

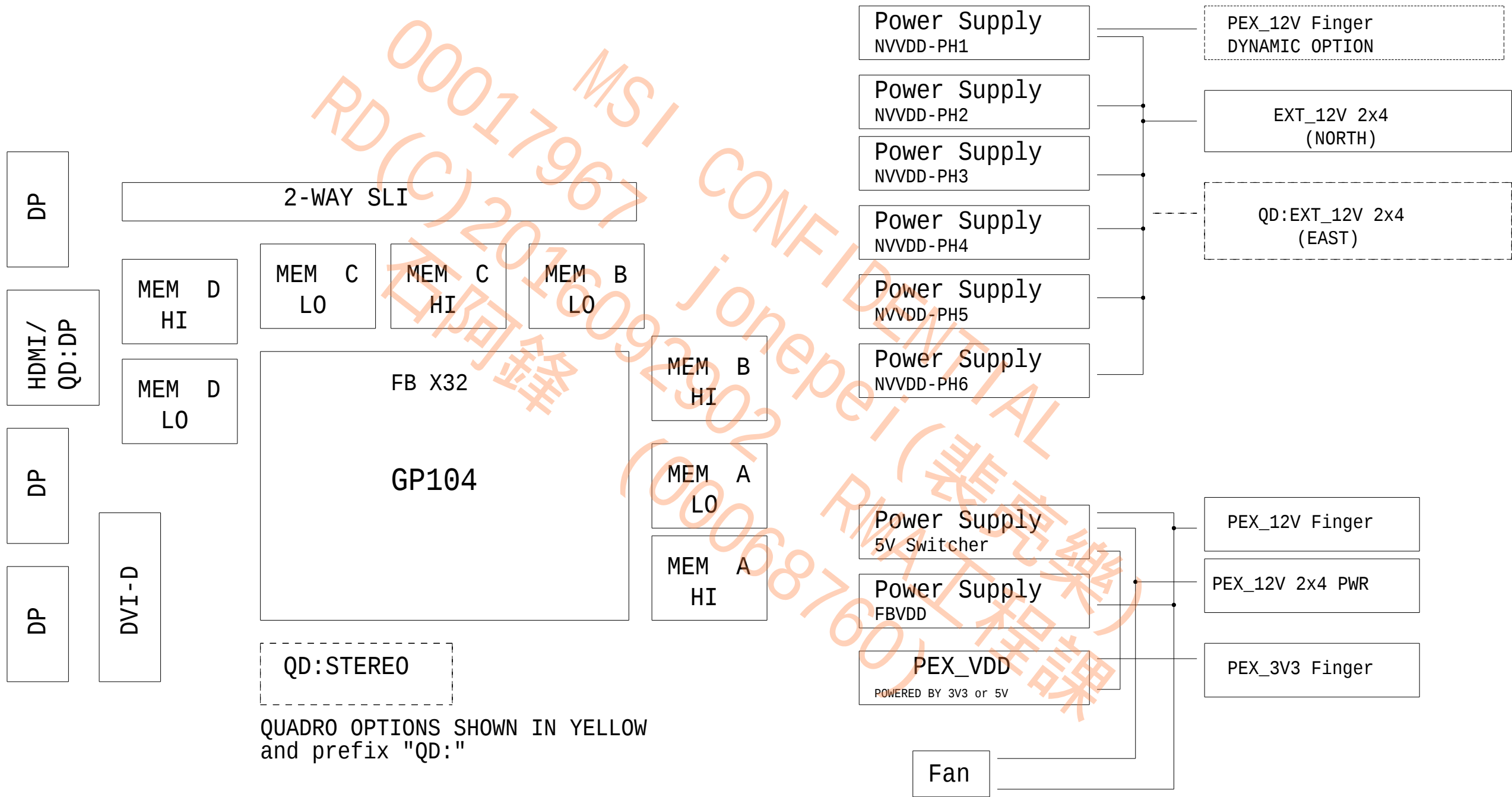
PG411 A01

GP104 - 8GB GDDR5, 256b, 256Mx32  
Ta1l DVI-D + DP + DP + DP/HDMI + DP

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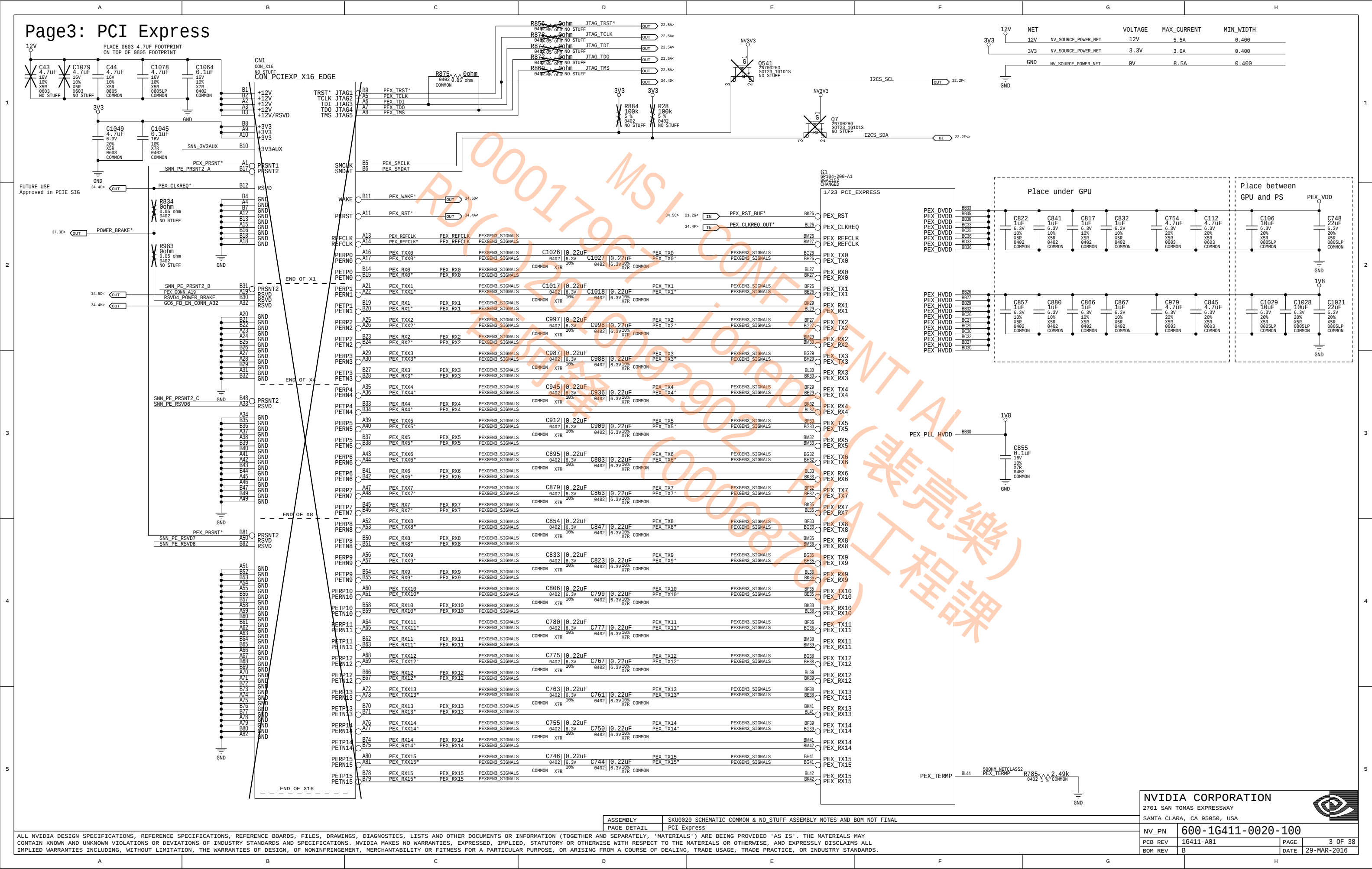
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QUADRO OPTIONS SHOWN IN YELLOW  
and prefix "QD:"

Page3: PCI Express



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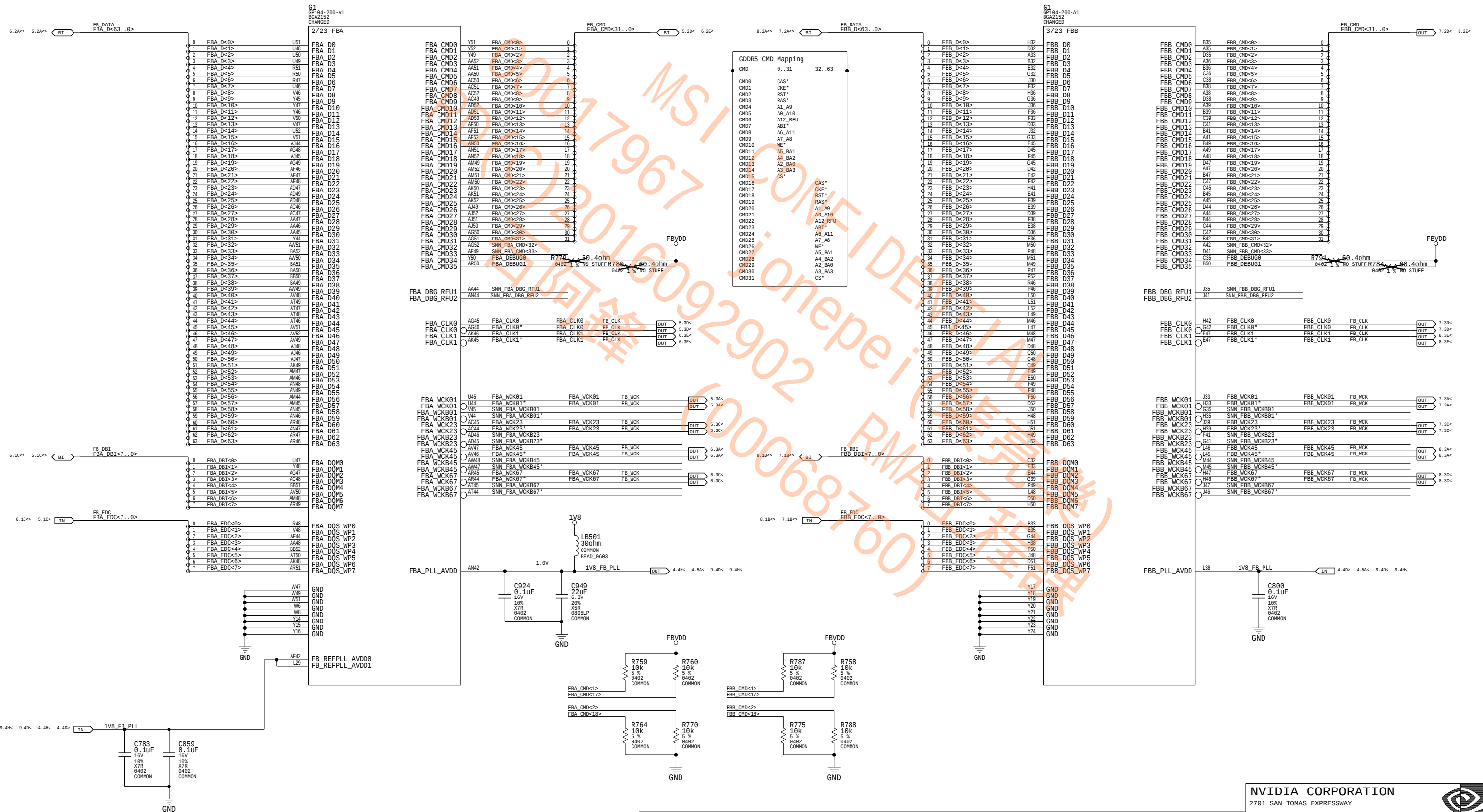
SANTA CLARA, CA 95050, USA

