

- 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.

M42C MLB

11/27/2006 POST RAMP WITH LOCKED BOOTROM

REV	ZONE	ECN	DESCRIPTION OF CHANGE	CK APPD	ENG APPD
C		474680	PRODUCTION RELEASED		
				DATE	DATE
				11/27/06	?

D

D

C

C

B

B

A

A

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

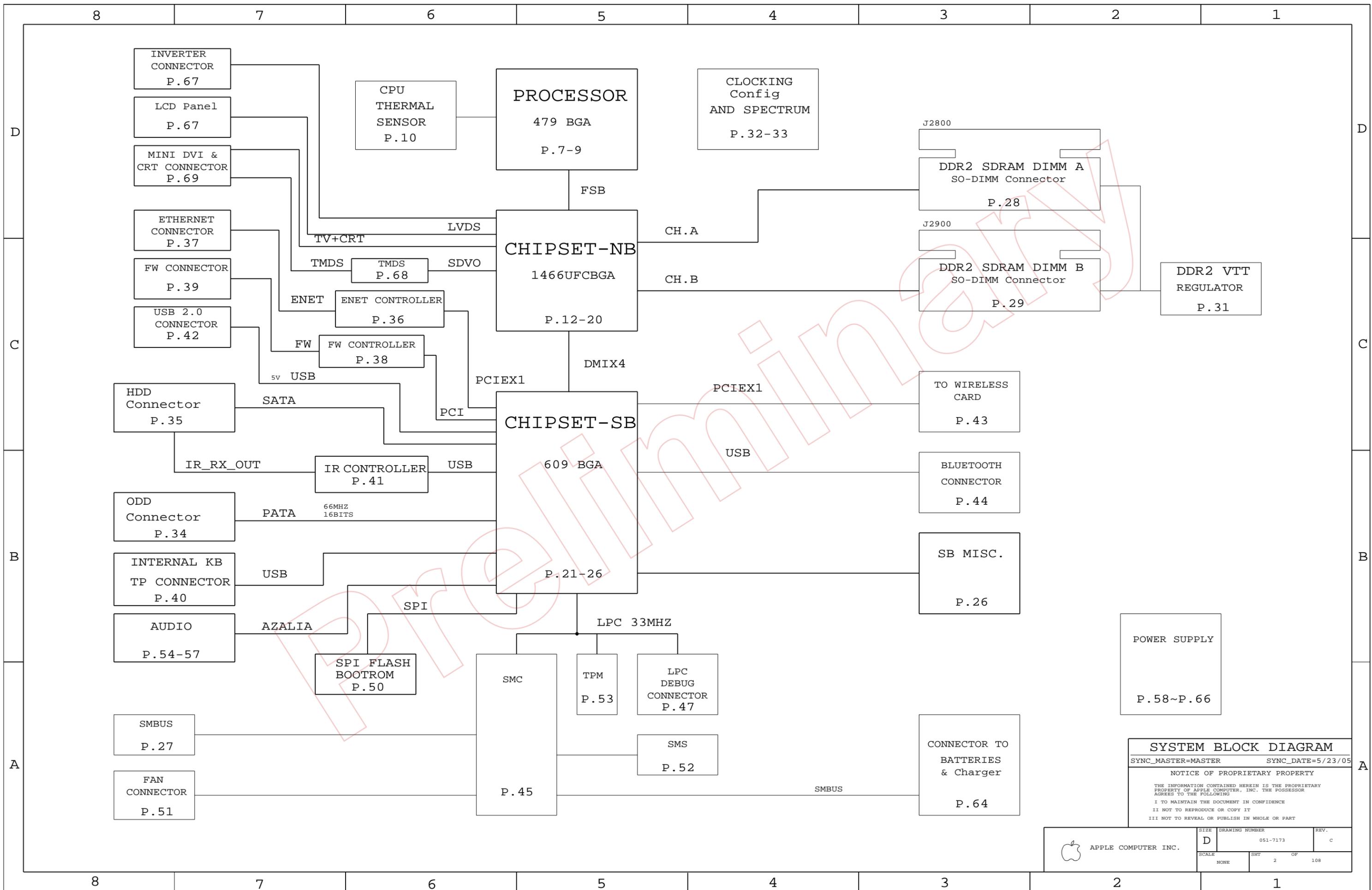
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50	50	SPI BOOTROM	ES	MASTER	5/23/05
51	51	Fan	MK	ENET	11/10/2005
52	52	SMS	RX	SMC	08/23/2005
53	53	TPM	DK	SMC	07/18/2005
54	54	AUDIO: CODEC	DK	M42AUDIO	08/05/2006
55	55	AUDIO: SPEAKER AMP	DK	M42AUDIO	08/05/2006
56	56	AUDIO: JACK	DK	M42AUDIO	08/05/2006
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			

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, MACBOOK, MLB	SCH	
820-1889	1	PCB#, MACBOOK, MLB	PCB	

DIMENSIONS ARE IN MILLIMETERS		METRIC		Apple Computer Inc.	
XX :	_____	DRAPTER	/	DESIGN CK	/
X.XX :	_____	ENG APPD	/	MFG APPD	/
X.XXX :	_____	QA APPD	/	DESIGNER	/
ANGLES :	_____	RELEASE	/	SCALE	NONE
DO NOT SCALE DRAWING		MATERIAL/FINISH NOTED AS APPLICABLE		SIZE	D
THIRD ANGLE PROJECTION		DRAWING NUMBER		051-7173	REV. C
					SHT 1 OF 108



SYSTEM BLOCK DIAGRAM
 SYNC_MASTER=MASTER SYNC_DATE=5/23/05

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	c
SCALE	SHT	OF	REV.
NONE	2	108	

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 1.8GHZ, 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 LINK, 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
341S1942	1	IC, 16MBIT 8-PIN SPI SERIAL FLASH, 802CE	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	C
SCALE	SHT	OF	108
NONE	4		

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_CLKRE01_L_SPN	6	
	TRUE CK410_SRC_CLKRE03_L_SPN	6	
	TRUE CK410_SRC_CLKRE08_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 46 47 53	
	TRUE PM_CLKRUN_L	23 38 46 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 PPQV9_S0	64	

Battery Digital Connector

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

Audio FUNC_TEST

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

Battery FUNC_TEST

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

USB FUNC_TEST

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

DC-JACK FUNC_TEST

FUNC_TEST	TEST	VALUE	LOC
	TRUE ACIN_ENABLE_GATE	65	

Battery charger FUNC_TEST

FUNC_TEST	TEST	VALUE	LOC
	TRUE PPVBAT_G3H_CHGR_OUT	66	

INVERTER CONNECTOR FUNC_TEST

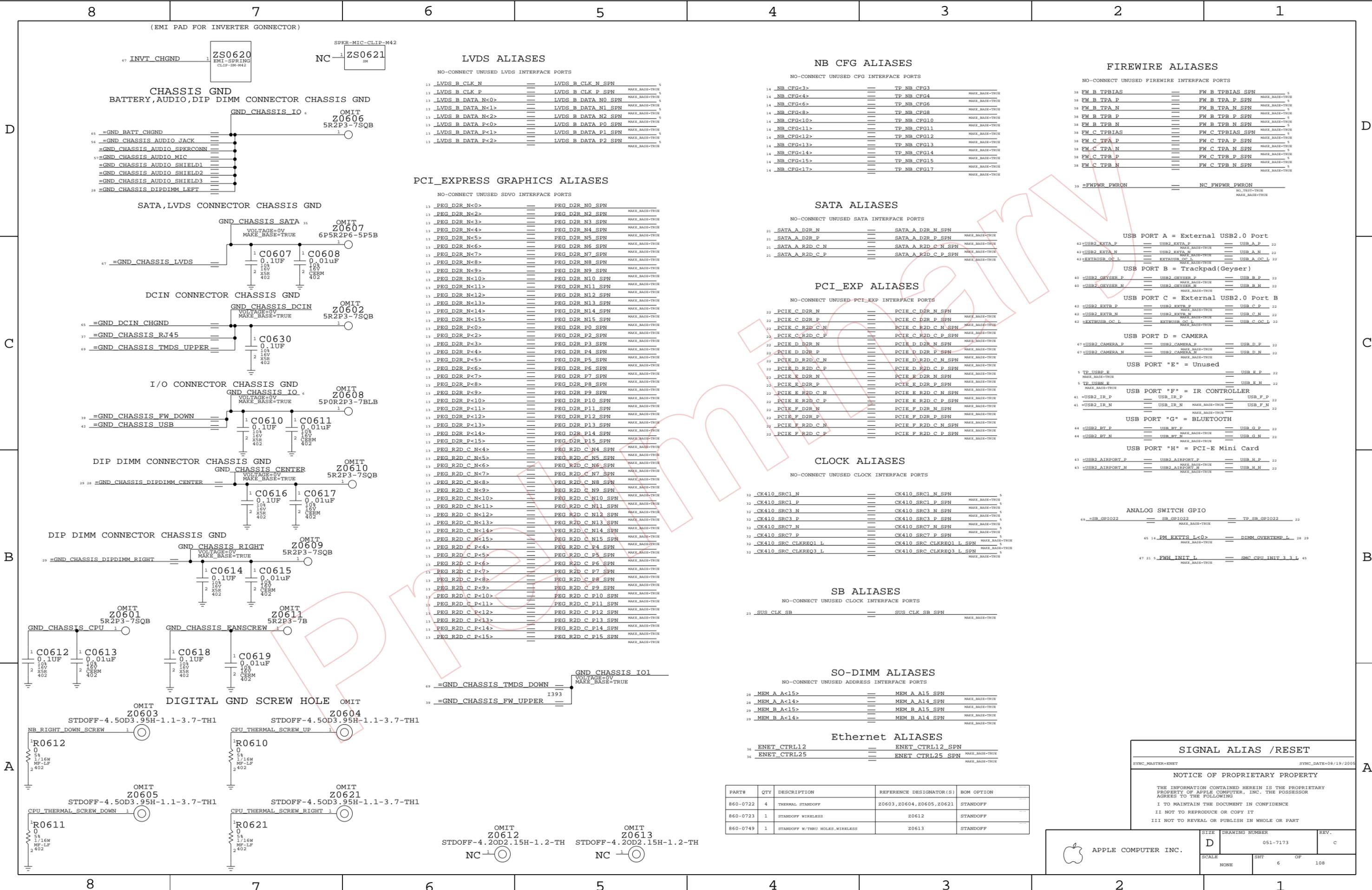
FUNC_TEST	TEST	VALUE	LOC
	TRUE PPBUS_ALL_INV_CONN	67	
	TRUE INV_GND	67	
	TRUE PP5V_INV_F	67	
	TRUE INV_BKLIGHT_PWM_L	67	

FUNC TEST 1 OF 2

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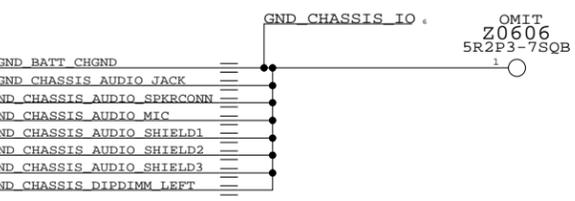
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	NONE	SHT	OF
		5	108



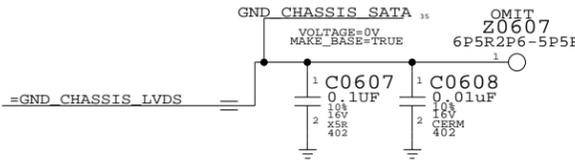
(EMI PAD FOR INVERTER CONNECTOR)



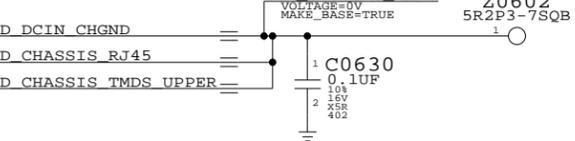
CHASSIS GND
BATTERY, AUDIO, DIP DIMM CONNECTOR CHASSIS GND



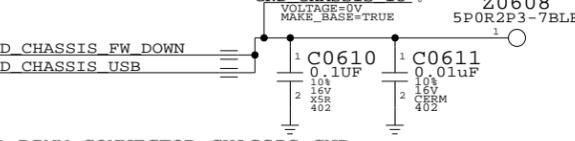
SATA, LVDS CONNECTOR CHASSIS GND



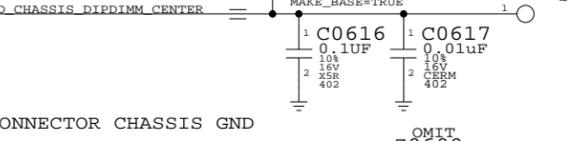
DCIN CONNECTOR CHASSIS GND



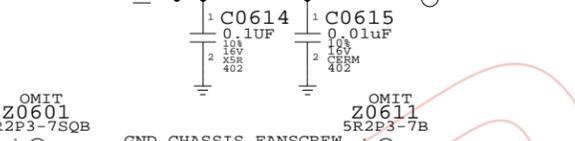
I/O CONNECTOR CHASSIS GND



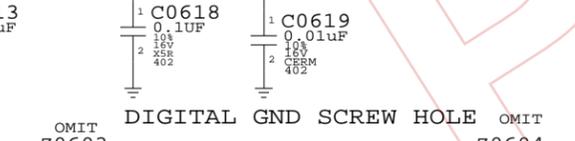
DIP DIMM CONNECTOR CHASSIS GND



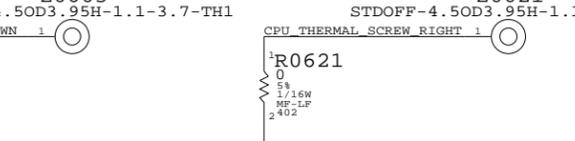
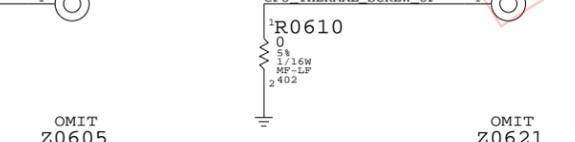
DIP DIMM CONNECTOR CHASSIS GND



DIP DIMM CONNECTOR CHASSIS GND



DIGITAL GND SCREW HOLE



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

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

FIREWIRE ALIASES

NO-CONNECT UNUSED FIREWIRE INTERFACE PORTS

38	FW_B_TPBIA5	FW_B_TPBIA5 SPN	MAKE_BASE=TRUE
38	FW_B_TPA_P	FW_B_TPA_P SPN	MAKE_BASE=TRUE
38	FW_B_TPA_N	FW_B_TPA_N SPN	MAKE_BASE=TRUE
38	FW_B_TPB_P	FW_B_TPB_P SPN	MAKE_BASE=TRUE
38	FW_B_TPB_N	FW_B_TPB_N SPN	MAKE_BASE=TRUE
38	FW_C_TPBIA5	FW_C_TPBIA5 SPN	MAKE_BASE=TRUE
38	FW_C_TPA_P	FW_C_TPA_P SPN	MAKE_BASE=TRUE
38	FW_C_TPA_N	FW_C_TPA_N SPN	MAKE_BASE=TRUE
38	FW_C_TPB_P	FW_C_TPB_P SPN	MAKE_BASE=TRUE
38	FW_C_TPB_N	FW_C_TPB_N SPN	MAKE_BASE=TRUE
39	FWPWR_PWRON	NC_FWPWR_PWRON	MAKE_TEST=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

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

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/TBU HOLES, WIRELESS	Z0613	STANDOFF

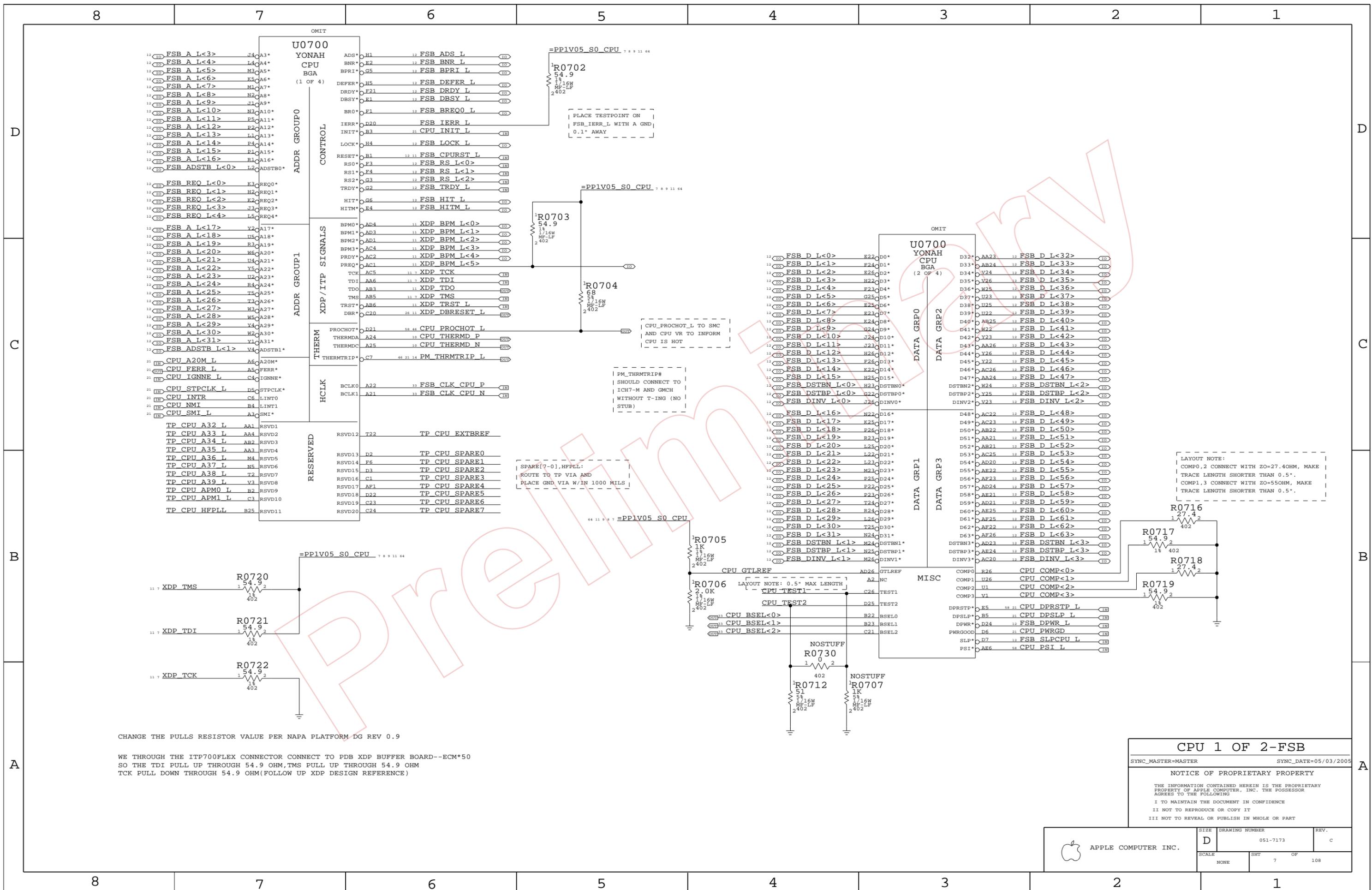
SIGNAL ALIAS /RESET

SYNC_MASTER=ENET SYNC_DATE=08/19/2005

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D	051-7173	C
SCALE	SHT	OF
NONE	6	108



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

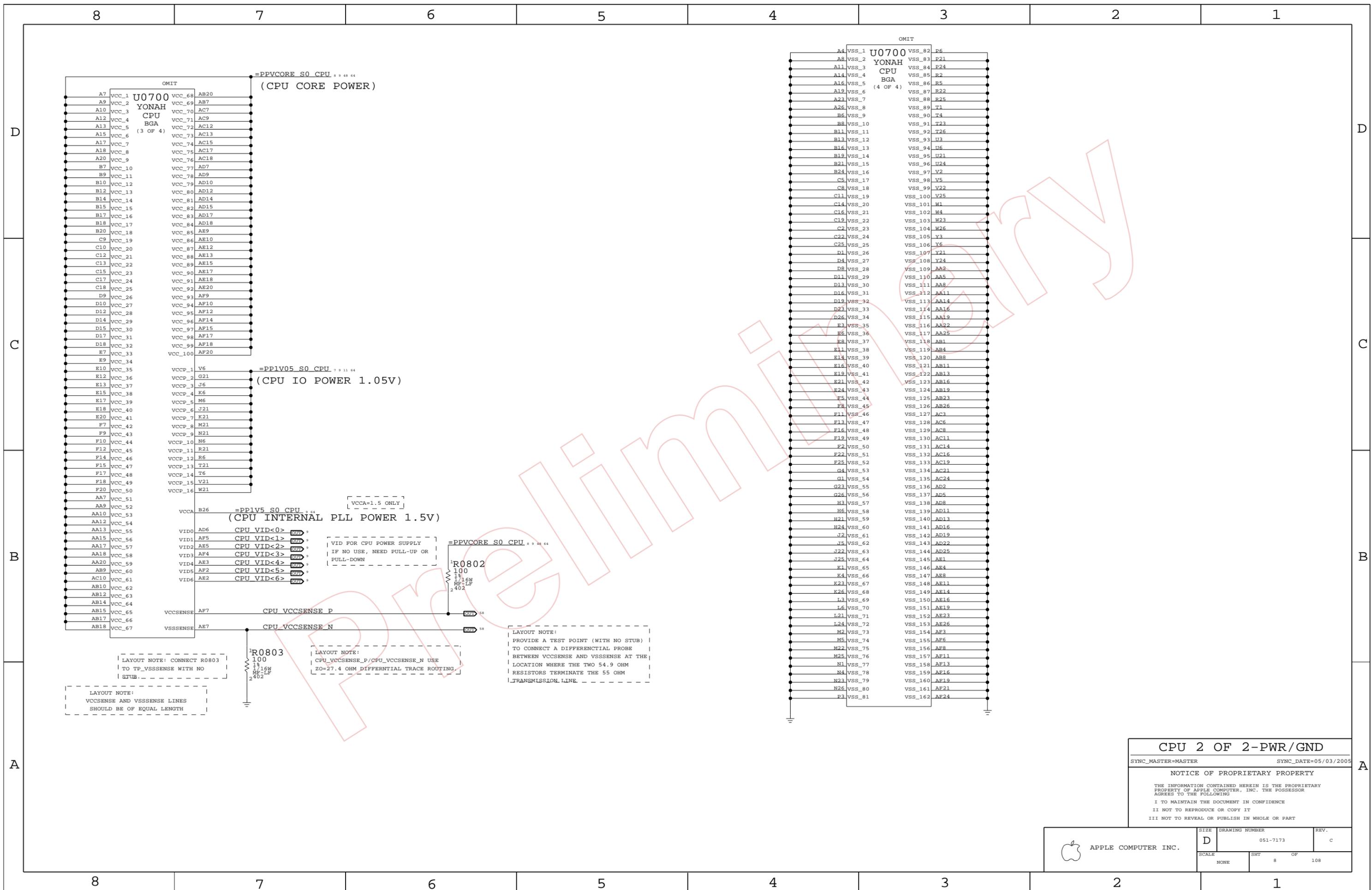
SYNC_MASTER=MASTER SYNC_DATE=05/03/2005

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NONE	7		



CPU 2 OF 2-PWR/GND

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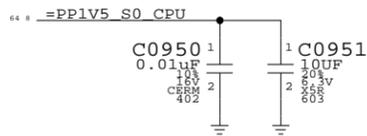
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SCALE	SHT		OF
NONE	8		108

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
138S0606	138S0602	?	ALL	USE TAIYO

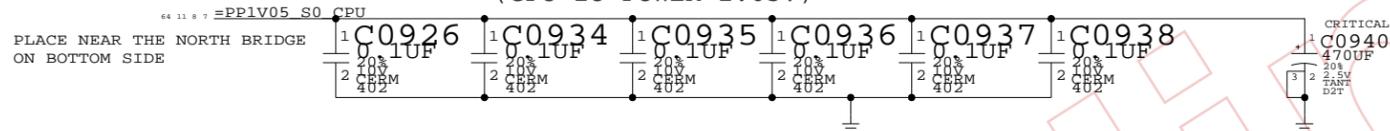
CPU CORE VID<> SETTINGS

EN CPU VID<6>	R0921	1	0	5*1/16W	MF-LP402	58 CPU VID R<6>
EN CPU VID<5>	R0922	1	0	5*1/16W	MF-LP402	58 CPU VID R<5>
EN CPU VID<4>	R0923	1	0	5*1/16W	MF-LP402	58 CPU VID R<4>
EN CPU VID<3>	R0924	1	0	5*1/16W	MF-LP402	58 CPU VID R<3>
EN CPU VID<2>	R0925	1	0	5*1/16W	MF-LP402	58 CPU VID R<2>
EN CPU VID<1>	R0926	1	0	5*1/16W	MF-LP402	58 CPU VID R<1>
EN CPU VID<0>	R0927	1	0	5*1/16W	MF-LP402	58 CPU VID R<0>

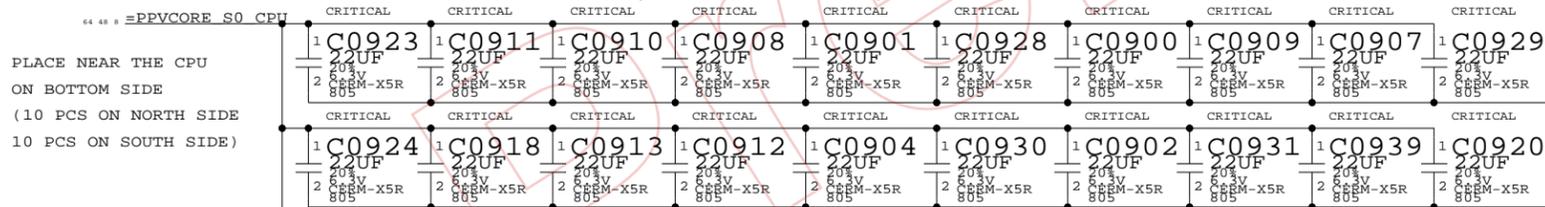
R0921~R0927 FOR CPU VOLTAGE MANUAL SETTING

VCCP CORE DECOUPLING
(CPU IO POWER 1.05V)

THIS 470UF FOR CPU, GMCH FSB BUS 1.05V



VCC CORE DECOUPLING
(CPU CORE POWER)



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

	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

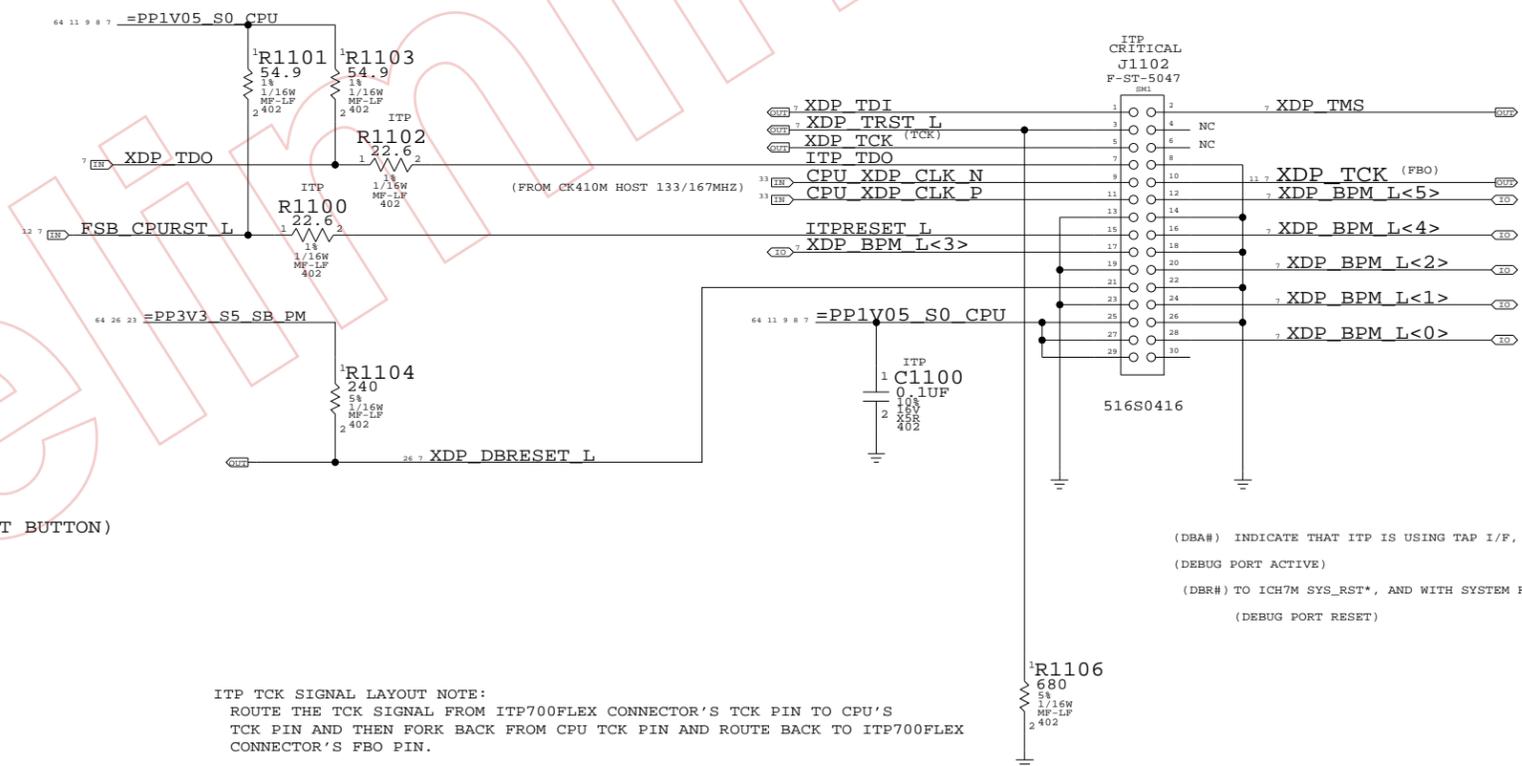
CPU DECAPS & VID<>

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NONE	9	108	

CPU ITP700FLEX DEBUG SUPPORT



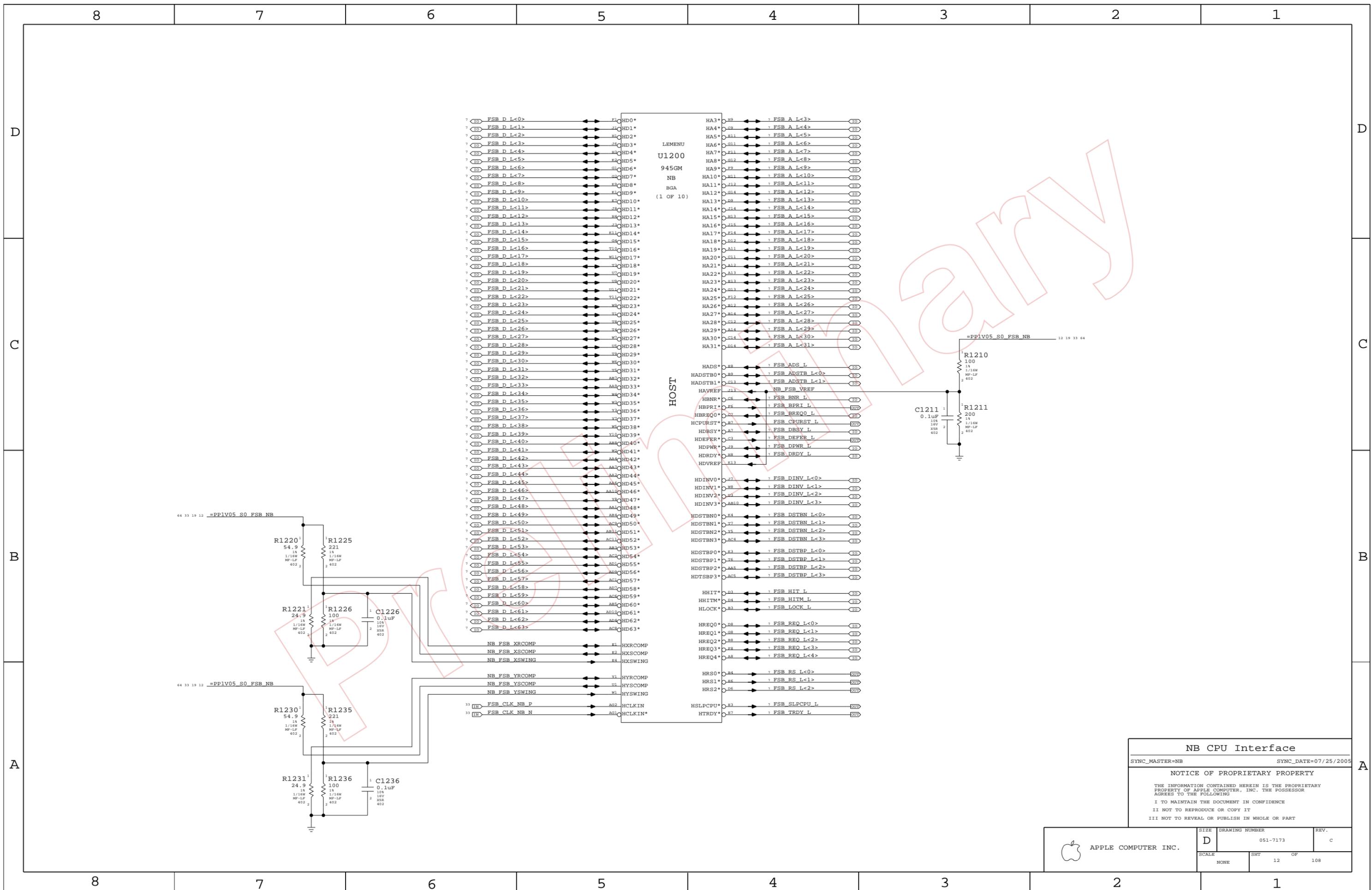
(AND WITH RESET BUTTON)

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

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

CPU ITP700FLEX DEBUG
 SYNC_MASTER=MASTER SYNC_DATE=5/23/05
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SCALE	SHT	OF	REV.
NONE	11	108	



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. C
	SCALE NONE	SHEET 12	OF 108

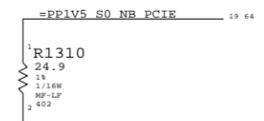
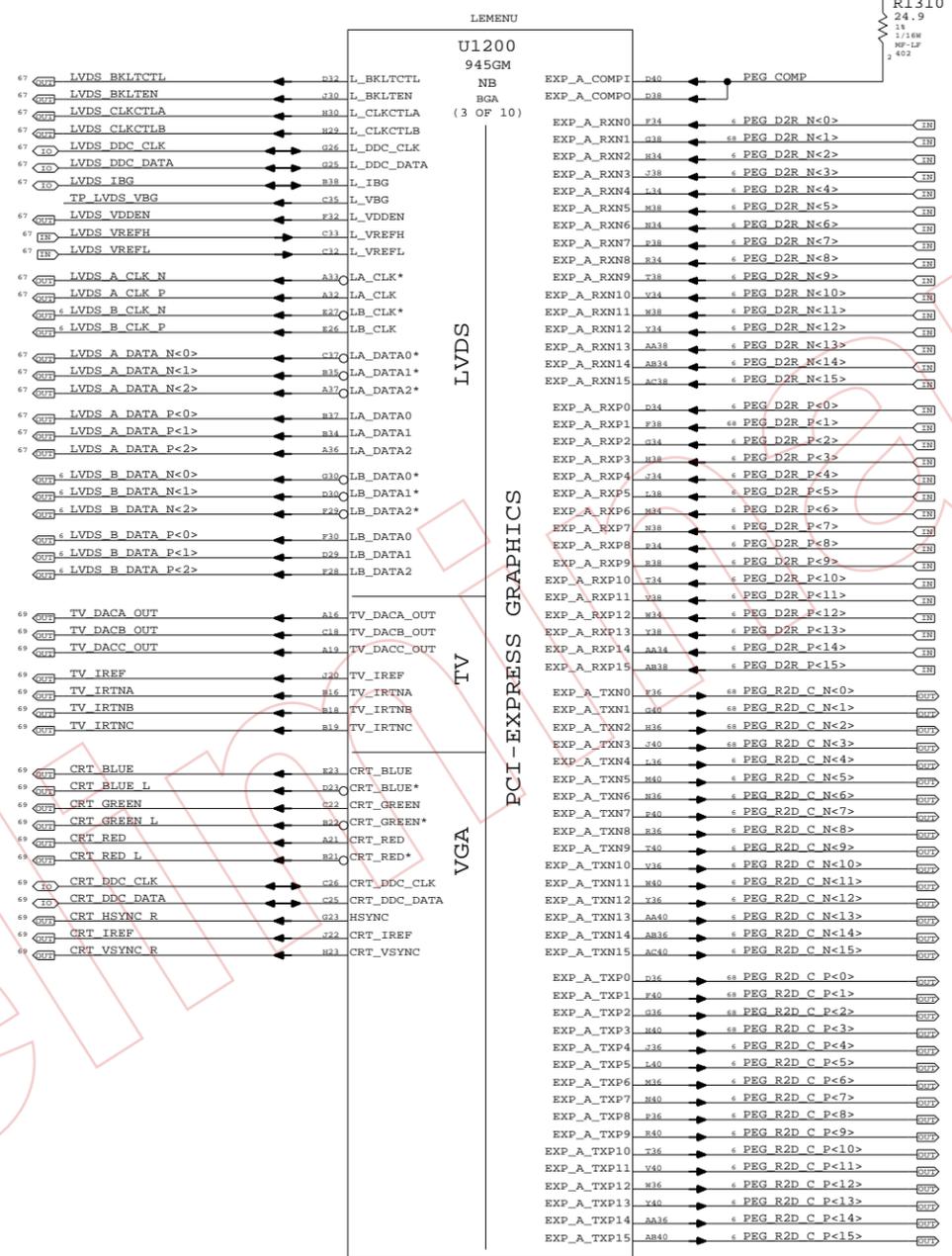
LVDS Disable
 Can leave all signals NC if LVDS is not implemented
 Tie VCC_TXLVDS and VCCA_LVDS to GND. If SDVO is used
 VCCD_LVDS must remain powered with proper decoupling.
 Otherwise, tie VCCD_LVDS to GND also.

