

PG161-A01

TU106 6GB GDDR6, 192b, X16  
DVI-D/DP + DP + HDMI

TABLE OF CONTENTS

| Page | Description                        |
|------|------------------------------------|
| 1    | Table of Contents                  |
| 2    | Block Diagram                      |
| 3    | PCI Express                        |
| 4    | MEMORY: GPU_FB_AB                  |
| 5    | MEMORY: FBA[31:0]                  |
| 6    | MEMORY: FBA[63:32]                 |
| 7    | MEMORY: FBB[31:0]                  |
| 8    | MEMORY: FBB[63:32]                 |
| 9    | MEMORY: GPU_FB_CD                  |
| 10   | MEMORY: FBC[31:0]                  |
| 11   | MEMORY: FBC[63:32]                 |
| 12   | MEMORY: FBD[31:0]                  |
| 13   | MEMORY: FBD[63:32]                 |
| 14   | GPU PWR & GND                      |
| 15   | GPU Decoupling                     |
| 16   | GPU Decoupling2                    |
| 17   | IO: IFPAB DVI-D-DL                 |
| 18   | IO: IFPA DP                        |
| 19   | IO: IFPB DP                        |
| 20   | IO: IFPE & IFPF USBC NC            |
| 21   | IO: IFPC HDMI                      |
| 22   | IO: IFPD DP                        |
| 23   | IO: NVHS Interface and Frame Lock  |
| 24   | MISC1: Thermal, JTAG, GPIO, STEREO |
| 25   | MISC2: ROM, XTAL, STRAPS           |

| Page | Description                          |
|------|--------------------------------------|
| 26   | PS: 1V8_AON                          |
| 27   | PS: 5V                               |
| 28   | PS: PEXVDD                           |
| 29   | PS: FBVDDQ                           |
| 30   | PS: FBVDDQ PH2                       |
| 31   | PS: NVVDD Controller                 |
| 32   | PS: NVVDD Phase 6,4                  |
| 33   | PS: NVVDD Phase 3,5                  |
| 34   | PS: NVVDD Phase 2,1                  |
| 35   | PS: Input, Filtering, and Monitoring |
| 36   | PS: STEERING, UPB & HOT-UNPLUG       |
| 37   | SEQ: 5V, 1V8, NV3V3 ENABLE           |
| 38   | SEQ: NV, PEX, FB ENABLE              |
| 39   | SEQ: MISC                            |
| 40   | FAN                                  |
| 41   | PS: Pre-filter                       |
| 42   | MECH                                 |

| Page | Description |
|------|-------------|
|------|-------------|

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.

|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY DESCRIPTION> |
| PAGE DETAIL | Table of Contents      |

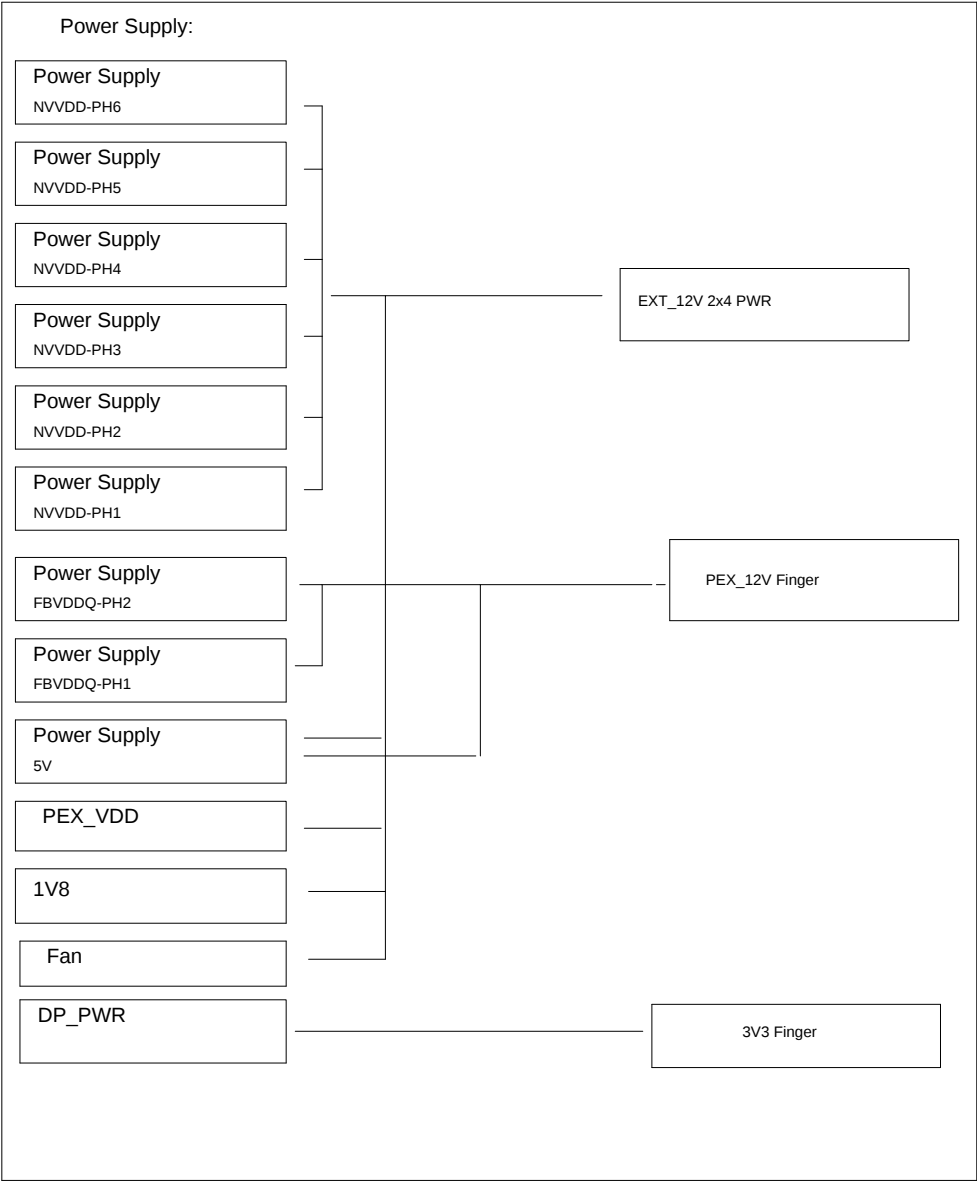
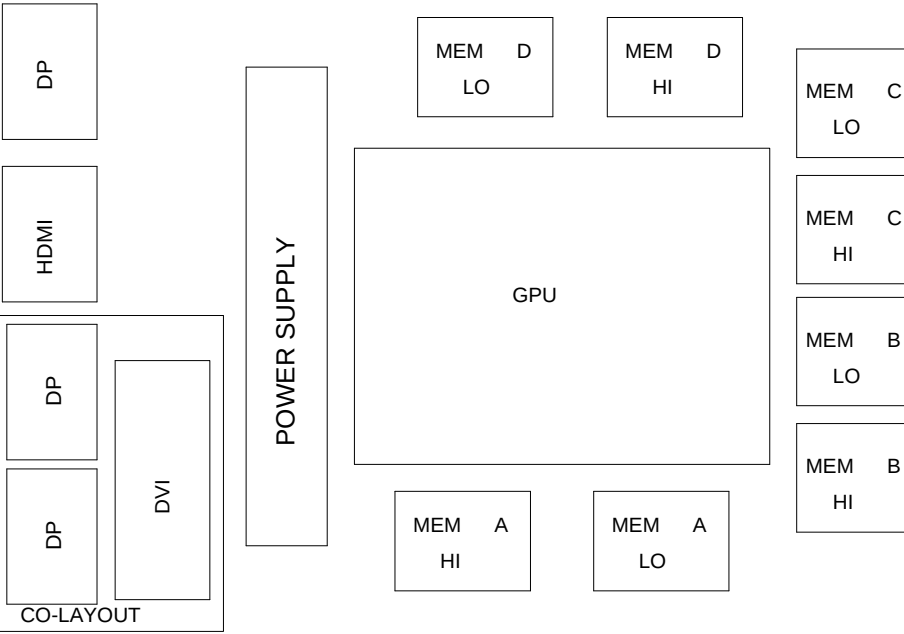
NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95050, USA



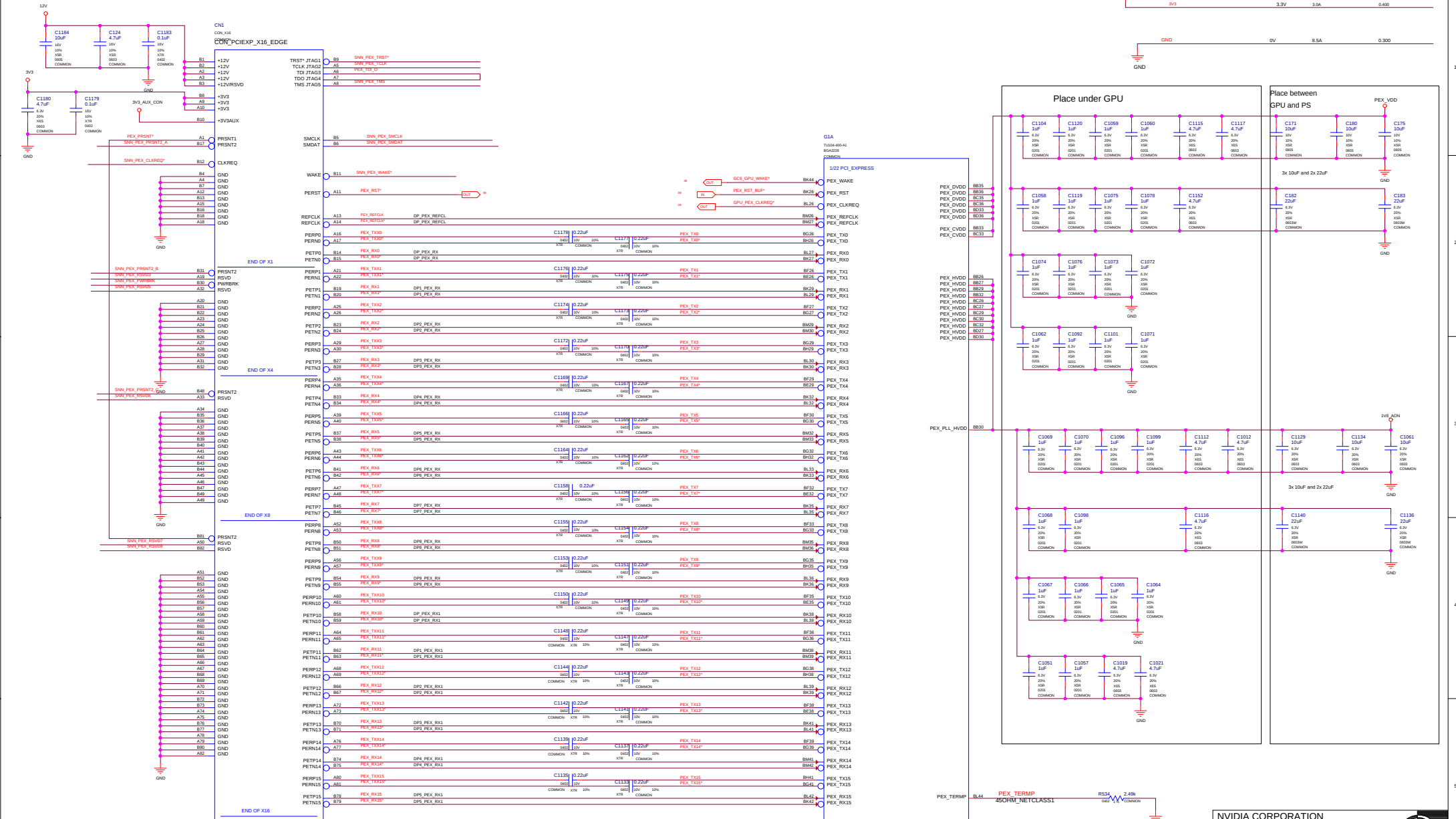
|         |                    |      |           |
|---------|--------------------|------|-----------|
| NV_PN   | 600-1G161-BASE-100 |      |           |
| PCB REV | PG161-A01          | PAGE | 1 OF 42   |
| BCM REV | B                  | DATE | 19NOV2018 |



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.

