## P391-A00 Base Design

P391-A00, G92, 8Mx32/16Mx32 GDDR3 DVI-I-DL, DVI-I-DL, HDTVout

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| SKL | VARI ANT                 | NVPN                     | ASSEMBLY   |
|-----|--------------------------|--------------------------|--|
| В   | BASE                     | 600-10391-base-000       | P391 - BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL |
| 1   | SKU0050                  | 600-10391-0050-000       | P391 G92 512MB GDDR3 16Mx32 DVI-I+DVI-I  |
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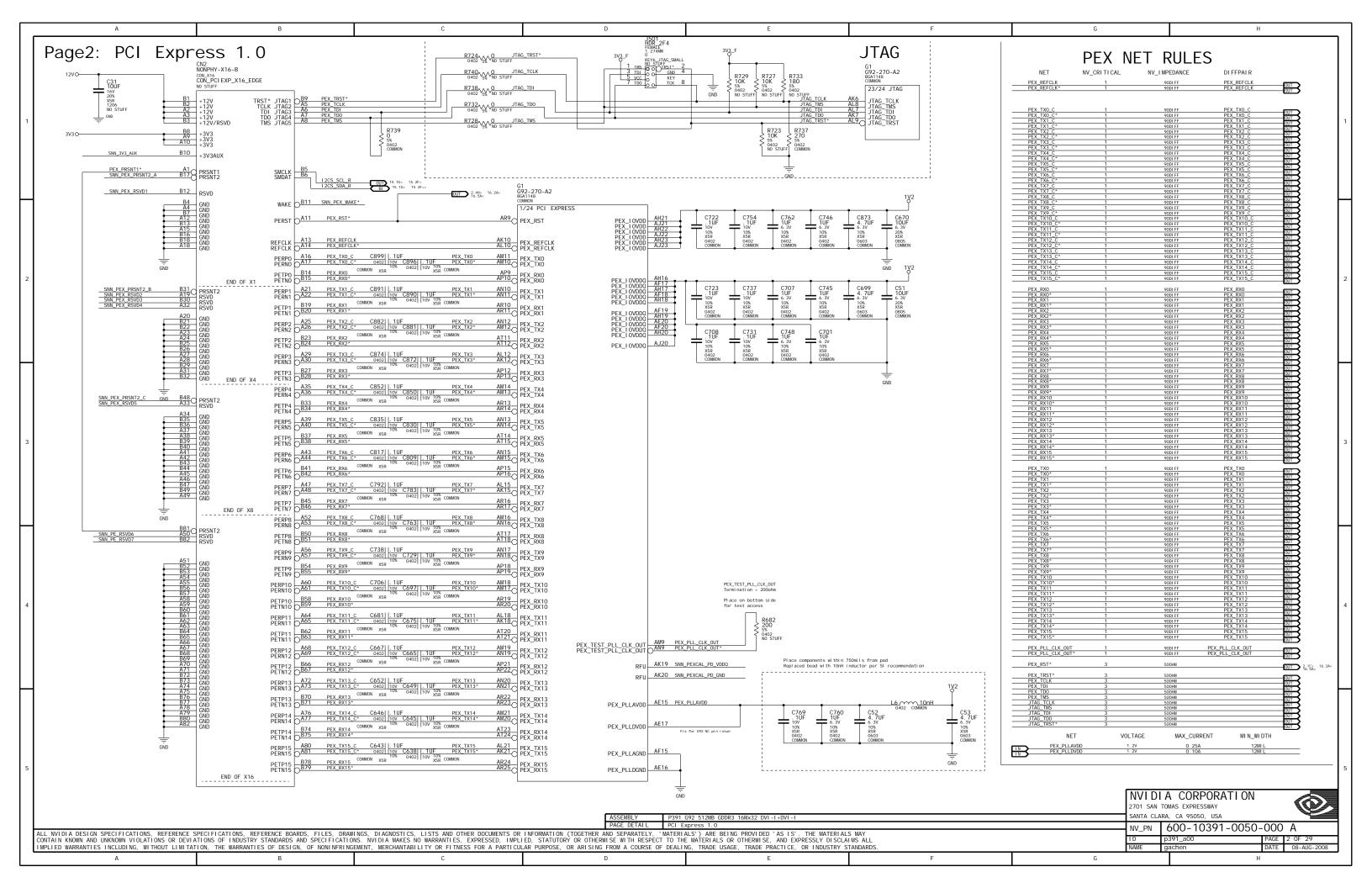
NVIDIA CORPORATION

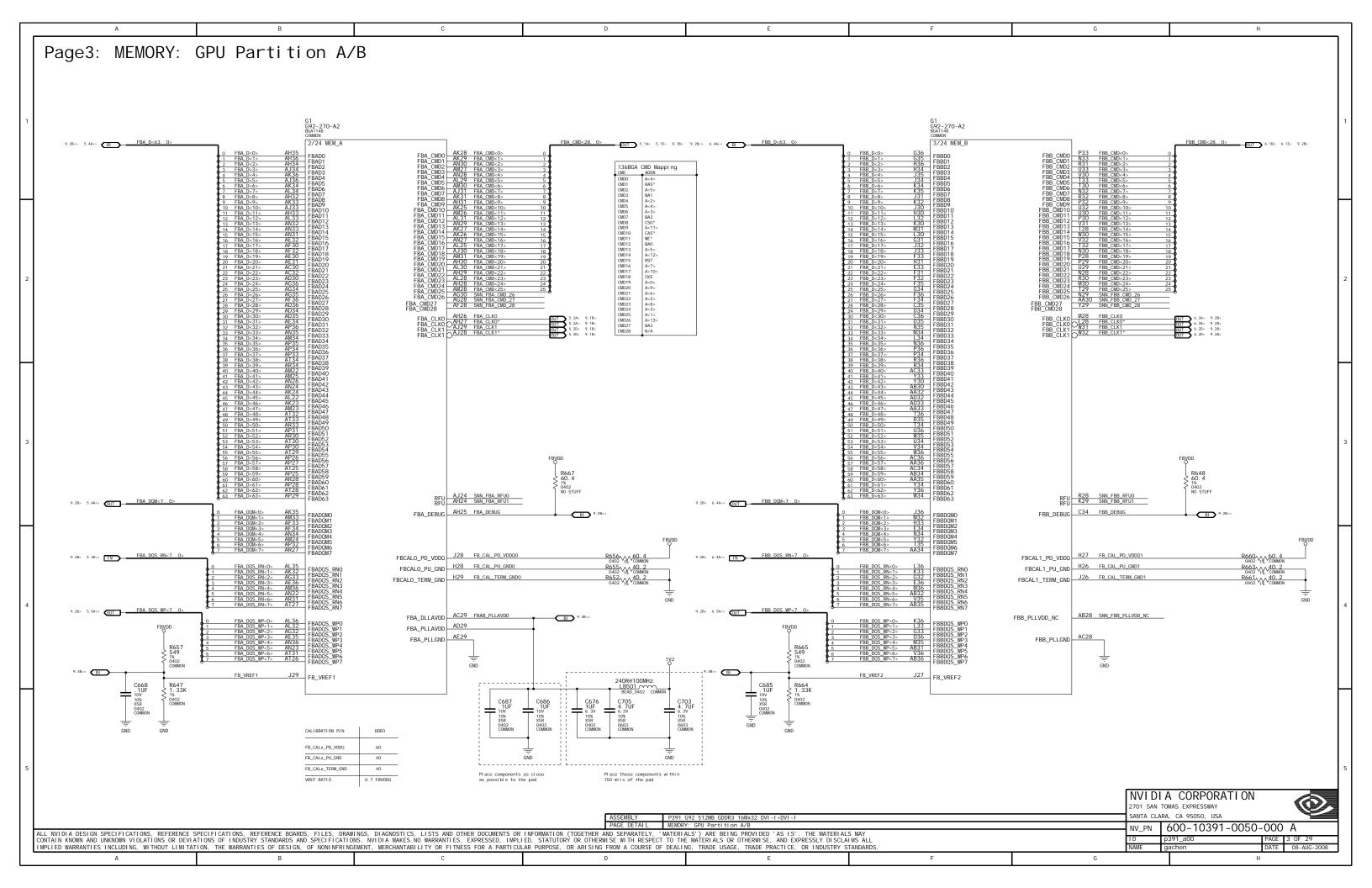
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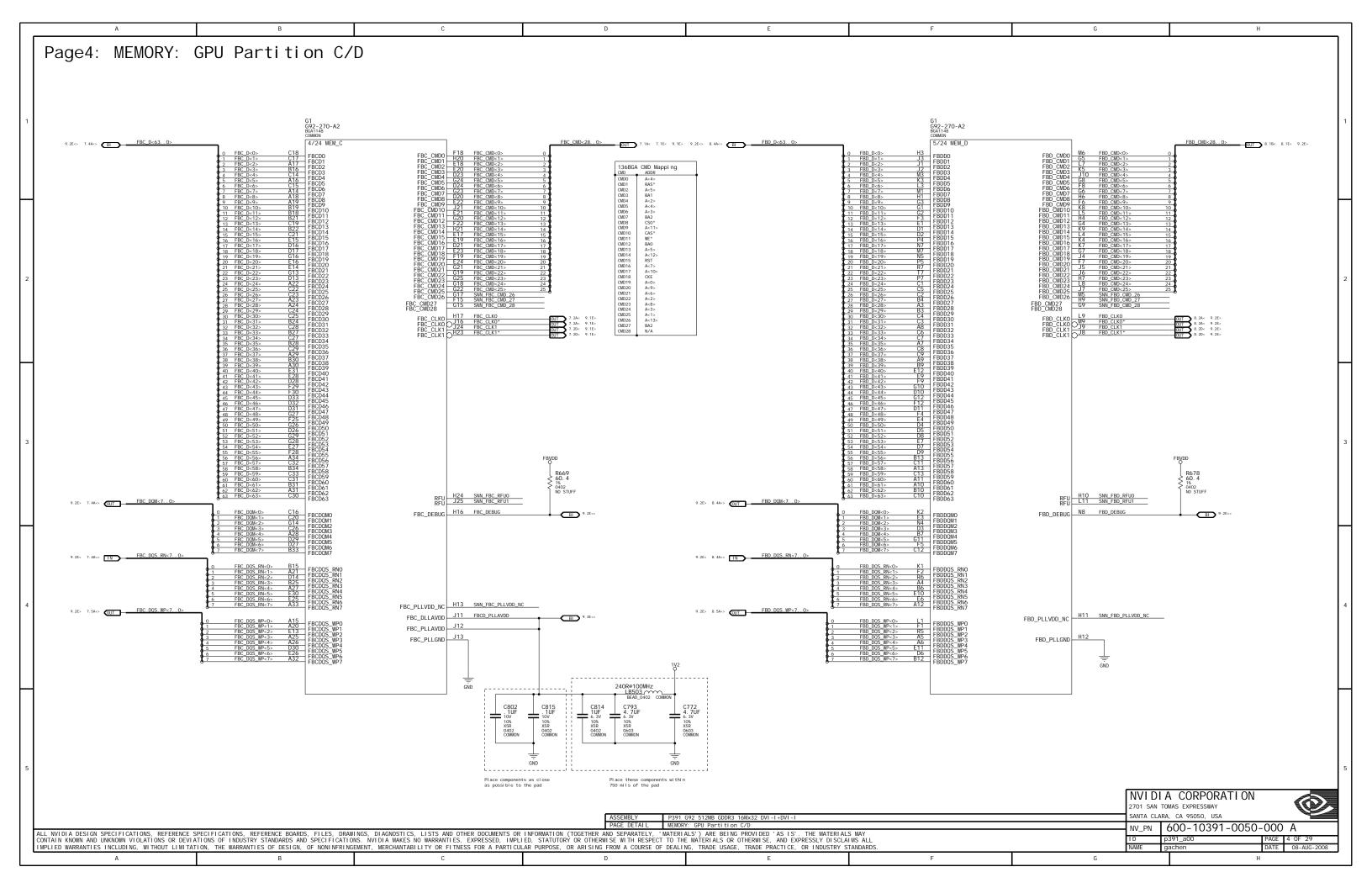
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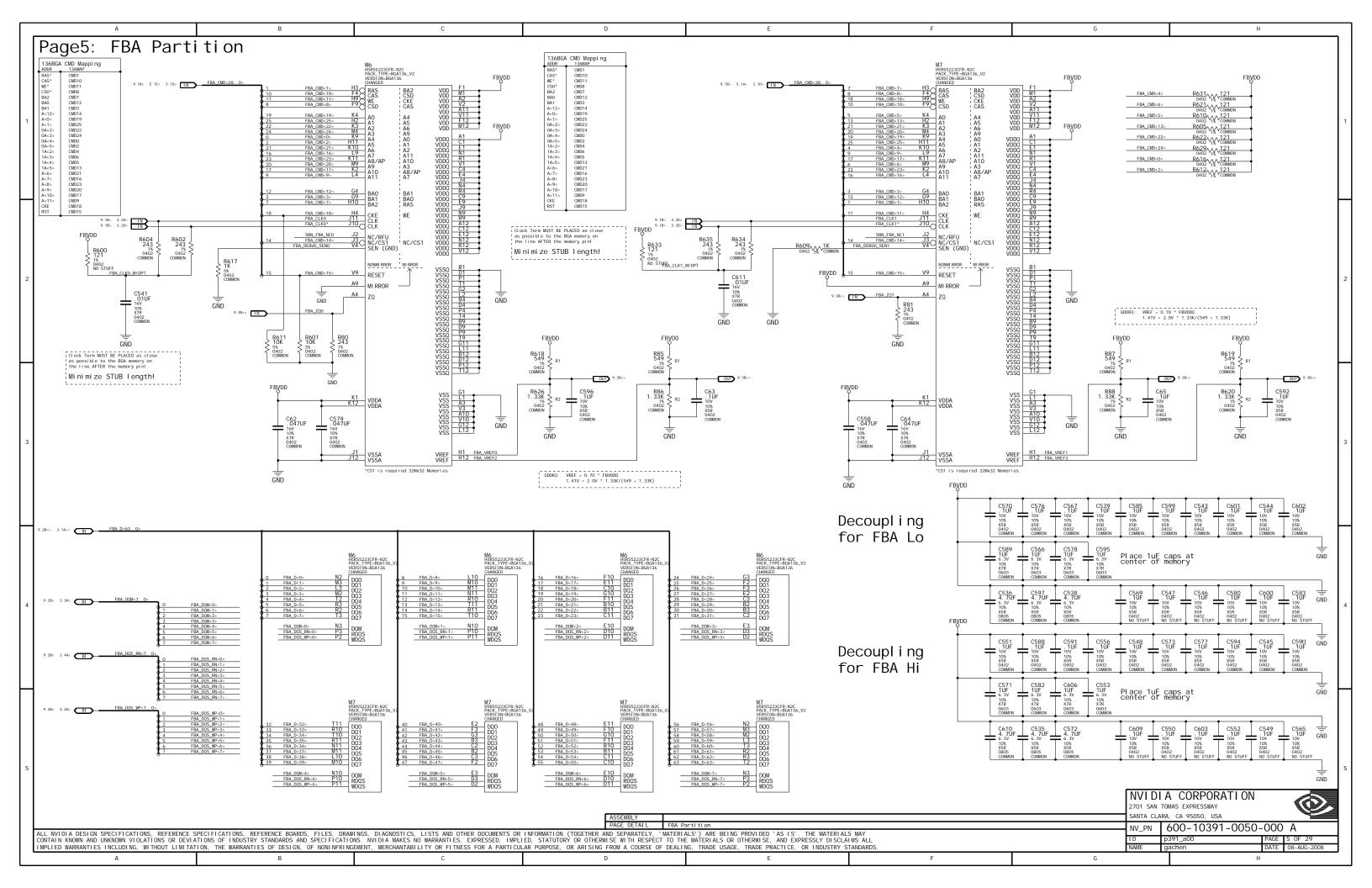
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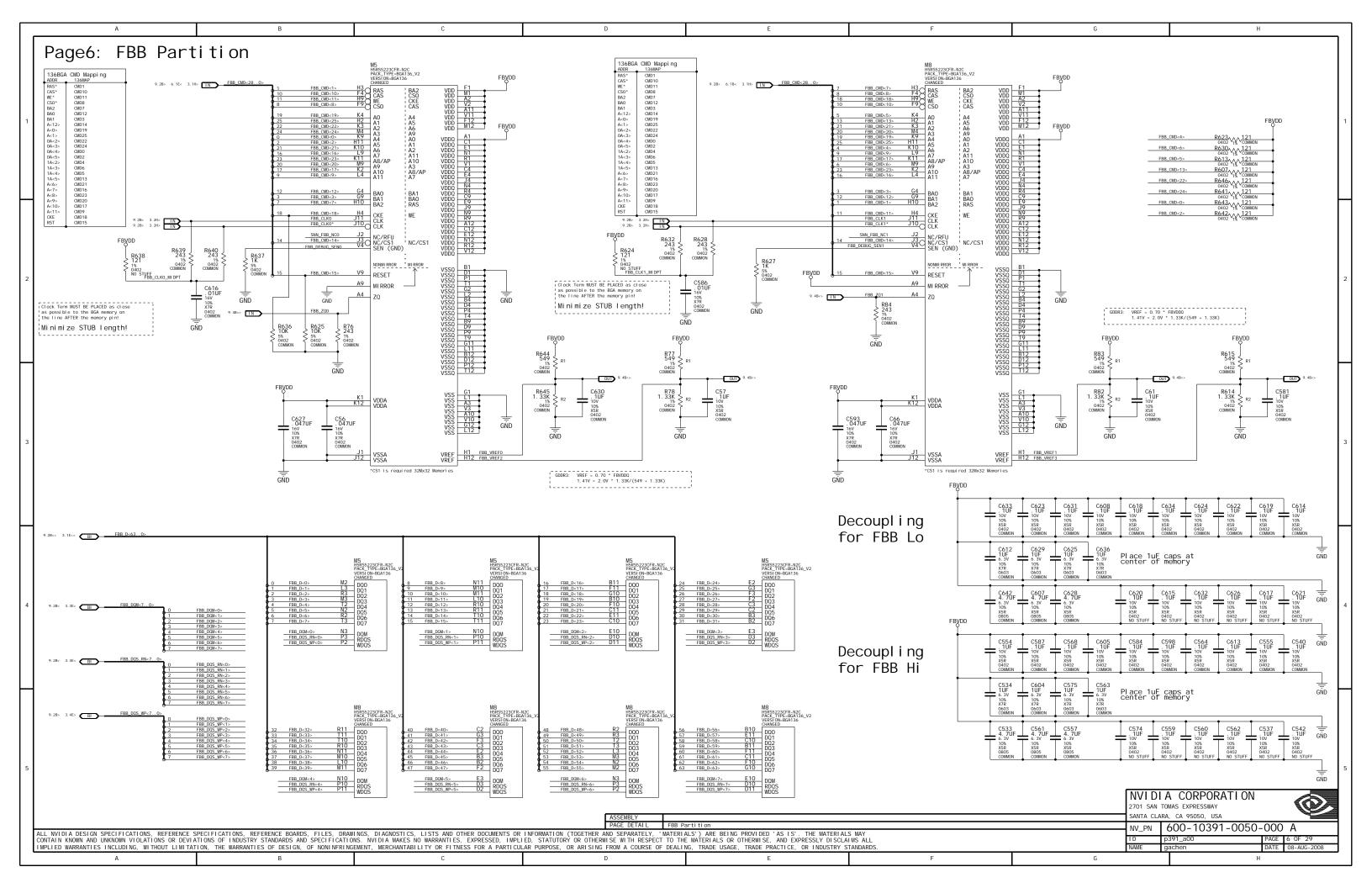
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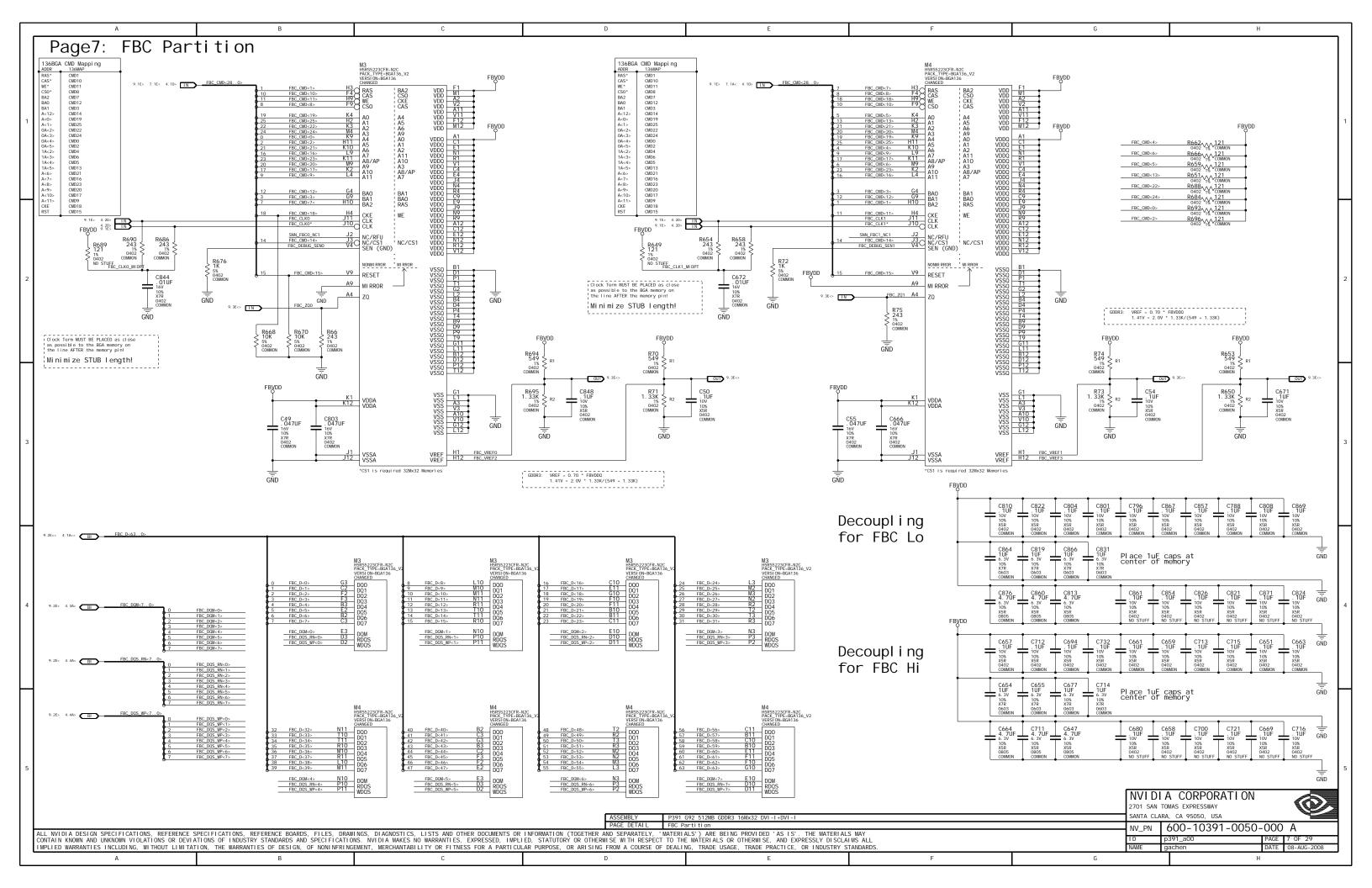


