

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

REV	ZONE	ECN	DESCRIPTION OF CHANGE	CK APPD DATE	ENG APPD DATE
?		?	?	?	?


Mar 09 12:07:11 2003

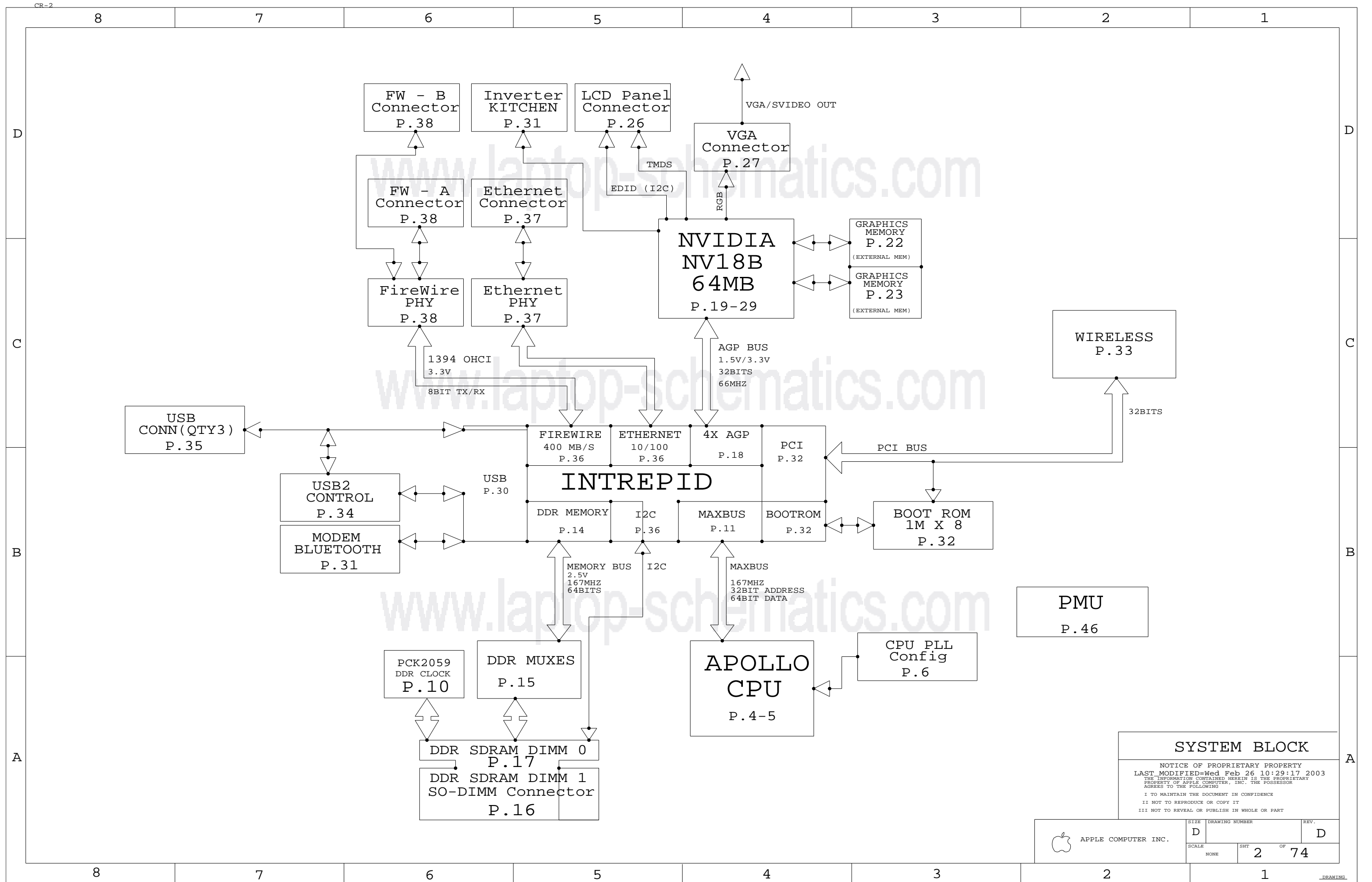
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# SCHEMATIC, Q26A, MLB

## POWER RAIL DEFINITIONS

	RUN	SLEEP	SHUTDOWN
+2_5V_MAIN	ON	ON	OFF
+3V_MAIN	ON	ON	OFF
+5V_MAIN	ON	ON	OFF
+5V_SLEEP	ON	OFF	OFF
+12V_MAIN	ON	ON	ON
+12V_SLEEP	ON	OFF	OFF
FW_PWR	ON	ON	OFF
+1.8V_SLEEP	ON	OFF	OFF
+MAXBUS_SLEEP	ON	OFF	OFF

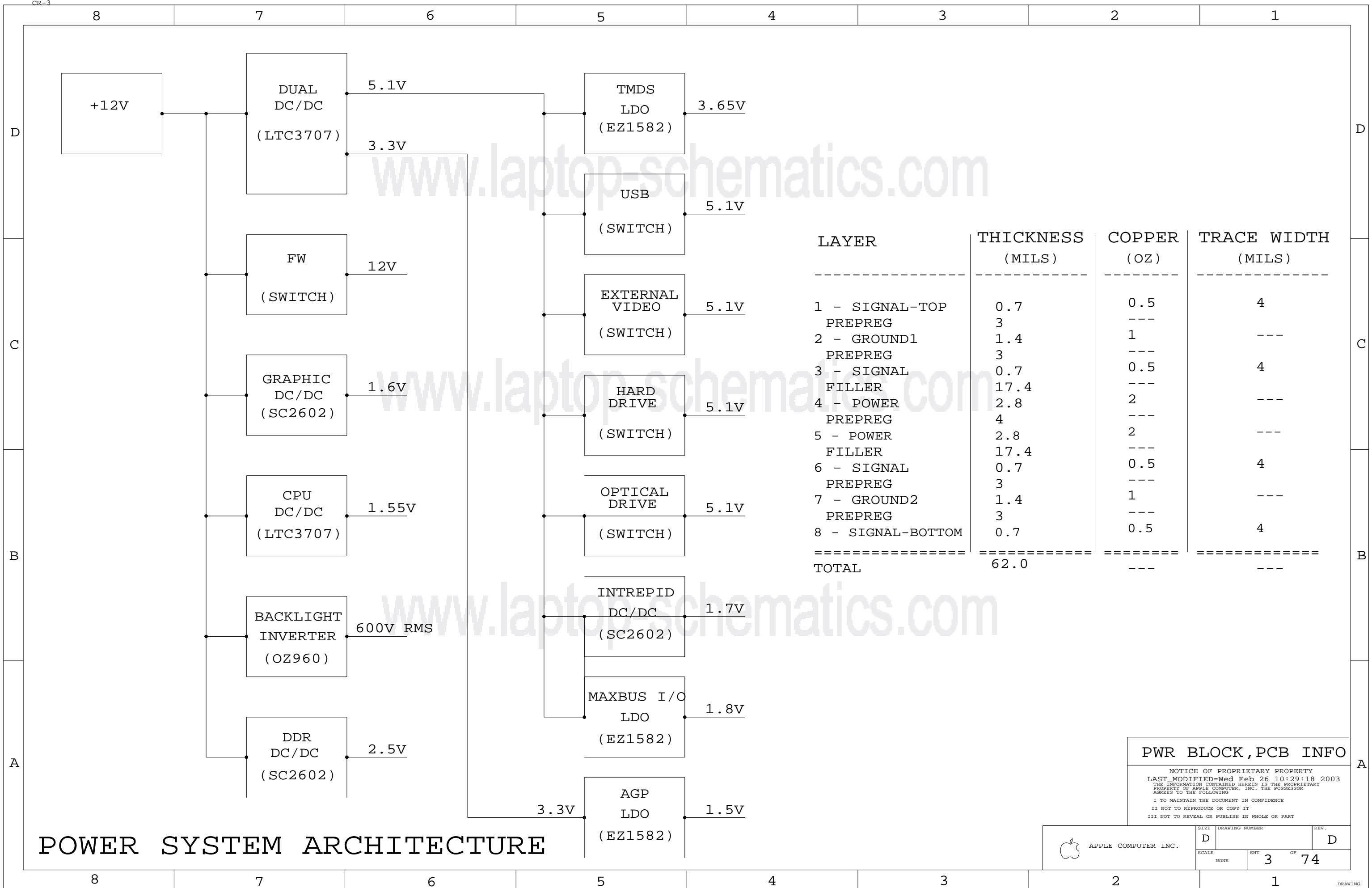
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x.xxx : _____		QA APPD	DESIGNER		
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				SHT 1 OF 74	



**SYSTEM BLOCK**

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LAYER	THICKNESS (MILS)	COPPER (OZ)	TRACE WIDTH (MILS)
1 - SIGNAL-TOP	0.7	0.5	4
PREPREG	3	---	---
2 - GROUND1	1.4	1	---
PREPREG	3	---	---
3 - SIGNAL	0.7	0.5	4
FILLER	17.4	---	---
4 - POWER	2.8	2	---
PREPREG	4	---	---
5 - POWER	2.8	2	---
FILLER	17.4	---	---
6 - SIGNAL	0.7	0.5	4
PREPREG	3	---	---
7 - GROUND2	1.4	1	---
PREPREG	3	---	---
8 - SIGNAL-BOTTOM	0.7	0.5	4
=====	=====	=====	=====
TOTAL	62.0	---	---

# POWER SYSTEM ARCHITECTURE

## PWR BLOCK, PCB INFO

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SCALE	NONE	SHT	3	OF	74

CPU INTERNAL PLL FILTERING

CPU\_VCORE\_SLEEP 4D7 9B6 9C2 47B3 47C1 54C6 61B4 61D7

61D7 61B4 54C6 47C1 47B3 9C2 9B6 4D3 CPU\_VCORE\_SLEEP

+MAXBUS\_SLEEP 48D4 54C6 61C7 6D8 7A3 7B3 7C3 7C5 7C7 8D3 9B2 9D2 9D4 11B8 11D8 46B7 46D1 46D2 47D2

D

D

C

C

B

B

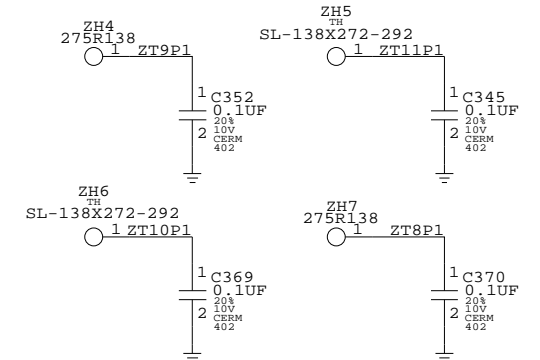
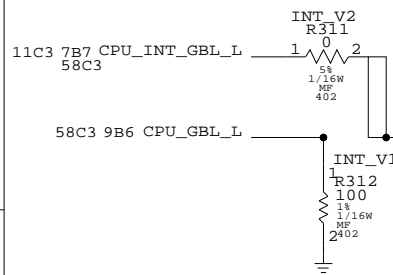
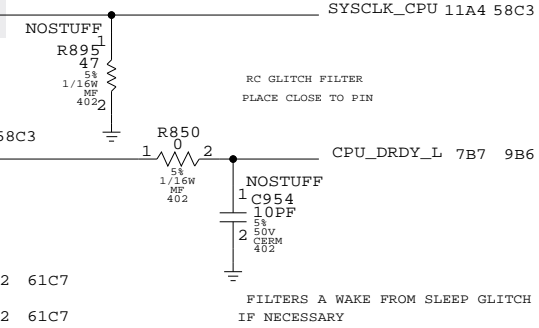
A

A

- 58D3 11D3 9C5 7C7 CPU\_BR\_L D2 BR\*
- 58D3 11D3 9B5 7B7 CPU\_BG\_L M1 BG\*
- 58D3 11D3 9C7 7C7 CPU\_TS\_L L4 TS\*
- 7C5 4A3 CPU\_PULLDOWN E11 A0
- H11 A1
- C111 A2
- G3 A3
- F10 A4
- L2 A5
- D11 A6
- D1 A7
- C10 A8
- G2 A9
- D12 A10
- L3 A11
- G4 A12
- T2 A13
- F4 A14
- V1 A15
- J4 A16
- R2 A17
- K5 A18
- W2 A19
- J2 A20
- K4 A21
- N4 A22
- J3 A23
- M5 A24
- P5 A25
- N3 A26
- T1 A27
- V2 A28
- U1 A29
- N5 A30
- W1 A31
- B12 A32
- C4 A33
- G10 A34
- B11 A35
- NC\_CPUAP<0> NO\_TEST C1 AP0
- NC\_CPUAP<1> NO\_TEST E3 AP1
- NC\_CPUAP<2> NO\_TEST H6 AP2
- NC\_CPUAP<3> NO\_TEST F5 AP3
- NC\_CPUAP<4> NO\_TEST G7 AP4
- 58D3 11B3 9C5 7A7 CPU\_TT<0> E5 TT0
- 58D3 11B3 9C6 7A7 CPU\_TT<1> E6 TT1
- 58D3 11B3 9B5 7A7 CPU\_TT<2> F6 TT2
- 58D3 11B3 9B6 7A7 CPU\_TT<3> E9 TT3
- 58D3 11B3 9C5 7A7 CPU\_TT<4> C5 TT4
- 58D3 11B3 9B5 7B7 CPU\_TBST\_L F11 TBST\*
- 58D3 11B3 9B6 CPU\_TSIZ<0> G6 TSIZ0
- 58D3 11B3 9C6 CPU\_TSIZ<1> F7 TSIZ1
- 58D3 11B3 9B7 CPU\_TSIZ<2> E7 TSIZ2
- E2 GBL\* GBL\*
- D3 WT\* WT\*
- J1 CI\* CI\*
- R1 AACK\* AACK\*
- N2 ARTRY\* ARTRY\*
- E4 SHD0\* SHD0\*
- H5 SHD1\* SHD1\*
- B2 HIT\* HIT\*

U34  
800MHZ  
APOLLO\_MPC7445\_360  
BGA  
(1 OF 3)  
SEE\_TABLE

- BVSEL B7 CPU\_BUS\_VSEL 7C4
- SYSCLK A10
- CLKOUT H2 NO\_TEST NC\_CPU\_CLKOUT
- PLLCFG0 B8 CPU\_PLL\_CFG<0> 6C6 9A8
- PLLCFG1 C8 CPU\_PLL\_CFG<1> 6C6 9A8
- PLLCFG2 C7 CPU\_PLL\_CFG<2> 6C6 9A8
- PLLCFG3 D7 CPU\_PLL\_CFG<3> 6C6 9A8
- PLL\_EXT A7 CPU\_PLL\_CFGEXT 6C6 9A8
- DBG\* M2 CPU\_DBG\_L 7B7 9C8 11B1 58C3
- DRDY\* C3 58C3 CPU\_DRDY\_L UF
- DTI0 G1 CPU\_EDTI 7C5
- DTI1 K1 CPU\_DTI<0> 9B7 11A1 58C3
- DTI2 P1 CPU\_DTI<1> 9B5 11A1 58C3
- DTI3 N1 CPU\_DTI<2> 9B5 11A1 58C3
- TDI B9 JTAG\_CPU\_TDI 7A5 8D2 9A2 61C7
- TDO A4 JTAG\_CPU\_TDO 9A2 61C7
- TMS F1 JTAG\_CPU\_TMS 7A5 8D2 9A2 61C7
- TCK C6 JTAG\_CPU\_TCK 7D5 8C2 9A2 61C7
- TRST\* A5 JTAG\_CPU\_TRST\_L 7C5 8D2 9A2 61C7
- LSSDMODE\* E8 CPU\_LSSD\_MODE 7B5
- L1TSTCLK G8 CPU\_L1TSTCLK 7A4
- L2TSTCLK B3 CPU\_L2TSTCLK 7C4
- TA\* K6 CPU\_TA\_L 7C7 9C5 11A1 58C3
- TEA\* L1 CPU\_TEA\_L 7B7 9C6 11A1 58C3
- TBEN E1 CPU\_TBEN 7C5 11A3
- QREQ\* F4 CPU\_QREQ\_L 7D5 9B7 11B3 58C3
- QACK\* G5 CPU\_QACK\_L 9B5 11B3 58C3
- CKSTP\_IN\* A3 CPU\_CHKSTP\_IN\_L 7B5 61C7
- CKSTP\_OUT\* B1 CPU\_CHKSTP\_OUT\_L 7B5 9A2 9D6 61C7
- INT\* D4 MPIC\_CPU\_INT\_L 7A5 9D7 30B5
- SMI\* F9 CPU\_SMI\_L 7A5 46C4
- MCP\* C9 CPU\_MCP\_L 7B5
- SRESET\* A2 CPU\_SRESET\_L 7A5 9A2 61C4
- HRESET\* D8 CPU\_HRESET\_L 7A3 7A5 7B3 8D2 9A2 46C2 46D2 61C7



INTREPID VERSION 1 PULLS GBL ALL THE TIME. NEED TO CUT THE TRACE AND YANK DOWN HARD FOR SNOOPING. FIXED IN INTREPID VERSION 2.

CPU MECHANICAL PARTS SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
875-1475	1	PAD, THERMAL, CPU, U34	U341	CRITICAL	
870-1113	1	HEAT SINK, CPU, Q26, U34	U342	CRITICAL	DEV
870-1114	1	CLIP, HEAT SINK, CPU, Q26, U34	U343	CRITICAL	DEV
412-0042	1	SCREW, MACH, 3MM W, 8MM L, U34	U344	CRITICAL	DEV
835-0251	1	NUT, 3MM, U34	U345	CRITICAL	DEV

**MPC7450 MAXBUS**  
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APOLLO\_MPC7445\_360

NC\_CPUCRUD<0> NO\_TEST F18 NC\_F18  
 NC\_CPUCRUD<1> NO\_TEST F17 NC\_F17  
 NC\_CPUCRUD<2> NO\_TEST F19 NC\_F19  
 NC\_CPUCRUD<3> NO\_TEST H19 NC\_H19  
 NC\_CPUCRUD<4> NO\_TEST H18 NC\_H18  
 NC\_CPUCRUD<5> NO\_TEST H17 NC\_H17  
 NC\_CPUCRUD<6> NO\_TEST H16 NC\_H16  
 NC\_CPUCRUD<7> NO\_TEST E19 NC\_E19  
 NC\_CPUCRUD<8> NO\_TEST D18 NC\_D18  
 NC\_CPUCRUD<9> NO\_TEST F16 NC\_F16  
 NC\_CPUCRUD<10> NO\_TEST G16 NC\_G16  
 NC\_CPUCRUD<11> NO\_TEST D19 NC\_D19  
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 NC\_CPUCRUD<13> NO\_TEST G19 NC\_G19  
 NC\_CPUCRUD<14> NO\_TEST E16 NC\_E16  
 NC\_CPUCRUD<15> NO\_TEST D17 NC\_D17  
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 NC\_CPUCRUD<77> NO\_TEST F12 NC\_F12  
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 NC\_CPUCRUD<80> NO\_TEST C13 NC\_C13

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 NC\_CPUCRUD<87> NO\_TEST B13 NC\_B13  
 NC\_CPUCRUD<88> NO\_TEST B14 NC\_B14  
 NC\_CPUCRUD<89> NO\_TEST A6 NC\_A6

U34  
 800MHZ  
 BGA  
 (3 OF 3)

APOLLO\_MPC7445\_360

58D3 11D1 9C5 CPU\_DATA<0> R15 D0  
 58D3 11D1 9C7 CPU\_DATA<1> W15 D1  
 58D3 11D1 9C8 CPU\_DATA<2> T14 D2  
 58D3 11D1 9C6 CPU\_DATA<3> V16 D3  
 58D3 11D1 9C7 CPU\_DATA<4> W16 D4  
 58D3 11D1 9C8 CPU\_DATA<5> T15 D5  
 58D3 11D1 9C5 CPU\_DATA<6> U15 D6  
 58D3 11D1 9C8 CPU\_DATA<7> P14 D7  
 58D3 11D1 9D6 CPU\_DATA<8> V13 D8  
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 58D3 11D1 9C7 CPU\_DATA<10> T13 D10  
 58D3 11D1 9C6 CPU\_DATA<11> P13 D11  
 58D3 11D1 9C6 CPU\_DATA<12> U14 D12  
 58D3 11D1 9C7 CPU\_DATA<13> W14 D13  
 58D3 11D1 9C8 CPU\_DATA<14> R12 D14  
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 58D3 11C1 9D7 CPU\_DATA<17> V12 D17  
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 58D3 11C1 9D5 CPU\_DATA<19> N10 D19  
 58D3 11C1 9D5 CPU\_DATA<20> R11 D20  
 58D3 11C1 9D8 CPU\_DATA<21> U11 D21  
 58D3 11C1 9D7 CPU\_DATA<22> W11 D22  
 58D3 11C1 9D8 CPU\_DATA<23> T11 D23  
 58D3 11C1 9D5 CPU\_DATA<24> R10 D24  
 58D3 11C1 9D7 CPU\_DATA<25> N9 D25  
 58D3 11C1 9D6 CPU\_DATA<26> P10 D26  
 58D3 11C1 9D7 CPU\_DATA<27> U10 D27  
 58D3 11C1 9D8 CPU\_DATA<28> R9 D28  
 58D3 11C1 9D8 CPU\_DATA<29> W10 D29  
 58D3 11C1 9D6 CPU\_DATA<30> U9 D30  
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 58D3 11D8 11C1 9D7 CPU\_DATA<32> W5 D32  
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 58D3 11D8 11C1 9D8 CPU\_DATA<34> T5 D34  
 58D3 11D8 11C1 9D7 CPU\_DATA<35> U5 D35  
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 58D3 11B8 11B1 9C6 CPU\_DATA<52> T18 D52  
 58D3 11B8 11B1 9C7 CPU\_DATA<53> T17 D53  
 58D3 11B8 11B1 9D7 CPU\_DATA<54> W3 D54  
 58D3 11B8 11B1 9C6 CPU\_DATA<55> V17 D55  
 58D3 11B1 9D8 CPU\_DATA<56> U4 D56  
 58D3 11B5 11B1 9D6 CPU\_DATA<57> U8 D57  
 58D3 11B5 11B1 9D5 CPU\_DATA<58> U7 D58  
 58D3 11B5 11B1 9D8 CPU\_DATA<59> R7 D59  
 58D3 11B5 11B1 9D8 CPU\_DATA<60> P6 D60  
 58D3 11B5 11B1 9D5 CPU\_DATA<61> R8 D61  
 58D3 11B5 11B1 9D5 CPU\_DATA<62> W8 D62  
 58D3 11B5 11B1 9D6 CPU\_DATA<63> T8 D63

U34  
 800MHZ  
 BGA  
 (2 OF 3)

NC\_CPUDP<0> NO\_TEST T3 DP0  
 NC\_CPUDP<1> NO\_TEST W4 DP1  
 NC\_CPUDP<2> NO\_TEST T4 DP2  
 NC\_CPUDP<3> NO\_TEST W9 DP3  
 NC\_CPUDP<4> NO\_TEST M6 DP4  
 NC\_CPUDP<5> NO\_TEST V3 DP5  
 NC\_CPUDP<6> NO\_TEST N8 DP6  
 NC\_CPUDP<7> NO\_TEST W6 DP7

MPC7450 - 2

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SCALE	SHT	OF
NONE	5	74



BOMOPTIONS FOR UPPER-SET OF RESISTORS

1200@133&1500@167&1333@133&1667@167&1467@133&1833@167&1600@133&2000@167&1733@133&2167@167&1867@133&2333@167&2000@133&2500@167&2133@133&2667@167  
 667@133&833@167&733@133&917@167&800@133&1000@167&1067@133&1333@167&1333@133&1667@167&1467@133&1833@167&1600@133&2000@167&1867@133&2333@167&2133@133&2667@167  
 800@133&1000@167&867@133&1083@167&1067@133&1333@167&1200@133&1500@167&1733@133&2167@167&1867@133&2333@167&2133@133&2667@167  
 667@133&833@167&933@133&1167@167&1200@133&1500@167&1333@133&1667@167&1600@133&2000@167  
 667@133&833@167&733@133&917@167&800@133&1000@167&867@133&1083@167&1000@133&1250@167&1200@133&1500@167&1467@133&1833@167&1600@133&2000@167&1733@133&2167@167&2000@133&2500@167&2133@133&2667@167

CPU FREQUENCY CONFIGURATION (SUPPORTED CPU & BUS SPEEDS)

MULTIPLIER (BUS-TO-CORE)	CORE FREQUENCY (AT BUS FREQUENCY)		CPU_PLL_CFG E 0123 HEX
	167MHZ	133MHZ	
5.0X	833	667	0 1011 0B
5.5X	917	733	0 1001 09
6.0X	1000	800	0 1101 0D
6.5X	1083	867	0 0101 05
7.0X	1167	933	0 0010 02
7.5X	1250	1000	0 0001 01
8.0X	1333	1067	0 1100 0C
9.0X	1500	1200	1 0111 17
10.0X	1667	1333	1 1010 1A
11.0X	1833	1467	1 1001 19
12.0X	2000	1600	1 1011 1B
13.0X	2167	1733	1 0101 15
14.0X	2333	1867	1 1100 1C
15.0X	2500	2000	1 0001 11
16.0X	2667	2133	1 1101 1D

CPU FREQUENCY CONFIGURATION (OTHER POSSIBLE CPU & BUS SPEEDS)

MULTIPLIER (BUS-TO-CORE)	CORE FREQUENCY (AT BUS FREQUENCY)		CPU_PLL_CFG E 0123 HEX
	167MHZ	133MHZ	
0.0X	PLL OFF		0 1111 0F
1.0X (11.5X)	167 (1917)	133 (1533)	0 0000 00
PLL BYPASS	PLL BYPASS		0 0011 03
2.0X	333	267	0 0100 04
2.5X (8.5X)	417 (1417)	333 (1133)	0 0110 06
3.0X	500	400	0 1000 08
3.5X (13.5X)	583 (2250)	467 (1800)	0 1110 0E
4.0X	667	533	0 1010 0A
4.5X (9.5X)	750 (1583)	600 (1267)	0 0111 07
17.0X	2833	2267	1 0000 10
18.0X	3000	2400	1 0010 12
20.0X	3333	2667	1 0011 13
21.0X	3500	2800	1 0100 14
24.0X	4000	3200	1 0110 16
10.5X	1750	1400	1 1000 18
28.0X	4667	3733	1 1110 1E
12.5X	2083	1667	1 1111 1F

BOMOPTIONS FOR LOWER-SET OF RESISTORS

933@133&1167@167&1067@133&1333@167&1333@133&1667@167&1867@133&2333@167  
 733@133&917@167&800@133&1000@167&867@133&1083@167&1000@133&1250@167&1067@133&1333@167&1467@133&1833@167&1733@133&2167@167&1867@133&2333@167&2000@133&2500@167&2133@133&2667@167  
 667@133&833@167&733@133&917@167&933@133&1167@167&1000@133&1250@167&1333@133&1667@167&1467@133&1833@167&1600@133&2000@167&2000@133&2500@167  
 867@133&1083@167&933@133&1167@167&1000@133&1250@167&1200@133&1500@167&1733@133&2167@167&2000@133&2500@167  
 667@133&833@167&733@133&917@167&800@133&1000@167&867@133&1083@167&933@133&1167@167&1000@133&1250@167&1067@133&1333@167


CPU SPEED & BUS RATIO SUPPORT

THE CONFIGURATION RESISTORS BELOW ARE SELF CONFIGURING WHEN THE ENGINEER SELECTS THE APPROPRIATE CPU AND BUS SPEED BOM OPTION, THE APPROPRIATE RESISTORS ARE AUTOMATICALLY SELECTED

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
337S2674	1	IC, APOLLO, N5, V3.3, 1.0GHZ	U34		1000@133

CPU BUS RATIO BITS

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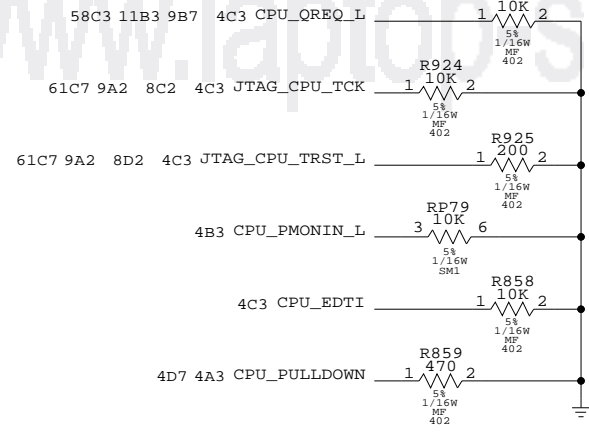
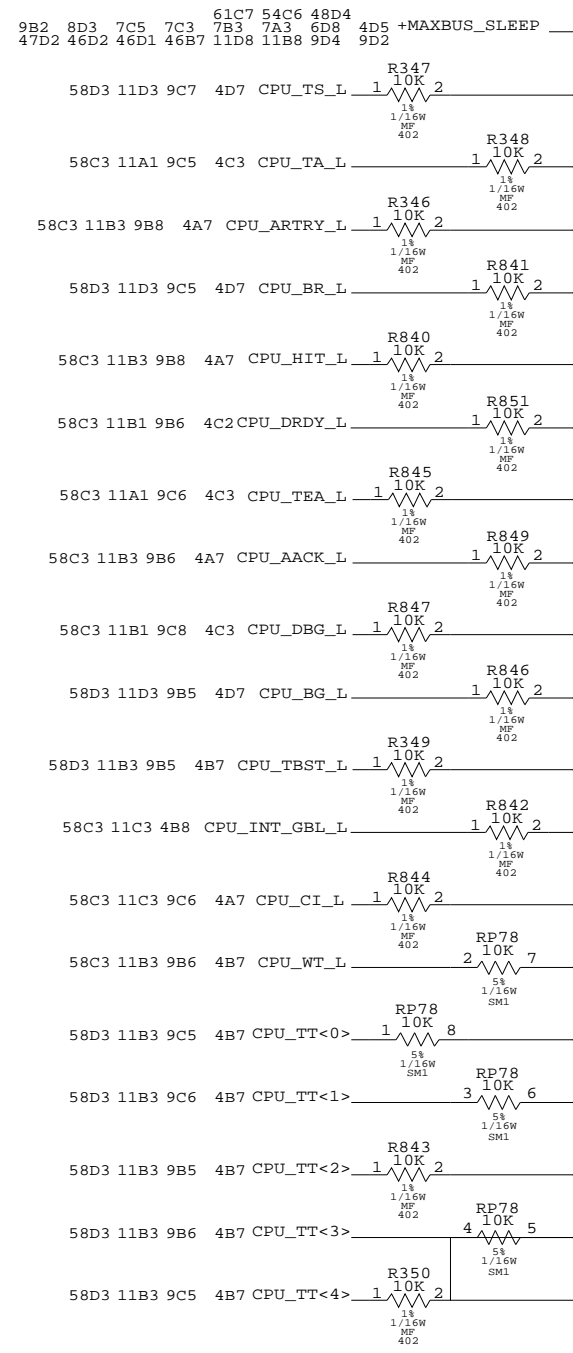
APPLE COMPUTER INC.  D

SCALE: NONE SHT 6 OF 74

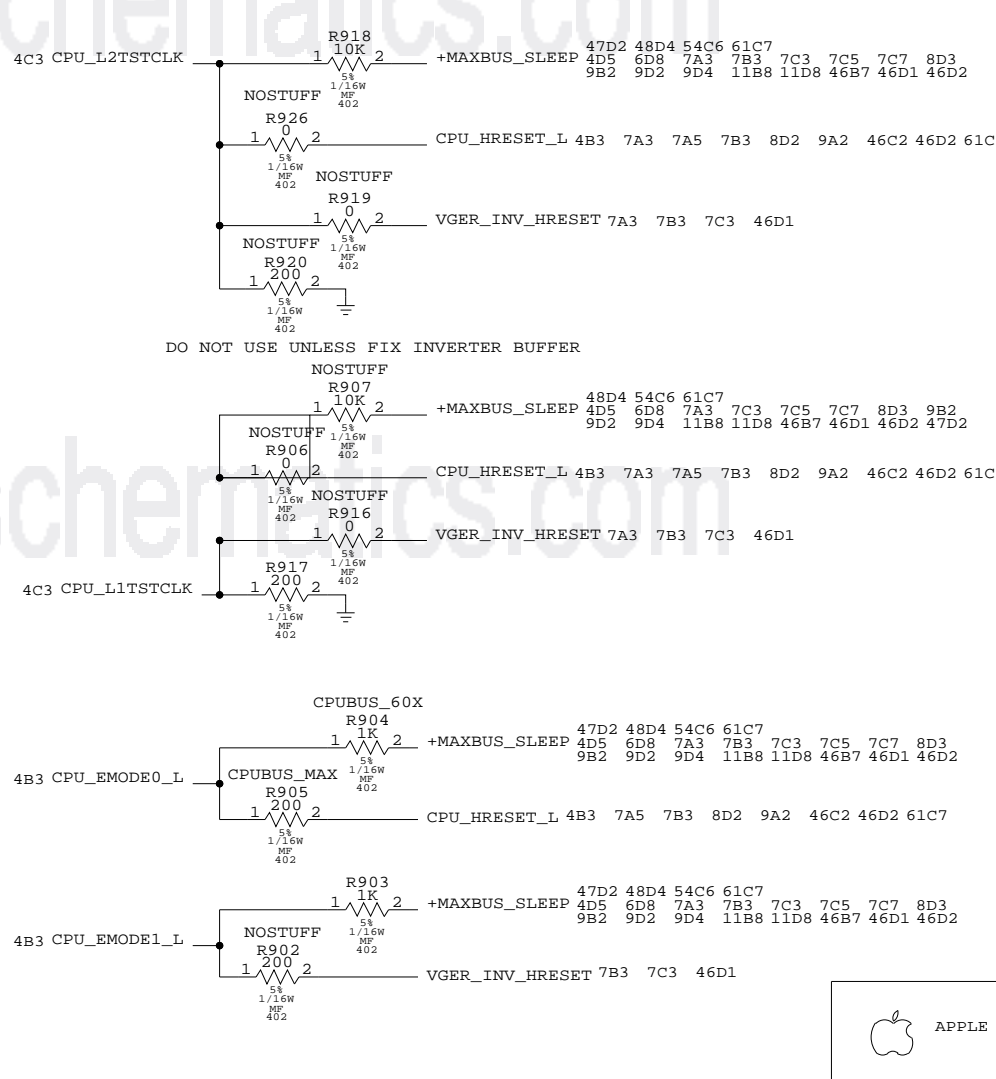
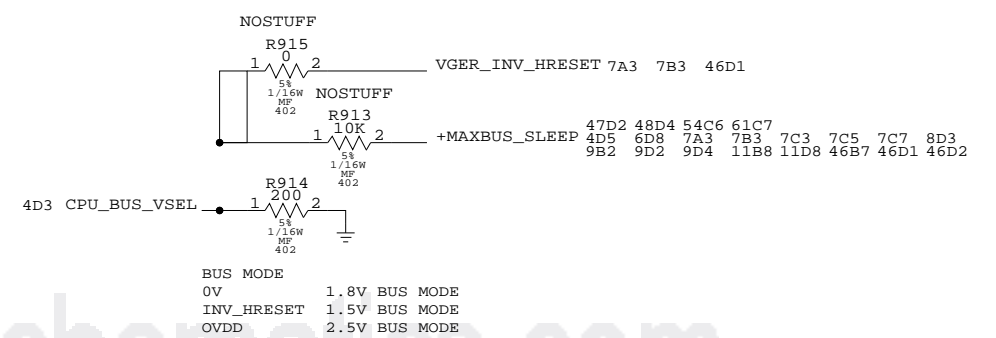
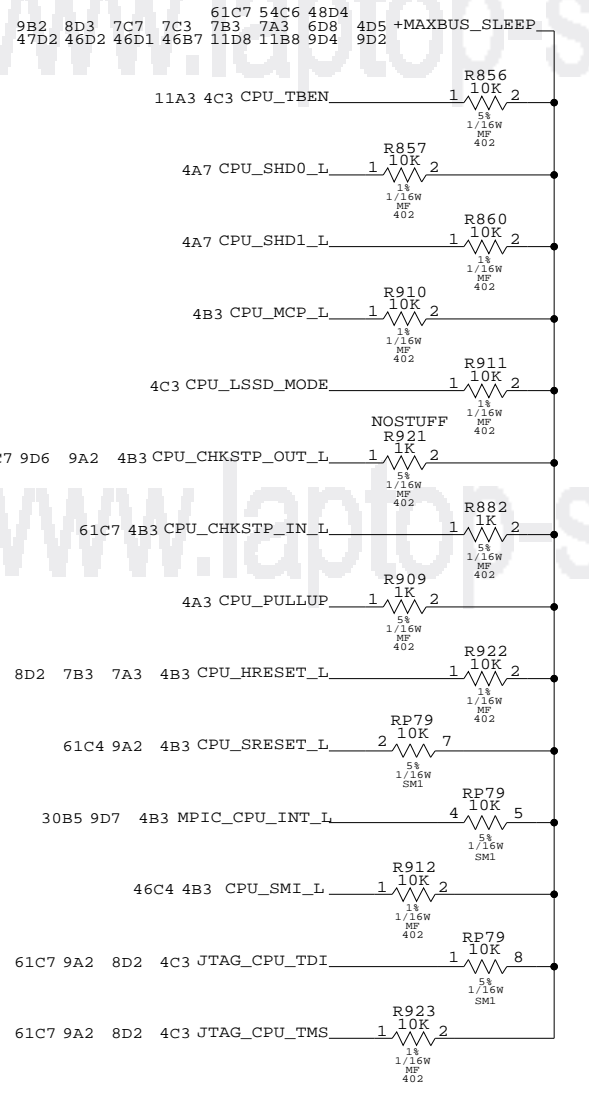
BMODE <0> <1>	MSSCR0 <16:17>	Sys Bus	Vger ID	Addr Drve
L L	1 1	???	01	yes unavail
L !hr	1 0	Max	01	yes unavail
L hr	1 1	???	00	yes unavail
L H	1 0	Max	00	yes unavail
-----				
!hr L	0 1	MB+	01	yes unavail
!hr !hr	0 0	60x	01	yes unavail
!hr hr	0 1	MB+	00	yes unavail
!hr H	0 0	60x	00	yes unavail
-----				
hr L	1 1	???	01	norm unavail
hr !hr	1 0	Max	01	norm
hr hr	1 1	???	00	norm unavail
HR H	1 0	MAX	00	NORM <- DEFAULT
-----				
H L	0 1	MB+	01	norm unavail
H !hr	0 0	60x	01	norm
H hr	0 1	MB+	00	norm unavail
H H	0 0	60x	00	norm

SIGNAL	TIED	APPLICATION
CPU_EMODE0_L	HIGH	60X BUS MODE
CPU_BUS_VSEL	CPU_HRESET_L	MAX BUS MODE
	CPU_HRESET_L	2.5V INTERFACE
	LOW	1.8V INTERFACE
	CPU_HRESET_H	1.5V INTERFACE
CPU_L3_VSEL	CPU_HRESET_L or L3_OVDD	2.5V INTERFACE
	LOW	1.8V INTERFACE
	CPU_HRESET_H	1.5V INTERFACE

MAXBUS PULL-UPS



MPC7450 PULL-UPS

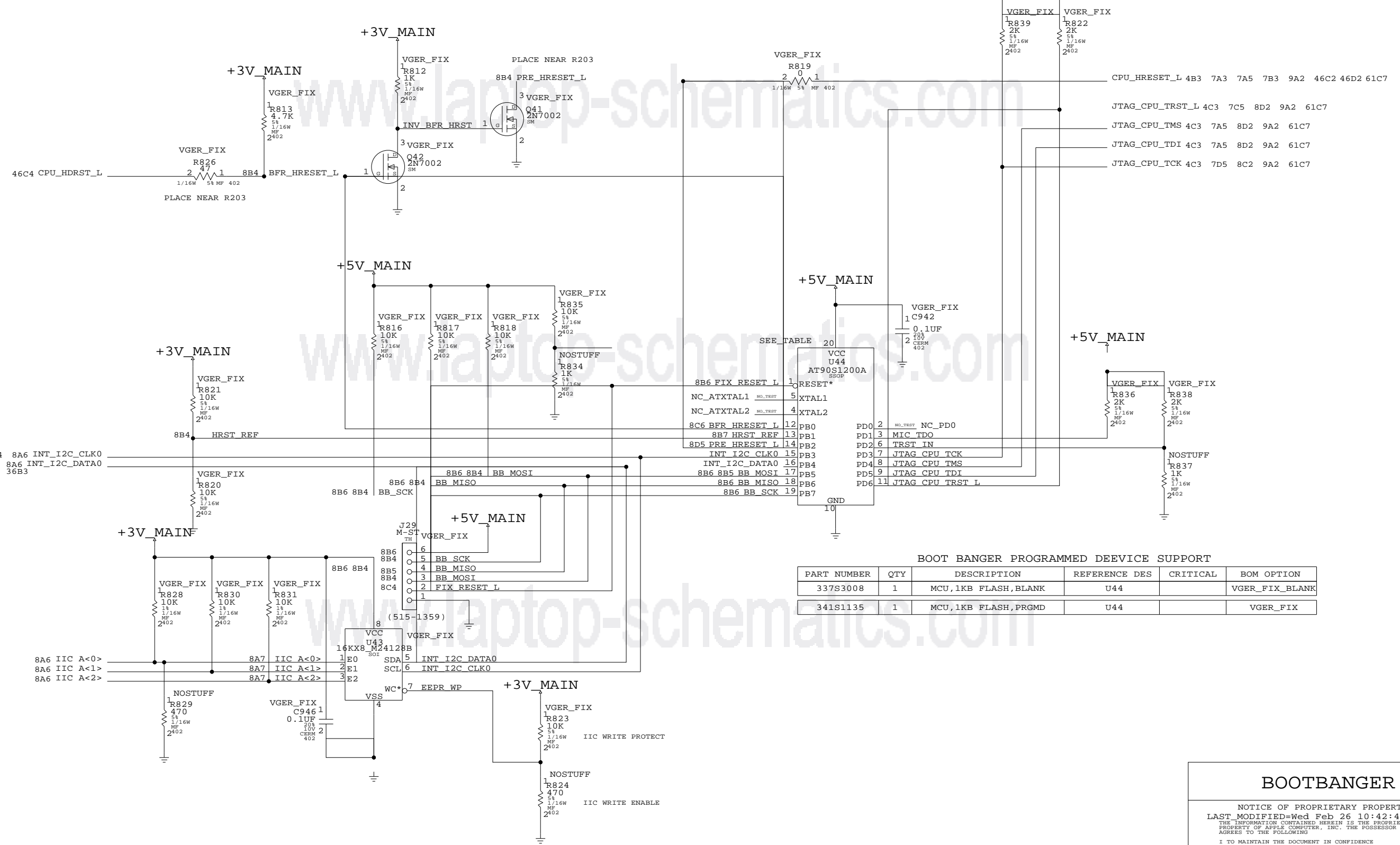


CPU CONFIG OPTIONS

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	SCALE	SHT	OF
	NONE	7	74

61C7 54C6 49D4  
9B2 7C7 7C5 7C3 7B3 7A3 6D8 4D5 +MAXBUS\_SLEEP\_  
47D2 46D2 46D1 46B7 11D8 11B8 9D4 9D2



**BOOT BANGER PROGRAMMED DEEVICE SUPPORT**

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
337S3008	1	MCU,1KB FLASH,BLANK	U44		VGER_FIX_BLANK
341S1135	1	MCU,1KB FLASH,PRGMD	U44		VGER_FIX

**BOOTBANGER**

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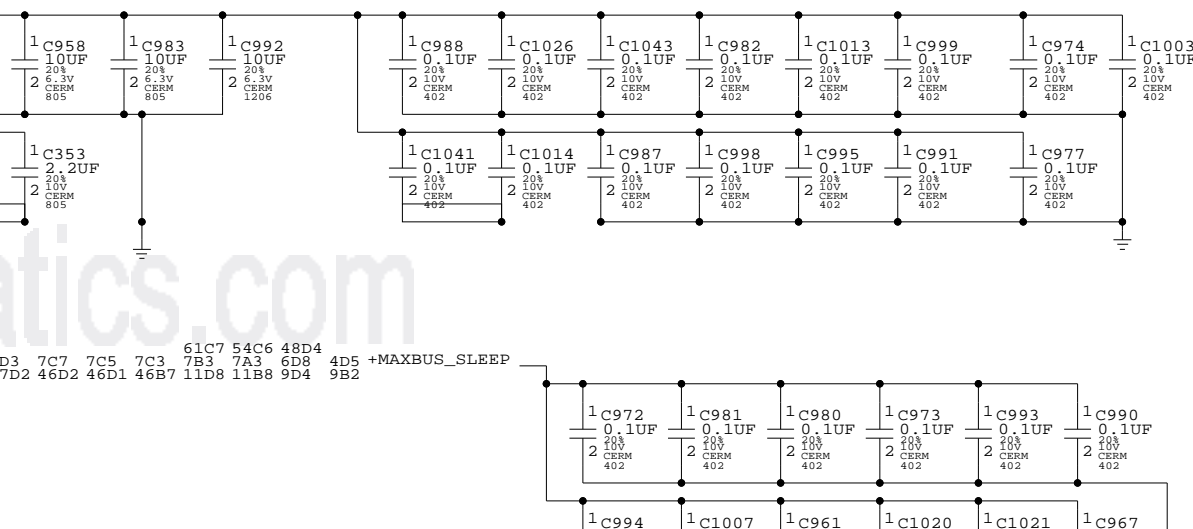
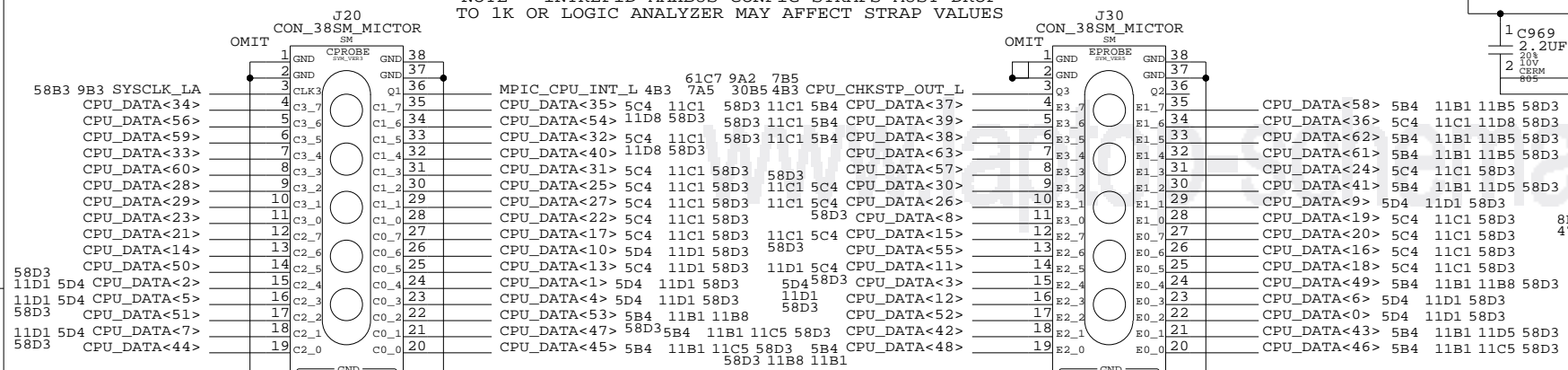
APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
SCALE	SHT	OF
NONE	8	74

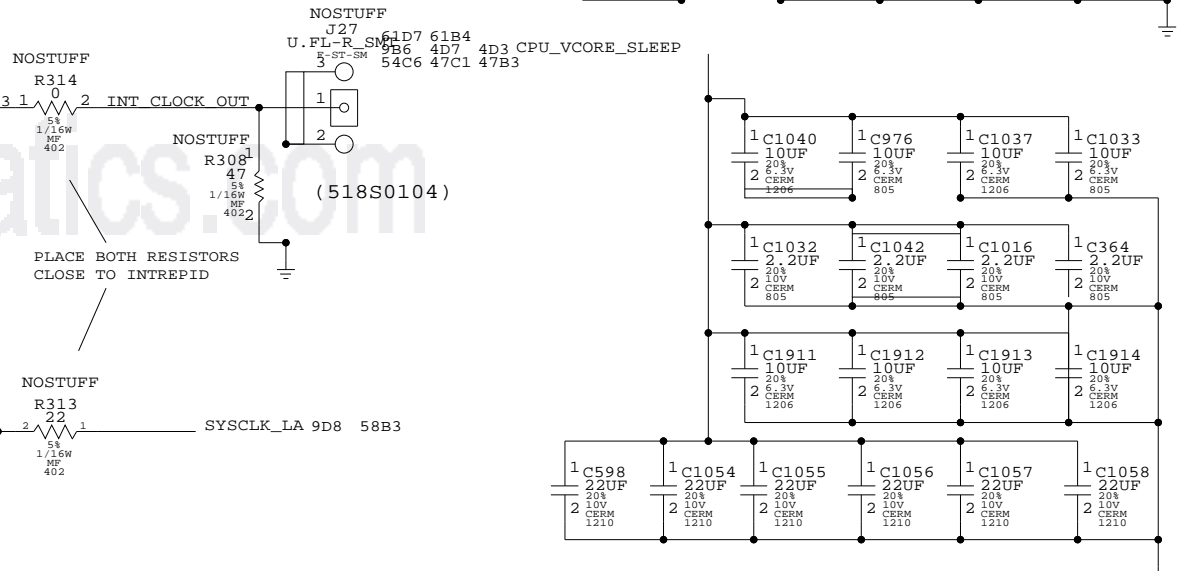
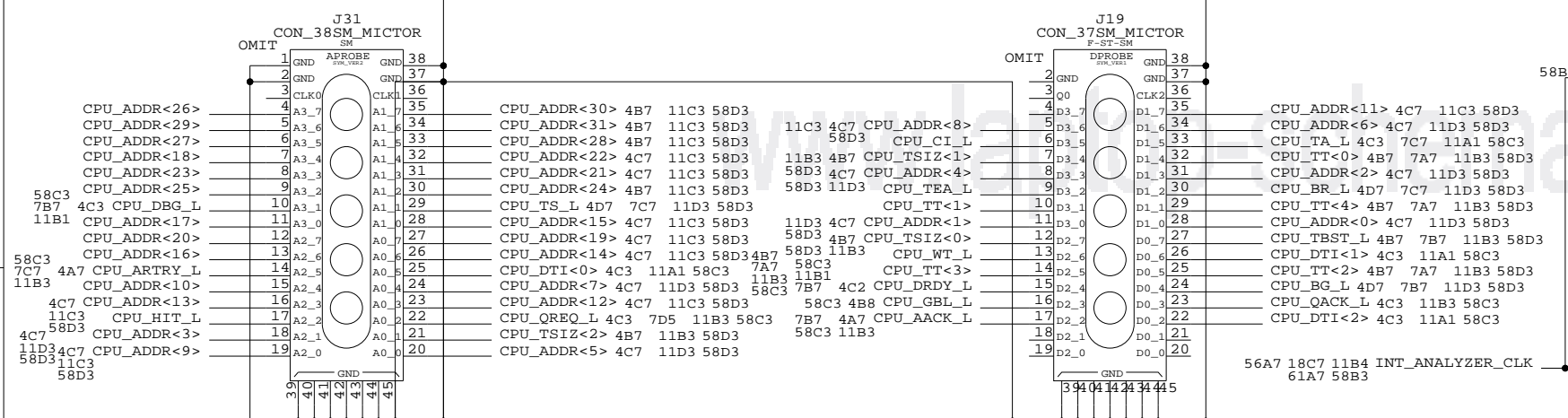


### MAXBUS LOGIC ANALYZER SUPPORT

NOTE: INTREPID MAXBUS CONFIG STRAPS MUST DROP TO 1K OR LOGIC ANALYZER MAY AFFECT STRAP VALUES

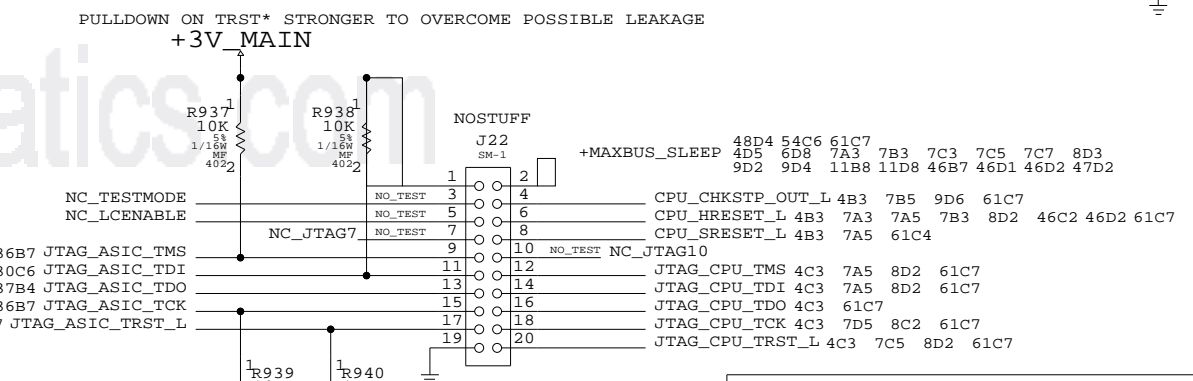
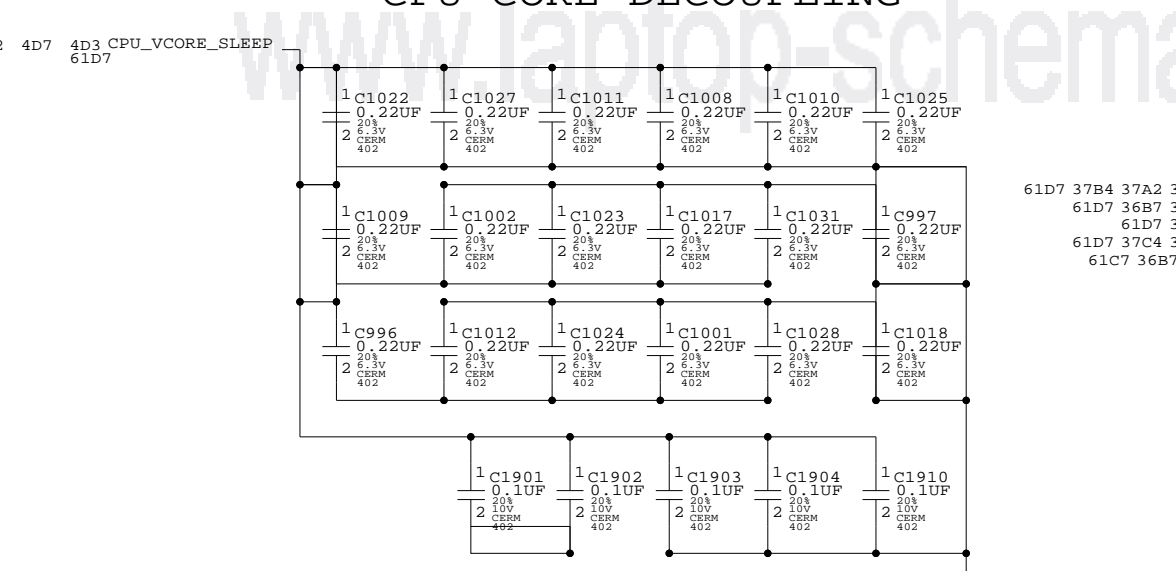
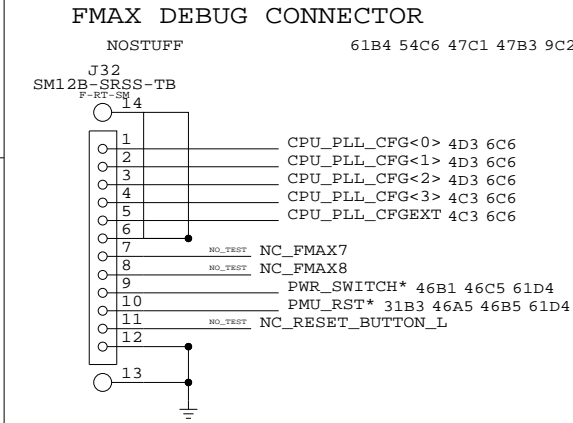


### INTREPID CLOCK OUTPUT



(519-0698)

### CPU CORE DECOUPLING



(518S0105)

### LA CONS & ESP

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	D	
SCALE	SHT	9	OF 74
NONE			

D

D

C

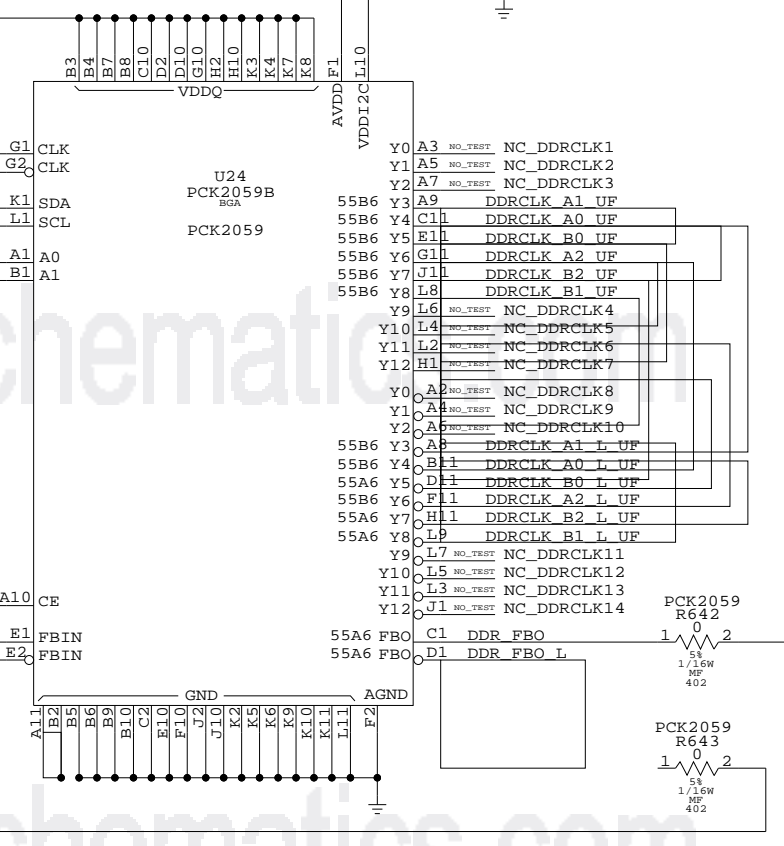
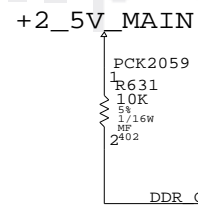
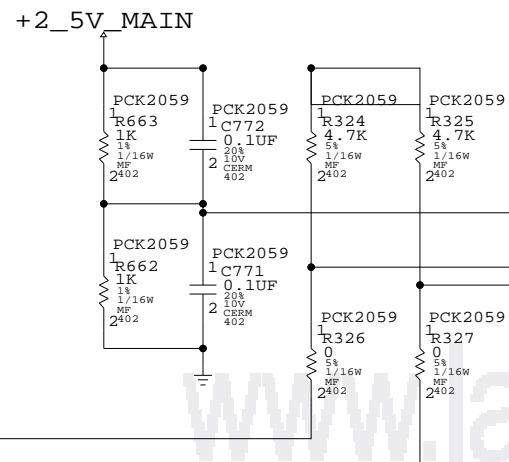
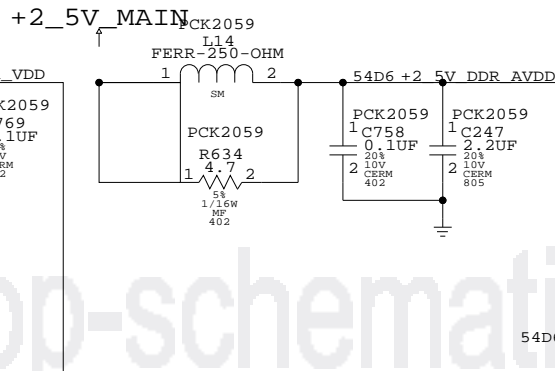
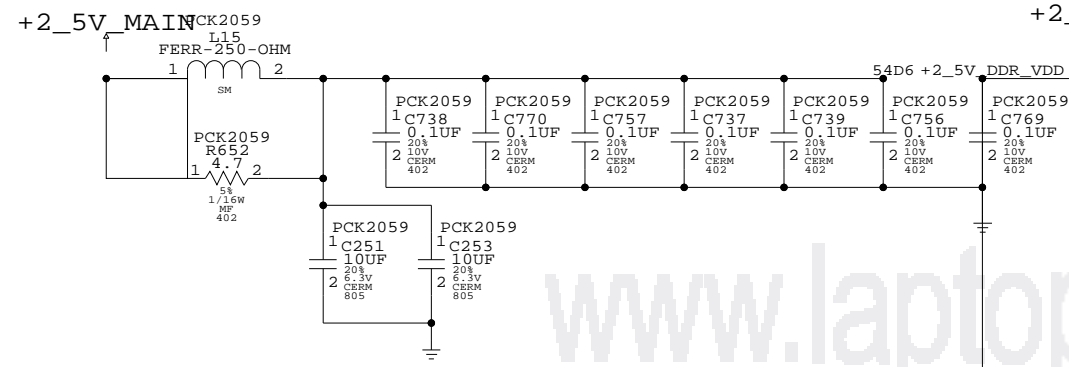
C