|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY DESCRIPTION> |
| PAGE DETAIL | Block Diagram          |

|                            |                    |      |             |
|----------------------------|--------------------|------|-------------|
| NVIDIA CORPORATION         |                    |      |             |
| 2701 SAN TOMAS EXPRESSWAY  |                    |      |             |
| SANTA CLARA, CA 95050, USA |                    |      |             |
| NV_PN                      | 600-1G161-BASE-100 | PAGE | 2 OF 42     |
| PCB REV                    | PG161-A01          | DATE | 19-NOV-2018 |
| BOM REV                    | B                  |      |             |

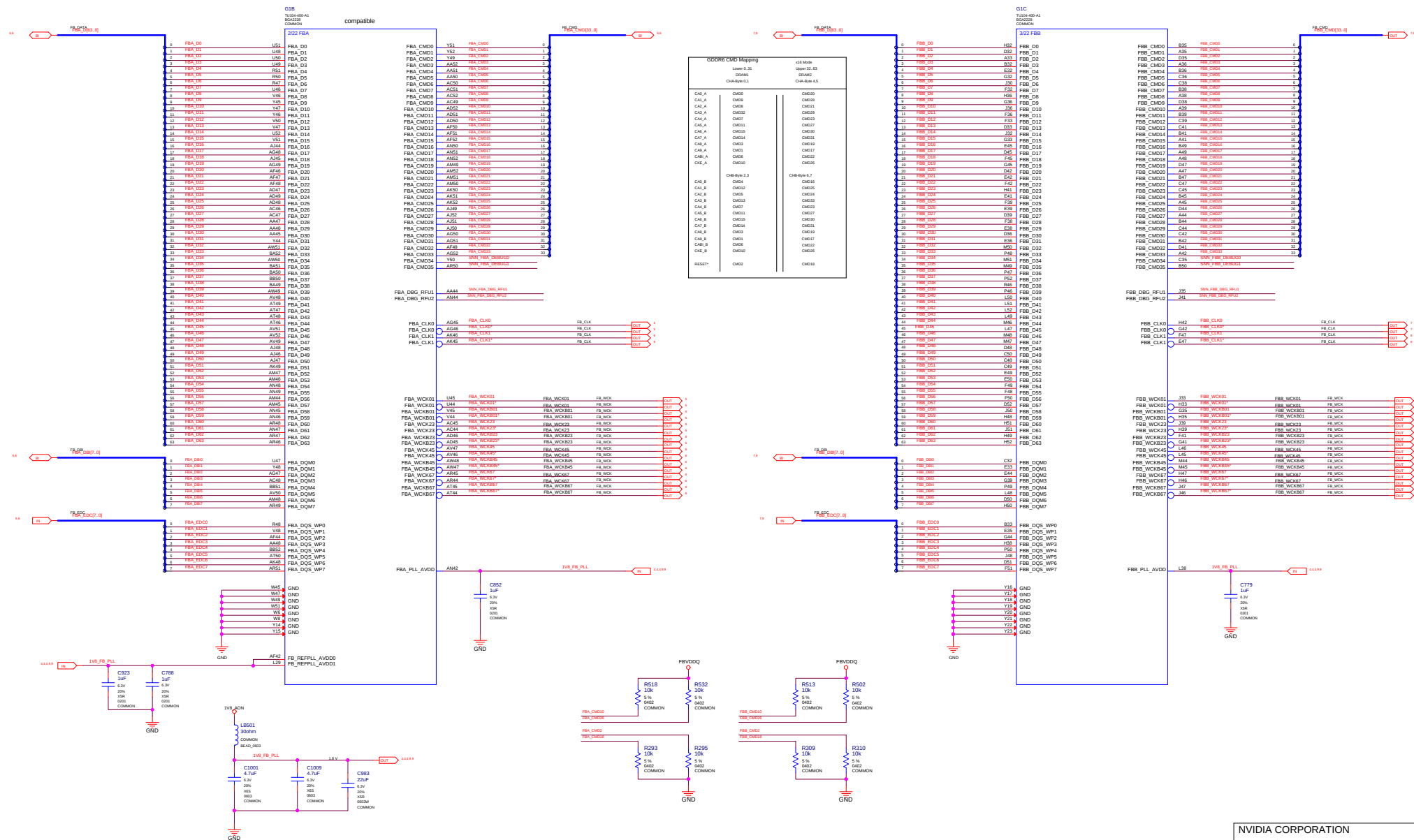


|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION> |
| PAGE DETAIL | PCI Express            |

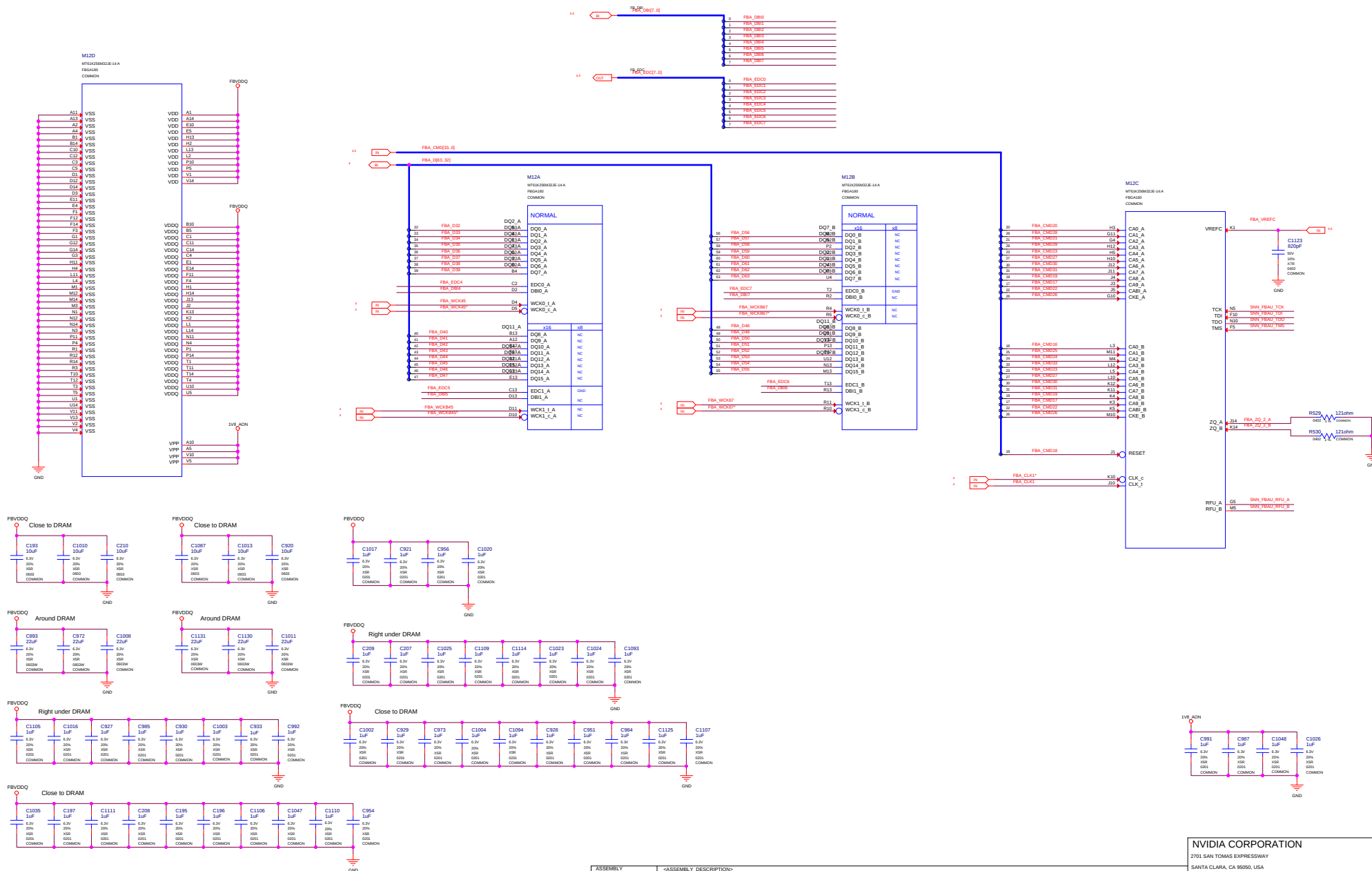
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED AS IS. THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS 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 NONINFRINGEMENT, OF 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                      |  | 600-1G161-BASE-100 |                                                                                       |             |
| PCB REV                    |  | PG161-A01          | PAGE                                                                                  | 3 OF 42     |
| BOM REV                    |  | B                  | DATE                                                                                  | 13-NOV-2018 |

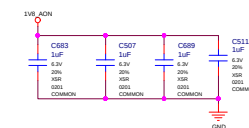
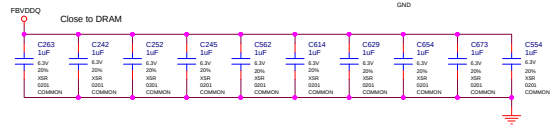
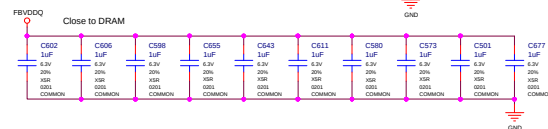
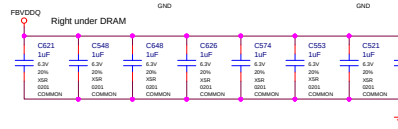
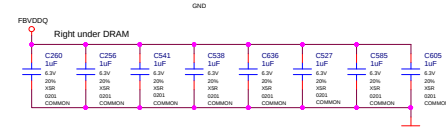
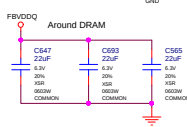
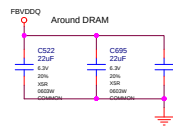
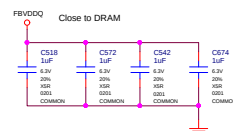
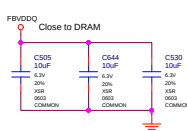
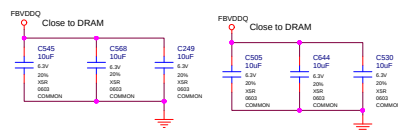
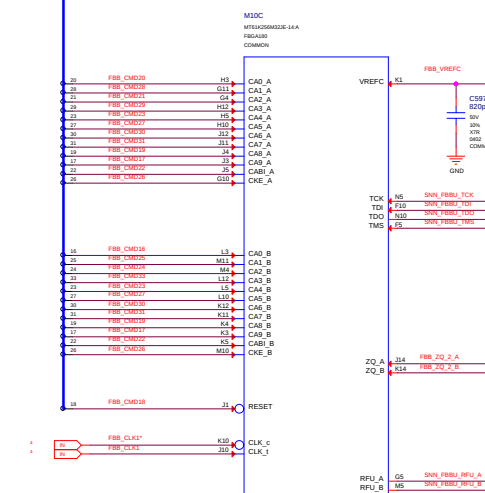
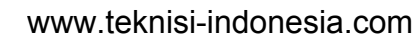
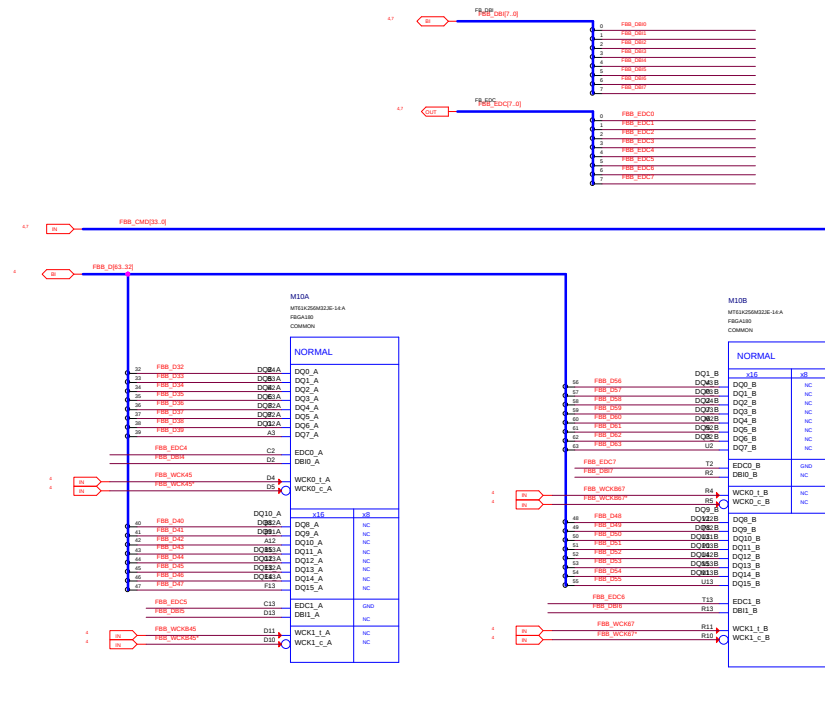
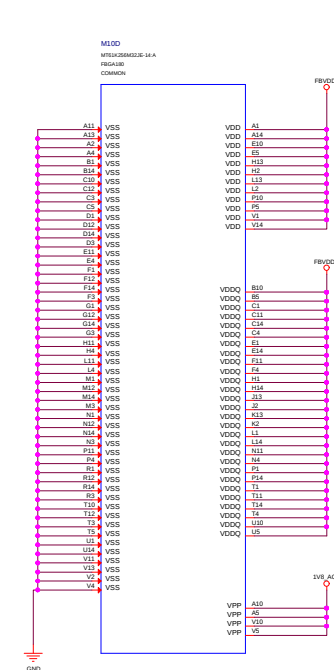


