

P2757-B01	
GM107 GB4B-128, MXM TYPE A, X32 GDDR5 QUAD DP, LVDS, VGA	
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ASSEMBLY

PAGE DETAIL

SKU502 GM107 128Bit X32 GDDR5 MEMORY

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A

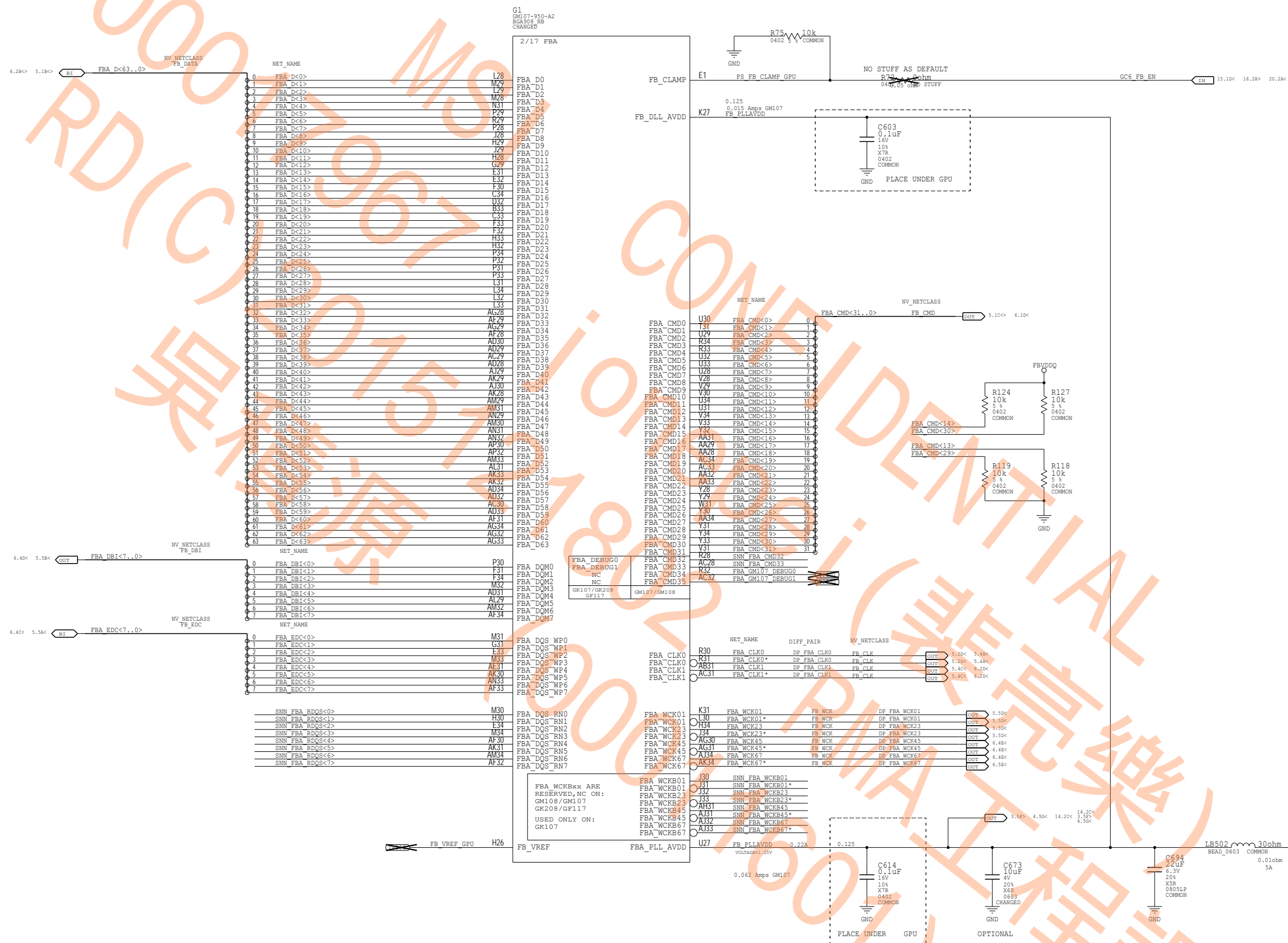
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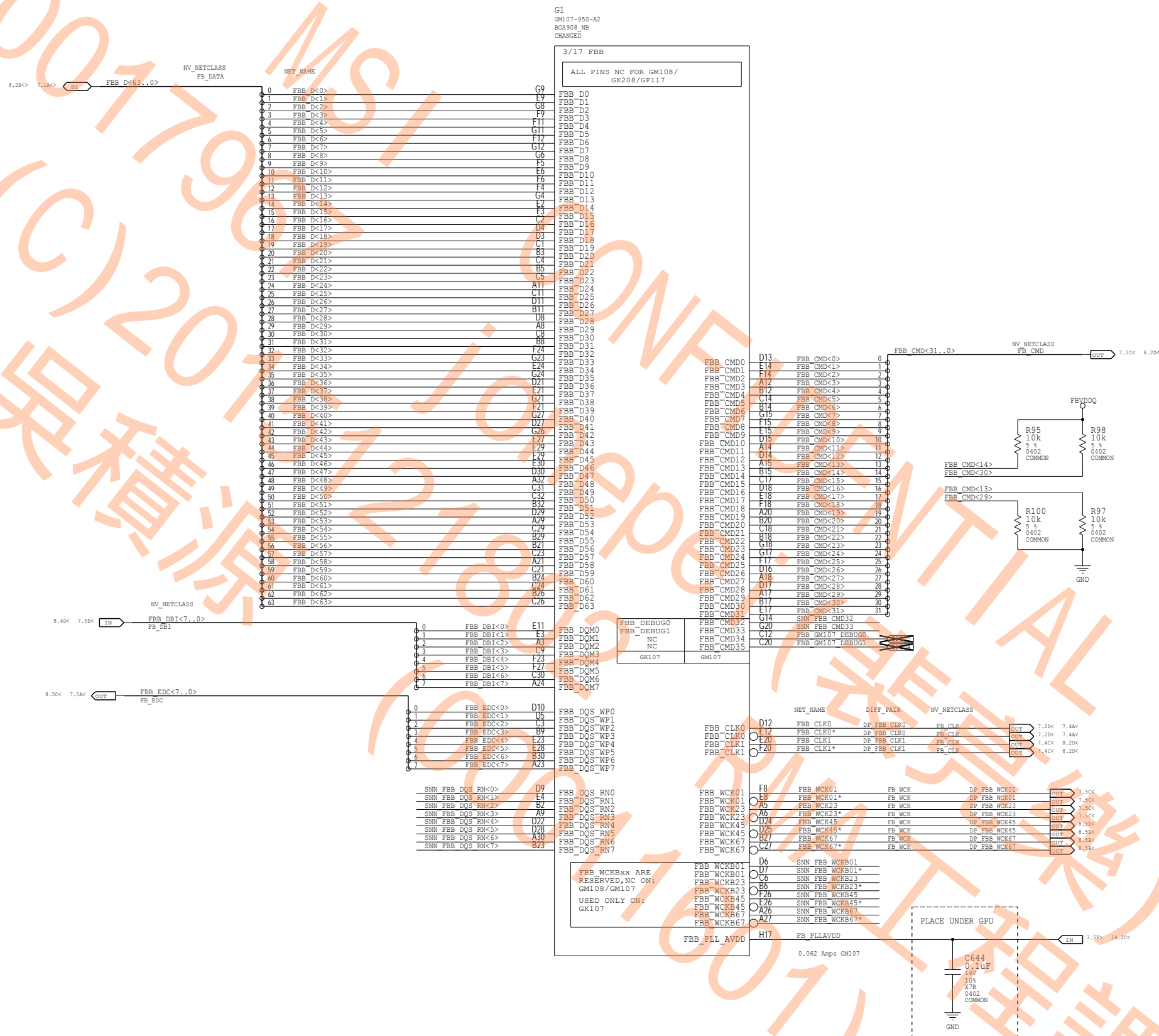
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FRAME BUFFER A GPU INTERFACE



GDGR5	BGA170	MIRR	COMMAND	MAP
		32	63	
		CS*		
CM01	A3	BA3		
CM02	A2	BA0		
CM03	A4	BA2		
CM04	A5	BA1		
CM05	WE*			
CM06	A7	A8		
CM07	A6	A11		
CM08	ABT*			
CM09	A12	RFU		
CM10	A0	A10		
CM11	A1	A9		
CM12	RA5*			
CM13	RS*			
CM14	CKE*			
CM15	CAS*			
CM16			CS*	
CM17			A3	BA3
CM18			A2	BA0
CM19			A4	BA2
CM20			A5	BA1
CM21			WE*	
CM22			A7	A8
CM23			A6	A11
CM24			ABT*	
CM25			A12	RFU
CM26			A0	A10
CM27			A1	A9
CM28			RA5*	
CM29			RS*	
CM30			CKE*	
CM31			CAS*	

FRAME BUFFER B GPU INTERFACE



```

GDDR5_BGA170_MIRR_COMMAND_MAP


0001 30 A1
CMD0 CS*
CMD1 A3 BA3
CMD2 A2 BA0
CMD3 A4 BA2
CMD4 A5 BA1
CMD5 WE*
CMD6 A7 A8
CMD7 A6 A11
CMD8 AB1*
CMD9 A12 RFU
CMD10 A0 A10
CMD11 A1 A9
CMD12 RAS*
CMD13 RST*
CMD14 CKE*
CMD15 CAS*

CMD16 CS*
CMD17 A3 BA3
CMD18 A2 BA0
CMD19 A4 BA2
CMD20 A5 BA1
CMD21 WE*
CMD22 A7 A8
CMD23 A6 A11
CMD24 AB1*
CMD25 A12 RFU
CMD26 A0 A10
CMD27 A1 A9
CMD28 RAS*
CMD29 RST*
CMD30 CKE*
CMD31 CAS*

