

P2005 A01

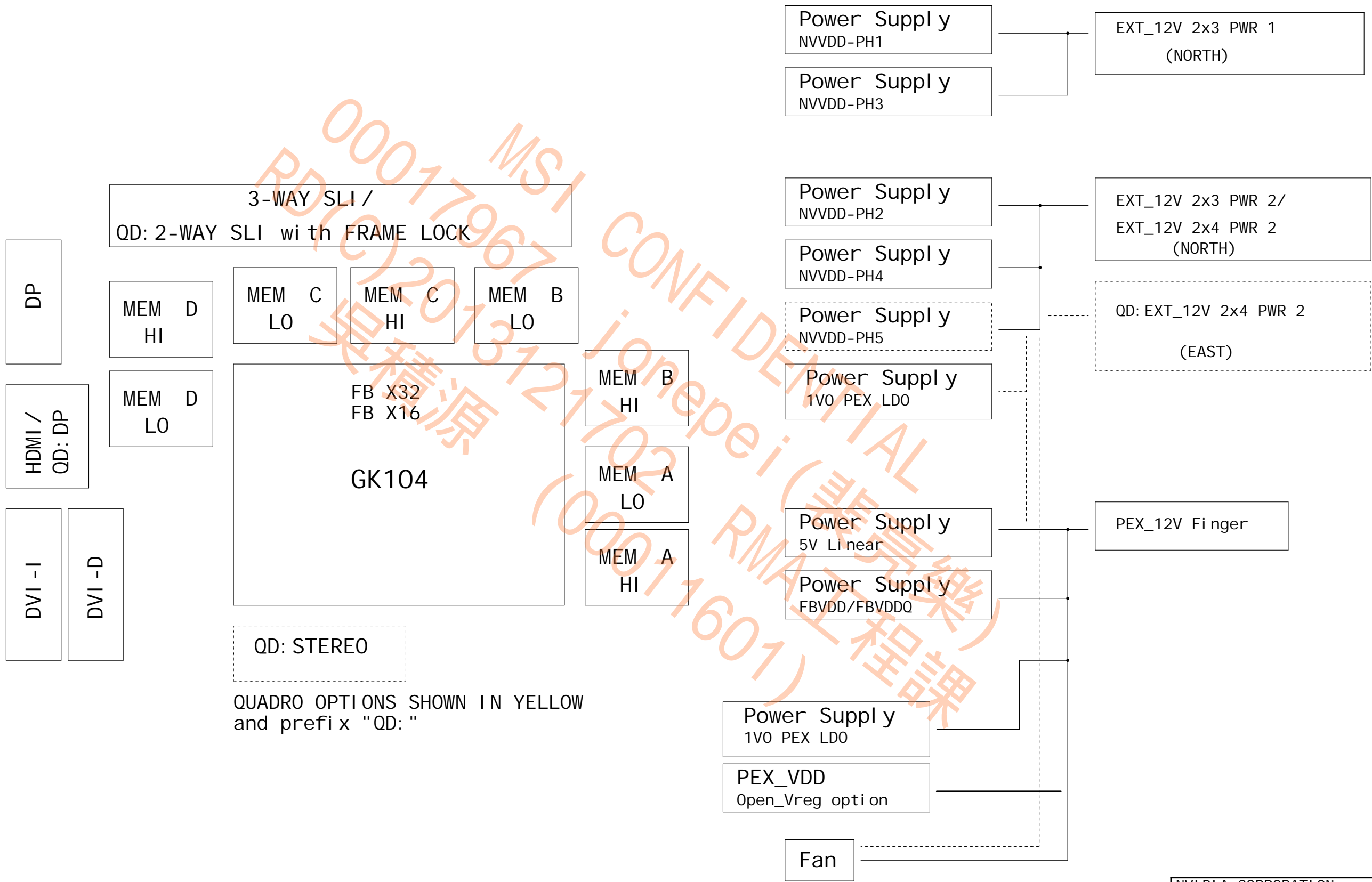
2GB GDDR5, 256b, 64Mx32
Stacked DVI -I /DVI -D + HDMI + DP

TABLE OF CONTENTS

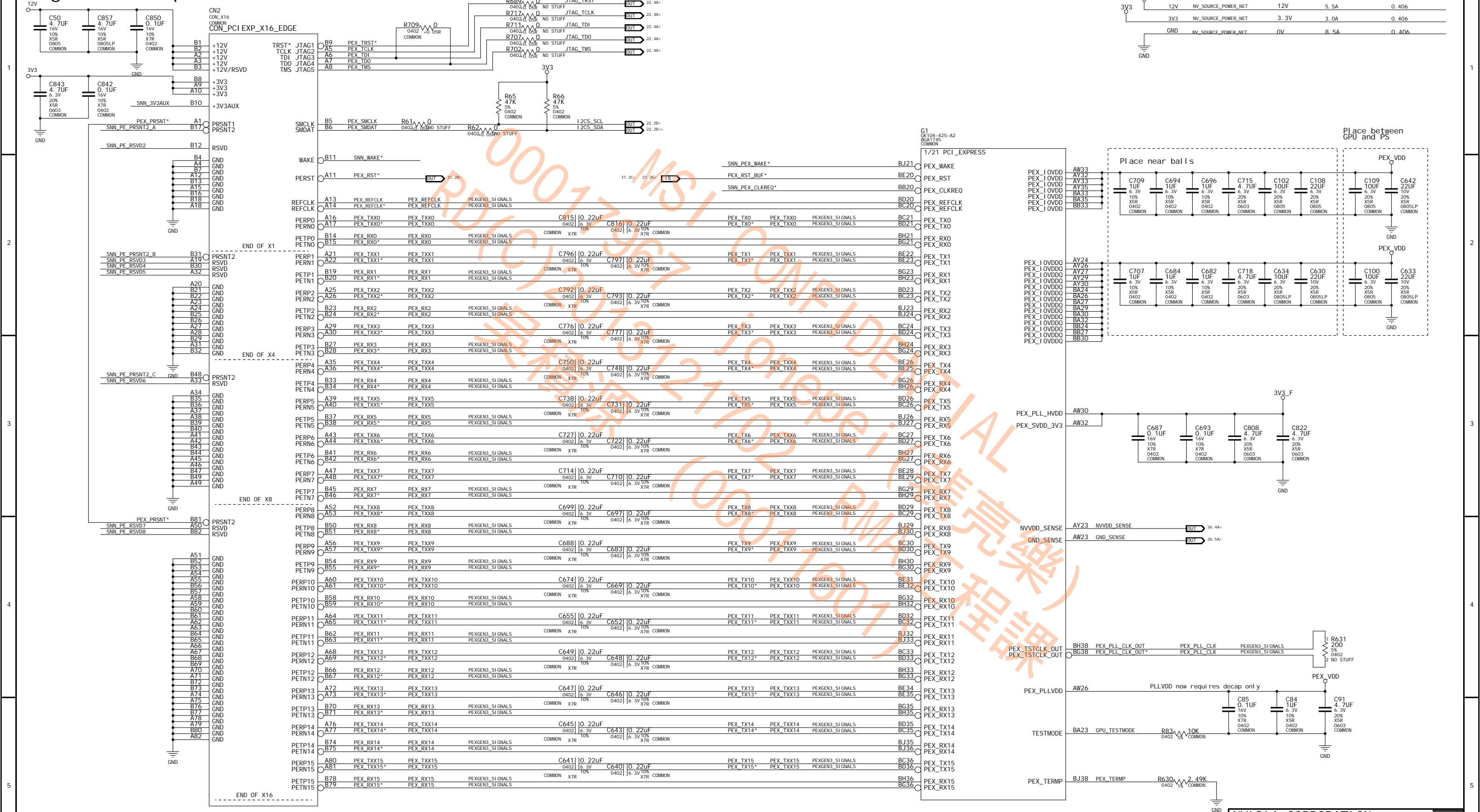
| Page | Descripti on |
|------|--|
| 1 | Table of Contents |
| 2 | Block Diagram |
| 3 | PCI Express |
| 4 | MEMORY: GPU Partit ion A/B |
| 5 | MEMORY: FBA[31:0] |
| 6 | MEMORY: FBA[63:32] |
| 7 | MEMORY: FBB[31:0] |
| 8 | MEMORY: FBB[63:32] |
| 9 | MEMORY: GPU Partit ion C/D |
| 10 | MEMORY: FBC[31:0] |
| 11 | MEMORY: FBC[63:32] |
| 12 | MEMORY: FBD[31:0] |
| 13 | MEMORY: FBD[63:32] |
| 14 | GPU PWR and GND |
| 15 | GPU Decoupling |
| 16 | DACA Interface |
| 17 | I FPAB DVI -I -DL |
| 18 | I FPEF DVI -D-DL |
| 19 | I FPC HDMI /DP |
| 20 | I FPD DP |
| 21 | MI OA/B Interface And Frame Lock |
| 22 | MI SC1: Fan, Thermal, JTAG, GPIO, Stereo |
| 23 | MI SC2: ROM, XTAL, Straps |
| 24 | PS: 5V, PEX_VDD |
| 25 | PS: FBVDD/Q |

| Page | Descripti on |
|------|--|
| 26 | PS: NVVDD Controller |
| 27 | PS: NVVDD Phase 1, 3 |
| 28 | PS: NVVDD Phase 2, 5 |
| 29 | PS: NVVDD Phase 4 |
| 30 | PS: Inputs, Filtering, and Moni toring |
| 31 | PS: Shutdown |
| 32 | PS: 12V Current Steering PSI Control and LED |
| 33 | MECH: Bracket/Thermal |

00017967 MSI CONFIDENTIAL
RD(C)2013121702 jonepei (裴亮樂)
吳積源 (00011601) RMA工程師



Page3: PCI Express



| | |
|-------------|-----------------------------|
| ASSEMBLY | SKU0000 GK104 256BIT 64Mx32 |
| PAGE DETAIL | PCI Express |

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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95050, USA

| | |
|-------|--------------------|
| NV_PN | 600-12005-0000-QS1 |
|-------|--------------------|

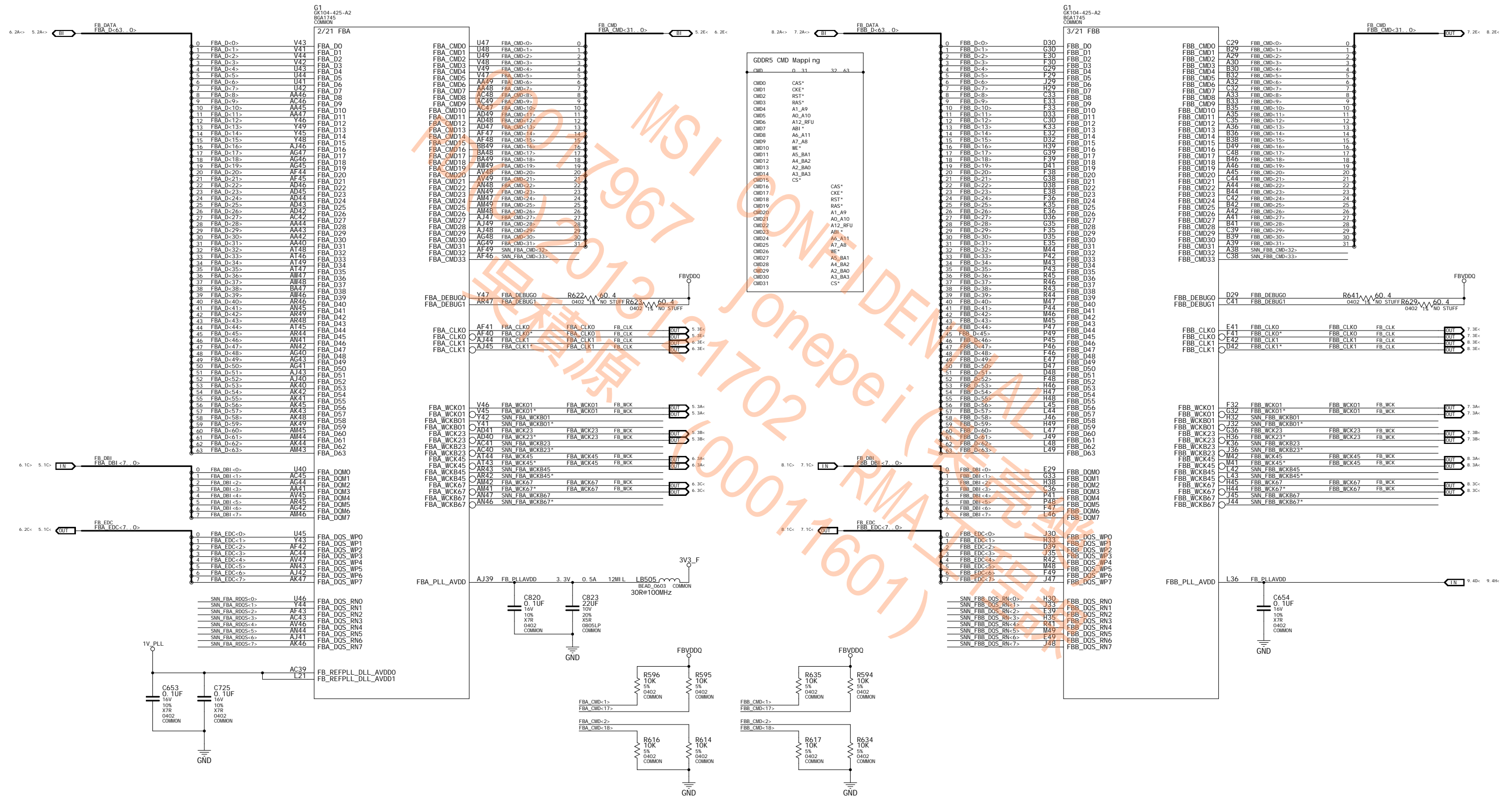
| | |
|---------|-----------|
| PCB REV | P2005-A01 |
|---------|-----------|