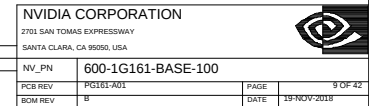










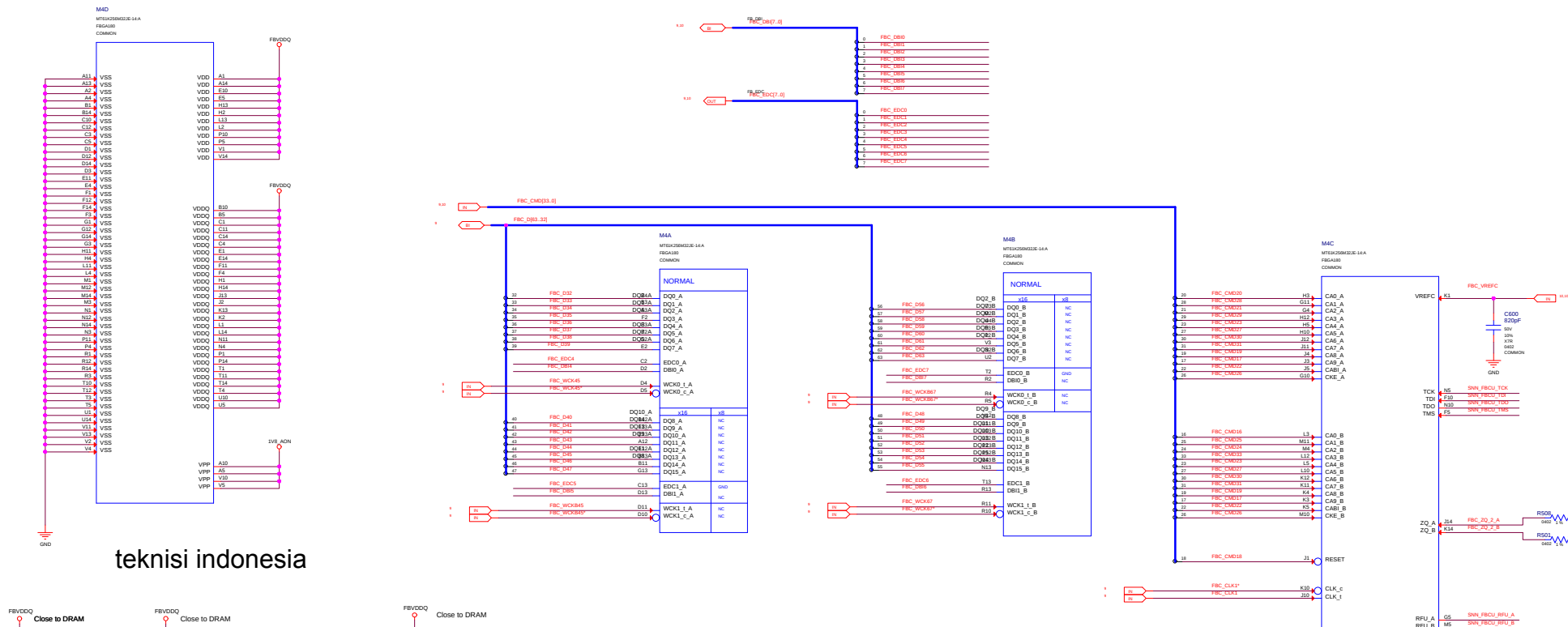




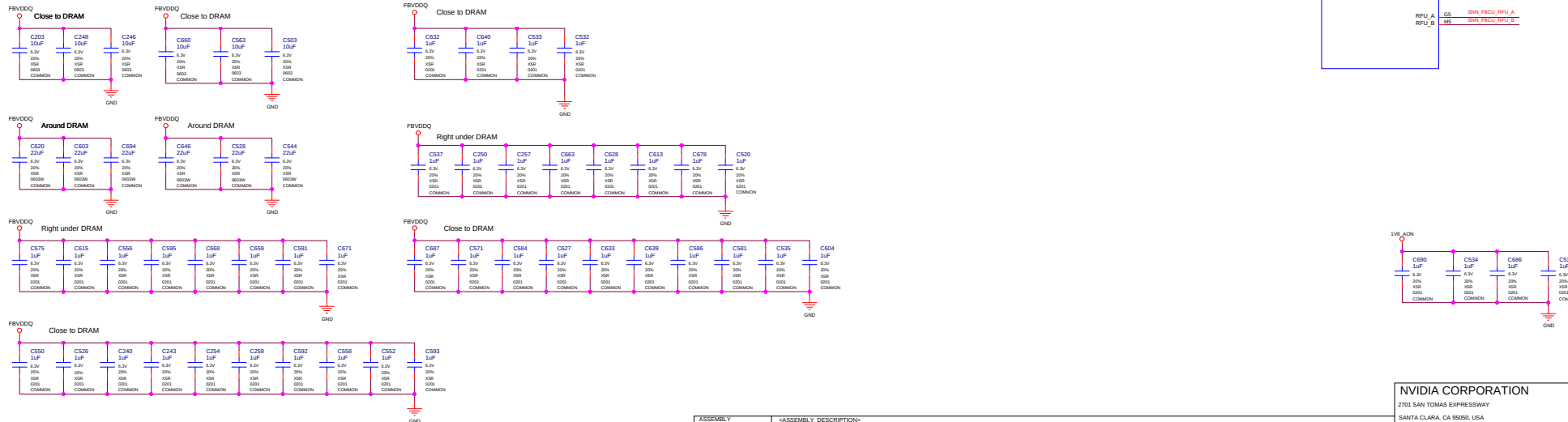
2701 SAN TOMAS EXPRESSWAY  
SANTA CLARA, CA 95050, USA

|         |           |
|---------|-----------|
| PCB REV | PG161-A01 |
| BOM REV | B         |

---



teknisi indonesia



ASSEMBLY  
PAGE DETAIL

ASSEMBLY DESCRIPTION  
MEMORY: FBC[63..32]

NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY  
SANTA CLARA, CA 95050, USA

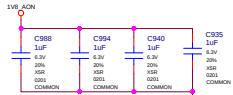


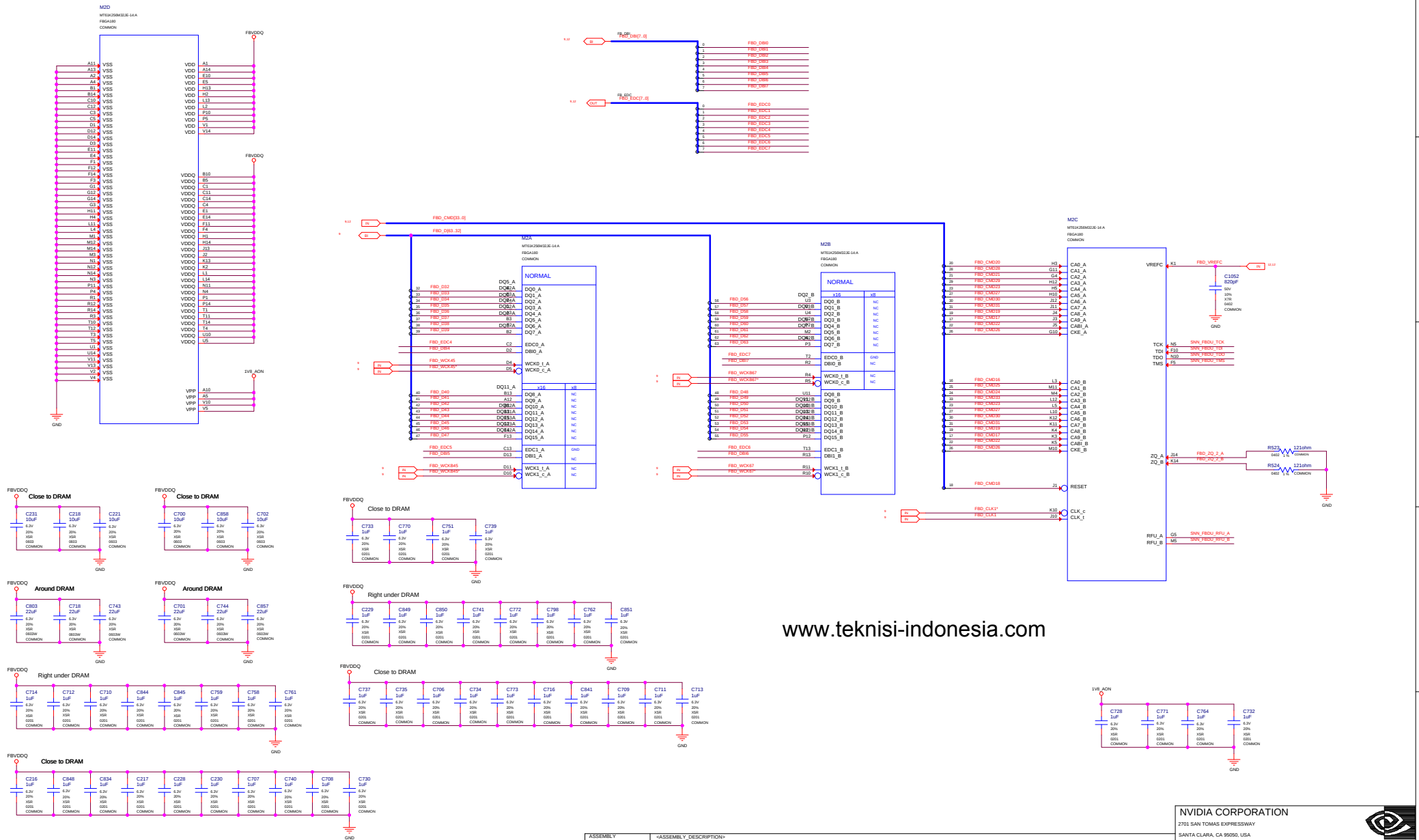
NV\_PN 600-1G161-BASE-100

PCB REV PG161-AD1  
BCM REV B

PAGE 11 OF 42  
DATE 19-NOV-2018

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.





www.teknisi-indonesia.com

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.