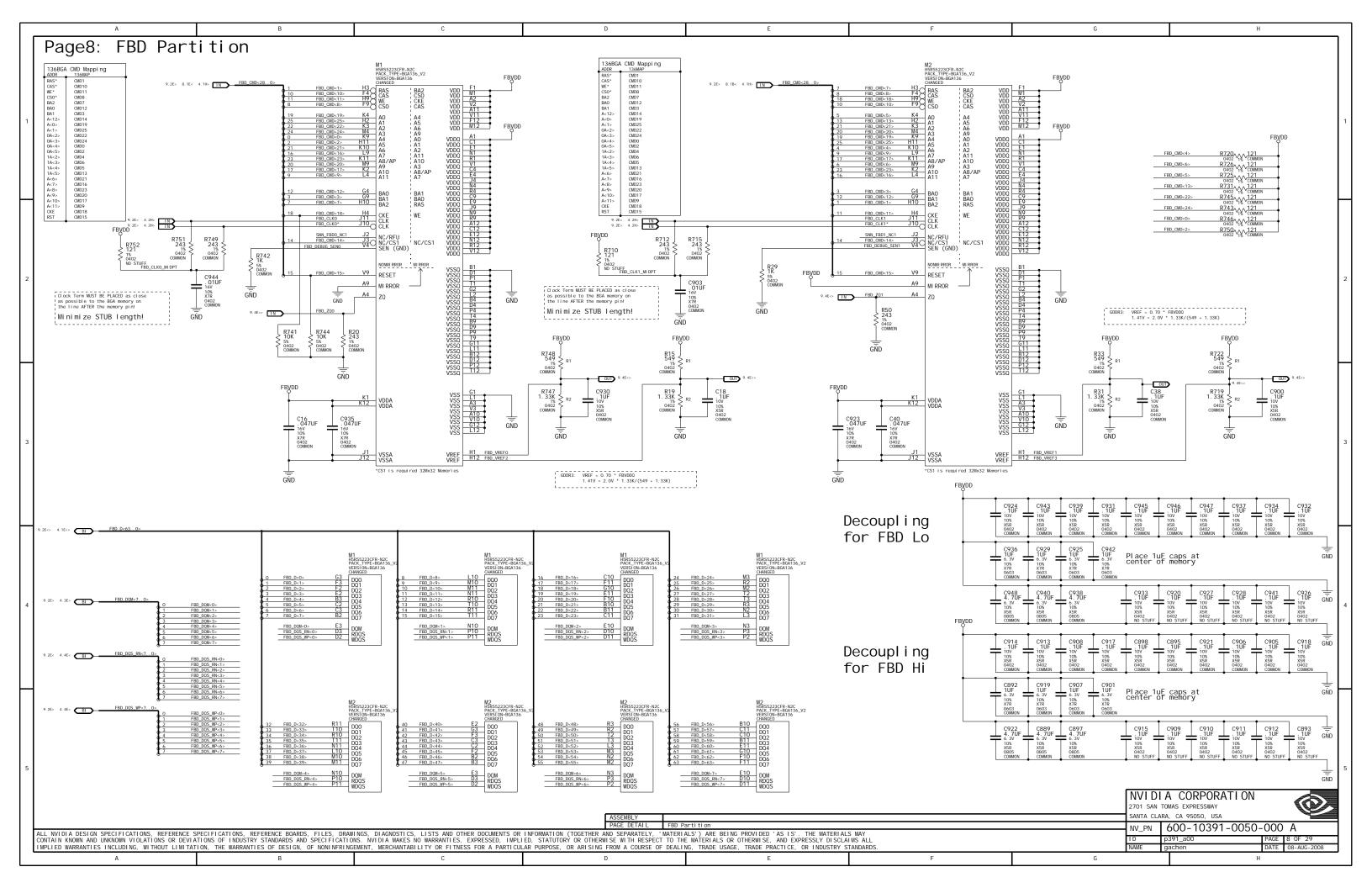




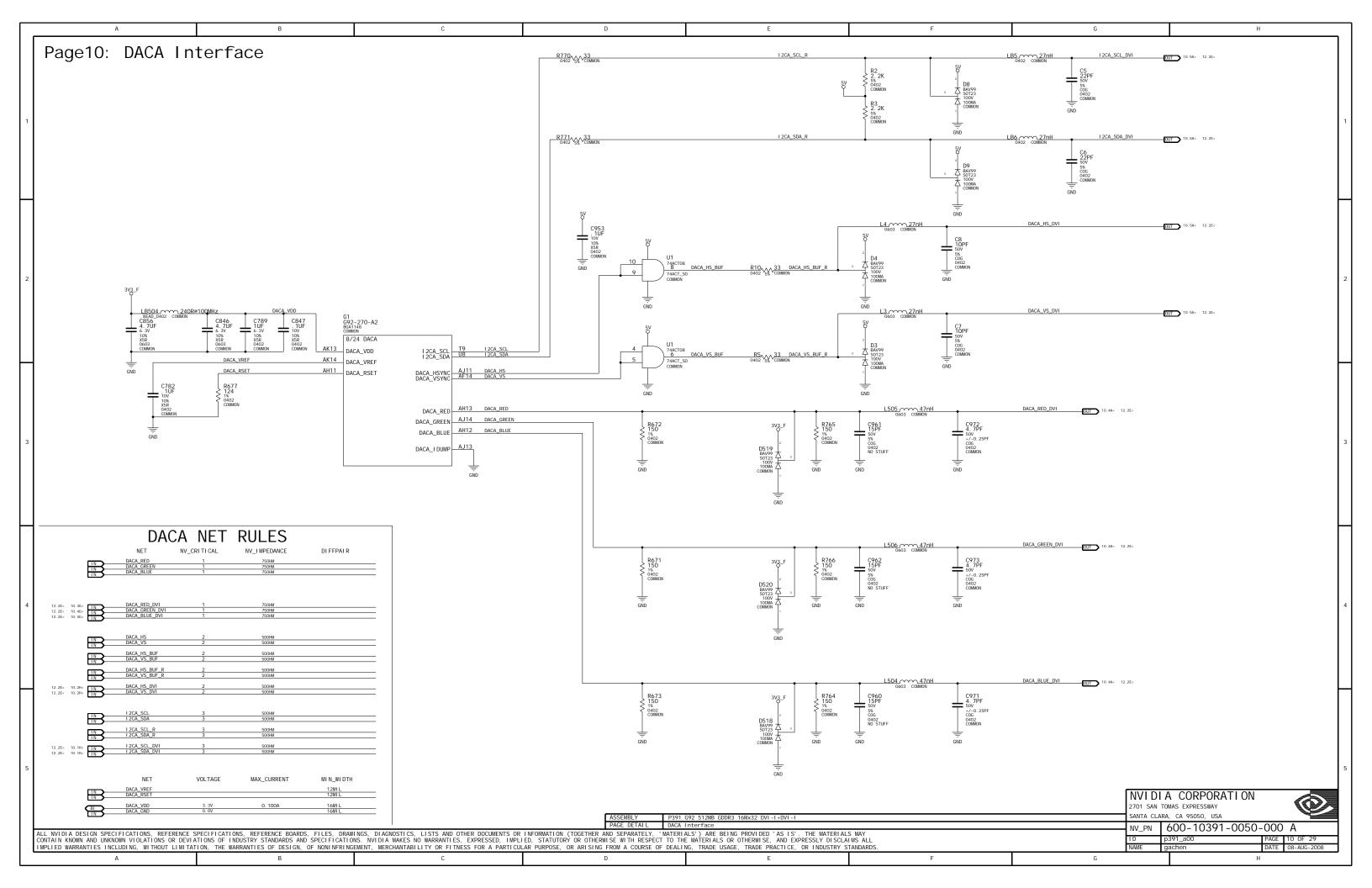


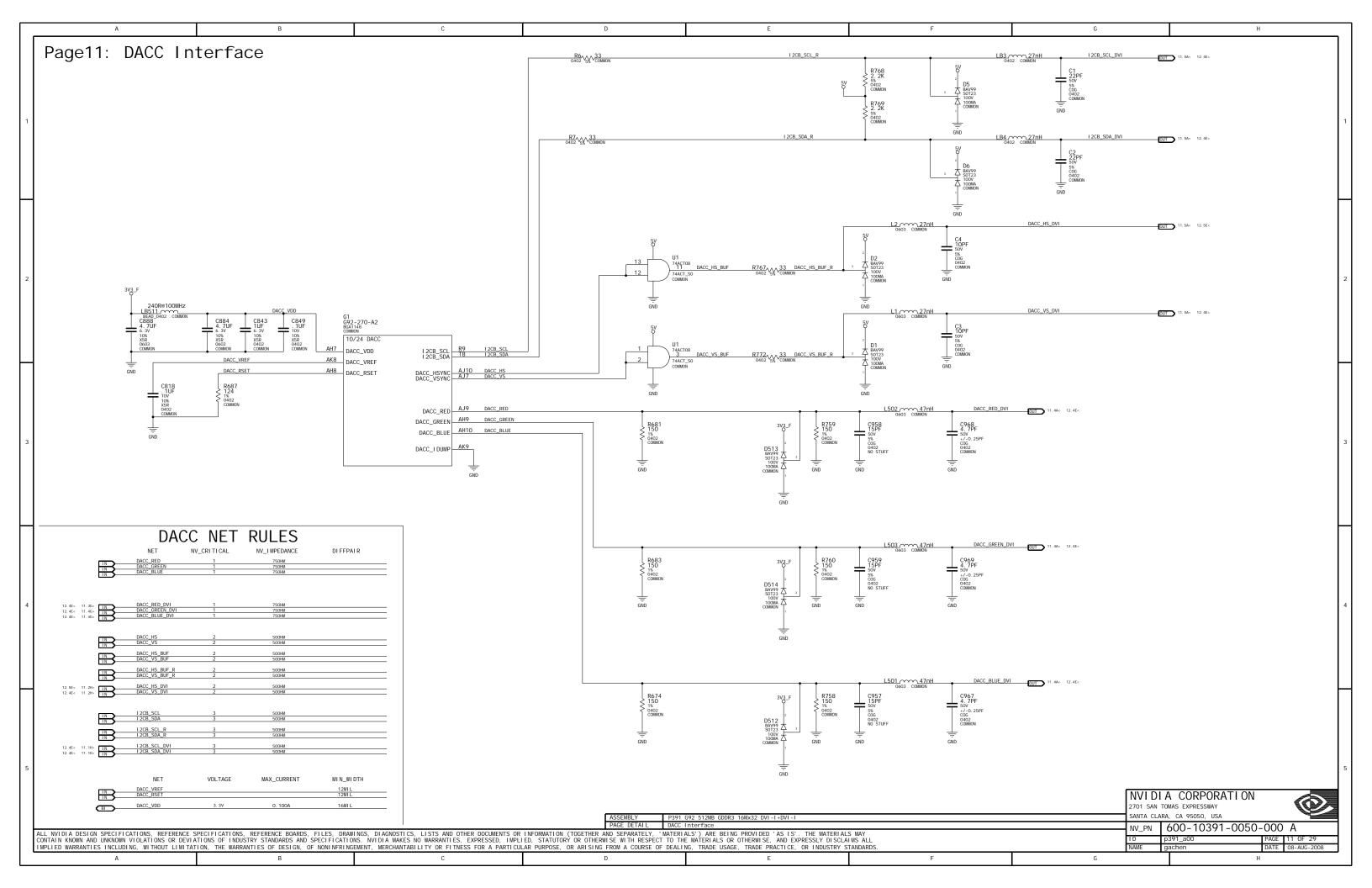


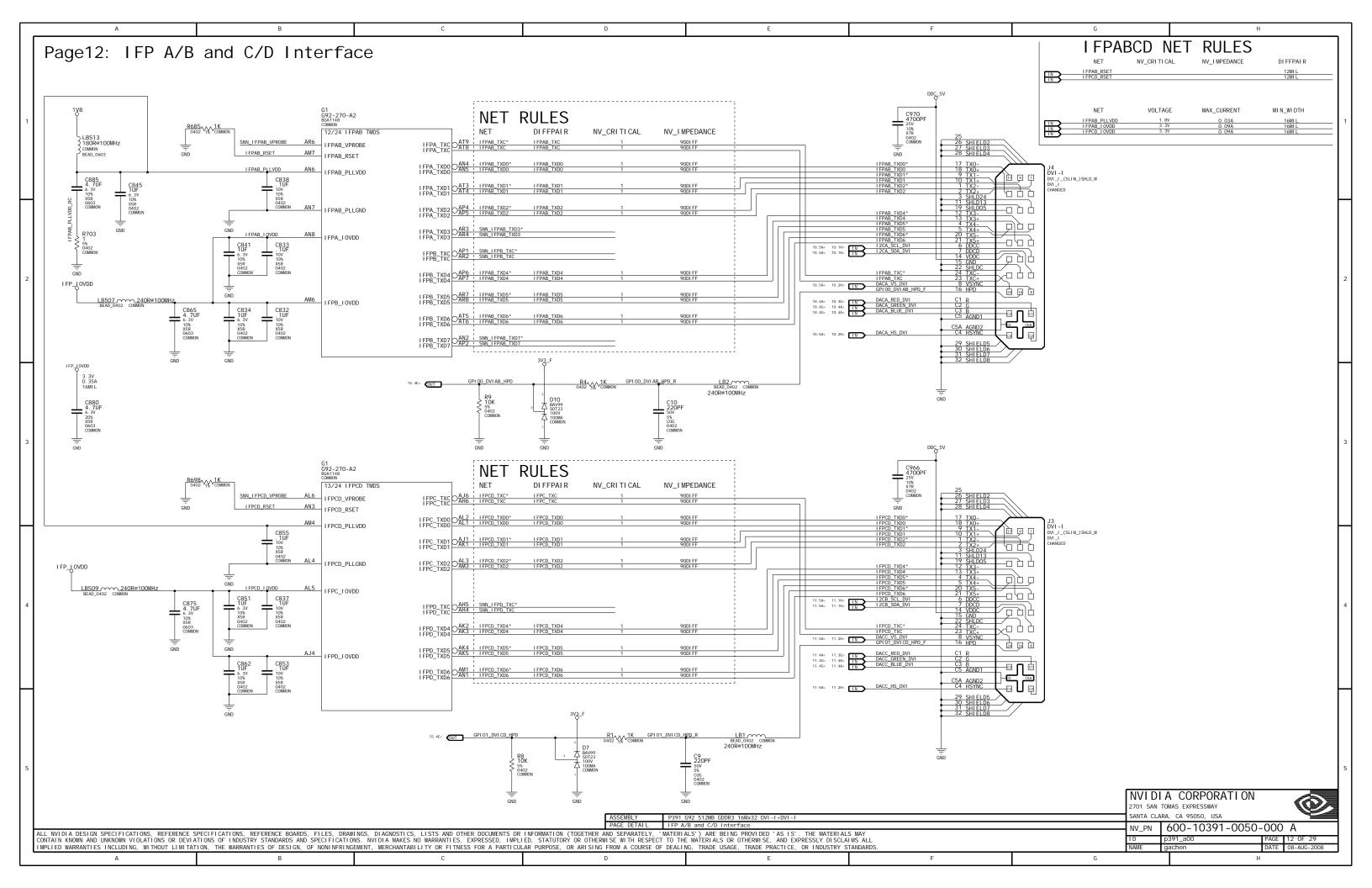


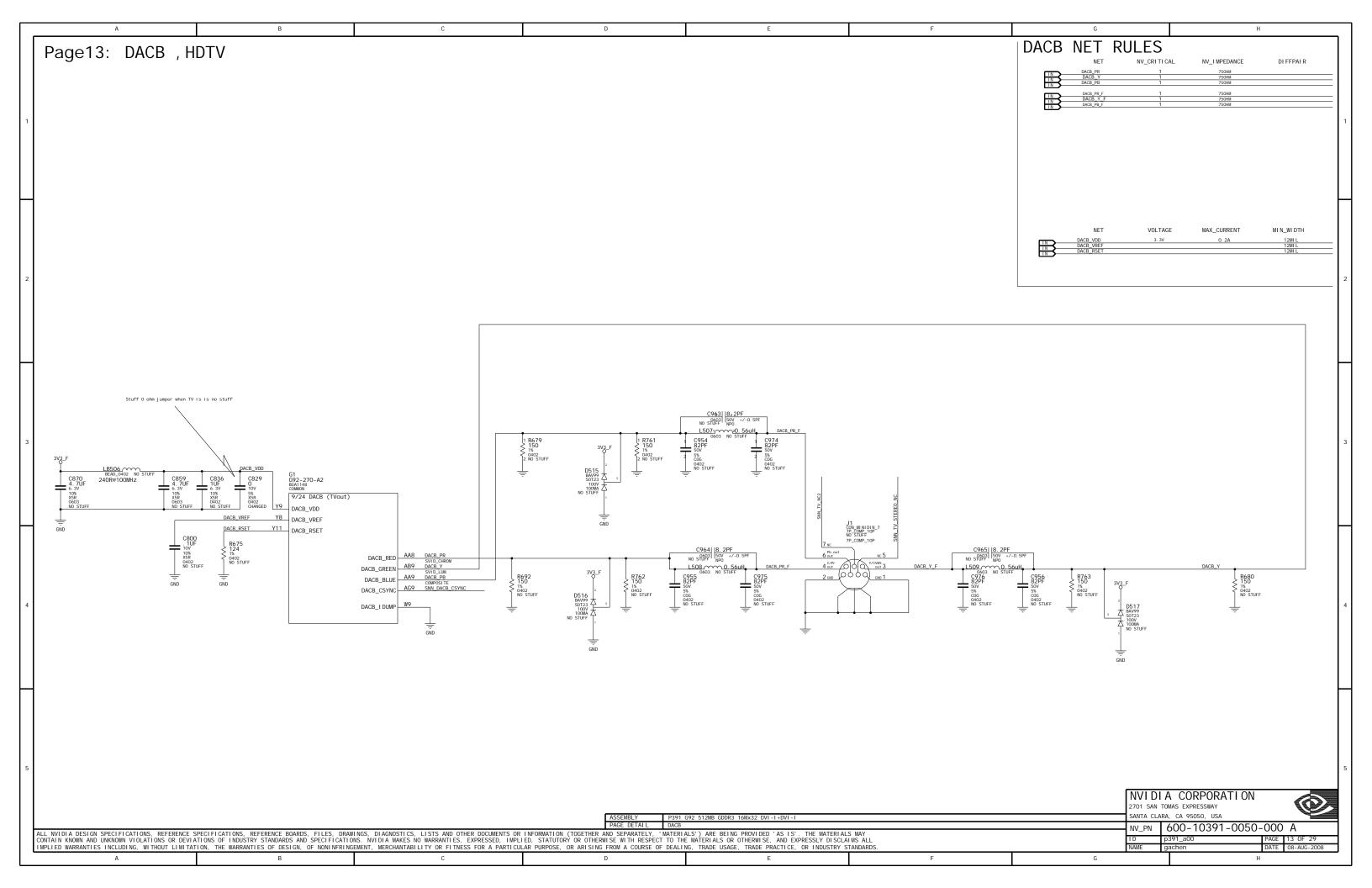


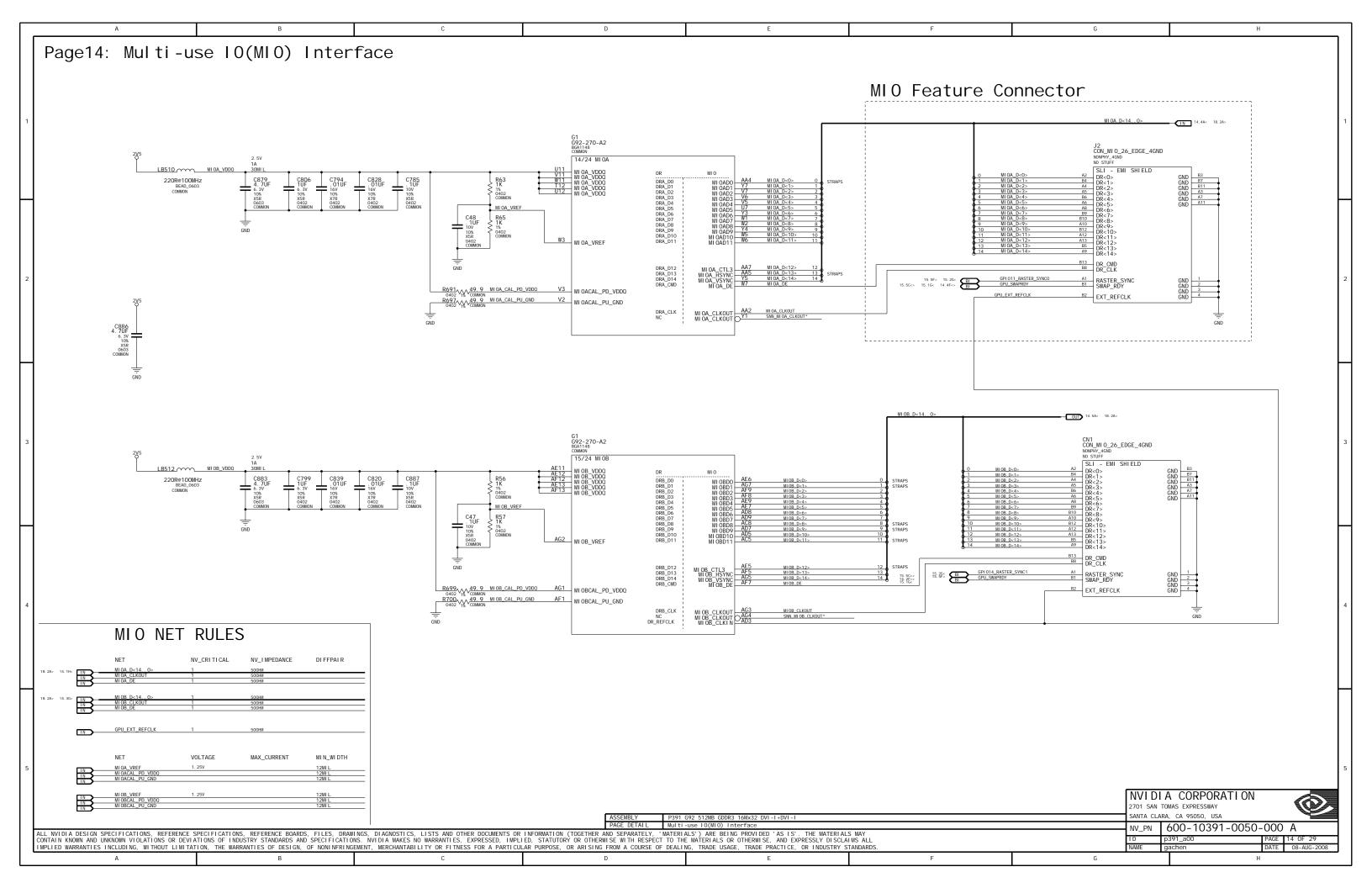
Page9: FrameBuffer Net Rules NET RULES for FrameBuffer A/B NET RULES for FrameBuffer C/D NV\_CRI TI CAL NV\_I MPEDANCE NV\_CRI TI CAL NV\_I MPEDANCE DI FFPAI R NV\_I MPEDANCE DIFFPAIR DI FFPAI R NV\_CRITICAL NV\_CRI TI CAL NV\_I MPEDANCE VOLTAGE MAX\_CURRENT MI N\_WI DTH VOLTAGE MAX\_CURRENT MI N\_WI DTH 3. 4D<> BI FBAB\_PLLAVDD 4. 4D<> BI FBCD\_PLLAVDD 0. 02A 6. 3E>
6. 3H>
BI
FBB\_VREF2
FBB\_VREF3 3. 4A<> BI FB\_VREF1
3. 4E<> BI FB\_VREF2 1. 40V 1. 40V 0. 02A 0. 02A NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA NV\_PN 600-10391-0050-000 A ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, 'MATERIALS') ARE BEING PROVIDED 'AS IS'. THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS PAGE 9 0F 29 DATE 08-AUG-2008