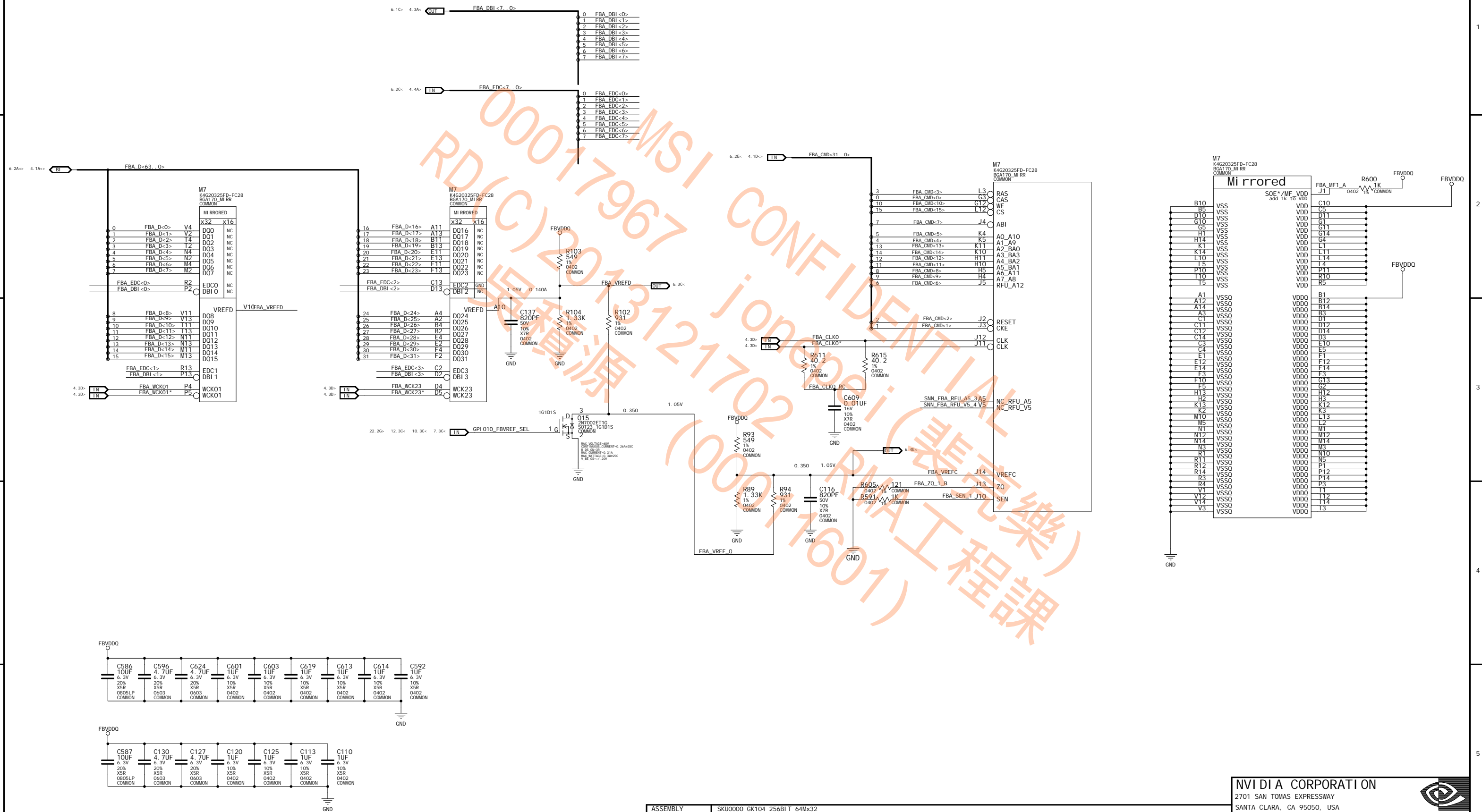
PAGE 3 OF 33

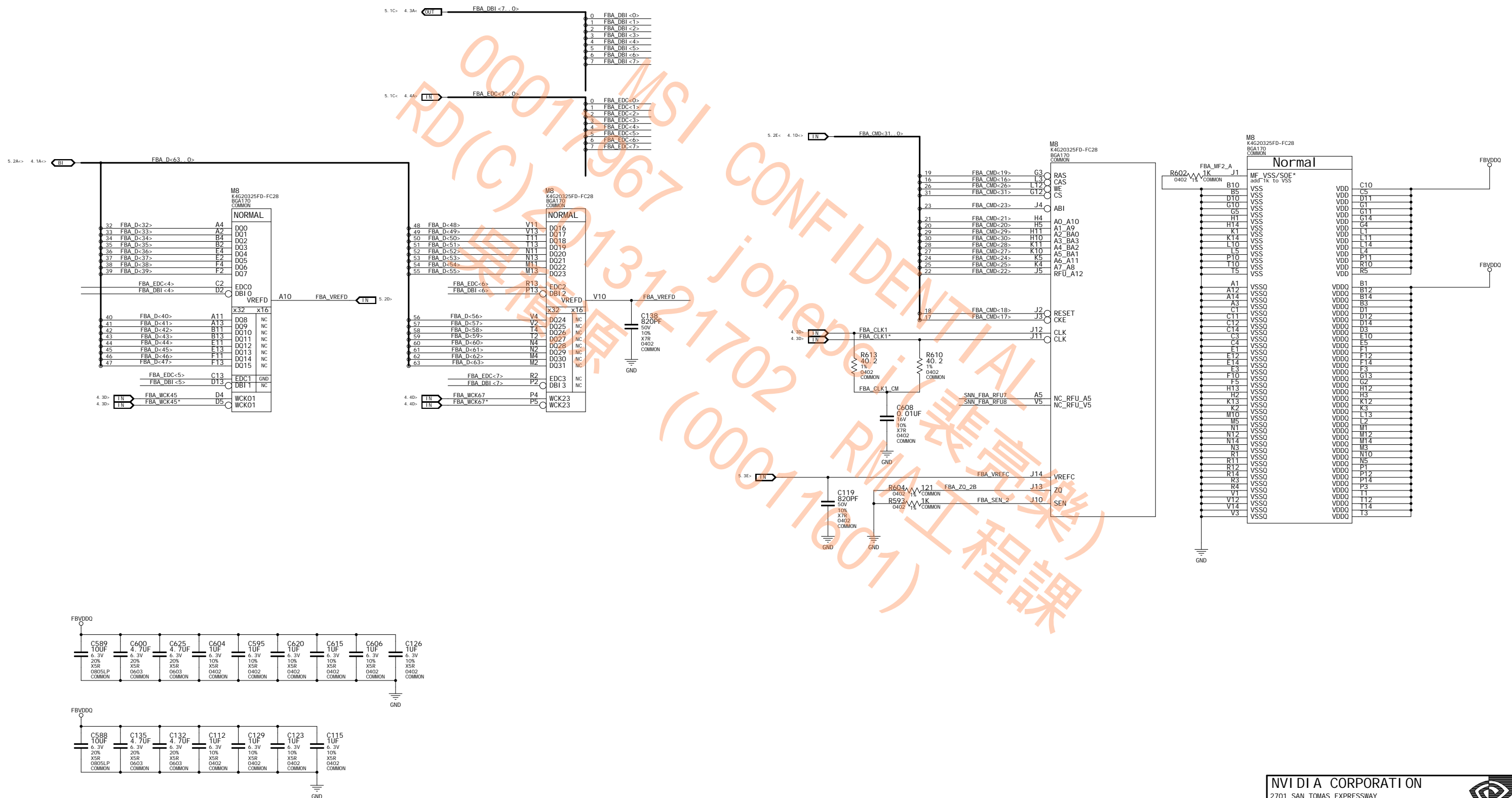
| | |
|---------|---|
| BOM REV | B |
|---------|---|

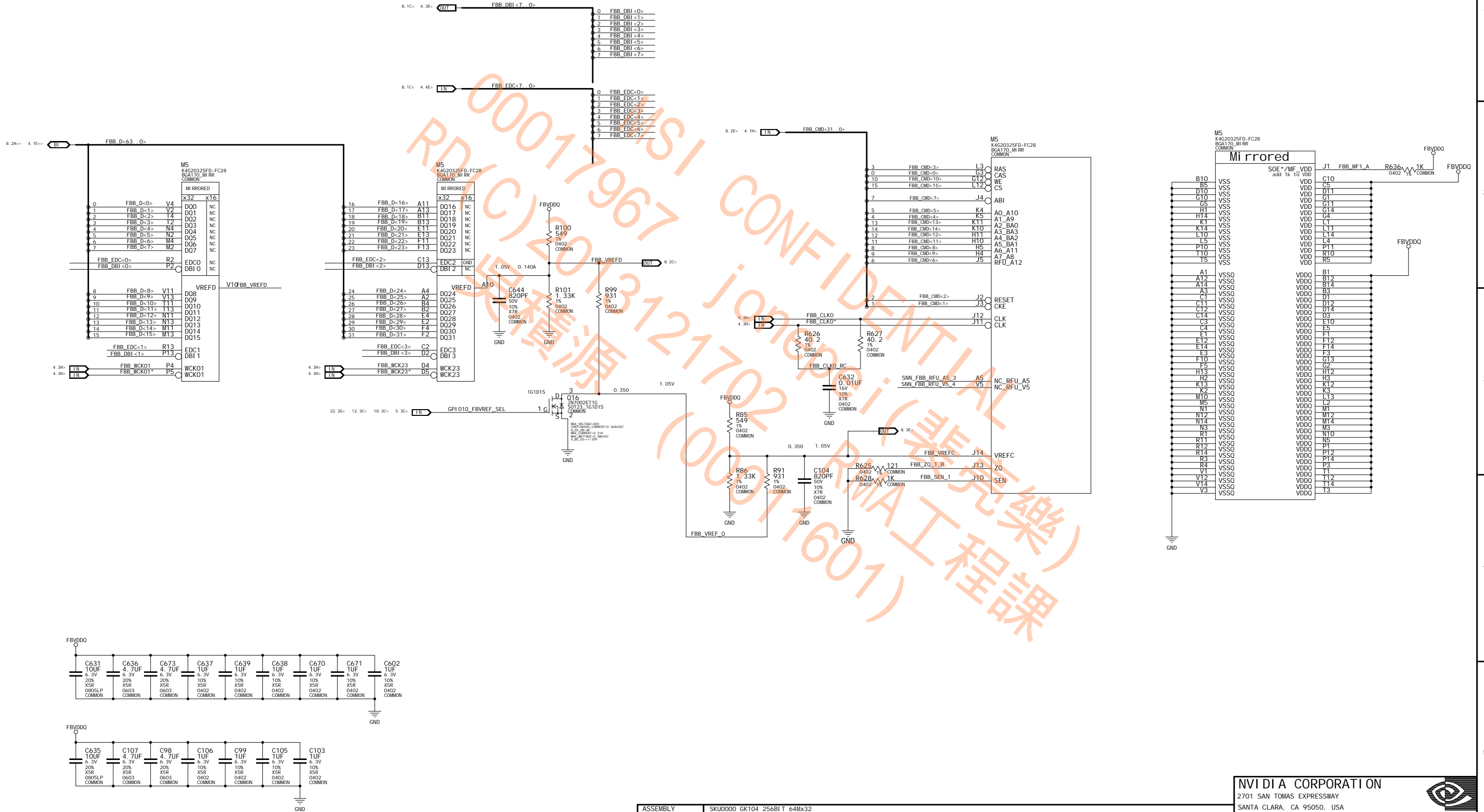
| | |
|------|-------------|
| DATE | 26-MAR-2013 |
|------|-------------|

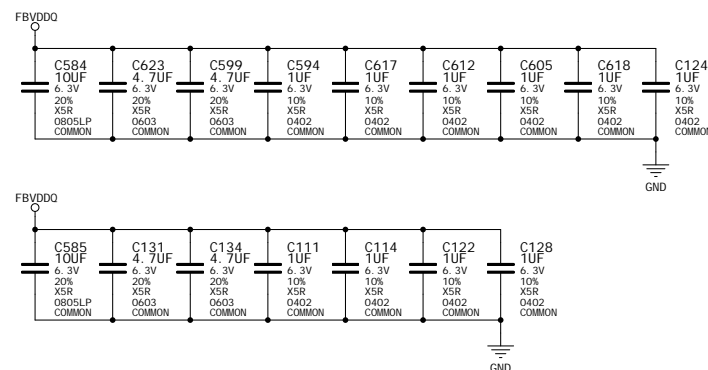
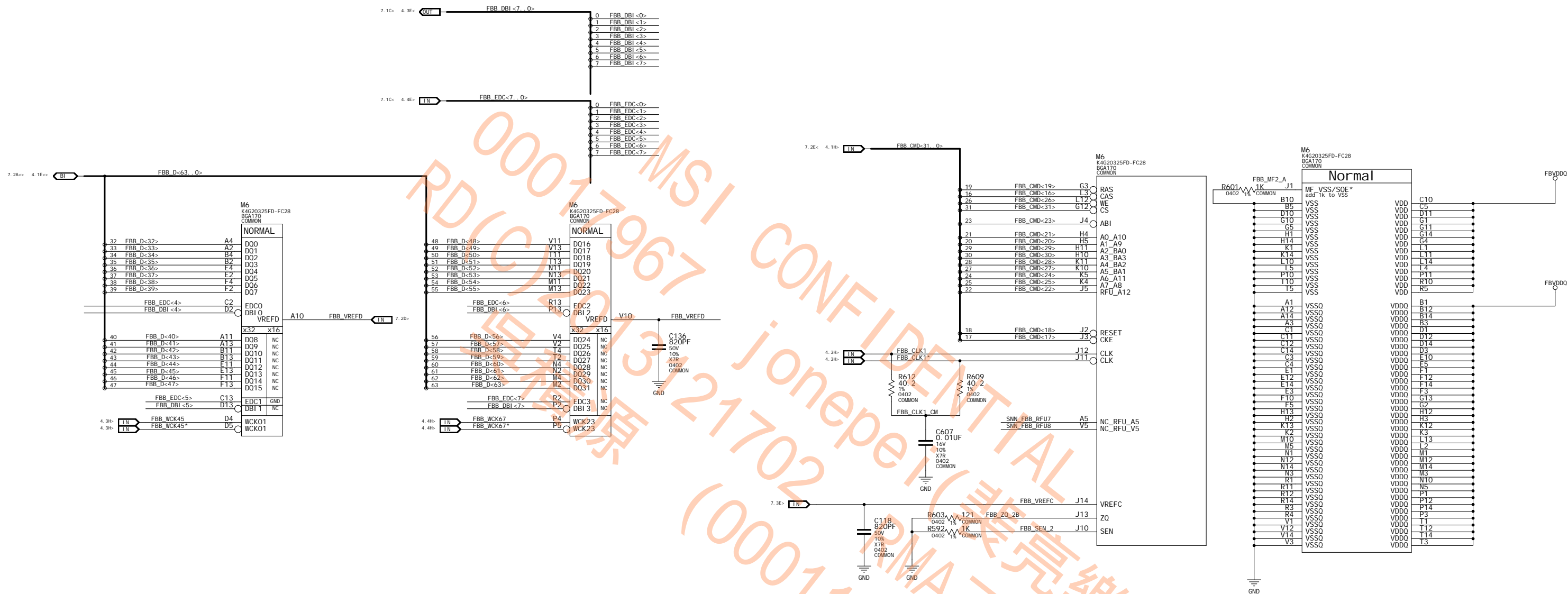












| | |
|-------------|-----------------------------|
| ASSEMBLY | SKU0000 GK104 256BIT 64Mx32 |
| PAGE DETAIL | MEMORY: FBB[63: 32] |

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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