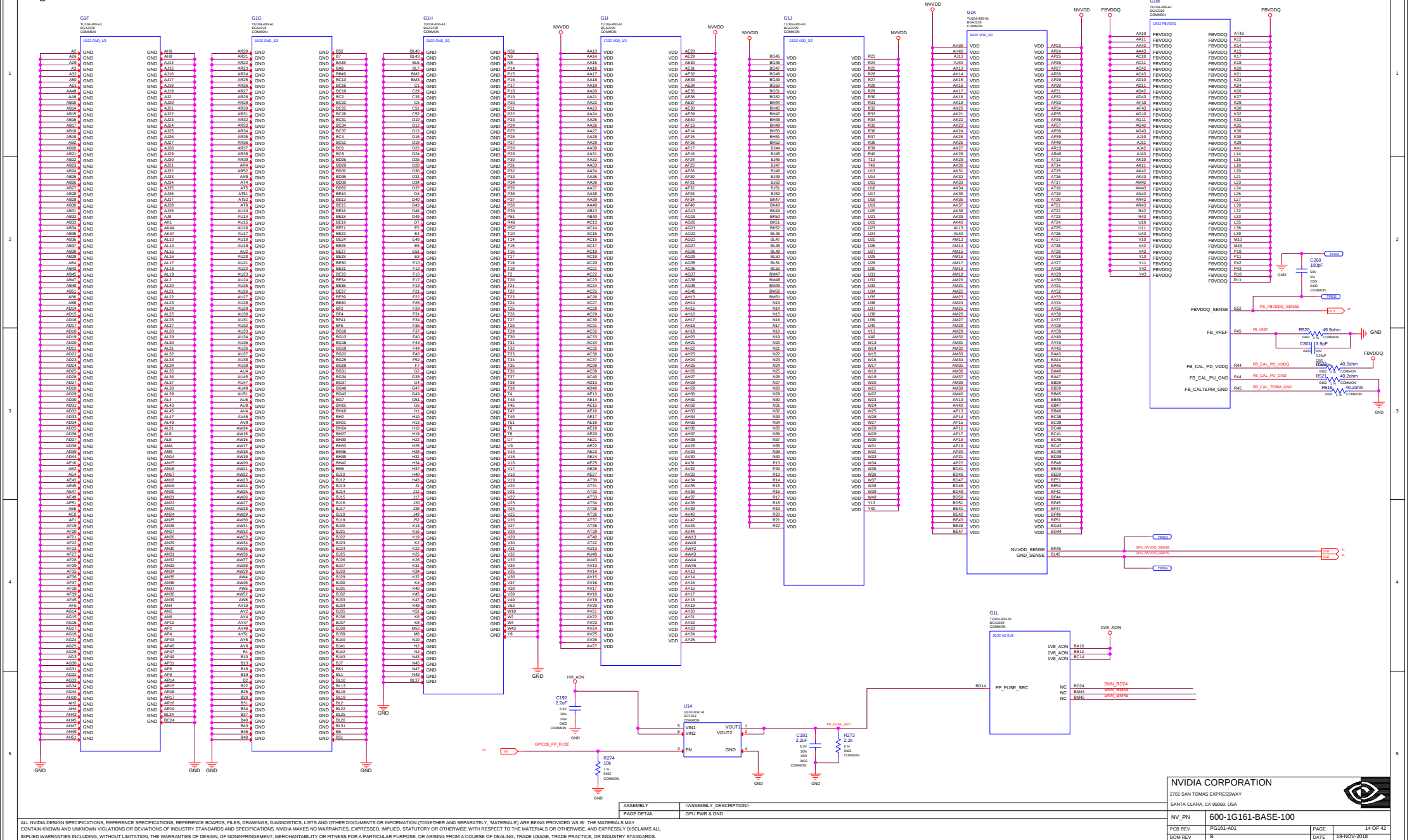
|             |                      |
|-------------|----------------------|
| ASSEMBLY    | ASSEMBLY DESCRIPTION |
| PAGE DETAIL | MEMORY: FBD(63..32)  |

NVIDIA CORPORATION

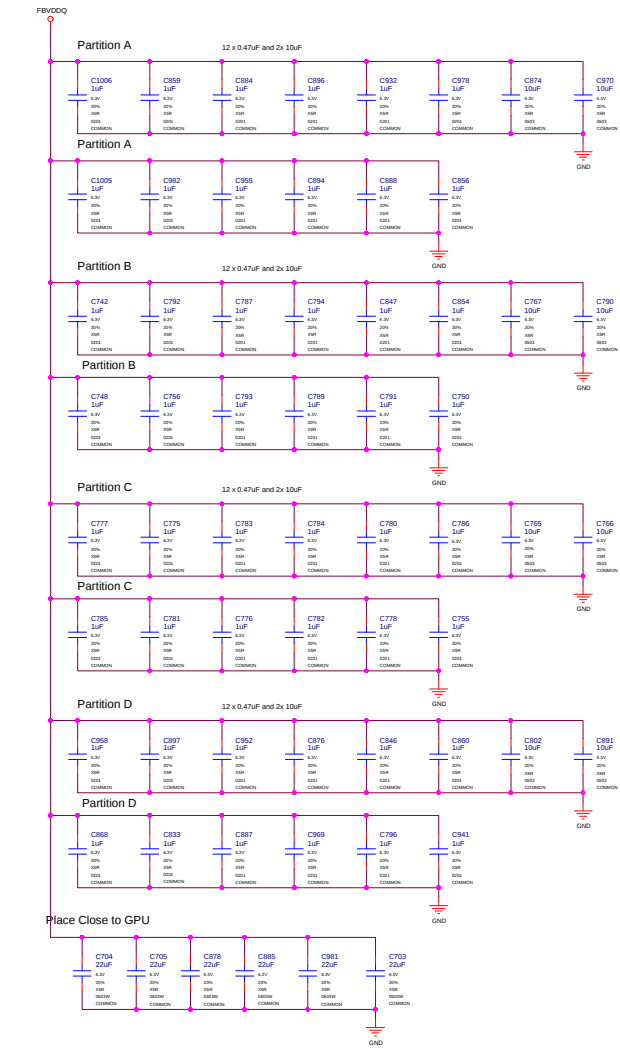
2701 SAN TOMAS EXPRESSWAY  
SANTA CLARA, CA 95050, USA



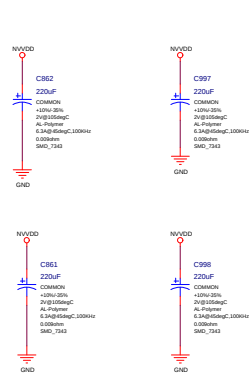
|         |                    |
|---------|--------------------|
| NV_PN   | 600-1G161-BASE-100 |
| PCB REV | PG161-A01          |
| BCM REV | B                  |
| PAGE    | 13 OF 42           |
| DATE    | 19-NOV-2018        |



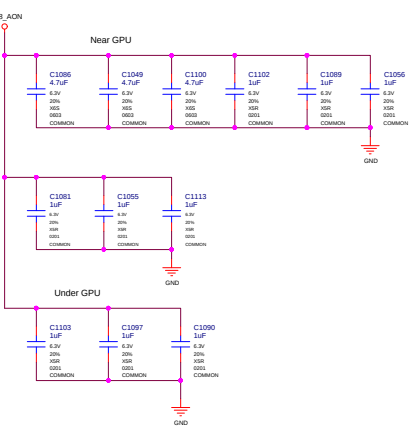
FBVDDQ



NVVD



1V8\_AON

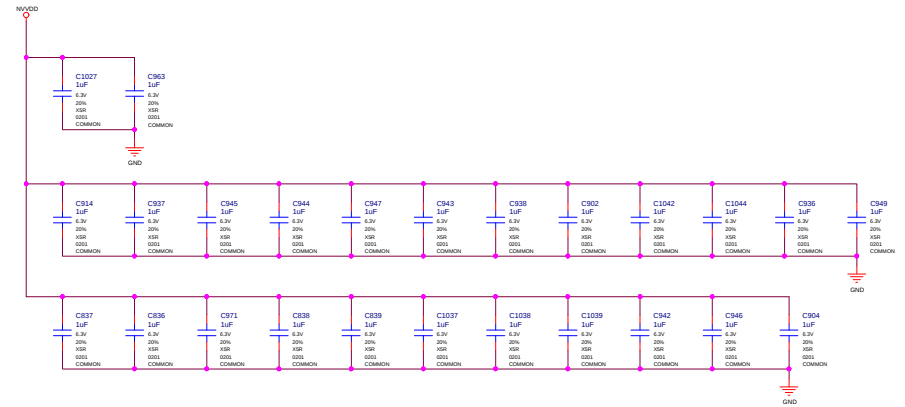
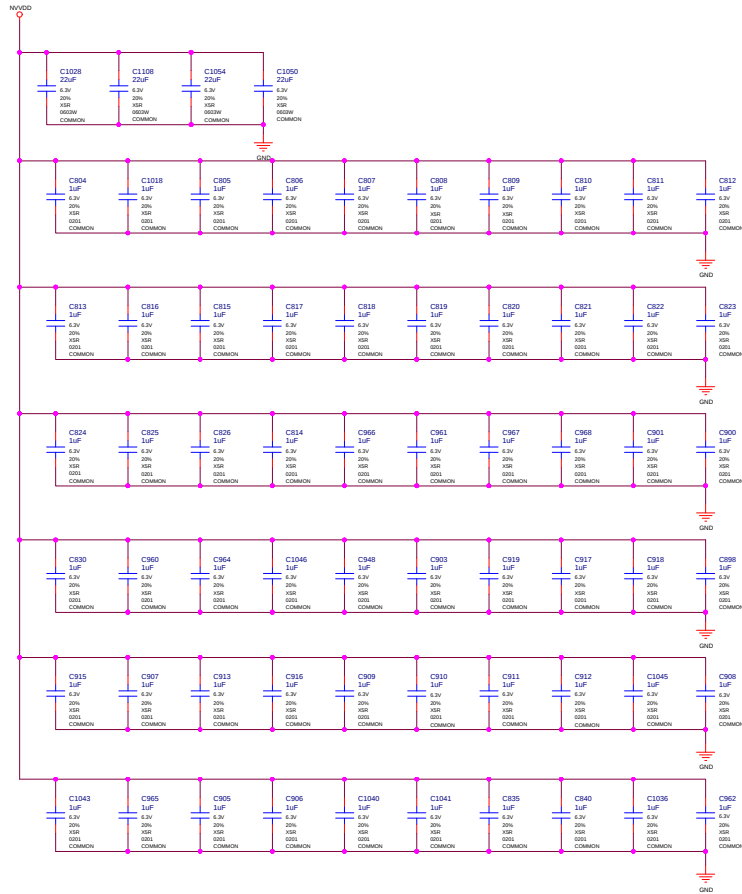


ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS 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.

| ASSEMBLY    | <ASSEMBLY DESCRIPTION> |
|-------------|------------------------|
| PAGE DETAIL | GPU Decoupling         |

|                            |                    |      |             |
|----------------------------|--------------------|------|-------------|
| NVIDIA CORPORATION         |                    |      |             |
| 2701 SAN TOMAS EXPRESSWAY  |                    |      |             |
| SANTA CLARA, CA 95050, USA |                    |      |             |
| NV_PN                      | 600-1G161-BASE-100 |      |             |
| PCB REV                    | PG161-A01          | PAGE | 15 OF 42    |
| BCM REV                    | B                  | DATE | 19-NOV-2018 |

## NVVDD



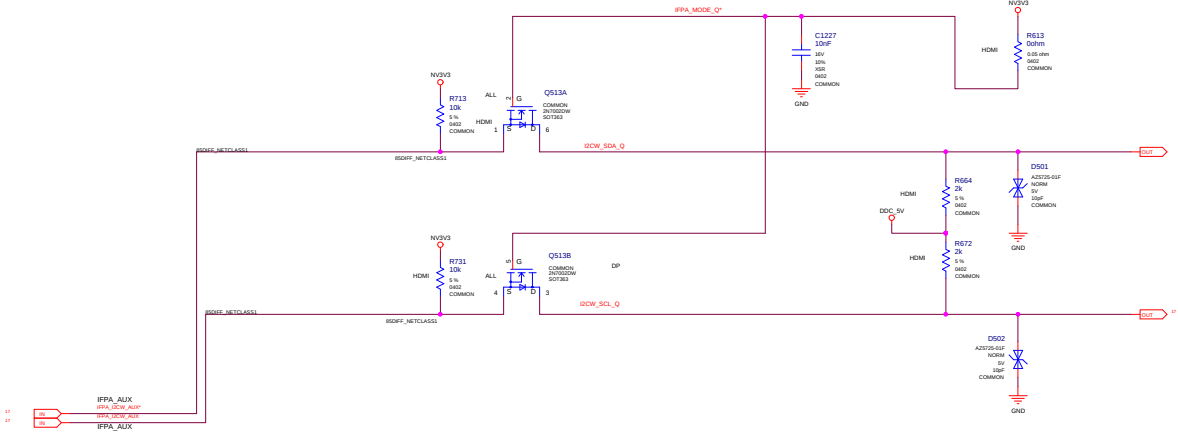
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS 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.

|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION> |
| PAGE DETAIL | GPU Decoupling2        |

|                                                                                      |                  |                           |                                                                                       |
|--------------------------------------------------------------------------------------|------------------|---------------------------|---------------------------------------------------------------------------------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |                  |                           |  |
| <b>NV_PN</b>                                                                         |                  | <b>600-1G161-BASE-100</b> |                                                                                       |
| <b>PCB REV</b>                                                                       | <b>PG161-A01</b> | <b>PAGE</b>               | <b>16 OF 42</b>                                                                       |
| <b>BOM REV</b>                                                                       | <b>B</b>         | <b>DATE</b>               | <b>19-NOV-2018</b>                                                                    |







# IFPA DP CO-LAYOUT WITH IFPAB DVI-D-DL

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

|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION> |
| PAGE DETAIL | 10 IFPA DP             |

|                            |                    |      |             |
|----------------------------|--------------------|------|-------------|
| NVIDIA CORPORATION         |                    |      |             |
| 2701 SAN TOMAS EXPRESSWAY  |                    |      |             |
| SANTA CLARA, CA 95050, USA |                    |      |             |
| NV_PN                      | 600-1G161-BASE-100 |      |             |
| PCB REV                    | PG161-A01          | PAGE | 18 OF 42    |
| BCM REV                    | B                  | DATE | 19-NOV-2018 |

# IFPB DP CO-LAYOUT WITH IFPAB DVI-D-DL

www.teknisi-indonesia.com

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.