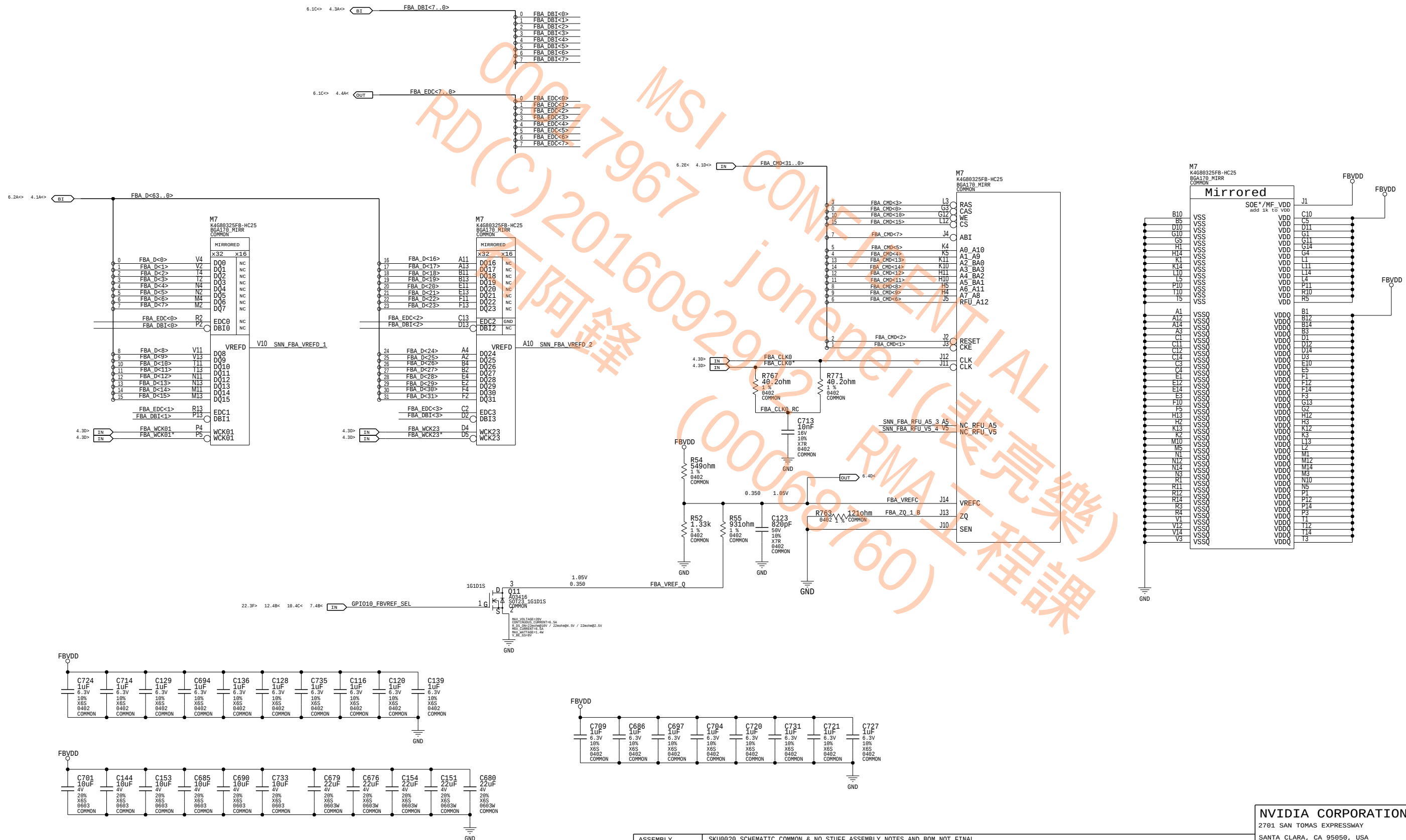


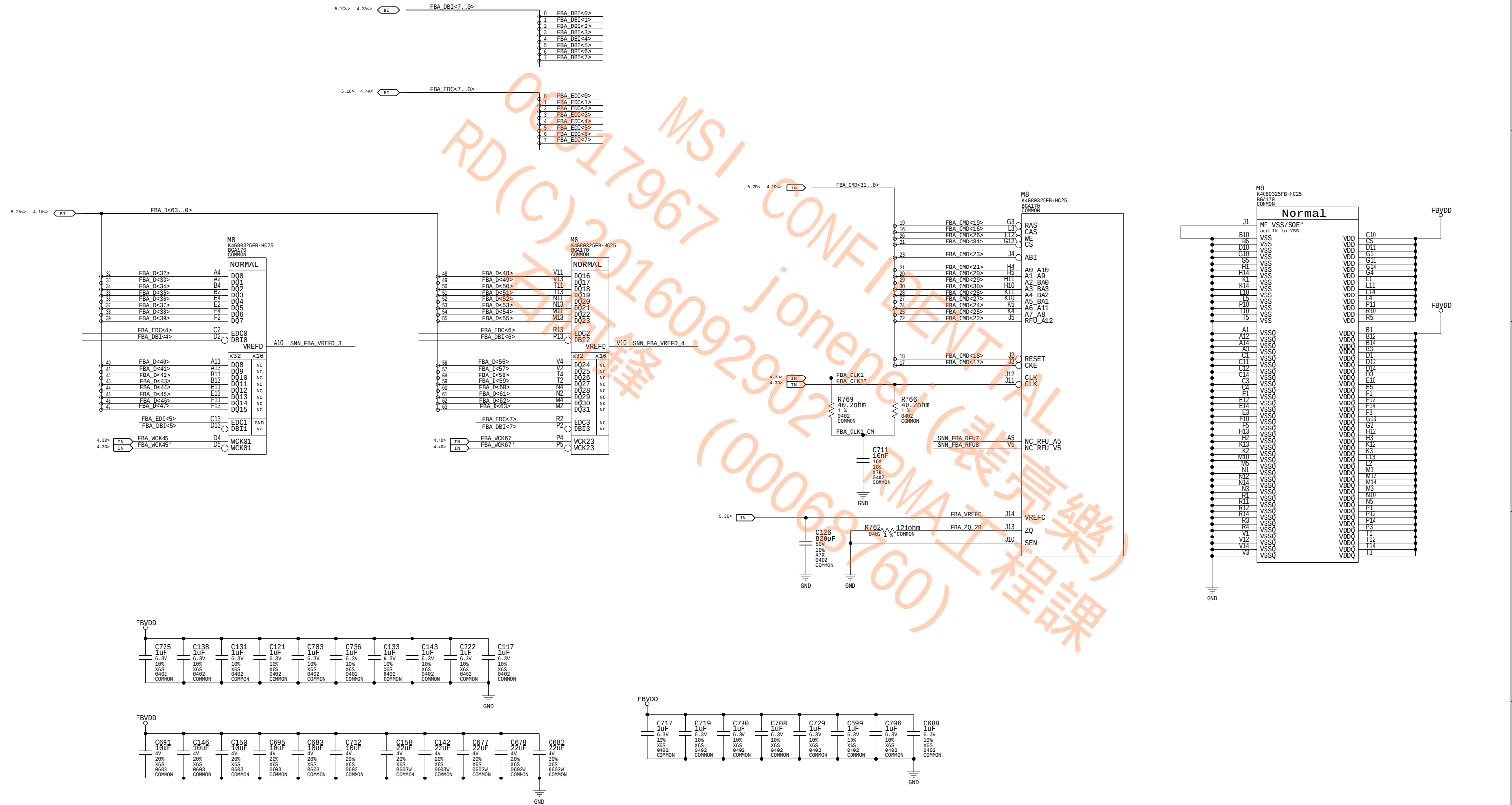
NV\_PN 600-1G411-0020-100

|         |           |      |             |
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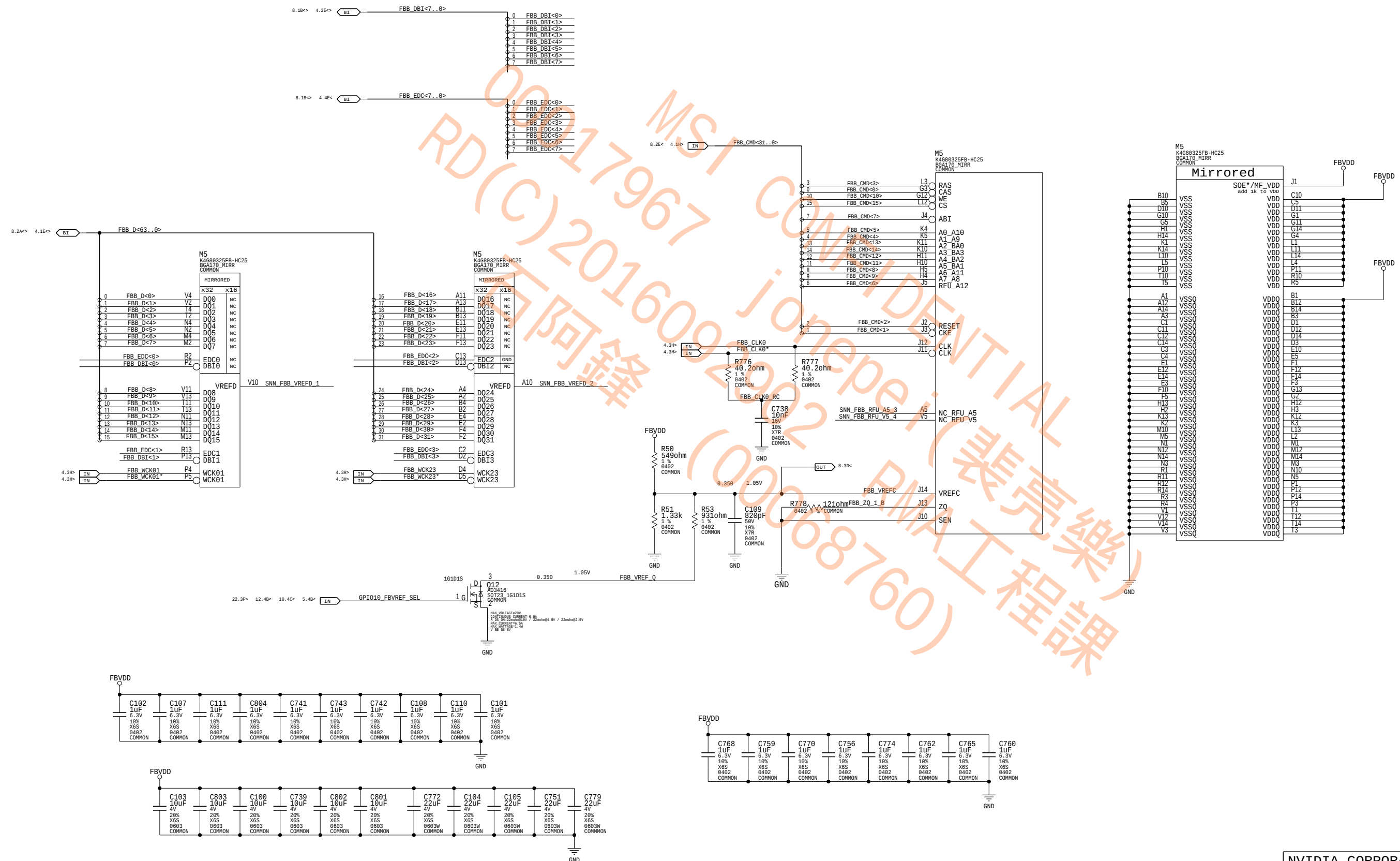
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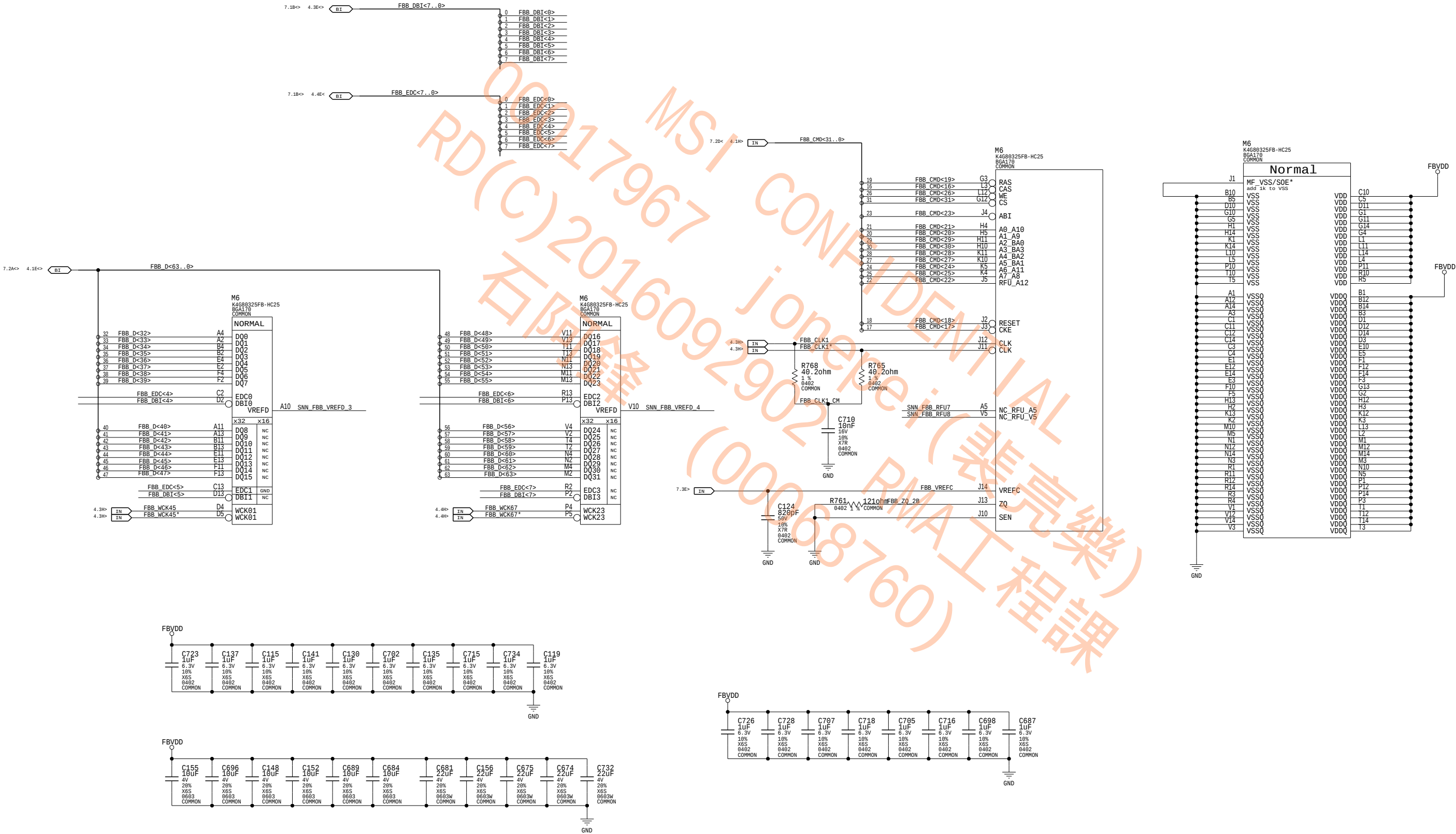
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NV\_PN 600-1G411-0020-100

PCB REV 1G411-A01

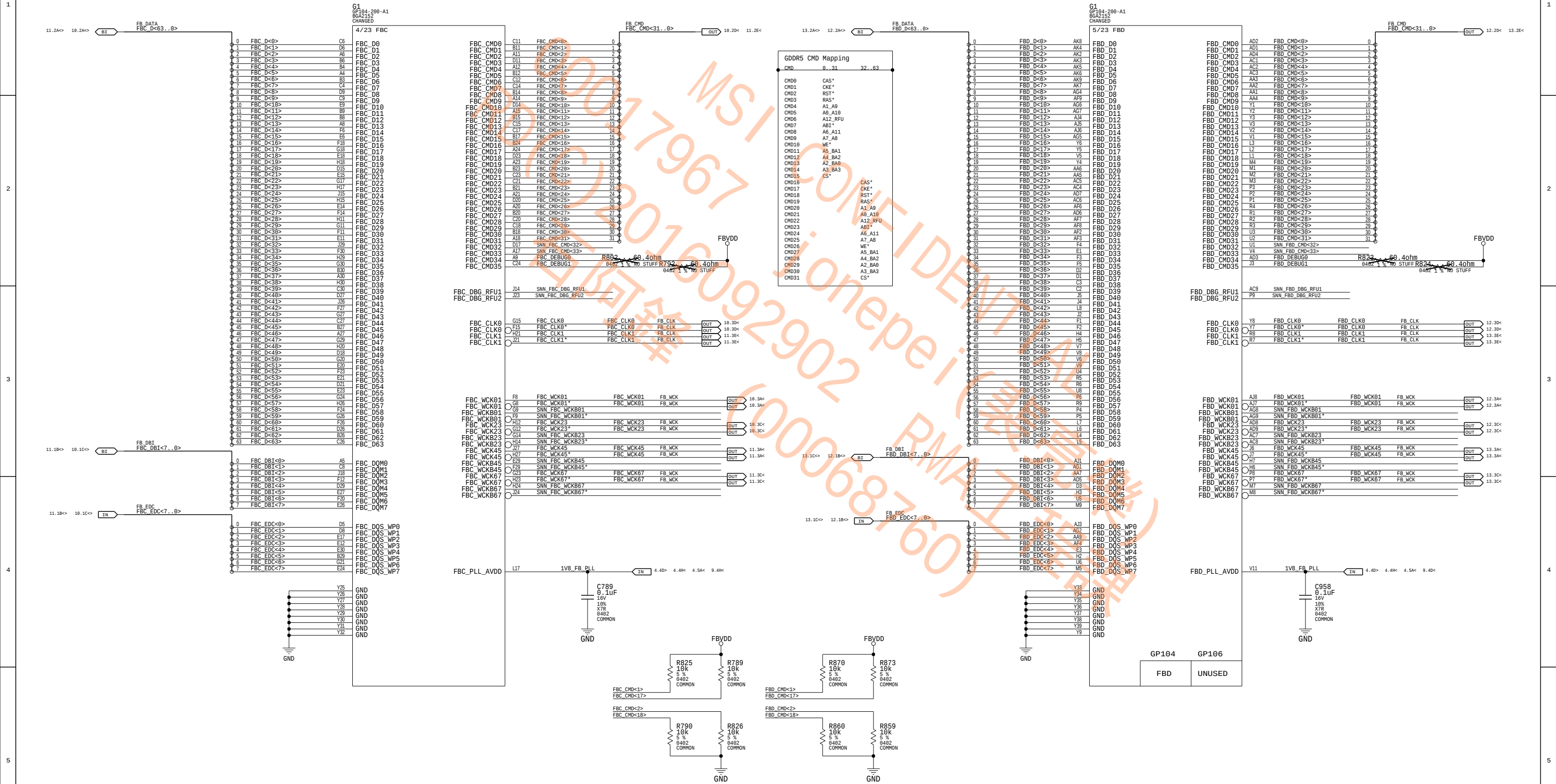
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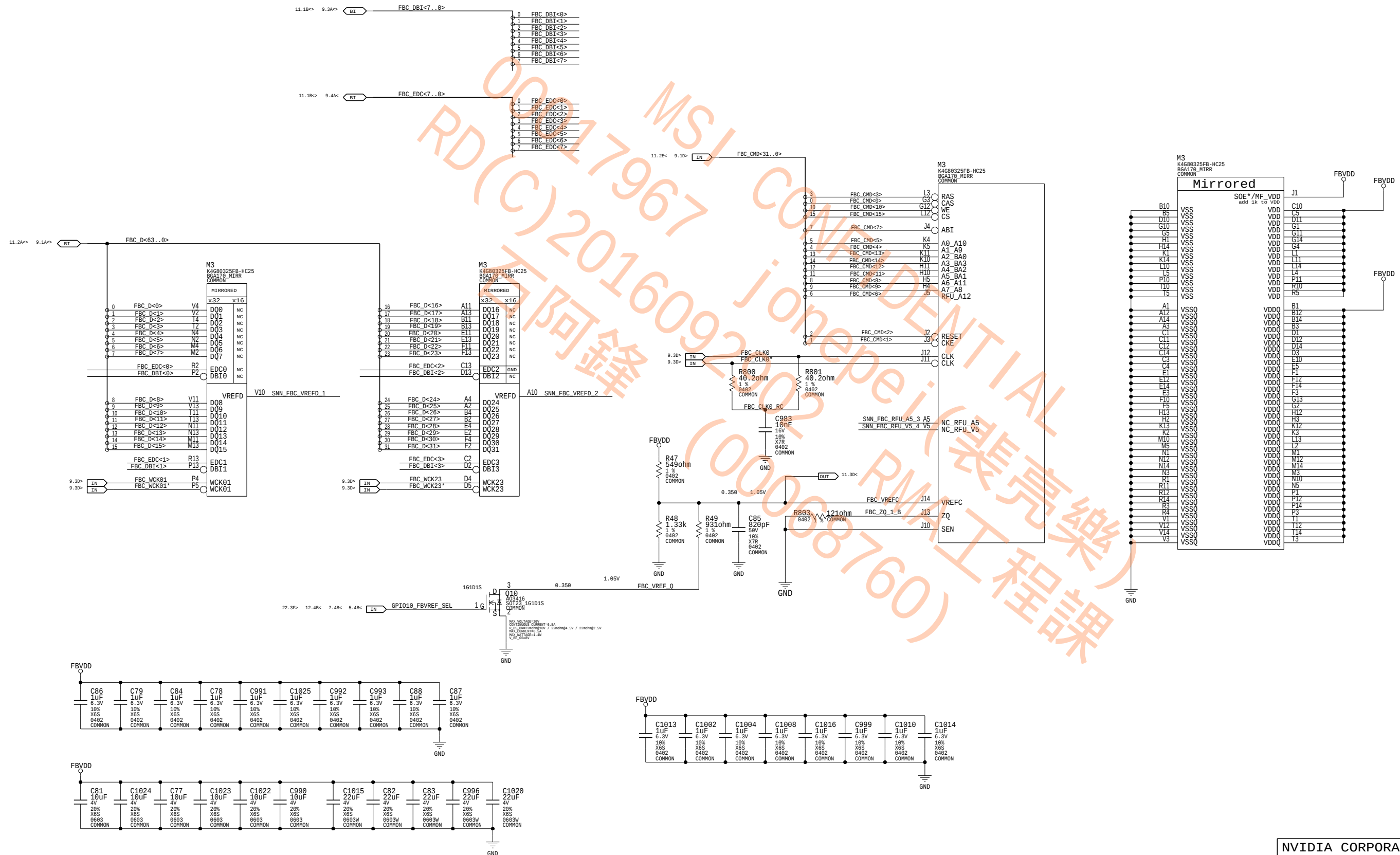
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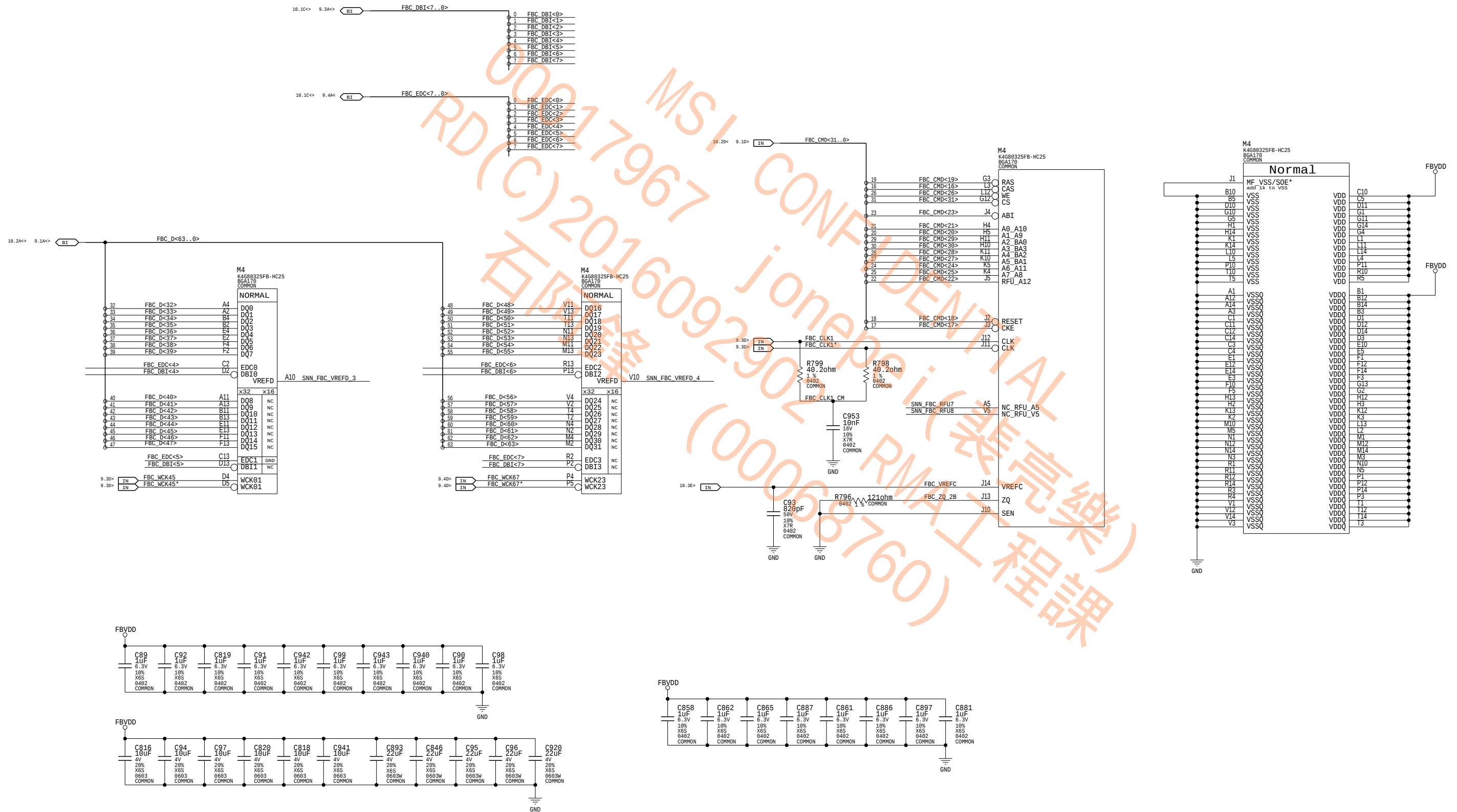
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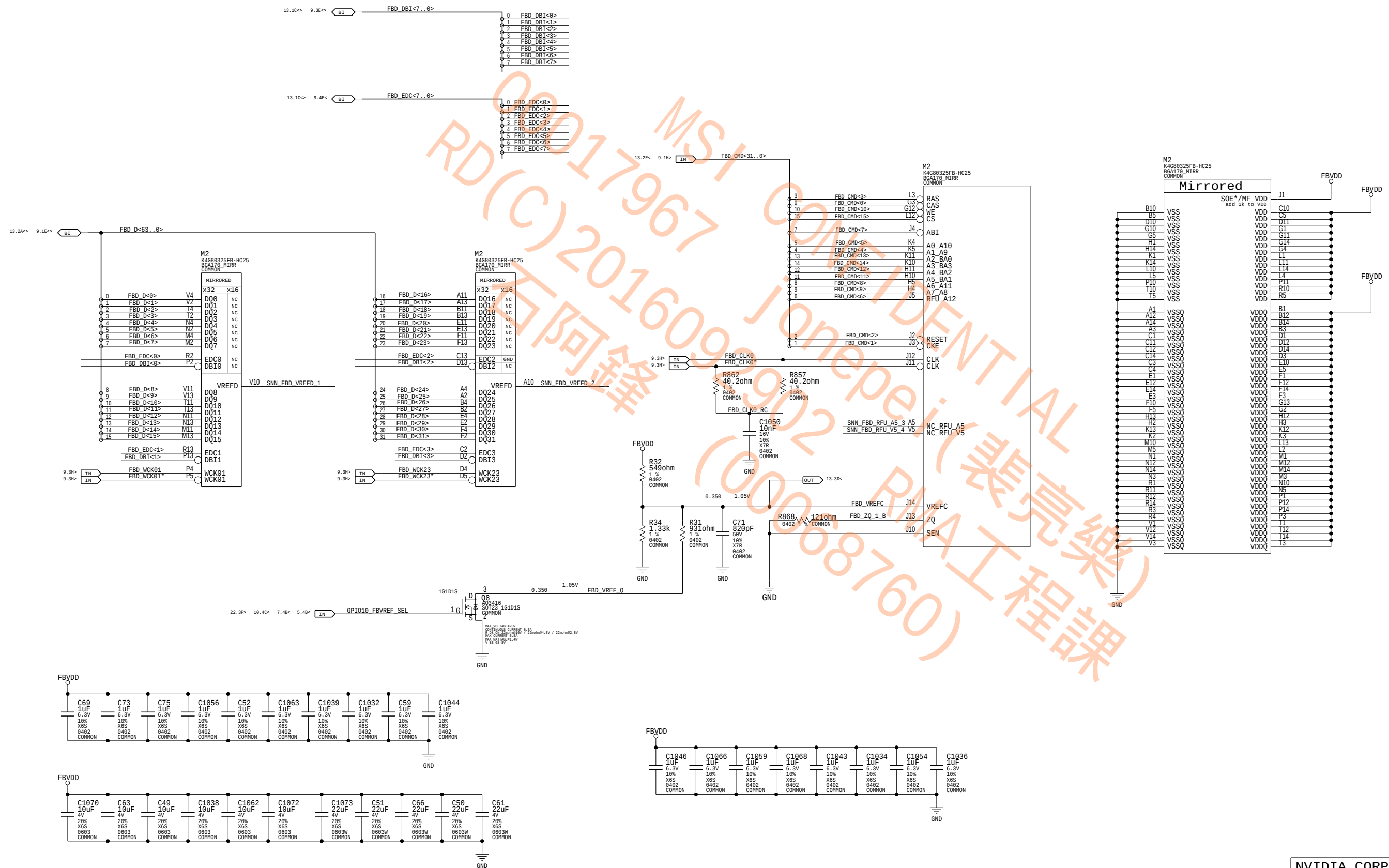
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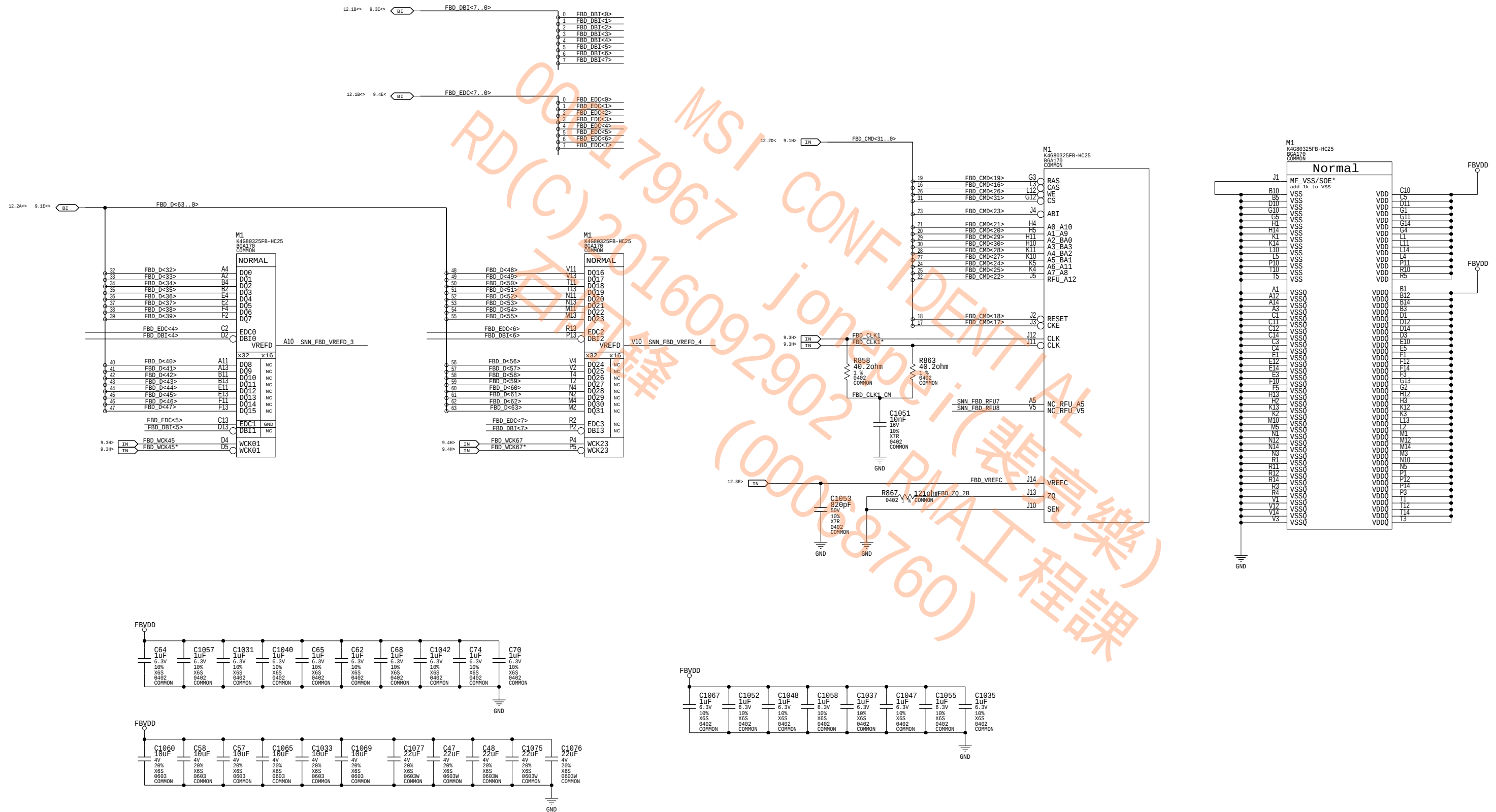
29-MAR-2016



