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|--|--|-----------------------------------|----------------------------------|-------------|--|------|---------------------------|--|--|------------|------|--|------------------------------|-------------------------|-----------------|----------------------|--|--|--|--|--|----------------|--|-----------|--|------|--|---|--|
| 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | | | | | | | | | | | | | | | |
| 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 | ECN | DESCRIPTION OF REVISION | CK APPD DATE | | | | | | | | | | | | | | |
| | | | | | | | | | | | | 4 | 0021398968 | ENGINEERING RELEASED | 2019-12-19 | | | | | | | | | | | | | | |
| X1647 MLB NAVI10 P1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | LAST_MODIFICATION=Thu Dec 19 09:25:43 2019 | | | | LAST_MODIFICATION=Thu Dec 19 09:25:43 2019 | | | | LAST_MODIFICATION=Thu Dec 19 09:25:43 2019 | | | | | | | | | | | | | | | | | | | | |
| | PAGE | CSA | CONTENTS | SYNC | DATE | PAGE | CSA | CONTENTS | SYNC | DATE | PAGE | CSA | CONTENTS | SYNC | DATE | | | | | | | | | | | | | | |
| | 1 | 1 | SCHEM,MLB_NAVI10 | | | 61 | 67 | AUDIO MIC CONNECTOR | DIRK | 12/12/2019 | 121 | 140 | GDDR6 X16 GPU CH F0, F1 | RAYMOND | 08/28/2019 | | | | | | | | | | | | | | |
| | 2 | 2 | BOM Configuration | KRITHIKA | 05/24/2019 | 62 | 68 | CAMERA/ALS CONNECTOR | J184 | 06/07/2019 | 122 | 141 | GDDR6 X16 GPU CH G0, G1 | RAYMOND | 08/28/2019 | | | | | | | | | | | | | | |
| | 3 | 3 | DEBUG: LEDs | J185_NAVI14 | 12/04/2018 | 63 | 69 | PLATFORM POWER: CONNECTORS | JERRY | 12/12/2019 | 123 | 142 | GDDR6 X16 GPU CH H0, H1 | RAYMOND | 08/28/2019 | | | | | | | | | | | | | | |
| | 4 | 4 | MECHANICAL: PD PARTS | KRITHIKA | 09/24/2019 | 64 | 70 | VR CPU Core & VCCGT Ctrl | SUNIL | 08/27/2019 | 124 | 145 | VR VDDCR_GFX, VDDCR_SOC CTRL | SUNIL | 11/15/2019 | | | | | | | | | | | | | | |
| | 5 | 5 | CPU DMI/PEG/DDI | J184 | 06/07/2019 | 65 | 71 | VR CPU CORE PHASES 1-3 | SUNIL | 08/27/2019 | 125 | 146 | VR VDDCR_GFX PHASES 1-3 | SUNIL | 10/02/2019 | | | | | | | | | | | | | | |
| | 6 | 6 | CPU Clock/Misc/JTAG/CFG | MURPHY | 10/28/2019 | 66 | 72 | VR CPU CORE PHASES 4-6 | SUNIL | 08/27/2019 | 126 | 147 | VR VDDCR_GFX PHASES 4-6 | SUNIL | 10/02/2019 | | | | | | | | | | | | | | |
| | 7 | 7 | CPU DDR4 Interface | J184 | 06/07/2019 | 67 | 73 | CPU & CHIPSET: CPU VDDQ VR | SUNIL | 11/15/2019 | 127 | 148 | VR VDDCR_GFX PHASES 7-9 | SUNIL | 10/02/2019 | | | | | | | | | | | | | | |
| | 8 | 8 | CPU Power | MURPHY | 10/31/2019 | 68 | 74 | CPU & CHIPSET: VCCGT & VCCSA | SUNIL | 08/27/2019 | 128 | 149 | VR GFX VDDIO, VDDCI CTRL | SUNIL | 08/27/2019 | | | | | | | | | | | | | | |
| | 9 | 9 | CPU Ground | J184 | 06/07/2019 | 69 | 75 | CPU & CHIPSET: CPU VCCIO VR | SUNIL | 08/27/2019 | 129 | 150 | GRAPHICS: GPU VDDCI VR | SUNIL | 08/27/2019 | | | | | | | | | | | | | | |
| | 10 | 10 | CPU DECOUPLING 1 | MURPHY | 09/26/2019 | 70 | 76 | PLATFORM POWER: 3.3V G3H/5V G3S VR | SUNIL | 08/27/2019 | 130 | 151 | GRAPHICS: GPU 0V75 VR | SUNIL | 08/27/2019 | | | | | | | | | | | | | | |
| | 11 | 11 | CPU DECOUPLING-2 | MURPHY | 05/06/2019 | 71 | 77 | CPU & CHIPSET: PCH 1V05 | SUNIL | 11/15/2019 | 131 | 152 | GRAPHICS: GPU 1V8 VR | SUNIL | 10/16/2019 | | | | | | | | | | | | | | |
| | 12 | 12 | PCH DMI/eSPI/SPI/RTC/Sideband/PM | RAYMOND | 11/01/2019 | 72 | 78 | PMIC BUCKS AND SWs | MATTHEW | 10/24/2019 | 132 | 153 | VR GFX VDDIO PHASES 1-2 | SUNIL | 08/27/2019 | | | | | | | | | | | | | | |
| | 13 | 13 | PCH USB/JTAG/HDA | MATTHEW | 09/10/2019 | 73 | 79 | PMIC LDOs | MATTHEW | 10/11/2019 | 133 | 154 | GPU POWER RAIL DISCHARGE | MATTHEW | 08/09/2019 | | | | | | | | | | | | | | |
| | 14 | 14 | PCH PCIe and Clocks | MATTHEW | 09/04/2019 | 74 | 80 | PMIC GPIOs Controls | MATTHEW | 09/16/2019 | 134 | 155 | POWER ALIASES - 1 | KENNYC | 04/29/2019 | | | | | | | | | | | | | | |
| | 15 | 15 | PCH GPIO/Misc/NCTF | MATTHEW | 09/04/2019 | 75 | 81 | DISPLAY: LCD Backlight Driver (LP8565) | JERRYHU | 06/13/2019 | 135 | 156 | POWER ALIASES - 2 | KRITHIKA | 04/29/2019 | | | | | | | | | | | | | | |
| | 16 | 16 | PCH Power | MATTHEW | 10/24/2019 | 76 | 82 | DISPLAY: Backlight Driver 2 | RAYMOND | 03/11/2019 | 136 | 158 | FCT/ICT TPS -1 | J184 | 06/07/2019 | | | | | | | | | | | | | | |
| | 17 | 17 | PCH Decoupling | MATTHEW | 10/24/2019 | 77 | 83 | DISPLAY: Support | RAYMOND | 08/28/2019 | 137 | 159 | CHARZ AUTOMATION TPS | MATTHEW | 08/09/2019 | | | | | | | | | | | | | | |
| | 18 | 18 | CPU XDP | MATTHEW | 10/11/2019 | 78 | 84 | POWER FET 2 | MATTHEW | 10/11/2019 | 138 | 160 | SIGNAL ALIASES | KRITHIKA | 04/24/2019 | | | | | | | | | | | | | | |
| | 19 | 19 | CPU & CHIPSET: Chipset Support | MATTHEW | 08/09/2019 | 79 | 85 | POWER FET | MATTHEW | 08/09/2019 | 139 | 161 | ALTERNATE TABLE | KRITHIKA | 10/11/2019 | | | | | | | | | | | | | | |
| C | 20 | 20 | Project-Specific Chipset Support | MATTHEW | 08/09/2019 | 80 | 86 | SSD0: S4E/S5E<0> | KRITHIKA | 06/07/2019 | 140 | 162 | FCT/ICT TPS -2 | KRITHIKA | 08/07/2019 | | | | | | | | | | | | | | |
| | 21 | 21 | DRAM: ALIASES AND BITSWAPS | RAYMOND | 08/27/2019 | 81 | 87 | SSD0: S4E/S5E<1> | KRITHIKA | 06/07/2019 | 141 | 163 | TESTPOINTS TABLE 1 | | | | | | | | | | | | | | | | |
| | 22 | 22 | DRAM:VREF/VTT EN | RAYMOND | 09/10/2019 | 82 | 88 | SSD0: S4E/S5E<2> | KRITHIKA | 06/07/2019 | 142 | 164 | TESTPOINTS TABLE 2 | | | | | | | | | | | | | | | | |
| | 23 | 23 | DRAM:SO-DIMM CONNECTOR A DIMM 0 | RAYMOND | 08/27/2019 | 83 | 89 | SSD0: S4E/S5E<3> | KRITHIKA | 06/07/2019 | 143 | 165 | TESTPOINTS TABLE 3 | | | | | | | | | | | | | | | | |
| | 24 | 24 | DRAM:SO-DIMM CONNECTOR A DIMM 1 | RAYMOND | 08/27/2019 | 84 | 90 | OCARINA PMIC & NAND VCC VR | KRITHIKA | 06/07/2019 | 144 | 166 | TESTPOINTS TABLE 4 | | | | | | | | | | | | | | | | |
| | 25 | 25 | DRAM:SO-DIMM CONNECTOR B DIMM 0 | RAYMOND | 08/27/2019 | 85 | 91 | SSD0 SUPPORT | KRITHIKA | 06/07/2019 | 145 | 167 | TESTPOINTS TABLE 5 | | | | | | | | | | | | | | | | |
| | 26 | 26 | DRAM:SO-DIMM CONNECTOR B DIMM 1 | RAYMOND | 08/27/2019 | 86 | 92 | SSD 1 CONN | KRITHIKA | 06/07/2019 | 146 | 168 | TESTPOINTS TABLE 6 | | | | | | | | | | | | | | | | |
| | 27 | 28 | USB-C High Speed 1 | J184 | 06/07/2019 | 87 | 95 | SYSTEM POWER SEQUENCING | MATTHEW | 10/24/2019 | 147 | 170 | BOM Configuration | KRITHIKA | 09/26/2019 | | | | | | | | | | | | | | |
| | 28 | 29 | USB-C High Speed 2 | J184 | 06/07/2019 | 88 | 96 | GPU POWER SEQUENCING S0 | MATTHEW | 08/09/2019 | 148 | 171 | CONFIGURATION BOMS P0 | KRITHIKA | 09/26/2019 | | | | | | | | | | | | | | |
| | 29 | 30 | USB-C Support Page | JACOB | 11/14/2019 | 89 | 97 | 10G ETHERNET CONTROLLER 1 | MURPHY | 07/01/2019 | 149 | 172 | BOM CONFIGURATION | | | | | | | | | | | | | | | | |
| | 30 | 31 | USB-C PORT CONTROLLER XA | JACOB | 10/11/2019 | 90 | 98 | 10G ETHERNET CONTROLLER 2 | MURPHY | 09/11/2019 | | | | | | | | | | | | | | | | | | | |
| | 31 | 32 | USB-C PORT CONTROLLER XB | JACOB | 10/11/2019 | 91 | 99 | 10G ENET SUPPORT 1 | MURPHY | 08/05/2019 | | | | | | | | | | | | | | | | | | | |
| | 32 | 33 | USB-C Connector | J185_NAVI14 | 12/04/2018 | 92 | 100 | 10G ENET SUPPORT 2 | MURPHY | 05/22/2019 | | | | | | | | | | | | | | | | | | | |
| | 33 | 36 | SECURE ELEMENT | RAYMOND | 08/05/2019 | 93 | 101 | VR 10G ENET 1V2, 2V1 | MURPHY | 09/24/2019 | | | | | | | | | | | | | | | | | | | |
| | 34 | 38 | SOC DEV LED | J184 | 06/07/2019 | 94 | 102 | VR 10G ENET 0V85 | SUNIL | 08/27/2019 | | | | | | | | | | | | | | | | | | | |
| | 35 | 39 | SoC GPIO/SEP/USB/DDR/Test | J184 | 06/07/2019 | 95 | 103 | SD CONTROLLER UHS-II | MURPHY | 06/27/2019 | | | | | | | | | | | | | | | | | | | |
| | 36 | 40 | SoC AOP/AON/SMC | KRITHIKA | 08/20/2019 | 96 | 104 | SD CONNECTOR UHS-II | MURPHY | 07/05/2019 | | | | | | | | | | | | | | | | | | | |
| | 37 | 41 | SoC ISP/I2C/UART/SPI/I2S | J184 | 06/07/2019 | 97 | 106 | USB-A: EXTERNAL USB PORTS A & B | RAYMOND | 08/27/2019 | | | | | | | | | | | | | | | | | | | |
| | 38 | 42 | SoC PCIe | J184 | 06/07/2019 | 98 | 107 | USB-A: EXTERNAL USB PORTS C & D | RAYMOND | 08/27/2019 | | | | | | | | | | | | | | | | | | | |
| | 39 | 43 | SoC Power 1 | J184 | 06/07/2019 | 99 | 110 | WIFI/BT MODULE 1 | KRITHIKA | 08/20/2019 | | | | | | | | | | | | | | | | | | | |
| | 40 | 44 | SoC Power 2 | J184 | 06/07/2019 | 100 | 111 | WIFI/BT MODULE 2 | KRITHIKA | 08/20/2019 | | | | | | | | | | | | | | | | | | | |
| 41 | 45 | SoC Power 3 | J184 | 06/07/2019 | 101 | 112 | WIFI/BT SUPPORT | KRITHIKA | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 42 | 46 | SoC Ground | J184 | 06/07/2019 | 102 | 120 | GPU PCIE | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 43 | 47 | SoC Shared Support | J184 | 06/07/2019 | 103 | 121 | GPU GPIOs, STRAPS | RAYMOND | 09/10/2019 | | | | | | | | | | | | | | | | | | | | |
| 44 | 48 | SOC PROJECT SUPPORT | KRITHIKA | 08/20/2019 | 104 | 122 | GPU DISPLAYPORT | RAYMOND | 09/10/2019 | | | | | | | | | | | | | | | | | | | | |
| 45 | 49 | SOC SHARED SUPPORT IMAC 1 | MATTHEW | 07/31/2019 | 105 | 123 | GPU GND | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 46 | 50 | I2C SOC 1 | JERRY | 12/12/2019 | 106 | 124 | GPU CLK GEN, JTAG | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 47 | 51 | I2C SOC 2 | RAYMOND | 08/19/2019 | 107 | 125 | GPU MEMORY PWR | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 48 | 52 | SMC Project Support | JERRY | 12/12/2019 | 108 | 126 | GPU CORE AND SOC PWR | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 49 | 53 | SOC SHARED SUPPORT IMAC 2 | J184 | 06/07/2019 | 109 | 127 | GPU CORE PWR DECOUPLING | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 50 | 54 | SENSORS: I and V Sense | JERRY | 12/12/2019 | 110 | 128 | GPU MEM CH A0, A1, B0, B1 | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 51 | 55 | SENSORS: I and V Sense(Continued) | JERRY | 12/12/2019 | 111 | 129 | GPU MEM CH C0, C1, D0, D1 | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 52 | 56 | SENSORS THERMAL 1 | JERRY | 12/12/2019 | 112 | 130 | GPU MEM CH E0, E1, F0, F1 | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 53 | 57 | SENSORS: PSU/PCC | JERRY | 12/12/2019 | 113 | 131 | GPU MEM CH G0, G1, H0, H1 | RAYMOND | 08/20/2019 | | | | | | | | | | | | | | | | | | | | |
| 54 | 58 | FAN: System Fan | JERRY | 12/12/2019 | 114 | 132 | GPU ROM | RAYMOND | 06/13/2019 | | | | | | | | | | | | | | | | | | | | |
| 55 | 60 | 1G ENET PHY (Caesar IV) | MURPHY | 08/07/2019 | 115 | 134 | GPU ISO | RAYMOND | 06/17/2019 | | | | | | | | | | | | | | | | | | | | |
| 56 | 61 | 1G ENET SUPPORT | MURPHY | 06/19/2019 | 116 | 135 | GDDR6 X16 GPU CH A0,A1 | RAYMOND | 06/24/2019 | | | | | | | | | | | | | | | | | | | | |
| 57 | 63 | Audio Jack CODEC | DIRK | 12/12/2019 | 117 | 136 | GDDR6 X16 GPU CH B0,B1 | RAYMOND | 06/24/2019 | | | | | | | | | | | | | | | | | | | | |
| 58 | 64 | Left Speaker Amps | DIRK | 12/12/2019 | 118 | 137 | GDDR6 X16 GPU CH C0, C1 | RAYMOND | 06/24/2019 | | | | | | | | | | | | | | | | | | | | |
| 59 | 65 | Right Speaker Amp | DIRK | 12/12/2019 | 119 | 138 | GDDR6 X16 GPU CH D0, D1 | RAYMOND | 06/24/2019 | | | | | | | | | | | | | | | | | | | | |
| 60 | 66 | Audio Jack Connector | DIRK | 12/12/2019 | 120 | 139 | GDDR6 X16 GPU CH E0, E1 | RAYMOND | 08/28/2019 | | | | | | | | | | | | | | | | | | | | |
| 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | | | | | | | | | | | | | | | |
| SCHEM,MLB_NAVI10 | | | | | | | | | | | | SYNC_MASTER=KRITHIKA DRAWING TITLE | | | | SYNC_DATE=04/24/2019 | | | | | | | | | | | | | |
| | | | | | | | | | | | | SCHEM,MLB_NAVI10,X1647 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | |  Apple Inc. | | | | | | | | | | DRAWING NUMBER | | 051-04826 | | SIZE | | D | |
| | | | | | | | | | | | | | | | | | | | | | | REVISION | | 4.0.0 | | | | | |
| | | | | | | | | | | | | NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | | | | | | | | | BRANCH | | proto-1-b | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | SHEET | | 1 OF 149 | | | | | |


| D | 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|-------------------------|-------------------------|-------------------|------------|-------------|-------------------------|-------------------------|------------|------------|-----------------------------|--|--|----------------------|----------------------|-----------|-------------------|--|-----|--|----------|-----------|------------------|--|-----|--|---------|-----------|----------------|---|------------|--|------------|-----------|---------------|-----------|---|--|------------|-----------------------|--|-------------|-----------|--|-------------|----------------------|---|---|-----------|--------------------------------|------------------|---------------------|--|---|-----------|------------------------------|------------------------------|----------------------|---|------------------------------|-----------|---|----------------------------|---------------------|--|--------------------------|--|--|--|--------------------|---|--|--|-------------------|--|---------------------|---|------------------|--|-------------------|--|-----------------|---|--|--|--|--|-------------|--|--|--|--|--|----------------|--|--|--|
| | X1647 SCHEMATIC / PCB #'S | | | | | | | | | | | | | | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>051-04826</td><td>1</td><td>SCHEM_MLB_NAVI10,X1647</td><td>SCH1</td><td>CRITICAL</td><td>X1647</td></tr><tr><td>820-01823</td><td>1</td><td>PCBF_MLB_NAVI10,X1647</td><td>PCB1</td><td>CRITICAL</td><td>X1647</td></tr><tr><td>685-00316</td><td>1</td><td>PCBA_COMMON,PARTS_MLB_NAVI10,X1647</td><td>CMNP1S</td><td>CRITICAL</td><td>MLB_CMNP1S</td></tr><tr><td>685-00343</td><td>1</td><td>ITLC,SSD PARTS_NAVI10,4L_S4E,X1647</td><td>SSD_S4E_4L</td><td></td><td>4L_S4E</td></tr><tr><td>685-00345</td><td>1</td><td>ITLC,SSD PARTS_NAVI10,4L_S5E,X1647</td><td>SSD_S5E_4L</td><td></td><td>4L_S5E</td></tr><tr><td>685-00362</td><td>1</td><td>ENET PARTS_NAVI10,10G_ENET,X1647</td><td>10G_ENET</td><td></td><td>10G_ENET</td></tr><tr><td>685-00363</td><td>1</td><td>ENETPARTS_NAVI10,1G_ENET,X1647</td><td>1G_ENET</td><td></td><td>1G_ENET</td></tr></table> | | | | | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 051-04826 | 1 | SCHEM_MLB_NAVI10,X1647 | SCH1 | | CRITICAL | X1647 | 820-01823 | 1 | PCBF_MLB_NAVI10,X1647 | PCB1 | CRITICAL | X1647 | 685-00316 | 1 | PCBA_COMMON,PARTS_MLB_NAVI10,X1647 | CMNP1S | CRITICAL | MLB_CMNP1S | 685-00343 | 1 | ITLC,SSD PARTS_NAVI10,4L_S4E,X1647 | SSD_S4E_4L | | 4L_S4E | 685-00345 | 1 | ITLC,SSD PARTS_NAVI10,4L_S5E,X1647 | SSD_S5E_4L | | 4L_S5E | 685-00362 | 1 | ENET PARTS_NAVI10,10G_ENET,X1647 | 10G_ENET | | 10G_ENET | 685-00363 | 1 | ENETPARTS_NAVI10,1G_ENET,X1647 | 1G_ENET | | 1G_ENET | <table><tr><th>BOM GROUP</th><th colspan="5">BOM OPTIONS</th></tr><tr><td>X1647_COMMON</td><td colspan="5">COMMON,ALTERNATE,X1647_PROGPARTS,1V8_AUDIO,DLY:N,PEG:REVERSE,LDO_CLIFDEN,NO_LDO_CLIFDEN,RF:TUNE</td></tr><tr><td>X1647_COMMON2</td><td colspan="5">X1647,C10:NO,PWR_SEQUENCE:SMC,SE:PROD,XDP:YES,WIFI:MURATA,BOARDREV_P1</td></tr><tr><td>X1647_PROGPARTS</td><td colspan="5">TBTR0M:PROG,WIFI_ROM:PROG,BT_ROM:PROG,SD_ROM:PROG</td></tr><tr><td>X1647_DEVEL</td><td colspan="5">DEVELOPMENT,SSD_DBG,XDP_CONN,UPC_DBG_HDR,DEBUG,DEBUG_LEDS,DBG_LED,SOC_DBG:YES,BOOTCFG0</td></tr><tr><td>X1647_SPECIFIC</td><td colspan="5">BOARDID5,BOARDID1,BOARDID0NAVI10 BOARDID: 100011</td></tr></table> | | | | | | | | | | BOM GROUP | BOM OPTIONS | | | | | X1647_COMMON | COMMON,ALTERNATE,X1647_PROGPARTS,1V8_AUDIO,DLY:N,PEG:REVERSE,LDO_CLIFDEN,NO_LDO_CLIFDEN,RF:TUNE | | | | | X1647_COMMON2 | X1647,C10:NO,PWR_SEQUENCE:SMC,SE:PROD,XDP:YES,WIFI:MURATA,BOARDREV_P1 | | | | | X1647_PROGPARTS | TBTR0M:PROG,WIFI_ROM:PROG,BT_ROM:PROG,SD_ROM:PROG | | | | | X1647_DEVEL | DEVELOPMENT,SSD_DBG,XDP_CONN,UPC_DBG_HDR,DEBUG,DEBUG_LEDS,DBG_LED,SOC_DBG:YES,BOOTCFG0 | | | | | X1647_SPECIFIC | BOARDID5,BOARDID1,BOARDID0NAVI10 BOARDID: 100011 | | |
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 051-04826 | 1 | SCHEM_MLB_NAVI10,X1647 | SCH1 | CRITICAL | X1647 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 820-01823 | 1 | PCBF_MLB_NAVI10,X1647 | PCB1 | CRITICAL | X1647 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00316 | 1 | PCBA_COMMON,PARTS_MLB_NAVI10,X1647 | CMNP1S | CRITICAL | MLB_CMNP1S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00343 | 1 | ITLC,SSD PARTS_NAVI10,4L_S4E,X1647 | SSD_S4E_4L | | 4L_S4E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00345 | 1 | ITLC,SSD PARTS_NAVI10,4L_S5E,X1647 | SSD_S5E_4L | | 4L_S5E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00362 | 1 | ENET PARTS_NAVI10,10G_ENET,X1647 | 10G_ENET | | 10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00363 | 1 | ENETPARTS_NAVI10,1G_ENET,X1647 | 1G_ENET | | 1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOM GROUP | BOM OPTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X1647_COMMON | COMMON,ALTERNATE,X1647_PROGPARTS,1V8_AUDIO,DLY:N,PEG:REVERSE,LDO_CLIFDEN,NO_LDO_CLIFDEN,RF:TUNE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X1647_COMMON2 | X1647,C10:NO,PWR_SEQUENCE:SMC,SE:PROD,XDP:YES,WIFI:MURATA,BOARDREV_P1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X1647_PROGPARTS | TBTR0M:PROG,WIFI_ROM:PROG,BT_ROM:PROG,SD_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X1647_DEVEL | DEVELOPMENT,SSD_DBG,XDP_CONN,UPC_DBG_HDR,DEBUG,DEBUG_LEDS,DBG_LED,SOC_DBG:YES,BOOTCFG0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X1647_SPECIFIC | BOARDID5,BOARDID1,BOARDID0NAVI10 BOARDID: 100011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | GPU PROGRAMMABLE | | | | | | | | | | | | | | | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>341S01566</td><td>1</td><td>ROM_VBIOS_NAVI10-XTMA,GPU[V002]P1,X1647</td><td>UD200</td><td>CRITICAL</td><td>GPU_XTMA_ROM:PROG</td></tr><tr><td>341S01567</td><td>1</td><td>ROM_VBIOS_NAVI10-XGA,GPU[V002]P1,X1647</td><td>UD200</td><td>CRITICAL</td><td>GPU_XGA_ROM:PROG</td></tr><tr><td>335S00232</td><td>1</td><td>IC_GPU_SERIAL_FLASH,BWBITV,1.0V,0008</td><td>UD200</td><td>CRITICAL</td><td>GPU_ROM:BLANK</td></tr></table> | | | | | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 341S01566 | 1 | ROM_VBIOS_NAVI10-XTMA,GPU[V002]P1,X1647 | UD200 | | CRITICAL | GPU_XTMA_ROM:PROG | 341S01567 | 1 | ROM_VBIOS_NAVI10-XGA,GPU[V002]P1,X1647 | UD200 | CRITICAL | GPU_XGA_ROM:PROG | 335S00232 | 1 | IC_GPU_SERIAL_FLASH,BWBITV,1.0V,0008 | UD200 | CRITICAL | GPU_ROM:BLANK | <table><tr><th>BOM NUMBER</th><th>BOM NAME</th><th>BOM OPTIONS</th></tr><tr><td>985-01183</td><td>PCBA_MLB_NAVI10_DEV,X1647</td><td>X1647_DEVEL</td></tr><tr><td>685-00316</td><td>PCBA_COMMON PARTS_MLB_NAVI10,X1647</td><td>X1647_COMMON,X1647_COMMON2,X1647_SPECIFIC</td></tr><tr><td>685-00342</td><td>PCBA_MLB_NAVI10,2L_S4E,X1647</td><td>SSD0_2L,SSD0_S4E</td></tr><tr><td>685-00343</td><td>PCBA_MLB_NAVI10,4L_S4E,X1647</td><td>SSD0_4L,SSD0_S4E,SSD0_S4E_4L</td></tr><tr><td>685-00344</td><td>PCBA_MLB_NAVI10,2L_S5E,X1647</td><td>SSD0_2L,SSD0_S5E,SSD0_S5E_2L</td></tr><tr><td>685-00345</td><td>PCBA_MLB_NAV10,4L_S5E,X1647</td><td>SSD0_4L,SSD0_S5E,SSD0_S5E_4L</td></tr><tr><td>685-00362</td><td>PCBA_MLB_NAVI10,10G_ENET,X1647</td><td>ENET:10G,10G_ENET_ROM:PROG</td></tr><tr><td>685-00363</td><td>PCBA_MLB_NAVI10,1G_ENET,X1647</td><td>ENET:1G,1G_ENET_ROM:PROG</td></tr></table> | | | | | | | | | | BOM NUMBER | BOM NAME | BOM OPTIONS | 985-01183 | PCBA_MLB_NAVI10_DEV,X1647 | X1647_DEVEL | 685-00316 | PCBA_COMMON PARTS_MLB_NAVI10,X1647 | X1647_COMMON,X1647_COMMON2,X1647_SPECIFIC | 685-00342 | PCBA_MLB_NAVI10,2L_S4E,X1647 | SSD0_2L,SSD0_S4E | 685-00343 | PCBA_MLB_NAVI10,4L_S4E,X1647 | SSD0_4L,SSD0_S4E,SSD0_S4E_4L | 685-00344 | PCBA_MLB_NAVI10,2L_S5E,X1647 | SSD0_2L,SSD0_S5E,SSD0_S5E_2L | 685-00345 | PCBA_MLB_NAV10,4L_S5E,X1647 | SSD0_4L,SSD0_S5E,SSD0_S5E_4L | 685-00362 | PCBA_MLB_NAVI10,10G_ENET,X1647 | ENET:10G,10G_ENET_ROM:PROG | 685-00363 | PCBA_MLB_NAVI10,1G_ENET,X1647 | ENET:1G,1G_ENET_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 341S01566 | 1 | ROM_VBIOS_NAVI10-XTMA,GPU[V002]P1,X1647 | UD200 | CRITICAL | GPU_XTMA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 341S01567 | 1 | ROM_VBIOS_NAVI10-XGA,GPU[V002]P1,X1647 | UD200 | CRITICAL | GPU_XGA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00232 | 1 | IC_GPU_SERIAL_FLASH,BWBITV,1.0V,0008 | UD200 | CRITICAL | GPU_ROM:BLANK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOM NUMBER | BOM NAME | BOM OPTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 985-01183 | PCBA_MLB_NAVI10_DEV,X1647 | X1647_DEVEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00316 | PCBA_COMMON PARTS_MLB_NAVI10,X1647 | X1647_COMMON,X1647_COMMON2,X1647_SPECIFIC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00342 | PCBA_MLB_NAVI10,2L_S4E,X1647 | SSD0_2L,SSD0_S4E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00343 | PCBA_MLB_NAVI10,4L_S4E,X1647 | SSD0_4L,SSD0_S4E,SSD0_S4E_4L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00344 | PCBA_MLB_NAVI10,2L_S5E,X1647 | SSD0_2L,SSD0_S5E,SSD0_S5E_2L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00345 | PCBA_MLB_NAV10,4L_S5E,X1647 | SSD0_4L,SSD0_S5E,SSD0_S5E_4L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00362 | PCBA_MLB_NAVI10,10G_ENET,X1647 | ENET:10G,10G_ENET_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 685-00363 | PCBA_MLB_NAVI10,1G_ENET,X1647 | ENET:1G,1G_ENET_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | GPU | | | | | | | | | | | | | | | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>337S00771</td><td>1</td><td>GPU_AMD_NAVI10,XTMA,A2,S5,BOARD1928</td><td>UC000</td><td>CRITICAL</td><td>GPU_SKU:XTMA</td></tr><tr><td>337S00772</td><td>1</td><td>GPU_AMD_NAVI10,XGA,A2,S5,BOARD1928</td><td>UC000</td><td>CRITICAL</td><td>GPU_SKU:XGA</td></tr></table> | | | | | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 337S00771 | 1 | GPU_AMD_NAVI10,XTMA,A2,S5,BOARD1928 | UC000 | | CRITICAL | GPU_SKU:XTMA | 337S00772 | 1 | GPU_AMD_NAVI10,XGA,A2,S5,BOARD1928 | UC000 | CRITICAL | GPU_SKU:XGA | <table><tr><th>BOM GROUP</th><th colspan="5">BOM OPTIONS</th></tr><tr><td>NV10_XTA_16GB_SAMSUNG</td><td colspan="5">GPU_SKU:XTMA,FB:16GB_SAMSUNG,GPU_XTMA_ROM:PROG</td></tr><tr><td>NV10_XTA_16GB_MICRON</td><td colspan="5">GPU_SKU:XTMA,FB:16GB_MICRON,GPU_XTMA_ROM:PROG</td></tr><tr><td>NV10_XTA_16GB_HYNIX</td><td colspan="5">GPU_SKU:XTMA,FB:16GB_HYNIX,GPU_XTMA_ROM:PROG</td></tr><tr><td>NV10_XGA_8GB_SAMSUNG</td><td colspan="5">GPU_SKU:XGA,FB:8GB_SAMSUNG,GPU_XGA_ROM:PROG</td></tr><tr><td>NV10_XGA_8GB_MICRON</td><td colspan="5">GPU_SKU:XGA,FB:8GB_MICRON,GPU_XGA_ROM:PROG</td></tr><tr><td>NV10_XGA_8GB_HYNIX</td><td colspan="5">GPU_SKU:XGA,FB:8GB_HYNIX,GPU_XGA_ROM:PROG</td></tr></table> | | | | | | | | | | BOM GROUP | BOM OPTIONS | | | | | NV10_XTA_16GB_SAMSUNG | GPU_SKU:XTMA,FB:16GB_SAMSUNG,GPU_XTMA_ROM:PROG | | | | | NV10_XTA_16GB_MICRON | GPU_SKU:XTMA,FB:16GB_MICRON,GPU_XTMA_ROM:PROG | | | | | NV10_XTA_16GB_HYNIX | GPU_SKU:XTMA,FB:16GB_HYNIX,GPU_XTMA_ROM:PROG | | | | | NV10_XGA_8GB_SAMSUNG | GPU_SKU:XGA,FB:8GB_SAMSUNG,GPU_XGA_ROM:PROG | | | | | NV10_XGA_8GB_MICRON | GPU_SKU:XGA,FB:8GB_MICRON,GPU_XGA_ROM:PROG | | | | | NV10_XGA_8GB_HYNIX | GPU_SKU:XGA,FB:8GB_HYNIX,GPU_XGA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 337S00771 | 1 | GPU_AMD_NAVI10,XTMA,A2,S5,BOARD1928 | UC000 | CRITICAL | GPU_SKU:XTMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 337S00772 | 1 | GPU_AMD_NAVI10,XGA,A2,S5,BOARD1928 | UC000 | CRITICAL | GPU_SKU:XGA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOM GROUP | BOM OPTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NV10_XTA_16GB_SAMSUNG | GPU_SKU:XTMA,FB:16GB_SAMSUNG,GPU_XTMA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NV10_XTA_16GB_MICRON | GPU_SKU:XTMA,FB:16GB_MICRON,GPU_XTMA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NV10_XTA_16GB_HYNIX | GPU_SKU:XTMA,FB:16GB_HYNIX,GPU_XTMA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NV10_XGA_8GB_SAMSUNG | GPU_SKU:XGA,FB:8GB_SAMSUNG,GPU_XGA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NV10_XGA_8GB_MICRON | GPU_SKU:XGA,FB:8GB_MICRON,GPU_XGA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NV10_XGA_8GB_HYNIX | GPU_SKU:XGA,FB:8GB_HYNIX,GPU_XGA_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | VRAM | | | | | | | | | | | | | | | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>333S00223</td><td>8</td><td>IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,S,80180</td><td></td><td>CRITICAL</td><td>FB:8GB_HYNIX</td></tr><tr><td>333S00209</td><td>8</td><td>IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,M,80180</td><td></td><td>CRITICAL</td><td>FB:8GB_MICRON</td></tr><tr><td>333S00210</td><td>8</td><td>IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,S,80180</td><td></td><td>CRITICAL</td><td>FB:8GB_SAMSUNG</td></tr><tr><td>333S00211</td><td>8</td><td>IC_GDDR6,16GBIT,14GBPS,1.35V,18NM,S,8180</td><td></td><td>CRITICAL</td><td>FB:16GB_HYNIX</td></tr><tr><td>333S00212</td><td>8</td><td>IC_GDDR6,16GBIT,14GBPS,1.35V,18NM,M,8180</td><td></td><td>CRITICAL</td><td>FB:16GB_MICRON</td></tr><tr><td>333S00213</td><td>8</td><td>IC_GDDR6,16GBIT,14GBPS,1.35V,18NM,S,8180</td><td></td><td>CRITICAL</td><td>FB:16GB_SAMSUNG</td></tr></table> | | | | | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 333S00223 | 8 | IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,S,80180 | | | CRITICAL | FB:8GB_HYNIX | 333S00209 | 8 | IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,M,80180 | | CRITICAL | FB:8GB_MICRON | 333S00210 | 8 | IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,S,80180 | | CRITICAL | FB:8GB_SAMSUNG | 333S00211 | 8 | IC_GDDR6,16GBIT,14GBPS,1.35V,18NM,S,8180 | | CRITICAL | FB:16GB_HYNIX | 333S00212 | 8 | IC_GDDR6,16GBIT,14GBPS,1.35V,18NM,M,8180 | | CRITICAL | FB:16GB_MICRON | 333S00213 | 8 | IC_GDDR6,16GBIT,14GBPS,1.35V,18NM,S,8180 | | CRITICAL | FB:16GB_SAMSUNG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 333S00223 | 8 | IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,S,80180 | | CRITICAL | FB:8GB_HYNIX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 333S00209 | 8 | IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,M,80180 | | CRITICAL | FB:8GB_MICRON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 333S00210 | 8 | IC_GDDR6,8GBIT,14GBPS,1.35V,18NM,S,80180 | | CRITICAL | FB:8GB_SAMSUNG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 333S00211 | 8 | IC_GDDR6,16GBIT,14GBPS,1.35V,18NM,S,8180 | | CRITICAL | FB:16GB_HYNIX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 333S00213 | 8 | IC_GDDR6,16GBIT,14GBPS,1.35V,18NM,S,8180 | | CRITICAL | FB:16GB_SAMSUNG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPU SKU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>337S00828</td><td>1</td><td>CPU_OEM-S,Q789,Q8-P-0,3,3,8C,65W,140X120</td><td>CPU</td><td>CRITICAL</td><td>CPU:GOOD</td></tr><tr><td>337S00832</td><td>1</td><td>CPU_OEM-S,Q0CK,Q8-P-0,2,9,8C,65W,140X120</td><td>CPU</td><td>CRITICAL</td><td>CPU:BEST</td></tr><tr><td>337S00831</td><td>1</td><td>CPU_OEM-S,Q0CK,Q8-P-0,3,8,8C,125W,11200</td><td>CPU</td><td>CRITICAL</td><td>CPU:ULT</td></tr><tr><td>337S00830</td><td>1</td><td>CPU_OEM-S,Q0NQ,Q8-P-0,3,7,10C,125W,11200</td><td>CPU</td><td>CRITICAL</td><td>CPU:CTO</td></tr></table> | | | | | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 337S00828 | 1 | CPU_OEM-S,Q789,Q8-P-0,3,3,8C,65W,140X120 | CPU | CRITICAL | CPU:GOOD | 337S00832 | 1 | CPU_OEM-S,Q0CK,Q8-P-0,2,9,8C,65W,140X120 | CPU | CRITICAL | CPU:BEST | 337S00831 | 1 | CPU_OEM-S,Q0CK,Q8-P-0,3,8,8C,125W,11200 | CPU | CRITICAL | CPU:ULT | 337S00830 | 1 | CPU_OEM-S,Q0NQ,Q8-P-0,3,7,10C,125W,11200 | CPU | CRITICAL | CPU:CTO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| ALTERNATE PARTS TABLE LOCATED ON CSA 115 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table><tr><td colspan="15">SYNC_MASTER=KRTIHXIA</td><td>SYNC_DATE=05/24/2019</td></tr><tr><td colspan="16">PAGE TITLE</td></tr><tr><td colspan="12"><div> Apple Inc.</div></td><td colspan="2">DRAWING NUMBER 051-04826</td><td>SIZE D</td></tr><tr><td colspan="12" rowspan="4">NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED</td><td colspan="2">REVISION 4.0.0</td></tr><tr><td colspan="2">BRANCH proto-1-b</td></tr><tr><td colspan="2">PAGE 2 OF 172</td></tr><tr><td colspan="2">SHEET 2 OF 149</td></tr></table> | | | | | | | | | | | | | | | | SYNC_MASTER=KRTIHXIA | | | | | | | | | | | | | | | SYNC_DATE=05/24/2019 | PAGE TITLE | | | | | | | | | | | | | | | | <div> Apple Inc.</div> | | | | | | | | | | | | DRAWING NUMBER 051-04826 | | SIZE D | NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | | | | | | | | | | | REVISION 4.0.0 | | BRANCH proto-1-b | | PAGE 2 OF 172 | | SHEET 2 OF 149 | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | SHEET 2 OF 149 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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BRANCH

proto-1-b

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SHEET

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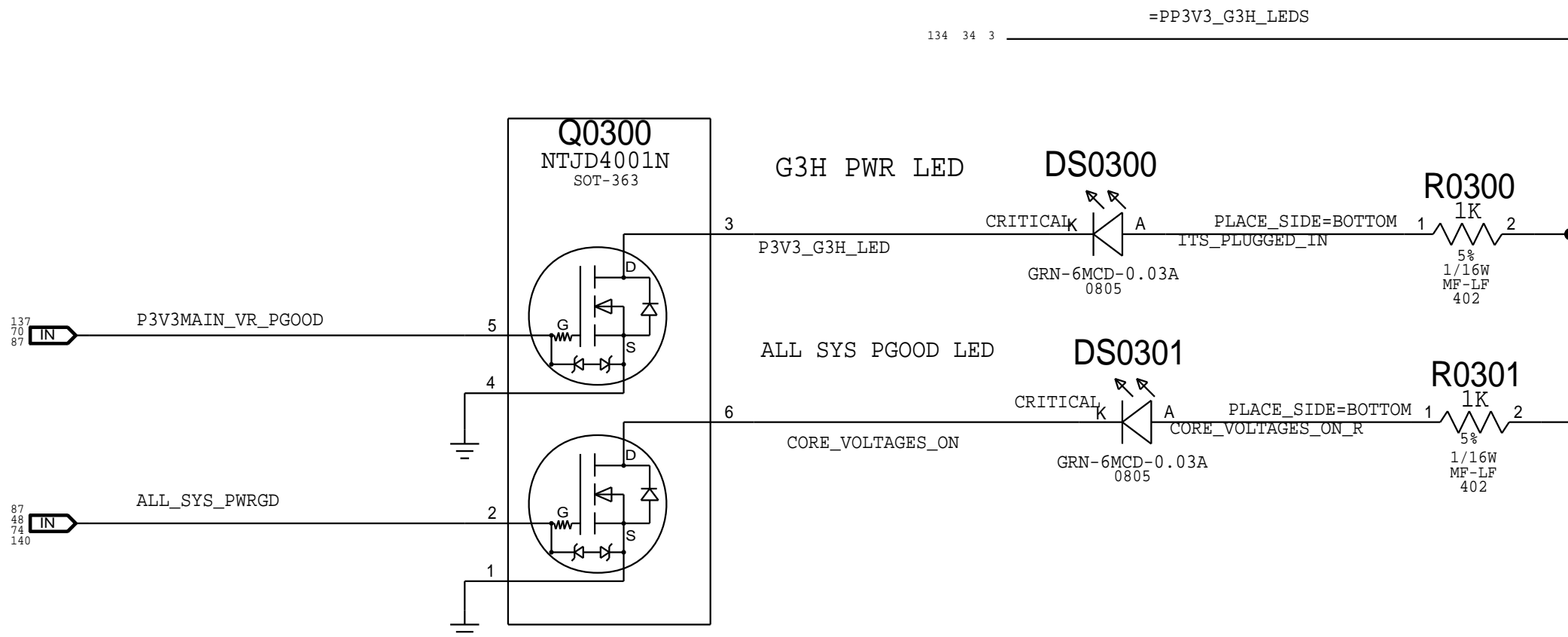
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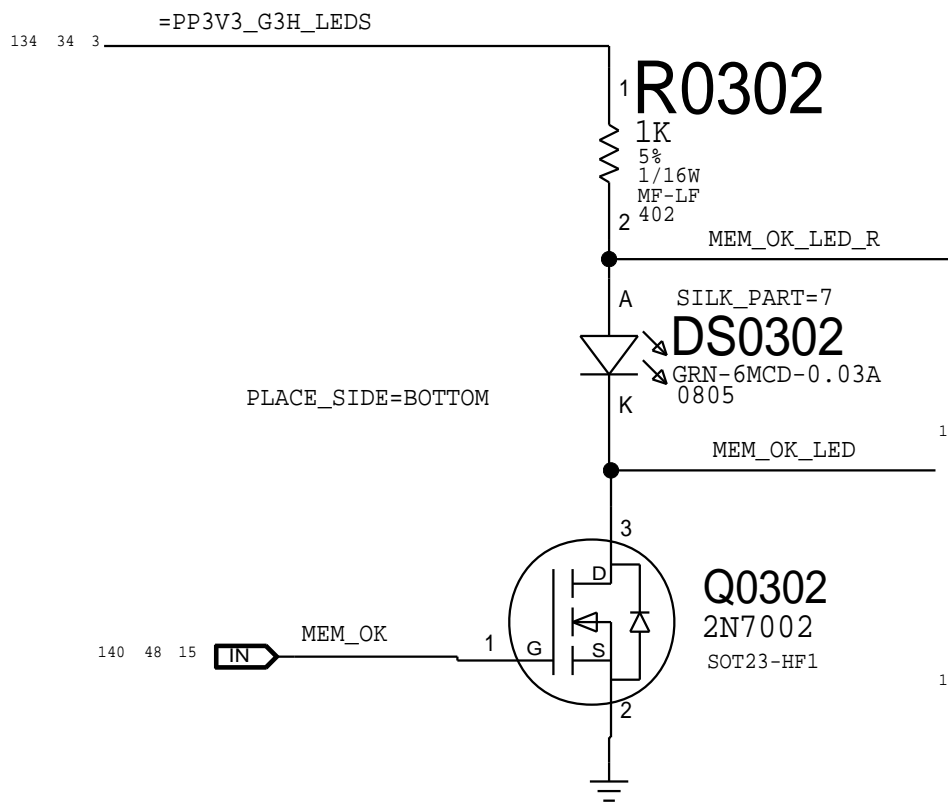
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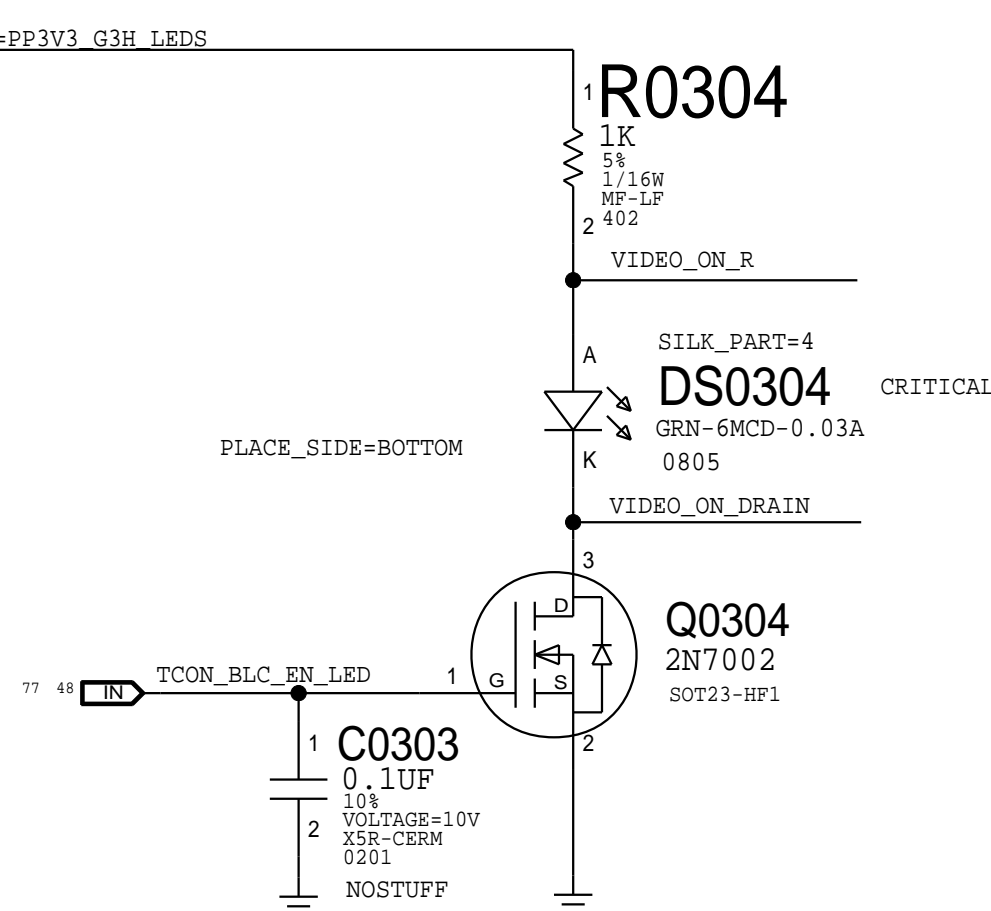
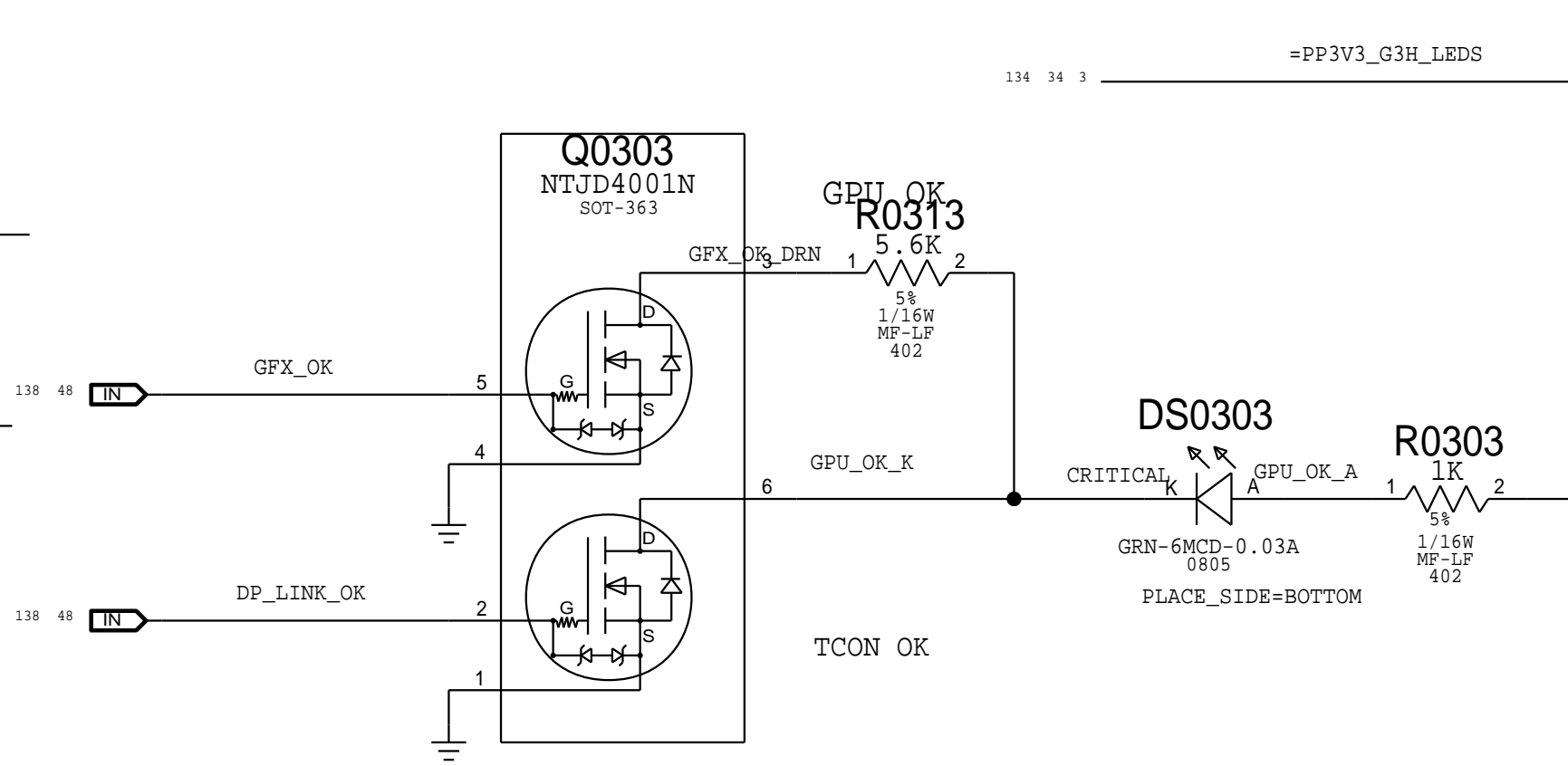
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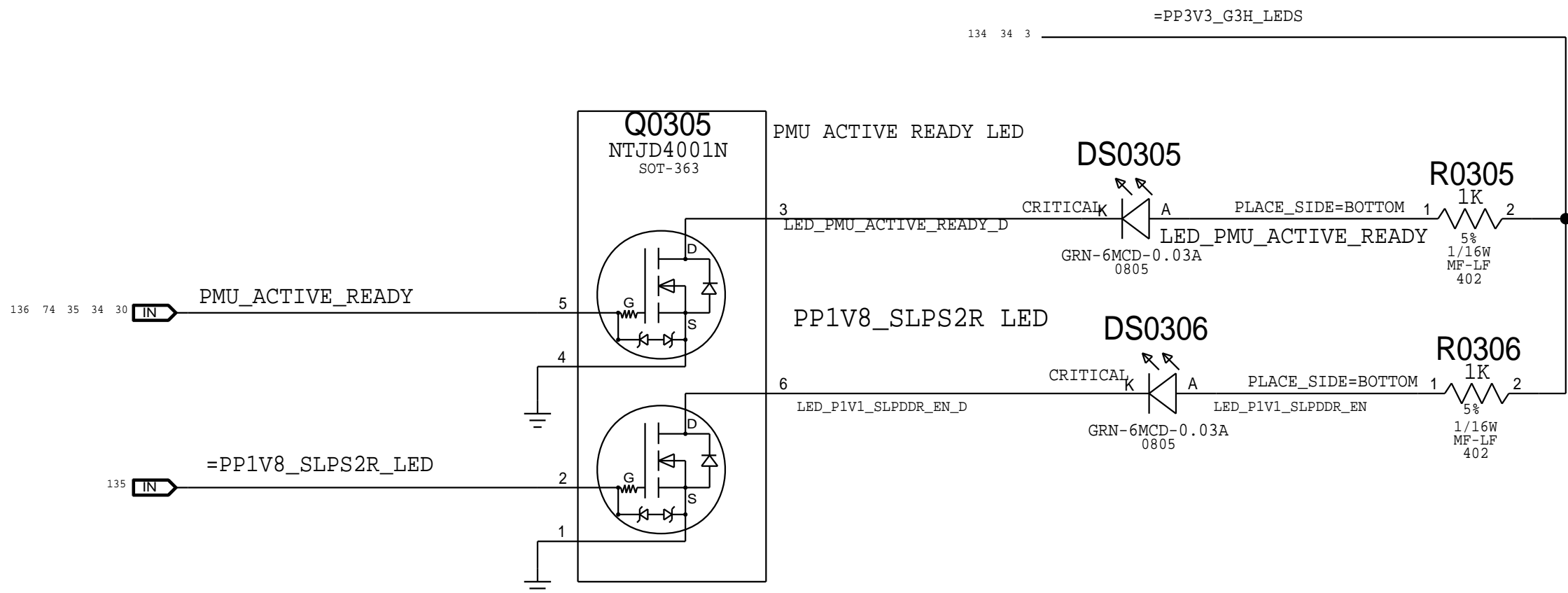
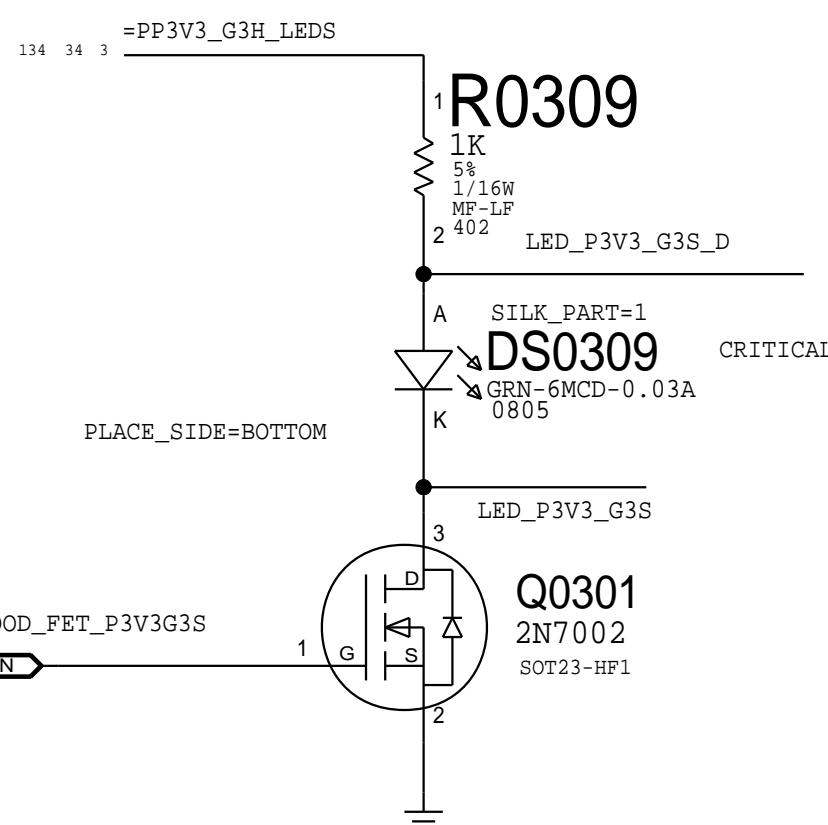
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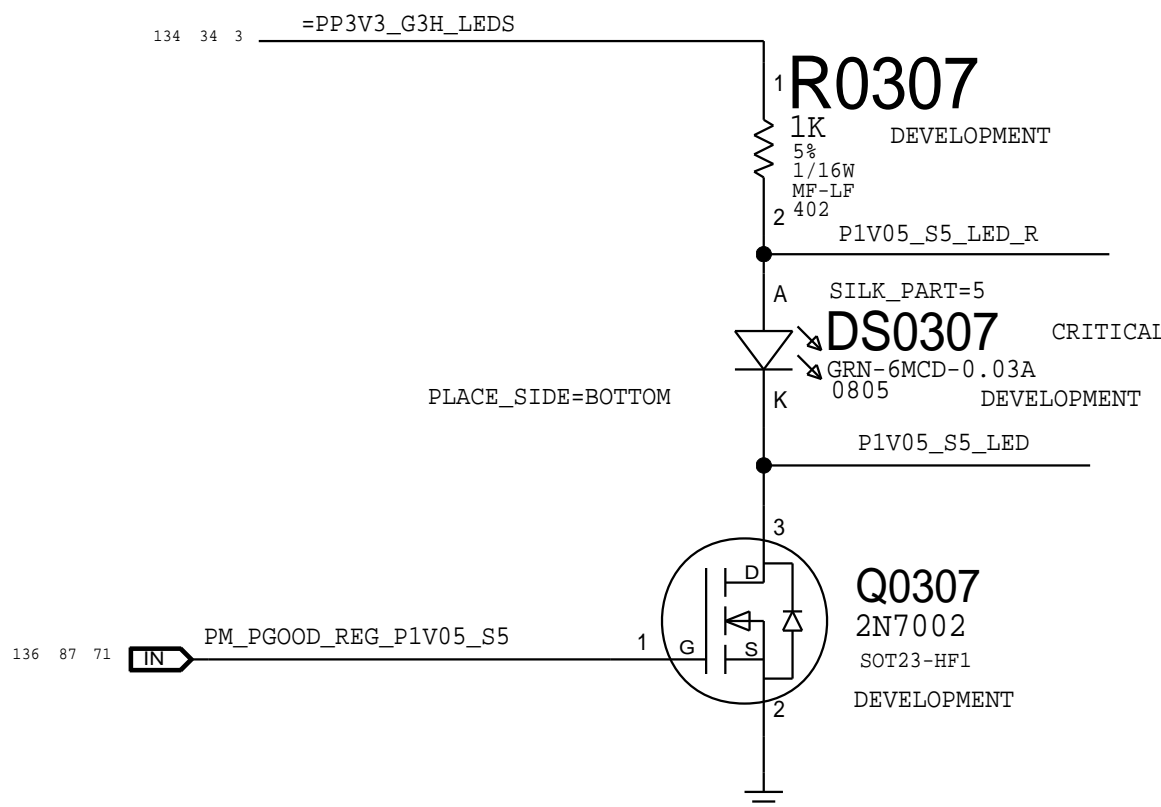


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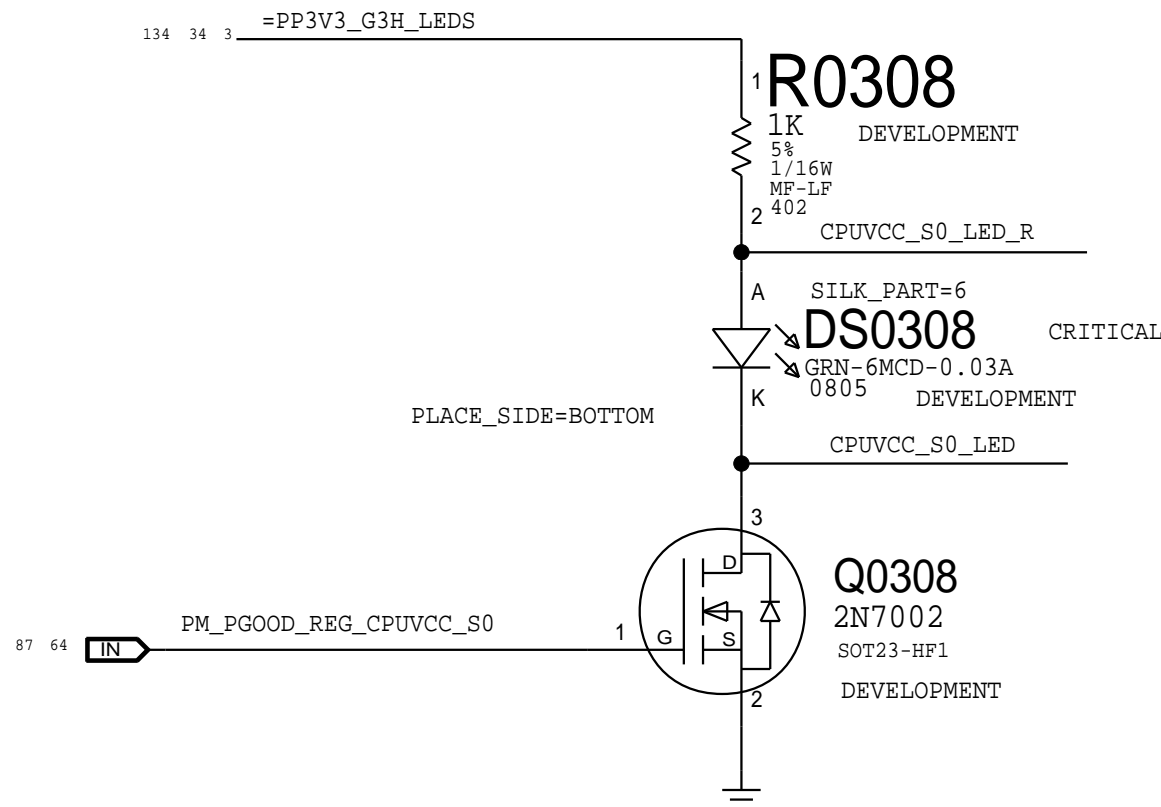


DEBUG LEDS (DEVELOPMENT ONLY)


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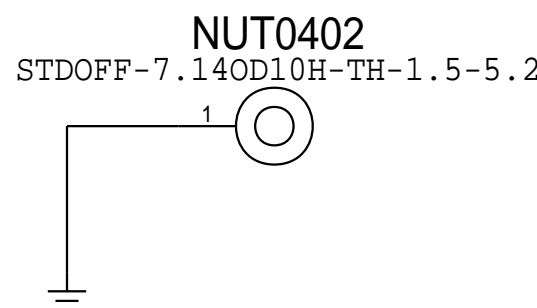
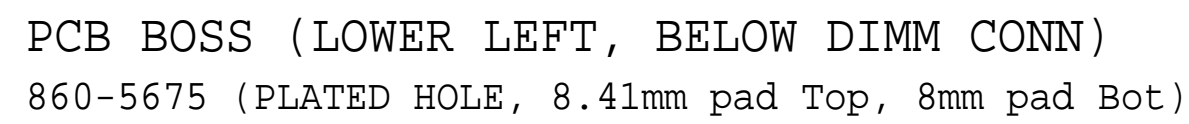
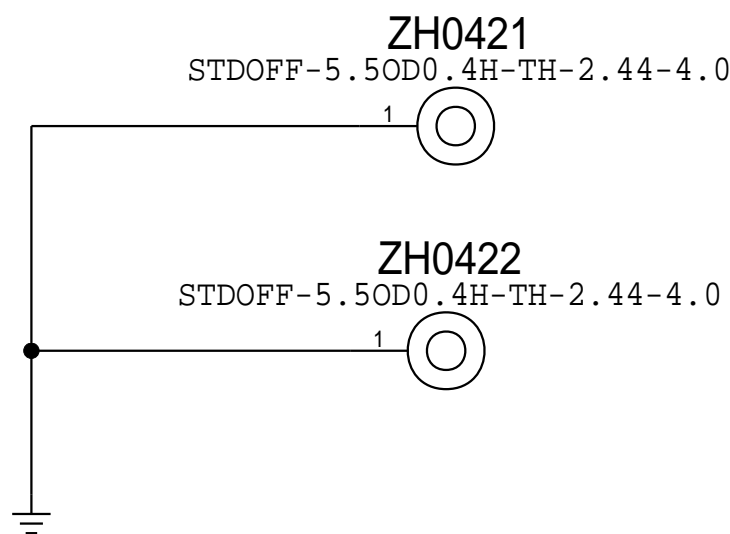
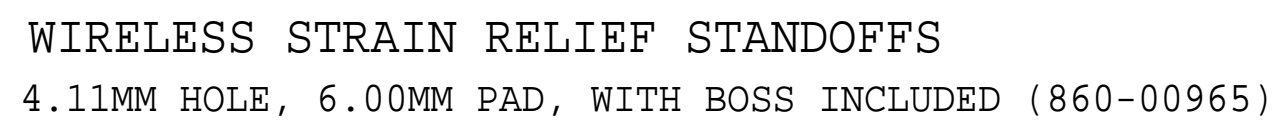
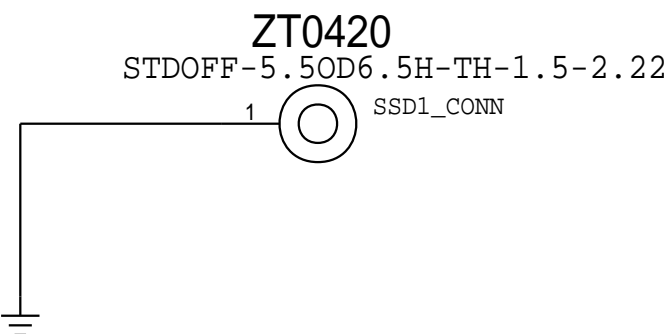
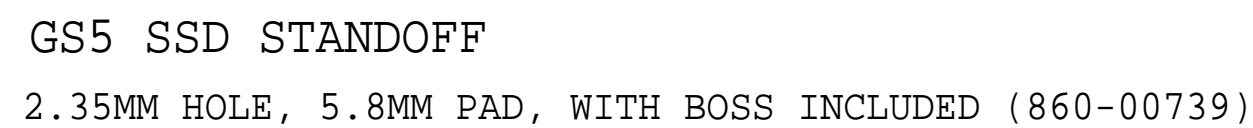
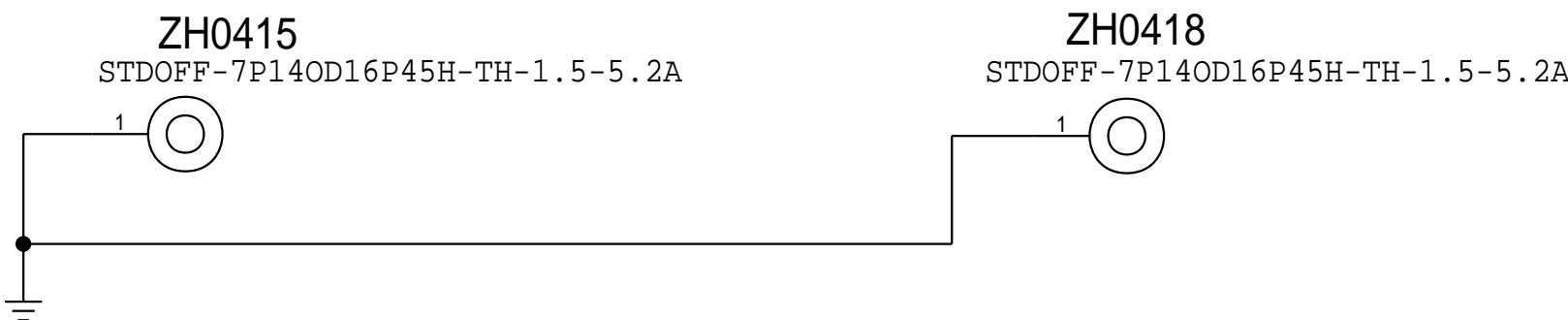
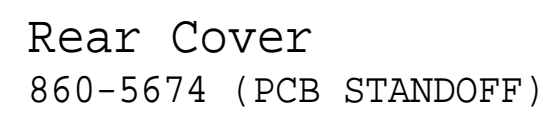
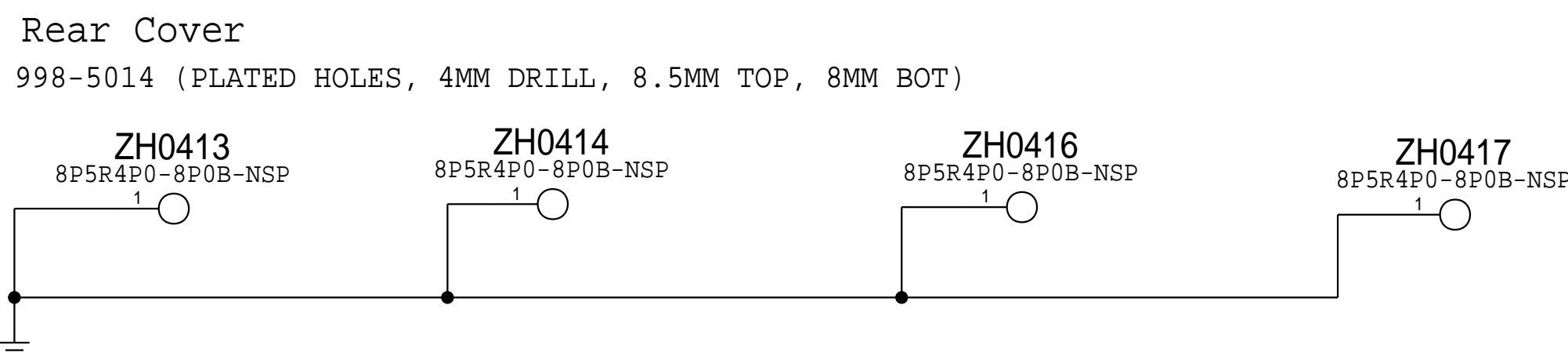
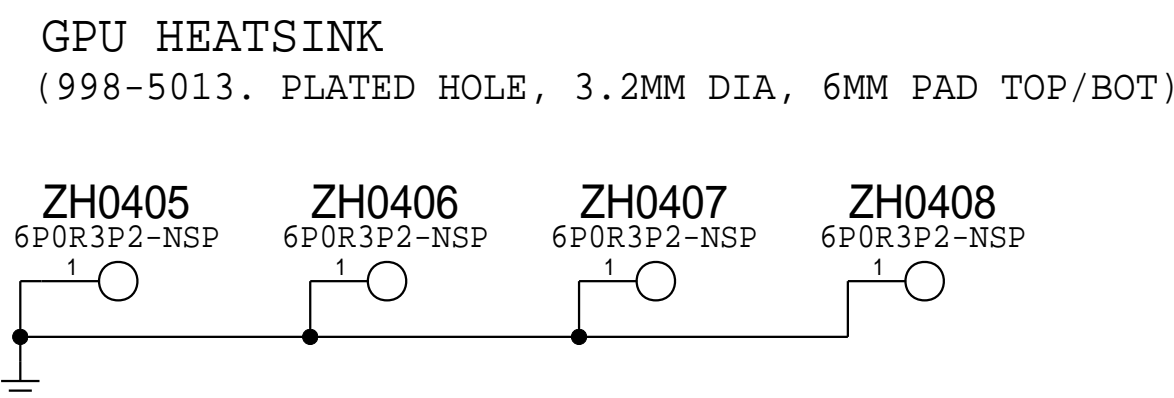
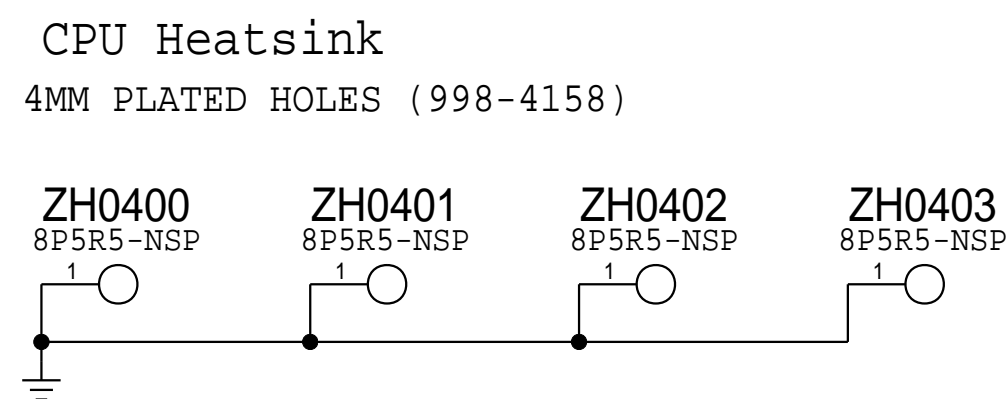


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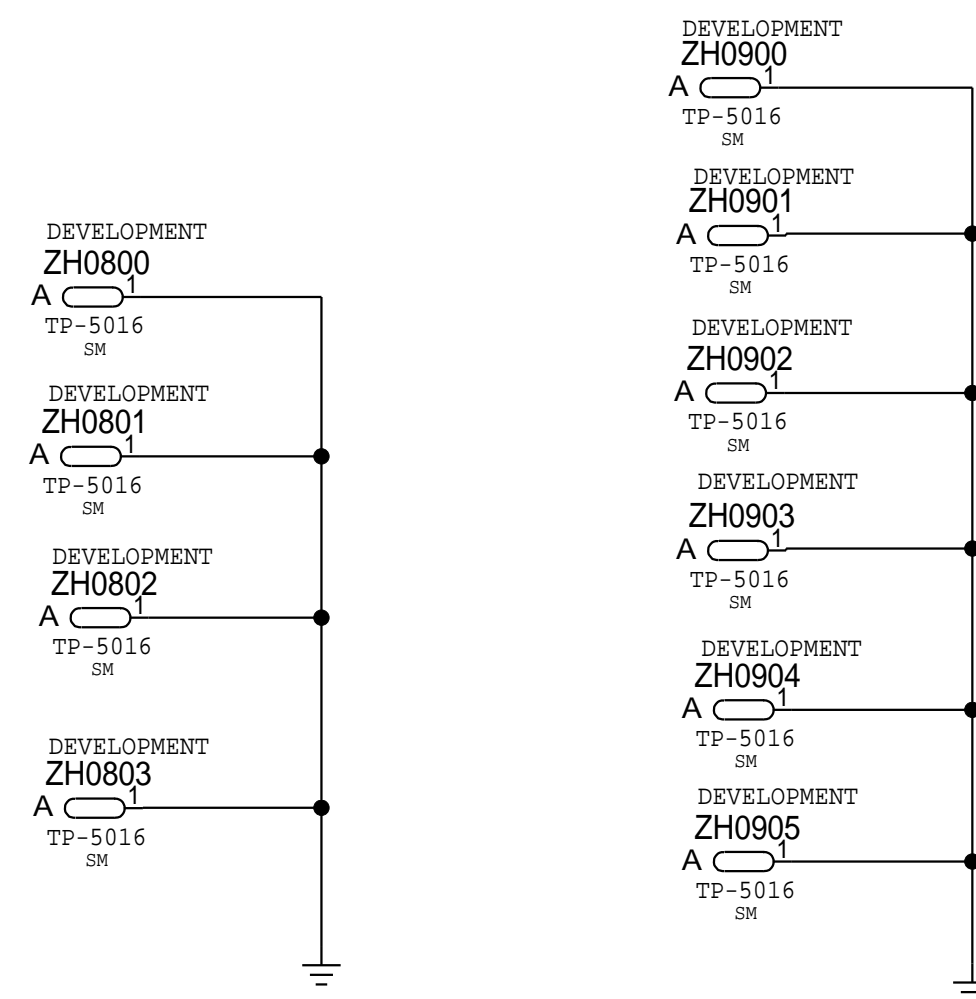
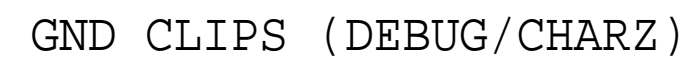



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|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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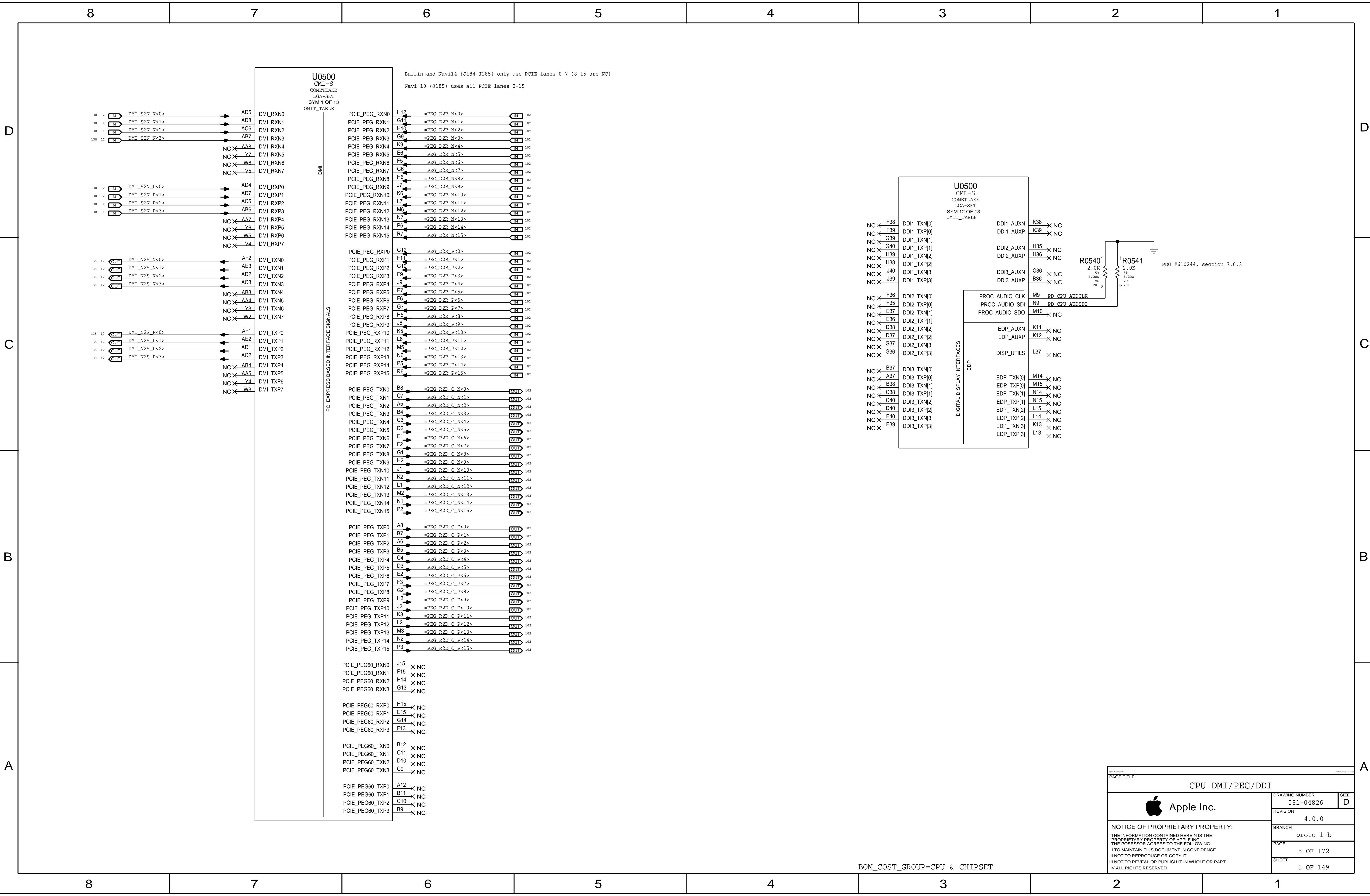



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| 806-16417 | 1 | SHIELD,FENCE,WIFI_SYM,X1214 | AIRPORT_FENCE | |
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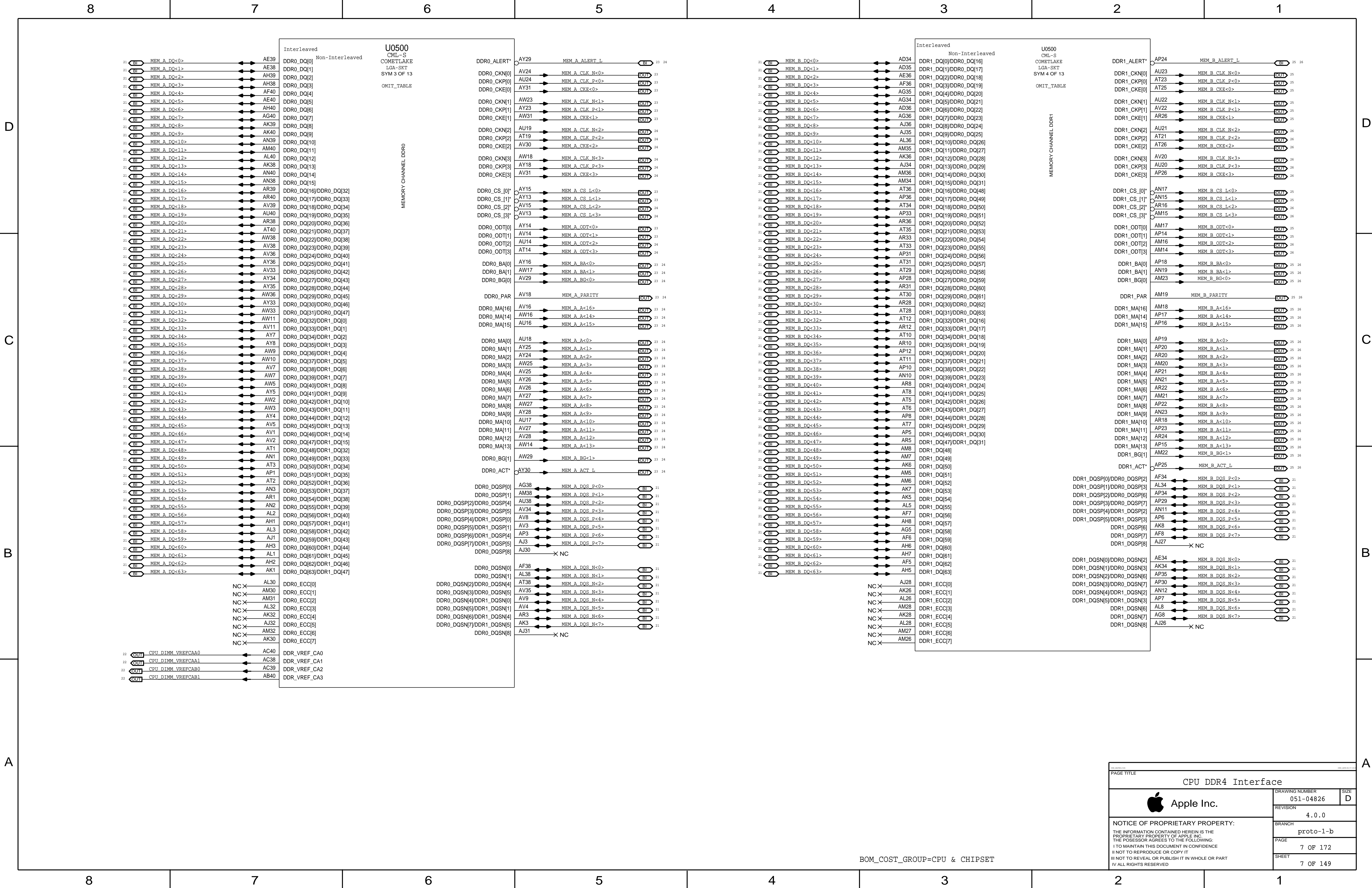
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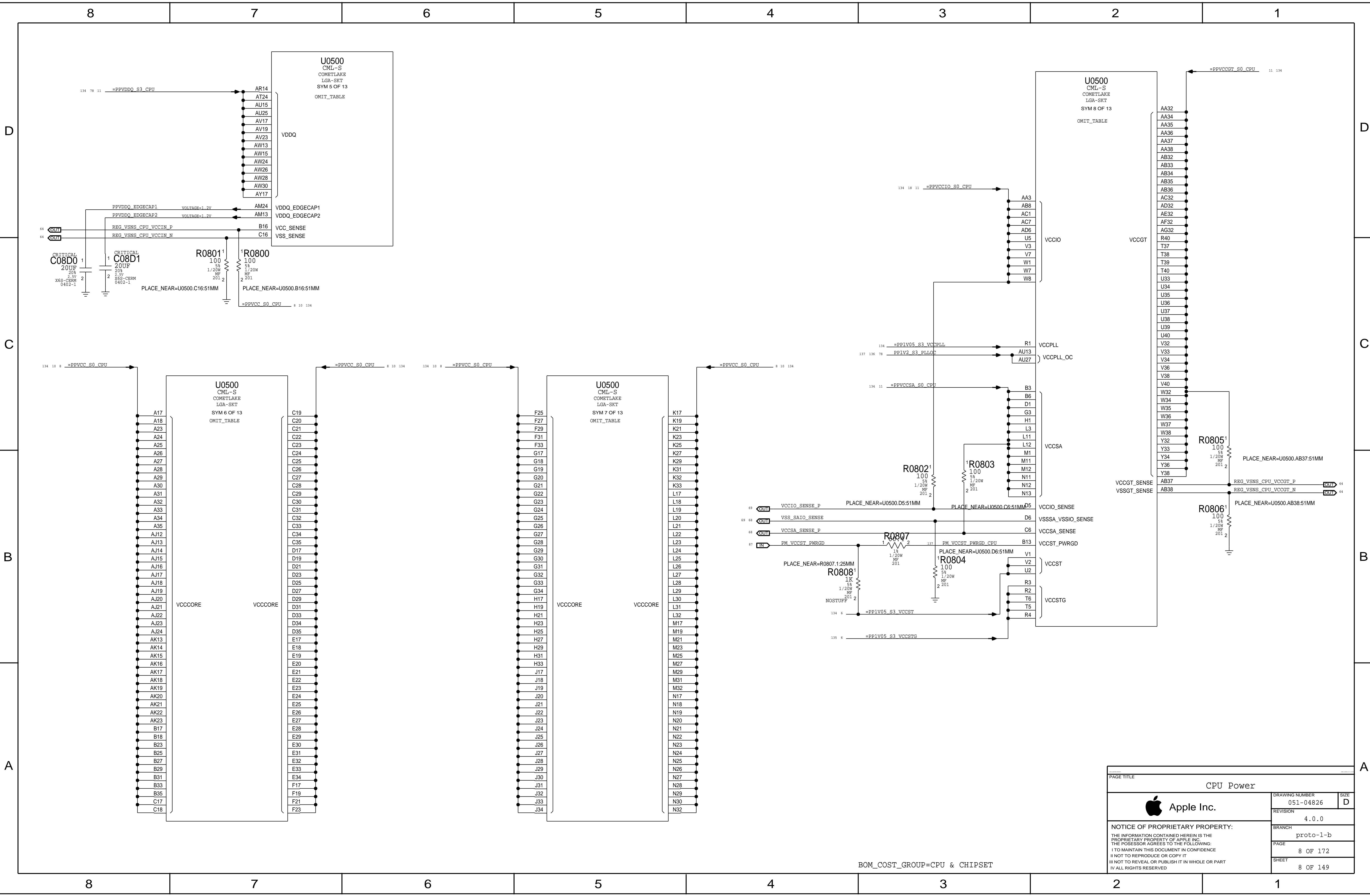
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|  Apple Inc. | DRAWING NUMBER | 051-04826 | |
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| | BRANCH | proto-1-b | |
| | PAGE | 5 OF 172 | |
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BOM_COST_GROUP=CPU & CHIPSET



| | | |
|--|----------------|-----------|
| CPU DDR4 Interface | | |
| | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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| | PAGE | 7 OF 172 |
| | SHEET | 7 OF 149 |

BOM_COST_GROUP=CPU & CHIPSET

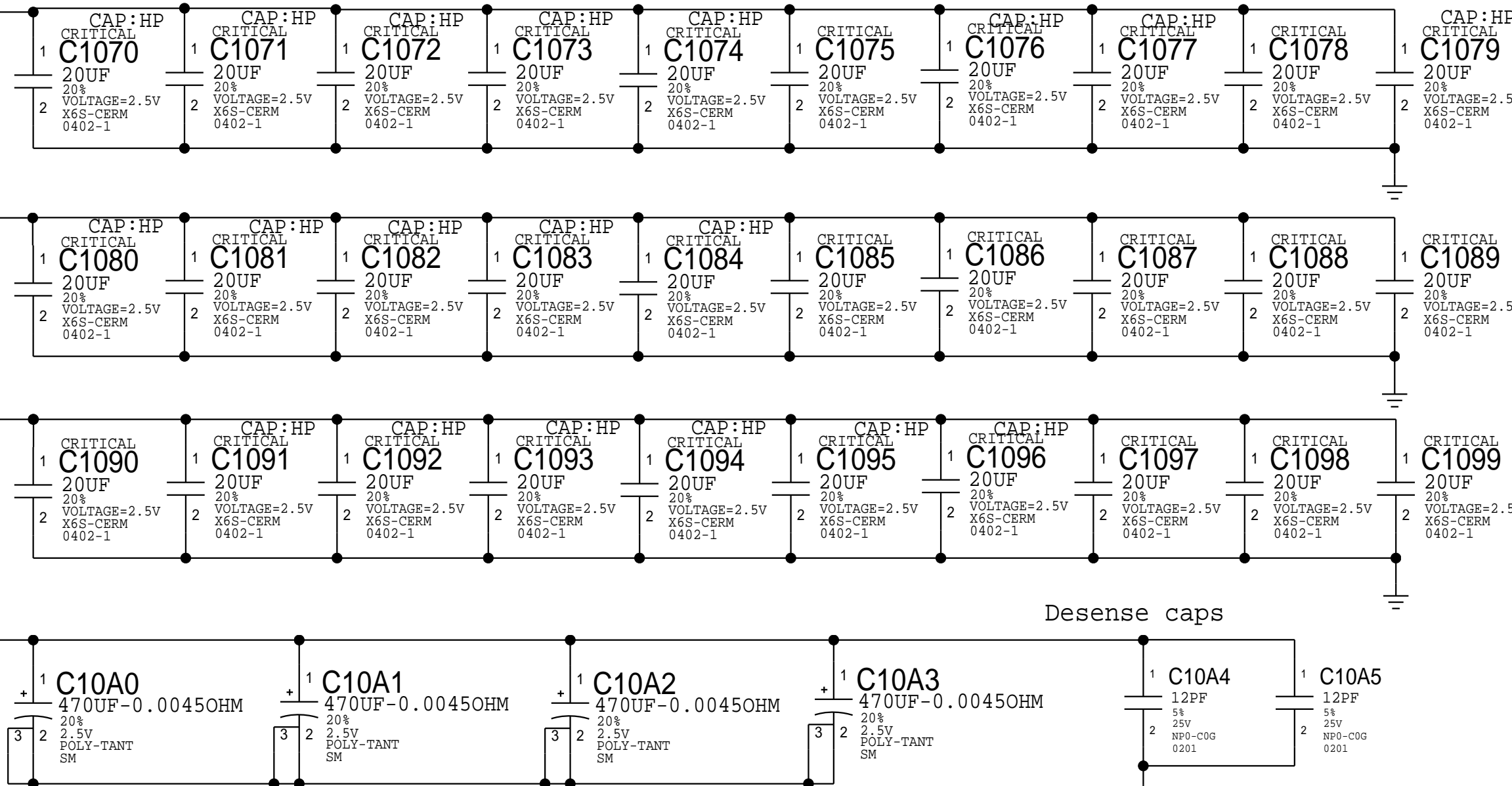



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| PAGE TITLE | | |
| CPU Power | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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| | PAGE | 8 OF 172 |
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BOM_COST_GROUP=CPU & CHIPSET

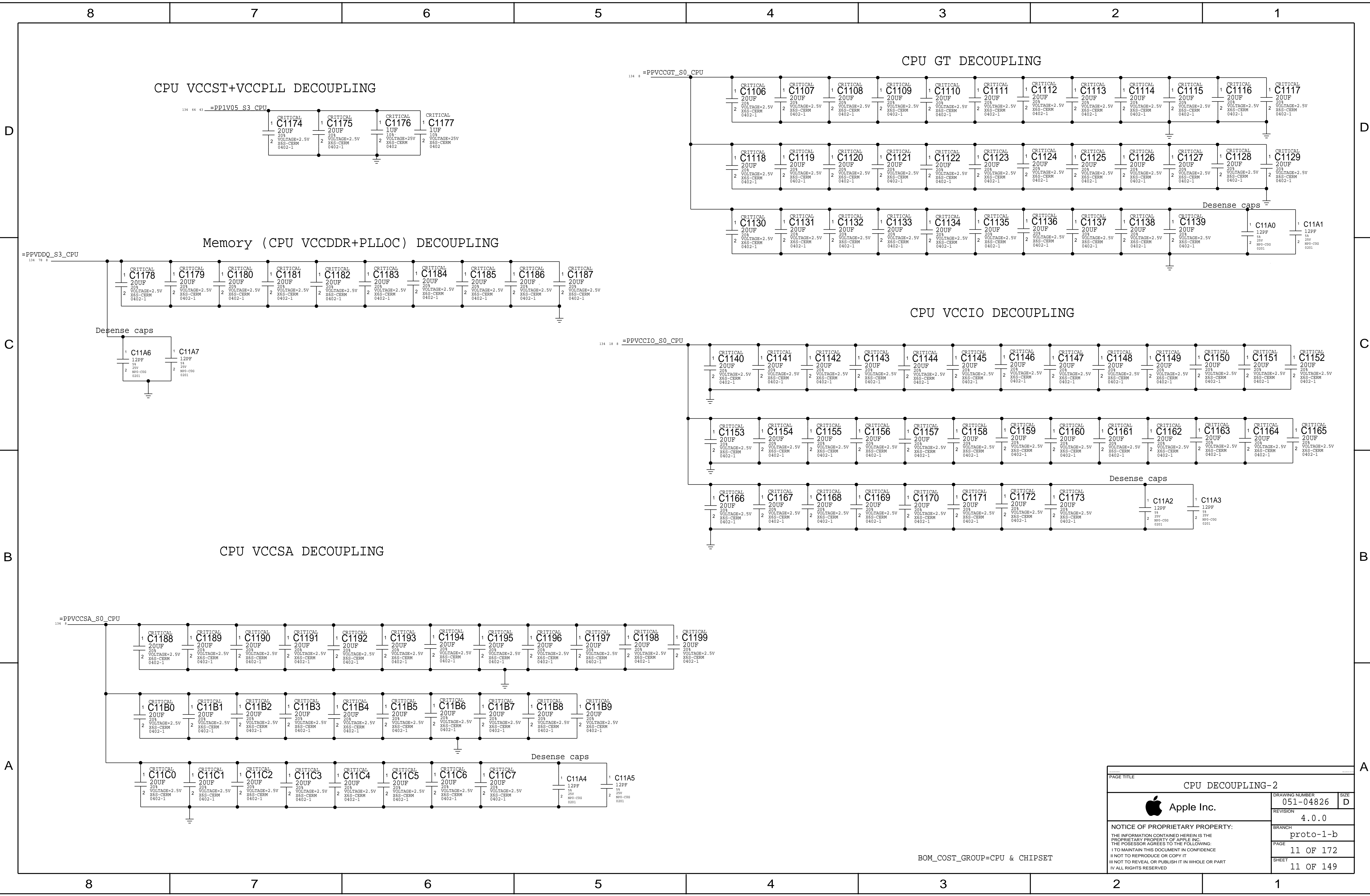
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134 8 =PPVCC S0 CPU



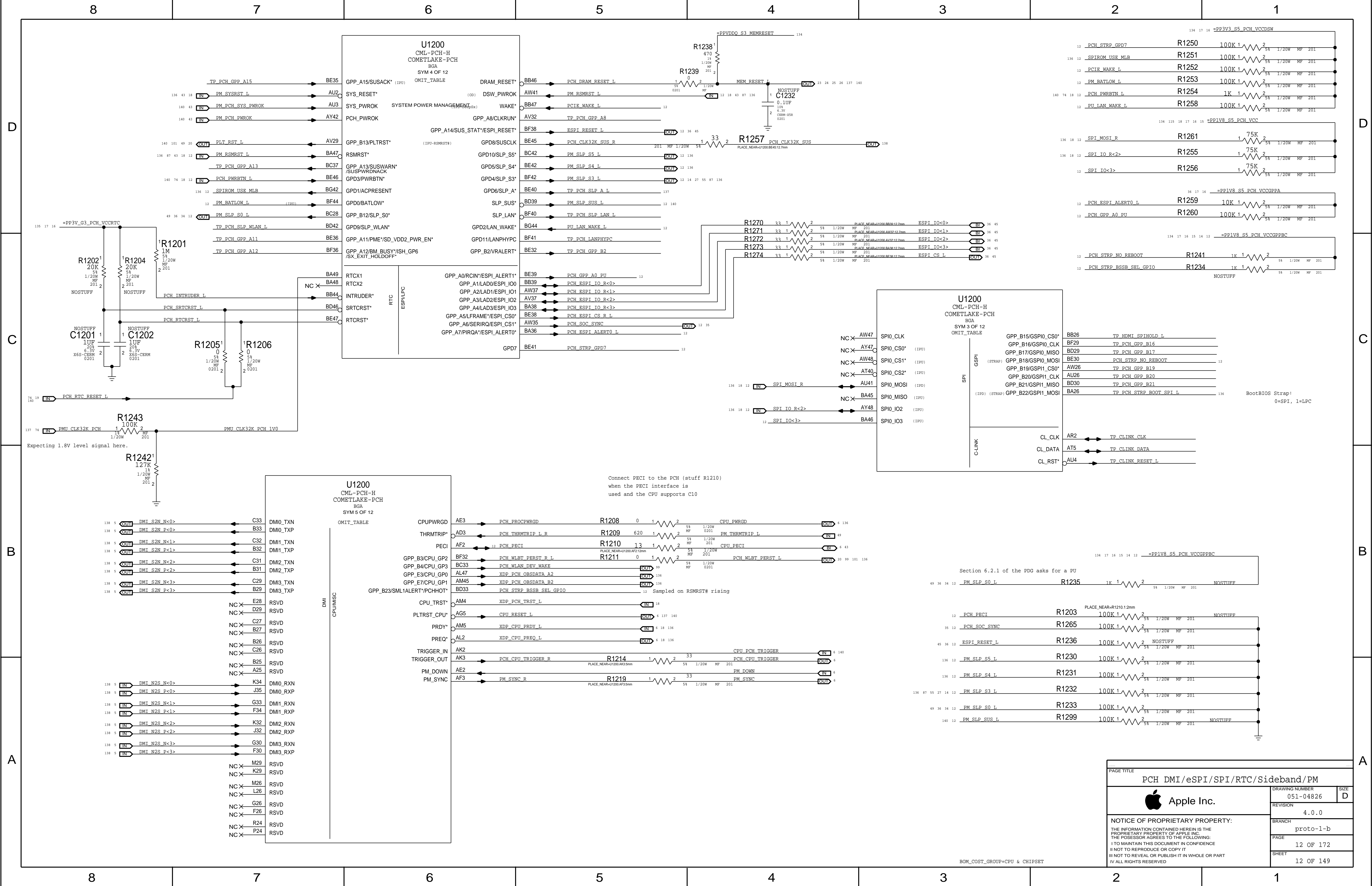
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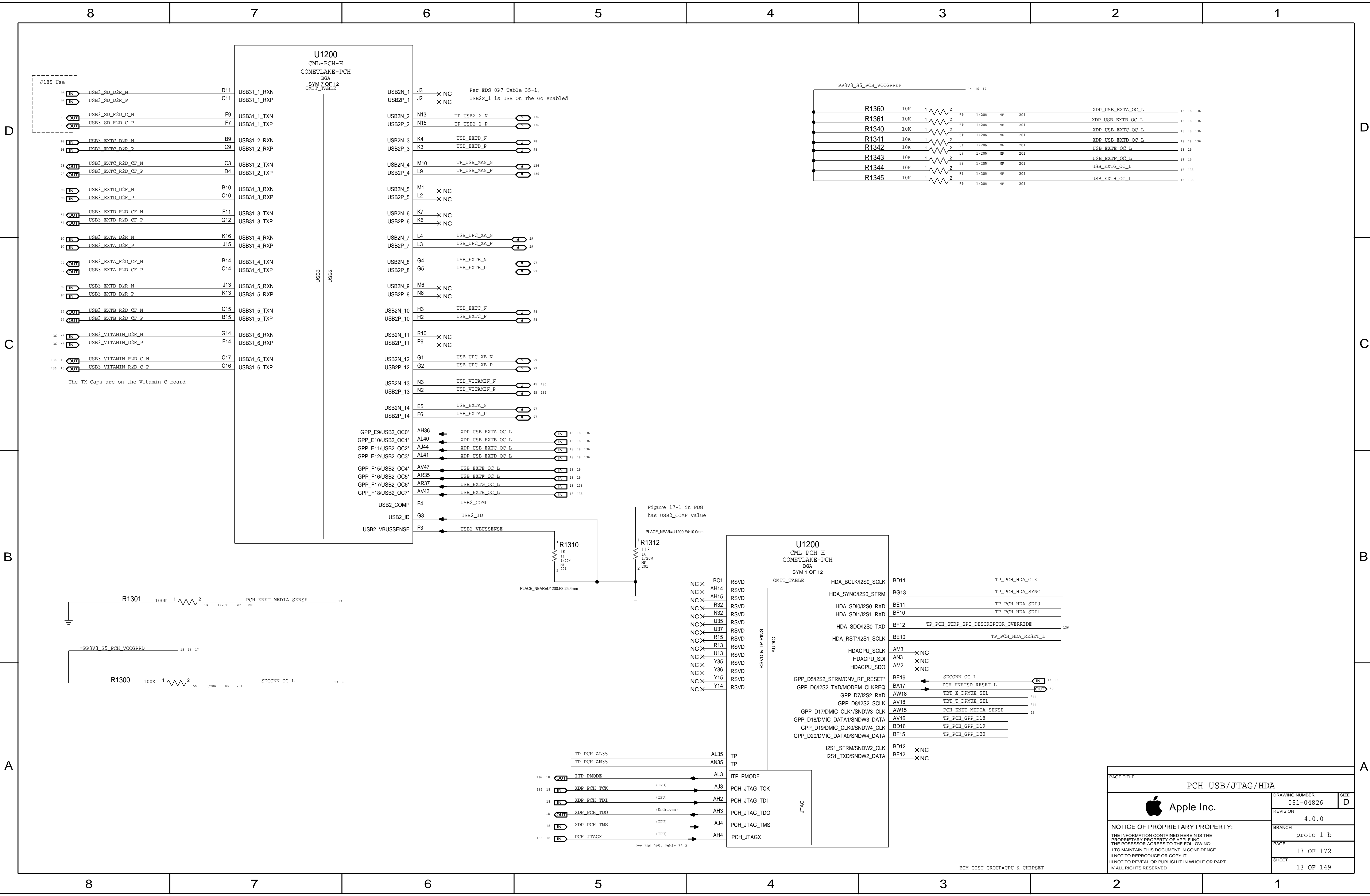
BOM_COST_GROUP=CPU & CHIPSET

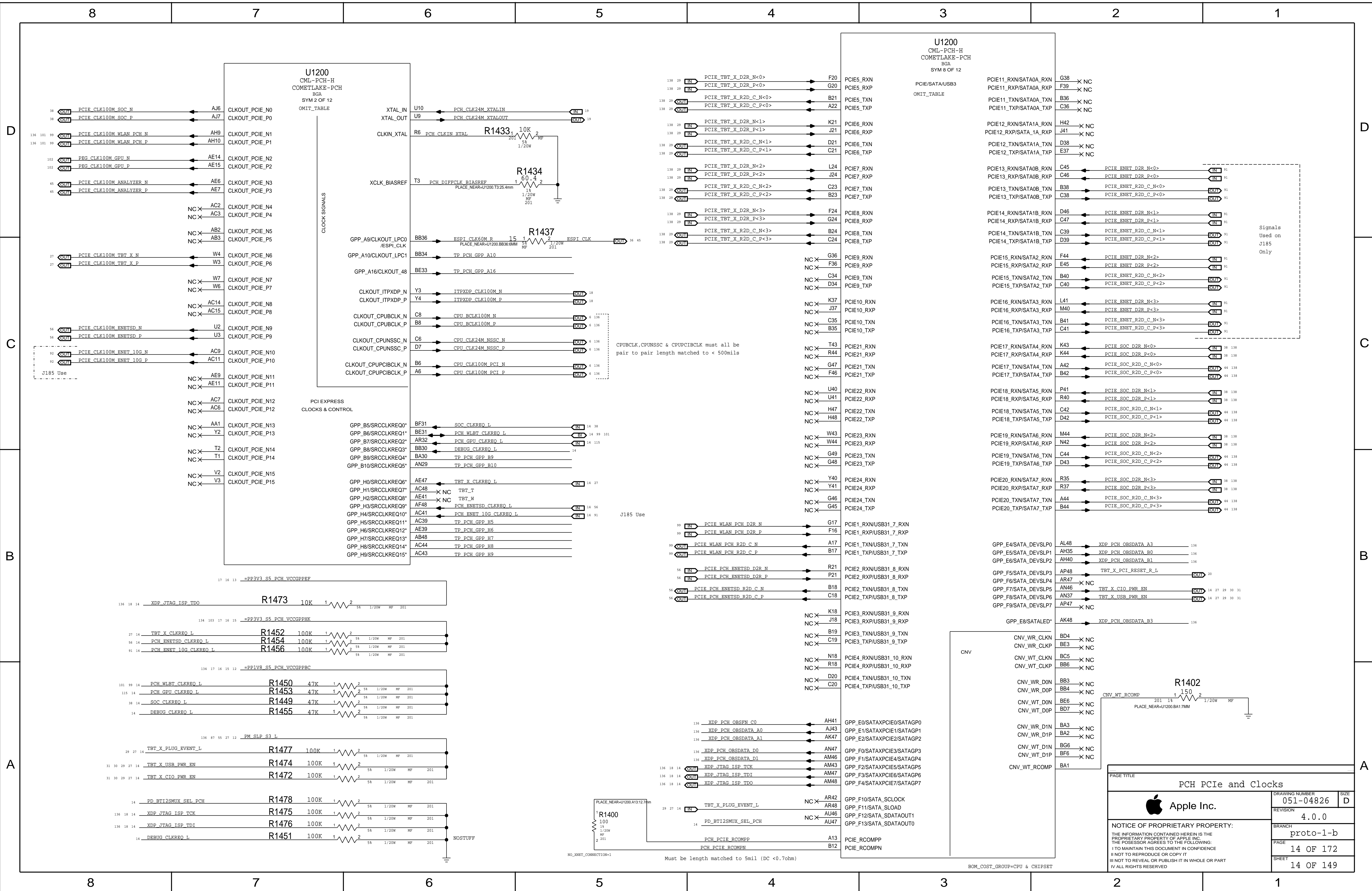


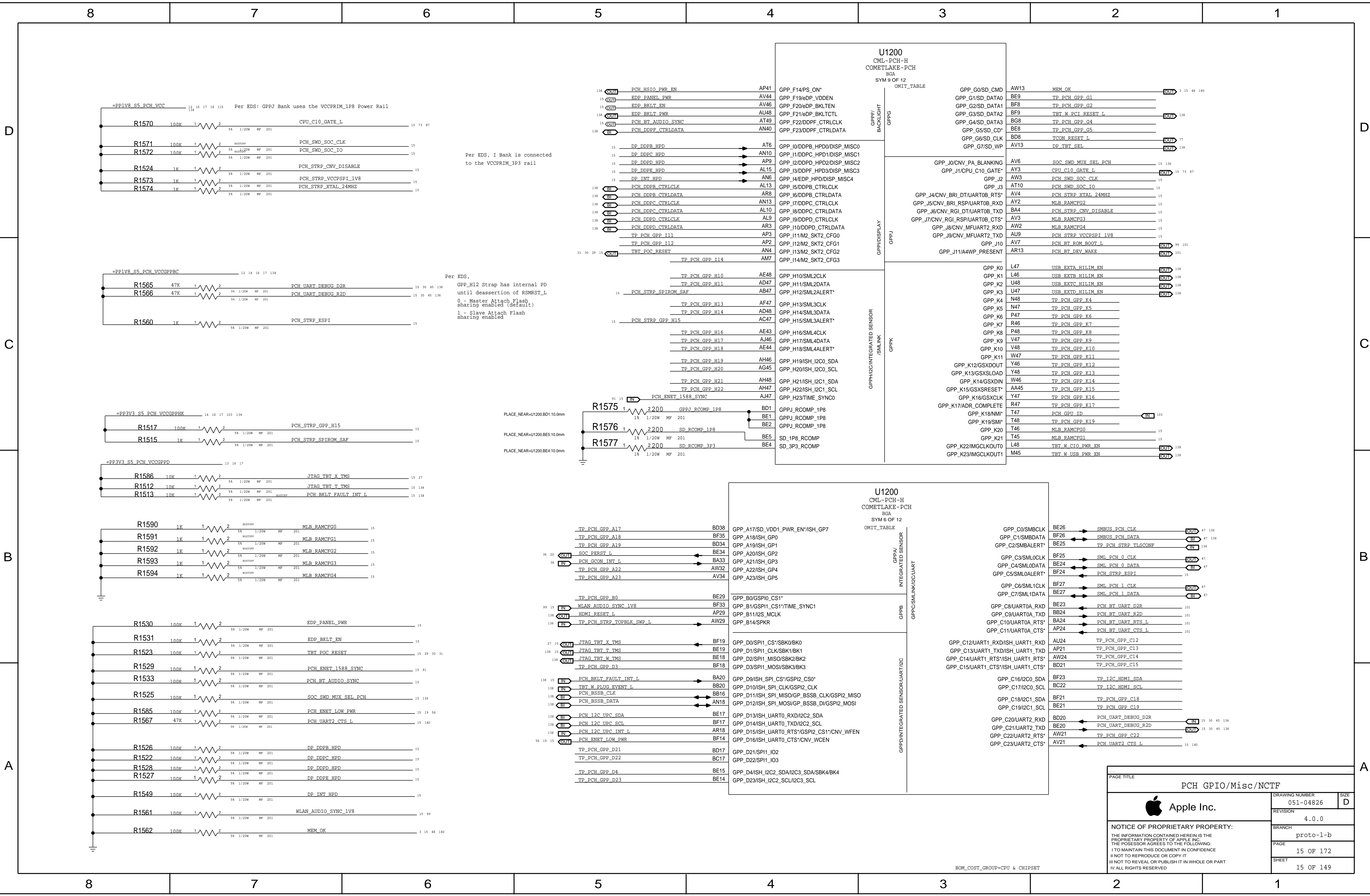
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| CPU DECOUPLING-2 | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
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| | | PAGE 11 OF 172 |
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BOM_COST_GROUP=CPU & CHIPSET



