

- 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
D		263	PRODUCTION RELEASE	05/19/03	05/23/03

5/19/03 A RFA# 276257 ENGR RELEASE  
5/23/03 B

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35	USB POWER & CONNECTORS
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38	FIREWIRE PHY
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# Q26B DVT MLB

## GEN X REV B



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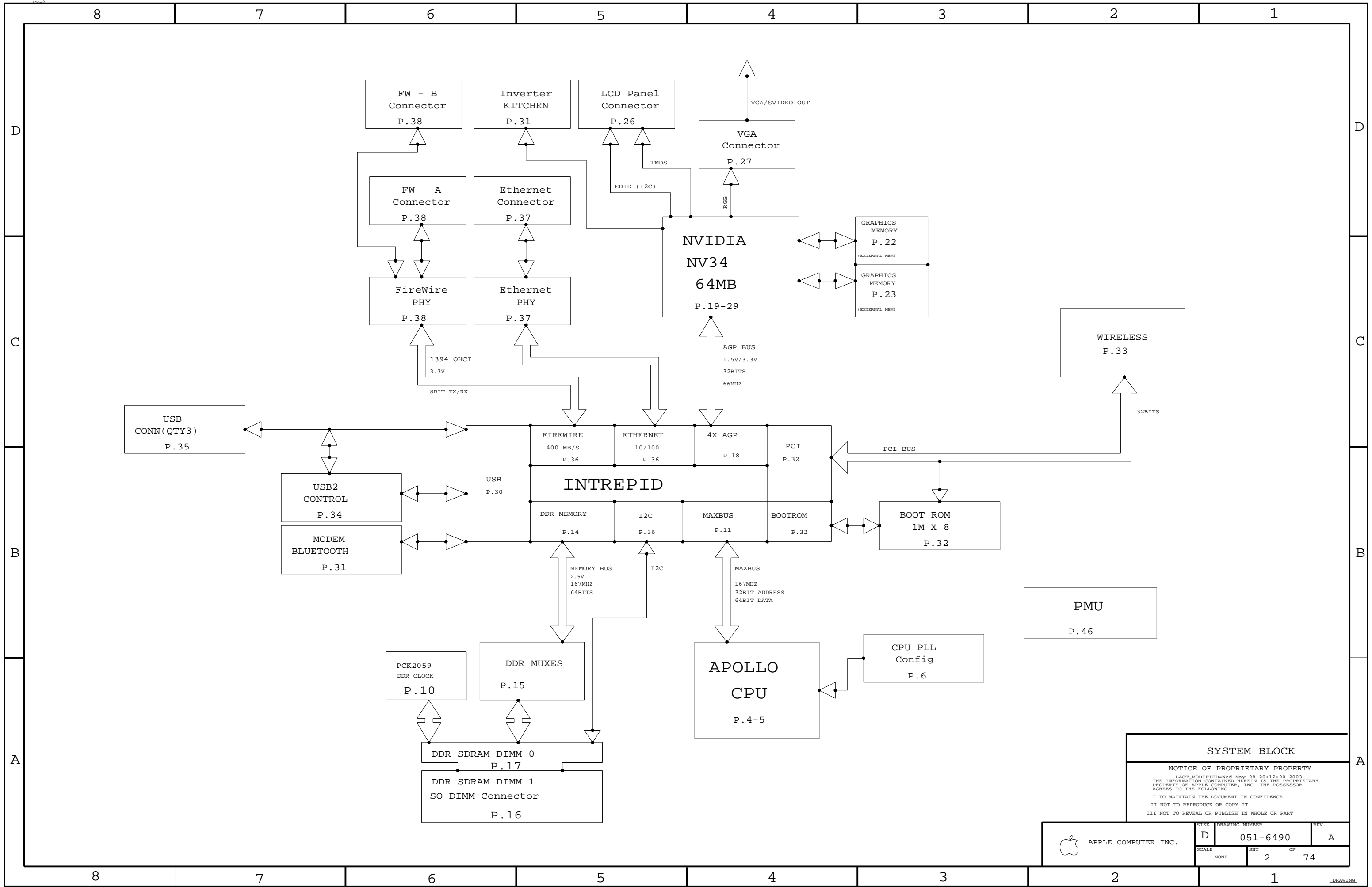
POWER RAIL DEFINITIONS

	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

SCHEMATIC AND PCB SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
051-6490	1	SCHEM,MLB,Q26A,GENX	SCH1	CRITICAL	
820-1501	1	PCB,MLB,IMACG4	PCB1	CRITICAL	
825-2029	1	LBL,SER #,BARCODE	PCB1		
056-1158	1	DESIGN GUIDE,MCO,IMACG4	PCB1	CRITICAL	
057-0040	1	DFM,PNLZN DWG,MLB,Q26	PCB1	CRITICAL	
630-4745	1	630-4745,PCBA,H,Q26A,EEE PRR	HYNIX		OMIT
630-4746	1	630-4746,PCBA,S,Q26A,EEE PRR	SAMSUNG		OMIT

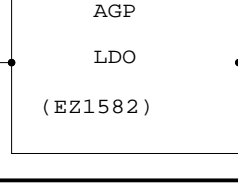
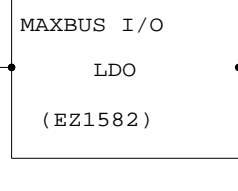
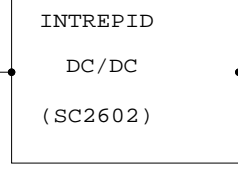
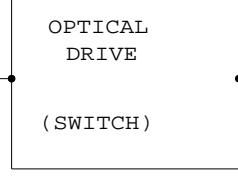
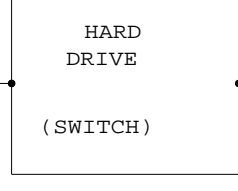
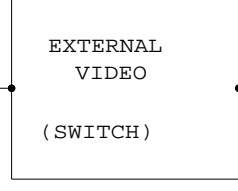
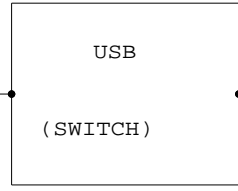
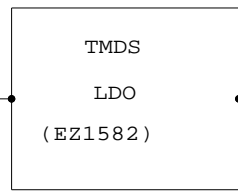
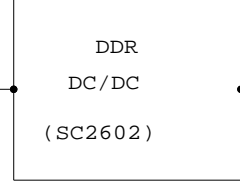
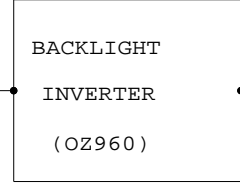
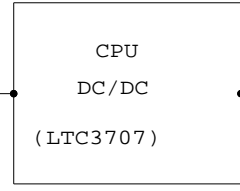
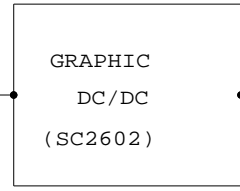
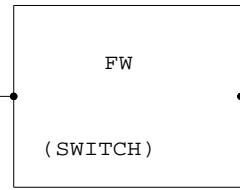
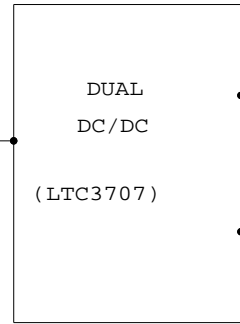
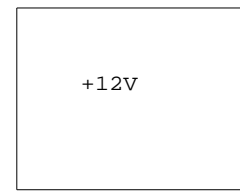
<p style="font-size: small;">DIMENSIONS ARE IN MILLIMETERS</p> <p>xx: _____</p> <p>x.xx: _____</p> <p>x.xxx: _____</p> <p>ANGLES: _____</p> <p style="font-size: x-small;">DO NOT SCALE DRAWING</p> <p style="text-align: center;"></p> <p style="font-size: x-small;">THIRD ANGLE PROJECTION</p>	<p><b>METRIC</b></p>	 Apple Computer Inc.
<p style="font-size: x-small;">NOTICE OF PROPRIETARY PROPERTY</p> <p style="font-size: x-small;">THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING</p> <p style="font-size: x-small;">I TO MAINTAIN THE DOCUMENT IN CONFIDENCE</p> <p style="font-size: x-small;">II NOT TO REPRODUCE OR COPY IT</p> <p style="font-size: x-small;">III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART</p>		<p>TITLE</p> <p style="font-size: large; font-weight: bold;">SCHEM,MLB,Q26,GEN X</p>
<p style="font-size: x-small;">MATERIAL/FINISH NOTED AS APPLICABLE</p>		<p>SIZE</p> <p style="font-size: large; font-weight: bold;">D</p>
		<p>DRAWING NUMBER</p> <p style="font-size: large; font-weight: bold;">051-6490</p>
		<p>REV. <b>A</b></p> <p style="font-size: x-small;">SHT 1 OF 74</p>



**SYSTEM BLOCK**

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	D	051-6490	A
SCALE	SHT	OF	
NONE	2	74	



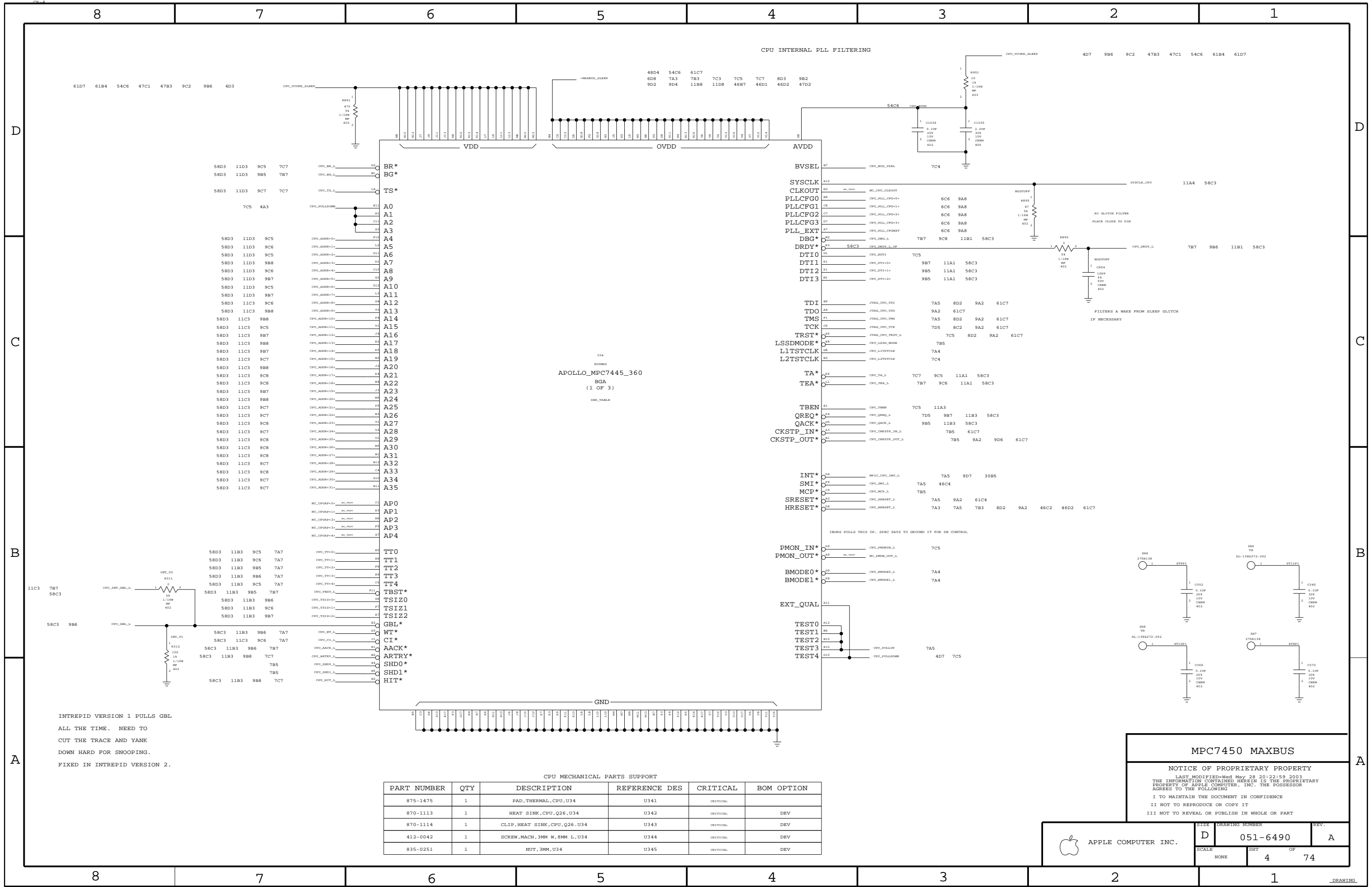
LAYER	THICKNESS (MILS)	COPPER (OZ)	TRACE WIDTH (MILS)
1 - SIGNAL-TOP	0.7	0.5	4
PREPREG	3	---	---
2 - GROUND1	1.4	1	---
PREPREG	3	---	---
3 - SIGNAL	0.7	0.5	4
FILLER	17.4	---	---
4 - POWER	2.8	2	---
PREPREG	4	---	---
5 - POWER	2.8	2	---
FILLER	17.4	---	---
6 - SIGNAL	0.7	0.5	4
PREPREG	3	---	---
7 - GROUND2	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	SHT		OF
NONE	3		74



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

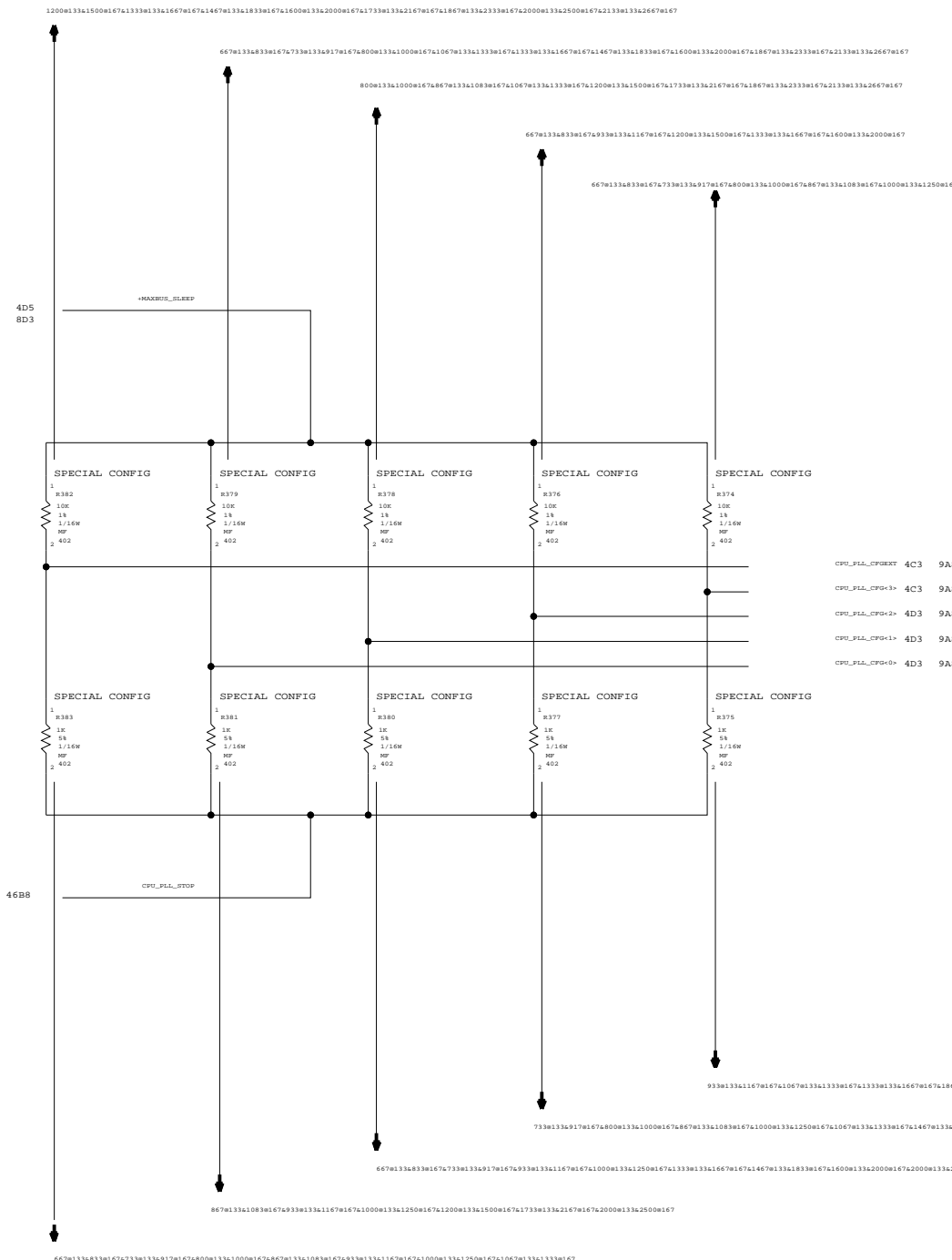
**MPC7450 MAXBUS**

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	SCALE NONE	SHEET <b>4</b>	OF <b>74</b>



BOMPTIONS FOR UPPER-SET OF RESISTORS



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

CPU FREQUENCY CONFIGURATION  
(SUPPORTED CPU & BUS SPEEDS)

MULTIPLIER (BUS-TO-CORE)	CORE FREQUENCY (AT BUS FREQUENCY) (MHZ)		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

BOMPTIONS FOR LOWER-SET OF RESISTORS

CPU FREQUENCY CONFIGURATION  
(OTHER POSSIBLE CPU & BUS SPEEDS)

MULTIPLIER (BUS-TO-CORE)	CORE FREQUENCY (AT BUS FREQUENCY) (MHZ)		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	0 0100 04
2.5X	(8.5X)	417 (1417) 333 (1133)	0 0110 06
3.0X		500	0 1000 08
3.5X	(13.5X)	583 (2250) 467 (1800)	0 1110 0E
4.0X		667	0 1010 0A
4.5X	(9.5X)	750 (1583) 600 (1267)	0 0111 07
17.0X		2833	1 0000 10
18.0X		3000	1 0010 12
20.0X		3333	1 0011 13
21.0X		3500	1 0100 14
24.0X		4000	1 0110 16
10.5X		1750	1 1000 18
28.0X		4667	1 1110 1E
12.5X		2083	1 1111 1F

REV 3.0+ ONLY

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  
ARE AUTOMATICALLY SELECTED

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
337S2674	1	IC, APOLLO, N5, V3. 3, 1.0GHZ	U34		1000e133
116S1473	2	RES, 4.7K-OHM, 5%, 1/16W, 0402	R887, R368		1000e133
114S1004	1	RES, 10K-OHM, 1%, 1/16W, 0402	R866		1000e133
337S2769	1	IC, APOLLO, N5, V3. 3, 1.250GHZ	U34		1250e167
116S1473	3	RES, 4.7K-OHM, 5%, 1/16W, 0402	R887, R368, R357		1250e167

CPU BUS RATIO BITS

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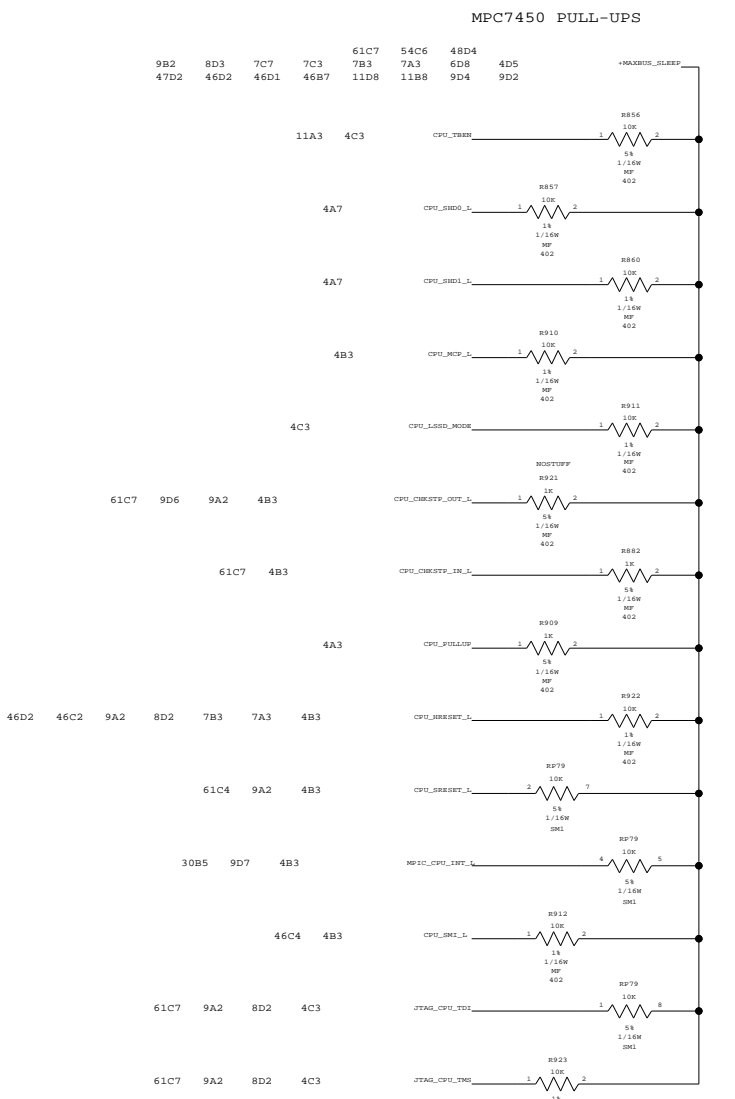
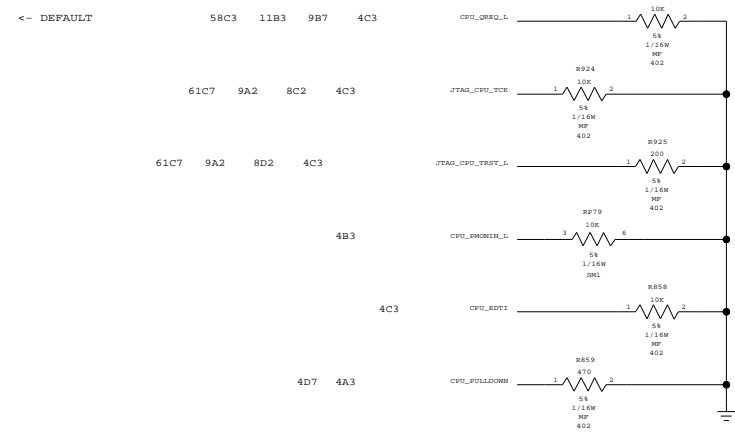
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SIZE	DRAWING NUMBER	REV.
D	051-6490	A
SCALE	SHT	OF
NONE	6	74

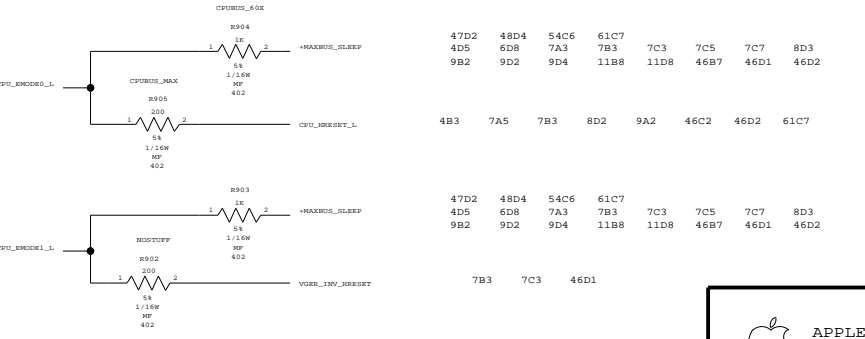
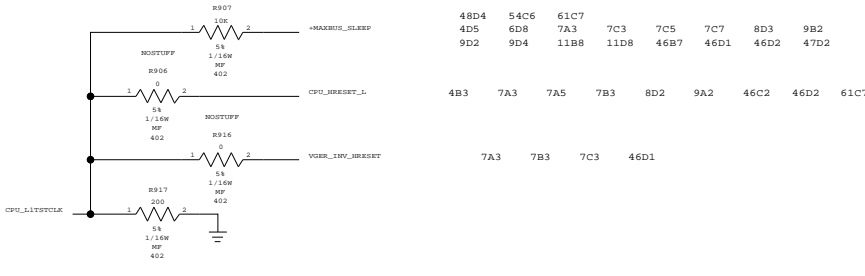
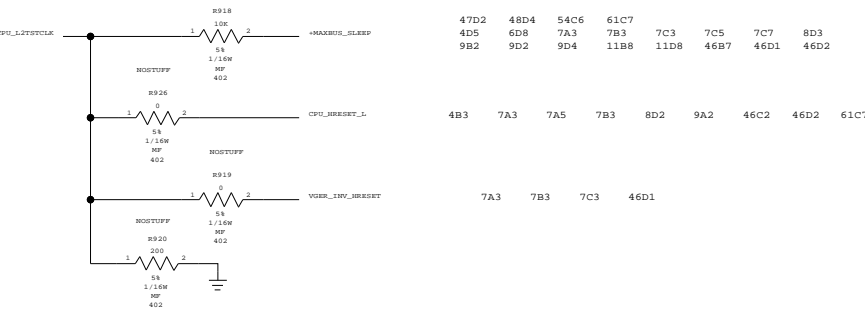
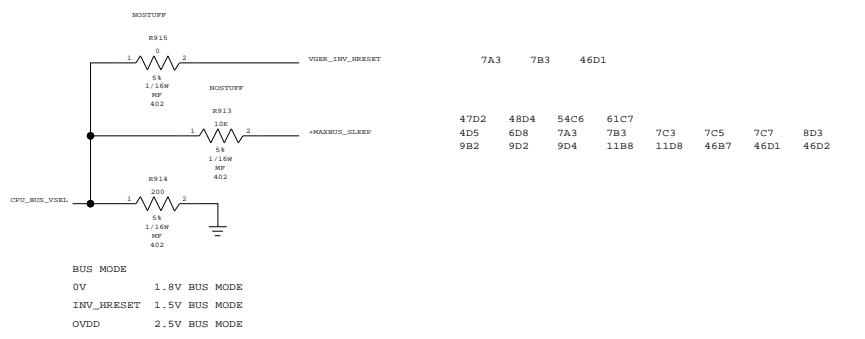
8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

BMODE	MSSCR0	Sys	Vger	Addr
<0> <1>	<16:17>	Bus	ID	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
-----				
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



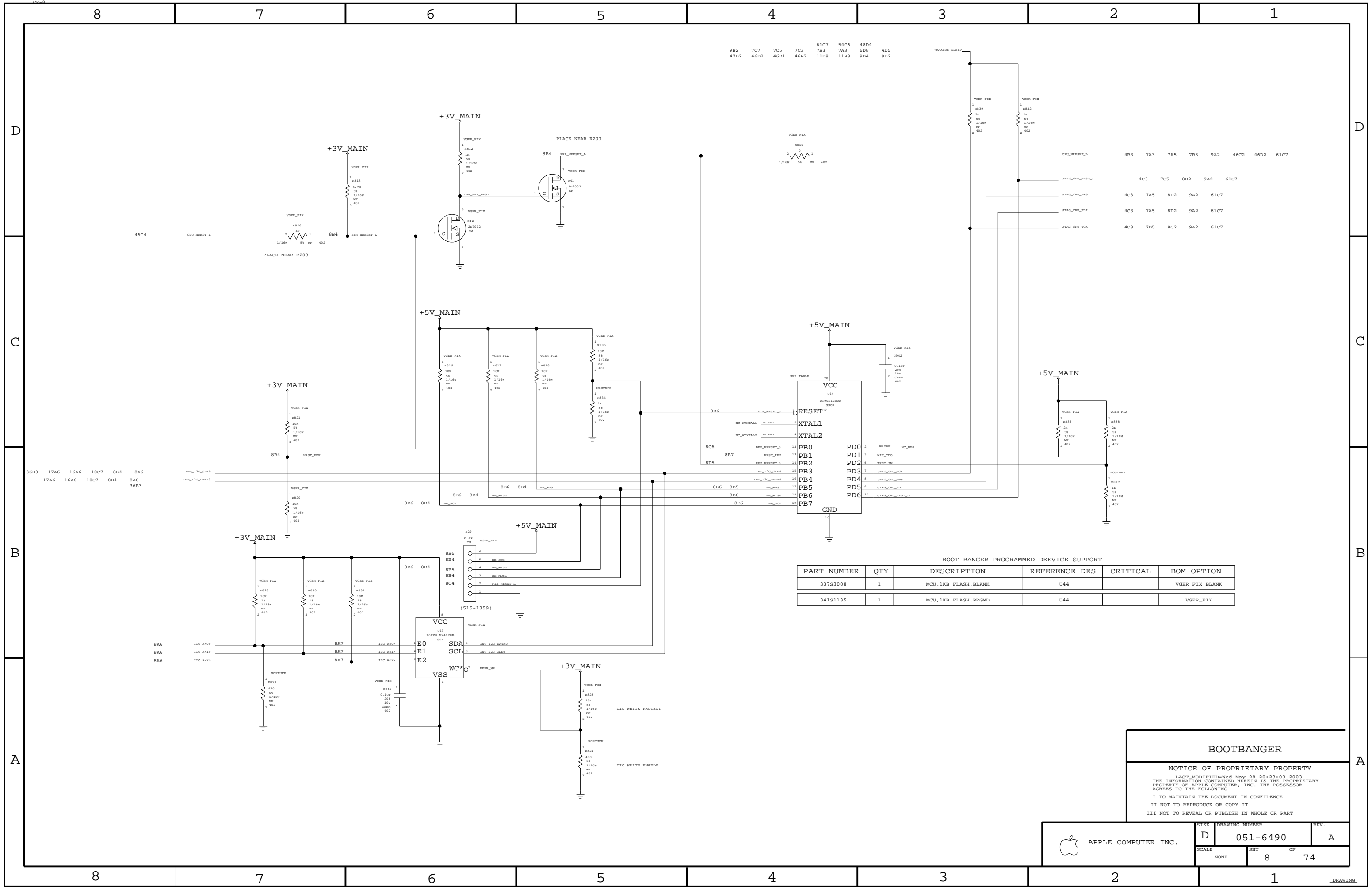
SIGNAL	TIED	APPLICATION
CPU_EMODE0_L	HIGH	60X BUS MODE
	CPU_HRESET_L	MAX BUS MODE
CPU_BUS_VSEL	CPU_HRESET_L	2.5V INTERFACE
	LOW	1.8V INTERFACE
CPU_L3_VSEL	CPU_HRESET_H	1.5V INTERFACE
	CPU_HRESET_L or L3_OVDD	2.5V INTERFACE
CPU_L3_VSEL	LOW	1.8V INTERFACE
	CPU_HRESET_H	1.5V INTERFACE



CPU CONFIG OPTIONS

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	SCALE		SHT
NONE		7	74



9B2 7C7 7C5 7C3 61C7 54C6 48D4  
 47D2 46D2 46D1 46B7 11D8 7B3 7A3 6D8 4D5 9D4 9D2

4B3 7A3 7A5 7B3 9A2 46C2 46D2 61C7  
 4C3 7C5 8D2 9A2 61C7  
 4C3 7A5 8D2 9A2 61C7  
 4C3 7D5 8C2 9A2 61C7

36B3 17A6 16A6 10C7 8B4 8A6  
 17A6 16A6 10C7 8B4 8A6 36B3

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

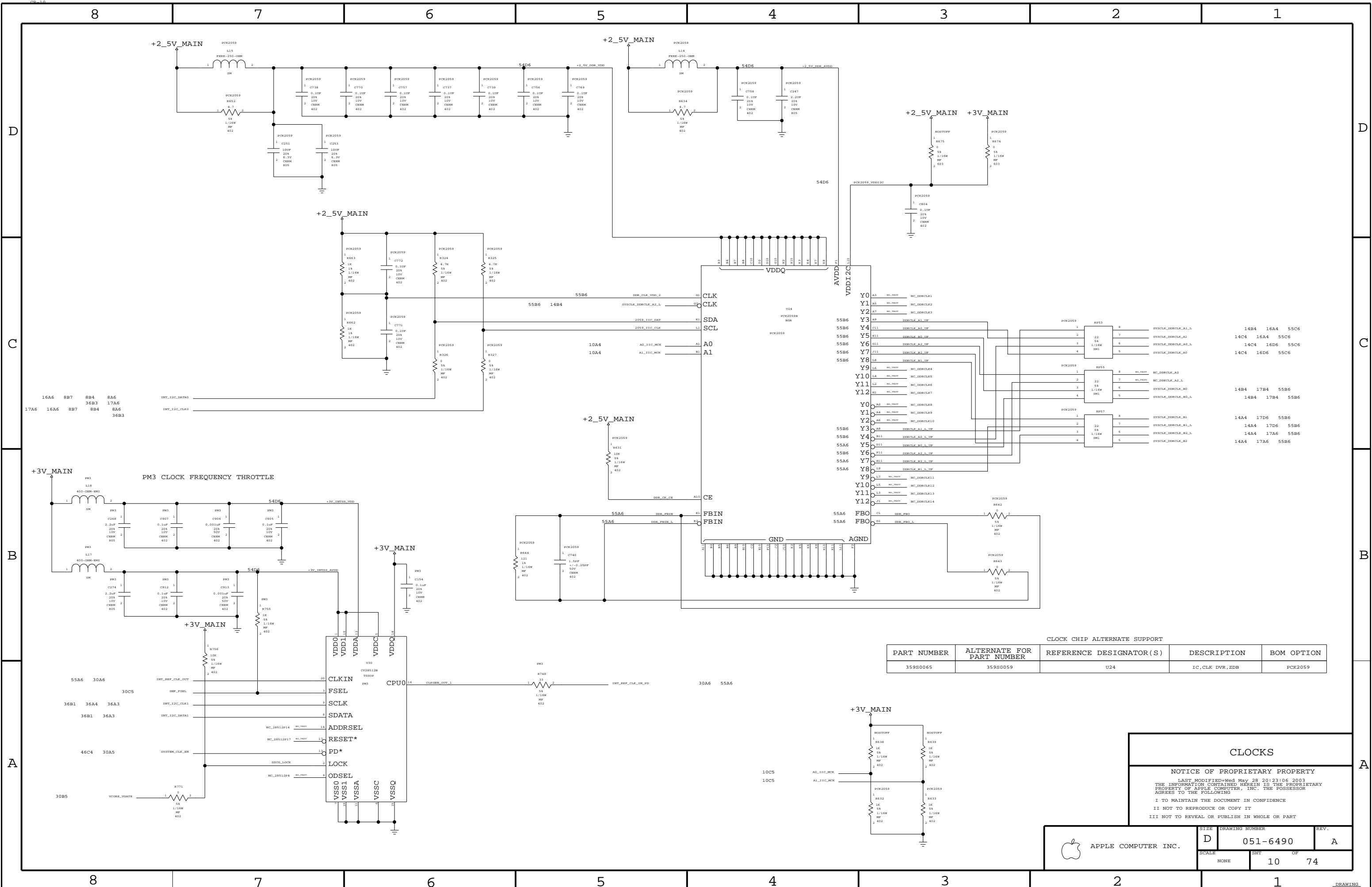
**BOOTBANGER**

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SCALE	SHT	OF	
NONE	8	74	







CLOCK CHIP ALTERNATE SUPPORT

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
35980065	35980059	U24	IC,CLK DVR,ZDB	PCK2059

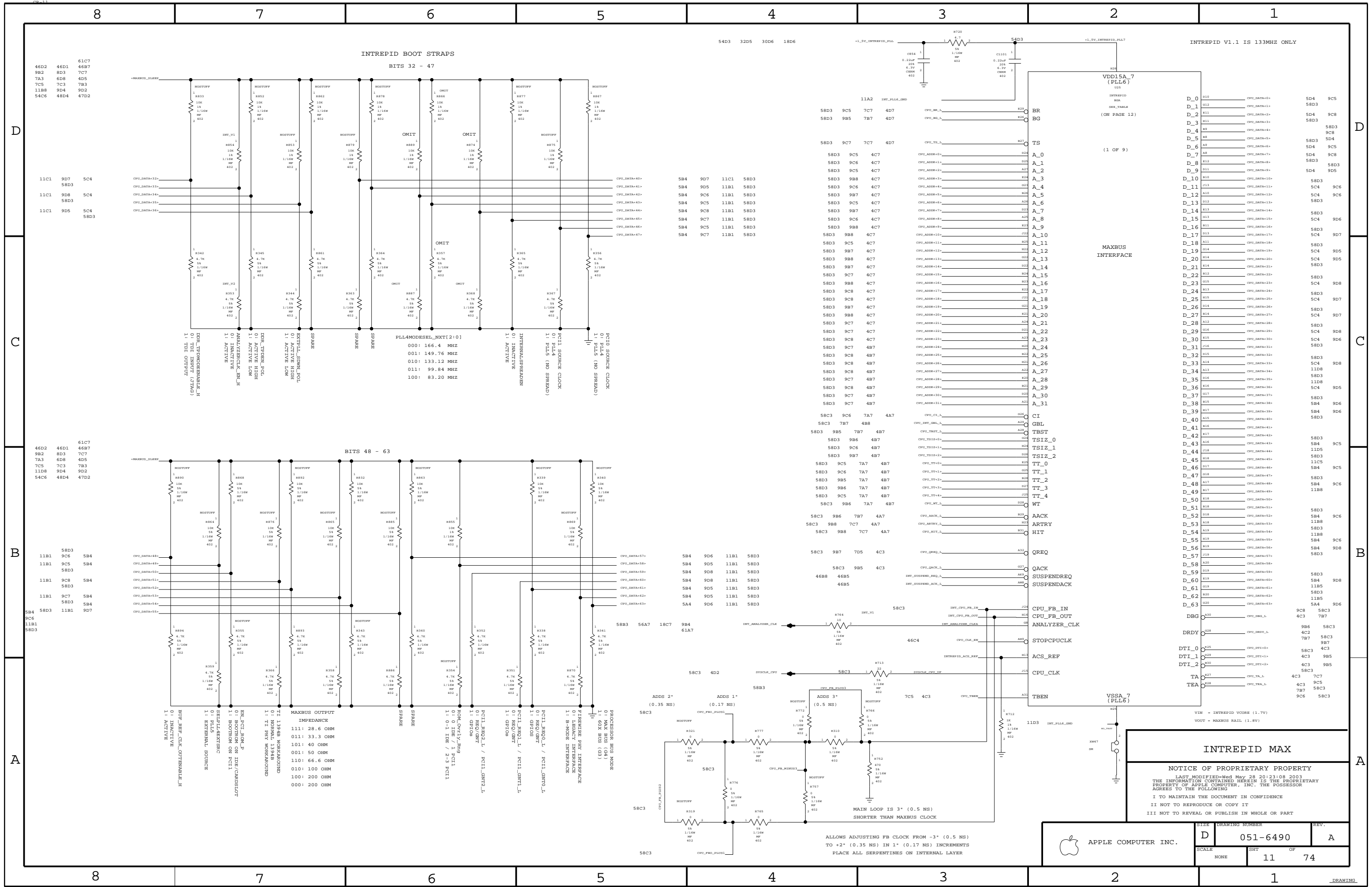
**CLOCKS**

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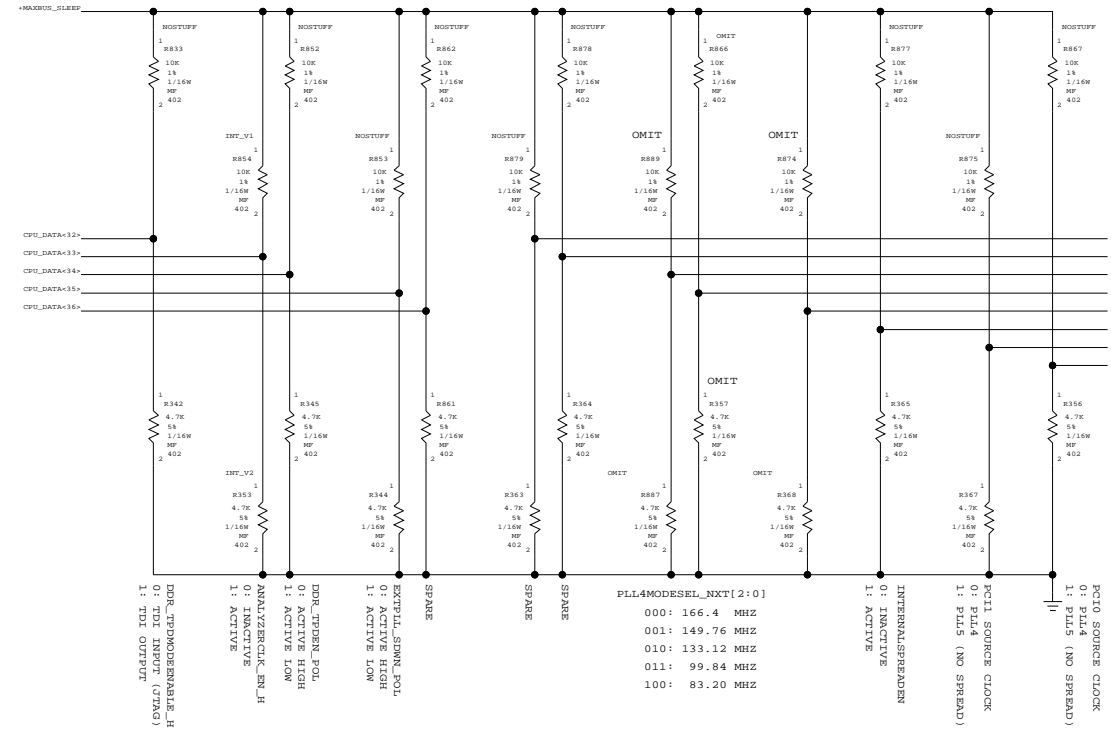
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SCALE	SHT	OF	
NONE	10	74	