```

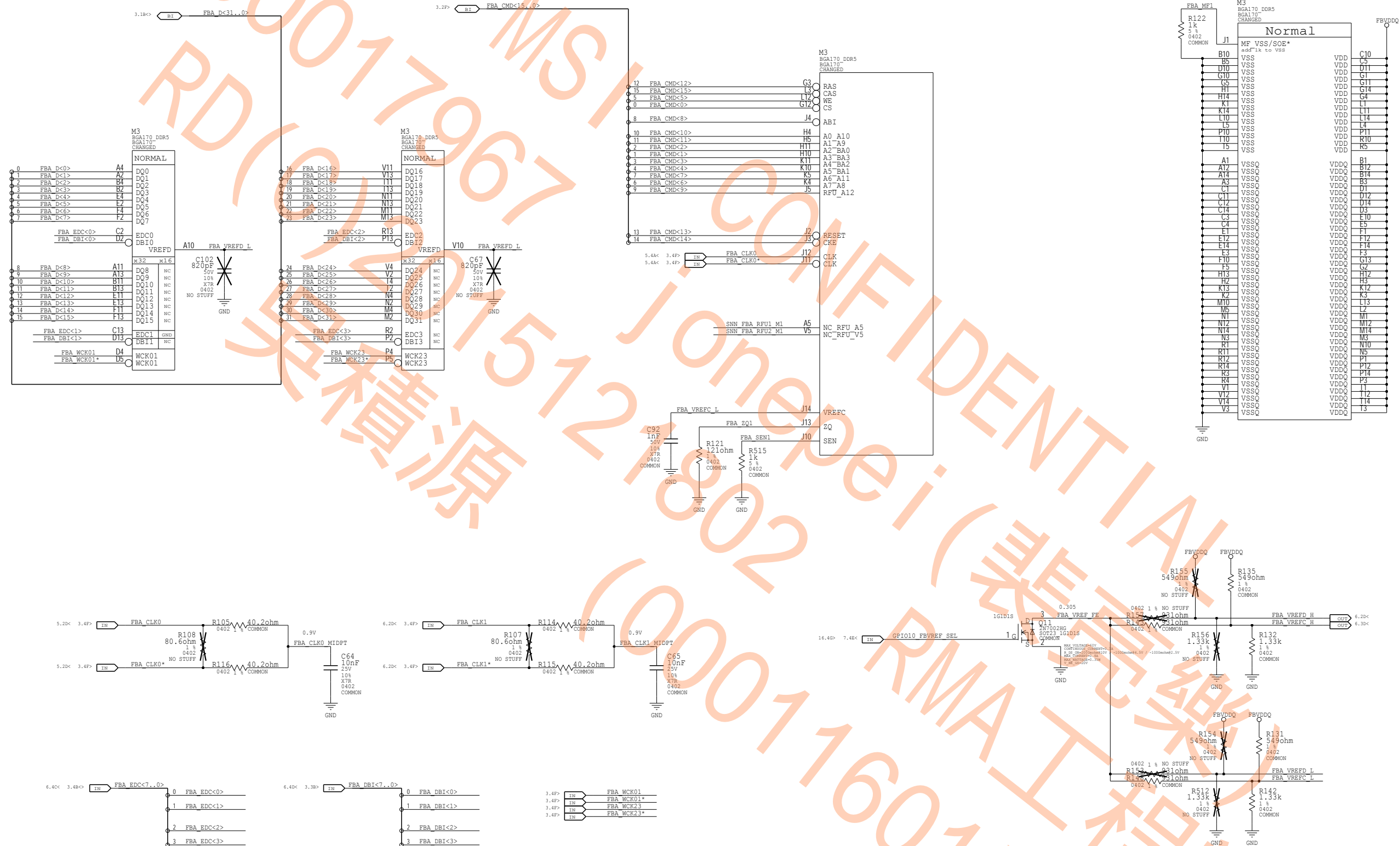
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FRAME BUFFER PARTITION A [31..0]

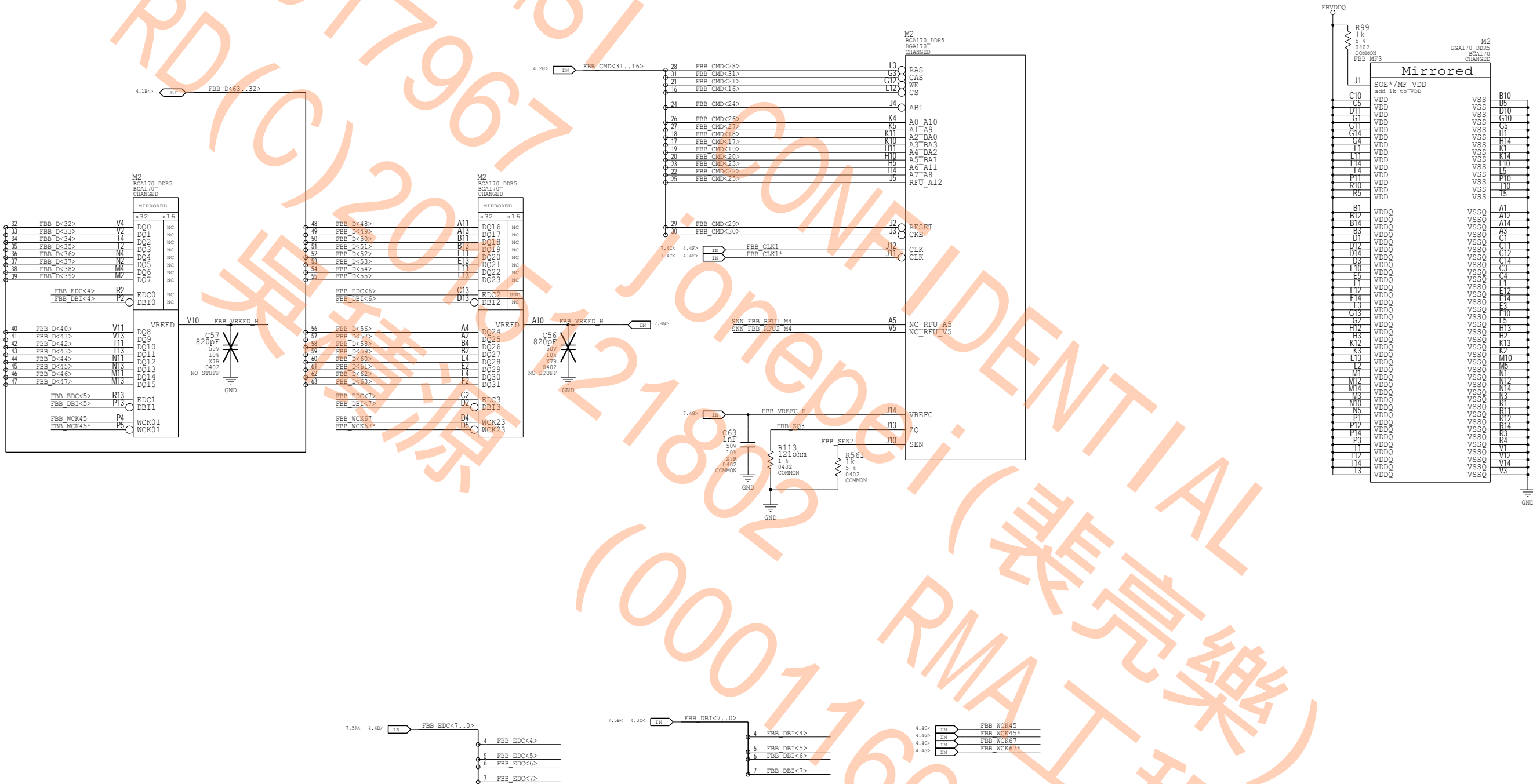


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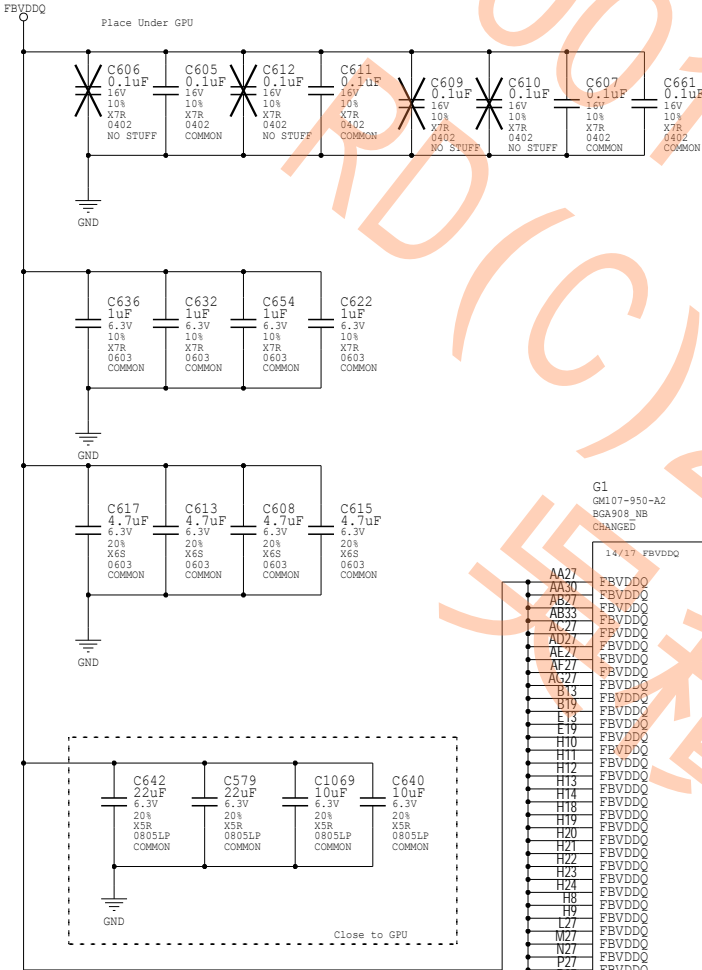
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FRAME BUFFER PARTITION B [63..32]