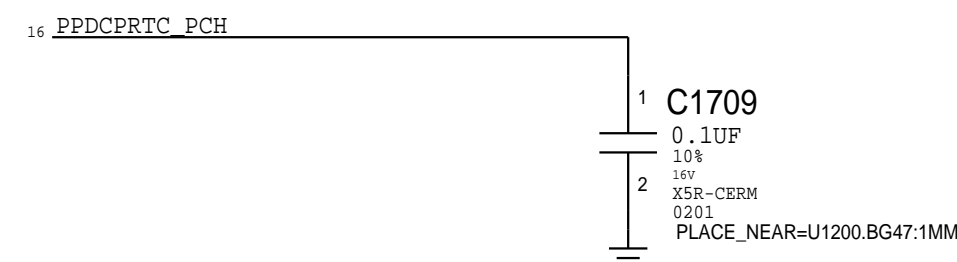
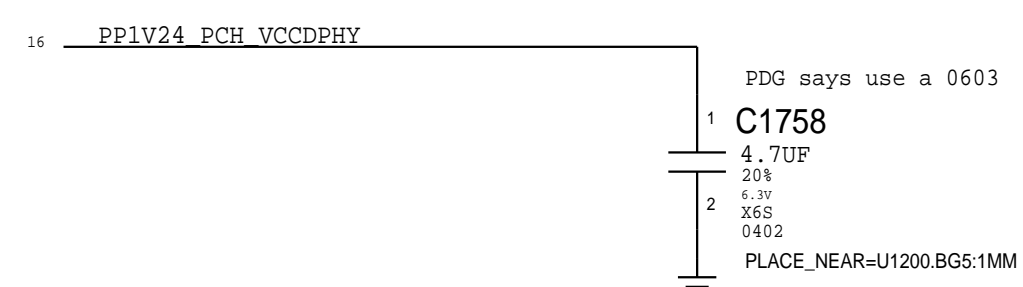
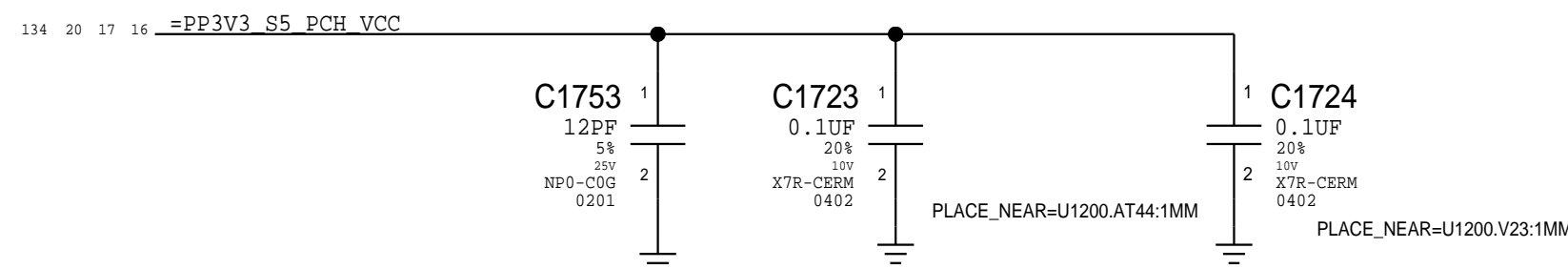
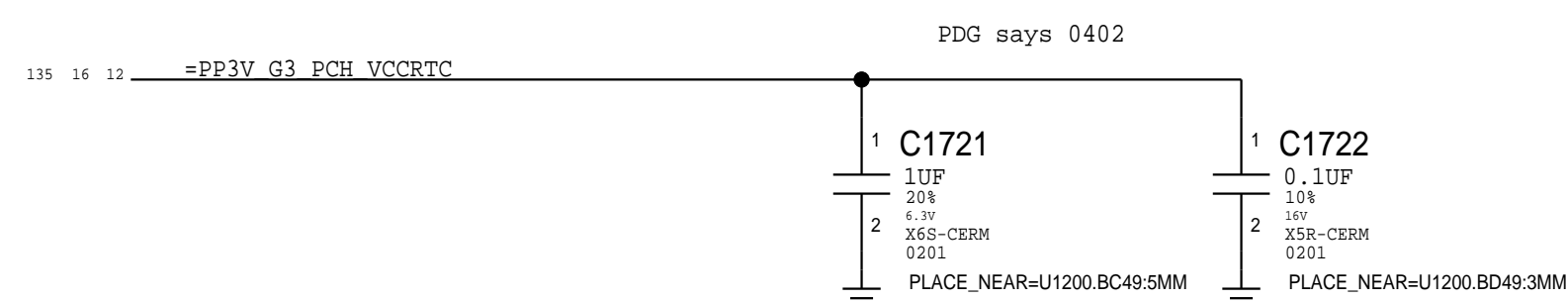
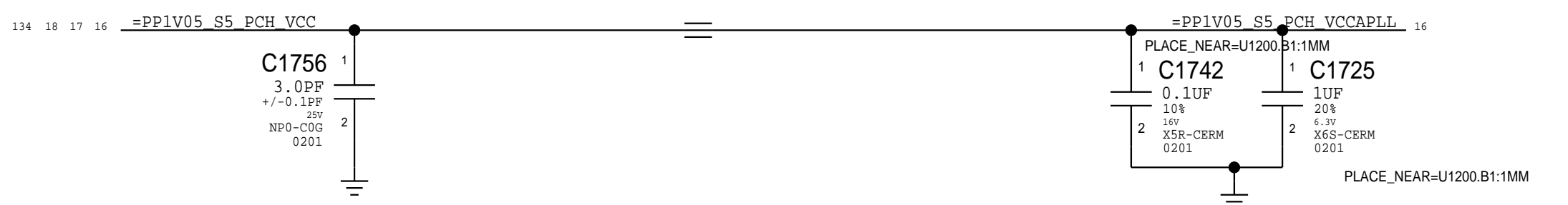
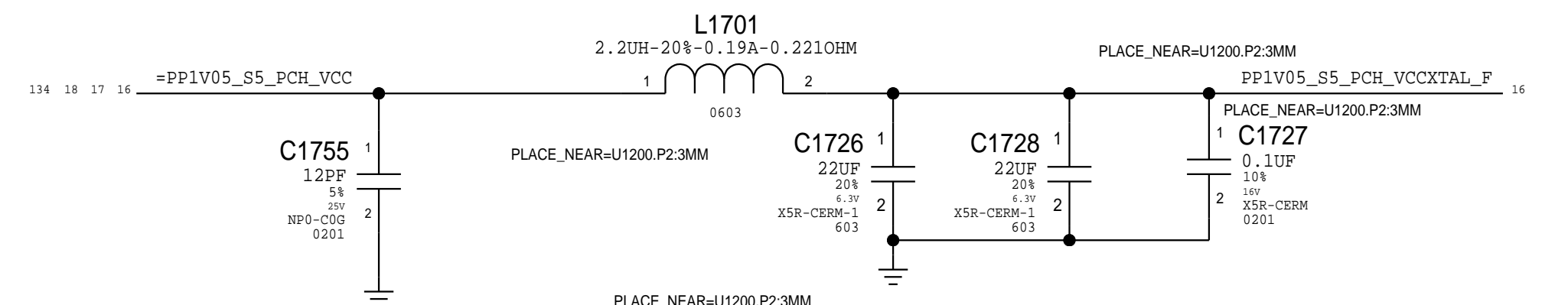
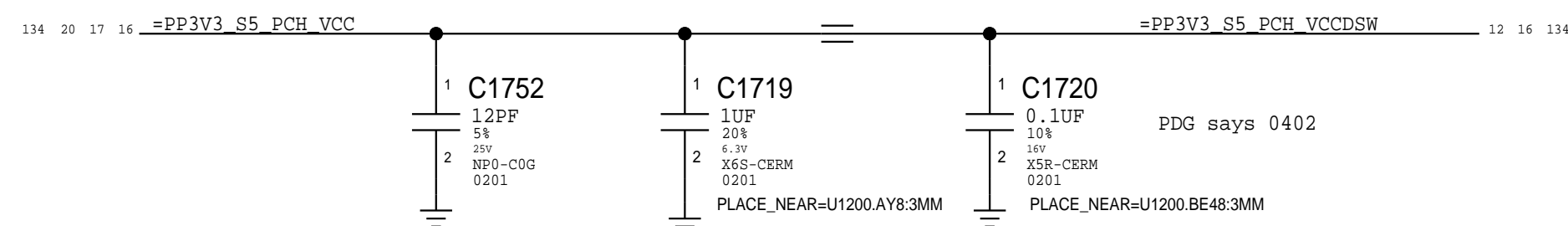
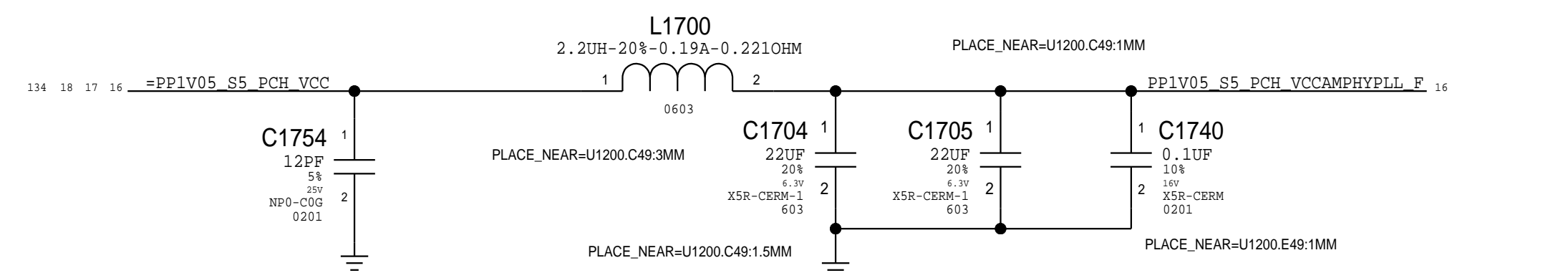
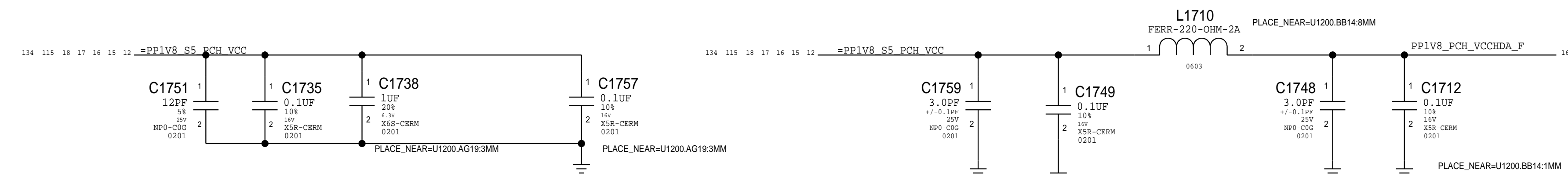
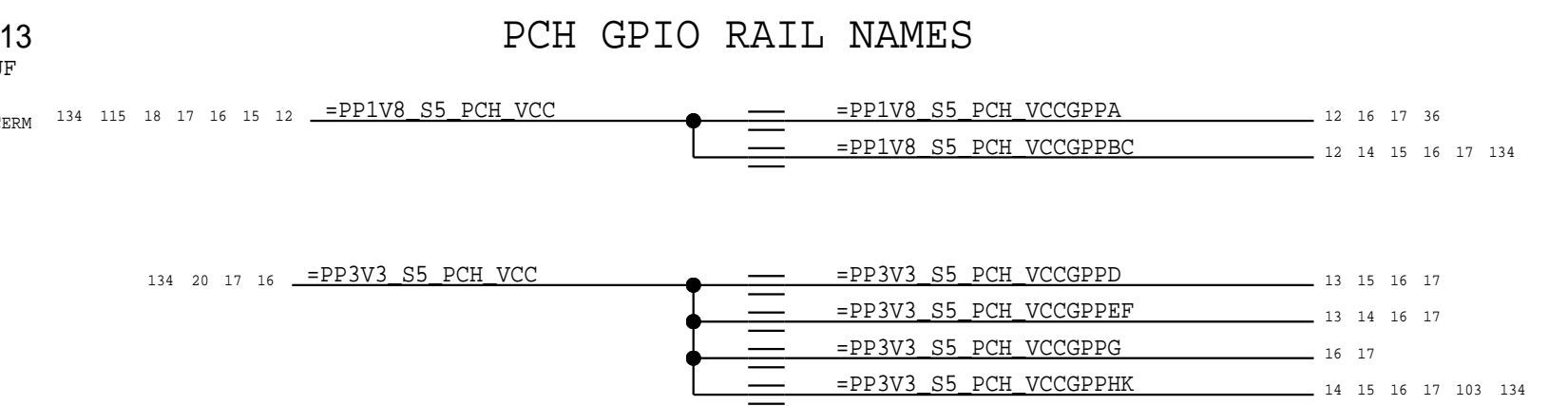
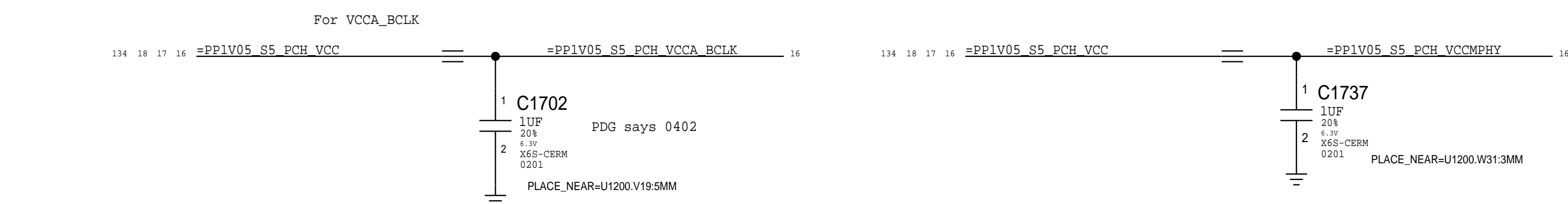
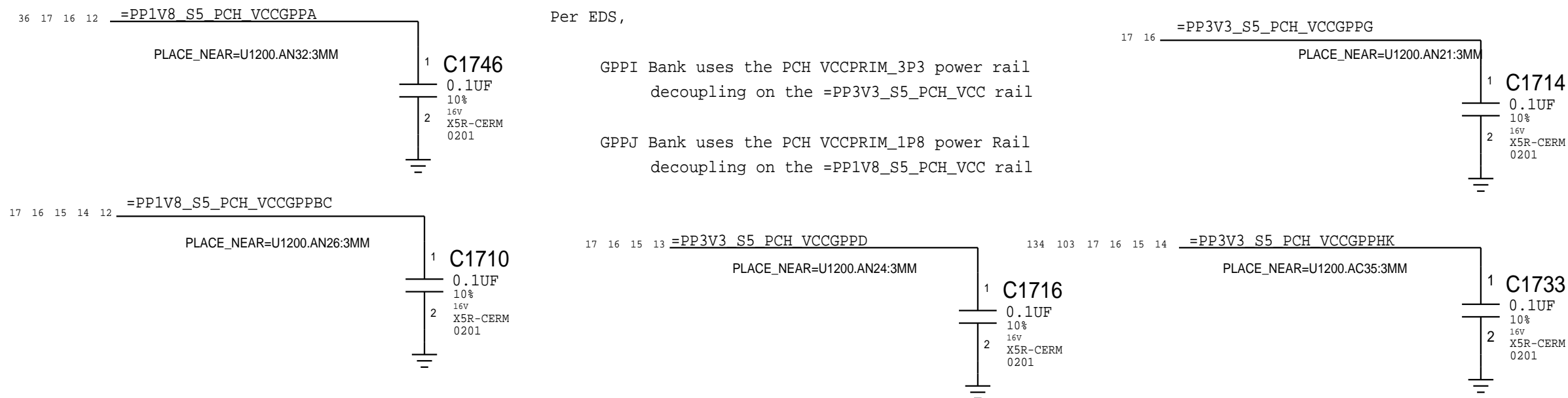
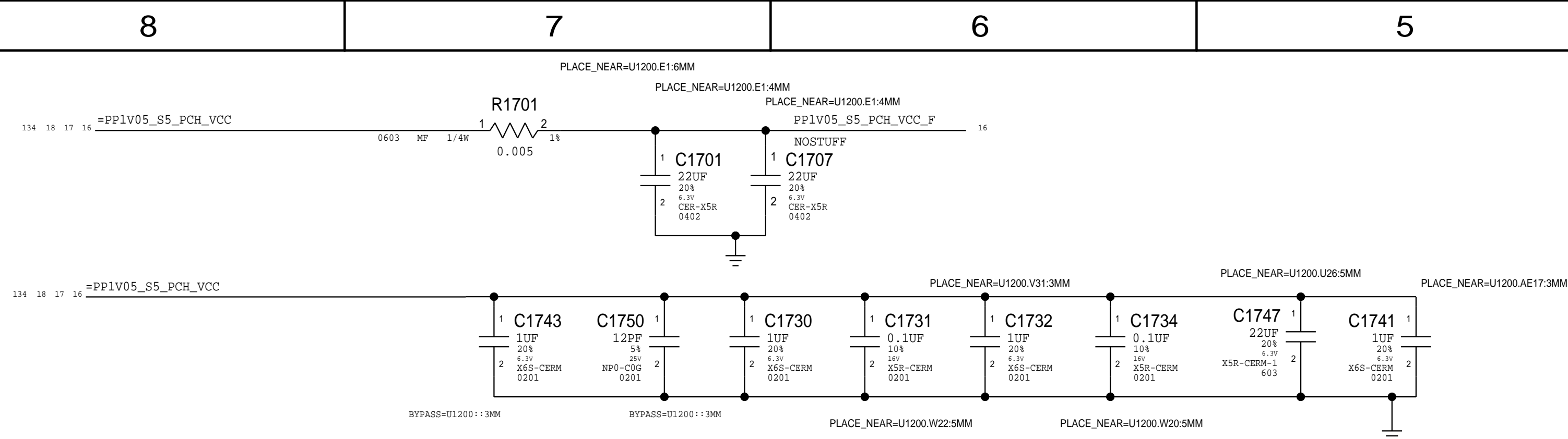









BOM_COST_GROUP=CPU & CHIPSET



Updated to latest PDG values and filter requirements

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| PCH Decoupling | | 051-04826 | | D | |
|  Apple Inc. | | REVISION | | | |
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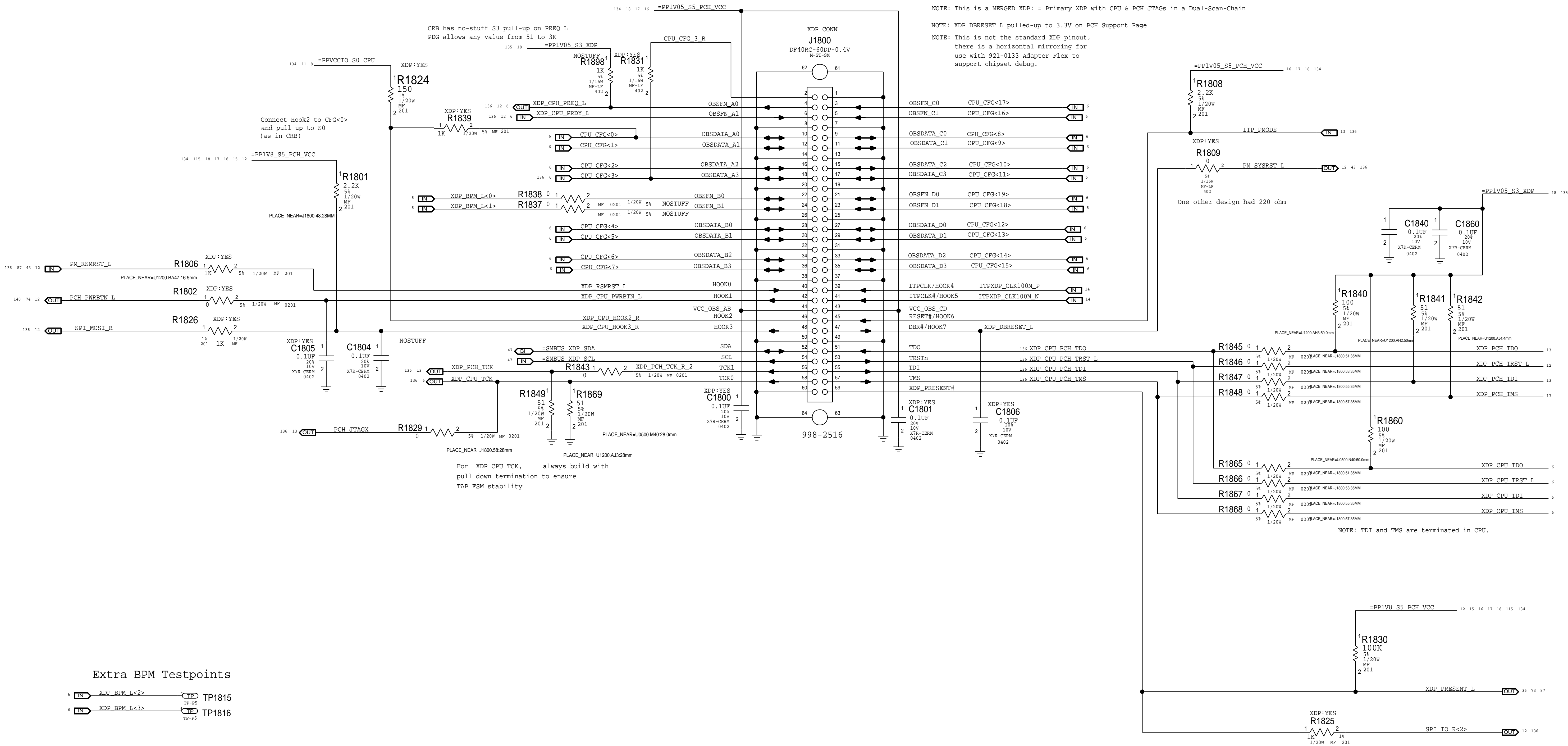
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Micro2-XDP



BOM_COST_GROUP=CPU & CHIPSET

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|  Apple Inc. | DRAWING NUMBER | 051-04826 |
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| | SHEET | 18 OF 149 |

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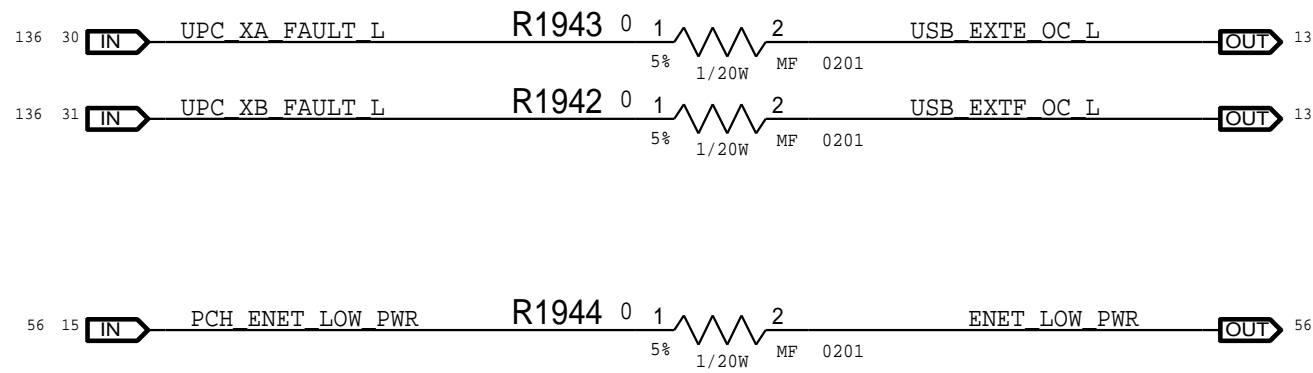
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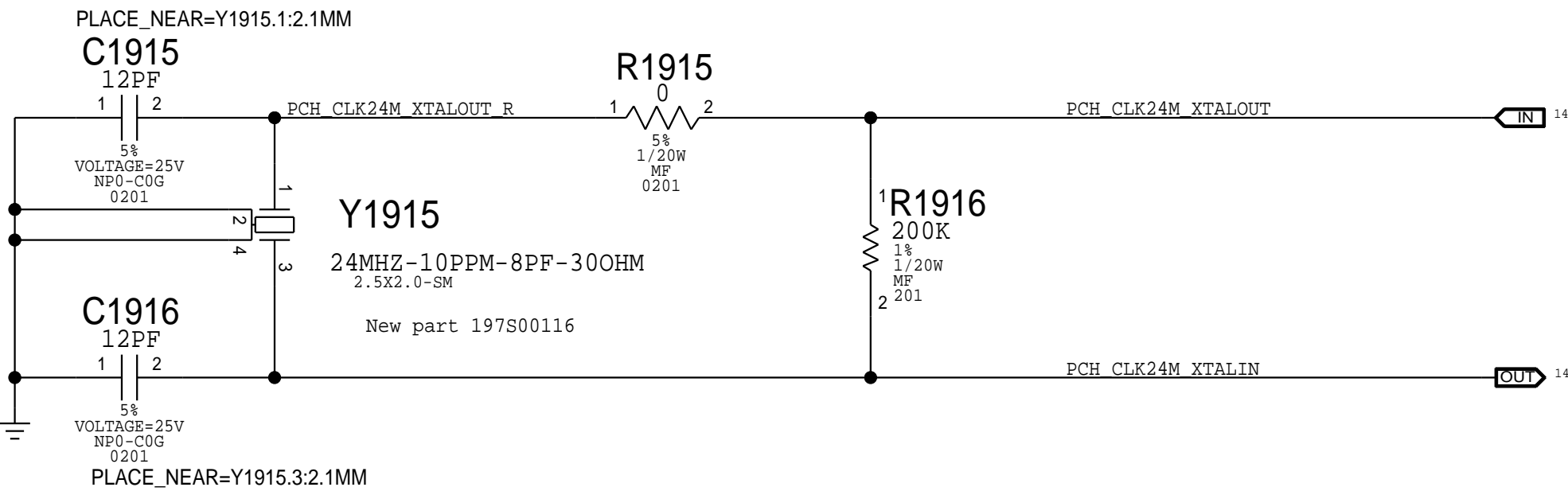
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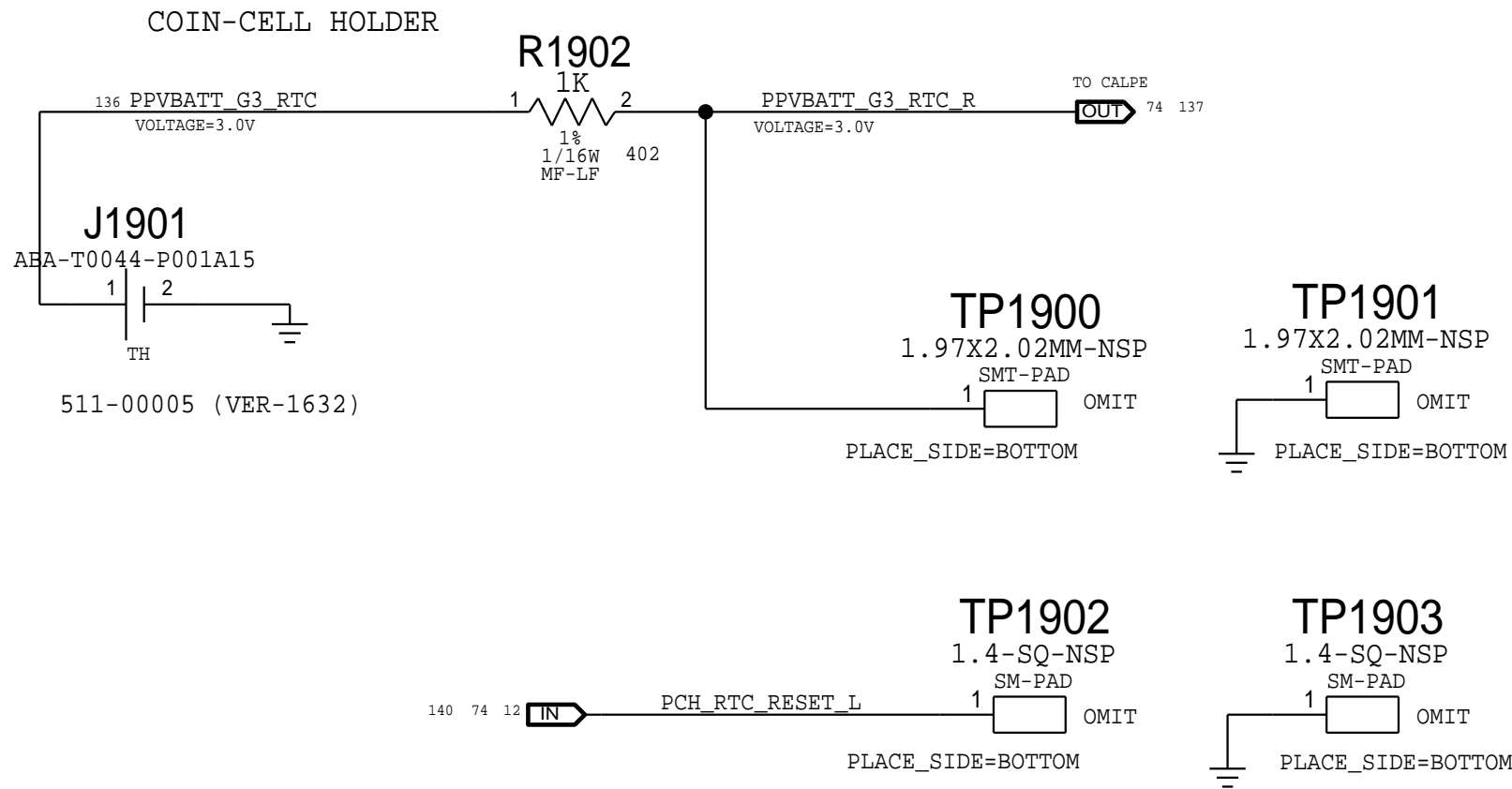


PCH 24MHz Crystal




Ce = 2 * [C1 - (Cs + Ci)]
C1 per 197S00116 spec = 8pf
Cs is trace and xtal pad capacitance ~= 1pf (extract after layout)
Ci is PCH pin capacitance ~= 1 pf (assumption, need spec)
Ce = 2 * [8 - (1 + 1)] = 2 * [8 - 2] = 2 * 6 = 12 pf

RTC Power Sources



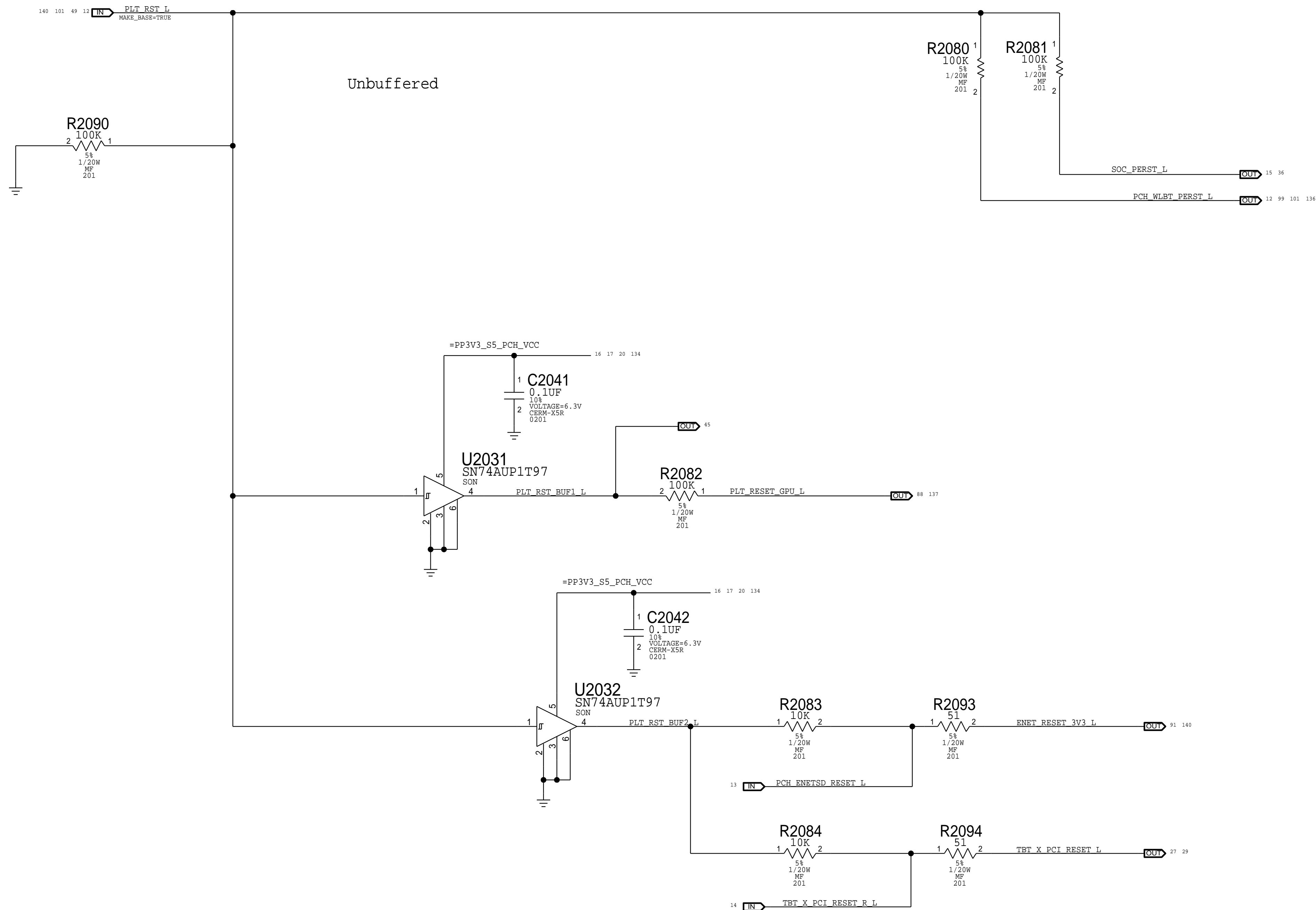
Place TP1901-TP1903 on bottom side


BOM_COST_GROUP=CPU & CHIPSET




| PAGE TITLE | | |
|---|----------------|-----------|
| CPU & CHIPSET: Chipset Support | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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MOW NOTE WW34

SECTION 5.1.4



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|---|----------------|--|------|
| PAGE TITLE | | | |
| Project-Specific Chipset Support | | | |
|  Apple Inc. | DRAWING NUMBER | | SIZE |
| | 051-04826 | | D |
| | REVISION | | |
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|---|-----------------|---|-----------------|---|-----------------|---|-----------------|---|-----------------|---|-----------------|---|-----------------|---|-----------------|----------------|---|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------|--|------|--|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----------|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|--|-------|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|--|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|------|--|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|--|-----------|--|
| | | 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THERE ARE DQ PIN SWAPS WITHIN A BYTE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | MEM A DQS N<0> | | MEM A DQS P<0> | | MEM A DQS N<0> | | MEM A DQS P<0> | | MEM B DQS N<0> | | MEM B DQS P<0> | | MEM B DQS N<0> | | MEM B DQS P<0> | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<7> | | MEM A DQ<6> | | MEM A DQ<5> | | MEM A DQ<4> | | MEM A DQ<3> | | MEM A DQ<2> | | MEM A DQ<1> | | MEM A DQ<0> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | MEM B DQ<7> | | MEM B DQ<6> | | MEM B DQ<5> | | MEM B DQ<4> | | MEM B DQ<3> | | MEM B DQ<2> | | MEM B DQ<1> | | MEM B DQ<0> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | MEM A DQS N<1> | | MEM A DQS P<1> | | MEM A DQS N<1> | | MEM A DQS P<1> | | MEM B DQS N<1> | | MEM B DQS P<1> | | MEM B DQS N<1> | | MEM B DQS P<1> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | MEM A DQ<15> | | MEM A DQ<14> | | MEM A DQ<13> | | MEM A DQ<12> | | MEM A DQ<11> | | MEM A DQ<10> | | MEM A DQ<9> | | MEM A DQ<8> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | MEM B DQ<15> | | MEM B DQ<14> | | MEM B DQ<13> | | MEM B DQ<12> | | MEM B DQ<11> | | MEM B DQ<10> | | MEM B DQ<9> | | MEM B DQ<8> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | MEM A DQ<23> | | MEM A DQ<22> | | MEM A DQ<21> | | MEM A DQ<20> | | MEM A DQ<19> | | MEM A DQ<18> | | MEM A DQ<17> | | MEM A DQ<16> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | MEM A DQS N<3> | | MEM A DQS P<3> | | MEM A DQS N<3> | | MEM A DQS P<3> | | MEM B DQS N<3> | | MEM B DQS P<3> | | MEM B DQS N<3> | | MEM B DQS P<3> | | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<31> | | MEM A DQ<30> | | MEM A DQ<29> | | MEM A DQ<28> | | MEM A DQ<27> | | MEM A DQ<26> | | MEM A DQ<25> | | MEM A DQ<24> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM B DQ<31> | | MEM B DQ<30> | | MEM B DQ<29> | | MEM B DQ<28> | | MEM B DQ<27> | | MEM B DQ<26> | | MEM B DQ<25> | | MEM B DQ<24> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQS N<4> | | MEM A DQS P<4> | | MEM A DQS N<4> | | MEM A DQS P<4> | | MEM B DQS N<4> | | MEM B DQS P<4> | | MEM B DQS N<4> | | MEM B DQS P<4> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<39> | | MEM A DQ<38> | | MEM A DQ<37> | | MEM A DQ<36> | | MEM A DQ<35> | | MEM A DQ<34> | | MEM A DQ<33> | | MEM A DQ<32> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM B DQ<39> | | MEM B DQ<38> | | MEM B DQ<37> | | MEM B DQ<36> | | MEM B DQ<35> | | MEM B DQ<34> | | MEM B DQ<33> | | MEM B DQ<32> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQS N<5> | | MEM A DQS P<5> | | MEM A DQS N<5> | | MEM A DQS P<5> | | MEM B DQS N<5> | | MEM B DQS P<5> | | MEM B DQS N<5> | | MEM B DQS P<5> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<47> | | MEM A DQ<46> | | MEM A DQ<45> | | MEM A DQ<44> | | MEM A DQ<43> | | MEM A DQ<42> | | MEM A DQ<41> | | MEM A DQ<40> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | MEM A DQS N<6> | | MEM A DQS P<6> | | MEM A DQS N<6> | | MEM A DQS P<6> | | MEM B DQS N<6> | | MEM B DQS P<6> | | MEM B DQS N<6> | | MEM B DQS P<6> | | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<55> | | MEM A DQ<54> | | MEM A DQ<53> | | MEM A DQ<52> | | MEM A DQ<51> | | MEM A DQ<50> | | MEM A DQ<49> | | MEM A DQ<48> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM B DQ<55> | | MEM B DQ<54> | | MEM B DQ<53> | | MEM B DQ<52> | | MEM B DQ<51> | | MEM B DQ<50> | | MEM B DQ<49> | | MEM B DQ<48> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQS N<7> | | MEM A DQS P<7> | | MEM A DQS N<7> | | MEM A DQS P<7> | | MEM B DQS N<7> | | MEM B DQS P<7> | | MEM B DQS N<7> | | MEM B DQS P<7> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<63> | | MEM A DQ<62> | | MEM A DQ<61> | | MEM A DQ<60> | | MEM A DQ<59> | | MEM A DQ<58> | | MEM A DQ<57> | | MEM A DQ<56> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM B DQ<63> | | MEM B DQ<62> | | MEM B DQ<61> | | MEM B DQ<60> | | MEM B DQ<59> | | MEM B DQ<58> | | MEM B DQ<57> | | MEM B DQ<56> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQS N<8> | | MEM A DQS P<8> | | MEM A DQS N<8> | | MEM A DQS P<8> | | MEM B DQS N<8> | | MEM B DQS P<8> | | MEM B DQS N<8> | | MEM B DQS P<8> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<71> | | MEM A DQ<70> | | MEM A DQ<69> | | MEM A DQ<68> | | MEM A DQ<67> | | MEM A DQ<66> | | MEM A DQ<65> | | MEM A DQ<64> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | MEM A DQS N<9> | | MEM A DQS P<9> | | MEM A DQS N<9> | | MEM A DQS P<9> | | MEM B DQS N<9> | | MEM B DQS P<9> | | MEM B DQS N<9> | | MEM B DQS P<9> | | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<79> | | MEM A DQ<78> | | MEM A DQ<77> | | MEM A DQ<76> | | MEM A DQ<75> | | MEM A DQ<74> | | MEM A DQ<73> | | MEM A DQ<72> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM B DQ<79> | | MEM B DQ<78> | | MEM B DQ<77> | | MEM B DQ<76> | | MEM B DQ<75> | | MEM B DQ<74> | | MEM B DQ<73> | | MEM B DQ<72> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQS N<10> | | MEM A DQS P<10> | | MEM A DQS N<10> | | MEM A DQS P<10> | | MEM B DQS N<10> | | MEM B DQS P<10> | | MEM B DQS N<10> | | MEM B DQS P<10> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<87> | | MEM A DQ<86> | | MEM A DQ<85> | | MEM A DQ<84> | | MEM A DQ<83> | | MEM A DQ<82> | | MEM A DQ<81> | | MEM A DQ<80> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM B DQ<87> | | MEM B DQ<86> | | MEM B DQ<85> | | MEM B DQ<84> | | MEM B DQ<83> | | MEM B DQ<82> | | MEM B DQ<81> | | MEM B DQ<80> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQS N<11> | | MEM A DQS P<11> | | MEM A DQS N<11> | | MEM A DQS P<11> | | MEM B DQS N<11> | | MEM B DQS P<11> | | MEM B DQS N<11> | | MEM B DQS P<11> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MEM A DQ<95> | | MEM A DQ<94> | | MEM A DQ<93> | | MEM A DQ<92> | | MEM A DQ<91> | | MEM A DQ<90> | | MEM A DQ<89> | | MEM A DQ<88> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | MAKE_BASE=TRUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOM_COST_GROUP=DRAM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table><tr><td colspan="16">PAGE TITLE</td><td colspan="2">DRAWING NUMBER</td><td colspan="2">SIZE</td></tr><tr><td colspan="16">DRAM: ALIASES AND BITSWAPS</td><td colspan="2">051-04826</td><td colspan="2">D</td></tr><tr><td colspan="16"> Apple Inc.</td><td colspan="2">REVISION</td><td colspan="2">4.0.0</td></tr><tr><td colspan="16">NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I INOT TO REPRODUCE OR COPY IT I INOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED</td><td colspan="2">BRANCH</td><td colspan="2">proto-1-b</td></tr><tr><td colspan="16"></td><td colspan="2">PAGE</td><td colspan="2">21 OF 172</td></tr><tr><td colspan="16"></td><td colspan="2">SHEET</td><td colspan="2">21 OF 149</td></tr></table> | | | | | | | | | | | | | | | | | | PAGE TITLE | | | | | | | | | | | | | | | | DRAWING NUMBER | | SIZE | | DRAM: ALIASES AND BITSWAPS | | | | | | | | | | | | | | | | 051-04826 | | D | |  Apple Inc. | | | | | | | | | | | | | | | | REVISION | | 4.0.0 | | NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I INOT TO REPRODUCE OR COPY IT I INOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | | | | | | | | | | | | | | | BRANCH | | proto-1-b | | | | | | | | | | | | | | | | | | PAGE | | 21 OF 172 | | | | | | | | | | | | | | | | | | SHEET | | 21 OF 149 | |
| PAGE TITLE | | | | | | | | | | | | | | | | DRAWING NUMBER | | SIZE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRAM: ALIASES AND BITSWAPS | | | | | | | | | | | | | | | | 051-04826 | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  Apple Inc. | | | | | | | | | | | | | | | | REVISION | | 4.0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | PAGE | | 21 OF 172 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | SHEET | | 21 OF 149 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

D

C

B

A

D

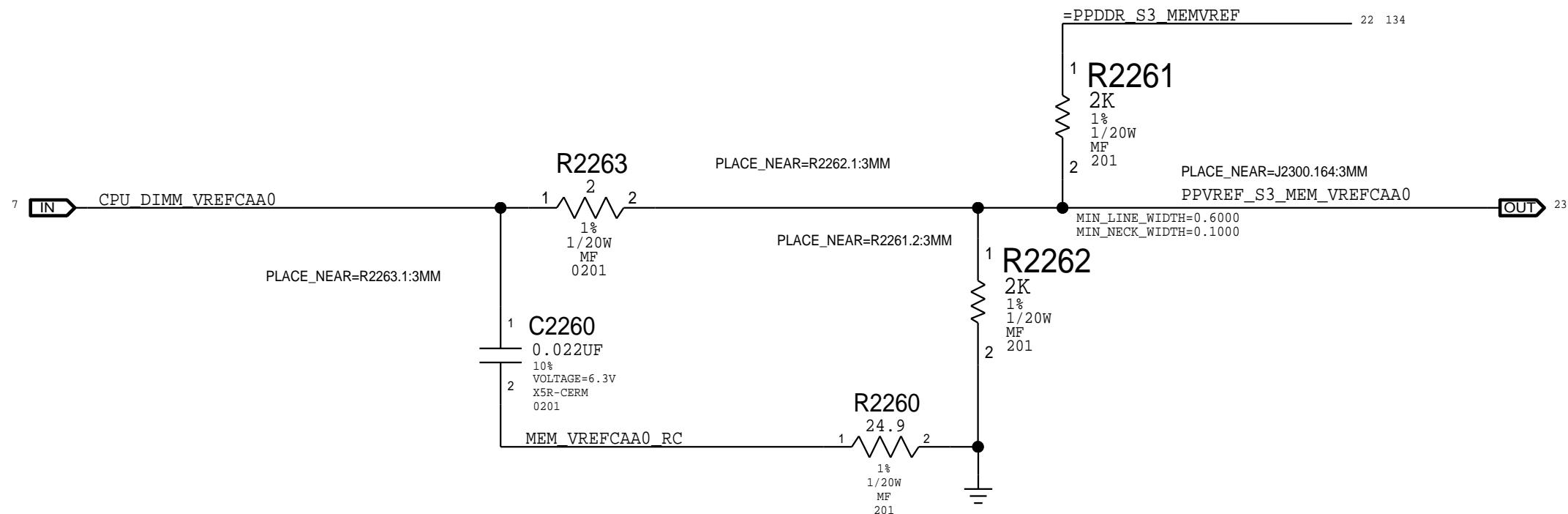
C

B

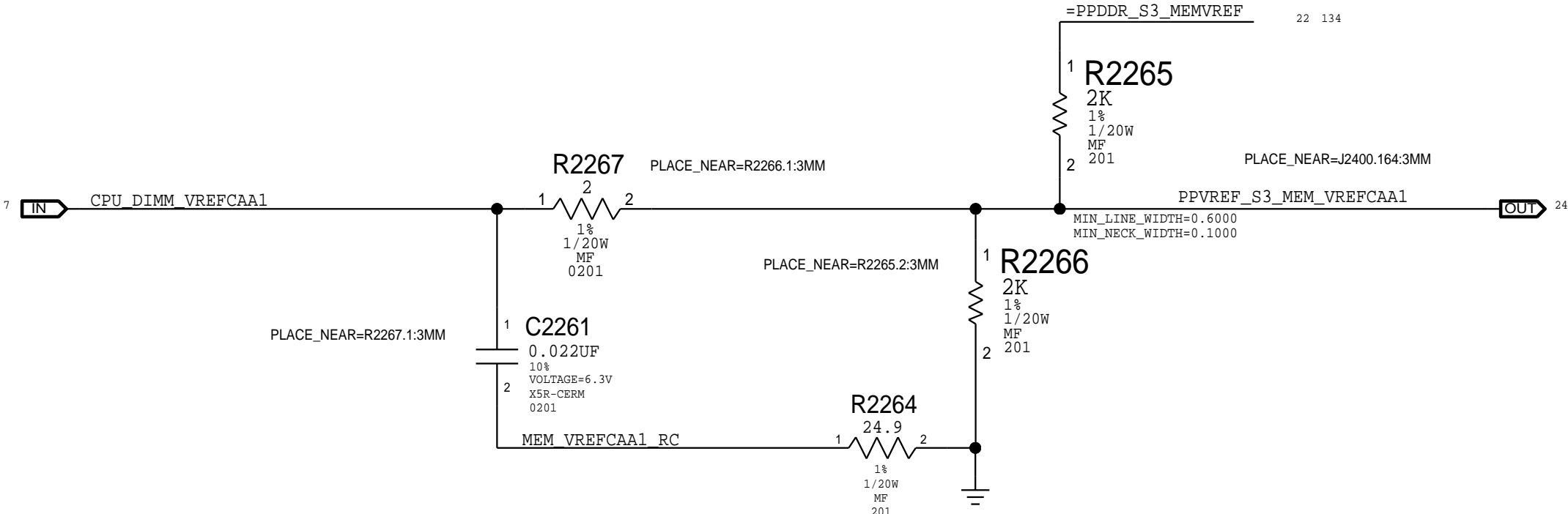
A

**Removed DQ VREF dividers from DDR3L
**DDR4 DIMM Internal DQ Vref

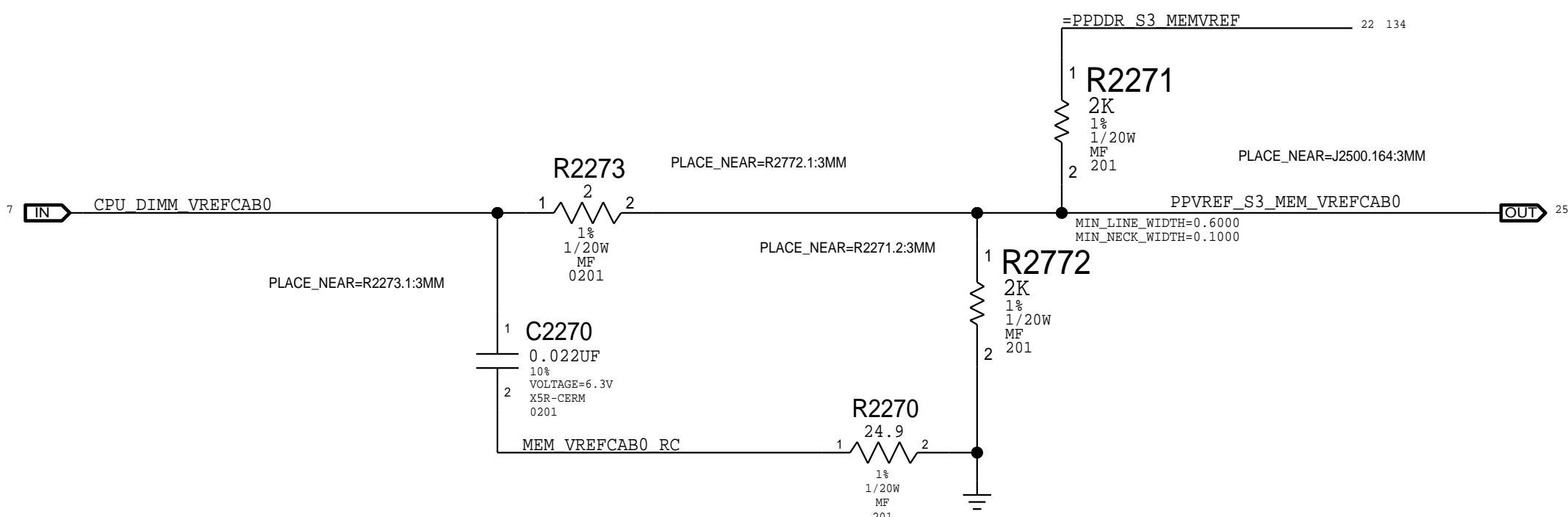
VRef Dividers



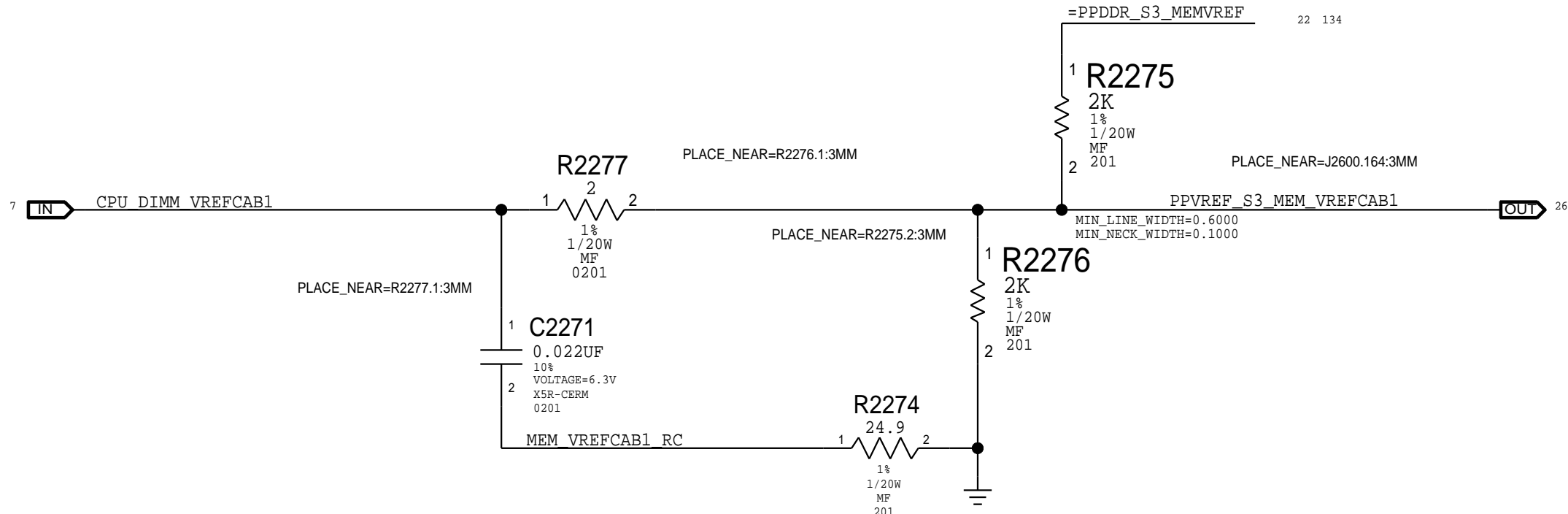
VRef Dividers




VRef Dividers



VRef Dividers



BOM_COST_GROUP=DRAM

| PAGE TITLE | | |
|---|----------------|-----------|
| DRAM:VREF/VT T EN | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | BRANCH | proto-1-b |
| | PAGE | 22 OF 172 |
| | SHEET | 22 OF 149 |

D

C

B

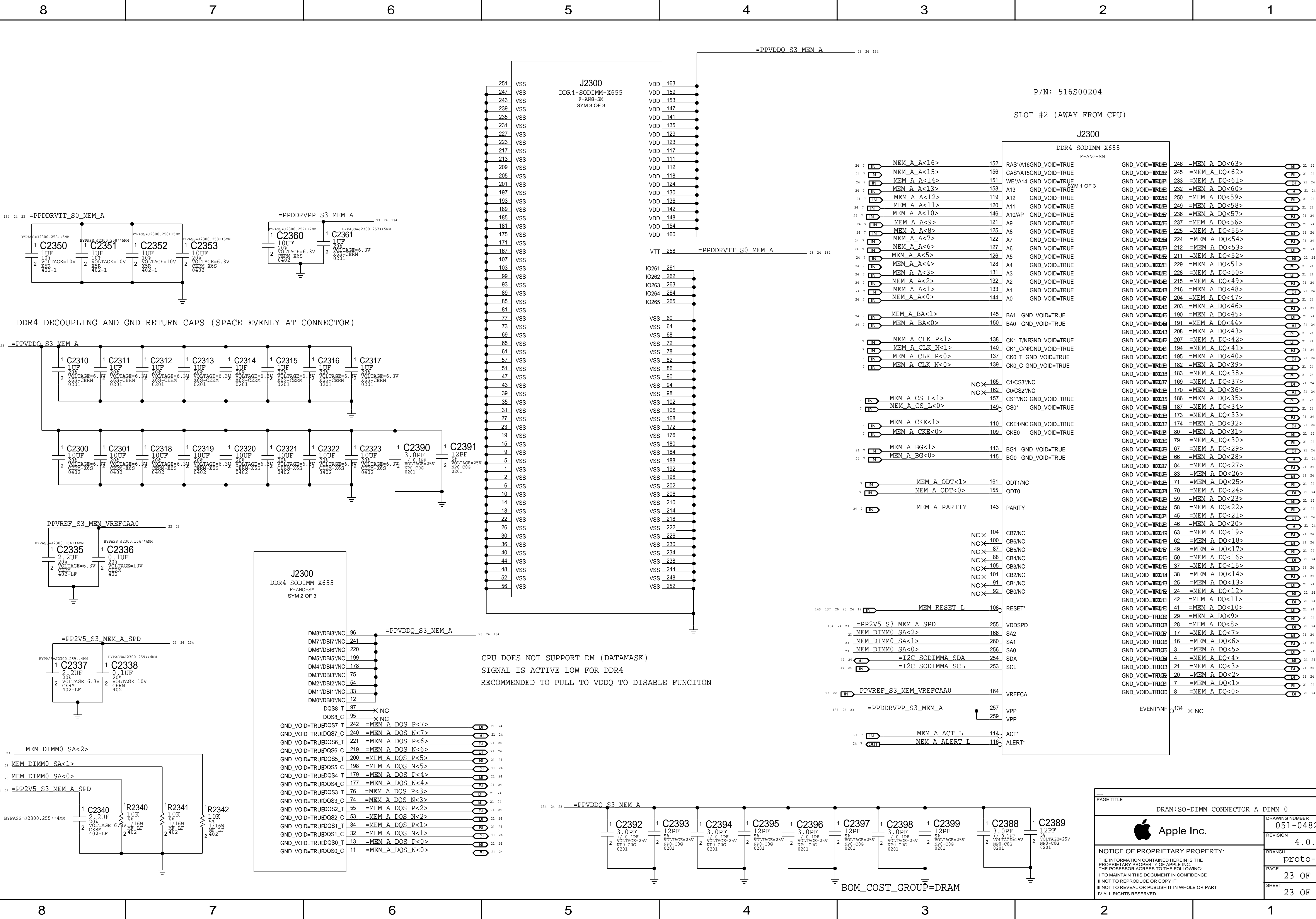
A

D

C


B

A




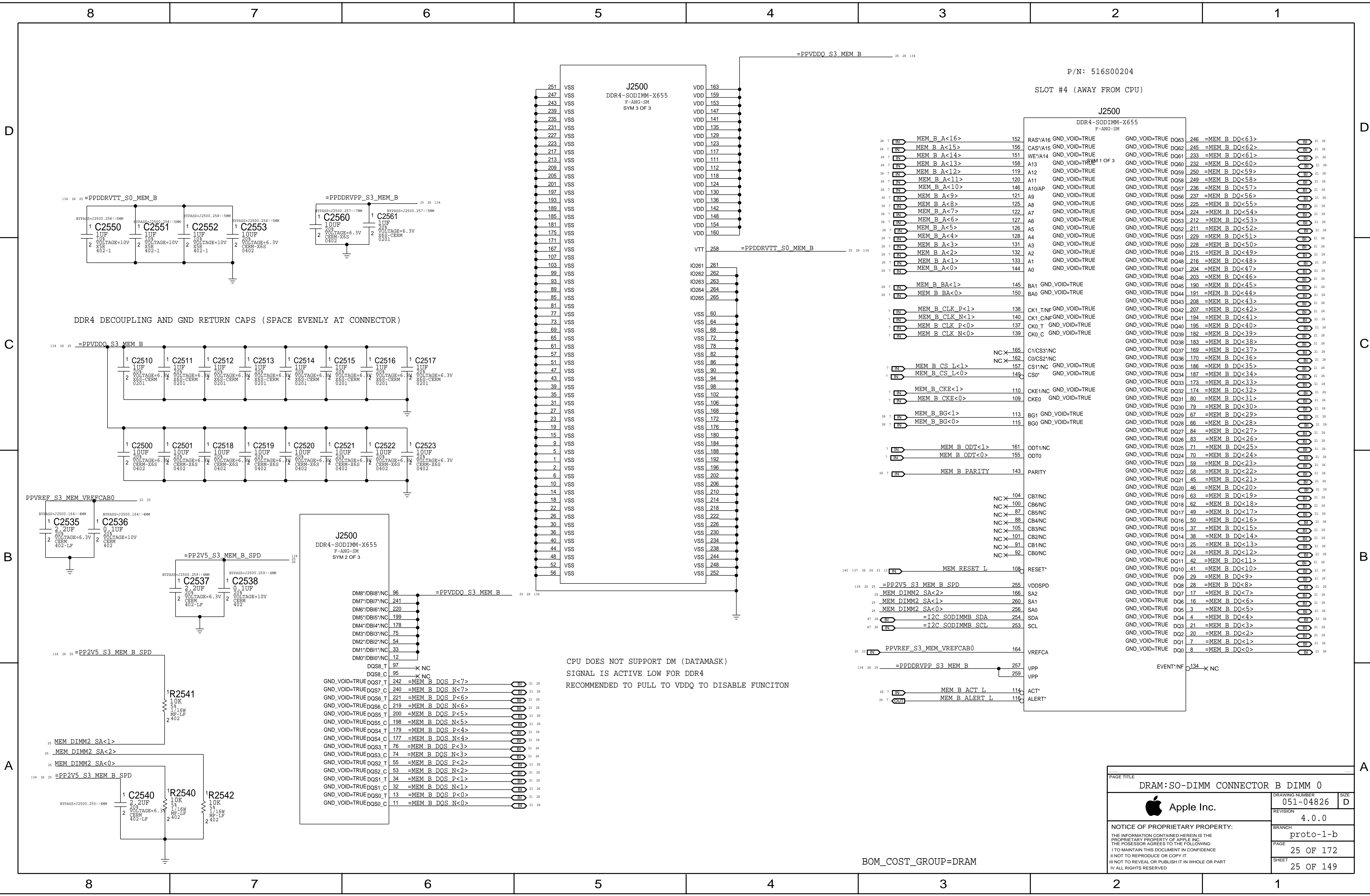
CPU DOES NOT SUPPORT DM (DATAMASK)
SIGNAL IS ACTIVE LOW FOR DDR4
RECOMMENDED TO PULL TO VDDQ TO DISABLE FUNCITON

BOM_COST_GROUP=DRAM


| | | |
|--|----------------|---------------------|
| PAGE TITLE | | |
| DRAM:SO-DIMM CONNECTOR A DIMM 0 | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | BRANCH proto-1-b |
| | | PAGE 23 OF 172 |
| | | SHEET 23 OF 149 |

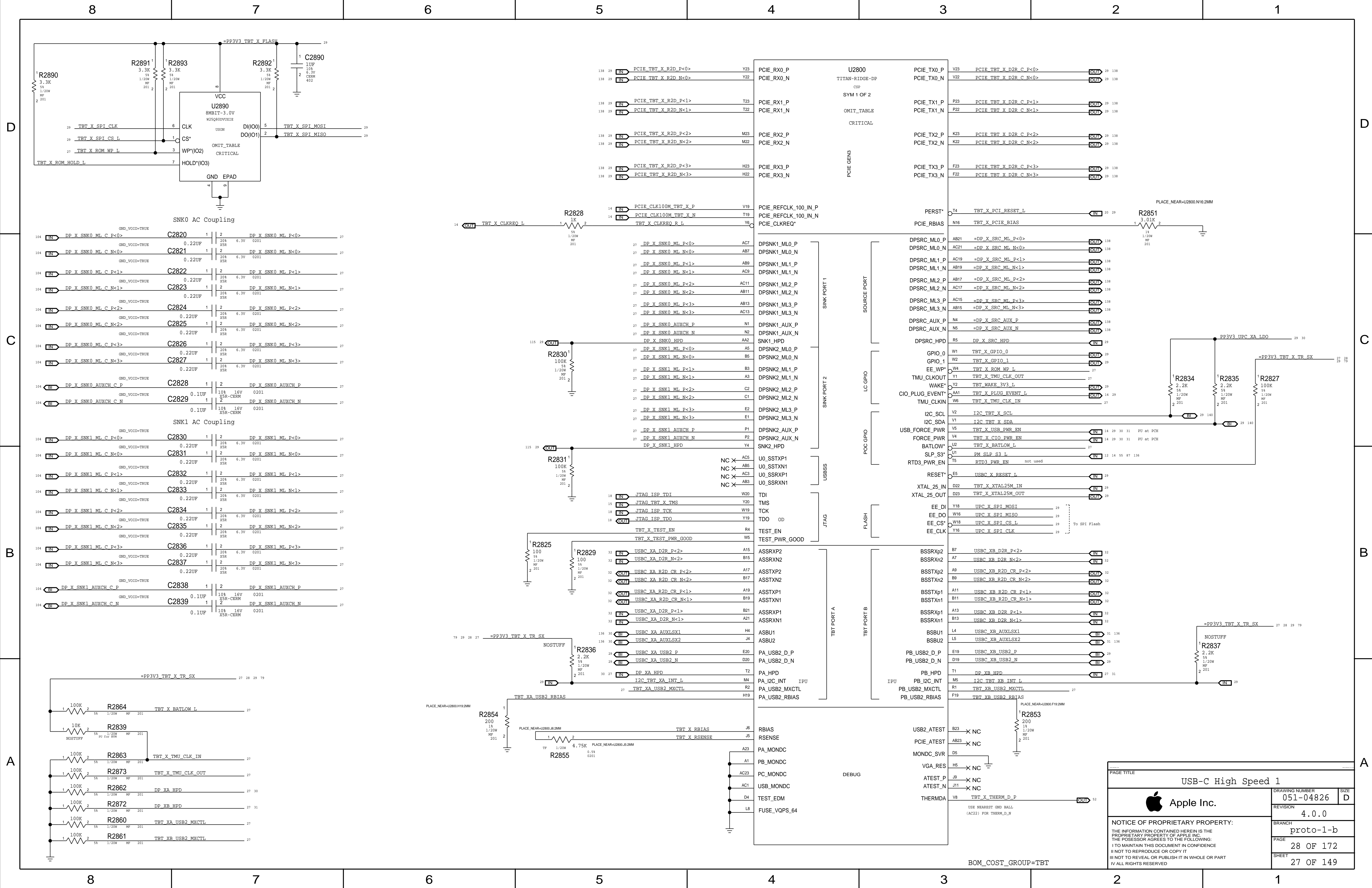


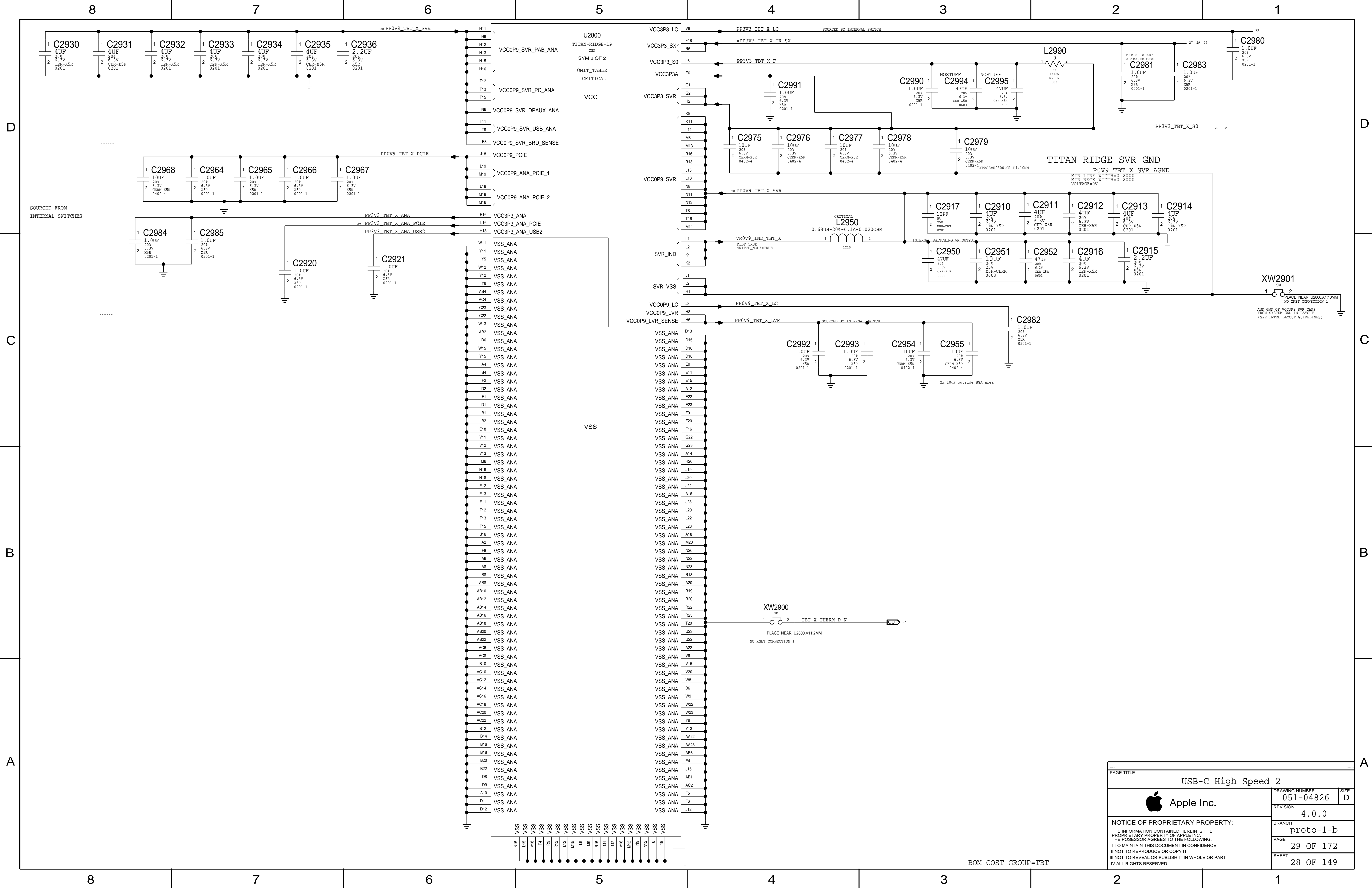
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|---|-----------------------------|--------------------|--|--|-----------|
| | | | | | |
| PAGE TITLE | | | | | |
| DRAM:SO-DIMM CONNECTOR A DIMM 1 | | | | | |
|  | DRAWING NUMBER 051-04826 | | | | SIZE D |
| | REVISION 4.0.0 | | | | |
| | BRANCH proto-1-b | | | | |
| | PAGE 24 OF 172 | SHEET 24 OF 149 | | | |
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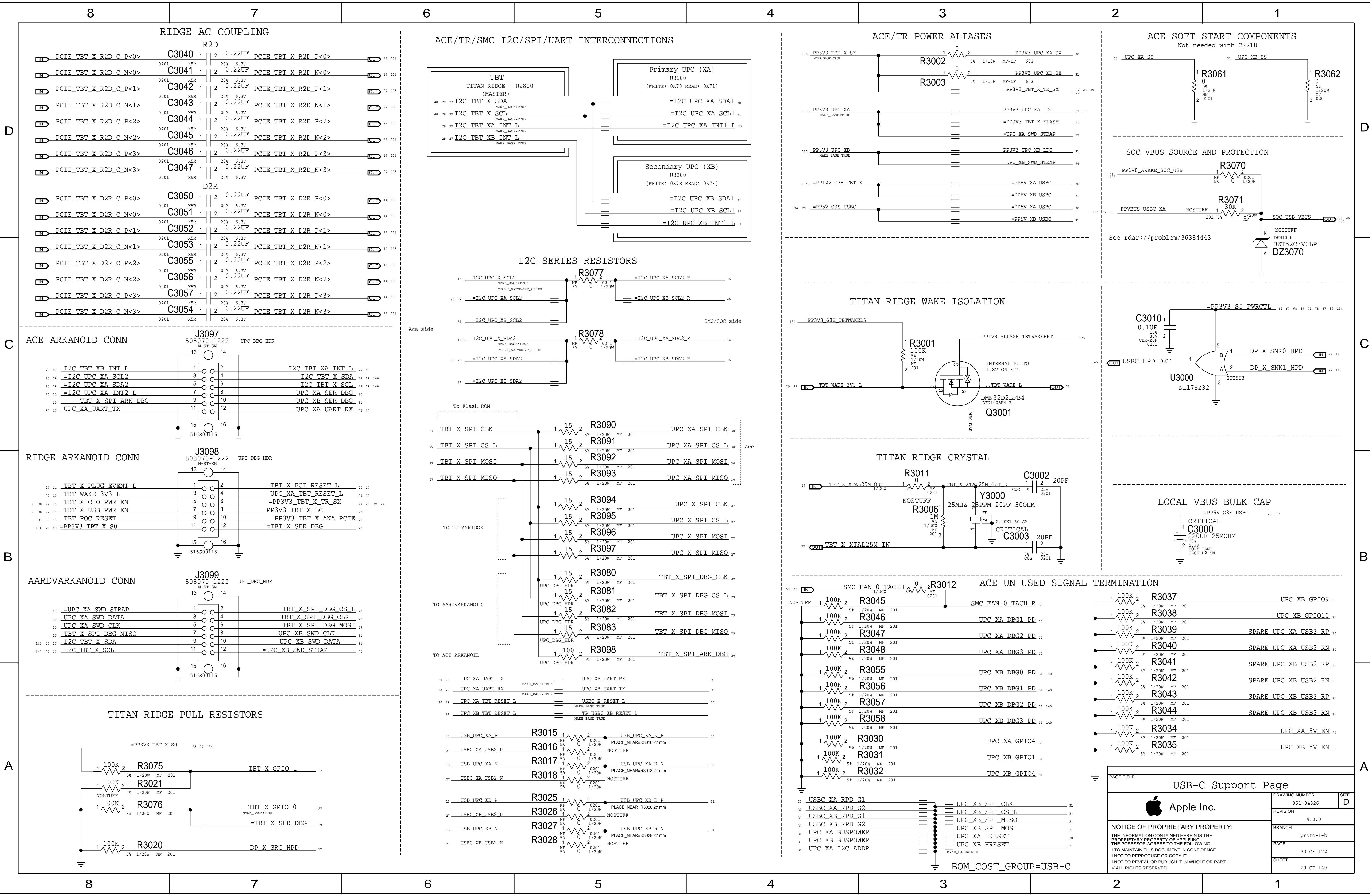




| | | | | | |
|--|----------------|---------------------------------|-----------|--|------|
| PAGE TITLE | | | PAGE NO. | | |
| DRAM:SO-DIMM CONNECTOR B DIMM 1 | | | | | |
|  Apple Inc. | DRAWING NUMBER | | 051-04826 | | SIZE |
| | REVISION | | 4.0.0 | | |
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| | | SHEET 26 OF 149 | | | |








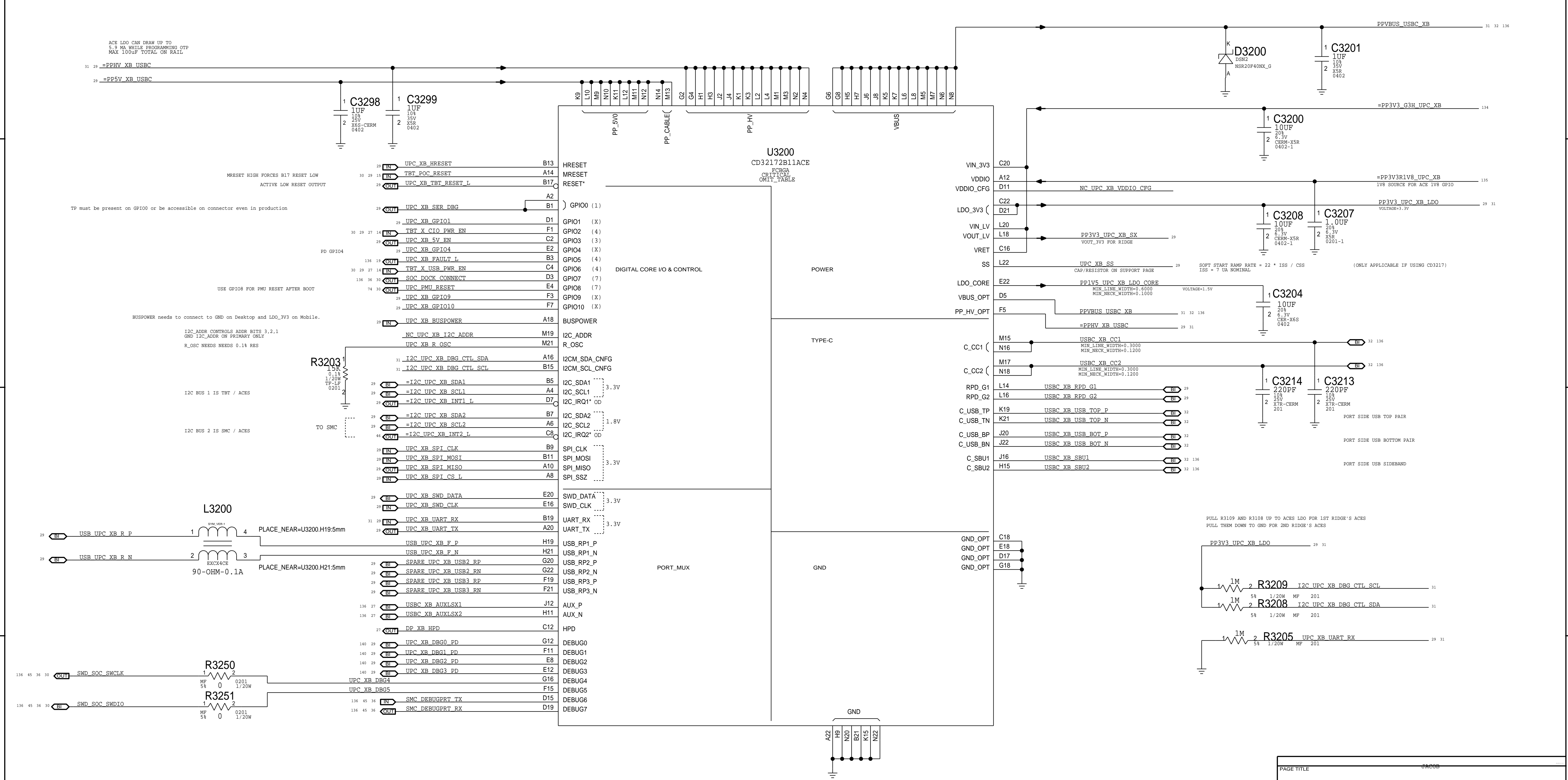
```
ACE2 PINCONFIG
(1) 3.3V PP
(2) 3.3V OD NMOS
(3) 3.3V OD PMOS
(4) 3.3V INPUT
(5) 1.8V PP
(6) 1.8V OD NMOS
(7) 1.8V OD PMOS
(8) 1.8V INPUT
```




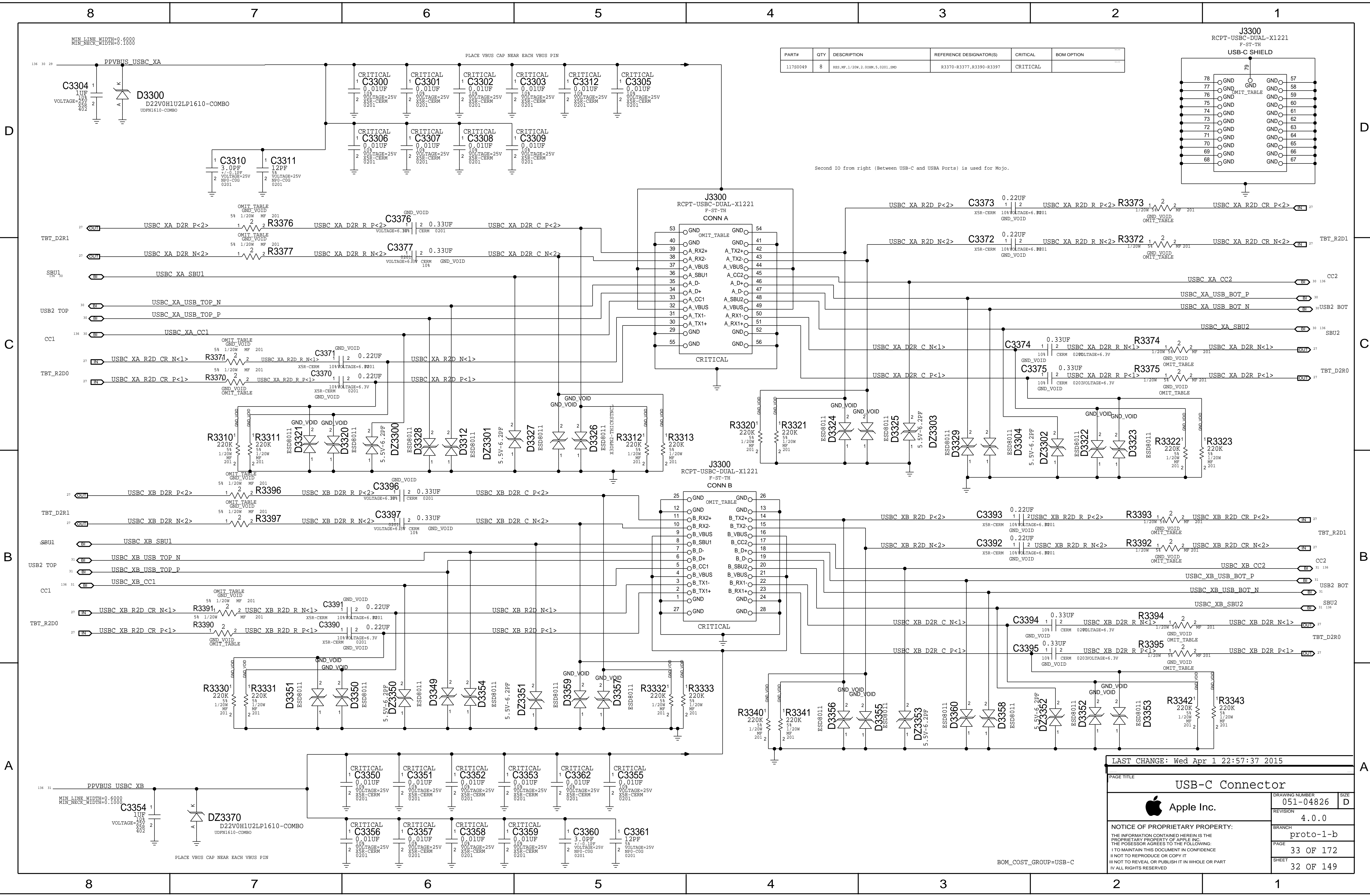
| | | |
|--|----------------|------|
| PAGE TITLE | | |
| USB-C PORT CONTROLLER XA | | |
|  Apple Inc. | DRAWING NUMBER | SIZE |
| | 051-04826 | D |
| | REVISION | |
| | 4.0.0 | |
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X SECONDARY ACE USB-C PORT CONTROLLER (UPC)

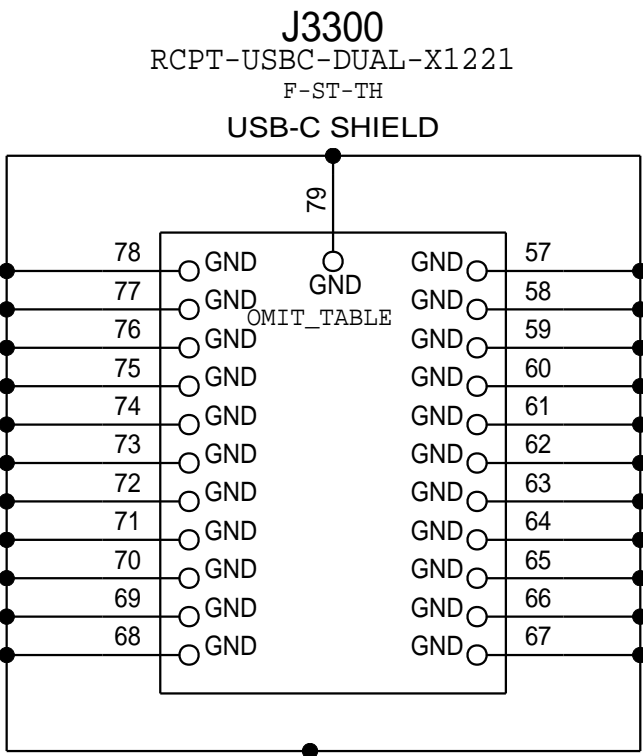
```
ACE2 PINCONFIG
(1) 3.3V PP
(2) 3.3V OD NMOS
(3) 3.3V OD PMOS
(4) 3.3V INPUT
(5) 1.8V PP
(6) 1.8V OD NMOS
(7) 1.8V OD PMOS
(8) 1.8V INPUT
```



| | | | | | |
|--|--|--|--|----------------|--|
| PAGE TITLE | | | | TACOS | |
|  Apple Inc. | | | | | |
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| | | | | 051-04826 | |
| | | | | SIZE | |
| | | | | D | |
| | | | | REVISION | |
| | | | | 4.0.0 | |
| | | | | BRANCH | |
| | | | | proto-1-b | |
| | | | | PAGE | |
| | | | | 32 OF 172 | |
| | | | | SHEET | |
| | | | | 31 OF 149 | |



| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|----------|-----|--------------------------------|-------------------------|----------|------------|
| 117S0049 | 8 | RBS,MF,1/20W,2.00HM,5.0201,SMD | R3370-R3377,R3390-R3397 | CRITICAL | |



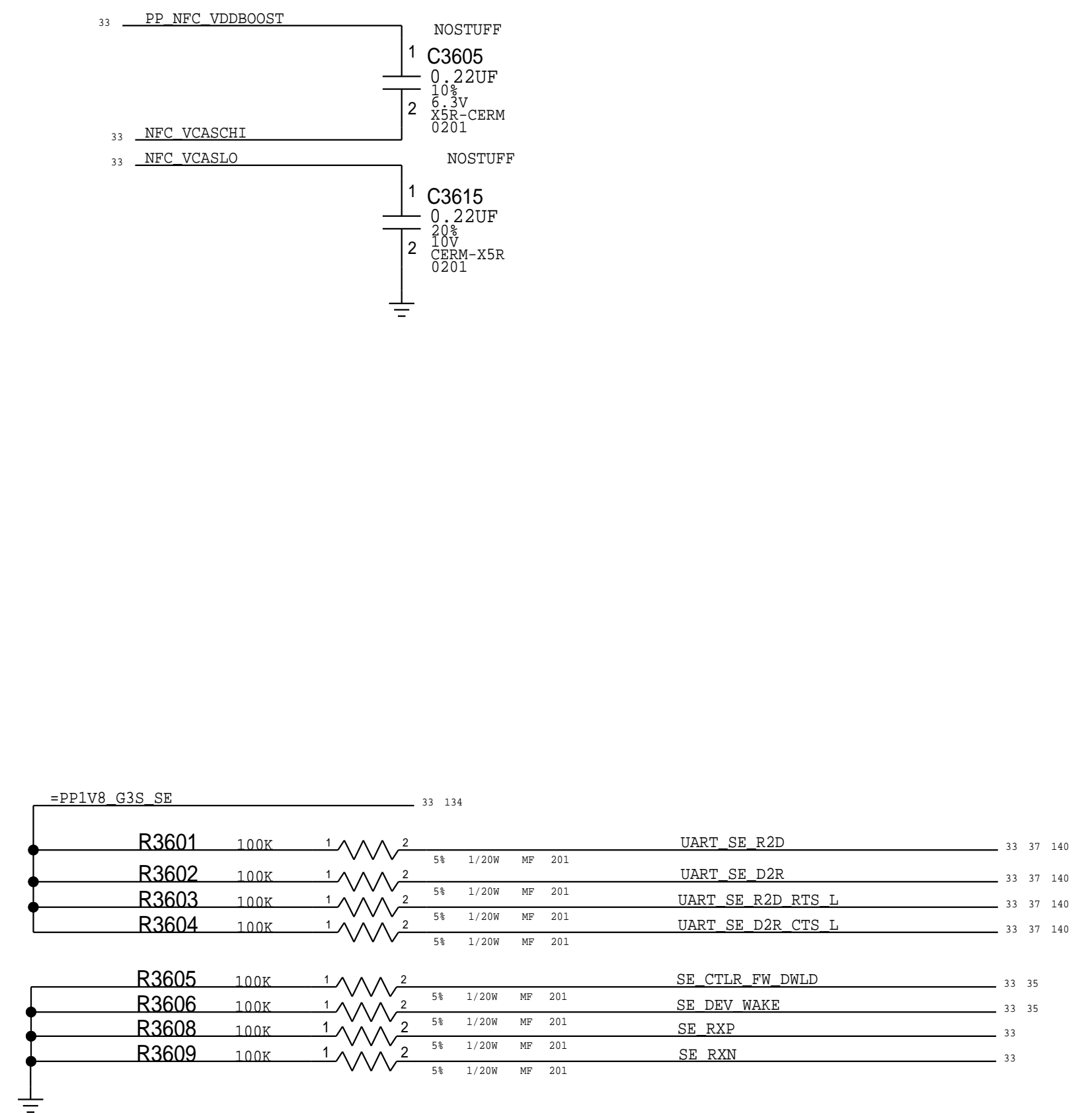
Second IO from right (Between USB-C and USB-A Ports) is used for Mojo.


LAST CHANGE: Wed Apr 1 22:57:37 2015

| | | | |
|---|--|-----------------|-----------|
| PAGE TITLE | | USB-C Connector | |
| | | DRAWING NUMBER | 051-04826 |
| | | REVISION | 4.0.0 |
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| | | PAGE | 33 OF 172 |
| | | SHEET | 32 OF 149 |

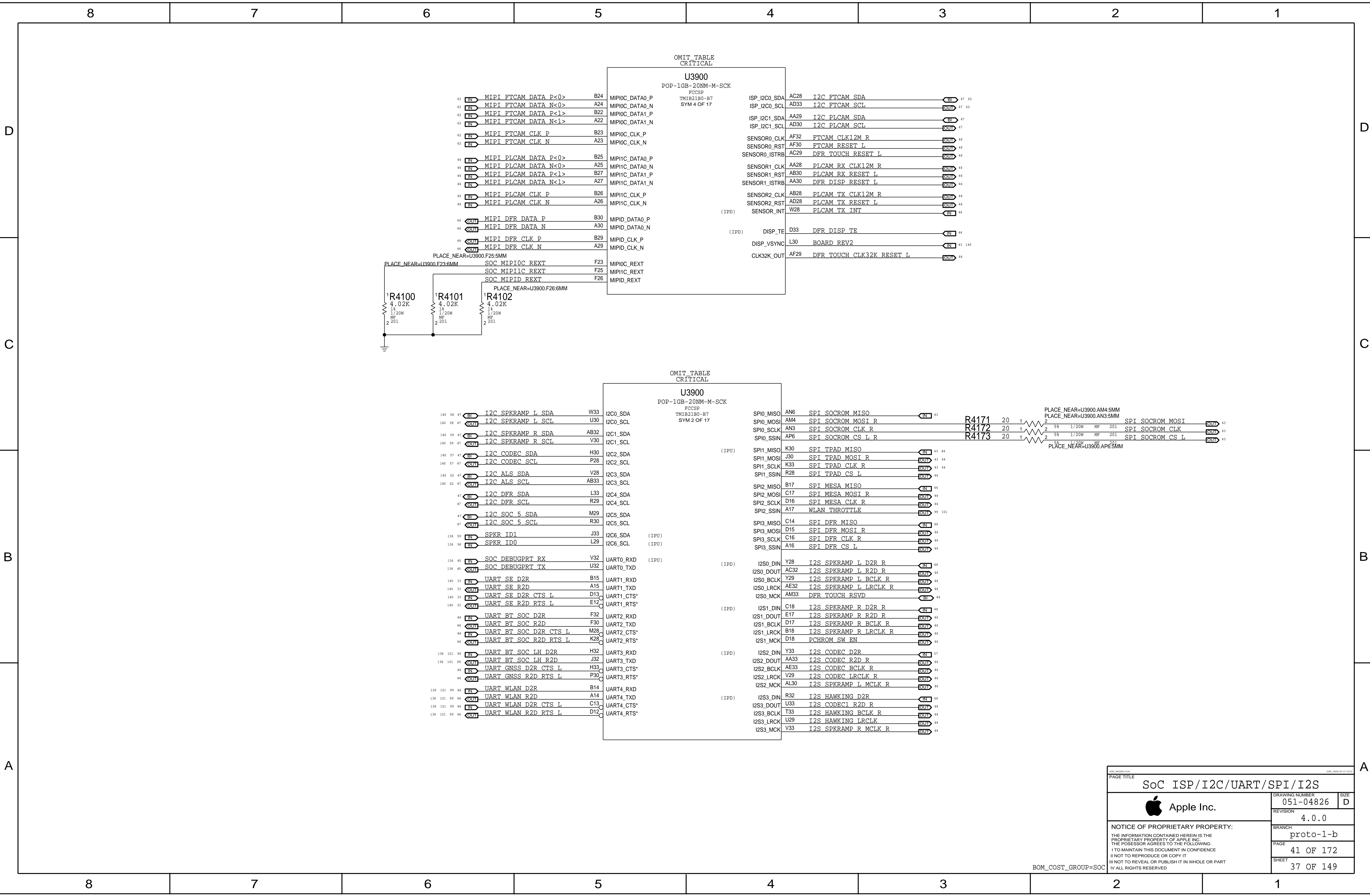
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NFC & SE CONTROLLER

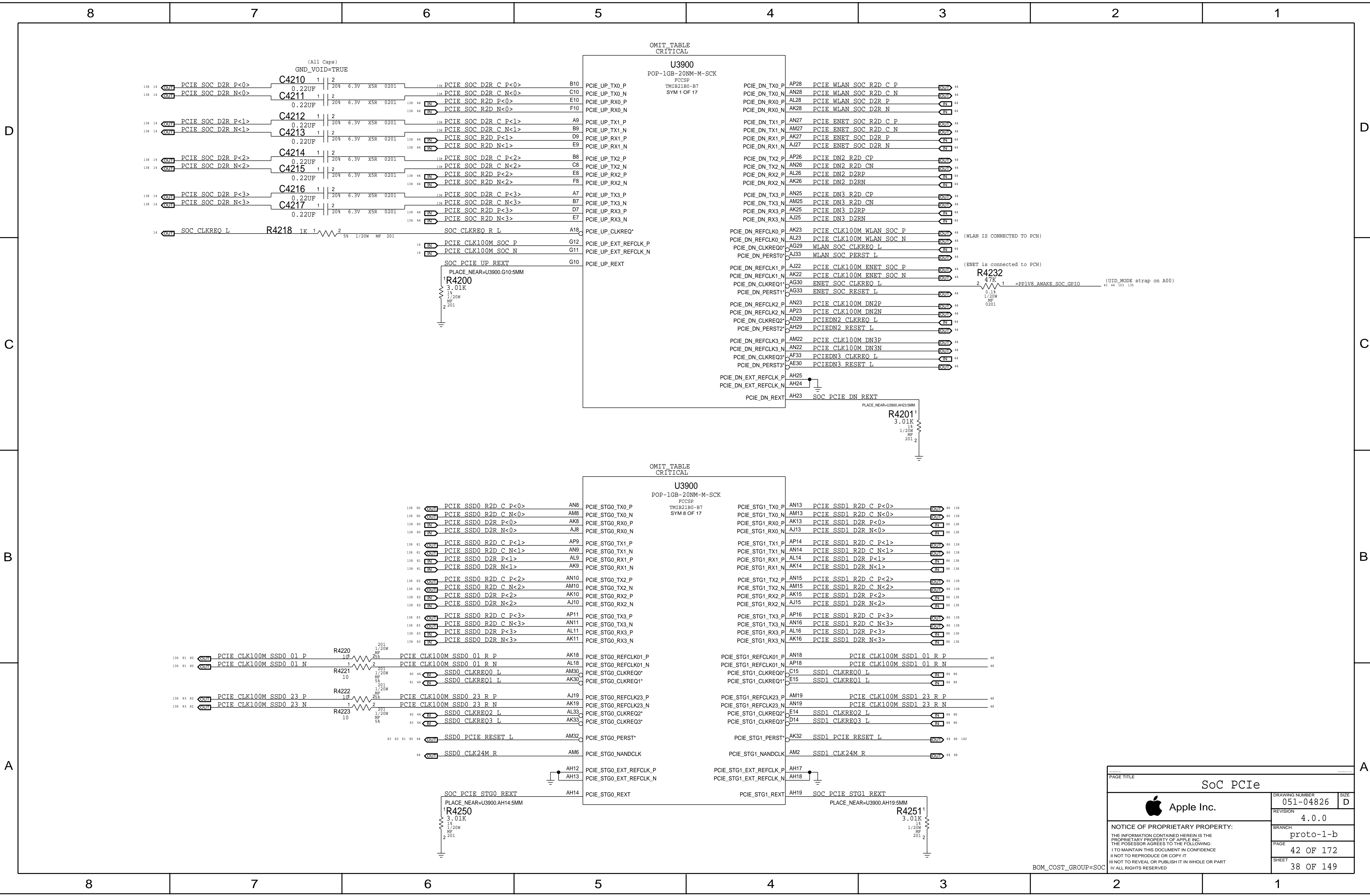



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| PAGE TITLE | | DRAWING NUMBER | | SIZE | |
| SECURE ELEMENT | | 051-04826 | | D | |
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| | | SHEET | | 33 OF 149 | |

BOM_COST_GROUP=KEYBOARD



BOM_COST_GROUP=SOC

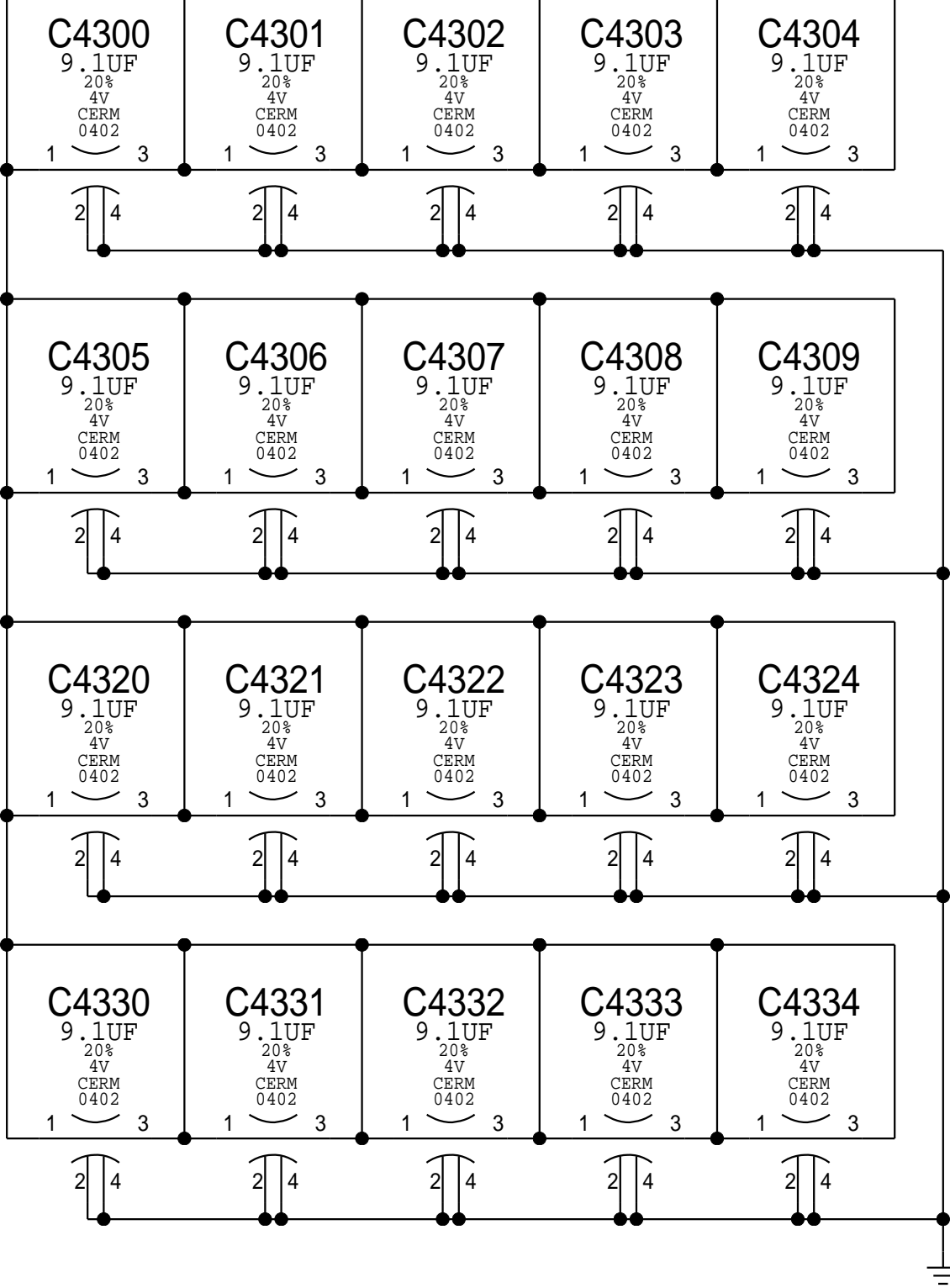


| | | | |
|---|----------------|-----------|-----------|
| PAGE TITLE | | | |
| SoC PCIe | | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 | SIZE |
| | REVISION | 4.0.0 | D |
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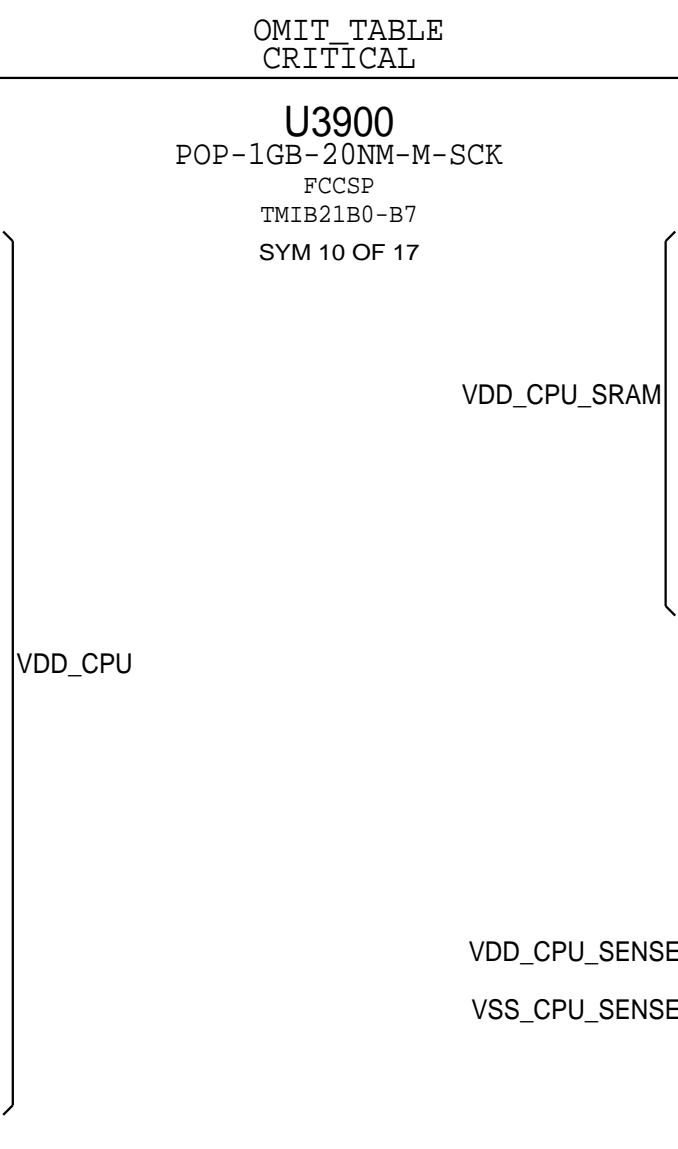
BOM_COST_GROUP=SOC

Current estimates @ 105C & 2GB from Gibraltar Power Specification Rev 0.5.3

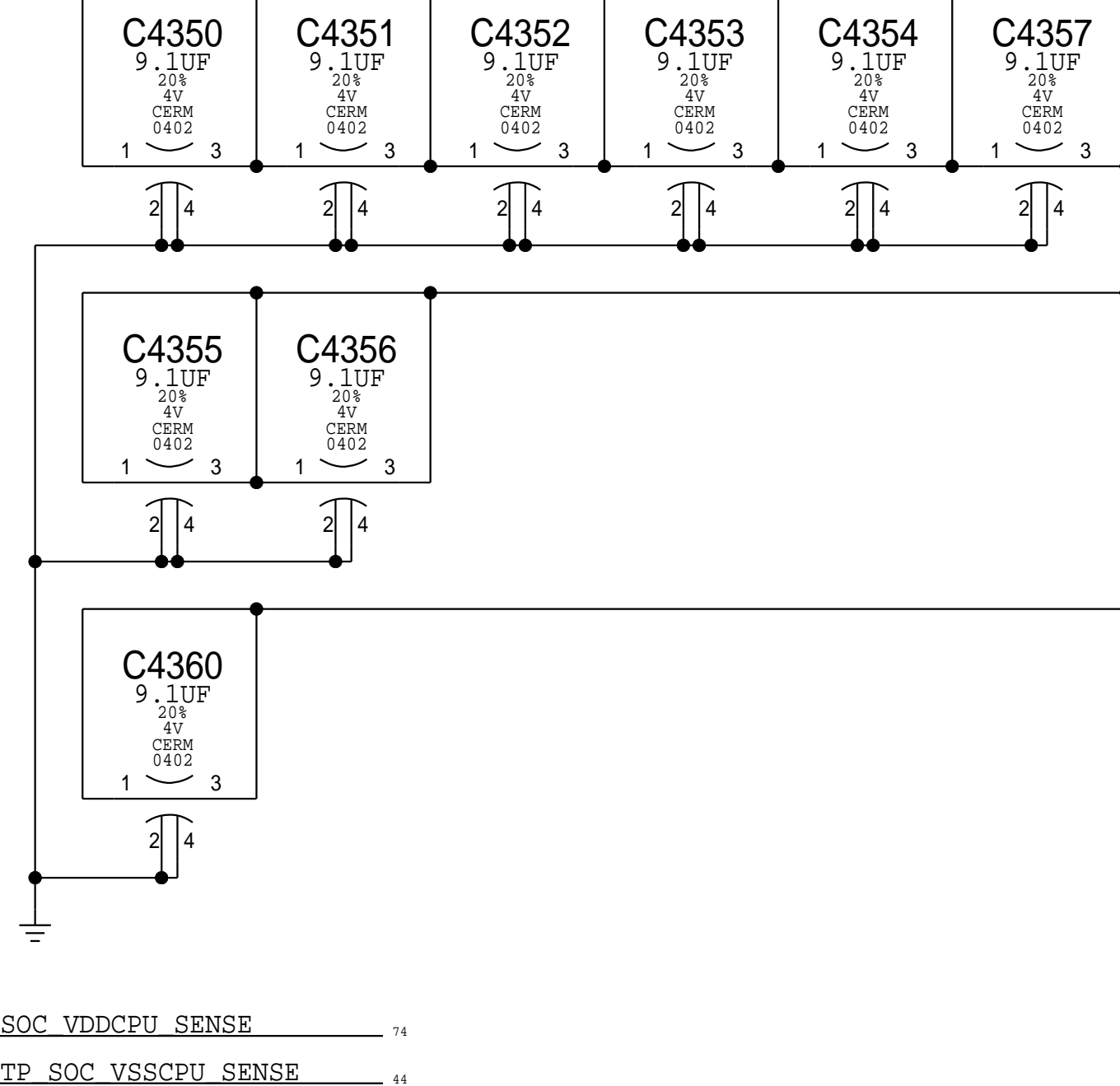
135 =PPVDDCPU AWAKE SOC
0.625V - 1.06V
11.6A Max



AA12
AA14
AA16
AB11
AB13
AB15
N12
N14
N16
P11
P13
P15
R10
R12
R14
U12
U14
U16
W10
W12
W14
Y11
Y13
Y15

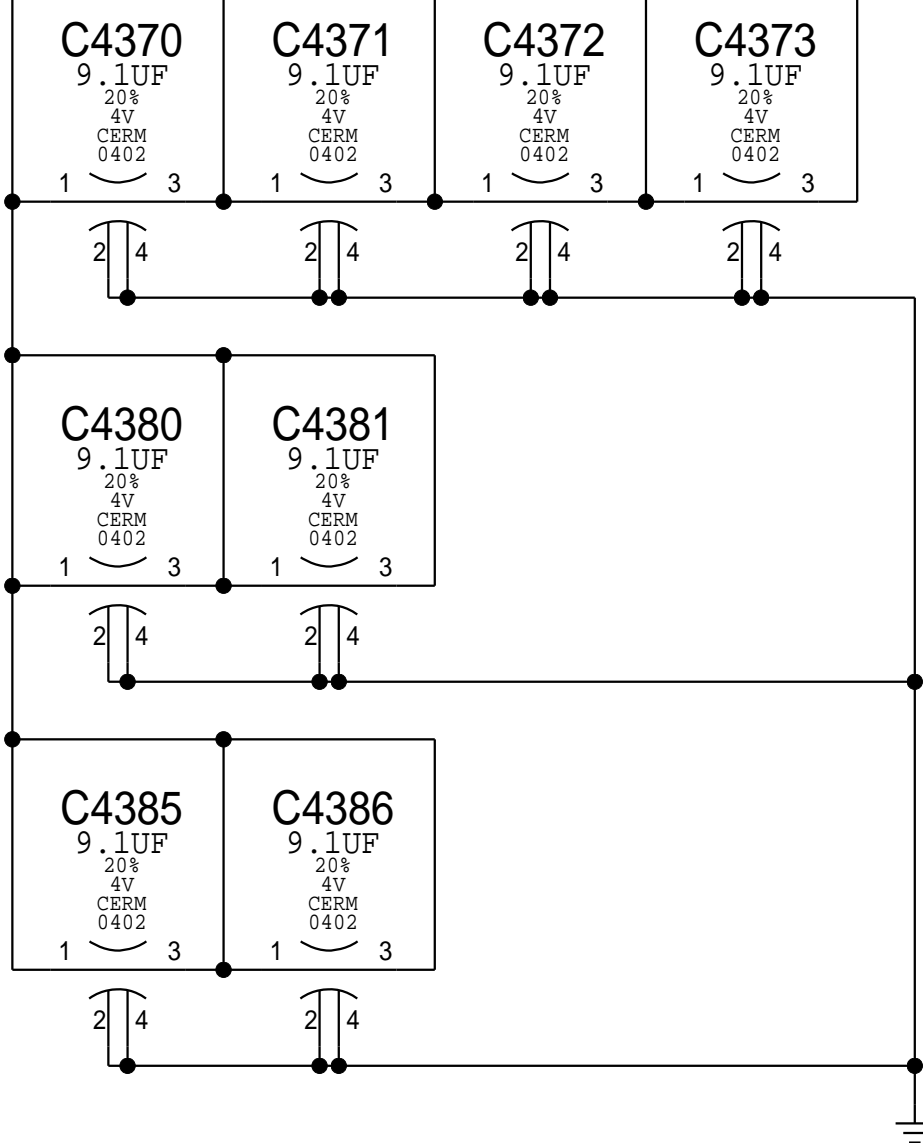


AA10
N10
R16
T11
T13
T15
U10
V11
V13
V15
W16

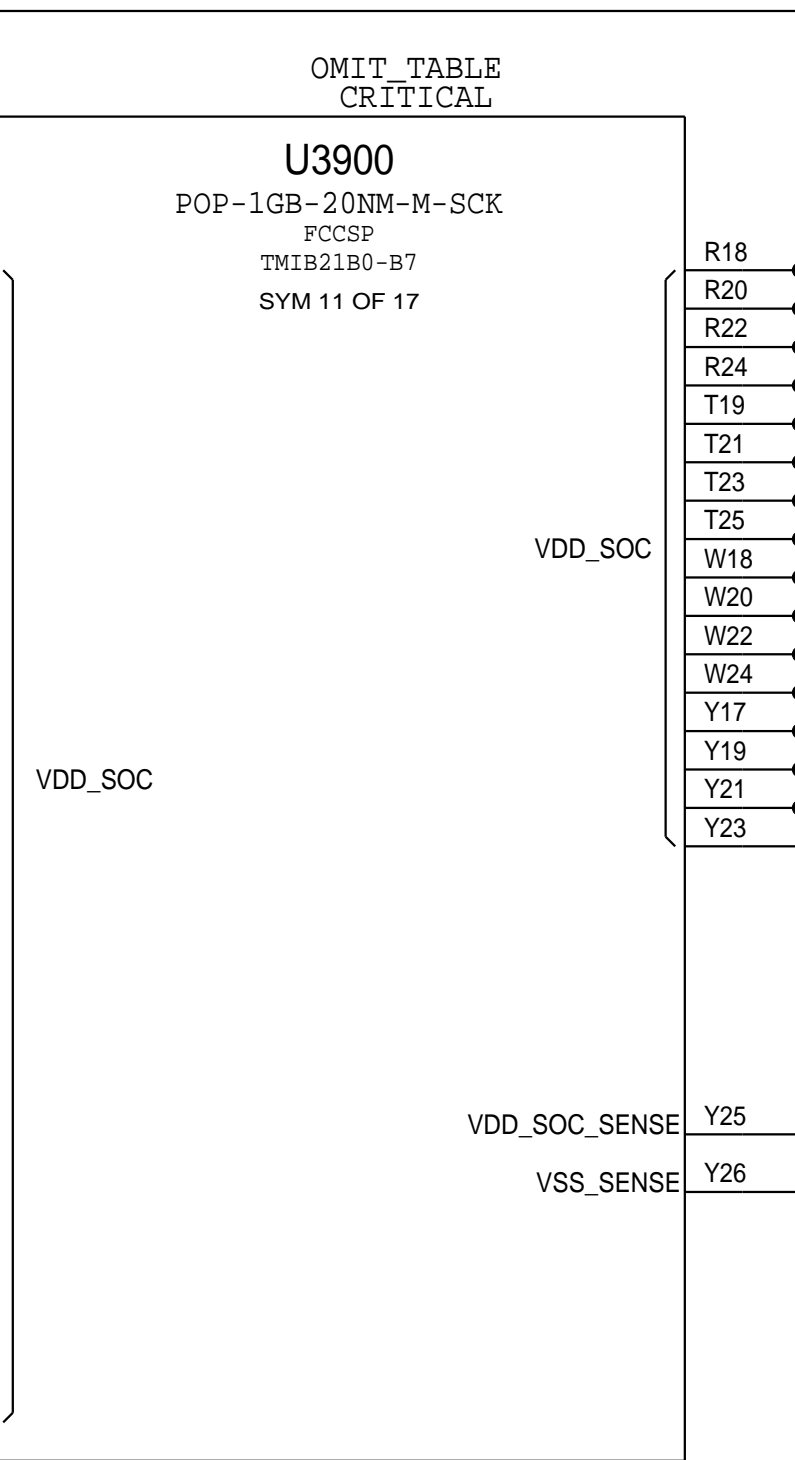


=PPVDDCPUSRAM AWAKE SOC 135
0.8V - 1.06V
0.9A Max

135 =PP0V82_SLPDDR VDDSOC
5.6A Max



AC10
AC12
AC14
AC16
AC18
AC20
AC22
AC24
AD11
AD13
AD15
AD17
AD19
AD21
AD23
AD25
L10
L12
L14
L16
L18
L20
L22
L24
M11
M13
M15
M19
M21
M23
M25