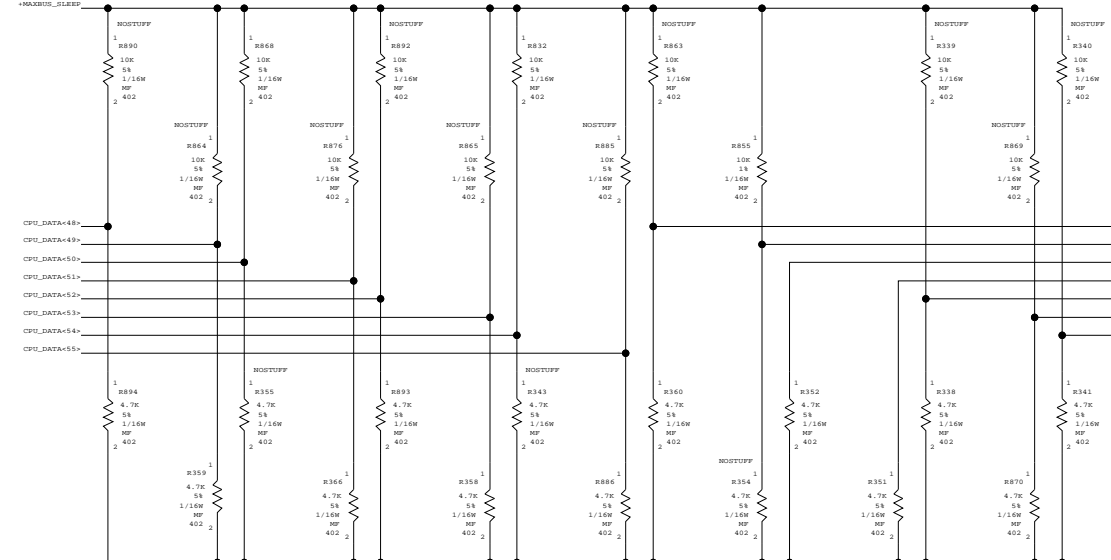
INTREPID BOOT STRAPS

BITS 32 - 47



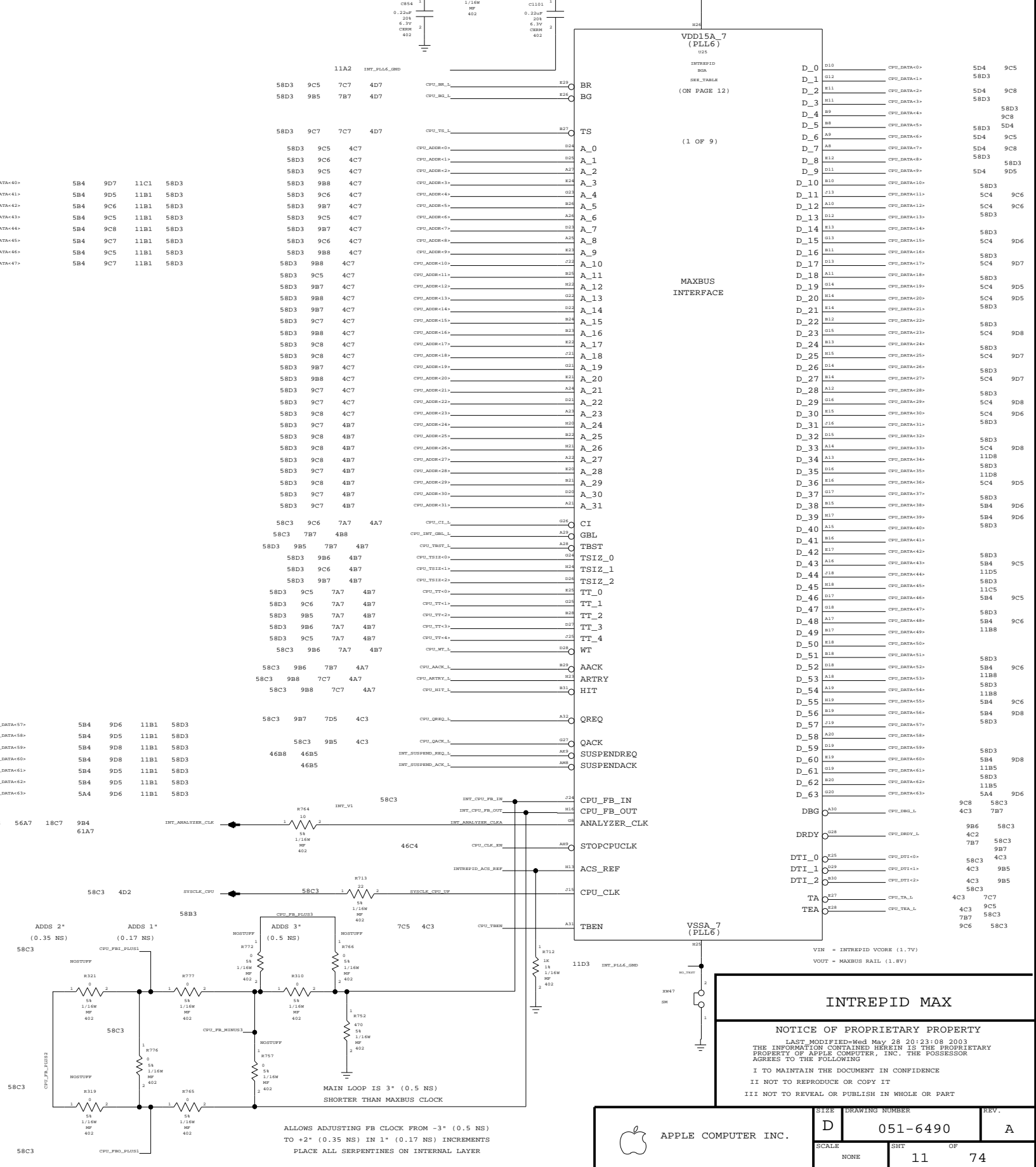
PLL4MODESEL\_NXT[2:0]  
 000: 166.4 MHZ  
 001: 149.76 MHZ  
 010: 133.12 MHZ  
 011: 99.84 MHZ  
 100: 83.20 MHZ

BITS 48 - 63



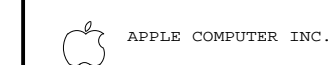
MAXBUS OUTPUT IMPEDANCE  
 111: 28.6 OHM  
 011: 33.3 OHM  
 101: 40 OHM  
 001: 50 OHM  
 010: 100 OHM  
 100: 200 OHM  
 000: 200 OHM

54D3 32D5 30D6 18D6 +1.5V\_INTREPID\_PLL INTREPID V1.1 IS 133MHZ ONLY



**INTREPID MAX**  
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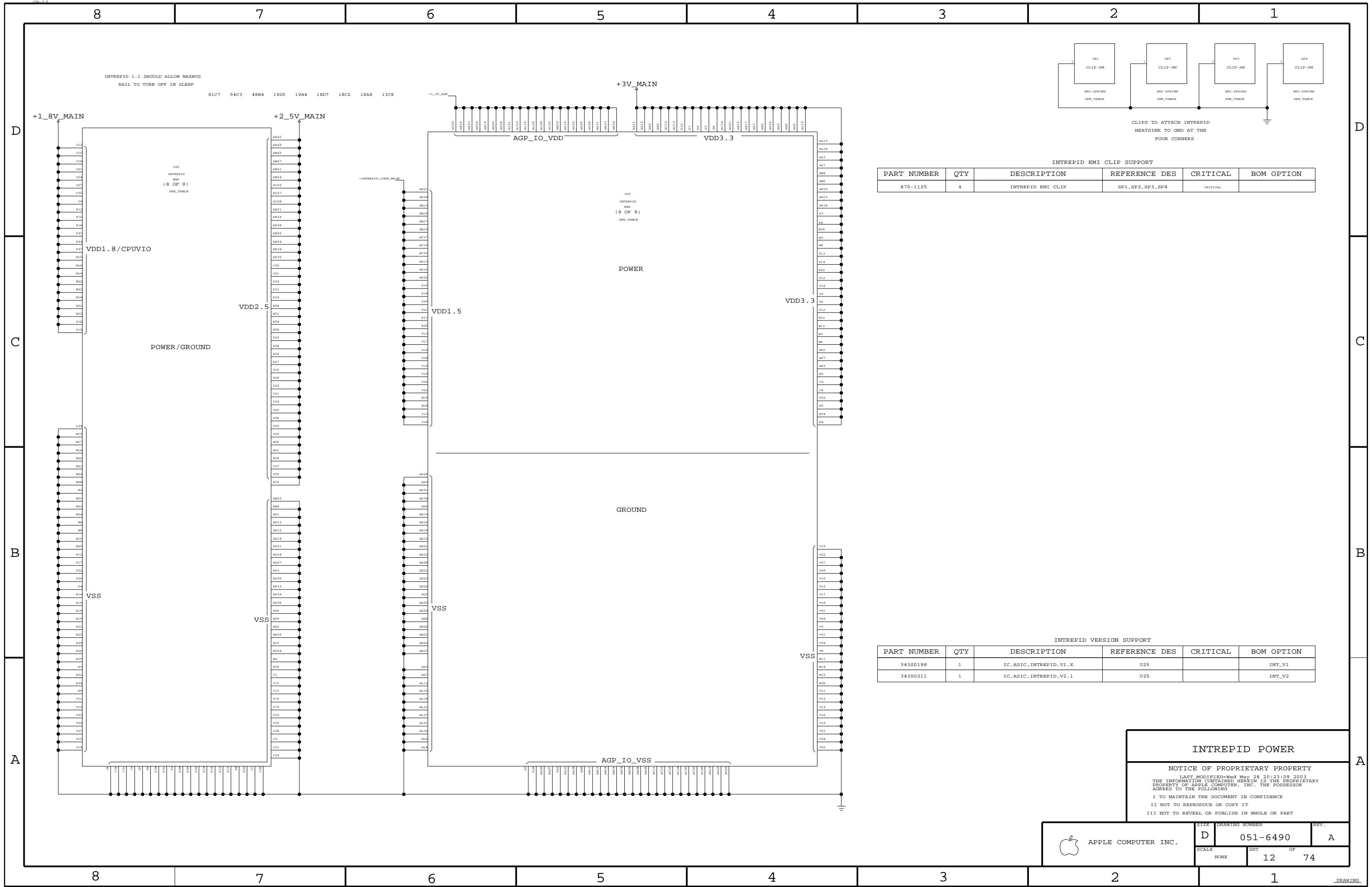
DRAWING NUMBER	051-6490		REV. A
	SCALE	NONE	
SHEET	11		OF 74
	NONE		



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

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1



INTREPID EMI CLIP SUPPORT

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

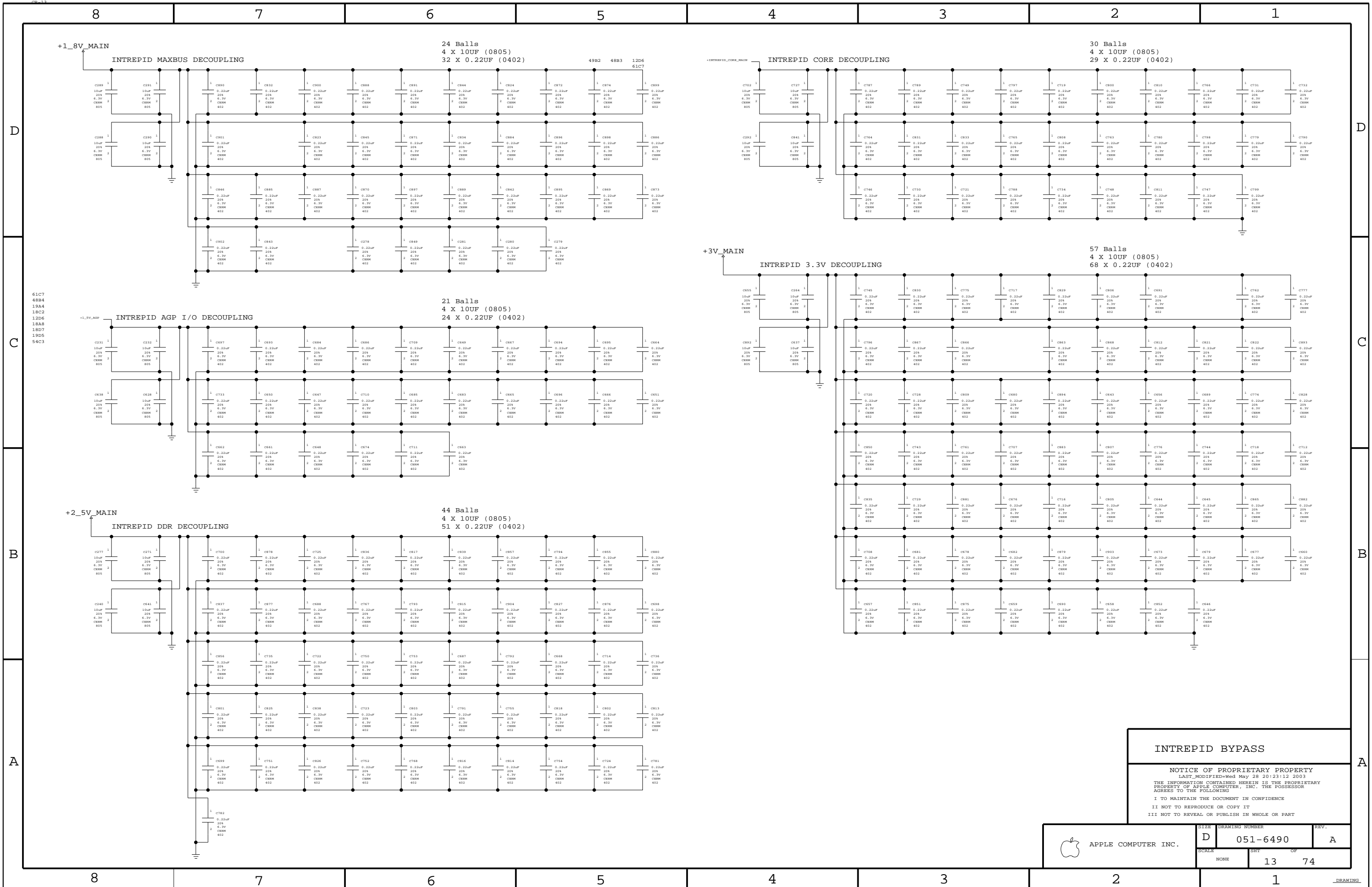
INTREPID VERSION SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
34380198	1	IC,ASIC,INTREPID,V1.X	U25		INT_V1
34380211	1	IC,ASIC,INTREPID,V2.1	U25		INT_V2

**INTREPID POWER**

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	D	051-6490	A
SCALE	SHT	OF	
NONE	12	74	



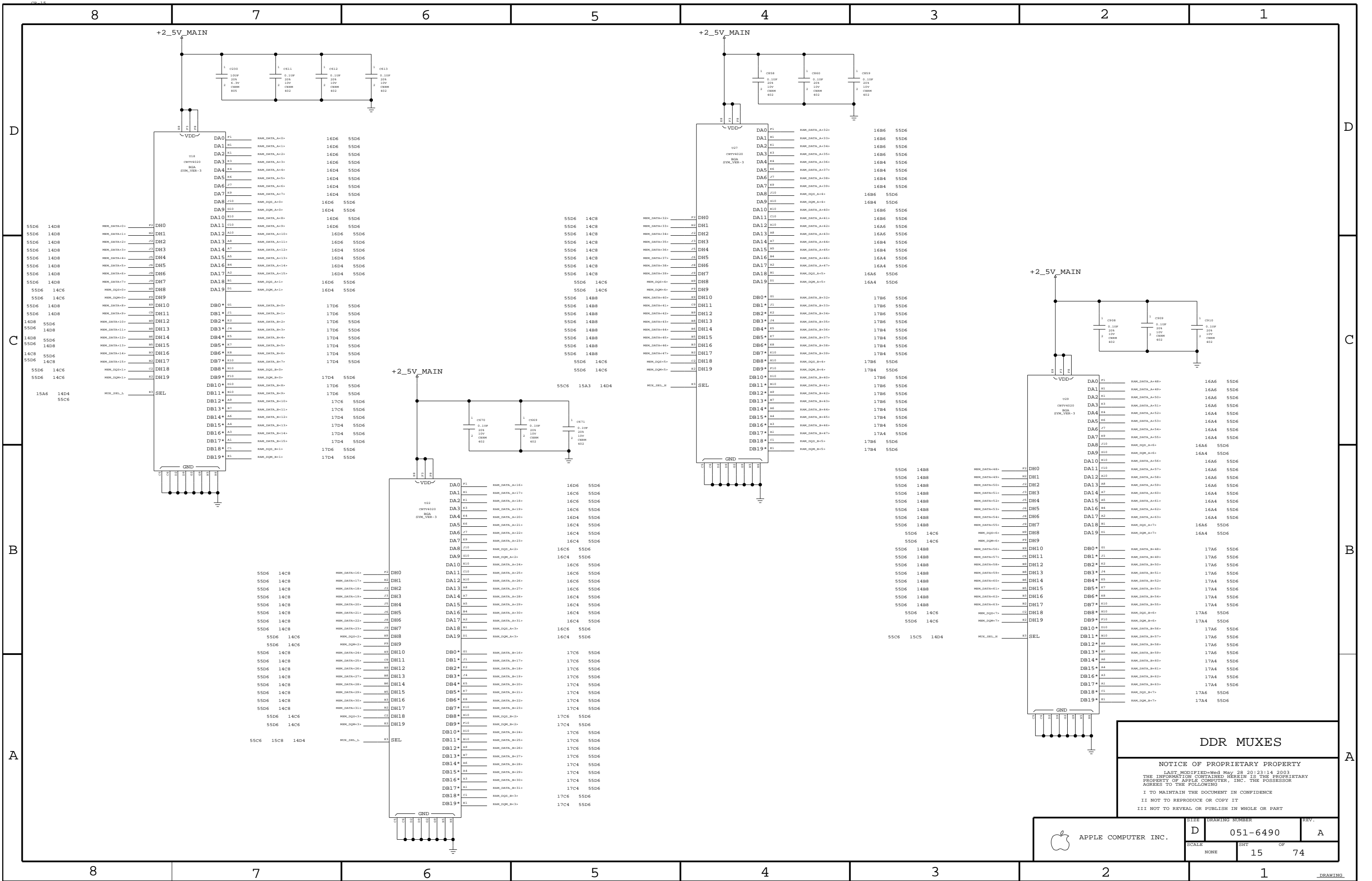
**INTREPID BYPASS**

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	D	051-6490	A
SCALE	SHEET OF		
NONE	13	74	





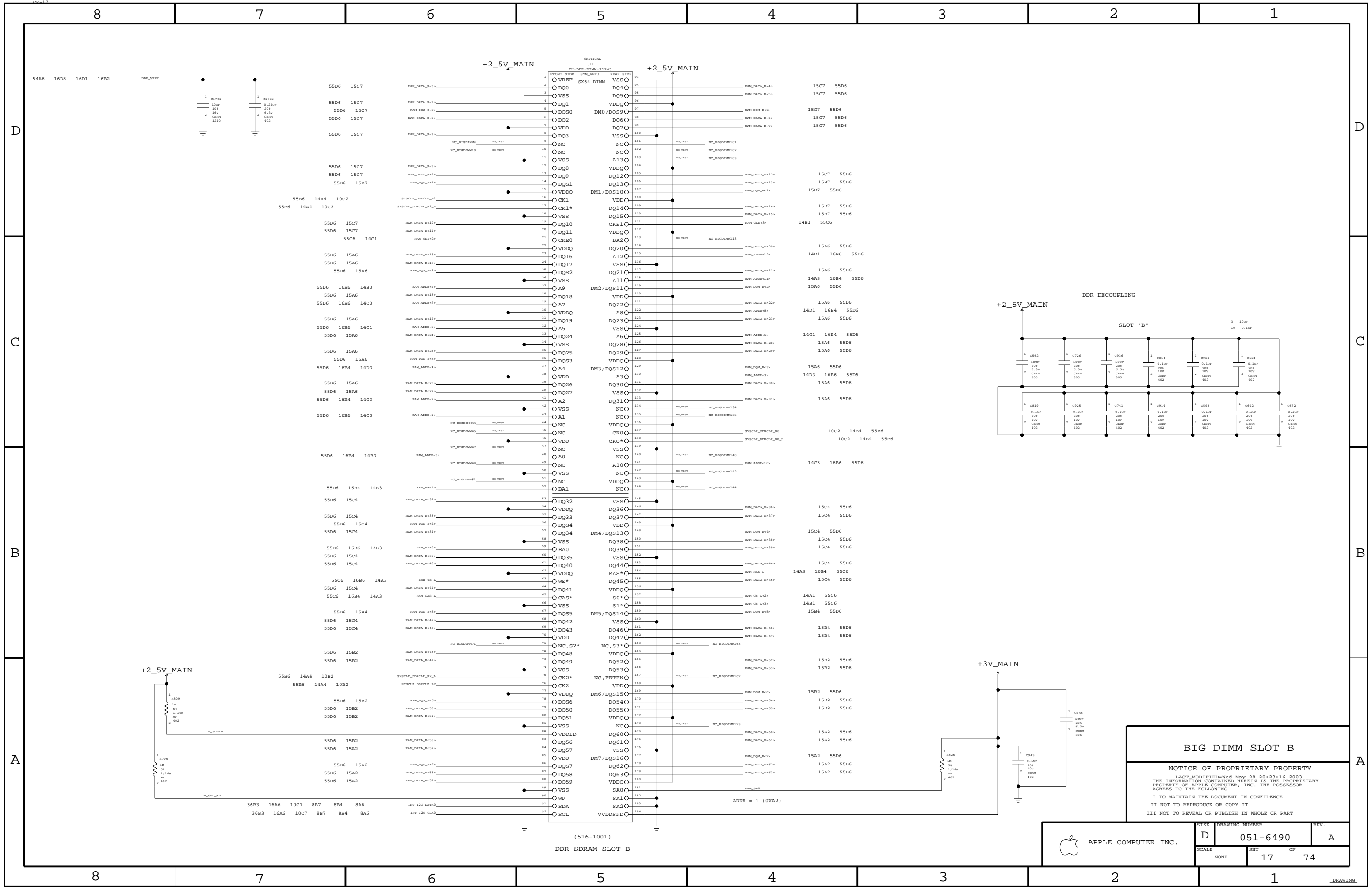
**DDR MUXES**

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APPLE COMPUTER INC.	SIZE: <b>D</b> SCALE: NONE	DRAWING NUMBER: <b>051-6490</b> SHEET: 15 OF 74	REV.: <b>A</b>
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CRITICAL  
J11  
TH-DDR-DIMM-71243

+2.5V\_MAIN

+2.5V\_MAIN

+2.5V\_MAIN

DDR DECOUPLING

SLOT "B"

+3V\_MAIN

BIG DIMM SLOT B

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(516-1001)  
 DDR SDRAM SLOT B

APPLE COMPUTER INC.	DRAWING NUMBER <b>051-6490</b>	REV. <b>A</b>
	SCALE NONE	SHEET 17

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

D

D

C

C

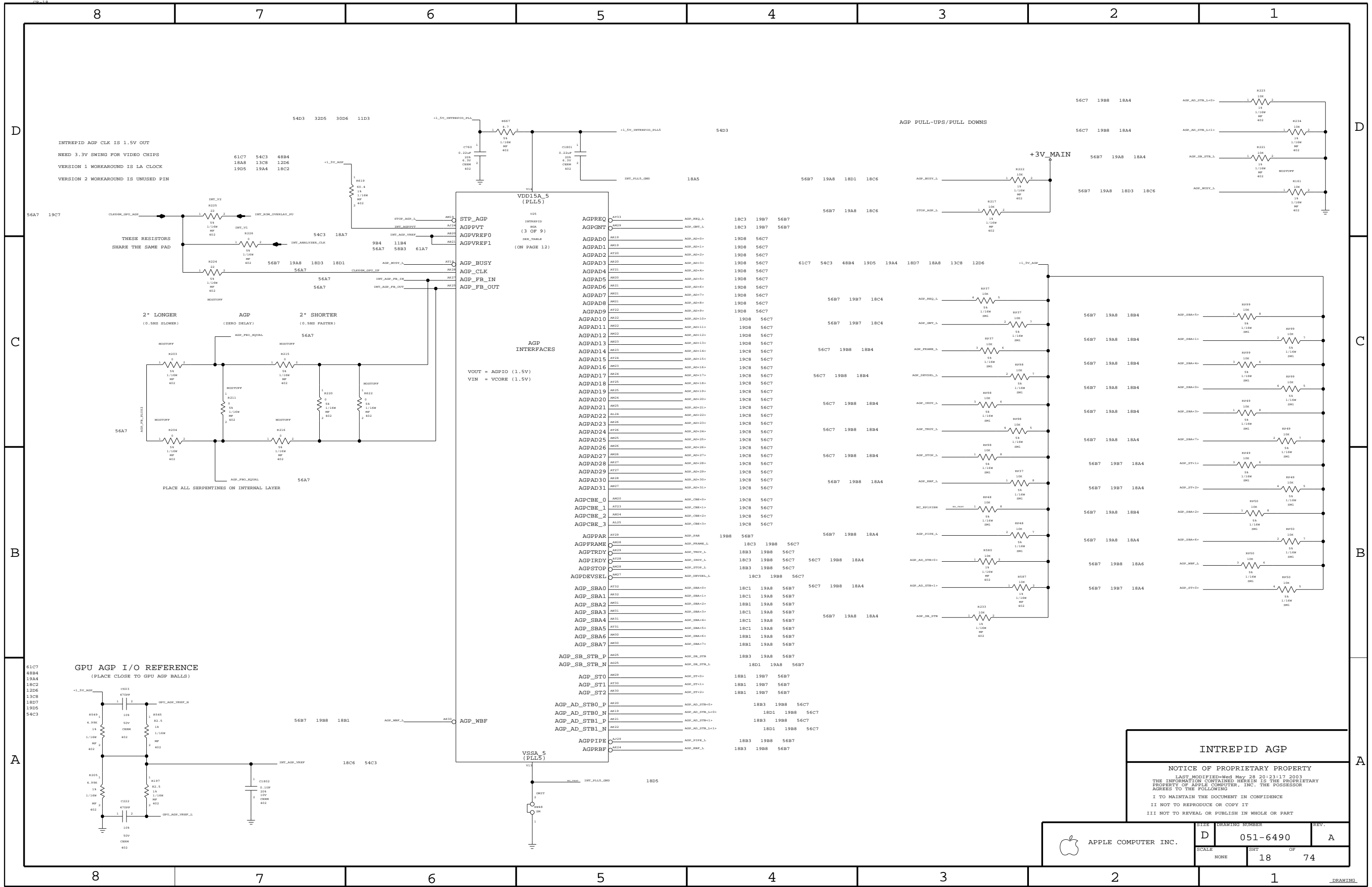
B

B

A

A

DRAWING

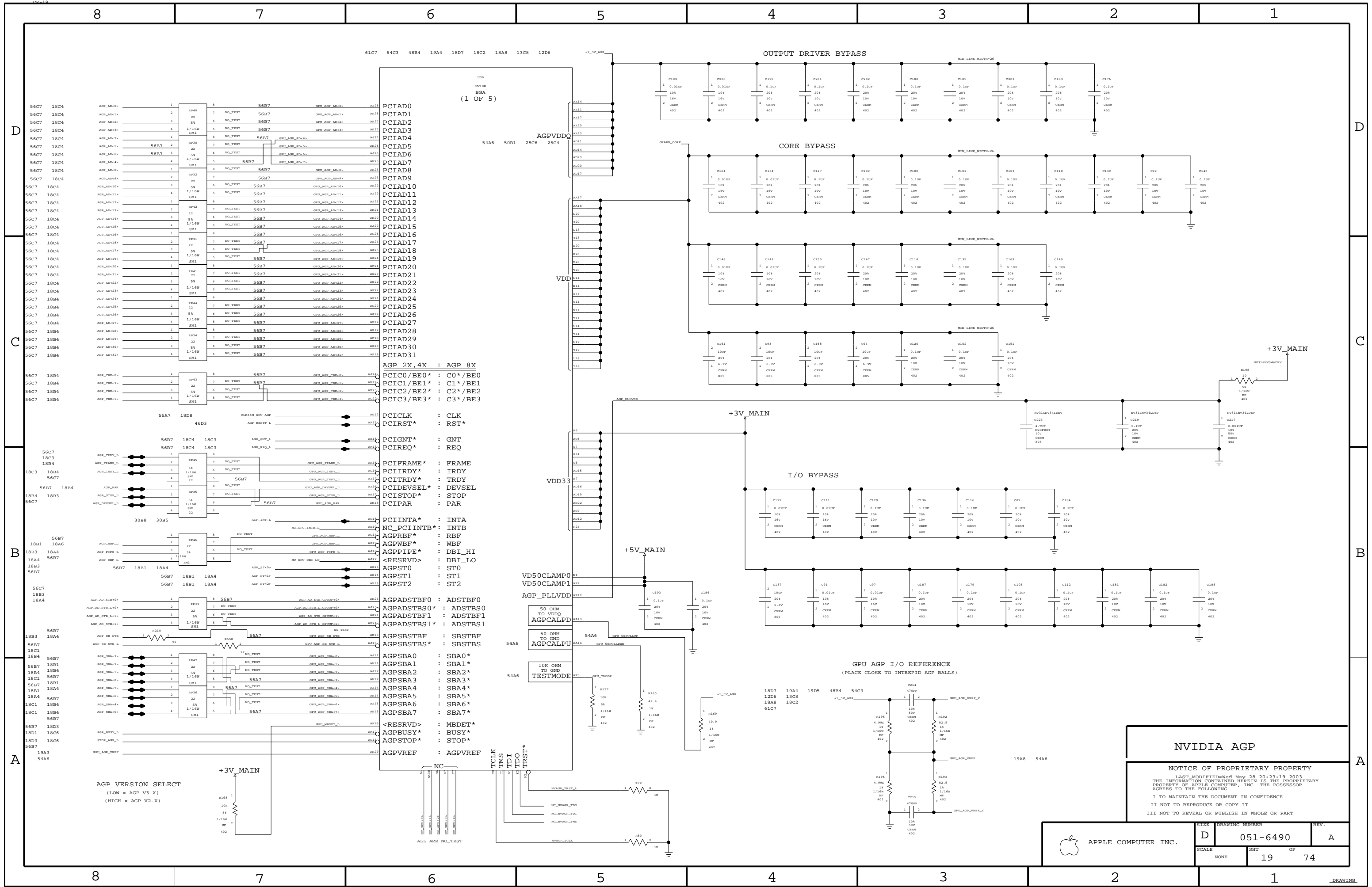


**INTREPID AGP**

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	D 051-6490	A
SCALE	SHT	OF
NONE	18	74



61C7 54C3 48B4 19A4 18D7 18C2 18A8 13C8 12D6

(1 OF 5)  
AGPVDQ0  
54A6 50B1 25C6 25C4

56C7 18C4	AGP_AD0*	1	RP40	8	NO_TEST	56B7	GPU_AGP_AD0*	A278	PCIAD0
56C7 18C4	AGP_AD1*	2	22	7	NO_TEST	56B7	GPU_AGP_AD1*	A278	PCIAD1
56C7 18C4	AGP_AD2*	3	5A	6	NO_TEST	56B7	GPU_AGP_AD2*	A277	PCIAD2
56C7 18C4	AGP_AD3*	4	1/16W	5	NO_TEST	56B7	GPU_AGP_AD3*	A277	PCIAD3
56C7 18C4	AGP_AD4*	1	SM1	8	NO_TEST	56B7	GPU_AGP_AD4*	A277	PCIAD4
56C7 18C4	AGP_AD5*	2	RP30	7	NO_TEST	56B7	GPU_AGP_AD5*	A276	PCIAD5
56C7 18C4	AGP_AD6*	3	22	6	NO_TEST	56B7	GPU_AGP_AD6*	A276	PCIAD6
56C7 18C4	AGP_AD7*	4	1/16W	5	NO_TEST	56B7	GPU_AGP_AD7*	A275	PCIAD7
56C7 18C4	AGP_AD8*	1	SM1	8	NO_TEST	56B7	GPU_AGP_AD8*	A275	PCIAD8
56C7 18C4	AGP_AD9*	2	RP32	7	NO_TEST	56B7	GPU_AGP_AD9*	A273	PCIAD9
56C7 18C4	AGP_AD10*	3	5A	6	NO_TEST	56B7	GPU_AGP_AD10*	A272	PCIAD10
56C7 18C4	AGP_AD11*	4	1/16W	5	NO_TEST	56B7	GPU_AGP_AD11*	A272	PCIAD11
56C7 18C4	AGP_AD12*	1	RP42	8	NO_TEST	56B7	GPU_AGP_AD12*	A271	PCIAD12
56C7 18C4	AGP_AD13*	2	22	7	NO_TEST	56B7	GPU_AGP_AD13*	A271	PCIAD13
56C7 18C4	AGP_AD14*	3	5A	6	NO_TEST	56B7	GPU_AGP_AD14*	A270	PCIAD14
56C7 18C4	AGP_AD15*	4	1/16W	5	NO_TEST	56B7	GPU_AGP_AD15*	A270	PCIAD15
56C7 18C4	AGP_AD16*	1	SM1	8	NO_TEST	56B7	GPU_AGP_AD16*	A266	PCIAD16
56C7 18C4	AGP_AD17*	2	RP31	7	NO_TEST	56B7	GPU_AGP_AD17*	A274	PCIAD17
56C7 18C4	AGP_AD18*	3	22	6	NO_TEST	56B7	GPU_AGP_AD18*	A273	PCIAD18
56C7 18C4	AGP_AD19*	4	1/16W	5	NO_TEST	56B7	GPU_AGP_AD19*	A274	PCIAD19
56C7 18C4	AGP_AD20*	1	SM1	8	NO_TEST	56B7	GPU_AGP_AD20*	A274	PCIAD20
56C7 18C4	AGP_AD21*	2	RP41	7	NO_TEST	56B7	GPU_AGP_AD21*	A273	PCIAD21
56C7 18C4	AGP_AD22*	3	22	6	NO_TEST	56B7	GPU_AGP_AD22*	A272	PCIAD22
56C7 18C4	AGP_AD23*	4	1/16W	5	NO_TEST	56B7	GPU_AGP_AD23*	A272	PCIAD23
56C7 18B4	AGP_AD24*	1	SM1	8	NO_TEST	56B7	GPU_AGP_AD24*	A271	PCIAD24
56C7 18B4	AGP_AD25*	2	RP44	7	NO_TEST	56B7	GPU_AGP_AD25*	A270	PCIAD25
56C7 18B4	AGP_AD26*	3	22	6	NO_TEST	56B7	GPU_AGP_AD26*	A269	PCIAD26
56C7 18B4	AGP_AD27*	4	1/16W	5	NO_TEST	56B7	GPU_AGP_AD27*	A269	PCIAD27
56C7 18B4	AGP_AD28*	1	SM1	8	NO_TEST	56B7	GPU_AGP_AD28*	A269	PCIAD28
56C7 18B4	AGP_AD29*	2	RP34	7	NO_TEST	56B7	GPU_AGP_AD29*	A268	PCIAD29
56C7 18B4	AGP_AD30*	3	22	6	NO_TEST	56B7	GPU_AGP_AD30*	A268	PCIAD30
56C7 18B4	AGP_AD31*	4	1/16W	5	NO_TEST	56B7	GPU_AGP_AD31*	A267	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

PCINTA\* : INTA  
 NC\_PCINTB\* : INTB  
 AGPRBF\* : RBF  
 AGPWF\* : WBF  
 AGPPPE\* : 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\*

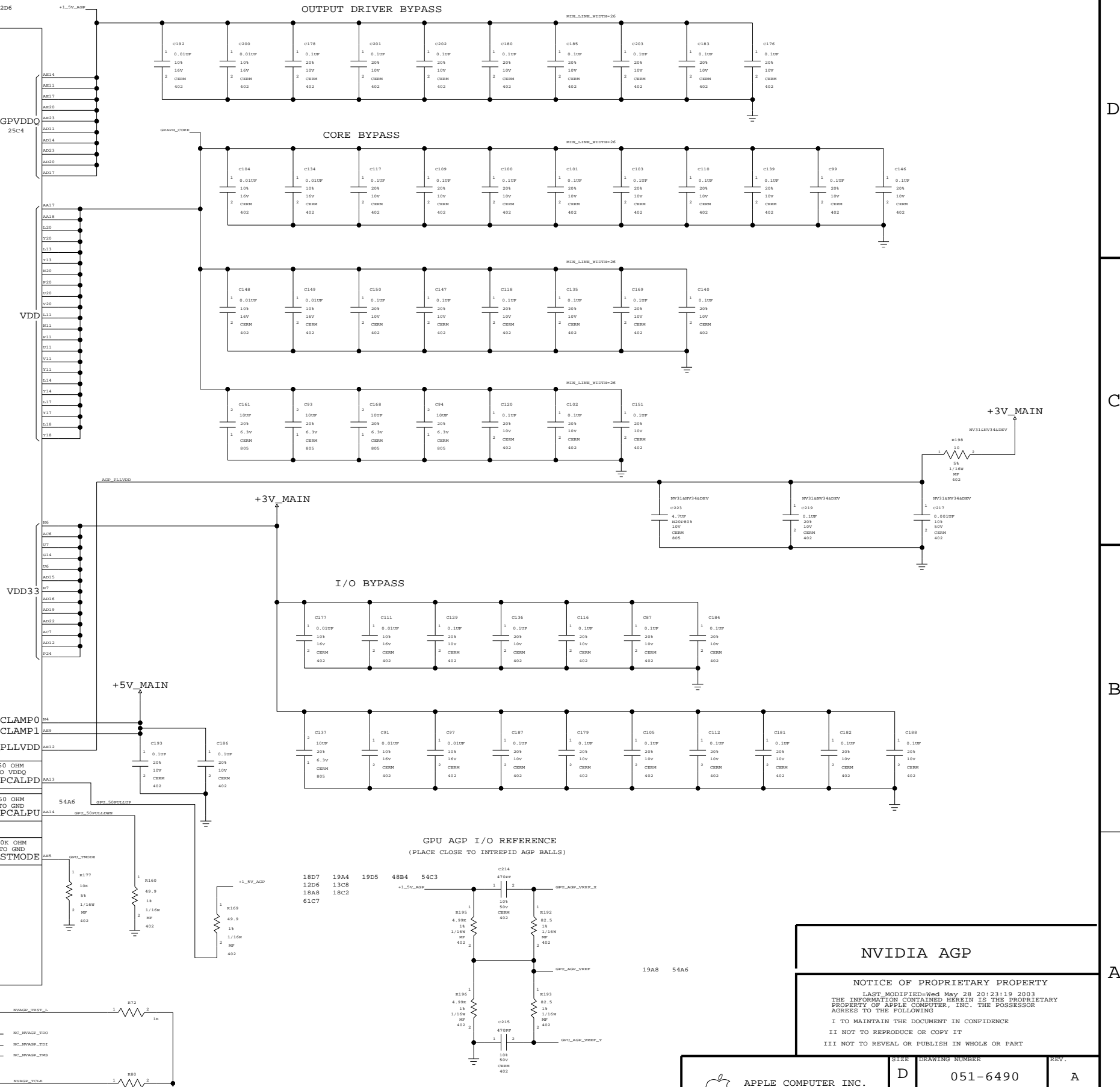
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 AGPBUSY\* : BUSY\*  
 AGPSTOP\* : STOP\*  
 AGPVREF : AGPVREF

NC  
 TCLK  
 TNS  
 TDI  
 TDO  
 TRST\*

56C7 18C3 18B4	AGP_TRDY_L	1	RP45	8	NO_TEST	56B7	GPU_AGP_TRDY_L	A274	PCIAD10
56C7 18C3 18B4	AGP_TRDY_L	2	5A	6	NO_TEST	56B7	GPU_AGP_TRDY_L	A274	PCIAD11
56C7 18C3 18B4	AGP_TRDY_L	3	1/16W	5	NO_TEST	56B7	GPU_AGP_TRDY_L	A274	PCIAD12
56C7 18C3 18B4	AGP_TRDY_L	4	SM1	8	NO_TEST	56B7	GPU_AGP_TRDY_L	A274	PCIAD13
18B4 18B3 56C7	AGP_PAR	1	RP35	7	NO_TEST	56B7	GPU_AGP_PAR	A273	PCIAD14
18B4 18B3 56C7	AGP_PAR	2	22	6	NO_TEST	56B7	GPU_AGP_PAR	A273	PCIAD15
18B4 18B3 56C7	AGP_PAR	3	1/16W	5	NO_TEST	56B7	GPU_AGP_PAR	A273	PCIAD16
18B4 18B3 56C7	AGP_PAR	4	SM1	8	NO_TEST	56B7	GPU_AGP_PAR	A273	PCIAD17
18B3 18A4 56B7	AGP_PAR	1	RP46	7	NO_TEST	56B7	GPU_AGP_PAR	A272	PCIAD18
18B3 18A4 56B7	AGP_PAR	2	22	6	NO_TEST	56B7	GPU_AGP_PAR	A272	PCIAD19
18B3 18A4 56B7	AGP_PAR	3	1/16W	5	NO_TEST	56B7	GPU_AGP_PAR	A272	PCIAD20
18B3 18A4 56B7	AGP_PAR	4	SM1	8	NO_TEST	56B7	GPU_AGP_PAR	A272	PCIAD21
18B3 18A4 56B7	AGP_PAR	1	RP47	7	NO_TEST	56B7	GPU_AGP_PAR	A271	PCIAD22
18B3 18A4 56B7	AGP_PAR	2	22	6	NO_TEST	56B7	GPU_AGP_PAR	A271	PCIAD23
18B3 18A4 56B7	AGP_PAR	3	1/16W	5	NO_TEST	56B7	GPU_AGP_PAR	A271	PCIAD24
18B3 18A4 56B7	AGP_PAR	4	SM1	8	NO_TEST	56B7	GPU_AGP_PAR	A271	PCIAD25
18B3 18A4 56B7	AGP_PAR	1	RP36	7	NO_TEST	56B7	GPU_AGP_PAR	A270	PCIAD26
18B3 18A4 56B7	AGP_PAR	2	22	6	NO_TEST	56B7	GPU_AGP_PAR	A270	PCIAD27
18B3 18A4 56B7	AGP_PAR	3	1/16W	5	NO_TEST	56B7	GPU_AGP_PAR	A270	PCIAD28
18B3 18A4 56B7	AGP_PAR	4	SM1	8	NO_TEST	56B7	GPU_AGP_PAR	A270	PCIAD29
18B3 18A4 56B7	AGP_PAR	1	RP37	7	NO_TEST	56B7	GPU_AGP_PAR	A269	PCIAD30
18B3 18A4 56B7	AGP_PAR	2	22	6	NO_TEST	56B7	GPU_AGP_PAR	A269	PCIAD31
18B3 18A4 56B7	AGP_PAR	3	1/16W	5	NO_TEST	56B7	GPU_AGP_PAR	A269	PCIAD32
18B3 18A4 56B7	AGP_PAR	4	SM1	8	NO_TEST	56B7	GPU_AGP_PAR	A269	PCIAD33

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

19A3 54A6	AGP_VREF	1	R168	10K	HP	2	AGP_VREF	A229	AGPVREF
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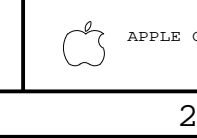


**NVIDIA AGP**

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SCALE	SHEET	OF
19	74	



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PLACE R'S BETWEEN GPU & MEMORY