B

B

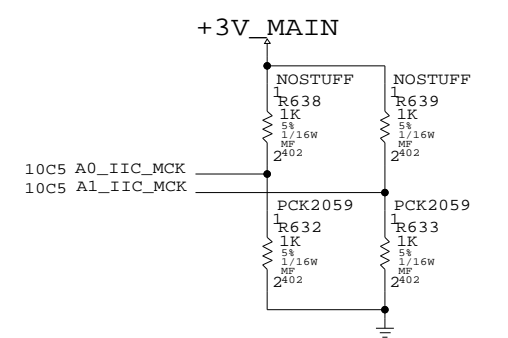
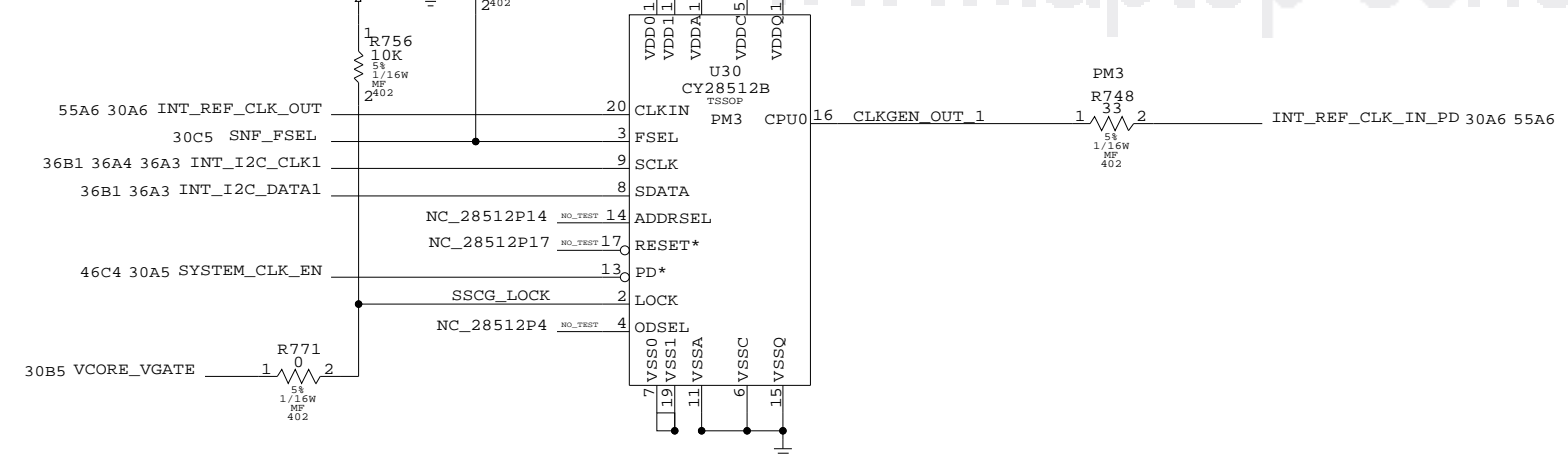
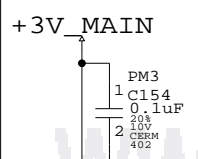
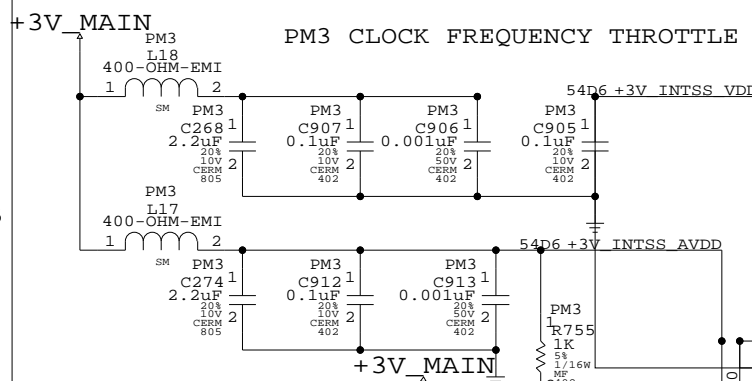
A

A



CLOCK CHIP ALTERNATE SUPPORT

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
359S0065	359S0059	U24	IC, CLK DVR, ZDB	PCK2059



### CLOCKS

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	SCALE	SHT	OF
	NONE	10	74

8

7

6

5

4

3

2

1

INTREPID BOOT STRAPS  
BITS 32 - 47

54D3 32D5 30D6 18D6 +1\_5V\_INTREPID\_PLL

R720

1

4

7

2

54D3+1\_5V\_INTREPID\_PLL7

INTREPID V1.1 IS 133MHZ ONLY

46D2 46D1 61C7  
9B2 8D3 46B7  
7A3 6D8 4D5 +MAXBUS\_SLEEP  
7C5 7C3 7B3  
11B8 9D4 9D2  
54C6 48D4 47D2

NOSTUFF  
R833  
10K  
1/16W  
MF  
2402

NOSTUFF  
R852  
10K  
1/16W  
MF  
2402

NOSTUFF  
R862  
10K  
1/16W  
MF  
2402

NOSTUFF  
R878  
10K  
1/16W  
MF  
2402

NOSTUFF  
R889  
10K  
1/16W  
MF  
2402

NOSTUFF  
R866  
10K  
1/16W  
MF  
2402

NOSTUFF  
R877  
10K  
1/16W  
MF  
2402

NOSTUFF  
R867  
10K  
1/16W  
MF  
2402

11C1 9D7 5C4 CPU\_DATA<32>  
58D3 CPU\_DATA<33>  
11C1 9D8 5C4 CPU\_DATA<34>  
58D3 CPU\_DATA<35>  
11C1 9D5 5C4 CPU\_DATA<36>  
58D3

INT\_V1  
R854  
10K  
1/16W  
MF  
4022

NOSTUFF  
R853  
10K  
1/16W  
MF  
4022

NOSTUFF

NOSTUFF

NOSTUFF

NOSTUFF

NOSTUFF

CPU\_DATA<40> 5B4 9D7 11C1 58D3  
CPU\_DATA<41> 5B4 9D5 11B1 58D3  
CPU\_DATA<42> 5B4 9C6 11B1 58D3  
CPU\_DATA<43> 5B4 9C5 11B1 58D3  
CPU\_DATA<44> 5B4 9C8 11B1 58D3  
CPU\_DATA<45> 5B4 9C7 11B1 58D3  
CPU\_DATA<46> 5B4 9C5 11B1 58D3  
CPU\_DATA<47> 5B4 9C7 11B1 58D3

INT\_V2  
R342  
4.7K  
5/8  
1/16W  
MF  
2402

R345  
4.7K  
5/8  
1/16W  
MF  
2402

R861  
4.7K  
5/8  
1/16W  
MF  
2402

R364  
4.7K  
5/8  
1/16W  
MF  
2402

R357  
4.7K  
5/8  
1/16W  
MF  
2402

R887  
4.7K  
5/8  
1/16W  
MF  
2402

R365  
4.7K  
5/8  
1/16W  
MF  
2402

R356  
4.7K  
5/8  
1/16W  
MF  
2402

DDR\_TPMODEENABLE\_H  
0: TDI INPUT (JTAG)  
1: TDI OUTPUT

DDR\_TPDEN\_POL  
0: ACTIVE HIGH  
1: ACTIVE LOW

EXTPL1\_SDMN\_POL  
0: ACTIVE HIGH  
1: ACTIVE LOW

SPARE

SPARE

SPARE

PLL4MODESEL\_NXT[2:0]  
000: 166.4 MHZ  
001: 149.76 MHZ  
010: 133.12 MHZ  
011: 99.84 MHZ  
100: 83.20 MHZ

INTERNALSPREADEN  
0: INACTIVE  
1: ACTIVE

PC11\_SOURCE\_CLOCK  
0: PLL4  
1: PLL5 (NO SPREAD)

46D2 46D1 61C7  
9B2 8D3 46B7  
7A3 6D8 4D5 +MAXBUS\_SLEEP  
7C5 7C3 7B3  
11D8 9D4 9D2  
54C6 48D4 47D2

BITS 48 - 63

NOSTUFF  
R890  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R868  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R892  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R832  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R863  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R339  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R340  
10K  
5/8  
1/16W  
MF  
2402

11B1 9C6 5B4 CPU\_DATA<48>  
11B1 9C5 5B4 CPU\_DATA<49>  
58D3 CPU\_DATA<50>  
11B1 9C8 5B4 CPU\_DATA<51>  
58D3 CPU\_DATA<52>  
11B1 9C7 5B4 CPU\_DATA<53>  
58D3 5B4 CPU\_DATA<54>  
5B4 58D3 11B1 9D7 CPU\_DATA<55>

NOSTUFF  
R864  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R876  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R865  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R885  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R855  
10K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R869  
10K  
5/8  
1/16W  
MF  
2402

R894  
4.7K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R355  
4.7K  
5/8  
1/16W  
MF  
2402

R893  
4.7K  
5/8  
1/16W  
MF  
2402

NOSTUFF  
R343  
4.7K  
5/8  
1/16W  
MF  
2402

R360  
4.7K  
5/8  
1/16W  
MF  
2402

R352  
4.7K  
5/8  
1/16W  
MF  
2402

R338  
4.7K  
5/8  
1/16W  
MF  
2402

R341  
4.7K  
5/8  
1/16W  
MF  
2402

CPU\_DATA<57> 5B4 9D6 11B1 58D3  
CPU\_DATA<58> 5B4 9D5 11B1 58D3  
CPU\_DATA<59> 5B4 9D8 11B1 58D3  
CPU\_DATA<60> 5B4 9D8 11B1 58D3  
CPU\_DATA<61> 5B4 9D5 11B1 58D3  
CPU\_DATA<62> 5B4 9D5 11B1 58D3  
CPU\_DATA<63> 5A4 9D6 11B1 58D3

BUZ\_REF\_CLK\_OUTENABLE\_H  
0: INACTIVE  
1: ACTIVE

SERPL14EXTSRC  
0: BOOTROM ON IDE/CARD/SLOT  
1: TDI CPU WORKAROUND

EN\_PCL\_ROM\_P  
0: BOOTROM ON IDE/CARD/SLOT  
1: TDI CPU WORKAROUND

MAXBUS OUTPUT IMPEDANCE  
111: 28.6 OHM  
011: 33.3 OHM  
101: 40 OHM  
001: 50 OHM  
110: 66.6 OHM  
010: 100 OHM  
100: 200 OHM  
000: 200 OHM

SPARE

SPARE

PC11\_ROM2\_L / PC11\_GNT2\_L  
0: REQ/GNT  
1: GPTIOS

PC11\_ROM0\_L / PC11\_GNT0\_L  
0: REQ/GNT  
1: GPTIOS

PC11\_ROM1\_L / PC11\_GNT1\_L  
0: REQ/GNT  
1: GPTIOS

A

D

D

C

D

C

B

B

A

A

INTREPID MAX

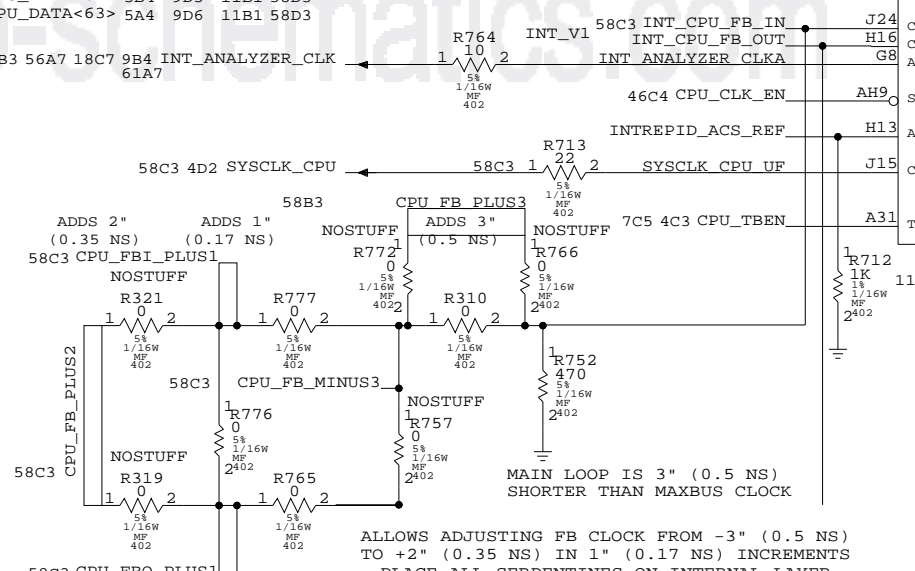
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SCALE	NONE	SHT	11 OF 74

ALLOWS ADJUSTING FB CLOCK FROM -3" (0.5 NS) TO +2" (0.35 NS) IN 1" (0.17 NS) INCREMENTS  
PLACE ALL SERPENTINES ON INTERNAL LAYER



VIN = INTREPID VCORE (1.7V)  
VOUT = MAXBUS RAIL (1.8V)

INTREPID V1.1 IS 133MHZ ONLY

SEE TABLE (ON PAGE 12)

(1 OF 9)

MAXBUS INTERFACE

INTREPID BGA  
U25

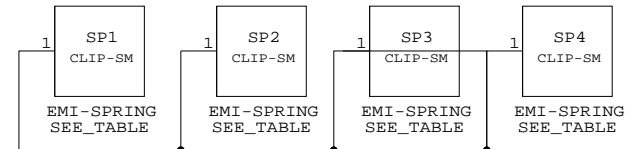
INTREPID V1.1 IS 133MHZ ONLY

INTREPID 1.1 SHOULD ALLOW MAXBUS RAIL TO TURN OFF IN SLEEP  
61C7 54C3 48B4 19D5 19A4 18D7 18C2 18A8 13C8 +1\_5V\_AGP

+3V MAIN

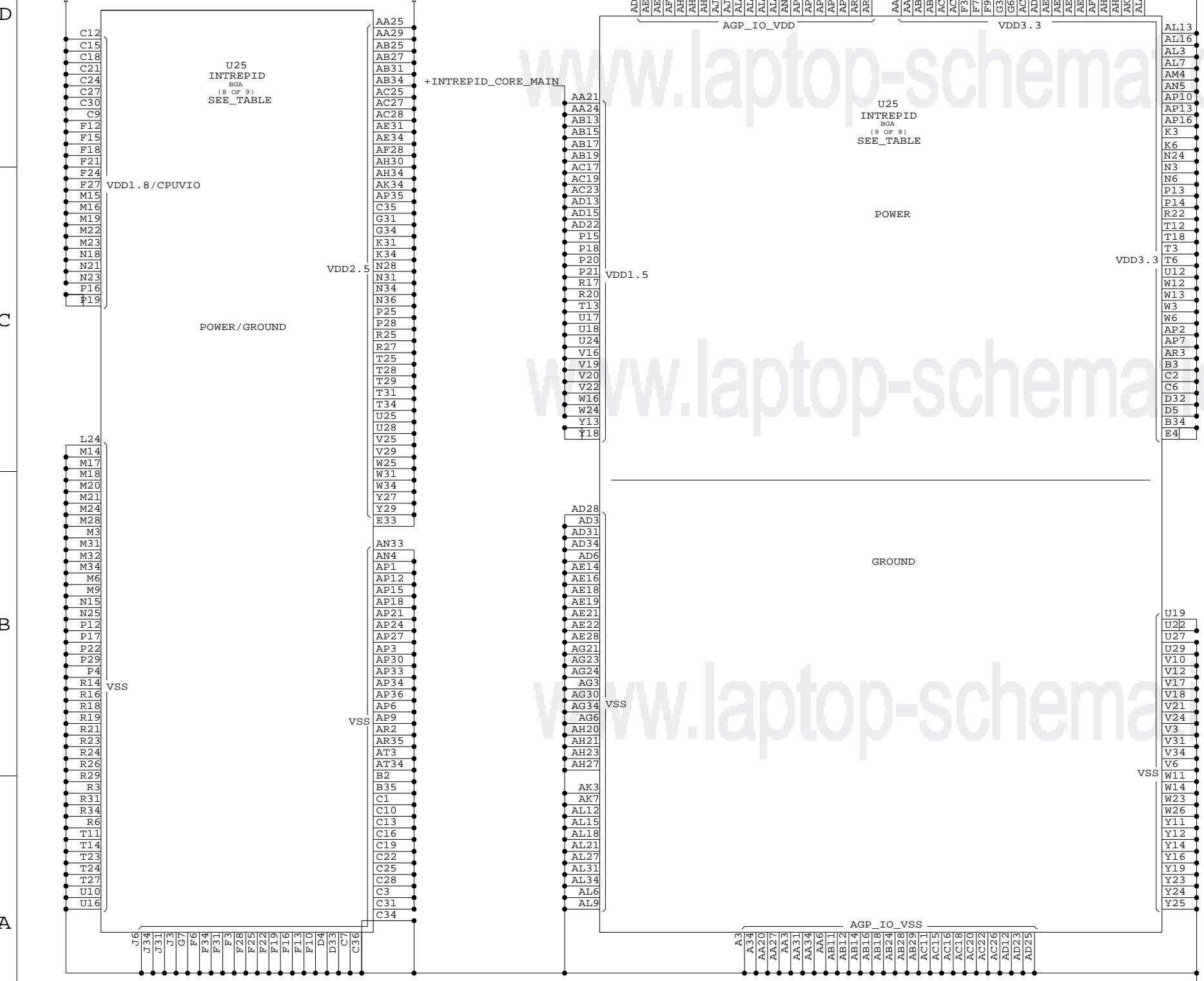
+1\_8V MAIN

+2\_5V MAIN



CLIPS TO ATTACH INTREPID HEATSINK TO GND AT THE FOUR CORNERS


INTREPID EMI CLIP SUPPORT					
PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
870-1125	4	INTREPID EMI CLIP	SP1,SP2,SP3,SP4	CRITICAL	



INTREPID VERSION SUPPORT					
PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
343S0198	1	IC,ASIC,INTREPID,V1.X	U25		INT_V1
343S0211	1	IC,ASIC,INTREPID,V2.1	U25		INT_V2

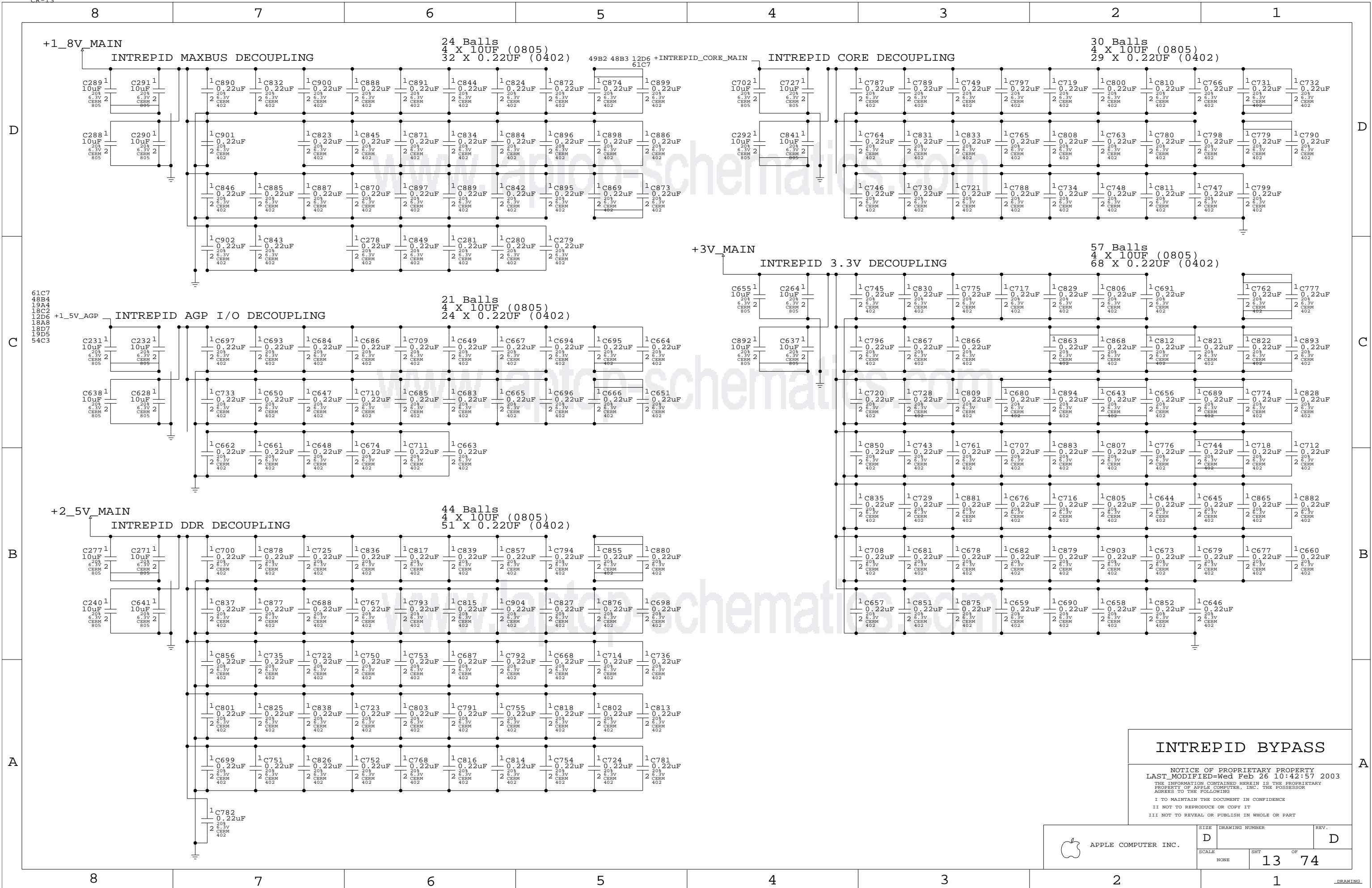
### INTREPID POWER

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SIZE	D	DRAWING NUMBER	REV.
SCALE	NONE	SHT	12 OF 74





**INTREPID BYPASS**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D		D
SCALE	SHT	OF	
NONE	13	74	



### DDR MUX CONNECTIONS

0-ohm resistors to allow rewiring if necessary

D

D

C

C

B

B

A

A

55D6 15C8 MEM_DATA<0>	AK32	DDR_DATA_0	DDR_A_0	H35	MEM_ADDR<0>	14B3 55D6
55D6 15C8 MEM_DATA<1>	AK33	DDR_DATA_1	DDR_A_1	G35	MEM_ADDR<1>	14C3 55D6
55D6 15C8 MEM_DATA<2>	AK31	DDR_DATA_2	DDR_A_2	G36	MEM_ADDR<2>	14C3 55D6
55D6 15C8 MEM_DATA<3>	AK35	DDR_DATA_3	DDR_A_3	F35	MEM_ADDR<3>	14D3 55D6
55D6 15C8 MEM_DATA<4>	AK36	DDR_DATA_4	DDR_A_4	E35	MEM_ADDR<4>	14D3 55D6
55D6 15C8 MEM_DATA<5>	AJ32	DDR_DATA_5	DDR_A_5	E36	MEM_ADDR<5>	14C2 55D6
55D6 15C8 MEM_DATA<6>	AJ35	DDR_DATA_6	DDR_A_6	D35	MEM_ADDR<6>	14C2 55D6
55D6 15C8 MEM_DATA<7>	AJ36	DDR_DATA_7	DDR_A_7	G32	MEM_ADDR<7>	14C3 55D6
55D6 15C8 MEM_DATA<8>	AG33	DDR_DATA_8	DDR_A_8	H33	MEM_ADDR<8>	14D2 55D6
55D6 15C8 MEM_DATA<9>	AG35	DDR_DATA_9	DDR_A_9	G33	MEM_ADDR<9>	14B3 55D6
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55D6 15C8 MEM_DATA<11>	AG36	DDR_DATA_11	DDR_A_11	D35	MEM_ADDR<11>	14A3 55D6
55D6 15C8 MEM_DATA<12>	AH36	DDR_DATA_12	DDR_A_12	H33	MEM_ADDR<12>	14D2 55D6
55D6 15C8 MEM_DATA<13>	AH32	DDR_DATA_13	DDR_BA_0	L30	MEM_BA<0>	14B3 55D6 14B6
55D6 15C8 MEM_DATA<14>	AG32	DDR_DATA_14	DDR_BA_1	M29	MEM_BA<1>	14B3 55D6 55C6
55D6 15C8 MEM_DATA<15>	AG31	DDR_DATA_15	DDRC_S_0	AN34	MEM_CS_L<0>	14C2 55D6
55D6 15B6 MEM_DATA<16>	AE32	DDR_DATA_16	DDRC_S_1	AN35	MEM_CS_L<1>	14B2 55D6
55D6 15B6 MEM_DATA<17>	AF35	DDR_DATA_17	DDRC_S_2	AL35	MEM_CS_L<2>	14A2 55D6
55D6 15B6 MEM_DATA<18>	AF36	DDR_DATA_18	DDRC_S_3	AL33	MEM_CS_L<3>	14B2 55D6
55D6 15B6 MEM_DATA<19>	AE36	DDR_DATA_19	DDR_DQS_0	AJ31	MEM_DQS<0>	15C8 55D6
55D6 15B6 MEM_DATA<20>	AE35	DDR_DATA_20	DDR_DQS_1	AH31	MEM_DQS<1>	15C8 55D6
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55D6 15B6 MEM_DATA<23>	AD35	DDR_DATA_23	DDR_DQS_4	V30	MEM_DQS<4>	15C5 55D6
55D6 15A6 MEM_DATA<24>	AA36	DDR_DATA_24	DDR_DQS_5	P32	MEM_DQS<5>	15C5 55D6
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55D6 15A6 MEM_DATA<27>	AB36	DDR_DATA_27	DDR_DM_0	AJ33	MEM_DQM<0>	15C8 55D6
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55D6 15C5 MEM_DATA<35>	V35	DDR_DATA_35	DDRDRAS	L29	MEM_RAS_L	14A3 55C6
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55D6 15C5 MEM_DATA<38>	U35	DDR_DATA_38	DDRDRAS	AN35	MEM_CKE<0>	14B2 55C6
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55D6 15C5 MEM_DATA<41>	R30	DDR_DATA_41	DDRDRAS	AL36	MEM_CKE<3>	14B2 55C6
55D6 15C5 MEM_DATA<42>	P35	DDR_DATA_42	DDRDRAS	AB32	MEM_MUXSEL_H<0>	55C6 14D5
55D6 15C5 MEM_DATA<43>	P36	DDR_DATA_43	DDRDRAS	AE29	MEM_MUXSEL_H<1>	55C6
55D6 15C5 MEM_DATA<44>	R36	DDR_DATA_44	DDRDRAS	N30	MEM_MUXSEL_L<0>	55C6
55D6 15C5 MEM_DATA<45>	R35	DDR_DATA_45	DDRDRAS	T32	MEM_MUXSEL_L<1>	14D5
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55D6 15B3 MEM_DATA<55>	M30	DDR_DATA_55	DDRDRAS	V32	SYSCLK_DDRCLK_B1_L_UF	55B6
55D6 15B3 MEM_DATA<56>	J32	DDR_DATA_56	DDRDRAS	W35	SYSCLK_DDRCLK_B2_UF	14A5 55B6
55D6 15B3 MEM_DATA<57>	J33	DDR_DATA_57	DDRDRAS	W36	SYSCLK_DDRCLK_B2_L_UF	55B6
55D6 15B3 MEM_DATA<58>	J35	DDR_DATA_58	DDRDRAS	AA22	INT_MEM_REF	
55D6 15B3 MEM_DATA<59>	K32	DDR_DATA_59	DDRDRAS	Y22	MEMREFI_ACT	
55D6 15B3 MEM_DATA<60>	K33	DDR_DATA_60	DDRDRAS	T22	MEMREFI_PAS	
55D6 15B3 MEM_DATA<61>	J36	DDR_DATA_61	DDRDRAS			
55D6 15B3 MEM_DATA<62>	K36	DDR_DATA_62	DDRDRAS			
55D6 15B3 MEM_DATA<63>	K35	DDR_DATA_63	DDRDRAS			

U25  
INTREPID  
(2 OF 9)  
SEE TABLE  
(ON PAGE 12)

DDR MEMORY  
INTERFACE

55C6 14D5

55C6 14C5

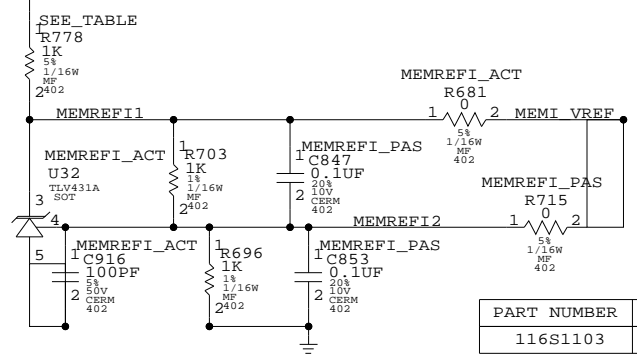
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55C6 14B5

55C6 14A5

55C6 14A5

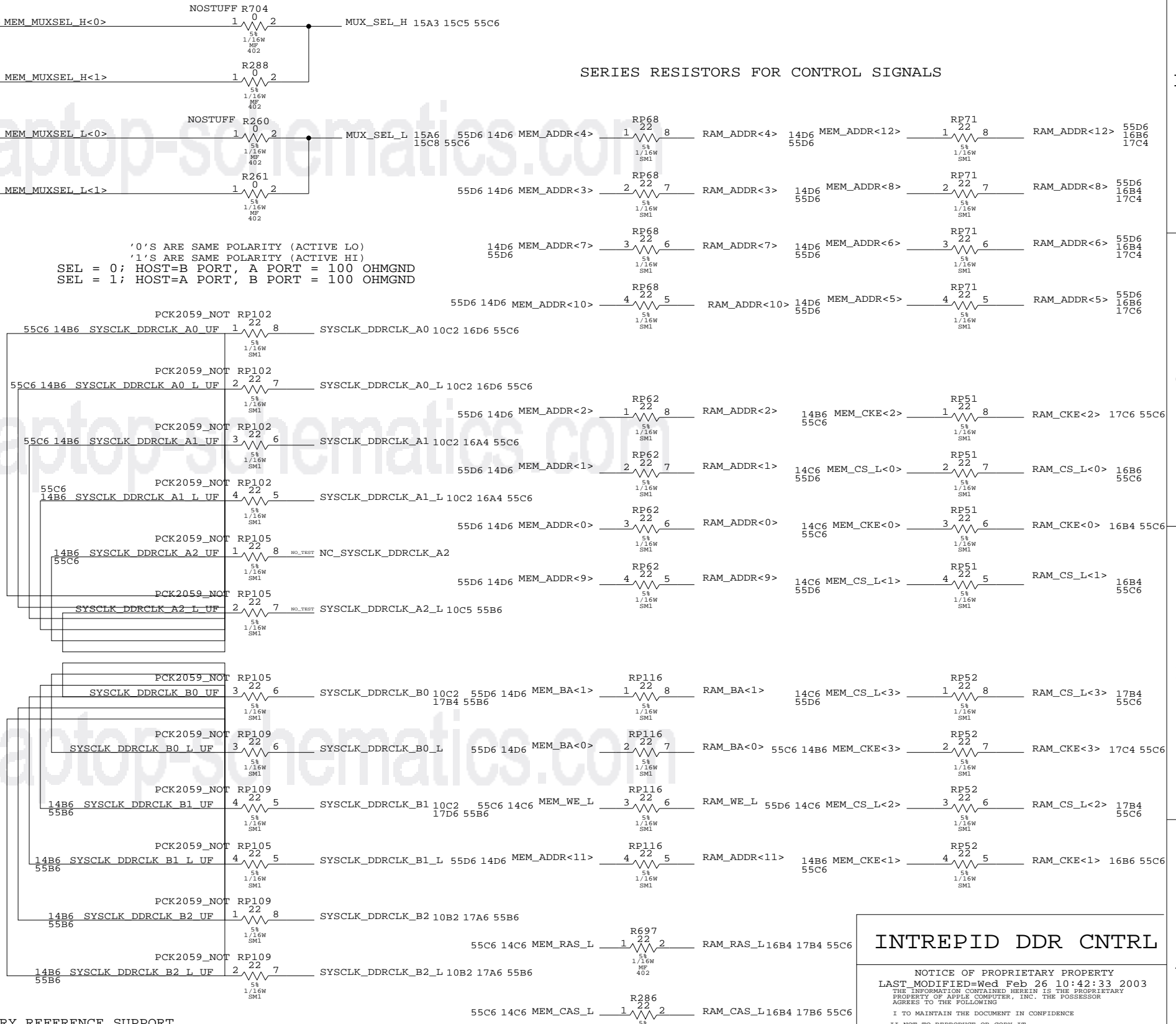
+2\_5V MAIN



#### INTREPID DDR MEMORY REFERENCE SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
116S1103	1	RES, 1K-OHM, 5%, 1/16W, 0402	R778		MEMREFI_ACT
116S1000	1	RES, 0-OHM, 5%, 1/16W, 0402	R778		MEMREFI_PAS

#### SERIES RESISTORS FOR CONTROL SIGNALS



'0'S ARE SAME POLARITY (ACTIVE LO)  
'1'S ARE SAME POLARITY (ACTIVE HI)  
SEL = 0; HOST=B PORT, A PORT = 100 OHMGND  
SEL = 1; HOST=A PORT, B PORT = 100 OHMGND

### INTREPID DDR CNTRL

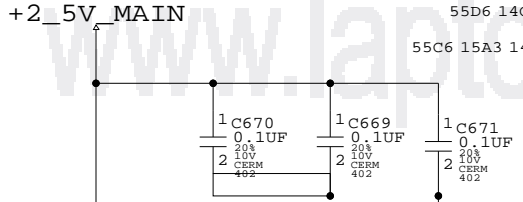
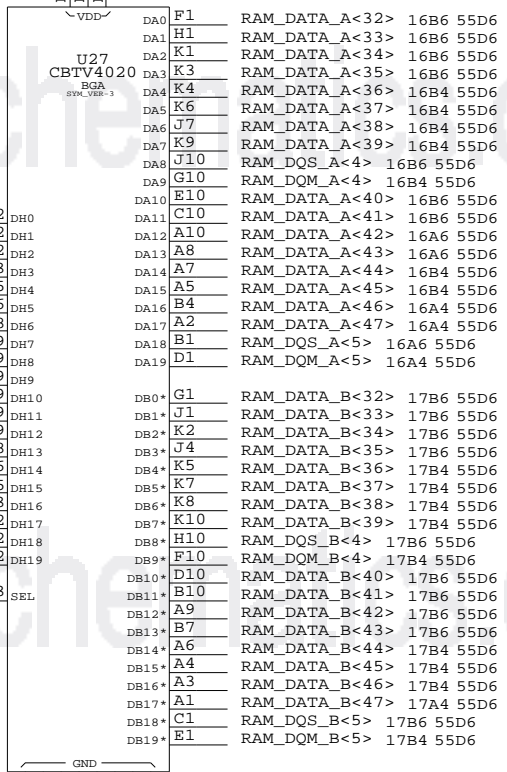
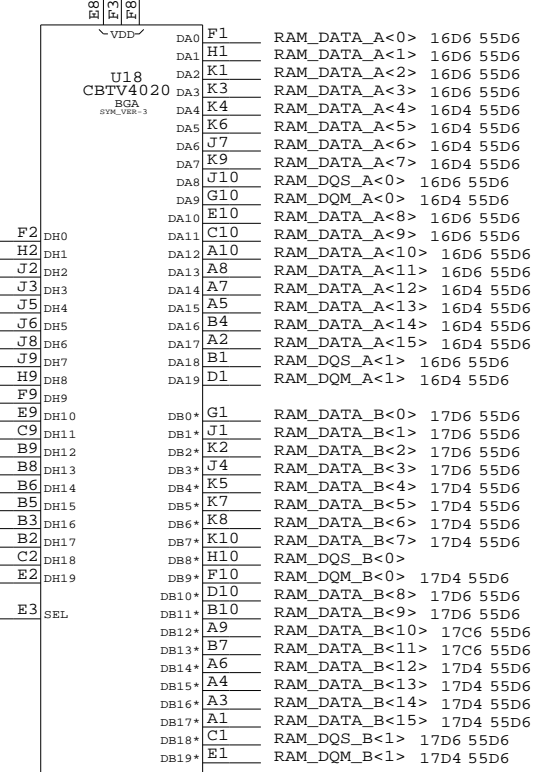
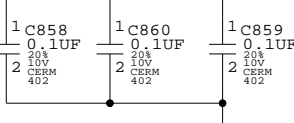
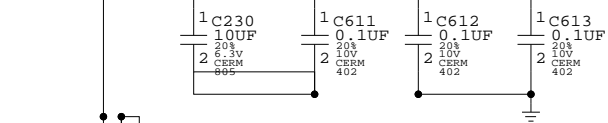
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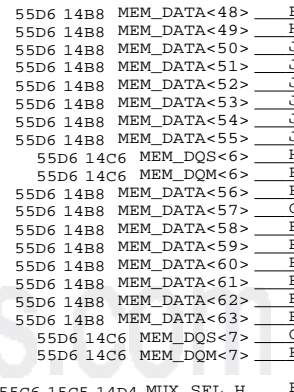
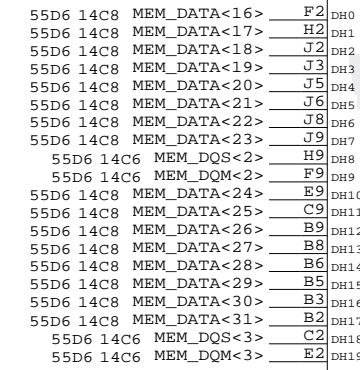
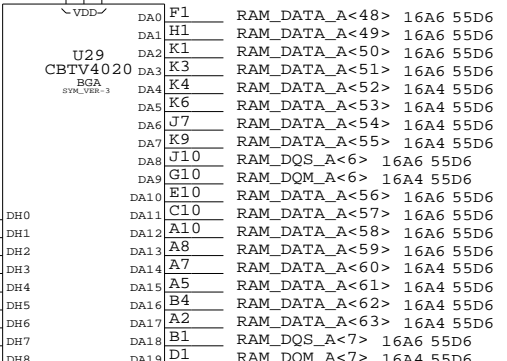
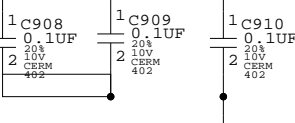
SIZE	D	DRAWING NUMBER		REV.	D
SCALE	NONE	SHT	14	OF	74

+2\_5V\_MAIN

+2\_5V\_MAIN



+2\_5V\_MAIN



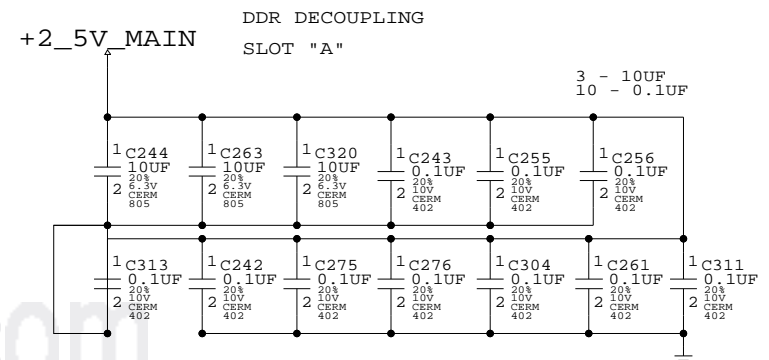
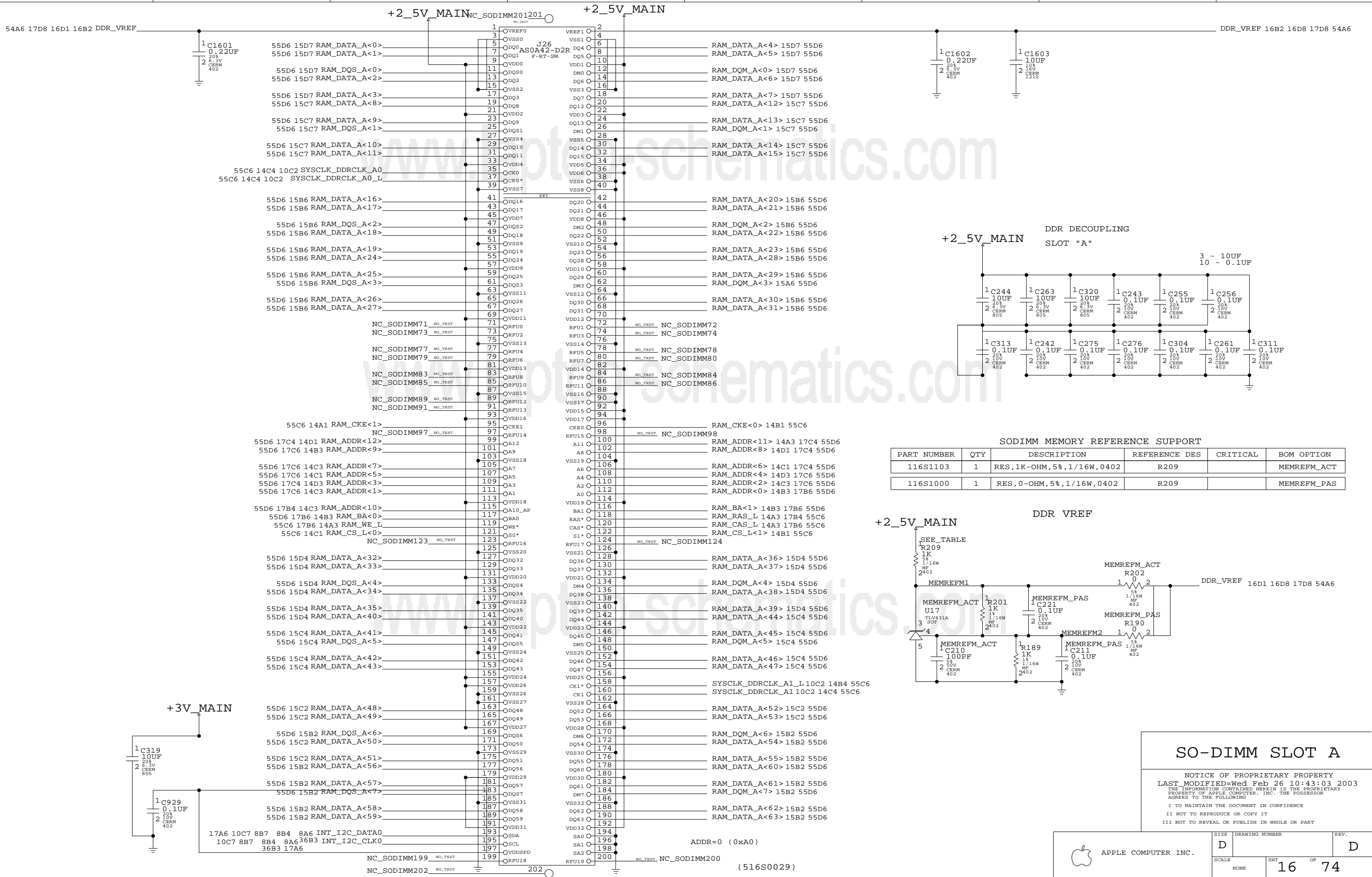
### DDR MUXES

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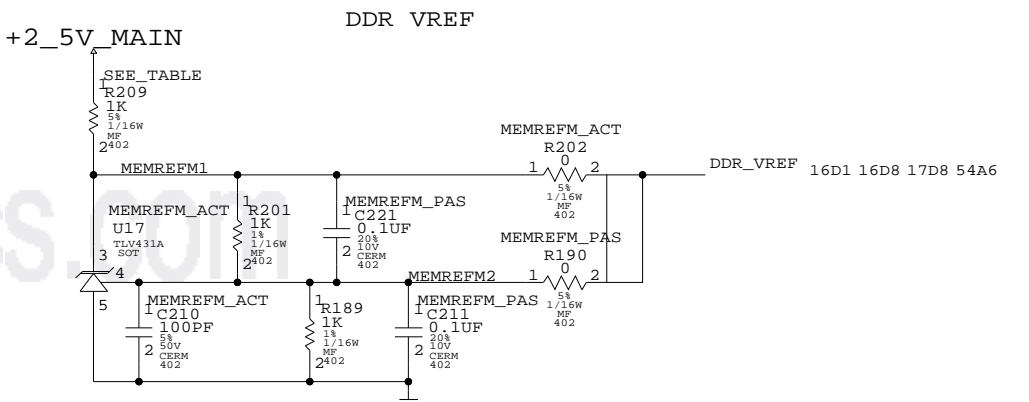
APPLE COMPUTER INC.

SIZE	D	DRAWING NUMBER	REV.
SCALE	NONE	SHT 15 OF 74	D



SODIMM MEMORY REFERENCE SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
116S1103	1	RES, 1K-OHM, 5%, 1/16W, 0402	R209		MEMREFM_ACT
116S1000	1	RES, 0-OHM, 5%, 1/16W, 0402	R209		MEMREFM_PAS



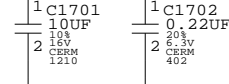
### SO-DIMM SLOT A

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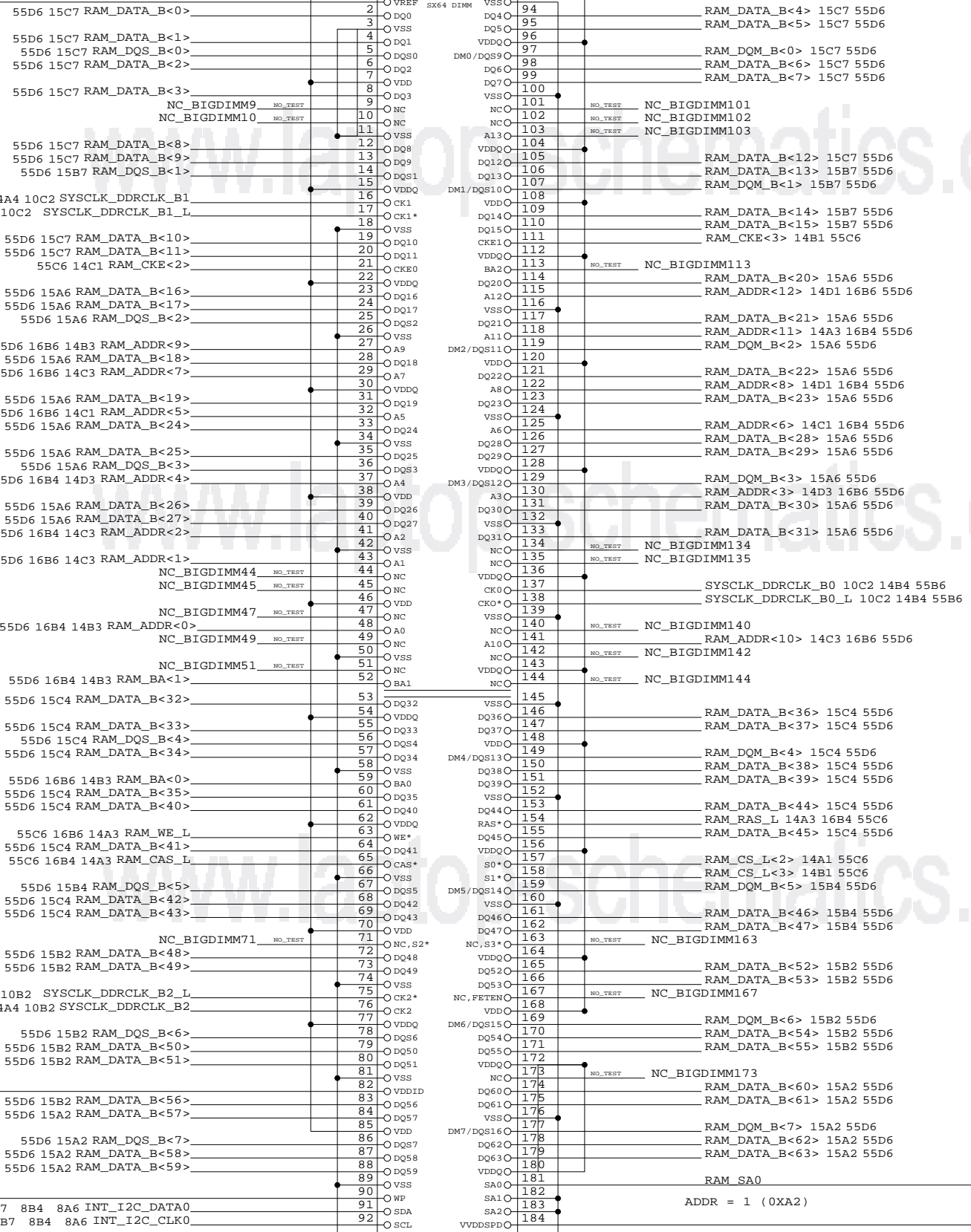
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	SCALE	SHT	OF
	NONE	16	74



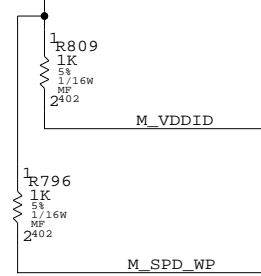
54A6 16D8 16D1 16B2 DDR\_VREF



+2\_5V\_MAIN CRITICAL J11 TH-DDR-DIMM-71243 +2\_5V\_MAIN

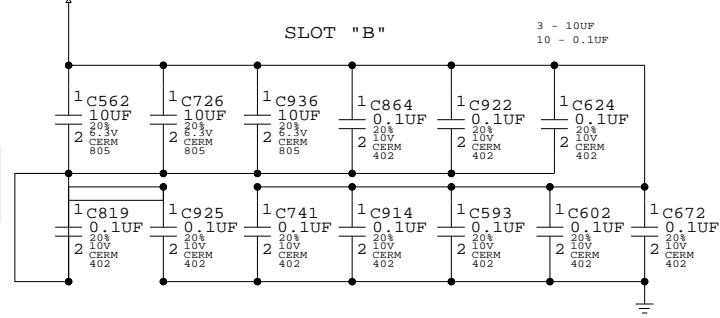


+2\_5V\_MAIN

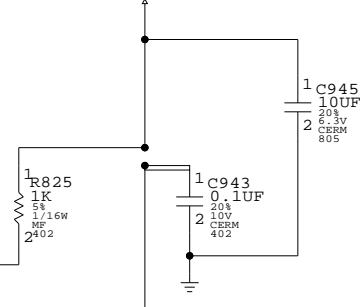


+2\_5V\_MAIN

DDR DECOUPLING



+3V\_MAIN



(516-1001) DDR SDRAM SLOT B

### BIG DIMM SLOT B

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	D		D
SCALE	NONE	SHT	17 OF 74

8

7

6

5

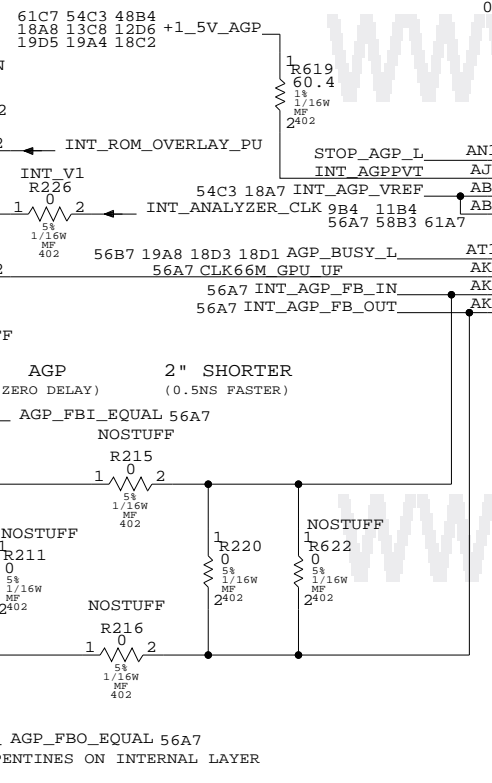
4

3

2

1

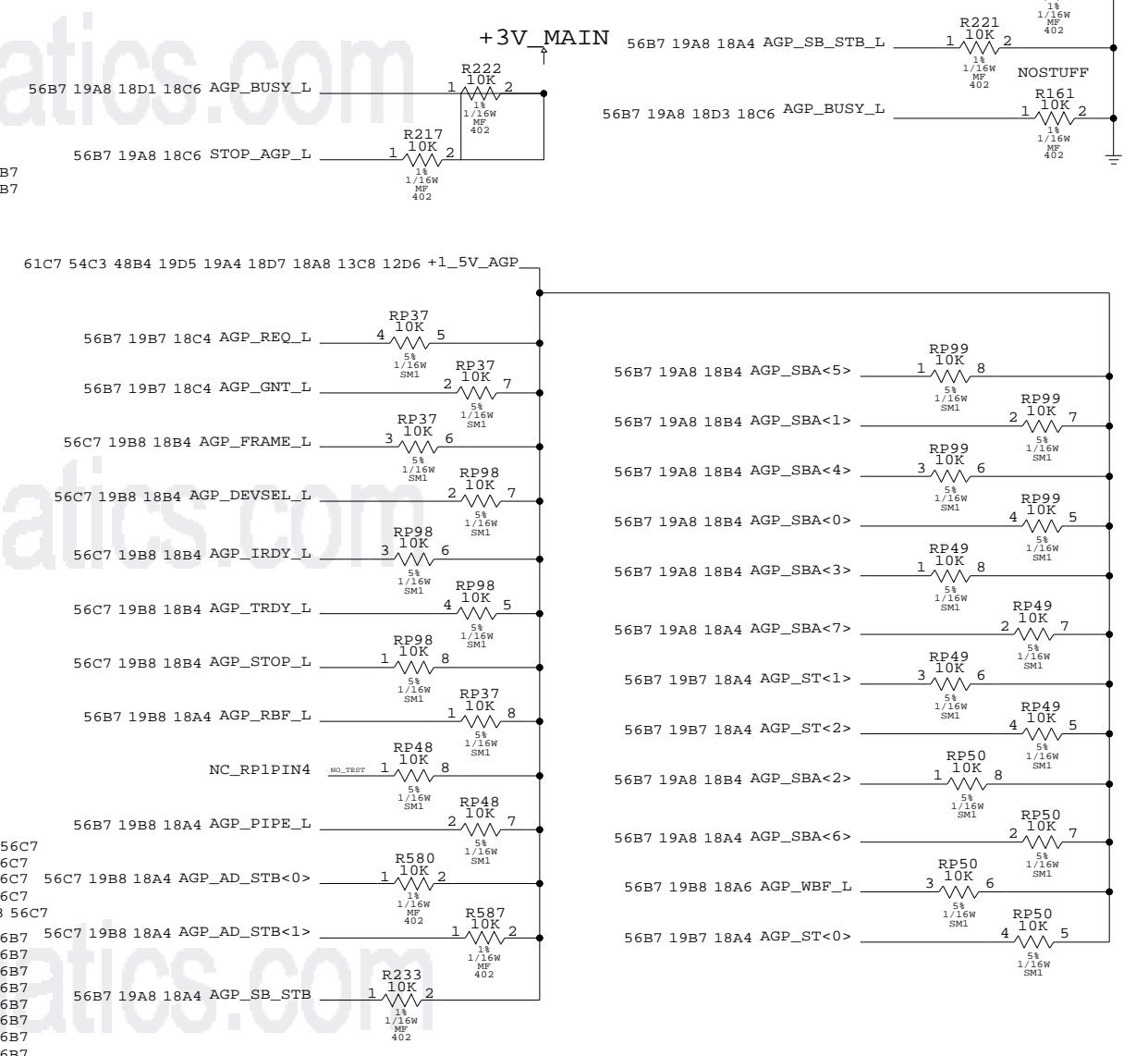
INTREPID AGP CLK IS 1.5V OUT  
NEED 3.3V SWING FOR VIDEO CHIPS  
VERSION 1 WORKAROUND IS LA CLOCK  
VERSION 2 WORKAROUND IS UNUSED PIN



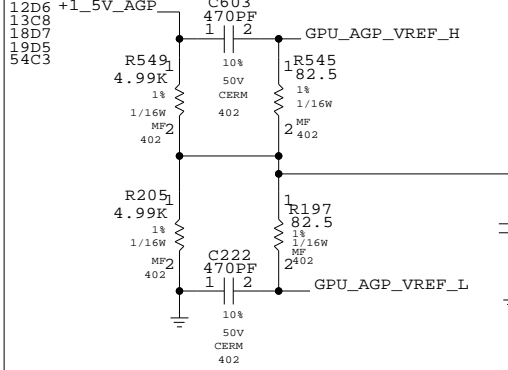
U25  
INTREPID  
BGA  
(3 OF 9)  
SEE TABLE  
(ON PAGE 12)

AGP  
INTERFACES  
VOUT = AGPIO (1.5V)  
VIN = VCORE (1.5V)

AGP PULL-UPS/PULL DOWNS



GPU AGP I/O REFERENCE  
(PLACE CLOSE TO GPU AGP BALLS)



### INTREPID AGP

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SCALE NONE		DWT 18		REV. D	
SHT 18		OF 74		REV. D	



APPLE COMPUTER INC.



