

P2083-B01

GK110, 3GB GDDR5, 384b, 64Mx32 +128Mx32
DVI_I+DVI_D + HDMI + DP

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40	POWER BRAKE AND LED

V296-10 Bason on P2083 modify

- Page 3. remove JTAG circuit and POWER BRAKE circuit
- Page 4~18. 修改 memory net name
- Page 22~23. add ESD component
- Page 24 remove co-lay DP circuit and change HDMI component footprint
- Page 27 remove GPIO 24 連接器 and JTAG and STEREO HEADER circuit
- Page 28 ADD DUAL bios circuit
- Page 29 remove 5V and PEX_VDD switch circuit, change 5V APL1117 circuit and NTC7511 circuit
- Page 30 change FBVDD switch circuit
- Page 31 remove NVVDD 小卡 circuit, add FBVDDQ power circuit
- Page 32 remove NVVDD power circuit, change PEX_VDD and 6.5V power circuit
- Page 33 ~37 change NVVDD power circuit
- Page 39 remove co-layout component and J8 component and add 12V_PEX6_F1 circuit
- Page 43 remove co-layout J5 component circuit
- Page 25 change DP component footprint

V296-11 Bason on V296-10 modify

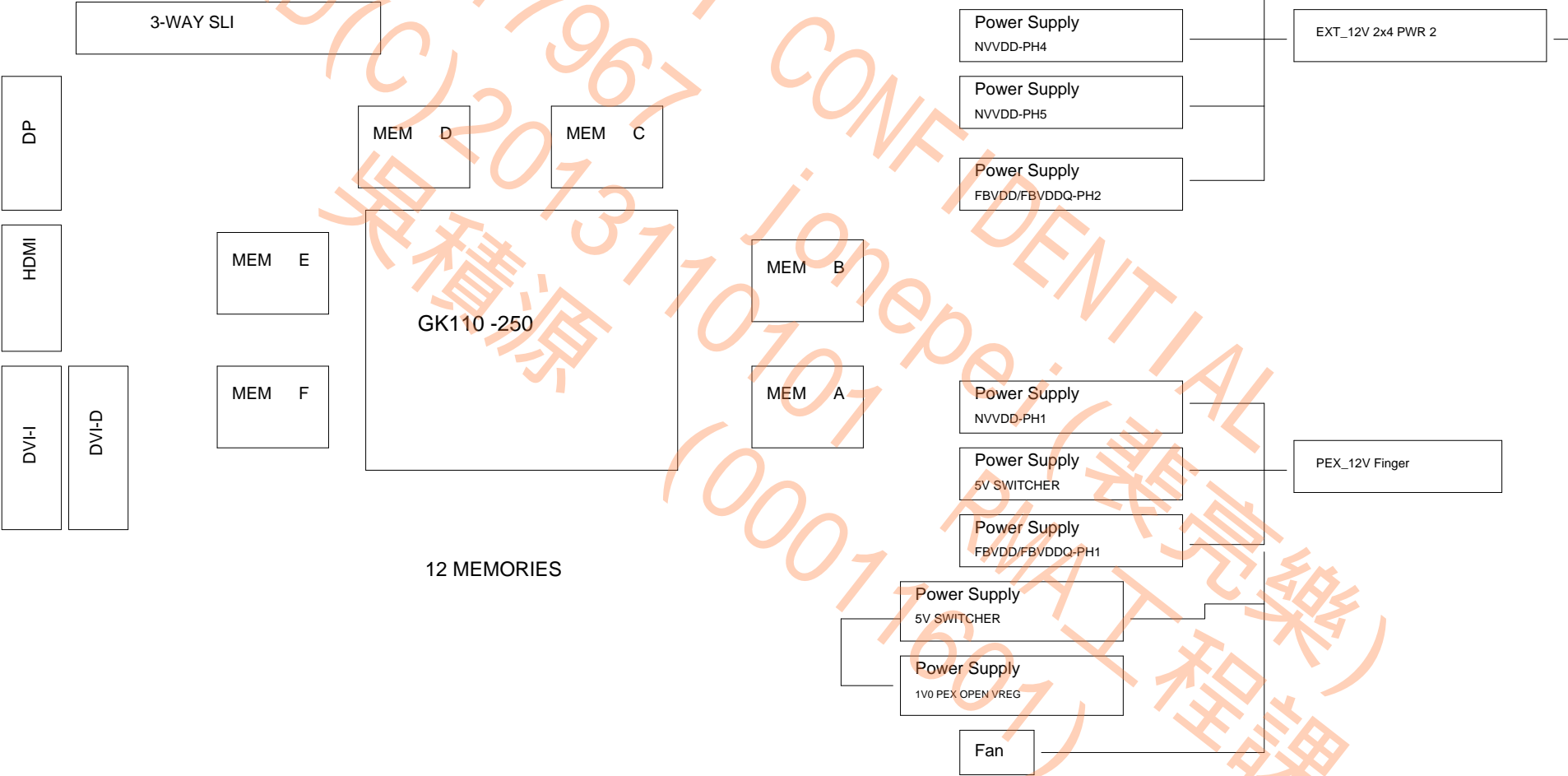
- Page 31 and 37 add 10uF6.3V 0603
- Page 34: modify PQ1 and Q1001 circuit
- Page 43: modify LED control circuit

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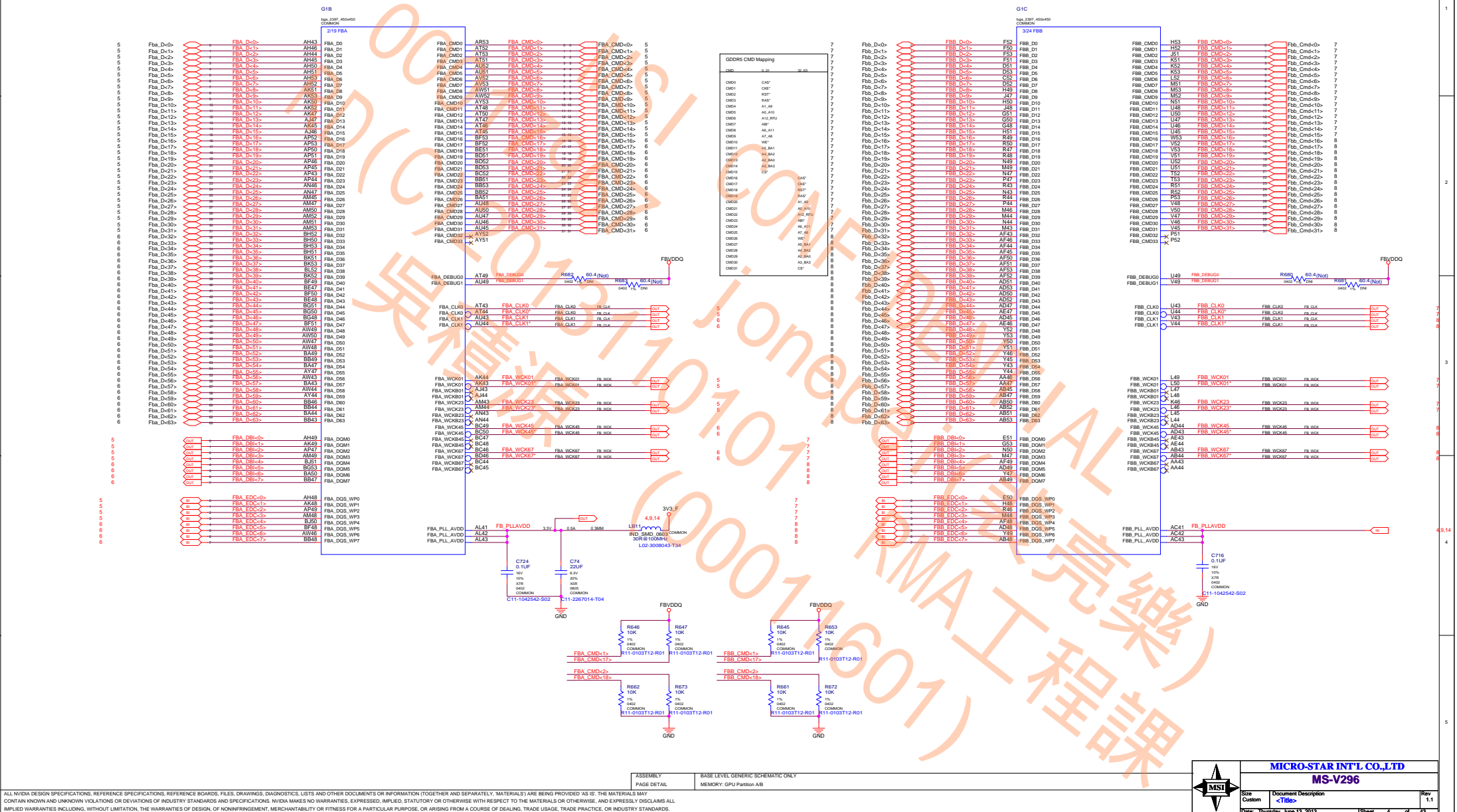


