

# M38A - PVT

08/01/06

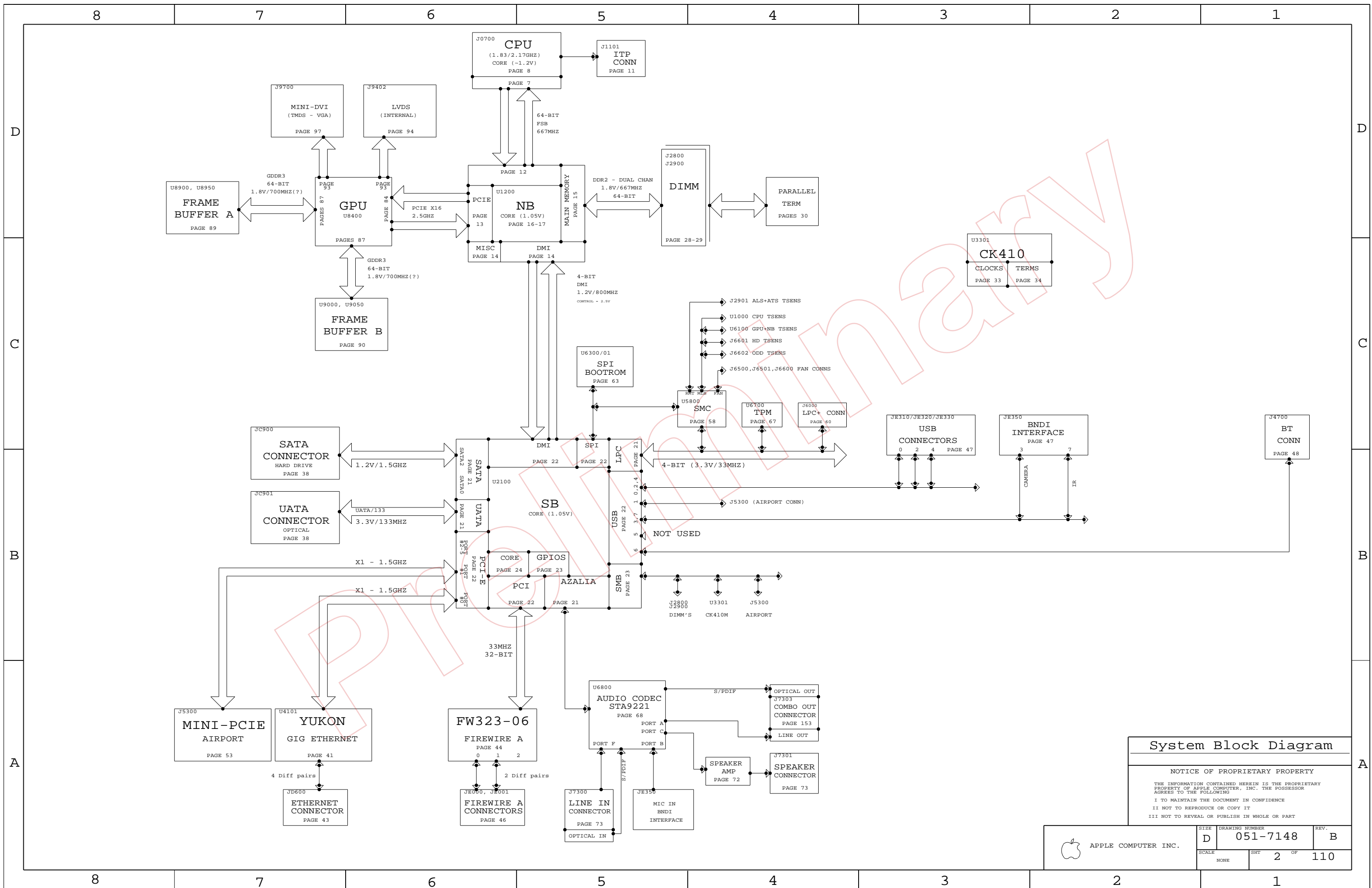
1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

| REV | ZONE | ECN    | DESCRIPTION OF CHANGE | CK APPD  | ENG APPD |
|-----|------|--------|-----------------------|----------|----------|
|     |      |        |                       | DATE     | DATE     |
| B   |      | 452626 | PRODUCTION RELEASED   | 08/01/06 | 06/22/04 |

| PAGE     | DRI | PDF | CIRCUIT                                |
|----------|-----|-----|--|
| 1        | JD  | JD  | 1 TABLE OF CONTENTS                    |
| 2        | JD  | JD  | 2 SYSTEM BLOCK DIAGRAM                 |
| 3        | RT  | RT  | 3 POWER BLOCK DIAGRAM                  |
| 4        | JD  | JD  | 4 TABLE ITEMS & REVISION HISTORY       |
| 5        | JD  | JD  | 5 FUNC TEST                            |
| 6        | RT  | RT  | 6 POWER CONNECTOR / POWER ALIAS        |
| (M42) 7  | MS  | JD  | 7 CPU - BUS INTERFACE                  |
| (M42) 8  | MS  | JD  | 8 CPU - PWR & GND                      |
| 9        | MS  | JD  | 9 CPU - DECAPS                         |
| (M42) 10 | MS  | JD  | 10 CPU - THERMAL SENSOR                |
| M42 11   | MS  | JD  | 11 CPU - ITP CONN                      |
| M1 12    | PS  | JH  | 12 NB - CPU INTERFACE                  |
| M1 13    | PS  | JH  | 13 NB - VIDEO INTERFACE                |
| 14       | PS  | JH  | 14 NB - MISC INTERFACES                |
| M1 15    | PS  | JH  | 15 NB - DDR2 INTERFACE                 |
| M1 16    | PS  | JH  | 16 NB - POWER 1                        |
| M1 17    | PS  | JH  | 17 NB - POWER 2                        |
| M1 18    | PS  | JH  | 18 NB - GROUNDS                        |
| 19       | PS  | JH  | 19 NB - DECAPS                         |
| M1 20    | PS  | JH  | 20 NB - CONFIG STRAPS                  |
| 21       | JD  | JD  | 21 SB - RTC, LAN, AUDIO, ATA, CPU, LPC |
| 22       | JD  | JD  | 22 SB - PCIE, SPI, USB, DMI, PCI       |
| 23       | JD  | JD  | 23 SB - SMB, GPIO, PM, CLKS            |
| 24       | JD  | JD  | 24 SB - POWERS AND GROUNDS             |
| 25       | JD  | JD  | 25 SB - DECAPS                         |
| 26       | JD  | JD  | 26 SB - MISC                           |
| 27       | JD  | JD  | 27 SB - SMB BUS CONNECTIONS            |
| 28       | PS  | JD  | 28 DDR2 - SO-DIMM CONN A               |
| 29       | PS  | JD  | 29 DDR2 - SO-DIMM CONN B (REVERSED)    |
| 30       | PS  | JD  | 30 DDR2 - TERMINATION                  |
| M1 31    | RT  | RT  | 31 DDR2 - VTT SUPPLY                   |
| M42 33   | JD  | JD  | 33 CLOCKS - GENERATOR                  |
| 34       | JD  | JD  | 34 CLOCKS - TERMINATIONS               |
| 38       | JD  | JD  | 38 ATA (SATA AND IDE) CONN'S           |
| (M42) 41 | JD  | JD  | 41 LAN - YUKON'S PCIE INTERFACE        |
| 42       | JD  | JD  | 42 LAN - YUKON'S PWR, MISC             |
| 43       | JD  | JD  | 43 LAN - CONN                          |
| 44       | JD  | JD  | 44 FIREWIRE - FW323-06                 |
| 45       | JD  | JD  | 45 FIREWIRE - DECAPS                   |
| 46       | JD  | JD  | 46 FIREWIRE - CONN'S                   |
| 47       | JD  | JD  | 47 USB - CONN'S                        |

| PAGE  | DRI | PDF | CIRCUIT                           |
|-------|-----|-----|-----------------------------------|
| 53    | JD  | JD  | 43 PCI-E - AIRPORT MINI-PCIE CONN |
| 54    | JD  | JD  | 44 PCI-E - UNUSED PORTS           |
| 58    | MS  | MS  | 45 SMC - H8S2116                  |
| 59    | MS  | MS  | 46 SMC - SMB BUSSES, MISC         |
| 60    | MS  | MS  | 47 SMC - LPC+ CONN                |
| 61    | JH  | JH  | 48 SMC - GPU/NB THERMAL SENSOR    |
| RX 63 | MS  | JD  | 49 SMC - SPI BOOTROM              |
| 65    | MS  | MS  | 50 SMC - FANS                     |
| 66    | MS  | MS  | 51 SMC - FANS                     |
| 67    | JD  | JD  | 52 SMC - TPM                      |
| SO 68 | PT  | JD  | 53 AUDIO - CODEC, VREG, MIC BIAS  |
| SO 72 | PT  | JD  | 54 AUDIO - INTERNAL SPEAKER AMP   |
| SO 73 | PT  | JD  | 55 AUDIO - I/O CONN'S, EMC        |
| SO 74 | PT  | JD  | 56 AUDIO - DETECT TRANSLATORS     |
| RP 75 | RT  | RT  | 57 VR - CPU CORE                  |
| RP 76 | RT  | RT  | 58 VR - CPU I-V SENSE CKT         |
| RP 77 | RT  | RT  | 59 VR - "S0" 1.2V & 2.5V (GRAFIX) |
| RP 78 | RT  | RT  | 60 VR - "S0" 1.8V                 |
| RP 79 | RT  | RT  | 61 VR - "S3" 1.8V                 |
| RP 80 | RT  | RT  | 62 VR - "S0" 1.5V                 |
| RP 81 | RT  | RT  | 63 VR - "S0" 1.05V                |
| RP 83 | RT  | RT  | 64 VR - "S3" 3.3V AND 5V          |
| JH 84 | JH  | JH  | 65 GPU - M56 PCI-E                |
| M1 85 | JH  | JH  | 66 GPU - VCORE SUPPLY             |
| M1 86 | JH  | JH  | 67 GPU - M56 CORE PWR             |
| M1 87 | JH  | JH  | 68 GPU - M56 FRAME BUFFER         |
| M1 88 | JH  | JH  | 69 GPU - MISC                     |
| M1 89 | JH  | JH  | 70 GPU - GDDR SDRAM A             |
| M1 90 | JH  | JH  | 71 GPU - GDDR SDRAM B             |
| M1 91 | JH  | JH  | 72 GPU - M56 GPIO, DVO, MISC      |
| M1 92 | JH  | JH  | 73 GPU - M56 CLOCKS               |
| M1 93 | JH  | JH  | 74 GPU - M56 VIDEO INTERFACES     |
| JH 94 | JH  | JH  | 75 GPU - INTERNAL DISPLAY CONN'S  |
| JH 95 | JH  | JH  | 76 GPU - TP'S                     |
| JH 96 | JH  | JH  | 77 GPU - TMDS, INVERTER, EXT VGA  |
| JH 97 | JH  | JH  | 78 GPU - EXTERNAL DISPLAY CONN'S  |

|   |                                     |   |                                     |                                     |          |                                     |          |                                     |         |                                     |          |                                     |         |                                     |       |      |  |                                     |               |  |
|---|-------------------------------------|---|-------------------------------------|-------------------------------------|----------|-------------------------------------|----------|-------------------------------------|---------|-------------------------------------|----------|-------------------------------------|---------|-------------------------------------|-------|------|--|-------------------------------------|---------------|--|
| <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="text-align: center; font-size: x-small;">DO NOT SCALE DRAWING</p> <div style="text-align: center;"> <p style="font-size: x-small;">THIRD ANGLE PROJECTION</p> </div>  | <p><b>METRIC</b></p>                | <div style="text-align: right;"> <p>Apple Computer Inc.</p> </div> <p style="font-size: x-small; text-align: center;">NOTICE OF PROPRIETARY PROPERTY</p> <p style="font-size: x-small; text-align: center;">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; text-align: center;">I TO MAINTAIN THE DOCUMENT IN CONFIDENCE</p> <p style="font-size: x-small; text-align: center;">II NOT TO REPRODUCE OR COPY IT</p> <p style="font-size: x-small; text-align: center;">III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART</p> <div style="text-align: center;"> <p><b>TITLE</b></p> <p style="font-size: large;">SCH, MLB, M38A</p> </div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>DRAWING NUMBER <b>051-7148</b></span> <span>REV. <b>B</b></span> </div> |                                     |                                     |          |                                     |          |                                     |         |                                     |          |                                     |         |                                     |       |      |  |                                     |               |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DRAFTER</td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;">DESIGN CK</td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>ENG APPD</td> <td><input checked="" type="checkbox"/></td> <td>MFG APPD</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>QA APPD</td> <td><input checked="" type="checkbox"/></td> <td>DESIGNER</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>RELEASE</td> <td><input checked="" type="checkbox"/></td> <td>SCALE</td> <td>NONE</td> </tr> </table> | DRAFTER                             | <input checked="" type="checkbox"/>   | DESIGN CK                           | <input checked="" type="checkbox"/> | ENG APPD | <input checked="" type="checkbox"/> | MFG APPD | <input checked="" type="checkbox"/> | QA APPD | <input checked="" type="checkbox"/> | DESIGNER | <input checked="" type="checkbox"/> | RELEASE | <input checked="" type="checkbox"/> | SCALE | NONE | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">MATERIAL/FINISH NOTED AS APPLICABLE</td> <td style="width: 50%;">SIZE <b>D</b></td> </tr> </table> | MATERIAL/FINISH NOTED AS APPLICABLE | SIZE <b>D</b> | <p style="text-align: right;">SHEET 1 OF 110</p> |
| DRAFTER   | <input checked="" type="checkbox"/> | DESIGN CK   | <input checked="" type="checkbox"/> |                                     |          |                                     |          |                                     |         |                                     |          |                                     |         |                                     |       |      |  |                                     |               |  |
| ENG APPD  | <input checked="" type="checkbox"/> | MFG APPD  | <input checked="" type="checkbox"/> |                                     |          |                                     |          |                                     |         |                                     |          |                                     |         |                                     |       |      |  |                                     |               |  |
| QA APPD   | <input checked="" type="checkbox"/> | DESIGNER  | <input checked="" type="checkbox"/> |                                     |          |                                     |          |                                     |         |                                     |          |                                     |         |                                     |       |      |  |                                     |               |  |
| RELEASE   | <input checked="" type="checkbox"/> | SCALE   | NONE                                |                                     |          |                                     |          |                                     |         |                                     |          |                                     |         |                                     |       |      |  |                                     |               |  |
| MATERIAL/FINISH NOTED AS APPLICABLE   | SIZE <b>D</b>                       |   |                                     |                                     |          |                                     |          |                                     |         |                                     |          |                                     |         |                                     |       |      |  |                                     |               |  |

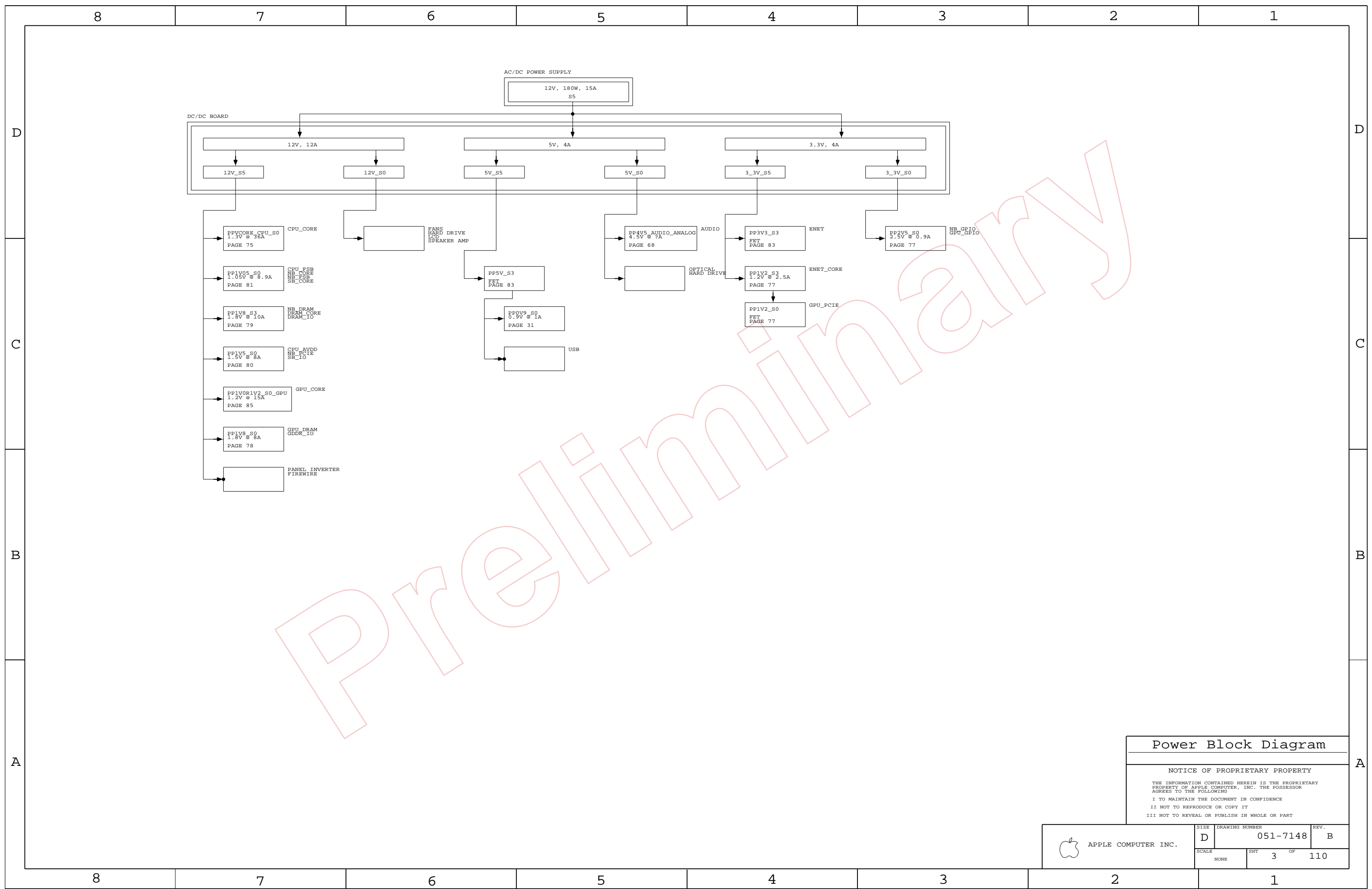


### System Block Diagram

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|                     | SCALE<br>NONE    | SHEET<br>2 OF 110                 |                  |



Preliminary

**Power Block Diagram**

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| SCALE               | SHT  | OF             |      |
| NONE                | 3    | 110            |      |

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COMMON

| PART#               | QTY | DESCRIPTION                              | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|---------------------|-----|--|-------------------------|----------|------------|
| 511S0025            | 1   | IC,CPU-SKT,479BGA                        | J0700                   | CRITICAL |            |
| 338S0328            | 1   | IC,945PM,NORTHBRIDGE                     | U1200                   | CRITICAL |            |
| 343S0385            | 1   | IC,SB,652BGA                             | U2100                   | CRITICAL |            |
| 338S0344            | 1   | IC,ATI,M56P,GRAFIXCTLR,880BGA,LF         | U8400                   | CRITICAL |            |
| 359S0101            | 1   | IC,CY28445-5,CLK GEN,68PIN QFN           | U3301                   | CRITICAL |            |
| 338S0270            | 1   | IC,88E8053,GIGABIT ENET XCVR,64P QFN,SMD | U4101                   | CRITICAL |            |
| (335S0382) 341S1797 | 1   | IC,ENET LAN ROM                          | U4102                   | CRITICAL |            |
| 338S0279            | 1   | IC,FW32306,1394A LINK,TQFP               | U4400                   | CRITICAL |            |

|                         |   |                            |       |          |        |
|-------------------------|---|----------------------------|-------|----------|--------|
| 341S1789                | 1 | IC,TPM,TSSOP,28P           | U6700 | CRITICAL | LEMENU |
| UNSCREENED P/N 353S1465 | 1 | IC,CPU VREG,IMVP,TWO PHASE | U7500 | CRITICAL |        |

|          |   |  |   |          |  |
|----------|---|--|---|----------|--|
| 128S0078 | 3 | CAP,EL,AL,330UF,20V,16V,10X12,7MM,SMD,LF | C7517,C7518,C7910                             | CRITICAL |  |
| 825-6447 | 1 | MLB LABEL,48_0X4.8                       | X14   | CRITICAL |  |
| 155S0289 | 7 | EMI CHOKE                                | FLR011,FLR021,FL4610,FL4620,L4712,L4722,L4732 | CRITICAL |  |

| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES                     | COMMENTS:                         |
|-------------|---------------------------|------------|-----------------------------|-----------------------------------|
| 126S0096    | 126S0076                  |            | C7801                       | SANYO W16CK680EX 680UF 16V LP     |
| 126S0086    | 126S0078                  |            | C699,C940,C1900,C1901,C1968 | SANYO W6CE330F8 330UF 6.3V LP     |
| 128S0080    | 128S0078                  |            | C7517,C7518,C7910           | SANYO 166VP330W 330UF 16V SMD LP  |
| 124-0338    | 124-0333                  |            | C7501,C8014                 | CAP,AL,EL,680UF,16V,RAD,10X12,5MM |
| 138S0580    | 138S0552                  |            |                             | 22UF 0805                         |
| 353S1321    | 353S1105                  |            | U7910                       | LM339                             |
| 378S0141    | 378S0140                  |            | LED001,LED602,LED603        | SMD                               |
| 353S1461    | 353S1465                  |            | U7500                       | CPU REGULATOR - ISL9504           |
| 138S0598    | 138S0512                  |            |                             | SAMSUNG                           |

| PART#    | QTY | DESCRIPTION                        | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION       |
|----------|-----|------------------------------------|-------------------------|----------|------------------|
| 051-7148 | 1   | PCB,SCHM,MLB,M38A                  | SCH1                    |          | 17_INCH_LCD      |
| 820-2052 | 1   | PCB,FAB,MLB,M38A                   | MLB1                    |          | 17_INCH_LCD      |
| 341T0040 | 1   | EFI ROM,M38A                       | U6301                   | CRITICAL | 17_INCH_LCD      |
| 114S0264 | 1   | 3.01K,1%,1/16W,402,MF-LF           | R8522                   |          | GPU_VCORE_1P2V   |
| 341T0039 | 1   | IC,SMC,M38A                        | U5800                   | CRITICAL | 17_INCH_LCD      |
| 338S0315 | 1   | IC,ATI,M56LP,GRAFIX CTLR,880BGA,LF | U8400                   | CRITICAL | GPU_B26_LP       |
| 114S0287 | 1   | 5.11K,1%,1/16W,402,MF-LF           | R8522                   |          | GPU_VCORE_0P953V |
| 114S0281 | 1   | 4.53K,1%,1/16W,402,MF-LF           | R8522                   |          | GPU_VCORE_1P0V   |
| 337S3388 | 1   | 2.00GHZ MEROM                      | CPU                     | CRITICAL | 2P00_CPU         |
| 337S3390 | 1   | 2.16GHZ MEROM                      | CPU                     | CRITICAL | 2P16_CPU         |

(341S1908 - DEVEL)  
(341S1909 - FINAL)  
(335S0384 - BLNK)  
  
(341S1907 - PROG)  
(338S0274 - BLNK)

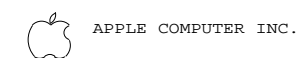
| PART#    | QTY | DESCRIPTION                         | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION           |
|----------|-----|-------------------------------------|-------------------------|----------|----------------------|
| 333S0354 | 4   | IC,SURAM,GDDR3,8MX32,700MHZ,136FBGA | U8900,U8950,U9000,U9050 | CRITICAL | ATI_FB_128M_SAMSUNG  |
| 333S0358 | 4   | IC,SURAM,GDDR3,8MX32,700MHZ,136FBGA | U8900,U8950,U9000,U9050 | CRITICAL | ATI_FB_128M_HYNIX    |
| 333S0376 | 4   | IC,SURAM,GDDR3,8MX32,700MHZ,136FBGA | U8900,U8950,U9000,U9050 | CRITICAL | ATI_FB_128M_INFINEON |

| PART#    | QTY | DESCRIPTION                          | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION           |
|----------|-----|--------------------------------------|-------------------------|----------|----------------------|
| 333S0350 | 4   | IC,SURAM,GDDR3,16MX32,700MHZ,136FBGA | U8900,U8950,U9000,U9050 | CRITICAL | ATI_FB_256M_SAMSUNG  |
| 333S0351 | 4   | IC,SURAM,GDDR3,16MX32,700MHZ,136FBGA | U8900,U8950,U9000,U9050 | CRITICAL | ATI_FB_256M_HYNIX    |
| 333S0377 | 4   | IC,SURAM,GDDR3,16MX32,700MHZ,136FBGA | U8900,U8950,U9000,U9050 | CRITICAL | ATI_FB_256M_INFINEON |

Table Items

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|-------|----------------|------|
| D     | 051-7148       | B    |
| SCALE | SHT            | OF   |
| NONE  | 4              | 110  |

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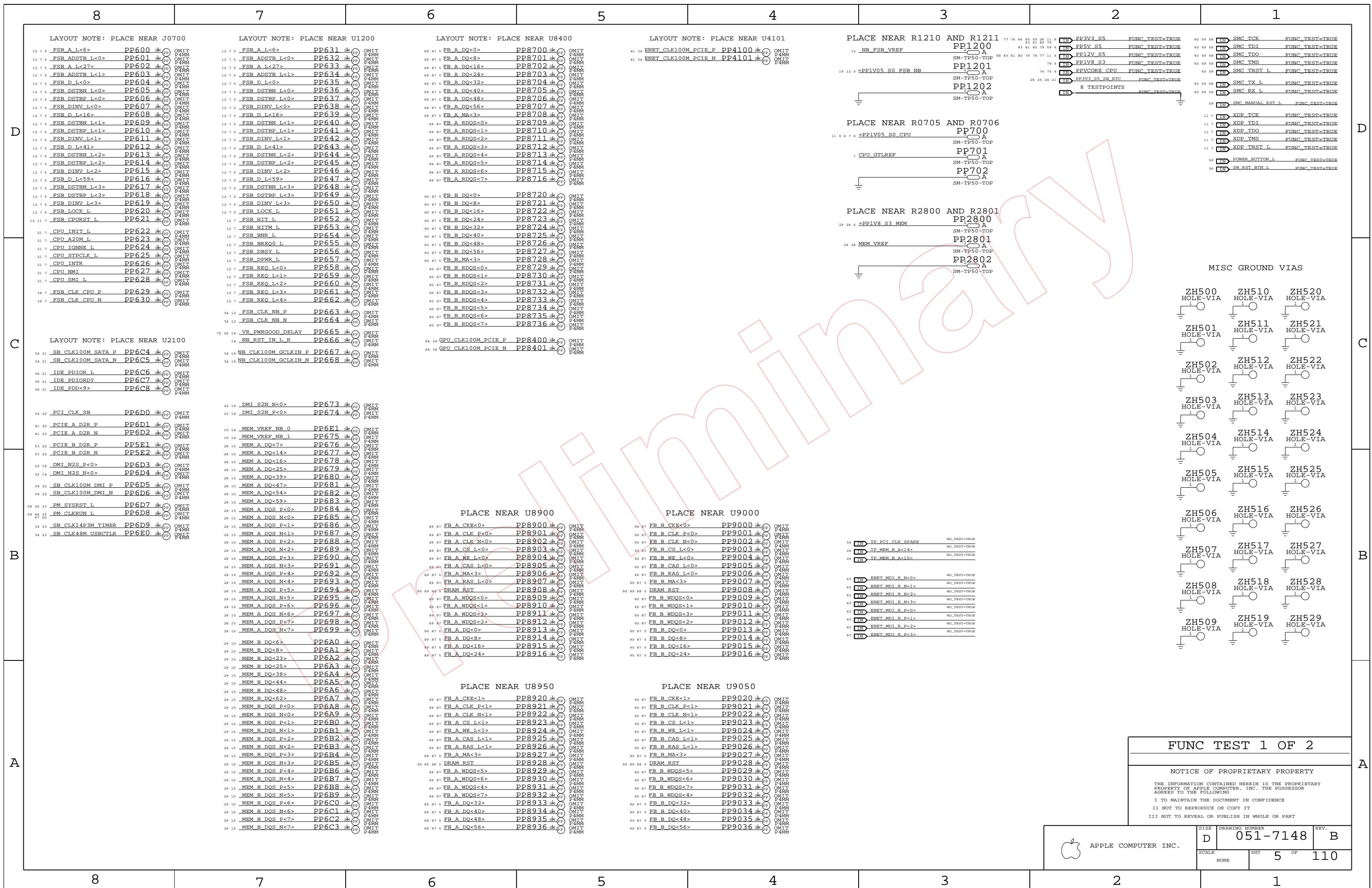
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FUNC TEST 1 OF 2

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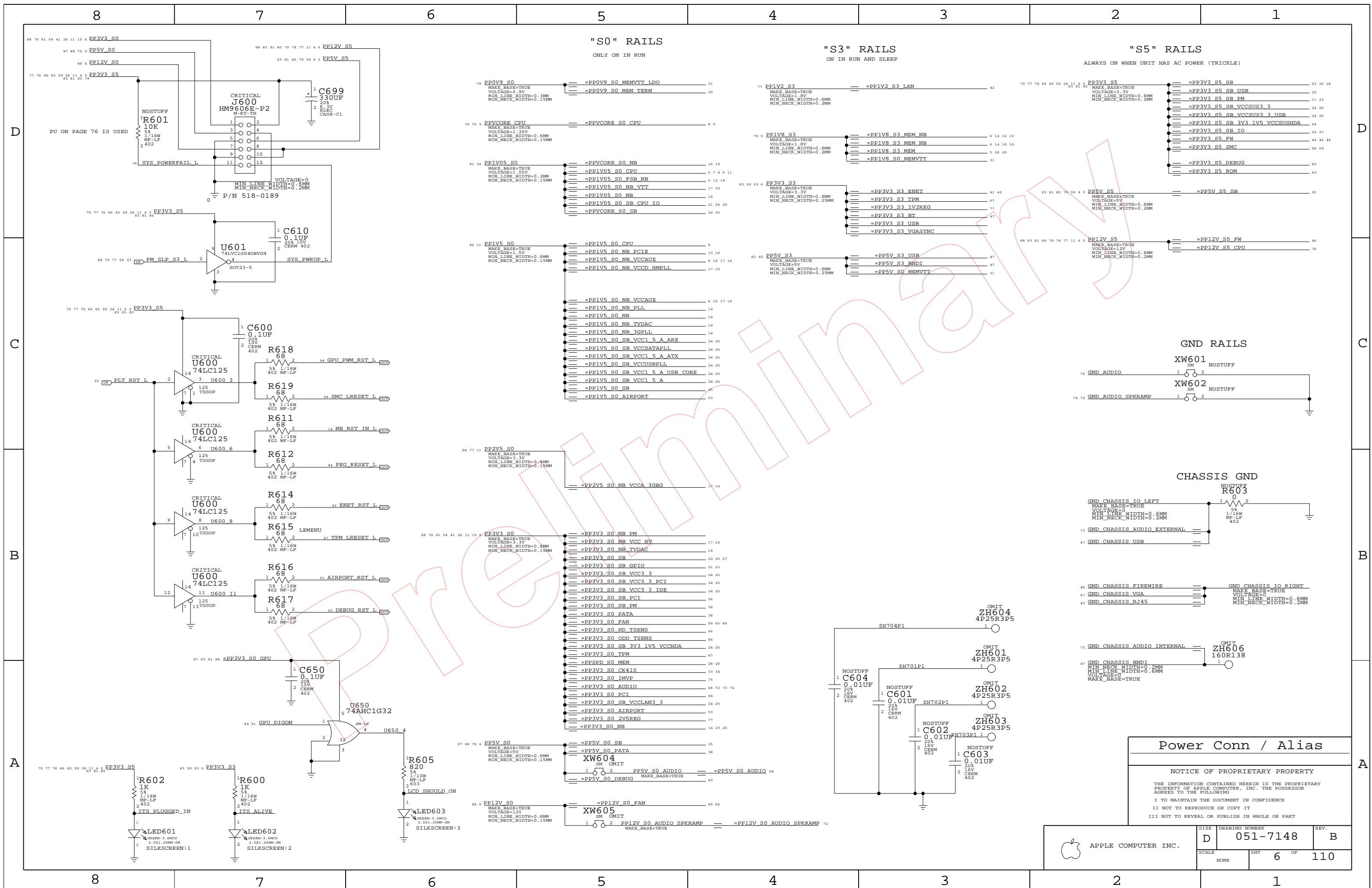
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| NONE                | 5     | 110            |       |





"S0" RAILS

ONLY ON IN RUN

"S3" RAILS

ON IN RUN AND SLEEP

"S5" RAILS

ALWAYS ON WHEN UNIT HAS AC POWER (TRICKLE)

GND RAILS

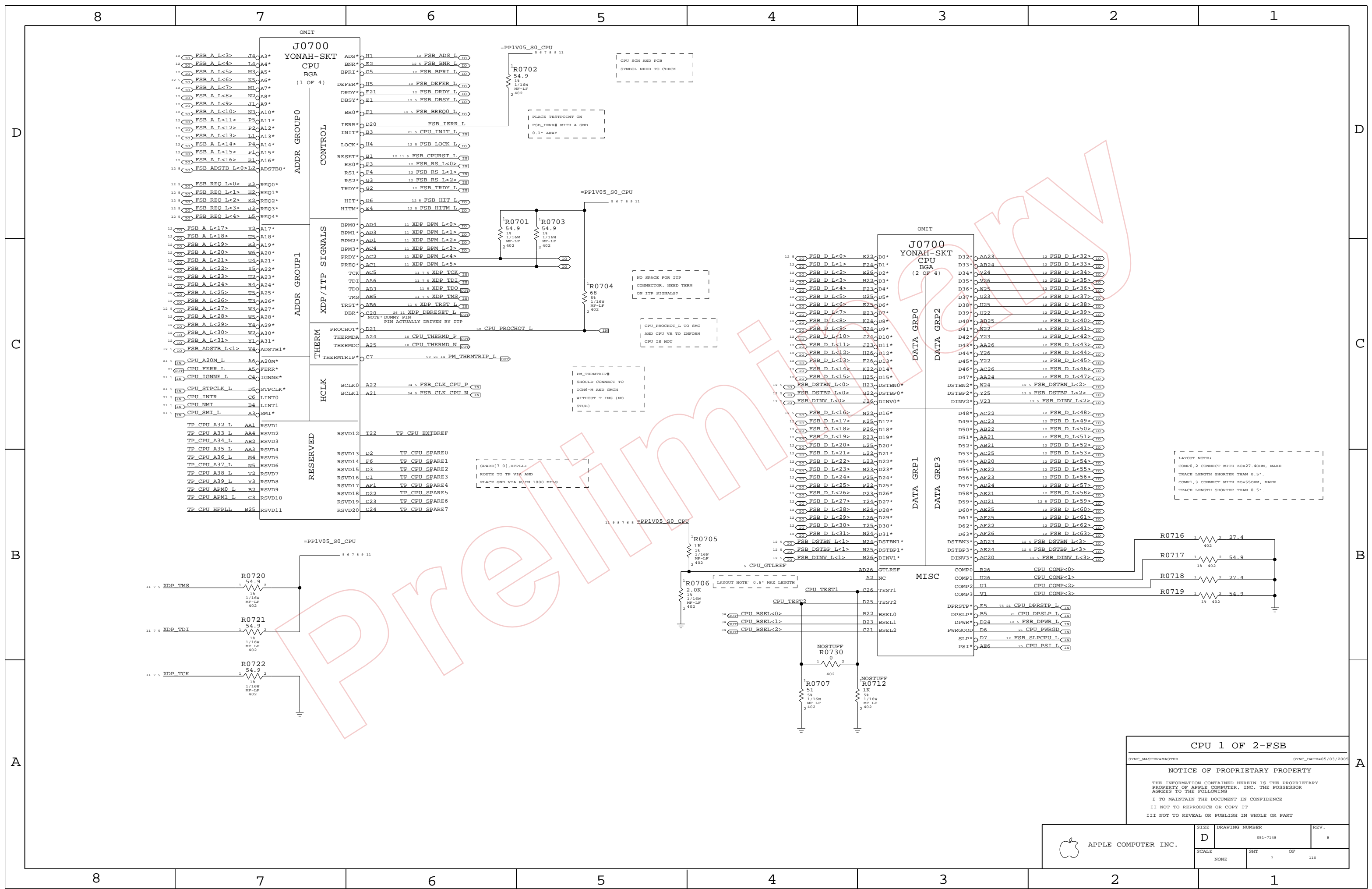
CHASSIS GND

Power Conn / Alias

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| NONE                | 6    | 110            |      |



**CPU 1 OF 2-FSB**

SYNC\_MASTER=MASTER SYNC\_DATE=05/03/2005

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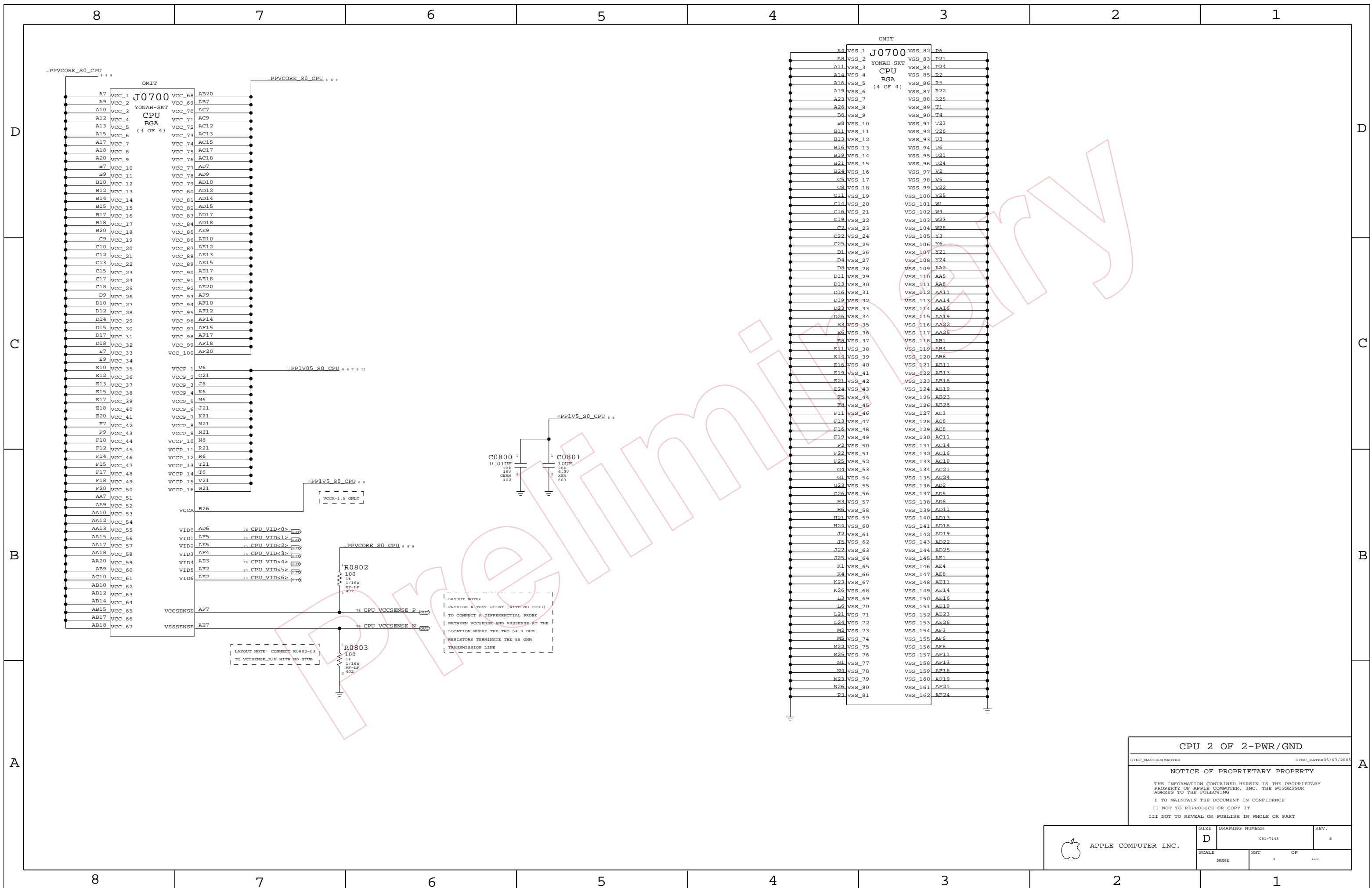
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|                     | SCALE<br>NONE    | SHEET<br>7                 | OF<br>110 |



**CPU 2 OF 2 - PWR/GND**

SYNC\_MASTER=MASTER SYNC\_DATE=05/03/2005

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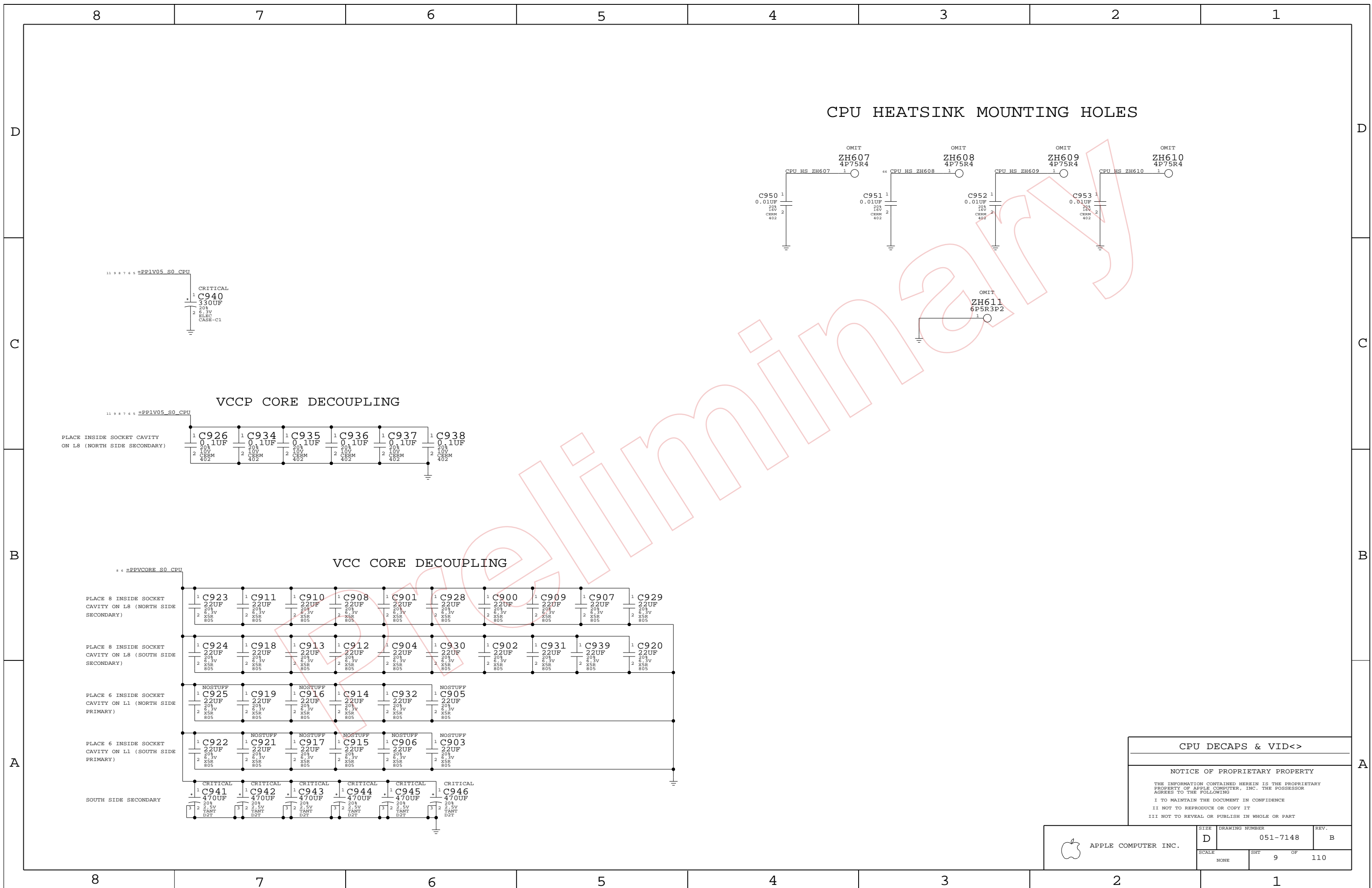
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**CPU DECAPS & VID<>**

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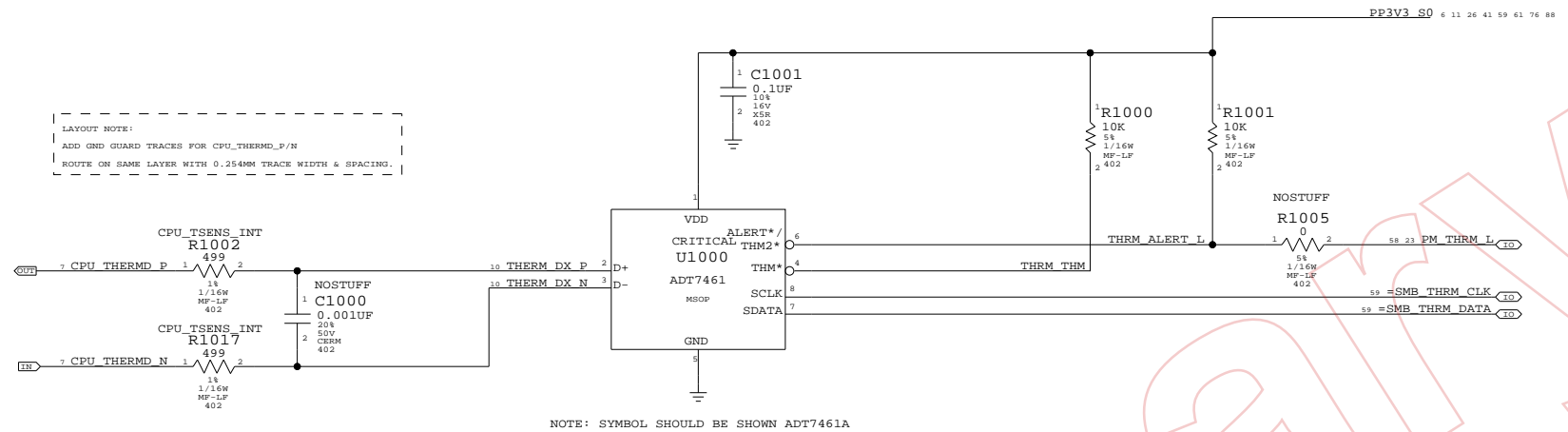
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1

### CPU THERMAL SENSOR

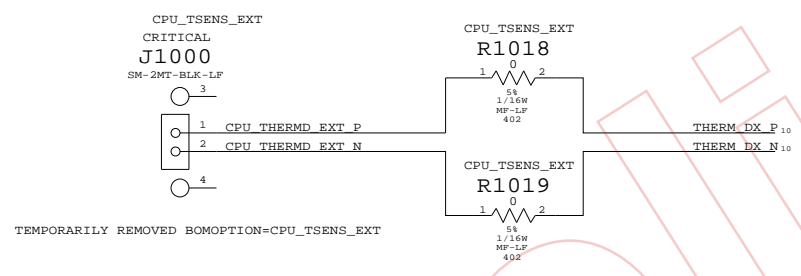
NOTE:  
 IF CPU T DIODE TO BE READ IN OFF STATE,  
 THEN THIS SHOULD BE S5

LAYOUT NOTE:  
 ADD GND GUARD TRACKS FOR CPU\_THERMD\_P/N  
 ROUTE ON SAME LAYER WITH 0.254MM TRACE WIDTH & SPACING.



NOTE: SYMBOL SHOULD BE SHOWN ADT7461A

LAYOUT NOTE:  
 PLACE R1002 AND R1018 SUCH THAT THEY SHARE ONE PAD  
 PLACE R1017 AND R1019 SUCH THAT THEY SHARE ONE PAD



D  
C  
B  
A

D  
C  
B  
A

CPU TEMP SENSOR

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| APPLE COMPUTER INC. | SIZE   | DRAWING NUMBER | REV. |
|                     | D      | 051-7148       | B    |
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| NONE                | 10     |                | 110  |

8

7

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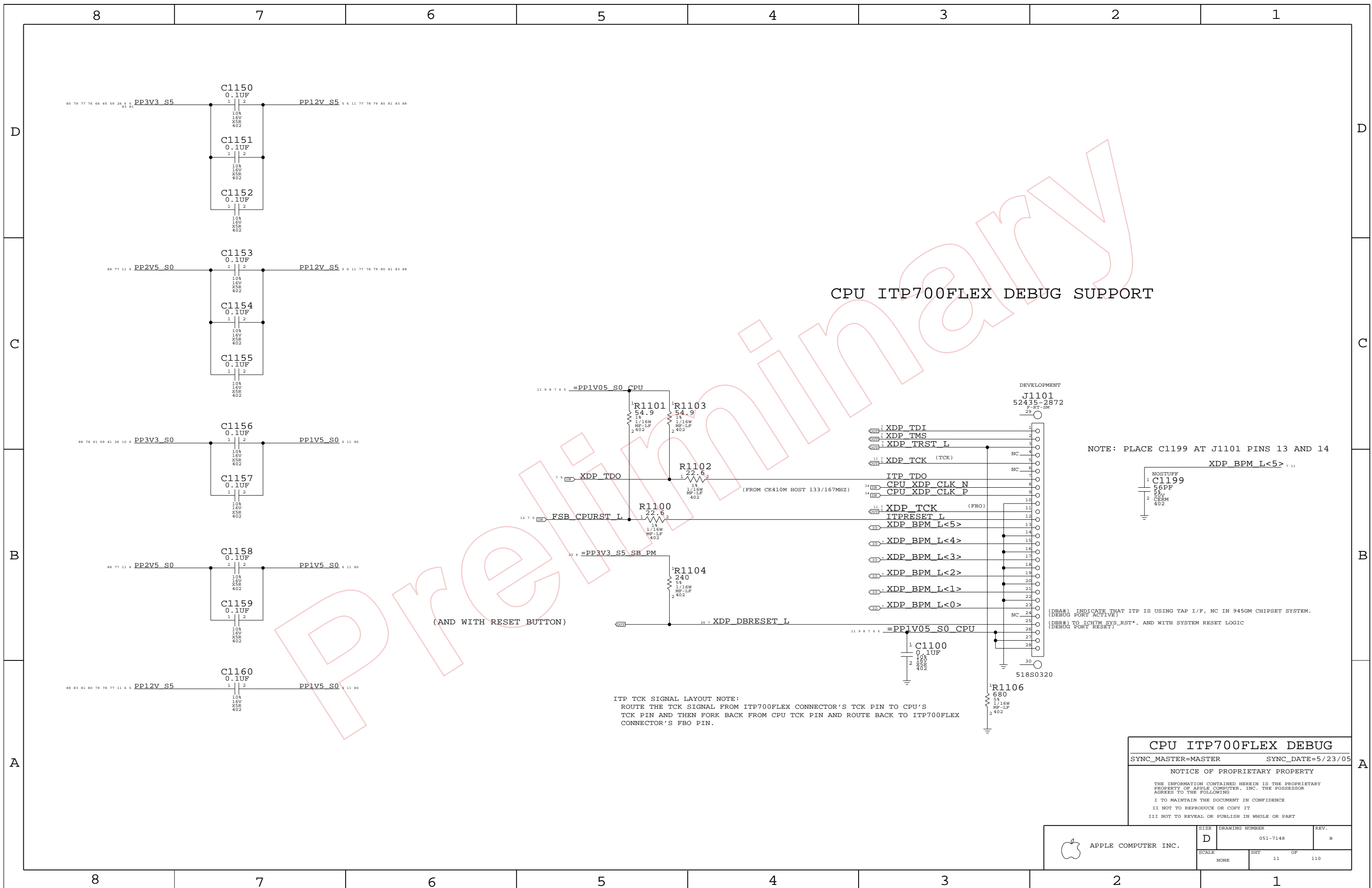
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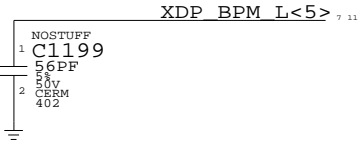
2

1



CPU ITP700FLEX DEBUG SUPPORT

NOTE: PLACE C1199 AT J1101 PINS 13 AND 14



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

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

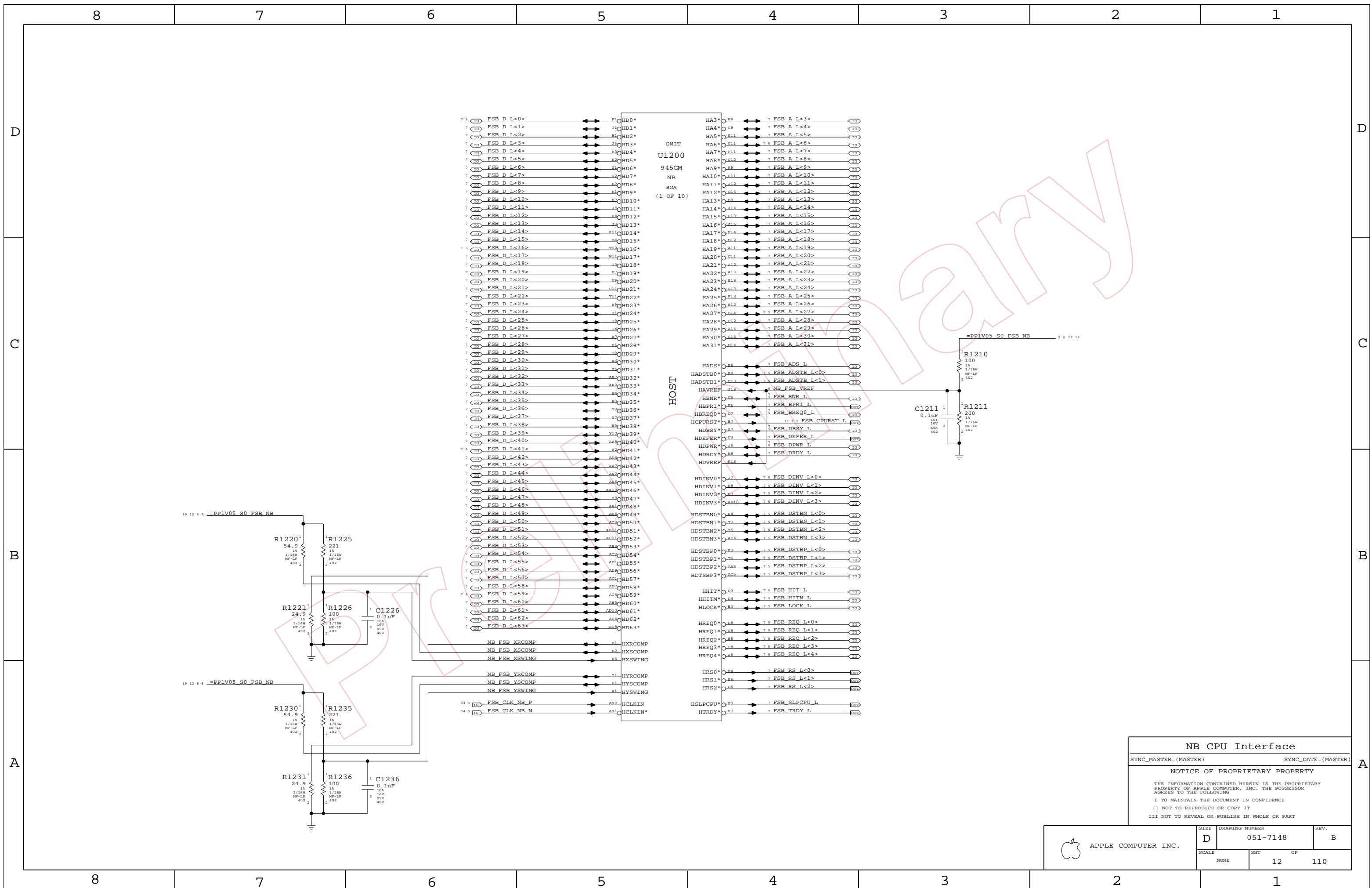
CPU ITP700FLEX DEBUG

SYNC\_MASTER=MASTER SYNC\_DATE=5/23/05

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| SCALE               | SHT  | OF             | 110  |
| NONE                | 11   |                |      |



**NB CPU Interface**

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| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
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| SCALE               | SHT  | OF             |      |
| NONE                | 12   | 110            |      |



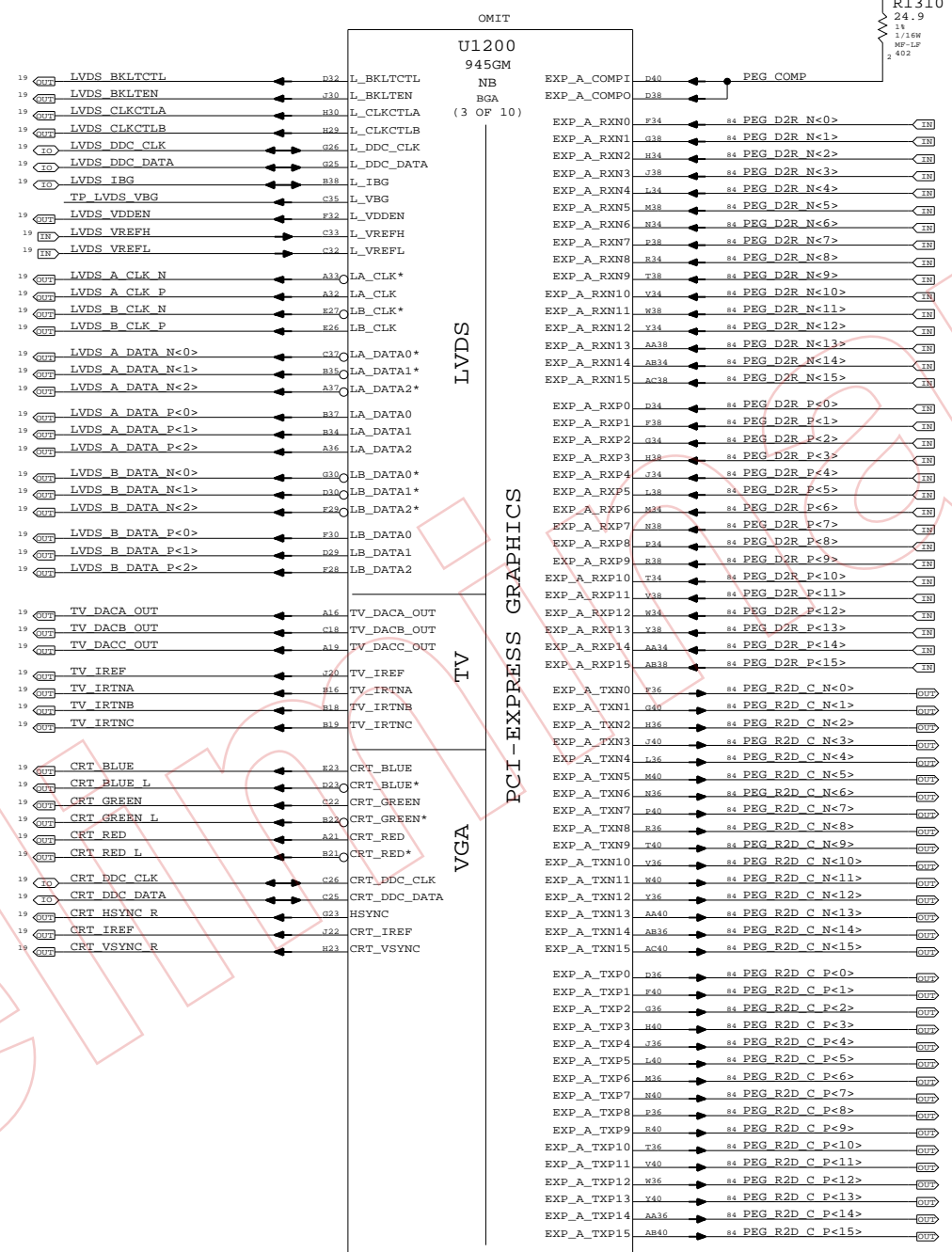
LVDS Disable  
Can leave all signals NC if LVDS is not implemented  
Tie VCC\_TXLVDS and VCCA\_LVDS to GND. If SDVO is used  
VCCD\_LVDS must remain powered with proper decoupling.  
Otherwise, tie VCCD\_LVDS to GND also.