PLACE R'S CLOSE TO GPU

D

D

C

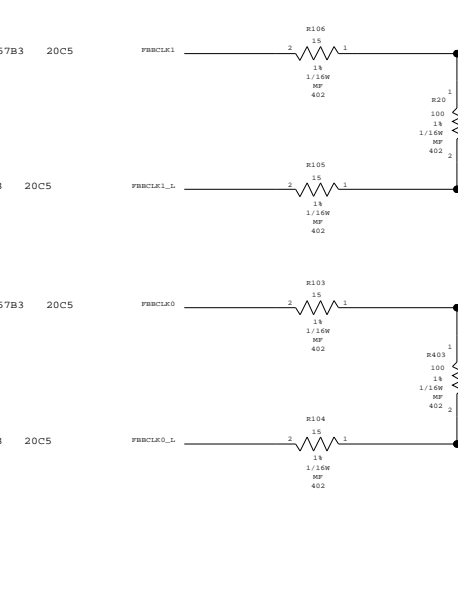
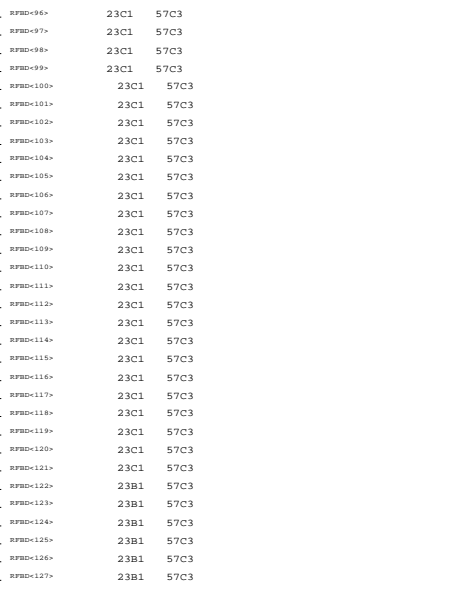
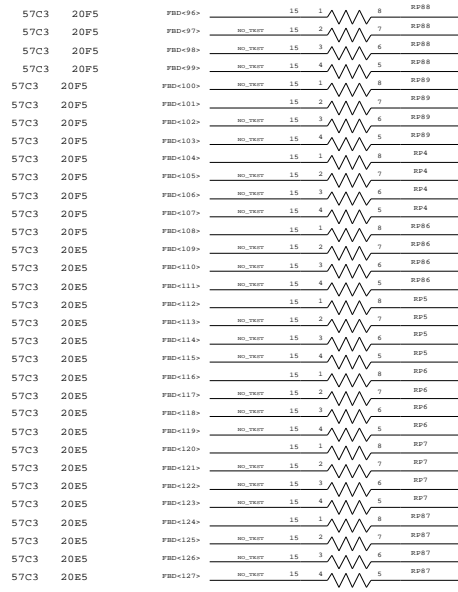
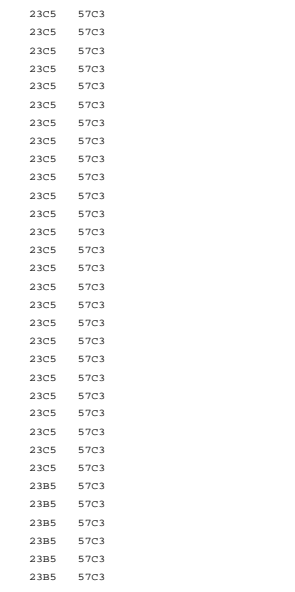
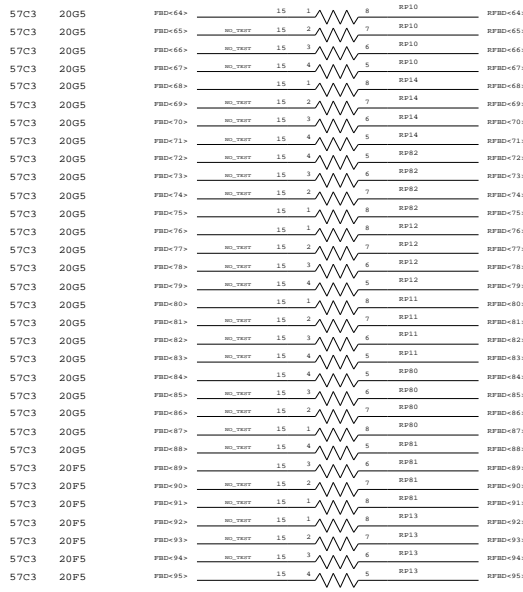
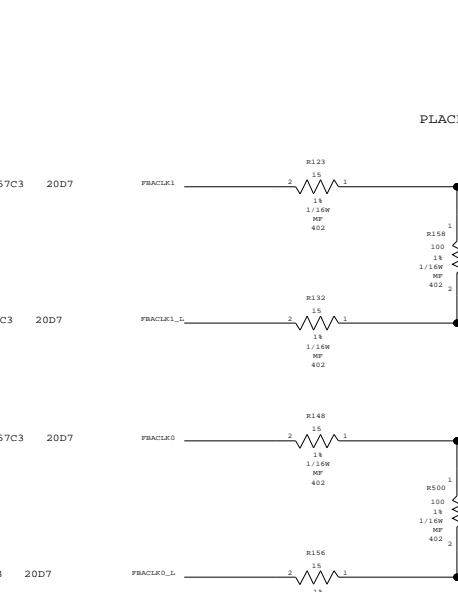
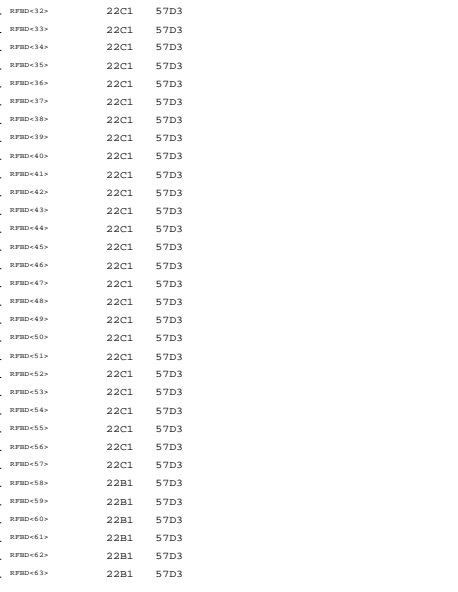
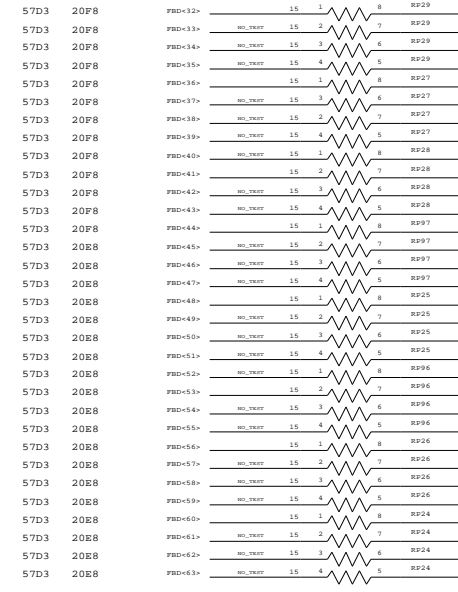
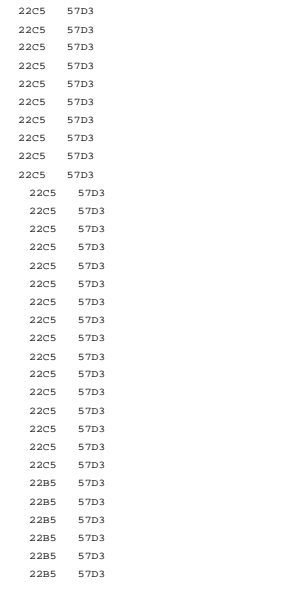
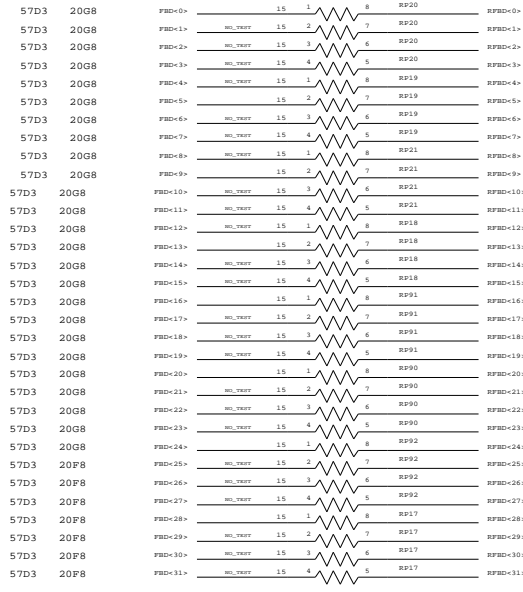
C

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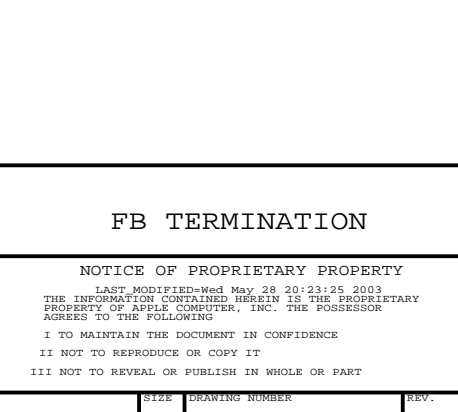
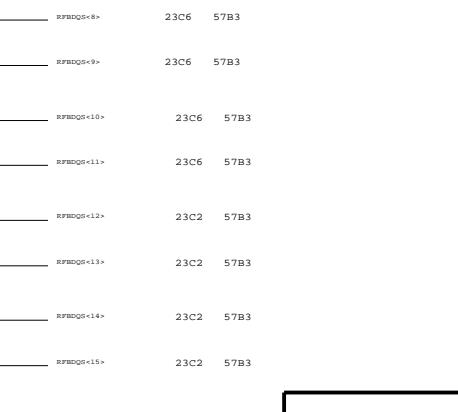
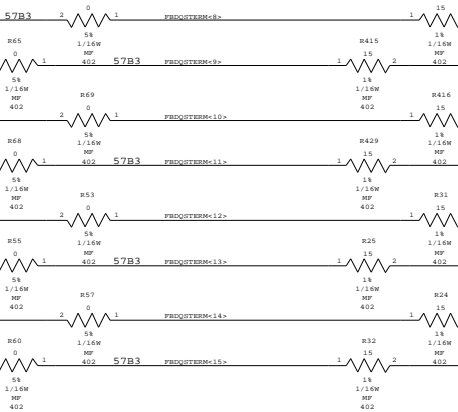
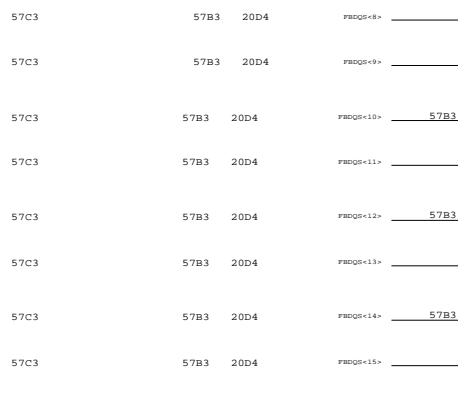
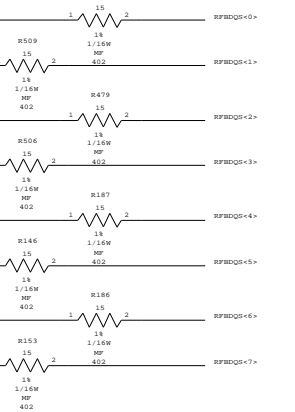
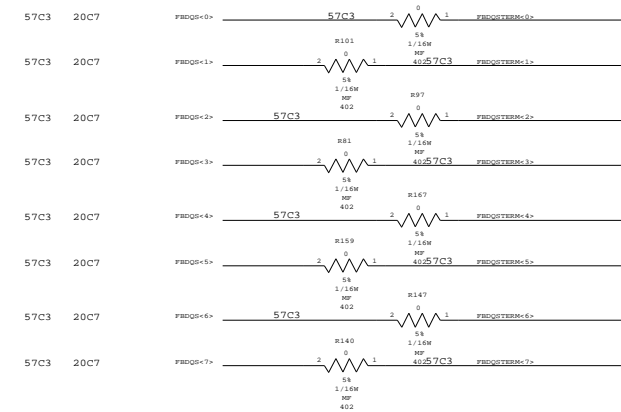


PLACE THESE R CLOSE TO GPU

PLACE THESE R CLOSE TO SGRAM

PLACE THESE R CLOSE TO GPU

PLACE THESE R CLOSE TO SGRAM



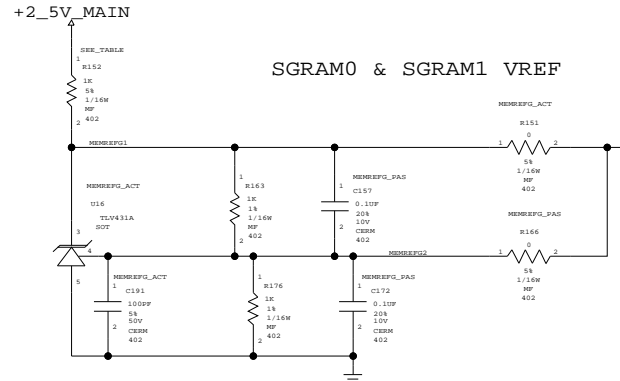
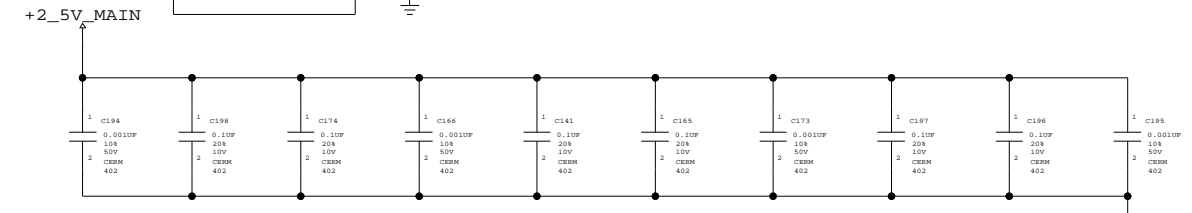
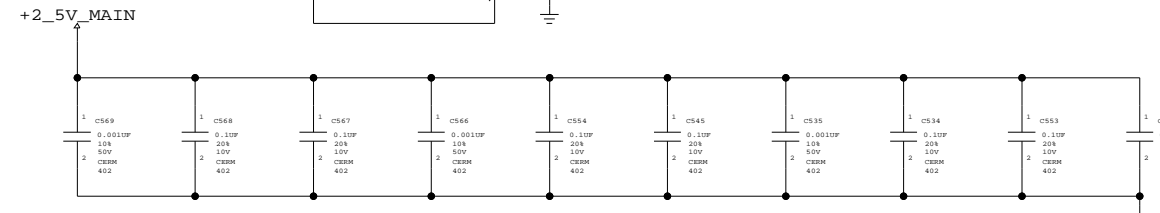
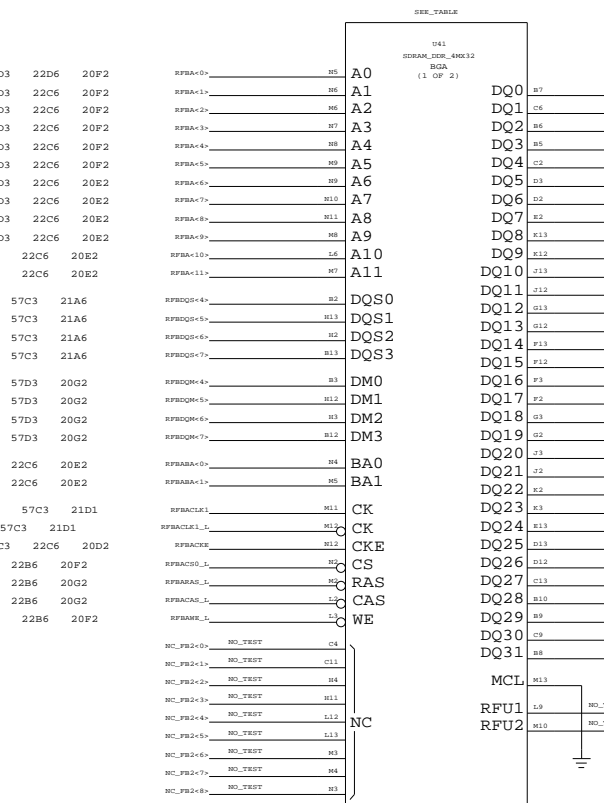
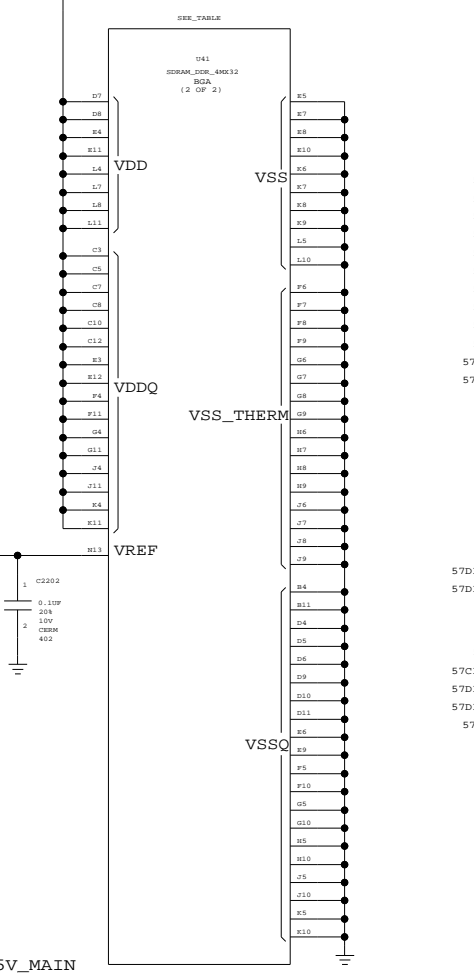
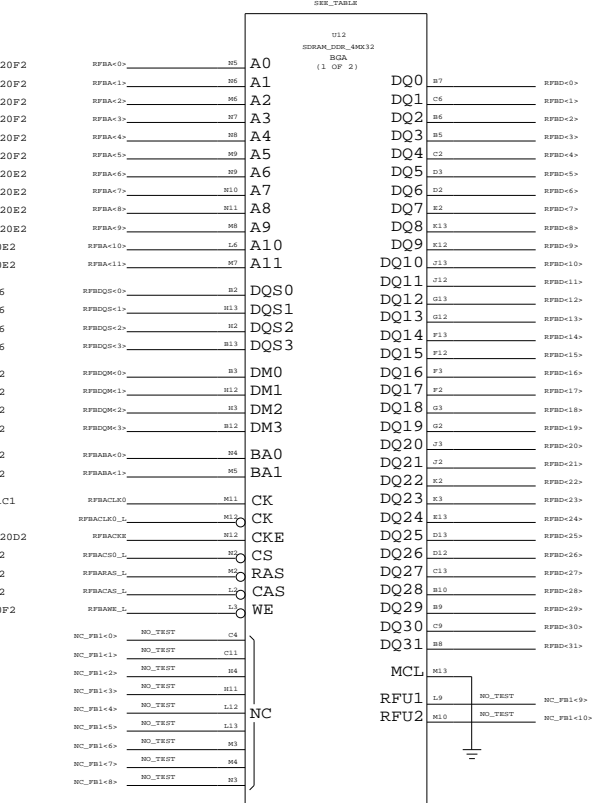
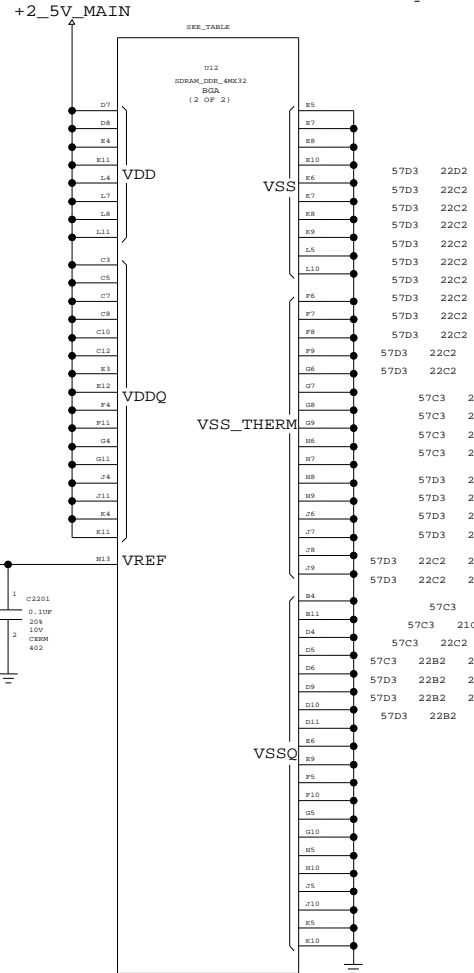
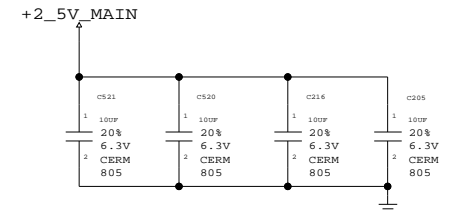
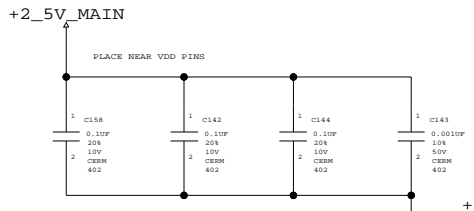
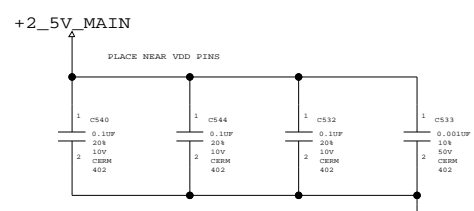
**F'B TERMINATION**

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SCALE	NONE	SHT	21	OF	74



SGRAM0 & SGRAM1 MEMORY SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
333S0249	2	SDRAM, 4MX32, DDR, 275MHZ	U12, U41	CRITICAL	275_SAMSUNG
333S0250	2	SDRAM, 4MX32, DDR, 275MHZ	U12, U41	CRITICAL	275_HYNIX

SGRAM0 & SGRAM1 DDR MEMORY REFERENCE SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
116S1103	1	RES, 1K-OHM, 5%, 1/16W, 0402	R152		MEMREF0_ACT
116S1000	1	RES, 0-OHM, 5%, 1/16W, 0402	R152		MEMREF0_PAS

**SGRAM0 & SGRAM1**

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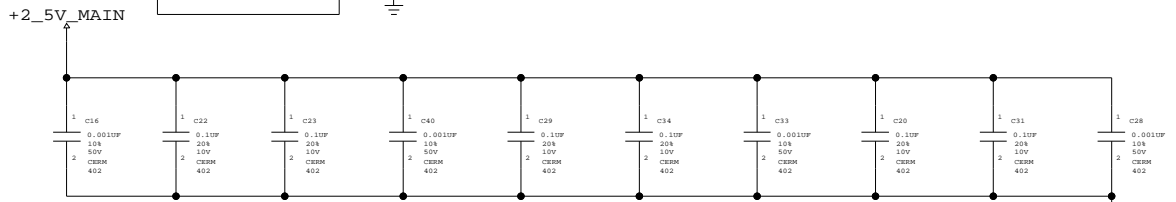
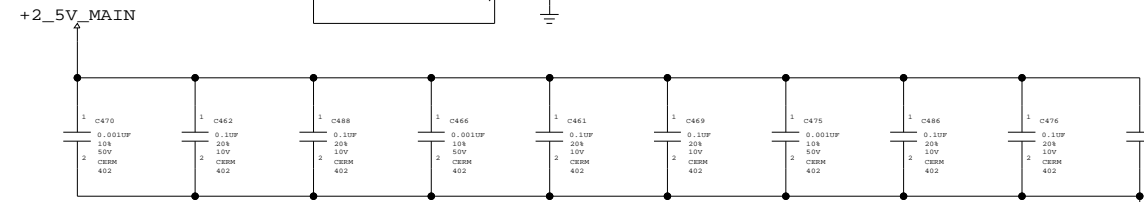
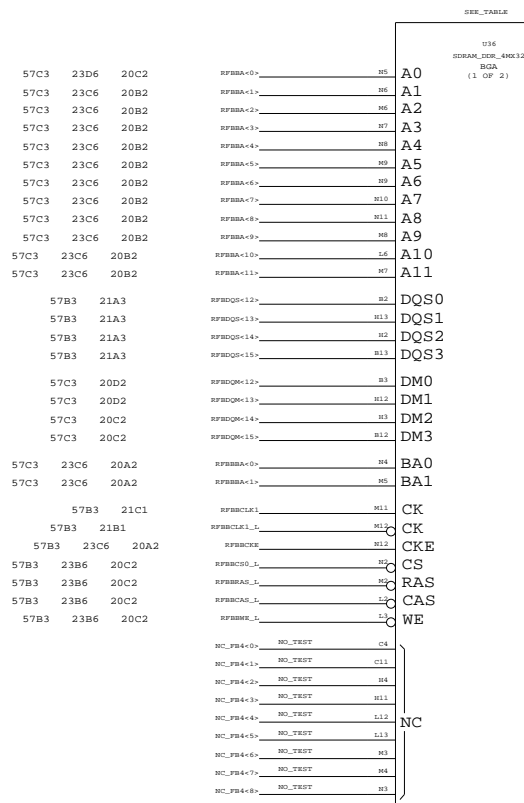
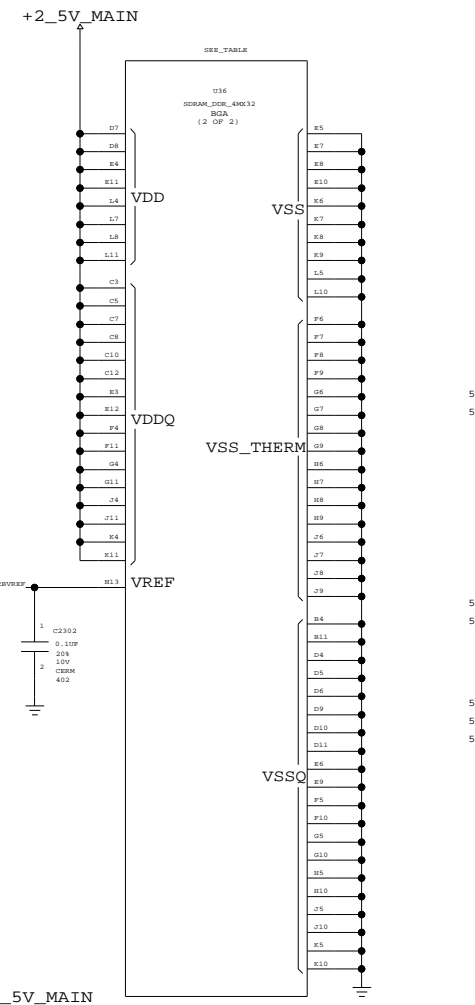
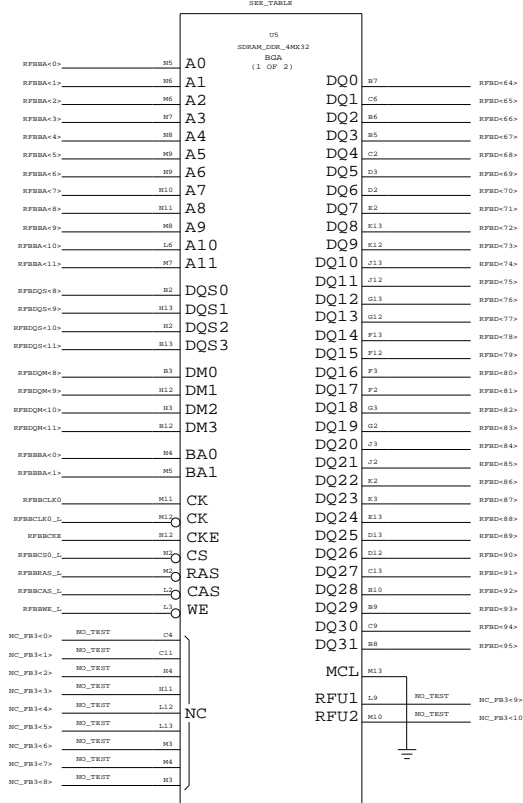
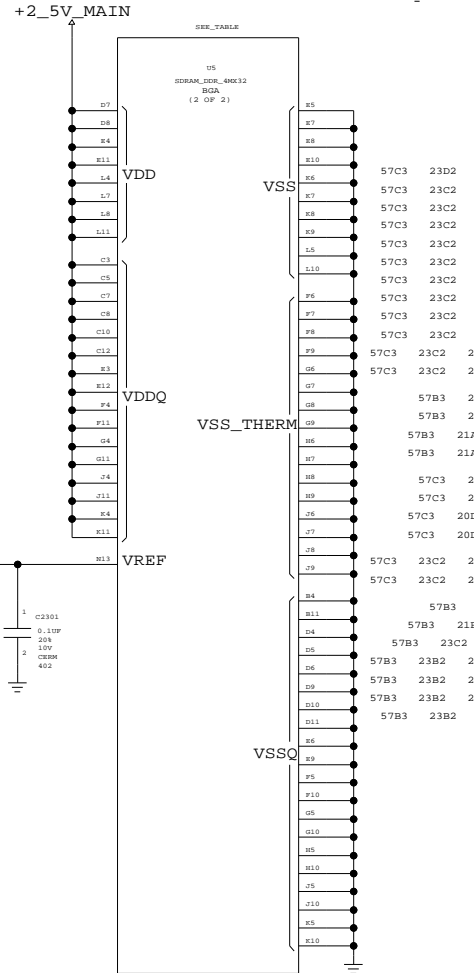
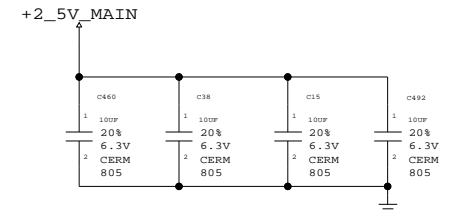
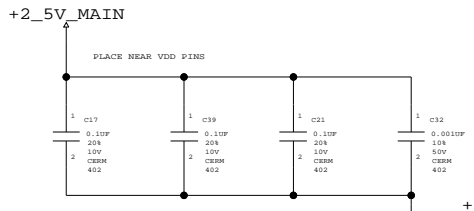
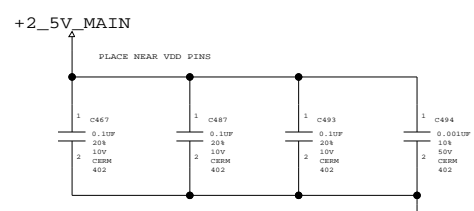
APPLE COMPUTER INC.

SCALE: NONE

SHEET: 22 OF 74

DRAWING NUMBER: 051-6490

REV: A

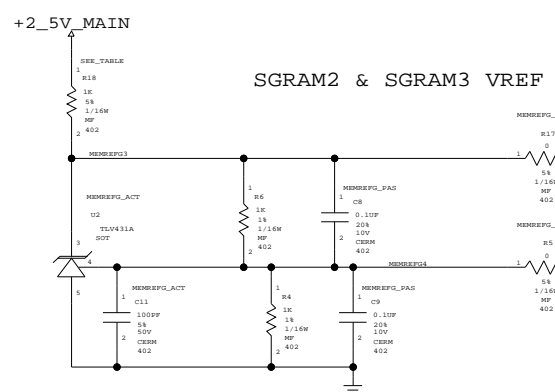


SGRAM0 & SGRAM1 MEMORY SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
333S0249	2	SDRAM, 4MX32, DDR, 275MHZ	US, U36	CRITICAL	275_SAMSUNG
333S0250	2	SDRAM, 4MX32, DDR, 275MHZ	US, U36	CRITICAL	275_HYUNIK

SGRAM2 & SGRAM3 DDR MEMORY REFERENCE SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
116S1103	1	RES, 1K-OHM, 5%, 1/16W, 0402	R18		MEMREFQ_ACT
116S1000	1	RES, 0-OHM, 5%, 1/16W, 0402	R18		MEMREFQ_PAS



**SGRAM2 & SGRAM3**

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APPLE COMPUTER INC.

SCALE: NONE

SHEET: 23 OF 74

DRAWING NUMBER: 051-6490

REV: A

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A

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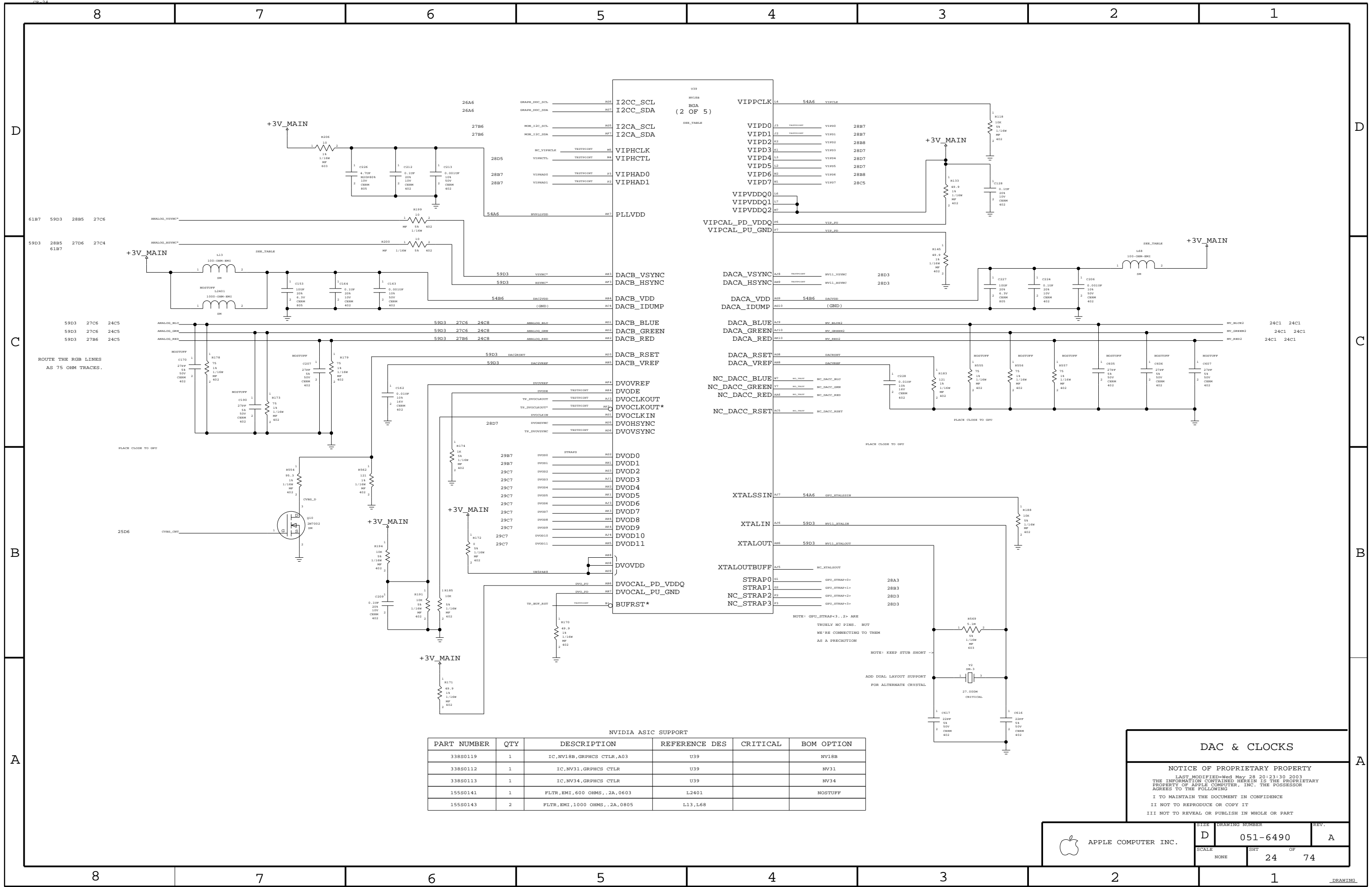
B

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C

D

D



ROUTE THE RGB LINES AS 75 OHM TRACES.

NVIDIA ASIC SUPPORT

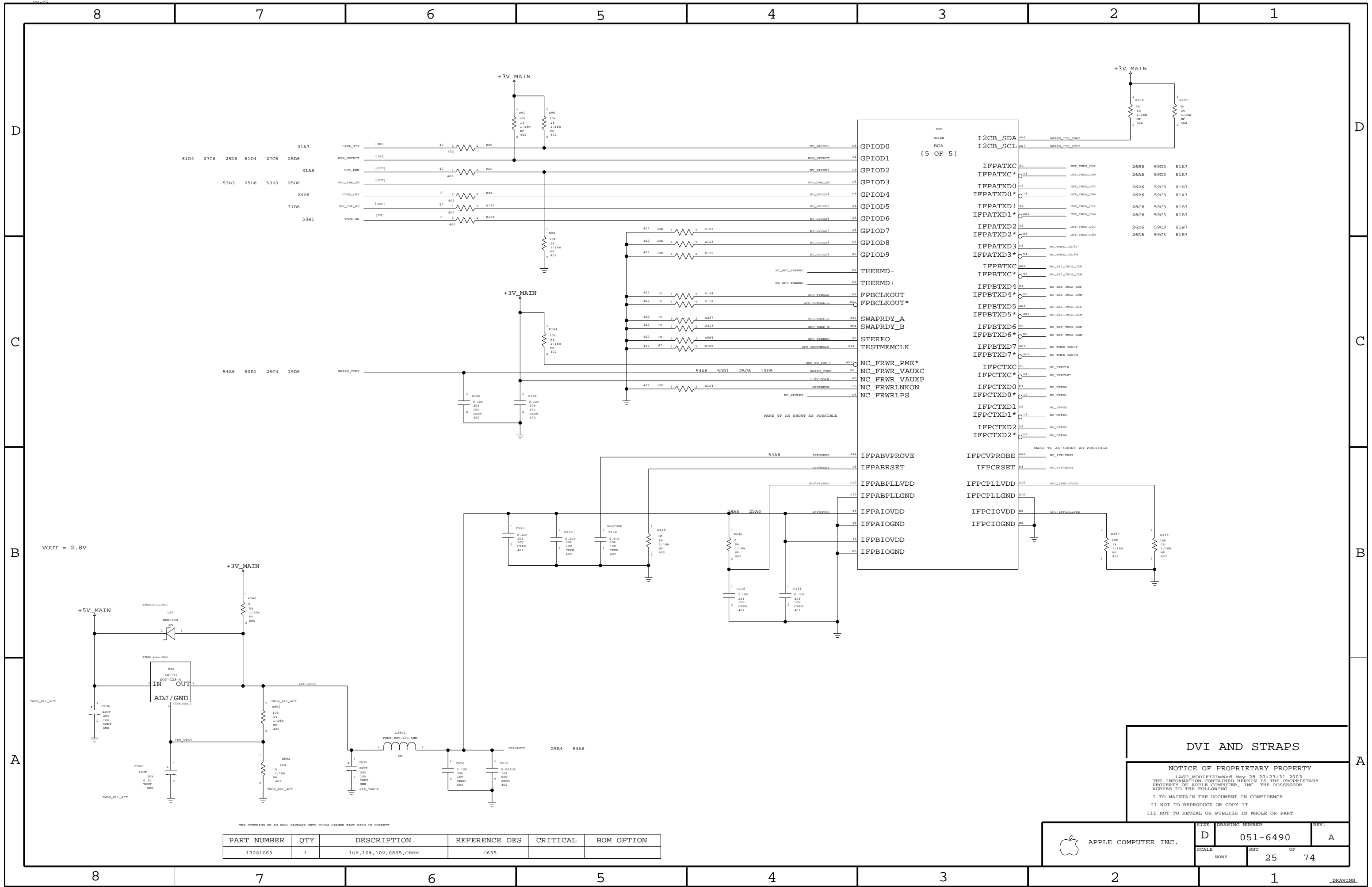
PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
33880119	1	IC,NV18B,GRPHCS CTRLR,A03	U39		NV18B
33880112	1	IC,NV31,GRPHCS CTRLR	U39		NV31
33880113	1	IC,NV34,GRPHCS CTRLR	U39		NV34
15580141	1	FLTR,EMI,600 OHMS,.2A,0603	L2401		NOSTUFF
15580143	2	FLTR,EMI,1000 OHMS,.2A,0805	L13,L68		

**DAC & CLOCKS**

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	SIZE	DRAWING NUMBER	REV.
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SCALE	SHT		OF
NONE	24		74





**DVI AND STRAPS**

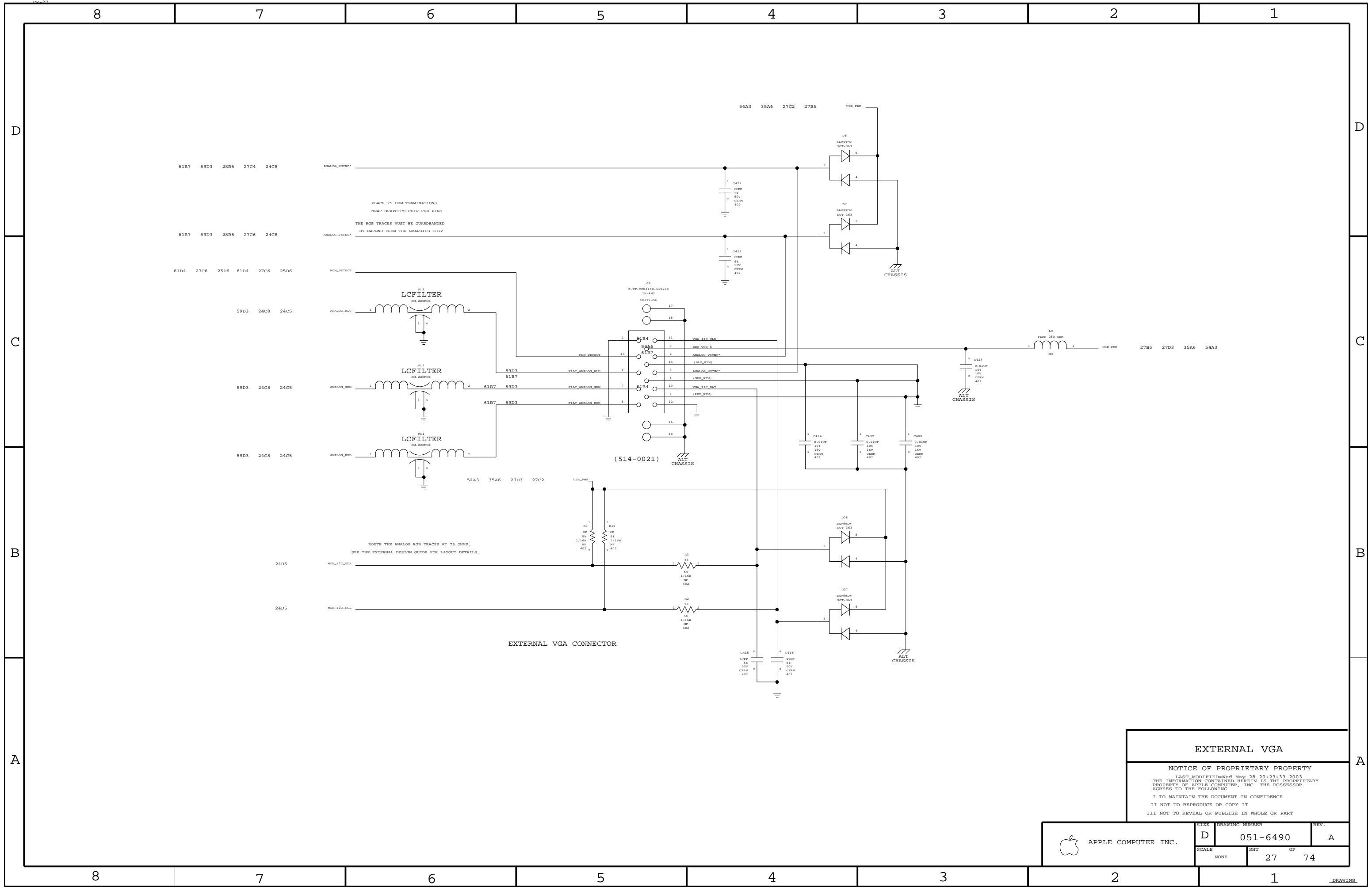
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PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
132S1063	1	1UF,10%,10V,0805,CERM	C635		

 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-6490	A
SCALE	SHT	OF	
NONE	25	74	

THE STUFFING OF AN 0805 PACKAGE ONTO C635 LARGER TANT SMD IS CORRECT





**EXTERNAL VGA**

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	SCALE NONE	SHEET <b>27</b>	OF <b>74</b>

D

C

B

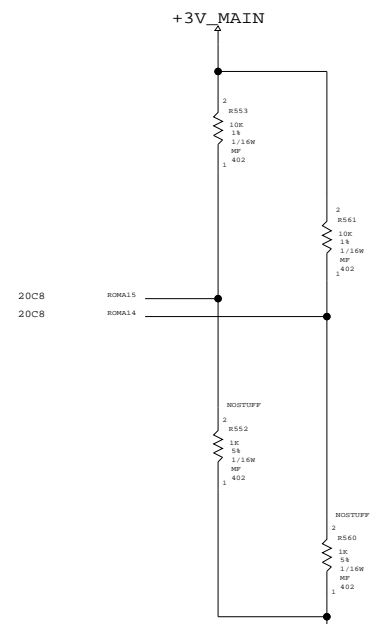
A

D

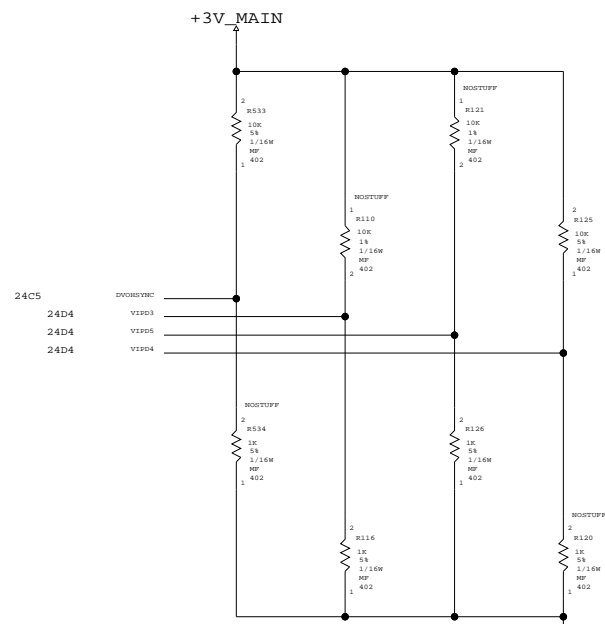
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B