61C7 54C3 48B4 19A4 18D7 18C2 18A8 13C8 12D6 +1\_5V\_AGP

D

D

C

C

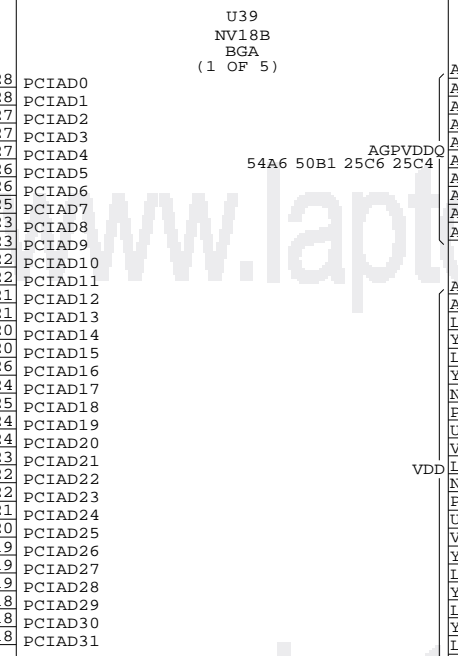
B

B

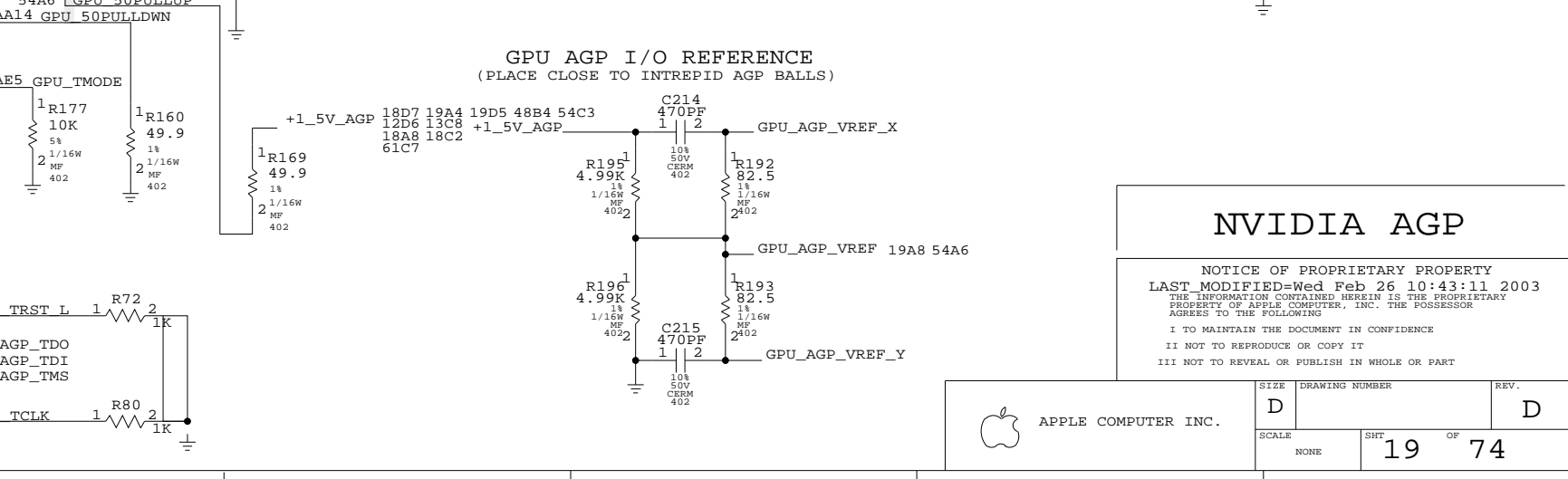
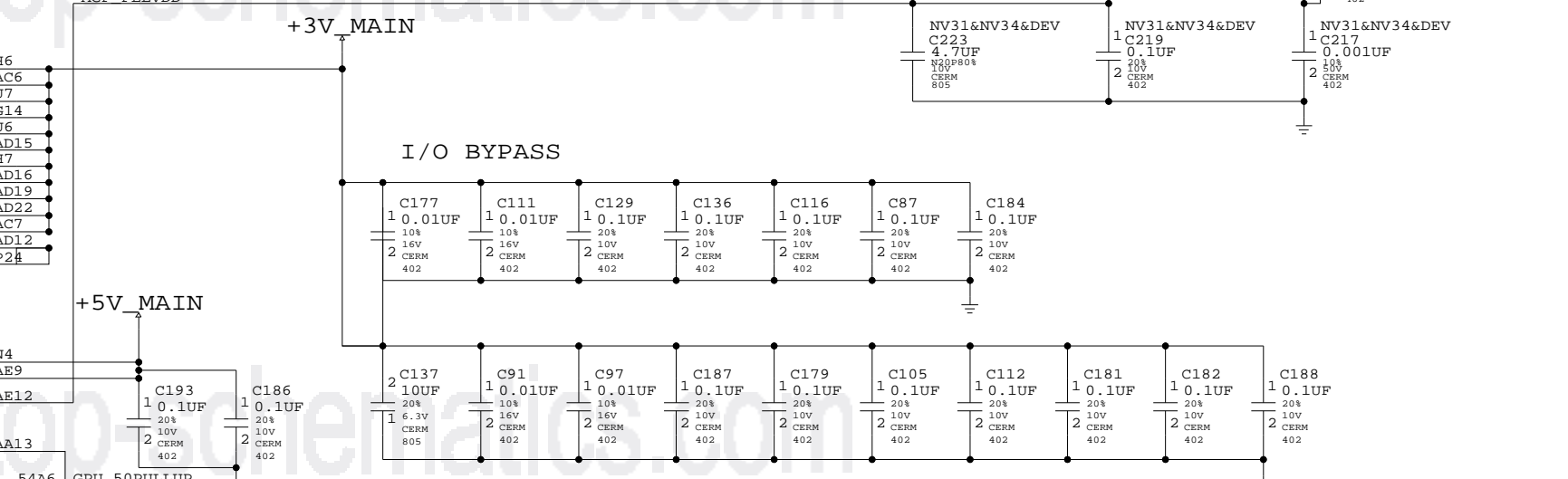
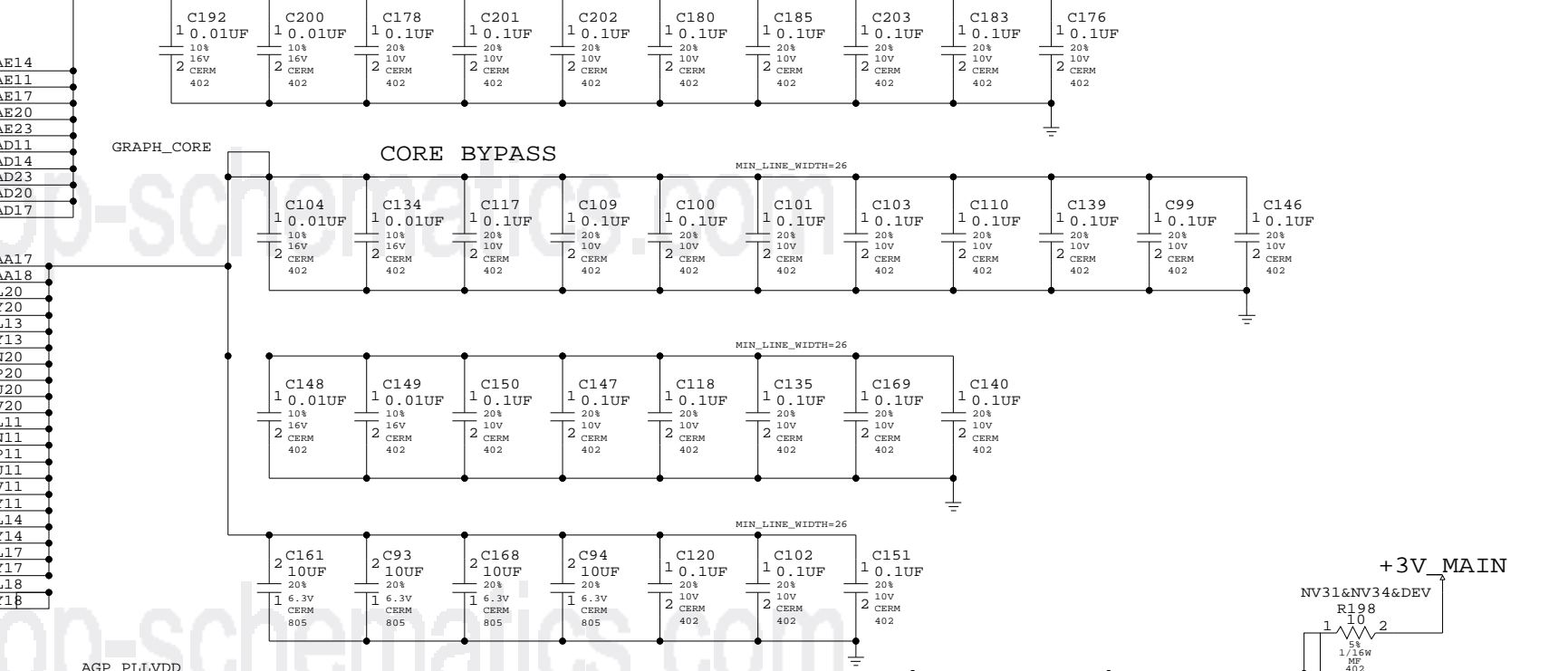
A

A

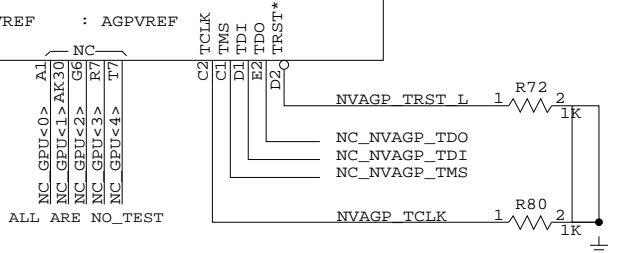
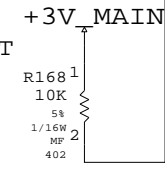
56C7 18C4 AGP_AD<0>	1	RP40	8	56B7 GPU AGP AD<0>	AJ28	PCIAD0
56C7 18C4 AGP_AD<1>	2	22	7	NO_TEST 56B7 GPU AGP AD<1>	AK28	PCIAD1
56C7 18C4 AGP_AD<2>	3	5	6	NO_TEST 56B7 GPU AGP AD<2>	AH27	PCIAD2
56C7 18C4 AGP_AD<3>	4	1/16W SM1	5	NO_TEST 56B7 GPU AGP AD<3>	AK27	PCIAD3
56C7 18C4 AGP_AD<4>	1	8	8	NO_TEST 56B7 GPU AGP AD<4>	AJ27	PCIAD4
56C7 18C4 AGP_AD<5>	56B7 2	RP30	7	NO_TEST GPU AGP AD<5>	AH26	PCIAD5
56C7 18C4 AGP_AD<6>	56B7 3	22	6	NO_TEST GPU AGP AD<6>	AJ26	PCIAD6
56C7 18C4 AGP_AD<7>	1	1/16W SM1	5	56B7 GPU AGP AD<7>	AH25	PCIAD7
56C7 18C4 AGP_AD<8>	1	8	8	NO_TEST 56B7 GPU AGP AD<8>	AH23	PCIAD8
56C7 18C4 AGP_AD<9>	2	RP32	7	NO_TEST 56B7 GPU AGP AD<9>	AJ23	PCIAD9
56C7 18C4 AGP_AD<10>	3	22	6	NO_TEST 56B7 GPU AGP AD<10>	AH22	PCIAD10
56C7 18C4 AGP_AD<11>	4	1/16W SM1	5	NO_TEST 56B7 GPU AGP AD<11>	AJ22	PCIAD11
56C7 18C4 AGP_AD<12>	1	8	8	NO_TEST 56B7 GPU AGP AD<12>	AJ21	PCIAD12
56C7 18C4 AGP_AD<13>	2	22	7	NO_TEST 56B7 GPU AGP AD<13>	AK21	PCIAD13
56C7 18C4 AGP_AD<14>	3	5	6	NO_TEST 56B7 GPU AGP AD<14>	AH20	PCIAD14
56C7 18C4 AGP_AD<15>	4	1/16W SM1	5	NO_TEST 56B7 GPU AGP AD<15>	AJ20	PCIAD15
56C7 18C4 AGP_AD<16>	1	8	8	NO_TEST 56B7 GPU AGP AD<16>	AG26	PCIAD16
56C7 18C4 AGP_AD<17>	2	RP31	7	NO_TEST 56B7 GPU AGP AD<17>	AE24	PCIAD17
56C7 18C4 AGP_AD<18>	3	22	6	NO_TEST GPU AGP AD<18>	AG25	PCIAD18
56C7 18C4 AGP_AD<19>	4	1/16W SM1	5	NO_TEST 56B7 GPU AGP AD<19>	AG24	PCIAD19
56C7 18C4 AGP_AD<20>	1	8	8	NO_TEST 56B7 GPU AGP AD<20>	AF24	PCIAD20
56C7 18C4 AGP_AD<21>	2	RP41	7	NO_TEST 56B7 GPU AGP AD<21>	AG23	PCIAD21
56C7 18C4 AGP_AD<22>	3	22	6	NO_TEST 56B7 GPU AGP AD<22>	AE22	PCIAD22
56C7 18C4 AGP_AD<23>	4	1/16W SM1	5	NO_TEST 56B7 GPU AGP AD<23>	AF22	PCIAD23
56C7 18B4 AGP_AD<24>	1	8	8	NO_TEST 56B7 GPU AGP AD<24>	AE21	PCIAD24
56C7 18B4 AGP_AD<25>	2	RP44	7	NO_TEST 56B7 GPU AGP AD<25>	AG20	PCIAD25
56C7 18B4 AGP_AD<26>	3	22	6	NO_TEST 56B7 GPU AGP AD<26>	AG19	PCIAD26
56C7 18B4 AGP_AD<27>	4	1/16W SM1	5	NO_TEST 56B7 GPU AGP AD<27>	AF19	PCIAD27
56C7 18B4 AGP_AD<28>	1	8	8	NO_TEST 56B7 GPU AGP AD<28>	AE19	PCIAD28
56C7 18B4 AGP_AD<29>	2	RP34	7	NO_TEST 56B7 GPU AGP AD<29>	AF18	PCIAD29
56C7 18B4 AGP_AD<30>	3	22	6	NO_TEST 56B7 GPU AGP AD<30>	AG18	PCIAD30
56C7 18B4 AGP_AD<31>	4	1/16W SM1	5	NO_TEST 56B7 GPU AGP AD<31>	AE18	PCIAD31



- AGP 2X, 4X : AGP 8X
- PCIC0/BE0\* : C0\*/BE0
- PCIC1/BE1\* : C1\*/BE1
- PCIC2/BE2\* : C2\*/BE2
- PCIC3/BE3\* : C3\*/BE3
- PCICLK\* : CLK
- PCIRST\* : RST\*
- PCIGNT\* : GNT
- PCIREQ\* : REQ
- PCIFRAME\* : FRAME
- PCIIRDY\* : IRDY
- PCITRDY\* : TRDY
- PCIDEVSEL\* : DEVSEL
- PCISTOP\* : STOP
- PCIPAR\* : PAR
- PCIINTA\* : INTA
- NC\_PCIINTB\* : INTB
- AGPRBF\* : RBF
- AGPWBF\* : WBF
- AGPPPIPE\* : DBI\_HI
- <RESRVD> : DBI\_LO
- AGPST0 : ST0
- AGPST1 : ST1
- AGPST2 : ST2
- AGPADSTBF0 : ADSTBF0
- AGPADSTBS0\* : ADSTBS0
- AGPADSTBF1 : ADSTBF1
- AGPADSTBS1\* : ADSTBS1
- AGPSBSTBF : SBSTBF
- AGPSBSTBS\* : SBSTBS
- AGPSBA0 : SBA0\*
- AGPSBA1 : SBA1\*
- AGPSBA2 : SBA2\*
- AGPSBA3 : SBA3\*
- AGPSBA4 : SBA4\*
- AGPSBA5 : SBA5\*
- AGPSBA6 : SBA6\*
- AGPSBA7 : SBA7\*
- <RESRVD> : MBDET\*
- AGPBUSY\* : BUSY\*
- AGPSTOP\* : STOP\*
- AGPVREF : AGPVREF



AGP VERSION SELECT  
(LOW = AGP V3.X)  
(HIGH = AGP V2.X)



**NVIDIA AGP**

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PLACE R'S BETWEEN GPU & MEMORY

Table with columns for component ID, test status, resistor value, and component ID. Rows include 57D3 20G8 FBD<0> through 57D3 20F8 FBD<31>.

Table with columns for component ID, test status, resistor value, and component ID. Rows include 57D3 20F8 FBD<32> through 57D3 20E8 FBD<63>.

Table with columns for component ID, test status, resistor value, and component ID. Rows include 57D3 20F8 FBD<32> through 57D3 20E8 FBD<63>.

PLACE R'S CLOSE TO GPU

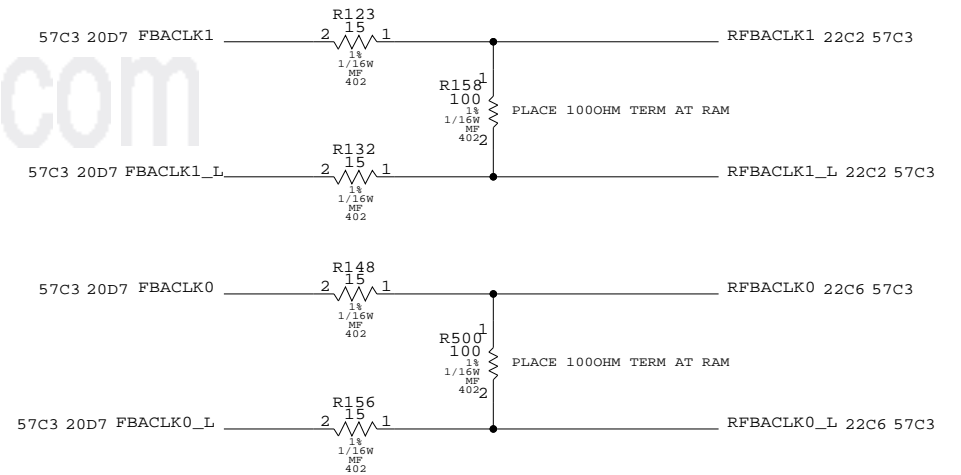
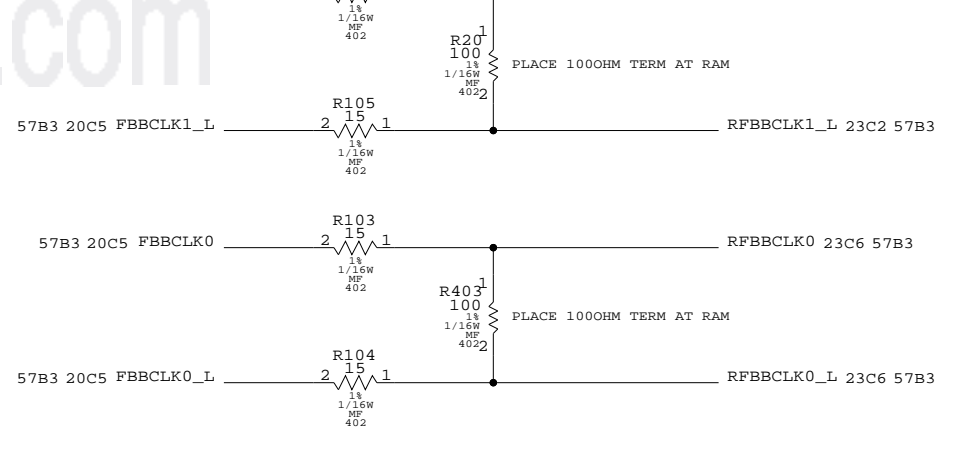


Table with columns for component ID, test status, resistor value, and component ID. Rows include 57C3 20G5 FBD<64> through 57C3 20F5 FBD<95>.

Table with columns for component ID, test status, resistor value, and component ID. Rows include 57C3 20F5 FBD<96> through 57C3 20E5 FBD<127>.

Table with columns for component ID, test status, resistor value, and component ID. Rows include 57C3 20F5 FBD<96> through 57C3 20E5 FBD<127>.

PLACE R'S CLOSE TO GPU

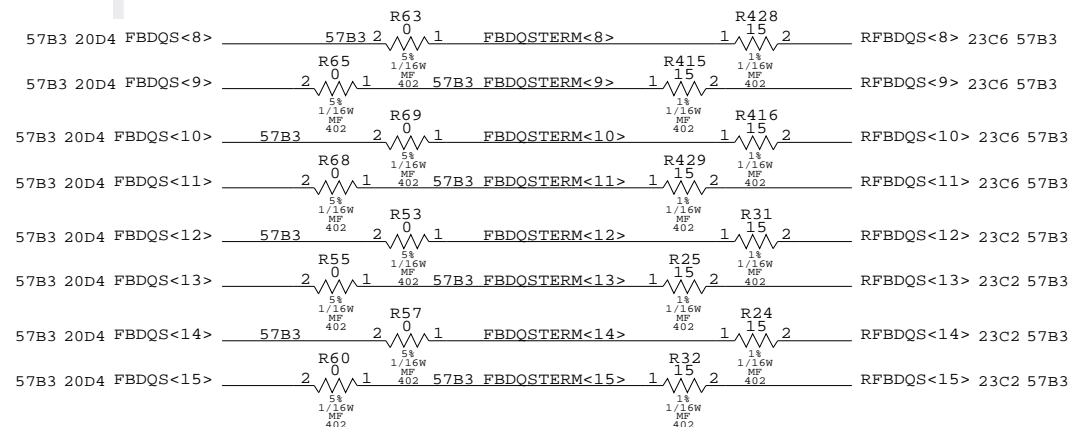
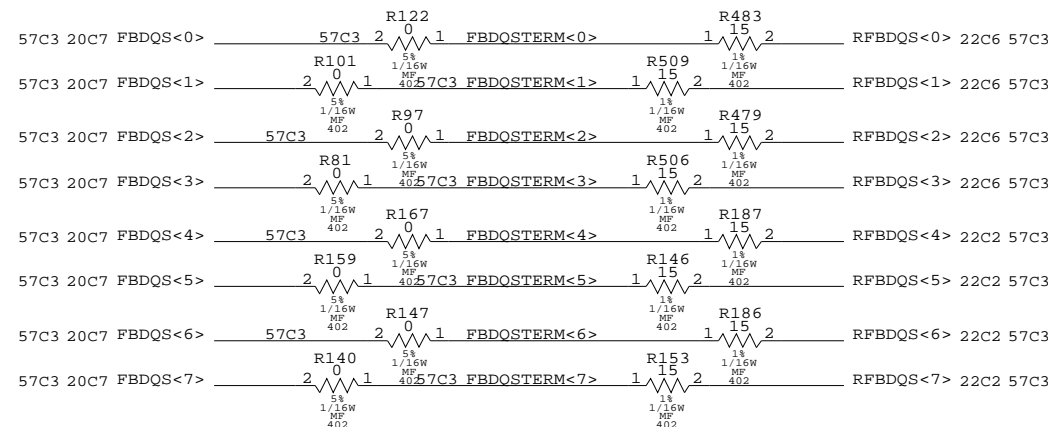


PLACE THESE R CLOSE TO GPU

PLACE THESE R CLOSE TO SGRAM

PLACE THESE R CLOSE TO GPU

PLACE THESE R CLOSE TO SGRAM

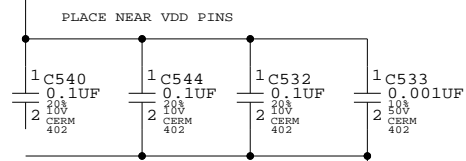


FB TERMINATION

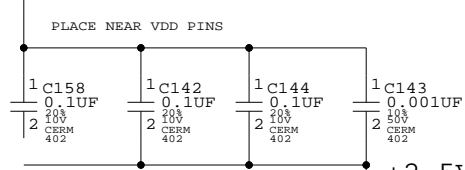
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Table with columns for Apple Computer Inc., Drawing Number (D), Scale (NONE), Sheet (21 OF 74), and Revision (D).

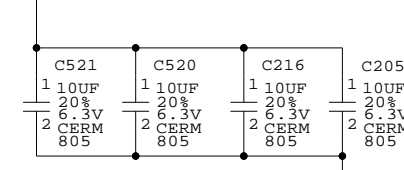
+2\_5V\_MAIN



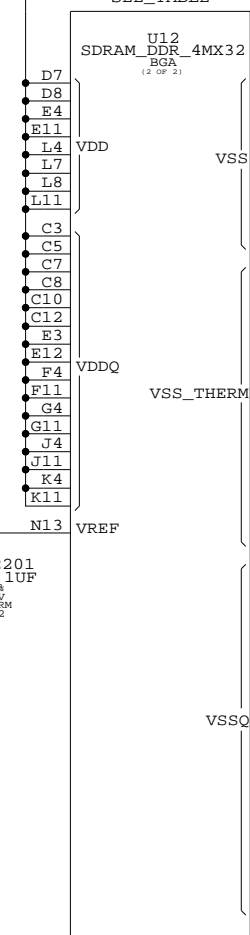
+2\_5V\_MAIN



+2\_5V\_MAIN



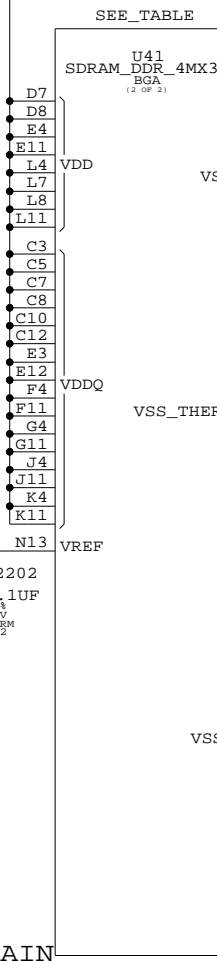
+2\_5V\_MAIN



SEE\_TABLE for U12 SDRAM\_DDR\_4MX32 (1 OF 2) listing pins A0-A11, B0-B3, C0-C3, D0-D3, E0-E3, F0-F3, G0-G3, H0-H3, J0-J3, K0-K3, M0-M3, N0-N3, and NC connections.

SEE\_TABLE for U12 SDRAM\_DDR\_4MX32 (2 OF 2) listing pins B7-B11, C0-C3, D0-D3, E0-E3, F0-F3, G0-G3, H0-H3, J0-J3, K0-K3, M0-M3, N0-N3, and RFU1/RFU2 connections.

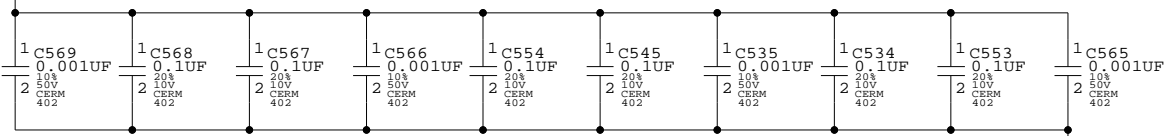
+2\_5V\_MAIN



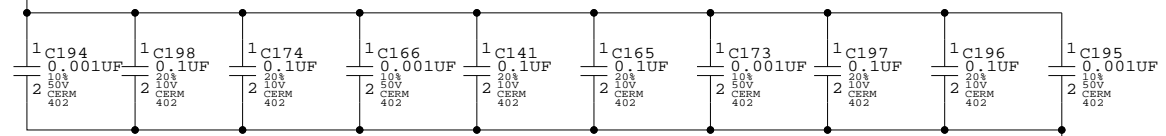
SEE\_TABLE for U41 SDRAM\_DDR\_4MX32 (1 OF 2) listing pins A0-A11, B0-B3, C0-C3, D0-D3, E0-E3, F0-F3, G0-G3, H0-H3, J0-J3, K0-K3, M0-M3, N0-N3, and NC connections.

SEE\_TABLE for U41 SDRAM\_DDR\_4MX32 (2 OF 2) listing pins B7-B11, C0-C3, D0-D3, E0-E3, F0-F3, G0-G3, H0-H3, J0-J3, K0-K3, M0-M3, N0-N3, and RFU1/RFU2 connections.

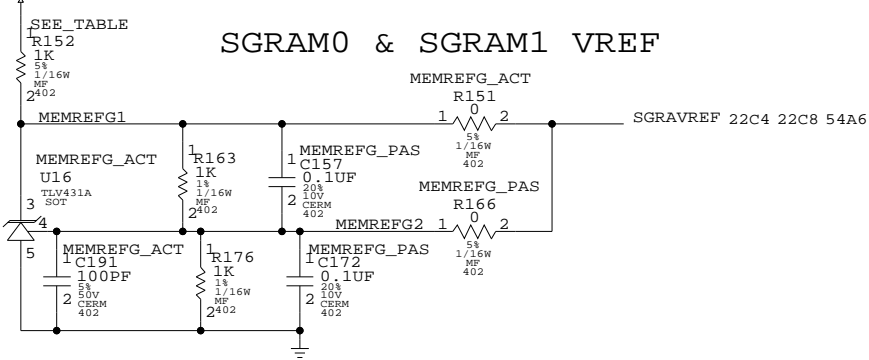
+2\_5V\_MAIN



+2\_5V\_MAIN



+2\_5V\_MAIN



SGRAM0 & SGRAM1 MEMORY SUPPORT table with columns: PART NUMBER, QTY, DESCRIPTION, REFERENCE DES, CRITICAL, BOM OPTION.

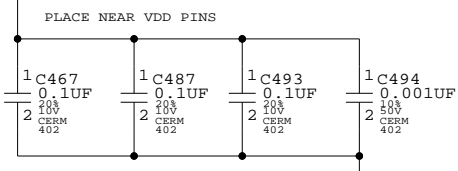
SGRAM0 & SGRAM1 DDR MEMORY REFERENCE SUPPORT table with columns: PART NUMBER, QTY, DESCRIPTION, REFERENCE DES, CRITICAL, BOM OPTION.

SGRAM0 & SGRAM1

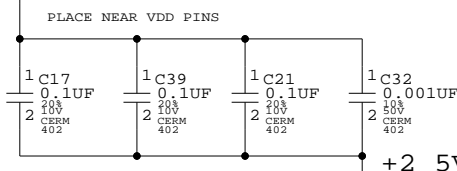
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Apple Computer Inc. logo and drawing information: SCALE NONE, SHT 22 OF 74, REV. D.

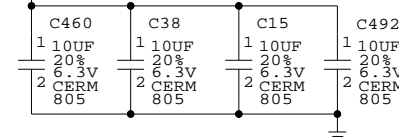
+2\_5V\_MAIN



+2\_5V\_MAIN



+2\_5V\_MAIN



+2\_5V\_MAIN

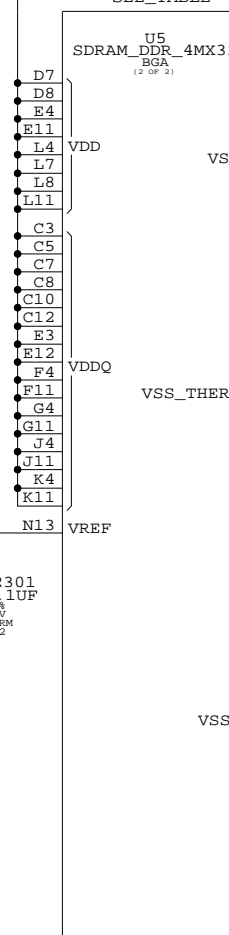


Table mapping SDRAM pins to memory bank addresses (e.g., 57C3 23D2 20C2 RFBBAA<0> to N5 A0).

Table mapping SDRAM pins to memory bank addresses (e.g., DQ0 B7, DQ1 C6, DQ2 B6).

+2\_5V\_MAIN

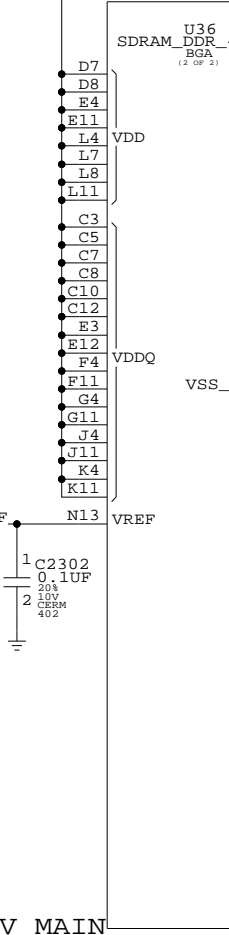
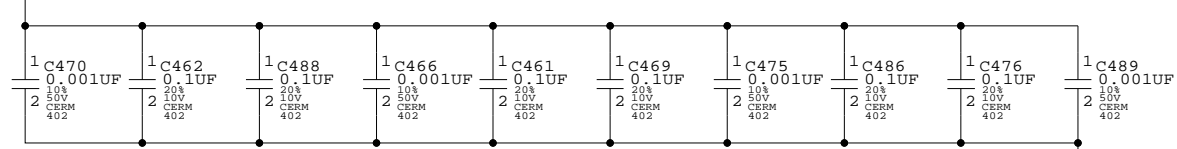


Table mapping SDRAM pins to memory bank addresses (e.g., 57C3 23D6 20C2 RFBBAA<0> to N5 A0).

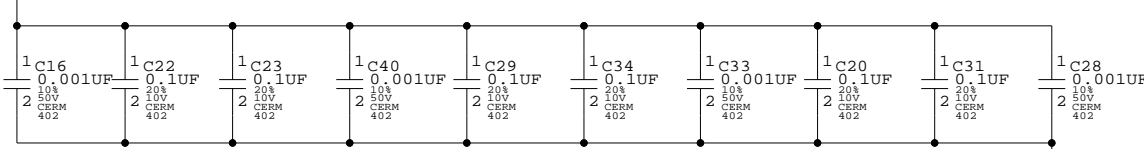
Table mapping SDRAM pins to memory bank addresses (e.g., DQ0 B7, DQ1 C6, DQ2 B6).

Table mapping SDRAM pins to memory bank addresses (e.g., DQ0 B7, DQ1 C6, DQ2 B6).

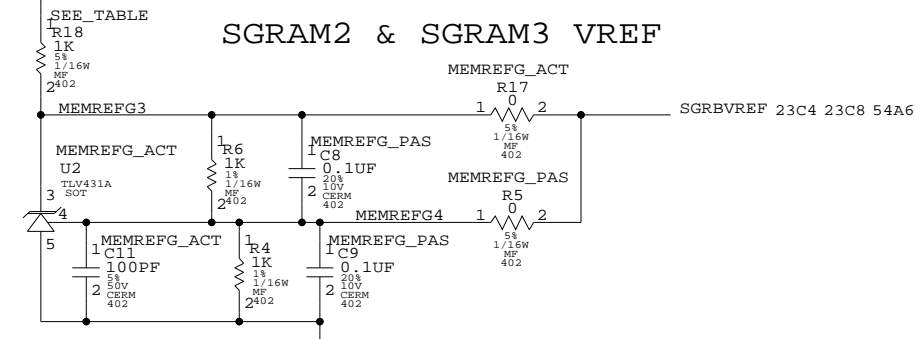
+2\_5V\_MAIN



+2\_5V\_MAIN



+2\_5V\_MAIN



SGRAM0 & SGRAM1 MEMORY SUPPORT

Table with 6 columns: PART NUMBER, QTY, DESCRIPTION, REFERENCE DES, CRITICAL, BOM OPTION. Lists SDRAM parts 333S0249 and 333S0250.

SGRAM2 & SGRAM3 DDR MEMORY REFERENCE SUPPORT

Table with 6 columns: PART NUMBER, QTY, DESCRIPTION, REFERENCE DES, CRITICAL, BOM OPTION. Lists resistor parts 116S1103 and 116S1000.

SGRAM2 & SGRAM3

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D

D

C

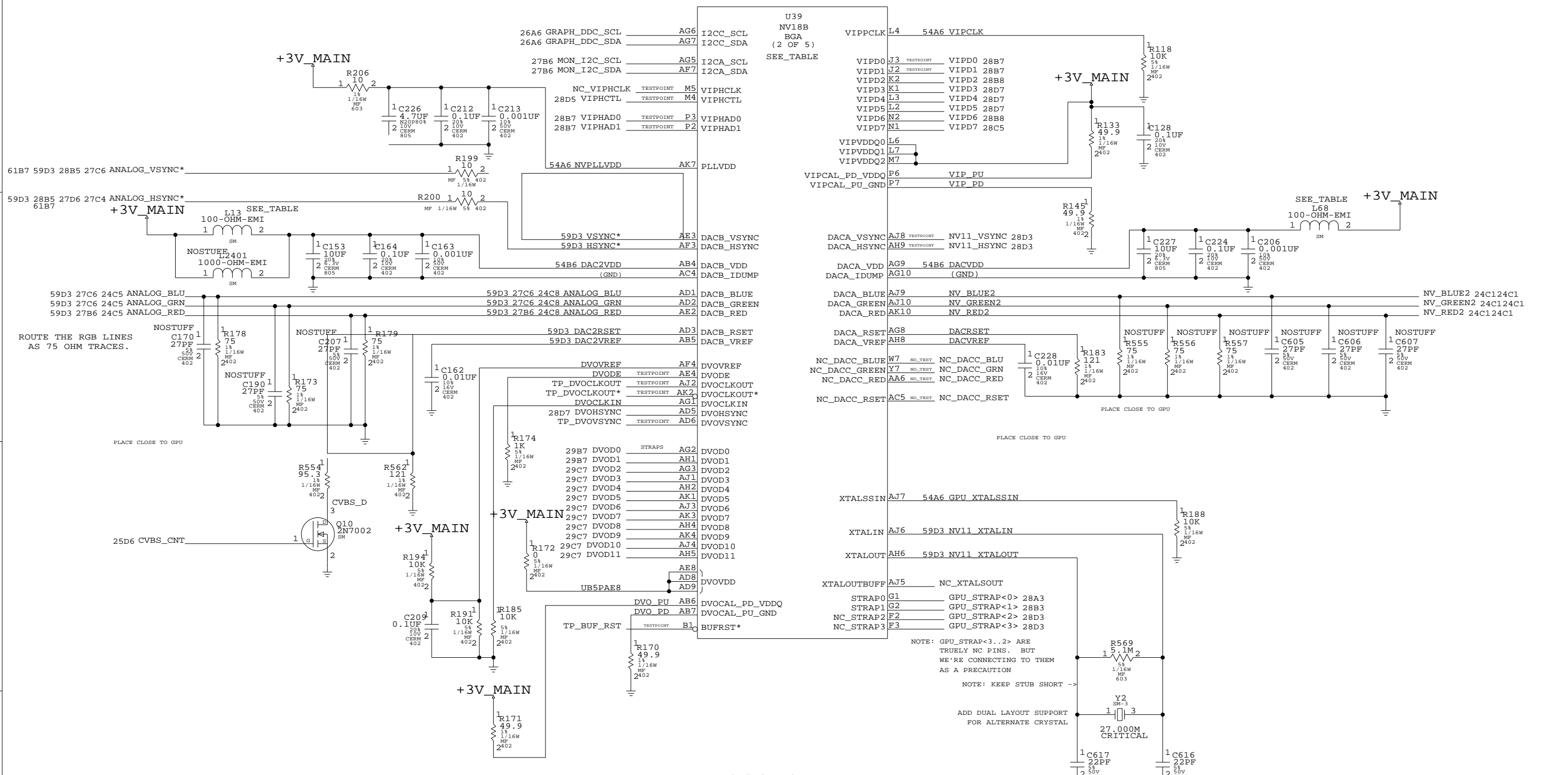
C

B

B

A

A



NVIDIA ASIC SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
338S0119	1	IC,NV18B,GRPHCS CTLR, A03	U39		NV18B
338S0112	1	IC,NV31,GRPHCS CTLR	U39		NV31
338S0113	1	IC,NV34,GRPHCS CTLR	U39		NV34
155S0141	1	FLTR,EMI,600 OHMS,.2A,0603	L2401		NOSTUFF
155S0143	2	FLTR,EMI,1000 OHMS,.2A,0805	L13,L68		NOSTUFF

**DAC & CLOCKS**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	24	74

D

D

C

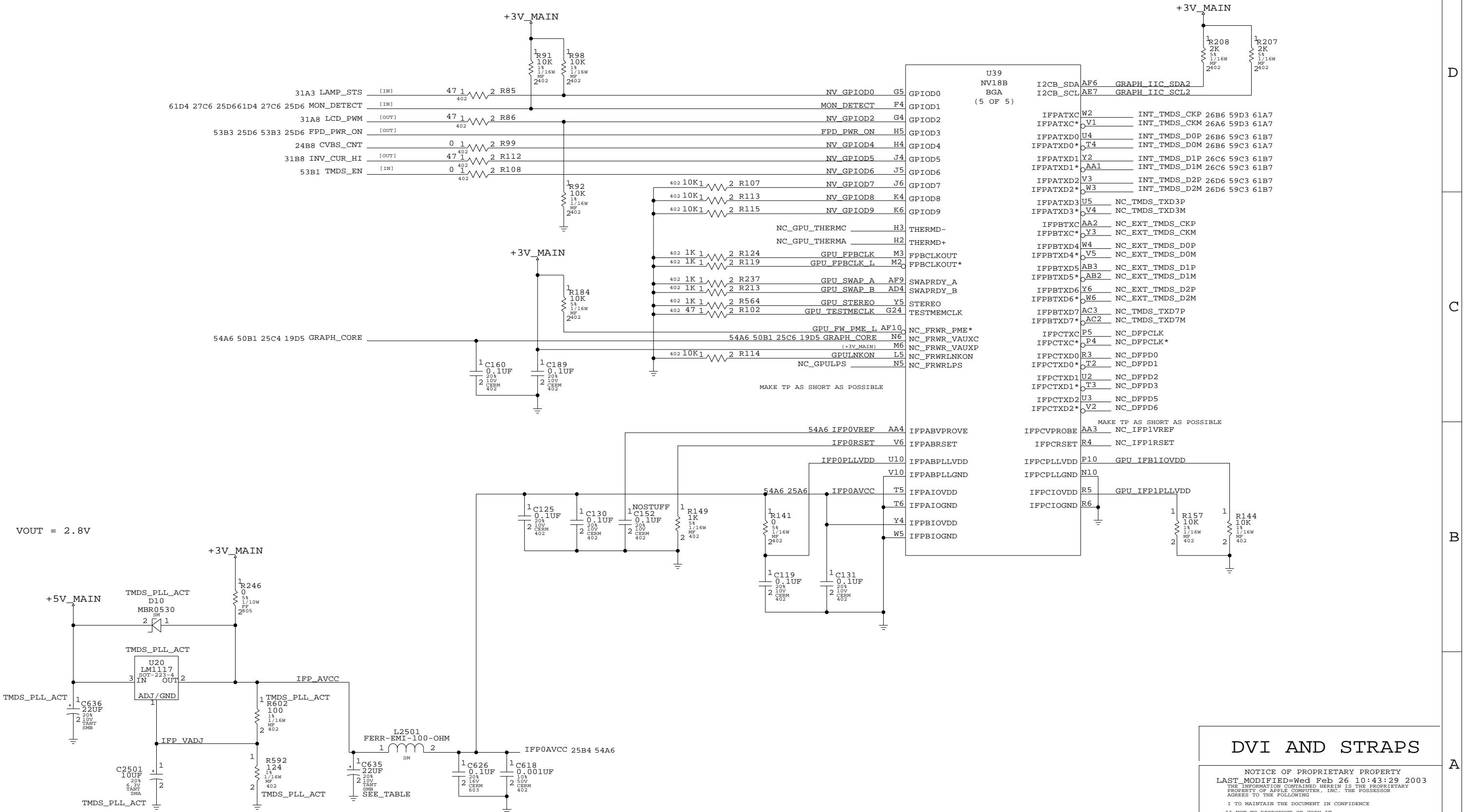
C

B

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A



VOUT = 2.8V

# DVI AND STRAPS

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THE STUFFING OF AN 0805 PACKAGE ONTO C635S LARGER TANT PADS IS CORRECT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
132S1063	1	1UF, 10%, 10V, 0805, CERM	C635		

APPLE COMPUTER INC.

SCALE	SHT	REV.
NONE	25 OF 74	D

D

C

B

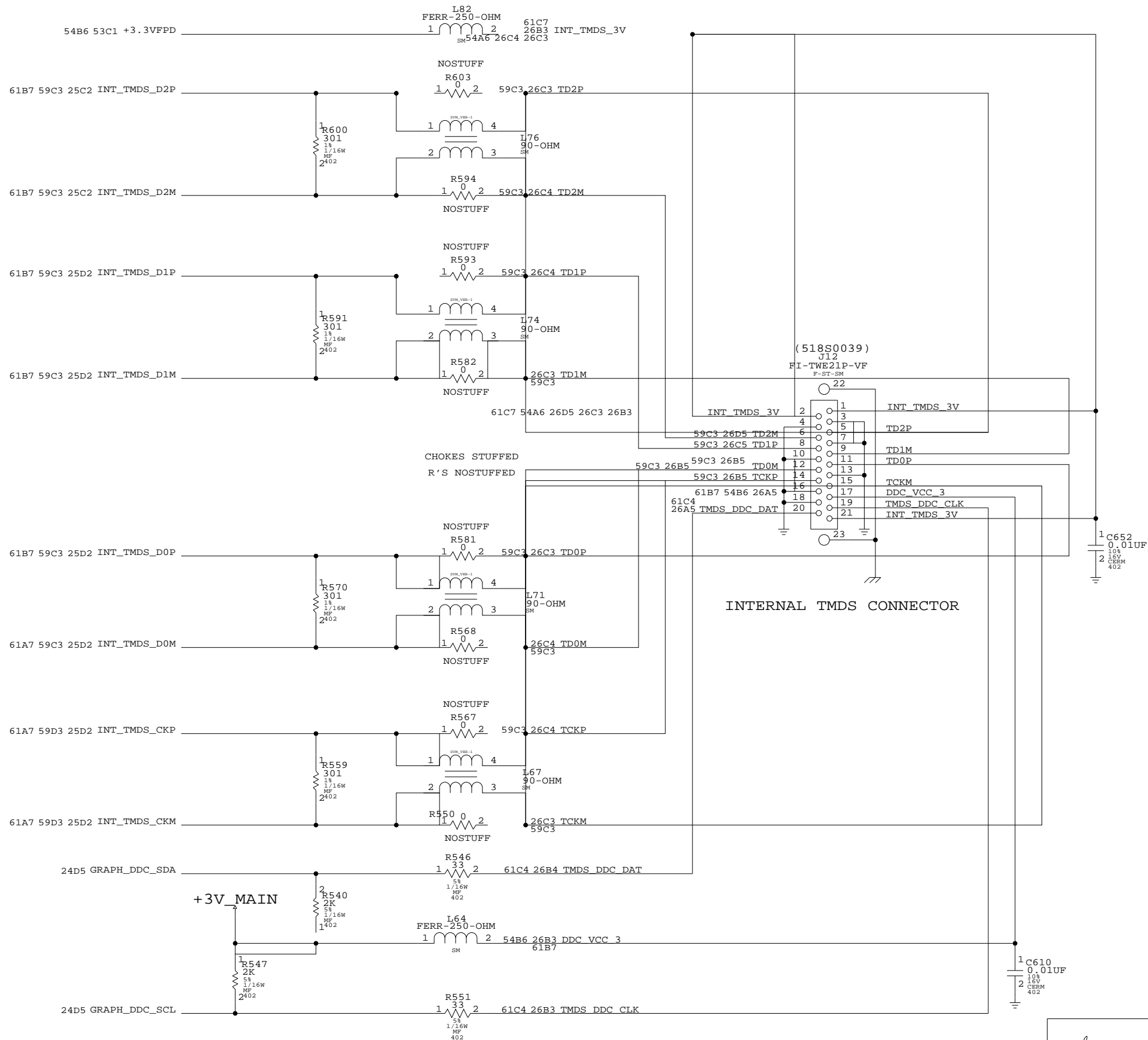
A

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A



**TMDS**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	26	74

D

D

C

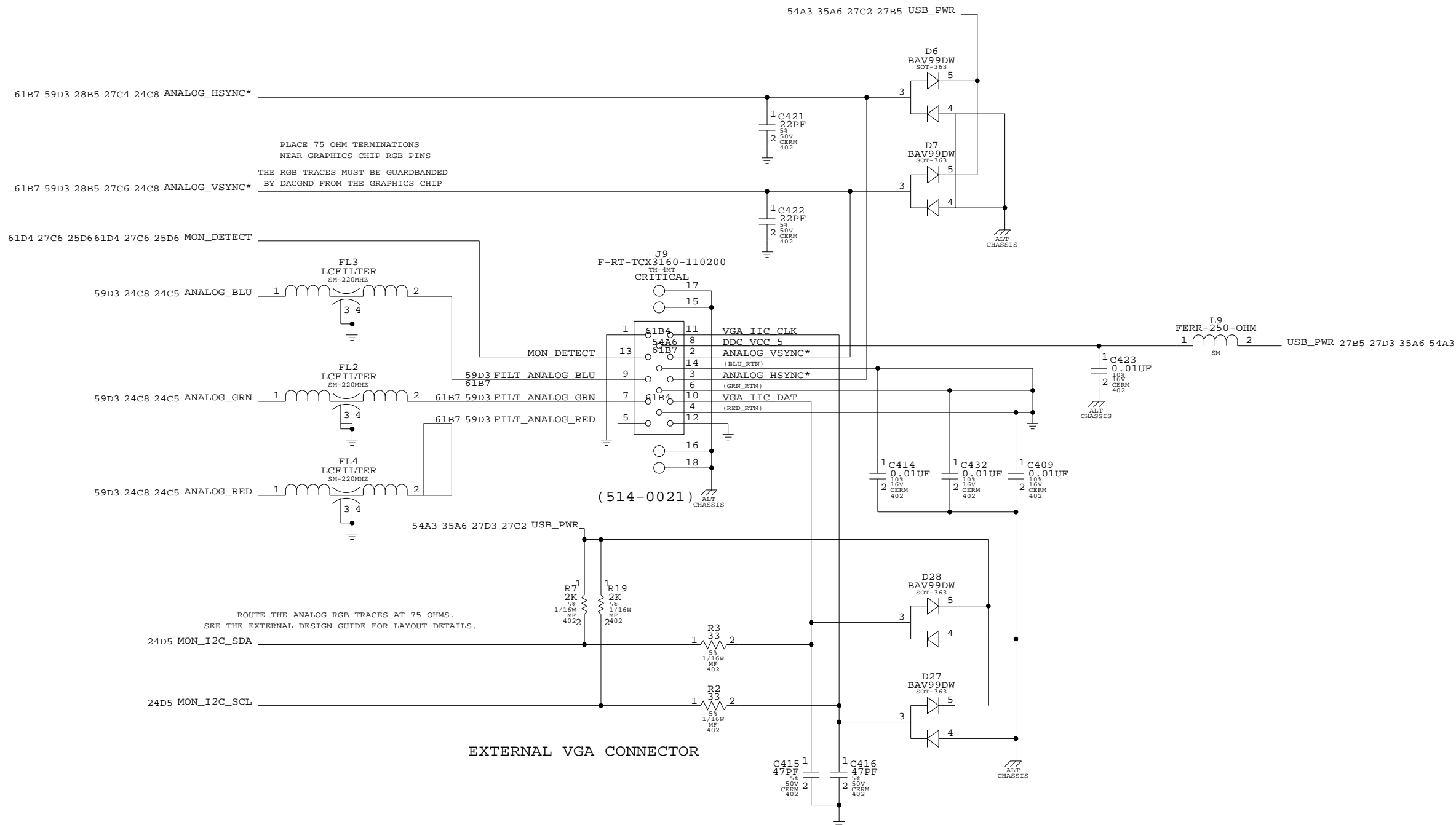
C

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B

A

A



**EXTERNAL VGA**

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	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	27	74



D

D

C

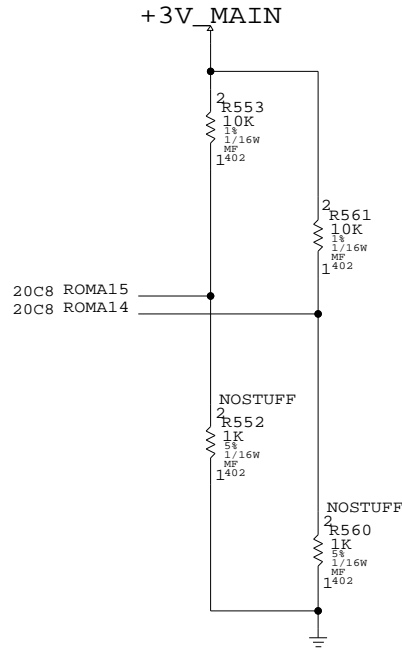
C

B

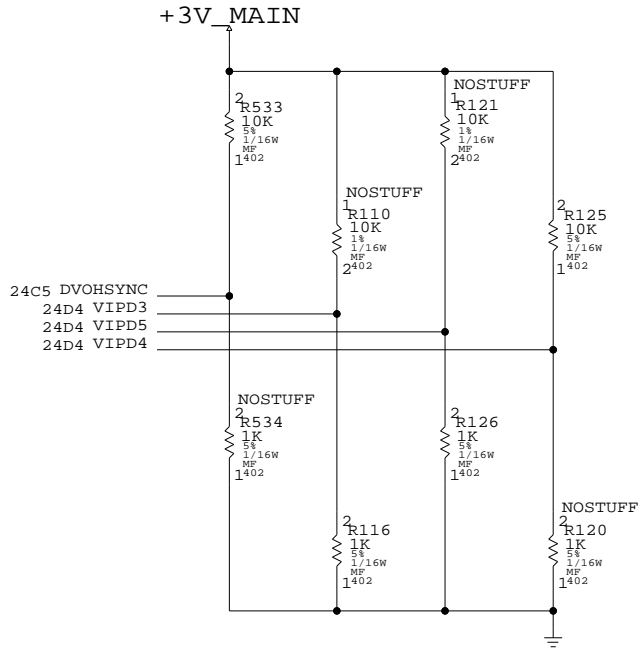
B

A

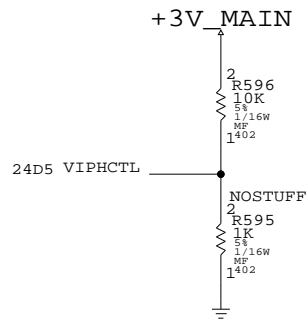
A



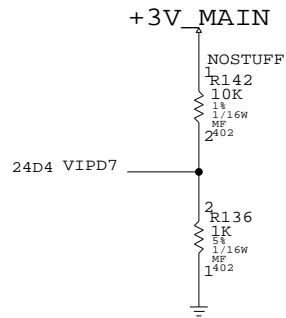
(1) ROM TYPE (OVERRIDDEN IF STRAP1 = 0)  
 [1..0] = [ROMA15,ROMA14]  
 00 = PARALLEL  
 01 = SERIAL AT25F  
 10 = SERIAL SST45VF  
 \* 11 = SERIAL FUTURE



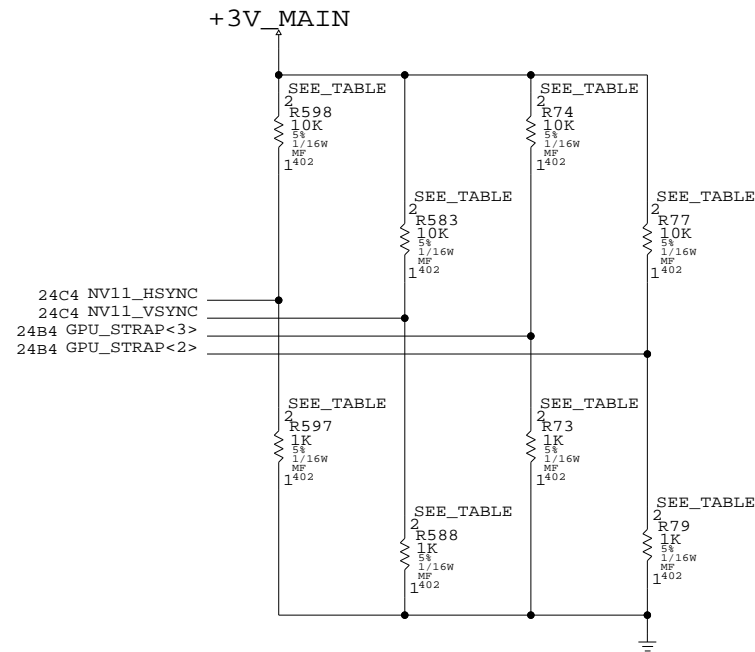
(3) PCI DEVICE ID  
 [3..0] = [DVOHSYNC, VIPD3, VIPD5, VIPD4]  
 0010 = 0X112 GEFORCE2 GO  
 0011 = 0X113 QUADRO2 GO  
 0100 = 0X114 NV17M  
 0000 = 0X110 GEFORCE2GO MX (NV11B)  
 \* 1001 = NV18B, NV31, NV34



(5) HOST MODE  
 [0] = [VIPHCTL]  
 0 = PCI MODE  
 \* 1 = AGP MODE

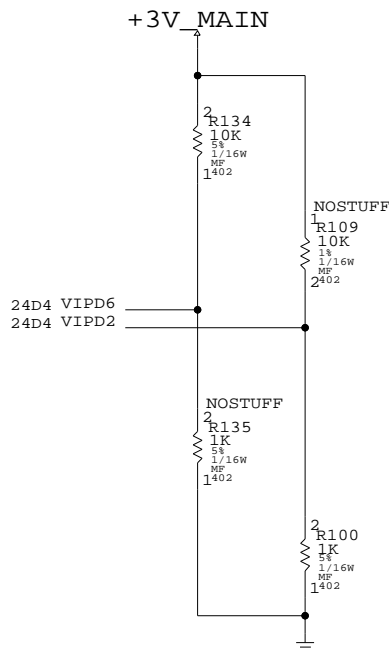


(6) AGP SIDEBAND  
 [0] = [VIPD7]  
 \* 0 = ENABLE AGP SIDEBAND  
 1 = DISABLE AGP SIDEBAND

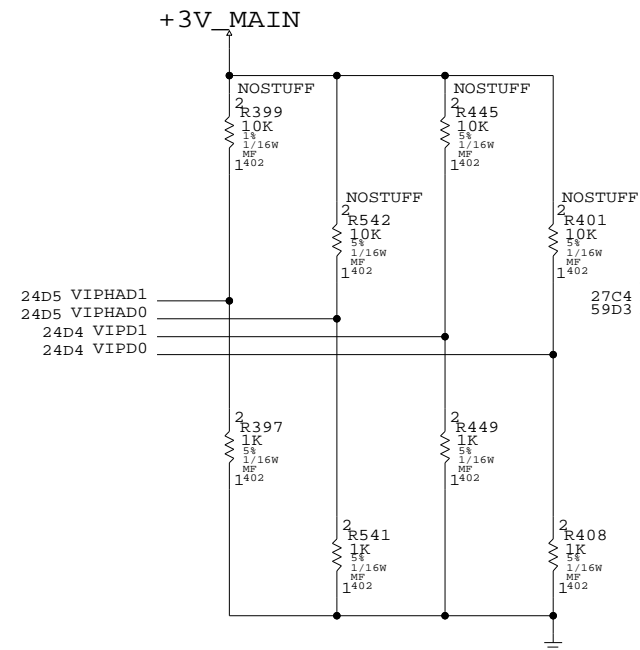


(8) FRAME BUFFER MEMORY TYPE  
 [3..0] = [NV11\_HSYNC, NV11\_VSYNC, GPU\_STRAP<3>, GPU\_STRAP<2>]  
 1111 = 222MHZ  
 1101 = 275MHZ SAMSUNG  
 1100 = 275MHZ HYNIX

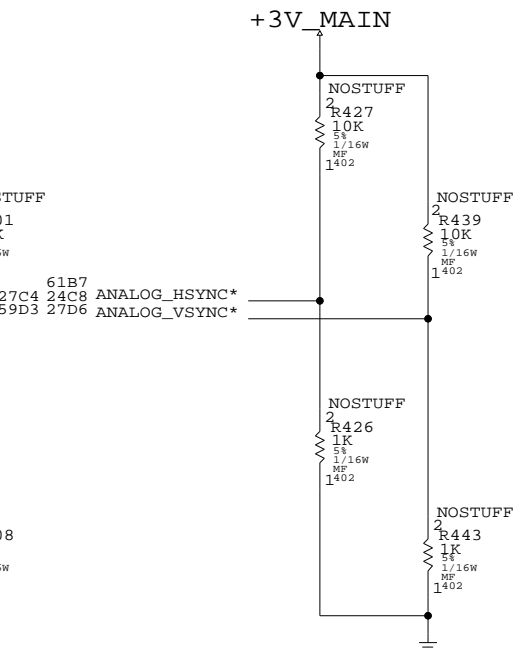
PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
116S1104	3	RES, 10KOHM, 5%, 0402	R598, R583, R77		275_SAMSUNG
116S1103	1	RES, 1KOHM, 5%, 0402	R73		275_SAMSUNG
116S1104	2	RES, 10KOHM, 5%, 0402	R598, R583		275_HYNIX
116S1103	2	RES, 1KOHM, 5%, 0402	R73, R79		275_HYNIX



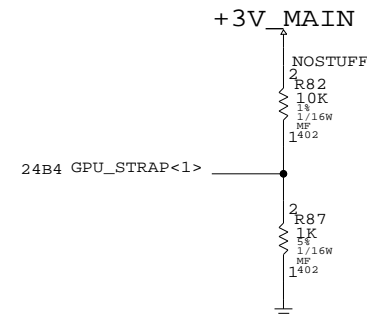
(2) CRYSTAL FREQUENCY SELECT  
 [1..0] = [VIPD6, VIPD2]  
 00 = 13.5MHZ  
 01 = 14.38MHZ  
 \* 10 = 27MHZ  
 11 = {UNDEFINED}



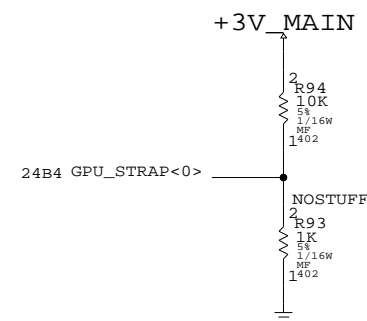
(4) USER DEFINED STRAPS  
 [3..0] = [VIPHAD1, VIPHAD0, VIPD1, VIPD0]  
 THESE BITS ARE UNDEFINED BUT THEY  
 MUST BE KEPT LOW DURING RESET



(7) TV MODE  
 [1..0] = [ANALOG\_HSYNC\*, ANALOG\_VSYNC\*]  
 00 = SECAM  
 01 = NTSC  
 10 = PAL  
 \* 11 = DISABLED  
 (THESE RESISTORS ARE ALL NOSTUFF)



(9) SUB-VENDOR  
 [0] = [GPU\_STRAP<1>]  
 0 = SYSTEM BIOS (VENDOR & SUBSYSTEM ID=0X0000)  
 \* 1 = ADAPTER CARD VGA BIOS (VENDOR & SUBSYSTEM ID=0X54-0X57)



(10) PCI ADDRESS BUS  
 [0] = [GPU\_STRAP<0>]  
 0 = REVERSED  
 \* 1 = NORMAL

### NVIDIA STRAPS 1

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SCALE NONE	SHT 28	OF 74	SIZE D	DRAWING NUMBER	REV. D
			APPLE COMPUTER INC.		