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

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

TV-Out Disable  
Tie DACx\_OUT, IRTNx, and IREF to 1.5V power rail.  
Tie VCCD\_TVDAC, VCCD\_QTVDAC, VCCA\_TVDACx, and  
VCCA\_TVVBG to 1.5V power rail. Tie VSSA\_TVVBG to GND.

CRT Disable  
Tie R/R#/G/G#/B/B# and IREF to VCC Core rail, tie  
HSYNC and VSYNC to GND. Tie VCCA\_CRTDAC to VCC Core  
rail, and tie VSSA\_CRTDAC and VCC\_SYNC to GND.



SDVO Alternate Function  
SDVO\_TVCLKIN#  
SDVO\_INT#  
SDVO\_FLDSTALL#

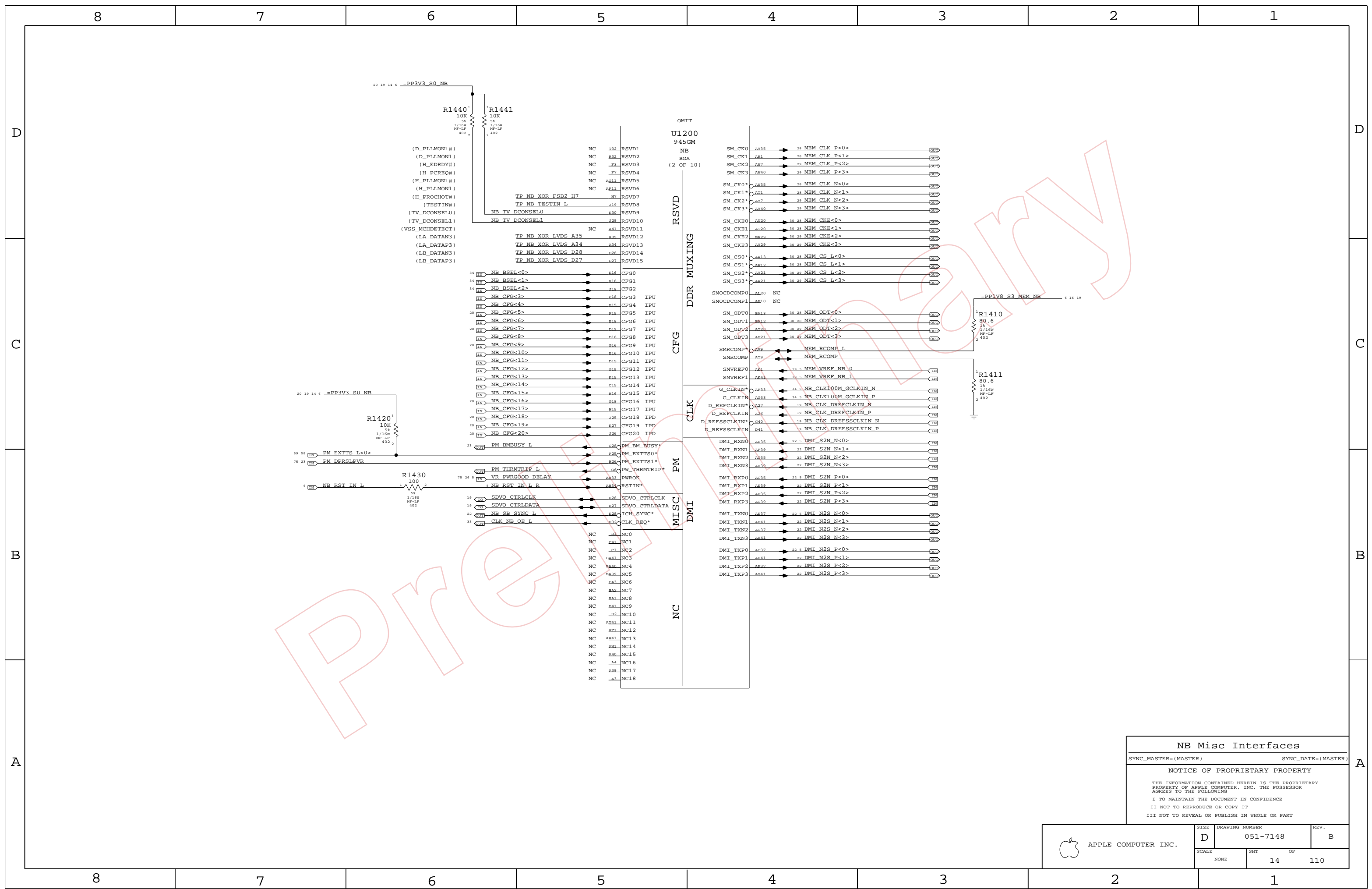
SDVO\_TVCLKIN  
SDVO\_INT  
SDVO\_FLDSTALL

SDVOB\_RED#  
SDVOB\_GREEN#  
SDVOB\_BLUE#  
SDVOB\_CLKN  
SDVOC\_RED#  
SDVOC\_GREEN#  
SDVOC\_BLUE#  
SDVOC\_CLKN

SDVOB\_RED  
SDVOB\_GREEN  
SDVOB\_BLUE  
SDVOB\_CLKP  
SDVOC\_RED  
SDVOC\_GREEN  
SDVOC\_BLUE  
SDVOC\_CLKP

NB PEG / Video Interfaces  
SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)  
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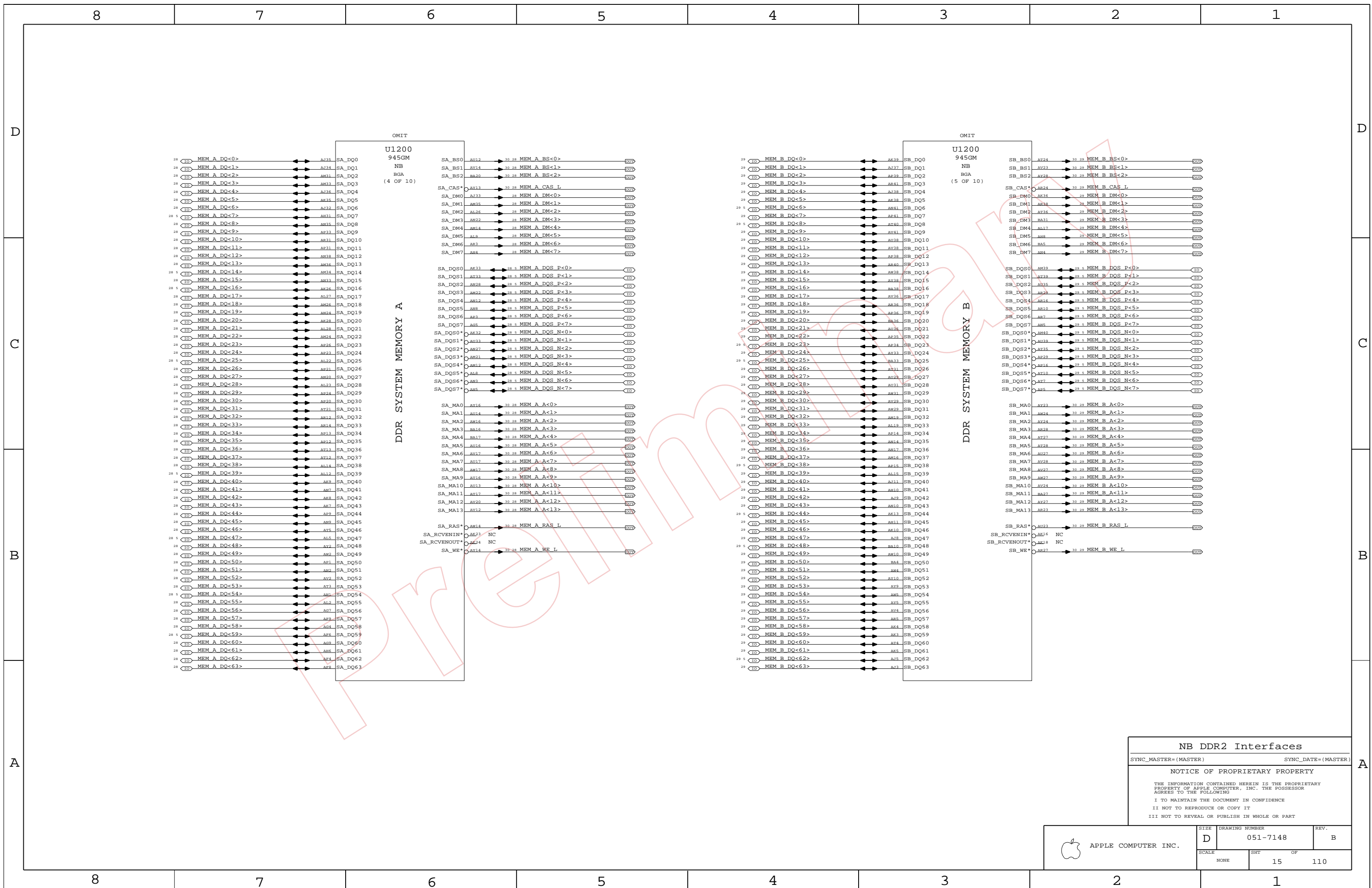
**NB Misc Interfaces**

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

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| SCALE               | SHT  | OF             |      |
| NONE                | 14   | 110            |      |



**NB DDR2 Interfaces**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

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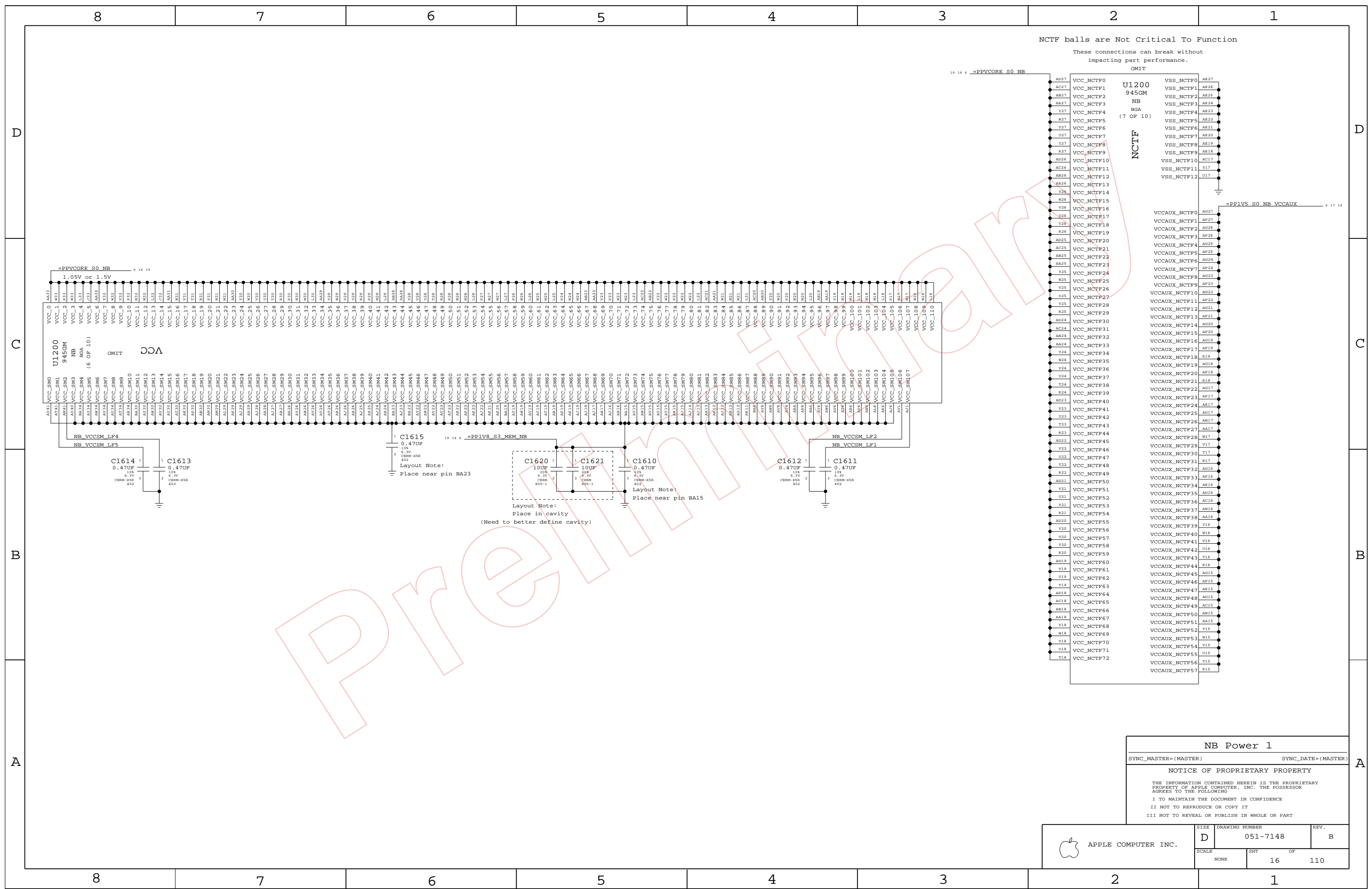
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|                     | SCALE<br>NONE    | SHEET<br>15                | OF<br>110 |



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

U1200  
 945GM  
 NB  
 BGA  
 (7 OF 10)  
 NCTF

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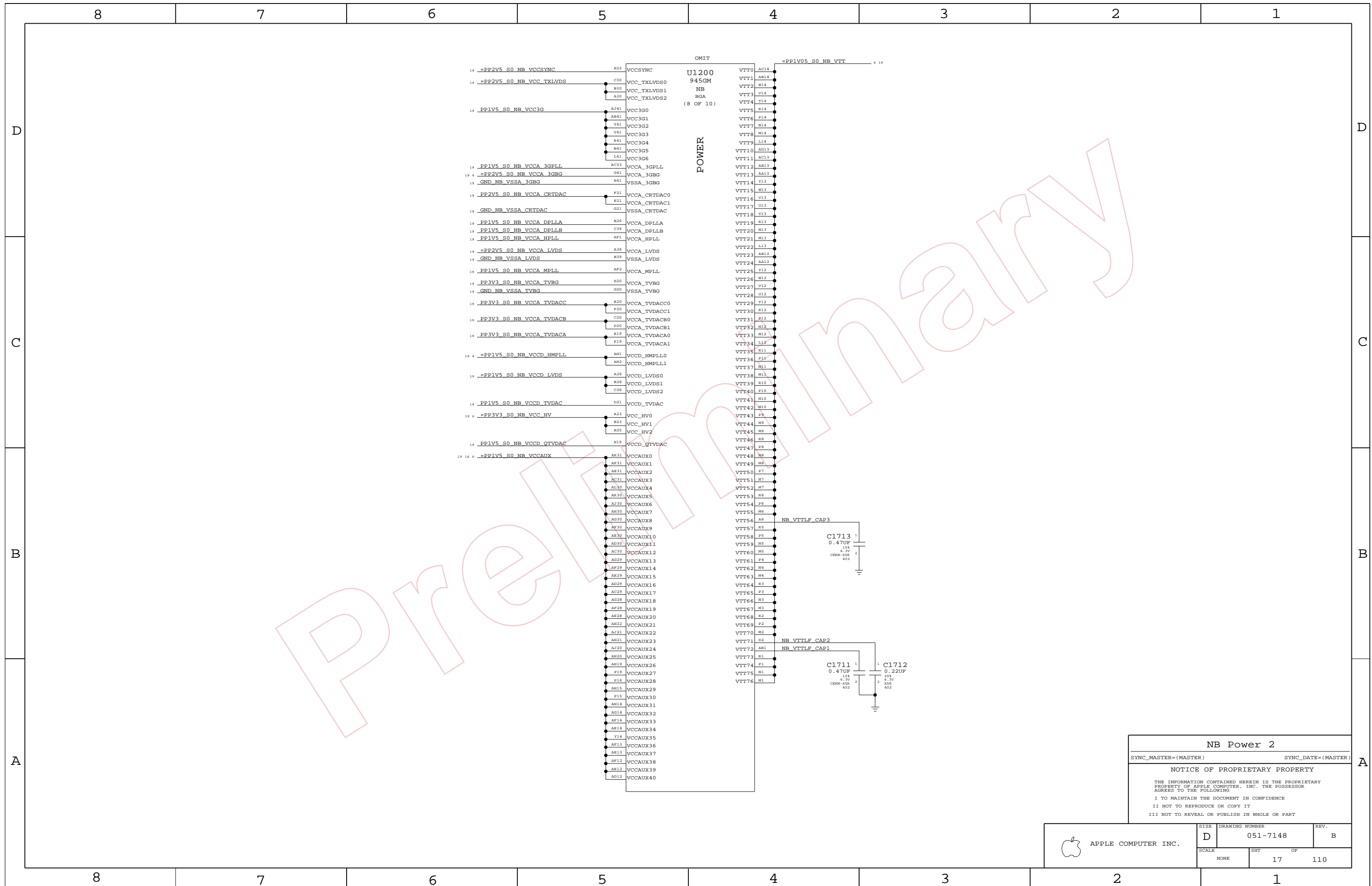
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NB Power 1  
 SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)  
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| SCALE<br>NONE | DRAWING NUMBER<br>D 051-7148 | REV.<br>B |
|               |                              |           |





**NB Power 2**

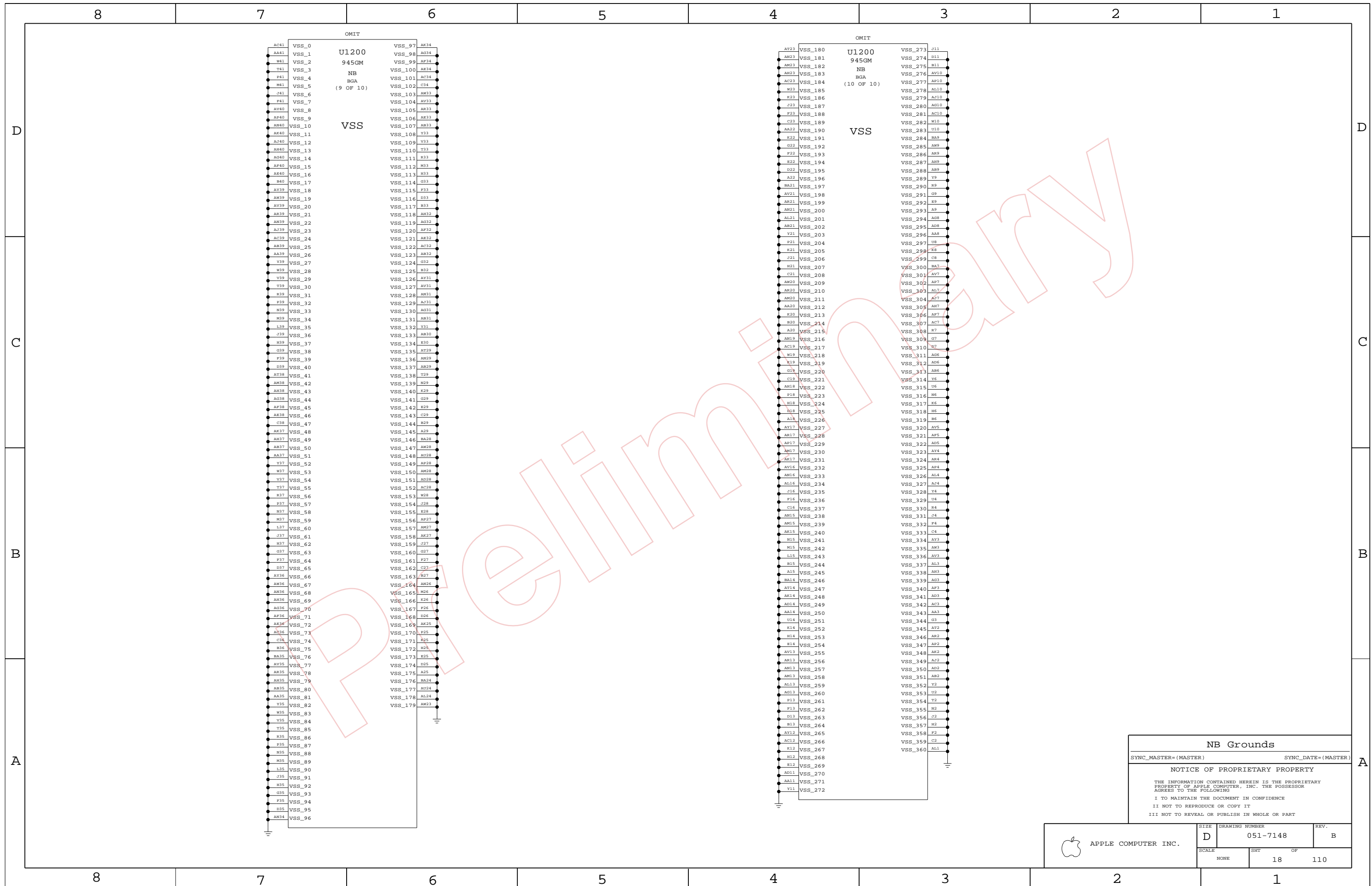
SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

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|                     | SCALE<br>NONE    | SHEET<br>17                       | OF<br>110        |



**NB Grounds**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

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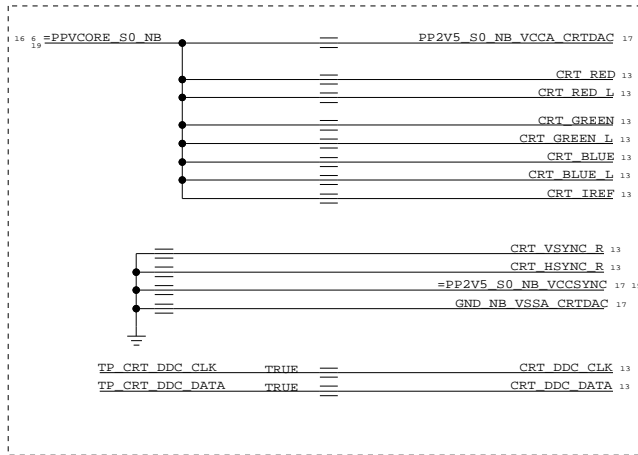
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|                     | SCALE<br>NONE    | SHT<br>18                         | OF<br>110        |

### Power Interface

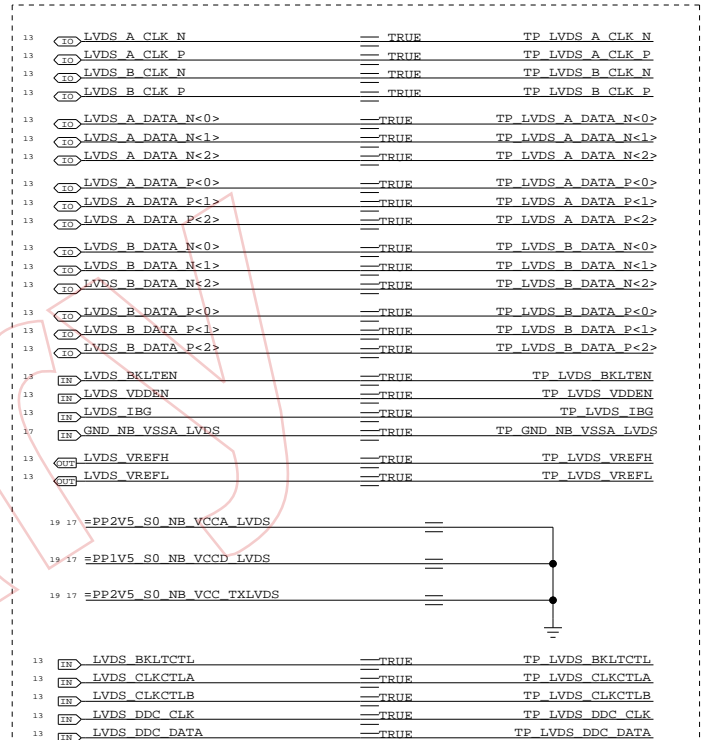
These are the power signals that leave the NB "block"

|    |                         |            |
|----|-------------------------|------------|
| IN | =PP1V05_S0_FSB_NB       | 5 6 12     |
| IN | =PPVCORE_S0_NB          | 6 16 19    |
| IN | =PP1V05_S0_NB           | 6          |
| IN | =PP1V05_S0_NB_VTT       | 6 17 19    |
| IN | =PP1V5_S0_NB            | 6 19       |
| IN | =PP1V5_S0_NB_PCIE       | 6 13       |
| IN | =PP1V5_S0_NB_PLL        | 6 19       |
| IN | =PP1V5_S0_NB_TVDAC      | 6 19       |
| IN | =PP1V5_S0_NB_VCCD_HMPLL | 6 19       |
| IN | =PP1V5_S0_NB_VCCD_LVDS  | 17 19      |
| IN | =PP1V5_S0_NB_VCCAUX     | 6 16 17 19 |
| IN | =PP1V8_S3_MEM_NB        | 6 14 16 19 |
| IN | =PP2V5_S0_NB_VCCSYNCR   | 17 19      |
| IN | =PP2V5_S0_NB_VCC_TXLVDS | 17 19      |
| IN | =PP2V5_S0_NB_VCCA_3GBG  | 6 17 19    |
| IN | =PP2V5_S0_NB_VCCA_LVDS  | 17 19      |
| IN | =PP3V3_S0_NB            | 6 14 20    |
| IN | =PP3V3_S0_NB_TVDAC      | 6          |
| IN | =PP3V3_S0_NB_VCC_HV     | 6 17 19    |

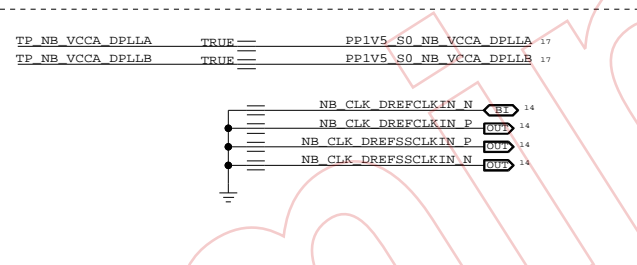
### TVOUT DISABLE



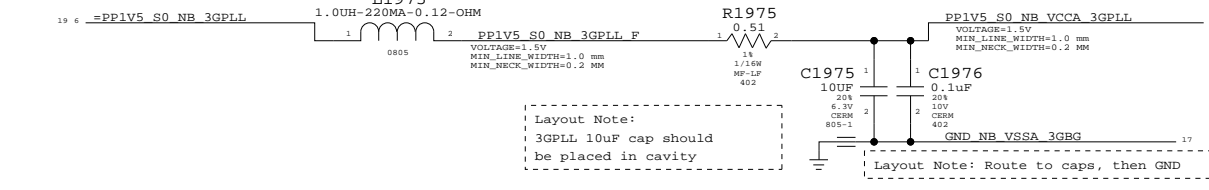
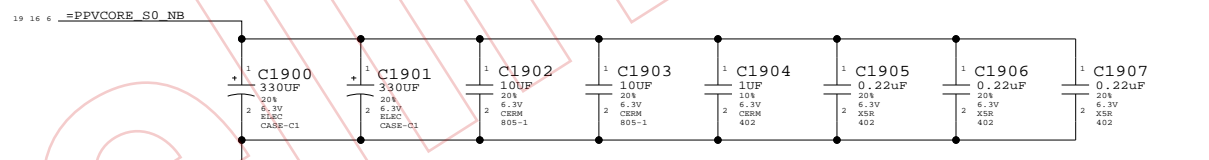
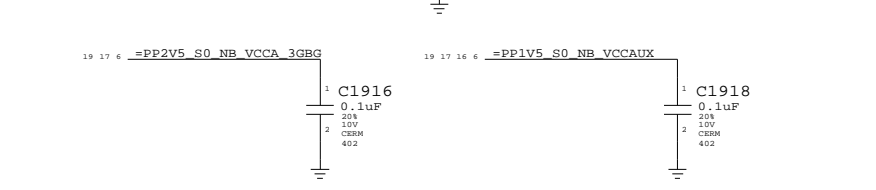
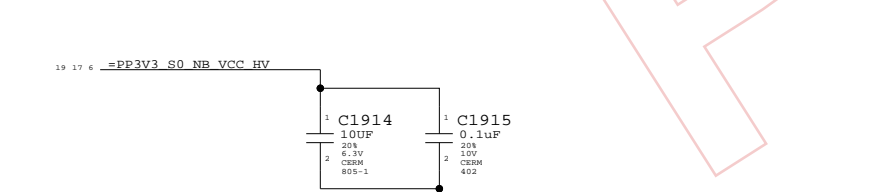
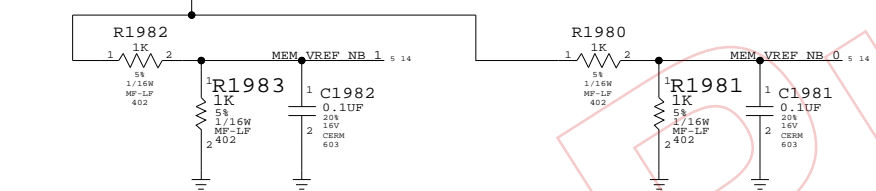
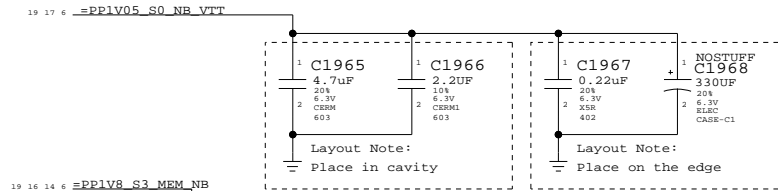
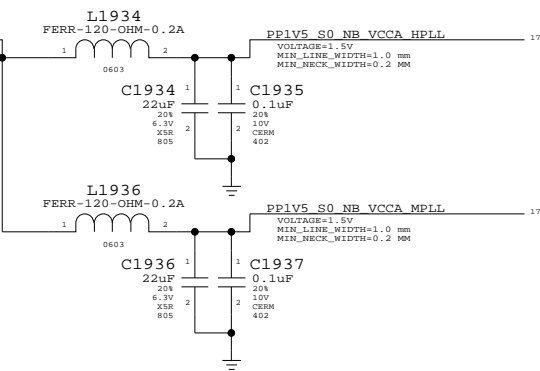
### LVDS DISABLE



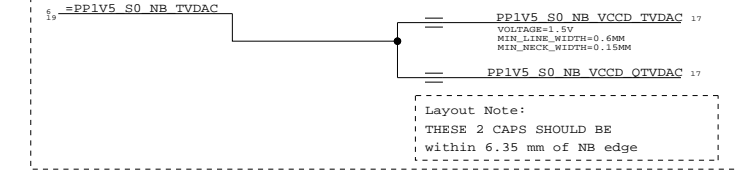
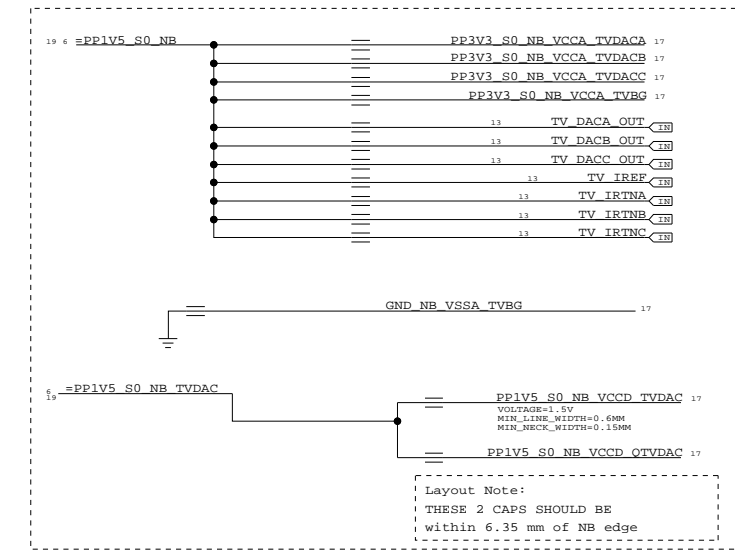
### DISPLAY DISABLE



Layout Note:  
These 4 0.1uF caps should be within 5 mm of NB edge



### TVOUT DISABLE

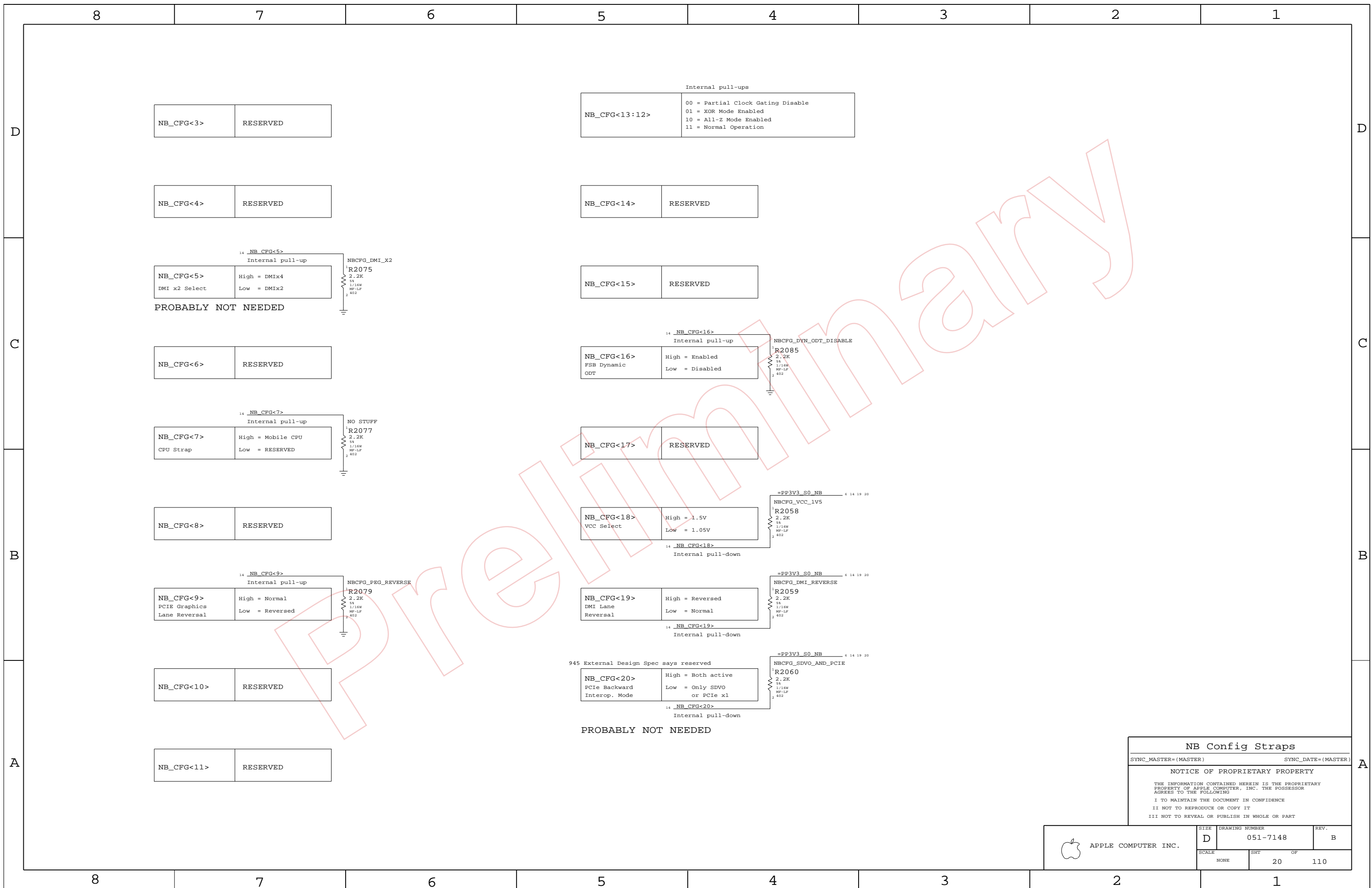


**NB (GM) Decoupling**  
 SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)  
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|-------|----------------|------|
| SIZE  | DRAWING NUMBER | REV. |
| D     | 051-7148       | B    |
| SCALE | SHT            | OF   |
| NONE  | 19             | 110  |



APPLE COMPUTER INC.



**NB Config Straps**

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

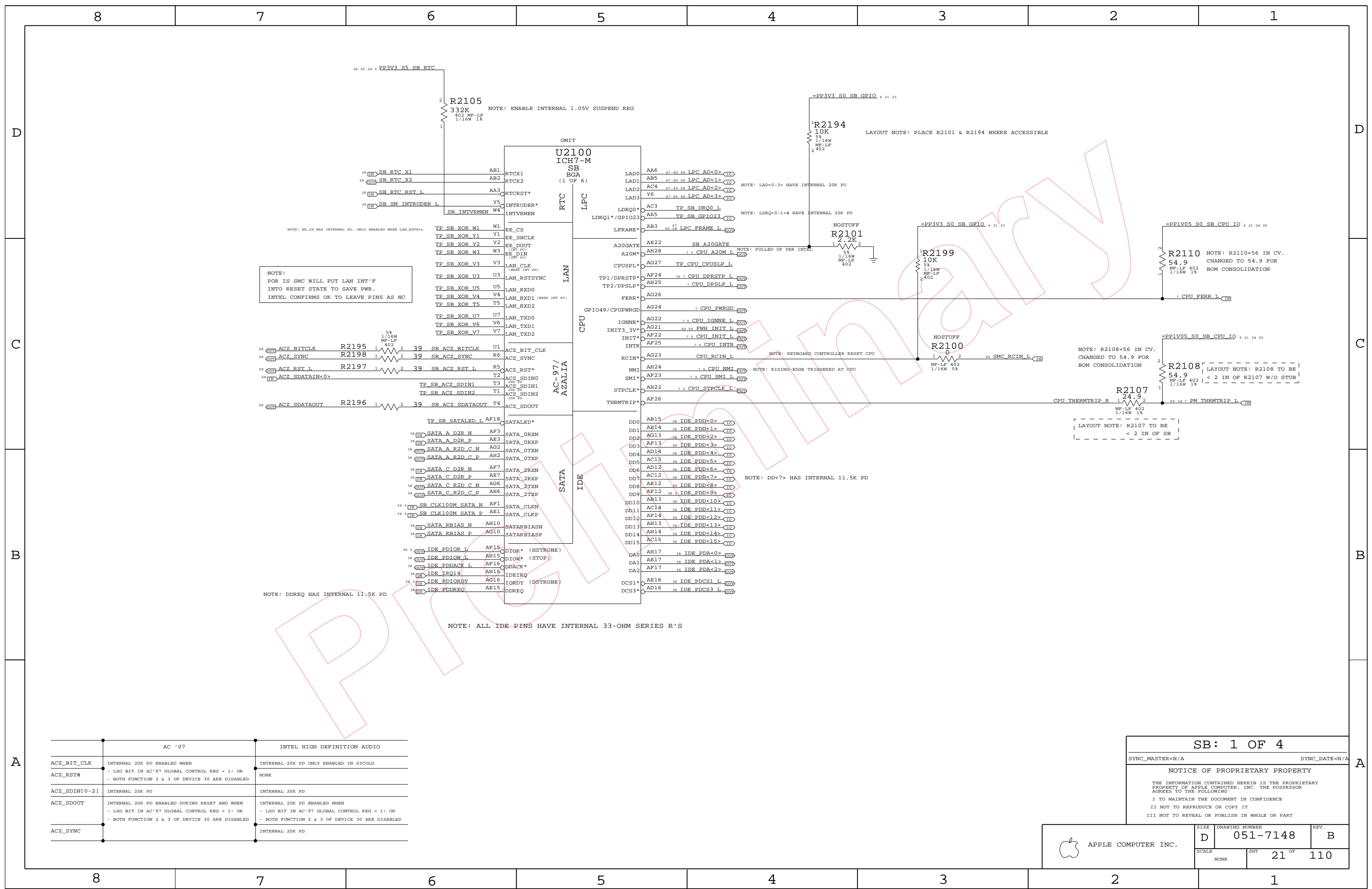
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| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             |      |
| NONE                | 20   | 110            |      |





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

NOTE: DDREQ HAS INTERNAL 11.5K PD

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

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

**SB: 1 OF 4**

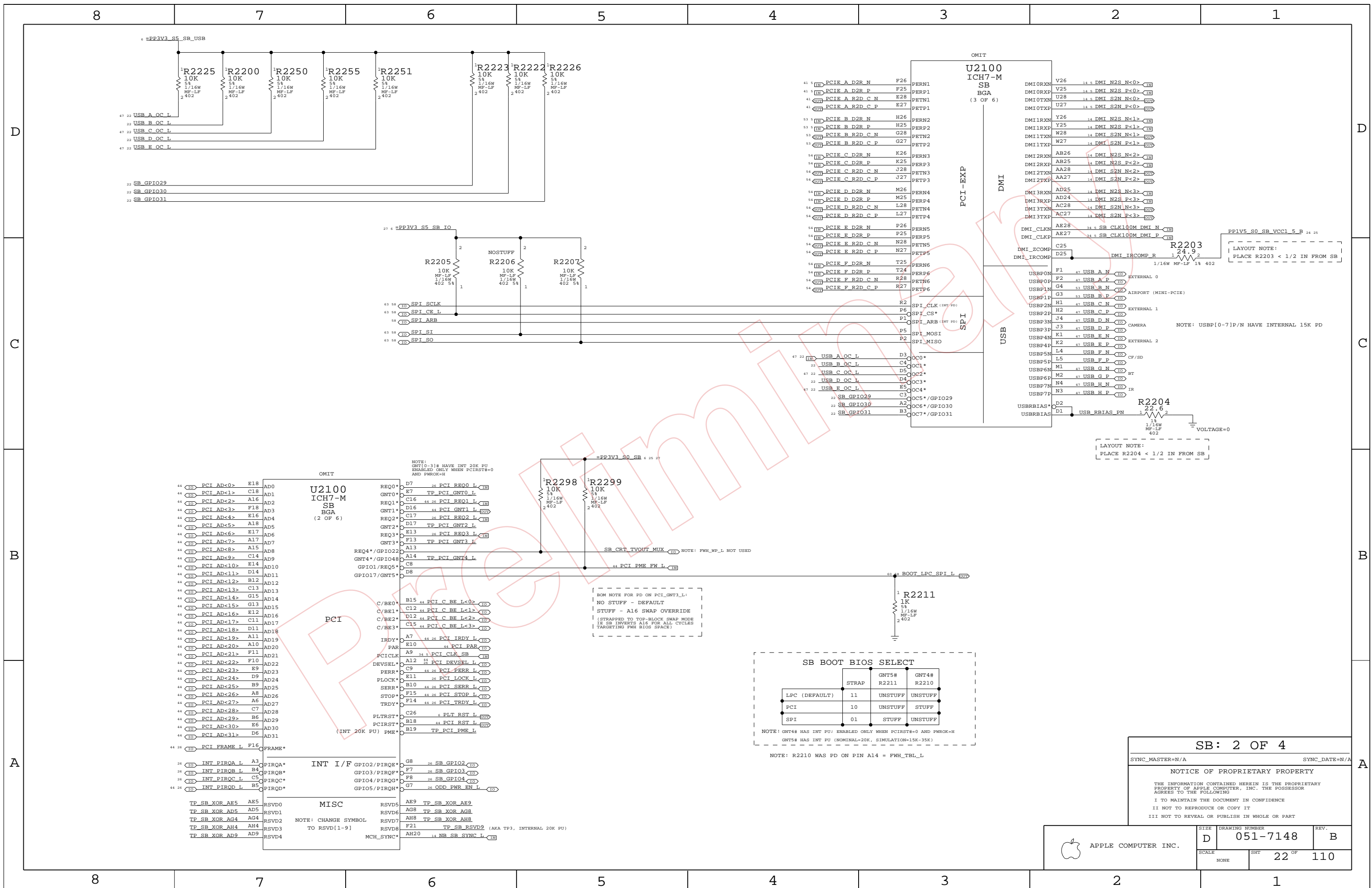
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|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 21 OF 110      |      |
| NONE                |      |                |      |



**NOTICE OF PROPRIETARY PROPERTY**

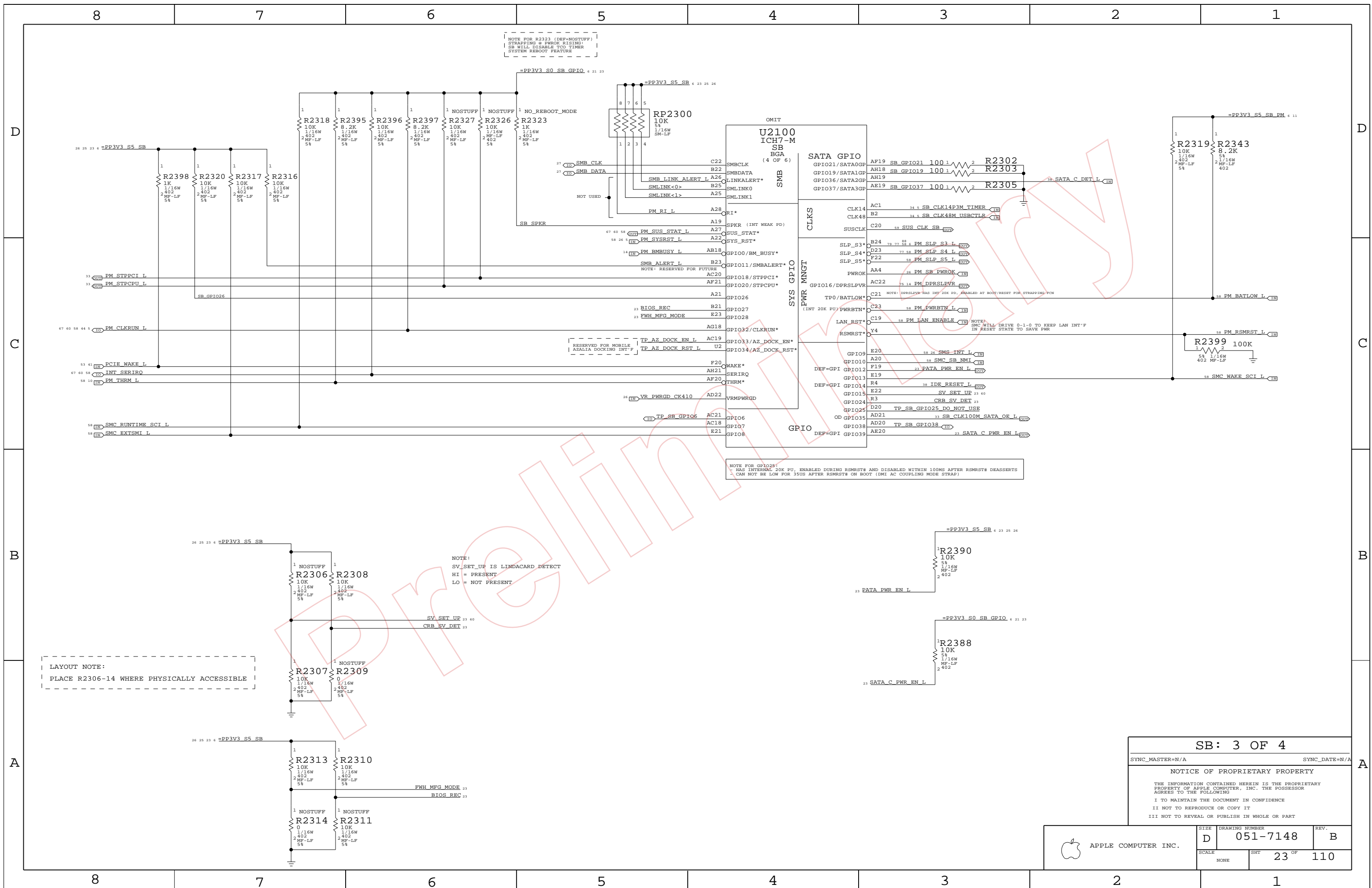
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|---------------------|------------------|-----------------------------------|------------------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br><b>051-7148</b> | REV.<br><b>B</b> |
|                     | SCALE<br>NONE    | SHEET<br><b>22</b> OF <b>110</b>  |                  |



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

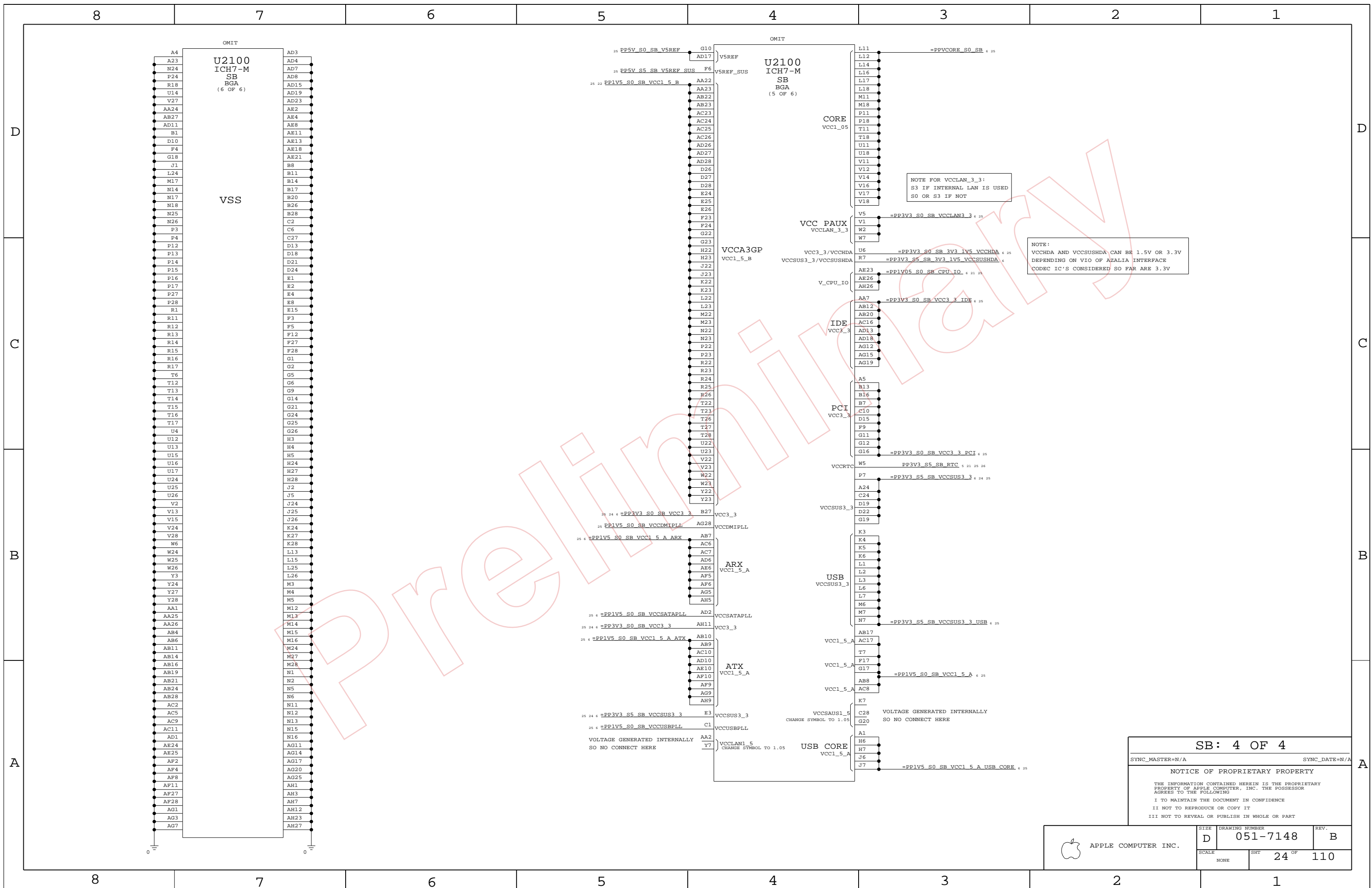
NOTE FOR GPIO25:  
\* HAS INTERNAL 20K PU, ENABLED DURING RSMRST# AND DISABLED WITHIN 100MS AFTER RSMRST# DEASSERTS  
\* CAN NOT BE LOW FOR 35US AFTER RSMRST# ON BOOT (EMI AC COUPLING MODE STRAP)

LAYOUT NOTE:  
PLACE R2306-14 WHERE PHYSICALLY ACCESSIBLE

NOTE:  
SV\_SET\_UP IS LINDACARD DETECT  
HI = PRESENT  
LO = NOT PRESENT

SB: 3 OF 4  
SYNC\_MASTER=N/A SYNC\_DATE=N/A  
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|                     | D    | 051-7148       | B         |
| SCALE               | NONE | SHT            | 23 OF 110 |



**SB: 4 OF 4**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

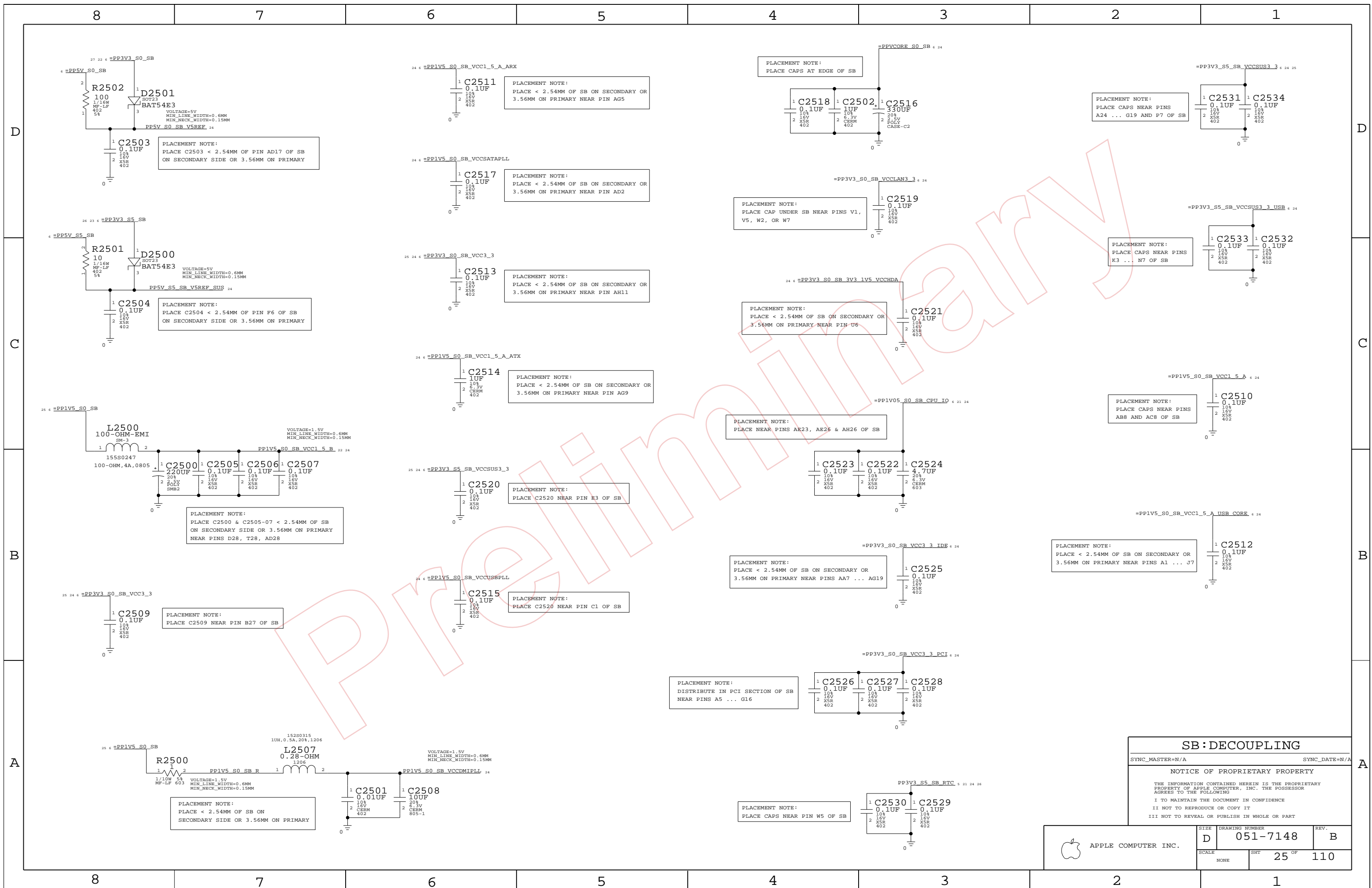
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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 24 OF 110      |      |
| NONE                |      |                |      |





