

P2083-B01

GK110, 3GB GDDR5, 384b, 64Mx32 +128Mx32  
DVI\_I+DVI\_D + HDMI + DP

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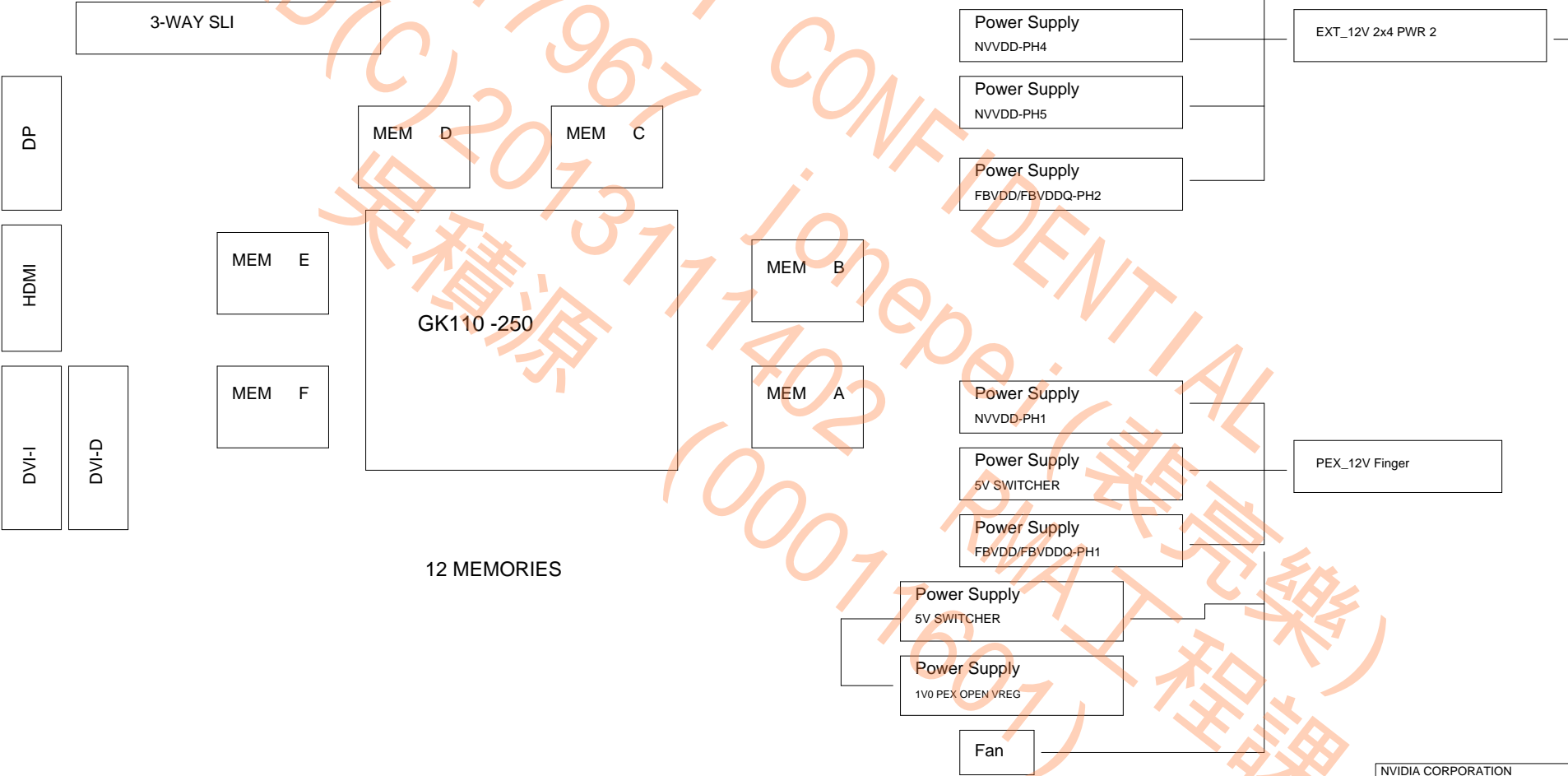
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## Page3: PCI Express