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

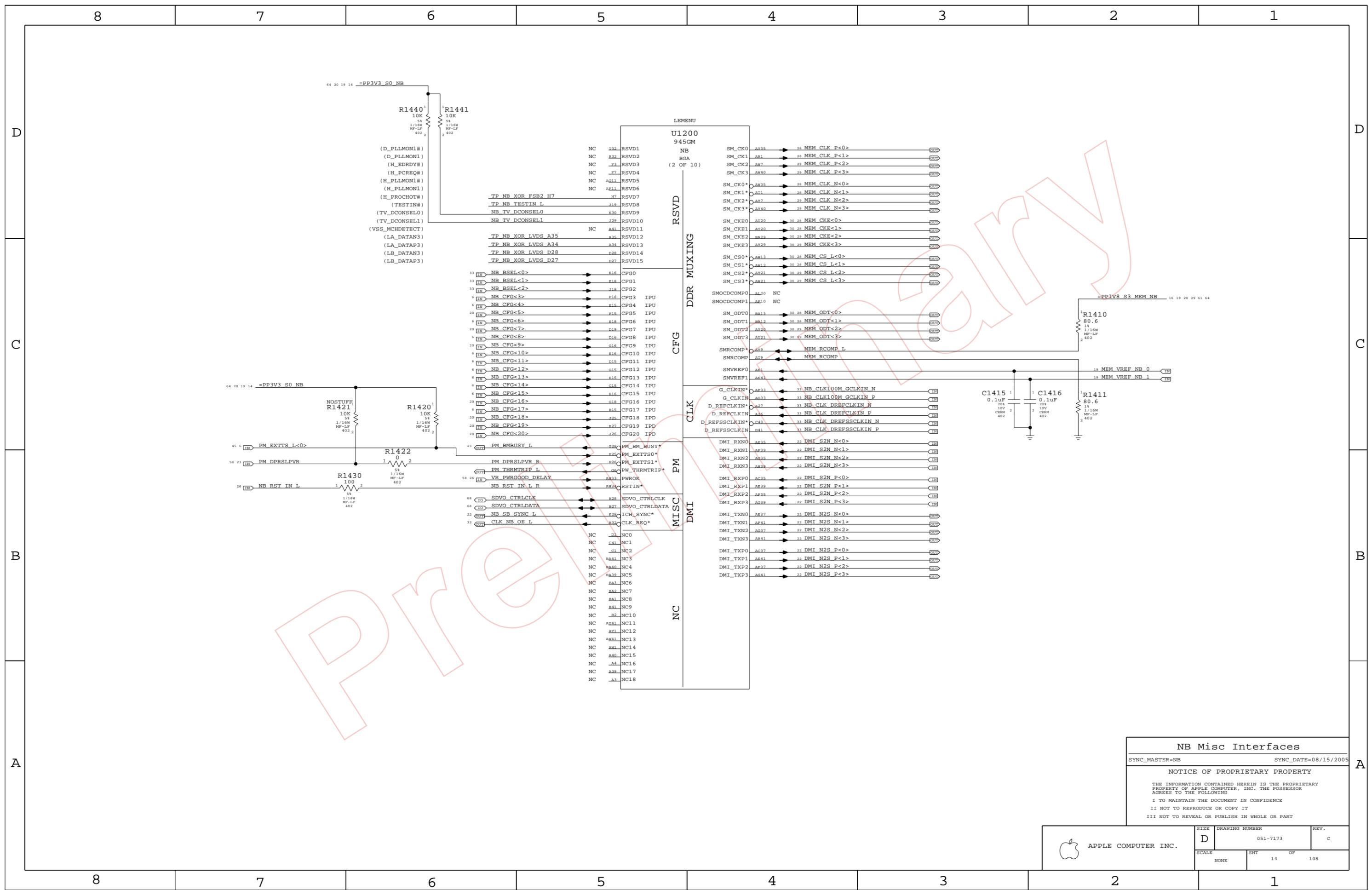
SDVOB_RED#
 SDVOB_GREEN#
 SDVOB_BLUE#
 SDVOB_CLKN
 SDVOC_RED#
 SDVOC_GREEN#
 SDVOC_BLUE#
 SDVOC_CLKN

SDVOB_RED
 SDVOB_GREEN
 SDVOB_BLUE
 SDVOB_CLKP
 SDVOC_RED
 SDVOC_GREEN
 SDVOC_BLUE
 SDVOC_CLKP

Preview

NB PEG / Video Interfaces
 SYNC_MASTER=NB SYNC_DATE=07/25/2005
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SCALE	SHT	OF	REV.
NONE	13	108	



NB Misc Interfaces

SYNC_MASTER=NB SYNC_DATE=08/15/2005

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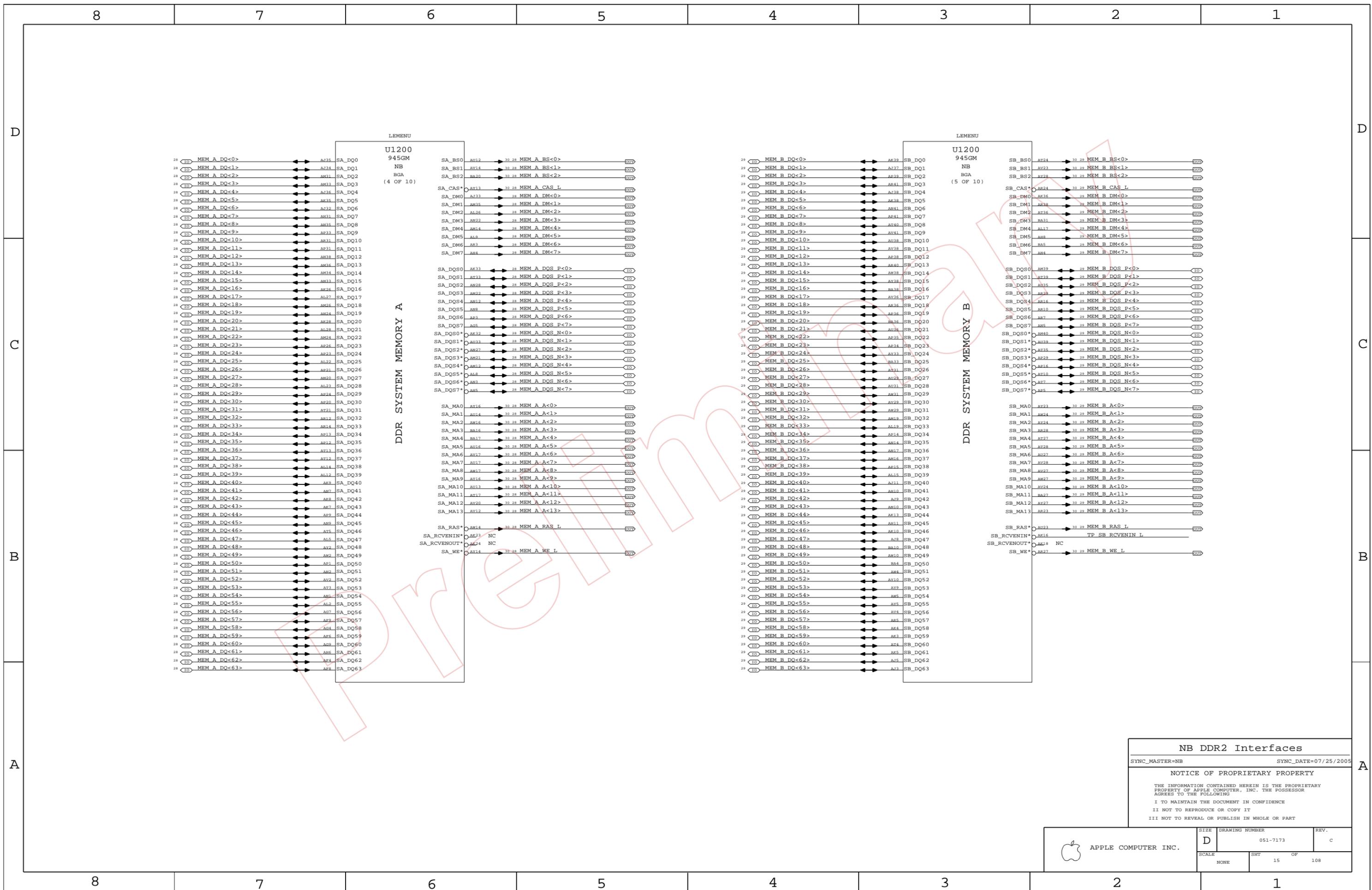
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SCALE	SHT	OF	REV.
NONE	14	108	



NB DDR2 Interfaces

SYNC_MASTER=NB SYNC_DATE=07/25/2005

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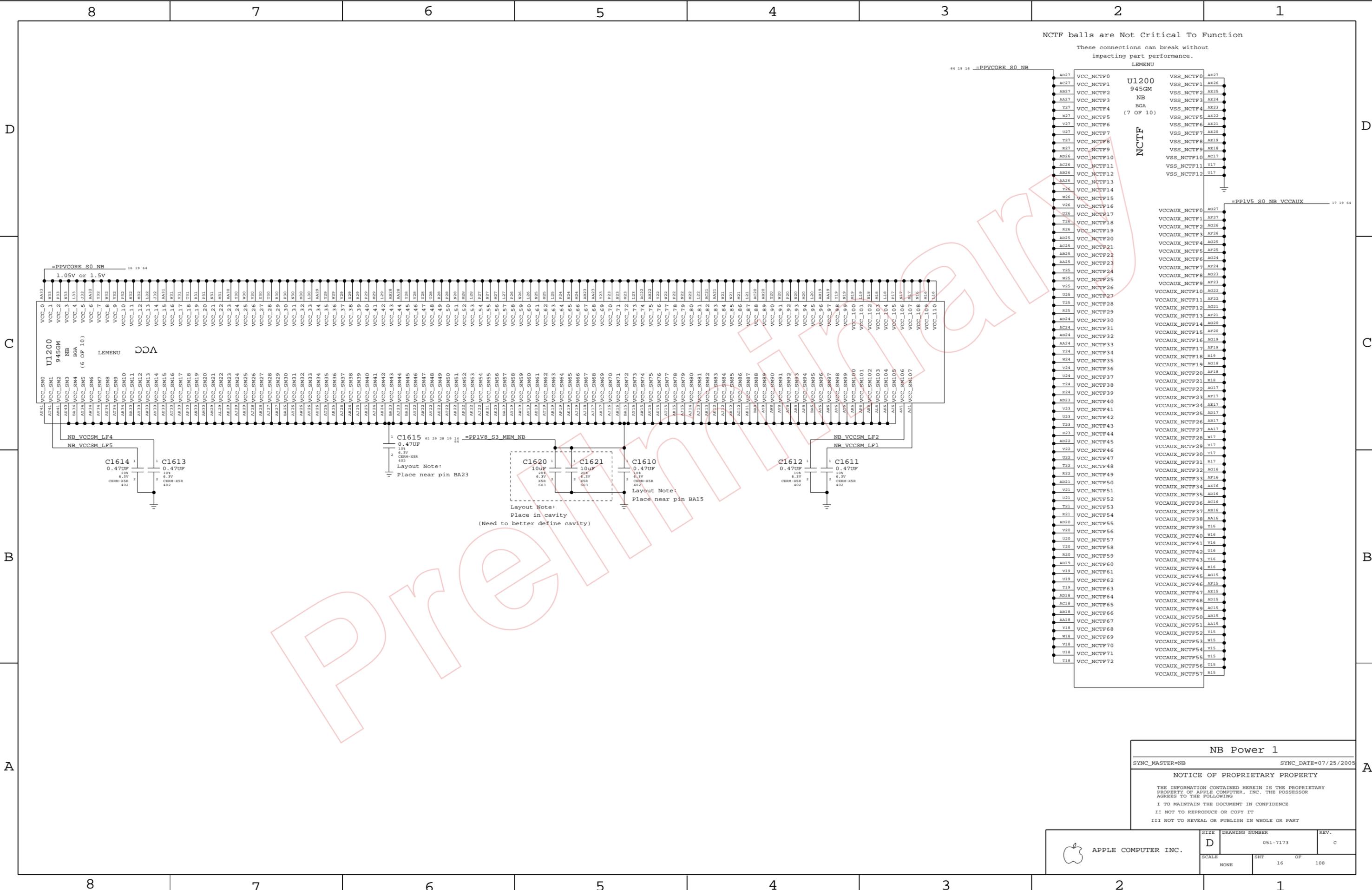
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	D	051-7173	c
SCALE	SHT	OF	108
NONE	15		



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

NCTF

VCCAUX_NCTF

VCC

NB VCCSM LP4

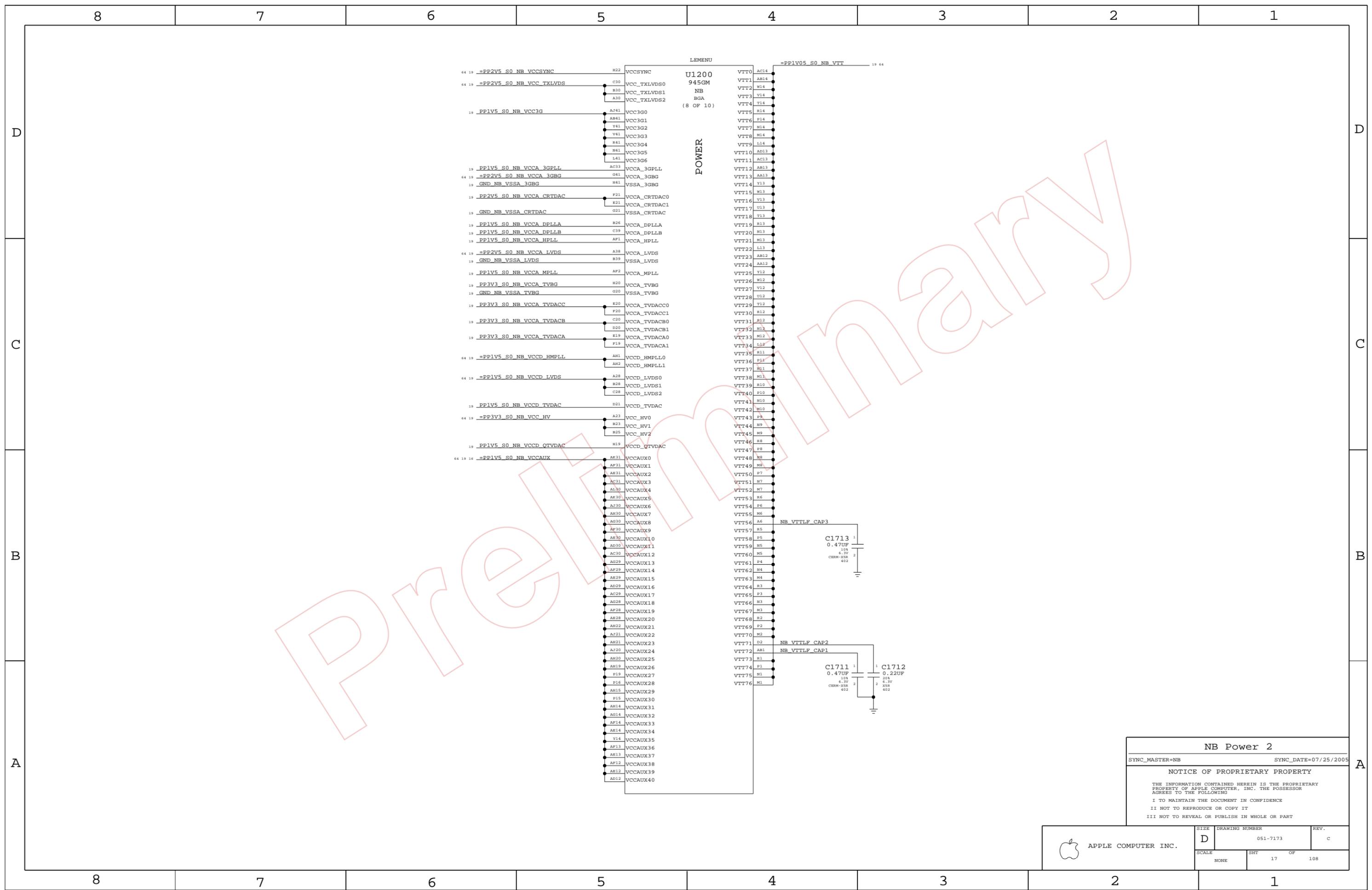
NB VCCSM LP5

NB VCCSM LP2

NB VCCSM LP1

NB Power 1
 SYNC_MASTER=NB SYNC_DATE=07/25/2005
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NONE	16		



NB Power 2

SYNC_MASTER=NB SYNC_DATE=07/25/2005

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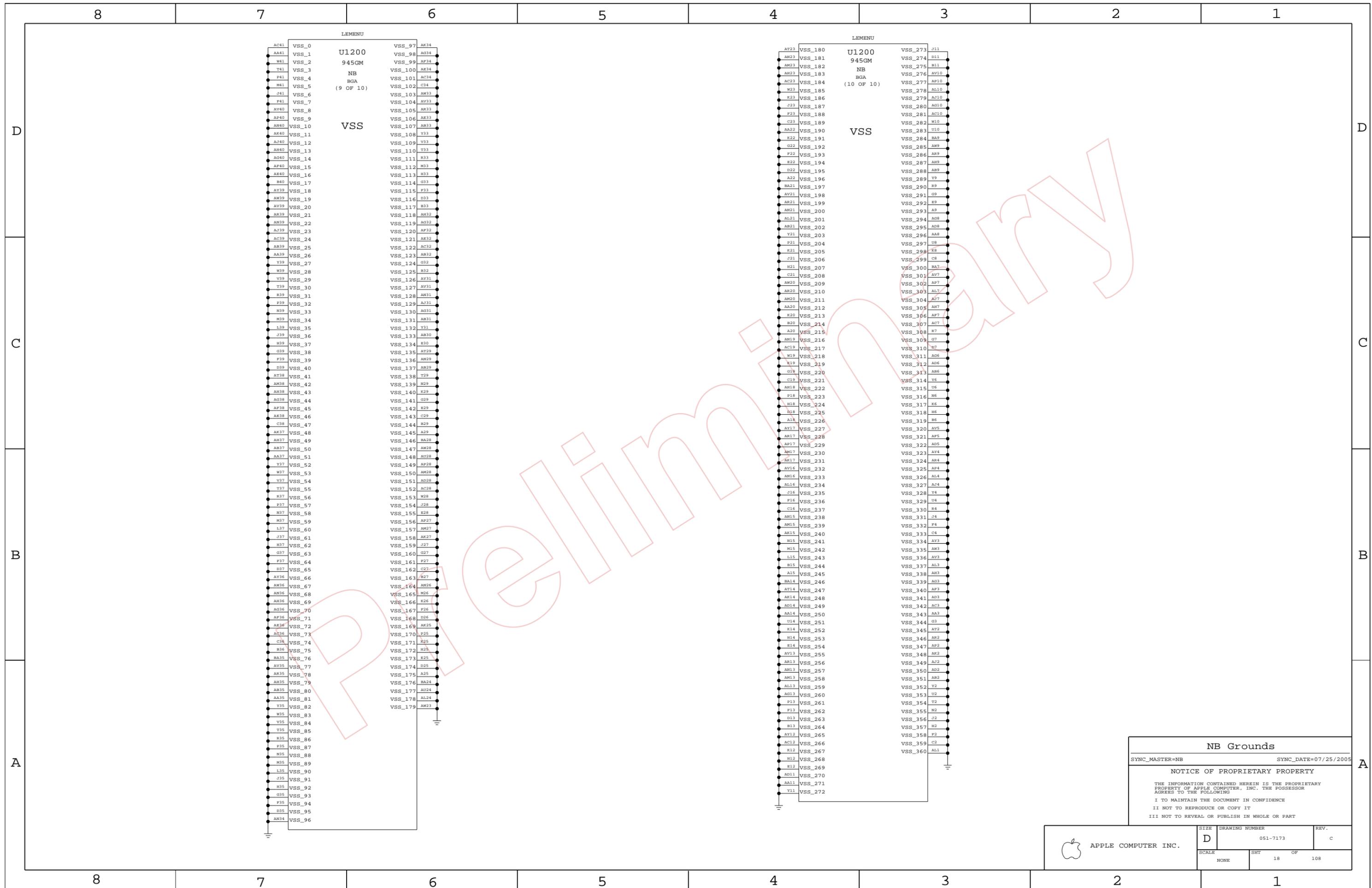
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SCALE	SHT	OF	REV.
NONE	17	108	



NB Grounds

SYNC_MASTER=NB SYNC_DATE=07/25/2005

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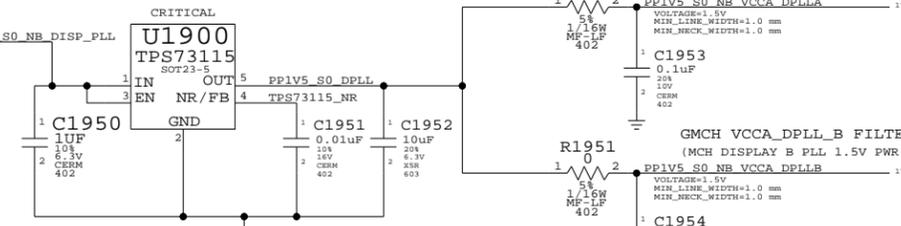
APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. c
	SCALE NONE	SHEET 18	OF 108

Power Interface

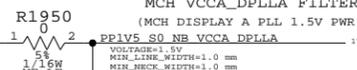
These are the power signals that leave the NB "block"

- =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_TV DAC
=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_TV DAC

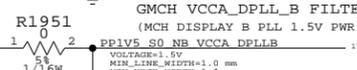
MCH DISPLAY PLL POWER LDO



MCH VCCA_DPLL FILTER



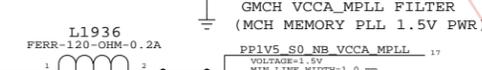
GMCH VCCA_DPLL_B FILTER



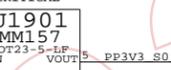
GMCH VCCA_HPLL FILTER



GMCH VCCA_MPLL FILTER



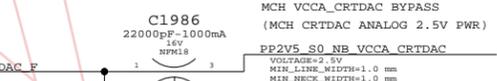
MCH VCCA_CRTDAC BYPASS



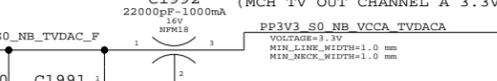
MCH VCCA_LVDS FILTER



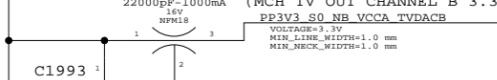
MCH VCCA_CRTDAC BYPASS



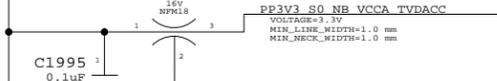
MCH VCCA_TV DAC FILTER



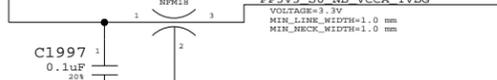
MCH VCCA_TV DAC FILTER



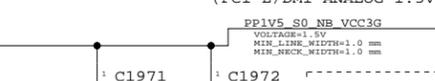
MCH VCCA_TV DAC FILTER



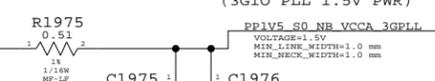
MCH VCCA_TV BG FILTER



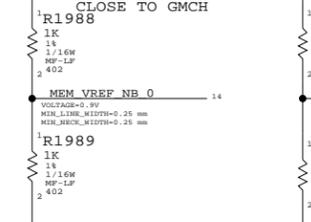
GMCH VCC3G FILTER



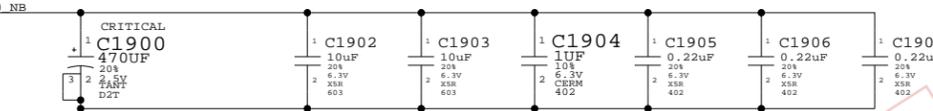
GMCH VCCA_3GPLL FILTER



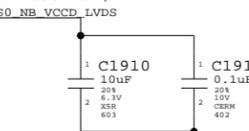
PLACE THOSE COMPONENT CLOSE TO GMCH



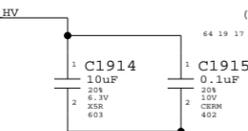
GMCH CORE PWR 1.05V BYPASS THIS 470UF FOR GMCH CORE 1.05V



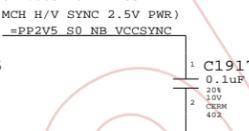
GMCH VCCD_LVDS BYPASS



MCH VCC_HV BYPASS



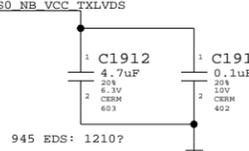
MCH VCCSYNC BYPASS



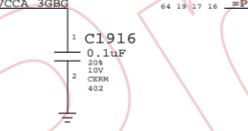
MCH VTT BYPASS



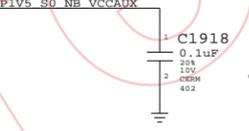
GMCH VCC TX LVDS BYPASS



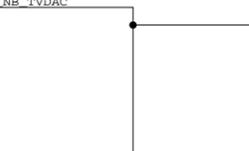
MCH VCCA_3GBG BYPASS



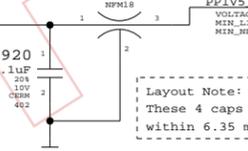
GMCH VCCAUX FILTER



MCH TV DAC



MCH TV DAC DEDICATED PWR



MCH TV DAC DIGITAL QUIET



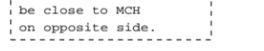
MCH TV DAC DIGITAL QUIET



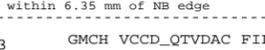
Layout Note: Place L and C close to MCH



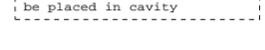
Layout Note: 10uF caps should be close to MCH on opposite side.



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



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 (D), DRAWING NUMBER (051-7173), REV. (C), SCALE (NONE), SHEET (19 OF 108)



APPLE COMPUTER INC.

8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

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
-----------	----------

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

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

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

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

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

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

PROBABLY NOT NEEDED

NB Config Straps

SYNC_MASTER=NB SYNC_DATE=06/28/2005

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NONE	20	108	

8

7

6

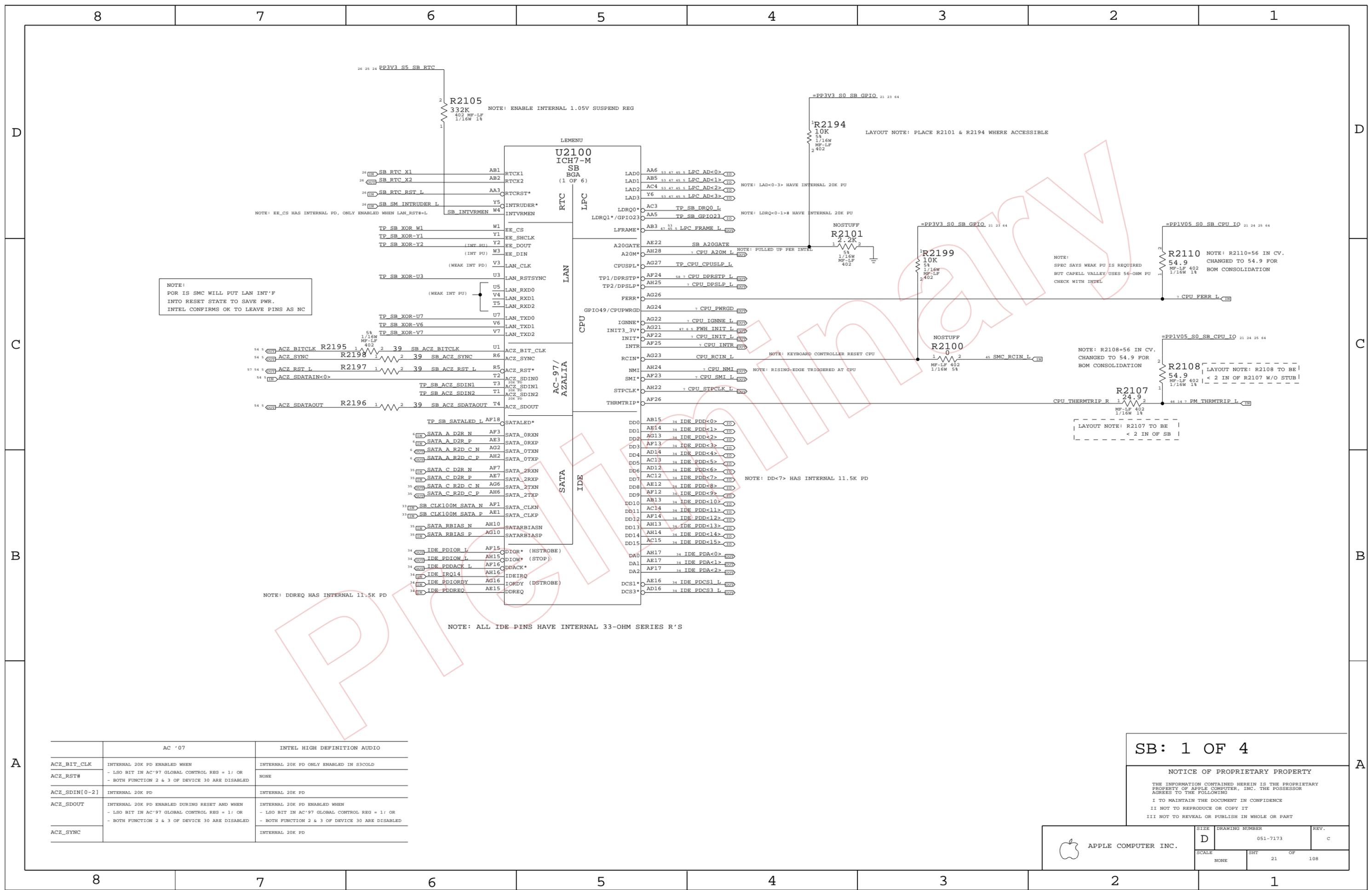
5

4

3

2

1



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:
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: DD<7> HAS INTERNAL 11.5K PD

NOTE: DDREQ HAS INTERNAL 11.5K PD

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

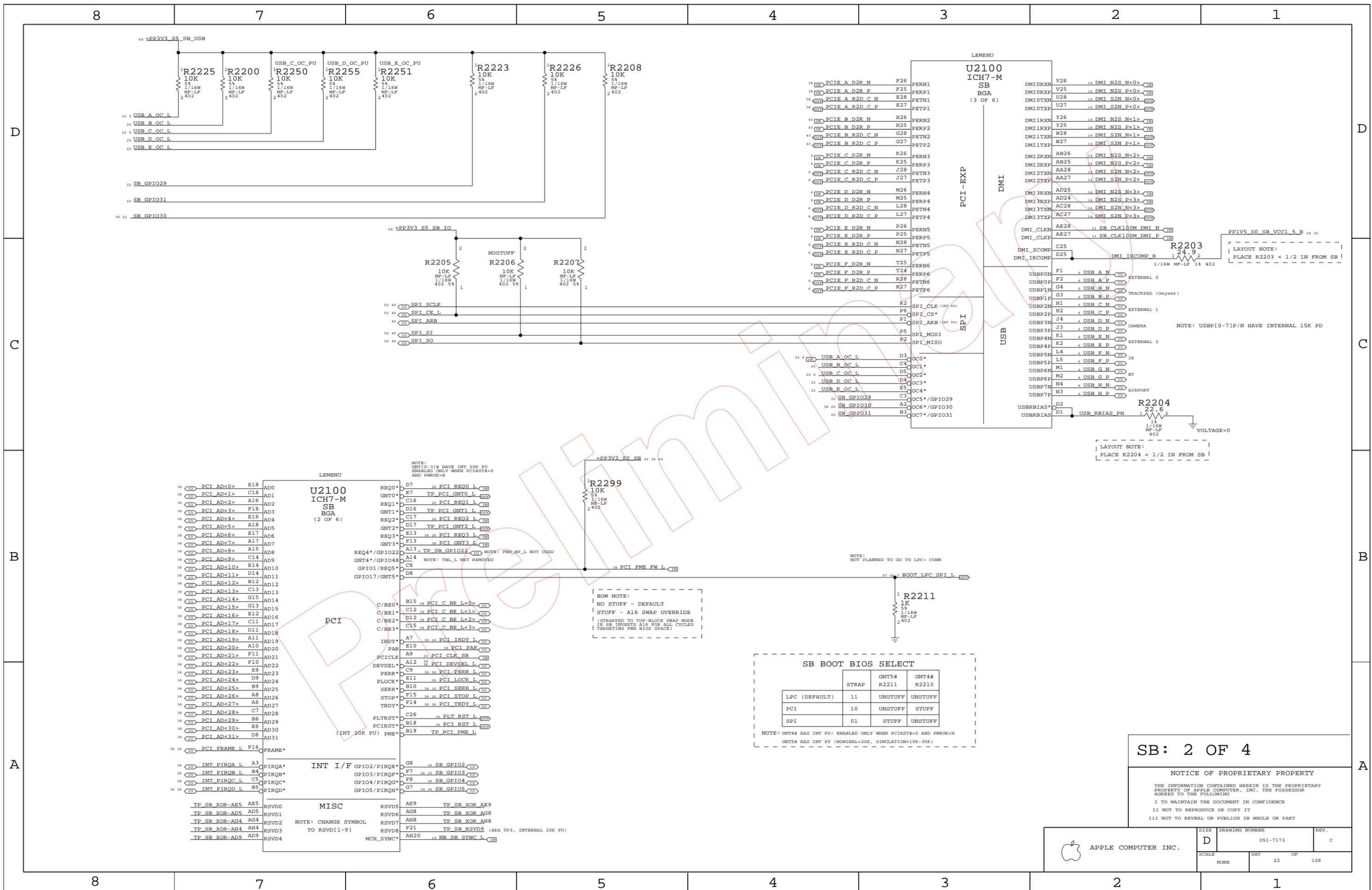
	AC '07	INTEL HIGH DEFINITION AUDIO
ACZ_BIT_CLK	INTERNAL 20K PD ENABLED WHEN - LSO BIT IN AC'97 GLOBAL CONTROL REG = 1; OR	INTERNAL 20K PD ONLY ENABLED IN S3COLD
ACZ_RST#	NONE - BOTH FUNCTION 2 & 3 OF DEVICE 30 ARE DISABLED	NONE
ACZ_SDIN[0-2]	INTERNAL 20K PD	INTERNAL 20K PD
ACZ_SDOUT	INTERNAL 20K PD ENABLED 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	108	



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	SCALE NONE	SHEET 22	OF 108

SB BOOT BIOS SELECT

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

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

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))

LEMENU

U2100 ICH7-M SB BGA (2 OF 6)

REQ0*	D7	26	PCI REQ0 L	(TH)			
GNT0*	E7	TP	PCI GNT0 L	(TH)			
REQ1*	C16	26	PCI REQ1 L	(TH)			
GNT1*	D16	TP	PCI GNT1 L	(TH)			
REQ2*	C17	26	PCI REQ2 L	(TH)			
GNT2*	D17	TP	PCI GNT2 L	(TH)			
REQ3*	E13	38-24	PCI REQ3 L	(TH)			
GNT3*	F13	38	PCI GNT3 L	(TH)			
REQ4*/GPIO22	A13	6	TP SB GPIO22	(TH) NOTE: FWB_MP_L NOT USED			
GNT4*/GPIO48	A14			NOTE: TBL_L NET REMOVED			
GPIO1/REQ5*	C8						
GPIO17/GNT5*	D8						
REQ0*	D7	26	PCI REQ0 L	(TH)			
GNT0*	E7	TP	PCI GNT0 L	(TH)			
REQ1*	C16	26	PCI REQ1 L	(TH)			
GNT1*	D16	TP	PCI GNT1 L	(TH)			
REQ2*	C17	26	PCI REQ2 L	(TH)			
GNT2*	D17	TP	PCI GNT2 L	(TH)			
REQ3*	E13	38-24	PCI REQ3 L	(TH)			
GNT3*	F13	38	PCI GNT3 L	(TH)			
REQ4*/GPIO22	A13	6	TP SB GPIO22	(TH) NOTE: FWB_MP_L NOT USED			
GNT4*/GPIO48	A14			NOTE: TBL_L NET REMOVED			
GPIO1/REQ5*	C8						
GPIO17/GNT5*	D8						
C/BE0*	B15	38	PCI C BE L<0>	(TH)			
C/BE1*	C12	38	PCI C BE L<1>	(TH)			
C/BE2*	D12	38	PCI C BE L<2>	(TH)			
C/BE3*	C15	38	PCI C BE L<3>	(TH)			
IRDY*	A7	38-24	PCI IRDY L	(TH)			
PAR	E10	38	PCI PAR	(TH)			
PCICLK	A9	33	PCI CLK SB	(TH)			
DEVSEL*	A12	38	PCI DEVSEL L	(TH)			
PERR*	C9	38-24	PCI PERR L	(TH)			
PLOCK*	E11	24	PCI LOCK L	(TH)			
SERR*	B10	38-24	PCI SERR L	(TH)			
STOP*	F15	38-24	PCI STOP L	(TH)			
TRDY*	F14	38-24	PCI TRDY L	(TH)			
PLTRST*	C26	26	PLT RST L	(TH)			
PCIRST*	B18	38	PCI RST L	(TH)			
PME*	B19	TP	PCI PME L	(TH)			
INT PIRQA L	A3	PIRQA*					
INT PIRQB L	B4	PIRQB*					
INT PIRQC L	C5	PIRQC*					
INT PIRQD L	B5	PIRQD*					
TP_SB_XOR-AE5	AE5	RSVD0	TP_SB_XOR_AE9	RSVD5			
TP_SB_XOR-AD5	AD5	RSVD1	TP_SB_XOR_AG8	RSVD6			
TP_SB_XOR-AG4	AG4	RSVD2	TP_SB_XOR_AH8	RSVD7			
TP_SB_XOR-AH4	AH4	RSVD3	TP_SB_RSVD9 (AKA TP3, INTERNAL 20K PU)	RSVD8			
TP_SB_XOR-AD9	AD9	RSVD4	MCH_SYNC*	AH20	14	NB_SB_SYNC L	(TH)

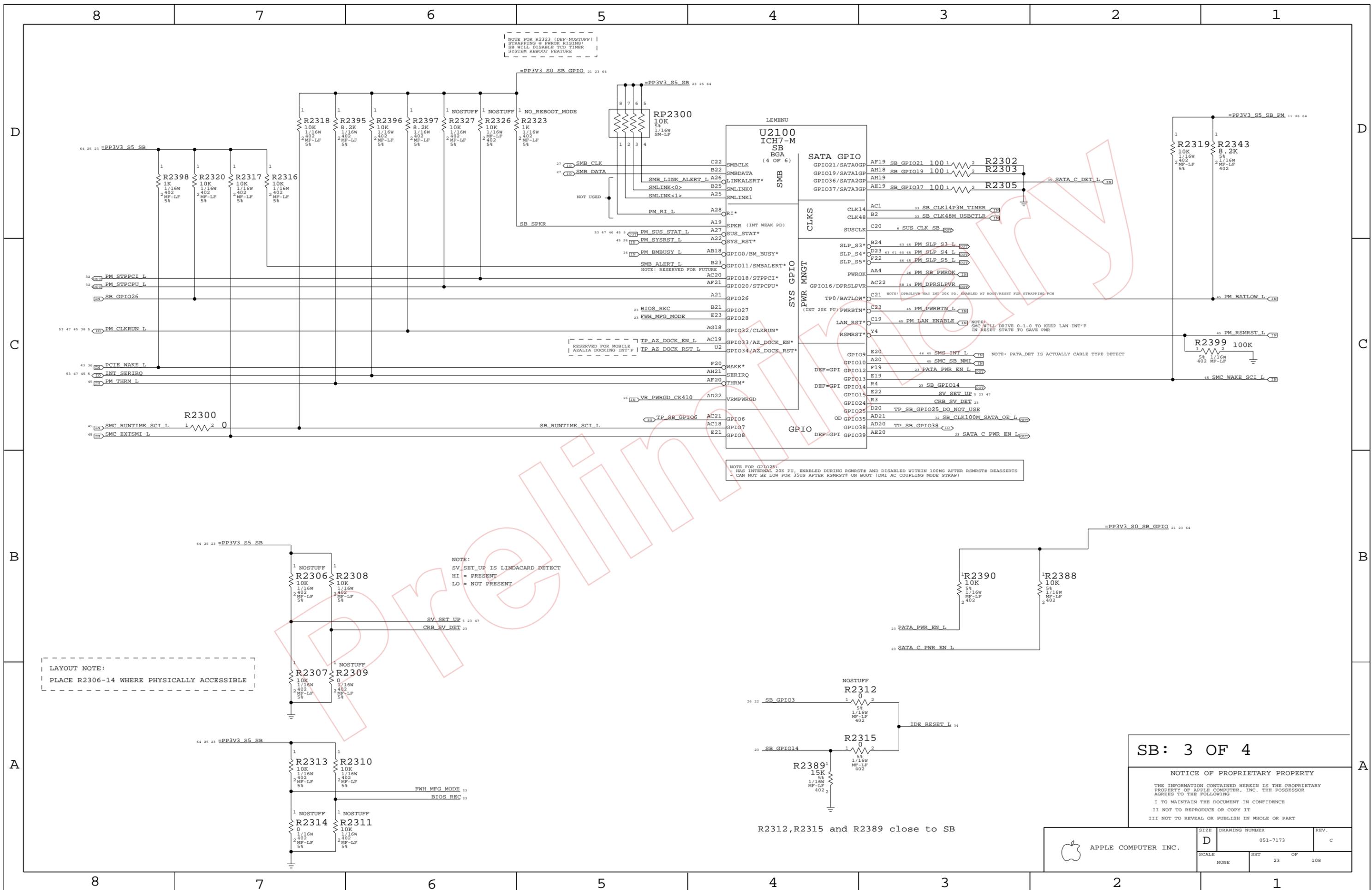
INT I/F

MISC

NOTE: CHANGE SYMBOL TO RSVD[1-9]