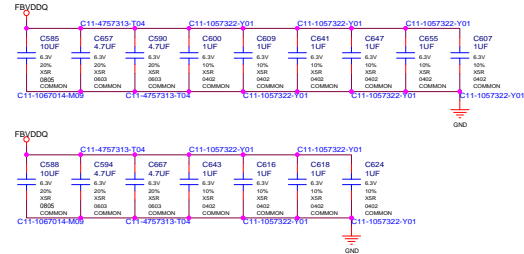
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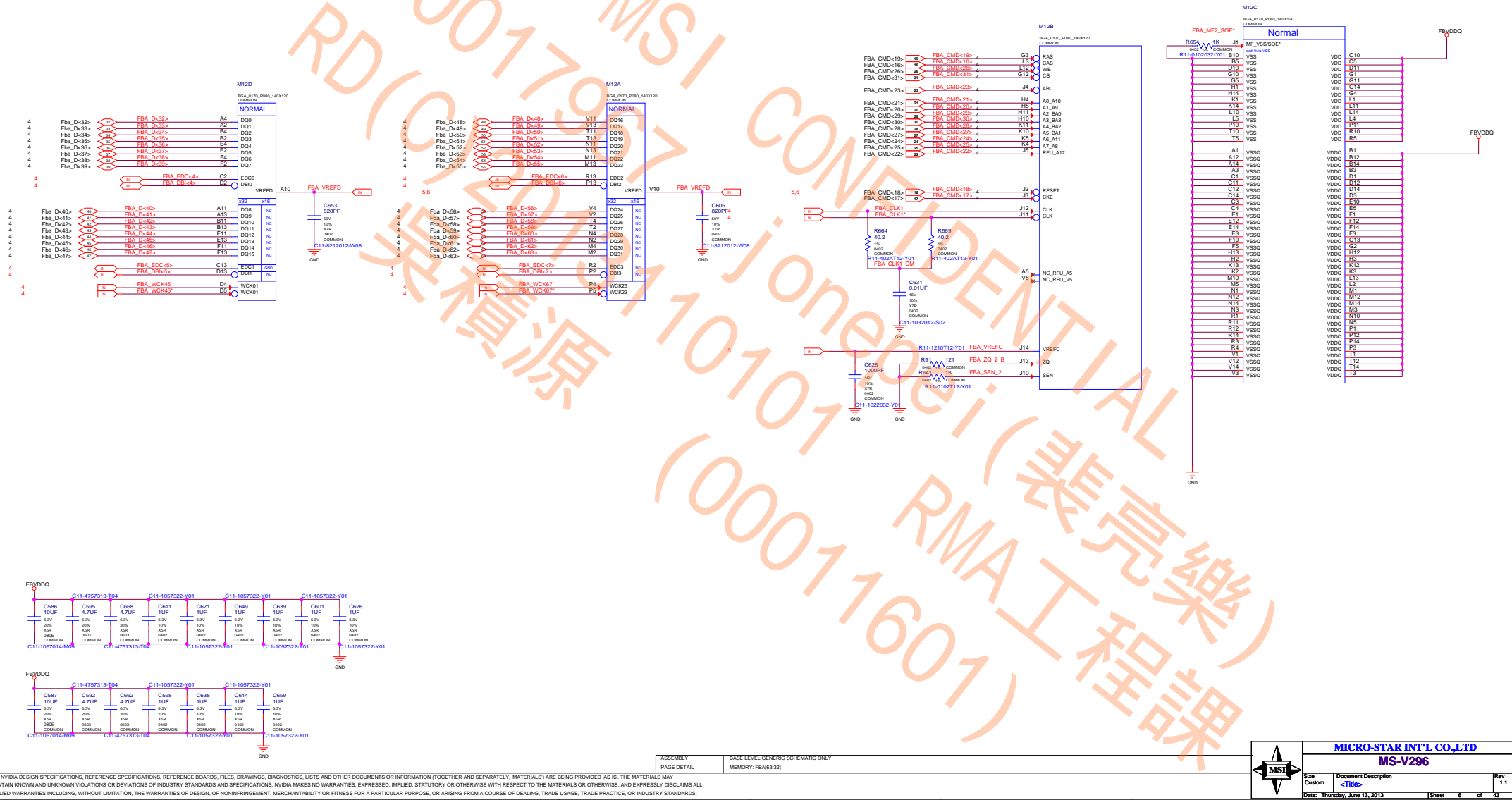
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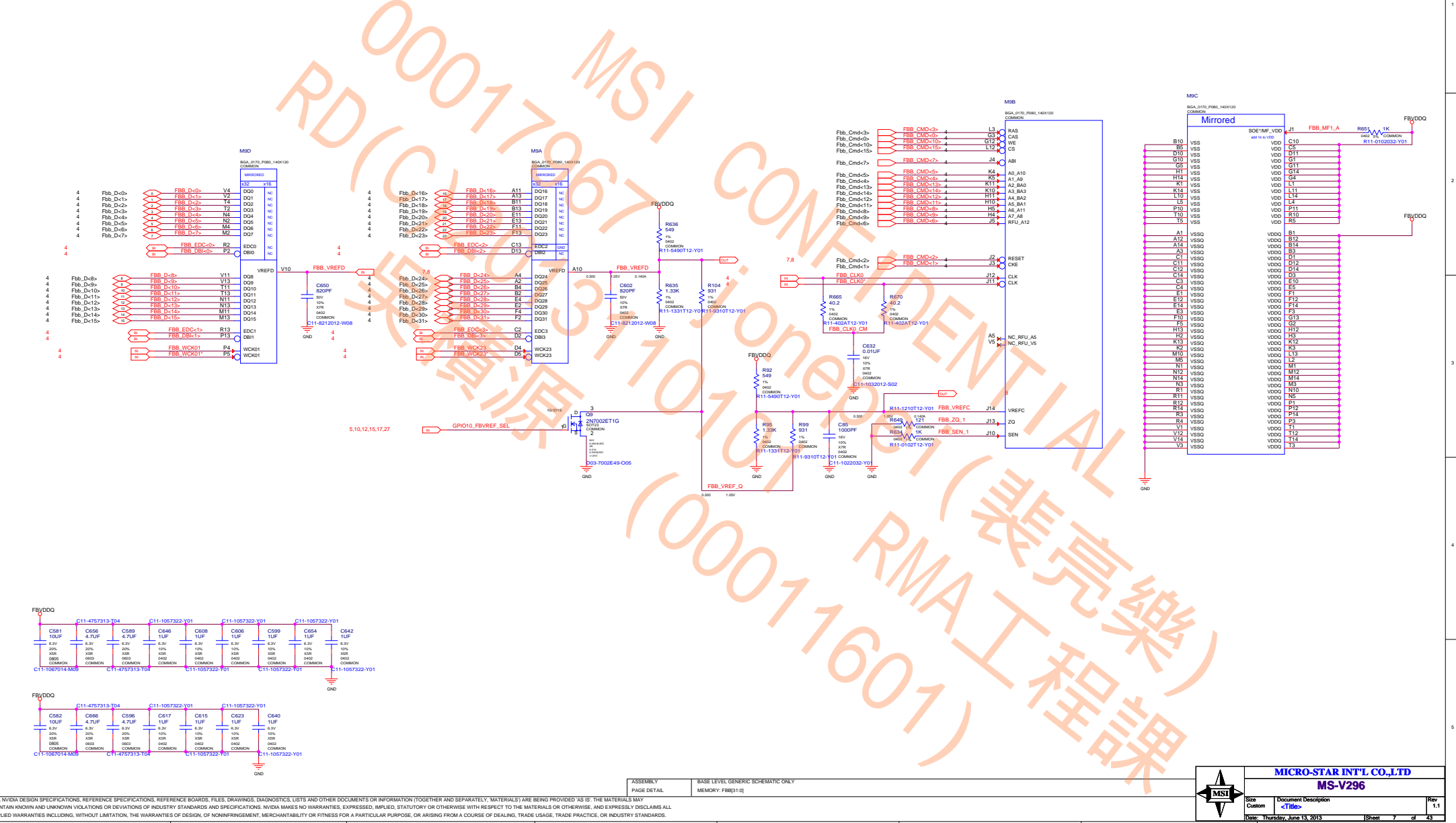


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ASSEMBLY
PAGE DETAIL


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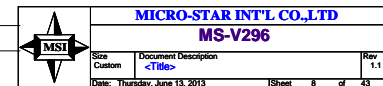
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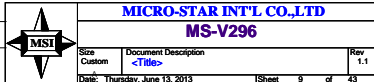
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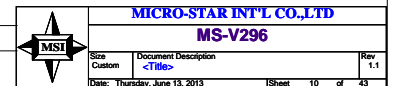


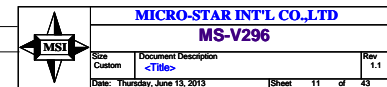
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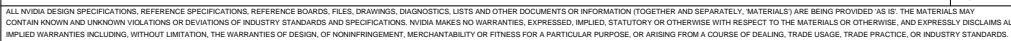





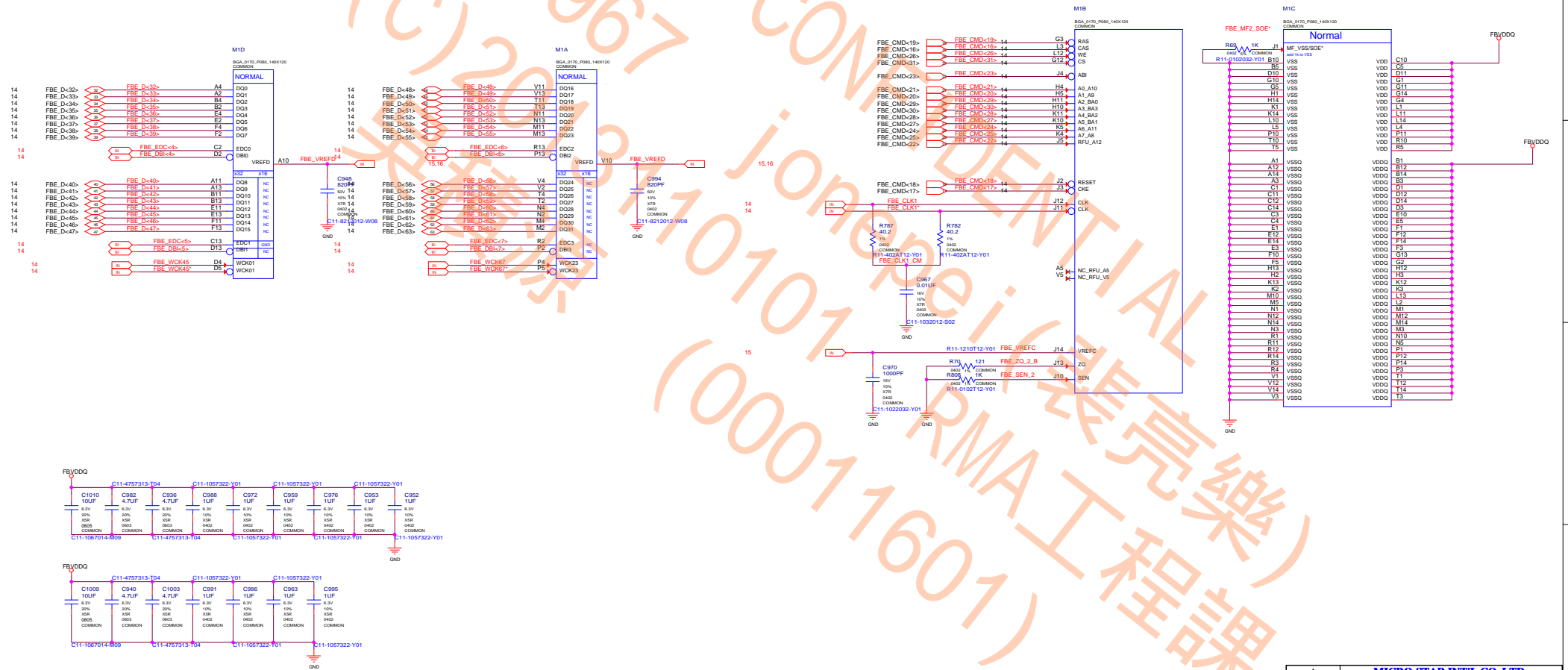


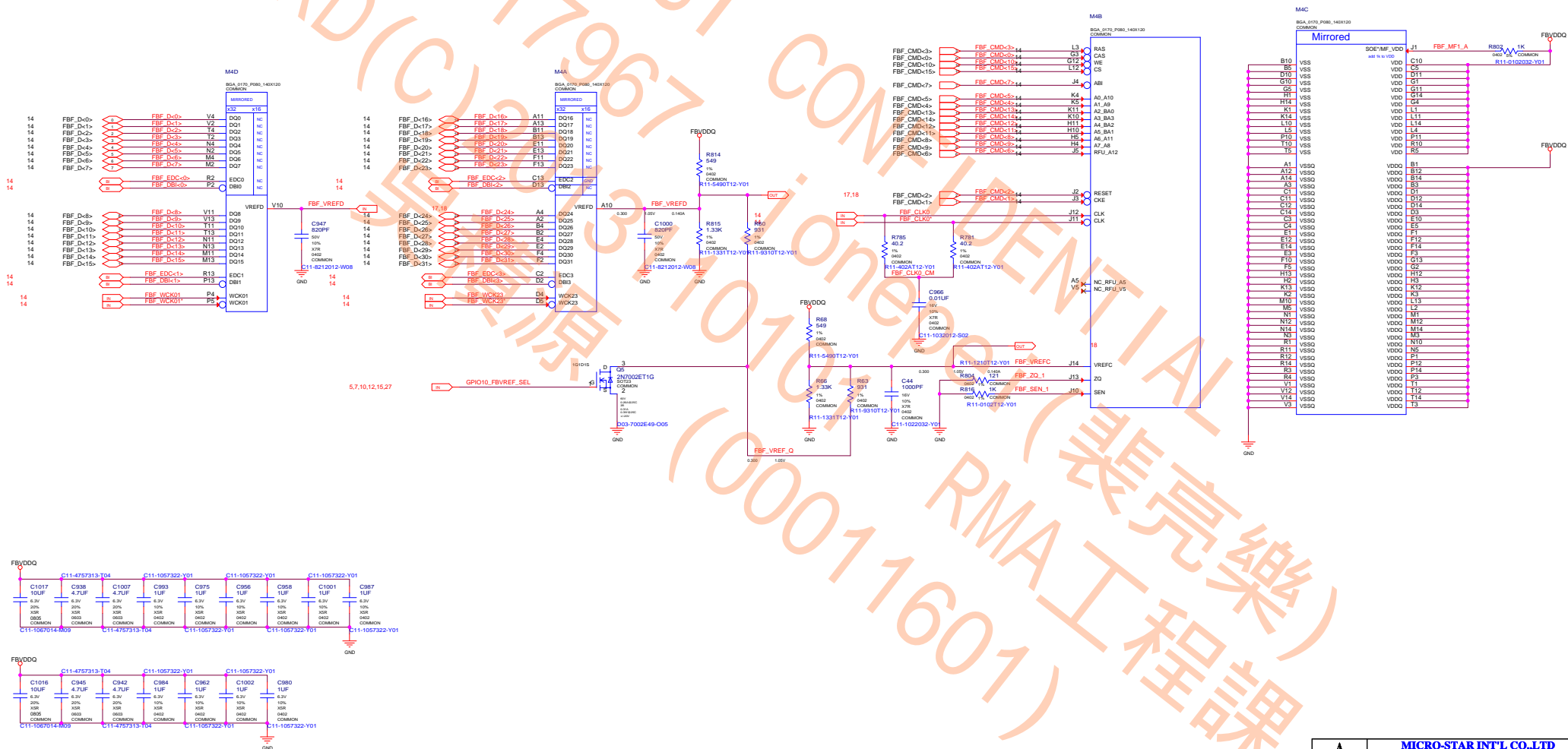






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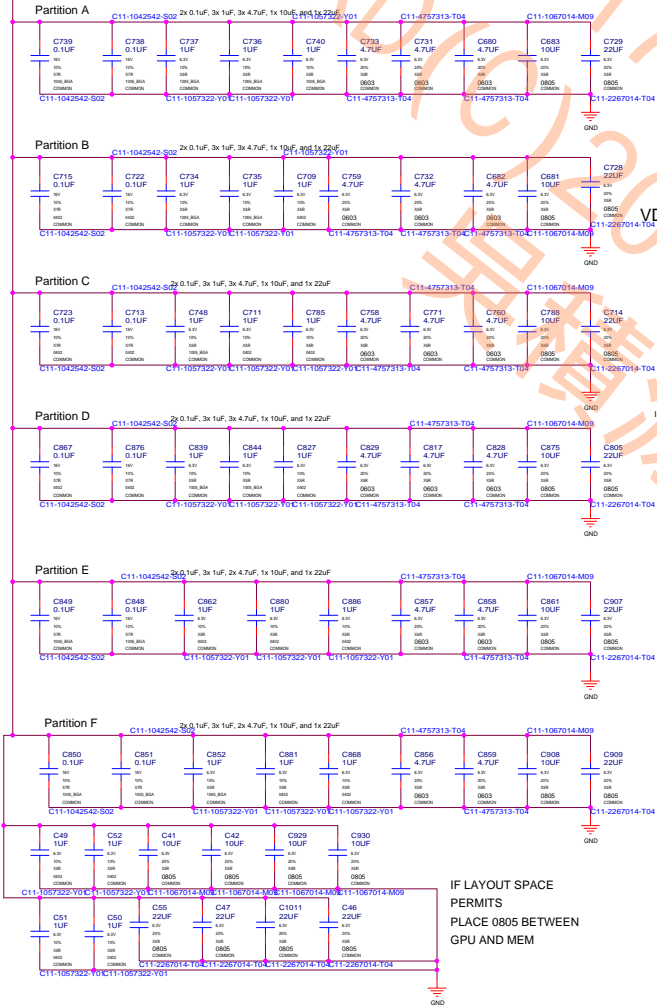




ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	MEMORY: FBF[63:32]

Based on GB3-X GDDR5 FBVDDQ Decap Guideline

FBVDDQ
0.1uF, 1uF, 0402 (Place Under GPU)
4.7uF, 0603 (Place Near GPU)
10uF, 0805 (Place Near GPU)
22uF, 0805 (Place Near GPU)



IF LAYOUT SPACE PERMITS
PLACE 0805 BETWEEN GPU AND MEM

NVVD
NVVDD Decoupling caps. Place under GPU.



8x 47uF, 0805

6x 10uF, 0603

4x 1uF, 0402

4x 0.22uF, 0402

4x 0.1uF, 0402

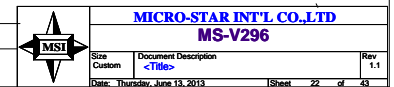
3x 330uF, SMD7343

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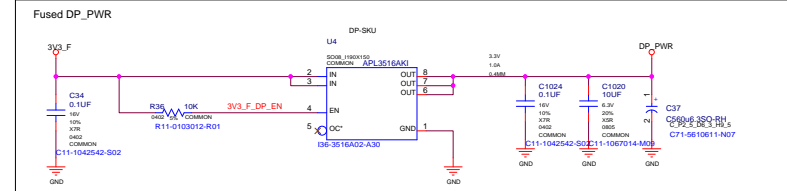
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GPU Decoupling

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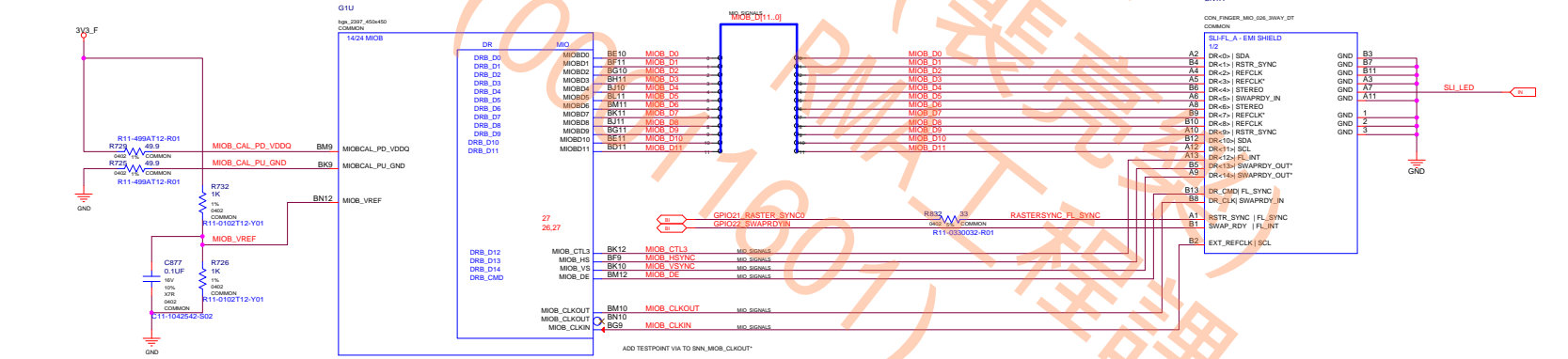




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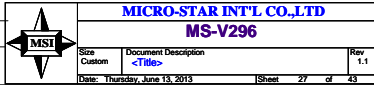
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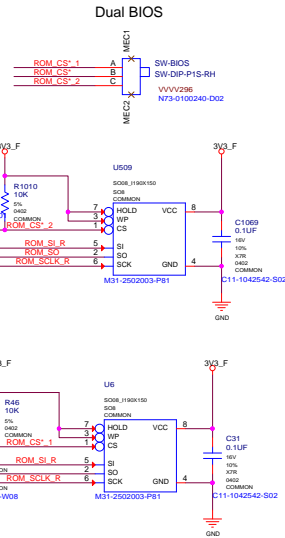




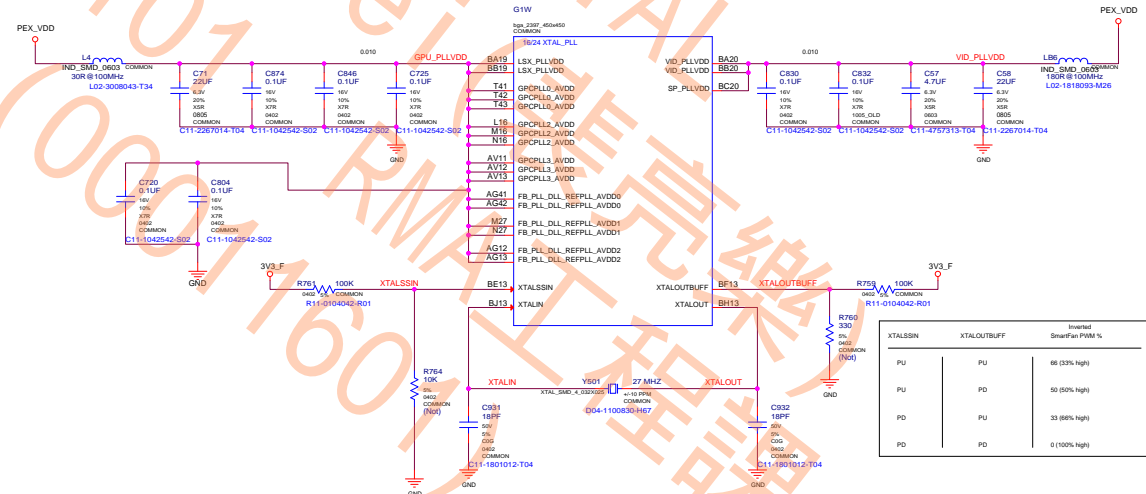
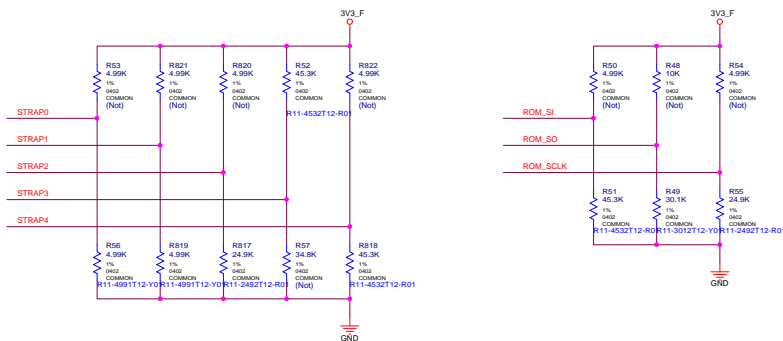
	GND	3V3
5k	0000	1000
10k	0001	1001
15k	0010	1010
20k	0011	1011
25k	0100	1100
30k	0101	1101
35k	0110	1110
45k	0111	1111

x32 DENSITY MODE STRAP1	
CFG[3:0] Config Width	Vendor
0000	Reserved
0001	32Mx32 384-bit Elpida
0010	32Mx32 384-bit Hynix
0011	32Mx32 384-bit Samsung
0100	Reserved
0101	64Mx32 384-bit Elpida
0110	64Mx32 384-bit Hynix
0111	64Mx32 384-bit Samsung
1000	Reserved
1001	32Mx32 320-bit Elpida
1010	32Mx32 320-bit Hynix
1011	32Mx32 320-bit Samsung
1100	Reserved
1101	64Mx32 320-bit Elpida
1110	64Mx32 320-bit Hynix
1111	64Mx32 320-bit Samsung

x16 DENSITY MODE STRAP		
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



	MULTI_STRAP_REF0_GND
BINARY PRODUCTION	NC
BINARY BRINGUP	NC
MULTI-LEVEL	40.2K 1% TO GND



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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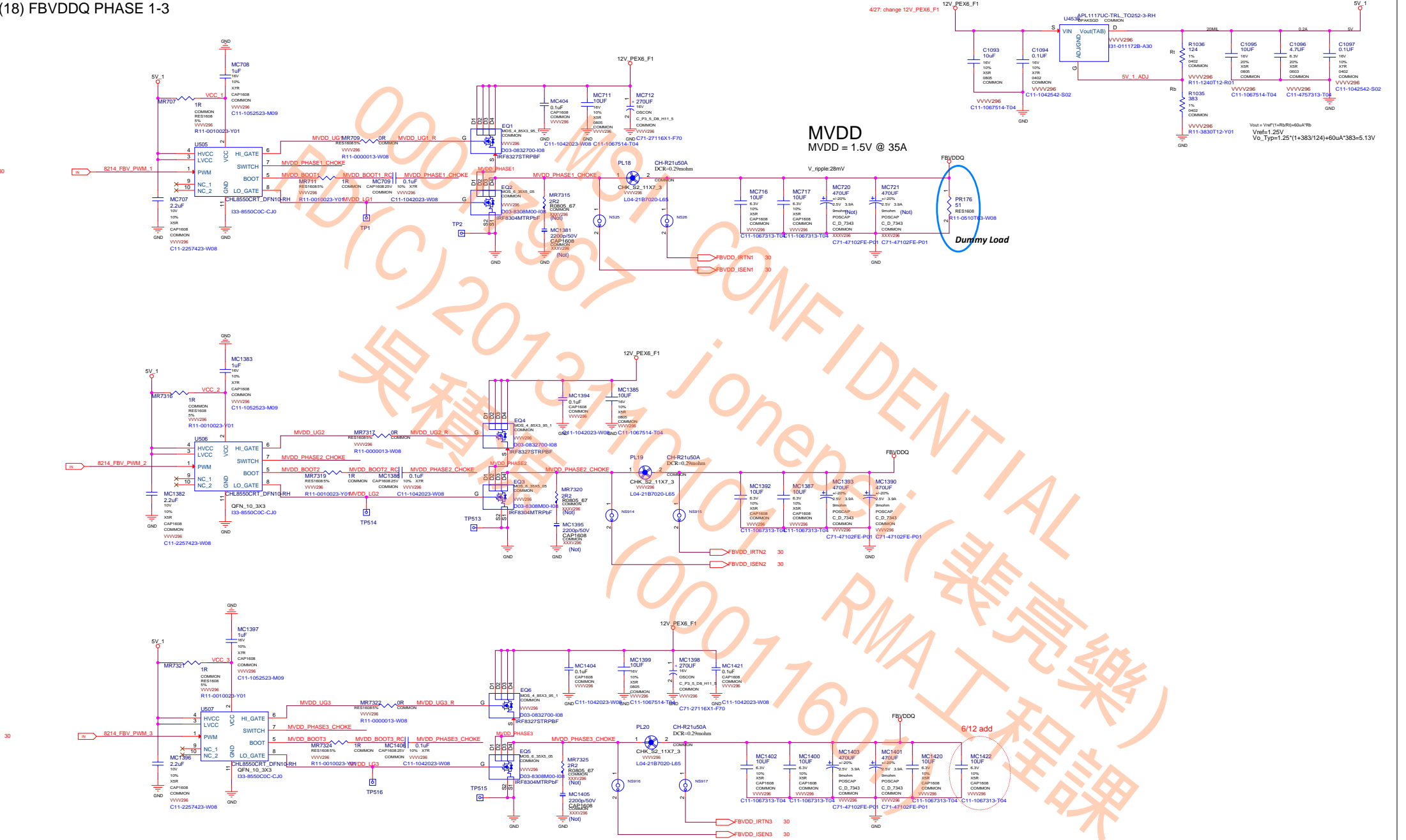
Layout notice :

- *Add ground shielding for D+ and Dtraces.
- *D+/D- route has to be away from the high noise area.
- *The recommended traces width and ground shielding spacing are 10mils.

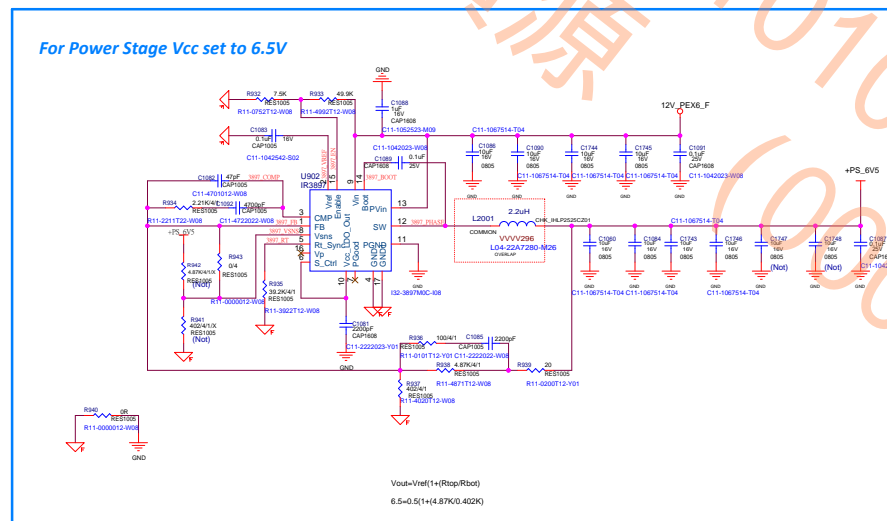
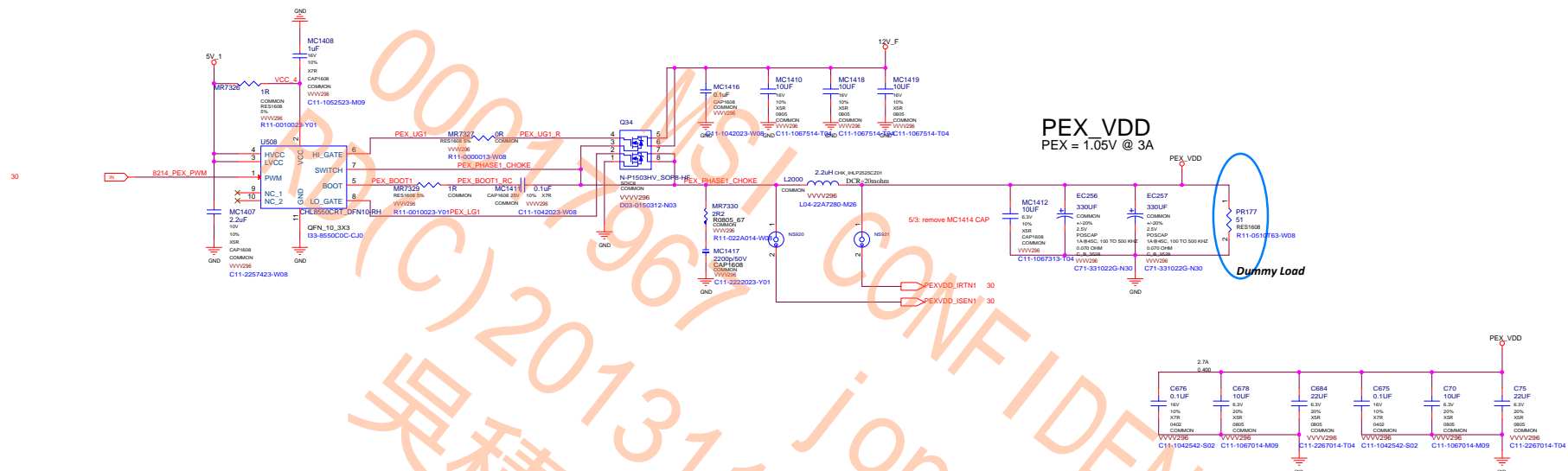
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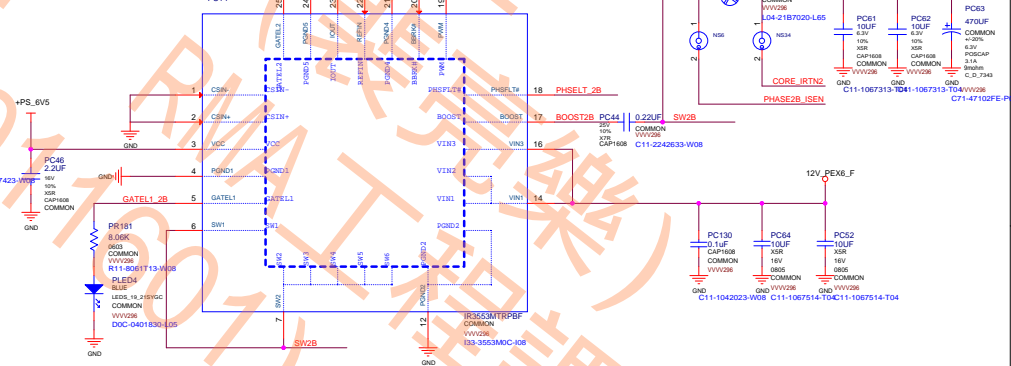
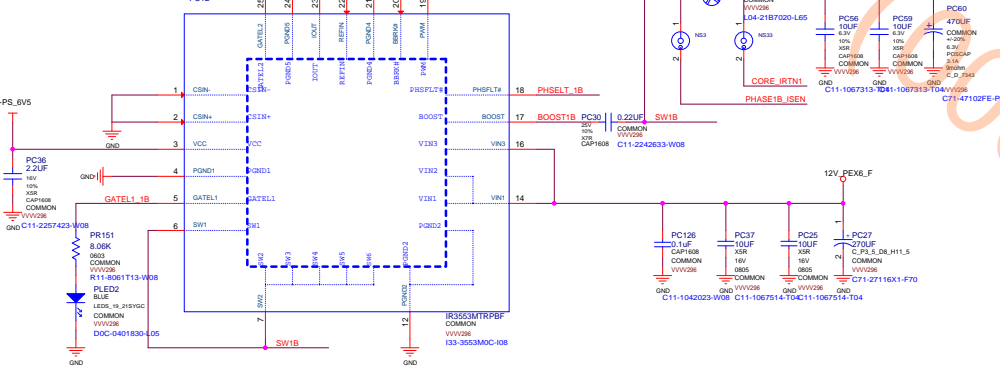
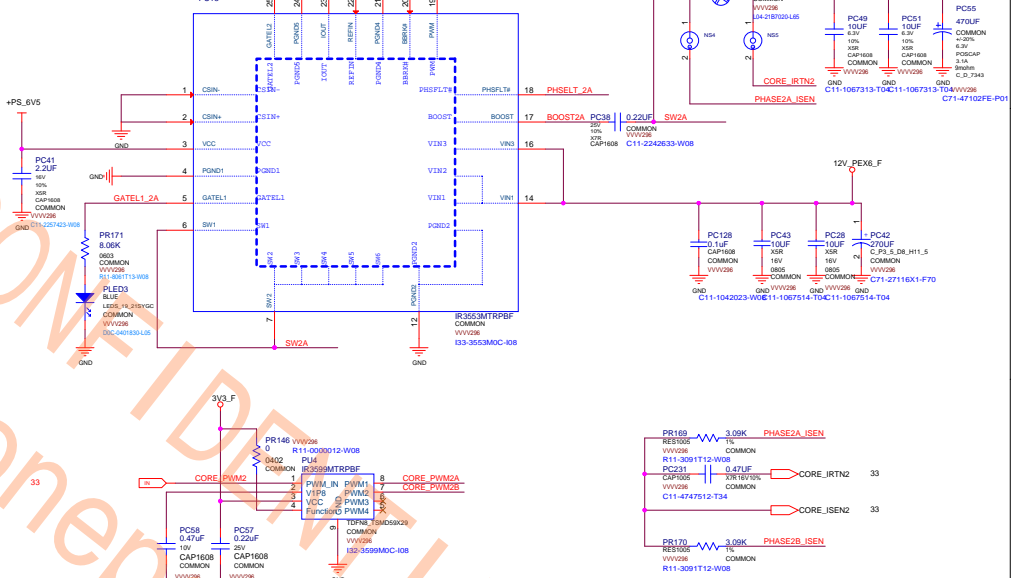
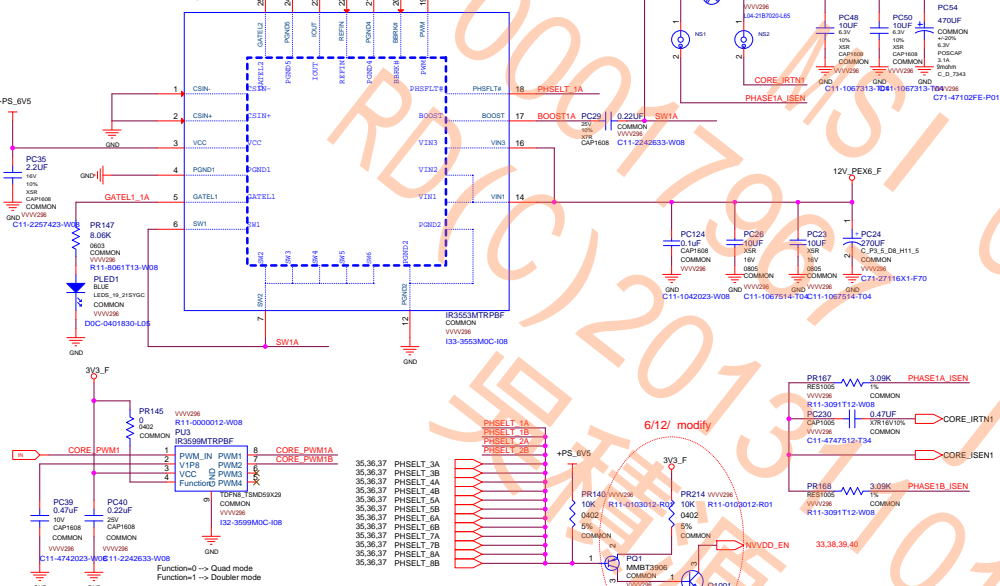
(18) FBVDDQ PHASE 1-3



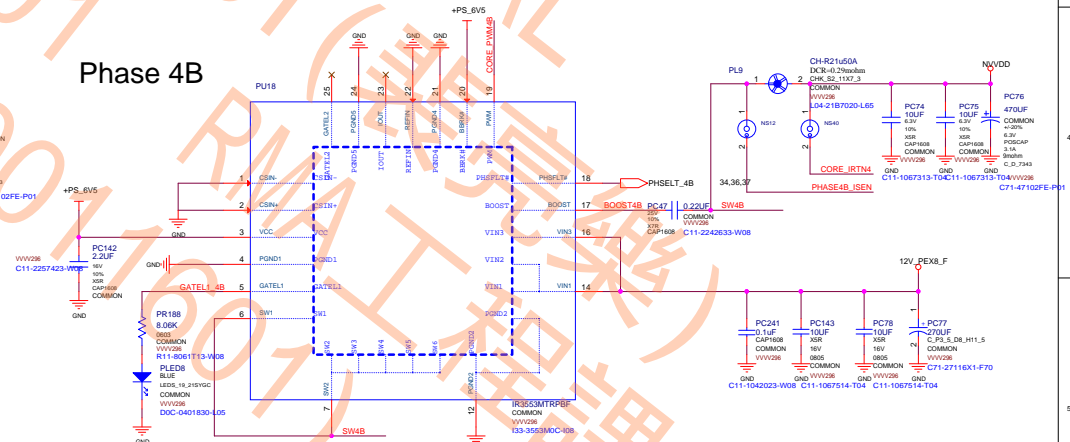
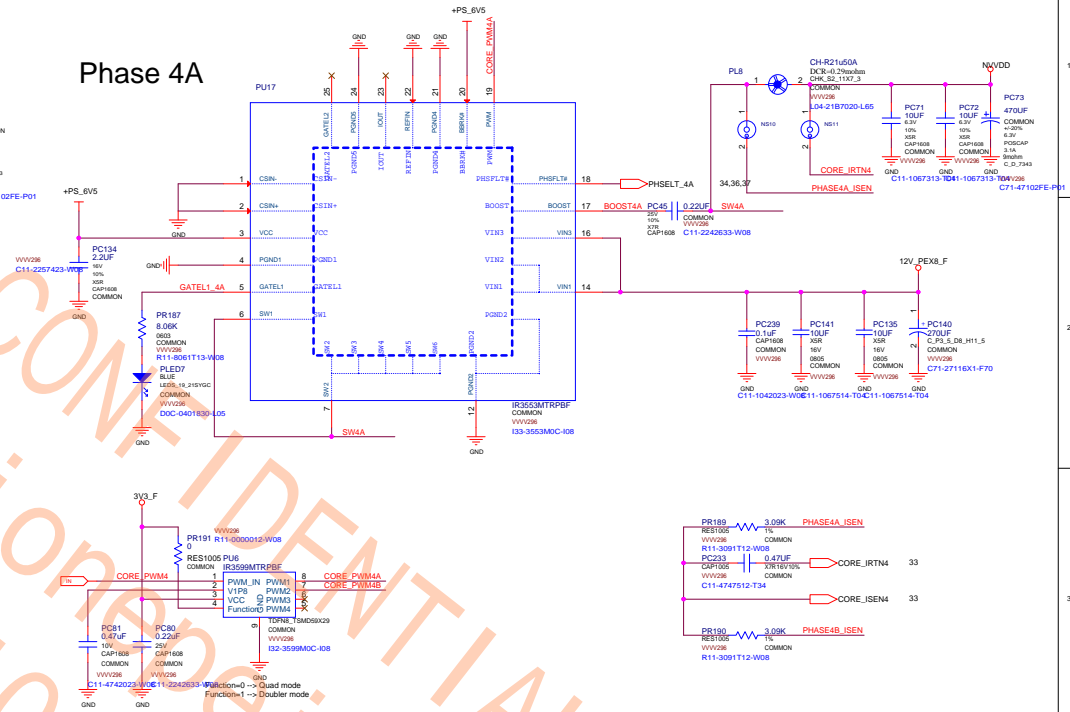
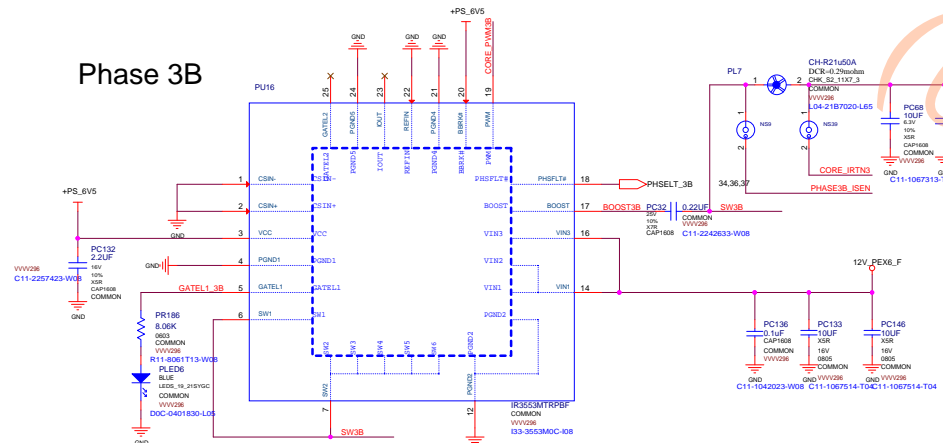
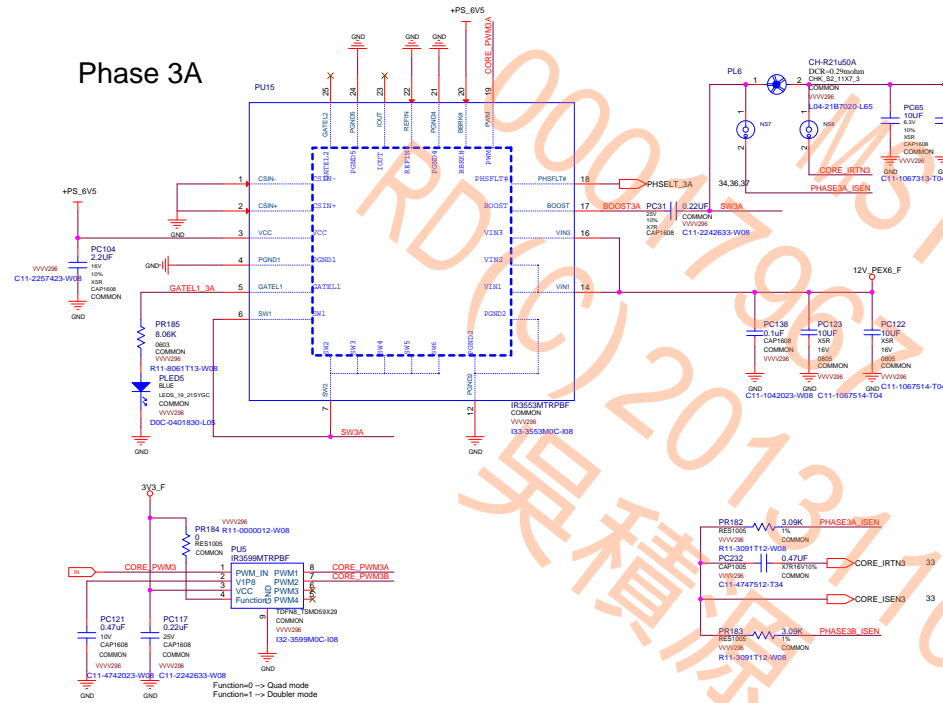
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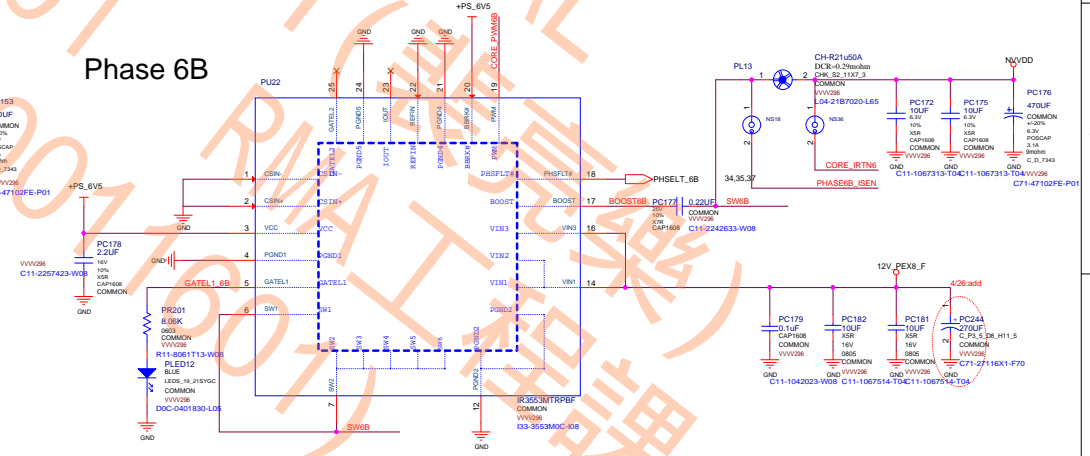
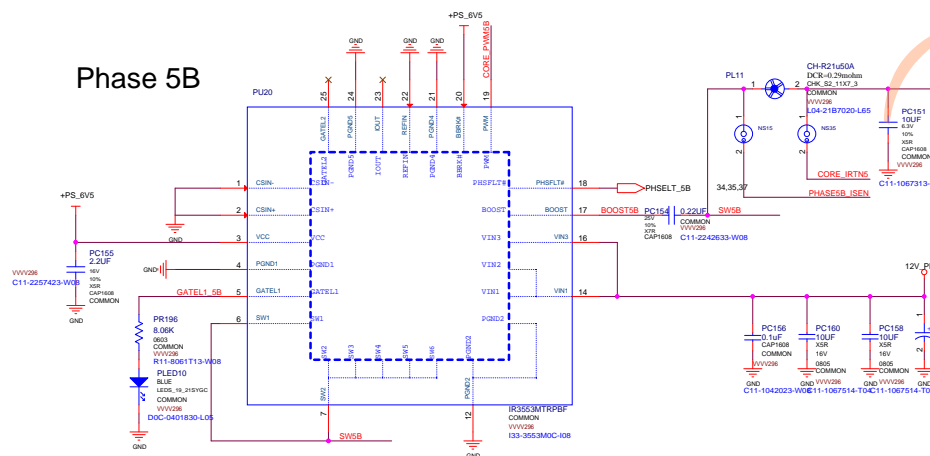
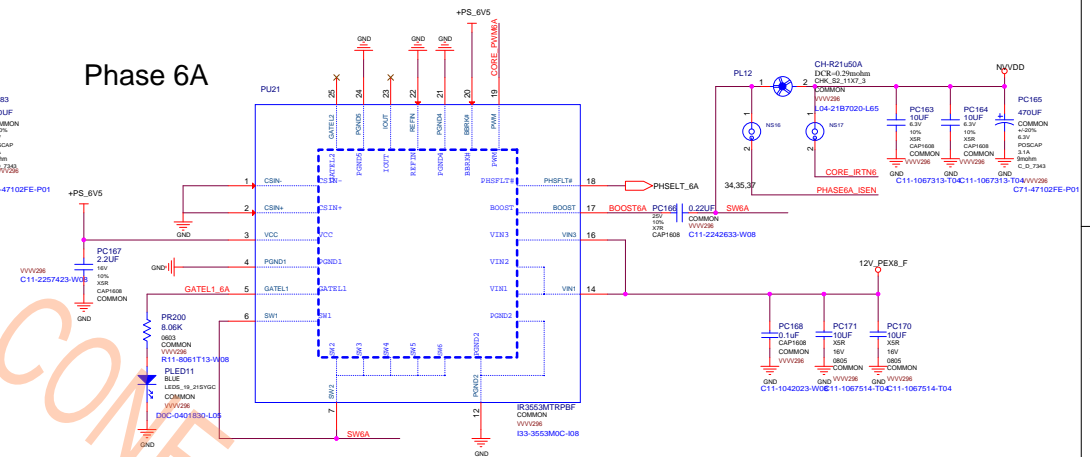
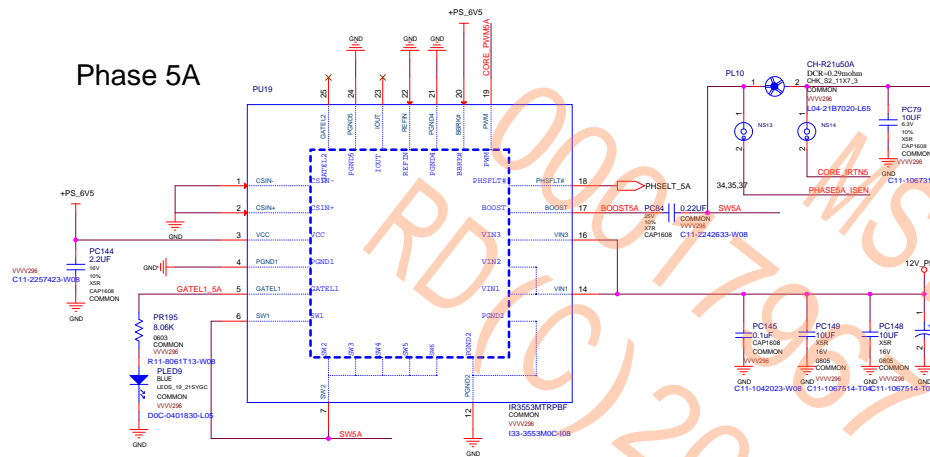





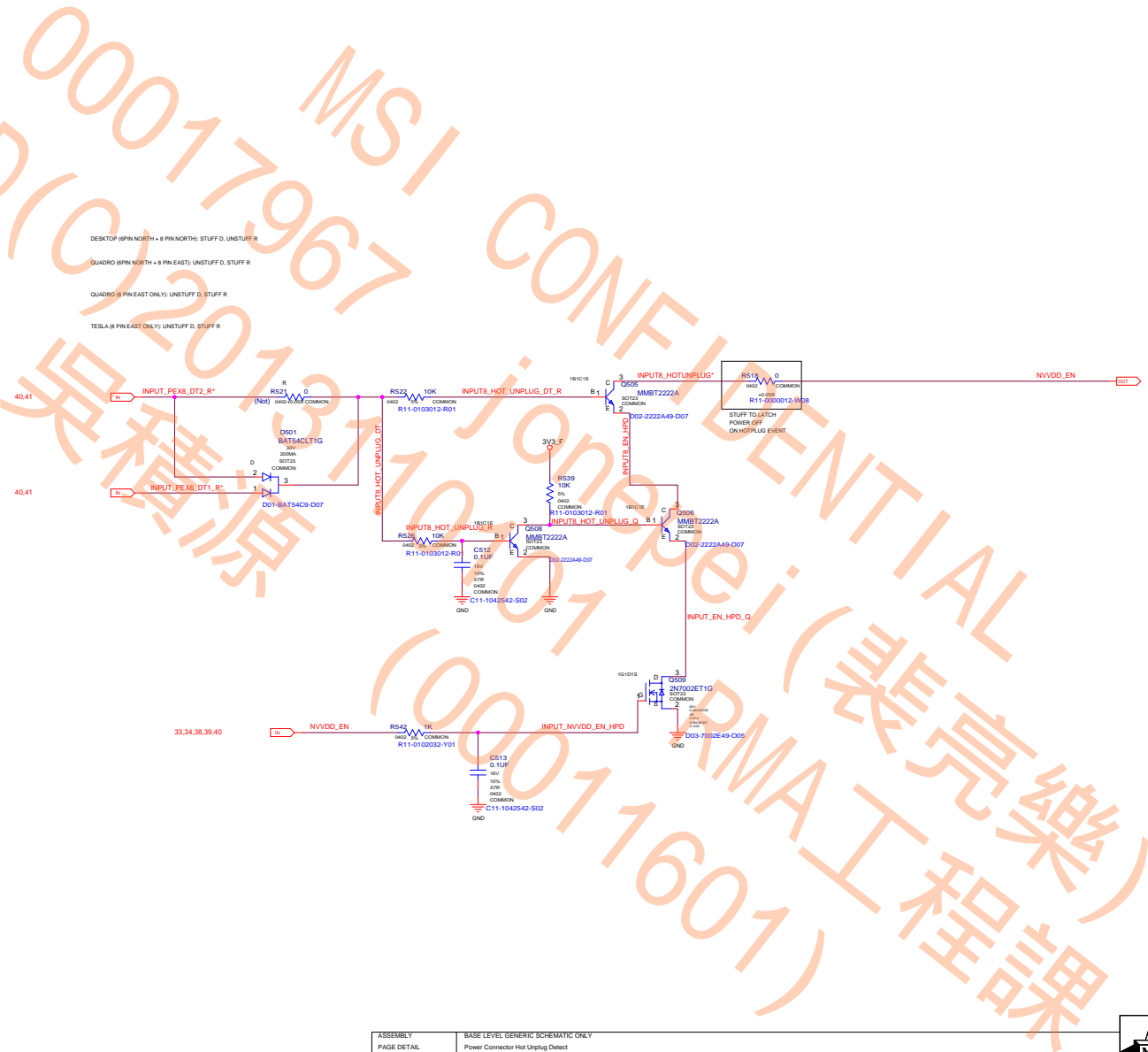
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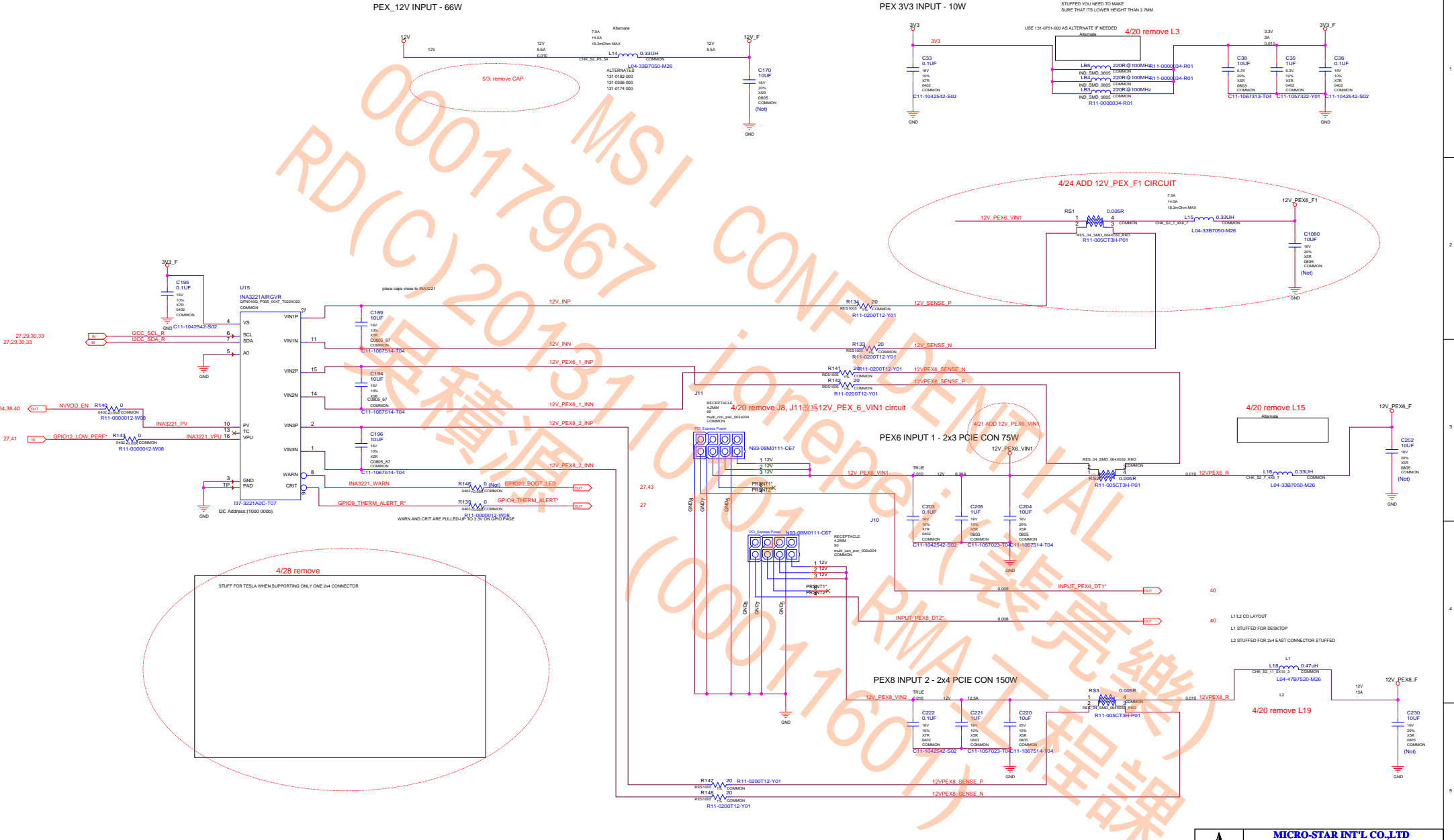
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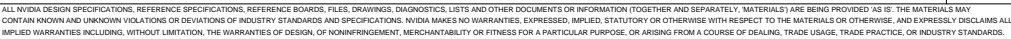