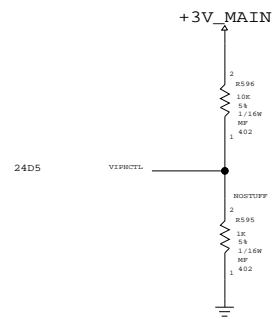
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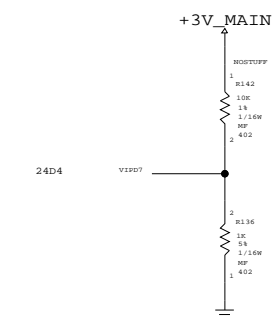
(1) ROM TYPE (OVERRIDDEN IF STRAP1 = 0)  
 [1..0] = [ROMA15,ROMA14]  
 00 = PARALLEL  
 01 = SERIAL AT25F  
 10 = SERIAL SST45VF  
 \* 11 = SERIAL FUTURE



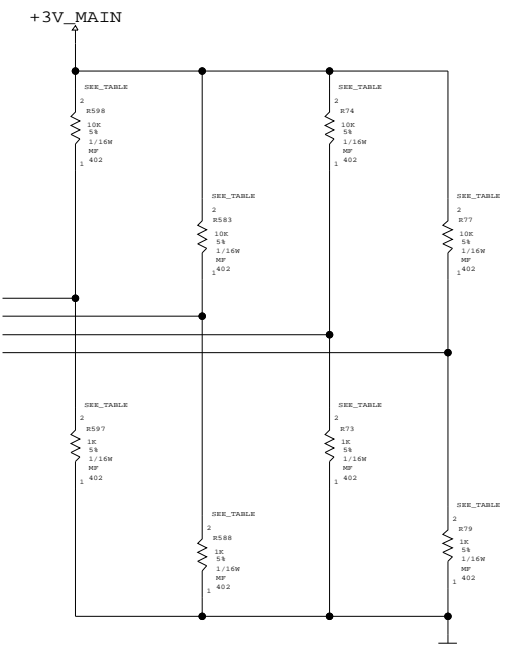
(3) PCI DEVICE ID  
 [3..0] = [DVOHSYNC,VIPD3,VIPD5,VIPD4]  
 0010 = 0X112 GEFORCE2 GO  
 0011 = 0X113 QUADRO2 GO  
 0100 = 0X114 NV17M  
 0000 = 0X110 GEFORCE2GO MX (NV11B)  
 \* 1001 = NV18B,NV31,NV34



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

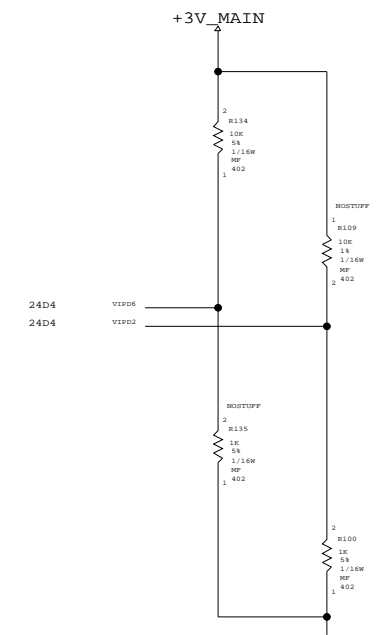


(6) AGP SIDE BAND  
 [0] = [VIPD7]  
 \* 0 = ENABLE AGP SIDE BAND  
 1 = DISABLE AGP SIDE BAND

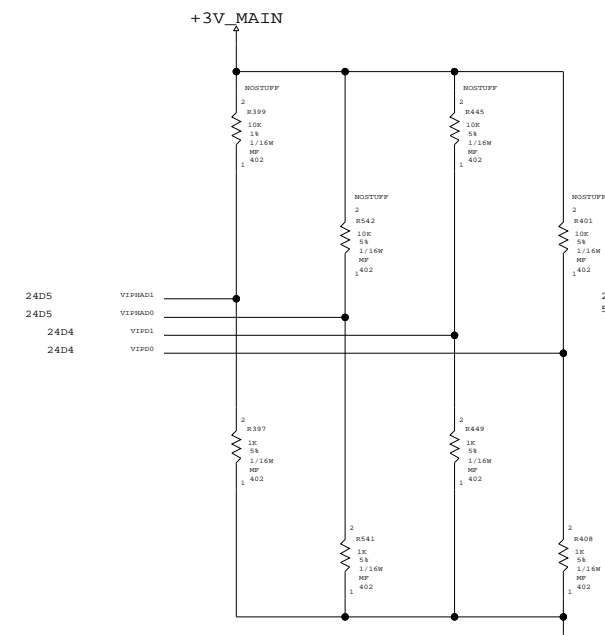


(8) FRAME BUFFER MEMORY TYPE  
 [3..0] = [NV11\_HSYNC,NV11\_VSYNC,GPU\_STRAP<3>,GPU\_STRAP<2>]  
 1111 = 222MHZ  
 1101 = 275MHZ SAMSUNG  
 1100 = 275MHZ HYNIX

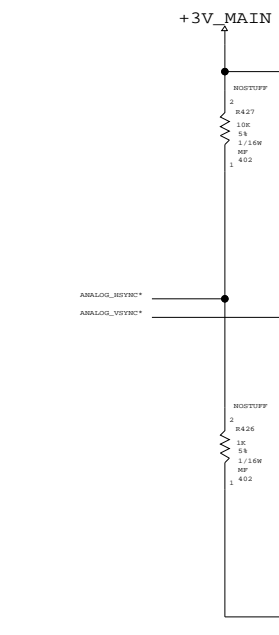
PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
116S1104	3	RES,10KOHM,5%,0402	R598,R583,R77		275_SAMSUNG
116S1103	1	RES,1KOHM,5%,0402	R73		275_SAMSUNG
116S1104	2	RES,10KOHM,5%,0402	R598,R583		275_HYNIX
116S1103	2	RES,1KOHM,5%,0402	R73,R79		275_HYNIX



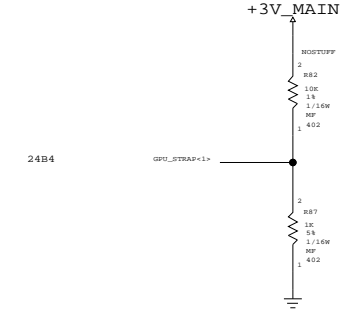
(2) CRYSTAL FREQUENCY SELECT  
 [1..0] = [VIPD6,VIPD2]  
 00 = 13.5MHZ  
 01 = 14.38MHZ  
 \* 10 = 27MHZ  
 11 = [UNDEFINED]



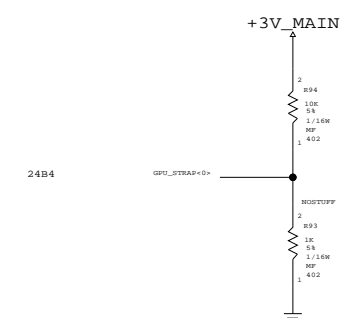
(4) USER DEFINED STRAPS  
 [3..0] = [VIPHAD1,VIPHAD0,VIPD1,VIPD0]  
 THESE BITS ARE UNDEFINED BUT THEY  
 MUST BE KEPT LOW DURING RESET



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



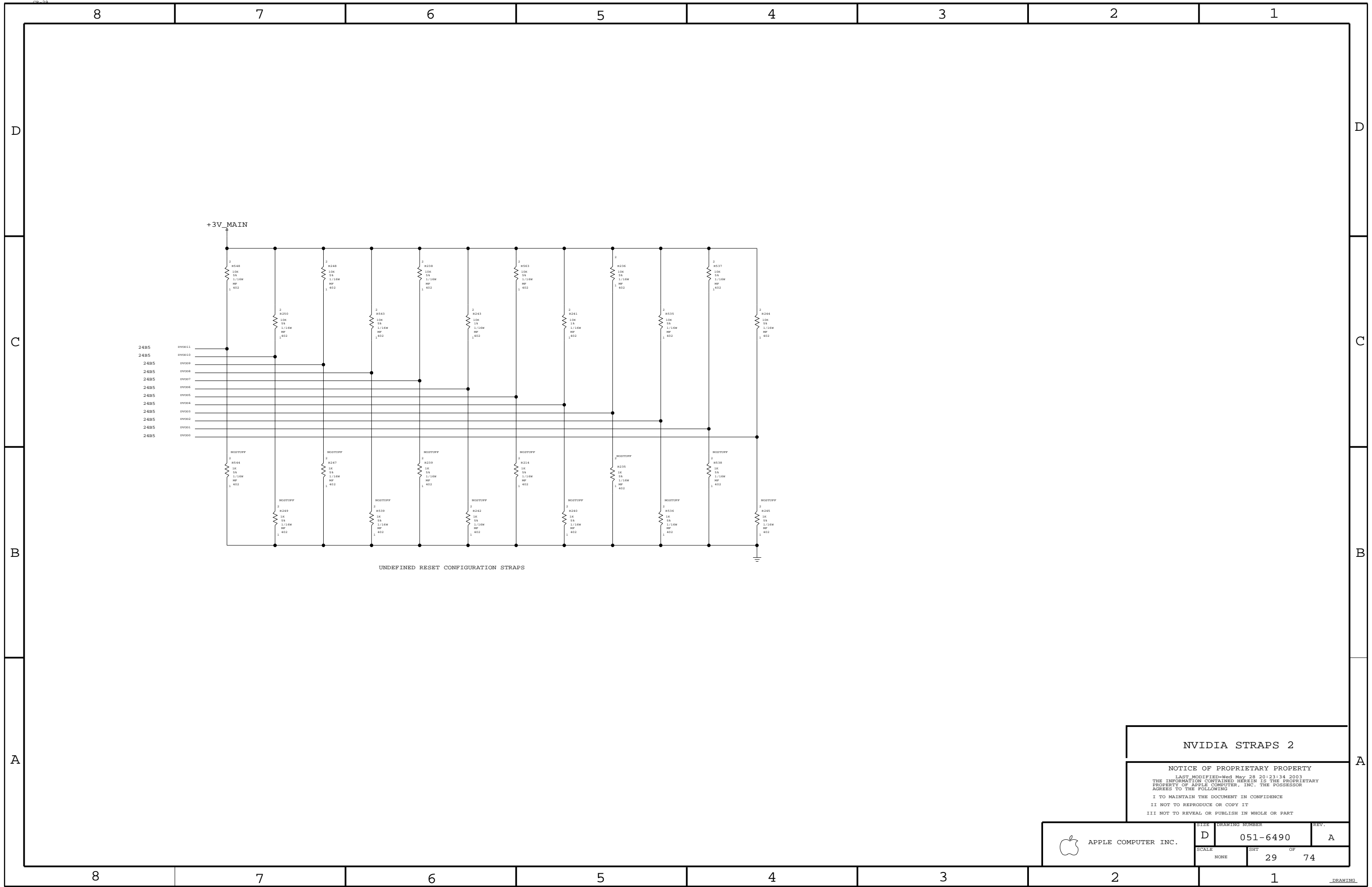
(9) SUB-VENDOR  
 [0] = [GPU\_STRAP<1>]  
 0 = SYSTEM BIOS (VENDOR & SUBSYSTEM ID=0X0000)  
 \* 1 = ADAPTER CARD VGA BIOS (VENDOR & SUBSYSTEM ID=0X54-0X57)



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


**NVIDIA STRAPS 1**  
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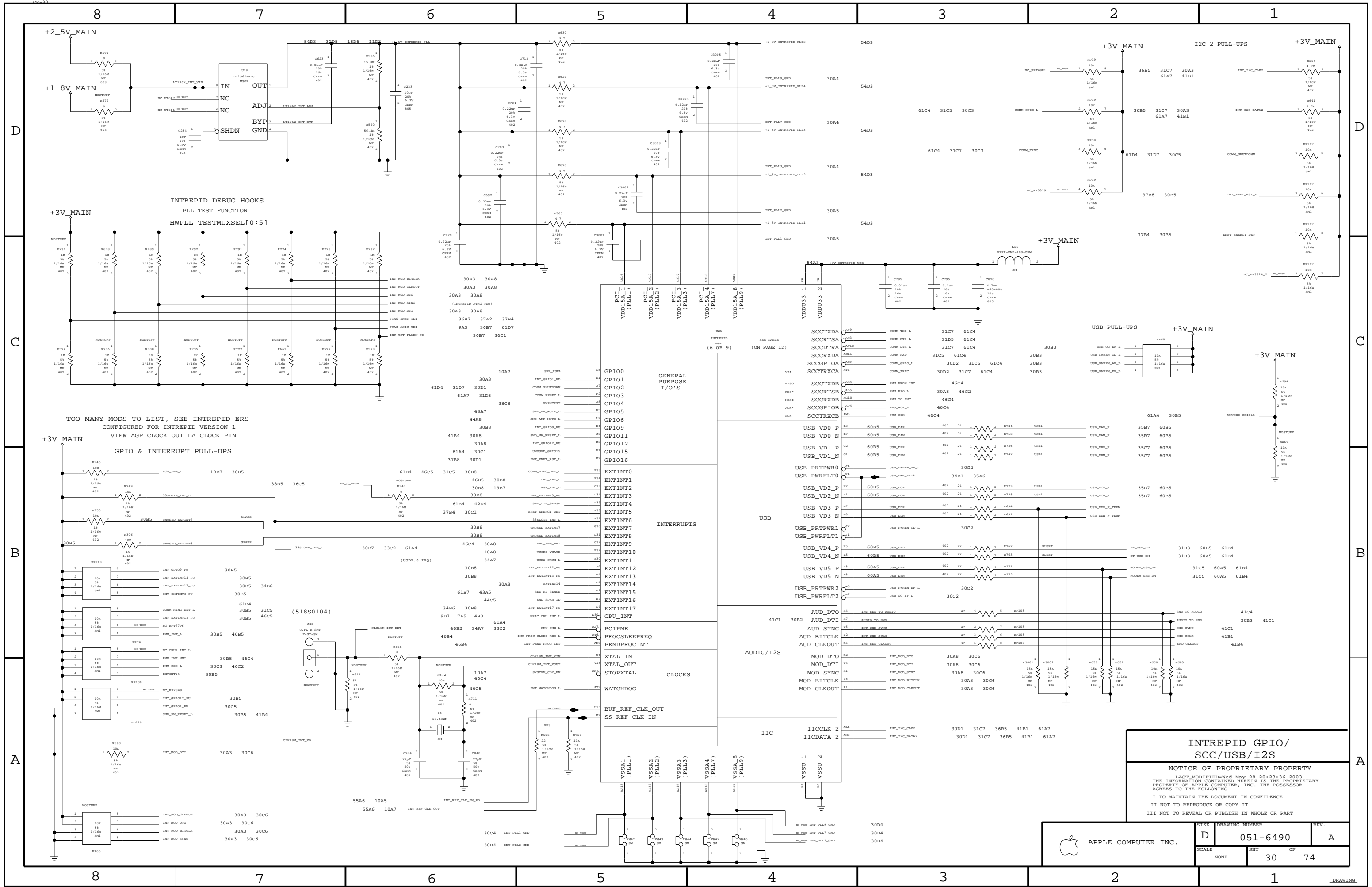
APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
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SCALE	SHT	OF	
NONE	28	74	



NVIDIA STRAPS 2

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	SCALE NONE	SHT 29	OF 74

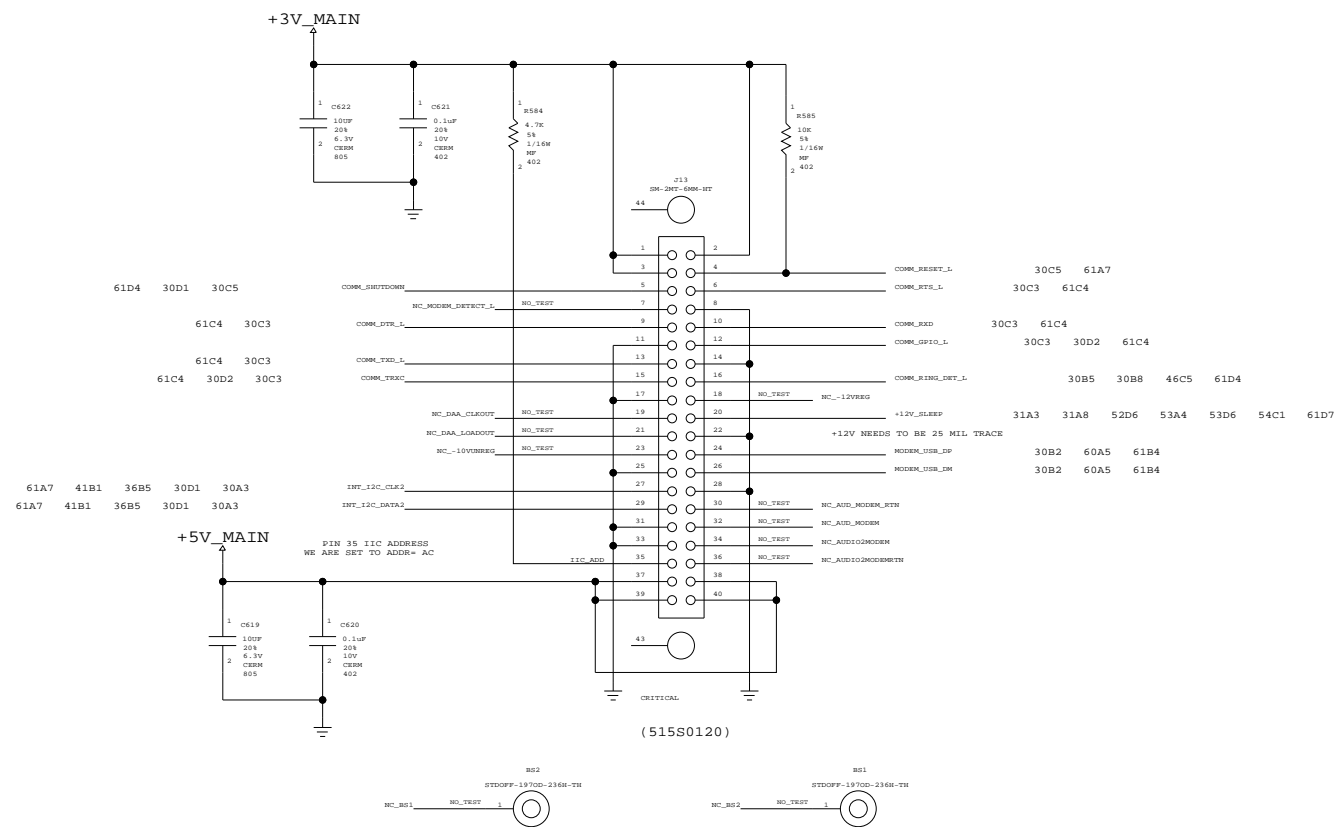


**INTREPID GPIO/  
SCC/USB/I2S**

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			051-6490	A
SCALE		SHEET		OF
NONE		30		74

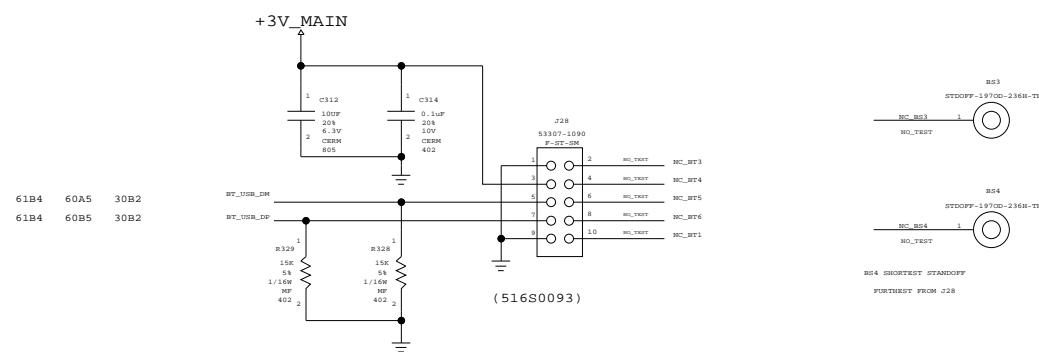
MODEM BOARD CONNECTOR  
(DASH II)



MODEM STANDOFF SUPPORT

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

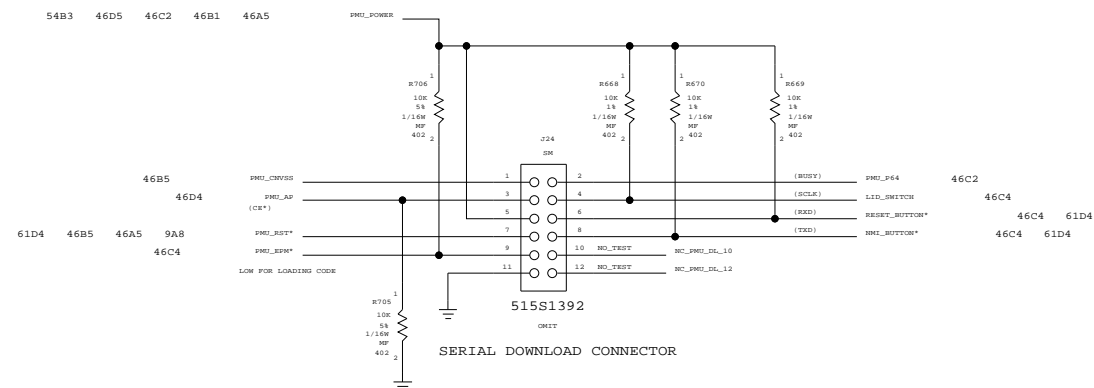
BLUETOOTH CONNECTOR



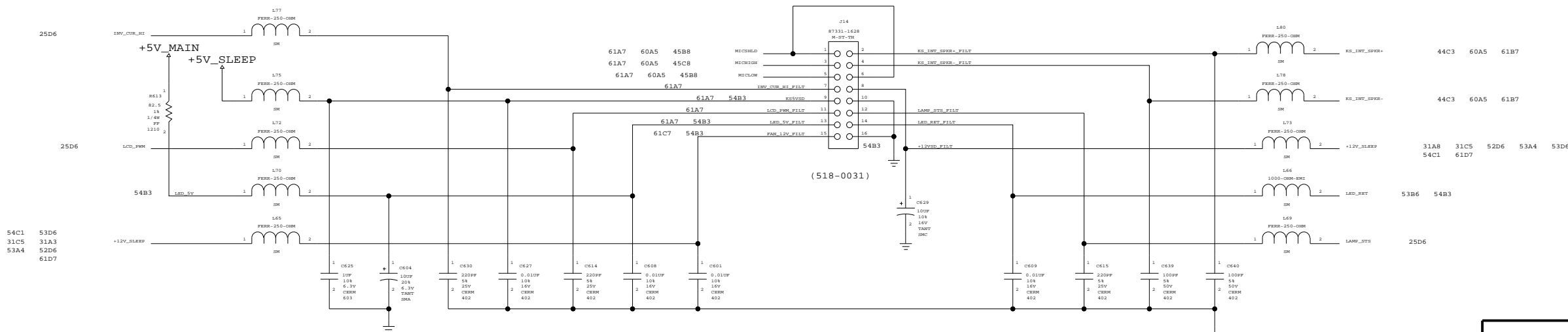
BLUETOOTH CARD MOUNTING HARDWARE SUPPORT

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



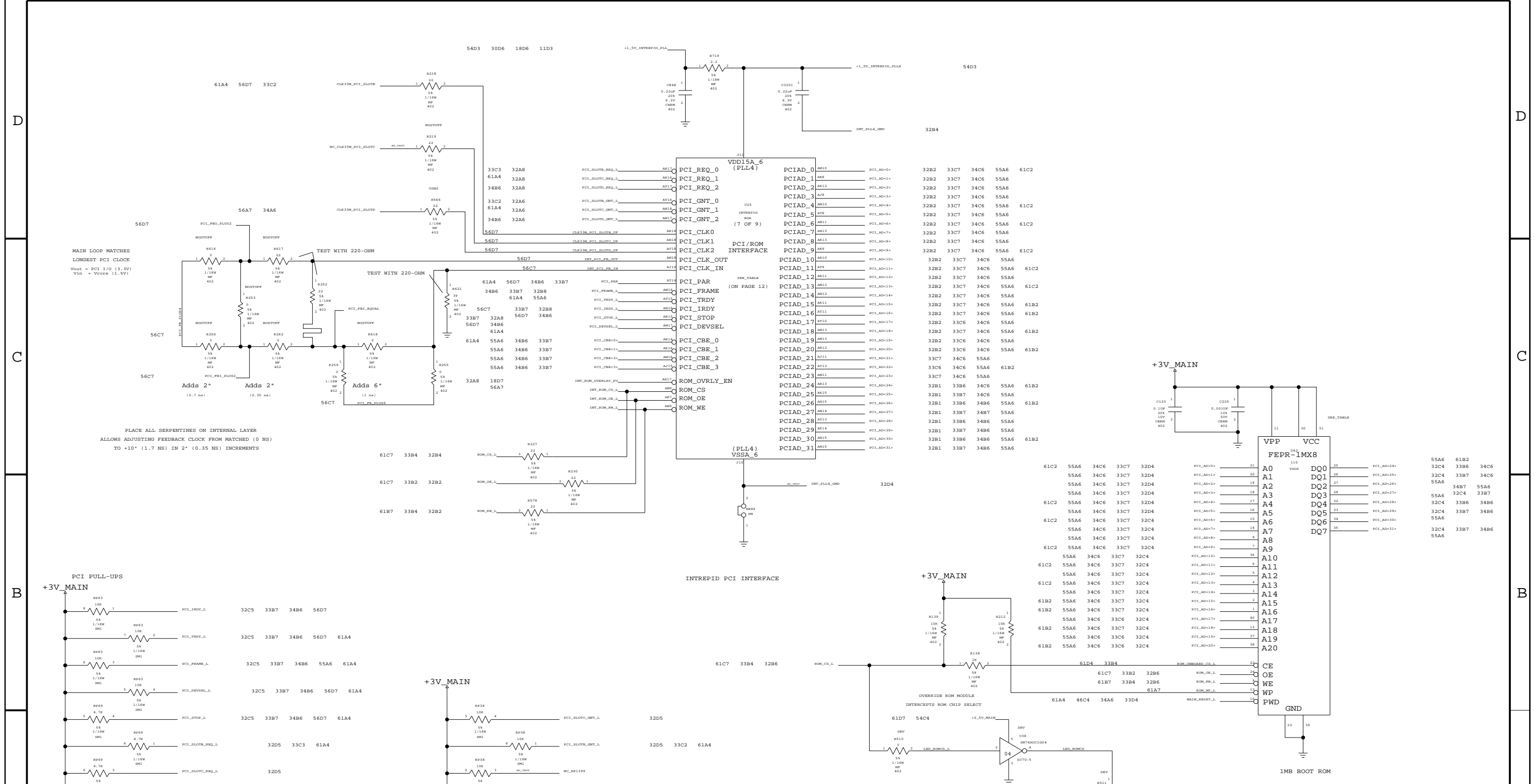
'KITCHEN SINK' CONNECTOR  
(MICROPHONE, INTERNAL SPEAKER CONNECTIONS  
INVERTER, LCD, LED & FAN POWER)



MODEM, BLUETOOTH,  
KITCHEN SINK  
& SERIAL DOWNLOAD

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	D	051-6490	A
SCALE	NONE	SHT	OF
		31	74



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, DVT, 4.5.8B2	U42		ROM_IMG PROD
341S1272	1	IC, FLASH, BOOT ROM, Q26B	U42		ROM_PRGMD PROD
009-6068	1	CODE, BOOTROM, Q26B, DVT, 4.6.7B1	U42		ROM_IMG PROD
335S0350	1	IC, FLASH ROM, 1MB, BLANK	U42		OMIT

**INTREPID PCI & BOOT ROM**

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D 051-6490	A
SCALE	SHT OF
NONE	32 74



D

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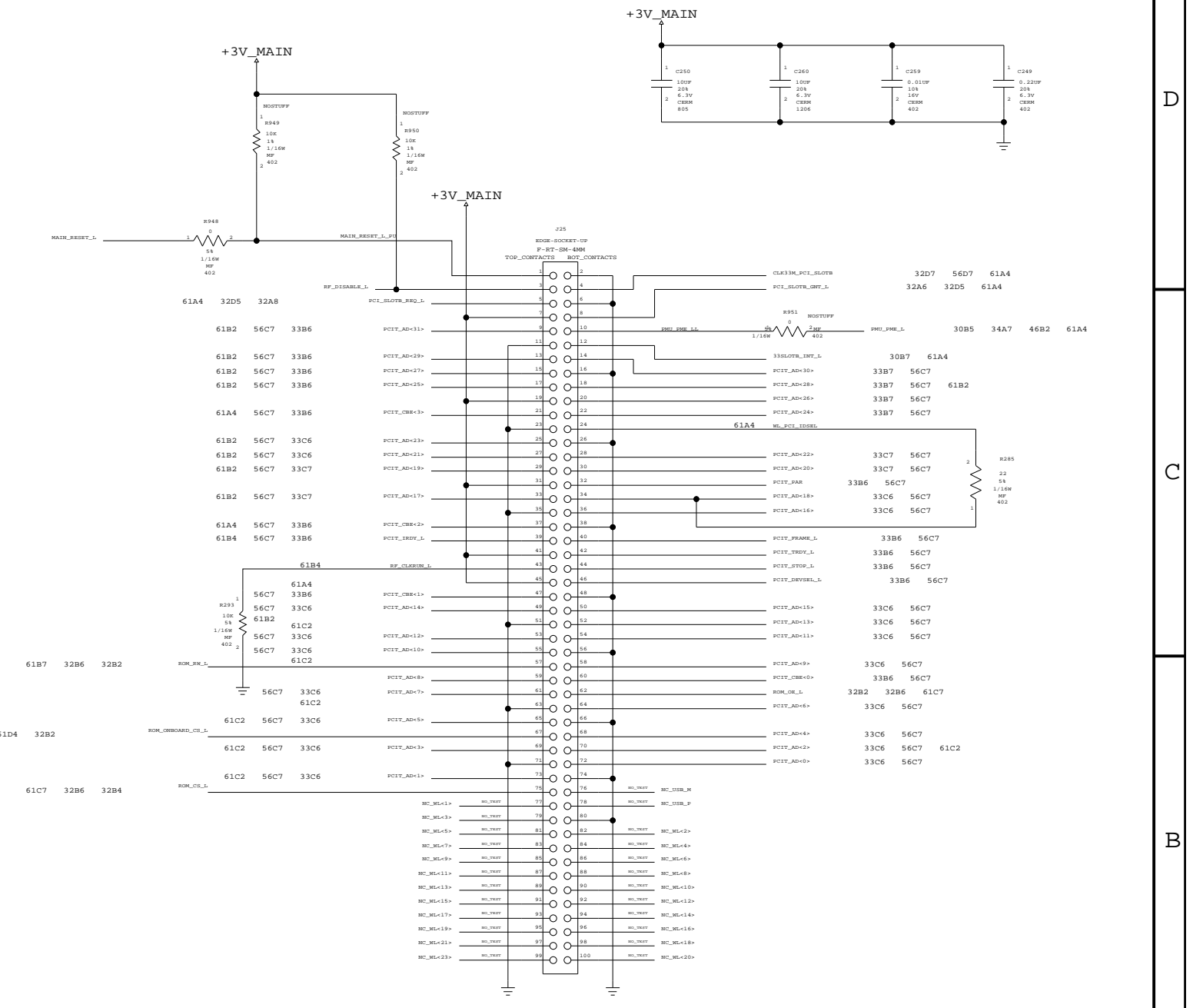
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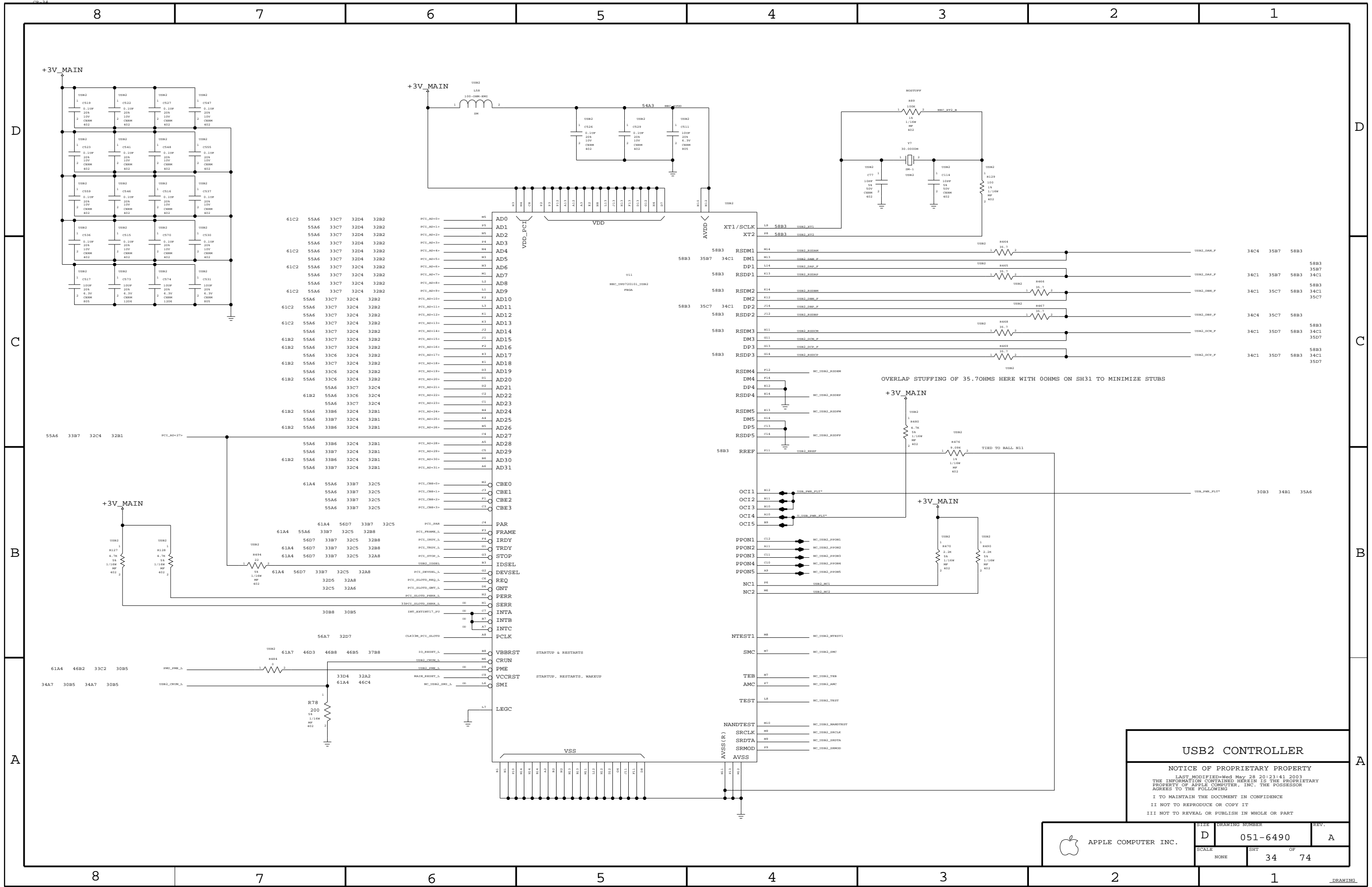
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A

PLACE RP'S NEAR WIRELESS CONNECTOR

61C2	55A6	34C6	32D4	32B2	PCI_AD<0>	1	RP77	8	PCI_AD<0>	33B2	56C7			
	55A6	34C6	32D4	32B2	PCI_AD<1>	2	33	7	PCI_AD<1>	33B3	56C7	61C2		
	55A6	34C6	32D4	32B2	PCI_AD<2>	3	55	6	NO_TEST	33B2	56C7	61C2		
	55A6	34C6	32D4	32B2	PCI_AD<3>	4	SM1	5	PCI_AD<3>	33B3	56C7	61C2		
61C2	55A6	34C6	32D4	32B2	PCI_AD<4>	1		8	PCI_AD<4>	33B2	56C7			
	55A6	34C6	32D4	32B2	PCI_AD<5>	2	RP75	7	PCI_AD<5>	33B3	56C7	61C2		
	55A6	34C6	32D4	32B2	PCI_AD<6>	3	53	6	NO_TEST	33B2	56C7			
	55A6	34C6	32C4	32B2	PCI_AD<7>	4	SM1	5	PCI_AD<7>	33B3	56C7	61C2		
	55A6	34C6	32C4	32B2	PCI_AD<8>	1		8	PCI_AD<8>	33B3	56C7	61C2		
61C2	55A6	34C6	32C4	32B2	PCI_AD<9>	2	RP73	7	NO_TEST	33B2	56C7			
	55A6	34C6	32C4	32B2	PCI_AD<10>	3	33	6	PCI_AD<10>	33B3	56C7	61C2		
	55A6	34C6	32C4	32B2	PCI_AD<11>	4	53	5	NO_TEST	33B2	56C7			
61C2	55A6	34C6	32C4	32B2	PCI_AD<12>	1		8	PCI_AD<12>	33B3	56C7	61C2		
	55A6	34C6	32C4	32B2	PCI_AD<13>	2	RP72	7	NO_TEST	33B2	56C7			
	55A6	34C6	32C4	32B2	PCI_AD<14>	3	33	6	PCI_AD<14>	33C3	56C7	61B2		
	55A6	34C6	32C4	32B2	PCI_AD<15>	4	SM1	5	NO_TEST	33C2	56C7			
61B2	55A6	34C6	32C4	32B2	PCI_AD<16>	1		8	PCI_AD<16>	33C2	56C7			
	55A6	34C6	32C4	32B2	PCI_AD<17>	2	RP59	7	PCI_AD<17>	32B2	32C4	34C6	55A6	
	55A6	34C6	32C4	32B2	PCI_AD<18>	3	53	6	PCI_AD<18>	33C2	56C7			
	55A6	34C6	32C4	32B2	PCI_AD<19>	4	SM1	5	PCI_AD<19>	32B2	32C4	34C6	55A6	
	55A6	34C6	32C4	32B2	PCI_AD<23>	1		8	PCI_AD<23>	33C3	56C7	61B2		
	55A6	34C6	32C4	32B2	PCI_AD<21>	2	RP58	7	PCI_AD<21>	33C3	56C7	61B2		
	55A6	34C6	32C4	32B2	PCI_AD<22>	3	33	6	PCI_AD<22>	32C4	34C6	55A6	61B2	
	55A6	34C6	32C4	32B2	PCI_AD<20>	4	53	5	PCI_AD<20>	32B2	32C4	34C6	55A6	61B2
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	55A6	34C6	32C4	32B1	PCI_AD<25>	2	RP56	7	PCI_AD<25>	33C3	56C7	61B2		
	55A6	34C6	32C4	32B1	PCI_AD<26>	3	33	6	PCI_AD<26>	32B1	32C4	34B6	55A6	61B2
	55A6	34C6	32C4	32B1	PCI_AD<24>	4	53	5	PCI_AD<24>	32B1	32C4	34C6	55A6	61B2
	55A6	34C6	32C4	32B1	PCI_AD<28>	1		8	PCI_AD<28>	32B1	32C4	34B6	55A6	61B2
	55A6	34B6	32C4	32B1	PCI_AD<30>	2	RP54	7	PCI_AD<30>	32B1	32C4	34B6	55A6	61B2
	55A6	34B6	32C4	32B1	PCI_AD<31>	3	33	6	PCI_AD<31>	33C3	56C7	61B2		
	55A6	34B6	32C4	32B1	PCI_AD<29>	4	53	5	PCI_AD<29>	33C3	56C7	61B2		
	55A6	34B6	32C4	32B1	PCI_PAR	1		8	PCI_PAR	33C2	56C7			
	55A6	34B6	32C5	32B8	PCI_FRAME_L	2	RP61	7	NO_TEST	PCI_FRAME_L	33C2	56C7		
	55A6	34B6	32C5	32B8	PCI_TRDY_L	3	33	6	NO_TEST	PCI_TRDY_L	33C2	56C7		
	55A6	34B6	32C5	32B8	PCI_STBY_L	4	53	5	NO_TEST	PCI_STBY_L	33C3	56C7	61B4	
	55A6	34B6	32C5	32B8	PCI_STOP_L	1		8	PCI_STOP_L	33C2	56C7			
	55A6	34B6	32C5	32A8	PCI_DEVSEL_L	2	RP67	7	NO_TEST	PCI_DEVSEL_L	33C2	56C7		
	55A6	34B6	32C5	32A8	PCI_CBE<1>	3	33	6	PCI_CBE<1>	33C3	56C7	61A4		
	55A6	34B6	32C5	32A8	PCI_CBE<0>	4	53	5	NO_TEST	PCI_CBE<0>	33B2	56C7		
	55A6	34B6	32C5	32A8	PCI_CBE<2>	1		8	PCI_CBE<2>	33C3	56C7	61A4		
	55A6	34B6	32C5	32A8	PCI_CBE<3>	2	RP64	7	PCI_CBE<3>	33C3	56C7	61A4		
	NO_TEST	NO_TEST	NO_TEST	NO_TEST	NO_TEST	3	33	6	NO_TEST	NO_TEST	NO_TEST	NO_TEST	NO_TEST	
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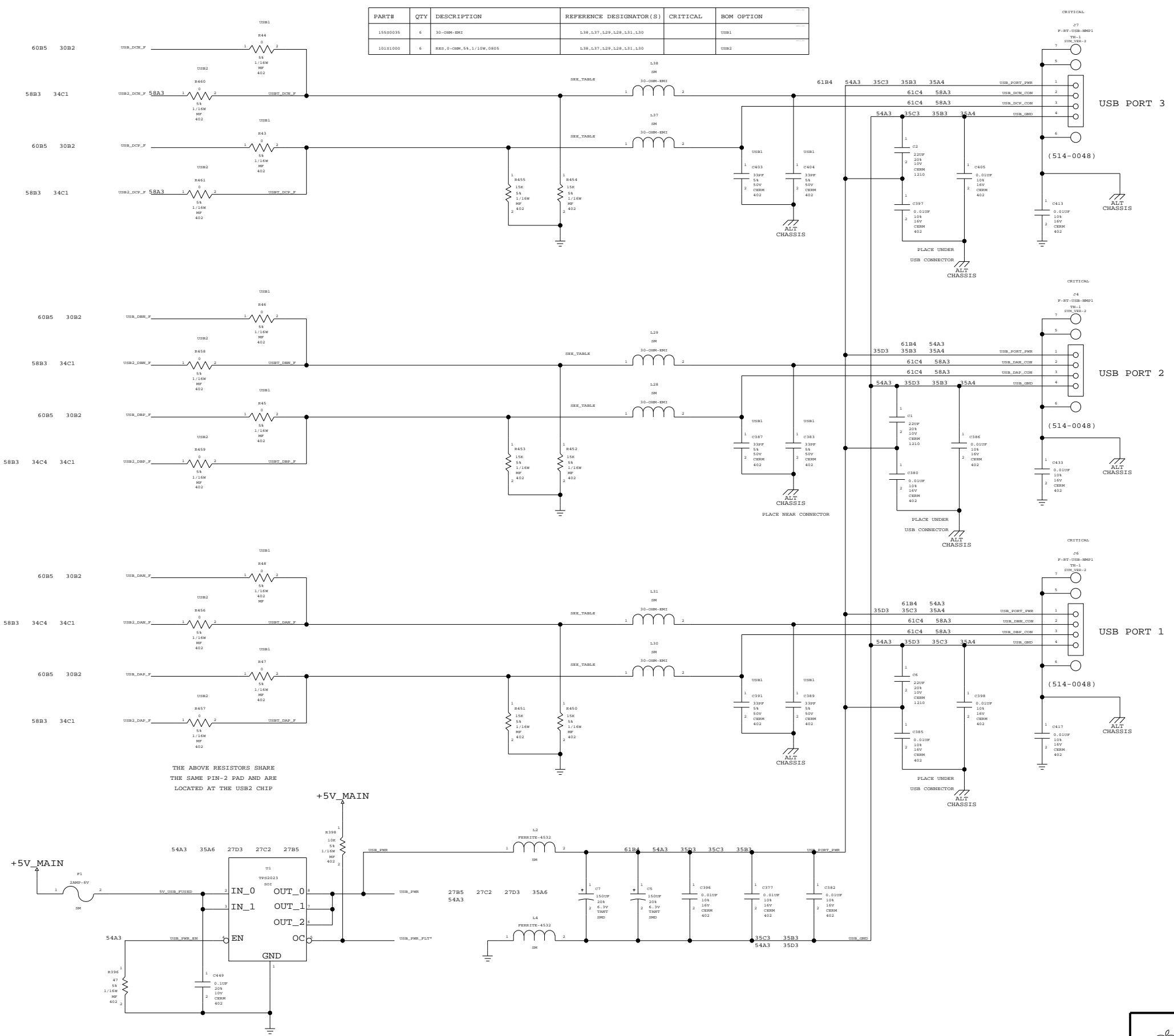