R18
R20
R22
R24
T19
T21
T23
T25
W18
W20
W22
W24
Y17
Y19
Y21
Y23

Y25 TP_SOC VDDSOC_SENSE 44
Y26 TP_SOC VSSSOC_SENSE 44

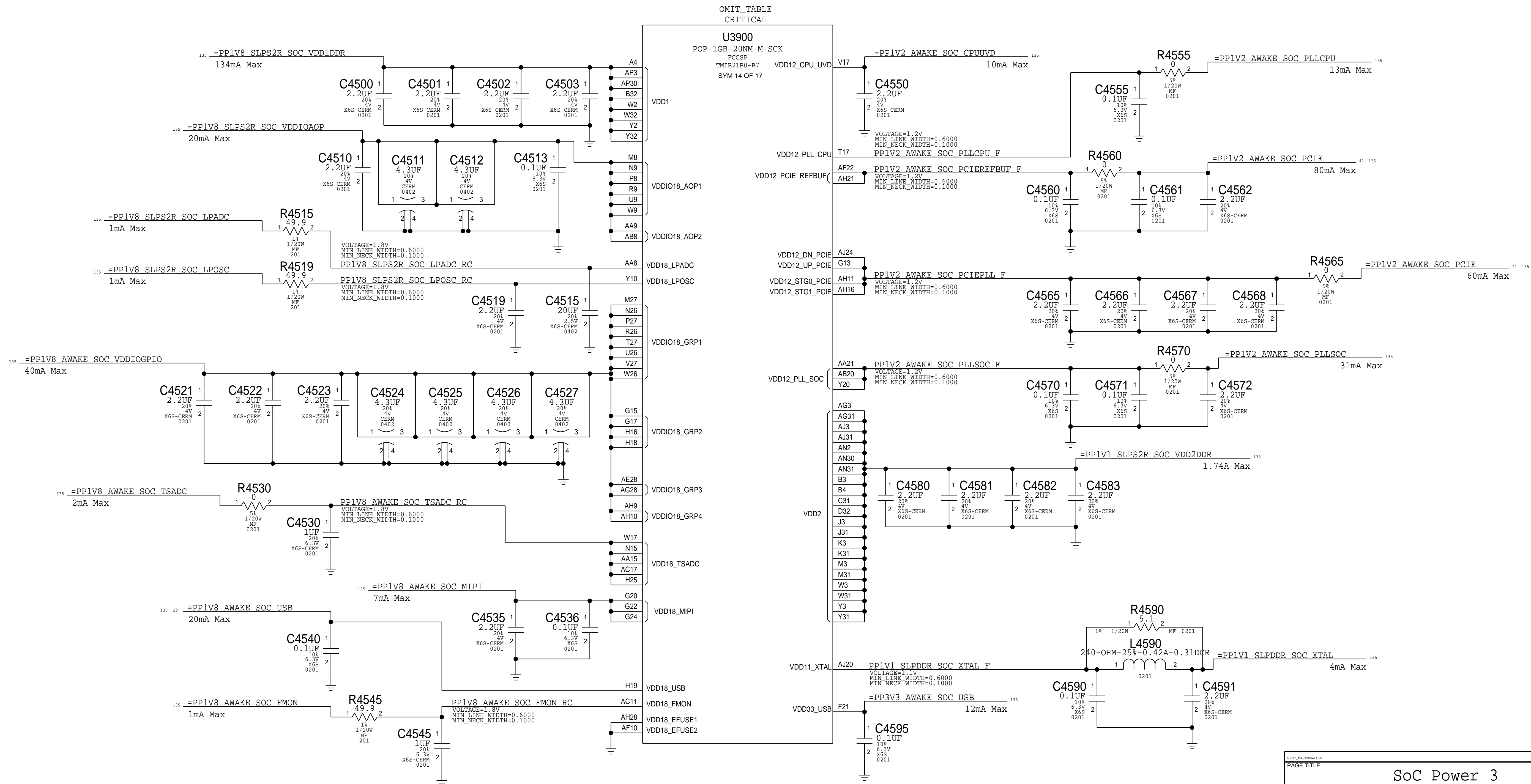
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| SoC Power 1 | | |
| | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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| | | proto-1-b |
| | | PAGE |
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| | | 39 OF 149 |


BOM_COST_GROUP=SOC

1

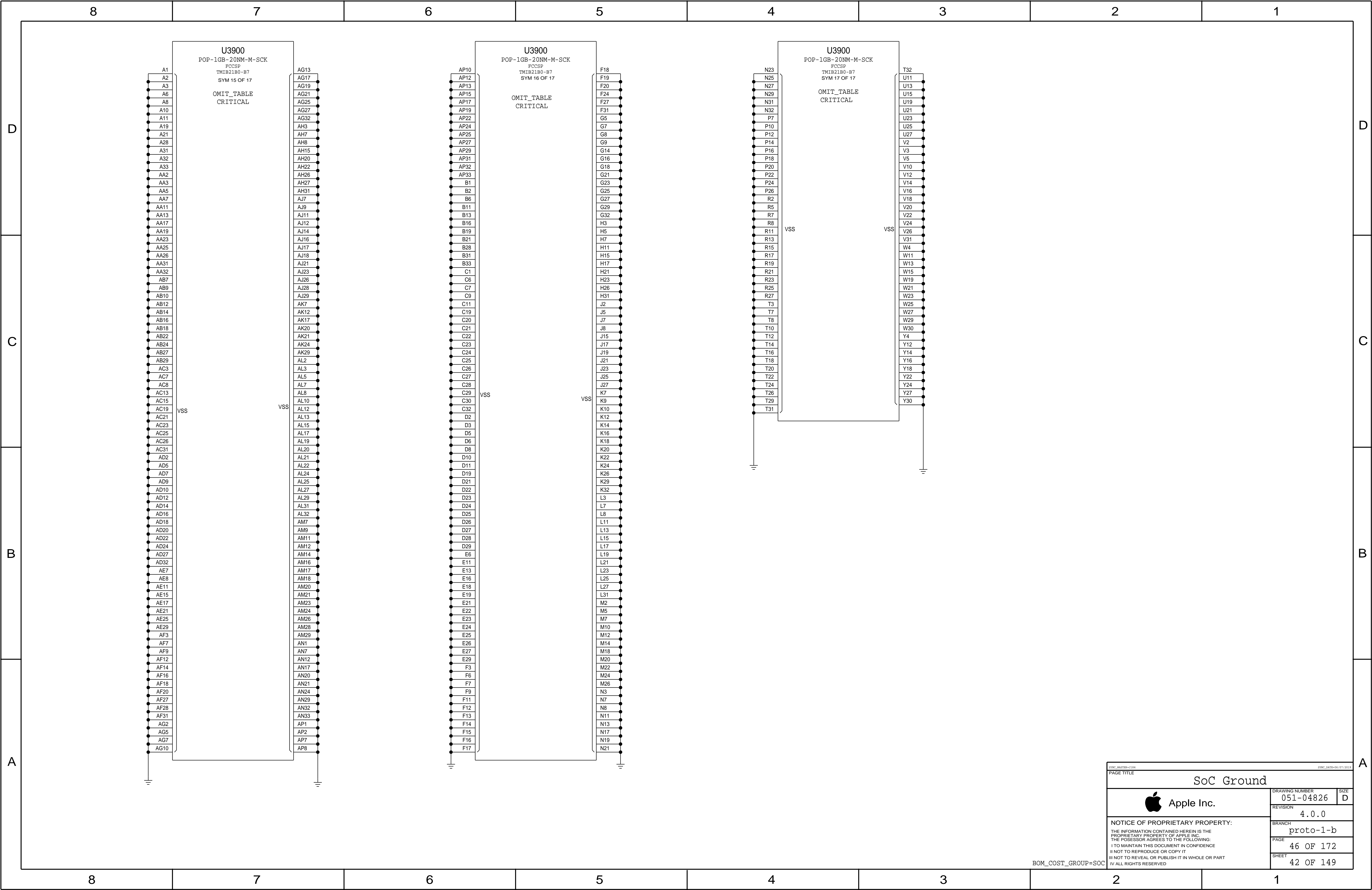
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Current estimates @ 105C & 2GB from Gibraltar Power Specification Rev 0.5.3



| | | | |
|---|--|------------------------|--|
| 270C_HARTING-0164 | | 270C_CATECH-08/07/2018 | |
| PAGE TITLE | | | |
| SoC Power 3 | | | |
|  Apple Inc. | | DRAWING NUMBER | |
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| | | 4.0.0 | |
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| | | proto-1-b | |
| | | PAGE | |
| | | 45 OF 172 | |
| | | SHEET | |
| | | 41 OF 149 | |

BOM_COST_GROUP=SOC

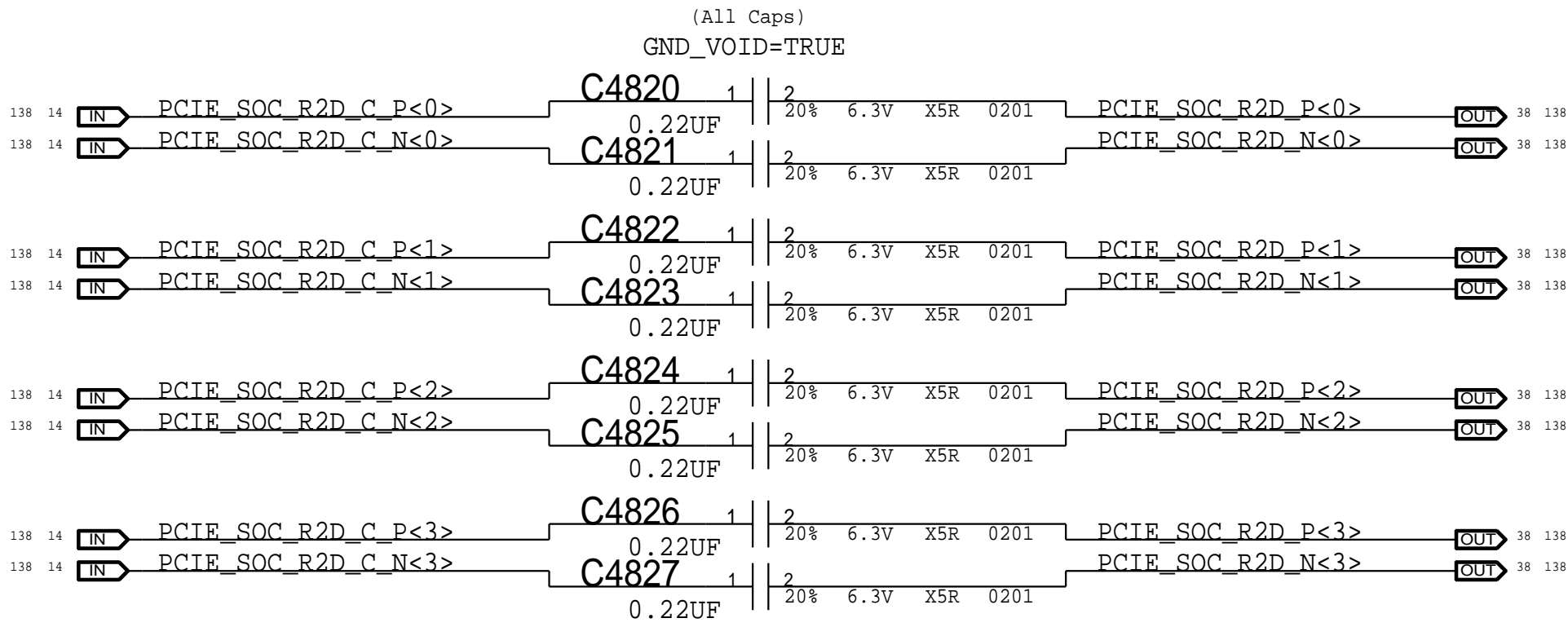


PCIE Up R2D AC Caps

SOC SIGNAL ALIAS

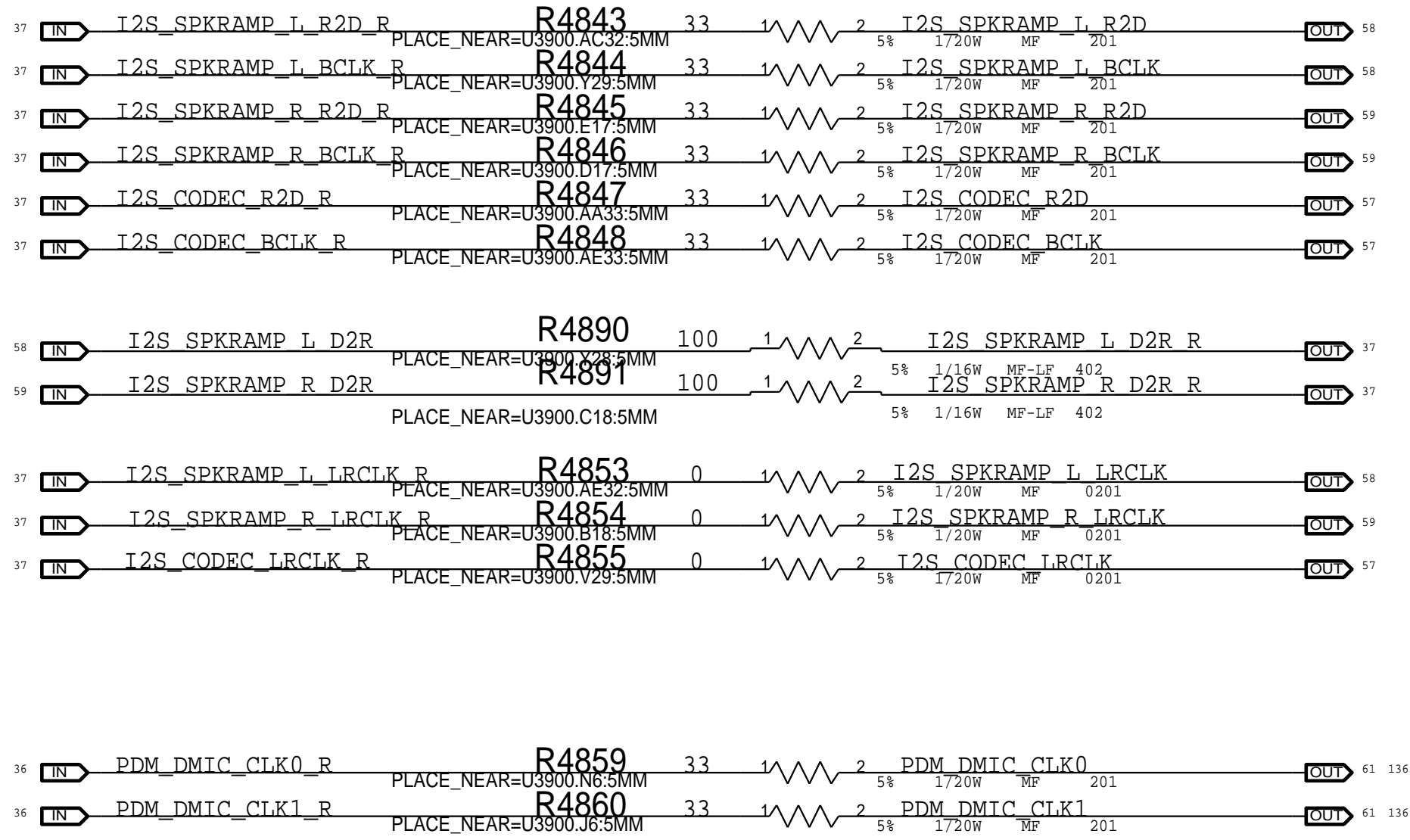
SOC SIGNAL NC's

D

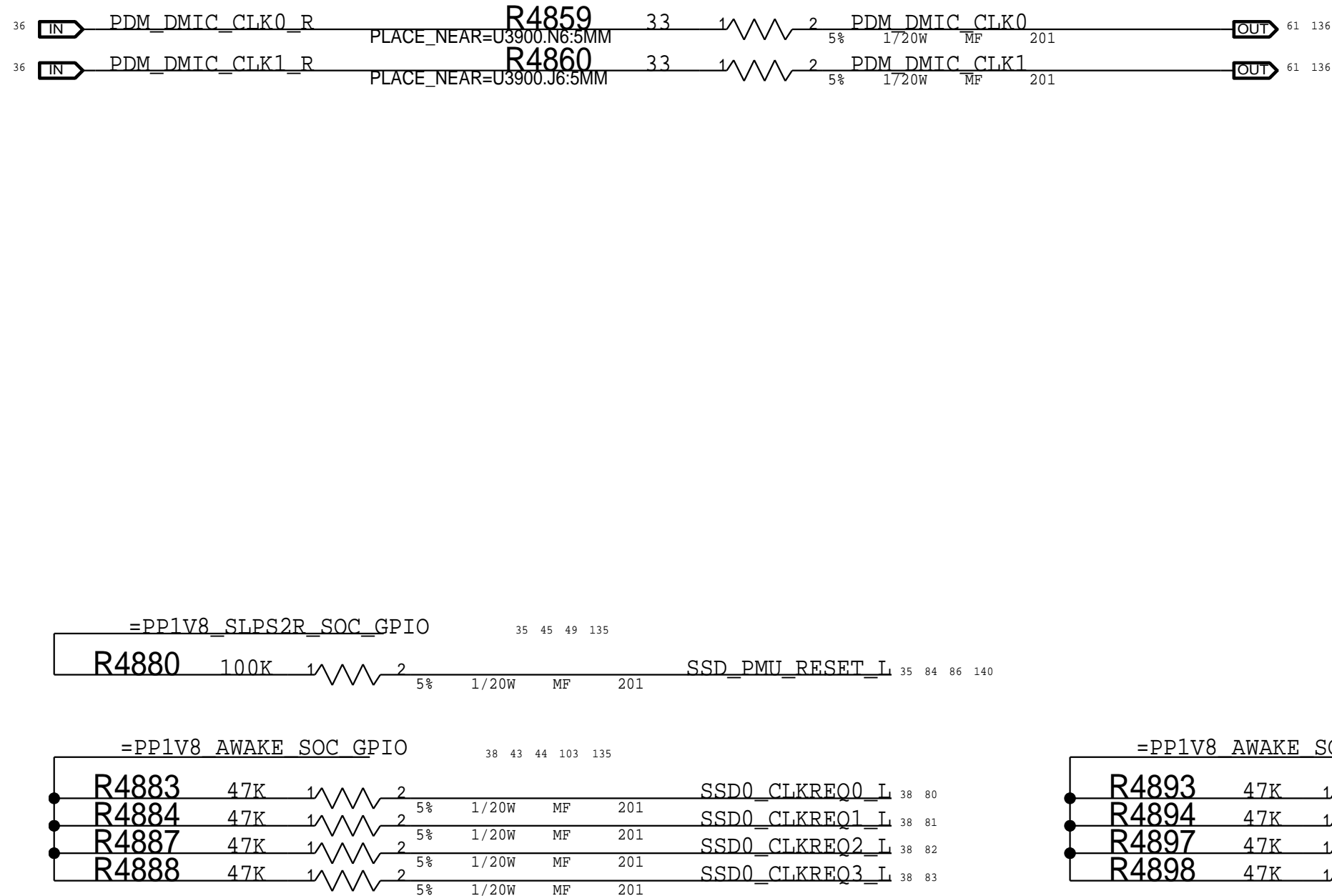


GPIO Source Termination

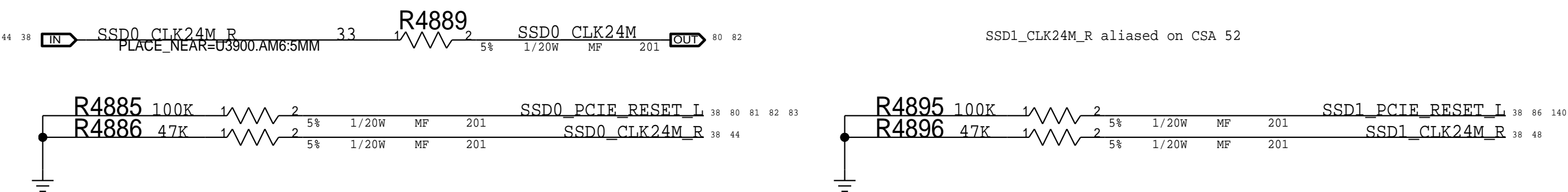
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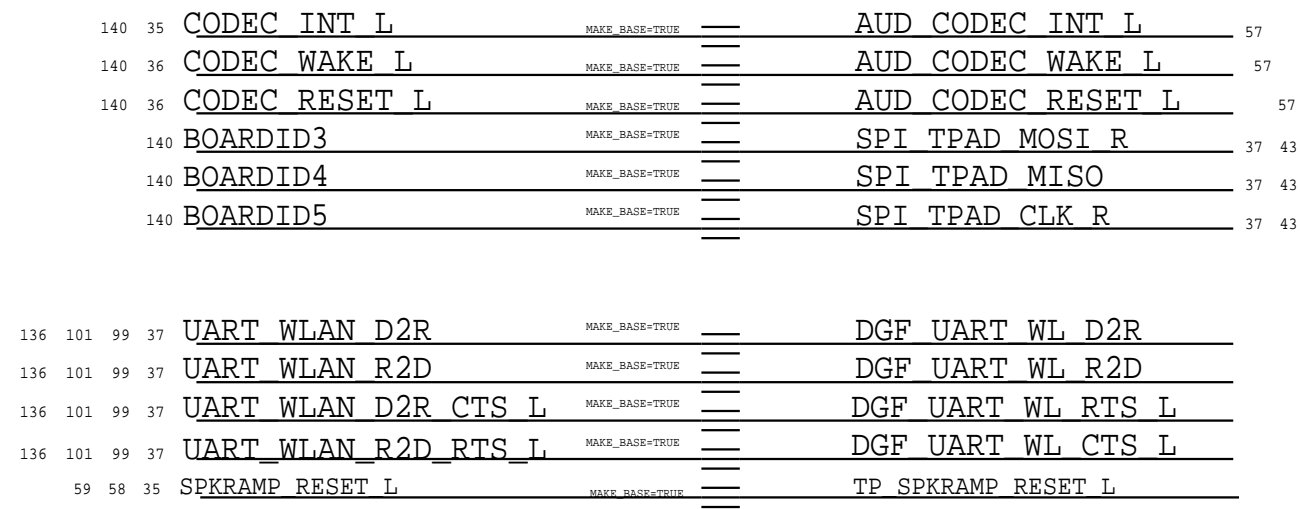
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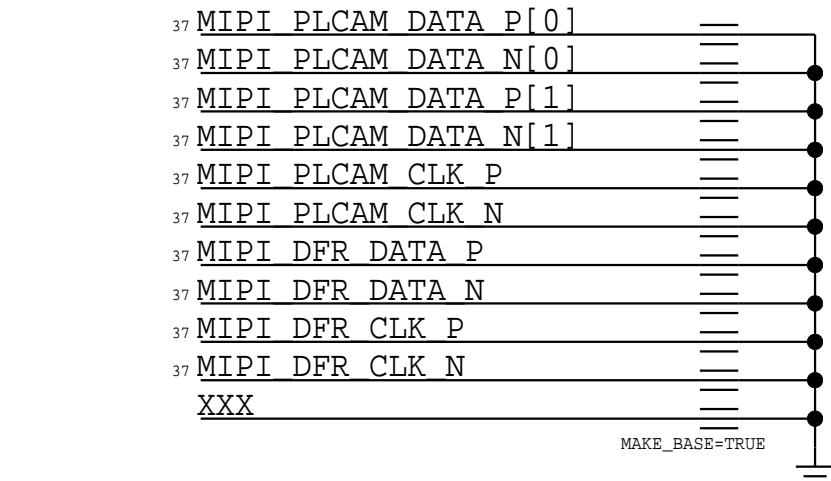
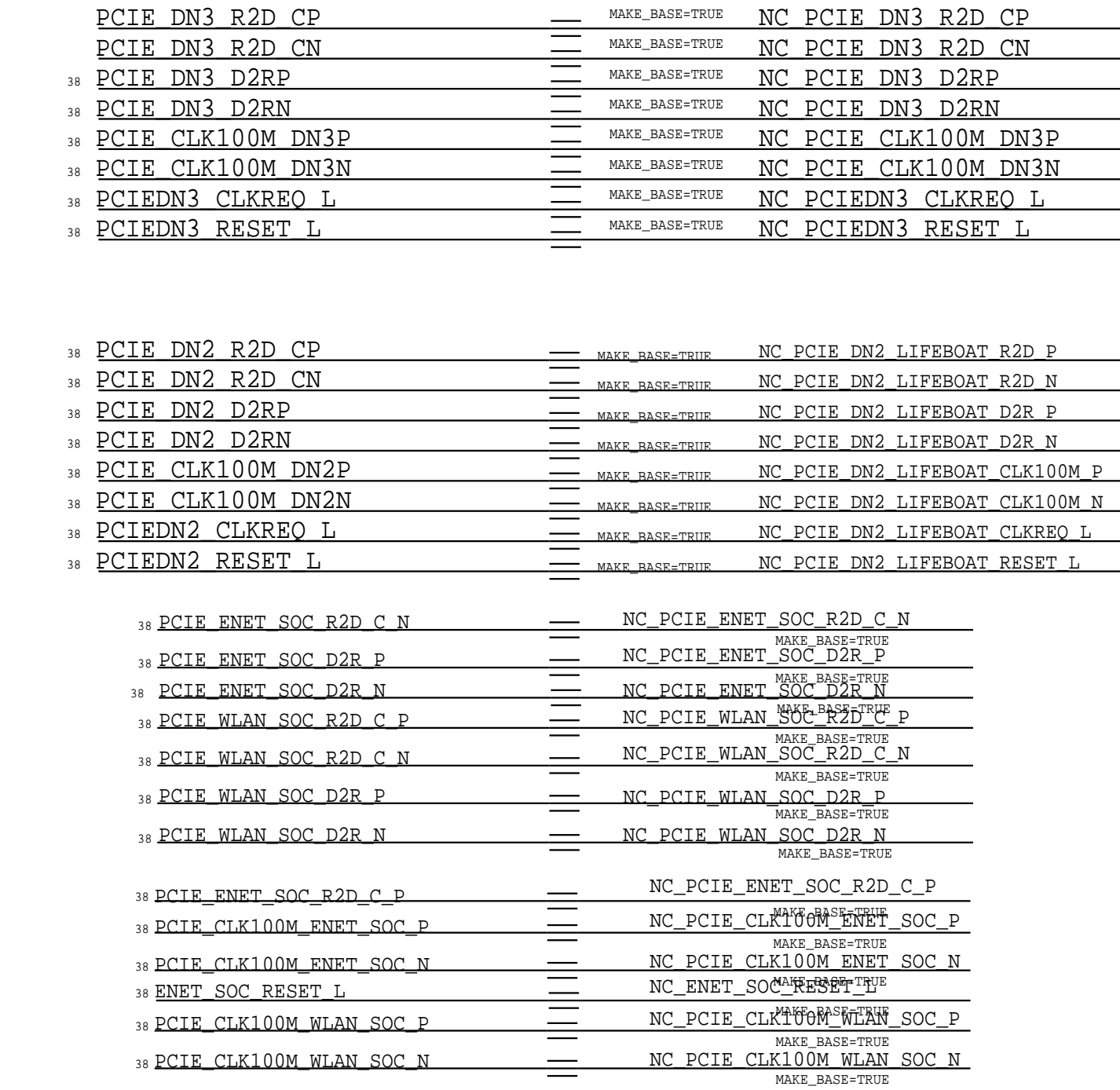
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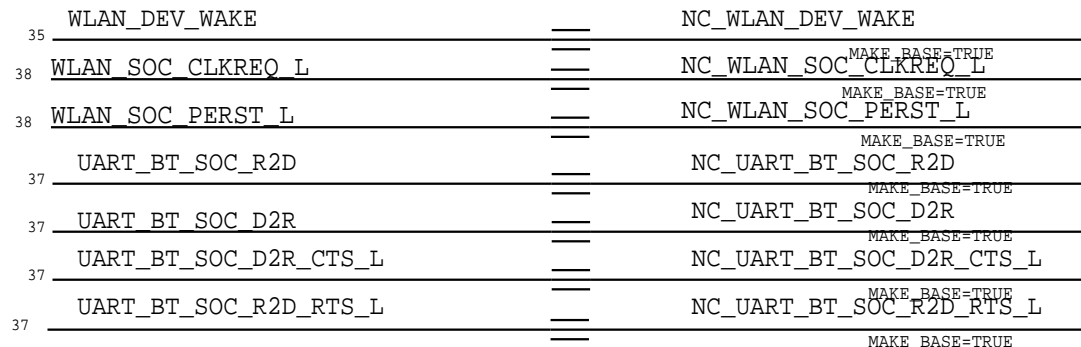
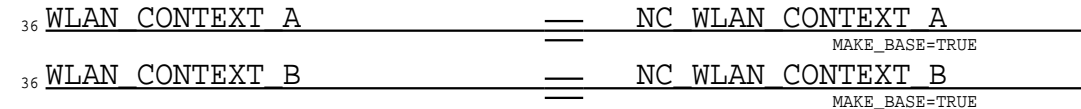
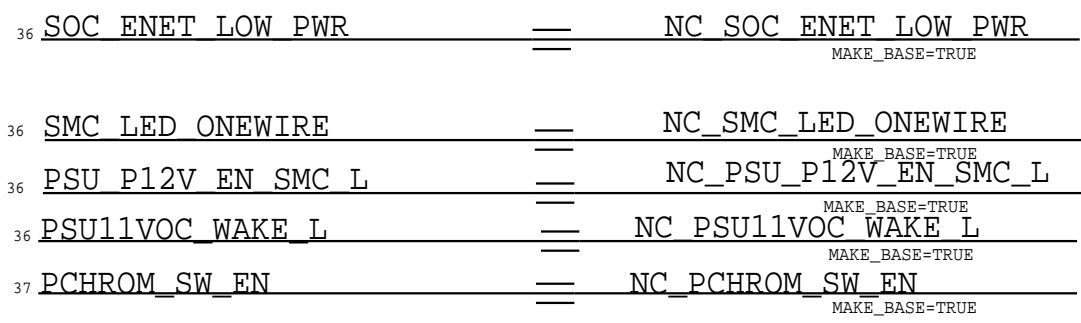
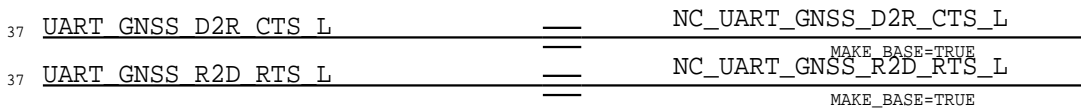
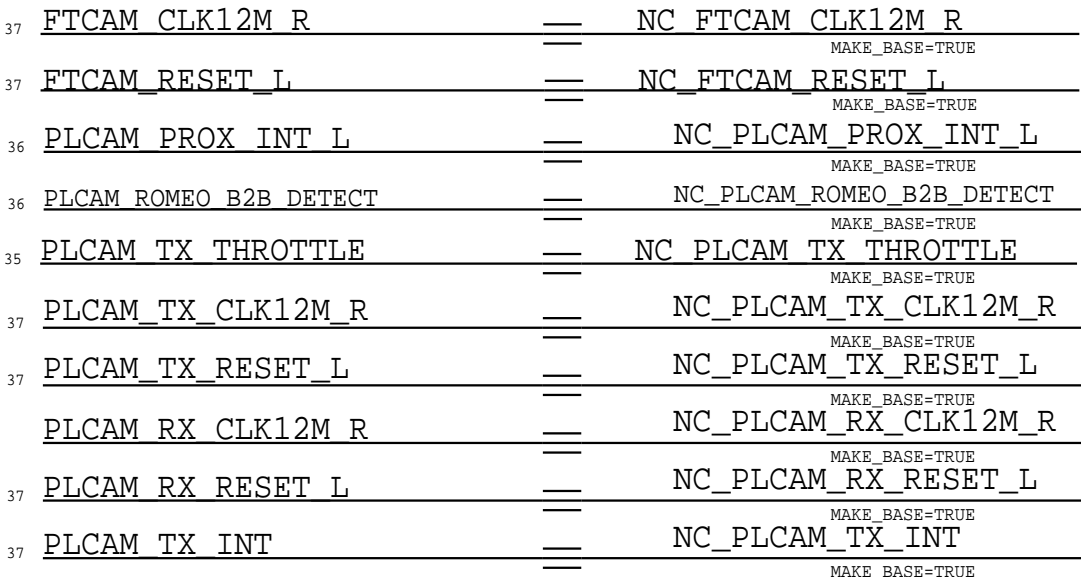
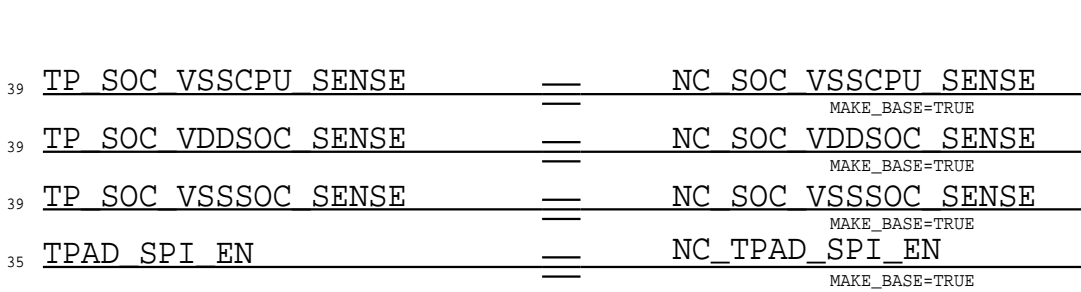
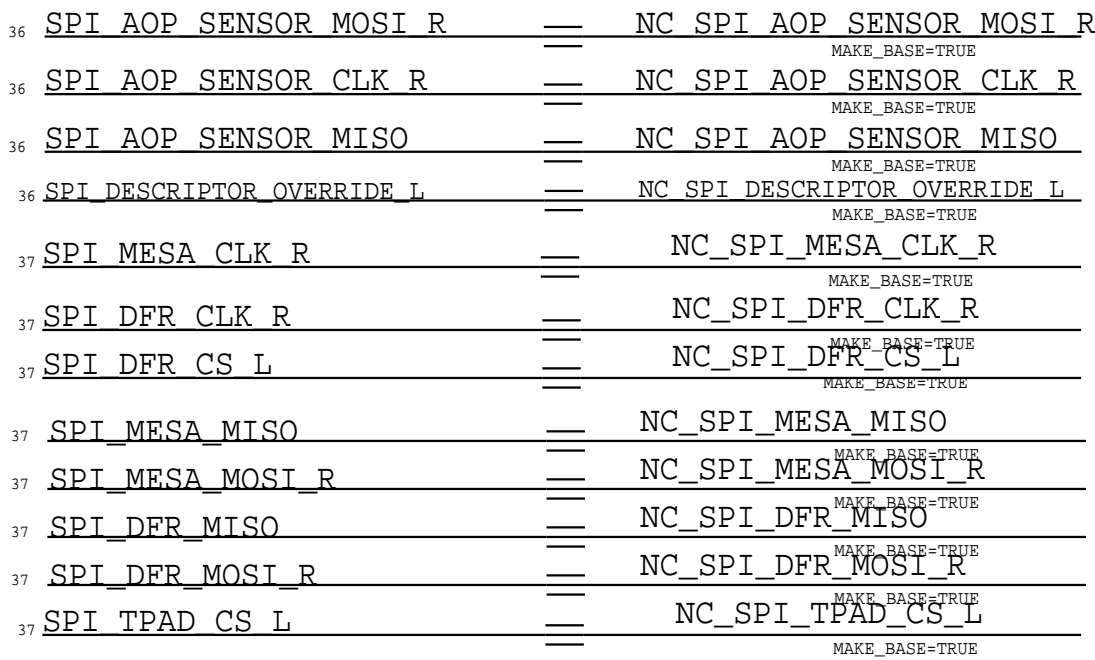
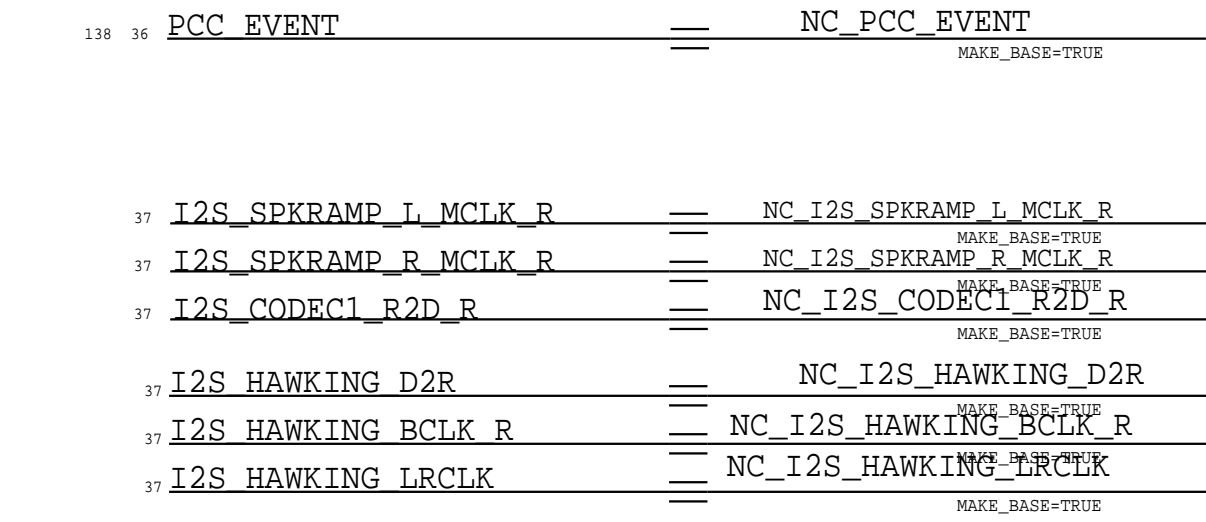
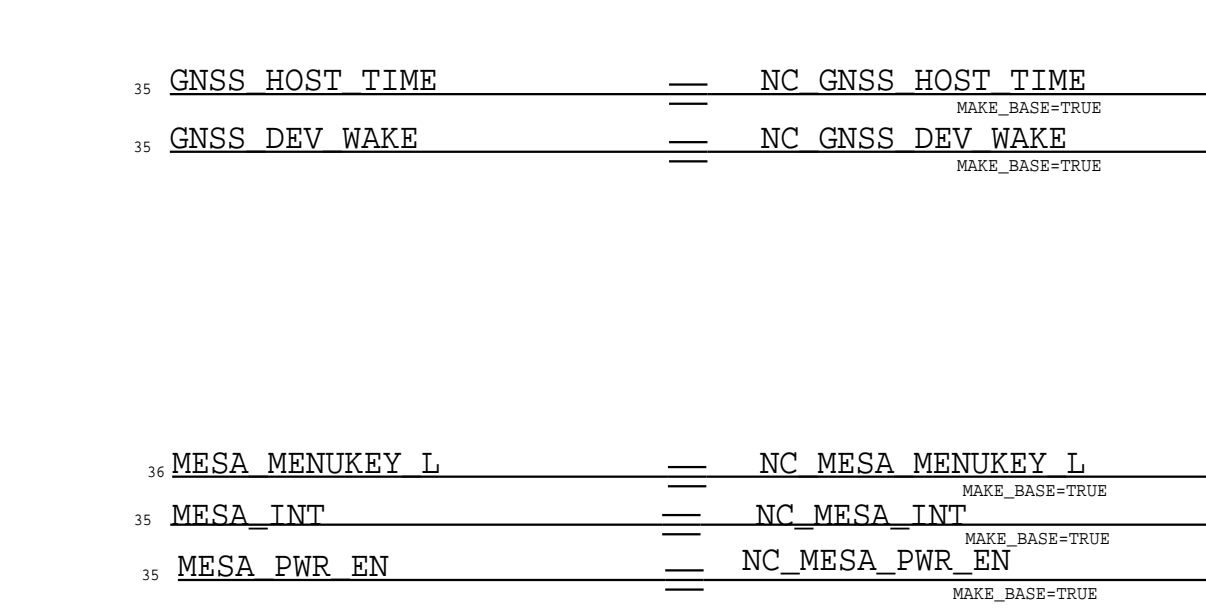
These 6 resistors allows J185
to use the same H9M GPIO configuration.
Warning: SSD1_CLK24M turned on but unused on J184.



SOC SIGNAL NC's



RTS <---> CTS




D

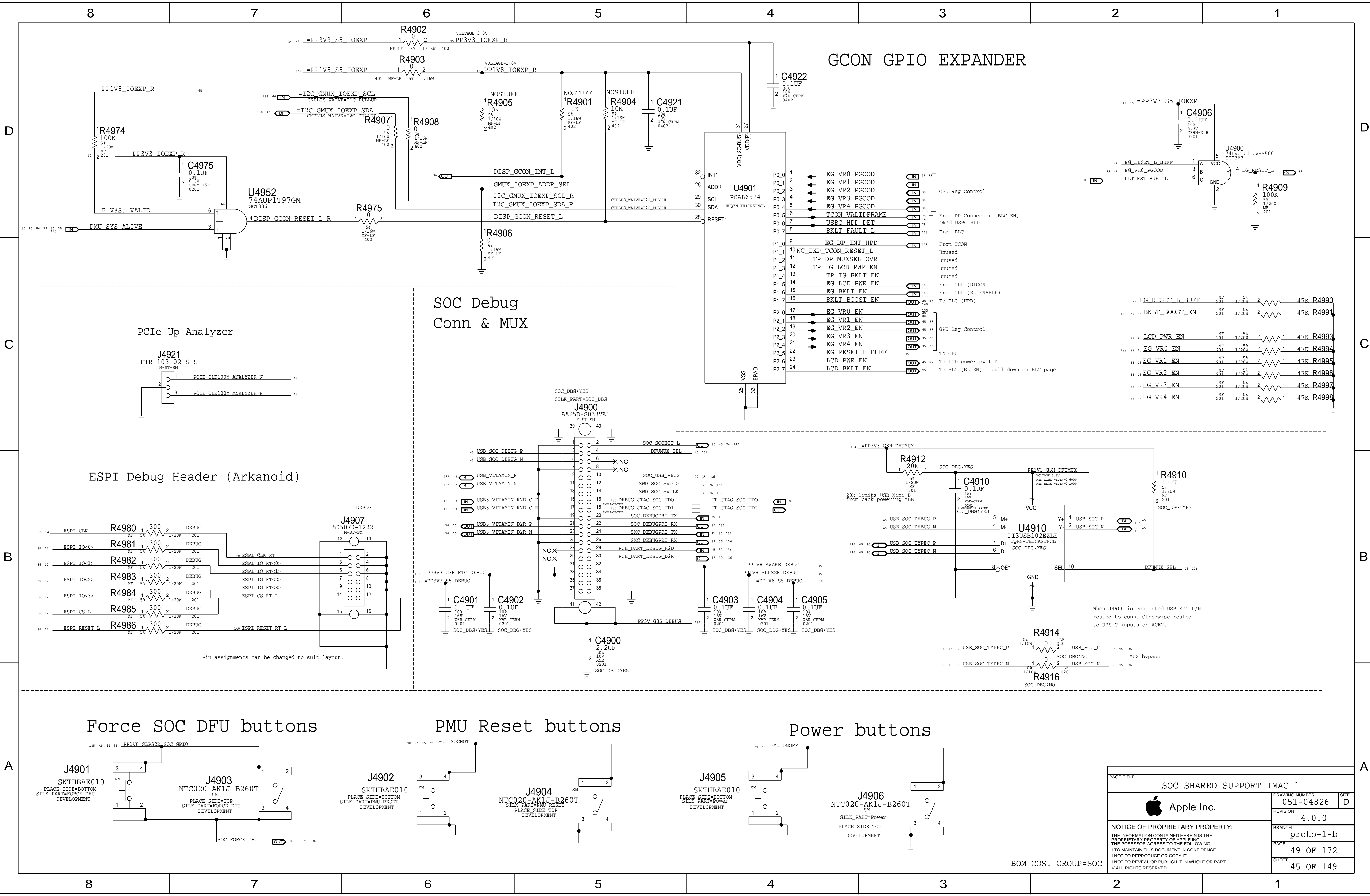
C


B

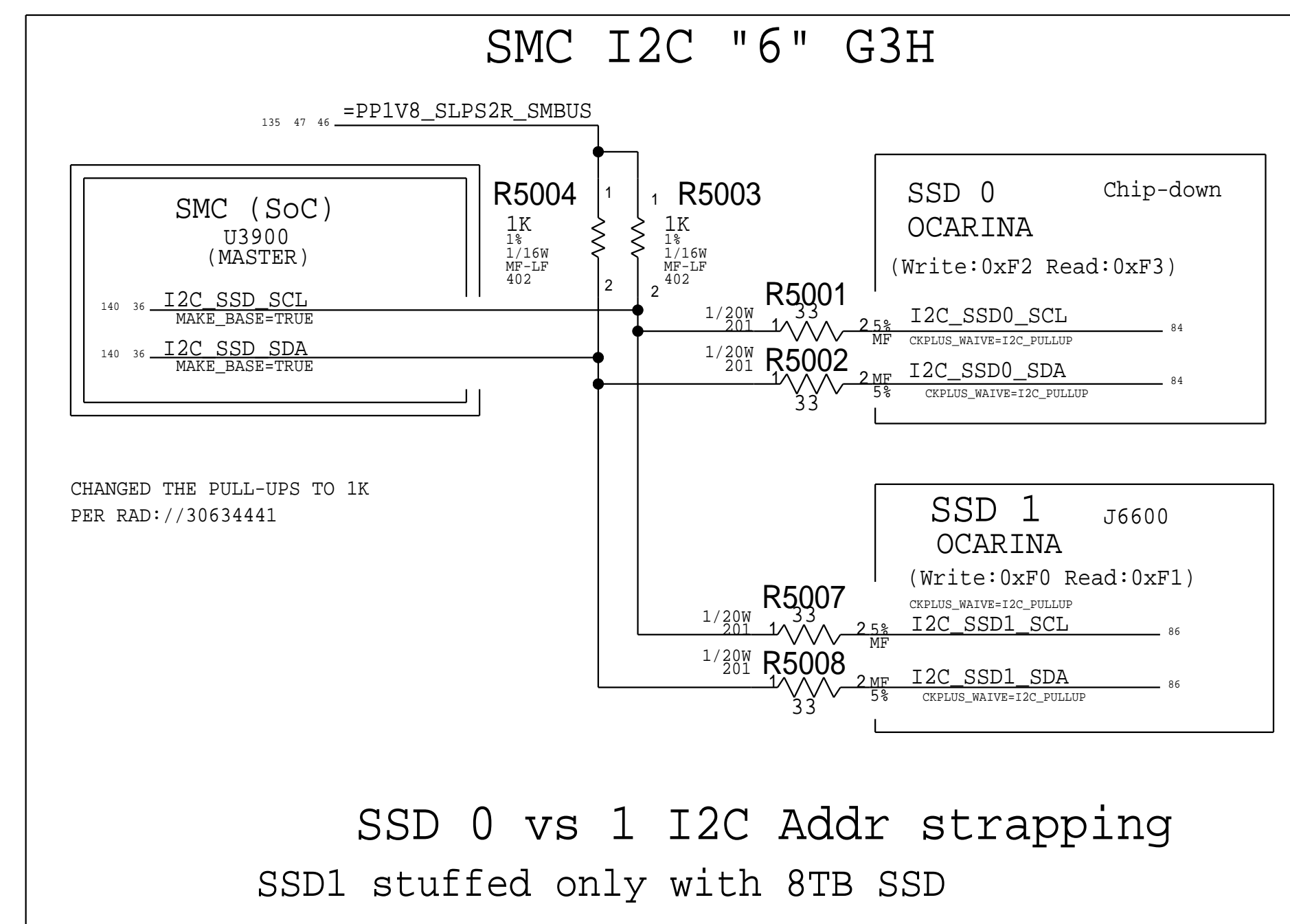
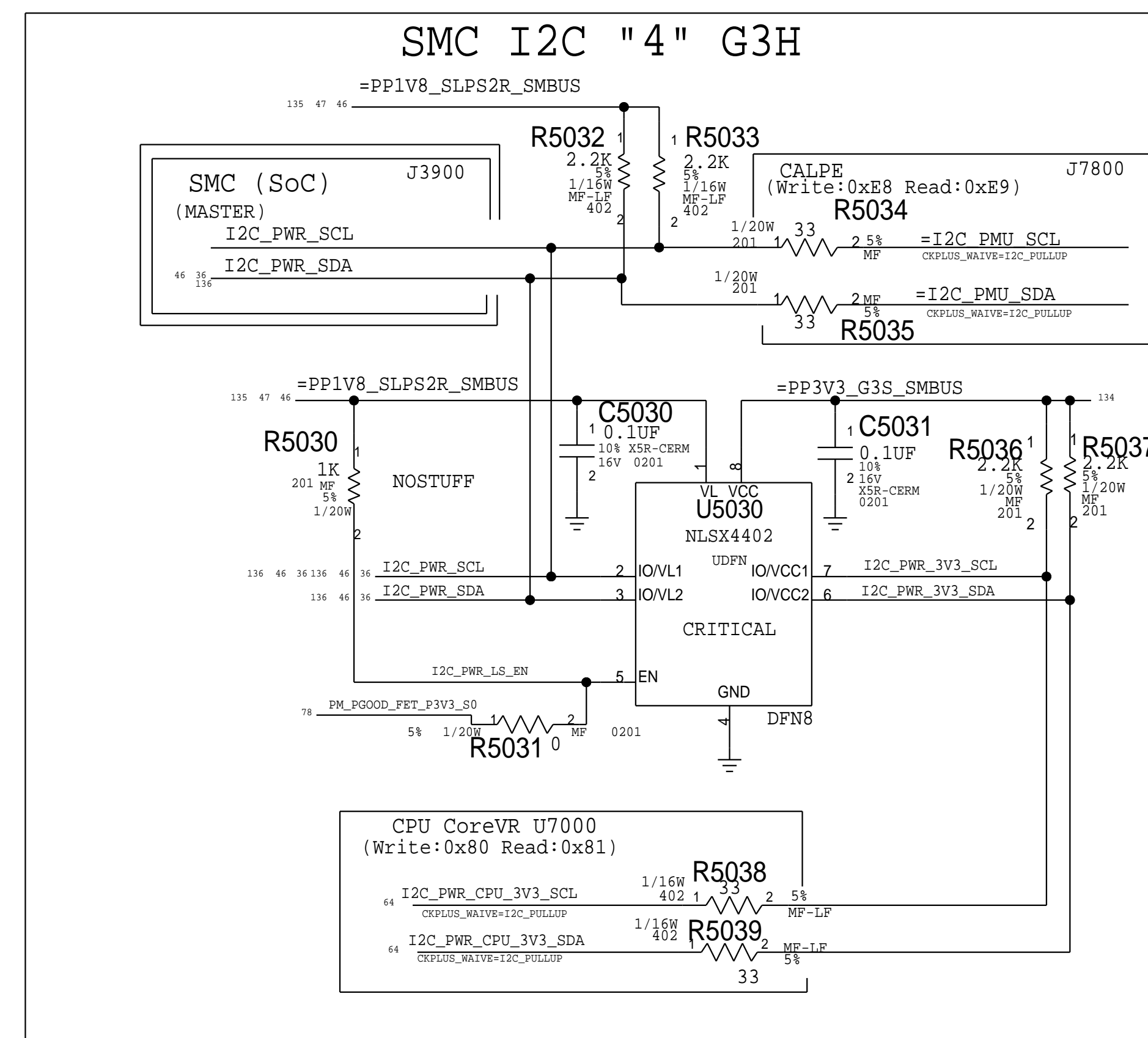
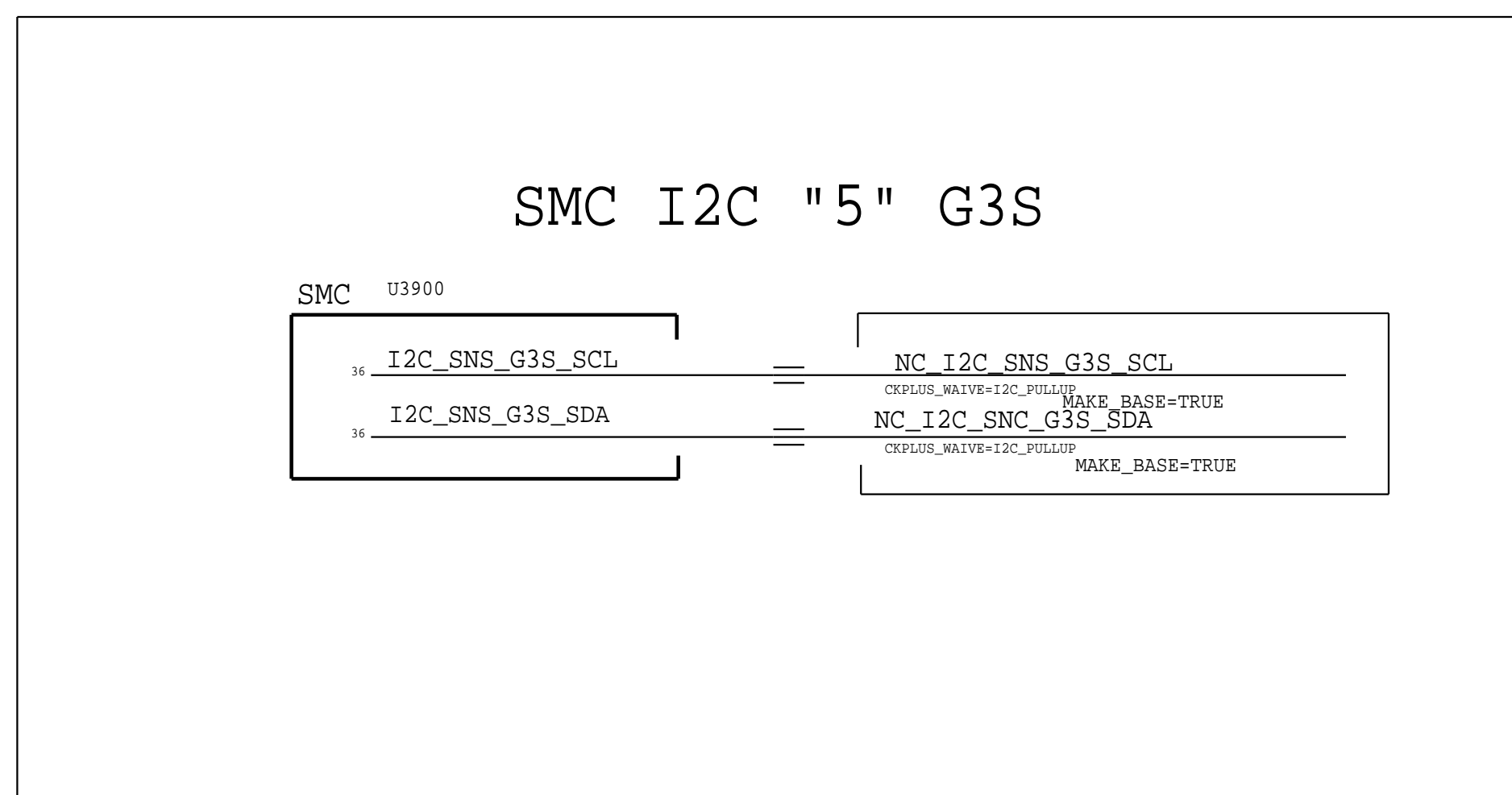
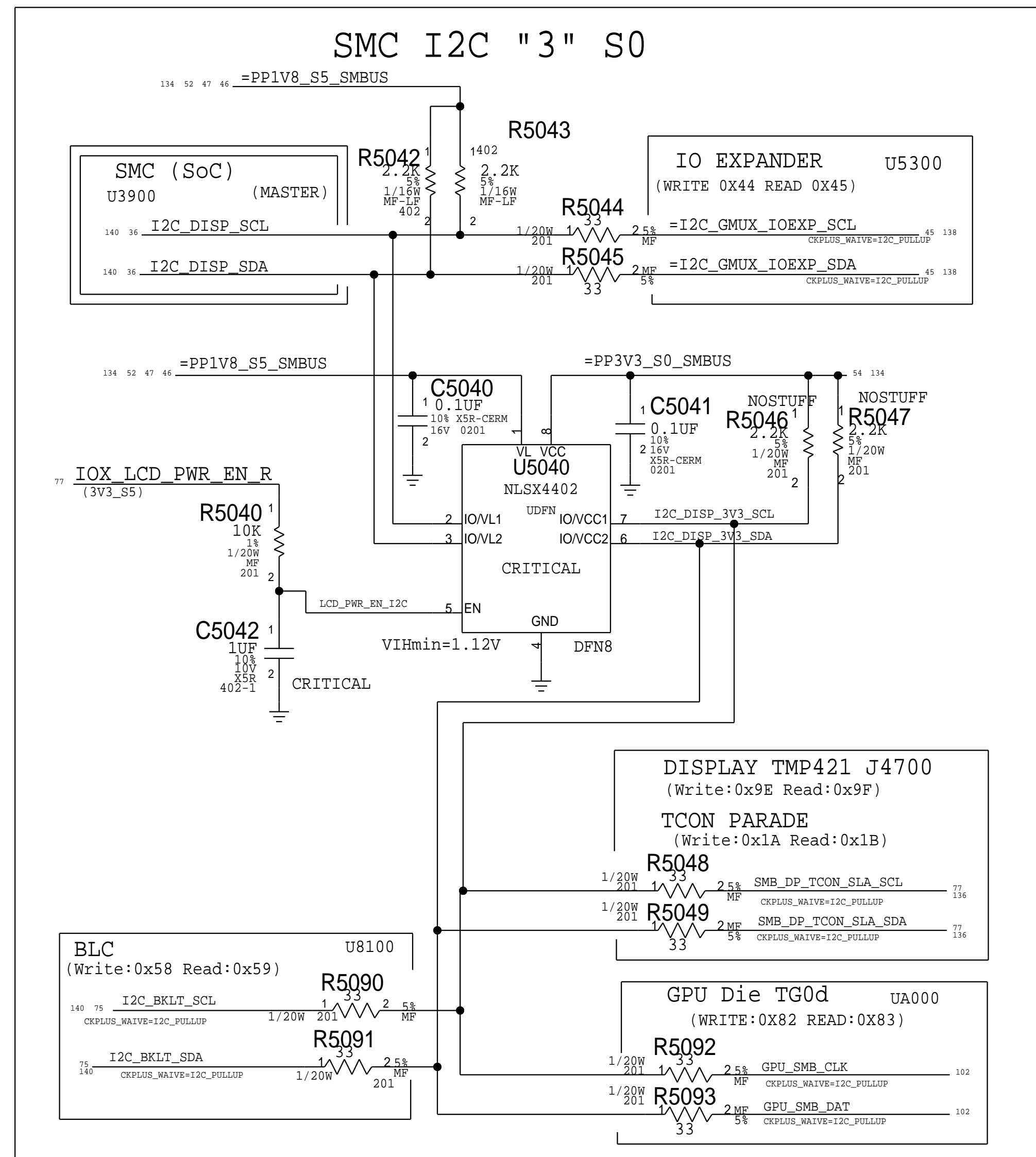
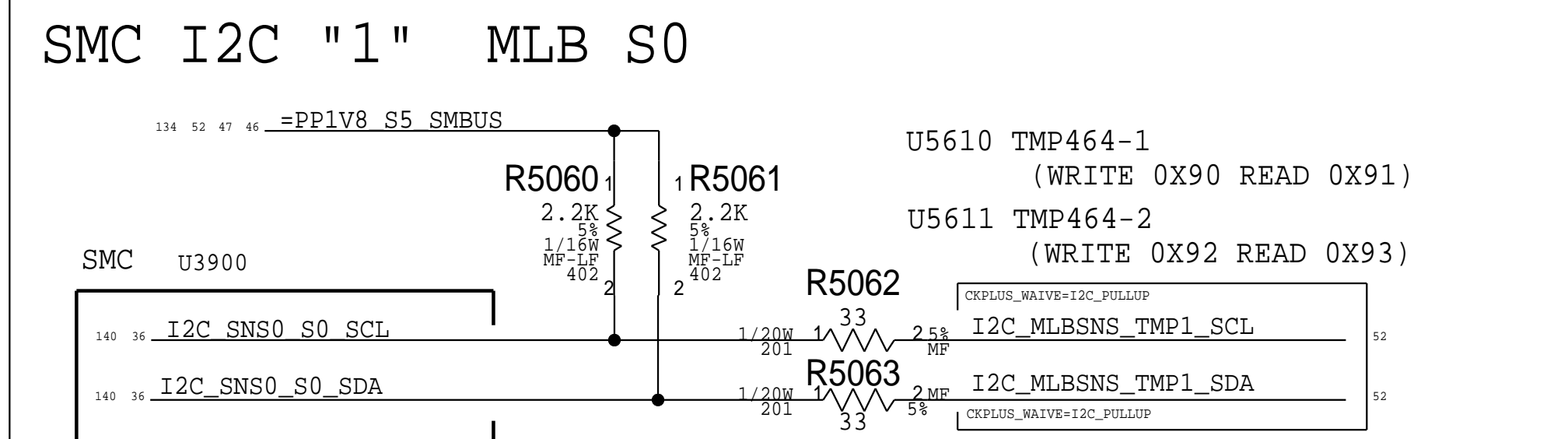
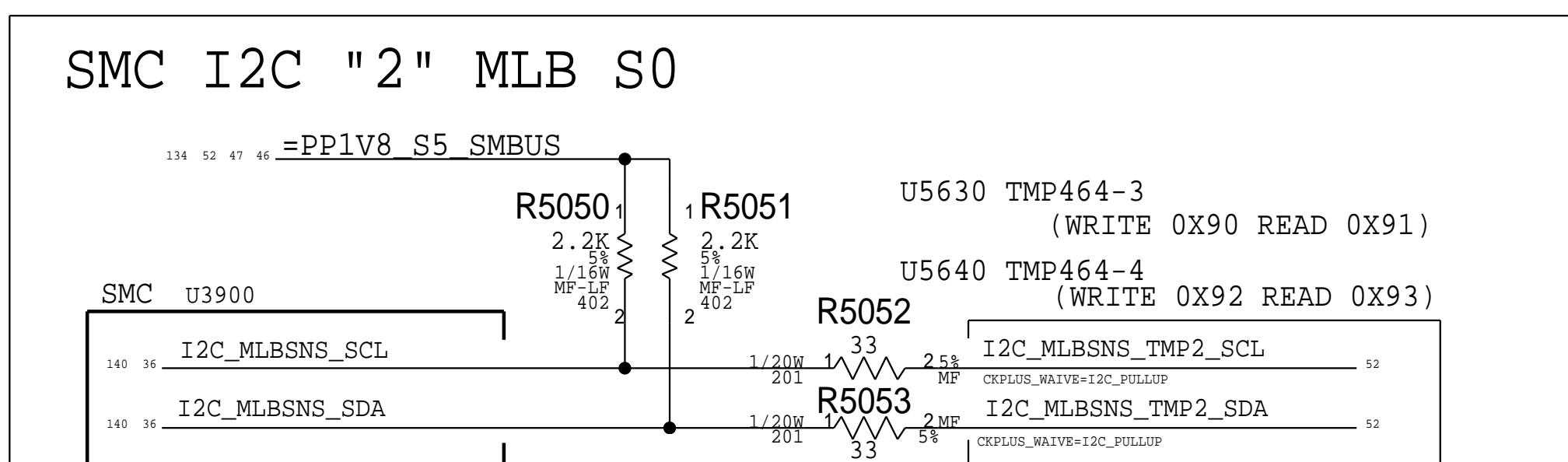
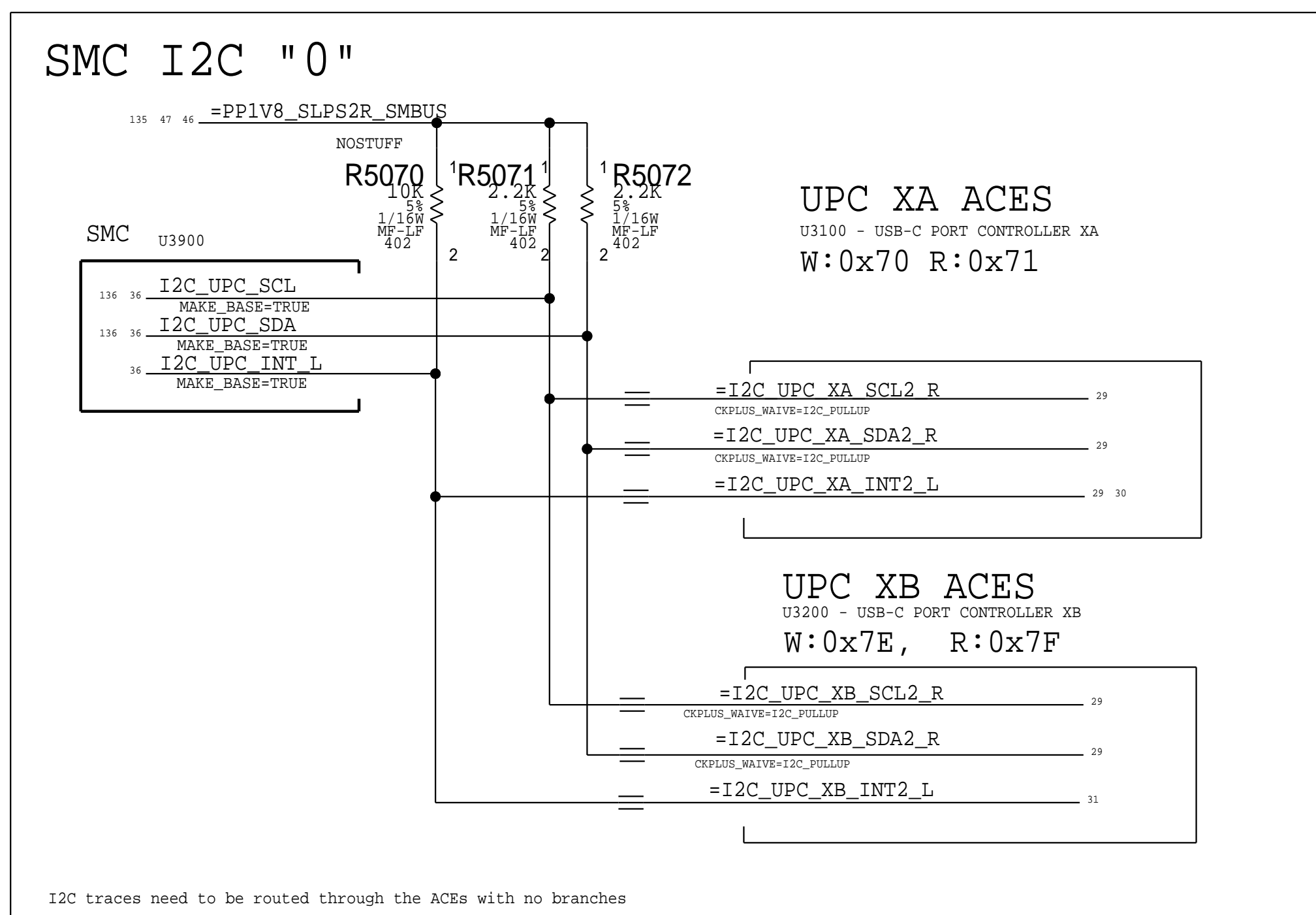
A


BOM_COST_GROUP=SOC

| PAGE TITLE | | |
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| SOC PROJECT SUPPORT | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
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| | PAGE | 48 OF 172 |
| | SHEET | 44 OF 149 |

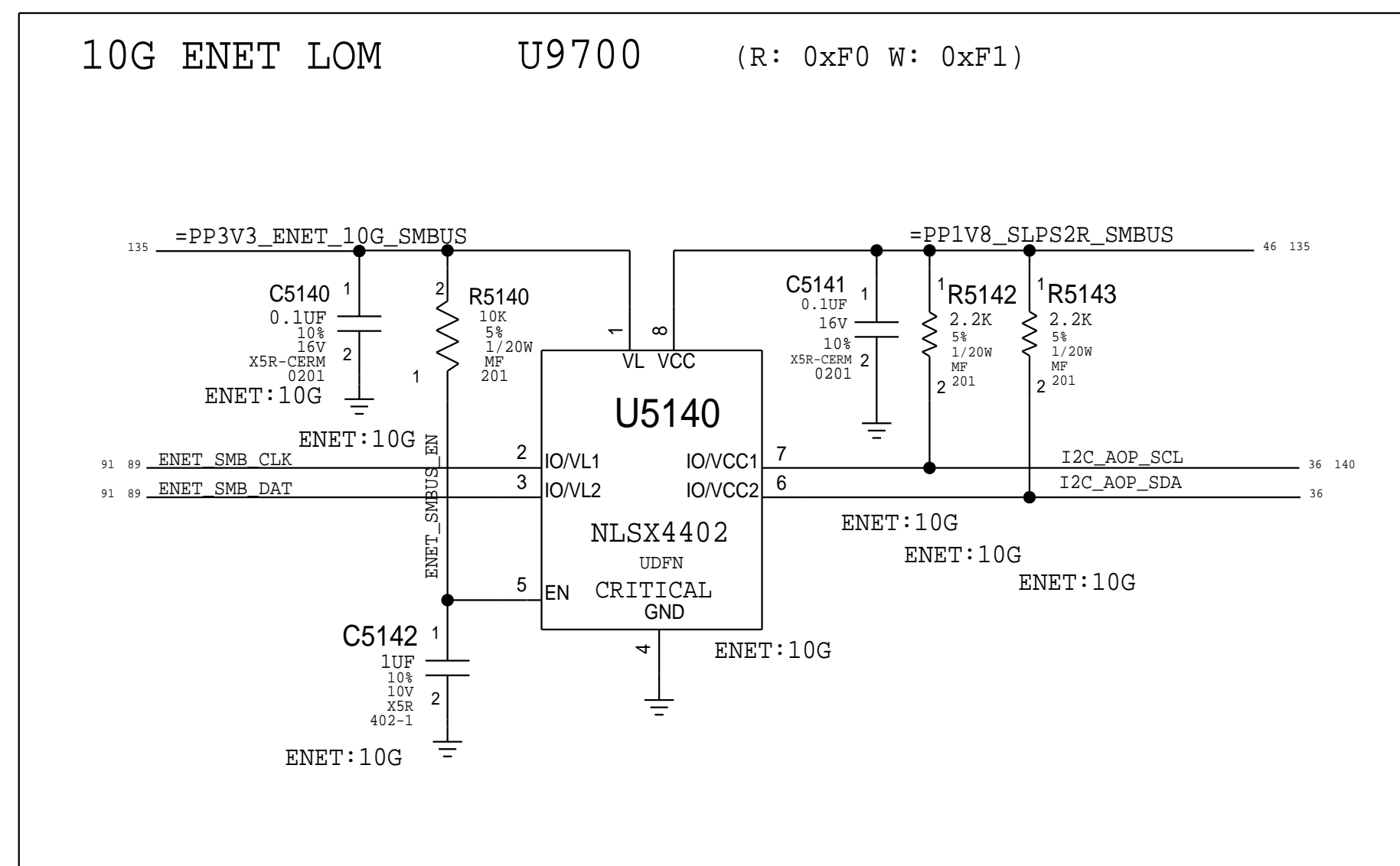
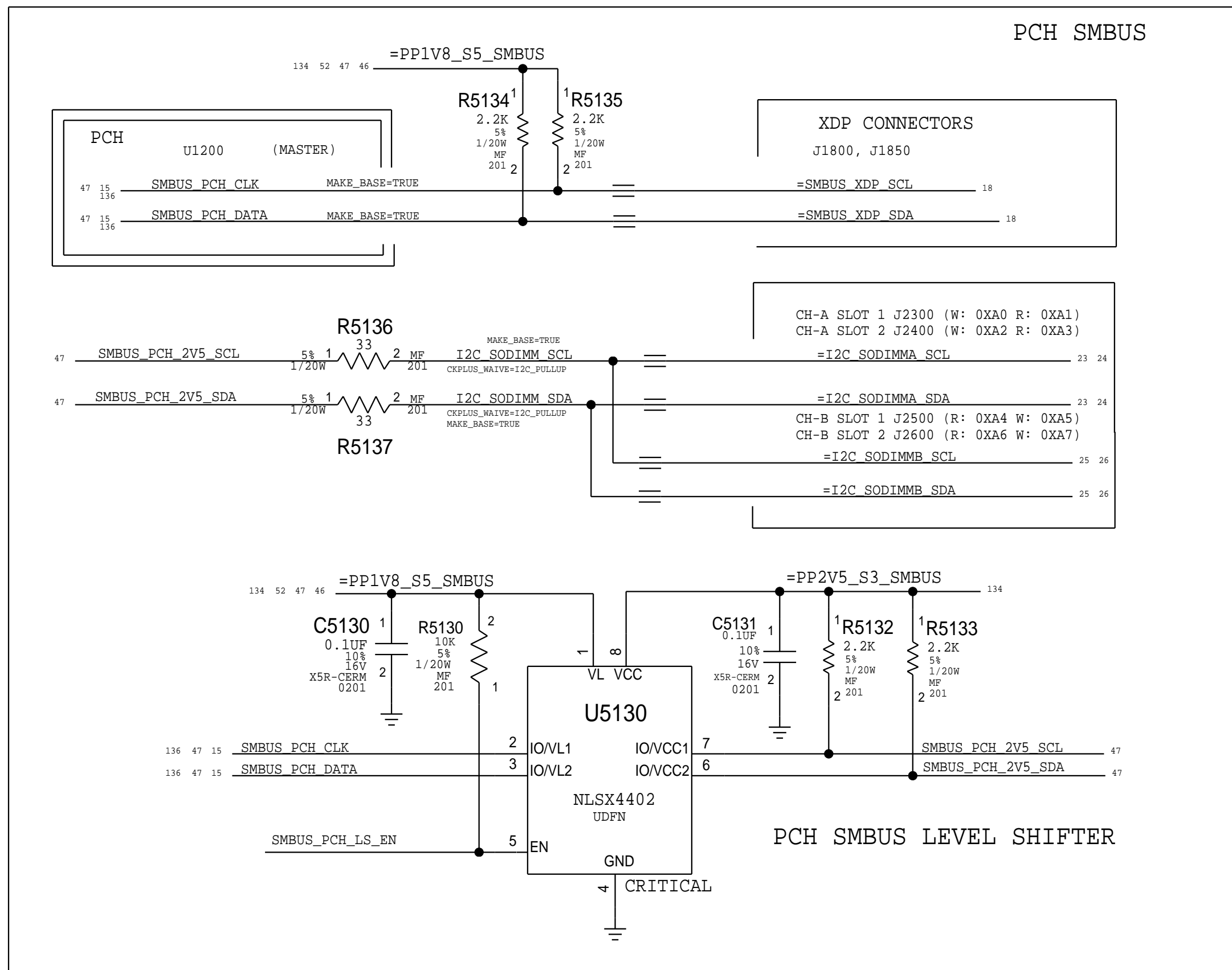
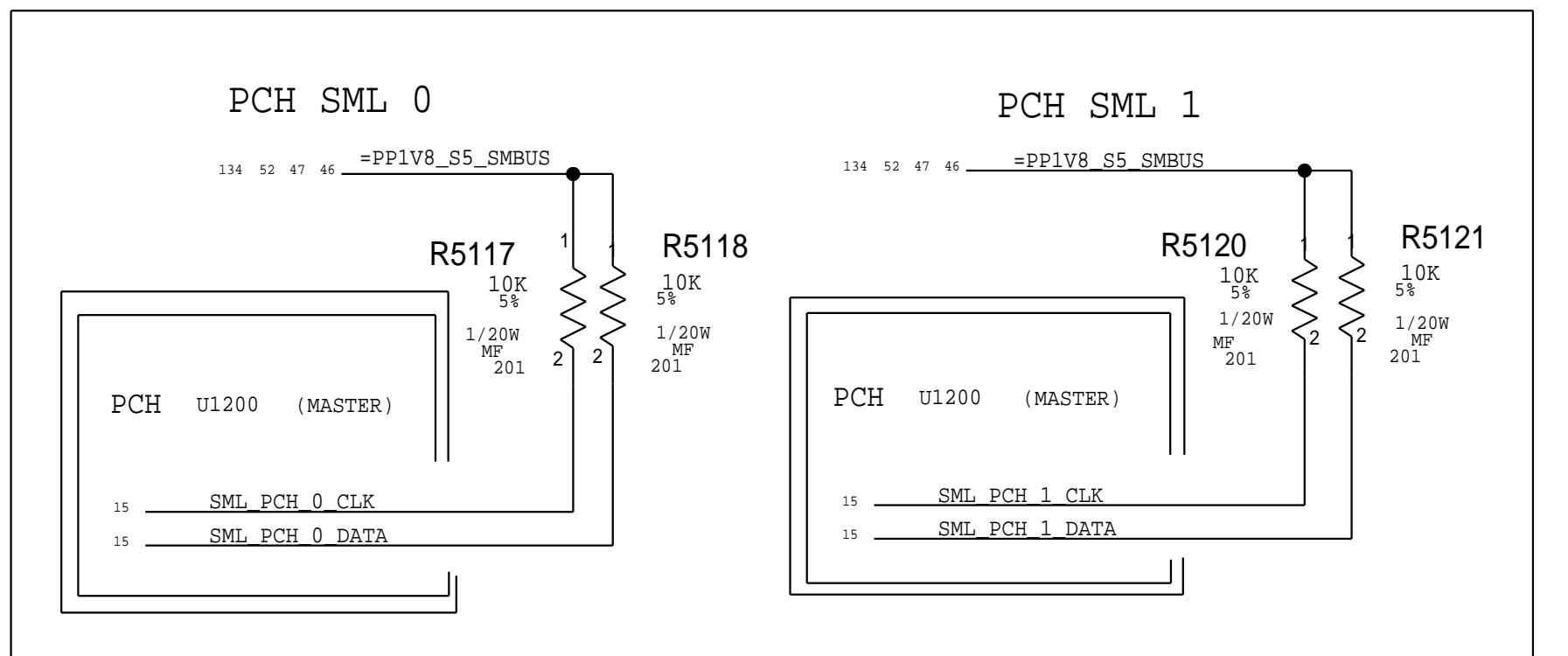
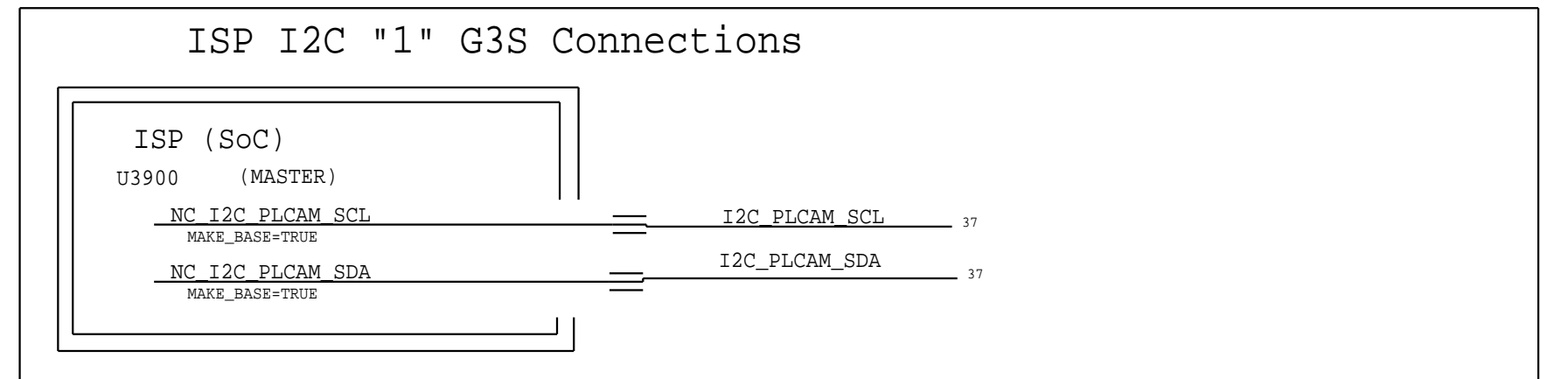
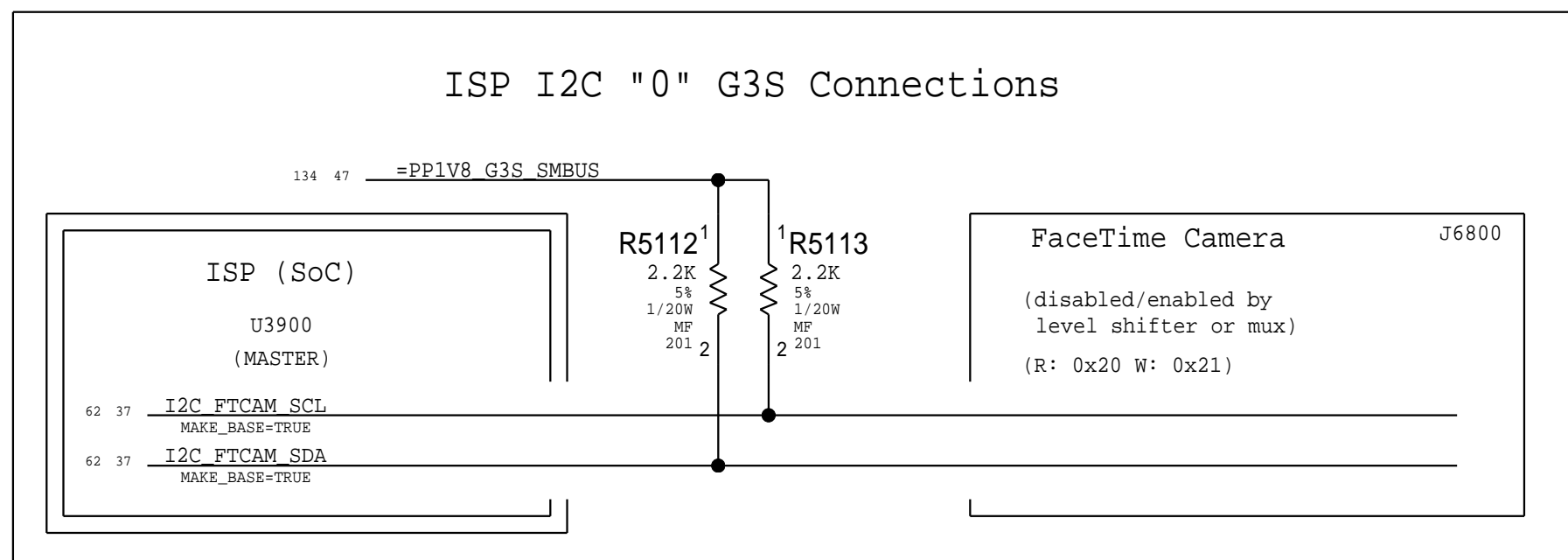
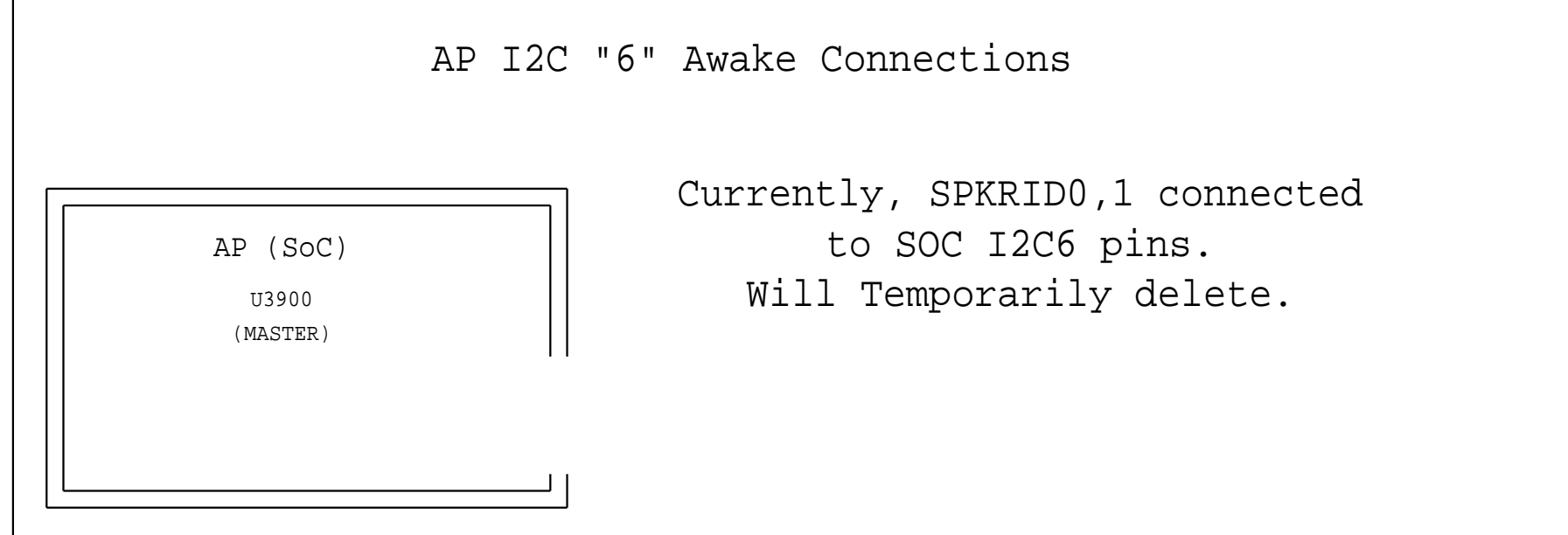
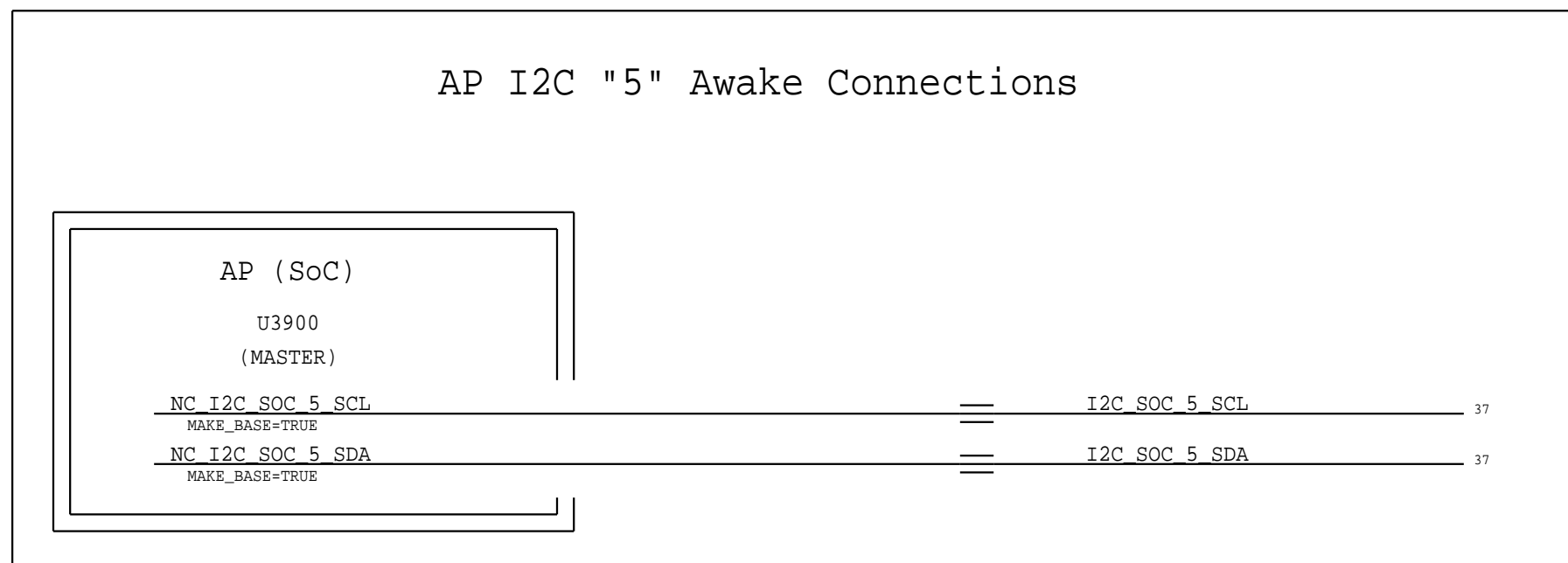
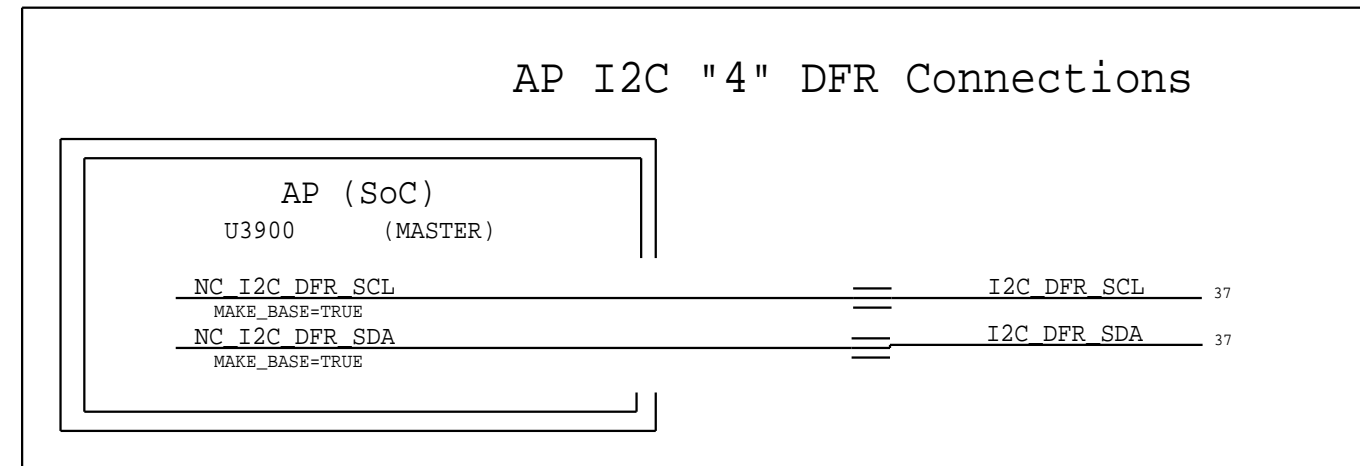
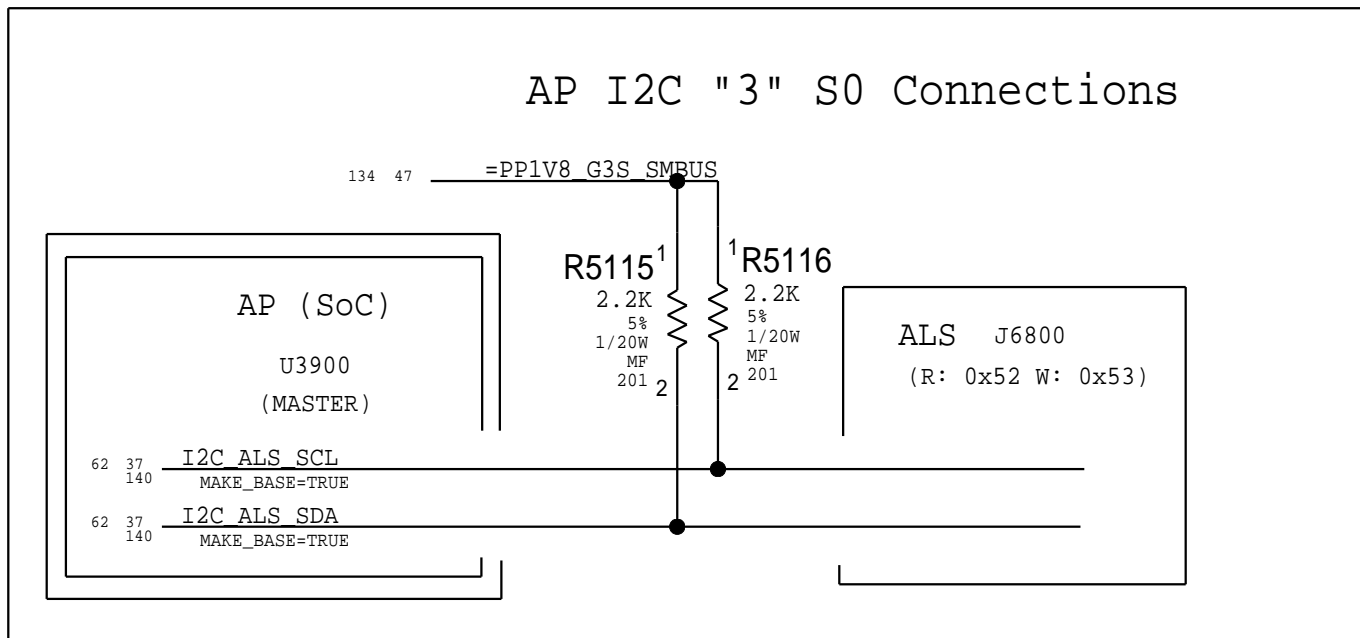
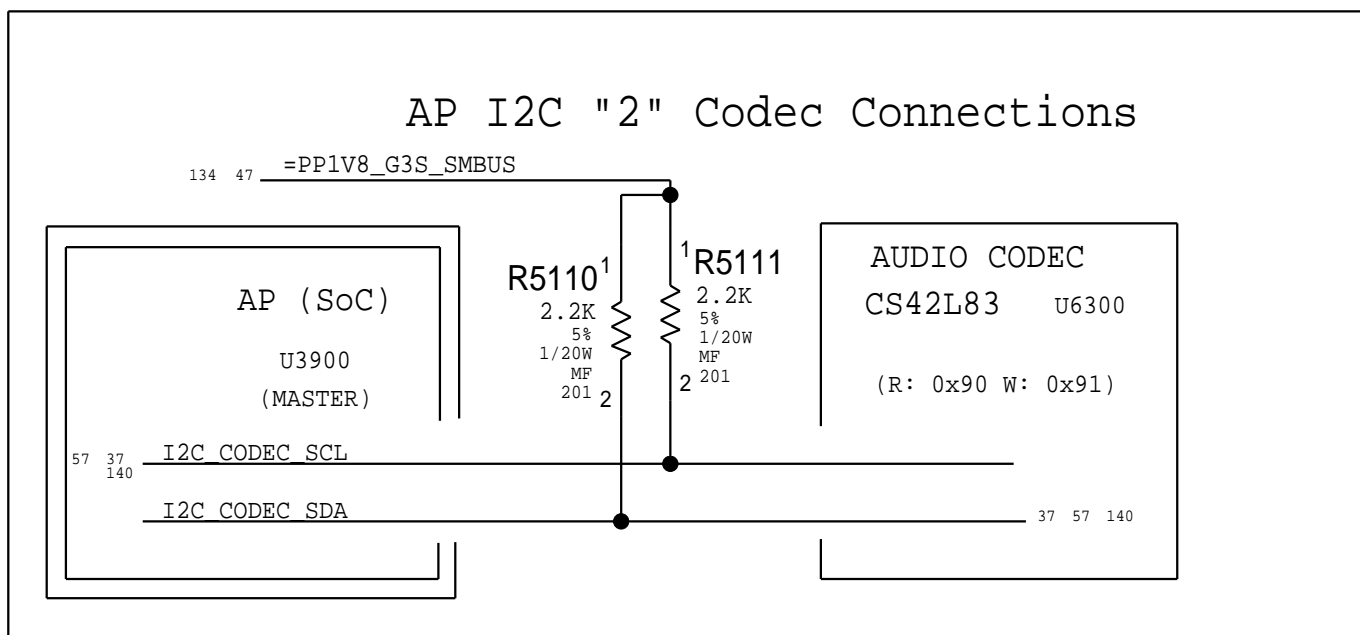
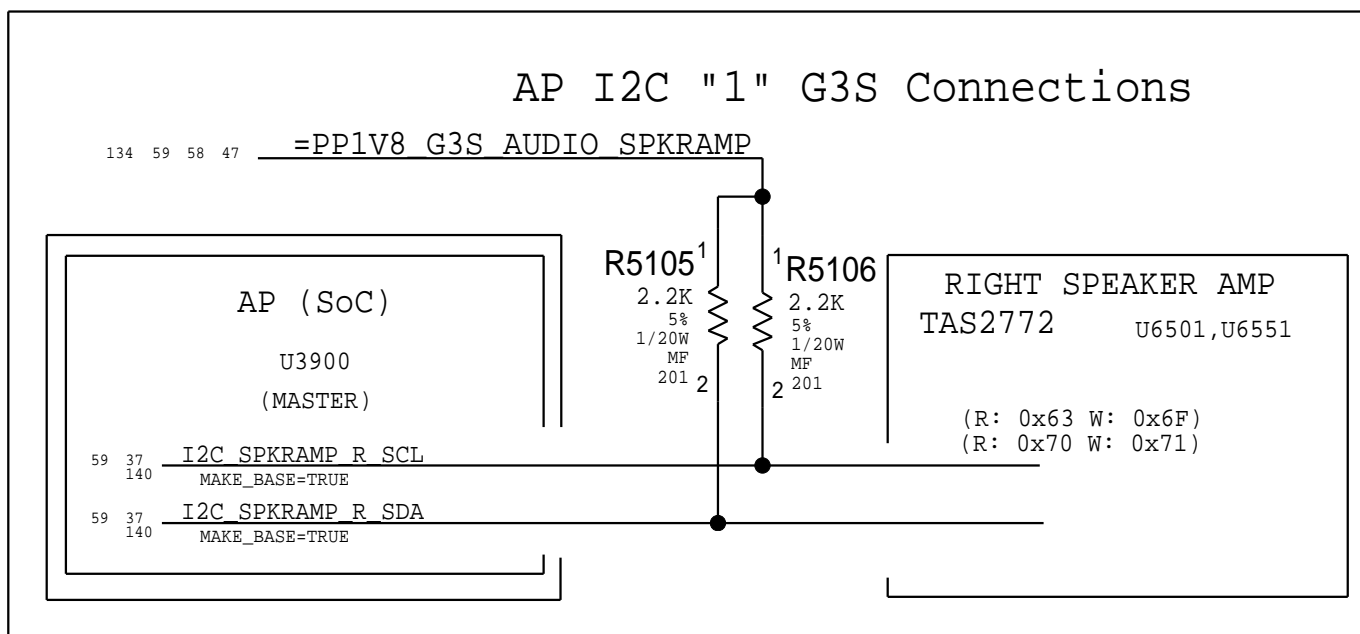
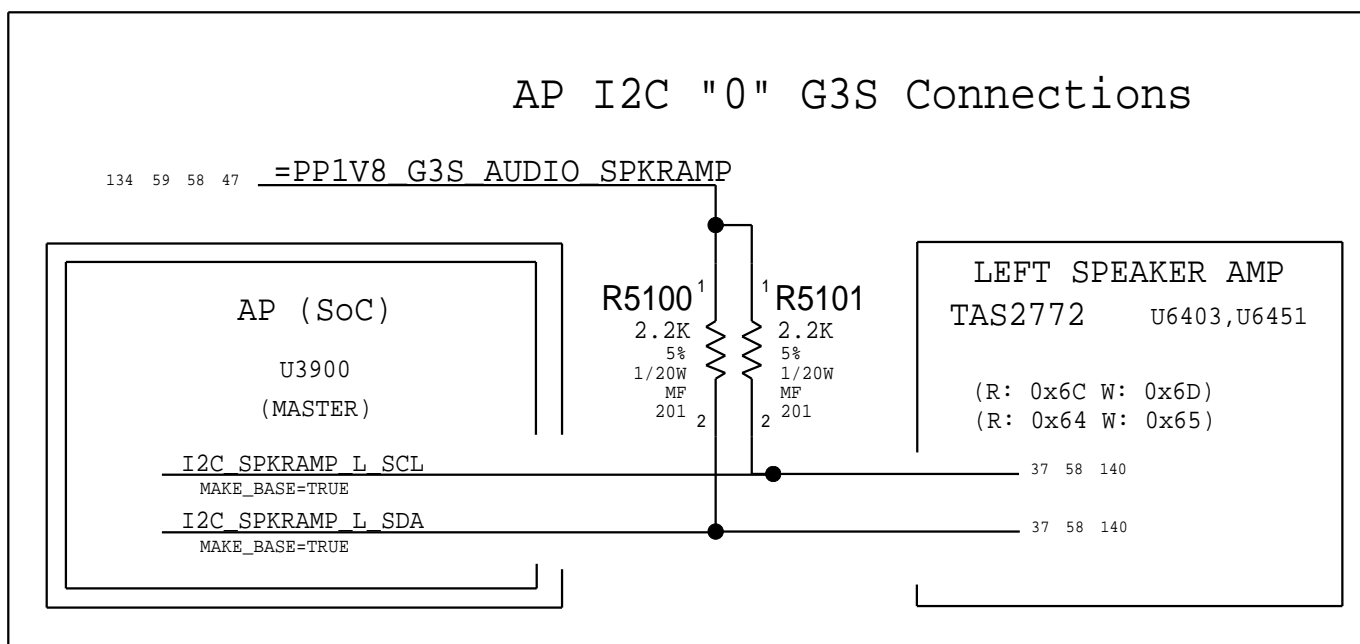


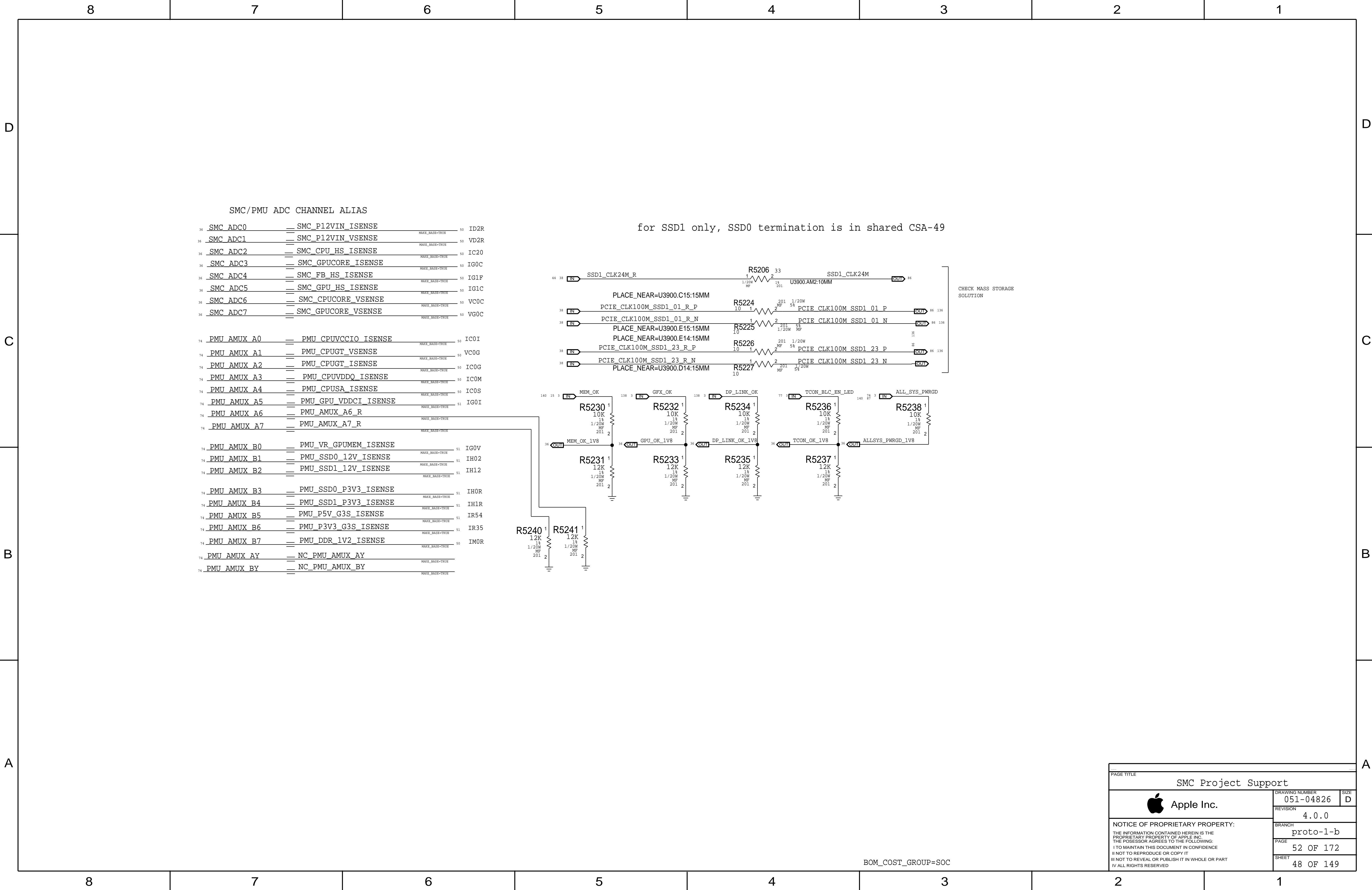
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| SOC SHARED SUPPORT IMAC 1 | | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 | SIZE D |
| | REVISION | 4.0.0 | |
| | BRANCH | proto-1-b | |
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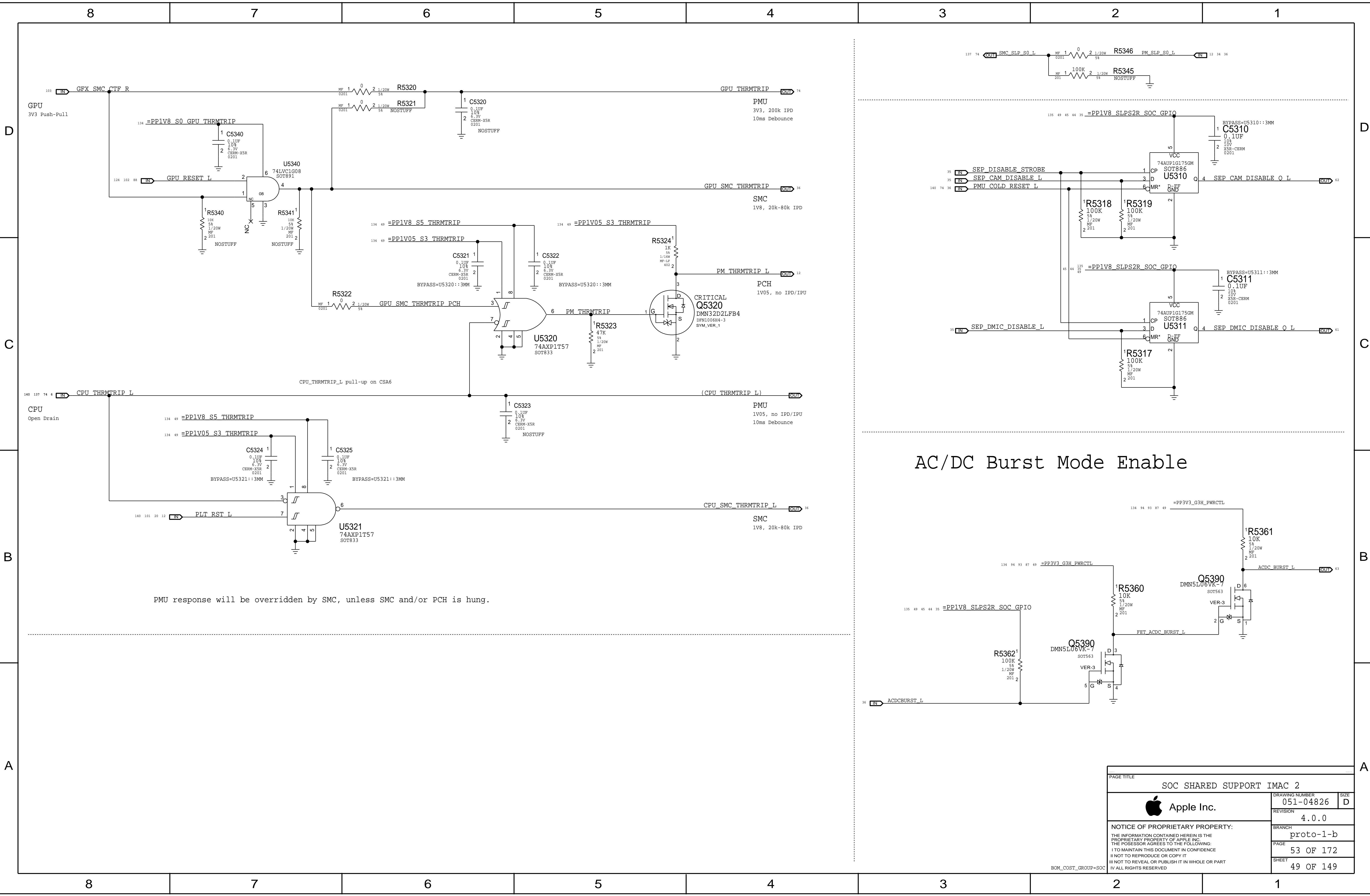


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|--|----------------|---------------------------------------|-----------|
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| | SHEET | 46 OF 149 | |

BOM_COST_GROUP=SOC








PMU response will be overridden by SMC, unless SMC and/or PCH is hung.