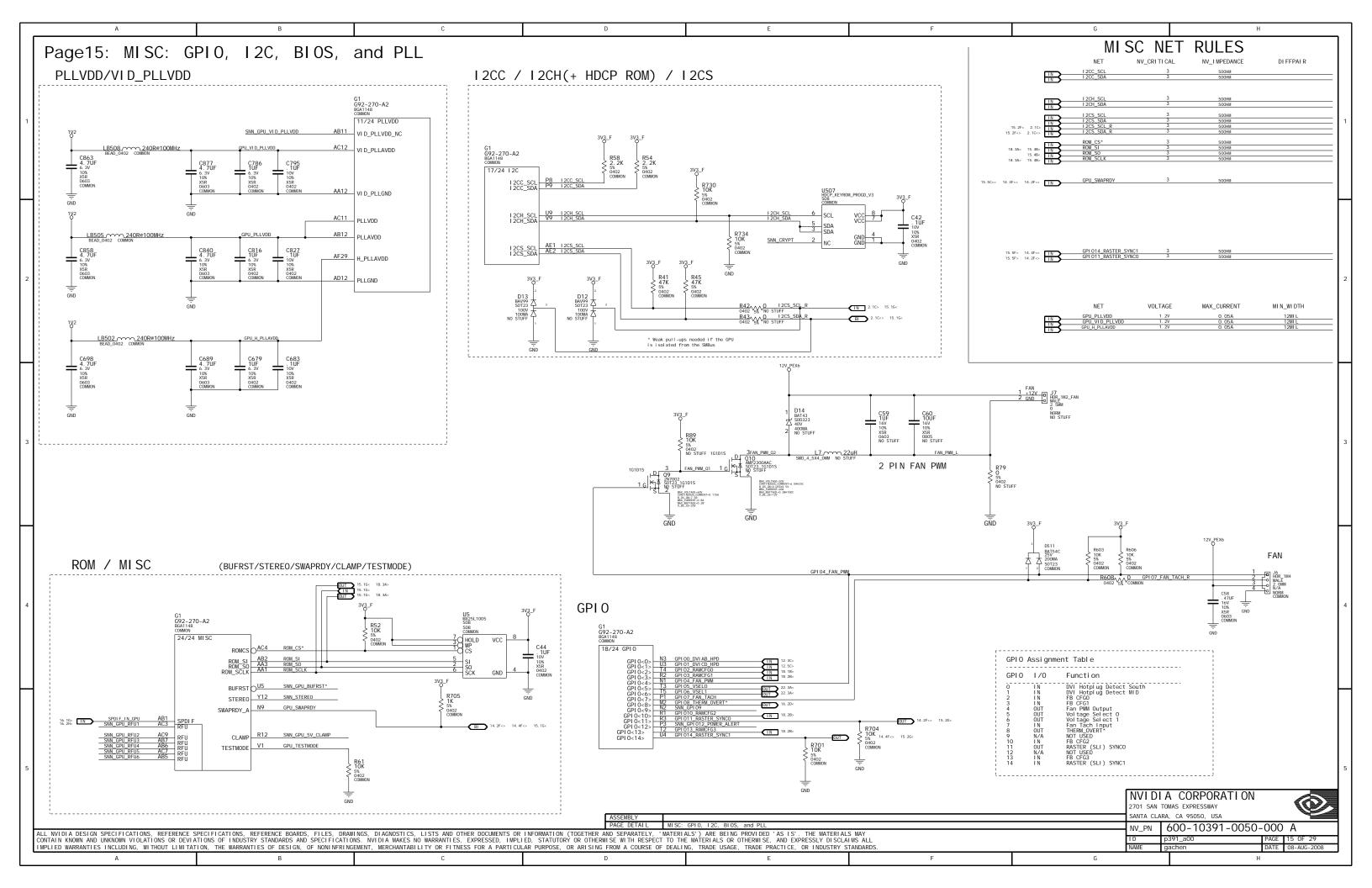


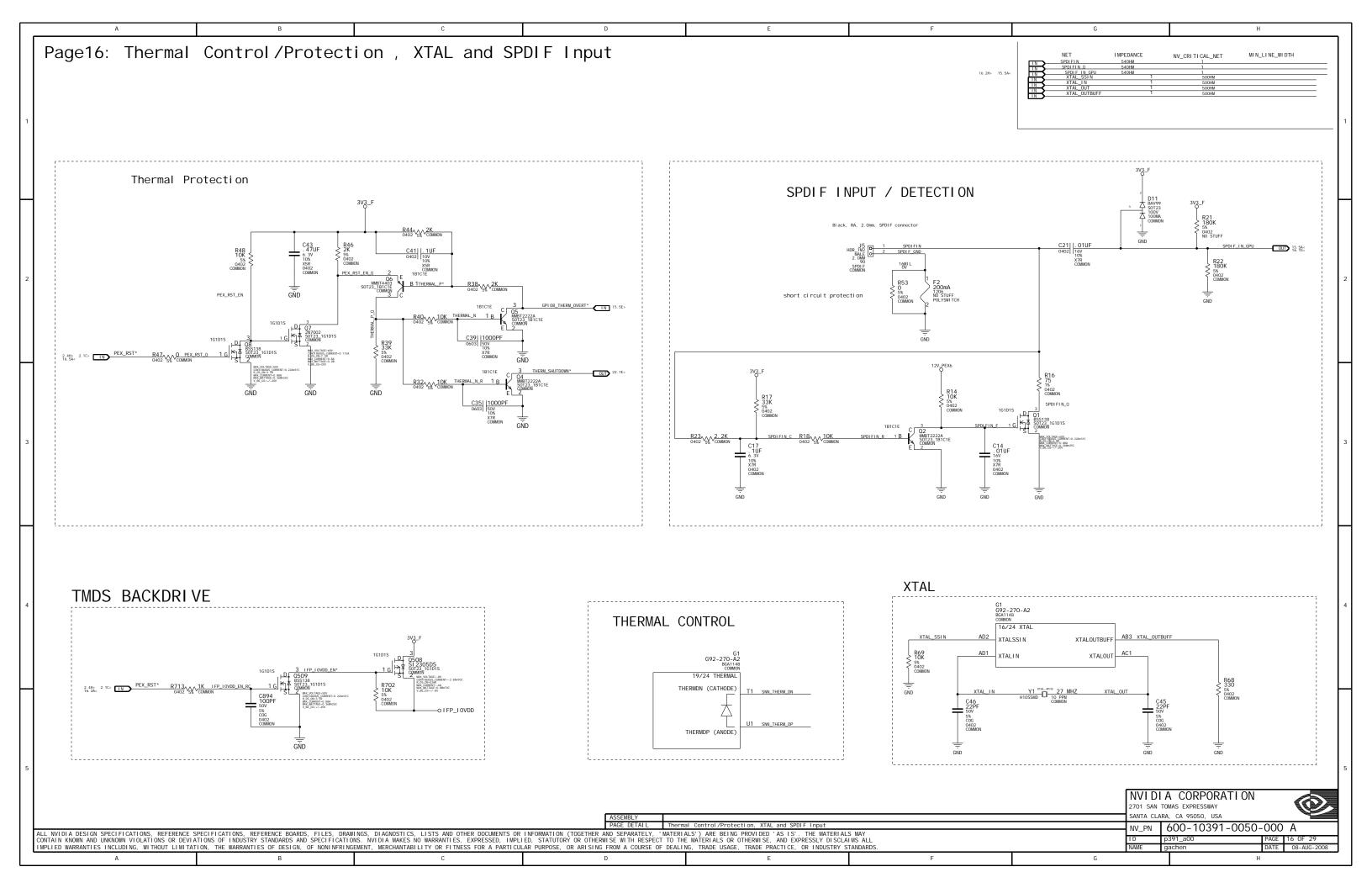


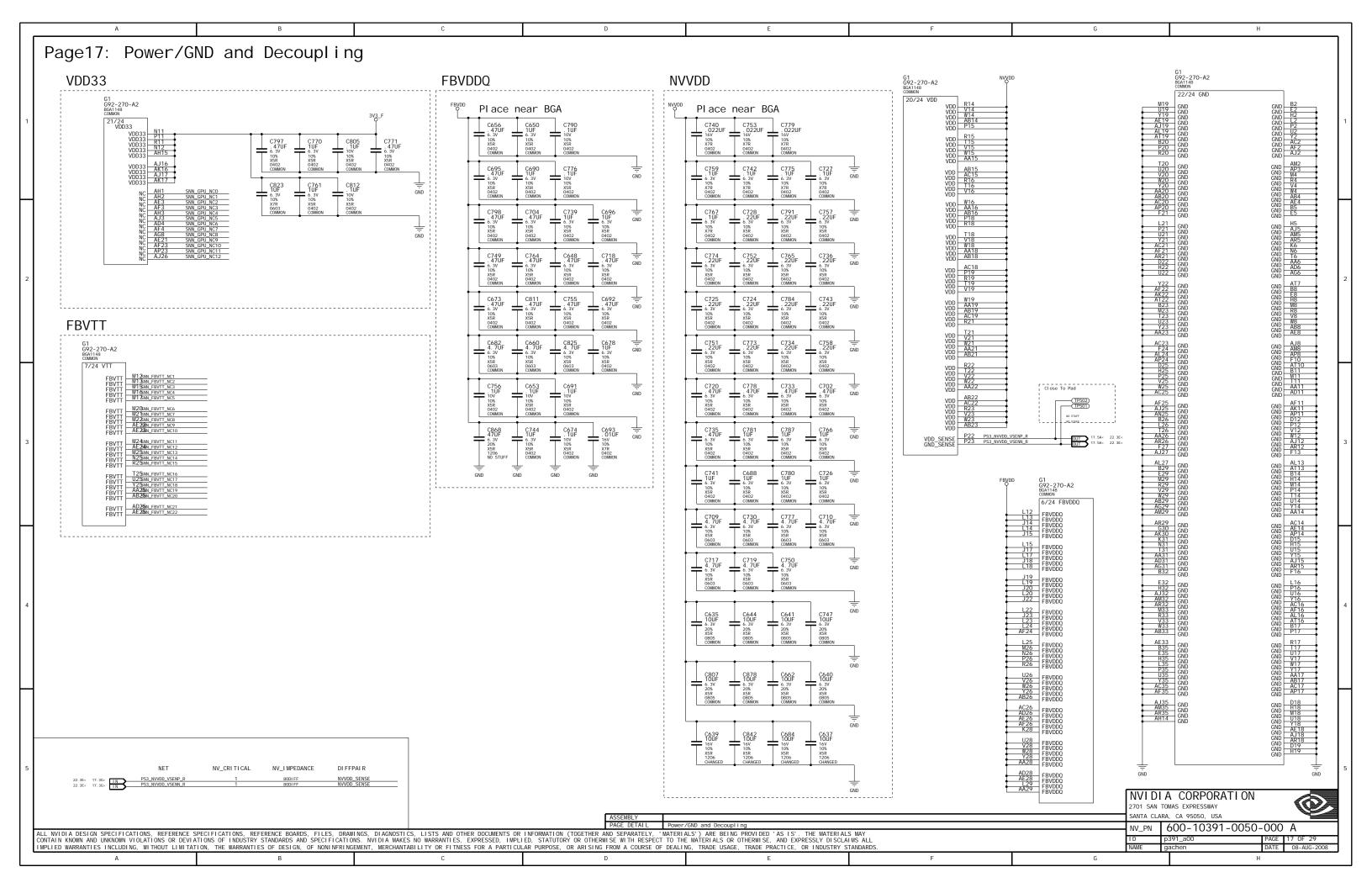


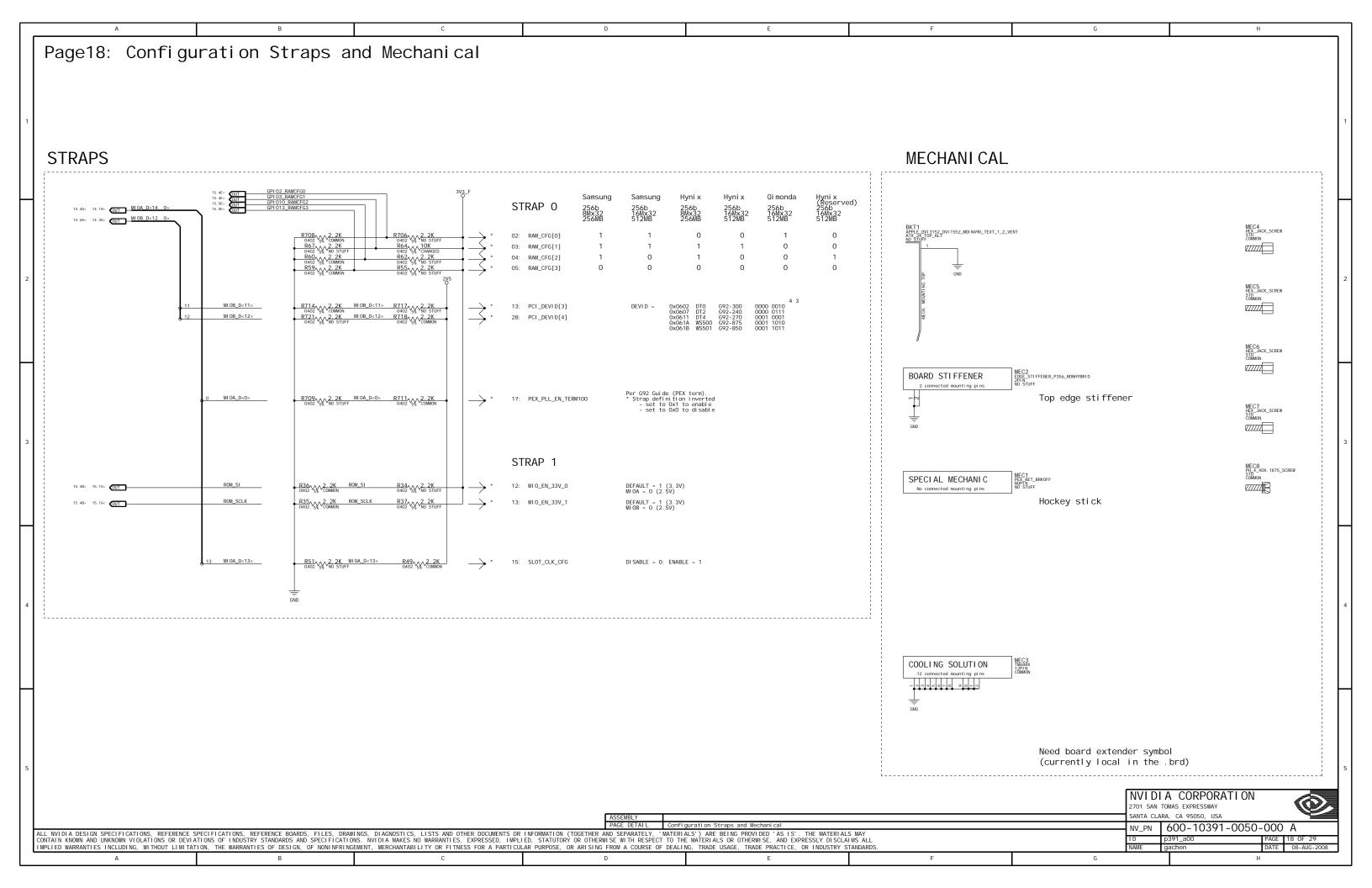


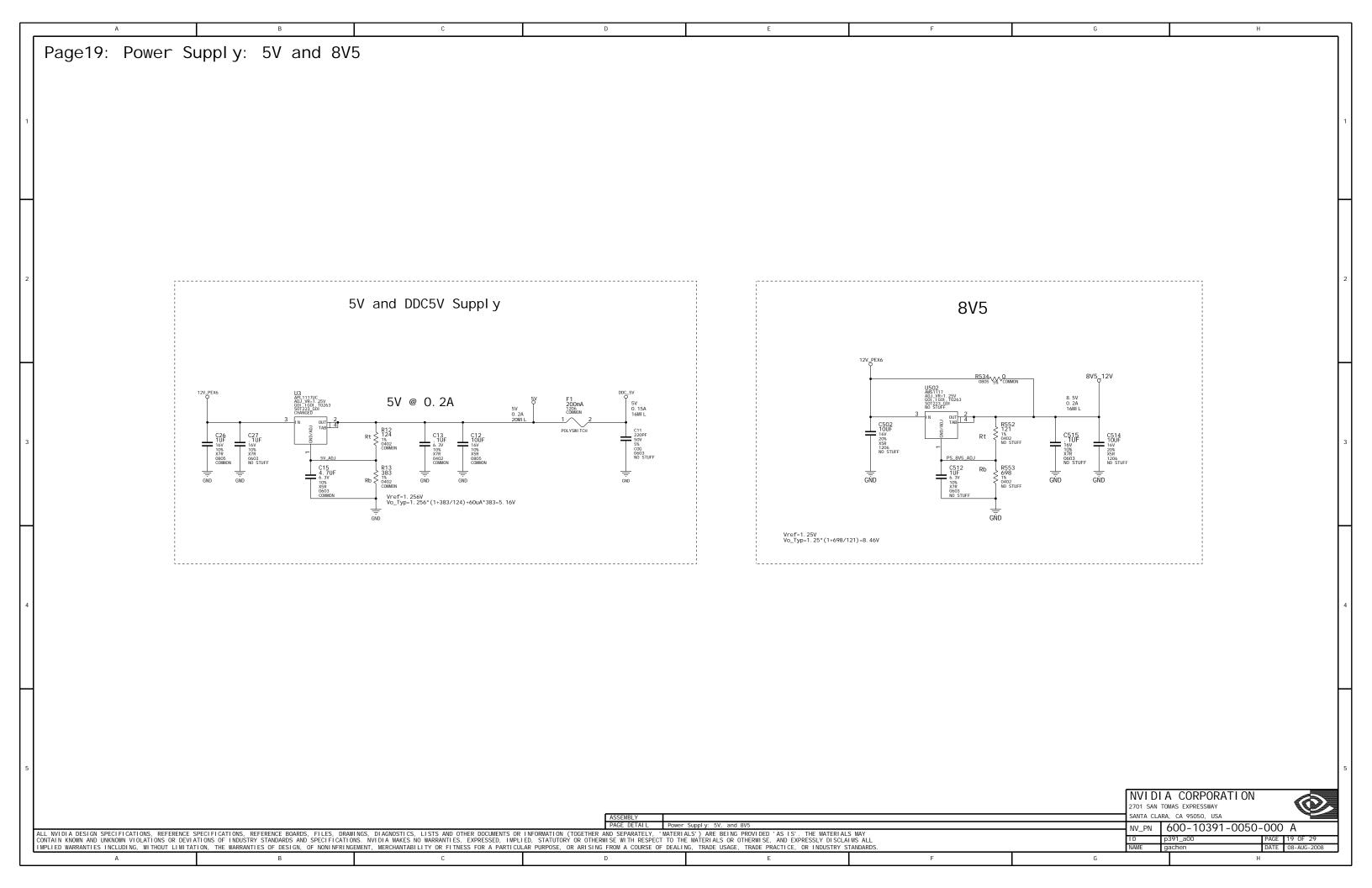


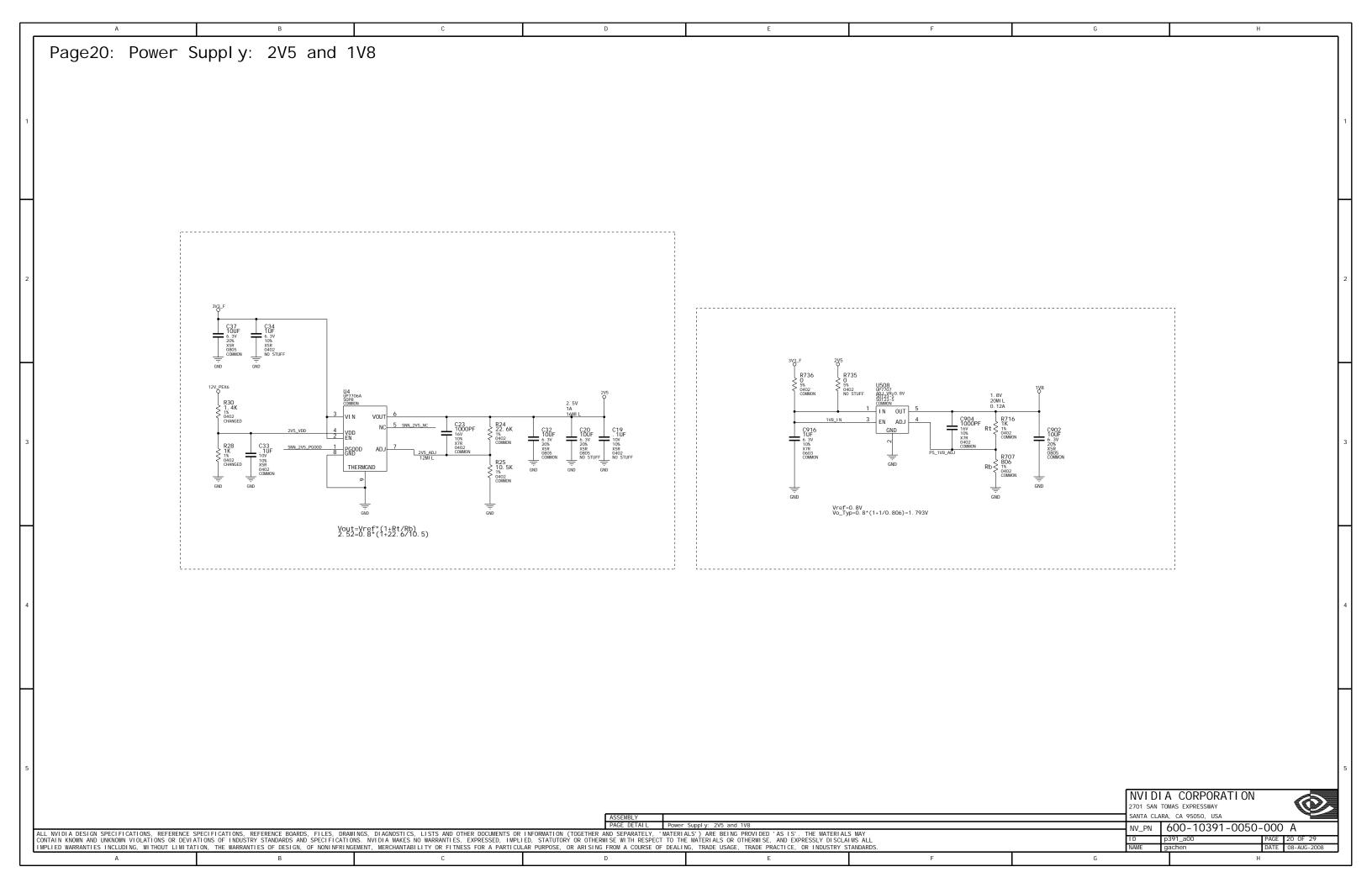


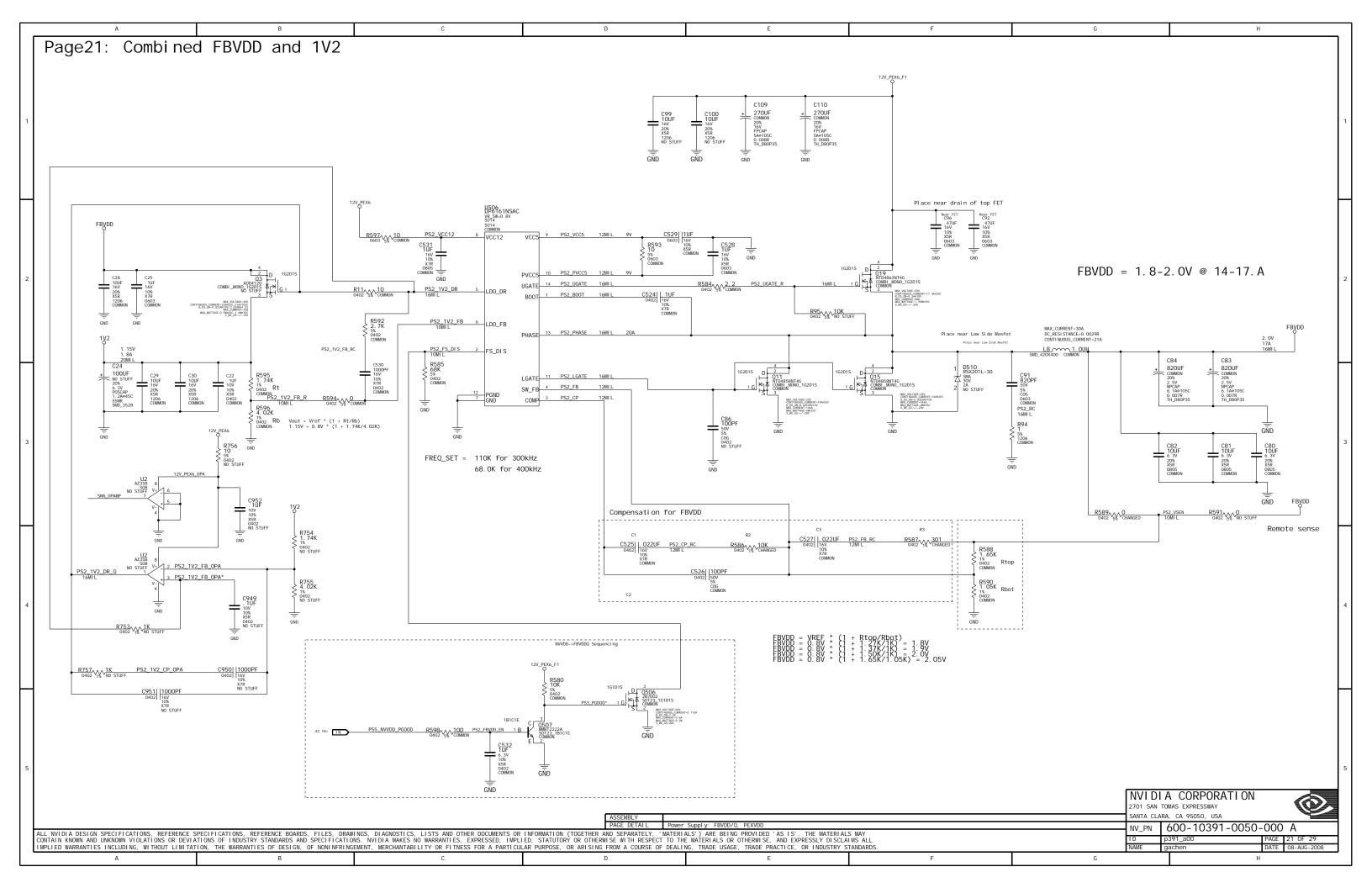


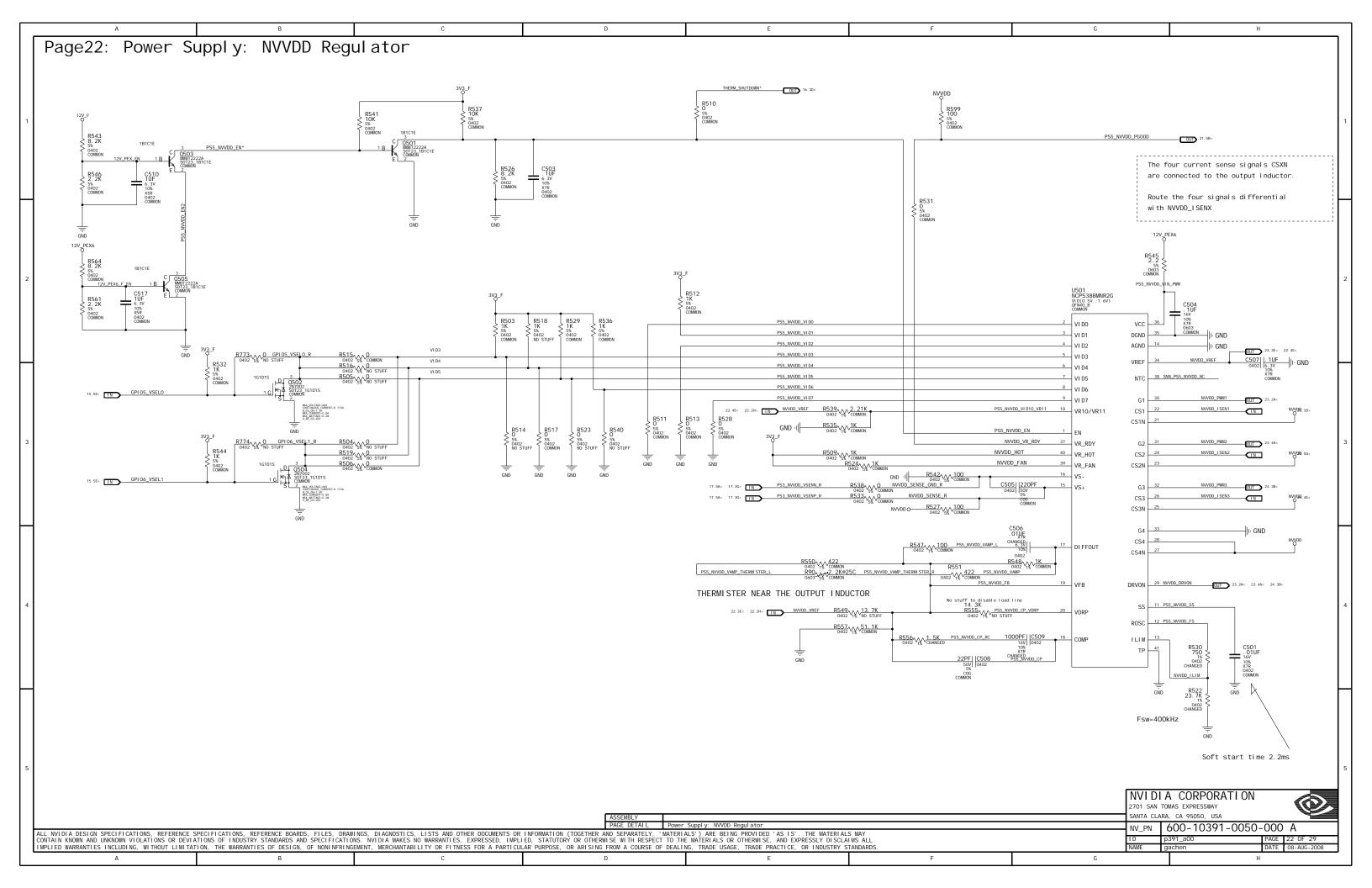


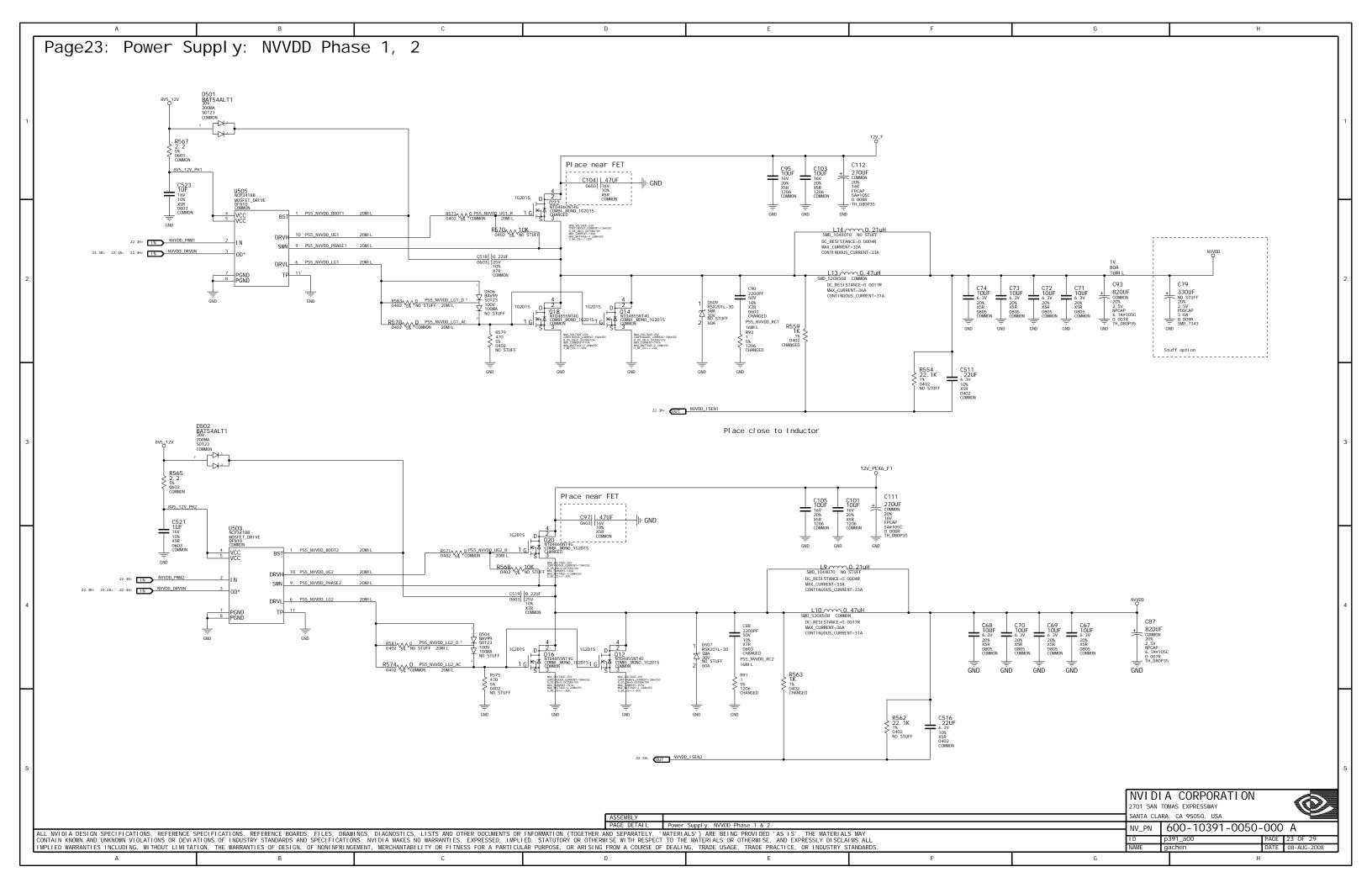


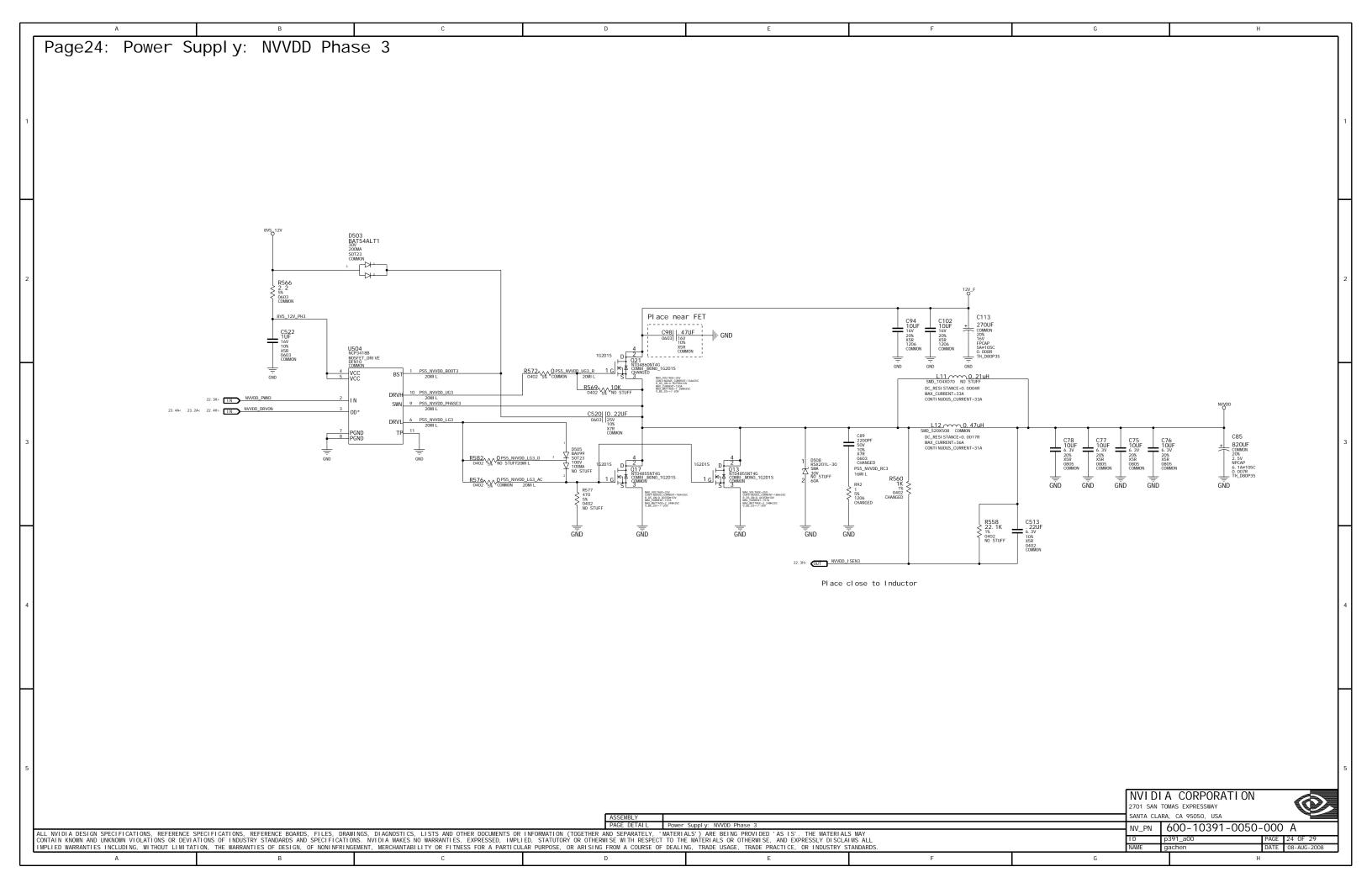


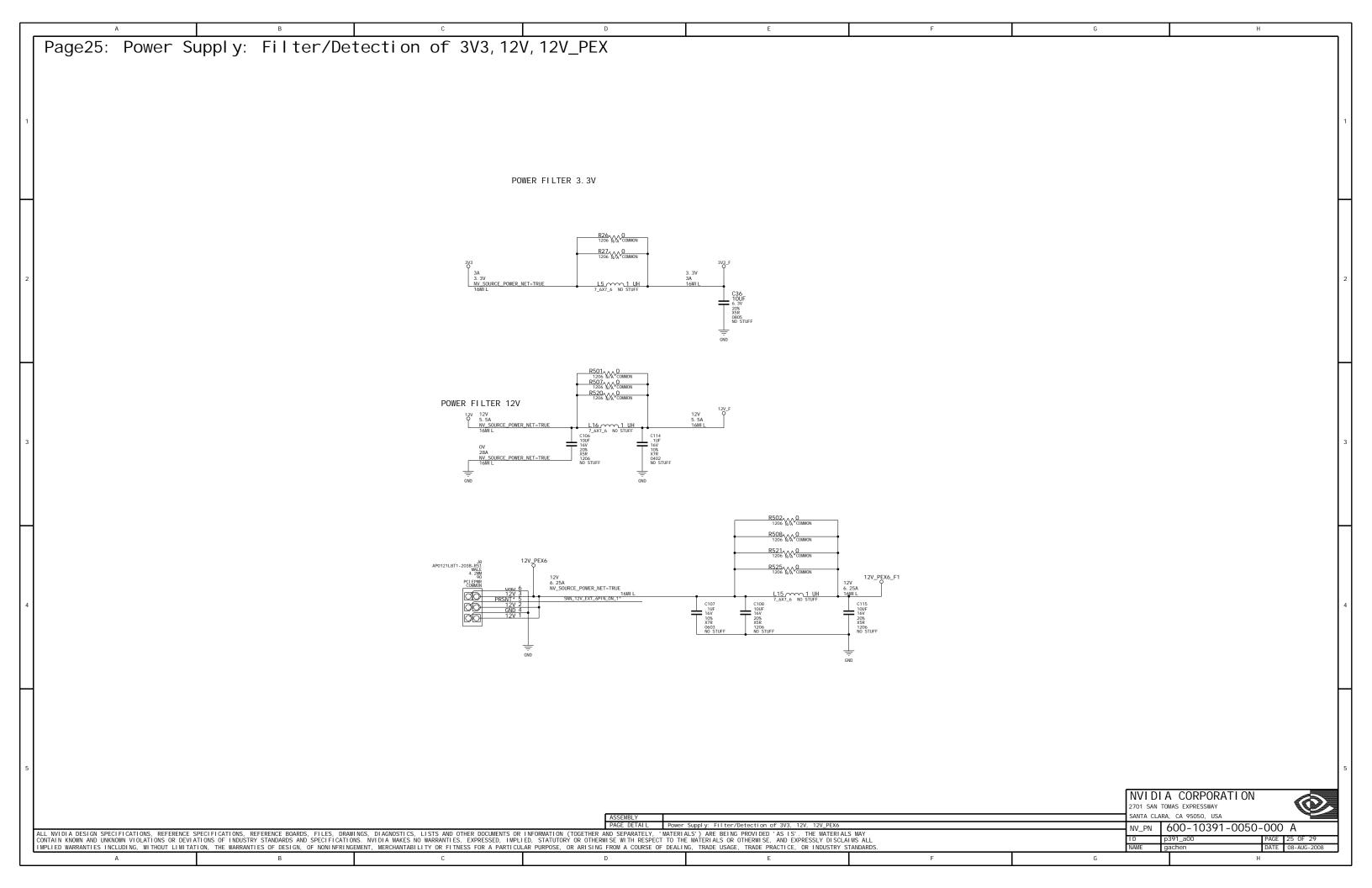












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|---|---|--|--|---|--|-------------------------------|---|
| Column  | А   | В  | C  | D   | Ł  | F                             | Н   |
| Column  |   |  |  |   |  |                               |   |
| Column  |   |  |  |   |  |                               |   |
| Column   C  |   |  |  |   |  |                               |   |
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| Comparison  | Aug 6 11. 10. 00 2000   |  |  |   |  |                               |   |
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| The content of the   |   | FBA_D<13> 3. 2B 5. 4C  | FBB_CMD<1> 3. 1G 6. 1B 6. 2F                   | FBB_DQM<2> 3. 3F 6. 4A 6. 4D  | FBC_D<30> 4. 2B 7. 4E  | FBD_CMD<18> 4. 2G 8. 1F 8. 2B | FBD_DQS_WP<1> 4. 4F 8. 4C 8. 5A   |
| ### 1985     |   |  |  |   |  |                               |   |
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|   |   |  |  |   |  |                               |   |
| Column   C  | A_HS_BUF 10. 2E 10. 4A<   | FBA_D<19> 3. 2B 5. 4D  | FBB_CMD<7> 3. 1G 6. 1F 6. 2B                   | FBB_DQS_RN<0> 3. 4F 6. 4A 6. 4B   | FBC_D<36> 4. 2B 7. 5B  | FBD_CMD<24> 4. 2G 8. 1B 8. 2G | FBD_DQS_WP<7> 4. 4F 8. 5A 8. 5E   |
| The content of the   |   |  |  |   |  |                               |   |
| ### 19 1  |   |  |  |   |  |                               |   |
| March   Marc  |   |  |  |   |  |                               |   |
| March   Marc  |   |  |  |   |  |                               |   |
| Color   | _VDD 10. 2B 10. 5A<>  | FBA_D<25> 3. 2B 5. 4E  | FBB_CMD<13> 3. 2G 6. 1F 6. 1G                  | FBB_DQS_RN<5> 3.4F 6.5A 6.5C  | FBC_D<42> 4. 3B 7. 5C  | FBD_D<3> 4. 1F 8. 4B          | FBD_ZQ1 8. 2E< 9. 4E<>  |
| Column   C  |   |  |  |   |  |                               |   |
| ## 1  |   |  |  |   |  |                               |   |
| March   Marc  |   |  |  |   |  |                               |   |
| 10   10   10   10   10   10   10   10   |   |  |  |   |  |                               |   |
| The bill of the content of the con  | _PB 13. 1G< 13. 4C  | FBA_D<31> 3. 2B 5. 4E  | FBB_CMD<19> 3. 2G 6. 1B 6. 1F                  | FBB_DQS_WP<2> 3.4F 6.4D 6.5A  | FBC_D<48> 4. 3B 7. 5D  | FBD_D<9> 4. 2F 8. 4C          | FB_CAL_TERM_GND1 3.4G   |
| March   1976  |   |  |  |   |  |                               |   |
| March   1975  |   |  |  |   |  |                               |   |
| March   Marc  |   |  |  |   |  |                               |   |
| March   Marc  |   |  |  |   |  | FBD_D<14> 4. 2F 8. 4C         |   |
| THE STATE OF THE S  | _VREF 13. 2G< 13. 3B  | FBA_D<37> 3. 2B 5. 5B  | FBB_CMD<25> 3. 2G 6. 1B 6. 1F                  | FBB_VREFO 6. 3D> 9. 4B<>  | FBC_D<54> 4. 3B 7. 5D  | FBD_D<15> 4. 2F 8. 4C         | GPI 01_DVI CD_HPD   |
| March   Marc  |   |  |  |   |  |                               |   |
| April   Apri  |   |  |  |   |  |                               |   |
| Mill   15   16   16   17   16   18   18   18   18   18   18   18  |   |  |  |   |  |                               |   |
| Tell   |   | 1 1 =  |  |   |  |                               |   |
| 1.6     | _GREEN_DVI 11. 4A< 11. 4G> 12. 4E<  | FBA_D<43> 3.3B 5.5C  | FBB_D<4> 3. 1F 6. 4B                           | FBCD_PLLAVDD 4. 4D<> 9. 3E<>  | FBC_D<60> 4. 3B 7. 5E  | FBD_D<21> 4. 2F 8. 4D         | GPI 05_VSEL0 15. 5E> 22. 3A<  |
| March   Marc  |   | 1 1 =  |  |   |  |                               |   |
| March   1.5   1.  |   |  |  |   |  |                               |   |
| Column   C  |   | 1 1 =  |  |   |  |                               |   |
| The column   The  | _RED 11. 3C 11. 4A<   | FBA_D<48> 3.3B 5.5D  | FBB_D<9> 3. 2F 6. 4C                           | FBC_CLK1* 4. 2D> 7. 2D< 9. 1E>  | FBC_DEBUG_SENO 7. 2B   | FBD_D<26> 4. 2F 8. 4E         | GPI 07_FAN_TACH_R 15. 4G  |