LAYOUT NOTE:
 PLACE R2204 < 1/2 IN FROM SB

LAYOUT NOTE:
 PLACE R2203 < 1/2 IN FROM SB



NOTE FOR R2333 (DEF-NOSTUFF) | STRAPPING & PWROK RISING: SB WILL DISABLE TOO TIMER SYSTEM REBOOT FEATURE

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

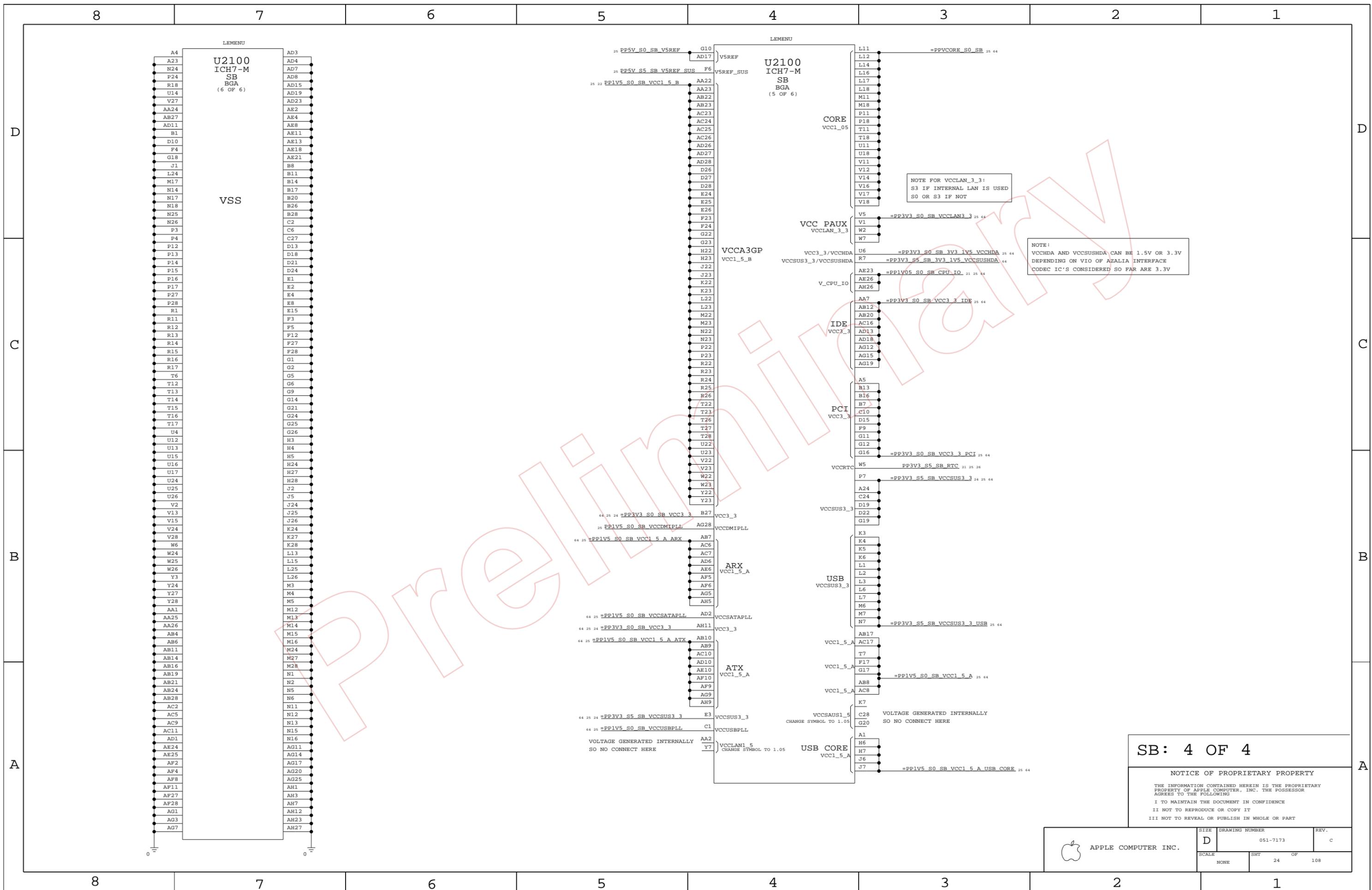
LAYOUT NOTE:
 PLACE R2306-14 WHERE PHYSICALLY ACCESSIBLE

SB: 3 OF 4

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	D	051-7173	C
SCALE	NONE	SHT	23 OF 108

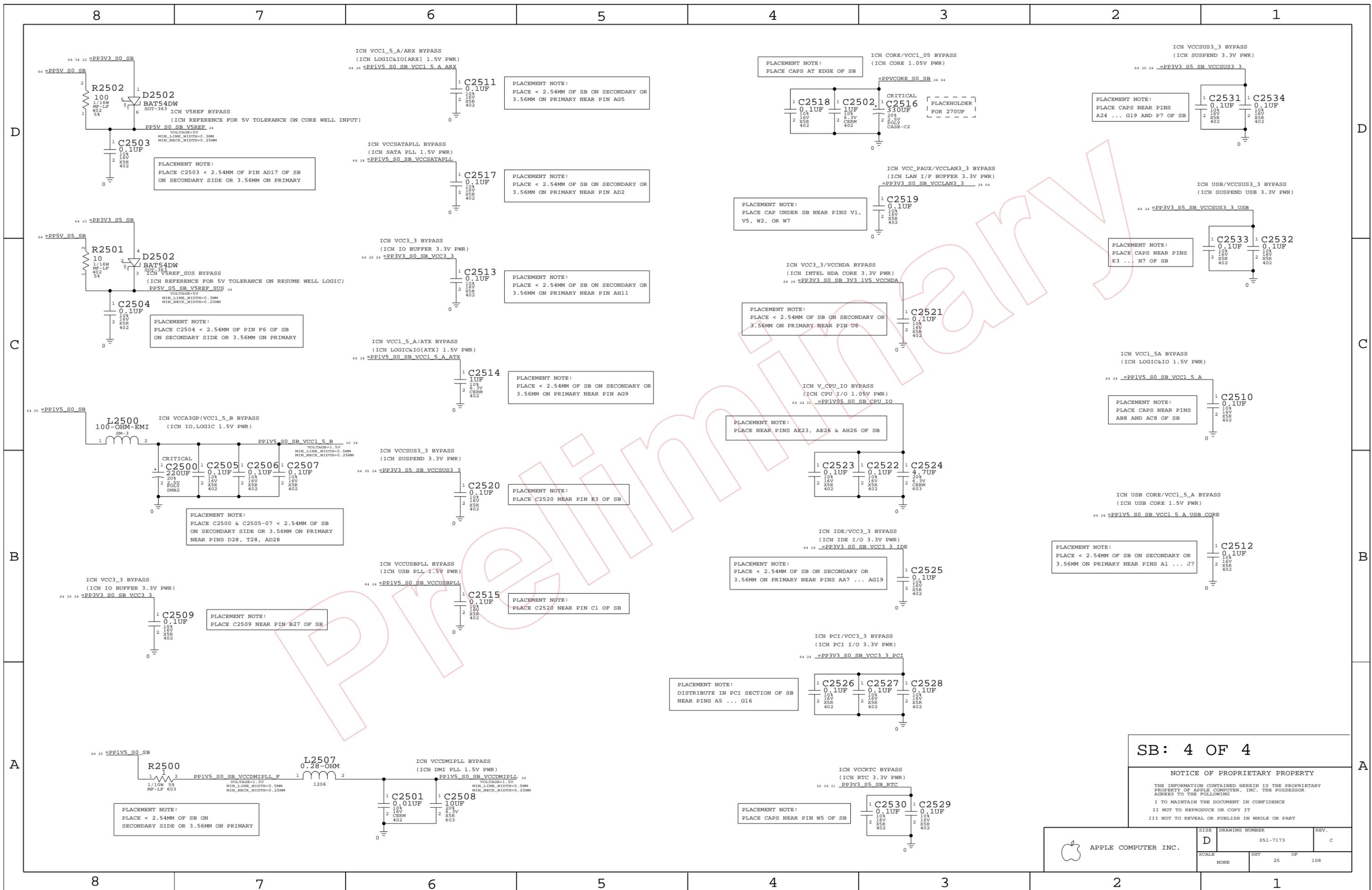
R2312, R2315 and R2389 close to SB



SB: 4 OF 4

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	D	051-7173	C
SCALE	SHT	OF	108
NONE	24		



SB: 4 OF 4

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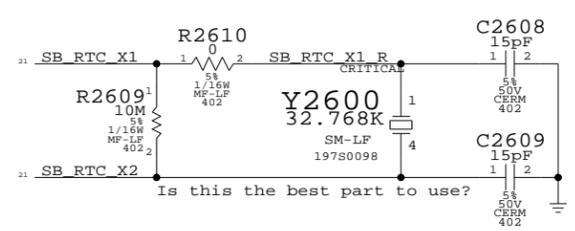
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	108
NONE	25		

RTC Battery Connector

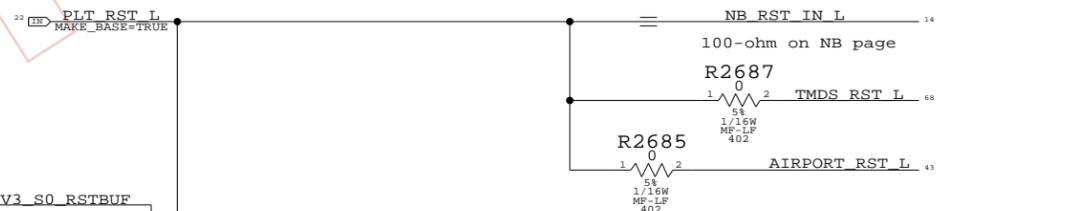


SB RTC Crystal Circuit

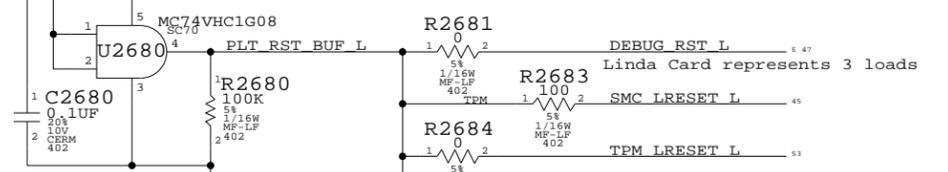


This part is never stuffed, it provides a set of pads on the board to short or to solder a reset button.
Silk: "SYS RST"

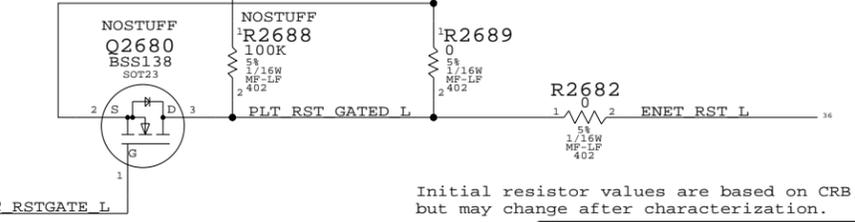
Platform Reset Connections
Unbuffered



Buffered



Gated



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

SB Misc		
SYNC_MASTER=NB	SYNC_DATE=07/26/2005	
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	108
NONE	26		

8

7

6

5

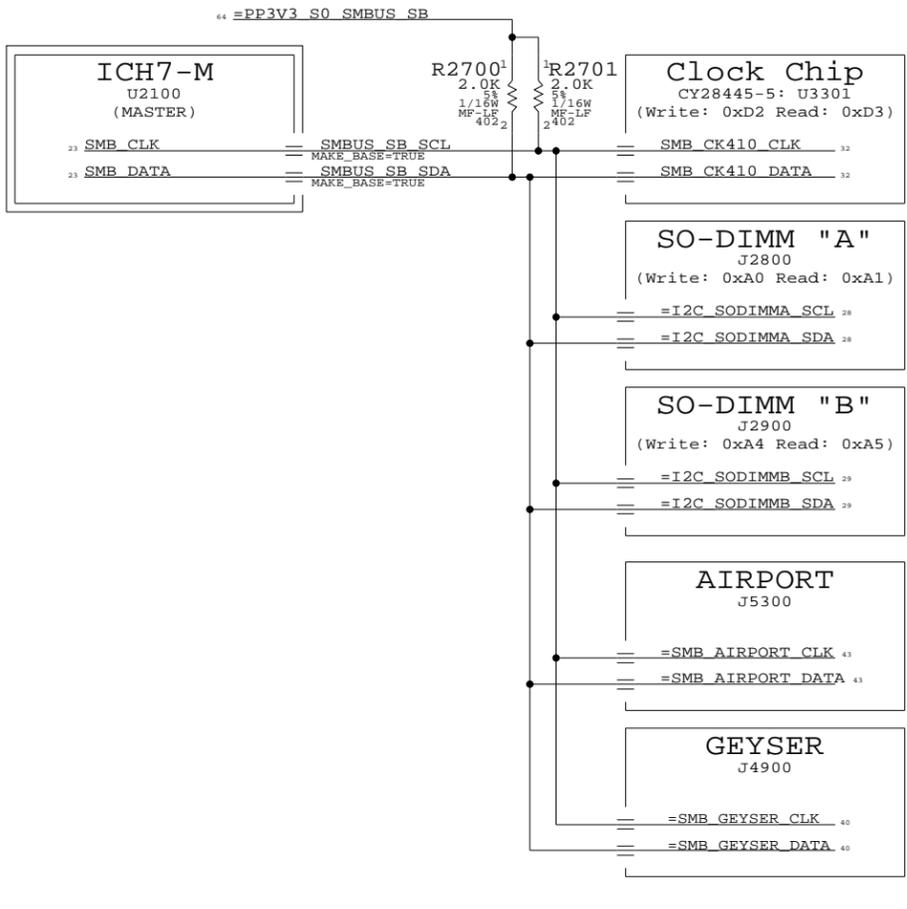
4

3

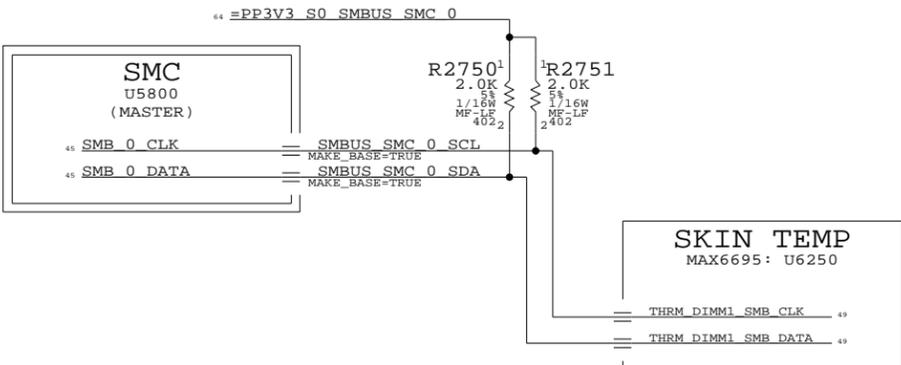
2

1

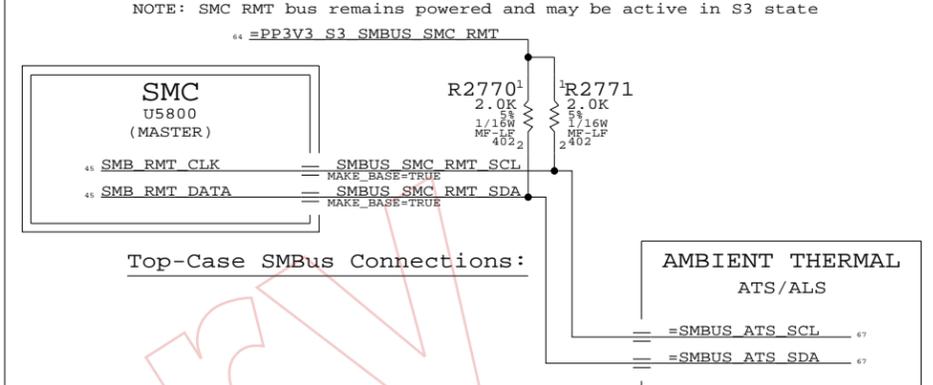
ICH7-M SMBus Connections



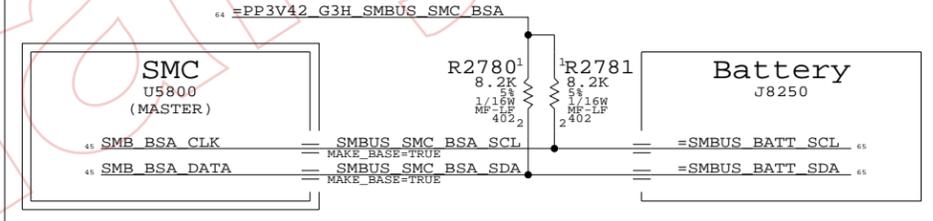
SMC "0" SMBus Connections



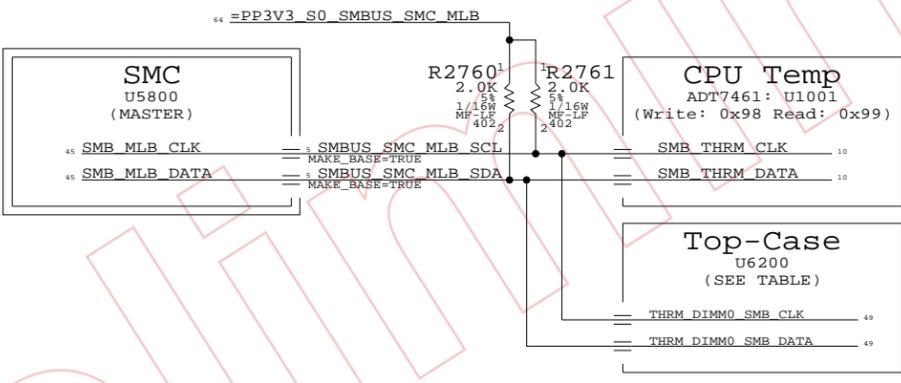
SMC "RMT" SMBus Connections



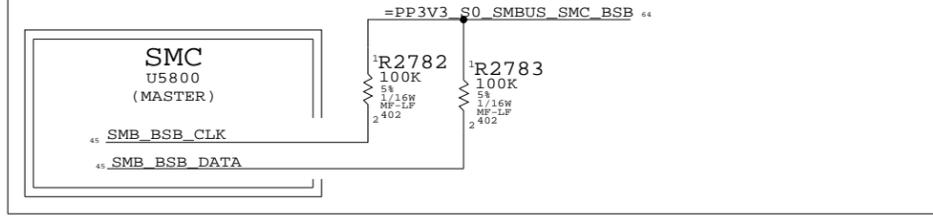
SMC "Battery A" SMBus Connections



SMC "MLB" SMBus Connections



SMC "Battery B" SMBus Connections



PRELIMINARY

M42 SMBUS CONNECTIONS

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	c
SCALE	SHT	OF	REV.
NONE	27	108	

8

7

6

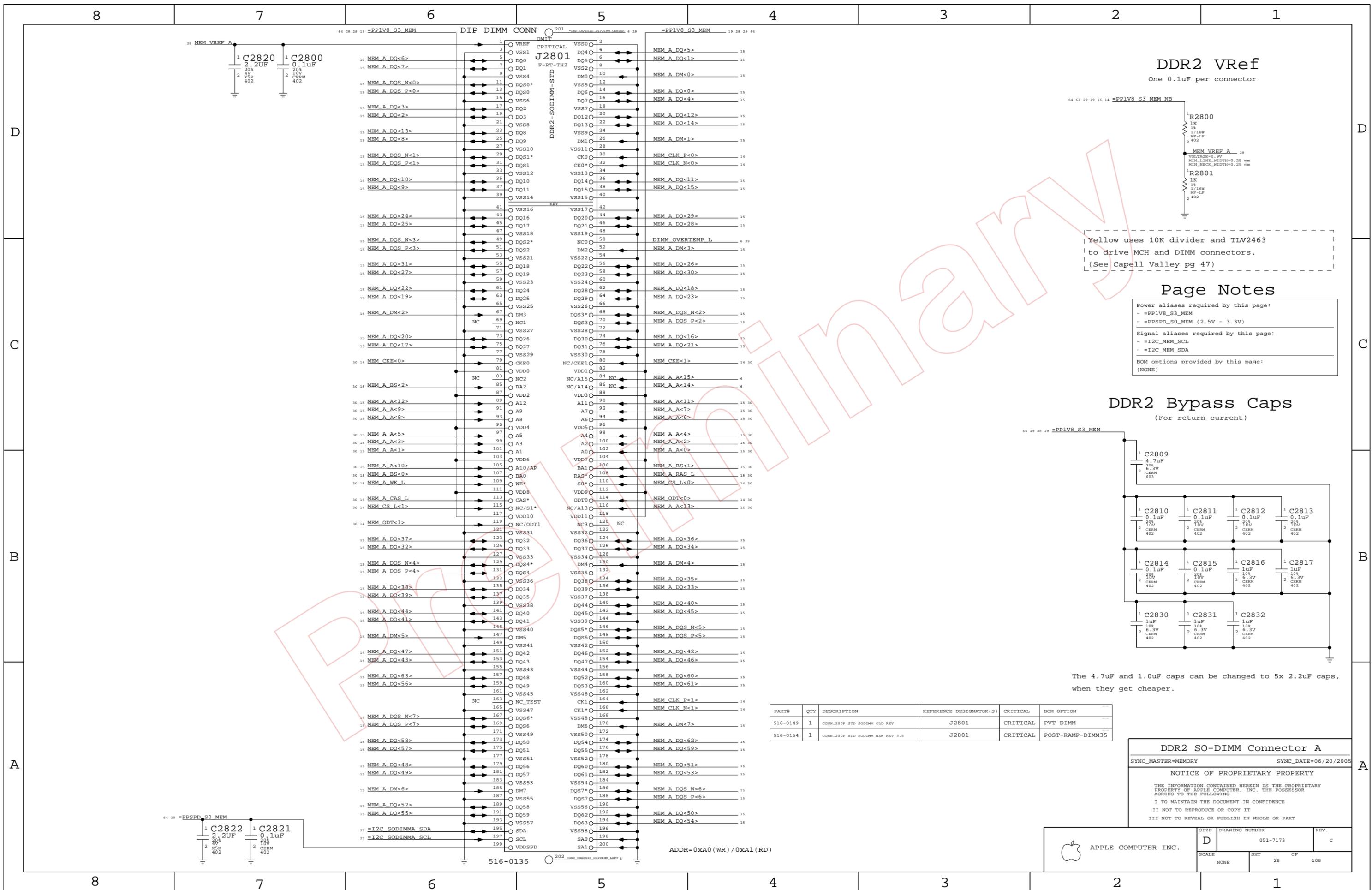
5

4

3

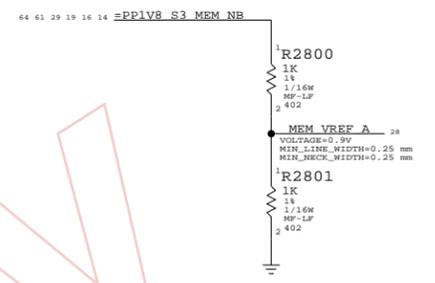
2

1



DDR2 VRef

One 0.1uF per connector



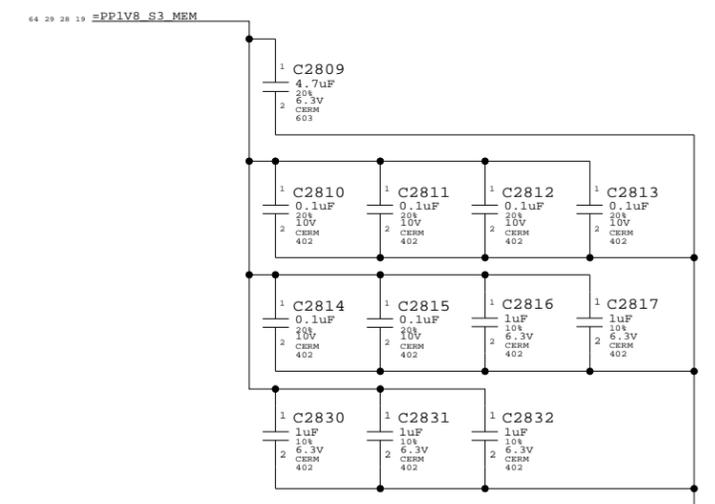
Yellow uses 10K divider and TLV2463 to drive MCH and DIMM connectors. (See Capell Valley pg 47)

Page Notes

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

DDR2 Bypass Caps

(For return current)



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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
516-0149	1	CONN_200P STD SODIMM OLD REV	J2801	CRITICAL	PVT-DIMM
516-0154	1	CONN_200P STD SODIMM NEW REV 3.5	J2801	CRITICAL	POST-RAMP-DIMM35

DDR2 SO-DIMM Connector A

SYNC_MASTER=MEMORY SYNC_DATE=06/20/2005

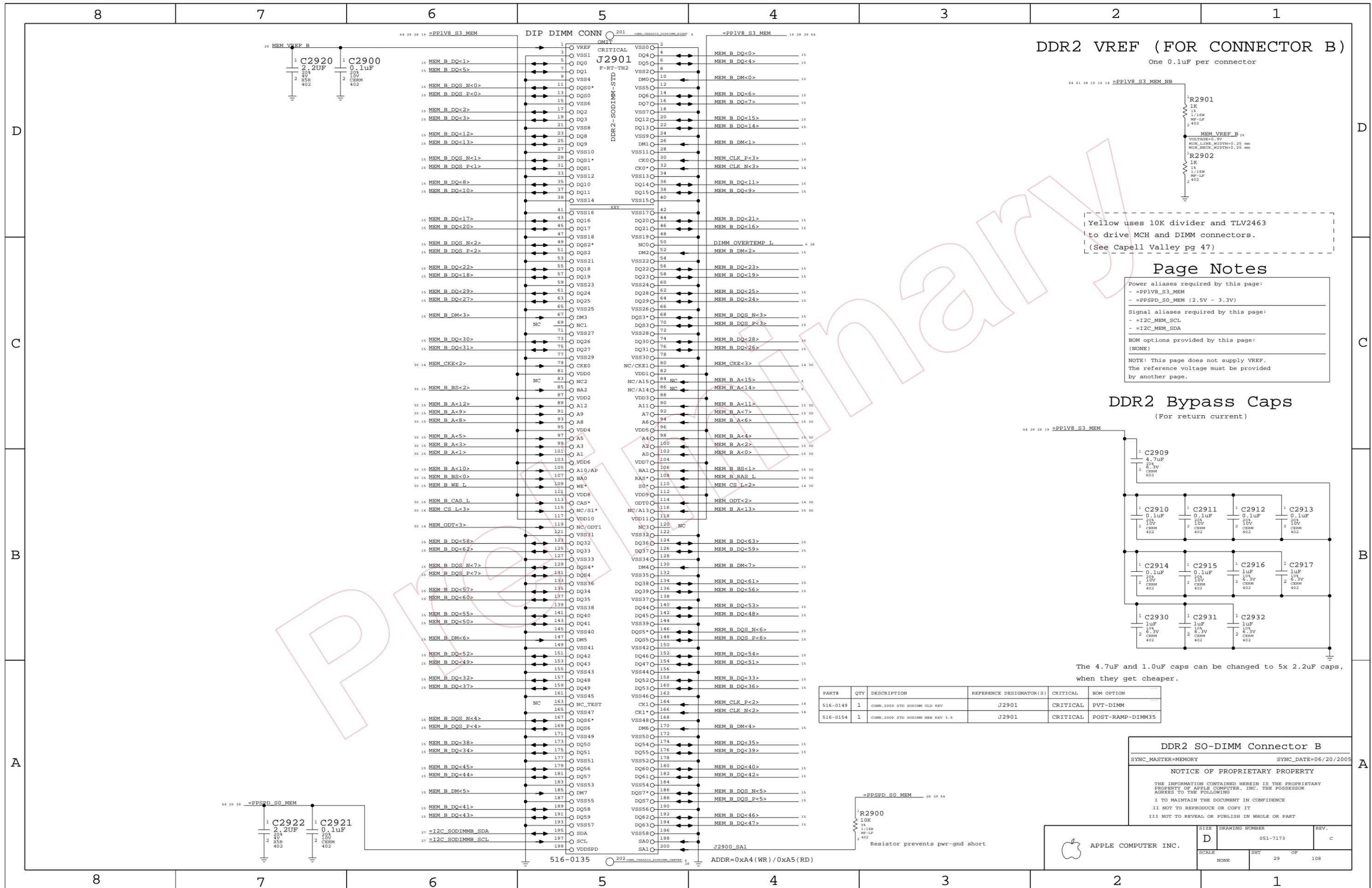
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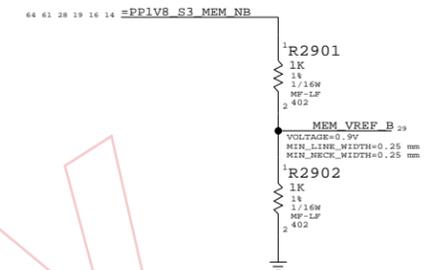
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	
NONE	28	108	

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



DDR2 VREF (FOR CONNECTOR B)

One 0.1uF per connector

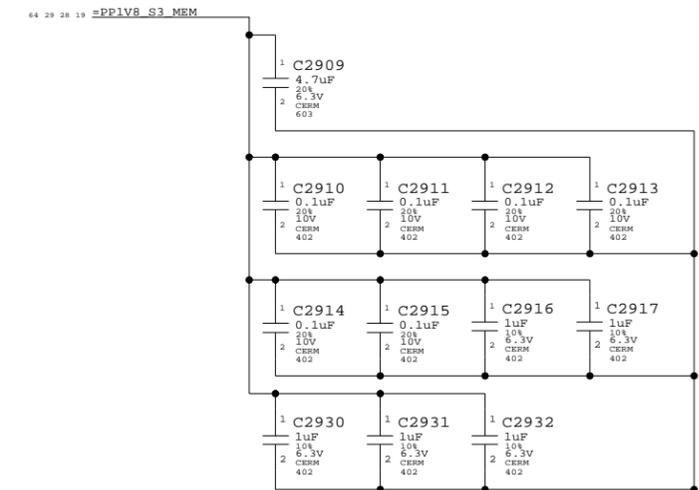


Yellow uses 10K divider and TLV2463 to drive MCH and DIMM connectors. (See Capell Valley pg 47)

Page Notes

- Power aliases required by this page:
- =PP1V8_S3_MEM
 - =PPSPD_S0_MEM (2.5V - 3.3V)
- Signal aliases required by this page:
- =I2C_MEM_SCL
 - =I2C_MEM_SDA
- BOM options provided by this page:
- (NONE)
- NOTE: This page does not supply VREF. The reference voltage must be provided by another page.

DDR2 Bypass Caps (For return current)



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

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

DDR2 SO-DIMM Connector B

SYNC_MASTER=MEMORY SYNC_DATE=06/20/2005

NOTICE OF PROPRIETARY PROPERTY

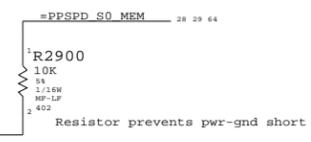
THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING

I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

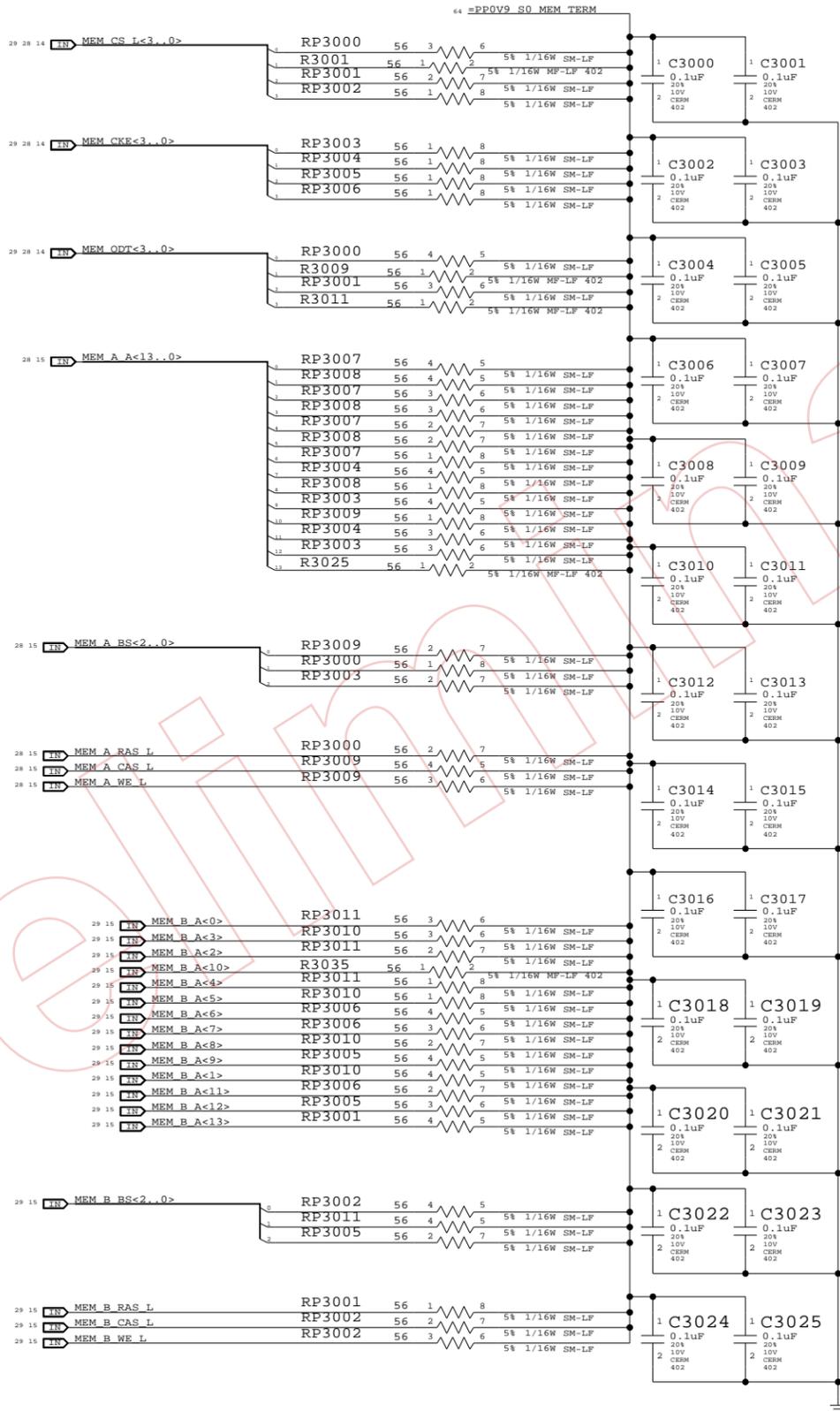
II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	
NONE	29	108	



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

PRELIMINARY

Memory Active Termination

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	c
SCALE	SHT	OF	108
NONE	30		

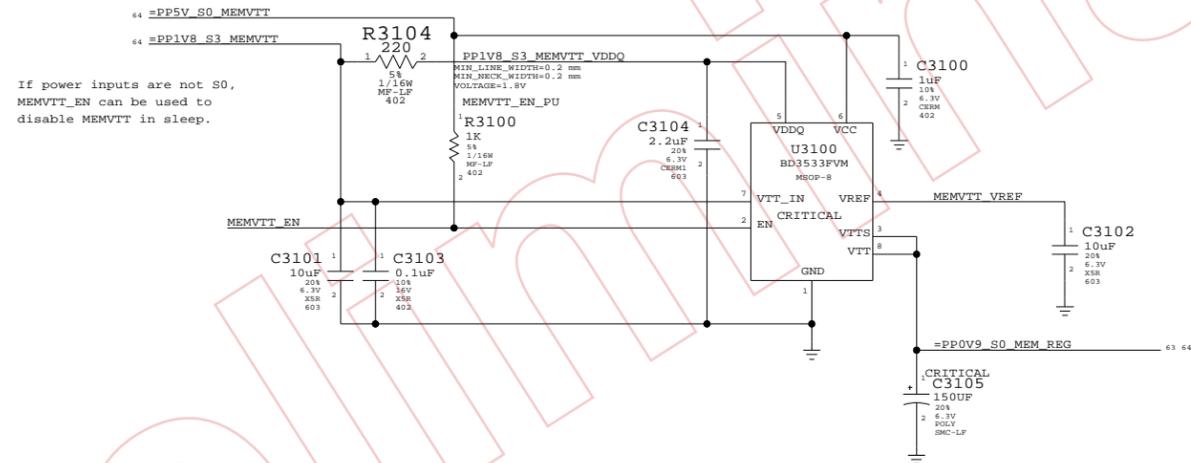
Page Notes

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



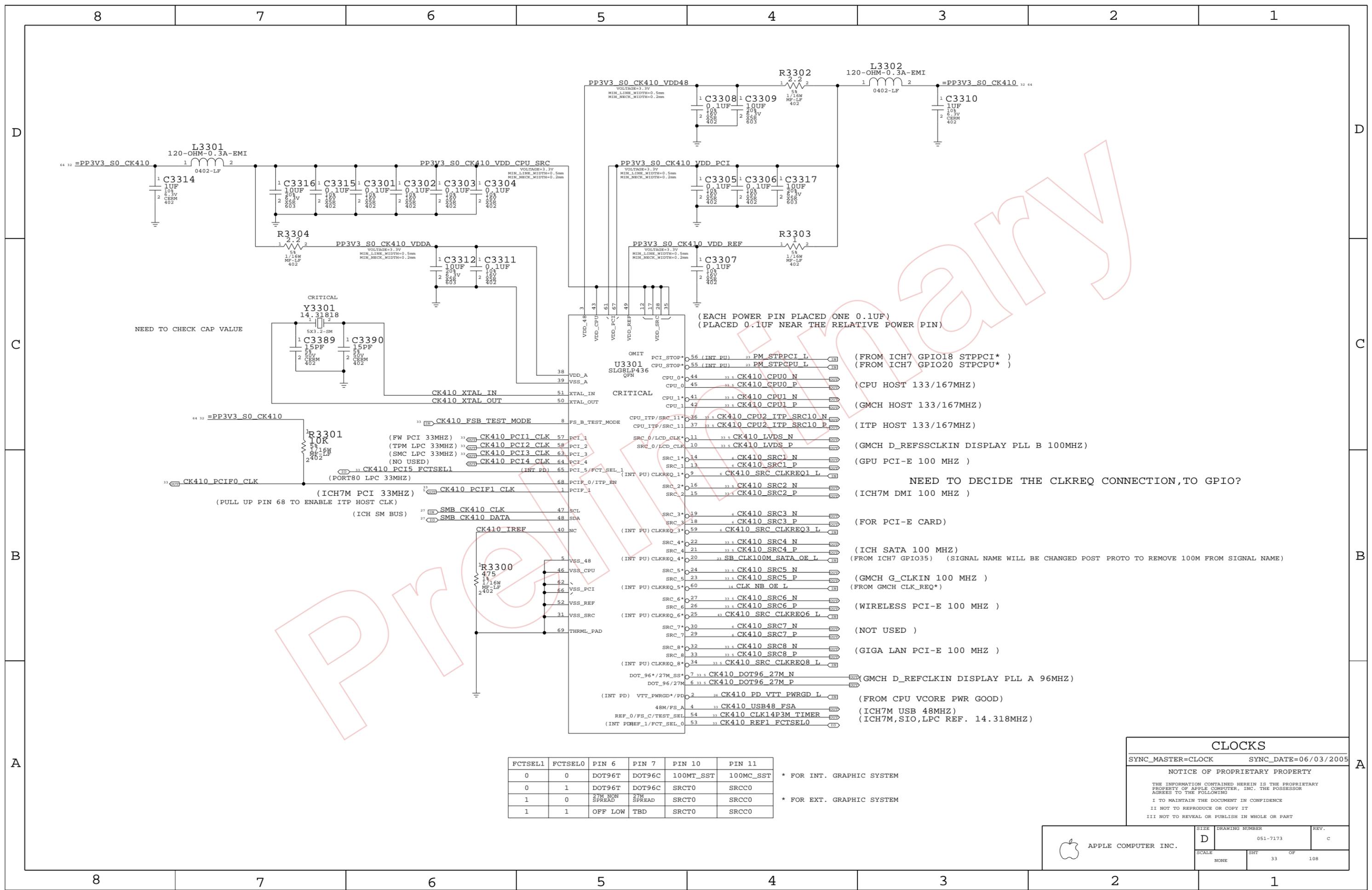
Memory Vtt Supply

SYNC_MASTER=(MASTER) SYNC_DATE=(MASTER)

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	c
SCALE	SHT	OF	REV.
NONE	31	108	



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)

(ICH SATA 100 MHZ)

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

(GMCH G_CLKIN 100 MHZ)

(FROM GMCH CLK_REQ*)

(WIRELESS PCI-E 100 MHZ)

(NOT USED)

(GIGA LAN PCI-E 100 MHZ)

(GMCH D_REFCLKIN DISPLAY PLL A 96MHZ)

(FROM CPU VCORE PWR GOOD)

(ICH7M USB 48MHZ)

(ICH7M,SIO,LPC REF. 14.318MHZ)