AC/DC Burst Mode Enable

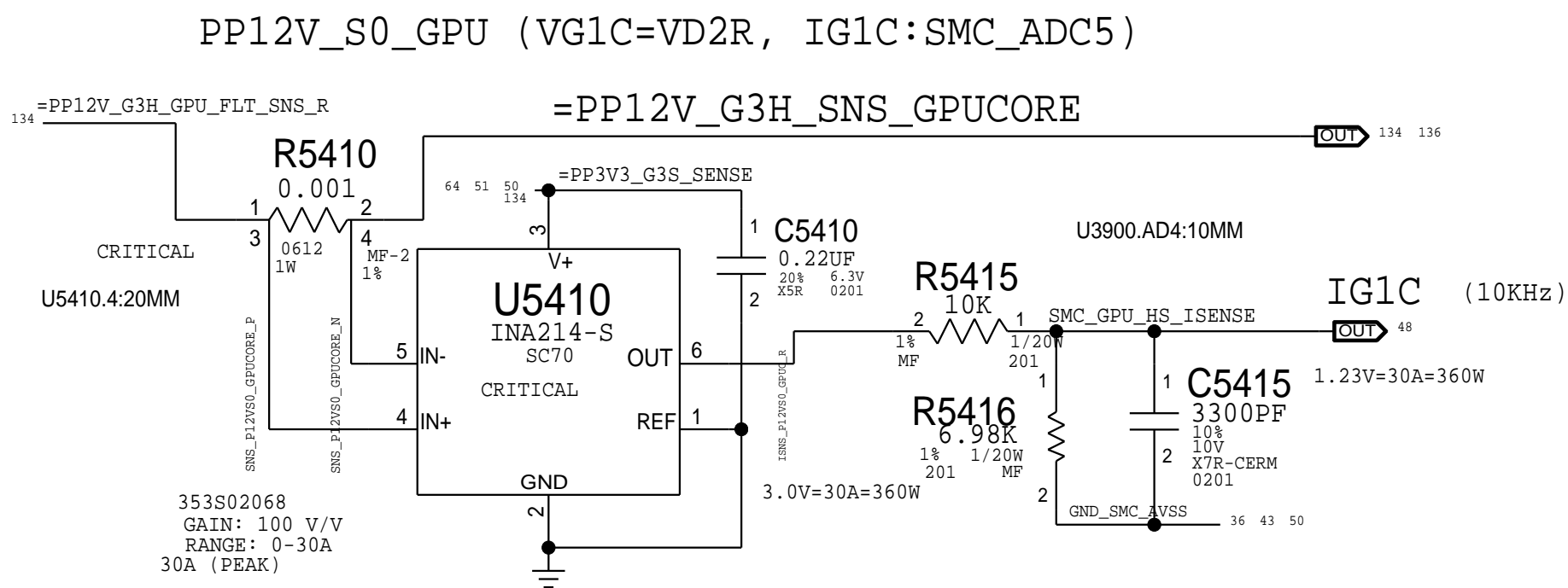
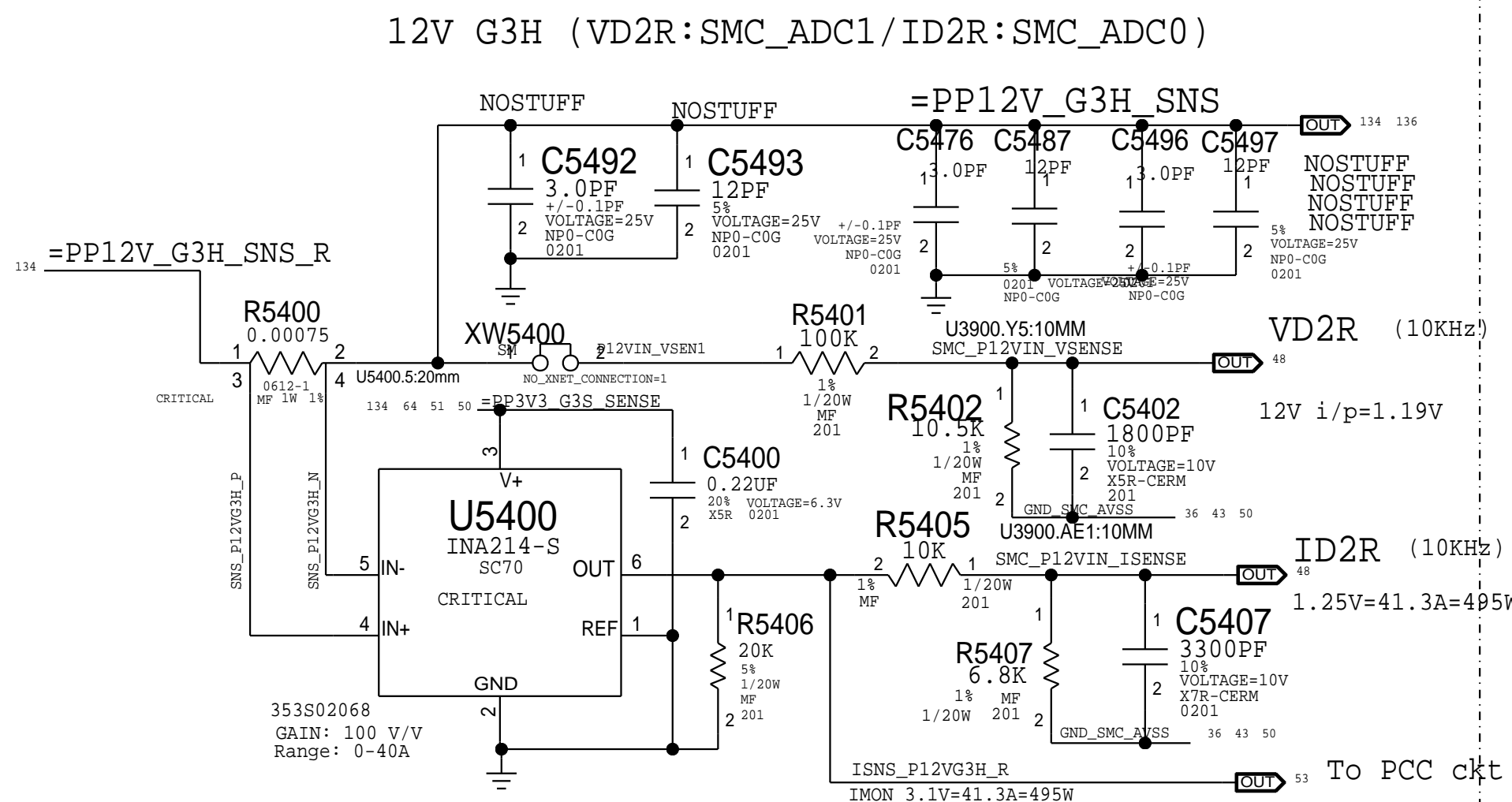
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| SOC SHARED SUPPORT IMAC 2 | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
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| | PAGE | 53 OF 172 |
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D

C

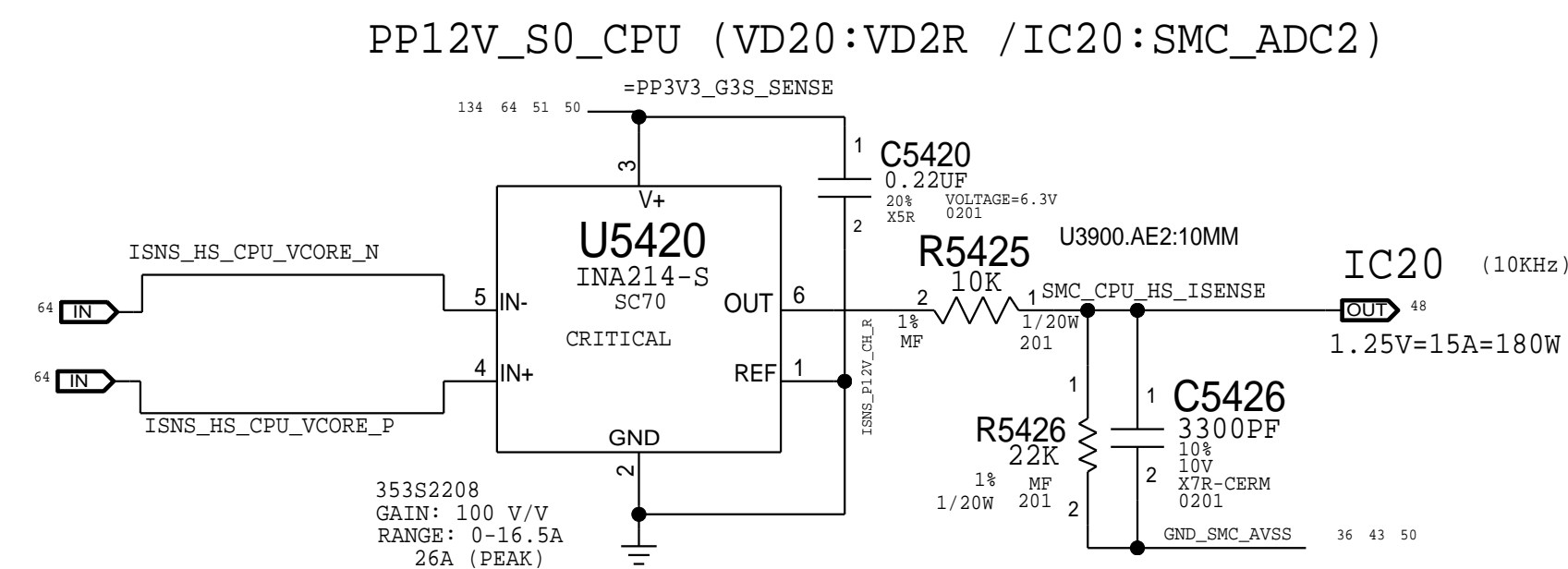
B

A

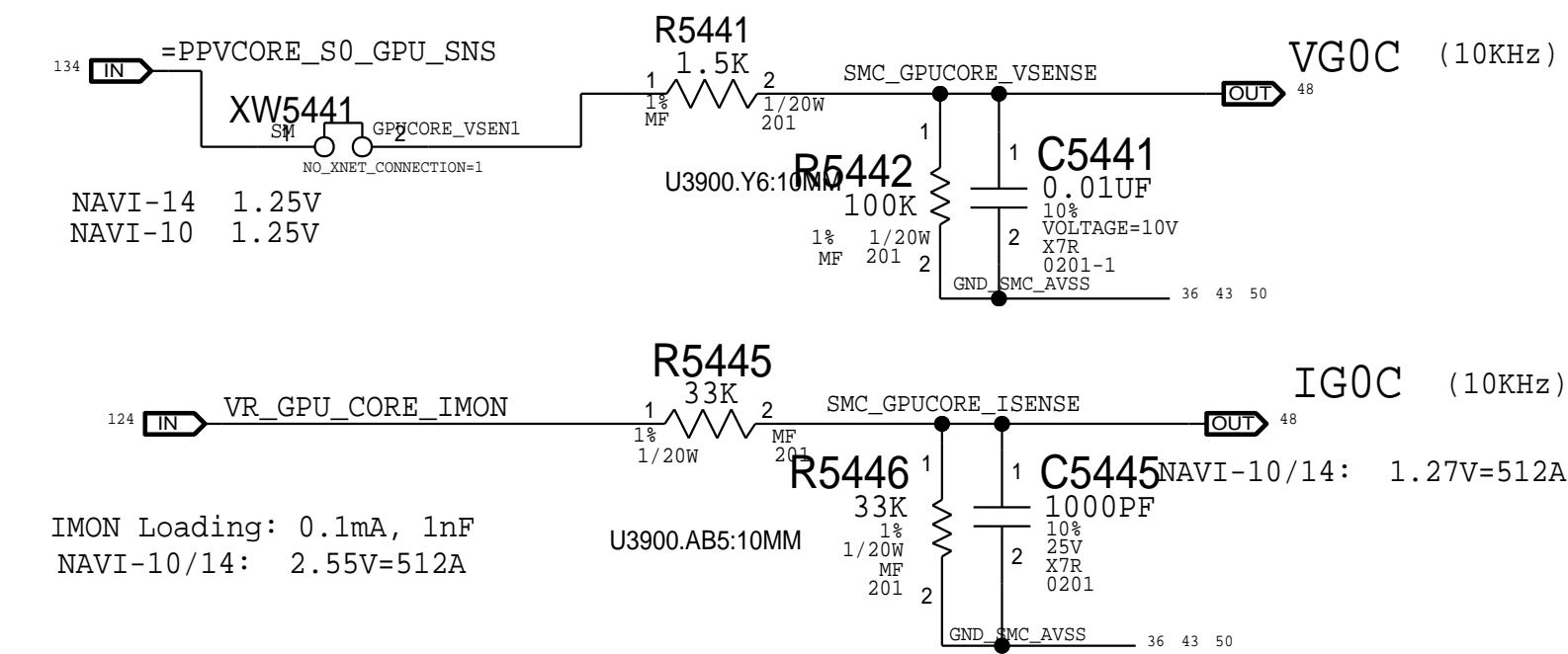


GPU AUX RAILS (VG1A=VD2R, IG1A:AMUX_A7) (100Hz)

GPU highside sense for GPU 0.9V & 1.8V VR

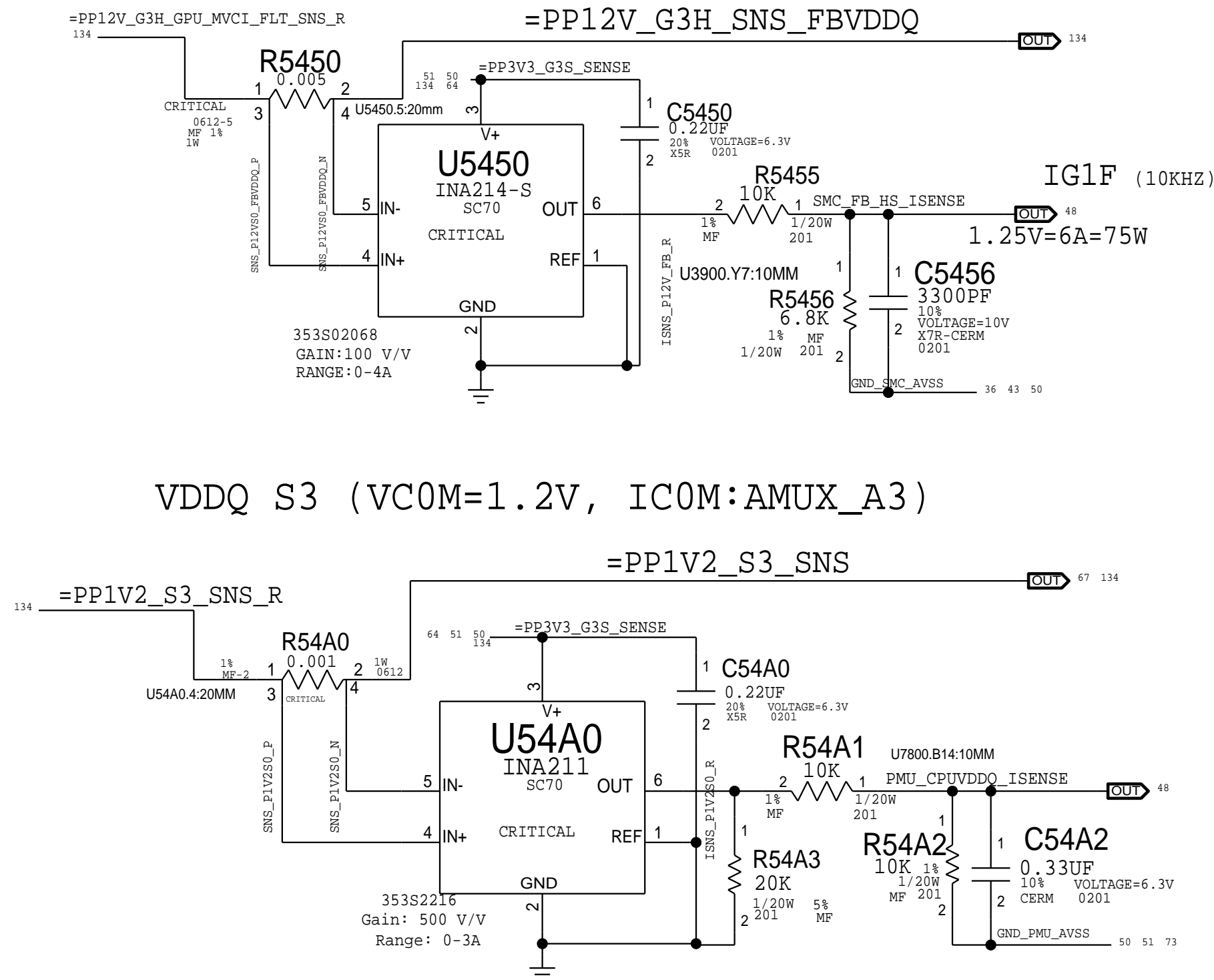


GPU CORE (VG0C:SMC_ADC7/IG0C:SMC_ADC3)

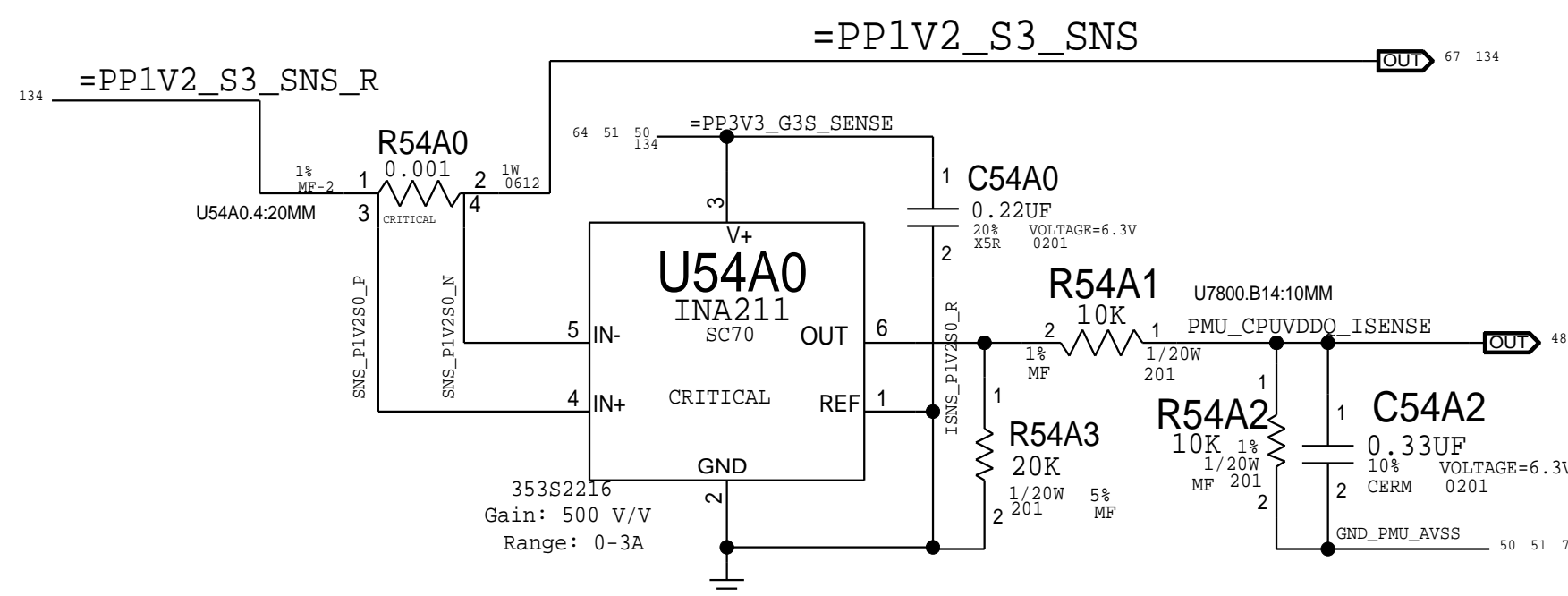


GPU FB (VG1F=VD20, IG1F:SMC_ADC4)

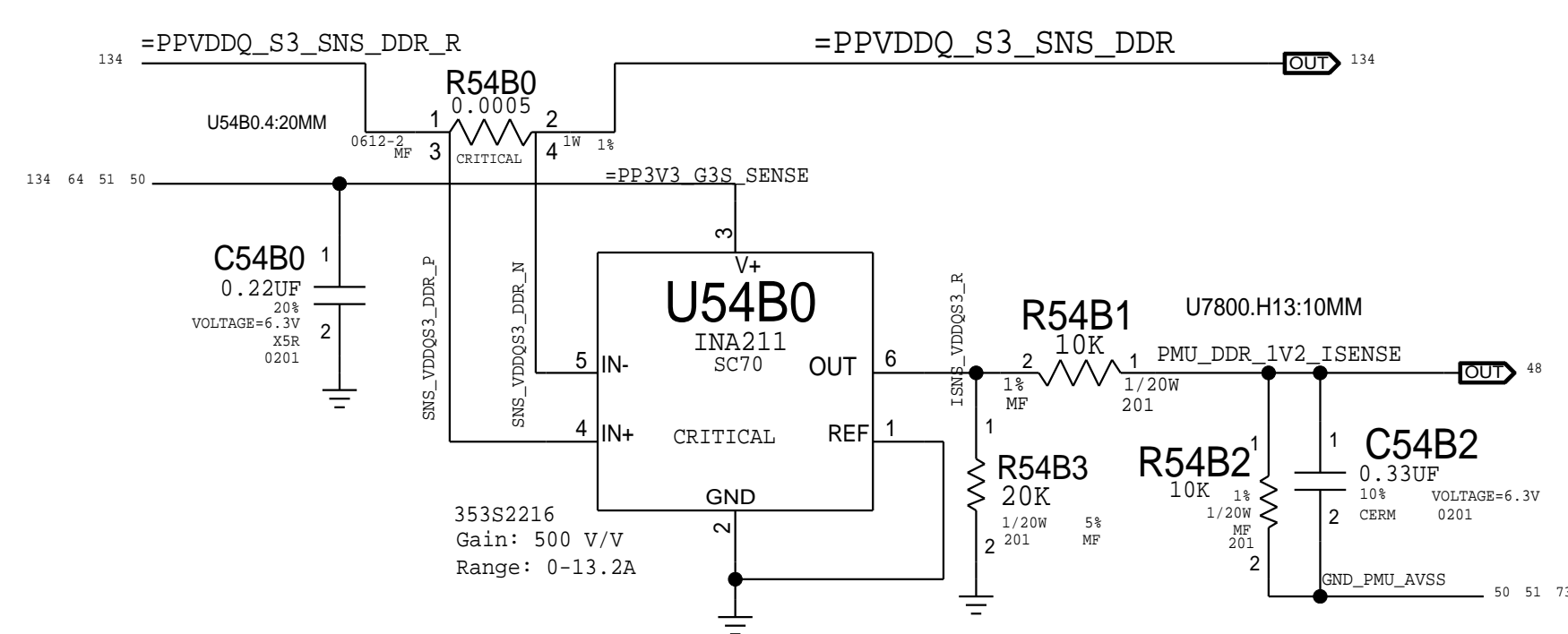
GPU highside sense for GPU FB 1.5V VDDQ VR



VDDQ S3 (VC0M=1.2V, IC0M:AMUX_A3)

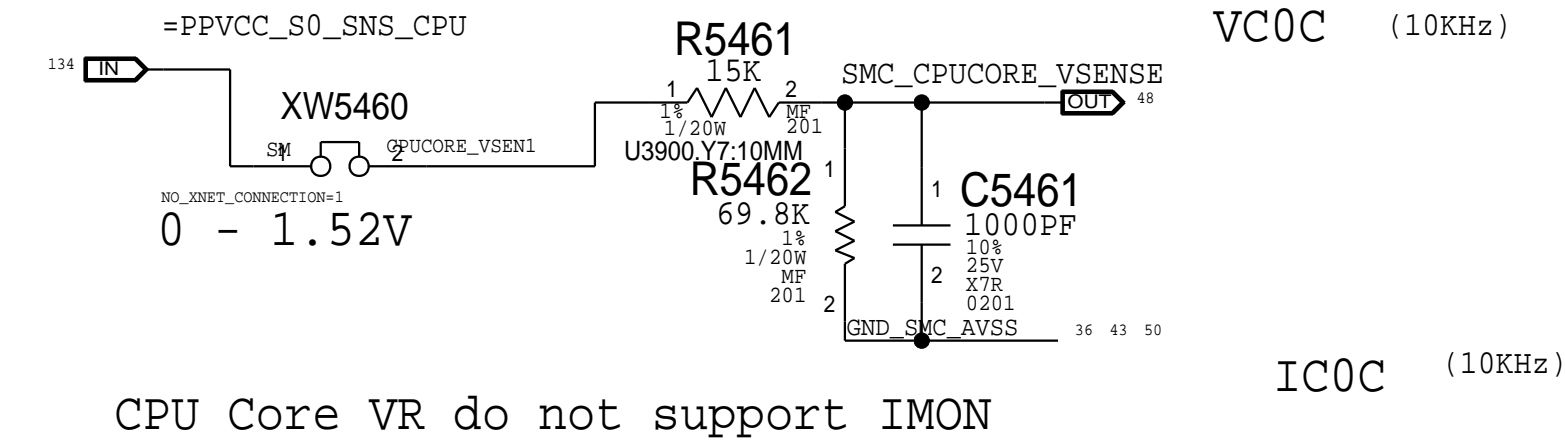


VDDQ S3 (VM0R:1.2V/ IM0R:AMUX_B7)



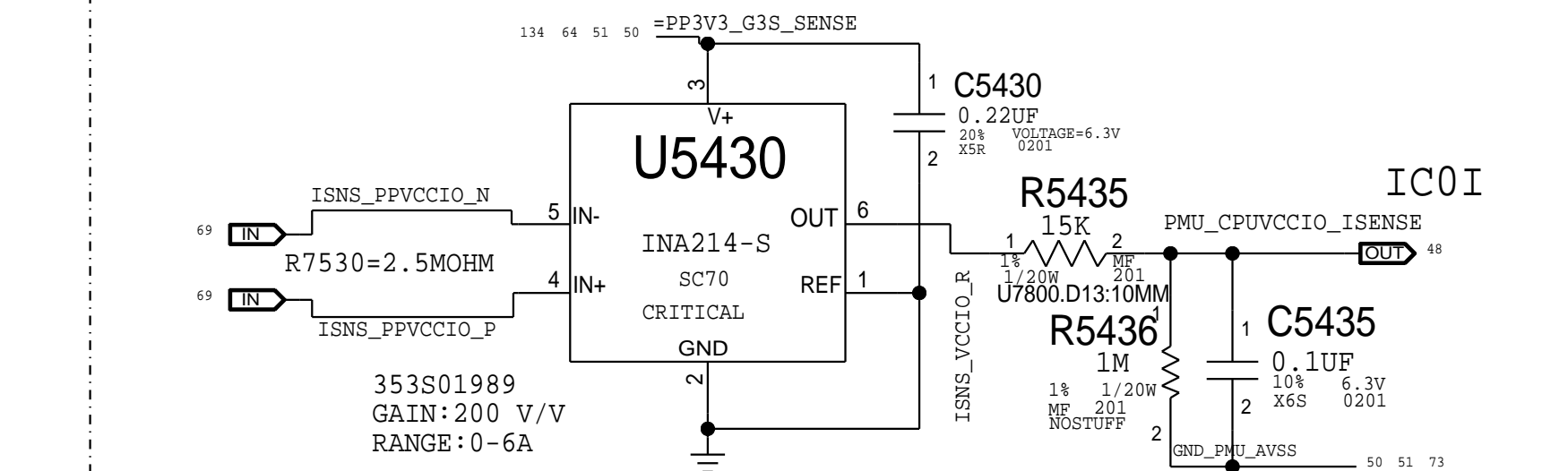
BOM_COST_GROUP=SENSORS

CPU CORE (VC0C:SMC_ADC6 /IC0C:NA)

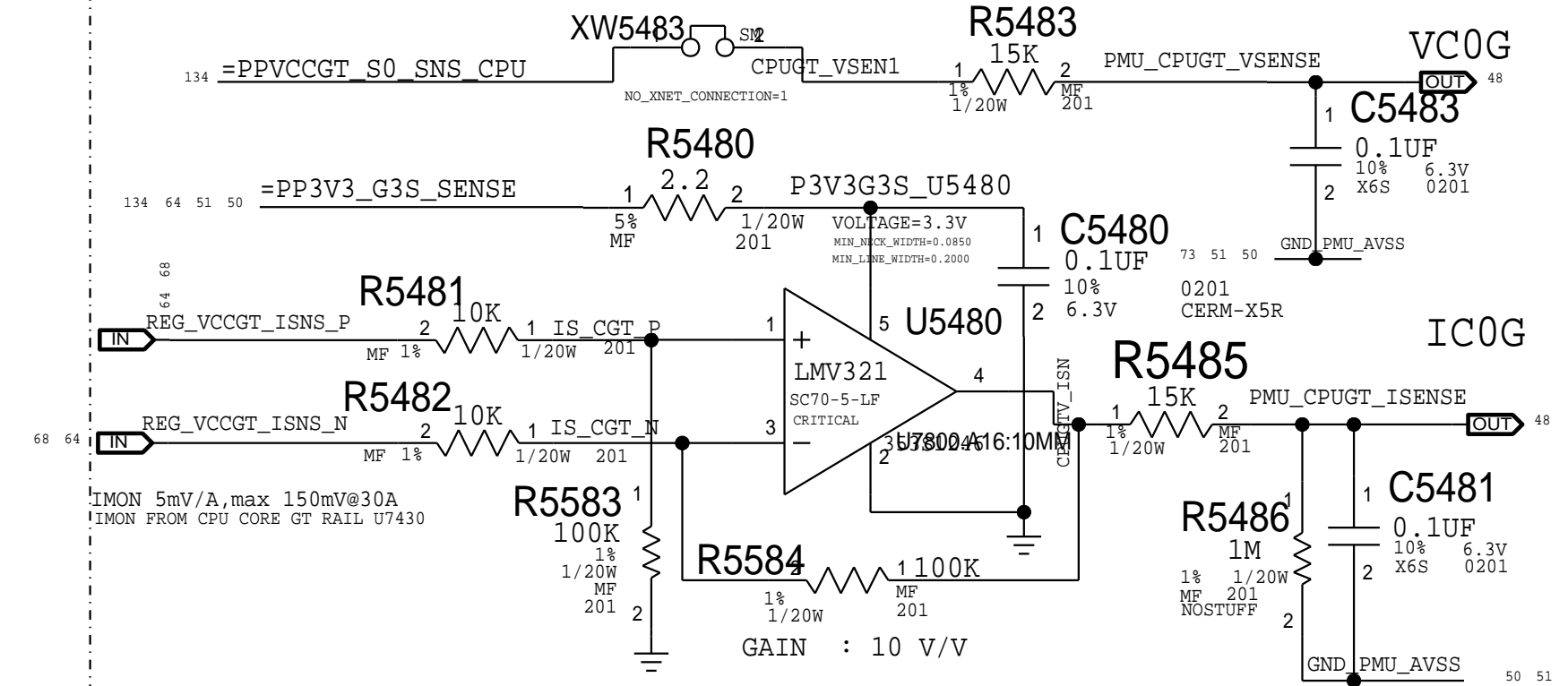


CPU Core VR do not support IMON

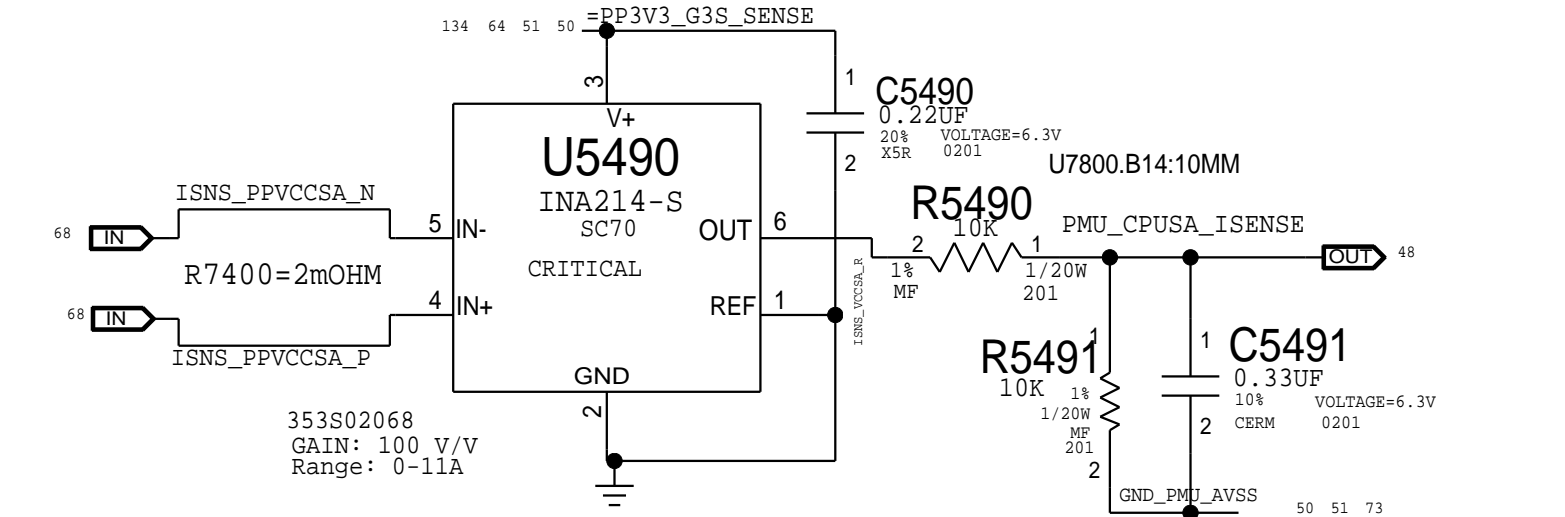
CPU VCCIO (VC0I=0.95V, IC0I:AMUX_A0)




CPU CORE GT (VC0G:AMUX_A1/IC0G:AMUX_A2)



CPU CORE VCC_SA (VC0S=1.05V, IC0S:AMUX_A4)



| | | |
|---|----------------|-----------|
| PAGE TITLE | | |
| SENSORS: I and V Sense | | |
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| | PAGE | 54 OF 172 |
| | SHEET | 50 OF 149 |

D

C

B

A

D

D

C

C

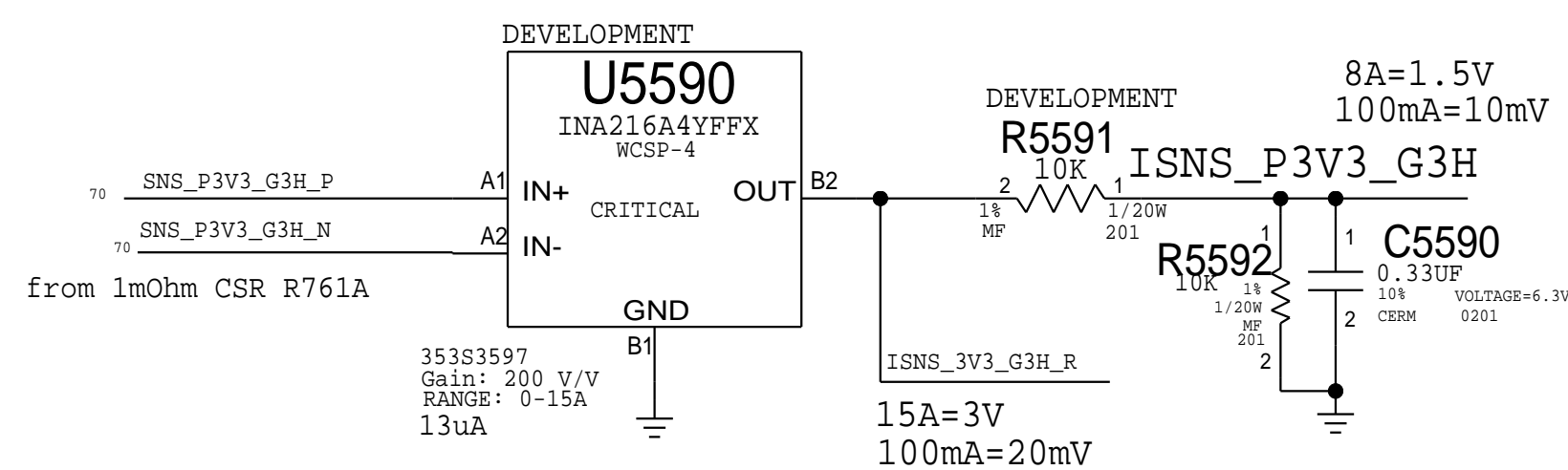
B

B

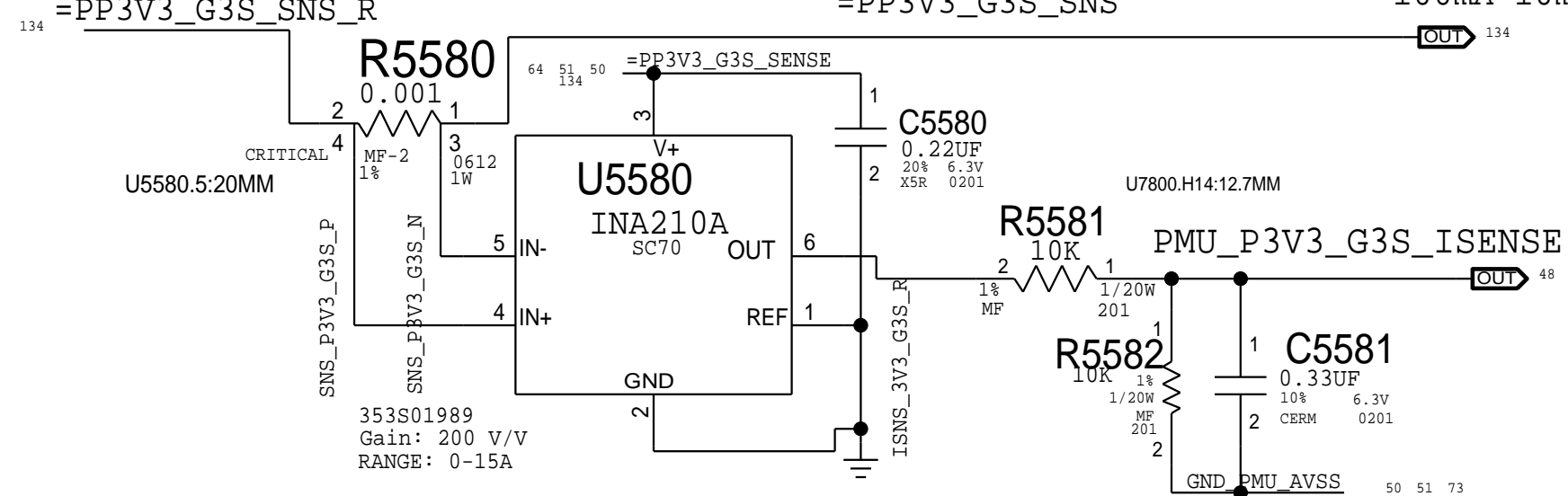
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A

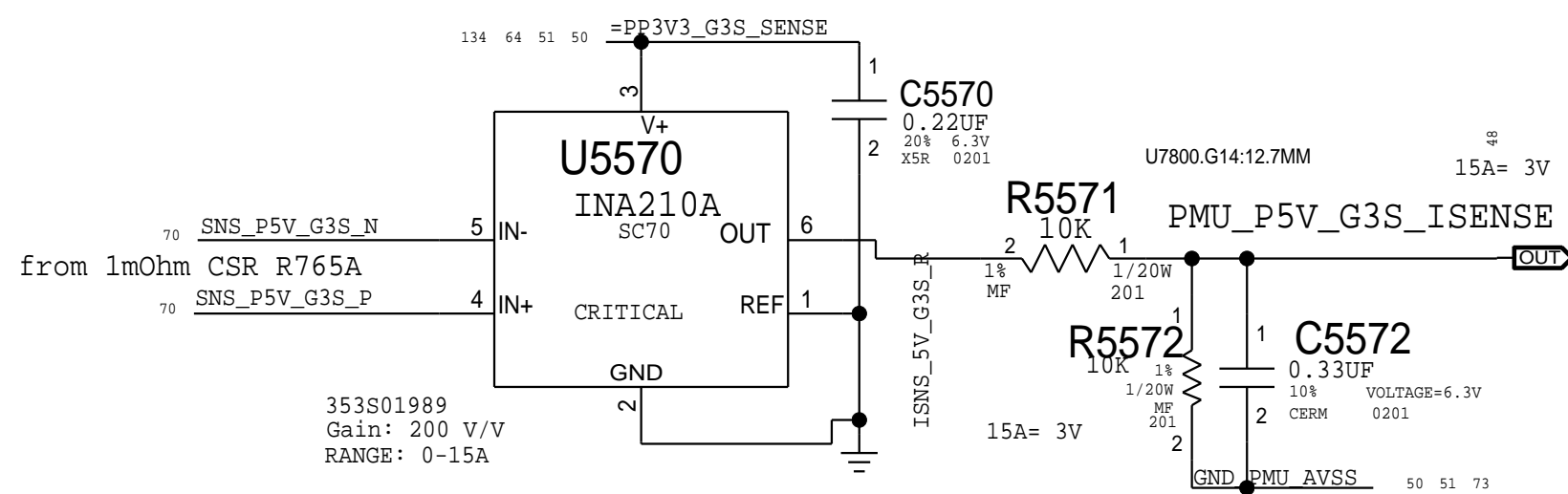
3V3_G3H MANUAL MEASUREMENT



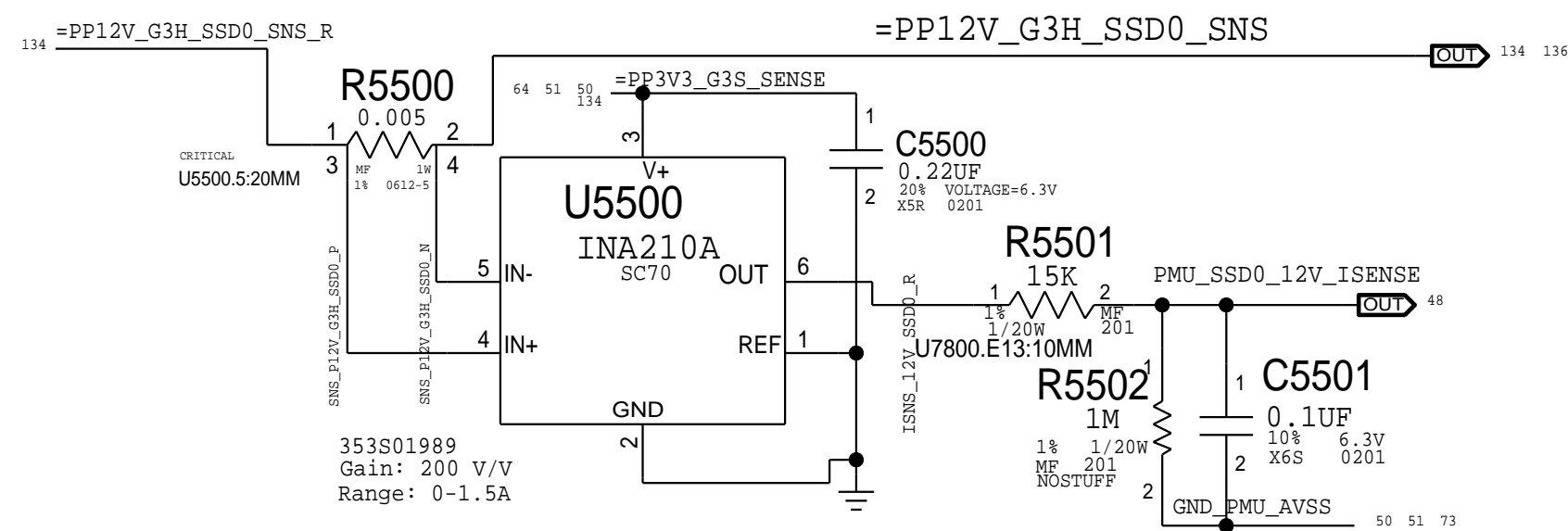
```
3V3_G3S (IG3S:AMUX_B6) 8A=1.5V
V3_G3S_SNS_P -PB3V3_G3S_SNS 100mA=10mV
```



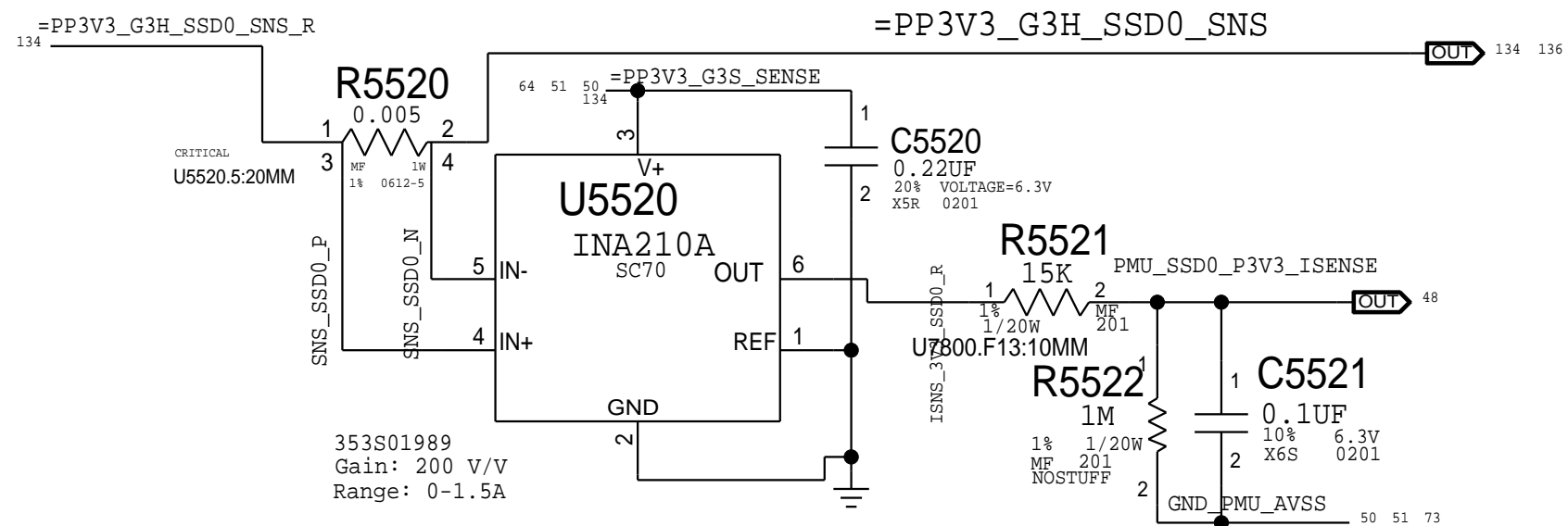
5V_G3S (IR45:AMUX_B5)



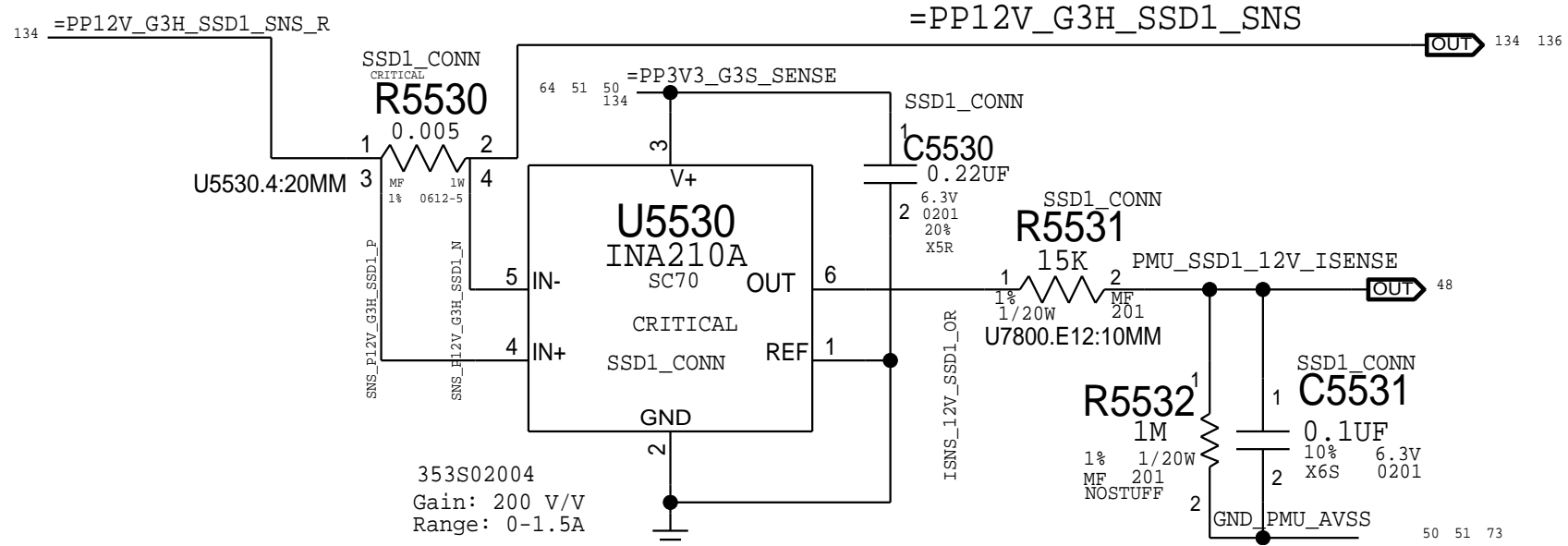
SSD0_PP12V_SSD0(VH02:VD20/IH02:AMUX_B1)



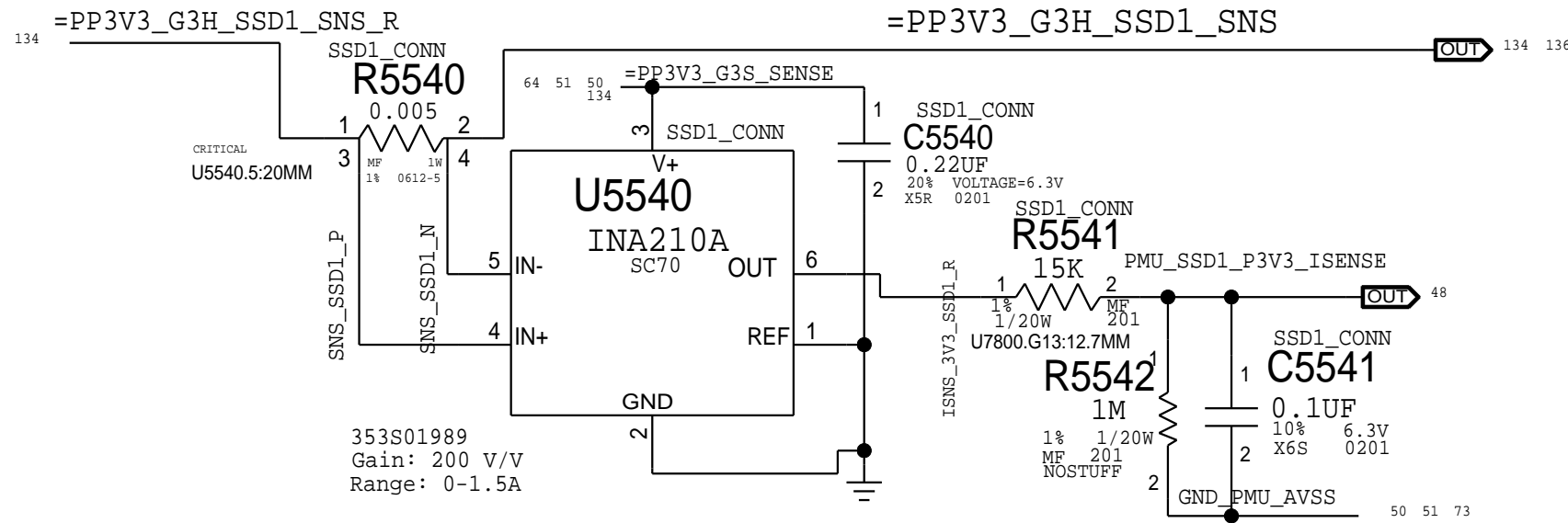
SSD0 (VR1R:3.3V/IH0R:AMUX_B3)



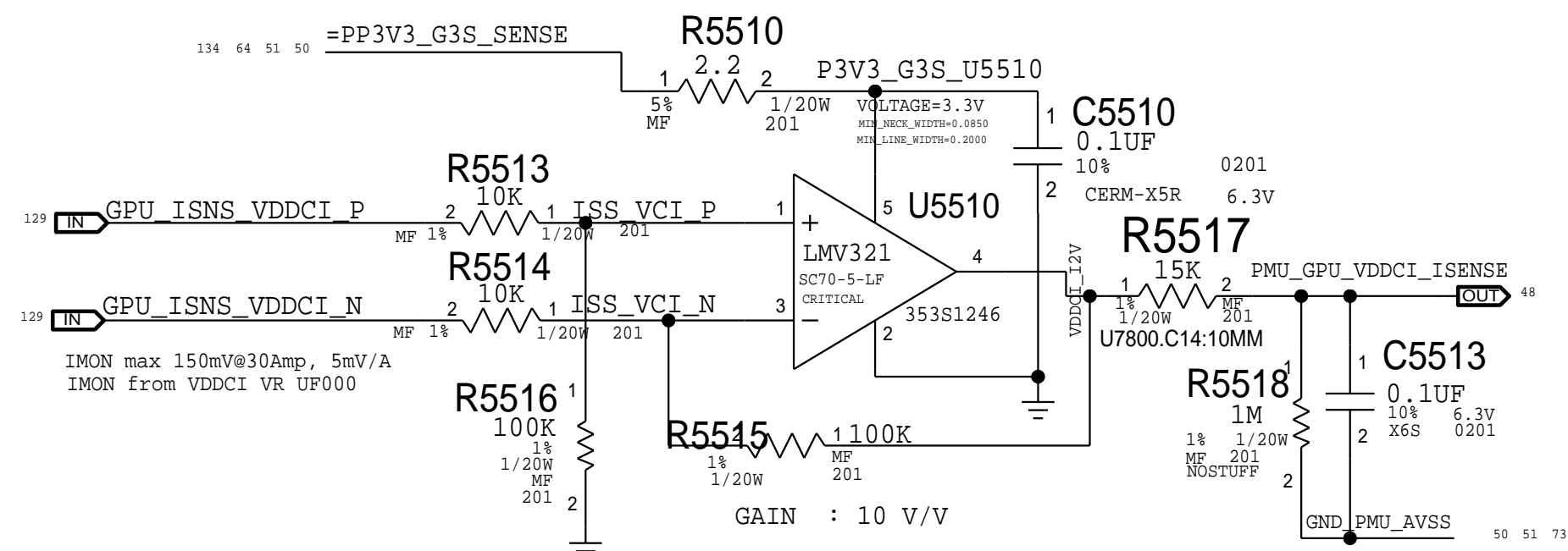
SSD1 PP12V_SSD1(VH02:VD20/IH12:AMUX_B2)



SSD1 (VR1R:3.3V / IH1R:AMUX_B4)

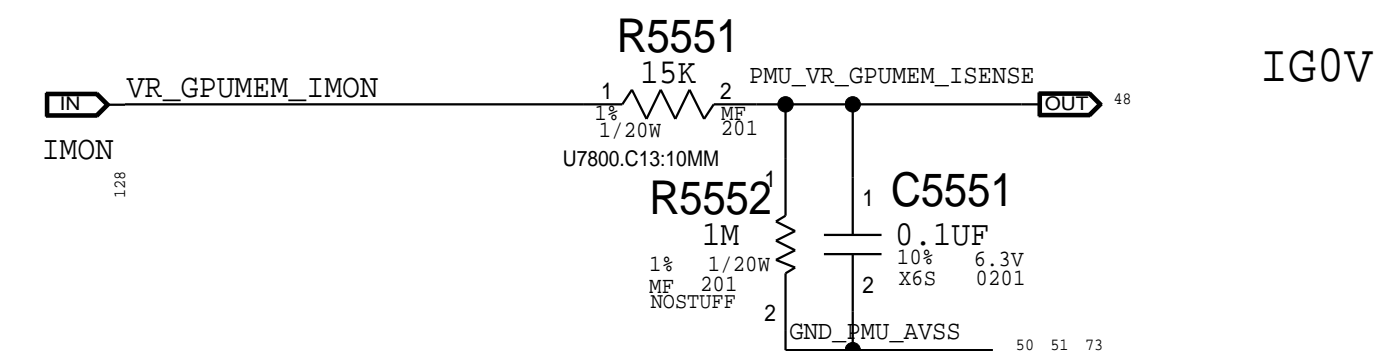


```
GPU_VDDCI S0 (VG0I:1V /IG0I: AMUX_A5)
```




| Chip | Vref | Vmax | SMC_ADC_Freq | ADC_LPF |
|-------|-------|------|--------------|---------|
| H9M | 1.25V | 1.8V | 10Khz | 10Khz |
| Calpe | 1.5V | 5V | 100hz | 100hz |

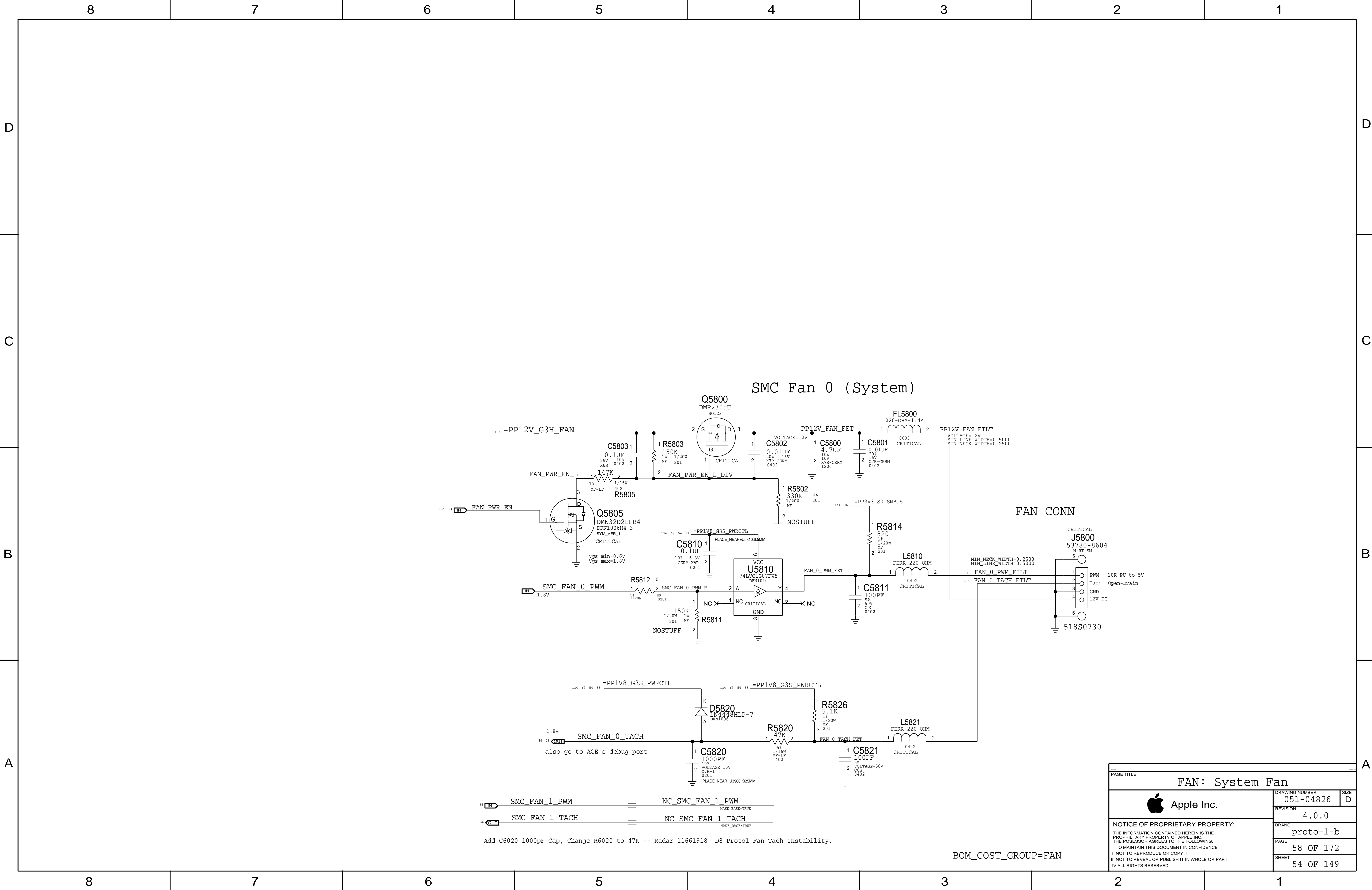
```
GPU VDDIO/MVDD( VG0F:1.35V IG0F:AMUX_B0)
```




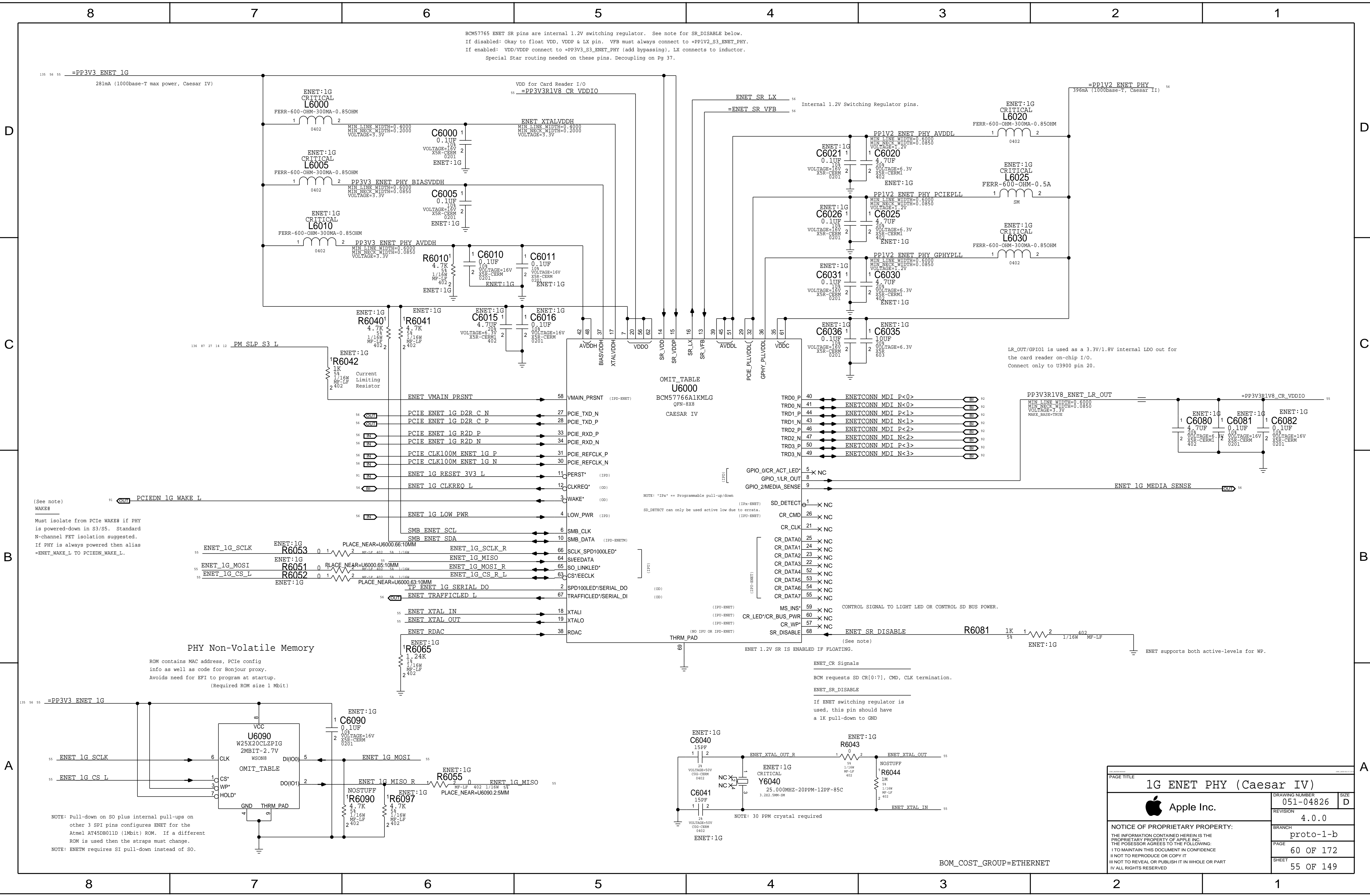
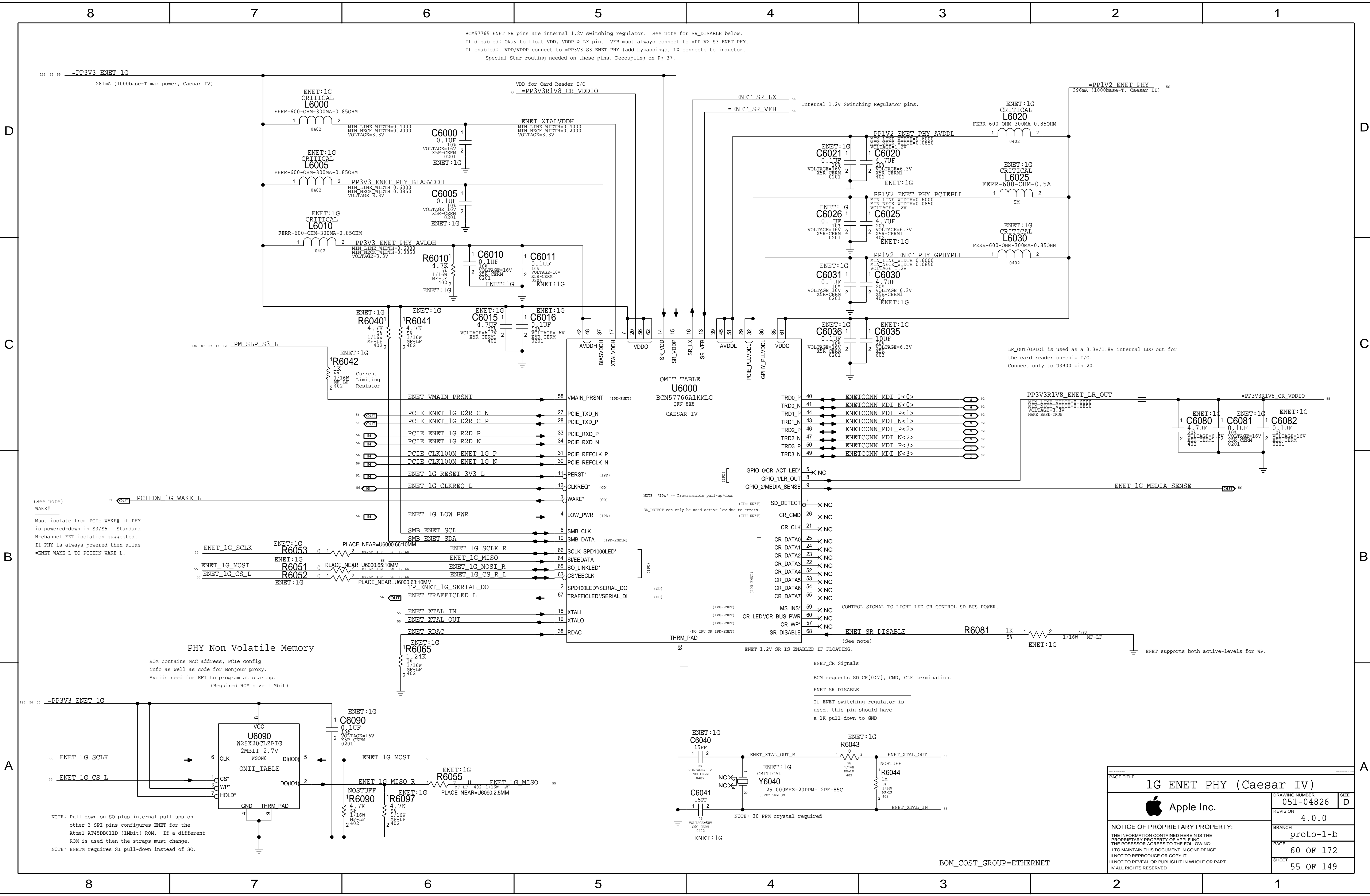
NAVI-10 1.5V=50A

| | | |
|--|----------------|------|
| PAGE TITLE | | |
| SENSORS: I and V Sense(Continued) | | |
|  Apple Inc. | DRAWING NUMBER | SIZE |
| | 051-04826 | D |
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BOM_COST_GROUP=SENSORS



| PAGE TITLE | | |
|---|----------------|-----------|
| FAN: System Fan | | |
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| | SHEET | 54 OF 149 |



8 7 6 5 4 3 2 1

BCM57765 ENET SR pins are internal 1.2V switching regulator. See note for SR_DISABLE below.
If disabled: Okay to float VDD, VDDP & LX pin. VFB must always connect to =PP1V2_S3_ENET_PHY.
If enabled: VDD/VDDP connect to =PP3V3_S3_ENET_PHY (add bypassing), LX connects to inductor.
Special Star routing needed on these pins. Decoupling on Pg 37.

135 56 55 =PP3V3 ENET 1G

281mA (1000base-T max power, Caesar IV)

VDD for Card Reader I/O
=PP3V3R1V8_CR_VDDIO

ENET:1G CRITICAL L6000
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6005
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6010
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6020
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6025
FERR-600-OHM-0.5A

ENET:1G CRITICAL L6030
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6080
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6081
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6082
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6090
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6095
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6100
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6105
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6110
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6115
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6120
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6125
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6130
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6135
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6140
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6145
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6150
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6155
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6160
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6165
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6170
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6175
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6180
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6185
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6190
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6195
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6200
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6205
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6210
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6215
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6220
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6225
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6230
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ENET:1G CRITICAL L6235
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6240
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6245
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ENET:1G CRITICAL L6250
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ENET:1G CRITICAL L6255
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ENET:1G CRITICAL L6260
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6265
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6270
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ENET:1G CRITICAL L6275
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ENET:1G CRITICAL L6280
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6285
FERR-600-OHM-300MA-0.85OHM

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FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6300
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6305
FERR-600-OHM-300MA-0.85OHM

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FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6315
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ENET:1G CRITICAL L6320
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6325
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6330
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6335
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6340
FERR-600-OHM-300MA-0.85OHM

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ENET:1G CRITICAL L6355
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6360
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6365
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6370
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6375
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6380
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6385
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6390
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6395
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6400
FERR-600-OHM-300MA-0.85OHM

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FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6410
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6415
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6420
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6425
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6430
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6435
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6440
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6445
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6450
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6455
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6460
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6465
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6470
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6475
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6480
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6485
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6490
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6495
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6500
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6505
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6510
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6515
FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6520
FERR-600-OHM-300MA-0.85OHM

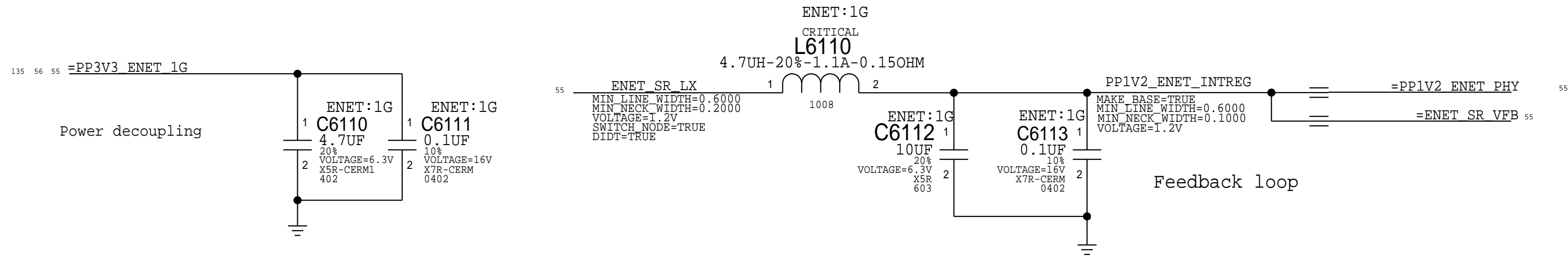
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FERR-600-OHM-300MA-0.85OHM

ENET:1G CRITICAL L6530
FERR-600-OHM-300MA-0.85OHM

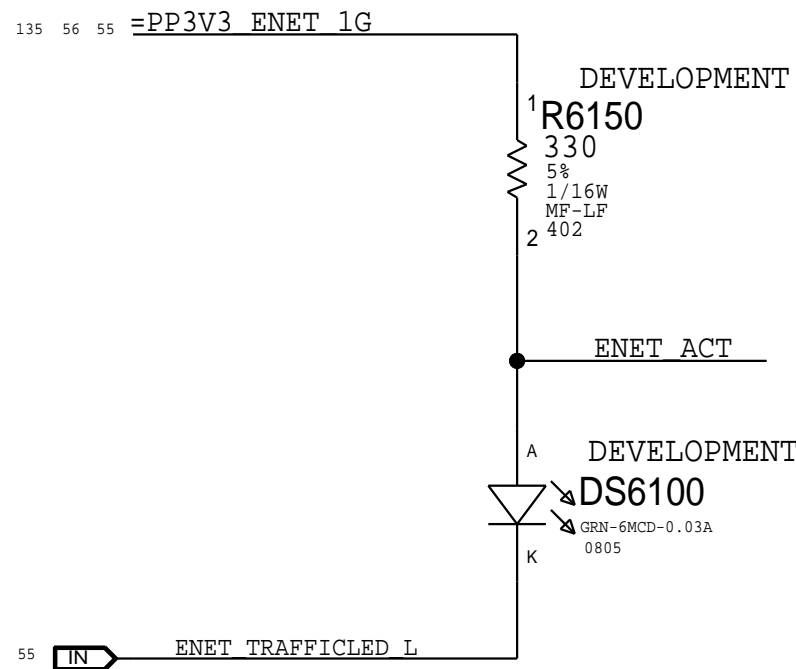
ENET:1G CRITICAL L6535
FERR-600-OHM-300MA-0.85OHM

ENET:1

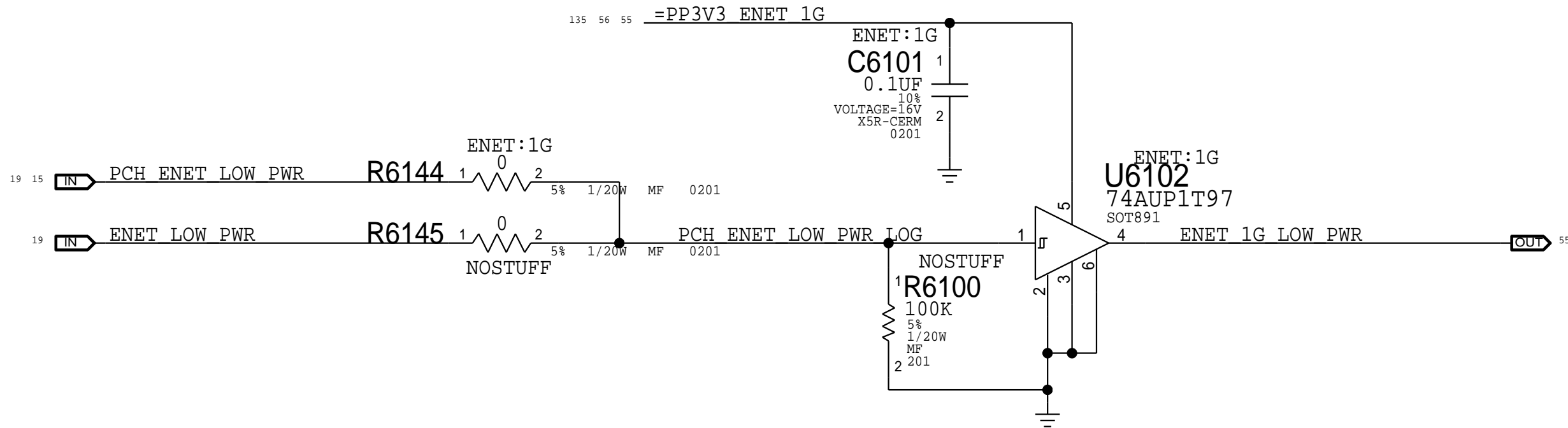
CAESAR IV 1.2V INT.VR CMPTS



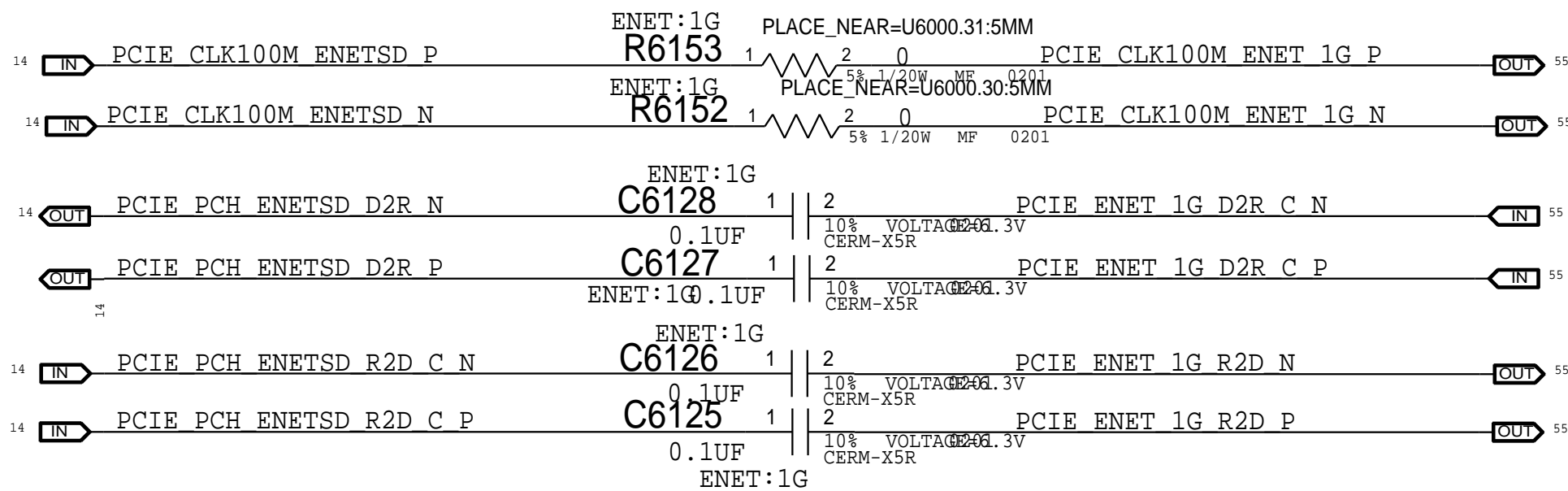
1G ETHERNET ACTIVITY LED



1G ENET LOW PWR



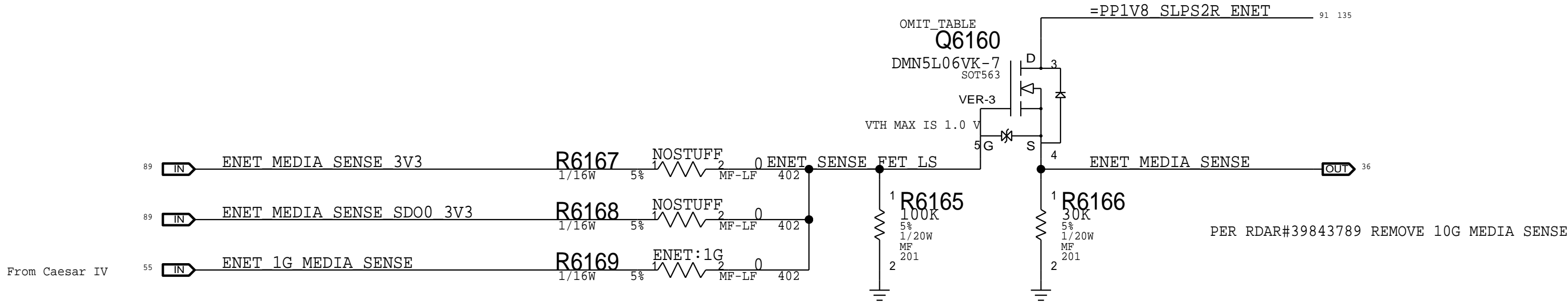
PCIE Connection



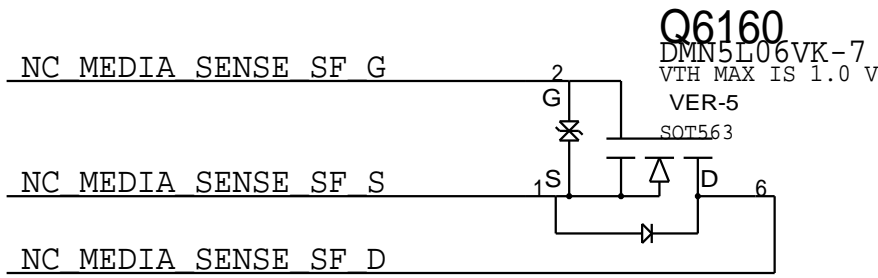
Caesar IV

ENET MEDIA SENSE LEVEL SHIFTER

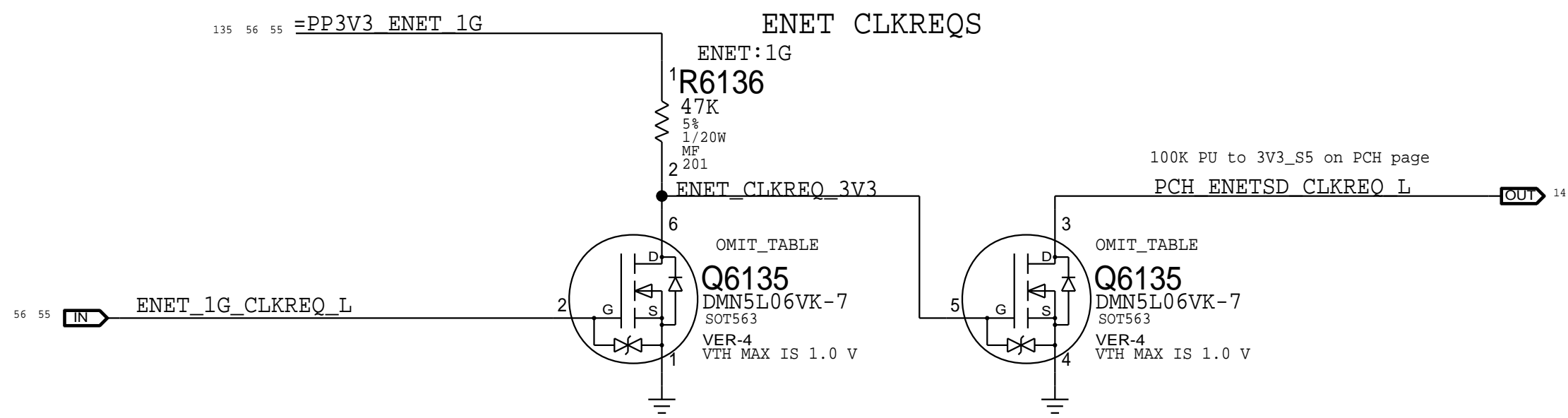
| PART NUMBER | QTY | DESCRIPTION | REFERENCE DES | CRITICAL | BOM OPTION |
|-------------|-----|-------------|---------------|----------|------------|
| 376S0855 | 2 | dual FET | Q6160,Q6135 | CRITICAL | ENET:1G |



SPARE MOSFET

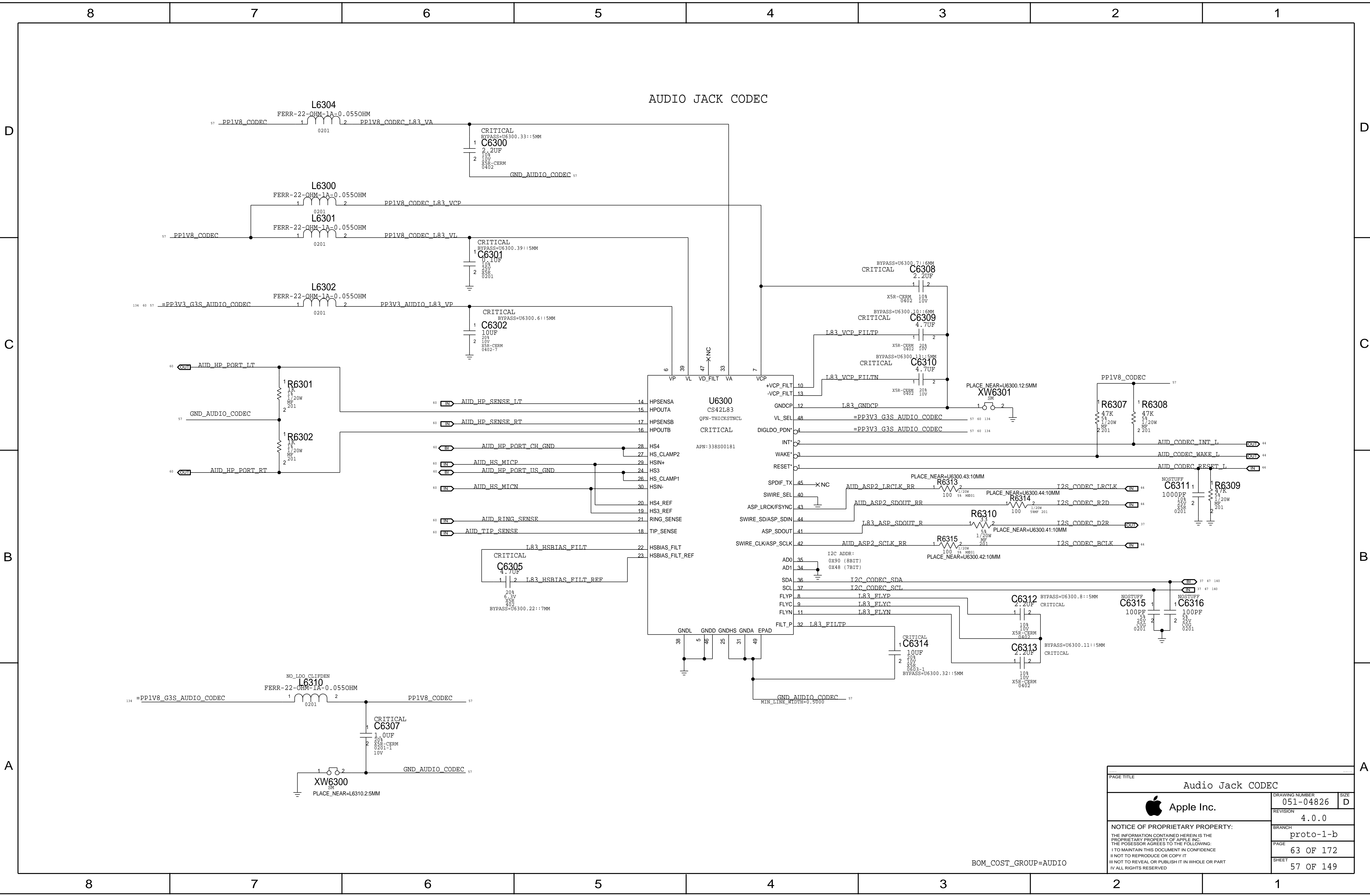



ENET CLKREQS



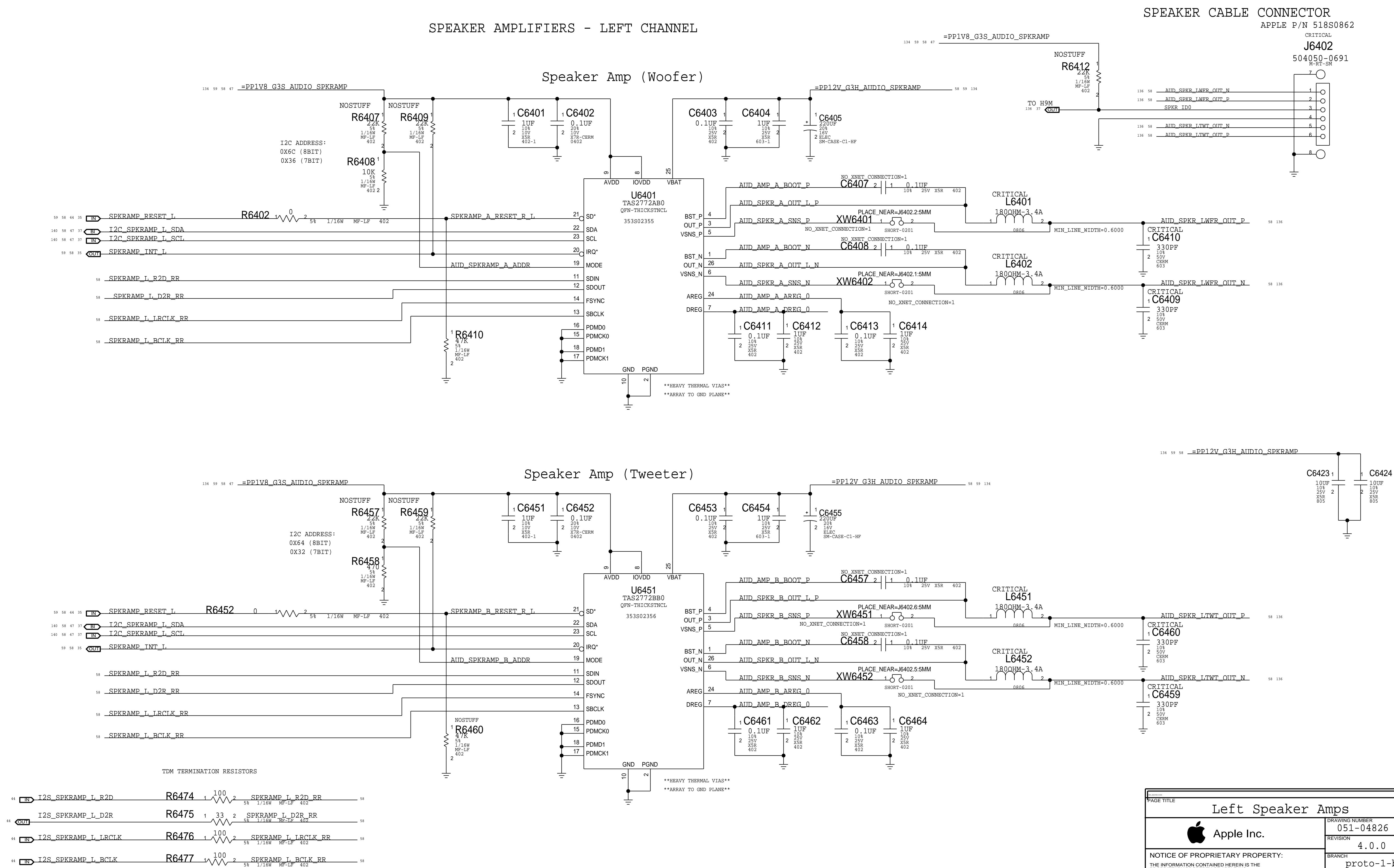
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| PAGE TITLE | | |
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| 1G ENET SUPPORT | | |
| | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | BRANCH | proto-1-b |
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| | SHEET | 56 OF 149 |



| PAGE TITLE | | |
|--|----------------|-----------|
| Audio Jack CODEC | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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| | PAGE | 63 OF 172 |
| | SHEET | 57 OF 149 |

BOM_COST_GROUP=AUDIO



D

C

B

A

D

C

B

A

SPEAKER AMPLIFIERS - RIGHT CHANNEL

SPEAKER CABLE CONNECTOR

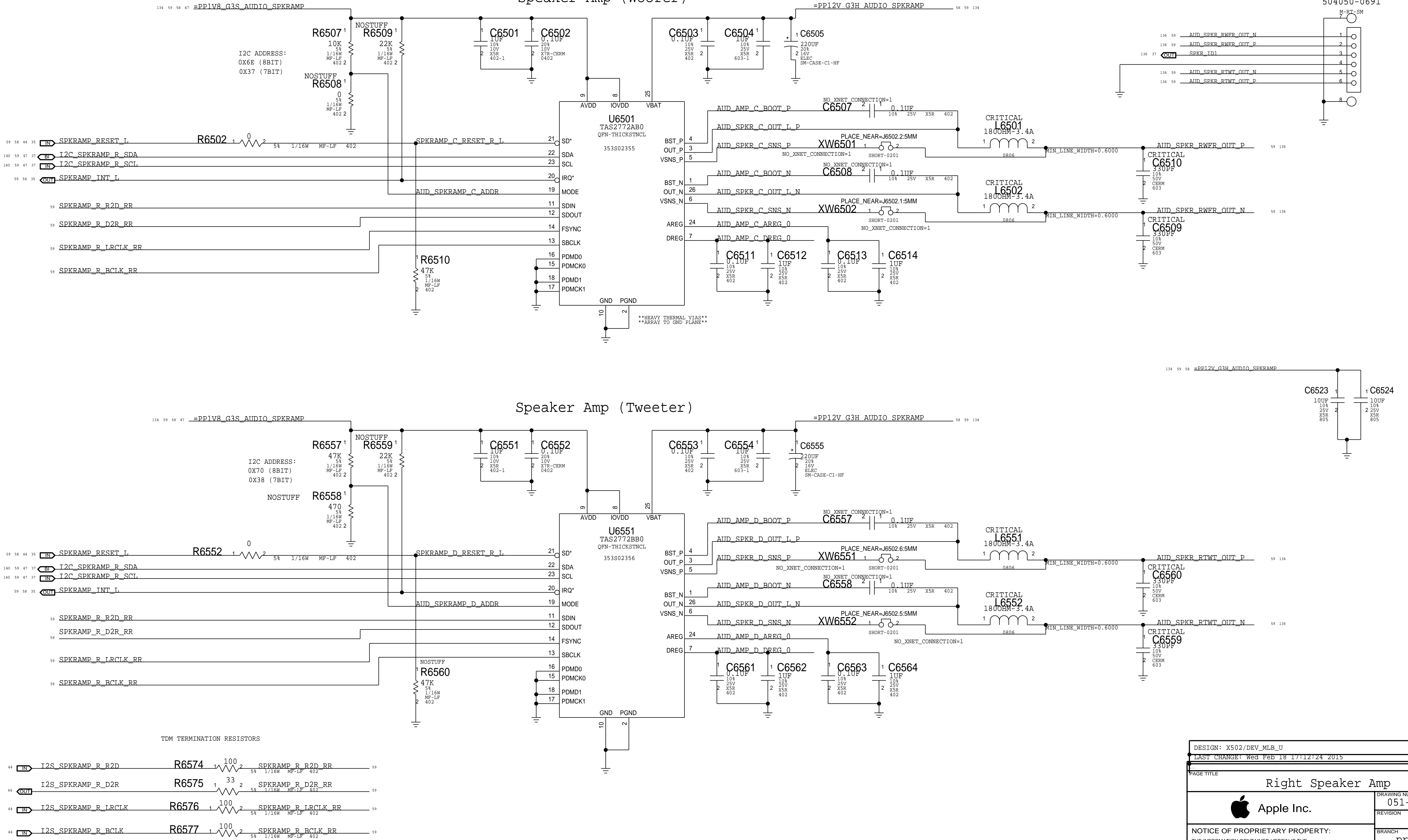
APPLE P/N 518S0862

J6502

504050-0691

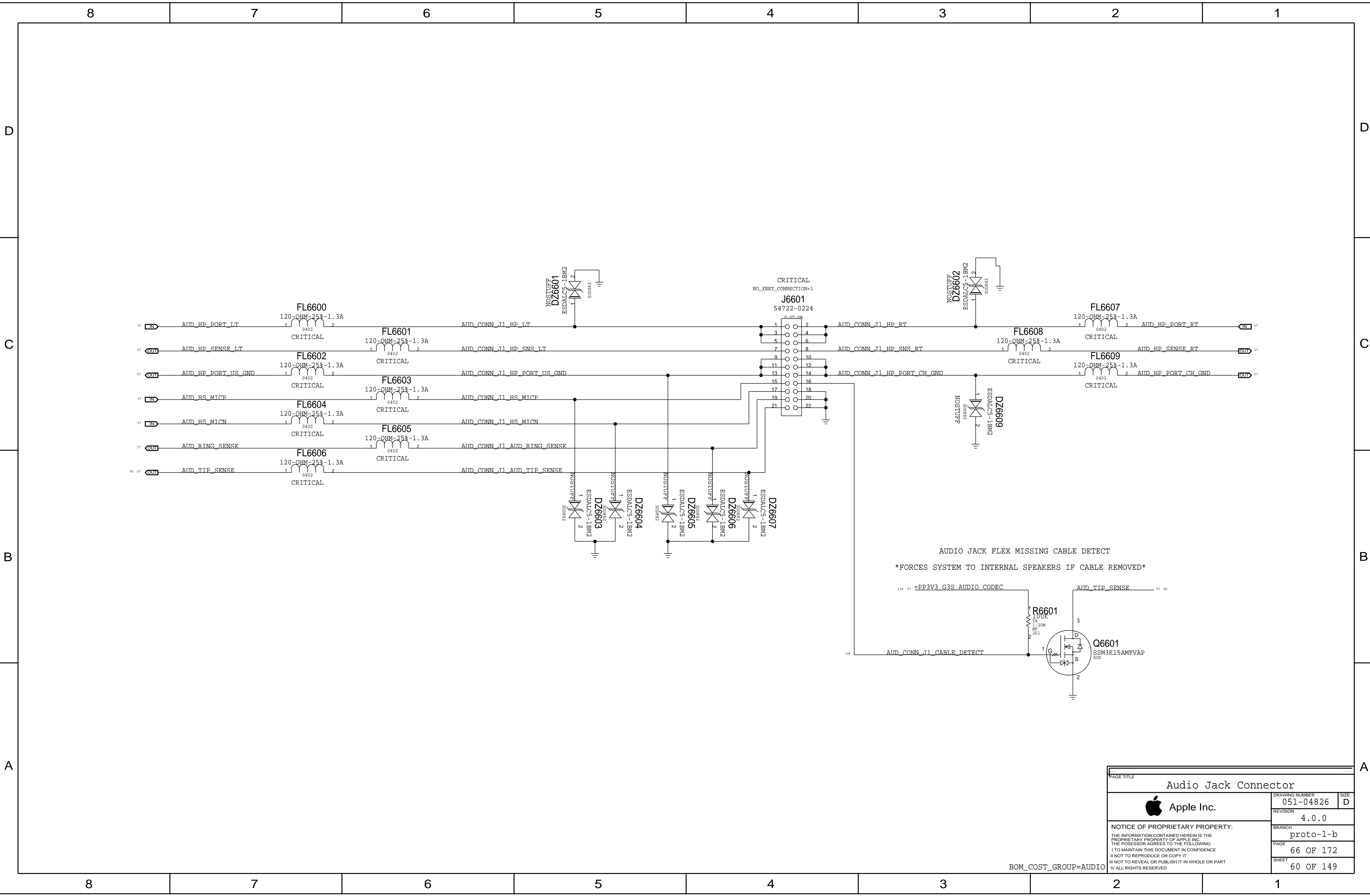
Speaker Amp (Woofer)


Speaker Amp (Tweeter)

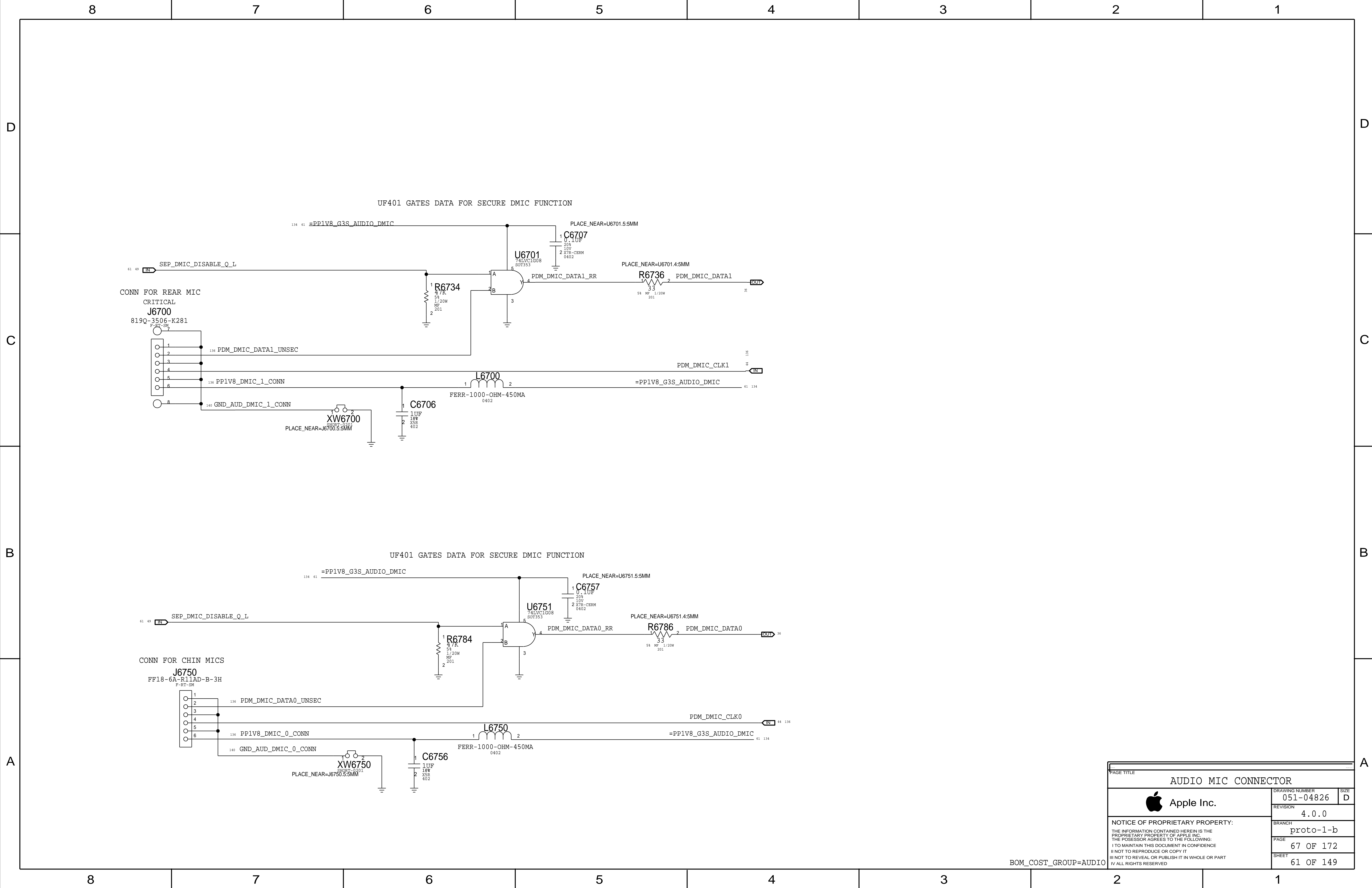



BOM_COST_GROUP=AUDIO

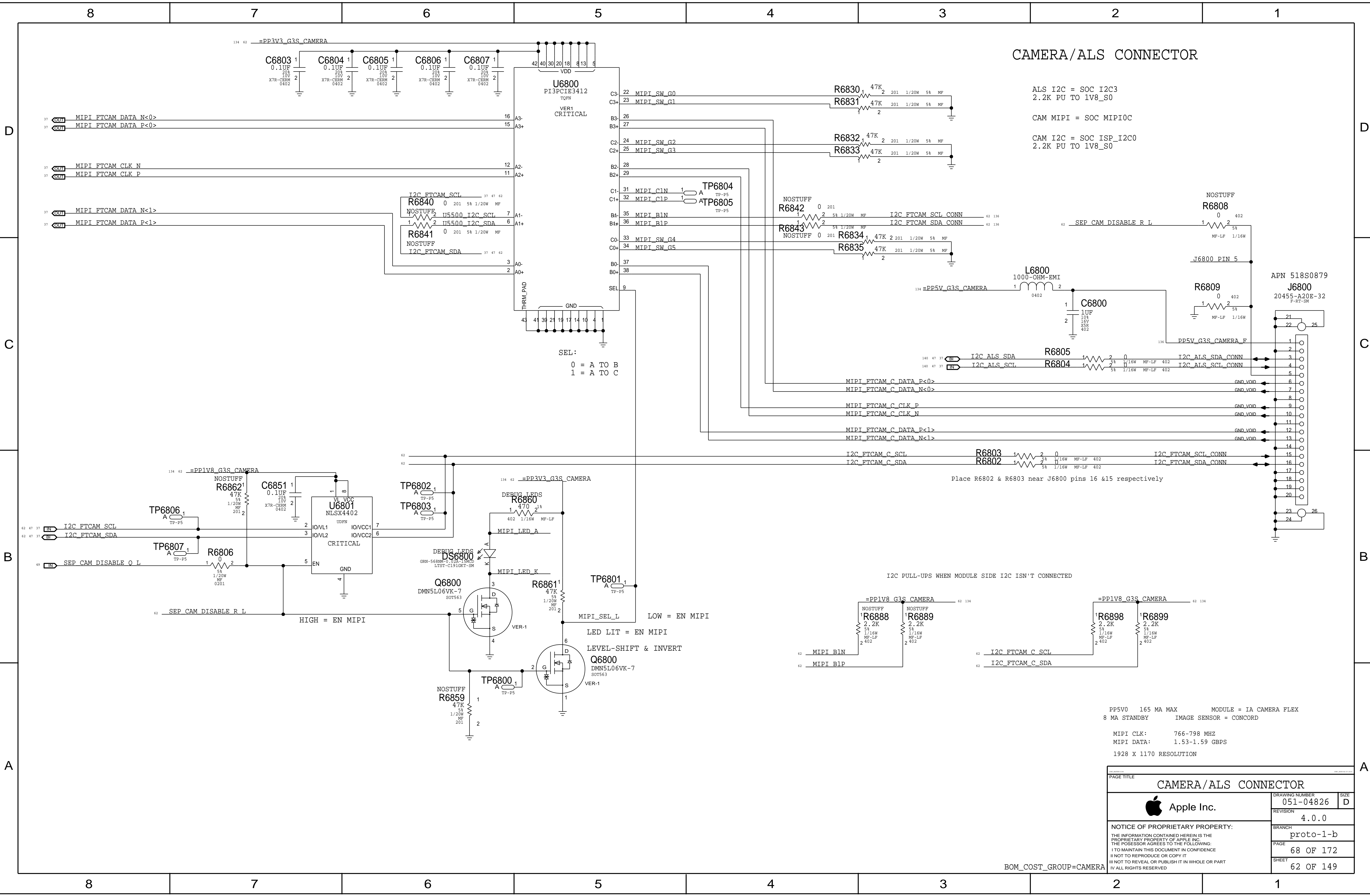
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| DESIGN: X502/DEV_MLB_U | | |
| LAST CHANGE: Wed Feb 18 17:12:24 2015 | | |
| PAGE TITLE | | |
| Right Speaker Amp | | |
| | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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| | | |
|---|----------------|-----------|
| PAGE TITLE | | |
| Audio Jack Connector | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | BRANCH | proto-1-b |
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| PAGE TITLE | | |
|---|----------------|-----------|
| AUDIO MIC CONNECTOR | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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CAMERA/ALS CONNECTOR

ALS I2C = SOC I2C3
2.2K PU TO 1V8_S0


CAM MIPI = SOC MIPI0C

CAM I2C = SOC ISP_I2C0
2.2K PU TO 1V8_S0

PP5V0 165 MA MAX MODULE = IA CAMERA FLEX
8 MA STANDBY IMAGE SENSOR = CONCORD

MIPI CLK: 766-798 MHZ
MIPI DATA: 1.53-1.59 GBPS

1928 X 1170 RESOLUTION

| PAGE TITLE | | |
|---|----------------|-----------|
| CAMERA/ALS CONNECTOR | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART I ALL RIGHTS RESERVED | BRANCH | proto-1-b |
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BOM_COST_GROUP=CAMERA

D

C

B

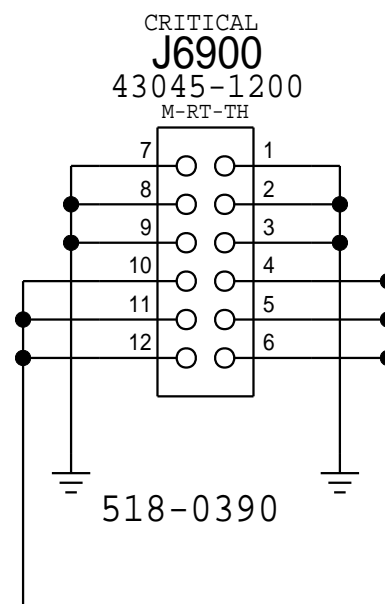
A

D

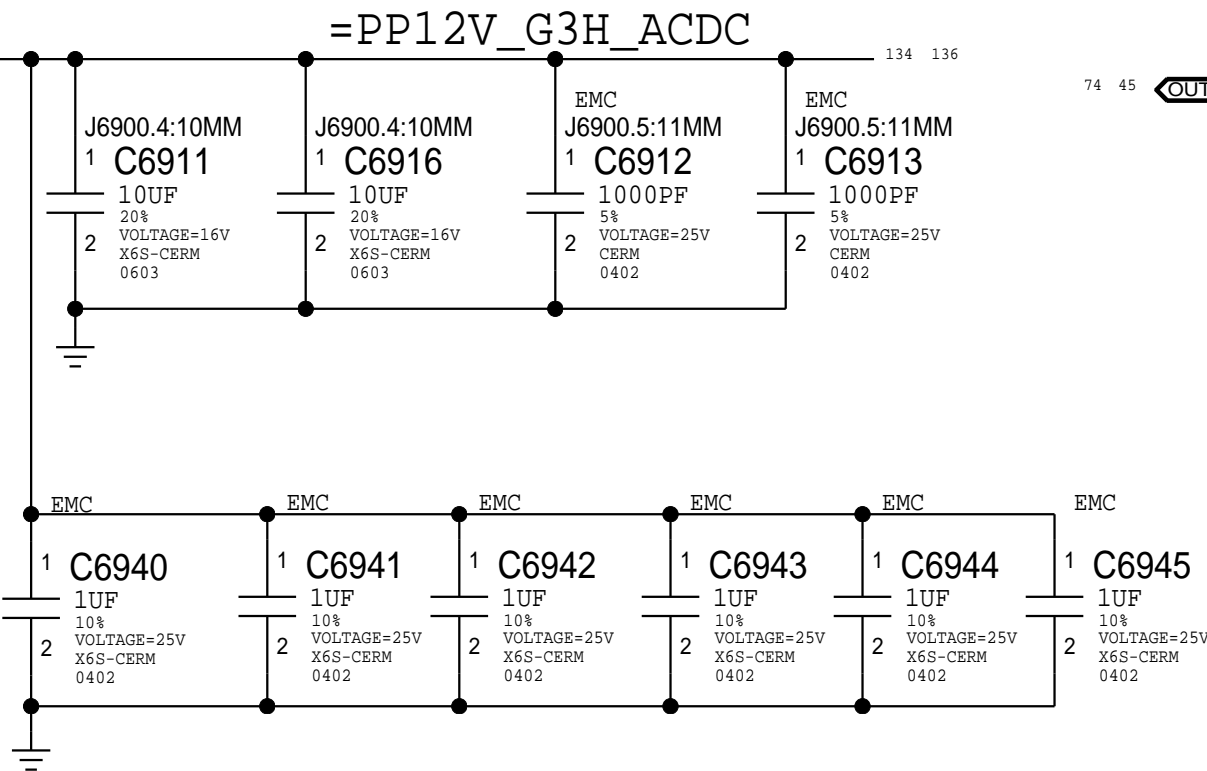
C

B

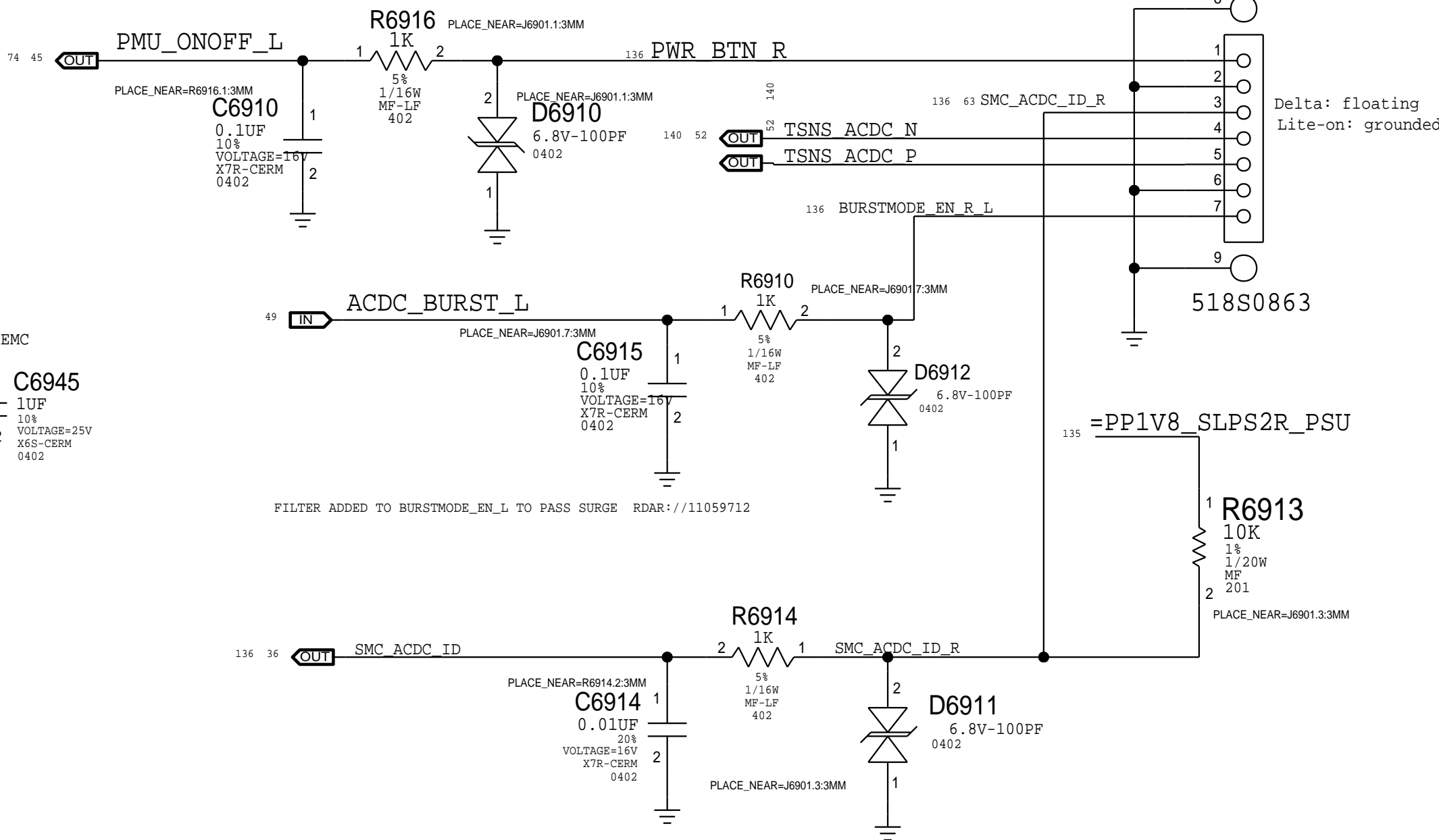
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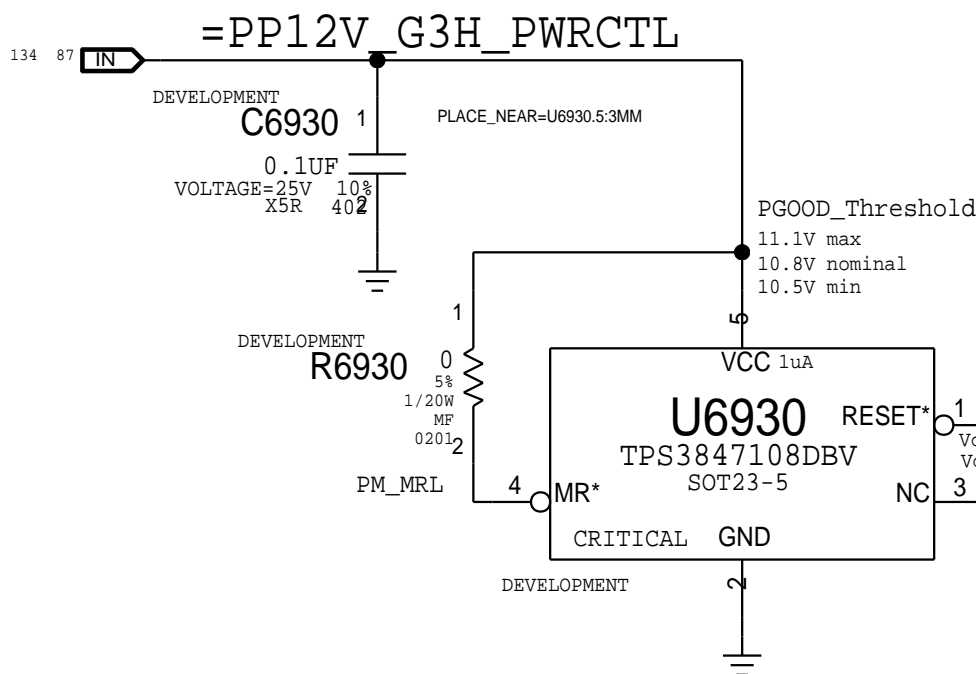
MLB to AC-DC Connector



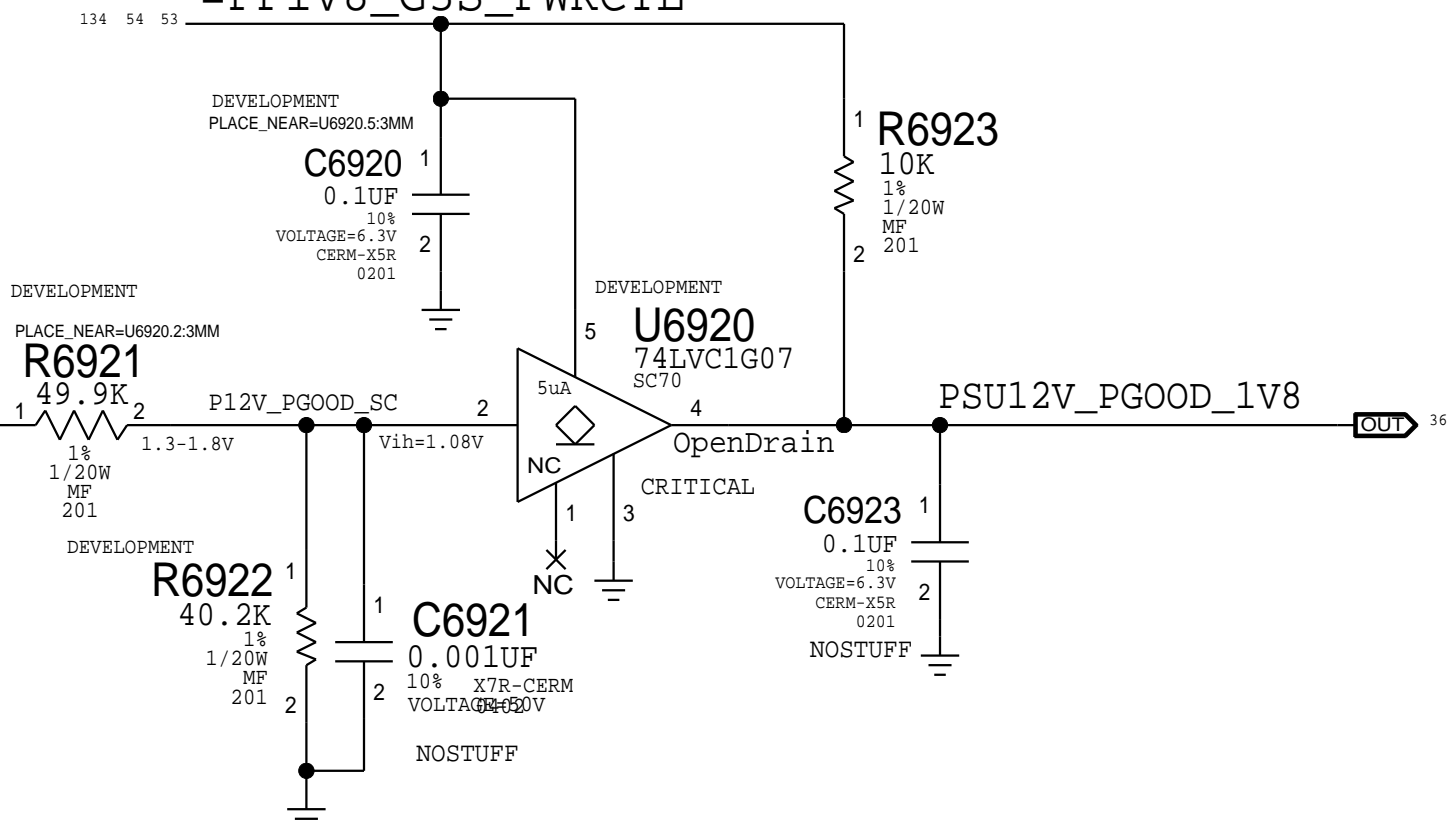
MLB to AC-DC Supplemental Signal Connector