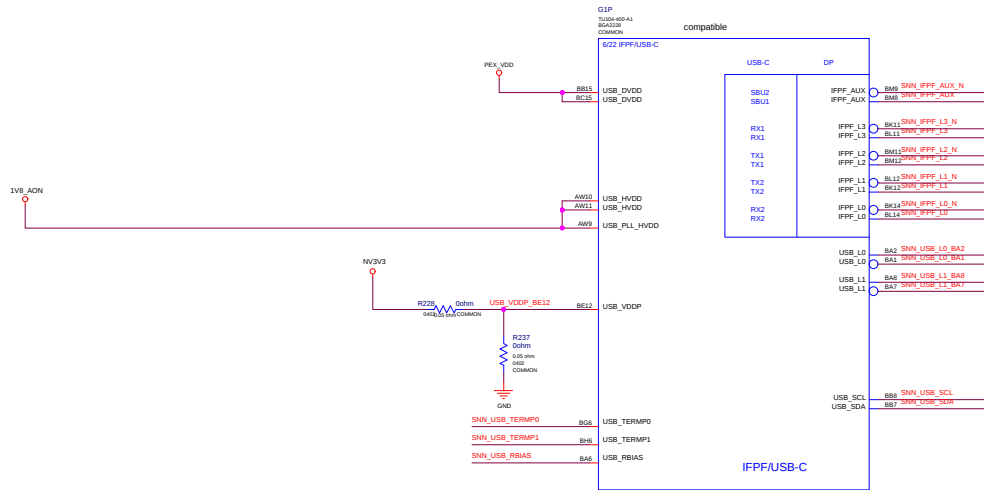
NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

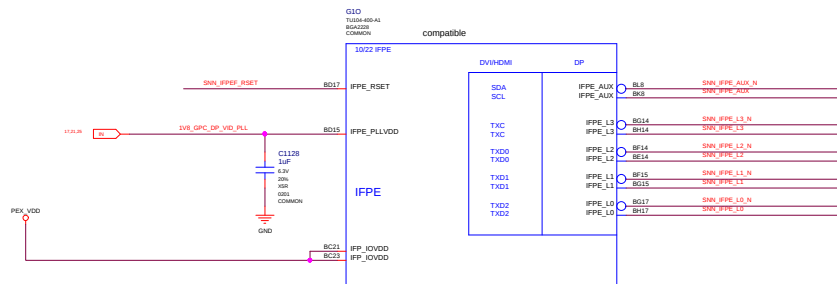
SANTA CLARA, CA 95050, USA



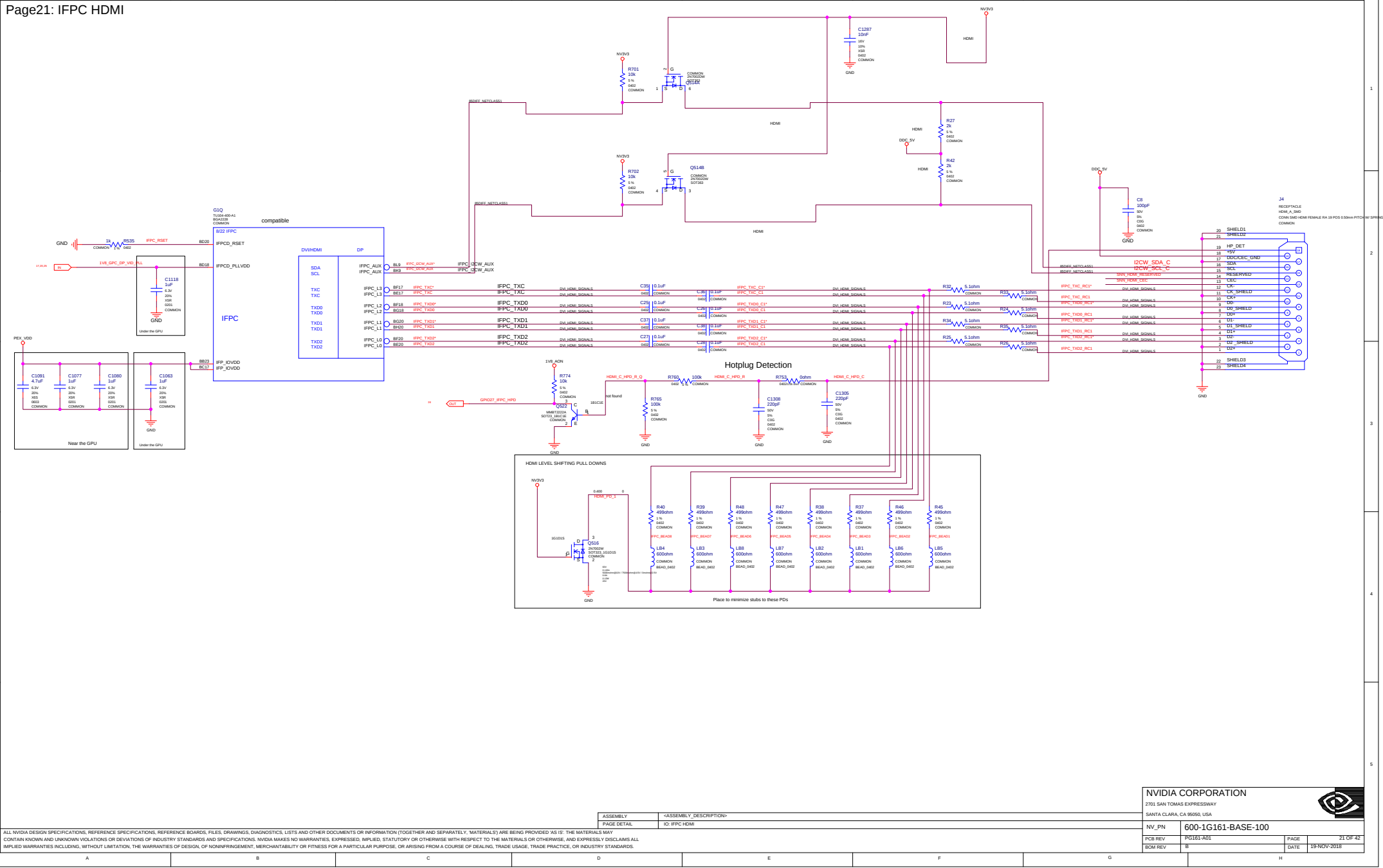
|         |                    |      |             |
|---------|--------------------|------|-------------|
| NV_PN   | 600-1G161-BASE-100 |      |             |
| PCB REV | PG161-A01          | PAGE | 19 OF 42    |
| BCM REV | B                  | DATE | 19-NOV-2018 |



IFPF NC



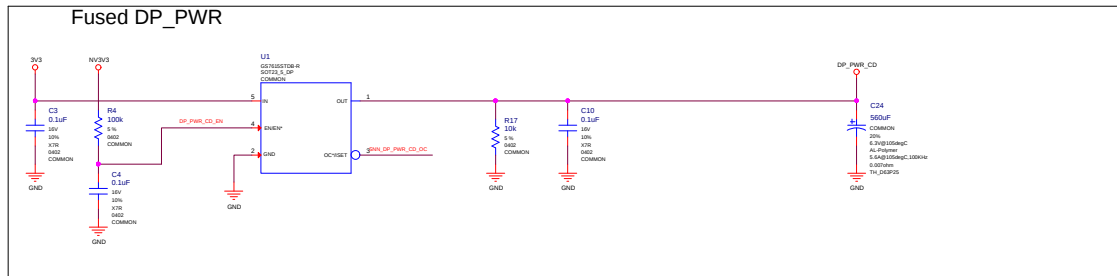
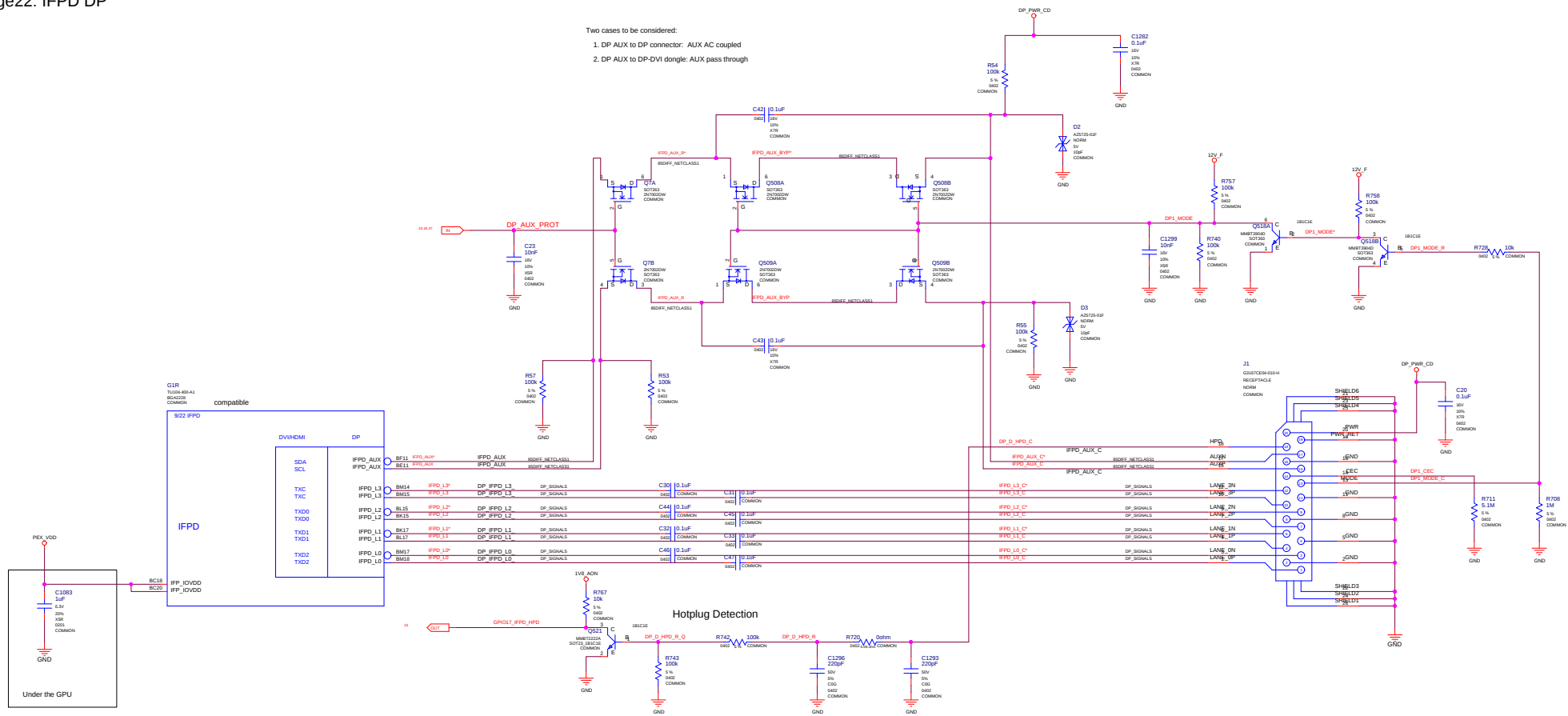
IFPE NC



ALL NVIDIA DESIGN 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 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.