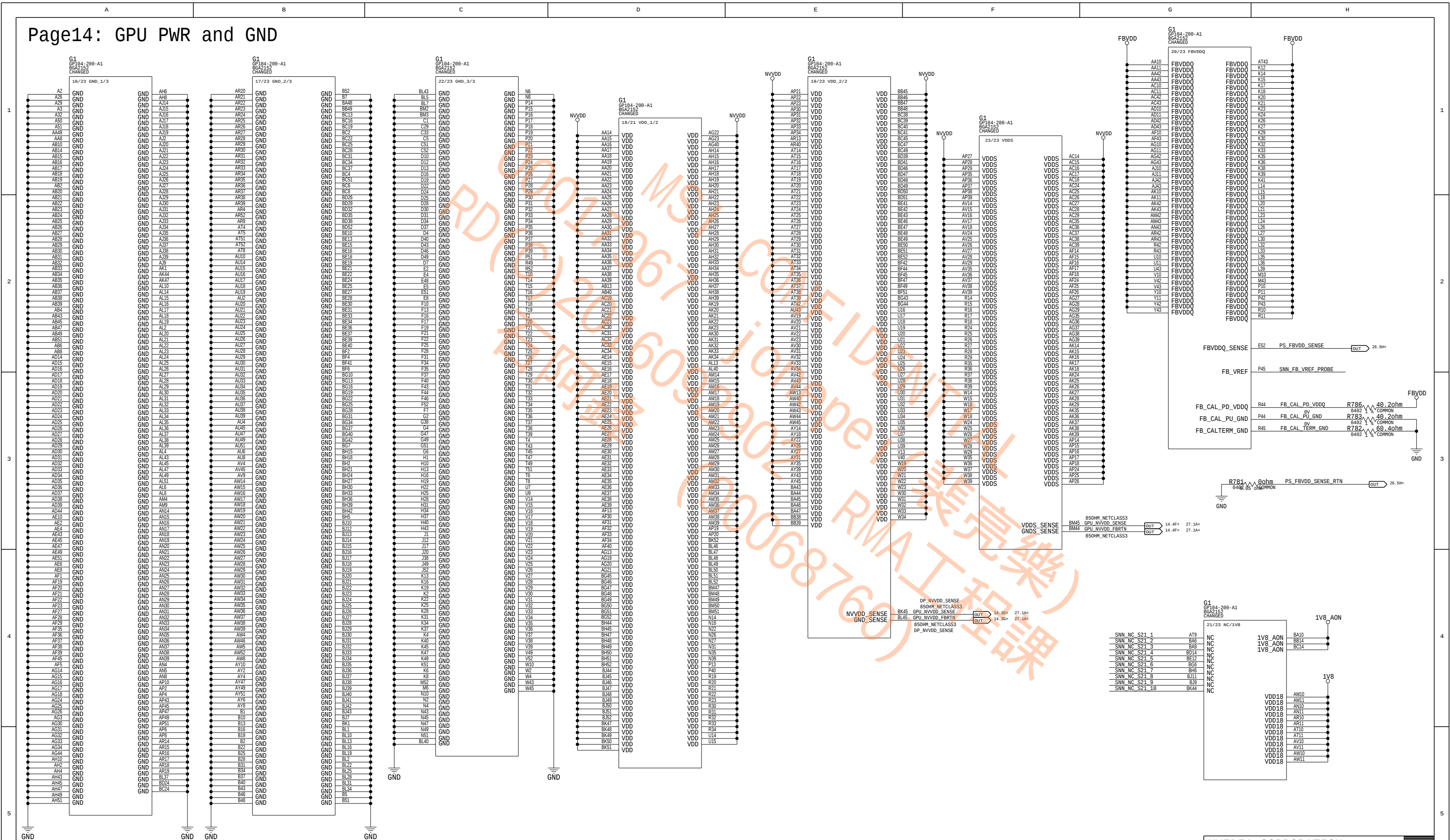






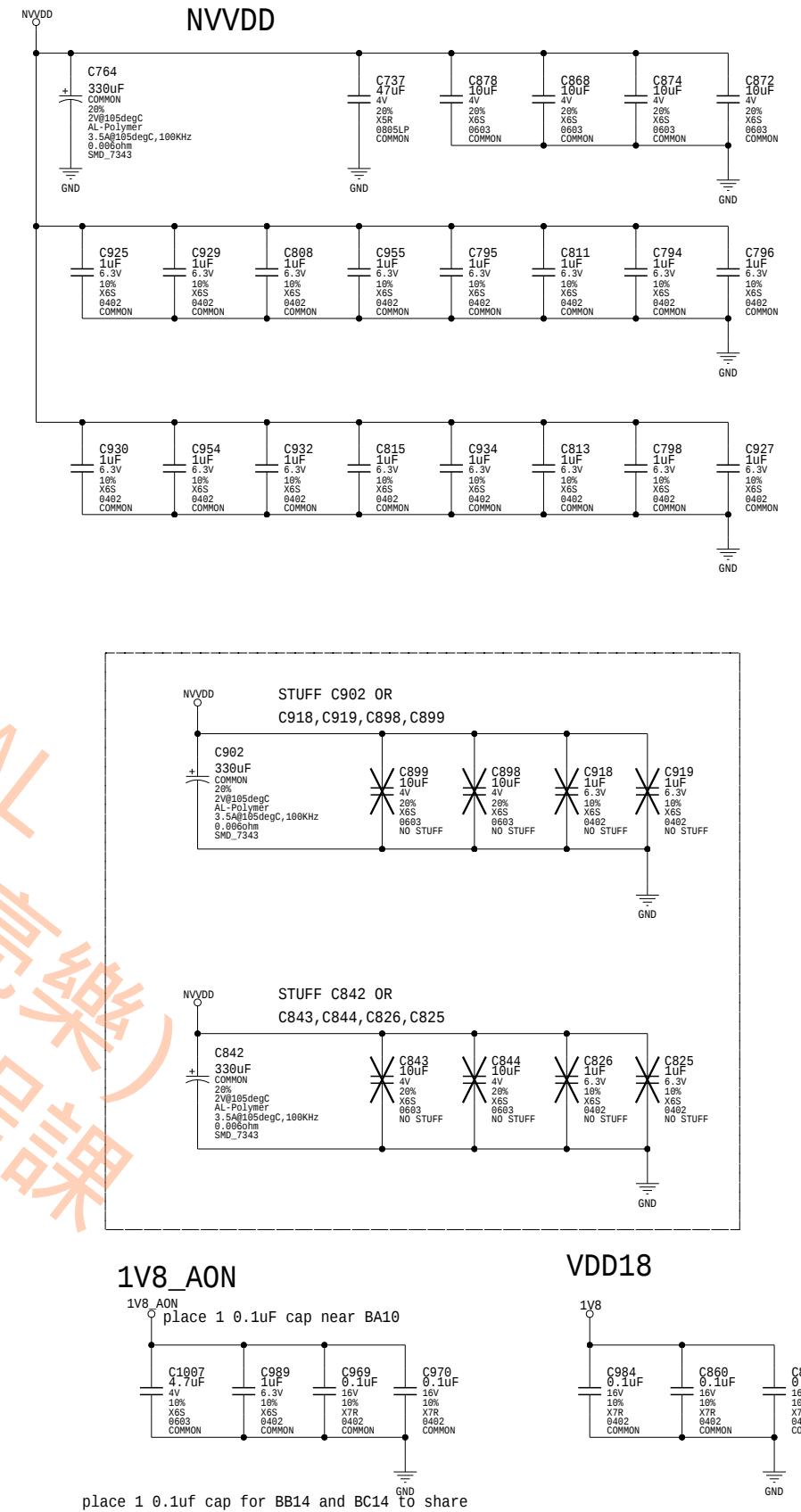
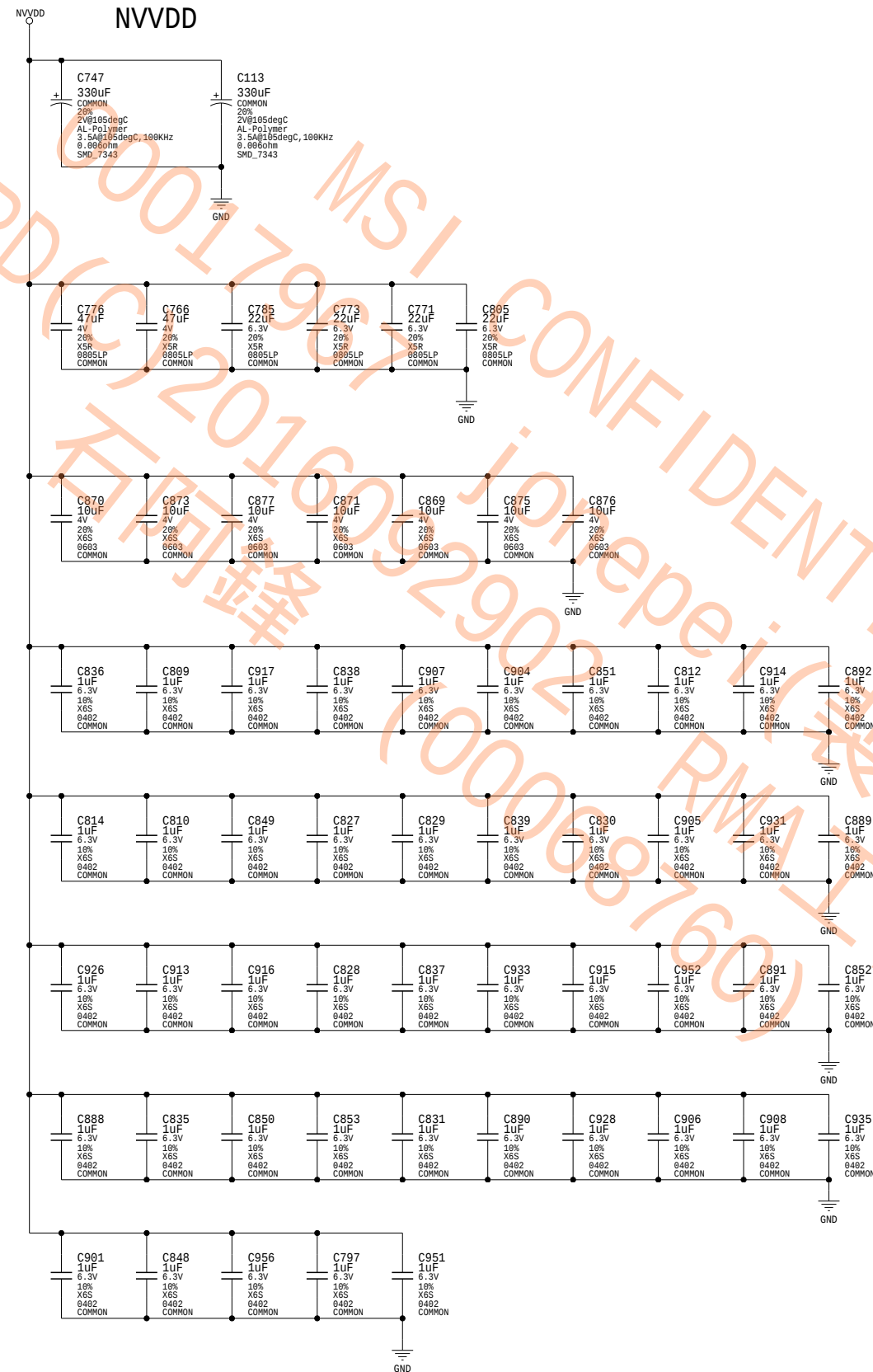
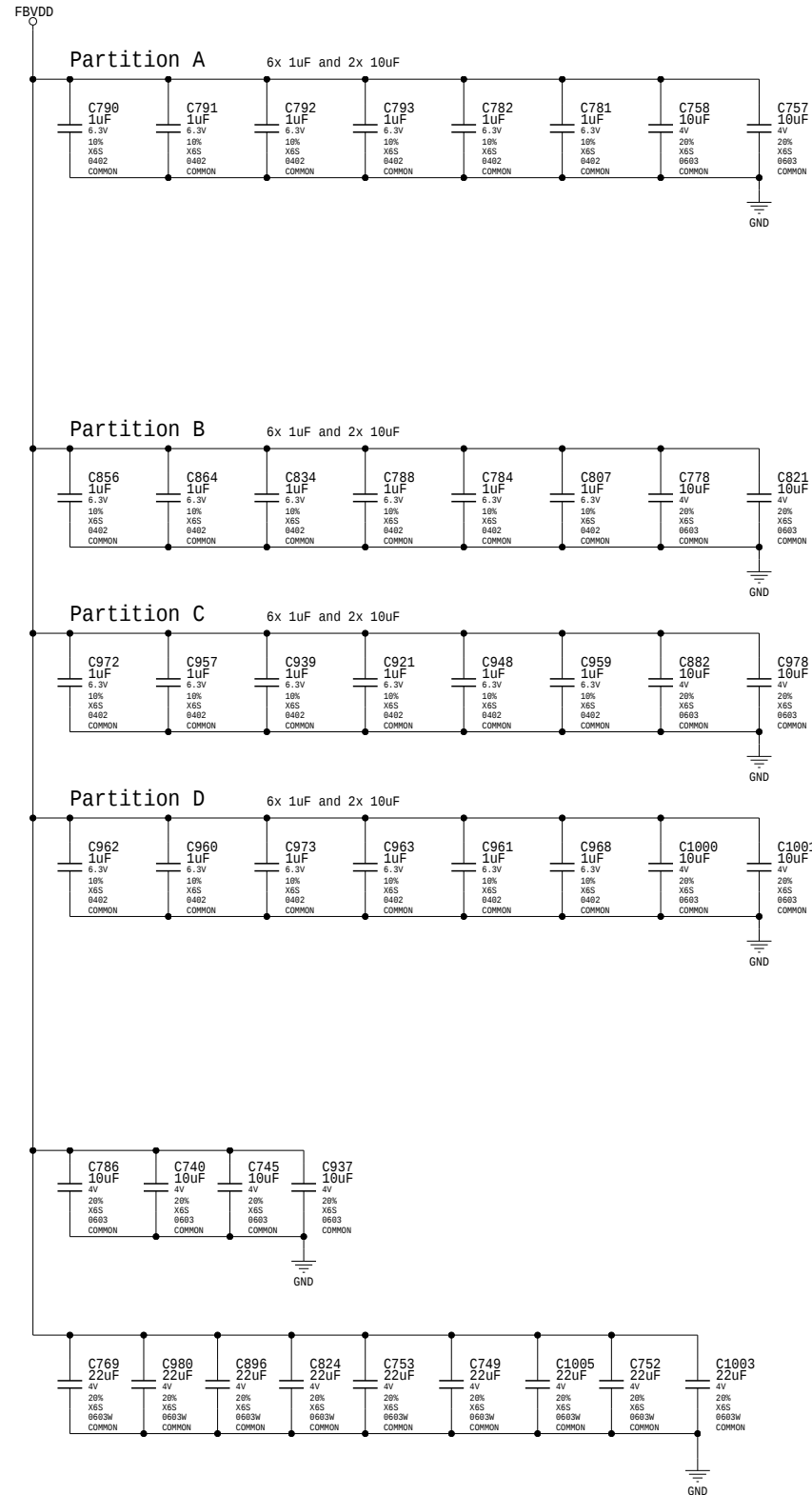