**SB: DECOUPLING**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

**NOTICE OF PROPRIETARY PROPERTY**

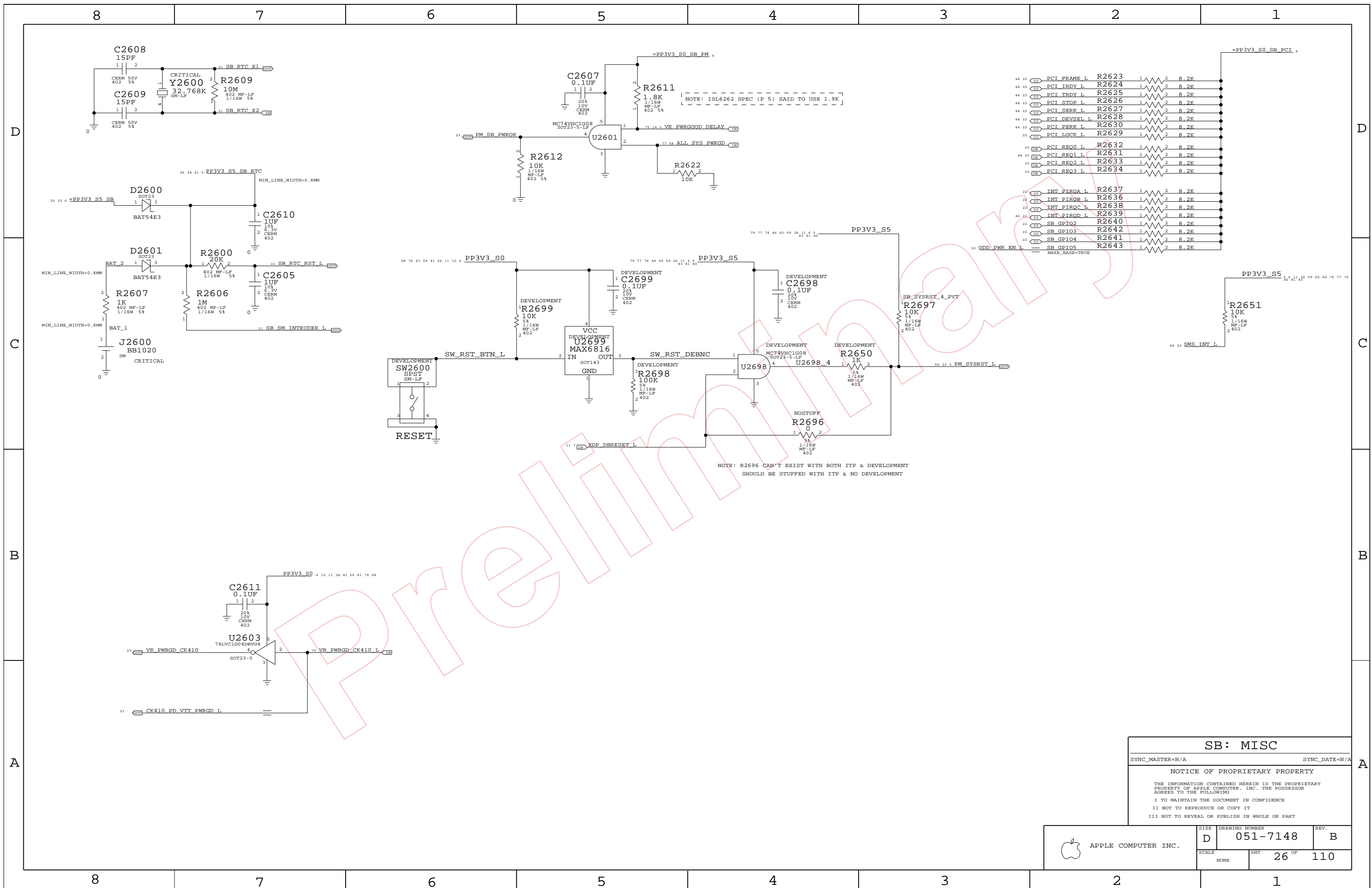
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|---------------------|------|----------------|------|
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|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 25 OF          | 110  |
| NONE                |      |                |      |



**SB: MISC**

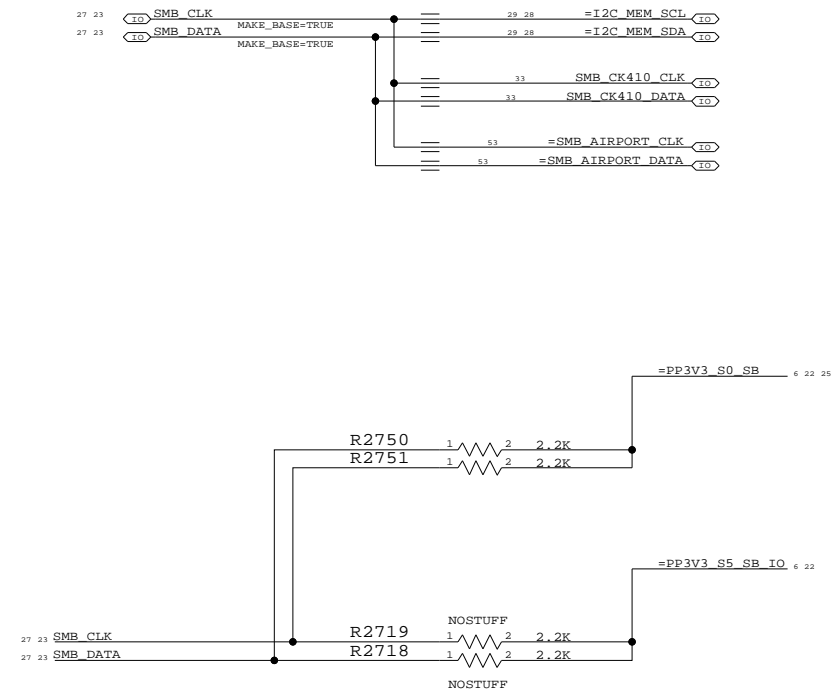
SYNC\_MASTER=N/A SYNC\_DATE=N/A

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|---------------------|------------------|-----------------------------------|------------------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br><b>051-7148</b> | REV.<br><b>B</b> |
|                     | SCALE<br>NONE    | SHT<br>26 OF 110                  |                  |

# SB I2C BUSSES



Preliminary


## SB: SMB HUB

SYNC\_MASTER=N/A SYNC\_DATE=N/A

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|---|------|----------------|------|
|  APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|   | D    | 051-7148       | B    |
| SCALE   | SHT  | 27 OF 110      |      |
| NONE  |      |                |      |

# Page Notes

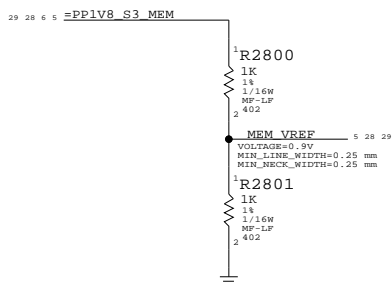
Power aliases required by this page:  
 - =PPIV8\_S3\_MEM  
 - =PPSPD\_S0\_MEM (2.5V - 3.3V)

Signal aliases required by this page:  
 - =I2C\_MEM\_SCL  
 - =I2C\_MEM\_SDA

BOM options provided by this page:  
 (NONE)

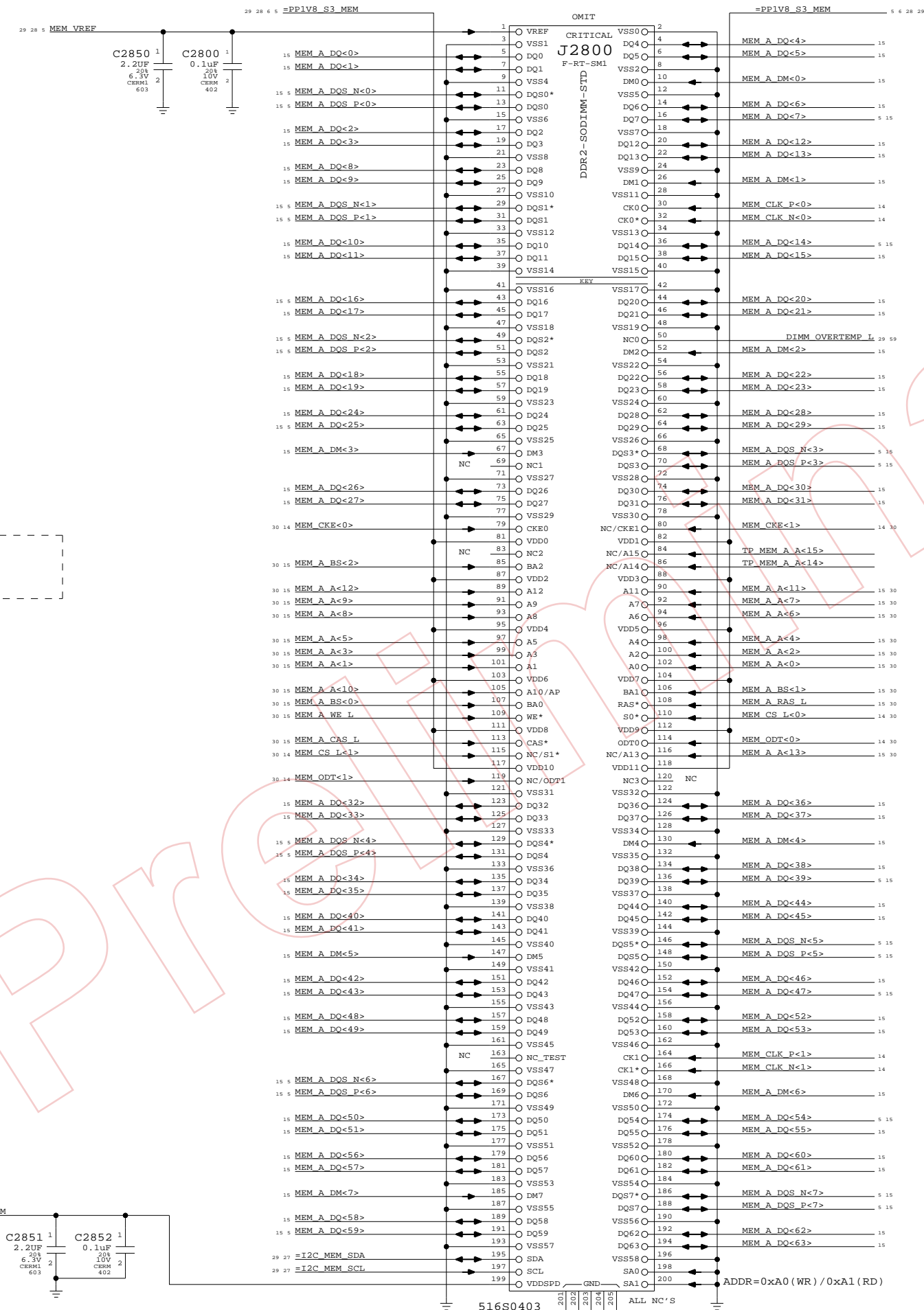
## DDR2 VRef

One 0.1uF per connector



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

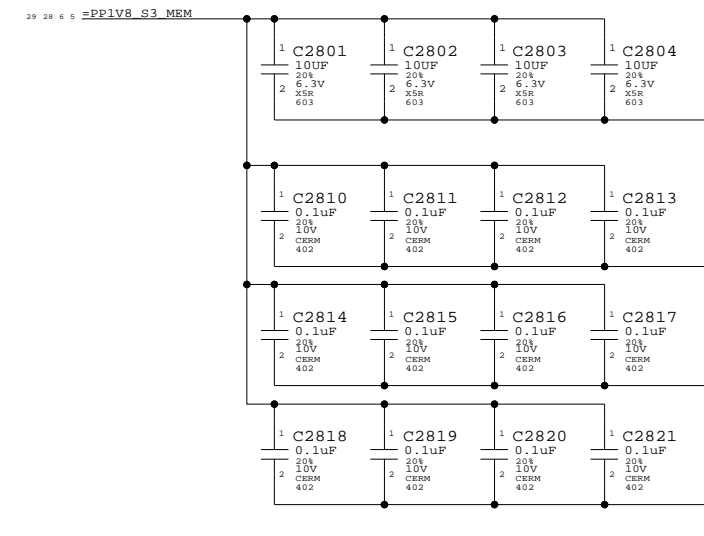
PR



| PART#    | QTY | DESCRIPTION          | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|----------|-----|----------------------|-------------------------|----------|------------|
| 516S0503 | 1   | DDR2 SODIMM STD CONN | J2800                   | CRITICAL |            |

## DDR2 Bypass Caps

(For return current)



**DDR2 SO-DIMM Connector A**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

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|-------|------|----------------|------|
|       | SIZE | DRAWING NUMBER | REV. |
|       | D    | 051-7148       | B    |
| SCALE | SHT  | OF             |      |
| NONE  | 28   | 110            |      |

# Page Notes

Power aliases required by this page:  
 - =PP1V8\_S3\_MEM  
 - =PPSPD\_S0\_MEM (2.5V - 3.3V)

Signal aliases required by this page:  
 - =I2C\_MEM\_SCL  
 - =I2C\_MEM\_SDA

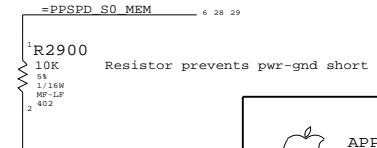
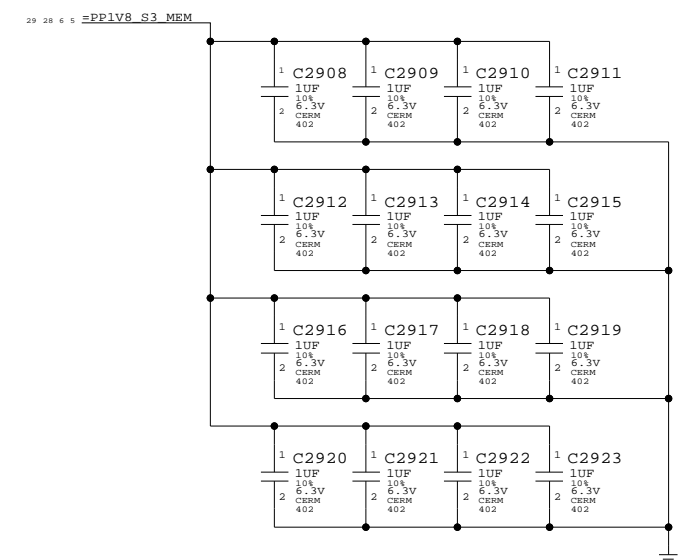
BOM options provided by this page:  
 (NONE)

NOTE: This page does not supply VREF.  
 The reference voltage must be provided by another page.



| PART#    | QTY | DESCRIPTION          | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|----------|-----|----------------------|-------------------------|----------|------------|
| 516S0504 | 1   | DDR2 SODIMM REV CONN | J2900                   | CRITICAL |            |

## DDR2 Bypass Caps (For return current)



**DDR2 SO-DIMM Connector B**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

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|---------------------|------------------|----------------------------|-----------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br>051-7148 | REV.<br>B |
|                     | SCALE<br>NONE    | SHEET<br>29                | OF<br>110 |



8

7

6

5

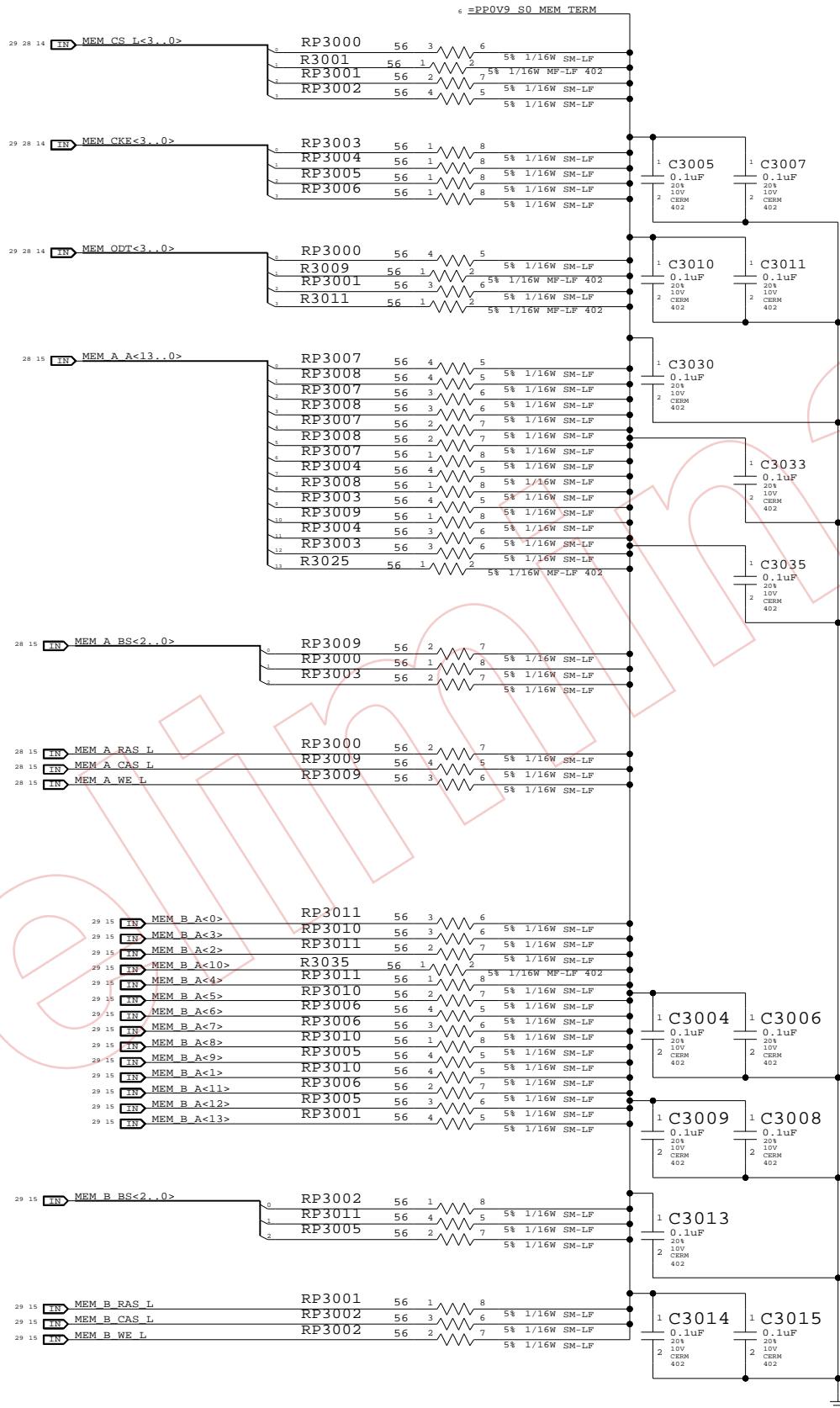
4

3

2

1

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



PRELIMINARY

Memory Active Termination

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|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             |      |
| NONE                | 30   | 110            |      |

8

7

6

5

4

3

2

1

Page Notes

Power aliases required by this page:  
 - =PP5V\_S0\_MEMVTT  
 - =PP1V8\_S0\_MEMVTT  
 - =PP0V9\_S0\_MEMVTT\_LDO

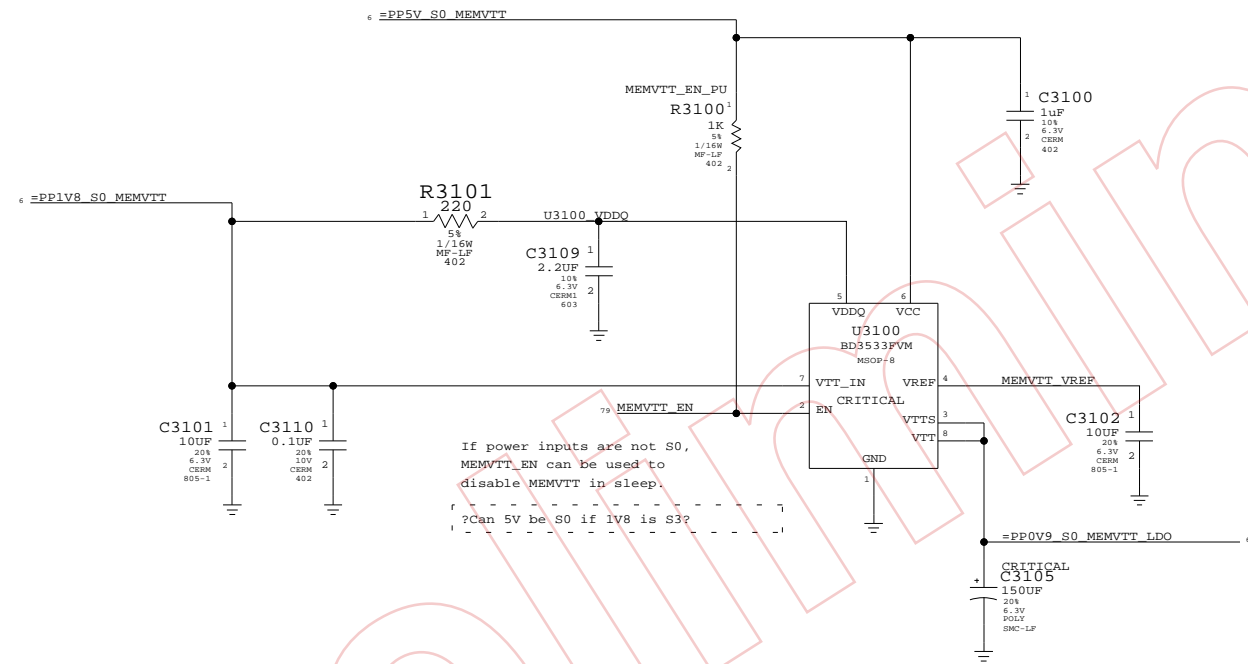
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Signal aliases required by this page:  
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BOM options provided by this page:  
 (NONE)

DDR2 Vtt Regulator



Memory Vtt Supply

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

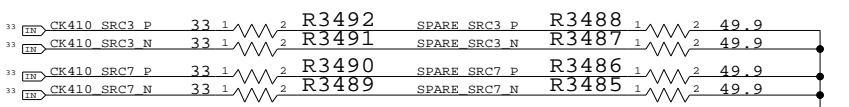
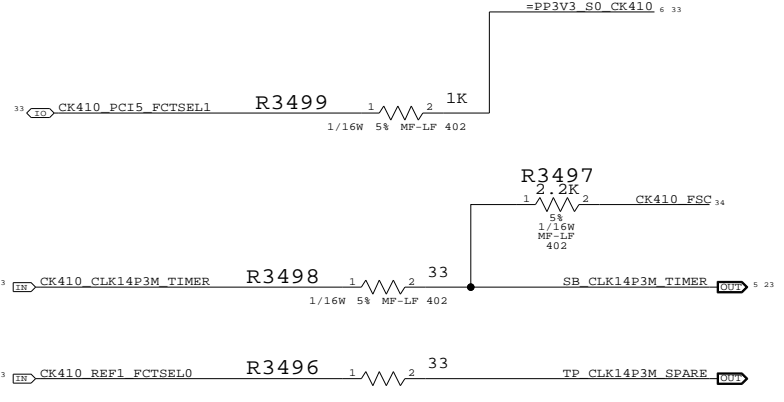
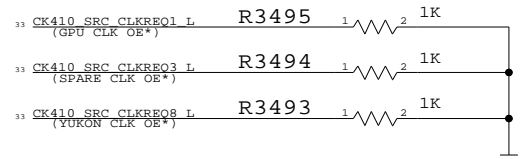
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| NONE                | 31   | 110            |      |

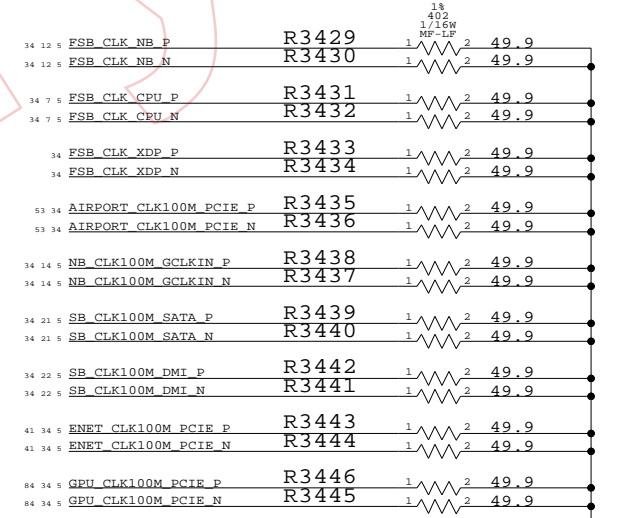
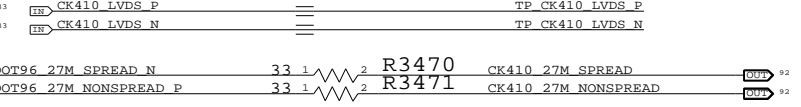
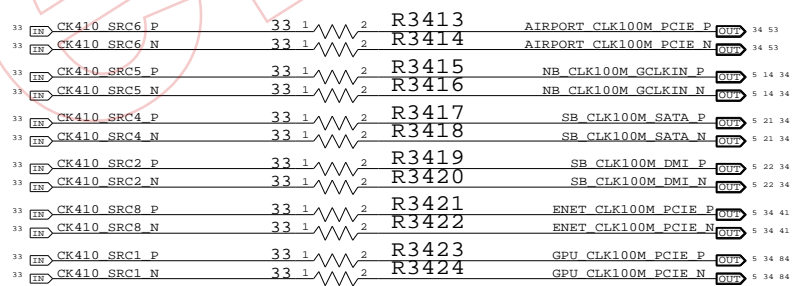
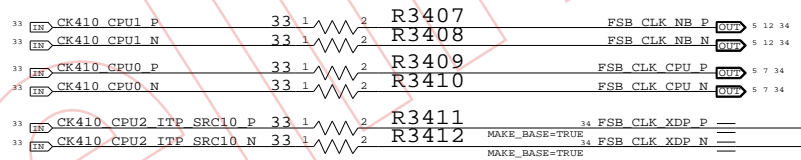
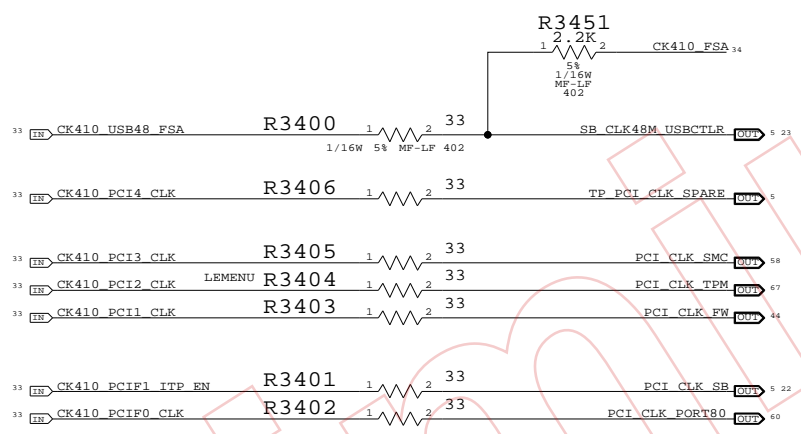
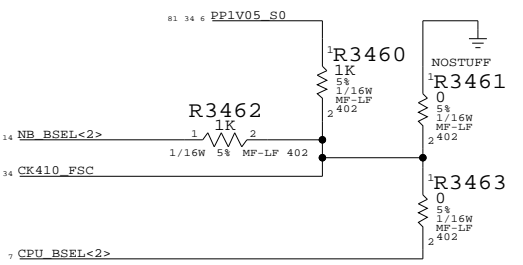
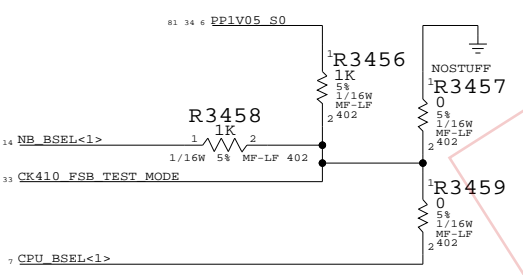
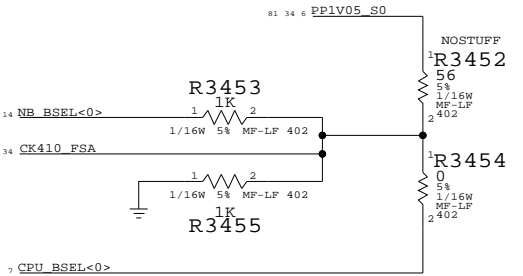


NOTE: USE THESE PULL-DOWNS IF NOT CONNECTED TO GPIO'S



FSB FREQUENCY SELECT:

|                            | STUFF                            | NO STUFF                         |
|----------------------------|----------------------------------|----------------------------------|
| CPU DRIVEN                 | R3452<br>R3453<br>R3454<br>R3455 | R3457<br>R3456<br>R3459<br>R3460 |
| 533MHZ<br>(133MHZ CPU CLK) | R3452<br>R3453<br>R3454<br>R3455 | R3457<br>R3456<br>R3459<br>R3460 |
| 667MHZ<br>(166MHZ CPU CLK) | R3452<br>R3453<br>R3454<br>R3455 | R3457<br>R3456<br>R3459<br>R3460 |



**CLOCKS: TERMINATIONS**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

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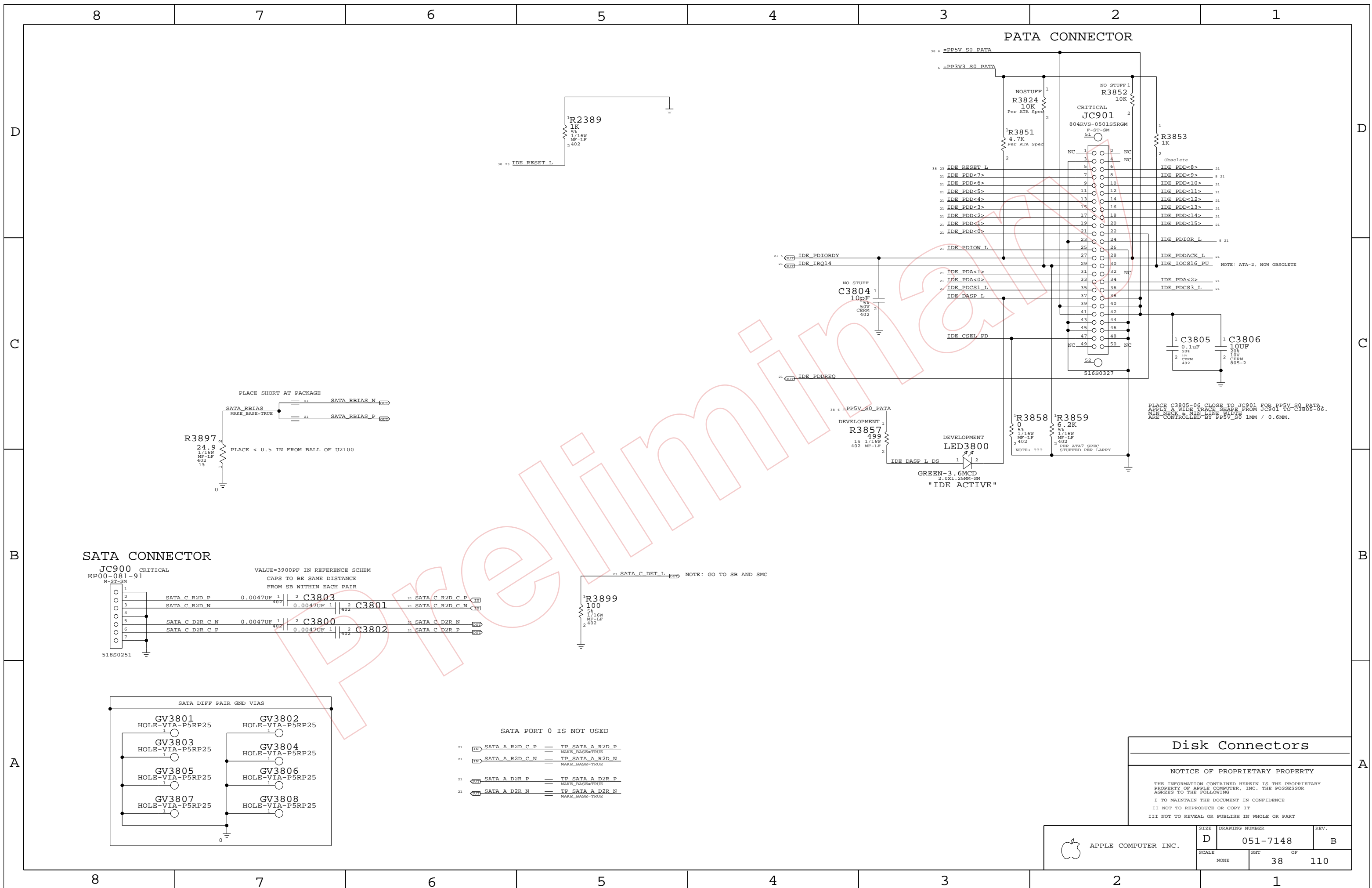
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|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             | 110  |
| NONE                | 34   |                |      |



**Disk Connectors**

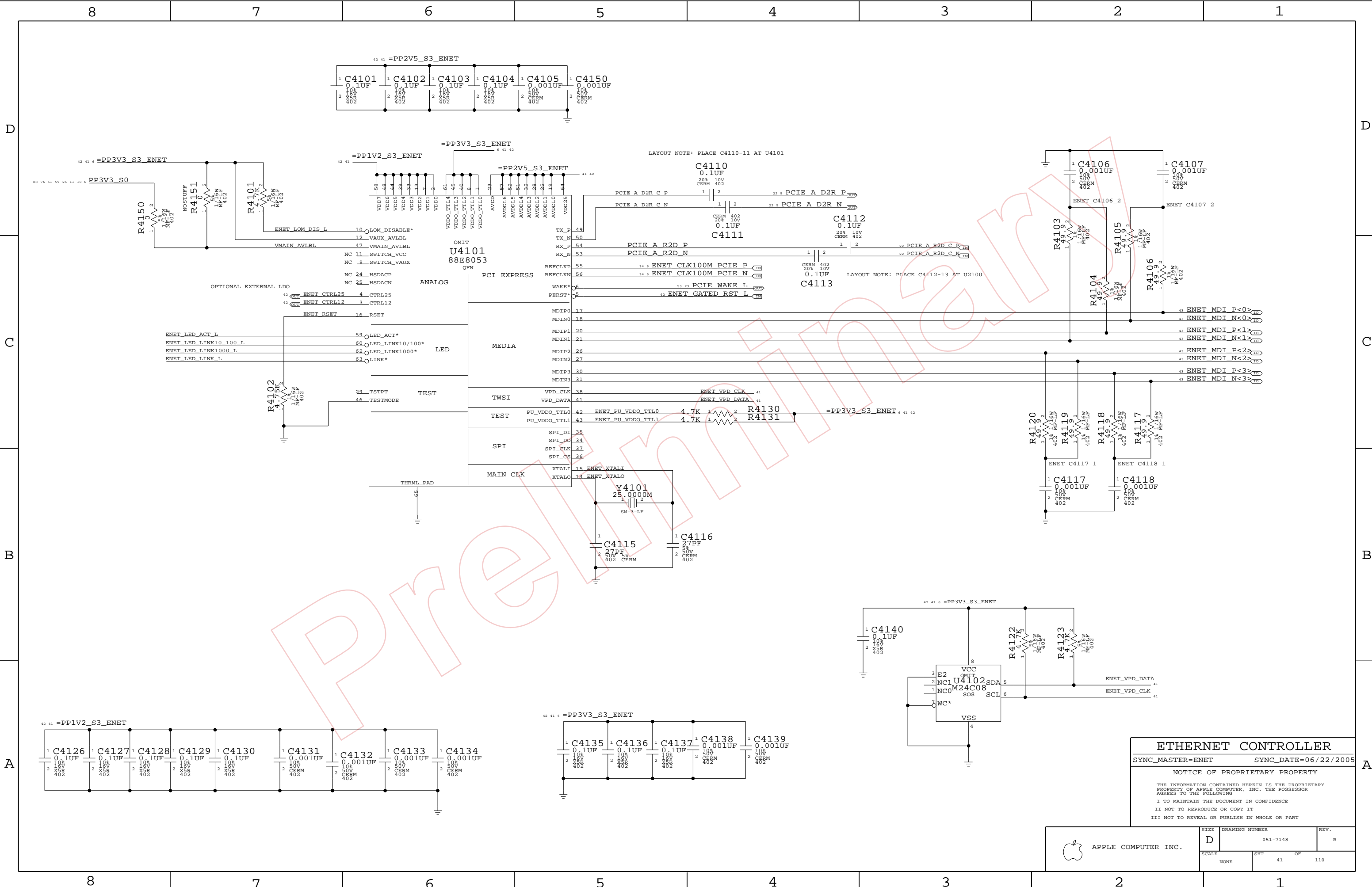
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|                     |      |                |      |
|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             | REV. |
| NONE                | 38   | 110            | 1    |





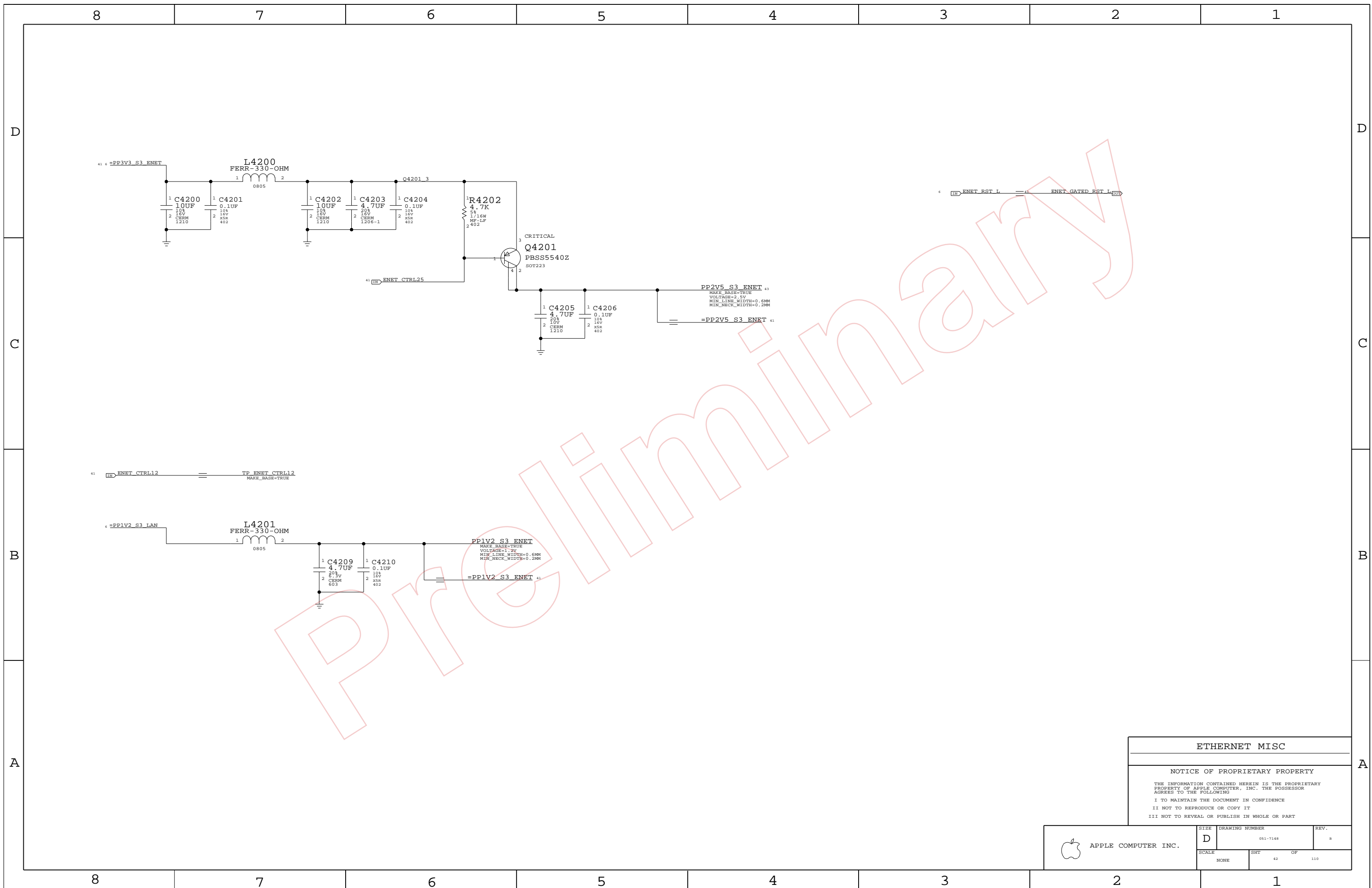
**ETHERNET CONTROLLER**

SYNC\_MASTER=ENET SYNC\_DATE=06/22/2005

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|                     |                  |                            |           |
|---------------------|------------------|----------------------------|-----------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br>051-7148 | REV.<br>B |
|                     | SCALE<br>NONE    | SHEET<br>41                | OF<br>110 |



ETHERNET MISC

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|---------------------|------------------|----------------------------|-----------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br>051-7148 | REV.<br>B |
|                     | SCALE<br>NONE    | SHT<br>42                  | OF<br>110 |

8

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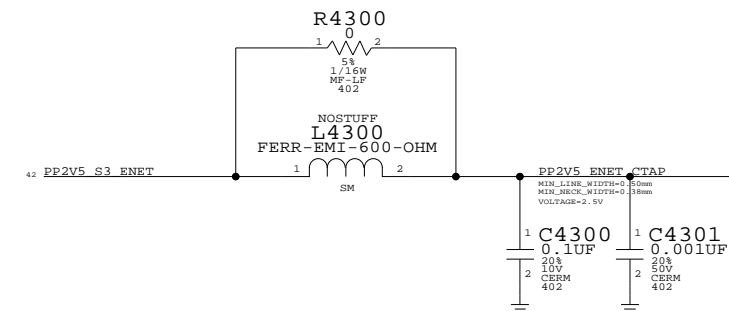
C

B

B

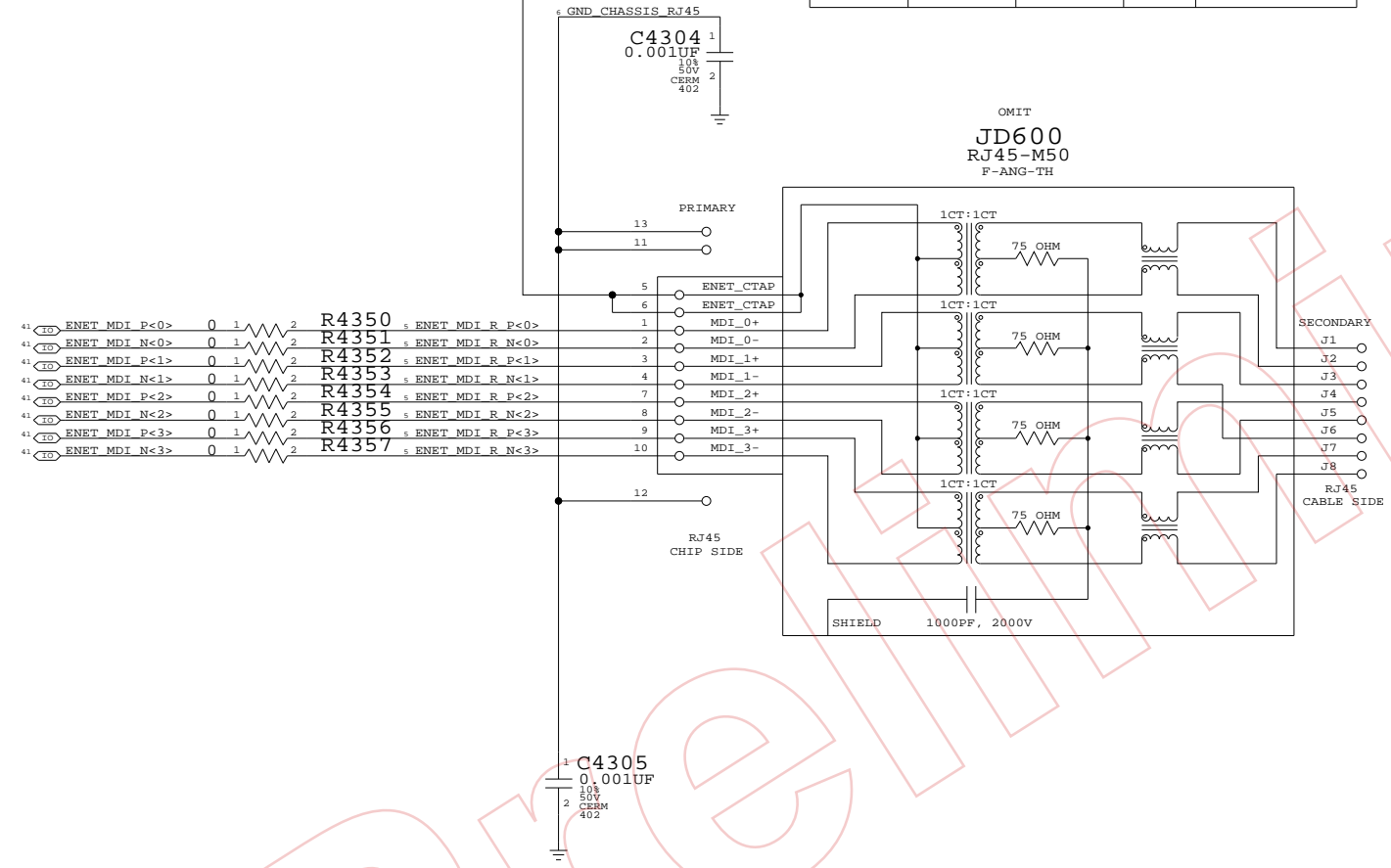
A

A



| PART#    | QTY | DESCRIPTION            | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|----------|-----|------------------------|-------------------------|----------|------------|
| 514-0366 | 1   | FOXCONN AND DELTA RJ45 | JD600                   | CRITICAL |            |

| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES | COMMENTS: |
|-------------|---------------------------|------------|---------|-----------|
|             |                           |            |         |           |



**ETHERNET CONNECTOR**

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|---------------------|-----------|----------------|------|
| APPLE COMPUTER INC. | SIZE      | DRAWING NUMBER | REV. |
|                     | D         | 051-7148       | B    |
| SCALE               | SHT OF    |                |      |
| NONE                | 43 OF 110 |                |      |

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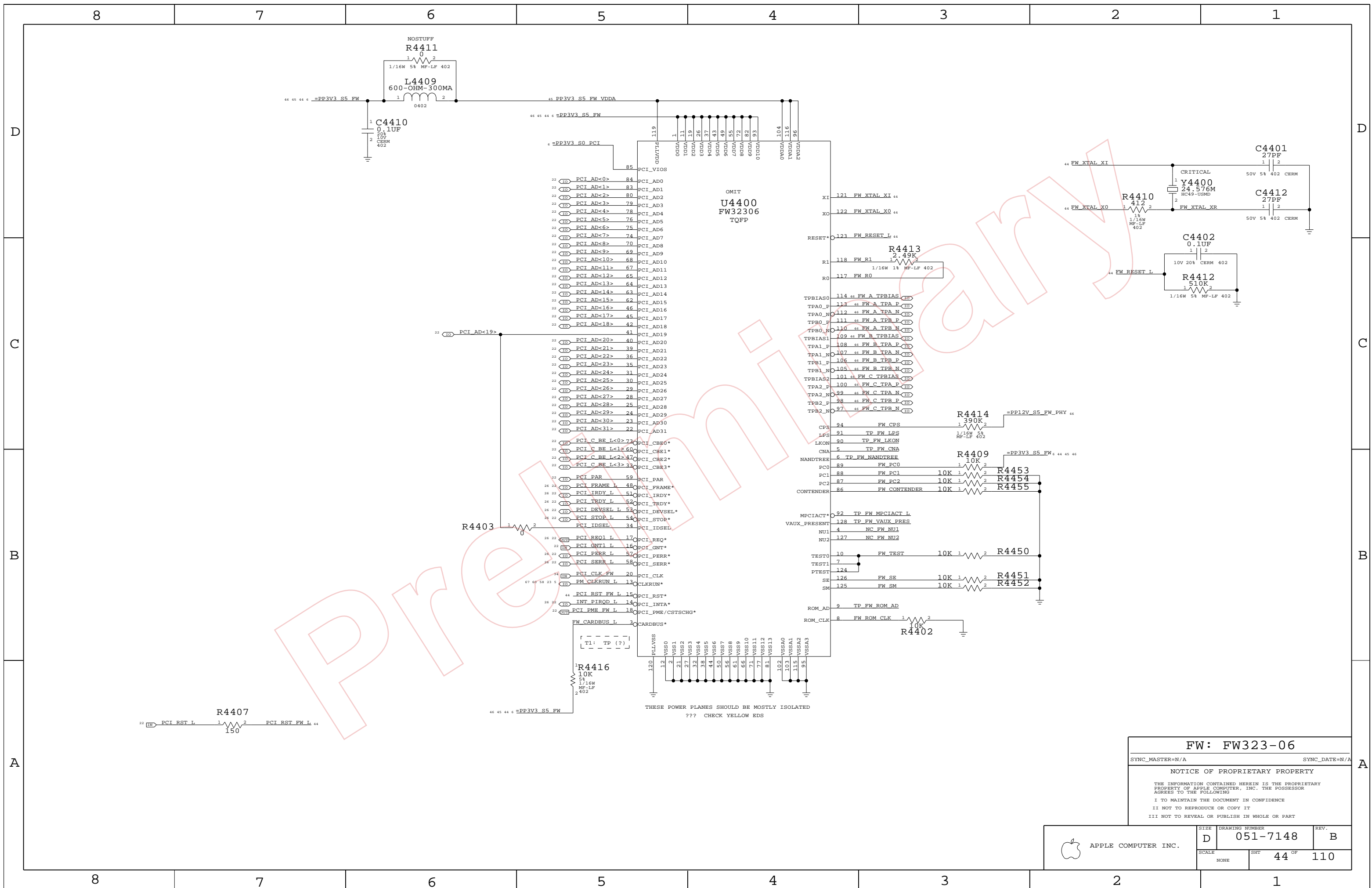
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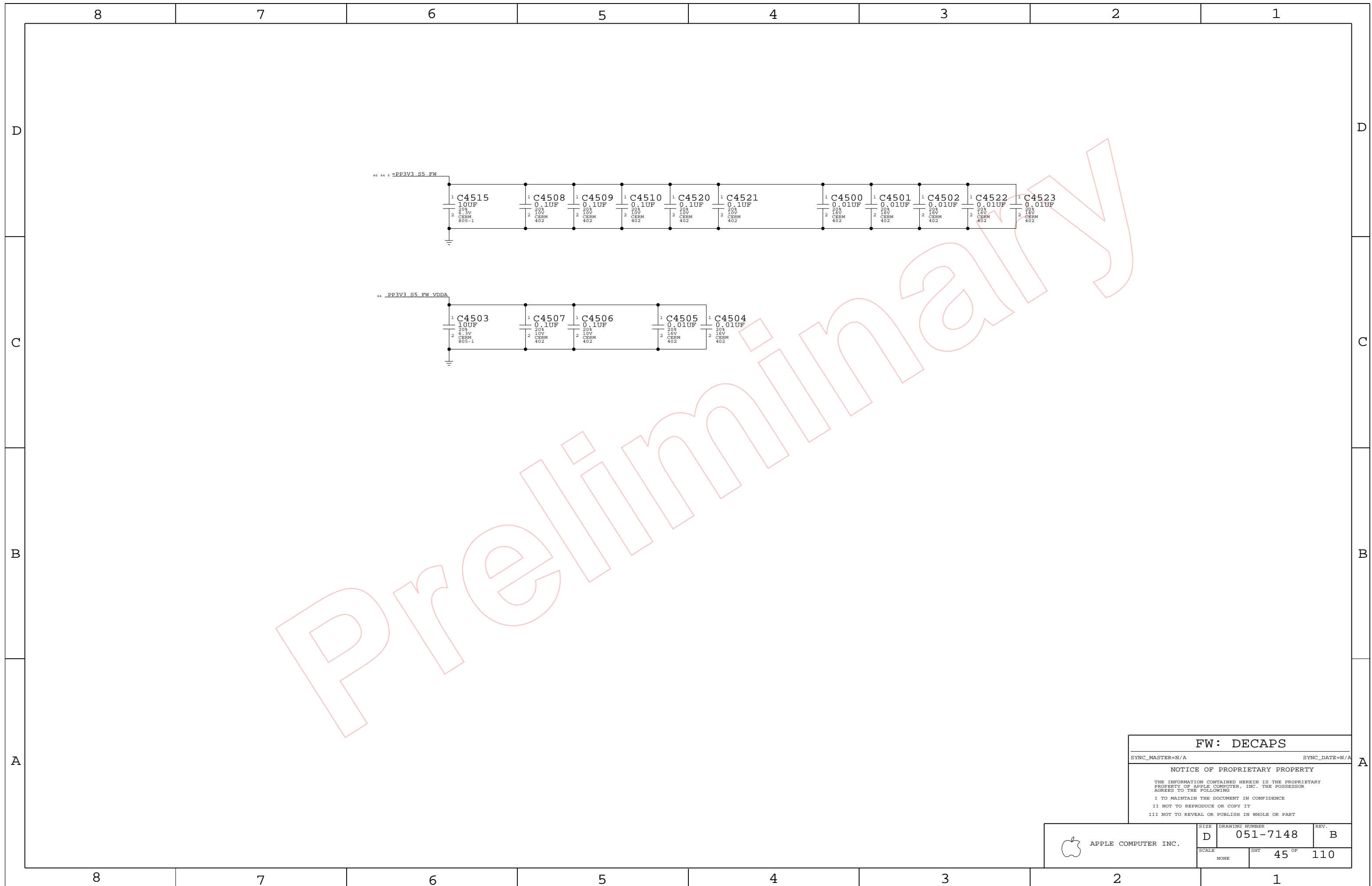
2

1



FW: FW323-06  
 SYNC\_MASTER=N/A SYNC\_DATE=N/A  
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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 44 OF          | 110  |
| NONE                |      |                |      |



Preliminary

**FW: DECAPS**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

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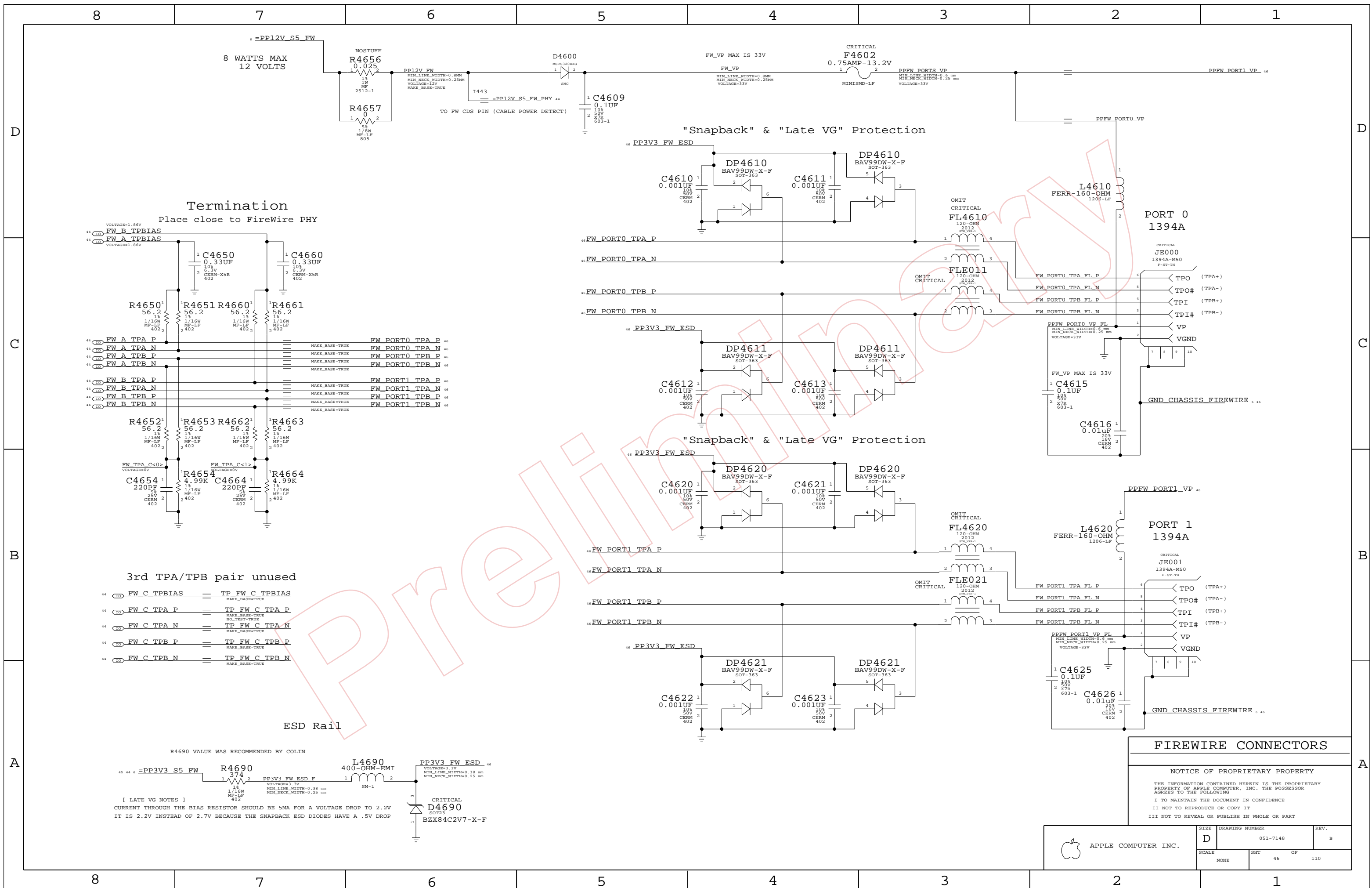
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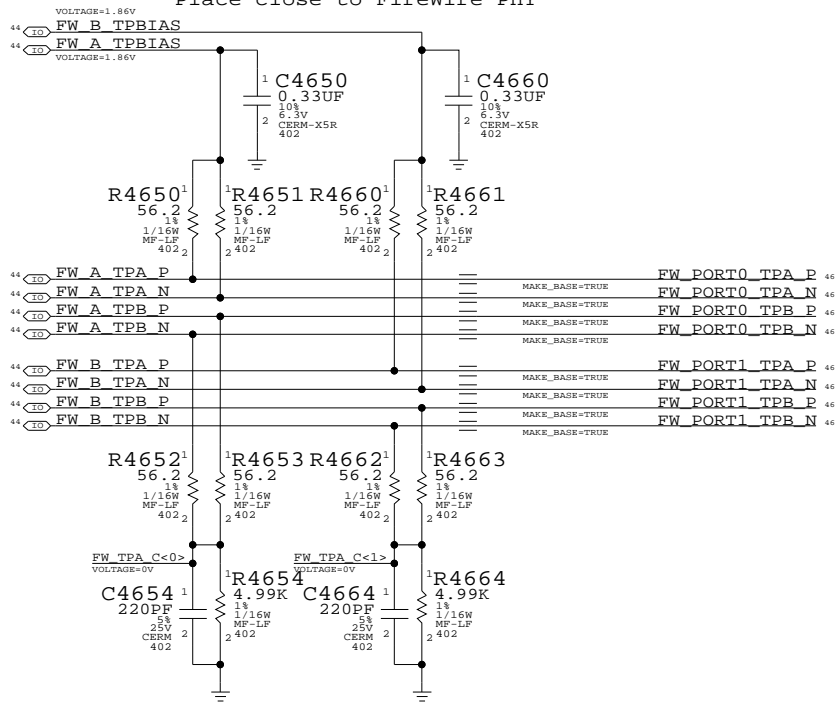
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

|                     |      |                |      |
|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             | REV. |
| NONE                | 45   | 110            |      |