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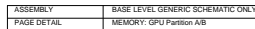
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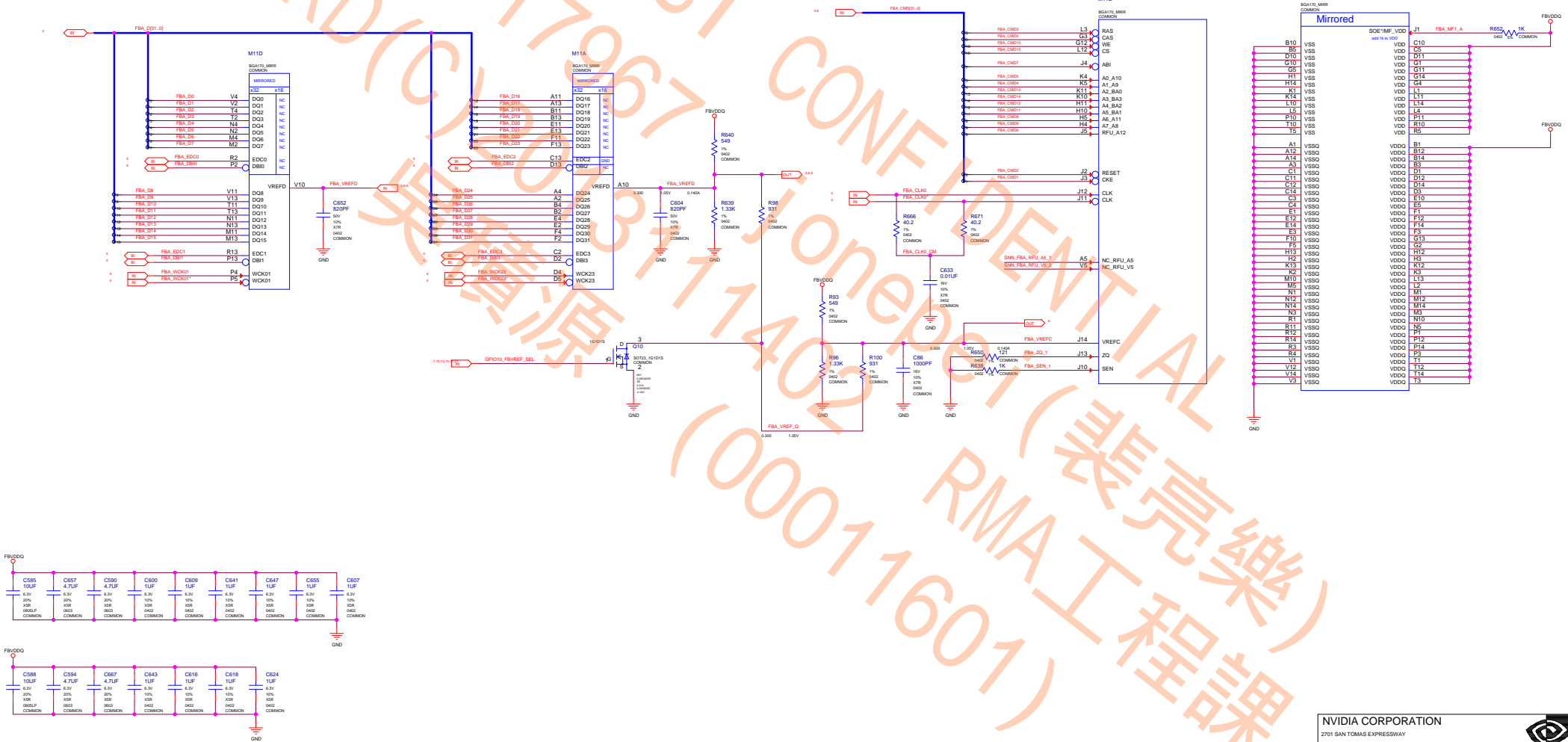
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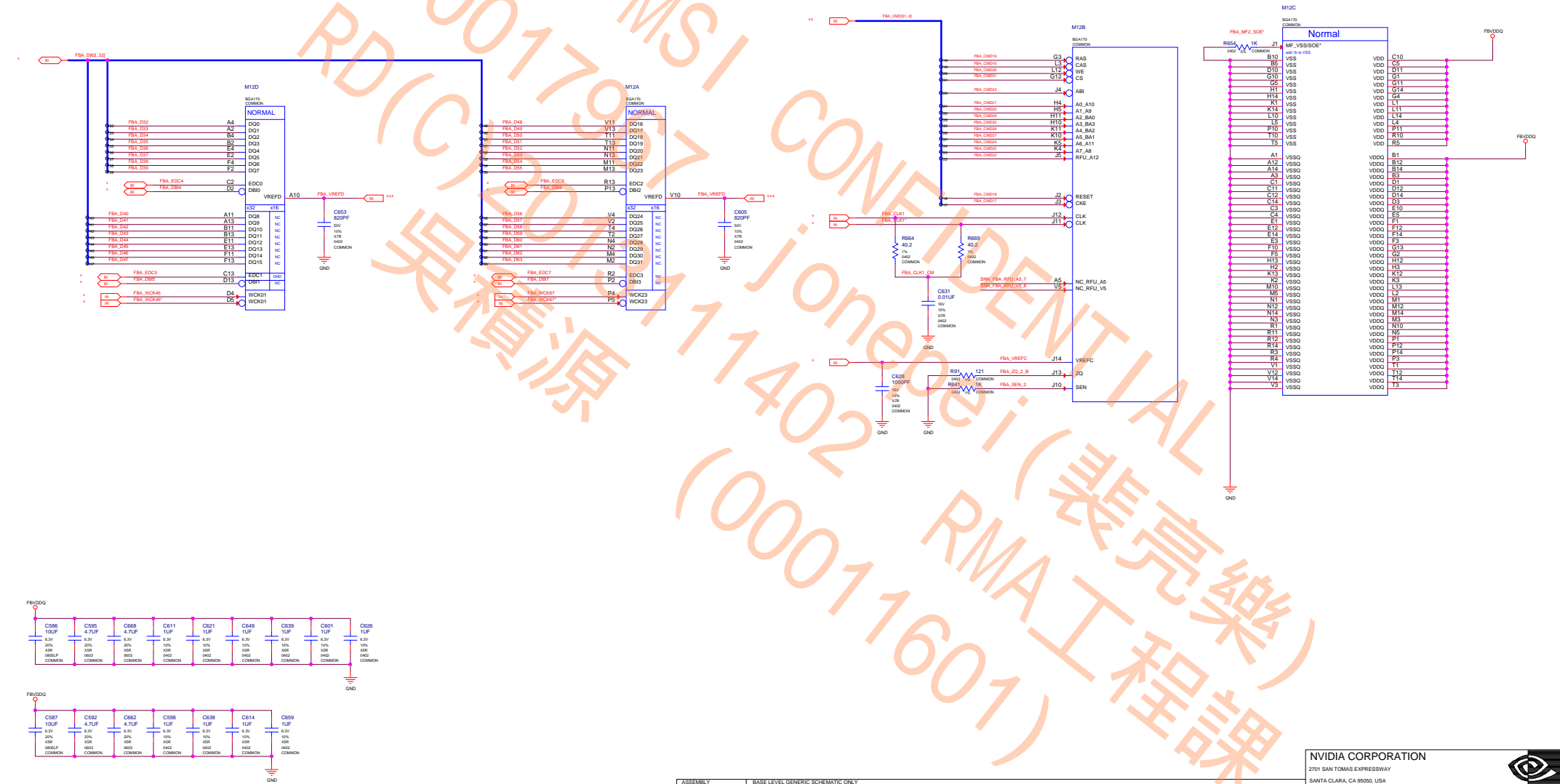




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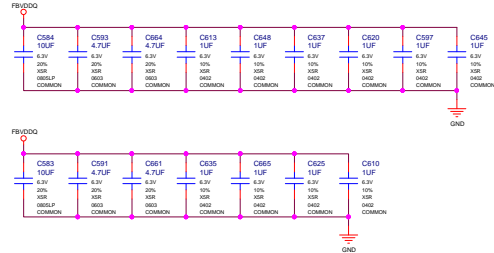
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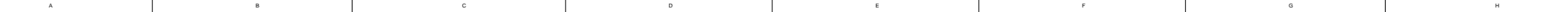
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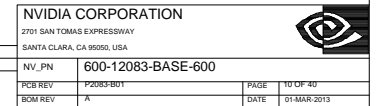





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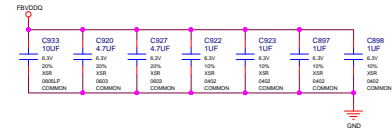
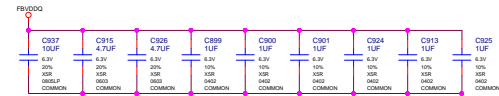