**USB2 CONTROLLER**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-6490	A
SCALE	SHT	OF	
NONE	34	74	

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
1550035	4	30-OHM-0801	L38,L37,L29,L28,L31,L30		USB1
10151000	4	RES,0-OHM,5%,1/10W,0805	L38,L37,L29,L28,L31,L30		USB2

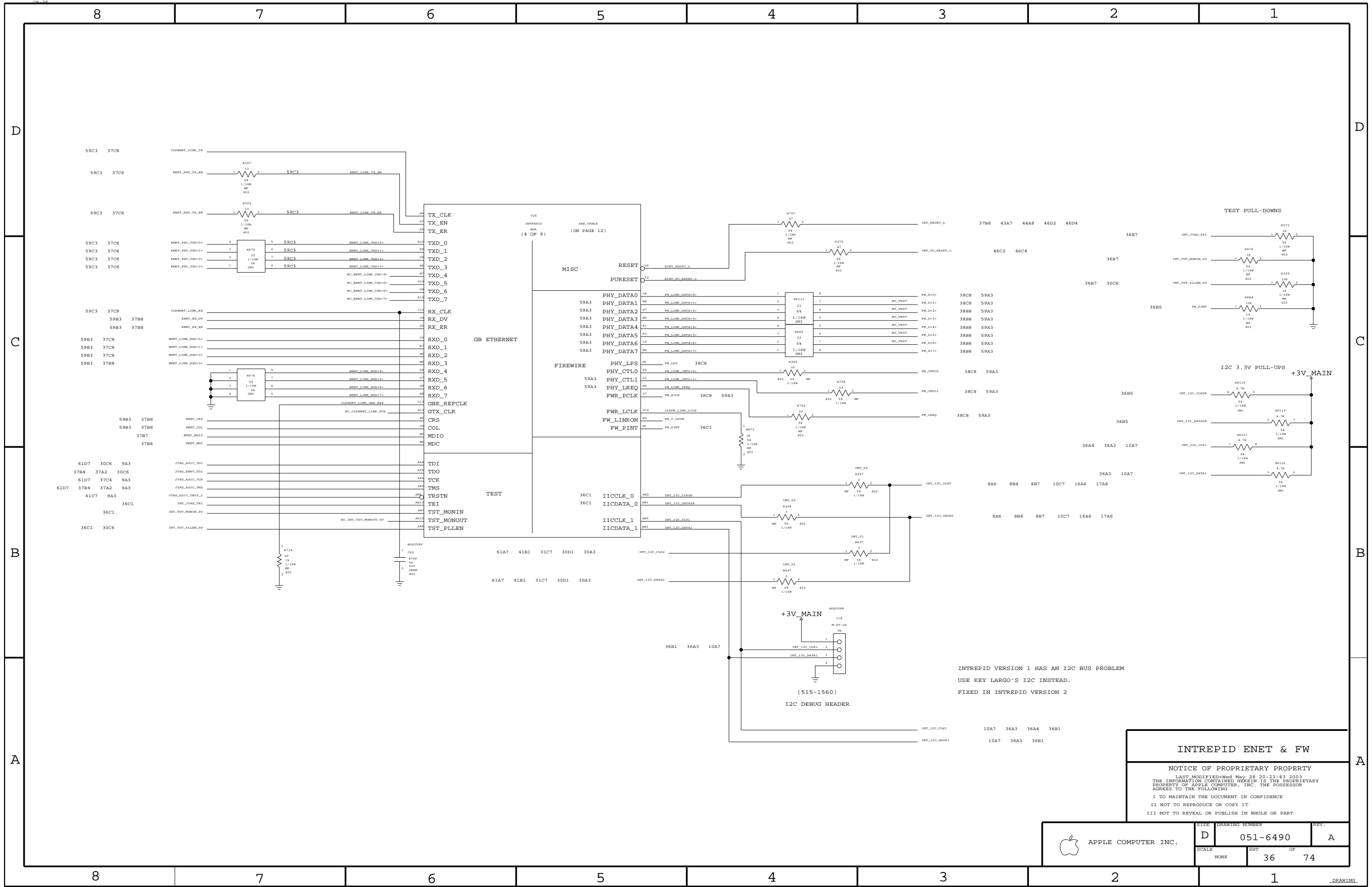


THE ABOVE RESISTORS SHARE THE SAME PIN-2 PAD AND ARE LOCATED AT THE USB2 CHIP

**USB CONNS & PWR**

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-6490	A
SCALE	SHT	OF	
NONE	35	74	

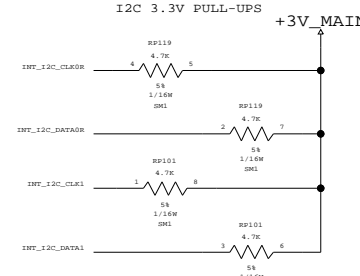
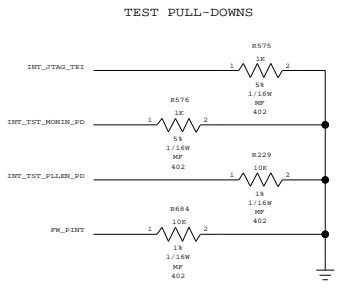
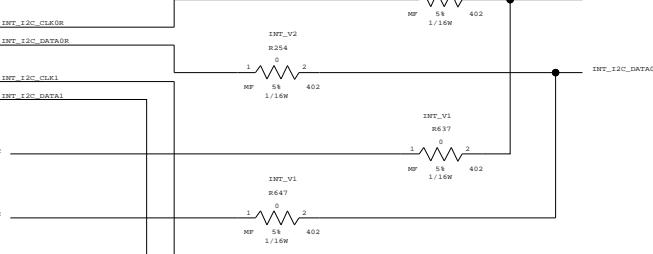
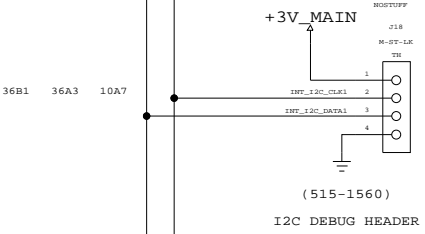


**INTREPID ENET & FW**

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APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER <b>051-6490</b>	REV. <b>A</b>
	SCALE NONE	SHEET <b>36</b>	OF <b>74</b>

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



INTREPID  
 (4 OF 9)

MISC

PHY\_DATA0  
 PHY\_DATA1  
 PHY\_DATA2  
 PHY\_DATA3  
 PHY\_DATA4  
 PHY\_DATA5  
 PHY\_DATA6  
 PHY\_DATA7

FIREWIRE

PHY\_LPS  
 PHY\_CTL0  
 PHY\_CTL1  
 PHY\_LREQ  
 FWR\_PCLK  
 FWR\_LCLK  
 FW\_LINKON  
 FW\_PINT

TEST

IICLK\_0  
 IICDATA\_0  
 IICLK\_1  
 IICDATA\_1

GB ETHERNET

TEST

TEST

TEST

TEST

TEST

TEST

TEST

TEST

TEST

TEST

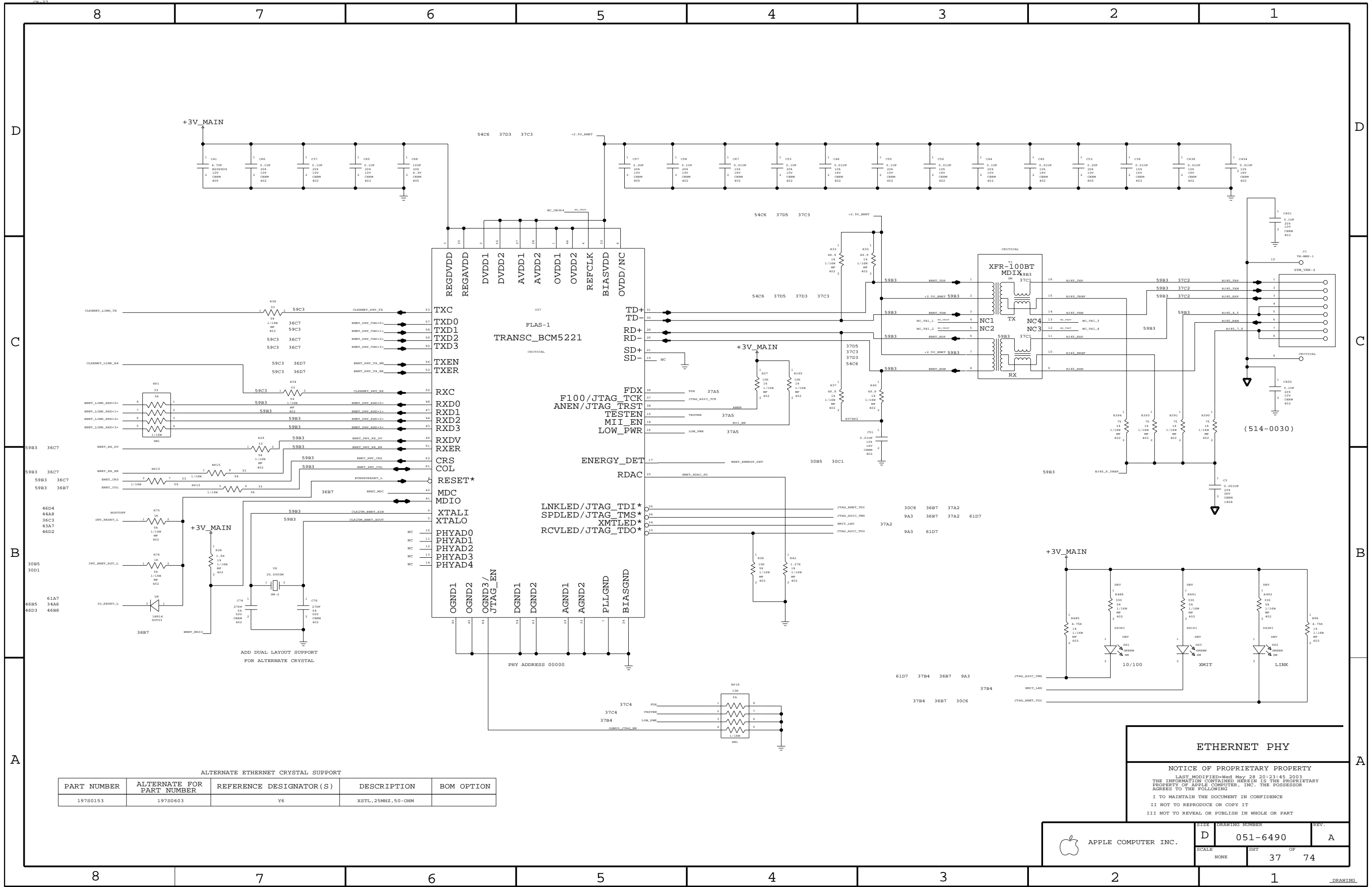
TEST

TEST

TEST

TEST

TEST



ALTERNATE ETHERNET CRYSTAL SUPPORT

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

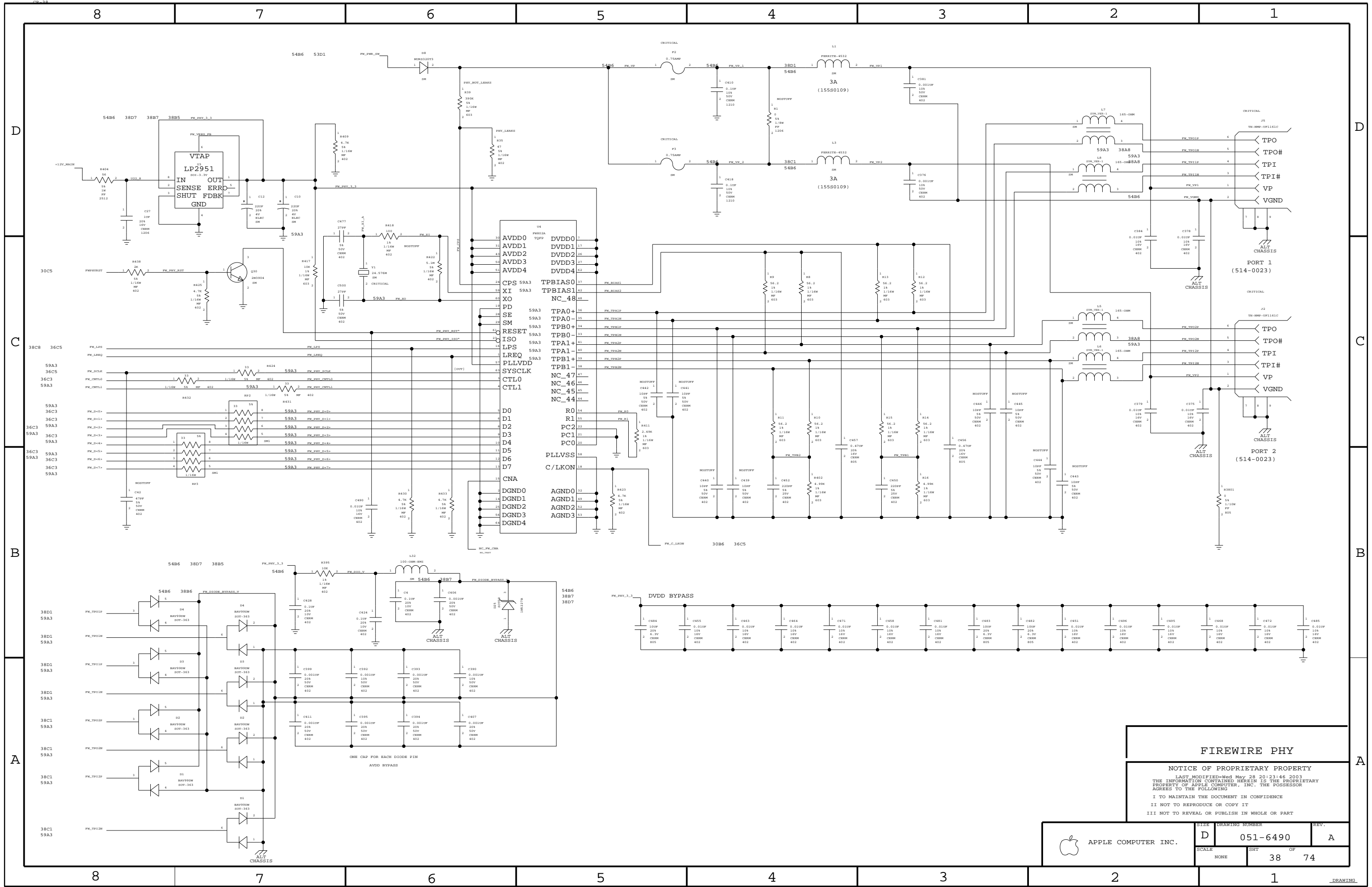
**ETHERNET PHY**

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APPLE COMPUTER INC.

SIZE: **D** DRAWING NUMBER: **051-6490** REV.: **A**

SCALE: NONE SHEET: **37** OF **74**



**FIREWIRE PHY**

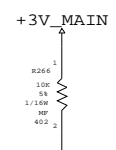
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APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER <b>051-6490</b>	REV. <b>A</b>
	SCALE NONE	SHEET <b>38</b>	OF <b>74</b>

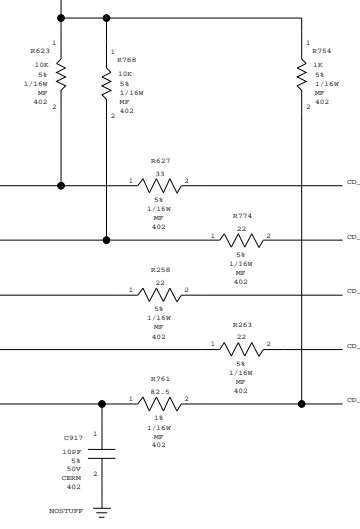
D  
C  
B  
A

D  
C  
B  
A

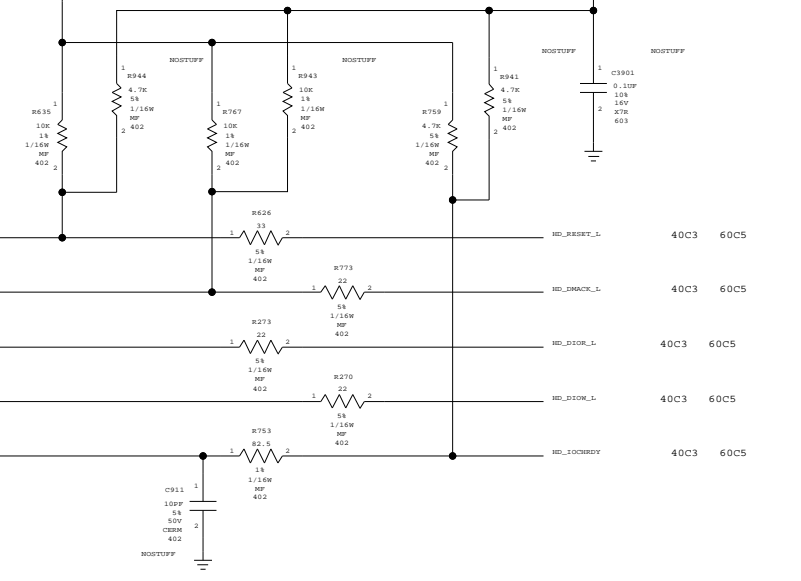
UATA100		ATA_D0	UATA100	UIDE_DATA<0>	39C3	60C5
		ATA_D1	UATA100	UIDE_DATA<1>	39C3	60C5
		ATA_D2	UATA100	UIDE_DATA<2>	39C3	60C5
		ATA_D3	UATA100	UIDE_DATA<3>	39C3	60C5
		ATA_D4	UATA100	UIDE_DATA<4>	39B3	60C5
		ATA_D5	UATA100	UIDE_DATA<5>	39B3	60C5
		ATA_D6	UATA100	UIDE_DATA<6>	39B3	60C5
		ATA_D7	UATA100	UIDE_DATA<7>	39B3	60C5
		ATA_D8	UATA100	UIDE_DATA<8>	39B3	60C5
		ATA_D9	UATA100	UIDE_DATA<9>	39B3	60C5
		ATA_D10	UATA100	UIDE_DATA<10>	39B3	60C5
		ATA_D11	UATA100	UIDE_DATA<11>	39B3	60C5
		ATA_D12	UATA100	UIDE_DATA<12>	39B3	60C5
		ATA_D13	UATA100	UIDE_DATA<13>	39A3	60C5
		ATA_D14	UATA100	UIDE_DATA<14>	39A3	60C5
		ATA_D15	UATA100	UIDE_DATA<15>	39A3	60C5
		ATA_A0	UATA100	UIDE_ADDR<0>	40B4	60B5
		ATA_A1	UATA100	UIDE_ADDR<1>	40B4	60B5
		ATA_A2	UATA100	UIDE_ADDR<2>	40A4	60B5
		ATA_VREP	UATA100	UIDE_VREP		
		ATA_RST	UATA100	UIDE_RST_L	39D3	60C5
		ATA_WR	UATA100	UIDE_DIOW_L	39C3	60C5
		ATA_RD	UATA100	UIDE_DIOR_L	39D3	60C5
		ATA_CHRDY	UATA100	UIDE_IOCHRDY	39C3	60C5
		ATA_CS0	UATA100	UIDE_CS0FX_L	40B4	60B5
		ATA_CS1	UATA100	UIDE_CS1FX_L	40B4	60B5
		ATA_DMACK	UATA100	UIDE_DMACK_L	39D3	60C5
		ATA_DMARQ	UATA100	UIDE_DMARQ	40C4	60C5
		ATA_INTRQ	UATA100	UIDE_INTRQ	40C4	60C5
		CS_CE1	CARDSLOT	MC_CSLOT_CE1_L		
		CS_CE2	CARDSLOT	MC_CSLOT_CE2_L		
		CS_IORD	CARDSLOT	MC_CSLOT_IORD_L		
		CS_IOWR	CARDSLOT	MC_CSLOT_IOWR_L		
		CS_OE	CARDSLOT	MC_CSLOT_OE_L		
		CS_WE	CARDSLOT	MC_CSLOT_WE_L		
		CS_WAIT	CARDSLOT	MC_CSLOT_WAIT_L		
		IDEDD0	IDE	UIDE_DATA<0>	39C5	60D5
		IDEDD1	IDE	UIDE_DATA<1>	39C5	60D5
		IDEDD2	IDE	UIDE_DATA<2>	39C5	60D5
		IDEDD3	IDE	UIDE_DATA<3>	39C5	60D5
		IDEDD4	IDE	UIDE_DATA<4>	39B5	60D5
		IDEDD5	IDE	UIDE_DATA<5>	39B5	60D5
		IDEDD6	IDE	UIDE_DATA<6>	39B5	60D5
		IDEDD7	IDE	UIDE_DATA<7>	39B5	60D5
		IDEDD8	IDE	UIDE_DATA<8>	39B5	60D5
		IDEDD9	IDE	UIDE_DATA<9>	39B5	60D5
		IDEDD10	IDE	UIDE_DATA<10>	39B5	60D5
		IDEDD11	IDE	UIDE_DATA<11>	39B5	60D5
		IDEDD12	IDE	UIDE_DATA<12>	39B5	60D5
		IDEDD13	IDE	UIDE_DATA<13>	39A5	60D5
		IDEDD14	IDE	UIDE_DATA<14>	39A5	60D5
		IDEDD15	IDE	UIDE_DATA<15>	39A5	60D5
		IDEA0	IDE	UIDE_ADDR<0>	40B8	60C5
		IDEA1	IDE	UIDE_ADDR<1>	40B8	60C5
		IDEA2	IDE	UIDE_ADDR<2>	40A8	60C5
		IDEA3	IDE	MC_CSLOT_ADDR<3>		
		IDEA4	IDE	MC_CSLOT_ADDR<4>		
		IDEA5	IDE	MC_CSLOT_ADDR<5>		
		IDEA6	IDE	MC_CSLOT_ADDR<6>		
		IDEA7	IDE	MC_CSLOT_ADDR<7>		
		IDEA8	IDE	MC_CSLOT_ADDR<8>		
		IDEA9	IDE	MC_CSLOT_ADDR<9>		
		IDECHRDY	IDE	UIDE_DIOCHRDY	39C5	60D5
		IDEC0	IDE	UIDE_CS0FX_L	40B8	60C5
		IDEC1	IDE	UIDE_CS1FX_L	40B8	60C5
		IDERST	IDE	UIDE_RST_L	39D5	60D5
		IDEWR	IDE	UIDE_STOP	39D5	60D5
		IDERD	IDE	UIDE_DIOCHRDY	39C5	60D5
		IDEDMACK	IDE	UIDE_DMACK_L	39D5	60D5
		IDEDMARQ	IDE	UIDE_DMARQ	40C8	60D5
		IDEINTRQ	IDE	UIDE_INTRQ	40C8	60D5



+5V\_SLEEP



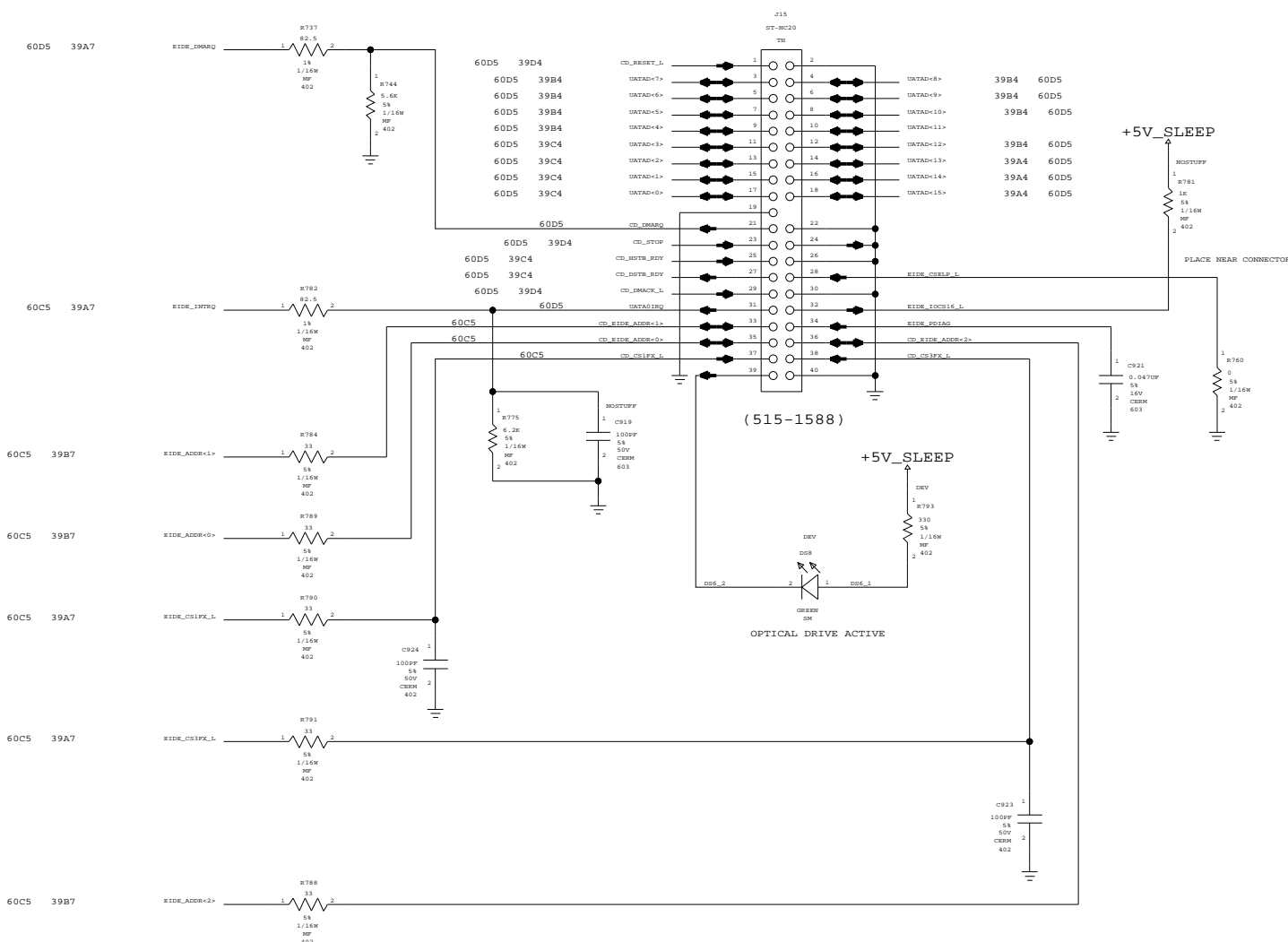
+5V\_SLEEP



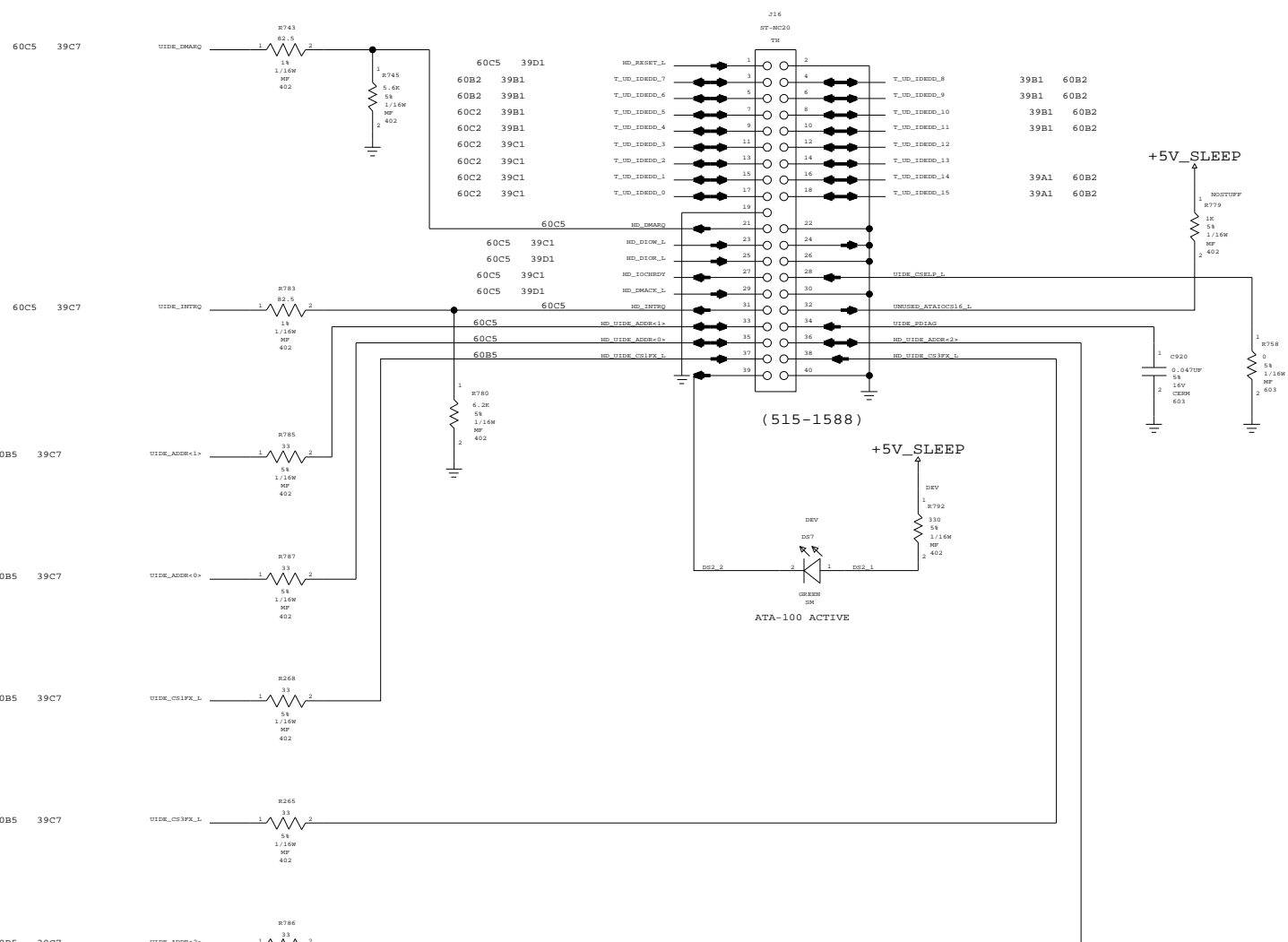
**INTREPID UATA/IDE**  
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
	D	051-6490	A
SCALE	SHT	OF	
NONE	39	74	

### OPTICAL DRIVE INTERFACE



### ATA-100 INTERFACE

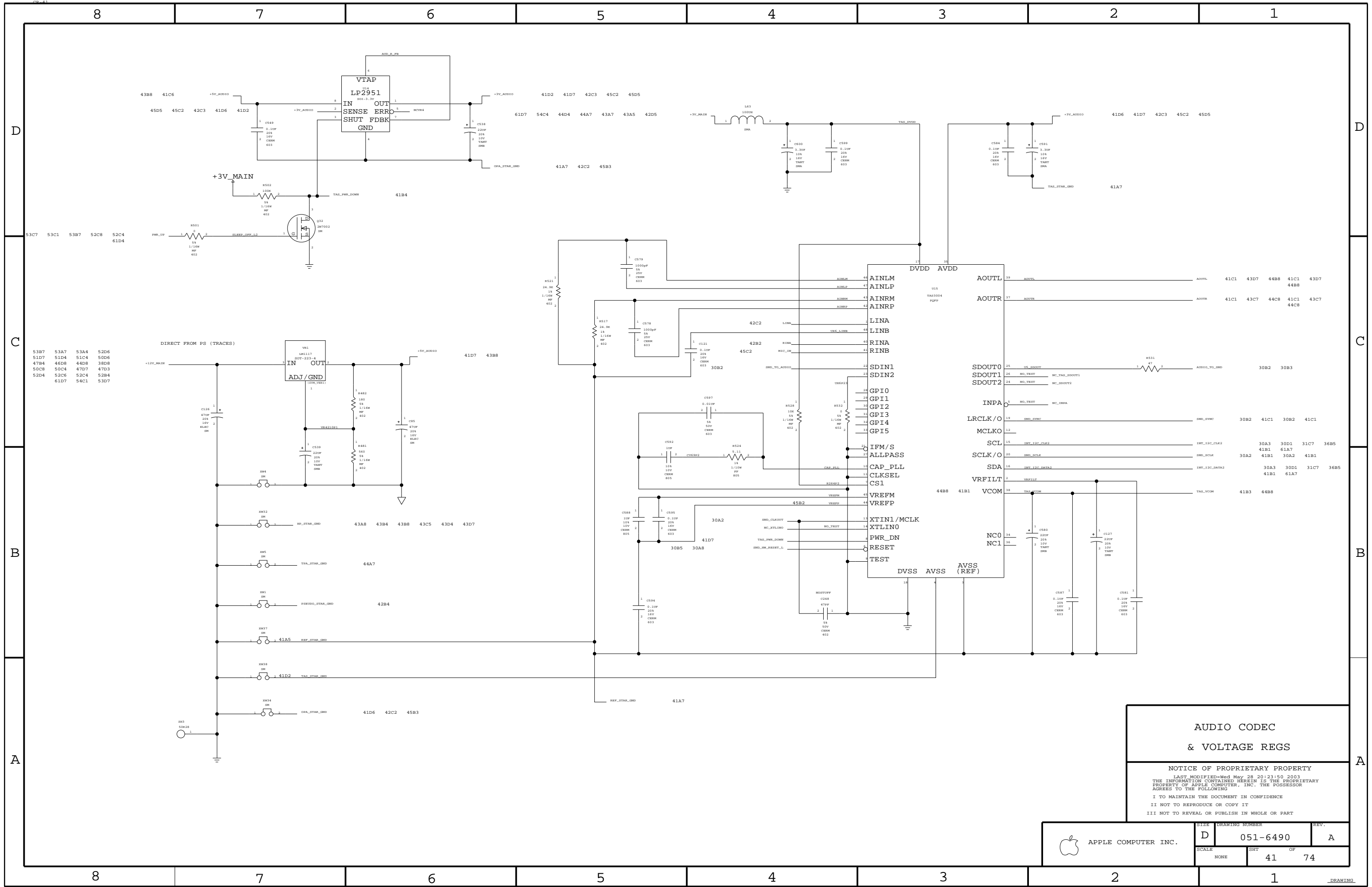


**CD/HD CONS**

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APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER 051-6490	REV. A
	SCALE NONE	SHEET 40	OF 74

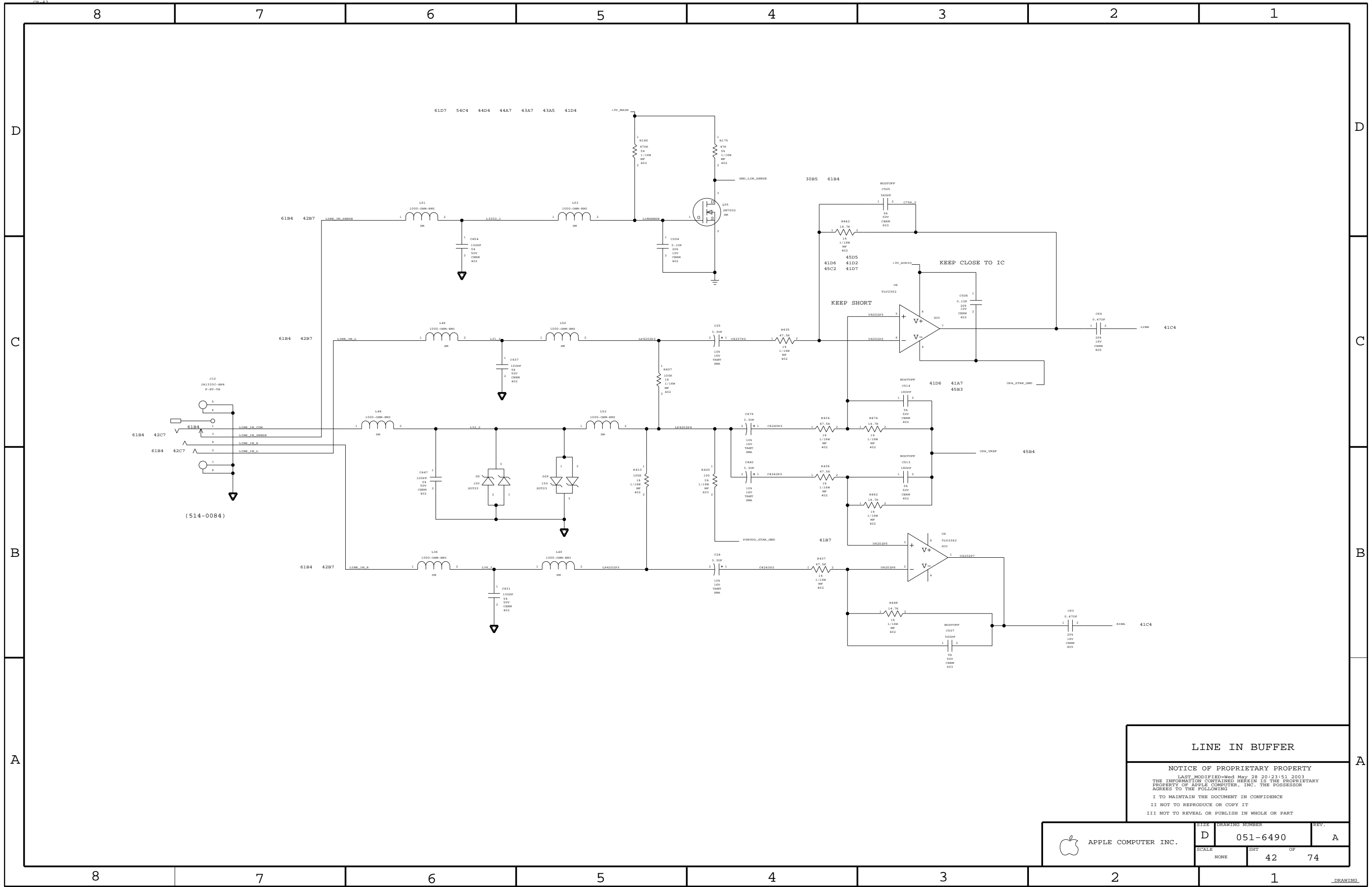




**AUDIO CODEC  
& VOLTAGE REGS**

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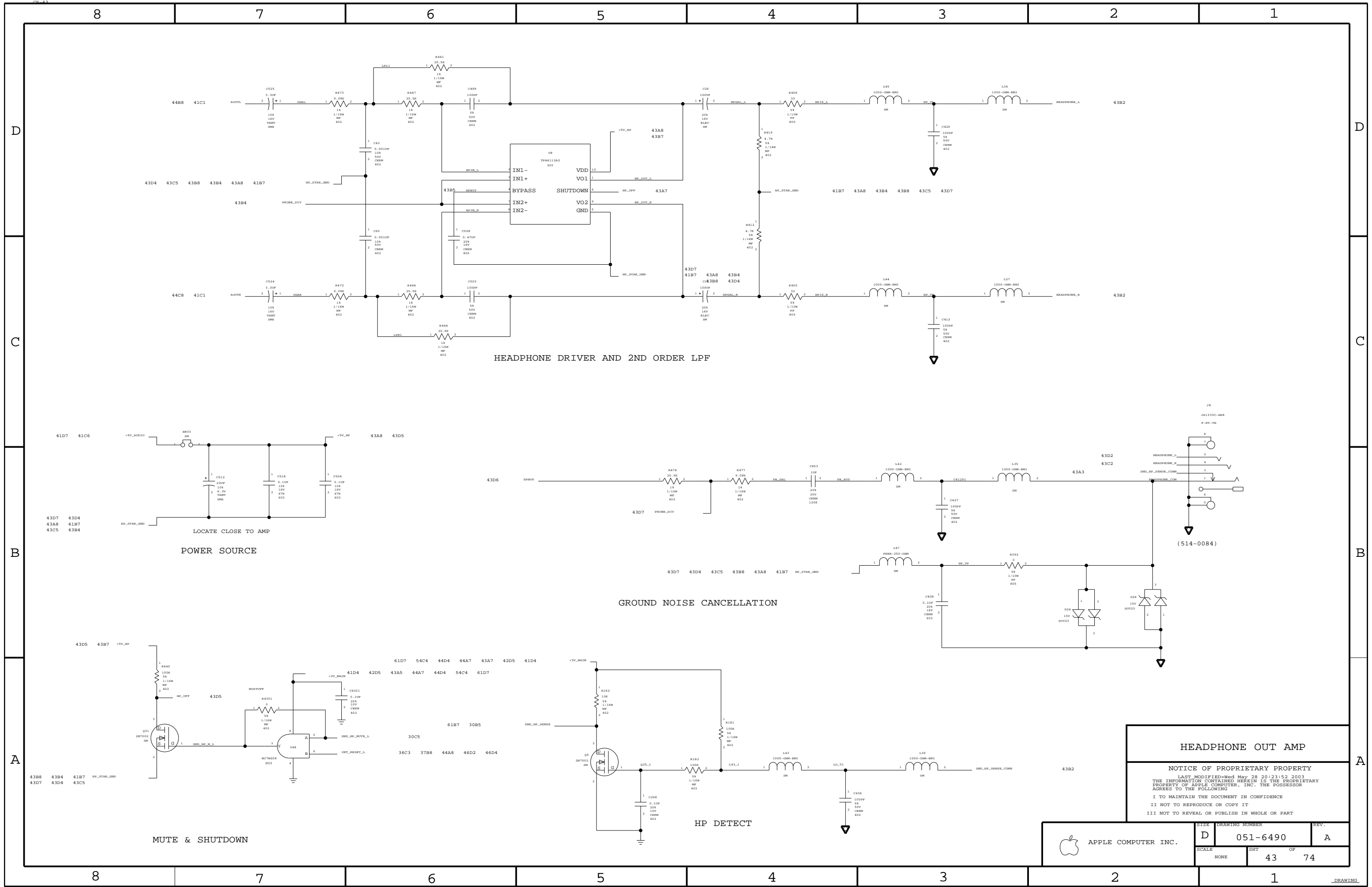
APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER <b>051-6490</b>	REV. <b>A</b>
	SCALE NONE	SHEET <b>41</b>	OF <b>74</b>



**LINE IN BUFFER**

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	SCALE NONE	SHEET <b>42</b>	OF <b>74</b>