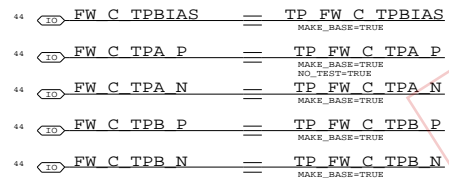




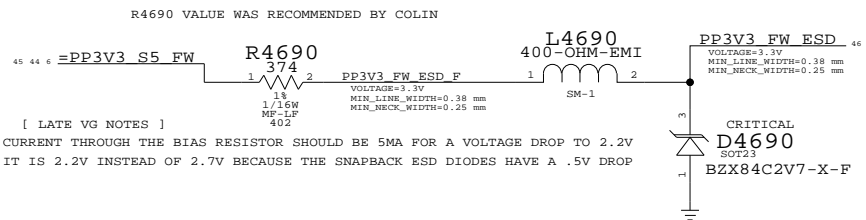
**Termination**  
Place close to FireWire PHY



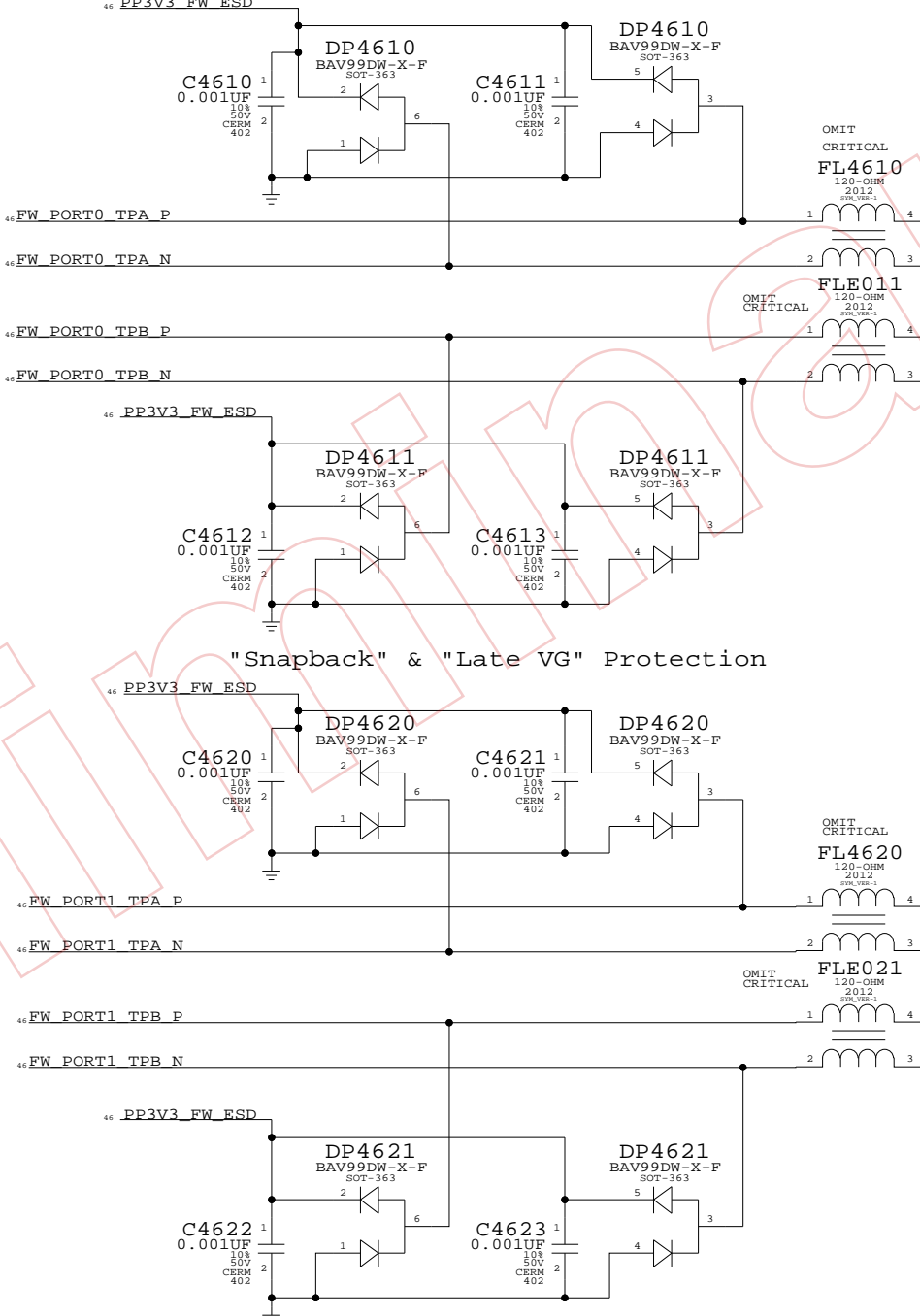
3rd TPA/TPB pair unused



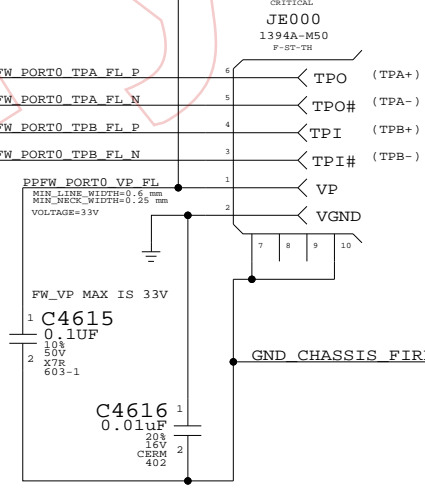
ESD Rail



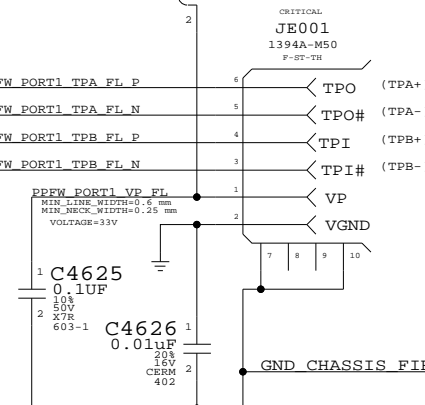
"Snapback" & "Late VG" Protection



PORT 0  
1394A



PORT 1  
1394A



FIREWIRE CONNECTORS

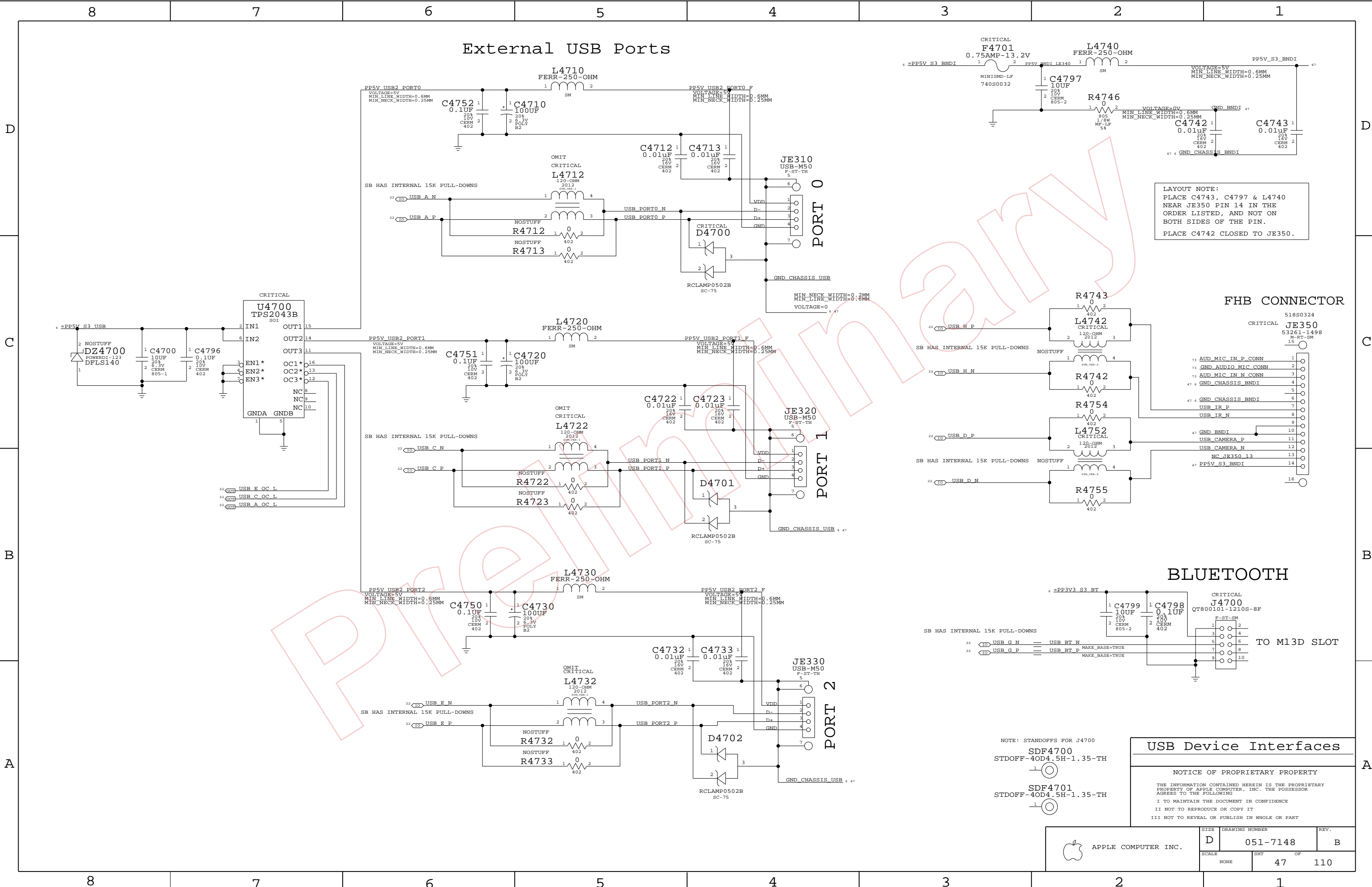
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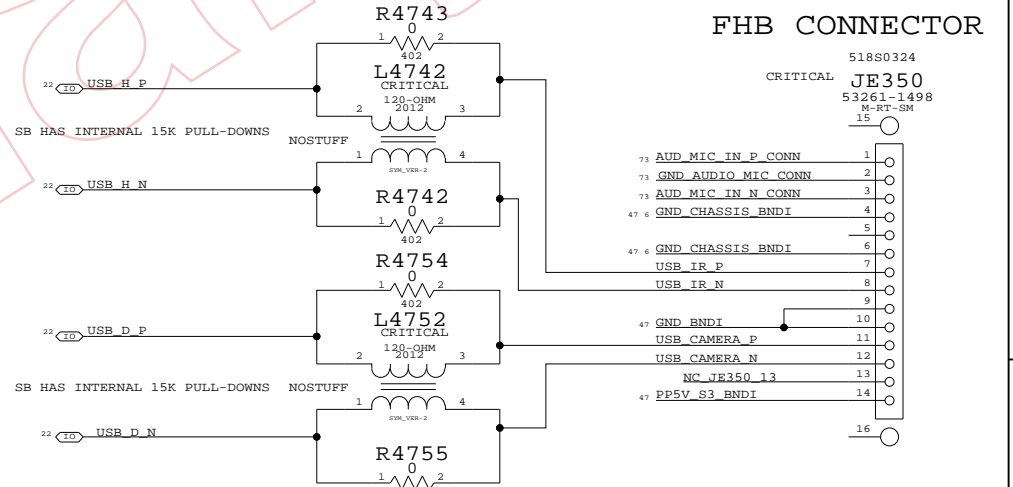
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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             | 110  |
| NONE                | 46   |                |      |

# External USB Ports

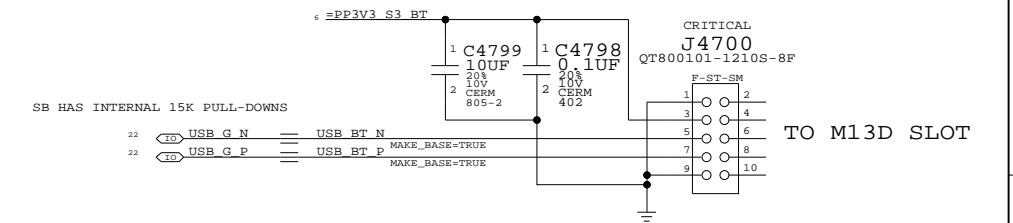


LAYOUT NOTE:  
 PLACE C4743, C4797 & L4740  
 NEAR JE350 PIN 14 IN THE  
 ORDER LISTED, AND NOT ON  
 BOTH SIDES OF THE PIN.  
 PLACE C4742 CLOSED TO JE350.

## FHB CONNECTOR



## BLUETOOTH

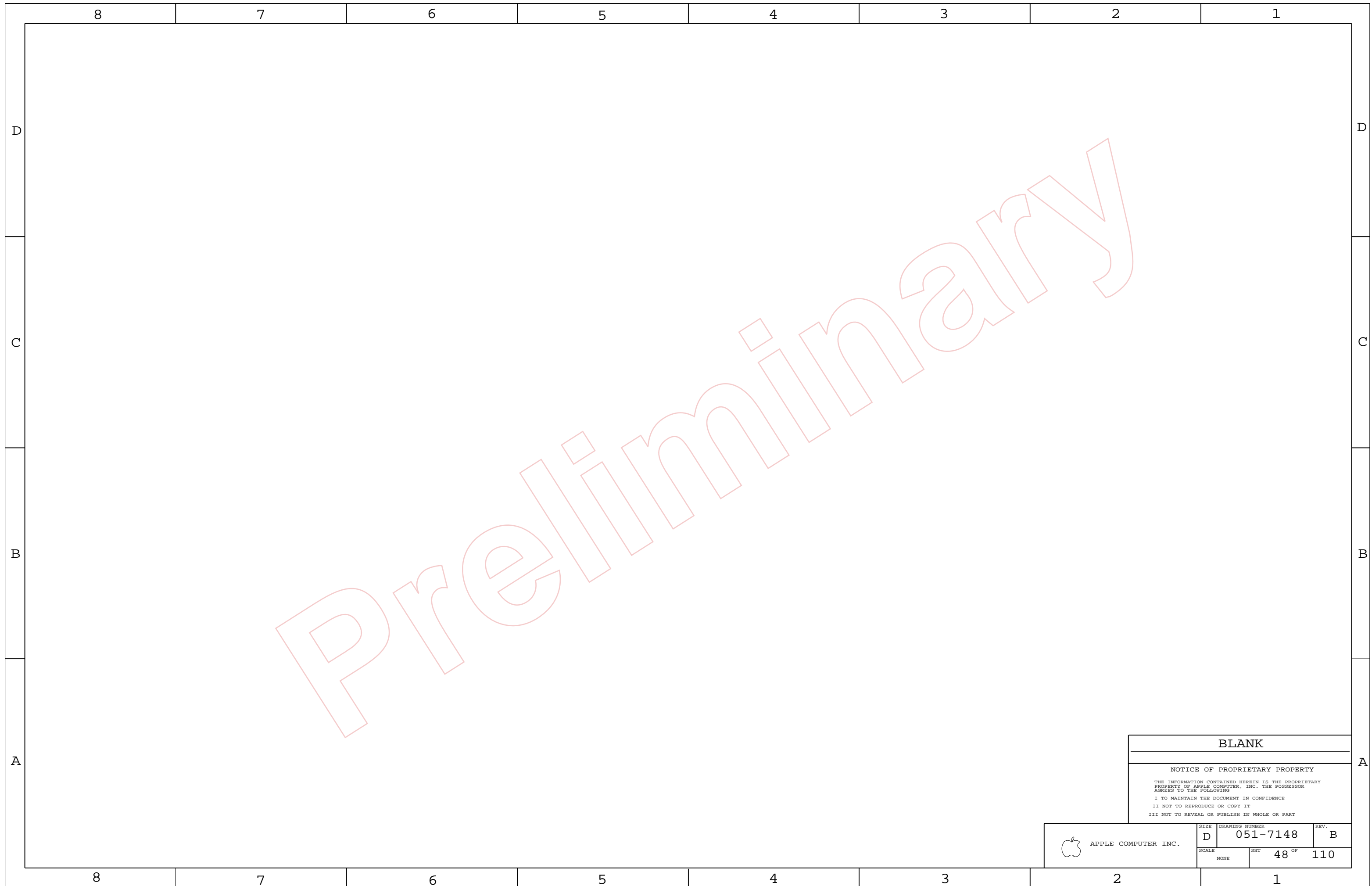


NOTE: STANDOFFS FOR J4700  
 SDF4700  
 STDOFF-40D4.5H-1.35-TH  
 SDF4701  
 STDOFF-40D4.5H-1.35-TH

## USB Device Interfaces

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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | NONE | SHT            | OF   |
|                     |      | 47             | 110  |



**BLANK**

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**NOTICE OF PROPRIETARY PROPERTY**

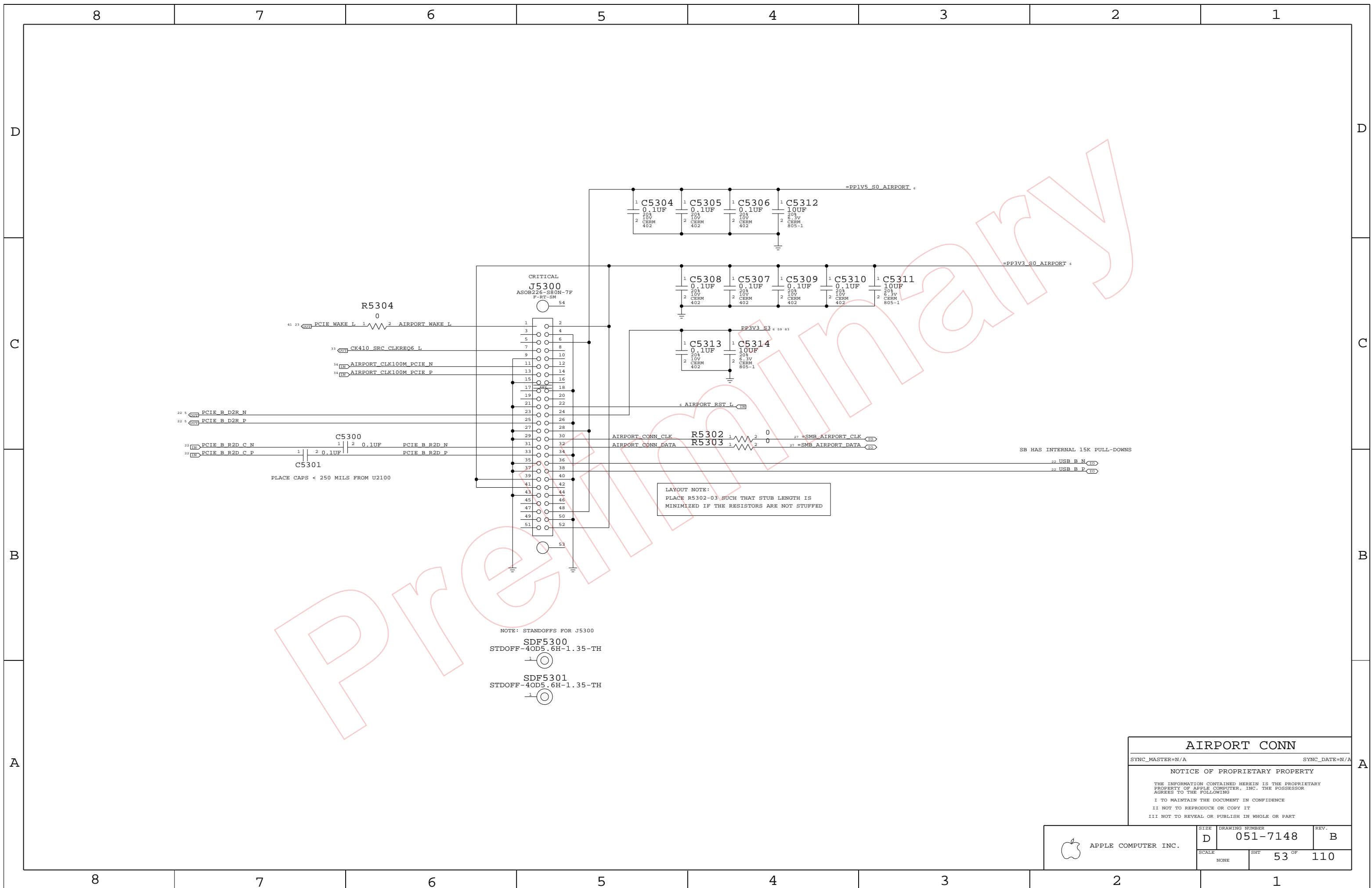
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

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

|                            |                                 |  |                                 |
|----------------------------|---------------------------------|--|---------------------------------|
| <b>APPLE COMPUTER INC.</b> | <small>SIZE</small><br><b>D</b> | <small>DRAWING NUMBER</small><br><b>051-7148</b> | <small>REV.</small><br><b>B</b> |
|                            | <small>SCALE</small><br>NONE    | <small>SHT</small><br>48 <sup>OF</sup>           | <small>110</small>              |



PROTOTYPE

LAYOUT NOTE:  
 PLACE R5302-03 SUCH THAT STUB LENGTH IS  
 MINIMIZED IF THE RESISTORS ARE NOT STUFFED

NOTE: STANDOFFS FOR J5300  
 SDF5300  
 STDOFF-40D5.6H-1.35-TH  
  
 SDF5301  
 STDOFF-40D5.6H-1.35-TH  


PLACE CAPS < 250 MILS FROM U2100

SB HAS INTERNAL 15K PULL-DOWNS


**AIRPORT CONN**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

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|---|------------------|-----------------------------------|------------------|
|  APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br><b>051-7148</b> | REV.<br><b>B</b> |
|   | SCALE<br>NONE    | SHEET<br>53 OF 110                |                  |

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22 PCIE C R2D C N == TP PCIE C R2D C N  
MAKE\_BASE=TRUE

22 PCIE C R2D C P == TP PCIE C R2D C P  
MAKE\_BASE=TRUE

22 PCIE C D2R N == TP PCIE C D2R N  
MAKE\_BASE=TRUE

22 PCIE C D2R P == TP PCIE C D2R P  
MAKE\_BASE=TRUE

22 PCIE D R2D C N == TP PCIE D R2D C N  
MAKE\_BASE=TRUE

22 PCIE D R2D C P == TP PCIE D R2D C P  
MAKE\_BASE=TRUE

22 PCIE D D2R N == TP PCIE D D2R N  
MAKE\_BASE=TRUE

22 PCIE D D2R P == TP PCIE D D2R P  
MAKE\_BASE=TRUE

22 PCIE E R2D C N == TP PCIE E R2D C N  
MAKE\_BASE=TRUE

22 PCIE E R2D C P == TP PCIE E R2D C P  
MAKE\_BASE=TRUE

22 PCIE E D2R N == TP PCIE E D2R N  
MAKE\_BASE=TRUE

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MAKE\_BASE=TRUE

22 PCIE F R2D C N == TP PCIE F R2D C N  
MAKE\_BASE=TRUE

22 PCIE F R2D C P == TP PCIE F R2D C P  
MAKE\_BASE=TRUE

22 PCIE F D2R N == TP PCIE F D2R N  
MAKE\_BASE=TRUE

22 PCIE F D2R P == TP PCIE F D2R P  
MAKE\_BASE=TRUE

Preliminary

PCIE UNUSED PORTS

SYNC\_MASTER=N/A SYNC\_DATE=N/A

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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             |      |
| NONE                | 54   | 110            |      |

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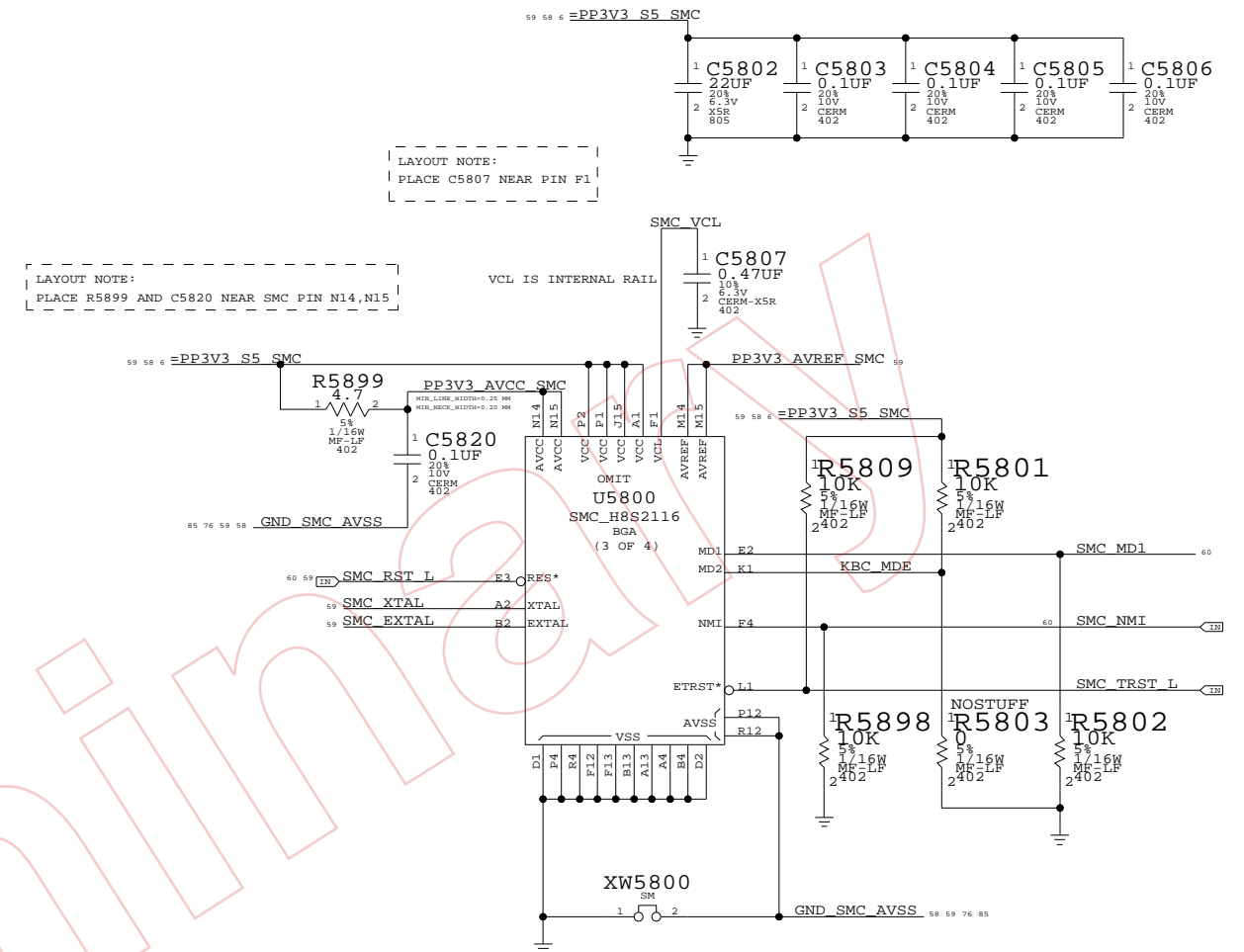
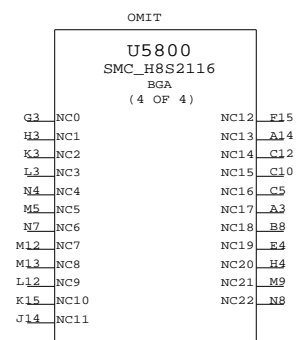
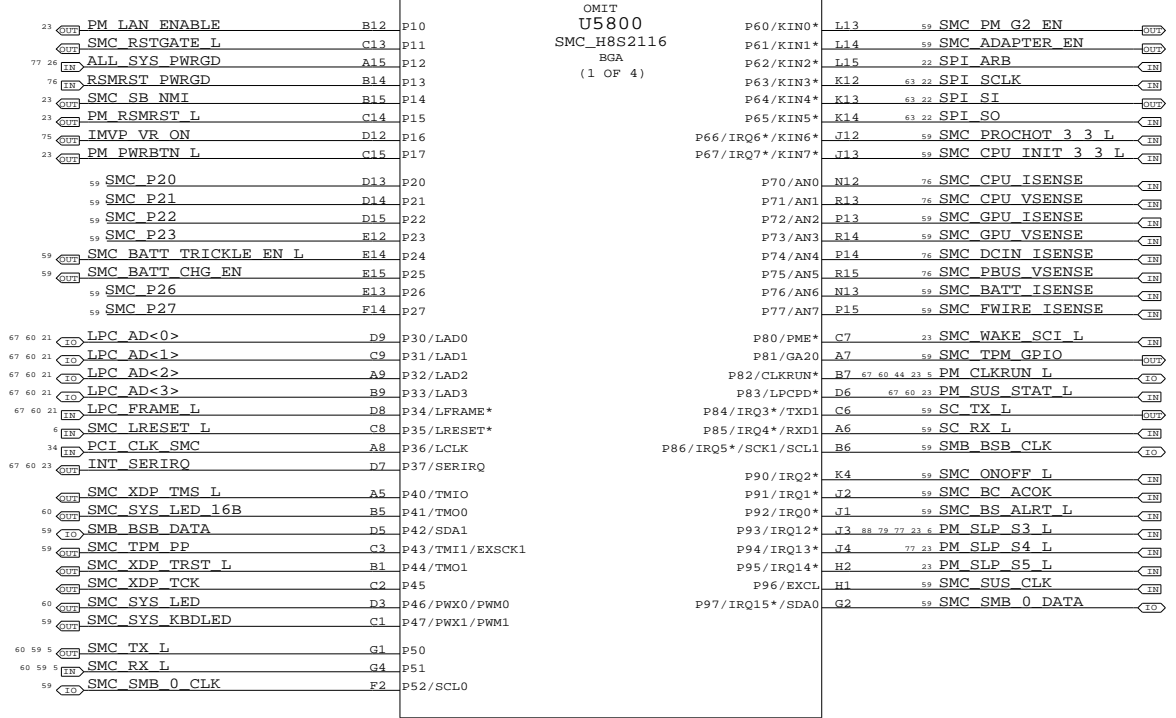
3

2

1



UNUSED PINS HAVE THE FORMAT SMC\_XXX WHERE XXX IS THE PORT NUMBER. THEY ARE SET BY SOFTWARE TO BE DRIVEN OUTPUTS ALWAYS SO THEY CAN BE LEFT NO-CONNECTED.



SMC

SYNC\_MASTER=N/A SYNC\_DATE=N/A

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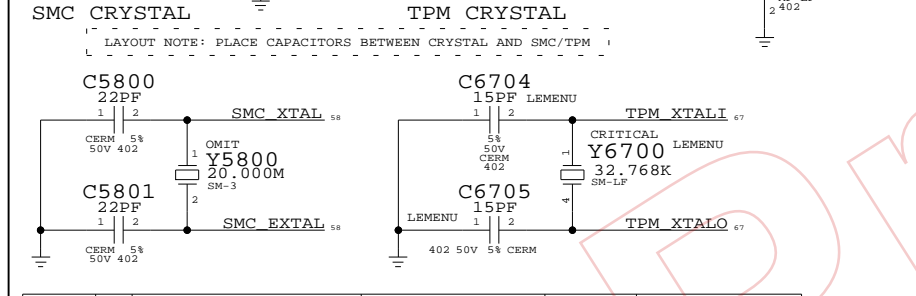
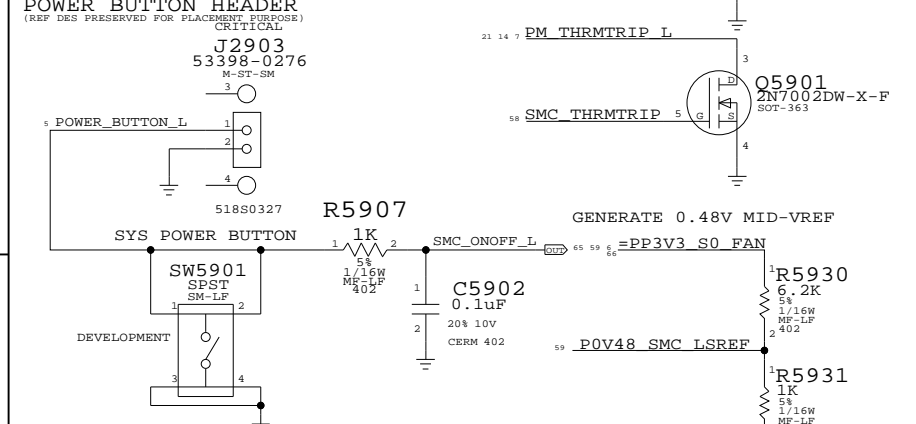
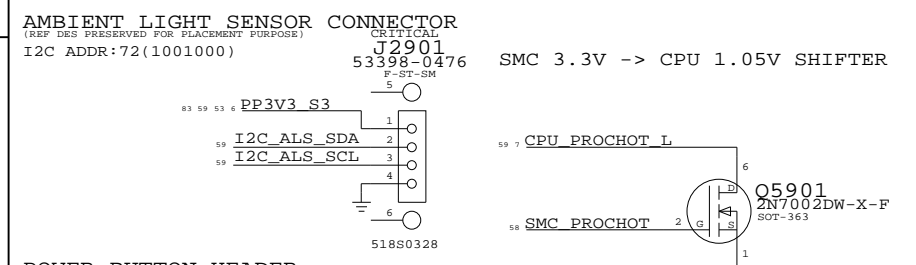
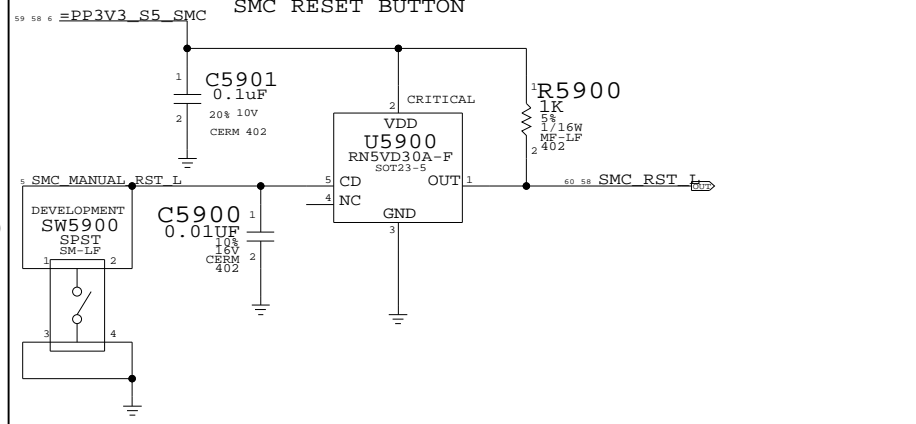
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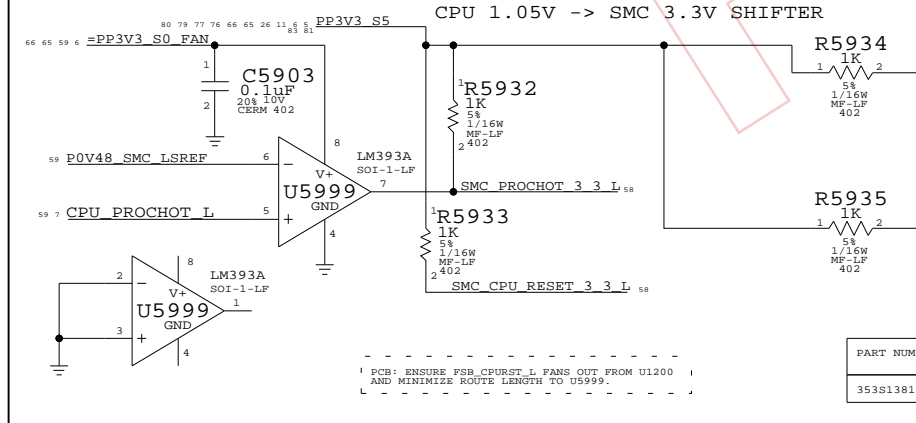
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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 58 OF          | 110  |
| NONE                |      |                |      |

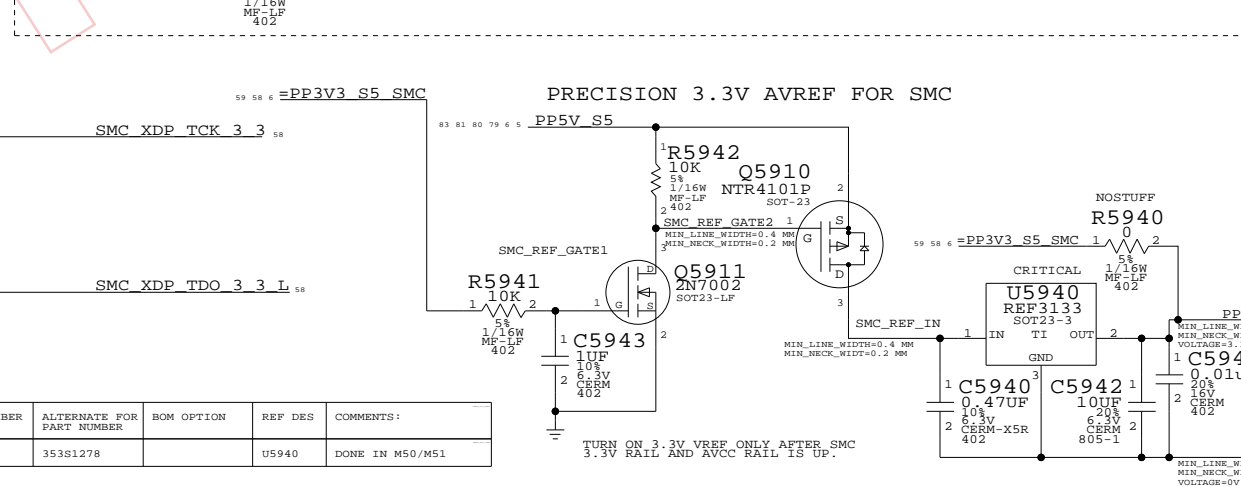
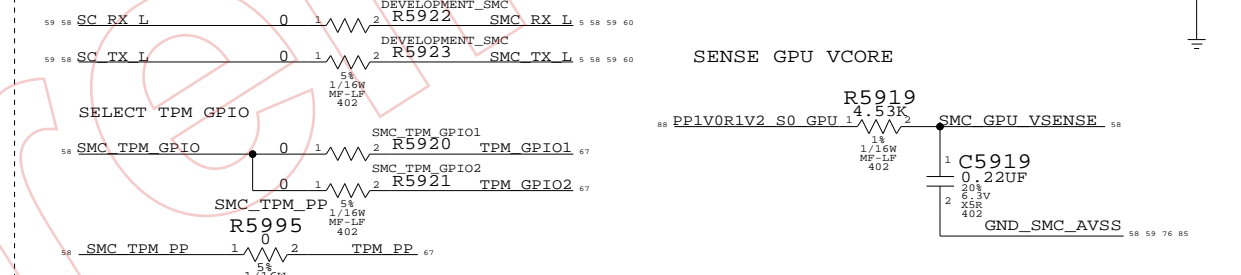
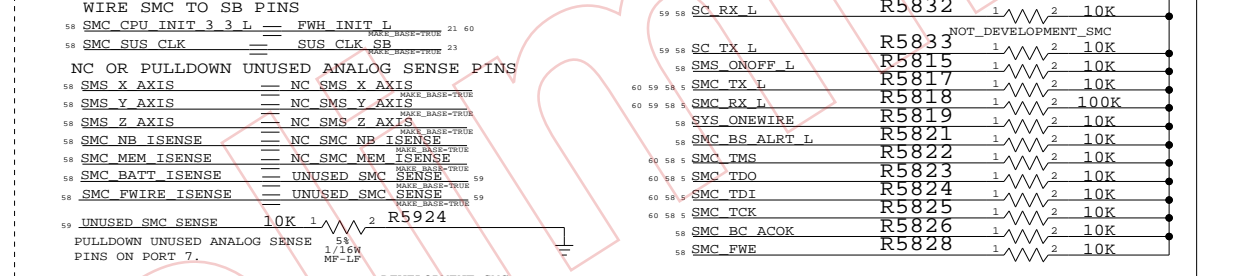
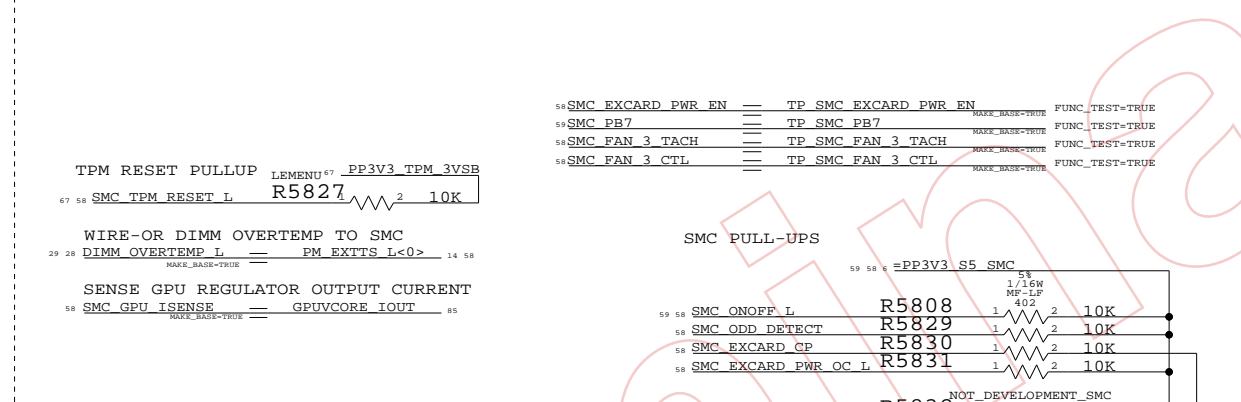


| PART#    | QTY | DESCRIPTION                       | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|----------|-----|-----------------------------------|-------------------------|----------|------------|
| 197S0165 | 1   | XTAL, 20.00, 80PPM, HC49, SMD, LF | Y5800                   | CRITICAL |            |

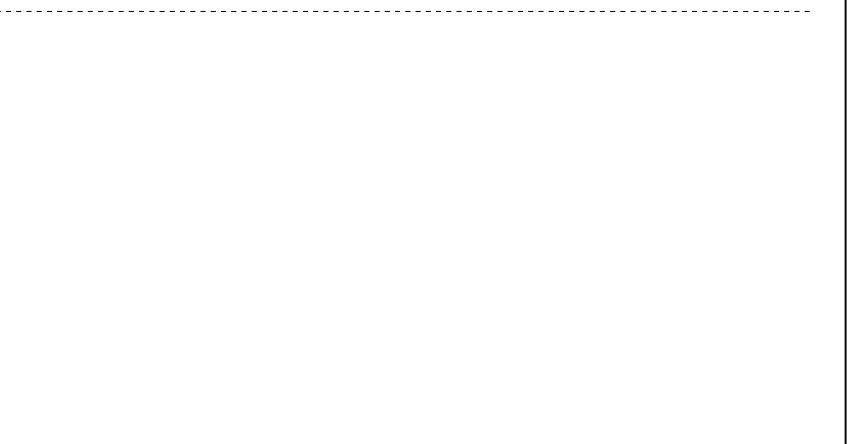
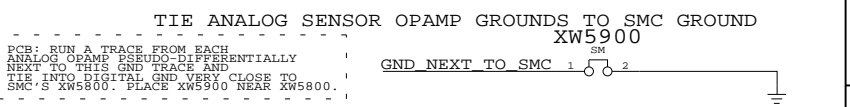
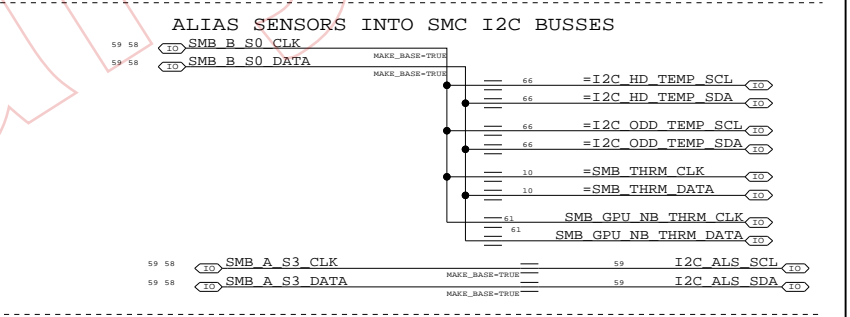
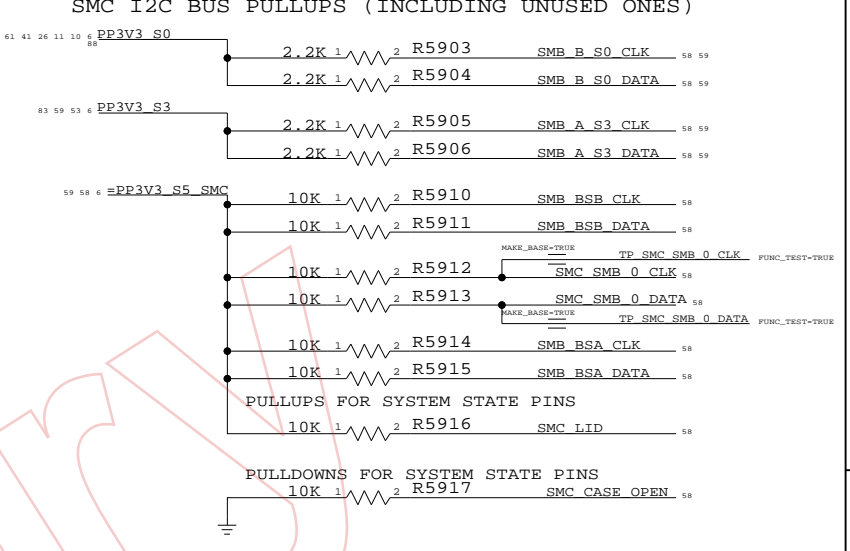


### SMC ALIASES, PULLUPS, AND TESTPOINTS

| NO-CONNECT UNUSED PINS | SMC ALIASES              | PULLUPS | TESTPOINTS |
|------------------------|--------------------------|---------|------------|
| SMC P20                | NC SMC P20               |         |            |
| SMC P21                | NC SMC P21               |         |            |
| SMC P22                | NC SMC P22               |         |            |
| SMC P23                | NC SMC P23               |         |            |
| SMC P26                | NC SMC P26               |         |            |
| SMC P27                | NC SMC P27               |         |            |
| SMC BATT_ISET          | NC SMC BATT_ISET         |         |            |
| SMC BATT_VSET          | NC SMC BATT_VSET         |         |            |
| SMC SYS_ISET           | NC SMC SYS_ISET          |         |            |
| SMC SYS_VSET           | NC SMC SYS_VSET          |         |            |
| SMC BATT_TRICKLE_EN_L  | NC SMC BATT_TRICKLE_EN_L |         |            |
| SMC BATT_CHG_EN        | NC SMC BATT_CHG_EN       |         |            |
| SMC ANALOG_ID          | NC SMC ANALOG_ID         |         |            |
| ALS_GAIN               | NC ALS_GAIN              |         |            |



| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES | COMMENTS        |
|-------------|---------------------------|------------|---------|-----------------|
| 353S1381    | 353S1278                  |            | U5940   | DONE IN M50/M51 |



### SMC & TPM SUPPORT

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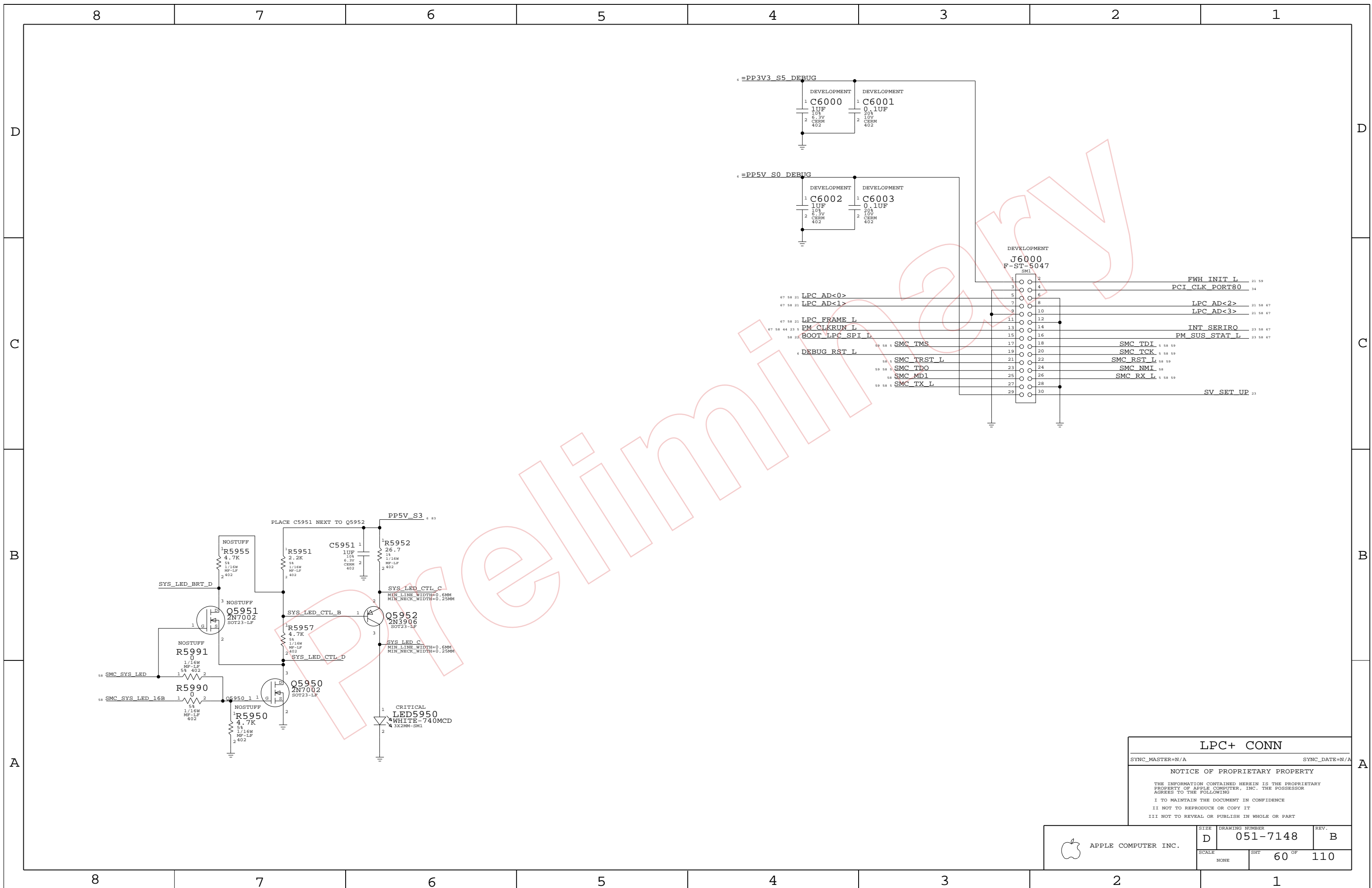
II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

| SIZE | DRAWING NUMBER | REV. |
|------|----------------|------|
| D    | 051-7148       | B    |

SCALE: NONE    SHEET: 59 OF 110

APPLE COMPUTER INC.