NVIDIA CORPORATION

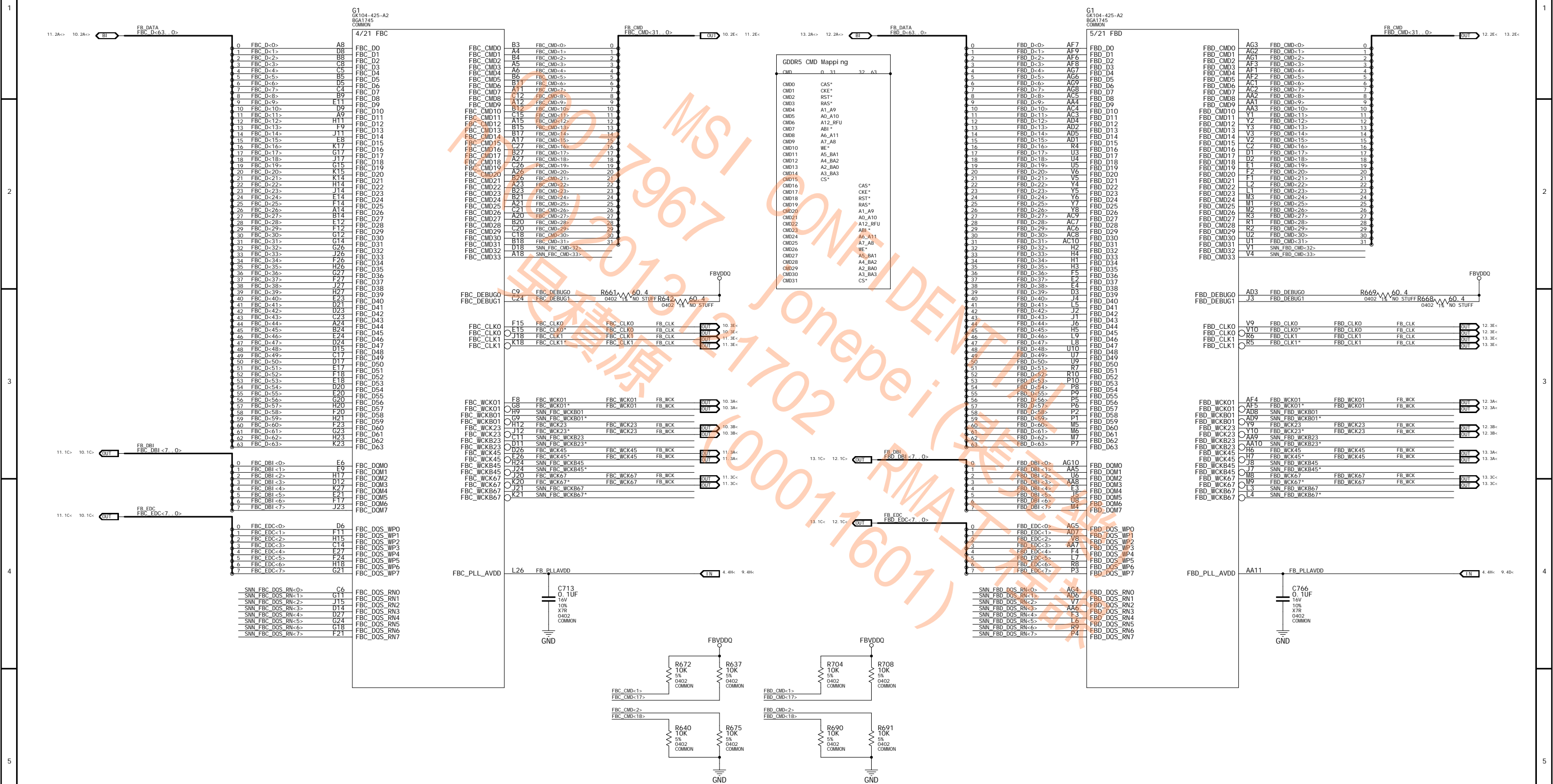
2701 SAN TOMAS EXPRESSWAY

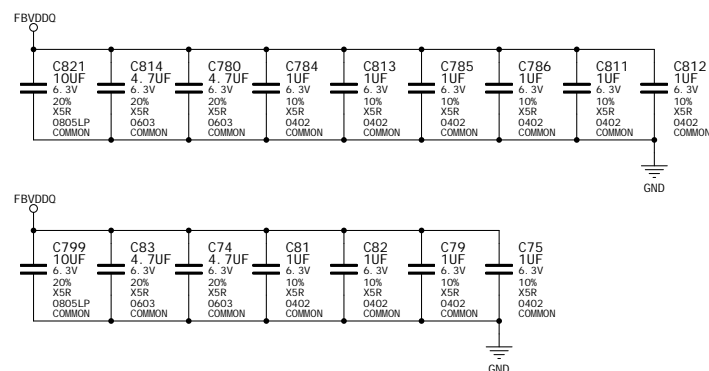
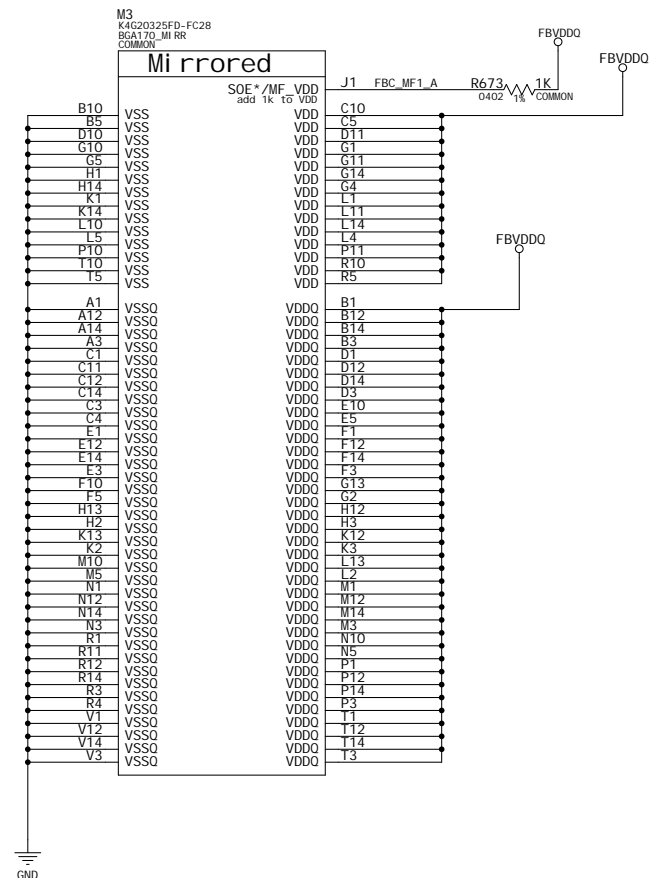
SANTA CLARA, CA 95050, USA


| | |
|-------|--------------------|
| NV_PN | 600-12005-0000-QS1 |
|-------|--------------------|

| | | | |
|---------|-----------|------|---------|
| PCB REV | P2005-A01 | PAGE | 8 OF 33 |
|---------|-----------|------|---------|

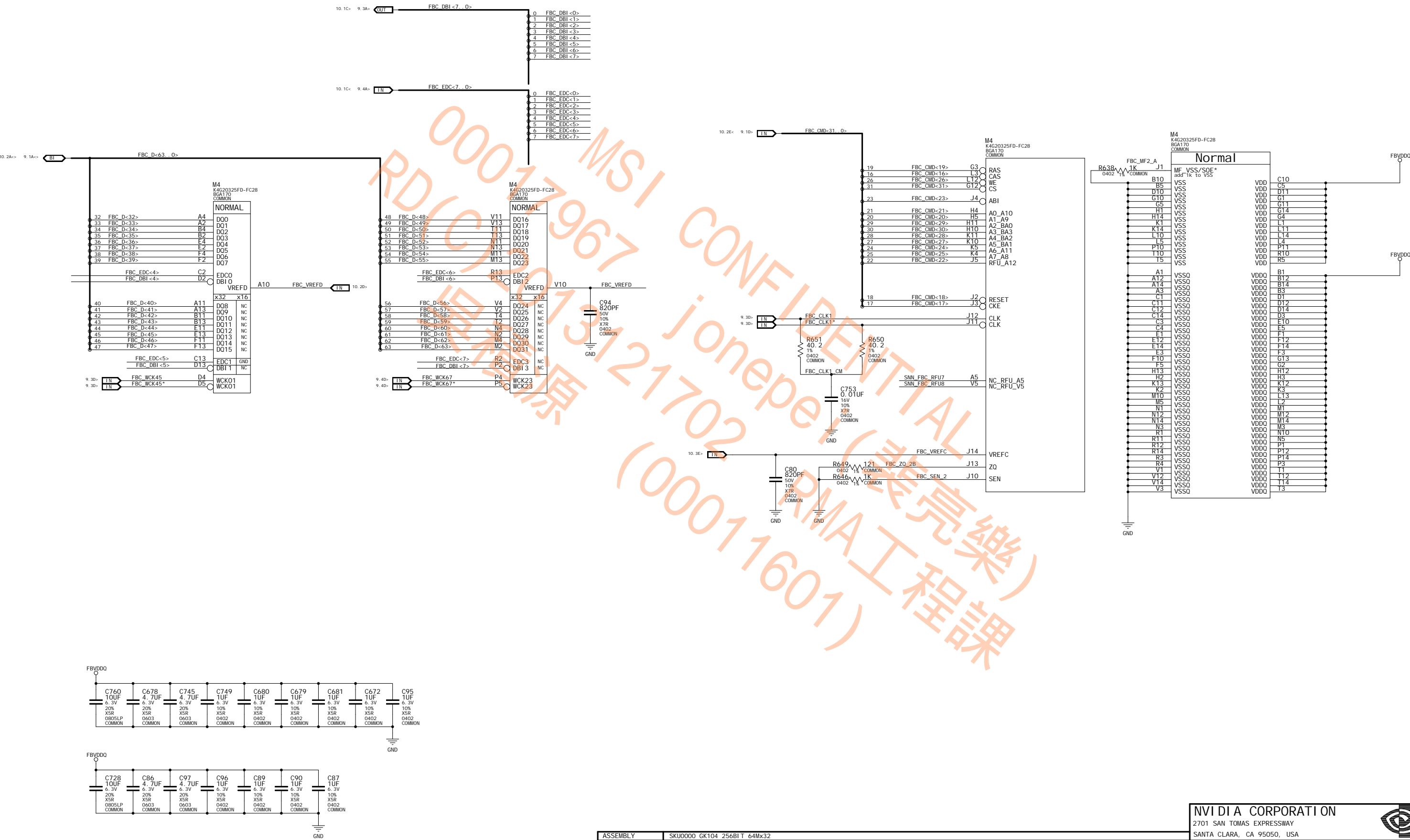
| | | | |
|----------|----------|------|-------------|
| PAGE REV | PAGE REV | PAGE | DATE |
| BOM REV | B | | 26-MAR-2013 |

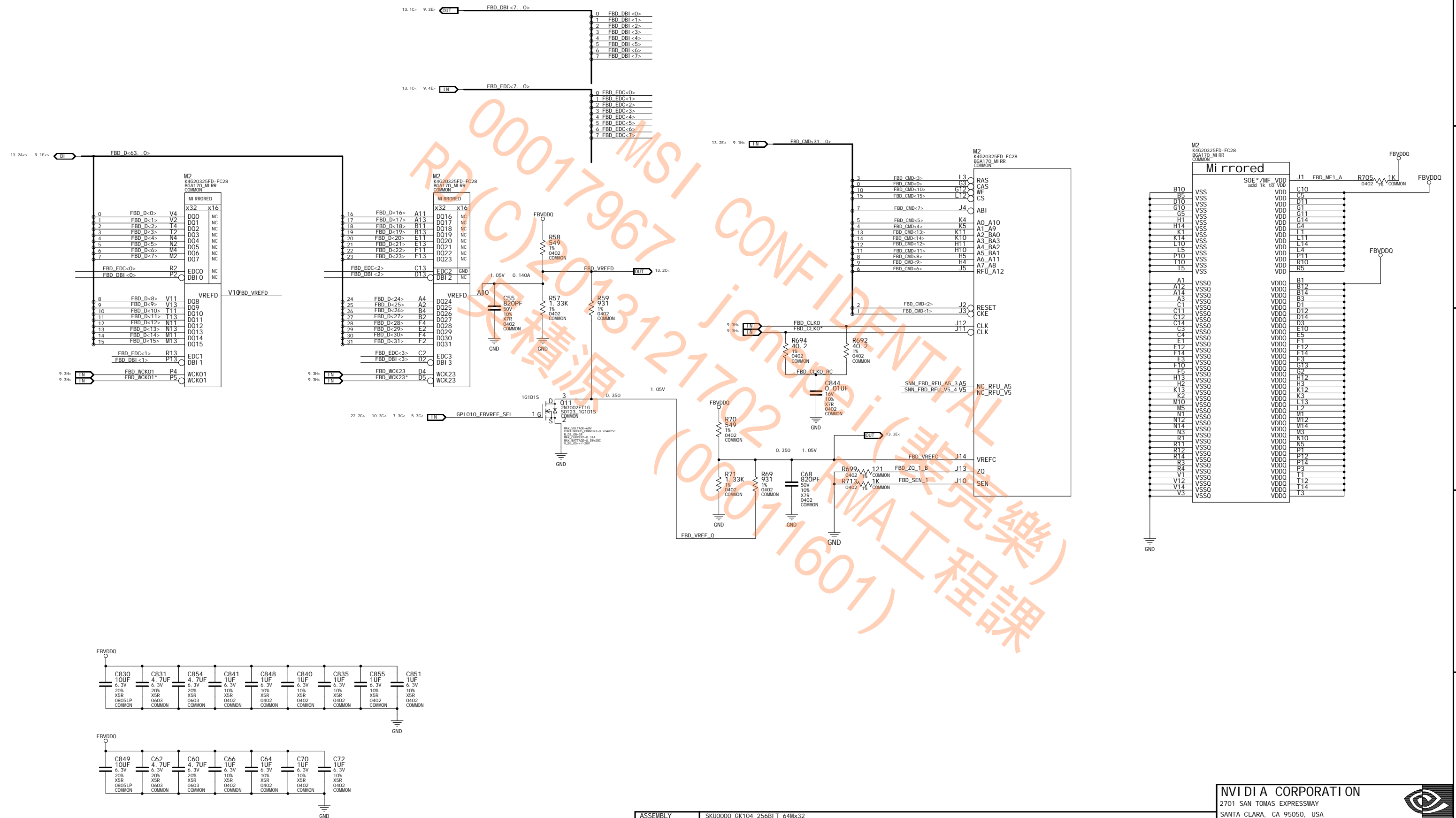


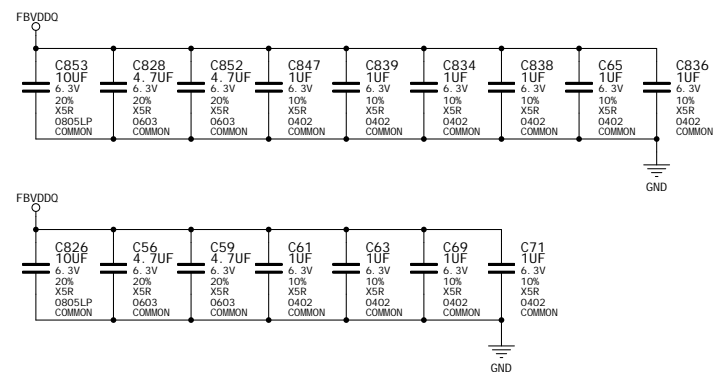
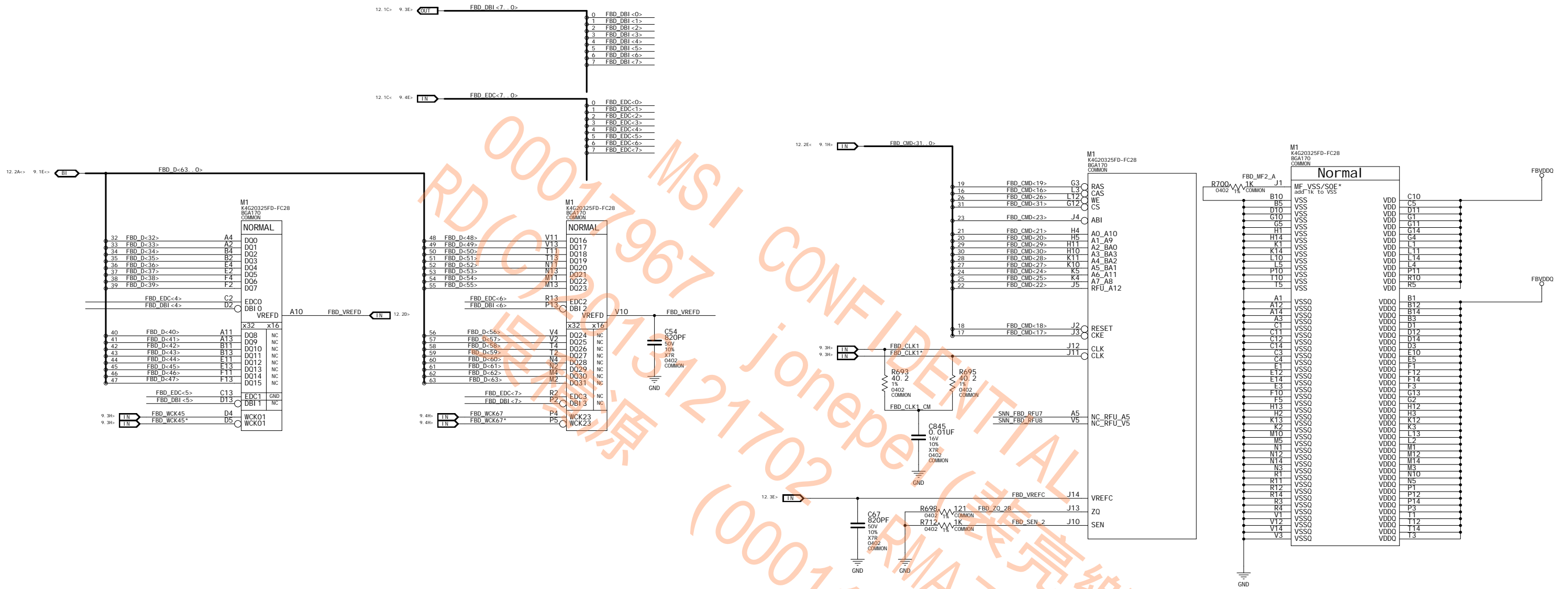


| | | | | |
|---|--|---------------------------|---|-------------------------|
| NVI DIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA | | |  | |
| NV_PN | | 600-12005-0000-QS1 | | |
| PCB REV | | P2005-A01 | | PAGE 10 OF 33 |
| BOM REV | | B | | DATE 26-MAR-2013 |

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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.