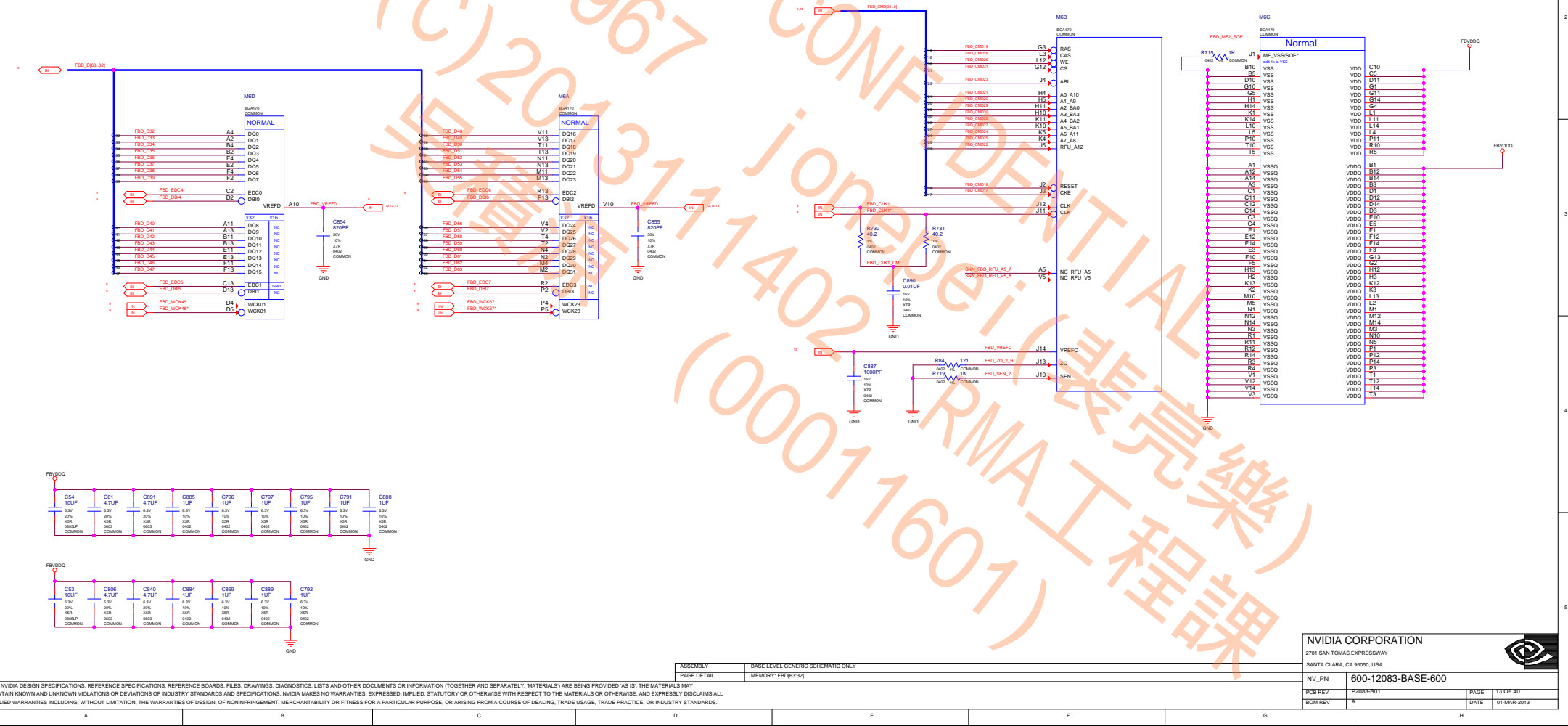




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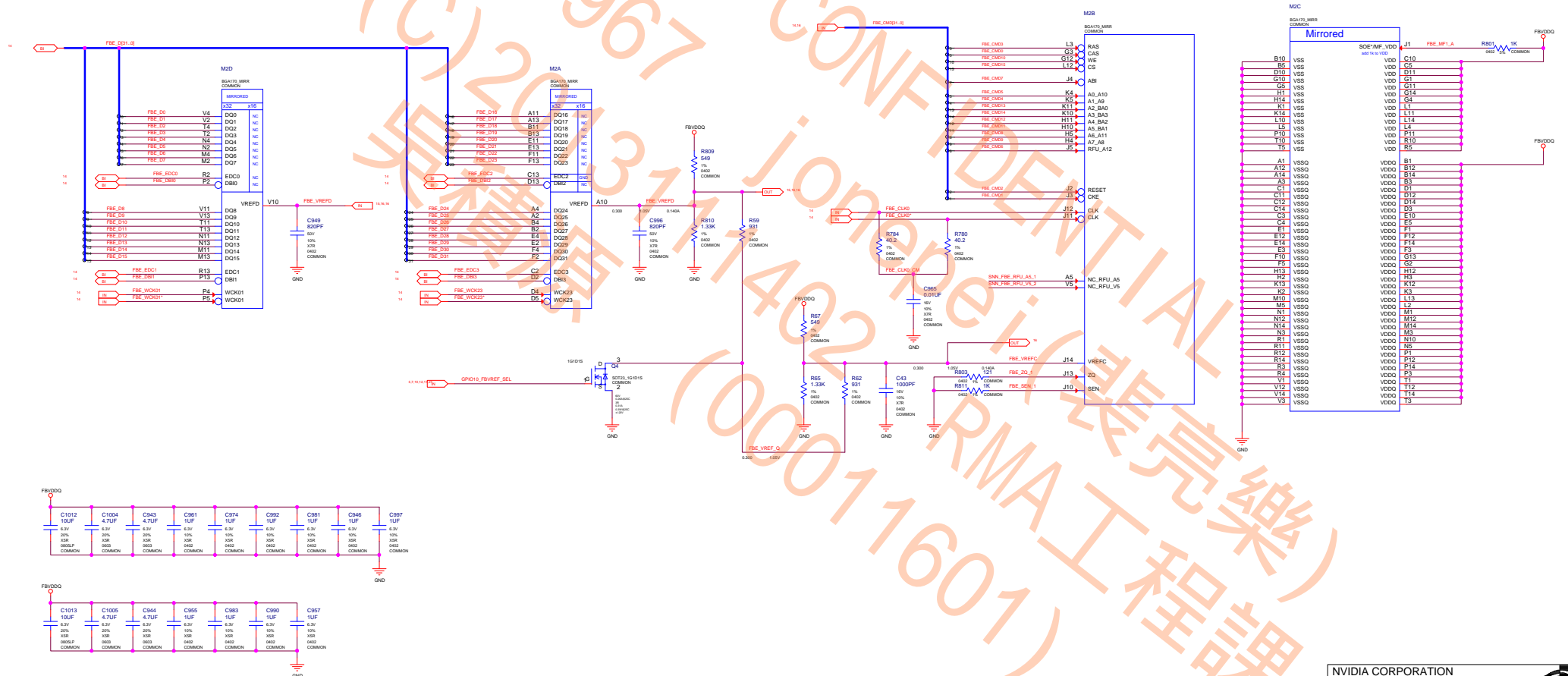
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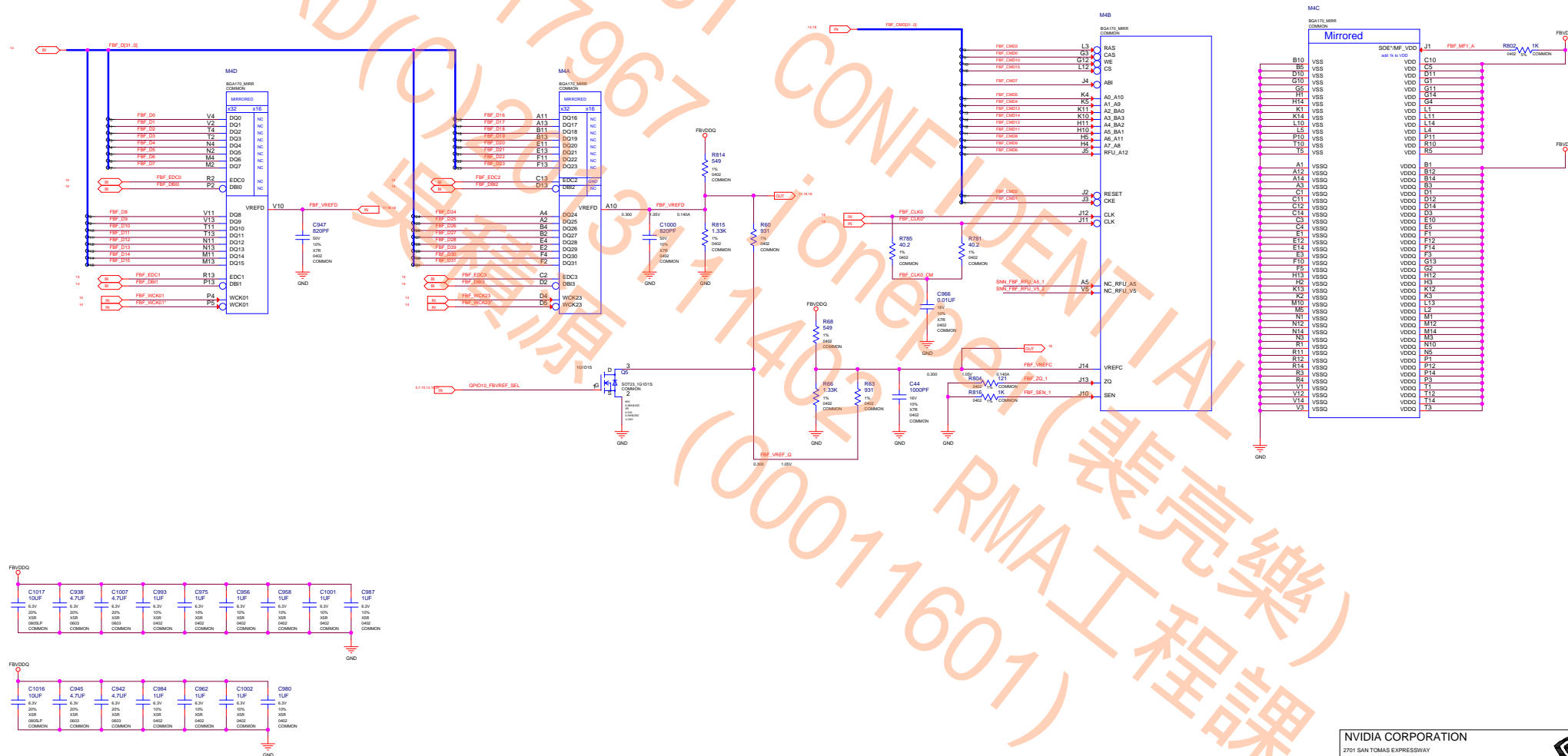




