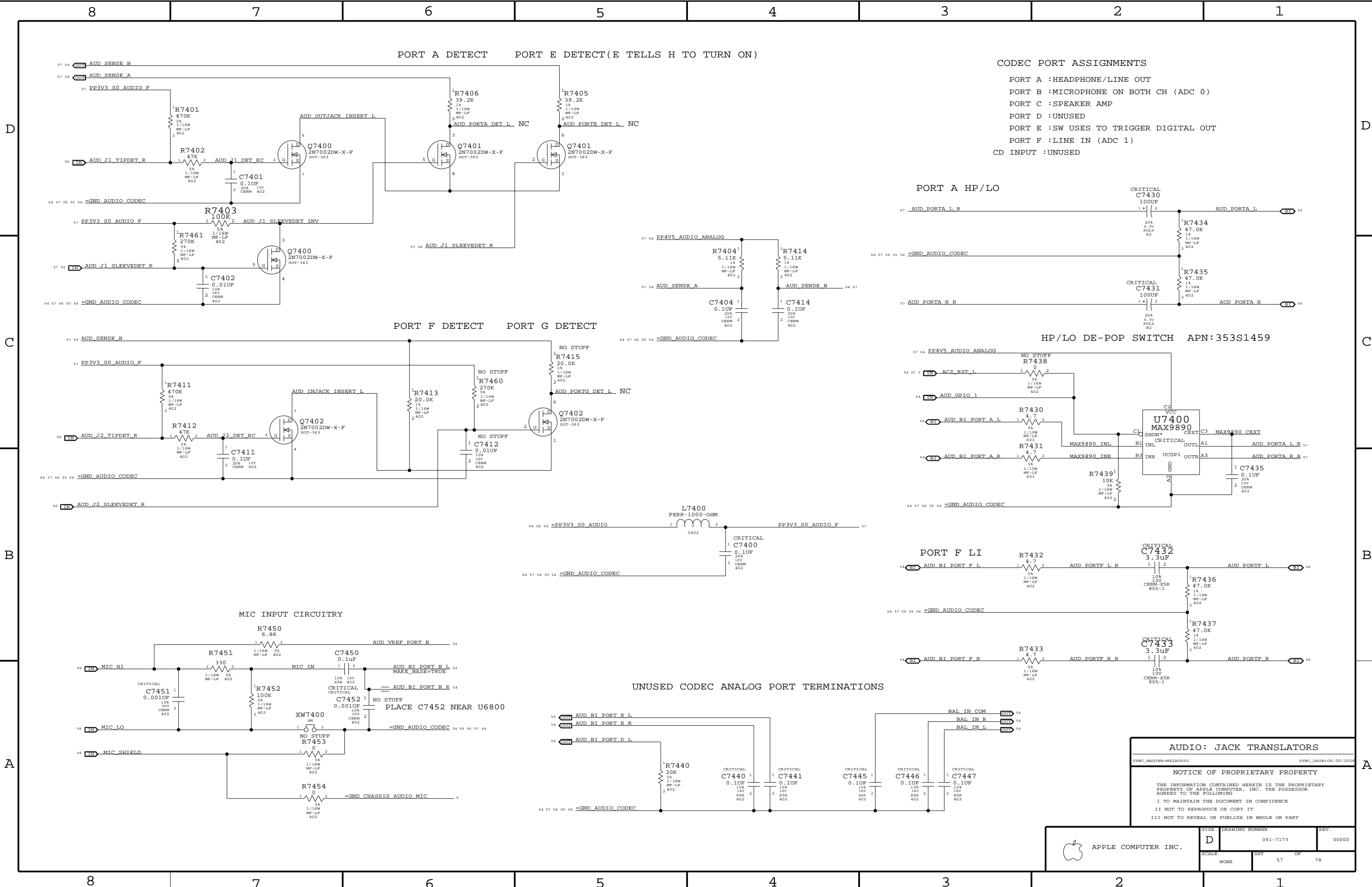
AUDIO: JACK

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

NOTICE OF PROPRIETARY PROPERTY

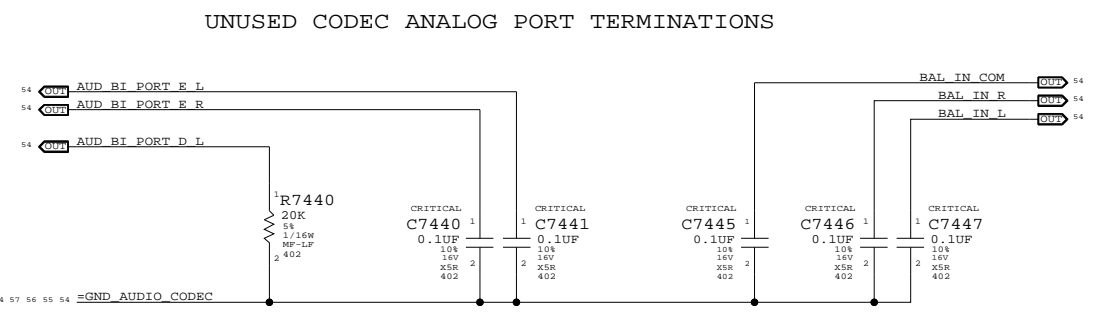
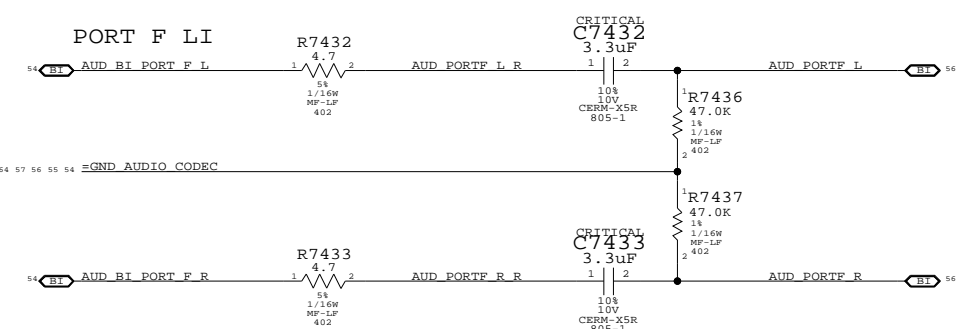
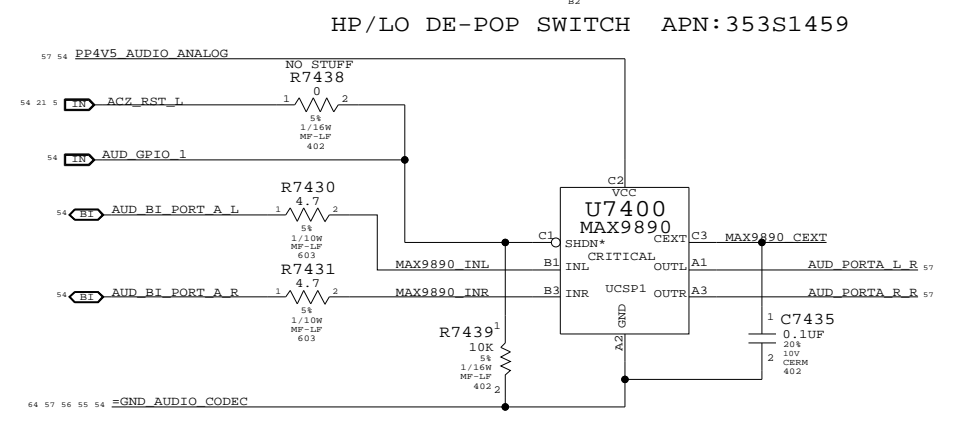
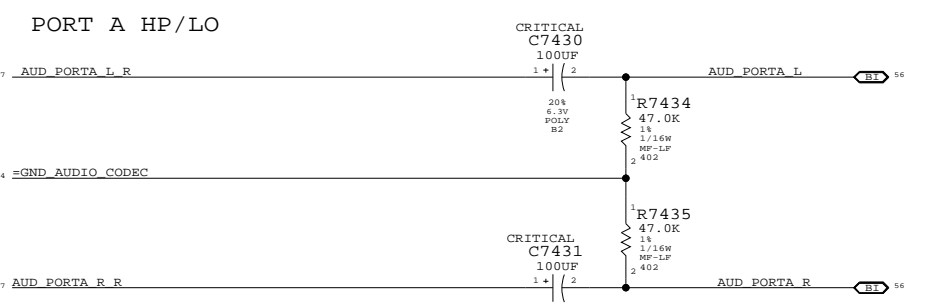
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	SHT		OF
NONE	56		78



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

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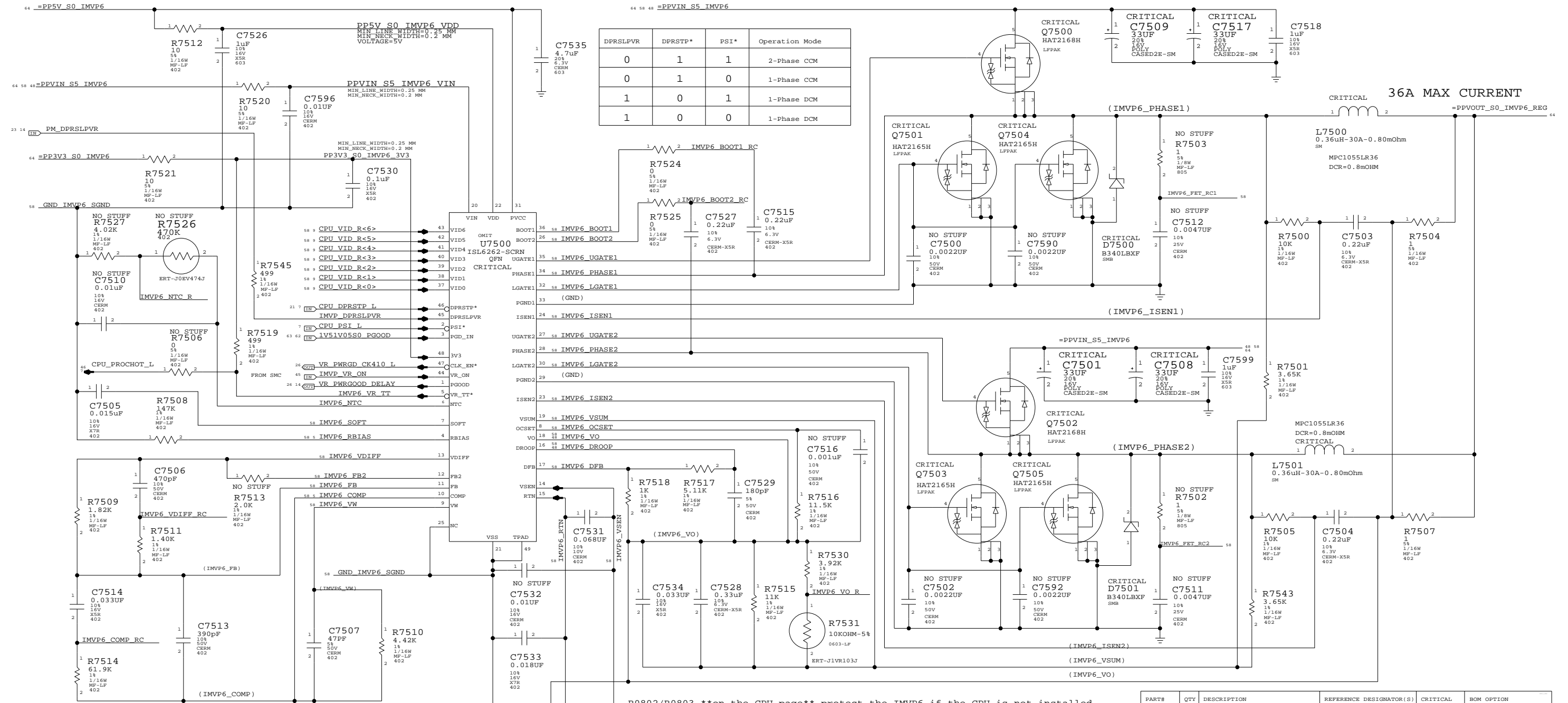
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III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	00000
SCALE	NONE	SHT	OF
		57	78

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

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		MIN_LINE_WIDTH	MIN_NECK_WIDTH
58 IMVP6_PHASE1	1.5 MM	0.25 MM	58 IMVP6_PHASE2	0.25 MM	0.25 MM
58 IMVP6_BOOT1	0.25 MM	0.25 MM	58 IMVP6_BOOT2	0.25 MM	0.25 MM
58 IMVP6_UGATE1	1.5 MM	0.25 MM	58 IMVP6_UGATE2	0.25 MM	0.25 MM
58 IMVP6_LGATE1	1.5 MM	0.25 MM	58 IMVP6_LGATE2	0.25 MM	0.25 MM
58 IMVP6_ISEN1	0.25 MM	0.25 MM	58 IMVP6_ISEN2	0.25 MM	0.25 MM
58 IMVP6_FET_RC1	0.25 MM	0.25 MM	58 IMVP6_FET_RC2	0.25 MM	0.25 MM
58 IMVP6_VSUM_R1	0.25 MM	0.25 MM	58 IMVP6_VSUM_R2	0.25 MM	0.25 MM
58 IMVP6_VO_R1	0.25 MM	0.25 MM	58 IMVP6_VO_R2	0.25 MM	0.25 MM
			58 IMVP6_VSEN	0.25 MM	0.25 MM