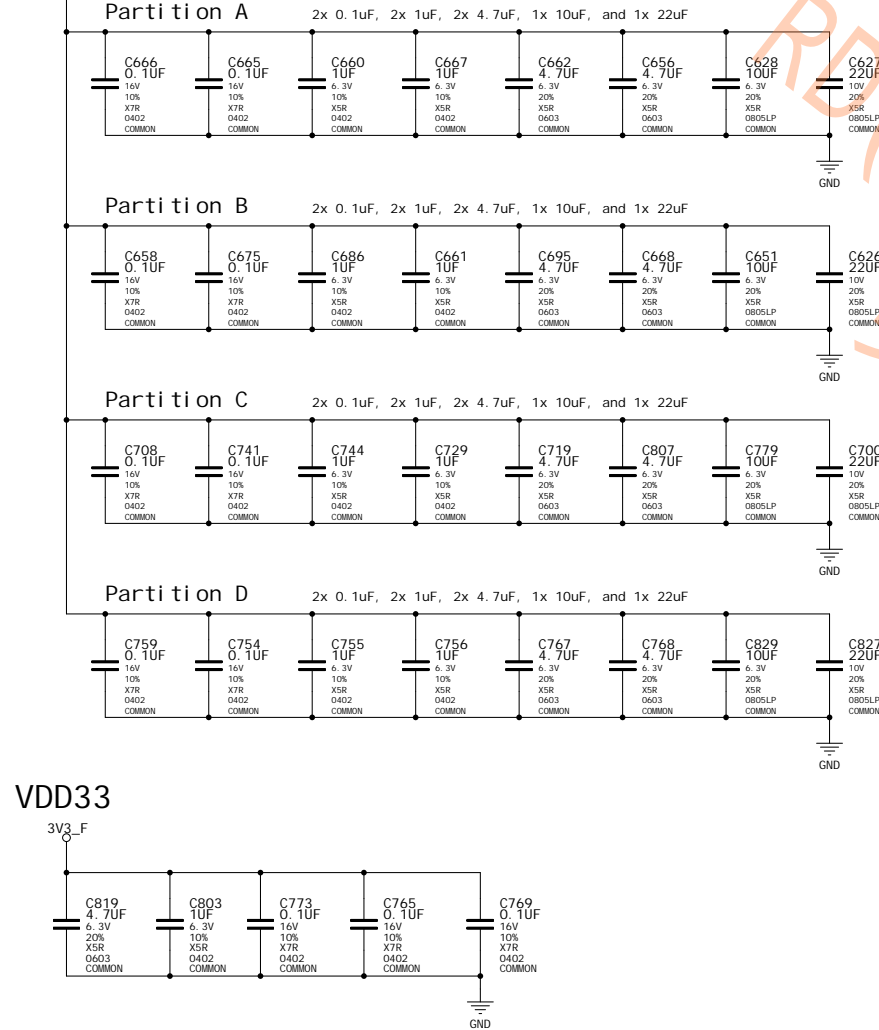
| | |
|-------------|-----------------------------|
| ASSEMBLY | SKU0000 GK104 256BIT 64Mx32 |
| PAGE DETAIL | MEMORY: FBD[63: 32] |

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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

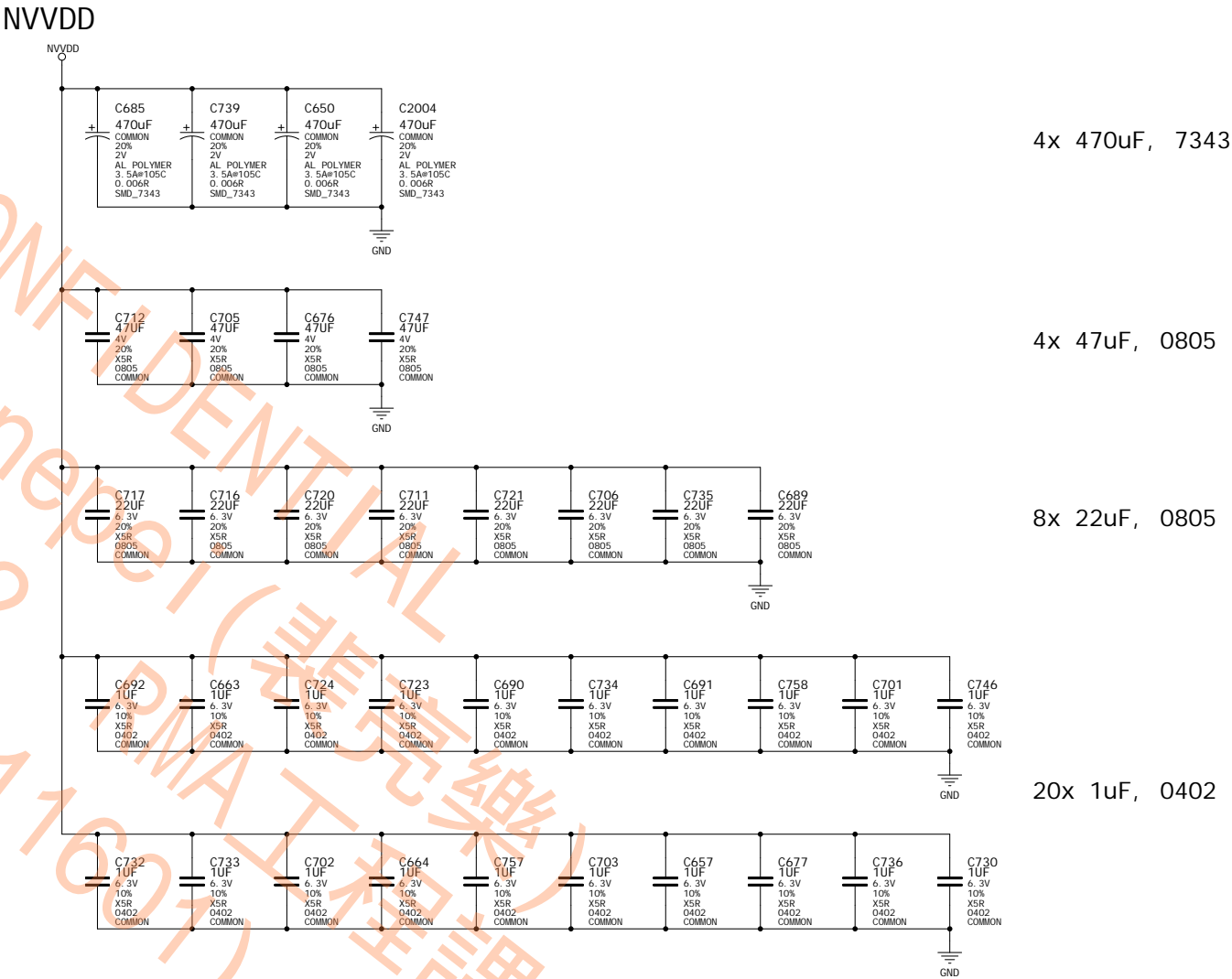


Based on GB2-X GDDR5 FBVDDQ Decap Guidel ine

FBVDDQ
0.1uF, 0.47uF & 1uF, 0402 (Pl ace Under GPU)
4.7uF, 0603 (Pl ace Near GPU)
10uF, 0805 (Pl ace Near GPU)
22uF, 0805 (Pl ace Near GPU)



NVVDD Decoupl i ng caps. Pl ace under GPU.



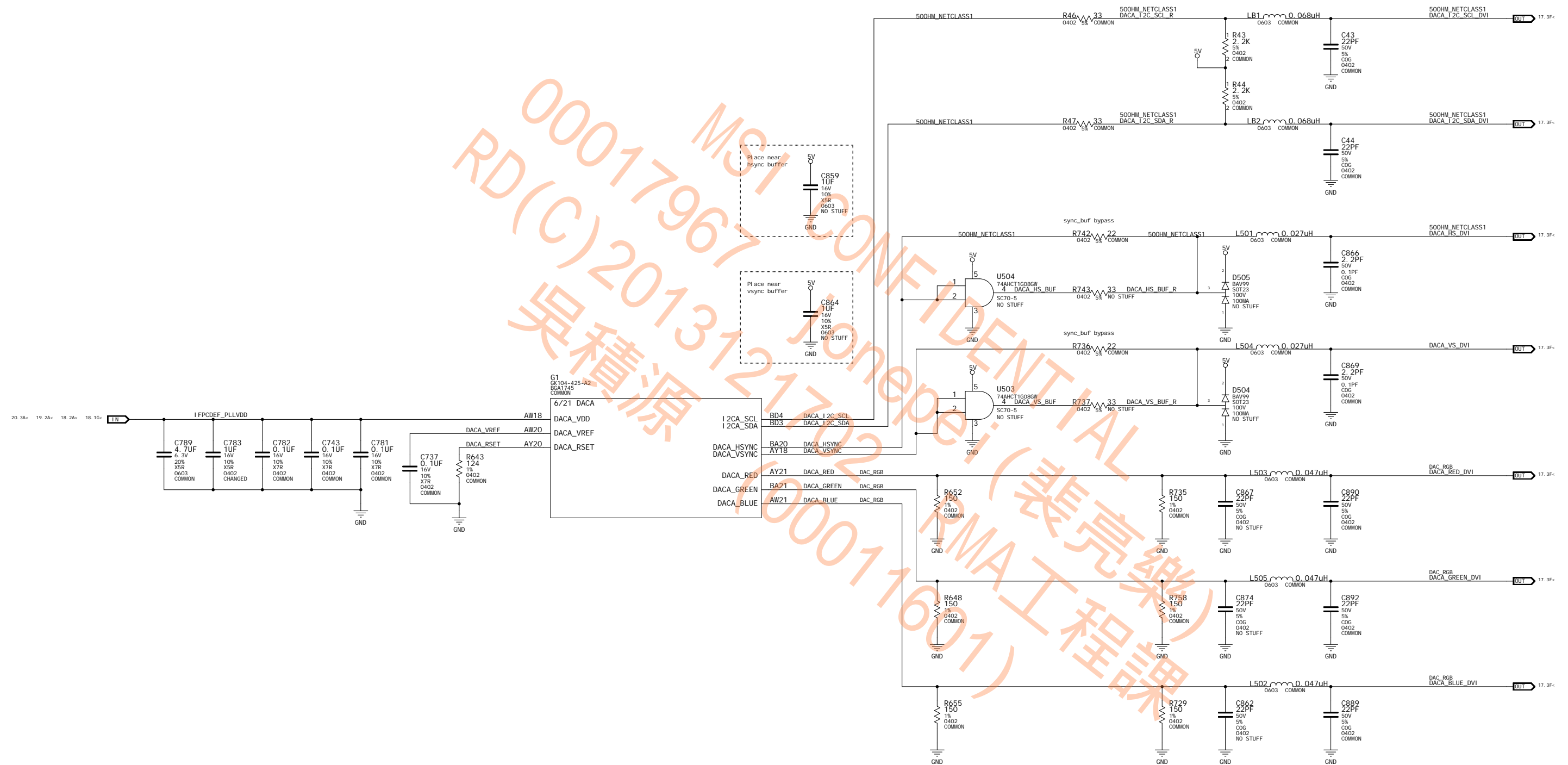
4x 470uF, 7343

4x 47uF, 0805

8x 22uF, 0805

20x 1uF, 0402

Page16: DACA Interface



NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

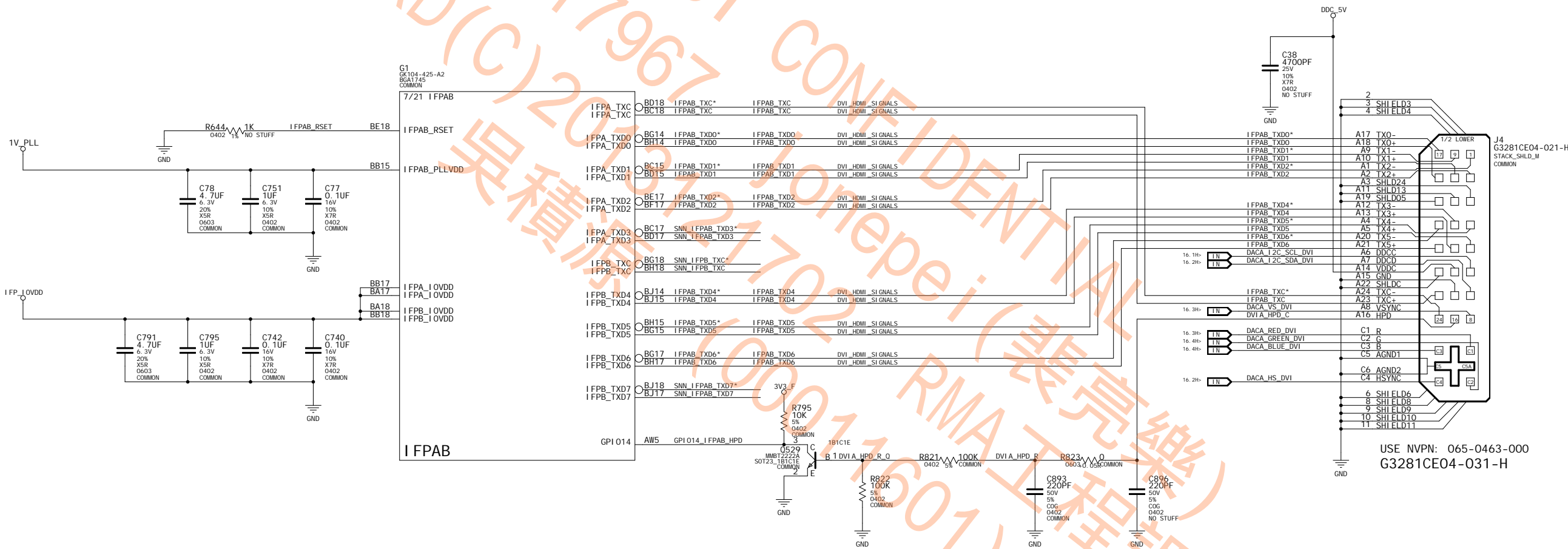
SANTA CLARA, CA 95050, USA

| | |
|-------|--------------------|
| NV_PN | 600-12005-0000-QS1 |
|-------|--------------------|

| | | | |
|---------|-----------|------|----------|
| PCB REV | P2005-A01 | PAGE | 16 OF 33 |
|---------|-----------|------|----------|

| | | | |
|---------|---|------|-------------|
| BOM REV | B | DATE | 26-MAR-2013 |
|---------|---|------|-------------|

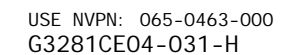
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS 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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