MEMORY DECOUPLING CAPS

0402 x 0.1uF x4 (4pcs Option)
0603 x 1uF x4
0603 x 4.7uF x4
0805 X 10uF x2
0805 X 22uF x2



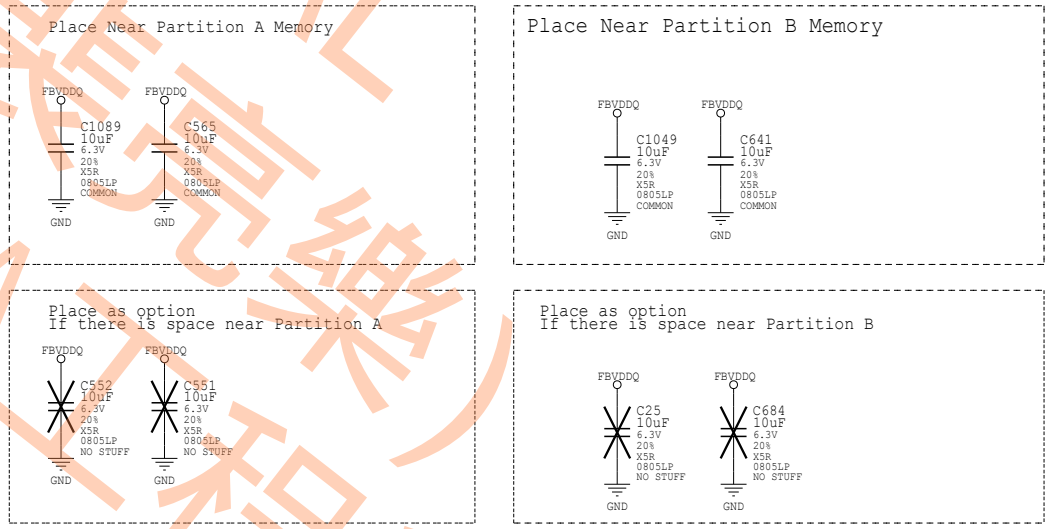
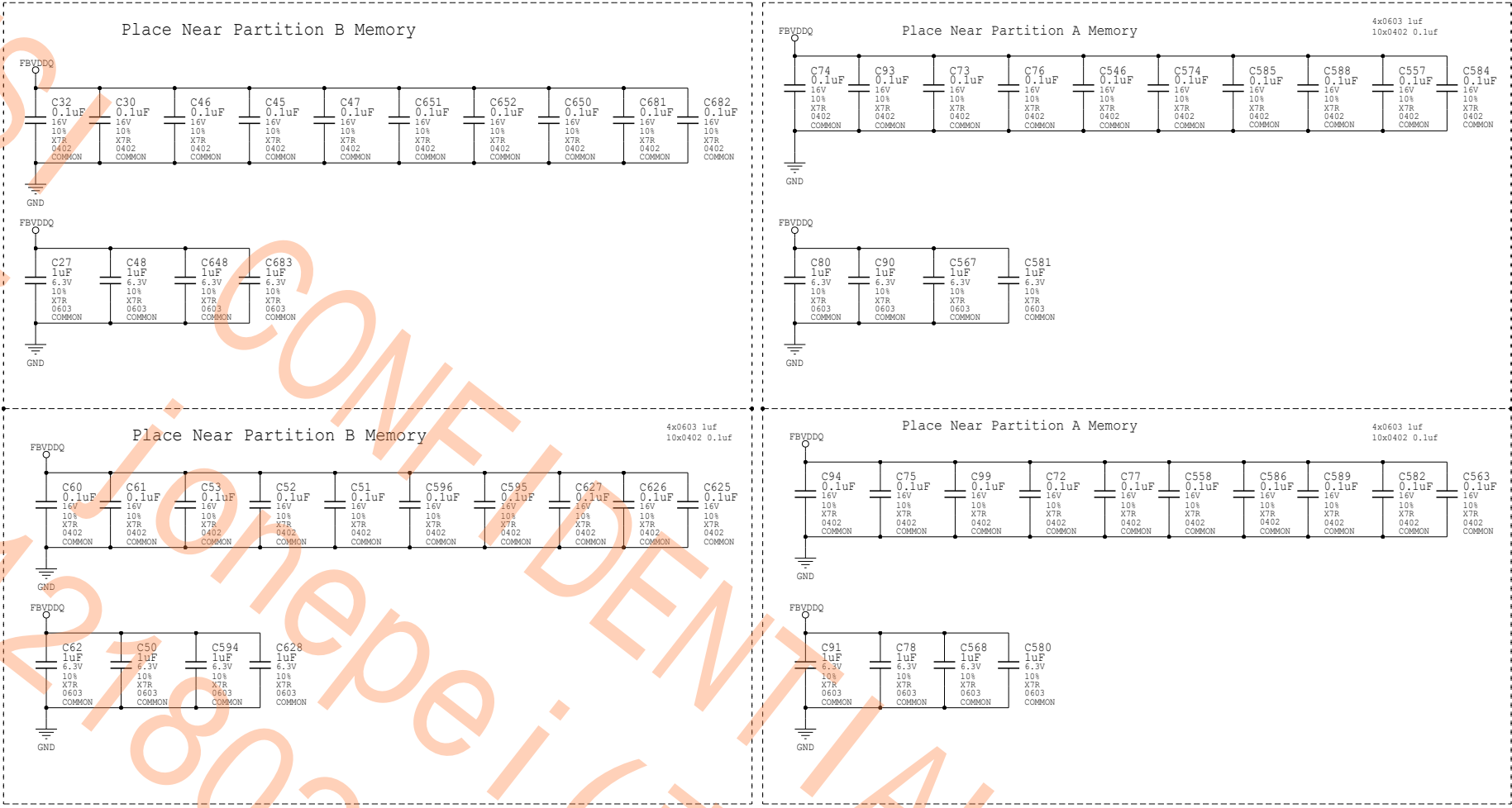
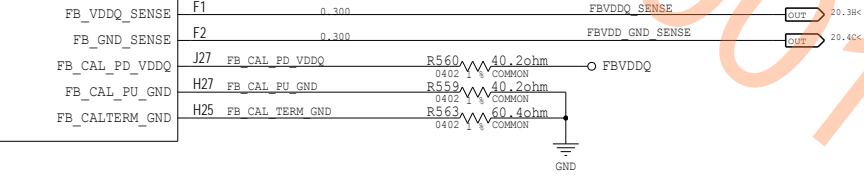
G1 GM107-950-A2 BGA908_NB CHANGED

14/17 FBVDDQ

AA27	FBVDDQ
AB27	FBVDDQ
AB33	FBVDDQ
AC27	FBVDDQ
AD27	FBVDDQ
AE27	FBVDDQ
AF27	FBVDDQ
AG27	FBVDDQ
B13	FBVDDQ
B19	FBVDDQ
E13	FBVDDQ
E19	FBVDDQ
H10	FBVDDQ
H11	FBVDDQ
H12	FBVDDQ
H13	FBVDDQ
H14	FBVDDQ
H18	FBVDDQ
H19	FBVDDQ
H20	FBVDDQ
H21	FBVDDQ
H22	FBVDDQ
H23	FBVDDQ
H24	FBVDDQ
H8	FBVDDQ
H9	FBVDDQ
L27	FBVDDQ
M27	FBVDDQ
N27	FBVDDQ
P27	FBVDDQ
R27	FBVDDQ
R27	FBVDDQ
R30	FBVDDQ
R33	FBVDDQ
Y27	FBVDDQ