ACDC PSU : min 11.5V, nominal 12.1V

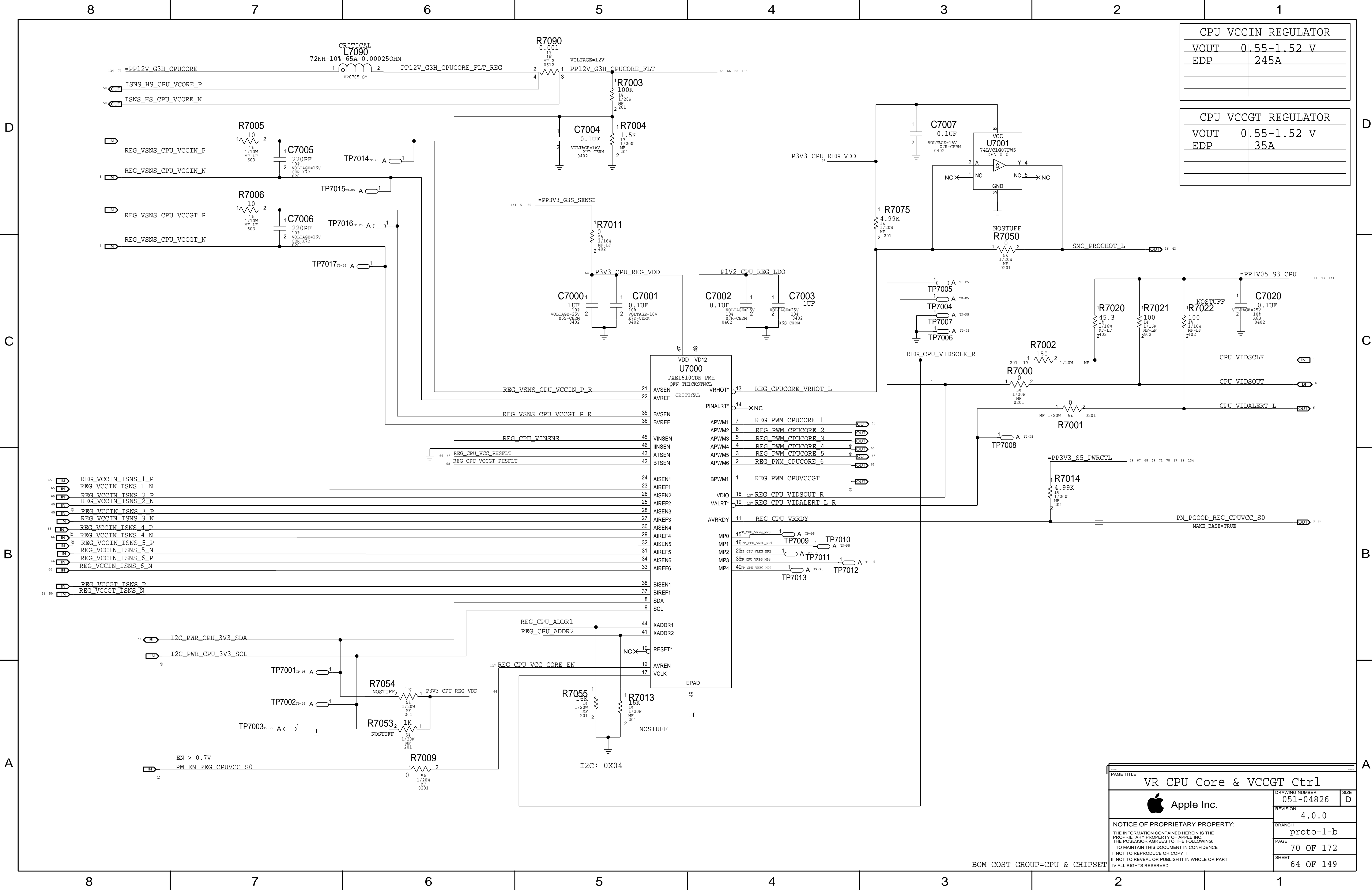


=PP1V8_G3S_PWRCTL




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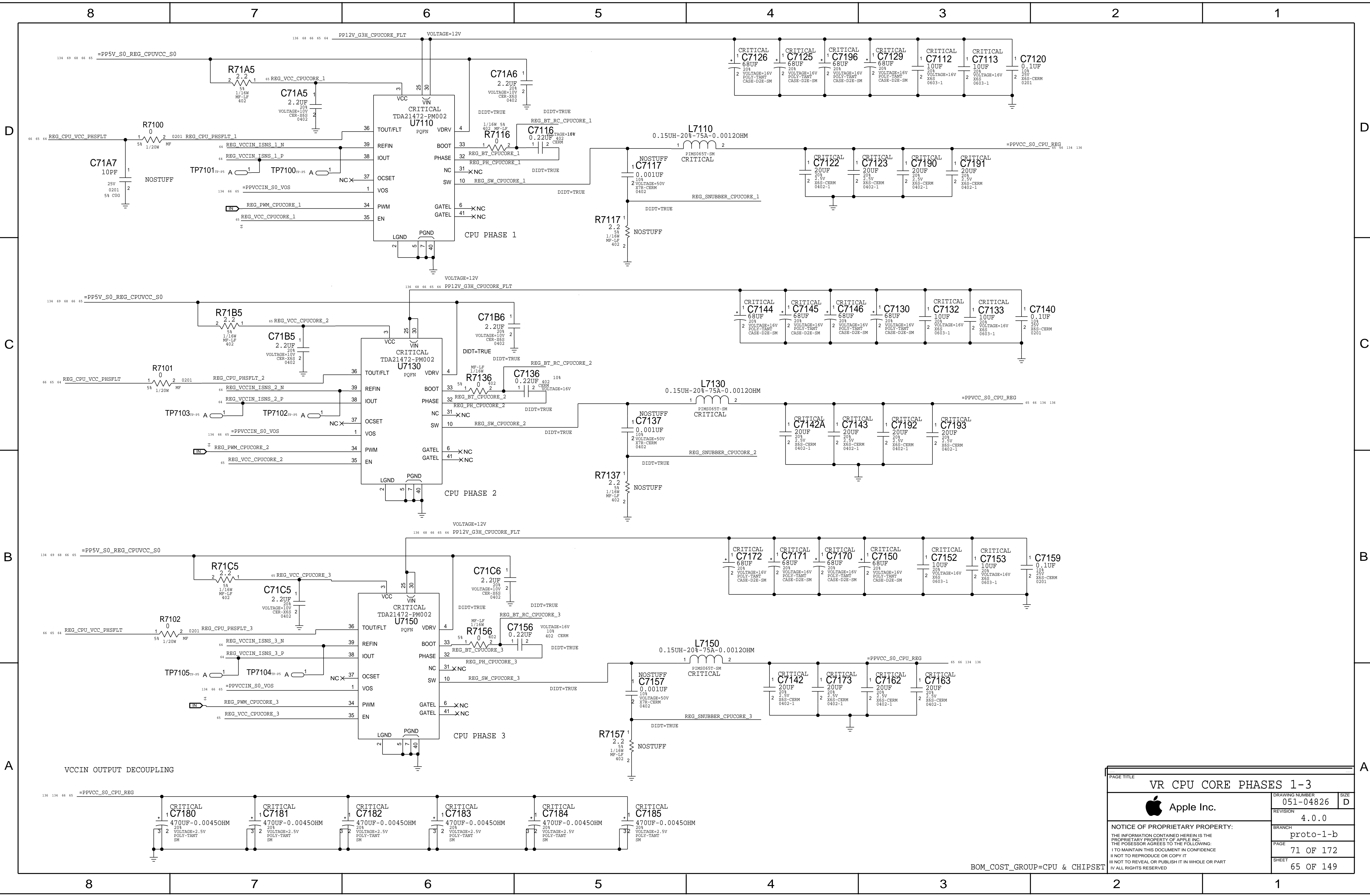
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| PLATFORM POWER: CONNECTORS | | |
| | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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| CPU VCCIN REGULATOR | |
|---------------------|-------------|
| VOUT | 0.55-1.52 V |
| EDP | 245A |
| | |
| | |

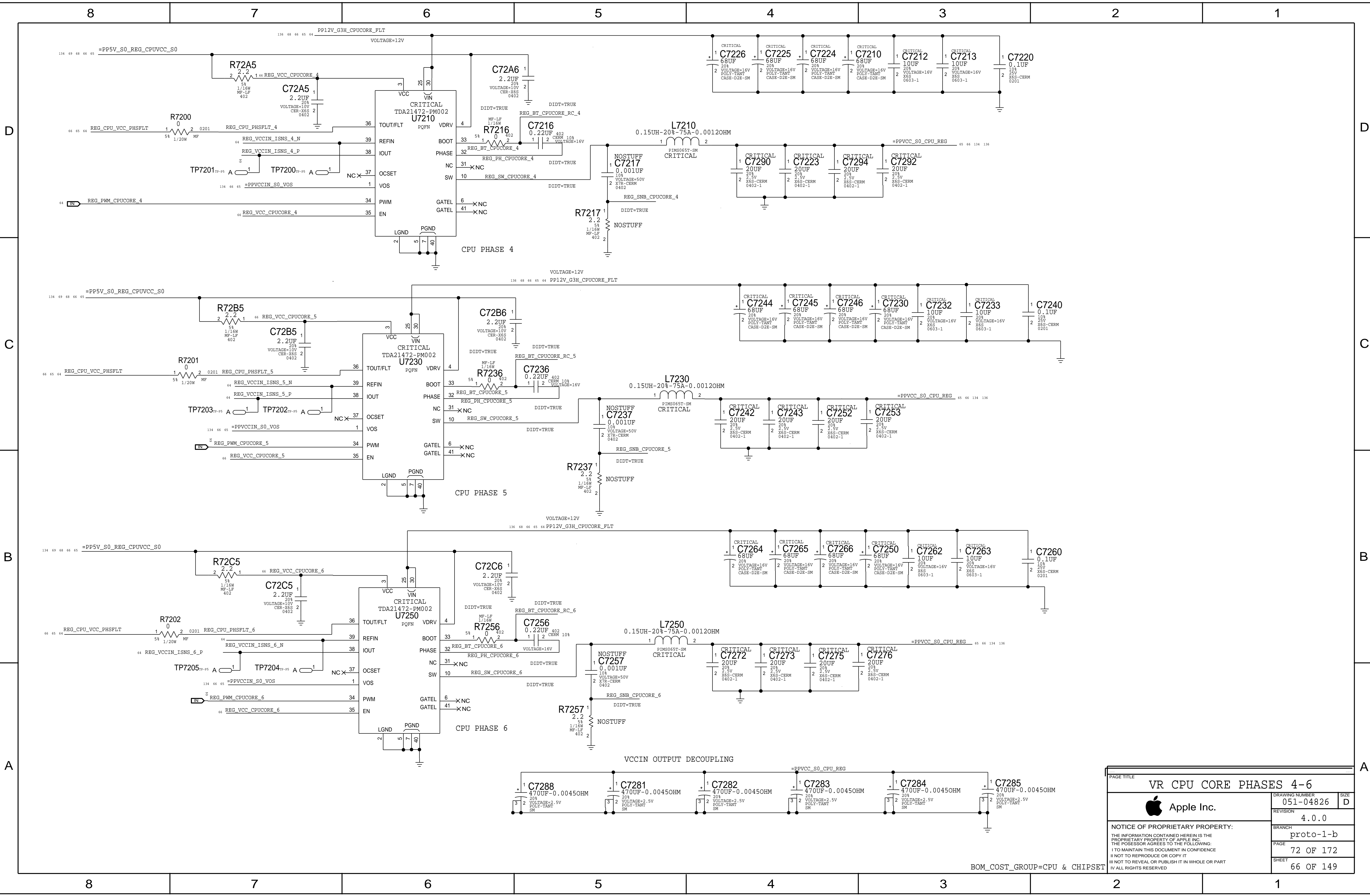
| CPU VCCGT REGULATOR | |
|---------------------|-------------|
| VOUT | 0.55-1.52 V |
| EDP | 35A |
| | |
| | |

| PAGE TITLE | | |
|--|----------------|-----------|
| VR CPU Core & VCCGT Ctrl | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | BRANCH | proto-1-b |
| | PAGE | 70 OF 172 |
| | SHEET | 64 OF 149 |

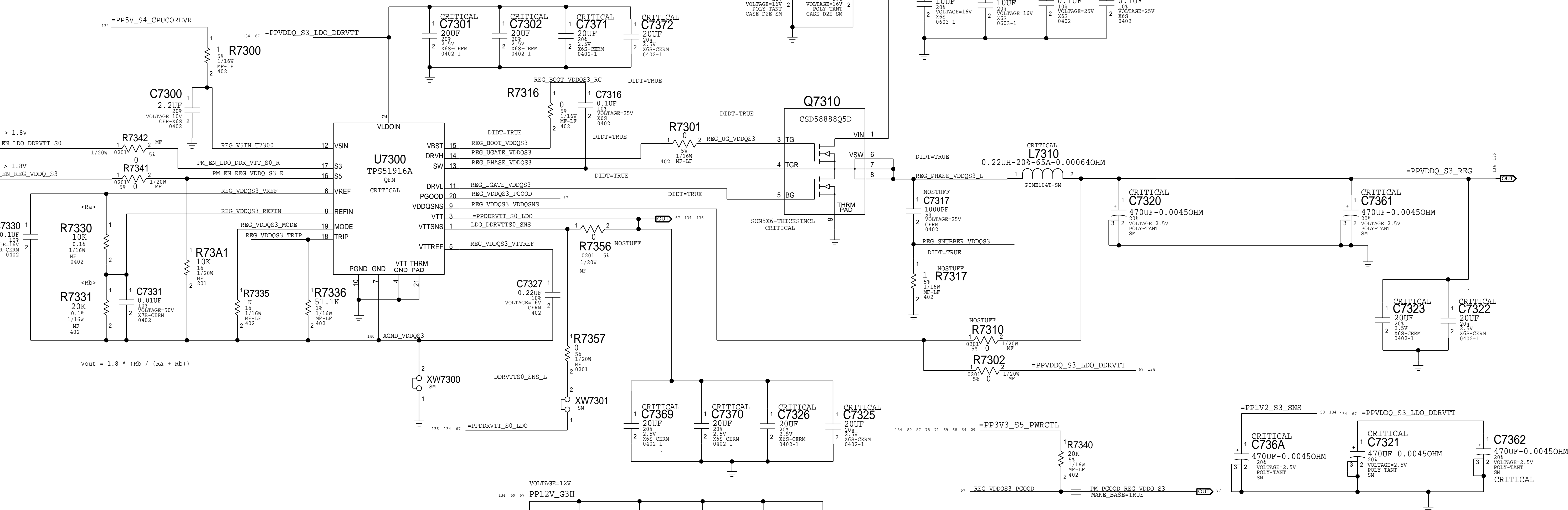
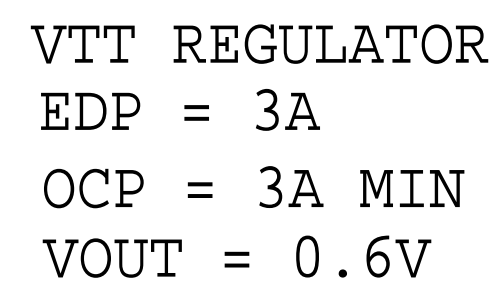
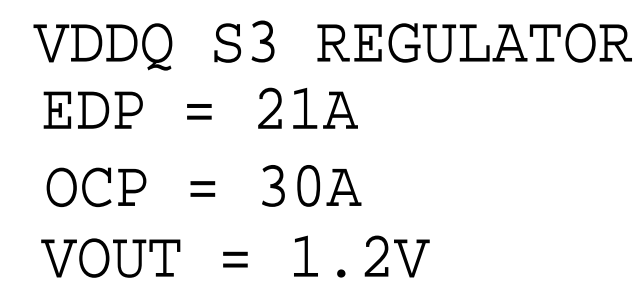



| PAGE TITLE | | | |
|---|----------------|-----------|-----------|
| VR CPU CORE PHASES 1-3 | | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 | SIZE D |
| | REVISION | 4.0.0 | |
| | BRANCH | proto-1-b | |
| | PAGE | 71 OF 172 | |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | SHEET | 65 OF 149 |

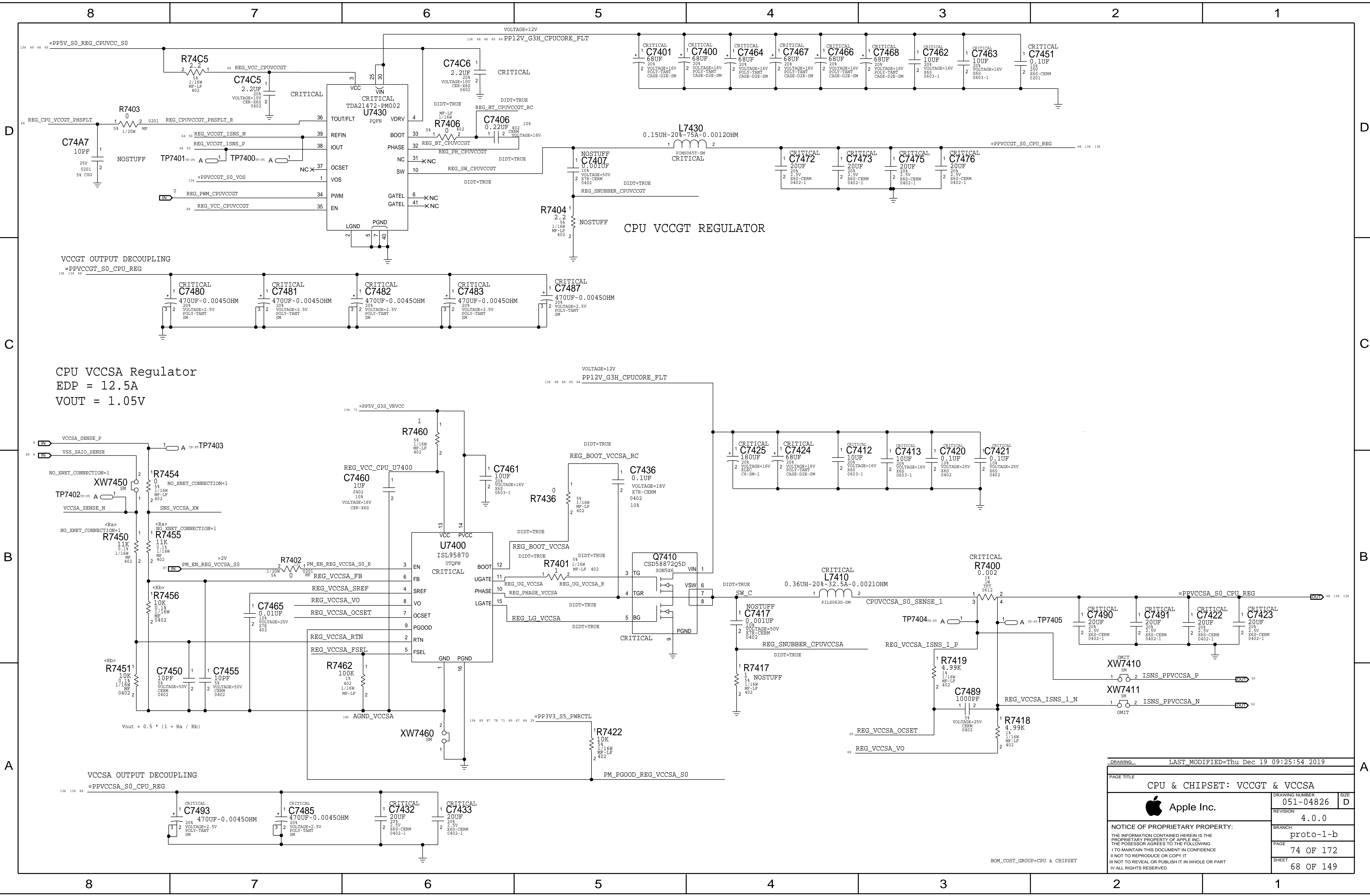
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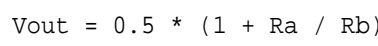



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| VR CPU CORE PHASES 4-6 | | |
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| | PAGE | 72 OF 172 |
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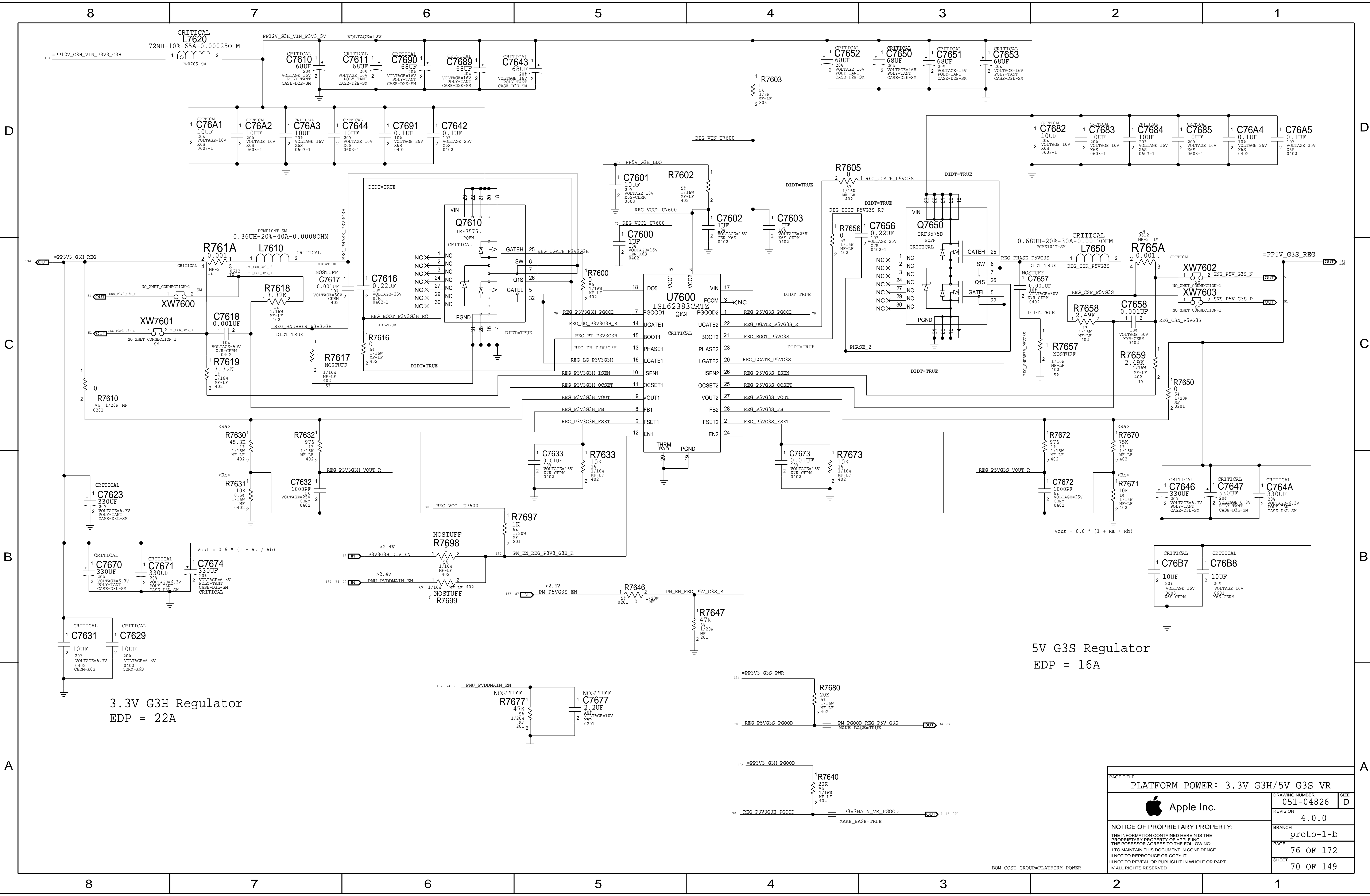


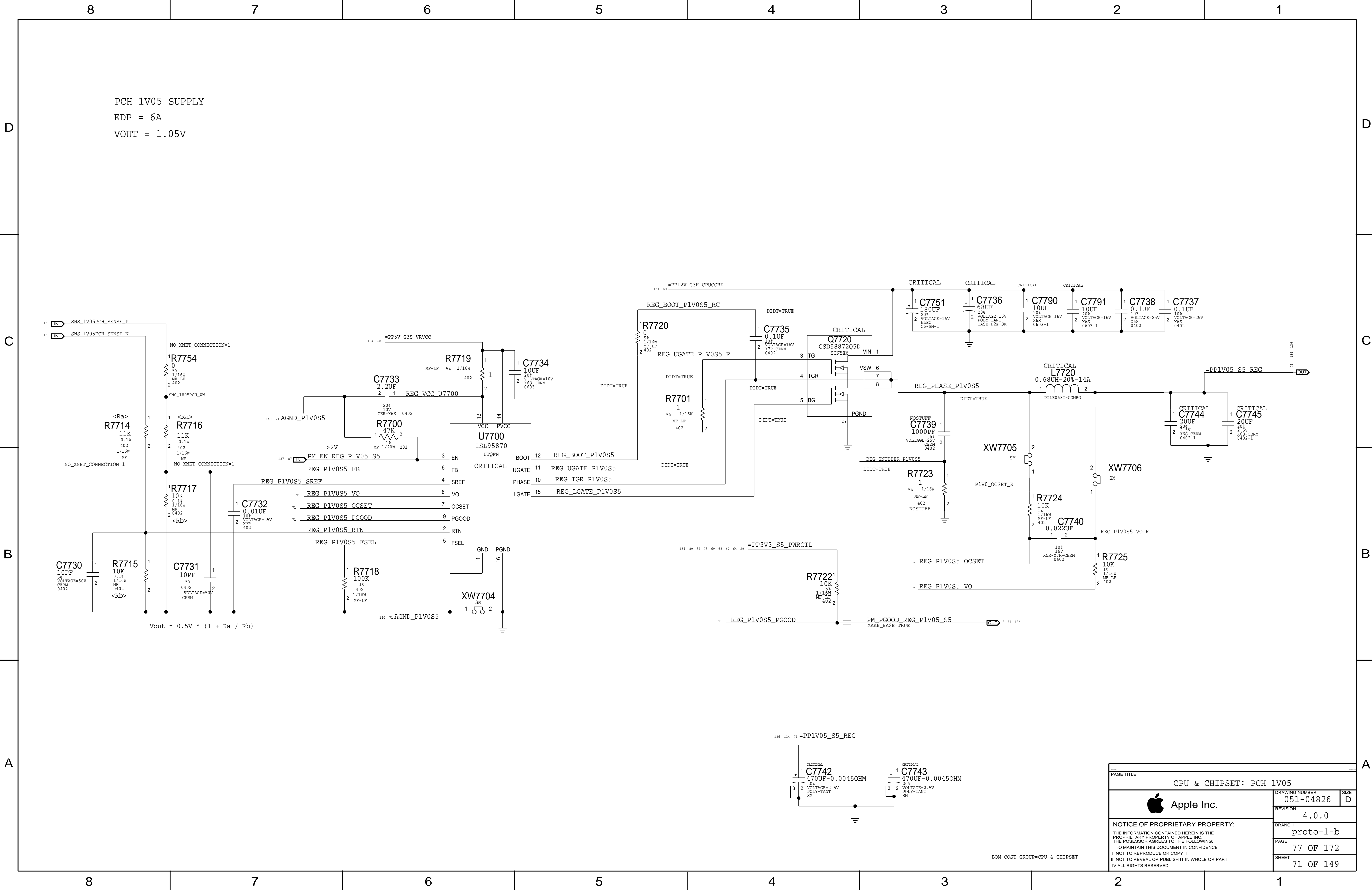
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|---|----------------|------|
| PAGE TITLE | | |
| CPU & CHIPSET: CPU VDDQ VR | | |
|  Apple Inc. | DRAWING NUMBER | SIZE |
| | 051-04826 | D |
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| | 4.0.0 | |
| | BRANCH | |
| | proto-1-b | |
| | PAGE | |
| | 73 OF 172 | |
| | SHEET | |
| | 67 OF 149 | |

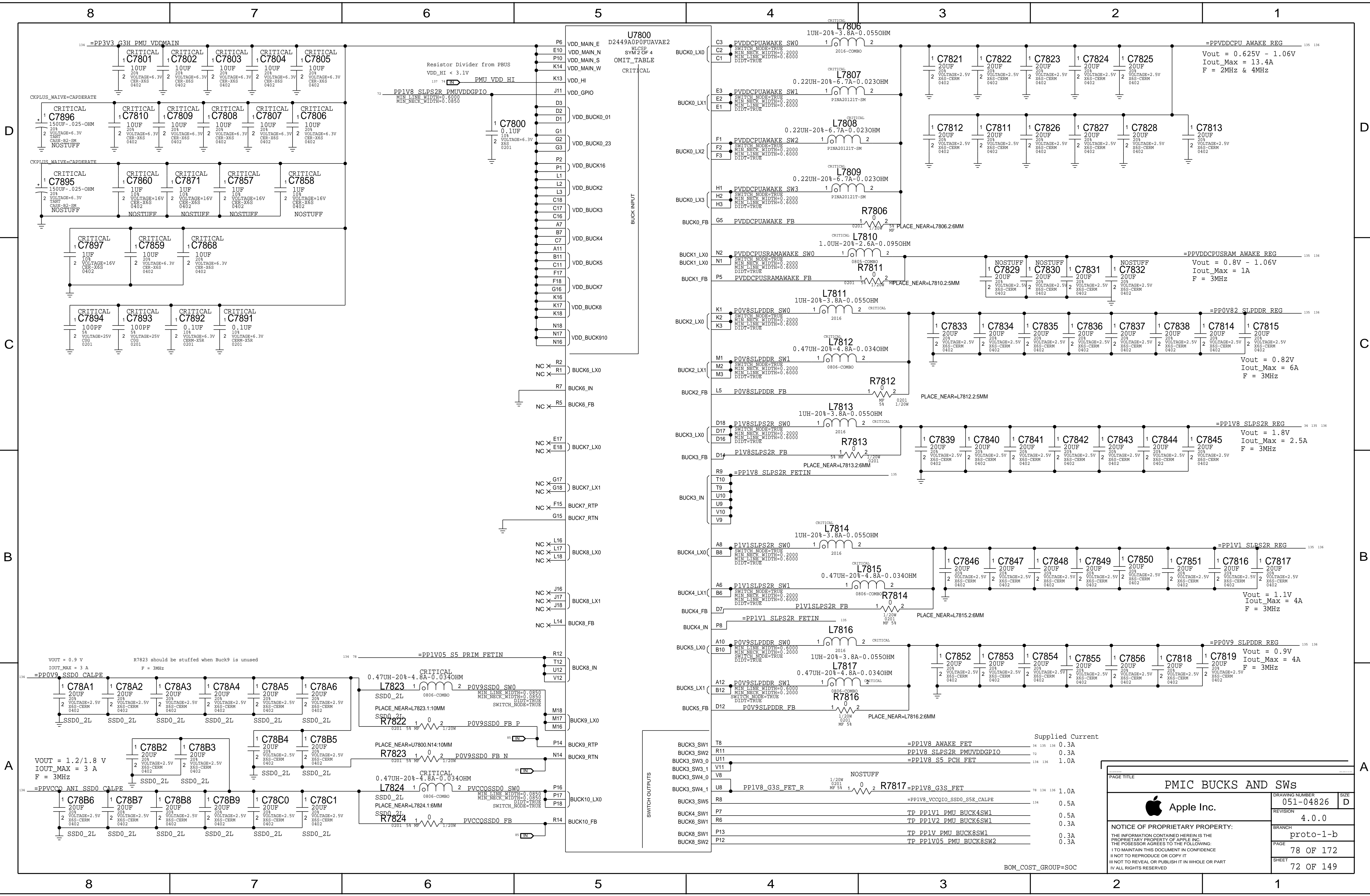


$$\begin{aligned} \text{EDP} &= 6.5\text{A} \\ \text{VOUT} &= 0.95\text{V} \end{aligned}$$


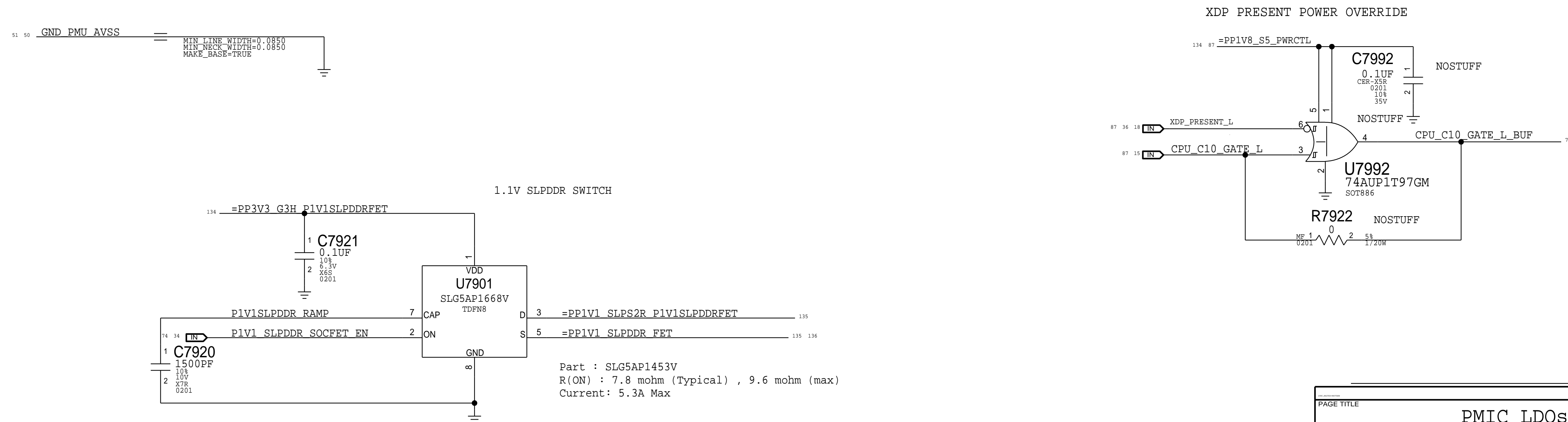
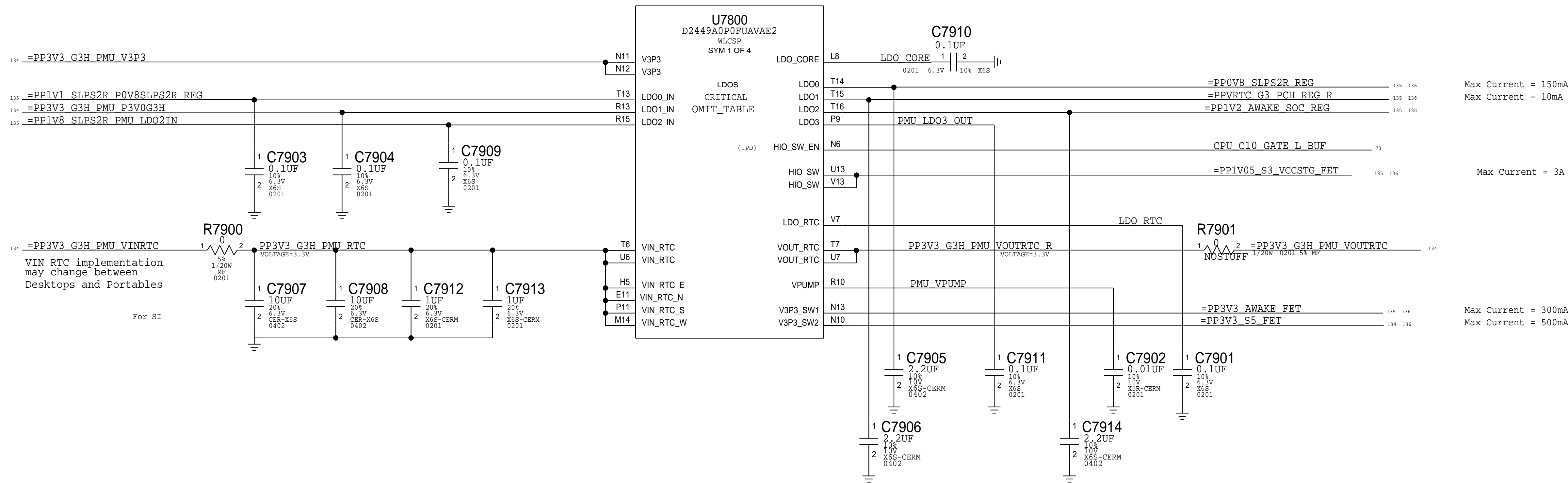
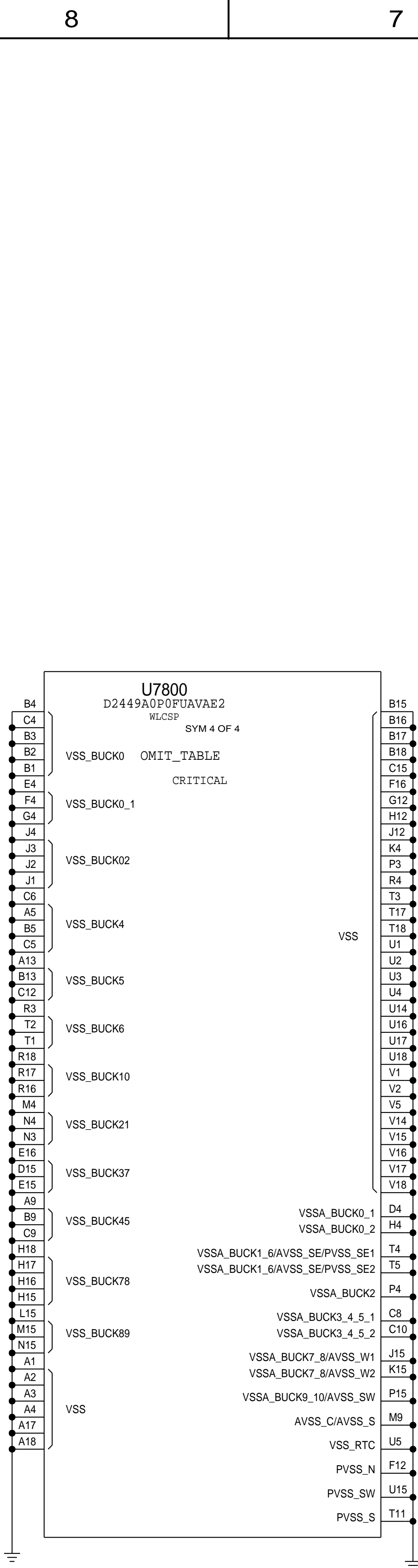
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| CPU & CHIPSET: CPU VCCIO VR | | | |
|  Apple Inc. | | DRAWING NUMBER 051-04826 | SIZE D |
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| | | BRANCH proto-1-b | |
| | | PAGE 75 OF 172 | |
| | | SHEET 69 OF 149 | |






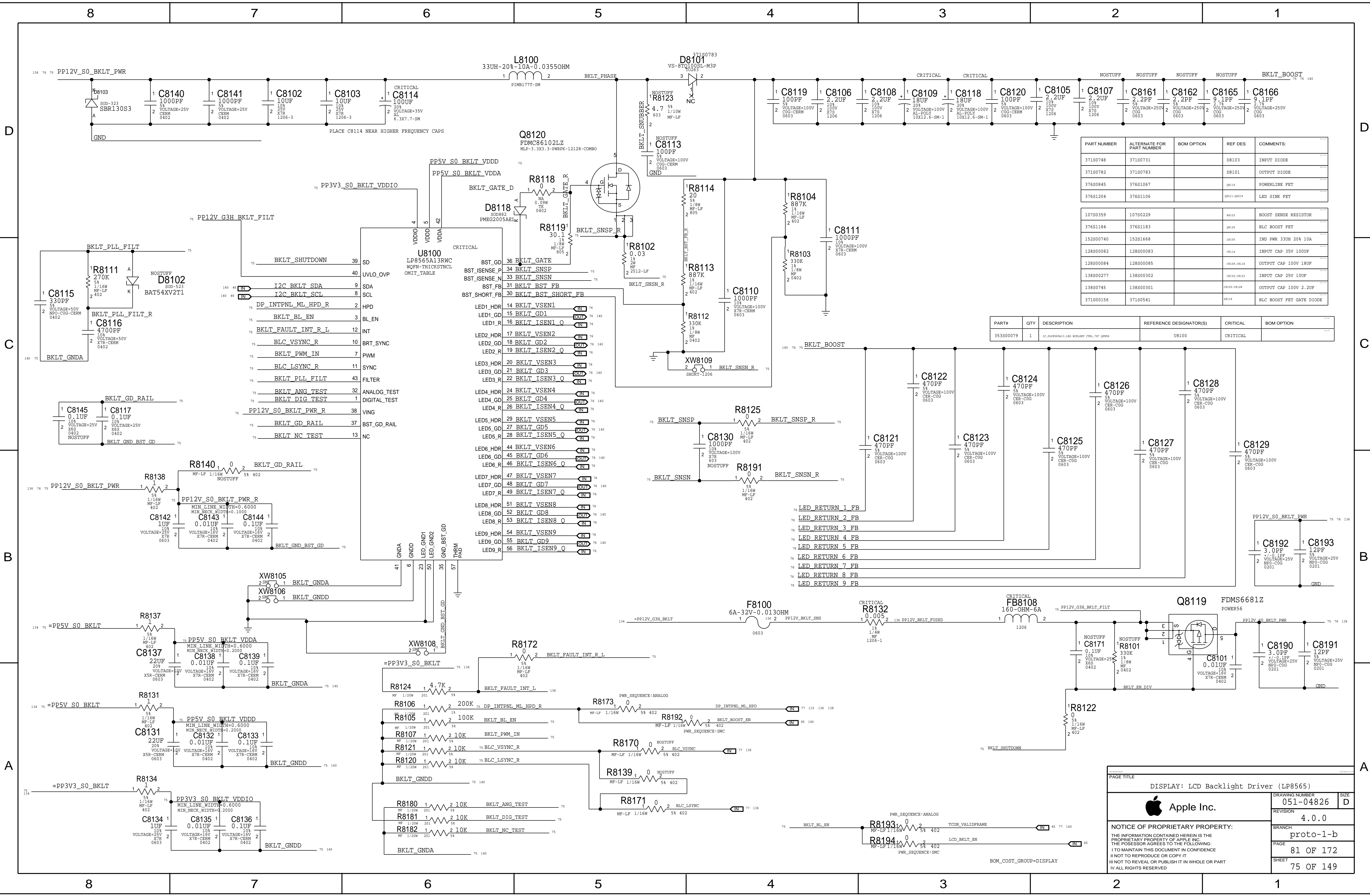


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| PAGE TITLE | | | PMIC BUCKS AND SWs | | |
| | | | DRAWING NUMBER | 051-04826 | SIZE |
| | | | REVISION | 4.0.0 | D |
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| | | | PAGE | 78 OF 172 | |
| | | | SHEET | 72 OF 149 | |



| | | | | | |
|--|--|----------------|--|-----------|--|
| PAGE TITLE | | DRAWING NUMBER | | SIZE | |
| PMIC LDOs | | 051-04826 | | D | |
|  Apple Inc. | | REVISION | | 4.0.0 | |
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| | | SHEET | | 73 OF 149 | |

BOM_COST_GROUP=SOC



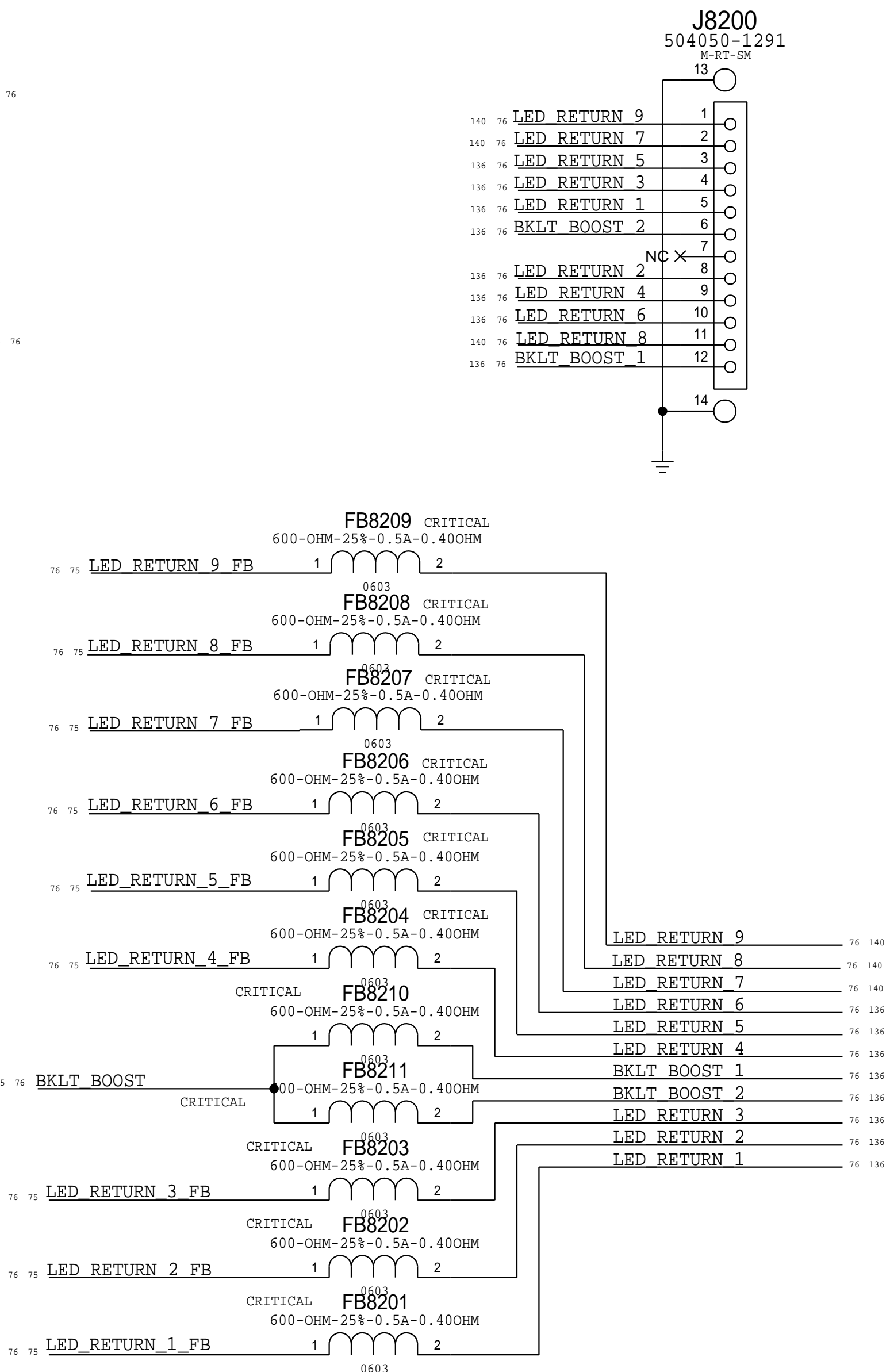
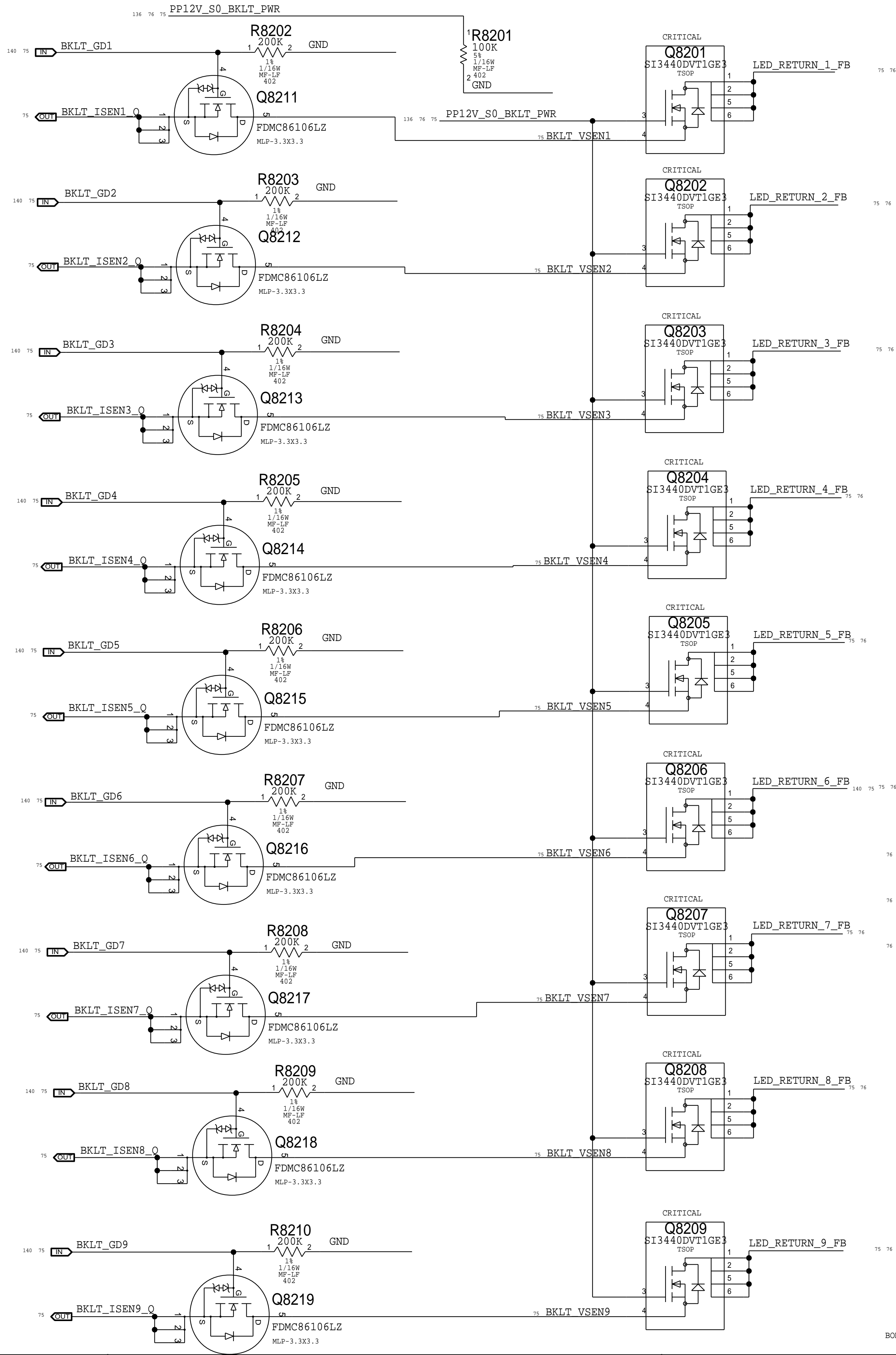
| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES | COMMENTS: |
|-------------|---------------------------|------------|-------------|---------------|
| 371S0748 | 371S0731 | | D8103 | INPUT DIODE |
| 371S0782 | 371S0783 | | D8101 | OUTPUT DIODE |
| 376S0845 | 376S1067 | | Q8119 | POWERLINE FET |
| 376S1204 | 376S1106 | | Q8211-Q8219 | LED SINK FET |


| | | | | |
|-----------|-----------|--|-------------|--------------------------|
| 107S0359 | 107S0229 | | R8102 | BOOST SENSE RESISTOR |
| 376S1184 | 376S1183 | | Q8120 | BLC BOOST FET |
| 152S00740 | 152S1668 | | C8100 | IND FWR 33UH 20% 10A |
| 128S00082 | 128S00083 | | C8114 | INPUT CAP 35V 100UF |
| 128S00084 | 128S00085 | | C8109,C8118 | OUTPUT CAP 100V 18UF |
| 138S00277 | 138S00302 | | C8102,C8103 | INPUT CAP 25V 10UF |
| 138S0745 | 138S00301 | | C8105,C8108 | OUTPUT CAP 100V 2.2UF |
| 371S00156 | 371S0541 | | D8118 | BLC BOOST FET GATE DIODE |

| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|-----------|-----|---|-------------------------|----------|------------|
| 353S00079 | 1 | IC,LP8565A13,LED BACKLIGHT CTRL,7X7 QFN56 | U8100 | CRITICAL | |

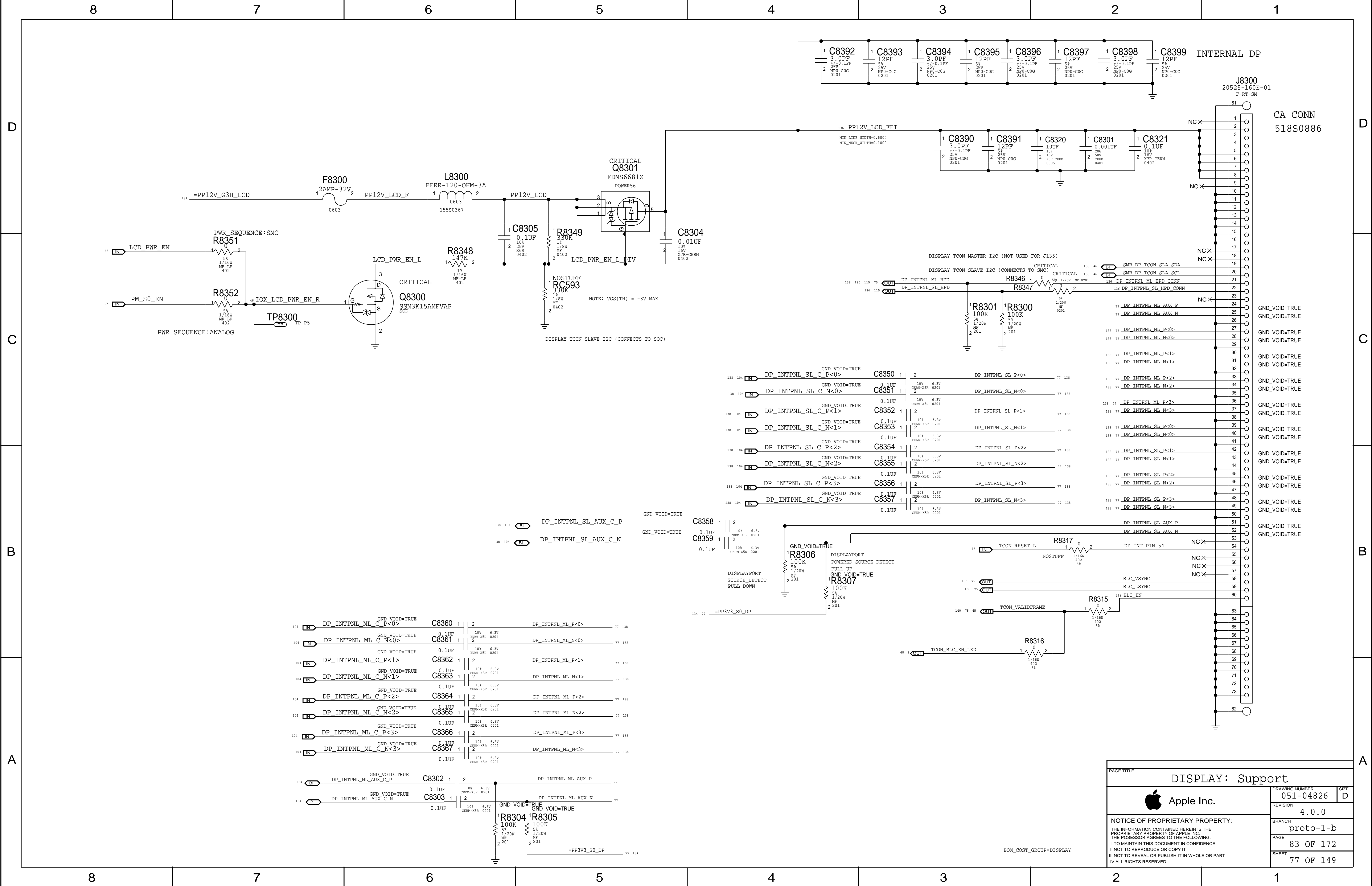
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| DISPLAY: LCD Backlight Driver (LP8565) | | |
| DRAWING NUMBER | | SIZE |
| 051-04826 | | D |
| REVISION | | 4.0.0 |
| BRANCH | | proto-1-b |
| PAGE | | 81 OF 172 |
| SHEET | | 75 OF 149 |
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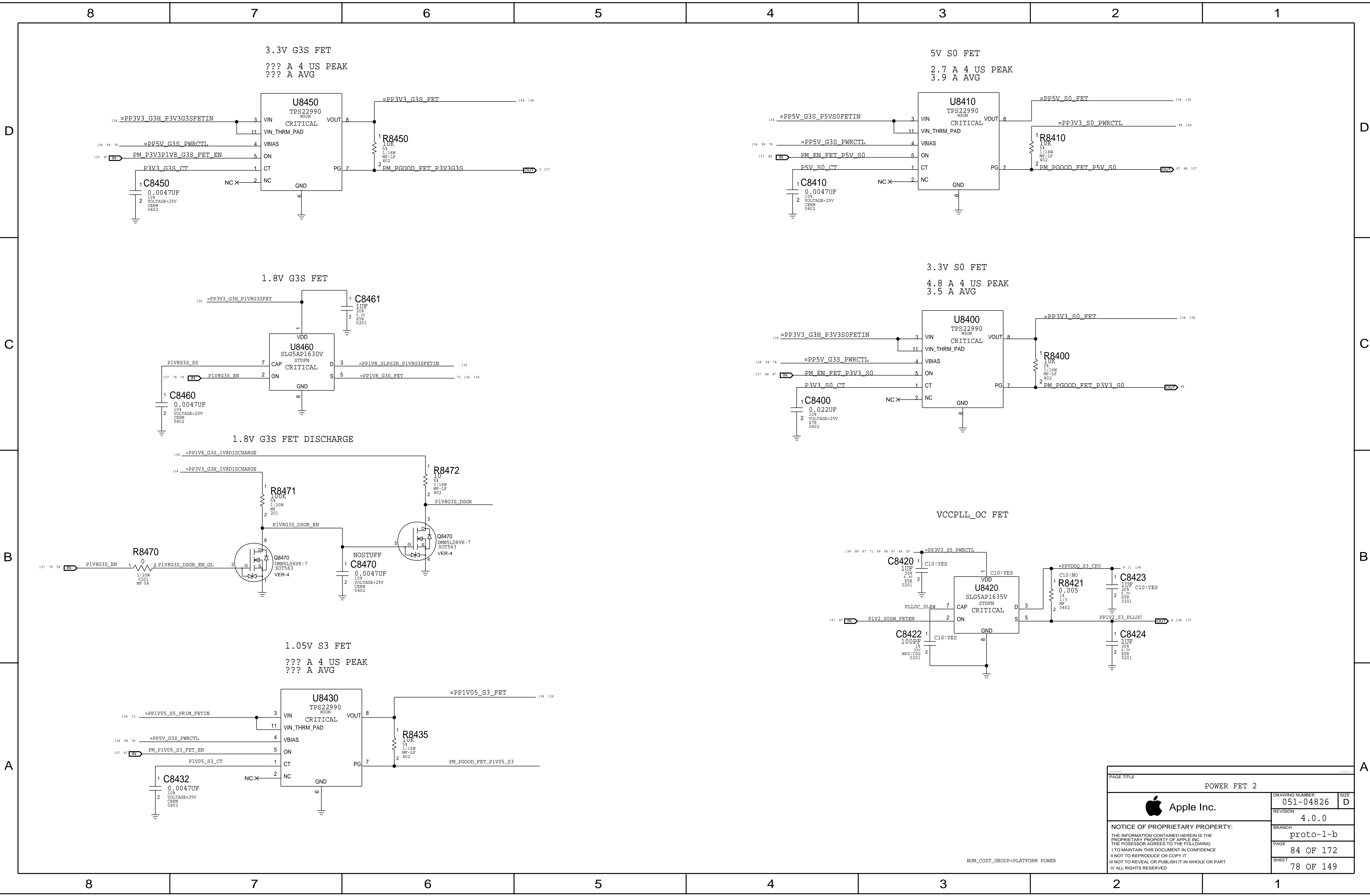
| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES | COMMENTS: |
|-------------|---------------------------|------------|---------|----------------------|
| 376S1256 | 376S1073 | | ALL | Short Protection FET |
| 155S0831 | 155S0797 | | ALL | FB8201 TO FB8211 |




| | | | |
|---|----------------|----------------------|-----------|
| SYNCHMASTER=RAYMOND | | SYNCHDATE=03/11/2019 | |
| PAGE TITLE | | | |
| DISPLAY: Backlight Driver 2 | | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 | SIZE |
| | REVISION | 4.0.0 | |
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BOM_COST_GROUP=DISPLAY

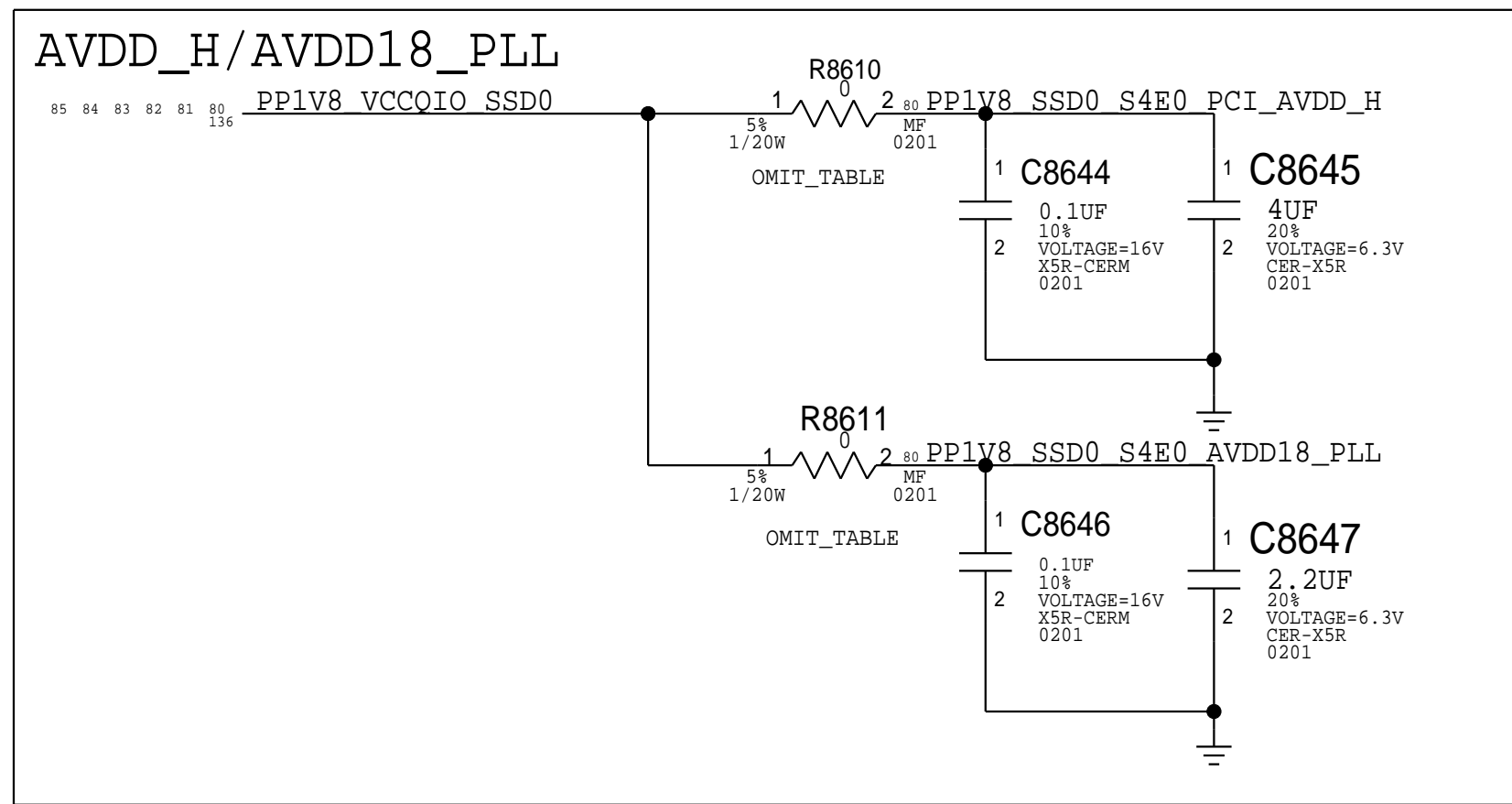
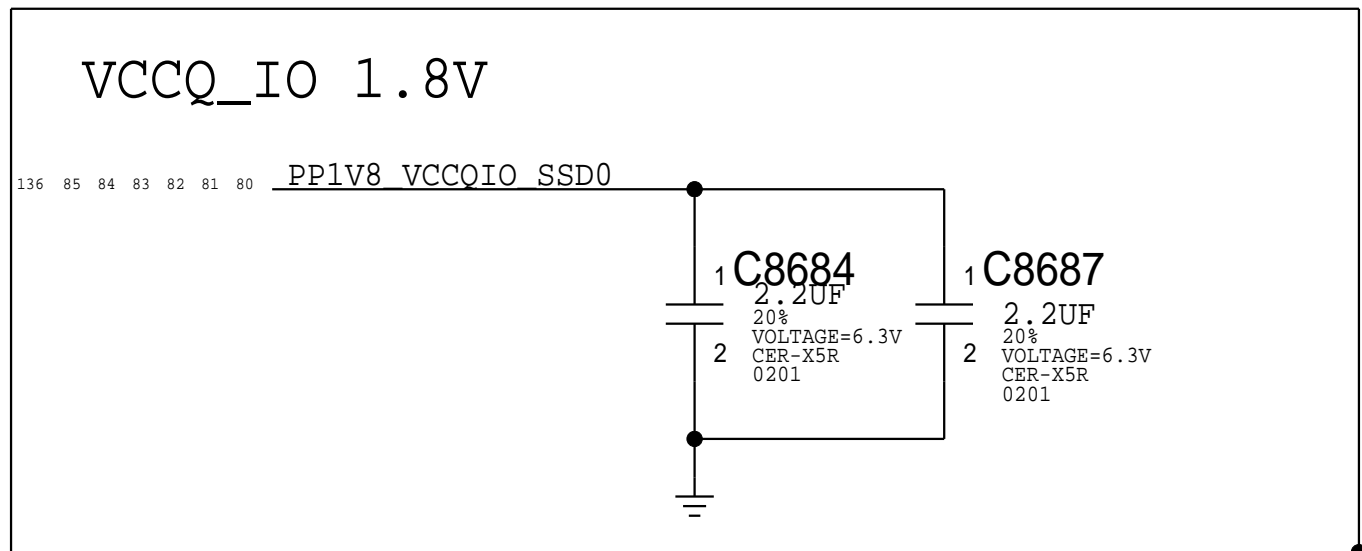
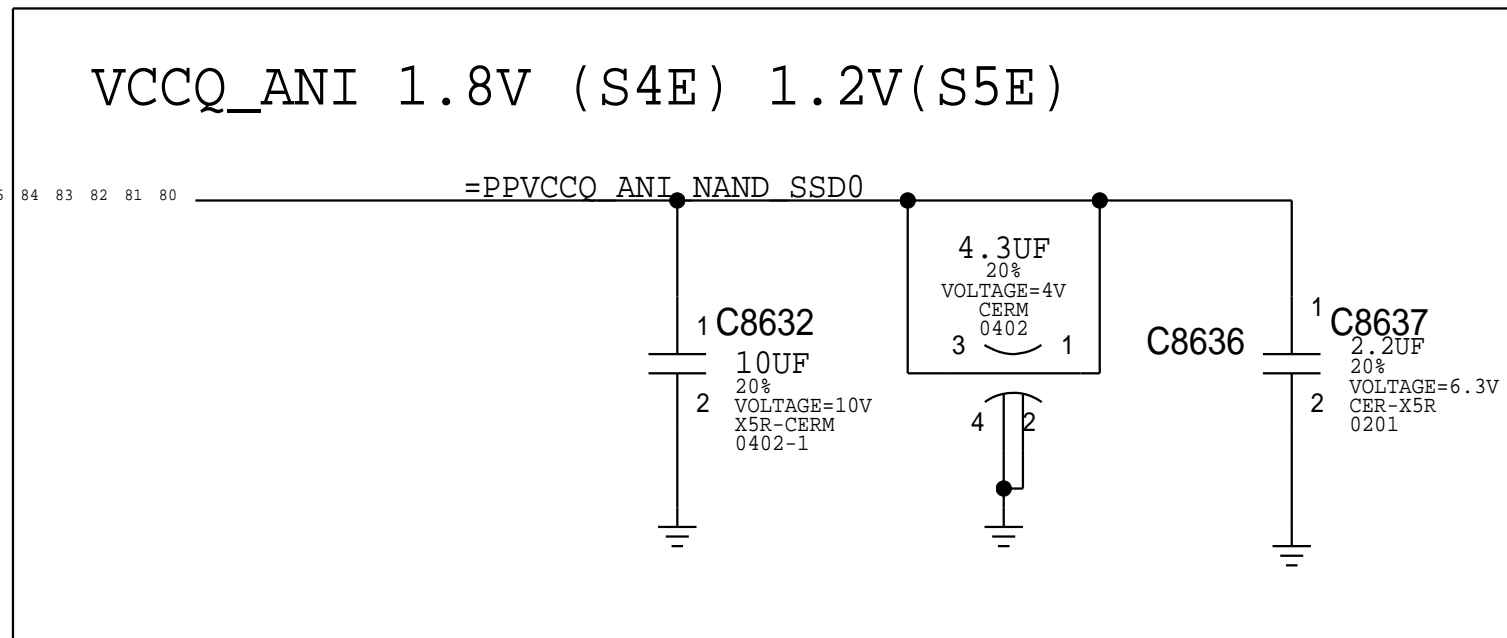
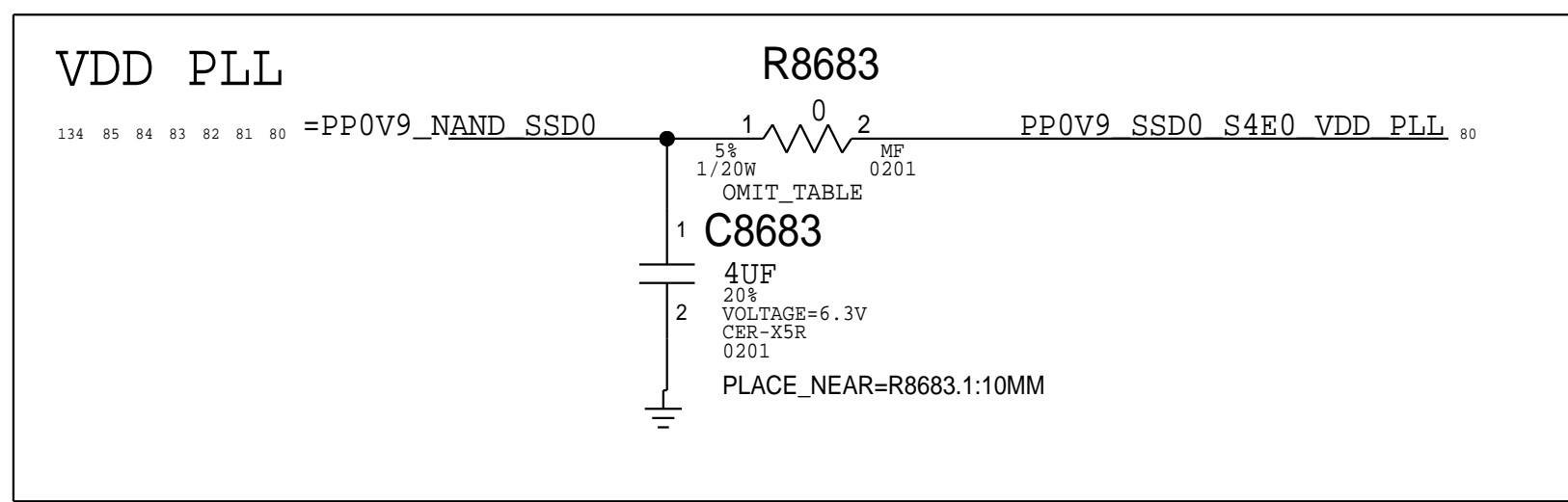
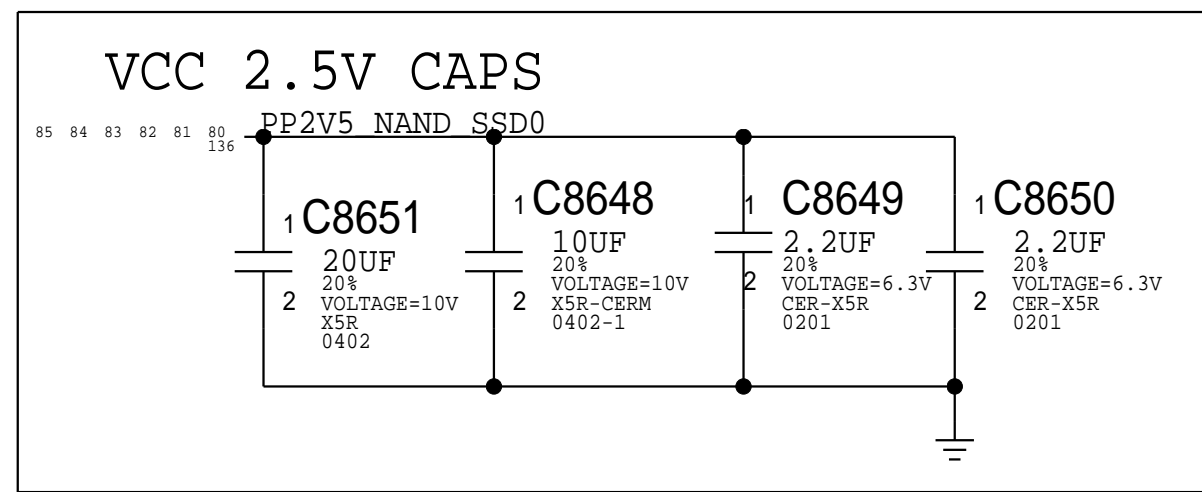
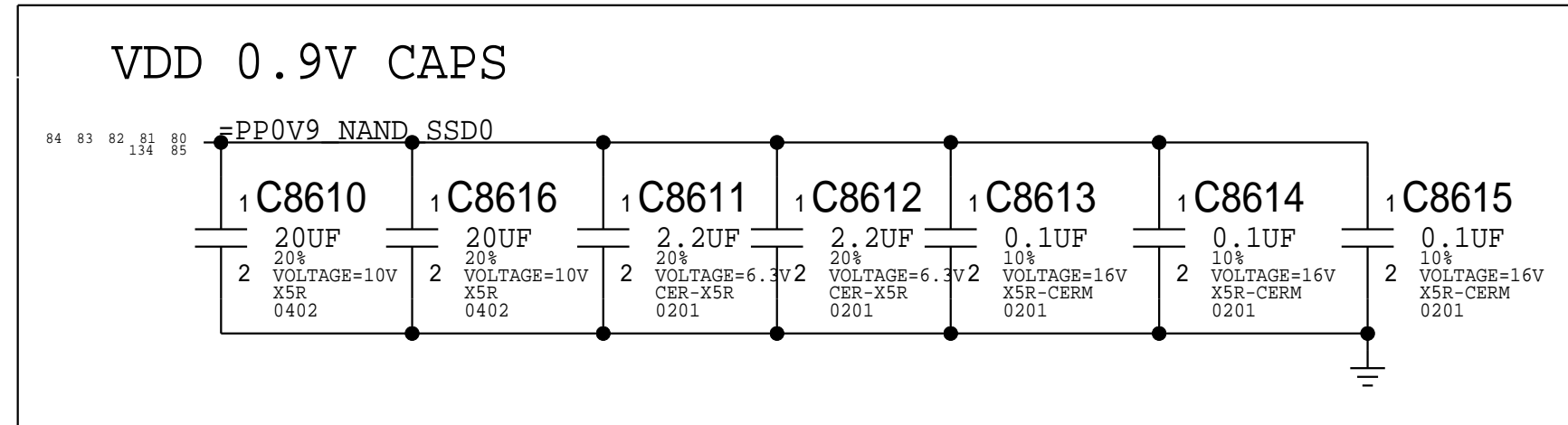
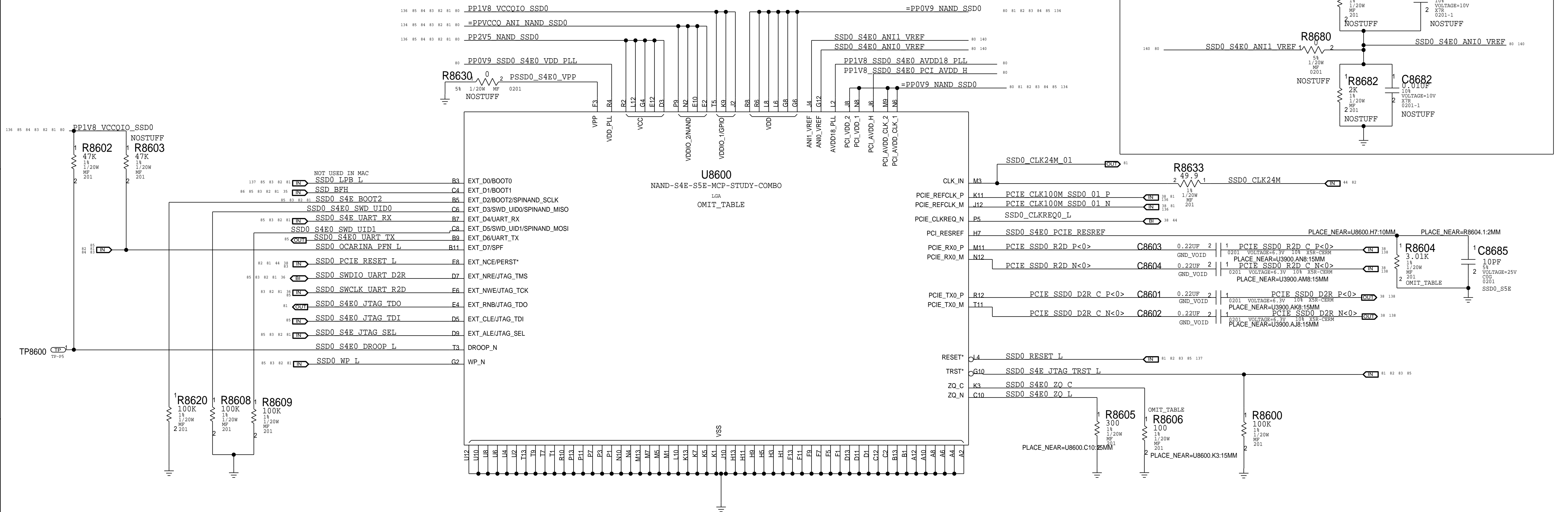




| | | | |
|---|----------------|-----------|-----------|
| PAGE TITLE | | | |
| POWER FET 2 | | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 | SIZE D |
| | REVISION | 4.0.0 | |
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| | PAGE | 84 OF 172 | |
| | SHEET | 78 OF 149 | |

BOM_COST_GROUP=PLATFORM POWER

SSD0 S4E0/S5E0

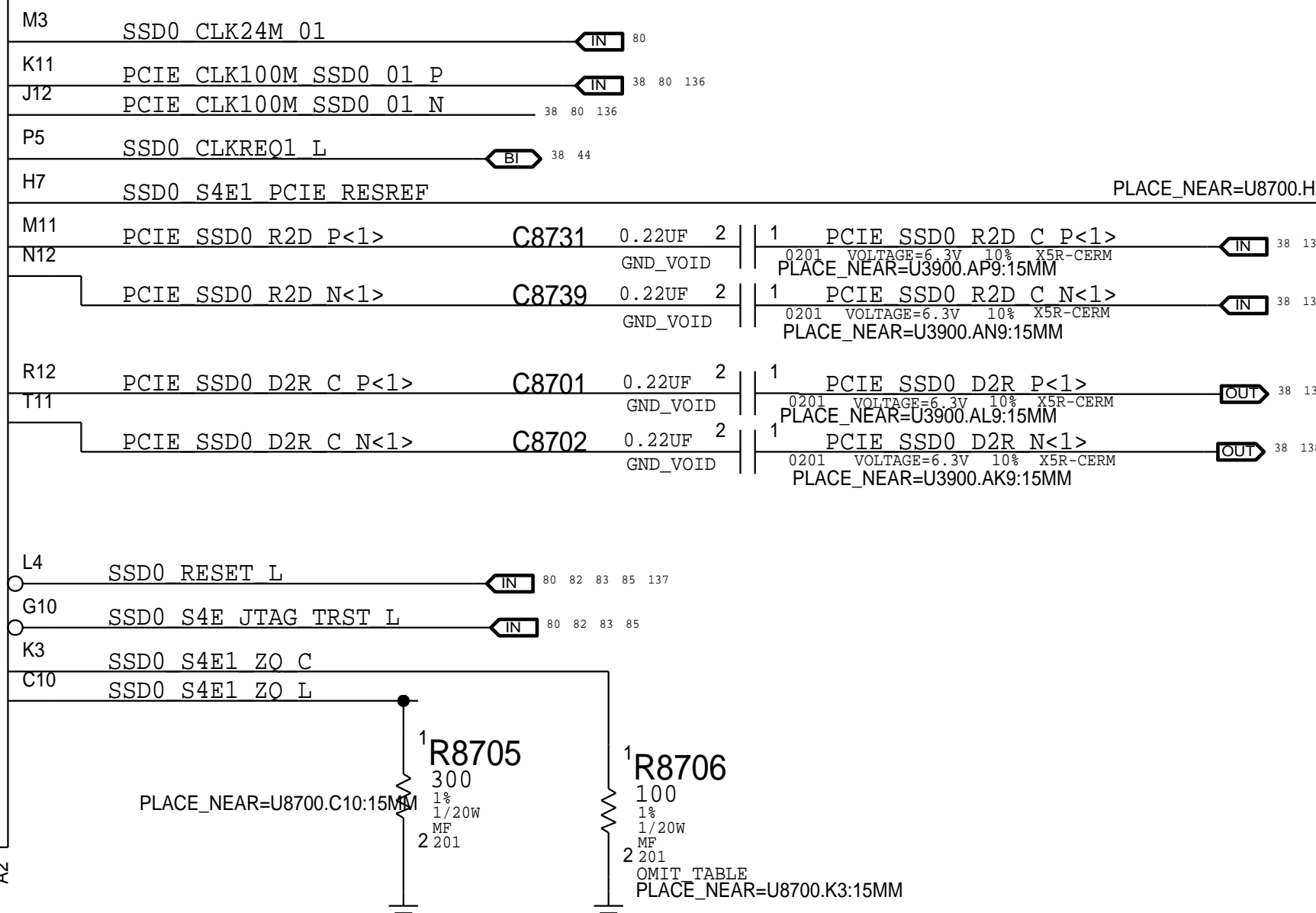
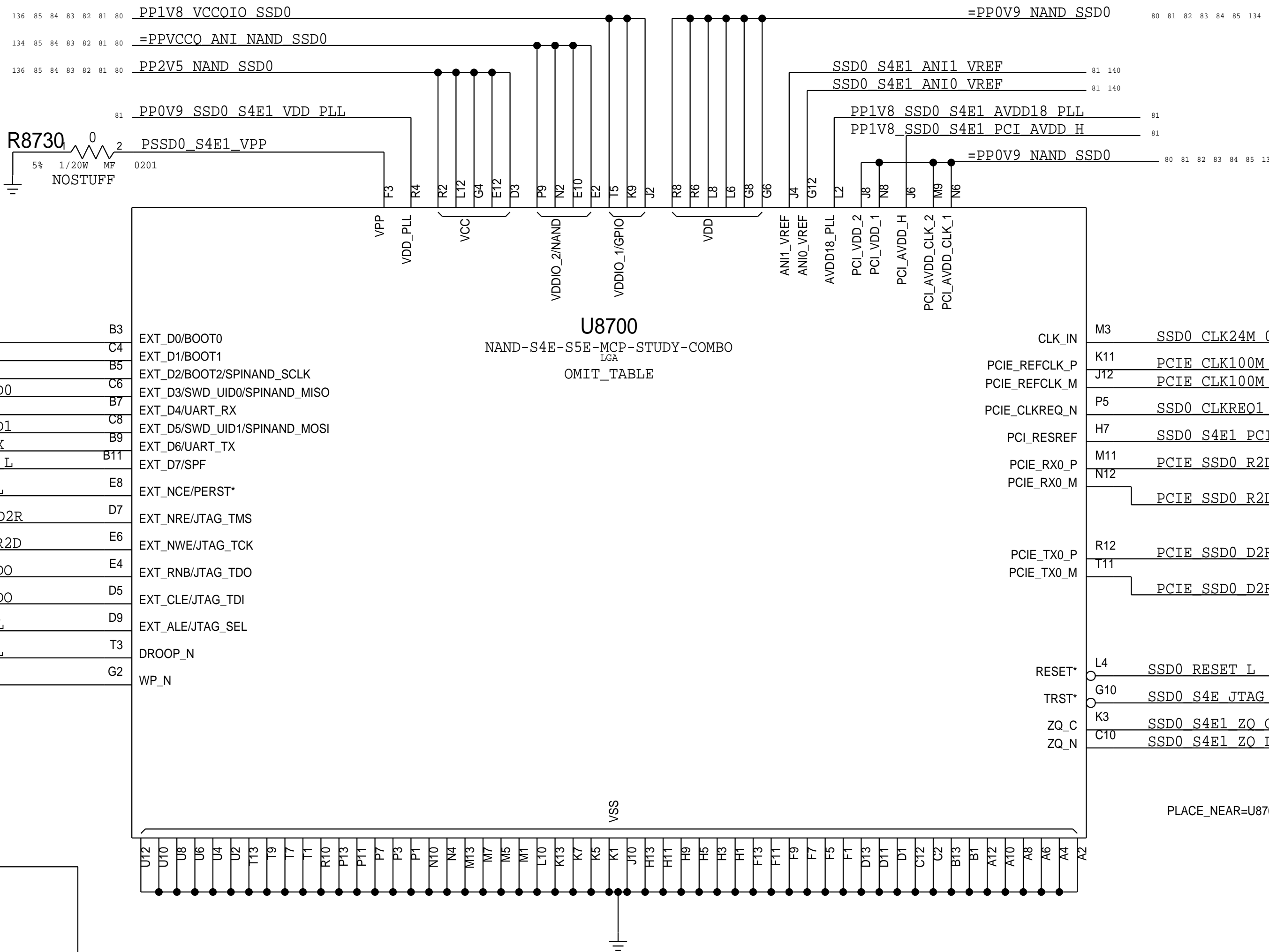
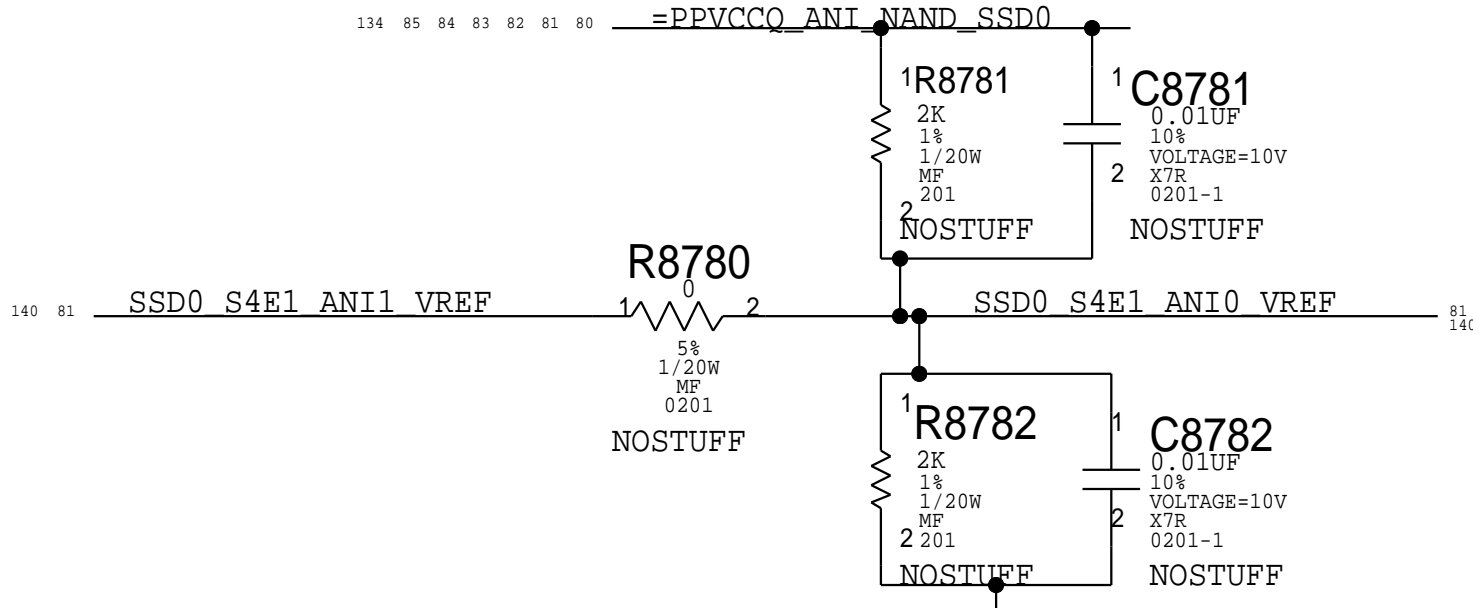


| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|-----------|-----|--------------------------------|-------------------------|----------|------------|
| 118S0279 | 1 | RES, 3.01KOHM, 1%, 1/20W, 0201 | R8604 | CRITICAL | SSD0_S4E |
| 103S00429 | 1 | RES, 200OHM, 0.1%, 1/20W, 0201 | R8604 | CRITICAL | SSD0_S5E |
| 118S0011 | 1 | RES, 100OHM, 1%, 1/20W, 0201 | R8606 | CRITICAL | SSD0_S4E |
| 118S0273 | 1 | RES, 300OHM, 1%, 1/20W, 0201 | R8606 | CRITICAL | SSD0_S5E |
| 117S0201 | 2 | RES, 0OHM, 1/20W, 0201 | R8683, R8610, R8611 | | SSD0_S4E |
| 155S00161 | 2 | FERR BD, 10OHM, 0.05 DCR, 0201 | R8683, R8610 | CRITICAL | SSD0_S5E |
| 118S0794 | 1 | RES, MF, 20HM, 1%, 1/20W, 0201 | R8611 | CRITICAL | SSD0_S5E |

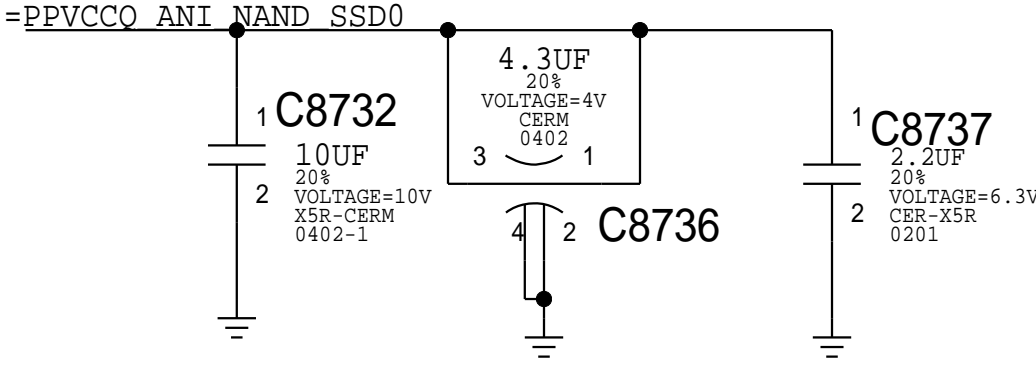
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| SSD0: S4E/S5E<0> | | DRAWING NUMBER | 051-04826 |
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SSD0 S4E1/S5E1

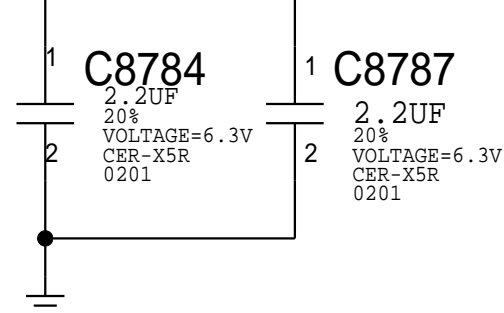
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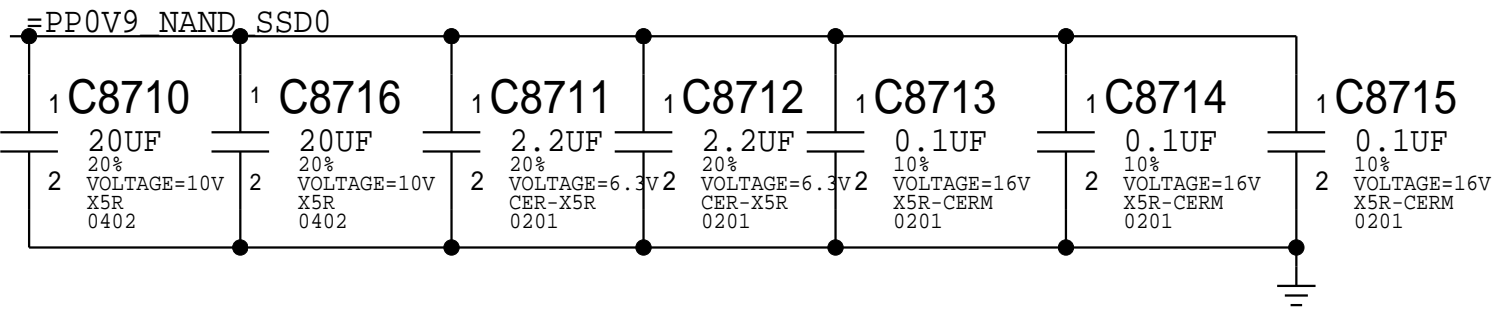
VCCQ_ANI 1.8V (S4E) 1.2V(S5E)



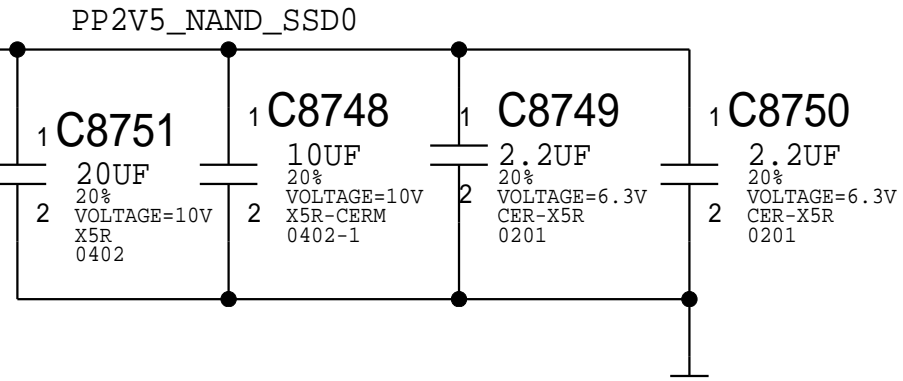
VCCQ_IO 1.8V



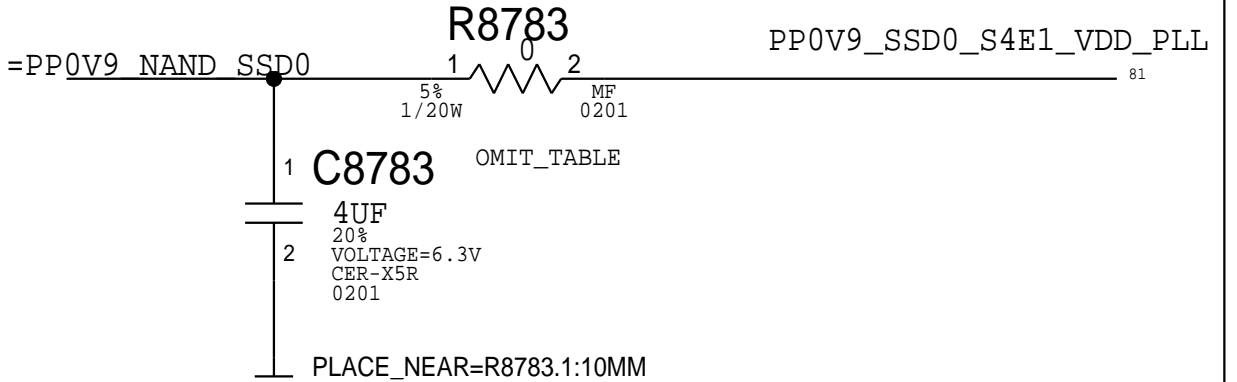
VDD 0.9V CAPS



VCC 2.5V CAPS



VDD PLL



| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|-----------|-----|------------------------------|-------------------------|----------|------------|
| 118S0279 | 1 | RES, 3.01KOHM,1%,1/20W,0201 | R8704 | CRITICAL | SSD0_S4E |
| 103S00429 | 1 | RES, 200OHM,0.1%,1/20W,0201 | R8704 | CRITICAL | SSD0_S5E |
| 118S0011 | 1 | RES, 100OHM,1%,1/20W,0201 | R8705 | CRITICAL | SSD0_S4E |
| 118S0273 | 1 | RES, 300OHM,1%,1/20W,0201 | R8706 | CRITICAL | SSD0_S5E |
| 117S0201 | 2 | RES, 0OHM,1/20W,0201 | R8783,R8710,R8711 | | SSD0_S4E |
| 155S00161 | 2 | FERR BD, 10OHM,0.05 DCR,0201 | R8783,R8710 | CRITICAL | SSD0_S5E |
| 118S0794 | 1 | RES, MF, 20HM,1%,1/20W,0201 | R8711 | CRITICAL | SSD0_S5E |

SSD0: S4E/S5E<1>



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| REVISION | 4.0.0 | BRANCH | proto-1-b |
| PAGE | 87 OF 172 | SHEET | 81 OF 149 |