**LPC+ CONN**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

**NOTICE OF PROPRIETARY PROPERTY**

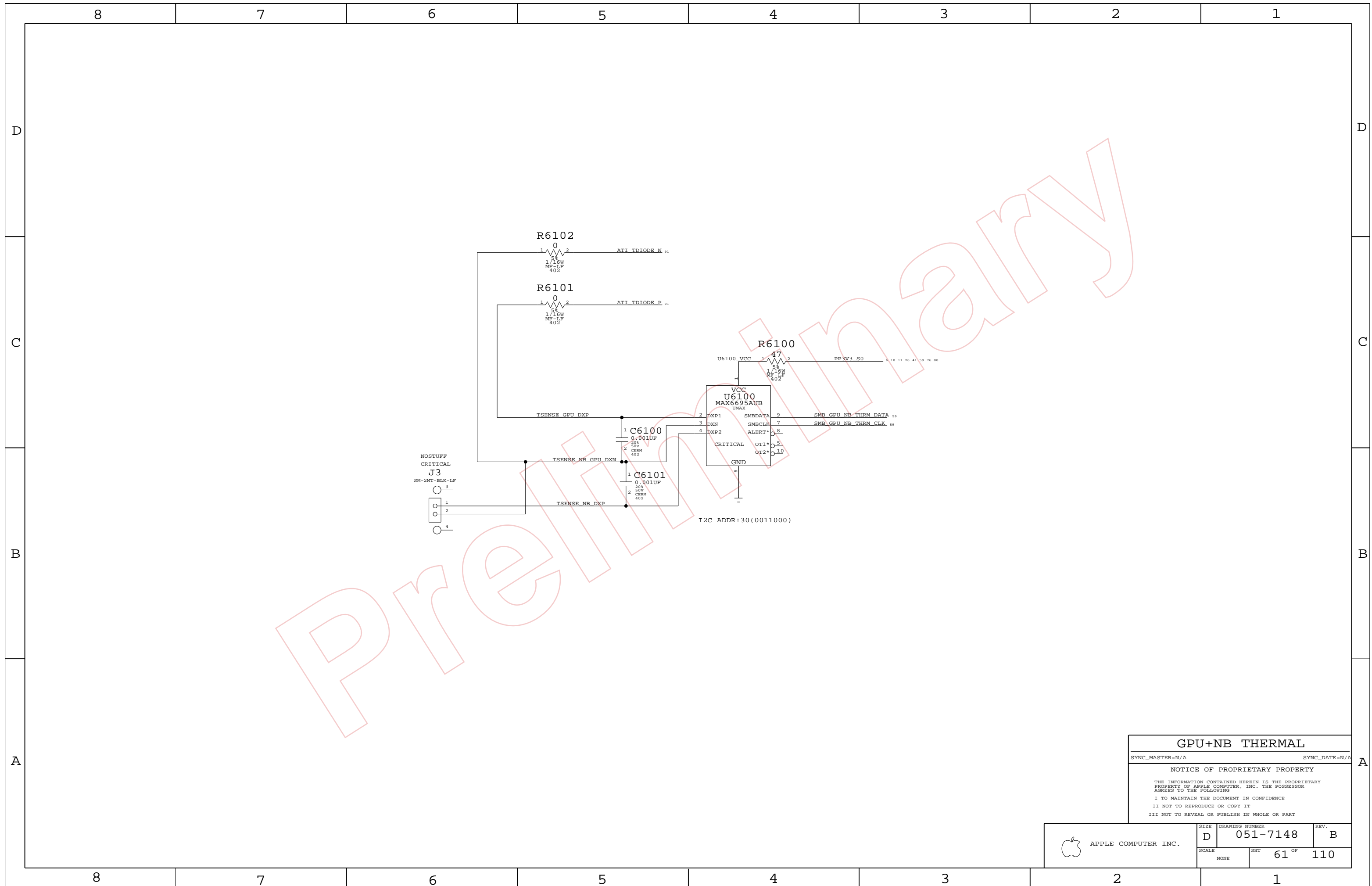
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|---------------------|------|----------------|------|
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|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 60 OF          | 110  |
| NONE                |      |                |      |



Preiminary

**GPU+NB THERMAL**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

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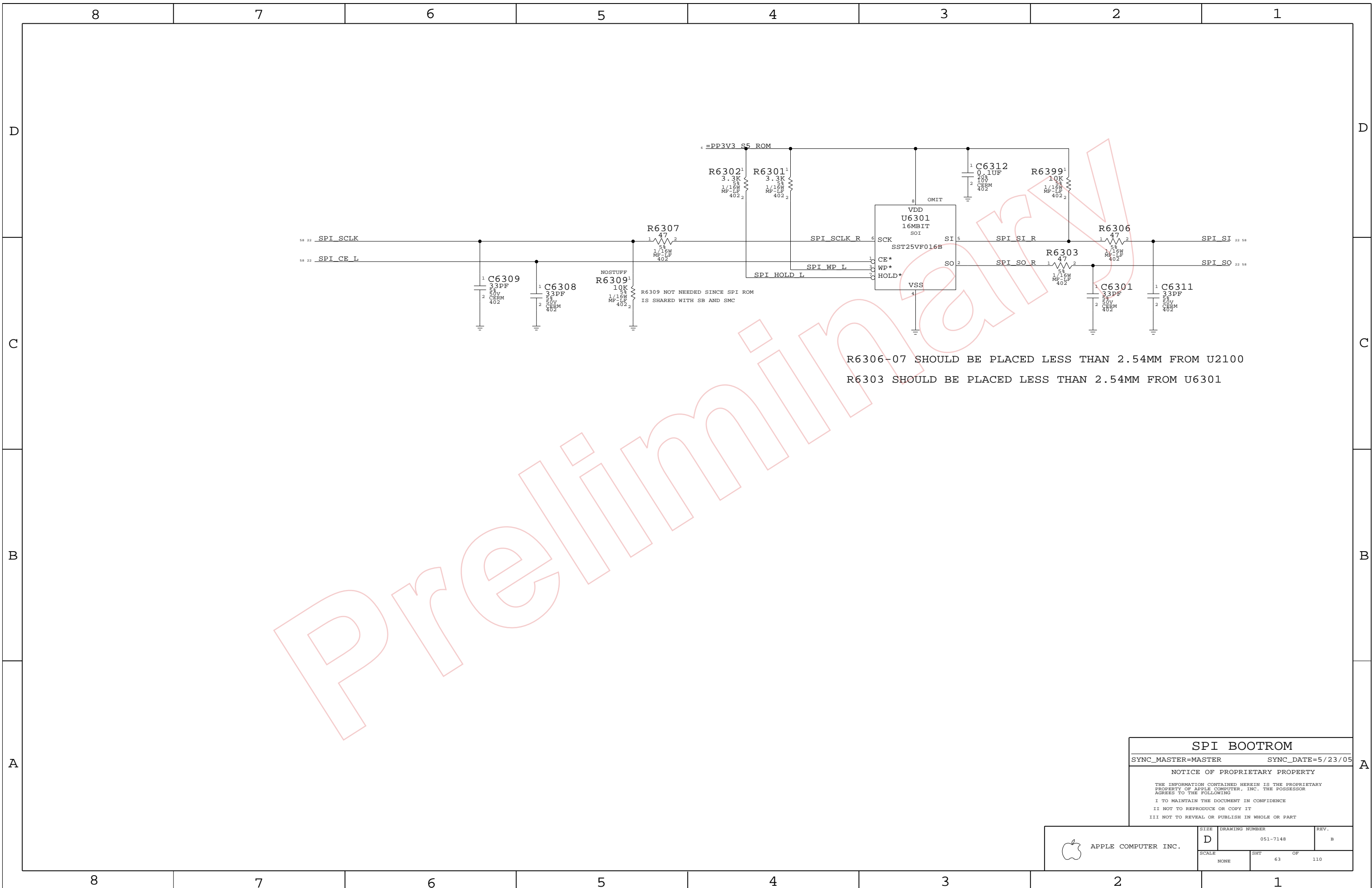
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|                     |                  |                                   |                  |
|---------------------|------------------|-----------------------------------|------------------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br><b>051-7148</b> | REV.<br><b>B</b> |
|                     | SCALE<br>NONE    | SHEET<br>61 OF 110                |                  |



R6306-07 SHOULD BE PLACED LESS THAN 2.54MM FROM U2100  
R6303 SHOULD BE PLACED LESS THAN 2.54MM FROM U6301


**SPI BOOTROM**

SYNC\_MASTER=MASTER      SYNC\_DATE=5/23/05

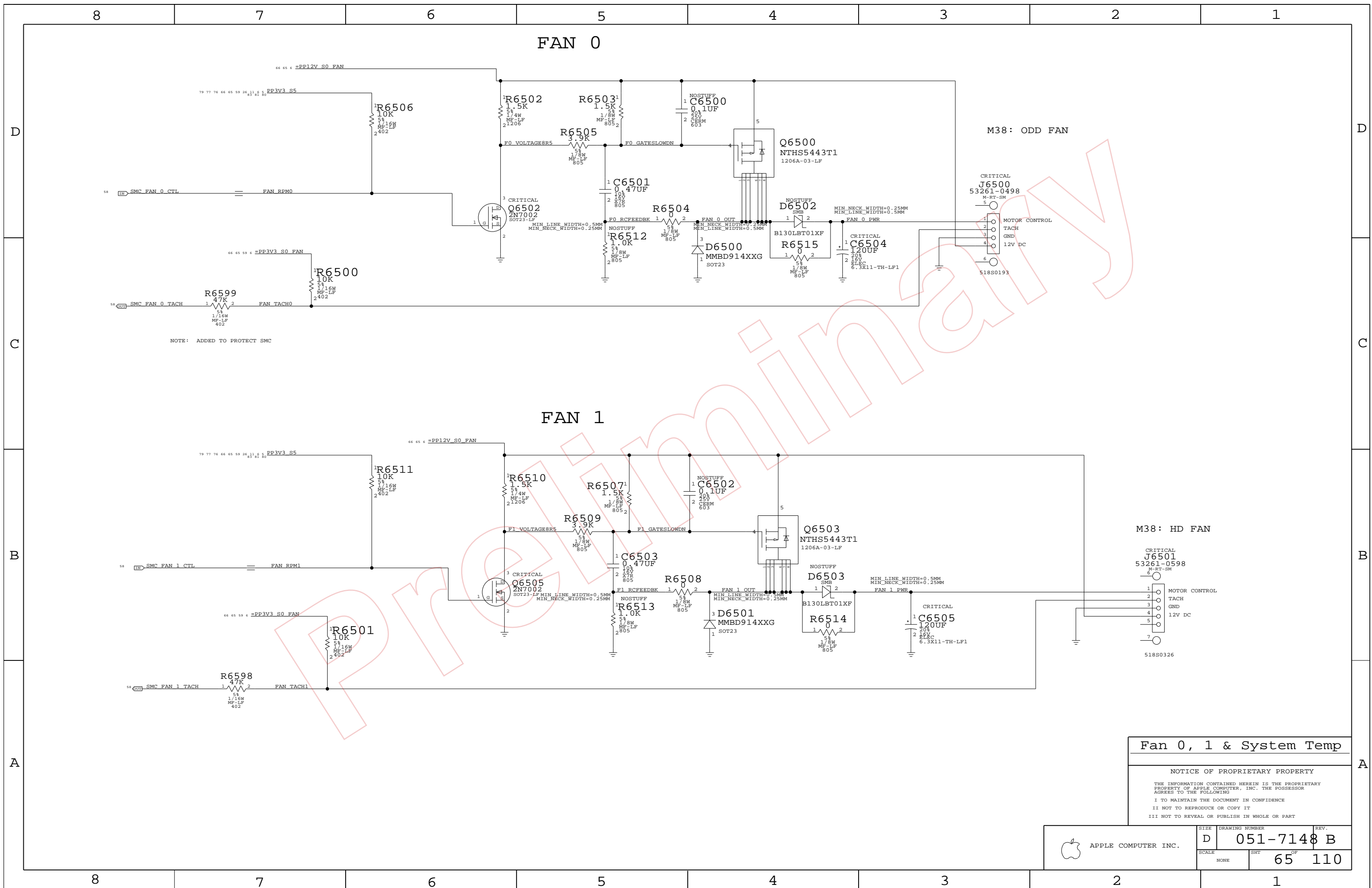
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|   |      |                |      |
|---|------|----------------|------|
|  APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|   | D    | 051-7148       | B    |
| SCALE   | SHT  | OF             |      |
| NONE  | 63   | 110            |      |





FAN 0

FAN 1

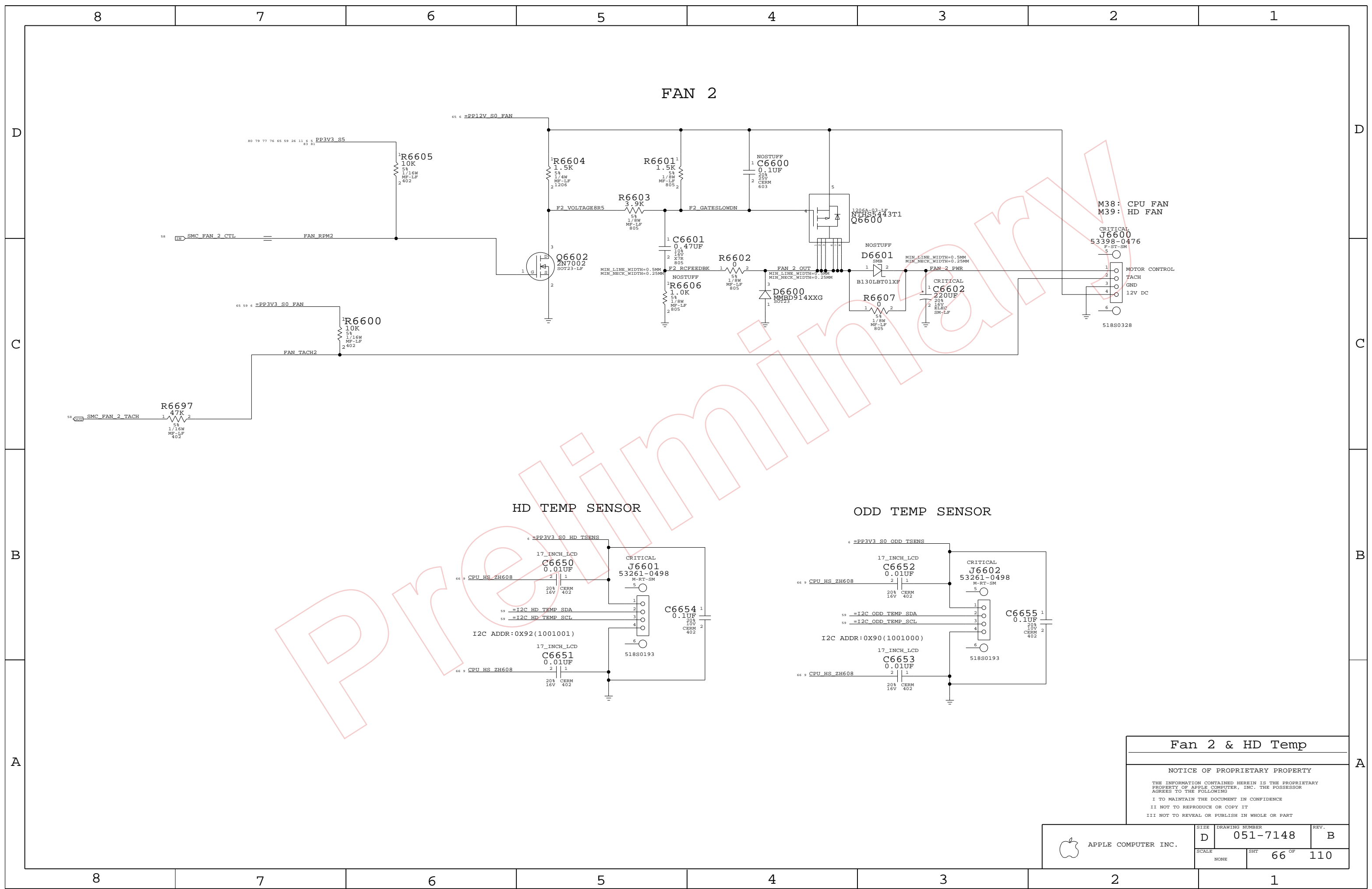
M38: ODD FAN

M38: HD FAN

Fan 0, 1 & System Temp

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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | NONE | 051-7148 B     |      |
| SCALE               |      | SHT            | OF   |
| NONE                |      | 65             | 110  |



FAN 2

HD TEMP SENSOR

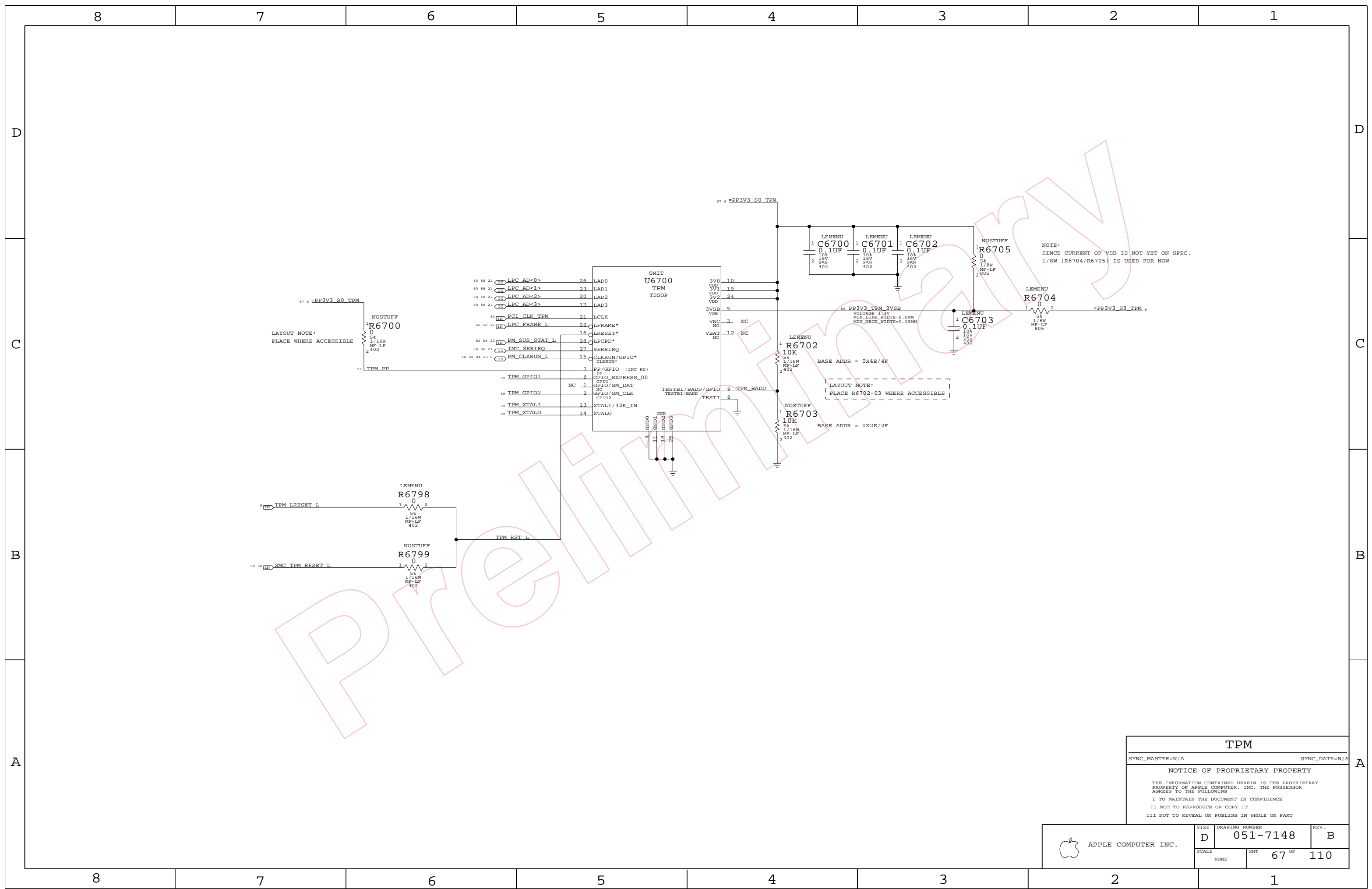
ODD TEMP SENSOR

Fan 2 & HD Temp

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|                     |      |                |      |
|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             | REV. |
| NONE                | 66   | 110            |      |



LAYOUT NOTE:  
PLACE WHERE ACCESSIBLE

LAYOUT NOTE:  
PLACE R6702-03 WHERE ACCESSIBLE

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

**TPM**

SYNC\_MASTER=N/A SYNC\_DATE=N/A

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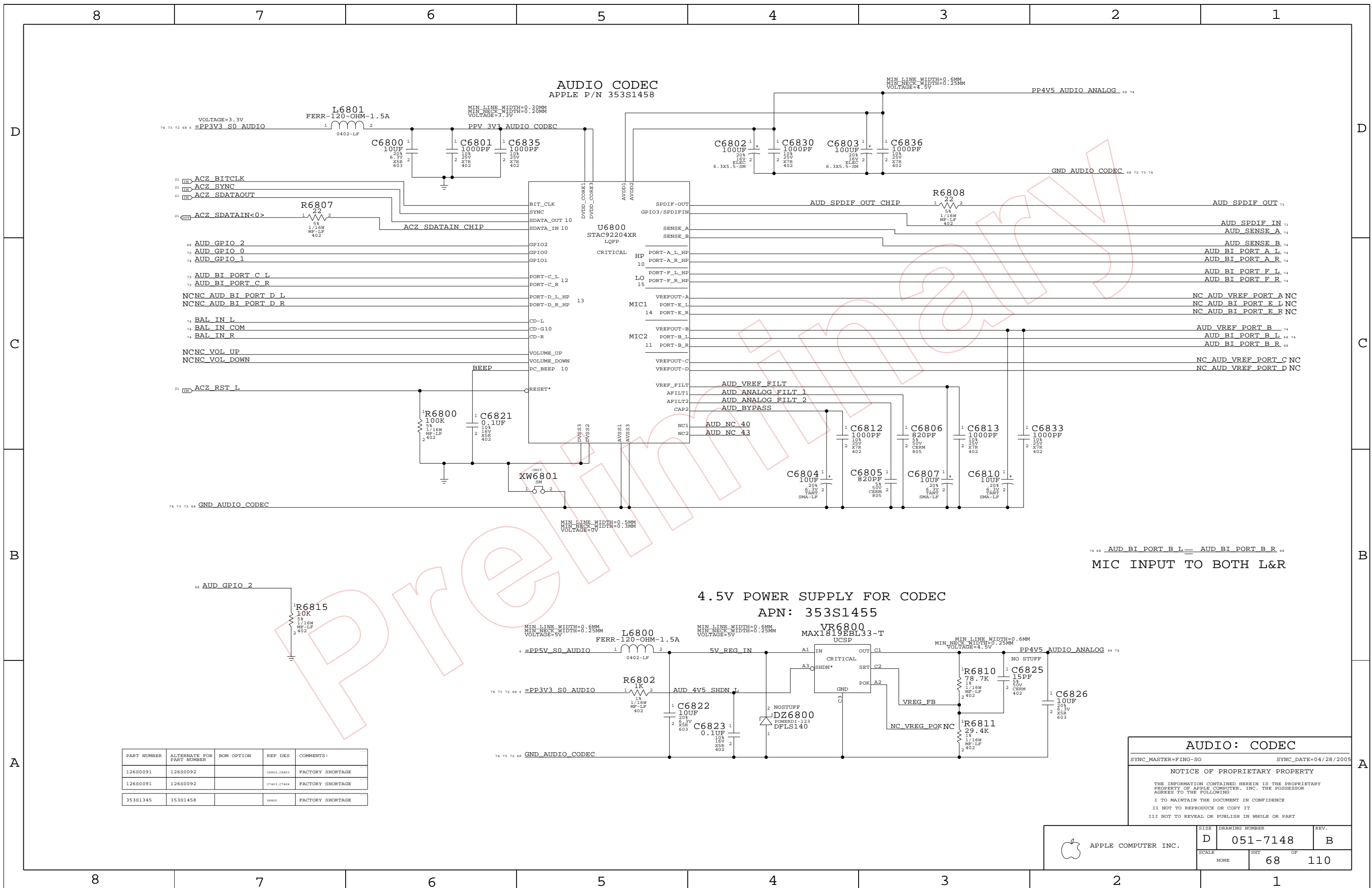
|                     |                  |                                   |                  |
|---------------------|------------------|-----------------------------------|------------------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br><b>051-7148</b> | REV.<br><b>B</b> |
|                     | SCALE<br>NONE    | SHT<br>67 OF                      | 110              |

8 7 6 5 4 3 2 1

D C B A

D C B A

8 7 6 5 4 3 2 1



| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES      | COMMENTS:        |
|-------------|---------------------------|------------|--------------|------------------|
| 126S0091    | 126S0092                  |            | C6802, C6803 | FACTORY SHORTAGE |
| 126S0091    | 126S0092                  |            | C7403, C7404 | FACTORY SHORTAGE |
| 353S1345    | 353S1458                  |            | U6800        | FACTORY SHORTAGE |

**AUDIO: CODEC**

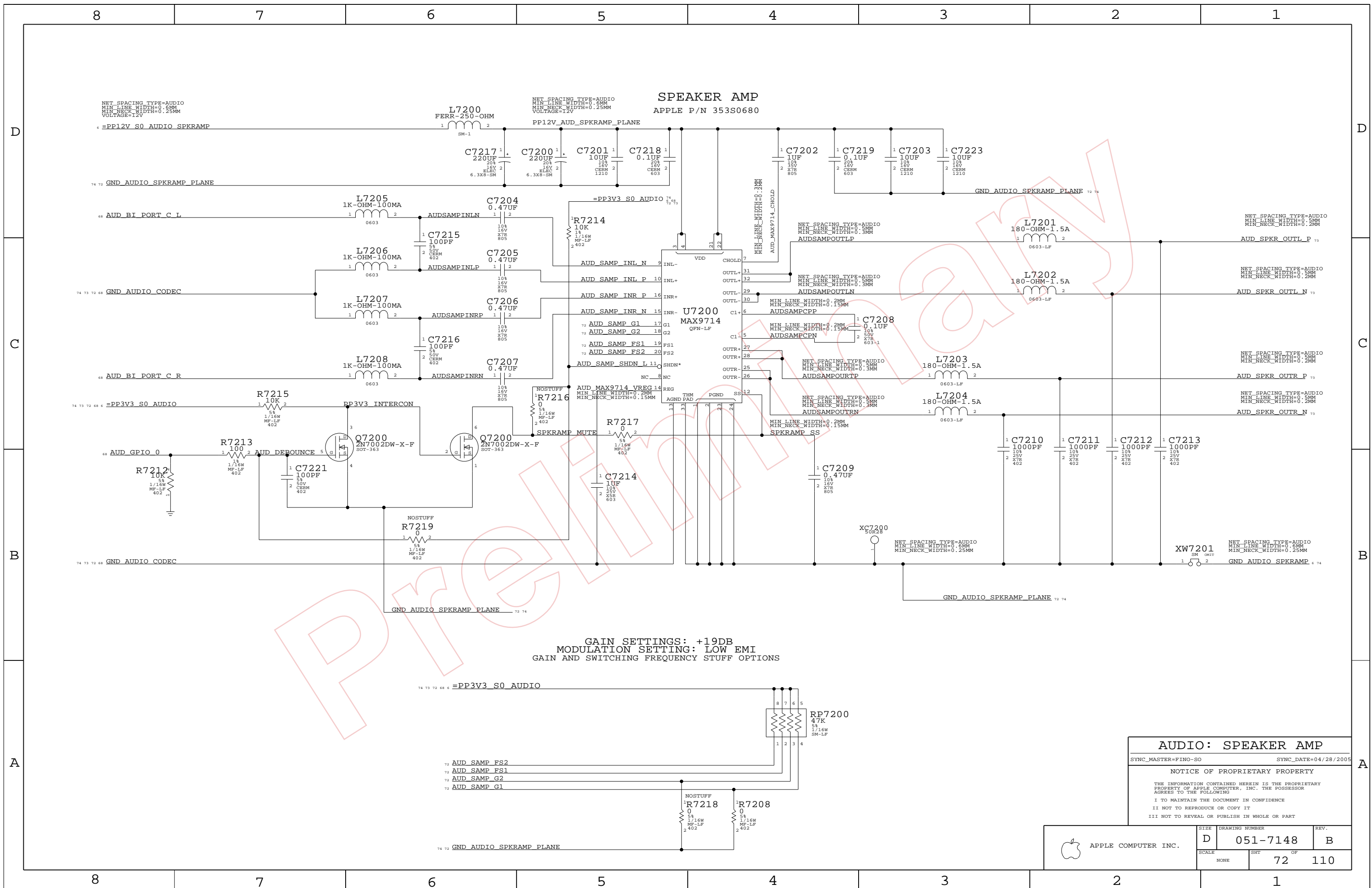
SYNC\_MASTER=FINO-SO      SYNC\_DATE=04/28/2005

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|---------------------|-----------|----------------|------|
| APPLE COMPUTER INC. | SIZE      | DRAWING NUMBER | REV. |
|                     | D         | 051-7148       | B    |
| SCALE               | SHEET OF  |                |      |
| NONE                | 68 OF 110 |                |      |



**SPEAKER AMP**  
APPLE P/N 353S0680

GAIN SETTINGS: +19DB  
MODULATION SETTING: LOW EMI  
GAIN AND SWITCHING FREQUENCY STUFF OPTIONS

**AUDIO: SPEAKER AMP**  
SYNC\_MASTER=FINO-SO SYNC\_DATE=04/28/2005

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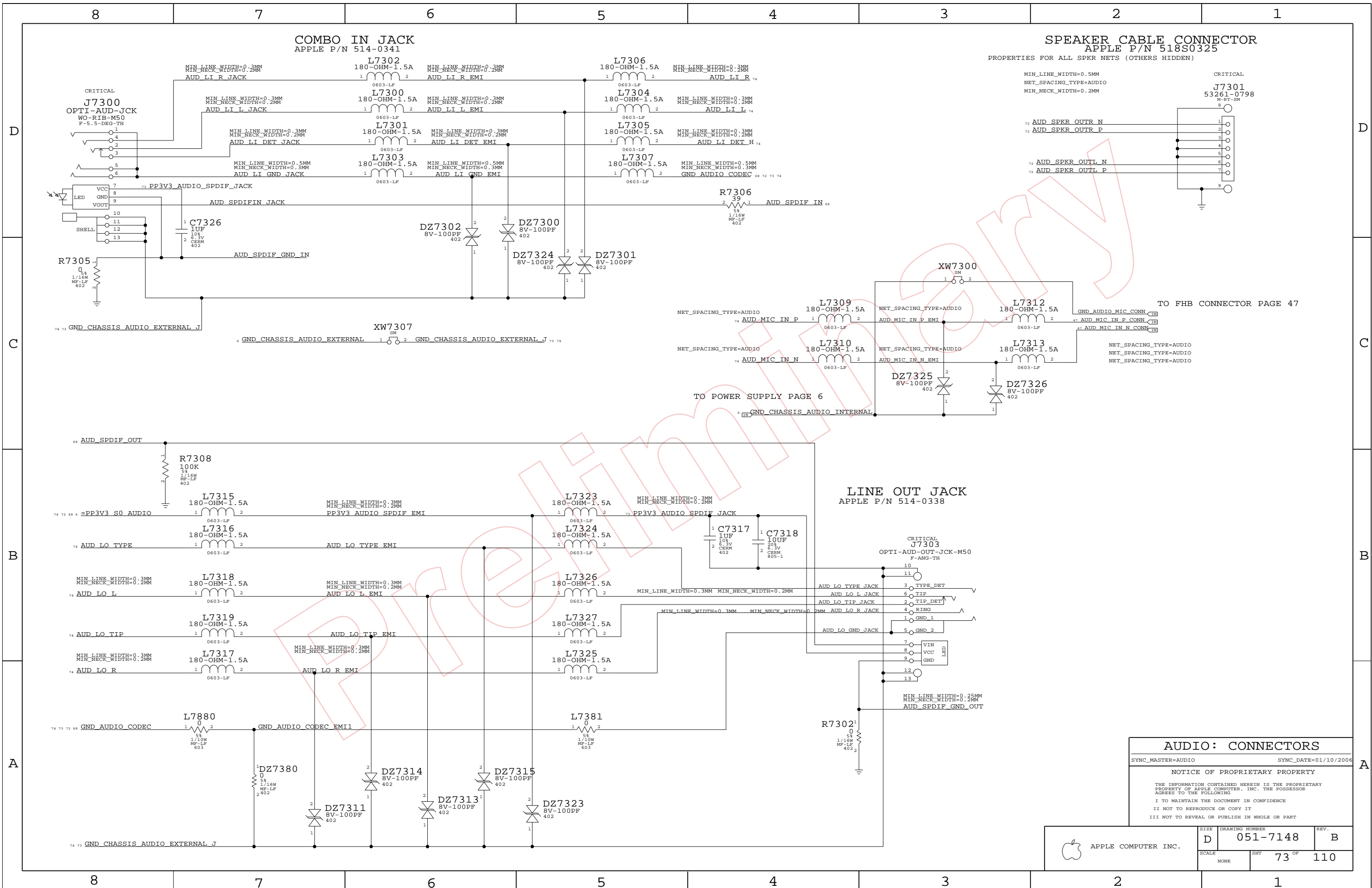
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II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

|                     |      |                |      |
|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             |      |
| NONE                | 72   | 110            |      |





**AUDIO: CONNECTORS**

SYNC\_MASTER=AUDIO      SYNC\_DATE=01/10/2006

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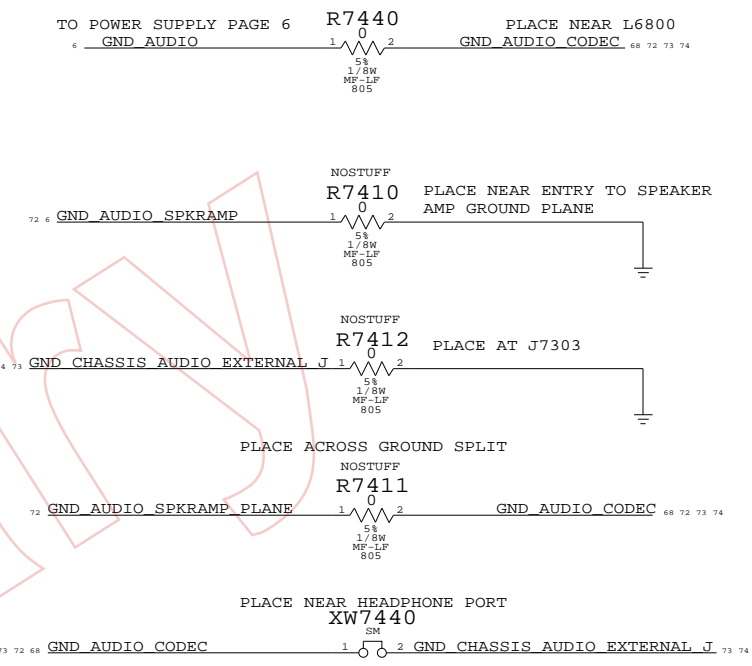
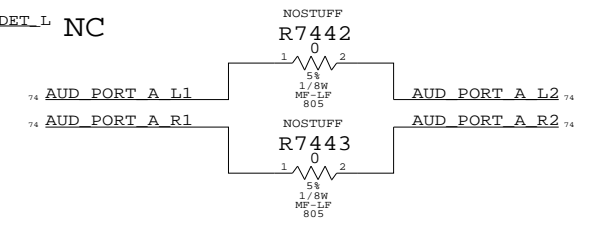
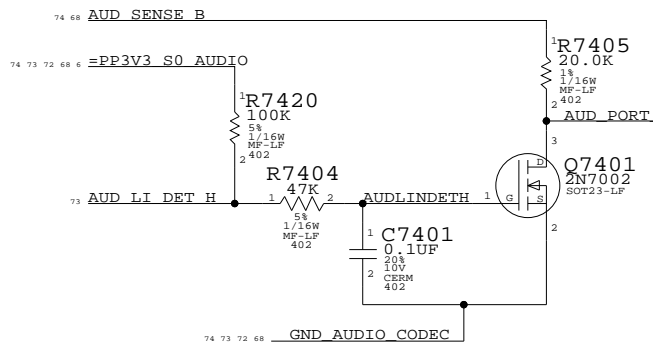
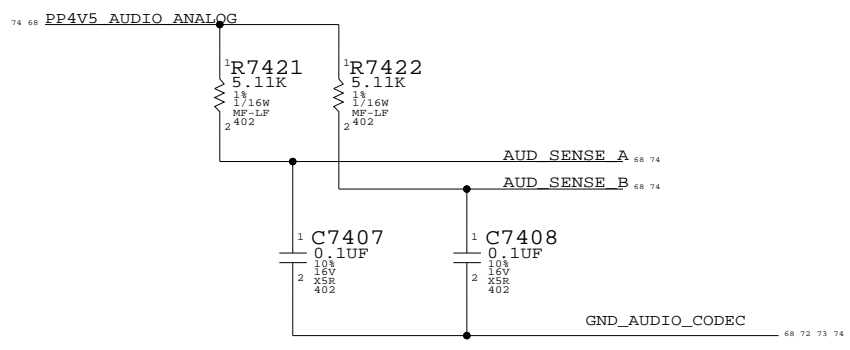
III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

|                     |                  |                                   |                  |
|---------------------|------------------|-----------------------------------|------------------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br><b>051-7148</b> | REV.<br><b>B</b> |
|                     | SCALE<br>NONE    | SHIT<br>73 OF 110                 |                  |

PORT F (LI) PLUG DETECT

AUDIO GROUND RETURNS

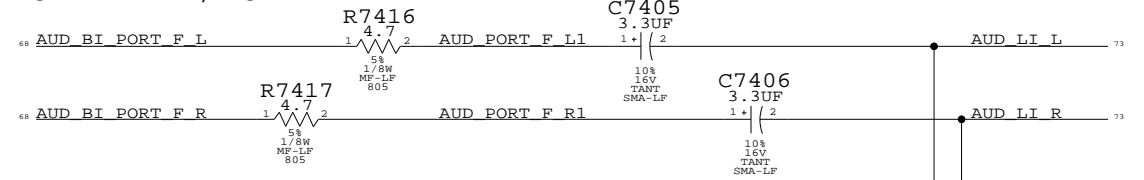
JACK SENSE PULL UPS (PLACE NEXT TO CODEC)



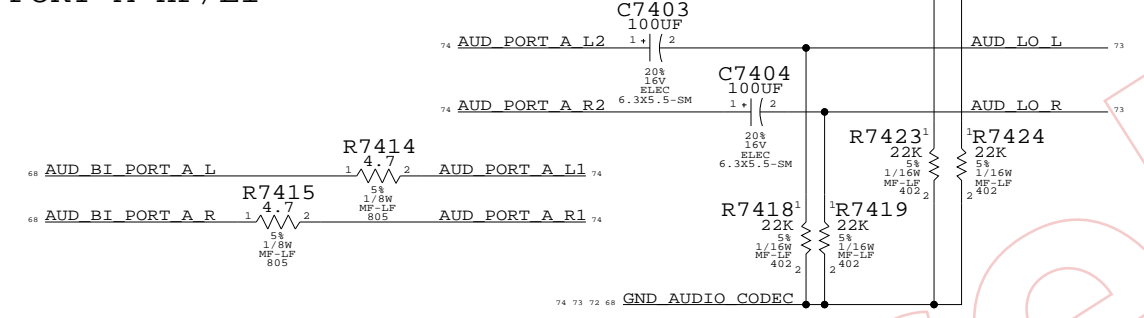
USED PORTS  
 PORT A HP/LI  
 PORT B MIC IN, VREF 80%  
 PORT C BI SPEAKERS  
 PORT F LI/LO

UNUSED PORTS  
 PORT E SPDIF OUT DELEGATE  
 PORT D

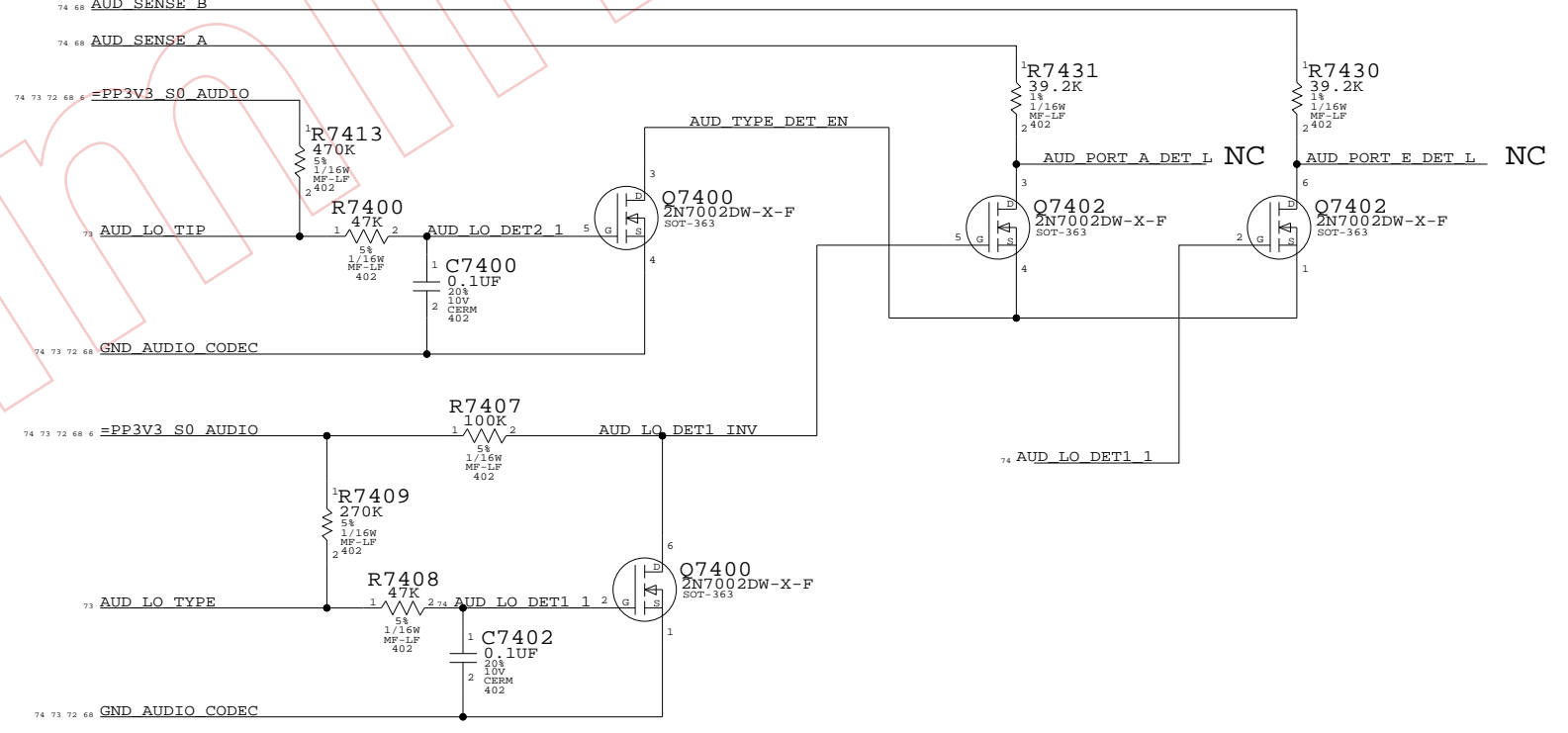
PORT F LI/LO



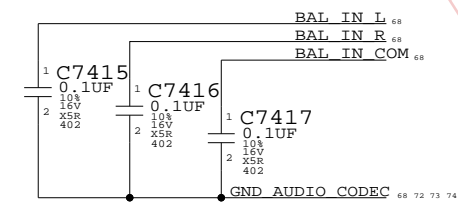
PORT A HP/LI



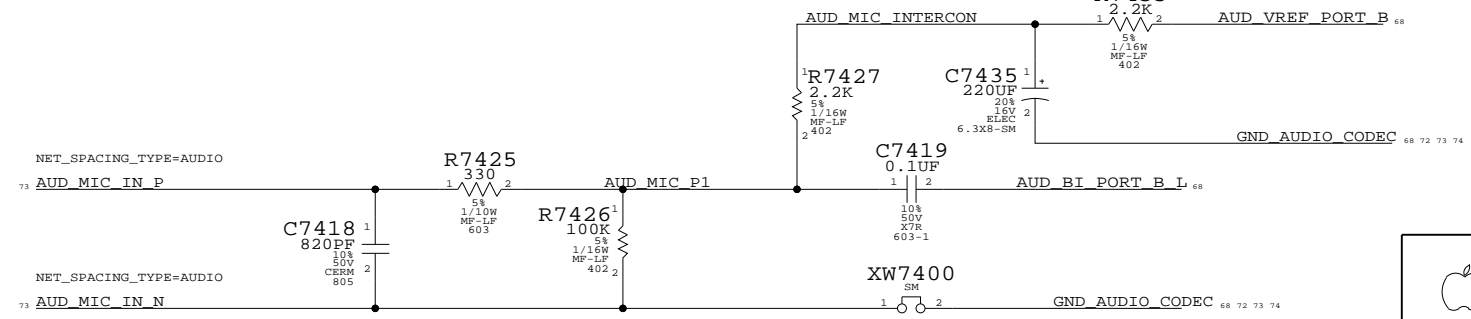
PORT A/H (LO/DIG\_OUT) PLUG DETECT (E TELLS H TO COME ON)



UNUSED PORT TERMINATION



MICROPHONE IMPEDANCE MATCHING CIRCUIT



AUDIO: POWER SUPPLIES

SYNC\_MASTER=AUDIO SYNC\_DATE=02/23/2006

NOTICE OF PROPRIETARY PROPERTY

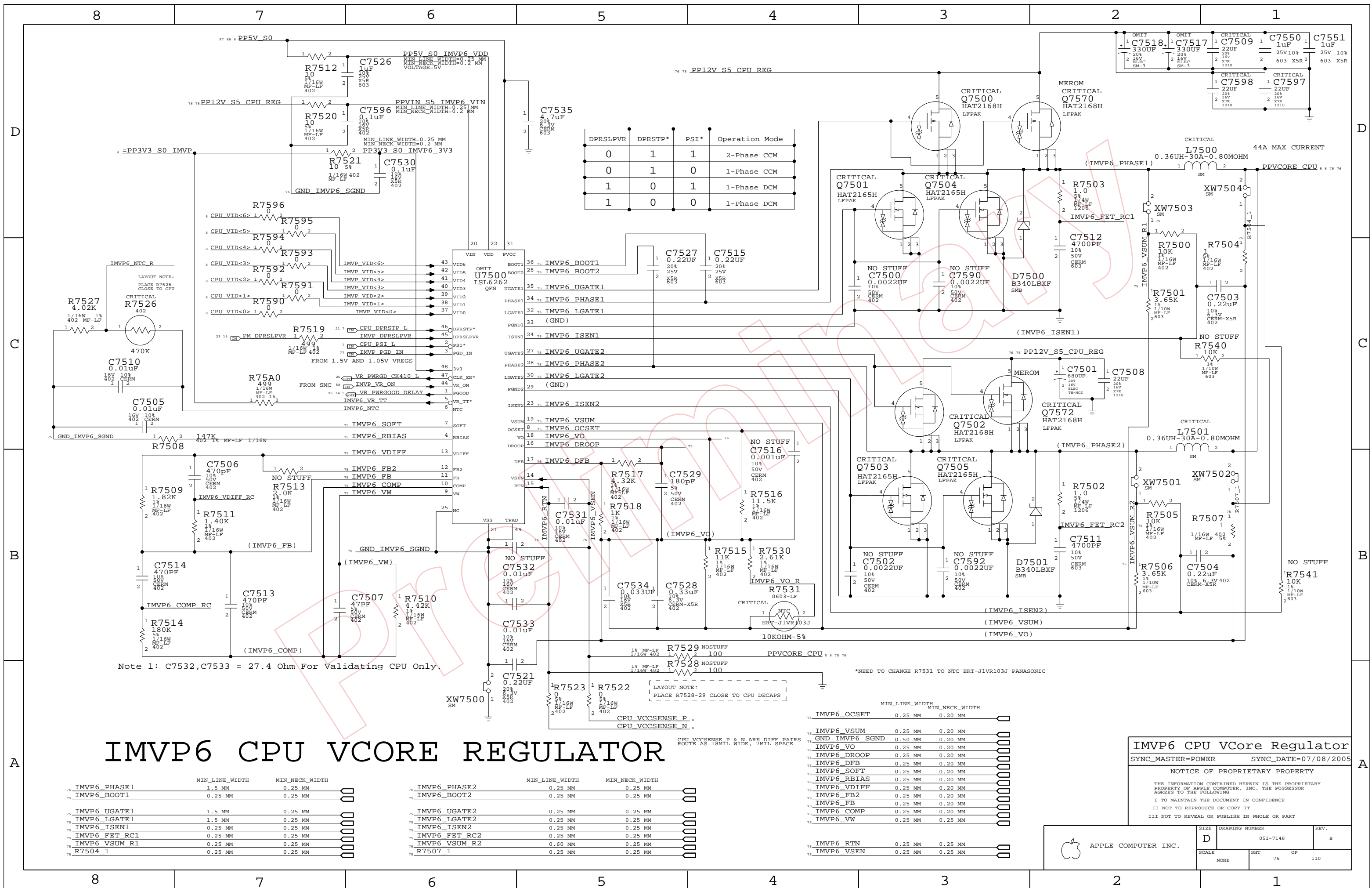
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|---------------------|------|----------------|------|
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|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 74 OF          | 110  |
| NONE                |      |                |      |



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

| IMVP6_PHASE1 | IMVP6_PHASE2 | IMVP6_VSEN1 | IMVP6_VSEN2 | IMVP6_VSUM | IMVP6_DROOP | IMVP6_VSEN | IMVP6_VSUM | IMVP6_DROOP |
|--------------|--------------|-------------|-------------|------------|-------------|------------|------------|-------------|
| NO STUFF     | NO STUFF     | NO STUFF    | NO STUFF    | NO STUFF   | NO STUFF    | NO STUFF   | NO STUFF   | NO STUFF    |

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

\*NEED TO CHANGE R7531 TO NTC ERT-J1VR103J PANASONIC

LAYOUT NOTE:  
PLACE R7528-29 CLOSE TO CPU DECAPS

# IMVP6 CPU VCore REGULATOR

|                  | MIN_LINE_WIDTH | MIN_NECK_WIDTH |
|------------------|----------------|----------------|
| 75 IMVP6_PHASE1  | 1.5 MM         | 0.25 MM        |
| 75 IMVP6_BOOT1   | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_UGATE1  | 1.5 MM         | 0.25 MM        |
| 75 IMVP6_LGATE1  | 1.5 MM         | 0.25 MM        |
| 75 IMVP6_ISEN1   | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_FET_RC1 | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_VSUM_R1 | 0.25 MM        | 0.25 MM        |
| 75 R7504_1       | 0.25 MM        | 0.25 MM        |

|                  | MIN_LINE_WIDTH | MIN_NECK_WIDTH |
|------------------|----------------|----------------|
| 75 IMVP6_PHASE2  | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_BOOT2   | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_UGATE2  | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_LGATE2  | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_ISEN2   | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_FET_RC2 | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_VSUM_R2 | 0.60 MM        | 0.25 MM        |
| 75 R7507_1       | 0.25 MM        | 0.25 MM        |

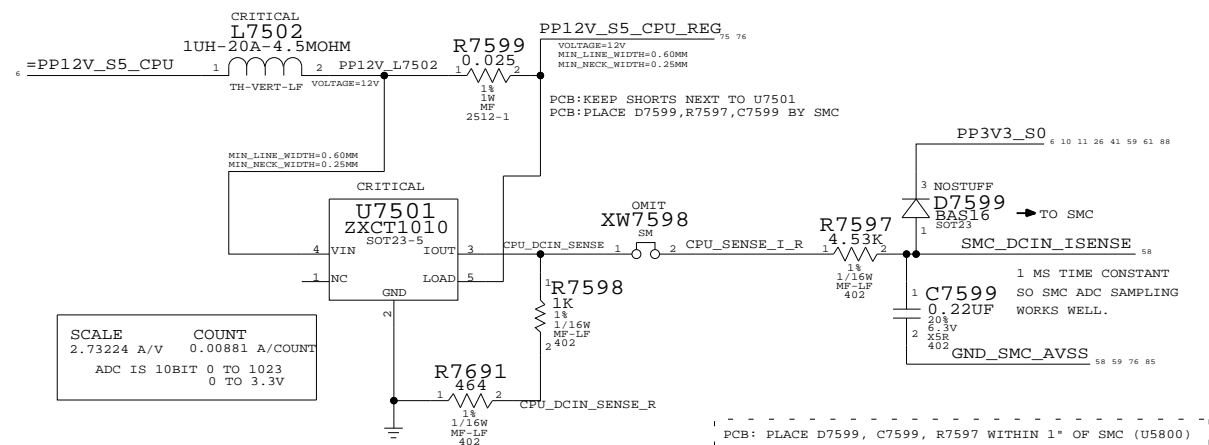
|                   | MIN_LINE_WIDTH | MIN_NECK_WIDTH |
|-------------------|----------------|----------------|
| 75 IMVP6_OCSET    | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_VSUM     | 0.25 MM        | 0.20 MM        |
| 75 GND_IMVP6_SGND | 0.50 MM        | 0.20 MM        |
| 75 IMVP6_VO       | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_DROOP    | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_DFB      | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_SOFT     | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_RBIAS    | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_VDIFF    | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_FB2      | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_FB       | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_COMP     | 0.25 MM        | 0.20 MM        |
| 75 IMVP6_VW       | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_RTIN     | 0.25 MM        | 0.25 MM        |
| 75 IMVP6_VSEN     | 0.25 MM        | 0.25 MM        |

IMVP6 CPU VCore Regulator  
SYNC\_MASTER=POWER SYNC\_DATE=07/08/2005

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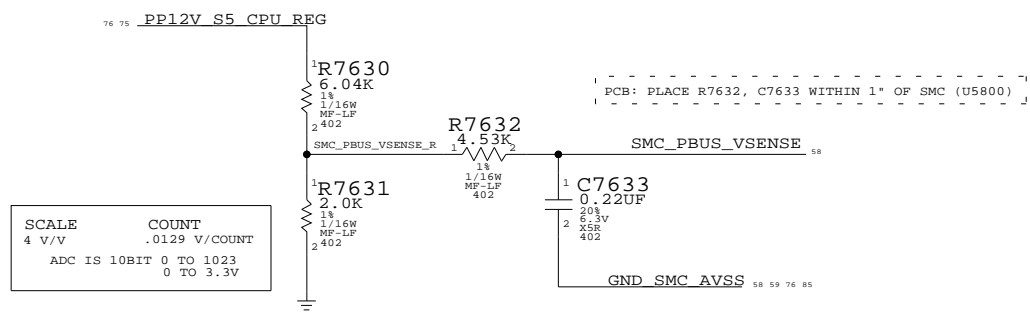
|                     |       |                |       |
|---------------------|-------|----------------|-------|
| APPLE COMPUTER INC. | SIZE  | DRAWING NUMBER | REV.  |
|                     | D     | 051-7148       | B     |
| SCALE               | SHEET | OF             | TOTAL |
| NONE                | 75    | OF             | 110   |

**PROCESSOR VCORE CURRENT SENSE**  
(USING 12V INPUT CURRENT TO DERIVE CPU CURRENT)



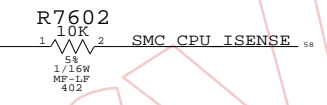
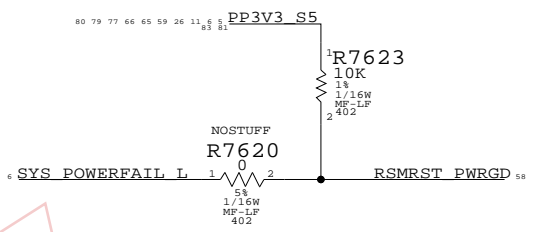
SCALE COUNT  
2.73224 A/V 0.00881 A/COUNT  
ADC IS 10BIT 0 TO 1023  
0 TO 3.3V

**PROCESSOR DCIN VOLTAGE SENSE**  
(SCALING 12V INPUT VOLTAGE TO SMC)

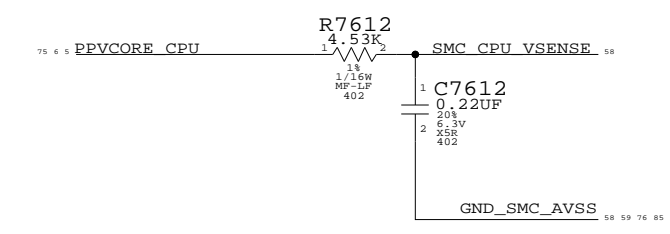


SCALE COUNT  
4 V/V .0129 V/COUNT  
ADC IS 10BIT 0 TO 1023  
0 TO 3.3V

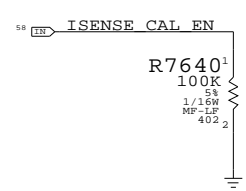
**SMC PWRGD PULLUP**



**PROCESSOR VCORE SENSE**



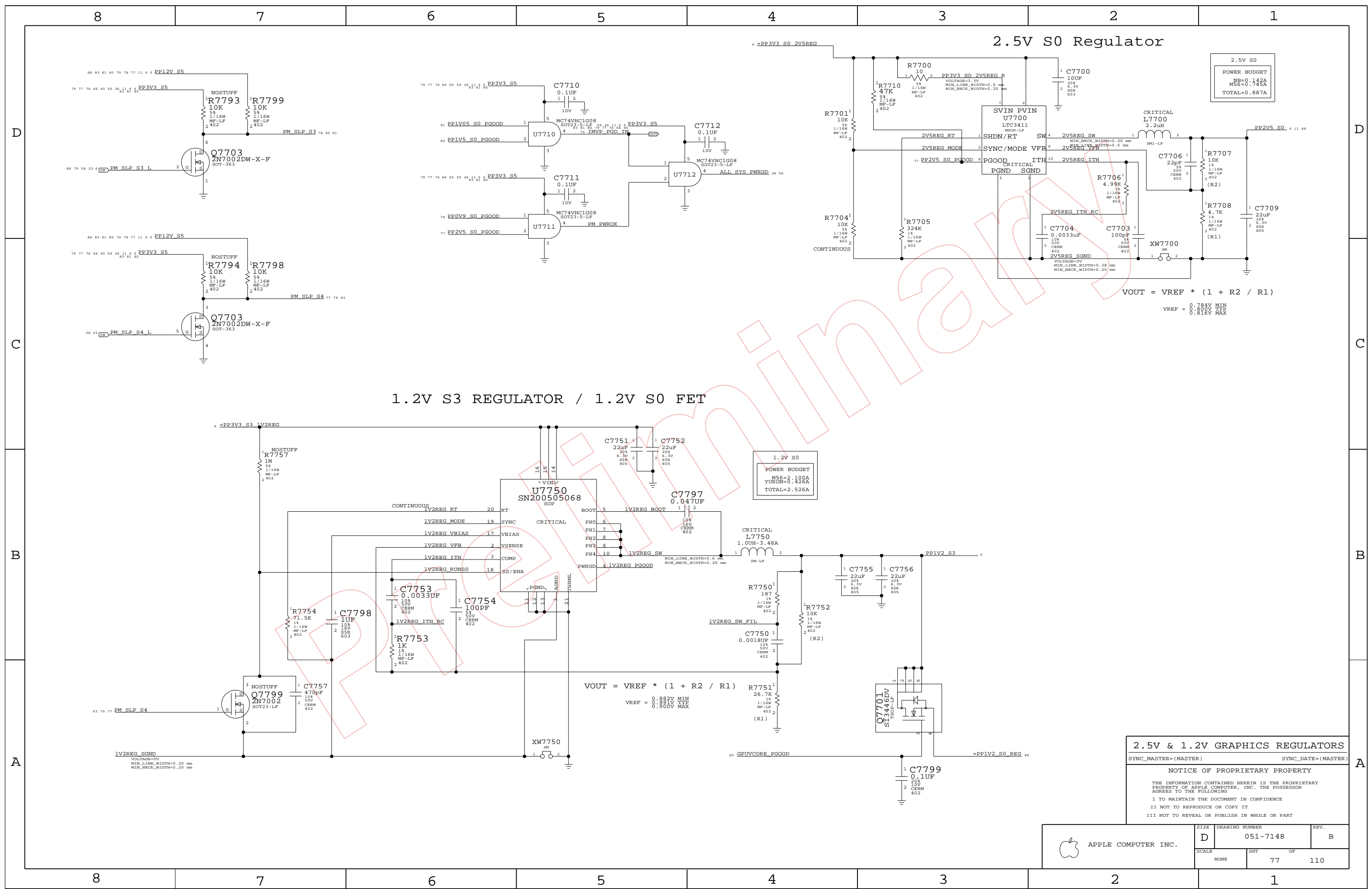
**Current Sense Calibration Circuit**  
Switches in fixed load on power supplies to calibrate current sense circuits



**CPU SENSE CIRCUITRIES**  
SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)  
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|---------------------|------|----------------|------|
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|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 76 OF          | 110  |
| NONE                |      |                |      |