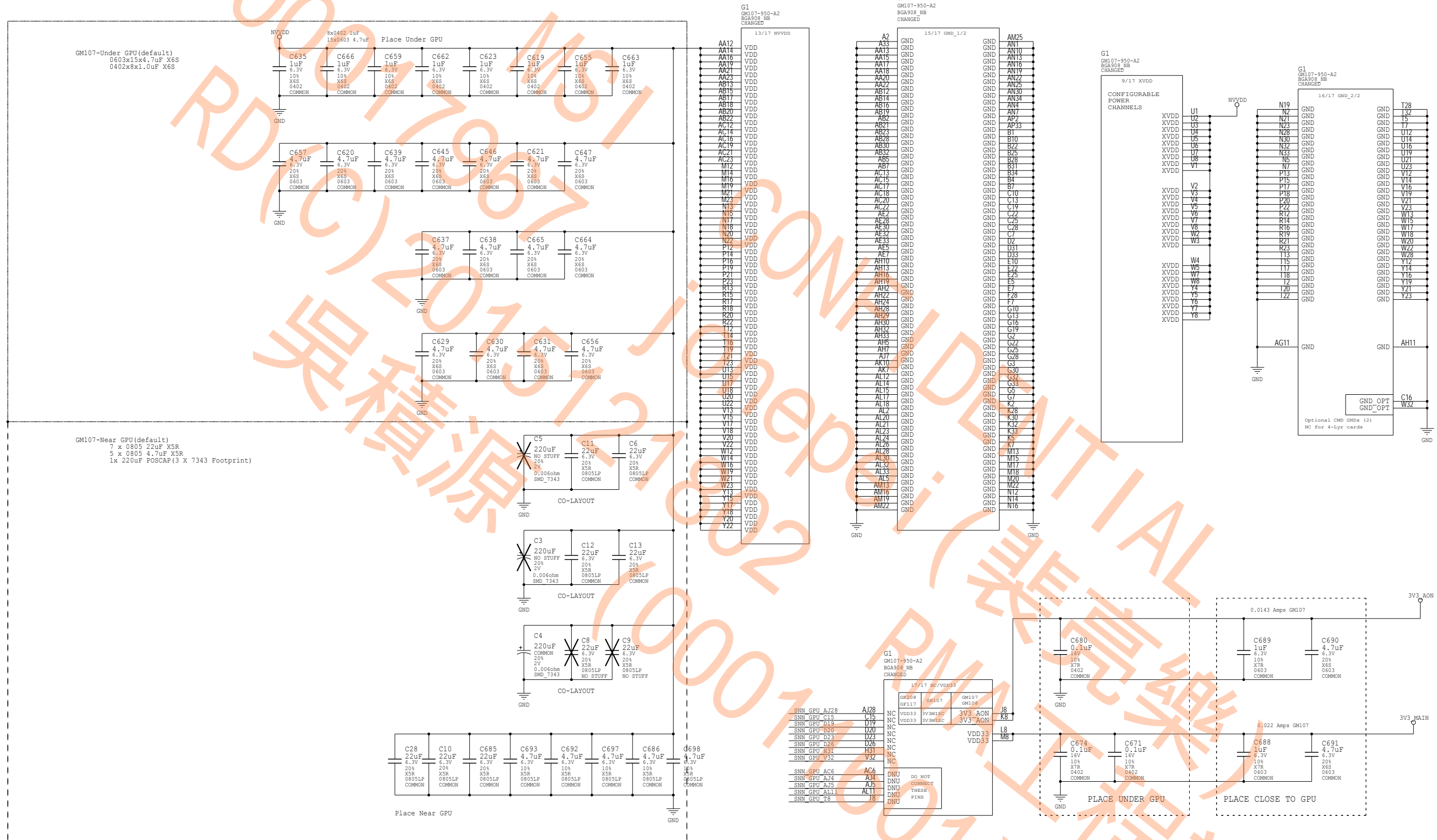
B16	FBVDDQ_AON	FBVDDQ
E16	FBVDDQ_AON	FBVDDQ
H15	FBVDDQ_AON	FBVDDQ
H16	FBVDDQ_AON	FBVDDQ
H17	FBVDDQ_AON	FBVDDQ
V27	FBVDDQ_AON	FBVDDQ
W27	FBVDDQ_AON	FBVDDQ
W30	FBVDDQ_AON	FBVDDQ
W33	FBVDDQ_AON	FBVDDQ

G107/GM108 G107/GM108/G117



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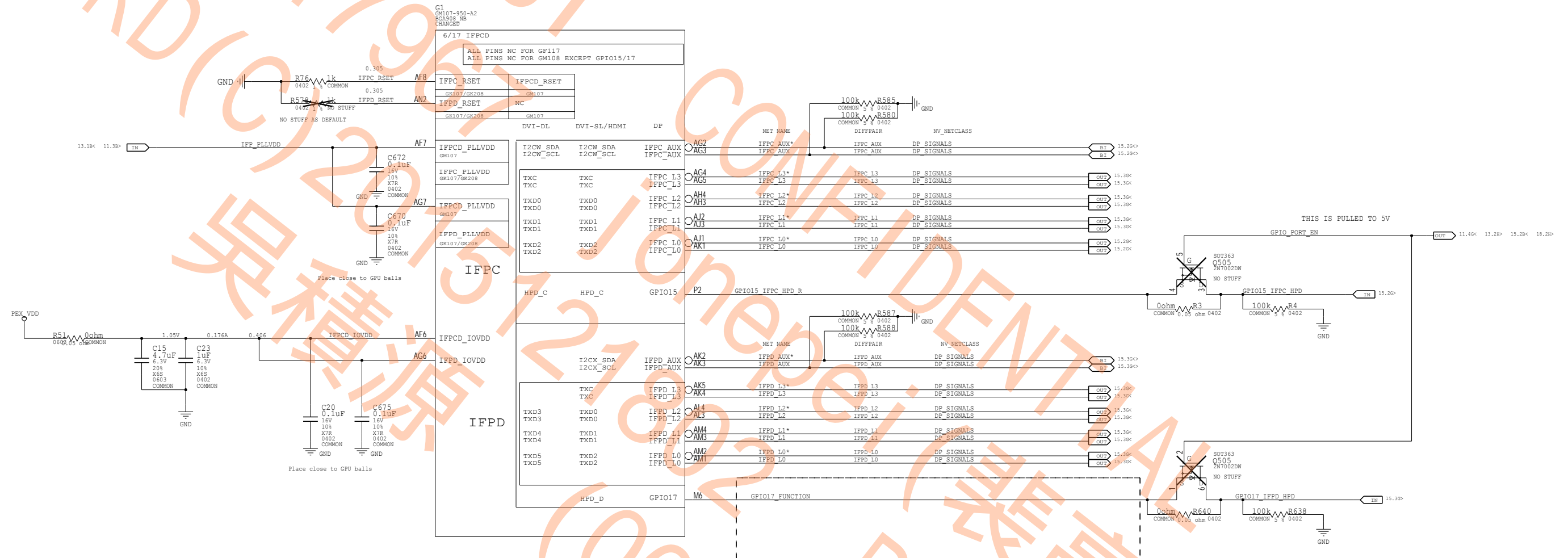
GPU VDD\DCPLNG\GND