HEADPHONE DRIVER AND 2ND ORDER LPF

POWER SOURCE

LOCATE CLOSE TO AMP

GROUND NOISE CANCELLATION

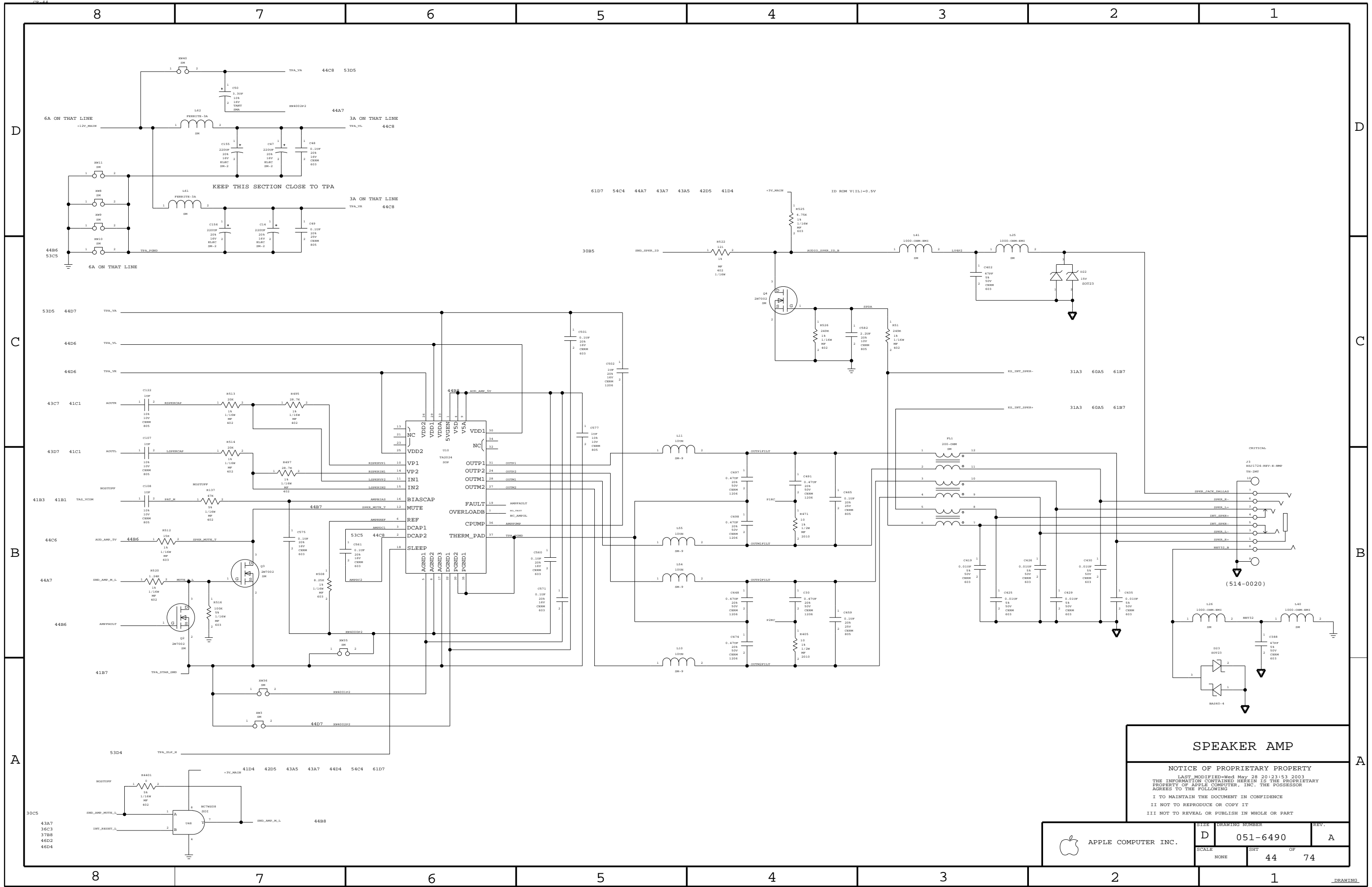
MUTE & SHUTDOWN

HP DETECT

HEADPHONE OUT AMP

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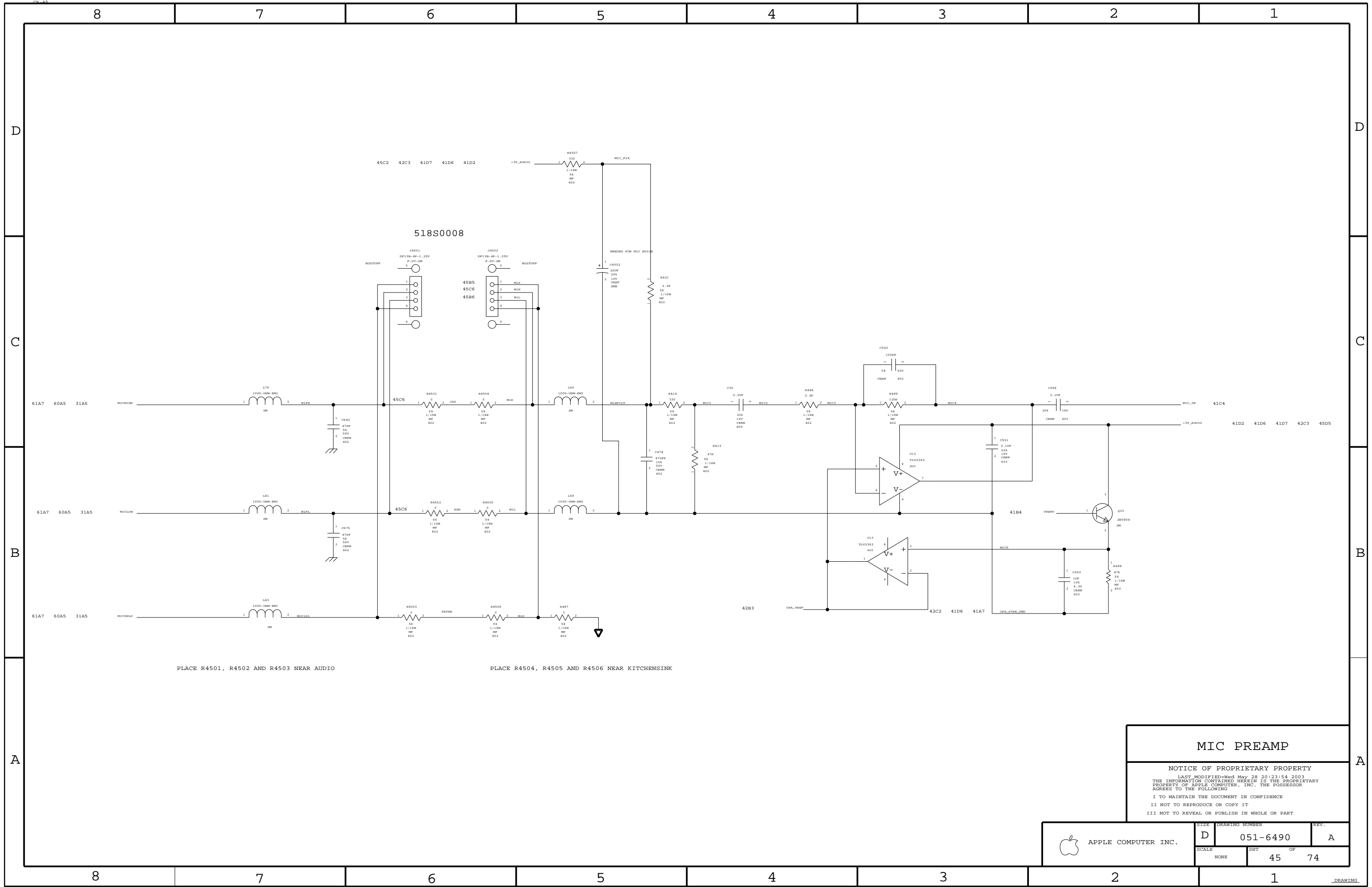
APPLE COMPUTER INC.	SIZE <b>D</b>	DRAWING NUMBER 051-6490	REV. A
	SCALE NONE	SHEET 43	OF 74



**SPEAKER AMP**

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	SCALE NONE	SHEET 44



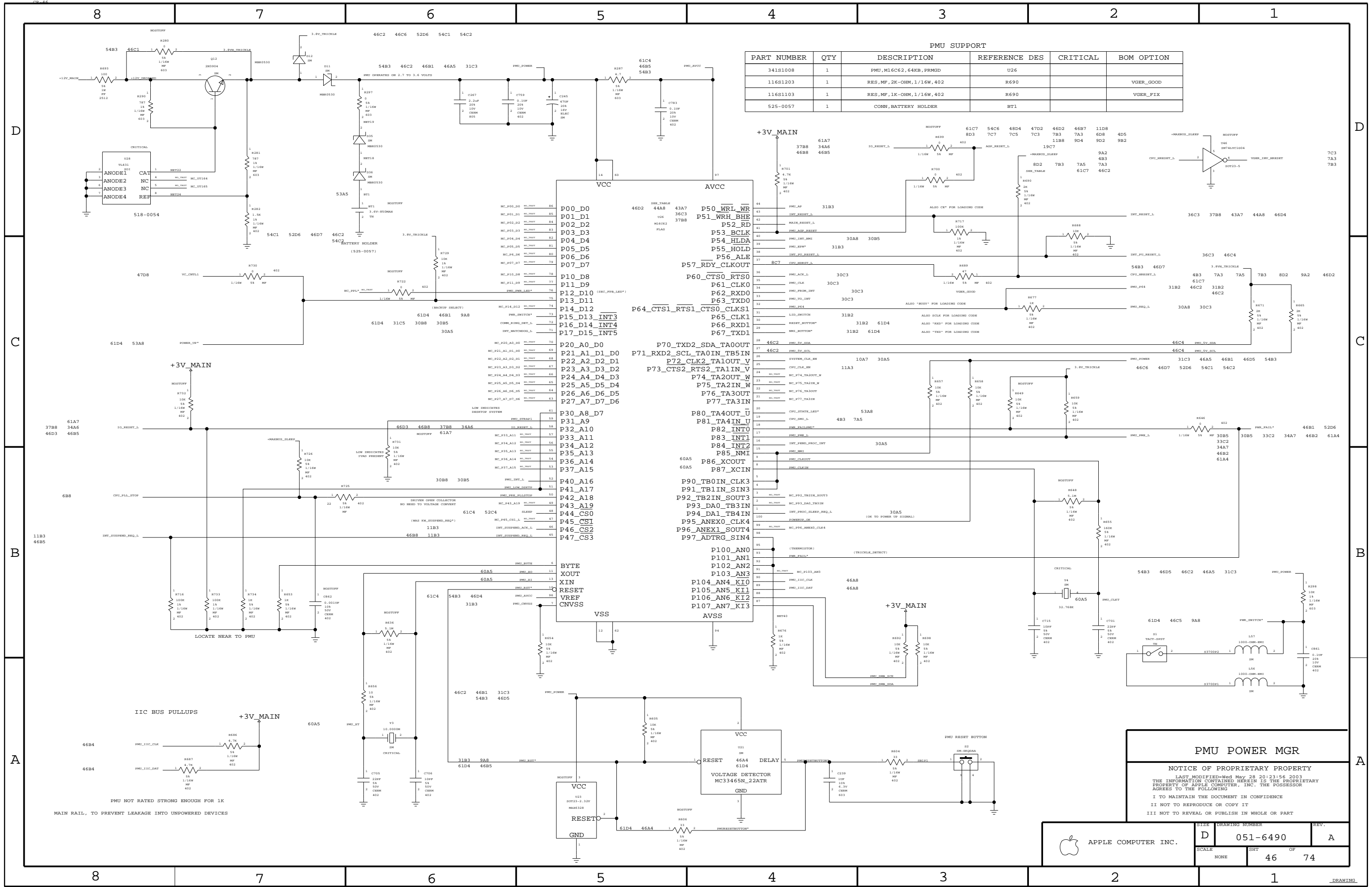
PLACE R4501, R4502 AND R4503 NEAR AUDIO

PLACE R4504, R4505 AND R4506 NEAR KITCHENSINK

**MIC PREAMP**

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	SCALE NONE	SHEET <b>45</b>	OF <b>74</b>

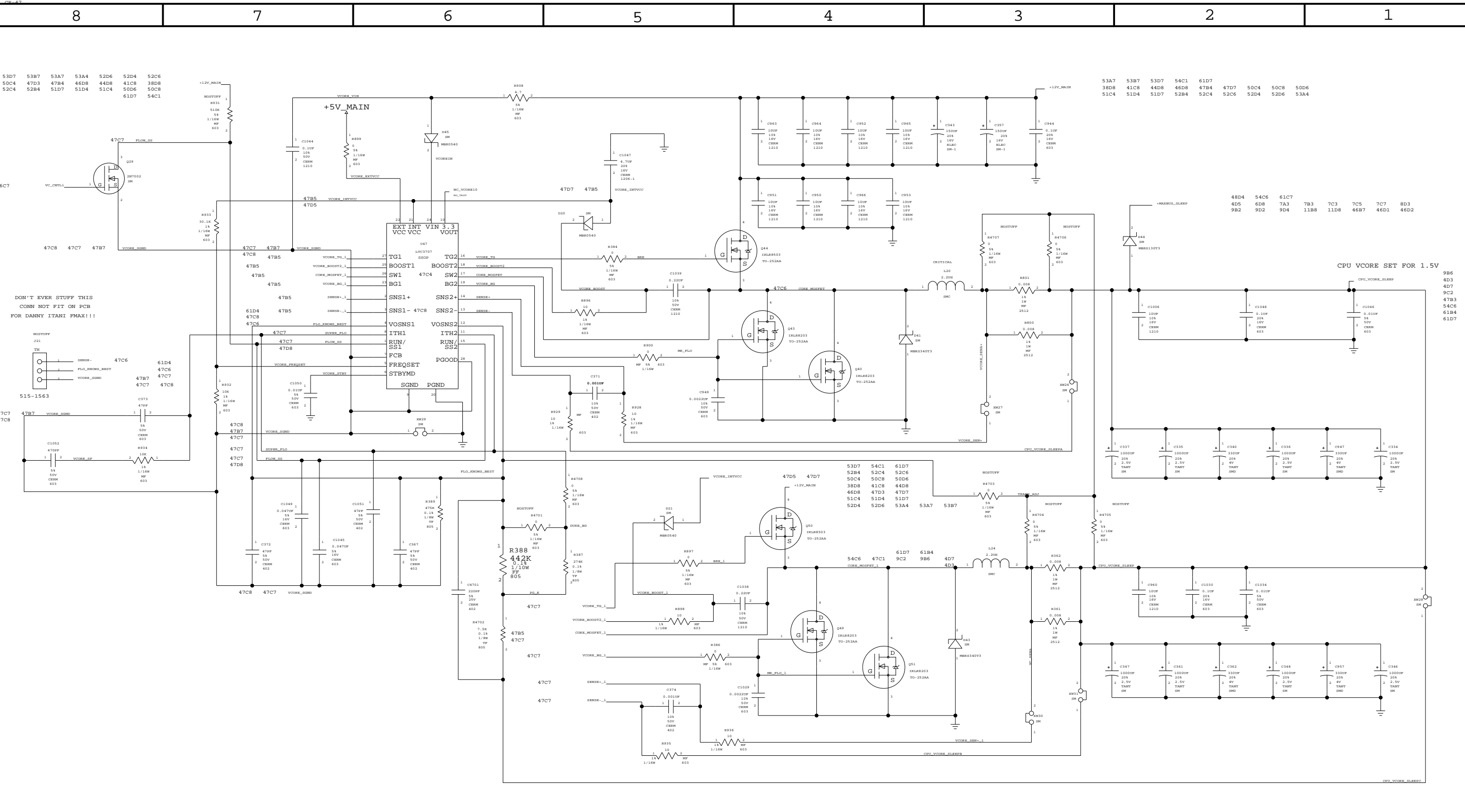


**PMU POWER MGR**

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	D	051-6490	A
SCALE	SHT	OF	
NONE	46	74	

PMU NOT RATED STRONG ENOUGH FOR 1K MAIN RAIL, TO PREVENT LEAKAGE INTO UNPOWERED DEVICES



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

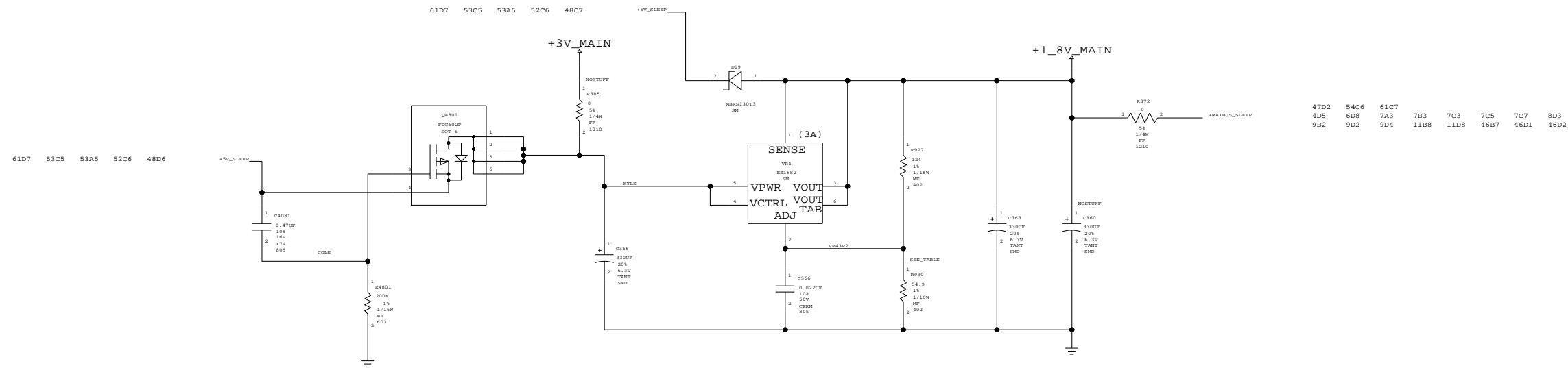
PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
128S0018	128S0012	C340,C362,C947,C957	330UF, 2.5V,TANT	

**CPU & AGP VREGS**

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	APPLE COMPUTER INC.		SIZE	DRAWING NUMBER	REV.
			D	051-6490	A
		SCALE	NONE	SHT	OF
				47	74

INTREPID MAXBUS & CPU OVDD POWER CONVERTER  
(OFF DURING SLEEP)

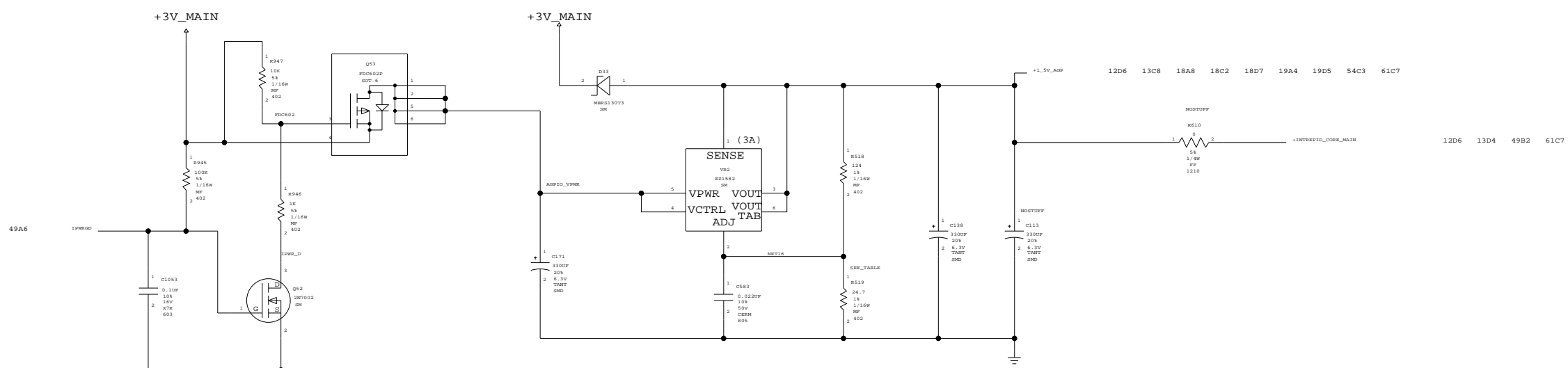


47D2 54C6 61C7  
4D5 6D8 7A3 7B3 7C3 7C5 7C7 8D3  
9B2 9D2 9D4 11B8 11D8 46B7 46D1 46D2

MAXBUS I/O SUPPLY SUPPORT

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
11482491	1	RES, FF, 24.9-OHM, 1%	R930		MAXIO_1'50V
11483481	1	RES, FF, 34.8-OHM, 1%	R930		MAXIO_1'65V
11484421	1	RES, FF, 44.2-OHM, 1%	R930		MAXIO_1'70V
11485491	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
11482491	1	RES, FF, 24.9-OHM, 1%	R519		AGPIO_1'50V
11483481	1	RES, FF, 34.8-OHM, 1%	R519		AGPIO_1'65V
11484421	1	RES, FF, 44.2-OHM, 1%	R519		AGPIO_1'70V
11485491	1	RES, FF, 54.9-OHM, 1%	R519		AGPIO_1'80V

CPU & AGP VREGS

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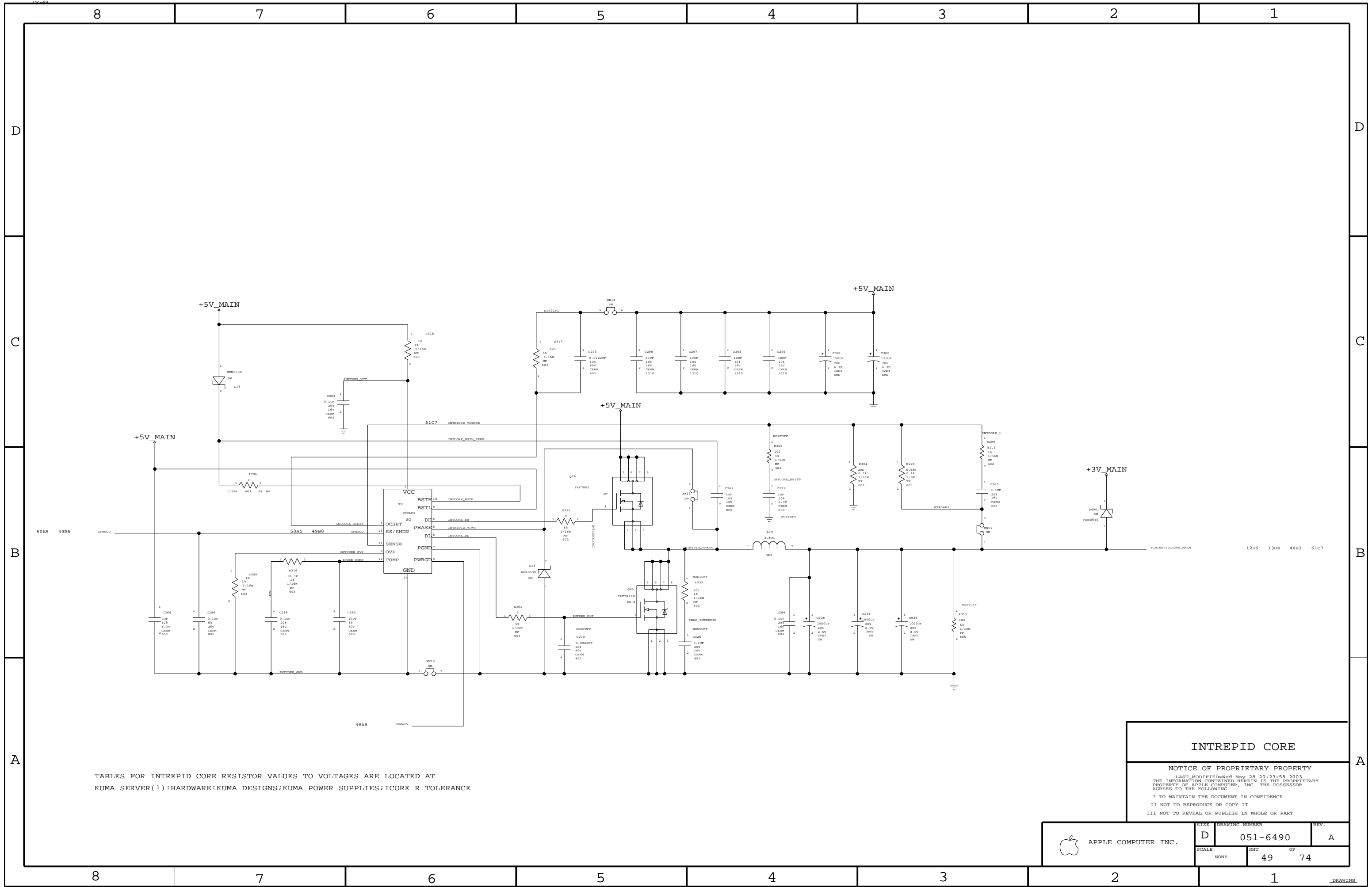
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SIZE: D DRAWING NUMBER: 051-6490 REV: A

SCALE: NONE SHEET: 48 OF 74



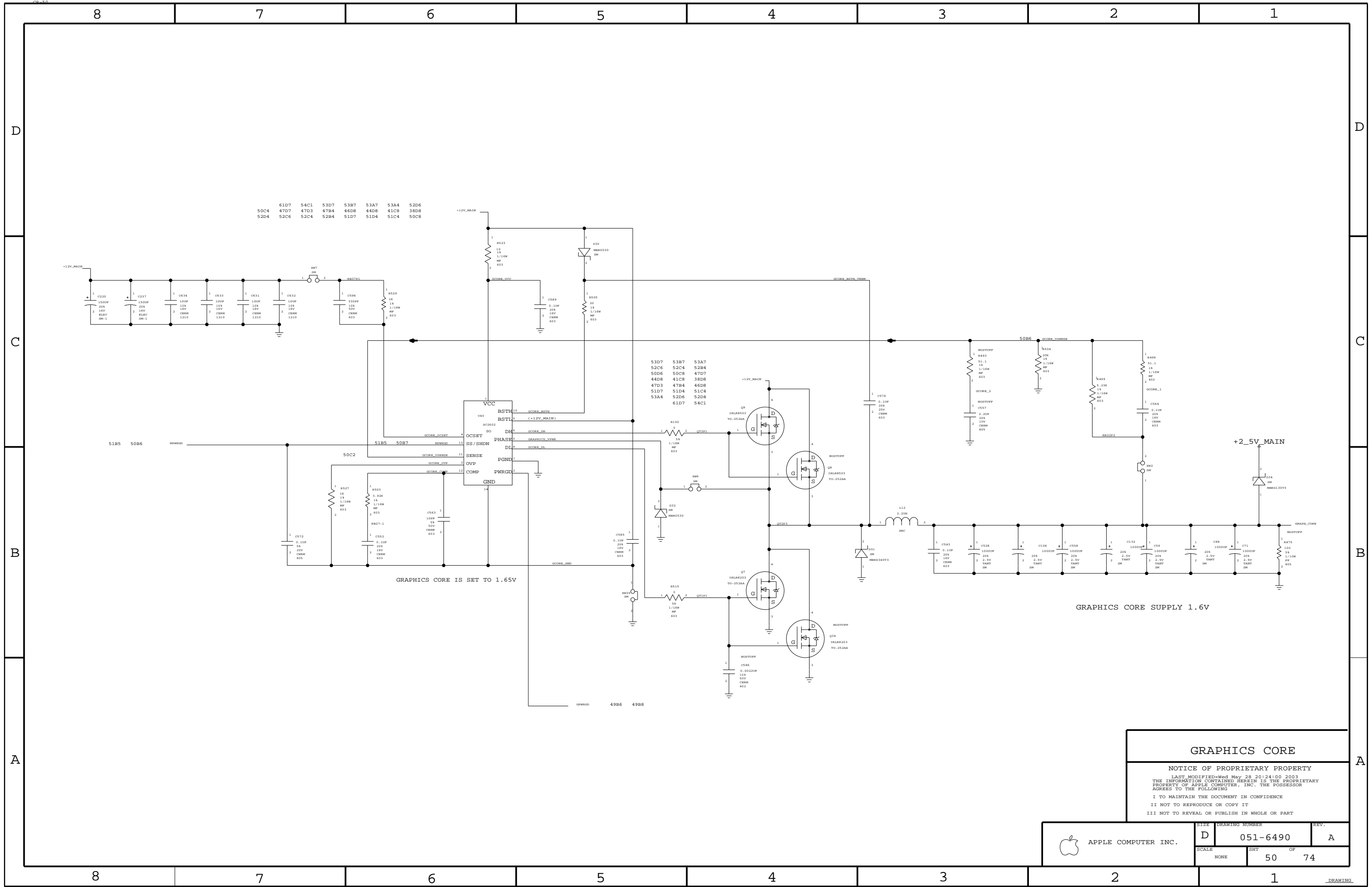


TABLES FOR INTREPID CORE RESISTOR VALUES TO VOLTAGES ARE LOCATED AT  
 KUMA SERVER(1):HARDWARE:KUMA DESIGNS;KUMA POWER SUPPLIES;ICORE R TOLERANCE

**INTREPID CORE**

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NONE	49	74	



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

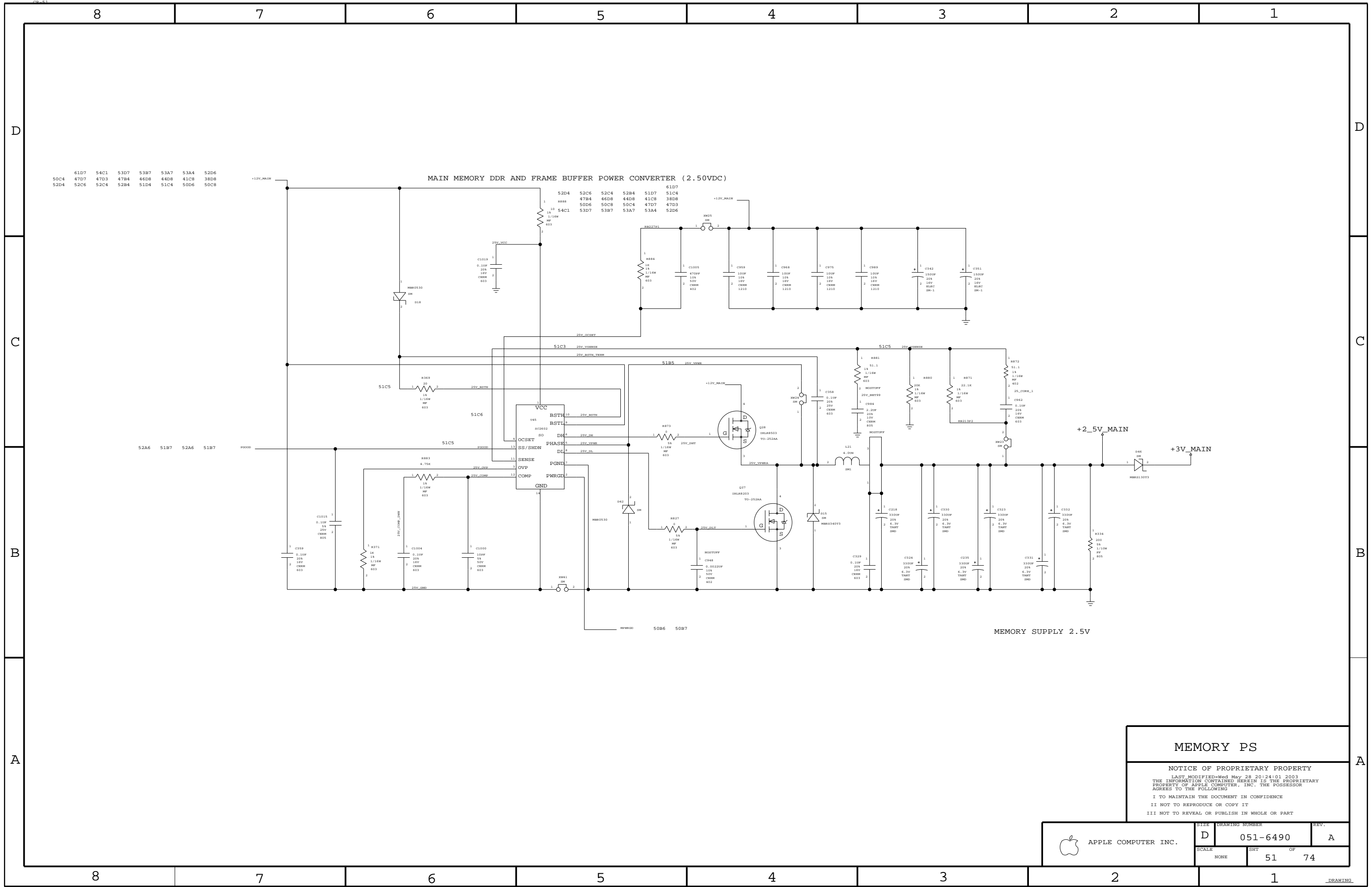
53D7 53B7 53A7  
 52C6 52C4 52B4  
 50D6 50C8 47D7  
 44D8 41C8 38D8  
 47D3 47B4 46D8  
 51D7 51D4 51C4  
 53A4 52D6 52D4  
 61D7 54C1

GRAPHICS CORE IS SET TO 1.65V

GRAPHICS CORE SUPPLY 1.6V

**GRAPHICS CORE**  
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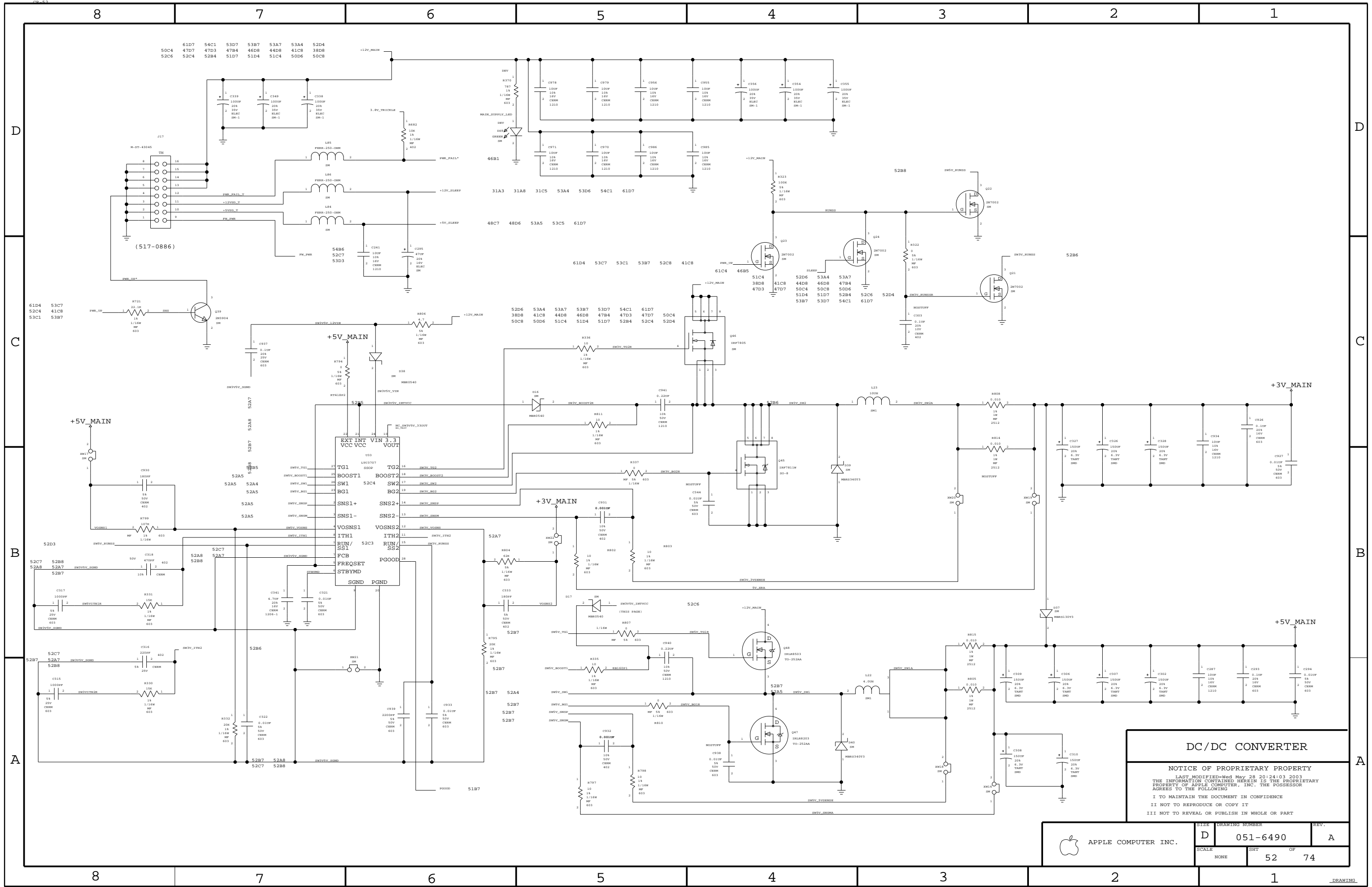
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NONE	50		74



**MEMORY PS**

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	SCALE NONE	SHEET <b>51</b>	OF <b>74</b>



**DC/DC CONVERTER**

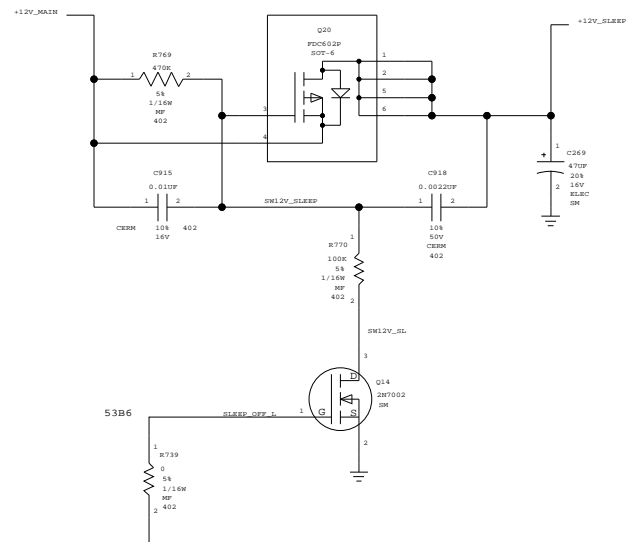
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D	DRAWING NUMBER <b>051-6490</b>	REV. <b>A</b>
SCALE NONE	SHEET 52	OF 74

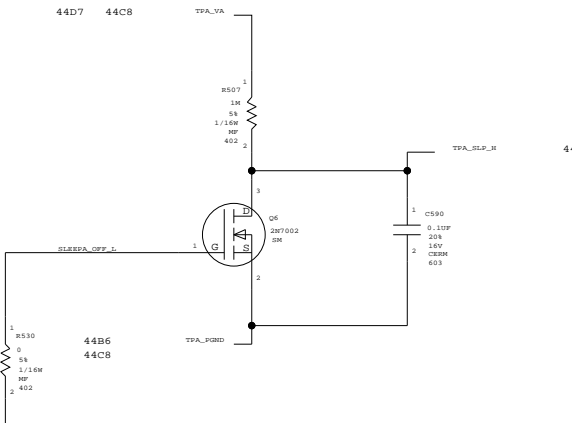


APPLE COMPUTER INC.