| 12   13   15   15   15   15   15   15   15  |   |  | =  |   |  |                               |   |
| 12   1.5  |   |  |  |   |  |                               |   |
| 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |   | 1 1 =  |  |   |  |                               | 0   |
| 1.2   1.4   1.2   | C_VS 11. 3C 11. 4A<   | FBA_D<53> 3.3B 5.5D  | FBB_D<14> 3. 2F 6. 4C                          | FBC_CMD<1> 4. 1C 7. 1B 7. 2F  | FBC_DQM<2> 4. 3B 7. 4A 7. 4D   | FBD_D<31> 4. 2F 8. 4E         |   |
| 1 12-0 12-0   | C_VS_BUF 11. 2E 11. 4A<   |  |  |   |  |                               | GPI 014_RASTER_SYNC 14. 4F<> 15. 2G< 15. 5F>  |
| PRINCE   19.2   |   |  |  |   |  |                               | 1   |
| 13.00   13.0  |   |  | =  | =   |  |                               |   |
| Fig.  |   |  |  |   |  |                               |   |
| 1   |   |  |  |   |  |                               |   |
| 2007 3 20 5 20 5 10 5 10 5 10 5 10 5 10 5 10 5  | _PLLAVDD 3. 4D<> 9. 3B<>  | FBA_D<60> 3.3B 5.5E  | FBB_D<21> 3. 2F 6. 4D                          | FBC_CMD<8> 4.1C 7.1B 7.1F   | FBC_DQS_RN<70> 4.4A< 7.4A<> 9.2E<  | FBD_D<38> 4. 2F 8. 5B         | 15. 1G< 15. 5C<>  |
| 1   |   | -  | =  | =   |  |                               |   |
| 2.11 2 300 5 20 5 10 10 10 10 10 10 10 10 10 10 10 10 10  |   |  |  |   |  |                               |   |
| 120     |   |  |  |   |  |                               |   |
| \$\$\text{\$\ | LK1* 3. 2D> 5. 2D< 9. 1B>   | FBA_DEBUG_SENO 5. 2B   | FBB_D<26> 3. 2F 6. 4E                          | FBC_CMD<13> 4. 2C 7. 1F 7. 1G   | FBC_DQS_RN<5> 4.4B 7.5A 7.5C   | FBD_D<43> 4. 3F 8. 5C         | I 2CA_SCL_R 10. 1E 10. 5A<  |
| 180-90. 0 3 10 5 76 - 50 15 15 15 15 15 15 15 15 15 15 15 15 15   | _   | 1 1 = =  | =  | =   |  |                               |   |
| 9 715   FRA, CORD-1 3 18 5 46 5 42   FRA, CORD-1 3 18 5 46 5 45   FRA, CORD-1 3 18 5 46 5 46   FRA, CORD-1 3 18 5 46 5 45   FRA, CORD-1 3 18 5 46 5   FRA, CORD-1 3 18 5 46 5 46   FRA, CORD-1 3 18 5 46 5 46   FRA, CORD-1 3 18 5 46 5   FRA,  |   |  |  |   |  |                               |   |
| 200-1-2-3-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1   |   |  |  |   |  |                               |   |
| 100-2- 3 15 5 18 5 17   |   |  |  |   |  |                               |   |
| FBL_DOM-5   3.46 5.45 5.10   FBL_DOM-5   3.47 6.58   | MD<2> 3. 1C 5. 1B 5. 1G   | FBA_DQM<3> 3.4B 5.4A 5.4E  | FBB_D<32> 3. 2F 6. 5B                          | FBC_CMD<19> 4. 2C 7. 1B 7. 1F   | FBC_DQS_WP<2> 4.4B 7.4D 7.5A   | FBD_D<49> 4. 3F 8. 5D         | I 2CB_SCL_R 11. 1E 11. 5A<  |
| 180-6   3.10 5.17 5.10   FB_DOST   3.10 5.17 5.10   FB_DOST   3.10 5.17 5.20   FB_DOST   3.10 5.10 5.20   FB_DOST   3.10 5.20   FB_DOST   |   |  |  |   |  |                               |   |
| Section   Sect  |   |  |  |   |  |                               |   |
| 120_00-3 1C 5.17 5.28   FA_DOS_RPACO 3.46 5.46 5.48   FA_DOS_RPACO 4.47 5.85   FA_DOS_RPACO 4.47  |   |  |  |   |  |                               |   |
| \$\(\text{NO_P}\) \$\(\text{3.26_S, Big.}\) \$\(\text{FB_D_OS_B}\) \$\(\text{NO_S}\) \$\(\text{3.26_S}\) \$\(\text{FB_D_OS_B}\) \$\(\text{NO_S}\) \$\(\text{3.26_S}\) \$\(\text{1.8}\) \$\(\text{5.18_S}\) \$\(\text{FB_D_OS_B}\) \$\(\text{1.8}\) \$\(\text{3.46_S}\) \$\(\text{4.8}\) \$\(\text{5.18_S}\) \$\(\text{FB_D_OS_B}\) \$\(\text{1.8}\) \$\(\text{3.46_S}\) \$\(\text{4.8}\) \$\(\text{5.18_S}\) \$\(\text{1.8}\) \$\(\t   |   |  |  |   |  |                               |   |
| 180-10-3 3.2 C 5.18 5.1F  | MD<8> 3.1C 5.1B 5.1F  | FBA_DQS_RN<70> 3.4A< 5.4A<> 9.2B<  | FBB_D<38> 3. 2F 6. 5B                          | FBC_CMD<25> 4. 2C 7. 1B 7. 1F   | FBC_VREFO 7. 3D> 9. 3E<>   | FBD_D<55> 4. 3F 8. 5D         | I 2CH_SCL 15. 1G< 15. 2D 15. 2E   |
| 00-11 3 2 C 5 18 5 2F FB_DD_CS_M-3 3 48 5 48 5 58 FB_DD_CS_M-3 3 8 5 C FB_DD_CS_M 3 3 6 5 C FB_DD_CS_M 3 6 C FB_DD_CS  |   |  |  |   |  |                               |   |