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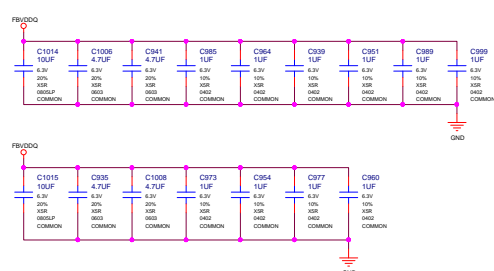
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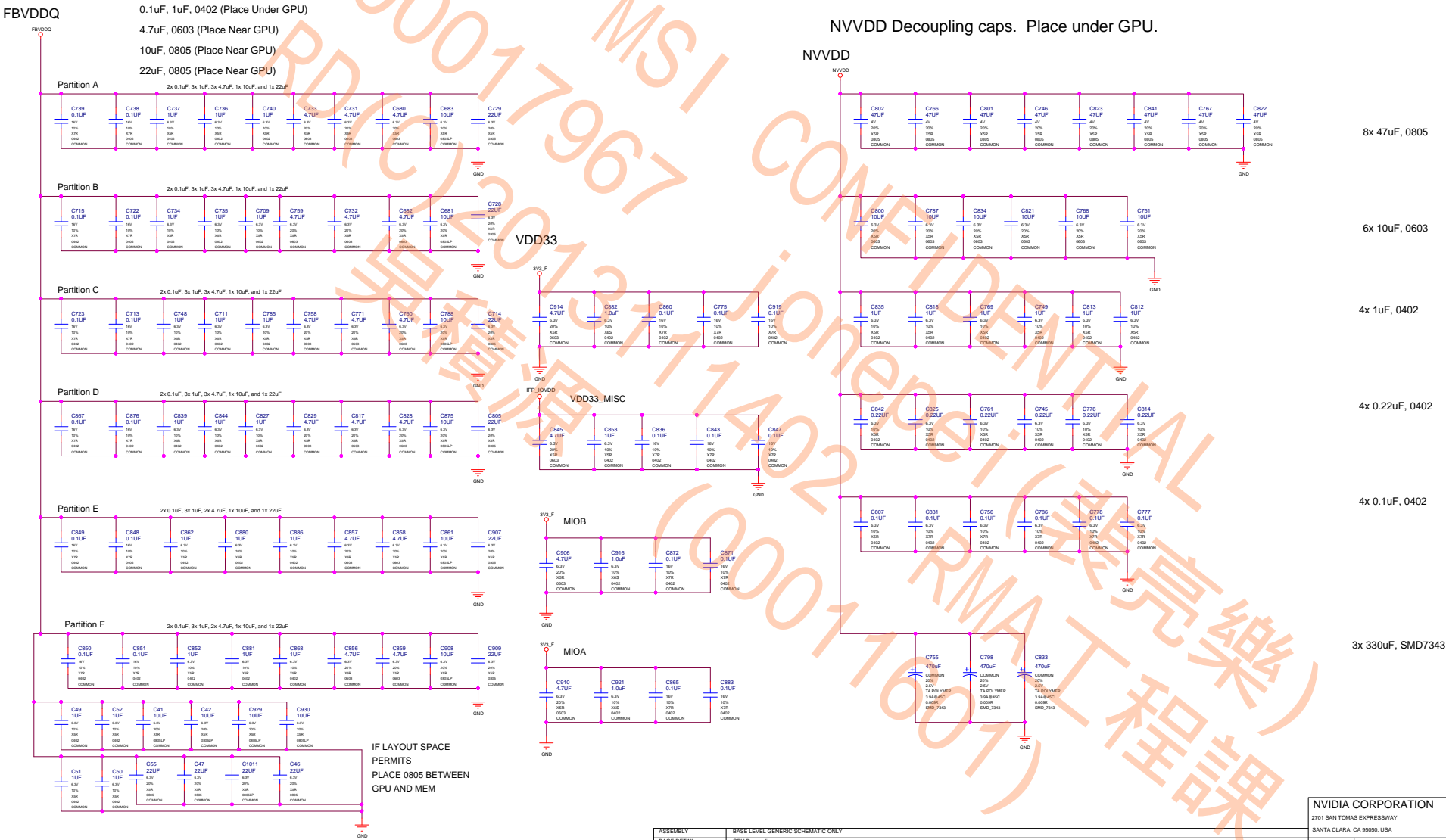


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Based on GB3-X GDDR5 FBVDDQ Decap Guideline