BOM_COST_GROUP=SSD

SSD0 SE4/S5E 2

D

C

B

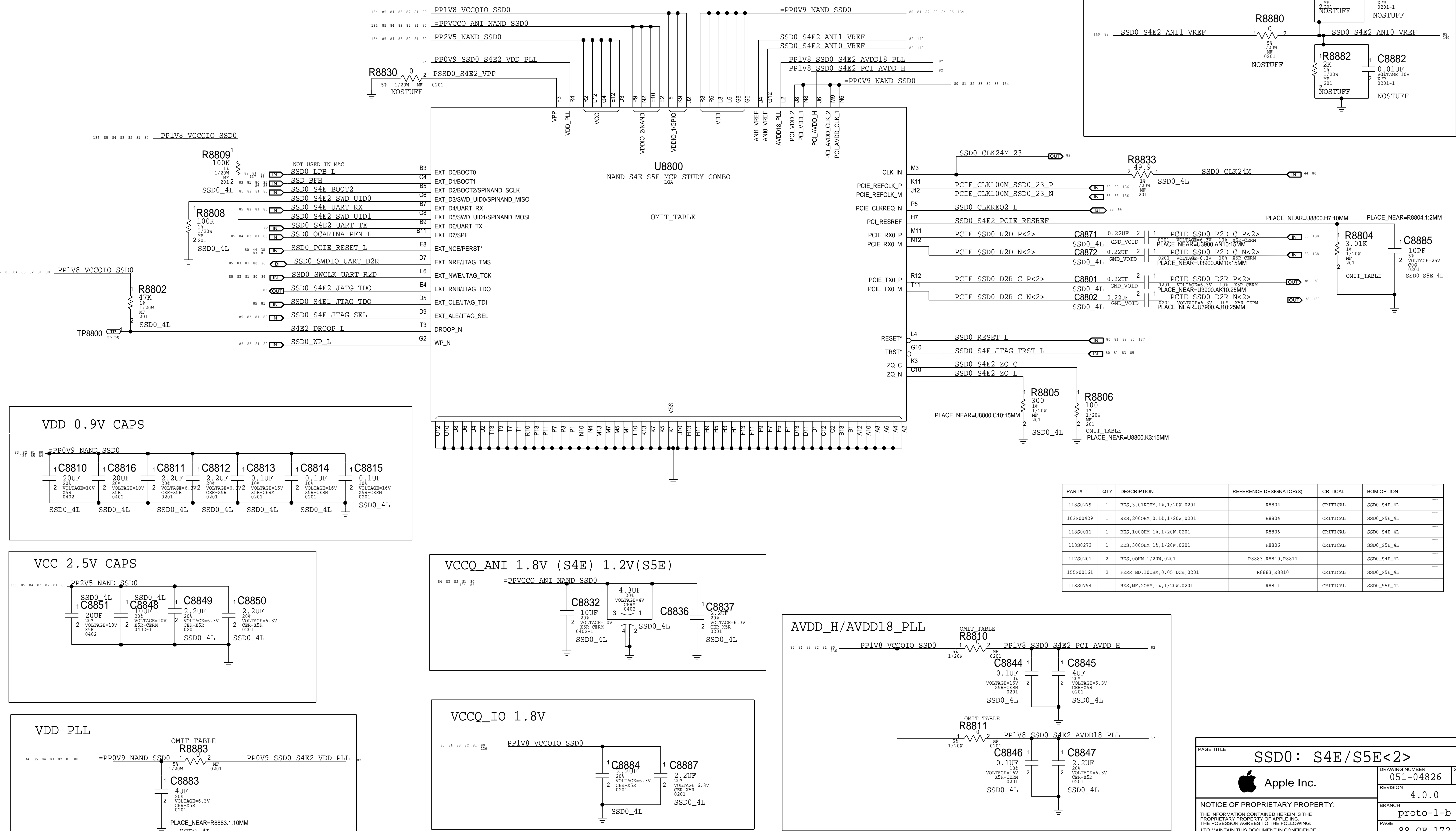
A

D


C

B

A

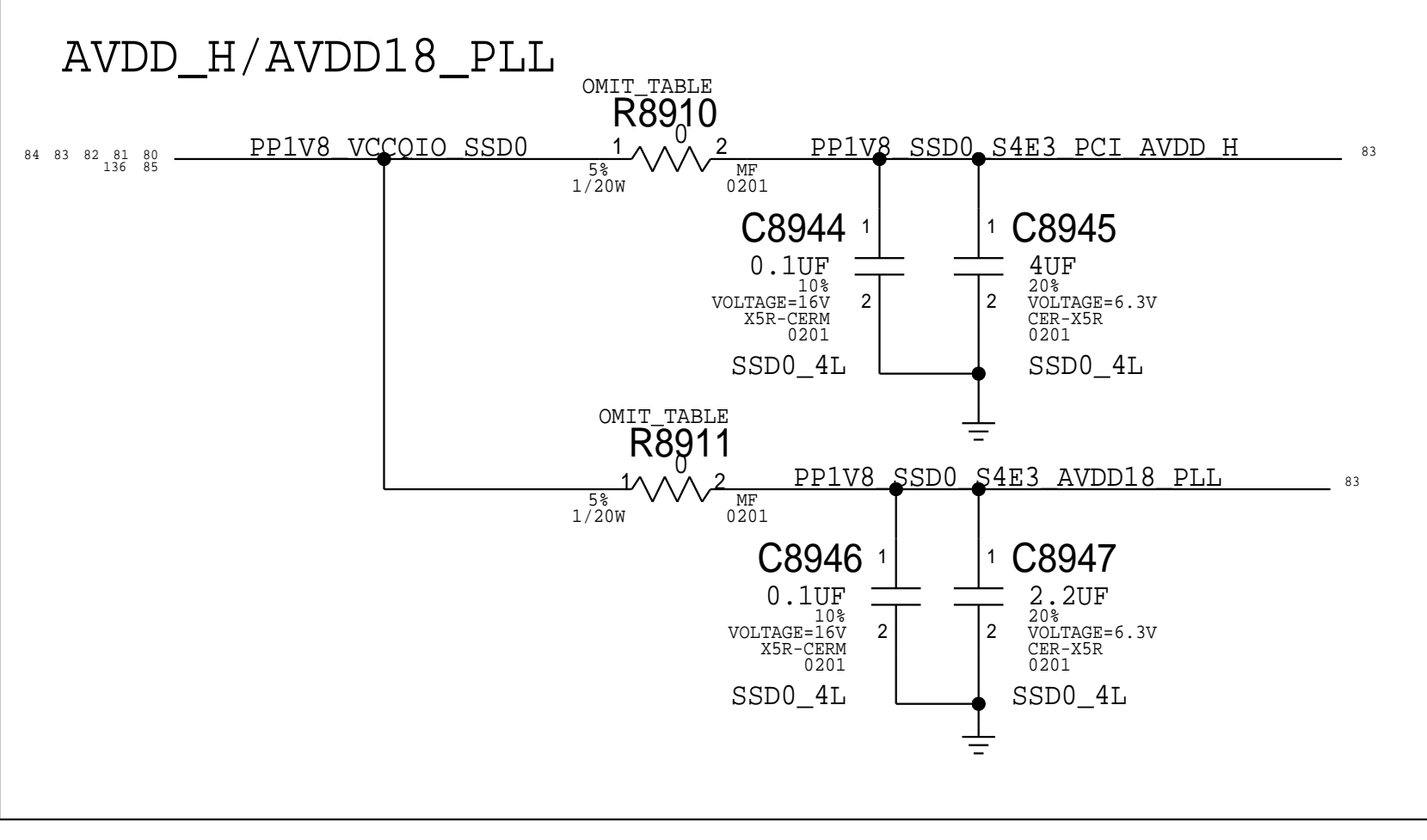
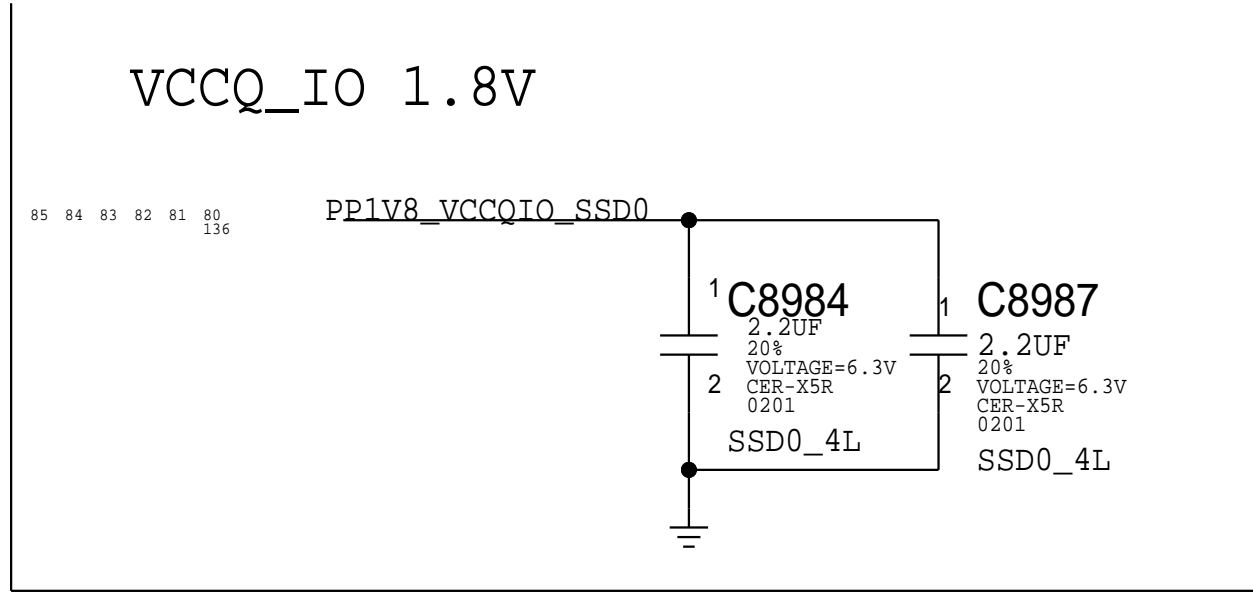
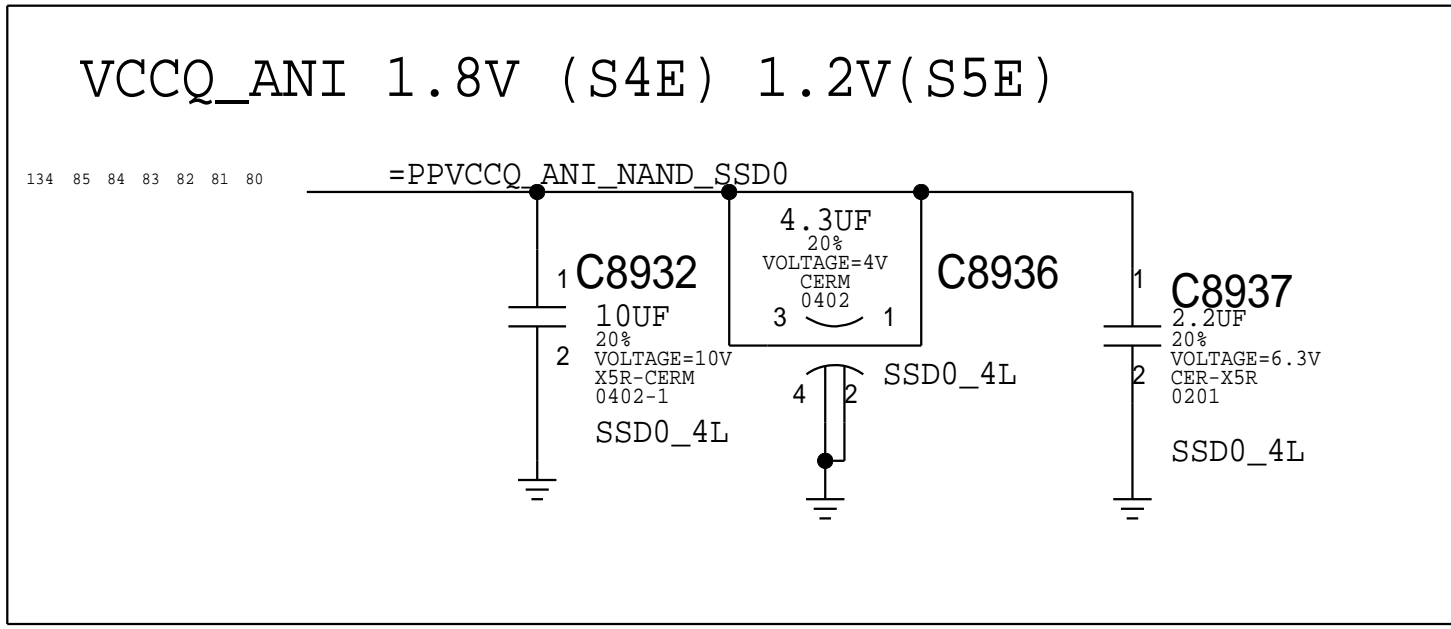
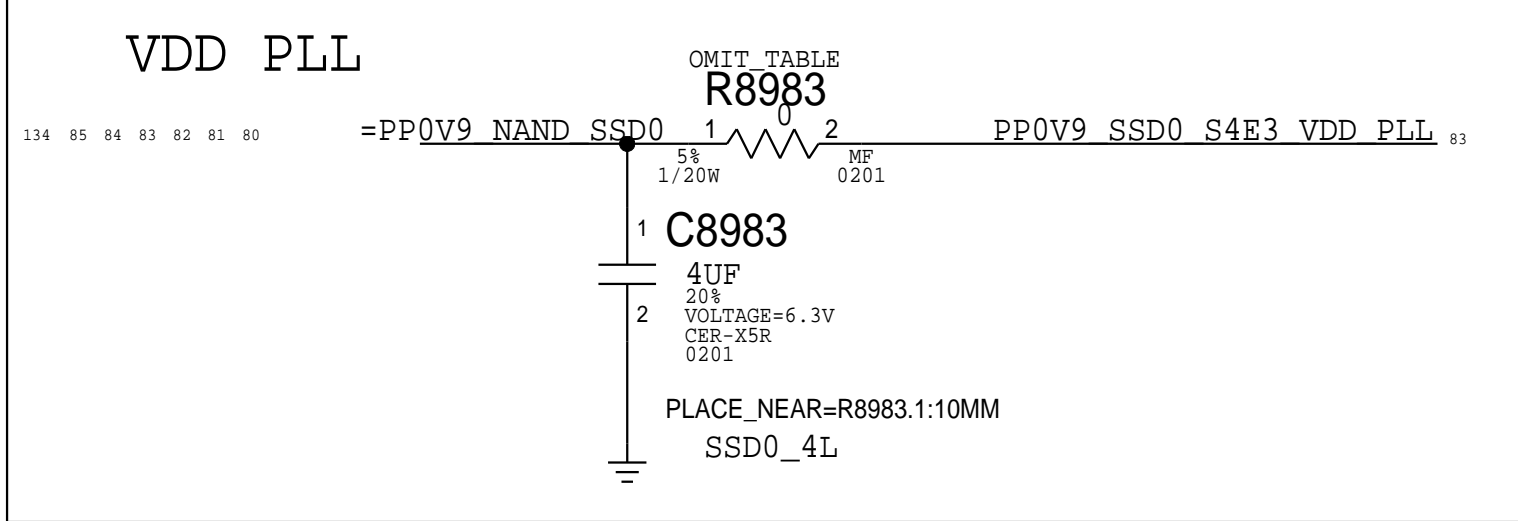
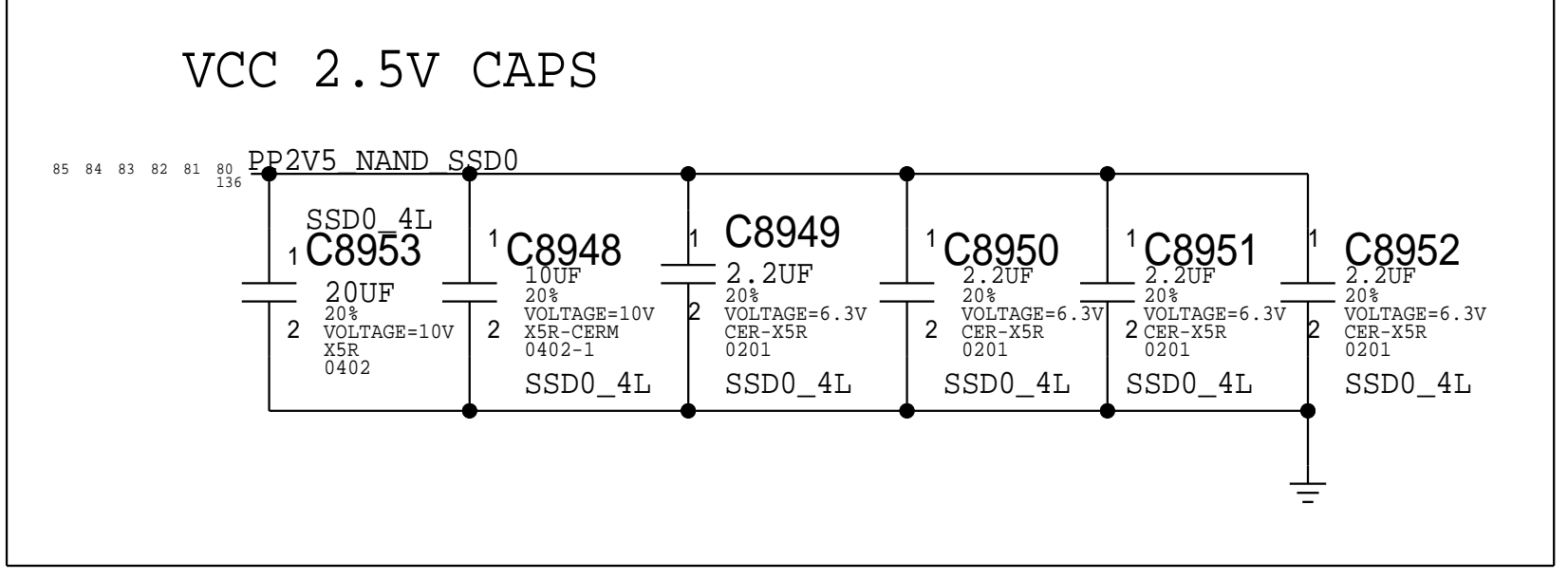
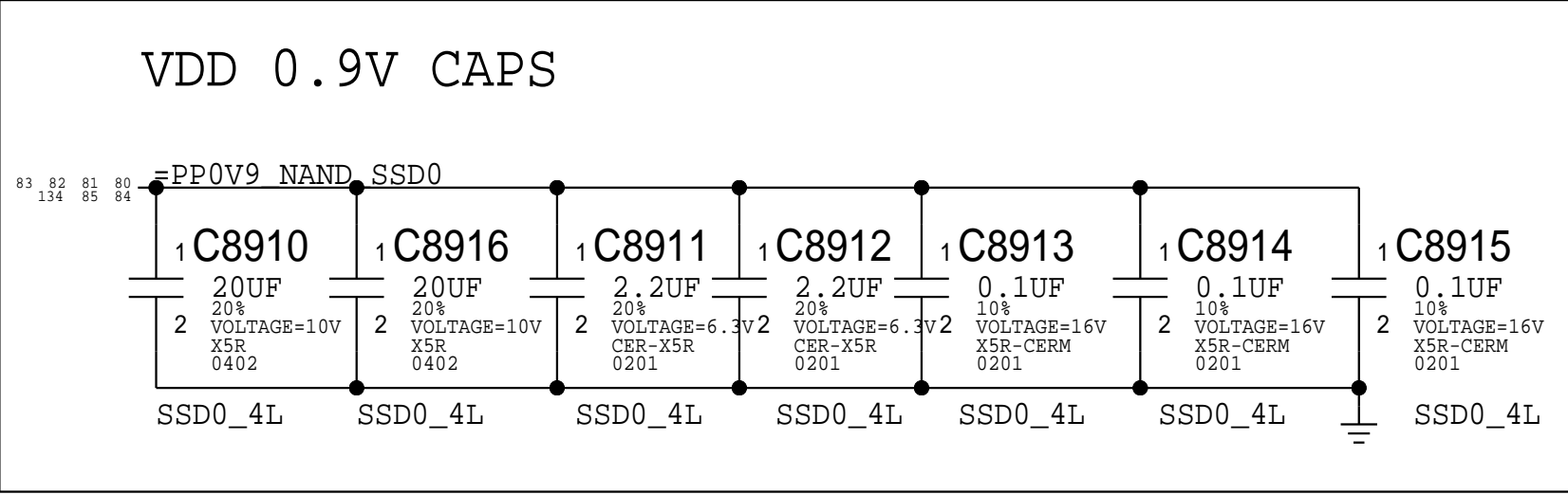
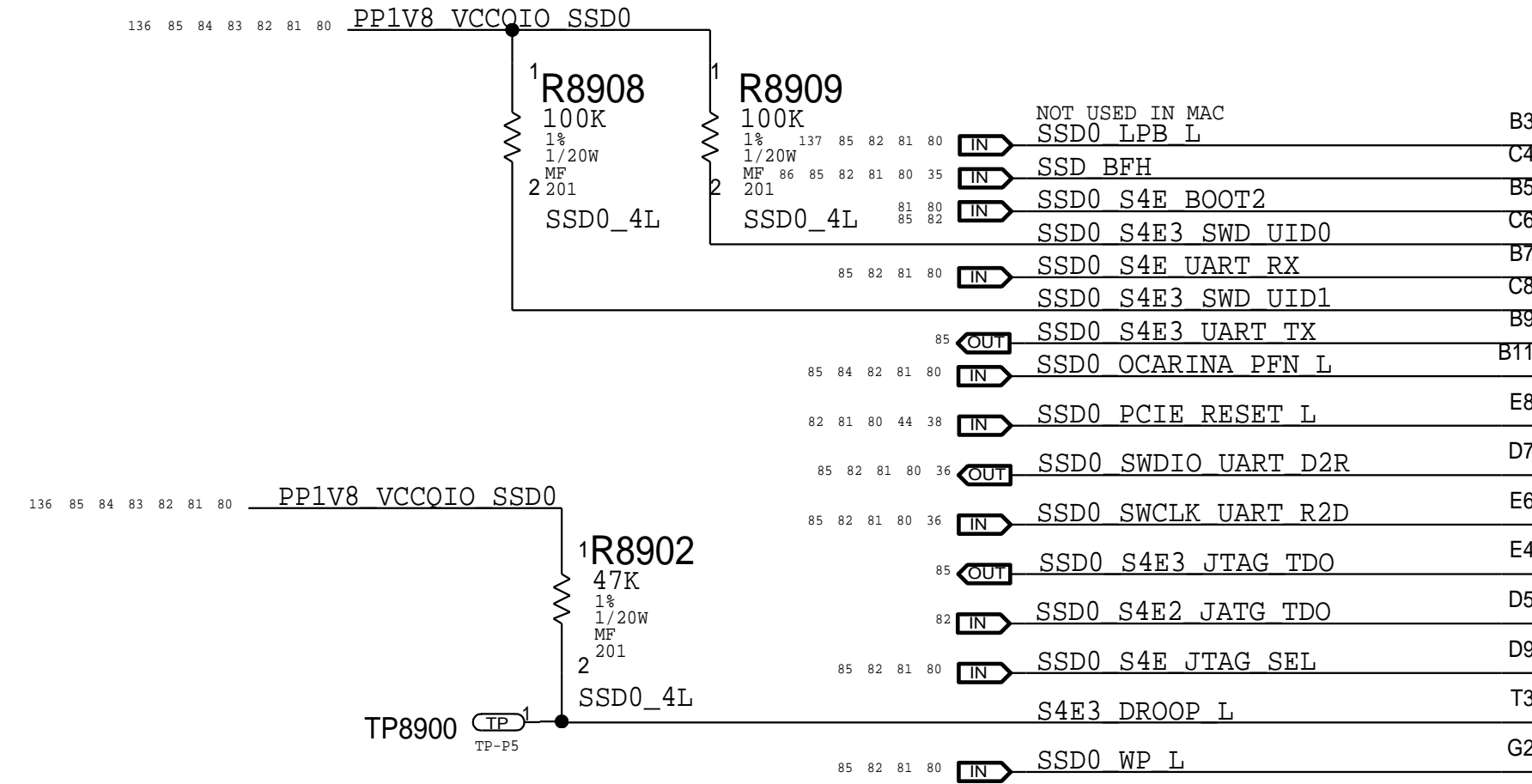
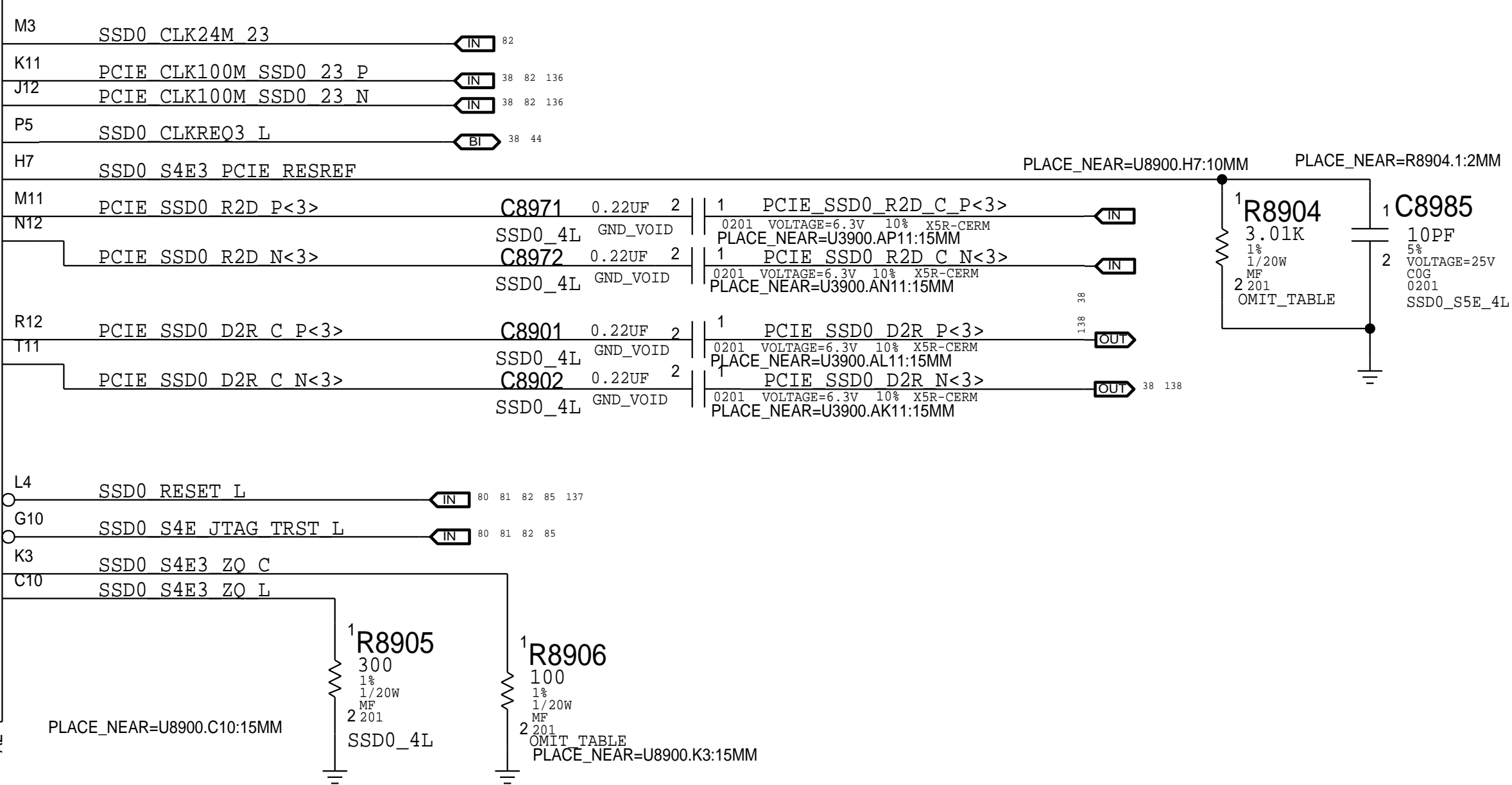
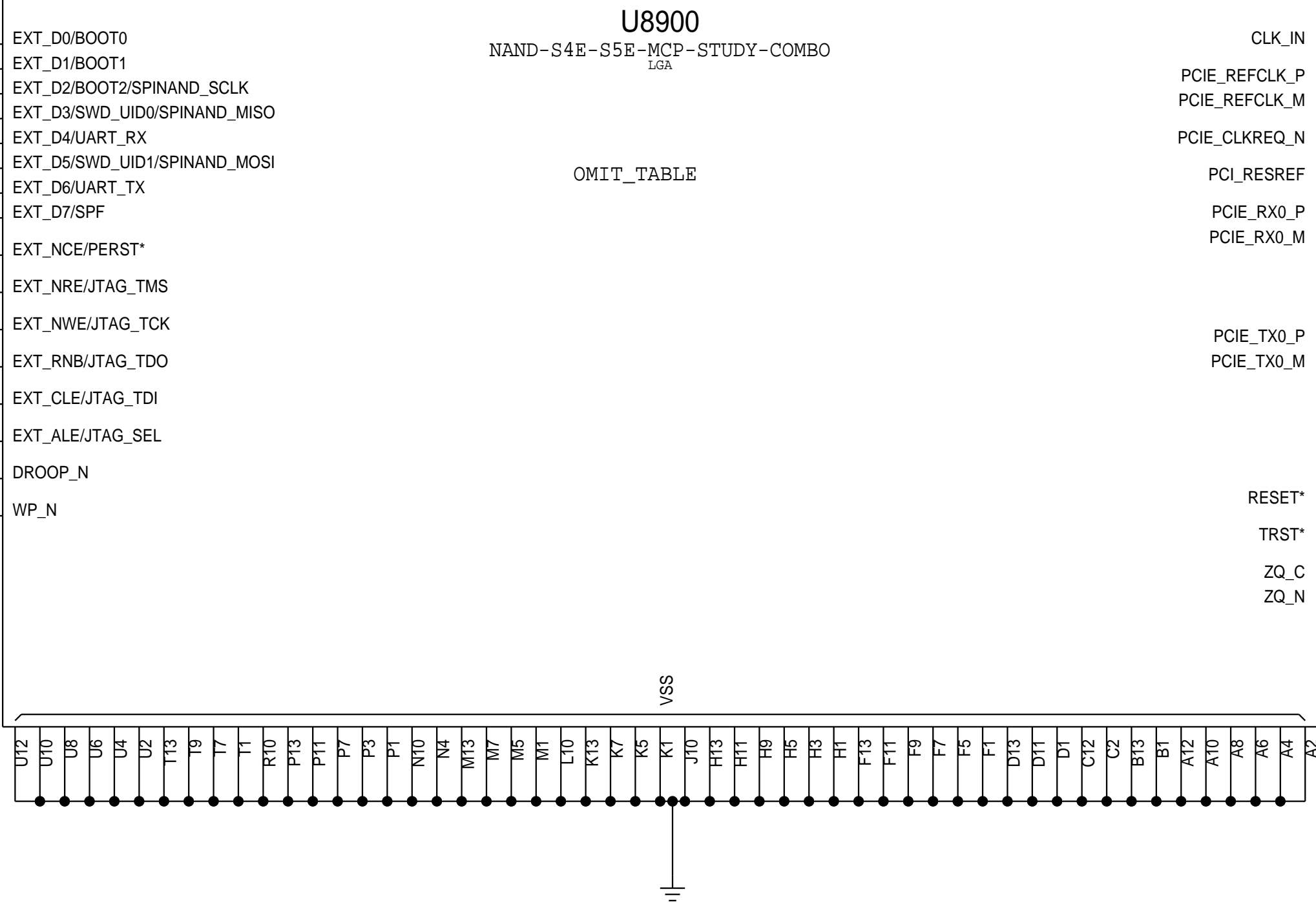
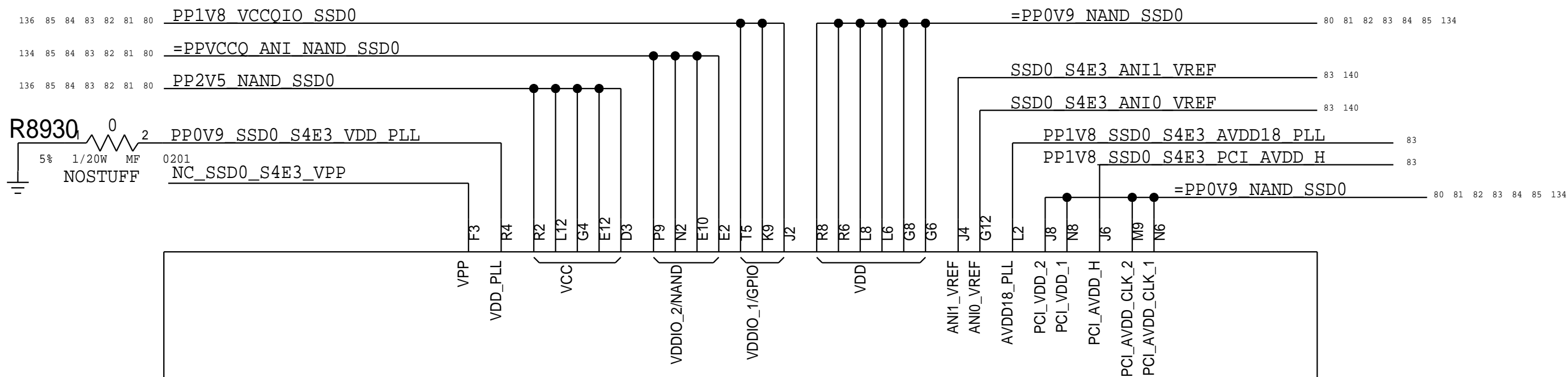
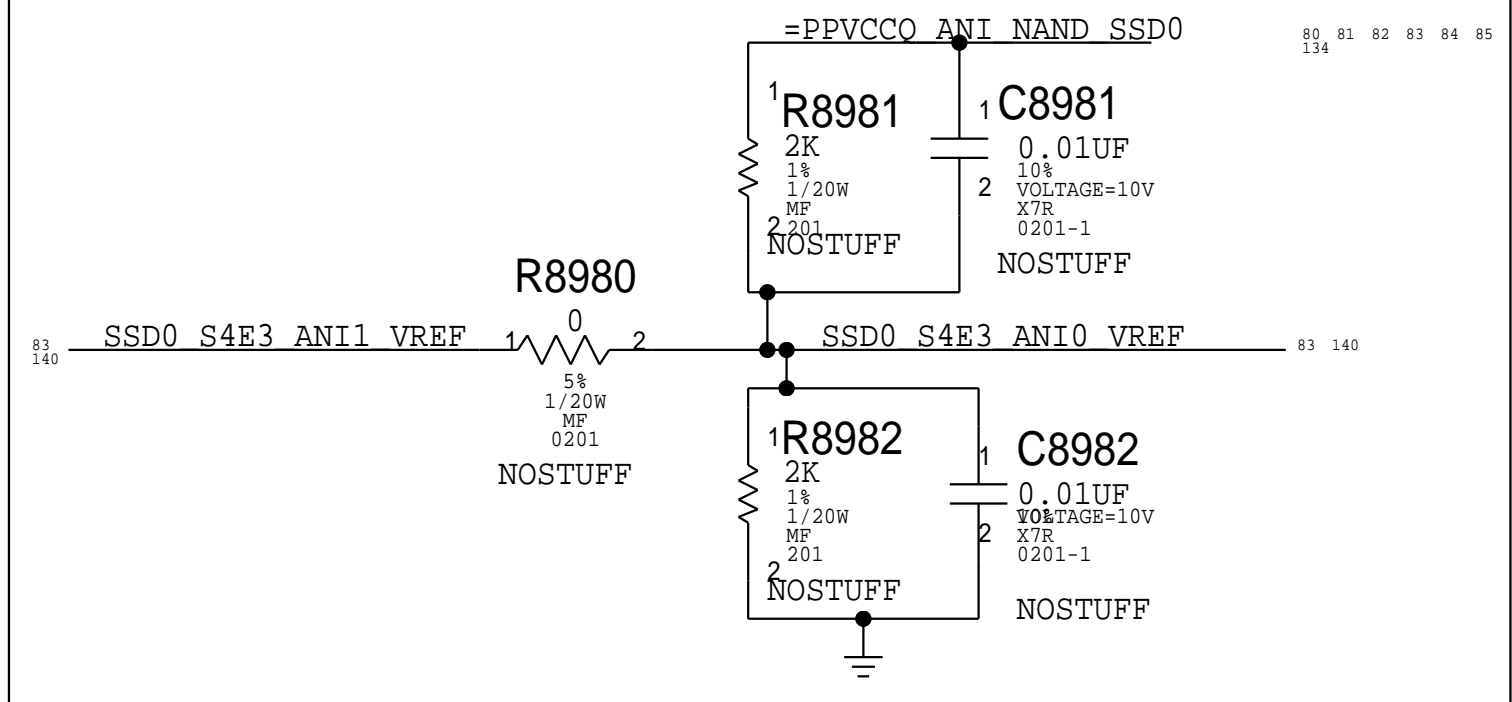


| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|-----------|-----|-----------------------------|-------------------------|----------|-------------|
| 11880279 | 1 | RES,3.01KOHM,1%,1/20W,0201 | R8804 | CRITICAL | SSD0_S4E_4L |
| 103800429 | 1 | RES,200OHM,0.1%,1/20W,0201 | R8804 | CRITICAL | SSD0_S5E_4L |
| 11880011 | 1 | RES,100OHM,1%,1/20W,0201 | R8806 | CRITICAL | SSD0_S4E_4L |
| 11880273 | 1 | RES,300OHM,1%,1/20W,0201 | R8806 | CRITICAL | SSD0_S5E_4L |
| 11780201 | 2 | RES,00HM,1/20W,0201 | R8883,R8810,R8811 | | SSD0_S4E_4L |
| 155800161 | 2 | FERR BD,100HM,0.05 DCR,0201 | R8883,R8810 | CRITICAL | SSD0_S5E_4L |
| 11880794 | 1 | RES,MF,20HM,1%,1/20W,0201 | R8811 | CRITICAL | SSD0_S5E_4L |

| PAGE TITLE | | |
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| SSD0: S4E/S5E<2> | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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SSD0 S4E/S5E 3

EXTERNAL VREF



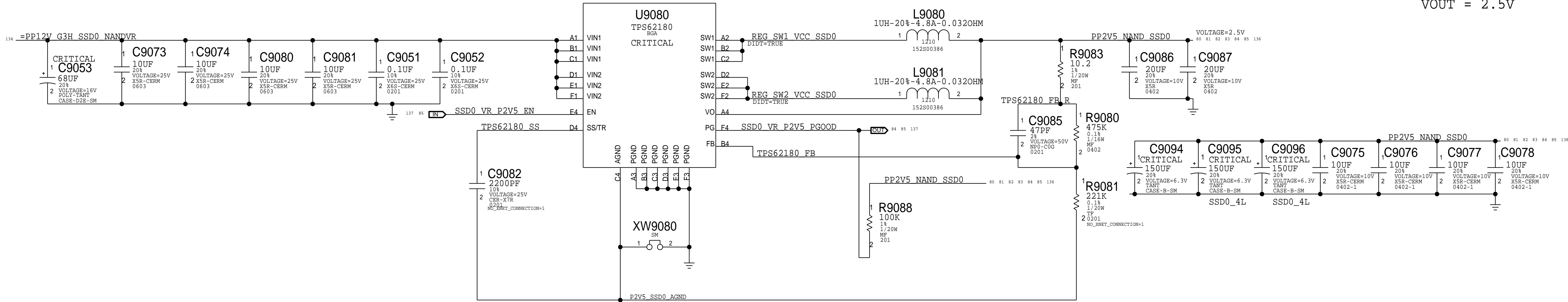
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|-----------|-----|---------------------------------|-------------------------|----------|-------------|
| 11880279 | 1 | RES, 3.01KOHM, 1%, 1/20W, 0201 | R8904 | CRITICAL | SSD0_S4E_4L |
| 103500429 | 1 | RES, 2000OHM, 0.1%, 1/20W, 0201 | R8904 | CRITICAL | SSD0_S5E_4L |
| 11880011 | 1 | RES, 1000OHM, 1%, 1/20W, 0201 | R8906 | CRITICAL | SSD0_S4E_4L |
| 11880273 | 1 | RES, 3000OHM, 1%, 1/20W, 0201 | R8906 | CRITICAL | SSD0_S5E_4L |
| 11750201 | 2 | RES, 000HM, 1/20W, 0201 | R8983, R8910, R8911 | CRITICAL | SSD0_S4E_4L |
| 155S00161 | 2 | FERR BD, 100HM, 0.05 DCR, 0201 | R8983, R8910 | CRITICAL | SSD0_S5E_4L |
| 11880794 | 1 | RES, MF, 20HM, 1%, 1/20W, 0201 | R8911 | CRITICAL | SSD0_S5E_4L |

| PAGE TITLE | | | |
|---|--|----------------|-----------|
| SSD0: S4E/S5E<3> | | DRAWING NUMBER | 051-04826 |
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| I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART | | | |
| I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART | | | |

BOM_COST_GROUP=SSD

VR FOR 2.5V NAND VCC

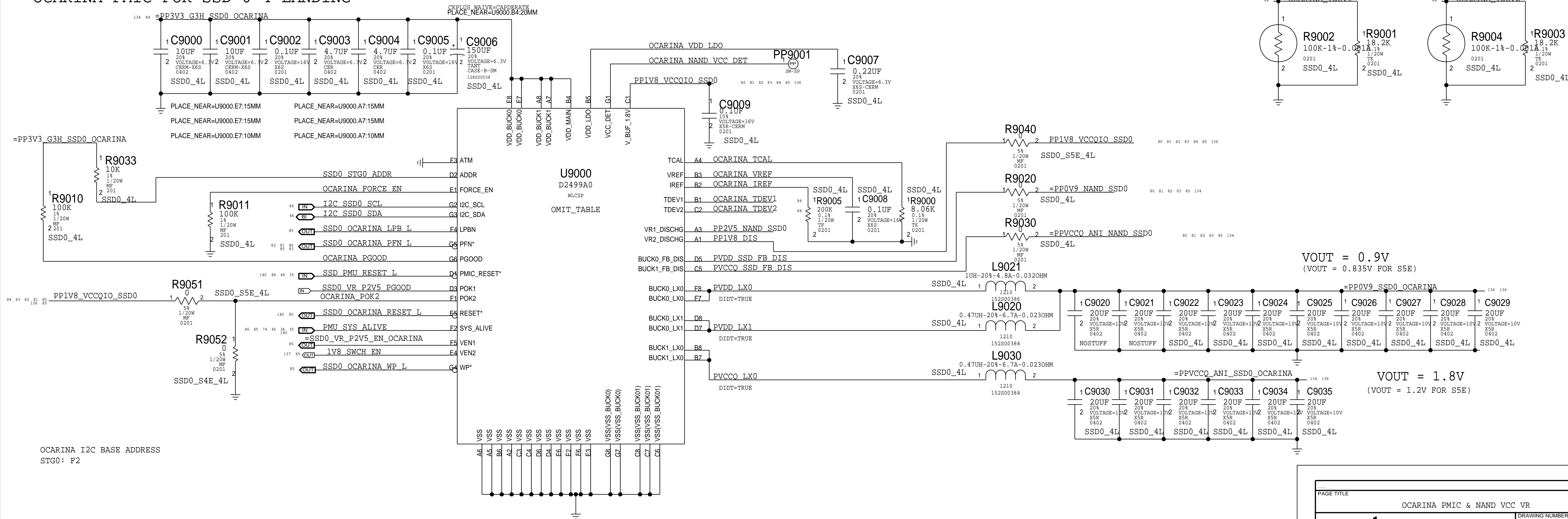
VOUT = 2.5V




OCARINA PMIC FOR SSD 0 4 LANDING

VOUT = 0.9V
(VOUT = 0.835V FOR S5E)

VOUT = 1.8V
(VOUT = 1.2V FOR S5E)



| | | |
|--|----------------|-----------|
| PAGE TITLE | | |
| OCARINA PMIC & NAND VCC VR | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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| | PAGE | 90 OF 172 |
| | SHEET | 84 OF 149 |

BOM_COST_GROUP=SSD

D

C

B

A

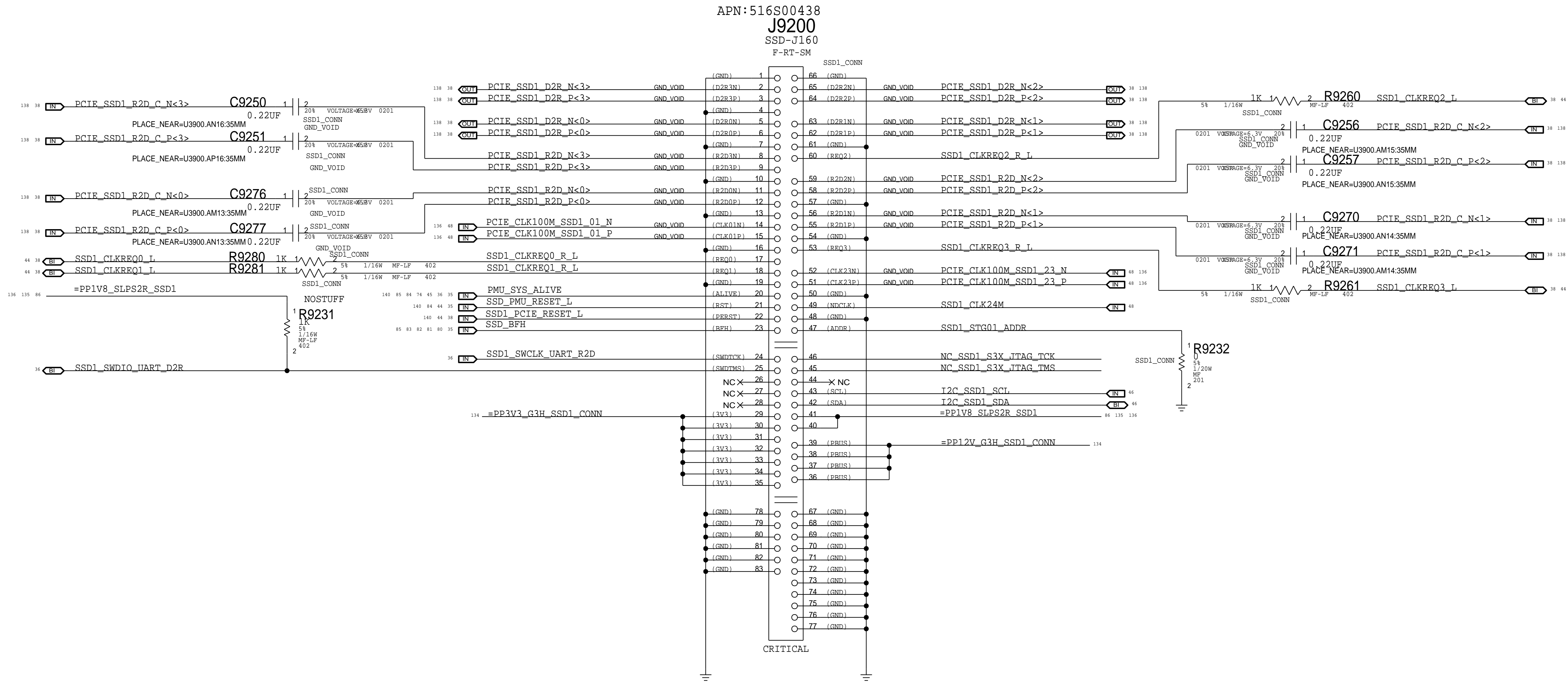
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C


B

A

SSD1 GS5 CONNECTOR



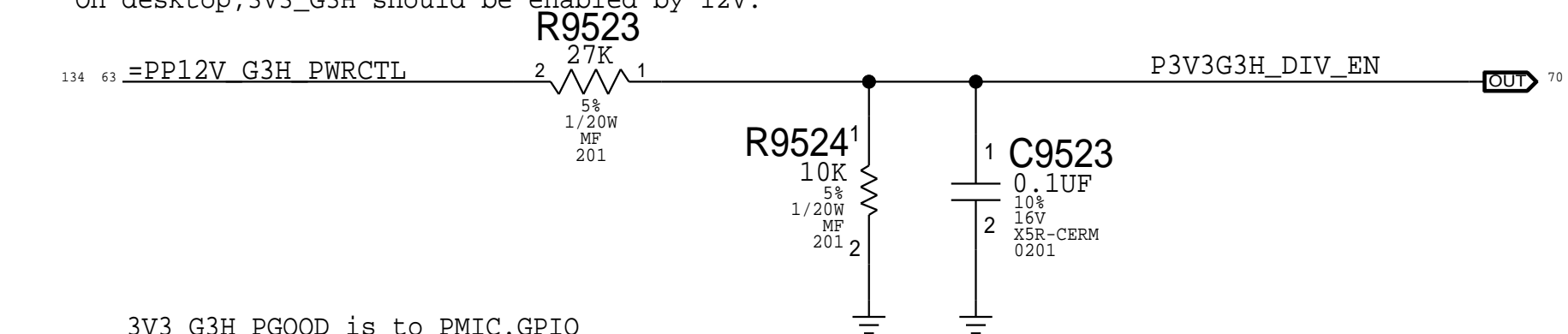
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| PAGE TITLE | | |
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| | PAGE | 92 OF 172 |
| | SHEET | 86 OF 149 |

G3H

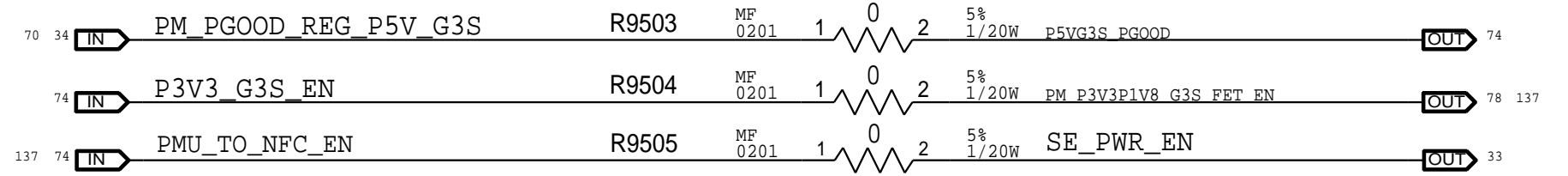
12V_G3H uses ACDC

3V3_G3H is enabled by PMIC.PVDDMAIN_EN - this is only applied for laptop Big current G3H.
On desktop,3V3_G3H should be enabled by 12V.

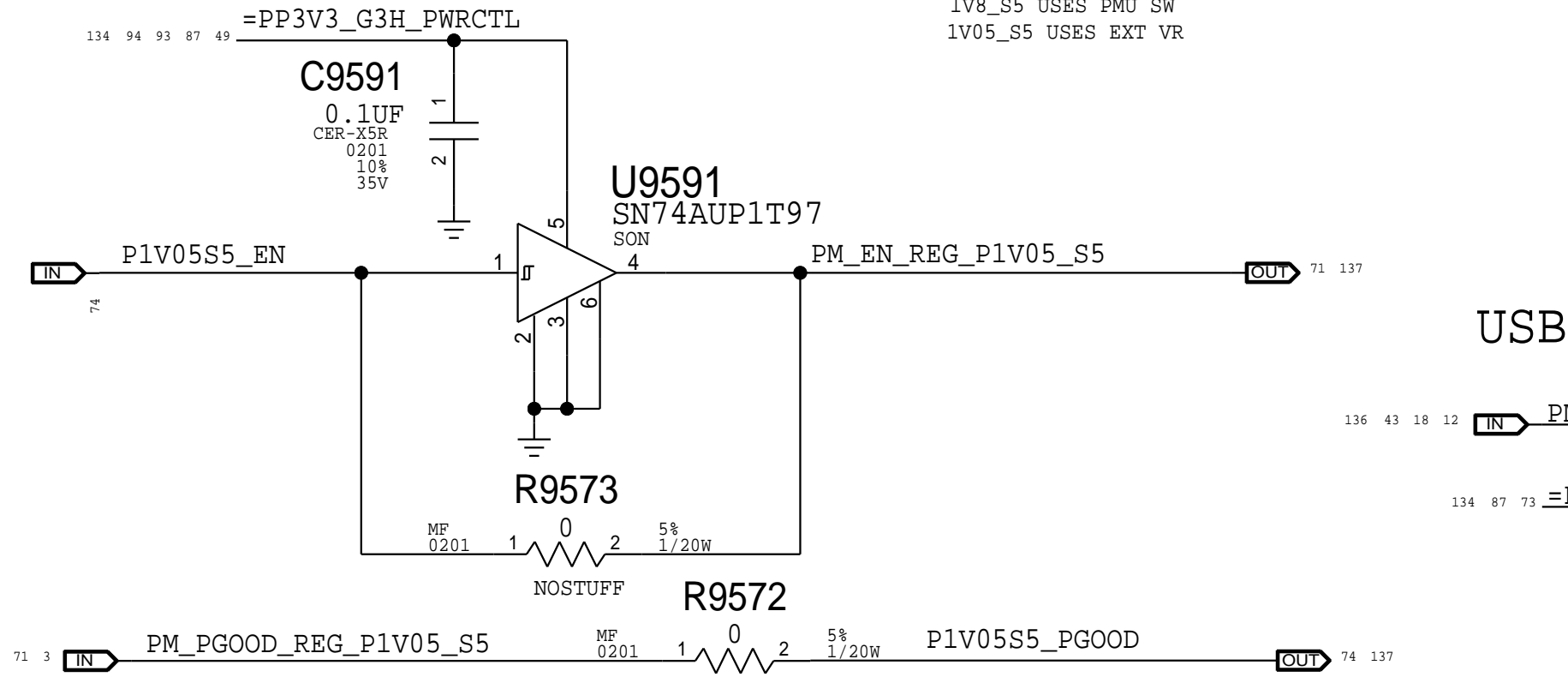


3V3_G3H_PGOOD is to PMIC.GPIO

G3S - static timing by PMU

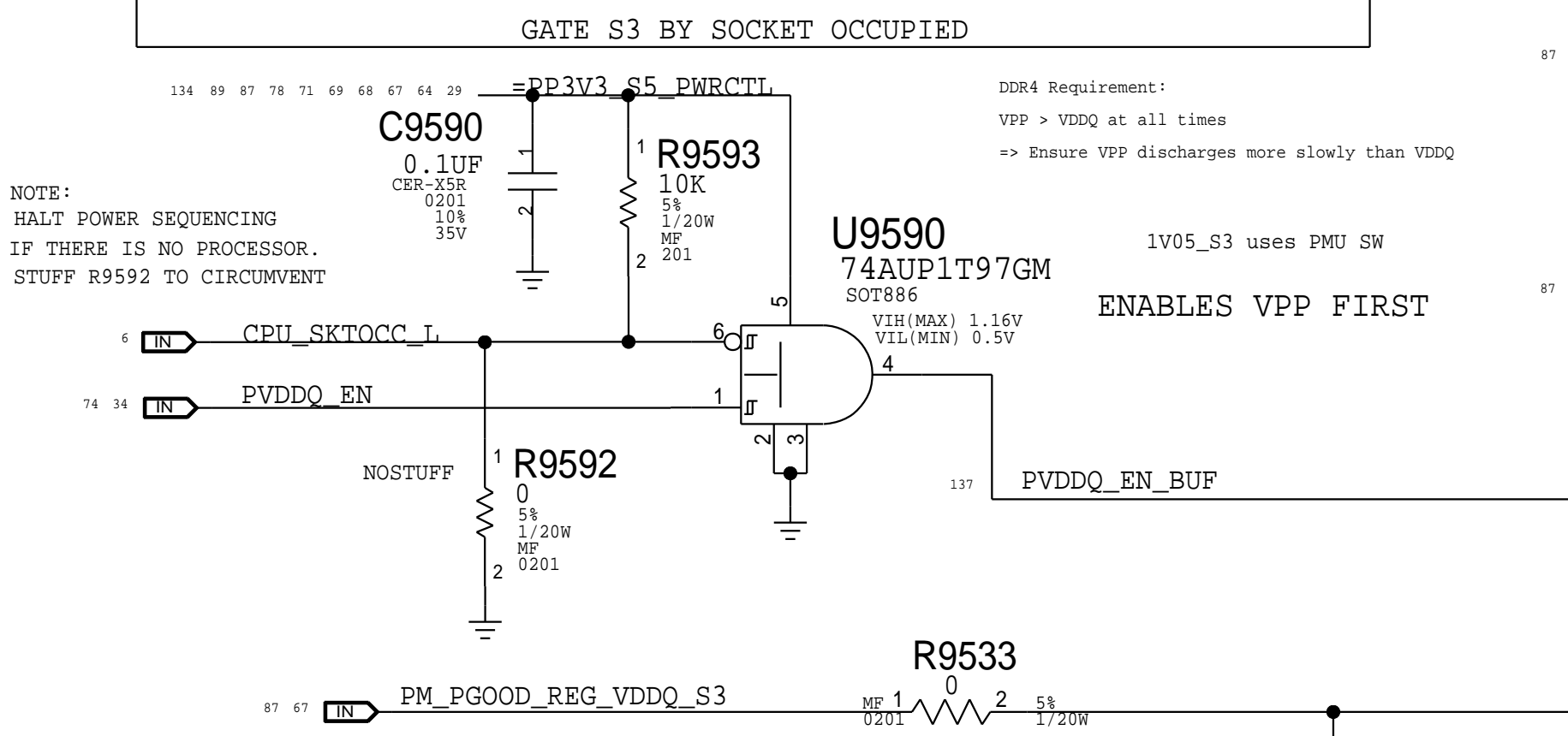


S5 - static timing by PMU



S3 1V2_S3 sequencing

Calpe VDDQ_EN -> 2V5_VTT -> 2V5_PGOOD -> Enable 1V2 VDDQ -> VDDQ_PGDD



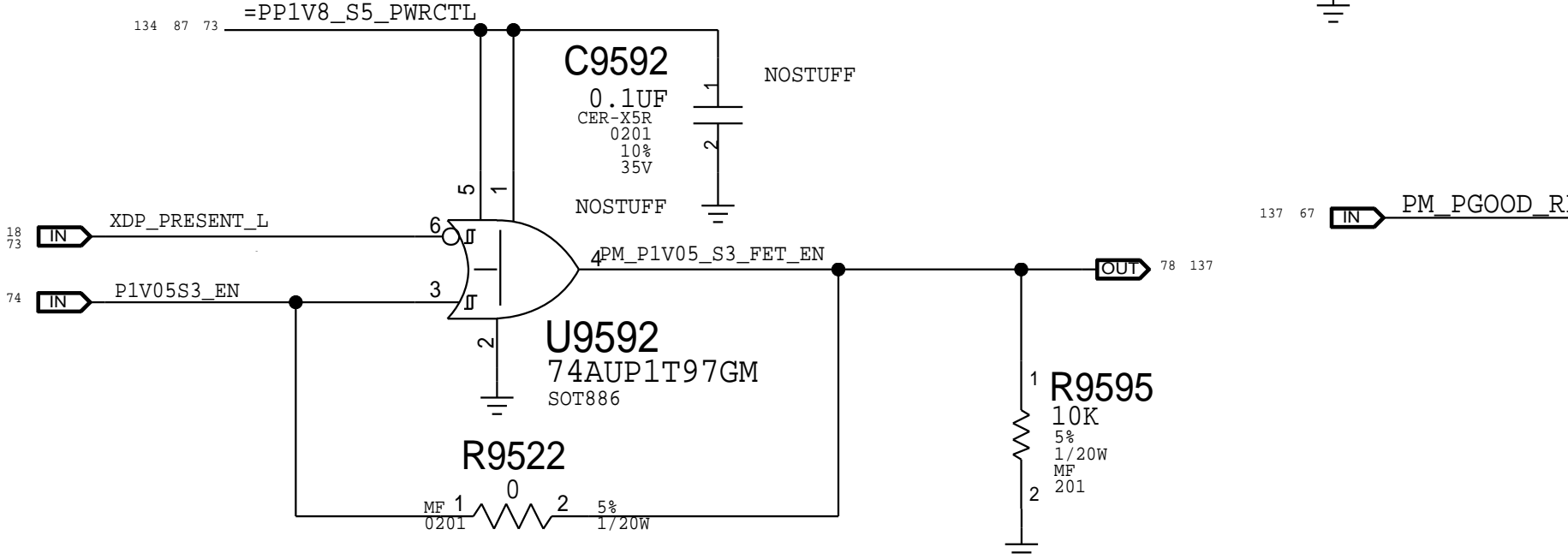
NOTE:
HALT POWER SEQUENCING
IF THERE IS NO PROCESSOR.
STUFF R9592 TO CIRCUMVENT

DDR4 Requirement:
VPP > VDDQ at all times
=> Ensure VPP discharges more slowly than VDDQ

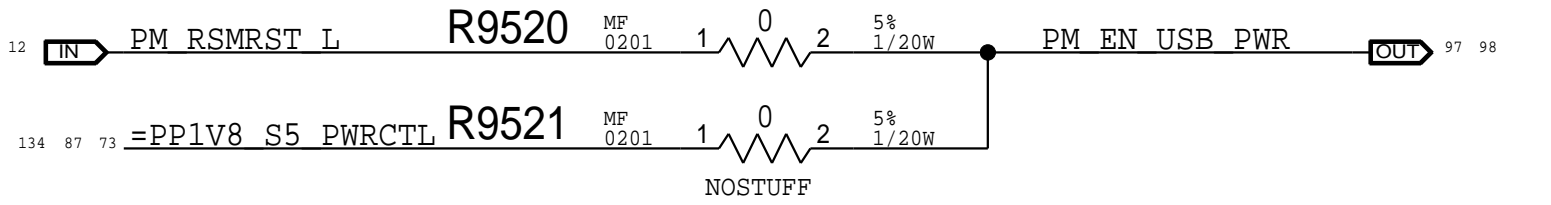
1V05_S3 uses PMU SW

ENABLES VPP FIRST

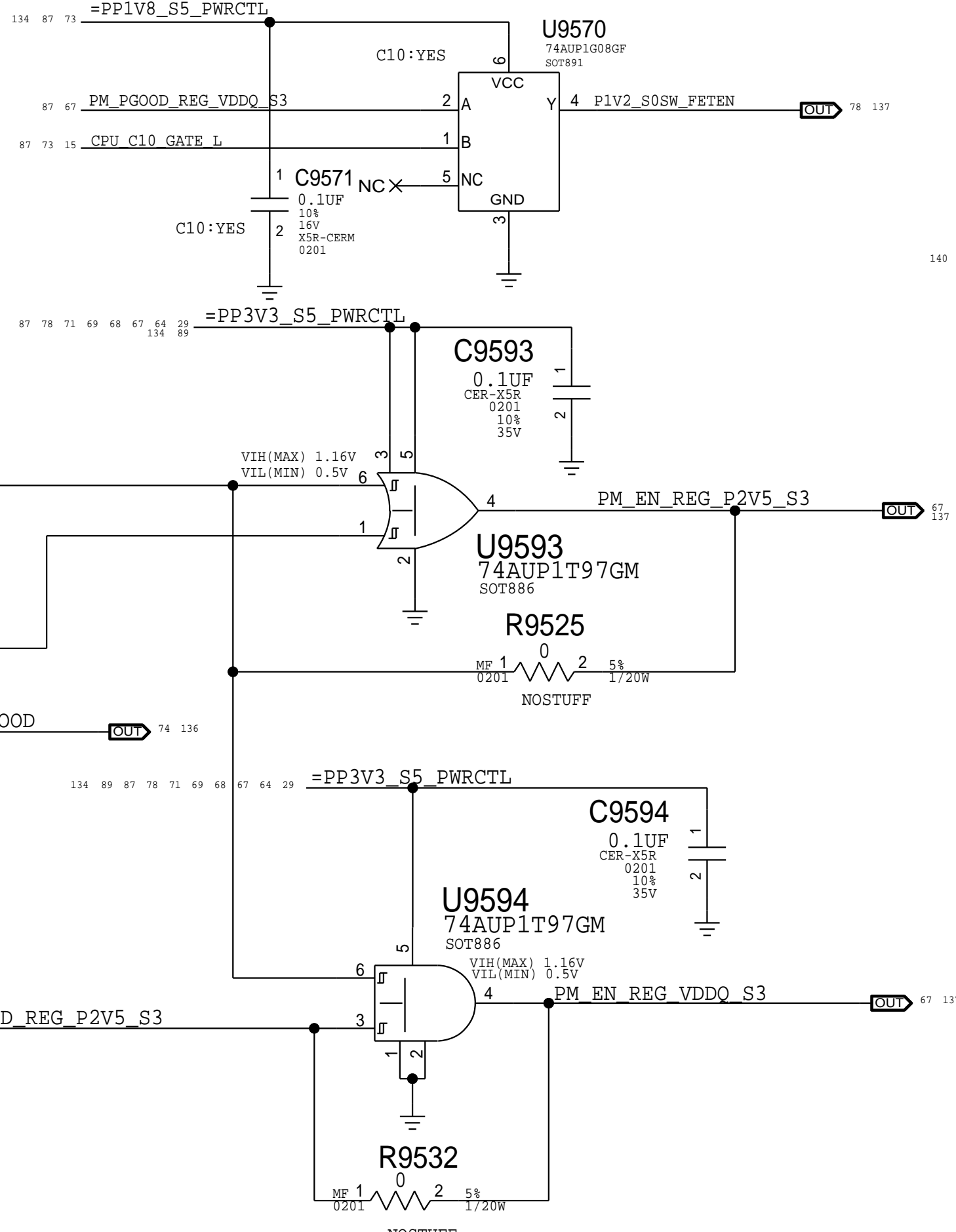
XDP PRESENT POWER OVERRIDE



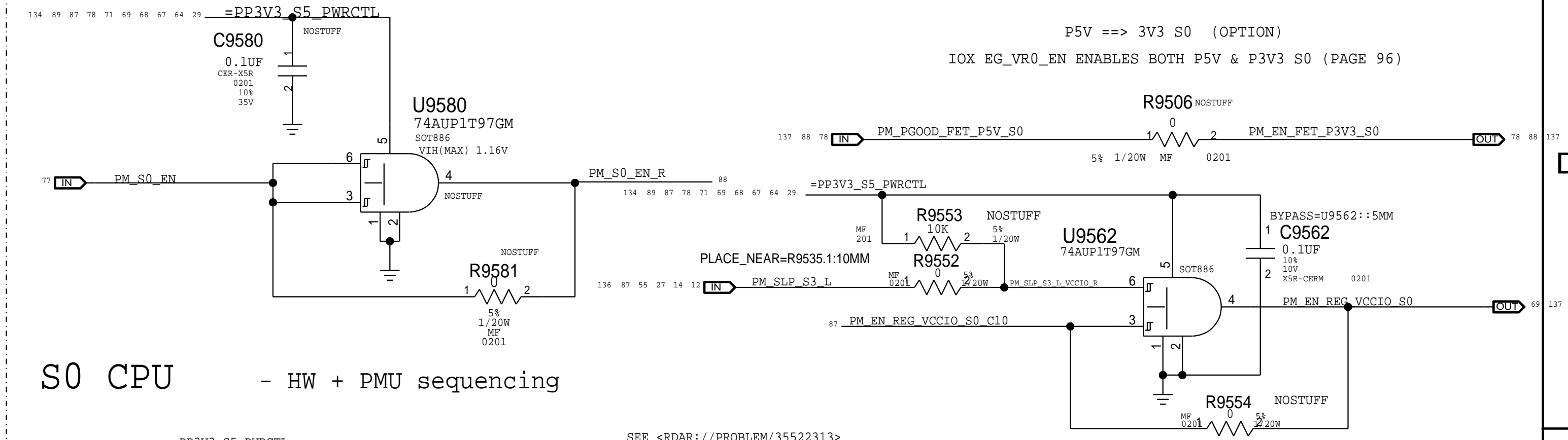
USB-A - HW sequencing



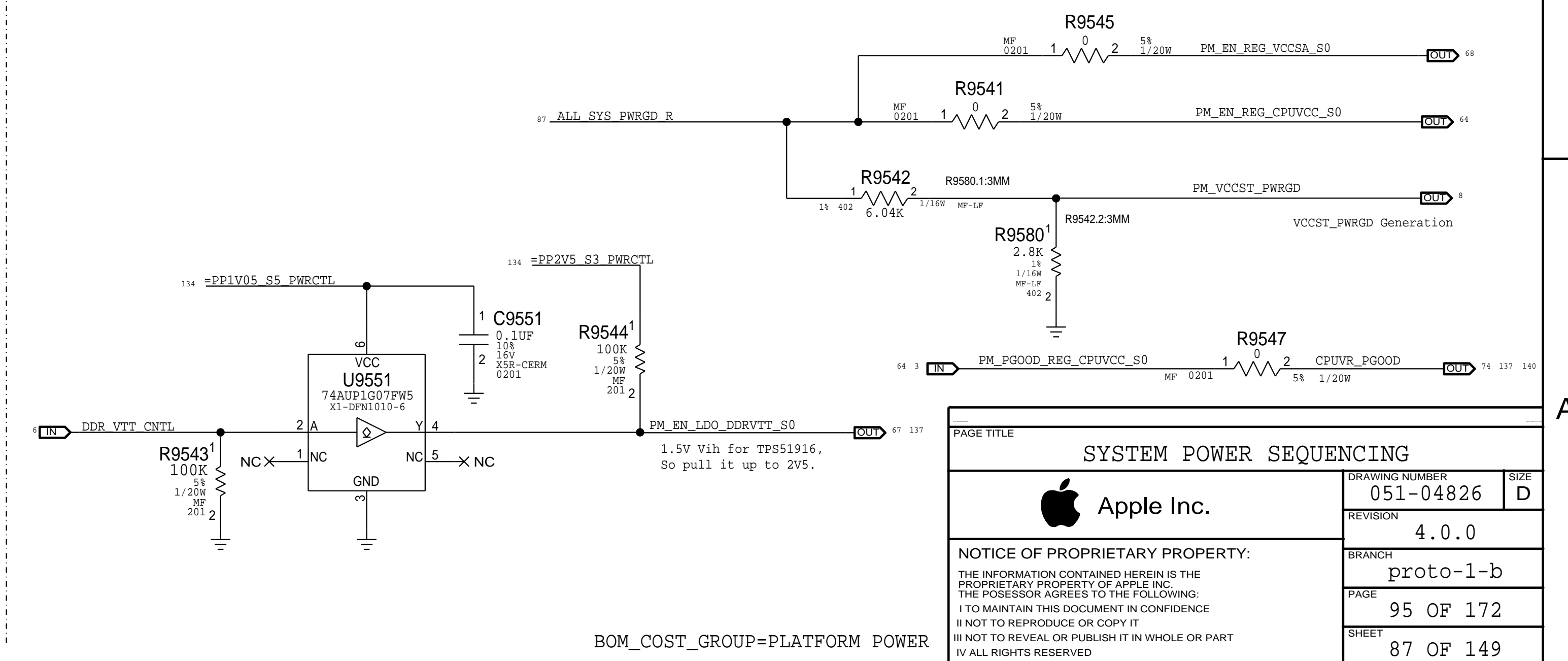
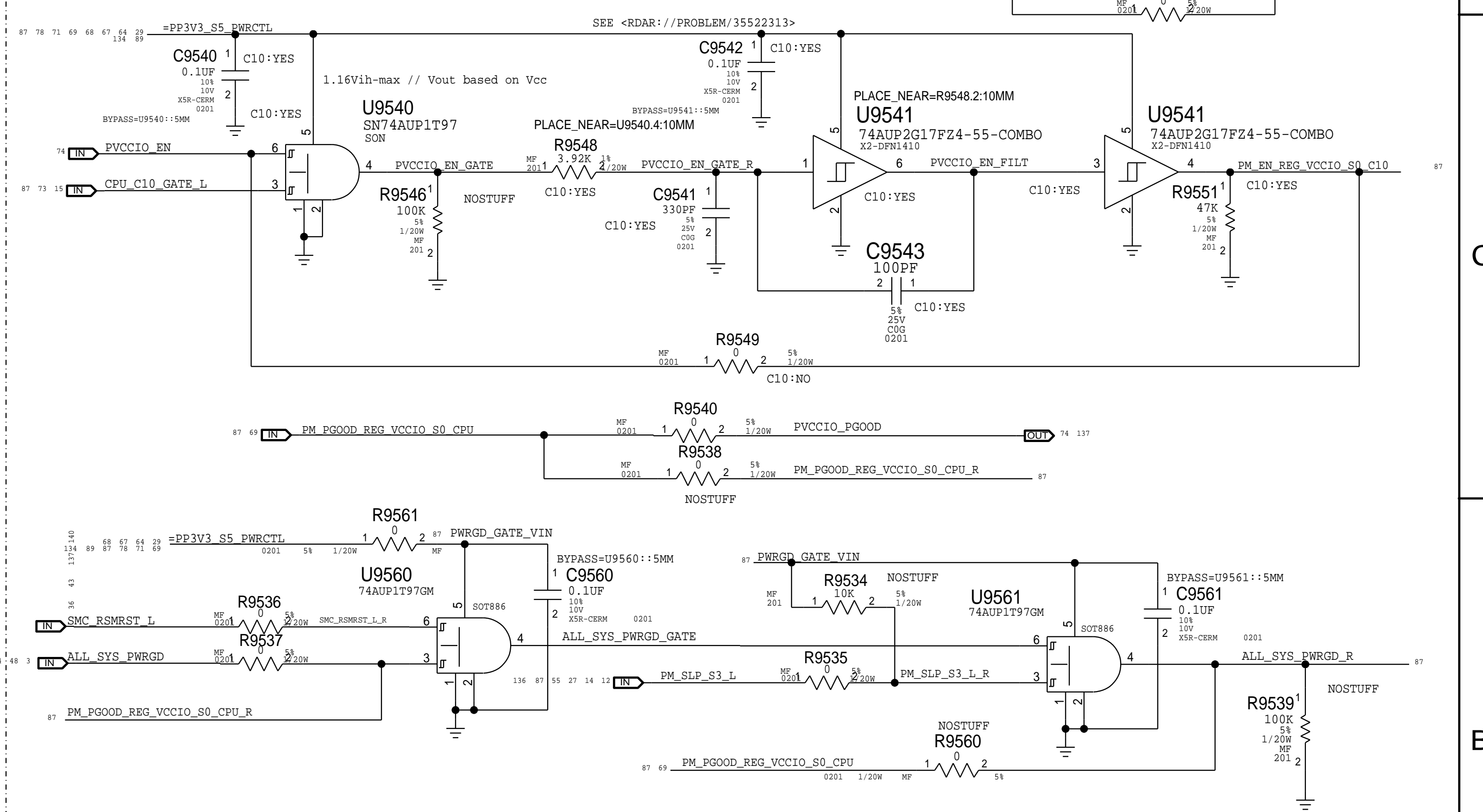
VCCPLL_OC SEQUENCING



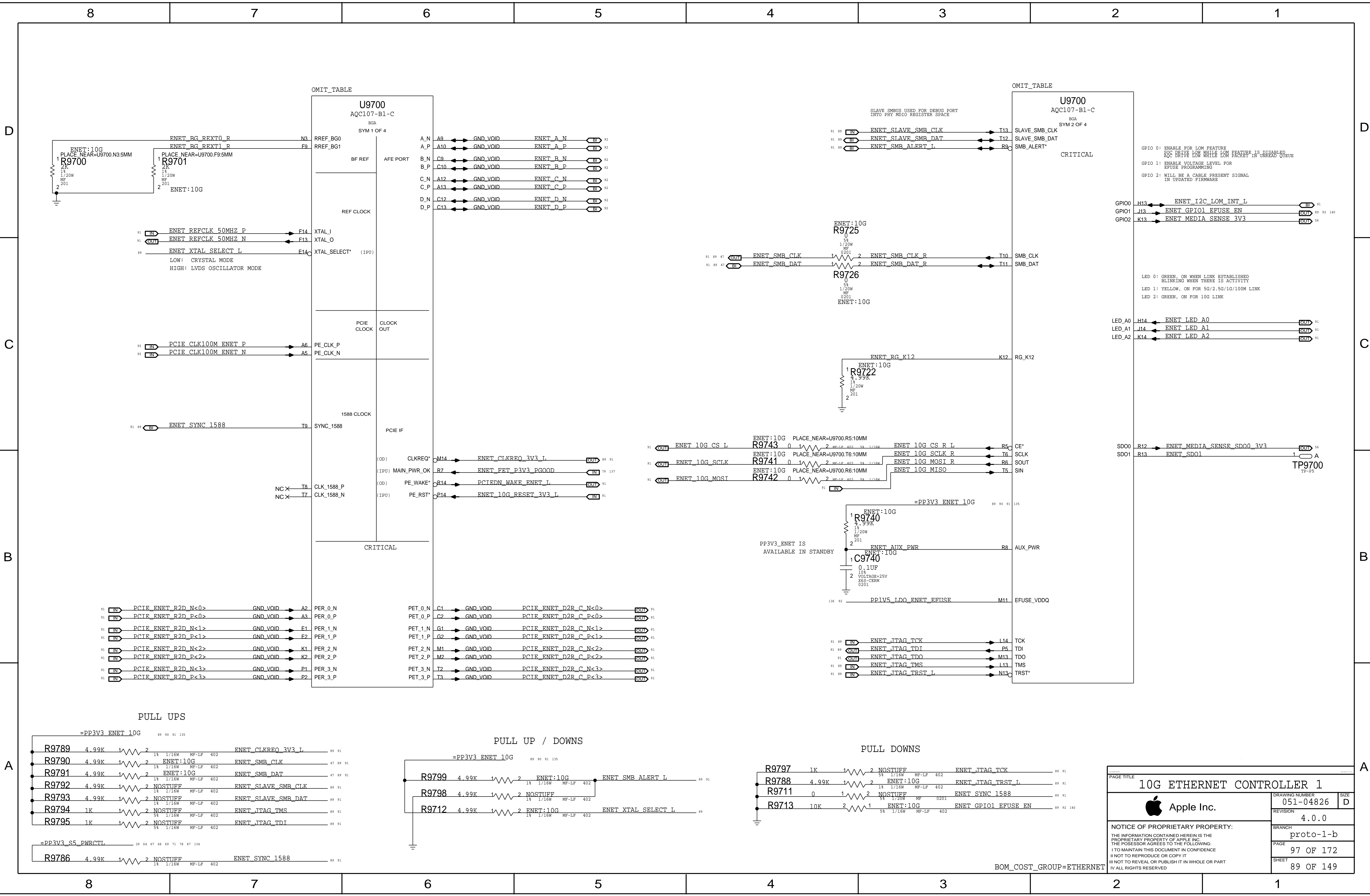
3V3 AND 5V S0 FOR GPU + DISPLAY + BLC

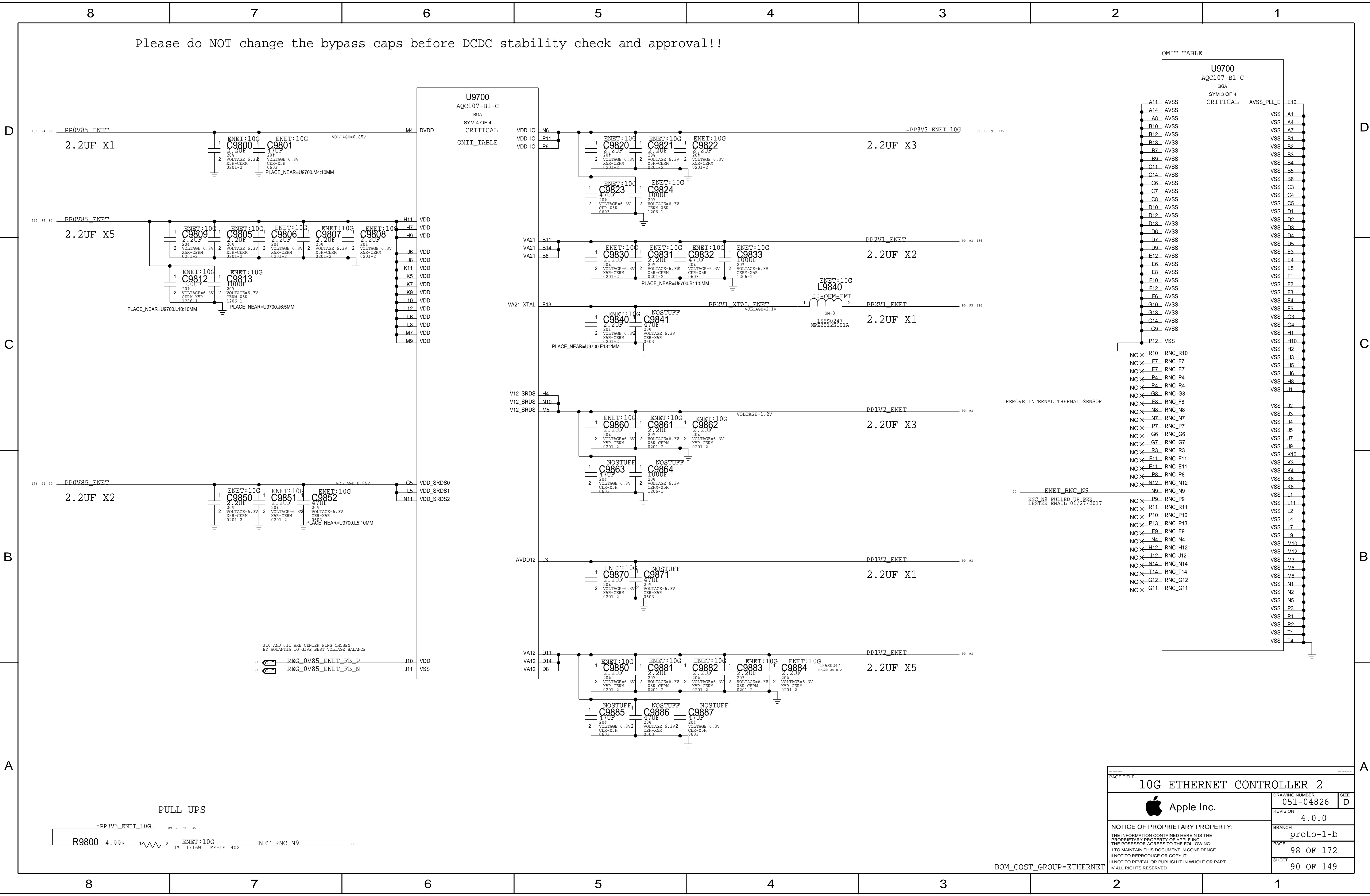



S0 CPU - HW + PMU sequencing

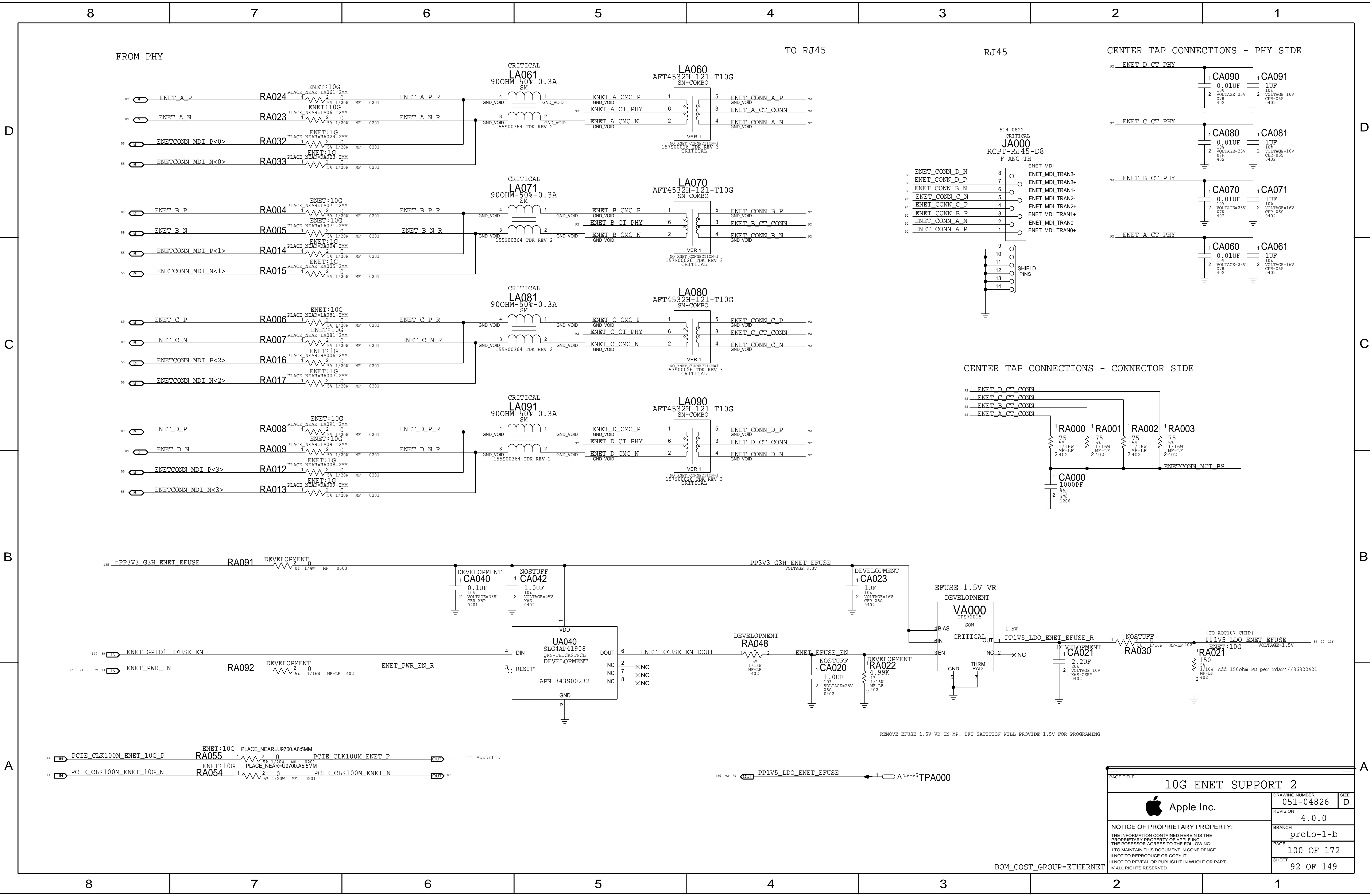


| SYSTEM POWER SEQUENCING | | | |
|---|----------------|-----------|-----------|
| | DRAWING NUMBER | 051-04826 | SIZE |
| | REVISION | 4.0.0 | D |
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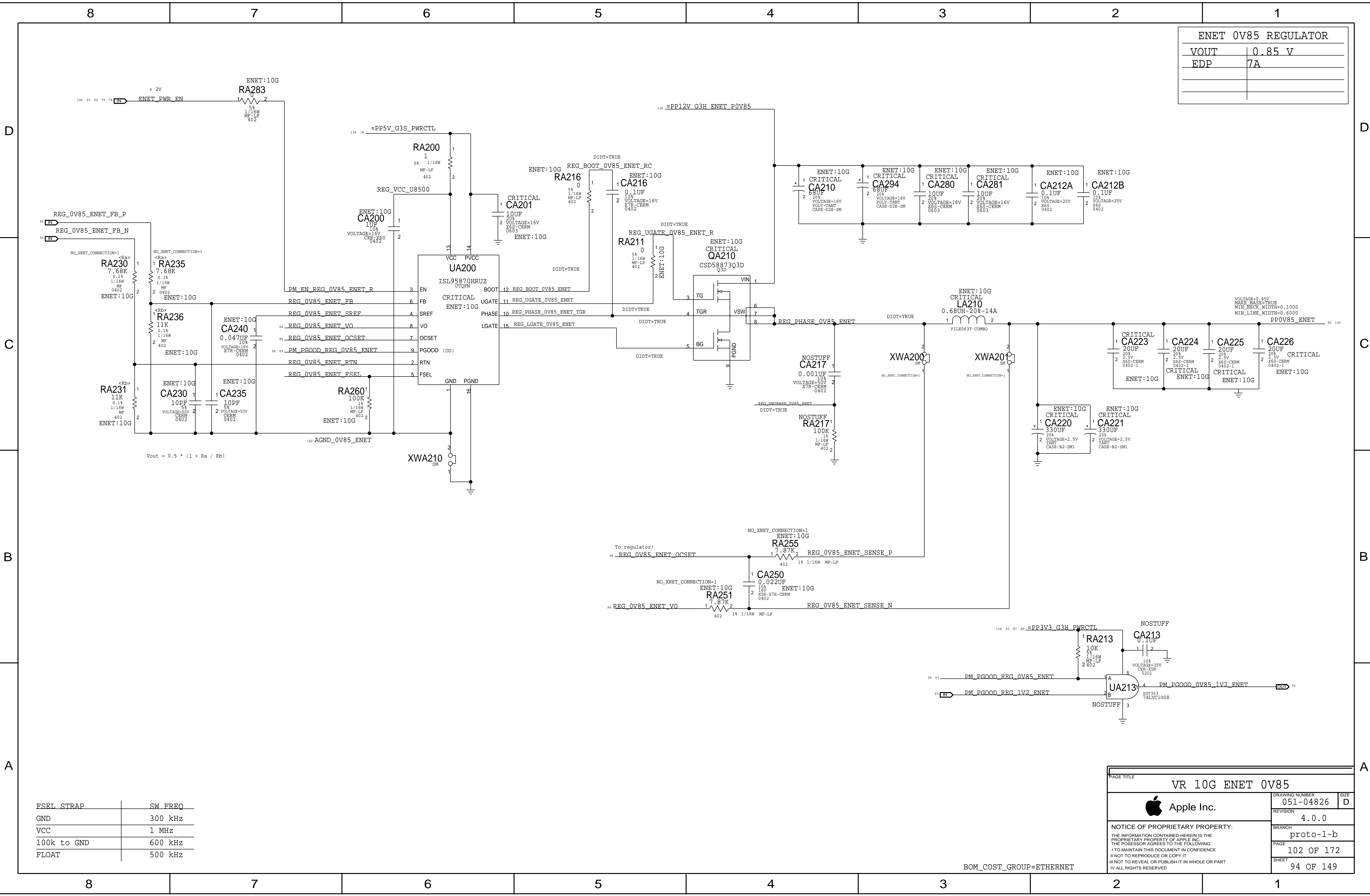




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| 10G ETHERNET CONTROLLER 2 | | |
|  Apple Inc. | DRAWING NUMBER | 051-04826 |
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| PAGE TITLE | | |
|---|----------------|------------|
| 10G ENET SUPPORT 2 | | |
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| | PAGE | 100 OF 172 |
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| ENET 0V85 REGULATOR | |
|---------------------|--------|
| VOUT | 0.85 V |
| EDP | 7A |
| | |
| | |

| | |
|-------------|---------|
| FSEL STRAP | SW FREQ |
| GND | 300 kHz |
| VCC | 1 MHz |
| 100k to GND | 600 kHz |
| FLOAT | 500 kHz |

| PAGE TITLE | | |
|--|----------------|------------|
| VR 10G ENET 0V85 | | |
| | DRAWING NUMBER | 051-04826 |
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BOM_COST_GROUP=ETHERNET

D



B



D

C

B

A

TPA430

TPA431

TPA432

TPA433

TPA440

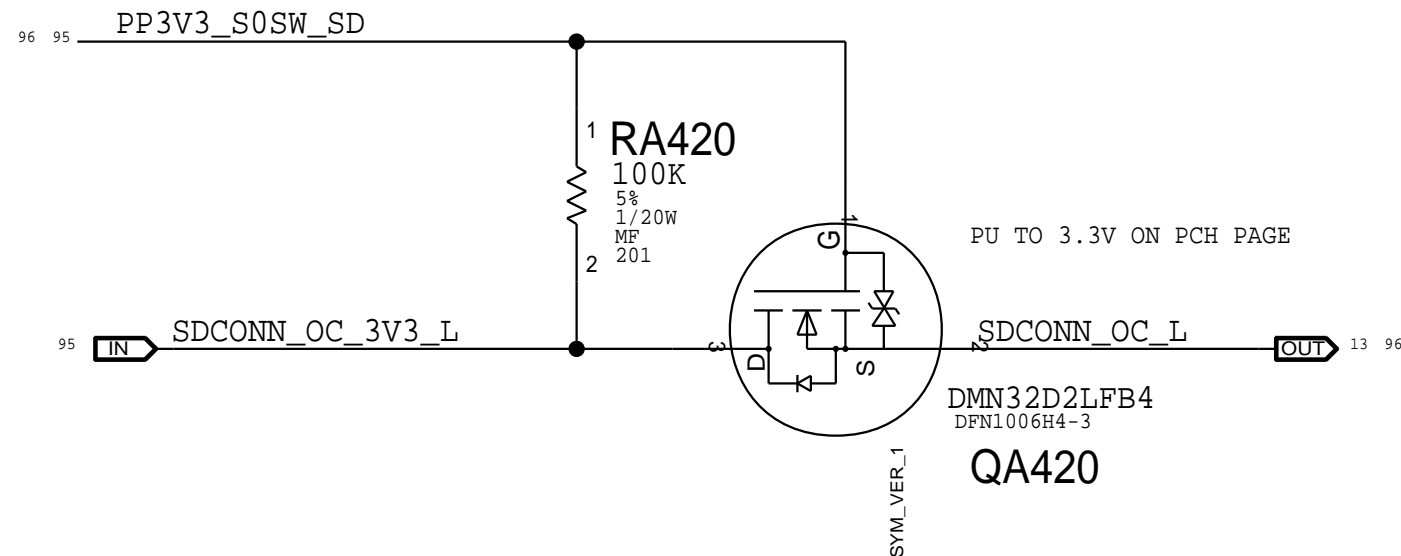
TPA441

TPA442

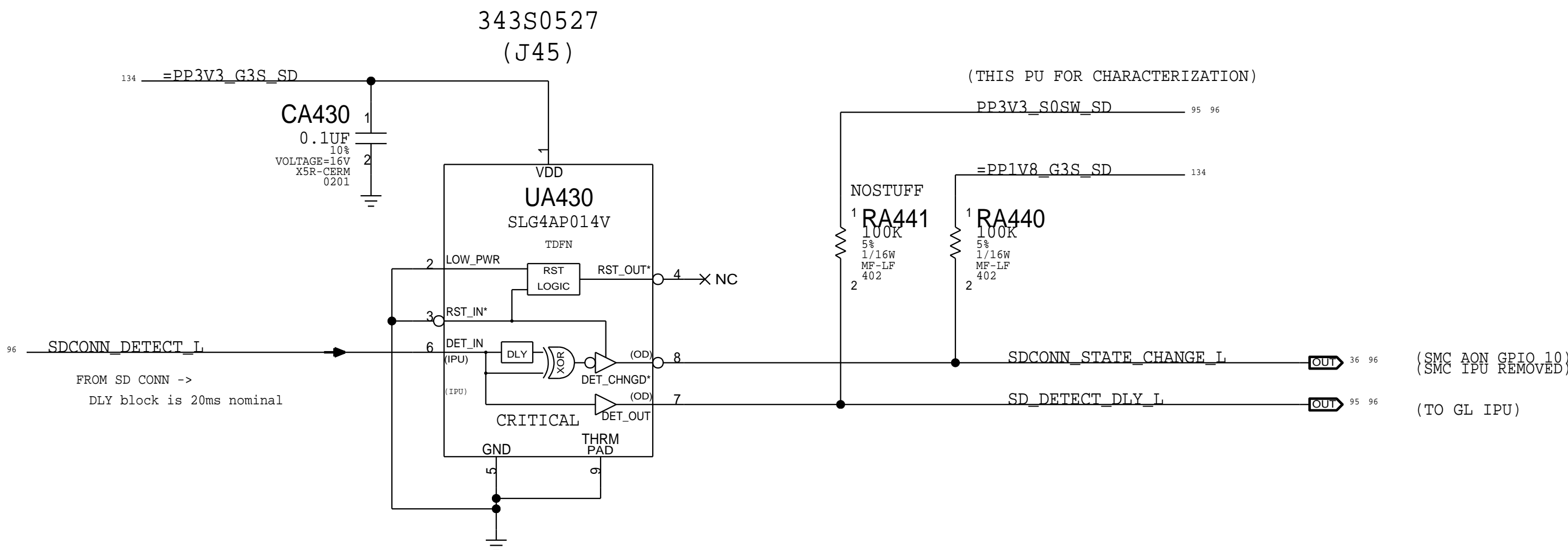
TPA443

| | | | | | |
|--------|---|---|-------|-----------------------|-------|
| TPA430 | A | 1 | TP-P5 | SD_SPT_CLK | 95 |
| TPA431 | A | 1 | TP-P5 | SD_SPT_CS_L | 95 |
| TPA432 | A | 1 | TP-P5 | SD_SPT_MOSI | 95 |
| TPA433 | A | 1 | TP-P5 | SD_SPT_MISO | 95 |
| TPA440 | A | 1 | TP-P5 | SDCONN_OC_L | 13 96 |
| TPA441 | A | 1 | TP-P5 | SDCONN_DETECT_L | 96 |
| TPA442 | A | 1 | TP-P5 | SDCONN_STATE_CHANGE_L | 36 96 |
| TPA443 | A | 1 | TP-P5 | SD_DETECT_DLY_L | 95 96 |

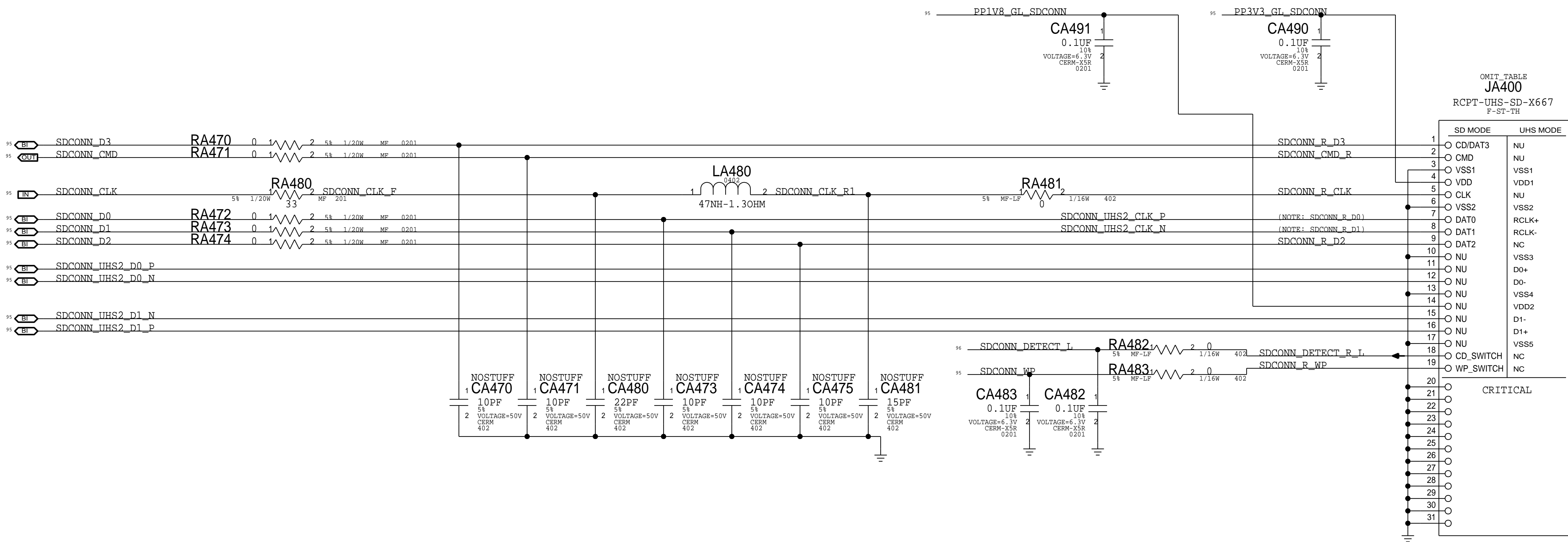
SD CARD OC EVENT ISOLATION



SDCONN STATE CHANGE AND DEBOUNCE



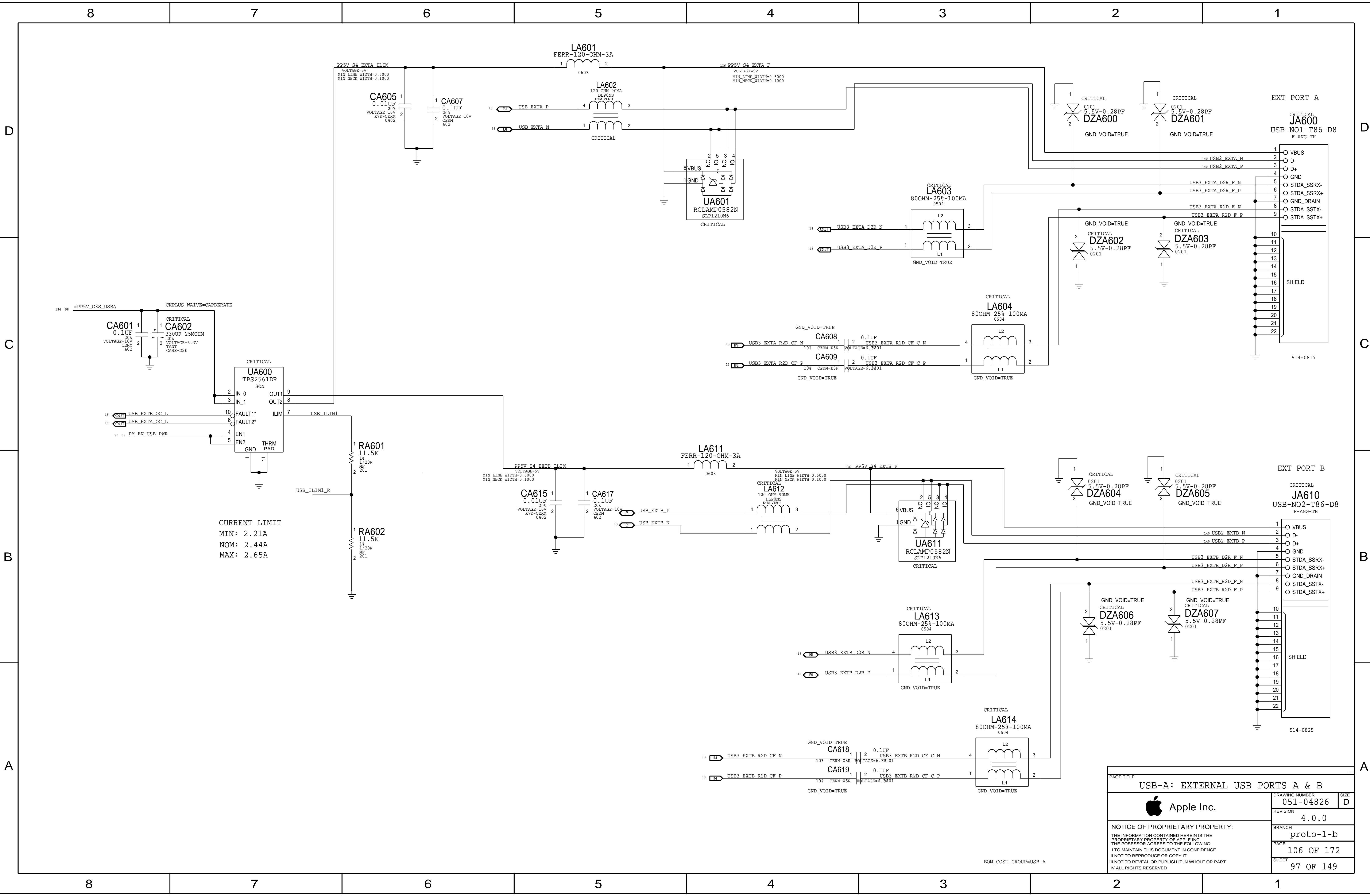
SD UHS-II CARD CONNECTOR




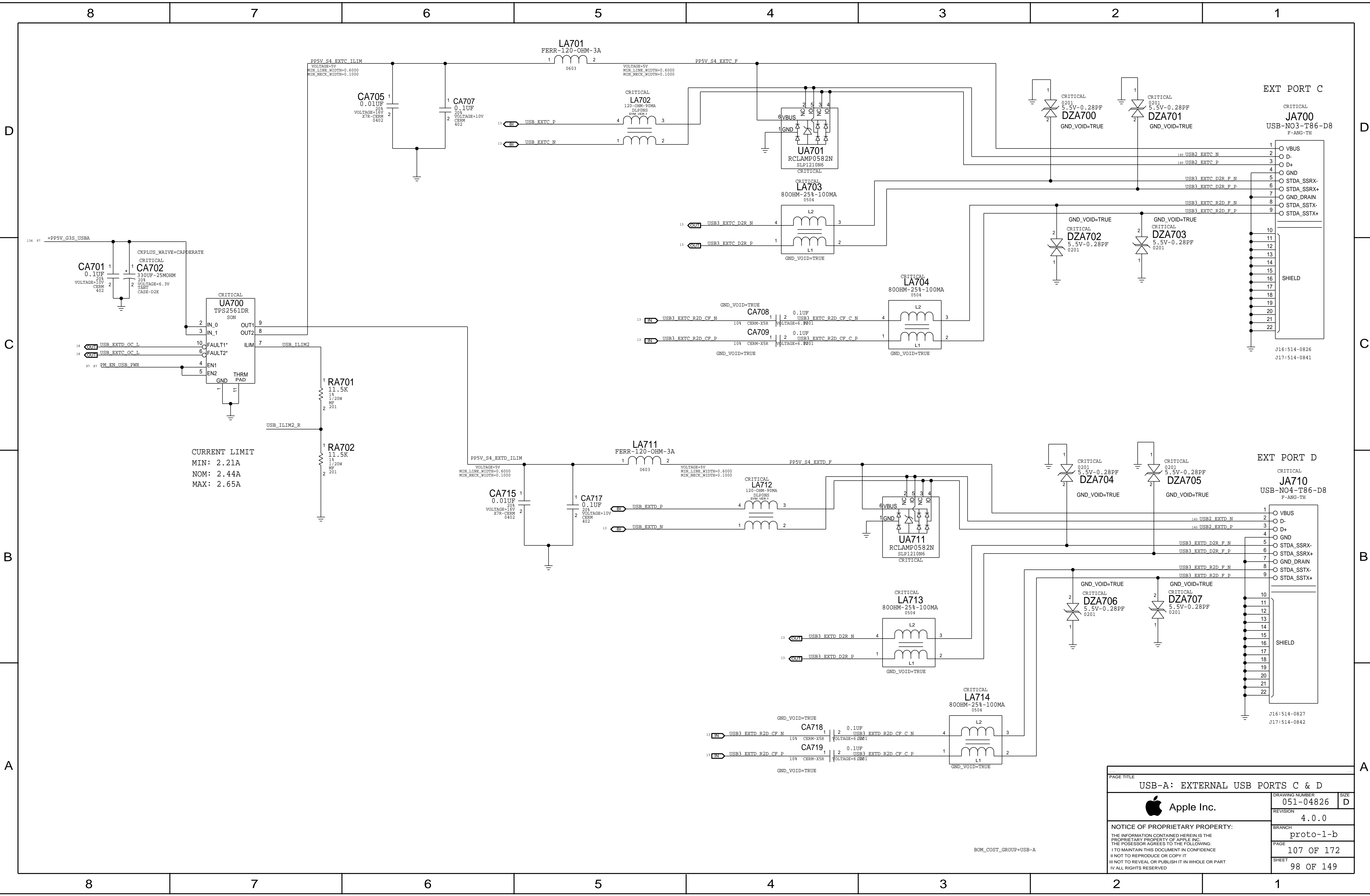
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|-----------|-----|------------------------|-------------------------|----------|------------|
| 512-00005 | 1 | CONN,RCPT,UHS SD,X1146 | JA400 | CRITICAL | |

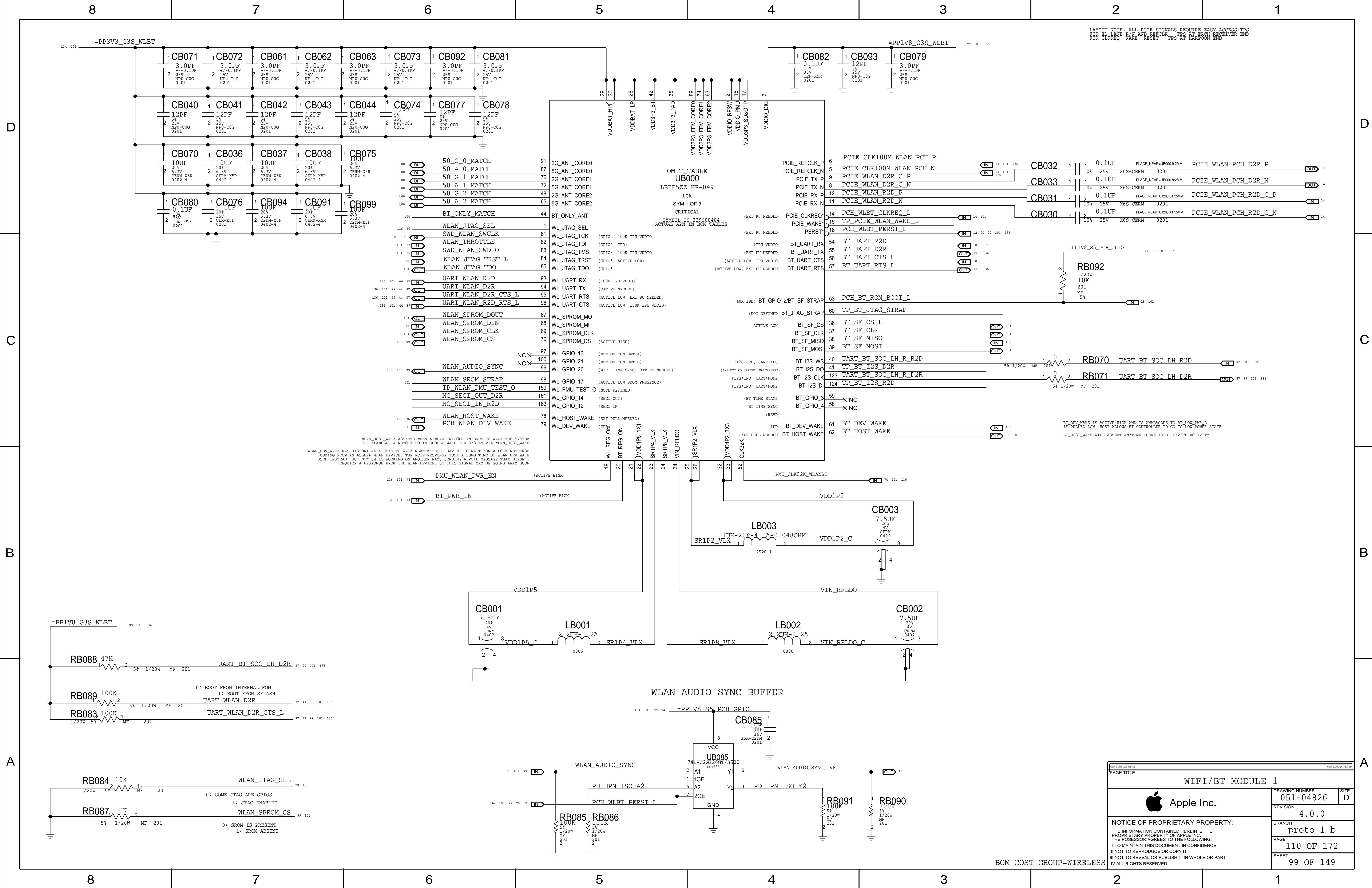
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|--|----------------|------------|
| SD CONNECTOR UHS-II | | |
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BOM_COST_GROUP=SD CARD

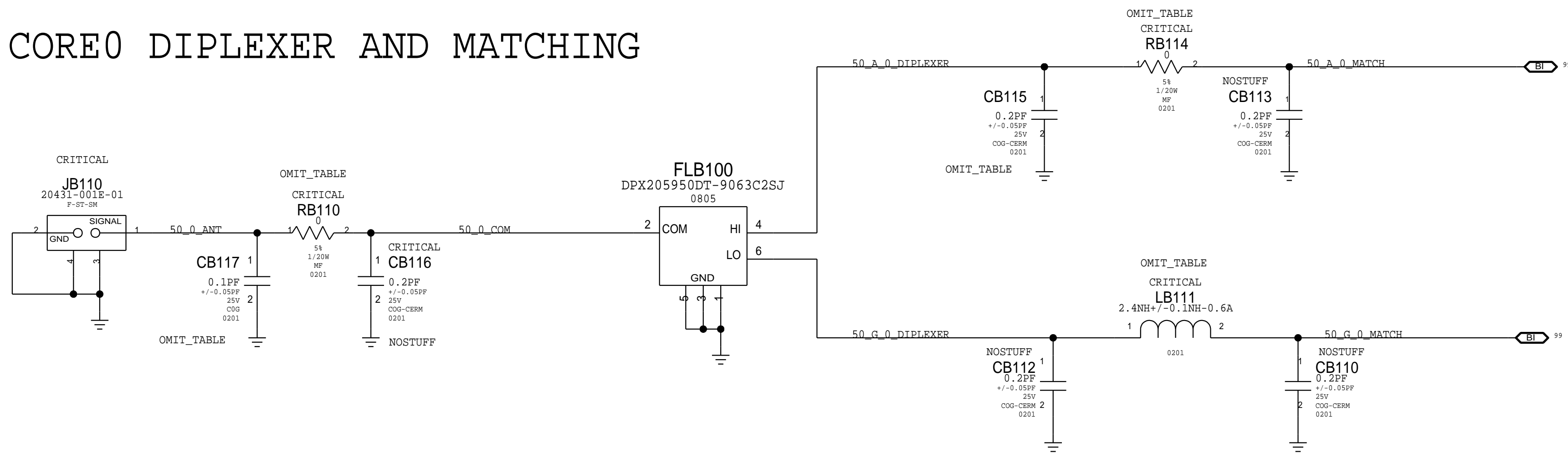


| | | |
|---|----------------|------------|
| PAGE TITLE | | |
| USB-A: EXTERNAL USB PORTS A & B | | |
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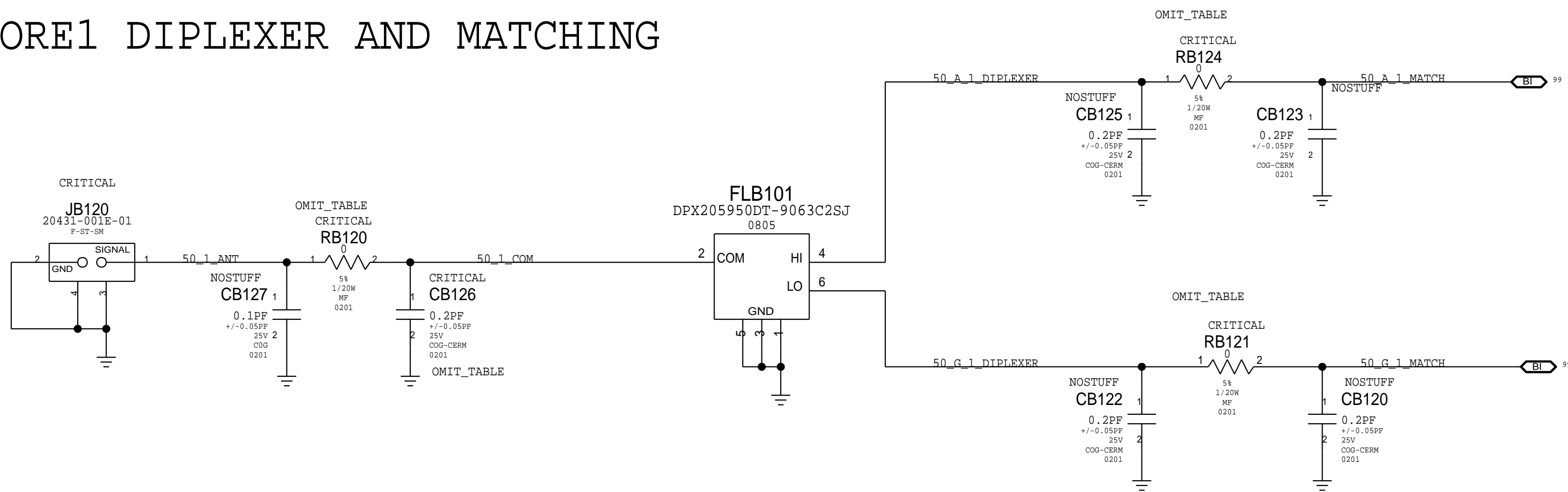




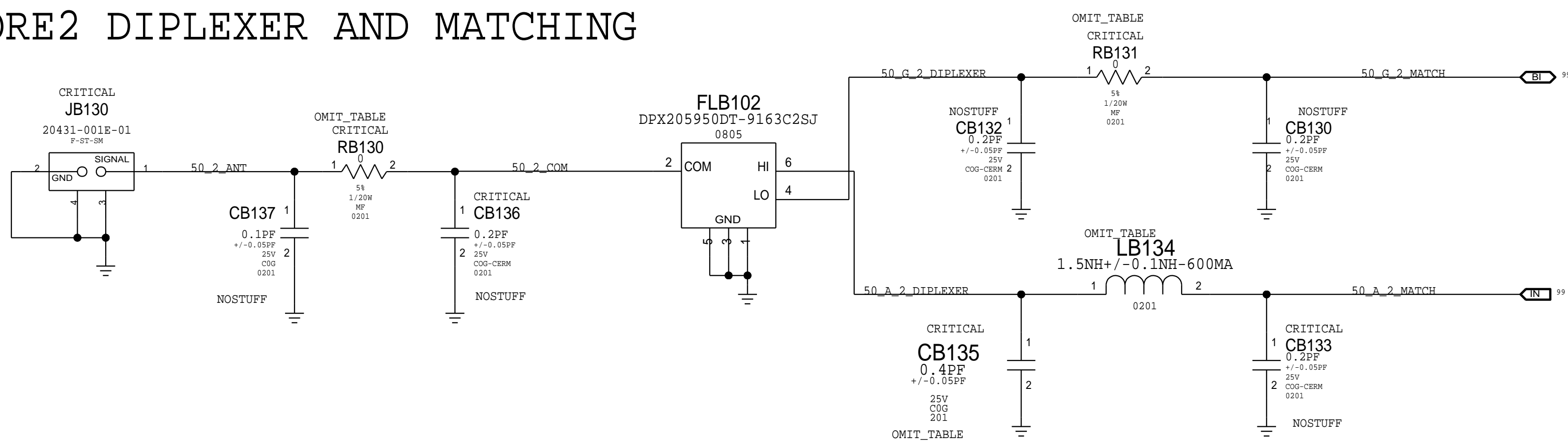
CORE0 DIPLEXER AND MATCHING



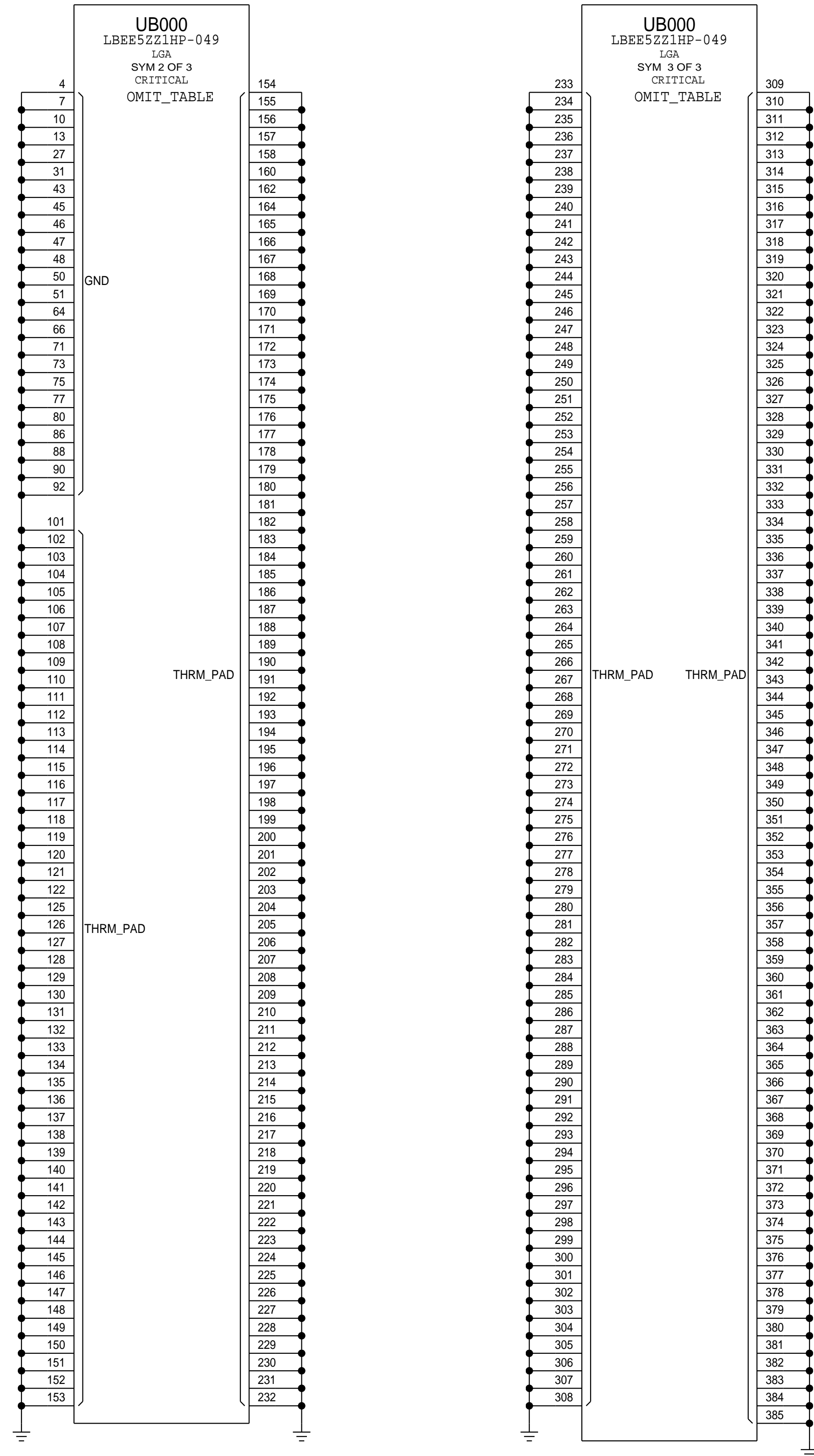
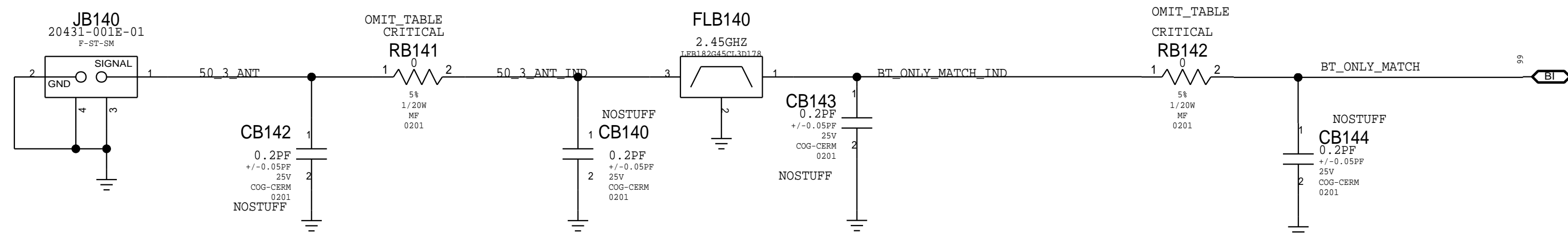
CORE1 DIPLEXER AND MATCHING