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

* FOR INT. GRAPHIC SYSTEM

* FOR EXT. GRAPHIC SYSTEM

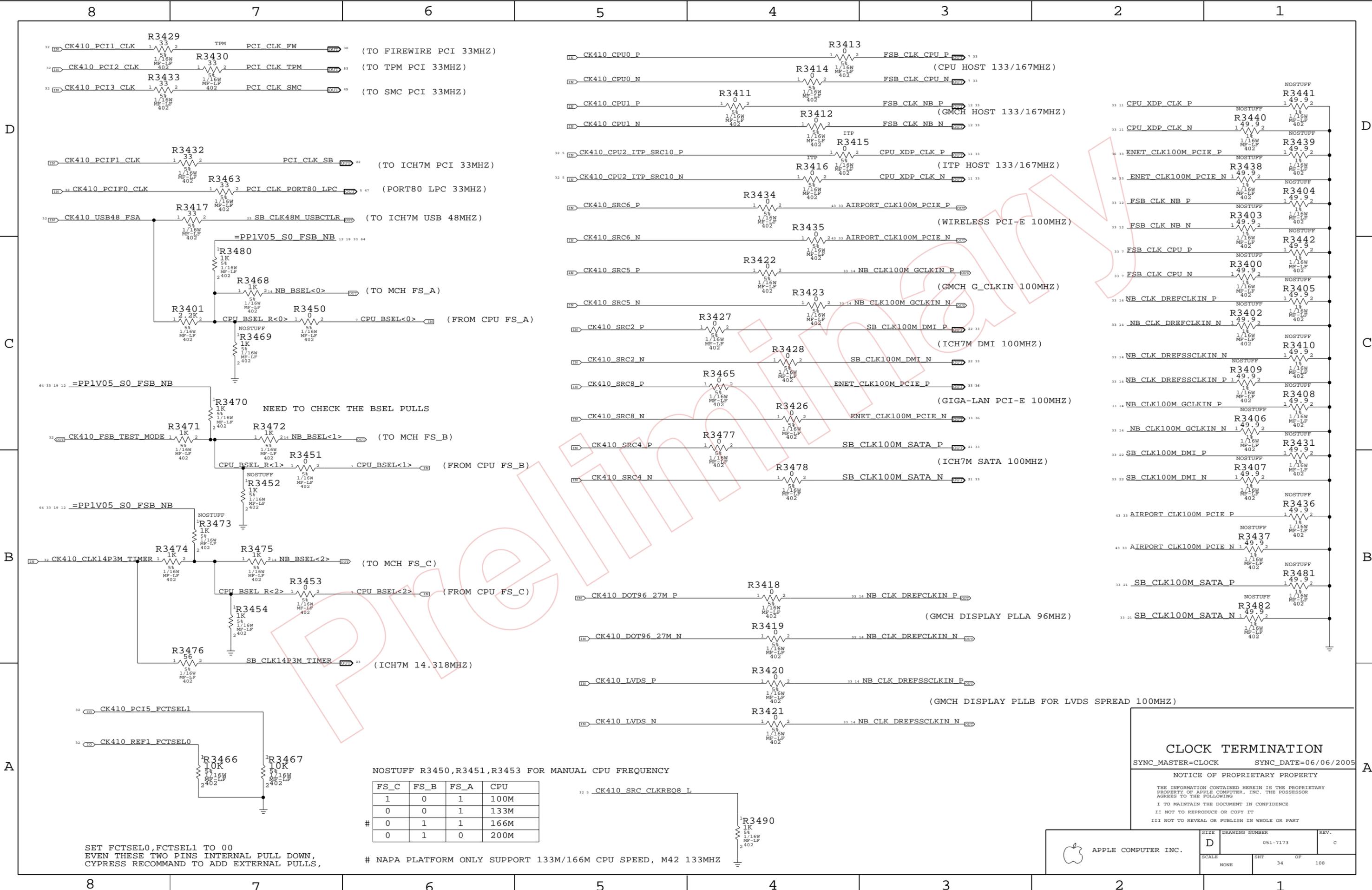
CLOCKS

SYNC_MASTER=CLOCK SYNC_DATE=06/03/2005

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	D	051-7173	c
SCALE	SHT	OF	108
NONE	33		



NOSTUFF R3450, R3451, R3453 FOR MANUAL CPU FREQUENCY

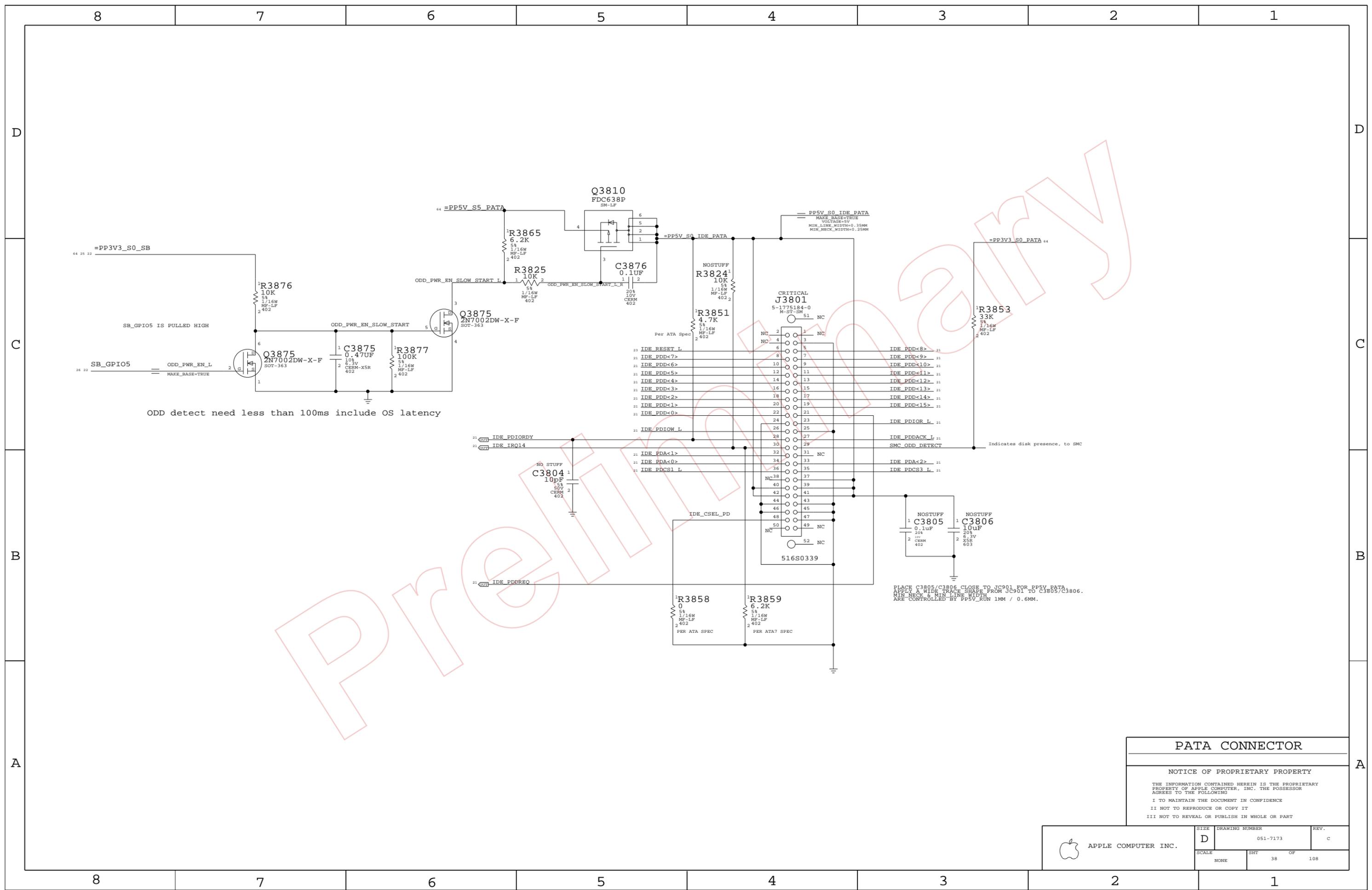
FS_C	FS_B	FS_A	CPU
1	0	1	100M
0	0	1	133M
0	1	1	166M
0	1	0	200M

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

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

CLOCK TERMINATION
 SYNC_MASTER=CLOCK SYNC_DATE=06/06/2005
 NOTICE OF PROPRIETARY PROPERTY
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	108
NONE	34		



PATA CONNECTOR

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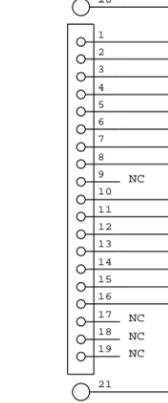
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. c
	SCALE NONE	SHEET 38	OF 108

SATA CONNECTOR

518S0390

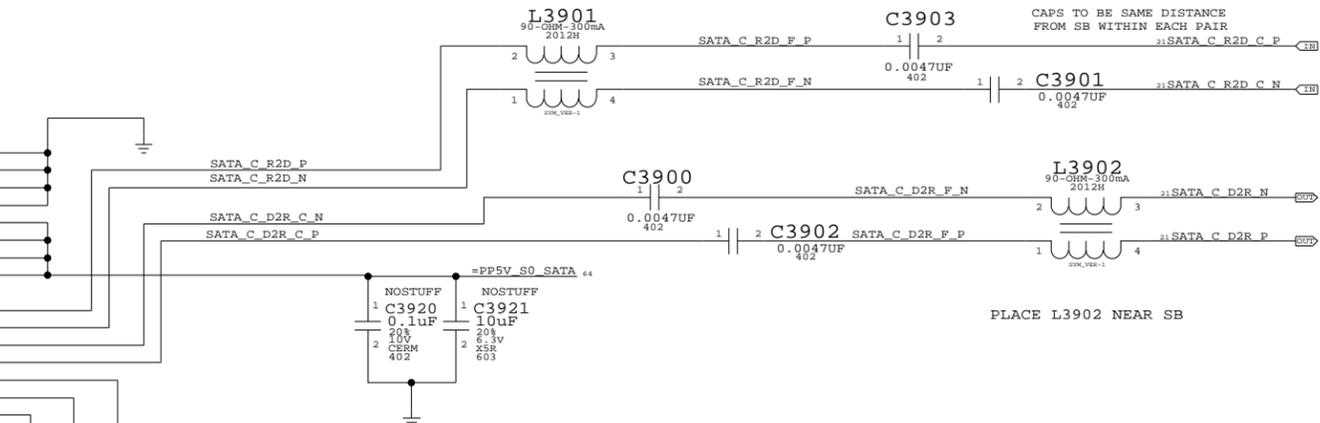
CRITICAL
J3901
20247-019E
F-ST-20



Place L3901 near J3901

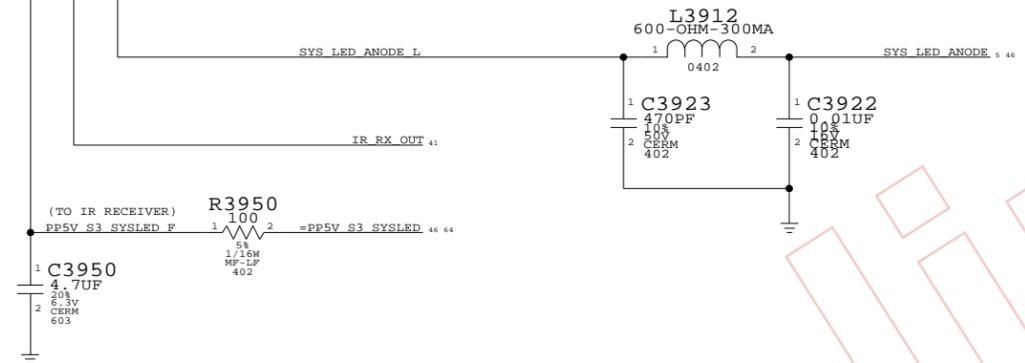
VALUE=3900PF IN REFERENCE SCHEM

CAPS TO BE SAME DISTANCE FROM SB WITHIN EACH PAIR

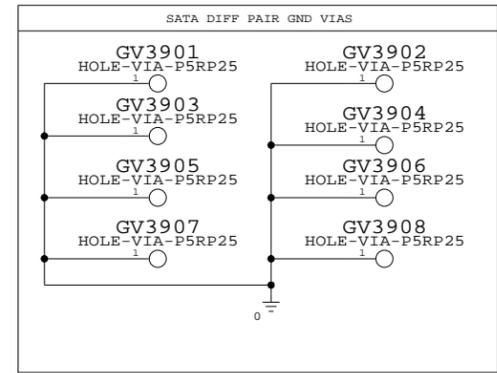
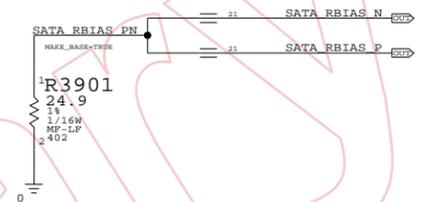


PLACE L3902 NEAR SB

SYSTEM (SLEEP) LED FILTER



PLACE NEAR ICH7 PIN



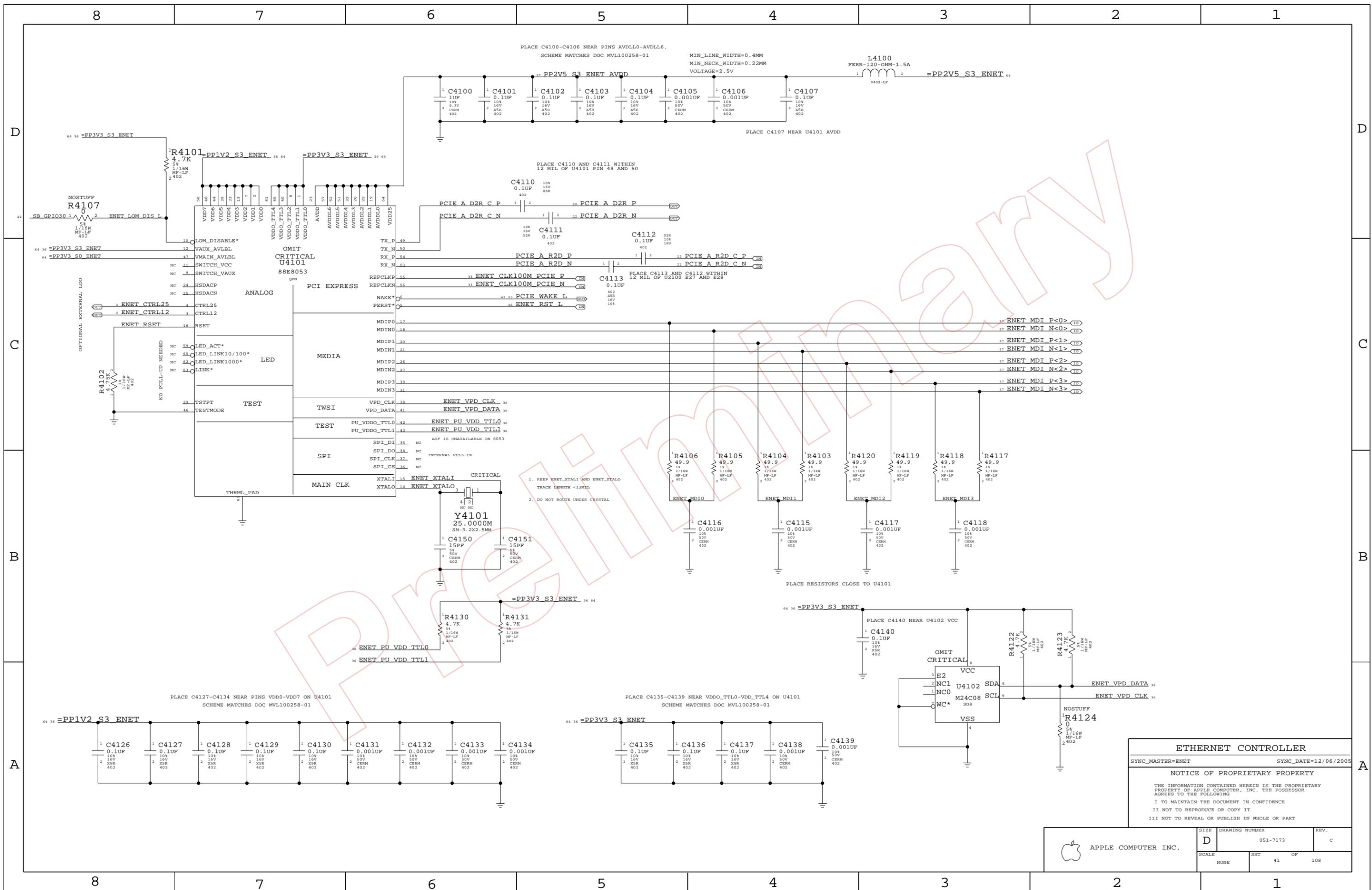
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
155S0227	155S0164	?	J3901.L3902	KEEP MAG. LAYER IN BOM

SATA CONNECTOR

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	c
SCALE	SHT	OF	108
NONE	39		



ETHERNET CONTROLLER

SYNC_MASTER=ENET SYNC_DATE=12/06/2005

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 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	108
NONE	41		

8 7 6 5 4 3 2 1

D

D

C

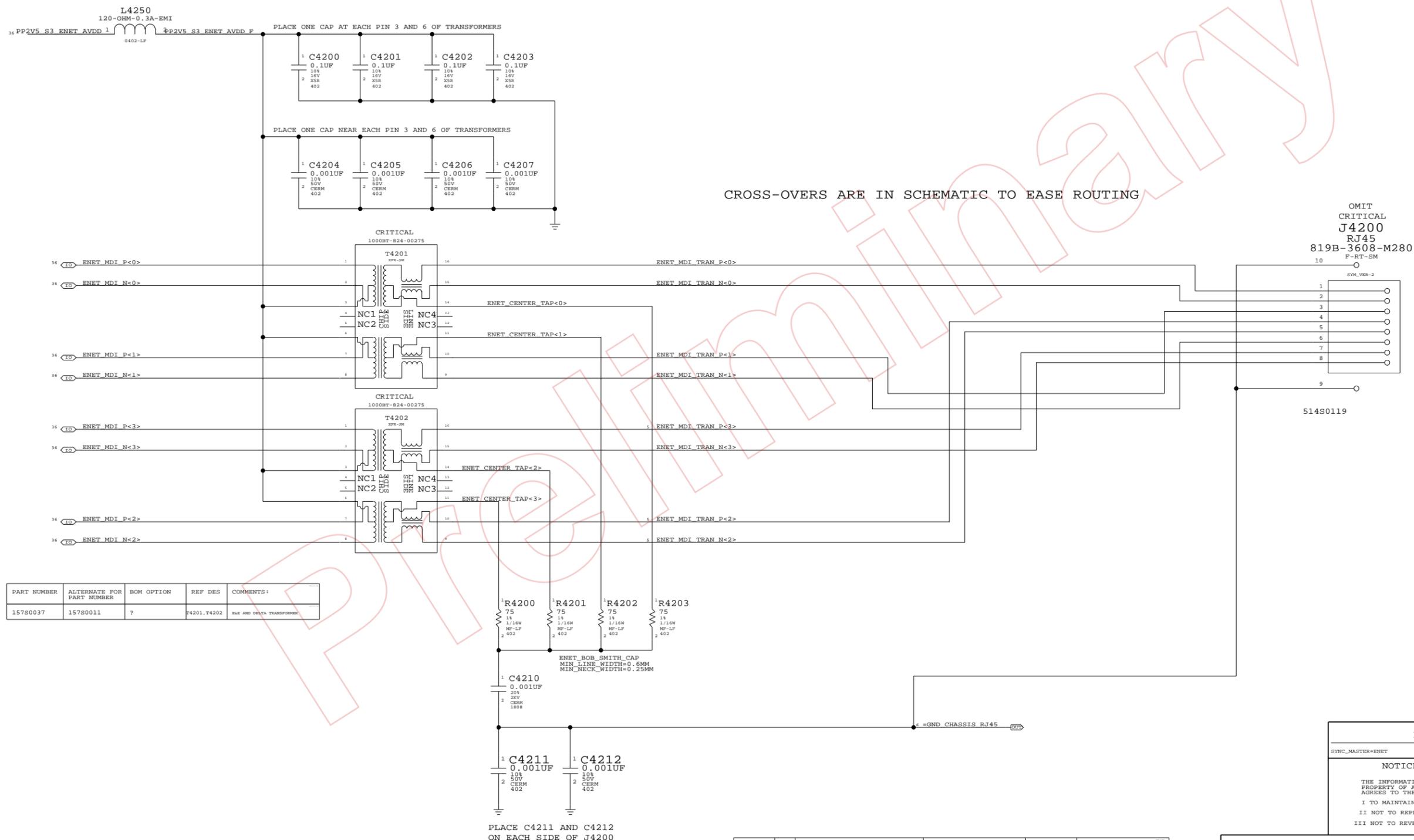
C

B

B

A

A



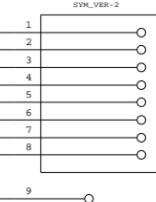
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS
157S0037	157S0011	?	T4201, T4202	SEE AND CHECK TRANSFORMER

ENET_B0B_SMITH_CAP
MIN LINE WIDTH=0.6MM
MIN NECK_WIDTH=0.25MM

PLACE C4211 AND C4212
ON EACH SIDE OF J4200

CROSS-OVERS ARE IN SCHEMATIC TO EASE ROUTING

OMIT
CRITICAL
J4200
RJ45
819B-3608-M280
F-RT-SM



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, BK3, LP	J4200	CRITICAL	NORMAL
514S0144	1	CONN, SP RJ-45 JACK, MIDDLEPLANE, BLACK, LP	J4200	CRITICAL	FANCY

APPLE COMPUTER INC.

SIZE D	DRAWING NUMBER 051-7173	REV. C
SCALE NONE	SHT 42	OF 108

8 7 6 5 4 3 2 1

PAGE NOTES

INPUT
=PP3V3_S0_FW - 3.3V POWER FOR FIREWIRE (MOBILE: OFF DURING SLEEP)
=PP3V3_S0_PCI - 3.3V POWER FOR PCI FIREWIRE (MOBILE: OFF DURING SLEEP)
PCI_GNT3_L - PCI GRANT FROM SB
PCI_CLK_FW - NEED TO REFERENCE TO ALIAS PAGE
PCI_RST_L - PCI RESET FROM SB
FW_PCO - 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 REQ/GNT TO REQ3/GNT3 (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 PCO 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

D

D

C

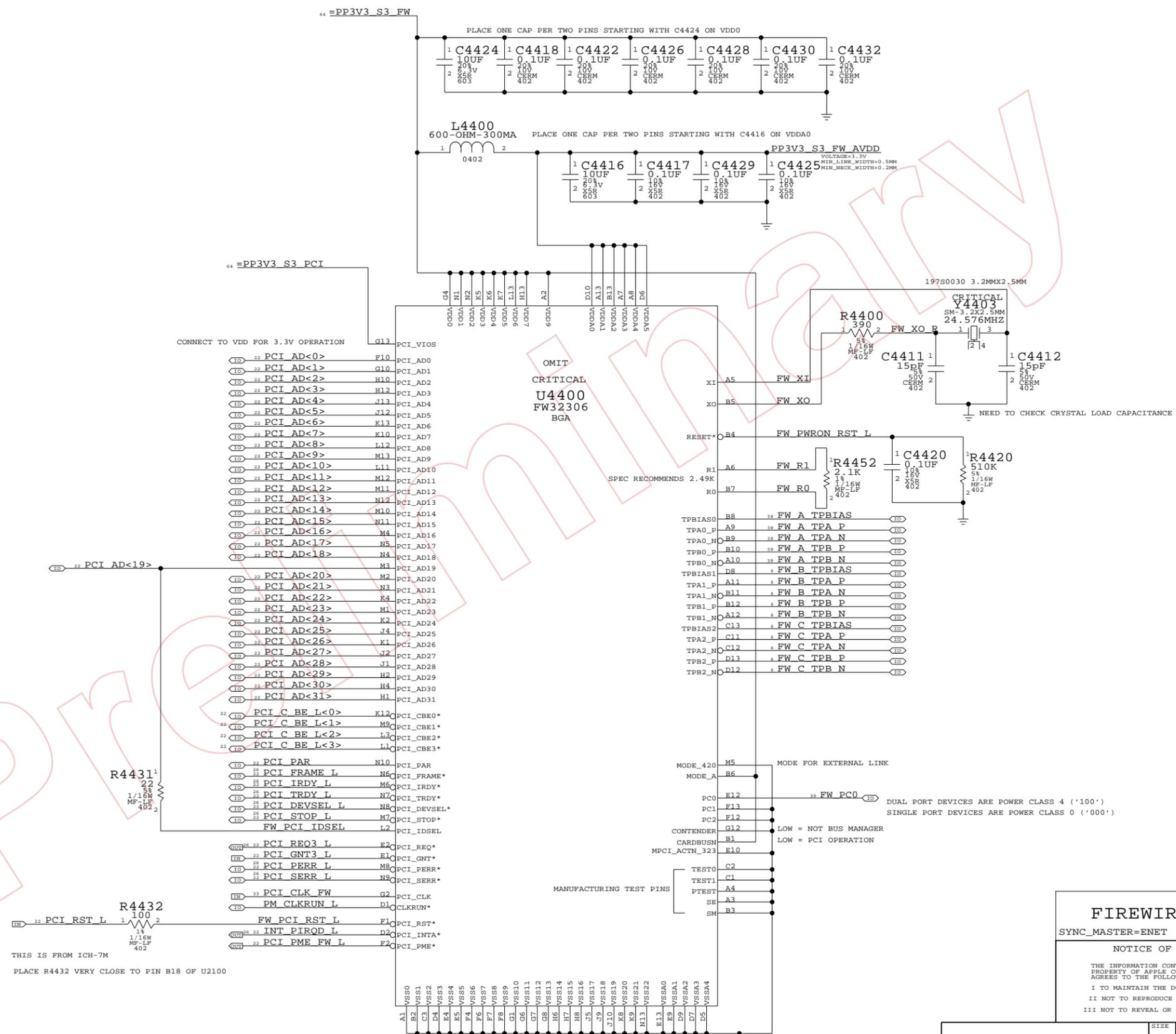
C

B

B

A

A



Page Notes

INPUT:
 =PPBUS_S5_FWPWRSM - PORT POWER
 =PP3V3_S5_FW - DIGITAL POWER
 =GND_CHASSIS_FW_PORT0 - CHASSIS GROUND
 =FWPWR_PWRON - ADDITIONAL POWER CONTROL

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

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

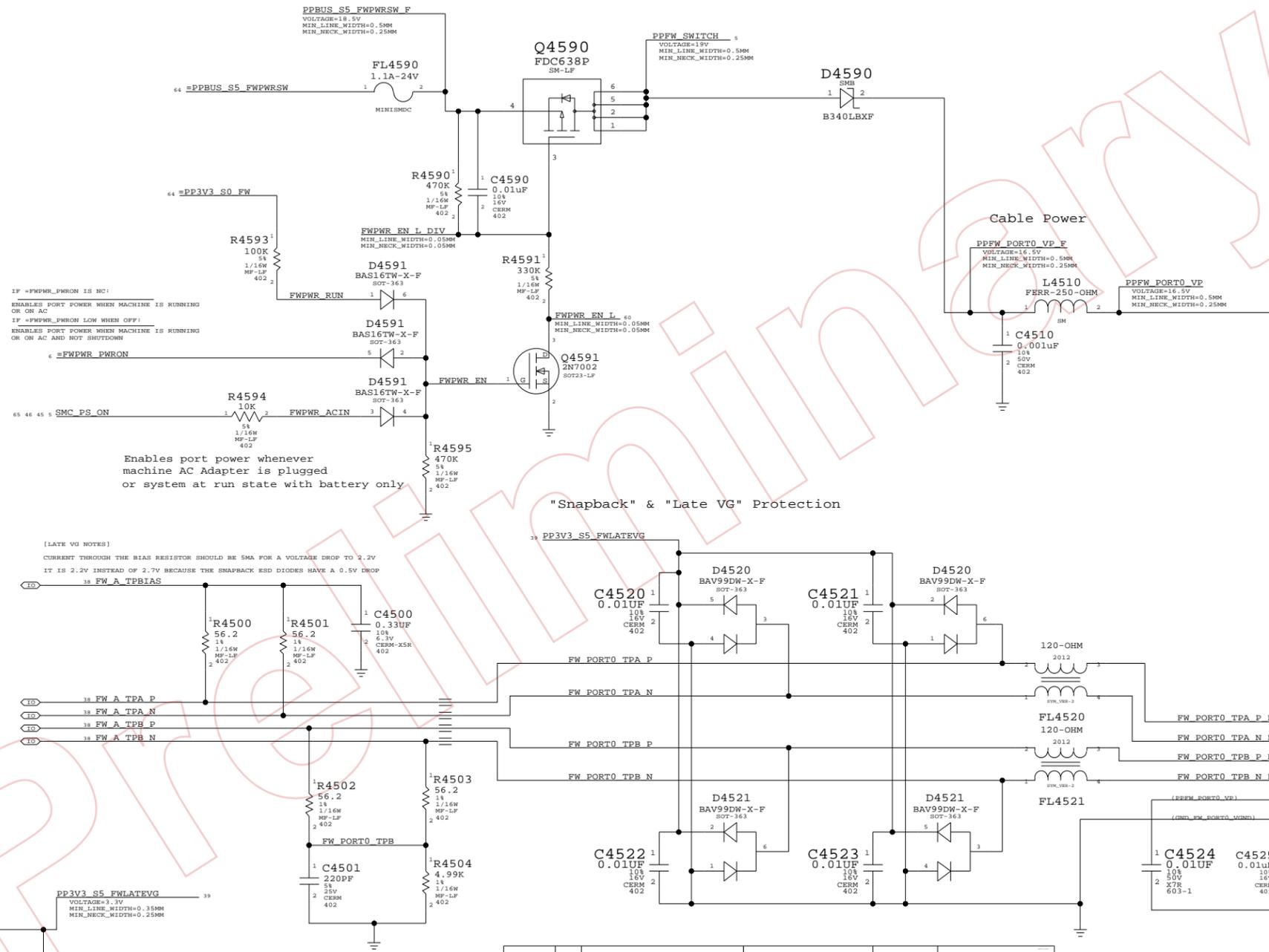
PAGE HISTORY

5/19/05 - INITIAL REVISION
 6/22/05 - CHANGED DIFF PAIR NAMES TO MATCH REUSE
 6/22/05 - REMOVED CONSTRAINTS BECAUSE USING ALLEGRO CONST MANAGER
 6/22/05 - CONNECTED FW_PCO FOR SINGLE PORT
 7/26/05 - UPDATED LATE-VG POWER RAIL CIRCUIT FROM M1
 7/26/05 - CHANGED CONNECTOR PORT NAMING TO PORT0
 7/26/05 - SWITCHED TO 514-0124 FOR 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

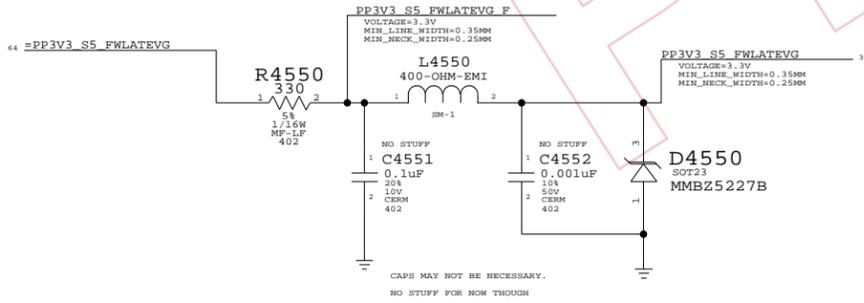
1394b implementation based on Apple
 FireWire Design Guide (FWDG 0.6, 5/14/03)

PORT POWER CLASS

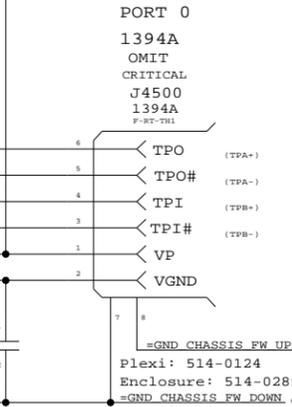
0 FOR SINGLE PORT
 1 FOR DUAL PORT



LATE-VG PROTECTION POWER



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



FIREWIRE PORT

SYNC_MASTER=ENET SYNC_DATE=11/16/2005

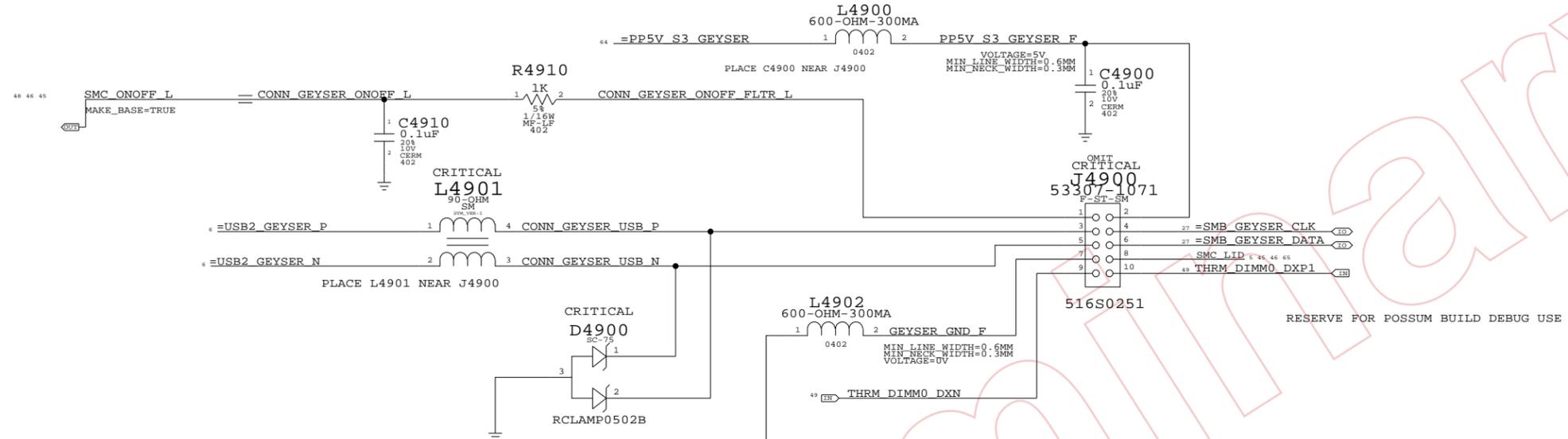
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	D	051-7173	C
SCALE	SHT	OF	108
NONE	45		

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

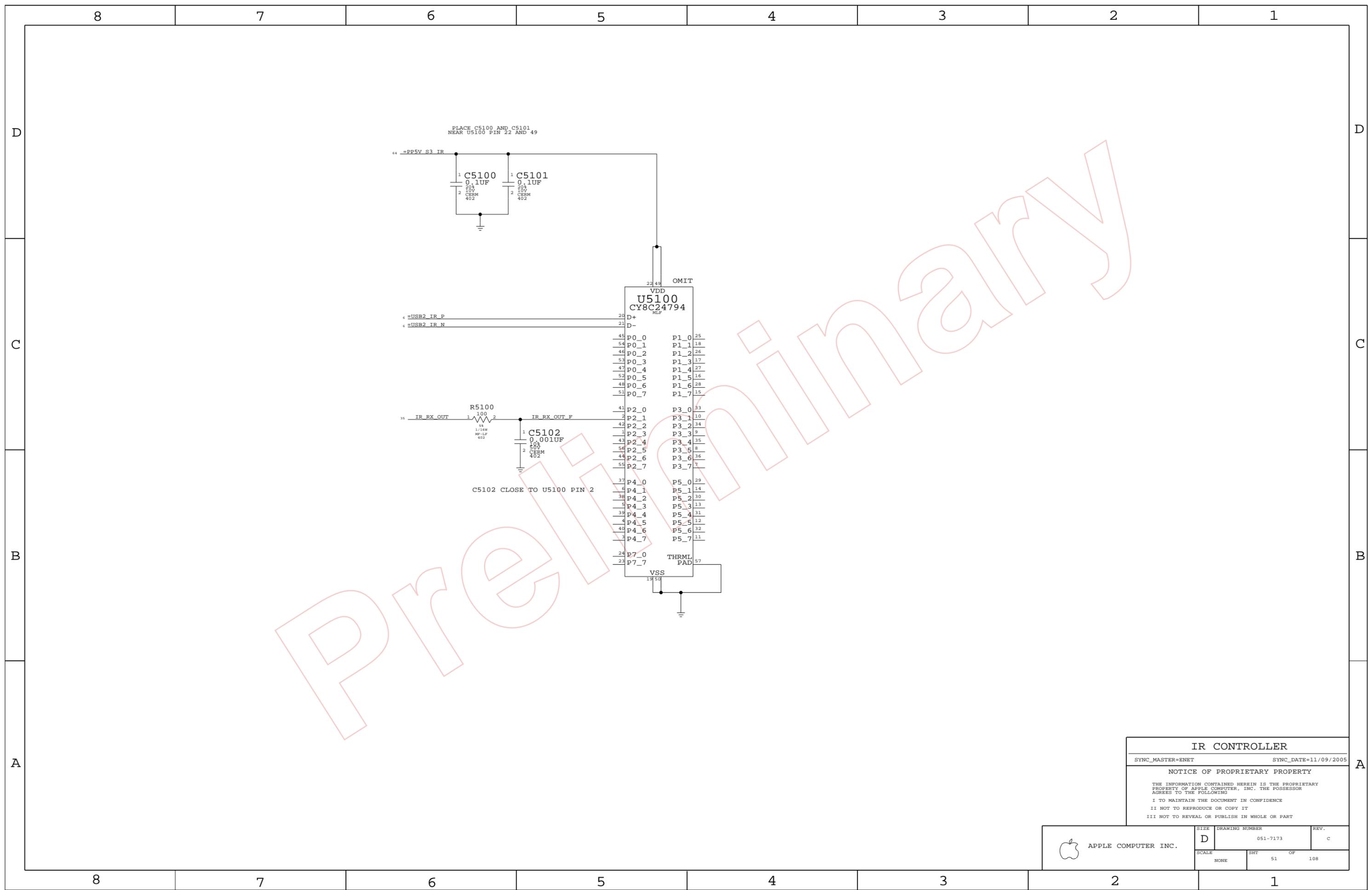
CONNECTOR MISC

SYNC_MASTER=ENET SYNC_DATE=11/16/2005

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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. c
	SCALE NONE	SHEET 49	OF 108



IR CONTROLLER

SYNC_MASTER=ENET SYNC_DATE=11/09/2005

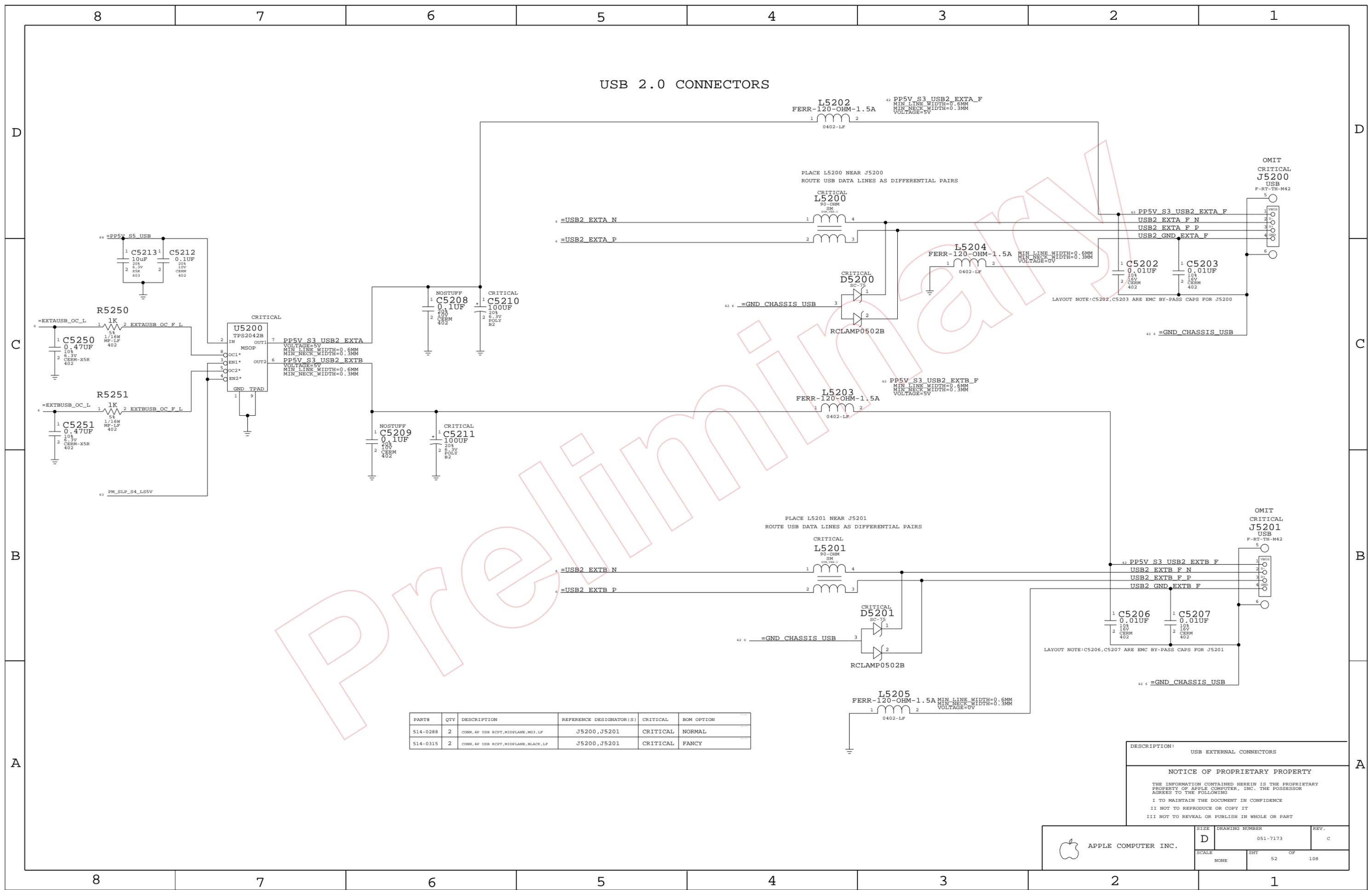
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	SCALE NONE	SHEET 51	OF 108