| 00-12 3 2 C 5 18 5 1F FBQ_DS_MR-4> 3 48 5 48 5 58 FBQ_D-42> 3 3 F 6 5 C FBQ_DS_MR-4> 3 48 5 5 48 5 58 FBQ_D-42> 3 3 F 6 5 C FBQ_DS_MR-4> 3 48 5 5 48 5 58 FBQ_D-42> 3 3 F 6 5 C FBQ_DS_MR-4> 3 48 5 5 48 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 48 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 48 5 50 FBQ_D-58 4 18 7 7 48 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 48 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 4 5 50 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_DS_MR-4> 3 48 5 5 5 FBQ_D-42> 4 18 7 7 48 FBQ_D-42> 4 18 7 7  |   |  |  |   |  |                               |   |
| M0-13 3.2 5.1 F. 5.10   | MD<11> 3. 2C 5. 1B 5. 2F  |  |  |   |  |                               |   |
| MO-15 3. 2. 5. 2. 5. 18 5. 1F MO-17 3. 2. 5. 18 5. 1F MO-17 3. 2. 5. 18 5. 1F MO-18 3. 2. 5. 18 5. 1F MO-19 3. 3. 48 5. 48 5. 58 MO-19 3. 48 5. 48 5. 58 MO-19 3. 4. 18 7. 48 MO-19 3. 2. 5. 18 5. 1F MO-19 3. 4. 18 7. 48 MO-19 3. 2. 5. 18 5. 1F MO-19 3. 4. 18 7. 48 MO-19 3. 4. 18 7.   |   | FBA_DQS_RN<5> 3.4B 5.4A 5.5C   | FBB_D<43> 3. 3F 6. 5C                          | FBC_D<3> 4. 1B 7. 4B  | FBC_ZQ1 7. 2E< 9. 3E<>   | FBD_D<60> 4. 3F 8. 5E         | I 2CS_SDA_R 2. 1C<> 15. 1G< 15. 2F<>  |
| FBA_DOS_MP*0  | MD<12> 3. 2C 5. 1B 5. 1F<br>MD<13> 3. 2C 5. 1F 5. 1G  |  |  |   | =  |                               |   |
| FBA_DOS_MP-7. 0   3.4   | MD<12> 3. 2C 5. 1B 5. 1F<br>MD<13> 3. 2C 5. 1F 5. 1G<br>MD<14> 3. 2C 5. 2B 5. 2F  |  |  |   |  |                               |   |
| FBQ_DGS_WP<2> 3.48 5.40 5.5A   FBQ_DGS_WP<2> 3.38 6.5D   FBQ_DGS_WP<2> 4.28 7.4C   FBQ_DGS_WP<2> 4.28 7  | MD<12> 3. 2C 5. 1B 5. 1F<br>MD<13> 3. 2C 5. 1F 5. 1G<br>MD<14> 3. 2C 5. 2B 5. 2F<br>MD<15> 3. 2C 5. 2B 5. 2F  |  |  |   |  |                               |   |
| ASSEMBLY P391 G92 512MB GDDR3 16Mx32 DVI-I+DVI-I SANTA CLARA, CA 95050, USA PAGE DETAIL Cref 1 NV_PN 600-10391-0050-000 A KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVI DIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL    FBQ_DMX-O> 4.16 8.18 8.26   FBQ_DMX-O> 4.3F 8.4A 8.4B   IFPAB_TXDO 12.1C 12.1F   | MD<12> 3. 2C 5. 1B 5. 1F  MD<13> 3. 2C 5. 1F 5. 1G  MD<14> 3. 2C 5. 2B 5. 2F  MD<15> 3. 2C 5. 2B 5. 2F  MD<16> 3. 2C 5. 2B 5. 2F  | FBA_DQS_WP<0> 3.4B 5.4B 5.5A   | FBB_D<47> 3. 3F 6. 5C                          |   | FBD_CLK1* 4. 2H> 8. 2D< 9. 2E>   | FBD_DEBUG_SENO 8. 2B          | I FPAB_TXC 12. 1C 12. 2F  |
| ASSEMBLY P391 G92 512MB GDDR3 16Mx32 DVI-I+DVI-I SANTA CLARA, CA 95050, USA  PAGE DETAIL Cref 1 DIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SPARARTLY, 'MATERIALS') ARE BEING PROVIDED 'AS IS'. THE MATERIALS MAY KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, MAID EXPRESSLY DISCLAIMS ALL    D   p391_a00   PAGE   26 OF 24 OF 24 OF 25 OF 2  | \text{SMD<12>} 3. 2C 5. 1B 5. 1F \\ 3. 2C 5. 1F 5. 1G \\ 3. 2C 5. 1F 5. 1G \\ 3. 2C 5. 2B 5. 2F \\ 5. MD<15> 3. 2C 5. 2B 5. 2F \\ 5. MD<16> 3. 2C 5. 2B 5. 2F \\ 5. MD<17> 3. 2C 5. 1B 5. 1F \\ 5. MD<17> 3. 2C 5. 1B 5. 1F \\ 5. MD<18> 3. 2C 5. 1F 5. 2B \\ 5. 1F 5. 2B \\ 6. MD<18> 3. 2C 5. 1F 5. 2B \\ 6. MD<18> 3. 2C 5. 1F 5. 2B | FBA_DOS_WP<0> 3. 4B 5. 4B 5. 5A<br>FBA_DOS_WP<7 0> 3. 4A> 5. 5A<> 9. 2B><br>FBA_DOS_WP<1> 3. 4B 5. 4C 5. 5A  | FBB_D<48> 3. 3F 6. 5D                          |   | FBD_CLK1_MI DPT 8. 2D  | FBD_DEBUG_SEN1 8. 2F          |   |
| ASSEMBLY P391 G92 512MB GDDR3 16MX32 DVI-I+DVI-I SANT CLARA, CA 95050, USA PAGE DETAIL Cref 1  In a DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPRESSLY DISCLAIMS ALL  NV_PN 600-10391-0050-000 A  KNOWN AND UNKNOWN VIOLATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL  D 9391_800 PAGE 126 OF 24  | MD<12> 3.2C 5.1B 5.1F<br>MD<13> 3.2C 5.1F 5.1G<br>MD<14> 3.2C 5.2B 5.2F<br>MD<15> 3.2C 5.2B 5.2F<br>MD<16> 3.2C 5.1B 5.1F<br>MD<17> 3.2C 5.1B 5.1F<br>MD<18> 3.2C 5.1F 5.2B<br>MD<19> 3.2C 5.1F 5.2B  | FBA_DOS_WP<0> 3.4B 5.4B 5.5A<br>FBA_DOS_WP+70> 3.4B 5.5A<> 9.2B><br>FBA_DOS_WP+1> 3.4B 5.4C 5.5A<br>FBA_DOS_WP<2> 3.4B 5.4D 5.5A   | FBB_D<48> 3. 3F 6. 5D<br>FBB_D<49> 3. 3F 6. 5D | FBC_D<9> 4. 2B 7. 4C  |  |                               |   |
| ASSEMBLY P391 G92 512MB GDDR3 16MX32 DVI-I+DVI-I SANT CLARA, CA 95050, USA PAGE DETAIL Cref 1  In a DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPRESSLY DISCLAIMS ALL  NV_PN 600-10391-0050-000 A  KNOWN AND UNKNOWN VIOLATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL  D 9391_800 PAGE 126 OF 24  | MD<12> 3.2C 5.1B 5.1F<br>MD<13> 3.2C 5.1F 5.1G<br>MD<14> 3.2C 5.2B 5.2F<br>MD<15> 3.2C 5.2B 5.2F<br>MD<16> 3.2C 5.1B 5.1F<br>MD<17> 3.2C 5.1B 5.1F<br>MD<18> 3.2C 5.1F 5.2B<br>MD<19> 3.2C 5.1F 5.2B  | FBA_DOS_WP<0> 3.4B 5.4B 5.5A<br>FBA_DOS_WP+70> 3.4B 5.5A<> 9.2B><br>FBA_DOS_WP+1> 3.4B 5.4C 5.5A<br>FBA_DOS_WP<2> 3.4B 5.4D 5.5A   | FBB_D<48> 3. 3F 6. 5D<br>FBB_D<49> 3. 3F 6. 5D | FBC_D<9> 4. 2B 7. 4C  |  | FBD_DOM<0> 4.3F 8.4A 8.4B     | I FPAB_TXDO 12. 1C 12. 1F   |