| ASSEMBLY    | ASSEMBLY DESCRIPTION |
|-------------|----------------------|
| PAGE DETAIL | 10 IFPC HDMI         |

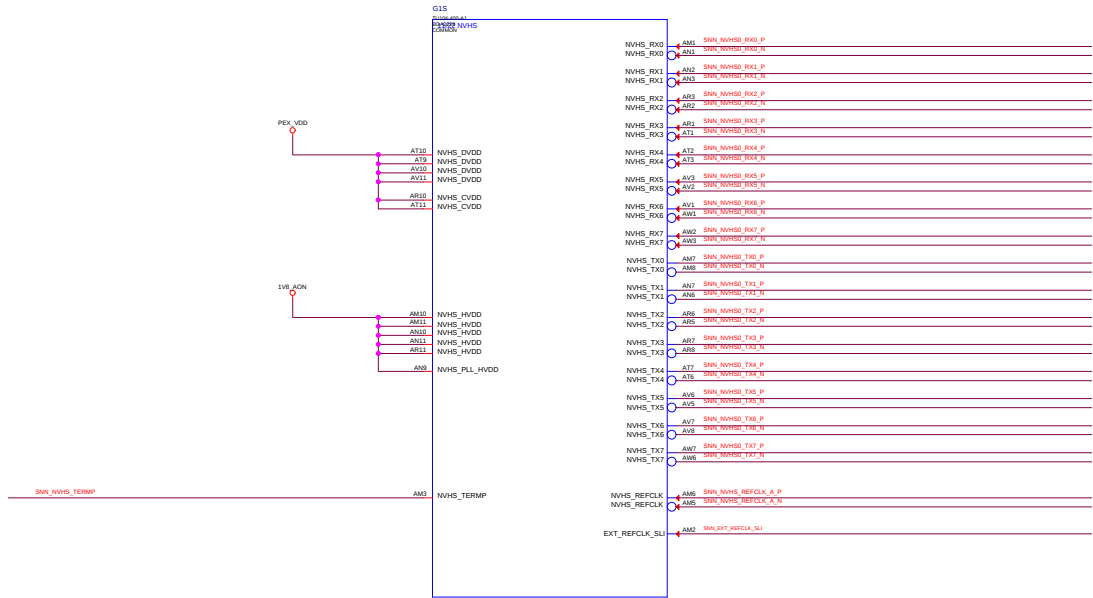
|                                                                                       |                    |      |             |
|---------------------------------------------------------------------------------------|--------------------|------|-------------|
| NVIDIA CORPORATION                                                                    |                    |      |             |
| 2701 SAN TOMAS EXPRESSWAY                                                             |                    |      |             |
| SANTA CLARA, CA 95050, USA                                                            |                    |      |             |
|  |                    |      |             |
| NV_PN                                                                                 | 600-1G161-BASE-100 | PAGE | 21 OF 42    |
| PCB REV                                                                               | PG161-A01          | DATE | 19 NOV 2018 |
| BOM REV                                                                               | B                  |      |             |



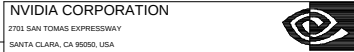
|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY DESCRIPTION> |
| PAGE DETAIL | ID: IFPD DP            |

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.

|                                                                                      |                    |                                                                                       |             |
|--------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------|-------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |                    |  |             |
| NV_PN                                                                                | 600-1G161-BASE-100 |                                                                                       |             |
| PCB REV                                                                              | PG161-A01          | PAGE                                                                                  | 22 OF 42    |
| BOM REV                                                                              | B                  | DATE                                                                                  | 19-NOV-2018 |



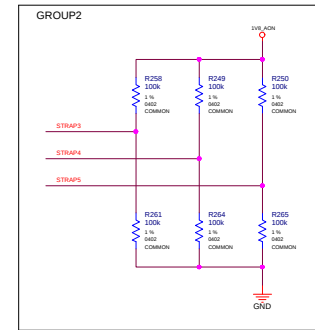
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS.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

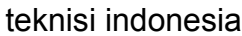


|         |           |                    |             |
|---------|-----------|--------------------|-------------|
| NV_PN   |           | 600-1G161-BASE-100 |             |
| PCB REV | PG161-A01 | PAGE               | 23 OF 42    |
| ROM REV | B         | DATE               | 19-NOV-2018 |



|             |                         |
|-------------|-------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION>  |
| PAGE DETAIL | MISC2: ROM, XTAL,STRAPS |

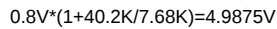
34



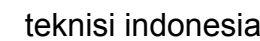
$$0.6V \cdot (1 + 10K/4.99K) = 1.802V$$

|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION> |
| PAGE DETAIL | PS: 1V8_AON            |

|                                                                                      |                    |      |                                                                                       |
|--------------------------------------------------------------------------------------|--------------------|------|---------------------------------------------------------------------------------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |                    |      |  |
| NV_PN                                                                                | 600-1G161-BASE-100 |      |                                                                                       |
| PCB REV                                                                              | PG161-A01          | PAGE | 26 OF 42                                                                              |
| BOM REV                                                                              | B                  | DATE | 19-NOV-2018                                                                           |

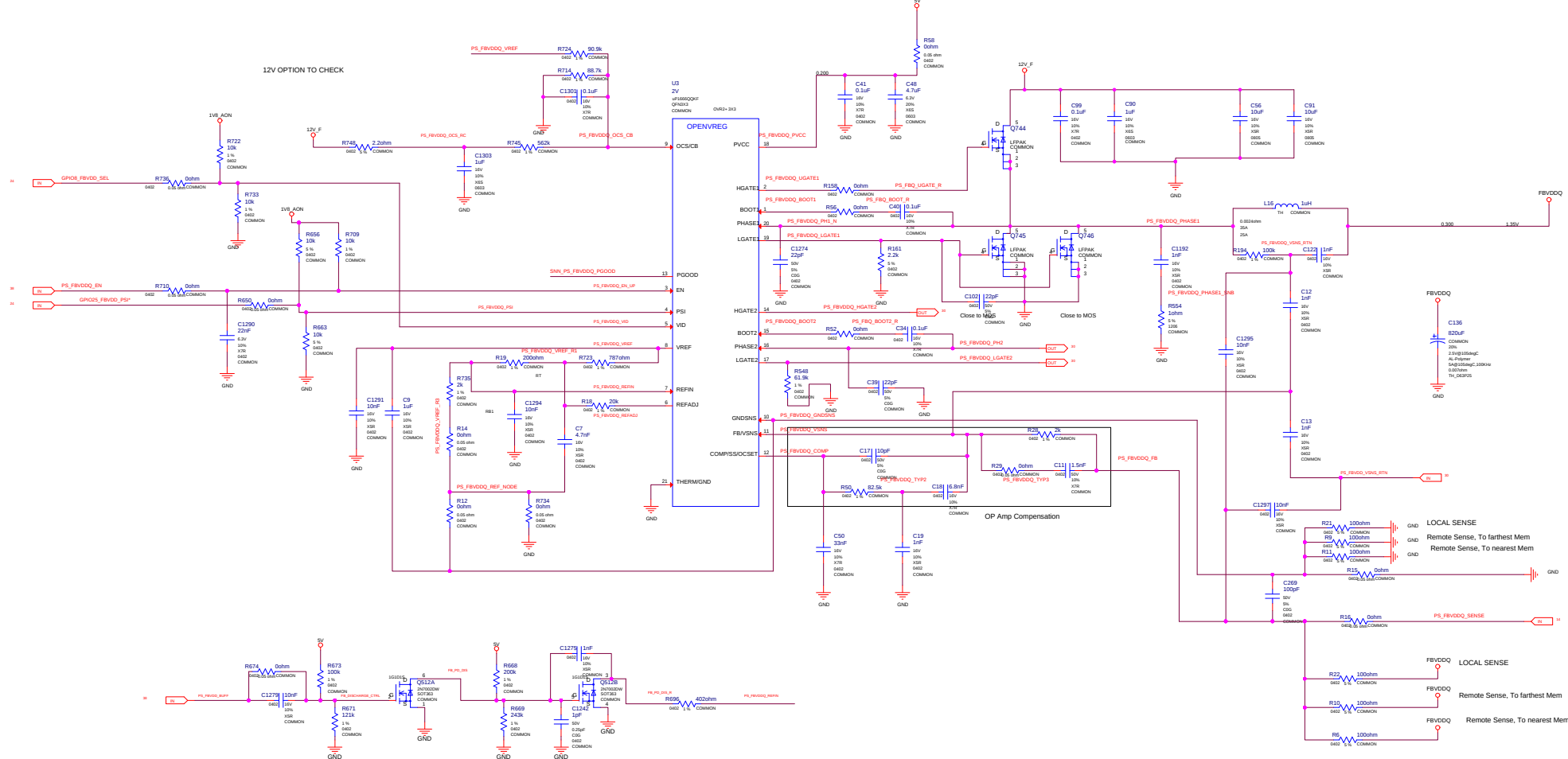


ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS 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.



|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION> |
| PAGE DETAIL | PS: PEXVDD             |

|                                                                                      |                           |                                                                                       |             |
|--------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------|-------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |                           |  |             |
| <b>NV_PN</b>                                                                         | <b>600-1G161-BASE-100</b> |                                                                                       |             |
| <b>PCB REV</b>                                                                       | <b>PG161-A01</b>          | <b>PAGE</b>                                                                           | 28 OF 42    |
| <b>BOM REV</b>                                                                       | B                         | <b>DATE</b>                                                                           | 19-NOV-2018 |

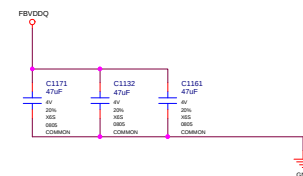
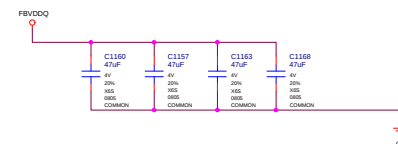
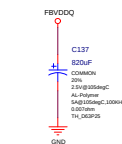


|             |                        |
|-------------|------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION> |
| PAGE DETAIL | PS: FBVDDQ             |

ALL IVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REQUIREMENTS, STANDARDS, 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. IVIDIA 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.

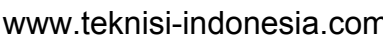
**NVIDIA CORPORATION**  
2701 SAN TOMAS EXPRESSWAY  
SANTA CLARA, CA 95050, USA

|         |                    |      |             |
|---------|--------------------|------|-------------|
| NV_PN   | 600-1G161-BASE-100 |      |             |
| PCB REV | PG161-A01          | PAGE | 29 OF 42    |
| BOM REV | B                  | DATE | 19-NOV-2018 |