USB 2.0 CONNECTORS

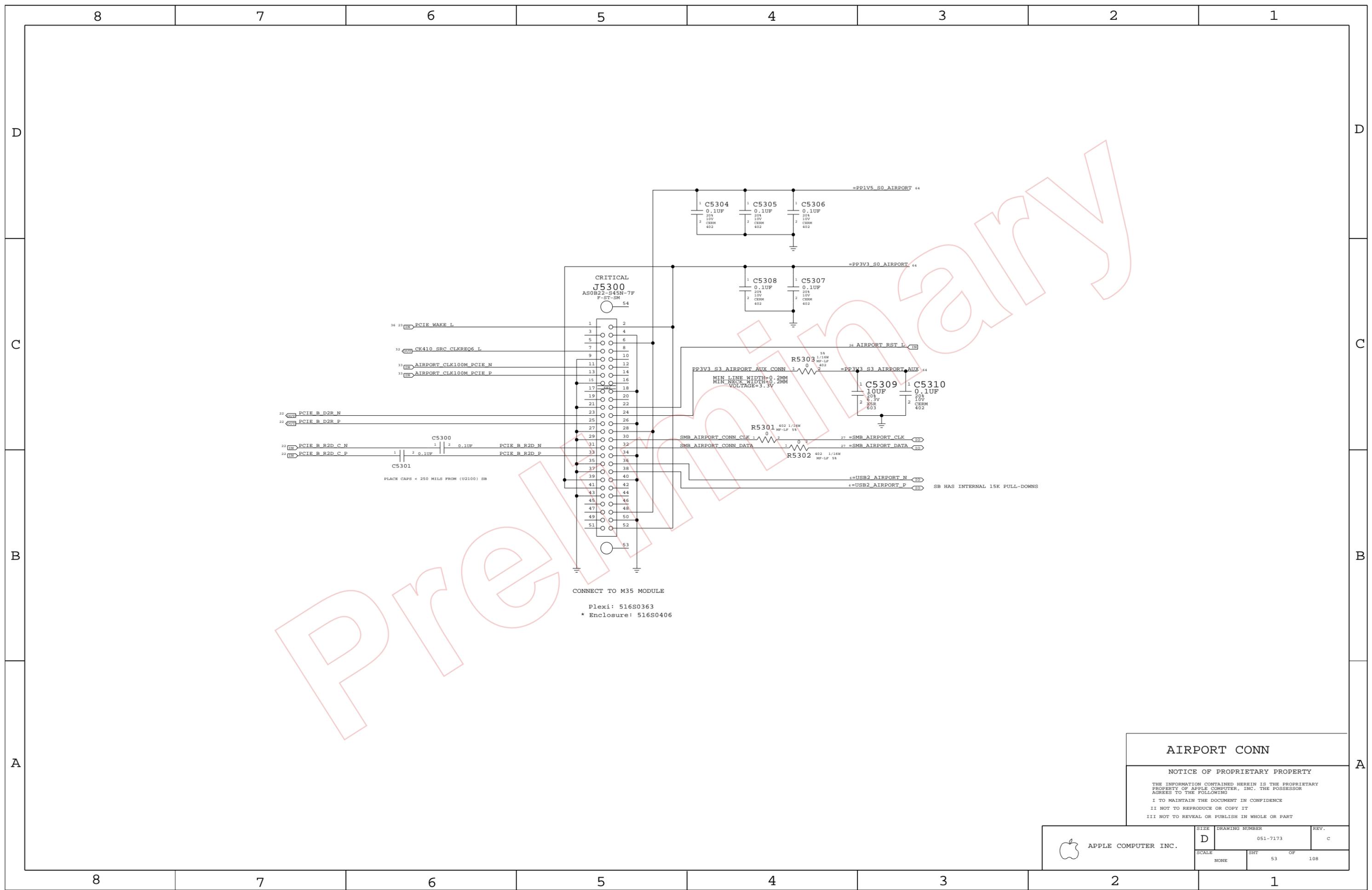


PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0288	2	CONN, 4P USB RCPT, MIDPLANE, W3, LF	J5200, J5201	CRITICAL	NORMAL
514-0315	2	CONN, 4P USB RCPT, MIDPLANE, BLACK, LF	J5200, J5201	CRITICAL	FANCY

DESCRIPTION:
USB EXTERNAL CONNECTORS

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	D	051-7173	C
SCALE	SHT	OF	REV.
NONE	52	108	



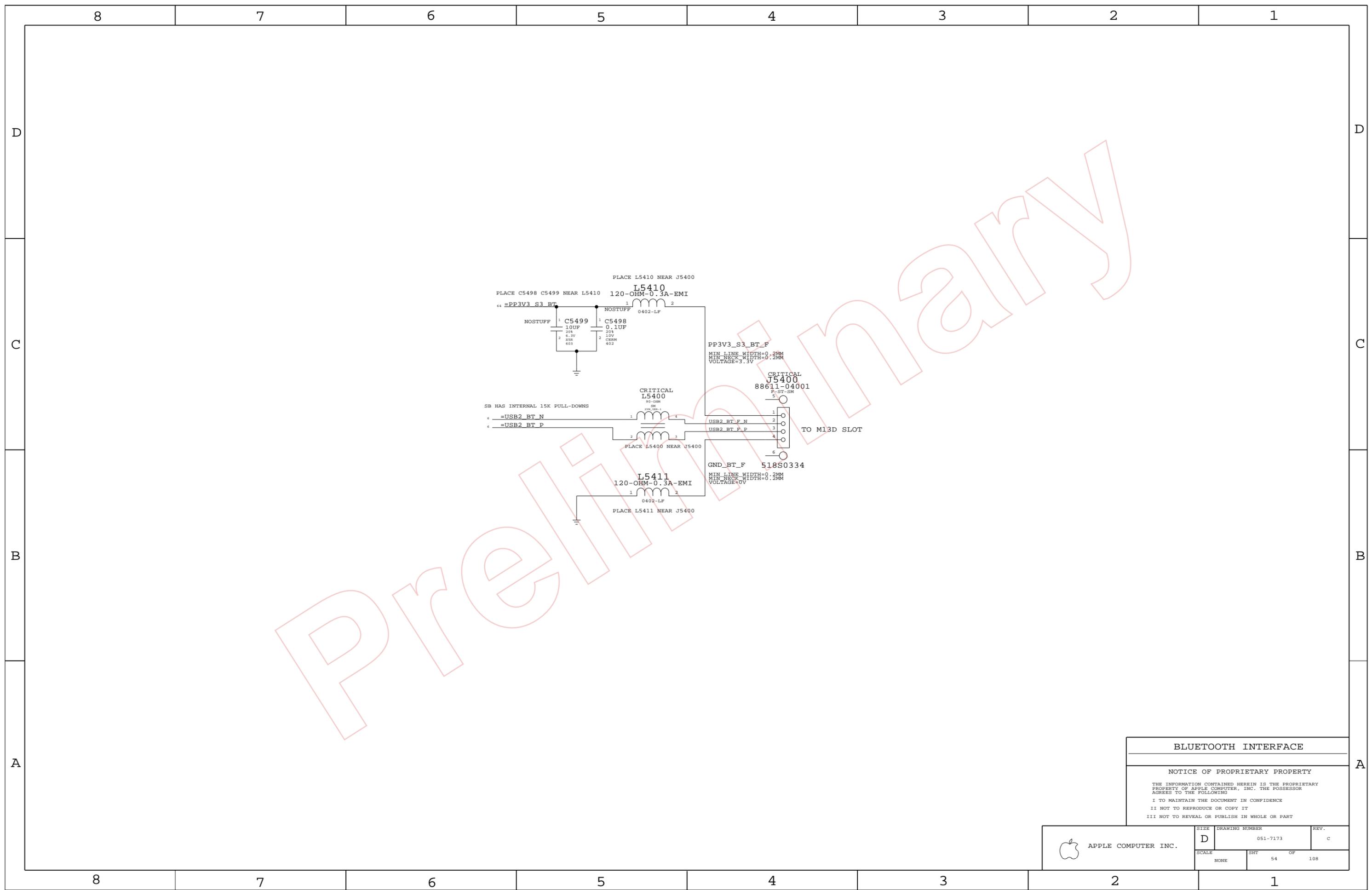
CONNECT TO M35 MODULE
 Plexi: 516S0363
 * Enclosure: 516S0406

AIRPORT CONN

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 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	c
SCALE	SHT	OF	REV.
NONE	53	108	



Preiminary

BLUETOOTH INTERFACE

NOTICE OF PROPRIETARY PROPERTY

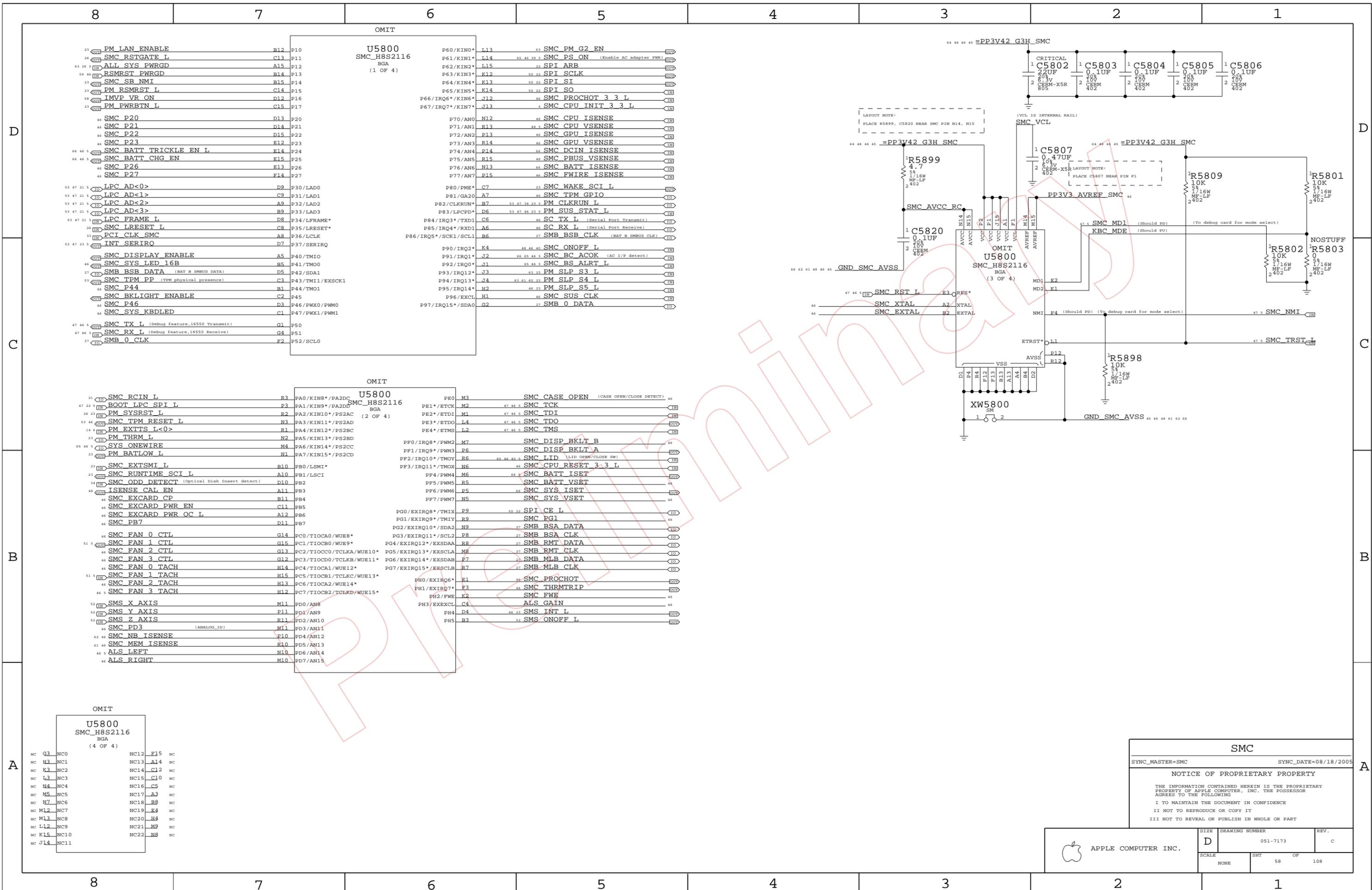
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. c
	SCALE NONE	SHIT 54	OF 108



SMC

SYNC_MASTER=SMC SYNC_DATE=08/18/2005

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	D	051-7173	C
SCALE	SHT	OF	
NONE	58	108	

NC G3 NC0 NC12 E15 NC

NC H3 NC1 NC13 A14 NC

NC K3 NC2 NC14 C12 NC

NC L3 NC3 NC15 C10 NC

NC M3 NC4 NC16 C5 NC

NC N3 NC5 NC17 A3 NC

NC P3 NC6 NC18 B8 NC

NC Q3 NC7 NC19 E4 NC

NC R3 NC8 NC20 H4 NC

NC S3 NC9 NC21 M9 NC

NC T3 NC10 NC22 N8 NC

NC U3 NC11

OMIT

U5800
SMC_H8S2116
BGA
(4 OF 4)

OMIT

U5800
SMC_H8S2116
BGA
(2 OF 4)

21	SMC RCIN L	R3	PA0/KIN8*/PA2DC	PE0	M3	SMC CASE OPEN (CASE OPEN/CLOSE DETECT)	46
47 22	BOOT LPC SPI L	R3	PA1/KIN9*/PA2DC	PE1*/ETCK	M2	SMC TCK	46
23	PM SYSRST L	R2	PA2/KIN10*/PS2AC	PE2*/ETDI	M1	SMC TDI	46
24	SMC TPM RESET L	N3	PA3/KIN11*/PS2AD	PE3*/ETDO	L4	SMC TDO	46
14	PM EXTTTS L<0>	R1	PA4/KIN12*/PS2BC	PE4*/ETMS	L2	SMC TMS	46
23	PM THRM L	N2	PA5/KIN13*/PS2BD				
65 46 5	SYS ONEWIRE	M4	PA6/KIN14*/PS2CC	PF0/IRQ8*/PWM2	M7	SMC DISP BKLT B	46
23	PM BATLOW L	N1	PA7/KIN15*/PS2CD	PF1/IRQ9*/PWM3	P6	SMC DISP BKLT A	46
23	SMC EXTSMI L	B10	PB0/LSMI*	PF2/IRQ10*/TMOY	R6	SMC LID (LID OPEN/CLOSE SW)	46
23	SMC RUNTIME SCI L	A10	PB1/LSCI	PF3/IRQ11*/TMOX	N6	SMC CPU RESET 3 3 L	46
34	SMC_ODD_DETECT (Optical Disk Insert detect)	D10	PB2	PF4/PWM4	M6	SMC BATT ISET	46
48	ISENSE_CAL_EN	A11	PB3	PF5/PWM5	R5	SMC BATT VSET	46
46	SMC_EXCARD_CP	B11	PB4	PF6/PWM6	E5	SMC SYS ISET	46
46	SMC_EXCARD_PWR_EN	C11	PB5	PF7/PWM7	N5	SMC SYS VSET	46
46	SMC_EXCARD_PWR_OC L	A12	PB6				
46	SMC_PB7	D11	PB7	PG0/EXIRQ8*/TMIX	P9	SMC SPI_CE L	46
46	SMC_FAN_0_CTL	G14	PC0/TIOCA0/WUE8*	PG1/EXIRQ9*/TMIX	R9	SMC PG1	46
51 5	SMC_FAN_1_CTL	G15	PC1/TIOCB0/WUE9*	PG2/EXIRQ10*/SDA2	N9	SMC SMB_BSA_DATA	46
46	SMC_FAN_2_CTL	G13	PC2/TIOCC0/TCLKA/WUE10*	PG3/EXIRQ11*/SCL2	E8	SMC SMB_BSA_CLK	46
46	SMC_FAN_3_CTL	G12	PC3/TIOCD0/TCLKB/WUE11*	PG4/EXIRQ12*/EXSDAA	RR	SMC SMB_RMT_DATA	46
46	SMC_FAN_0 TACH	H14	PC4/TIOCA1/WUE12*	PG5/EXIRQ13*/EXSCLA	M8	SMC SMB_RMT_CLK	46
51 5	SMC_FAN_1 TACH	H15	PC5/TIOCB1/TCLKC/WUE13*	PG6/EXIRQ14*/EXSDAB	E7	SMC SMB_MLB_DATA	46
46	SMC_FAN_2 TACH	H13	PC6/TIOCA2/WUE14*	PG7/EXIRQ15*/EXSCLB	R7	SMC SMB_MLB_CLK	46
46 5	SMC_FAN_3 TACH	H12	PC7/TIOCB2/TCLKD/WUE15*				
52	SMS_X_AXIS	M11	PD0/AN8	PH0/EXIRQ6*	E1	SMC PROCHOT	46
52	SMS_Y_AXIS	F11	PD1/AN9	PH1/EXIRQ7*	E3	SMC THRMTRIP	46
52	SMS_Z_AXIS	R11	PD2/AN10	PH2/FWE	K2	SMC FWE	46
46	SMC_PD3 (ANALOG_ID)	N11	PD3/AN11	PH3/EXEXCL	C4	SMC ALS_GAIN	46
62	SMC_NB_ISENSE	F10	PD4/AN12				
61	SMC_MEM_ISENSE	F10	PD5/AN13				
46 5	ALS LEFT	N10	PD6/AN14				
46	ALS RIGHT	N10	PD7/AN15				

OMIT

U5800
SMC_H8S2116
BGA
(1 OF 4)

23	PM LAN ENABLE	B12	P10	P60/KIN0*	L13	SMC PM_G2_EN	46
26	SMC_RSTGATE L	C13	P11	P61/KIN1*	L14	SMC PS_ON (Enable AC adapter PWR)	46
63 25	ALL SYS_PWRGD	A15	P12	P62/KIN2*	L15	SPI_ARB	46
59 44	RSMRST_PWRGD	B14	P13	P63/KIN3*	K12	SPI_SCLK	46
23	SMC_SB_NMI	B15	P14	P64/KIN4*	K13	SPI_SI	46
23	PM_RSMRST L	C14	P15	P65/KIN5*	K14	SPI_SO	46
50	IMVP_VR_ON	D12	P16	P66/IRQ6*/KIN6*	J12	SMC PROCHOT 3 3 L	46
23	PM_PWRBTN L	C15	P17	P67/IRQ7*/KIN7*	J13	SMC CPU_INIT 3 3 L	46
46	SMC_P20	D13	P20	P70/AN0	N12	SMC CPU_ISENSE	46
46	SMC_P21	D14	P21	P71/AN1	R13	SMC CPU_VSENSE	46
46	SMC_P22	D15	P22	P72/AN2	P13	SMC GPU_ISENSE	46
46	SMC_P23	E12	P23	P73/AN3	R14	SMC GPU_VSENSE	46
66 46 5	SMC_BATT_TRICKLE_EN L	E14	P24	P74/AN4	P14	SMC DCIN_ISENSE	46
66 46 5	SMC_BATT_CHG_EN	E15	P25	P75/AN5	R15	SMC PBUS_VSENSE	46
46	SMC_P26	E13	P26	P76/AN6	N13	SMC BATT_ISENSE	46
46	SMC_P27	F14	P27	P77/AN7	P15	SMC FWIRE_ISENSE	46
53 47 21 5	LPC_AD<0>	D9	P30/LAD0	P80/PME*	C7	SMC WAKE_SCI L	46
53 47 21 5	LPC_AD<1>	C9	P31/LAD1	P81/GA20	A7	SMC TPM_GPIO	46
53 47 21 5	LPC_AD<2>	A9	P32/LAD2	P82/CLKRUN*	B7	PM_CLKRUN L	46
53 47 21 5	LPC_AD<3>	B9	P33/LAD3	P83/LPCPD*	D6	PM_SUS_STAT L	46
53 47 21 5	LPC_FRAME L	D8	P34/LFRAME*	P84/IRQ3*/TXD1	C6	SC_TX L (Serial Port Transmit)	46
26	SMC_LRESET L	C8	P35/LRESET*	P85/IRQ4*/RXD1	A6	SC_RX L (Serial Port Receive)	46
33	PCI_CLK_SMC	A8	P36/LCLK	P86/IRQ5*/SCK1/SCL1	B6	SMB_BSB_CLK (BAT B SMBUS CLK)	46
53 47 21 5	INT_SERIRQ	D7	P37/SERIRQ	P90/IRQ2*	K4	SMC ONOFF L	46
46	SMC_DISPLAY_ENABLE	A5	P40/TMIO	P91/IRQ1*	J2	SMC BC_ACOK (AC I/P detect)	46
46	SMC_SYS_LED_16B	B5	P41/TMO0	P92/IRQ0*	J1	SMC BS_ALRT L	46
27	SMB_BSB_DATA (BAT B SMBUS DATA)	D5	P42/SDA1	P93/IRQ12*	J3	PM_SLP_S3 L	46
53 47 21 5	SMC_TPM_PP (TPM physical presence)	C3	P43/TMI1/EXSCK1	P94/IRQ13*	J4	PM_SLP_S4 L	46
46	SMC_P44	B1	P44/TMO1	P95/IRQ14*	H2	PM_SLP_S5 L	46
46	SMC_BKLIGHT_ENABLE	C2	P45	P96/EXCL	H1	SMC SUS_CLK	46
46	SMC_P46	D3	P46/PWX0/PWM0	P97/IRQ15*/SDA0	G2	SMB_0_DATA	46
46	SMC_SYS_KBDLED	C1	P47/PWX1/PWM1				
47 46 5	SMC_TX L (Debug feature,16550 Transmit)	G1	P50				
47 46 5	SMC_RX L (Debug feature,16550 Receive)	G4	P51				
27	SMB_0_CLK	E2	P52/SCL0				

8 7 6 5 4 3 2 1

D

C

B

A

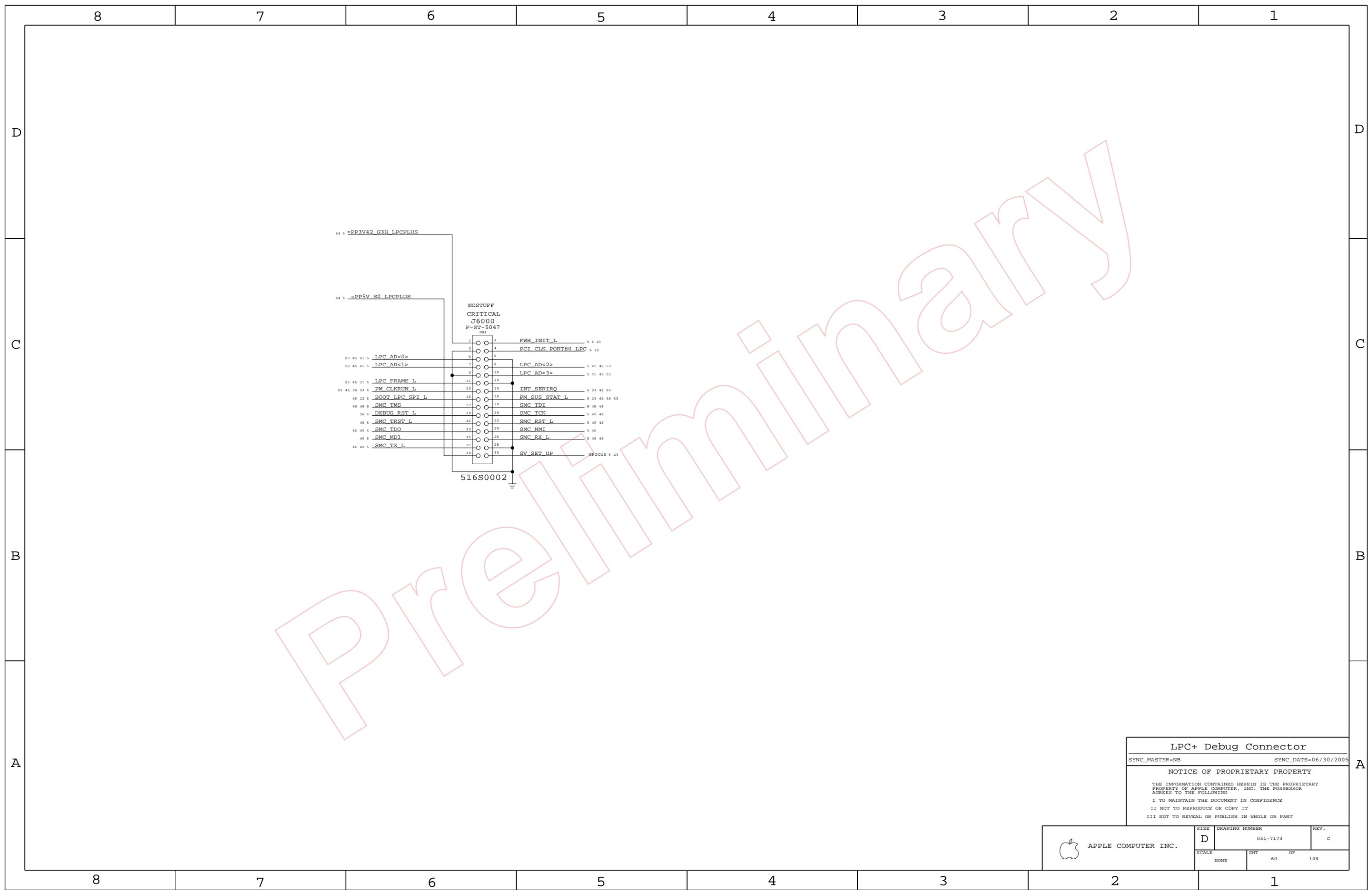
D

C

B

A

8 7 6 5 4 3 2 1



Preliminary

LPC+ Debug Connector

SYNC_MASTER=NB SYNC_DATE=06/30/2005

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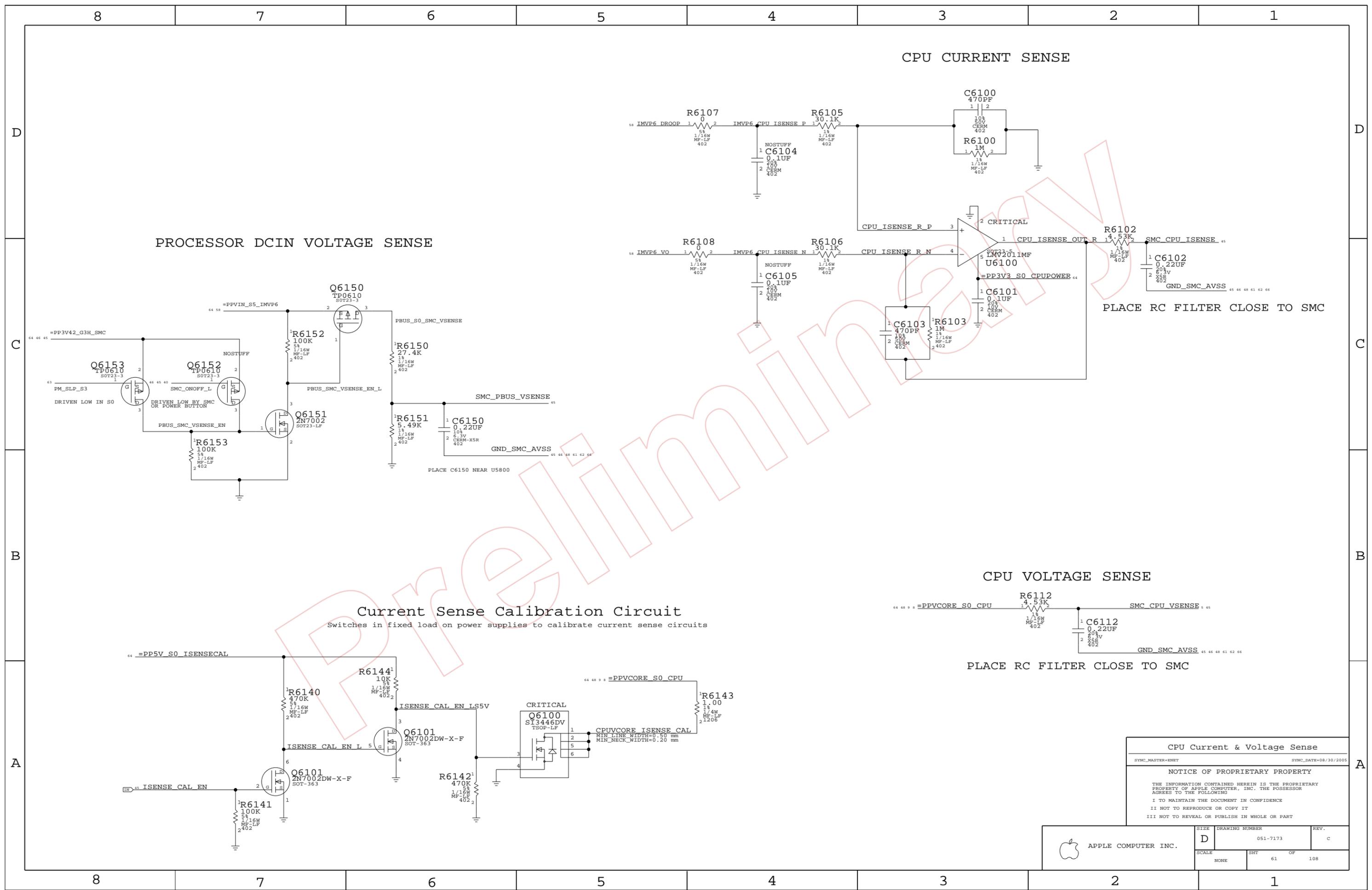
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	D	051-7173	c
SCALE	SHT	OF	REV.
NONE	60	108	



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

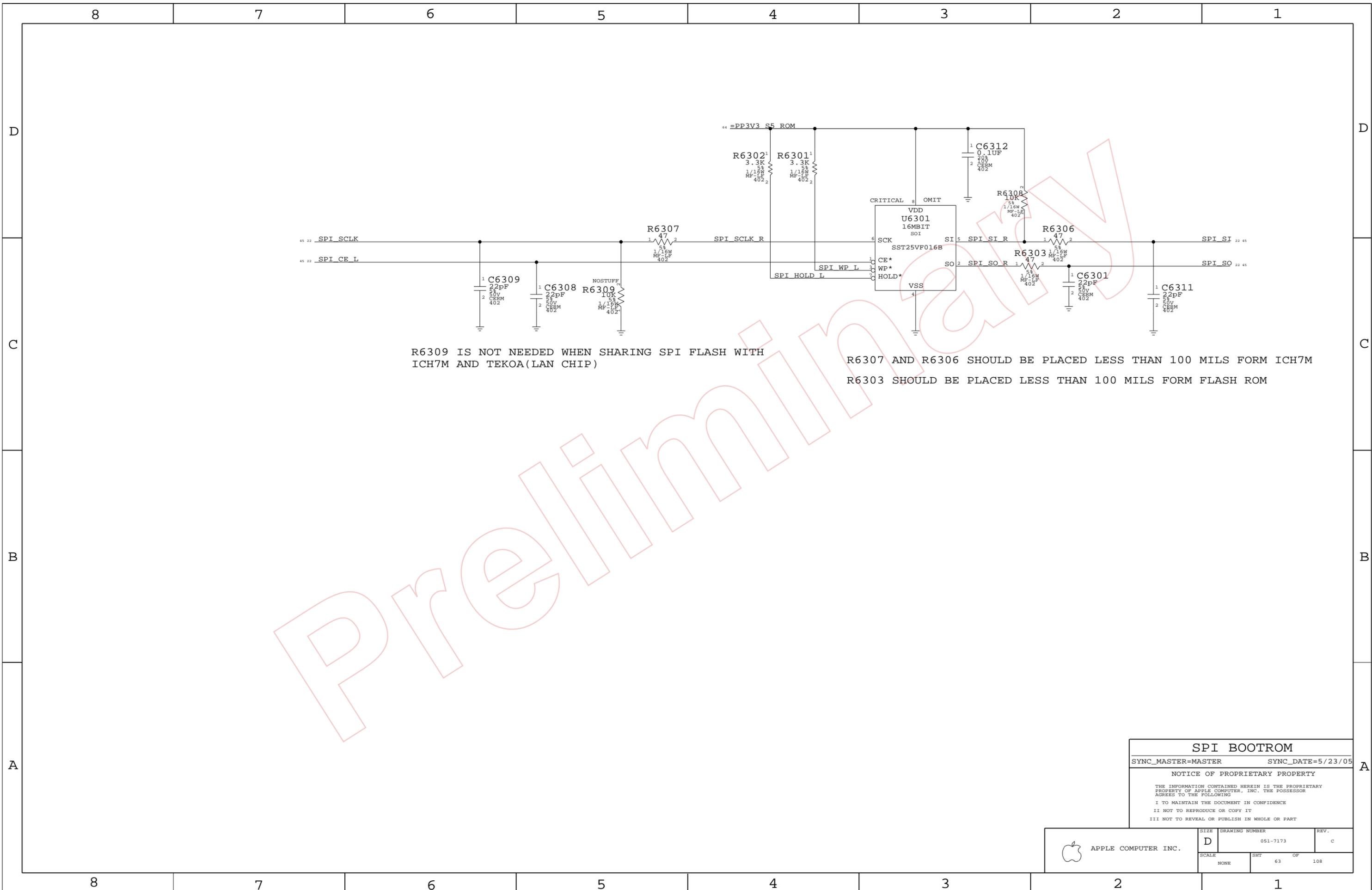
PLACE RC FILTER CLOSE TO SMC

PLACE RC FILTER CLOSE TO SMC

PLACE C6150 NEAR U5800

CPU Current & Voltage Sense
 SYNC_MASTER=EMBT SYNC_DATE=08/30/2005
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SCALE	SHT	OF	REV.
NONE	61	108	



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

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

Preliminary

SPI BOOTROM

SYNC_MASTER=MASTER SYNC_DATE=5/23/05

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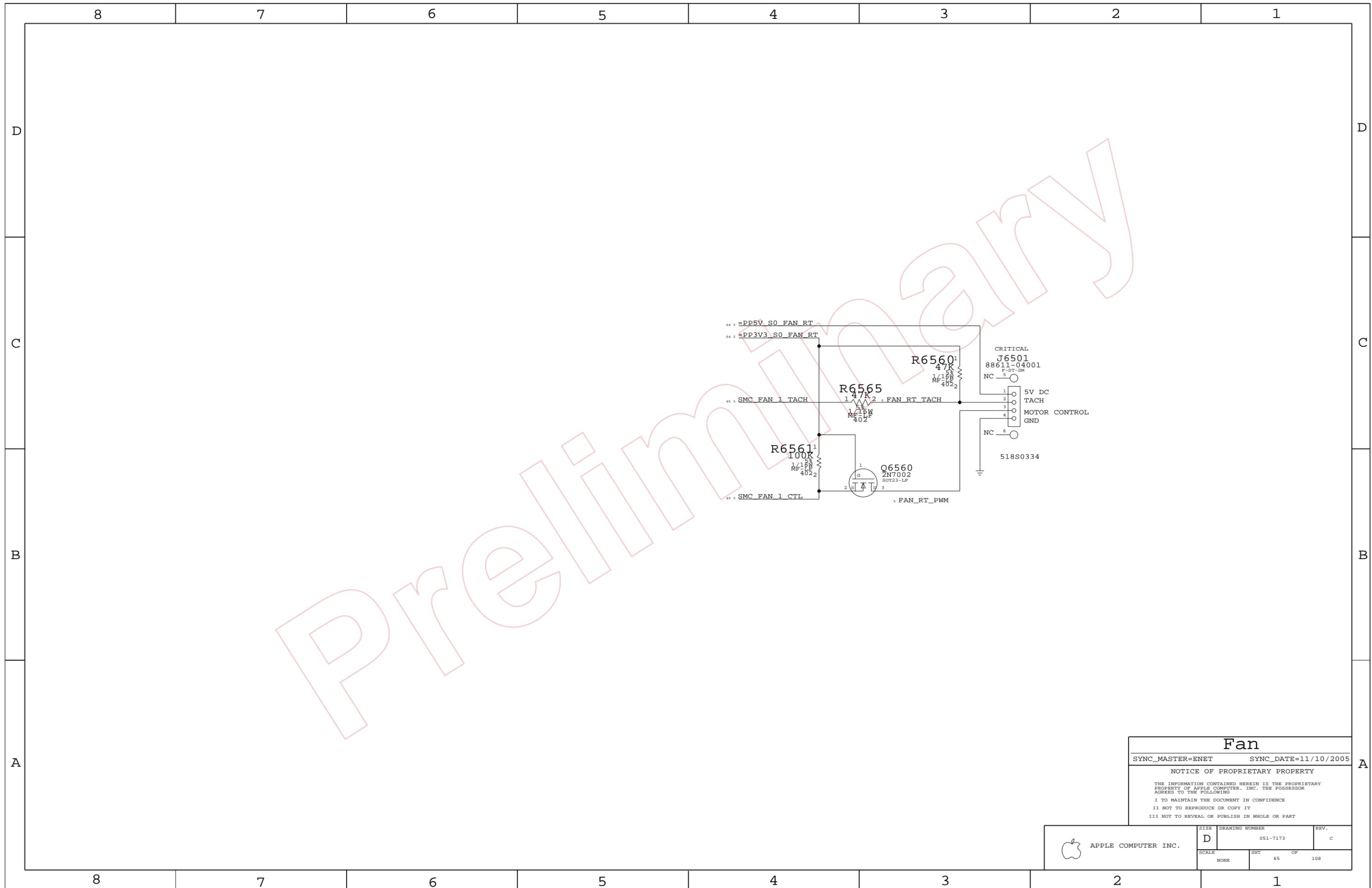
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SCALE		SHT	OF
NONE		63	108