## Page14: GPU PWR and GND



## Page15: GPU Decoupling

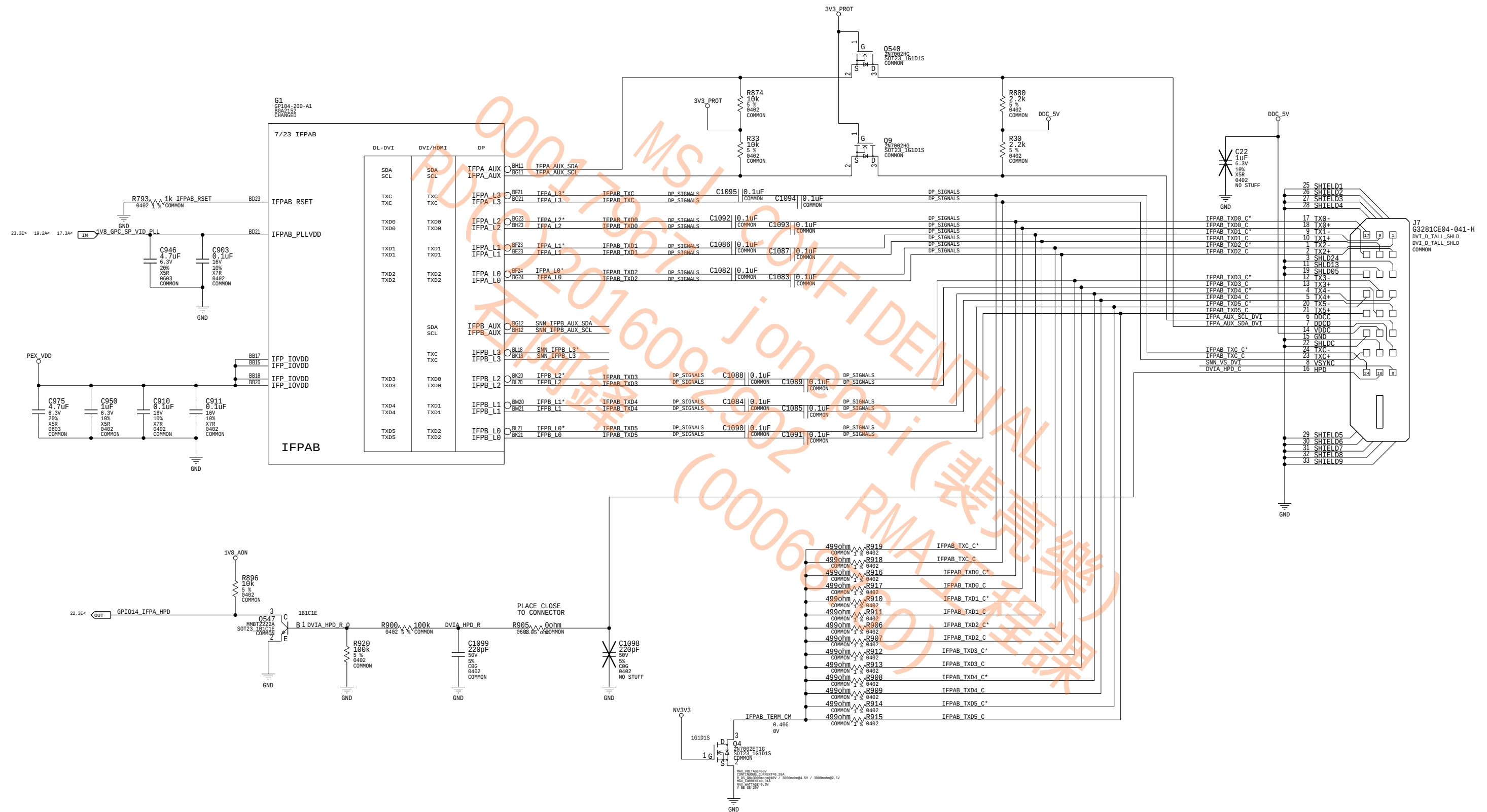
## FBVDD



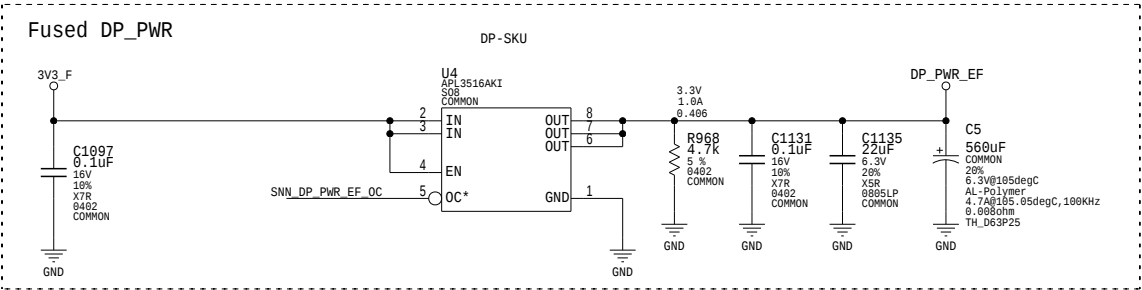
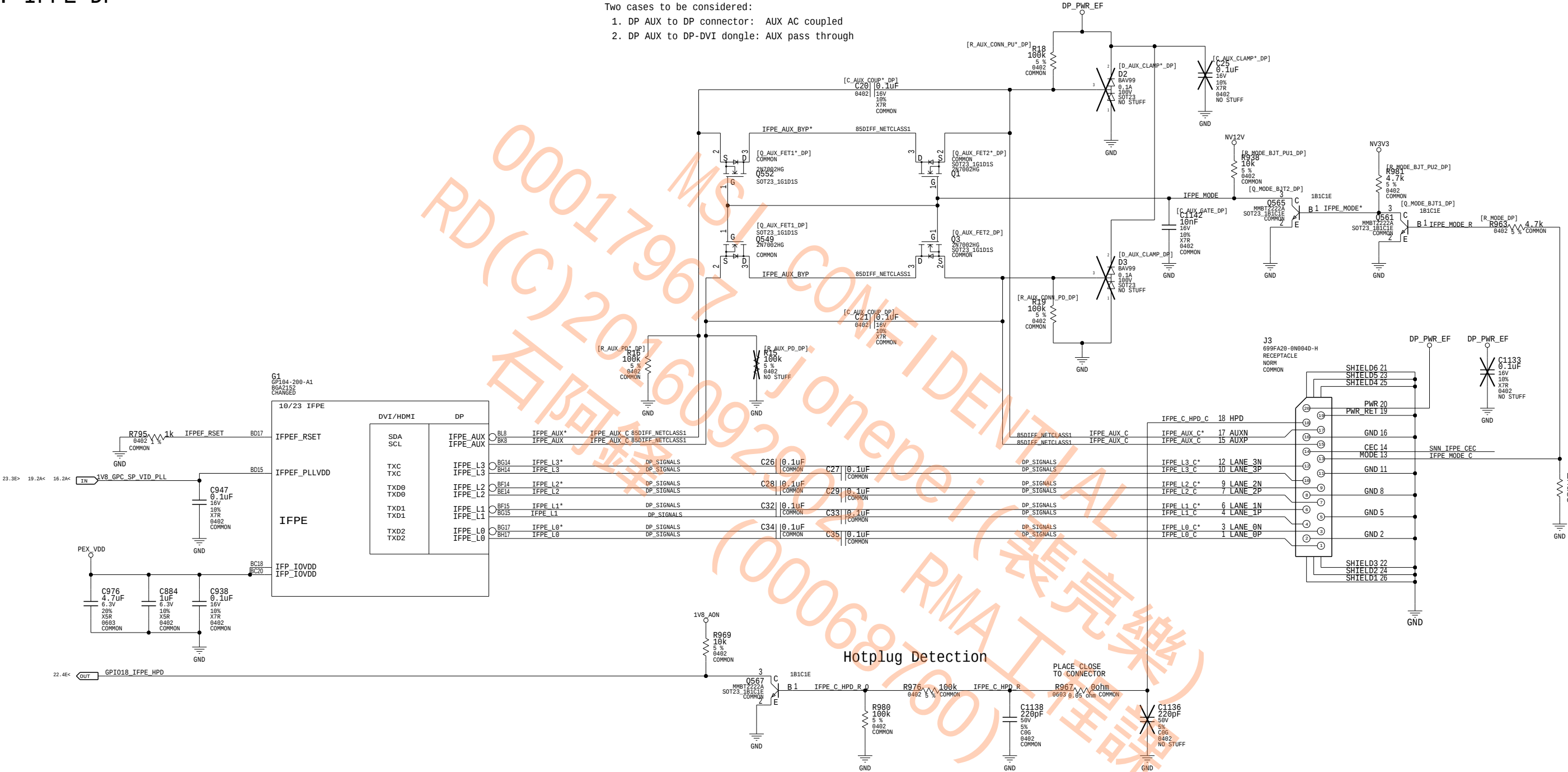
|             |                                                                      |
|-------------|----------------------------------------------------------------------|
| ASSEMBLY    | SKU0020 SCHEMATIC COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL |
| PAGE DETAIL | GPU Decoupling                                                       |

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| NV_PN                      | 600-16411-0020-100 |                                                                                       |             |
| PCB REV                    | 16411-A01          | PAGE                                                                                  | 15 OF 38    |
| BOM REV                    | B                  | DATE                                                                                  | 29-MAR-2016 |

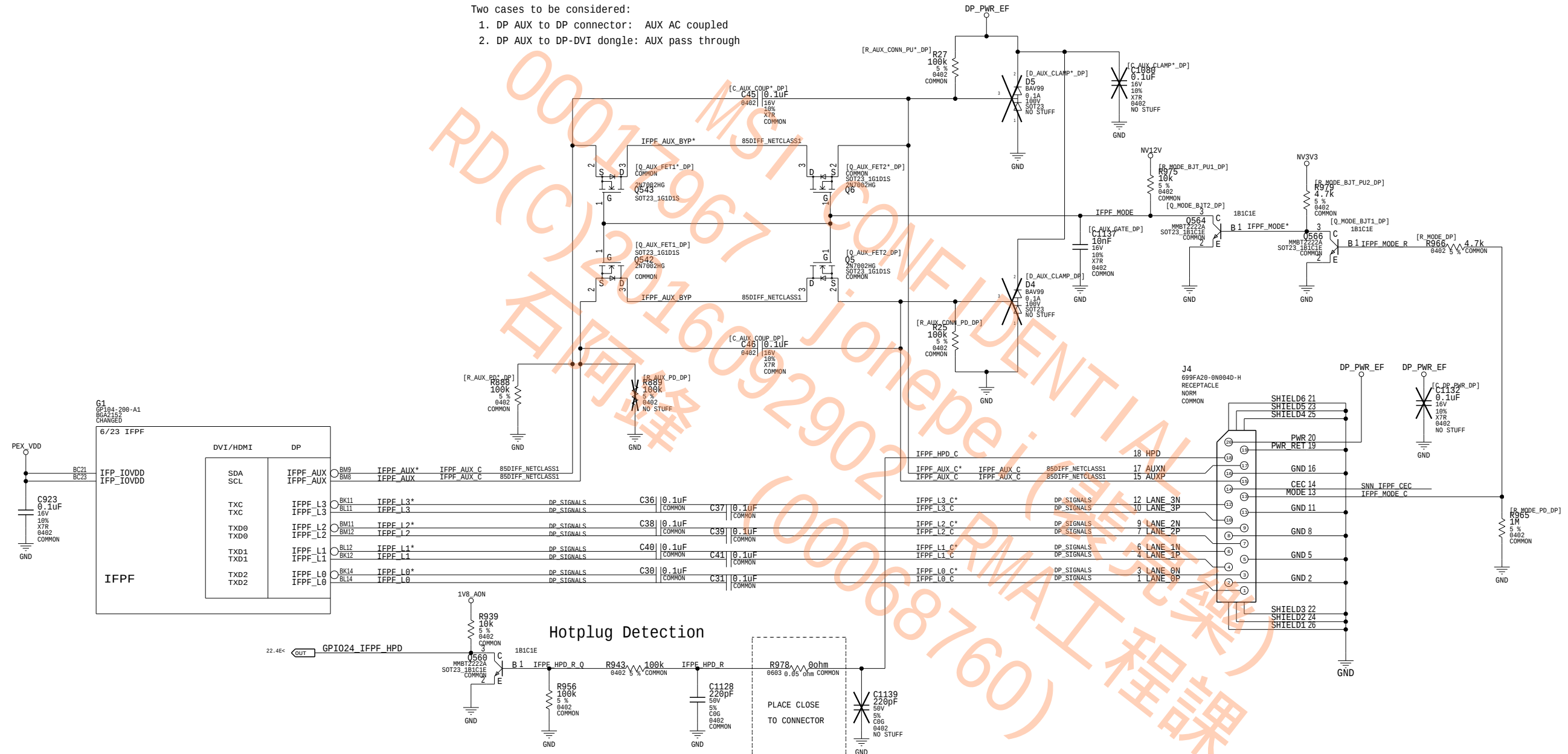


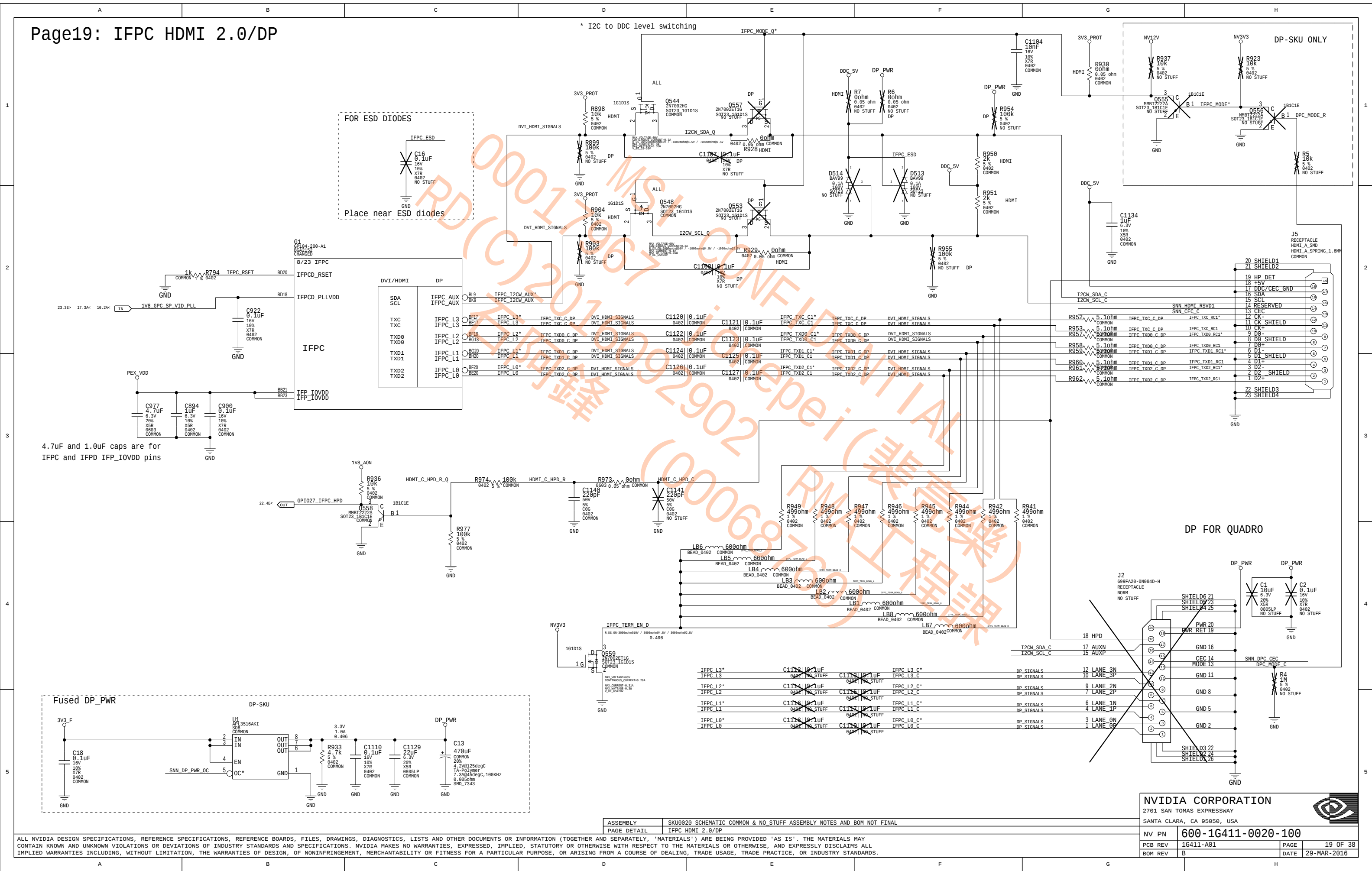
- Two cases to be considered:
1. DP AUX to DP connector: AUX AC coupled
  2. DP AUX to DP-DVI dongle: AUX pass through



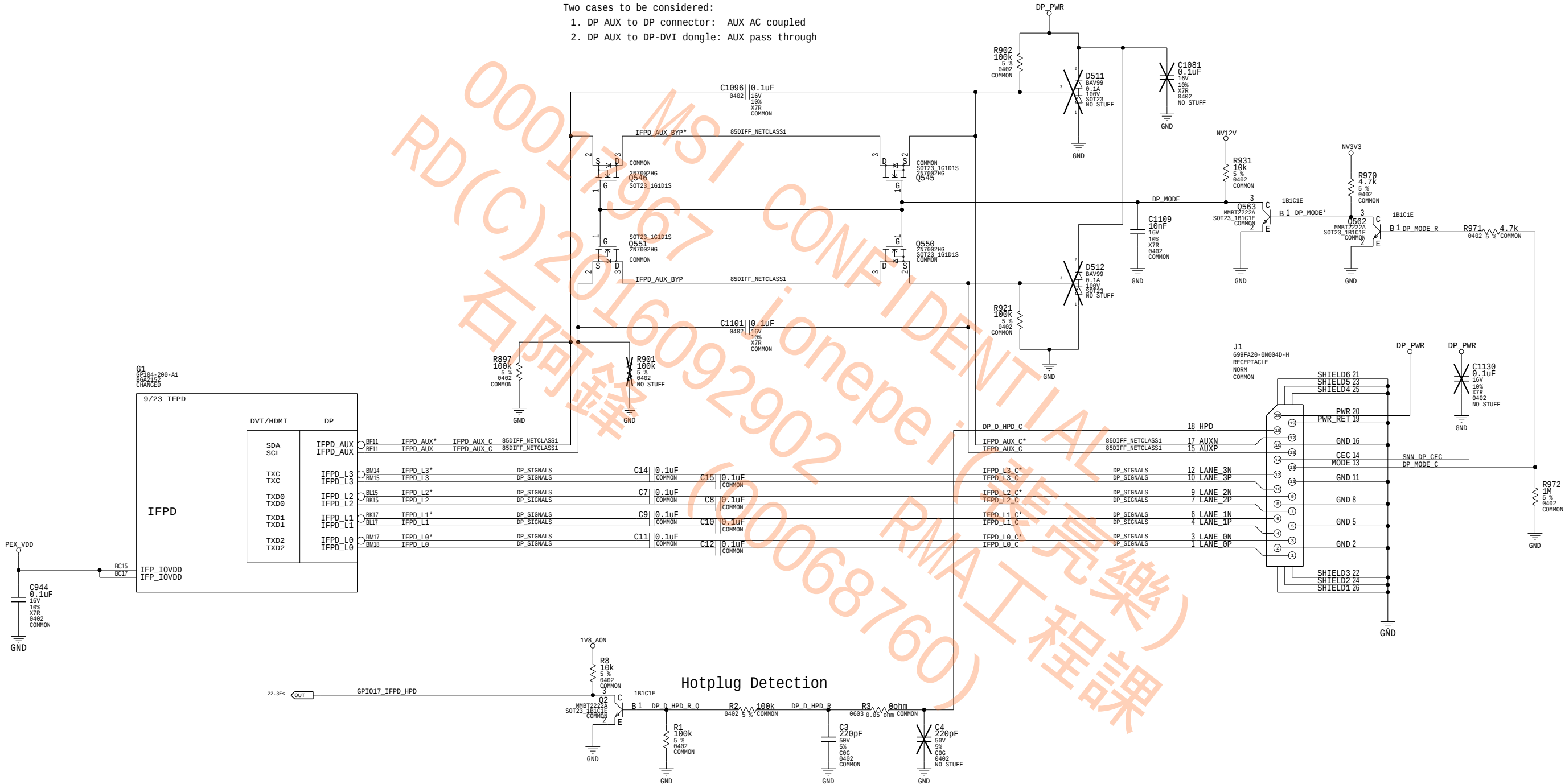
Two cases to be considered:

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

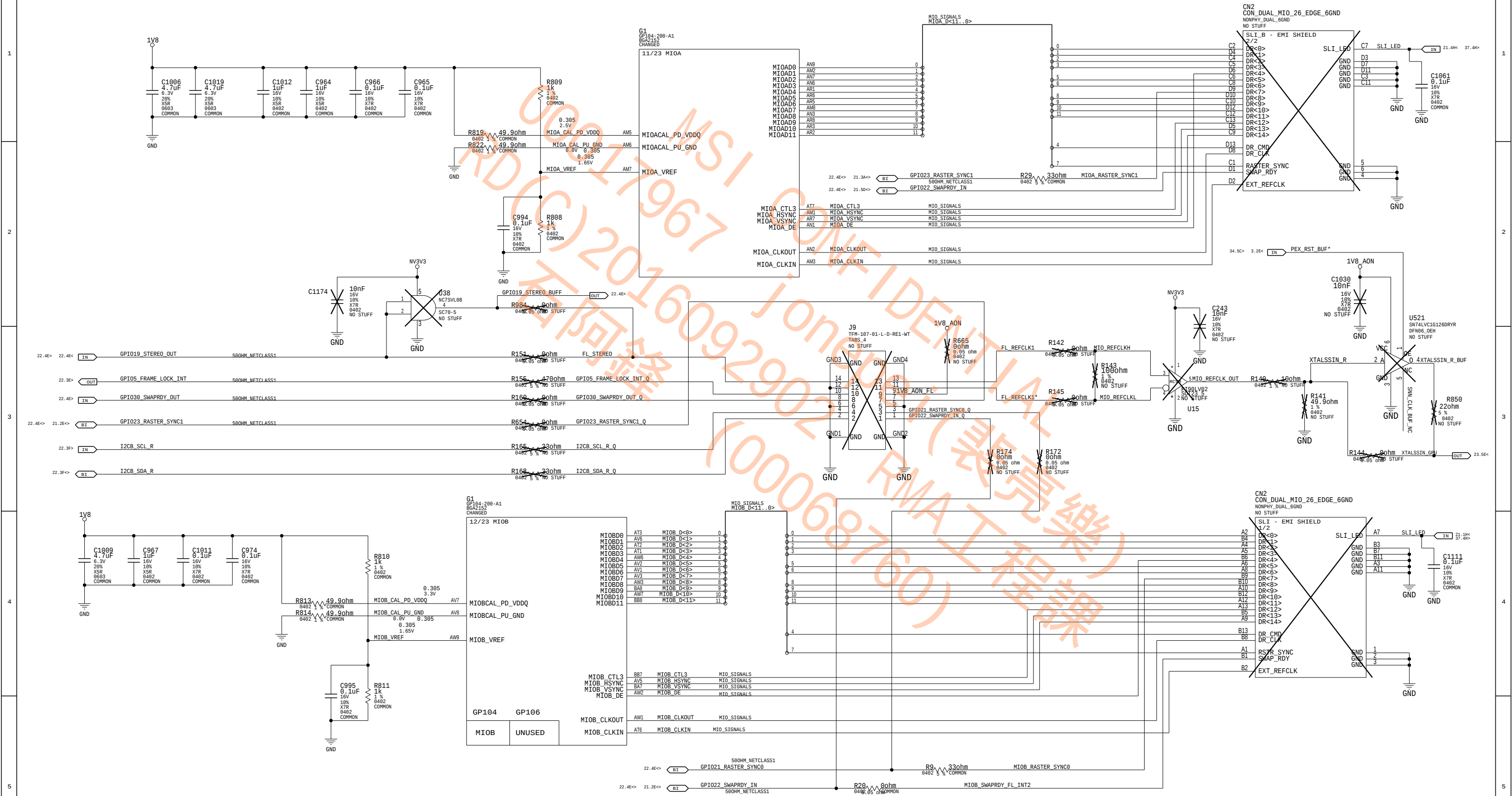


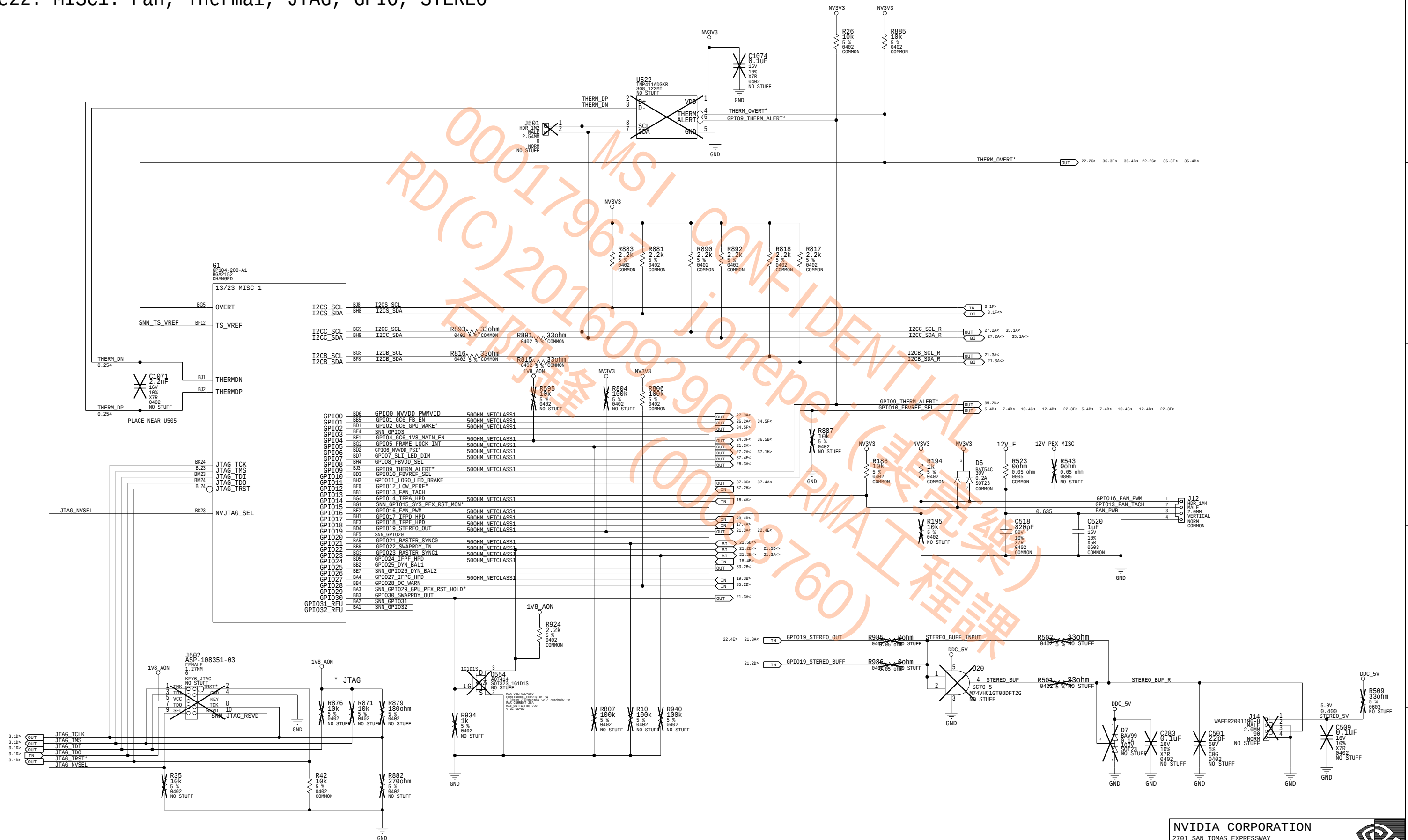


- Two cases to be considered:
1. DP AUX to DP connector: AUX AC coupled
  2. DP AUX to DP-DVI dongle: AUX pass through



## Page21: MIOA/B Interface and FRAME LOCK





Page23: MISC2: ROM, XTAL, Straps

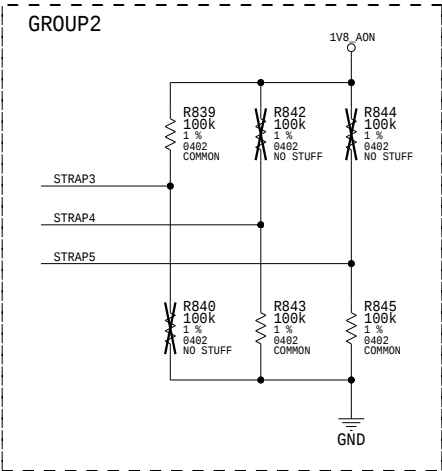
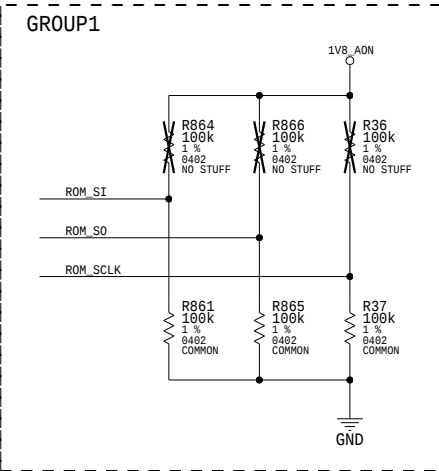
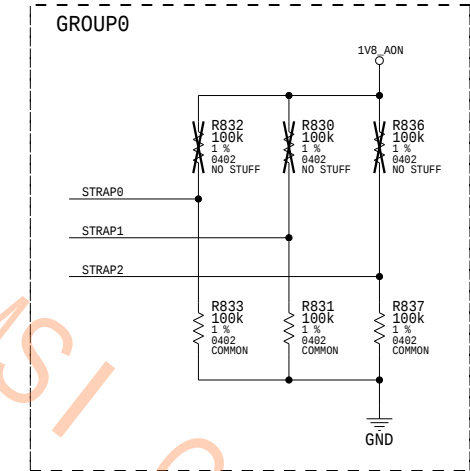
| STRAP2 | STRAP1 | STRAP0   | RAMCFG[4:0]                         |
|--------|--------|----------|-------------------------------------|
| L      | L      | L        | 00000                               |
| L      | H      | L        | 00010                               |
| L      | H      | H        | 00011                               |
| H      | H      | L        | 00110                               |
| H      | H      | H        | 00111                               |
| ROM_S0 | ROM_S1 | ROM_SCLK | S0R_EXPOSED[3:0] 1:ENABLE 0:DISABLE |
| L      | L      | L        | 1111 DEFAULT S0R0/1/2/3 ENABLE      |
| L      | L      | H        | 1110                                |
| L      | H      | L        | 1101                                |
| L      | H      | H        | 1100                                |
| H      | L      | L        | 1011                                |
| H      | L      | H        | 1010                                |
| H      | H      | L        | 1001                                |
| H      | H      | H        | 1000                                |
| L      | L      | M        | 0111                                |
| L      | M      | L        | 0110                                |
| L      | M      | H        | 0101                                |
| L      | H      | M        | 0100                                |
| H      | L      | M        | 0011                                |
| H      | M      | L        | 0010                                |
| H      | M      | H        | 0001                                |
| H      | H      | M        | 0000                                |

| STRAP5 | STRAP4 | STRAP3 | SMB_ALT_ADDR | DEVID_SEL | PCIE_CFG | VGA_DEVICE |
|--------|--------|--------|--------------|-----------|----------|------------|
| M      | H      | H      | 1            | 1         | 1        | 1          |
| M      | H      | L      | 1            | 1         | 1        | 0          |
| M      | L      | H      | 1            | 1         | 0        | 1          |
| M      | L      | L      | 1            | 1         | 0        | 0          |
| L      | H      | M      | 1            | 0         | 1        | 1          |
| L      | M      | H      | 1            | 0         | 1        | 0          |
| L      | M      | L      | 1            | 0         | 0        | 1          |
| L      | L      | M      | 1            | 0         | 0        | 0          |
| H      | H      | H      | 0            | 1         | 1        | 1          |
| H      | H      | L      | 0            | 1         | 1        | 0          |
| H      | L      | H      | 0            | 1         | 0        | 1          |
| H      | L      | L      | 0            | 1         | 0        | 0          |
| L      | H      | H      | 0            | 0         | 1        | 1          |
| L      | H      | L      | 0            | 0         | 1        | 0          |
| L      | L      | H      | 0            | 0         | 0        | 1 DEFAULT  |
| L      | L      | L      | 0            | 0         | 0        | 0          |

H=High :Tied to 1.8V  
M=Middle:Tied to 0.9V  
L=Low :Tied to 0V

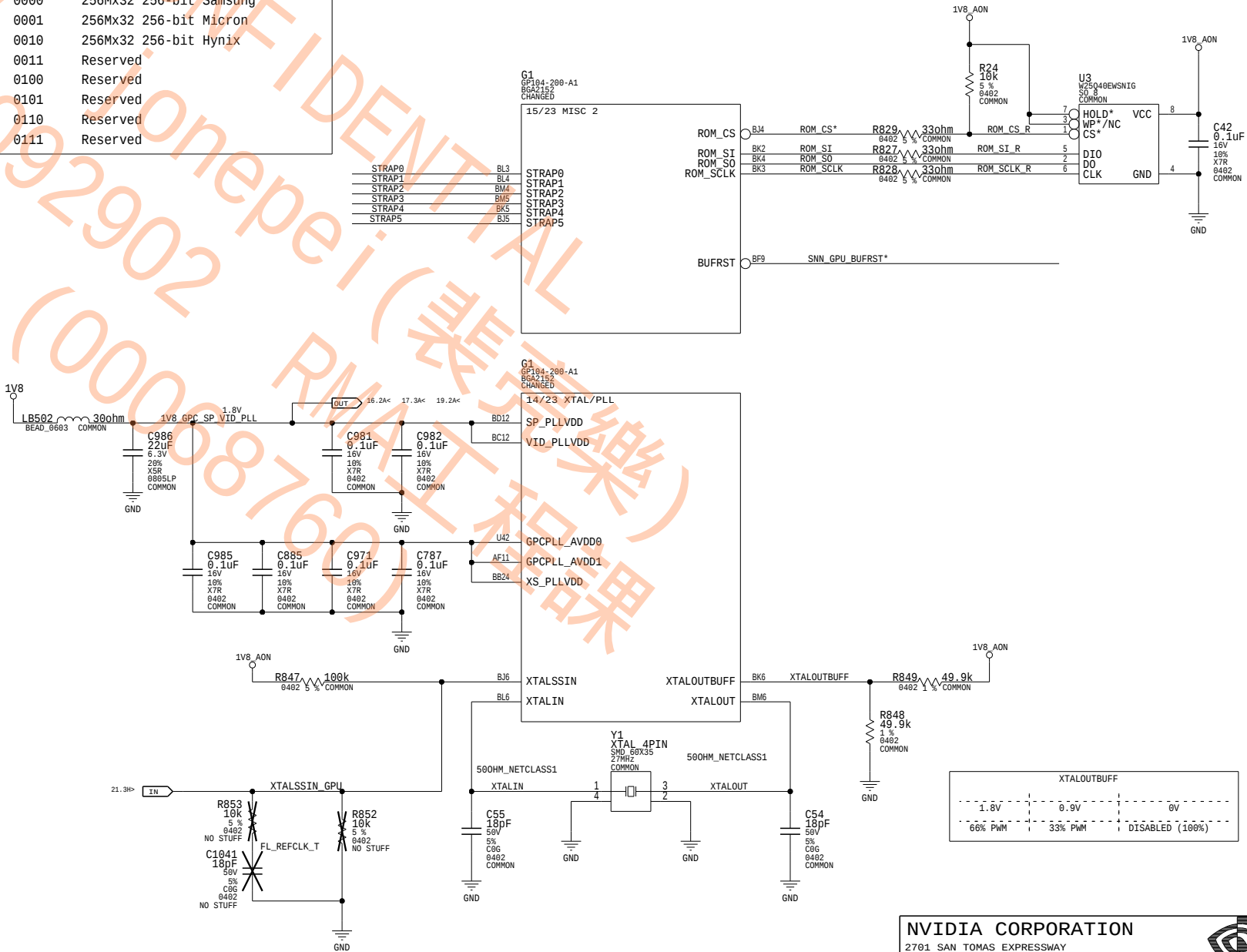
1:SMB\_ALT\_ADDR ENABLE  
0:SMB\_ALT\_ADDR DISABLE  
  
1:DEVID\_SEL REBRAND  
0:DEVID\_SEL ORIGNAL

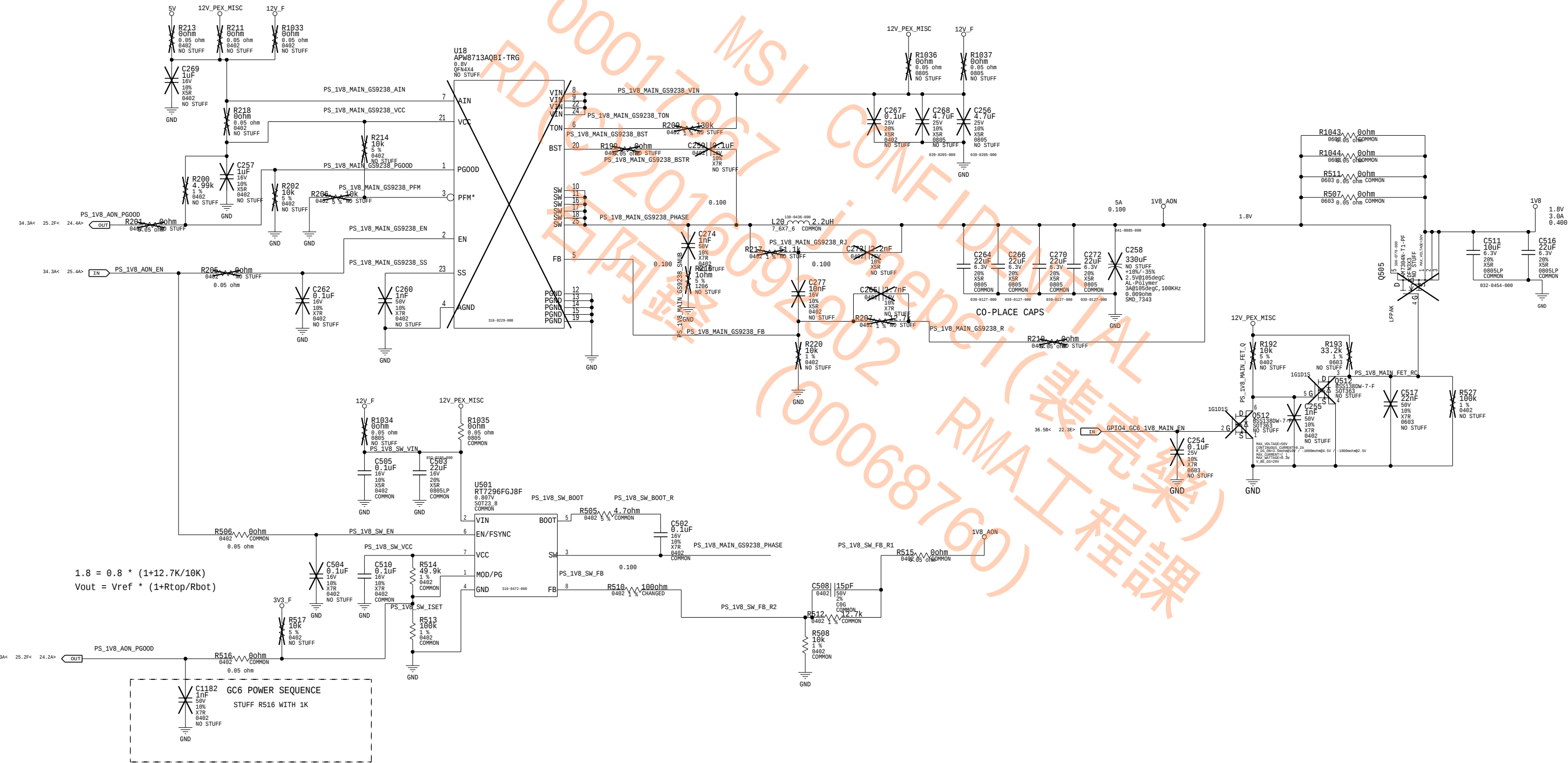
1:PCIE\_CFG LOW POWER  
0:PCIE\_CFG HIGH POWER  
  