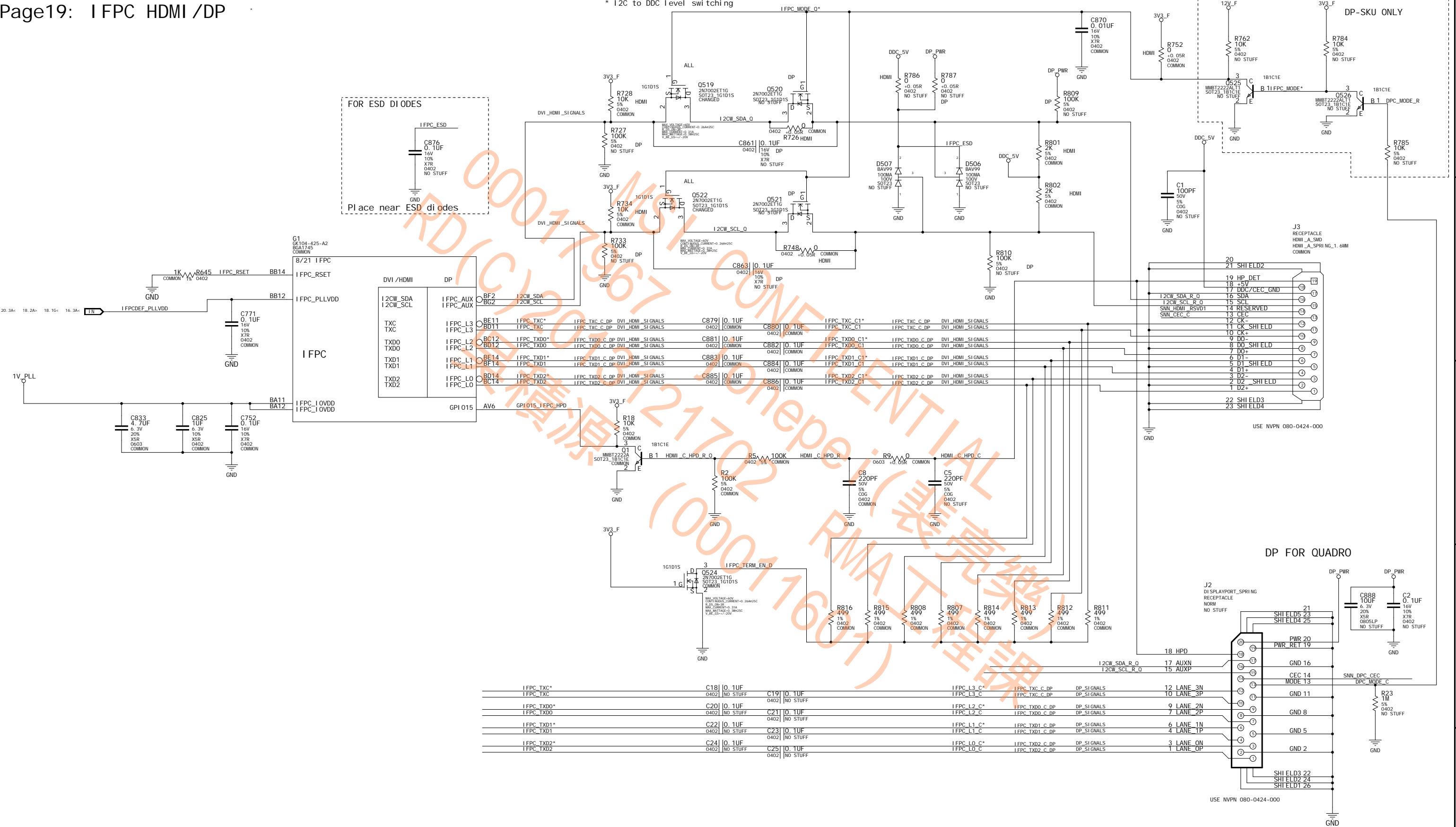


ci20313

| | | | |
|----------------------------|--------------------|------|-------------|
| NVIDIA CORPORATION | | | |
| 2701 SAN TOMAS EXPRESSWAY | | | |
| SANTA CLARA, CA 95050, USA | | | |
| NV_PN | 600-12005-0000-QS1 | | |
| PCB REV | P2005-A01 | PAGE | 17 OF 33 |
| BOM REV | B | DATE | 26-MAR-2013 |

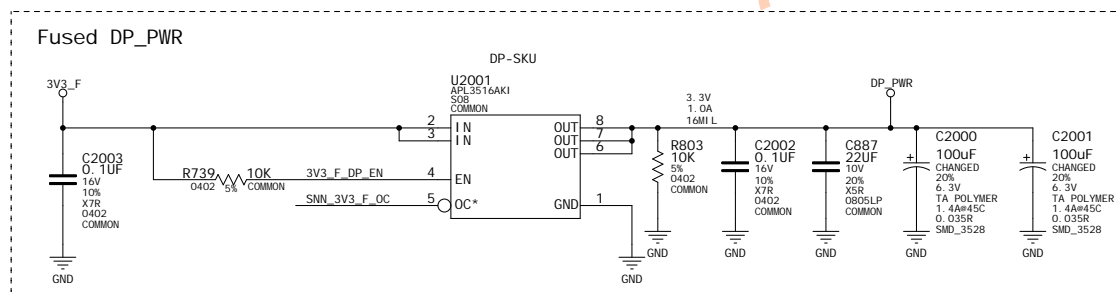
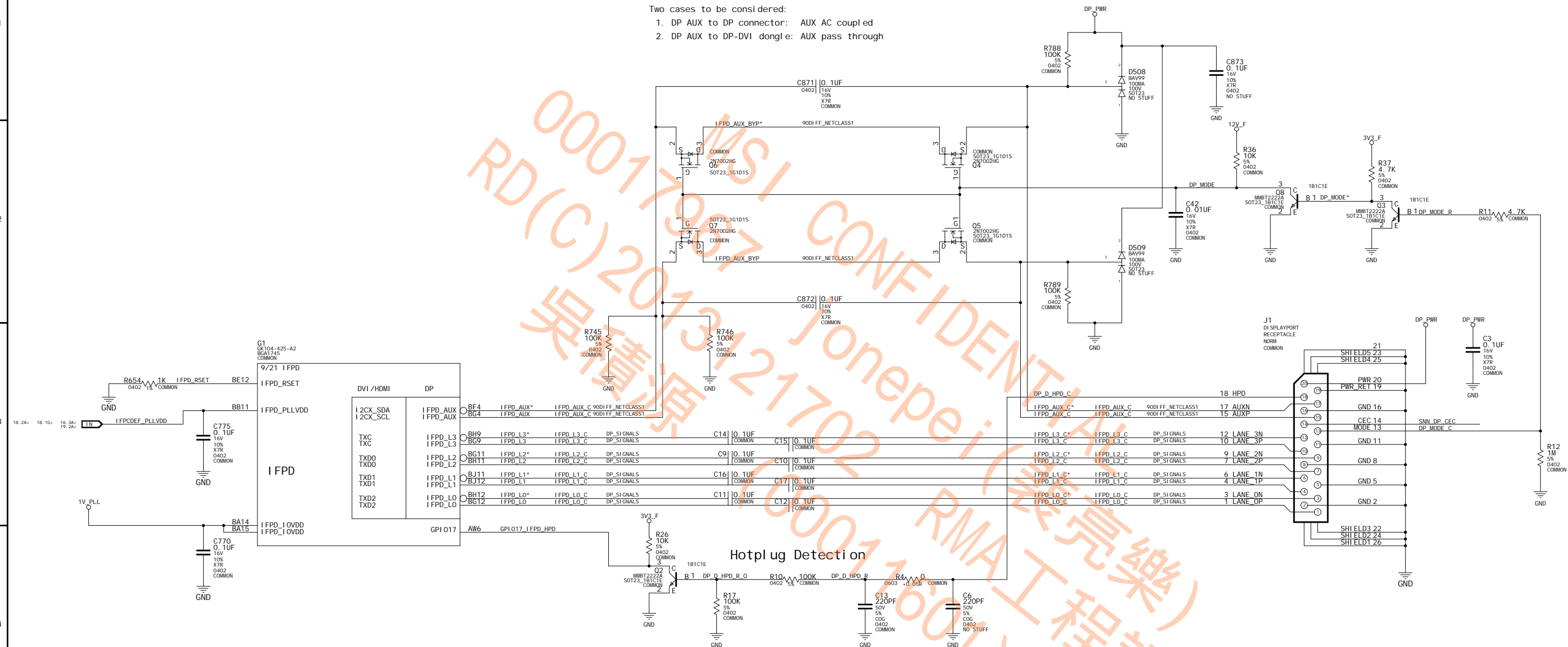
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. 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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.





Two cases to be considered:

1. DP AUX to DP connector: AUX AC coupled
2. DP AUX to DP-DVI dongle: AUX pass through



| | |
|-------------|-----------------------------|
| ASSEMBLY | SKU0000 GK104 256BIT 64Mx32 |
| PAGE DETAIL | IFPD DP |

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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

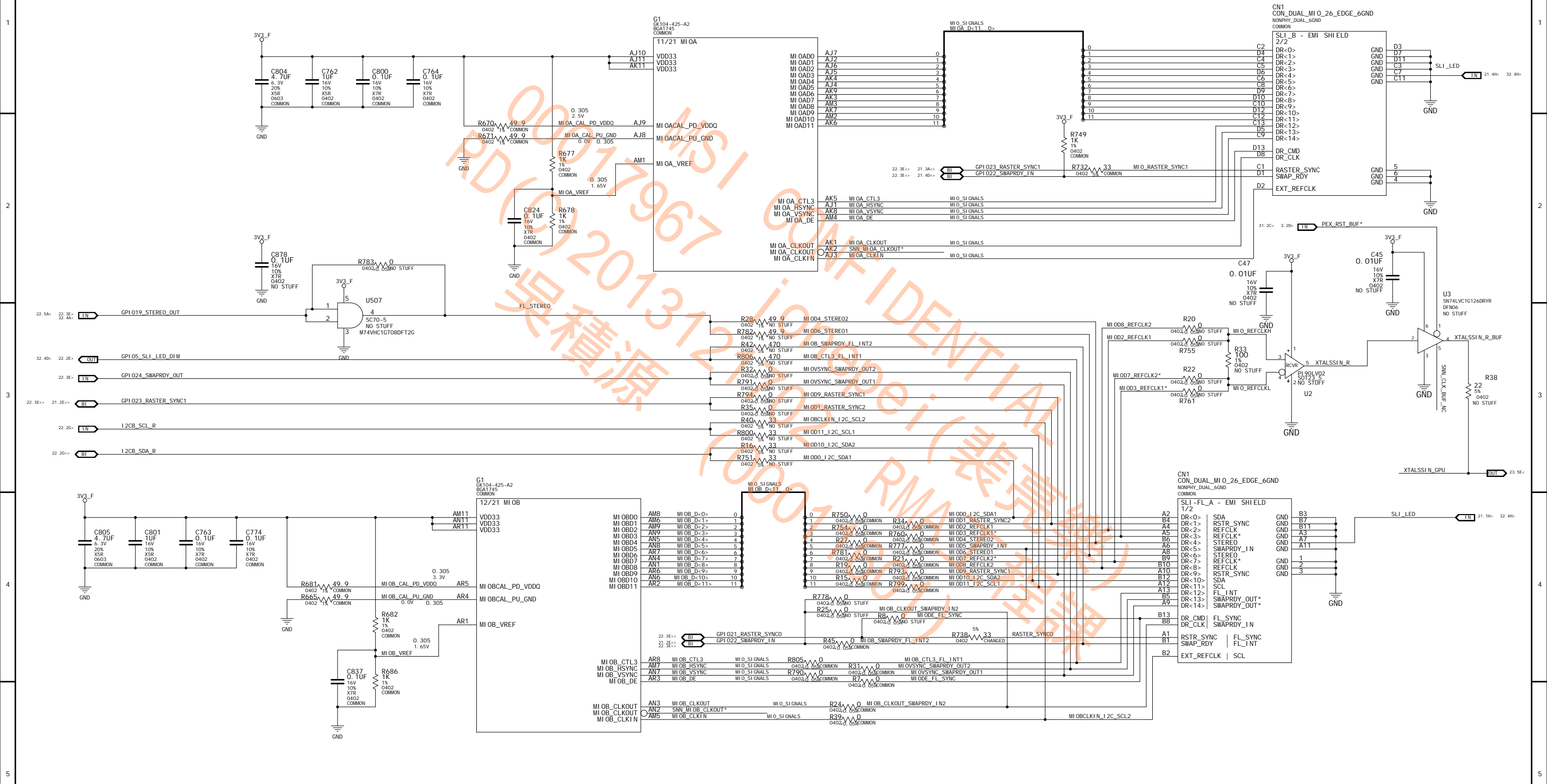
NVIDIA CORPORATION

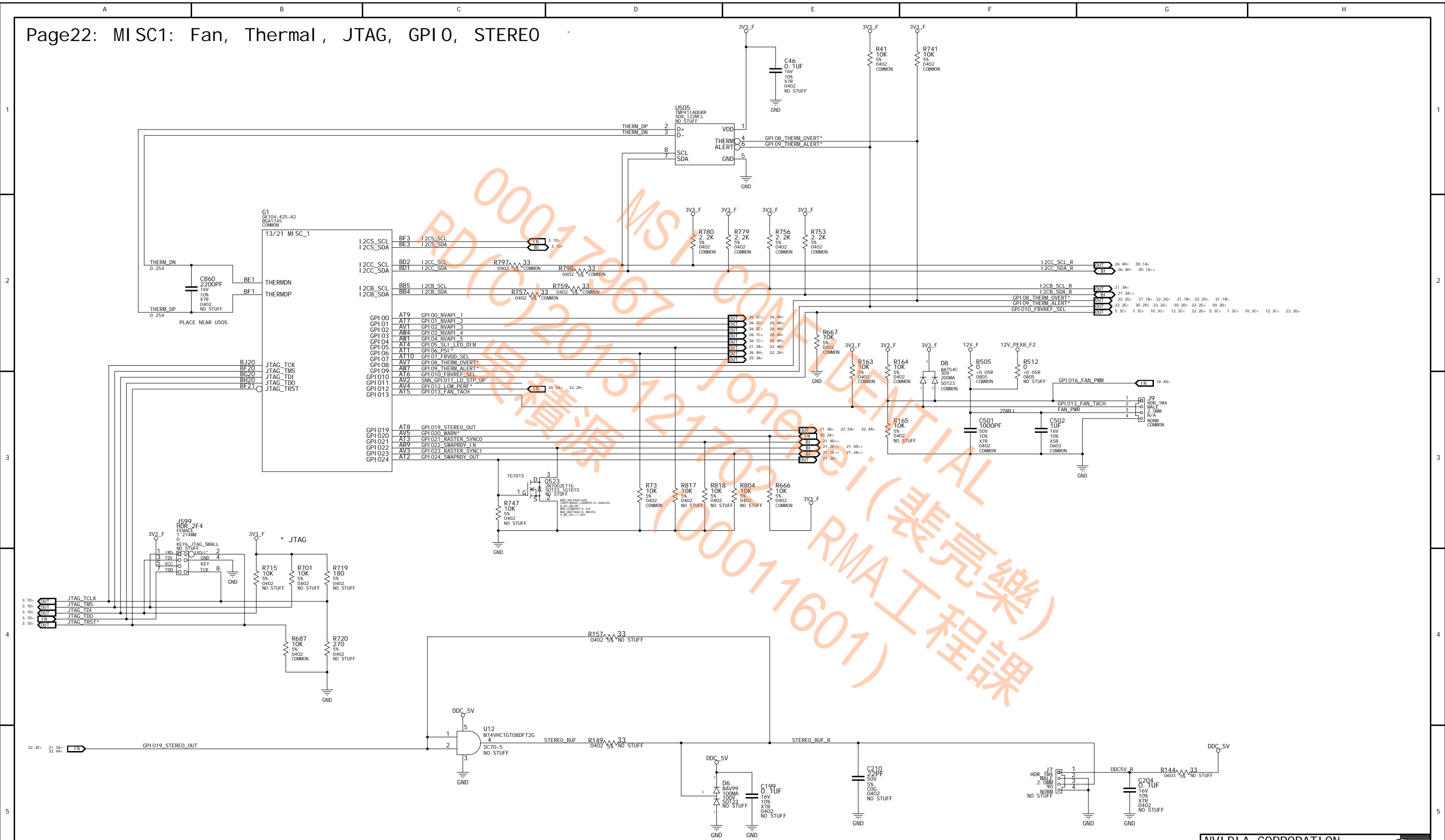
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA



| | |
|-------|--------------------|
| NV_PN | 600-12005-0000-QS1 |
|-------|--------------------|

| | | | |
|---------|-----------|------|-------------|
| PCB REV | P2005-A01 | PAGE | 20 OF 33 |
| BOM REV | B | DATE | 26-MAR-2013 |



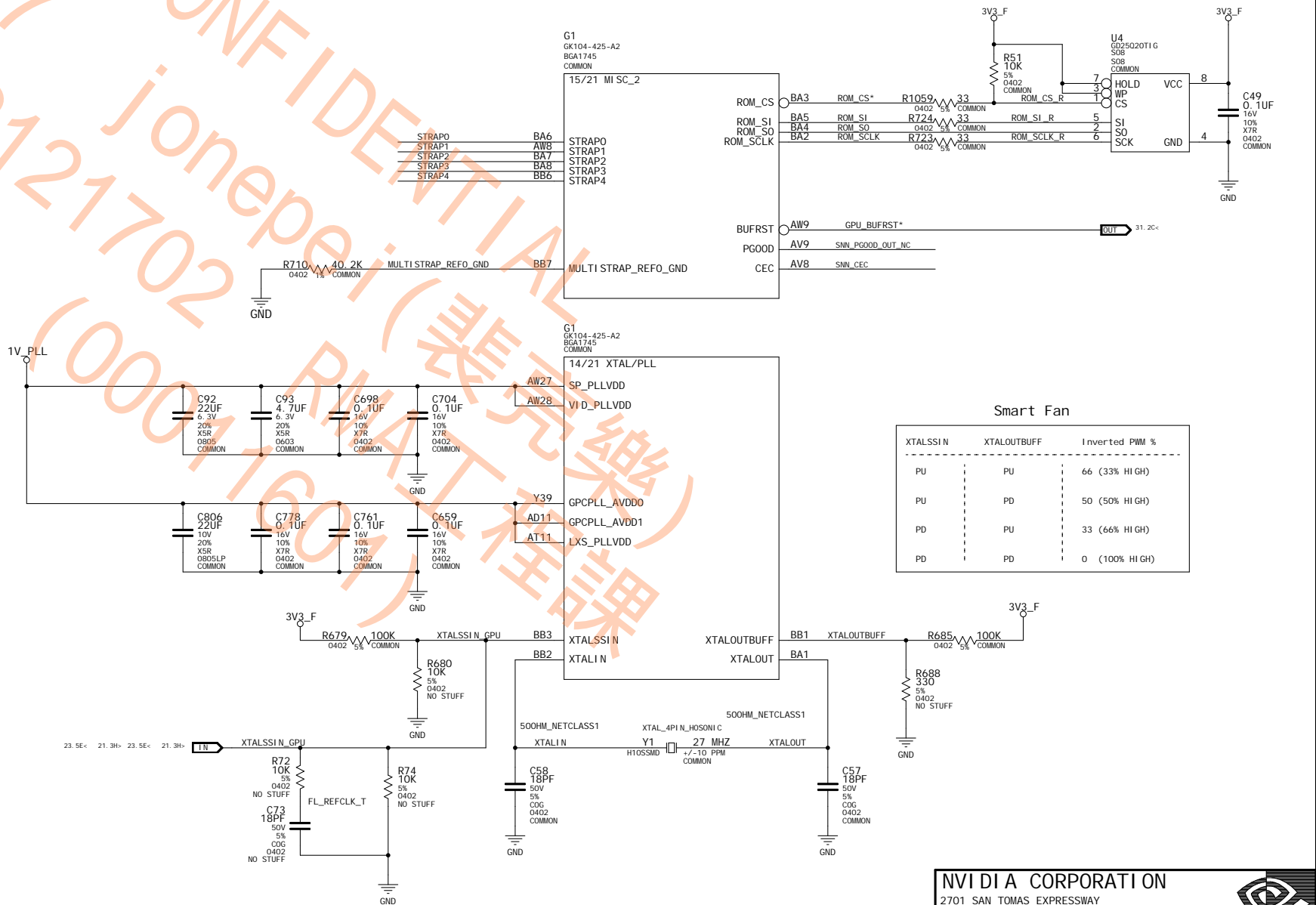
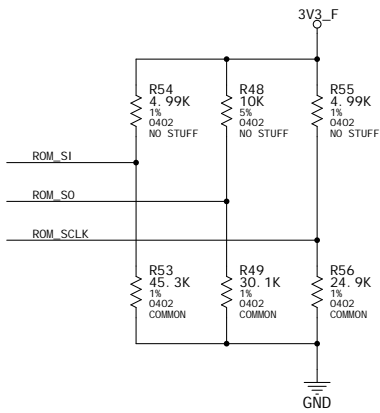
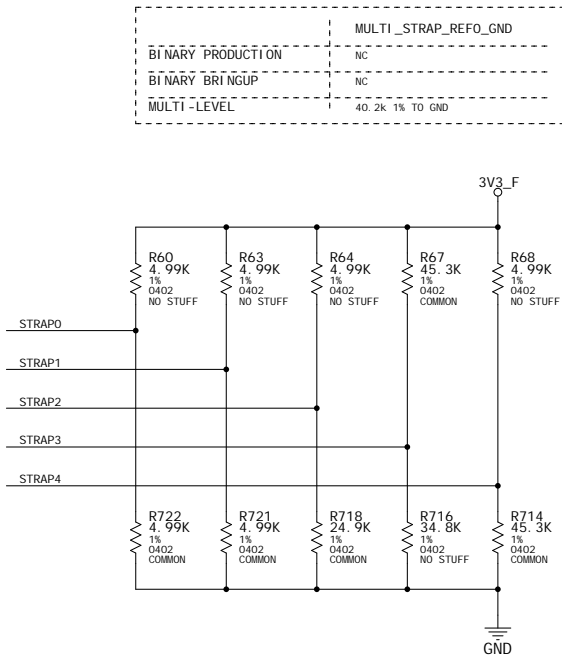


Page23: MI SC2: ROM, XTAL, Straps

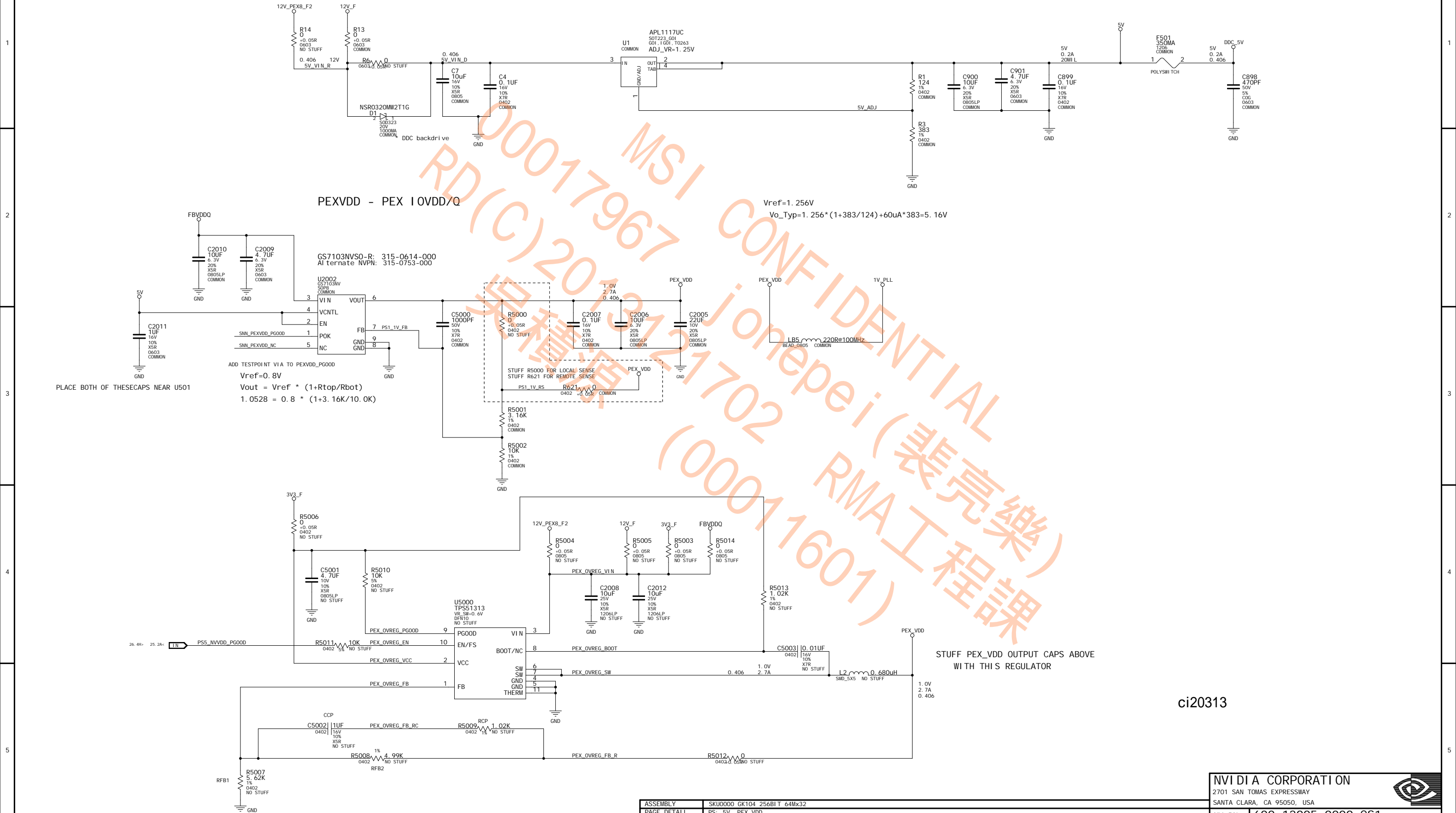
| | | | |
|----------|----------------------|--------------------|--|
| STRAP0 | USER_BIT [3:0]* | 0000* | 5K PD* |
| STRAP1 | 3GIO_PADCFG_LUT_ADR* | 0000* | 5K PD Desktop* |
| STRAP2 | PCI_DEVID [3:0]* | 0100 - (0x1184)* | 25K PD -425 GPU* |
| STRAP3 | SOR_EXPOSED [3:0]* | 1111* | 45K PU* |
| STRAP4 | DP_PLL_VDD_33V* | 1* FOR 3_3V* | |
| | PEX_MAX_SPEED* | 1* FOR GEN2/3* | 45K PD* |
| | PEX_SPD_CHANGE_GEN3* | 1* ENABLED* | |
| | * | | |
| ROM_SI | RAMCFG[0]* | 1* | |
| | RAMCFG[1]* | 1* | 35K PD* 0110 for 64Mx32 256 bit HYNIX for SKU 0 primary memory 45K PD* 0111 for 64Mx32 256 bit SAMSUNG for SKU 0 primary memory |
| | RAMCFG[2]* | 1* | |
| | RAMCFG[3]* | 0* | |
| | VGA_DEVICE* | 1* | |
| ROM_SO | SMB_ALT_ADDR* | 0* | 30k PD* |
| | FB[0]_APERTURE_SIZE* | 1* For 128MB* | |
| | FB[1]_APERTURE_SIZE* | 0* For 128MB* | |
| | PEX_PLL_EN_TERM100* | 0* DISABLED* | |
| ROM_SCLK | PCI_DEVID_EXT[5]* | 0* For 0x1184* | 25K PD* |
| | SUB_VENDOR* | 1* Dedicated BIOS* | |
| | PCI_DEVID_EXT[4]* | 0* For 0x1184* | |

| | GND | 3V3 |
|-----|------|------|
| 5k | 0000 | 1000 |
| 10k | 0001 | 1001 |
| 15k | 0010 | 1010 |
| 20k | 0011 | 1011 |
| 25k | 0100 | 1100 |
| 30k | 0101 | 1101 |
| 35k | 0110 | 1110 |
| 45k | 0111 | 1111 |

| CFG[3:0] | Config Width | Vendor |
|----------|----------------|----------|
| 0000 | Reserved | |
| 0001 | 32Mx32 256-bit | Elpi da |
| 0010 | 32Mx32 256-bit | Hyni x |
| 0011 | 32Mx32 256-bit | Samsun g |
| 0100 | Reserved | |
| 0101 | 64Mx32 256-bit | Elpi da |
| 0110 | 64Mx32 256-bit | Hyni x |
| 0111 | 64Mx32 256-bit | Samsun g |
| 1000 | Reserved | |
| 1001 | 32Mx32 192-bit | Elpi da |
| 1010 | 32Mx32 192-bit | Hyni x |
| 1011 | 32Mx32 192-bit | Samsun g |
| 1100 | Reserved | |
| 1101 | 64Mx32 192-bit | Elpi da |
| 1110 | 64Mx32 192-bit | Hyni x |
| 1111 | 64Mx32 192-bit | Samsun g |




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.