2.5V S0 Regulator

2.5V S0  
POWER BUDGET  
NB=0.142A  
MS=0.745A  
TOTAL=0.887A

$$V_{OUT} = V_{REF} * (1 + R2 / R1)$$

VREF = 0.784V MIN  
0.800V TYP  
0.816V MAX

1.2V S3 REGULATOR / 1.2V S0 FET

1.2V S0  
POWER BUDGET  
MS=2.100A  
YUKON=0.426A  
TOTAL=2.526A

$$V_{OUT} = V_{REF} * (1 + R2 / R1)$$

VREF = 0.882V MIN  
0.881V TYP  
0.900V MAX

2.5V & 1.2V GRAPHICS REGULATORS

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

NOTICE OF PROPRIETARY PROPERTY

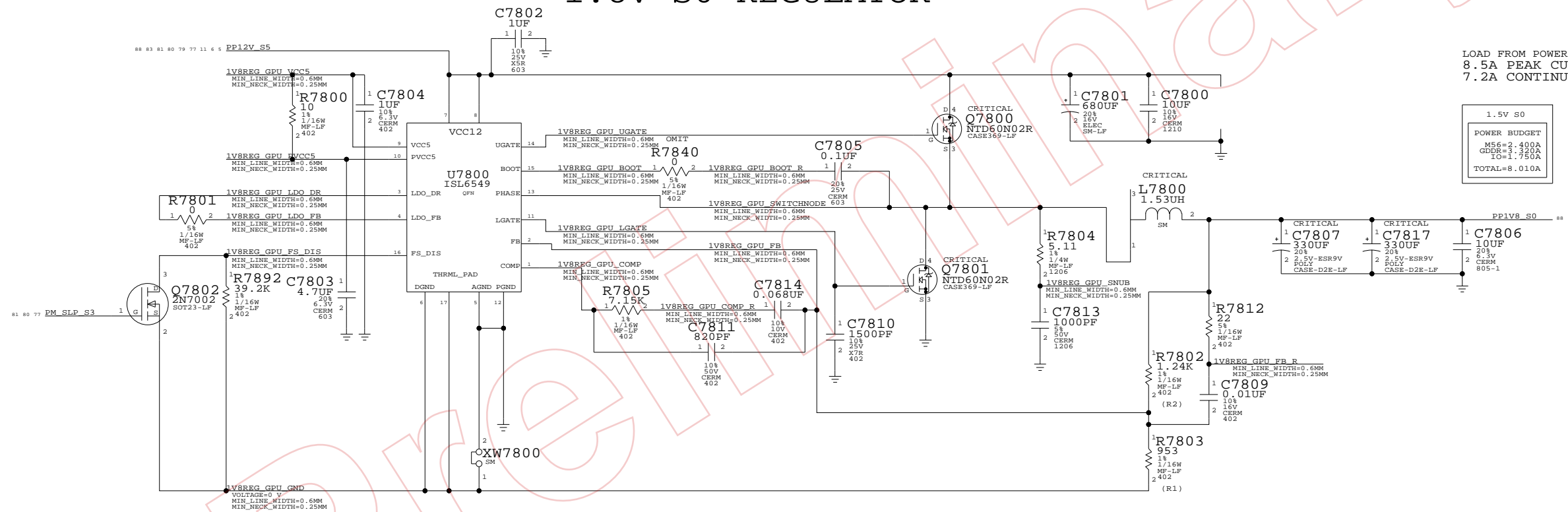
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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             |      |
| NONE                | 77   | 110            |      |



| PART#    | QTY | DESCRIPTION               | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|----------|-----|---------------------------|-------------------------|----------|------------|
| 11480514 | 1   | 5.11 OHM 0402 1% 1/16W LF | R7840                   |          |            |

### 1.8V S0 REGULATOR



LOAD FROM POWER BUDGET  
8.5A PEAK CURRENT DRAW  
7.2A CONTINUOUS CURRENT DRAW

|              |
|--------------|
| 1.5V S0      |
| POWER BUDGET |
| M56=2.400A   |
| GDDR=3.300A  |
| IO=1.700A    |
| TOTAL=8.010A |

$$V_{OUT} = V_{REF} * (1 + R2/R1)$$

VREF = 0.784V MIN  
VREF = 0.800V TYP  
VREF = 0.816V MAX

**1.8V GDDR REGULATOR**

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

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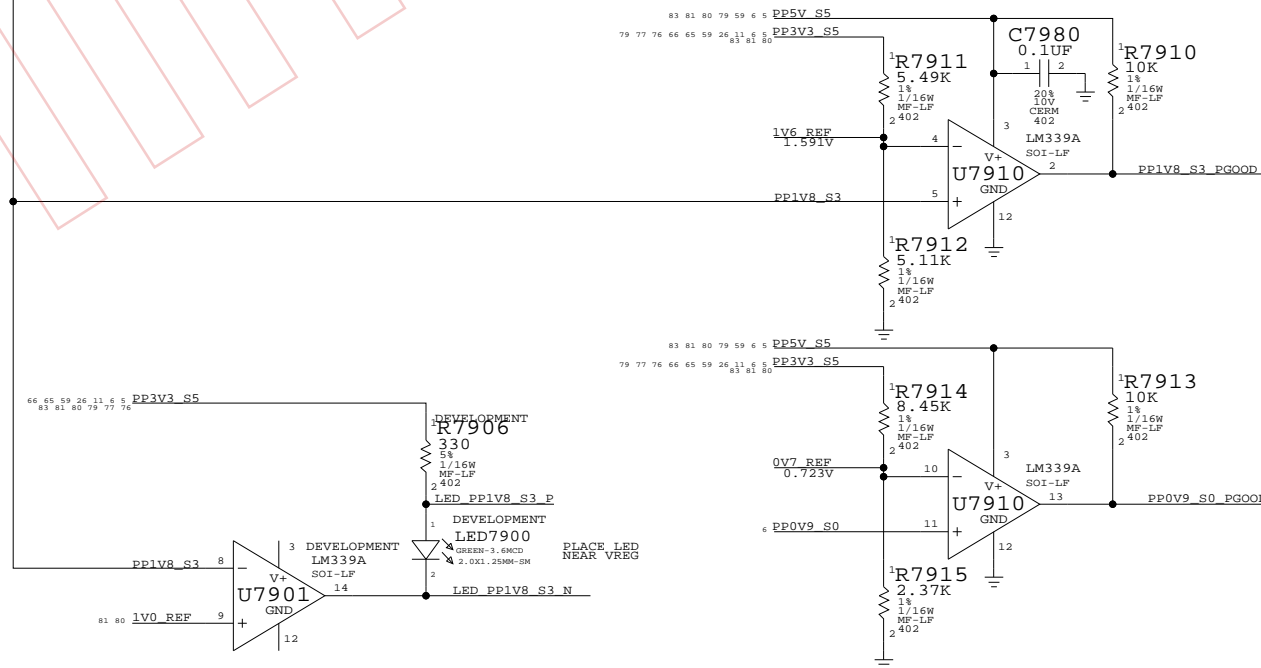
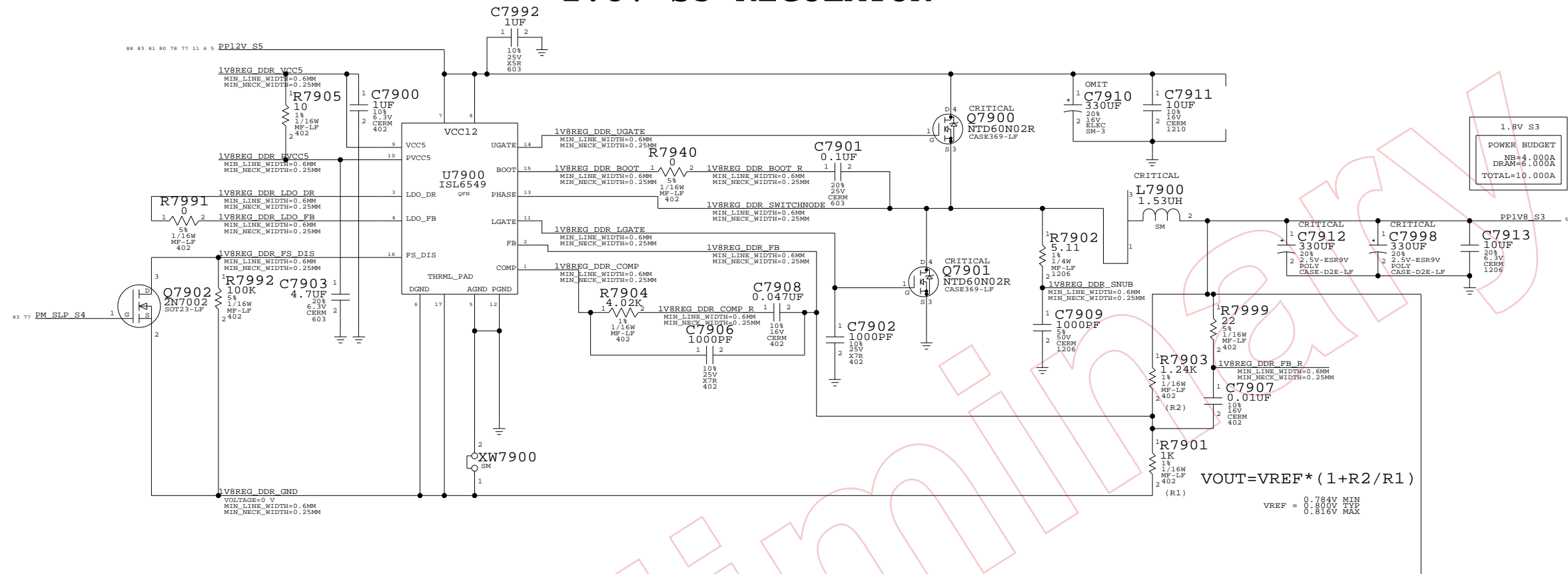
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II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

|                     |      |                |      |
|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 78 OF 110      |      |
| NONE                |      |                |      |

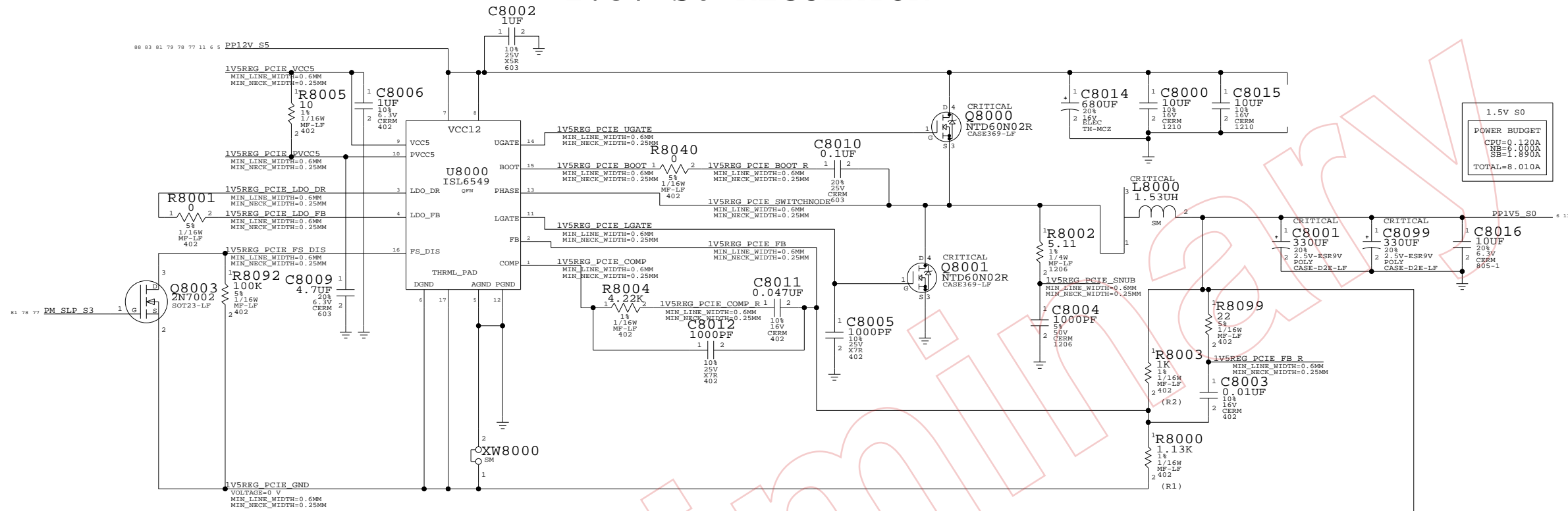
# 1.8V S3 REGULATOR



**1.8V Vreg**  
 SYNC\_MASTER=M23-PC SYNC\_DATE=04/12/2005  
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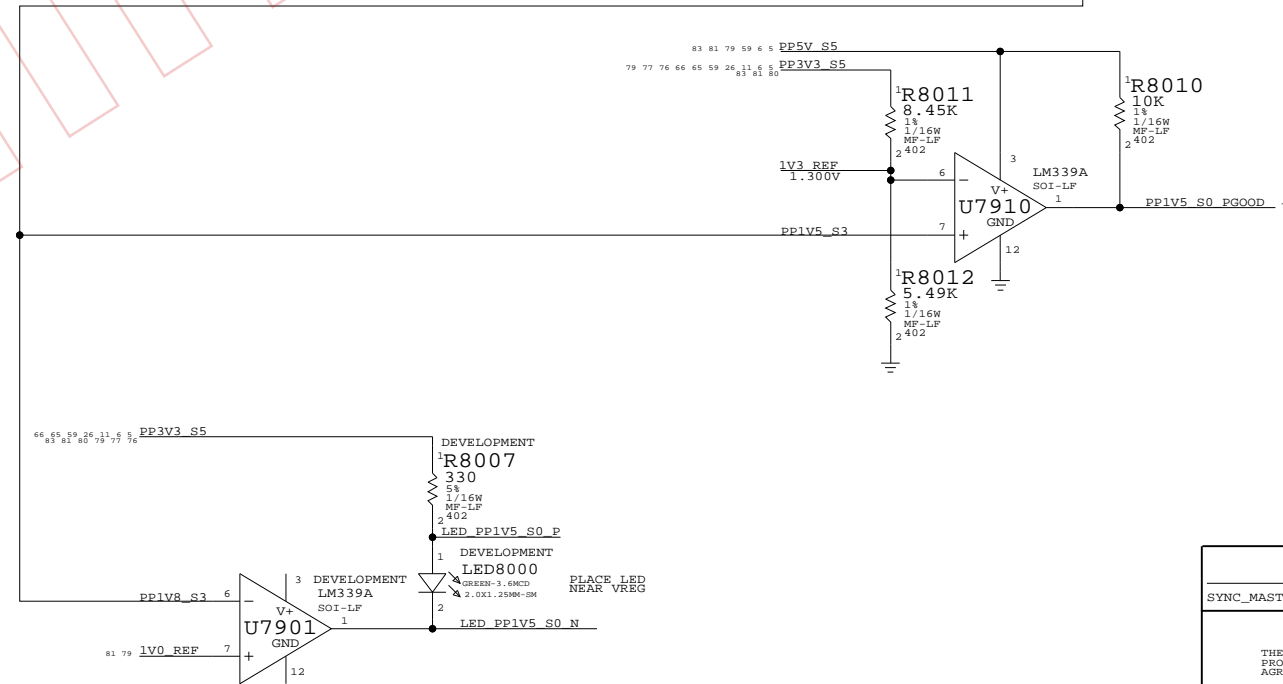
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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 79 OF          | 110  |
| NONE                |      |                |      |

# 1.5V S0 REGULATOR



$$V_{OUT} = V_{REF} * (1 + R2/R1)$$

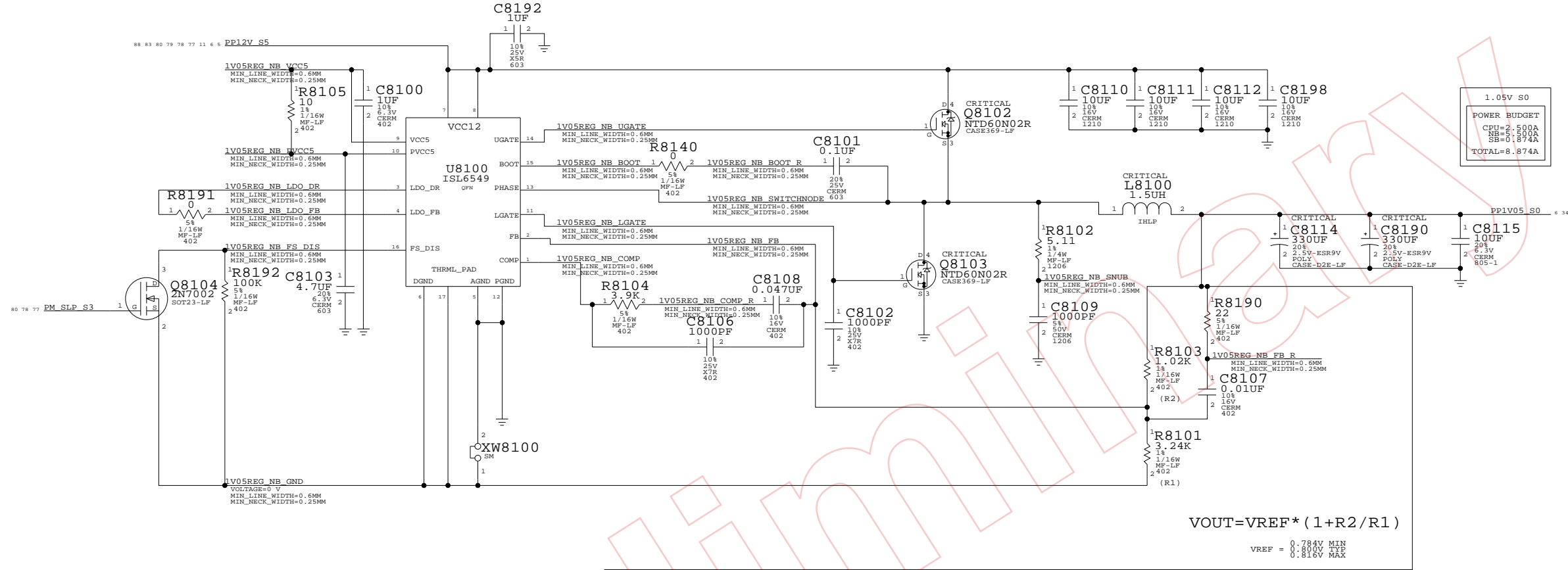
$$V_{REF} = \begin{matrix} 0.784V \text{ MIN} \\ 0.800V \text{ TYP} \\ 0.816V \text{ MAX} \end{matrix}$$



**1.5V Vreg**  
 SYNC\_MASTER=FINO-PC SYNC\_DATE=05/18/2005  
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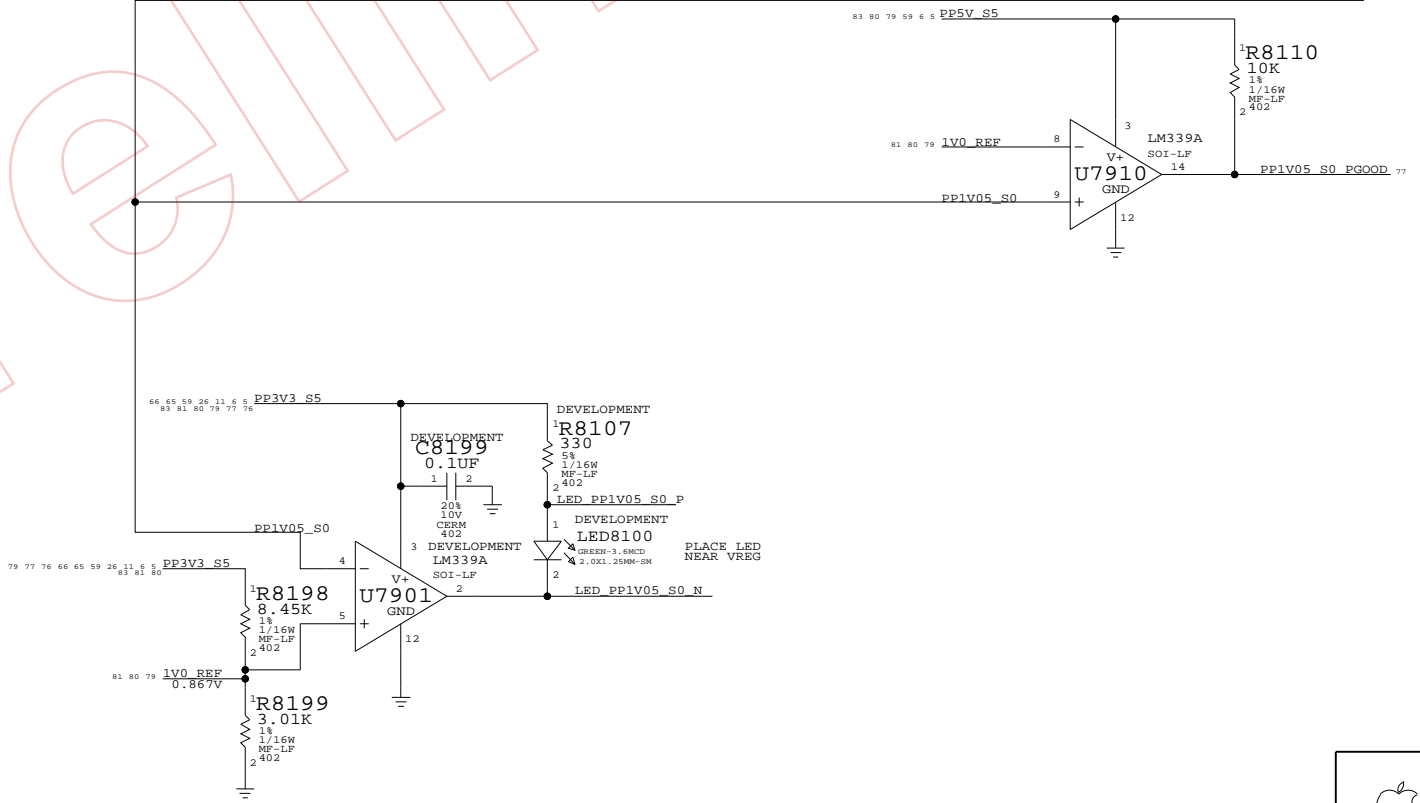
|                     |      |                |      |
|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 80 OF          | 110  |
| NONE                |      |                |      |

# 1.05V S0 REGULATOR



$$V_{OUT} = V_{REF} * (1 + R2/R1)$$

VREF = 0.784V MIN  
0.800V TYP  
0.816V MAX



**1.05V VREG**

SYNC\_MASTER=M38-RT SYNC\_DATE=05/18/2005

NOTICE OF PROPRIETARY PROPERTY

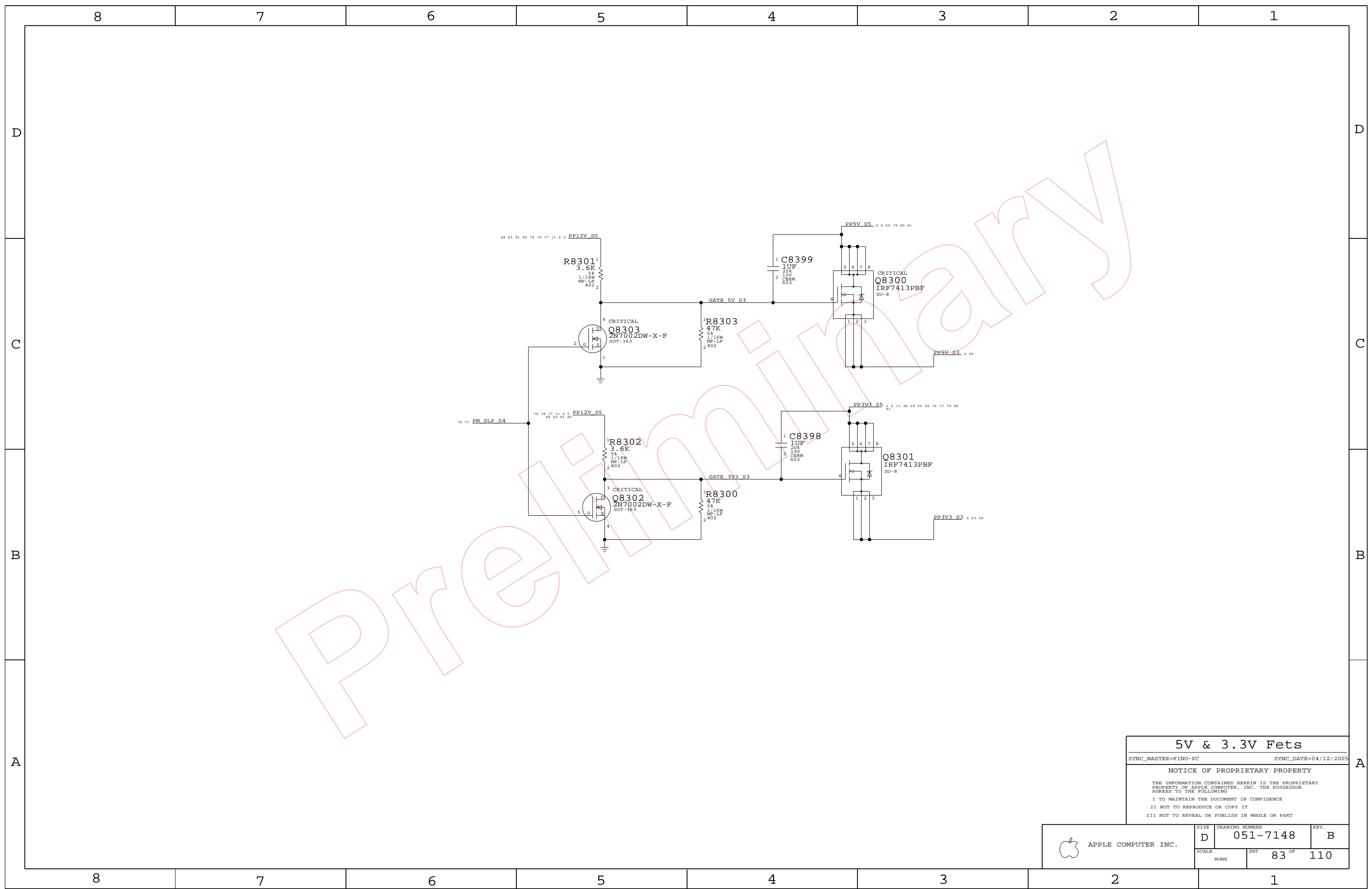
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| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 81 OF          | 110  |
| NONE                |      |                |      |



5V & 3.3V Fets

SYNC\_MASTER=FINO-PC SYNC\_DATE=04/12/2005

NOTICE OF PROPRIETARY PROPERTY

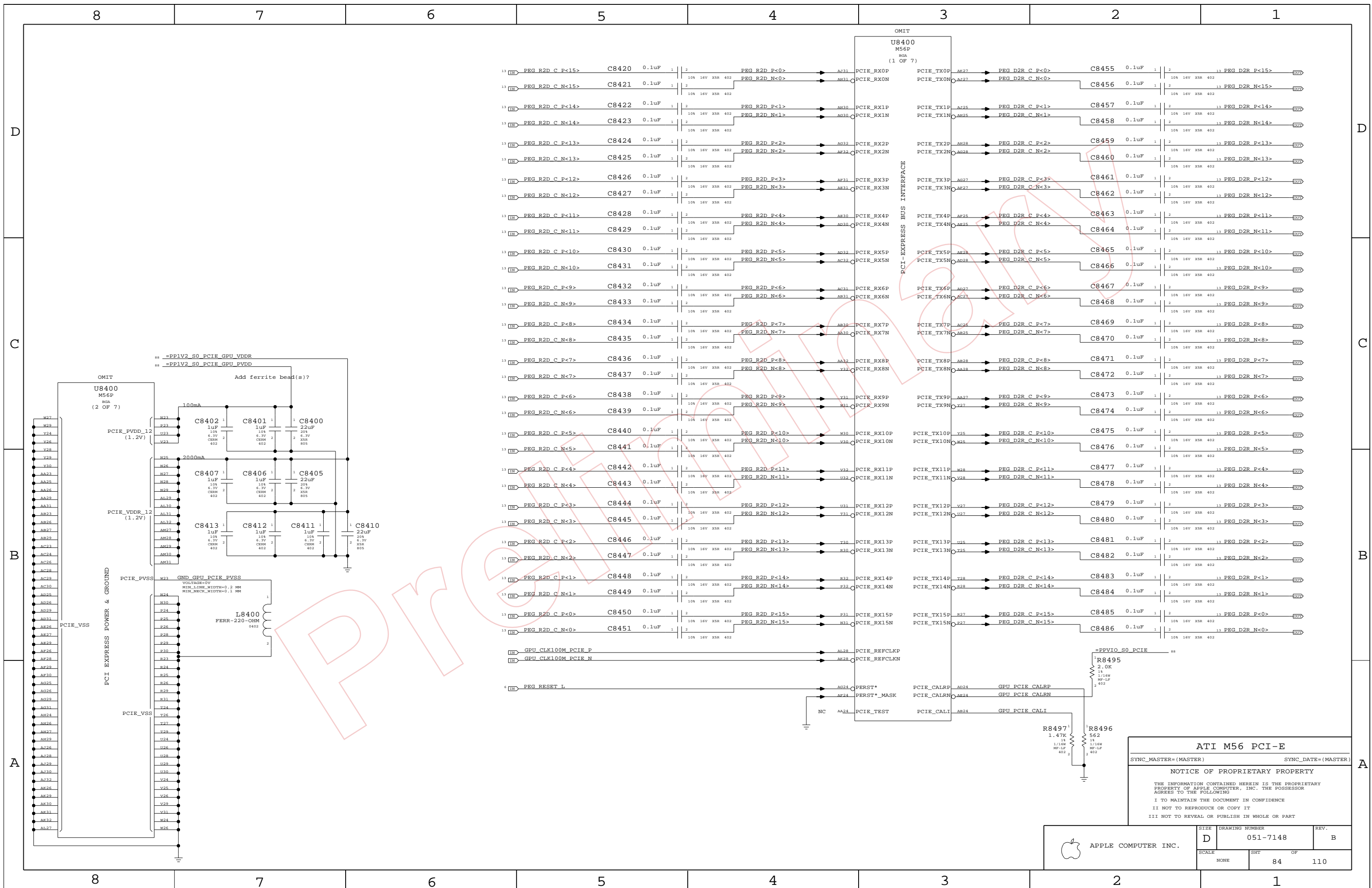
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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | 83 OF 110      |      |
| NONE                |      |                |      |



**ATI M56 PCI-E**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

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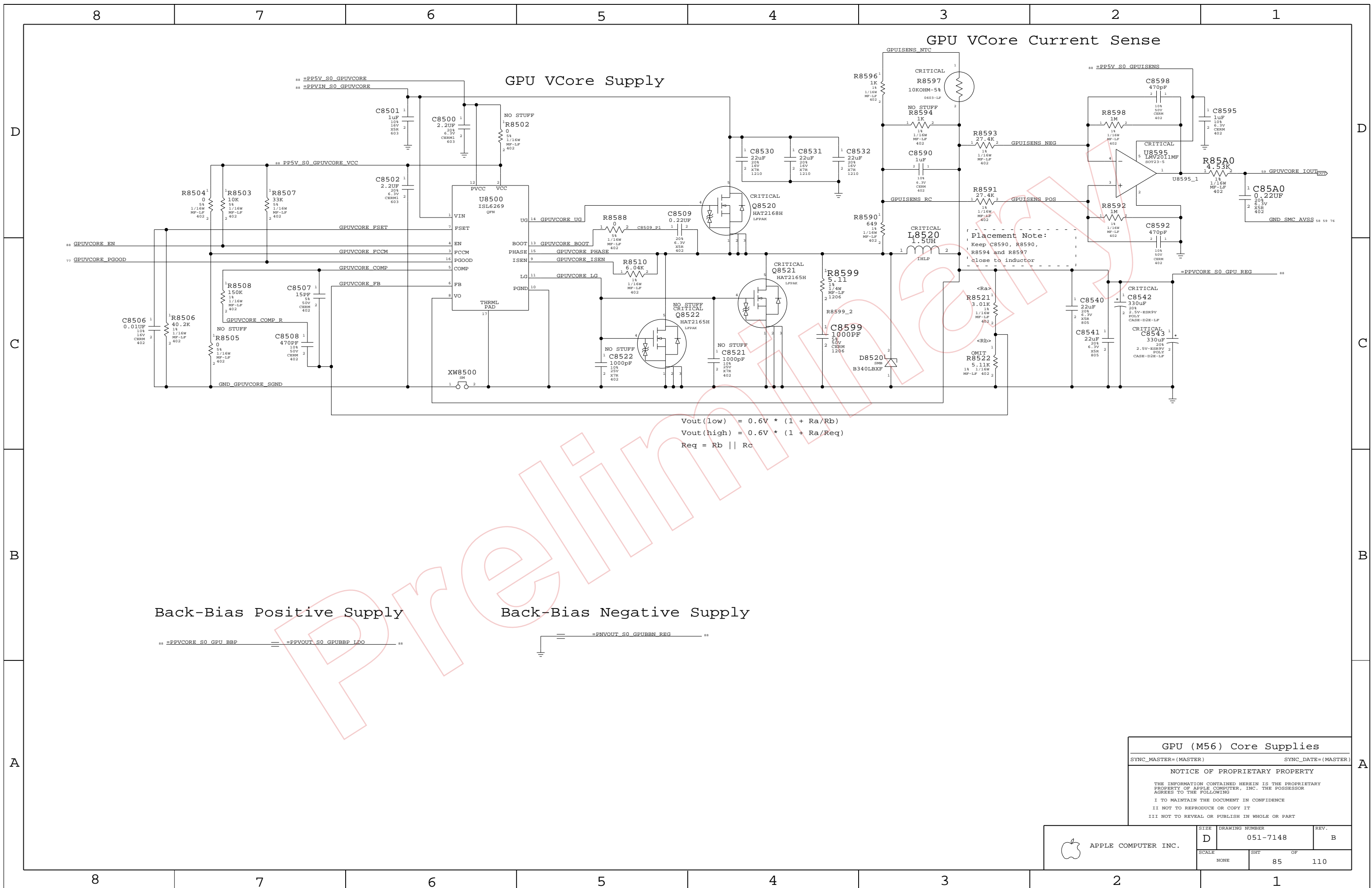
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|                     |      |                |      |
|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             |      |
| NONE                | 84   | 110            |      |





**GPU (M56) Core Supplies**

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

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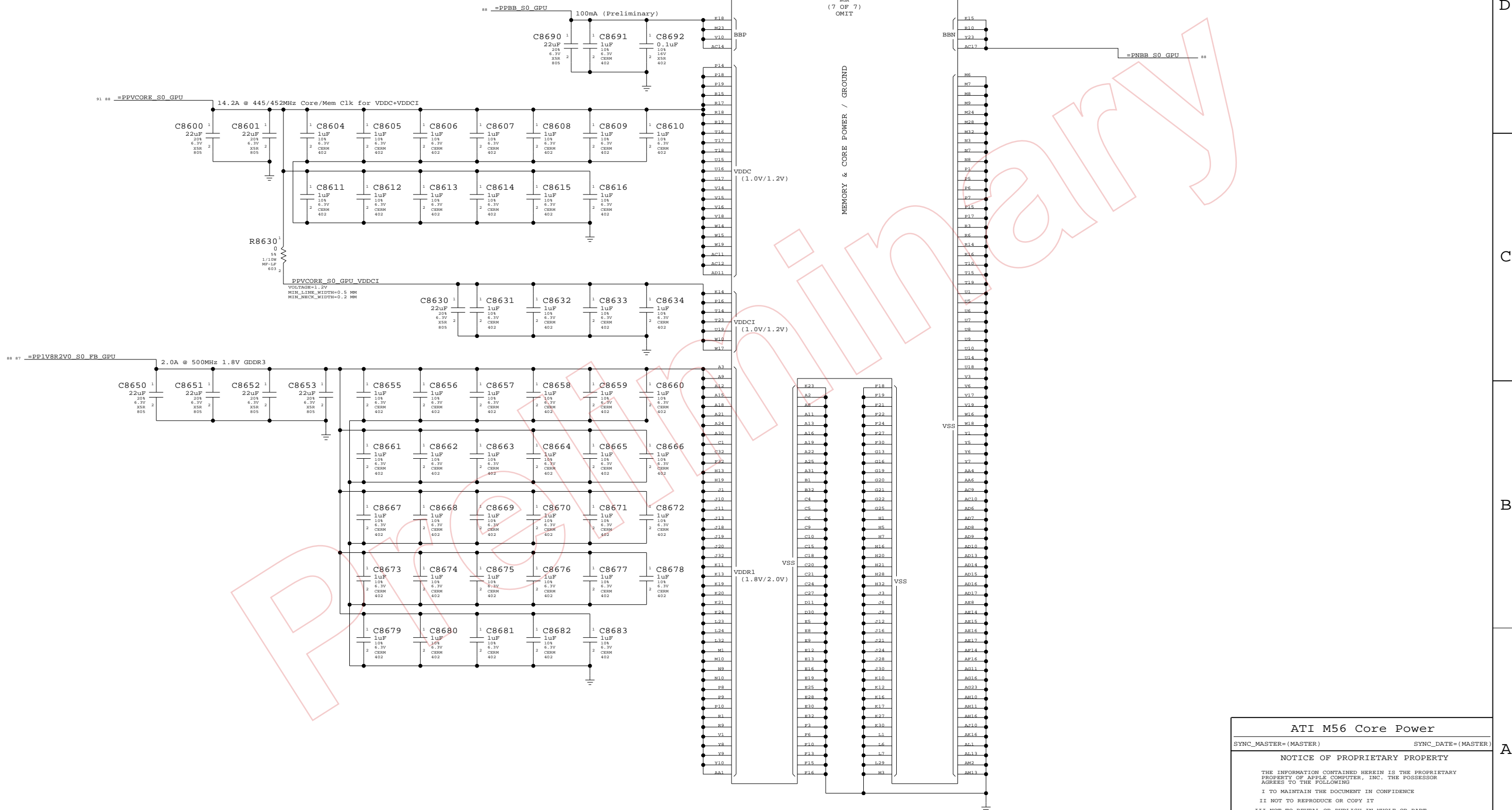
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|---------------------|------------------|----------------------------|-----------|
| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br>051-7148 | REV.<br>B |
|                     | SCALE<br>NONE    | SHEET OF<br>85 OF 110      |           |

Page Notes

Power aliases required by this page:  
 - =PP1V5\_GPU\_VDD15  
 - =PP1VR1V3\_GPU\_VCORE

Signal aliases required by this page:  
 (NONE)

BOM options provided by this page:  
 (NONE)



ATI M56 Core Power

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

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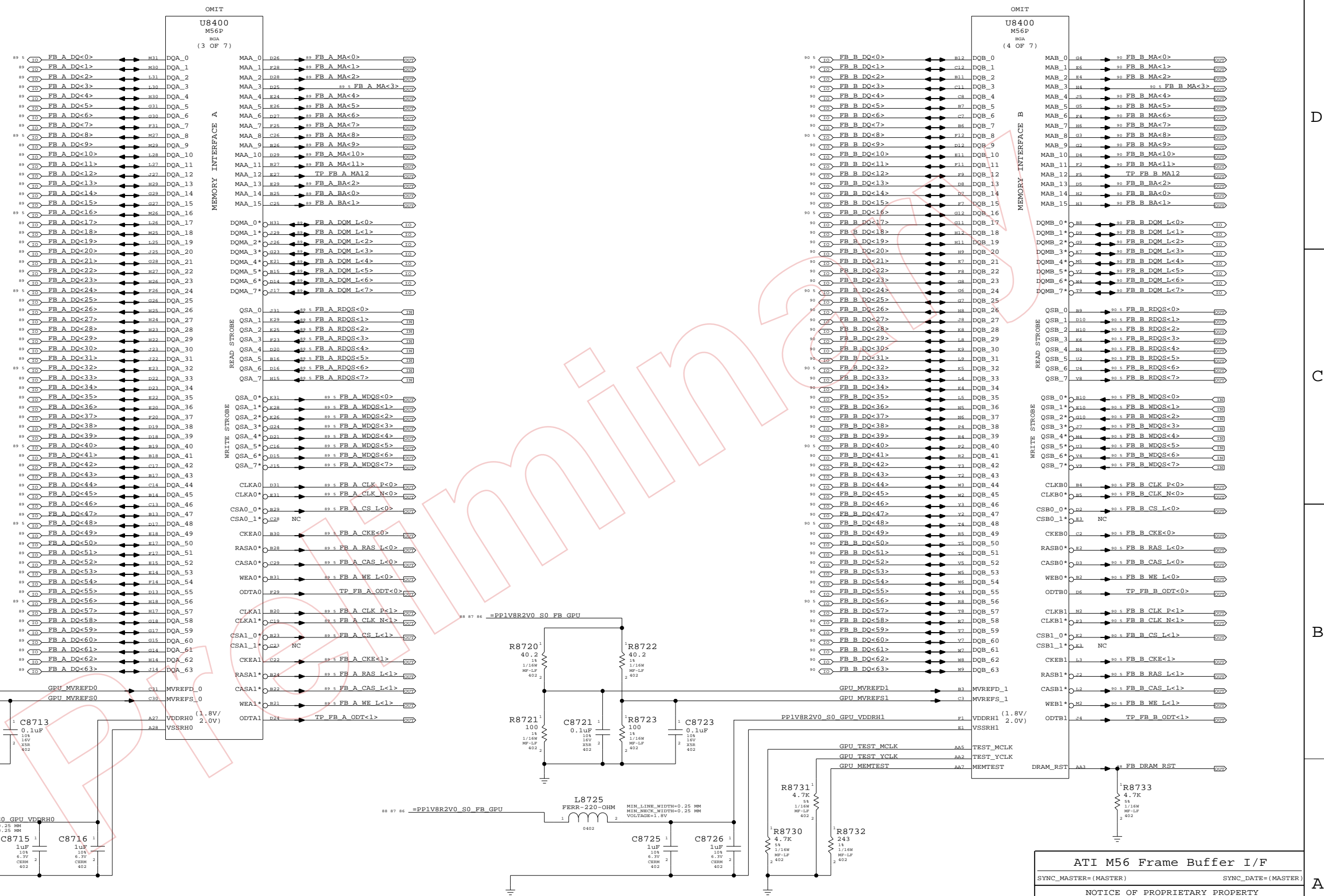
II NOT TO REPRODUCE OR COPY IT

III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART

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|---------------------|------|----------------|------|
| APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|                     | D    | 051-7148       | B    |
| SCALE               | NONE | SHT            | OF   |
|                     |      | 86             | 110  |

Page Notes

Power aliases required by this page:
- =PP1V8R2V0\_S0\_FB\_GPU
Signal aliases required by this page:
(NONE)
BOM options provided by this page:
(NONE)



ATI M56 Frame Buffer I/F
SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)
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Table with columns for SIZE (D), DRAWING NUMBER (051-7148), REV. (B), SCALE (NONE), SHEET (87), and OF (110). Includes the Apple logo and 'APPLE COMPUTER INC.' text.

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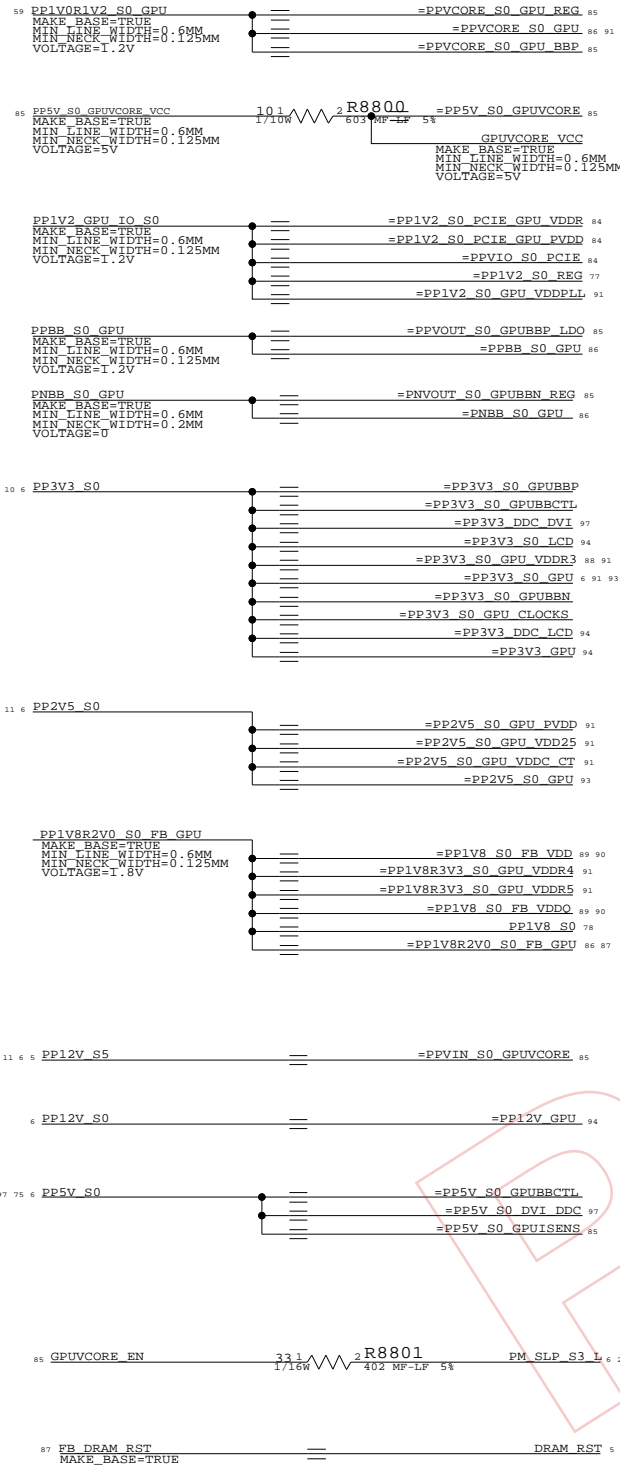
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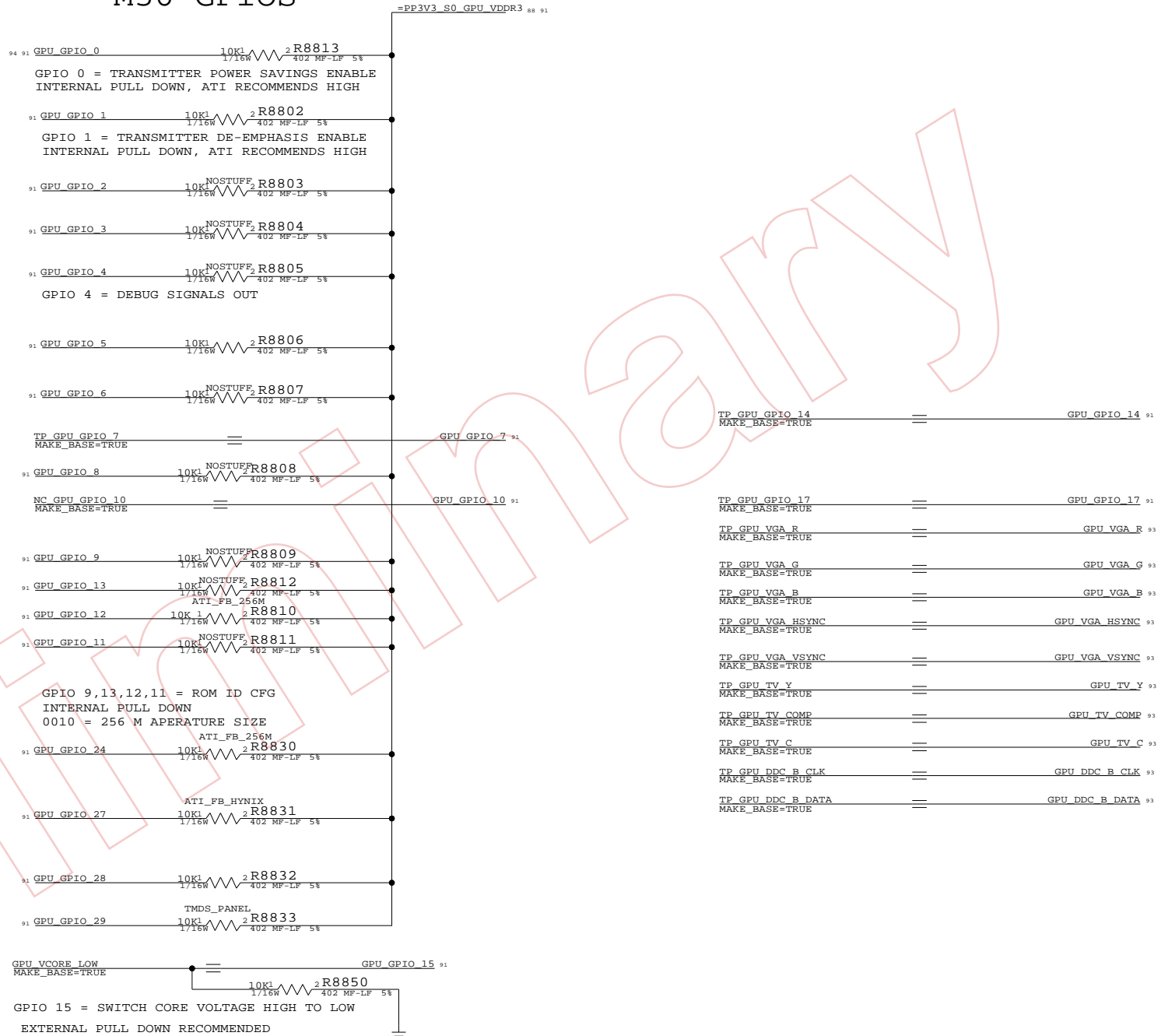
1

### "S0" GPU RAILS

ONLY ON IN RUN



### M56 GPIOs



### GPU MISC

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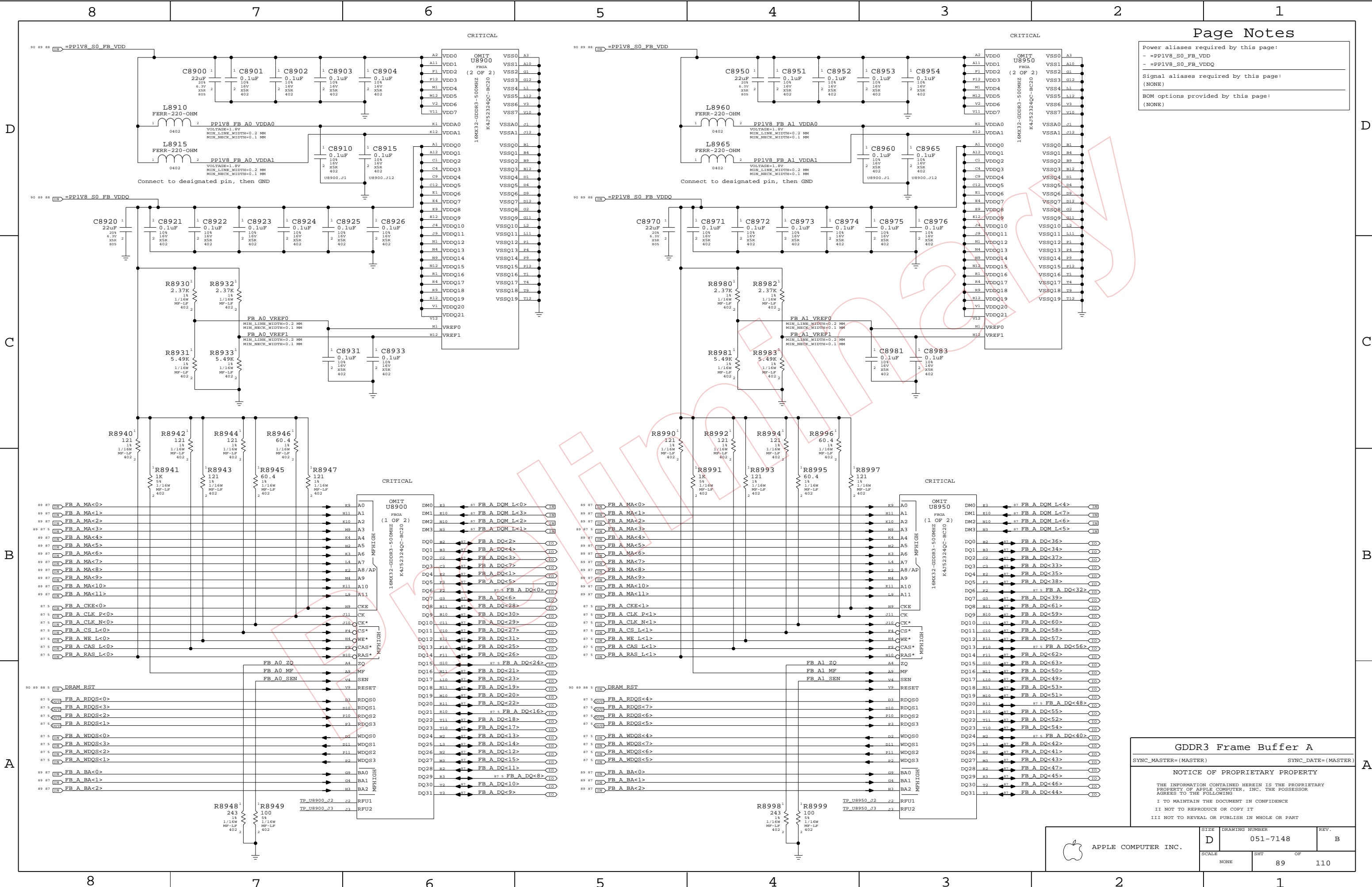
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Power aliases required by this page:  
 - =PPIV8\_S0\_FB\_VDD  
 - =PPIV8\_S0\_FB\_VDDQ

Signal aliases required by this page:  
 (NONE)

BOM options provided by this page:  
 (NONE)



**GDDR3 Frame Buffer A**

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

NOTICE OF PROPRIETARY PROPERTY

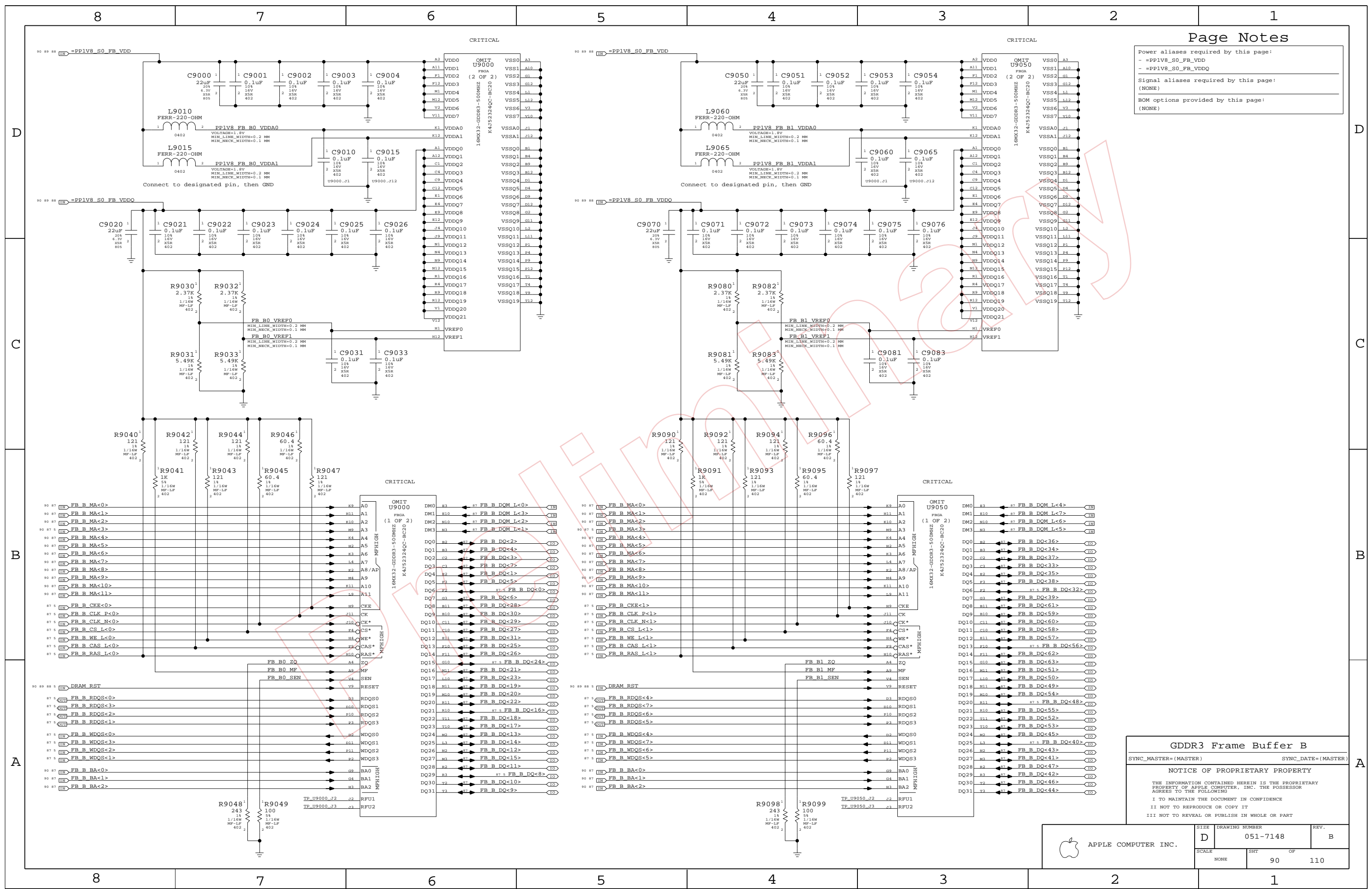
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Power aliases required by this page:  
 - =PPIV8\_S0\_FB\_VDD  
 - =PPIV8\_S0\_FB\_VDDQ

Signal aliases required by this page:  
 (NONE)

BOM options provided by this page:  
 (NONE)



**GDDR3 Frame Buffer B**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

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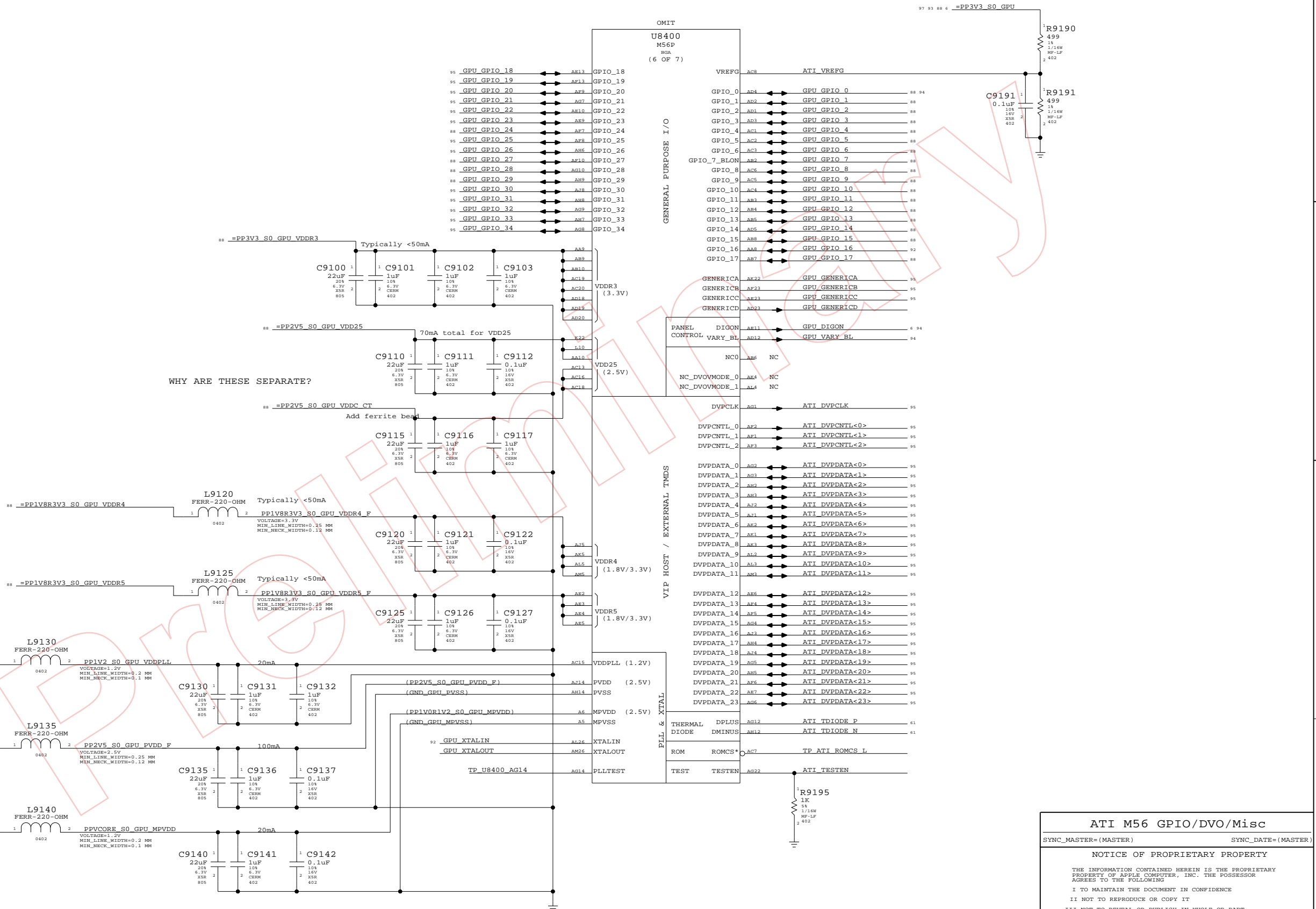