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PAGE DETAIL	GPU Decoupling

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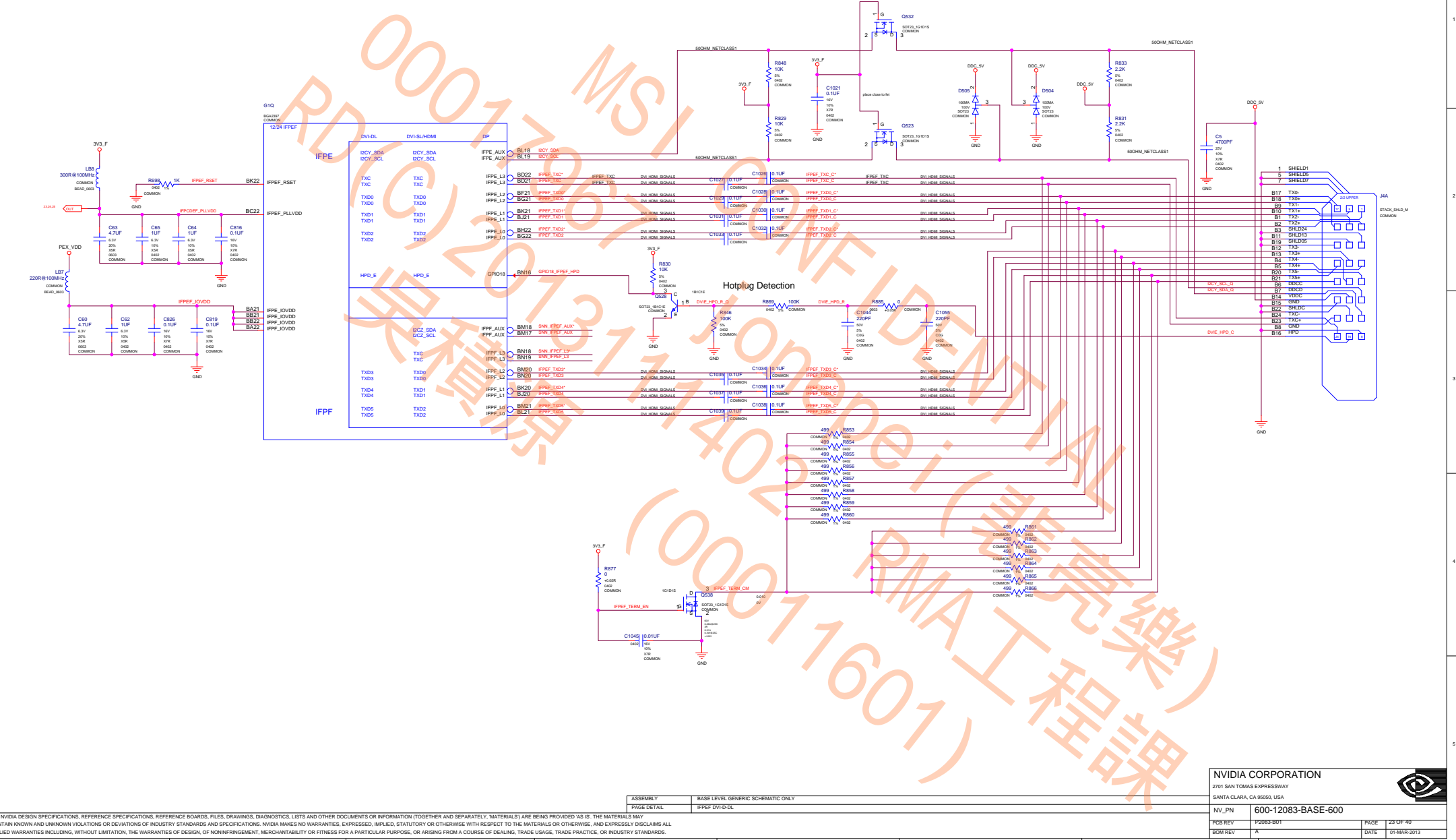
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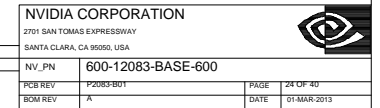
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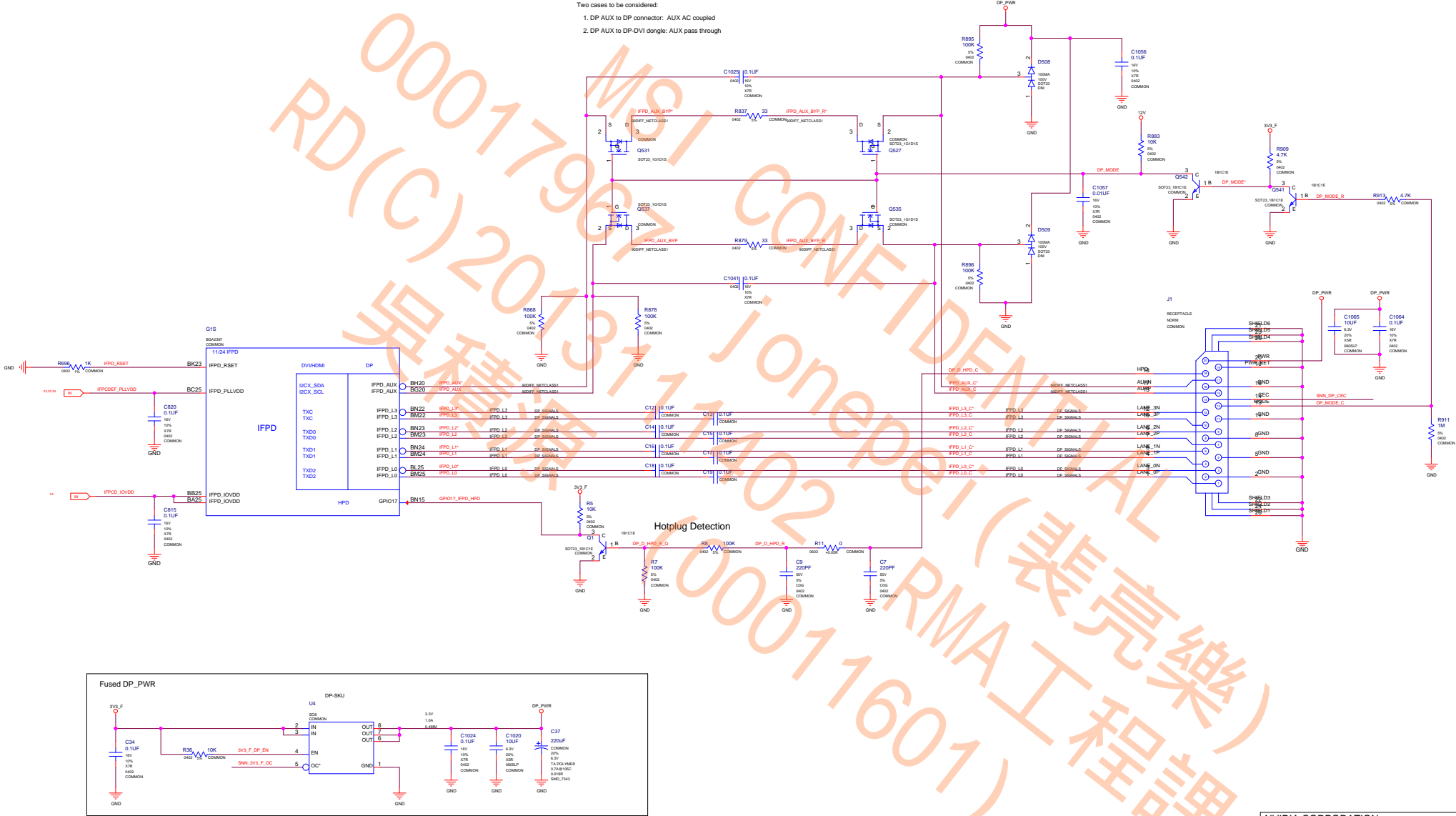


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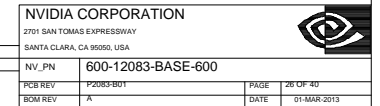
- Two cases to be considered:
- 1. DP AUX to DP connector: AUX AC coupled
  - 2. DP AUX to DP-DVI dongle: AUX pass through



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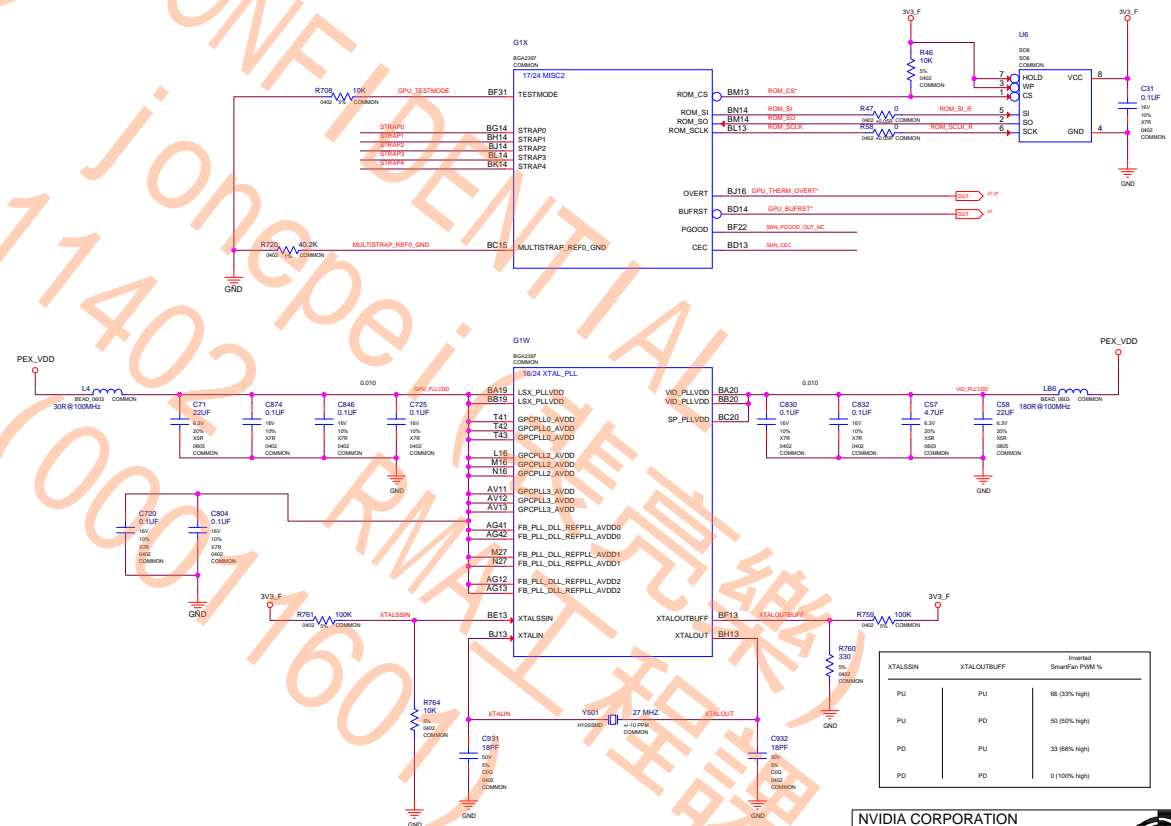
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	GND	3V3
5k	0000	1000
10k	0001	1001
15k	0010	1010
20k	0011	1011
25k	0100	1100
30k	0101	1101
35k	0110	1110
45k	0111	1111