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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	PS: Inputs, Filtering, and Monitoring

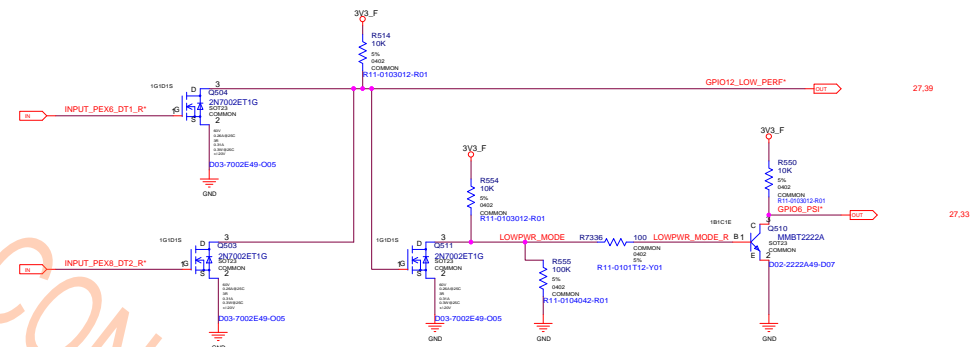
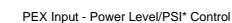
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IFP_IOVDD (backdrive prevention)



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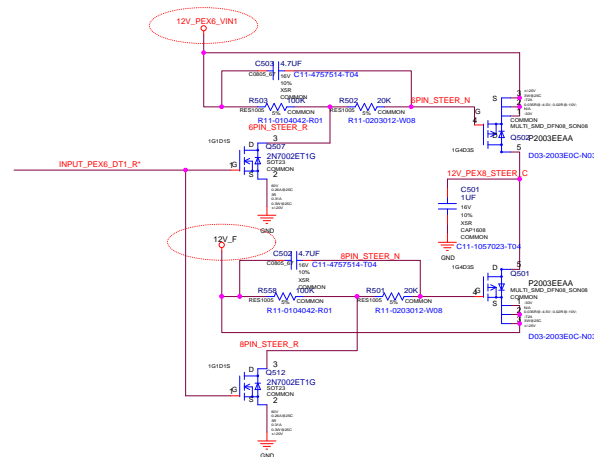
GPIO12_LOW_PERF	GPU SPEED
0	Slow
1	Normal



12V Current Steering FETs FROM 8PIN TO 6PIN (TESLA ONLY)

4/21:modify 電源接點

STUFF FOR TESLA ONLY



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PAGE DETAIL	PS: 12V Current Steering

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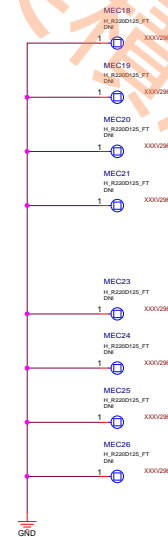
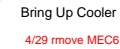
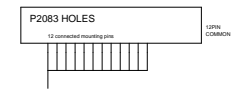
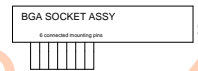
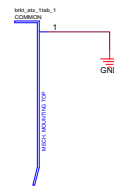
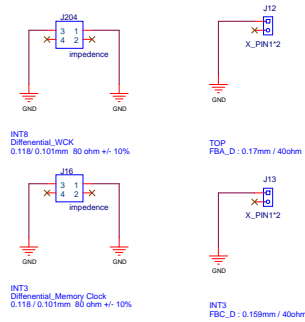



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