| ASSEMBLY P391 G92 512MB GDDR3 16Mx32 DVI-I+DVI-I SANT CLARA, CA 95050, USA PAGE DETAIL Cref 1  DIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER MOSE NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MITERIALS MAY WITH RESPECT TO THE MITERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL  2701 SAN TOMAS EXPRESSMAY SANTA CLARA, CA 95050, USA PAGE DETAIL Cref 1  NV_PN 600-10391-0050-000 A  NV_PN 600-10391-0050-000 A  ID 9391_800 PAGE 126 OF 25   | CMD<12> 3. 2C 5. 1B 5. 1F CMD<13> 3. 2C 5. 1F 5. 1G CMD<14> 3. 2C 5. 2B 5. 2F CMD<15> 3. 2C 5. 2B 5. 2F CMD<16- 3. 2C 5. 1B 5. 1F CMD<17> 3. 2C 5. 1B 5. 1F CMD<17> 3. 2C 5. 1B 5. 1F CMD<18- 3. 2C 5. 1F 5. 2B CMD<18- 3. 2C 5. 1F 5. 2B   | FBA_DOS_WP<0> 3.4B 5.4B 5.5A<br>FBA_DOS_WP+70> 3.4B 5.5A<> 9.2B><br>FBA_DOS_WP+1> 3.4B 5.4C 5.5A<br>FBA_DOS_WP<2> 3.4B 5.4D 5.5A   | FBB_D<48> 3. 3F 6. 5D<br>FBB_D<49> 3. 3F 6. 5D | FBC_D<9> 4. 2B 7. 4C  |  | FBD_DQM<0> 4.3F 8.4A 8.4B     | 12. 1C 12. 1F   |
| PAGE DETAIL Cref 1  DIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, 'MATERIALS') ARE BEING PROVIDED 'AS IS'. THE MATERIALS MAY KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL  NV_PN 600-10391-0050-000 A  ID p391_a00 PAGE 26 0F 26   | CMD<12> 3. 2C 5. 18 5. 1F  CMD<13> 3. 2C 5. 1F 5. 1G  CMD<14> 3. 2C 5. 2B 5. 2F  CMD<15> 3. 2C 5. 2B 5. 2F  CMD<16> 3. 2C 5. 18 5. 1F  CMD<17> 3. 2C 5. 1B 5. 1F  CMD<18> 3. 2C 5. 1B 5. 1F  CMD<18> 3. 2C 5. 1F 5. 2B  CMD<19> 3. 2C 5. 1F 5. 2B   | FBA_DOS_WP<0> 3.4B 5.4B 5.5A<br>FBA_DOS_WP+70> 3.4B 5.5A<> 9.2B><br>FBA_DOS_WP<1> 3.4B 5.4C 5.5A<br>FBA_DOS_WP<2> 3.4B 5.4D 5.5A   | FBB_D<48> 3. 3F 6. 5D<br>FBB_D<49> 3. 3F 6. 5D | FBC_D<9> 4. 2B 7. 4C  |  | FBD_DQM<0> 4. 3F 8. 4A 8. 4B  |   |
| DIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, 'MATERIALS') ARE BEING PROVIDED 'AS IS'. THE MATERIALS MAY  KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL  10 p391_a00   | CMD<12> 3. 2C 5. 18 5. 1F  CMD<13> 3. 2C 5. 1F 5. 1G  CMD<14> 3. 2C 5. 2B 5. 2F  CMD<15> 3. 2C 5. 2B 5. 2F  CMD<16> 3. 2C 5. 18 5. 1F  CMD<17> 3. 2C 5. 1B 5. 1F  CMD<18> 3. 2C 5. 1B 5. 1F  CMD<18> 3. 2C 5. 1F 5. 2B  CMD<19> 3. 2C 5. 1F 5. 2B   | FBA_DOS_WP<0> 3.4B 5.4B 5.5A<br>FBA_DOS_WP+70> 3.4B 5.5A<> 9.2B><br>FBA_DOS_WP<1> 3.4B 5.4C 5.5A<br>FBA_DOS_WP<2> 3.4B 5.4D 5.5A   | FBB_D<48> 3. 3F 6. 5D<br>FBB_D<49> 3. 3F 6. 5D | FBC_D<9> 4. 2B 7. 4C  |  | FBD_DQM<0> 4. 3F 8. 4A 8. 4B  | NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY  |
|   | CMD<12> 3. 2C 5. 18 5. 1F<br>CMD<13> 3. 2C 5. 1F 5. 1G<br>CMD<14> 3. 2C 5. 2B 5. 2F<br>CMD<16> 3. 2C 5. 2B 5. 2F<br>CMD<16> 3. 2C 5. 18 5. 1F<br>CMD<17> 3. 2C 5. 1B 5. 1F<br>CMD<17> 3. 2C 5. 1F 5. 2B<br>CMD<19> 3. 2C 5. 1F 5. 2B  | FBA_DOS_WP<0> 3.4B 5.4B 5.5A<br>FBA_DOS_WP+70> 3.4B 5.5A<> 9.2B><br>FBA_DOS_WP<1> 3.4B 5.4C 5.5A<br>FBA_DOS_WP<2> 3.4B 5.4D 5.5A   | FBB_D<48> 3. 3F 6. 5D<br>FBB_D<49> 3. 3F 6. 5D | FBC_D<9> 4.28 7.4C<br>FBC_D<10> 4.28 7.4C   | FBD_CMD<0> 4. 1G 8. 1B 8. 2G   | FBD_DQM<0> 4. 3F 8. 4A 8. 4B  | NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA                             |
|   | CMD<12> 3. 2C 5. 1B 5. 1F  SMD<13> 3. 2C 5. 1F 5. 1G  SMD<14> 3. 2C 5. 2B 5. 2F  CMD<15> 3. 2C 5. 2B 5. 2F  SMD<16> 3. 2C 5. 2B 5. 2F  SMD<16> 3. 2C 5. 1B 5. 1F  SMD<17> 3. 2C 5. 1B 5. 1F  CMD<18> 3. 2C 5. 1B 5. 1F  CMD<18> 3. 2C 5. 1B 5. 1F  CMD<20> 3. 2C 5. 1B 5. 1F  SMD<20> 3. 2C 5. 1B 5. 1F  SMD<20> 3. 2C 5. 1B 5. 1F      | FBA_DOS_WP-O> 3.4B 5.4B 5.5A FBA_DOS_WP-70> 3.4B 5.4C 5.5A FBA_DOS_WP-1> 3.4B 5.4C 5.5A FBA_DOS_WP-2> 3.4B 5.4D 5.5A FBA_DOS_WP-2> 3.4B 5.4D 5.5A FBA_DOS_WP-3> 3.4B 5.4E 5.5A | FBB_D<48>                                      | FBC_D<9> 4. 28 7. 4C<br>FBC_D<10> 4. 28 7. 4C  ASSEMBLY P391 G92 512MB GDDR PAGE DETAIL Cref 1  ON (TOGETHER AND SEPARATELY, 'MATERIALS') ARE BEI | FBD_CMD<0> 4. 1G 8. 1B 8. 2G  3 16Mx32 DVI -I +DVI -I  NG PROVI DED 'AS IS'. THE MATERIALS MAY | FBD_DQM<0> 4. 3F 8. 4A 8. 4B  | NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA  NV_PN 600-10391-0050-000 A |