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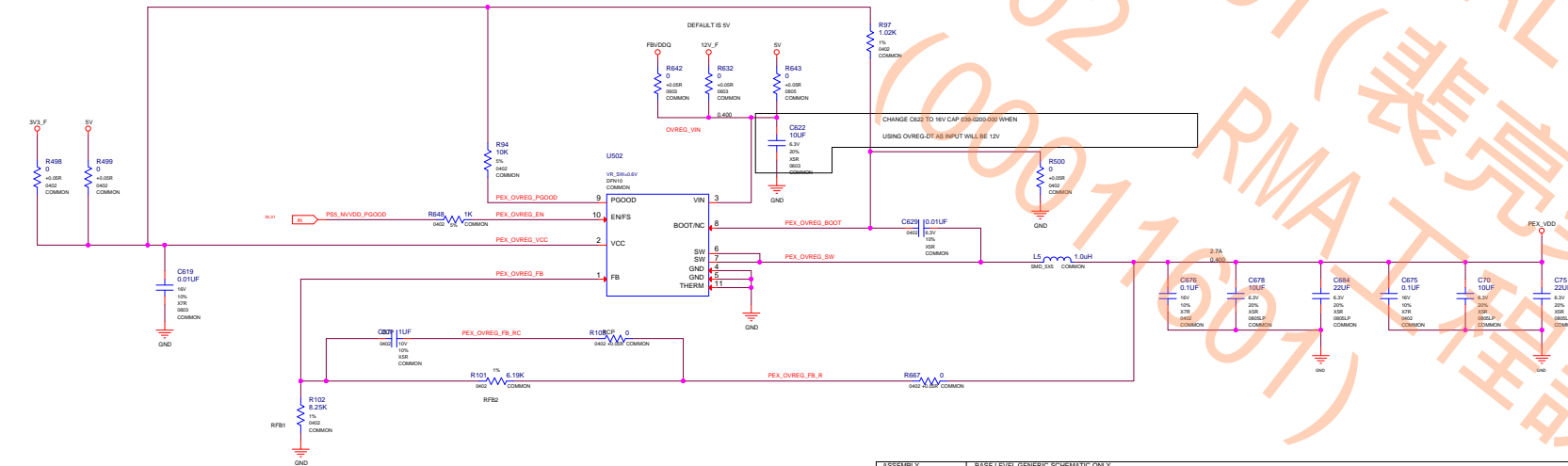
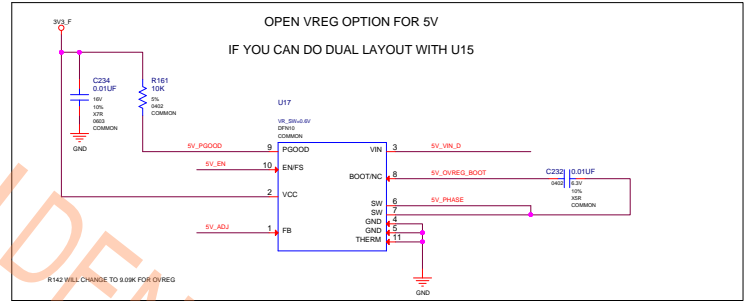
x16 DENSITY MODE STRAPS
CFG[3:0] Config Width  Vendor
-----
0000  Reserved
0001  64Mx16 384-bit Elpida
0010  64Mx16 384-bit Hynix
0011  64Mx16 384-bit Samsung
0100  Reserved
0101  128Mx16 384-bit Elpida
0110  128Mx16 384-bit Hynix
0111  128Mx16 384-bit Samsung
1000  Reserved
1001  64Mx16 320-bit Elpida
1010  64Mx16 320-bit Hynix
1011  64Mx16 320-bit Samsung
1100  Reserved
1101  128Mx16 320-bit Elpida
1110  128Mx16 320-bit Hynix
1111  128Mx16 320-bit Samsung

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XTALSSIN	XTALOUTBUFF	Inverted SmartFan PWM %
PU	PU	66 (33% high)
PU	PD	50 (50% high)
PD	PU	33 (66% high)
PD	PD	0 (100% high)

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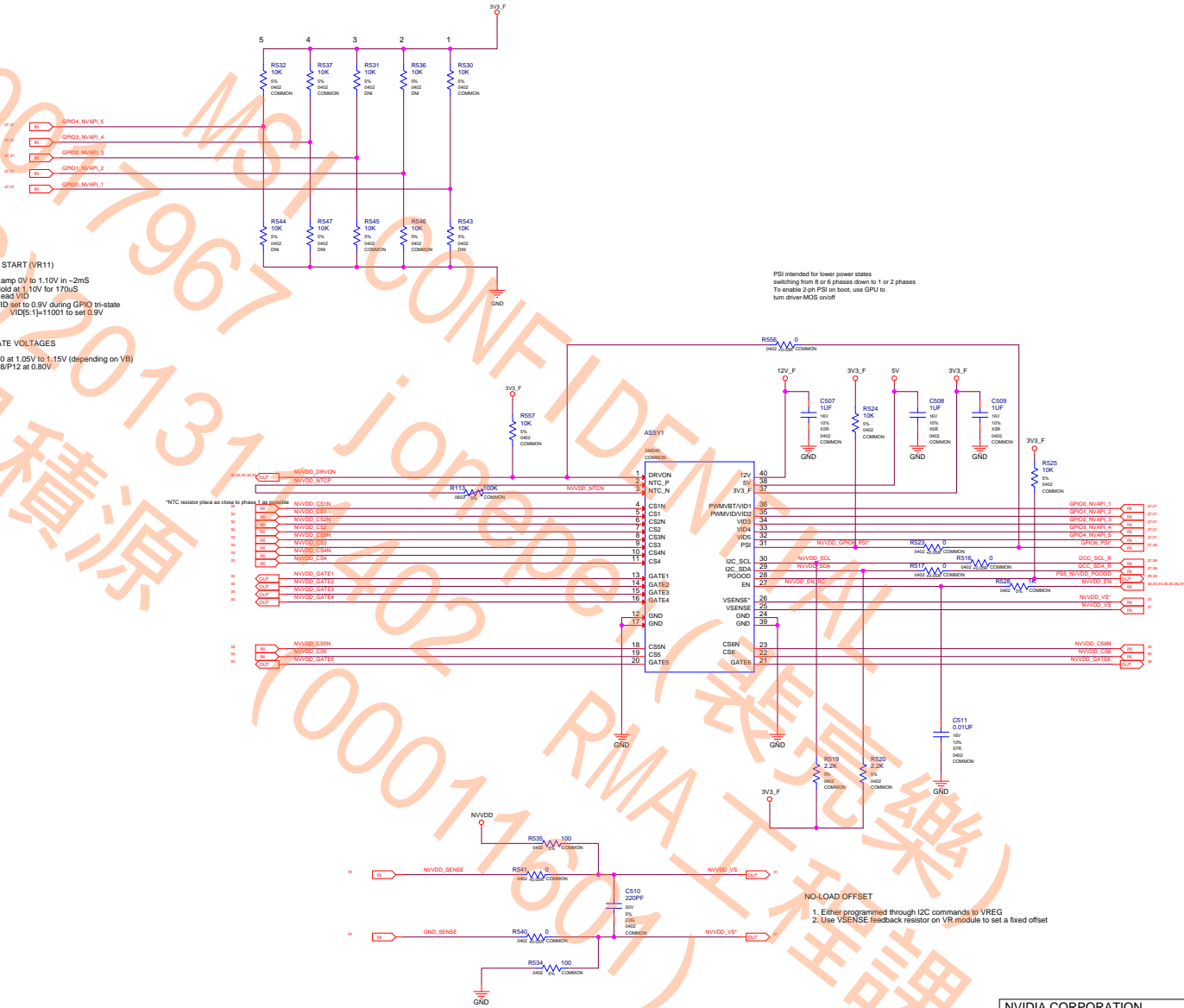