Fan

SYNC_MASTER=ENET SYNC_DATE=11/10/2005

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NONE		65	108

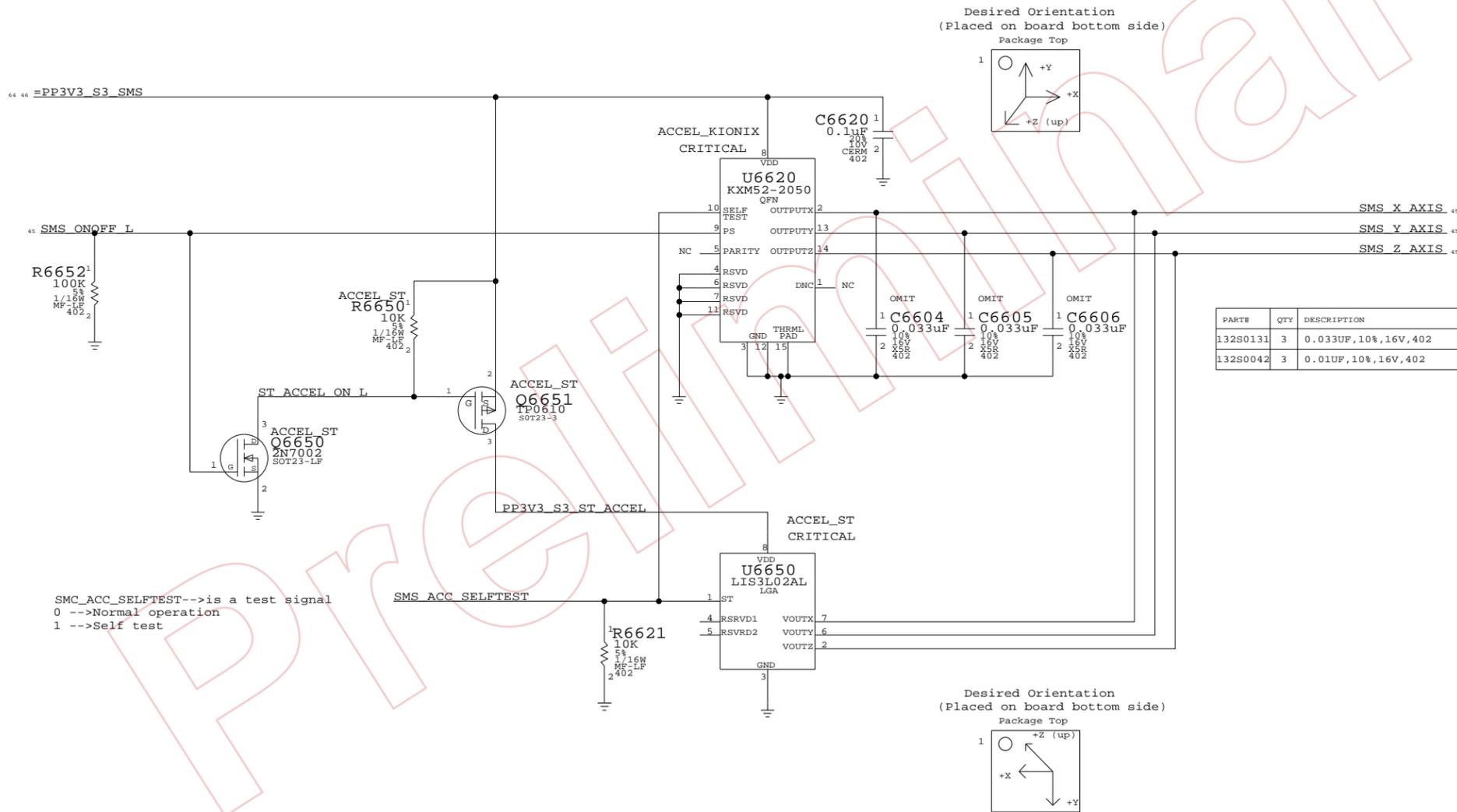
PAGE NOTES

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

OUTPUT
 SMS_ACC_*_AXIS - ACCELEROMETER OUTPUT TO SCU

PAGE HISTORY

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



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

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

SMS

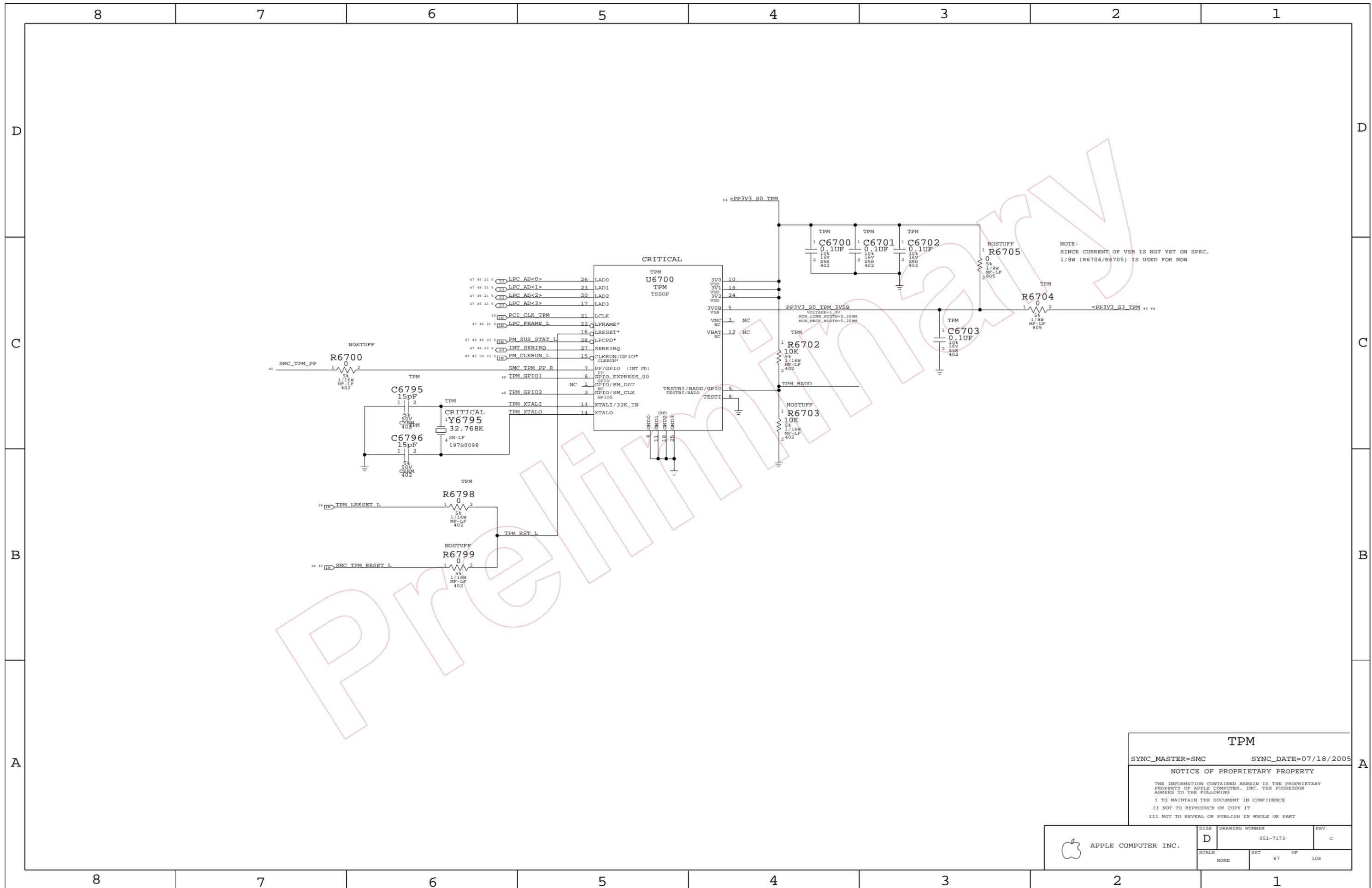
SYNC_MASTER=SMC SYNC_DATE=08/23/2005

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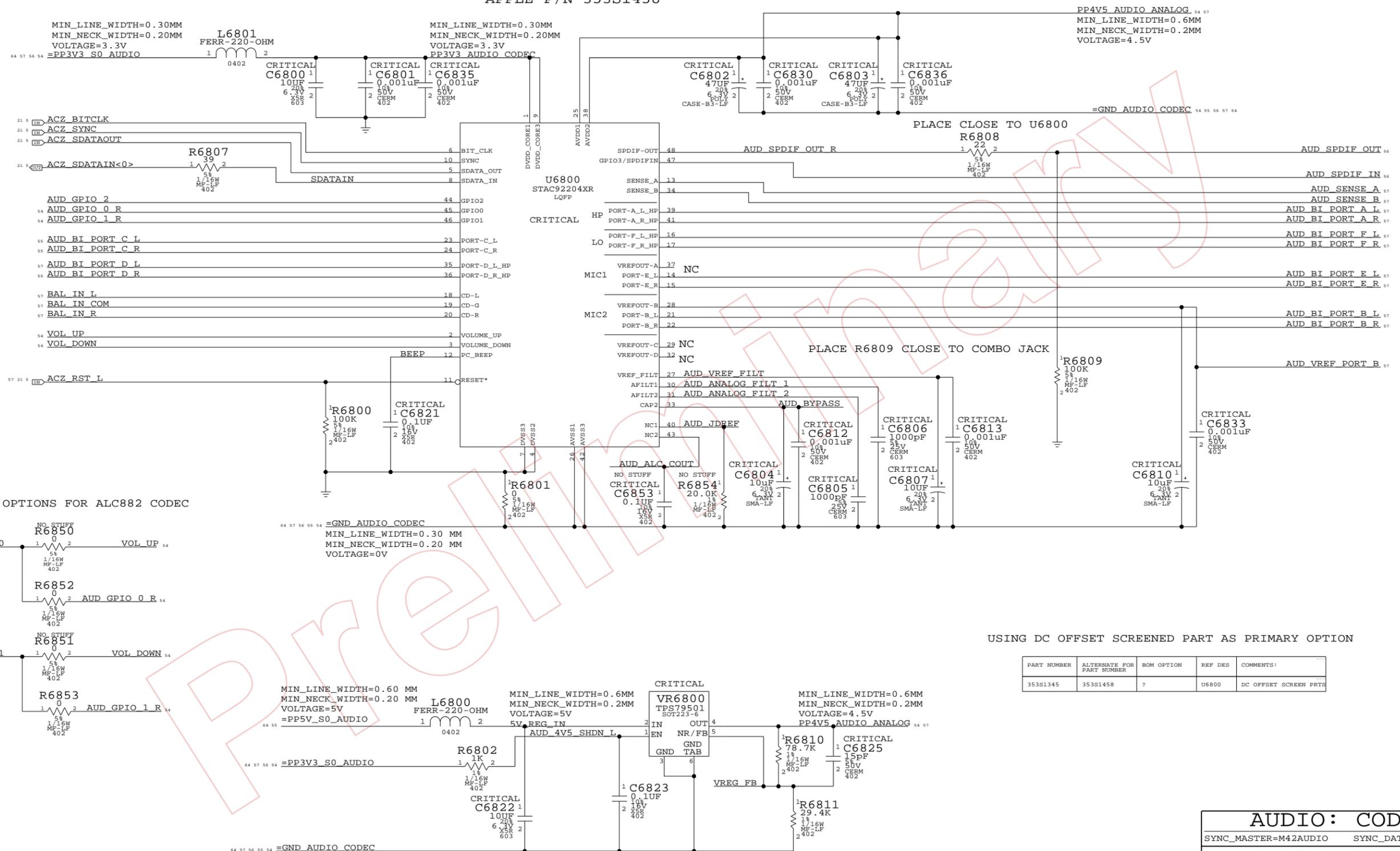
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	c
SCALE	SHT	OF	REV.
NONE	66	108	



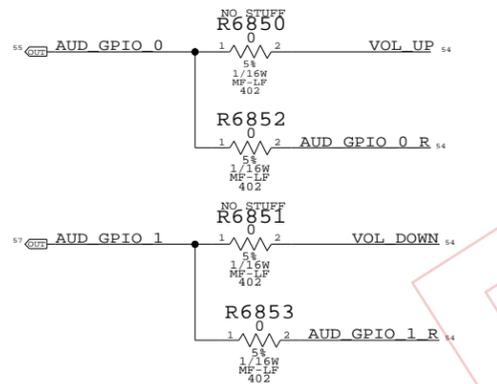
TPM			
SYNC_MASTER=SMC		SYNC_DATE=07/18/2005	
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 APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. c
	SCALE NONE	SHEETS 67	OF 108

AUDIO CODEC

APPLE P/N 353S1458

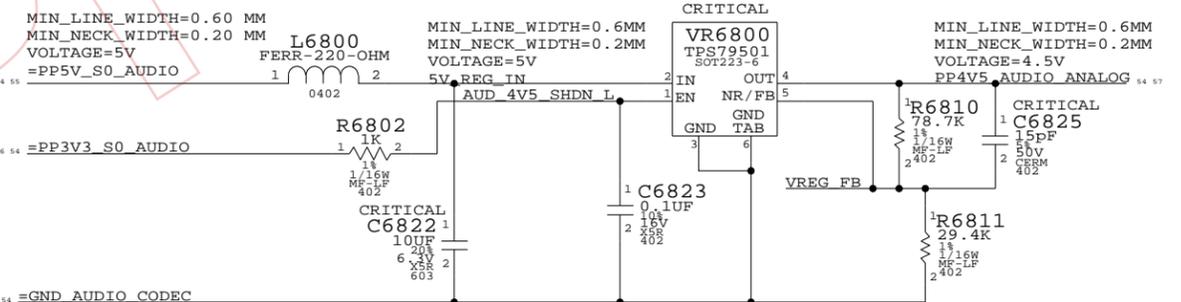


STUFFING OPTIONS FOR ALC882 CODEC



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



4.5V POWER SUPPLY FOR CODEC

AUDIO: CODEC
 SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006
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SCALE	SHT	OF	108
NONE	68		

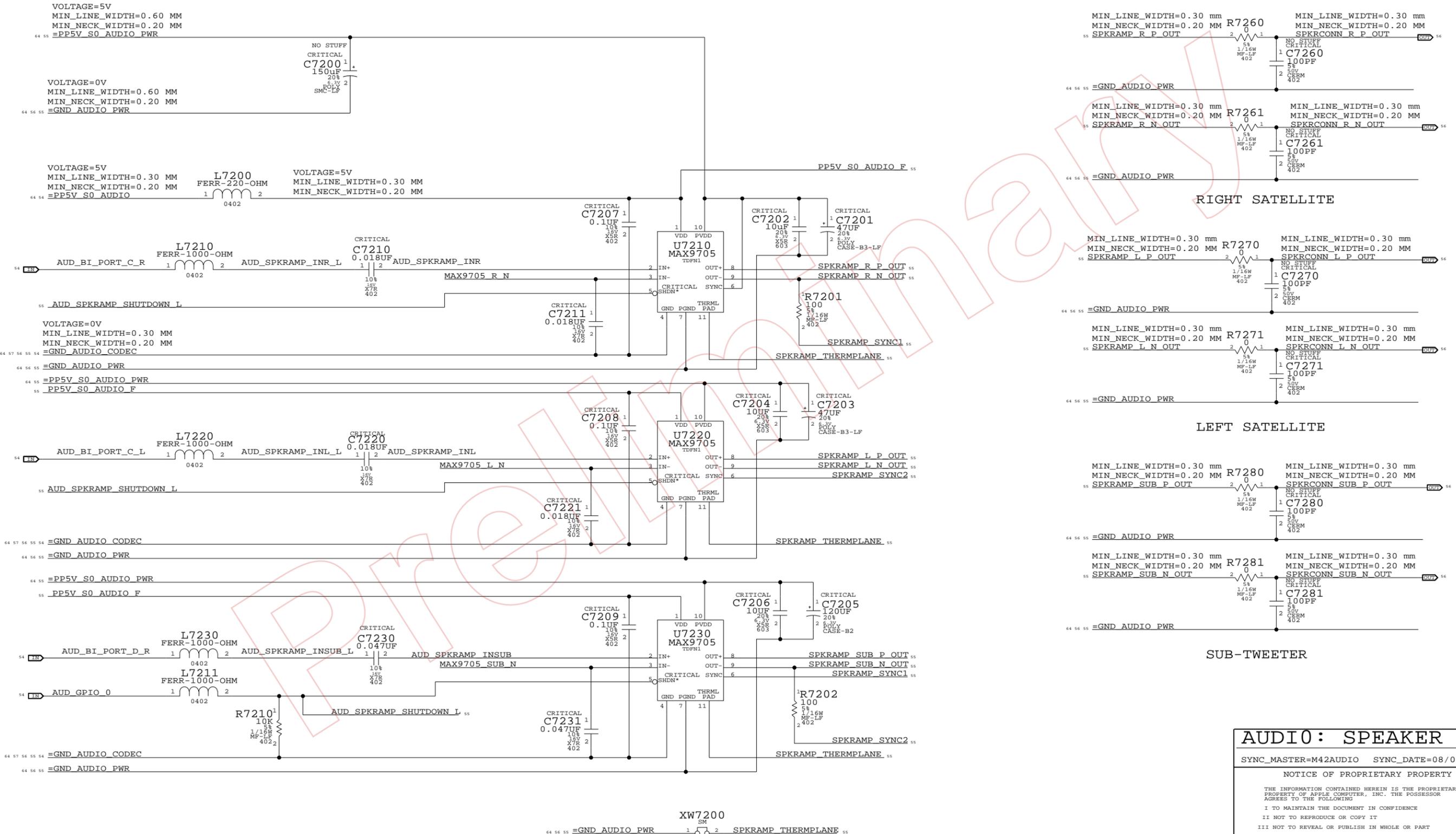
SATELLITE & SUB TWEETER AMPLIFIER APN:353S1595

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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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	108
NONE	72		

AUDIO JACK 1: LO/HP CONNECTOR, SPDIF TX

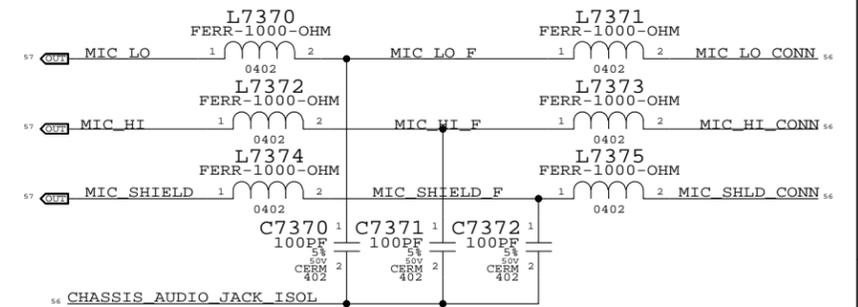
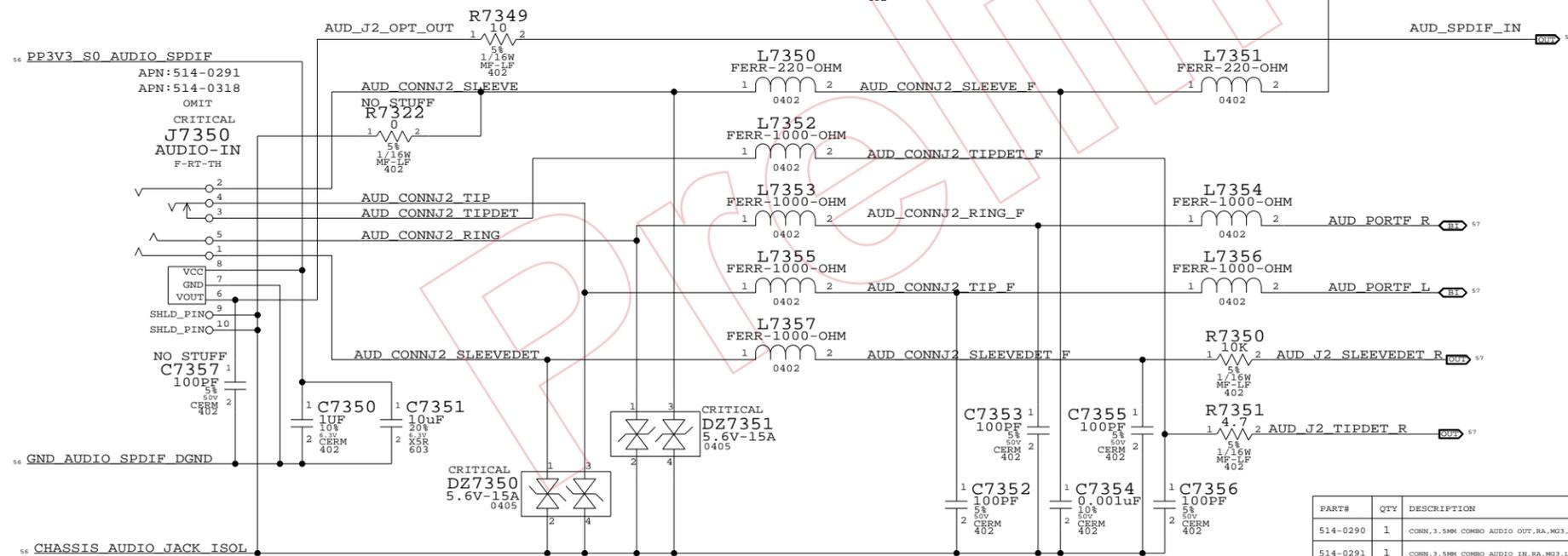
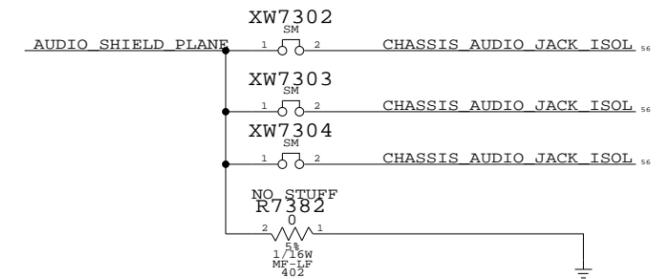
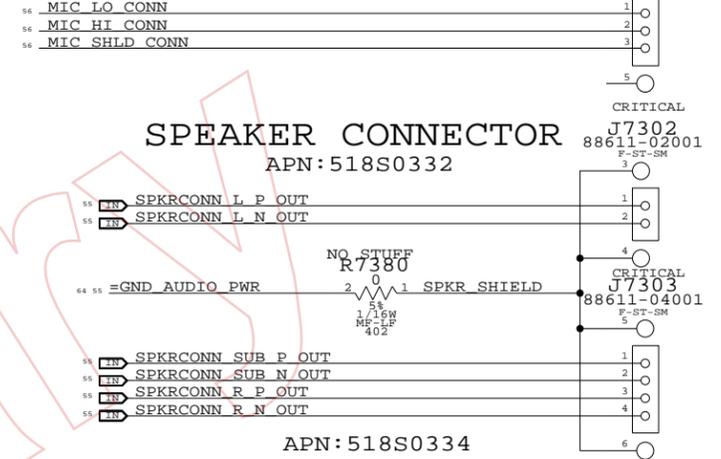
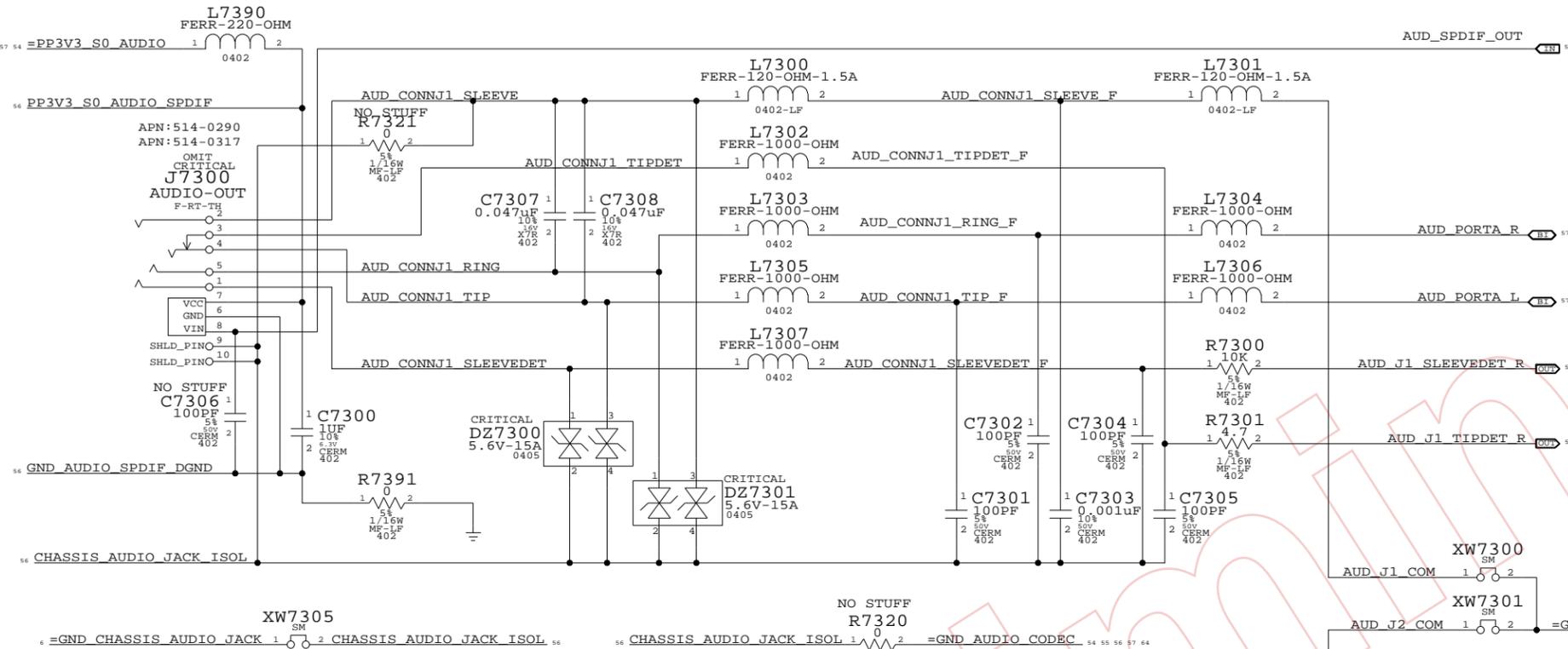
MIC CONNECTOR
APN:514S0392

SPEAKER CONNECTOR
APN:518S0332

AUDIO SHIELD FILL

MIC EMI FILTER

AUDIO JACK 2: LINE IN CONNECTOR, SPDIF RX

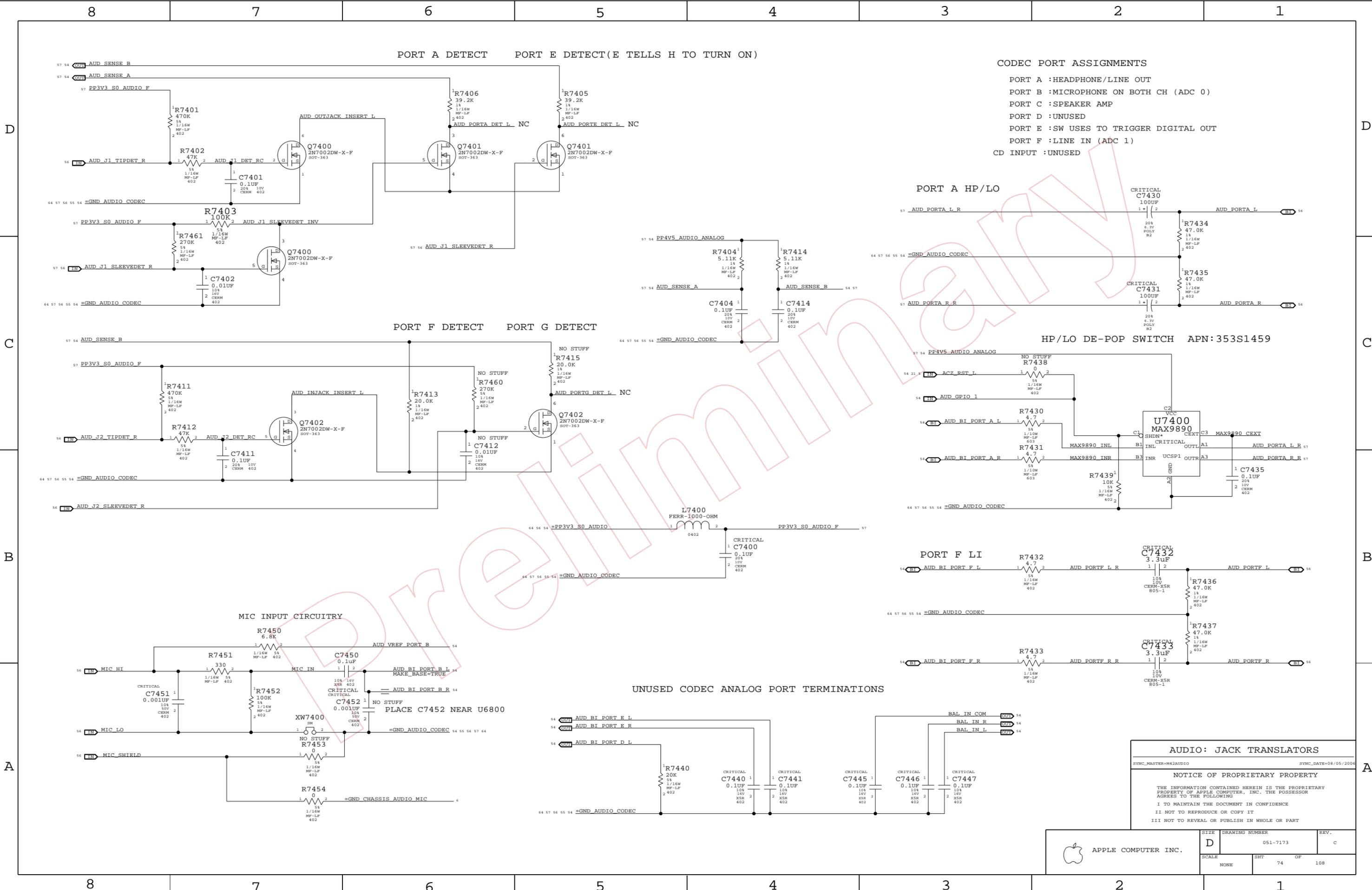


PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
514-0290	1	CONN, 3.5MM COMBO AUDIO OUT, RA, MG3, LF	J7300	CRITICAL	NORMAL
514-0291	1	CONN, 3.5MM COMBO AUDIO IN, RA, MG3, LF	J7350	CRITICAL	NORMAL
514-0317	1	CONN, 3.5MM COMBO AUDIO OUT, RA, BLACK, LF	J7300	CRITICAL	FANCY
514-0318	1	CONN,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

AUDIO: JACK
 SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006
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APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
D	051-7173	C
SCALE	SHT	OF
NONE	73	108



CODEC PORT ASSIGNMENTS

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

HP/LO DE-POP SWITCH APN: 353S1459

AUDIO: JACK TRANSLATORS

SYNC_MASTER=M42AUDIO SYNC_DATE=08/05/2006

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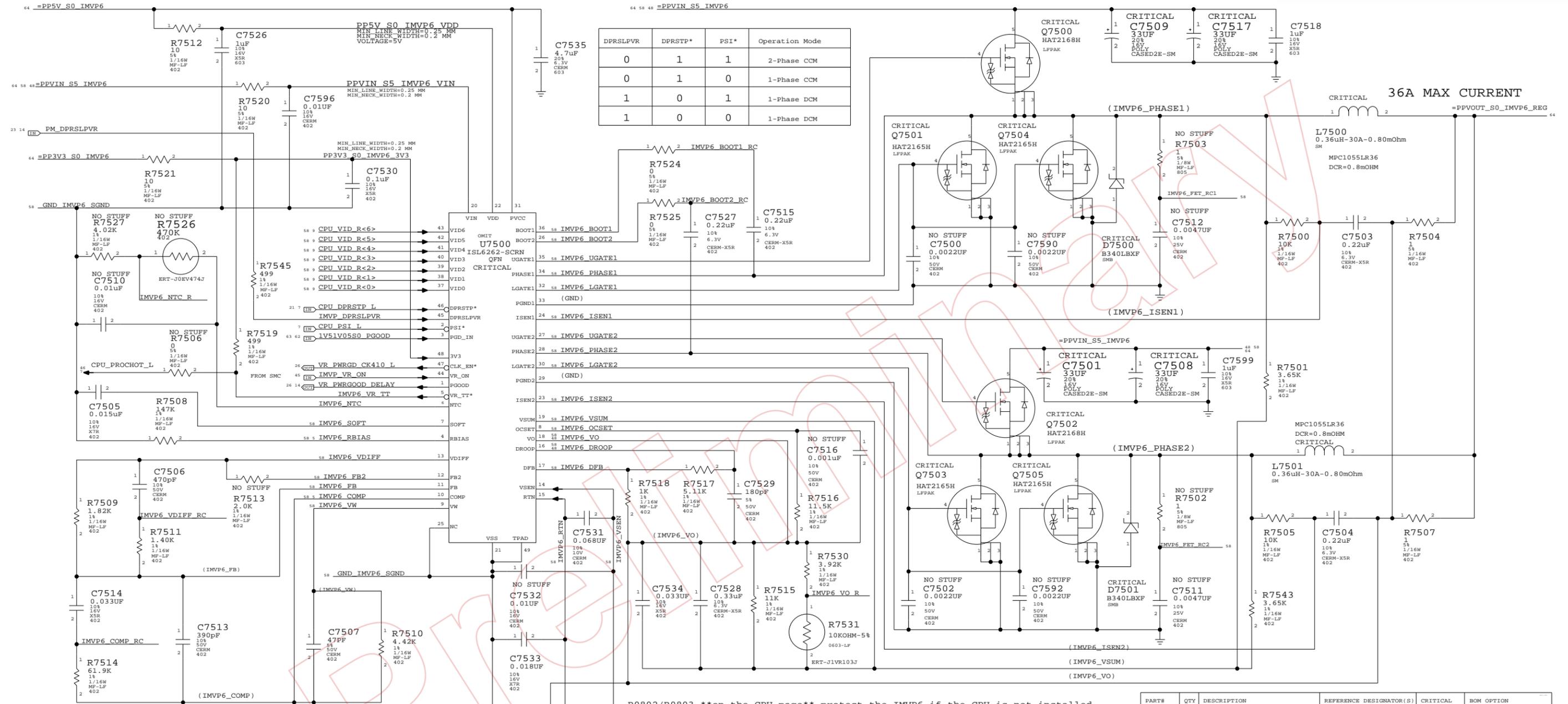
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	REV.
NONE	74	108	

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

DPRSLPVR	DPRSTP*	PSI*	Operation Mode
0	1	1	2-Phase CCM
0	1	0	1-Phase CCM
1	0	1	1-Phase DCM
1	0	0	1-Phase DCM



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

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

IMVP6 CPU VCore Regulator

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

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

IMVP6 CPU VCore Regulator

SYNC_MASTER=POWER SYNC_DATE=07/13/2005

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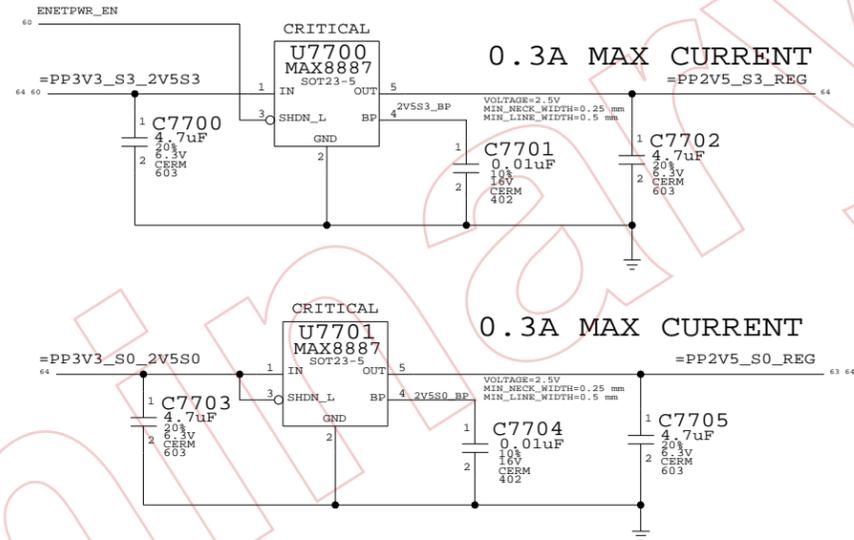
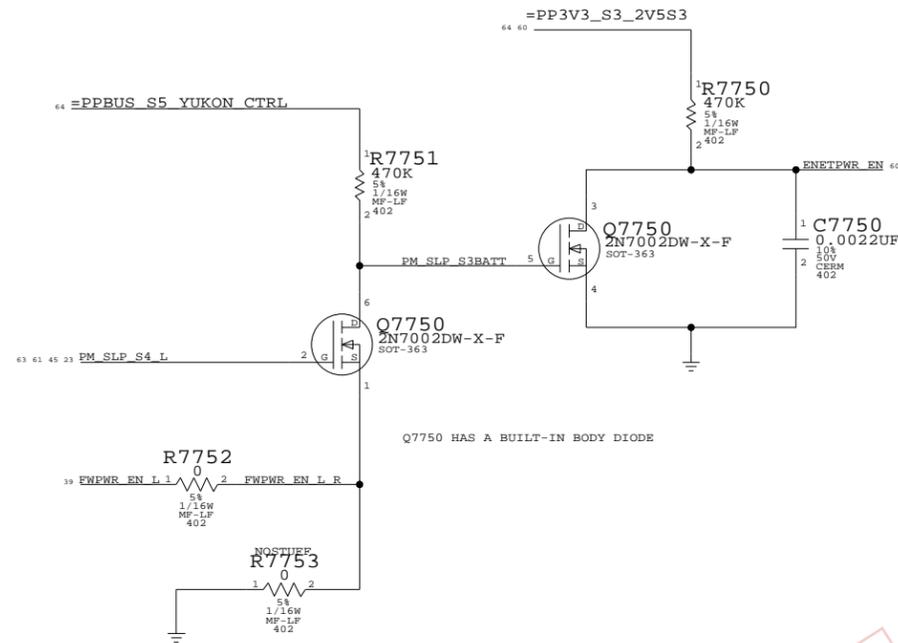
II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	C
SCALE	SHT	OF	108
NONE	75		

YUKON POWER CONTROL

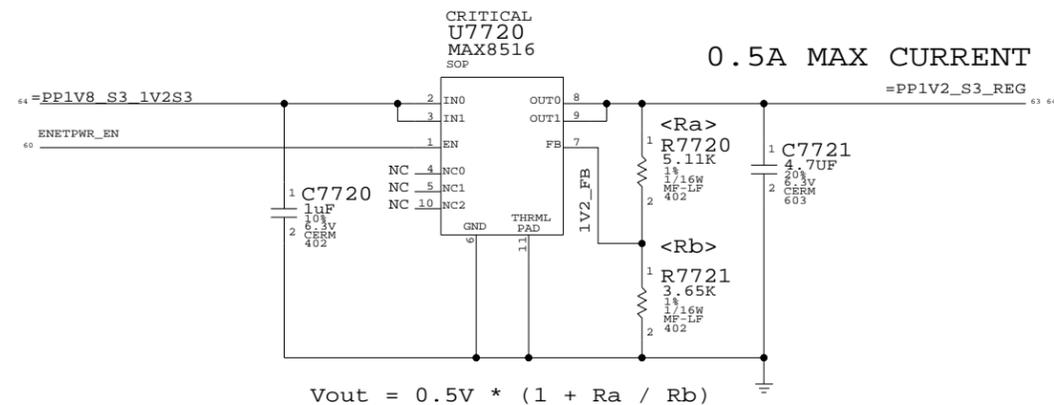
2.5V REGULATORS



1.2V REGULATOR

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/1.2V Regulator
 SYNC_MASTER=ENET SYNC_DATE=12/06/2005
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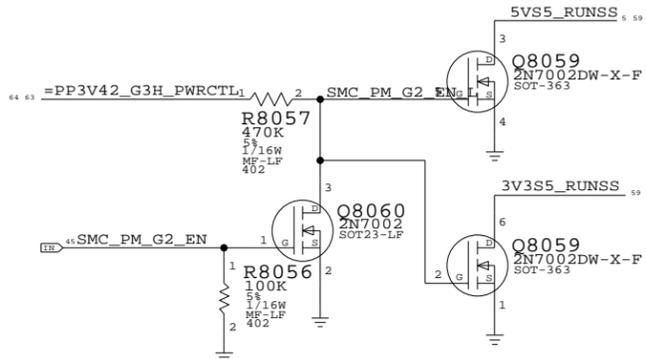
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-7173	c
SCALE	SHT	OF	REV.
NONE	77	108	