1:VGA\_DEVICE ENABLE  
0:VGA\_DEVICE DISABLE



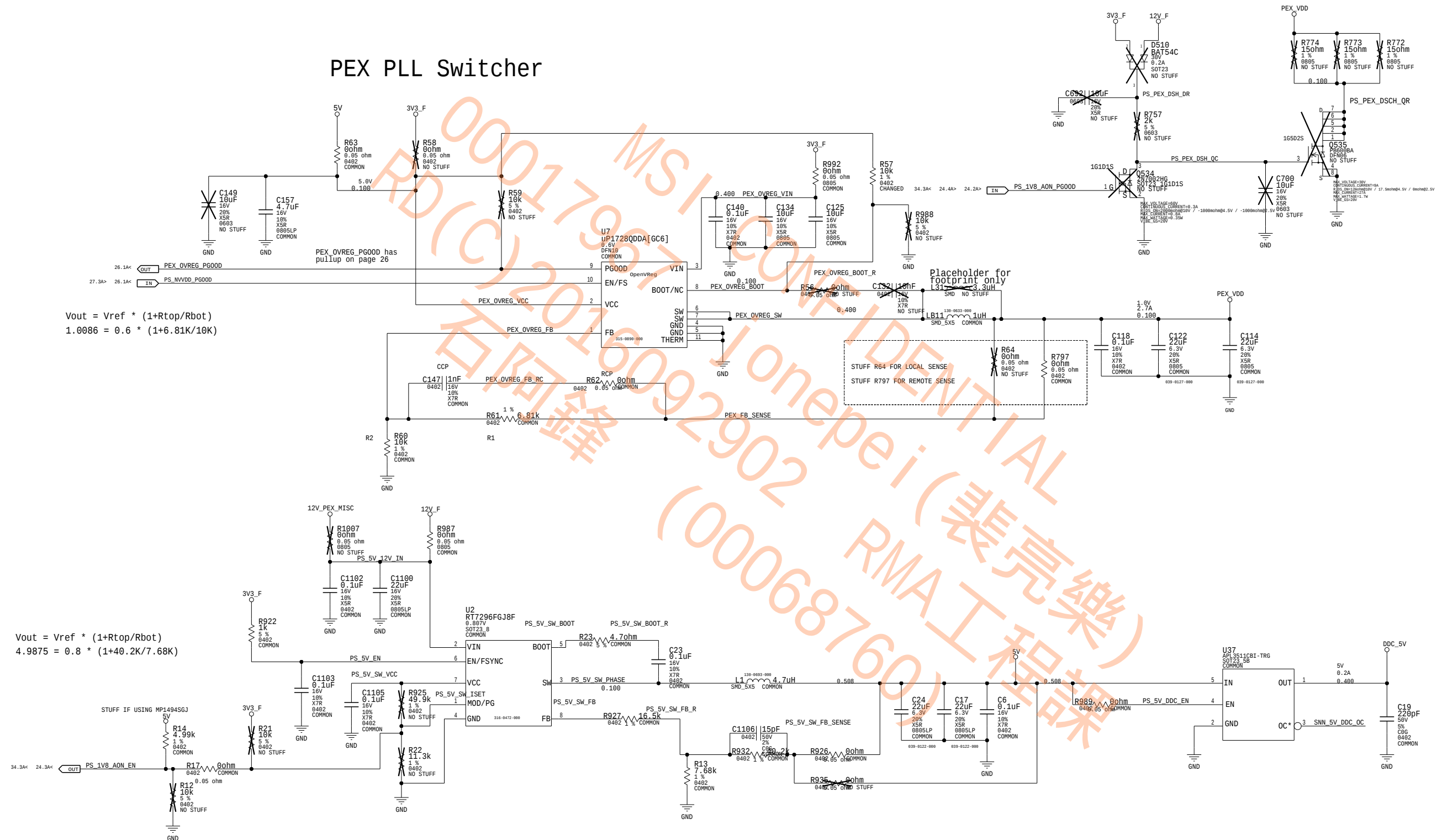
| CFG[3:0] | Config   | Width   | Vendor  |
|----------|----------|---------|---------|
| 0000     | 256Mx32  | 256-bit | Samsung |
| 0001     | 256Mx32  | 256-bit | Micron  |
| 0010     | 256Mx32  | 256-bit | Hynix   |
| 0011     | Reserved |         |         |
| 0100     | Reserved |         |         |
| 0101     | Reserved |         |         |
| 0110     | Reserved |         |         |
| 0111     | Reserved |         |         |

|        |     |
|--------|-----|
| STRAP0 | BL3 |
| STRAP1 | BL4 |
| STRAP2 | BMA |
| STRAP3 | BMS |
| STRAP4 | BKS |
| STRAP5 | BJS |





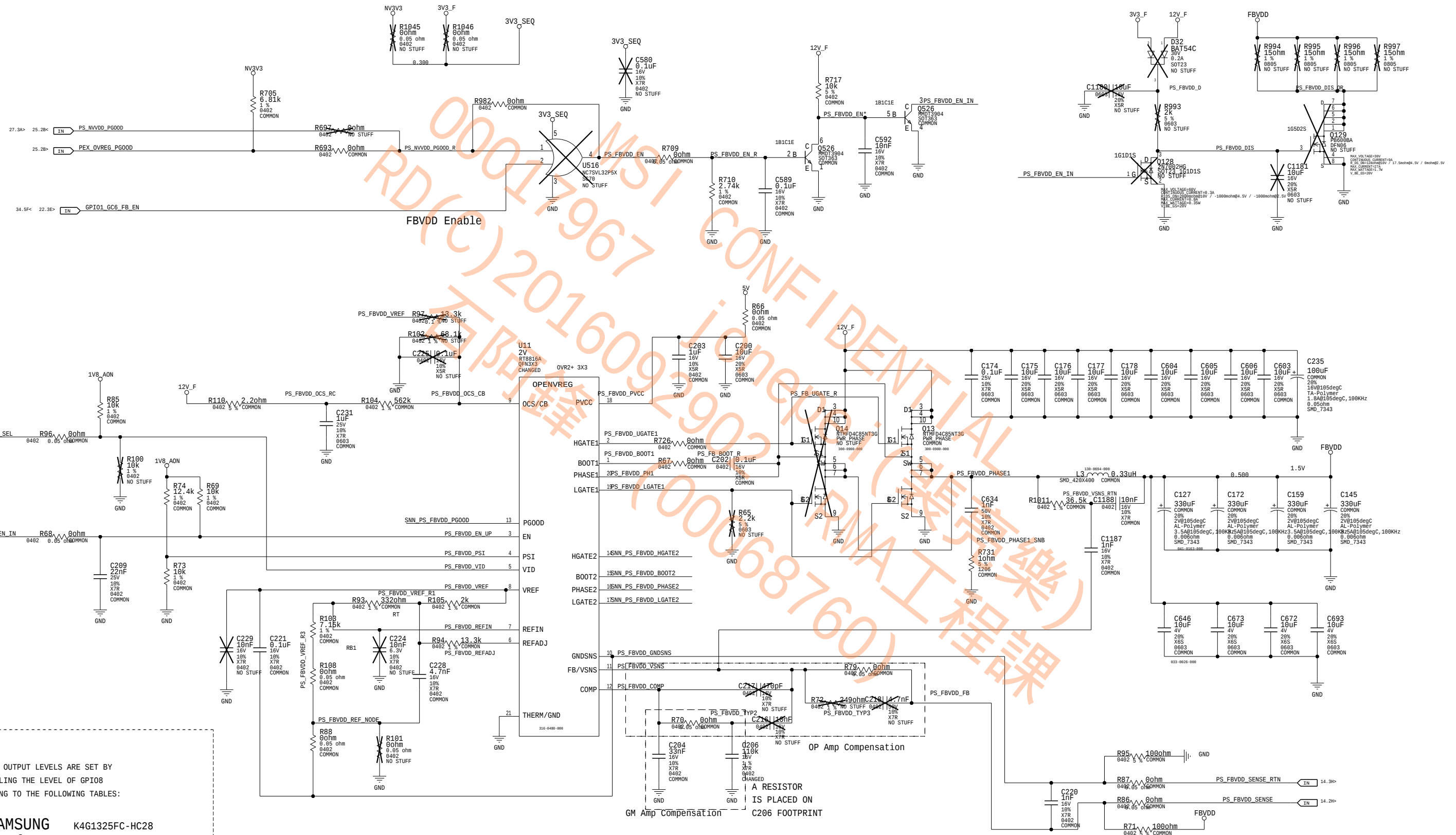
# PEX PLL Switcher



|             |                                                                      |
|-------------|----------------------------------------------------------------------|
| ASSEMBLY    | SKU0020 SCHEMATIC COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL |
| PAGE DETAIL | PS: 5V, PEX_VDD                                                      |

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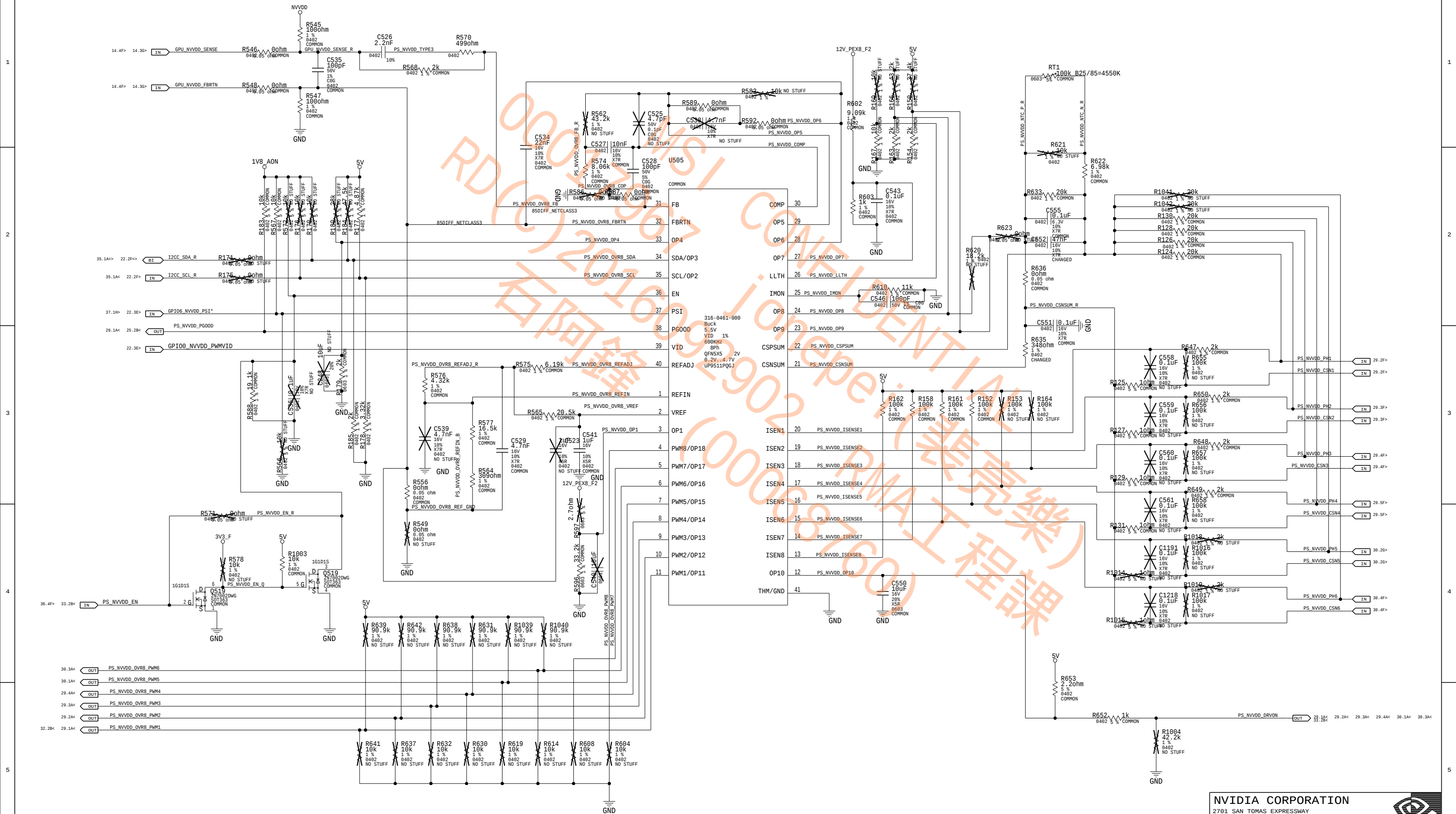
|                                                                                      |  |                           |                                                                                       |                         |
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| <b>NV_PN</b>                                                                         |  | <b>600-1G411-0020-100</b> |                                                                                       |                         |
| <b>PCB REV</b>                                                                       |  | <b>1G411-A01</b>          |                                                                                       | <b>PAGE</b> 25 OF 38    |
| <b>BOM REV</b>                                                                       |  | <b>B</b>                  |                                                                                       | <b>DATE</b> 29-MAR-2016 |



| SAMSUNG |       | K4G1325FC-HC28       |
|---------|-------|----------------------|
| GPI08   | LEVEL | FBVDD OUTPUT VOLTAGE |
| 0       |       | 1.35V                |
| 1       |       | 1.55V                |

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## Page27: PS: NVVDD\_OVR8



|             |                                                                      |
|-------------|----------------------------------------------------------------------|
| ASSEMBLY    | SKU0020 SCHEMATIC COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL |
| PAGE DETAIL | PS: NVVDD_OVR8                                                       |

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|---------|-----------|------|-------------|
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| BOM REV | B         | DATE | 29-MAR-2016 |



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RD(C)2016092902 RMA工程課  
石阿鋒 (00068760)

|             |                                                                      |  |  |
|-------------|----------------------------------------------------------------------|--|--|
| ASSEMBLY    | SKU0020 SCHEMATIC COMMON & NO STUFF ASSEMBLY NOTES AND BOM NOT FINAL |  |  |
| PAGE DETAIL | PS: Blank Page                                                       |  |  |

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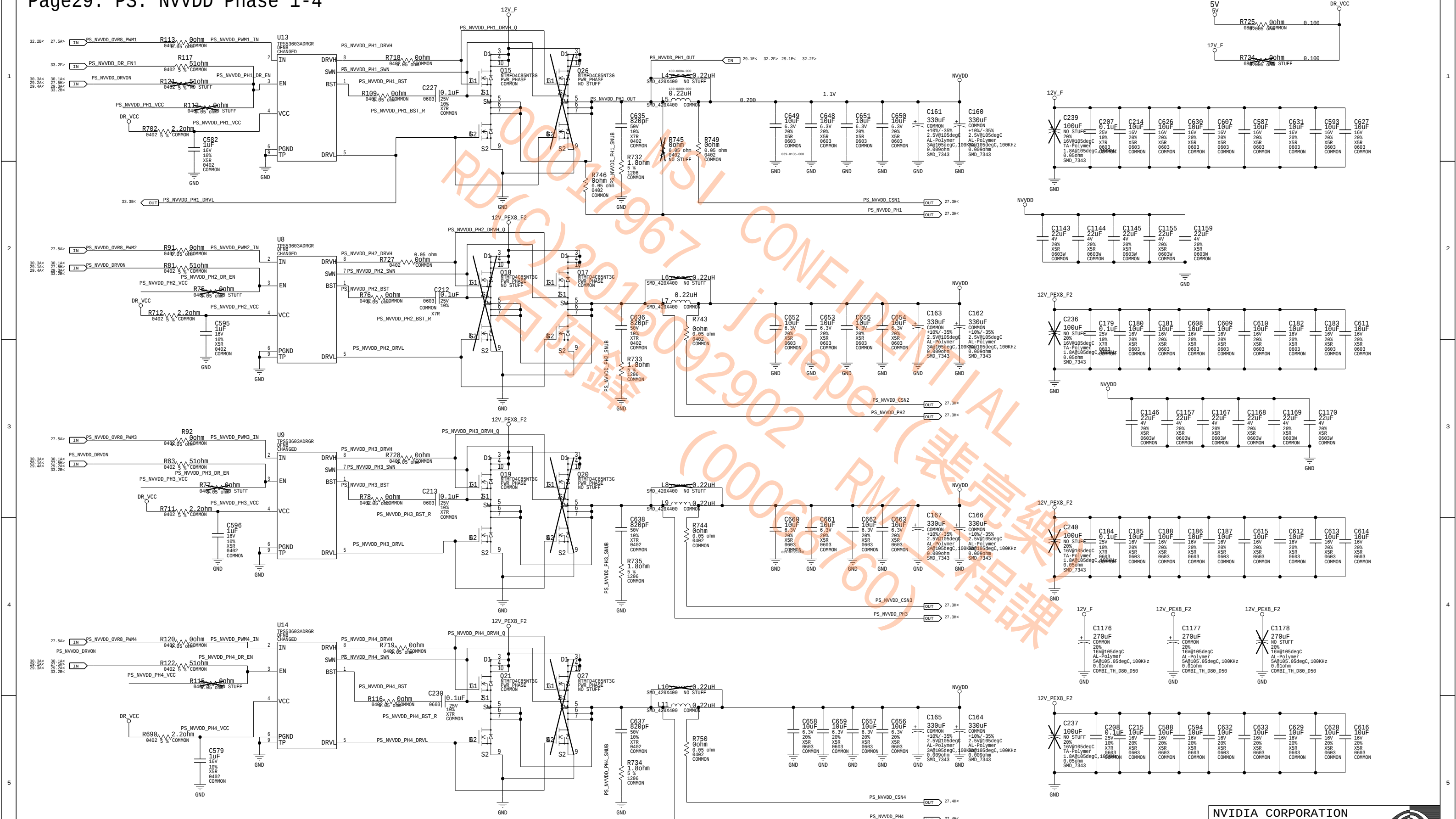
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|---------|--------------------|------|-------------|
| NV_PN   | 600-1G411-0020-100 |      |             |
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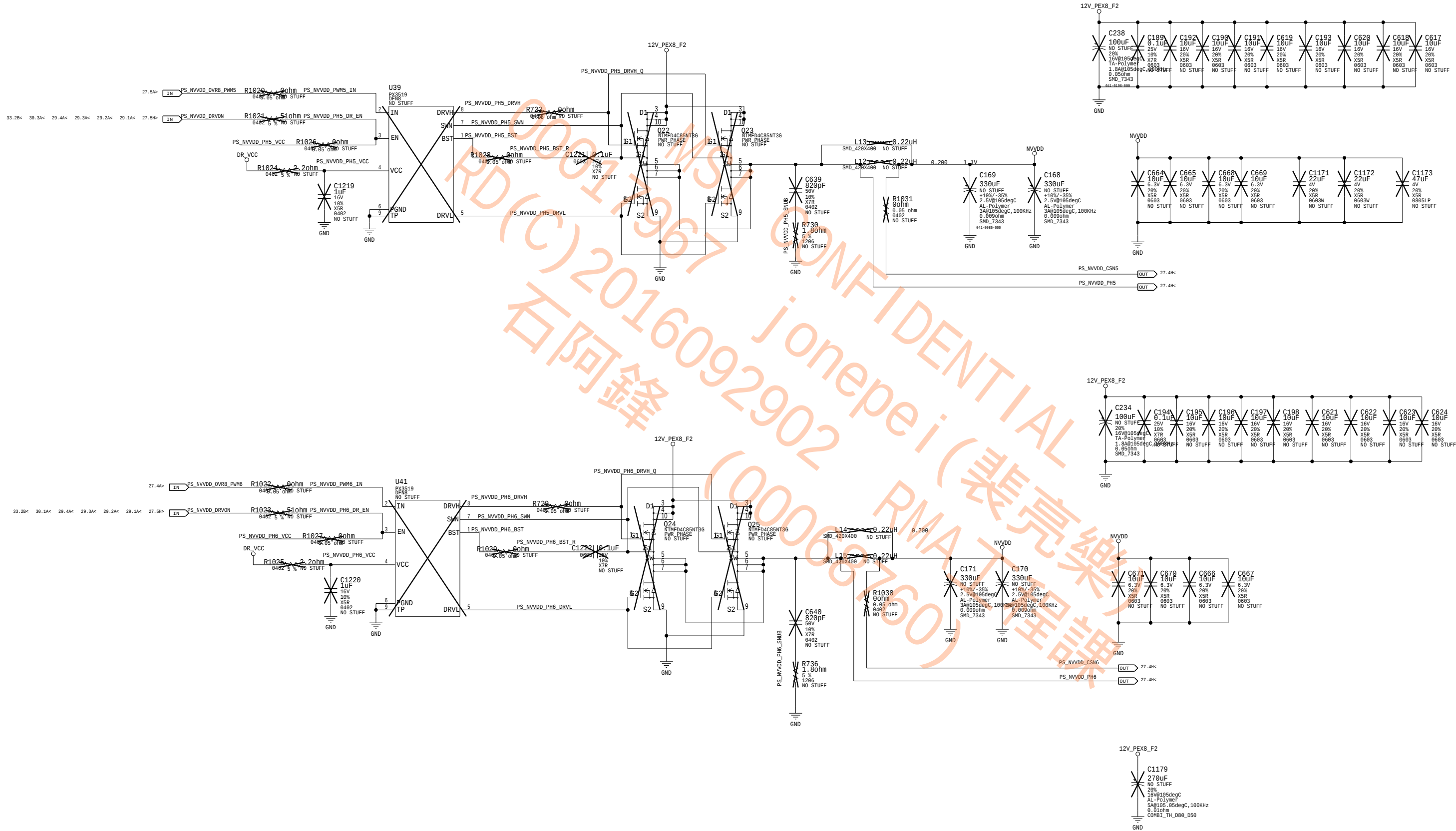
## Page29: PS: NVVDD Phase 1-4



|             |                                                                      |
|-------------|----------------------------------------------------------------------|
| ASSEMBLY    | SKU0020 SCHEMATIC COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL |
| PAGE DETAIL | PS: NWDD Phase 1-4                                                   |