Page Notes

Power aliases required by this page:  
 - =PP3V3\_GPU\_GPIOS  
 - =PP2V5\_PVDD  
 - =PP1V8\_GPU\_LVDS\_PLL

Signal aliases required by this page:  
 - =I2C\_GPU\_TMDS\_SDA - I2C data line for external TMDS transmitters  
 - =I2C\_GPU\_TMDS\_SCL - I2C clock line for external TMDS transmitters

BOM options provided by this page:  
 (NONE)



ATI M56 GPIO/DVO/Misc

SYNC\_MASTER=(MASTER) SYNC\_DATE=(MASTER)

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### Page Notes

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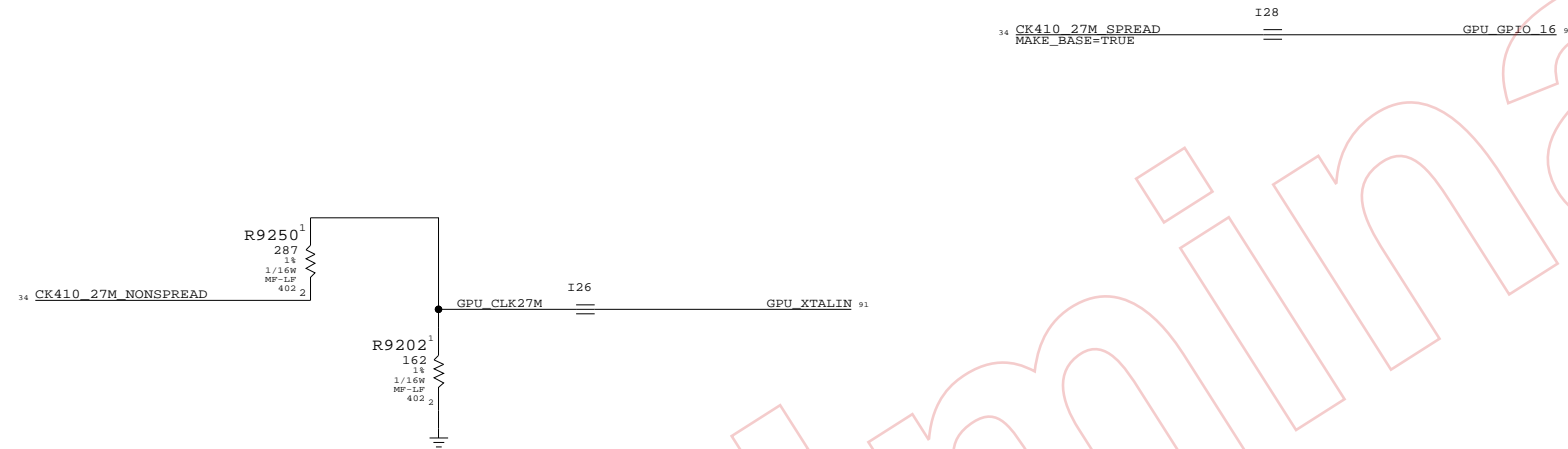
- =PP3V3\_GPU\_CLOCKS      - =PP3V3\_GPU\_PWRSEQ
- =PPVIN\_GPU\_LVDDR\_LDO    - =PP2V5\_GPU\_PWRSEQ
- =PP2V5\_GPU\_LVDDR\_LDO    - =PP1V8\_GPU\_PWRSEQ
- =PP1V5\_GPU\_PWRSEQ

Signal aliases required by this page:

(NONE)

BOM options provided by this page:

- GPU\_SS                      - GPU\_LVDDR\_2V8



Preliminary

### GPU CLOCKS

SYNC\_MASTER=BOZEMAN      SYNC\_DATE=05/21/2005

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| APPLE COMPUTER INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br>051-7148 | REV.<br>B |
|                     | SCALE<br>NONE    | SHT<br>92                  | OF<br>110 |

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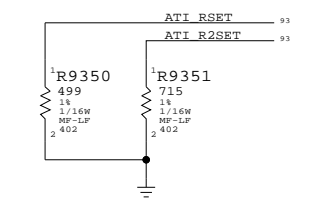
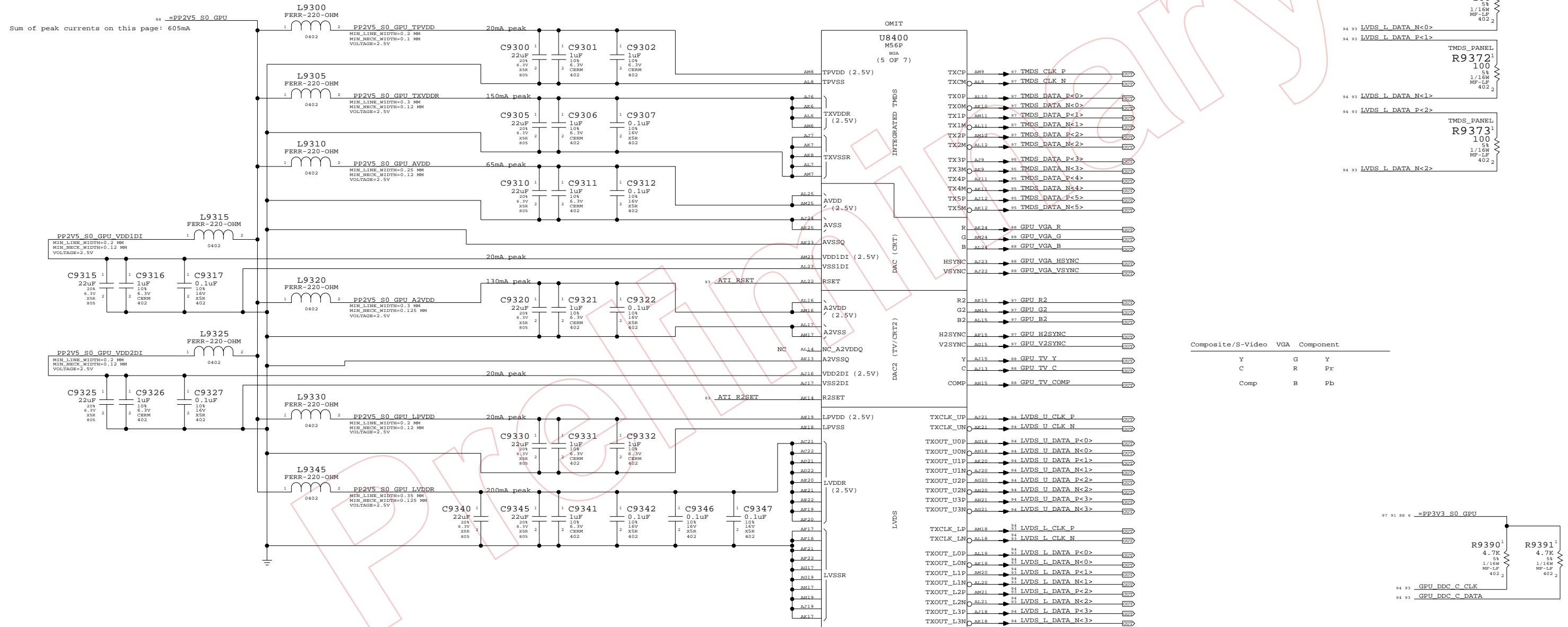
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 - =PP1V8R2V5\_S0\_GPU\_LVDDR

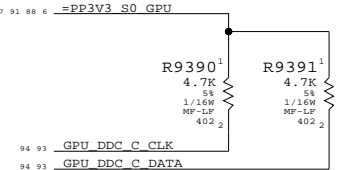
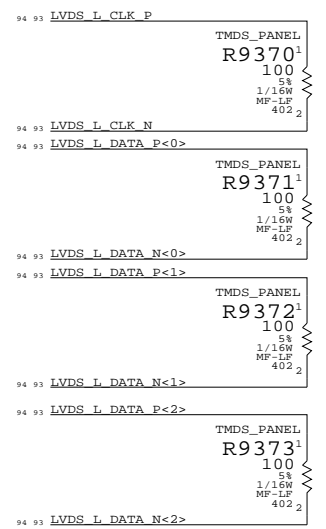
Signal aliases required by this page:  
 (NONE)

BOM options provided by this page:  
 (NONE)

TERMINATION FOR TMDS USAGE OF LVDS PINS  
 PLACE CLOSE TO GPU (U8400)



| Composite/S-Video | VGA | Component |
|-------------------|-----|-----------|
| Y                 | G   | Y         |
| C                 | R   | Pr        |
| Comp              | B   | Pb        |



**ATI M56 Video Interfaces**

SYNC\_MASTER=(MASTER)      SYNC\_DATE=(MASTER)

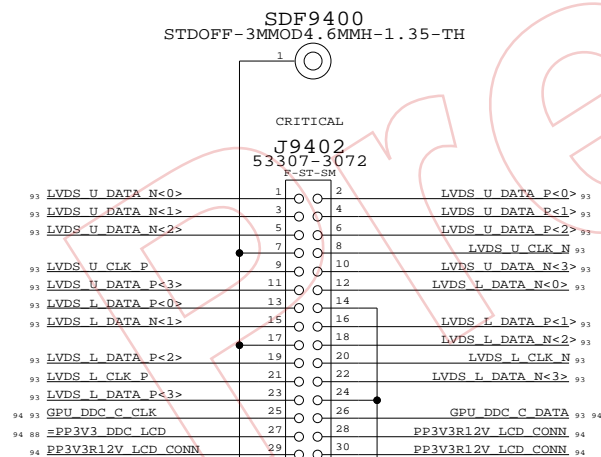
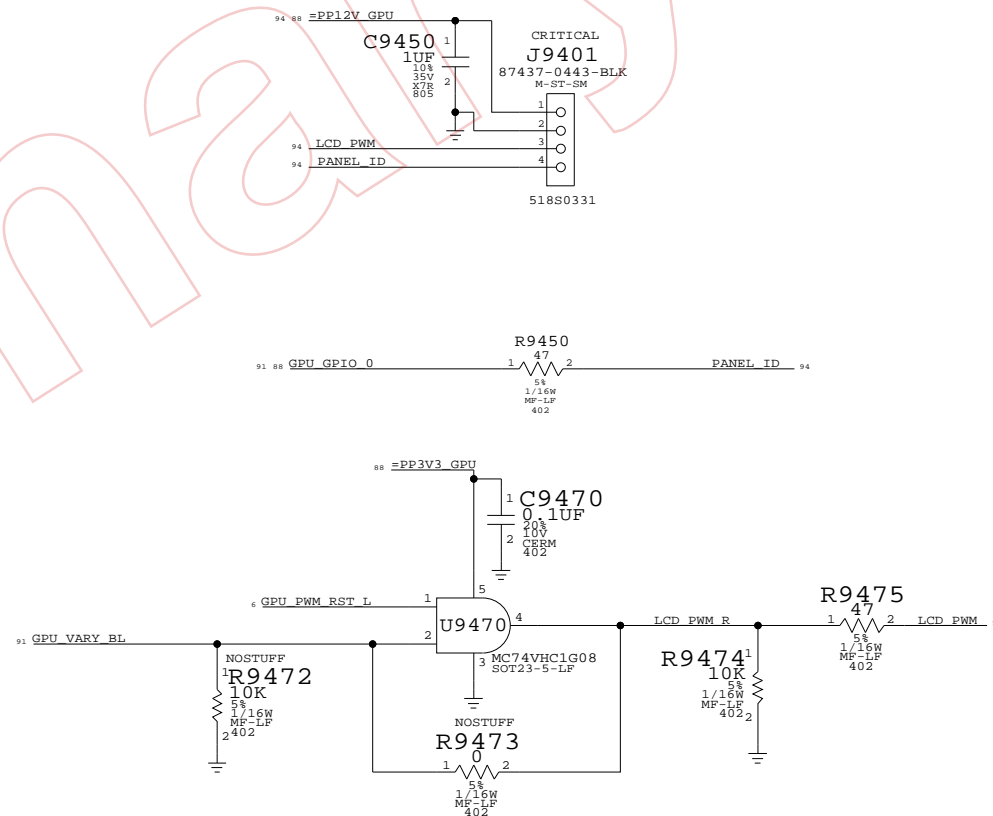
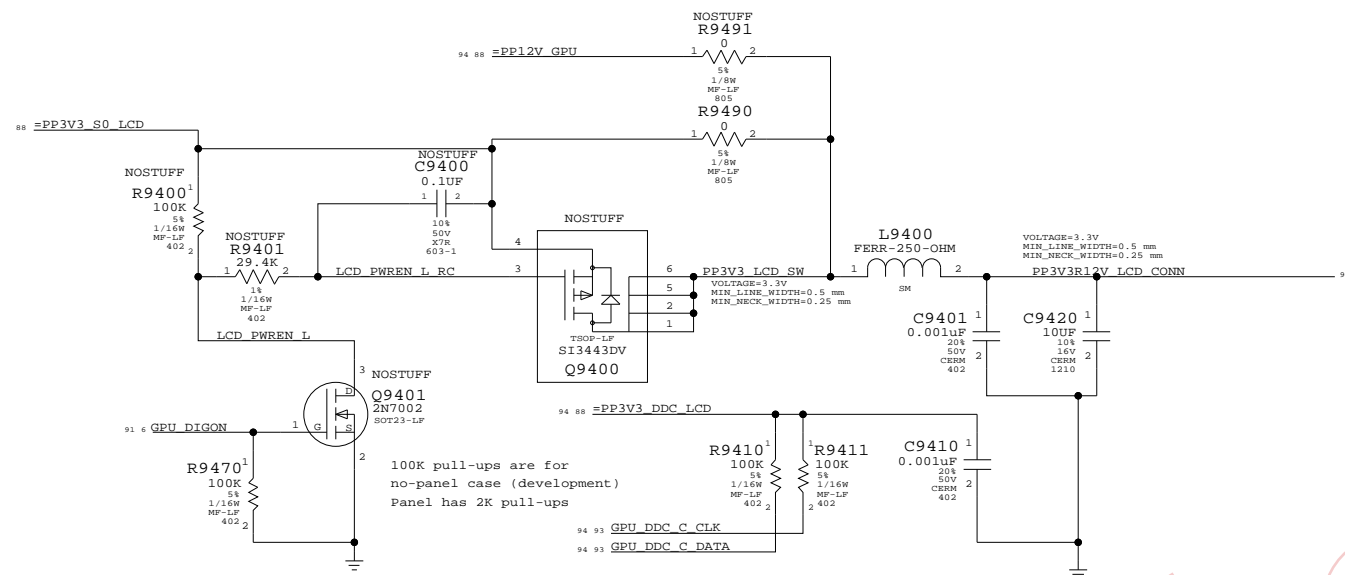
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# LCD (LVDS) INTERFACE

# INVERTER INTERFACE



**Internal Display Conns**  
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| SCALE               | SHT  | OF             |      |
| NONE                | 94   | 110            |      |

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### M56 TPS


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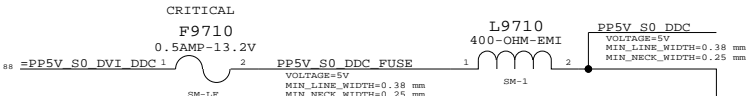
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|---|------|----------------|------|
|  APPLE COMPUTER INC. | SIZE | DRAWING NUMBER | REV. |
|   | D    | 051-7148       | B    |
| SCALE   | SHT  | 95 OF 110      |      |
| NONE  |      |                |      |

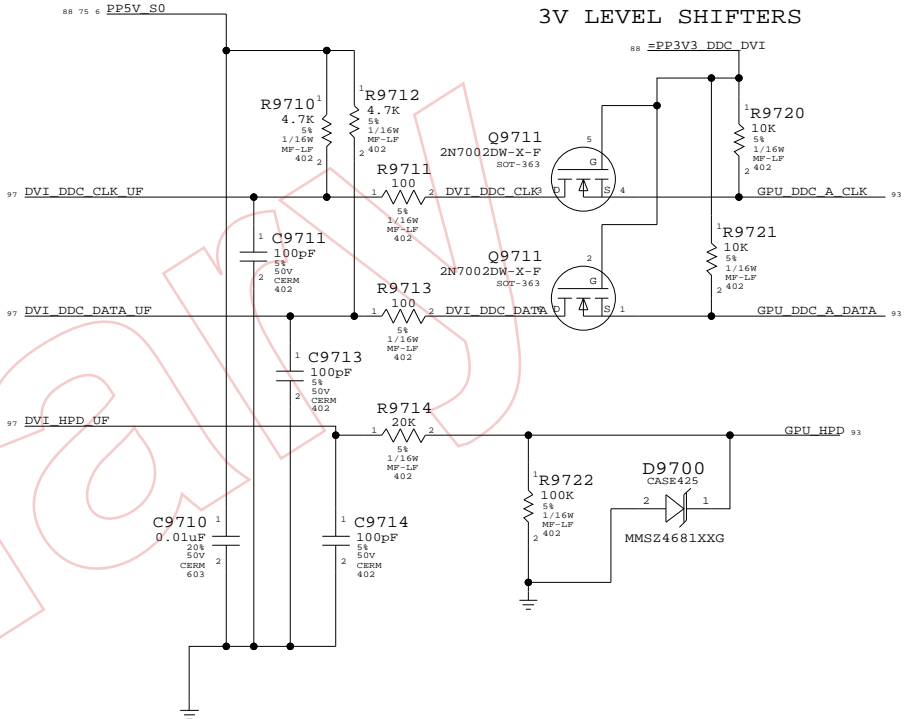
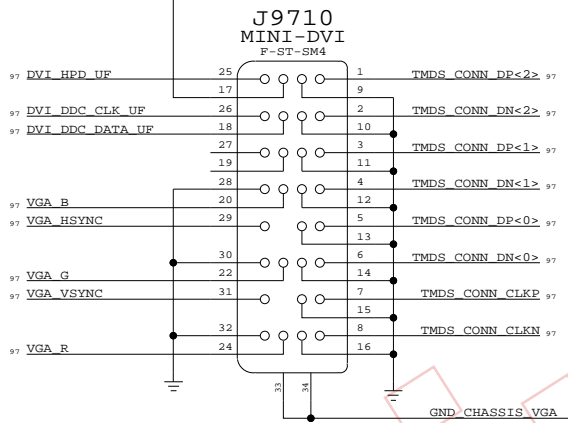
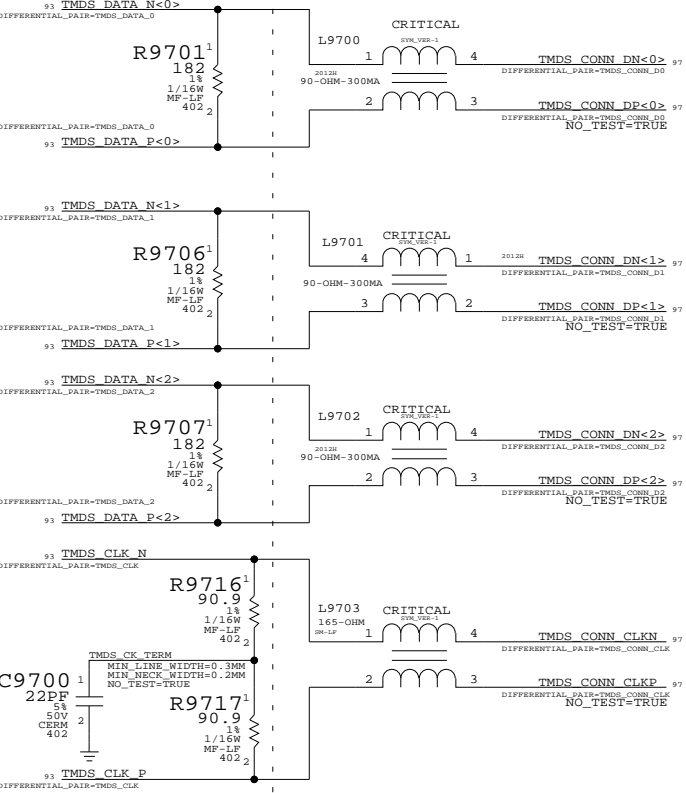
PLACE LEFT SIDE AS CLOSE TO GPU (U8400) AS POSSIBLE

PLACE FILTER CLOSE TO TMD5 CONNECTOR

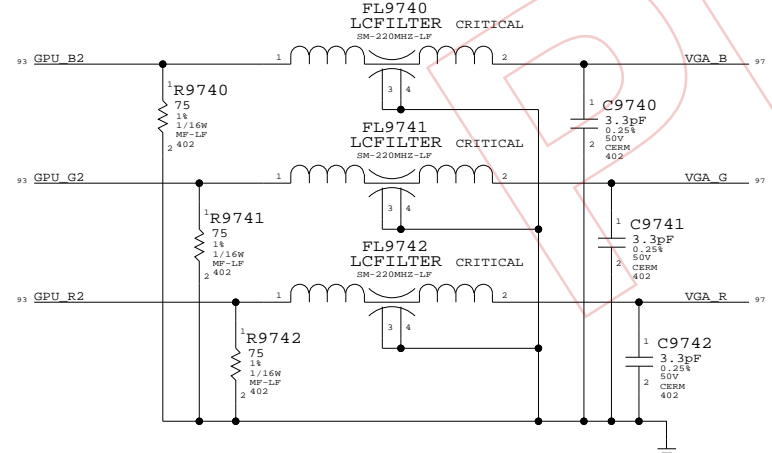
DVI DDC CURRENT LIMIT DVI INTERFACE



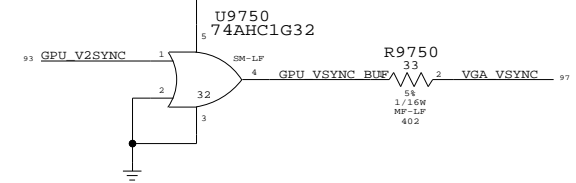
| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES | COMMENTS |
|-------------|---------------------------|------------|---------|----------|
| 740S0044    | 740S0028                  |            | F9710   | FUSE     |



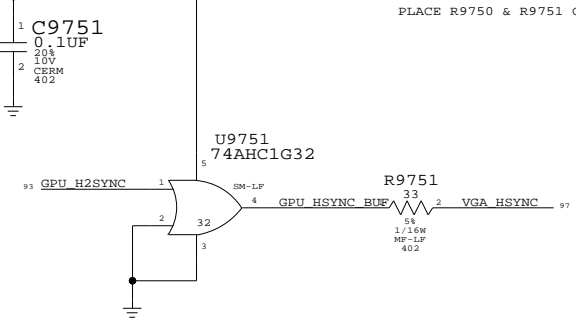
ANALOG FILTERING PLACE CLOSE TO CONNECTOR



VGA SYNC BUFFERS



PLACE R9750 & R9751 CLOSE TO DVI CONNECTOR



External Display Conns  
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|                     | D    | 051-7148       | B    |
| SCALE               | SHT  | OF             |      |
| NONE                | 97   | 110            |      |



Table with columns for Title, Design, Date, Base nets and synonyms, Base Signal, and Location. It lists various components like 0V7\_REF, 0V7\_REFP, 0V7\_REFR, etc.

Table with columns for Base Signal, Synonyms, and Location. It lists components like =PP0V9\_S0\_MEMVTT\_LDO, =PP1V2\_S0\_GPU\_VDDPLL, etc.

Table with columns for Base Signal, Synonyms, and Location. It lists components like =PP3V3\_S0\_TPM, =PP3V3\_S0\_SB\_VCC3\_3\_IDE, etc.

Table with columns for Base Signal, Synonyms, and Location. It lists components like =PP5V\_S5\_SB, =PP12V\_GPU, =PP12V\_S0\_AUDIO\_SPKR, etc.

Table with columns for Base Signal, Synonyms, and Location. It lists components like =PP12V\_S5\_CPU, =PP12V\_S5\_FW\_PHY, =PPBB\_S0\_GPU, etc.

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|                  | 8                                 | 7                               | 6            | 5                             | 4                               | 3              | 2                             | 1                             |               |
|------------------|-----------------------------------|---------------------------------|--------------|-------------------------------|---------------------------------|----------------|-------------------------------|-------------------------------|---------------|
| D                | IMVP6_UGATE1                      | IMVP6_UGATE1 - @m38a_lib.M38A   | 75A8 75C5    | MEM_A_A<13>                   | MEM_A_A<13> - @m38a_lib.M38A    | 15A5 28B3      | MEM_B_DQ<1>                   | MEM_B_DQ<1> - @m38a_lib.M38A  | 15D4 29D6     |
|                  | IMVP6_UGATE2                      | IMVP6_UGATE2 - @m38a_lib.M38A   | 75A6 75C5    | MEM_A_BS<0>                   | MEM_A_BS<0> - @m38a_lib.M38A    | 15D5 28B6      | MEM_B_DQ<2>                   | MEM_B_DQ<2> - @m38a_lib.M38A  | 15D4 29D6     |
|                  | IMVP6_VDIFF                       | IMVP6_VDIFF - @m38a_lib.M38A    | 75A4 75B6    | MEM_A_BS<2..0>                | MEM_A_BS<2..0> - @m38a_lib.M38A | 30C6           | MEM_B_DQ<3>                   | MEM_B_DQ<3> - @m38a_lib.M38A  | 15D4 29D6     |
|                  | IMVP6_VDIFF_RC                    | IMVP6_VDIFF_RC - @m38a_lib.M38A | 75B7         | MEM_A_BS<1>                   | MEM_A_BS<1> - @m38a_lib.M38A    | 15D5 28B3      | MEM_B_DQ<4>                   | MEM_B_DQ<4> - @m38a_lib.M38A  | 15D4 29D3     |
|                  | IMVP6_VO                          | IMVP6_VO - @m38a_lib.M38A       | 75A4 75B4    | MEM_A_BS<2>                   | MEM_A_BS<2> - @m38a_lib.M38A    | 15D5 28C6      | MEM_B_DQ<5>                   | MEM_B_DQ<5> - @m38a_lib.M38A  | 15D4 29D3     |
|                  | IMVP6_VO_R                        | IMVP6_VO_R - @m38a_lib.M38A     | 75B4         | MEM_A_CAS_L                   | MEM_A_CAS_L - @m38a_lib.M38A    | 15D5 28B6 30B6 | MEM_B_DQ<6>                   | MEM_B_DQ<6> - @m38a_lib.M38A  | 5A7 15D4 29D3 |
|                  | IMVP6_VR_TT                       | IMVP6_VR_TT - @m38a_lib.M38A    | 75C7         | MEM_A_DM<0>                   | MEM_A_DM<0> - @m38a_lib.M38A    | 15D5 28D3      | MEM_B_DQ<7>                   | MEM_B_DQ<7> - @m38a_lib.M38A  | 15D4 29D3     |
|                  | IMVP6_VSEN                        | IMVP6_VSEN - @m38a_lib.M38A     | 75A4 75B5    | MEM_A_DM<1>                   | MEM_A_DM<1> - @m38a_lib.M38A    | 15D5 28D3      | MEM_B_DQ<8>                   | MEM_B_DQ<8> - @m38a_lib.M38A  | 5A7 15C4 29D6 |
|                  | IMVP6_VSYM                        | IMVP6_VSYM - @m38a_lib.M38A     | 75A4 75C5    | MEM_A_DM<2>                   | MEM_A_DM<2> - @m38a_lib.M38A    | 15D5 28C3      | MEM_B_DQ<9>                   | MEM_B_DQ<9> - @m38a_lib.M38A  | 15C4 29D6     |
|                  | IMVP6_VSYM_R1                     | IMVP6_VSYM_R1 - @m38a_lib.M38A  | 75A8 75C2    | MEM_A_DM<3>                   | MEM_A_DM<3> - @m38a_lib.M38A    | 15C5 28C6      | MEM_B_DQ<10>                  | MEM_B_DQ<10> - @m38a_lib.M38A | 15C4 29D6     |
| IMVP6_VSYM_R2    | IMVP6_VSYM_R2 - @m38a_lib.M38A    | 75A6 75B2                       | MEM_A_DM<4>  | MEM_A_DM<4> - @m38a_lib.M38A  | 15C5 28B3                       | MEM_B_DQ<11>   | MEM_B_DQ<11> - @m38a_lib.M38A | 15C4 29D6                     |               |
| IMVP6_VW         | IMVP6_VW - @m38a_lib.M38A         | 75A4 75B6                       | MEM_A_DM<5>  | MEM_A_DM<5> - @m38a_lib.M38A  | 15C5 28A6                       | MEM_B_DQ<12>   | MEM_B_DQ<12> - @m38a_lib.M38A | 15C4 29D3                     |               |
| IMVP_DPRS_LVPR   | IMVP_DPRS_LVPR - @m38a_lib.M38A   | 75C6                            | MEM_A_DM<6>  | MEM_A_DM<6> - @m38a_lib.M38A  | 15C5 28A3                       | MEM_B_DQ<13>   | MEM_B_DQ<13> - @m38a_lib.M38A | 15C4 29D3                     |               |
| IMVP_PGD_IN      | IMVP_PGD_IN - @m38a_lib.M38A      | 75C6 77D5                       | MEM_A_DM<7>  | MEM_A_DM<7> - @m38a_lib.M38A  | 15C5 28A6                       | MEM_B_DQ<14>   | MEM_B_DQ<14> - @m38a_lib.M38A | 15C4 29D3                     |               |
| IMVP_VID<0>      | IMVP_VID<0> - @m38a_lib.M38A      | 75C6                            | MEM_A_DQ<0>  | MEM_A_DQ<0> - @m38a_lib.M38A  | 15D7 28D6                       | MEM_B_DQ<15>   | MEM_B_DQ<15> - @m38a_lib.M38A | 15C4 29D3                     |               |
| IMVP_VID<1>      | IMVP_VID<1> - @m38a_lib.M38A      | 75C7                            | MEM_A_DQ<1>  | MEM_A_DQ<1> - @m38a_lib.M38A  | 15D7 28D6                       | MEM_B_DQ<16>   | MEM_B_DQ<16> - @m38a_lib.M38A | 15C4 29C6                     |               |
| IMVP_VID<2>      | IMVP_VID<2> - @m38a_lib.M38A      | 75C7                            | MEM_A_DQ<2>  | MEM_A_DQ<2> - @m38a_lib.M38A  | 15D7 28D6                       | MEM_B_DQ<17>   | MEM_B_DQ<17> - @m38a_lib.M38A | 15C4 29C6                     |               |
| IMVP_VID<3>      | IMVP_VID<3> - @m38a_lib.M38A      | 75C7                            | MEM_A_DQ<3>  | MEM_A_DQ<3> - @m38a_lib.M38A  | 15D7 28D3                       | MEM_B_DQ<18>   | MEM_B_DQ<18> - @m38a_lib.M38A | 15C4 29C6                     |               |
| IMVP_VID<4>      | IMVP_VID<4> - @m38a_lib.M38A      | 75C7                            | MEM_A_DQ<4>  | MEM_A_DQ<4> - @m38a_lib.M38A  | 15D7 28D3                       | MEM_B_DQ<19>   | MEM_B_DQ<19> - @m38a_lib.M38A | 15C4 29C6                     |               |
| IMVP_VID<5>      | IMVP_VID<5> - @m38a_lib.M38A      | 75C7                            | MEM_A_DQ<5>  | MEM_A_DQ<5> - @m38a_lib.M38A  | 15D7 28D3                       | MEM_B_DQ<20>   | MEM_B_DQ<20> - @m38a_lib.M38A | 15C4 29C3                     |               |
| IMVP_VID<6>      | IMVP_VID<6> - @m38a_lib.M38A      | 75C7                            | MEM_A_DQ<6>  | MEM_A_DQ<6> - @m38a_lib.M38A  | 15D7 28D3                       | MEM_B_DQ<21>   | MEM_B_DQ<21> - @m38a_lib.M38A | 15C4 29C3                     |               |
| IMVP_VR_ON       | IMVP_VR_ON - @m38a_lib.M38A       | 58D7 75C6                       | MEM_A_DQ<7>  | MEM_A_DQ<7> - @m38a_lib.M38A  | 5B7 15D7 28D3                   | MEM_B_DQ<22>   | MEM_B_DQ<22> - @m38a_lib.M38A | 15C4 29C3                     |               |
| INT_PIRQA_L      | INT_PIRQA_L - @m38a_lib.M38A      | 22A7 26D2                       | MEM_A_DQ<8>  | MEM_A_DQ<8> - @m38a_lib.M38A  | 15C7 28D6                       | MEM_B_DQ<23>   | MEM_B_DQ<23> - @m38a_lib.M38A | 5A7 15C4 29C3                 |               |
| INT_PIRQB_L      | INT_PIRQB_L - @m38a_lib.M38A      | 22A7 26D2                       | MEM_A_DQ<9>  | MEM_A_DQ<9> - @m38a_lib.M38A  | 15C7 28D6                       | MEM_B_DQ<24>   | MEM_B_DQ<24> - @m38a_lib.M38A | 15C4 29C6                     |               |
| INT_PIROC_L      | INT_PIROC_L - @m38a_lib.M38A      | 22A7 26D2                       | MEM_A_DQ<10> | MEM_A_DQ<10> - @m38a_lib.M38A | 15C7 28D6                       | MEM_B_DQ<25>   | MEM_B_DQ<25> - @m38a_lib.M38A | 5A7 15C4 29C6                 |               |
| INT_PIROQ_L      | INT_PIROQ_L - @m38a_lib.M38A      | 22A7 26D2 44B5                  | MEM_A_DQ<11> | MEM_A_DQ<11> - @m38a_lib.M38A | 15C7 28D6                       | MEM_B_DQ<26>   | MEM_B_DQ<26> - @m38a_lib.M38A | 15C4 29C6                     |               |
| INT_SERRIQ       | INT_SERRIQ - @m38a_lib.M38A       | 23C8 58C7 601C 67C6             | MEM_A_DQ<12> | MEM_A_DQ<12> - @m38a_lib.M38A | 15C7 28D3                       | MEM_B_DQ<27>   | MEM_B_DQ<27> - @m38a_lib.M38A | 15C4 29C6                     |               |
| ISSENSE_CLK_EN   | ISSENSE_CLK_EN - @m38a_lib.M38A   | 58B7 76A8                       | MEM_A_DQ<13> | MEM_A_DQ<13> - @m38a_lib.M38A | 15C7 28D3                       | MEM_B_DQ<28>   | MEM_B_DQ<28> - @m38a_lib.M38A | 15C4 29C3                     |               |
| ITPRESSET_L      | ITPRESSET_L - @m38a_lib.M38A      | 11B3                            | MEM_A_DQ<14> | MEM_A_DQ<14> - @m38a_lib.M38A | 5B7 15C7 28D3                   | MEM_B_DQ<29>   | MEM_B_DQ<29> - @m38a_lib.M38A | 15C4 29C3                     |               |
| ITP_TDO          | ITP_TDO - @m38a_lib.M38A          | 11B3                            | MEM_A_DQ<15> | MEM_A_DQ<15> - @m38a_lib.M38A | 15C7 28D3                       | MEM_B_DQ<30>   | MEM_B_DQ<30> - @m38a_lib.M38A | 15C4 29C3                     |               |
| ITS_ALIVE        | ITS_ALIVE - @m38a_lib.M38A        | 6A7                             | MEM_A_DQ<16> | MEM_A_DQ<16> - @m38a_lib.M38A | 5B7 15C7 28C6                   | MEM_B_DQ<31>   | MEM_B_DQ<31> - @m38a_lib.M38A | 15C4 29C3                     |               |
| ITS_PLUGGED_IN   | ITS_PLUGGED_IN - @m38a_lib.M38A   | 6A7                             | MEM_A_DQ<17> | MEM_A_DQ<17> - @m38a_lib.M38A | 15C7 28C6                       | MEM_B_DQ<32>   | MEM_B_DQ<32> - @m38a_lib.M38A | 15C4 29B6                     |               |
| KBC_MDE          | KBC_MDE - @m38a_lib.M38A          | 58C2                            | MEM_A_DQ<18> | MEM_A_DQ<18> - @m38a_lib.M38A | 15C7 28C6                       | MEM_B_DQ<33>   | MEM_B_DQ<33> - @m38a_lib.M38A | 15C4 29B6                     |               |
| LCD_PWM          | LCD_PWM - @m38a_lib.M38A          | 94B1 94C3                       | MEM_A_DQ<19> | MEM_A_DQ<19> - @m38a_lib.M38A | 15C7 28C6                       | MEM_B_DQ<34>   | MEM_B_DQ<34> - @m38a_lib.M38A | 15B4 29B6                     |               |
| LCD_PWM_R        | LCD_PWM_R - @m38a_lib.M38A        | 94B2                            | MEM_A_DQ<20> | MEM_A_DQ<20> - @m38a_lib.M38A | 15C7 28C3                       | MEM_B_DQ<35>   | MEM_B_DQ<35> - @m38a_lib.M38A | 15B4 29B6                     |               |
| LCD_PWREN_L      | LCD_PWREN_L - @m38a_lib.M38A      | 94C8                            | MEM_A_DQ<21> | MEM_A_DQ<21> - @m38a_lib.M38A | 15C7 28C3                       | MEM_B_DQ<36>   | MEM_B_DQ<36> - @m38a_lib.M38A | 15B4 29B3                     |               |
| LCD_PWREN_L_RC   | LCD_PWREN_L_RC - @m38a_lib.M38A   | 94C7                            | MEM_A_DQ<22> | MEM_A_DQ<22> - @m38a_lib.M38A | 15C7 28C3                       | MEM_B_DQ<37>   | MEM_B_DQ<37> - @m38a_lib.M38A | 15B4 29B6                     |               |
| LCD_SHOULDN_ON   | LCD_SHOULDN_ON - @m38a_lib.M38A   | 6A7                             | MEM_A_DQ<23> | MEM_A_DQ<23> - @m38a_lib.M38A | 15C7 28C3                       | MEM_B_DQ<38>   | MEM_B_DQ<38> - @m38a_lib.M38A | 5A7 15B4 29B3                 |               |
| LKD_PP1V05_S0_N  | LKD_PP1V05_S0_N - @m38a_lib.M38A  | 81A4                            | MEM_A_DQ<24> | MEM_A_DQ<24> - @m38a_lib.M38A | 15C7 28C6                       | MEM_B_DQ<39>   | MEM_B_DQ<39> - @m38a_lib.M38A | 15B4 29B3                     |               |
| LED_PP1V05_S0_P  | LED_PP1V05_S0_P - @m38a_lib.M38A  | 81A4                            | MEM_A_DQ<25> | MEM_A_DQ<25> - @m38a_lib.M38A | 5B7 15C7 28C6                   | MEM_B_DQ<40>   | MEM_B_DQ<40> - @m38a_lib.M38A | 15B4 29B6                     |               |
| LED_PP1V5_S0_N   | LED_PP1V5_S0_N - @m38a_lib.M38A   | 80A3                            | MEM_A_DQ<26> | MEM_A_DQ<26> - @m38a_lib.M38A | 15C7 28C6                       | MEM_B_DQ<41>   | MEM_B_DQ<41> - @m38a_lib.M38A | 15B4 29B6                     |               |
| LED_PP1V5_S0_P   | LED_PP1V5_S0_P - @m38a_lib.M38A   | 80A4                            | MEM_A_DQ<27> | MEM_A_DQ<27> - @m38a_lib.M38A | 15C7 28C6                       | MEM_B_DQ<42>   | MEM_B_DQ<42> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LED_PP1V8_S3_N   | LED_PP1V8_S3_N - @m38a_lib.M38A   | 79A4                            | MEM_A_DQ<28> | MEM_A_DQ<28> - @m38a_lib.M38A | 15C7 28C3                       | MEM_B_DQ<43>   | MEM_B_DQ<43> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LED_PP1V8_S3_P   | LED_PP1V8_S3_P - @m38a_lib.M38A   | 79A4                            | MEM_A_DQ<29> | MEM_A_DQ<29> - @m38a_lib.M38A | 15C7 28C3                       | MEM_B_DQ<44>   | MEM_B_DQ<44> - @m38a_lib.M38A | 5A7 15B4 29B3                 |               |
| LPC_AD<0>        | LPC_AD<0> - @m38a_lib.M38A        | 21D4 58D7 60C4 67C6             | MEM_A_DQ<30> | MEM_A_DQ<30> - @m38a_lib.M38A | 15C7 28C3                       | MEM_B_DQ<45>   | MEM_B_DQ<45> - @m38a_lib.M38A | 15B4 29B3                     |               |
| LPC_AD<1>        | LPC_AD<1> - @m38a_lib.M38A        | 21D4 58D7 60C4 67C6             | MEM_A_DQ<31> | MEM_A_DQ<31> - @m38a_lib.M38A | 15C7 28C3                       | MEM_B_DQ<46>   | MEM_B_DQ<46> - @m38a_lib.M38A | 15B4 29B3                     |               |
| LPC_AD<2>        | LPC_AD<2> - @m38a_lib.M38A        | 21D4 58C7 60C1 67C6             | MEM_A_DQ<32> | MEM_A_DQ<32> - @m38a_lib.M38A | 15C7 28B6                       | MEM_B_DQ<47>   | MEM_B_DQ<47> - @m38a_lib.M38A | 5A7 15B4 29A6                 |               |
| LPC_AD<3>        | LPC_AD<3> - @m38a_lib.M38A        | 21D4 58C7 60C1 67C6             | MEM_A_DQ<33> | MEM_A_DQ<33> - @m38a_lib.M38A | 15C7 28B6                       | MEM_B_DQ<48>   | MEM_B_DQ<48> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LPC_FRAME_L      | LPC_FRAME_L - @m38a_lib.M38A      | 21C5 58D7 60C4 67C6             | MEM_A_DQ<34> | MEM_A_DQ<34> - @m38a_lib.M38A | 15B7 28B6                       | MEM_B_DQ<49>   | MEM_B_DQ<49> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LVDS_A_CLK_N     | LVDS_A_CLK_N - @m38a_lib.M38A     | 13D5 19D2                       | MEM_A_DQ<35> | MEM_A_DQ<35> - @m38a_lib.M38A | 15B7 28B6                       | MEM_B_DQ<50>   | MEM_B_DQ<50> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LVDS_A_CLK_P     | LVDS_A_CLK_P - @m38a_lib.M38A     | 19D1                            | MEM_A_DQ<36> | MEM_A_DQ<36> - @m38a_lib.M38A | 15B7 28B3                       | MEM_B_DQ<51>   | MEM_B_DQ<51> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LVDS_A_DATA_N<0> | LVDS_A_DATA_N<0> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<37> | MEM_A_DQ<37> - @m38a_lib.M38A | 15B7 28B3                       | MEM_B_DQ<52>   | MEM_B_DQ<52> - @m38a_lib.M38A | 15B4 29A3                     |               |
| LVDS_A_DATA_N<1> | LVDS_A_DATA_N<1> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<38> | MEM_A_DQ<38> - @m38a_lib.M38A | 15B7 28B3                       | MEM_B_DQ<53>   | MEM_B_DQ<53> - @m38a_lib.M38A | 15B4 29A3                     |               |
| LVDS_A_DATA_N<2> | LVDS_A_DATA_N<2> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<39> | MEM_A_DQ<39> - @m38a_lib.M38A | 5B7 15B7 28B3                   | MEM_B_DQ<54>   | MEM_B_DQ<54> - @m38a_lib.M38A | 15B4 29A3                     |               |
| LVDS_A_DATA_N<3> | LVDS_A_DATA_N<3> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<40> | MEM_A_DQ<40> - @m38a_lib.M38A | 15B7 28B6                       | MEM_B_DQ<55>   | MEM_B_DQ<55> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LVDS_A_DATA_P<0> | LVDS_A_DATA_P<0> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<41> | MEM_A_DQ<41> - @m38a_lib.M38A | 15B7 28B6                       | MEM_B_DQ<56>   | MEM_B_DQ<56> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LVDS_A_DATA_P<1> | LVDS_A_DATA_P<1> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<42> | MEM_A_DQ<42> - @m38a_lib.M38A | 15B7 28A6                       | MEM_B_DQ<57>   | MEM_B_DQ<57> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LVDS_A_DATA_P<2> | LVDS_A_DATA_P<2> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<43> | MEM_A_DQ<43> - @m38a_lib.M38A | 15B7 28B3                       | MEM_B_DQ<58>   | MEM_B_DQ<58> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LVDS_A_DATA_P<3> | LVDS_A_DATA_P<3> - @m38a_lib.M38A | 13D5 19C2                       | MEM_A_DQ<44> | MEM_A_DQ<44> - @m38a_lib.M38A | 15B7 28B3                       | MEM_B_DQ<59>   | MEM_B_DQ<59> - @m38a_lib.M38A | 15B4 29A6                     |               |
| LVDS_BKLTCTL     | LVDS_BKLTCTL - @m38a_lib.M38A     | 13D5 19C2                       | MEM_A_DQ<45> | MEM_A_DQ<45> - @m38a_lib.M38A | 15B7 28B3                       | MEM_B_DQ<60>   | MEM_B_DQ<60> - @m38a_lib.M38A | 15A4 29A3                     |               |
| LVDS_BKLTEN      | LVDS_BKLTEN - @m38a_lib.M38A      | 13D5 19C2                       | MEM_A_DQ<46> | MEM_A_DQ<46> - @m38a_lib.M38A | 15B7 28A3                       | MEM_B_DQ<61>   | MEM_B_DQ<61> - @m38a_lib.M38A | 15A4 29A3                     |               |
| LVDS_BKLTEN      | LVDS_BKLTEN - @m38a_lib.M38A      | 13D5 19C2                       | MEM_A_DQ<47> | MEM_A_DQ<47> - @m38a_lib.M38A | 5B7 15B7 28A3                   | MEM_B_DQ<62>   | MEM_B_DQ<62> - @m38a_lib.M38A | 5A7 15A4 29A3                 |               |
| LVDS_B_CLK_N     | LVDS_B_CLK_N - @m38a_lib.M38A     | 13D5 19D2                       | MEM_A_DQ<48> | MEM_A_DQ<48> - @m38a_lib.M38A | 15B7 28A6                       | MEM_B_DQ<63>   | MEM_B_DQ<63> - @m38a_lib.M38A | 15A4 29A3                     |               |
| LVDS_B_CLK_P     | LVDS_B_CLK_P - @m38a_lib.M38A     | 13D5 19D2                       | MEM_A_DQ<49> | MEM_A_DQ<49> - @m38a_lib.M38A | 15B7 28A6                       | MEM_B_DQ<64>   | MEM_B_DQ<64> - @m38a_lib.M38A | 5A7 15C2 29D6                 |               |
| LVDS_B_DATA_N<0> | LVDS_B_DATA_N<0> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<50> | MEM_A_DQ<50> - @m38a_lib.M38A | 15B7 28A6                       | MEM_B_DQ<65>   | MEM_B_DQ<65> - @m38a_lib.M38A | 5A7 15C2 29D6                 |               |
| LVDS_B_DATA_N<1> | LVDS_B_DATA_N<1> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<51> | MEM_A_DQ<51> - @m38a_lib.M38A | 15B7 28A6                       | MEM_B_DQ<66>   | MEM_B_DQ<66> - @m38a_lib.M38A | 5A7 15C2 29D6                 |               |
| LVDS_B_DATA_N<2> | LVDS_B_DATA_N<2> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<52> | MEM_A_DQ<52> - @m38a_lib.M38A | 15B7 28A3                       | MEM_B_DQ<67>   | MEM_B_DQ<67> - @m38a_lib.M38A | 5A7 15C2 29B6                 |               |
| LVDS_B_DATA_N<3> | LVDS_B_DATA_N<3> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<53> | MEM_A_DQ<53> - @m38a_lib.M38A | 15B7 28A3                       | MEM_B_DQ<68>   | MEM_B_DQ<68> - @m38a_lib.M38A | 5A7 15C2 29B6                 |               |
| LVDS_B_DATA_P<0> | LVDS_B_DATA_P<0> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<54> | MEM_A_DQ<54> - @m38a_lib.M38A | 5B7 15B7 28A3                   | MEM_B_DQ<69>   | MEM_B_DQ<69> - @m38a_lib.M38A | 5A7 15C2 29B6                 |               |
| LVDS_B_DATA_P<1> | LVDS_B_DATA_P<1> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<55> | MEM_A_DQ<55> - @m38a_lib.M38A | 15B7 28A3                       | MEM_B_DQ<70>   | MEM_B_DQ<70> - @m38a_lib.M38A | 5A7 15C2 29A6                 |               |
| LVDS_B_DATA_P<2> | LVDS_B_DATA_P<2> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<56> | MEM_A_DQ<56> - @m38a_lib.M38A | 15B7 28A6                       | MEM_B_DQ<71>   | MEM_B_DQ<71> - @m38a_lib.M38A | 5A7 15C2 29A3                 |               |
| LVDS_B_DATA_P<3> | LVDS_B_DATA_P<3> - @m38a_lib.M38A | 13D5 19D2                       | MEM_A_DQ<57> | MEM_A_DQ<57> - @m38a_lib.M38  |                                 |                |                               |                               |               |