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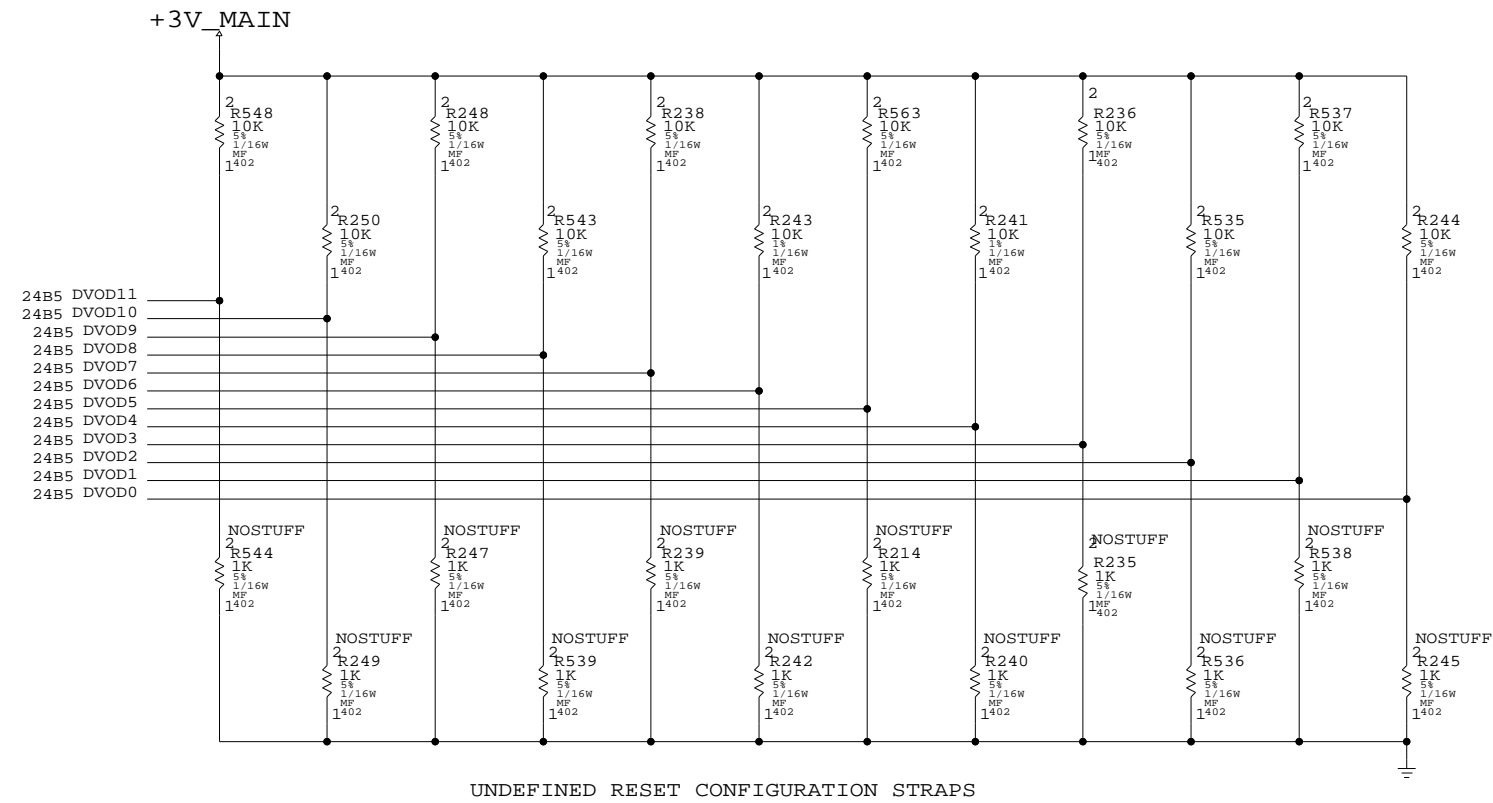
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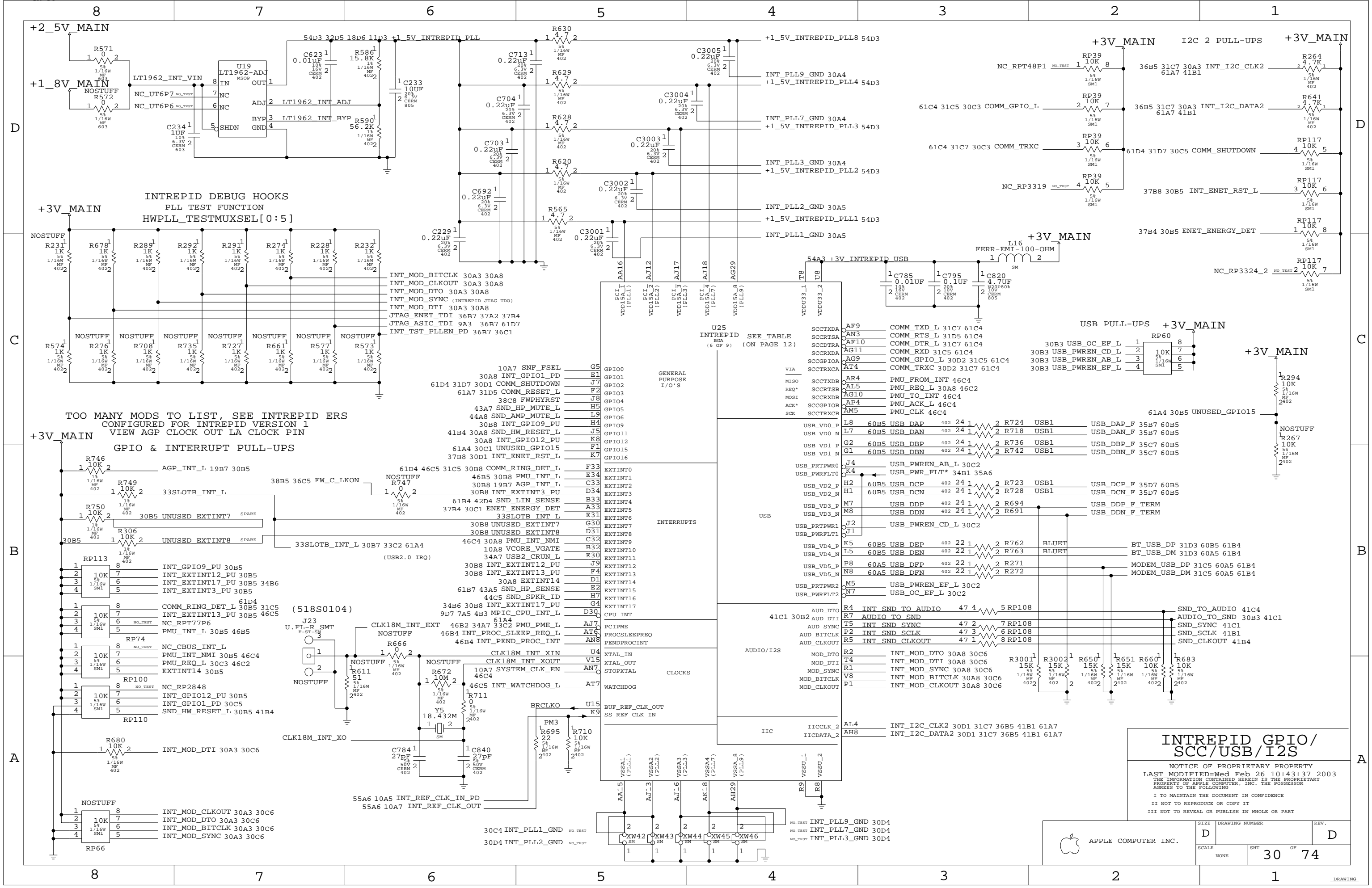


### NVIDIA STRAPS 2

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	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	29	74

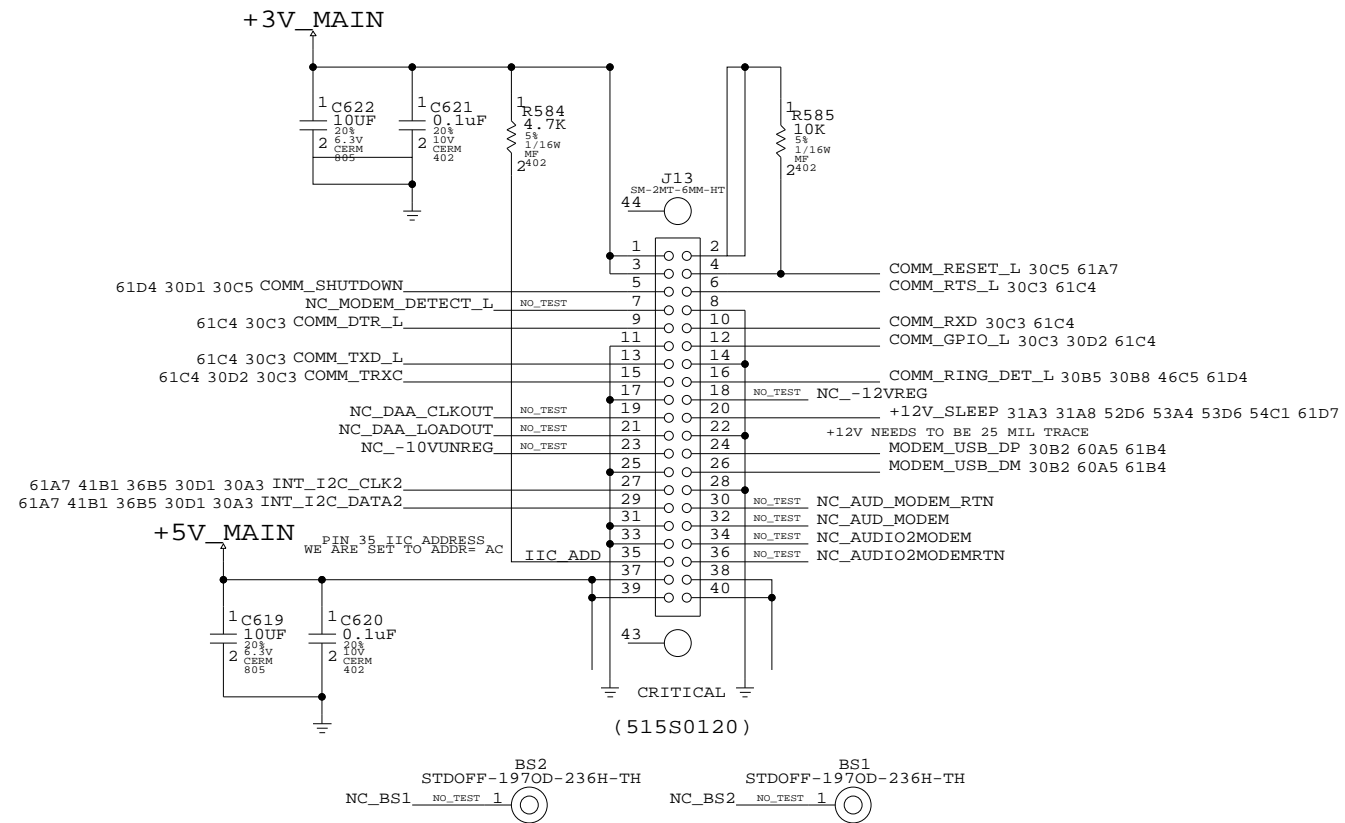


### INTREPID GPIO/SCC/USB/I2S

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	D	D	
SCALE	SHT	OF	
NONE	30	74	

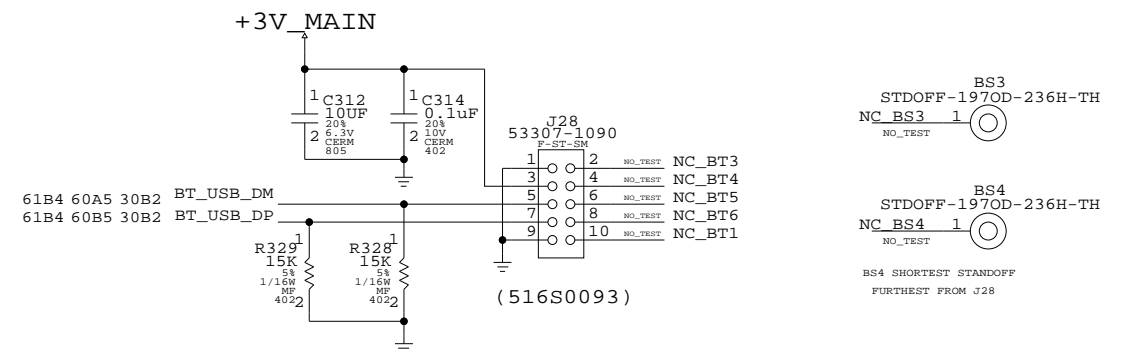
### MODEM BOARD CONNECTOR (DASH II)



MODEM STANDOFF SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
860-1034	2	STDOFF-19709-236H-TH	BS1, BS2		

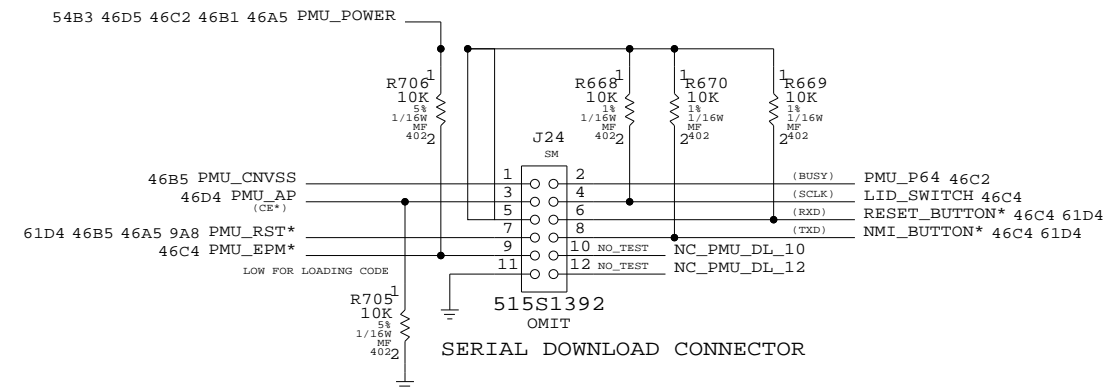
### BLUETOOTH CONNECTOR



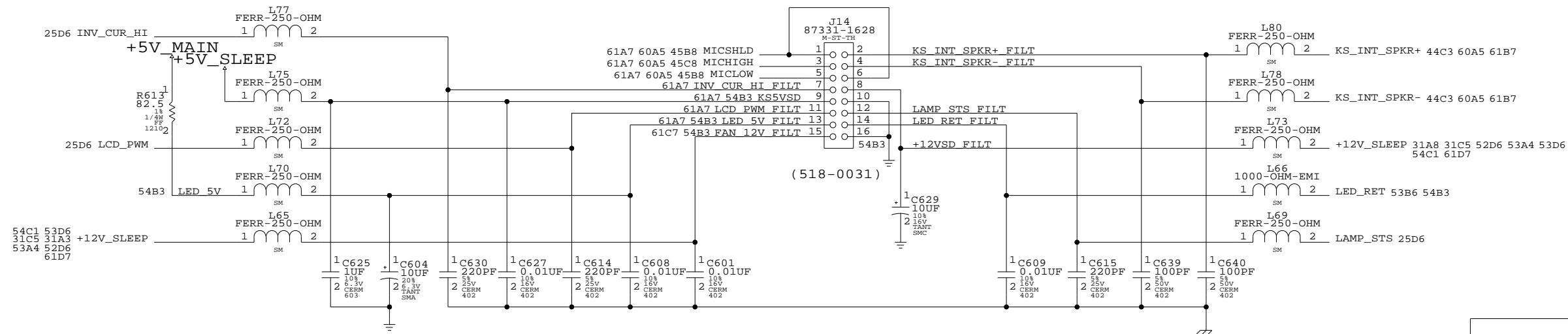
BLUETOOTH CARD MOUNTING HARDWARE SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
860-0170	1	STDOFF, BLUETOOTH, SHORT	BS4		
860-0171	1	STDOFF, BLUETOOTH, LONG	BS3		

### SERIAL DOWNLOAD INTERFACE



### 'KITCHEN SINK' CONNECTOR (MICROPHONE, INTERNAL SPEAKER CONNECTIONS INVERTER, LCD, LED & FAN POWER)



### MODEM, BLUETOOTH, & SERIAL DOWNLOAD

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SCALE	SHT	31	74
NONE			



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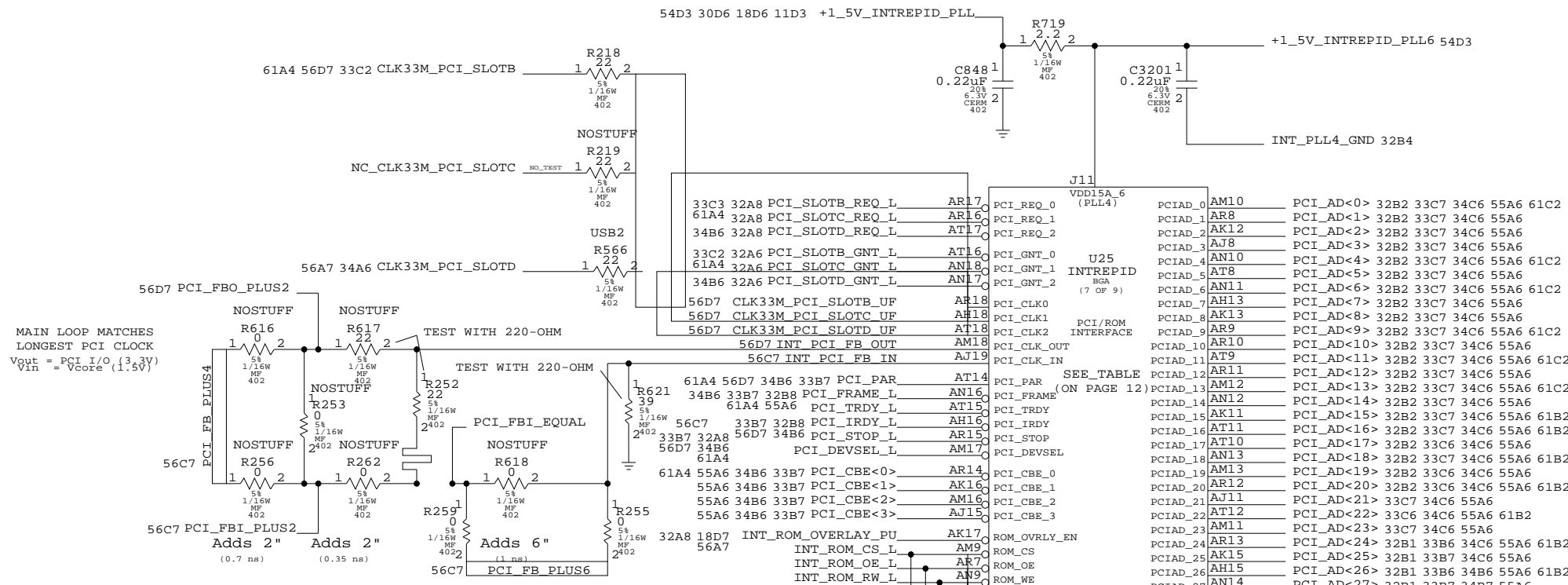
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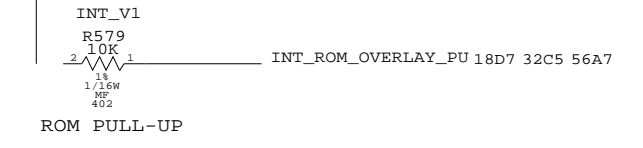
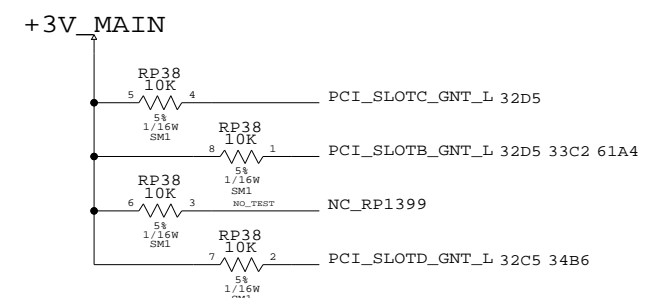
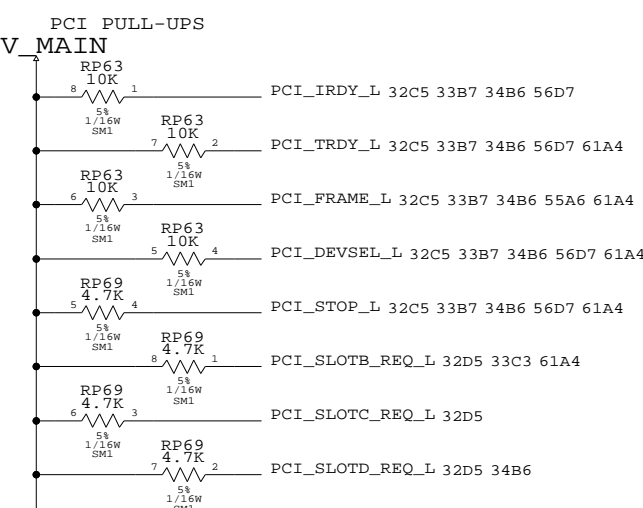


MAIN LOOP MATCHES  
LONGEST PCI CLOCK  
V<sub>OUT</sub> = PCI I/O (3.3V)  
V<sub>IN</sub> = V<sub>core</sub> (1.5V)

PLACE ALL SERPENTINES ON INTERNAL LAYER  
ALLOWS ADJUSTING FEEDBACK CLOCK FROM MATCHED (0 NS)  
TO +10" (1.7 NS) IN 2" (0.35 NS) INCREMENTS

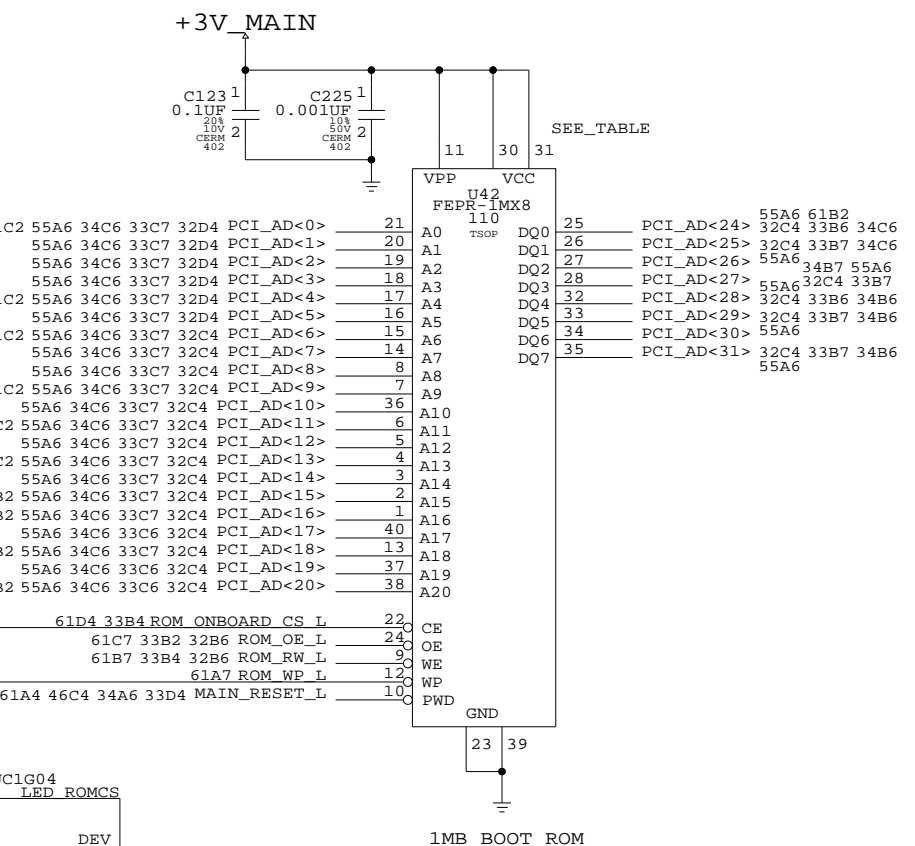
INTREPID PCI INTERFACE

33C3 32A8 PCI_SLOTB_REQ_L	AR17	PCI_REQ_0	PCIAD_0	AM10	PCI_AD<0>	32B2 33C7 34C6 55A6 61C2
61A4 32A8 PCI_SLOTC_REQ_L	AR16	PCI_REQ_1	PCIAD_1	AR8	PCI_AD<1>	32B2 33C7 34C6 55A6
34B6 32A8 PCI_SLOTD_REQ_L	AT17	PCI_REQ_2	PCIAD_2	AK12	PCI_AD<2>	32B2 33C7 34C6 55A6
33C2 32A6 PCI_SLOTB_GNT_L	AT16	PCI_GNT_0	PCIAD_3	AJ8	PCI_AD<3>	32B2 33C7 34C6 55A6
61A4 32A6 PCI_SLOTC_GNT_L	AN18	PCI_GNT_1	PCIAD_4	AN10	PCI_AD<4>	32B2 33C7 34C6 55A6 61C2
34B6 32A6 PCI_SLOTD_GNT_L	AN17	PCI_GNT_2	PCIAD_5	AT8	PCI_AD<5>	32B2 33C7 34C6 55A6
56D7 CLK33M_PCI_SLOTB_UP	AR18	PCI_CLK0	PCIAD_6	AN11	PCI_AD<6>	32B2 33C7 34C6 55A6 61C2
56D7 CLK33M_PCI_SLOTC_UP	AH18	PCI_CLK1	PCIAD_7	AH13	PCI_AD<7>	32B2 33C7 34C6 55A6
56D7 CLK33M_PCI_SLOTD_UP	AT18	PCI_CLK2	PCIAD_8	AK13	PCI_AD<8>	32B2 33C7 34C6 55A6
56D7 INT_PCI_FB_OUT	AM18	PCI_CLK_OUT	PCIAD_9	AR9	PCI_AD<9>	32B2 33C7 34C6 55A6 61C2
56C7 INT_PCI_FB_IN	AJ19	PCI_CLK_IN	PCIAD_10	AR10	PCI_AD<10>	32B2 33C7 34C6 55A6
			PCIAD_11	AT9	PCI_AD<11>	32B2 33C7 34C6 55A6 61C2
			PCIAD_12	AR11	PCI_AD<12>	32B2 33C7 34C6 55A6
			PCIAD_13	AM12	PCI_AD<13>	32B2 33C7 34C6 55A6 61C2
			PCIAD_14	AN12	PCI_AD<14>	32B2 33C7 34C6 55A6
			PCIAD_15	AK11	PCI_AD<15>	32B2 33C7 34C6 55A6 61B2
			PCIAD_16	AT11	PCI_AD<16>	32B2 33C7 34C6 55A6 61B2
			PCIAD_17	AT10	PCI_AD<17>	32B2 33C6 34C6 55A6
			PCIAD_18	AN13	PCI_AD<18>	32B2 33C7 34C6 55A6 61B2
			PCIAD_19	AM13	PCI_AD<19>	32B2 33C6 34C6 55A6
			PCIAD_20	AR12	PCI_AD<20>	32B2 33C6 34C6 55A6 61B2
			PCIAD_21	AJ11	PCI_AD<21>	33C7 34C6 55A6
			PCIAD_22	AT12	PCI_AD<22>	33C6 34C6 55A6 61B2
			PCIAD_23	AM11	PCI_AD<23>	33C7 34C6 55A6
			PCIAD_24	AR13	PCI_AD<24>	32B1 33B6 34C6 55A6 61B2
			PCIAD_25	AK15	PCI_AD<25>	32B1 33B7 34C6 55A6
			PCIAD_26	AH15	PCI_AD<26>	32B1 33B6 34B6 55A6 61B2
			PCIAD_27	AN14	PCI_AD<27>	32B1 33B7 34B7 55A6
			PCIAD_28	AT13	PCI_AD<28>	32B1 33B6 34B6 55A6
			PCIAD_29	AK14	PCI_AD<29>	32B1 33B7 34B6 55A6
			PCIAD_30	AN15	PCI_AD<30>	32B1 33B6 34B6 55A6 61B2
			PCIAD_31	AM15	PCI_AD<31>	32B1 33B7 34B6 55A6



FLASH BOOT ROM SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
341T1107	1	IC, FLASH, PROD, ROM, PRGMD	U42		
341S1169	1	IC, FEPR, FLASH ROM, PROD	U42		ROM_PRGMD PROD
009-6420	1	IC, FEPR, FLASH ROM, PROD	U42		ROM_IMG PROD
341S1225	1	IC, FLASH, BOOT ROM, Q26, 4.5.8B2	U42		ROM_PRGMD PROD
009-6076	1	CODE, BOOTROM, Q26, PVT, 4.5.8B2	U42		ROM_IMG PROD
335S0350	1	IC, FLASH ROM, 1MB, BLANK	U42		OMIT



**INTREPID PCI & BOOT ROM**

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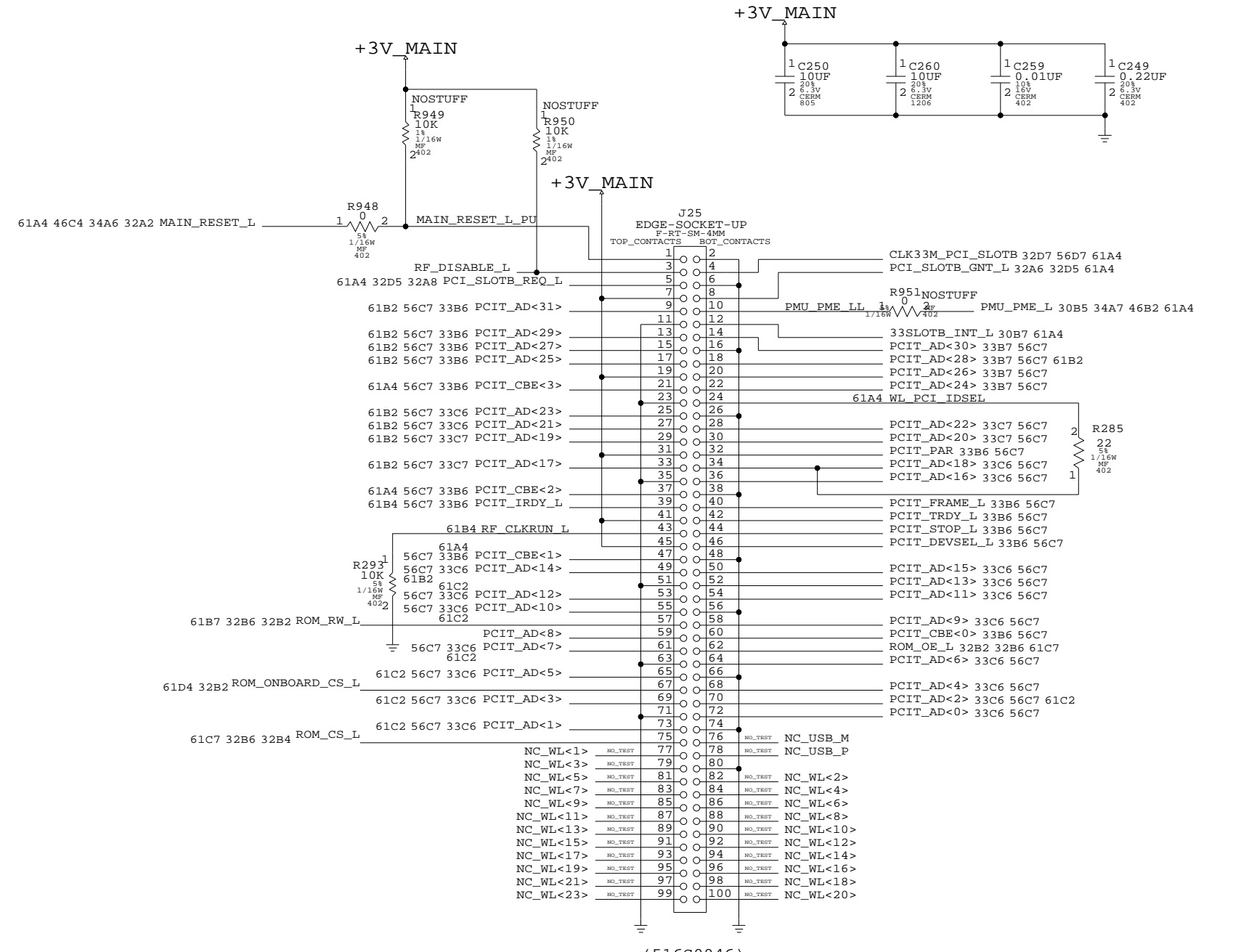
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APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
SCALE	SHT	OF
NONE	32	74

PLACE RP'S NEAR WIRELESS CONNECTOR

61C2 55A6 34C6 32D4 32B2 PCI_AD<0>	1	RP77	8	PCIT_AD<0>	33B2 56C7
55A6 34C6 32D4 32B2 PCI_AD<1>	2	33	7	PCIT_AD<1>	33B3 56C7 61C2
55A6 34C6 32D4 32B2 PCI_AD<2>	3	1/16W	6 NO_TEST	PCIT_AD<2>	33B2 56C7 61C2
55A6 34C6 32D4 32B2 PCI_AD<3>	4	SM1	5	PCIT_AD<3>	33B3 56C7 61C2
61C2 55A6 34C6 32D4 32B2 PCI_AD<4>	1	RP75	8	PCIT_AD<4>	33B2 56C7
55A6 34C6 32D4 32B2 PCI_AD<5>	2	33	7	PCIT_AD<5>	33B3 56C7 61C2
61C2 55A6 34C6 32C4 32B2 PCI_AD<6>	3	1/16W	6 NO_TEST	PCIT_AD<6>	33B2 56C7
55A6 34C6 32C4 32B2 PCI_AD<7>	4	SM1	5	PCIT_AD<7>	33B3 56C7 61C2
55A6 34C6 32C4 32B2 PCI_AD<8>	1	8	8	PCIT_AD<8>	33B3 56C7 61C2
61C2 55A6 34C6 32C4 32B2 PCI_AD<9>	2	RP73	7 NO_TEST	PCIT_AD<9>	33B2 56C7
55A6 34C6 32C4 32B2 PCI_AD<10>	3	33	6	PCIT_AD<10>	33B3 56C7 61C2
61C2 55A6 34C6 32C4 32B2 PCI_AD<11>	4	1/16W	5 NO_TEST	PCIT_AD<11>	33B2 56C7
55A6 34C6 32C4 32B2 PCI_AD<12>	1	SM1	8	PCIT_AD<12>	33B3 56C7 61C2
61C2 55A6 34C6 32C4 32B2 PCI_AD<13>	2	RP72	7 NO_TEST	PCIT_AD<13>	33B2 56C7
55A6 34C6 32C4 32B2 PCI_AD<14>	3	33	6	PCIT_AD<14>	33C3 56C7 61B2
61B2 55A6 34C6 32C4 32B2 PCI_AD<15>	4	1/16W	5 NO_TEST	PCIT_AD<15>	33C2 56C7
61B2 55A6 34C6 32C4 32B2 PCI_AD<16>	1	SM1	8	PCIT_AD<16>	33C2 56C7
61B2 56C7 33C3 PCIT_AD<17>	2	RP59	7	PCI_AD<17>	32B2 32C4 34C6 55A6
61B2 55A6 34C6 32C4 32B2 PCI_AD<18>	3	33	6	PCIT_AD<18>	33C2 56C7
61B2 56C7 33C3 PCIT_AD<19>	4	1/16W	5	PCI_AD<19>	32B2 32C4 34C6 55A6
55A6 34C6 32C4 PCI_AD<23>	1	SM1	8	PCIT_AD<23>	33C3 56C7 61B2
55A6 34C6 32C4 PCI_AD<21>	2	RP58	7	PCIT_AD<21>	33C3 56C7 61B2
56C7 33C2 PCIT_AD<22>	3	33	6	PCI_AD<22>	32C4 34C6 55A6 61B2
56C7 33C2 PCIT_AD<20>	4	1/16W	5	PCI_AD<20>	32B2 32C4 34C6 55A6 61B2
55A6 34B7 32C4 32B1 PCI_AD<27>	1	SM1	8	PCIT_AD<27>	33C3 56C7 61B2
55A6 34C6 32C4 32B1 PCI_AD<25>	2	RP56	7	PCIT_AD<25>	33C3 56C7 61B2
56C7 33C2 PCIT_AD<26>	3	33	6	PCI_AD<26>	32B1 32C4 34B6 55A6 61B2
56C7 33C2 PCIT_AD<24>	4	1/16W	5	PCI_AD<24>	32B1 32C4 34C6 55A6 61B2
61B2 56C7 33C2 PCIT_AD<28>	1	SM1	8	PCI_AD<28>	32B1 32C4 34B6 55A6
56C7 33C2 PCIT_AD<30>	2	RP54	7	PCI_AD<30>	32B1 32C4 34B6 55A6 61B2
55A6 34B6 32C4 32B1 PCI_AD<31>	3	33	6	PCIT_AD<31>	33C3 56C7 61B2
55A6 34B6 32C4 32B1 PCI_AD<29>	4	1/16W	5	PCIT_AD<29>	33C3 56C7 61B2
61A4 56D7 34B6 32C5 PCI_PAR	1	SM1	8	PCIT_PAR 39>	33C2 56C7
61A4 55A6 34B6 32C5 32B8 PCI_FRAME_L	2	RP61	7 NO_TEST	PCIT_FRAME_L	33C2 56C7
61A4 56D7 34B6 32C5 32B8 PCI_TRDY_L	3	33	6 NO_TEST	PCIT_TRDY_L	33C2 56C7
56D7 34B6 32C5 32B8 PCI_IRDY_L	4	1/16W	5 NO_TEST	PCIT_IRDY_L	33C3 56C7 61B4
61A4 56D7 34B6 32C5 32A8 PCI_STOP_L	1	SM1	8	PCIT_STOP_L	33C2 56C7
61A4 56D7 34B6 32C5 32A8 PCI_DEVSEL_L	2	RP67	7 NO_TEST	PCIT_DEVSEL_L	33C2 56C7
55A6 34B6 32C5 PCI_CBE<1>	3	33	6	PCIT_CBE<1>	33C3 56C7 61A4
61A4 55A6 34B6 32C5 PCI_CBE<0>	4	1/16W	5 NO_TEST	PCIT_CBE<0>	33B2 56C7
55A6 34B6 32C5 PCI_CBE<2>	1	SM1	8	PCIT_CBE<2>	33C3 56C7 61A4
55A6 34B6 32C5 PCI_CBE<3>	2	RP64	7	PCIT_CBE<3>	33C3 56C7 61A4
NC_PCIR0	NO_TEST	3	6 NO_TEST	NC_PCITR0	
NC_PCIR1	NO_TEST	4	5 NO_TEST	NC_PCITR1	



(516S0046)

WIRELESS CARD MOUNTING HARDWARE SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
815-7245	1	WIRELESS CARD GUIDE, J25	J251		
452-0411	2	NUT, HEX, M2 X 1.5H, J25	J252, J253		
452-0412	2	SCREW, M2 X 0.4 X 6.0 L, J25	J254, J255		

WIRELESS PCI

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	D		D
SCALE	SHT	OF	
NONE	33	74	

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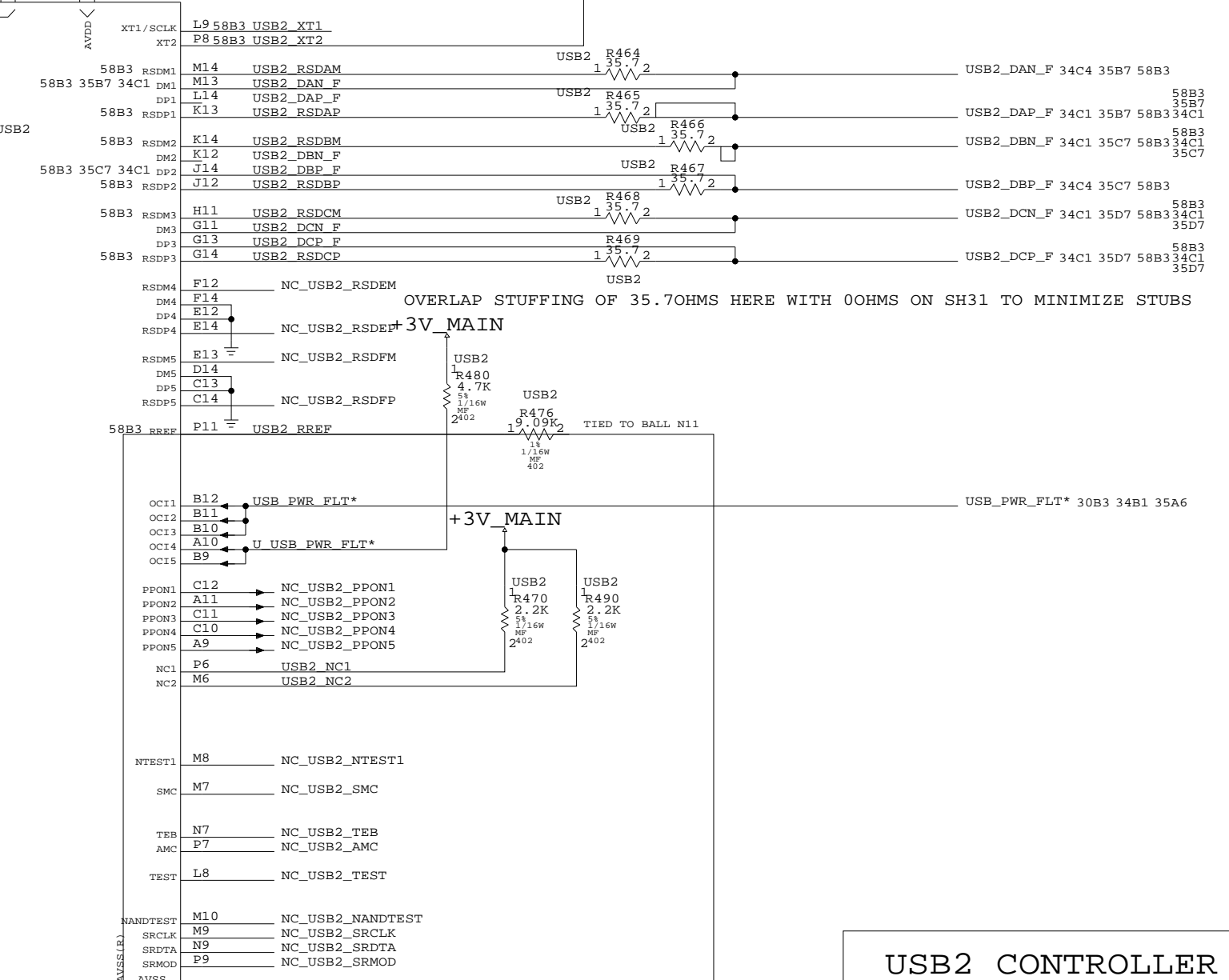
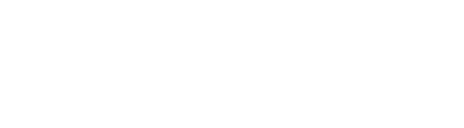
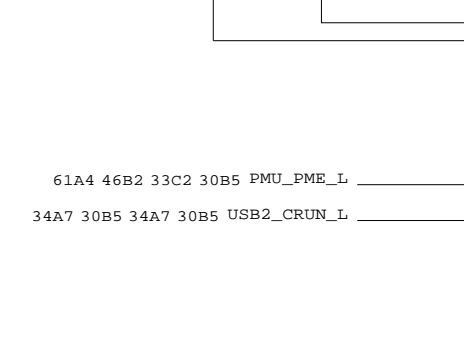
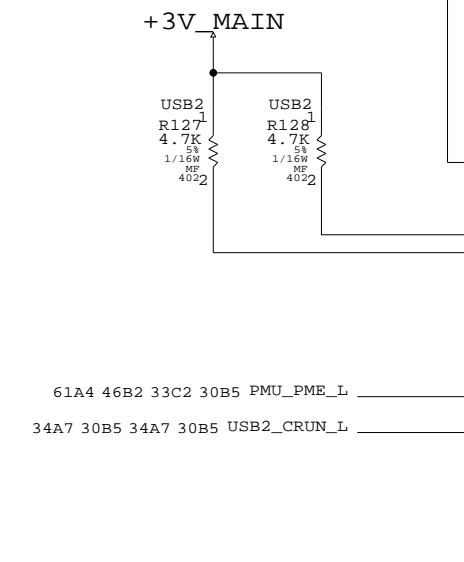
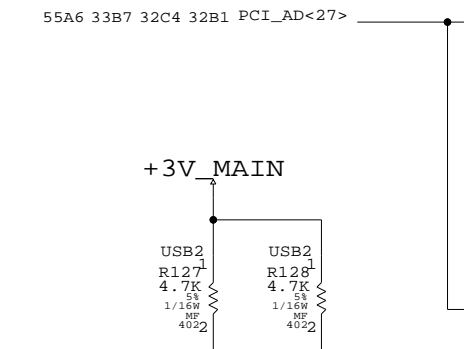
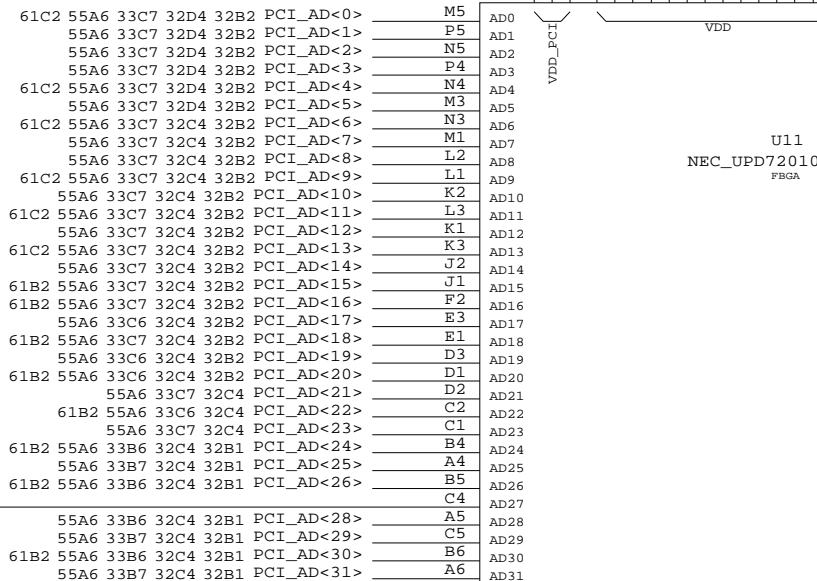
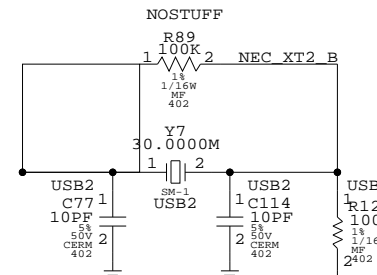
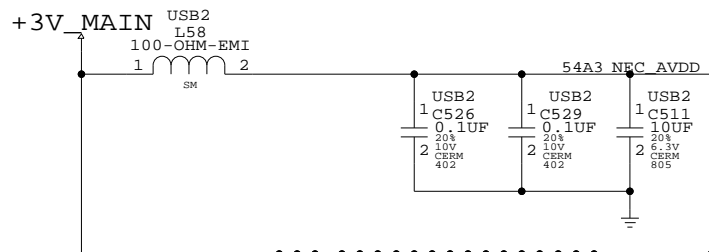
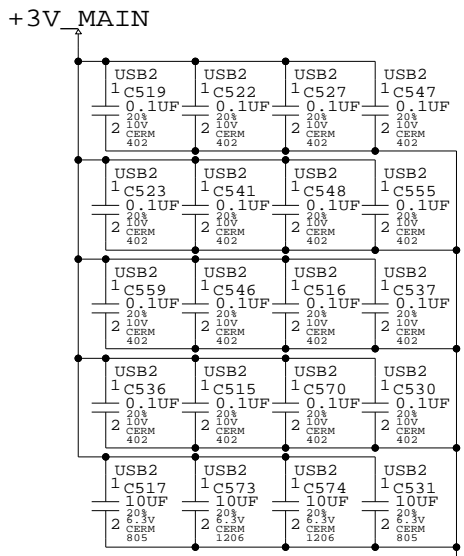
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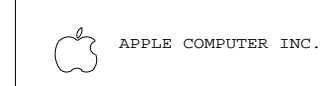
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# USB2 CONTROLLER

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SIZE	DRAWING NUMBER	REV.
D		D
SCALE	SHT	OF
NONE	34	74



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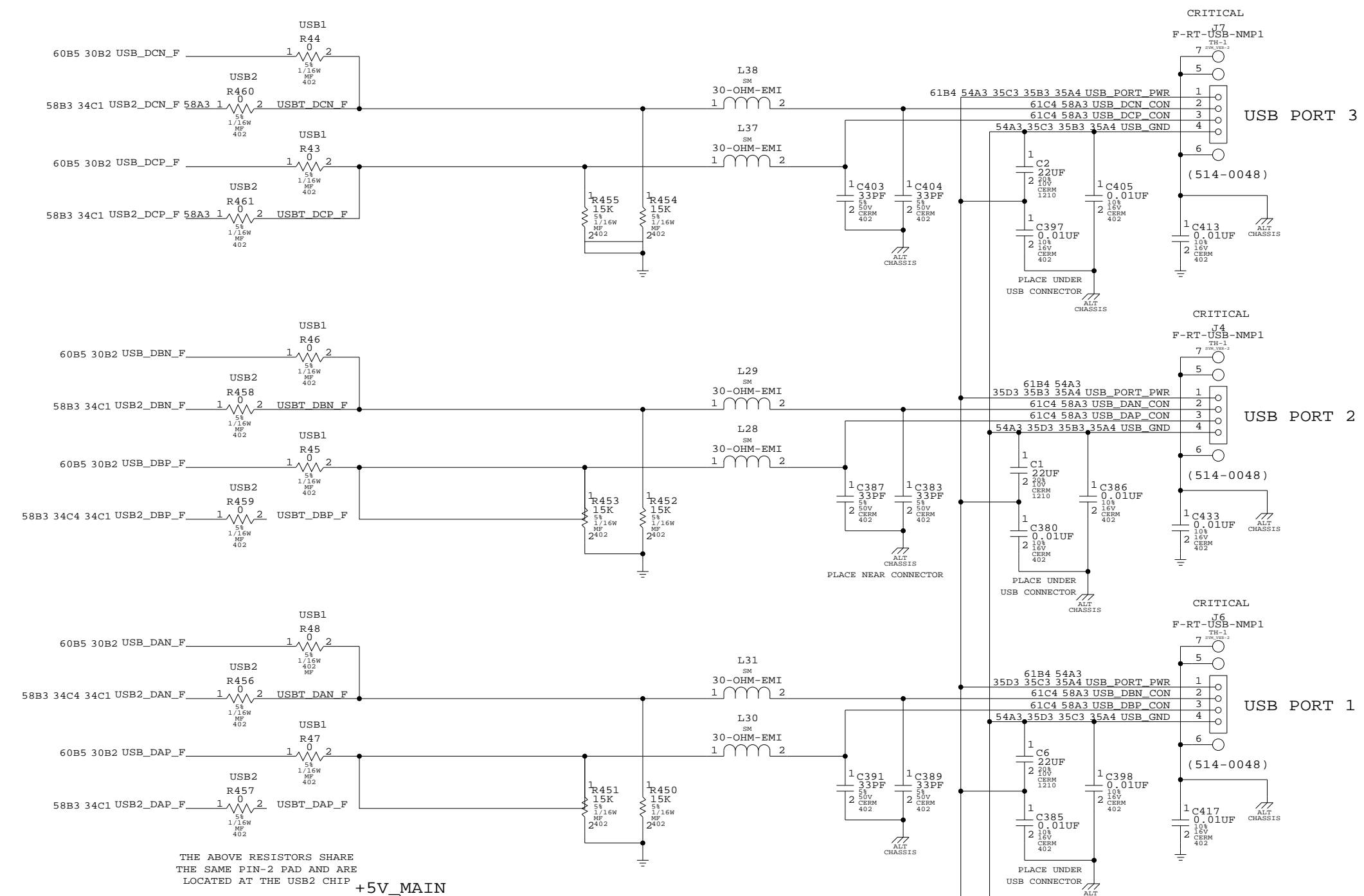
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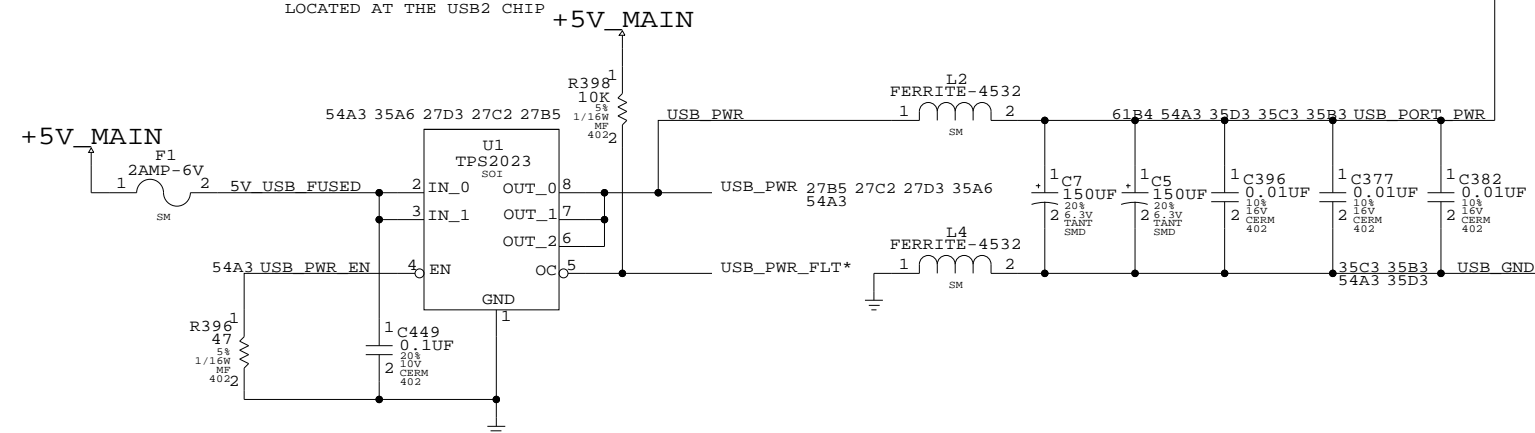
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THE ABOVE RESISTORS SHARE  
THE SAME PIN-2 PAD AND ARE  
LOCATED AT THE USB2 CHIP



### USB CONNS & PWR

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	35 OF 74



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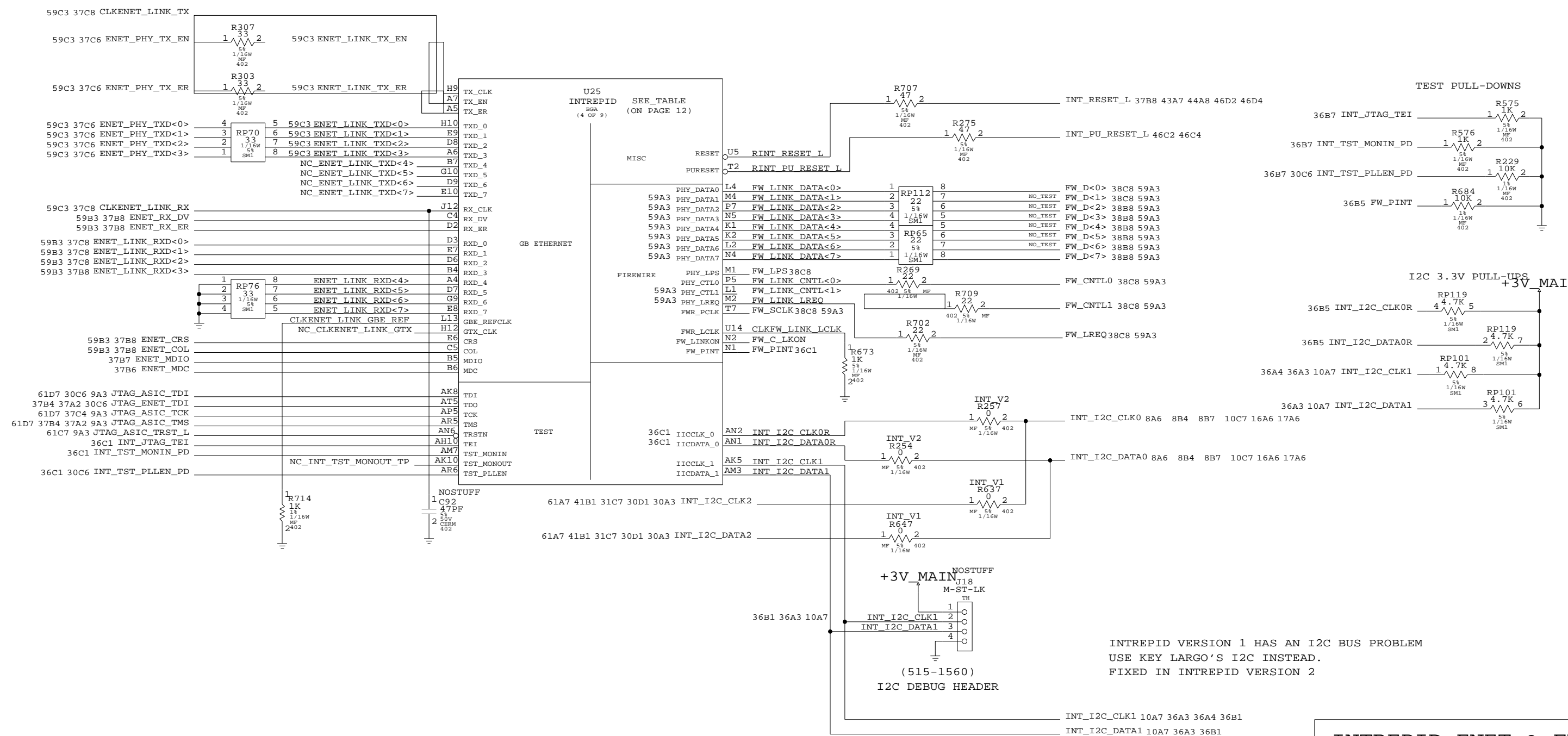
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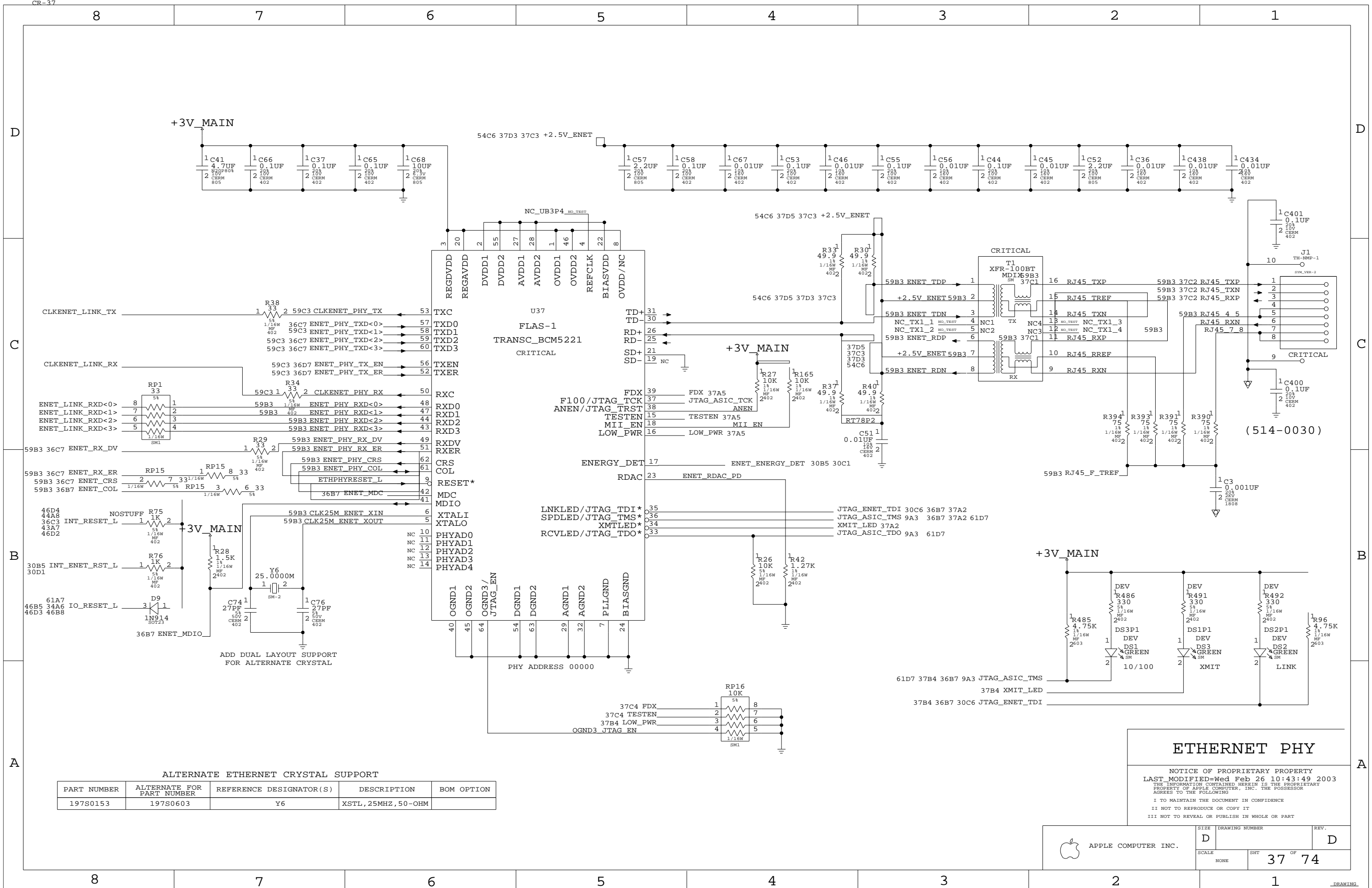


INTREPID VERSION 1 HAS AN I2C BUS PROBLEM  
USE KEY LARGO'S I2C INSTEAD.  
FIXED IN INTREPID VERSION 2

### INTREPID ENET & FW

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	36	74



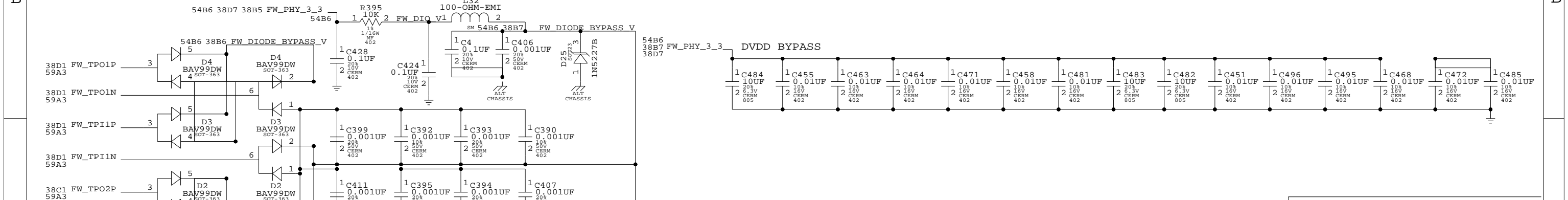
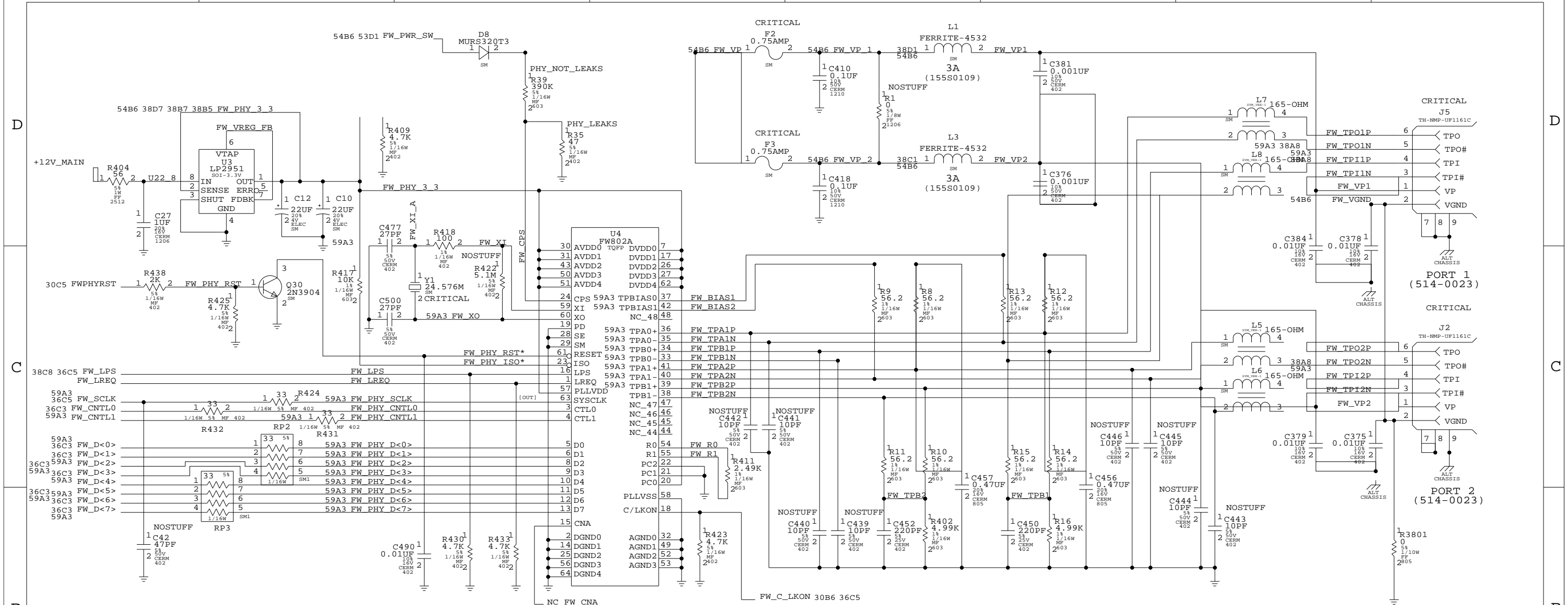
ALTERNATE ETHERNET CRYSTAL SUPPORT

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
197S0153	197S0603	Y6	XSTL, 25MHZ, 50-OHM	

ETHERNET PHY

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	SCALE: NONE	SHT: 37	OF: 74



**FIREWIRE PHY**

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APPLE COMPUTER INC.