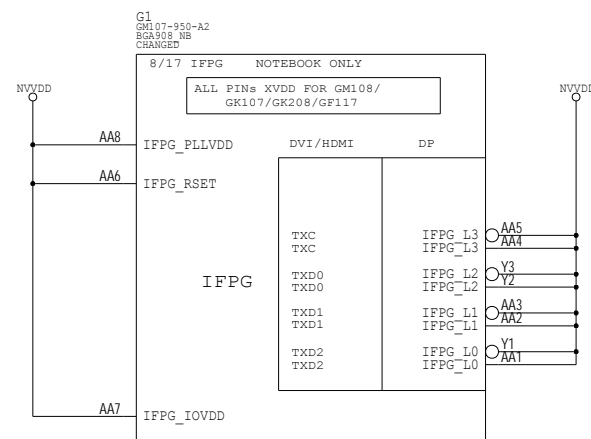
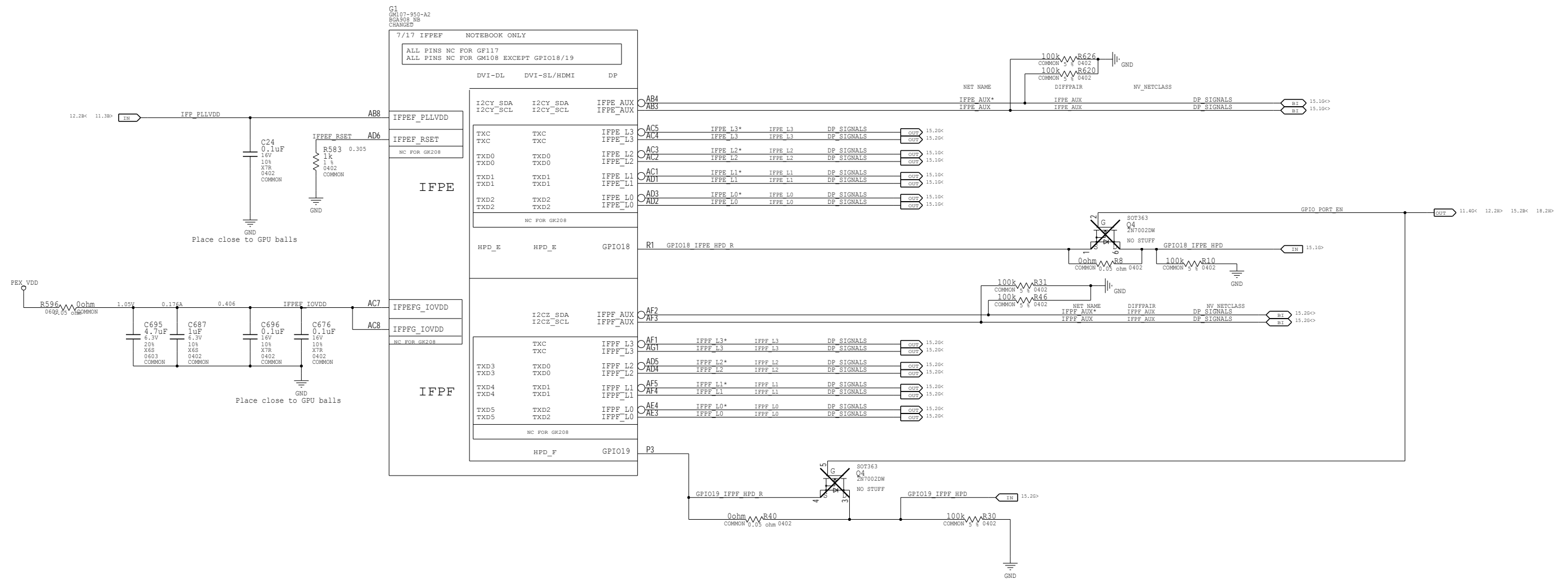
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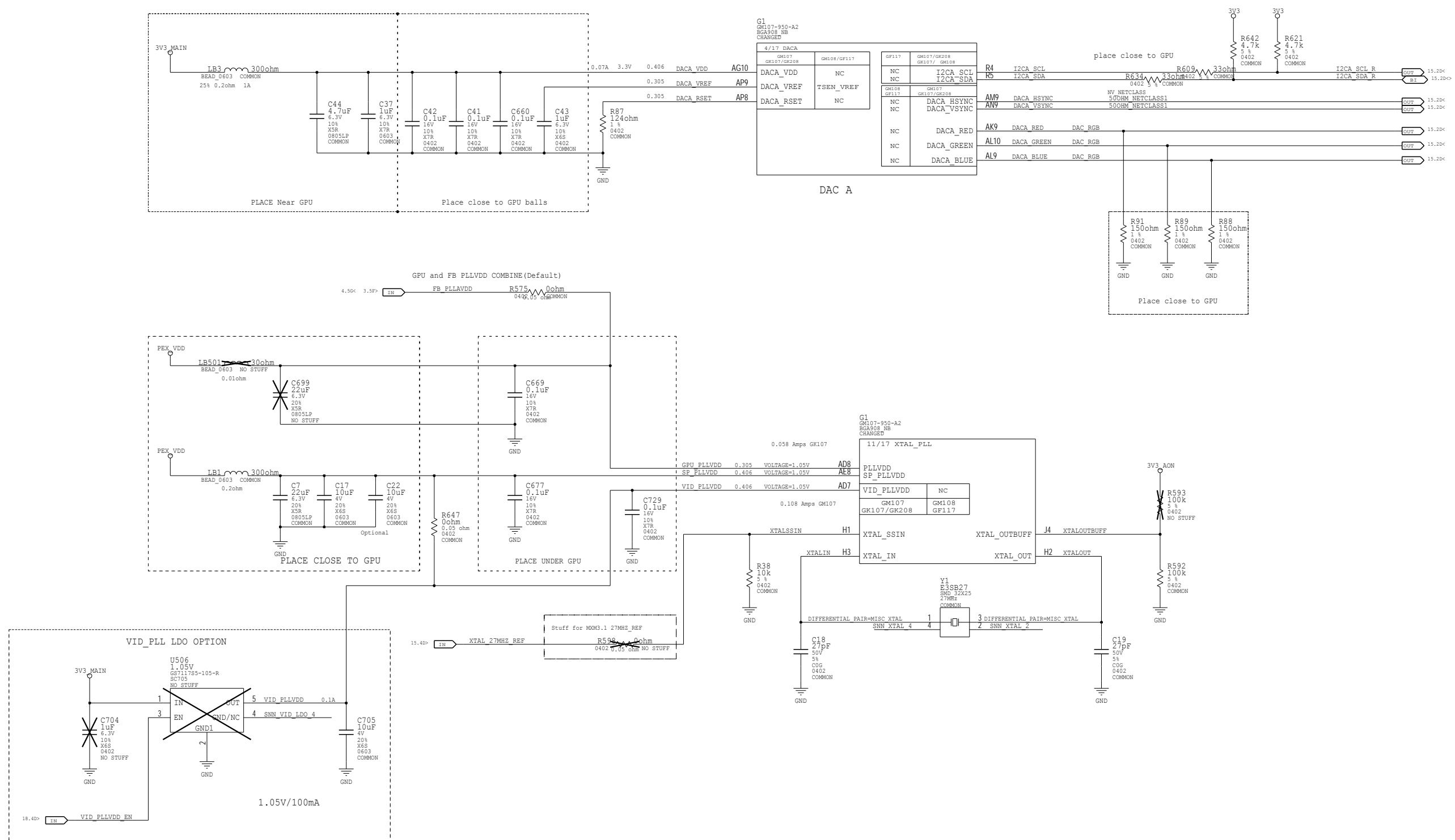
DP LINKS C, D



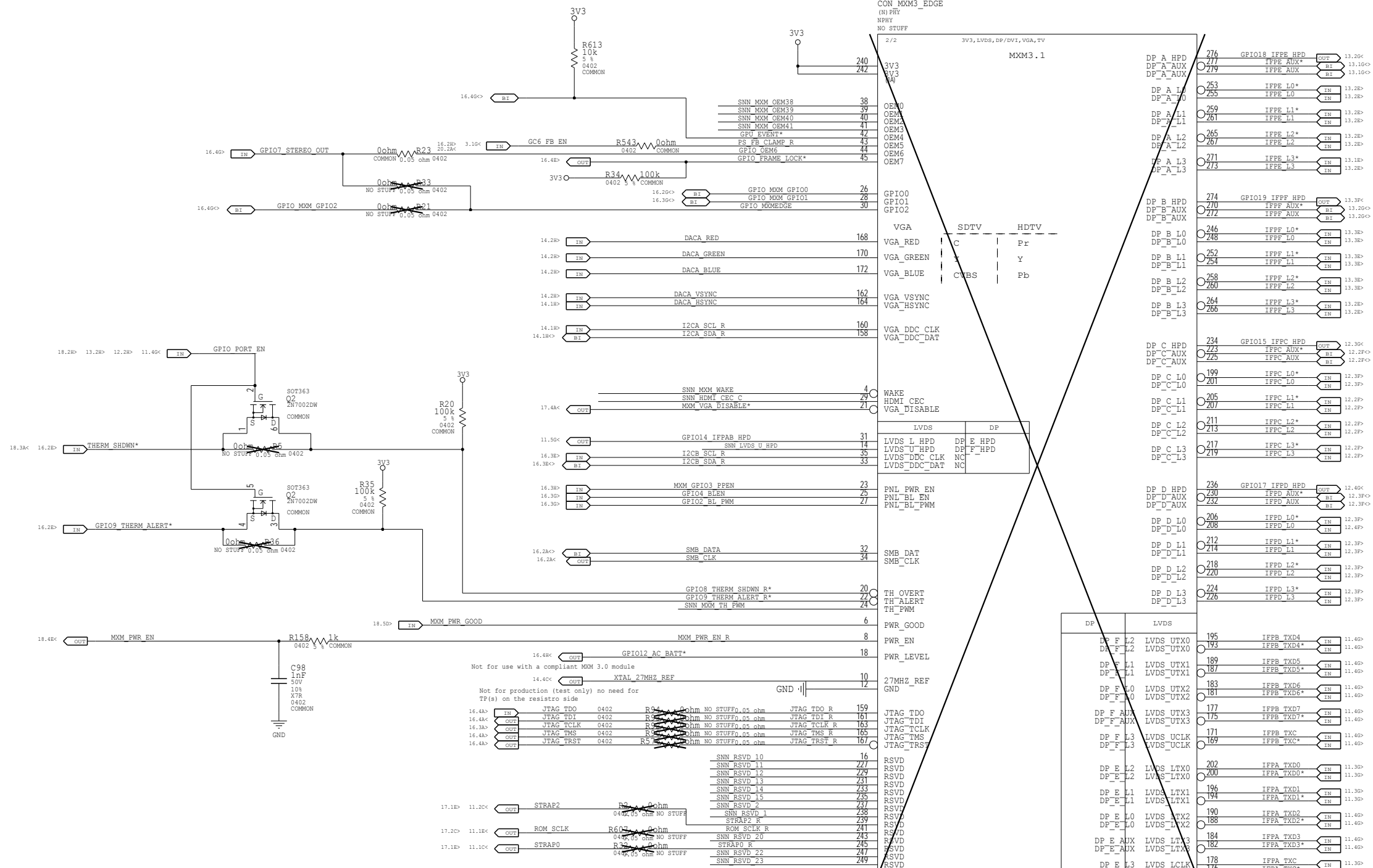
DP LINKS E, F, G



DACA PLL, CRYSTAL



MXM CONNECTOR, IO-SECTION



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PAGE DETAIL	MXM CONNECTOR, IO-SECTION