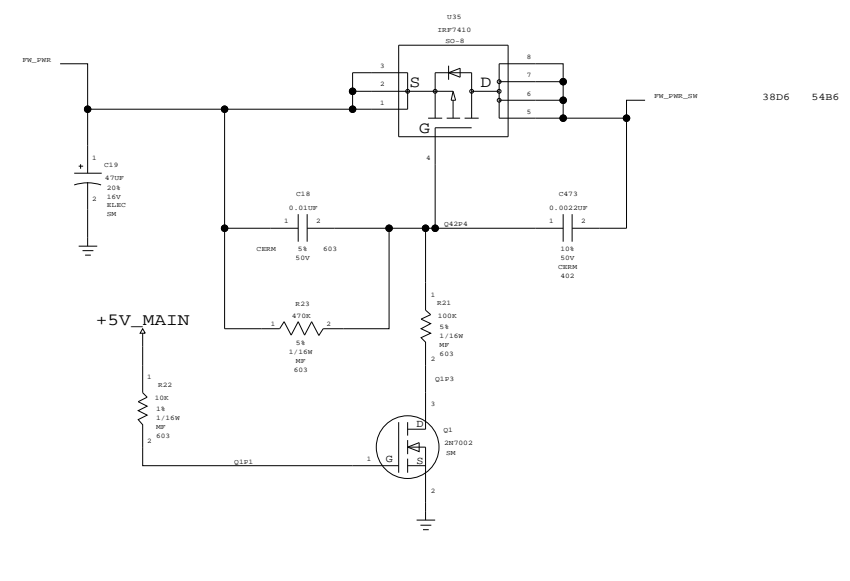
**+12V MAIN POWER SWITCH**  
(OFF DURING SLEEP)



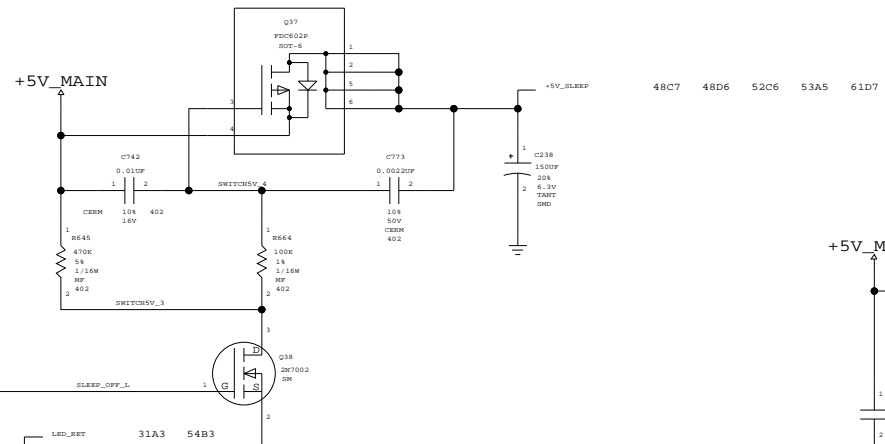
**AUDIO SLEEP SWITCH**  
(OFF DURING SLEEP)



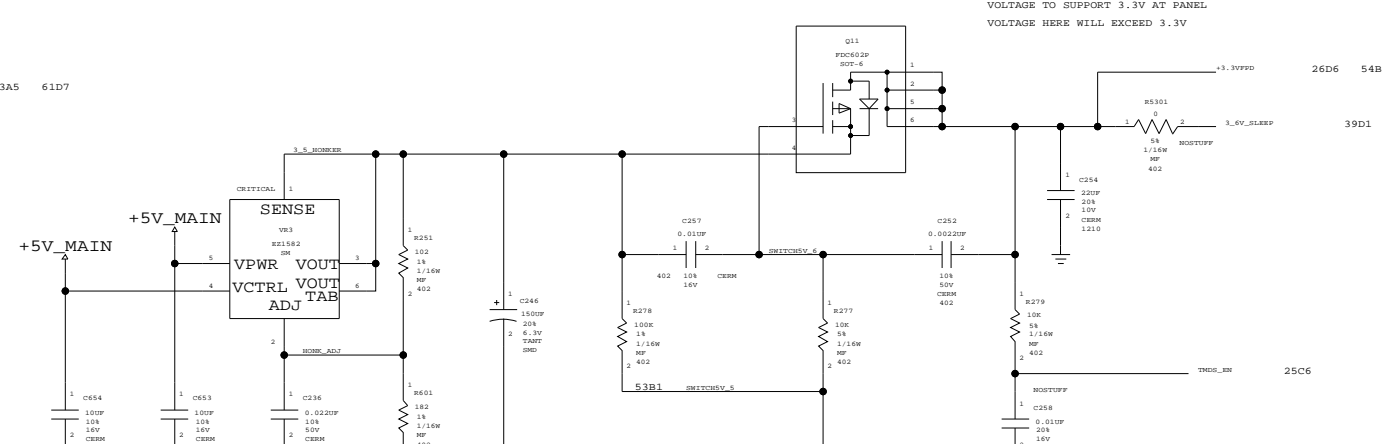
**FIREWIRE POWER SWITCH**



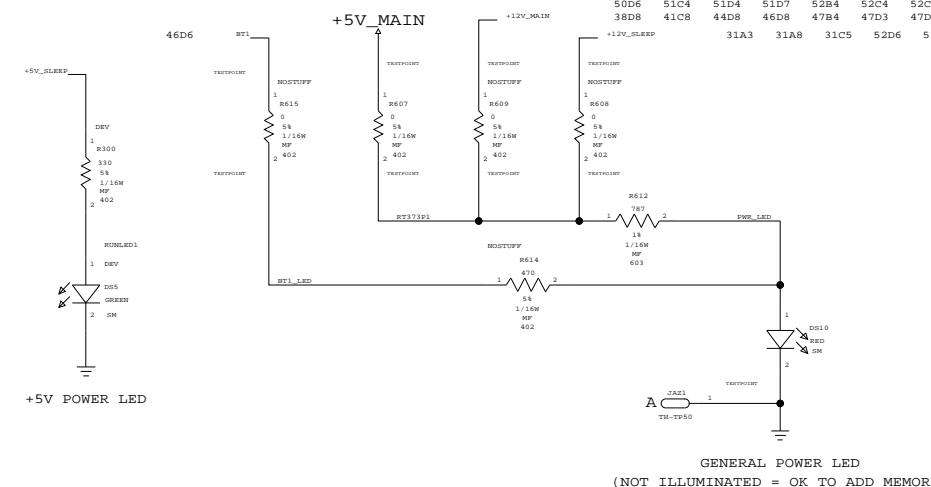
**+5V POWER SWITCH**  
(OFF DURING SLEEP)



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



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



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

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SCALE		SHT	OF
NONE		53	74

CLOCK POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+1_SV_DDR_AVDD	10	2.5	20
+2_SV_DDR_VDD	10	2.5	20
+3V_INTFS_VDD	10	3.3	20
+3V_INTFS_VDD	10	3.3	20
MPCK359_VDD12C	10	2.5	20

10D4  
10D5  
10B7  
10B6  
10D4

CPU POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+MAXRES_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
+1_SV_ERST	10	2.5	20

37C3 37D3 37D5

FIREWIRE POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
FW_SIG_V	10	3.3	20
FW_DISK_OFFPASS_V	10	3.3	20
FW_P0	10	24	20
FW_P0_SW	10	24	20
FW_P0T_3_3	10	3.3	20
FW_V0B0	10	0	20
FW_V0	10	12	20
FW_V01	10	12	20
FW_V02	10	12	20
FW_V0_1	10	12	20
FW_V0_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
+1_3VFPD	10	3.6	20
GPU_AVDD	10	3.3	20
GPU_VDD	10	3.3	20
GPU_VDD_3	10	3.3	20
GPU_VDD_5	10	5	20
GPU_VREF	10	1.25	20
GPU_VREF	10	3.8	20
GPU_VREF	10	3.8	20
GPU_VREF_V0	10	3.6	20
GPU_VREF_VREF	10	0.75	20
GPU_VREF_VREF	10	1.25	20
GPU_VREF_VREF	10	1.6	20
GPU_VREF_VREF	10	3.3	20
GPU_VREF_VREF	10	1.25	20
GPU_VREF_VREF	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_VREF_VREF	1.5	19A5
GPU_VREF_VREF	0	19A5
GPU_VREF_VREF	0	19A5
GPU_VREF_VREF	0	24B4
GPU_VREF_VREF	0	24D4
GPU_VREF_VREF	3.3	39B7
GPU_VREF_VREF	0	40C6
GPU_VREF_VREF	5	40C6
GPU_VREF_VREF	0	40C2
GPU_VREF_VREF	5	40C2

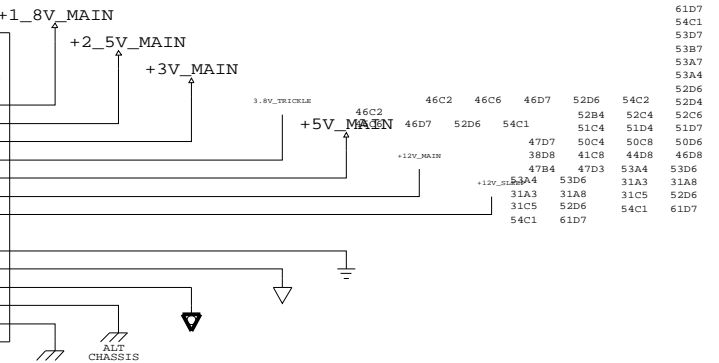
INTREPID POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
+1_SV_INTREPID_PLL	10	1.5	20
+1_SV_INTREPID_PLL1	10	1.5	20
+1_SV_INTREPID_PLL2	10	1.5	20
+1_SV_INTREPID_PLL3	10	1.5	20
+1_SV_INTREPID_PLL4	10	1.5	20
+1_SV_INTREPID_PLL5	10	1.5	20
+1_SV_INTREPID_PLL6	10	1.5	20
+1_SV_INTREPID_PLL7	10	1.5	20
+1_SV_INTREPID_PLL8	10	1.5	20
+1_SV_ADP	10	1.5	20
INT_ADP_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
GRD	10	0	20
AGND	10	0	20
ANALOG_GND	10	0	20
ALTO_GND	10	0	20
CHASSIS	10	0	20



PMU POWER CONSTRAINT TABLE

SIG_NAME	MIN_NECK_WIDTH	VOLTAGE	MIN_LINE_WIDTH
3_8V_TRICKLE	10	3.8	20
PMU_AVDD	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
+12V0_FILT	10	12	20
FAN_12V_FILT	10	12	20
ESVDD	10	5	20
L8D_V0	10	5	20
L8D_V0_FILT	10	5	20
L8D_VREF	10	0	20
L8D_VREF_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
USB_AVDD	10	3.3	20
USB_GND	10	0	20
USB_PORT_PEN	10	5	20
USB_PEN	10	5	20
USB_PEN_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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SCALE	NONE	SHEET	OF
		54	74



D  
C  
B  
A

D  
C  
B  
A

SIG_NAME	RATNEST_SCHEDULE	MATCHED_DELAY	MAX_VIAS	DELAY_RULE	STUB_LENGTH	NET_SPACING_TYPE	MAX_EXPOSED_LENGTH	DIFFERENTIAL_PAIR	PUNC_TEST	PULSE_PARAM
PCI_DEV0_S	MIN_DAISSY_CHAIN		6	::6000:8000	500					33 MHZ
PCI_DEV1_S	MIN_DAISSY_CHAIN		6	::6000:8000	500					33 MHZ
PCI_DEV2_S	MIN_DAISSY_CHAIN		6	::6000:8000	500					33 MHZ
PCI_DEV3_S	MIN_DAISSY_CHAIN		6	::6000:8000	500					33 MHZ
PCI_STOP_S	MIN_DAISSY_CHAIN		6	::6000:8000	500					33 MHZ
CLK33M_PCI_SLOT0_UP			3	::600:1000	200		450			33 MHZ
CLK33M_PCI_SLOT1_UP			3	::600:1200	200		450			33 MHZ
CLK33M_PCI_SLOT2_UP			3	::600:1000	200		450			33 MHZ
CLK33M_PCI_SLOT3_UP			5	::3000:4000	200	10 MIL SPACING	450			33 MHZ
INT_PCI_FB_OUT			4	::1:1000	200		450			33 MHZ
PCI_FB0_FB00			4	::1:200	200		450			33 MHZ
PCI_FB1_FB04			4	::1900:2000			450			33 MHZ
PCI_FB2_FB08			4	::1900:2000	200		450			33 MHZ
PCI_FB3_FB0C			4	::2000:3000	200		450			33 MHZ
PCI_FB4_FB0F			4	::5900:6000			450			33 MHZ
INT_PCI_FB_IN			4	::1:1080	200		450			33 MHZ
PCIY_AD<31..0>			3	::1:1000						33 MHZ
PCIY_CBE<31..0>			3	::1:1000						33 MHZ
PCIY_FRAME_S			3	::1:1000						33 MHZ
PCIY_TRDY_S			3	::1:1000						33 MHZ
PCIY_DEVSEL_S			3	::1:1000						33 MHZ
PCIY_STOP_S			3	::1:1000						33 MHZ
PCIY_FAB			3	::1:1000						33 MHZ
AGP_AD<0..15>	AGP_GROUP0:::280		5	::1:4500						266 MHZ
AGP_CBE<0..15>	AGP_GROUP0:::330		5	::1:4500						266 MHZ
AGP_AD_STB<0>	AGP_GROUP0:::330		4	::1:4400	200	8 MIL SPACING	500	AGP_ADSTB0P0		133 MHZ
AGP_AD_STB<1>	AGP_GROUP0:::330		4	::1:4400	200	8 MIL SPACING	500	AGP_ADSTB0P0		133 MHZ
AGP_AD<16..31>	AGP_GROUP0:::280		5	::1:4500						266 MHZ
AGP_CBE<2..31>	AGP_GROUP0:::280		5	::1:4500						266 MHZ
AGP_AD_STB<16>	AGP_GROUP0:::280		4	::1:4400	200	8 MIL SPACING	500	AGP_ADSTB0P1		133 MHZ
AGP_AD_STB<17>	AGP_GROUP0:::330		4	::1:4400	200	8 MIL SPACING	500	AGP_ADSTB0P1		133 MHZ
AGP_FRAME_S			5	::4000:4500						66 MHZ
AGP_TRDY_S			5	::4000:4500						66 MHZ
AGP_DEVSEL_S			5	::4000:4500						66 MHZ
AGP_STOP_S			5	::4000:4500						66 MHZ
AGP_FAB			5	::4000:4500						66 MHZ
AGP_SBA<0..7>			5	::4000:4500						66 MHZ
AGP_SB_STB0	AGP_GROUP99:::200		5	::1:4500				AGP_SBSTB0		66 MHZ
AGP_SB_STB1	AGP_GROUP99:::200		5	::1:4500				AGP_SBSTB0		66 MHZ
AGP_ST<0..2>			5	::4500:5000						66 MHZ
AGP_FIF0_S			5	::4000:4500						66 MHZ
AGP_FIF1_S			5	::4000:4500						66 MHZ
AGP_REQ_S			5	::4500:5000						66 MHZ
AGP_OUT_S			5	::4500:5000						66 MHZ
AGP_BSY_S			5	::4000:4500						66 MHZ
AGP_BSY_S			5	::4500:5000						66 MHZ
STOP_AGP_S			5	::4500:5000						66 MHZ
GPU_AGP_AD<0..15>	GPU_AGP_GROUP0:::100		3	::1:600						266 MHZ
GPU_AGP_CBE<0..15>	GPU_AGP_GROUP0:::100		3	::1:600						266 MHZ
GPU_AD_STB<GPU0>	GPU_AGP_STB0:::150		3	::1:450		8 MIL SPACING	500	GPU_ADSTB0P0		133 MHZ
GPU_AD_STB<GPU1>	GPU_AGP_STB0:::150		3	::1:800		8 MIL SPACING	500	GPU_ADSTB0P0		133 MHZ
GPU_AGP_AD<16..31>	GPU_AGP_GROUP1:::100		3	::1:600						266 MHZ
GPU_AGP_CBE<2..31>	GPU_AGP_GROUP1:::100		3	::1:600						266 MHZ
GPU_AD_STB<GPU16>	GPU_AGP_STB1:::150		3	::1:800		8 MIL SPACING	500	GPU_ADSTB0P1		133 MHZ
GPU_AD_STB<GPU17>	GPU_AGP_STB1:::150		3	::1:800		8 MIL SPACING	500	GPU_ADSTB0P1		133 MHZ
GPU_AGP_FRAME_S			3	::1:300:600						66 MHZ
GPU_AGP_TRDY_S			3	::1:300:600						66 MHZ
GPU_AGP_DEVSEL_S			3	::1:300:600						66 MHZ
GPU_AGP_STOP_S			3	::1:300:600						66 MHZ
GPU_AGP_FAB			3	::1:300:600						66 MHZ
GPU_AGP_SBA<0..7>			3	::1:300:600						66 MHZ
GPU_AGP_SB_STB0	GPU_AGP_SBSTB:::150		3	::1:300:600				GPU_SBSTB0		66 MHZ
GPU_AGP_SB_STB1	GPU_AGP_SBSTB:::150		3	::1:300:600				GPU_SBSTB0		66 MHZ
GPU_AGP_FIF0_S			3	::1:300:600						66 MHZ
GPU_AGP_FIF1_S			3	::1:300:600						66 MHZ
CLK66M_GPU_AGP			4	::3700:3900	200	10 MIL SPACING	250			66 MHZ
INT_AGP_FB_OUT			4	::1400:1500	200		250			66 MHZ
AGP_FB0_FB00			4	::900:1080	200		250			66 MHZ
AGP_FB1_FB04			4	::1900:2000			250			66 MHZ
AGP_FB2_FB08			4	::1:200	200		250			66 MHZ
AGP_FB3_FB0C			4	::1:200	200		250			66 MHZ
INT_AGP_FB_IN			4	::1:200	200		250			66 MHZ
INT_NOM_OVERLAY_PU			3	::600:800		10 MIL SPACING	250			66 MHZ
INT_ANALYZER_CLK			2	::1:2800		8 MIL SPACING	250			66 MHZ
CLK33M_PCI_SLOT0			4	::3000:3500	200	8 MIL SPACING	250			33 MHZ

**SIGNAL CONSTRAINTS**

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SCALE	SHT		OF
NONE	56	74	




DIGITAL SIGNALS

SIG_NAME	MATCHED_DELAY	MAX_VIA	DELAY_RULE	STUCL_LENGTH	NET_SPACING_TYPE	MAX_EXPOSED_LENGTH	PULSE_PARAM	GROUP
GPU_FBDATA_A:::225	GPU_FBDATA_A:::225	4	:::800				300 MHZ	20E8 20F8 20G8 21C5 21C8 21D5 21D8
RAM_FBDATA_A:::300	RAM_FBDATA_A:::300	4	:::1000				300 MHZ	21C4 21C7 21D4 21D7 22B1 22B5 22C1 22C5
GPU_FBDQM_A:::200	GPU_FBDQM_A:::200	4	:::800				300 MHZ	20D8 20G3
RAM_FBDQM_A:::200	RAM_FBDQM_A:::200	4	:::1000				300 MHZ	20G2 22C2 22C6
GPU_FBADDR_A:::200	GPU_FBADDR_A:::200	4	:::700				300 MHZ	20C8 20D8 20E3 20F3
RAM_FBADDR_A:::530	RAM_FBADDR_A:::530	5	:::2400	2350			300 MHZ	20E2 20F2 22C2 22C6 22D2 22D6
GPU_FBADDR_A:::200	GPU_FBADDR_A:::200	4	:::700				300 MHZ	20C8 20E3
RAM_FBADDR_A:::530	RAM_FBADDR_A:::530	5	:::2400	50			300 MHZ	20E2 22C2 22C6
GPU_FBCNTL_A:::200	GPU_FBCNTL_A:::200	4	:::400				300 MHZ	20C8 20G3
GPU_FBCNTL_A:::200	GPU_FBCNTL_A:::200	4	:::400				300 MHZ	20C8 20G3
GPU_FBCNTL_A:::200	GPU_FBCNTL_A:::200	4	:::400				300 MHZ	20C8 20F3
GPU_FBCNTL_A:::200	GPU_FBCNTL_A:::200	4	:::400				300 MHZ	20C9 20F3
GPU_FBCNTL_A:::200	GPU_FBCNTL_A:::200	5	:::400	100			300 MHZ	20D3 20D7
RAM_FBCNTL_A:::350	RAM_FBCNTL_A:::350	5	:::2700	50			300 MHZ	20G2 22B2 22B6
RAM_FBCNTL_A:::500	RAM_FBCNTL_A:::500	5	:::2700	50			300 MHZ	20G2 22B2 22B6
RAM_FBCNTL_A:::500	RAM_FBCNTL_A:::500	5	:::2700	50			300 MHZ	20F2 22B2 22B6
RAM_FBCNTL_A:::350	RAM_FBCNTL_A:::350	5	:::2700	50			300 MHZ	20F2 22B2 22B6
RAM_FBCNTL_A:::500	RAM_FBCNTL_A:::500	5	:::2700	50			300 MHZ	20F2 22B2 22B6
GPU_FBDQS_A:::100	GPU_FBDQS_A:::100	3	:::1350				300 MHZ	20D2 22C2 22C6
FB_DQSTERM_A:::150	FB_DQSTERM_A:::150	3	:::1500		10 MIL SPACING		300 MHZ	20C7 21A8
RAM_FBDQS_A:::155	RAM_FBDQS_A:::155	3	:::150		10 MIL SPACING		300 MHZ	21A7
GPU_FBCLK_A:::50	GPU_FBCLK_A:::50	3	:::150			200	300 MHZ	21A6 22C2 22C6
GPU_FBCLK_A:::50	GPU_FBCLK_A:::50	3	:::150			200	300 MHZ	20D7 21C3
GPU_FBCLK_A:::50	GPU_FBCLK_A:::50	3	:::150			200	300 MHZ	20D7 21C3
GPU_FBCLK_A:::50	GPU_FBCLK_A:::50	3	:::150			200	300 MHZ	20D7 21D3
RAM_FBCLK_A:::80	RAM_FBCLK_A:::80	3	:::2500			200	300 MHZ	21D1 22C2
RAM_FBCLK_A:::80	RAM_FBCLK_A:::80	3	:::2500			200	300 MHZ	21D1 22C2
RAM_FBCLK_A:::70	RAM_FBCLK_A:::70	3	:::2500			200	300 MHZ	21C1 22C6
RAM_FBCLK_A:::70	RAM_FBCLK_A:::70	3	:::2500			200	300 MHZ	21C1 22C6
GPU_FBDATA_B:::225	GPU_FBDATA_B:::225	4	:::800				300 MHZ	20E5 20F5 20G5 21B5 21B8 21C5 21C8
RAM_FBDATA_B:::325	RAM_FBDATA_B:::325	4	:::1000				300 MHZ	21B4 21B7 21C4 21C7 23B1 23B5 23C1 23C5
GPU_FBDQM_B:::120	GPU_FBDQM_B:::120	4	:::800				300 MHZ	20C3 20D3 20D5
RAM_FBDQM_B:::120	RAM_FBDQM_B:::120	4	:::1000				300 MHZ	20C2 20D2 23C2 23C6
GPU_FBADDR_B:::120	GPU_FBADDR_B:::120	4	:::600				300 MHZ	20A3 20B3 20C3 20C5 20D5
RAM_FBADDR_B:::370	RAM_FBADDR_B:::370	5	:::2400	50			300 MHZ	20B2 20C2 23C2 23C6 23D2 23D6
GPU_FBADDR_B:::120	GPU_FBADDR_B:::120	4	:::600				300 MHZ	20A3 20C5
RAM_FBADDR_B:::370	RAM_FBADDR_B:::370	5	:::2400	50			300 MHZ	20A2 23C2 23C6
GPU_FBCNTL_B:::120	GPU_FBCNTL_B:::120	4	:::400				300 MHZ	20C3 20D4
GPU_FBCNTL_B:::120	GPU_FBCNTL_B:::120	4	:::400				300 MHZ	20C3 20D4
GPU_FBCNTL_B:::120	GPU_FBCNTL_B:::120	4	:::400				300 MHZ	20C3 20D4
GPU_FBCNTL_B:::120	GPU_FBCNTL_B:::120	4	:::400				300 MHZ	20C3 20D4
GPU_FBCNTL_B:::120	GPU_FBCNTL_B:::120	5	:::400	100			300 MHZ	20C3 20C4
RAM_FBCNTL_B:::2000	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20A3 20C4
RAM_FBCNTL_B:::2000	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20C2 23B2 23B6
RAM_FBCNTL_B:::2000	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20C2 23B2 23B6
RAM_FBCNTL_B:::2000	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20C2 23B2 23B6
RAM_FBCNTL_B:::2000	RAM_FBCNTL_B:::2000	5	:::3500	3550			300 MHZ	20C2 23B2 23B6
GPU_FBDQS_B:::100	GPU_FBDQS_B:::100	3	:::1350		10 MIL SPACING		300 MHZ	20A2 23C2 23C6
FB_DQSTERM_B:::160	FB_DQSTERM_B:::160	3	:::1500		10 MIL SPACING		300 MHZ	20D4 21A5
RAM_FBDQS_B:::50	RAM_FBDQS_B:::50	3	:::150		10 MIL SPACING		300 MHZ	21A3 23C2 23C6
GPU_FBCLK_B:::50	GPU_FBCLK_B:::50	3	:::150			200	300 MHZ	20C5 21B3
GPU_FBCLK_B:::50	GPU_FBCLK_B:::50	3	:::150			200	300 MHZ	20C5 21B3
GPU_FBCLK_B:::50	GPU_FBCLK_B:::50	3	:::150			200	300 MHZ	20C5 21C3
RAM_FBCLK_B:::90	RAM_FBCLK_B:::90	4	:::2500			200	300 MHZ	20C5 21B3
RAM_FBCLK_B:::90	RAM_FBCLK_B:::90	3	:::2500			200	300 MHZ	21C1 23C2
RAM_FBCLK_B:::90	RAM_FBCLK_B:::90	3	:::2500			200	300 MHZ	21B1 23C2
RAM_FBCLK_B:::90	RAM_FBCLK_B:::90	3	:::2500			200	300 MHZ	21B1 23C6
RAM_FBCLK_B:::90	RAM_FBCLK_B:::90	3	:::2500			200	300 MHZ	21B1 23C6

**SIGNAL CONSTRAINTS**

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	D	051-6490	A
SCALE	SHEET		OF
NONE	57		74

D

C

B

A

DIGITAL SIGNALS

GROUP	SIG_NAME	MATCHES_DELAY	MAX_VIAS	DELAY_RULE	STUB_LENGTH	NET_SPACING_TYPE	NET_TEST	PULSE_PARAM	MAX_LENGTH_LIMIT													
MAXBUS	CPH_ADDR_G_31*	CPU_ADDR_GROUP:::1250	7	:::5000	250			166 MHZ		4B7	4C7	9B7	9B8	9C5	9C6	9C7	9C8	11C3	11D3	11D8		
	CPH_DATA_G_63*	CPU_DATA_GROUP:::1400	7	:::5000	1550			166 MHZ		5A4	5B4	5C4	5D4	9C5	9C6	9C7	9C8	9D5	9D6	9D7	9D8	
	CPH_B_L	CPU_CNTL_GROUP:::1100	7	:::5000	250	10 MIL SPACING		166 MHZ		4D7	7C7	9C5	11D3	11B1	11B5	11B8	11C1	11C5	11D1	11D5		
	CPH_B_L	CPU_CNTL_GROUP:::1100	7	:::5000	250	10 MIL SPACING		166 MHZ		4D7	7B7	9B5	11D3									
	CPH_C_L	CPU_CNTL_GROUP:::1000	7	:::5000	250	10 MIL SPACING		166 MHZ		4D7	7C7	9C7	11D3									
	CPH_C_L	CPU_CNTL_GROUP:::1300	7	:::5000	250	10 MIL SPACING		166 MHZ		4B7	7A7	9B5	9B6	9C5	9C6	11B3						
	CPH_D_L	CPU_CNTL_GROUP:::1100	7	:::5000	250	10 MIL SPACING		166 MHZ		4B7	7B7	9B5	11B3									
	CPH_E_L	CPU_CNTL_GROUP:::1260	7	:::5000	250	10 MIL SPACING		166 MHZ		4B7	9B6	9B7	9C6	11B3								
	CPH_F_L	CPU_CNTL_GROUP:::1000	7	:::5000	250	10 MIL SPACING		166 MHZ		4A7	7C7	9B8	11B3									
	CPH_G_L	CPU_CNTL_GROUP:::1000	7	:::5000	250	10 MIL SPACING		166 MHZ		4A7	7B7	9B6	11B3									
	CPH_H_L	CPU_CNTL_GROUP:::1000	3	:::1000	250	10 MIL SPACING		166 MHZ		4B8	9B6											
	CPH_I_L	CPU_CNTL_GROUP:::1100	6	:::3500	250	10 MIL SPACING		166 MHZ		4B8	7B7	11C3										
	CPH_J_L	CPU_CNTL_GROUP:::1000	7	:::5000	250	10 MIL SPACING		166 MHZ		4A7	7A7	9C6	11C3									
	CPH_K_L	CPU_CNTL_GROUP:::1000	7	:::5000	250	10 MIL SPACING		166 MHZ		4A7	7C7	9B8	11B3									
	CPH_L_L	CPU_CNTL_GROUP:::1000	7	:::3500	250	10 MIL SPACING		166 MHZ		4C3	7B7	9C8	11B1									
	CPH_M_L	CPU_CNTL_GROUP:::1100	5	:::500	250	10 MIL SPACING		166 MHZ		4C2	7B7	9B6	11B1									
	CPH_N_L	CPU_CNTL_GROUP:::1000	7	:::5000	250	10 MIL SPACING		166 MHZ		4B7	7A7	9B6	11B3									
	CPH_O_L	CPU_CNTL_GROUP:::1000	2	:::5000	250	10 MIL SPACING		166 MHZ		4C3												
	CPH_P_L	CPU_CNTL_GROUP:::1150	7	:::5000	250	10 MIL SPACING		166 MHZ		4C3	9B5	9B7	11A1									
	CPH_Q_L	CPU_CNTL_GROUP:::1100	7	:::5000	250	10 MIL SPACING		166 MHZ		4C3	7C7	9C5	11A1									
	CPH_R_L	CPU_CNTL_GROUP:::1100	7	:::5000	250	10 MIL SPACING		166 MHZ		4C3	7B7	9C6	11A1									
	CPH_S_L	CPU_CNTL_GROUP:::1000	7	:::5000	250	10 MIL SPACING		166 MHZ		4C3	7D5	9B7	11B3									
	CPH_T_L	CPU_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3										
	CPH_U_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3										
	CPH_V_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3										
	CPH_W_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3										
	CPH_X_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3										
	CPH_Y_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3										
	CPH_Z_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3										
	CPH_AA_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3										
CPH_AB_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AC_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AD_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AE_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AF_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AG_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AH_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AI_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AJ_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AK_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AL_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AM_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AN_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AO_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AP_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AQ_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AR_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AS_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AT_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AU_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AV_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AW_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AX_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AY_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_AZ_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BA_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BB_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BC_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BD_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BE_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BF_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BG_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BH_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BI_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BJ_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BK_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BL_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BM_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BN_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		166 MHZ		4C3	9B5	11B3											
CPH_BO_L	CPH_CNTL_GROUP:::1000	8	:::4000	250	10 MIL SPACING		1															



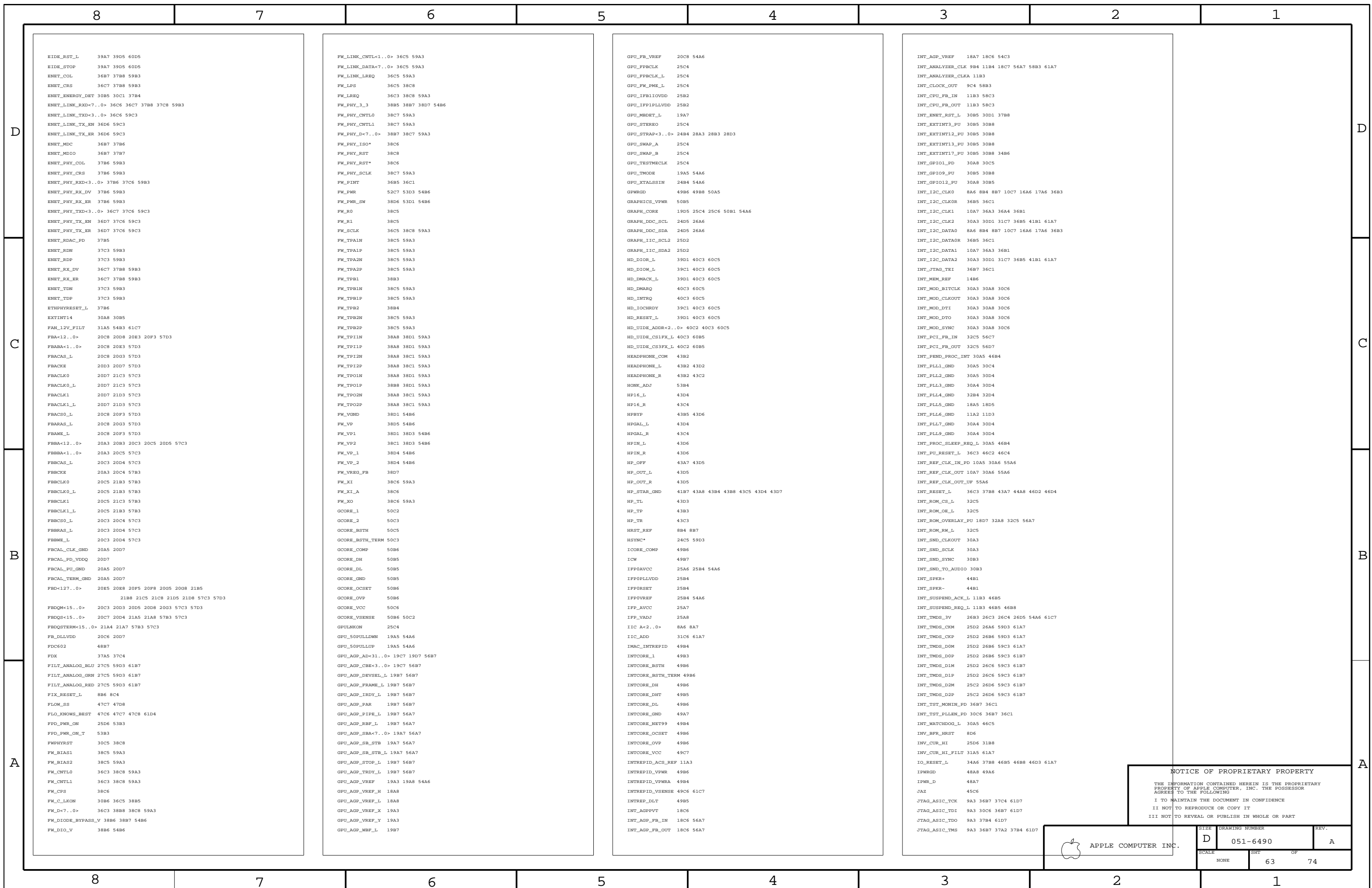




	8	7	6	5	4	3	2	1	
D	<pre> *** Signal Cross-Reference *** --- for the entire design ---  +1_5V_AGP      12D6 13C8 18A8 18C2 18D7 19A4 19D5               48B4 54C3 61C7 +1_5V_INTREPID_PLL1 11D3 18D6 30D6 32D5 54D3 +1_5V_INTREPID_PLL2 30C4 54D3 +1_5V_INTREPID_PLL3 30D4 54D3 +1_5V_INTREPID_PLL4 30D4 54D3 +1_5V_INTREPID_PLL5 18D5 54D3 +1_5V_INTREPID_PLL6 32D4 54D3 +1_5V_INTREPID_PLL7 11D2 54D3 +1_5V_INTREPID_PLL8 30D4 54D3 +1_8V_MAIN     54C4 61D7 +2_5V_ENET     37C3 37D3 37D5 54C6 +2_5V_DDR_AVDD 10D4 54D6 +2_5V_DDR_VDD  10D5 54D6 +2_5V_MAIN     32A3 54C4 61D7 +3_3VFPD      26D6 53C1 54B6 +3V_AUDIO     41D2 41D6 41D7 42C3 45C2 45D5 +3V_INTREPID_USB 30C4 54A3 +3V_INTSS_AVDD 10B7 54D6 +3V_INTSS_VDD  10B6 54D6 +3V_MAIN      41D4 42D5 43A5 43A7 44A7 44D4 54C4               61D7 +5VSD_T       52D7 +5V_AUDIO     41C6 41D7 43B8 +5V_HP        43A8 43B7 43D5 +5V_MAIN      54C4 61D7 +5V_SLEEP     48C7 48D6 52C6 53A5 53C5 61D7 +12VSD_FILT   31A5 54B3 +12VSD_T      52D7 +12V_DROPPED  46D8 +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 +12V_SLEEP   31A3 31A8 31C5 52D6 53A4 53D6 54C1               61D7 +12V_SLEEPA  61D7 +INTREPID_CORE_MAIN 12D6 13D4 48B3 49B2 61C7 +MAXBUS_SLEEP 4D5 6D8 7A3 7B3 7C3 7C5 7C7 8D3 9B2               9D2 9D4 11B8 11D8 46B7 46D1 46D2               47D2 48D4 54C6 61C7  3_8VH_TRICKLE 46C1 46D7 54B3 3_8V_TRICKLE  46C2 46C6 46D7 52D6 54C1 54C2 3_5_HONKER    53C4 3_6V_SLEEP   39D1 53C1 5V_USB_FUSED 35A7 5V_XRA       52B4 25V_BSTH     51C5 51C6 25V_BSTH_TERM 51C5 25V_COMP     51B6 25V_COMP_DWN 51B6 25V_DH       51B5 25V_DHT      51B5 25V_DL       51B5 25V_DLT      51B4 25V_GND      51B6 25V_NET99    51C3 25V_OCSET   51C5 25V_OVP     51B6 25V_VCC     51C6 25V_VPWR    51B5 51C5 25V_VPWRA   51B4 25V_VSENSE  51C3 51C5 25_CORE_1   51C3 33PCI_SLOTD_SERR_L 34B6 33SLOTB_INT_L 30B7 33C2 61A4 2059_IIC_CLK 10C5 2059_IIC_DAT 10C5 A0_IIC_MCK  10A4 10C5 A1_IIC_MCK  10A4 10C5 AGND        54C4 AGPIO_VPWR  48B6 AGP_AD&lt;31..0&gt; 18B4 18C4 19C8 19D8 56C7 AGP_AD_STB&lt;1..0&gt; 18A4 18B3 19B8 56C7 AGP_AD_STB_GPUUF&lt;1..0&gt; 19B7 56B7 AGP_AD_STB_L&lt;1..0&gt; 18A4 18D1 19B8 56C7 AGP_AD_STB_L_GPUUF&lt;1..0&gt; 19B7 56B7 </pre>		<pre> AGP_BUSY_L    18C6 18D1 18D3 19A8 56B7 AGP_CBE&lt;3..0&gt; 18B4 19C8 56C7 AGP_DEVSEL_L  18B4 18C3 19B8 56C7 AGP_FBI_EQUAL 18C7 56A7 AGP_FBO_EQUAL 18B7 56A7 AGP_FB_PLUS2  18B8 56A7 AGP_FRAME_L   18B4 18C3 19B8 56C7 AGP_GNT_L     18C3 18C4 19B7 56B7 AGP_INT_L     19B7 30B5 30B8 AGP_IRDY_L    18B4 18C3 19B8 56C7 AGP_PAR       18B4 19B8 56B7 AGP_PIPE_L    18A4 18B3 19B8 56B7 AGP_PILLVDD  19C5 AGP_RBF_L     18A4 18B3 19B8 56B7 AGP_REQ_L     18C3 18C4 19B7 56B7 AGP_RESET_L   19C7 46D3 AGP_SBA&lt;7..0&gt; 18A4 18B1 18B4 18C1 19A8 56B7 AGP_SB_STB    18A4 18B3 19A8 56B7 AGP_SB_STB_L  18A4 18D1 19A8 56B7 AGP_ST&lt;2..0&gt; 18A4 18B1 19B7 56B7 AGP_STOP_L    18B3 18B4 19B8 56C7 AGP_TRDY_L    18B3 18B4 19B8 56C7 AGP_WBF_L     18A6 18B1 19B8 56B7 AINLM        41C4 AINLP        41C4 AINRM        41C4 AINRP        41C4 ALTCHGND     54C4 AMPBIAS      44B6 AMPDC1       44B6 AMPDC2       44B6 AMPFAULT     44B6 44B8 AMPUMP       44B6 AMPREF       44B6 ANALOG_GND   54C4 ANALOG_BLU   24C5 24C8 27C6 59D3 ANALOG_GRN   24C5 24C8 27C6 59D3 ANALOG_HSYN* 24C8 27C4 27D6 28B5 59D3 61B7 ANALOG_RED   24C5 24C8 27B6 59D3 ANALOG_VSYN* 24C8 27C6 28B5 59D3 61B7 ANEN         37C4 AOUTL        41C1 43D7 44B8 AOUTR        41C1 43C7 44C8 ASH          45B6 AUDIO_SPKR_ID_B 44C4 AUDIO_TO_SND 30B2 30B3 41C1 AUDAMP_5V    44B8 44C6 AUD_R_FB     41D6 BB_MISO      8B4 8B6 BB_MOSI      8B4 8B5 8B6 BB_SCK       8B4 8B6 BFR_HRESET_L 8B4 8C6 BRCLKO       30A5 BRE          47C5 BRE_1        47B5 BT1          46D6 53A5 BT1_LED      53A5 BT_USB_DM    30B2 31D3 60A5 61B4 BT_USB_DP    30B2 31D3 60B5 61B4 C412P1       43B3 C756_2       42D3 C4237P2      42C4 C4240P2      42C4 C4242P2      42B4 C4243P2      42B4 CAP_PLL      41B4 CD_CS1FX_L   40C6 60C5 CD_CS3FX_L   40C6 60C5 CD_DMACK_L   39D4 40C6 60D5 CD_DMARQ     40C6 60D5 CD_DSTB_RDY  39C4 40C6 60D5 CD_EIDE_ADDR&lt;2..0&gt; 40C6 60C5 CD_HSTR_RDY  39C4 40C6 60D5 CD_RESET_L   39D4 40C6 60D5 CD_STOP      39D4 40C6 60D5 CHGND        54C4 CLK18M_INT_EXT 30B6 CLK18M_INT_XIN 30A5 CLK18M_INT_XO 30A6 CLK18M_INT_XOUT 30A5 CLK25M_ENET_XIN 37B6 59B3 </pre>		<pre> CLK25M_ENET_XOUT 37B6 59B3 CLK33M_PCI_SLOTB 32D7 33C2 56D7 61A4 CLK33M_PCI_SLOTB_UP 32C5 56D7 CLK33M_PCI_SLOTC_UP 32C5 56D7 CLK33M_PCI_SLOTD 32D7 34A6 56A7 CLK33M_PCI_SLOTD_UP 32C5 56D7 CLK66M_GPU_AGP 18D8 19C7 56A7 CLK66M_GPU_UP 18C6 56A7 CLKENET_LINK_GBE_REF 36C6 CLKENET_LINK_RX 36C7 37C8 59C3 CLKENET_LINK_TX 36D7 37C8 59C3 CLKENET_PHY_RX 37C6 59C3 CLKENET_PHY_TX 37C6 59C3 CLKFW_LINK_LCLK 36C5 CLKGEN_OUT_1 10A6 55A6 CLK18M_INT_XOUT 60B5 COLE         48C7 COMM_DTR_L   30C3 31C7 61C4 COMM_GPIO_L  30C3 30D2 31C5 61C4 COMM_RESET_L 30C5 31D5 61A7 COMM_RING_DET_L 30B5 30B8 31C5 46C5 61D4 COMM_RTS_L   30C3 31D5 61C4 COMM_RXD     30C3 31C5 61C4 COMM_SHUTDOWN 30C5 30D1 31D7 61D4 COMM_TRXC    30C3 30D2 31C7 61C4 COMM_TXD_L   30C3 31C7 61C4 CORE_MOSFET  47C4 47C6 CORE_MOSFET_1 47B5 47C7 CPU_AACK_L    4A7 7B7 9B6 11B3 58C3 CPU_ADDR&lt;31..0&gt; 4B7 4C7 9B7 9B8 9C5 9C6 9C7 9C8               11C3 11D3 58D3 CPU_ARTRY_L   4A7 7C7 9B8 11B3 58C3 CPU_AVDD     4D3 54C6 CPU_BG_L     4D7 7B7 9B5 11D3 58D3 CPU_BR_L     4D7 7C7 9C5 11D3 58D3 CPU_BUS_VSEL 4D3 7C4 CPU_CHKSTP_IN_L 4B3 7B5 61C7 CPU_CHKSTP_OUT_L 4B3 7B5 9A2 9D6 61C7 CPU_C1_L     4A7 7A7 9C6 11C3 58C3 CPU_CLK_EN   11A3 46C4 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 CPU_DBG_L    4C3 7B7 9C8 11B1 58C3 CPU_DRDY_L   4C2 7B7 9B6 11B1 58C3 CPU_DRDY_L_UP 4C3 58C3 CPU_DTI&lt;2..0&gt; 4C3 9B5 9B7 11A1 58C3 CPU_EDTI     4C3 7C5 CPU_EMODE0_L 4B3 7A4 CPU_EMODE1_L 4B3 7A4 CPU_FBI_PLUS1 11A4 58C3 CPU_FBO_PLUS1 11A4 58C3 CPU_FB_MINUS3 11A4 58C3 CPU_FB_PLUS2 11A5 58C3 CPU_FB_PLUS3 11A4 58B3 CPU_GBL_L    4B8 9B6 58C3 CPU_HDRST_L  8C7 46C4 CPU_HIT_L    4A7 7C7 9B8 11B3 58C3 CPU_HRESET_L 4B3 7A3 7A5 7B3 8D2 9A2 46C2 46D2               61C7 CPU_INT_GBL_L 4B8 7B7 11C3 58C3 CPU_L1TSTCLK 4C3 7A4 CPU_L2TSTCLK 4C3 7C4 CPU_LSSD_MODE 4C3 7B5 CPU_MCP_L    4B3 7B5 CPU_PLL_CPG&lt;3..0&gt; 4C3 4D3 6C6 9A8 CPU_PLL_CPGEXT 4C3 6C6 9A8 CPU_PLL_STOP 6B8 46B8 CPU_PMONIN_L 4B3 7C5 CPU_PULLDOWN 4A3 4D7 7C5 CPU_PULLUP  4A3 7A5 CPU_QACK_L   4C3 9B5 11B3 58C3 CPU_QREQ_L   4C3 7D5 9B7 11B3 58C3 CPU_SHD0_L   4A7 7B5 CPU_SHD1_L   4A7 7B5 CPU_SLEEPIN  53B7 CPU_SMI_L    4B3 7A5 46C4 CPU_SRESET_L 4B3 7A5 9A2 61C4 CPU_STATE_LED* 46C4 53A8 CPU_TA_L     4C3 7C7 9C5 11A1 58C3 CPU_TBEN    4C3 7C5 11A3 </pre>		<pre> CPU_TBST_L   4B7 7B7 9B5 11B3 58D3 CPU_TEA_L    4C3 7B7 9C6 11A1 58C3 CPU_TSIZE&lt;2..0&gt; 4B7 9B6 9B7 9C6 11B3 58D3 CPU_TS_L     4D7 7C7 9C7 11D3 58D3 CPU_TT&lt;4..0&gt; 4B7 7A7 9B5 9B6 9C5 9C6 11B3 58D3 CPU_VCORE_SLEEP 4D3 4D7 9B6 9C2 47B3 47C1 54C6 61B4               61D7 CPU_VCORE_SLEEPA 47C3 CPU_VCORE_SLEEPB 47A4 CPU_VCORE_SLEEP_C 47A1 CPU_WT_L     4B7 7A7 9B6 11B3 58C3 CSLOT_IOWAIT_L 39B7 54A6 CVBS_CNT    24B8 25D6 CVBS_D      24B7 CY69P2      41B5 DAC2RESET   24C6 59D3 DAC2VDD     24C5 54B6 DAC2VREF    24C5 59D3 DACRSET     24C4 DACVDD      24C4 54B6 DACVREF     24C4 DDC_VCC_3   26A5 26B3 54B6 61B7 DDC_VCC_5   27C4 54A6 61B7 DDRCLK_A0_L_UP 10B3 55B6 DDRCLK_A0_UP 10C3 55B6 DDRCLK_A1_L_UP 10B3 55B6 DDRCLK_A1_UP 10C3 55B6 DDRCLK_A2_L_UP 10B3 55B6 DDRCLK_A2_UP 10C3 55B6 DDRCLK_B0_L_UP 10B3 55A6 DDRCLK_B0_UP 10C3 55B6 DDRCLK_B1_L_UP 10B3 55A6 DDRCLK_B1_UP 10C3 55B6 DDRCLK_B2_L_UP 10B3 55A6 DDRCLK_B2_UP 10C3 55B6 DDR_CLK_CE  10B5 DDR_CLK_VDD_2 10C5 55B6 DDR_FBIN    10B5 55A6 DDR_FBIN_L  10B5 55A6 DDR_FBO     10B3 55A6 DDR_FBO_L   10B3 55A6 DDR_VREF    16B2 16D1 16D8 17D8 54A6 DS1P1       37B2 DS2P1       37B1 DS2_1       40B2 DS2_2       40B2 DS3P1       37B2 DS6_1       40B6 DS6_2       40B6 DUKE_BD     47B5 DVCLKIN     24C5 DVOD0       24B5 29B7 DVOD1       24B5 29B7 DVOD2       24B5 29C7 DVOD3       24B5 29C7 DVOD4       24B5 29C7 DVOD5       24B5 29C7 DVOD6       24B5 29C7 DVOD7       24B5 29C7 DVOD8       24B5 29C7 DVOD9       24B5 29C7 DVOD10      24B5 29C7 DVOD11      24B5 29C7 DVODE       24C5 DVOSYNC     24C5 28D7 DVOVREF     24C5 DVO_PD      24B5 DVO_PU      24B5 REPR_WP     8A6 EIDE_ADDR&lt;2..0&gt; 39A7 40A8 40B8 60C5 EIDE_CS1FX_L 39A7 40B8 60C5 EIDE_CS3FX_L 39A7 40B8 60C5 EIDE_CSELP_L 40C6 54A6 EIDE_DATA&lt;15..0&gt; 39A5 39B5 39B7 39C5 60D5 EIDE_DMACK_L 39A7 39D5 60D5 EIDE_DMARQ  39A7 40C8 60D5 EIDE_DSTB_RDY 39A7 39C5 60D5 EIDE_HSTR_RDY 39A7 39C5 60D5 EIDE_INTRQ  39A7 40C8 60C5 EIDE_IOCS16_L 40C6 54A6 EIDE_PDIAG  40C6 </pre>		A
B	<pre> AGP_AD&lt;31..0&gt; 18B4 18C4 19C8 19D8 56C7 AGP_AD_STB&lt;1..0&gt; 18A4 18B3 19B8 56C7 AGP_AD_STB_GPUUF&lt;1..0&gt; 19B7 56B7 AGP_AD_STB_L&lt;1..0&gt; 18A4 18D1 19B8 56C7 AGP_AD_STB_L_GPUUF&lt;1..0&gt; 19B7 56B7 </pre>		<pre> CLK18M_INT_EXT 30B6 CLK18M_INT_XIN 30A5 CLK18M_INT_XO 30A6 CLK18M_INT_XOUT 30A5 CLK25M_ENET_XIN 37B6 59B3 </pre>		<pre> CPU_SMI_L    4B3 7A5 46C4 CPU_SRESET_L 4B3 7A5 9A2 61C4 CPU_STATE_LED* 46C4 53A8 CPU_TA_L     4C3 7C7 9C5 11A1 58C3 CPU_TBEN    4C3 7C5 11A3 </pre>		<pre> EIDE_DATA&lt;15..0&gt; 39A5 39B5 39B7 39C5 60D5 EIDE_DMACK_L 39A7 39D5 60D5 EIDE_DMARQ  39A7 40C8 60D5 EIDE_DSTB_RDY 39A7 39C5 60D5 EIDE_HSTR_RDY 39A7 39C5 60D5 EIDE_INTRQ  39A7 40C8 60C5 EIDE_IOCS16_L 40C6 54A6 EIDE_PDIAG  40C6 </pre>		A
C	<pre> +12V_SLEEP   31A3 31A8 31C5 52D6 53A4 53D6 54C1               61D7 +12V_SLEEPA  61D7 +INTREPID_CORE_MAIN 12D6 13D4 48B3 49B2 61C7 +MAXBUS_SLEEP 4D5 6D8 7A3 7B3 7C3 7C5 7C7 8D3 9B2               9D2 9D4 11B8 11D8 46B7 46D1 46D2               47D2 48D4 54C6 61C7 </pre>		<pre> CLK18M_INT_EXT 30B6 CLK18M_INT_XIN 30A5 CLK18M_INT_XO 30A6 CLK18M_INT_XOUT 30A5 CLK25M_ENET_XIN 37B6 59B3 </pre>		<pre> CPU_SMI_L    4B3 7A5 46C4 CPU_SRESET_L 4B3 7A5 9A2 61C4 CPU_STATE_LED* 46C4 53A8 CPU_TA_L     4C3 7C7 9C5 11A1 58C3 CPU_TBEN    4C3 7C5 11A3 </pre>		<pre> EIDE_DATA&lt;15..0&gt; 39A5 39B5 39B7 39C5 60D5 EIDE_DMACK_L 39A7 39D5 60D5 EIDE_DMARQ  39A7 40C8 60D5 EIDE_DSTB_RDY 39A7 39C5 60D5 EIDE_HSTR_RDY 39A7 39C5 60D5 EIDE_INTRQ  39A7 40C8 60C5 EIDE_IOCS16_L 40C6 54A6 EIDE_PDIAG  40C6 </pre>		C
D	<pre> +12V_SLEEP   31A3 31A8 31C5 52D6 53A4 53D6 54C1               61D7 +12V_SLEEPA  61D7 +INTREPID_CORE_MAIN 12D6 13D4 48B3 49B2 61C7 +MAXBUS_SLEEP 4D5 6D8 7A3 7B3 7C3 7C5 7C7 8D3 9B2               9D2 9D4 11B8 11D8 46B7 46D1 46D2               47D2 48D4 54C6 61C7 </pre>		<pre> CLK18M_INT_EXT 30B6 CLK18M_INT_XIN 30A5 CLK18M_INT_XO 30A6 CLK18M_INT_XOUT 30A5 CLK25M_ENET_XIN 37B6 59B3 </pre>		<pre> CPU_SMI_L    4B3 7A5 46C4 CPU_SRESET_L 4B3 7A5 9A2 61C4 CPU_STATE_LED* 46C4 53A8 CPU_TA_L     4C3 7C7 9C5 11A1 58C3 CPU_TBEN    4C3 7C5 11A3 </pre>		<pre> EIDE_DATA&lt;15..0&gt; 39A5 39B5 39B7 39C5 60D5 EIDE_DMACK_L 39A7 39D5 60D5 EIDE_DMARQ  39A7 40C8 60D5 EIDE_DSTB_RDY 39A7 39C5 60D5 EIDE_HSTR_RDY 39A7 39C5 60D5 EIDE_INTRQ  39A7 40C8 60C5 EIDE_IOCS16_L 40C6 54A6 EIDE_PDIAG  40C6 </pre>		D
8	7	6	5	4	3	2	1		