POWER CONTROL SIGNALS

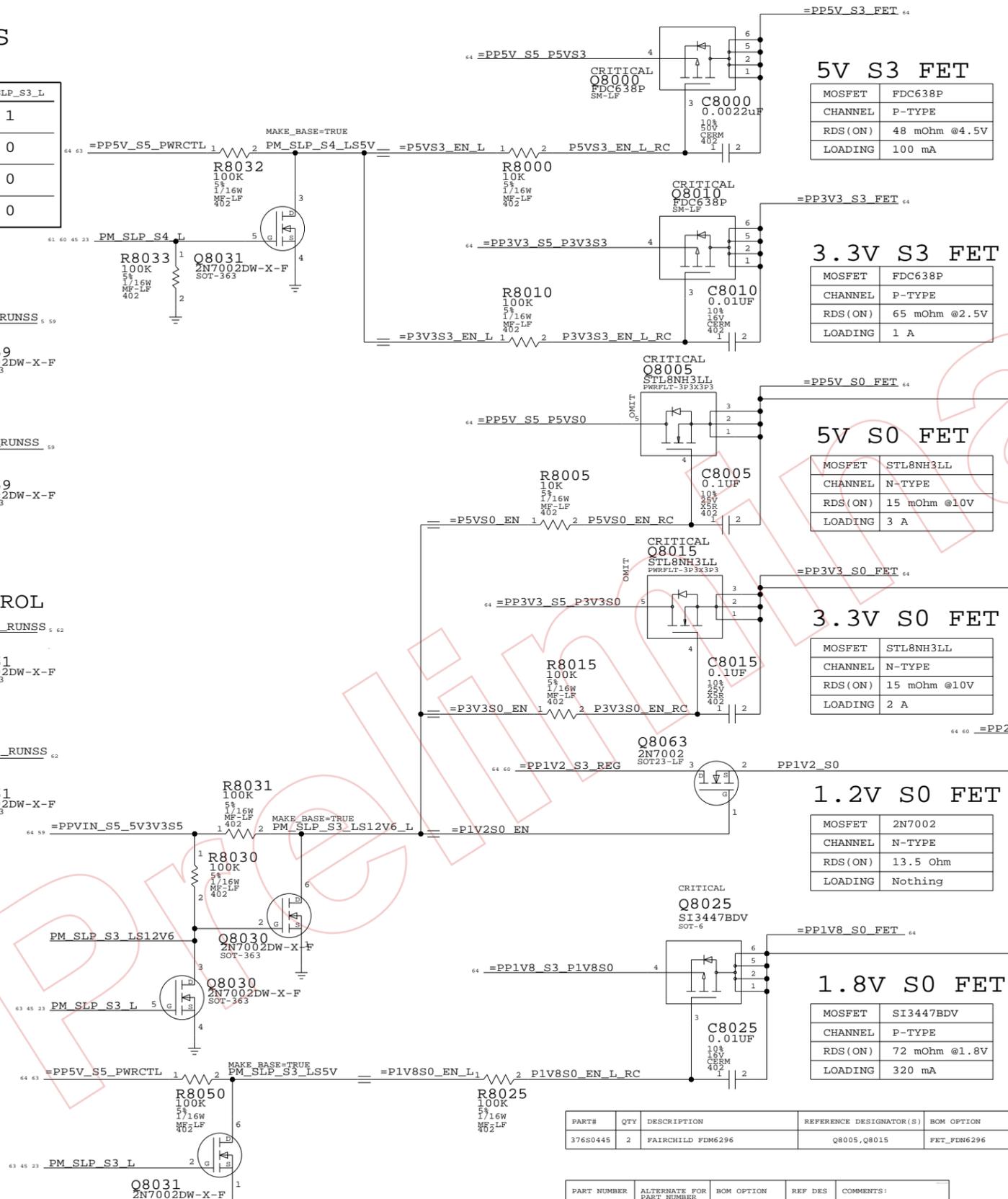
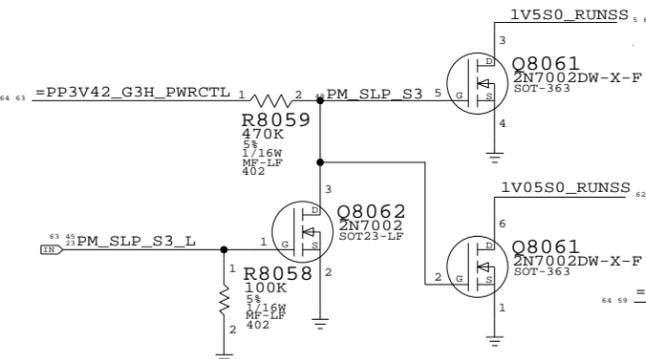
These rails are monitored by LTC2908

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

5V/3.3V S5 RUN/SS CONTROL

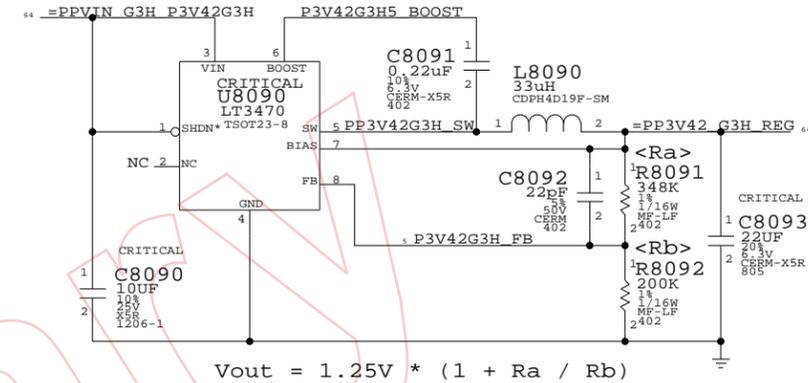


1.5V/1.05V S0 RUN/SS CONTROL

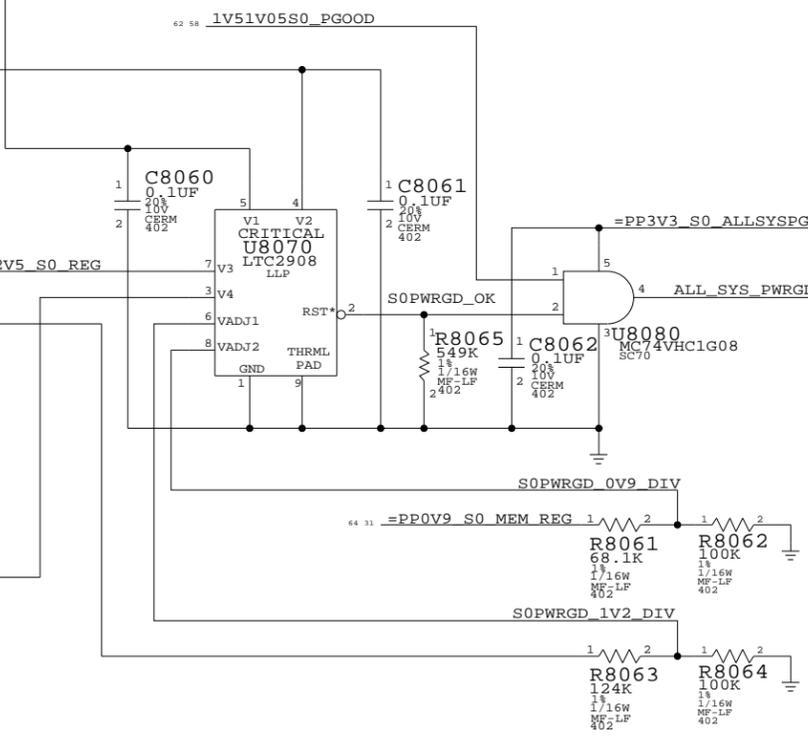


3.425V "G3Hot" SUPPLY

Supply needs to guarantee 3.31V delivered to SMC VRef generator



ALL SYSTEM PWRGD CIRCUIT



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

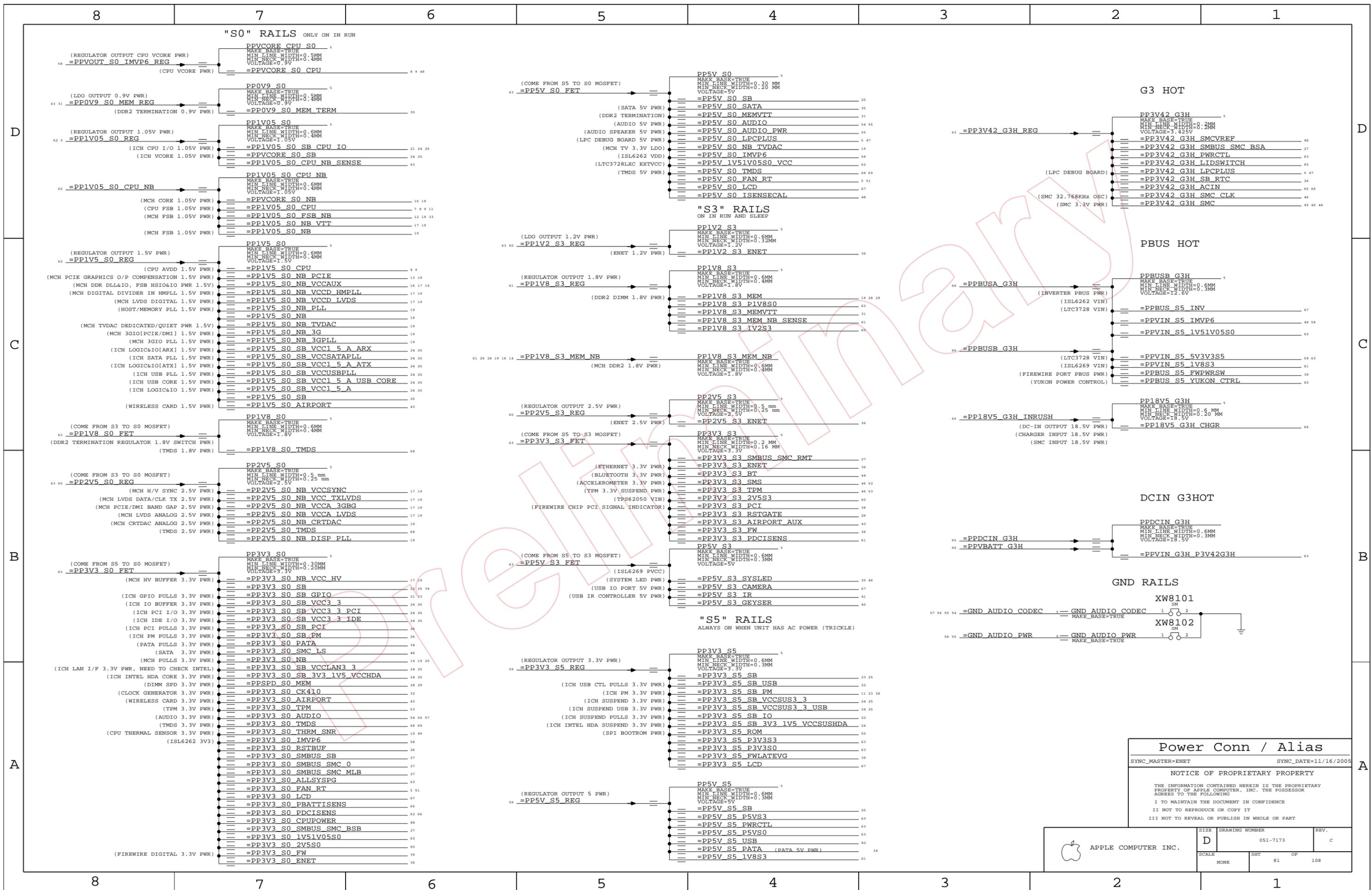
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
376S0448	376S0445	?	D8005, Q8015	VISHAY SI7806ADN

S3/S0 FETS, G3H SUPPLY

SYNC_MASTER=ENET SYNC_DATE=08/30/2005

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APPLE COMPUTER INC.	SIZE: D	DRAWING NUMBER: 051-7173	REV.: C
	SCALE: NONE	SHEET: 80	OF: 108



Power Conn / Alias

SYNC_MASTER=ENET SYNC_DATE=11/16/2005

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APPLE COMPUTER INC.	SCALE NONE	SHEET 81	OF 108	REV. C
	DRAWING NUMBER 051-7173		SIZE D	

DC-JACK INTERFACE

8 7 6 5 4 3 2 1

D

D

C

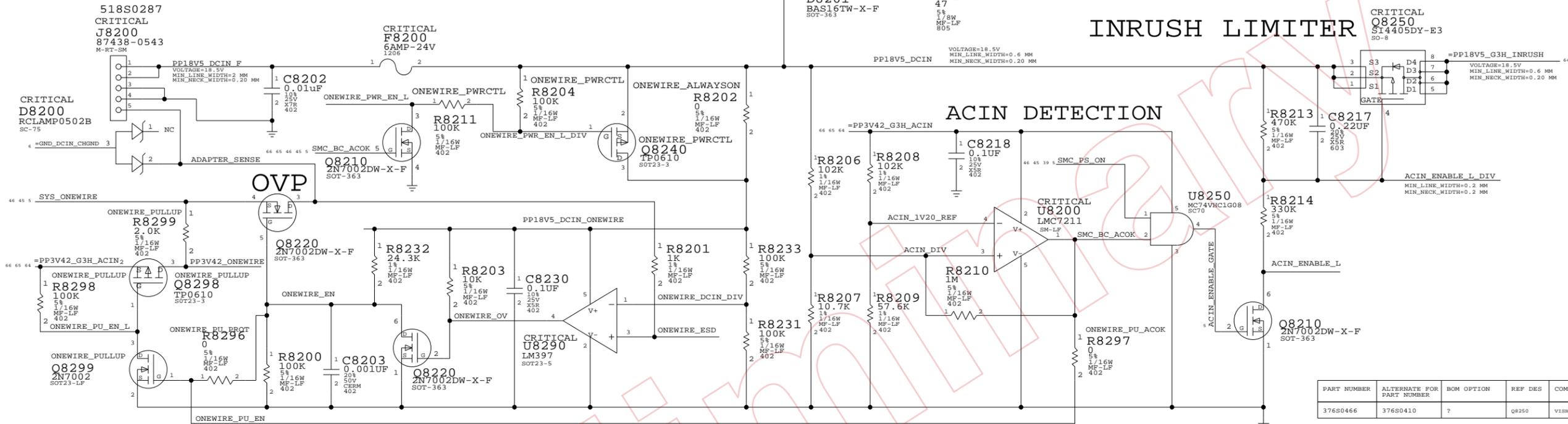
C

B

B

A

A



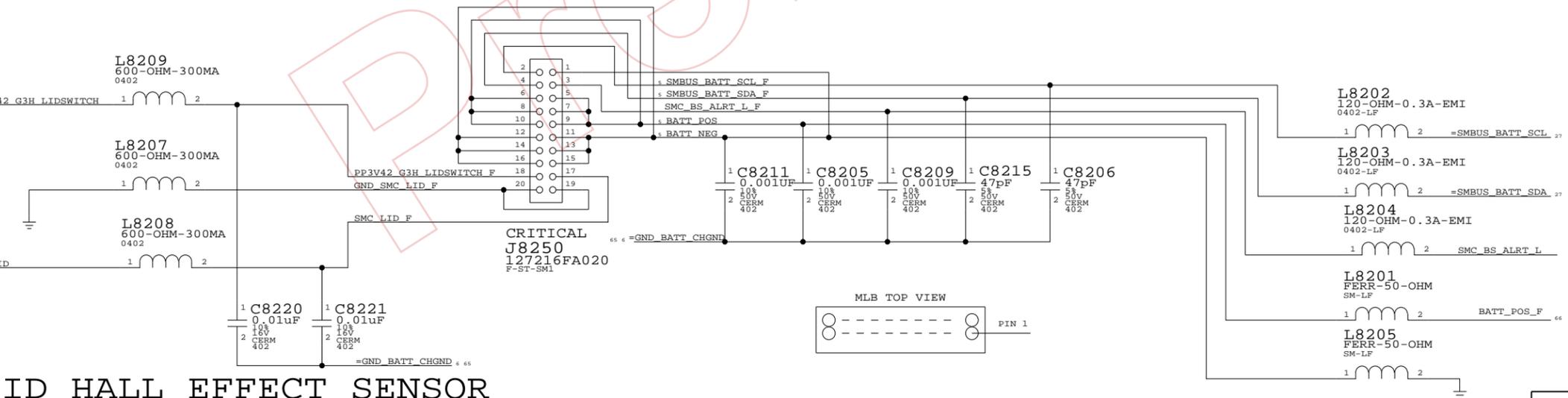
INRUSH LIMITER

ACIN DETECTION

OVP

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

BATTERY INTERFACE



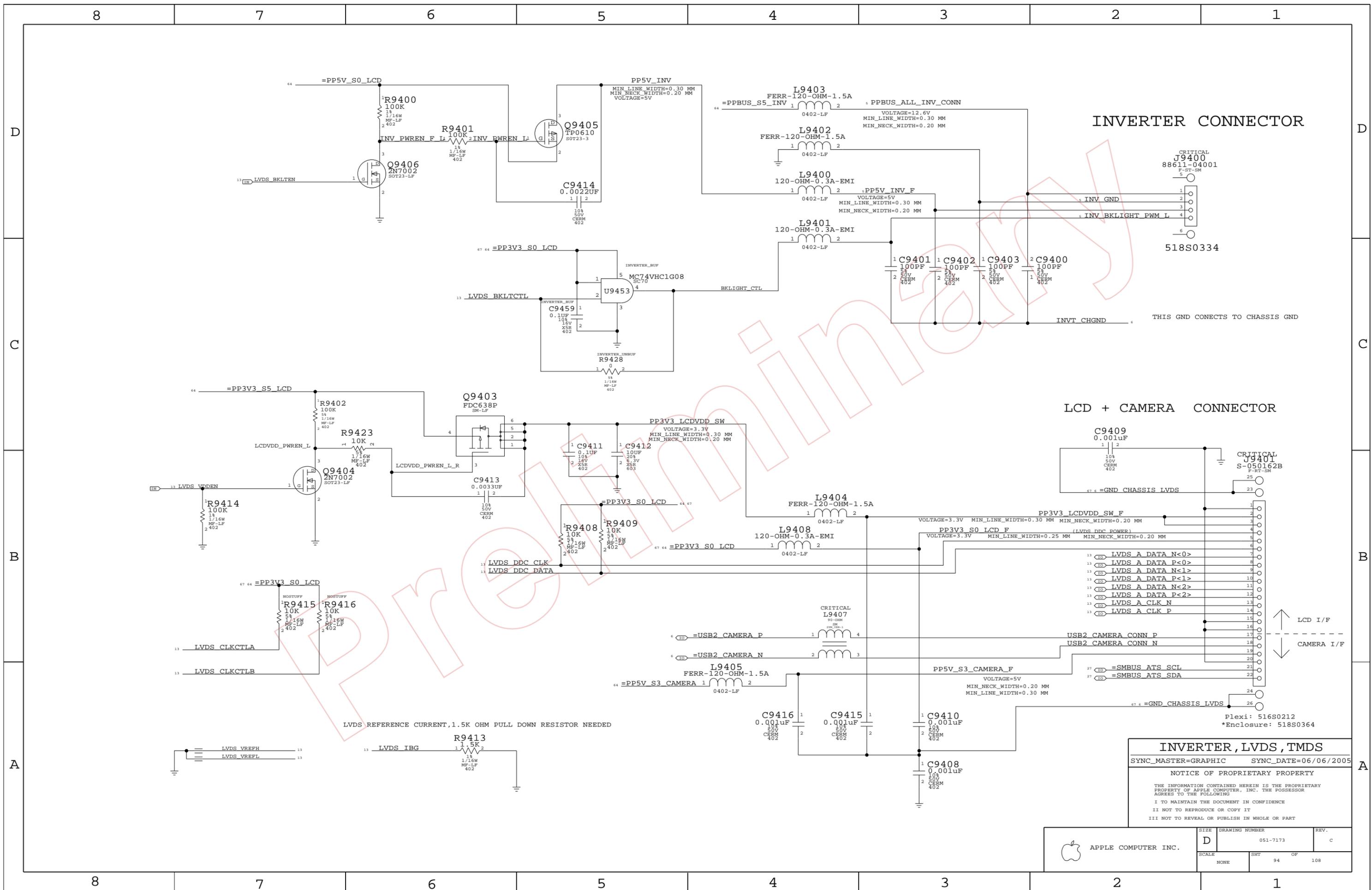
LID HALL EFFECT SENSOR

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

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	D	051-7173	C
SCALE	SHT	OF	REV.
NONE	82	108	

8 7 6 5 4 3 2 1

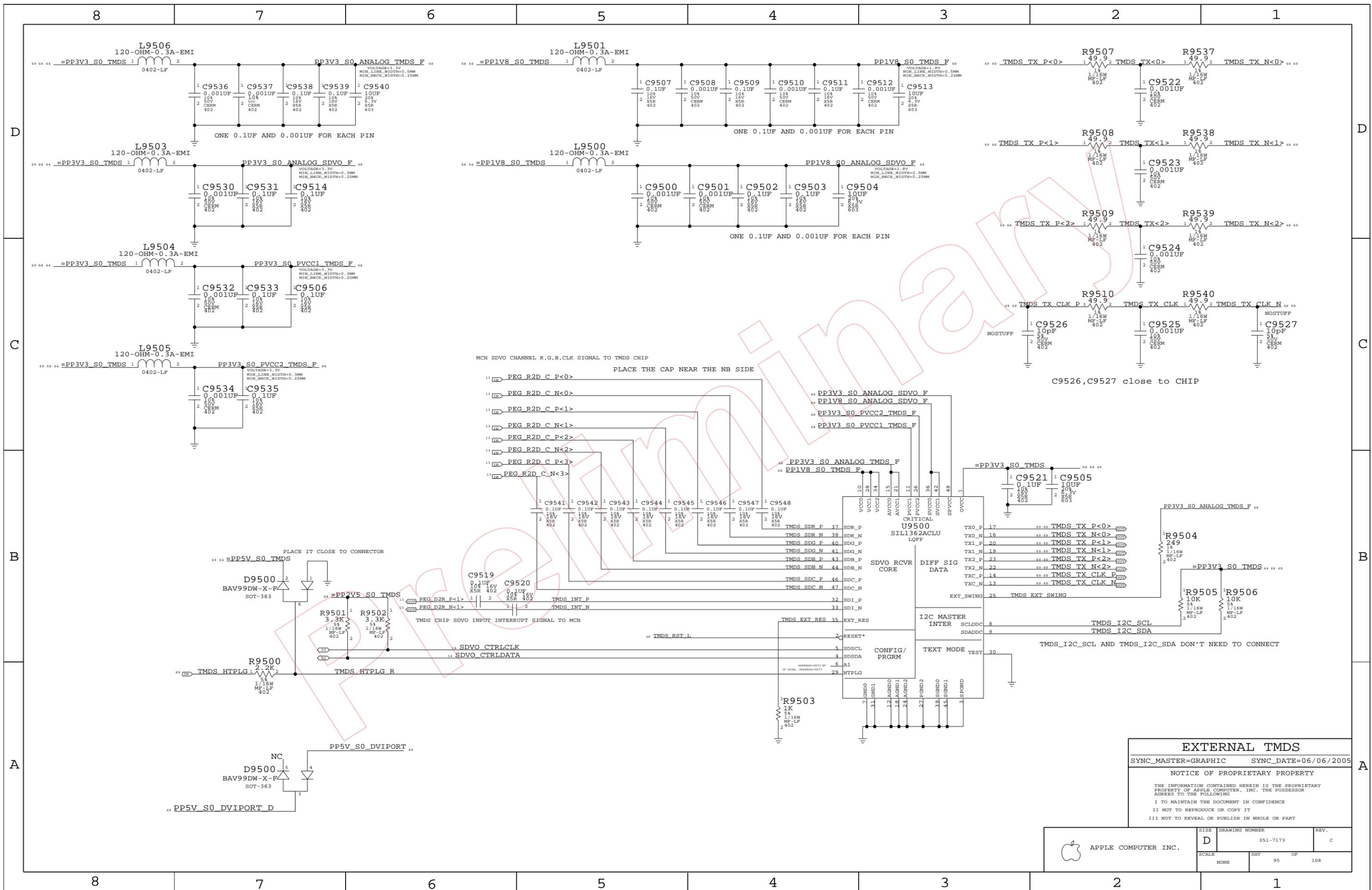


INVERTER CONNECTOR

LCD + CAMERA CONNECTOR

INVERTER, LVDS, TMDs
 SYNC_MASTER=GRAPHIC SYNC_DATE=06/06/2005
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APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. C
	SCALE NONE	SHEET 94	OF 108



MCH SDVO CHANNEL R,G,B,CLK SIGNAL TO TMDs CHIP
 PLACE THE CAP NEAR THE NB SIDE

C9526,C9527 close to CHIP

EXTERNAL TMDs		
SYNC_MASTER=GRAPHIC	SYNC_DATE=06/06/2005	
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III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART		

APPLE COMPUTER INC.	SIZE D	DRAWING NUMBER 051-7173	REV. C
	SCALE NONE	SHEET 95	OF 108

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

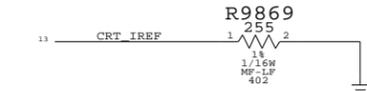
TMDS(MINI DVI) INTERFACE

Isolation required for DVI power switch

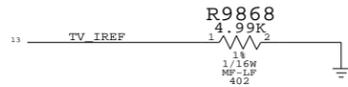
PLACE THE RESISTOR CLOSE TO GMCH AND THE CAP NEAR CONNECTOR

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

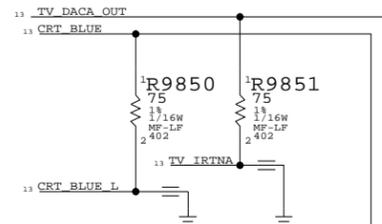
A 255 OHM 1% RESISTOR IS REQUIRED BETWEEN CRT_IREF AND GROUND



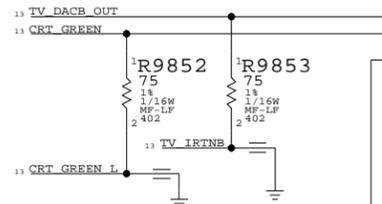
TV REFERENCE CURRENT, USES AN EXTERNAL RESISTOR OF 5K OHM 1% TO SET INTERNAL VOLTAGE LEVELS



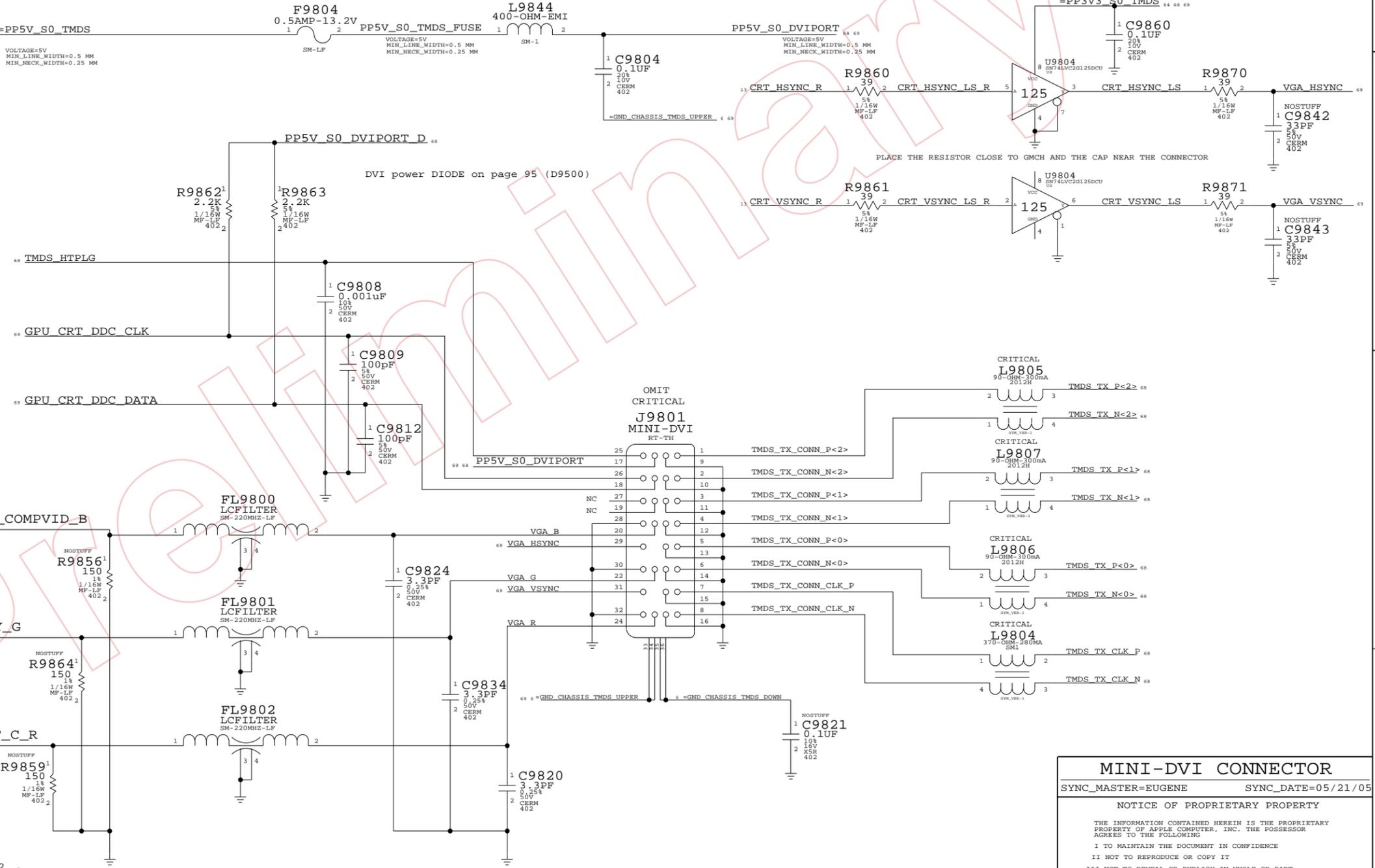
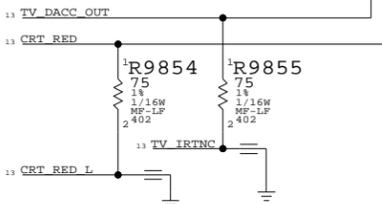
PLACE THE RESISTOR CLOSE TO GMCH



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.
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SCALE	SHT	OF
NONE	98	108

	8	7	6	5	4	3	2	1	
	FWPWR_EN	FWPWR_EN - @m42a_1ib.M42A	39C5	IMVP6_PHASE2	IMVP6_PHASE2 - @m42a_1ib.M42A	58A6 58C6	MEM_DQ<17>	MEM_DQ<17> - @m42a_1ib.M42A	15C4 29C6
	FWPWR_EN_L	FWPWR_EN_L - @m42a_1ib.M42A	39C4 60C8	IMVP6_RBIAS	IMVP6_RBIAS - @m42a_1ib.M42A	5D7 58A4 58B7	MEM_DQ<18>	MEM_DQ<18> - @m42a_1ib.M42A	15C4 29C6
	FWPWR_EN_L_DIV	FWPWR_EN_L_DIV - @m42a_1ib.M42A	39C5	IMVP6_RTN	IMVP6_RTN - @m42a_1ib.M42A	58A4 58B6	MEM_DQ<19>	MEM_DQ<19> - @m42a_1ib.M42A	15C4 29C4
	FWPWR_EN_L_R	FWPWR_EN_L_R - @m42a_1ib.M42A	60C7	IMVP6_SOFT	IMVP6_SOFT - @m42a_1ib.M42A	58A4 58C7	MEM_DQ<20>	MEM_DQ<20> - @m42a_1ib.M42A	15C4 29C6
	FWPWR_RUN	FWPWR_RUN - @m42a_1ib.M42A	39C6	IMVP6_UGATE1	IMVP6_UGATE1 - @m42a_1ib.M42A	58A8 58C6	MEM_DQ<21>	MEM_DQ<21> - @m42a_1ib.M42A	15C4 29C4
	FW_A_TPA_N	FW_A_TPA_N - @m42a_1ib.M42A	38B3 39B6	IMVP6_UGATE2	IMVP6_UGATE2 - @m42a_1ib.M42A	58A6 58C6	MEM_DQ<22>	MEM_DQ<22> - @m42a_1ib.M42A	15C4 29C6
	FW_PORT0_TPA_N	FW_PORT0_TPA_N - @m42a_1ib.M42A	39B5	IMVP6_VDIFF	IMVP6_VDIFF - @m42a_1ib.M42A	58A4 58B7	MEM_DQ<23>	MEM_DQ<23> - @m42a_1ib.M42A	15C4 29C6
	FW_A_TPA_P	FW_A_TPA_P - @m42a_1ib.M42A	38B3 39B6	IMVP6_VDIFF_RC	IMVP6_VDIFF_RC - @m42a_1ib.M42A	58B7	MEM_DQ<24>	MEM_DQ<24> - @m42a_1ib.M42A	15C4 29C4
	FW_PORT0_TPA_P	FW_PORT0_TPA_P - @m42a_1ib.M42A	39B5	IMVP6_VO	IMVP6_VO - @m42a_1ib.M42A	58A5 58A4 58B6	MEM_DQ<25>	MEM_DQ<25> - @m42a_1ib.M42A	15C4 29C4
	FW_A_TPB_IAS	FW_A_TPB_IAS - @m42a_1ib.M42A	38B3 39B6	IMVP6_VO_R	IMVP6_VO_R - @m42a_1ib.M42A	58B4	MEM_DQ<26>	MEM_DQ<26> - @m42a_1ib.M42A	15C4 29C4
	FW_A_TPB_N	FW_A_TPB_N - @m42a_1ib.M42A	38B3 39B6	IMVP6_VO_R1	IMVP6_VO_R1 - @m42a_1ib.M42A	58A8	MEM_DQ<27>	MEM_DQ<27> - @m42a_1ib.M42A	15C4 29C6
	FW_PORT0_TPB_N	FW_PORT0_TPB_N - @m42a_1ib.M42A	39B5	IMVP6_VO_R2	IMVP6_VO_R2 - @m42a_1ib.M42A	58A6	MEM_DQ<28>	MEM_DQ<28> - @m42a_1ib.M42A	15C4 29C4
	FW_A_TPB_P	FW_A_TPB_P - @m42a_1ib.M42A	38B3 39B6	IMVP6_VR_TT	IMVP6_VR_TT - @m42a_1ib.M42A	58C7	MEM_DQ<29>	MEM_DQ<29> - @m42a_1ib.M42A	15C4 29C6
	FW_PORT0_TPB_P	FW_PORT0_TPB_P - @m42a_1ib.M42A	39B5	IMVP6_VSEN	IMVP6_VSEN - @m42a_1ib.M42A	58A4 58B5	MEM_DQ<30>	MEM_DQ<30> - @m42a_1ib.M42A	15C4 29C6
	FW_B_TPA_N	FW_B_TPA_N - @m42a_1ib.M42A	6D2 38B3	IMVP6_VSUM	IMVP6_VSUM - @m42a_1ib.M42A	58A4 58C6	MEM_DQ<31>	MEM_DQ<31> - @m42a_1ib.M42A	15C4 29C6
	FW_B_TPA_N_SPN	FW_B_TPA_N_SPN - @m42a_1ib.M42A	5B7 6D1	IMVP6_VSUM_R1	IMVP6_VSUM_R1 - @m42a_1ib.M42A	58A8	MEM_DQ<32>	MEM_DQ<32> - @m42a_1ib.M42A	15C4 29A6
	FW_B_TPA_P	FW_B_TPA_P - @m42a_1ib.M42A	6D2 38B3	IMVP6_VSUM_R2	IMVP6_VSUM_R2 - @m42a_1ib.M42A	58A6	MEM_DQ<33>	MEM_DQ<33> - @m42a_1ib.M42A	15C4 29A4
	FW_B_TPB_IAS	FW_B_TPB_IAS - @m42a_1ib.M42A	6D2 38B3	IMVP_VDPSLPVR	IMVP_VDPSLPVR - @m42a_1ib.M42A	58A4 58B7	MEM_DQ<34>	MEM_DQ<34> - @m42a_1ib.M42A	15B4 29A4
	FW_B_TPB_N	FW_B_TPB_N - @m42a_1ib.M42A	5B7 6D1	IMVP_VR_ON	IMVP_VR_ON - @m42a_1ib.M42A	58C7	MEM_DQ<35>	MEM_DQ<35> - @m42a_1ib.M42A	15B4 29A4
	FW_B_TPB_N_SPN	FW_B_TPB_N_SPN - @m42a_1ib.M42A	6D2 38B3	INT_PIROA_L	INT_PIROA_L - @m42a_1ib.M42A	45D8 58C7	MEM_DQ<36>	MEM_DQ<36> - @m42a_1ib.M42A	15B4 29A6
	FW_B_TPB_P	FW_B_TPB_P - @m42a_1ib.M42A	6D2 38B3	INT_PIROB_L	INT_PIROB_L - @m42a_1ib.M42A	22A7 26C3	MEM_DQ<37>	MEM_DQ<37> - @m42a_1ib.M42A	15B4 29A6
	FW_C_TPA_N	FW_C_TPA_N - @m42a_1ib.M42A	6D2 38B3	INT_PIROC_L	INT_PIROC_L - @m42a_1ib.M42A	22A7 26C3	MEM_DQ<38>	MEM_DQ<38> - @m42a_1ib.M42A	15B4 29A4
	FW_C_TPA_P	FW_C_TPA_P - @m42a_1ib.M42A	6D2 38B3	INT_PIROQ_L	INT_PIROQ_L - @m42a_1ib.M42A	22A7 26C3 38A5	MEM_DQ<39>	MEM_DQ<39> - @m42a_1ib.M42A	15B4 29A4
	FW_C_TPB_IAS	FW_C_TPB_IAS - @m42a_1ib.M42A	5B7 6D1	INT_SERIRQ	INT_SERIRQ - @m42a_1ib.M42A	5C2 23C8 45C8 47C5 53C6	MEM_DQ<40>	MEM_DQ<40> - @m42a_1ib.M42A	15B4 29A6
	FW_C_TPB_N	FW_C_TPB_N - @m42a_1ib.M42A	5B7 6D1	INTV_CHGND	INTV_CHGND - @m42a_1ib.M42A	6D8 67C2	MEM_DQ<41>	MEM_DQ<41> - @m42a_1ib.M42A	15B4 29A6
	FW_OC_TPA_P	FW_OC_TPA_P - @m42a_1ib.M42A	6D2 38B3	INTV_BRLIGHT_PWM_L	INTV_BRLIGHT_PWM_L - @m42a_1ib.M42A	5B1 67D2	MEM_DQ<42>	MEM_DQ<42> - @m42a_1ib.M42A	15B4 29A6
	FW_C_TPB_P	FW_C_TPB_P - @m42a_1ib.M42A	5B7 6D1	INTV_GND	INTV_GND - @m42a_1ib.M42A	5B1 67D2	MEM_DQ<43>	MEM_DQ<43> - @m42a_1ib.M42A	15B4 29A6
	FW_C_TPB_IAS	FW_C_TPB_IAS - @m42a_1ib.M42A	6D2 38B3	INV_PWREN_F_L	INV_PWREN_F_L - @m42a_1ib.M42A	67D6	MEM_DQ<44>	MEM_DQ<44> - @m42a_1ib.M42A	15B4 29A6
	FW_C_TPB_N	FW_C_TPB_N - @m42a_1ib.M42A	5B7 6D1	INV_PWREN_L	INV_PWREN_L - @m42a_1ib.M42A	67D6	MEM_DQ<45>	MEM_DQ<45> - @m42a_1ib.M42A	15B4 29A4
	FW_C_TPB_N_SPN	FW_C_TPB_N_SPN - @m42a_1ib.M42A	5B7 6D1	IR_RX_OUT	IR_RX_OUT - @m42a_1ib.M42A	35C6 41C6	MEM_DQ<46>	MEM_DQ<46> - @m42a_1ib.M42A	15B4 29A4
	FW_C_TPB_P	FW_C_TPB_P - @m42a_1ib.M42A	6D2 38B3	IR_RX_OUT_F	IR_RX_OUT_F - @m42a_1ib.M42A	41C5	MEM_DQ<47>	MEM_DQ<47> - @m42a_1ib.M42A	15B4 29A4
	FW_C_TPB_P_SPN	FW_C_TPB_P_SPN - @m42a_1ib.M42A	6D2 38B3	ISENSE_CAL_EN	ISENSE_CAL_EN - @m42a_1ib.M42A	45B8 48A8	MEM_DQ<48>	MEM_DQ<48> - @m42a_1ib.M42A	15B4 29A6
	FW_C_TPB_P_SPN	FW_C_TPB_P_SPN - @m42a_1ib.M42A	5B7 6D1	ISENSE_CAL_EN_L	ISENSE_CAL_EN_L - @m42a_1ib.M42A	48A7	MEM_DQ<49>	MEM_DQ<49> - @m42a_1ib.M42A	15B4 29A6
	FW_PCI_IDSEL	FW_PCI_IDSEL - @m42a_1ib.M42A	38A5	ISENSE_CAL_EN_LS5V	ISENSE_CAL_EN_LS5V - @m42a_1ib.M42A	48A6	MEM_DQ<50>	MEM_DQ<50> - @m42a_1ib.M42A	15B4 29A4
	FW_PCI_RST_L	FW_PCI_RST_L - @m42a_1ib.M42A	38A5	ITPRESET_L	ITPRESET_L - @m42a_1ib.M42A	11B3	MEM_DQ<51>	MEM_DQ<51> - @m42a_1ib.M42A	15B4 29A6
	FW_PORT0_TPA_N_FL	FW_PORT0_TPA_N_FL - @m42a_1ib.M42A	39B2	ITP_TDO	ITP_TDO - @m42a_1ib.M42A	11B3	MEM_DQ<52>	MEM_DQ<52> - @m42a_1ib.M42A	15B4 29A6
	FW_PORT0_TPA_P_FL	FW_PORT0_TPA_P_FL - @m42a_1ib.M42A	39B2	J2900_SAI	J2900_SAI - @m42a_1ib.M42A	29A4	MEM_DQ<53>	MEM_DQ<53> - @m42a_1ib.M42A	15B4 29A6
	FW_PORT0_TPB	FW_PORT0_TPB - @m42a_1ib.M42A	39A5	KBC_MDE	KBC_MDE - @m42a_1ib.M42A	45C2	MEM_DQ<54>	MEM_DQ<54> - @m42a_1ib.M42A	15B4 29A6
	FW_PORT0_TPB_N_FL	FW_PORT0_TPB_N_FL - @m42a_1ib.M42A	39B2	LCDVDV_PWREN_L	LCDVDV_PWREN_L - @m42a_1ib.M42A	67B7	MEM_DQ<55>	MEM_DQ<55> - @m42a_1ib.M42A	15B4 29A4
	FW_PORT0_TPB_P_FL	FW_PORT0_TPB_P_FL - @m42a_1ib.M42A	39B2	LCDVDV_PWREN_L_R	LCDVDV_PWREN_L_R - @m42a_1ib.M42A	67B6	MEM_DQ<56>	MEM_DQ<56> - @m42a_1ib.M42A	15B4 29A6
	FW_PWRON_RST_L	FW_PWRON_RST_L - @m42a_1ib.M42A	38C3	LPC_AD<0>	LPC_AD<0> - @m42a_1ib.M42A	5D2 21D4 45D8 47C6 53C6	MEM_DQ<57>	MEM_DQ<57> - @m42a_1ib.M42A	15B4 29A6
	FW_R0	FW_R0 - @m42a_1ib.M42A	38B3	LPC_AD<1>	LPC_AD<1> - @m42a_1ib.M42A	5D2 21D4 45D8 47C6 53C6	MEM_DQ<58>	MEM_DQ<58> - @m42a_1ib.M42A	15B4 29A4
	FW_R1	FW_R1 - @m42a_1ib.M42A	38C3	LPC_AD<2>	LPC_AD<2> - @m42a_1ib.M42A	5C2 21D4 45D8 47C5 53C6	MEM_DQ<59>	MEM_DQ<59> - @m42a_1ib.M42A	15A4 29A6
	FW_XI	FW_XI - @m42a_1ib.M42A	38C3	LPC_AD<3>	LPC_AD<3> - @m42a_1ib.M42A	5C2 21D4 45D8 47C5 53C6	MEM_DQ<60>	MEM_DQ<60> - @m42a_1ib.M42A	15A4 29A6
	FW_XO	FW_XO - @m42a_1ib.M42A	38C3	LPC_FRAME_L	LPC_FRAME_L - @m42a_1ib.M42A	5C2 21C5 45C8 47C6 53C6	MEM_DQ<61>	MEM_DQ<61> - @m42a_1ib.M42A	15A4 29A6
	FW_Y0	FW_Y0 - @m42a_1ib.M42A	38C3	LVDS_A_CLK_N	LVDS_A_CLK_N - @m42a_1ib.M42A	13C5 67B2	MEM_DQ<62>	MEM_DQ<62> - @m42a_1ib.M42A	15C2 29A6
	GEYSER_GND_F	GEYSER_GND_F - @m42a_1ib.M42A	40C5	LVDS_A_CLK_P	LVDS_A_CLK_P - @m42a_1ib.M42A	13C5 67B2	MEM_DQ<63>	MEM_DQ<63> - @m42a_1ib.M42A	15C2 29A6
	GND_LV8S3_SGND	GND_LV8S3_SGND - @m42a_1ib.M42A	61B5 61C6	LVDS_A_DATA_N<0>	LVDS_A_DATA_N<0> - @m42a_1ib.M42A	13C5 67B2	MEM_DQ<64>	MEM_DQ<64> - @m42a_1ib.M42A	15C2 29A6
	GND_LV51V05S0_SGND	GND_LV51V05S0_SGND - @m42a_1ib.M42A	62B7	LVDS_A_DATA_N<1>	LVDS_A_DATA_N<1> - @m42a_1ib.M42A	13C5 67B2	MEM_DQ<65>	MEM_DQ<65> - @m42a_1ib.M42A	15C2 29A6
	GND_SV3V3S5_SGND	GND_SV3V3S5_SGND - @m42a_1ib.M42A	59B7	LVDS_A_DATA_N<2>	LVDS_A_DATA_N<2> - @m42a_1ib.M42A	13C5 67B2	MEM_DQ<66>	MEM_DQ<66> - @m42a_1ib.M42A	15C2 29A6
	GND_AUDIO_CODEC	GND_AUDIO_CODEC - @m42a_1ib.M42A	5D1 64B2	LVDS_A_DATA_P<0>	LVDS_A_DATA_P<0> - @m42a_1ib.M42A	13C5 67B2	MEM_DQ<67>	MEM_DQ<67> - @m42a_1ib.M42A	15C2 29A6
		+GND_AUDIO_CODEC - @m42a_1ib.M42A	54A6 54B6 54D2 55A8 55B8	LVDS_A_DATA_P<1>	LVDS_A_DATA_P<1> - @m42a_1ib.M42A	13C5 67B2	MEM_DQ<68>	MEM_DQ<68> - @m42a_1ib.M42A	15C2 29A4
			55C8 56B3 56B5 57A5 57A6	LVDS_A_DATA_P<2>	LVDS_A_DATA_P<2> - @m42a_1ib.M42A	13C5 67B2	MEM_DQ<69>	MEM_DQ<69> - @m42a_1ib.M42A	15C2 29A4
			57B3 57B3 57B5 57B8 57C3	LVDS_BKLTCTL	LVDS_BKLTCTL - @m42a_1ib.M42A	13D5 67C6	MEM_DQ<70>	MEM_DQ<70> - @m42a_1ib.M42A	15C2 29A6
			57C5 57C8 57D8 64B3	LVDS_BKLTCTL	LVDS_BKLTCTL - @m42a_1ib.M42A	13D5 67D7	MEM_DQ<71>	MEM_DQ<71> - @m42a_1ib.M42A	15C2 29A6
			5D1 64B2	LVDS_B_CLK_N	LVDS_B_CLK_N - @m42a_1ib.M42A	6D6 13C5	MEM_DQ<72>	MEM_DQ<72> - @m42a_1ib.M42A	15C2 29A6
			55A3 55A5 55A8 55B3 55B3	LVDS_B_CLK_P	LVDS_B_CLK_P - @m42a_1ib.M42A	6D6 13C5	MEM_DQ<73>	MEM_DQ<73> - @m42a_1ib.M42A	15C2 29A6
			55B8 55C3 55C3 55C8 55D3	LVDS_B_CLK_P_SPN	LVDS_B_CLK_P_SPN - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<74>	MEM_DQ<74> - @m42a_1ib.M42A	15C2 29A6
			55D8 56C2 64B3	LVDS_B_DATA_N<0>	LVDS_B_DATA_N<0> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<75>	MEM_DQ<75> - @m42a_1ib.M42A	15C2 29A6
			56A8 56C8	LVDS_B_DATA_N<1>	LVDS_B_DATA_N<1> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<76>	MEM_DQ<76> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<2>	LVDS_B_DATA_N<2> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<77>	MEM_DQ<77> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<3>	LVDS_B_DATA_N<3> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<78>	MEM_DQ<78> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<4>	LVDS_B_DATA_N<4> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<79>	MEM_DQ<79> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<5>	LVDS_B_DATA_N<5> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<80>	MEM_DQ<80> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<6>	LVDS_B_DATA_N<6> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<81>	MEM_DQ<81> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<7>	LVDS_B_DATA_N<7> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<82>	MEM_DQ<82> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<8>	LVDS_B_DATA_N<8> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<83>	MEM_DQ<83> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<9>	LVDS_B_DATA_N<9> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<84>	MEM_DQ<84> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<10>	LVDS_B_DATA_N<10> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<85>	MEM_DQ<85> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<11>	LVDS_B_DATA_N<11> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<86>	MEM_DQ<86> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<12>	LVDS_B_DATA_N<12> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<87>	MEM_DQ<87> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<13>	LVDS_B_DATA_N<13> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<88>	MEM_DQ<88> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<14>	LVDS_B_DATA_N<14> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<89>	MEM_DQ<89> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<15>	LVDS_B_DATA_N<15> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<90>	MEM_DQ<90> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<16>	LVDS_B_DATA_N<16> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<91>	MEM_DQ<91> - @m42a_1ib.M42A	15C2 29A6
				LVDS_B_DATA_N<17>	LVDS_B_DATA_N<17> - @m42a_1ib.M42A	5A7 6D5	MEM_DQ<92>	MEM_DQ<92>	