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| <b>NV_PN</b>                                                                         | <b>600-1G411-0020-100</b> |             |                                                                                       |  |
| <b>PCB REV</b>                                                                       | 1G411-A01                 | <b>PAGE</b> | 29 OF 38                                                                              |  |
| <b>BOM REV</b>                                                                       | B                         | <b>DATE</b> | 29-MAR-2016                                                                           |  |



|                                                                                      |                  |                           |                                                                                       |  |
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| <b>NV_PN</b>                                                                         |                  | <b>600-1G411-0020-100</b> |                                                                                       |  |
| <b>PCB REV</b>                                                                       | <b>1G411-A01</b> | <b>PAGE</b>               | <b>30 OF 38</b>                                                                       |  |
| <b>BOM REV</b>                                                                       | <b>B</b>         | <b>DATE</b>               | <b>29-MAR-2016</b>                                                                    |  |

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石阿鋒 (00068760)

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|-------------|----------------------------------------------------------------------|--|--|
| ASSEMBLY    | SKU0020 SCHEMATIC COMMON & NO STUFF ASSEMBLY NOTES AND BOM NOT FINAL |  |  |
| PAGE DETAIL | PS: Blank Page                                                       |  |  |

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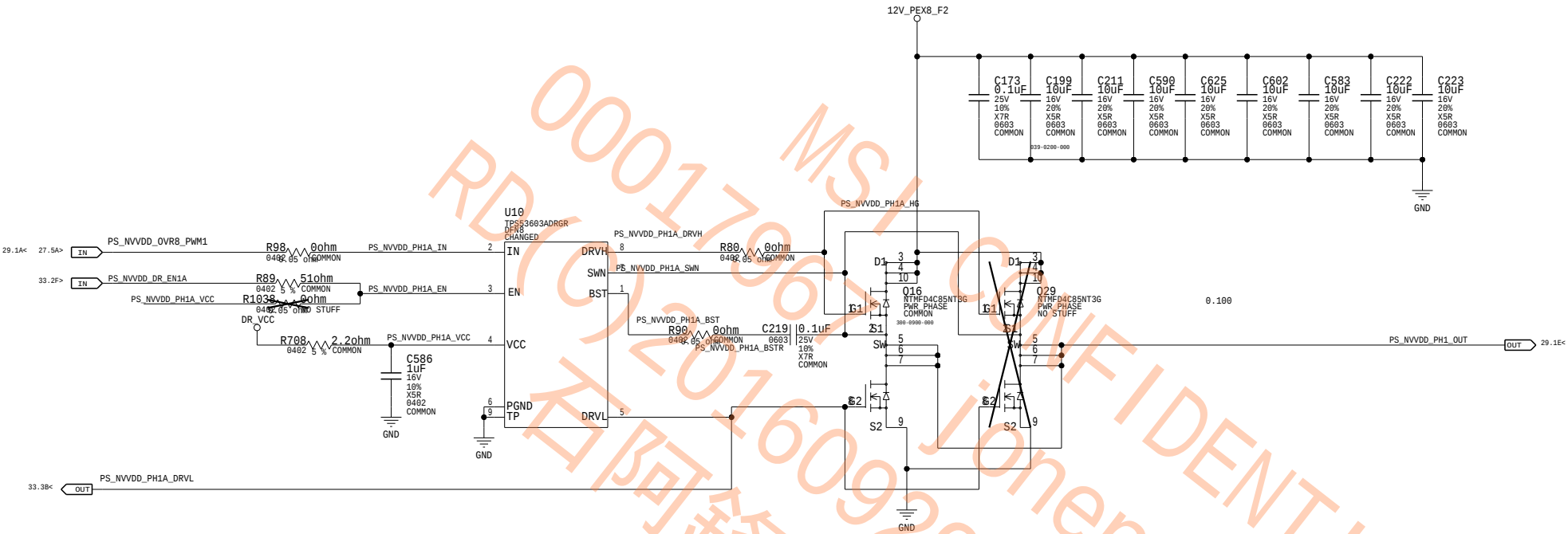
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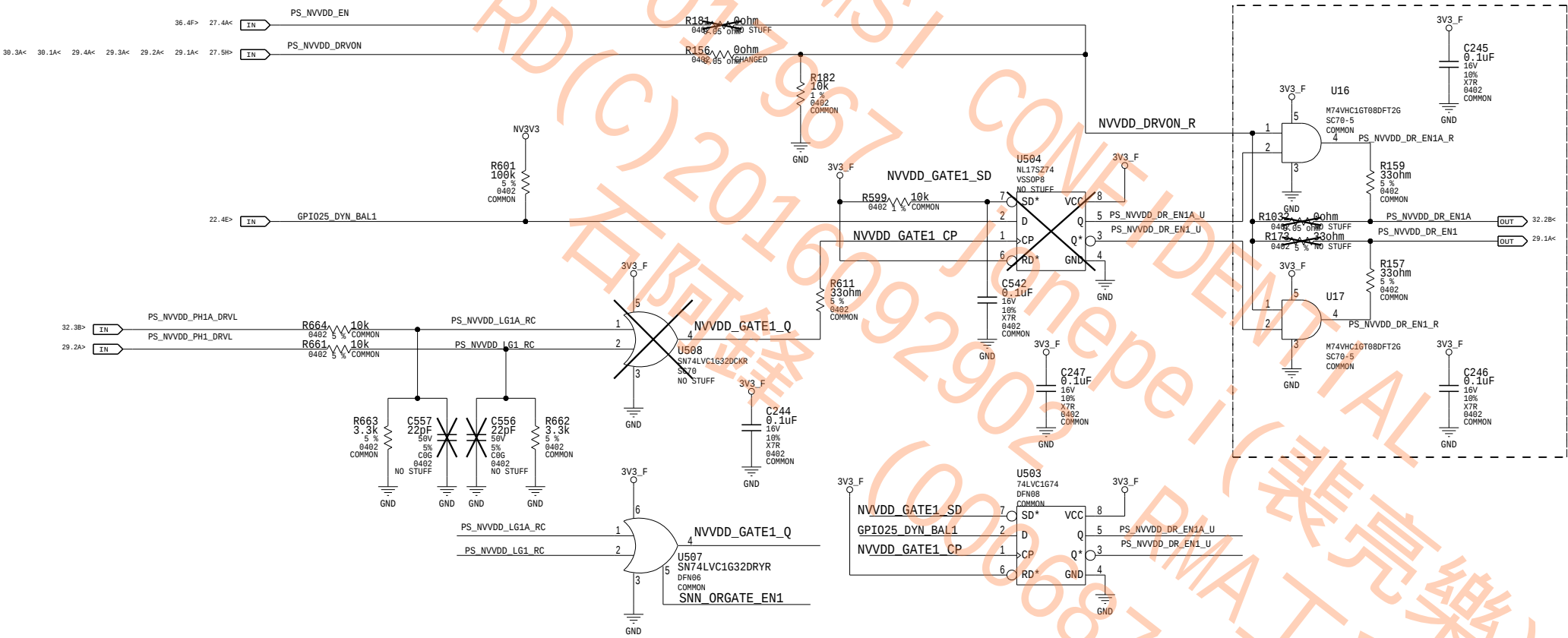
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|---------|--------------------|------|-------------|
| NV_PN   | 600-1G411-0020-100 | PAGE | 31 OF 38    |
| PCB REV | 1G411-A01          | DATE | 29-MAR-2016 |
| BOM REV | B                  |      |             |

Page32: PS: Dynamic Power Balance Phases

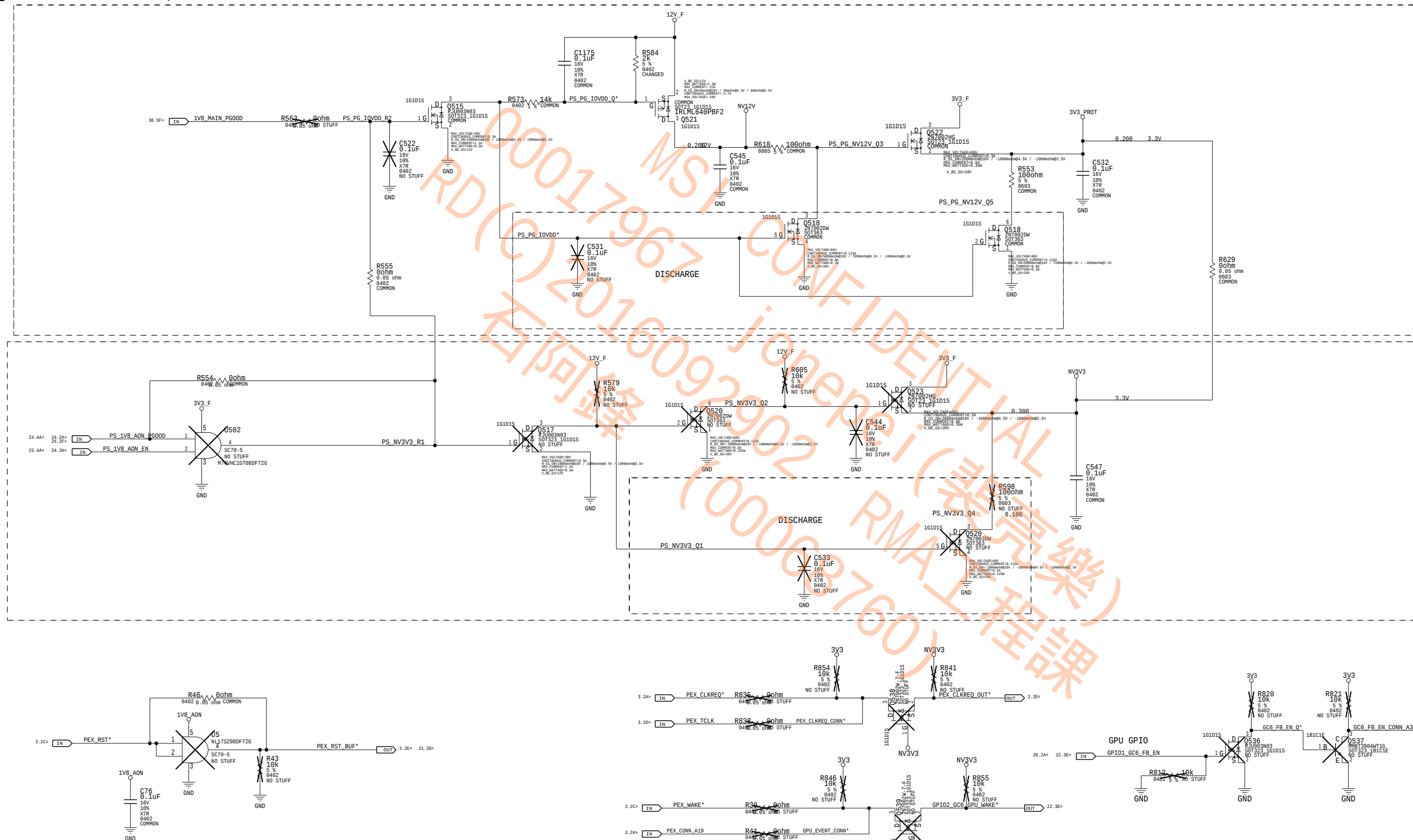


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Page33: PS: Dynamic Power Balance Logic



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| ASSEMBLY    | SKU0020 SCHEMATIC COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL |
| PAGE DETAIL | PS: NV3V3, NV12V                                                     |

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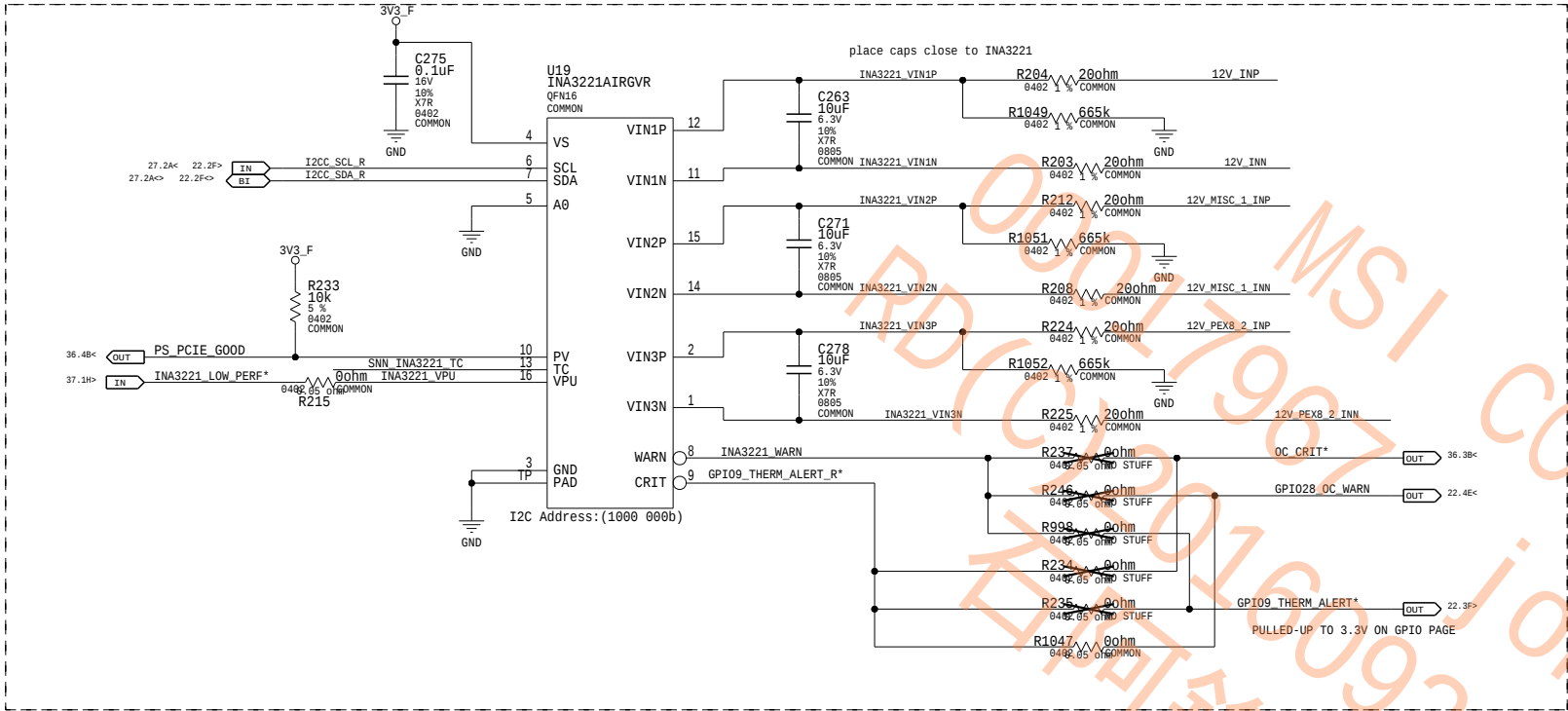
SANTA CLARA, CA 95050, USA

|       |                    |
|-------|--------------------|
| NV_PN | 600-1G411-0020-100 |
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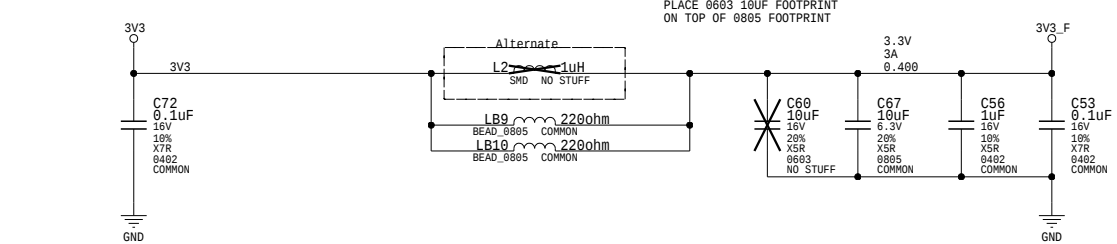
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|---------|-----------|------|-------------|
| PCB REV | 1G411-A01 | PAGE | 34 OF 38    |
| BOM REV | B         | DATE | 29-MAR-2016 |



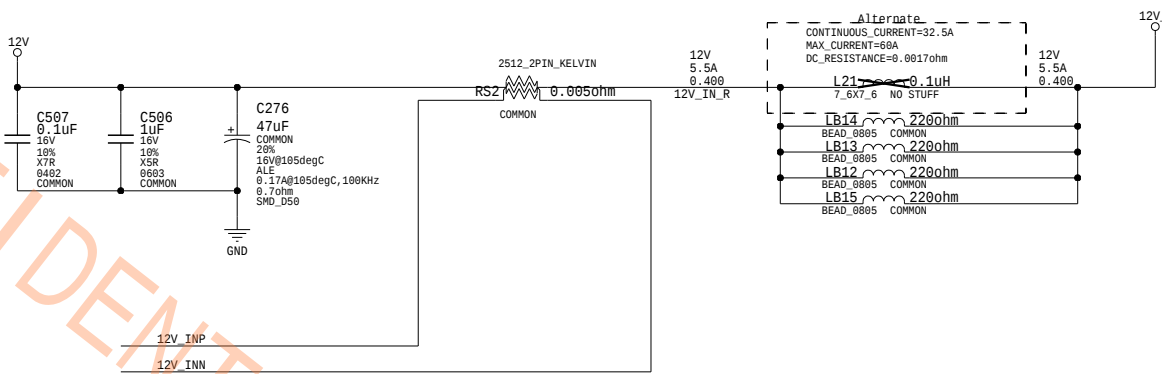
Page35: PS: Inputs, Filtering, and Monitoring