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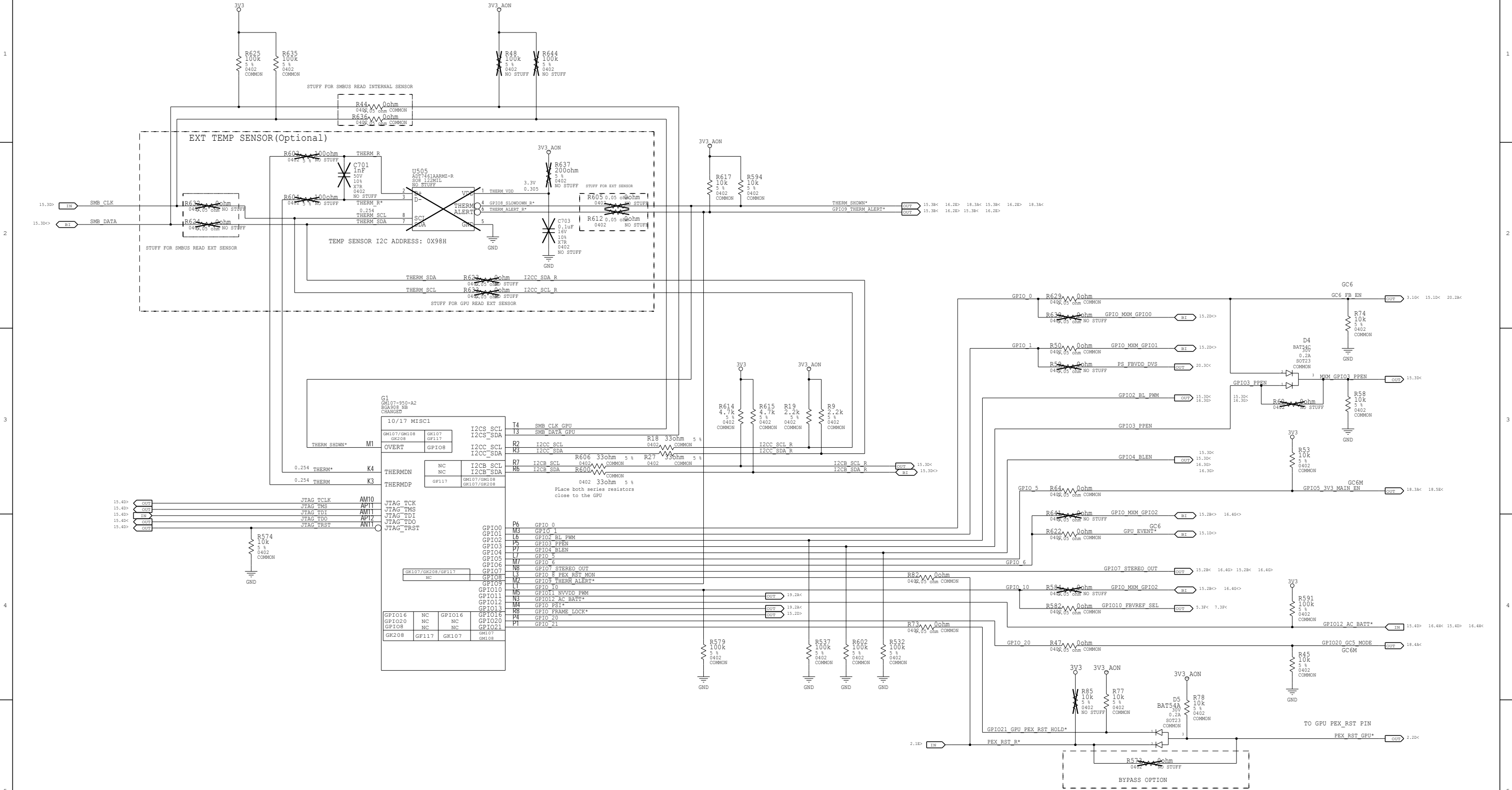
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GPIO, JTAG, TEMP SENSOR



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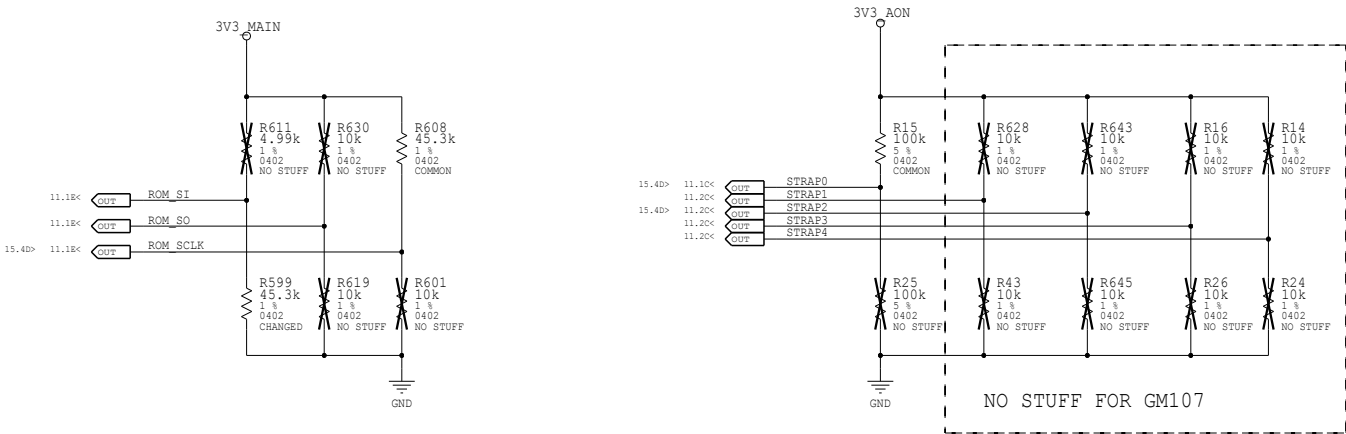
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STRAPS AND MOUNTING HOLES



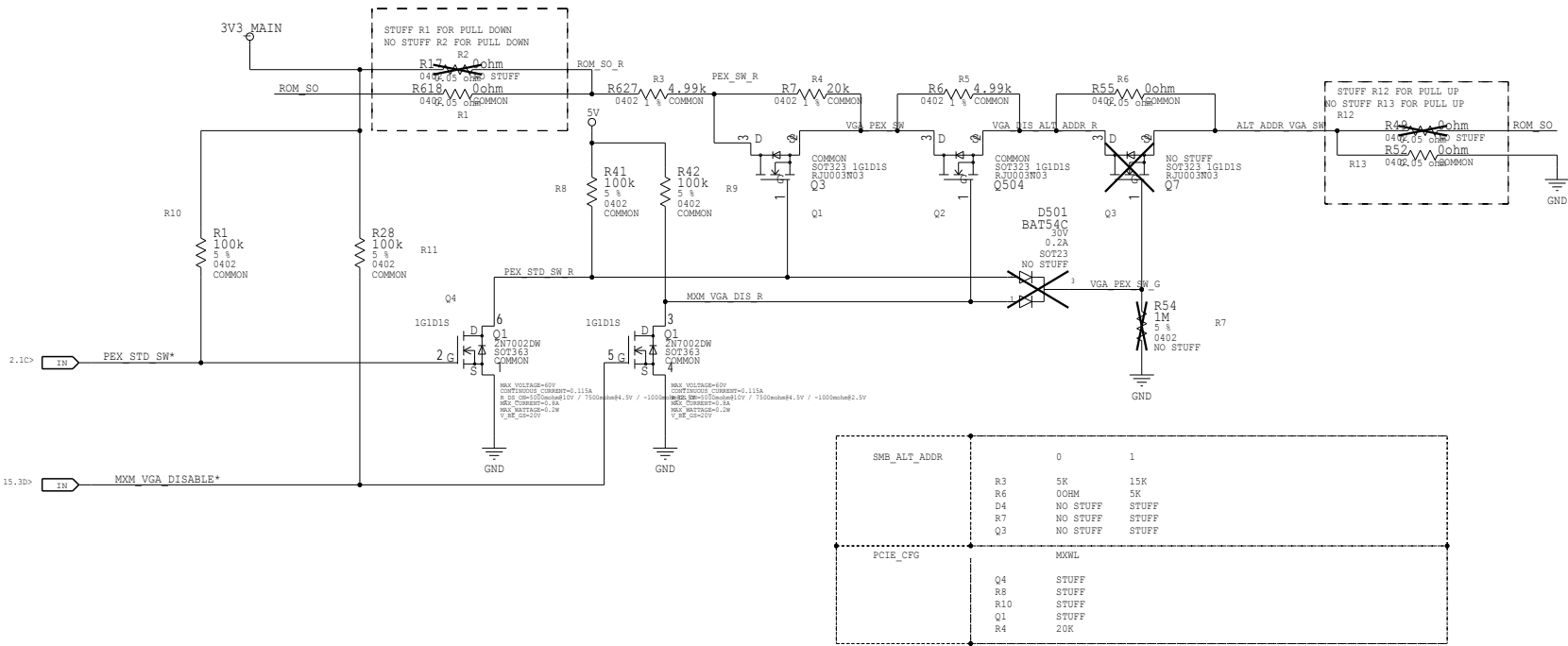
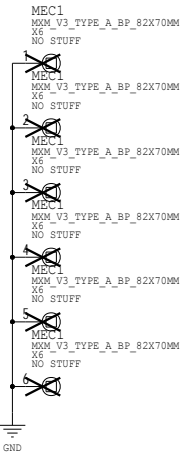
GB4B-128 Straps

Maxwell Bit Signal Values

ROM_SI	03: RAMCFG[3]				
	02: RAMCFG[2]	0111	128Mx32 128bit Samsung	Primary	
	01: RAMCFG[1]	0010	128Mx32 128bit Hynix-A	Second	
	00: RAMCFG[0]	0101	128Mx32 128bit Elpida	Third	
ROM_SO	03: DEVID_SEL	0	DEFAULT		
	02: PCIE_CFG	0	HS	1	LS
	01: SMB_ALT_ADDR	0	DISABLED	1	ENABLED
	00: VGA_DEVICE	0	DISABLED	1	ENABLED
ROM_SCLK	03: SOR3_EXPOSED	0	DISABLED	1	ENABLED
	02: SOR2_EXPOSED	0	DISABLED	1	ENABLED
	01: SOR1_EXPOSED	0	DISABLED	1	ENABLED
	00: SOR0_EXPOSED	0	DISABLED	1	ENABLED
STRAP0	100kohm PULL UP TO 3V3_AON				
	RESERVED				
	RESERVED				
	RESERVED				
STRAP1	RESERVED				
	RESERVED				
	RESERVED				
	RESERVED				
STRAP2	RESERVED				
	RESERVED				
	RESERVED				
	RESERVED				
STRAP3	RESERVED				
	RESERVED				
	RESERVED				
	RESERVED				
STRAP4	RESERVED				
	RESERVED				
	RESERVED				
	RESERVED				