Α G I FPAB\_TXDO\* NVVDD\_PWM1 PEX\_TX10 LEPAR TXD1 12.1C 12.1F NVVDD PWM2 22. 3H> 23. 4A< PEX TX10\* 2.4C 2.4H> PS5 NVVDD VLD6 22. 3F SNN GPU REU6 15. 5A 22. 3H> 24. 3B< I FPAB\_TXD1\* NVVDD\_PWM3 PEX\_TX10\_C 2. 2H> 2. 4B PS5\_NVVDD\_VI D7 SNN\_GPU\_VI D\_PLLVDD 15. 1B LEPAR TXD2 12. 1F 12. 20 NVVDD SENSE GND R 22.3E PEX\_TX10\_C 2. 2H> 2. 4B PS5\_NVVDD\_VI D10\_VR 22. 3F SNN LEPAR TXD3 12. 20 PEX\_TX11 SNN\_I FPAB\_TXD3\* I FPAB\_TXD2 NVVDD\_SENSE\_R LEPAB TXD4 12. 2C 12. 2F NVVDD VREF 22. 2H> 22. 3E< 22. 4E< PEX TX11\* 2.4C 2.4H> PS5 NVVDD VIN PWM 22.2G SNN I FPAB TXD7 12. 2C SNN\_I FPAB\_TXD7\* I FPAB\_TXD4 12. 2C 12. 2F NVVDD\_VR\_RDY PEX\_TX11\_C 2. 2H> 2. 4B PS\_1V8\_ADJ LEPAR TXD5 12, 2C, 12, 2F PEX PLIAVDD 2.5D 2.5E< PEX TX11 C 2. 2H> 2. 4B PS\_8V5\_ADJ 19. 3F SNN LEPAR VPROBE 12. 1B I FPAB\_TXD5\* PEX\_PLLDVDD PEX\_TX12 2.4C 2.4H> ROM\_CS\* SNN\_I FPB\_TXC 12. 20 LEPAB TXD6 12. 2C 12. 2F PEX PLL CLK OUT 2. 4D 2. 4H> PEX TX12\* 2. 4C 2. 4H> ROM SCLK 15. 1G< 15. 4B> 18. 3A> SNN I FPB TXC\* 12. 2C SNN\_I FPCD\_VPROBE I FPAB\_TXD6 12. 2C 12. 2F PEX\_PLL\_CLK\_OUT 2.4D 2.4H> PEX\_TX12\_C 2. 2H> 2. 4B 18. 3B ROM\_SI 15. 1G< 15. 4B> 18. 3A> LEPCD LOVDD 12.1G< 12.4B PEX\_PRSNT1\* 2.1A PEX TX12 C 2. 2H> 2. 4B SNN LEPD TXC 12.4C SNN\_I FPD\_TXC\* I FPCD\_RSET PEX\_REFCLK 2. 1H> 2. 2B PEX\_TX13 2. 4C 2. 4H> ROM SO 15. 1G< 15. 4B< LEPCD TXC 12. 3C 12. 4F PEX REFCLK\* 2. 1H> 2. 2B PEX TX13\* 2.4C 2.4H> SNN MI OA CLKOUT\* 14.2E 2. 1C> 2. 4H> 16. 2A< I FPCD\_TXC PEX\_RST\* PEX\_TX13\_C 2. 2H> 2. 4B SNN\_2V5\_NC SNN\_MI OB\_CLKOUT\* LEPCD TXDO 12. 3C 12. 3F 16. 5A< PEX TX13 C\* 2. 2H> 2. 4B SNN 2V5 PG00D 20. 3B SNN OPAMP 21. 3A I FPCD\_TXDO SNN\_PEXCAL\_PD\_GND 2.4D PEX\_RST\_EN PEX\_TX14 SNN\_3V3\_AUX LEPCD TXD1 12.4C 12.4F PEX RST EN O 16. 2B PFX TX14\* 2.4H> 2.5C SNN\_12V\_EXT\_6PI N\_0 25. 4D SNN PEXCAL PD VDDO 2, 4D PEX\_RST\_Q PEX\_TX14\_C 2. 2H> 2. 5B SNN\_PEX\_PRSNT2\_A 2. 1A I FPCD\_TXD1 SNN CRYPT LFPCD TXD2 12, 4C 12, 4F PEX RXO 2. 2B 2. 2H> PEX TX14 C\* 2. 2H> 2. 5B 15. 2E SNN PEX PRSNT2 B 2.2A I FPCD\_TXD2 PEX\_RXO\* 2. 2B 2. 2H> PEX\_TX15 SNN\_DACB\_CSYNC 13. 4C SNN\_PEX\_PRSNT2\_C 2. 3A LEPCD TXD4 12.4C 12.4F PFX RX1 2. 2B 2. 2H> PEX\_TX15\* 2.4H> 2.5C SNN FBA CMD 26 3.20 SNN PEX RSVD1 2.1A SNN\_FBA\_CMD\_27 I FPCD\_TXD4 PEX\_RX1 2. 2B 2. 2H> PEX\_TX15\_C 2. 2H> 2. 5B SNN\_PEX\_RSVD2 2. 2A LEPCD TXD5 12, 4C 12, 4F PEX RX2 2. 2B 2. 2H> PEX TX15 C\* 2. 2H> 2. 5B SNN FBA CMD 28 3. 2C SNN PEX RSVD3 2. 2A I FPCD\_TXD5 12. 4C 12. 4F PEX\_RX2 2. 2B 2. 2H> PS2\_1V2\_CP\_0PA 21. 4A SNN\_FBA\_NCO 5. 2B SNN\_PEX\_RSVD4 2. 2A LEPCD TXD6 12. 4C 12. 4F PEX RX3 2. 2H> 2. 3B 2. 2H> 2. 3B PS2 1V2 DR 21. 2C SNN FBA NC1 5. 2F SNN PEX RSVD5 2. 3A 2. 2B I FPCD\_TXD6 PS2\_1V2\_DR\_Q SNN\_FBA\_RFU0 SNN\_PEX\_WAKE\* PEX\_RX3 2. 2H> 2. 3B 2. 2H> 2. 3B LED LOVDD EN 16. 4B PFX RX4 PS2 1V2 FB 21. 2C SNN FBA RFU1 3.3C SNN PF RSVD6 2.4A PEX\_RX4 PS2\_1V2\_FB\_0PA SNN\_FBB\_CMD\_26 SNN\_PE\_RSVD7 JTAG TCLK 2.1C 2.1E 2.5H> PEX RX5 2. 2H> 2. 3B PS2 1V2 FB OPA 21. 4A SNN FBB CMD 27 3. 2G SNN PS5 NVVDD NC 22.3G PEX\_RX5 2. 2H> 2. 3B PS2\_1V2\_FB\_R SNN\_FBB\_CMD\_28 SNN\_STEREO JTAG\_TDI JTAG TDO 2.1C 2.1E 2.5H> PFX RX6 2. 2H> 2. 3B PS2 1V2 FB RC 21. 2B SNN FBB NCO 6. 2B SNN THERM DN 16. 5F JTAG\_TMS PEX\_RX6 PS2\_B00T SNN\_FBB\_NC1 SNN\_THERM\_DP JTAG TRST\* 2, 1C 2, 1E 2, 5H> PEX RX7 2. 3B 2. 3H> PS2 CP 21. 3D SNN FBB PLLVDD NC 3.4G SNN TV NC2 13. 3E MI OACAL\_PD\_VDDQ SNN\_FBB\_RFU0 PEX\_RX7 2. 3B 2. 3H PS2\_CP\_RC SNN\_TV\_STEREO\_N MI OACAL\_PU\_GND 14. 5A< PEX\_RX8 2. 3H> 2. 4B PS2\_FB 21. 3D SNN\_FBB\_RFU1 3. 3G SPDIFIN 16. 1G< 16. 2F MI OA\_CAL\_PD\_VDDQ 14. 2C PEX\_RX8 2. 3H> 2. 4B PS2\_FBVDD\_EN SNN\_FBCO\_NC1 SPDI FI N\_C 16. 3E MLOA CAL PU GND 14. 2C PFX RX9 2. 3H> 2. 4B PS2\_FB\_RC 21. 4F SNN FBC1 NC1 7. 2F SPDIFIN F 16. 3F MI OA\_CLKOUT 2. 3H> 2. 4B SNN\_FBC\_CMD\_26 SPDI FI N\_Q PEX\_RX9 PS2\_FS\_DIS MI OA\_D<O> 14. 1E 14. 1F 18. 3E PEX RX10 2. 3H> 2. 4B PS2 LGATE 21. 3D SNN FBC CMD 27 4. 2C SPDIFIN R 16. 3F PEX\_RX10\* PS2\_PHASE SNN\_FBC\_CMD\_28 14. 1H< 14. 4A< 18. 2A> MLOA D<14...0> PFX RX11 2.3H> 2.4B PS2\_PVCC5 21. 2D SNN FBC PLLVDD NC 4, 4C SPDLE IN GPU 15.5A< 16.1G< 16.2H> MI OA\_D<1> PEX\_RX11\* 2. 3H> 2. 4B PS2\_RC SNN\_FBC\_RFU0 THERMAL\_N 21. 3G 16. 2C MI OA D<2> 14. 1E 14. 1F PEX RX12 2. 3H> 2. 4B PS2 UGATE 21. 2D SNN FBC RFU1 4.3C THERMAL N R 16. 3C PEX\_RX12\* 2. 3H> 2. 4B SNN\_FBDO\_NC1 MI 0A\_D<3 PS2\_UGATE\_R THERMAL\_P\* MI OA\_D<4> 14. 1F 14. 2E PEX\_RX13 2. 3H> 2. 5B PS2\_VCC5 21. 2D SNN\_FBD1\_NC1 8. 2F THERMAL\_P\_Q 16. 2C 2. 3H> 2. 5B PS2\_VCC12 SNN\_FBD\_CMD\_26 THERM\_SHUTDOWN MI OA\_D<5 PEX\_RX13\* 16. 3D> 22. 1E> MI OA D<6 14, 2E 14, 2F PEX RX14 2. 3H> 2. 5B PS2 VSEN 21. 3G SNN FBD CMD 27 4. 2G XTAL IN 16. 1G< 16. 5F 14. 2E 14. 2F PEX\_RX14\* PS3\_NVVDD\_VSENN\_R 17.3G> 17.5A< 22.3E< SNN\_FBD\_CMD\_28 XTAL\_OUT MI OA\_D<7: MI OA D<8> 14, 2E 14, 2F PEX RX15 2. 3H> 2. 5B PS3\_NVVDD\_VSENP\_R 17.3G> 17.5A< 22.3E< SNN FBD PLLVDD NC 4.4G XTAL OUTBUFF 16. 1G< 16. 4G MI OA\_D<9 PEX\_RX15\* PS3\_PG00D\* SNN\_FBD\_RFU0 XTAL\_SSIN MLOA D<10: 14. 2F 14. 2F PEX TOLK 2. 1B 2. 4H> PS5\_NVVDD\_B00T1 23\_2B SNN FBD RFU1 4.3G MI OA\_D<11> PEX\_TDI PS5\_NVVDD\_B00T2 SNN\_FBVTT\_NC1 MI OA D<12> 14. 2E 14. 2F PEX TDO 2. 1B 2. 5H> PS5 NVVDD B00T3 24.3C SNN FBVTT NC2 17. 3A SNN\_FBVTT\_NC3 MI OA\_D<13> 14. 2E 14. 2F 18. 4E PEX\_TMS 2. 1B 2. 5H PS5\_NVVDD\_CP 18. 4B PEX\_TRST\* 2. 1B 2. 4H> PS5\_NVVDD\_CP\_RC 22. 4F SNN\_FBVTT\_NC4 17. 3A MI OA\_D<14> 14. 2E 14. 2F PS5\_NVVDD\_CP\_VDRP SNN\_FBVTT\_NC5 PEX\_TX0 PEX TXO\* MI OA DE 14. 2E 14. 4A< 2. 2C 2. 3H> PS5 NVVDD EN 22. 3F SNN FBVTT NC6 17. 3A PS5\_NVVDD\_EN\* SNN\_FBVTT\_NC7 MI OA\_VDDQ PEX\_TXO\_C 2. 1H> 2. 2B MI OA VREF 14. 2C 14. 5A< PEX TXO C 2. 1H> 2. 2B PS5 NVVDD EN2 22. 2A SNN FBVTT NC8 17. 3A MI OBCAL\_PD\_VDDQ PEX\_TX1 PS5\_NVVDD\_FB SNN\_FBVTT\_NC9 MLORCAL PU GND 14.5A< PFX TX1\* 2.2C 2.3H> PS5 NVVDD ES 22. 4G SNN FBVTT NC10 17. 3A MI OB\_CAL\_PD\_VDDQ PEX\_TX1\_C PS5\_NVVDD\_LG1 SNN\_FBVTT\_NC11 MI OB CAL PU GND 14.4C PEX TX1 C 2. 1H> 2. 2B PS5 NVVDD LG1 AC 23.2C SNN FBVTT NC12 17. 3A MI OB\_CLKOUT PEX\_TX2 2. 2C 2. 3H> PS5\_NVVDD\_LG1\_D SNN\_FBVTT\_NC13 MI OB\_D<0> 14. 3E 14. 3F PEX\_TX2\* 2. 2C 2. 3H> PS5\_NVVDD\_LG2 23. 4B SNN\_FBVTT\_NC14 17. 3A PS5\_NVVDD\_LG2\_AC SNN\_FBVTT\_NC15 MI OB\_D<12. . 0> PEX\_TX2\_C 2. 1H> 2. 2B 14. 3G> 14. 5A< PEX TX2 C 2. 1H> 2. 2B PS5 NVVDD LG2 D 23. 4C SNN FBVTT NC16 17. 3A MI OB\_D<14. . 0> PS5\_NVVDD\_LG3 SNN\_FBVTT\_NC17 PEX\_TX3 PS5\_NVVDD\_LG3\_AC 24.3C MI OB\_D<1> 14. 3E 14. 3F PEX\_TX3\* 2. 2C 2. 3H> SNN\_FBVTT\_NC18 17. 3A MI OB\_D<2> PEX\_TX3\_C 2. 1H> 2. 2B PS5\_NVVDD\_LG3\_D SNN\_FBVTT\_NC19 MLOB D<3: 14. 3F 14. 3F PEX TX3 C 2. 1H> 2. 2B PS5 NVVDD PG00D 21. 5B< 22. 1H: SNN FBVTT NC20 17. 3A MI OB\_D<4> PEX\_TX4 2. 3C 2. 3H PS5\_NVVDD\_PHASE1 23.2B SNN\_FBVTT\_NC21 MI OB D<5> 14. 3E 14. 3F PEX TX4\* 2. 3C 2. 3H> PS5 NVVDD PHASE2 23.4B SNN FBVTT NC22 17. 3A MI OB\_D<6 PEX\_TX4\_C 2. 1H> 2. 3B PS5\_NVVDD\_PHASE3 SNN\_GPI 09 MI OB\_D<7> 14. 3E 14. 3F PEX\_TX4\_C 2. 1H> 2. 3B PS5\_NVVDD\_RC1 23. 2E SNN\_GPI 012\_POWER\_A 15.5D PS5\_NVVDD\_RC2 MI OB\_D<8: PEX\_TX5 SNN GPU 5V CLAMP 15.5B MI OB D<9> 14. 3F 14. 4E PEX TX5\* 2. 3C 2. 4H> PS5 NVVDD RC3 24. 3F PEX\_TX5\_C 2. 1H> 2. 3B PS5\_NVVDD\_SS  ${\sf SNN\_GPU\_BUFRST}^{\star}$ MI OB\_D<11> 14. 4E 14. 4F 18. 2E PEX\_TX5\_C 2. 1H> 2. 3B PS5\_NVVDD\_UG1 23. 2B SNN\_GPU\_NCO 17. 1A 2. 3C 2. 4H> PS5\_NVVDD\_UG1\_R SNN\_GPU\_NC1 PEX\_TX6 14. 4F 14. 4F 18. 2B MLOB D<12> PFX TX6\* 2.3C 2.4H> PS5\_NVVDD\_UG2 23. 4B SNN GPU NC2 17. 2A PEX\_TX6\_C 2. 1H> 2. 3B PS5\_NVVDD\_UG2\_R SNN\_GPU\_NC3 MI OB D<13> 14. 4E 14. 4F PEX TX6 C 2. 