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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_I1H1	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
SWITCHSV_3	53B6
SWITCHSV_4	53B6
SWITCHSV_5	53B1 53B3
SWITCHSV_6	53B2
SYSCLK_CFU	4D2 11A4 58C3
SYSCLK_CFU_UP	11A3 58C3
SYSCLK_DORCLK_A0	10C2 14C4 16D6 55C6
SYSCLK_DORCLK_A0_L	10C2 14C4 16D6 55C6
SYSCLK_DORCLK_A0_L_UP	14B6 14C5 55C6
SYSCLK_DORCLK_A0_UP	14B6 14C5 55C6
SYSCLK_DORCLK_A1	10C2 14C4 16A4 55C6
SYSCLK_DORCLK_A1_L	10C2 14B4 16A4 55C6
SYSCLK_DORCLK_A1_L_UP	14B5 14B6 55C6
SYSCLK_DORCLK_A1_UP	14B6 14C5 55C6
SYSCLK_DORCLK_A2	10C5 14B4 55B6
SYSCLK_DORCLK_A2_L	10C5 14B4 55B6
SYSCLK_DORCLK_A2_L_UP	14B5 14B6 55C6
SYSCLK_DORCLK_A2_UP	14B5 14B6 55C6
SYSCLK_DORCLK_B0	10C2 14B4 17B4 55B6
SYSCLK_DORCLK_B0_L	10C2 14B4 17B4 55B6
SYSCLK_DORCLK_B0_L_UP	14B5 14B6 55B6
SYSCLK_DORCLK_B0_UP	14B5 14B6 55B6
SYSCLK_DORCLK_B1	10C2 14A4 17D6 55B6
SYSCLK_DORCLK_B1_L	10C2 14A4 17D6 55B6
SYSCLK_DORCLK_B1_L_UP	14A5 14B6 55B6
SYSCLK_DORCLK_B1_UP	14A5 14B6 55B6
SYSCLK_DORCLK_B2	10B2 14A4 17A6 55B6
SYSCLK_DORCLK_B2_L	10B2 14A4 17A6 55B6
SYSCLK_DORCLK_B2_L_UP	14A5 14B6 55B6
SYSCLK_DORCLK_B2_UP	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
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TP_BUF_RST	24B5
TP_DVOCLOCKOUT	24C5
TP_DVOCLOCKOUT*	24C5
TP_DVOVSIN	24B5
TRANS_ADJ	47B3
TRST_IN	8B3
T_UD_IDEDD_0	39C1 40C3 60C2
T_UD_IDEDD_1	39C1 40C3 60C2

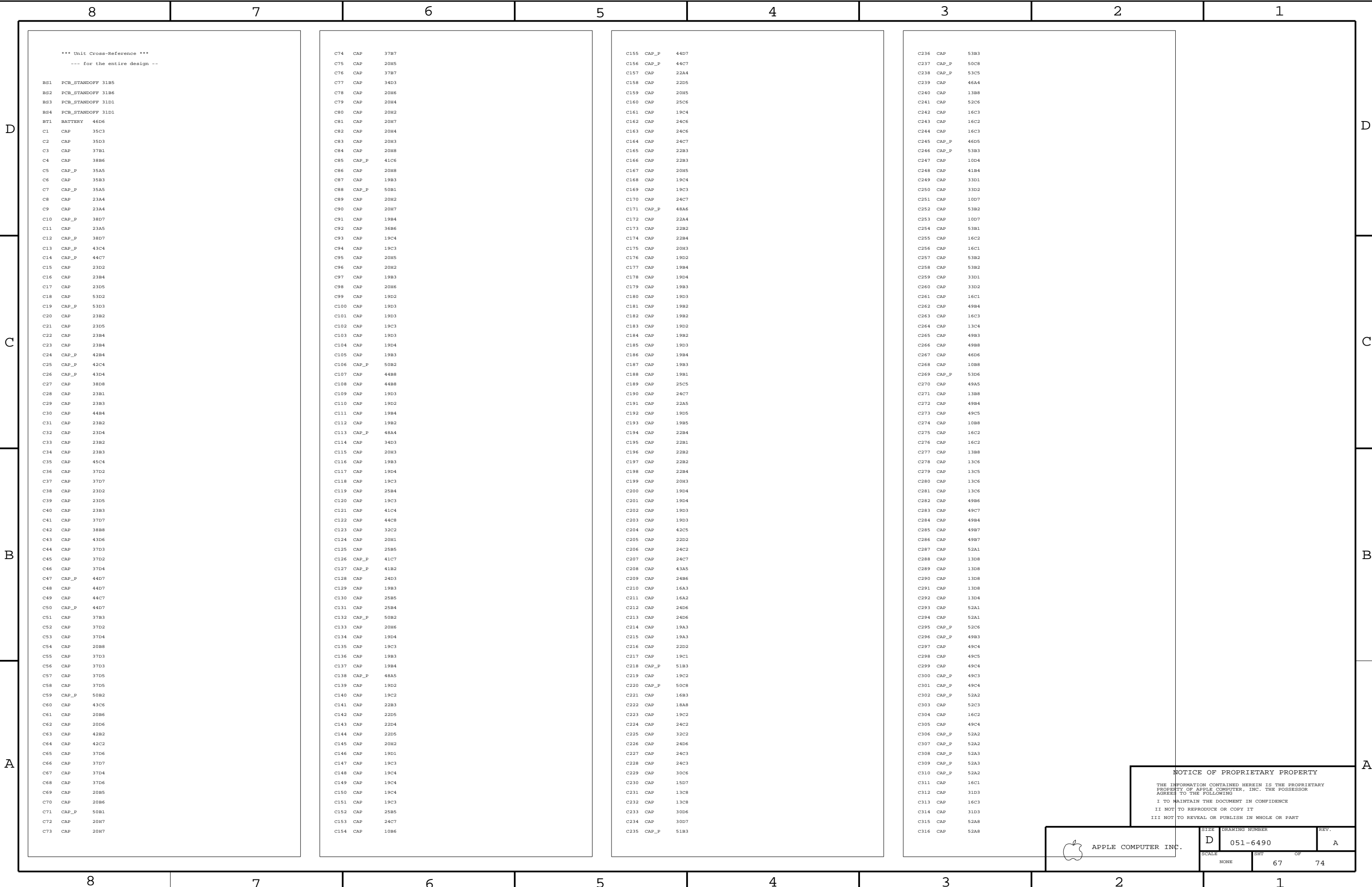
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T_UD_IDEDD_5	39B1 40C3 60C2
T_UD_IDEDD_6	39B1 40C3 60B2
T_UD_IDEDD_7	39B1 40C3 60B2
T_UD_IDEDD_8	39B1 40C2 60B2
T_UD_IDEDD_9	39B1 40C2 60B2
T_UD_IDEDD_10	39B1 40C2 60B2
T_UD_IDEDD_11	39B1 40C2 60B2
T_UD_IDEDD_12	39B1 40C2 60B2
T_UD_IDEDD_13	39A1 40C2 60B2
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UATAD<15..0>	39A4 39B4 39C4 40C6 60D5
UB5PAR8	24B5
UIDE_ADDR<2..0>	39C7 40A4 40B4 60B5
UIDE_CS1FX_L	39C7 40B4 60B5
UIDE_CS3FX_L	39C7 40B4 60B5
UIDE_CSLP_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_FDIAG	40C2
UIDE_REF	39C7
UIDE_RST_L	39C7 39D3 60C5
UNUSED_ATAIOCS16_L	40C2 54A6
UNUSED_EXTINT7	30B5 30B8
UNUSED_EXTINT8	30B5 30B8
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USB2_CRUN_L	30B5 34A7
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USB2_DBP_F	34C1 34C4 35C7 58B3
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USB2_RREF	34B4 58B3
USB2_RSDAM	34C4 58B3
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USB2_RSDBM	34C4 58B3
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USB2_XT2_B	58B3
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USBT_DCP_F	35D6 58A3
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USB_DAN_CON	35C3 58A3 61C4
USB_DAN_F	30B2 35B7 60B5
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USB_DDN	30B3
USB_DDN_F_TERM	30B2
USB_DDP	30B3
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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
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USB_PWREN_AR_L	30B3 30C2
USB_PWREN_CD_L	30B3 30C2
USB_PWREN_EF_L	30B3 30C2
USB_PWR_EN	35A7 54A3
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VCORE_BG_1	47B5 47C7
VCORE_BOOST	47C5
VCORE_BOOST2	47C6
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VCORE_BOOST_1	47B5
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VCORE_SF	47C8
VCORE_SGND	47B7 47C7 47C8
VCORE_STBY	47C7
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VGA_IIC_DAT	27C4 61B4
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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
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VREFM	41B4
VREFP	41B4 45B2
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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  
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 C3 CAP 37B1  
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 C13 CAP\_P 43C4  
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 C17 CAP 23D5  
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 C19 CAP\_P 53D3  
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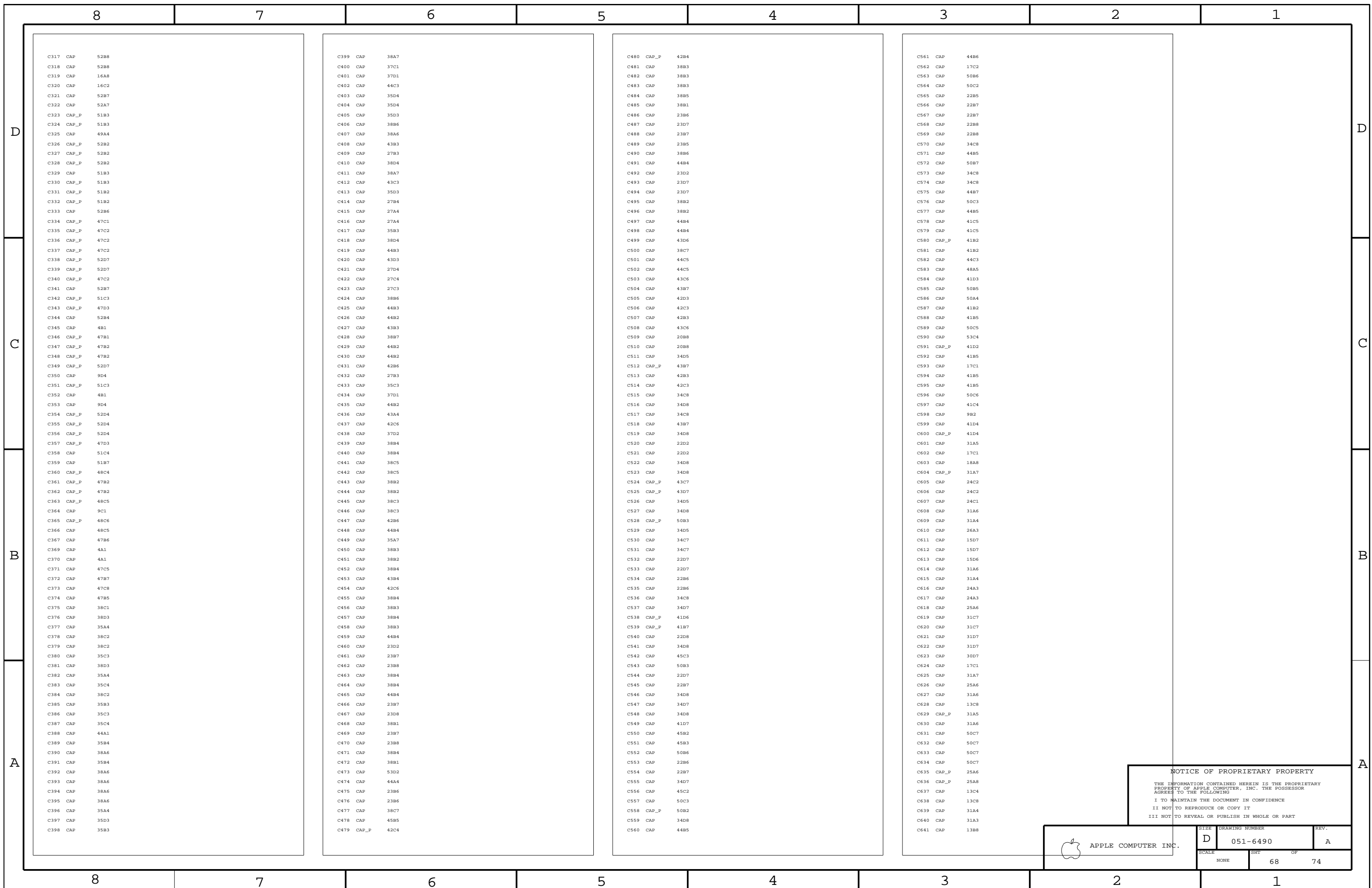
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	SCALE NONE	SHEET 68	OF 74

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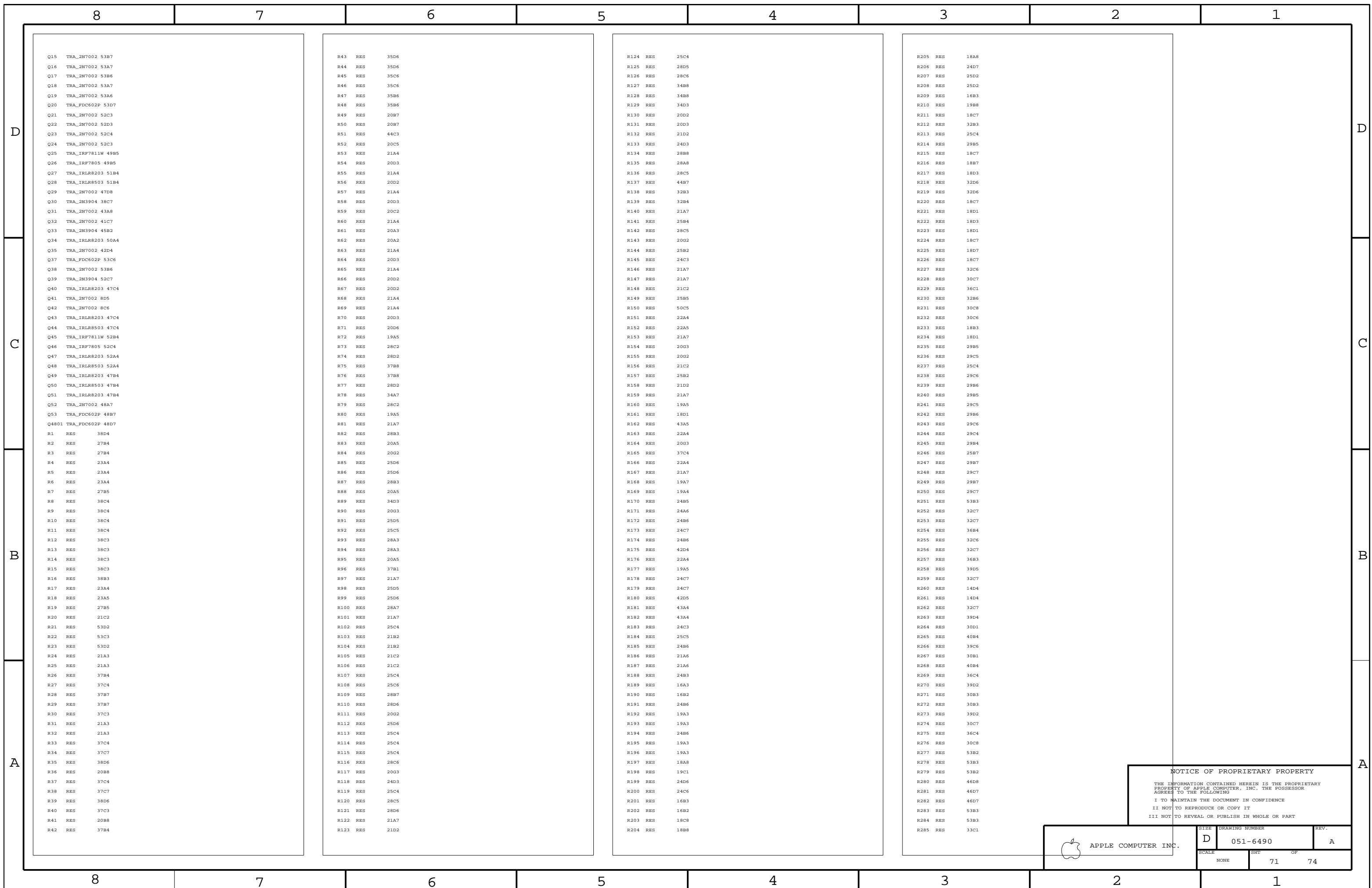
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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER	REV.
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SCALE	SHT	OF	
NONE	69	74	

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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_NMBZ15VDLT1 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_NMBZ15VDLT1 44C2 D23 DIODE_SCHOT_3P 44A1 D24 ZENER_NMBZ15VDLT1 43B2 D25 ZENER 38B6 D26 ZENER_NMBZ15VDLT1 43B2 D27 DIODE_DUAL_6P 27B4 D28 DIODE_DUAL_6P 27B4 D29 ZENER_NMBZ15VDLT1 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	051-6490	A
SCALE	SHEET OF		
NONE	70	74	



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Q18	TRA_2N7002	53A7
Q19	TRA_2N7002	53A6
Q20	TRA_FDC602P	53D7
Q21	TRA_2N7002	52C3
Q22	TRA_2N7002	52D3
Q23	TRA_2N7002	52C4
Q24	TRA_2N7002	52C3
Q25	TRA_IRF7811W	49B5
Q26	TRA_IRF7805	49B5
Q27	TRA_IRLR8203	51B4
Q28	TRA_IRLR8503	51B4
Q29	TRA_2N7002	47D8
Q30	TRA_2N3904	38C7
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Q33	TRA_2N3904	45B2
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Q39	TRA_2N3904	52C7
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Q4801	TRA_FDC602P	48D7
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R9	RES	38C4
R10	RES	38C4
R11	RES	38C4
R12	RES	38C3
R13	RES	38C3
R14	RES	38C3
R15	RES	38C3
R16	RES	38B3
R17	RES	23A4
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R22	RES	53C3
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R27	RES	37C4
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R29	RES	37B7
R30	RES	37C3
R31	RES	21A3
R32	RES	21A3
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R36	RES	20B8
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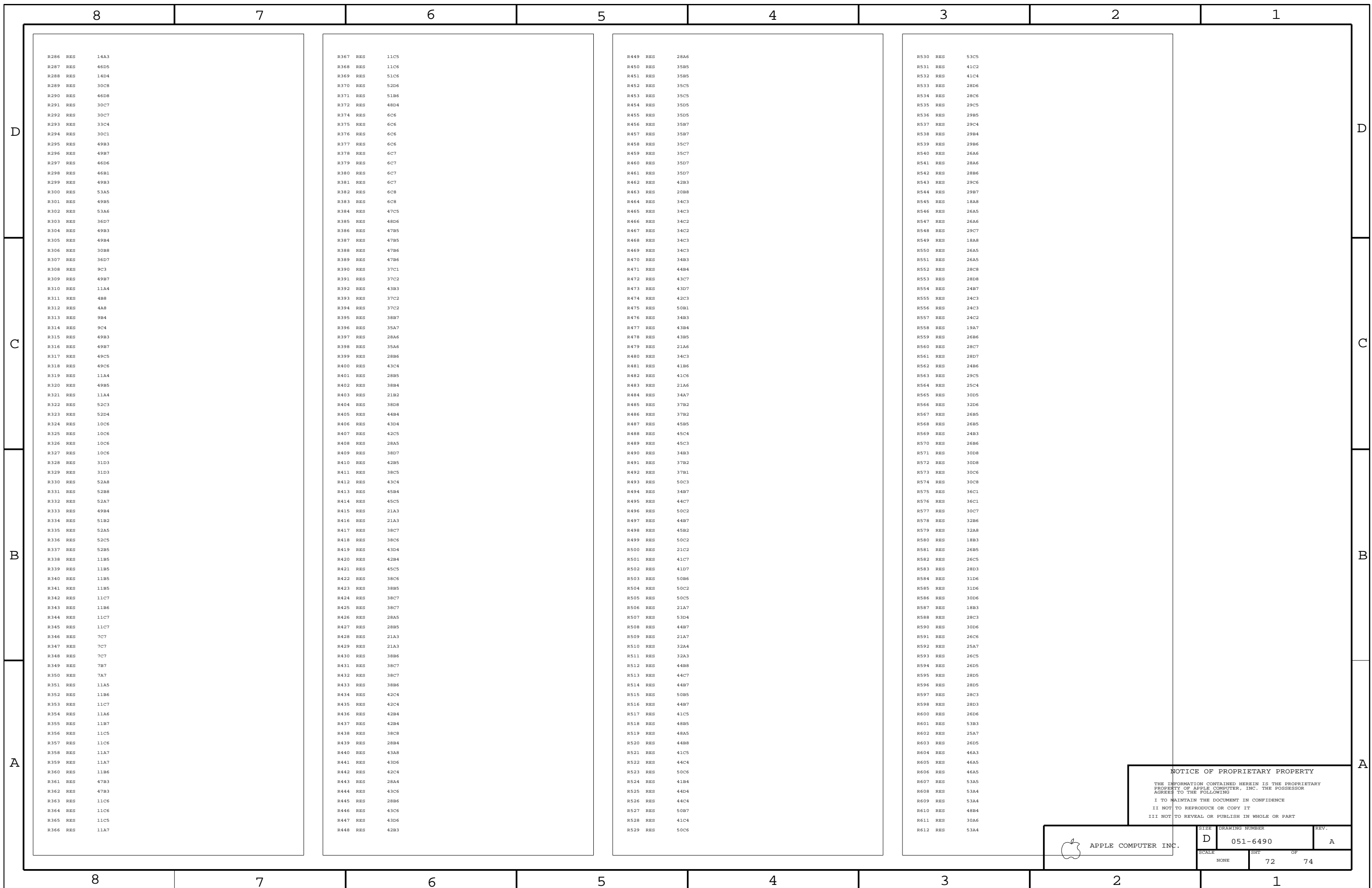
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R222	RES	18D3
R223	RES	18D1
R224	RES	18C7
R225	RES	18D7
R226	RES	18C7
R227	RES	32C6
R228	RES	30C7
R229	RES	36C1
R230	RES	32B6
R231	RES	30C8
R232	RES	30C6
R233	RES	18B3
R234	RES	18D1
R235	RES	29B5
R236	RES	29C5
R237	RES	25C4
R238	RES	29C6
R239	RES	29B6
R240	RES	29B5
R241	RES	29C5
R242	RES	29B6
R243	RES	29C6
R244	RES	29C4
R245	RES	29B4
R246	RES	25B7
R247	RES	29B7
R248	RES	29C7
R249	RES	29B7
R250	RES	29C7
R251	RES	53B3
R252	RES	32C7
R253	RES	32C7
R254	RES	36B4
R255	RES	32C6
R256	RES	32C7
R257	RES	36B3
R258	RES	39D5
R259	RES	32C7
R260	RES	14D4
R261	RES	14D4
R262	RES	32C7
R263	RES	39D4
R264	RES	30D1
R265	RES	40B4
R266	RES	39C6
R267	RES	30B1
R268	RES	40B4
R269	RES	36C4
R270	RES	39D2
R271	RES	30B3
R272	RES	30B3
R273	RES	39D2
R274	RES	30C7
R275	RES	36C4
R276	RES	30C8
R277	RES	53B2
R278	RES	53B3
R279	RES	53B2
R280	RES	46D8
R281	RES	46D7
R282	RES	46D7
R283	RES	53B3
R284	RES	53B3
R285	RES	33C1

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	D	051-6490	A
SCALE	SHT		OF
NONE	71		74



R286	RES	14A3
R287	RES	46D5
R288	RES	14D4
R289	RES	30C8
R290	RES	46D8
R291	RES	30C7
R292	RES	30C7
R293	RES	33C4
R294	RES	30C1
R295	RES	49B3
R296	RES	49B7
R297	RES	46D6
R298	RES	46B1
R299	RES	49B3
R300	RES	53A5
R301	RES	49B5
R302	RES	53A6
R303	RES	36D7
R304	RES	49B3
R305	RES	49B4
R306	RES	30B8
R307	RES	36D7
R308	RES	9C3
R309	RES	49B7
R310	RES	11A4
R311	RES	4B8
R312	RES	4A8
R313	RES	9B4
R314	RES	9C4
R315	RES	49B3
R316	RES	49B7
R317	RES	49C5
R318	RES	49C6
R319	RES	11A4
R320	RES	49B5
R321	RES	11A4
R322	RES	52C3
R323	RES	52D4
R324	RES	10C6
R325	RES	10C6
R326	RES	10C6
R327	RES	10C6
R328	RES	31D3
R329	RES	31D3
R330	RES	52A8
R331	RES	52B8
R332	RES	52A7
R333	RES	49B4
R334	RES	51B2
R335	RES	52A5
R336	RES	52C5
R337	RES	52B5
R338	RES	11B5
R339	RES	11B5
R340	RES	11B5
R341	RES	11B5
R342	RES	11C7
R343	RES	11B6
R344	RES	11C7
R345	RES	11C7
R346	RES	7C7
R347	RES	7C7
R348	RES	7C7
R349	RES	7B7
R350	RES	7A7
R351	RES	11A5
R352	RES	11B6
R353	RES	11C7
R354	RES	11A6
R355	RES	11B7
R356	RES	11C5
R357	RES	11C6
R358	RES	11A7
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R360	RES	11B6
R361	RES	47B3
R362	RES	47B3
R363	RES	11C6
R364	RES	11C6
R365	RES	11C5
R366	RES	11A7

R367	RES	11C5
R368	RES	11C6
R369	RES	51C6
R370	RES	52D6
R371	RES	51B6
R372	RES	48D4
R374	RES	6C6
R375	RES	6C6
R376	RES	6C6
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R378	RES	6C7
R379	RES	6C7
R380	RES	6C7
R381	RES	6C7
R382	RES	6C8
R383	RES	6C8
R384	RES	47C5
R385	RES	48D6
R386	RES	47B5
R387	RES	47B5
R388	RES	47B6
R389	RES	47B6
R390	RES	37C1
R391	RES	37C2
R392	RES	43B3
R393	RES	37C2
R394	RES	37C2
R395	RES	38B7
R396	RES	35A7
R397	RES	28A6
R398	RES	35A6
R399	RES	28B6
R400	RES	43C4
R401	RES	28B5
R402	RES	38B4
R403	RES	21B2
R404	RES	38D8
R405	RES	44B4
R406	RES	43D4
R407	RES	42C5
R408	RES	28A5
R409	RES	38D7
R410	RES	42B5
R411	RES	38C5
R412	RES	43C4
R413	RES	45B4
R414	RES	45C5
R415	RES	21A3
R416	RES	21A3
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R418	RES	38C6
R419	RES	43D4
R420	RES	42B4
R421	RES	45C5
R422	RES	38C6
R423	RES	38B5
R424	RES	38C7
R425	RES	38C7
R426	RES	28A5
R427	RES	28B5
R428	RES	21A3
R429	RES	21A3
R430	RES	38B6
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R435	RES	42C4
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R438	RES	38C8
R439	RES	28B4
R440	RES	43A8
R441	RES	43D6
R442	RES	42C4
R443	RES	28A4
R444	RES	43C6
R445	RES	28B6
R446	RES	43C6
R447	RES	43D6
R448	RES	42B3

R449	RES	28A6
R450	RES	35B5
R451	RES	35B5
R452	RES	35C5
R453	RES	35C5
R454	RES	35D5
R455	RES	35D5
R456	RES	35B7
R457	RES	35B7
R458	RES	35C7
R459	RES	35C7
R460	RES	35D7
R461	RES	35D7
R462	RES	42B3
R463	RES	20B8
R464	RES	34C3
R465	RES	34C3
R466	RES	34C2
R467	RES	34C2
R468	RES	34C3
R469	RES	34C3
R470	RES	34B3
R471	RES	44B4
R472	RES	43C7
R473	RES	43D7
R474	RES	42C3
R475	RES	50B1
R476	RES	34B3
R477	RES	43B4
R478	RES	43B5
R479	RES	21A6
R480	RES	34C3
R481	RES	41B6
R482	RES	41C6
R483	RES	21A6
R484	RES	34A7
R485	RES	37B2
R486	RES	37B2
R487	RES	45B5
R488	RES	45C4
R489	RES	45C3
R490	RES	34B3
R491	RES	37B2
R492	RES	37B1
R493	RES	50C3
R494	RES	34B7
R495	RES	44C7
R496	RES	50C2
R497	RES	44B7
R498	RES	45B2
R499	RES	50C2
R500	RES	21C2
R501	RES	41C7
R502	RES	41D7
R503	RES	50B6
R504	RES	50C2
R505	RES	50C5
R506	RES	21A7
R507	RES	53D4
R508	RES	44B7
R509	RES	21A7
R510	RES	32A4
R511	RES	32A3
R512	RES	44B8
R513	RES	44C7
R514	RES	44B7
R515	RES	50B5
R516	RES	44B7
R517	RES	41C5
R518	RES	48B5
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R520	RES	44B8
R521	RES	41C5
R522	RES	44C4
R523	RES	50C6
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R526	RES	44C4
R527	RES	50B7
R528	RES	41C4
R529	RES	50C6

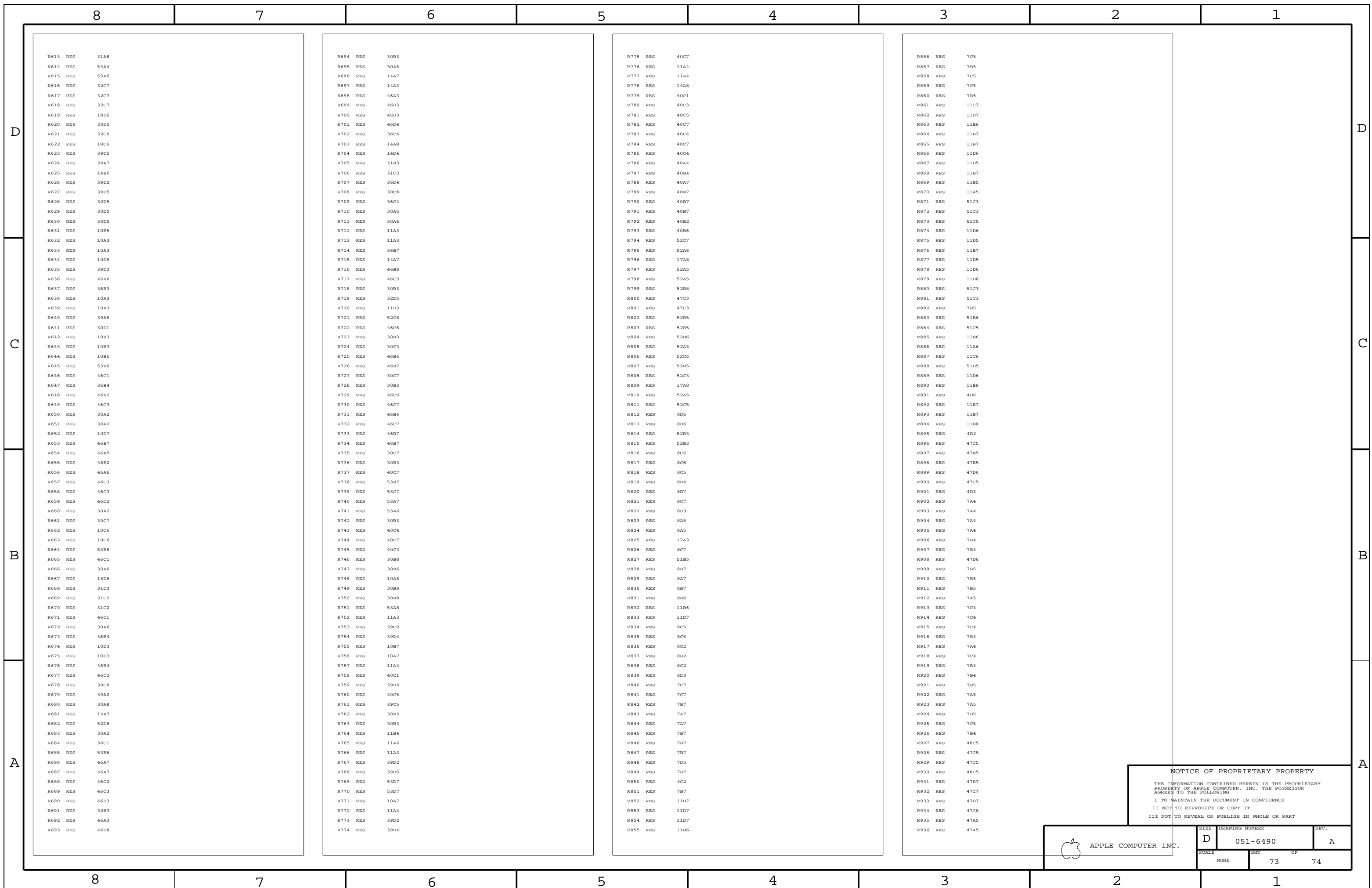
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R533	RES	28D6
R534	RES	28C6
R535	RES	29C5
R536	RES	29B5
R537	RES	29C4
R538	RES	29B4
R539	RES	29B6
R540	RES	26A6
R541	RES	28A6
R542	RES	28B6
R543	RES	29C6
R544	RES	29B7
R545	RES	18A8
R546	RES	26A5
R547	RES	26A6
R548	RES	29C7
R549	RES	18A8
R550	RES	26A5
R551	RES	26A5
R552	RES	28C8
R553	RES	28D8
R554	RES	24B7
R555	RES	24C3
R556	RES	24C3
R557	RES	24C2
R558	RES	19A7
R559	RES	26B6
R560	RES	28C7
R561	RES	28D7
R562	RES	24B6
R563	RES	29C5
R564	RES	25C4
R565	RES	30D5
R566	RES	32D6
R567	RES	26B5
R568	RES	26B5
R569	RES	24B3
R570	RES	26B6
R571	RES	30D8
R572	RES	30D8
R573	RES	30C6
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R577	RES	30C7
R578	RES	32B6
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R584	RES	31D6
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R586	RES	30D6
R587	RES	18B3
R588	RES	28C3
R590	RES	30D6
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R597	RES	28C3
R598	RES	28D3
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R601	RES	53B3
R602	RES	25A7
R603	RES	26D5
R604	RES	46A3
R605	RES	46A5
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R607	RES	53A5
R608	RES	53A4
R609	RES	53A4
R610	RES	48B4
R611	RES	30A6
R612	RES	53A4

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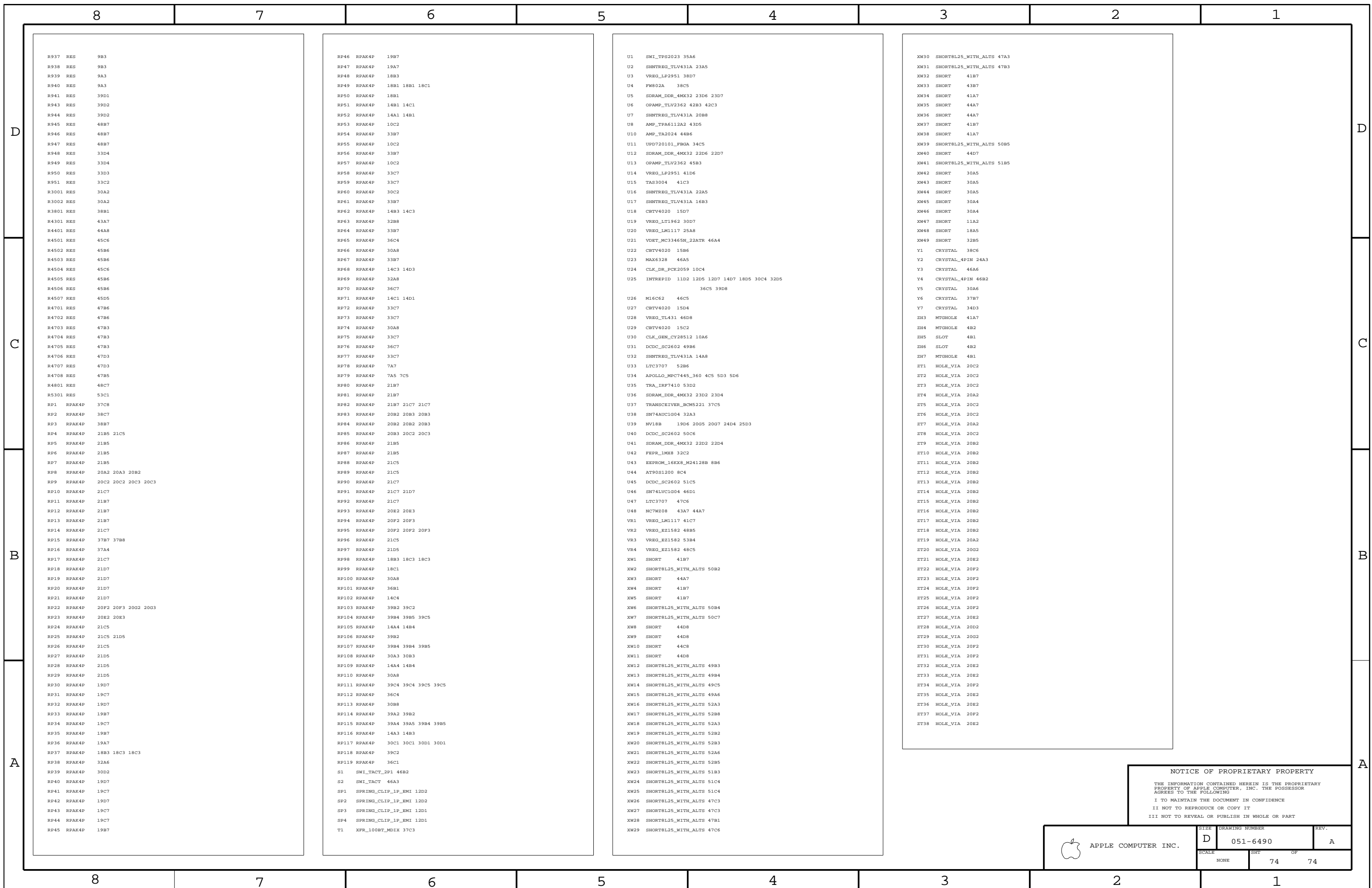
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NONE	72	74






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	SCALE NONE	SHEET 74	OF 74