SCALE	DRAWING NUMBER	REV.
NONE	38 OF 74	D

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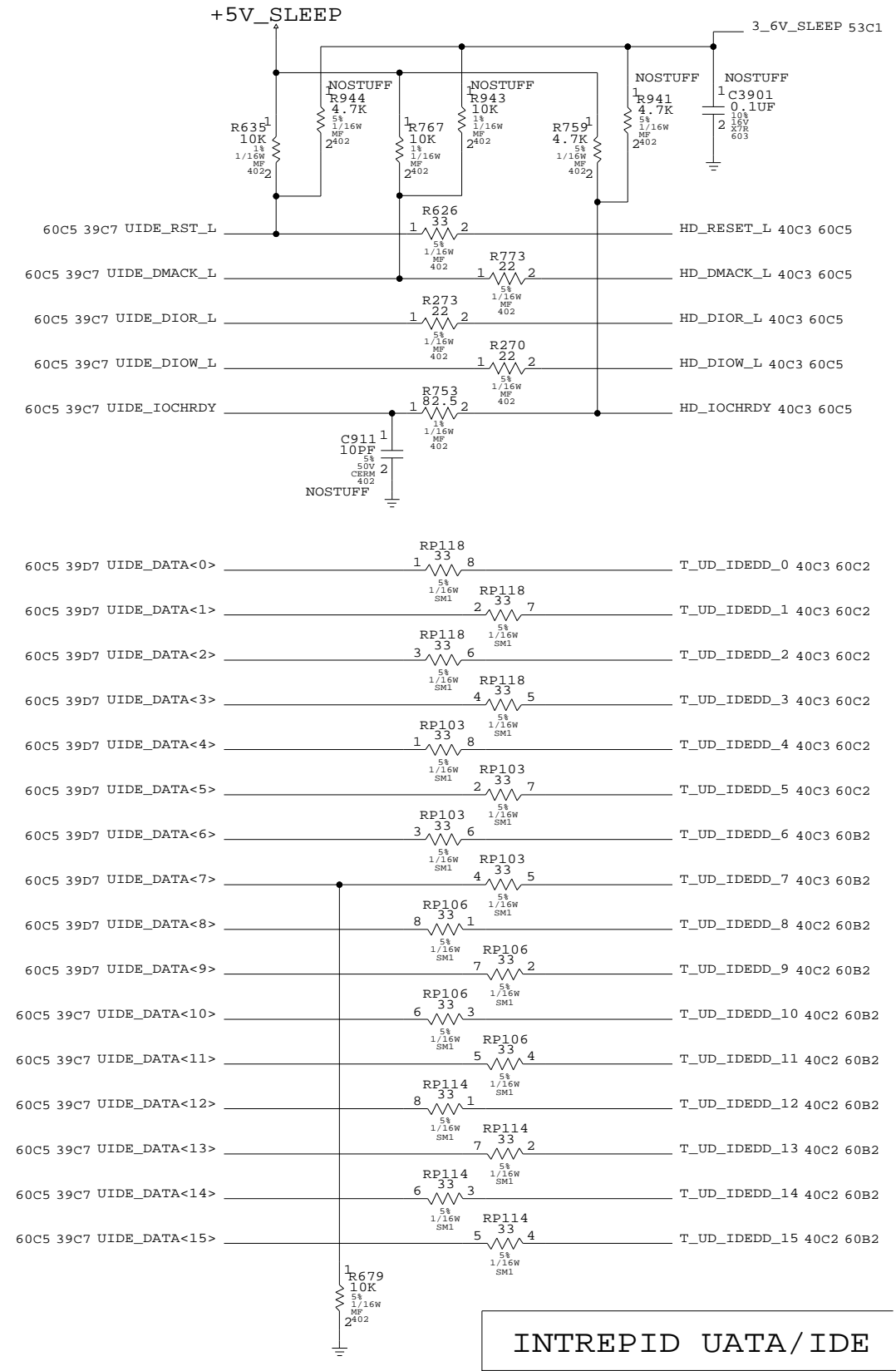
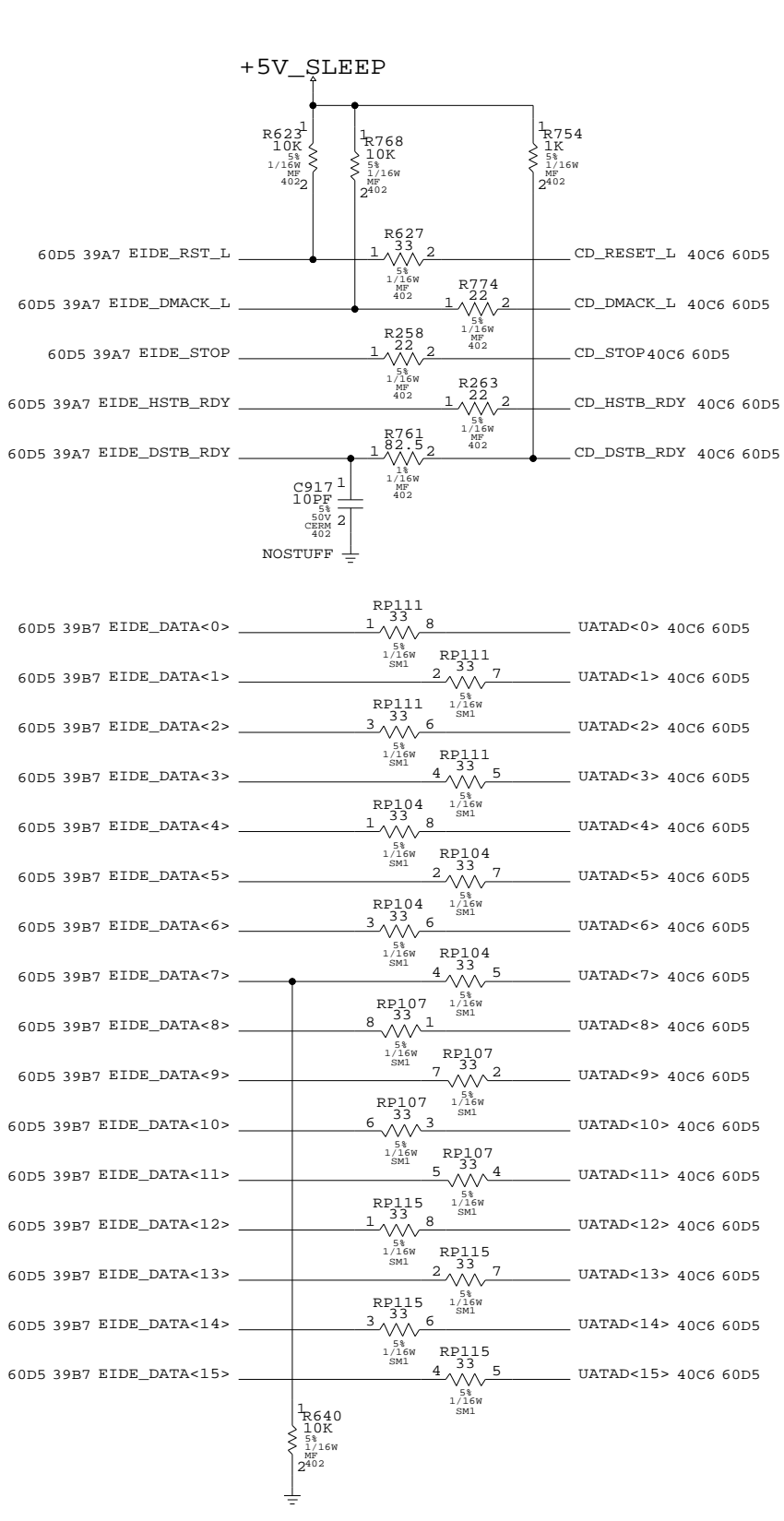
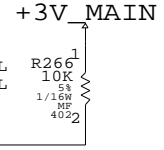
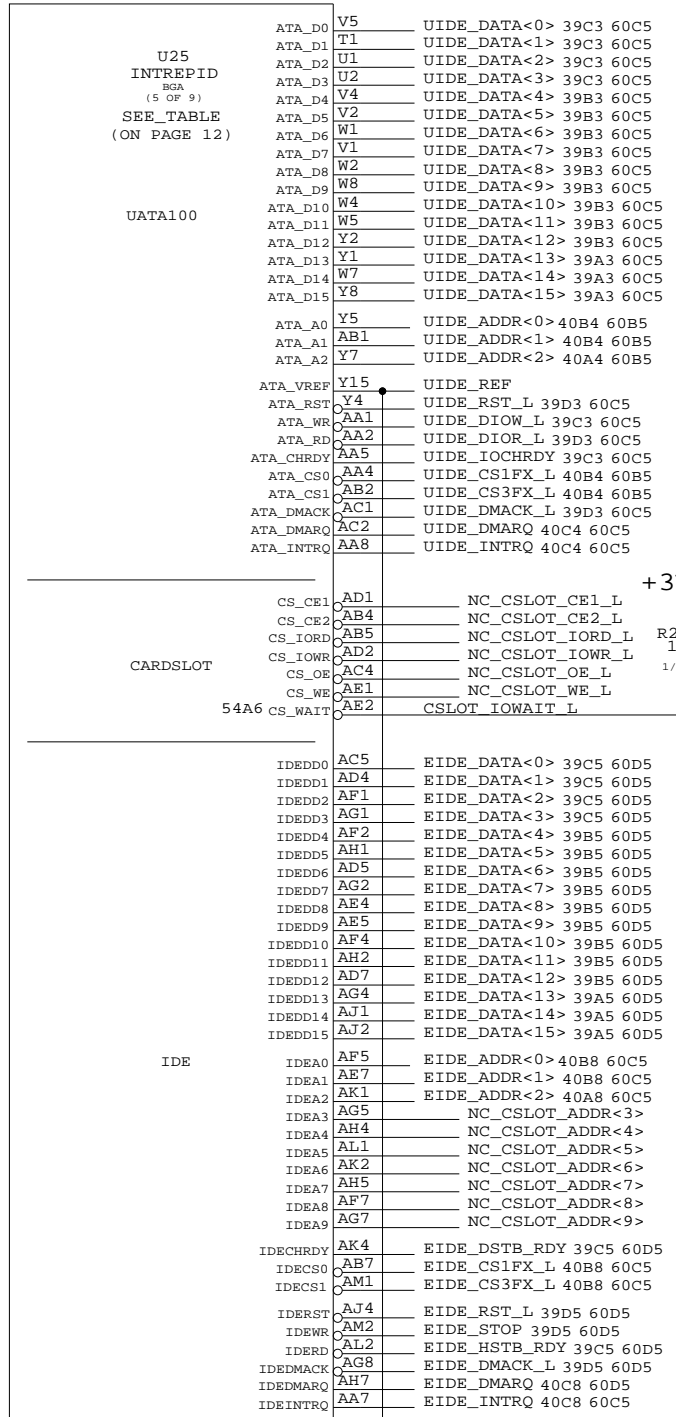
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# INTREPID UATA/IDE

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APPLE COMPUTER INC. DRAWING NUMBER D REV. D  
 SCALE NONE SHT 39 OF 74



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# OPTICAL DRIVE INTERFACE

# ATA-100 INTERFACE

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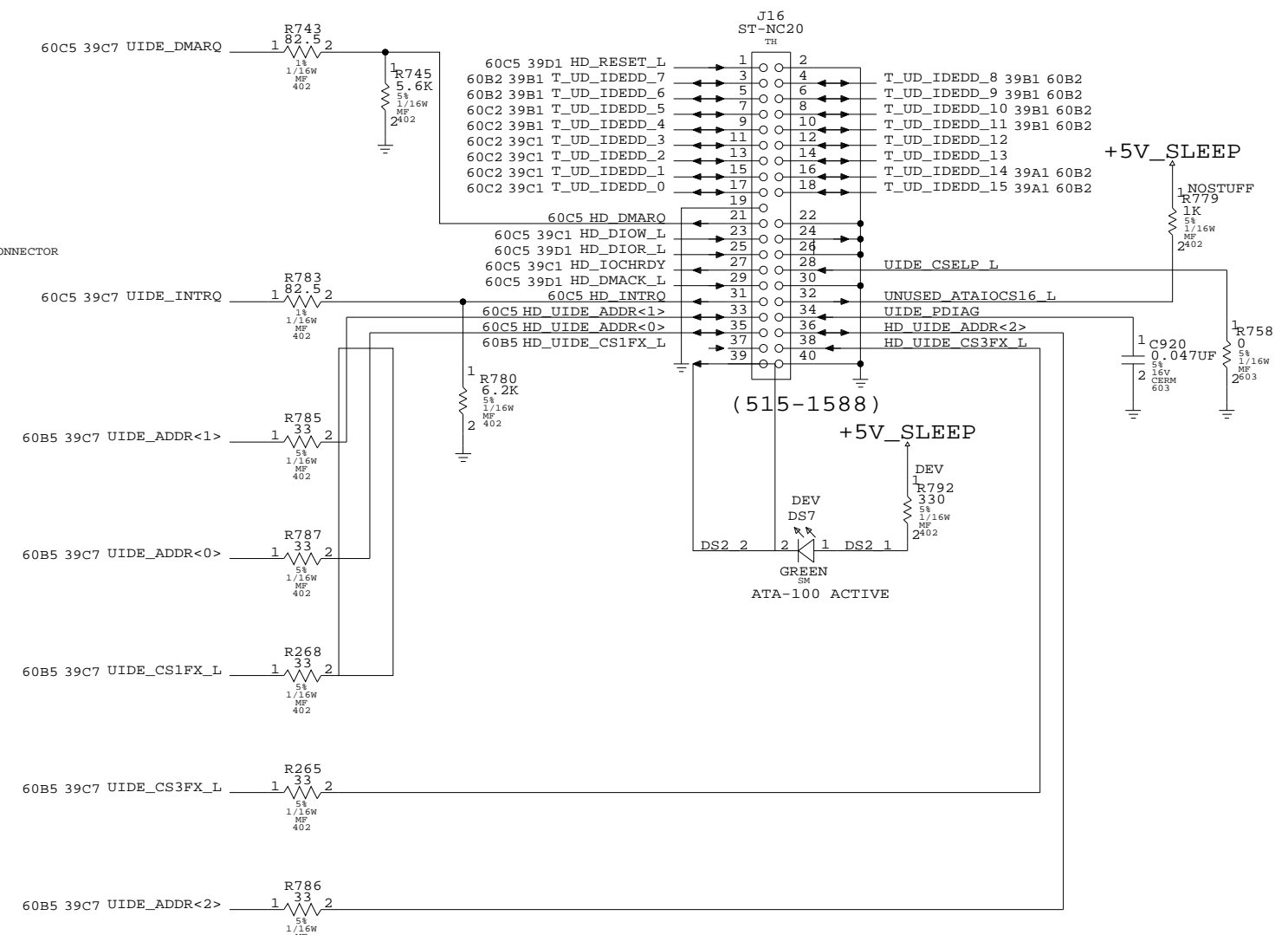
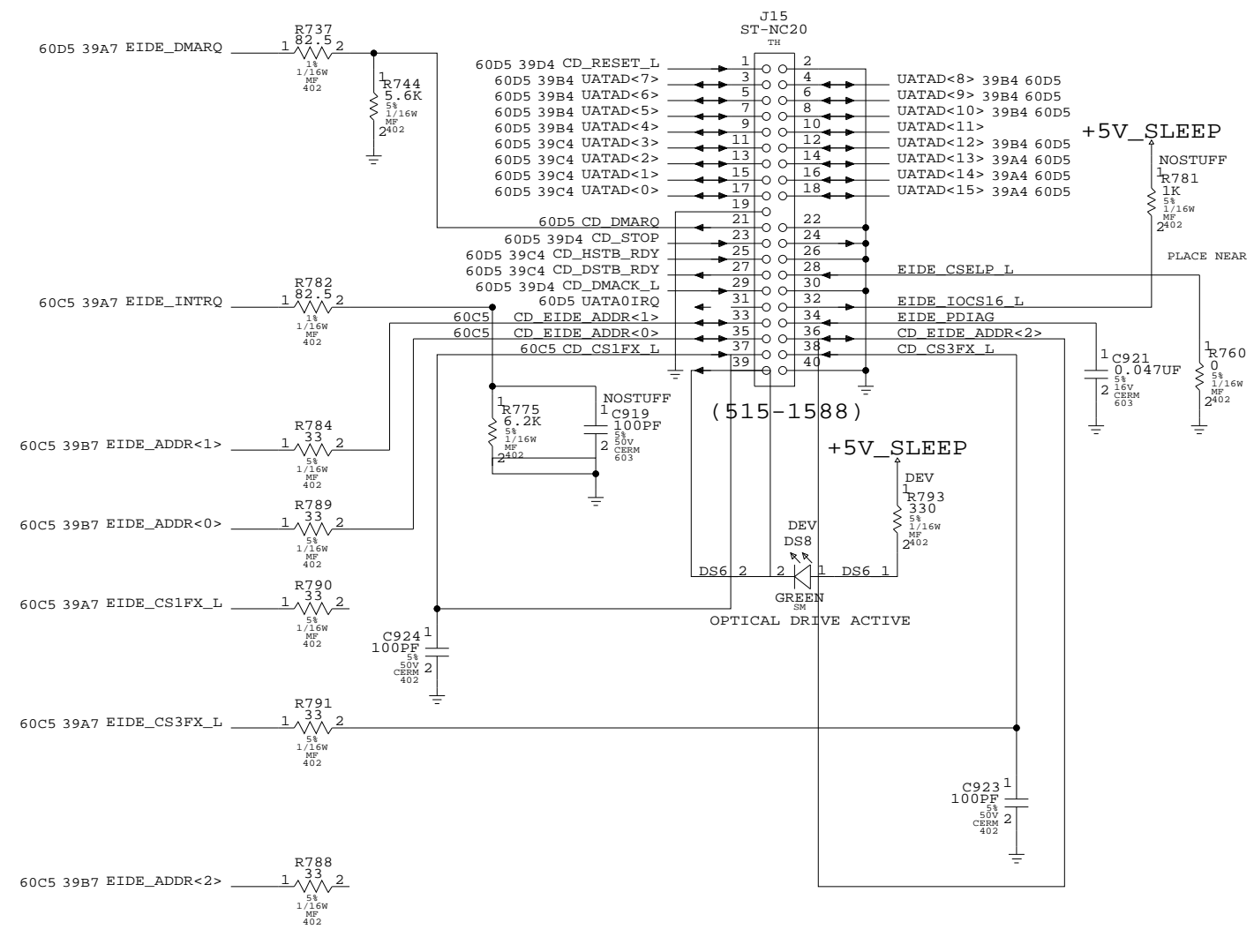
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**CD/HD CONS**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	40 OF 74

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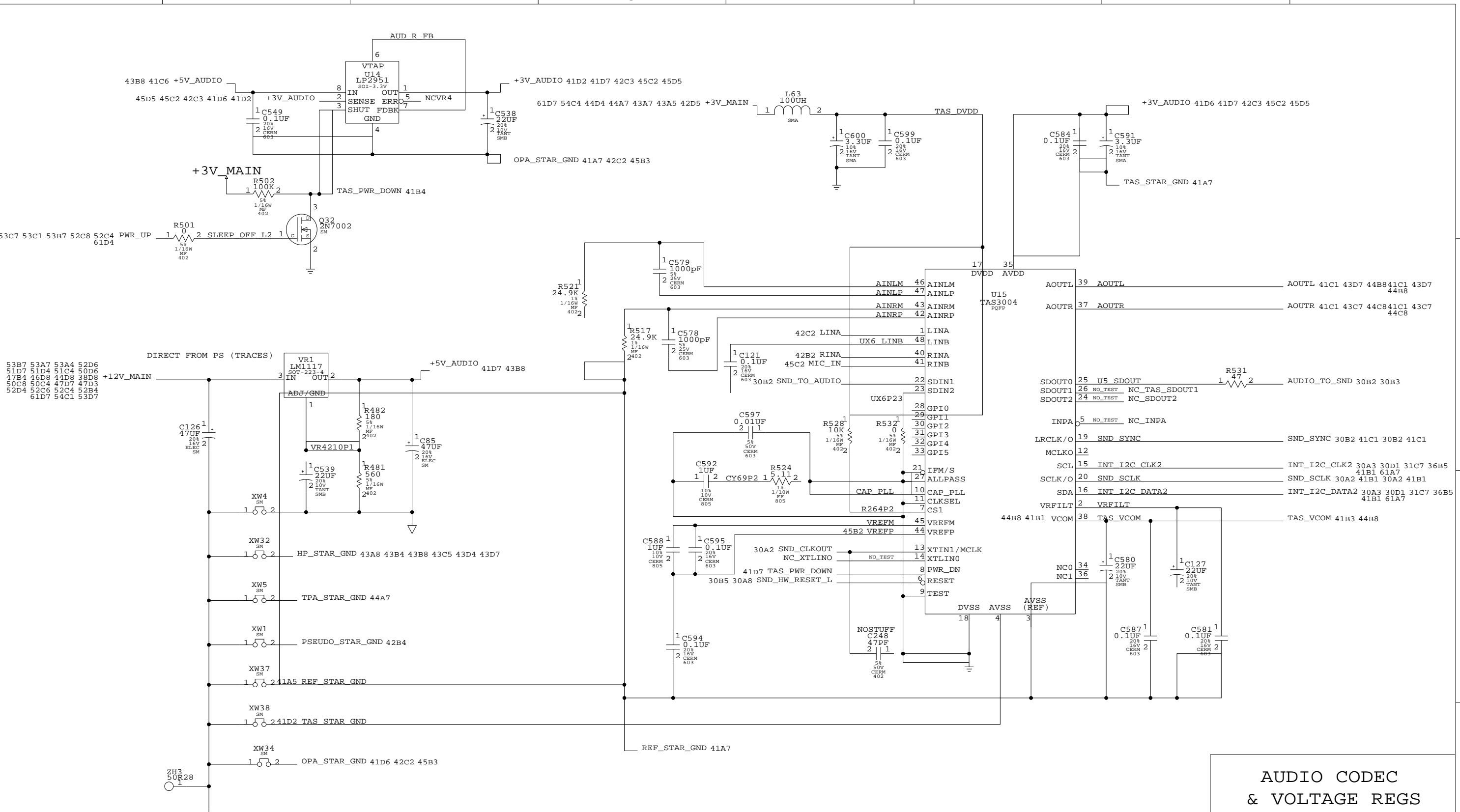
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# AUDIO CODEC & VOLTAGE REGS

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APPLE COMPUTER INC.	D <small>SCALE</small> NONE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><small>DRAWING NUMBER</small></td> <td style="width: 50%;"><small>REV.</small></td> </tr> <tr> <td style="text-align: center;">41</td> <td style="text-align: center;">74</td> </tr> </table>	<small>DRAWING NUMBER</small>	<small>REV.</small>	41	74	D
<small>DRAWING NUMBER</small>	<small>REV.</small>						
41	74						

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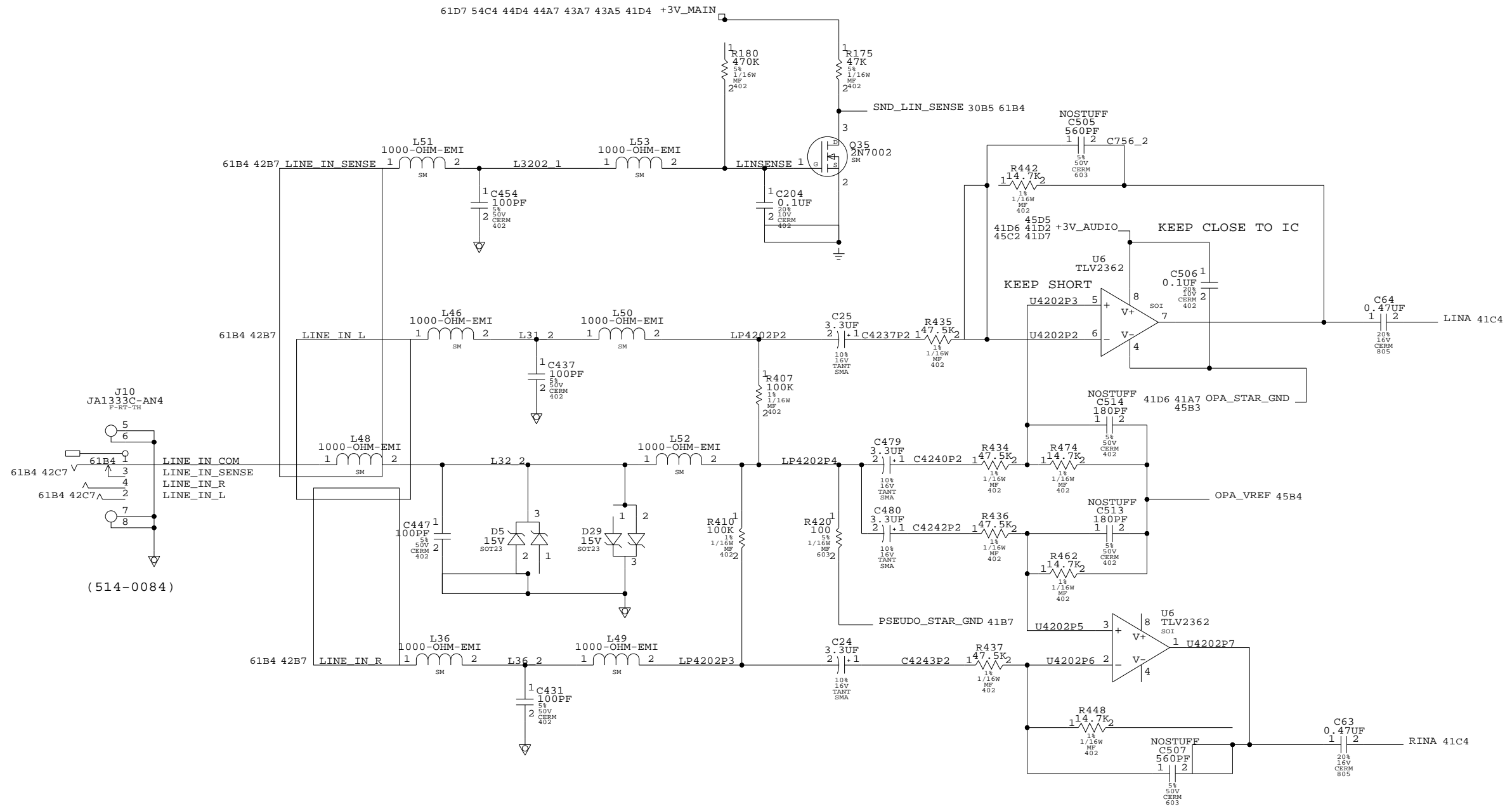
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**LINE IN BUFFER**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	42	74

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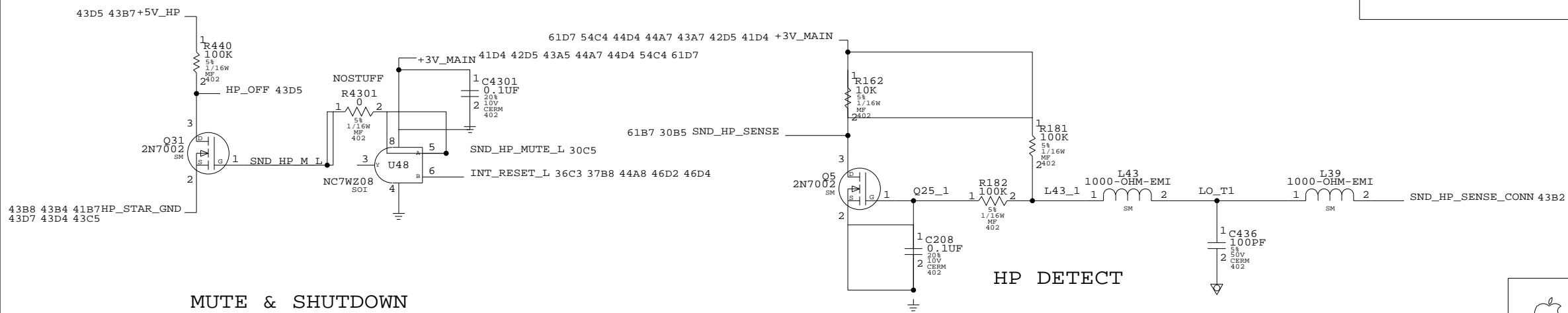
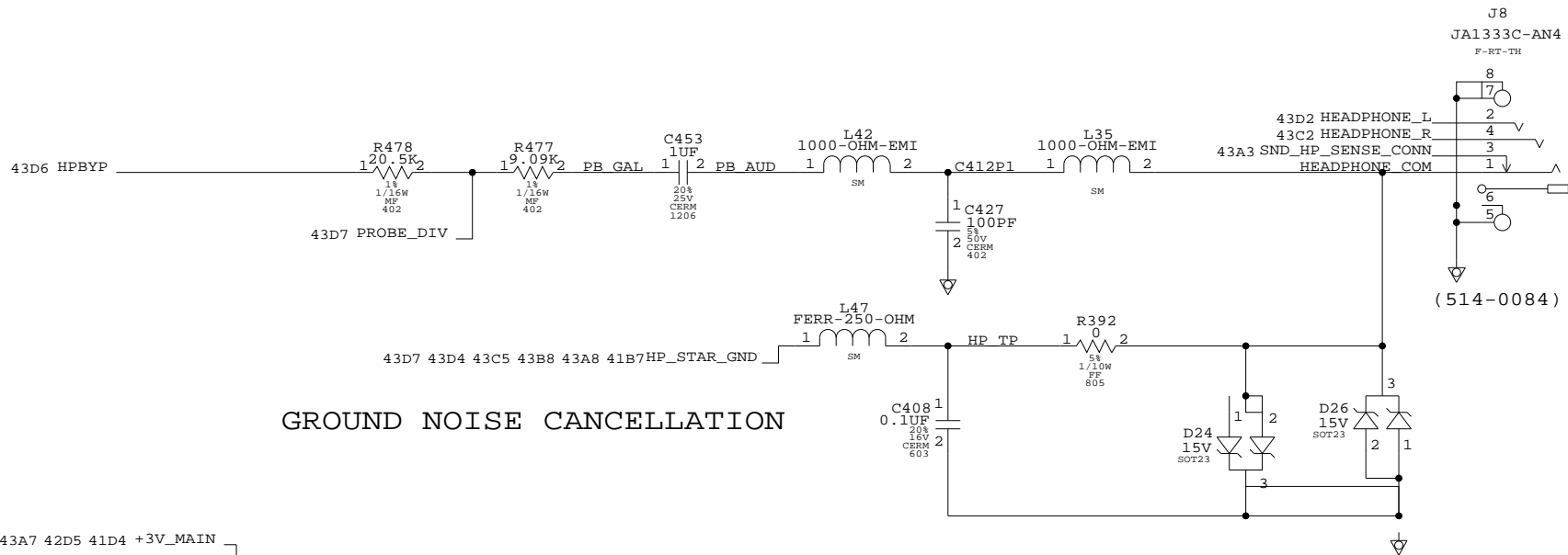
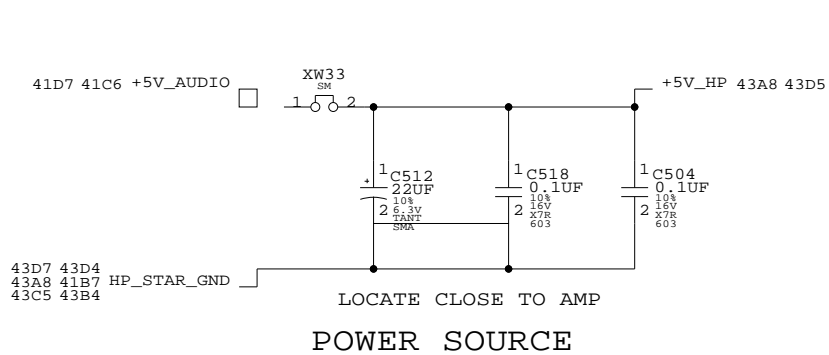
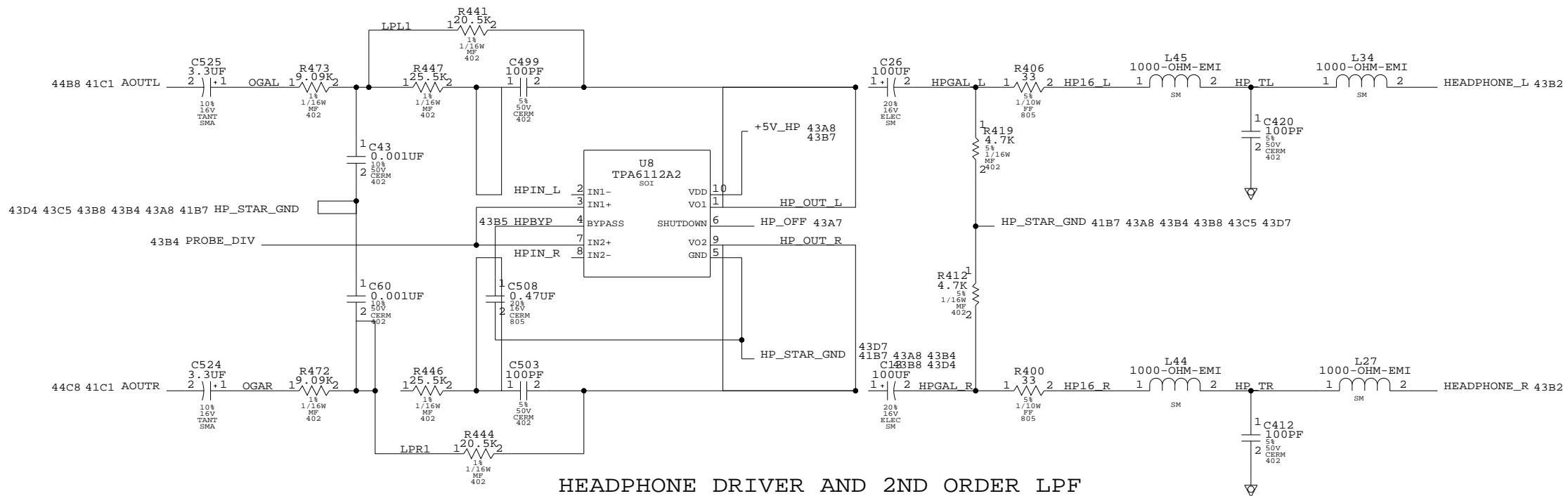
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**HEADPHONE OUT AMP**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	43 OF 74

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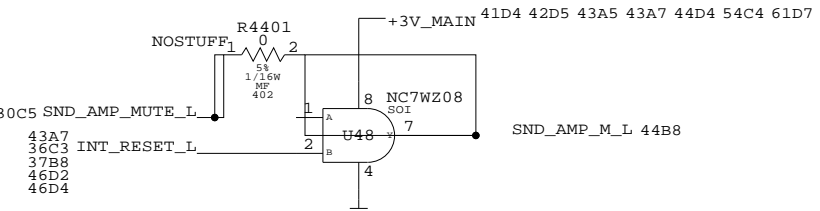
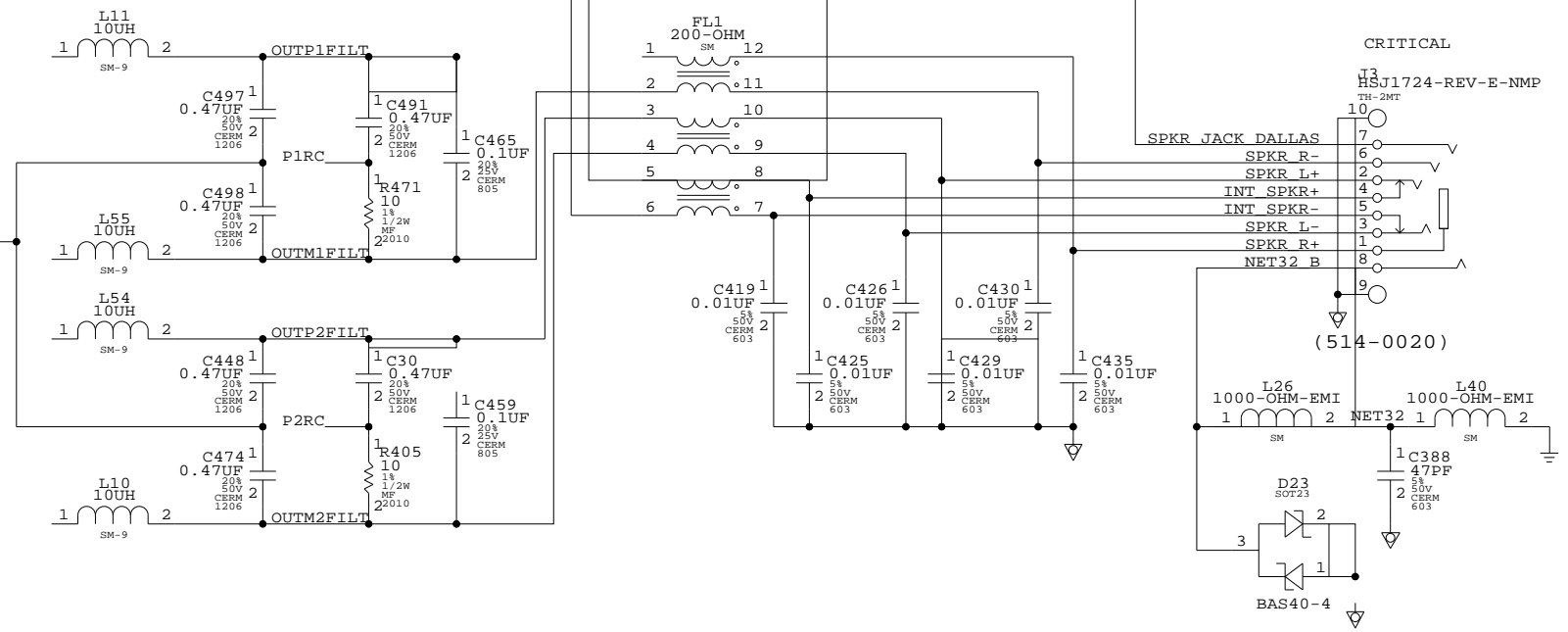
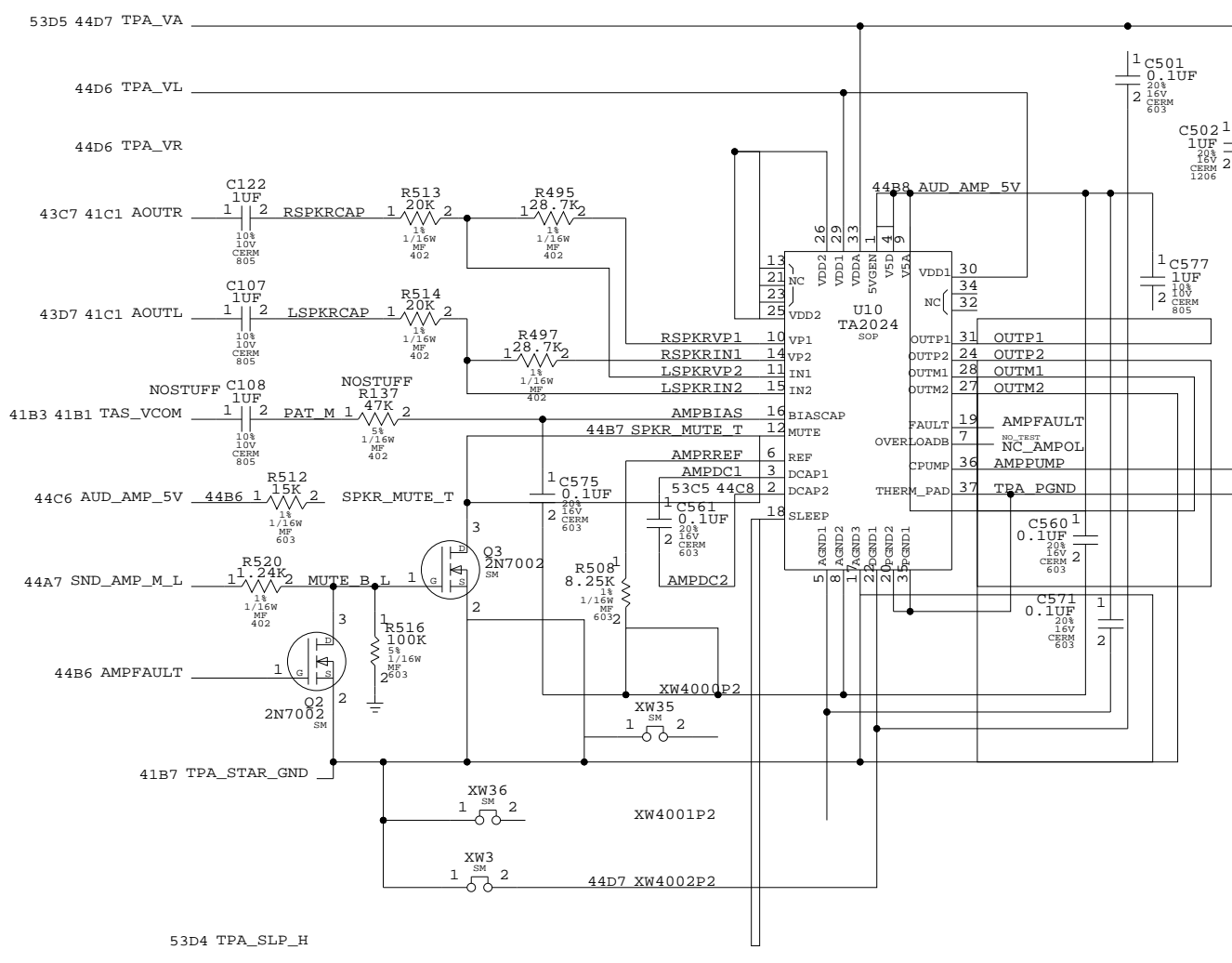
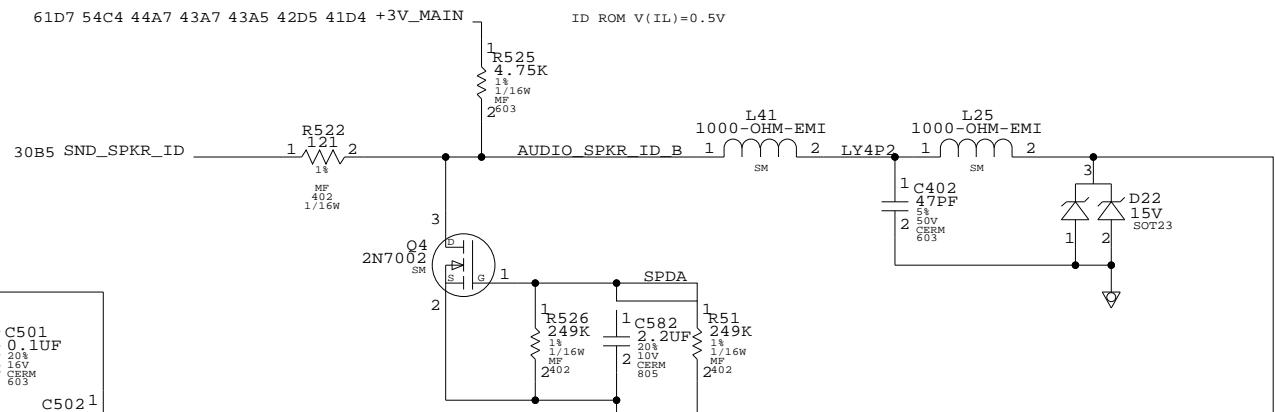
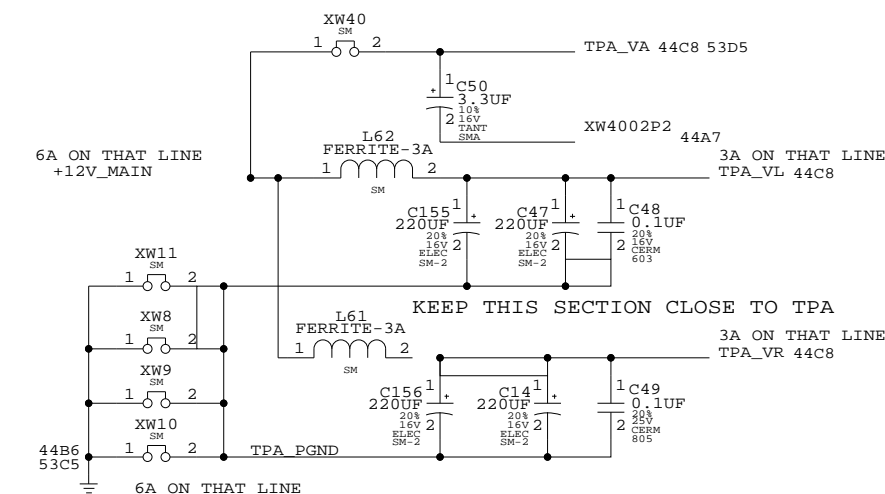
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**SPEAKER AMP**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D		D
SCALE	NONE	SHT	44 OF 74



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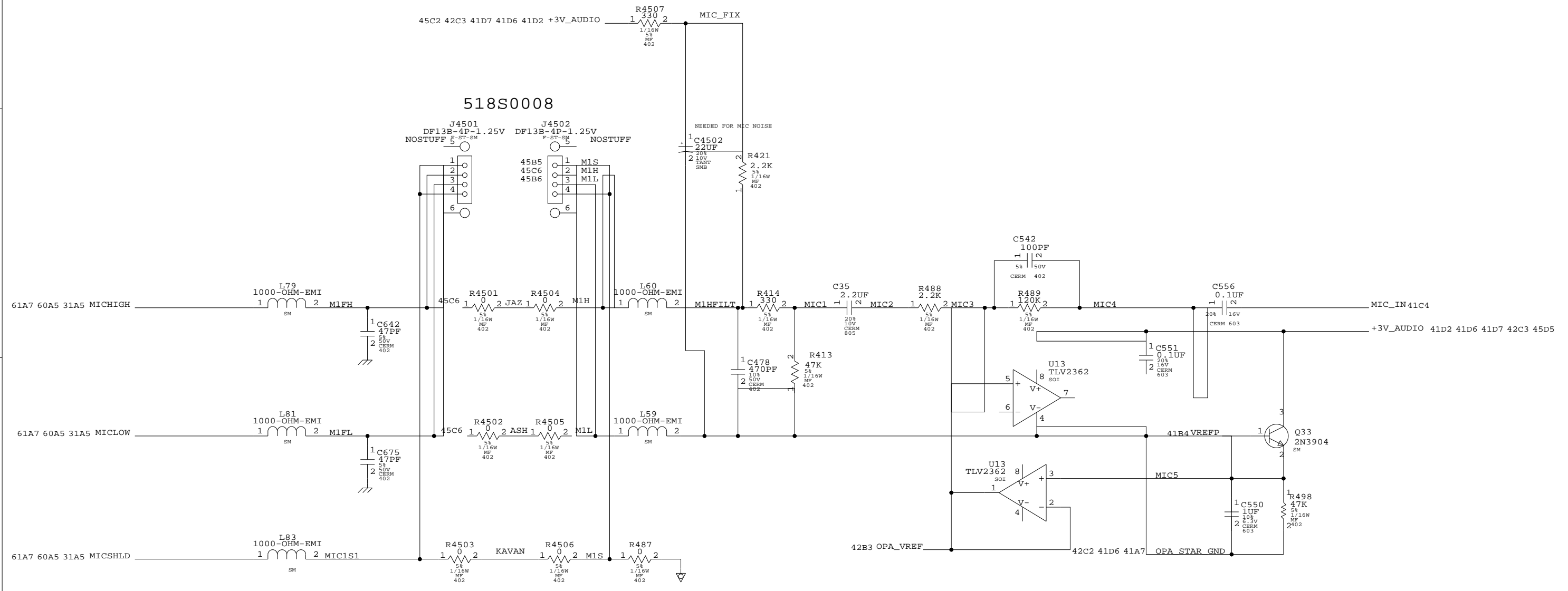
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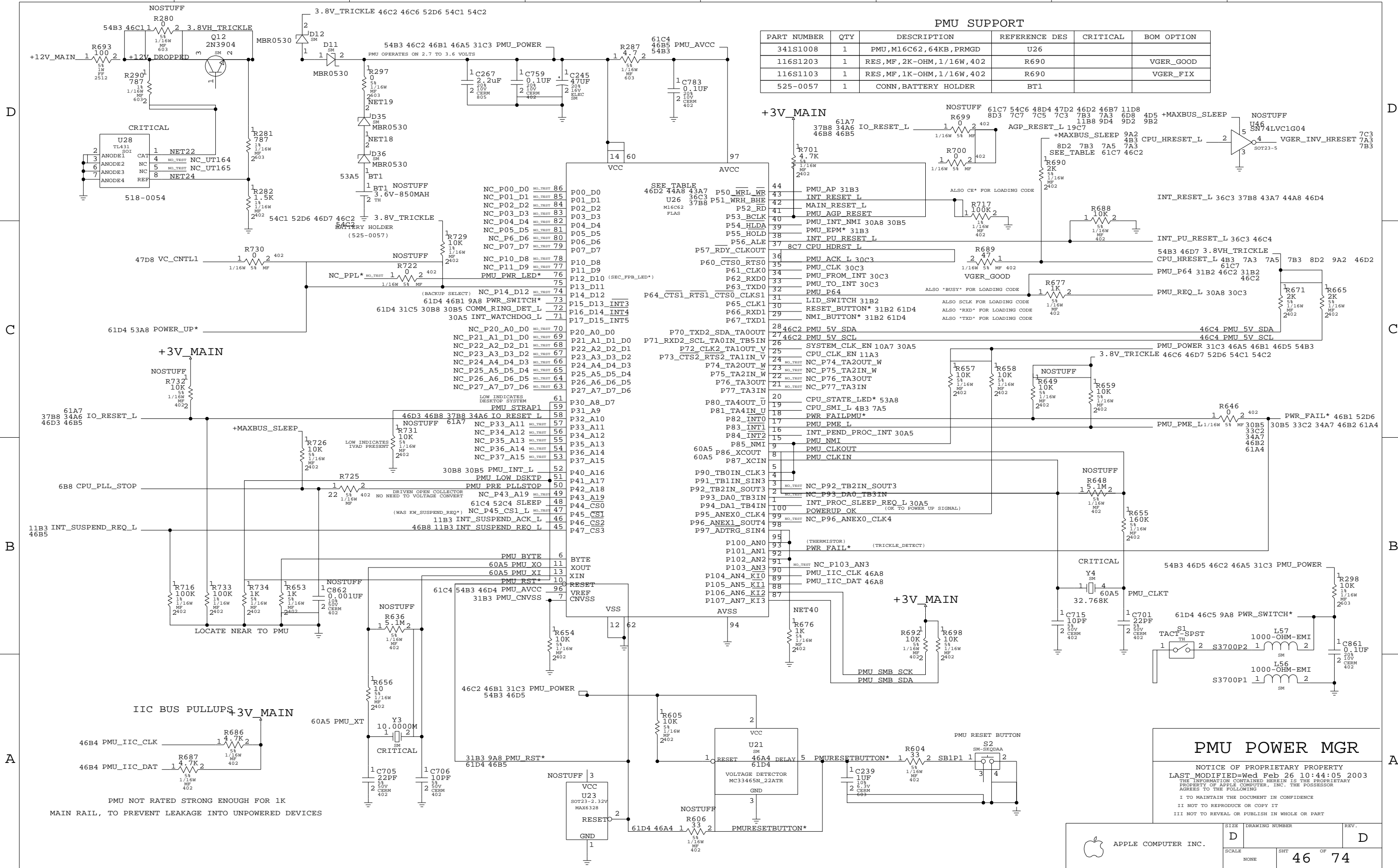
PLACE R4501, R4502 AND R4503 NEAR AUDIO

PLACE R4504, R4505 AND R4506 NEAR KITCHENSINK

# MIC PREAMP

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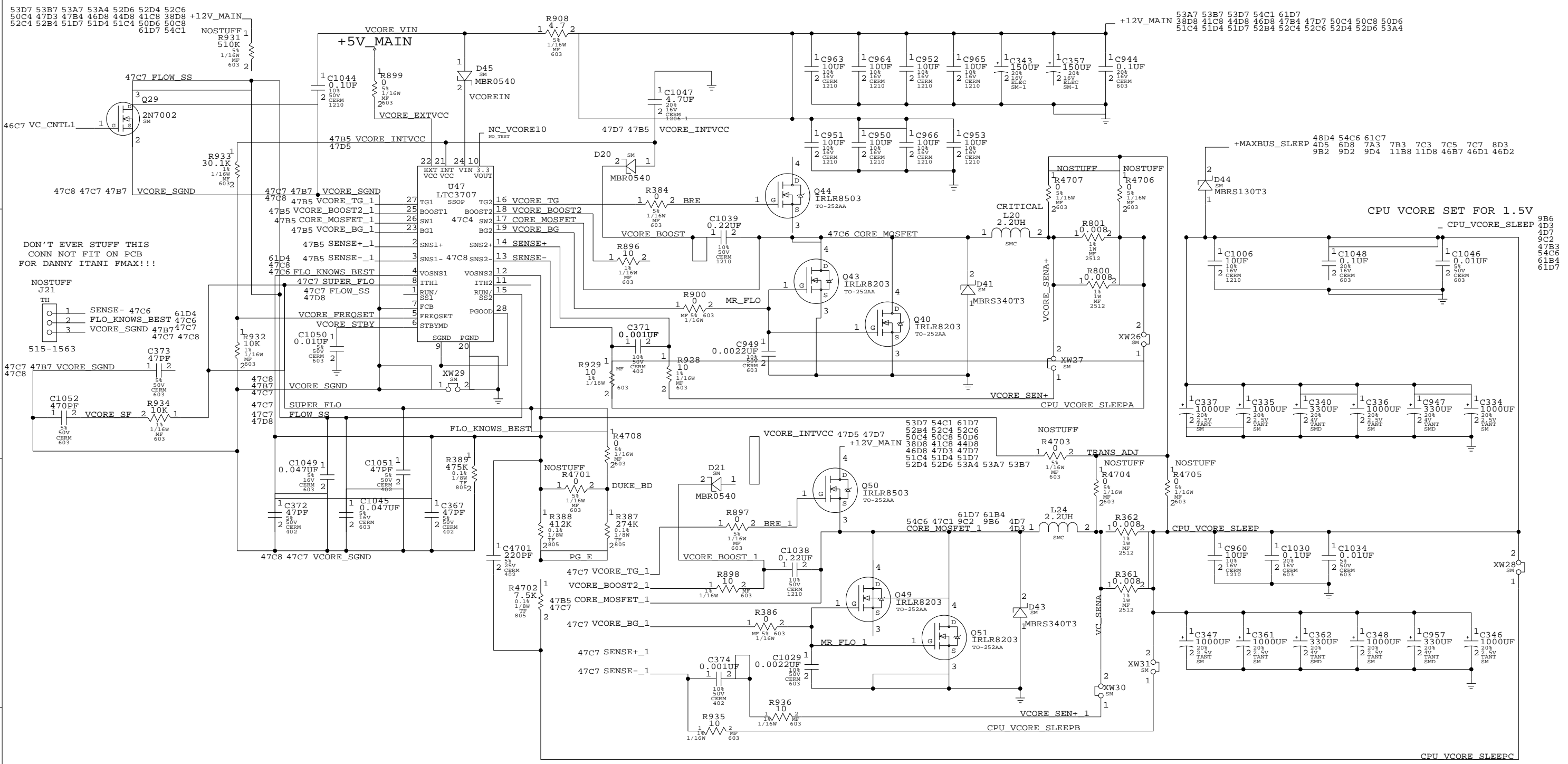
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	45	74



PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
341S1008	1	PMU, M16C62, 64KB, PRMGD	U26		
116S1203	1	RES, MF, 2K-OHM, 1/16W, 402	R690		VGER_GOOD
116S1103	1	RES, MF, 1K-OHM, 1/16W, 402	R690		VGER_FIX
525-0057	1	CONN, BATTERY HOLDER	BT1		

**PMU POWER MGR**

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DON'T EVER STUFF THIS  
CONN NOT FIT ON PCB  
FOR DANNY ITANI FMAX!!!