Multilevel Straps

0000	4.99K to GND	1000	4.99K to VCC
0001	10K to GND	1001	10K to VCC
0010	15K to GND	1010	15K to VCC
0011	20K to GND	1011	20K to VCC
0100	24.9K to GND	1100	24.9K to VCC
0101	30.1K to GND	1101	30.1K to VCC
0110	34.8K to GND	1110	34.8K to VCC
0111	45.3K to GND	1111	45.3K to VCC



SMB_ALT_ADDR	0	1
	R3	5K 15K
	R6	00HM 5K
	D4	NO STUFF STUFF
PCIE_CFG	R7	NO STUFF STUFF
	Q3	NO STUFF STUFF
	Q4	STUFF
	R8	STUFF
PCIE_CFG	R10	STUFF
	Q1	STUFF
	Q4	STUFF
	R4	20K

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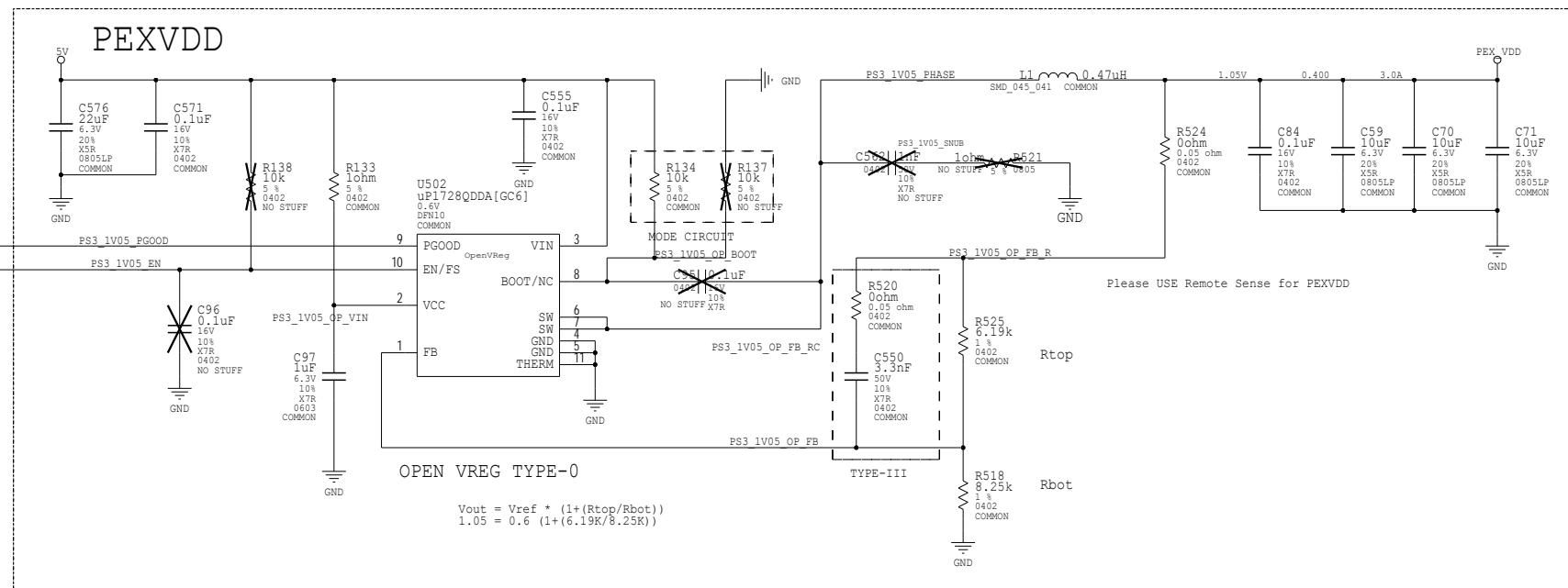
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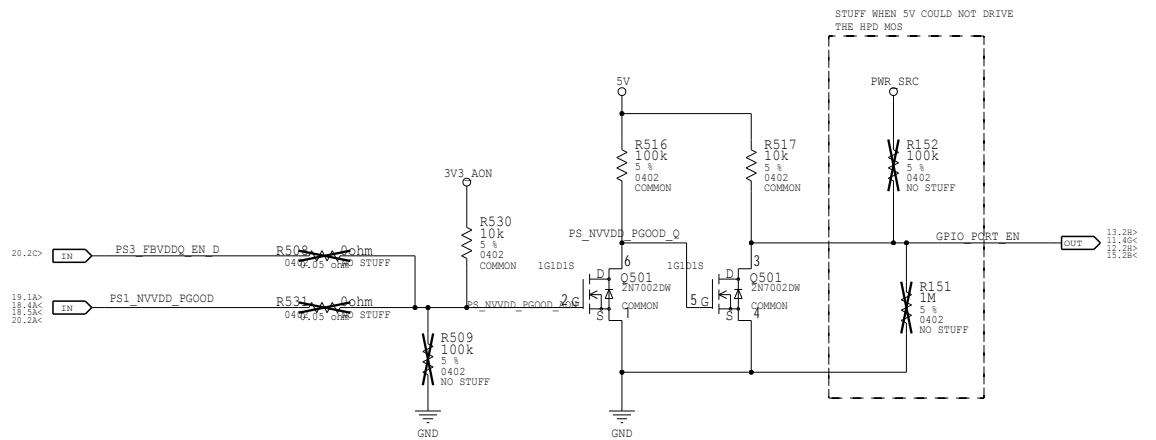
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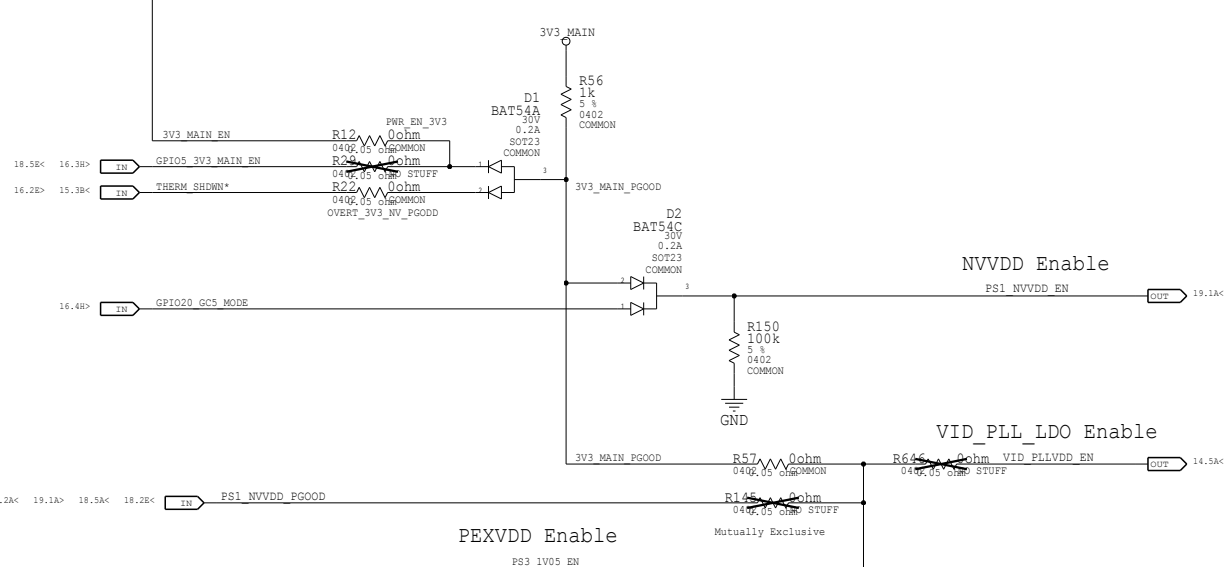
PEXVDD 3V3 AON 3V3 MAIN