|   | 8                        | 7                        | 6                        | 5                        | 4                        | 3                        | 2                        | 1                        |                          |                          |                          |                          |                          |                           |                           |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                      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 |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          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|                                  |                                  |                                  |                                  |                                  |                              |                                  |                                |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |                                  |                                  |                             |                                  |                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                    |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|------------------------------------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|-----------------------------|---------------------------|------------------------------------|---------------------------|--------------------------|--------------------------|------------------------------------|---------------------------|------------------------------------|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|---------------------------|----------------------------|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------------------|----------------------------|------------------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------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| D | C7528 CAP_402 m38a[75B5] | C7529 CAP_402 m38a[75B5] | C7530 CAP_402 m38a[75D6] | C7531 CAP_402 m38a[75B5] | C7532 CAP_402 m38a[75B6] | C7533 CAP_402 m38a[75B6] | C7534 CAP_402 m38a[75B5] | C7535 CAP_603 m38a[75D5] | C7550 CAP_603 m38a[75D1] | C7551 CAP_603 m38a[75D1] | C7590 CAP_402 m38a[75C3] | C7592 CAP_402 m38a[75B3] | C7596 CAP_402 m38a[75D6] | C7597 CAP_1210 m38a[75D1] | C7598 CAP_1210 m38a[75D1] | C7599 CAP_402 m38a[76D6] | C7612 CAP_402 m38a[76B2] | C7633 CAP_402 m38a[76C7] | C7700 CAP_603 m38a[77D2] | C7703 CAP_402 m38a[77C2] | C7704 CAP_402 m38a[77C2] | C7706 CAP_402 m38a[77D2] | C7709 CAP_805 m38a[77D1] | C7710 CAP_402 m38a[77D5] | C7711 CAP_402 m38a[77D5] | C7712 CAP_402 m38a[77D4] | C7750 CAP_402 m38a[77A4] | C7751 CAP_805 m38a[77B5] | C7752 CAP_805 m38a[77B5] | C7753 CAP_402 m38a[77B6] | C7754 CAP_402 m38a[77B6] | C7755 CAP_805 m38a[77B4] | C7756 CAP_805 m38a[77B3] | C7757 CAP_402 m38a[77A7] | C7797 CAP_402 m38a[77B4] | C7798 CAP_603 m38a[77B7] | C7799 CAP_402 m38a[77A3] | C7800 CAP_1210 m38a[78C3] | C7801 CAP_P_SM-LF m38a[78C4] | C7802 CAP_603 m38a[78C6] | C7803 CAP_603 m38a[78B6] | C7804 CAP_402 m38a[78C6] | C7805 CAP_603 m38a[78C4] | C7806 CAP_805-1 m38a[78B2] | C7807 CAP_P_CASE-D2E-LF m38a[78B3] | C7809 CAP_402 m38a[78B3] | C7810 CAP_402 m38a[78B4] | C7811 CAP_402 m38a[78B5] | C7813 CAP_1206 m38a[78B4] | C7814 CAP_402 m38a[78B5] | C7817 CAP_P_CASE-D2E-LF m38a[78B2] | C7900 CAP_402 m38a[79D6] | C7901 CAP_603 m38a[79D5] | C7902 CAP_402 m38a[79C5] | C7903 CAP_603 m38a[79C7] | C7906 CAP_402 m38a[79C5] | C7907 CAP_402 m38a[79C3] | C7908 CAP_402 m38a[79C5] | C7909 CAP_1206 m38a[79C4] | C7910 CAP_P_SM-3 m38a[79D4] | C7911 CAP_1210 m38a[79D3] | C7912 CAP_P_CASE-D2E-LF m38a[79C3] | C7913 CAP_1206 m38a[79C2] | C7980 CAP_402 m38a[79B3] | C7992 CAP_603 m38a[79D6] | C7998 CAP_P_CASE-D2E-LF m38a[79C3] | C8000 CAP_1210 m38a[80D3] | C8001 CAP_P_CASE-D2E-LF m38a[80C3] | C8002 CAP_603 m38a[80D6] | C8003 CAP_402 m38a[80C3] | C8004 CAP_1206 m38a[80C4] | C8005 CAP_402 m38a[80C4] | C8006 CAP_402 m38a[80D6] | C8009 CAP_603 m38a[80C6] | C8010 CAP_603 m38a[80C4] | C8011 CAP_402 m38a[80C5] | C8012 CAP_402 m38a[80C5] | C8014 CAP_P_TH-MC2 m38a[80D4] | C8015 CAP_1210 m38a[80D3] | C8016 CAP_805-1 m38a[80C2] | C8099 CAP_P_CASE-D2E-LF m38a[80C2] | C8100 CAP_402 m38a[81D6] | C8101 CAP_603 m38a[81C5] | C8102 CAP_402 m38a[81C5] | C8103 CAP_603 m38a[81C7] | C8106 CAP_402 m38a[81C5] | C8107 CAP_402 m38a[81C3] | C8108 CAP_402 m38a[81C5] | C8109 CAP_1206 m38a[81C4] | C8110 CAP_1210 m38a[81D4] | C8111 CAP_1210 m38a[81D3] | C8112 CAP_1210 m38a[81D3] | C8114 CAP_P_CASE-D2E-LF m38a[81C3] | C8115 CAP_805-1 m38a[81C2] | C8190 CAP_P_CASE-D2E-LF m38a[81C3] | C8192 CAP_603 m38a[81D6] | C8198 CAP_1210 m38a[81D3] | C8199 CAP_402 m38a[81A5] | C8398 CAP_603 m38a[83B4] | C8399 CAP_603 m38a[83C4] | C8400 CAP_805 m38a[84C7] | C8401 CAP_402 m38a[84C7] | C8402 CAP_402 m38a[84C7] | C8405 CAP_805 m38a[84B7] | C8406 CAP_402 m38a[84B7] | C8407 CAP_402 m38a[84B7] | C8410 CAP_805 m38a[84B6] | C8411 CAP_402 m38a[84B7] | C8412 CAP_402 m38a[84B7] | C8413 CAP_402 m38a[84B7] | C8420 CAP_402 m38a[84D5] | C8421 CAP_402 m38a[84D5] | C8422 CAP_402 m38a[84D5] | C8423 CAP_402 m38a[84D5] | C8424 CAP_402 m38a[84D5] | C8425 CAP_402 m38a[84D5] | C8426 CAP_402 m38a[84D5] | C8427 CAP_402 m38a[84D5] | C8428 CAP_402 m38a[84D5] | C8429 CAP_402 m38a[84C5] | C8430 CAP_402 m38a[84C5] | C8431 CAP_402 m38a[84C5] | C8432 CAP_402 m38a[84C5] | C8433 CAP_402 m38a[84C5] | C8434 CAP_402 m38a[84C5] | C8435 CAP_402 m38a[84C5] | C8436 CAP_402 m38a[84C5] | C8437 CAP_402 m38a[84C5] | C8438 CAP_402 m38a[84C5] | C8439 CAP_402 m38a[84C5] | C8440 CAP_402 m38a[84B5] | C8441 CAP_402 m38a[84B5] | C8442 CAP_402 m38a[84B5] | C8443 CAP_402 m38a[84B5] | C8444 CAP_402 m38a[84B5] | C8445 CAP_402 m38a[84B5] | C8446 CAP_402 m38a[84B5] | C8447 CAP_402 m38a[84B5] | C8448 CAP_402 m38a[84B5] | C8449 CAP_402 m38a[84B5] | C8450 CAP_402 m38a[84B5] | C8451 CAP_402 m38a[84B5] | C8455 CAP_402 m38a[84D2] | C8456 CAP_402 m38a[84D2] | C8457 CAP_402 m38a[84D2] | C8458 CAP_402 m38a[84D2] | C8459 CAP_402 m38a[84D2] | C8460 CAP_402 m38a[84D2] | C8461 CAP_402 m38a[84D2] | C8462 CAP_402 m38a[84D2] | C8463 CAP_402 m38a[84D2] | C8464 CAP_402 m38a[84C2] | C8465 CAP_402 m38a[84C2] | C8466 CAP_402 m38a[84C2] | C8467 CAP_402 m38a[84C2] | C8468 CAP_402 m38a[84C2] | C8469 CAP_402 m38a[84C2] | C8470 CAP_402 m38a[84C2] | C8471 CAP_402 m38a[84C2] | C8472 CAP_402 m38a[84C2] | C8473 CAP_402 m38a[84C2] | C8474 CAP_402 m38a[84C2] | C8475 CAP_402 m38a[84B2] | C8476 CAP_402 m38a[84B2] | C8477 CAP_402 m38a[84B2] | C8478 CAP_402 m38a[84B2] | C8479 CAP_402 m38a[84B2] | C8480 CAP_402 m38a[84B2] | C8481 CAP_402 m38a[84B2] | C8482 CAP_402 m38a[84B2] | C8483 CAP_402 m38a[84B2] | C8484 CAP_402 m38a[84B2] | C8485 CAP_402 m38a[84B2] | C8486 CAP_402 m38a[84B2] | C8500 CAP_603 m38a[85D6] | C8501 CAP_603 m38a[85D6] | C8502 CAP_603 m38a[85D6] | C8506 CAP_402 m38a[85C8] | C8507 CAP_402 m38a[85C7] | C8508 CAP_402 m38a[85C7] | C8509 CAP_402 m38a[85C5] | C8521 CAP_402 m38a[85C4] | C8522 CAP_402 m38a[85C5] | C8530 CAP_1210 m38a[85D4] | C8531 CAP_1210 m38a[85D4] | C8532 CAP_1210 m38a[85D4] | C8540 CAP_805 m38a[85C2] | C8541 CAP_805 m38a[85C2] | C8542 CAP_P_CASE-D2E-LF m38a[85C2] | C8543 CAP_P_CASE-D2E-LF m38a[85C2] | C8590 CAP_402 m38a[85D3] | C8592 CAP_402 m38a[85C2] | C8595 CAP_402 m38a[85D1] | C8598 CAP_402 m38a[85D2] | C8599 CAP_1206 m38a[85C4] | C8600 CAP_805 m38a[86C7] | C8601 CAP_805 m38a[86C7] | C8604 CAP_402 m38a[86C7] | C8605 CAP_402 m38a[86C6] | C8606 CAP_402 m38a[86C6] | C8607 CAP_402 m38a[86C6] | C8608 CAP_402 m38a[86C5] | C8609 CAP_402 m38a[86C5] | C8610 CAP_402 m38a[86C5] | C8611 CAP_402 m38a[86C7] | C8612 CAP_402 m38a[86C6] | C8613 CAP_402 m38a[86C6] | C8614 CAP_402 m38a[86C6] | C8615 CAP_402 m38a[86C5] | C8616 CAP_402 m38a[86C5] | C8630 CAP_805 m38a[86C6] | C8631 CAP_402 m38a[86C6] | C8632 CAP_402 m38a[86C5] | C8633 CAP_402 m38a[86C5] | C8634 CAP_402 m38a[86C5] | C8650 CAP_805 m38a[86B7] | C8651 CAP_805 m38a[86B7] | C8652 CAP_805 m38a[86B7] | C8653 CAP_805 m38a[86B6] | C8655 CAP_402 m38a[86B6] | C8656 CAP_402 m38a[86B6] | C8657 CAP_402 m38a[86B6] | C8658 CAP_402 m38a[86B5] | C8659 CAP_402 m38a[86B5] | C8660 CAP_402 m38a[86B5] | C8661 CAP_402 m38a[86B6] | C8662 CAP_402 m38a[86B6] | C8663 CAP_402 m38a[86B6] | C8664 CAP_402 m38a[86B5] | C8665 CAP_402 m38a[86B5] | C8666 CAP_402 m38a[86B5] | C8667 CAP_402 m38a[86B6] | C8668 CAP_402 m38a[86B6] | C8669 CAP_402 m38a[86B6] | C8670 CAP_402 m38a[86B5] | C8671 CAP_402 m38a[86B5] | C8672 CAP_402 m38a[86B5] | C8673 CAP_402 m38a[86B6] | C8674 CAP_402 m38a[86B6] | C8675 CAP_402 m38a[86B6] | C8676 CAP_402 m38a[86B5] | C8677 CAP_402 m38a[86B5] | C8678 CAP_402 m38a[86B5] | C8679 CAP_402 m38a[86A6] | C8680 CAP_402 m38a[86A6] | C8681 CAP_402 m38a[86A6] | C8682 CAP_402 m38a[86A5] | C8683 CAP_402 m38a[86A5] | C8690 CAP_805 m38a[86D5] | C8691 CAP_402 m38a[86D5] | C8692 CAP_402 m38a[86D5] | C8711 CAP_402 m38a[87B7] | C8713 CAP_402 m38a[87B7] | C8715 CAP_402 m38a[87A7] | C8716 CAP_402 m38a[87A6] | C8721 CAP_402 m38a[87B4] | C8722 CAP_402 m38a[87B4] | C8725 CAP_402 m38a[87A4] | C8726 CAP_402 m38a[87A3] | C8900 CAP_805 m38a[89D7] | C8901 CAP_402 m38a[89D7] | C8902 CAP_402 m38a[89D7] | C8903 CAP_402 m38a[89D7] | C8904 CAP_402 m38a[89D6] | C8910 CAP_402 m38a[89D7] | C8915 CAP_402 m38a[89C8] | C8920 CAP_805 m38a[89C8] | C8921 CAP_402 m38a[89C8] | C8922 CAP_402 m38a[89C7] | C8923 CAP_402 m38a[89C7] | C8924 CAP_402 m38a[89C7] | C8925 CAP_402 m38a[89C7] | C8926 CAP_402 m38a[89C6] | C8931 CAP_402 m38a[89C7] | C8933 CAP_402 m38a[89C6] | C8950 CAP_805 m38a[89D4] | C8951 CAP_402 m38a[89D4] | C8952 CAP_402 m38a[89D4] | C8953 CAP_402 m38a[89D3] | C8954 CAP_402 m38a[89D3] | C8960 CAP_402 m38a[89D3] | C8965 CAP_402 m38a[89D3] | C8970 CAP_805 m38a[89C5] | C8971 CAP_402 m38a[89C4] | C8972 CAP_402 m38a[89C4] | C8973 CAP_402 m38a[89C4] | C8974 CAP_402 m38a[89C4] | C8975 CAP_402 m38a[89C3] | C8976 CAP_402 m38a[89C3] | C8981 CAP_402 m38a[89C3] | C8983 CAP_402 m38a[89C3] | C9000 CAP_805 m38a[90D7] | C9001 CAP_402 m38a[90D7] | C9002 CAP_402 m38a[90D7] | C9003 CAP_402 m38a[90D7] | C9004 CAP_402 m38a[90D6] | C9010 CAP_402 m38a[90D7] | C9015 CAP_402 m38a[90D6] | C9020 CAP_805 m38a[90C8] | C9021 CAP_402 m38a[90C8] | C9022 CAP_402 m38a[90C7] | C9023 CAP_402 m38a[90C7] | C9024 CAP_402 m38a[90C7] | C9025 CAP_402 m38a[90C7] | C9026 CAP_402 m38a[90C6] | C9031 CAP_402 m38a[90C7] | C9033 CAP_402 m38a[90C6] | C9050 CAP_805 m38a[90D4] | C9051 CAP_402 m38a[90D4] | C9052 CAP_402 m38a[90D4] | C9053 CAP_402 m38a[90D3] | C9054 CAP_402 m38a[90D3] | C9060 CAP_402 m38a[90D3] | C9065 CAP_805 m38a[90C3] | C9070 CAP_402 m38a[90C4] | C9071 CAP_402 m38a[90C4] | C9072 CAP_402 m38a[90C4] | C9073 CAP_402 m38a[90C4] | C9074 CAP_402 m38a[90C4] | C9075 CAP_402 m38a[90C3] | C9076 CAP_402 m38a[90C3] | C9081 CAP_402 m38a[90C3] | C9083 CAP_402 m38a[90C3] | C9100 CAP_805 m38a[91C5] | C9101 CAP_402 m38a[91C5] | C9102 CAP_402 m38a[91C5] | C9103 CAP_402 m38a[91C5] | C9110 CAP_805 m38a[91C5] | C9111 CAP_402 m38a[91C5] | C9112 CAP_402 m38a[91C5] | C9115 CAP_805 m38a[91B5] | C9116 CAP_402 m38a[91B5] | C9117 CAP_402 m38a[91B5] | C9120 CAP_805 m38a[91B5] | C9121 CAP_402 m38a[91B5] | C9122 CAP_402 m38a[91B5] | C9125 CAP_805 m38a[91B5] | C9126 CAP_402 m38a[91B5] | C9127 CAP_402 m38a[91B5] | C9130 CAP_805 m38a[91A6] | C9131 CAP_402 m38a[91A6] | C9132 CAP_402 m38a[91A5] | C9135 CAP_805 m38a[91A6] | C9136 CAP_402 m38a[91A6] | C9137 CAP_402 m38a[91A5] | C9140 CAP_805 m38a[91A6] | C9141 CAP_402 m38a[91A6] | C9142 CAP_402 m38a[91A5] | C9191 CAP_402 m38a[91D2] | C9300 CAP_805 m38a[93C6] | C9301 CAP_402 m38a[93C6] | C9302 CAP_402 m38a[93C5] | C9303 CAP_805 m38a[93C6] | C9306 CAP_402 m38a[93C6] | C9307 CAP_402 m38a[93C5] | C9310 CAP_805 m38a[93C6] | C9311 CAP_402 m38a[93C6] | C9312 CAP_402 m38a[93C5] | C9315 CAP_805 m38a[93B8] | C9316 CAP_402 m38a[93B8] | C9317 CAP_402 m38a[93B7] | C9320 CAP_805 m38a[93B6] | C9321 CAP_402 m38a[93B6] | C9322 CAP_402 m38a[93B5] | C9325 CAP_805 m38a[93B8] | C9326 CAP_402 m38a[93B8] | C9327 CAP_402 m38a[93B7] | C9330 CAP_805 m38a[93B6] | C9331 CAP_402 m38a[93B6] | C9332 CAP_402 m38a[93B5] | C9340 CAP_805 m38a[93A6] | C9341 CAP_402 m38a[93A6] | C9342 CAP_402 m38a[93A5] | C9345 CAP_805 m38a[93A6] | C9346 CAP_402 m38a[93A5] | C9347 CAP_402 m38a[93A5] | C9400 CAP_603-1 m38a[94C7] | C9401 CAP_402 m38a[94C6] | C9410 CAP_402 m38a[94C6] | C9420 CAP_1210 m38a[94C5] | C9450 CAP_805 m38a[94C2] | C9470 CAP_402 m38a[94B2] | C9700 CAP_402 m38a[97C8] | C9710 CAP_603 m38a[97C3] | C9711 CAP_402 m38a[97D3] | C9713 CAP_402 m38a[97C2] | C9714 CAP_402 m38a[97C2] | C9740 CAP_402 m38a[97A7] | C9741 CAP_402 m38a[97A6] | C9742 CAP_402 m38a[97A6] | C9750 CAP_402 m38a[97B4] | C9751 CAP_402 m38a[97A4] | D2500 DIODE_SCHOT_SOT23 m38a[25C8] | D2501 DIODE_SCHOT_SOT23 m38a[25D8] | D2600 DIODE_SCHOT_SOT23 m38a[26D8] | D2601 DIODE_SCHOT_SOT23 m38a[26C8] | D4600 DIODE_SMC m38a[46D5] | D4690 ZENER_SOT23 m38a[46A6] | D4700 DIODE_SCHOT_3P_A_SC-75 m38a[47C4] | D4701 DIODE_SCHOT_3P_A_SC-75 m38a[47B4] | D4702 DIODE_SCHOT_3P_A_SC-75 m38a[47A4] | D6500 DIODE_SOT23 m38a[65C4] | D6501 DIODE_SOT23 m38a[65B4] | D6502 DIODE_SCHOT_SMB m38a[65C4] | D6503 DIODE_SCHOT_SMB m38a[65B4] | D6600 DIODE_SCHOT_SMB m38a[66C3] | D7500 DIODE_SCHOT_SMB m38a[75C3] | D7501 DIODE_SCHOT_SMB m38a[75B2] | D7599 DIODE_SOT23 m38a[76D6] | D8520 DIODE_SCHOT_SMB m38a[85C3] | D9700 ZENER_CASE425 m38a[97C1] | DP4610 DIODE_DUAL_6P_SOT-36 m38a[46D4 46D3] | DP4611 DIODE_DUAL_6P_SOT-36 m38a[46C4 46C3] | DP4620 DIODE_DUAL_6P_SOT-36 m38a[46B4 46B3] | DP4621 DIODE_DUAL_6P_SOT-36 m38a[46A4 46A3] | DZ4700 DIODE_SCHOT_POWERDI-123 m38a[47C8] | DZ6800 DIODE_SCHOT_POWERDI-123 m38a[68A4] | DZ7300 SUPPR_TRANSIENT1_402 m38a[73C6] | DZ7301 SUPPR_TRANSIENT1_402 m38a[73C5] | DZ7302 SUPPR_TRANSIENT1_402 m38a[73C6] | DZ7311 SUPPR_TRANSIENT1_402 m38a[73A7] | DZ7313 SUPPR_TRANSIENT1_402 m38a[73A6] | DZ7314 SUPPR_TRANSIENT1_402 m38a[73A6] | DZ7315 SUPPR_TRANSIENT1_402 m38a[73A6] | DZ7323 SUPPR_TRANSIENT1_402 m38a[73A5] | DZ7324 SUPPR_TRANSIENT1_402 m38a[73C5] | DZ7325 SUPPR_TRANSIENT1_402 m38a[73C3] | DZ7326 SUPPR_TRANSIENT1_402 m38a[73C3] | DZ7380 SUPPR_TRANSIENT1_402 m38a[73A7] | F4602 FUSE_MINISMD-LF m38a[46D3] | F4701 FUSE_MINISMD-LF m38a[47D3] | F9710 FUSE_SM-LF m38a[97D5] | FL4610 FILTER_4P_2012 m38a[46C3] | FL4620 FILTER_4P_2012 m38a[46B3] | FL9740 FILTER_LC_SM-220MHZ-LF m38a[97B7] | FL9741 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9742 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9743 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9744 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9745 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9746 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9747 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9748 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9749 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9750 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9751 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9752 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9753 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9754 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9755 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9756 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9757 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9758 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9759 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9760 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9761 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9762 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9763 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9764 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9765 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9766 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9767 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9768 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9769 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9770 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9771 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9772 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9773 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9774 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9775 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9776 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9777 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9778 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9779 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9780 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9781 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9782 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9783 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9784 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9785 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9786 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9787 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9788 FILTER_LC_SM-220MHZ-LF m38a[97A7] | FL9789 FILTER_LC_SM-220MHZ-LF m38a |

|       | 8                         | 7                               | 6                       | 5                            | 4                        | 3                       | 2                               | 1                               |
|-------|---------------------------|---------------------------------|-------------------------|------------------------------|--------------------------|-------------------------|---------------------------------|---------------------------------|
| D     | J7301                     | CON_M7RT_S2MT_SM_M-R m38a[73D1] | L9702                   | FILTER_4P_2012H m38a[97C7]   | PP673                    | PROBEPOINT_SM m38a[5C6] | PP9016                          | PROBEPOINT_SM m38a[5A4]         |
|       | J7303                     | CON_F9ANG_S4MT_TH1_F m38a[73B3] | L9703                   | FILTER_4P_SM-LF m38a[97C7]   | PP674                    | PROBEPOINT_SM m38a[5C6] | PP9020                          | PROBEPOINT_SM m38a[5A4]         |
|       | J9401                     | CON_M4ST_S_SM_M-ST-S m38a[94C2] | L9710                   | IND_SM-1 m38a[97D5]          | PP675                    | PROBEPOINT_SM m38a[5B6] | PP9021                          | PROBEPOINT_SM m38a[5A4]         |
|       | J9402                     | CON_F30ST_D_SM_F-ST- m38a[94B6] | LED601                  | LED_2_0X1_25MM-SM m38a[6A8]  | PP676                    | PROBEPOINT_SM m38a[5B6] | PP9022                          | PROBEPOINT_SM m38a[5A4]         |
|       | J9710                     | CON_DV1_F32ST_Q2MT_S m38a[97D5] | LED602                  | LED_2_0X1_25MM-SM m38a[6A7]  | PP677                    | PROBEPOINT_SM m38a[5B6] | PP9023                          | PROBEPOINT_SM m38a[5A4]         |
|       | JC900                     | CON_M7ST_SATA_SM_M-S m38a[38B8] | LED603                  | LED_2_0X1_25MM-SM m38a[6A6]  | PP678                    | PROBEPOINT_SM m38a[5B6] | PP9024                          | PROBEPOINT_SM m38a[5A4]         |
|       | JC901                     | CON_F50ST_D2MT_SM_F- m38a[38D2] | LED3800                 | LED_2_0X1_25MM-SM m38a[38B3] | PP679                    | PROBEPOINT_SM m38a[5B6] | PP9025                          | PROBEPOINT_SM m38a[5A4]         |
|       | JD600                     | CON_RJ45_10ANG_S3MT_ m38a[43C6] | LED5950                 | LED_3X2MM-SM m38a[60A6]      | PP680                    | PROBEPOINT_SM m38a[5B6] | PP9026                          | PROBEPOINT_SM m38a[5A4]         |
|       | JE000                     | CON_F6ST_S4MT_TH1_F- m38a[46B2] | LED6000                 | LED_M33X15_ST-SM m38a[60A6]  | PP681                    | PROBEPOINT_SM m38a[5B6] | PP9027                          | PROBEPOINT_SM m38a[5A4]         |
|       | JE310                     | CON_F4ST_USB_S3MT_TH m38a[47D4] | LED7900                 | LED_2_0X1_25MM-SM m38a[79A4] | PP682                    | PROBEPOINT_SM m38a[5B6] | PP9028                          | PROBEPOINT_SM m38a[5A4]         |
|       | JE320                     | CON_F4ST_USB_S3MT_TH m38a[47B4] | LED8000                 | LED_2_0X1_25MM-SM m38a[80A4] | PP683                    | PROBEPOINT_SM m38a[5B6] | PP9029                          | PROBEPOINT_SM m38a[5A4]         |
|       | JE330                     | CON_F4ST_USB_S3MT_TH m38a[47A4] | LED8100                 | LED_2_0X1_25MM-SM m38a[81A4] | PP684                    | PROBEPOINT_SM m38a[5B6] | PP9030                          | PROBEPOINT_SM m38a[5A4]         |
|       | JE350                     | CON_M14ST_S2MT_SM_M- m38a[47C1] | PP5E1                   | PROBEPOINT_SM m38a[5B8]      | PP685                    | PROBEPOINT_SM m38a[5B6] | PP9031                          | PROBEPOINT_SM m38a[5A4]         |
|       | L1934                     | IND_0603 m38a[19C7]             | PP5E2                   | PROBEPOINT_SM m38a[5B8]      | PP686                    | PROBEPOINT_SM m38a[5B6] | PP9032                          | PROBEPOINT_SM m38a[5A4]         |
|       | L1936                     | IND_0603 m38a[19C7]             | PP6A0                   | PROBEPOINT_SM m38a[5A6]      | PP687                    | PROBEPOINT_SM m38a[5B6] | PP9033                          | PROBEPOINT_SM m38a[5A4]         |
|       | L1970                     | IND_1210 m38a[19A5]             | PP6A1                   | PROBEPOINT_SM m38a[5A6]      | PP688                    | PROBEPOINT_SM m38a[5B6] | PP9034                          | PROBEPOINT_SM m38a[5A4]         |
|       | L1975                     | IND_0805 m38a[19A5]             | PP6A2                   | PROBEPOINT_SM m38a[5A6]      | PP689                    | PROBEPOINT_SM m38a[5B6] | PP9035                          | PROBEPOINT_SM m38a[5A4]         |
|       | L2500                     | IND_SM-3 m38a[25B8]             | PP6A3                   | PROBEPOINT_SM m38a[5A6]      | PP690                    | PROBEPOINT_SM m38a[5B6] | Q4201                           | TRA_PSS55402_SOT23 m38a[42C6]   |
|       | L2507                     | IND_1206 m38a[25A7]             | PP6A4                   | PROBEPOINT_SM m38a[5A6]      | PP691                    | PROBEPOINT_SM m38a[5B6] | Q5901                           | TRA_2N7002DM_SOT-363 m38a[59C7] |
|       | L3301                     | IND_0402-LF m38a[33D7]          | PP6A5                   | PROBEPOINT_SM m38a[5A6]      | PP692                    | PROBEPOINT_SM m38a[5B6] | Q5910                           | TRA_SINGLE_MOSFET_PC m38a[59A4] |
|       | L3302                     | IND_0402-LF m38a[33D3]          | PP6A6                   | PROBEPOINT_SM m38a[5A6]      | PP693                    | PROBEPOINT_SM m38a[5B6] | Q5911                           | TRA_2N7002_SOT23-LF m38a[59A4]  |
|       | L4200                     | IND_0603 m38a[42D1]             | PP6A7                   | PROBEPOINT_SM m38a[5A6]      | PP694                    | PROBEPOINT_SM m38a[5B6] | Q5950                           | TRA_2N7002_SOT23-LF m38a[60A7]  |
|       | L4201                     | IND_0805 m38a[42B7]             | PP6A8                   | PROBEPOINT_SM m38a[5A6]      | PP695                    | PROBEPOINT_SM m38a[5B6] | Q5951                           | TRA_2N7002_SOT23-LF m38a[60B7]  |
|       | L4300                     | IND_SM m38a[43D7]               | PP6A9                   | PROBEPOINT_SM m38a[5A6]      | PP696                    | PROBEPOINT_SM m38a[5B6] | Q5952                           | TRA_2N3906_SOT23-LF m38a[60B6]  |
|       | L4409                     | IND_0402 m38a[44D6]             | PP6B0                   | PROBEPOINT_SM m38a[5A6]      | PP697                    | PROBEPOINT_SM m38a[5B6] | Q6500                           | TRA_NTHSS443T1_1206A m38a[65D4] |
| L4610 | IND_1206-LF m38a[46D2]    | PP6B1                           | PROBEPOINT_SM m38a[5A6] | PP698                        | PROBEPOINT_SM m38a[5B6]  | Q6502                   | TRA_2N7002_SOT23-LF m38a[65D6]  |                                 |
| L4620 | IND_1206-LF m38a[46B2]    | PP6B2                           | PROBEPOINT_SM m38a[5A6] | PP699                        | PROBEPOINT_SM m38a[5B6]  | Q6503                   | TRA_NTHSS443T1_1206A m38a[65B4] |                                 |
| L4690 | IND_SM-1 m38a[46A6]       | PP6B3                           | PROBEPOINT_SM m38a[5A6] | PP700                        | TP_SM-TF50-TOP m38a[5D3] | Q6505                   | TRA_2N7002_SOT23-LF m38a[65B6]  |                                 |
| L4710 | IND_SM m38a[47D5]         | PP6B4                           | PROBEPOINT_SM m38a[5A6] | PP701                        | TP_SM-TF50-TOP m38a[5D3] | Q6600                   | TRA_NTHSS443T1_1206A m38a[66D4] |                                 |
| L4712 | FILTER_4P_2012 m38a[47C5] | PP6B5                           | PROBEPOINT_SM m38a[5A6] | PP702                        | TP_SM-TF50-TOP m38a[5D3] | Q6602                   | TRA_2N7002_SOT23-LF m38a[66C5]  |                                 |
| L4720 | IND_SM m38a[47C5]         | PP6B6                           | PROBEPOINT_SM m38a[5A6] | PP703                        | TP_SM-TF50-TOP m38a[5D3] | Q7200                   | TRA_2N7002DM_SOT-363 m38a[72B6] |                                 |
| L4730 | FILTER_4P_2012 m38a[47B5] | PP6B7                           | PROBEPOINT_SM m38a[5A6] | PP1200                       | TP_SM-TF50-TOP m38a[5D3] | Q7400                   | TRA_2N7002DM_SOT-363 m38a[74B3] |                                 |
| L4732 | FILTER_4P_2012 m38a[47A5] | PP6B8                           | PROBEPOINT_SM m38a[5A6] | PP1201                       | TP_SM-TF50-TOP m38a[5D3] | Q7401                   | TRA_2N7002_SOT23-LF m38a[74D5]  |                                 |
| L4740 | IND_SM m38a[47D2]         | PP6B9                           | PROBEPOINT_SM m38a[5A6] | PP1202                       | TP_SM-TF50-TOP m38a[5D3] | Q7402                   | TRA_2N7002DM_SOT-363 m38a[74B2] |                                 |
| L4742 | FILTER_4P_2012 m38a[47C2] | PP6C0                           | PROBEPOINT_SM m38a[5A6] | PP2800                       | TP_SM-TF50-TOP m38a[5C3] | Q7500                   | TRA_HAT2168H_LFPAK m38a[75D3]   |                                 |
| L4752 | FILTER_4P_2012 m38a[47B2] | PP6C1                           | PROBEPOINT_SM m38a[5A6] | PP2802                       | TP_SM-TF50-TOP m38a[5C3] | Q7501                   | TRA_HAT2165H_LFPAK m38a[75D3]   |                                 |
| L6800 | IND_0402-LF m38a[68A5]    | PP6C2                           | PROBEPOINT_SM m38a[5A6] | PP4100                       | PROBEPOINT_SM m38a[5C4]  | Q7502                   | TRA_HAT2168H_LFPAK m38a[75C3]   |                                 |
| L6801 | IND_0402-LF m38a[68D6]    | PP6C3                           | PROBEPOINT_SM m38a[5A6] | PP4101                       | PROBEPOINT_SM m38a[5C4]  | Q7503                   | TRA_HAT2165H_LFPAK m38a[75B3]   |                                 |
| L7200 | IND_SM-1 m38a[72D6]       | PP6C4                           | PROBEPOINT_SM m38a[5A6] | PP8400                       | PROBEPOINT_SM m38a[5C5]  | Q7504                   | TRA_HAT2165H_LFPAK m38a[75D3]   |                                 |
| L7201 | IND_0603-LF m38a[72C2]    | PP6C5                           | PROBEPOINT_SM m38a[5C8] | PP8401                       | PROBEPOINT_SM m38a[5C5]  | Q7505                   | TRA_HAT2165H_LFPAK m38a[75B3]   |                                 |
| L7202 | IND_0603-LF m38a[72C2]    | PP6C6                           | PROBEPOINT_SM m38a[5C8] | PP8700                       | PROBEPOINT_SM m38a[5D5]  | Q7570                   | TRA_HAT2168H_LFPAK m38a[75D2]   |                                 |
| L7203 | IND_0603-LF m38a[72C3]    | PP6C7                           | PROBEPOINT_SM m38a[5C8] | PP8701                       | PROBEPOINT_SM m38a[5D5]  | Q7572                   | TRA_HAT2165H_LFPAK m38a[75B3]   |                                 |
| L7204 | IND_0603-LF m38a[72C3]    | PP6C8                           | PROBEPOINT_SM m38a[5C8] | PP8702                       | PROBEPOINT_SM m38a[5D5]  | Q7701                   | TRA_SI3446DV_TSOP-LF m38a[77A3] |                                 |
| L7205 | IND_0603 m38a[72D6]       | PP6D0                           | PROBEPOINT_SM m38a[5C8] | PP8703                       | PROBEPOINT_SM m38a[5D5]  | Q7703                   | TRA_2N7002DM_SOT-363 m38a[77C7] |                                 |
| L7206 | IND_0603 m38a[72C6]       | PP6D1                           | PROBEPOINT_SM m38a[5C8] | PP8704                       | PROBEPOINT_SM m38a[5D5]  | Q7799                   | TRA_2N7002_SOT23-LF m38a[77A7]  |                                 |
| L7207 | IND_0603 m38a[72C6]       | PP6D2                           | PROBEPOINT_SM m38a[5B8] | PP8705                       | PROBEPOINT_SM m38a[5D5]  | Q7800                   | TRA_NTD60N02R_CASE36 m38a[78C4] |                                 |
| L7208 | IND_0603 m38a[72C6]       | PP6D3                           | PROBEPOINT_SM m38a[5B8] | PP8706                       | PROBEPOINT_SM m38a[5D5]  | Q7801                   | TRA_NTD60N02R_CASE36 m38a[78B4] |                                 |
| L7300 | IND_0603-LF m38a[73D6]    | PP6D4                           | PROBEPOINT_SM m38a[5B8] | PP8707                       | PROBEPOINT_SM m38a[5D5]  | Q7802                   | TRA_2N7002_SOT23-LF m38a[78B7]  |                                 |
| L7301 | IND_0603-LF m38a[73D6]    | PP6D5                           | PROBEPOINT_SM m38a[5B8] | PP8708                       | PROBEPOINT_SM m38a[5D5]  | Q7900                   | TRA_NTD60N02R_CASE36 m38a[79D4] |                                 |
| L7302 | IND_0603-LF m38a[73D6]    | PP6D6                           | PROBEPOINT_SM m38a[5B8] | PP8709                       | PROBEPOINT_SM m38a[5D5]  | Q7901                   | TRA_NTD60N02R_CASE36 m38a[79C4] |                                 |
| L7303 | IND_0603-LF m38a[73D6]    | PP6D7                           | PROBEPOINT_SM m38a[5B8] | PP8710                       | PROBEPOINT_SM m38a[5D5]  | Q7902                   | TRA_2N7002_SOT23-LF m38a[79C7]  |                                 |
| L7304 | IND_0603-LF m38a[73D5]    | PP6D8                           | PROBEPOINT_SM m38a[5B8] | PP8711                       | PROBEPOINT_SM m38a[5D5]  | Q8000                   | TRA_NTD60N02R_CASE36 m38a[80D4] |                                 |
| L7305 | IND_0603-LF m38a[73D5]    | PP6D9                           | PROBEPOINT_SM m38a[5B8] | PP8712                       | PROBEPOINT_SM m38a[5D5]  | Q8001                   | TRA_NTD60N02R_CASE36 m38a[80C4] |                                 |
| L7306 | IND_0603-LF m38a[73D5]    | PP6E0                           | PROBEPOINT_SM m38a[5B8] | PP8713                       | PROBEPOINT_SM m38a[5D5]  | Q8003                   | TRA_2N7002_SOT23-LF m38a[80C7]  |                                 |
| L7307 | IND_0603-LF m38a[73D5]    | PP6E1                           | PROBEPOINT_SM m38a[5B8] | PP8714                       | PROBEPOINT_SM m38a[5D5]  | Q8102                   | TRA_NTD60N02R_CASE36 m38a[81D4] |                                 |
| L7309 | IND_0603-LF m38a[73C4]    | PP6E2                           | PROBEPOINT_SM m38a[5D8] | PP8715                       | PROBEPOINT_SM m38a[5D5]  | Q8103                   | TRA_NTD60N02R_CASE36 m38a[81C4] |                                 |
| L7310 | IND_0603-LF m38a[73C4]    | PP6E3                           | PROBEPOINT_SM m38a[5D8] | PP8716                       | PROBEPOINT_SM m38a[5D5]  | Q8104                   | TRA_2N7002_SOT23-LF m38a[81C7]  |                                 |
| L7312 | IND_0603-LF m38a[73C3]    | PP6E4                           | PROBEPOINT_SM m38a[5D8] | PP8717                       | PROBEPOINT_SM m38a[5D5]  | Q8300                   | TRA_IRF7413_SO-8 m38a[83C4]     |                                 |
| L7313 | IND_0603-LF m38a[73C3]    | PP6E5                           | PROBEPOINT_SM m38a[5D8] | PP8718                       | PROBEPOINT_SM m38a[5D5]  | Q8301                   | TRA_IRF7413_SO-8 m38a[83B4]     |                                 |
| L7316 | IND_0603-LF m38a[73B7]    | PP6E6                           | PROBEPOINT_SM m38a[5D8] | PP8719                       | PROBEPOINT_SM m38a[5D5]  | Q8302                   | TRA_2N7002DM_SOT-363 m38a[83B5] |                                 |
| L7317 | IND_0603-LF m38a[73A7]    | PP6E7                           | PROBEPOINT_SM m38a[5D8] | PP8720                       | PROBEPOINT_SM m38a[5D5]  | Q8303                   | TRA_2N7002DM_SOT-363 m38a[83C5] |                                 |
| L7318 | IND_0603-LF m38a[73B7]    | PP6E8                           | PROBEPOINT_SM m38a[5D8] | PP8721                       | PROBEPOINT_SM m38a[5D5]  | Q8520                   | TRA_HAT2168H_LFPAK m38a[85D4]   |                                 |
| L7319 | IND_0603-LF m38a[73B7]    | PP6E9                           | PROBEPOINT_SM m38a[5D8] | PP8722                       | PROBEPOINT_SM m38a[5D5]  | Q8522                   | TRA_HAT2165H_LFPAK m38a[85C5]   |                                 |
| L7323 | IND_0603-LF m38a[73B5]    | PP6F0                           | PROBEPOINT_SM m38a[5D8] | PP8723                       | PROBEPOINT_SM m38a[5D5]  | Q9400                   | TRA_SI3443DV_TSOP-LF m38a[94C7] |                                 |
| L7324 | IND_0603-LF m38a[73B5]    | PP6F1                           | PROBEPOINT_SM m38a[5D8] | PP8724                       | PROBEPOINT_SM m38a[5D5]  | Q9401                   | TRA_2N7002_SOT23-LF m38a[94C7]  |                                 |
| L7325 | IND_0603-LF m38a[73A5]    | PP6F2                           | PROBEPOINT_SM m38a[5D8] | PP8725                       | PROBEPOINT_SM m38a[5D5]  | Q9711                   | TRA_2N7002DM_SOT-363 m38a[97D2] |                                 |
| L7326 | IND_0603-LF m38a[73B5]    | PP6F3                           | PROBEPOINT_SM m38a[5C8] | PP8726                       | PROBEPOINT_SM m38a[5D5]  | R75A0                   | RES_402 m38a[75C7]              |                                 |
| L7327 | IND_0603-LF m38a[73B5]    | PP6F4                           | PROBEPOINT_SM m38a[5C8] | PP8727                       | PROBEPOINT_SM m38a[5D5]  | R85A0                   | RES_402 m38a[85D1]              |                                 |
| L7381 | IND_0603-LF m38a[73A5]    | PP6F5                           | PROBEPOINT_SM m38a[5C8] | PP8728                       | PROBEPOINT_SM m38a[5D5]  | R600                    | RES_402 m38a[6A7]               |                                 |
| L7500 | IND_SM m38a[75D1]         | PP6F6                           | PROBEPOINT_SM m38a[5C8] | PP8729                       | PROBEPOINT_SM m38a[5D5]  | R601                    | RES_402 m38a[6D8]               |                                 |
| L7501 | IND_SM m38a[75B2]         | PP6F7                           | PROBEPOINT_SM m38a[5C8] | PP8730                       | PROBEPOINT_SM m38a[5D5]  | R602                    | RES_402 m38a[6A8]               |                                 |
| L7502 | IND_TH-VERT-LF m38a[76D8] | PP6F8                           | PROBEPOINT_SM m38a[5C8] | PP8731                       | PROBEPOINT_SM m38a[5D5]  | R603                    | RES_402 m38a[6B3]               |                                 |
| L7700 | IND_SM1-LF m38a[77D2]     | PP6F9                           | PROBEPOINT_SM m38a[5D6] | PP8732                       | PROBEPOINT_SM m38a[5D5]  | R605                    | RES_402 m38a[6A6]               |                                 |
| L7750 | IND_SM-LF m38a[77B4]      | PP6F0                           | PROBEPOINT_SM m38a[5D6] | PP8733                       | PROBEPOINT_SM m38a[5D5]  | R611                    | RES_402 m38a[6B7]               |                                 |
| L7800 | IND_3P_SM m38a[78B3]      | PP6F1                           | PROBEPOINT_SM m38a[5D6] | PP8734                       | PROBEPOINT_SM m38a[5D5]  | R612                    | RES_402 m38a[6B7]               |                                 |
| L7880 | IND_0603-LF m38a[73A7]    | PP6F2                           | PROBEPOINT_SM m38a[5D6] | PP8735                       | PROBEPOINT_SM m38a[5D5]  | R614                    | RES_402 m38a[6B7]               |                                 |
| L7900 | IND_3P_SM m38a[79C3]      | PP6F3                           | PROBEPOINT_SM m38a[5D6] | PP8736                       | PROBEPOINT_SM m38a[5D5]  | R615                    | RES_402 m38a[6B7]               |                                 |
| L8000 | IND_3P_SM m38a[80C3]      | PP6F4                           | PROBEPOINT_SM m38a[5D6] | PP8737                       | PROBEPOINT_SM m38a[5D5]  | R617                    | RES_402 m38a[6B7]               |                                 |
| L8100 | IND_IHLP m38a[81C3]       | PP6F5                           | PROBEPOINT_SM m38a[5D6] | PP8738                       | PROBEPOINT_SM m38a[5D5]  | R618                    | RES_402 m38a[6C7]               |                                 |
| L8400 | IND_0402 m38a[84B7]       | PP6F6                           | PROBEPOINT_SM m38a[5D6] | PP8739                       | PROBEPOINT_SM m38a[5D5]  | R619                    | RES_402 m38a[6C7]               |                                 |
| L8520 | IND_IHLP m38a[85C3]       | PP6F7                           | PROBEPOINT_SM m38a[5D6] | PP8740                       | PROBEPOINT_SM m38a[5D5]  | R7071                   | RES_402 m38a[70C6]              |                                 |
| L8715 | IND_0402 m38a[87A7]       | PP6F8                           | PROBEPOINT_SM m38a[5D6] | PP8741                       | PROBEPOINT_SM m38a[5D5]  | R7072                   | RES_402 m38a[70D6]              |                                 |
| L8725 | IND_0402 m38a[87A4]       | PP6F9                           | PROBEPOINT_SM m38a[5D6] | PP8742                       | PROBEPOINT_SM m38a[5D5]  | R7073                   | RES_402 m38a[70C5]              |                                 |
| L8910 | IND_0402 m38a[89D7]       | PP6FA                           | PROBEPOINT_SM m38a[5D6] | PP8743                       | PROBEPOINT_SM m38a[5D5]  | R7074                   | RES_402 m38a[70C5]              |                                 |
| L8915 | IND_0402 m38a[89D7]       | PP6FB                           | PROBEPOINT_SM m38a[5D6] | PP8744                       | PROBEPOINT_SM m38a[5D5]  | R7075                   | RES_402 m38a[7B4]               |                                 |
| L8960 | IND_0402 m38a[89D4]       | PP6FC                           | PROBEPOINT_SM m38a[5D6] | PP8745                       | PROBEPOINT_SM m38a[5D5]  | R7076                   | RES_402 m38a[7B5]               |                                 |
| L8965 | IND_0402 m38a[89D4]       | PP6FD                           | PROBEPOINT_SM m38a[5D6] | PP8746                       | PROBEPOINT_SM m38a[5D5]  | R7077                   | RES_402 m38a[7A4]               |                                 |
| L9010 | IND_0402 m38a[90D7]       | PP6FE                           | PROBEPOINT_SM m38a[5D6] | PP8747                       | PROBEPOINT_SM m38a[5D5]  | R7078                   | RES_402 m38a[7A3]               |                                 |
| L9015 | IND_0402 m38a[90D7]       | PP6FF                           | PROBEPOINT_SM m38a[5D6] | PP8748                       | PROBEPOINT_SM m38a[5D5]  | R7079                   | RES_402 m38a[7B1]               |                                 |
| L9060 | IND_0402 m38a[90D4]       | PP6G0                           | PROBEPOINT_SM m38a[5D6] | PP8749                       | PROBEPOINT_SM m38a[5D5]  | R7080                   | RES_402 m38a[7B1]               |                                 |
| L9065 | IND_0402 m38a[90D4]       | PP6G1                           | PROBEPOINT_SM m38a[5D6] | PP8750                       | PROBEPOINT_SM m38a[5D5]  | R7081                   | RES_402 m38a[7B1]               |                                 |
| L9120 | IND_0402 m38a[91B6]       | PP6G2                           | PROBEPOINT_SM m38a[5D6] | PP8900                       | PROBEPOINT_SM m38a[5B4]  | R7082                   | RES_402 m38a[7B7]               |                                 |
| L9125 | IND_0402 m38a[91B6]       | PP6G3                           | PROBEPOINT_SM m38a[5D6] | PP8901                       | PROBEPOINT_SM m38a[5B4]  | R7083                   | RES_402 m38a[7A7]               |                                 |
| L9130 | IND_0402 m38a[91B7]       | PP6G4                           | PROBEPOINT_SM m         |                              |                          |                         |                                 |                                 |





| 8     |          |            | 7     |         |            | 6        |                       |                           | 5      |                    |            | 4 |  |  | 3 |  |  | 2 |  |  | 1 |  |  |
|-------|----------|------------|-------|---------|------------|----------|-----------------------|---------------------------|--------|--------------------|------------|---|--|--|---|--|--|---|--|--|---|--|--|
| R7612 | RES_402  | m38a[76B2] | R8807 | RES_402 | m38a[88C4] | RP7200   | RPAK4P_SM-LF          | m38a[72A4]                | XW8000 | SHORT_SM           | m38a[80C6] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7620 | RES_402  | m38a[76D2] | R8808 | RES_402 | m38a[88C4] | SDF4700  | PCB_STANDOFF          | m38a[47A2]                | XW8100 | SHORT_SM           | m38a[81C6] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7623 | RES_402  | m38a[76D1] | R8809 | RES_402 | m38a[88C4] | SDF4701  | PCB_STANDOFF          | m38a[47A2]                | XW8500 | SHORT_SM           | m38a[85C6] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7630 | RES_402  | m38a[76C8] | R8810 | RES_402 | m38a[88C4] | SDF5300  | PCB_STANDOFF          | m38a[53A5]                | Y2600  | CRYSTAL_4PIN_SM-LF | m38a[26D8] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7631 | RES_402  | m38a[76C8] | R8811 | RES_402 | m38a[88B4] | SDF5301  | PCB_STANDOFF          | m38a[53A5]                | Y3301  | CRYSTAL_5X3.2-SM   | m38a[33C7] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7632 | RES_402  | m38a[76C7] | R8812 | RES_402 | m38a[88C4] | SDF9400  | PCB_STANDOFF          | m38a[94B6]                | Y4101  | CRYSTAL_SM-3-LF    | m38a[41B5] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7640 | RES_402  | m38a[76A7] | R8813 | RES_402 | m38a[88D4] | SDF9401  | PCB_STANDOFF          | m38a[94A6]                | Y4400  | CRYSTAL_HC49-USMD  | m38a[44D2] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7691 | RES_402  | m38a[76C7] | R8830 | RES_402 | m38a[88B4] | SW2600   | SWI_TACT_4SM_EVQPH_S  | m38a[26C6]                | Y5800  | CRYSTAL_SM-3       | m38a[58B8] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7700 | RES_402  | m38a[77D3] | R8831 | RES_402 | m38a[88B4] | M-LF     |                       |                           | Y5700  | CRYSTAL_4PIN_SM-LF | m38a[57B7] |   |  |  |   |  |  |   |  |  |   |  |  |
| R7701 | RES_402  | m38a[77D4] | R8832 | RES_402 | m38a[88B4] | SW5900   | SWI_TACT_4SM_EVQPH_S  | m38a[59D8]                | ZH500  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7704 | RES_402  | m38a[77C4] | R8833 | RES_402 | m38a[88B4] | M-LF     |                       |                           | ZH501  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7705 | RES_402  | m38a[77C3] | R8850 | RES_402 | m38a[88B4] | SW5901   | SWI_TACT_4SM_EVQPH_S  | m38a[59B8]                | ZH502  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7706 | RES_402  | m38a[77D2] | R8930 | RES_402 | m38a[89C7] | M-LF     |                       |                           | ZH503  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7707 | RES_402  | m38a[77D1] | R8931 | RES_402 | m38a[89C7] | U600     | 74LCL125_TSSOP        | m38a[6B7 6B7 6B7 6C7]     | ZH504  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7708 | RES_402  | m38a[77D1] | R8932 | RES_402 | m38a[89C7] | U601     | SN74VHC1G04_SOT23-5   | m38a[6C7]                 | ZH505  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7710 | RES_402  | m38a[77D3] | R8933 | RES_402 | m38a[89C7] | U650     | 74AHC1G32_SM-LF       | m38a[6A7]                 | ZH506  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7750 | RES_402  | m38a[77B4] | R8940 | RES_402 | m38a[89B8] | U1000    | ADTT7461_MSOP         | m38a[10D5]                | ZH507  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7751 | RES_402  | m38a[77A4] | R8941 | RES_402 | m38a[89B8] | U1200    | NB_945GM_BGA          | m38a[12D5]                | ZH508  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7752 | RES_402  | m38a[77B4] | R8942 | RES_402 | m38a[89B7] | U1200    | NB_945GM_BGA          | m38a[13D4]                | ZH509  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7753 | RES_402  | m38a[77A6] | R8943 | RES_402 | m38a[89B7] | U1200    | NB_945GM_BGA          | m38a[14D5]                | ZH510  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7754 | RES_402  | m38a[77B7] | R8944 | RES_402 | m38a[89B7] | U1200    | NB_945GM_BGA          | m38a[15D3 15D7]           | ZH511  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7757 | RES_402  | m38a[77B7] | R8945 | RES_402 | m38a[89B7] | U1200    | NB_945GM_BGA          | m38a[16D2 16C8]           | ZH512  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7793 | RES_402  | m38a[77D7] | R8946 | RES_402 | m38a[89B7] | U1200    | NB_945GM_BGA          | m38a[17D5]                | ZH513  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7794 | RES_402  | m38a[77C7] | R8947 | RES_402 | m38a[89B7] | U1200    | NB_945GM_BGA          | m38a[18D4 18D7]           | ZH514  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7798 | RES_402  | m38a[77C7] | R8948 | RES_402 | m38a[89A7] | U2100    | SB_I1CH7M_BGA         | m38a[21D6]                | ZH515  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7799 | RES_402  | m38a[77D7] | R8949 | RES_402 | m38a[89A7] | U2100    | SB_I1CH7M_BGA         | m38a[22B7 22D3]           | ZH516  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7800 | RES_402  | m38a[78C7] | R8980 | RES_402 | m38a[89C4] | U2100    | SB_I1CH7M_BGA         | m38a[23D4]                | ZH517  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7801 | RES_402  | m38a[78B7] | R8981 | RES_402 | m38a[89C4] | U2100    | SB_I1CH7M_BGA         | m38a[24D4 24D7]           | ZH518  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7802 | RES_402  | m38a[78B3] | R8982 | RES_402 | m38a[89C4] | U2601    | MC74VHC1G08_SOT23-5-  | m38a[26D5]                | ZH519  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7803 | RES_402  | m38a[78B3] | R8983 | RES_402 | m38a[89C4] | LF       |                       |                           | ZH520  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7804 | RES_1206 | m38a[78B4] | R8990 | RES_402 | m38a[89B5] | U2603    | SN74VHC1G04_SOT23-5   | m38a[26A7]                | ZH521  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7805 | RES_402  | m38a[78B5] | R8991 | RES_402 | m38a[89B4] | U2698    | MC74VHC1G08_SOT23-5-  | m38a[26C4]                | ZH522  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7812 | RES_402  | m38a[78B3] | R8992 | RES_402 | m38a[89B4] | LF       |                       |                           | ZH523  | HOLE_VIA           | m38a[5C1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7840 | RES_402  | m38a[78C5] | R8993 | RES_402 | m38a[89B4] | U2699    | MAX6816_SOT143        | m38a[26C5]                | ZH524  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7892 | RES_402  | m38a[78B7] | R8994 | RES_402 | m38a[89B4] | U3100    | LREG_BD3533FVM_MSOP-  | m38a[31C5]                | ZH525  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7901 | RES_402  | m38a[79C3] | R8995 | RES_402 | m38a[89B4] | 8        |                       |                           | ZH526  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7902 | RES_1206 | m38a[79C4] | R8996 | RES_402 | m38a[89B4] | U3301    | CLK_GEN_CY284455_QFN  | m38a[33C5]                | ZH527  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7903 | RES_402  | m38a[79C3] | R8997 | RES_402 | m38a[89B4] | U4101    | 88F8053_QFN           | m38a[41D5]                | ZH528  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7904 | RES_402  | m38a[79C5] | R8998 | RES_402 | m38a[89A4] | U4102    | KEPPROM_M24C08_S08    | m38a[41A3]                | ZH529  | HOLE_VIA           | m38a[5B1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7905 | RES_402  | m38a[79D7] | R8999 | RES_402 | m38a[89A4] | U4400    | FW32306_QTFF          | m38a[44D5]                | ZH601  | MTGHOLE            | m38a[6A3]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7906 | RES_402  | m38a[79A4] | R9030 | RES_402 | m38a[90C7] | U4700    | SWI_TPS2043_SOI       | m38a[47C7]                | ZH602  | MTGHOLE            | m38a[6A3]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7910 | RES_402  | m38a[79B2] | R9031 | RES_402 | m38a[90C7] | U5800    | SMC_H8S2116_BGA       | m38a[58A8 58C3 58C6 58D6] | ZH603  | MTGHOLE            | m38a[6A3]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7911 | RES_402  | m38a[79B3] | R9032 | RES_402 | m38a[90C7] | U5900    | VDET_RNSVD_SOT23-5    | m38a[59D8]                | ZH604  | MTGHOLE            | m38a[6B3]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7912 | RES_402  | m38a[79B3] | R9033 | RES_402 | m38a[90C7] | U5940    | VREF_RFP3133_SOT23-3  | m38a[59A4]                | ZH606  | MTGHOLE            | m38a[6A1]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7913 | RES_402  | m38a[79A2] | R9040 | RES_402 | m38a[90B8] | U5999    | COMPPARATOR_LM393_SOI | m38a[59A8 59A8]           | ZH607  | MTGHOLE            | m38a[6D4]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7914 | RES_402  | m38a[79A3] | R9041 | RES_402 | m38a[90B8] | -1-LF    |                       |                           | ZH608  | MTGHOLE            | m38a[6D3]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7915 | RES_402  | m38a[79A3] | R9042 | RES_402 | m38a[90B7] | U6100    | MAX6695_UMAX          | m38a[61C4]                | ZH609  | MTGHOLE            | m38a[6D2]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7940 | RES_402  | m38a[79D5] | R9043 | RES_402 | m38a[90B7] | U6301    | FLASH_SST25VP016B_SO  | m38a[63D3]                | ZH610  | MTGHOLE            | m38a[6D2]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7941 | RES_402  | m38a[79C7] | R9044 | RES_402 | m38a[90B7] | I_SOI    |                       |                           | ZH611  | MTGHOLE            | m38a[6C3]  |   |  |  |   |  |  |   |  |  |   |  |  |
| R7992 | RES_402  | m38a[79C7] | R9045 | RES_402 | m38a[90B7] | U6700    | TPM_TSSOP             | m38a[67C5]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R7999 | RES_402  | m38a[79C3] | R9046 | RES_402 | m38a[90B7] | U6800    | AUDIO_STAC92204XR_LQ  | m38a[68D5]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8000 | RES_402  | m38a[80C3] | R9047 | RES_402 | m38a[90B7] | FP       |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8001 | RES_402  | m38a[80C7] | R9048 | RES_402 | m38a[90A7] | U7200    | MAX9714_QFN-LF        | m38a[72C5]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8002 | RES_1206 | m38a[80C4] | R9049 | RES_402 | m38a[90A7] | U7400    | MAX9890_UCSP1         | m38a[74C4]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8003 | RES_402  | m38a[80C3] | R9080 | RES_402 | m38a[90C4] | U7500    | ISL6262_QFN           | m38a[75C6]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8004 | RES_402  | m38a[80C5] | R9081 | RES_402 | m38a[90C4] | U7501    | ZXCT1010_SOT23-5      | m38a[75D7]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8005 | RES_402  | m38a[80D7] | R9082 | RES_402 | m38a[90C4] | U7700    | LC74411_MSOP-LF       | m38a[77C3]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8007 | RES_402  | m38a[80A4] | R9083 | RES_402 | m38a[90C4] | U7710    | MC74VHC1G08_SOT23-5-  | m38a[77D5]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8010 | RES_402  | m38a[80B2] | R9090 | RES_402 | m38a[90B5] | LF       |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8011 | RES_402  | m38a[80B3] | R9091 | RES_402 | m38a[90B4] | U7711    | MC74VHC1G08_SOT23-5-  | m38a[77C5]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8012 | RES_402  | m38a[80B3] | R9092 | RES_402 | m38a[90B4] | LF       |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8040 | RES_402  | m38a[80C5] | R9093 | RES_402 | m38a[90B4] | U7712    | MC74VHC1G08_SOT23-5-  | m38a[77D4]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8092 | RES_402  | m38a[80C7] | R9094 | RES_402 | m38a[90B4] | LF       |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8099 | RES_402  | m38a[80C3] | R9095 | RES_402 | m38a[90B4] | U7750    | SN200505068_SOP       | m38a[77B6]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8101 | RES_402  | m38a[81C3] | R9096 | RES_402 | m38a[90B4] | U7800    | ISL6549_QFN           | m38a[78C6]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8102 | RES_1206 | m38a[81C4] | R9097 | RES_402 | m38a[90B4] | U7900    | ISL6549_QFN           | m38a[79D6]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8103 | RES_402  | m38a[81C3] | R9098 | RES_402 | m38a[90A4] | U7901    | COMPPARATOR_LM339A_SO | m38a[79A5]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8104 | RES_402  | m38a[81C5] | R9099 | RES_402 | m38a[90A4] | I-LF     |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8105 | RES_402  | m38a[81D7] | R9190 | RES_402 | m38a[91D2] | U7901    | COMPPARATOR_LM339A_SO | m38a[80A4]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8107 | RES_402  | m38a[81A4] | R9191 | RES_402 | m38a[91D2] | I-LF     |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8110 | RES_402  | m38a[81B3] | R9195 | RES_402 | m38a[91A3] | U7901    | COMPPARATOR_LM339A_SO | m38a[81A5]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8140 | RES_402  | m38a[81C5] | R9202 | RES_402 | m38a[92C6] | I-LF     |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8190 | RES_402  | m38a[81C3] | R9250 | RES_402 | m38a[92C6] | U7910    | COMPPARATOR_LM339A_SO | m38a[79A3 79B3]           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8191 | RES_402  | m38a[81C7] | R9350 | RES_402 | m38a[93A8] | I-LF     |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8192 | RES_402  | m38a[81C7] | R9351 | RES_402 | m38a[93A8] | U7910    | COMPPARATOR_LM339A_SO | m38a[80B2]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8198 | RES_402  | m38a[81A5] | R9370 | RES_402 | m38a[93D1] | I-LF     |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8199 | RES_402  | m38a[81A5] | R9371 | RES_402 | m38a[93D1] | U7910    | COMPPARATOR_LM339A_SO | m38a[81B3]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8300 | RES_402  | m38a[83B4] | R9372 | RES_402 | m38a[93C1] | I-LF     |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8301 | RES_402  | m38a[83C5] | R9373 | RES_402 | m38a[93C1] | U8000    | ISL6549_QFN           | m38a[80D6]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8302 | RES_402  | m38a[83B5] | R9390 | RES_402 | m38a[93A1] | U8100    | ISL6549_QFN           | m38a[81D6]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8303 | RES_402  | m38a[83C4] | R9391 | RES_402 | m38a[93A1] | U8400    | ATI_M56P_BGA          | m38a[84C8 84D4]           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8495 | RES_402  | m38a[84A2] | R9400 | RES_402 | m38a[94C8] | U8400    | ATI_M56P_BGA          | m38a[86D4]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8496 | RES_402  | m38a[84A2] | R9401 | RES_402 | m38a[94C7] | U8400    | ATI_M56P_BGA          | m38a[87D2 87D6]           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8497 | RES_402  | m38a[84A2] | R9410 | RES_402 | m38a[94C6] | U8400    | ATI_M56P_BGA          | m38a[91D4]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8502 | RES_402  | m38a[85D6] | R9411 | RES_402 | m38a[94C6] | U8400    | ATI_M56P_BGA          | m38a[93C4]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8503 | RES_402  | m38a[85D7] | R9470 | RES_402 | m38a[94C2] | U8500    | ISL6269_QFN           | m38a[85D6]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8504 | RES_402  | m38a[85D7] | R9470 | RES_402 | m38a[94C7] | U8595    | OPAMP_LMV2011_SOT23-  | m38a[85D2]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8505 | RES_402  | m38a[85C7] | R9472 | RES_402 | m38a[94B3] |          |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8506 | RES_402  | m38a[85C8] | R9473 | RES_402 | m38a[94B2] | U8900    | SGRAM_16MX32_GDDR3_1  | m38a[89D6 89B6]           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8507 | RES_402  | m38a[85D7] | R9474 | RES_402 | m38a[94B2] | 36H_FPGA |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8508 | RES_402  | m38a[85C7] | R9475 | RES_402 | m38a[94B1] | U8950    | SGRAM_16MX32_GDDR3_1  | m38a[89D3 89B3]           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8510 | RES_402  | m38a[85C5] | R9490 | RES_805 | m38a[94C6] | 36H_FPGA |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8521 | RES_402  | m38a[85C3] | R9491 | RES_805 | m38a[94D6] | U9000    | SGRAM_16MX32_GDDR3_1  | m38a[90D6 90B6]           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8522 | RES_402  | m38a[85C3] | R9701 | RES_402 | m38a[97D8] | 36H_FPGA |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8588 | RES_402  | m38a[85C5] | R9706 | RES_402 | m38a[97D8] | U9050    | SGRAM_16MX32_GDDR3_1  | m38a[90D3 90B3]           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8590 | RES_402  | m38a[85C3] | R9707 | RES_402 | m38a[97D8] | 36H_FPGA |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8591 | RES_402  | m38a[85D3] | R9710 | RES_402 | m38a[97D2] | U9470    | MC74VHC1G08_SOT23-5-  | m38a[94B2]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8592 | RES_402  | m38a[85D2] | R9711 | RES_402 | m38a[97D2] | LF       |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8593 | RES_402  | m38a[85D3] | R9712 | RES_402 | m38a[97D2] | U9750    | 74AHC1G32_SM-LF       | m38a[97B4]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8594 | RES_402  | m38a[85D3] | R9713 | RES_402 | m38a[97C2] | U9751    | 74AHC1G32_SM-LF       | m38a[97A4]                |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |
| R8596 | RES_402  | m38a[85D3] | R9714 | RES_402 | m38a[97C2] | VR6800   |                       |                           |        |                    |            |   |  |  |   |  |  |   |  |  |   |  |  |