1H> 2. 3B PS5 NVVDD UG3 24.3C SNN GPU NC4 17. 2A MI OB\_D<14> PEX\_TX7 2.3C 2.4H> PS5\_NVVDD\_UG3\_R 24.3D SNN\_GPU\_NC5 17. 2A MI OB\_DE 14. 4E 14. 5A< PEX\_TX7\* 2. 3C 2. 4H> PS5\_NVVDD\_VAMP 22.4F SNN\_GPU\_NC6 17. 2A MI OB\_VDDQ PEX\_TX7\_C 2. 1H> 2. 3B PS5\_NVVDD\_VAMP\_L 22.4F SNN\_GPU\_NC7 17. 2A MI OB VREF 14. 3C 14. 5A< PEX TX7 C 2. 1H> 2. 3B PS5 NVVDD VAMP 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| ASSEMBLY PAGE DETAIL R INFORMATION (TOGETHER AND SEPARTELY, LIED, STATUTORY OR OTHERWIS E WITH RESPECT ULAR PURPOSE, OR ARISING FROM A COURSE OF | C762 [2. 2E] C763 [2. 4C] C764 [17. 2E] C765 [17. 2E] C766 [17. 3E] C767 [17. 2E] C768 [2. 3C] C769 [2. 5E] C770 [17. 1B] C771 [17. 1B] C771 [17. 1C] C772 [4. 5D] C773 [17. 2E] C774 [17. 2E] C775 [17. 1E] C775 [17. 1E] C776 [17. 1E] C777 [17. 4E] C777 [17. 4E] C778 [17. 3E] C779 [17. 1E] C780 [17. 3E] C781 [17. 3E] C782 [10. 3A] C783 [2. 3C] C784 [17. 2E] C785 [14. 1C] C786 [15. 1B] C787 [17. 3E] C788 [7. 3H] C789 [10. 2B] C790 [17. 1D] C791 [17. 1D] C791 [17. 1D] C791 [17. 1B] C792 [2. 3C] C793 [4. 5D] C794 [14. 1B] C795 [15. 1B] C796 [7. 3G] C797 [17. 1B] C799 [17. 1B] C799 [17. 1C] C799 [14. 3B] C800 [13. 4A] C801 [7. 3G] C802 [4. 5C] C803 [7. 3B] C804 [7. 3G] C805 [17. 1B] C806 [14. 1B] C807 [17. 4E] C808 [7. 3H] C809 [2. 3C] C801 [7. 4G] C801 [7. 4G] C802 [4. 5C] C803 [7. 4H] C809 [2. 3C] C801 [7. 4G] C801 [7. 4G] C801 [7. 4G] C802 [17. 1B] C803 [7. 4H] C809 [2. 3C] C811 [17. 2C] C812 [17. 1B] C813 [7. 4G] C814 [4. 5D] C815 [4. 5D] C816 [15. 2B] C827 [7. 4H] C828 [17. 4H] C829 [17. 2B] C829 [17. 2B] C831 [7. 4G] C832 [7. 4H] C829 [17. 2B] C831 [7. 4G] C832 [7. 4H] C825 [7. 4H] C826 [7. 4H] C827 [7. 4H] C828 [17. 2B] C838 [12. 2B] C839 [12. 2B] C840 [7. 3B] C841 [12. 2B] C842 [7. 4H] C825 [7. 4H] C826 [7. 4H] C827 [7. 4H] C828 [17. 4B] C839 [12. 2B] C840 [7. 3C] C851 [12. 4B] C852 [12. 4B] C853 [12. 4B] C854 [7. 3H] C855 [12. 4B] C855 [12. 4B] C856 [12. 4B] C857 [7. 3H]   | D |
| MATERIALS') ARE BEING PROVIDED 'AS IS<br>TO THE MATERIALS OR OTHERWISE, AND E  | C858 [15, 2A] C859 [13, 3A] C860 [7, 4G] C861 [7, 4G] C861 [7, 4G] C862 [12, 4B] C863 [15, 1A] C864 [7, 4F] C865 [12, 2A] C866 [7, 3G] C866 [7, 3G] C866 [7, 3G] C867 [7, 3G] C869 [7, 3H] C870 [13, 3A] C871 [7, 4H] C872 [2, 3C] C873 [2, 2F] C874 [2, 2C] C875 [12, 4A] C876 [7, 4F] C877 [15, 1A] C878 [17, 4E] C879 [14, 1B] C880 [12, 3A] C881 [12, 2A] C881 [12, 2A] C882 [2, 2C] C883 [14, 3B] C884 [11, 2B] C885 [14, 2A] C886 [14, 2A] C887 [14, 3C] C888 [11, 2A] C888 [11, 2A] C889 [8, 5G] C890 [2, 2C] C891 [2, 2C] C892 [8, 5F] C894 [16, 5B] C895 [8, 4G] C896 [2, 2C] C900 [8, 3H] C901 [8, 5G] C900 [8, 3H] C901 [8, 5G] C902 [20, 3G] C903 [8, 2D] C904 [10, 3F] C905 [8, 4H] C906 [8, 4H] C906 [8, 4H] C907 [8, 5G] C917 [8, 5G] C918 [8, 4G] C918 [8, 4G] C919 [8, 5G] C910 [8, 5H] C911 [8, 5G] C902 [20, 3G] C903 [8, 4H] C906 [8, 4H] C907 [8, 5G] C918 [8, 4G] C919 [8, 5G] C910 [8, 5H] C911 [8, 5G] C922 [8, 5F] C933 [8, 3H] C931 [8, 4G] C931 [8, 4G] C932 [8, 5H] C914 [8, 4F] C915 [8, 4G] C926 [8, 4H] C927 [8, 4H] C928 [8, 4H] C929 [8, 4G] C939 [8, 3G] C931 [8, 3G] C931 [8, 3G] C932 [8, 3H] C933 [8, 4G] C933 [8, 3H] C934 [8, 4G] C937 [8, 5G] C940 [8, 4G] C939 [8, 3G] C941 [8, 4H] C922 [8, 5F] C933 [8, 3H] C934 [8, 3G] C944 [8, 3G] C945 [8, 3H] C935 [8, 3H] C936 [8, 4G] C937 [8, 3H] C938 [8, 4G] C939 [8, 3G] C931 [8, 3H] C932 [8, 3H] C933 [8, 3G] C944 [8, 3G] C945 [8, 3H] C936 [8, 4H] C927 [8, 4H] C929 [8, 4G] C939 [8, 3G] C940 [8, 4G] C931 [8, 3G] C941 [8, 4H] C942 [8, 4G] C933 [8, 3H] C935 [8, 3H] C936 [8, 4G] C947 [8, 3H] C948 [8, 4G] C949 [8, 3G] C940 [8, 4G] C941 [8, 4H] C942 [8, 4G] C943 [8, 3G] C944 [8, 3G] C945 [8, 3G] C946 [8, 3G] C947 [8, 3H] C948 [8, 4G] C949 [8, 3G] C940 [8, 4G] C941 [8, 4H] C942 [8, 4G] C943 [8, 3G] C944 [8, 3G] C945 [8, 3G] C946 [8, 3G] C947 [8, 3H] C948 [8, 4F] C959 [21, 4B] C95 | E |
| S'. THE MATERIALS MAY<br>EXPRESSLY DISCLAIMS ALL   | C954 [13. 3E] C955 [13. 40] C956 [13. 46] C957 [11. 5F] C958 [11. 3F] C959 [11. 4F] C960 [10. 5F] C961 [10. 3F] C962 [10. 4F] C963 [13. 3E] C964 [13. 4E] C965 [13. 4F] C966 [12. 3F] C966 [12. 3F] C967 [11. 5F] C968 [11. 3F] C969 [11. 4F] C970 [12. 1F] C971 [10. 5F] C971 [10. 5F] C972 [10. 3F] C973 [10. 4F] C974 [13. 3E] C974 [13. 3E] C975 [13. 4F] CM1 [14. 4G] CM2 [2. 3B] D1 [11. 2F] D2 [11. 2F] D3 [10. 2F] D4 [10. 2F] D5 [11. 1F] D6 [11. 1F] D7 [12. 5D] D8 [10. 1F] D9 [10. 1F] D9 [10. 1F] D10 [12. 3D] D11 [16. 2G] D12 [15. 2D] D13 [15. 2D] D14 [15. 3E] D501 [23. 1B] D502 [23. 3B] D503 [24. 2C] D504 [23. 4C] D505 [24. 3B] D509 [23. 2E] D510 [21. 3F] D511 [15. 4G] D512 [11. 5E] D511 [15. 4G] D512 [11. 5E] D513 [13. 3D] D516 [13. 4D] D517 [13. 4A] D518 [10. 5E] D519 [10. 3E] D520 [10. 4E] F1 [19. 3D] F2 [16. 2F] G1 [17. 4G [17. 3H] T7. 3A] J1 [13. 4F] J2 [14. 2G] J3 [12. 2F] J4. 11. 2F] J5 [16. 2F] J6 [17. 4G [17. 3H] T7. 2F [17. 1A] T7. 3A] J7 [15. 3G] J8 [25. 4C] J50 [21. 1E] L1 [24. 3F]   |   |
|  | L13 [23.2F] L14 [23.2F] L15 [25.4E] L16 [25.3D] L501 [11.4F] L502 [11.3F] L503 [11.4F] L504 [10.4F] L505 [10.3F] L506 [10.4F] L505 [13.3E] L508 [13.4E] L509 [13.4F] LB1 [12.5E] LB2 [12.3E] LB3 [11.1G] LB4 [11.1G] LB5 [10.1G] LB5 [10.1G] LB6 [10.1G] LB5 [10.1 | F |
| 2701 SAN TOMA-<br>SANTA CLARA,<br>NV_PN 60   | R10 [10, 2E] R11 [21, 2C] R12 [19, 3C] R13 [19, 3C] R14 [16, 3F] R15 [8, 3D] R16 [16, 3E] R19 [8, 3D] R20 [8, 2B] R21 [16, 2H] R22 [16, 2H] R22 [16, 2H] R23 [16, 3E] R24 [20, 3C] R25 [20, 3C] R26 [25, 2D] R27 [25, 2D] R28 [20, 3B] R31 [8, 3G] R33 [8, 3G] R34 [18, 3G] R33 [16, 3C] R33 [16, 3C] R34 [18, 3G] R35 [18, 3B] R36 [18, 3B] R37 [18, 3C] R38 [16, 2C] R39 [16, 2C] R41 [15, 2D] R42 [15, 2E] R44 [16, 2C] R41 [15, 2E] R44 [16, 2C] R45 [15, 2E] R46 [16, 2B] R47 [16, 2A] R48 [16, 2B] R49 [18, 4C] R50 [8, 2F] R51 [18, 4B] R62 [15, 5E] R64 [15, 1D] R55 [18, 2C] R65 [14, 3C] R65 [14, 3C] R66 [14, 3C] R67 [18, 2B] R60 [18, 2B] R60 [18, 2B] R60 [18, 2B] R61 [15, 5B] R62 [18, 2C] R63 [14, 1C] R64 [18, 2C] R65 [14, 2C] R65 [14, 2C] R66 [7, 2B] R77 [7, 30] R71 [7, 30] R71 [7, 30] R72 [7, 2F] R73 [7, 3G] R74 [7, 3G] R74 [7, 3G] R75 [7, 2F] R76 [6, 3D] R79 [15, 3F] R81 [5, 2F] R82 [6, 3G] R83 [6, 3G] R84 [6, 2F] R85 [5, 30] R87 [5, 3G] R89 [15, 30] R90 [22, 4] R91 [23, 4E] R92 [24, 3F] R93 [23, 2E] R94 [21, 3G] R95 [22, 2G] R850 [22, 3C] R8 | G |
| CA 95050, USA 00-10391-0050-000 A 11_a00   | R511 [22, 3D] R512 [22, 2D] R513 [22, 3D] R514 [22, 3C] R515 [22, 2C] R516 [22, 3C] R517 [22, 3D] R518 [22, 2D] R519 [22, 3D] R518 [22, 2D] R519 [22, 3D] R520 [25, 3D] R521 [25, 4E] R520 [25, 3D] R521 [25, 4E] R523 [22, 3F] R524 [22, 3F] R525 [22, 4F] R526 [22, 1C] R527 [22, 3F] R528 [22, 3F] R529 [22, 2D] R530 [22, 4H] R531 [22, 2F] R530 [22, 4H] R531 [22, 2F] R532 [22, 3B] R533 [22, 3F] R534 [19, 3F] R535 [22, 3E] R536 [22, 3E] R537 [22, 1C] R538 [22, 3F] R539 [22, 3E] R530 [22, 4H] R531 [22, 2F] R539 [22, 3E] R534 [19, 3F] R535 [22, 3E] R536 [22, 2D] R537 [22, 1C] R538 [22, 3F] R539 [22, 3E] R540 [22, 3B] R541 [22, 1C] R542 [22, 3F] R544 [22, 3B] R545 [22, 2G] R544 [22, 3B] R545 [22, 2G] R546 [22, 4F] R547 [22, 4F] R548 [22, 4F] R559 [22, 4F] R550 [22, 4F] R550 [22, 4F] R551 [22, 4F] R552 [19, 3F] R555 [22, 4F] R553 [19, 3F] R555 [22, 4F] R556 [22, 4F] R557 [22, 4F] R558 [24, 4F] R559 [23, 2C] R571 [23, 4C] R577 [24, 3D] R578 [23, 4C] R579 [23, 2C] R580 [21, 4F] R588 [21, 4F] R589 [21, 3G] R590 [21, 4F] R591 [21, 3H] R592 [21, 2C] R593 [21, 2C] R599 [21, 4F] R599 [21, 3B] R596 [21, 3B] R597 [21, 2C] R599 [21, 4F] R590 [21, 4F] R690 [15, 2A] R600 [15, 2A] R6 | Н |
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