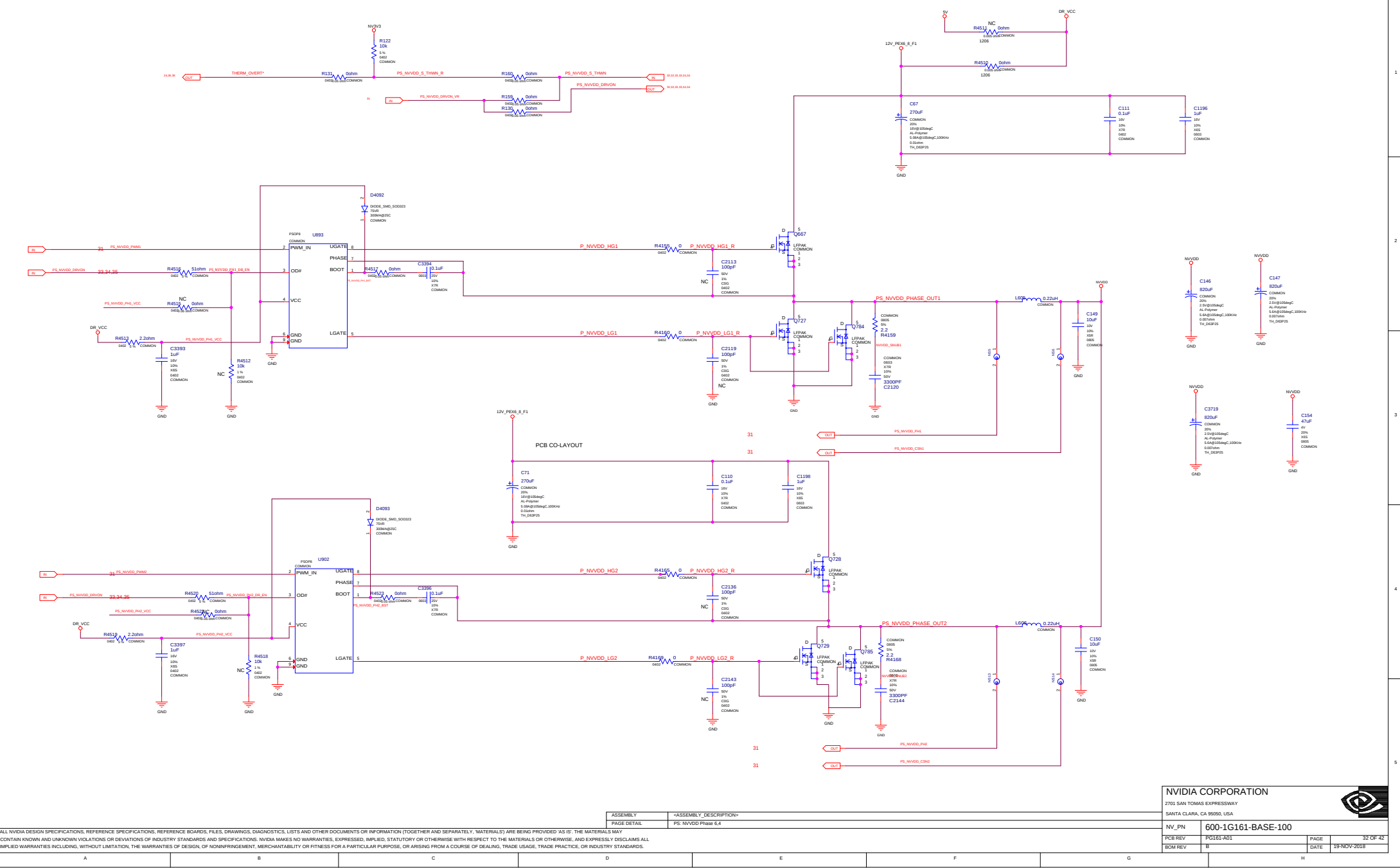
|         |                    |      |             |
|---------|--------------------|------|-------------|
| NV_PN   | 600-1G161-BASE-100 |      |             |
| PCB REV | PG161-A01          | PAGE | 30 OF 42    |
| BOM REV | B                  | DATE | 19-NOV-2018 |

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.



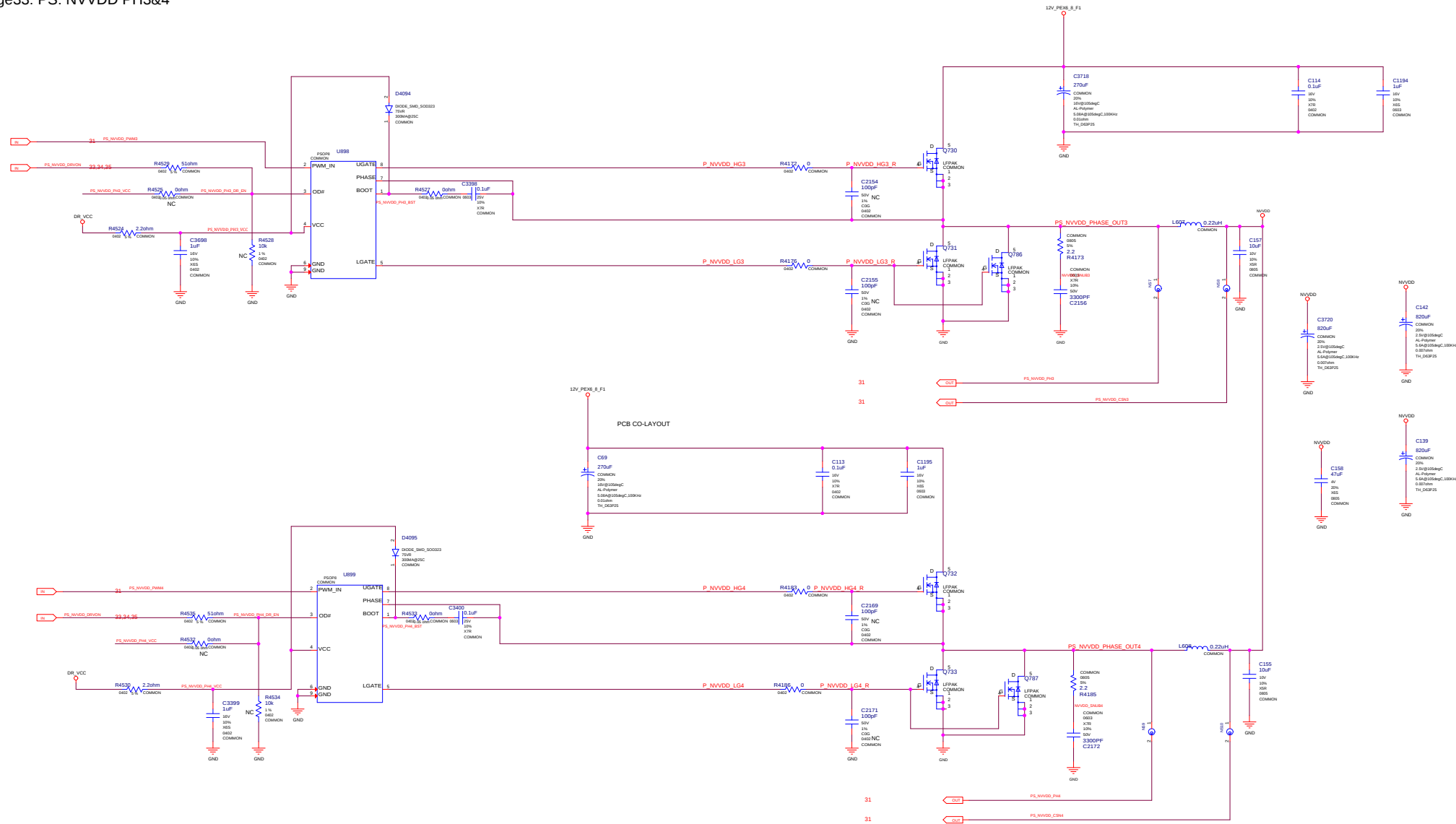
|                                                                                      |                    |      |                                                                                       |
|--------------------------------------------------------------------------------------|--------------------|------|---------------------------------------------------------------------------------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |                    |      |  |
| NV_PN                                                                                | 600-1G161-BASE-100 |      |                                                                                       |
| PCB REV                                                                              | PG161-A01          | PAGE | 31 OF 42                                                                              |
| BOM REV                                                                              | B                  | DATE | 19-NOV-2018                                                                           |





ALL NVIDIA DESIGN 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 NONINFRINGEMENT, 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                      | 600-1G161-BASE-100 |
| PCB REV                    | PG161-A01          |
| BOM REV                    | B                  |
| PAGE                       | 32 OF 42           |
| DATE                       | 19-NOV-2018        |



|                                                                                      |                           |                                                                                       |                    |
|--------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------|--------------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |                           |  |                    |
| <b>NV_PN</b>                                                                         | <b>600-1G161-BASE-100</b> |                                                                                       |                    |
| <b>PCB REV</b>                                                                       | <b>PG161-A01</b>          | <b>PAGE</b>                                                                           | <b>33 OF 42</b>    |
| <b>BOM REV</b>                                                                       | <b>B</b>                  | <b>DATE</b>                                                                           | <b>19-NOV-2018</b> |

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 KNOW OR 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 NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

|             |                                        |
|-------------|----------------------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION>                 |
| PAGE DETAIL | PS: NVVDD Phase 2.1PS: NVVDD Phase 1.2 |

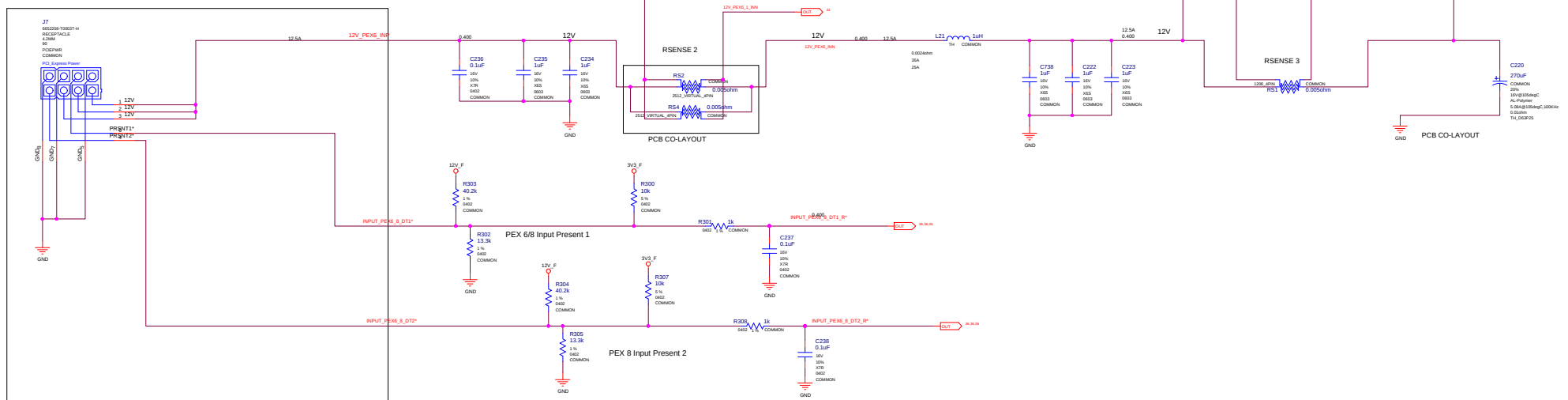
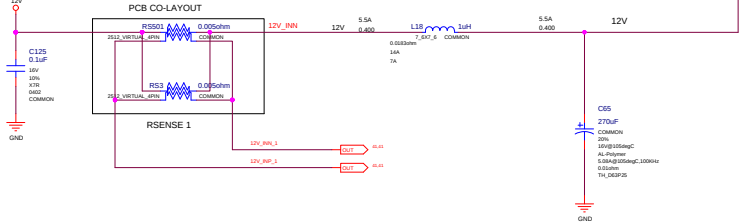
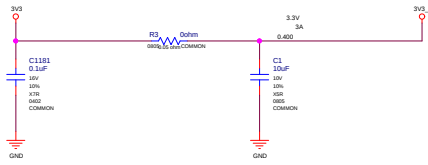
NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95050, USA



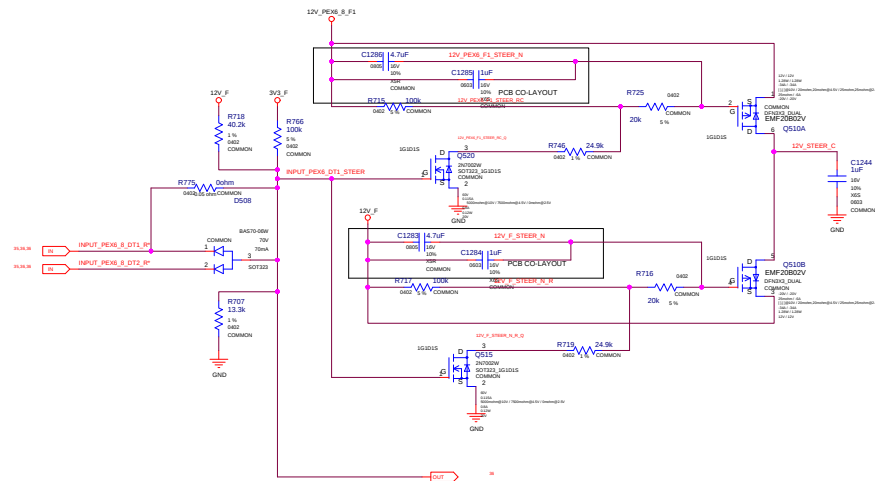
|         |                    |      |             |
|---------|--------------------|------|-------------|
| NV_PN   | 600-1G161-BASE-100 |      |             |
| PCB REV | PG161-A01          | PAGE | 34 OF 42    |
| BOM REV | B                  | DATE | 19-NOV-2018 |



|                                                                                      |                  |                           |                                                                                       |
|--------------------------------------------------------------------------------------|------------------|---------------------------|---------------------------------------------------------------------------------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |                  |                           |  |
| <b>NV_PN</b>                                                                         |                  | <b>600-1G161-BASE-100</b> |                                                                                       |
| <b>PCB REV</b>                                                                       | <b>PG161-A01</b> | <b>PAGE</b>               | <b>35 OF 42</b>                                                                       |
| <b>BOM REV</b>                                                                       | <b>B</b>         | <b>DATE</b>               | <b>19-NOV-2018</b>                                                                    |

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.