CORE2 DIPLEXER AND MATCHING



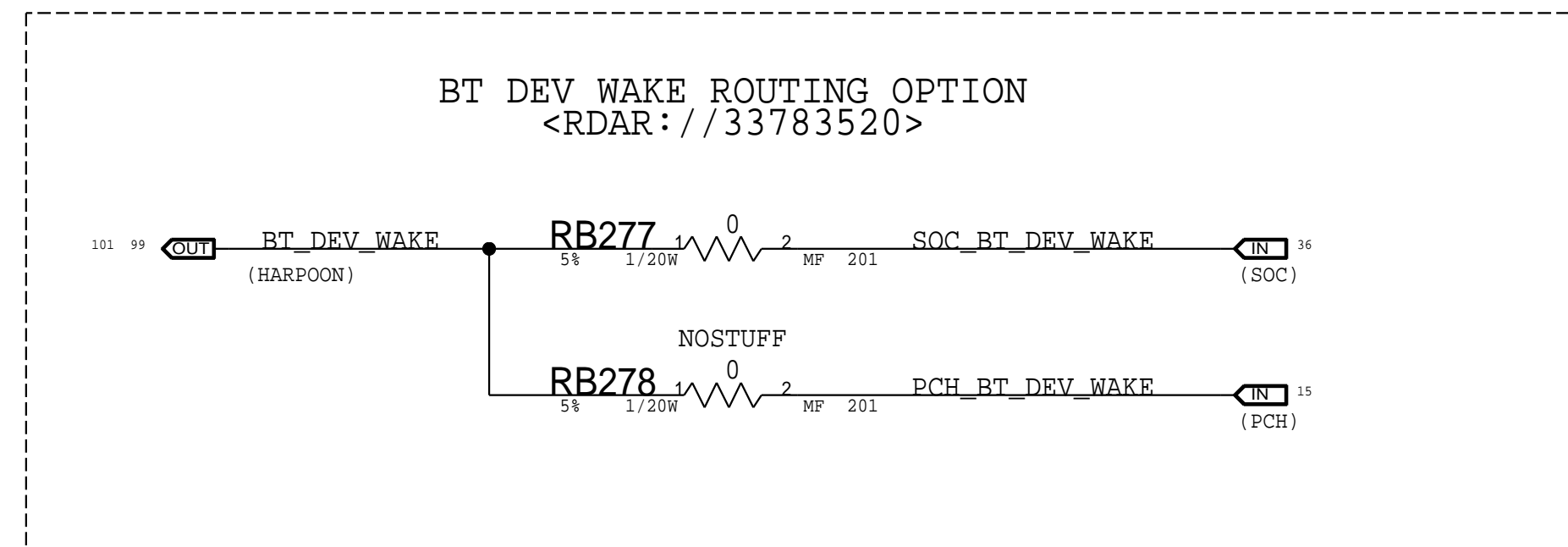
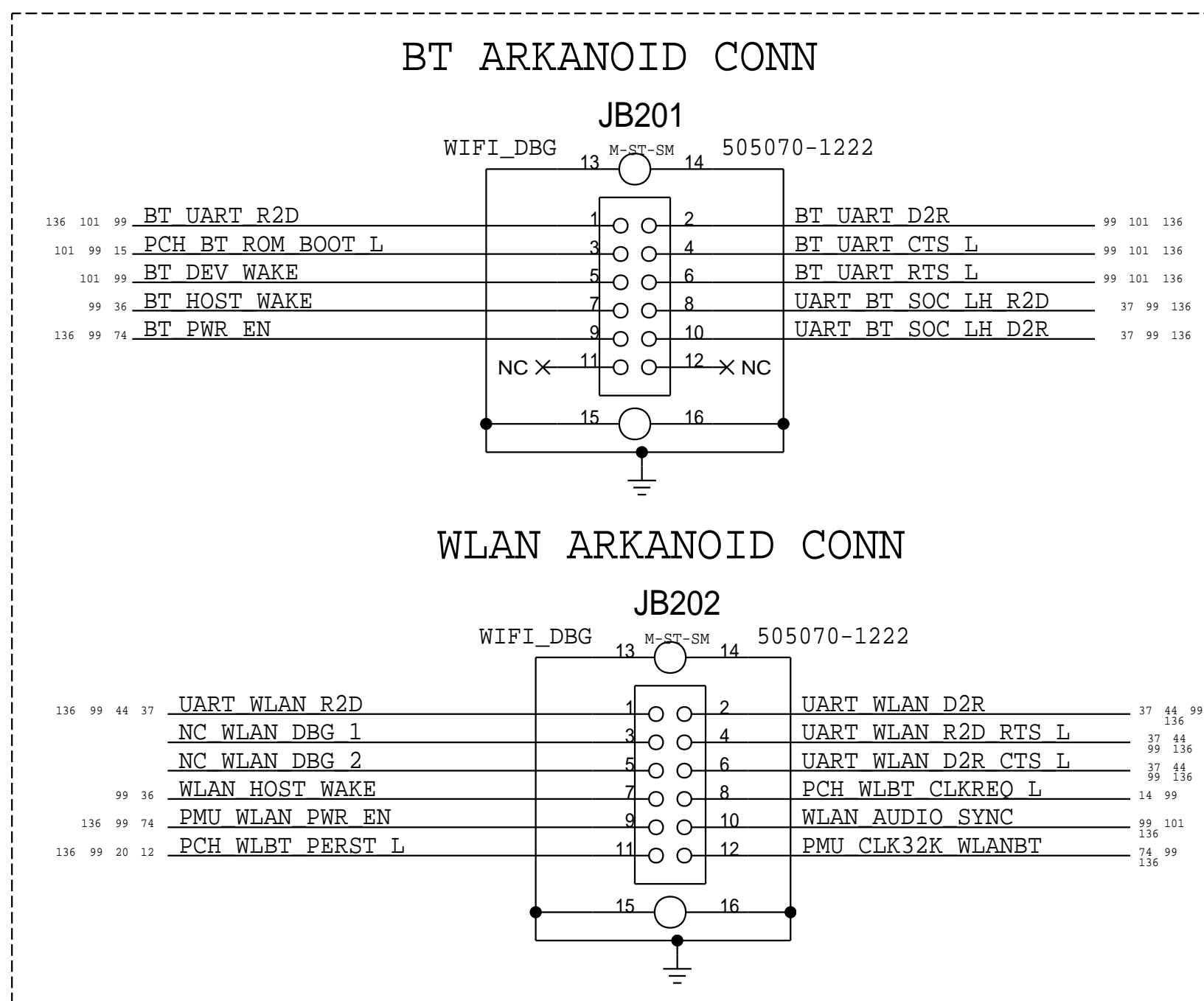
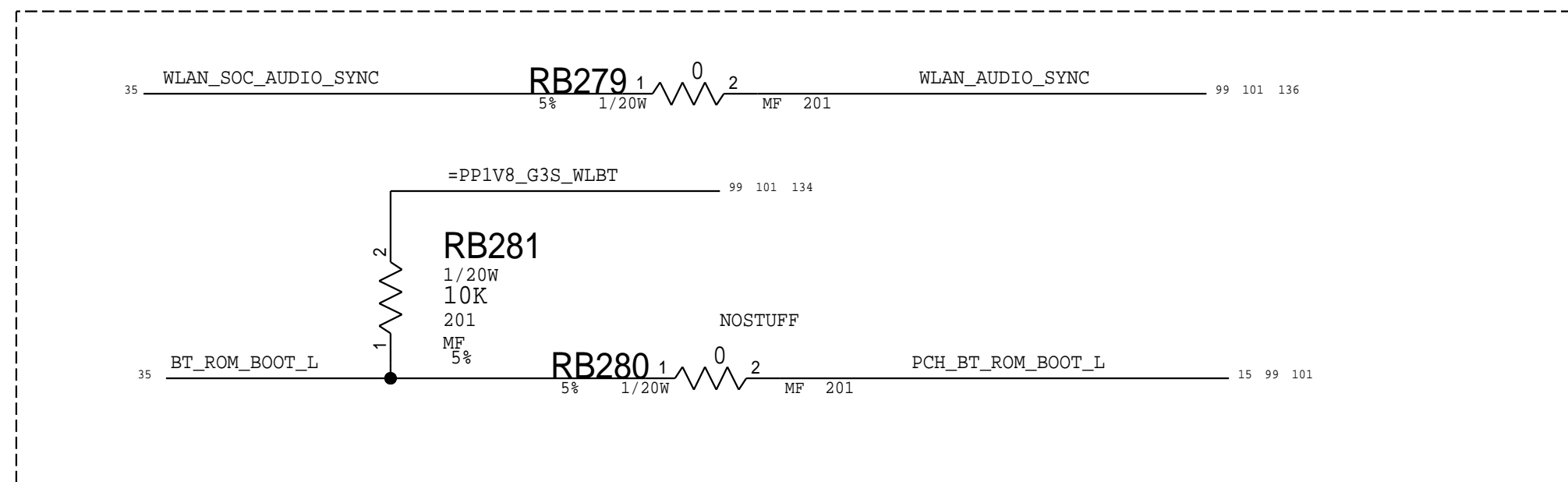
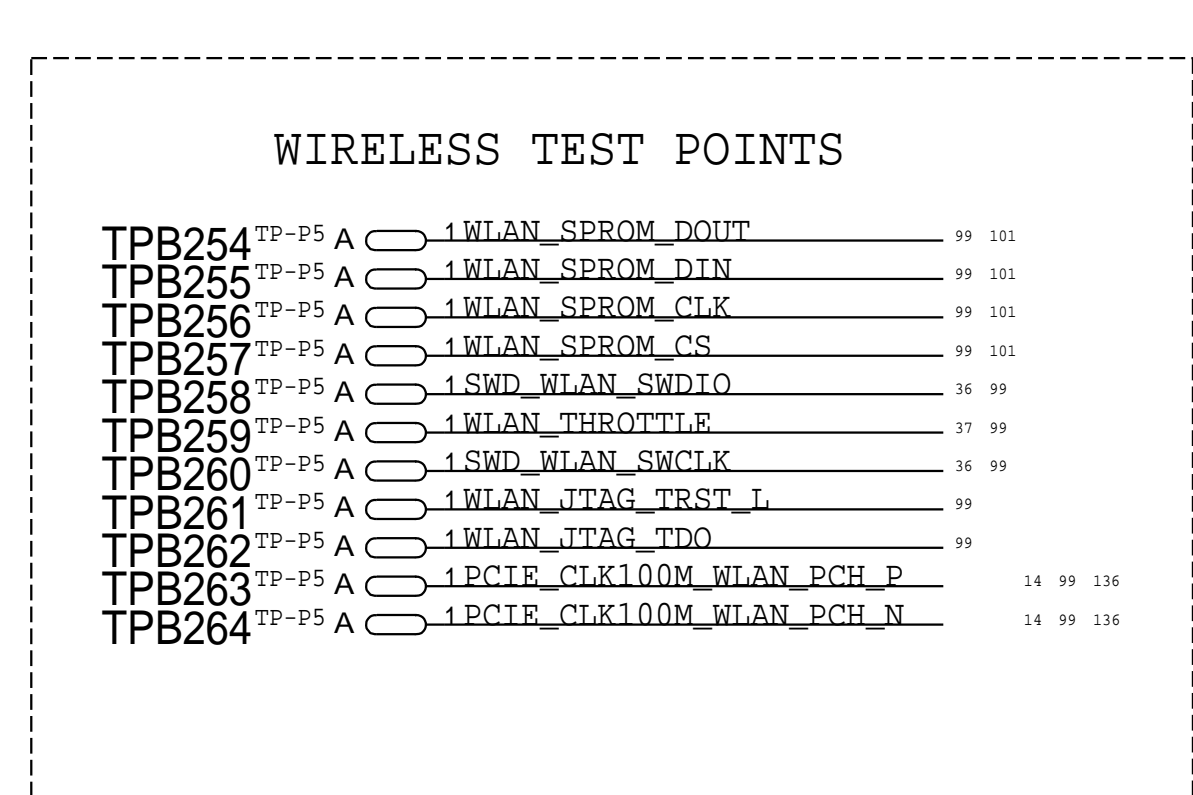
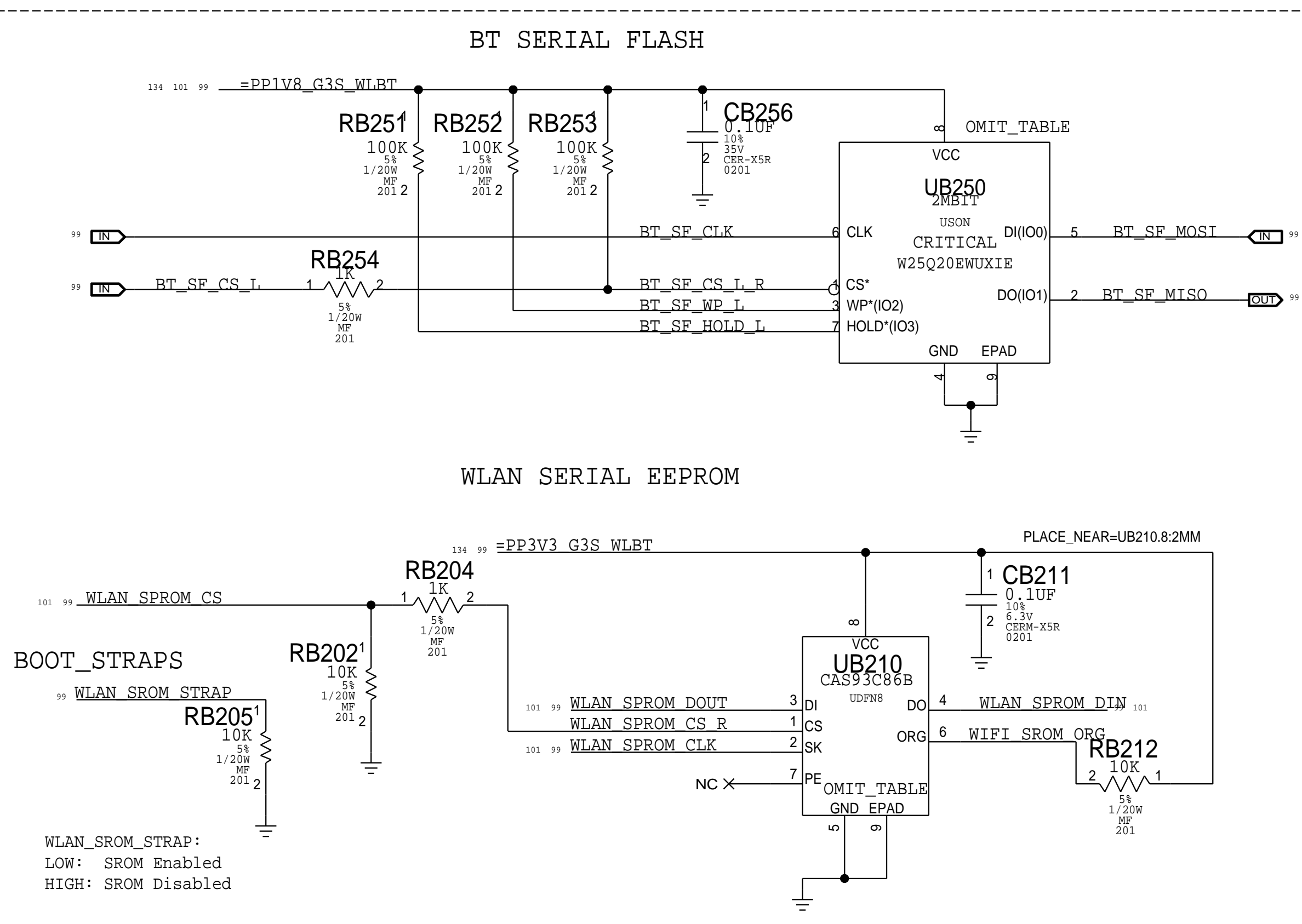
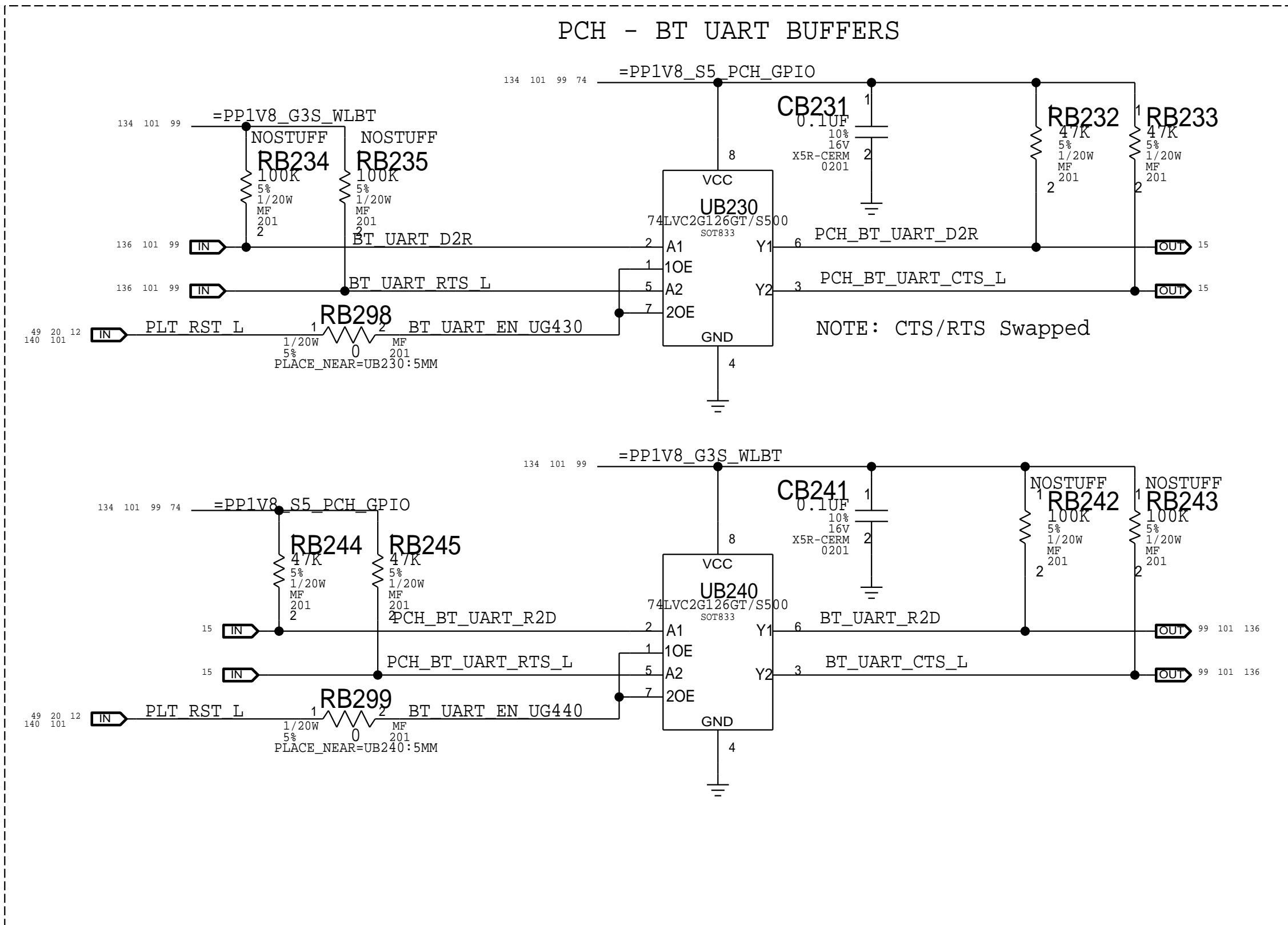
BT LPF AND MATCHING




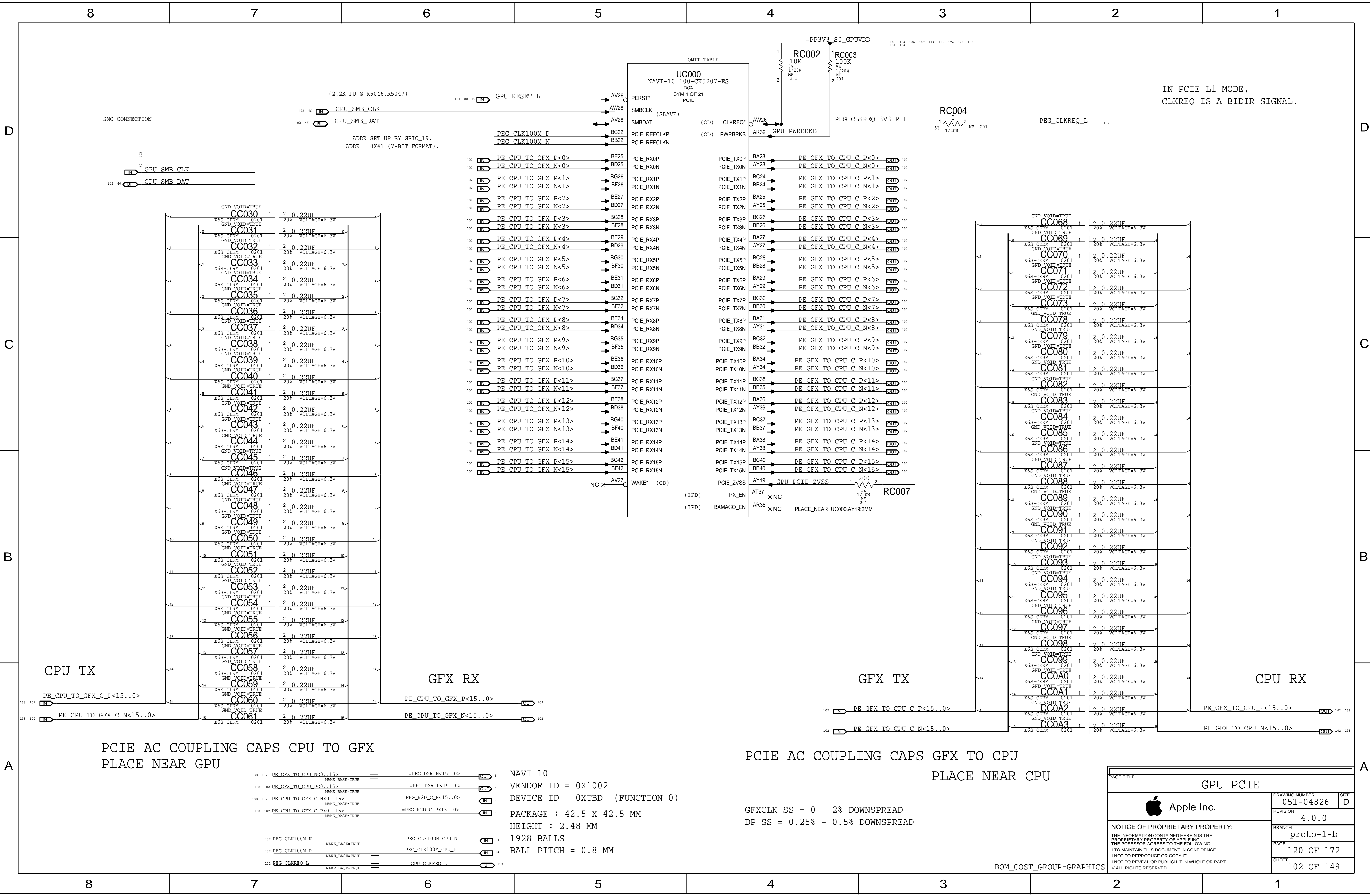
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION |
|-----------|-----|--|--|----------|------------|
| 117S0201 | 8 | RES,NP,1A,MAX,5A,0201,BLACK | RB111, RB110, RB117, RB124, RB120, RB131, RB130, RB141 | CRITICAL | RF:TUNE |
| 131S0555 | 2 | CAP,CER,C0G,NP, 1.0PF,+/-0.055PF,25V,0201 | RB114, LB134 | CRITICAL | RF:TUNE |
| 152S2036 | 2 | IND, P1LM, 2.5NH, +/-0.1NH, 600MA, 0R-Q,0201 | CB115, CB135 | CRITICAL | RF:TUNE |
| 131S0431 | 2 | CAP,CER,C0G,0.2PF,+/-0.055PF,25V,0201, R-Q | CB117, CB126 | CRITICAL | RF:TUNE |
| 152S00058 | 1 | IND,P1LM,1.7NH,+/-0.1NH,600MA,0R-Q,0201 | RB142 | CRITICAL | RF:TUNE |

BOM_COST_GROUP=WIRELESS

| | | | | | |
|--|--|--|----------------------|------------|------|
| SYRC MASTER-REVISION | | | SYRC DATE:08/20/2019 | | |
| PAGE TITLE | | | | | |
| WIFI/BT MODULE 2 | | | | | |
| | | | DRAWING NUMBER | 051-04826 | SIZE |
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| | | | PAGE | 111 OF 172 | |
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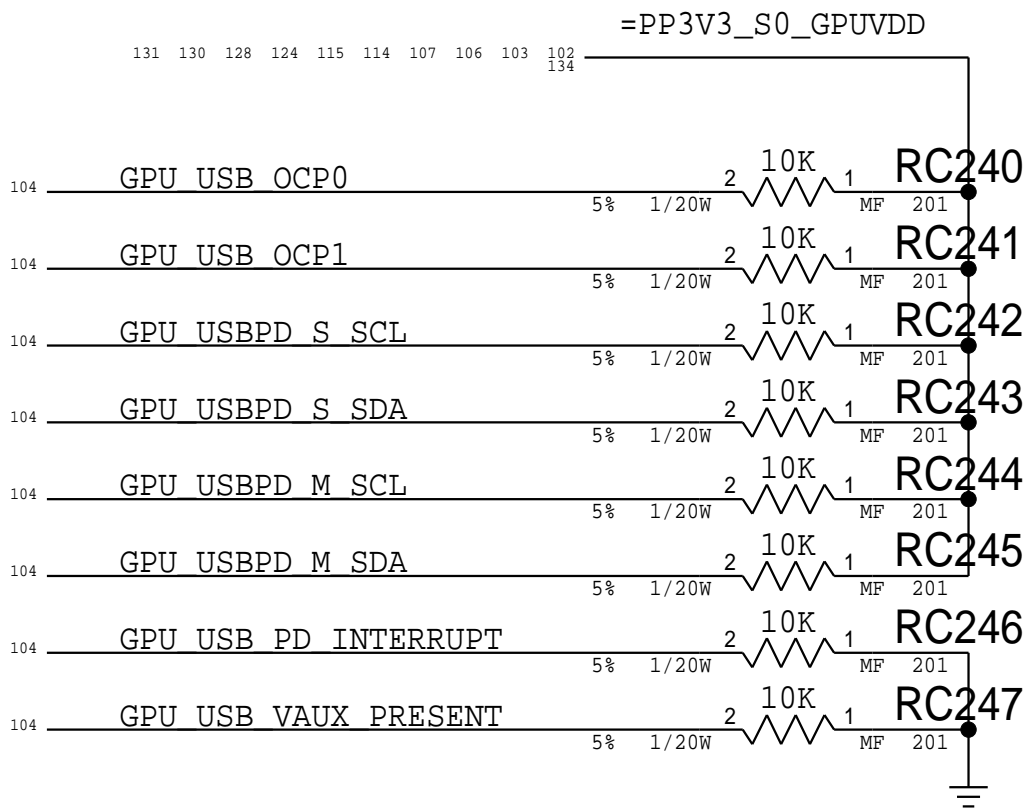
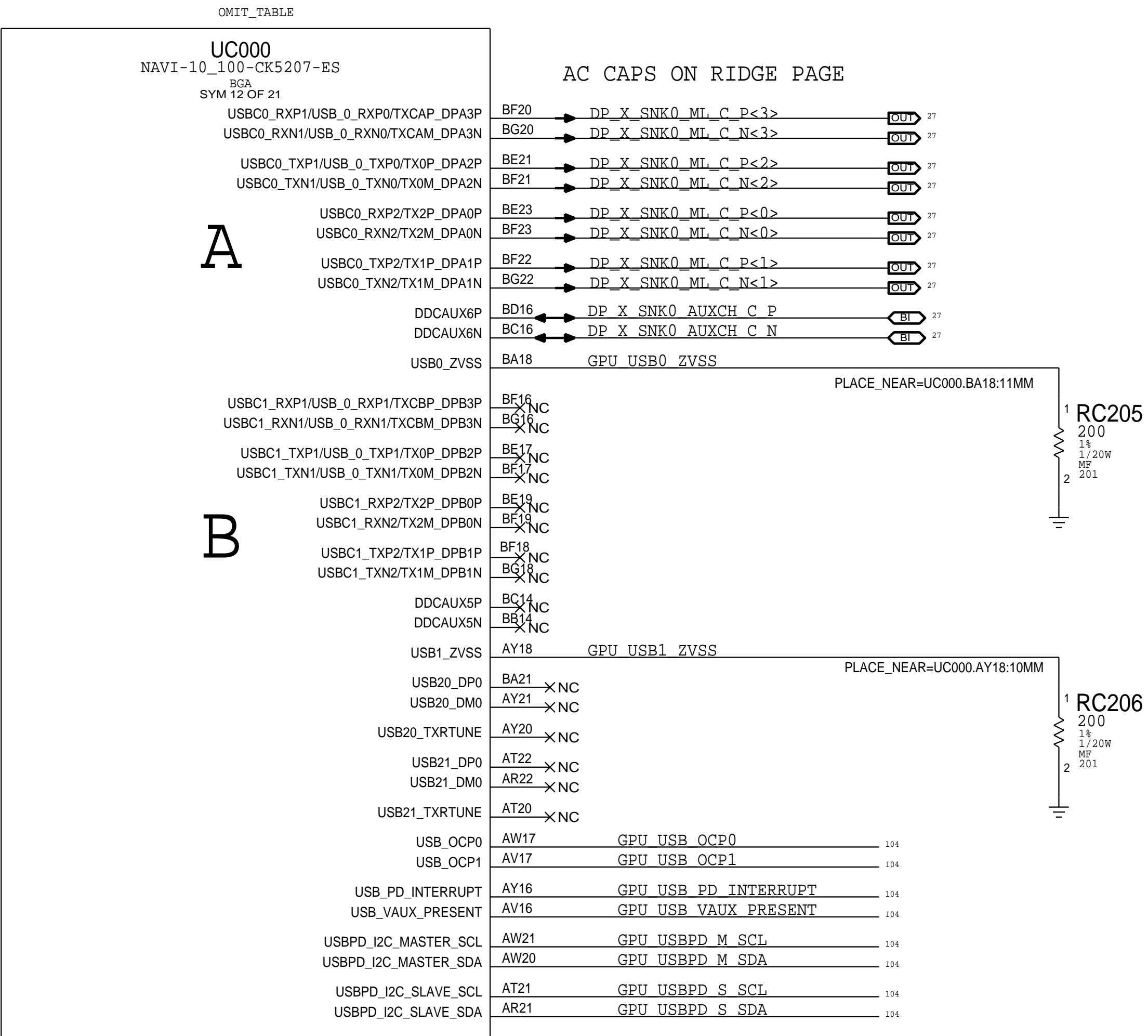
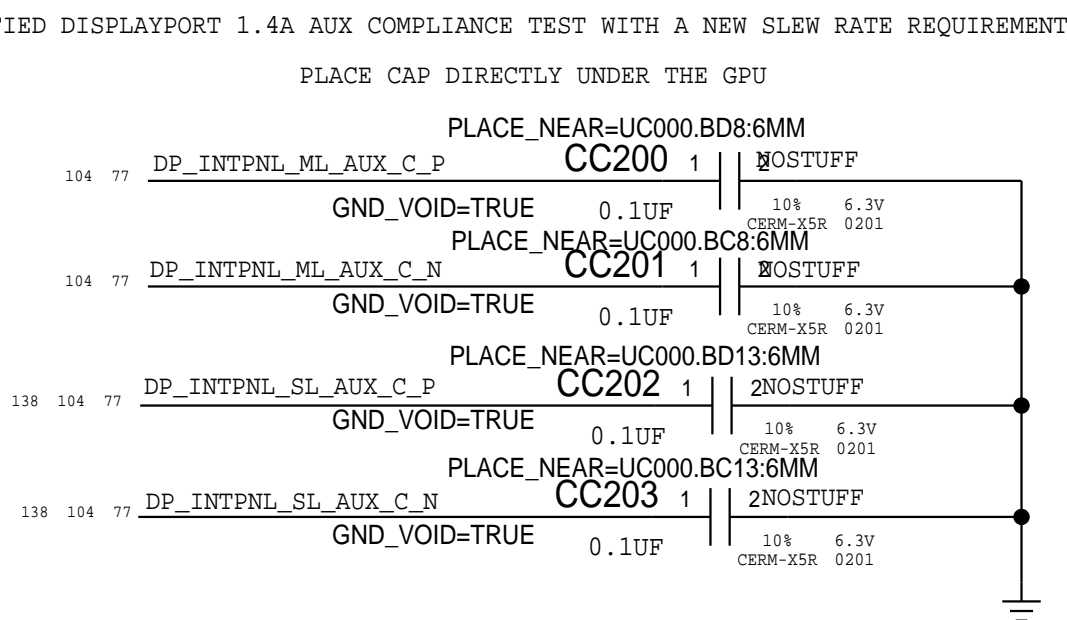
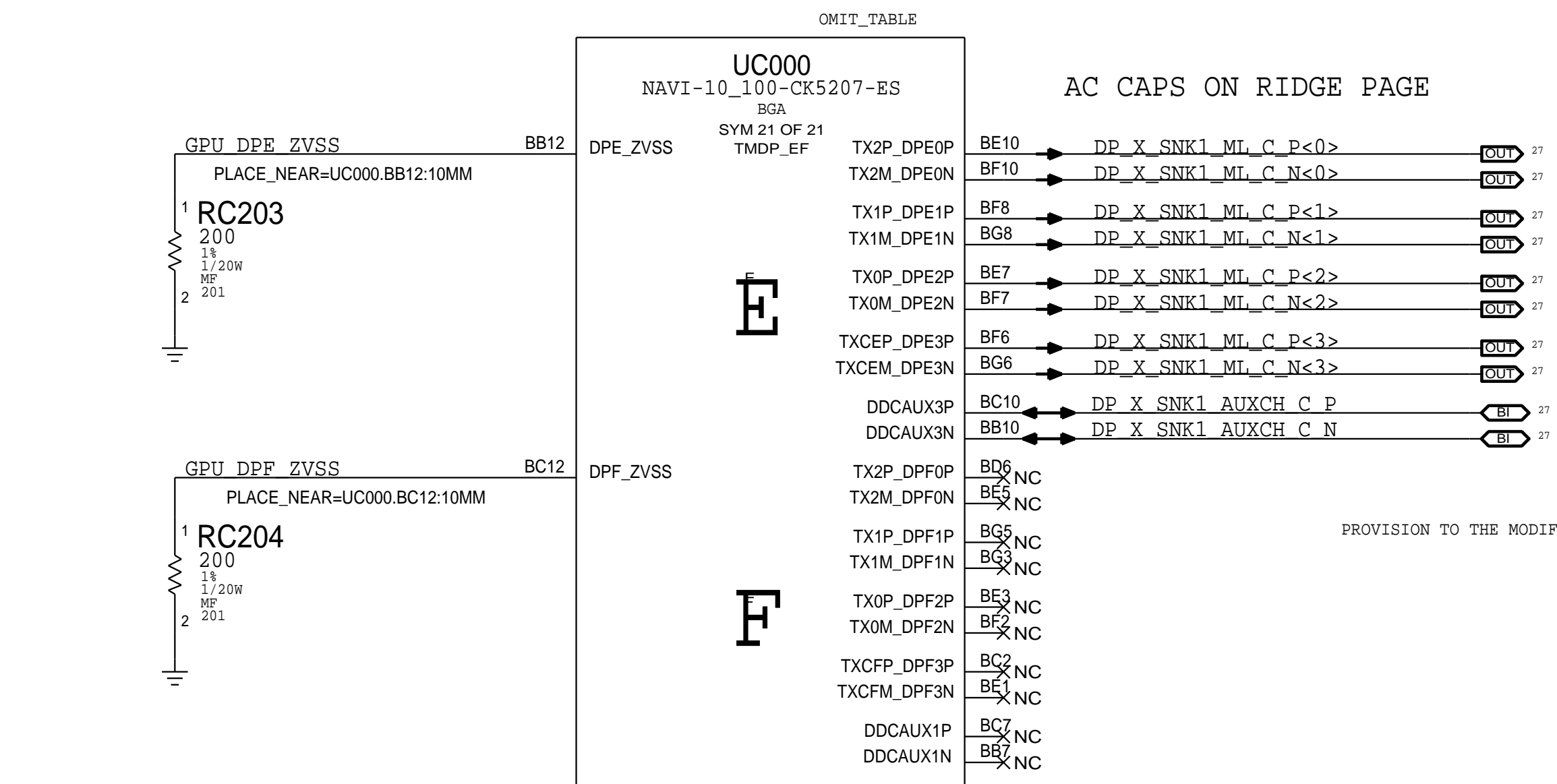
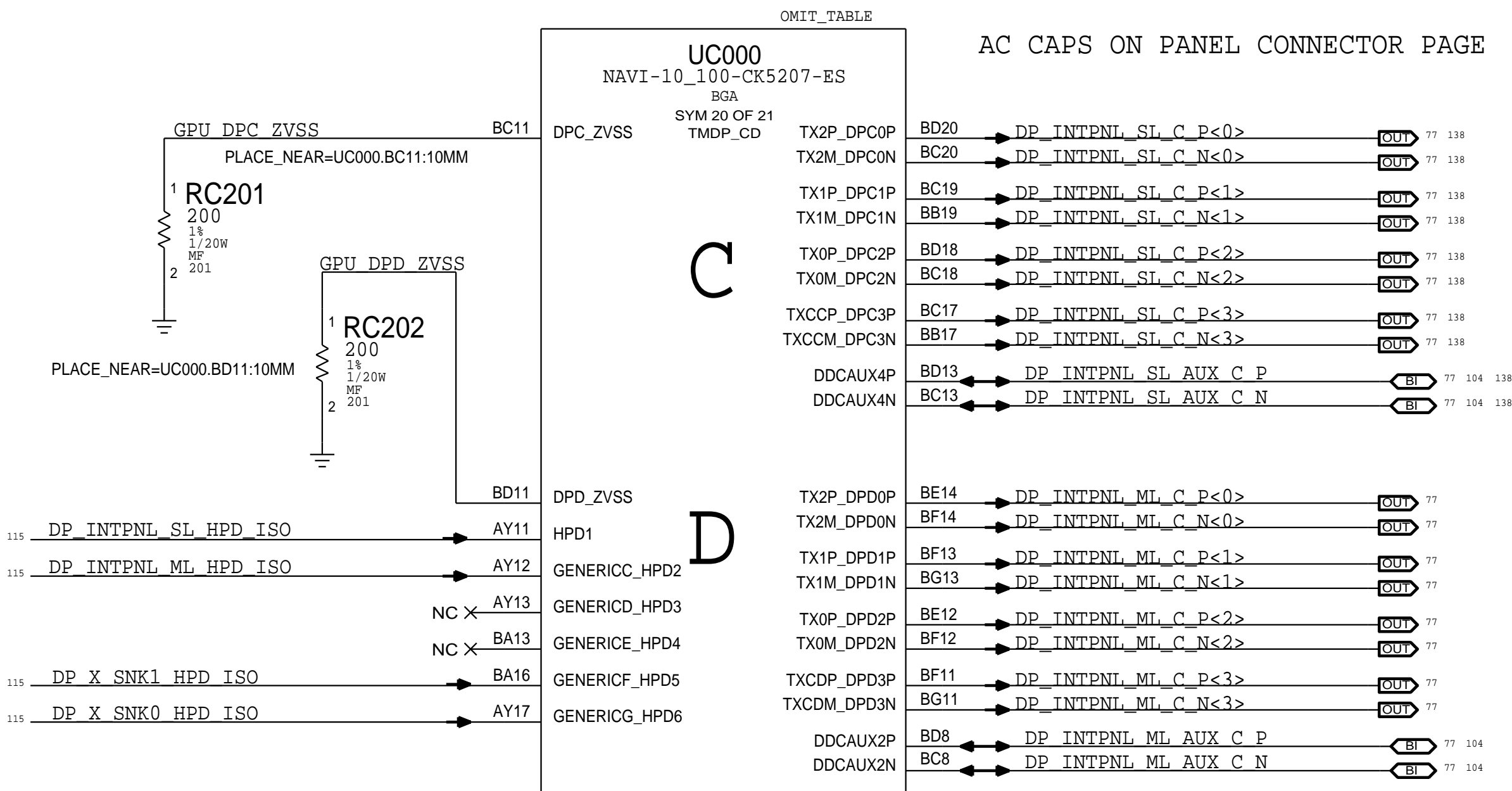


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| WIFI/BT SUPPORT | | | |
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THIS DESIGN
DOES NOT USE GPU
USBC FEATURE

NOTE: SYMBOL LANES ARE ORDERED FOR USB-C
PORT A DP LANES ARE OUT OF ORDER, 3-2-0-1




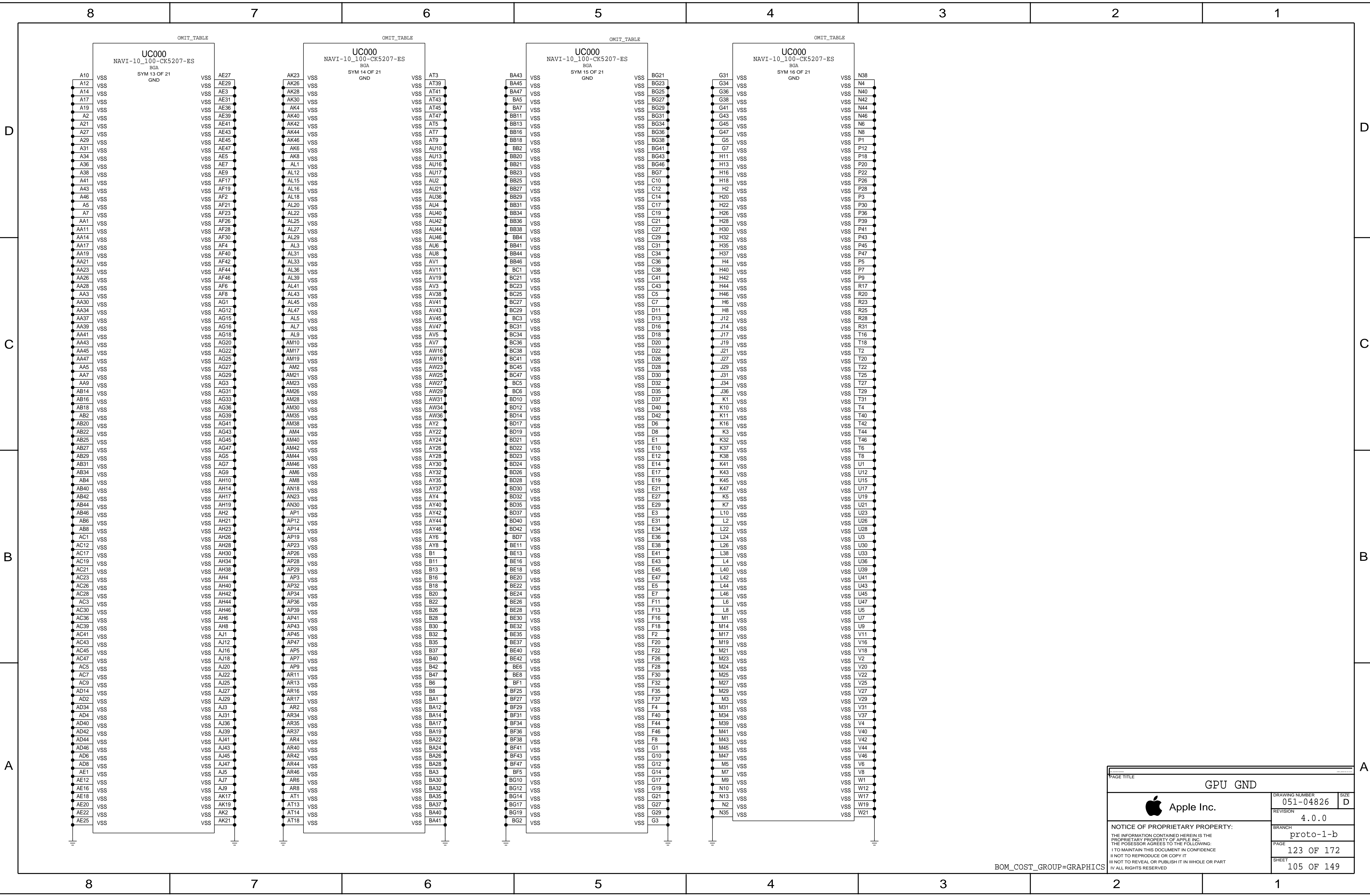
NOTES:

ALL 6 VIDEO PORTS ARE CONFIG TO DP IN VBIOS

NAVI DOES NOT SUPPORT DUAL LINK DVI

BOM_COST_GROUP=GRAPHICS

| PAGE TITLE | | | |
|---|----------------|------------|-----------|
| GPU DISPLAYPORT | | | |
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D

C

B

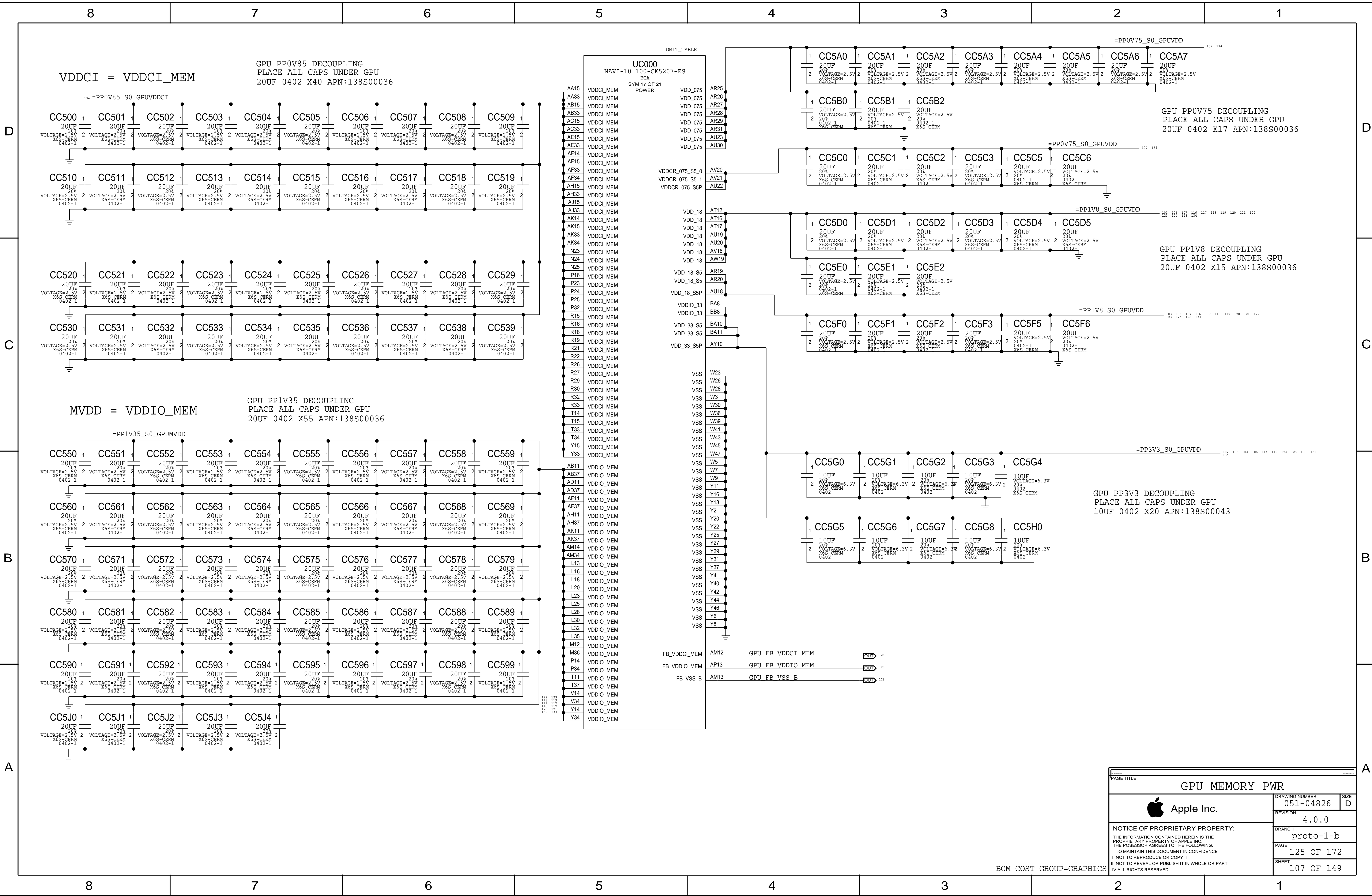
A

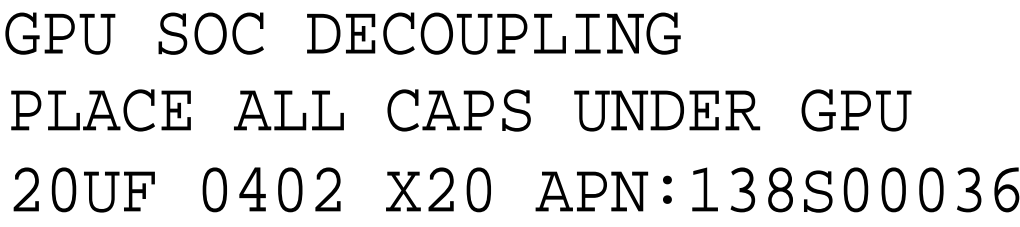
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
C

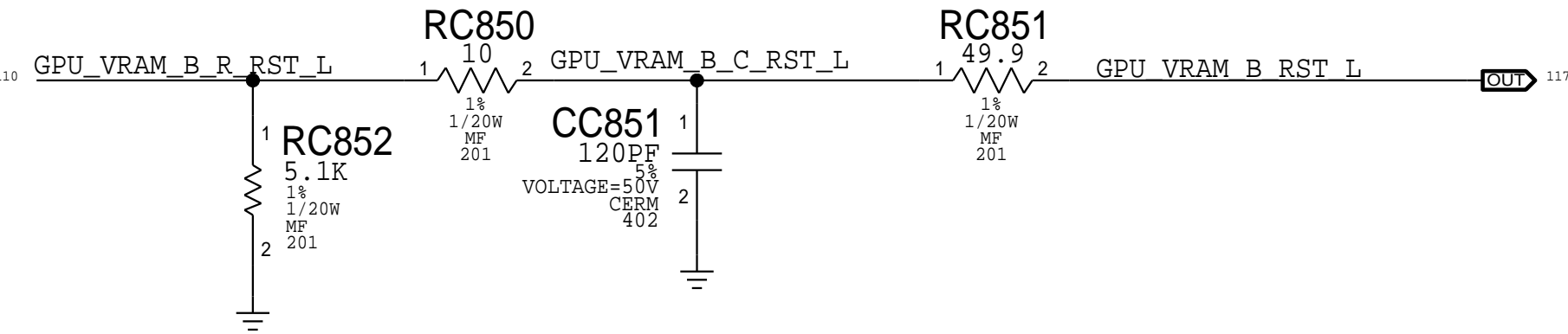
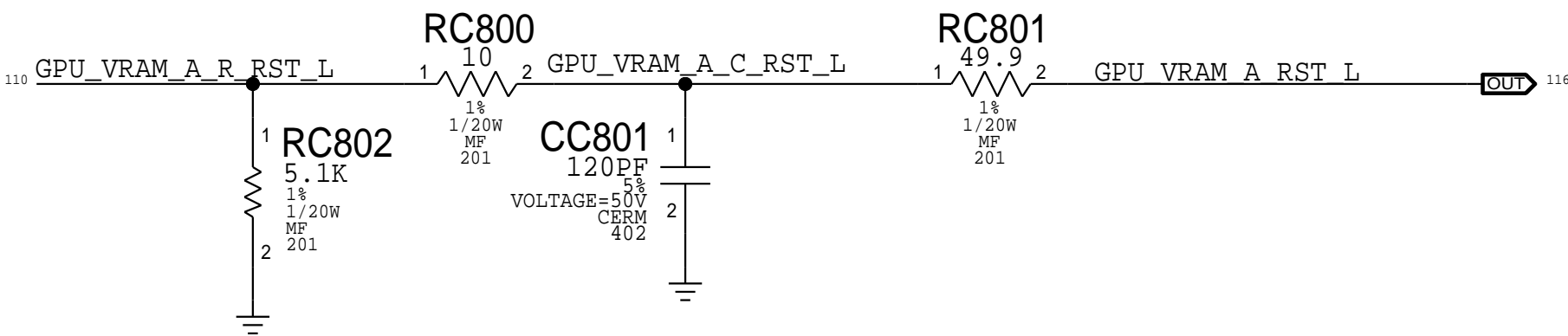
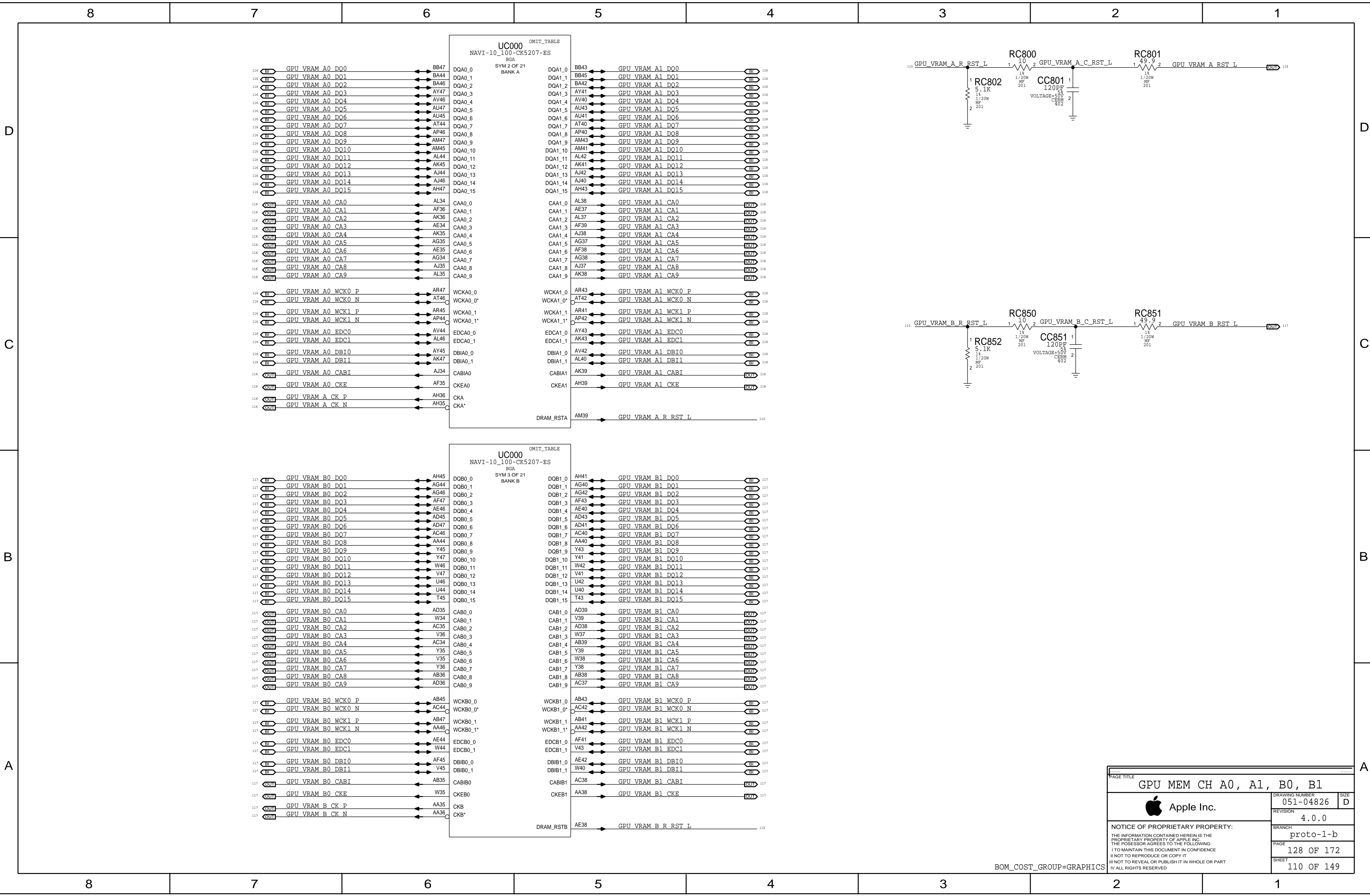
B

A



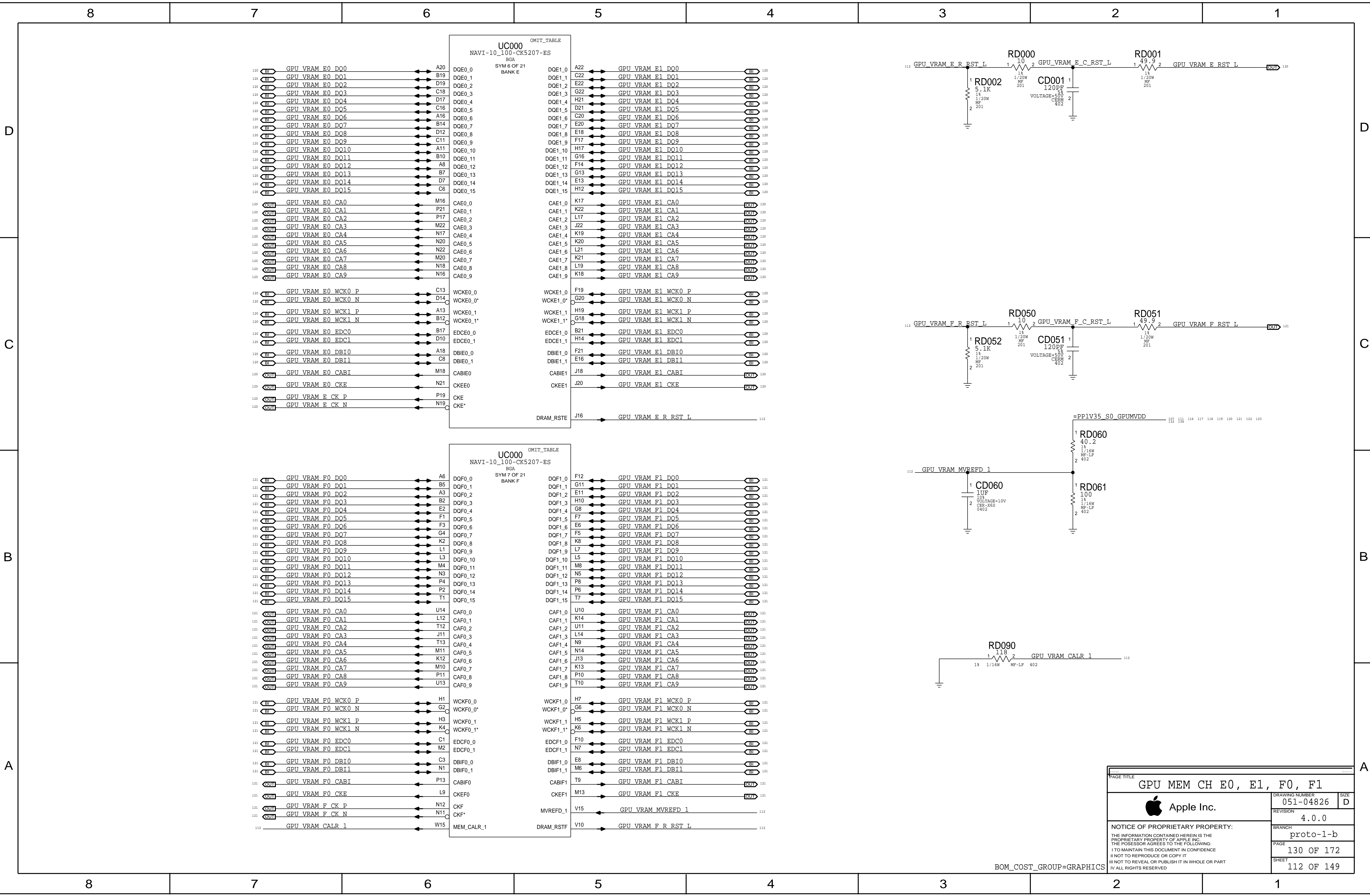



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| PAGE TITLE | | DRAWING NUMBER | | SIZE |
| GPU CORE AND SOC PWR | | 051-04826 | D | |
|  Apple Inc. | REVISION | | 4.0.0 | |
| | BRANCH | | proto-1-b | |
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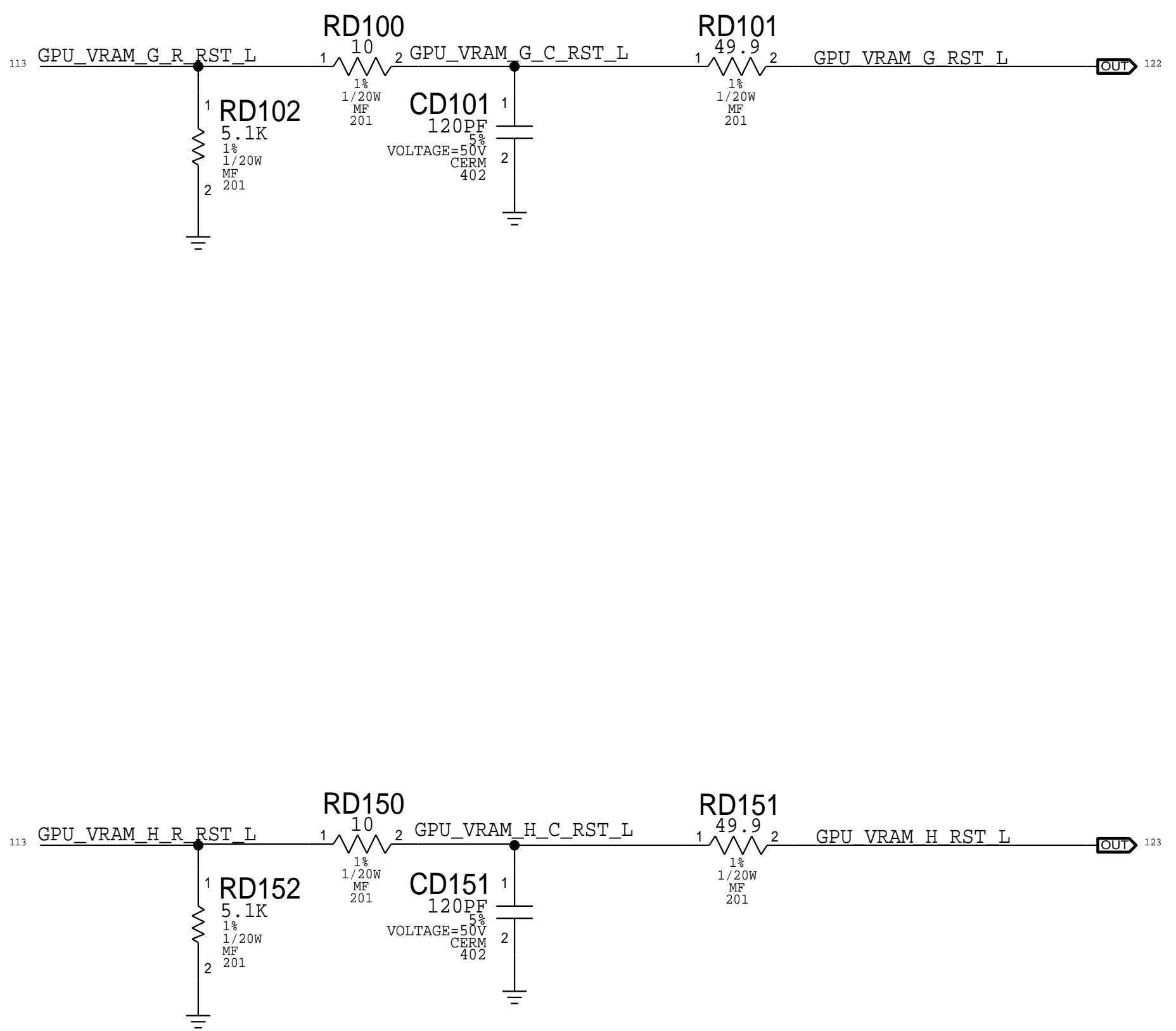
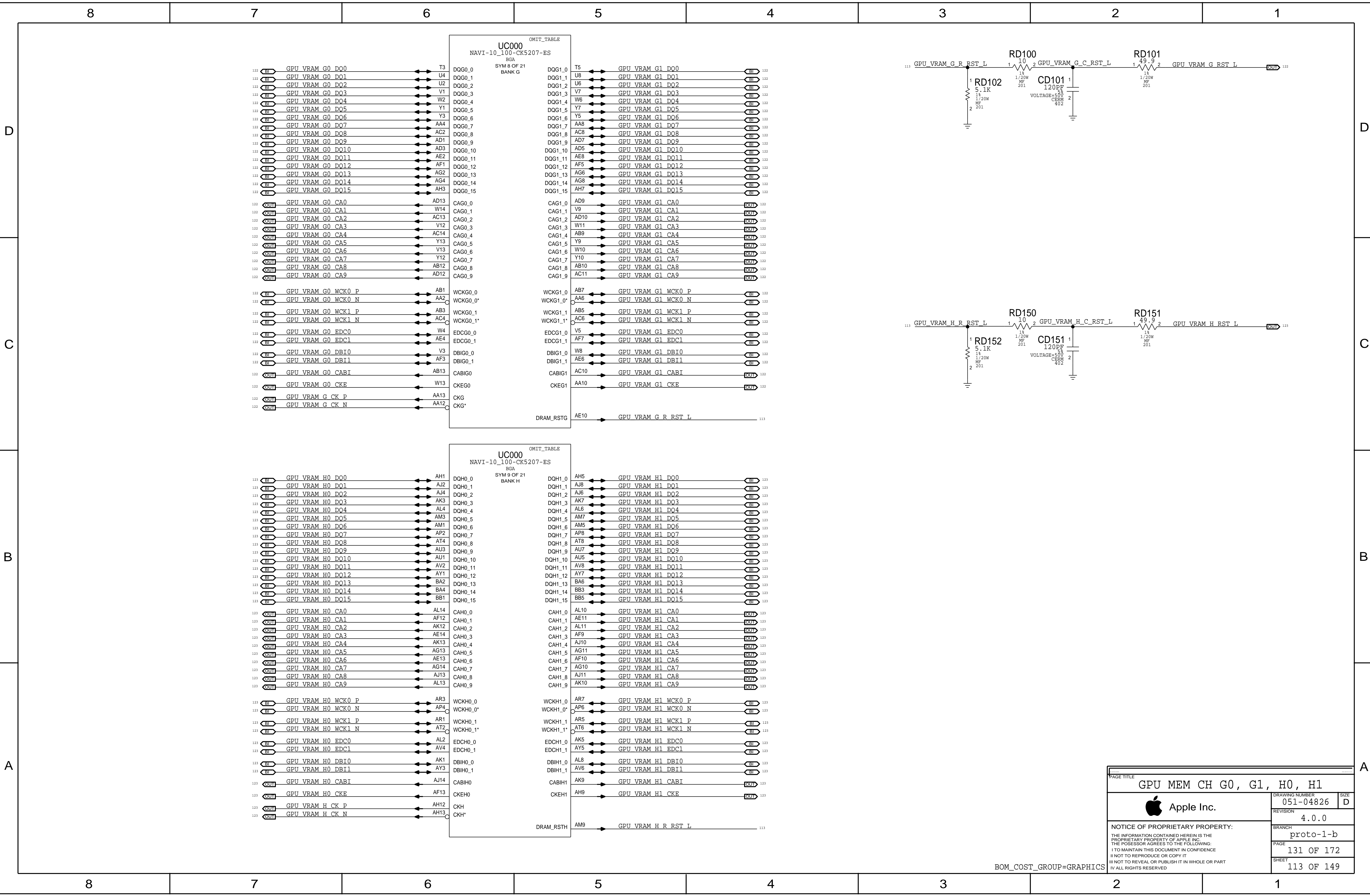


| | | |
|--|----------------|------------|
| PAGE TITLE | | |
| GPU MEM CH A0, A1, B0, B1 | | |
| | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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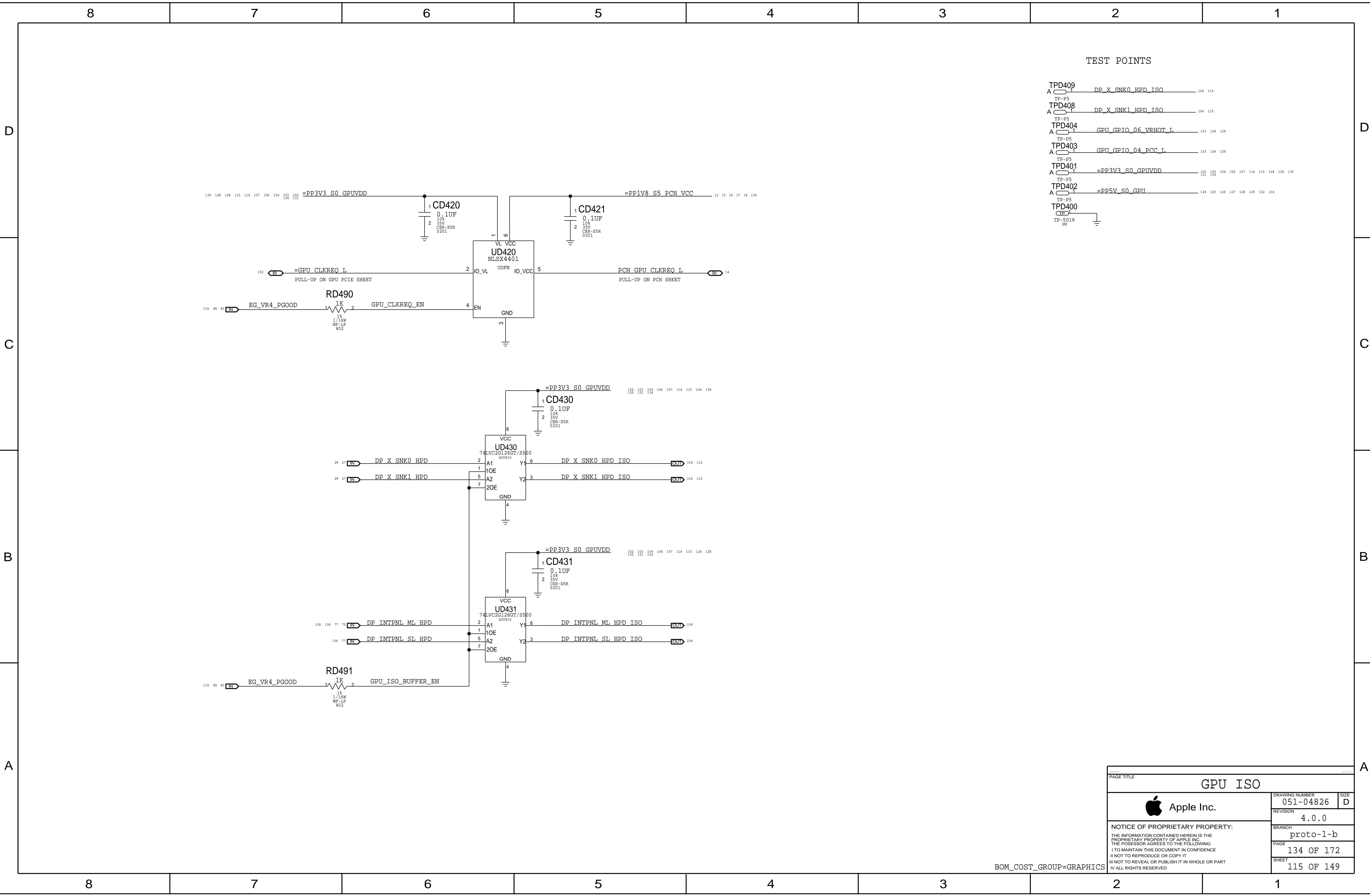


| | | |
|---|----------------|------------|
| PAGE TITLE | | |
| GPU MEM CH E0, E1, F0, F1 | | |
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| | | |
|---|----------------|------------|
| PAGE TITLE | | |
| GPU MEM CH G0, G1, H0, H1 | | |
| | DRAWING NUMBER | 051-04826 |
| | REVISION | 4.0.0 |
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| | PAGE | 131 OF 172 |
| | SHEET | 113 OF 149 |

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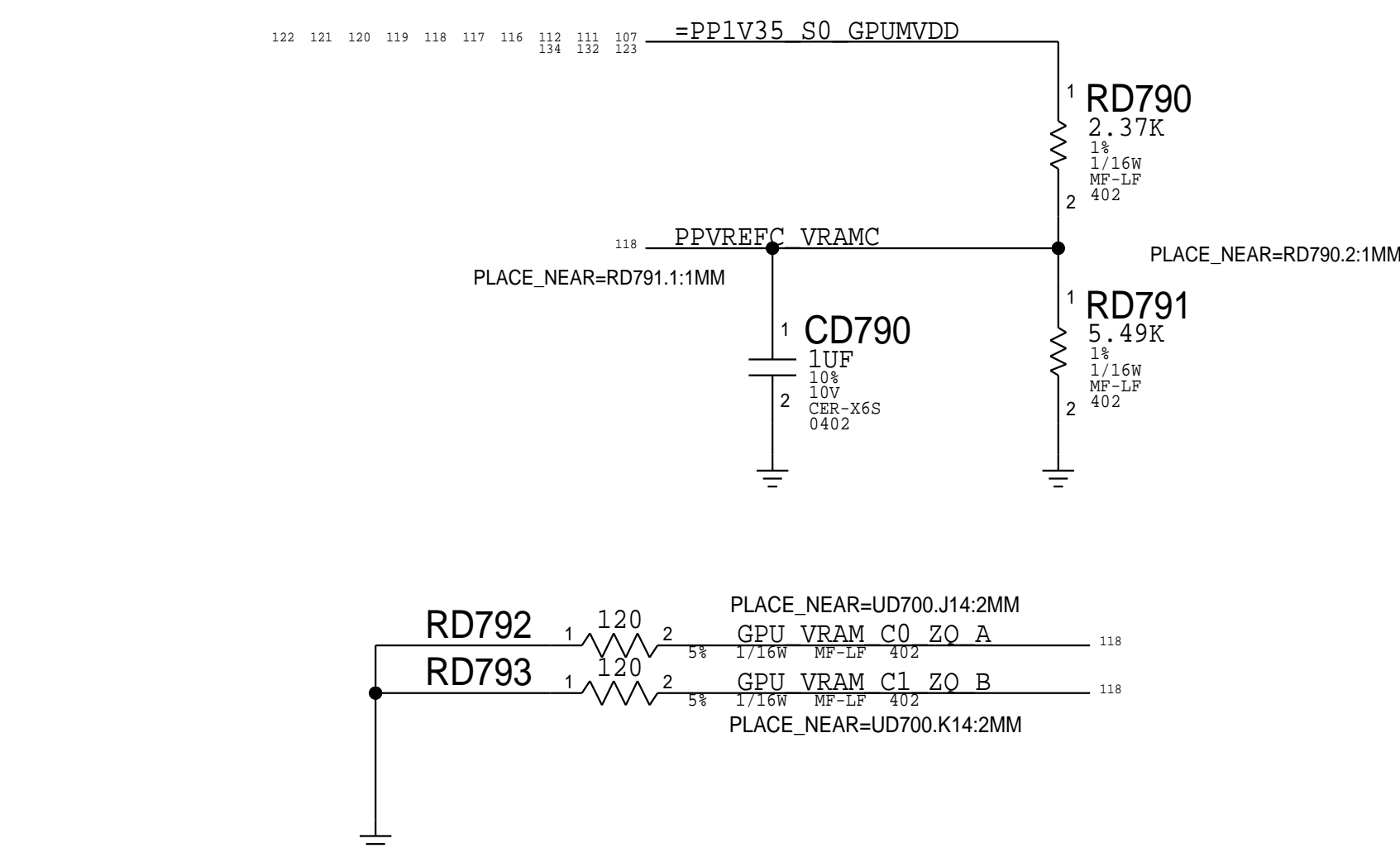
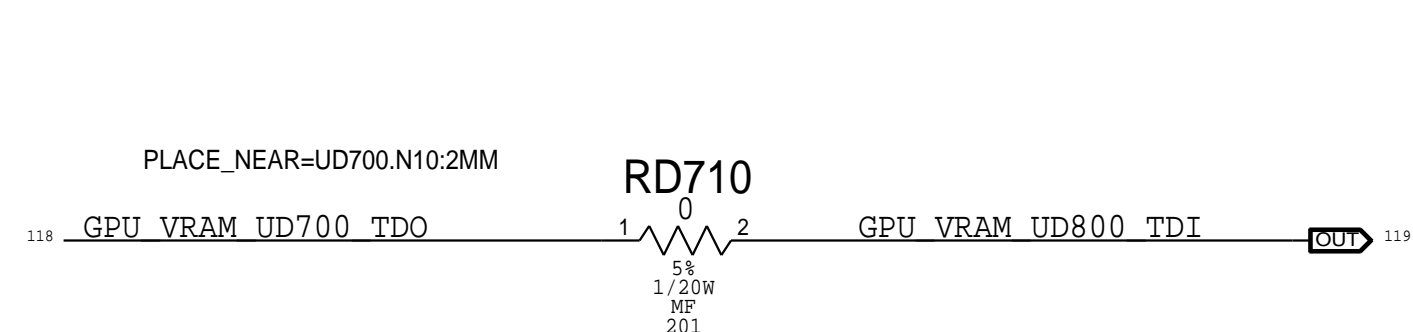
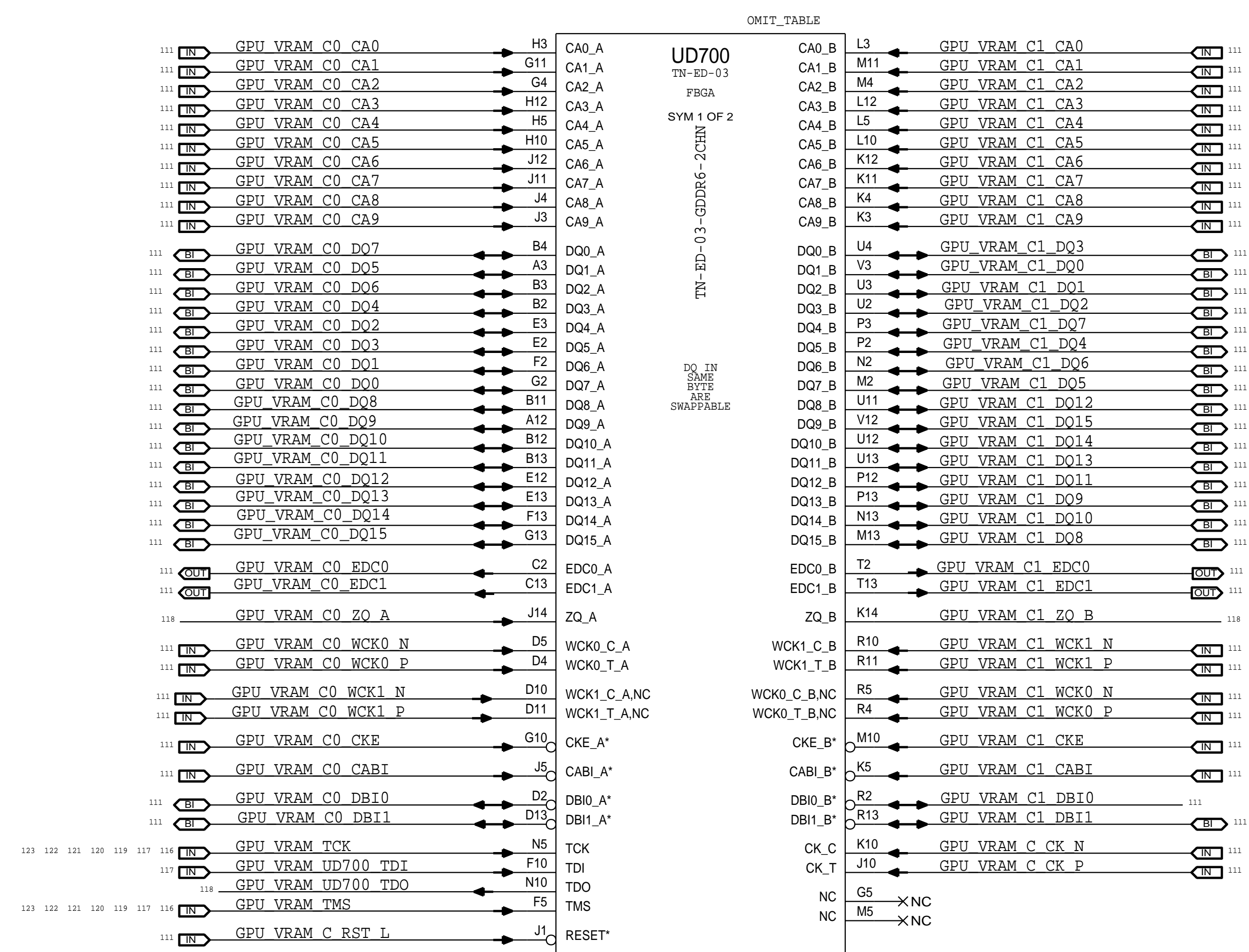
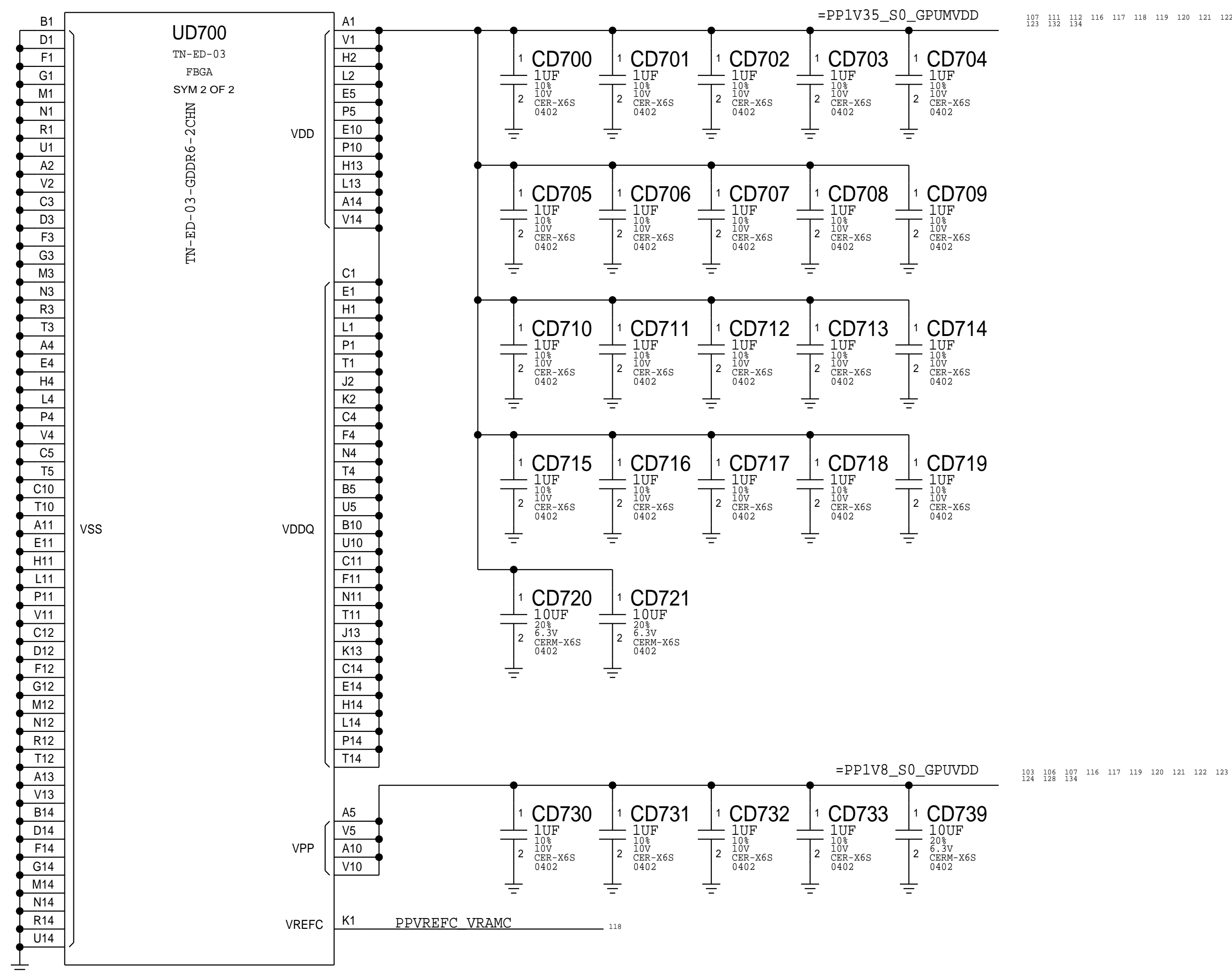



TEST POINTS

- TPD409
A DP_X_SNK0_HPD_ISO 104 115
TP-P5
- TPD408
A DP_X_SNK1_HPD_ISO 104 115
TP-P5
- TPD404
A GPU_GPIO_06_VRHOT_L 103 124 128
TP-P5
- TPD403
A GPU_GPIO_04_PCC_L 103 124 128
TP-P5
- TPD401
A =PP3V3_S0_GPUVDD 102 103 104 106 107 114 115 124 128 130 131 134
TP-P5
- TPD402
A =PP5V_S0_GPU 124 125 126 127 128 129 132 134
TP-P5
- TPD400
 TP-5016 SM

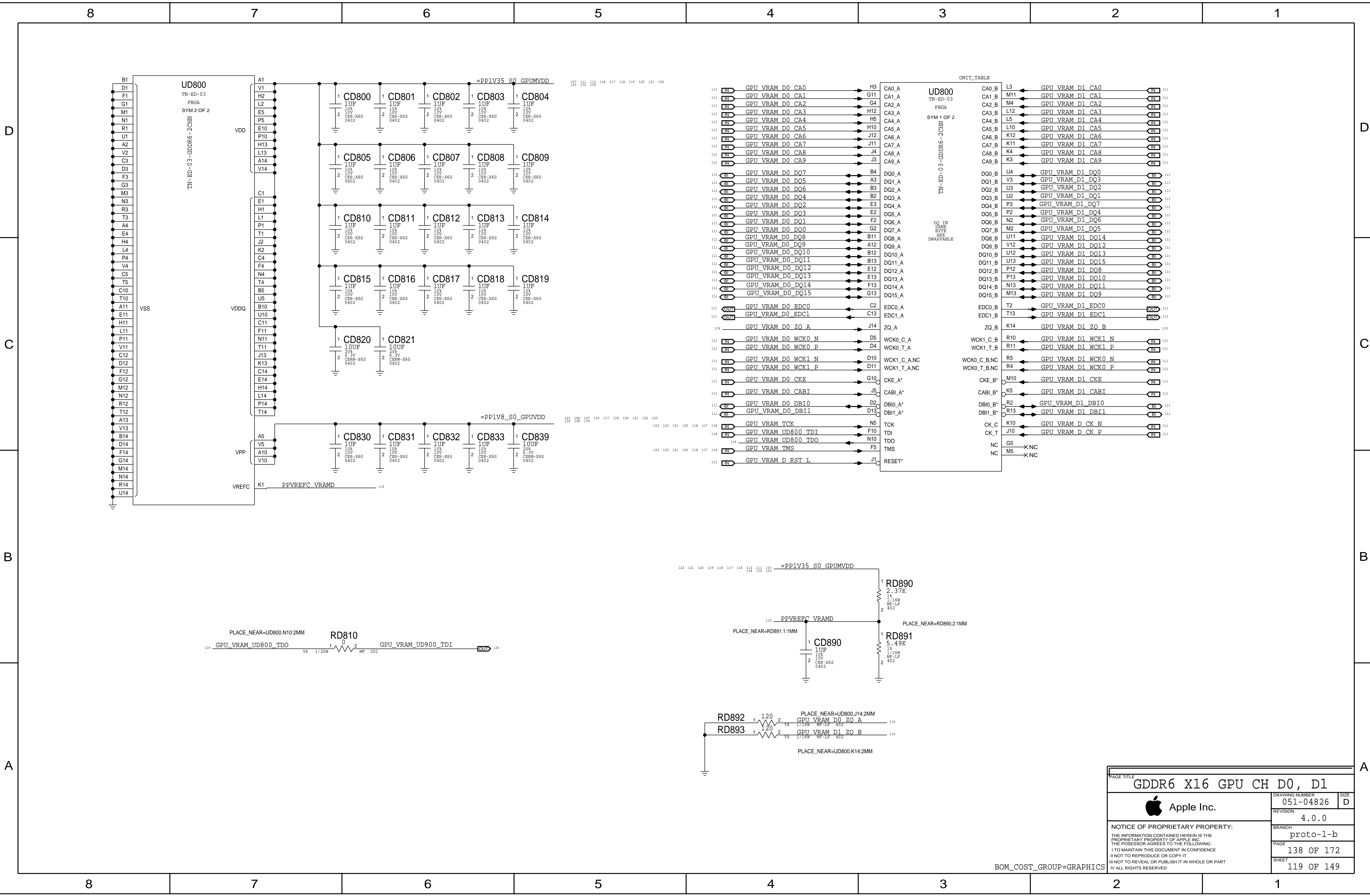
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| | DRAWING NUMBER | 051-04826 |
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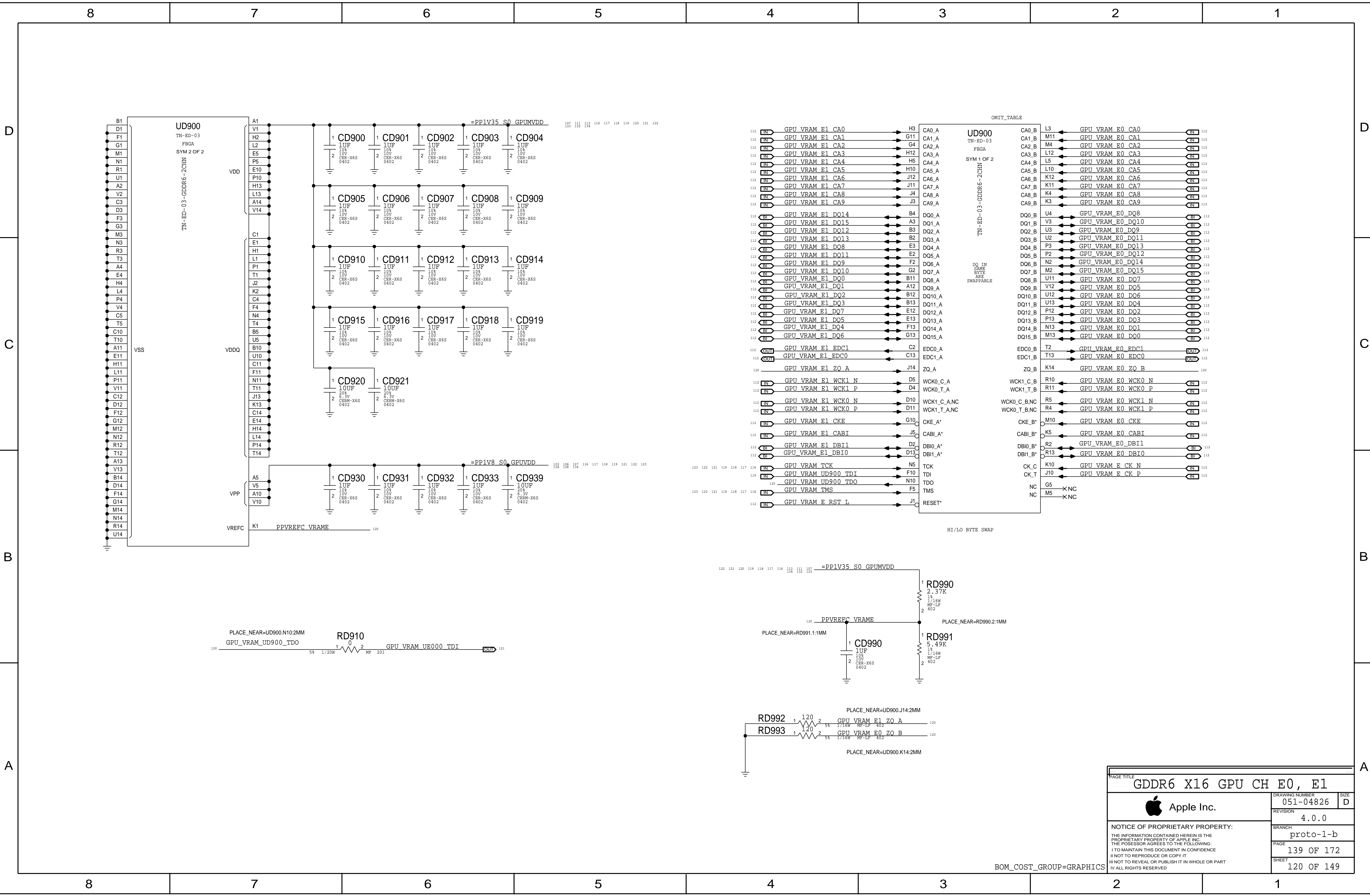
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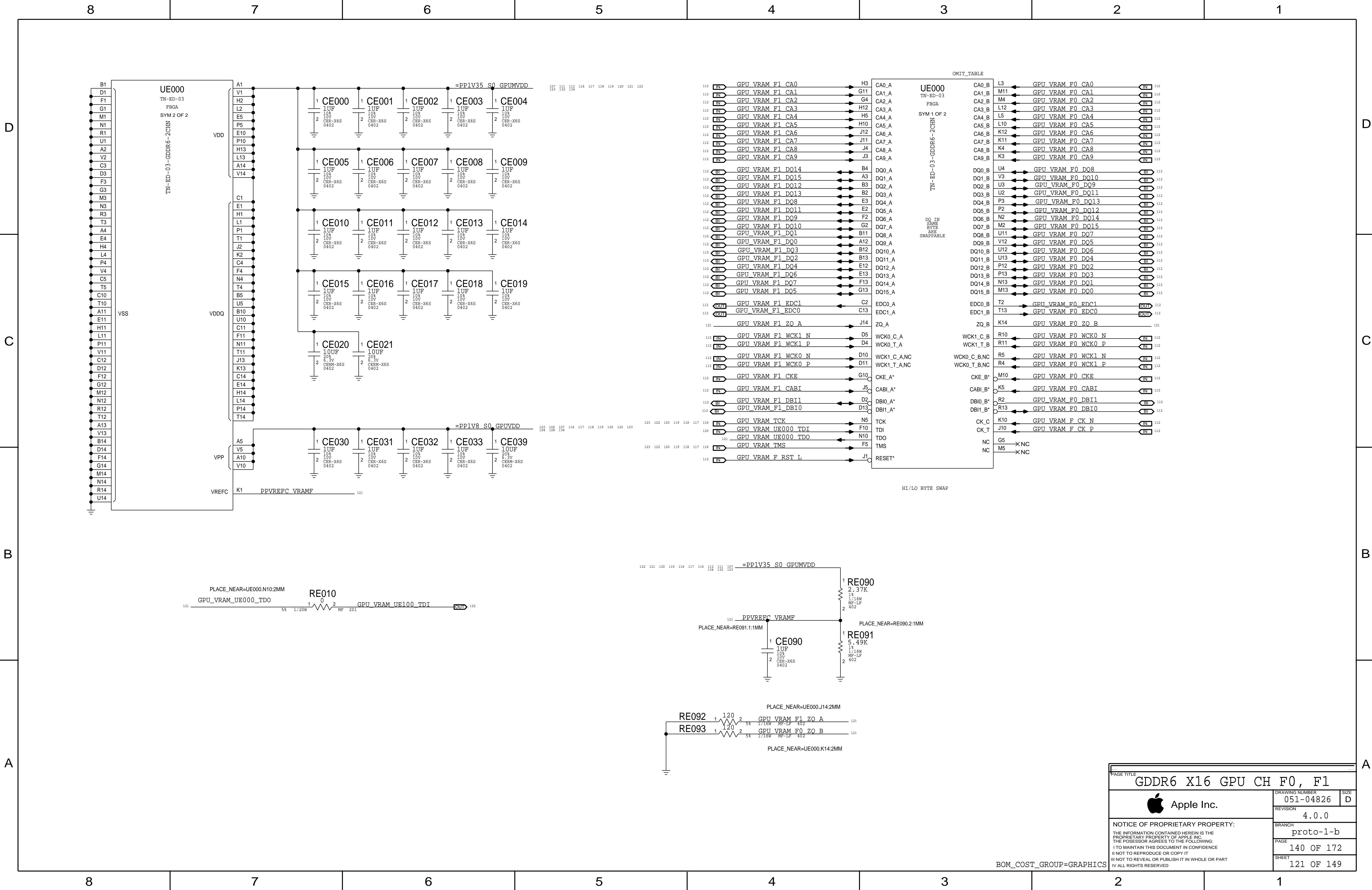
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|  Apple Inc. | DRAWING NUMBER | 051-04826 |
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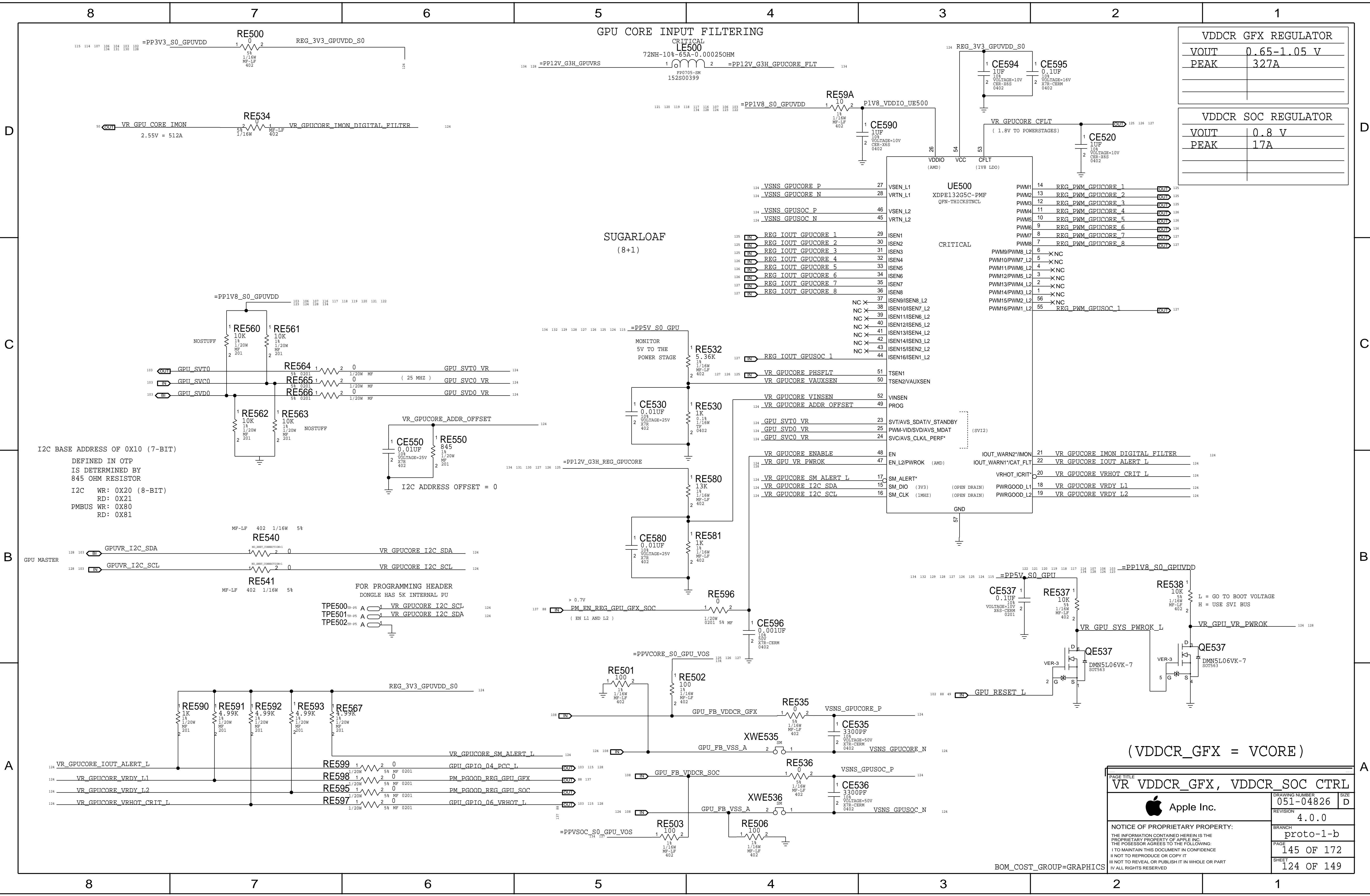


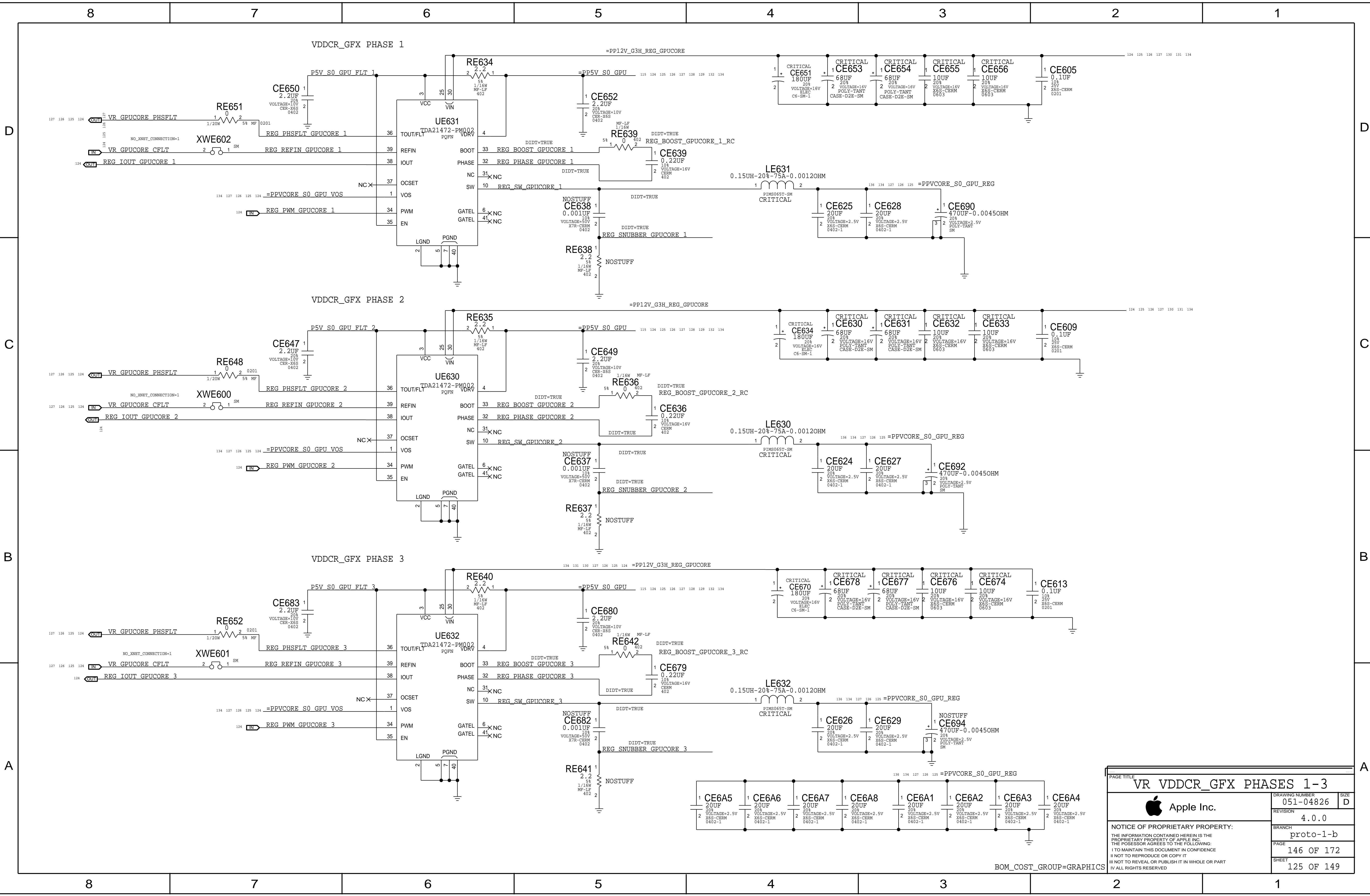
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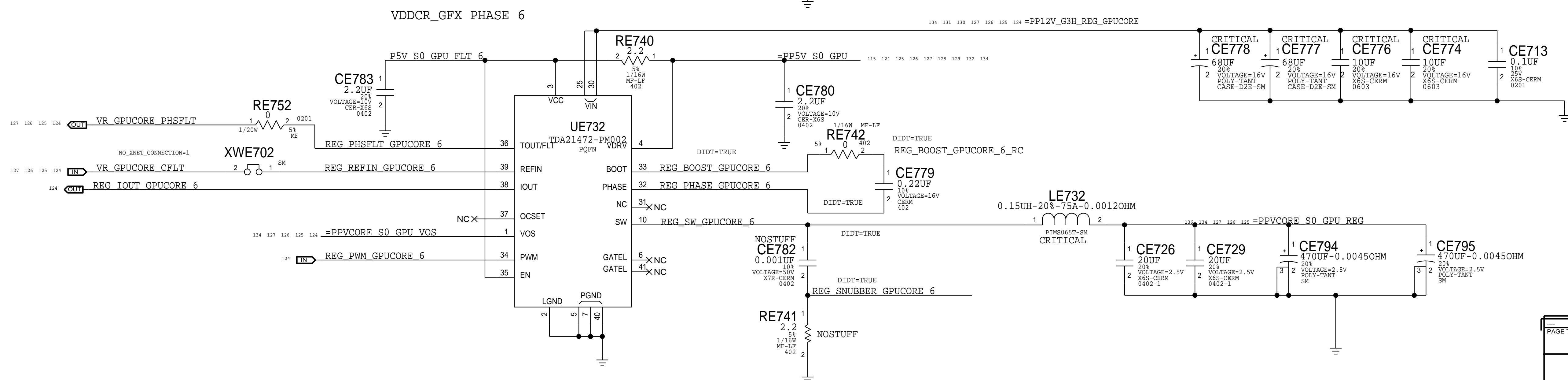
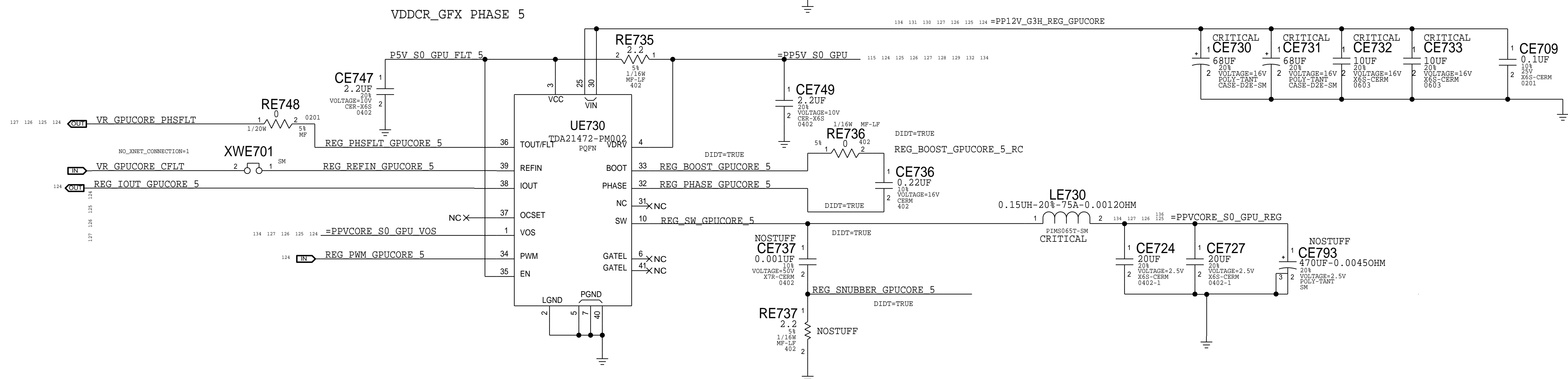
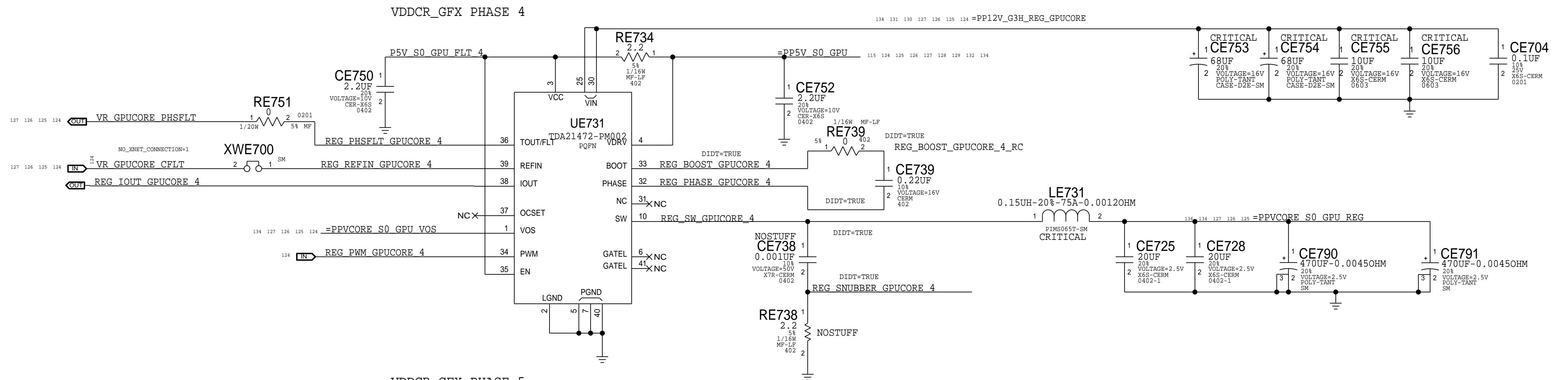



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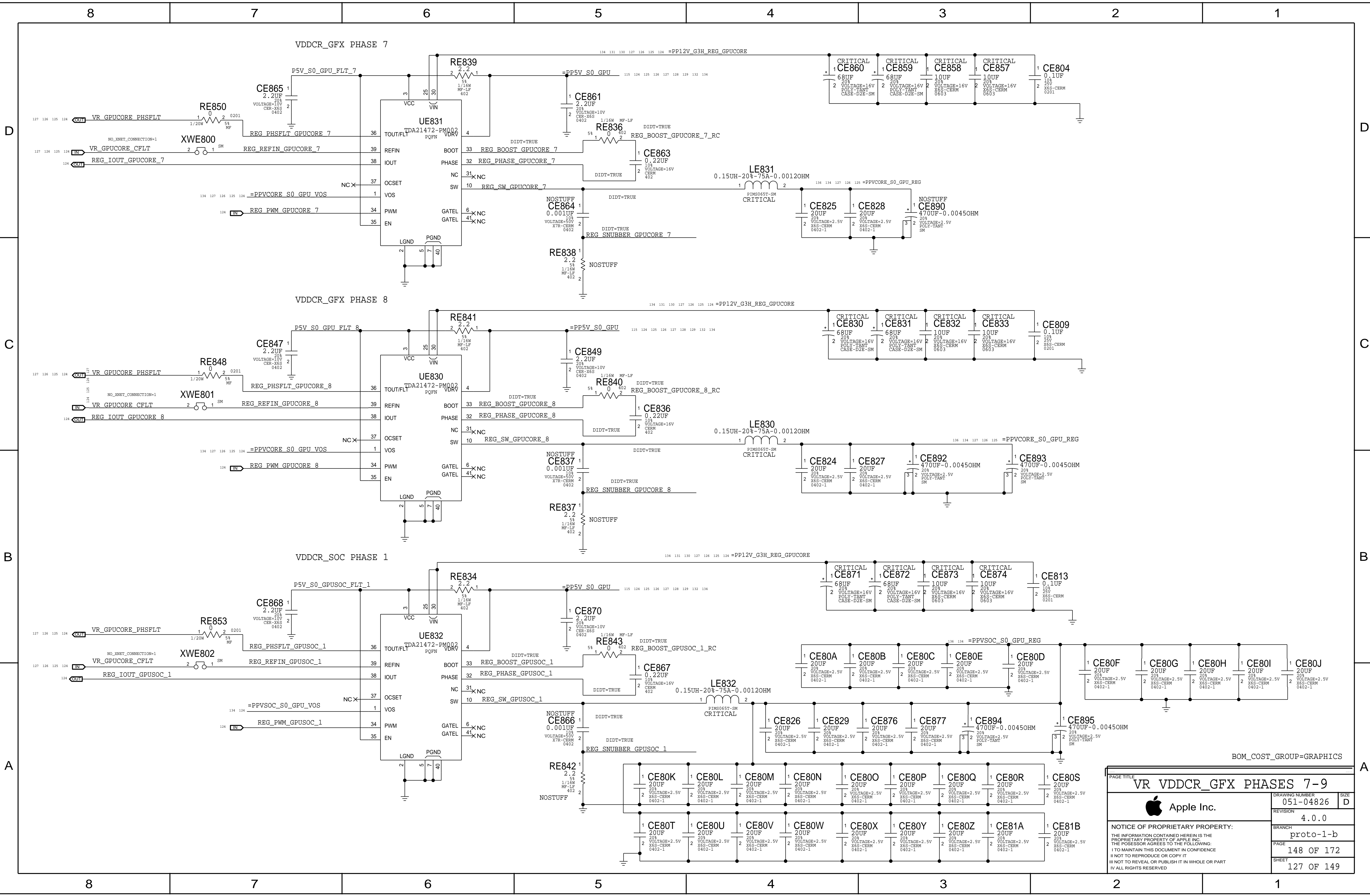



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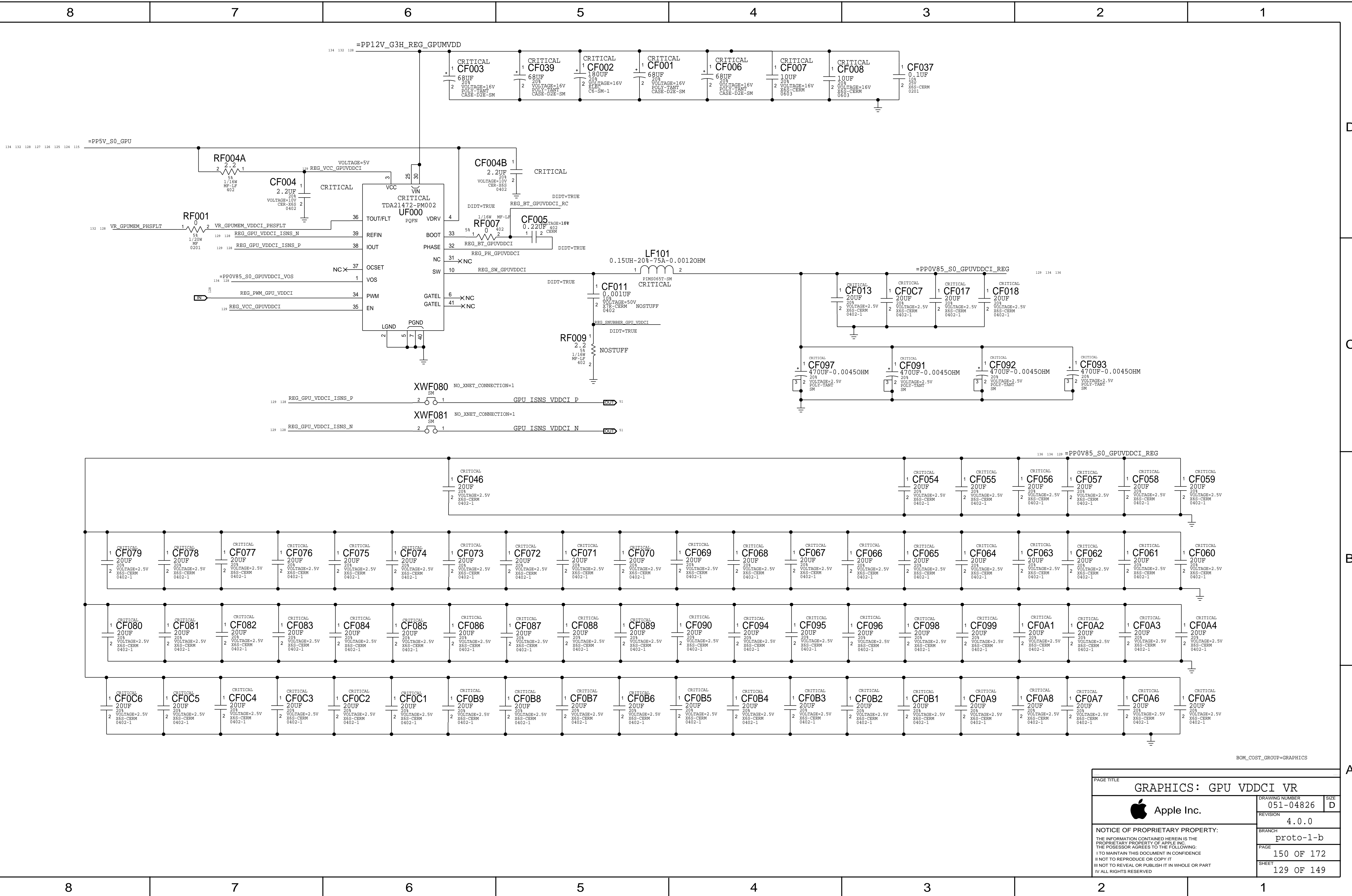


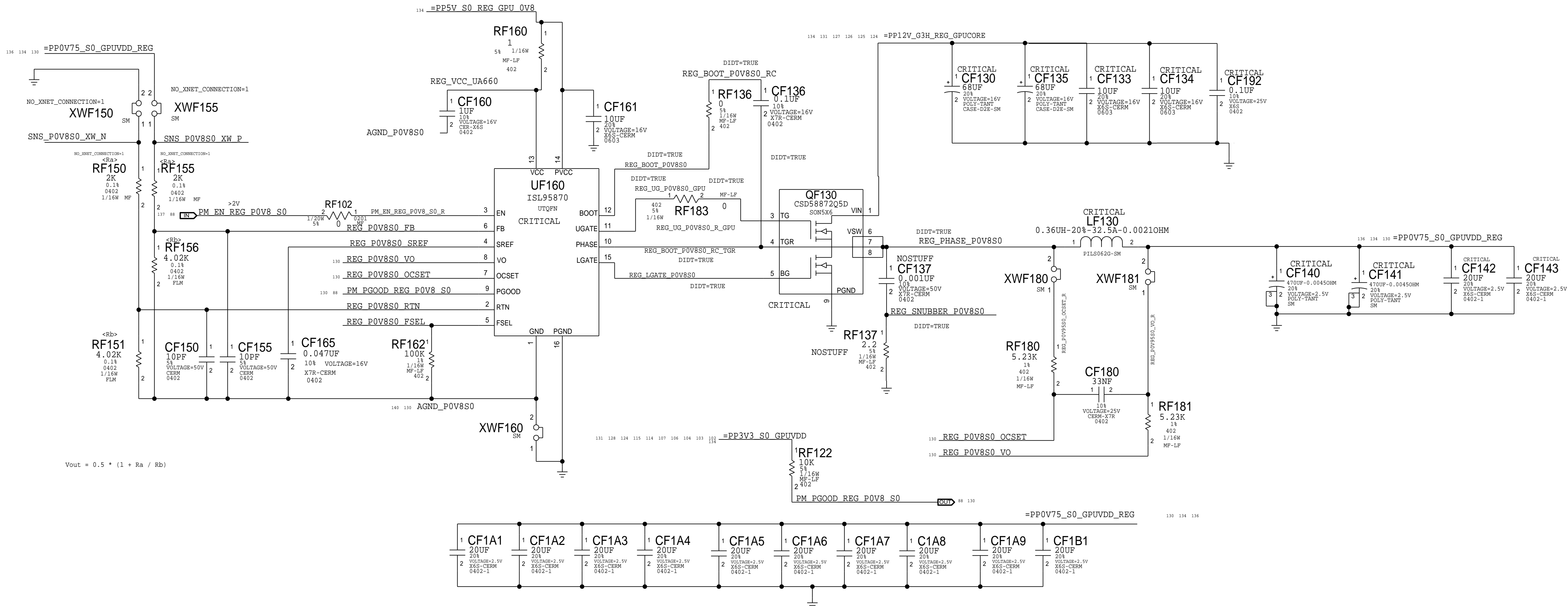
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| VR VDDCR_GFX PHASES 4-6 | | | |
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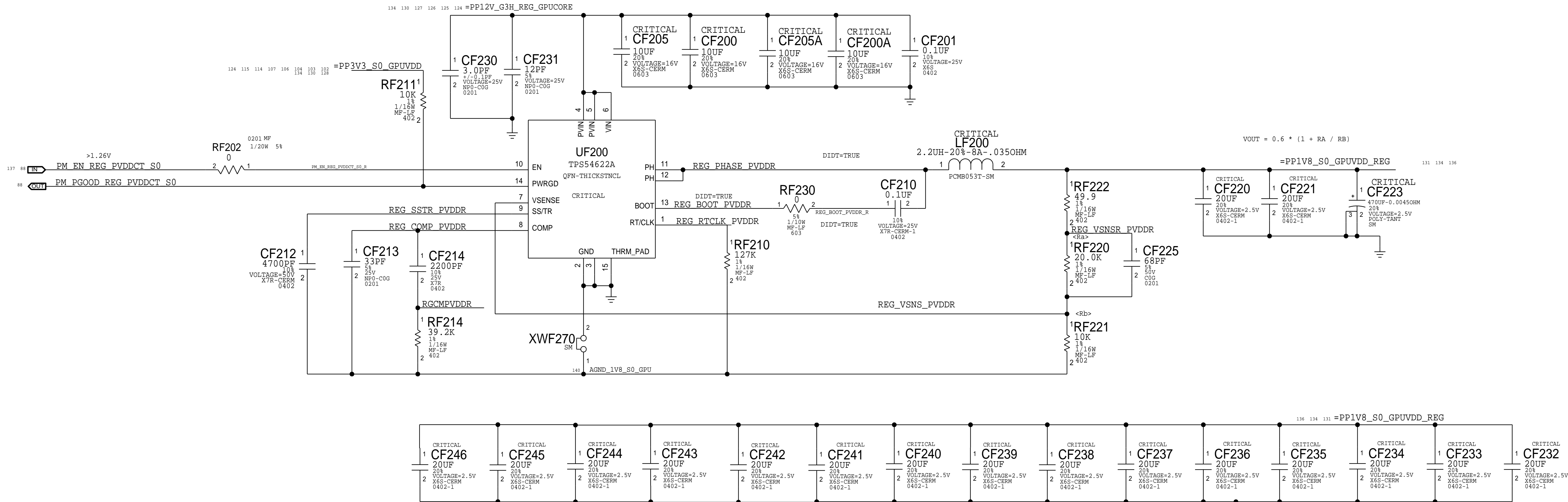