IMVP6 CPU VCore Regulator

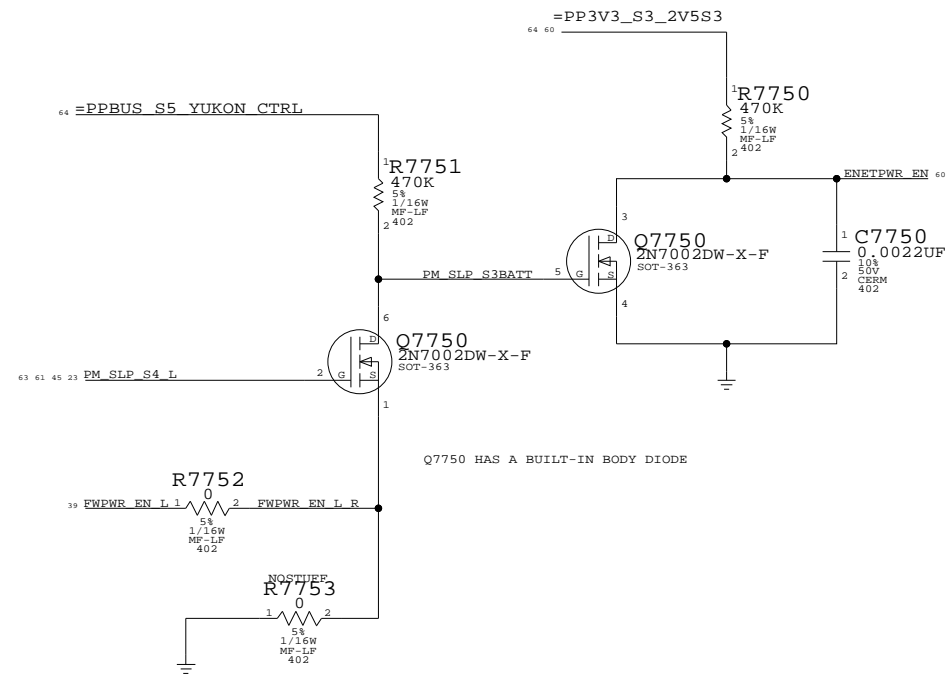
SYNC_MASTER=POWER SYNC_DATE=07/13/2005

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	D	051-7173	00000
SCALE	SHEET	OF	
NONE	58	78	

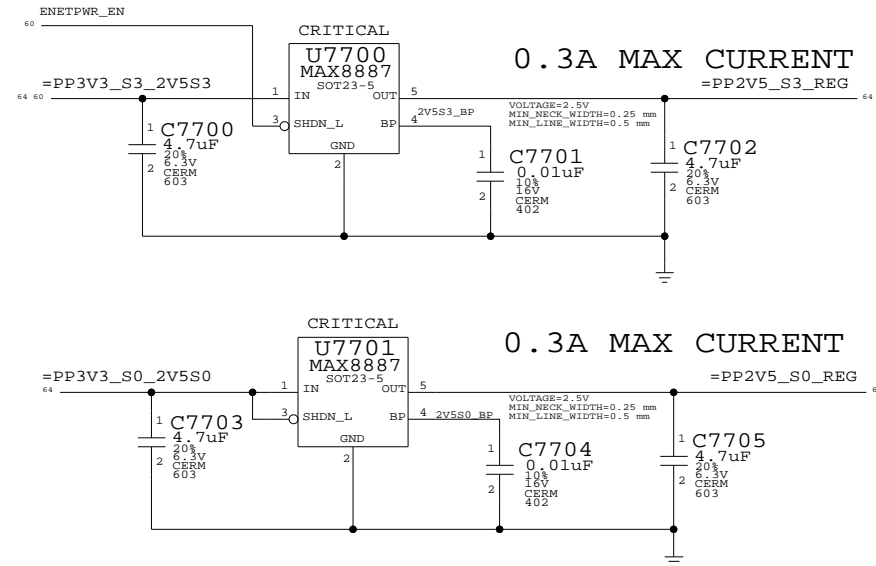
YUKON POWER CONTROL



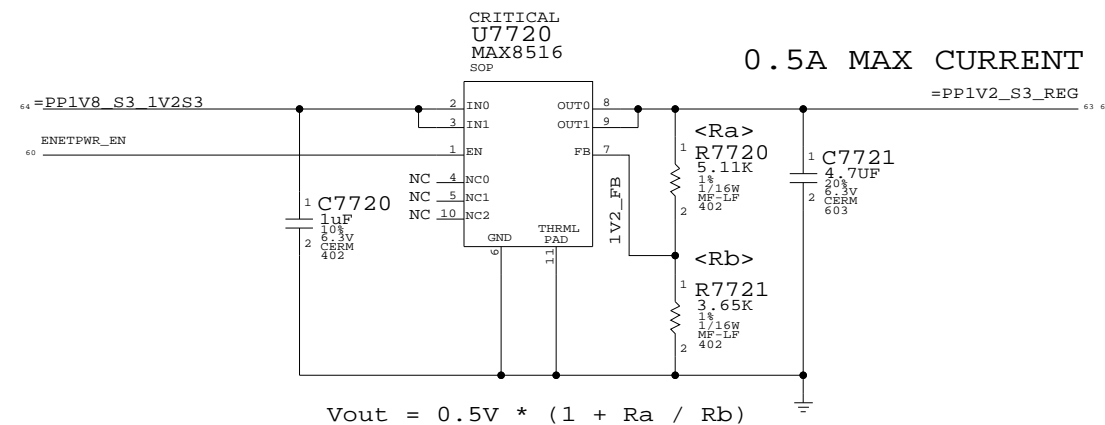
NAME	PM_SLP_S4_L	FWPWR_EN_L	PM_SLP_S3BATT	ENETPWR_EN
LOGIC	S3 S0	~S0 ~SMC_PS_ON		POWER YUKON
S3 ON BATTERY	TRUE (3.3V)	TRUE (PBUS 12.6V)	TRUE (PBUS 12.6V)	FALSE (0V)
S0 OR S3 ON AC	TRUE (3.3V)	FALSE (0V)	FALSE (0V)	TRUE (3.3V)
S5 ON AC	FALSE (0V)	TRUE (PBUS 12.6V)	TRUE (PBUS 12.6V)	FALSE (0V)
S5 ON BATT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

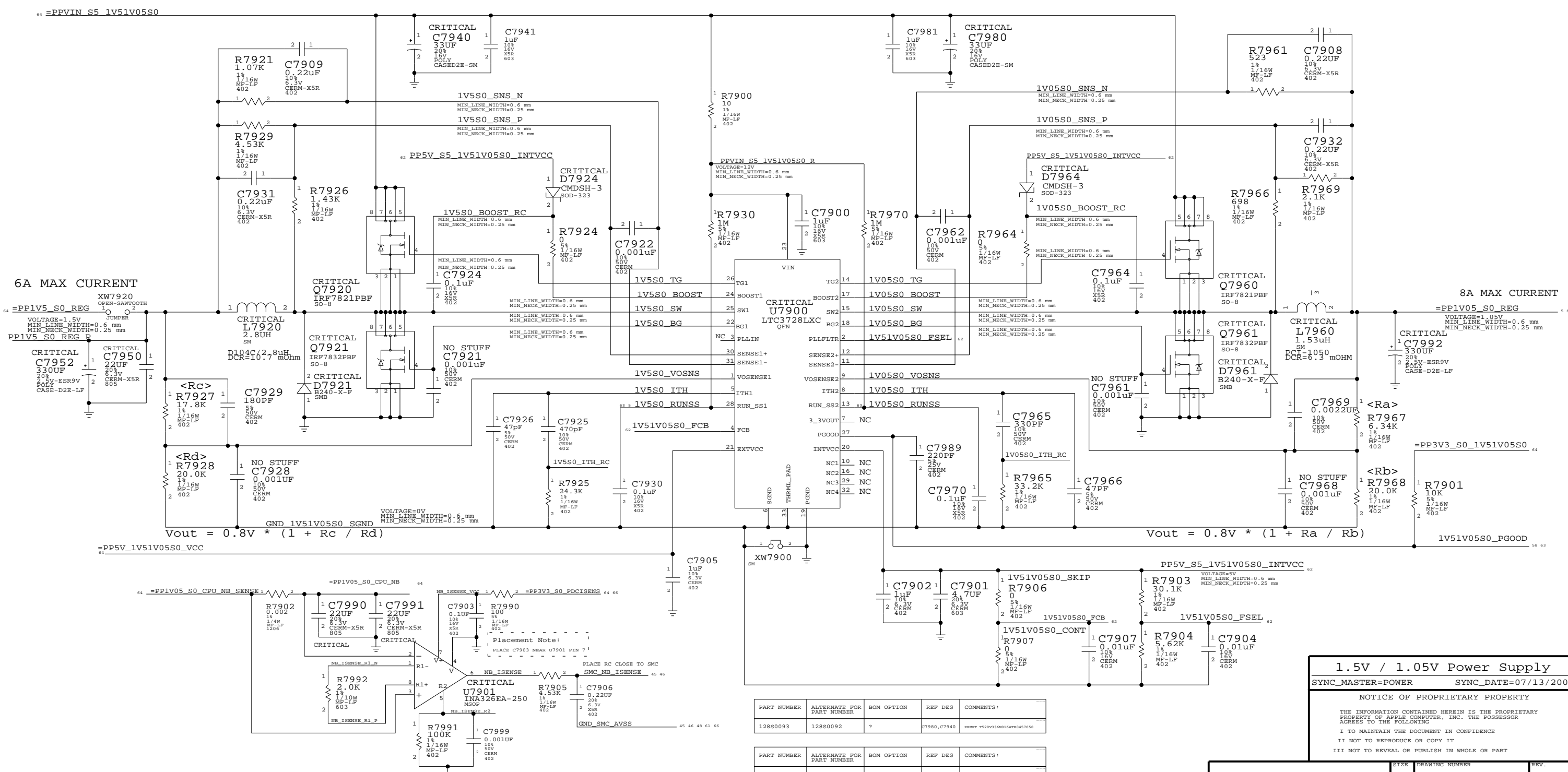


2.5V/1.2V Regulator
 SYNC_MASTER=ENET SYNC_DATE=12/06/2005

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

1.5V/1.05V POWER SUPPLY



6A MAX CURRENT

8A MAX CURRENT

$$V_{out} = 0.8V * (1 + R_c / R_d)$$

$$V_{out} = 0.8V * (1 + R_a / R_b)$$

1.5V / 1.05V Power Supply

SYNC_MASTER=POWER SYNC_DATE=07/13/2005

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PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0093	128S0092	?	C7980, C7940	RENT 7520V3100G1A040457450

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
128S0094	128S0060	?	C7952, C7992	PANASONIC EPEXK0D311E
128S0095	128S0060	?	C7952, C7992	PANASONIC EPEXK0D311E

APPLE COMPUTER INC.

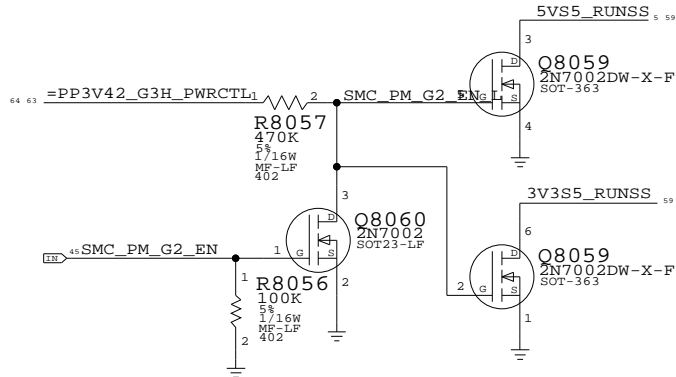
SCALE	DRAWING NUMBER	REV.
NONE	D 051-7173	00000
SHT	62	OF
		78

POWER CONTROL SIGNALS

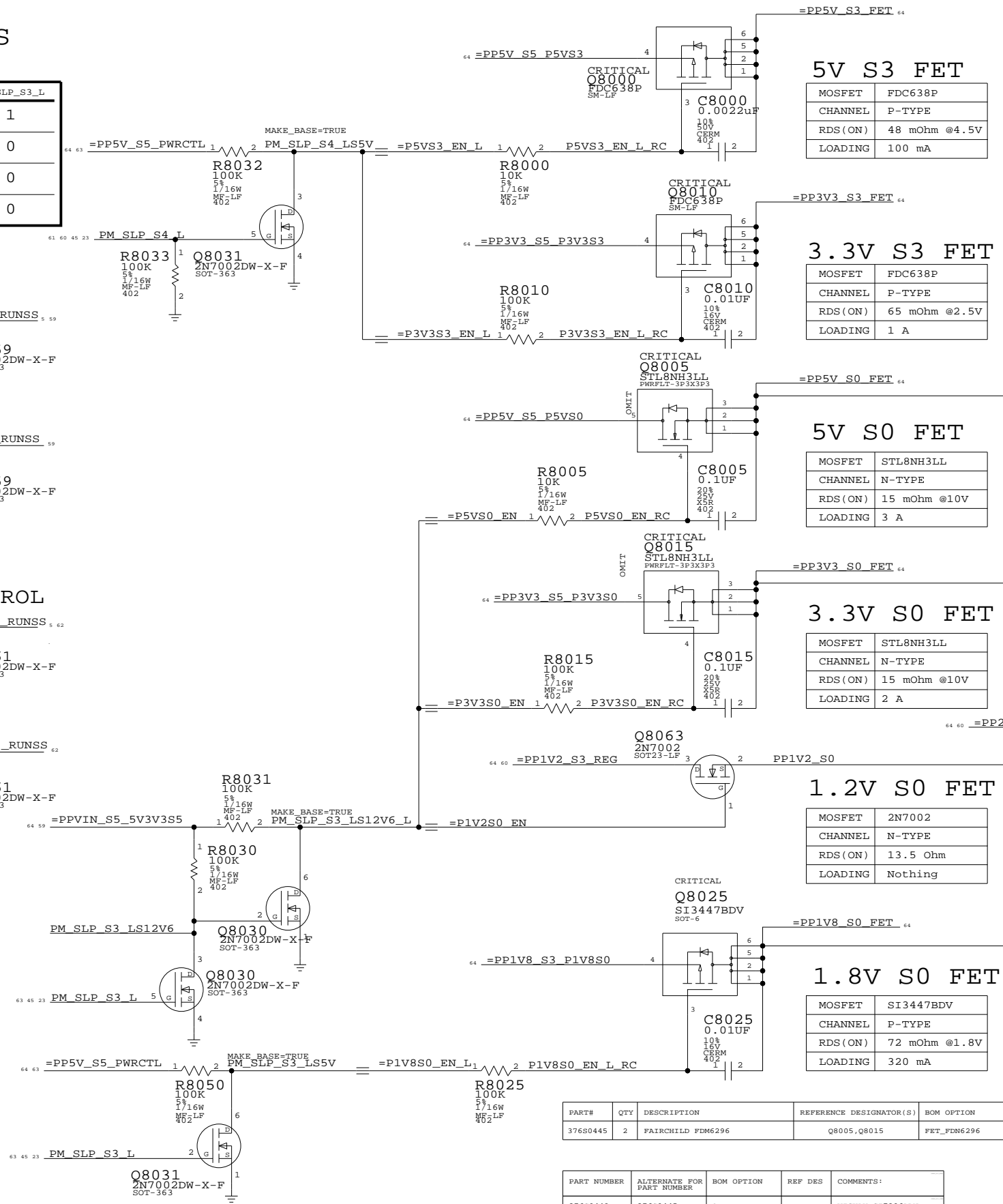
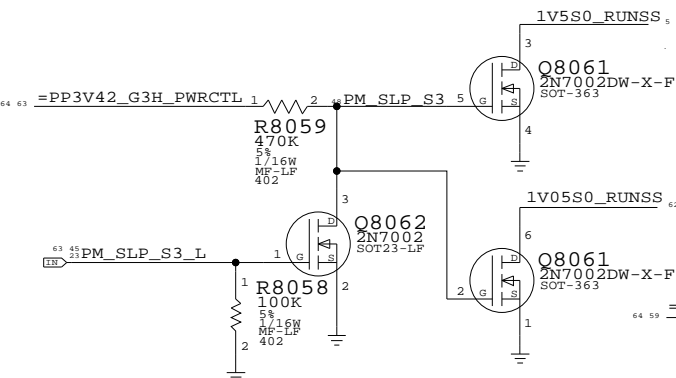
These rails are monitored by LTC2908

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

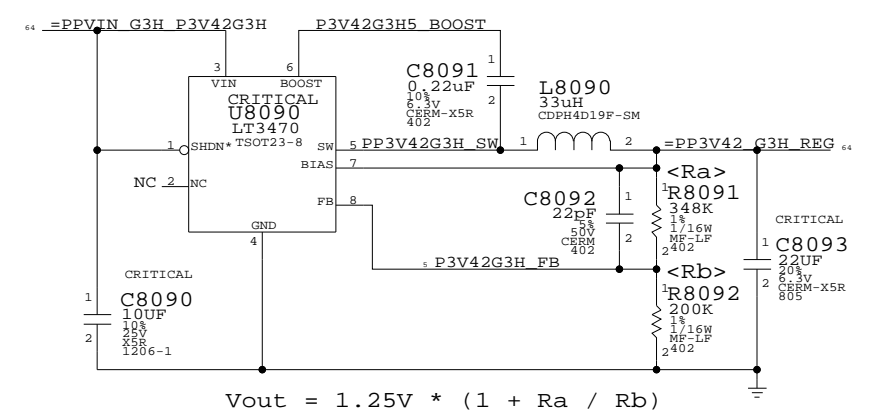


1.5V/1.05V S0 RUN/SS CONTROL



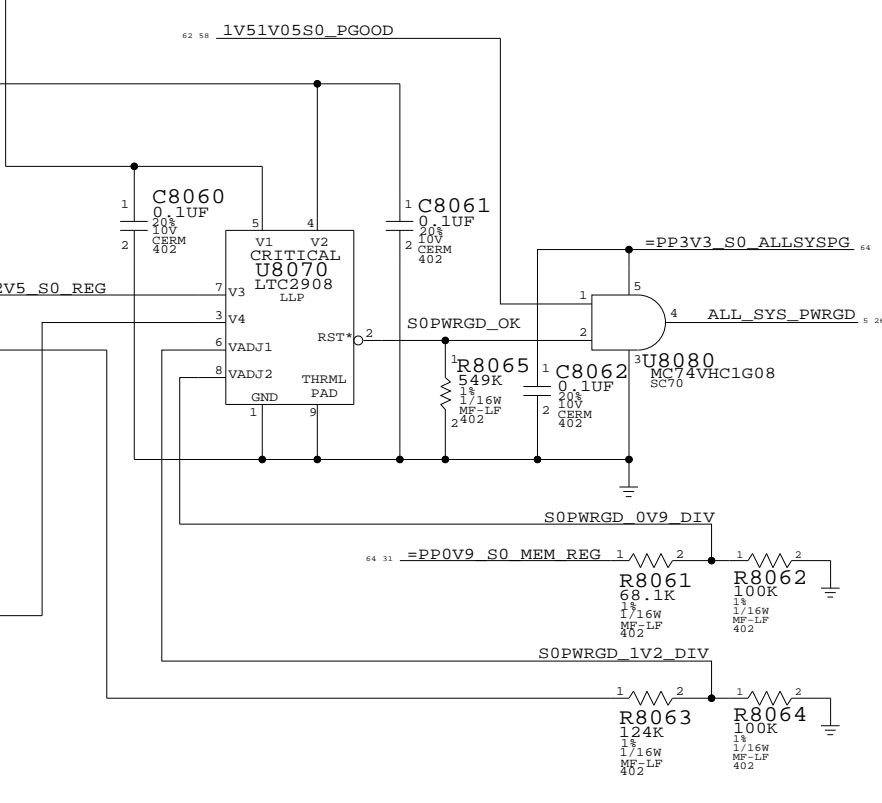
3.425V "G3Hot" SUPPLY

Supply needs to guarantee 3.31V delivered to SMC VRef generator



$$V_{out} = 1.25V * (1 + R_a / R_b)$$

ALL SYSTEM PWRGD CIRCUIT



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

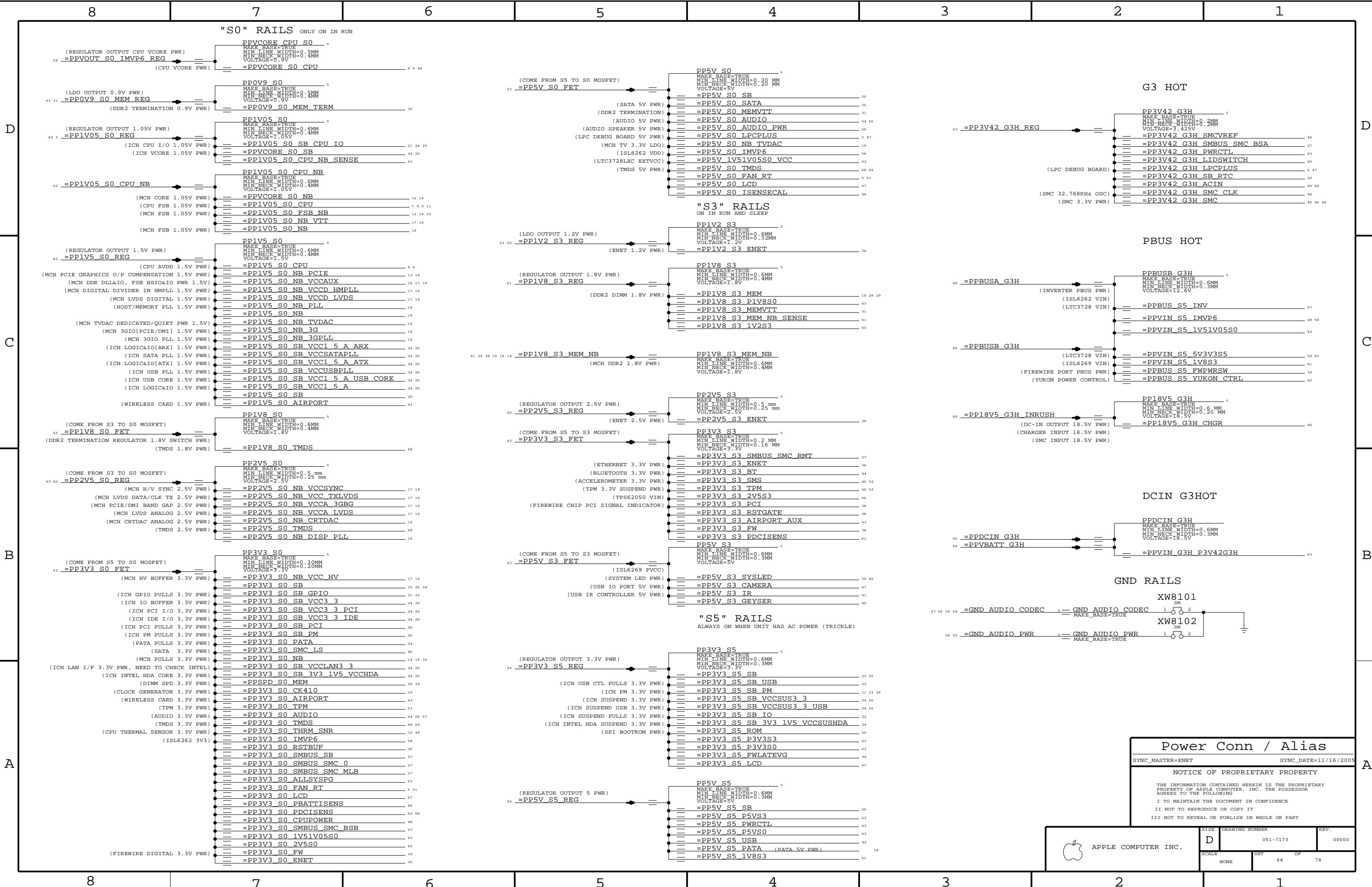
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
376S0448	376S0445	?	Q8005, Q8015	VISHAY SI7806ADN

S3/S0 FETS, G3H SUPPLY

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

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	D	051-7173	00000
SCALE	SHT	OF	78
NONE	63		



Power Conn / Alias

SYNC_MASTER=ENET SYNC_DATE=11/16/2005

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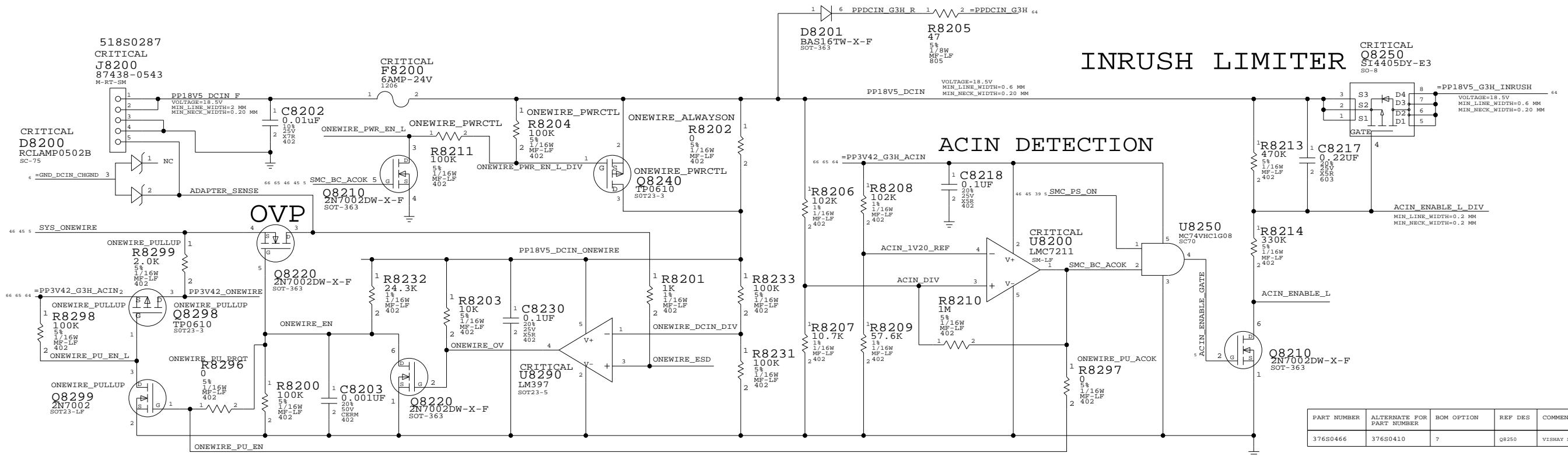
II NOT TO REPRODUCE OR COPY IT

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



INRUSH LIMITER

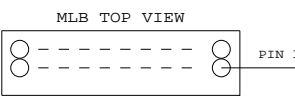
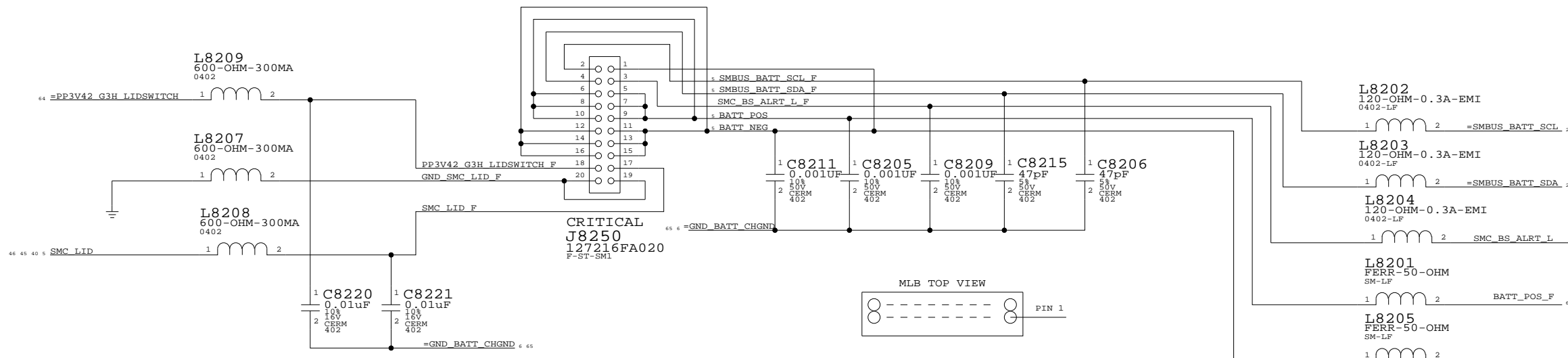
ACIN DETECTION

OVP

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
376S0466	376S0410	?	Q8250	VISHAY SI4413ADY

BATTERY INTERFACE

8 7 6 5 4 3 2 1



LID HALL EFFECT SENSOR

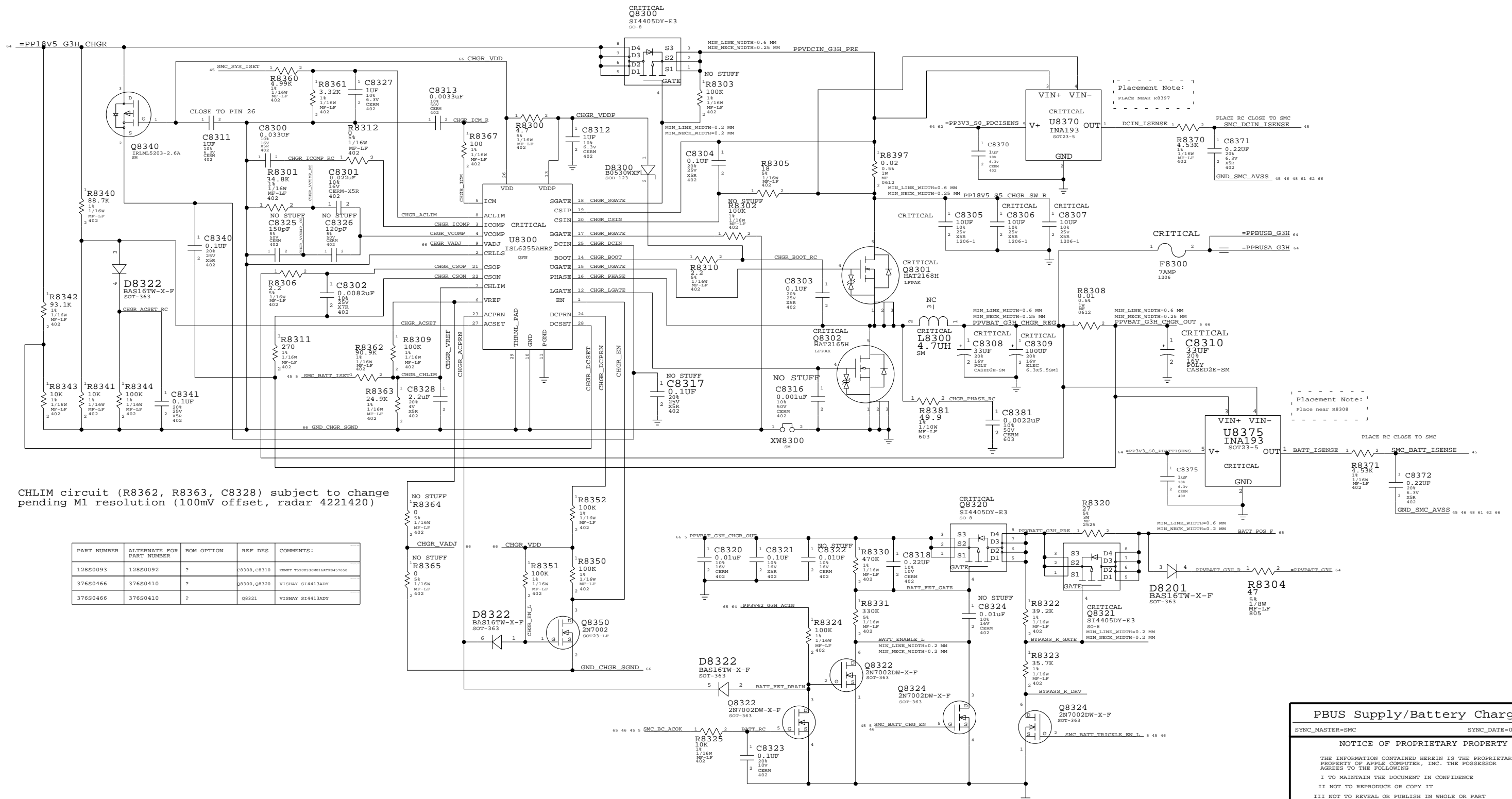
DC-In & Battery Connectors
 SYNC_MASTER=POWER SYNC_DATE=07/13/2005

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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

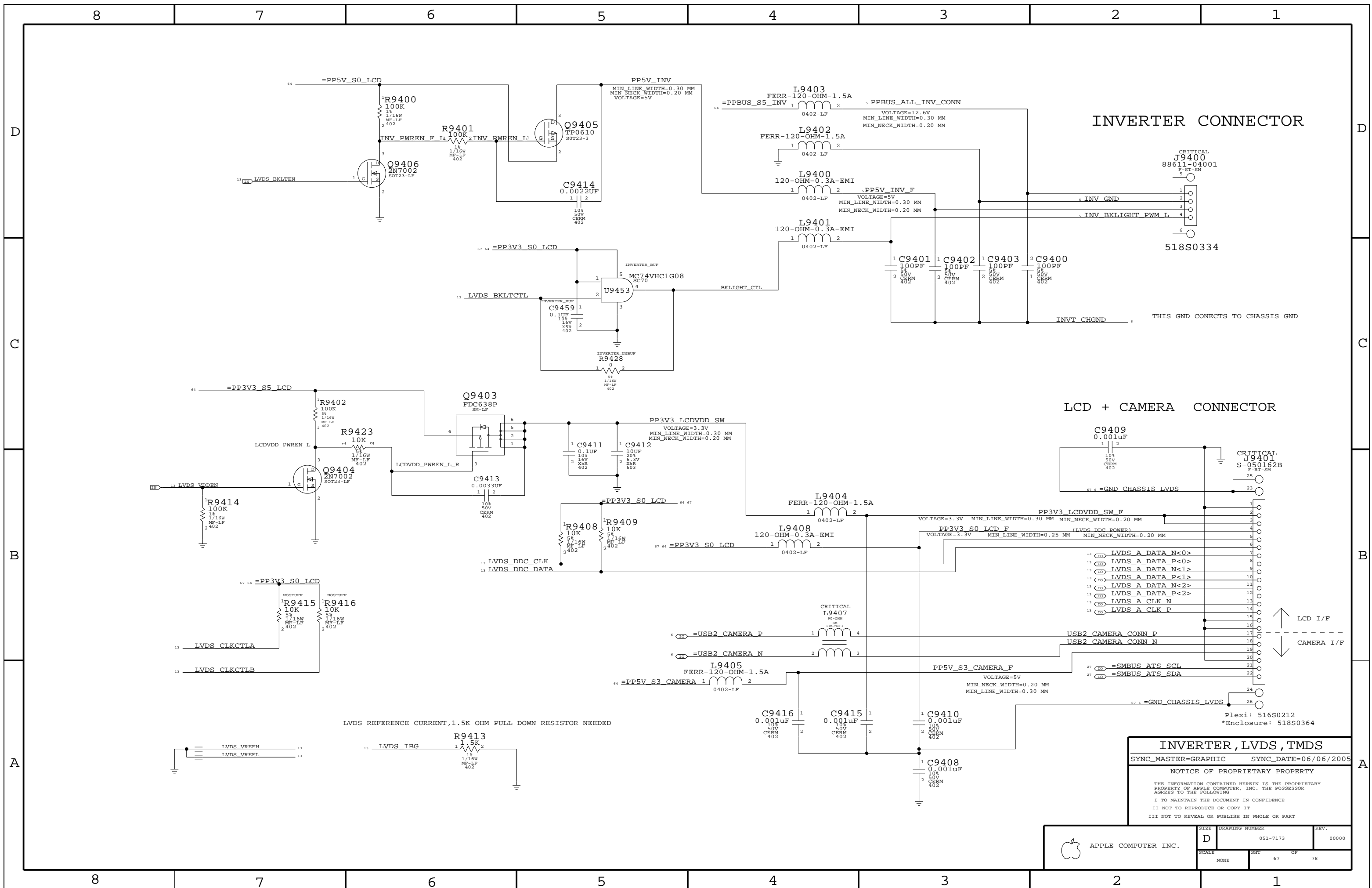
PBUS Supply/Battery Charger

SYNC_MASTER=SMC SYNC_DATE=08/19/2005

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



INVERTER CONNECTOR

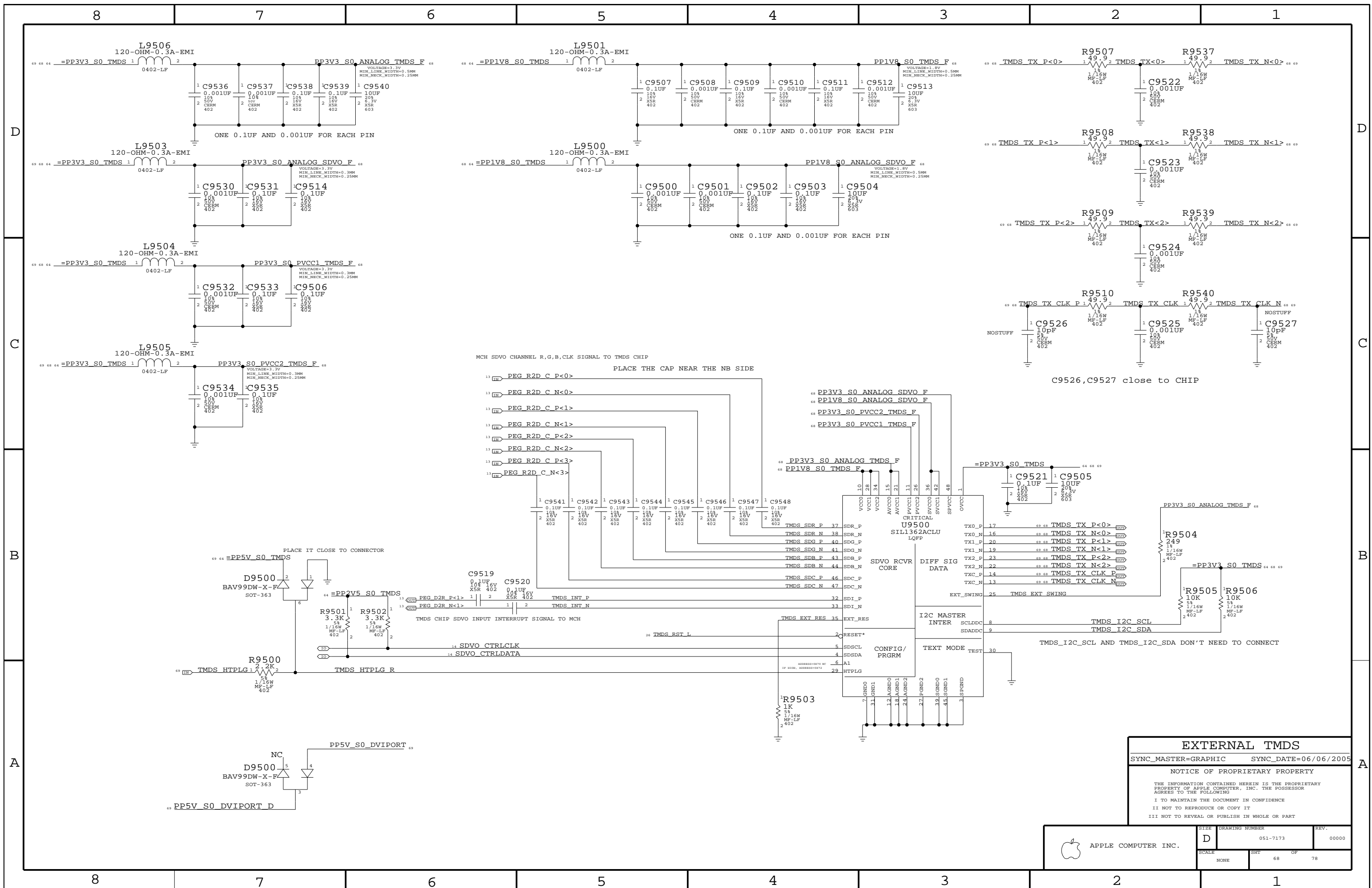
LCD + CAMERA CONNECTOR

INVERTER, LVDS, TMDs

SYNC_MASTER=GRAPHIC SYNC_DATE=06/06/2005

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	D	051-7173	00000
SCALE	SHT	OF	78
NONE	67		



EXTERNAL TMSD

SYNC_MASTER=GRAPHIC SYNC_DATE=06/06/2005

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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

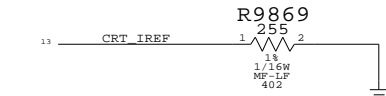
EXTERNAL VIDEO (VGA) INTERFACE

TMDS(MINI DVI) INTERFACE

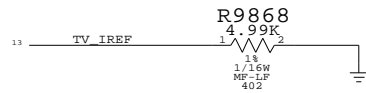
PLACE THE RESISTOR CLOSE TO GMCH AND THE CAP NEAR CONNECTOR

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

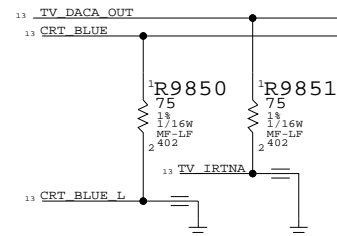
A 255 OHM 1% RESISTOR IS REQUIRED BETWEEN CRT_IREF AND GROUND



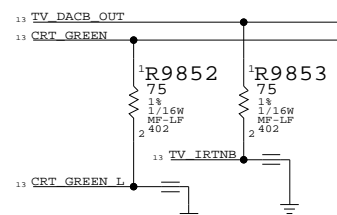
TV REFERENCE CURRENT, USES AN EXTERNAL RESISTOR OF 5K OHM 1% TO SET INTERNAL VOLTAGE LEVELS



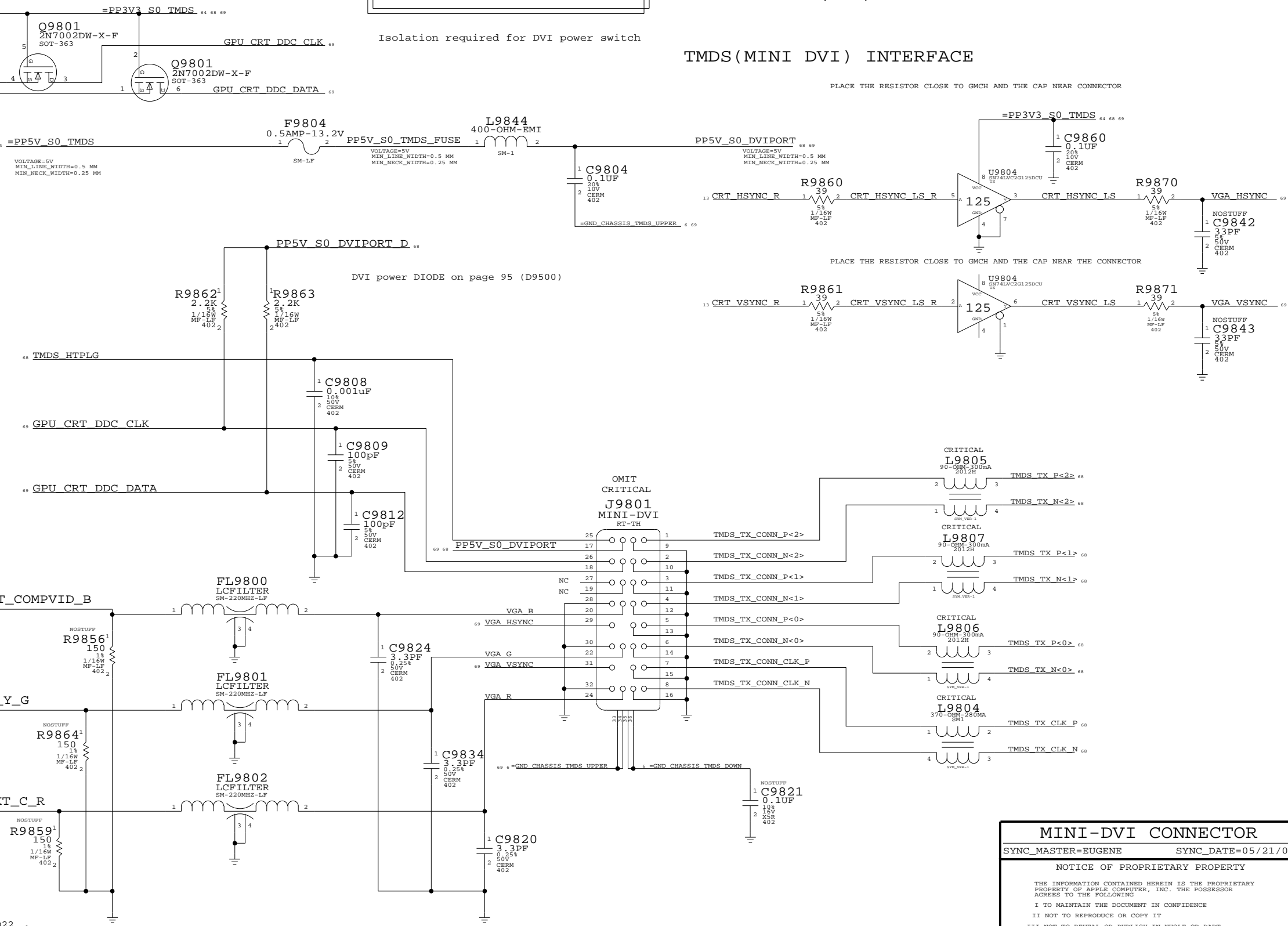
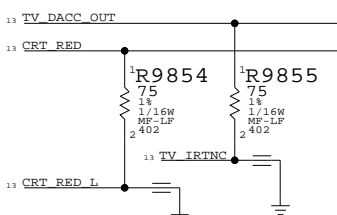
PLACE THE RESISTOR CLOSE TO GMCH



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
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SIZE	DRAWING NUMBER	REV.
D	051-7173	00000
SCALE	SHT	OF
NONE	69	78

8	7	6	5	4	3	2	1
D							D
C							C
B							B
A							A
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					
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	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_DACB_OUT	TV_DACB_OUT - @m42a_lib.M42A	13C5 69B8					
	TV_DACC_OUT	TV_DACC_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_RBIA5_PN	USB_RBIA5_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			C2500 CAP_P_SMB2			m42a[25B8]			C3804 CAP_402			m42a[34B5]			C5921 CAP_402			m42a[46C6]					
Design: m42a			C2501 CAP_402			m42a[25A6]			C3805 CAP_402			m42a[34B3]			C5922 CAP_402			m42a[46A4]					
Date: Aug 5 16:01:17 2006			C2502 CAP_402			m42a[25D4]			C3806 CAP_603			m42a[34B3]			C5923 CAP_402			m42a[46B8]					
C0607 CAP_402			m42a[6C7]			C2503 CAP_402			m42a[25D8]			C3875 CAP_402			m42a[34C7]			C5966 CAP_603			m42a[46B7]		
C0608 CAP_402			m42a[6C7]			C2504 CAP_402			m42a[25C8]			C3876 CAP_402			m42a[34C5]			C5967 CAP_402			m42a[46B7]		
C0610 CAP_402			m42a[6C7]			C2505 CAP_402			m42a[25B7]			C3900 CAP_402			m42a[35D6]			C5977 CAP_402			m42a[46C2]		
C0611 CAP_402			m42a[6C7]			C2506 CAP_402			m42a[25B7]			C3901 CAP_402			m42a[35D5]			C6100 CAP_402			m42a[48D3]		
C0612 CAP_402			m42a[6A8]			C2507 CAP_402			m42a[25B7]			C3902 CAP_402			m42a[35C6]			C6101 CAP_402			m42a[48C3]		
C0613 CAP_402			m42a[6A8]			C2508 CAP_603			m42a[25A6]			C3903 CAP_402			m42a[35D5]			C6102 CAP_402			m42a[48C2]		
C0614 CAP_402			m42a[6A8]			C2509 CAP_402			m42a[25B8]			C3920 CAP_402			m42a[35C7]			C6103 CAP_402			m42a[48C3]		
C0615 CAP_402			m42a[6A8]			C2510 CAP_402			m42a[25C1]			C3921 CAP_603			m42a[35C6]			C6104 CAP_402			m42a[48D4]		
C0616 CAP_402			m42a[6B7]			C2511 CAP_402			m42a[25D6]			C3922 CAP_402			m42a[35C5]			C6105 CAP_402			m42a[48C4]		
C0617 CAP_402			m42a[6B7]			C2512 CAP_402			m42a[25B1]			C3923 CAP_402			m42a[35C6]			C6112 CAP_402			m42a[48B2]		
C0618 CAP_402			m42a[6A8]			C2513 CAP_402			m42a[25C6]			C3950 CAP_603			m42a[35B8]			C6150 CAP_402			m42a[48C6]		
C0619 CAP_402			m42a[6A7]			C2514 CAP_402			m42a[25C6]			C4100 CAP_402			m42a[36D6]			C6200 CAP_402			m42a[49C5]		
C0630 CAP_402			m42a[9A6]			C2515 CAP_402			m42a[25B6]			C4101 CAP_402			m42a[36D6]			C6201 CAP_402			m42a[49C5]		
C0900 CAP_805			m42a[9B5]			C2516 CAP_P_CASE-C2			m42a[25D3]			C4102 CAP_402			m42a[36D5]			C6202 CAP_402			m42a[49D4]		
C0901 CAP_805			m42a[9B6]			C2517 CAP_402			m42a[25D6]			C4103 CAP_402			m42a[36D5]			C6250 CAP_402			m42a[49A5]		
C0902 CAP_805			m42a[9A5]			C2518 CAP_402			m42a[25D4]			C4104 CAP_402			m42a[36D5]			C6251 CAP_402			m42a[49A5]		
C0904 CAP_805			m42a[9A6]			C2519 CAP_402			m42a[25D3]			C4105 CAP_402			m42a[36D5]			C6252 CAP_402			m42a[49B4]		
C0907 CAP_805			m42a[9B4]			C2520 CAP_402			m42a[25B6]			C4106 CAP_402			m42a[36D4]			C6301 CAP_402			m42a[50C2]		
C0908 CAP_805			m42a[9B6]			C2521 CAP_402			m42a[25C3]			C4107 CAP_402			m42a[36D4]			C6308 CAP_402			m42a[50C5]		
C0909 CAP_805			m42a[9B5]			C2522 CAP_402			m42a[25B3]			C4110 CAP_402			m42a[36D5]			C6309 CAP_402			m42a[50C6]		
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C0911 CAP_805			m42a[9B7]			C2524 CAP_603			m42a[25B3]			C4112 CAP_402			m42a[36C5]			C6312 CAP_402			m42a[50D3]		
C0912 CAP_805			m42a[9A6]			C2525 CAP_402			m42a[25B3]			C4113 CAP_402			m42a[36C5]			C6604 CAP_402			m42a[52B4]		
C0913 CAP_805			m42a[9A7]			C2526 CAP_402			m42a[25A4]			C4115 CAP_402			m42a[36B4]			C6605 CAP_402			m42a[52B4]		
C0918 CAP_805			m42a[9A7]			C2527 CAP_402			m42a[25A3]			C4116 CAP_402			m42a[36A4]			C6606 CAP_402			m42a[52B4]		
C0920 CAP_805			m42a[9A4]			C2528 CAP_402			m42a[25A3]			C4117 CAP_402			m42a[36B3]			C6620 CAP_402			m42a[52C4]		
C0923 CAP_805			m42a[9B7]			C2529 CAP_402			m42a[25A3]			C4118 CAP_402			m42a[36B3]			C6700 CAP_402			m42a[53C4]		
C0924 CAP_805			m42a[9A7]			C2530 CAP_402			m42a[25A3]			C4126 CAP_402			m42a[36A8]			C6701 CAP_402			m42a[53C4]		
C0926 CAP_402			m42a[9A7]			C2531 CAP_402			m42a[25D1]			C4127 CAP_402			m42a[36A8]			C6702 CAP_402			m42a[53C3]		
C0928 CAP_805			m42a[9B5]			C2532 CAP_402			m42a[25C1]			C4128 CAP_402			m42a[36A7]			C6703 CAP_402			m42a[53C3]		
C0929 CAP_805			m42a[9B4]			C2533 CAP_402			m42a[25C1]			C4129 CAP_402			m42a[36A7]			C6795 CAP_402			m42a[53C6]		
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C0931 CAP_805			m42a[9A5]			C2605 CAP_402			m42a[26D4]			C4131 CAP_402			m42a[36A6]			C6800 CAP_603			m42a[54D6]		
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C0935 CAP_402			m42a[9B7]			C2609 CAP_402			m42a[26C7]			C4134 CAP_402			m42a[36A6]			C6803 CAP_P_CASE-B3-LF			m42a[54D3]		
C0936 CAP_402			m42a[9B6]			C2610 CAP_402			m42a[26D4]			C4135 CAP_402			m42a[36A5]			C6804 CAP_P_SMA-LF			m42a[54B4]		
C0937 CAP_402			m42a[9B6]			C2611 CAP_402			m42a[26B8]			C4136 CAP_402			m42a[36A5]			C6805 CAP_603			m42a[54B4]		
C0938 CAP_402			m42a[9B5]			C2680 CAP_402			m42a[26B3]			C4137 CAP_402			m42a[36A4]			C6806 CAP_603			m42a[54B3]		
C0939 CAP_805			m42a[9A4]			C2800 CAP_402			m42a[28D7]			C4138 CAP_402			m42a[36A4]			C6807 CAP_P_SMA-LF			m42a[54B3]		
C0940 CAP_P_3P_D2T			m42a[9B5]			C2809 CAP_603			m42a[28B2]			C4139 CAP_402			m42a[36A4]			C6810 CAP_P_SMA-LF			m42a[54B2]		
C0941 CAP_P_3P_D2T			m42a[9A7]			C2810 CAP_402			m42a[28B2]			C4140 CAP_402			m42a[36B3]			C6812 CAP_402			m42a[54B4]		
C0942 CAP_P_3P_D2T			m42a[9A7]			C2811 CAP_402			m42a[28B2]			C4150 CAP_402			m42a[36B6]			C6813 CAP_402			m42a[54B3]		
C0943 CAP_P_3P_D2T			m42a[9A6]			C2812 CAP_402			m42a[28A7]			C4151 CAP_402			m42a[36B6]			C6821 CAP_402			m42a[54D6]		
C0944 CAP_P_3P_D2T			m42a[9A6]			C2813 CAP_402			m42a[28B1]			C4200 CAP_402			m42a[37C7]			C6822 CAP_603			m42a[54A5]		
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C0951 CAP_603			m42a[9D7]			C2816 CAP_402			m42a[28B1]			C4203 CAP_402			m42a[37C6]			C6830 CAP_402			m42a[54D4]		
C1001 CAP_402			m42a[10B5]			C2817 CAP_402			m42a[28B1]			C4204 CAP_402			m42a[37C7]			C6833 CAP_402			m42a[54B2]		
C1002 CAP_402			m42a[10C4]			C2820 CAP_402			m42a[28D7]			C4205 CAP_402			m42a[37C6]			C6835 CAP_402			m42a[54D6]		
C1100 CAP_402			m42a[11B3]			C2821 CAP_402			m42a[28A7]			C4206 CAP_402			m42a[37C6]			C6836 CAP_402			m42a[54D3]		
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C1236 CAP_402			m42a[12A6]			C2831 CAP_402			m42a[28B2]			C4211 CAP_402			m42a[37A6]			C7201 CAP_P_CASE-B3-LF			m42a[55D4]		
C1415 CAP_402			m42a[14C3]			C2832 CAP_402			m42a[28B1]			C4212 CAP_402			m42a[37A5]			C7202 CAP_603			m42a[55C4]		
C1416 CAP_402			m42a[14C2]			C2900 CAP_402			m42a[29D7]			C4211 CAP_402			m42a[38C2]			C7203 CAP_P_CASE-B3-LF			m42a[55B4]		
C1610 CAP_402			m42a[16B5]			C2909 CAP_603			m42a[29B2]			C4412 CAP_402			m42a[38C2]			C7204 CAP_603			m42a[55B4]		
C1611 CAP_402			m42a[16B4]			C2910 CAP_402			m42a[29B2]			C4416 CAP_603			m42a[38D4]			C7205 CAP_P_CASE-B2			m42a[55B4]		
C1612 CAP_402			m42a[16B4]			C2911 CAP_402			m42a[29B2]			C4417 CAP_402			m42a[38D4]			C7206 CAP_603			m42a[55B4]		
C1613 CAP_402			m42a[16B8]			C2912 CAP_402			m42a[29B1]			C4418 CAP_402			m42a[38D4]			C7207 CAP_402			m42a[55C5]		
C1614 CAP_402			m42a[16B8]			C2913 CAP_402			m42a[29B1]			C4420 CAP_402			m42a[38C3]			C7208 CAP_402			m42a[55B5]		
C1615 CAP_402			m42a[16B6]			C2914 CAP_402			m42a[29B2]			C4422 CAP_402			m42a[38D4]			C7209 CAP_402			m42a[55A5]		
C1620 CAP_603			m42a[16B5]			C2915 CAP_402			m42a[29B2]			C4424 CAP_603			m42a[38D5]			C7210 CAP_402			m42a[55C6]		
C1621 CAP_603			m42a[16B5]			C2916 CAP_603			m42a[29B1]			C4425 CAP_402			m42a[38D3]			C7211 CAP_402			m42a[55C5]		
C1711 CAP_402			m42a[17A3]			C2917 CAP_402			m42a[29B1]			C4426 CAP_402			m42a[38D4]			C7220 CAP_402			m42a[55B6]		
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C1713 CAP_402			m42a[17B3]			C2921 CAP_402			m42a[29A7]			C4429 CAP_402			m42a[38D3]			C7230 CAP_402			m42a[55A6]		
C1900 CAP_P_3P_D2T			m42a[19B8]			C2922 CAP_402			m42a[29A7]			C4430 CAP_402			m42a[38D3]			C7231 CAP_402			m42a[55A5]		
C1902 CAP_603			m42a[19B7]			C2930 CAP_402			m42a[29B2]			C4432 CAP_402			m42a[38D3]			C7260 CAP_402			m42a[55D2]		
C1903 CAP_603			m42a[19B7]			C2931 CAP_402			m42a[29B2]			C4500 CAP_402			m42a[39B5]			C7261 CAP_402			m42a[55C2]		
C1904 CAP_402			m42a[19B6]			C2932 CAP_402			m42a[29B1]			C4501 CAP_402			m42a[39A5]			C7270 CAP_402			m42a[55C2]		
C1905 CAP_402			m42a[19B6]			C3000 CAP_402			m42a[30D4]			C4510 CAP_402			m42a[39C3]			C7271 CAP_402			m42a[55B2]		
C1906 CAP_402			m42a[19B6]			C3001 CAP_402			m42a[30D3]			C4520 CAP_402			m42a[39A4]			C7280 CAP_402			m42a[55B2]		
C1907 CAP_402			m42a[19B5]			C3002 CAP_402			m42a[30D4]			C4521 CAP_402			m42a[39B3]			C7281 CAP_402			m42a[55B2]		
C1910 CAP_603			m42a[19B8]			C3003 CAP_402			m42a[30D3]			C4522 CAP_402			m42a[39A4]			C7300 CAP_402			m42a[56C7]		
C1911 CAP_402			m42a[19B7]			C3004 CAP_402			m42a[30D4]			C4523 CAP_402			m42a[39A3]			C7301 CAP_402			m42a[56C5]		
C1912 CAP_603			m42a[19B8]			C3005 CAP_402			m42a[30D3]</														

	8	7	6	5	4	3	2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	C7507 CAP_402 m42a[58B7]	C7508 CAP_P_CASED2E-SM m42a[58C3]	C7509 CAP_P_CASED2E-SM m42a[58D3]	C7510 CAP_402 m42a[58C8]	C7511 CAP_402 m42a[58B3]	C7512 CAP_402 m42a[58C3]	C7513 CAP_402 m42a[58B7]	C7514 CAP_402 m42a[58B8]	C7515 CAP_402 m42a[58C5]	C7516 CAP_402 m42a[58B4]	C7517 CAP_P_CASED2E-SM m42a[58D3]	C7518 CAP_603 m42a[58D2]	C7521 CAP_402 m42a[58A6]	C7526 CAP_603 m42a[58D7]	C7527 CAP_402 m42a[58C5]	C7528 CAP_402 m42a[58B5]	C7529 CAP_402 m42a[58B5]	C7530 CAP_402 m42a[58C7]	C7531 CAP_402 m42a[58B5]	C7532 CAP_402 m42a[58B6]	C7533 CAP_402 m42a[58B6]	C7534 CAP_402 m42a[58B5]	C7535 CAP_603 m42a[58D6]	C7590 CAP_402 m42a[58C3]	C7592 CAP_402 m42a[58B3]	C7596 CAP_402 m42a[58D7]	C7599 CAP_603 m42a[58C2]	C7600 CAP_603 m42a[59C4]	C7601 CAP_603 m42a[59A4]	C7602 CAP_402 m42a[59A4]	C7604 CAP_402 m42a[59A2]	C7605 CAP_402 m42a[59A5]	C7607 CAP_402 m42a[59A3]	C7608 CAP_402 m42a[59D2]	C7609 CAP_402 m42a[59D7]	C7621 CAP_402 m42a[59B6]	C7622 CAP_402 m42a[59C5]	C7624 CAP_402 m42a[59C6]	C7625 CAP_402 m42a[59B6]	C7626 CAP_402 m42a[59B6]	C7628 CAP_402 m42a[59B7]	C7629 CAP_402 m42a[59B7]	C7630 CAP_402 m42a[59B5]	C7631 CAP_402 m42a[59C7]	C7632 CAP_402 m42a[59C2]	C7640 CAP_P_CASED2E-SM m42a[59D6]	C7641 CAP_603 m42a[59B6]	C7650 CAP_805 m42a[59B7]	C7651 CAP_805 m42a[59B8]	C7652 CAP_P_SMC-LF m42a[59B8]	C7661 CAP_402 m42a[59B3]	C7662 CAP_402 m42a[59C4]	C7664 CAP_402 m42a[59C3]	C7665 CAP_402 m42a[59B4]	C7666 CAP_402 m42a[59B3]	C7668 CAP_402 m42a[59B2]	C7669 CAP_402 m42a[59B2]	C7670 CAP_402 m42a[59B4]	C7680 CAP_P_CASED2E-SM m42a[59D3]	C7681 CAP_603 m42a[59D4]	C7689 CAP_402 m42a[59B4]	C7690 CAP_805 m42a[59B2]	C7691 CAP_805 m42a[59B1]	C7692 CAP_P_SMC-LF m42a[59B1]	C7700 CAP_603 m42a[60C4]	C7701 CAP_402 m42a[60C3]	C7702 CAP_603 m42a[60C3]	C7703 CAP_603 m42a[60C4]	C7704 CAP_402 m42a[60C3]	C7705 CAP_603 m42a[60C3]	C7720 CAP_402 m42a[60B4]	C7721 CAP_603 m42a[60B3]	C7750 CAP_402 m42a[60C6]	C7800 CAP_603 m42a[61C5]	C7801 CAP_603 m42a[61C6]	C7802 CAP_603 m42a[61C5]	C7803 CAP_402 m42a[61B2]	C7804 CAP_402 m42a[61C2]	C7805 CAP_402 m42a[61C2]	C7806 CAP_402 m42a[61B7]	C7807 CAP_402 m42a[61B6]	C7808 CAP_402 m42a[61B6]	C7809 CAP_402 m42a[61C4]	C7810 CAP_402 m42a[61B4]	C7830 CAP_P_CASED2E-SM m42a[61C4]	C7831 CAP_603 m42a[61C4]	C7840 CAP_805 m42a[61B3]	C7841 CAP_805 m42a[61B3]	C7842 CAP_P_CASE-D2E-LF m42a[61B3]	C7843 CAP_P_CASE-D2E-LF m42a[61B2]	C7864 CAP_402 m42a[61C2]	C7900 CAP_603 m42a[62C4]	C7901 CAP_603 m42a[62A4]	C7902 CAP_402 m42a[62A4]	C7903 CAP_402 m42a[62A6]	C7904 CAP_402 m42a[62A2]	C7905 CAP_402 m42a[62A5]	C7906 CAP_402 m42a[62A6]	C7907 CAP_402 m42a[62A3]	C7908 CAP_402 m42a[62D2]	C7909 CAP_402 m42a[62C7]	C7921 CAP_402 m42a[62B6]	C7922 CAP_402 m42a[62C5]	C7924 CAP_402 m42a[62C6]	C7925 CAP_402 m42a[62B6]	C7926 CAP_402 m42a[62B6]	C7928 CAP_402 m42a[62B7]	C7929 CAP_402 m42a[62B7]	C7930 CAP_402 m42a[62B5]	C7931 CAP_402 m42a[62C7]	C7932 CAP_402 m42a[62C2]	C7940 CAP_P_CASED2E-SM m42a[62C6]	C7941 CAP_603 m42a[62C6]	C7950 CAP_805 m42a[62B8]	C7952 CAP_P_CASE-D2E-LF m42a[62B8]	C7961 CAP_402 m42a[62B3]	C7962 CAP_402 m42a[62C4]	C7964 CAP_402 m42a[62C3]	C7965 CAP_402 m42a[62B3]	C7966 CAP_402 m42a[62B3]	C7968 CAP_402 m42a[62B2]	C7969 CAP_402 m42a[62B2]	C7970 CAP_402 m42a[62B4]	C7980 CAP_P_CASED2E-SM m42a[62C4]	C7981 CAP_603 m42a[62C4]	C7989 CAP_402 m42a[62B4]	C7990 CAP_805 m42a[62A7]	C7991 CAP_805 m42a[62A7]	C7992 CAP_P_CASE-D2E-LF m42a[62B1]	C7999 CAP_402 m42a[62A6]	C8000 CAP_402 m42a[63D4]	C8005 CAP_402 m42a[63C4]	C8010 CAP_402 m42a[63C4]	C8015 CAP_402 m42a[63B4]	C8025 CAP_402 m42a[63A4]	C8060 CAP_402 m42a[63B3]	C8061 CAP_402 m42a[63B2]	C8062 CAP_402 m42a[63B2]	C8090 CAP_1206-1 m42a[63C3]	C8091 CAP_402 m42a[63D2]	C8092 CAP_402 m42a[63D1]	C8093 CAP_805 m42a[63D1]	C8202 CAP_402 m42a[65D7]	C8203 CAP_402 m42a[65C7]	C8205 CAP_402 m42a[65A5]	C8206 CAP_402 m42a[65A4]	C8209 CAP_402 m42a[65A5]	C8211 CAP_402 m42a[65A5]	C8215 CAP_402 m42a[65A4]	C8217 CAP_603 m42a[65C2]	C8218 CAP_402 m42a[65C4]	C8220 CAP_402 m42a[65A7]	C8221 CAP_402 m42a[65A7]	C8230 CAP_402 m42a[65C6]	C8300 CAP_402 m42a[66C7]	C8301 CAP_402 m42a[66C7]	C8302 CAP_402 m42a[66C7]	C8303 CAP_402 m42a[66C4]	C8304 CAP_402 m42a[66C5]	C8305 CAP_1206-1 m42a[66C4]	C8306 CAP_1206-1 m42a[66C3]	C8307 CAP_1206-1 m42a[66C3]	C8308 CAP_P_CASED2E-SM m42a[66B4]	C8309 CAP_P_6_3X5_5SM1 m42a[66B3]	C8310 CAP_P_CASED2E-SM m42a[66B3]	C8311 CAP_402 m42a[66C7]	C8312 CAP_402 m42a[66C5]	C8313 CAP_402 m42a[66C6]	C8316 CAP_402 m42a[66B4]	C8317 CAP_402 m42a[66B5]	C8318 CAP_402 m42a[66B4]	C8320 CAP_402 m42a[66B5]	C8321 CAP_402 m42a[66B5]	C8322 CAP_402 m42a[66B4]	C8323 CAP_402 m42a[66A5]	C8324 CAP_402 m42a[66A4]	C8325 CAP_402 m42a[66C7]	C8326 CAP_402 m42a[66C7]	C8327 CAP_402 m42a[66D7]	C8328 CAP_402 m42a[66B6]	C8329 CAP_402 m42a[66C7]	C8341 CAP_402 m42a[66B8]	C8370 CAP_402 m42a[66C3]	C8371 CAP_402 m42a[66C2]	C8372 CAP_402 m42a[66B1]	C8375 CAP_402 m42a[66B3]	C8381 CAP_603 m42a[66B3]	C9400 CAP_402 m42a[67C3]	C9401 CAP_402 m42a[67C3]	C9402 CAP_402 m42a[67C3]	C9403 CAP_402 m42a[67C3]	C9408 CAP_402 m42a[67A3]	C9409 CAP_402 m42a[67B2]	C9410 CAP_402 m42a[67A3]	C9411 CAP_402 m42a[67B5]	C9412 CAP_603 m42a[67B5]	C9413 CAP_402 m42a[67B6]	C9414 CAP_402 m42a[67D5]	C9415 CAP_402 m42a[67A3]	C9416 CAP_402 m42a[67A4]	C9459 CAP_402 m42a[68D5]	C9500 CAP_402 m42a[68D5]	C9501 CAP_402 m42a[68D4]	C9502 CAP_402 m42a[68D4]	C9503 CAP_402 m42a[68D4]	C9504 CAP_603 m42a[68D4]	C9505 CAP_603 m42a[68B2]	C9506 CAP_402 m42a[68C7]	C9507 CAP_402 m42a[68D5]	C9508 CAP_402 m42a[61C4]	C9509 CAP_402 m42a[68D4]	C9510 CAP_402 m42a[68D4]	C9511 CAP_402 m42a[68D4]	C9512 CAP_402 m42a[68D3]	C9513 CAP_603 m42a[68D3]	C9514 CAP_402 m42a[68D7]	C9519 CAP_402 m42a[68B6]	C9520 CAP_402 m42a[68B6]	C9521 CAP_402 m42a[68B3]	C9522 CAP_402 m42a[68D2]	C9523 CAP_402 m42a[68D2]	C9524 CAP_402 m42a[68C2]	C9525 CAP_402 m42a[68C2]	C9526 CAP_402 m42a[68C3]	C9527 CAP_402 m42a[68C1]	C9530 CAP_402 m42a[68D7]	C9531 CAP_402 m42a[68D7]	C9532 CAP_402 m42a[68C7]	C9533 CAP_402 m42a[68C7]	C9534 CAP_402 m42a[68C7]	C9535 CAP_402 m42a[68C7]	C9536 CAP_402 m42a[68D7]	C9537 CAP_402 m42a[68D7]	C9538 CAP_402 m42a[68D7]	C9539 CAP_402 m42a[68D7]	C9540 CAP_603 m42a[68D6]	C9541 CAP_402 m42a[68B5]	C9542 CAP_402 m42a[68B5]	C9543 CAP_402 m42a[68B5]	C9544 CAP_402 m42a[68B5]	C9545 CAP_402 m42a[68B5]	C9546 CAP_402 m42a[68B4]	C9547 CAP_402 m42a[68B4]	C9548 CAP_402 m42a[68B4]	C9804 CAP_402 m42a[69C4]	C9808 CAP_402 m42a[69C5]	C9809 CAP_402 m42a[69B5]	C9812 CAP_402 m42a[69B5]	C9820 CAP_402 m42a[69A4]	