CPU VCORE SET FOR 1.5V

KUMA SERVER(1):HARDWARE:KUMA DESIGNS:KUMA POWER SUPPLIES:VCORE WITH AVP TABLES

### CPU & AGP VREGS

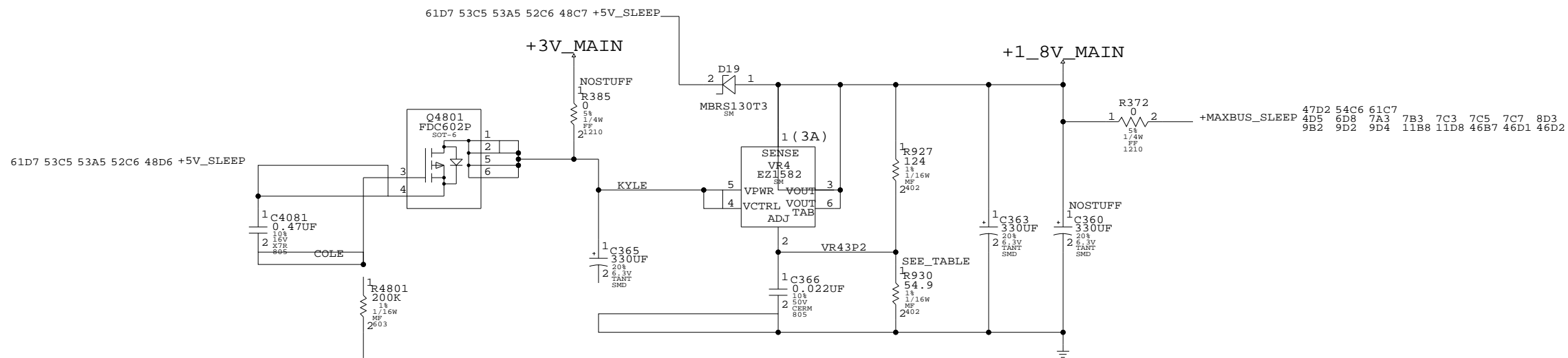
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PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
128S0018	128S0012	C340,C362,C947,C957	330UF, 2.5V,TANT	

APPLE COMPUTER INC.

SCALE	NONE	SHT	47	OF	74
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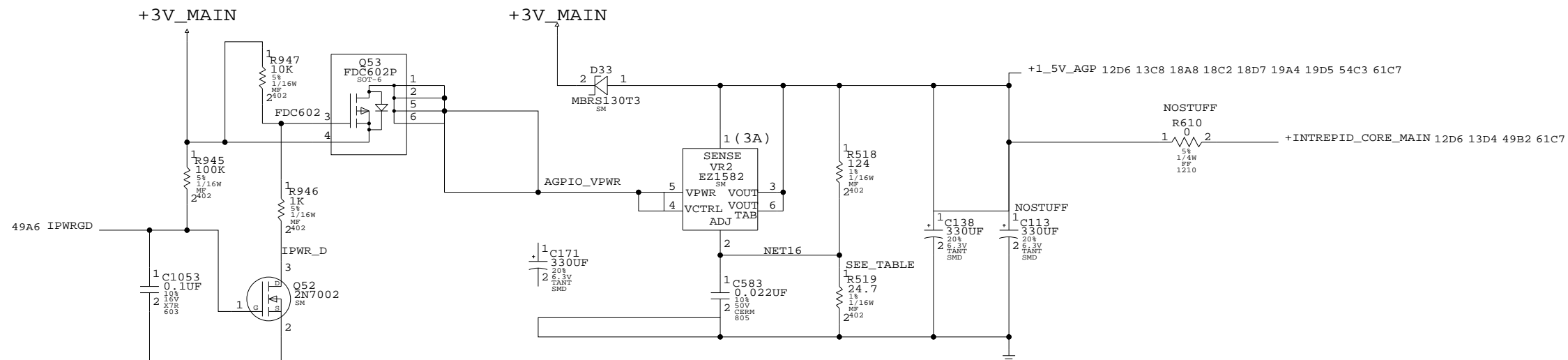
### INTREPID MAXBUS & CPU OVDD POWER CONVERTER (OFF DURING SLEEP)



MAXBUS I/O SUPPLY SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
114S2491	1	RES, FF, 24.9-OHM, 1%	R930		MAXIO_1'50V
114S3481	1	RES, FF, 34.8-OHM, 1%	R930		MAXIO_1'65V
114S4421	1	RES, FF, 44.2-OHM, 1%	R930		MAXIO_1'70V
114S5491	1	RES, FF, 54.9-OHM, 1%	R930		MAXIO_1'80V

### AGP I/O POWER CONVERTER



AGP I/O SUPPLY SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
114S2491	1	RES, FF, 24.9-OHM, 1%	R519		AGPIO_1'50V
114S3481	1	RES, FF, 34.8-OHM, 1%	R519		AGPIO_1'65V
114S4421	1	RES, FF, 44.2-OHM, 1%	R519		AGPIO_1'70V
114S5491	1	RES, FF, 54.9-OHM, 1%	R519		AGPIO_1'80V

### CPU & AGP VREGS

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	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	48	74

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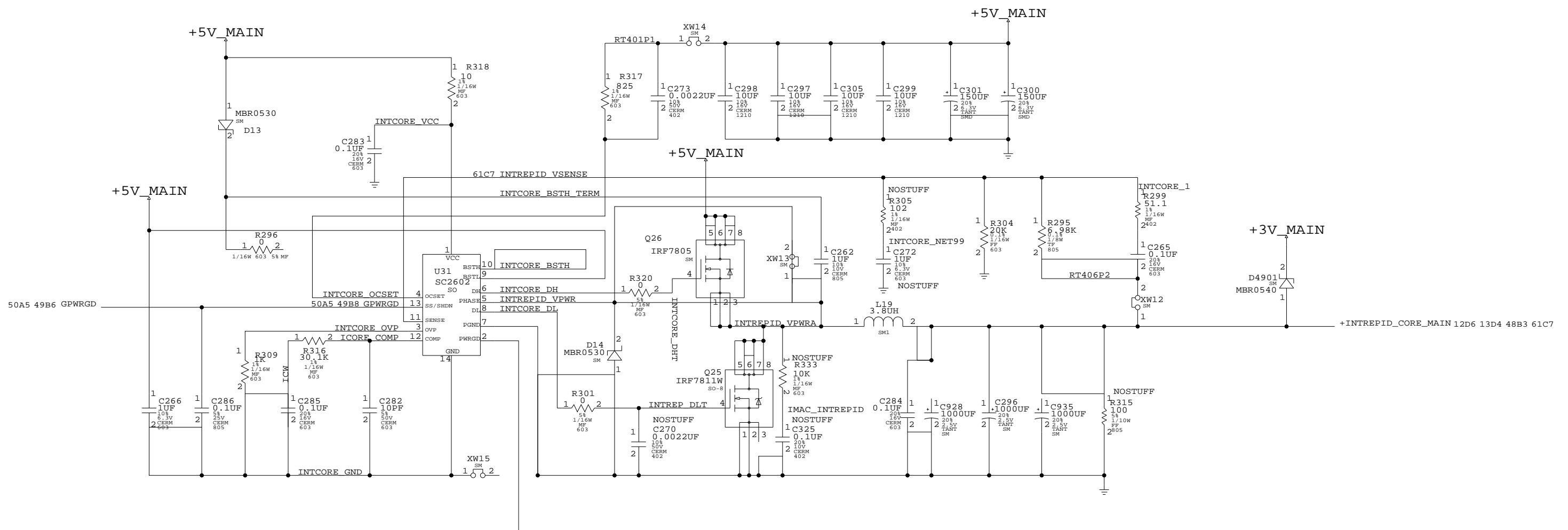
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TABLES FOR INTREPID CORE RESISTOR VALUES TO VOLTAGES ARE LOCATED AT  
 KUMA SERVER(1):HARDWARE:KUMA DESIGNS;KUMA POWER SUPPLIES;ICORE R TOLERANCE

### INTREPID CORE

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	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	49	74



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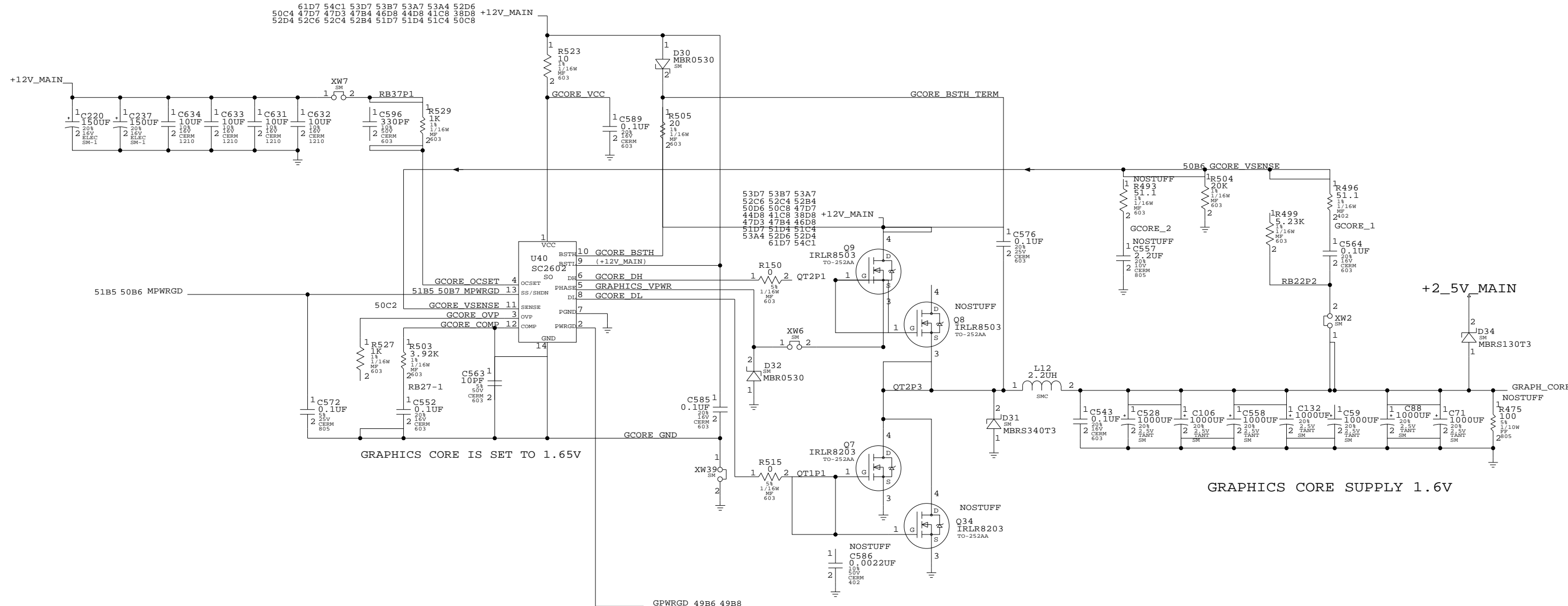
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61D7 54C1 53D7 53B7 53A7 53A4 52D6  
50C4 47D7 47D3 47B4 46D8 44D8 41C8 38D8 +12V\_MAIN  
52D4 52C6 52C4 52B4 51D7 51D4 51C4 50C8



# GRAPHICS CORE

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	50	74

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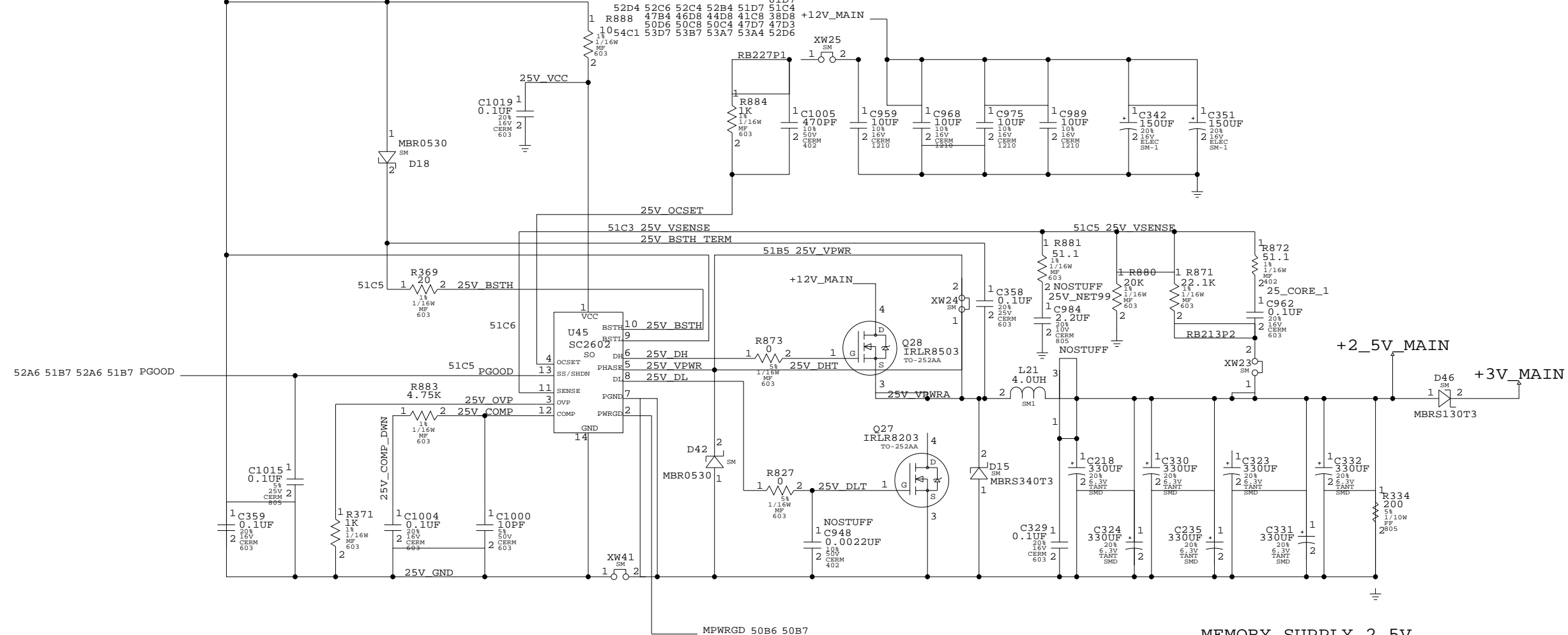
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61D7 54C1 53D7 53B7 53A7 53A4 52D6  
50C4 47D7 47D3 47B4 46D8 44D8 41C8 38D8  
52D4 52C6 52C4 52B4 51D4 51C4 50D6 50C8 +12V\_MAIN

### MAIN MEMORY DDR AND FRAME BUFFER POWER CONVERTER (2.50VDC)

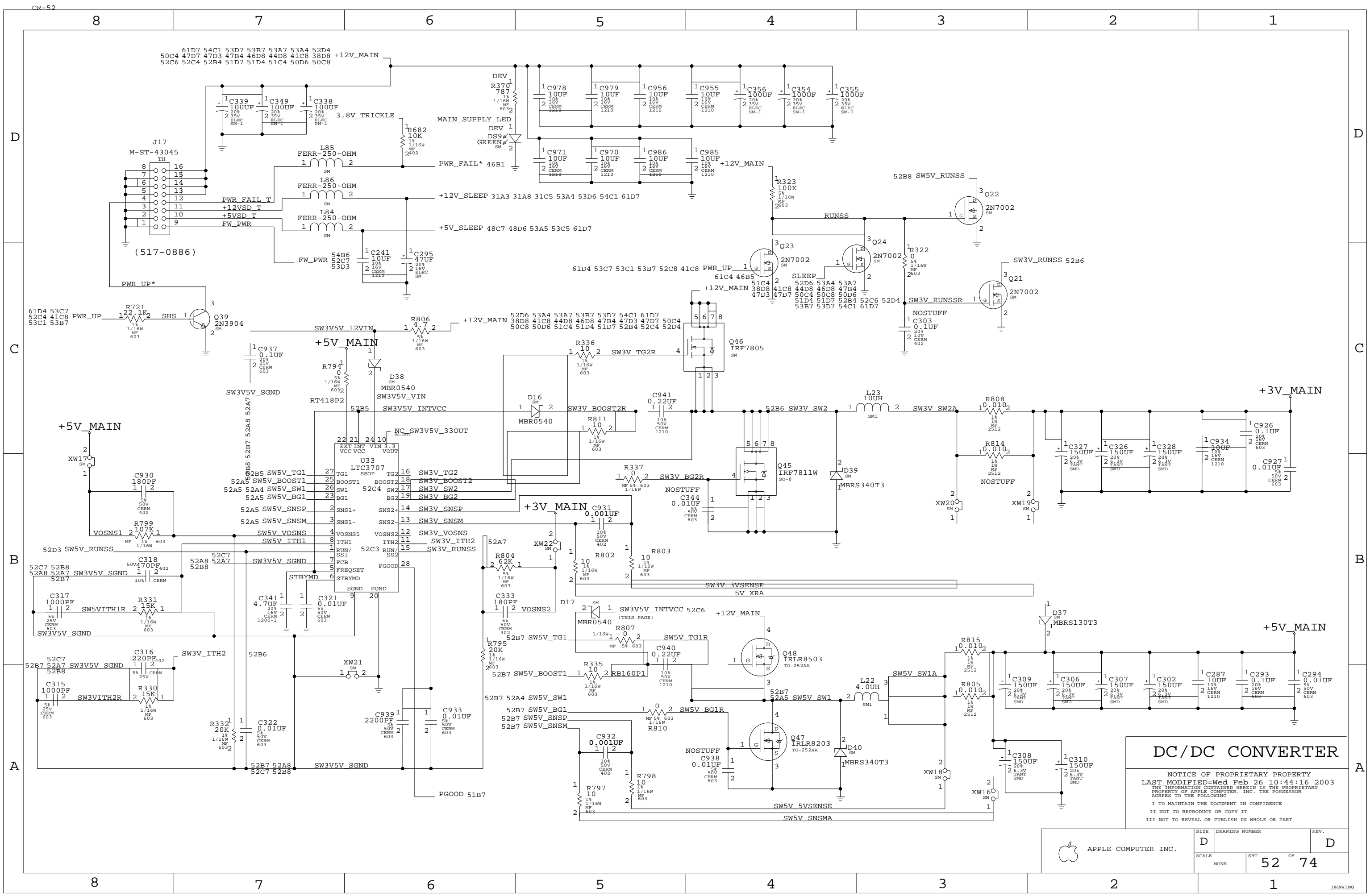


MEMORY SUPPLY 2.5V

## MEMORY PS

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	SIZE	DRAWING NUMBER	REV.
	SCALE	SHT	OF
	NONE	51	74



### DC/DC CONVERTER

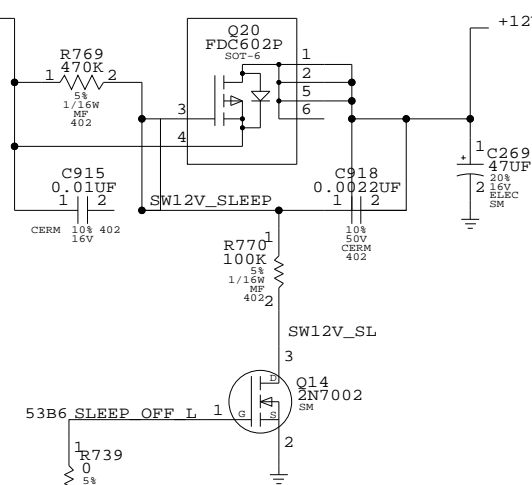
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APPLE COMPUTER INC.		SCALE	DRAWING NUMBER	REV.
		NONE	52 OF 74	D

DRAWING

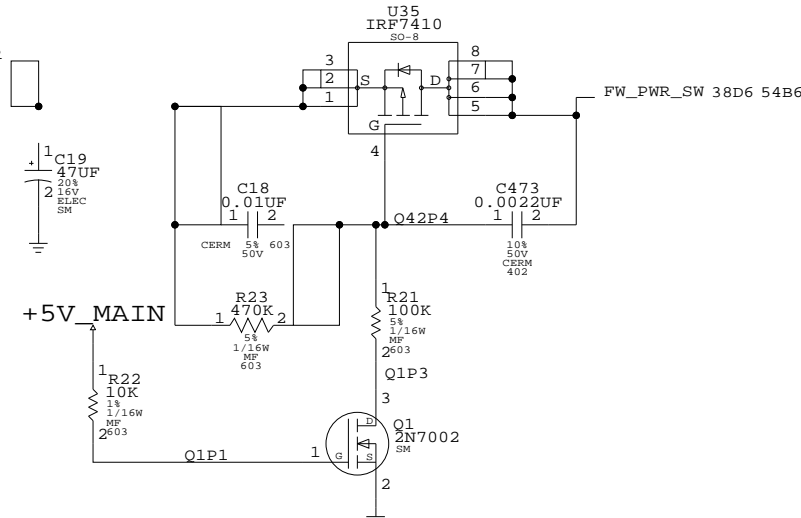
### +12V MAIN POWER SWITCH (OFF DURING SLEEP)

61D7 54C1 53B7  
52C4 52B4 51D7 51D4 51C4  
47B4 46D8 44D8 41C8 38D8  
50D6 50C8 50C4 47D7 47D3  
53A7 53A4 52D6 52D4 52C6

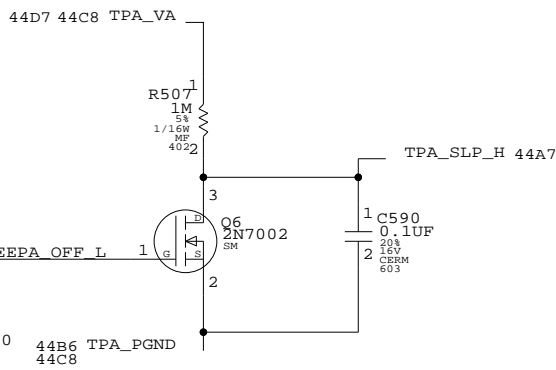


### FIREWIRE POWER SWITCH

54B6 52C7 FW\_PWR

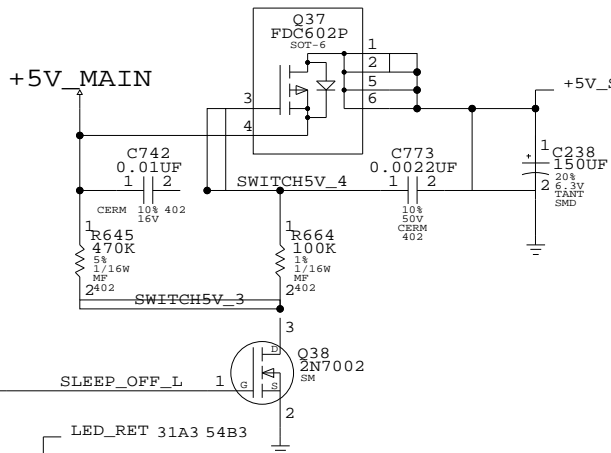


### AUDIO SLEEP SWITCH (OFF DURING SLEEP)



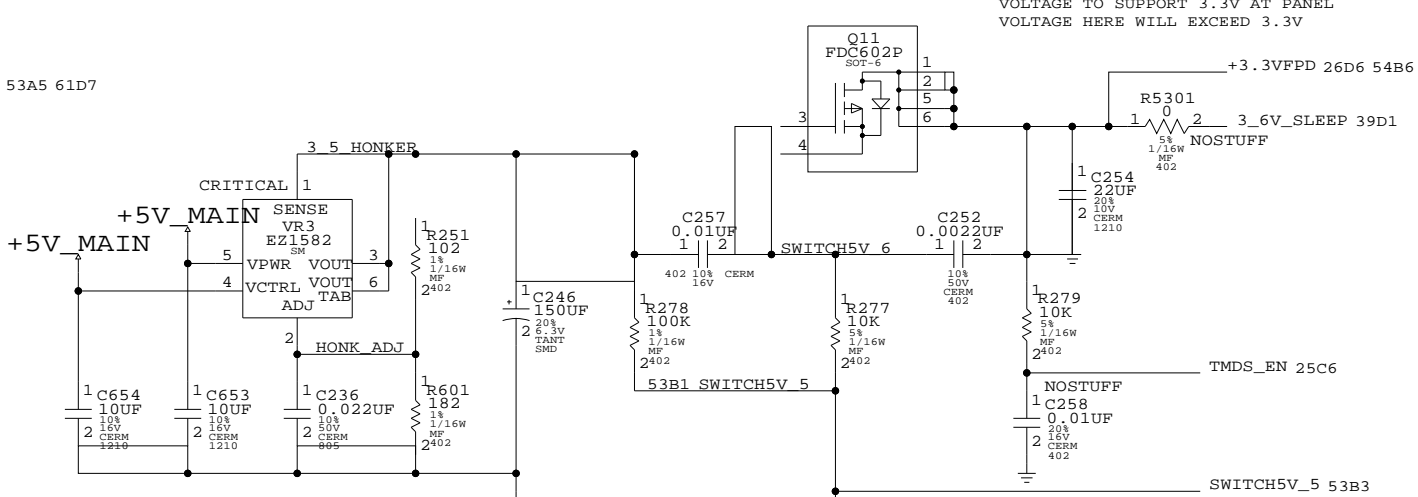
### +5V POWER SWITCH (OFF DURING SLEEP)

+5V\_MAIN +5V\_SLEEP 48C7 48D6 52C6 53A5 61D7



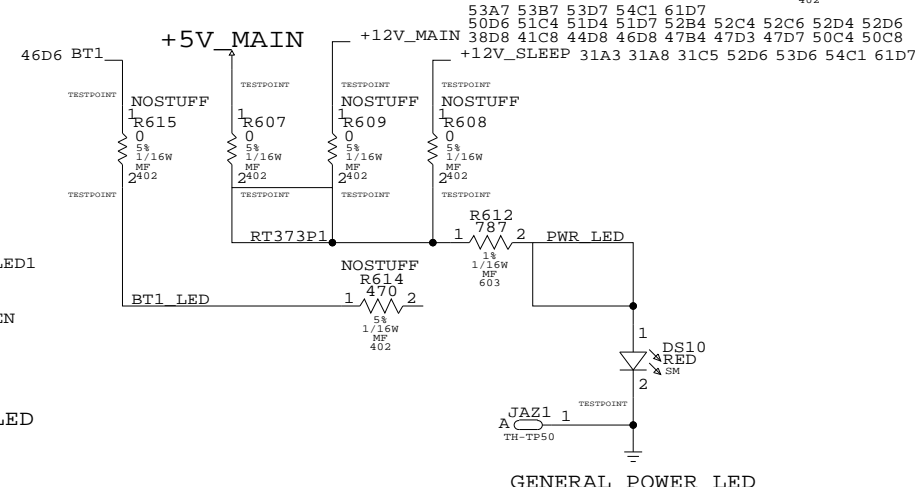
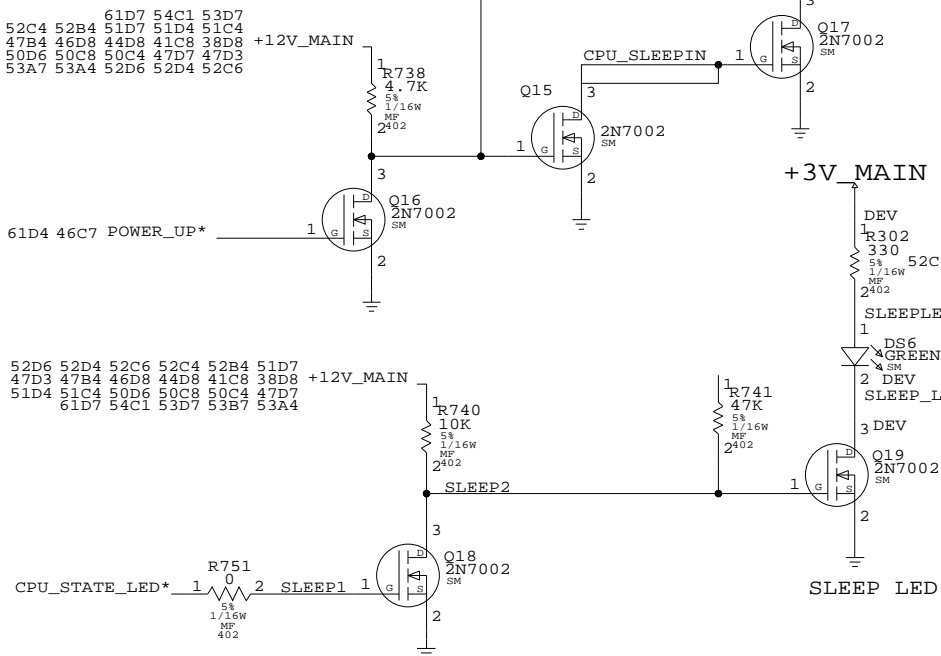
### TMDS POWER CONVERTER & SWITCH (OFF DURING SLEEP)

VOLTAGE TO SUPPORT 3.3V AT PANEL  
VOLTAGE HERE WILL EXCEED 3.3V



### +5V POWER, SLEEP & TESTPOINT LEDES (TESTPOINT LED IS USED TO FOR SERVICE AND IF NOT ILLUMINATED, TELLS USER ITS OK TO ADD MEMORY)

61D7 54C1 53D7  
52C4 52B4 51D7 51D4 51C4  
47B4 46D8 44D8 41C8 38D8  
50D6 50C8 50C4 47D7 47D3  
53A7 53A4 52D6 52D4 52C6



## +5V/+12V, AUDIO FW & TMDS PWR

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D		D
SCALE	SHT	OF	
NONE	53	74	

CLOCK POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+2_5V_DDR_AVDD	10	2.5	20
+2_5V_DDR_VDD	10	2.5	20
+3V_INTSS_AVDD	10	3.3	20
+3V_INTSS_VDD	10	3.3	20
PCK2059_VDDI2C	10	2.5	20

10D4  
10D5  
10B7  
10B6  
10D4

CPU POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+MAXBUS_SLEEP	10	1.8	20
CPU_AVDD	10	1.85	20
CPU_VCORE_SLEEP	10	1.85	20

4D5 6D8 7A3 7B3 7C3 7C5 7C7 8D3 9B2 9D2 9D4  
4D3 11B8 11D8 46B7 46D1 46D2 47D2 48D4 61C7  
4D3 4D7 9B6 9C2 47B3 47C1 61B4 61D7

ETHERNET POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+2.5V_ENET	10	2.5	20

37C3 37D3 37D5

FIREWIRE POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
FW_DIO_V	10	3.3	20
FW_DIODE_BYPASS_V	10	3.3	20
FW_PWR	10	24	20
FW_PWR_SW	10	24	20
FW_PHY_3_3	10	3.3	20
FW_VGND	10	0	20
FW_VP	10	12	20
FW_VP1	10	12	20
FW_VP2	10	12	20
FW_VP_1	10	12	20
FW_VP_2	10	12	20

38B6  
38B6 38B7  
52C7 53D3  
38D6 53D1  
38B5 38B7 38D7  
38D1  
38D5  
38D1 38D3  
38C1 38D3  
38D4  
38D4

GRAPHICS POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+3.3VFPD	10	3.6	20
DAC2VDD	10	3.3	20
DACVDD	10	3.3	20
DDC_VCC_3	10	3.3	20
DDC_VCC_5	10	5	20
DDR_VREF	10	1.25	20
IFP0AVCC	10	3.8	20
IFP0VREF	10	3.8	20
INT_TMDS_3V	10	3.6	20
GPU_AGP_VREF	10	0.75	20
GPU_FB_VREF	10	1.25	20
GRAPH_CORE	10	1.6	20
NVPLLVD	10	3.3	20
SGRAVREF	10	1.25	20
SGRBVREF	10	1.25	20

26D6 53C1  
24C5  
24C4  
26A5 26B3 61B7  
27C4 61B7  
16B2 16D1 16D8 17D8  
25A6 25B4  
25B4  
26B3 26C3 26C4 26D5 61C7  
19A3 19A8  
20C8  
19D5 25C4 25C6 50B1  
24D5  
22A3 22C4 22C8  
23A3 23C4 23C8

GPU_50PULLUP	1.5	OFFP29A5
GPU_50PULLDWN	0	OFFP29A5
GPU_TMODE	0	OFFP29A5

GPU_XTALSSIN	0	OFFP24B4
VIPCLK	0	OFFP24D4

CSLOT_IOWAIT_L	3.3	OFFP29B7
EIDE_CSELP_L	0	OFFP40C6
EIDE_IOCS16_L	5	OFFP40C6
UIDE_CSELP_L	0	OFFP40C2
UNUSED_ATAIOCS16_L	5	OFFP40C2

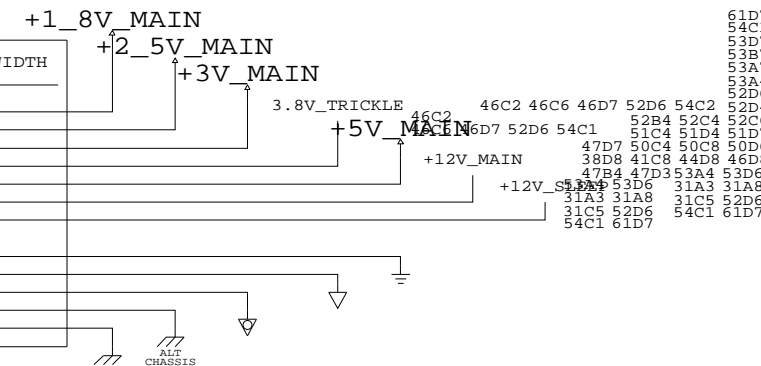
INTREPID POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+1_5V_INTREPID_PLL	10	1.5	20
+1_5V_INTREPID_PLL1	10	1.5	20
+1_5V_INTREPID_PLL2	10	1.5	20
+1_5V_INTREPID_PLL3	10	1.5	20
+1_5V_INTREPID_PLL4	10	1.5	20
+1_5V_INTREPID_PLL5	10	1.5	20
+1_5V_INTREPID_PLL6	10	1.5	20
+1_5V_INTREPID_PLL7	10	1.5	20
+1_5V_INTREPID_PLL8	10	1.5	20
+1_5V_AGP	10	1.5	20
INT_AGP_VREF	10	0.75	20

11D3 18D6 30D6 32D5  
30C4  
30D4  
30D4  
30D4  
18D5  
32D4  
11D2  
30D4  
12D6 13C8 18A8 18C2 18D7 19A4 19D5 48B4 61C7  
18A7 18C6

MAIN POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+1_8V_MAIN	10	1.8	20
+2_5V_MAIN	10	2.5	20
+3V_MAIN	10	3.3	20
3.8V_TRICKLE	10	3.8	20
+5V_MAIN	10	5	20
+12V_MAIN	10	12	20
+12V_SLEEP	10	12	20
GND	10	0	20
AGND	10	0	20
ANALOGGND	10	0	20
ALTCGND	10	0	20
CHGND	10	0	20



PMU POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
3.8VH_TRICKLE	10	3.8	20
PMU_AVCC	10	3.5	20
PMU_POWER	10	3.5	20

46C1 46D7  
46B5 46D4 61C4  
31C3 46A5 46B1 46C2 46D5

SYSTEM POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+12VSD_FILT	10	12	20
FAN_12V_FILT	10	12	20
KSSVSD	10	5	20
LED_5V	10	5	20
LED_5V_FILT	10	5	20
LED_RET	10	0	20
LED_RET_FILT	10	0	20

31A5  
31A5 61C7  
31A5 61A7  
31A8  
31A5 61A7  
31A3 53B6  
31A5 61A7

USB POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+3V_INTREPID_USB	10	3.3	20
NEC_AVDD	10	3.3	20
USB_GND	10	0	20
USB_PORT_PWR	10	5	20
USB_PWR	10	5	20
USB_PWR_EN	10	0	20

30C4  
34D5  
35A4 35B3 35C3 35D3  
35A4 35B3 35C3 35D3  
61B4 27B5 27C2 27D3  
35A6

POWER CONSTRAINTS

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SIG_NAME	RATSNBET_SCHEDULE MATCHED_DELAY	MAX_VIAS	DELAY_RULE	STUB_LENGTH	MIN_NECK_WIDTH NET_SPACING_TYPE	MAX_EXPOSED_LENGTH	NO_TEST	FUNC_TEST	PULSE_PARAM
15C5 15B6 15B3 15A6 14D8 14C8 14B8	MEM_DATA<0..63>	MEM_GROUP0:::150	8	:::1300	3				167 MHZ
17D6 17D4 17C6 17C4 15C8	RAM_DATA_A<0..63>	MEM_GROUP0_A:::180	8	:::1800	3				167 MHZ
15C7 15C4 15B7 15B4 15B2 15A6 15A2	RAM_DATA_B<0..63>	MEM_GROUP0_B:::180	2	:::2400	3				167 MHZ
17B6 17B4 17A6 17A4 16D6 16C6 16B6	MEM_DQS<0..7>	MEM_GROUP0:::180	3	:::1300	3				167 MHZ
16A6 15D7 15D4 15C7 15C4 15B6 15B2	RAM_DQS_A<0..7>	MEM_GROUP0_A:::180	3	:::1700	3				167 MHZ
15C7 15C4 15B7 15B4 15B2 15A6 15A2	RAM_DQS_B<0..7>	MEM_GROUP0_B:::180	2	:::2400	3				167 MHZ
17D6 17C6 17B6 17A6 16D6 16C6 16B6	MEM_DQM<0..7>	MEM_GROUP0:::180	3	:::1300	3				167 MHZ
15C7 15C4 15B7 15B4 15B2 15A6 15A2	RAM_DQM_A<0..7>	MEM_GROUP0_A:::180	3	:::1800	3				167 MHZ
17D4 17C4 17B4 17A4 14D6 14D3 14D2 14C3 14C2 14B3 14A3	MEM_ADDR<0..12>	MEM_ADDR:::200	3	:::600					
16B4 14D3 14D1 14C3 14C1 14B3 14A3	RAM_ADDR<0..12>	RAM_ADDR:::1300	4	:::3500		200			
17C6 17C4 17B6 17B4 16B6 14D6 14B3	MEM_BA<0..1>	MEM_ADDR:::1300	3	:::600					
17B6 16B6 16B4 14B3	RAM_BA<0..1>	RAM_ADDR:::1300	4	:::4000		200			
14C6 14C2 14B2 14A2	MEM_CS_L<0..3>	MEM_ADDR:::200	3	:::600	10 MIL SPACING				
16B6 16B4 14C1 14B1	RAM_CS_L<0..1>	RAM_CS_GROUP0:::400	3	:::2000:3500	10 MIL SPACING				
17B4 14B1 14A1	RAM_CS_L<2..3>	RAM_CS_GROUP1:::350	2	:::2000:3500	10 MIL SPACING				
14C6 14A3	MEM_RAS_L	MEM_ADDR:::200	3	:::600					
14C6 14A3	MEM_CAS_L	MEM_ADDR:::200	3	:::600					
14C6 14A3	MEM_WE_L	MEM_ADDR:::280	3	:::600					
17B6 16B4 14A3	RAM_CAS_L	RAM_ADDR:::2000	4	:::4000	200				
17B4 16B4 14A3	RAM_RAS_L	RAM_ADDR:::2000	4	:::4000	200				
17B6 16B6 14A3	RAM_WE_L	RAM_ADDR:::2000	4	:::4000	200				
14C6 14C2 14B6 14B2 14A2	MEM_CKE<0..3>	MEM_ADDR:::200	3	:::600	10 MIL SPACING				
16B6 16B4 14B1 14A1	RAM_CKE<0..1>	RAM_CS_GROUP0:::400	3	:::2500	10 MIL SPACING				
17C6 17C4 14C1 14B1	RAM_CKE<2..3>	RAM_CS_GROUP1:::350	2	:::2500	10 MIL SPACING				
14D5 14B6	MEM_MUXSEL_H<0..1>		3	:::1000					
14D5 14B6	MEM_MUXSEL_L<0..1>		3	:::1000					
15C5 15A3 14D4	MUX_SEL_H		4	:::2000	200				167 MHZ
15C8 15A6 14D4	MUX_SEL_L		4	:::2000	200				167 MHZ
14C5 14B6	SYSCLK_DDRCLK_A0_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
14C5 14B6	SYSCLK_DDRCLK_A0_L_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
16D6 14C4 10C2	SYSCLK_DDRCLK_A0SYSCLK_DDRCLKA0:::100	3	:::2600	200	8 MIL SPACING	270			167 MHZ
16D6 14C4 10C2	SYSCLK_DDRCLK_A0SYSCLK_DDRCLKA0:::100	3	:::2600	200	8 MIL SPACING	270			167 MHZ
14C5 14B6	SYSCLK_DDRCLK_A1_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
14B6 14B5	SYSCLK_DDRCLK_A1_L_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
16A4 14C4 10C2	SYSCLK_DDRCLK_A1SYSCLK_DDRCLKA1:::100	3	:::2600	200	8 MIL SPACING	270			167 MHZ
14B6 14B5	SYSCLK_DDRCLK_A2_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
14B6 14B5	SYSCLK_DDRCLK_A2_L_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
14B4 10C5	SYSCLK_DDRCLK_A2_L		3	:::750	8 MIL SPACING	270			167 MHZ
14B6 14B5	SYSCLK_DDRCLK_B0_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
14B6 14B5	SYSCLK_DDRCLK_B0_L_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
17B4 14B4 10C2	SYSCLK_DDRCLK_B0SYSCLK_DDRCLKB0:::100	3	:::3500	200	8 MIL SPACING	270			167 MHZ
17B4 14B4 10C2	SYSCLK_DDRCLK_B0SYSCLK_DDRCLKB0:::100	3	:::3500	200	8 MIL SPACING	270			167 MHZ
14B6 14A5	SYSCLK_DDRCLK_B1_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
14B6 14A5	SYSCLK_DDRCLK_B1_L_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
17D6 14A4 10C2	SYSCLK_DDRCLK_B1SYSCLK_DDRCLKB1:::100	3	:::3500	200	8 MIL SPACING	270			167 MHZ
17D6 14A4 10C2	SYSCLK_DDRCLK_B1SYSCLK_DDRCLKB1:::100	3	:::3200	200	8 MIL SPACING	270			167 MHZ
14B6 14A5	SYSCLK_DDRCLK_B2_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
14B6 14A5	SYSCLK_DDRCLK_B2_L_UF		3	:::500:850	8 MIL SPACING	270			167 MHZ
17A6 14A4 10B2	SYSCLK_DDRCLK_B2SYSCLK_DDRCLKB2:::100	3	:::3500	200	8 MIL SPACING	270			167 MHZ
17A6 14A4 10B2	SYSCLK_DDRCLK_B2SYSCLK_DDRCLKB2:::100	3	:::3500	200	8 MIL SPACING	270			167 MHZ
10C5	DDR_CLK_VDD_2		3	:::1000		400			167 MHZ
10C3	DDRCLK_A0_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10C3	DDRCLK_A1_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10C3	DDRCLK_A2_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10C3	DDRCLK_B0_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10C3	DDRCLK_B1_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10C3	DDRCLK_B2_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10B3	DDRCLK_A0_L_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10B3	DDRCLK_A1_L_UF		8	:::400:500	8 MIL SPACING	270			167 MHZ
10B3	DDRCLK_A2_L_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10B3	DDRCLK_B0_L_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10B3	DDRCLK_B1_L_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10B3	DDRCLK_B2_L_UF		3	:::400:500	8 MIL SPACING	270			167 MHZ
10B3	DDR_FBO		3	:::500	8 MIL SPACING	270			167 MHZ
10B3	DDR_FBO_L		3	:::500	8 MIL SPACING	270			167 MHZ
10B5	DDR_FBIN		8	:::1550:1615	8 MIL SPACING	400			167 MHZ
10B5	DDR_FBIN_L		8	:::1600:1650	8 MIL SPACING	270			167 MHZ
30A6 10A7	INT_REF_CLK_OUT		3	:::1500	10 MIL SPACING	270			49.92 MHZ
	INT_REF_CLK_OUT_UF		8	:::1500	10 MIL SPACING	270			49.92 MHZ
10A6	CLKGEN_OUT_1		3	:::500	10 MIL SPACING	270			66.56 MHZ
61C2 30A6 10A5	INT_REF_CLK_IN_PD		8	:::2500	10 MIL SPACING	270			66.56 MHZ
33C7 33C6 33B7 33B6 32D4 32C4 32B2 32B1	PCI_AD<31..0>	MIN_DAISSY_CHAIN	6	:::6000:8000	500				33 MHZ
61B2 34C6 34B7 34B6 61A4 34B6 33B7 32C5	PCI_CBE<3..0>	MIN_DAISSY_CHAIN	6	:::6000:8000	500				33 MHZ
61A4 34B6 33B7 32C5 32B8	PCI_FRAME_L	MIN_DAISSY_CHAIN	7	:::6000:8000	500				33 MHZ

DIGITAL SIGNAL CONSTRAINTS

SIGNAL CONSTRAINTS

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SIG_NAME	RATSNEST_SCHEDULE MATCHED_DELAY	MAX_VIAS	DELAY_RULE	STUB_LENGTH	NET_SPACING_TYPE	MAX_EXPOSED_LENGTH	DIFFERENTIAL_PAIR FUNC_TEST	PULSE_PARAM	FLAG
34B6 33B7 32C5 32B8 PCI_IRDY_L	MIN_DAISSY_CHAIN	6	:::6000:8000	500				33 MHZ	FLAG 111
61A4 34B6 33B7 32C5 32B8 PCI_TRDY_L	MIN_DAISSY_CHAIN	6	:::6000:8000	500				33 MHZ	FLAG 112
61A4 34B6 33B7 32C5 32A8 PCI_DEVSEL_L	MIN_DAISSY_CHAIN	6	:::6000:8000	500				33 MHZ	FLAG 113
61A4 34B6 33B7 32C5 32A8 PCI_STOP_L	MIN_DAISSY_CHAIN	6	:::6000:8000	500				33 MHZ	FLAG 114
61A4 34B6 33B7 32C5 PCI_PAR	MIN_DAISSY_CHAIN	6	:::6000:8000	500				33 MHZ	FLAG 115
32C5 CLK33M_PCI_SLOTB_UF		3	:::600:1000	200		450		33 MHZ	FLAG 116
32C5 CLK33M_PCI_SLOTC_UF		3	:::600:1200	200		450		33 MHZ	FLAG 117
32C5 CLK33M_PCI_SLOTD_UF		3	:::600:1000	200		450		33 MHZ	FLAG 118
61A4 33C2 32D7 CLK33M_PCI_SLOTB		5	:::3000:4000	200	10 MIL SPACING	450		33 MHZ	FLAG 119
32C5 INT_PCI_FB_OUT		4	:::1000	200		450		33 MHZ	FLAG 120
32C7 PCI_FBO_PLUS2		4	:::200	200		450		33 MHZ	FLAG 121
32C8 PCI_FB_PLUS4		4	:::1900:2000	200		450		33 MHZ	FLAG 122
32C7 PCI_FBI_PLUS2		4	:::1900:2000	200		450		33 MHZ	FLAG 123
32C7 PCI_FBI_EQUAL		4	:::2000:3000	200		450		33 MHZ	FLAG 124
32C7 PCI_FB_PLUS6		4	:::5900:6000	200		450		33 MHZ	FLAG 125
32C5 INT_PCI_FB_IN		4	:::1080	200		450		33 MHZ	FLAG 126
33C7 33C6 33C3 33C2 33B7 33B6 33B3 33B2 PCIT_AD<31..0>		3	:::1000					33 MHZ	FLAG 127
61C2 61B2 61A4 33C3 33B6 33B2 PCIT_CBE<31..0>		3	:::1000					33 MHZ	FLAG 128
33C2 33B6 PCIT_FRAME_L		3	:::1000					33 MHZ	FLAG 129
61B4 33C3 33B6 PCIT_IRDY_L		3	:::1000					33 MHZ	FLAG 130
33C2 33B6 PCIT_TRDY_L		3	:::1000					33 MHZ	FLAG 131
33C2 33B6 PCIT_DEVSEL_L		3	:::1000					33 MHZ	FLAG 132
33C2 33B6 PCIT_STOP_L		3	:::1000					33 MHZ	FLAG 133
33C2 33B6 PCIT_PAR		3	:::1000					33 MHZ	FLAG 134
19D8 19C8 18C4 AGP_AD<0..15>	AGP_GROUP0:::280	5	:::4500					266 MHZ	FLAG 135
19C8 18B4 AGP_CBE<0..1>	AGP_GROUP0:::330	5	:::4500					266 MHZ	FLAG 136
19B8 18B3 18A4 AGP_AD_STB<0>	AGP_GROUP0:::330	4	:::4400	200	8 MIL SPACING	500	AGP_ADSTBDP0	133 MHZ	FLAG 137
19B8 18D1 18A4 AGP_AD_STB_L<0>	AGP_GROUP0:::330	4	:::4400	200	8 MIL SPACING	500	AGP_ADSTBDP0	133 MHZ	FLAG 138
19C8 18C4 18B4 AGP_AD<16..31>	AGP_GROUP0:::280	5	:::4500					266 MHZ	FLAG 139
19C8 18B4 AGP_CBE<2..3>	AGP_GROUP0:::280	5	:::4500					266 MHZ	FLAG 140
19B8 18B3 18A4 AGP_AD_STB<1>	AGP_GROUP0:::280	4	:::4400	200	8 MIL SPACING	500	AGP_ADSTBDP1	133 MHZ	FLAG 141
19B8 18D1 18A4 AGP_AD_STB_L<1>	AGP_GROUP0:::330	4	:::4400	200	8 MIL SPACING	500	AGP_ADSTBDP1	133 MHZ	FLAG 142
19B8 18C3 18B4 AGP_FRAME_L		5	:::4000:4500					66 MHZ	FLAG 143
19B8 18C3 18B4 AGP_IRDY_L		5	:::4000:4500					66 MHZ	FLAG 144
19B8 18B4 18B3 AGP_TRDY_L		5	:::4000:4500					66 MHZ	FLAG 145
19B8 18C3 18B4 AGP_DEVSEL_L		5	:::4000:4500					66 MHZ	FLAG 146
19B8 18B4 18B3 AGP_STOP_L		5	:::4000:4500					66 MHZ	FLAG 147
19B8 18B4 AGP_PAR		5	:::4000:4500					66 MHZ	FLAG 148
19A8 18C1 18B4 18B1 18A4 AGP_SBA<0..7>		5	:::4000:4500						FLAG 149
19A8 18B3 18A4 AGP_SB_STB	AGP_GROUP99:::200	5	:::4500				AGP_SBSTBB		FLAG 150
19A8 18D1 18A4 AGP_SB_STB_L	AGP_GROUP99:::200	5	:::4500				AGP_SBSTBB		FLAG 151
19B7 18B1 18A4 AGP_ST<0..2>		5	:::4500:5000						FLAG 152
19B8 18B3 18A4 AGP_PIPE_L		5	:::4000:4500						FLAG 153
19B8 18B3 18A4 AGP_RBF_L		5	:::4000:4500						FLAG 154
19B7 18C4 18C3 AGP_REQ_L		5	:::4500:5000						FLAG 155
19B7 18C4 18C3 AGP_GNT_L		5	:::4500:5000						FLAG 156
19B8 18B1 18A6 AGP_WBF_L		5	:::4000:4500						FLAG 157
19A8 18D3 18D1 18C6 AGP_BUSY_L		5	:::4500:5000						FLAG 158
19A8 18D3 18C6 STOP_AGP_L		5	:::4500:5000						FLAG 159
19D7 19C7 GPU_AGP_AD<0..15>	GPU_AGP_GROUP0:::100	3	:::600					266 MHZ	FLAG 160
19C7 GPU_AGP_CBE<0..1>	GPU_AGP_GROUP0:::100	3	:::600					266 MHZ	FLAG 161
19B7 AGP_AD_STB_GPUUF<0>	GPU_AGP_STB0:::50	3	:::450		8 MIL SPACING	500	GPU_ADSTBDP0	133 MHZ	FLAG 162
19B7 AGP_AD_STB_L_GPUUF<0>	GPU_AGP_STB0:::50	3	:::800		8 MIL SPACING	500	GPU_ADSTBDP0	133 MHZ	FLAG 163
19C7 GPU_AGP_AD<16..31>	GPU_AGP_GROUP1:::100	3	:::600					266 MHZ	FLAG 164
19C7 GPU_AGP_CBE<2..3>	GPU_AGP_GROUP1:::100	3	:::600					266 MHZ	FLAG 165
19B7 AGP_AD_STB_GPUUF<1>	GPU_AGP_STB1:::50	3	:::800		8 MIL SPACING	500	GPU_ADSTBDP1	133 MHZ	FLAG 166
19B7 AGP_AD_STB_L_GPUUF<1>	GPU_AGP_STB1:::50	3	:::800		8 MIL SPACING	500	GPU_ADSTBDP1	133 MHZ	FLAG 167
19B7 GPU_AGP_FRAME_L		3	:::300:600					66 MHZ	FLAG 168
19B7 GPU_AGP_IRDY_L		3	:::300:600					66 MHZ	FLAG 169
19B7 GPU_AGP_TRDY_L		3	:::300:600					66 MHZ	FLAG 170
19B7 GPU_AGP_DEVSEL_L		3	:::300:600					66 MHZ	FLAG 171
19B7 GPU_AGP_STOP_L		3	:::300:600					66 MHZ	FLAG 172
19B7 GPU_AGP_PAR		3	:::300:600					66 MHZ	FLAG 173
19A7 GPU_AGP_SBA<0..7>		3	:::300:600						FLAG 174
19A7 GPU_AGP_SB_STB	GPU_AGP_SBSTB:::50	3	:::300:600				GPU_SBSTBB		FLAG 175
19A7 GPU_AGP_SB_STB_L	GPU_AGP_SBSTB:::50	3	:::300:600				GPU_SBSTBB		FLAG 176
19B7 GPU_AGP_PIPE_L		3	:::300:600						FLAG 177
19B7 GPU_AGP_RBF_L		3	:::300:600						FLAG 178
18C6 CLK66M_GPU_UF		3	:::1000:1100		10 MIL SPACING	250		66 MHZ	FLAG 179
19C7 18D8 CLK66M_GPU_AGP		4	:::3700:3900	200	10 MIL SPACING	250		66 MHZ	FLAG 180
18C6 INT_AGP_FB_OUT		4	:::1400:1500	200		250		66 MHZ	FLAG 181
18B7 AGP_FBO_EQUAL		4	:::900:1080	200		250		66 MHZ	FLAG 182
18B8 AGP_FB_PLUS2		4	:::1900:2000	200		250		66 MHZ	FLAG 183
18C7 AGP_FBI_EQUAL		4	:::200	200		250		66 MHZ	FLAG 184
18C6 INT_AGP_FB_IN		4	:::1200	200		250		66 MHZ	FLAG 185
32C5 32A8 18D7 INT_ROM_OVERLAY_PU		3	:::600:800		10 MIL SPACING	250		66 MHZ	FLAG 186
61A7 58B3 18C7 11B4 9B4 INT_ANALYZER_CLK		2	:::2800		8 MIL SPACING	250		66 MHZ	FLAG 187
34A6 32D7 CLK33M_PCI_SLOTD		4	:::3000:3500	200	8 MIL SPACING	250		33 MHZ	FLAG 188

**SIGNAL CONSTRAINTS**

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	SCALE	DRAWING NUMBER	REV.
	NONE	56 OF 74	D

### DIGITAL SIGNALS

GROUP	SIG_NAME	MATCHED_DELAY	MAX VIAS	DELAY_RULE	STUB_LENGTH	NET_SPACING_TYPE	MAX EXPOSED LENGTH	PULSE PARAM	
	FBD<0..63>	GPU_FBDDATA_A:::225	4	:::800				300 MHZ	20E8 20F8 20G8 21C5 21C8 21D5 21D8
	FBDD<0..63>	RAM_FBDDATA_A:::300	4	:::1000				300 MHZ	21C4 21C7 21D4 21D7 22B1 22B5 22C1 22C5
	FBDQM<0..7>	GPU_FBDQM_A:::200	4	:::800				300 MHZ	20D8 20G3
	FBDDQM<0..7>	RAM_FBDQM_A:::200	4	:::1000				300 MHZ	20G2 22C2 22C6
	FBA<0..12>	GPU_FBADDR_A:::200	4	:::700				300 MHZ	20C8 20D8 20E3 20F3
	FBBA<0..11>	RAM_FBADDR_A:::530	4	:::2400	2350			300 MHZ	20E2 20F2 22C2 22C6 22D2 22D6
	FBABA<0..1>	GPU_FBADDR_A:::200	4	:::600				300 MHZ	20C8 20E3
	FBABA<0..1>	RAM_FBADDR_A:::530	5	:::2400	50			300 MHZ	20E2 22C2 22C6
	FBARAS L	GPU_FBCNTL_A:::200	4	:::400				300 MHZ	20C8 20G3
	FBACAS L	GPU_FBCNTL_A:::200	4	:::400				300 MHZ	20C8 20G3
	FBABWE L	GPU_FBCNTL_A:::200	4	:::400				300 MHZ	20C8 20F3
	FBACSO L	GPU_FBCNTL_A:::200	4	:::400				300 MHZ	20C8 20F3
	FBACKE	GPU_FBCNTL_A:::200	5	:::400	100			300 MHZ	20D3 20D7
	FBARAS L	RAM_FBCNTL_A:::350	5	:::2700	50			300 MHZ	20G2 22B2 22B6
	FBACAS L	RAM_FBCNTL_A:::500	5	:::2700	50			300 MHZ	20G2 22B2 22B6
	FBABWE L	RAM_FBCNTL_A:::500	5	:::2700	50			300 MHZ	20F2 22B2 22B6
	FBACSO L	RAM_FBCNTL_A:::350	5	:::2700	50			300 MHZ	20F2 22B2 22B6
	FBACKE	RAM_FBCNTL_A:::500	5	:::2700	50			300 MHZ	20D2 22C2 22C6
	FBDOQ<0..7>	GPU_FBDOQ_A:::100	3	:::350				300 MHZ	20C7 21A8
	FBDOQTERM<0..7>	FB_DOQTERM_A:::50	3	:::1500		10 MIL SPACING		300 MHZ	21A7
	FBDOQ<0..7>	RAM_FBDOQ_A:::55	3	:::150		10 MIL SPACING		300 MHZ	21A6 22C2 22C6
	FBCLK0	GPU_FBCLK_A:::50	3	:::150			200	300 MHZ	20D7 21C3
	FBCLK0_L	GPU_FBCLK_A:::50	3	:::150			200	300 MHZ	20D7 21C3
	FBCLK1	GPU_FBCLK_A:::50	3	:::150			200	300 MHZ	20D7 21D3
	FBCLK1_L	GPU_FBCLK_A:::50	3	:::150			200	300 MHZ	20D7 21D3
	FBACLK1	RAM_FBCLK_A:::80	3	:::2500			200	300 MHZ	21D1 22C2
	FBACLK1_L	RAM_FBCLK_A:::80	3	:::2500			200	300 MHZ	21D1 22C2
	FBACLK0	RAM_FBCLK_A:::70	3	:::2500			200	300 MHZ	21C1 22C6
	FBACLK0_L	RAM_FBCLK_A:::70	3	:::2500			200	300 MHZ	21C1 22C6
	FBD<64..127>	GPU_FBDDATA_B:::225	4	:::800				300 MHZ	20E5 20F5 20G5 21B5 21B8 21C5 21C8
	FBDD<64..127>	RAM_FBDDATA_B:::325	4	:::1000				300 MHZ	21B4 21B7 21C4 21C7 23B1 23B5 23C1 23C5
	FBDQM<8..15>	GPU_FBDQM_B:::120	4	:::800				300 MHZ	20C3 20D3 20D5
	FBDDQM<8..15>	RAM_FBDQM_B:::120	4	:::1000				300 MHZ	20C2 20D2 23C2 23C6
	FBA<0..12>	GPU_FBADDR_B:::120	4	:::600				300 MHZ	20A3 20B3 20C3 20C5 20D5
	FBBA<0..11>	RAM_FBADDR_B:::370	5	:::2400	50			300 MHZ	20B2 20C2 23C2 23C6 23D2 23D6
	FBABA<0..1>	GPU_FBADDR_B:::120	4	:::600				300 MHZ	20A3 20C5
	FBABA<0..1>	RAM_FBADDR_B:::370	5	:::2400	50			300 MHZ	20A2 23C2 23C6
	FBARAS L	GPU_FBCNTL_B:::120	4	:::400				300 MHZ	20C3 20D4
	FBACAS L	GPU_FBCNTL_B:::120	4	:::400				300 MHZ	20C3 20D4
	FBABWE L	GPU_FBCNTL_B:::120	4	:::400				300 MHZ	20C3 20D4
	FBACSO L	GPU_FBCNTL_B:::120	4	:::400				300 MHZ	20C3 20C4
	FBACKE	GPU_FBCNTL_B:::120	5	:::400	100			300 MHZ	20A3 20C4
	FBARAS L	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20C2 23B2 23B6
	FBACAS L	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20C2 23B2 23B6
	FBABWE L	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20C2 23B2 23B6
	FBACSO L	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20C2 23B2 23B6
	FBACKE	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20A2 23C2 23C6
	FBDOQ<8..15>	GPU_FBDOQ_B:::100	3	:::350		10 MIL SPACING		300 MHZ	20D4 21A5
	FBDOQTERM<8..15>	FB_FBDOQTERM_B:::60	3	:::1500		10 MIL SPACING		300 MHZ	21A4
	FBDOQ<8..15>	RAM_FBDOQ_B:::50	3	:::150		10 MIL SPACING		300 MHZ	21A3 23C2 23C6
	FBCLK0	GPU_FBCLK_B:::50	3	:::150			200	300 MHZ	20C5 21B3
	FBCLK0_L	GPU_FBCLK_B:::50	3	:::150			200	300 MHZ	20C5 21B3
	FBCLK1	GPU_FBCLK_B:::50	3	:::150			200	300 MHZ	20C5 21C3
	FBCLK1_L	GPU_FBCLK_B:::50	3	:::150			200	300 MHZ	20C5 21B3
	FBACLK1	RAM_FBCLK_B:::90	4	:::2500			200	300 MHZ	21C1 23C2
	FBACLK1_L	RAM_FBCLK_B:::90	3	:::2500			200	300 MHZ	21B1 23C2
	FBACLK0	RAM_FBCLK_B:::90	3	:::2500			200	300 MHZ	21B1 23C6
	FBACLK0_L	RAM_FBCLK_B:::90	3	:::2500			200	300 MHZ	21B1 23C6

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	D		D
SCALE	SHT	57	74
NONE			

### DIGITAL SIGNALS

GROUP	SIG_NAME	MATCHED_DELAY	MAX_VIAS	DELAY_RULE	STUB_LENGTH	NET_SPACING_TYPE	NO_TEST	PULSE_PARAM	MAX_EXPOSED_LENGTH
MAXBUS	#GPU_ADDR<0..31>	CPU_ADDR_GROUP:::71250	:::5000		250			166 MHZ	4B7 4C7 9B7 9B8 9C5 9C6 9C7 9C8 11C3 11D3 11D8
	#GPU_DATA<0..63>	CPU_DATA_GROUP:::7400	:::5000		1550			166 MHZ	5A4 5B4 5C4 5D4 9C5 9C6 9C7 9C8 9D5 9D6 9D7 9D8
	#GPU_BR L	CPU_CNTL_GROUP:::7100	:::5000		250	10 MIL SPACING		166 MHZ	4D7 7C7 9C5 11D3 11B1 11B5 11B8 11C1 11C5 11D1 11D5
	#GPU_BG L	CPU_CNTL_GROUP:::7100	:::5000		250	10 MIL SPACING		166 MHZ	4D7 7B7 9B5 11D3
	#GPU_TS L	CPU_CNTL_GROUP:::7000	:::5000		250	10 MIL SPACING		166 MHZ	4D7 7C7 9C7 11D3
	#GPU_TT<0..4>	CPU_CNTL_GROUP:::7300	:::5000		250	10 MIL SPACING		166 MHZ	4B7 7A7 9B5 9B6 9C5 9C6 11B3
	#GPU_TBST L	CPU_CNTL_GROUP:::7100	:::5000		250	10 MIL SPACING		166 MHZ	4B7 7B7 9B5 11B3
	#GPU_TSIZ<0..2>	CPU_CNTL_GROUP:::7260	:::5000		250	10 MIL SPACING		166 MHZ	4B7 9B6 9B7 9C6 11B3
	#GPU_ARTRY L	CPU_CNTL_GROUP:::7000	:::5000		250	10 MIL SPACING		166 MHZ	4A7 7C7 9B8 11B3
	#GPU_AACK L	CPU_CNTL_GROUP:::7000	:::5000		250	10 MIL SPACING		166 MHZ	4A7 7B7 9B6 11B3
	#GPU_GBL L	CPU_CNTL_GROUP:::7000	:::1000		250	10 MIL SPACING		166 MHZ	4B8 9B6
	#GPU_INT_GBL L	CPU_CNTL_GROUP:::7100	:::3500		250	10 MIL SPACING		166 MHZ	4B8 7B7 11C3
	#GPU_CI L	CPU_CNTL_GROUP:::7000	:::5000		250	10 MIL SPACING		166 MHZ	4A7 7A7 9C6 11C3
	#GPU_HIT L	CPU_CNTL_GROUP:::7000	:::5000		250	10 MIL SPACING		166 MHZ	4A7 7C7 9B8 11B3
	#GPU_DBG L	CPU_CNTL_GROUP:::7000	:::3500		250	10 MIL SPACING		166 MHZ	4C3 7B7 9C8 11B1
	#GPU_DRDY L	CPU_CNTL_GROUP:::7100	:::500		250	10 MIL SPACING		166 MHZ	4C2 7B7 9B6 11B1
	#GPU_WT L	CPU_CNTL_GROUP:::7000	:::5000		250	10 MIL SPACING		166 MHZ	4B7 7A7 9B6 11B3
	#GPU_DRDY L UF		2	:::5000		250	10 MIL SPACING	166 MHZ	4C3
	#GPU_DTI<0..2>	CPU_CNTL_GROUP:::7150	:::5000		250	10 MIL SPACING		166 MHZ	4C3 9B5 9B7 11A1
	#GPU_TA L	CPU_CNTL_GROUP:::7100	:::5000		250	10 MIL SPACING		166 MHZ	4C3 7C7 9C5 11A1
	#GPU_TEA L	CPU_CNTL_GROUP:::7100	:::5000		250	10 MIL SPACING		166 MHZ	4C3 7B7 9C6 11A1
	#GPU_OREO L	CPU_CNTL_GROUP:::7000	:::5000		250	10 MIL SPACING		166 MHZ	4C3 7D5 9B7 11B3
#GPU_OACK L	CPU_CNTL_GROUP:::7000	:::4000		250	10 MIL SPACING		166 MHZ	4C3 9B5 11B3	
#SYSCLK_CPU UF		2	:::150				166 MHZ	11A3	
#SYSCLK_CPU		4	:::2200:2400	200	10 MIL SPACING		166 MHZ	315 4D2 11A4	
#INT_CPU_FB_OUT		3	:::1000	200			166 MHZ	315 11B3	
#GPU_FBO_PLUS1		3	:::200	200			166 MHZ	315 11A4	
#GPU_FBI_PLUS1		3	:::1400:1500	200			166 MHZ	315 11A4	
#GPU_FB_MINUS3		4	:::900:1000	200			166 MHZ	315 11A4	
#INT_CPU_FB_IN		4	:::1000	200			166 MHZ	315 11B3	
#GPU_FB_PLUS2		3	:::900:1000				166 MHZ	315 11A5	
#GPU_FB_PLUS3		3	:::2900:3000				166 MHZ	315 11A4	
#INT_ANALYZER_CLK		3	:::300				166 MHZ	9B4 11B4 18C7 56A7 61A7	
#SYSCLK_LA		2	:::2000				166 MHZ	9B3 9D8	
#INT_CLOCK_OUT		3	:::3000				166 MHZ	9C4	
MIN_LINE_WIDTH DIFFERENTIAL_PAIR									
#USB2_XT1		3	:::1000	100	10 MIL SPACING		30 MHZ		34C4
#USB2_XT2 B		3	:::1000	100	10 MIL SPACING		30 MHZ		
#USB2_XT2		3	:::100	100	10 MIL SPACING		30 MHZ		34C4
#USB2_RREF		2	:::100						34B4
#USB2_RSDAM	USB2_RSDA:::20	2	:::500		8 MIL SPACING	3.5	480 MHZ		34C4
#USB2_RSDAP	USB2_RSDA:::20	2	:::500		8 MIL SPACING	3.5	480 MHZ		34C4
#USB2_RSDBM	USB2_RSDB:::20	2	:::500		8 MIL SPACING	3.5	480 MHZ		34C4
#USB2_RSDBP	USB2_RSDB:::20	2	:::500		8 MIL SPACING	3.5	480 MHZ		34C4
#USB2_RSDCM	USB2_RSDC:::20	2	:::500		8 MIL SPACING	3.5	480 MHZ		34C4
#USB2_RSDCP	USB2_RSDC:::20	2	:::500		8 MIL SPACING	3.5	480 MHZ		34C4
#USB2_DAN F	USB2_DMA:::30	3	:::500	50	8 MIL SPACING	3.5	480 MHZ	USB2_DMA_DP	MIN_DAISY_CHAIN 34C1 34C4 35B7
#USB2_DAP F	USB2_DMA:::30	3	:::500	50	8 MIL SPACING	3.5	480 MHZ	USB2_DMA_DP	MIN_DAISY_CHAIN 34C1 35B7
#USB2_DBN F	USB2_DMB:::20	3	:::500	50	8 MIL SPACING	3.5	480 MHZ	USB2_DMB_DP	MIN_DAISY_CHAIN 34C1 35C7
#USB2_DBP F	USB2_DMB:::20	3	:::500	50	8 MIL SPACING	3.5	480 MHZ	USB2_DMB_DP	MIN_DAISY_CHAIN 34C1 34C4 35C7
#USB2_DCN F	USB2_DMC:::20	3	:::500	50	8 MIL SPACING	3.5	480 MHZ	USB2_DMC_DP	MIN_DAISY_CHAIN 34C1 35D7
#USB2_DCP F	USB2_DMC:::20	3	:::500	50	8 MIL SPACING	3.5	480 MHZ	USB2_DMC_DP	MIN_DAISY_CHAIN 34C1 35D7
#USBT_DAN F	USB2_DMAT:::60	4	:::3000	2000	8 MIL SPACING	3.5	480 MHZ	USB2_DMAT_DP	MIN_DAISY_CHAIN 35B6
#USBT_DAP F	USB2_DMAT:::60	4	:::3000	2000	8 MIL SPACING	3.5	480 MHZ	USB2_DMAT_DP	MIN_DAISY_CHAIN 35B6
#USBT_DBN F	USB2_DMBT:::60	4	:::3000	2000	8 MIL SPACING	3.5	480 MHZ	USB2_DMBT_DP	MIN_DAISY_CHAIN 35C6
#USBT_DBP F	USB2_DMBT:::60	4	:::3000	2000	8 MIL SPACING	3.5	480 MHZ	USB2_DMBT_DP	MIN_DAISY_CHAIN 35C6
#USBT_DCN F	USB2_DMCT:::60	4	:::3000	2000	8 MIL SPACING	3.5	480 MHZ	USB2_DMCT_DP	MIN_DAISY_CHAIN 35D6
#USBT_DCP F	USB2_DMCT:::60	4	:::3000	2000	8 MIL SPACING	3.5	480 MHZ	USB2_DMCT_DP	MIN_DAISY_CHAIN 35D6
#USB_DAN CON	USB2_CONA:::30	2	:::750	50	8 MIL SPACING	3.5	480 MHZ	USB2_CONA_DP	MIN_DAISY_CHAIN 35C3 61C4
#USB_DAP CON	USB2_CONA:::30	2	:::750	50	8 MIL SPACING	3.5	480 MHZ	USB2_CONA_DP	MIN_DAISY_CHAIN 35C3 61C4
#USB_DBN CON	USB2_CONB:::30	2	:::750	50	8 MIL SPACING	3.5	480 MHZ	USB2_CONB_DP	MIN_DAISY_CHAIN 35B3 61C4
#USB_DBP CON	USB2_CONB:::30	2	:::750	50	8 MIL SPACING	3.5	480 MHZ	USB2_CONB_DP	MIN_DAISY_CHAIN 35B3 61C4
#USB_DCN CON	USB2_CONC:::30	2	:::750	50	8 MIL SPACING	3.5	480 MHZ	USB2_CONC_DP	MIN_DAISY_CHAIN 35D3 61C4
#USB_DCP CON	USB2_CONC:::30	2	:::750	50	8 MIL SPACING	3.5	480 MHZ	USB2_CONC_DP	MIN_DAISY_CHAIN 35D3 61C4

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	D		D
SCALE	SHT	OF	
NONE	58	74	

DIGITAL SIGNALS

GROUP	SIG_NAME	MATCHED_DELAY	MAX_VIAS	DELAY_RULE	STUB_LENGTH	NET_SPACING_TYPE	MIN_LINE_WIDTH MAX_EXPOSED_LENGTH	PULSE_PARAM
NEW	FVSYNC*		3	:::1000				24C5
STUFF	FANALOG_VSYNC*		4	:::3500				24C8 27C6 28B5 61B7
HERE	FHSYNC*		3	:::1000				24C5
	FANALOG_HSYNC*		5	:::3500				24C8 27C4 27D6 28B5 61B7
	FANALOG_BLU		4	:::4000	200	10 MIL SPACING	5.8	24C5 24C8 27C6
	FANALOG_GRN		4	:::4000	200	10 MIL SPACING	5.8	24C5 24C8 27C6
	FANALOG_RED		4	:::4000	200	10 MIL SPACING	5.8	24C5 24C8 27B6
	FRLT_ANALOG_RED		2	:::500		10 MIL SPACING	5.8	27C5 61B7
	FRLT_ANALOG_GRN		2	:::500		10 MIL SPACING	5.8	27C5 61B7
	FRLT_ANALOG_BLU		2	:::500		10 MIL SPACING	5.8	27C5 61B7
	FDAC2RSET			:::1000		10 MIL SPACING		24C6
	FDAC2VREF			:::1000		10 MIL SPACING		24C5
	FNV11_XTALIN		4	:::1000	100	8 MIL SPACING		27 MHZ 24B4
	FNV11_XTALOUT		4	:::1000	100	8 MIL SPACING		27 MHZ 24B4
	FINT_TMDS_CKP	TMDS:::120	3		50	8 MIL SPACING	TMDS_CLK	25D2 26B6 61A7
	FINT_TMDS_CKM	TMDS:::120	3		50	8 MIL SPACING	TMDS_CLK	25D2 26A6 61A7
	FINT_TMDS_D0P	TMDS:::120	3		50	8 MIL SPACING	TMDS_D0	25D2 26B6 61B7
	FINT_TMDS_D0M	TMDS:::120	3		50	8 MIL SPACING	TMDS_D0	25D2 26B6 61A7
	FINT_TMDS_D1P	TMDS:::120	3		50	8 MIL SPACING	TMDS_D1	25D2 26C6 61B7
	FINT_TMDS_D1M	TMDS:::120	3		50	8 MIL SPACING	TMDS_D1	25D2 26C6 61B7
	FINT_TMDS_D2P	TMDS:::120	3		50	8 MIL SPACING	TMDS_D2	25C2 26D6 61B7
	FINT_TMDS_D2M	TMDS:::120	3		50	8 MIL SPACING	TMDS_D2	25C2 26D6 61B7
	FACKP	TMDSFILT:::50	2		20	8 MIL SPACING	TMDSFILT_CLK	26B5 26C4
	FACKM	TMDSFILT:::50	2		20	8 MIL SPACING	TMDSFILT_CLK	26A5 26C3
	FAD0P	TMDSFILT:::50	2		20	8 MIL SPACING	TMDSFILT_D0	26B5 26C3
	FAD0M	TMDSFILT:::50	2		20	8 MIL SPACING	TMDSFILT_D0	26B5 26C4
	FAD1P	TMDSFILT:::50	2		20	8 MIL SPACING	TMDSFILT_D1	26C4 26C5
	FAD1M	TMDSFILT:::50	2		20	8 MIL SPACING	TMDSFILT_D1	26C3 26C5
	FAD2P	TMDSFILT:::50	2		20	8 MIL SPACING	TMDSFILT_D2	26C3 26D5
	FAD2M	TMDSFILT:::50	2		20	8 MIL SPACING	TMDSFILT_D2	26C4 26D5
	FENET_LINK_TX_EN		4	:::1000				25 MHZ 36D6
	FENET_LINK_TX_ER		4	:::1000				25 MHZ 36D6
	FENET_LINK_TXD<0..3>		4	:::1000				25 MHZ 36C6
	FENET_PHY_TX_EN		4	:::5600				25 MHZ 36D7 37C6
	FENET_PHY_TX_ER		4	:::5600				25 MHZ 36D7 37C6
	FENET_PHY_TXD<0..3>		4	:::4600:5600				25 MHZ 36C7 37C6
	FGLKENET_LINK_TX		4	:::4600:5600				25 MHZ 36D7 37C8
	FGLKENET_PHY_TX		4	:::1000				25 MHZ 37C6
	FGLKENET_LINK_RX		4	:::4600:5600				25 MHZ 36C7 37C8
	FGLKENET_PHY_RX		4	:::1000				25 MHZ 37C6
	FENET_PHY_RXD<0..3>		4	:::1000				25 MHZ 37B6 37C6
	FENET_PHY_RX_DV		4	:::1000				25 MHZ 37B6
	FENET_PHY_RX_ER		4	:::1000				25 MHZ 37B6
	FENET_PHY_CRS		4	:::1000				25 MHZ 37B6
	FENET_PHY_COL		4	:::1000				25 MHZ 37B6
	FENET_LINK_RXD<0..3>		4	:::4600:5600				25 MHZ 36C7 37B8 37C8
	FENET_CRS		4	:::4600:5600				25 MHZ 36C7 37B8
	FENET_COL		4	:::4600:5600				25 MHZ 36B7 37B8
	FENET_RX_DV		4	:::4600:5600				25 MHZ 36C7 37B8
	FENET_RX_ER		4	:::4600:5600				25 MHZ 36C7 37B8
	FGLK25M_ENET_XIN		3	:::1000	100	8 MIL SPACING		25 MHZ 37B6
	FGLK25M_ENET_XOUT		3	:::1000	100	8 MIL SPACING		25 MHZ 37B6
	FENET_TDP	ETHTD:::70	3	:::4000	3150	10 MIL SPACING	ETH_TXD	100 MHZ 37C3
	FENET_TDN	ETHTD:::70	3	:::4000	3150	10 MIL SPACING	ETH_TXD	100 MHZ 37C3
	FENET_RDP	ETHRD:::70	3	:::4000	3150	10 MIL SPACING	ETH_RXD	100 MHZ 37C3
	FENET_RDN	ETHRD:::70	3	:::4000	3150	10 MIL SPACING	ETH_RXD	100 MHZ 37C3
	RJ45_TXP	RJTxD:::70	2	:::750		2KV ISO	RJ45_TXD	100 MHZ 37C1 37C2
	RJ45_TXN	RJTxD:::70	2	:::750		2KV ISO	RJ45_TXD	100 MHZ 37C1 37C2
	RJ45_RXP	RJRxD:::70	2	:::750		2KV ISO	RJ45_RXD	100 MHZ 37C1 37C2
	RJ45_RXN	RJRxD:::70	2	:::750		2KV ISO	RJ45_RXD	100 MHZ 37C1 37C2
	RJ45_TREF					2KV ISO		37C2
	RJ45_RREF					2KV ISO		37C2
	RJ45_4_5					2KV ISO		37C1
	RJ45_7_8					2KV ISO		37C1
	RJ45_F_TREF					2KV ISO		37B2
	FEW_LINK_DATA<0..7>		4	:::1000				36C5
	FEW_LINK_CNTL<0..1>		4	:::1000				49.152 MHZ 36C5
	FEW_LINK_LREQ		4	:::1000				49.152 MHZ 36C5
	FEW_SCLK		4	:::3500:4500				49.152 MHZ 36C5 38C8
	FEW_D<0..7>		4	:::3700:4700				49.152 MHZ 36C3 38B8 38C8
	FEW_CNTL0		4	:::3700:4700				49.152 MHZ 36C3 38C8
	FEW_CNTL1		4	:::3700:4700				49.152 MHZ 36C3 38C8
	FEW_LREQ		4	:::3700:4700				49.152 MHZ 36C3 38C8
	FEW_PHY_SCLK		4	:::500				49.152 MHZ 38C7
	FEW_PHY_CNTL0		4	:::1000				49.152 MHZ 38C7
	FEW_PHY_CNTL1		4	:::1000				49.152 MHZ 38C7
	FEW_PHY_D<0..7>		4	:::1000				49.152 MHZ 38B7 38C7
	FEW_XI		3	:::1000	100	8 MIL SPACING		24.576 MHZ 38C6
	FEW_XO		3	:::1000	100	8 MIL SPACING		24.576 MHZ 38C6
	FEW_BIAS1							38C5
	FEW_BIAS2							38C5
	FEW_TPA1P	FWTPA1:::50	3	:::1220	5000		FW_TPA1	400 MHZ 38C5
	FEW_TPA1N	FWTPA1:::50	3	:::1220	5000		FW_TPA1	400 MHZ 38C5
	FEW_TPB1P	FWTPB1:::50	3	:::1220	5000		FW_TPB1	400 MHZ 38C5
	FEW_TPB1N	FWTPB1:::50	3	:::1220	5000		FW_TPB1	400 MHZ 38C5
	FEW_TPA2P	FWTPA2:::50	3	:::1220	5000		FW_TPA2	400 MHZ 38C5
	FEW_TPA2N	FWTPA2:::50	3	:::1220	5000		FW_TPA2	400 MHZ 38C5
	FEW_TPB2P	FWTPB2:::50	3	:::1220	5000		FW_TPB2	400 MHZ 38C5
	FEW_TPB2N	FWTPB2:::50	3	:::1220	5000		FW_TPB2	400 MHZ 38C5
	FEW_TPO1P	FWTPO1:::50	3	:::1220	5000		FW_TPO1	400 MHZ 38A8 38D1
	FEW_TPO1N	FWTPO1:::50	3	:::1220	5000		FW_TPO1	400 MHZ 38A8 38D1
	FEW_TPI1P	FWTPI1:::50	3	:::1220	5000		FW_TPI1	400 MHZ 38A8 38D1
	FEW_TPI1N	FWTPI1:::50	3	:::1220	5000		FW_TPI1	400 MHZ 38A8 38D1
	FEW_TPO2P	FWTPO2:::50	3	:::1220	5000		FW_TPO2	400 MHZ 38A8 38C1
	FEW_TPO2N	FWTPO2:::50	3	:::1220	5000		FW_TPO2	400 MHZ 38A8 38C1
	FEW_TPI2P	FWTPI2:::50	3	:::1220	5000		FW_TPI2	400 MHZ 38A8 38C1
	FEW_TPI2N	FWTPI2:::50	3	:::1220	5000		FW_TPI2	400 MHZ 38A8 38C1

SIGNAL CONSTRAINTS

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SIZE	DRAWING NUMBER	REV.
D		D
SCALE	SHT	OF
NONE	59	74

DIGITAL SIGNALS (CONT'D)

GROUP	SIG_NAME	MATCHED_DELAY	MAX_VIAS	DELAY_RULE	STUB_LENGTH	NET_SPACING_TYPE	MAX_EXPOSED_LENGTH	PULSE_PARAM
CD DRIVE BUS	EIDE_RST_L			:::3500:5500				33 MHZ 39A7 39D5
	EIDE_DMACK_L			:::3500:5500				33 MHZ 39A7 39D5
	EIDE_STOP			:::5500				33 MHZ 39A7 39D5
	EIDE_HSTB_RDY			:::5500				33 MHZ 39A7 39C5
	EIDE_DSTB_RDY			:::3500:5500				33 MHZ 39A7 39C5
	EIDE_DATA<0..15>			:::3500:5500				33 MHZ 39A5 39B5 39B7 39C5
	GD_RESET_L			:::1000				33 MHZ 39D4 40C6
	GD_DMACK_L			:::4000				33 MHZ 39D4 40C6
	GD_STOP			:::5000				33 MHZ 39D4 40C6
	GD_HSTB_RDY			:::5000				33 MHZ 39C4 40C6
	GD_DSTB_RDY			:::1000				33 MHZ 39C4 40C6
	UATAD<0..15>			:::1000				33 MHZ 39A4 39B4 39C4 40C6
	GD_DMARQ			:::1000				33 MHZ 40C6
	EIDE_DMARQ			:::3500:5500				33 MHZ 39A7 40C8
	UATA0IRO			:::1000				33 MHZ 40C6
	EIDE_INTRO			:::3500:5500				33 MHZ 39A7 40C8
	CD_EIDE_ADDR<0..2>			:::1000				33 MHZ 40C6
	EIDE_ADDR<0..2>			:::3500:5500				33 MHZ 39B7 40A8 40B8
	CD_CS1FX_L			:::1000				33 MHZ 40C6
	EIDE_CS1FX_L			:::3500:5500				33 MHZ 39A7 40B8
	CD_CS3FX_L			:::1000				33 MHZ 40C6
	EIDE_CS3FX_L			:::3500:5500				33 MHZ 39A7 40B8
HD DRIVE BUS	UIDE_RST_L	HD_DATA:::5500		:::100:6000	500			100 MHZ 39C7 39D3
	UIDE_DMACK_L	HD_DATA:::5500		:::100:6000	500			100 MHZ 39C7 39D3
	UIDE_DIOR_L	HD_DATA:::5500		:::100:6000				100 MHZ 39C7 39D3
	UIDE_DIOW_L	HD_DATA:::5500		:::6000				100 MHZ 39C3 39C7
	UIDE_IOCHRDY	HD_DATA:::5500		:::100:6000	500			100 MHZ 39C3 39C7
	UIDE_DATA<0..15>	HD_DATA:::5500		:::100:6000				100 MHZ 39A3 39B3 39C3 39C7 39D7
	HD_RESET_L			:::1000				100 MHZ 39D1 40C3
	HD_DMACK_L			:::1000				100 MHZ 39D1 40C3
	HD_DIOR_L			:::5500				100 MHZ 39D1 40C3
	HD_DIOW_L			:::5500				100 MHZ 39C1 40C3
	HD_IOCHRDY			:::1000				100 MHZ 39C1 40C3
	HD_DMARQ			:::1000				100 MHZ 40C3
	UIDE_DMARQ	HD_DATA:::5500		:::100:6000				100 MHZ 39C7 40C4
	HD_INTRO			:::1000	500			100 MHZ 40C3
	UIDE_INTRO	HD_DATA:::5500		:::100:6000				100 MHZ 39C7 40C4
	HD_UIDE_ADDR<0..2>			:::1000				100 MHZ 40C2 40C3
	UIDE_ADDR<0..2>	HD_DATA:::5500		:::100:6000				100 MHZ 39C7 40A4 40B4
	HD_UIDE_CS1FX_L			:::6000				100 MHZ 40C3
	UIDE_CS1FX_L	HD_DATA:::5500		:::6000				100 MHZ 39C7 40B4
	HD_UIDE_CS3FX_L			:::6000				100 MHZ 40C2
	UIDE_CS3FX_L	HD_DATA:::5500		:::6000				100 MHZ 39C7 40B4
	CLK_18M_INT_XOUT		3	:::1000	100	8 MIL SPACING		18.432 MHZ 60B5
	CLK_18M_INT_XOUT		3	:::1000	100	8 MIL SPACING		18.432 MHZ 60B5
	CLK_18M_INT_XOUT		3	:::200	50	8 MIL SPACING		18.432 MHZ 60B5
	USB_DAP	USBA:::500						30B3
	USB_DAN	USBA:::500						30B3
	USB_DAP_F	USBA_F:::500			100			30B2 35B7
	USB_DAN_F	USBA_F:::500			100			30B2 35B7
	USB_DBP	USBB:::500						30B3
	USB_DBN	USBB:::500						30B3
	USB_DBP_F	USBB_F:::500			100			30B2 35C7
	USB_DBN_F	USBB_F:::500			100			30B2 35C7
	USB_DCP	USBC:::500						30B3
	USB_DCN	USBC:::500						30B3
	USB_DCP_F	USBC_F:::500			100			30B2 35D7
	USB_DCN_F	USBC_F:::500			100			30B2 35D7
	USB_DEP	USBE:::500						30B3
	USB_DEN	USBE:::500						30B3
	RT_USB_DP	USBE_F:::500			100			30B2 31D3 61B4
	RT_USB_DM	USBE_F:::500			100			30B2 31D3 61B4
	USB_DFP	USBF:::500						30B3
	USB_DFN	USBF:::500						30B3
	MODEM_USB_DP	USBF_F:::500			100			30B2 31C5 61B4
	MODEM_USB_DM	USBF_F:::500			100			30B2 31C5 61B4
	EMU_XO		3	:::1000	100	8 MIL SPACING		10 MHZ 46B5
	EMU_XI		3	:::1000	100	8 MIL SPACING		10 MHZ 46B5
	EMU_XT		3	:::300	50	8 MIL SPACING		10 MHZ 46A6
	EMU_CLKOUT		3	:::1000	100	8 MIL SPACING		32.768 MHZ 46B4
	EMU_CLKIN		3	:::1000	100	8 MIL SPACING		32.768 MHZ 46B4
	EMU_CLKT		3	:::300	50	8 MIL SPACING		32.768 MHZ 46B2
	MICSHLD					10 MIL SPACING		31A5 45B8 61A7
	MICHIGH					10 MIL SPACING		31A5 45C8 61A7
	MICLOW					10 MIL SPACING		31A5 45B8 61A7
	KS_INT_SPKR+					10 MIL SPACING		31A3 44C3 61B7
	KS_INT_SPKR-					10 MIL SPACING		31A3 44C3 61B7

SIG_NAME	DELAY_RULE	PULSE_PARAM
T_UD_IDEDD_0	:::1000	100 MHZ 39C1 40C3
T_UD_IDEDD_1	:::1000	100 MHZ 39C1 40C3
T_UD_IDEDD_2	:::1000	100 MHZ 39C1 40C3
T_UD_IDEDD_3	:::1000	100 MHZ 39C1 40C3
T_UD_IDEDD_4	:::1000	100 MHZ 39B1 40C3
T_UD_IDEDD_5	:::1000	100 MHZ 39B1 40C3
T_UD_IDEDD_6	:::1000	100 MHZ 39B1 40C3
T_UD_IDEDD_7	:::1000	100 MHZ 39B1 40C3
T_UD_IDEDD_8	:::1000	100 MHZ 39B1 40C2
T_UD_IDEDD_9	:::1000	100 MHZ 39B1 40C2
T_UD_IDEDD_10	:::1000	100 MHZ 39B1 40C2
T_UD_IDEDD_11	:::1000	100 MHZ 39B1 40C2
T_UD_IDEDD_12	:::1000	100 MHZ 39B1 40C2
T_UD_IDEDD_13	:::1000	100 MHZ 39A1 40C2
T_UD_IDEDD_14	:::1000	100 MHZ 39A1 40C2
T_UD_IDEDD_15	:::1000	100 MHZ 39A1 40C2

SIGNAL CONSTRAINTS

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	D		D
SCALE	SHT	OF	
NONE	60	74	

FUNC\_TEST

Table with columns for test name, test type, and test code. Includes tests like +1\_8V\_MAIN, +12V\_MAIN, +12V\_SLEEP, +12V\_SLEEPS, +5V\_MAIN, +5V\_SLEEP, +2\_5V\_MAIN, +3V\_MAIN, CPU\_VCORE\_SLEEP, JTAG\_ASIC\_TCK, JTAG\_ASIC\_TDI, JTAG\_ASIC\_TDO, JTAG\_ASIC\_TMS, JTAG\_ASIC\_TRST\_L, INT\_TMDS\_3V, +1\_5V\_AGP, FAN\_12V\_FILT, +INTREPID\_CORE\_MAIN, INTREPID\_VSENSE, OVDD\_ADJ, CPU\_CHKSTP\_OUT\_L, CPU\_CHKSTP\_IN\_L, CPU\_HRESET\_L, JTAG\_CPU\_TCK, JTAG\_CPU\_TDI, JTAG\_CPU\_TDO, JTAG\_CPU\_TMS, JTAG\_CPU\_TRST\_L, +MAXBUS\_SLEEP, ROM\_CS\_L, ROM\_OE\_L, ROM\_RW\_L, DDC\_VCC\_3, DDC\_VCC\_5, SND\_HP\_SENSE, ANALOG\_HSYNC\*, ANALOG\_VSYNC\*, FILT\_ANALOG\_BLU, FILT\_ANALOG\_RED, FILT\_ANALOG\_GRN, GND, KS\_INT\_SPKR+, KS\_INT\_SPKR-, INT\_TMDS\_D2P, INT\_TMDS\_D2M, INT\_TMDS\_D1P, INT\_TMDS\_D1M, INT\_TMDS\_D0P, INT\_TMDS\_D0M, INT\_TMDS\_CKP, INT\_TMDS\_CKM, INV\_CUR\_HI\_FILT, IO\_RESET\_L, KS5VSD, INT\_I2C\_CLK2, INT\_I2C\_DATA2, INT\_ANALYZER\_CLK, LAMP\_STS\_FILT, LCD\_PWM\_FILT, LED\_5V\_FILT, LED\_RET\_FILT, MICSHLD, MICHIGH, MICLOW, COMM\_RESET\_L, IIC\_ADD, ROM\_WP\_L.

FUNC\_TEST

Table with columns for test name, test type, and test code. Includes tests like COMM\_SHUTDOWN, MON\_DETECT, FLO\_KNOWS\_BEST, NMI\_BUTTON\*, PWR\_SWITCH\*, PMU\_RST\*, PMURESETBUTTON\*, PWR\_SWITCH\*, PWR\_UP, POWER\_UP\*, RESET\_BUTTON\*, COMM\_RING\_DET\_L, ROM\_ONBOARD\_CS\_L, COMM\_DTR\_L, COMM\_TXD\_L, COMM\_TRXC, COMM\_RTS\_L, COMM\_RXD, COMM\_GPIO\_L, SLEEP, CPU\_SRESET\_L, PMU\_AVCC, TMDS\_DDC\_CLK, TMDS\_DDC\_DAT, USB\_DCN\_CON, USB\_DCP\_CON, USB\_DBN\_CON, USB\_DBP\_CON, USB\_DAN\_CON, USB\_DAP\_CON, BT\_USB\_DP, BT\_USB\_DM, MODEM\_USB\_DP, MODEM\_USB\_DM, USB\_PORT\_PWR, VGA\_IIC\_CLK, VGA\_IIC\_DAT, CPU\_VCORE\_SLEEP, LINE\_IN\_COM, LINE\_IN\_R, LINE\_IN\_SENSE, LINE\_IN\_L, SND\_LIN\_SENSE, OUT\_R, LINEOUT\_COMM2, LINE\_OUT\_L, PCIT\_IRDY\_L, RF\_CLKRUN\_L, NC\_RF\_DISABLE\_L, PCI\_DEVSEL\_L, PCI\_STOP\_L, PCI\_TRDY\_L, PCI\_FRAME\_L, PCI\_PAR, WL\_PCI\_IDSEL, 33SLOTB\_INT\_L, PMU\_PME\_L, PCI\_SLOTB\_GNT\_L, CLK33M\_PCI\_SLOTB, PCI\_SLOTB\_REQ\_L, MAIN\_RESET\_L, PCI\_CBE<0>, PCIT\_CBE<1>, PCIT\_CBE<2>, PCIT\_CBE<3>, UNUSED\_GPIO15.

FUNC\_TEST

Table with columns for test name, test type, and test code. Includes tests like PCI\_AD<0>, PCIT\_AD<1>, PCIT\_AD<2>, PCIT\_AD<3>, PCI\_AD<4>, PCI\_AD<5>, PCI\_AD<6>, PCIT\_AD<7>, PCIT\_AD<8>, PCI\_AD<9>, PCIT\_AD<10>, PCI\_AD<11>, PCIT\_AD<12>, PCI\_AD<13>, PCIT\_AD<14>, PCI\_AD<15>, PCI\_AD<16>, PCIT\_AD<17>, PCI\_AD<18>, PCIT\_AD<19>, PCI\_AD<20>, PCIT\_AD<21>, PCI\_AD<22>, PCIT\_AD<23>, PCI\_AD<24>, PCIT\_AD<25>, PCI\_AD<26>, PCIT\_AD<27>, PCIT\_AD<28>, PCIT\_AD<29>, PCI\_AD<30>, PCIT\_AD<31>.

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SCALE NONE SHT 61 OF 74



	8	7	6	5	4	3	2	1						
D	<p>*** Signal Cross-Reference ***          --- for the entire design ---</p> <p>+1_5V_AGP 12D6 13C8 18A8 18C2 18D7 19A4 19D5          48B4 54C3 61C7</p> <p>+1_5V_INTREPID_PLL 11D3 18D6 30D6 32D5 54D3</p> <p>+1_5V_INTREPID_PLL1 30C4 54D3</p> <p>+1_5V_INTREPID_PLL2 30D4 54D3</p> <p>+1_5V_INTREPID_PLL3 30D4 54D3</p> <p>+1_5V_INTREPID_PLL4 30D4 54D3</p> <p>+1_5V_INTREPID_PLL5 18D5 54D3</p> <p>+1_5V_INTREPID_PLL6 32D4 54D3</p> <p>+1_5V_INTREPID_PLL7 11D2 54D3</p> <p>+1_5V_INTREPID_PLL8 30D4 54D3</p> <p>+1_8V_MAIN 54C4 61D7</p> <p>+2_5V_ENET 37C3 37D3 37D5 54C6</p> <p>+2_5V_DDR_AVDD 10D4 54D6</p> <p>+2_5V_DDR_VDD 10D5 54D6</p> <p>+2_5V_MAIN 32A3 54C4 61D7</p> <p>+3.3VFPD 26D6 53C1 54B6</p> <p>+3V_AUDIO 41D2 41D6 41D7 42C3 45C2 45D5</p> <p>+3V_INTREPID_USB 30C4 54A3</p> <p>+3V_INTSS_AVDD 10B7 54D6</p> <p>+3V_INTSS_VDD 10B6 54D6</p> <p>+3V_MAIN 41D4 42D5 43A5 43A7 44A7 44D4 54C4          61D7</p> <p>+5VSD_T 52D7</p> <p>+5V_AUDIO 41C6 41D7 43B8</p> <p>+5V_HP 43A8 43B7 43D5</p> <p>+5V_MAIN 54C4 61D7</p> <p>+5V_SLEEP 48C7 48D6 52C6 53A5 53C5 61D7</p> <p>+12VSD_FILT 31A5 54B3</p> <p>+12VSD_T 52D7</p> <p>+12V_DROPPED 46D8</p> <p>+12V_MAIN 38D8 41C8 44D8 46D8 47B4 47D3 47D7          50C4 50C8 50D6 51C4 51D4 51D7 52B4          52C4 52C6 52D4 52D6 53A4 53A7 53B7          53D7 54C1 61D7</p> <p>+12V_SLEEP 31A3 31A8 31C5 52D6 53A4 53D6 54C1          61D7</p> <p>+12V_SLEEPA 61D7</p> <p>+INTREPID_CORE_MAIN 12D6 13D4 48B3 49B2 61C7</p> <p>+MAXBUS_SLEEP 4D5 6D8 7A3 7B3 7C3 7C5 7C7 8D3 9B2          9D2 9D4 11B8 11D8 46B7 46D1 46D2          47D2 48D4 54C6 61C7</p> <p>3.8VH_TRICKLE 46C1 46D7 54B3</p> <p>3.8V_TRICKLE 46C2 46C6 46D7 52D6 54C1 54C2</p> <p>3_5_HONKER 53C4</p> <p>3_6V_SLEEP 39D1 53C1</p> <p>5V_USB_FUSED 35A7</p> <p>5V_XRA 52B4</p> <p>25V_BSTH 51C5 51C6</p> <p>25V_BSTH_TERM 51C5</p> <p>25V_COMP 51B6</p> <p>25V_COMP_DWN 51B6</p> <p>25V_DH 51B5</p> <p>25V_DHT 51B5</p> <p>25V_DL 51B5</p> <p>25V_DLT 51B4</p> <p>25V_GND 51B6</p> <p>25V_NET99 51C3</p> <p>25V_OCSET 51C5</p> <p>25V_OVP 51B6</p> <p>25V_VCC 51C6</p> <p>25V_VPWR 51B5 51C5</p> <p>25V_VPWRA 51B4</p> <p>25V_VSENSE 51C3 51C5</p> <p>25_CORE_1 51C3</p> <p>33PCI_SLOTD_SERR_L 34B6</p> <p>33SLOTB_INT_L 30B7 33C2 61A4</p> <p>2059_IIC_CLK 10C5</p> <p>2059_IIC_DAT 10C5</p> <p>A0_IIC_MCK 10A4 10C5</p> <p>A1_IIC_MCK 10A4 10C5</p> <p>AGND 54C4</p> <p>AGPIO_VPWR 48B6</p> <p>AGP_AD&lt;31..0&gt; 18B4 18C4 19C8 19D8 56C7</p> <p>AGP_AD_STB&lt;1..0&gt; 18A4 18B3 19B8 56C7</p> <p>AGP_AD_STB_GPUUF&lt;1..0&gt; 19B7 56B7</p> <p>AGP_AD_STB_L&lt;1..0&gt; 18A4 18D1 19B8 56C7</p> <p>AGP_AD_STB_L_GPUUF&lt;1..0&gt; 19B7 56B7</p>		<p>AGP_BUSY_L 18C6 18D1 18D3 19A8 56B7</p> <p>AGP_CBE&lt;3..0&gt; 18B4 19C8 56C7</p> <p>AGP_DEVSEL_L 18B4 18C3 19B8 56C7</p> <p>AGP_FBI_EQUAL 18C7 56A7</p> <p>AGP_FBO_EQUAL 18B7 56A7</p> <p>AGP_FB_PLUS2 18B8 56A7</p> <p>AGP_FRAME_L 18B4 18C3 19B8 56C7</p> <p>AGP_GNT_L 18C3 18C4 19B7 56B7</p> <p>AGP_INT_L 19B7 30B5 30B8</p> <p>AGP_IRDY_L 18B4 18C3 19B8 56C7</p> <p>AGP_PAR 18B4 19B8 56B7</p> <p>AGP_PIPE_L 18A4 18B3 19B8 56B7</p> <p>AGP_PLLVDD 19C5</p> <p>AGP_RBF_L 18A4 18B3 19B8 56B7</p> <p>AGP_REQ_L 18C3 18C4 19B7 56B7</p> <p>AGP_RESET_L 19C7 46D3</p> <p>AGP_SBA&lt;7..0&gt; 18A4 18B1 18B4 18C1 19A8 56B7</p> <p>AGP_SB_STB 18A4 18B3 19A8 56B7</p> <p>AGP_SB_STB_L 18A4 18D1 19A8 56B7</p> <p>AGP_ST&lt;2..0&gt; 18A4 18B1 19B7 56B7</p> <p>AGP_STOP_L 18B3 18B4 19B8 56C7</p> <p>AGP_TRDY_L 18B3 18B4 19B8 56C7</p> <p>AGP_WBF_L 18A6 18B1 19B8 56B7</p> <p>AINLM 41C4</p> <p>AINLP 41C4</p> <p>AINRM 41C4</p> <p>AINRP 41C4</p> <p>ALTCHGND 54C4</p> <p>AMPBIAS 44B6</p> <p>AMPDC1 44B6</p> <p>AMPDC2 44B6</p> <p>AMPPFAULT 44B6 44B8</p> <p>AMPPUMP 44B6</p> <p>AMPRREF 44B6</p> <p>ANALOGGND 54C4</p> <p>ANALOG_BLU 24C5 24C8 27C6 59D3</p> <p>ANALOG_GRN 24C5 24C8 27C6 59D3</p> <p>ANALOG_HSYNC* 24C8 27C4 27D6 28B5 59D3 61B7</p> <p>ANALOG_RED 24C5 24C8 27B6 59D3</p> <p>ANALOG_VSYNC* 24C8 27C6 28B5 59D3 61B7</p> <p>ANEN 37C4</p> <p>AOUTL 41C1 43D7 44B8</p> <p>AOUTR 41C1 43C7 44C8</p> <p>ASH 45B6</p> <p>AUDIO_SPKR_ID_B 44C4</p> <p>AUDIO_TO_SND 30B2 30B3 41C1</p> <p>AUD_AMP_5V 44B8 44C6</p> <p>AUD_R_FB 41D6</p> <p>BB_MISO 8B4 8B6</p> <p>BB_MOSI 8B4 8B5 8B6</p> <p>BB_SCK 8B4 8B6</p> <p>BFR_HRESET_L 8B4 8C6</p> <p>BRCLKO 30A5</p> <p>BRE 47C5</p> <p>BRE_1 47B5</p> <p>BT1 46D6 53A5</p> <p>BT1_LED 53A5</p> <p>BT_USB_DM 30B2 31D3 60A5 61B4</p> <p>BT_USB_DP 30B2 31D3 60B5 61B4</p> <p>C412P1 43B3</p> <p>C756_2 42D3</p> <p>C4237P2 42C4</p> <p>C4240P2 42C4</p> <p>C4242P2 42B4</p> <p>C4243P2 42B4</p> <p>CAP_PLL 41B4</p> <p>CD_CS1FX_L 40C6 60C5</p> <p>CD_CS3FX_L 40C6 60C5</p> <p>CD_DMACK_L 39D4 40C6 60D5</p> <p>CD_DMARQ 40C6 60D5</p> <p>CD_DSTB_RDY 39C4 40C6 60D5</p> <p>CD_EIDE_ADDR&lt;2..0&gt; 40C6 60C5</p> <p>CD_HSTB_RDY 39C4 40C6 60D5</p> <p>CD_RESET_L 39D4 40C6 60D5</p> <p>CD_STOP 39D4 40C6 60D5</p> <p>CHGND 54C4</p> <p>CLK18M_INT_EXT 30B6</p> <p>CLK18M_INT_XIN 30A5</p> <p>CLK18M_INT_XO 30A6</p> <p>CLK18M_INT_XOUT 30A5</p> <p>CLK25M_ENET_XIN 37B6 59B3</p>		<p>CLK25M_ENET_XOUT 37B6 59B3</p> <p>CLK33M_PCI_SLOTB 32D7 33C2 56D7 61A4</p> <p>CLK33M_PCI_SLOTB_UF 32C5 56D7</p> <p>CLK33M_PCI_SLOTC_UF 32C5 56D7</p> <p>CLK33M_PCI_SLOTD 32D7 34A6 56A7</p> <p>CLK33M_PCI_SLOTD_UF 32C5 56D7</p> <p>CLK66M_GPU_AGP 18D8 19C7 56A7</p> <p>CLK66M_GPU_UF 18C6 56A7</p> <p>CLKENET_LINK_GBE_REF 36C6</p> <p>CLKENET_LINK_RX 36C7 37C8 59C3</p> <p>CLKENET_LINK_TX 36D7 37C8 59C3</p> <p>CLKENET_PHY_RX 37C6 59C3</p> <p>CLKENET_PHY_TX 37C6 59C3</p> <p>CLKFW_LINK_LCLK 36C5</p> <p>CLKGEN_OUT_1 10A6 55A6</p> <p>CLK_18M_INT_XOUT 60B5</p> <p>COLE 48C7</p> <p>COMM_DTR_L 30C3 31C7 61C4</p> <p>COMM_GPIO_L 30C3 30D2 31C5 61C4</p> <p>COMM_RESET_L 30C5 31D5 61A7</p> <p>COMM_RING_DET_L 30B5 30B8 31C5 46C5 61D4</p> <p>COMM_RTS_L 30C3 31D5 61C4</p> <p>COMM_RXD 30C3 31C5 61C4</p> <p>COMM_SHUTDOWN 30C5 30D1 31D7 61D4</p> <p>COMM_TRXC 30C3 30D2 31C7 61C4</p> <p>COMM_TXD_L 30C3 31C7 61C4</p> <p>CORE_MOSFET 47C4 47C6</p> <p>CORE_MOSFET_1 47B5 47C7</p> <p>CPU_AACK_L 4A7 7B7 9B6 11B3 58C3</p> <p>CPU_ADDR&lt;31..0&gt; 4B7 4C7 9B7 9B8 9C5 9C6 9C7 9C8          11C3 11D3 58D3</p> <p>CPU_ARTRY_L 4A7 7C7 9B8 11B3 58C3</p> <p>CPU_AVDD 4D3 54C6</p> <p>CPU_BG_L 4D7 7B7 9B5 11D3 58D3</p> <p>CPU_BR_L 4D7 7C7 9C5 11D3 58D3</p> <p>CPU_BUS_VSEL 4D3 7C4</p> <p>CPU_CHKSTP_IN_L 4B3 7B5 61C7</p> <p>CPU_CHKSTP_OUT_L 4B3 7B5 9A2 9D6 61C7</p> <p>CPU_CI_L 4A7 7A7 9C6 11C3 58C3</p> <p>CPU_CLK_EN 11A3 46C4</p> <p>CPU_DATA&lt;63..0&gt; 5A4 5B4 5C4 5D4 9C5 9C6 9C7 9C8 9D5          9D6 9D7 9D8 11B1 11B5 11B8 11C1 11C5          11D1 11D5 11D8 58D3</p> <p>CPU_DBG_L 4C3 7B7 9C8 11B1 58C3</p> <p>CPU_DRDY_L 4C2 7B7 9B6 11B1 58C3</p> <p>CPU_DRDY_L_UF 4C3 58C3</p> <p>CPU_DTI&lt;2..0&gt; 4C3 9B5 9B7 11A1 58C3</p> <p>CPU_EDTI 4C3 7C5</p> <p>CPU_EMODE0_L 4B3 7A4</p> <p>CPU_EMODE1_L 4B3 7A4</p> <p>CPU_FBI_PLUS1 11A4 58C3</p> <p>CPU_FBO_PLUS1 11A4 58C3</p> <p>CPU_FB_MINUS3 11A4 58C3</p> <p>CPU_FB_PLUS2 11A5 58C3</p> <p>CPU_FB_PLUS3 11A4 58B3</p> <p>CPU_GBL_L 4B8 9B6 58C3</p> <p>CPU_HDRST_L 8C7 46C4</p> <p>CPU_HIT_L 4A7 7C7 9B8 11B3 58C3</p> <p>CPU_HRESET_L 4B3 7A3 7A5 7B3 8D2 9A2 46C2 46D2          61C7</p> <p>CPU_INT_GBL_L 4B8 7B7 11C3 58C3</p> <p>CPU_L1TSTCLK 4C3 7A4</p> <p>CPU_L2TSTCLK 4C3 7C4</p> <p>CPU_LSSD_MODE 4C3 7B5</p> <p>CPU_MCP_L 4B3 7B5</p> <p>CPU_PLL_CFG&lt;3..0&gt; 4C3 4D3 6C6 9A8</p> <p>CPU_PLL_CFGEXT 4C3 6C6 9A8</p> <p>CPU_PLL_STOP 6B8 46B8</p> <p>CPU_PMONIN_L 4B3 7C5</p> <p>CPU_PULLDOWN 4A3 4D7 7C5</p> <p>CPU_PULLUP 4A3 7A5</p> <p>CPU_QACK_L 4C3 9B5 11B3 58C3</p> <p>CPU_QREQ_L 4C3 7D5 9B7 11B3 58C3</p> <p>CPU_SHD0_L 4A7 7B5</p> <p>CPU_SHD1_L 4A7 7B5</p> <p>CPU_SLEEPIN 53B7</p> <p>CPU_SMI_L 4B3 7A5 46C4</p> <p>CPU_SRESET_L 4B3 7A5 9A2 61C4</p> <p>CPU_STATE_LED* 46C4 53A8</p> <p>CPU_TA_L 4C3 7C7 9C5 11A1 58C3</p> <p>CPU_TBEN 4C3 7C5 11A3</p>		<p>CPU_TBST_L 4B7 7B7 9B5 11B3 58D3</p> <p>CPU_TEA_L 4C3 7B7 9C6 11A1 58C3</p> <p>CPU_TSIZ&lt;2..0&gt; 4B7 9B6 9B7 9C6 11B3 58D3</p> <p>CPU_TS_L 4D7 7C7 9C7 11D3 58D3</p> <p>CPU_TT&lt;4..0&gt; 4B7 7A7 9B5 9B6 9C5 9C6 11B3 58D3</p> <p>CPU_VCORE_SLEEP 4D3 4D7 9B6 9C2 47B3 47C1 54C6 61B4          61D7</p> <p>CPU_VCORE_SLEEPA 47C3</p> <p>CPU_VCORE_SLEEPA 47C3</p> <p>CPU_VCORE_SLEEPA 47C3</p> <p>CPU_VCORE_SLEEPC 47A1</p> <p>CPU_WT_L 4B7 7A7 9B6 11B3 58C3</p> <p>CSLOT_IOWAIT_L 39B7 54A6</p> <p>CVBS_CNT 24B8 25D6</p> <p>CVBS_D 24B7</p> <p>CY69P2 41B5</p> <p>DAC2RSET 24C6 59D3</p> <p>DAC2VDD 24C5 54B6</p> <p>DAC2VREF 24C5 59D3</p> <p>DACRSET 24C4</p> <p>DACVDD 24C4 54B6</p> <p>DACVREF 24C4</p> <p>DDC_VCC_3 26A5 26B3 54B6 61B7</p> <p>DDC_VCC_5 27C4 54A6 61B7</p> <p>DDRCLK_A0_L_UF 10B3 55B6</p> <p>DDRCLK_A0_UF 10C3 55B6</p> <p>DDRCLK_A1_L_UF 10B3 55B6</p> <p>DDRCLK_A1_UF 10C3 55B6</p> <p>DDRCLK_A2_L_UF 10B3 55B6</p> <p>DDRCLK_A2_UF 10C3 55B6</p> <p>DDRCLK_B0_L_UF 10B3 55A6</p> <p>DDRCLK_B0_UF 10C3 55B6</p> <p>DDRCLK_B1_L_UF 10B3 55A6</p> <p>DDRCLK_B1_UF 10C3 55B6</p> <p>DDRCLK_B2_L_UF 10B3 55A6</p> <p>DDRCLK_B2_UF 10C3 55B6</p> <p>DDR_CK_CE 10B5</p> <p>DDR_CLK_VDD_2 10C5 55B6</p> <p>DDR_FBIN 10B5 55A6</p> <p>DDR_FBIN_L 10B5 55A6</p> <p>DDR_FBO 10B3 55A6</p> <p>DDR_FBO_L 10B3 55A6</p> <p>DDR_VREF 16B2 16D1 16D8 17D8 54A6</p> <p>DS1P1 37B2</p> <p>DS2P1 37B1</p> <p>DS2_1 40B2</p> <p>DS2_2 40B2</p> <p>DS3P1 37B2</p> <p>DS6_1 40B6</p> <p>DS6_2 40B6</p> <p>DUKE_BD 47B5</p> <p>DVOCCLKIN 24C5</p> <p>DVD0 24B5 29B7</p> <p>DVD01 24B5 29B7</p> <p>DVD02 24B5 29C7</p> <p>DVD03 24B5 29C7</p> <p>DVD04 24B5 29C7</p> <p>DVD05 24B5 29C7</p> <p>DVD06 24B5 29C7</p> <p>DVD07 24B5 29C7</p> <p>DVD08 24B5 29C7</p> <p>DVD09 24B5 29C7</p> <p>DVD010 24B5 29C7</p> <p>DVD011 24B5 29C7</p> <p>DVODE 24C5</p> <p>DVOHSYNC 24C5 28D7</p> <p>DVOVREF 24C5</p> <p>DVO_PD 24B5</p> <p>DVO_PU 24B5</p> <p>EEPR_WP 8A6</p> <p>EIDE_ADDR&lt;2..0&gt; 39B7 40A8 40B8 60C5</p> <p>EIDE_CS1FX_L 39A7 40B8 60C5</p> <p>EIDE_CS3FX_L 39A7 40B8 60C5</p> <p>EIDE_CSELP_L 40C6 54A6</p> <p>EIDE_DATA&lt;15..0&gt; 39A5 39B5 39B7 39C5 60D5</p> <p>EIDE_DMACK_L 39A7 39D5 60D5</p> <p>EIDE_DMARQ 39A7 40C8 60D5</p> <p>EIDE_DSTB_RDY 39A7 39C5 60D5</p> <p>EIDE_HSTB_RDY 39A7 39C5 60D5</p> <p>EIDE_INTRQ 39A7 40C8 60C5</p> <p>EIDE_IOCS16_L 40C6 54A6</p> <p>EIDE_PDIAG 40C6</p>		D					
C														
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A							<p style="text-align: center;"><b>NOTICE OF PROPRIETARY PROPERTY</b></p> <p style="text-align: center;">THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING:</p> <p style="text-align: center;">I TO MAINTAIN THE DOCUMENT IN CONFIDENCE</p> <p style="text-align: center;">II NOT TO REPRODUCE OR COPY IT</p> <p style="text-align: center;">III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART</p>							
	8	7	6	5	4	3	2	1						
							<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">SCALE</td> <td style="text-align: center;">DRAWING NUMBER</td> <td style="text-align: center;">REV.</td> </tr> <tr> <td style="text-align: center;">NONE</td> <td style="text-align: center;">D 62</td> <td style="text-align: center;">D 74</td> </tr> </table>		SCALE	DRAWING NUMBER	REV.	NONE	D 62	D 74
SCALE	DRAWING NUMBER	REV.												
NONE	D 62	D 74												