VID Table					
GPIO4	GPIO3	GPIO2	GPIO1	GPIO0	VOUT
VID_5	VID_4	VID_3	VID_2	VID_1	
0	0	0	0	0	1.2125V
0	0	0	0	1	1.2000V
0	0	0	1	0	1.1875V
0	0	0	1	1	1.1750V
0	0	1	0	0	1.1625V
0	0	1	0	1	1.1500V
0	0	1	1	0	1.1375V
0	0	1	1	1	1.1250V
0	1	0	0	0	1.1125V
0	1	0	0	1	1.1000V
0	1	0	1	0	1.0875V
0	1	0	1	1	1.0750V
0	1	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

SOFT START (VR11)  
1. Ramp 0V to 1.10V in ~2mS  
2. Hold at 1.10V for 170uS  
3. Read VID  
4. VID set to 0.9V during GPIO tri-state  
VID[S:1]=11001 to set 0.9V

P-STATE VOLTAGES  
1. P0 at 1.05V to 1.15V (depending on VB)  
2. P8/P12 at 0.80V




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PS: NVVDD Controller

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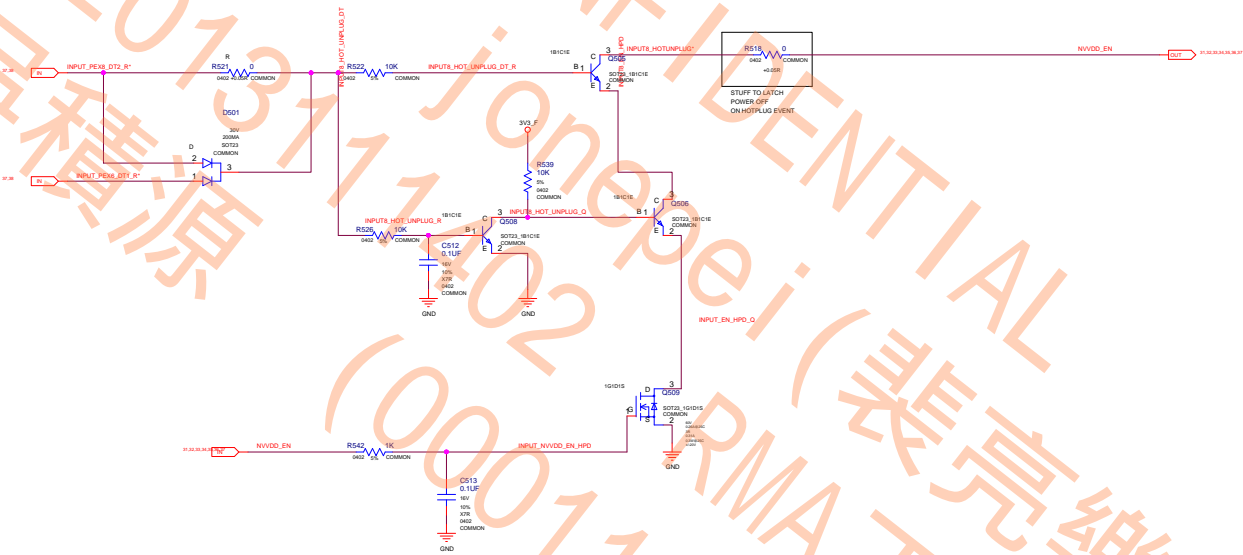
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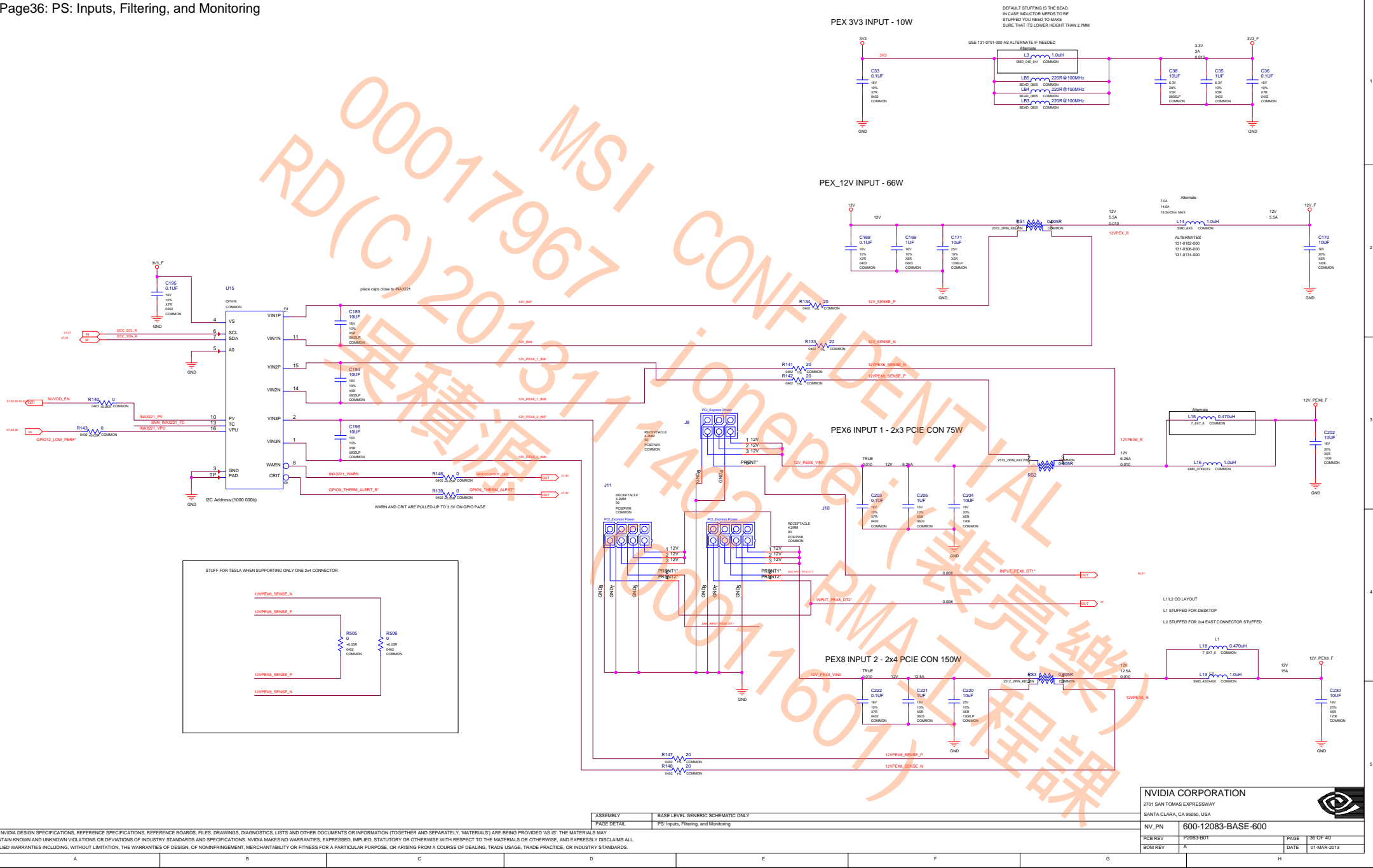
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DESKTOP (6PIN NORTH + 8 PIN NORTH): STUFF D, UNSTUFF R  
QUADRO (6PIN NORTH + 8 PIN EAST): UNSTUFF D, STUFF R  
QUADRO (8 PIN EAST ONLY): UNSTUFF D, STUFF R  
TESLA (8 PIN EAST ONLY): UNSTUFF D, STUFF R