C9821 CAP_402 m42a[69A3]	C9824 CAP_402 m42a[69B5]	C9834 CAP_402 m42a[69A4]	C9839 CAP_402 m42a[69B7]	C9842 CAP_402 m42a[69C1]	C9843 CAP_402 m42a[69C1]	C9860 CAP_402 m42a[69C2]	D1986 DIODE_SCHOT_6PB_SOT-363 m42a[19C2 19D2]	D2502 DIODE_SCHOT_6PB_SOT-363 m42a[25C8 25D8]	D2600 DIODE_SCHOT_6PB_SOT-363 m42a[26D5 26D5]	D4520 DIODE_DUAL_6P_SOT-36 m42a[39B4 39B3]	D4521 DIODE_DUAL_6P_SOT-36 m42a[39A4 39A3]	D4550 DIODE_SCHOT_SMB m42a[39A6]	D4590 DIODE_SCHOT_SMB m42a[39D4]	D4591 DPAK3P_SOT-363 m42a[39C5 39C5]	D4900 DIODE_SCHOT_3P_A_SC-75 m42a[40C6]	D5200 DIODE_SCHOT_3P_A_SC-75 m42a[42C3]	D5201 DIODE_SCHOT_3P_A_SC-75 m42a[42A3]	D7500 DIODE_SCHOT_SMB m42a[58C3]	D7501 DIODE_SCHOT_SMB m42a[58B3]	D7624 DIODE_SCHOT_SOD-323 m42a[59C6]	D7664 DIODE_SCHOT_SOD-323 m42a[59C3]	D7820 DIODE_SCHOT_SMB m42a[61B4]	D7921 DIODE_SMB m42a[62B7]	D7924 DIODE_SCHOT_SOD-323 m42a[62C6]	D7961 DIODE_SMB m42a[62B2]	D7964 DIODE_SCHOT_SOD-323 m42a[62C3]	D8200 DIODE_SCHOT_3P_A_SC-75 m42a[65C7]	D8201 DPAK3P_SOT-363 m42a[65D4]	D8201 DPAK3P_SOT-363 m42a[66B3]	D8300 DIODE_SCHOT_SOD-123 m42a[66C5]	D8322 DPAK3P_SOT-363 m42a[66C8 66A5 66A6]	D9500 DIODE_DUAL_6P_SOT-36 m42a[68A7 68B7]	D27300 SUPPR_TRANSIENT_4P1-0405 m42a[56C6]	D27301 SUPPR_TRANSIENT_4P1-0405 m42a[56C6]	D27350 SUPPR_TRANSIENT_4P1-0405 m42a[56A6]	D27351 SUPPR_TRANSIENT_4P1-0405 m42a[56A6]	F8200 FUSE_1206 m42a[65D6]	F8300 FUSE_1206 m42a[66C3]	F9804 FUSE_SM-LF m42a[69C5]	FL4520 FILTER_4P_2012 m42a[39B3]	FL4521 FILTER_4P_2012 m42a[39B3]	FL4590 FUSE_MINISMD m42a[39D5]	FL9800 FILTER_IC_SM-220MHZ-LF m42a[69B5]	FL9801 FILTER_IC_SM-220MHZ-LF m42a[69A5]	FL9802 FILTER_IC_SM-220MHZ-LF m42a[69A5]	GV3901 HOLE_VIA m42a[35C2]	GV3902 HOLE_VIA m42a[35C2]	GV3903 HOLE_VIA m42a[35C2]	GV3904 HOLE_VIA m42a[35C2]	GV3905 HOLE_VIA m42a[35B2]	GV3906 HOLE_VIA m42a[35B2]	GV3907 HOLE_VIA m42a[35B2]	GV3908 HOLE_VIA m42a[35B2]	J1102 CON_F30STSM_5047_SML m42a[11B2]	J2600 CON_F2RT_S2MT_SM-F-R m42a[26D6]	J2801 CON_F200RT_DDR2DIMM m42a[28D6]	J2901 TH1_F-RT-TH2 m42a[29D5]	J3801 CON_M50ST_D2MT_SM-M-ST m42a[34C4]	J3901 CON_F19ST_S2MT_SM-F-ST m42a[35D8]	J4200 CON_R345_8RT_S2MT_SM m42a[37C2]	J4500 CON_F4RT_S2MT_TH-F-R m42a[39B2]	J4900 CON_F10ST_D_SMA_F-ST m42a[40C4]	J5200 CON_F4RT_USB_S2MT_TH m42a[42D1]	J5201 CON_F4RT_USB_S2MT_TH m42a[42B1]	J5300 CON_F52RT_D2MT_SM-F m42a[43C5]	J5400 CON_F4ST_S2MT_SM-F-S m42a[44C4]	J6000 CON_F30STSM_5047_SML m42a[47C6]	J6250 CON_F2ST_S2MT_SM-F-S m42a[49C6]	J6251 CON_F2ST_S2MT_SM-F-S m42a[49A6]	J6501 CON_F4ST_S2MT_SM-F-S m42a[51C3]	J7300 CON_F8RT_2MT_AUDIIOU m42a[56C8]	J7301 T_TH1_F-RT-TH m42a[56D1]	J7302 CON_F2ST_S2MT_SM-F-S m42a[56D1]	J7303 CON_F4ST_S2MT_SM-F-S m42a[56C1]	J7350 CON_F8RT_2MT_AUDIIOIN m42a[56B8]	J8200 CON_M5RT_S_SM-M-RT-S m42a[65D7]	J8250 CON_F20ST_D_SM-F-ST-SM1 m42a[65B6]	J9400 CON_F4ST_S2MT_SM-F-S m42a[67D2]	J9401 CON_F22RT_S4MT_SM-F m42a[67B1]	J9801 CON_DVI_30RT_Q4MT_TH1_RT-TH m42a[69B4]	L1922 IND_0603 m42a[19A7]	L1934 IND_0603 m42a[19C5]	L1936 IND_0603 m42a[19C5]	L1970 IND_1210 m42a[19B4]	L1975 IND_0805 m42a[19A4]	L1985 IND_0603 m42a[19D3]	L1990 IND_0603 m42a[19C3]	L2500 IND_SM-3 m42a[25B8]	L2507 IND_1206 m42a[25A7]	L3301 IND_0402-LF m42a[32D7]	L3302 IND_0402-LF m42a[32D3]	L3901 FILTER_4P_2012H m42a[35D6]	L3902 FILTER_4P_2012H m42a[35D5]	L3912 IND_0402 m42a[35C6]	L4100 IND_0402-LF m42a[36D3]	L4250 IND_0402-LF m42a[37D7]	L4400 IND_0402 m42a[38D4]	L4510 IND_SM m42a[39C3]	L4550 IND_SM-1 m42a[39A7]	L4900 IND_0402 m42a[40D5]	L4901 FILTER_4P_SM m42a[40C6]	L4902 IND_0402 m42a[40C5]	L5200 FILTER_4P_SM m42a[42C4]	L5201 FILTER_4P_SM m42a[42B4]	L5202 IND_0402-LF m42a[42D4]	L5203 IND_0402-LF m42a[42C4]	L5204 IND_0402-LF m42a[42C3]	L5205 IND_0402-LF m42a[42A3]	L5400 FILTER_4P_SM m42a[44B5]	L5410 IND_0402-LF m42a[44C5]	L5411 IND_0402-LF m42a[44B5]	L5910 IND_0603 m42a[46A7]	L6800 IND_0402 m42a[54A5]	L6801 IND_0402 m42a[54D6]	L7200 IND_0402 m42a[55C7]	L7210 IND_0402 m42a[55A7]	L7220 IND_0402 m42a[55B7]	L7230 IND_0402 m42a[55A7]	L7300 IND_0402-LF m42a[56D6]	L7301 IND_0402-LF m42a[56D4]	L7302 IND_0402 m42a[56D6]	L7303 IND_0402 m42a[56C6]	L7304 IND_0402 m42a[56C4]	L7305 IND_0402 m42a[56C6]	L7306 IND_0402 m42a[56C4]	L7307 IND_0402 m42a[56D6]	L7350 IND_0402 m42a[56B6]	L7351 IND_0402 m42a[56B4]	L7352 IND_0402 m42a[56B6]	L7353 IND_0402 m42a[56B6]	L7354 IND_0402 m42a[56B4]	L7355 IND_0402 m42a[56B6]	L7356 IND_0402 m42a[56B4]	L7357 IND_0402 m42a[56A6]	L7370 IND_0402 m42a[56B2]	L7371 IND_0402 m42a[56B1]	L7372 IND_0402 m42a[56B2]	L7373 IND_0402 m42a[56B1]	L7374 IND_0402 m42a[56B2]	L7375 IND_0402 m42a[56B1]	L7390 IND_0402 m42a[56D8]	L7400 IND_0402 m42a[57B4]	L7500 IND_SM m42a[58D2]	L7501 IND_SM m42a[58B2]	L7620 IND_0402-LF m42a[59B7]	L7680 IND_SM m42a[59B2]	L7820 IND_3P_SM m42a[61B3]	L7920 IND_SM m42a[62B7]	L7960 IND_3P_SM m42a[62B2]	L8090 IND_CDPH4D19F-SM m42a[63D1]	L8201 IND_SM-LF m42a[65A3]	L8202 IND_0402-LF m42a[65A3]	L8203 IND_0402-LF m42a[65A3]	L8204 IND_0402-LF m42a[65A3]	L8205 IND_SM-LF m42a[65A3]	L8207 IND_0402 m42a[65A7]	L8208 IND_0402 m42a[65A7]	L8209 IND_0402 m42a[65A7]	L8300 IND_3P_SM m42a[66C4]	L9400 IND_0402-LF m42a[67D4]	L9401 IND_0402-LF m42a[67C4]	L9402 IND_0402-LF m42a[67D4]	L9403 IND_0402-LF m42a[67D4]	L9404 IND_0402-LF m42a[67B4]	L9405 IND_0402-LF m42a[67A4]	L9407 FILTER_4P_SM m42a[67A4]	L9408 IND_0402-LF m42a[67B4]	L9500 IND_0402-LF m42a[68D5]	L9501 IND_0402-LF m42a[68D5]	L9503 IND_0402-LF m42a[68D8]	L9504 IND_0402-LF m42a[68C8]	L9505 IND_0402-LF m42a[68C8]	L9506 IND_0402-LF m42a[68D8]	L9804 FILTER_4P_SM m42a[69A2]	L9805 FILTER_4P_2012H m42a[69B2]	L9806 FILTER_4P_2012H m42a[69B2]	L9807 FILTER_4P_2012H m42a[69B2]	L9844 IND_SM-1 m42a[69C4]	Q2680 TRA_SINGLE_MOSFET_NC m42a[26A3]	Q3810 TRA_FDC638P_SM-LF m42a[34C5]	Q3875 TRA_2N7002DW_SOT-363 m42a[34C6 34C7]	Q4590 TRA_FDC638P_SM-LF m42a[39D5]	Q5291 TRA_2N7002_SOT23-LF m42a[39C5]	Q5901 TRA_2N7002DW_SOT-363 m42a[46B4 46B5]	Q5950 TRA_2N3906_SOT23-LF m42a[46A3]	Q5952 TRA_2N7002_SOT23-LF m42a[46A3]	Q6100 TRA_S13446DV_TSOP-LF m42a[48A5]	Q6101 TRA_2N7002DW_SOT-363 m42a[48A6 48A7]	Q6150 TRA_TP0610_SOT23-3 m42a[48C6]	Q6151 TRA_2N7002_SOT23-LF m42a[48C7]	Q6152 TRA_TP0610_SOT23-3 m42a[48C7]	Q6153 TRA_TP0610_SOT23-3 m42a[48C8]	Q6200 TRA_B0846M375G_NFN_SOT732-3 m42a[49B6]	Q6560 TRA_2N7002_SOT23-LF m42a[51B3]	Q6650 TRA_2N7002_SOT23-LF m42a[52B6]	Q6651 TRA_TP0610_SOT23-3 m42a[52B6]	Q7400 TRA_2N7002DW_SOT-363 m42a[57C7 57D7]	Q7401 TRA_2N7002DW_SOT-363 m42a[57D5 57D6]	Q7402 TRA_2N7002DW_SOT-363 m42a[57B7 57C5]	Q7500 TRA_HAT2168H_LFPAK m42a[58D3]	Q7501 TRA_HAT2165H_LFPAK m42a[58D4]