	8	7	6	5	4	3	2	1
D	EIDE_RST_L 39A7 39D5 60D5 EIDE_STOP 39A7 39D5 60D5 ENET_COL 36B7 37B8 59B3 ENET_CRIS 36C7 37B8 59B3 ENET_ENERGY_DET 30B5 30C1 37B4 ENET_LINK_RXD<7..0> 36C6 36C7 37B8 37C8 59B3 ENET_LINK_TXD<3..0> 36C6 59C3 ENET_LINK_TX_EN 36D6 59C3 ENET_LINK_TX_ER 36D6 59C3 ENET_MDC 36B7 37B6 ENET_MDIO 36B7 37B7 ENET_PHY_COL 37B6 59B3 ENET_PHY_CRIS 37B6 59B3 ENET_PHY_RXD<3..0> 37B6 37C6 59B3 ENET_PHY_RX_DV 37B6 59B3 ENET_PHY_RX_ER 37B6 59B3 ENET_PHY_TXD<3..0> 36C7 37C6 59C3 ENET_PHY_TX_EN 36D7 37C6 59C3 ENET_PHY_TX_ER 36D7 37C6 59C3 ENET_RDAC_PD 37B5 ENET_RDN 37C3 59B3 ENET_RDP 37C3 59B3 ENET_RX_DV 36C7 37B8 59B3 ENET_RX_ER 36C7 37B8 59B3 ENET_TDN 37C3 59B3 ENET_TDP 37C3 59B3 ETHPHYRESET_L 37B6 EXTINT14 30A8 30B5 FAN_12V_FILT 31A5 54B3 61C7 FBA<12..0> 20C8 20D8 20E3 20F3 57D3 FBABA<1..0> 20C8 20E3 57D3 FBACAS_L 20C8 20G3 57D3 FBACKE 20D3 20D7 57D3 FBACLK0 20D7 21C3 57C3 FBACLK0_L 20D7 21C3 57C3 FBACLK1 20D7 21D3 57C3 FBACLK1_L 20D7 21D3 57C3 FBACSO_L 20C8 20F3 57D3 FBARAS_L 20C8 20G3 57D3 FBAWE_L 20C8 20F3 57D3 FBBA<12..0> 20A3 20B3 20C3 20C5 20D5 57C3 FBBBA<1..0> 20A3 20C5 57C3 FBBCAS_L 20C3 20D4 57C3 FBBCKE 20A3 20C4 57B3 FBBCLK0 20C5 21B3 57B3 FBBCLK0_L 20C5 21B3 57B3 FBBCLK1 20C5 21C3 57B3 FBBCLK1_L 20C5 21B3 57B3 FBBCSO_L 20C3 20C4 57C3 FBBRAS_L 20C3 20D4 57C3 FBBWE_L 20C3 20D4 57C3 FBCAL_CLK_GND 20A5 20D7 FBCAL_PD_VDDQ 20D7 FBCAL_PU_GND 20A5 20D7 FBCAL_TERM_GND 20A5 20D7 FBD<127..0> 20E5 20E8 20F5 20F8 20G5 20G8 21B5 FBDQM<15..0> 21B8 21C5 21C8 21D5 21D8 57C3 57D3 FBDQS<15..0> 20C7 20D4 21A5 21A8 57B3 57C3 FBDQSTERM<15..0> 21A4 21A7 57B3 57C3 FB_DLLVDD 20C6 20D7 FDC602 48B7 FDX 37A5 37C4 FILT_ANALOG_BLU 27C5 59D3 61B7 FILT_ANALOG_GRN 27C5 59D3 61B7 FILT_ANALOG_RED 27C5 59D3 61B7 FIX_RESET_L 8B6 8C4 FLOW_SS 47C7 47D8 FLO_KNOWS_BEST 47C6 47C7 47C8 61D4 FPD_PWR_ON 25D6 53B3 FPD_PWR_ON_T 53B3 FWPHYRST 30C5 38C8 FW_BIAS1 38C5 59A3 FW_BIAS2 38C5 59A3 FW_CNTL0 36C3 38C8 59A3 FW_CNTL1 36C3 38C8 59A3 FW_CPS 38C6 FW_C_LKON 30B6 36C5 38B5 FW_D<7..0> 36C3 38B8 38C8 59A3 FW_DIODE_BYPASS_V 38B6 38B7 54B6 FW_DIO_V 38B6 54B6	FW_LINK_CNTL<1..0> 36C5 59A3 FW_LINK_DATA<7..0> 36C5 59A3 FW_LINK_LREQ 36C5 59A3 FW_LPS 36C5 38C8 FW_LREQ 36C3 38C8 59A3 FW_PHY_3_3 38B5 38B7 38D7 54B6 FW_PHY_CNTL0 38C7 59A3 FW_PHY_CNTL1 38C7 59A3 FW_PHY_D<7..0> 38B7 38C7 59A3 FW_PHY_ISO* 38C6 FW_PHY_RST 38C8 FW_PHY_RST* 38C6 FW_PHY_SCLK 38C7 59A3 FW_PINT 36B5 36C1 FW_PWR 52C7 53D3 54B6 FW_PWR_SW 38D6 53D1 54B6 FW_R0 38C5 FW_R1 38C5 FW_SCLK 36C5 38C8 59A3 FW_TPA1N 38C5 59A3 FW_TPA1P 38C5 59A3 FW_TPA2N 38C5 59A3 FW_TPA2P 38C5 59A3 FW_TPB1 38B3 FW_TPB1N 38C5 59A3 FW_TPB1P 38C5 59A3 FW_TPB2 38B4 FW_TPB2N 38C5 59A3 FW_TPB2P 38C5 59A3 FW_TPI1N 38A8 38D1 59A3 FW_TPI1P 38A8 38D1 59A3 FW_TPI2N 38A8 38C1 59A3 FW_TPI2P 38A8 38C1 59A3 FW_TPOLN 38A8 38D1 59A3 FW_TPOLP 38B8 38D1 59A3 FW_TPO2N 38A8 38C1 59A3 FW_TPO2P 38A8 38C1 59A3 FW_VGND 38D1 54B6 FW_VP 38D5 54B6 FW_VP1 38D1 38D3 54B6 FW_VP2 38C1 38D3 54B6 FW_VP_1 38D4 54B6 FW_VP_2 38D4 54B6 FW_VREG_FB 38D7 FW_XI 38C6 59A3 FW_XI_A 38C6 FW_XO 38C6 59A3 GCORE_1 50C2 GCORE_2 50C3 GCORE_BSTH 50C5 GCORE_BSTH_TERM 50C3 GCORE_COMP 50B6 GCORE_DH 50B5 GCORE_DL 50B5 GCORE_GND 50B5 GCORE_OCSET 50B6 GCORE_OVP 50B6 GCORE_VCC 50C6 GCORE_VSENSE 50B6 50C2 GPULNKON 25C4 GPU_50PULLDWN 19A5 54A6 GPU_50PULLUP 19A5 54A6 GPU_AGP_AD<31..0> 19C7 19D7 56B7 GPU_AGP_CBE<3..0> 19C7 56B7 GPU_AGP_DEVSEL_L 19B7 56B7 GPU_AGP_FRAME_L 19B7 56B7 GPU_AGP_IRDY_L 19B7 56B7 GPU_AGP_PAR 19B7 56B7 GPU_AGP_PIPE_L 19B7 56A7 GPU_AGP_RBF_L 19B7 56A7 GPU_AGP_SBA<7..0> 19A7 56A7 GPU_AGP_SB_STB 19A7 56A7 GPU_AGP_SB_STB_L 19A7 56A7 GPU_AGP_STOP_L 19B7 56B7 GPU_AGP_TRDY_L 19B7 56B7 GPU_AGP_VREF 19A3 19A8 54A6 GPU_AGP_VREF_H 18A8 GPU_AGP_VREF_L 18A8 GPU_AGP_VREF_X 19A3 GPU_AGP_VREF_Y 19A3 GPU_AGP_WBF_L 19B7	GPU_FB_VREF 20C8 54A6 GPU_FPBCLK 25C4 GPU_FPBCLK_L 25C4 GPU_FW_PME_L 25C4 GPU_IFB1IOVDD 25B2 GPU_IFP1PLLVD 25B2 GPU_MBDL 19A7 GPU_STEREO 25C4 GPU_STRAP<3..0> 24B4 28A3 28B3 28D3 GPU_SWAP_A 25C4 GPU_SWAP_B 25C4 GPU_TESTMECLK 25C4 GPU_TMODE 19A5 54A6 GPU_XTALSSIN 24B4 54A6 GFWRGD 49B6 49B8 50A5 GRAPHICS_VPWR 50B5 GRAPH_CORE 19D5 25C4 25C6 50B1 54A6 GRAPH_DDC_SCL 24D5 26A6 GRAPH_DDC_SDA 24D5 26A6 GRAPH_IIC_SCL2 25D2 GRAPH_IIC_SDA2 25D2 HD_DIOR_L 39D1 40C3 60C5 HD_DIOW_L 39C1 40C3 60C5 HD_DMACK_L 39D1 40C3 60C5 HD_DMARQ 40C3 60C5 HD_INTRQ 40C3 60C5 HD_IOCHRDY 39C1 40C3 60C5 HD_RESET_L 39D1 40C3 60C5 HD_UIDE_ADDR<2..0> 40C2 40C3 60C5 HD_UIDE_CS1FX_L 40C3 60B5 HD_UIDE_CS3FX_L 40C2 60B5 HEADPHONE_COM 43B2 HEADPHONE_L 43B2 43D2 HEADPHONE_R 43B2 43C2 HONK_ADJ 53B4 HP16_L 43D4 HP16_R 43C4 HPBYP 43B5 43D6 HPGAL_L 43D4 HPGAL_R 43C4 HPIN_L 43D6 HPIN_R 43D6 HP_OFF 43A7 43D5 HP_OUT_L 43D5 HP_OUT_R 43D5 HP_STAR_GND 41B7 43A8 43B4 43B8 43C5 43D4 43D7 HP_TL 43D3 HP_TP 43B3 HP_TR 43C3 HRST_REF 8B4 8B7 HSYNC* 24C5 59D3 ICORE_COMP 49B6 ICW 49B7 IFP0AVCC 25A6 25B4 54A6 IFP0PLLVD 25B4 IFPORSET 25B4 IFPOVREF 25B4 54A6 IFP_AVCC 25A7 IFP_VADJ 25A8 IIC A<2..0> 8A6 8A7 IIC_ADD 31C6 61A7 IMAC_INTREPID 49B4 INTCORE_1 49B3 INTCORE_BSTH 49B6 INTCORE_BSTH_TERM 49B6 INTCORE_DH 49B6 INTCORE_DHT 49B5 INTCORE_DL 49B6 INTCORE_GND 49A7 INTCORE_NET99 49B4 INTCORE_OCSET 49B6 INTCORE_OVP 49B6 INTCORE_VCC 49C7 INTREPID_ACS_REF 11A3 INTREPID_VPWR 49B6 INTREPID_VPWR_A 49B4 INTREPID_VSENSE 49C6 61C7 INTREP_DLT 49B5 INT_AGPPVT 18C6 INT_AGP_FB_IN 18C6 56A7 INT_AGP_FB_OUT 18C6 56A7	INT_AGP_VREF 18A7 18C6 54C3 INT_ANALYZER_CLK 9B4 11B4 18C7 56A7 58B3 61A7 INT_ANALYZER_CLKA 11B3 INT_CLOCK_OUT 9C4 58B3 INT_CPU_FB_IN 11B3 58C3 INT_CPU_FB_OUT 11B3 58C3 INT_ENET_RST_L 30B5 30D1 37B8 INT_EXTINT3_PU 30B5 30B8 INT_EXTINT12_PU 30B5 30B8 INT_EXTINT13_PU 30B5 30B8 INT_EXTINT17_PU 30B5 30B8 34B6 INT_GPIO1_PD 30A8 30C5 INT_GPIO9_PU 30B5 30B8 INT_GPIO12_PU 30A8 30B5 INT_I2C_CLK0 8A6 8B4 8B7 10C7 16A6 17A6 36B3 INT_I2C_CLK0R 36B5 36C1 INT_I2C_CLK1 10A7 36A3 36A4 36B1 INT_I2C_CLK2 30A3 30D1 31C7 36B5 41B1 61A7 INT_I2C_DATA0 8A6 8B4 8B7 10C7 16A6 17A6 36B3 INT_I2C_DATA0R 36B5 36C1 INT_I2C_DATA1 10A7 36A3 36B1 INT_I2C_DATA2 30A3 30D1 31C7 36B5 41B1 61A7 INT_JTAG_TEI 36B7 36C1 INT_MEM_REF 14B6 INT_MOD_BITCLK 30A3 30A8 30C6 INT_MOD_CLKOUT 30A3 30A8 30C6 INT_MOD_DTI 30A3 30A8 30C6 INT_MOD_DTO 30A3 30A8 30C6 INT_MOD_SYNC 30A3 30A8 30C6 INT_PCI_FB_IN 32C5 56C7 INT_PCI_FB_OUT 32C5 56D7 INT_PEND_PROC_INT 30A5 46B4 INT_PLL1_GND 30A5 30C4 INT_PLL2_GND 30A5 30D4 INT_PLL3_GND 30A4 30D4 INT_PLL4_GND 32B4 32D4 INT_PLL5_GND 18A5 18D5 INT_PLL6_GND 11A2 11D3 INT_PLL7_GND 30A4 30D4 INT_PLL9_GND 30A4 30D4 INT_PROC_SLEEP_REQ_L 30A5 46B4 INT_PU_RESET_L 36C3 46C2 46C4 INT_REF_CLK_IN_PD 10A5 30A6 55A6 INT_REF_CLK_OUT 10A7 30A6 55A6 INT_REF_CLK_OUT_UF 55A6 INT_RESET_L 36C3 37B8 43A7 44A8 46D2 46D4 INT_ROM_CS_L 32C5 INT_ROM_OE_L 32C5 INT_ROM_OVERLAY_PU 18D7 32A8 32C5 56A7 INT_ROM_RW_L 32C5 INT_SND_CLKOUT 30A3 INT_SND_SCLK 30A3 INT_SND_SYNC 30B3 INT_SND_TO_AUDIO 30B3 INT_SPKR+ 44B1 INT_SPKR- 44B1 INT_SUSPEND_ACK_L 11B3 46B5 INT_SUSPEND_REQ_L 11B3 46B5 46B8 INT_TMDS_3V 26B3 26C3 26C4 26D5 54A6 61C7 INT_TMDS_CKM 25D2 26A6 59D3 61A7 INT_TMDS_CKP 25D2 26B6 59D3 61A7 INT_TMDS_DOM 25D2 26B6 59C3 61A7 INT_TMDS_D0P 25D2 26B6 59C3 61B7 INT_TMDS_DIM 25D2 26C6 59C3 61B7 INT_TMDS_D1P 25D2 26C6 59C3 61B7 INT_TMDS_D2M 25C2 26D6 59C3 61B7 INT_TMDS_D2P 25C2 26D6 59C3 61B7 INT_TST_MONIN_PD 36B7 36C1 INT_TST_PLEN_PD 30C6 36B7 36C1 INT_WATCHDOG_L 30A5 46C5 INV_BFR_HRST 8D6 INV_CUR_HI 25D6 31B8 INV_CUR_HI_FILT 31A5 61A7 IO_RESET_L 34A6 37B8 46B5 46B8 46D3 61A7 IPWRGD 48A8 49A6 IPWR_D 48A7 JAZ 45C6 JTAG_ASIC_TCK 9A3 36B7 37C4 61D7 JTAG_ASIC_TDI 9A3 30C6 36B7 61D7 JTAG_ASIC_TDO 9A3 37B4 61D7 JTAG_ASIC_TMS 9A3 36B7 37A2 37B4 61D7	NOTICE OF PROPRIETARY PROPERTY THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. 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A	8	7	6	5	4	3	2	1



	8	7	6	5	4	3	2	1												
D	<p>NC_TX1_3 37C2  NC_TX1_4 37C2  NC_UB3P4 37D5  NC_USB2_AMC 34A4  NC_USB2_NANDTEST 34A4  NC_USB2_NTTEST1 34A4  NC_USB2_PPON1 34B4  NC_USB2_PPON2 34B4  NC_USB2_PPON3 34B4  NC_USB2_PPON4 34B4  NC_USB2_PPON5 34B4  NC_USB2_RSDEM 34C4  NC_USB2_RSDEP 34C4  NC_USB2_RSDFM 34C4  NC_USB2_RSDFP 34B4  NC_USB2_SMC 34A4  NC_USB2_SMI_L 34A6  NC_USB2_SRCLK 34A4  NC_USB2_SRDTA 34A4  NC_USB2_SRMOD 34A4  NC_USB2_TEB 34A4  NC_USB2_TEST 34A4  NC_USB_M 33B2  NC_USB_P 33B2  NC_UT6P6 30D8  NC_UT6P7 30D8  NC_UT164 46D7  NC_UT165 46D7  NC_VCORE10 47D6  NC_VIPHCLK 24D5  NC_VTT&lt;11..0&gt; 20F7 20G7  NC_WL&lt;23..1&gt; 33B2 33B3  NC_XTALSOUT 24B4  NC_XTLINO 41B4  NEC_AVDD 34D5 54A3  NEC_XT2_B 34D3  NET16 48A5  NET18 46D6  NET19 46D6  NET22 46D8  NET24 46D8  NET32 44B1  NET32_B 44B1  NET40 46B4  NMI_BUTTON* 31B2 46C4 61D4  NV11_HSYNC 24C4 28D3  NV11_VSYNC 24C4 28D3  NV11_XTALIN 24B4 59D3  NV11_XTALOUT 24B4 59D3  NVAGP_TCLK 19A5  NVAGP_TRST_L 19A5  NVPLLVD 24D5 54A6  NV_BLUE2 24C1  NV_GPIOD0 25D4  NV_GPIOD2 25D4  NV_GPIOD4 25D4  NV_GPIOD5 25D4  NV_GPIOD6 25C4  NV_GPIOD7 25C4  NV_GPIOD8 25C4  NV_GPIOD9 25C4  NV_GREEN2 24C1  NV_RED2 24C1  OGAL 43D7  OGAR 43C7  OGND3_JTAG_EN 37A5  OPA_STAR_GND 41A7 41D6 42C2 45B3  OPA_VREF 42B3 45B4  OUTM1 44B6  OUTM1FILT 44B4  OUTM2 44B6  OUTM2FILT 44A4  OUTP1 44B6  OUTP1FILT 44B4  OUTP2 44B6  OUTP2FILT 44B4  OUT_R 61B4  OVDD_ADJ 61C7  P1RC 44B4  P2RC 44B4  PAT_M 44B8</p>	<p>PB_AUD 43B4  PB_GAL 43B4  PCIT_AD&lt;31..0&gt; 33B2 33B3 33B6 33B7 33C2 33C3 33C6  33C7 56C7 61B2 61C2  PCIT_CBE&lt;31..0&gt; 33B2 33B6 33C3 56C7 61A4  PCIT_DEVSEL_L 33B6 33C2 56C7  PCIT_FRAME_L 33B6 33C2 56C7  PCIT_IRDY_L 33B6 33C3 56C7 61B4  PCIT_PAR 33B6 33C2 56C7  PCIT_STOP_L 33B6 33C2 56C7  PCIT_TRDY_L 33B6 33C2 56C7  PCI_AD&lt;31..0&gt; 32B1 32B2 32C4 32D4 33B6 33B7 33C6  33C7 34B6 34B7 34C6 55A6 61B2 61C2  PCI_CBE&lt;3..0&gt; 32C5 33B7 34B6 55A6 61A4  PCI_DEVSEL_L 32A8 32C5 33B7 34B6 56D7 61A4  PCI_FBI_EQUAL 32C7 56C7  PCI_FBI_PLUS2 32C7 56C7  PCI_FBO_PLUS2 32C7 56D7  PCI_FB_PLUS4 32C8 56C7  PCI_FB_PLUS6 32C7 56C7  PCI_FRAME_L 32B8 32C5 33B7 34B6 55A6 61A4  PCI_IRDY_L 32B8 32C5 33B7 34B6 56D7  PCI_PAR 32C5 33B7 34B6 56D7 61A4  PCI_SLOTB_GNT_L 32A6 32D5 33C2 61A4  PCI_SLOTB_REQ_L 32A8 32D5 33C3 61A4  PCI_SLOTC_GNT_L 32A6 32D5  PCI_SLOTC_REQ_L 32A8 32D5  PCI_SLOTD_GNT_L 32A6 32C5 34B6  PCI_SLOTD_PERR_L 34B6  PCI_SLOTD_REQ_L 32A8 32D5 34B6  PCI_STOP_L 32A8 32C5 33B7 34B6 56D7 61A4  PCI_TRDY_L 32B8 32C5 33B7 34B6 56D7 61A4  PCK2059_VDDI2C 10D4 54D6  PGOOD 51B7 52A6  PG_E 47B6  PMURESETBUTTON* 46A4 61D4  PMU_5V_SCL 46C2 46C4  PMU_5V_SDA 46C2 46C4  PMU_ACK_L 30C3 46C4  PMU_AGP_RESET 46C4  PMU_AP 31B3 46D4  PMU_AVCC 46B5 46D4 54B3 61C4  PMU_BYTE 46B5  PMU_CLK 30C3 46C4  PMU_CLKIN 46B4 60A5  PMU_CLKOUT 46B4 60A5  PMU_CLKT 46B2 60A5  PMU_CNVSS 31B3 46B5  PMU_EPM* 31B3 46C4  PMU_FROM_INT 30C3 46C4  PMU_IIC_CLK 46A8 46B4  PMU_IIC_DAT 46A8 46B4  PMU_INT_L 30B5 30B8 46B5  PMU_INT_NMI 30A8 30B5 46C4  PMU_LOW_DSKTP 46B5  PMU_NMI 46B4  PMU_P64 31B2 46C2  PMU_PME_L 30B5 33C2 34A7 46B2 61A4  PMU_PME_LL 33C2  PMU_POWER 31C3 46A5 46B1 46C2 46D5 54B3  PMU_PRE_PLLSTOP 46B5  PMU_PWR_LED* 46C5  PMU_REQ_L 30A8 30C3 46C2  PMU_RST* 9A8 31B3 46A5 46B5 61D4  PMU_SMB_SCK 46A3  PMU_SMB_SDA 46A3  PMU_STRAP1 46C5  PMU_TO_INT 30C3 46C4  PMU_XI 46B5 60A5  PMU_XO 46B5 60A5  PMU_XT 46A6 60A5  POWERUP_OK 46B4  POWER_UP* 46C7 53A8 61D4  PRE_HRESET_L 8B4 8D5  PROBE_DIV 43B4 43D7  PSEUDO_STAR_GND 41B7 42B4  PWR_FAIL* 46B1 52D6  PWR_FAILPMU* 46B4  PWR_FAIL_T 52D7  PWR_LED 53A4  PWR_SWITCH* 9A8 46B1 46C5 61D4</p>	<p>PWR_UP 41C8 52C4 52C8 53B7 53C1 53C7 61D4  PWR_UP* 52C8  Q1P1 53C3  Q1P3 53C2  Q25_1 43A5  Q42P4 53D2  QT1P1 50B4  QT2P1 50B4  QT2P3 50B4  R264P2 41B4  RAM_ADDR&lt;12..0&gt; 14A3 14B3 14C1 14C3 14D1 14D3 16B4  16B6 17B4 17B6 17C4 17C6 55D6  RAM_BA&lt;1..0&gt; 14B3 16B4 16B6 17B6 55D6  RAM_CAS_L 14A3 16B4 17B6 55C6  RAM_CKE&lt;3..0&gt; 14A1 14B1 14C1 16B4 16B6 17C4 17C6  55C6  RAM_CS_L&lt;3..0&gt; 14A1 14B1 14C1 16B4 16B6 17B4 55C6  RAM_DATA_A&lt;63..0&gt; 15B2 15B6 15C2 15C4 15C7 15D4  15D7 16A4 16A6 16B4 16B6 16C4 16C6  16D4 16D6 55D6  RAM_DATA_B&lt;63..0&gt; 15A2 15A6 15B2 15B4 15B7 15C4  15C7 17A4 17A6 17B4 17B6 17C4 17C6  17D4 17D6 55D6  RAM_DQM_A&lt;7..0&gt; 15A6 15B2 15B6 15C4 15C7 15D4 15D7  16A4 16B4 16C4 16D4 55D6  RAM_DQM_B&lt;7..0&gt; 15A2 15A6 15B2 15B4 15B7 15C4 15C7  17A4 17B4 17C4 17D4 55D6  RAM_DQS_A&lt;7..0&gt; 15B2 15B6 15C4 15C7 15D4 15D7 16A6  16B6 16C6 16D6 55D6  RAM_DQS_B&lt;7..0&gt; 15A2 15A6 15B2 15B4 15B7 15C4 15C7  17A6 17B6 17C6 17D6 55D6  RAM_RAS_L 14A3 16B4 17B4 55C6  RAM_SA0 17A4  RAM_WE_L 14A3 16B6 17B6 55C6  RB22P2 50B2  RB27-1 50B6  RB37P1 50C6  RB160P1 52A5  RB213P2 51C3  RB227P1 51C5  REF_STAR_GND 41A5 41A7  RESET_BUTTON* 31B2 46C4 61D4  RFBA&lt;11..0&gt; 20E2 20F2 22C2 22C6 22D2 22D6 57D3  RFBABA&lt;1..0&gt; 20E2 22C2 22C6 57D3  RFBACAS_L 20G2 22B2 22B6 57D3  RFBACKE 20D2 22C2 22C6 57C3  RFBACLK0 21C1 22C6 57C3  RFBACLK0_L 21C1 22C6 57C3  RFBACLK1 21D1 22C2 57C3  RFBACLK1_L 21D1 22C2 57C3  RFBACS0_L 20F2 22B2 22B6 57C3  RFBARAS_L 20G2 22B2 22B6 57D3  RFBARE_L 20F2 22B2 22B6 57D3  RFBBA&lt;11..0&gt; 20B2 20C2 23C2 23C6 23D2 23D6 57C3  RFBBA&lt;1..0&gt; 20A2 23C2 23C6 57C3  RFBBCAS_L 20C2 23B2 23B6 57B3  RFBBCKE 20A2 23C2 23C6 57B3  RFBCLK0 21B1 23C6 57B3  RFBCLK0_L 21B1 23C6 57B3  RFBCLK1 21C1 23C2 57B3  RFBCLK1_L 21B1 23C2 57B3  RFBBCS0_L 20C2 23B2 23B6 57B3  RFBBRAS_L 20C2 23B2 23B6 57B3  RFBBWE_L 20C2 23B2 23B6 57B3  RFBBD&lt;127..0&gt; 21B4 21B7 21C4 21C7 21D4 21D7 22B1  22B5 22C1 22C5 23B1 23B5 23C1 23C5  57C3 57D3  RFBBDQM&lt;15..0&gt; 20C2 20D2 20G2 22C2 22C6 23C2 23C6  57C3 57D3  RFBBDQS&lt;15..0&gt; 21A3 21A6 22C2 22C6 23C2 23C6 57B3  57C3  RF_CLKRUN_L 33C3 61B4  RF_DISABLE_L 33C3  RINA 41C4 42B2  RINT_PU_RESET_L 36C5  RINT_RESET_L 36C5  RJ45_4_5 37C1 59B3  RJ45_7_8 37C1 59B3  RJ45_F_TREF 37B2 59B3  RJ45_RREF 37C2 59B3  RJ45_RXN 37C1 37C2 59B3</p>	<p>RJ45_RXP 37C1 37C2 59B3  RJ45_TREF 37C2 59B3  RJ45_TXN 37C1 37C2 59B3  RJ45_TXP 37C1 37C2 59B3  ROMA14 20C8 28D8  ROMA15 20C8 28D8  ROM_CS_L 32B4 32B6 33B4 61C7  ROM_OE_L 32B2 32B6 33B2 61C7  ROM_ONBOARD_CS_L 32B2 33B4 61D4  ROM_RW_L 32B2 32B6 33B4 61B7  ROM_WP_L 32A2 61A7  RSPKRCAP 44C8  RSPKRIN1 44B6  RSPKRV1 44B6  RT78P2 37C4  RT373P1 53A5  RT401P1 49C5  RT406P2 49B3  RT418P2 52C7  RUNLED1 53A5  RUNSS 52D4  S3700P1 46A1  S3700P2 46A1  SB1P1 46A3  SENSE+ 47C6  SENSE+_1 47B5 47C7  SENSE- 47C6 47C8  SENSE-_1 47B5 47C7  SGRAVREF 22A3 22C4 22C8 54A6  SGRBVREF 23A3 23C4 23C8 54A6  SHS 52C8  SLEEP 46B5 52C4 61C4  SLEEP1 53A8  SLEEP2 53A7  SLEEPA_OFF_L 53C5  SLEEPLD_TERM 53A6  SLEEP_LED_BD 53A6  SLEEP_OFF_L 53B6 53C7  SLEEP_OFF_L2 41C7  SND_AMP_MUTE_L 30C5 44A8  SND_AMP_M_L 44A7 44B8  SND_CLKOUT 30A2 41B4  SND_HP_MUTE_L 30C5 43A7  SND_HP_M_L 43A7  SND_HP_SENSE 30B5 43A5 61B7  SND_HP_SENSE_CONN 43A3 43B2  SND_HW_RESET_L 30A8 30B5 41B4  SND_LIN_SENSE 30B5 42D4 61B4  SND_SCLK 30A2 41B1  SND_SPKR_ID 30B5 44C5  SND_SYNC 30B2 41C1  SND_TO_AUDIO 30B2 41C4  SNF_FSEL 10A7 30C5  SPDA 44C3  SPKR_JACK_DALLAS 44B1  SPKR_L+ 44B1  SPKR_L- 44B1  SPKR_MUTE_T 44B6 44B7  SPKR_R+ 44B1  SPKR_R- 44B1  SSCG_LOCK 10A7  STBYMD 52B7  STOP_AGP_L 18C6 18D3 19A8 56B7  SUPER_FLO 47C7  SW3V5V_12VIN 52C7  SW3V5V_INTVCC 52B5 52C6  SW3V5V_SGND 52A7 52A8 52B7 52B8 52C7  SW3V5V_VIN 52C6  SW3VITH2R 52A8  SW3V_3VSENSE 52B4  SW3V_BG2 52B6  SW3V_BG2R 52B5  SW3V_BOOST2 52B6  SW3V_BOOST2R 52C5  SW3V_ITH2 52A7 52B6  SW3V_RUNSS 52B6 52C3  SW3V_RUNSSR 52C3  SW3V_SNSM 52B6  SW3V_SNSP 52B6  SW3V_SW2 52B6 52C4  SW3V_SW2A 52C3</p>	<p>NOTICE OF PROPRIETARY PROPERTY  THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. 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	8	7	6	5	4	3	2	1												
							 APPLE COMPUTER INC.													
							<table border="1"> <tr> <td>SCALE</td> <td>DRAWING NUMBER</td> <td>REV.</td> </tr> <tr> <td>NONE</td> <td>65</td> <td>D</td> </tr> <tr> <td></td> <td>SHT</td> <td>OF</td> </tr> <tr> <td></td> <td>74</td> <td></td> </tr> </table>	SCALE	DRAWING NUMBER	REV.	NONE	65	D		SHT	OF		74		
SCALE	DRAWING NUMBER	REV.																		
NONE	65	D																		
	SHT	OF																		
	74																			



SW3V_TG2	52B6
SW3V_TG2R	52C5
SW3V_VOSNS	52B6
SW5VITH1R	52B8
SW5V_SVSENSE	52A4
SW5V_BG1	52A5 52B7
SW5V_BG1R	52A5
SW5V_BOOST1	52A5 52B7
SW5V_ITH1	52B7
SW5V_RUNSS	52B8 52D3
SW5V_SNSM	52A5 52B7
SW5V_SNSMA	52A4
SW5V_SNSP	52A5 52B7
SW5V_SW1	52A4 52A5 52B7
SW5V_SW1A	52A3
SW5V_TG1	52B5 52B7
SW5V_TG1R	52B4
SW5V_VOSNS	52B7
SW12V_SL	53C7
SW12V_SLEEP	53D7
SWITCH5V_3	53B6
SWITCH5V_4	53B6
SWITCH5V_5	53B1 53B3
SWITCH5V_6	53B2
SYSCLK_CPU	4D2 11A4 58C3
SYSCLK_CPU_UF	11A3 58C3
SYSCLK_DDRCLK_A0	10C2 14C4 16D6 55C6
SYSCLK_DDRCLK_A0_L	10C2 14C4 16D6 55C6
SYSCLK_DDRCLK_A0_L_UF	14B6 14C5 55C6
SYSCLK_DDRCLK_A1	10C2 14C4 16A4 55C6
SYSCLK_DDRCLK_A1_L	10C2 14B4 16A4 55C6
SYSCLK_DDRCLK_A1_L_UF	14B5 14B6 55C6
SYSCLK_DDRCLK_A1_UF	14B6 14C5 55C6
SYSCLK_DDRCLK_A2_L	10C5 14B4 55B6
SYSCLK_DDRCLK_A2_L_UF	14B5 14B6 55C6
SYSCLK_DDRCLK_A2_UF	14B5 14B6 55C6
SYSCLK_DDRCLK_B0	10C2 14B4 17B4 55B6
SYSCLK_DDRCLK_B0_L	10C2 14B4 17B4 55B6
SYSCLK_DDRCLK_B0_L_UF	14B5 14B6 55B6
SYSCLK_DDRCLK_B0_UF	14B5 14B6 55B6
SYSCLK_DDRCLK_B1	10C2 14A4 17D6 55B6
SYSCLK_DDRCLK_B1_L	10C2 14A4 17D6 55B6
SYSCLK_DDRCLK_B1_L_UF	14A5 14B6 55B6
SYSCLK_DDRCLK_B1_UF	14A5 14B6 55B6
SYSCLK_DDRCLK_B2	10B2 14A4 17A6 55B6
SYSCLK_DDRCLK_B2_L	10B2 14A4 17A6 55B6
SYSCLK_DDRCLK_B2_L_UF	14A5 14B6 55B6
SYSCLK_DDRCLK_B2_UF	14A5 14B6 55B6
SYSCLK_LA	9B3 9D8 58B3
SYSTEM_CLK_EN	10A7 30A5 46C4
TAS_DVDD	41D3
TAS_PWR_DOWN	41B4 41D7
TAS_STAR_GND	41A7 41D2
TAS_VCOM	41B1 41B3 44B8
TCKM	26A5 26C3 59C3
TCKP	26B5 26C4 59C3
TD0M	26B5 26C4 59C3
TD0P	26B5 26C3 59C3
TD1M	26C3 26C5 59C3
TD1P	26C4 26C5 59C3
TD2M	26C4 26D5 59C3
TD2P	26C3 26D5 59C3
TESTEN	37A5 37C4
TMDS_DDC_CLK	26A5 26B3 61C4
TMDS_DDC_DAT	26A5 26B4 61C4
TMDS_EN	25C6 53B1
TPA_PGND	44B6 44C8 53C5
TPA_SLP_H	44A7 53D4
TPA_STAR_GND	41B7 44A7
TPA_VA	44C8 44D7 53D5
TPA_VL	44C8 44D6
TPA_VR	44C8 44D6
TP_BUF_RST	24B5
TP_DVOCLKOUT	24C5
TP_DVOCLKOUT*	24C5
TP_DVOVSYNC	24B5
TRANS_ADJ	47B3
TRST_IN	8B3
T_UD_IDEDD_0	39C1 40C3 60C2
T_UD_IDEDD_1	39C1 40C3 60C2

T_UD_IDEDD_2	39C1 40C3 60C2
T_UD_IDEDD_3	39C1 40C3 60C2
T_UD_IDEDD_4	39B1 40C3 60C2
T_UD_IDEDD_5	39B1 40C3 60C2
T_UD_IDEDD_6	39B1 40C3 60B2
T_UD_IDEDD_7	39B1 40C3 60B2
T_UD_IDEDD_8	39B1 40C2 60B2
T_UD_IDEDD_9	39B1 40C2 60B2
T_UD_IDEDD_10	39B1 40C2 60B2
T_UD_IDEDD_11	39B1 40C2 60B2
T_UD_IDEDD_12	39B1 40C2 60B2
T_UD_IDEDD_13	39A1 40C2 60B2
T_UD_IDEDD_14	39A1 40C2 60B2
T_UD_IDEDD_15	39A1 40C2 60B2
U5_SDOUT	41C3
U22_8	38D8
U4202P2	42C3
U4202P3	42C3
U4202P5	42B3
U4202P6	42B3
U4202P7	42B3
UATA0IRQ	40C6 60D5
UATAD<15..0>	39A4 39B4 39C4 40C6 60D5
UB5PAE8	24B5
UIDE_ADDR<2..0>	39C7 40A4 40B4 60B5
UIDE_CS1FX_L	39C7 40B4 60B5
UIDE_CS3FX_L	39C7 40B4 60B5
UIDE_CSELP_L	40C2 54A6
UIDE_DATA<15..0>	39A3 39B3 39C3 39C7 39D7 60C5
UIDE_DIOR_L	39C7 39D3 60C5
UIDE_DIOW_L	39C3 39C7 60C5
UIDE_DMACK_L	39C7 39D3 60C5
UIDE_DMARQ	39C7 40C4 60C5
UIDE_INTRQ	39C7 40C4 60C5
UIDE_IOCHRDY	39C3 39C7 60C5
UIDE_PDIAG	40C2
UIDE_REF	39C7
UIDE_RST_L	39C7 39D3 60C5
UNUSED_ATAIOCS16_L	40C2 54A6
UNUSED_EXTINT7	30B5 30B8
UNUSED_EXTINT8	30B5 30B8
UNUSED_GPIO15	30B5 30C1 61A4
USB2_CRUN_L	30B5 34A7
USB2_DAN_F	34C1 34C4 35B7 58B3
USB2_DAP_F	34C1 35B7 58B3
USB2_DBN_F	34C1 35C7 58B3
USB2_DBP_F	34C1 34C4 35C7 58B3
USB2_DCN_F	34C1 35D7 58B3
USB2_DCP_F	34C1 35D7 58B3
USB2_IDSSEL	34B6
USB2_NC1	34B4
USB2_NC2	34B4
USB2_PME_L	34A6
USB2_RREF	34B4 58B3
USB2_RSDAM	34C4 58B3
USB2_RSAP	34C4 58B3
USB2_RSDBM	34C4 58B3
USB2_RSDBP	34C4 58B3
USB2_RSDCM	34C4 58B3
USB2_RSDCP	34C4 58B3
USB2_XT1	34C4 58B3
USB2_XT2	34C4 58B3
USB2_XT2_B	58B3
USBT_DAN_F	35B6 58B3
USBT_DAP_F	35B6 58B3
USBT_DBN_F	35C6 58A3
USBT_DBP_F	35C6 58A3
USBT_DCN_F	35D6 58A3
USBT_DCP_F	35D6 58A3
USB_DAN	30B3 60B5
USB_DAN_CON	35C3 58A3 61C4
USB_DAN_F	30B2 35B7 60B5
USB_DAP	30B3 60B5
USB_DAP_CON	35C3 58A3 61C4
USB_DAP_F	30B2 35B7 60B5
USB_DBN	30B3 60B5
USB_DBN_CON	35B3 58A3 61C4
USB_DBN_F	30B2 35C7 60B5
USB_DBP	30B3 60B5
USB_DBP_CON	35B3 58A3 61C4
USB_DBP_F	30B2 35C7 60B5

USB_DCN	30B3 60B5
USB_DCN_CON	35D3 58A3 61C4
USB_DCN_F	30B2 35D7 60B5
USB_DCP	30B3 60B5
USB_DCP_CON	35D3 58A3 61C4
USB_DCP_F	30B2 35D7 60B5
USB_DDN	30B3
USB_DDN_F_TERM	30B2
USB_DDP	30B3
USB_DDP_F_TERM	30B2
USB_DEN	30B3 60B5
USB_DEP	30B3 60B5
USB_DFN	30B3 60A5
USB_DFP	30B3 60A5
USB_GND	35A4 35B3 35C3 35D3 54A3
USB_OC_EF_L	30B3 30C2
USB_PORT_PWR	35A4 35B3 35C3 35D3 54A3 61B4
USB_PWR	27B5 27C2 27D3 35A6 54A3
USB_PWREN_AB_L	30B3 30C2
USB_PWREN_CD_L	30B3 30C2
USB_PWREN_EF_L	30B3 30C2
USB_PWR_EN	35A7 54A3
USB_PWR_FLT*	30B3 34B1 35A6
UX6P23	41C4
UX6_LINB	41C4
U_USB_PWR_FLT*	34B4
VCOREIN	47D6
VCORE_BG	47C6
VCORE_BG_1	47B5 47C7
VCORE_BOOST	47C5
VCORE_BOOST2	47C6
VCORE_BOOST2_1	47B5 47C7
VCORE_BOOST_1	47B5
VCORE_EXTVCC	47D7
VCORE_FREQSET	47C7
VCORE_INTVCC	47B5 47D5 47D7
VCORE_SEN+	47C3
VCORE_SEN+_1	47A3
VCORE_SENA+	47C3
VCORE_SF	47C8
VCORE_SGND	47B7 47C7 47C8
VCORE_STBY	47C7
VCORE_TG	47C6
VCORE_TG_1	47B5 47C7
VCORE_VGATE	10A8 30B5
VCORE_VIN	47D7
VC_CNTL1	46C7 47D8
VC_SENA	47B3
VGA_IIC_CLK	27C4 61B4
VGA_IIC_DAT	27C4 61B4
VGER_INV_HRESET	7A3 7B3 7C3 46D1
VIPCLK	24D4 54A6
VIPD0	24D4 28B7
VIPD1	24D4 28B7
VIPD2	24D4 28B8
VIPD3	24D4 28D7
VIPD4	24D4 28D7
VIPD5	24D4 28D7
VIPD6	24D4 28B8
VIPD7	24D4 28C5
VIPHAD0	24D5 28B7
VIPHAD1	24D5 28B7
VIPHCTL	24D5 28D5
VIP_PD	24C4
VIP_PU	24C4
VOSNS1	52B8
VOSNS2	52B5
VR43P2	48C5
VR4210P1	41B7
VREFM	41B4
VREFP	41B4 45B2
VRFILT	41B3
VSYNC*	24C5 59D3
WL_PCI_IDSSEL	33C2 61A4
XMIT_LED	37A2 37B4
XW4000P2	44B7
XW4001P2	44A7
XW4002P2	44A7 44D7
ZT8P1	4A1
ZT9P1	4B2
ZT10P1	4A2

ZT11P1 4B1

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\*\*\* Unit Cross-Reference \*\*\*  
--- for the entire design ---

BS1 PCB\_STANDOFF 31B5  
BS2 PCB\_STANDOFF 31B6  
BS3 PCB\_STANDOFF 31D1  
BS4 PCB\_STANDOFF 31D1  
BT1 BATTERY 46D6  
C1 CAP 35C3  
C2 CAP 35D3  
C3 CAP 37B1  
C4 CAP 38B6  
C5 CAP\_P 35A5  
C6 CAP 35B3  
C7 CAP\_P 35A5  
C8 CAP 23A4  
C9 CAP 23A4  
C10 CAP\_P 38D7  
C11 CAP 23A5  
C12 CAP\_P 38D7  
C13 CAP\_P 43C4  
C14 CAP\_P 44C7  
C15 CAP 23D2  
C16 CAP 23B4  
C17 CAP 23D5  
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SCALE	SHT	OF
NONE	67	74



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SCALE	NONE	SHT	OF
		68	74

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APPLE COMPUTER INC.	SCALE	DRAWING NUMBER	REV.
	NONE	D 69 OF 74	D

	8	7	6	5	4	3	2	1	
D	C968 CAP 51C4 C969 CAP 9D4 C970 CAP 52D5 C971 CAP 52D5 C972 CAP 9C2 C973 CAP 9C1 C974 CAP 9D1 C975 CAP 51C4 C976 CAP 9C2 C977 CAP 9D1 C978 CAP 52D5 C979 CAP 52D5 C980 CAP 9C2 C981 CAP 9C2 C982 CAP 9D2 C983 CAP 9D3 C984 CAP 51C3 C985 CAP 52D4 C986 CAP 52D5 C987 CAP 9D2 C988 CAP 9D3 C989 CAP 51C3 C990 CAP 9C1 C991 CAP 9D1 C992 CAP 9D3 C993 CAP 9C1 C994 CAP 9C2 C995 CAP 9D2 C996 CAP 9A6 C997 CAP 9A5 C998 CAP 9D2 C999 CAP 9D1 C1000 CAP 51B6 C1001 CAP 9A5 C1002 CAP 9A6 C1003 CAP 9D1 C1004 CAP 51B6 C1005 CAP 51C4 C1006 CAP 47C2 C1007 CAP 9C2 C1008 CAP 9B5 C1009 CAP 9A6 C1010 CAP 9B5 C1011 CAP 9B5 C1012 CAP 9A6 C1013 CAP 9D2 C1014 CAP 9D2 C1015 CAP 51B7 C1016 CAP 9C1 C1017 CAP 9A5 C1018 CAP 9A5 C1019 CAP 51C6 C1020 CAP 9C1 C1021 CAP 9C1 C1022 CAP 9B6 C1023 CAP 9A5 C1024 CAP 9A5 C1025 CAP 9B5 C1026 CAP 9D2 C1027 CAP 9B6 C1028 CAP 9A5 C1029 CAP 47B4 C1030 CAP 47B2 C1031 CAP 9A5 C1032 CAP 9C2 C1033 CAP 9C1 C1034 CAP 47B2 C1035 CAP 4D3 C1036 CAP 4D3 C1037 CAP 9C1 C1038 CAP 47B4 C1039 CAP 47C5 C1040 CAP 9C2 C1041 CAP 9D3 C1042 CAP 9C2 C1043 CAP 9D2 C1044 CAP 47D7 C1045 CAP 47B7 C1046 CAP 47C1 C1047 CAP 47D5 C1048 CAP 47C2	C1049 CAP 47B7 C1050 CAP 47C7 C1051 CAP 47B6 C1052 CAP 47C8 C1053 CAP 48A8 C1054 CAP 9B2 C1055 CAP 9B2 C1056 CAP 9B1 C1057 CAP 9B1 C1058 CAP 9B1 C1101 CAP 11D3 C1601 CAP 16D7 C1602 CAP 16D3 C1603 CAP 16D3 C1701 CAP 17D7 C1702 CAP 17D7 C1801 CAP 18D5 C1802 CAP 18A7 C1901 CAP 9A6 C1902 CAP 9A5 C1903 CAP 9A5 C1904 CAP 9A5 C1910 CAP 9A5 C1911 CAP 9B2 C1912 CAP 9B2 C1913 CAP 9B1 C1914 CAP 9B1 C2201 CAP 22C8 C2202 CAP 22C4 C2301 CAP 23C8 C2302 CAP 23C4 C2501 CAP_P 25A8 C3001 CAP 30C5 C3002 CAP 30D5 C3003 CAP 30D5 C3004 CAP 30D4 C3005 CAP 30D4 C3201 CAP 32D4 C3901 CAP 39D1 C4081 CAP 48C7 C4301 CAP 43A6 C4502 CAP_P 45C5 C4701 CAP 47B6 D1 DIODE_DUAL_6P 38A7 D2 DIODE_DUAL_6P 38A7 D3 DIODE_DUAL_6P 38A7 D4 DIODE_DUAL_6P 38B7 D5 ZENER_MMBZ15VDLT1 42B6 D6 DIODE_DUAL_6P 27D4 D7 DIODE_DUAL_6P 27D4 D8 DIODE 38D6 D9 DIODE 37B8 D10 DIODE_SCHOT 25B8 D11 DIODE_SCHOT 46D7 D12 DIODE_SCHOT 46D7 D13 DIODE_SCHOT 49C7 D14 DIODE_SCHOT 49B5 D15 DIODE_SCHOT 51B4 D16 DIODE_SCHOT 52C5 D17 DIODE_SCHOT 52B5 D18 DIODE_SCHOT 51C6 D19 DIODE_SCHOT 48D6 D20 DIODE_SCHOT 47D5 D21 DIODE_SCHOT 47B5 D22 ZENER_MMBZ15VDLT1 44C2 D23 DIODE_SCHOT_3P 44A1 D24 ZENER_MMBZ15VDLT1 43B2 D25 ZENER 38B6 D26 ZENER_MMBZ15VDLT1 43B2 D27 DIODE_DUAL_6P 27B4 D28 DIODE_DUAL_6P 27B4 D29 ZENER_MMBZ15VDLT1 42B5 D30 DIODE_SCHOT 50C5 D31 DIODE_SCHOT 50B3 D32 DIODE_SCHOT 50B5 D33 DIODE_SCHOT 48B6 D34 DIODE_SCHOT 50B1 D35 DIODE_SCHOT 46D6 D36 DIODE_SCHOT 46D6 D37 DIODE_SCHOT 52B2 D38 DIODE_SCHOT 52C6	D39 DIODE_SCHOT 52B4 D40 DIODE_SCHOT 52A4 D41 DIODE_SCHOT 47C4 D42 DIODE_SCHOT 51B5 D43 DIODE_SCHOT 47B3 D44 DIODE_SCHOT 47D2 D45 DIODE_SCHOT 47D6 D46 DIODE_SCHOT 51B2 D4901 DIODE_SCHOT 49B2 DS1 LED 37A2 DS2 LED 37A1 DS3 LED 37A1 DS4 LED 32A3 DS5 LED 53A5 DS6 LED 53A6 DS7 LED 40B2 DS8 LED 40B6 DS9 LED 52D6 DS10 LED 53A3 F1 FUSE 35A7 F2 FUSE 38D5 F3 FUSE 38D5 FL1 FILTER_12P 44B3 FL2 FILTER_LC 27C6 FL3 FILTER_LC 27C6 FL4 FILTER_LC 27B6 J1 CON_RJ45 37C1 J2 CON_FWVERT_SKT 38C1 J3 CON_F8RT_S_TH1 44B1 J4 CON_F4RT_USB_UPRIGHT 35C3 J5 CON_FWVERT_SKT 38D1 J6 CON_F4RT_USB_UPRIGHT 35B3 J7 CON_F4RT_USB_UPRIGHT 35D3 J8 CON_F4RT_S4MT_TH1 43C1 J9 CON_F14RT_D4MT_TH1 27C5 J10 CON_F4RT_S4MT_TH1 42C7 J11 CON_F184ST_DDRDIMM 17D5 J12 CON_F21ST_D2MT_SM 26C3 J13 CON_M40SM_635 31D6 J14 CON_M16ST_D_TH 31B5 J15 CON_M40ST_NC20 40D6 J16 CON_M40ST_NC20 40D2 J17 CON_M16ST_MICROFIT 52D8 J18 CON_M4ST_LCK 36B4 J19 CON_37SM_MTOR 9C5 J20 CON_38SM_MTOR 9D7 J21 CON_M3ST_LCK 47C8 J22 CON_F20SM_KX 9B3 J23 CON_F1ST_S2MT_SM 30B7 J24 CON_M12ST_SM 31B3 J25 CON_F100RT_LP_SM 33D3 J26 CON_F200RT_DDRDIMM_SM2 16D5 J27 CON_F1ST_S2MT_SM 9C3 J28 CON_F10ST_D_SMA 31D2 J29 CON_M6ST_BTRY 8B6 J30 CON_38SM_MTOR 9D5 J31 CON_38SM_MTOR 9C7 J32 CON_F12RT_S2MT_SM 9B8 J4501 CON_F4ST_S2MT_SM 45C6 J4502 CON_F4ST_S2MT_SM 45C6 JAZ1 TP 53A4 L1 IND 38D4 L2 IND 35A5 L3 IND 38D4 L4 IND 35A5 L5 FILTER_4P 38C2 L6 FILTER_4P 38C2 L7 FILTER_4P 38D2 L8 FILTER_4P 38D2 L9 IND 27C2 L10 IND 44A5 L11 IND 44B5 L12 IND 50B3 L13 IND 24C7 L14 IND 10D5 L15 IND 10D7 L16 IND 30C3 L17 IND 10B8 L18 IND 10B8 L19 IND 49B4 L20 IND 47C3	L21 IND_3P 51B4 L22 IND_3P 52A3 L23 IND 52C3 L24 IND 47B3 L25 IND 44C3 L26 IND 44B1 L27 IND 43C3 L28 IND 35C5 L29 IND 35C5 L30 IND 35B5 L31 IND 35B5 L32 IND 38B6 L34 IND 43D3 L35 IND 43B3 L36 IND 42B6 L37 IND 35D5 L38 IND 35D5 L39 IND 43A3 L40 IND 44B1 L41 IND 44C3 L42 IND 43B3 L43 IND 43A4 L44 IND 43C3 L45 IND 43D3 L46 IND 42C6 L47 IND 43B3 L48 IND 42C6 L49 IND 42B5 L50 IND 42C5 L51 IND 42D6 L52 IND 42C5 L53 IND 42D5 L54 IND 44B5 L55 IND 44B5 L56 IND 46A1 L57 IND 46A1 L58 IND 34D6 L59 IND 45B5 L60 IND 45C5 L61 IND 44D7 L62 IND 44D7 L63 IND 41D4 L64 IND 26A5 L65 IND 31A7 L66 IND 31A3 L67 FILTER_4P 26A5 L68 IND 24C2 L69 IND 31A3 L70 IND 31A7 L71 FILTER_4P 26B5 L72 IND 31A7 L73 IND 31A3 L74 FILTER_4P 26C5 L75 IND 31A7 L76 FILTER_4P 26D5 L77 IND 31B7 L78 IND 31A3 L79 IND 45C7 L80 IND 31B3 L81 IND 45B7 L82 IND 26D5 L83 IND 45B7 L84 IND 52D7 L85 IND 52D7 L86 IND 52D7 L2401 IND 24C7 L2501 IND 25A6 Q1 TRA_2N7002 53C2 Q2 TRA_2N7002 44A7 Q3 TRA_2N7002 44B7 Q4 TRA_2N7002 44C4 Q5 TRA_2N7002 43A5 Q6 TRA_2N7002 53C4 Q7 TRA_IRLR8203 50B4 Q8 TRA_IRLR8503 50B4 Q9 TRA_IRLR8503 50C4 Q10 TRA_2N7002 24B7 Q11 TRA_FDC602P 53C2 Q12 TRA_2N3904 46D7 Q13 TRA_2N7002 53B2 Q14 TRA_2N7002 53C7					
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	D	D
SCALE	NONE	SHT	OF
		70	74

	8	7	6	5	4	3	2	1					
D	Q15	TRA_2N7002	53B7	R43	RES	35D6	R124	RES	25C4	R205	RES	18A8	D
	Q16	TRA_2N7002	53A7	R44	RES	35D6	R125	RES	28D5	R206	RES	24D7	
	Q17	TRA_2N7002	53B6	R45	RES	35C6	R126	RES	28C6	R207	RES	25D2	
	Q18	TRA_2N7002	53A7	R46	RES	35C6	R127	RES	34B8	R208	RES	25D2	
	Q19	TRA_2N7002	53A6	R47	RES	35B6	R128	RES	34B8	R209	RES	16B3	
	Q20	TRA_FDC602P	53D7	R48	RES	35B6	R129	RES	34D3	R210	RES	19B8	
	Q21	TRA_2N7002	52C3	R49	RES	20B7	R130	RES	20D2	R211	RES	18C7	
	Q22	TRA_2N7002	52D3	R50	RES	20B7	R131	RES	20D3	R212	RES	32B3	
	Q23	TRA_2N7002	52C4	R51	RES	44C3	R132	RES	21D2	R213	RES	25C4	
	Q24	TRA_2N7002	52C3	R52	RES	20C5	R133	RES	24D3	R214	RES	29B5	
	Q25	TRA_IRF7811W	49B5	R53	RES	21A4	R134	RES	28B8	R215	RES	18C7	
	Q26	TRA_IRF7805	49B5	R54	RES	20D3	R135	RES	28A8	R216	RES	18B7	
	Q27	TRA_IRLR8203	51B4	R55	RES	21A4	R136	RES	28C5	R217	RES	18D3	
	Q28	TRA_IRLR8503	51B4	R56	RES	20D2	R137	RES	44B7	R218	RES	32D6	
	Q29	TRA_2N7002	47D8	R57	RES	21A4	R138	RES	32B3	R219	RES	32D6	
	Q30	TRA_2N3904	38C7	R58	RES	20D3	R139	RES	32B4	R220	RES	18C7	
	Q31	TRA_2N7002	43A8	R59	RES	20C2	R140	RES	21A7	R221	RES	18D1	
	Q32	TRA_2N7002	41C7	R60	RES	21A4	R141	RES	25B4	R222	RES	18D3	
	Q33	TRA_2N3904	45B2	R61	RES	20A3	R142	RES	28C5	R223	RES	18D1	
	Q34	TRA_IRLR8203	50A4	R62	RES	20A2	R143	RES	20G2	R224	RES	18C7	
	Q35	TRA_2N7002	42D4	R63	RES	21A4	R144	RES	25B2	R225	RES	18D7	
	Q37	TRA_FDC602P	53C6	R64	RES	20D3	R145	RES	24C3	R226	RES	18C7	
	Q38	TRA_2N7002	53B6	R65	RES	21A4	R146	RES	21A7	R227	RES	32C6	
	Q39	TRA_2N3904	52C7	R66	RES	20D2	R147	RES	21A7	R228	RES	30C7	
	Q40	TRA_IRLR8203	47C4	R67	RES	20D2	R148	RES	21C2	R229	RES	36C1	
	Q41	TRA_2N7002	8D5	R68	RES	21A4	R149	RES	25B5	R230	RES	32B6	
	Q42	TRA_2N7002	8C6	R69	RES	21A4	R150	RES	50C5	R231	RES	30C8	
	Q43	TRA_IRLR8203	47C4	R70	RES	20D3	R151	RES	22A4	R232	RES	30C6	
	Q44	TRA_IRLR8503	47C4	R71	RES	20D6	R152	RES	22A5	R233	RES	18B3	
	Q45	TRA_IRF7811W	52B4	R72	RES	19A5	R153	RES	21A7	R234	RES	18D1	
	Q46	TRA_IRF7805	52C4	R73	RES	28C2	R154	RES	20G3	R235	RES	29B5	
	Q47	TRA_IRLR8203	52A4	R74	RES	28D2	R155	RES	20G2	R236	RES	29C5	
	Q48	TRA_IRLR8503	52A4	R75	RES	37B8	R156	RES	21C2	R237	RES	25C4	
	Q49	TRA_IRLR8203	47B4	R76	RES	37B8	R157	RES	25B2	R238	RES	29C6	
	Q50	TRA_IRLR8503	47B4	R77	RES	28D2	R158	RES	21D2	R239	RES	29B6	
	Q51	TRA_IRLR8203	47B4	R78	RES	34A7	R159	RES	21A7	R240	RES	29B5	
	Q52	TRA_2N7002	48A7	R79	RES	28C2	R160	RES	19A5	R241	RES	29C5	
	Q53	TRA_FDC602P	48B7	R80	RES	19A5	R161	RES	18D1	R242	RES	29B6	
	Q4801	TRA_FDC602P	48D7	R81	RES	21A7	R162	RES	43A5	R243	RES	29C6	
	R1	RES	38D4	R82	RES	28B3	R163	RES	22A4	R244	RES	29C4	
	R2	RES	27B4	R83	RES	20A5	R164	RES	20G3	R245	RES	29B4	
	R3	RES	27B4	R84	RES	20G2	R165	RES	37C4	R246	RES	25B7	
	R4	RES	23A4	R85	RES	25D6	R166	RES	22A4	R247	RES	29B7	
	R5	RES	23A4	R86	RES	25D6	R167	RES	21A7	R248	RES	29C7	
	R6	RES	23A4	R87	RES	28B3	R168	RES	19A7	R249	RES	29B7	
	R7	RES	27B5	R88	RES	20A5	R169	RES	19A4	R250	RES	29C7	
	R8	RES	38C4	R89	RES	34D3	R170	RES	24B5	R251	RES	53B3	
	R9	RES	38C4	R90	RES	20G3	R171	RES	24A6	R252	RES	32C7	
R10	RES	38C4	R91	RES	25D5	R172	RES	24B6	R253	RES	32C7		
R11	RES	38C4	R92	RES	25C5	R173	RES	24C7	R254	RES	36B4		
R12	RES	38C3	R93	RES	28A3	R174	RES	24B6	R255	RES	32C6		
R13	RES	38C3	R94	RES	28A3	R175	RES	42D4	R256	RES	32C7		
R14	RES	38C3	R95	RES	20A5	R176	RES	22A4	R257	RES	36B3		
R15	RES	38C3	R96	RES	37B1	R177	RES	19A5	R258	RES	39D5		
R16	RES	38B3	R97	RES	21A7	R178	RES	24C7	R259	RES	32C7		
R17	RES	23A4	R98	RES	25D5	R179	RES	24C7	R260	RES	14D4		
R18	RES	23A5	R99	RES	25D6	R180	RES	42D5	R261	RES	14D4		
R19	RES	27B5	R100	RES	28A7	R181	RES	43A4	R262	RES	32C7		
R20	RES	21C2	R101	RES	21A7	R182	RES	43A4	R263	RES	39D4		
R21	RES	53D2	R102	RES	25C4	R183	RES	24C3	R264	RES	30D1		
R22	RES	53C3	R103	RES	21B2	R184	RES	25C5	R265	RES	40B4		
R23	RES	53D2	R104	RES	21B2	R185	RES	24B6	R266	RES	39C6		
R24	RES	21A3	R105	RES	21C2	R186	RES	21A6	R267	RES	30B1		
R25	RES	21A3	R106	RES	21C2	R187	RES	21A6	R268	RES	40B4		
R26	RES	37B4	R107	RES	25C4	R188	RES	24B3	R269	RES	36C4		
R27	RES	37C4	R108	RES	25C6	R189	RES	16A3	R270	RES	39D2		
R28	RES	37B7	R109	RES	28B7	R190	RES	16B2	R271	RES	30B3		
R29	RES	37B7	R110	RES	28D6	R191	RES	24B6	R272	RES	30B3		
R30	RES	37C3	R111	RES	20G2	R192	RES	19A3	R273	RES	39D2		
R31	RES	21A3	R112	RES	25D6	R193	RES	19A3	R274	RES	30C7		
R32	RES	21A3	R113	RES	25C4	R194	RES	24B6	R275	RES	36C4		
R33	RES	37C4	R114	RES	25C4	R195	RES	19A3	R276	RES	30C8		
R34	RES	37C7	R115	RES	25C4	R196	RES	19A3	R277	RES	53B2		
R35	RES	38D6	R116	RES	28C6	R197	RES	18A8	R278	RES	53B3		
R36	RES	20B8	R117	RES	20G3	R198	RES	19C1	R279	RES	53B2		
R37	RES	37C4	R118	RES	24D3	R199	RES	24D6	R280	RES	46D8		
R38	RES	37C7	R119	RES	25C4	R200	RES	24C6	R281	RES	46D7		
R39	RES	38D6	R120	RES	28C5	R201	RES	16B3	R282	RES	46D7		
R40	RES	37C3	R121	RES	28D6	R202	RES	16B2	R283	RES	53B3		
R41	RES	20B8	R122	RES	21A7	R203	RES	18C8	R284	RES	53B3		
R42	RES	37B4	R123	RES	21D2	R204	RES	18B8	R285	RES	33C1		

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