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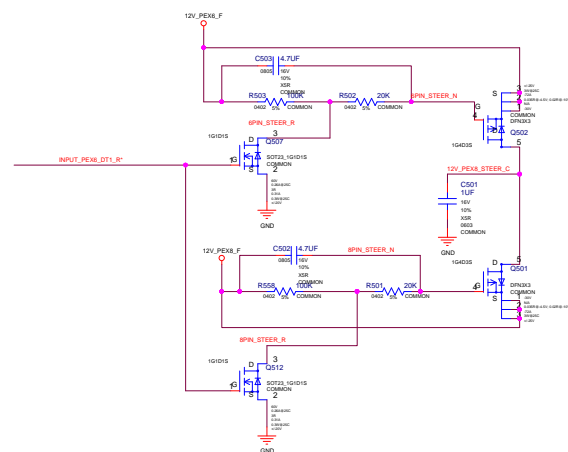
IFP\_IOVDD (backdrive prevention)

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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	PS: Shutdown

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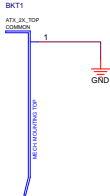
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## STUFF FOR TESLA ONLY

Brackets:

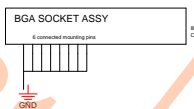
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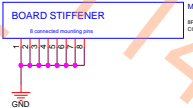
Bracket Screw



GPU SOCKET



GPU Stiffener (BRING-UP COOLER)



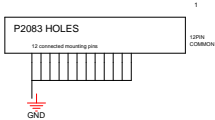
Hockey Stick



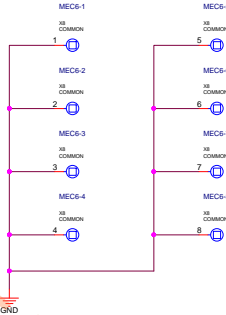
Stiffener



Mechanical Holes Symbol



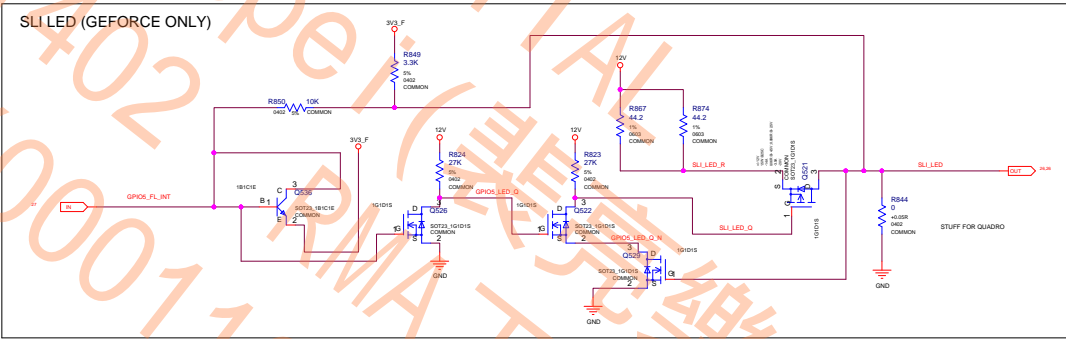
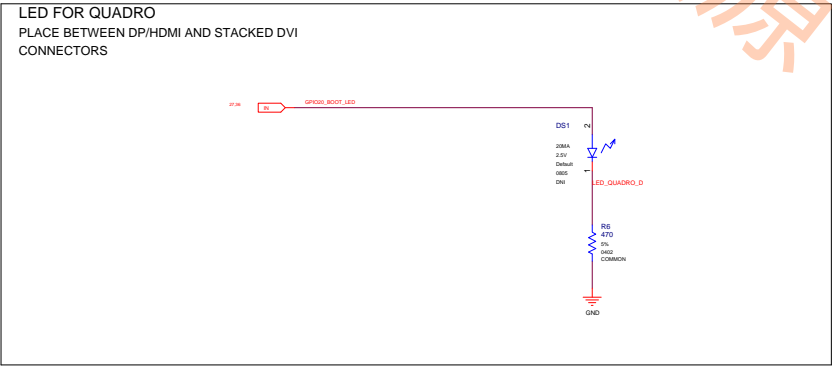
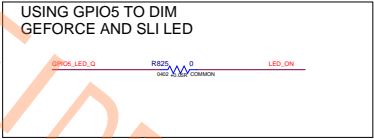
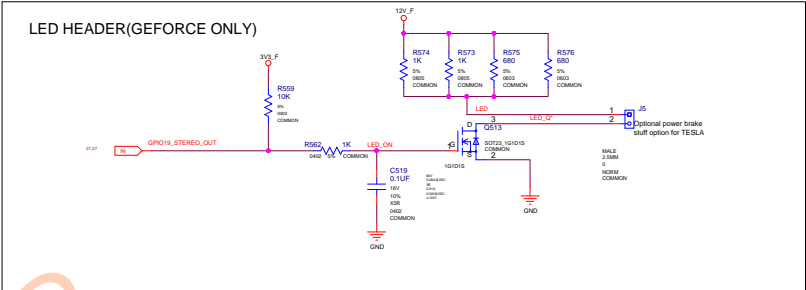
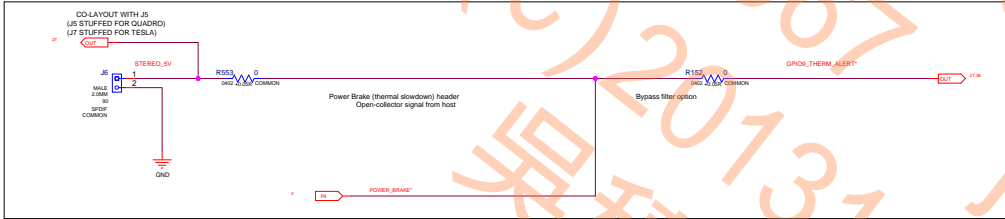
Bring Up Cooler



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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
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