	8		7		6		5		4		3		2		1	
	Q7502	TRA_HAT216RH_LFFPAK	m42a[58C3]	R2079	RES_402	m42a[20B7]	R3404	RES_402	m42a[33D1]	R5905	RES_402	m42a[46D4]				
	Q7503	TRA_HAT2165H_LFFPAK	m42a[58B4]	R2085	RES_402	m42a[20C4]	R3405	RES_402	m42a[33C1]	R5906	RES_402	m42a[46D4]				
	Q7504	TRA_HAT2165H_LFFPAK	m42a[58D3]	R2100	RES_402	m42a[21C3]	R3406	RES_402	m42a[33B1]	R5910	RES_603	m42a[46C8]				
	Q7505	TRA_HAT2165H_LFFPAK	m42a[58B3]	R2101	RES_402	m42a[21C4]	R3407	RES_402	m42a[33B1]	R5911	RES_402	m42a[46A6]				
	Q7620	TRA_STL8NH31L_COMBO	m42a[59C7]	R2105	RES_402	m42a[21D6]	R3408	RES_402	m42a[33C1]	R5918	RES_402	m42a[46C5]				
	Q7621	TRA_STL8NH31L_COMBO	m42a[59B7]	R2107	RES_402	m42a[21C2]	R3409	RES_402	m42a[33C1]	R5919	RES_402	m42a[46C5]				
	Q7660	TRA_STL8NH31L_COMBO	m42a[59C3]	R2110	RES_402	m42a[21C2]	R3410	RES_402	m42a[33C1]	R5920	RES_402	m42a[46C5]				
	Q7661	TRA_STL8NH31L_COMBO	m42a[59B3]	R2114	RES_402	m42a[21D4]	R3411	RES_402	m42a[33D4]	R5922	RES_402	m42a[46C5]				
	Q7750	TRA_2N7002DW_SOT-363	m42a[60C6 60C7]	R2195	RES_402	m42a[21C6]	R3413	RES_402	m42a[33D4]	R5924	RES_402	m42a[46C4]				
	Q7820	TRA_IRF7821_SO-8	m42a[61C4]	R2196	RES_402	m42a[21C6]	R3414	RES_402	m42a[33D4]	R5925	RES_402	m42a[46C5]				
	Q7821	TRA_IRF7821_SO-8	m42a[61B4]	R2197	RES_402	m42a[21C6]	R3415	RES_402	m42a[33D4]	R5926	RES_402	m42a[46C4]				
	Q7920	TRA_IRF7821_SO-8	m42a[62C6]	R2198	RES_402	m42a[21C6]	R3416	RES_402	m42a[33D4]	R5927	RES_402	m42a[46C5]				
	Q7921	TRA_IRF7821_SO-8	m42a[62B6]	R2199	RES_402	m42a[21C3]	R3417	RES_402	m42a[33C7]	R5928	RES_402	m42a[46D4]				
	Q7960	TRA_IRF7821_SO-8	m42a[62C3]	R2200	RES_402	m42a[22D7]	R3418	RES_402	m42a[33B4]	R5929	RES_402	m42a[46C5]				
	Q7961	TRA_IRF7821_SO-8	m42a[62B3]	R2203	RES_402	m42a[22C2]	R3419	RES_402	m42a[33B4]	R5930	RES_402	m42a[46C5]				
	Q8000	TRA_FDC638P_SM-LF	m42a[63D4]	R2204	RES_402	m42a[22C2]	R3420	RES_402	m42a[33A4]	R5931	RES_402	m42a[46C4]				
	Q8005	TRA_STL8NH31L_COMBO	m42a[63C4]	R2205	RES_402	m42a[22C6]	R3421	RES_402	m42a[33A4]	R5932	RES_402	m42a[46C4]				
	Q8010	TRA_FDC638P_SM-LF	m42a[63D4]	R2206	RES_402	m42a[22C5]	R3422	RES_402	m42a[33C4]	R5933	RES_402	m42a[46C4]				
	Q8015	TRA_STL8NH31L_COMBO	m42a[63C4]	R2207	RES_402	m42a[22C5]	R3423	RES_402	m42a[33C4]	R5934	RES_402	m42a[46C5]				
	Q8020	TRA_FDC638P_SM-LF	m42a[63C4]	R2208	RES_402	m42a[22D5]	R3426	RES_402	m42a[33C4]	R5935	RES_402	m42a[46C4]				
	Q8030	TRA_2N7002DW_SOT-363	m42a[63A6 63B6]	R2211	RES_402	m42a[22B3]	R3427	RES_402	m42a[33C4]	R5936	RES_402	m42a[46C5]				
	Q8031	TRA_2N7002DW_SOT-363	m42a[63D6 63A6]	R2223	RES_402	m42a[22D6]	R3428	RES_402	m42a[33C4]	R5937	RES_402	m42a[46C4]				
	Q8059	TRA_2N7002DW_SOT-363	m42a[63C7 63C7]	R2225	RES_402	m42a[22D7]	R3429	RES_402	m42a[33D8]	R5938	RES_402	m42a[46C5]				
	Q8060	TRA_2N7002_SOT23-LF	m42a[63C8]	R2226	RES_402	m42a[22D5]	R3430	RES_402	m42a[33D7]	R5939	RES_402	m42a[46C4]				
	Q8061	TRA_2N7002DW_SOT-363	m42a[63B7 63B7]	R2250	RES_402	m42a[22D7]	R3431	RES_402	m42a[33B1]	R5940	RES_402	m42a[46C5]				
	Q8062	TRA_2N7002_SOT23-LF	m42a[63B8]	R2251	RES_402	m42a[22D6]	R3432	RES_402	m42a[33D7]	R5941	RES_402	m42a[46C4]				
	Q8063	TRA_2N7002_SOT23-LF	m42a[63B4]	R2255	RES_402	m42a[22D7]	R3433	RES_402	m42a[33B8]	R5942	RES_402	m42a[46C3]				
	Q8210	TRA_2N7002DW_SOT-363	m42a[65C6 65C3]	R2299	RES_402	m42a[22B5]	R3434	RES_402	m42a[33D4]	R5943	RES_402	m42a[46B4]				
	Q8220	TRA_2N7002DW_SOT-363	m42a[65C7 65C6]	R2300	RES_402	m42a[23C7]	R3435	RES_402	m42a[33C4]	R5944	RES_402	m42a[46B4]				
	Q8240	TRA_TP0610_SOT23-3	m42a[65C5]	R2302	RES_402	m42a[23D3]	R3436	RES_402	m42a[33B1]	R5945	RES_402	m42a[46C4]				
	Q8250	TRA_TP0610_SOT-8	m42a[65C9]	R2303	RES_402	m42a[23D3]	R3437	RES_402	m42a[33B1]	R5946	RES_402	m42a[46C4]				
	Q8298	TRA_TP0610_SOT23-3	m42a[65C7]	R2305	RES_402	m42a[23D3]	R3438	RES_402	m42a[33D1]	R5947	RES_402	m42a[46B4]				
	Q8299	TRA_2N7002_SOT23-LF	m42a[65C7]	R2306	RES_402	m42a[23B7]	R3439	RES_402	m42a[33D1]	R5948	RES_402	m42a[46C5]				
	Q8300	TRA_S14405DY_SO-8	m42a[66D5]	R2307	RES_402	m42a[23A7]	R3440	RES_402	m42a[33D1]	R5949	RES_402	m42a[46C4]				
	Q8301	TRA_HAT2168H_LFFPAK	m42a[66C4]	R2308	RES_402	m42a[23B7]	R3441	RES_402	m42a[33D1]	R5950	RES_402	m42a[46A3]				
	Q8302	TRA_HAT2165H_LFFPAK	m42a[66B4]	R2309	RES_402	m42a[23A7]	R3442	RES_402	m42a[33C1]	R5951	RES_402	m42a[46A3]				
	Q8320	TRA_S14405DY_SO-8	m42a[66B3]	R2310	RES_402	m42a[23A7]	R3443	RES_402	m42a[33C7]	R5952	RES_402	m42a[46A3]				
	Q8321	TRA_S14405DY_SO-8	m42a[66B3]	R2311	RES_402	m42a[23A7]	R3451	RES_402	m42a[33B7]	R5953	RES_402	m42a[46D5]				
	Q8322	TRA_2N7002DW_SOT-363	m42a[66A4 66A4]	R2312	RES_402	m42a[23A3]	R3452	RES_402	m42a[33B7]	R5954	RES_402	m42a[46B5]				
	Q8324	TRA_2N7002DW_SOT-363	m42a[66A3 66A4]	R2313	RES_402	m42a[23A7]	R3453	RES_402	m42a[33B7]	R5955	RES_402	m42a[46B5]				
	Q8340	TRA_REL65203_SM	m42a[66C9]	R2314	RES_402	m42a[23A7]	R3454	RES_402	m42a[33B7]	R5970	RES_402	m42a[46D3]				
	Q8350	TRA_2N7002_SOT23-LF	m42a[66A6]	R2315	RES_402	m42a[23A3]	R3463	RES_402	m42a[33D7]	R5971	RES_402	m42a[46D3]				
	Q9403	TRA_FDC638P_SM-LF	m42a[67B6]	R2316	RES_402	m42a[23D7]	R3465	RES_402	m42a[33C4]	R5972	RES_402	m42a[46C7]				
	Q9404	TRA_2N7002_SOT23-LF	m42a[67B7]	R2317	RES_402	m42a[23D7]	R3466	RES_402	m42a[33A7]	R5973	RES_402	m42a[46C5]				
	Q9405	TRA_TP0610_SOT23-3	m42a[67D5]	R2318	RES_402	m42a[23D7]	R3467	RES_402	m42a[33A7]	R5976	RES_402	m42a[46D1]				
	Q9406	TRA_2N7002_SOT23-LF	m42a[67D6]	R2319	RES_402	m42a[23D7]	R3468	RES_402	m42a[33C7]	R5977	RES_402	m42a[46C1]				
	Q9801	TRA_2N7002DW_SOT-363	m42a[69D6 69D6]	R2320	RES_402	m42a[23D7]	R3469	RES_402	m42a[33C7]	R5980	RES_402	m42a[46D5]				
	R0610	RES_402	m42a[6A7]	R2323	RES_402	m42a[23D5]	R3470	RES_402	m42a[33C7]	R5981	RES_402	m42a[46D5]				
	R0611	RES_402	m42a[6A8]	R2326	RES_402	m42a[23D6]	R3471	RES_402	m42a[33B7]	R5982	RES_402	m42a[46D5]				
	R0612	RES_402	m42a[6A8]	R2327	RES_402	m42a[23D6]	R3472	RES_402	m42a[33B7]	R5983	RES_402	m42a[46C5]				
	R0621	RES_402	m42a[6A7]	R2343	RES_402	m42a[23D1]	R3473	RES_402	m42a[33B7]	R5984	RES_402	m42a[46C5]				
	R0702	RES_402	m42a[7D5]	R2388	RES_402	m42a[23B2]	R3474	RES_402	m42a[33B8]	R5985	RES_402	m42a[46C5]				
	R0703	RES_402	m42a[7C5]	R2389	RES_402	m42a[23A4]	R3475	RES_402	m42a[33B7]	R5986	RES_402	m42a[46C5]				
	R0704	RES_402	m42a[7C5]	R2390	RES_402	m42a[23B3]	R3476	RES_402	m42a[33A7]	R5987	RES_402	m42a[46C5]				
	R0705	RES_402	m42a[7B4]	R2395	RES_402	m42a[23D7]	R3477	RES_402	m42a[33B4]	R5988	RES_402	m42a[46B5]				
	R0706	RES_402	m42a[7B4]	R2396	RES_402	m42a[23D6]	R3478	RES_402	m42a[33B4]	R5989	RES_402	m42a[46D5]				
	R0707	RES_402	m42a[7A4]	R2397	RES_402	m42a[23D6]	R3480	RES_402	m42a[33C7]	R5990	RES_402	m42a[46B2]				
	R0712	RES_402	m42a[7A4]	R2398	RES_402	m42a[23D8]	R3481	RES_402	m42a[33B1]	R5991	RES_402	m42a[46B2]				
	R0716	RES_402	m42a[7B2]	R2399	RES_402	m42a[23C1]	R3482	RES_402	m42a[33B1]	R5992	RES_402	m42a[46B2]				
	R0717	RES_402	m42a[7B2]	R2500	RES_603	m42a[25A8]	R3490	RES_402	m42a[33A4]	R5993	RES_402	m42a[46B2]				
	R0718	RES_402	m42a[7B2]	R2501	RES_402	m42a[25C8]	R3824	RES_402	m42a[34C4]	R5994	RES_402	m42a[46D5]				
	R0719	RES_402	m42a[7B2]	R2502	RES_402	m42a[25D8]	R3825	RES_402	m42a[34C5]	R5995	RES_402	m42a[46D5]				
	R0720	RES_402	m42a[7B7]	R2600	RES_402	m42a[26D4]	R3851	RES_402	m42a[34C4]	R5996	RES_402	m42a[46B4]				
	R0721	RES_402	m42a[7B7]	R2606	RES_402	m42a[26D5]	R3853	RES_402	m42a[34C3]	R5997	RES_402	m42a[46B4]				
	R0722	RES_402	m42a[7A7]	R2607	RES_402	m42a[26D5]	R3858	RES_402	m42a[34B5]	R5998	RES_402	m42a[46B4]				
	R0730	RES_402	m42a[7A4]	R2609	RES_402	m42a[26C7]	R3859	RES_402	m42a[34B4]	R5999	RES_402	m42a[46C1]				
	R0802	RES_402	m42a[8B6]	R2610	RES_402	m42a[26C7]	R3865	RES_402	m42a[34C6]	R6100	RES_402	m42a[48D3]				
	R0803	RES_402	m42a[8A7]	R2611	RES_402	m42a[26B5]	R3876	RES_402	m42a[34C7]	R6102	RES_402	m42a[48C2]				
	R0921	RES_402	m42a[9D2]	R2612	RES_402	m42a[26A5]	R3877	RES_402	m42a[34C6]	R6103	RES_402	m42a[48C3]				