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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

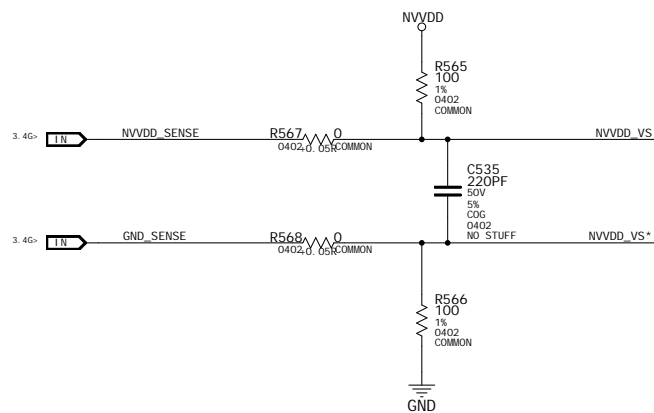
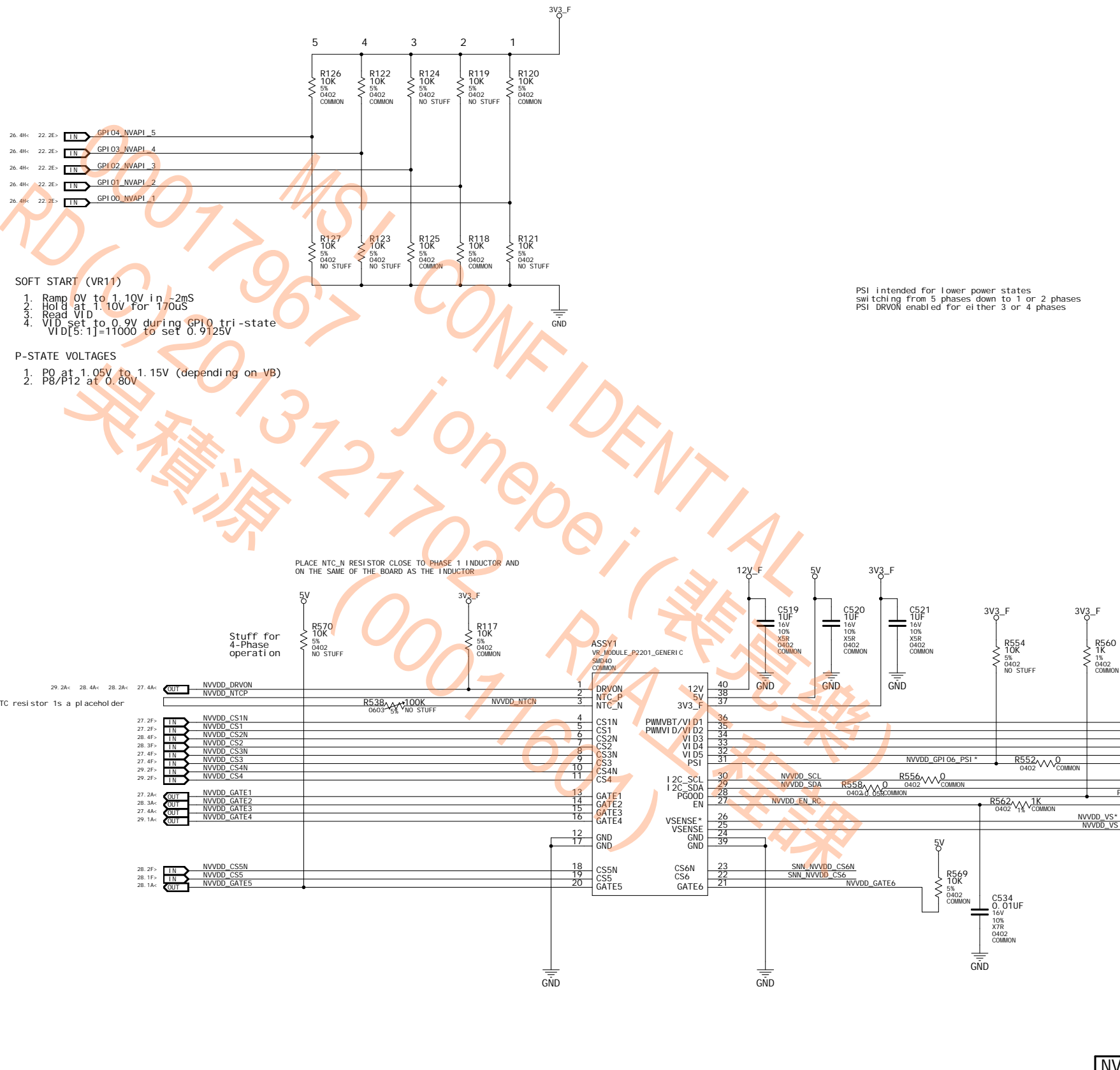
| | | | |
|----------------------------|--------------------|------|-------------|
| NVIDIA CORPORATION | | | |
| 2701 SAN TOMAS EXPRESSWAY | | | |
| SANTA CLARA, CA 95050, USA | | | |
| NV_PN | 600-12005-0000-QS1 | | |
| PCB REV | P2005-A01 | PAGE | 24 OF 33 |
| BOM REV | B | DATE | 26-MAR-2013 |

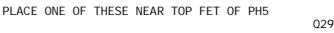



| | | | |
|----------------------------|--------------------|---|-------------|
| NVI DI A CORPORATI ON | |  | |
| 2701 SAN TOMAS EXPRESSWAY | | | |
| SANTA CLARA, CA 95050, USA | | | |
| NV_PN | 600-12005-0000-QS1 | | |
| PCB REV | P2005-A01 | PAGE | 25 OF 33 |
| BOM REV | B | DATE | 26-MAR-2013 |

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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

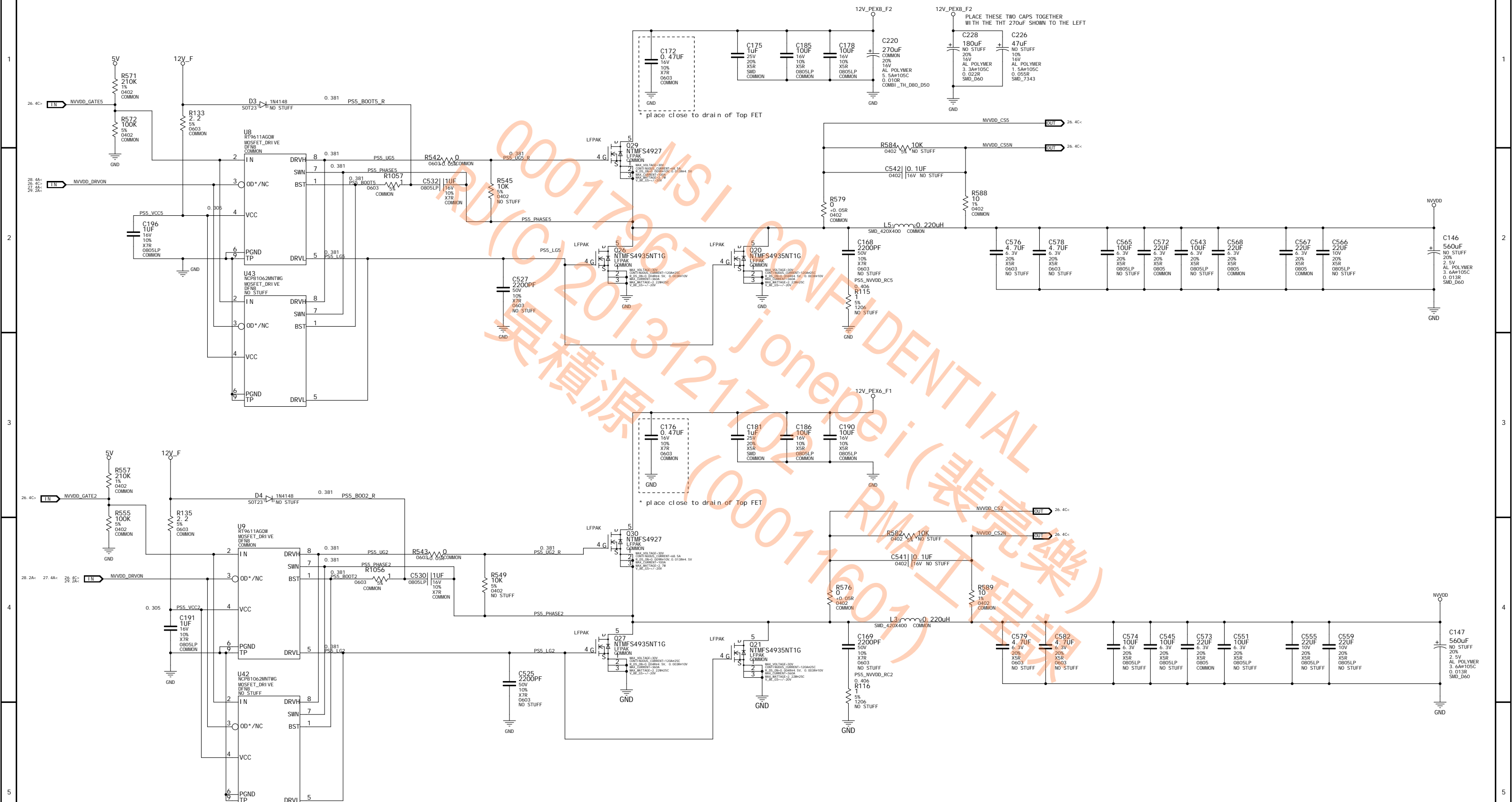
| VI D Table | | | | | |
|------------|--------|--------|--------|--------|----------|
| GPI 04 | GPI 03 | GPI 02 | GPI 01 | GPI 00 | VOUT |
| VI D_5 | VI D_4 | VI D_3 | VI D_2 | VI D_1 | |
| 0 | 0 | 0 | 0 | 0 | 1. 2125V |
| 0 | 0 | 0 | 0 | 1 | 1. 2000V |
| 0 | 0 | 0 | 1 | 0 | 1. 1875V |
| 0 | 0 | 0 | 1 | 1 | 1. 1750V |
| 0 | 0 | 1 | 0 | 0 | 1. 1625V |
| 0 | 0 | 1 | 0 | 1 | 1. 1500V |
| 0 | 0 | 1 | 1 | 0 | 1. 1375V |
| 0 | 0 | 1 | 1 | 1 | 1. 1250V |
| 0 | 1 | 0 | 0 | 0 | 1. 1125V |
| 0 | 1 | 0 | 0 | 1 | 1. 1000V |
| 0 | 1 | 0 | 1 | 0 | 1. 0875V |
| 0 | 1 | 0 | 1 | 1 | 1. 0750V |
| 0 | 1 | 1 | 0 | 0 | 1. 0625V |
| 0 | 1 | 1 | 0 | 1 | 1. 0500V |
| 0 | 1 | 1 | 1 | 0 | 1. 0375V |
| 0 | 1 | 1 | 1 | 1 | 1. 0250V |
| 1 | 0 | 0 | 0 | 0 | 1. 0125V |
| 1 | 0 | 0 | 0 | 1 | 1. 0000V |
| 1 | 0 | 0 | 1 | 0 | 0. 9875V |
| 1 | 0 | 0 | 1 | 1 | 0. 9750V |
| 1 | 0 | 1 | 0 | 0 | 0. 9625V |
| 1 | 0 | 1 | 0 | 1 | 0. 9500V |
| 1 | 0 | 1 | 1 | 0 | 0. 9375V |
| 1 | 0 | 1 | 1 | 1 | 0. 9250V |
| 1 | 1 | 0 | 0 | 0 | 0. 9125V |
| 1 | 1 | 0 | 0 | 1 | 0. 9000V |
| 1 | 1 | 0 | 1 | 0 | 0. 8875V |
| 1 | 1 | 0 | 1 | 1 | 0. 8750V |
| 1 | 1 | 1 | 0 | 0 | 0. 8625V |
| 1 | 1 | 1 | 0 | 1 | 0. 8500V |
| 1 | 1 | 1 | 1 | 0 | 0. 8375V |
| 1 | 1 | 1 | 1 | 1 | 0. 8250V |

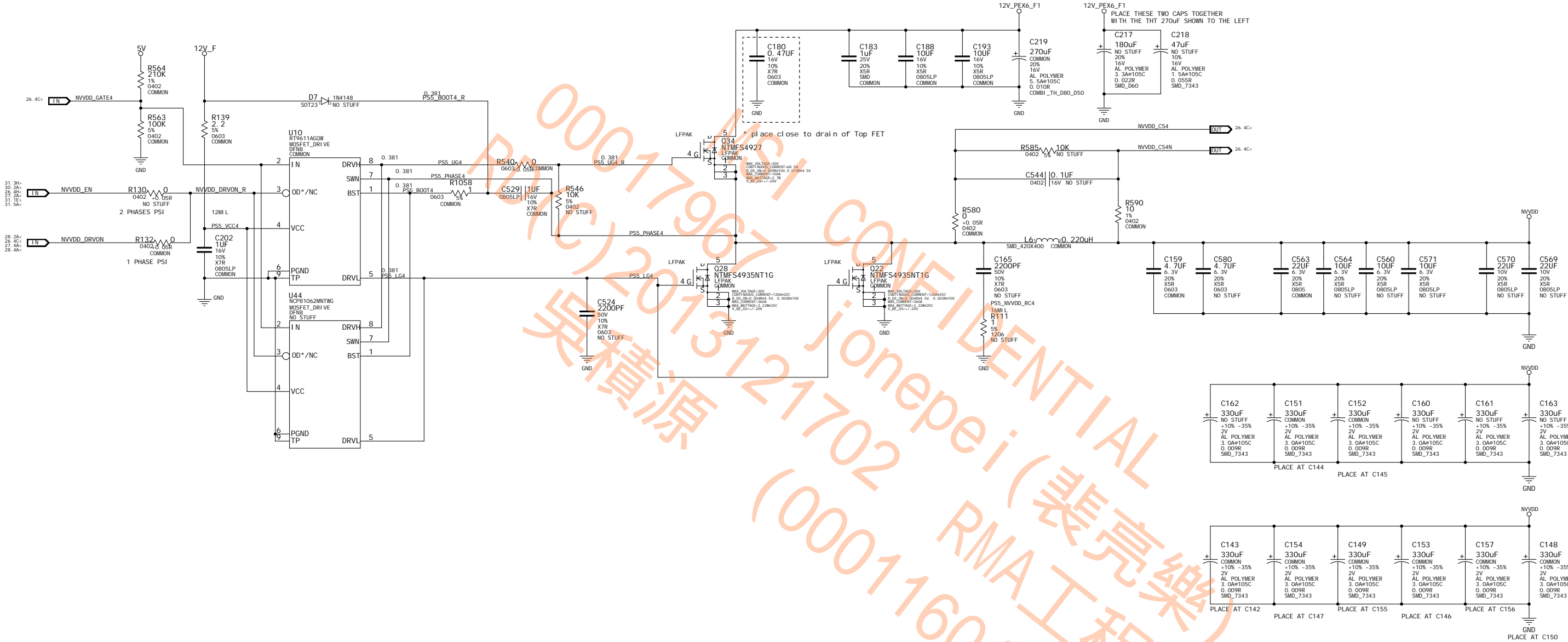




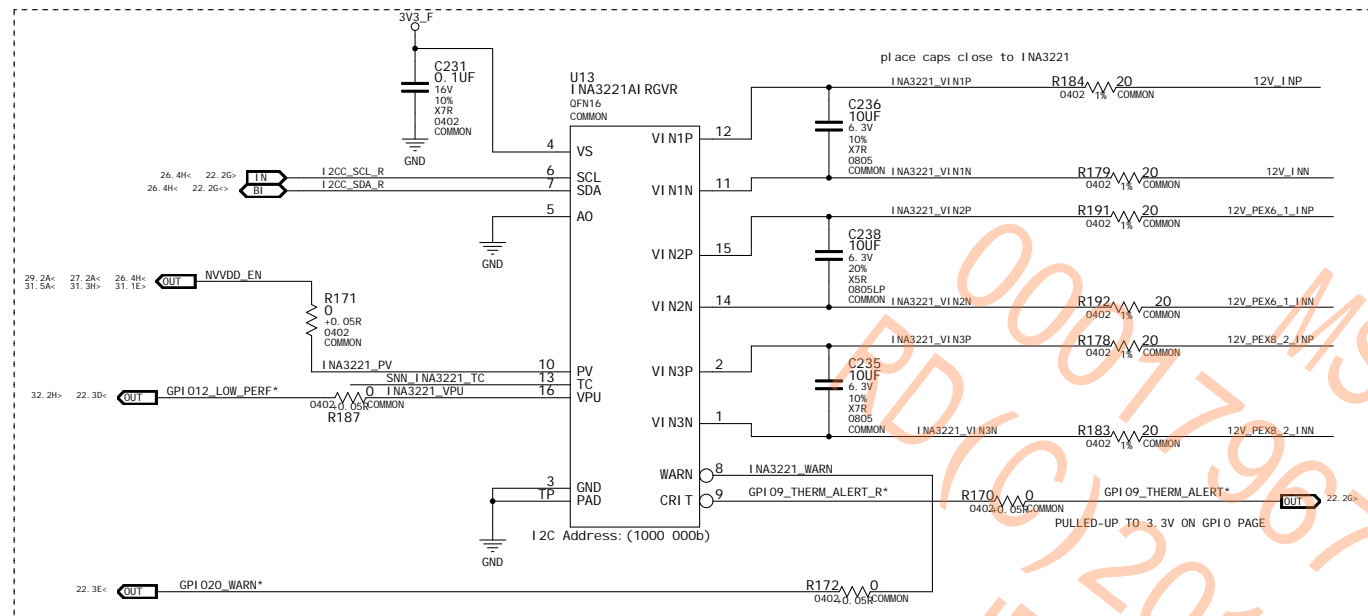
| | | | |
|--|-------------------------|---|--|
| NVI DI A CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA | |  | |
| NV_PN 600-12005-0000-QS1 | | | |
| PCB REV P2005-A01 | PAGE 27 OF 33 | | |
| BOM REV B | DATE 26-MAR-2013 | | |