GUIDES CURRENT FROM PEX EDGE TO PEX 6 PIN INPUT AREA.



1V8\_KON

R1  
> 2.2k  
1%  
RES  
COMMON

GPIO2\_LOW\_PERIP\*

OUT

16, 16, 36 INPUT\_PEXM\_8\_DT1\_R\*

IGDS15

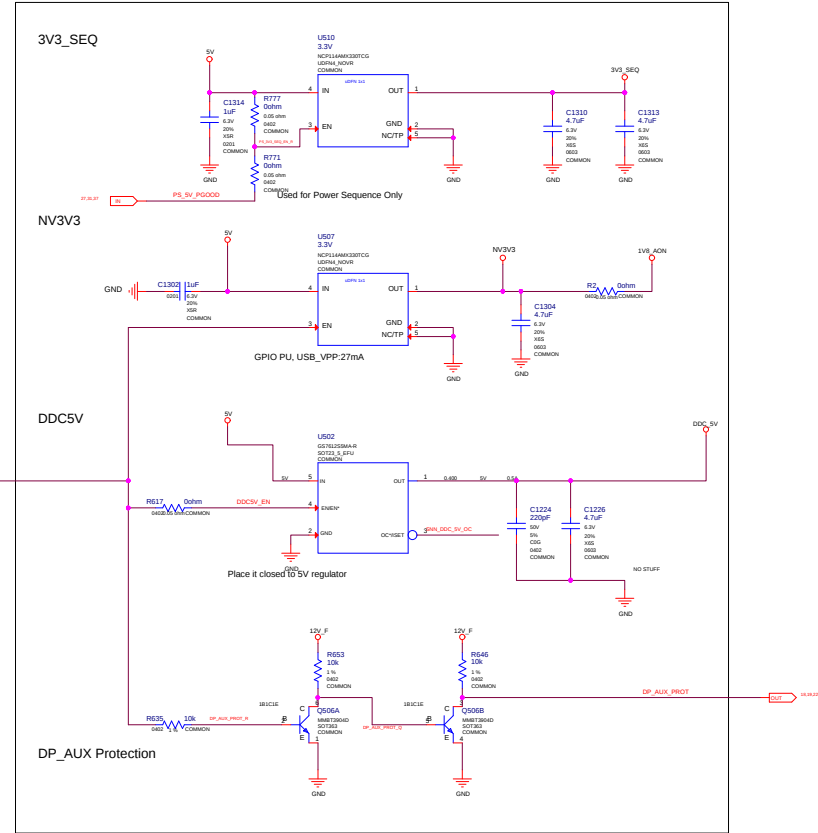
Q1  
N-CH MOSFET  
IGDS15  
COMMON  
2  
GND

26, 26, 36 INPUT\_PEX6\_8\_DT2\_R\*

IGDS15

Q2  
N-CH MOSFET  
IGDS15  
COMMON  
2  
GND

| GPIO2_LOW_PERIP* | GPU SPEED |
|------------------|-----------|
| 0                | Slow      |
| 1                | Normal    |



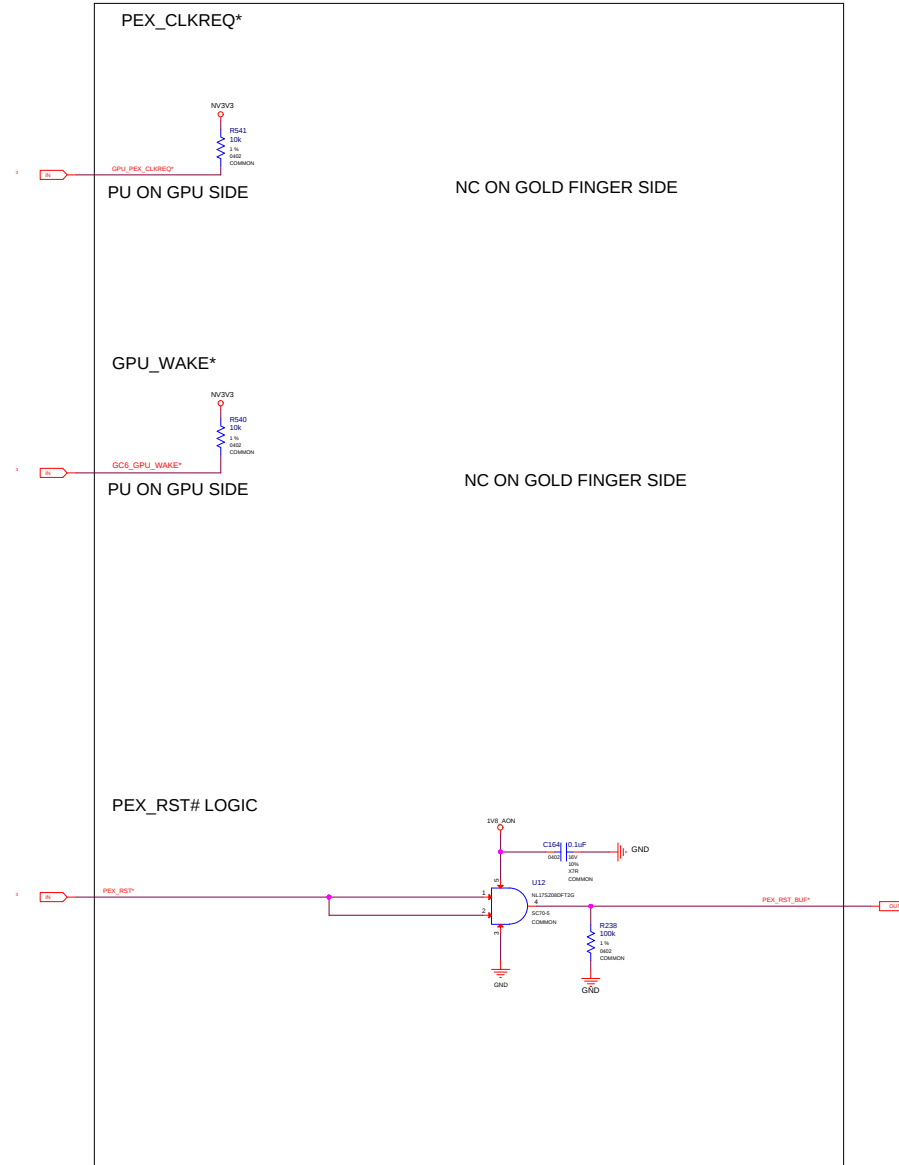
|             |                            |
|-------------|----------------------------|
| ASSEMBLY    | <ASSEMBLY_DESCRIPTION>     |
| PAGE DETAIL | SEQ: 5V, 1V8, NV3V3 ENABLE |

|                                                                                      |           |                           |                                                                                       |  |
|--------------------------------------------------------------------------------------|-----------|---------------------------|---------------------------------------------------------------------------------------|--|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |           |                           |  |  |
| <b>NV_PN</b>                                                                         |           | <b>600-1G161-BASE-100</b> |                                                                                       |  |
| PCB REV                                                                              | PG161-A01 | PAGE                      | 37 OF 42                                                                              |  |
| BOM REV                                                                              | B         | DATE                      | 19-NOV-2018                                                                           |  |



2701 SAN TOMAS EXPRESSWAY  
SANTA CLARA, CA 95050, USA

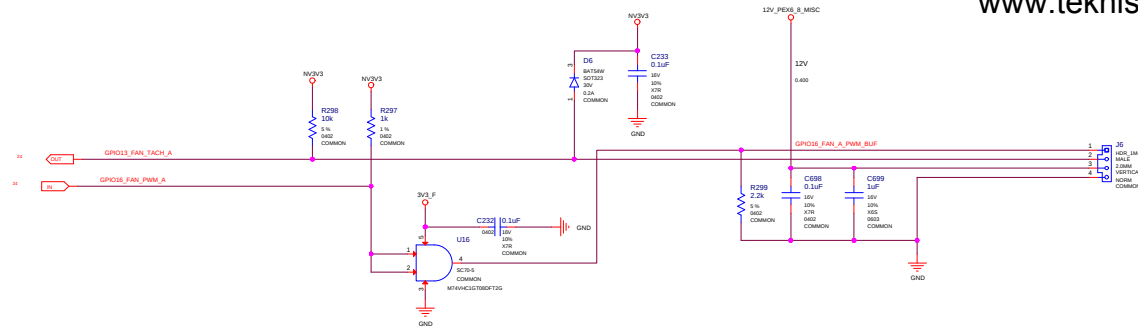
|         |                    |      |             |
|---------|--------------------|------|-------------|
| NV_PN   | 600-1G161-BASE-100 |      |             |
| PCB REV | PG161-A01          | PAGE | 38 OF 42    |
| BOM REV | B                  | DATE | 19-NOV-2018 |



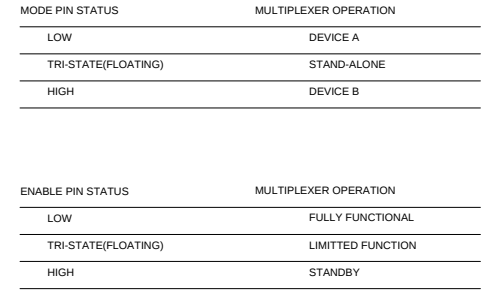
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS 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.

|                                                         |  |                        |  |                                                                                                  |  |
|---------------------------------------------------------|--|------------------------|--|--------------------------------------------------------------------------------------------------|--|
| ASSEMBLY                                                |  | <ASSEMBLY_DESCRIPTION> |  | SANTA CLARA, CA 95050, USA                                                                       |  |
| PAGE DETAIL                                             |  | SEQ MISC               |  |             |  |
| RALS MAY<br>ISSUING DISCLOSURES ALL<br>ISTRY STANDARDS. |  |                        |  | NV_PN <b>600-1G161-BASE-100</b><br>PCB REV PGL01-201 PAGE 35 OF 42<br>BOM REV B DATE 19-NOV-2018 |  |





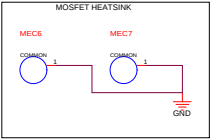
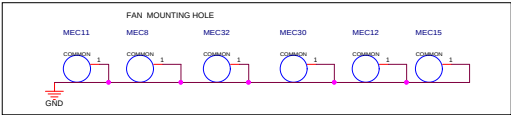
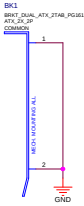
|                                                                                      |           |                                                                                       |             |
|--------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------|-------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |           |  |             |
| <b>NV_PN</b><br><b>600-1G161-BASE-100</b>                                            |           |                                                                                       |             |
| PCB REV                                                                              | PG161-A01 | PAGE                                                                                  | 40 OF 42    |
| BOM REV                                                                              | B         | DATE                                                                                  | 19-NOV-2018 |



| ENABLE PIN STATUS   | MULTIPLEXER OPERATION |
|---------------------|-----------------------|
| LOW                 | FULLY FUNCTIONAL      |
| TRI-STATE(FLOATING) | LIMITED FUNCTION      |
| HIGH                | STANDBY               |

|                                                                                      |  |                            |                                                                                       |
|--------------------------------------------------------------------------------------|--|----------------------------|---------------------------------------------------------------------------------------|
| <b>NVIDIA CORPORATION</b><br>2701 SAN TOMAS EXPRESSWAY<br>SANTA CLARA, CA 95050, USA |  |                            |  |
| <b>NV_PN</b><br>600-1G161-BASE-100                                                   |  |                            |                                                                                       |
| <b>PCB REV</b><br>P161-A01                                                           |  | <b>PAGE</b><br>41 OF 42    |                                                                                       |
| <b>BOM REV</b><br>B                                                                  |  | <b>DATE</b><br>19-NOV-2018 |                                                                                       |

Bracket:



BACK STIFFENER:



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 NONINFRINGEMENT, 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                      | 600-1G161-BASE-100 |      |             |
| PCB REV                    | PG161-A01          | PAGE | 42 OF 42    |
| BOM REV                    | B                  | DATE | 19-NOV-2018 |