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	8	7	6	5	4	3	2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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FILTER_IC_SM-220MHZ- m42a[69A5] LF	FL9802 FILTER_IC_SM-220MHZ- m42a[69A5] LF	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] T-SM	J2801 CON_F200RT_DDR2DIMM_ m42a[28D6] TH1_F-RT-TH2	J2901 CON_F200RT_DDR2DIMM_ m42a[29D5] TH1_F-RT-TH2	J3801 CON_M50ST_D2MT_SM_M- m42a[34C4] ST-SM	J3901 CON_F19ST_S2MT_SM_F- m42a[35D8] ST-SM	J4200 CON_R345_8RT_S2MT_SM m42a[37C2] _F-RT-SM	J4500 CON_F4RT_S2MT_TH_F-R m42a[39B2] T-TH1	J4900 CON_F10ST_D_SMA_F-ST m42a[40C4] -SM	J5200 CON_F4RT_USB_S2MT_TH m42a[42D1] _F-RT-TH-M42	J5201 CON_F4RT_USB_S2MT_TH m42a[42B1] _F-RT-TH-M42	J5300 CON_F52RT_D2MT_SM_F- m42a[43C5] ST-SM	J5400 CON_F4ST_S2MT_SM_F-S m42a[44C4] T-SM	J6000 CON_F30STSM_5047_SML m42a[47C6]	J6250 CON_F2ST_S2MT_SM_F-S m42a[49C6] T-SM	J6251 CON_F2ST_S2MT_SM_F-S m42a[49A6] T-SM	J6501 CON_F4ST_S2MT_SM_F-S m42a[51C3] T-SM	J7300 CON_F8RT_2MT_AUDIIOU m42a[56C8] T_TH1_F-RT-TH	J7301 CON_M3RT_S2MT_SM_M-R m42a[56D1] T-SM1	J7302 CON_F2ST_S2MT_SM_F-S m42a[56D1] T-SM	J7303 CON_F4ST_S2MT_SM_F-S m42a[56C1] T-SM	J7350 CON_F8RT_2MT_AUDIIOU m42a[56B8] _TH_F-RT-TH	J8200 CON_M5RT_S_SM_M-RT-S m42a[65D7] M	J8250 CON_F20ST_D_SM_F-ST- m42a[65B6] SM1	J9400 CON_F4ST_S2MT_SM_F-S m42a[67D2] T-SM	J9401 CON_F22RT_S4MT_SM_F- m42a[67B1] RT-SM	J9801 CON_DVI_30RT_Q4MT_TH m42a[69B4] 1_RT-TH	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[55C7]	L7211 IND_0402 m42a[55B7]	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[56C6]	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_1812WH 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] HN_SOT23	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_B0846BM375G_NFN m42a[49B6] SOT732-3	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]
A	8	7	6	5	4	3	2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																												

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D	Q7502	TRA_HAT2168H_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]	R2108	RES_402	m42a[21C2]	R3410	RES_402	m42a[33C1]	R5920	RES_402	m42a[46C5]
	Q7661	TRA_STL8NH31L_COMBO	m42a[59B3]	R2110	RES_402	m42a[21C2]	R3411	RES_402	m42a[33D4]	R5922	RES_402	m42a[46C5]
	Q7750	TRA_2N7002DW_SOT-363	m42a[60C6 60C7]	R2194	RES_402	m42a[21D4]	R3412	RES_402	m42a[33D4]	R5923	RES_402	m42a[46C5]
	Q7820	TRA_IRF7821_SO-8	m42a[61C4]	R2195	RES_402	m42a[21C6]	R3413	RES_402	m42a[33D4]	R5924	RES_402	m42a[46C4]
	Q7821	TRA_IRF7821_SO-8	m42a[61B4]	R2196	RES_402	m42a[21C6]	R3414	RES_402	m42a[33D4]	R5925	RES_402	m42a[46C5]
	Q7920	TRA_IRF7821_SO-8	m42a[62C6]	R2197	RES_402	m42a[21C6]	R3415	RES_402	m42a[33D4]	R5926	RES_402	m42a[46C4]
	Q7921	TRA_IRF7821_SO-8	m42a[62B6]	R2198	RES_402	m42a[21C6]	R3416	RES_402	m42a[33D4]	R5927	RES_402	m42a[46C5]
	Q7960	TRA_IRF7821_SO-8	m42a[62C3]	R2199	RES_402	m42a[21C3]	R3417	RES_402	m42a[33C7]	R5928	RES_402	m42a[46D4]
	Q7961	TRA_IRF7821_SO-8	m42a[62B3]	R2200	RES_402	m42a[22D7]	R3418	RES_402	m42a[33B4]	R5929	RES_402	m42a[46C5]
	Q8000	TRA_FDC638P_SM-LF	m42a[63D4]	R2203	RES_402	m42a[22C2]	R3419	RES_402	m42a[33B4]	R5930	RES_402	m42a[46C5]
	Q8005	TRA_STL8NH31L_COMBO	m42a[63C4]	R2204	RES_402	m42a[22C2]	R3420	RES_402	m42a[33A4]	R5931	RES_402	m42a[46C4]
	Q8010	TRA_FDC638P_SM-LF	m42a[63D4]	R2205	RES_402	m42a[22C5]	R3421	RES_402	m42a[33A4]	R5932	RES_402	m42a[46C4]
	Q8015	TRA_STL8NH31L_COMBO	m42a[63C4]	R2206	RES_402	m42a[22C5]	R3422	RES_402	m42a[33C4]	R5933	RES_402	m42a[46C4]
	Q8025	TRA_S13447BDV_SOT-6	m42a[63A4]	R2207	RES_402	m42a[22C5]	R3423	RES_402	m42a[33C4]	R5934	RES_402	m42a[46C5]
	Q8030	TRA_2N7002DW_SOT-363	m42a[63A6 63B6]	R2208	RES_402	m42a[22D5]	R3426	RES_402	m42a[33C4]	R5935	RES_402	m42a[46C4]
	Q8031	TRA_2N7002DW_SOT-363	m42a[63D6 63A6]	R2211	RES_402	m42a[22B3]	R3427	RES_402	m42a[33C4]	R5936	RES_402	m42a[46C5]
	Q8059	TRA_2N7002DW_SOT-363	m42a[63C7 63C7]	R2223	RES_402	m42a[22D6]	R3428	RES_402	m42a[33C4]	R5937	RES_402	m42a[46C4]
	Q8060	TRA_2N7002_SOT23-LF	m42a[63C8]	R2225	RES_402	m42a[22D7]	R3429	RES_402	m42a[33D8]	R5938	RES_402	m42a[46C5]
	Q8061	TRA_2N7002DW_SOT-363	m42a[63B7 63B7]	R2226	RES_402	m42a[22D5]	R3430	RES_402	m42a[33D7]	R5939	RES_402	m42a[46C4]
Q8062	TRA_2N7002_SOT23-LF	m42a[63B8]	R2250	RES_402	m42a[22D7]	R3431	RES_402	m42a[33B1]	R5940	RES_402	m42a[46C5]	
Q8063	TRA_2N7002_SOT23-LF	m42a[63B4]	R2251	RES_402	m42a[22D6]	R3432	RES_402	m42a[33D7]	R5941	RES_402	m42a[46C4]	
Q8210	TRA_2N7002DW_SOT-363	m42a[65C6 65C3]	R2255	RES_402	m42a[22D7]	R3433	RES_402	m42a[33B8]	R5942	RES_402	m42a[46C5]	
Q8220	TRA_2N7002DW_SOT-363	m42a[65C7 65C6]	R2299	RES_402	m42a[22B5]	R3434	RES_402	m42a[33D4]	R5943	RES_402	m42a[46B4]	
Q8240	TRA_TP0610_SOT23-3	m42a[65C5]	R2300	RES_402	m42a[23C7]	R3435	RES_402	m42a[33C4]	R5944	RES_402	m42a[46B4]	
Q8250	TRA_S1405DY_SO-8	m42a[66C9]	R2302	RES_402	m42a[23D3]	R3436	RES_402	m42a[33B1]	R5945	RES_402	m42a[46C4]	
Q8298	TRA_TP0610_SOT23-3	m42a[65C7]	R2303	RES_402	m42a[23D3]	R3437	RES_402	m42a[33B1]	R5946	RES_402	m42a[46C4]	
Q8299	TRA_2N7002_SOT23-LF	m42a[65C7]	R2305	RES_402	m42a[23D3]	R3438	RES_402	m42a[33D1]	R5947	RES_402	m42a[46B4]	
Q8300	TRA_S14405DY_SO-8	m42a[66D5]	R2306	RES_402	m42a[23B7]	R3439	RES_402	m42a[33D1]	R5948	RES_402	m42a[46C5]	
Q8301	TRA_HAT2168H_LFFPAK	m42a[66C4]	R2307	RES_402	m42a[23A7]	R3440	RES_402	m42a[33D1]	R5949	RES_402	m42a[46C4]	
Q8302	TRA_HAT2165H_LFFPAK	m42a[66B4]	R2308	RES_402	m42a[23B7]	R3441	RES_402	m42a[33D1]	R5950	RES_402	m42a[46A3]	
Q8320	TRA_S14405DY_SO-8	m42a[66B3]	R2309	RES_402	m42a[23A7]	R3442	RES_402	m42a[33C1]	R5952	RES_402	m42a[46A3]	
Q8321	TRA_S14405DY_SO-8	m42a[66B3]	R2310	RES_402	m42a[23A7]	R3443	RES_402	m42a[33C7]	R5952	RES_402	m42a[46A3]	
Q8322	TRA_2N7002DW_SOT-363	m42a[66A4 66A4]	R2311	RES_402	m42a[23A7]	R3451	RES_402	m42a[33B7]	R5953	RES_402	m42a[46D5]	
Q8324	TRA_2N7002DW_SOT-363	m42a[66A3 66A4]	R2312	RES_402	m42a[23A3]	R3452	RES_402	m42a[33B7]	R5954	RES_402	m42a[46B5]	
Q8340	TRA_IRF610_SOT23-LF	m42a[66C8]	R2313	RES_402	m42a[23A7]	R3453	RES_402	m42a[33B7]	R5955	RES_402	m42a[46B5]	
Q8350	TRA_2N7002_SOT23-LF	m42a[66A6]	R2314	RES_402	m42a[23A7]	R3454	RES_402	m42a[33B7]	R5970	RES_402	m42a[46D3]	
Q9403	TRA_FDC638P_SM-LF	m42a[67B6]	R2315	RES_402	m42a[23A3]	R3463	RES_402	m42a[33D7]	R5971	RES_402	m42a[46D3]	
Q9404	TRA_2N7002_SOT23-LF	m42a[67B7]	R2316	RES_402	m42a[23D7]	R3465	RES_402	m42a[33C4]	R5972	RES_402	m42a[46C7]	
Q9405	TRA_TP0610_SOT23-3	m42a[67D5]	R2317	RES_402	m42a[23D7]	R3466	RES_402	m42a[33A7]	R5973	RES_402	m42a[46C5]	
Q9406	TRA_2N7002_SOT23-LF	m42a[67D6]	R2318	RES_402	m42a[23D7]	R3467	RES_402	m42a[33A7]	R5976	RES_402	m42a[46D1]	
Q9801	TRA_2N7002DW_SOT-363	m42a[69D6 69D6]	R2319	RES_402	m42a[23D7]	R3468	RES_402	m42a[33C7]	R5977	RES_402	m42a[46C1]	
R0610	RES_402	m42a[6A7]	R2320	RES_402	m42a[23D7]	R3469	RES_402	m42a[33C7]	R5980	RES_402	m42a[46D5]	
R0611	RES_402	m42a[6A8]	R2323	RES_402	m42a[23D5]	R3470	RES_402	m42a[33C7]	R5981	RES_402	m42a[46D5]	
R0612	RES_402	m42a[6A8]	R2326	RES_402	m42a[23D6]	R3471	RES_402	m42a[33B7]	R5982	RES_402	m42a[46D5]	
R0621	RES_402	m42a[6A7]	R2327	RES_402	m42a[23D6]	R3472	RES_402	m42a[33B7]	R5983	RES_402	m42a[46C5]	
R0702	RES_402	m42a[7D5]	R2343	RES_402	m42a[23D1]	R3473	RES_402	m42a[33B7]	R5984	RES_402	m42a[46C5]	
R0703	RES_402	m42a[7C5]	R2388	RES_402	m42a[23B2]	R3474	RES_402	m42a[33B8]	R5985	RES_402	m42a[46C5]	
R0704	RES_402	m42a[7C5]	R2389	RES_402	m42a[23A4]	R3475	RES_402	m42a[33B7]	R5986	RES_402	m42a[46C5]	
R0705	RES_402	m42a[7B4]	R2390	RES_402	m42a[23B3]	R3476	RES_402	m42a[33A7]	R5987	RES_402	m42a[46C5]	
R0706	RES_402	m42a[7B4]	R2395	RES_402	m42a[23D7]	R3477	RES_402	m42a[33B4]	R5988	RES_402	m42a[46B5]	
R0707	RES_402	m42a[7A4]	R2396	RES_402	m42a[23D6]	R3478	RES_402	m42a[33B4]	R5989	RES_402	m42a[46D5]	
R0712	RES_402	m42a[7A4]	R2397	RES_402	m42a[23D6]	R3480	RES_402	m42a[33C7]	R5990	RES_402	m42a[46B2]	
R0716	RES_402	m42a[7B2]	R2398	RES_402	m42a[23D8]	R3481	RES_402	m42a[33B1]	R5991	RES_402	m42a[46B2]	
R0717	RES_402	m42a[7B2]	R2399	RES_402	m42a[23C1]	R3482	RES_402	m42a[33B1]	R5992	RES_402	m42a[46B2]	
R0718	RES_402	m42a[7B2]	R2500	RES_603	m42a[25A8]	R3490	RES_402	m42a[33A4]	R5993	RES_402	m42a[46B2]	
R0719	RES_402	m42a[7B2]	R2501	RES_402	m42a[25C8]	R3824	RES_402	m42a[34C4]	R5994	RES_402	m42a[46D5]	
R0720	RES_402	m42a[7B7]	R2502	RES_402	m42a[25D8]	R3825	RES_402	m42a[34C5]	R5995	RES_402	m42a[46D5]	
R0721	RES_402	m42a[7B7]	R2600	RES_402	m42a[26D4]	R3851	RES_402	m42a[34C4]	R5996	RES_402	m42a[46B4]	
R0722	RES_402	m42a[7A7]	R2606	RES_402	m42a[26D5]	R3853	RES_402	m42a[34C3]	R5997	RES_402	m42a[46B4]	
R0730	RES_402	m42a[7A4]	R2607	RES_402	m42a[26D5]	R3858	RES_402	m42a[34B5]	R5998	RES_402	m42a[46B4]	
R0802	RES_402	m42a[8B6]	R2609	RES_402	m42a[26C7]	R3859	RES_402	m42a[34B4]	R5999	RES_402	m42a[46C4]	
R0803	RES_402	m42a[8A7]	R2610	RES_402	m42a[26C7]	R3865	RES_402	m42a[34C6]	R6100	RES_402	m42a[48D3]	
R0921	RES_402	m42a[9D2]	R2611	RES_402	m42a[26B5]	R3876	RES_402	m42a[34C7]	R6102	RES_402	m42a[48C2]	
R0922	RES_402	m42a[9D2]	R2612	RES_402	m42a[26A5]	R3877	RES_402	m42a[34C6]	R6103	RES_402	m42a[48C3]	
R0923	RES_402	m42a[9C2]	R2622	RES_402	m42a[26A5]	R3900	RES_402	m42a[35D3]	R6105	RES_402	m42a[48D4]	
R0924	RES_402	m42a[9C2]	R2636	RES_402	m42a[26C2]	R3901	RES_402	m42a[35C3]	R6106	RES_402	m42a[48C4]	
R0925	RES_402	m42a[9C2]	R2637	RES_402	m42a[26C2]	R3950	RES_402	m42a[35B7]	R6107	RES_402	m42a[48D4]	
R0926	RES_402	m42a[9C2]	R2638	RES_402	m42a[26C2]	R4101	RES_402	m42a[36D8]	R6108	RES_402	m42a[48C4]	
R0927	RES_402	m42a[9C2]	R2639	RES_402	m42a[26C2]	R4102	RES_402	m42a[36C8]	R6112	RES_402	m42a[48B2]	
R1001	RES_402	m42a[10B6]	R2640	RES_402	m42a[26C2]	R4103	RES_402	m42a[36A4]	R6114	RES_402	m42a[48A7]	
R1002	RES_402	m42a[10B6]	R2641	RES_402	m42a[26C2]	R4104	RES_402	m42a[36A4]	R6141	RES_402	m42a[48A7]	
R1005	RES_402	m42a[10C4]	R2642	RES_402	m42a[26C2]	R4105	RES_402	m42a[36B4]	R6142	RES_402	m42a[48A6]	
R1106	RES_402	m42a[10C3]	R2643	RES_402	m42a[26C2]	R4106	RES_402	m42a[36B5]	R6143	RES_1206	m42a[48A4]	
R1107	RES_402	m42a[10C4]	R2680	RES_402	m42a[26B3]	R4107	RES_402	m42a[36D8]	R6144	RES_402	m42a[48A6]	
R1108	RES_402	m42a[11B5]	R2681	RES_402	m42a[26B2]	R4117	RES_402	m4				

	8	7	6	5	4	3	2	1				
D	R7210	RES_402	m42a[55A7]	R7903	RES_402	m42a[62A3]	R9509	RES_402	m42a[68C2]	XW7300	SHORT_SM	m42a[56C4]
	R7260	RES_402	m42a[55D2]	R7904	RES_402	m42a[62A3]	R9510	RES_402	m42a[68C2]	XW7301	SHORT_SM	m42a[56B4]
	R7261	RES_402	m42a[55C2]	R7905	RES_402	m42a[62A6]	R9537	RES_402	m42a[68D1]	XW7302	SHORT_SM	m42a[56C2]
	R7270	RES_402	m42a[55C2]	R7906	RES_402	m42a[62A3]	R9538	RES_402	m42a[68D1]	XW7303	SHORT_SM	m42a[56C2]
	R7271	RES_402	m42a[55C2]	R7907	RES_402	m42a[62A3]	R9539	RES_402	m42a[68C1]	XW7304	SHORT_SM	m42a[56B2]
	R7280	RES_402	m42a[55B2]	R7921	RES_402	m42a[62C7]	R9540	RES_402	m42a[68C1]	XW7305	SHORT_SM	m42a[56B7]
	R7281	RES_402	m42a[55B2]	R7924	RES_402	m42a[62C6]	R9821	RES_402	m42a[69D7]	XW7400	SHORT_SM	m42a[57A7]
	R7300	RES_402	m42a[56C4]	R7925	RES_402	m42a[62B6]	R9822	RES_402	m42a[69D6]	XW7500	SHORT_SM	m42a[58A6]
	R7301	RES_402	m42a[56C4]	R7926	RES_402	m42a[62C7]	R9850	RES_402	m42a[69B8]	XW7600	SHORT_SM	m42a[59A5]
	R7320	RES_402	m42a[56B5]	R7927	RES_402	m42a[62B8]	R9851	RES_402	m42a[69B8]	XW7620	JUMPER_OPEN-SAWTOOTH	m42a[59B8]
R7321	RES_402	m42a[56D7]	R7928	RES_402	m42a[62B8]	R9852	RES_402	m42a[69A8]	XW7660	JUMPER_OPEN-SAWTOOTH	m42a[59B1]	
R7322	RES_402	m42a[56B7]	R7929	RES_402	m42a[62C7]	R9853	RES_402	m42a[69A8]	XW7800	SHORT_SM	m42a[61B5]	
R7349	RES_402	m42a[56B7]	R7930	RES_402	m42a[62C5]	R9854	RES_402	m42a[69A8]	XW7900	SHORT_SM	m42a[62A5]	
R7350	RES_402	m42a[56A4]	R7961	RES_402	m42a[62C2]	R9855	RES_402	m42a[69A8]	XW7920	JUMPER_OPEN-SAWTOOTH	m42a[62B8]	
R7351	RES_402	m42a[56A4]	R7964	RES_402	m42a[62C3]	R9856	RES_402	m42a[69B6]	XW8101	SHORT_SM	m42a[64B2]	
R7380	RES_402	m42a[56C2]	R7965	RES_402	m42a[62B3]	R9859	RES_402	m42a[69A6]	XW8102	SHORT_SM	m42a[64B2]	
R7382	RES_402	m42a[56B2]	R7966	RES_402	m42a[62C2]	R9860	RES_402	m42a[69C3]	XW8300	SHORT_SM	m42a[66B4]	
R7391	RES_402	m42a[56C7]	R7967	RES_402	m42a[62B2]	R9861	RES_402	m42a[69C3]	Y2600	CRYSTAL_4PIN_SM-LF	m42a[26C7]	
R7401	RES_402	m42a[57D8]	R7968	RES_402	m42a[62B2]	R9862	RES_402	m42a[69C5]	Y3301	CRYSTAL_5X3.2-SM	m42a[32C7]	
R7402	RES_402	m42a[57D7]	R7969	RES_402	m42a[62C2]	R9863	RES_402	m42a[69C5]	Y4101	CRYSTAL_4PIN_SM-3.2X	m42a[36B6]	
R7403	RES_402	m42a[57C7]	R7970	RES_402	m42a[62C4]	R9864	RES_402	m42a[69A6]	2.5MM			
R7404	RES_402	m42a[57C4]	R7990	RES_402	m42a[62A6]	R9868	RES_402	m42a[69C8]	Y4403	CRYSTAL_4PIN_SM-3.2X	m42a[38C2]	
R7405	RES_402	m42a[57D5]	R7991	RES_402	m42a[62A6]	R9869	RES_402	m42a[69C8]	2.5MM			
R7406	RES_402	m42a[57D6]	R7992	RES_603	m42a[62A7]	R9870	RES_402	m42a[69C1]	Y5920	CRYSTAL_5X3.2-SM	m42a[46C7]	
R7411	RES_402	m42a[57C8]	R8000	RES_402	m42a[63D5]	R9871	RES_402	m42a[69C1]	Y6795	CRYSTAL_4PIN_SM-LF	m42a[53B6]	
R7412	RES_402	m42a[57B7]	R8005	RES_402	m42a[63C5]	RP2300	RP4K4P_SM-LF	m42a[23D5]	Z0601	MTGHOLE	m42a[68B]	
R7413	RES_402	m42a[57C6]	R8010	RES_402	m42a[63C5]	RP2600	RP4K4P_SM-LF	m42a[26D2]	Z0602	MTGHOLE	m42a[68B]	
R7414	RES_402	m42a[57C4]	R8015	RES_402	m42a[63A5]	RP2601	RP4K4P_SM-LF	m42a[26D2]	Z0603	PCB_STANDOFF	m42a[68B]	
R7415	RES_402	m42a[57C5]	R8025	RES_402	m42a[63A5]	RP2602	RP4K4P_SM-LF	m42a[26C2]	Z0604	PCB_STANDOFF	m42a[68B]	
R7430	RES_603	m42a[57C3]	R8030	RES_402	m42a[63B6]	RP3000	RP4K4P_SM-LF	m42a[30B4 30C4 30D4 30D4]	Z0605	PCB_STANDOFF	m42a[68B]	
R7431	RES_603	m42a[57B3]	R8031	RES_402	m42a[63B6]	RP3001	RP4K4P_SM-LF	m42a[30C4 30A4 30A4 30D4]	Z0606	MTGHOLE	m42a[68B]	
R7432	RES_402	m42a[57B3]	R8032	RES_402	m42a[63D6]	RP3002	RP4K4P_SM-LF	m42a[30A4 30A4 30A4 30D4]	Z0607	MTGHOLE	m42a[68B]	
R7433	RES_402	m42a[57A3]	R8033	RES_402	m42a[63D6]	RP3003	RP4K4P_SM-LF	m42a[30C4 30C4 30C4 30D4]	Z0608	MTGHOLE	m42a[68B]	
R7434	RES_402	m42a[57C2]	R8050	RES_402	m42a[63A6]	RP3004	RP4K4P_SM-LF	m42a[30C4 30C4 30D4]	Z0609	MTGHOLE	m42a[68B]	
R7435	RES_402	m42a[57C2]	R8056	RES_402	m42a[63C8]	RP3005	RP4K4P_SM-LF	m42a[30B4 30A4 30A4 30D4]	Z0610	MTGHOLE	m42a[68B]	
R7436	RES_402	m42a[57B2]	R8057	RES_402	m42a[63C8]	RP3006	RP4K4P_SM-LF	m42a[30B4 30B4 30A4 30D4]	Z0611	MTGHOLE	m42a[68B]	
R7437	RES_402	m42a[57B2]	R8058	RES_402	m42a[63B8]	RP3007	RP4K4P_SM-LF	m42a[30C4 30C4 30C4 30C4]	Z0612	PCB_STANDOFF	m42a[68B]	
R7438	RES_402	m42a[57C2]	R8059	RES_402	m42a[63B8]	RP3008	RP4K4P_SM-LF	m42a[30C4 30C4 30C4 30C4]	Z0613	PCB_STANDOFF	m42a[68B]	
R7439	RES_402	m42a[57B2]	R8061	RES_402	m42a[63B1]	RP3009	RP4K4P_SM-LF	m42a[30B4 30B4 30C4 30C4]	Z0621	PCB_STANDOFF	m42a[68B]	
R7440	RES_402	m42a[57A5]	R8062	RES_402	m42a[63B1]	RP3010	RP4K4P_SM-LF	m42a[30B4 30B4 30B4 30B4]	ZS0620	SPRING_CLIP_LP_RMI_C	m42a[6D7]	
R7450	RES_402	m42a[57A7]	R8063	RES_402	m42a[63A1]	RP3011	RP4K4P_SM-LF	m42a[30B4 30A4 30B4 30B4]	LIP-SM-M42			
R7451	RES_402	m42a[57A7]	R8064	RES_402	m42a[63A1]	T4201	XFR_1000BT_82400275	m42a[37C6]	ZS0621	CLIP_SM	m42a[6D6]	
R7452	RES_402	m42a[57A7]	R8065	RES_402	m42a[63B2]		XFR-SM					
R7453	RES_402	m42a[57A7]	R8091	RES_402	m42a[63D1]		XFR-SM					
R7454	RES_402	m42a[57A7]	R8092	RES_402	m42a[63C1]		XFR-SM					
R7460	RES_402	m42a[57C6]	R8200	RES_402	m42a[65B7]	U0700	CFU_YONAH_BGA	m42a[7C3 7D7]				
R7461	RES_402	m42a[57C7]	R8201	RES_402	m42a[65C5]	U0700	CFU_YONAH_BGA	m42a[8D8 8D4]				
R7500	RES_402	m42a[58C2]	R8202	RES_402	m42a[65C5]	U1001	ACT7461_MSOP	m42a[10C6]				
R7501	RES_402	m42a[58C2]	R8203	RES_402	m42a[65C6]	U1200	NB_945GM_BGA	m42a[12D5]				
R7502	RES_805	m42a[58B3]	R8204	RES_402	m42a[65C6]	U1200	NB_945GM_BGA	m42a[13D4]				
R7503	RES_805	m42a[58D3]	R8205	RES_805	m42a[65D4]	U1200	NB_945GM_BGA	m42a[14D5]				
R7504	RES_402	m42a[58C1]	R8206	RES_402	m42a[65C4]	U1200	NB_945GM_BGA	m42a[15D3 15D7]				
R7505	RES_402	m42a[58B2]	R8207	RES_402	m42a[65C4]	U1200	NB_945GM_BGA	m42a[16D2 16C8]				
R7506	RES_402	m42a[58C7]	R8208	RES_402	m42a[65C4]	U1200	NB_945GM_BGA	m42a[17D5]				
R7507	RES_402	m42a[58B1]	R8209	RES_402	m42a[65C4]	U1200	NB_945GM_BGA	m42a[18D4 18D7]				
R7508	RES_402	m42a[58B8]	R8210	RES_402	m42a[65C4]	U1900	LREG_TPS7115_SOT23-5	m42a[19D6]				
R7509	RES_402	m42a[58B8]	R8211	RES_402	m42a[65C6]	5						
R7510	RES_402	m42a[58B6]	R8213	RES_402	m42a[65C2]	U1901	MM157_SOT23-5-LF	m42a[19C4]				
R7511	RES_402	m42a[58B8]	R8214	RES_402	m42a[65C2]	U2100	SB_ICH7M_BGA	m42a[21D6]				
R7512	RES_402	m42a[58D7]	R8231	RES_402	m42a[65C5]	U2100	SB_ICH7M_BGA	m42a[22B7 22D3]				
R7513	RES_402	m42a[58B7]	R8232	RES_402	m42a[65C6]	U2100	SB_ICH7M_BGA	m42a[23D4]				
R7514	RES_402	m42a[58B8]	R8233	RES_402	m42a[65C5]	U2100	SB_ICH7M_BGA	m42a[24D4 24D7]				
R7515	RES_402	m42a[58B5]	R8296	RES_402	m42a[65B7]	U2601	MC74VHC1G08_SC70	m42a[26A5]				
R7516	RES_402	m42a[58B4]	R8297	RES_402	m42a[65C3]	U2603	MC74VHC1G08_SC70-5	m42a[26A7]				
R7517	RES_402	m42a[58B5]	R8298	RES_402	m42a[65C8]	U2680	MC74VHC1G08_SC70	m42a[26B3]				
R7518	RES_402	m42a[58B5]	R8299	RES_402	m42a[65C7]	U3100	LREG_BD3533FVM_MSOP-8	m42a[31C4]				
R7519	RES_402	m42a[58C7]	R8300	RES_402	m42a[66C6]	8						
R7520	RES_402	m42a[58D7]	R8301	RES_402	m42a[66C7]	U3301	CLK_SVN_SLG81P436_QP	m42a[32C5]				
R7521	RES_402	m42a[58D8]	R8302	RES_402	m42a[66C5]	N						
R7522	RES_402	m42a[58A5]	R8303	RES_402	m42a[66C5]	U4101	88E8053_QFN	m42a[36D6]				
R7523	RES_402	m42a[58A6]	R8304	RES_805	m42a[66B2]	U4102	EEPROM_M24C08_S08	m42a[36A3]				
R7524	RES_402	m42a[58D5]	R8305	RES_402	m42a[66C5]	U4400	FW32306_BGA_BGA	m42a[38C5]				
R7525	RES_402	m42a[58C5]	R8306	RES_402	m42a[66C7]	U5100	CY8C24794_MLF	m42a[41C5]				
R7526	THERMISTOR_402	m42a[58C7]	R8308	RES_0612	m42a[66C3]	U5200	SMI_TPS2042B_MSOP	m42a[42C7]				
R7527	RES_402	m42a[58C8]	R8309	RES_402	m42a[66B6]	U5800	SMC_HBS2116_BGA	m42a[45A8 45C3 45C7 45D7]				
R7530	RES_402	m42a[58B4]	R8310	RES_402	m42a[66C5]	U5900	VDET_RNSVD_SOT23-5	m42a[46C7]				
R7531	THERMISTOR_0603-LF	m42a[58B4]	R8311	RES_402	m42a[66B7]	U5910	OSC_LP_SG-3040LC-SM	m42a[46A7]				
R7543	RES_402	m42a[58B2]	R8312	RES_402	m42a[66C7]	U5977	COMPPARATOR_LMC7211_S	m42a[46C2]				
R7545	RES_402	m42a[58C7]	R8320	RES_2525	m42a[66B3]	M-LF						
R7600	RES_402	m42a[59C5]	R8322	RES_402	m42a[66A3]	U6100	OPAMP_LMV2011_SOT23-5	m42a[48C3]				
R7603	RES_402	m42a[59A3]	R8323	RES_402	m42a[66A3]	5						
R7604	RES_402	m42a[59A3]	R8324	RES_402	m42a[66A4]	U6200	MAX6695_UMAX	m42a[49D4]				
R7606	RES_402	m42a[59A3]	R8325	RES_402	m42a[66A5]	U6250	MAX6695_UMAX	m42a[49B4]				
R7607	RES_402	m42a[59A3]	R8330	RES_402	m42a[66B4]	U6301	FLASH_SST25VF016B_S0	m42a[50D3]				
R7621	RES_402	m42a[59C7]	R8331	RES_402	m42a[66A4]		I_S01					
R7624	RES_402	m42a[59C5]	R8340	RES_402	m42a[66C4]	U6620	K3MS2_QFN	m42a[52C5]				
R7625	RES_402	m42a[59B6]	R8341	RES_402	m42a[66B8]	U6650	L193L02AL_LGA	m42a[52B5]				
R7626	RES_402	m42a[59C7]	R8342	RES_402	m42a[66C8]							