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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

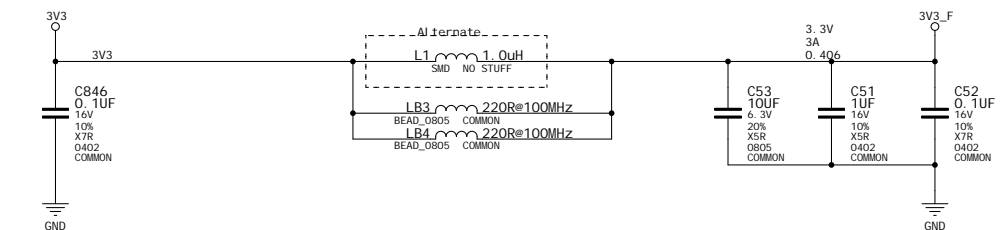




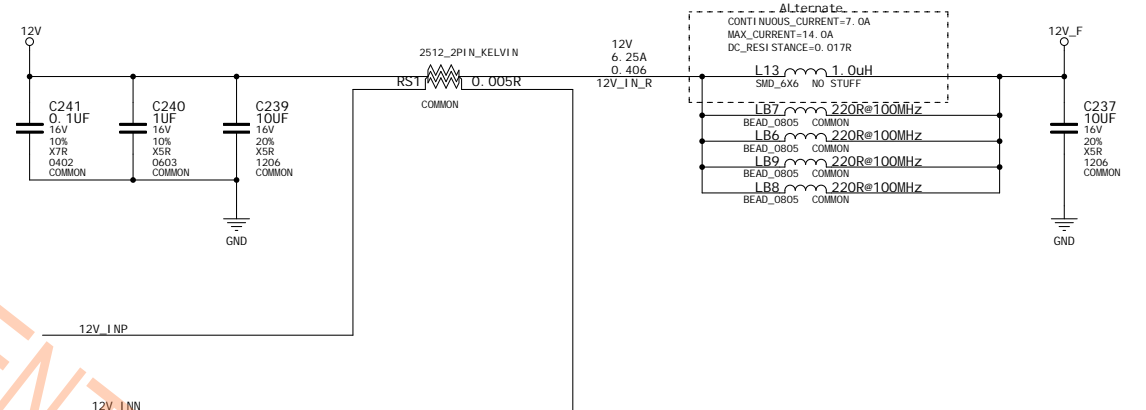
Page30: PS: Inputs, Filtering, and Monitoring



PEX 3V3 INPUT - 10W



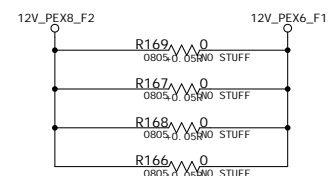
PEX_12V INPUT - 66W



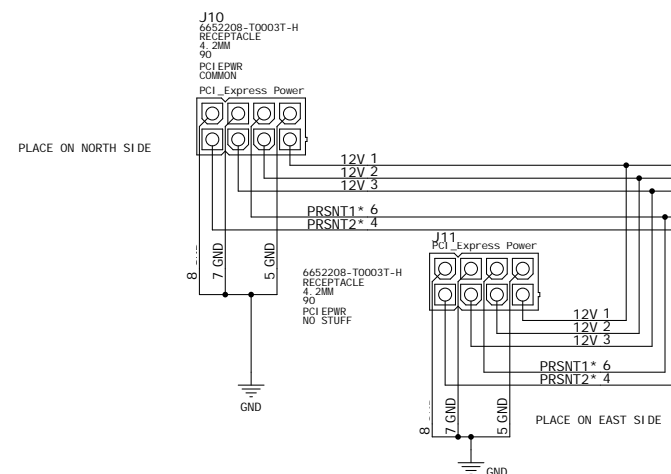
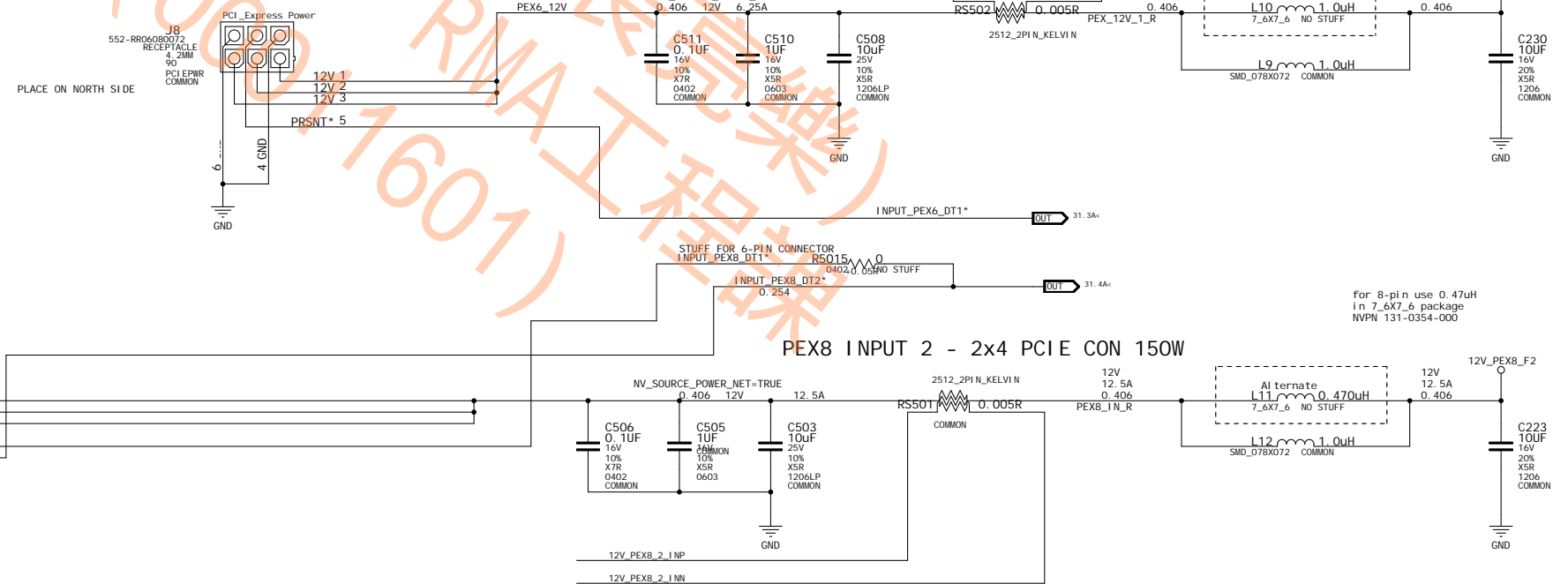
PEX6 INPUT 1 - 2x3 PCIe CON 75W




STUFF BOTH FOR QUADRO
PLACE NEAR U502 (INA3221)



STUFF ALL FOUR FOR QUADRO



| | | | |
|---|-----------|---|-------------|
| NVI DI A CORPORATI ON 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA | |  | |
| NV_PN 600-12005-0000-QS1 | | | |
| PCB REV | P2005-A01 | PAGE | 30 OF 33 |
| BOM REV | B | DATE | 26-MAR-2013 |

THERM OVERT SHUTDOWN LATCH

I FP_I OVDD (backdri ve preventi on)

PEX Input - NVVDD Power Sequence

PEX Input Present 1

PEX Input Present 2

POWER CONNECTOR HOT-UNPLUG DETECT

ALL NVIDIA DESIGN 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 NON INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA



NV_PN 600-12005-0000-QS1

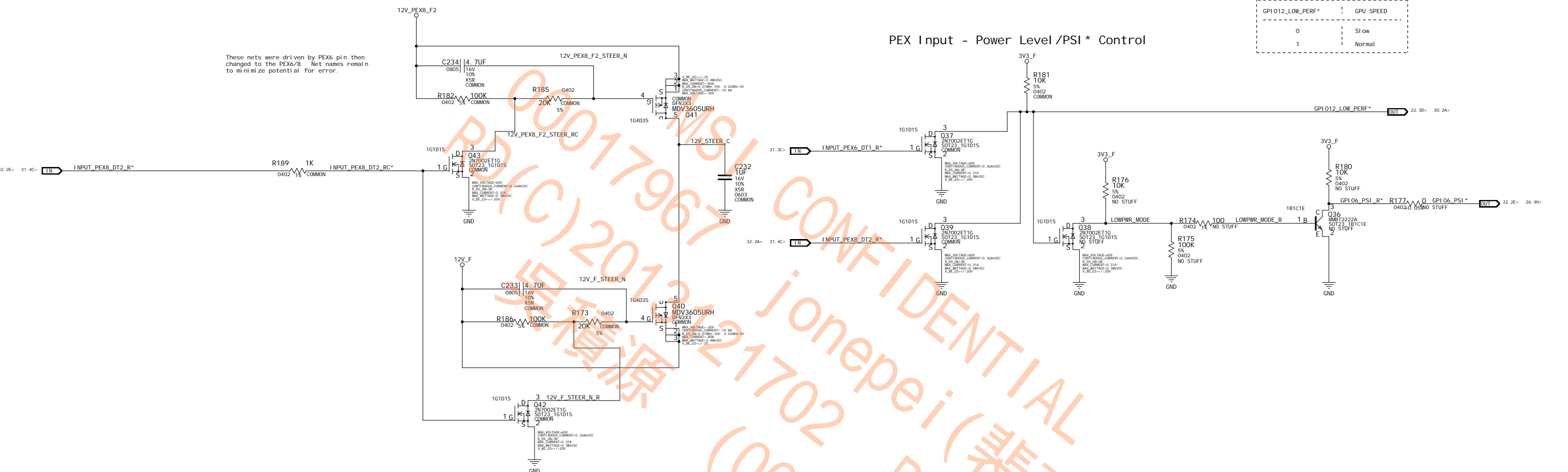
| | | | |
|---------|-----------|------|-------------|
| PCB REV | P2005-A01 | PAGE | 31 OF 33 |
| BOM REV | B | DATE | 26-MAR-2013 |

PEX Input - 12V Current Steering FETs

These nets were driven by PEX6 pin then changed to the PEX6/8. Net names remain to minimize potential for error.

PEX Input - Power Level /PSI * Control

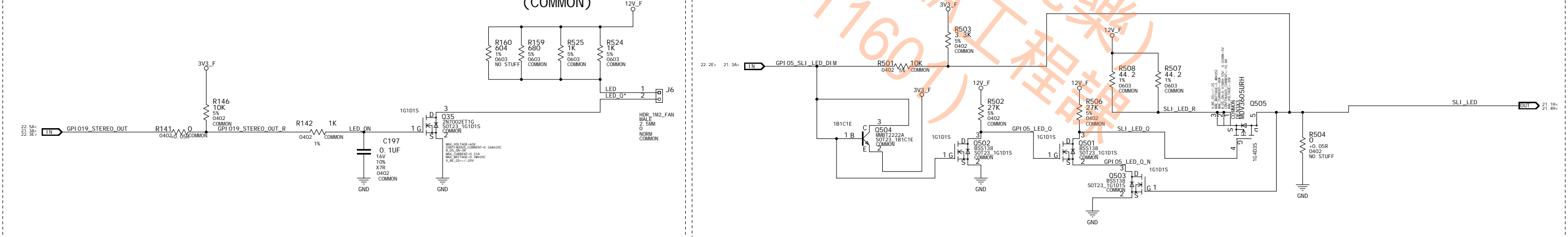
| | |
|------------------|-----------|
| GPI012_LOW_PERF* | GPU SPEED |
| 0 | Sl ow |
| 1 | Normal |



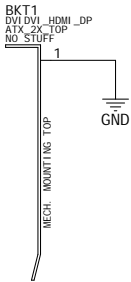
GeForce Logo LED

LED HEADER (COMMON)

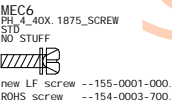
SLI LED (GEFORCE ONLY)



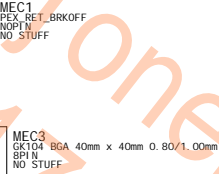
Brackets:



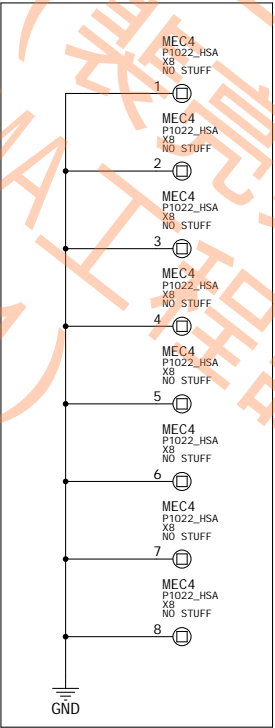
Bracket Screw



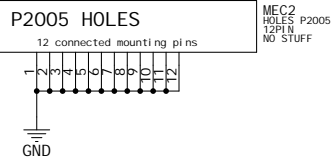
Hockey Stick



GPU Sti ffner



Mechani cal Hol es Symbol



NV I D I A CORPORATION

2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA



NV_PN 600-12005-0000-QS1

| | | | |
|---------|-----------|------|-------------|
| PCB REV | P2005-A01 | PAGE | 33 OF 33 |
| BOM REV | B | DATE | 26-MAR-2013 |

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 NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.