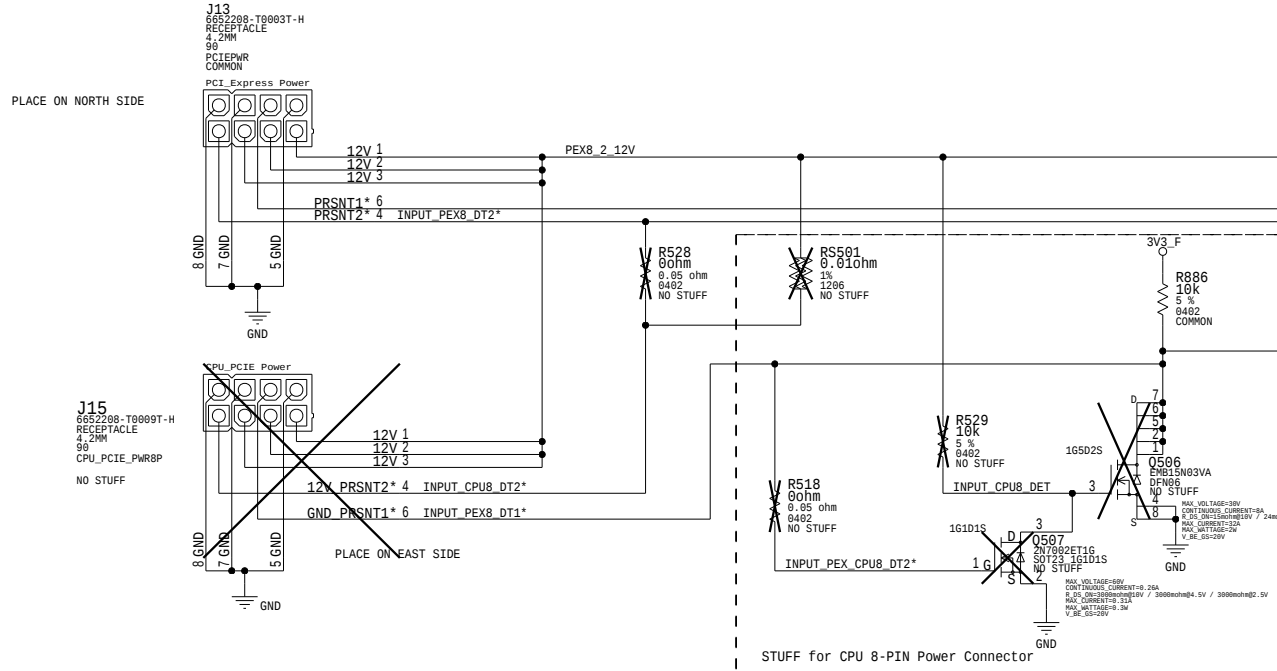
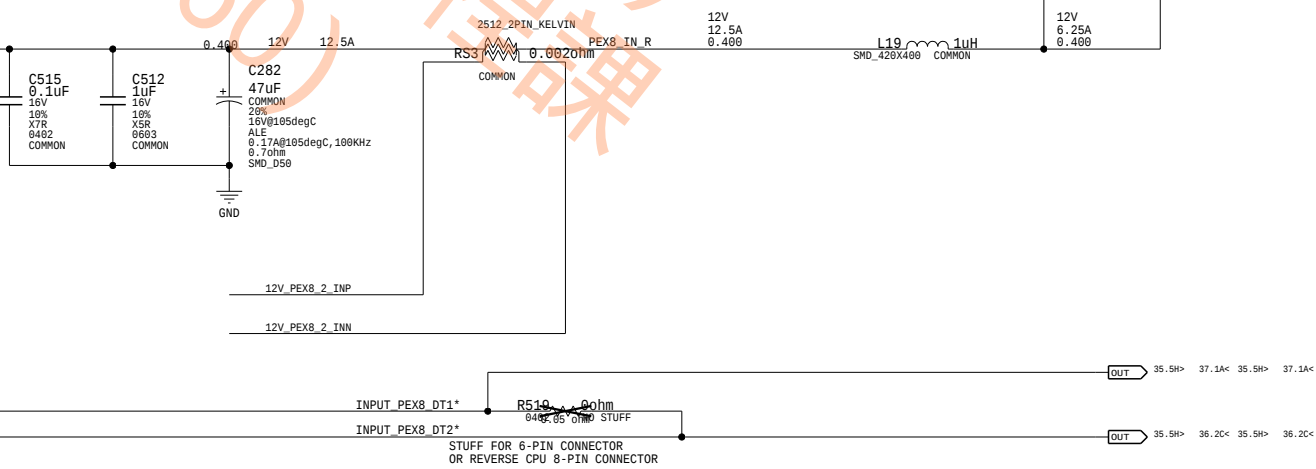
PEX 3V3 INPUT - 10W



PEX\_12V INPUT - 66W

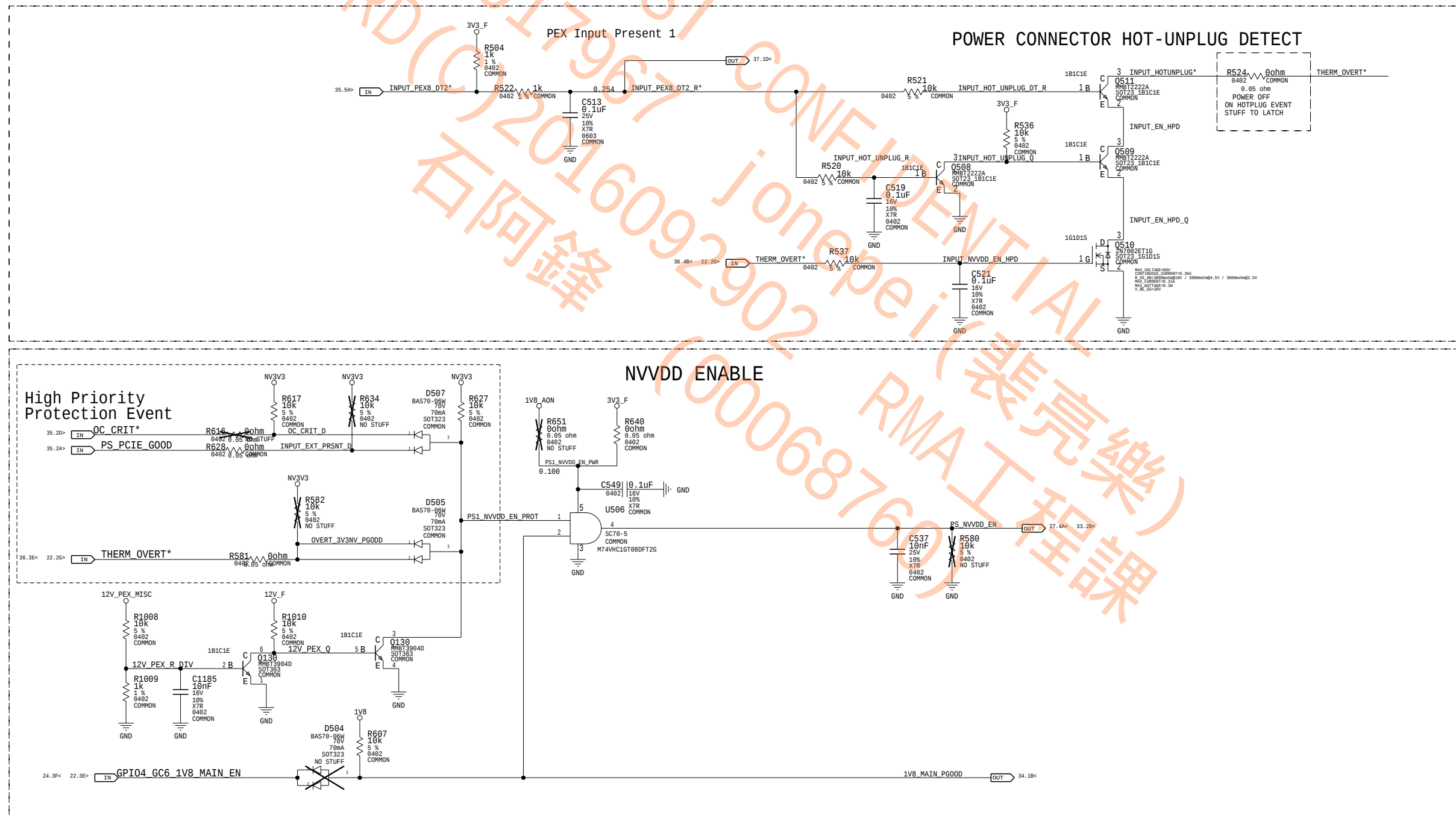


PEX8 INPUT 2 - 2x4 PCIE CON 150W

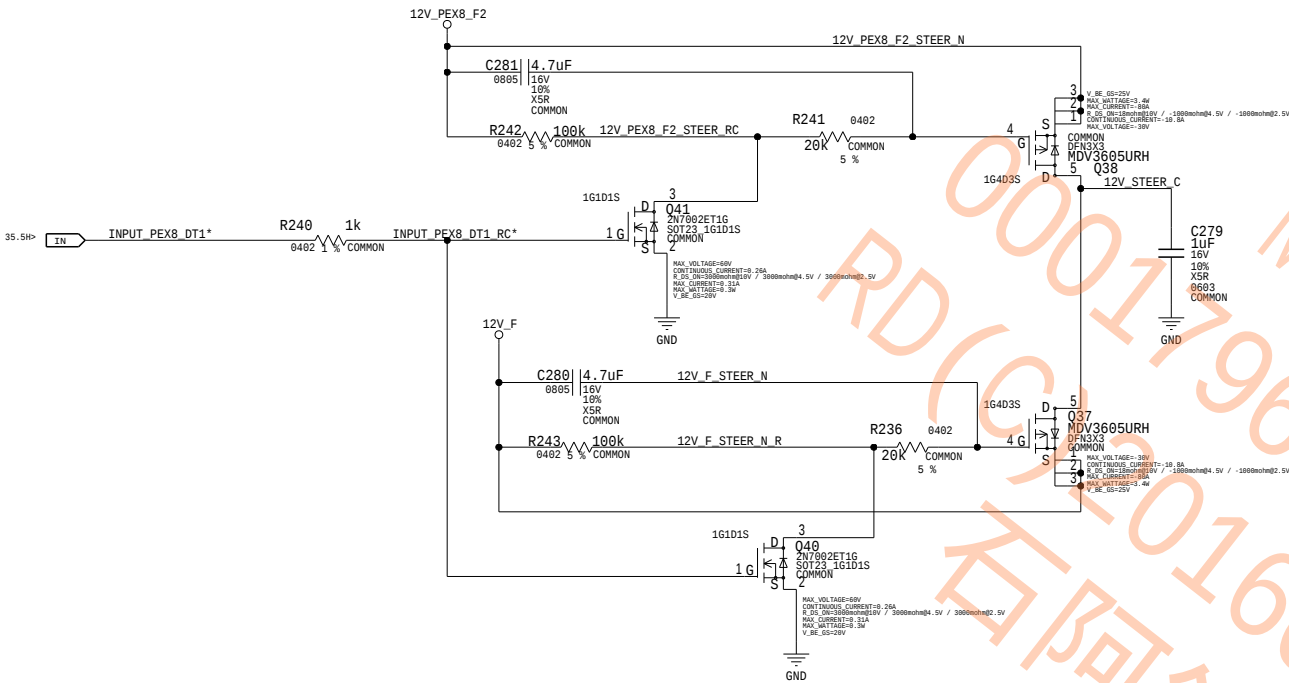


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| NV_PN                      | 600-16411-0020-100 |      |             |
| PCB REV                    | 16411-A01          | PAGE | 35 OF 38    |
| BOM REV                    | B                  | DATE | 29-MAR-2016 |

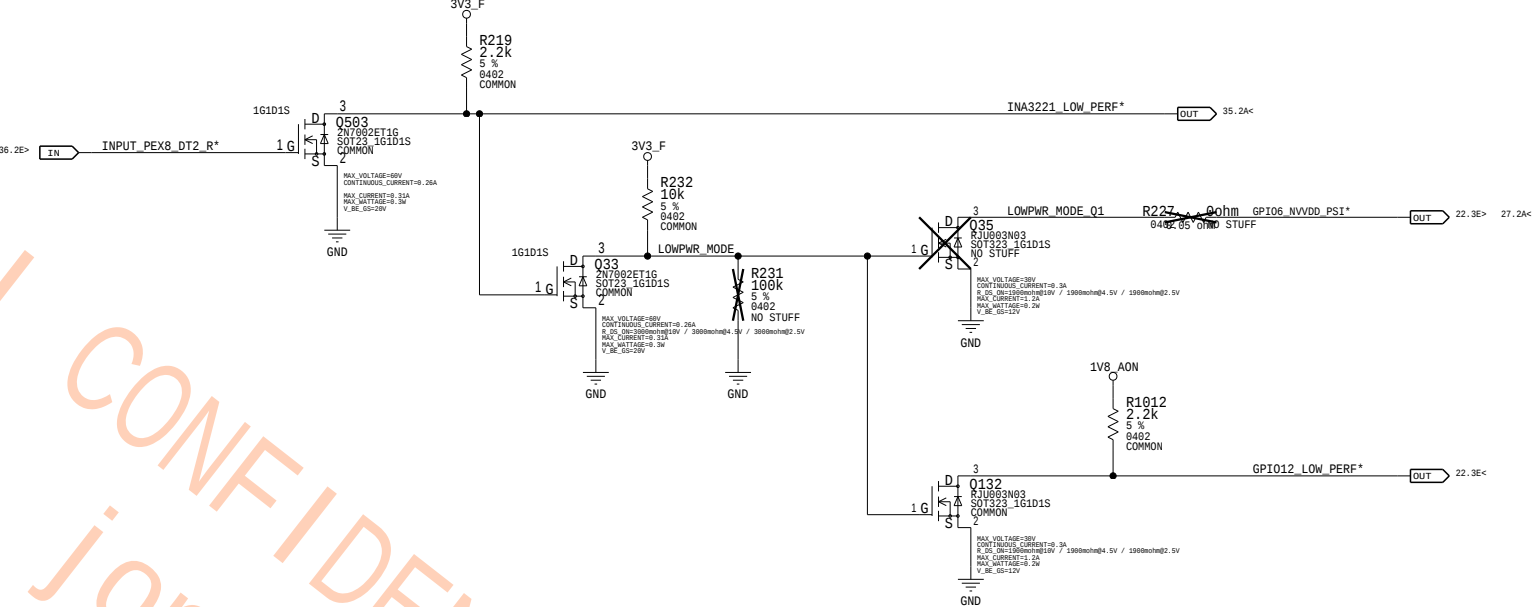
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PEX Input - 12V Current Steering FETs

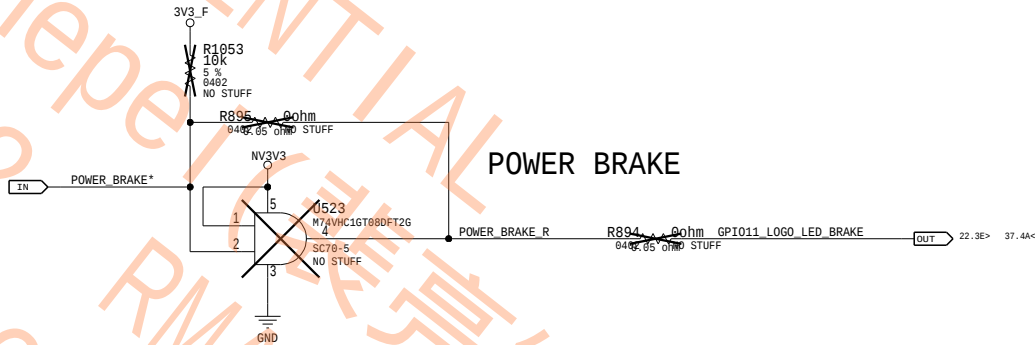


PEX Input - Power Level/PSI\* Control



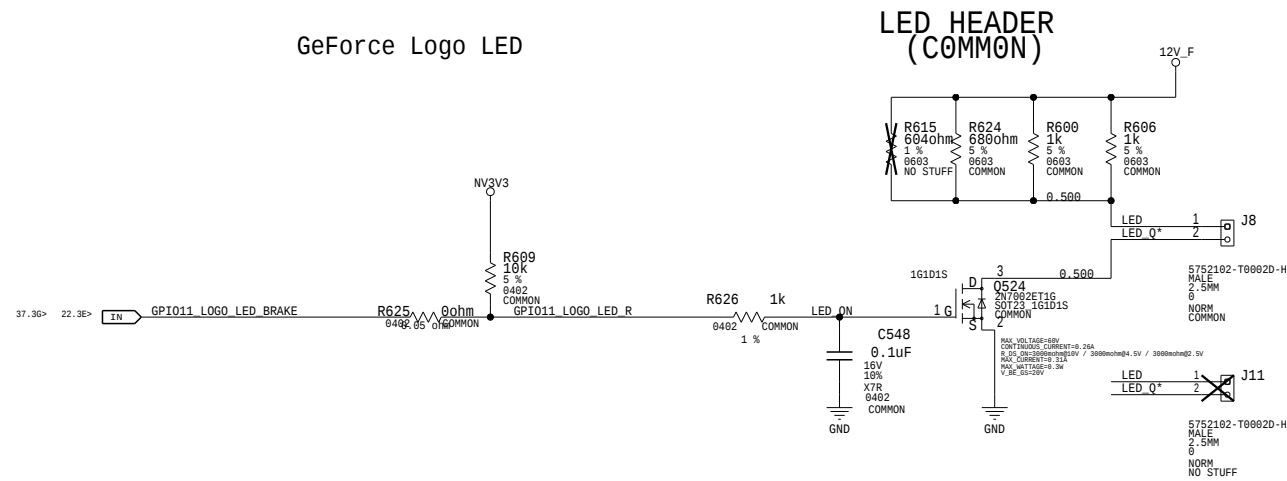
| GPIO12_LOW_PERF* | GPU SPEED |
|------------------|-----------|
| 0                | Slow      |
| 1                | Normal    |

POWER BRAKE

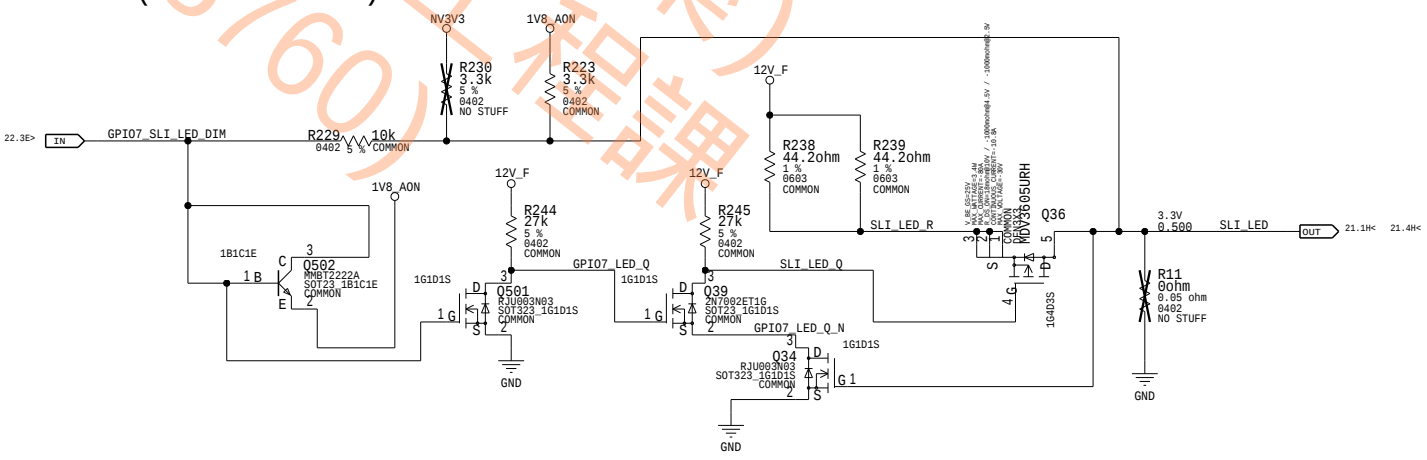


GeForce Logo LED

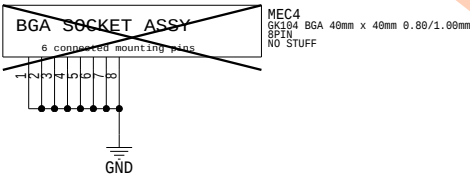
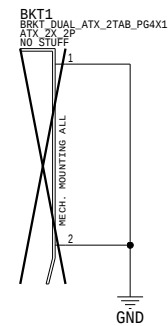
LED HEADER (COMMON)



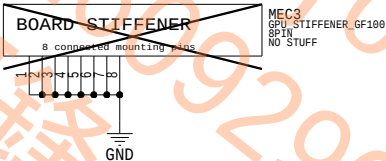
SLI LED (GEFORCE ONLY)



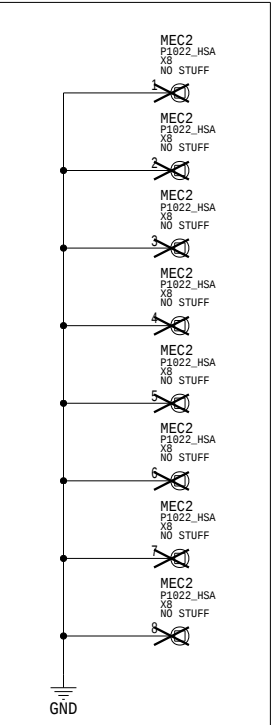
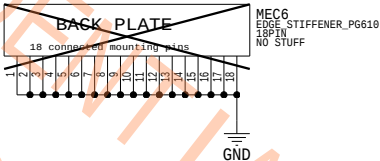
Brackets:



GPU Stiffner



Mechanical Holes Symbol



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