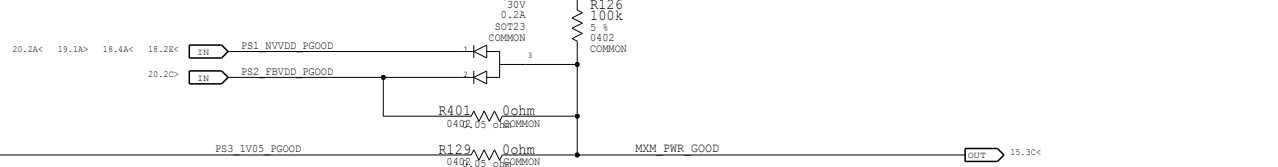
GPIO PROTECT ENABLE



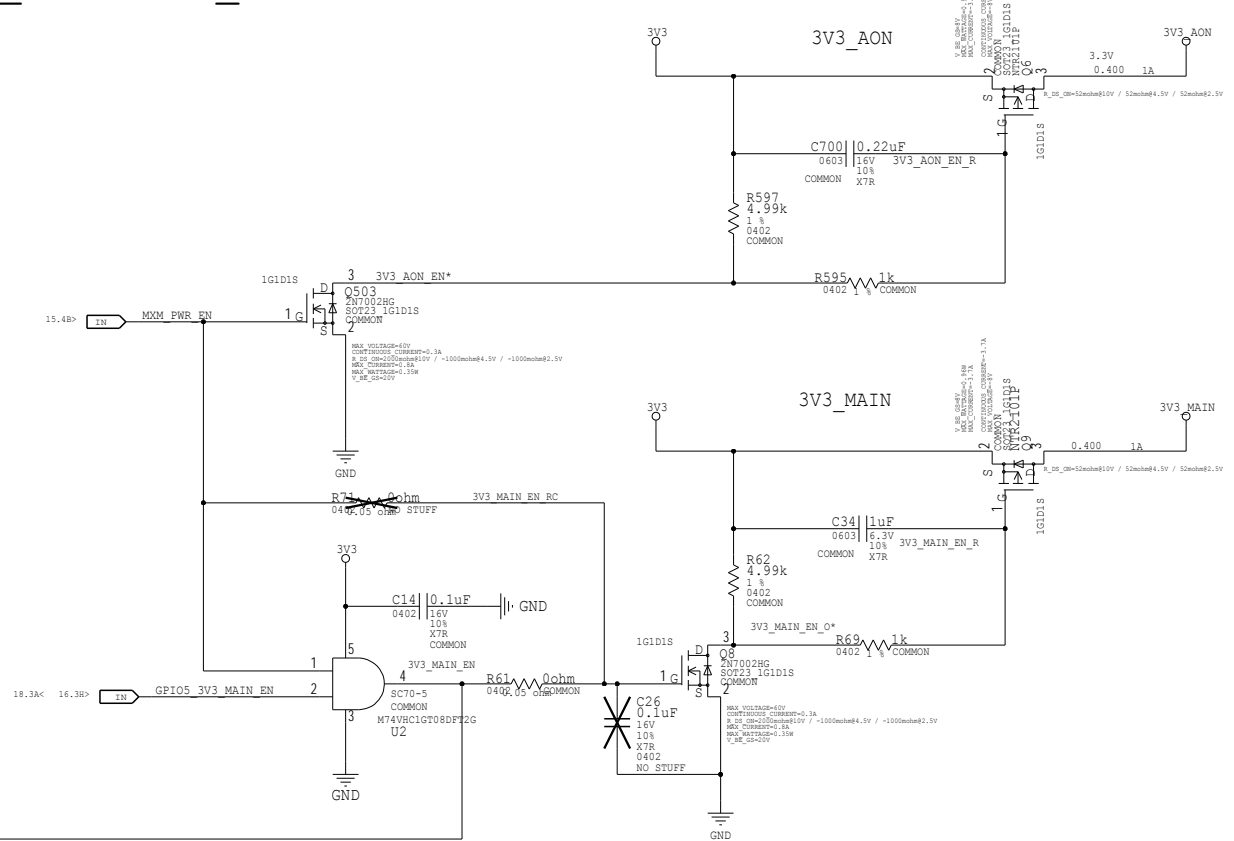
NVVDD&PEXVDD ENABLE



MXM POWER GOOD



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3V3 MAIN&3V3 AON ENABLE
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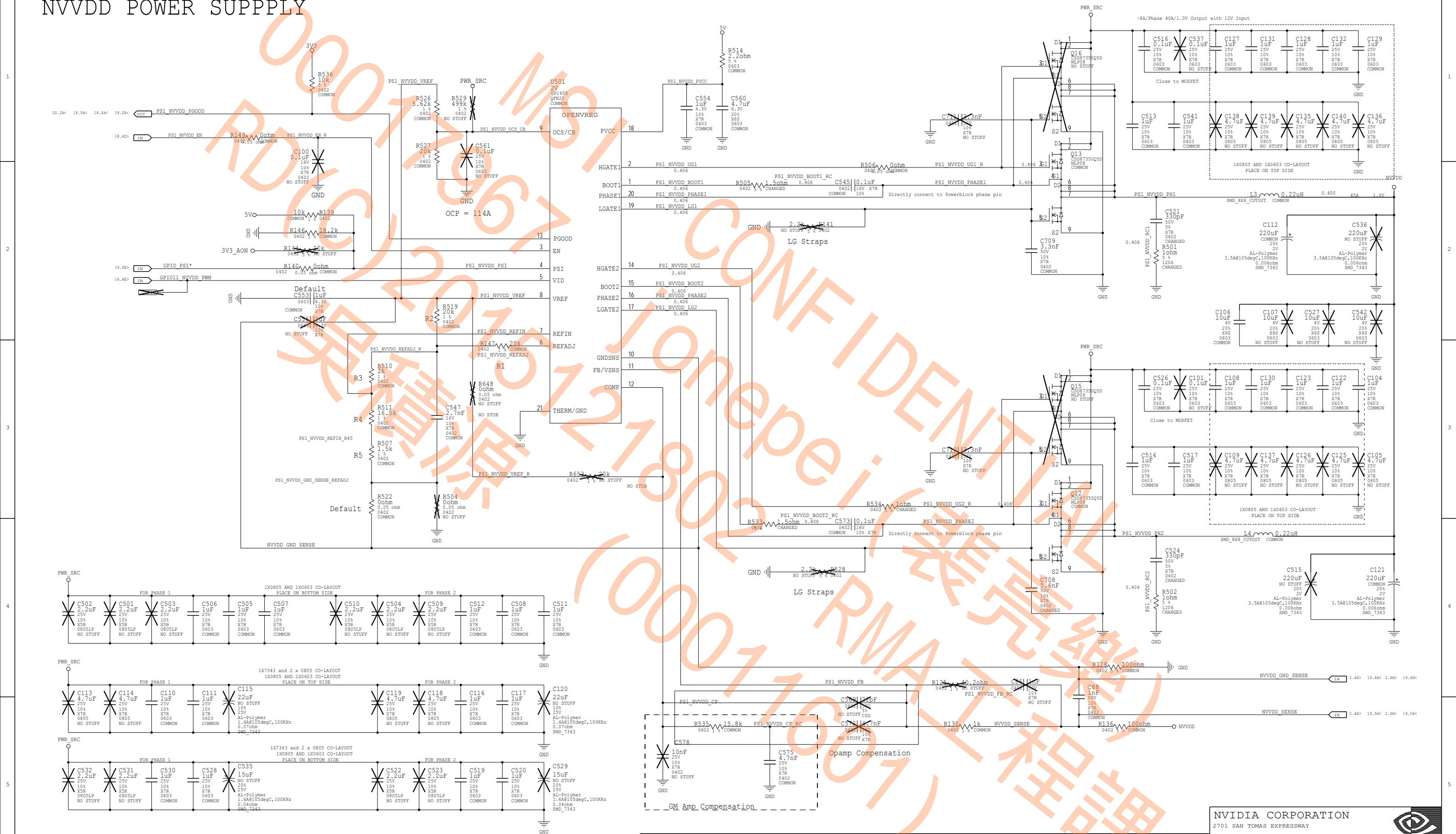
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NVVDD POWER SUPPLY

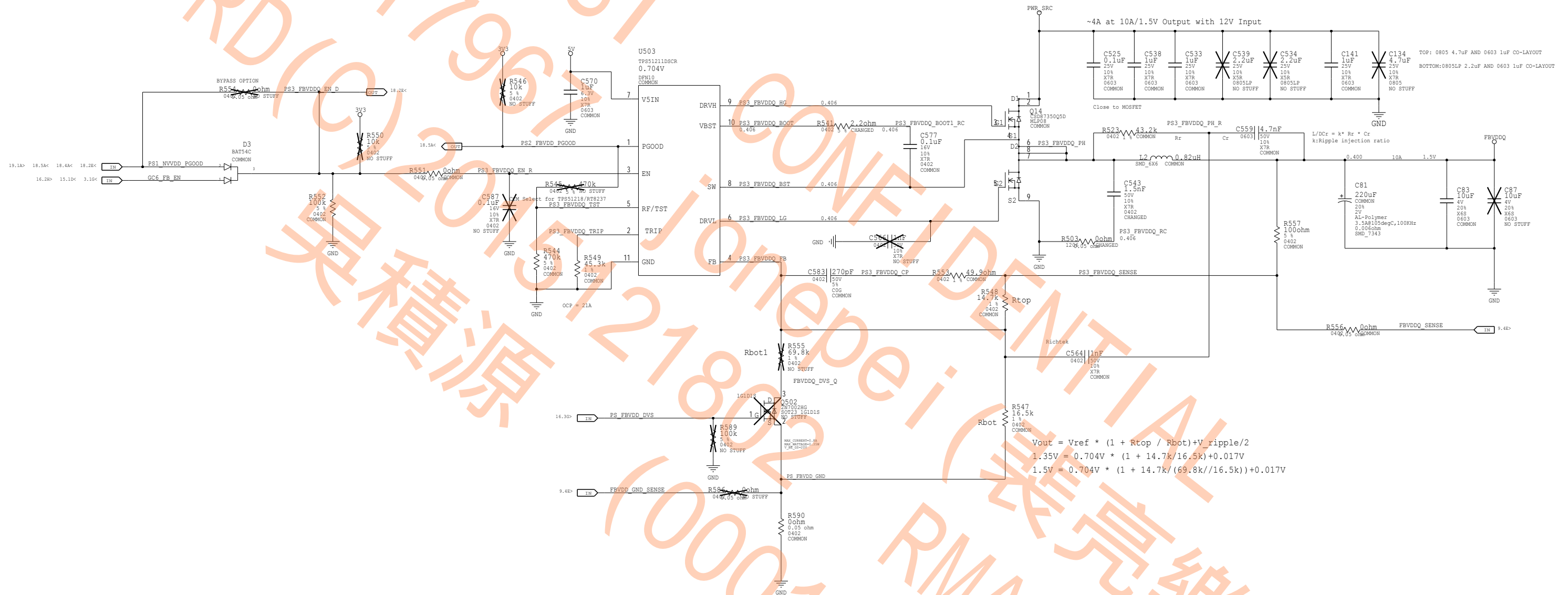


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FBVDDQ POWER SUPPLY


$$V_{out} = V_{ref} * (1 + R_{top} / R_{bot}) + V_{ripple}/2$$
$$1.35V = 0.704V * (1 + 14.7k/16.5k) + 0.017V$$
$$1.5V = 0.704V * (1 + 14.7k/(69.8k/16.5k)) + 0.017V$$

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