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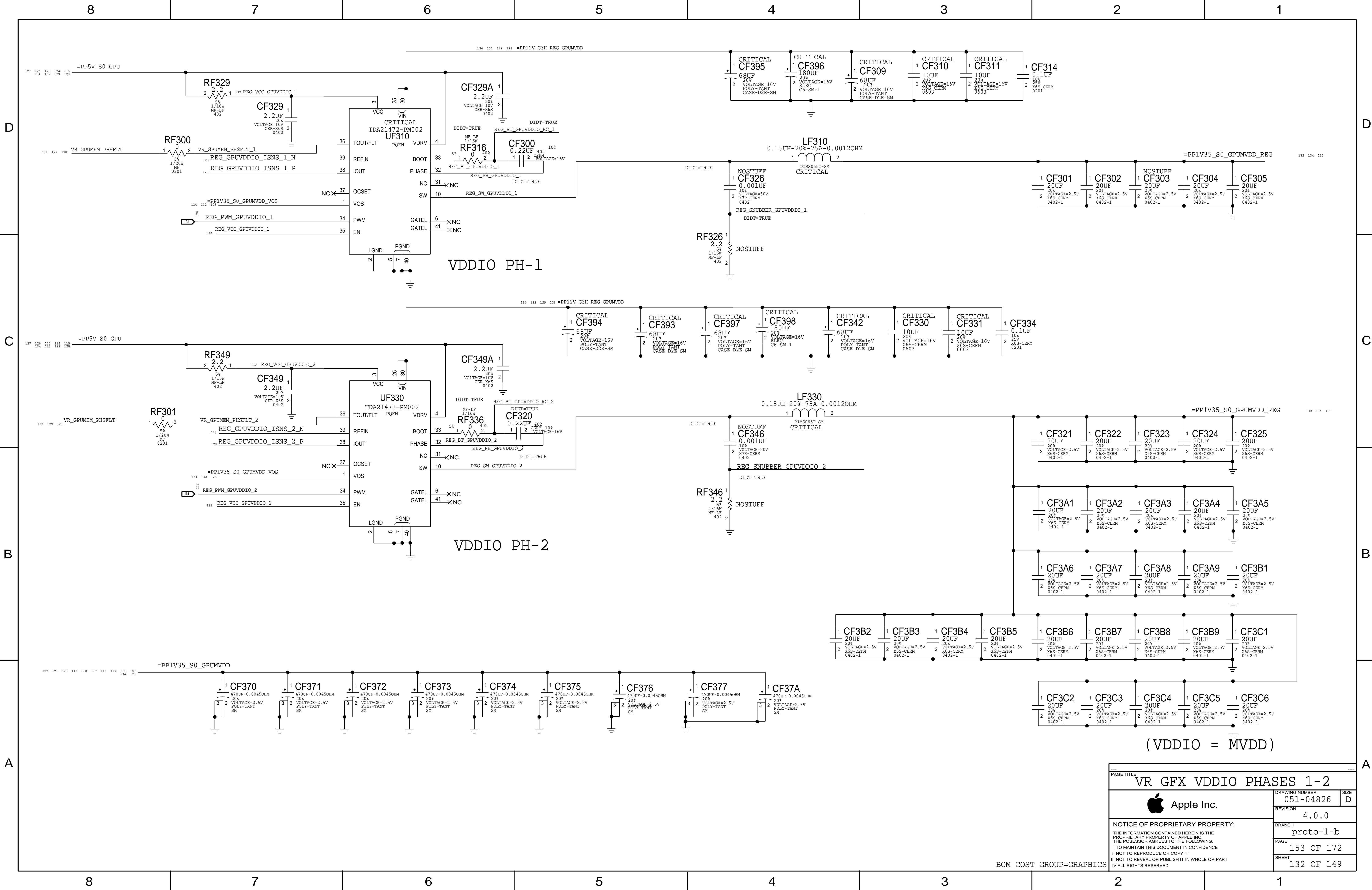


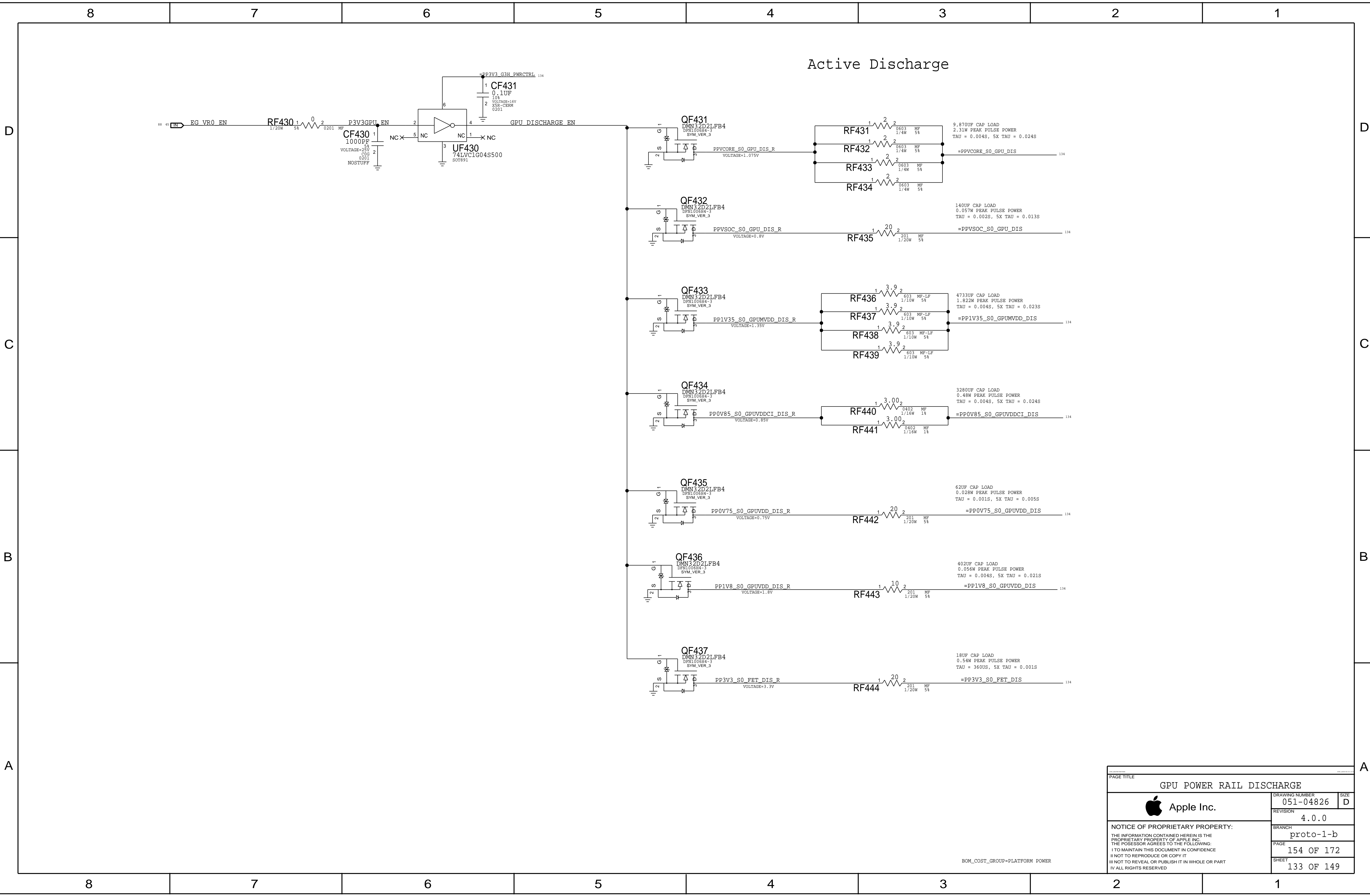
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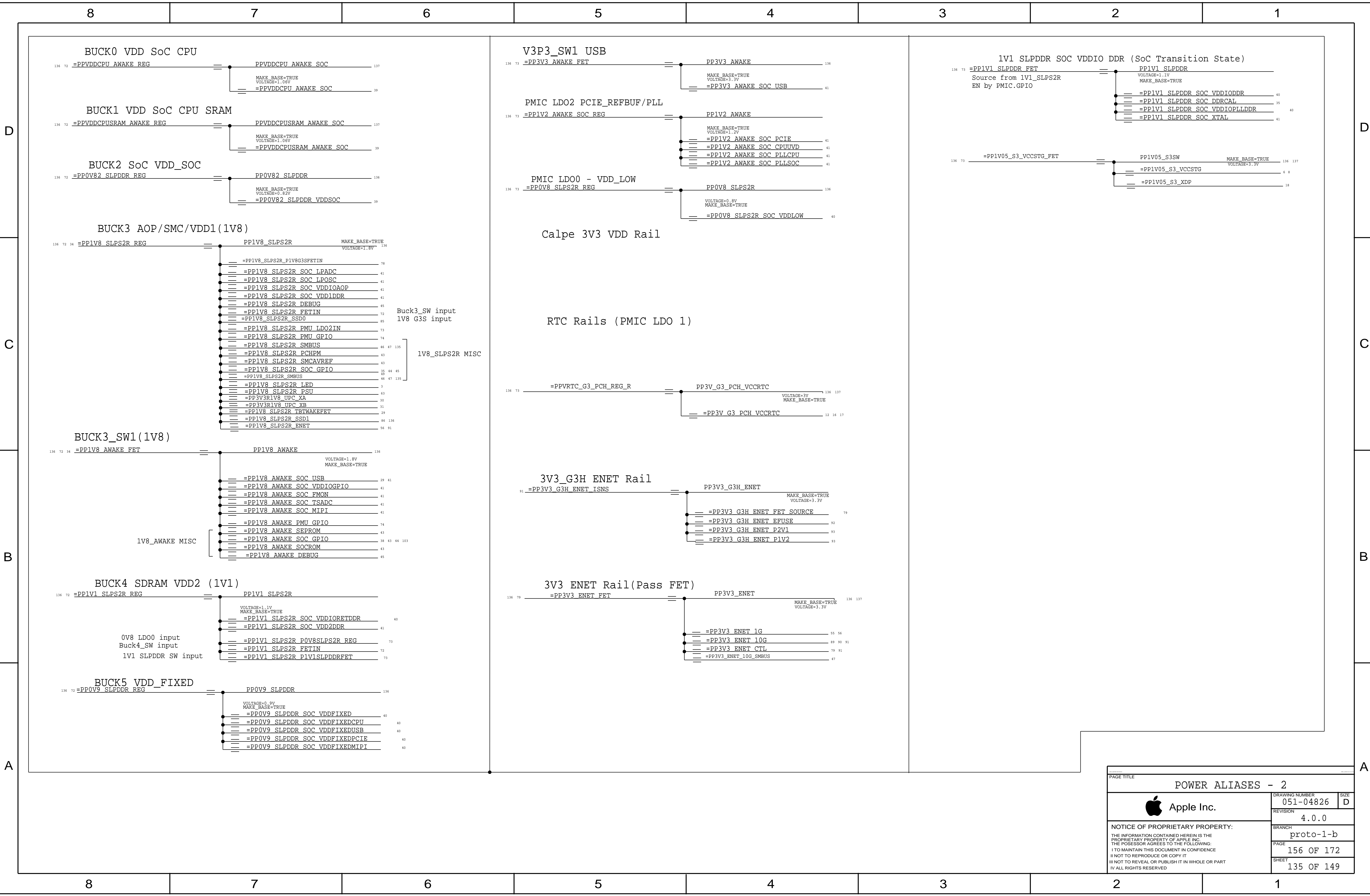



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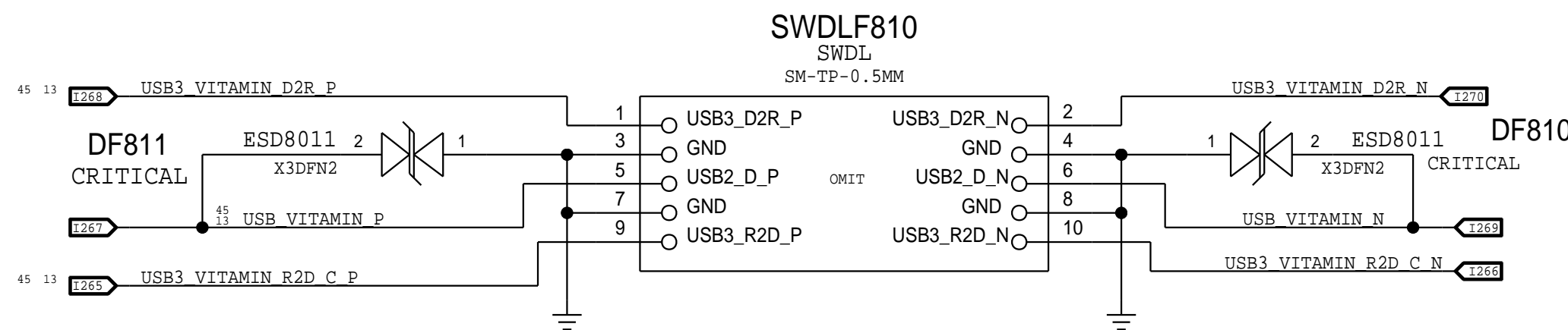


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| POWER ALIASES - 2 | | |
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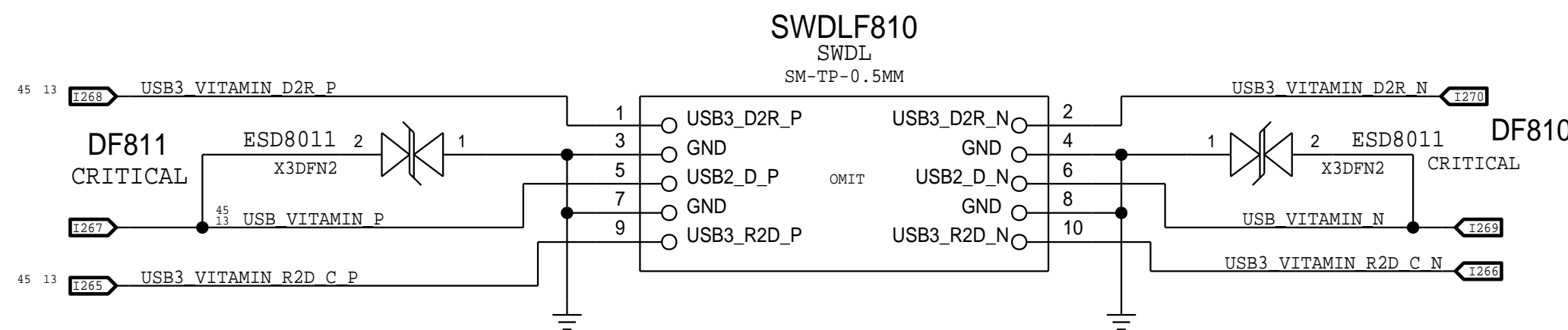
Connector FuncTest Points

| FUNC_TEST | | |
|----------------------------|------|----------------|
| PP12V_LCD_FET | TRUE | 77 |
| I2C_DP_TCON_SLA_3V3_SDA | TRUE | |
| I2C_DP_TCON_SLA_3V3_SCL | TRUE | |
| DP_INTPNL_ML_HPD | TRUE | 75, 77, 115 |
| MIPI CAMERA | | |
| I2C_FTCAM_SDA_CONN | TRUE | 62 |
| I2C_FTCAM_SCL_CONN | TRUE | 62 |
| PP5V_G3S_CAMERA_F | TRUE | 62 |
| I2C_ALS_SDA_CONN | TRUE | 62 |
| I2C_ALS_SCL_CONN | TRUE | 62 |
| DMIC | | |
| PP1V8_DMIC_0_CONN | TRUE | 61 |
| PDM_DMIC_CLK0 | TRUE | 44, 61 |
| PDM_DMIC_DATA0_UNSEC | TRUE | 61 |
| PP1V8_DMIC_1_CONN | TRUE | 61 |
| PDM_DMIC_CLK1 | TRUE | 44, 61 |
| PDM_DMIC_DATA1_UNSEC | TRUE | 61 |
| SPKR 0 | | |
| AUD_SPKR_LWFR_OUT_N | TRUE | 58 |
| AUD_SPKR_LWFR_OUT_P | TRUE | 58 |
| SPKR_ID0 | TRUE | 37, 58 |
| AUD_SPKR_LTWTT_OUT_N | TRUE | 58 |
| AUD_SPKR_LTWTT_OUT_P | TRUE | 58 |
| SPKR 1 | | |
| AUD_SPKR_RWFR_OUT_N | TRUE | 59 |
| AUD_SPKR_RWFR_OUT_P | TRUE | 59 |
| SPKR_ID1 | TRUE | 37, 59 |
| AUD_SPKR_RTWTT_OUT_N | TRUE | 59 |
| AUD_SPKR_RTWTT_OUT_P | TRUE | 59 |
| AUDIO | | |
| AUD_CONN_J1_HP_LT | TRUE | 60 |
| AUD_CONN_J1_HP_SNS_LT | TRUE | 60 |
| AUD_CONN_J1_HP_RT | TRUE | 60 |
| AUD_CONN_J1_HP_SNS_RT | TRUE | 60 |
| AUD_CONN_J1_HP_PORT_US_GND | TRUE | 60 |
| AUD_CONN_J1_HP_PORT_CH_GND | TRUE | 60 |
| AUD_CONN_J1_HS_MICP | TRUE | 60 |
| AUD_CONN_J1_HS_MICN | TRUE | 60 |
| AUD_CONN_J1_AUD_RING_SENSE | TRUE | 60 |
| AUD_CONN_J1_AUD_TIP_SENSE | TRUE | 60 |
| AUD_CONN_J1_CABLE_DETECT | TRUE | 60 |
| FAN | | |
| FAN_0_PWM_FILT | TRUE | 54 |
| FAN_0_TACH_FILT | TRUE | 54 |
| PP12V_FAN_FILT | TRUE | 54 |
| SOC | | |
| SOC_DOCK_CONNECT | TRUE | 30, 31, 36 |
| DFUMUX_SEL | TRUE | 45 |
| SOC_COLD_RESPT_L | TRUE | 36 |
| PCH_UART_DEBUG_R2D | TRUE | 15, 30, 45 |
| PCH_UART_DEBUG_D2R | TRUE | 15, 30, 45 |
| SMD_SOC_SWCLK | TRUE | 30, 31, 36, 45 |
| SMD_SOC_SWDIO | TRUE | 30, 31, 36, 45 |
| DEBUG_JTAG_SOC_TDO | TRUE | 45 |
| DEBUG_JTAG_SOC_TDI | TRUE | 45 |
| TP_JTAG_SOC_TRST_L | TRUE | 36, 140 |
| SMC_DEBUGPRT_RX | TRUE | 31, 36, 45 |
| SMC_DEBUGPRT_TX | TRUE | 31, 36, 45 |
| SOC_DEBUGPRT_RX | TRUE | 37, 45 |
| SOC_DEBUGPRT_TX | TRUE | 37, 45 |
| I2C_PWR_SDA | TRUE | 36, 46 |
| I2C_PWR_SCL | TRUE | 36, 46 |
| I2C_UPC_SDA | TRUE | 36, 46 |
| I2C_UPC_SCL | TRUE | 36, 46 |
| SOC_TESTMODE | TRUE | 35 |
| SOC_SWD_MUX_SEL_PCH | TRUE | 15 |
| MISC | | |
| FAN_PWR_EN | TRUE | 54, 74 |
| PP12V_S0_BKLT_PWR | TRUE | 75, 76 |
| PP12V_BKLT_FUSED | TRUE | 75 |
| PP12V_BKLT_SNS | TRUE | 75 |

J185 TP



Manufacturing FuncTest Points



BOM_COST_GROUP=DEBUG

| | | | |
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| PAGE TITLE | | FCT/ICT TPS -1 | |
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[illegible]

TESTPOINTS TABLE 1

| TESTPOINTS CONFIGURATION | | | | | |
|----------------------------|---------------------------|--------------|------------|----------|------------|
| NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR |
| 1V8_SWCH_EN | CHAR | 0.6 | BOT | 1 | |
| ACDCBURST_L | CHAR | 0.6 | BOT | 1 | |
| ACDC_PSU_PCC_1V8 | CHAR | 0.6 | BOT | 1 | |
| AGND_0V85_ENET | FCT | 0.6 | BOTTOM | 1 | |
| AGND_1V8_S0_GPU | FCT | 0.6 | BOTTOM | 1 | |
| AGND_P0V8S0 | FCT | 0.6 | BOTTOM | 1 | |
| AGND_P0V95S0_CPU | FCT | 0.6 | BOTTOM | 1 | |
| AGND_P1V0S5 | FCT | 0.6 | BOTTOM | 1 | |
| AGND_VCCSA | FCT | 0.6 | BOTTOM | 1 | |
| AGND_VDDQ83 | FCT | 0.6 | BOTTOM | 1 | |
| AGND_VPP_S3 | FCT | 0.6 | BOTTOM | 1 | |
| ALL_SYS_PWRGD | FCT,CHAR | 0.6 | BOT | 1 | |
| AUD_CONN_J1_AUD_RING_SENSE | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_AUD_TIP_SENSE | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_CABLE_DETECT | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_HP_LT | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_HP_PORT_CH_GND | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_HP_PORT_US_GND | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_HP_RT | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_HP_SNS_LT | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_HP_SNS_RT | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_HS_MICN | FCT | 0.6 | BOTTOM | 1 | |
| AUD_CONN_J1_HS_MICP | FCT | 0.6 | BOTTOM | 1 | |
| AUD_SPKR_LTWT_OUT_N | FCT | 0.6 | BOTTOM | 1 | |
| AUD_SPKR_LTWT_OUT_P | FCT | 0.6 | BOTTOM | 1 | |
| AUD_SPKR_LWFR_OUT_N | FCT | 0.6 | BOTTOM | 1 | |
| AUD_SPKR_LWFR_OUT_P | FCT | 0.6 | BOTTOM | 1 | |
| AUD_SPKR_RTWT_OUT_N | FCT | 0.6 | BOTTOM | 1 | |
| AUD_SPKR_RTWT_OUT_P | FCT | 0.6 | BOTTOM | 1 | |
| AUD_SPKR_RWFR_OUT_N | FCT | 0.6 | BOTTOM | 1 | |
| AUD_SPKR_RWFR_OUT_P | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_BOOST | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_BOOST_1 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_BOOST_2 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_BOOST_EN | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD1 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD2 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD3 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD4 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD5 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD6 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD7 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD8 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GD9 | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GNDA | FCT | 0.6 | BOTTOM | 1 | |
| BKLT_GNDD | FCT | 0.6 | BOTTOM | 1 | |
| BLC_LSYNC | FCT | 0.6 | BOTTOM | 1 | |
| BLC_VSYNC | FCT | 0.6 | BOTTOM | 1 | |
| BOARDID3 | FCT | 0.6 | BOTTOM | 1 | |
| BOARDID4 | FCT | 0.6 | BOTTOM | 1 | |

| TESTPOINTS CONFIGURATION | | | | | |
|--------------------------|---------------------------|--------------|------------|----------|------------|
| NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR |
| BOARDID5 | FCT | 0.6 | BOTTOM | 1 | |
| BOARD_REV0 | FCT,CHAR | 0.6 | BOT | 1 | |
| BOARD_REV1 | FCT,CHAR | 0.6 | BOT | 1 | |
| BOARD_REV2 | FCT | 0.6 | BOTTOM | 1 | |
| BOOT_CONFIG0 | FCT,CHAR | 0.6 | BOT | 1 | |
| BOOT_CONFIG1 | FCT,CHAR | 0.6 | BOT | 1 | |
| BOOT_CONFIG2 | FCT,CHAR | 0.6 | BOT | 1 | |
| BT_AUDIO_SYNC | FCT | 0.6 | BOTTOM | 1 | |
| BURSTMODE_EN_R_L | FCT | 0.6 | BOTTOM | 1 | |
| CODEC_INT_L | FCT,CHAR | 0.6 | BOT | 1 | |
| CODEC_RESET_L | FCT,CHAR | 0.6 | BOT | 1 | |
| CODEC_WAKE_L | FCT,CHAR | 0.6 | BOT | 1 | |
| CPUVR_PGOOD | FCT,CHAR | 0.6 | BOT | 1 | |
| CPU_BCLK100M_N | CHAR | 0.6 | BOT | 1 | |
| CPU_BCLK100M_P | CHAR | 0.6 | BOT | 1 | |
| CPU_C10_GATE_L | CHAR | 0.6 | BOT | 1 | |
| CPU_CATERR_L | FCT | 0.6 | BOTTOM | 1 | |
| CPU_PCH_TRIGGER | FCT | 0.6 | BOTTOM | 1 | |
| CPU_PROCHOT_L | FCT | 0.6 | BOTTOM | 1 | |
| CPU_PWRGD | FCT,CHAR | 0.6 | BOT | 1 | |
| CPU_RESET_L | FCT,CHAR | 0.6 | BOT | 1 | |
| CPU_SMC_THRMTRIP_L | CHAR | 0.6 | BOT | 1 | |
| CPU_THRMTRIP_L | FCT,CHAR | 0.6 | BOT | 1 | |
| DEBUG_CLKREQ_L | CHAR | 0.6 | BOT | 1 | |
| DFMUX_SEL | FCT | 0.6 | BOTTOM | 1 | |
| DISP_GCON_INT_L | CHAR | 0.6 | BOT | 1 | |
| DP_DDPB_HPD | CHAR | 0.6 | BOT | 1 | |
| DP_DDPC_HPD | CHAR | 0.6 | BOT | 1 | |
| DP_DDPD_HPD | CHAR | 0.6 | BOT | 1 | |
| DP_DDPE_HPD | CHAR | 0.6 | BOT | 1 | |
| DP_INTPNL_ML_AUX_C_N | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_AUX_C_P | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_AUX_N | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_AUX_P | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_HPD | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_HPD_CONN | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_N<0> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_N<1> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_N<2> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_N<3> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_P<0> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_P<1> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_P<2> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_ML_P<3> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_SL_AUX_N | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_SL_AUX_P | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_SL_HPD | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_SL_HPD_CONN | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_SL_N<0> | FCT | 0.6 | BOTTOM | 1 | |
| DP_INTPNL_SL_N<1> | FCT | 0.6 | BOTTOM | 1 | |

| | | | | | | | | | | | | | | | |
|--------------------|--------------------------|---------------------------|--------------|------------|----------|------------|--------------------------|---------------------------|--------------|------------|----------|------------|---|---|--|
| 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | |
| TESTPOINTS TABLE 2 | | | | | | | | | | | | | | | |
| D | TESTPOINTS CONFIGURATION | | | | | | TESTPOINTS CONFIGURATION | | | | | | D | | |
| | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | | | |
| | DP_INTPNL_SL_N<2> | FCT | 0.6 | BOTTOM | 1 | | I2C_AOP_SDA | CHAR | 0.6 | BOT | 1 | | | | |
| | DP_INTPNL_SL_N<3> | FCT | 0.6 | BOTTOM | 1 | | I2C_BKLT_SCL | FCT | 0.6 | BOTTOM | 1 | | | | |
| | DP_INTPNL_SL_P<0> | FCT | 0.6 | BOTTOM | 1 | | I2C_BKLT_SDA | FCT | 0.6 | BOTTOM | 1 | | | | |
| | DP_INTPNL_SL_P<1> | FCT | 0.6 | BOTTOM | 1 | | I2C_CODEC_SCL | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | DP_INTPNL_SL_P<2> | FCT | 0.6 | BOTTOM | 1 | | I2C_CODEC_SDA | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | DP_INTPNL_SL_P<3> | FCT | 0.6 | BOTTOM | 1 | | I2C_DISP_SCL | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | DP_INT_HPD | CHAR | 0.6 | BOT | 1 | | I2C_DISP_SDA | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | EG_RESET_RES_L | CHAR | 0.6 | BOT | 1 | | I2C_FTCAM_SCL | CHAR | 0.6 | BOT | 1 | | | | |
| C | ENET_3V3_PWR_EN_R | CHAR | 0.6 | BOT | 1 | | I2C_FTCAM_SCL_CONN | FCT | 0.6 | BOTTOM | 1 | | C | | |
| | ENET_3V3_PWR_EN_R | CHAR | 0.6 | BOT | 1 | | I2C_FTCAM_SDA | CHAR | 0.6 | BOT | 1 | | | | |
| | ENET_FET_P3V3_PGOOD | CHAR | 0.6 | BOT | 1 | | I2C_FTCAM_SDA_CONN | FCT | 0.6 | BOTTOM | 1 | | | | |
| | ENET_GPI01_EFUSE_EN | FCT, CHAR | 0.6 | BOT | 1 | | I2C_MLBSNS_SCL | FCT | 0.6 | BOTTOM | 1 | | | | |
| | ENET_PWR_EN | FCT | 0.6 | BOTTOM | 1 | | I2C_MLBSNS_SDA | FCT | 0.6 | BOTTOM | 1 | | | | |
| | ENET_RESET_3V3_L | FCT | 0.6 | BOTTOM | 1 | | I2C_PWR_SCL | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_CLK60M_R | CHAR | 0.6 | BOT | 1 | | I2C_PWR_SDA | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_CLK_RT | FCT | 0.6 | BOTTOM | 1 | | I2C_SEP_SCL | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_CS_L | CHAR | 0.6 | BOT | 1 | | I2C_SEP_SDA | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_IO<0> | CHAR | 0.6 | BOT | 1 | | I2C_SNS0_S0_SCL | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| B | ESPI_IO<1> | CHAR | 0.6 | BOT | 1 | | I2C_SNS0_S0_SDA | FCT, CHAR | 0.6 | BOT | 1 | | B | | |
| | ESPI_IO<2> | CHAR | 0.6 | BOT | 1 | | I2C_SPKRAMP_L_SCL | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_IO<3> | CHAR | 0.6 | BOT | 1 | | I2C_SPKRAMP_L_SDA | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_IO_RT<0> | FCT | 0.6 | BOTTOM | 1 | | I2C_SPKRAMP_R_SCL | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_IO_RT<1> | FCT | 0.6 | BOTTOM | 1 | | I2C_SPKRAMP_R_SDA | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_IO_RT<2> | FCT | 0.6 | BOTTOM | 1 | | I2C_SSD_SCL | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_IO_RT<3> | FCT | 0.6 | BOTTOM | 1 | | I2C_SSD_SDA | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | ESPI_RESET_L | CHAR | 0.6 | BOT | 1 | | I2C_TBT_X_SCL | FCT | 0.6 | BOTTOM | 1 | | | | |
| | ESPI_RESET_RT_L | FCT | 0.6 | BOTTOM | 1 | | I2C_TBT_X_SDA | FCT | 0.6 | BOTTOM | 1 | | | | |
| | FAN_0_PWM_FILT | FCT | 0.6 | BOTTOM | 1 | | I2C_UPC_INT_L | CHAR | 0.6 | BOT | 1 | | | | |
| A | FAN_0_TACH_FILT | FCT | 0.6 | BOTTOM | 1 | | I2C_UPC_SCL | FCT | 0.6 | BOTTOM | 1 | | A | | |
| | FAN_PWR_EN | FCT, CHAR | 0.6 | BOT | 1 | | I2C_UPC_SDA | FCT | 0.6 | BOTTOM | 1 | | | | |
| | GFX_SELF_THROTTLE_1V8 | CHAR | 0.6 | BOT | 1 | | I2C_UPC_XA_DBG_CTL_SCL | CHAR | 0.6 | BOT | 1 | | | | |
| | GND | FCT | 0.6 | BOTTOM | 40 | | I2C_UPC_XA_DBG_CTL_SDA | CHAR | 0.6 | BOT | 1 | | | | |
| | GND | FCT | 0.7 | BOTTOM | 5 | | I2C_UPC_XB_DBG_CTL_SCL | CHAR | 0.6 | BOT | 1 | | | | |
| | GND_AUD_DMIC_0_CONN | FCT | 0.6 | BOTTOM | 1 | | I2C_UPC_XB_DBG_CTL_SDA | CHAR | 0.6 | BOT | 1 | | | | |
| | GND_AUD_DMIC_1_CONN | FCT | 0.6 | BOTTOM | 1 | | I2C_UPC_X_SCL2 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | GPUVR_I2C_SCL | CHAR | 0.6 | BOT | 1 | | I2C_UPC_X_SDA2 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | GPUVR_I2C_SDA | CHAR | 0.6 | BOT | 1 | | JTAG_TBT_X_TMS | CHAR | 0.6 | BOT | 1 | | | | |
| | GPU_DISCHARGE_EN | FCT | 0.6 | BOTTOM | 1 | | LED_RETURN_1 | FCT | 0.6 | BOTTOM | 1 | | | | |
| 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | |

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TESTPOINTS TABLE 2

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| | | | | | | | | | | | | | | | |
|--------------------|--------------------------|---------------------------|--------------|------------|----------|------------|--------------------------|---------------------------|--------------|------------|----------|------------|---|---|--|
| 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | |
| TESTPOINTS TABLE 3 | | | | | | | | | | | | | | | |
| D | TESTPOINTS CONFIGURATION | | | | | | TESTPOINTS CONFIGURATION | | | | | | D | | |
| | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | | | |
| | MIPI_FTCAM_C_CLK_P | FCT | 0.6 | BOTTOM | 1 | | PLT_RESET_GPU_L | CHAR | 0.6 | BOT | 1 | | | | |
| | MIPI_FTCAM_C_DATA_N<0> | FCT | 0.6 | BOTTOM | 1 | | PLT_RST_L | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | MIPI_FTCAM_C_DATA_N<1> | FCT | 0.6 | BOTTOM | 1 | | PMU_ACTIVE_READY | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | MIPI_FTCAM_C_DATA_P<0> | FCT | 0.6 | BOTTOM | 1 | | PMU_CLK32K_PCH | CHAR | 0.6 | BOT | 1 | | | | |
| | MIPI_FTCAM_C_DATA_P<1> | FCT | 0.6 | BOTTOM | 1 | | PMU_CLK32K_SOC | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | NAND_MODE_1V2_EN | CHAR | 0.6 | BOT | 1 | | PMU_CLK32K_WLANBT | CHAR | 0.6 | BOT | 1 | | | | |
| | NC_PCH_CLK32K_SUS | CHAR | 0.6 | BOT | 1 | | PMU_CLK32K_WLANBT_R | FCT | 0.6 | BOTTOM | 1 | | | | |
| | P1V05S5_PGOOD | CHAR | 0.6 | BOT | 1 | | PMU_COLD_RESET_L | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| C | P1V1_SLPDDR_SOCFET_EN | CHAR | 0.6 | BOT | 1 | | PMU_ONOFF_L | CHAR | 0.6 | BOT | 1 | | C | | |
| | P1V2_S0SW_FETEN | CHAR | 0.6 | BOT | 1 | | PMU_PVDDMAIN_EN | CHAR | 0.6 | BOT | 1 | | | | |
| | P1V8G3S_EN | CHAR | 0.6 | BOT | 1 | | PMU_RSLOC_RST_L | FCT | 0.6 | BOTTOM | 1 | | | | |
| | P3V3MAIN_PGOOD | CHAR | 0.6 | BOT | 1 | | PMU_SYS_ALIVE | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | P3V3MAIN_PGOOD | CHAR | 0.6 | BOT | 1 | | PMU_TO_NFC_EN | CHAR | 0.6 | BOT | 1 | | | | |
| | P5VG3S_PGOOD | CHAR | 0.6 | BOT | 1 | | PMU_VDD_HI | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_BT_AUDIO_SYNC | CHAR | 0.6 | BOT | 1 | | PMU_WLBT_PWR_EN | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_ENETSD_CLKREQ_L | CHAR | 0.6 | BOT | 1 | | PM_BATLOW_L | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_ENETSD_RESET_L | CHAR | 0.6 | BOT | 1 | | PM_EN_FET_P3V3_S0 | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_ENET_10G_CLKREQ_L | CHAR | 0.6 | BOT | 1 | | PM_EN_FET_P5V_S0 | CHAR | 0.6 | BOT | 1 | | | | |
| B | PCH_ENET_LOW_PWR | CHAR | 0.6 | BOT | 1 | | PM_EN_LDO_DDRVTT_S0 | CHAR | 0.6 | BOT | 1 | | B | | |
| | PCH_ESPI_ALERT0_L | CHAR | 0.6 | BOT | 1 | | PM_EN_REG_GPU_GFX_SOC | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_GCON_INT_L | CHAR | 0.6 | BOT | 1 | | PM_EN_REG_P0V8_S0 | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_GPP_A0_PU | CHAR | 0.6 | BOT | 1 | | PM_EN_REG_P1V05_S5 | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_GPU_CLKREQ_L | CHAR | 0.6 | BOT | 1 | | PM_EN_REG_P2V5_S3 | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_GPU_ID | CHAR | 0.6 | BOT | 1 | | PM_EN_REG_P3V3_G3H_R | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_PWRBTN_L | FCT, CHAR | 0.6 | BOT | 1 | | PM_EN_REG_PVDDCT_S0 | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_RTC_RESET_L | FCT, CHAR | 0.6 | BOT | 1 | | PM_EN_REG_VCCIO_S0 | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_SOC_SYNC | CHAR | 0.6 | BOT | 1 | | PM_EN_REG_VCCSA_S0_R | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_STRP_BSSB_SEL_GPIO | CHAR | 0.6 | BOT | 1 | | PM_EN_REG_VDDQ_S3 | CHAR | 0.6 | BOT | 1 | | | | |
| A | PCH_STRP_ESPI | CHAR | 0.6 | BOT | 1 | | PM_P1V05_S3_FET_EN | CHAR | 0.6 | BOT | 1 | | A | | |
| | PCH_STRP_GPD7 | CHAR | 0.6 | BOT | 1 | | PM_P3V3P1V8_G3S_FET_EN | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_STRP_GPP_H15 | CHAR | 0.6 | BOT | 1 | | PM_P5VG3S_EN | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_STRP_NO_REBOOT | CHAR | 0.6 | BOT | 1 | | PM_PCH_PWROK | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_STRP_SPIROM_SAF | CHAR | 0.6 | BOT | 1 | | PM_PCH_SYS_PWROK | FCT, CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_STRP_VCCPSPI_1V8 | CHAR | 0.6 | BOT | 1 | | PM_PGOOD_FET_P3V3G3S | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_STRP_XTAL_24MHZ | CHAR | 0.6 | BOT | 1 | | PM_PGOOD_FET_P5V_S0 | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_SWD_SOC_CLK | CHAR | 0.6 | BOT | 1 | | PM_PGOOD_REG_GPU_GFX | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_SWD_SOC_IO | CHAR | 0.6 | BOT | 1 | | PM_PGOOD_REG_GPU_SOC | CHAR | 0.6 | BOT | 1 | | | | |
| | PCH_UART2_CTS_L | FCT, CHAR | 0.6 | BOT | 1 | | PM_PGOOD_REG_GPU_VDDCI | CHAR | 0.6 | BOT | 1 | | | | |
| 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | |

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TESTPOINTS TABLE 3

| | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------------------|--------------|------------|----------|------------|--------------------------|-----------|-----|--------|---|------------------|--------------------------------|---------------------------|--------------|------------|----------|------------|-------------------|-----------|-----|--------|---|--|-----------------|-----------|-----|--------|---|--|----------------|-----------|-----|--------|---|--|--------------------|-----------------------|-----|--------|---|--|------------------------|-----------|-----|--------|---|--|-------------------|-----------|-----|--------|---|--|--------------------------|-----------|-----|--------|---|--|--------------------------|-----------|-----|--------|---|--|--|--|
| | TESTPOINTS TABLE 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | <table><tr><th colspan="6">TESTPOINTS CONFIGURATION</th></tr><tr><th>NETNAME</th><th>TYPE (ICT, FUNC, CHAR)</th><th>MIN SIZE(MM)</th><th>TOP/BOTTOM</th><th>QUANTITY</th><th>PLACE_NEAR</th></tr><tr><td>PP0V75_S0_GPUVDD</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP0V82_SLPPDDR</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP0V85_ENET</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP0V85_S0_GPUVDDCI</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP0V8_SLPS2R</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP0V9_SLPPDDR</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP0V9_SSD0</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP12V_FAN_FILT</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr></table> | | | | | | TESTPOINTS CONFIGURATION | | | | | | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | PP0V75_S0_GPUVDD | FCT, CHAR | 0.6 | BOT | 1 | | PP0V82_SLPPDDR | FCT, CHAR | 0.6 | BOT | 1 | | PP0V85_ENET | FCT | 0.6 | BOTTOM | 1 | | PP0V85_S0_GPUVDDCI | FCT, CHAR | 0.6 | BOT | 1 | | PP0V8_SLPS2R | FCT, CHAR | 0.6 | BOT | 1 | | PP0V9_SLPPDDR | FCT, CHAR | 0.6 | BOT | 1 | | PP0V9_SSD0 | FCT, CHAR | 0.6 | BOT | 1 | | PP12V_FAN_FILT | FCT | 0.6 | BOTTOM | 1 | | | |
| | TESTPOINTS CONFIGURATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP0V75_S0_GPUVDD | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP0V82_SLPPDDR | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP0V85_ENET | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP0V85_S0_GPUVDDCI | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP0V8_SLPS2R | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP0V9_SLPPDDR | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP0V9_SSD0 | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP12V_FAN_FILT | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | <table><tr><td>PP12V_G3H</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP12V_G3H_ACDC</td><td>FCT, CHAR</td><td>0.7</td><td>BOT</td><td>5</td><td></td></tr><tr><td>PP12V_G3H_GPUCORE</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP12V_G3H_SSD0</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP12V_G3H_SSD1</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP12V_LCD_FET</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP12V_S0_BKLT_PWR</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP1V05_S3SW</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V05_S3_FET</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V05_S5</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr></table> | | | | | | PP12V_G3H | FCT | 0.6 | BOTTOM | 1 | | PP12V_G3H_ACDC | FCT, CHAR | 0.7 | BOT | 5 | | PP12V_G3H_GPUCORE | FCT | 0.6 | BOTTOM | 1 | | PP12V_G3H_SSD0 | FCT | 0.6 | BOTTOM | 1 | | PP12V_G3H_SSD1 | FCT | 0.6 | BOTTOM | 1 | | PP12V_LCD_FET | FCT | 0.6 | BOTTOM | 1 | | PP12V_S0_BKLT_PWR | FCT | 0.6 | BOTTOM | 1 | | PP1V05_S3SW | FCT, CHAR | 0.6 | BOT | 1 | | PP1V05_S3_FET | FCT, CHAR | 0.6 | BOT | 1 | | PP1V05_S5 | FCT, CHAR | 0.6 | BOT | 1 | | | |
| | PP12V_G3H | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP12V_G3H_ACDC | FCT, CHAR | 0.7 | BOT | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP12V_G3H_GPUCORE | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP12V_G3H_SSD0 | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP12V_G3H_SSD1 | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP12V_LCD_FET | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP12V_S0_BKLT_PWR | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V05_S3SW | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V05_S3_FET | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP1V05_S5 | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table><tr><td>PP1V1_SLPPDDR</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V1_SLPPDDR_SOC_VDDIOPLDDR_F</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP1V1_SLPS2R</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V2_AWAKE</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V2_S3_CPU</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP1V2_S3_PLLOC</td><td>CHAR, CHAR, FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V2_S3_PLLOC</td><td>CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V35_S0_GPUMVDD</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V5_LDO_ENET_EFUSE</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP1V8_AWAKE</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr></table> | | | | | | PP1V1_SLPPDDR | FCT, CHAR | 0.6 | BOT | 1 | | PP1V1_SLPPDDR_SOC_VDDIOPLDDR_F | FCT | 0.6 | BOTTOM | 1 | | PP1V1_SLPS2R | FCT, CHAR | 0.6 | BOT | 1 | | PP1V2_AWAKE | FCT, CHAR | 0.6 | BOT | 1 | | PP1V2_S3_CPU | FCT | 0.6 | BOTTOM | 1 | | PP1V2_S3_PLLOC | CHAR, CHAR, FCT, CHAR | 0.6 | BOT | 1 | | PP1V2_S3_PLLOC | CHAR | 0.6 | BOT | 1 | | PP1V35_S0_GPUMVDD | FCT, CHAR | 0.6 | BOT | 1 | | PP1V5_LDO_ENET_EFUSE | FCT | 0.6 | BOTTOM | 1 | | PP1V8_AWAKE | FCT, CHAR | 0.6 | BOT | 1 | | | |
| | PP1V1_SLPPDDR | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V1_SLPPDDR_SOC_VDDIOPLDDR_F | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V1_SLPS2R | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V2_AWAKE | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V2_S3_CPU | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V2_S3_PLLOC | CHAR, CHAR, FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V2_S3_PLLOC | CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V35_S0_GPUMVDD | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V5_LDO_ENET_EFUSE | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP1V8_AWAKE | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | <table><tr><td>PP1V8_DMIC_0_CONN</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP1V8_DMIC_1_CONN</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP1V8_G3S</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V8_S0_GPUVDD</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V8_S5</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V8_SLPS2R</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V8_SLPS2R_PMUVDGPI0</td><td>CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP1V8_VCCQIO_SSD0</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP1V8_VCCQIO_SSD0_S5E_2L</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP1V8_VCCQIO_SSD0_S5E_4L</td><td>CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr></table> | | | | | | PP1V8_DMIC_0_CONN | FCT | 0.6 | BOTTOM | 1 | | PP1V8_DMIC_1_CONN | FCT | 0.6 | BOTTOM | 1 | | PP1V8_G3S | FCT, CHAR | 0.6 | BOT | 1 | | PP1V8_S0_GPUVDD | FCT, CHAR | 0.6 | BOT | 1 | | PP1V8_S5 | FCT, CHAR | 0.6 | BOT | 1 | | PP1V8_SLPS2R | FCT, CHAR | 0.6 | BOT | 1 | | PP1V8_SLPS2R_PMUVDGPI0 | CHAR | 0.6 | BOT | 1 | | PP1V8_VCCQIO_SSD0 | FCT | 0.6 | BOTTOM | 1 | | PP1V8_VCCQIO_SSD0_S5E_2L | FCT | 0.6 | BOTTOM | 1 | | PP1V8_VCCQIO_SSD0_S5E_4L | CHAR | 0.6 | BOT | 1 | | | |
| | PP1V8_DMIC_0_CONN | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V8_DMIC_1_CONN | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V8_G3S | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V8_S0_GPUVDD | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V8_S5 | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V8_SLPS2R | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V8_SLPS2R_PMUVDGPI0 | CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V8_VCCQIO_SSD0 | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP1V8_VCCQIO_SSD0_S5E_2L | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP1V8_VCCQIO_SSD0_S5E_4L | CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | <table><tr><td>PP2V1_ENET</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP2V5_NAND_SSD0</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP2V5_S3</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP3V3_AWAKE</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP3V3_ENET</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP3V3_G3H</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP3V3_G3H_SSD0</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP3V3_G3H_SSD1</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP3V3_G3S</td><td>FCT</td><td>0.6</td><td>BOTTOM</td><td>1</td><td></td></tr><tr><td>PP3V3_G3S_FET</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr></table> | | | | | | PP2V1_ENET | FCT | 0.6 | BOTTOM | 1 | | PP2V5_NAND_SSD0 | FCT, CHAR | 0.6 | BOT | 1 | | PP2V5_S3 | FCT, CHAR | 0.6 | BOT | 1 | | PP3V3_AWAKE | FCT, CHAR | 0.6 | BOT | 1 | | PP3V3_ENET | FCT, CHAR | 0.6 | BOT | 1 | | PP3V3_G3H | FCT, CHAR | 0.6 | BOT | 1 | | PP3V3_G3H_SSD0 | FCT | 0.6 | BOTTOM | 1 | | PP3V3_G3H_SSD1 | FCT | 0.6 | BOTTOM | 1 | | PP3V3_G3S | FCT | 0.6 | BOTTOM | 1 | | PP3V3_G3S_FET | FCT, CHAR | 0.6 | BOT | 1 | | | |
| | PP2V1_ENET | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP2V5_NAND_SSD0 | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP2V5_S3 | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP3V3_AWAKE | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP3V3_ENET | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP3V3_G3H | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP3V3_G3H_SSD0 | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP3V3_G3H_SSD1 | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PP3V3_G3S | FCT | 0.6 | BOTTOM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP3V3_G3S_FET | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table><tr><td>PP3V3_S0</td><td>FCT, CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr><tr><td>PP3V3_S0SW_TBT_X</td><td>CHAR</td><td>0.6</td><td>BOT</td><td>1</td><td></td></tr></table> | | | | | | PP3V3_S0 | FCT, CHAR | 0.6 | BOT | 1 | | PP3V3_S0SW_TBT_X | CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP3V3_S0 | FCT, CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP3V3_S0SW_TBT_X | CHAR | 0.6 | BOT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| PAGE TITLE | | | |
| TESTPOINTS TABLE 4 | | | |
|  Apple Inc. | | DRAWING NUMBER | 051-04826 |
| | | REVISION | 4.0.0 |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | BRANCH | proto-1-b |
| | | PAGE | 166 OF 172 |
| | | SHEET | 144 OF 149 |
| | | | |

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|--------------------|--------------------------|---------------------------|--------------|------------|----------|------------|--------------------------|---------------------------|--------------|------------|----------|------------|---|---|--|
| 8 | | 7 | | 6 | | 5 | | 4 | | 3 | | 2 | | 1 | |
| TESTPOINTS TABLE 5 | | | | | | | | | | | | | | | |
| D | TESTPOINTS CONFIGURATION | | | | | | TESTPOINTS CONFIGURATION | | | | | | D | | |
| | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | | | |
| | SMC_GPU_THROTTLE_L | CHAR | 0.6 | BOT | 1 | | SWD_SOC_SWCLK | FCT | 0.6 | BOTTOM | 1 | | | | |
| | SMC_PCH_SYS_PWROK | FCT | 0.6 | BOTTOM | 1 | | SWD_SOC_SWDIO | FCT | 0.6 | BOTTOM | 1 | | | | |
| | SMC_RSMRST_L | FCT, CHAR | 0.6 | BOT | 1 | | SYS_STATE_BLUE_R | FCT | 0.6 | BOTTOM | 1 | | | | |
| | SMC_SLP_S0_L | CHAR | 0.6 | BOT | 1 | | SYS_STATE_GREEN_R | FCT | 0.6 | BOTTOM | 1 | | | | |
| | SMC_SYSRST_L | FCT | 0.6 | BOTTOM | 1 | | SYS_STATE_RED_R | FCT | 0.6 | BOTTOM | 1 | | | | |
| | SML_PCH_0_CLK | FCT, CHAR | 0.6 | BOT | 1 | | TBT_POC_RESET | CHAR | 0.6 | BOT | 1 | | | | |
| | SML_PCH_0_DATA | FCT, CHAR | 0.6 | BOT | 1 | | TBT_PWR_EN | CHAR | 0.6 | BOT | 1 | | | | |
| | SML_PCH_1_CLK | FCT, CHAR | 0.6 | BOT | 1 | | TBT_X_CIO_PWR_EN | CHAR | 0.6 | BOT | 1 | | | | |
| C | SML_PCH_1_DATA | FCT, CHAR | 0.6 | BOT | 1 | | TBT_X_CLKREQ_L | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_CLKREQ_L | CHAR | 0.6 | BOT | 1 | | TBT_X_GPIO_0 | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_COLD_RESET_L | FCT | 0.6 | BOTTOM | 1 | | TBT_X_GPIO_1 | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_DEBUGPRT_RX | FCT | 0.6 | BOTTOM | 1 | | TBT_X_PCI_RESET_R_L | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_DEBUGPRT_TX | FCT | 0.6 | BOTTOM | 1 | | TBT_X_PLUG_EVENT_L | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_DFU_STATUS | FCT | 0.6 | BOTTOM | 1 | | TBT_X_USB_PWR_EN | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_DOCK_CONNECT | FCT | 0.6 | BOTTOM | 1 | | TCON_VALIDFRAME | FCT | 0.6 | BOTTOM | 1 | | | | |
| | SOC_FORCE_DFU | FCT | 0.6 | BOTTOM | 1 | | TP_BT_GPIO_2 | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_HOLD_RESET | FCT | 0.6 | BOTTOM | 1 | | TP_BT_GPIO_4 | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_SOCHOT_L | FCT | 0.6 | BOTTOM | 1 | | TP_BT_GPIO_5 | CHAR | 0.6 | BOT | 1 | | | | |
| B | SOC_SWD_MUX_SEL_PCH | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_1 | CHAR | 0.6 | BOT | 1 | | | | |
| | SOC_USB_VBUS | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_10 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPI2_WLBT_SFL_CLK | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_11 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPI2_WLBT_SFL_CS_L | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_12 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPI2_WLBT_SFL_CS_L_R | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_13 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPI2_WLBT_SFL_MISO | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_14 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPI2_WLBT_SFL_MOSI | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_15 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPIROM_USE_MLB | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_16 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPKRAMP_INT_L | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_17 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPKRAMP_RESET_L | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_18 | CHAR | 0.6 | BOT | 1 | | | | |
| A | SPKR_ID0 | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_2 | CHAR | 0.6 | BOT | 1 | | | | |
| | SPKR_ID1 | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_3 | CHAR | 0.6 | BOT | 1 | | | | |
| | SSD0_CALPE_DISCHARGE_EN | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_4 | CHAR | 0.6 | BOT | 1 | | | | |
| | SSD0_LPB_L | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_5 | CHAR | 0.6 | BOT | 1 | | | | |
| | SSD0_OCARINA_PFN_L | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_6 | CHAR | 0.6 | BOT | 1 | | | | |
| | SSD0_OCARINA_PFN_L | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_7 | CHAR | 0.6 | BOT | 1 | | | | |
| | SSD0_OCARINA_RESET_L | FCT | 0.6 | BOTTOM | 1 | | TP_EXTRA_8 | CHAR | 0.6 | BOT | 1 | | | | |
| | SSD0_RESET_L | CHAR | 0.6 | BOT | 1 | | TP_EXTRA_9 | CHAR | 0.6 | BOT | 1 | | | | |
| | SSD0_S4E0_ANI0_VREF | FCT | 0.6 | BOTTOM | 1 | | TP_UTAG_SOC_TRST_L | FCT | 0.6 | BOTTOM | 1 | | | | |
| | SSD0_S4E0_ANI1_VREF | FCT | 0.6 | BOTTOM | 1 | | TP_PCH_SLP_A_L | CHAR | 0.6 | BOT | 1 | | | | |
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TESTPOINTS TABLE 5

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| TESTPOINTS TABLE 6 | | | | | | | | | | | | | | | |
| D | TESTPOINTS CONFIGURATION | | | | | | TESTPOINTS CONFIGURATION | | | | | | C | B | A |
| | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | NETNAME | TYPE (ICT, FUNC, CHAR) | MIN SIZE(MM) | TOP/BOTTOM | QUANTITY | PLACE_NEAR | | | |
| | UART_SE_D2R_CTS_L | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_D2R_C_P<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UART_SE_R2D | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_D2R_C_P<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UART_SE_R2D_RTS_L | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_D2R_N<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UART_WLAN_D2R | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_D2R_N<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UART_WLAN_D2R_CTS_L | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_D2R_P<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UART_WLAN_R2D | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_D2R_P<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UART_WLAN_R2D_RTS_L | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_R2D_N<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UPC_XA_GPI04 | CHAR | 0.6 | BOT | 1 | | USBC_XA_R2D_N<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| C | UPC_XB_DBG0_PD | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_R2D_P<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UPC_XB_DBG1_PD | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_R2D_P<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UPC_XB_DBG2_PD | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_SBU1 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UPC_XB_DBG3_PD | FCT | 0.6 | BOTTOM | 1 | | USBC_XA_SBU2 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UPC_XB_GPI01 | CHAR | 0.6 | BOT | 1 | | USBC_XA_USB_BOT_N | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UPC_XB_GPI010 | CHAR | 0.6 | BOT | 1 | | USBC_XA_USB_BOT_P | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UPC_XB_GPI04 | CHAR | 0.6 | BOT | 1 | | USBC_XA_USB_TOP_N | FCT | 0.6 | BOTTOM | 1 | | | | |
| | UPC_XB_GPI09 | CHAR | 0.6 | BOT | 1 | | USBC_XA_USB_TOP_P | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB2_EXT_A_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_AUXLSX1 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB2_EXT_A_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_AUXLSX2 | FCT | 0.6 | BOTTOM | 1 | | | | |
| B | USB2_EXT_B_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_CC1 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB2_EXT_B_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_CC2 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB2_EXTC_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_D2R_C_N<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB2_EXTC_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_D2R_C_N<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB2_EXTD_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_D2R_C_P<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB2_EXTD_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_D2R_C_P<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXT_A_D2R_F_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_R2D_N<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXT_A_D2R_F_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_R2D_N<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXT_A_R2D_F_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_R2D_P<1> | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXT_A_R2D_F_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_R2D_P<2> | FCT | 0.6 | BOTTOM | 1 | | | | |
| A | USB3_EXTB_D2R_F_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_SBU1 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXTB_D2R_F_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_SBU2 | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXTB_R2D_F_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_USB_BOT_N | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXTB_R2D_F_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_USB_BOT_P | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXTC_D2R_F_N | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_USB_TOP_N | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXTC_D2R_F_P | FCT | 0.6 | BOTTOM | 1 | | USBC_XB_USB_TOP_P | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXTC_R2D_F_N | FCT | 0.6 | BOTTOM | 1 | | USB_EXTE_OC_L | CHAR | 0.6 | BOT | 1 | | | | |
| | USB3_EXTC_R2D_F_P | FCT | 0.6 | BOTTOM | 1 | | USB_EXTF_OC_L | CHAR | 0.6 | BOT | 1 | | | | |
| | USB3_EXTD_D2R_F_N | FCT | 0.6 | BOTTOM | 1 | | USB_SOC_N | FCT | 0.6 | BOTTOM | 1 | | | | |
| | USB3_EXTD_D2R_F_P | FCT | 0.6 | BOTTOM | 1 | | USB_SOC_P | FCT | 0.6 | BOTTOM | 1 | | | | |
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| D | <div>SSD BOM GROUPS</div> <table><tr><th>BOM GROUP</th><th>BOM OPTIONS</th></tr><tr><td>STG_256GB_WD</td><td>2L_S4E,S4E_256GB_2L_WD,SOC:1G</td></tr><tr><td>STG_256GB_TO</td><td>2L_S4E,S4E_256GB_2L_TO,SOC:1G</td></tr><tr><td>STG_512GB_HY</td><td>4L_S4E,S4E_512GB_4L_HY,SOC:1G</td></tr><tr><td>STG_512GB_TO</td><td>4L_S4E,S4E_512GB_4L_TO,SOC:1G</td></tr><tr><td>STG_1TB_HY</td><td>4L_S4E,S4E_1TB_4L_HY,SOC:2G</td></tr><tr><td>STG_1TB_TO</td><td>4L_S4E,S4E_1TB_4L_TO,SOC:2G</td></tr><tr><td>STG_2TB_WD</td><td>4L_S4E,S4E_2TB_4L_WD,SOC:2G</td></tr><tr><td>STG_2TB_HY</td><td>4L_S4E,S4E_2TB_4L_HY,SOC:2G</td></tr><tr><td>STG_4TB_WD</td><td>4L_S4E,S4E_4TB_4L_WD,SOC:2G,SSD1_CONN,SSD:2TB_WD_ITLC</td></tr><tr><td>STG_4TB_HY</td><td>4L_S4E,S4E_4TB_4L_HY,SOC:2G,SSD1_CONN,SSD:2TB_HY_ITLC</td></tr><tr><td>STG_8TB_WD</td><td>4L_S4E,S4E_8TB_4L_WD,SOC:2G,SSD1_CONN,SSD:4TB_WD_ITLC</td></tr><tr><td>STG_8TB_HY</td><td>4L_S4E,S4E_8TB_4L_HY,SOC:2G,SSD1_CONN,SSD:4TB_HY_ITLC</td></tr></table> <div>SOC GROUPS</div> <table><tr><th>BOM GROUP</th><th>BOM OPTIONS</th></tr><tr><td>SOC:1G</td><td>SOC:DEV_1G</td></tr><tr><td>SOC:2G</td><td>SOC:DEV_2G</td></tr></table> <div>BOARD REV GROUPS</div> <table><tr><th>BOM GROUP</th><th>BOM OPTIONS</th></tr><tr><td>BOARDREV_POC</td><td></td></tr><tr><td>BOARDREV_P1</td><td>BOARDREV0</td></tr><tr><td>BOARDREV_EVT</td><td>BOARDREV1</td></tr><tr><td>BOARDREV_PVT</td><td>BOARDREV1,BOARDREV0</td></tr></table> <div>GS5 ASSEMBLIES</div> <table><tr><th>PART NUMBER</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DES</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>656-0118</td><td>1</td><td>SSD,WD,4L,16DP,GS5,ITLC,X1318</td><td>SSD</td><td>CRITICAL</td><td>SSD:2TB_WD_ITLC</td></tr><tr><td>656-0107</td><td>1</td><td>SSD,HY,4L,16DP,GS5,ITLC,X1318</td><td>SSD</td><td>CRITICAL</td><td>SSD:2TB_HY_ITLC</td></tr><tr><td>656-0123</td><td>1</td><td>SSD,WD,4L,16DP,GS5,ITLC,X1318</td><td>SSD</td><td>CRITICAL</td><td>SSD:4TB_WD_ITLC</td></tr><tr><td>656-0124</td><td>1</td><td>SSD,HY,4L,16DP,GS5,ITLC,X1318</td><td>SSD</td><td>CRITICAL</td><td>SSD:4TB_HY_ITLC</td></tr></table> <div>SSD BOM Groups</div> <div><rdar://50926379&50926402></div> <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>998-16396</td><td>2</td><td>NAND,3DV4,128GBT,S4e,256GB,T,SLGA110</td><td>U8600,U8700</td><td>CRITICAL</td><td>S4E_256GB_2L_TO</td></tr><tr><td>335S00378</td><td>2</td><td>NAND,3DV4,128GBT,S4E,256G,H,SLGA110</td><td>U8600,U8700</td><td>CRITICAL</td><td>S4E_256GB_2L_WD</td></tr><tr><td>335S00395</td><td>2</td><td>NAND,3DV4,192GBT,21.1,S4E,256G,T,SLGA110</td><td>U8600,U8700</td><td>CRITICAL</td><td>S4E_512GB_4L_TO</td></tr><tr><td>998-16396</td><td>2</td><td>NAND,3DV4,128GBT,S4E,256G,T,20NM,SLGA110</td><td>U8800,U8900</td><td>CRITICAL</td><td>S4E_512GB_4L_TO</td></tr><tr><td>335S00398</td><td>2</td><td>NAND,3DV4,192GBT,21.1,S4E,256G,H,SLGA110</td><td>U8600,U8700</td><td>CRITICAL</td><td>S4E_512GB_4L_HY</td></tr><tr><td>335S00378</td><td>2</td><td>NAND,3DV4,128GBT,S4E,256G,H,SLGA110</td><td>U8800,U8900</td><td>CRITICAL</td><td>S4E_512GB_4L_HY</td></tr><tr><td>335S00397</td><td>2</td><td>NAND,3DV4,320GBT,S4e,256GB,T,SLGA110</td><td>U8600,U8700</td><td>CRITICAL</td><td>S4E_1TB_4L_TO</td></tr><tr><td>335S00396</td><td>2</td><td>NAND,3DV4,256GBT,S4e,256GB,T,SLGA110</td><td>U8800,U8900</td><td>CRITICAL</td><td>S4E_1TB_4L_TO</td></tr><tr><td>335S00399</td><td>2</td><td>NAND,3DV4,320GBT,21.1,S4E,256G,H,SLGA110</td><td>U8600,U8700</td><td>CRITICAL</td><td>S4E_1TB_4L_HY</td></tr><tr><td>335S00379</td><td>2</td><td>NAND,3DV4,256GBT,S4E,256G,H,SLGA110</td><td>U8800,U8900</td><td>CRITICAL</td><td>S4E_1TB_4L_HY</td></tr><tr><td>335S00391</td><td>4</td><td>NAND,3DV4,512GBT,S4e,256GB,SD,SLGA110</td><td>U8600,U8700,U8800,U8900</td><td>CRITICAL</td><td>S4E_2TB_4L_WD</td></tr><tr><td>335S00380</td><td>4</td><td>NAND,3DV4,512GBT,S4E,256G,H,SLGA110</td><td>U8600,U8700,U8800,U8900</td><td>CRITICAL</td><td>S4E_2TB_4L_HY</td></tr><tr><td>335S00391</td><td>4</td><td>NAND,3DV4,512GBT,XXX,S4E,256G,SD,SLGA110</td><td>U8600,U8700,U8800,U8900</td><td>CRITICAL</td><td>S4E_4TB_4L_WD</td></tr><tr><td>335S00380</td><td>4</td><td>NAND,3DV4,512GBT,S4E,256G,H,SLGA110</td><td>U8600,U8700,U8800,U8900</td><td>CRITICAL</td><td>S4E_4TB_4L_HY</td></tr><tr><td>335S00433</td><td>4</td><td>NAND,3DV4,1TBT,XXX,S4E,512G,SD,SLGA110</td><td>U8600,U8700,U8800,U8900</td><td>CRITICAL</td><td>S4E_8TB_4L_WD</td></tr><tr><td>335S00444</td><td>4</td><td>NAND,3DV5,1024GBT,S4E,512G,H,SLGA110</td><td>U8600,U8700,U8800,U8900</td><td>CRITICAL</td><td>S4E_8TB_4L_HY</td></tr></table> <div>SOCKET& CONNECTOR</div> <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>511S00012</td><td>1</td><td>CONN,CPU,SOCKET,1GA1200,HF</td><td>U0500</td><td>CRITICAL</td><td></td></tr><tr><td>514-00118</td><td>1</td><td>CONN,ACPT,USB-C,DUAL,X1221</td><td>J3300</td><td>CRITICAL</td><td></td></tr></table> | | | | | | | | | BOM GROUP | BOM OPTIONS | STG_256GB_WD | 2L_S4E,S4E_256GB_2L_WD,SOC:1G | STG_256GB_TO | 2L_S4E,S4E_256GB_2L_TO,SOC:1G | STG_512GB_HY | 4L_S4E,S4E_512GB_4L_HY,SOC:1G | STG_512GB_TO | 4L_S4E,S4E_512GB_4L_TO,SOC:1G | STG_1TB_HY | 4L_S4E,S4E_1TB_4L_HY,SOC:2G | STG_1TB_TO | 4L_S4E,S4E_1TB_4L_TO,SOC:2G | STG_2TB_WD | 4L_S4E,S4E_2TB_4L_WD,SOC:2G | STG_2TB_HY | 4L_S4E,S4E_2TB_4L_HY,SOC:2G | STG_4TB_WD | 4L_S4E,S4E_4TB_4L_WD,SOC:2G,SSD1_CONN,SSD:2TB_WD_ITLC | STG_4TB_HY | 4L_S4E,S4E_4TB_4L_HY,SOC:2G,SSD1_CONN,SSD:2TB_HY_ITLC | STG_8TB_WD | 4L_S4E,S4E_8TB_4L_WD,SOC:2G,SSD1_CONN,SSD:4TB_WD_ITLC | STG_8TB_HY | 4L_S4E,S4E_8TB_4L_HY,SOC:2G,SSD1_CONN,SSD:4TB_HY_ITLC | BOM GROUP | BOM OPTIONS | SOC:1G | SOC:DEV_1G | SOC:2G | SOC:DEV_2G | BOM GROUP | BOM OPTIONS | BOARDREV_POC | | BOARDREV_P1 | BOARDREV0 | BOARDREV_EVT | BOARDREV1 | BOARDREV_PVT | BOARDREV1,BOARDREV0 | PART NUMBER | QTY | DESCRIPTION | REFERENCE DES | CRITICAL | BOM OPTION | 656-0118 | 1 | SSD,WD,4L,16DP,GS5,ITLC,X1318 | SSD | CRITICAL | SSD:2TB_WD_ITLC | 656-0107 | 1 | SSD,HY,4L,16DP,GS5,ITLC,X1318 | SSD | CRITICAL | SSD:2TB_HY_ITLC | 656-0123 | 1 | SSD,WD,4L,16DP,GS5,ITLC,X1318 | SSD | CRITICAL | SSD:4TB_WD_ITLC | 656-0124 | 1 | SSD,HY,4L,16DP,GS5,ITLC,X1318 | SSD | CRITICAL | SSD:4TB_HY_ITLC | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 998-16396 | 2 | NAND,3DV4,128GBT,S4e,256GB,T,SLGA110 | U8600,U8700 | CRITICAL | S4E_256GB_2L_TO | 335S00378 | 2 | NAND,3DV4,128GBT,S4E,256G,H,SLGA110 | U8600,U8700 | CRITICAL | S4E_256GB_2L_WD | 335S00395 | 2 | NAND,3DV4,192GBT,21.1,S4E,256G,T,SLGA110 | U8600,U8700 | CRITICAL | S4E_512GB_4L_TO | 998-16396 | 2 | NAND,3DV4,128GBT,S4E,256G,T,20NM,SLGA110 | U8800,U8900 | CRITICAL | S4E_512GB_4L_TO | 335S00398 | 2 | NAND,3DV4,192GBT,21.1,S4E,256G,H,SLGA110 | U8600,U8700 | CRITICAL | S4E_512GB_4L_HY | 335S00378 | 2 | NAND,3DV4,128GBT,S4E,256G,H,SLGA110 | U8800,U8900 | CRITICAL | S4E_512GB_4L_HY | 335S00397 | 2 | NAND,3DV4,320GBT,S4e,256GB,T,SLGA110 | U8600,U8700 | CRITICAL | S4E_1TB_4L_TO | 335S00396 | 2 | NAND,3DV4,256GBT,S4e,256GB,T,SLGA110 | U8800,U8900 | CRITICAL | S4E_1TB_4L_TO | 335S00399 | 2 | NAND,3DV4,320GBT,21.1,S4E,256G,H,SLGA110 | U8600,U8700 | CRITICAL | S4E_1TB_4L_HY | 335S00379 | 2 | NAND,3DV4,256GBT,S4E,256G,H,SLGA110 | U8800,U8900 | CRITICAL | S4E_1TB_4L_HY | 335S00391 | 4 | NAND,3DV4,512GBT,S4e,256GB,SD,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_2TB_4L_WD | 335S00380 | 4 | NAND,3DV4,512GBT,S4E,256G,H,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_2TB_4L_HY | 335S00391 | 4 | NAND,3DV4,512GBT,XXX,S4E,256G,SD,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_4TB_4L_WD | 335S00380 | 4 | NAND,3DV4,512GBT,S4E,256G,H,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_4TB_4L_HY | 335S00433 | 4 | NAND,3DV4,1TBT,XXX,S4E,512G,SD,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_8TB_4L_WD | 335S00444 | 4 | NAND,3DV5,1024GBT,S4E,512G,H,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_8TB_4L_HY | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 511S00012 | 1 | CONN,CPU,SOCKET,1GA1200,HF | U0500 | CRITICAL | | 514-00118 | 1 | CONN,ACPT,USB-C,DUAL,X1221 | J3300 | CRITICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOM GROUP | BOM OPTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_256GB_WD | 2L_S4E,S4E_256GB_2L_WD,SOC:1G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_256GB_TO | 2L_S4E,S4E_256GB_2L_TO,SOC:1G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_512GB_HY | 4L_S4E,S4E_512GB_4L_HY,SOC:1G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_512GB_TO | 4L_S4E,S4E_512GB_4L_TO,SOC:1G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_1TB_HY | 4L_S4E,S4E_1TB_4L_HY,SOC:2G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_1TB_TO | 4L_S4E,S4E_1TB_4L_TO,SOC:2G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_2TB_WD | 4L_S4E,S4E_2TB_4L_WD,SOC:2G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_2TB_HY | 4L_S4E,S4E_2TB_4L_HY,SOC:2G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_4TB_WD | 4L_S4E,S4E_4TB_4L_WD,SOC:2G,SSD1_CONN,SSD:2TB_WD_ITLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_4TB_HY | 4L_S4E,S4E_4TB_4L_HY,SOC:2G,SSD1_CONN,SSD:2TB_HY_ITLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_8TB_WD | 4L_S4E,S4E_8TB_4L_WD,SOC:2G,SSD1_CONN,SSD:4TB_WD_ITLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG_8TB_HY | 4L_S4E,S4E_8TB_4L_HY,SOC:2G,SSD1_CONN,SSD:4TB_HY_ITLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOM GROUP | BOM OPTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOC:1G | SOC:DEV_1G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOC:2G | SOC:DEV_2G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOM GROUP | BOM OPTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOARDREV_POC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOARDREV_P1 | BOARDREV0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOARDREV_EVT | BOARDREV1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOARDREV_PVT | BOARDREV1,BOARDREV0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PART NUMBER | QTY | DESCRIPTION | REFERENCE DES | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 656-0118 | 1 | SSD,WD,4L,16DP,GS5,ITLC,X1318 | SSD | CRITICAL | SSD:2TB_WD_ITLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 656-0107 | 1 | SSD,HY,4L,16DP,GS5,ITLC,X1318 | SSD | CRITICAL | SSD:2TB_HY_ITLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 656-0123 | 1 | SSD,WD,4L,16DP,GS5,ITLC,X1318 | SSD | CRITICAL | SSD:4TB_WD_ITLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 656-0124 | 1 | SSD,HY,4L,16DP,GS5,ITLC,X1318 | SSD | CRITICAL | SSD:4TB_HY_ITLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 998-16396 | 2 | NAND,3DV4,128GBT,S4e,256GB,T,SLGA110 | U8600,U8700 | CRITICAL | S4E_256GB_2L_TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00378 | 2 | NAND,3DV4,128GBT,S4E,256G,H,SLGA110 | U8600,U8700 | CRITICAL | S4E_256GB_2L_WD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00395 | 2 | NAND,3DV4,192GBT,21.1,S4E,256G,T,SLGA110 | U8600,U8700 | CRITICAL | S4E_512GB_4L_TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 998-16396 | 2 | NAND,3DV4,128GBT,S4E,256G,T,20NM,SLGA110 | U8800,U8900 | CRITICAL | S4E_512GB_4L_TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00398 | 2 | NAND,3DV4,192GBT,21.1,S4E,256G,H,SLGA110 | U8600,U8700 | CRITICAL | S4E_512GB_4L_HY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00378 | 2 | NAND,3DV4,128GBT,S4E,256G,H,SLGA110 | U8800,U8900 | CRITICAL | S4E_512GB_4L_HY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00397 | 2 | NAND,3DV4,320GBT,S4e,256GB,T,SLGA110 | U8600,U8700 | CRITICAL | S4E_1TB_4L_TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00396 | 2 | NAND,3DV4,256GBT,S4e,256GB,T,SLGA110 | U8800,U8900 | CRITICAL | S4E_1TB_4L_TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00399 | 2 | NAND,3DV4,320GBT,21.1,S4E,256G,H,SLGA110 | U8600,U8700 | CRITICAL | S4E_1TB_4L_HY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00379 | 2 | NAND,3DV4,256GBT,S4E,256G,H,SLGA110 | U8800,U8900 | CRITICAL | S4E_1TB_4L_HY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00391 | 4 | NAND,3DV4,512GBT,S4e,256GB,SD,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_2TB_4L_WD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00380 | 4 | NAND,3DV4,512GBT,S4E,256G,H,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_2TB_4L_HY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00391 | 4 | NAND,3DV4,512GBT,XXX,S4E,256G,SD,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_4TB_4L_WD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00380 | 4 | NAND,3DV4,512GBT,S4E,256G,H,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_4TB_4L_HY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00433 | 4 | NAND,3DV4,1TBT,XXX,S4E,512G,SD,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_8TB_4L_WD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00444 | 4 | NAND,3DV5,1024GBT,S4E,512G,H,SLGA110 | U8600,U8700,U8800,U8900 | CRITICAL | S4E_8TB_4L_HY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 511S00012 | 1 | CONN,CPU,SOCKET,1GA1200,HF | U0500 | CRITICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 514-00118 | 1 | CONN,ACPT,USB-C,DUAL,X1221 | J3300 | CRITICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div>Programmable Parts</div> <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>341S01498</td><td>1</td><td>IC,TBT,TBT-X (VXXX) POC,X1447</td><td>U2890</td><td>CRITICAL</td><td>TBTROM:PROG</td></tr><tr><td>335S00133</td><td>1</td><td>IC,SPI_FLASH_ROM,8MBIT,50MBZ,US0N8</td><td>U2890</td><td>CRITICAL</td><td>TBTROM:BLANK</td></tr><tr><td>341S01201</td><td>1</td><td>IC,ETHERNET,1GB,(V1.15),DVT,X1336</td><td>U6090</td><td>CRITICAL</td><td>1G_ENET_ROM:PROG</td></tr><tr><td>335S00198</td><td>1</td><td>IC,SPI_SERIAL_FLASH,2MBIT,2-TV,80208</td><td>U6090</td><td>CRITICAL</td><td>1G_ENET_ROM:BLANK</td></tr><tr><td>341S01500</td><td>1</td><td>ROM,BT-SPLASH,1-BV (V35) DVT-2,X1294</td><td>UB250</td><td>CRITICAL</td><td>BT_ROM:PROG</td></tr><tr><td>335S00255</td><td>1</td><td>IC,SPI_SERIAL_FLASH,2MBIT,1-BV,DFW8</td><td>UB250</td><td>CRITICAL</td><td>BT_ROM:BLANK</td></tr><tr><td>341S01421</td><td>1</td><td>IC,ENET_ROM (V2.11.9),DVT,X1294</td><td>U9990</td><td>CRITICAL</td><td>10G_ENET_ROM:PROG</td></tr><tr><td>335S00365</td><td>1</td><td>IC,SPI_SERIAL_FLASH,3MBIT,3V,Q8+0,80208</td><td>U9990</td><td>CRITICAL</td><td>10G_ENET_ROM:BLANK</td></tr><tr><td>341S01502</td><td>1</td><td>IC,ECOMD_CTI,083237A(V7A05),POC,X1547</td><td>UA330</td><td>CRITICAL</td><td>SD_ROM:PROG</td></tr><tr><td>335S00024</td><td>1</td><td>IC,SERIAL_FLASH,2MBIT,3V,8-080N,2K3X,80M</td><td>UA330</td><td>CRITICAL</td><td>SD_ROM:BLANK</td></tr><tr><td>341S00725</td><td>1</td><td>WIFI_ROM (V01) WWL,0685</td><td>UB210</td><td>CRITICAL</td><td>WIFI_ROM:PROG</td></tr><tr><td>335S00214</td><td>1</td><td>IC,EEPROM,EEP,1024B,16K,1-BV,DFW8</td><td>UB210</td><td>CRITICAL</td><td>WIFI_ROM:BLANK</td></tr></table> <div>ASICs</div> <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>337S00821</td><td>1</td><td>IC,PCB-E,CML,QML8,Q5-A-0,ROM474</td><td>U1200</td><td>CRITICAL</td><td></td></tr><tr><td>338S00441</td><td>1</td><td>IC,TBT,TITANIUM1008 DP,8MBSD,PRQ,C1,C0P137</td><td>U2800</td><td>CRITICAL</td><td></td></tr><tr><td>338S00342</td><td>1</td><td>IC,PMD,CALDE-1,D2248AD,OTP-AE,CSP124,0.5</td><td>U7800</td><td>CRITICAL</td><td></td></tr><tr><td>353S01961</td><td>2</td><td>IC,C73218,ACPT,82,108B PWR,SW,804M,SGA123</td><td>U3100,U3200</td><td>CRITICAL</td><td></td></tr><tr><td>338S00332</td><td>1</td><td>IC,ENET_CONTROLLER,AGC157,B3,WR324</td><td>U9700</td><td>CRITICAL</td><td>10G_ENET</td></tr><tr><td>343S0616</td><td>1</td><td>IC,COREAN-TV,8BIT,ENET,C0SL,QP94</td><td>U6000</td><td>CRITICAL</td><td>1G_ENET</td></tr><tr><td>338S00312</td><td>1</td><td>IC,063227A,DS83 3.0 TO SD CARD BRACKER,QP98</td><td>UA300</td><td>CRITICAL</td><td></td></tr><tr><td>338S00410</td><td>1</td><td>IC,PMD,OCARINA,D2499AD,OTP-AG,WLCSP56</td><td>U9000</td><td>CRITICAL</td><td>SSD0_S4E_4L</td></tr><tr><td>338S00410</td><td>1</td><td>IC,PMD,OCARINA,D2499AD,OTP-AG,WLCSP56</td><td>U9000</td><td>CRITICAL</td><td>SSD0_S5E_4L</td></tr><tr><td>339S00609</td><td>1</td><td>IC,MODULE,HARPOON,B3,M,EST-9,LGA385</td><td>UB000</td><td>CRITICAL</td><td>WIFI:MURATA</td></tr><tr><td>339S00610</td><td>1</td><td>IC,MODULE,HARPOON,B3,U,EST-7,LGA385</td><td>UB000</td><td>CRITICAL</td><td>WIFI:USI</td></tr></table> <div>H9M</div> <table><tr><th>PART#</th><th>QTY</th><th>DESCRIPTION</th><th>REFERENCE DESIGNATOR(S)</th><th>CRITICAL</th><th>BOM OPTION</th></tr><tr><td>339S00386</td><td>1</td><td>POP,GIBRALTAR,1+1GB,20NM,M,DEV,SCX,CSP1122</td><td>U3900</td><td>CRITICAL</td><td>SOC:DEV_1G</td></tr><tr><td>339S00388</td><td>1</td><td>POP,GIBRALTAR,1+2GB,20NM,M,DEV,SCX,CSP1122</td><td>U3900</td><td>CRITICAL</td><td>SOC:DEV_2G</td></tr><tr><td>339S00601</td><td>1</td><td>POP,GIBRALTAR,1+1GB,16NM,M,B0,SCX,CSP1122</td><td>U3900</td><td>CRITICAL</td><td>SOC:PRD_1G</td></tr><tr><td>339S00605</td><td>1</td><td>POP,GIBRALTAR,1+2GB,16NM,M,B0,SCX,CSP1122</td><td>U3900</td><td>CRITICAL</td><td>SOC:PRD_2G</td></tr></table> <div>H9M</div> <table><tr><th>PART NUMBER</th><th>ALTERNATE FOR PART NUMBER</th><th>BOM OPTION</th><th>REF DES</th><th>COMMENTS:</th></tr><tr><td>339S00387</td><td>339S00386</td><td>SOC:DEV_1G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00390</td><td>339S00386</td><td>SOC:DEV_1G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00391</td><td>339S00386</td><td>SOC:DEV_1G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00389</td><td>339S00388</td><td>SOC:DEV_2G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00392</td><td>339S00388</td><td>SOC:DEV_2G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00393</td><td>339S00388</td><td>SOC:DEV_2G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00602</td><td>339S00601</td><td>SOC:PROD_1G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00603</td><td>339S00601</td><td>SOC:PROD_1G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00604</td><td>339S00601</td><td>SOC:PROD_1G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00606</td><td>339S00605</td><td>SOC:PROD_2G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00607</td><td>339S00605</td><td>SOC:PROD_2G</td><td>ALL</td><td><RDAR:///41988491></td></tr><tr><td>339S00608</td><td>339S00605</td><td>SOC:PROD_2G</td><td>ALL</td><td><RDAR:///41988491></td></tr></table> <div>MICRON SCK PRIMARY, HYNIX SCK ALT POP,GIBRALTAR+1GB,20NM,M,DEV,SCX,CSP1122</div> <div>MICRON SCK PRIMARY, MICRON ATK ALT POP,GIBRALTAR+1GB,20NM,M,DEV,SCX,CSP1122</div> <div>MICRON SCK PRIMARY, HYNIX ATK ALT POP,GIBRALTAR+1GB,20NM,M,DEV,SCX,CSP1122</div> <div>MICRON SCK PRIMARY, HYNIX SCK ALT POP,GIBRALTAR+2GB,20NM,M,DEV,SCX,CSP1122</div> <div>MICRON SCK PRIMARY, MICRON ATK ALT POP,GIBRALTAR+2GB,20NM,M,DEV,SCX,CSP1122</div> <div>MICRON SCK PRIMARY, HYNIX ATK ALT POP,GIBRALTAR+2GB,20NM,M,DEV,SCX,CSP1122</div> <div>MICRON SCK PRIMARY, HYNIX SCK ALT POP,GIBRALTAR+1GB,16NM,M,B0,SCX,C1122</div> <div>MICRON SCK PRIMARY, MICRON ATK ALT POP,GIBRALTAR+1GB,16NM,M,B0,SCX,C1122</div> <div>MICRON SCK PRIMARY, HYNIX ATK ALT POP,GIBRALTAR+1GB,16NM,M,B0,SCX,C1122</div> <div>MICRON SCK PRIMARY, HYNIX SCK ALT POP,GIBRALTAR+2GB,16NM,M,B0,SCX,C1122</div> <div>MICRON SCK PRIMARY, HYNIX ATK ALT POP,GIBRALTAR+2GB,16NM,M,B0,SCX,C1122</div> | | | | | | | | | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 341S01498 | 1 | IC,TBT,TBT-X (VXXX) POC,X1447 | U2890 | CRITICAL | TBTROM:PROG | 335S00133 | 1 | IC,SPI_FLASH_ROM,8MBIT,50MBZ,US0N8 | U2890 | CRITICAL | TBTROM:BLANK | 341S01201 | 1 | IC,ETHERNET,1GB,(V1.15),DVT,X1336 | U6090 | CRITICAL | 1G_ENET_ROM:PROG | 335S00198 | 1 | IC,SPI_SERIAL_FLASH,2MBIT,2-TV,80208 | U6090 | CRITICAL | 1G_ENET_ROM:BLANK | 341S01500 | 1 | ROM,BT-SPLASH,1-BV (V35) DVT-2,X1294 | UB250 | CRITICAL | BT_ROM:PROG | 335S00255 | 1 | IC,SPI_SERIAL_FLASH,2MBIT,1-BV,DFW8 | UB250 | CRITICAL | BT_ROM:BLANK | 341S01421 | 1 | IC,ENET_ROM (V2.11.9),DVT,X1294 | U9990 | CRITICAL | 10G_ENET_ROM:PROG | 335S00365 | 1 | IC,SPI_SERIAL_FLASH,3MBIT,3V,Q8+0,80208 | U9990 | CRITICAL | 10G_ENET_ROM:BLANK | 341S01502 | 1 | IC,ECOMD_CTI,083237A(V7A05),POC,X1547 | UA330 | CRITICAL | SD_ROM:PROG | 335S00024 | 1 | IC,SERIAL_FLASH,2MBIT,3V,8-080N,2K3X,80M | UA330 | CRITICAL | SD_ROM:BLANK | 341S00725 | 1 | WIFI_ROM (V01) WWL,0685 | UB210 | CRITICAL | WIFI_ROM:PROG | 335S00214 | 1 | IC,EEPROM,EEP,1024B,16K,1-BV,DFW8 | UB210 | CRITICAL | WIFI_ROM:BLANK | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 337S00821 | 1 | IC,PCB-E,CML,QML8,Q5-A-0,ROM474 | U1200 | CRITICAL | | 338S00441 | 1 | IC,TBT,TITANIUM1008 DP,8MBSD,PRQ,C1,C0P137 | U2800 | CRITICAL | | 338S00342 | 1 | IC,PMD,CALDE-1,D2248AD,OTP-AE,CSP124,0.5 | U7800 | CRITICAL | | 353S01961 | 2 | IC,C73218,ACPT,82,108B PWR,SW,804M,SGA123 | U3100,U3200 | CRITICAL | | 338S00332 | 1 | IC,ENET_CONTROLLER,AGC157,B3,WR324 | U9700 | CRITICAL | 10G_ENET | 343S0616 | 1 | IC,COREAN-TV,8BIT,ENET,C0SL,QP94 | U6000 | CRITICAL | 1G_ENET | 338S00312 | 1 | IC,063227A,DS83 3.0 TO SD CARD BRACKER,QP98 | UA300 | CRITICAL | | 338S00410 | 1 | IC,PMD,OCARINA,D2499AD,OTP-AG,WLCSP56 | U9000 | CRITICAL | SSD0_S4E_4L | 338S00410 | 1 | IC,PMD,OCARINA,D2499AD,OTP-AG,WLCSP56 | U9000 | CRITICAL | SSD0_S5E_4L | 339S00609 | 1 | IC,MODULE,HARPOON,B3,M,EST-9,LGA385 | UB000 | CRITICAL | WIFI:MURATA | 339S00610 | 1 | IC,MODULE,HARPOON,B3,U,EST-7,LGA385 | UB000 | CRITICAL | WIFI:USI | PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | 339S00386 | 1 | POP,GIBRALTAR,1+1GB,20NM,M,DEV,SCX,CSP1122 | U3900 | CRITICAL | SOC:DEV_1G | 339S00388 | 1 | POP,GIBRALTAR,1+2GB,20NM,M,DEV,SCX,CSP1122 | U3900 | CRITICAL | SOC:DEV_2G | 339S00601 | 1 | POP,GIBRALTAR,1+1GB,16NM,M,B0,SCX,CSP1122 | U3900 | CRITICAL | SOC:PRD_1G | 339S00605 | 1 | POP,GIBRALTAR,1+2GB,16NM,M,B0,SCX,CSP1122 | U3900 | CRITICAL | SOC:PRD_2G | PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES | COMMENTS: | 339S00387 | 339S00386 | SOC:DEV_1G | ALL | <RDAR:///41988491> | 339S00390 | 339S00386 | SOC:DEV_1G | ALL | <RDAR:///41988491> | 339S00391 | 339S00386 | SOC:DEV_1G | ALL | <RDAR:///41988491> | 339S00389 | 339S00388 | SOC:DEV_2G | ALL | <RDAR:///41988491> | 339S00392 | 339S00388 | SOC:DEV_2G | ALL | <RDAR:///41988491> | 339S00393 | 339S00388 | SOC:DEV_2G | ALL | <RDAR:///41988491> | 339S00602 | 339S00601 | SOC:PROD_1G | ALL | <RDAR:///41988491> | 339S00603 | 339S00601 | SOC:PROD_1G | ALL | <RDAR:///41988491> | 339S00604 | 339S00601 | SOC:PROD_1G | ALL | <RDAR:///41988491> | 339S00606 | 339S00605 | SOC:PROD_2G | ALL | <RDAR:///41988491> | 339S00607 | 339S00605 | SOC:PROD_2G | ALL | <RDAR:///41988491> | 339S00608 | 339S00605 | SOC:PROD_2G | ALL | <RDAR:///41988491> | | | | | | | | | |
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 341S01498 | 1 | IC,TBT,TBT-X (VXXX) POC,X1447 | U2890 | CRITICAL | TBTROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00133 | 1 | IC,SPI_FLASH_ROM,8MBIT,50MBZ,US0N8 | U2890 | CRITICAL | TBTROM:BLANK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 341S01201 | 1 | IC,ETHERNET,1GB,(V1.15),DVT,X1336 | U6090 | CRITICAL | 1G_ENET_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00198 | 1 | IC,SPI_SERIAL_FLASH,2MBIT,2-TV,80208 | U6090 | CRITICAL | 1G_ENET_ROM:BLANK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 341S01500 | 1 | ROM,BT-SPLASH,1-BV (V35) DVT-2,X1294 | UB250 | CRITICAL | BT_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00255 | 1 | IC,SPI_SERIAL_FLASH,2MBIT,1-BV,DFW8 | UB250 | CRITICAL | BT_ROM:BLANK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 341S01421 | 1 | IC,ENET_ROM (V2.11.9),DVT,X1294 | U9990 | CRITICAL | 10G_ENET_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00365 | 1 | IC,SPI_SERIAL_FLASH,3MBIT,3V,Q8+0,80208 | U9990 | CRITICAL | 10G_ENET_ROM:BLANK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 341S01502 | 1 | IC,ECOMD_CTI,083237A(V7A05),POC,X1547 | UA330 | CRITICAL | SD_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00024 | 1 | IC,SERIAL_FLASH,2MBIT,3V,8-080N,2K3X,80M | UA330 | CRITICAL | SD_ROM:BLANK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 341S00725 | 1 | WIFI_ROM (V01) WWL,0685 | UB210 | CRITICAL | WIFI_ROM:PROG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335S00214 | 1 | IC,EEPROM,EEP,1024B,16K,1-BV,DFW8 | UB210 | CRITICAL | WIFI_ROM:BLANK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 337S00821 | 1 | IC,PCB-E,CML,QML8,Q5-A-0,ROM474 | U1200 | CRITICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 338S00441 | 1 | IC,TBT,TITANIUM1008 DP,8MBSD,PRQ,C1,C0P137 | U2800 | CRITICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 338S00342 | 1 | IC,PMD,CALDE-1,D2248AD,OTP-AE,CSP124,0.5 | U7800 | CRITICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 353S01961 | 2 | IC,C73218,ACPT,82,108B PWR,SW,804M,SGA123 | U3100,U3200 | CRITICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 338S00332 | 1 | IC,ENET_CONTROLLER,AGC157,B3,WR324 | U9700 | CRITICAL | 10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 343S0616 | 1 | IC,COREAN-TV,8BIT,ENET,C0SL,QP94 | U6000 | CRITICAL | 1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 338S00312 | 1 | IC,063227A,DS83 3.0 TO SD CARD BRACKER,QP98 | UA300 | CRITICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 338S00410 | 1 | IC,PMD,OCARINA,D2499AD,OTP-AG,WLCSP56 | U9000 | CRITICAL | SSD0_S4E_4L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 338S00410 | 1 | IC,PMD,OCARINA,D2499AD,OTP-AG,WLCSP56 | U9000 | CRITICAL | SSD0_S5E_4L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 339S00609 | 1 | IC,MODULE,HARPOON,B3,M,EST-9,LGA385 | UB000 | CRITICAL | WIFI:MURATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 339S00610 | 1 | IC,MODULE,HARPOON,B3,U,EST-7,LGA385 | UB000 | CRITICAL | WIFI:USI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PART# | QTY | DESCRIPTION | REFERENCE DESIGNATOR(S) | CRITICAL | BOM OPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 339S00386 | 1 | POP,GIBRALTAR,1+1GB,20NM,M,DEV,SCX,CSP1122 | U3900 | CRITICAL | SOC:DEV_1G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 339S00388 | 1 | POP,GIBRALTAR,1+2GB,20NM,M,DEV,SCX,CSP1122 | U3900 | CRITICAL | SOC:DEV_2G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 339S00601 | 1 | POP,GIBRALTAR,1+1GB,16NM,M,B0,SCX,CSP1122 | U3900 | CRITICAL | SOC:PRD_1G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 339S00605 | 1 | POP,GIBRALTAR,1+2GB,16NM,M,B0,SCX,CSP1122 | U3900 | CRITICAL | SOC:PRD_2G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES | COMMENTS: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 339S00606 | 339S00605 | SOC:PROD_2G | ALL | <RDAR:///41988491> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div>BOM Configuration</div> <table><tr><th colspan="3">DRAWING NUMBER</th><th>SIZE</th></tr><tr><td colspan="3">051-04826</td><td>D</td></tr><tr><td colspan="3">REVISION</td><td>4.0.0</td></tr><tr><td colspan="3">BRANCH</td><td>proto-1-b</td></tr><tr><td colspan="3">PAGE</td><td>170 OF 172</td></tr><tr><td colspan="3">SHEET</td><td>147 OF 149</td></tr></table> <div>NOTICE OF PROPRIETARY PROPERTY:</div> <div>THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE I NOT TO REPRODUCE OR COPY IT I NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART I/ ALL RIGHTS RESERVED</div> | | | | | | | | | DRAWING NUMBER | | | SIZE | 051-04826 | | | D | REVISION | | | 4.0.0 | BRANCH | | | proto-1-b | PAGE | | | 170 OF 172 | SHEET | | | 147 OF 149 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRAWING NUMBER | | | SIZE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 051-04826 | | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REVISION | | | 4.0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BRANCH | | | proto-1-b | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PAGE | | | 170 OF 172 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET | | | 147 OF 149 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| D | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|---|------------|------|---|---|------------|------------|----------|-------------------|-----------|---------------------------------------|---|-----------|--|---|----------------|------------------------------------|--|-----------|--|---|-----------|--------------------------------------|---|-----------|--------------------------------------|---|---|------------------------------------|--|-----------|-------------------------------------|--|-----------|---------------------------------------|--|---|------------|---------------------------------------|--|-----------|--------------------------------------|---|------------|-------------------------------------|---|-----------|--------------------------------------|---|-----------|--------------------------------------|--|-----------|------------------------------------|---|-----------|-----------------------------------|---|-----------|---------------------------------------|--|-----------|------------------------------------|--|-----------|------------------------------------|--|---|-----------|------------------------------------|---|-----------|--------------------------------------|--|-----------|-----------------------------------|---|-----------|-----------------------------------|--|-----------|-----------------------------------|--|-----------|------------------------------------|--|-----------|------------------------------------|---|-----------|------------------------------------|---|-----------|--------------------------------------|---|-----------|--------------------------------------|--|---|-----------|--------------------------------------|--|-----------|--------------------------------------|---|-----------|--------------------------------------|--|-----------|--------------------------------------|--|--|--|--|--|--|--|--|--|------------|--|--|-------------------|--|--|--|--|--|--|----------------|--|-----------|------|---|--|----------|--|-------|--|--|--|---|--|--------|--|-----------|--|--|--|------|--|------------|--|--|--|-------|--|------------|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|
| | BOM CONFIGURATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table><tr><th>BOM NUMBER</th><th>BOM NAME</th><th>BOM OPTIONS</th></tr><tr><td>639-10551</td><td>MLB,CTO,XTMA,HY16G,512GBTO,EN1G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_512GB_TO,1G_ENET</td></tr><tr><td>639-10552</td><td>MLB,CTO,XGA,SS8G,4TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_4TB_HY,10G_ENET</td></tr><tr><td>639-10553</td><td>MLB,CTO,XGA,HY8GB,1TBTO,EN1G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_TO,1G_ENET</td></tr><tr><td>639-10554</td><td>MLB,CTO,XTMA,SS16GB,512GBHY,EN1G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_512GB_HY,1G_ENET</td></tr><tr><td>639-10555</td><td>MLB,CTO,XTMA,SS16GB,2TBWD,EN1G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_2TB_WD,1G_ENET</td></tr><tr><td>639-10556</td><td>MLB,CTO,XTMA,MI16G,4TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_HY,10G_ENET</td></tr><tr><td>639-10557</td><td>MLB,CTO,XGA,MI8G,4TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_4TB_WD,10G_ENET</td></tr><tr><td>639-10558</td><td>MLB,CTO,XTMA,MI16G,2TBHY,EN1G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_2TB_HY,1G_ENET</td></tr><tr><td>639-10559</td><td>MLB,CTO,XTMA,SS16GB,8TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_HY,10G_ENET</td></tr><tr><td rowspan="10">C</td><td>639-10560</td><td>MLB,CTO,XTMA,SS16GB,8TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_WD,10G_ENET</td></tr><tr><td>639-10561</td><td>MLB,CTO,XTMA,MI16G,8TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_8TB_WD,10G_ENET</td></tr><tr><td>639-10562</td><td>MLB,CTO,XGA,HY8GB,1TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_HY,10G_ENET</td></tr><tr><td>639-10563</td><td>MLB,CTO,XTMA,MI16G,4TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_WD,10G_ENET</td></tr><tr><td>639-10564</td><td>MLB,CTO,XTMA,HY16G,8TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_HY,10G_ENET</td></tr><tr><td>639-10565</td><td>MLB,CTO,XGA,SS8G,2TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_2TB_HY,10G_ENET</td></tr><tr><td>639-10566</td><td>MLB,CTO,XGA,MI8G,1TBHY,EN1G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_1TB_HY,1G_ENET</td></tr><tr><td>639-10567</td><td>MLB,CTO,XTMA,MI16G,512GBTO,EN1G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_512GB_TO,1G_ENET</td></tr><tr><td>639-10568</td><td>MLB,CTO,XGA,MI8G,2TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_2TB_WD,10G_ENET</td></tr><tr><td>639-10904</td><td>MLB,CTO,XGA,MI8G,4TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_4TB_HY,10G_ENET</td></tr><tr><td rowspan="10">B</td><td>639-10905</td><td>MLB,CTO,XGA,HY8G,4TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_4TB_HY,10G_ENET</td></tr><tr><td>639-10907</td><td>MLB,CTO,XTMA,HY16G,8TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_WD,10G_ENET</td></tr><tr><td>639-10892</td><td>MLB,ULT,XGA,MI8G,1TBTO,EN1G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_1TB_TO,1G_ENET</td></tr><tr><td>639-10893</td><td>MLB,ULT,XGA,HY8G,1TBTO,EN1G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_TO,1G_ENET</td></tr><tr><td>639-10894</td><td>MLB,ULT,XGA,SS8G,1TBTO,EN1G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_1TB_TO,1G_ENET</td></tr><tr><td>639-10895</td><td>MLB,ULT,XGA,MI8G,2TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_2TB_WD,10G_ENET</td></tr><tr><td>639-10896</td><td>MLB,ULT,XGA,HY8G,2TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_2TB_WD,10G_ENET</td></tr><tr><td>639-10897</td><td>MLB,ULT,XGA,SS8G,2TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_2TB_WD,10G_ENET</td></tr><tr><td>639-10898</td><td>MLB,ULT,XTMA,MI16G,4TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_WD,10G_ENET</td></tr><tr><td>639-10899</td><td>MLB,ULT,XTMA,HY16G,4TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_4TB_WD,10G_ENET</td></tr><tr><td rowspan="4">A</td><td>639-10900</td><td>MLB,ULT,XTMA,SS16G,4TBWD,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_4TB_WD,10G_ENET</td></tr><tr><td>639-10901</td><td>MLB,ULT,XTMA,MI16G,8TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_8TB_HY,10G_ENET</td></tr><tr><td>639-10902</td><td>MLB,ULT,XTMA,HY16G,8TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_HY,10G_ENET</td></tr><tr><td>639-10903</td><td>MLB,ULT,XTMA,SS16G,8TBHY,EN10G,X1647</td><td>MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_HY,10G_ENET</td></tr><tr><td colspan="8"><table><tr><td colspan="3">PAGE TITLE</td><td colspan="3">BOM CONFIGURATION</td><td colspan="2"></td></tr><tr><td colspan="2" rowspan="2"> Apple Inc.</td><td colspan="2">DRAWING NUMBER</td><td>051-04826</td><td>SIZE</td><td colspan="2" rowspan="6">D</td></tr><tr><td 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THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED</td><td colspan="2">BRANCH</td><td colspan="4">proto-1-b</td></tr><tr><td colspan="2">PAGE</td><td colspan="4">172 OF 172</td></tr><tr><td colspan="2">SHEET</td><td colspan="4" rowspan="2">149 OF 149</td></tr><tr><td colspan="6"></td></tr></table></td><td>A</td></tr><tr><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td></tr></table> | | | | | | | | BOM NUMBER | BOM NAME | BOM OPTIONS | 639-10551 | MLB,CTO,XTMA,HY16G,512GBTO,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_512GB_TO,1G_ENET | 639-10552 | MLB,CTO,XGA,SS8G,4TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_4TB_HY,10G_ENET | 639-10553 | MLB,CTO,XGA,HY8GB,1TBTO,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_TO,1G_ENET | 639-10554 | MLB,CTO,XTMA,SS16GB,512GBHY,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_512GB_HY,1G_ENET | 639-10555 | MLB,CTO,XTMA,SS16GB,2TBWD,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_2TB_WD,1G_ENET | 639-10556 | MLB,CTO,XTMA,MI16G,4TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_HY,10G_ENET | 639-10557 | MLB,CTO,XGA,MI8G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_4TB_WD,10G_ENET | 639-10558 | MLB,CTO,XTMA,MI16G,2TBHY,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_2TB_HY,1G_ENET | 639-10559 | MLB,CTO,XTMA,SS16GB,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_HY,10G_ENET | C | 639-10560 | MLB,CTO,XTMA,SS16GB,8TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_WD,10G_ENET | 639-10561 | MLB,CTO,XTMA,MI16G,8TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_8TB_WD,10G_ENET | 639-10562 | MLB,CTO,XGA,HY8GB,1TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_HY,10G_ENET | 639-10563 | MLB,CTO,XTMA,MI16G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_WD,10G_ENET | 639-10564 | MLB,CTO,XTMA,HY16G,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_HY,10G_ENET | 639-10565 | MLB,CTO,XGA,SS8G,2TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_2TB_HY,10G_ENET | 639-10566 | MLB,CTO,XGA,MI8G,1TBHY,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_1TB_HY,1G_ENET | 639-10567 | MLB,CTO,XTMA,MI16G,512GBTO,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_512GB_TO,1G_ENET | 639-10568 | MLB,CTO,XGA,MI8G,2TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_2TB_WD,10G_ENET | 639-10904 | MLB,CTO,XGA,MI8G,4TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_4TB_HY,10G_ENET | B | 639-10905 | MLB,CTO,XGA,HY8G,4TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_4TB_HY,10G_ENET | 639-10907 | MLB,CTO,XTMA,HY16G,8TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_WD,10G_ENET | 639-10892 | MLB,ULT,XGA,MI8G,1TBTO,EN1G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_1TB_TO,1G_ENET | 639-10893 | MLB,ULT,XGA,HY8G,1TBTO,EN1G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_TO,1G_ENET | 639-10894 | MLB,ULT,XGA,SS8G,1TBTO,EN1G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_1TB_TO,1G_ENET | 639-10895 | MLB,ULT,XGA,MI8G,2TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_2TB_WD,10G_ENET | 639-10896 | MLB,ULT,XGA,HY8G,2TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_2TB_WD,10G_ENET | 639-10897 | MLB,ULT,XGA,SS8G,2TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_2TB_WD,10G_ENET | 639-10898 | MLB,ULT,XTMA,MI16G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_WD,10G_ENET | 639-10899 | MLB,ULT,XTMA,HY16G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_4TB_WD,10G_ENET | A | 639-10900 | MLB,ULT,XTMA,SS16G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_4TB_WD,10G_ENET | 639-10901 | MLB,ULT,XTMA,MI16G,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_8TB_HY,10G_ENET | 639-10902 | MLB,ULT,XTMA,HY16G,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_HY,10G_ENET | 639-10903 | MLB,ULT,XTMA,SS16G,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_HY,10G_ENET | <table><tr><td colspan="3">PAGE TITLE</td><td colspan="3">BOM CONFIGURATION</td><td colspan="2"></td></tr><tr><td colspan="2" rowspan="2"> Apple Inc.</td><td colspan="2">DRAWING NUMBER</td><td>051-04826</td><td>SIZE</td><td colspan="2" rowspan="6">D</td></tr><tr><td colspan="2">REVISION</td><td colspan="4">4.0.0</td></tr><tr><td colspan="2" rowspan="4">NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED</td><td colspan="2">BRANCH</td><td colspan="4">proto-1-b</td></tr><tr><td colspan="2">PAGE</td><td colspan="4">172 OF 172</td></tr><tr><td colspan="2">SHEET</td><td colspan="4" rowspan="2">149 OF 149</td></tr><tr><td colspan="6"></td></tr></table> | | | | | | | | PAGE TITLE | | | BOM CONFIGURATION | | | | |  Apple Inc. | | DRAWING NUMBER | | 051-04826 | SIZE | D | | REVISION | | 4.0.0 | | | | NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | BRANCH | | proto-1-b | | | | PAGE | | 172 OF 172 | | | | SHEET | | 149 OF 149 | | | | | | | | | | A | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| | BOM NUMBER | BOM NAME | BOM OPTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10551 | MLB,CTO,XTMA,HY16G,512GBTO,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_512GB_TO,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10552 | MLB,CTO,XGA,SS8G,4TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_4TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10553 | MLB,CTO,XGA,HY8GB,1TBTO,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_TO,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10554 | MLB,CTO,XTMA,SS16GB,512GBHY,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_512GB_HY,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10555 | MLB,CTO,XTMA,SS16GB,2TBWD,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_2TB_WD,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10556 | MLB,CTO,XTMA,MI16G,4TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 639-10557 | MLB,CTO,XGA,MI8G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_4TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 639-10558 | MLB,CTO,XTMA,MI16G,2TBHY,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_2TB_HY,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 639-10559 | MLB,CTO,XTMA,SS16GB,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | 639-10560 | MLB,CTO,XTMA,SS16GB,8TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10561 | MLB,CTO,XTMA,MI16G,8TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_8TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10562 | MLB,CTO,XGA,HY8GB,1TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10563 | MLB,CTO,XTMA,MI16G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10564 | MLB,CTO,XTMA,HY16G,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10565 | MLB,CTO,XGA,SS8G,2TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_2TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10566 | MLB,CTO,XGA,MI8G,1TBHY,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_1TB_HY,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10567 | MLB,CTO,XTMA,MI16G,512GBTO,EN1G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_512GB_TO,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10568 | MLB,CTO,XGA,MI8G,2TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_2TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10904 | MLB,CTO,XGA,MI8G,4TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_4TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | 639-10905 | MLB,CTO,XGA,HY8G,4TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_4TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10907 | MLB,CTO,XTMA,HY16G,8TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:CTO,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10892 | MLB,ULT,XGA,MI8G,1TBTO,EN1G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_1TB_TO,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10893 | MLB,ULT,XGA,HY8G,1TBTO,EN1G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_1TB_TO,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10894 | MLB,ULT,XGA,SS8G,1TBTO,EN1G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_1TB_TO,1G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10895 | MLB,ULT,XGA,MI8G,2TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_MICRON,STD_2TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10896 | MLB,ULT,XGA,HY8G,2TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_HYNIX,STD_2TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10897 | MLB,ULT,XGA,SS8G,2TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XGA,GPU_XGA_ROM:PROG,FB:8GB_SAMSUNG,STD_2TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10898 | MLB,ULT,XTMA,MI16G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_4TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10899 | MLB,ULT,XTMA,HY16G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_4TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | 639-10900 | MLB,ULT,XTMA,SS16G,4TBWD,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_4TB_WD,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10901 | MLB,ULT,XTMA,MI16G,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_MICRON,STD_8TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10902 | MLB,ULT,XTMA,HY16G,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_HYNIX,STD_8TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 639-10903 | MLB,ULT,XTMA,SS16G,8TBHY,EN10G,X1647 | MLB_CNPPTS,CPU:ULT,CAP:HP,GPU_SKU:XTMA,GPU_XTMA_ROM:PROG,FB:16GB_SAMSUNG,STD_8TB_HY,10G_ENET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table><tr><td colspan="3">PAGE TITLE</td><td colspan="3">BOM CONFIGURATION</td><td colspan="2"></td></tr><tr><td colspan="2" rowspan="2"> Apple Inc.</td><td colspan="2">DRAWING NUMBER</td><td>051-04826</td><td>SIZE</td><td colspan="2" rowspan="6">D</td></tr><tr><td colspan="2">REVISION</td><td colspan="4">4.0.0</td></tr><tr><td colspan="2" rowspan="4">NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED</td><td colspan="2">BRANCH</td><td colspan="4">proto-1-b</td></tr><tr><td colspan="2">PAGE</td><td colspan="4">172 OF 172</td></tr><tr><td colspan="2">SHEET</td><td colspan="4" rowspan="2">149 OF 149</td></tr><tr><td colspan="6"></td></tr></table> | | | | | | | | PAGE TITLE | | | BOM CONFIGURATION | | | | |  Apple Inc. | | DRAWING NUMBER | | 051-04826 | SIZE | D | | REVISION | | 4.0.0 | | | | NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | BRANCH | | proto-1-b | | | | PAGE | | 172 OF 172 | | | | SHEET | | 149 OF 149 | | | | | | | | | | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PAGE TITLE | | | BOM CONFIGURATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  Apple Inc. | | DRAWING NUMBER | | 051-04826 | SIZE | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | REVISION | | 4.0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTICE OF PROPRIETARY PROPERTY: THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE INC. THE POSSESSOR AGREES TO THE FOLLOWING: I TO MAINTAIN THIS DOCUMENT IN CONFIDENCE II NOT TO REPRODUCE OR COPY IT III NOT TO REVEAL OR PUBLISH IT IN WHOLE OR PART IV ALL RIGHTS RESERVED | | BRANCH | | proto-1-b | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | PAGE | | 172 OF 172 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SHEET | | 149 OF 149 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |