

P1025 - GF100

P1025, GF100-025/100, 1024MB/1280MB/2048MB/2560MB - GDDR5 BGA170 32M/64Mx32  
DVI -I + DVI\_I /DP +mHDMI + Dual SLI

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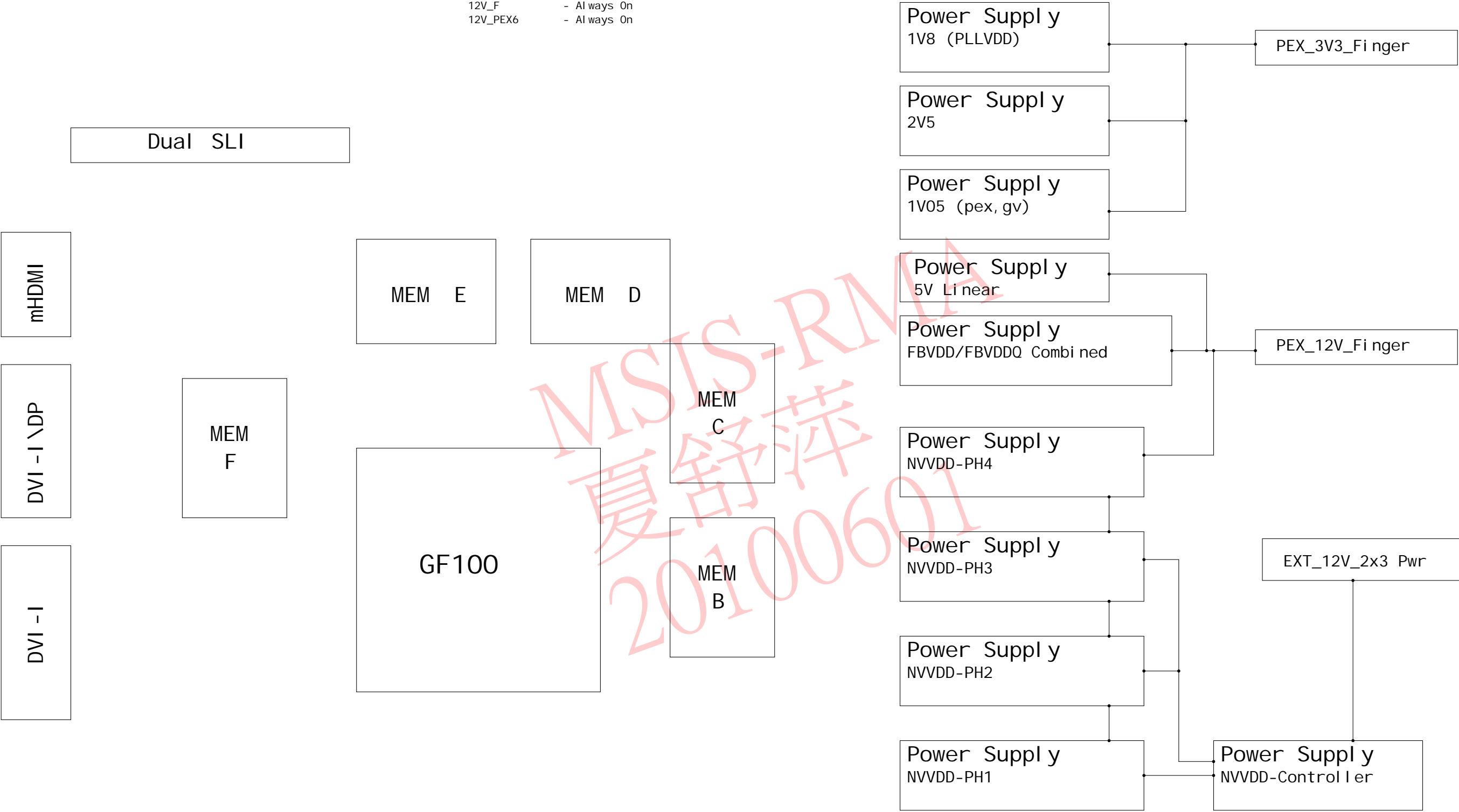
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SKU	VARI ANT	NVPN	ASSEMBLY
B	BASE	600-11025-BASE-SCH	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	SKU0000	602-11025-0000-300	DT, GF100-050, 659/2000, 1024MB - 32Mx32 GDDR5, DVI-I + DVI -I + mHDMI
2	SKU0001	602-11025-0001-300	DT, GF100-050, 659/2000, 1024MB - 32MX32 GDDR5, DVI -I + DVI -I + mHDMI
3	SKU0002	602-11025-0002-300	DT, GF100-300, 659/2000, 1280MB - 32Mx32 GDDR5, DVI -I + DP + mHDMI
4	SKU0003	602-11025-0003-0S1	DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI -I + DP + mHDMI
5	SKU0004	602-11025-0004-300	DT, GF100-300, 659/2000, 1280MB - 32Mx32 GDDR5, DVI -I + DVI -I + mHDMI
6	SKU0005	602-11025-0005-300	DT, GF100-050, 659/2000, 1024MB - 32Mx32 GDDR5, DVI -I + DVI -I + VENT
7	SKU0006	602-11025-0006-QS1	DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI -I + DVI -I + mHDMI
8	SKU0007	602-11025-0007-300	DT, GF100-030, 659/2000, 1280MB - 32Mx32 GDDR5, DVI -I + DVI -I + mHDMI
9	<UNDEFI NED>	<UNDEFI NED>	<UNDEFI NED>
10	<UNDEFI NED>	<UNDEFI NED>	<UNDEFI NED>
11	<UNDEFI NED>	<UNDEFI NED>	<UNDEFI NED>
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Block Diagram

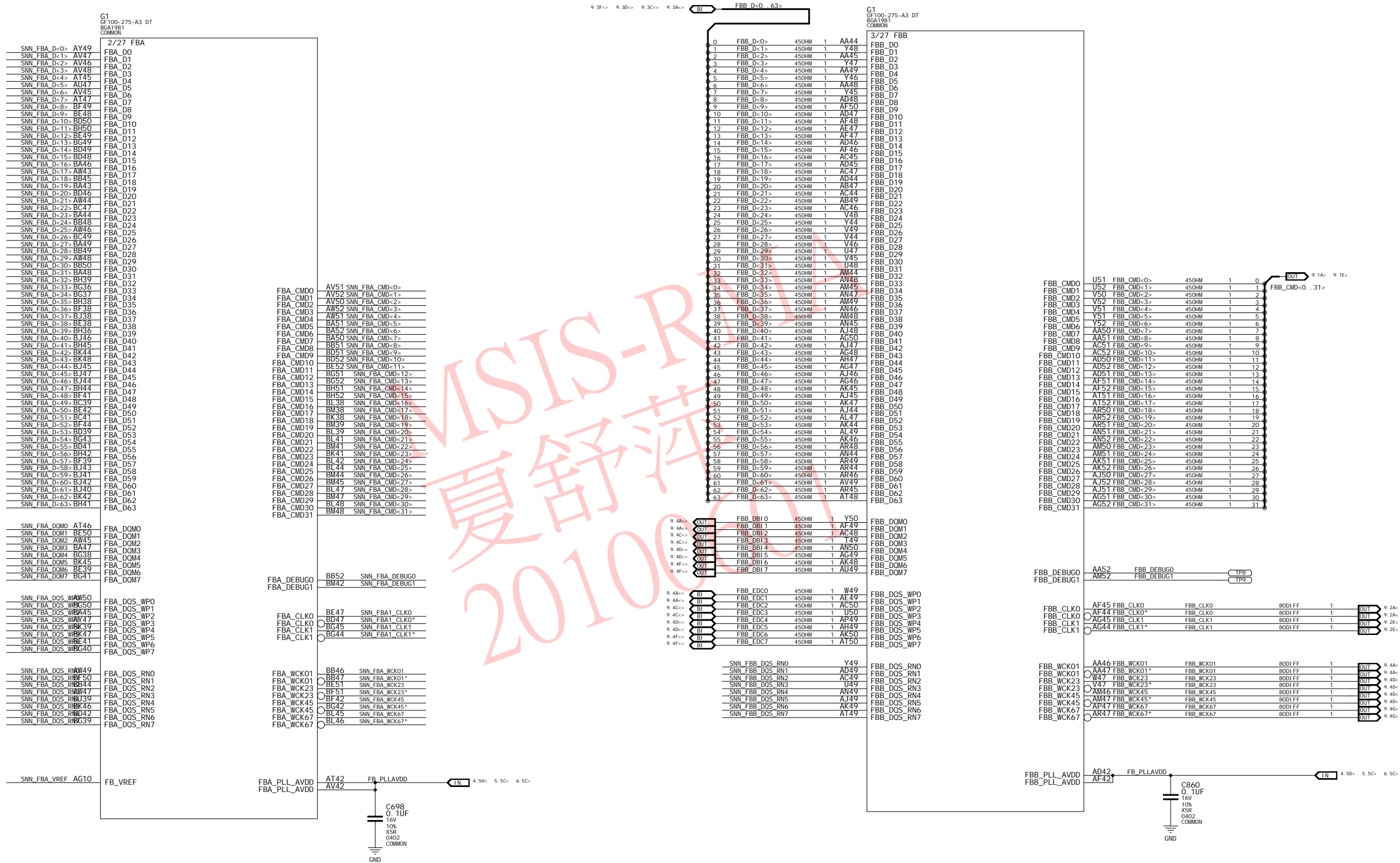
Power Sequence  
5V - Always On  
3V3 - Always On  
12V\_F - Always On  
12V\_PEX6 - Always On



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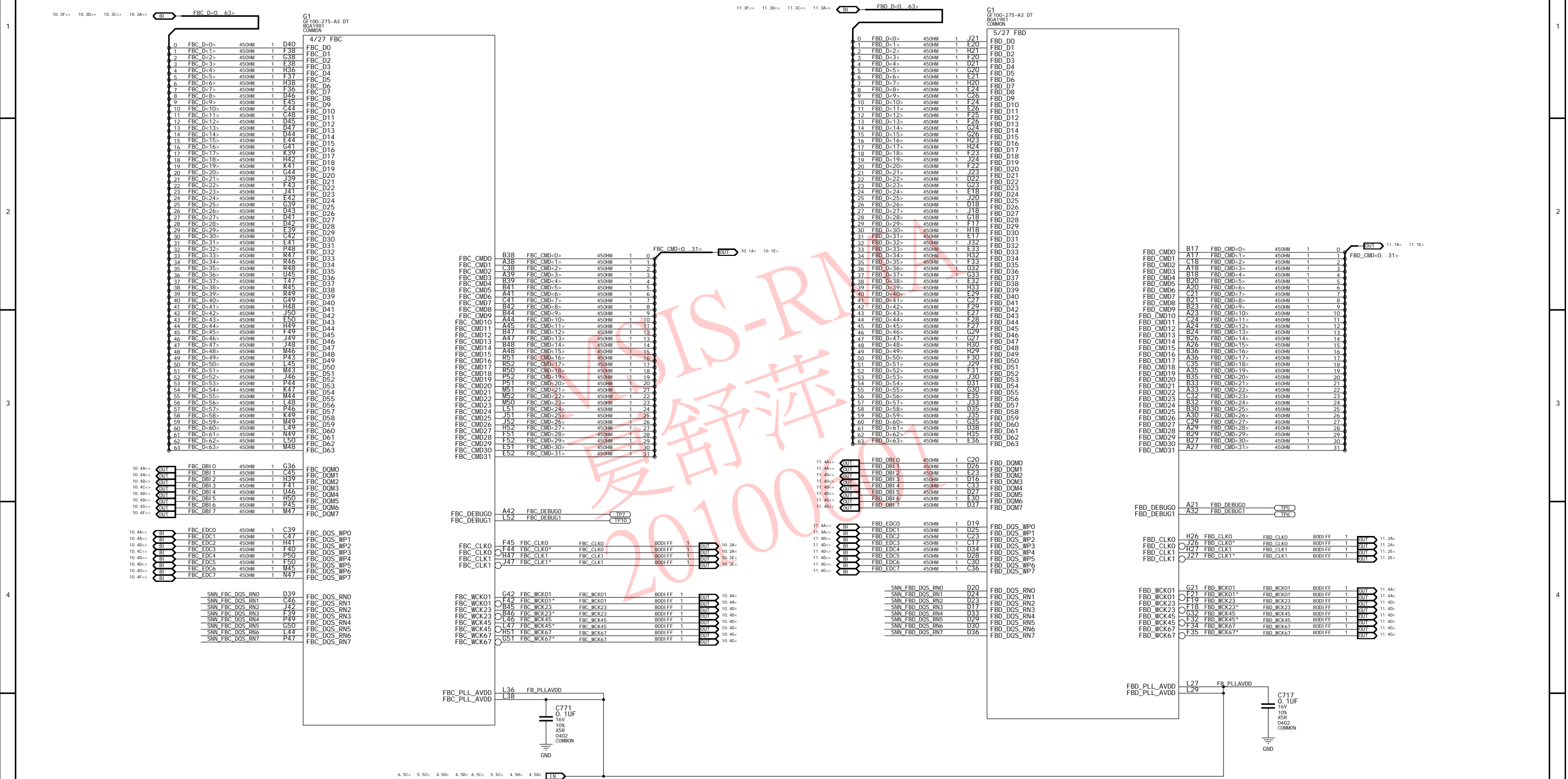
PCI Express

Framebuffer A, B: GPU Section

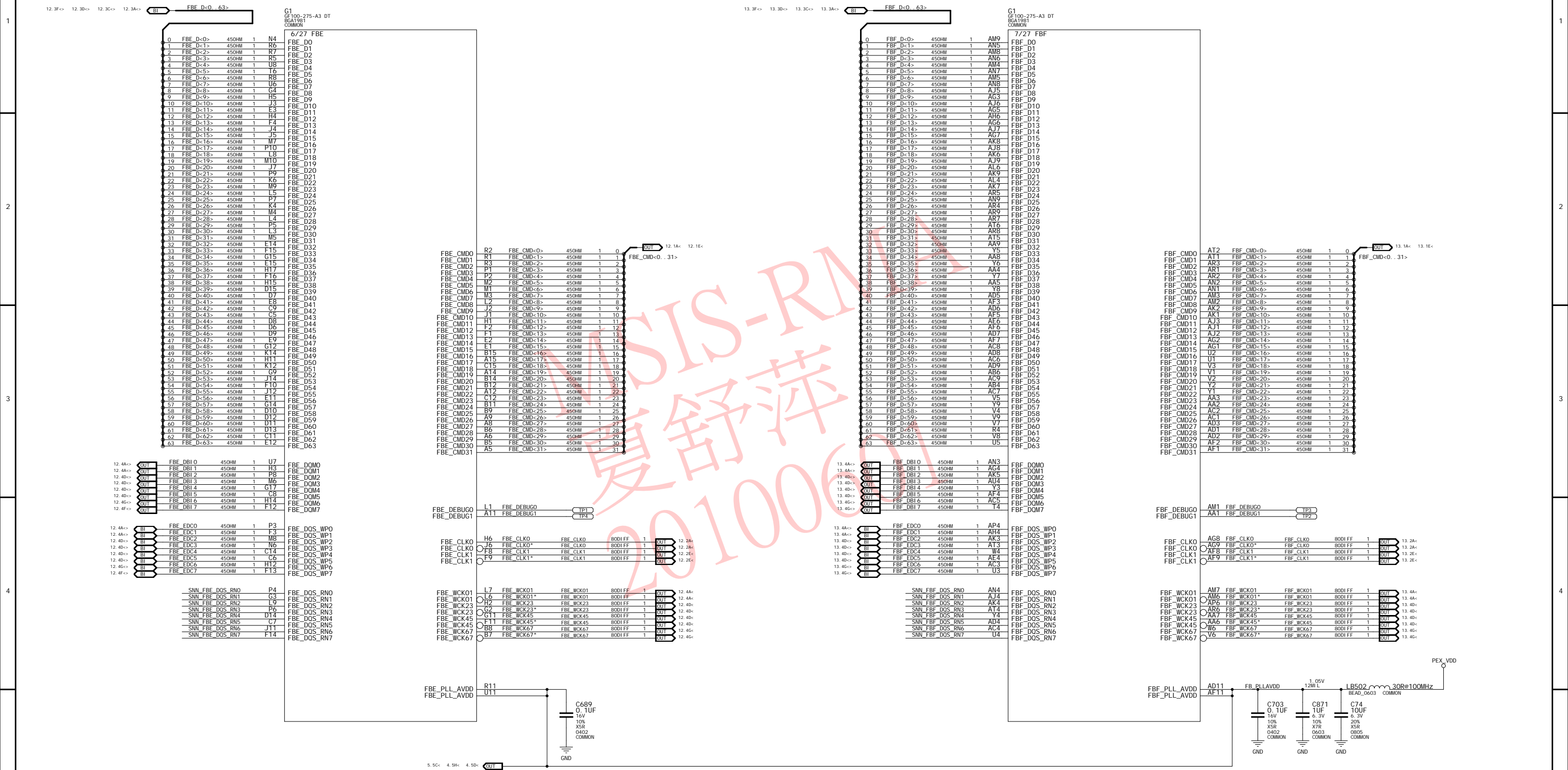




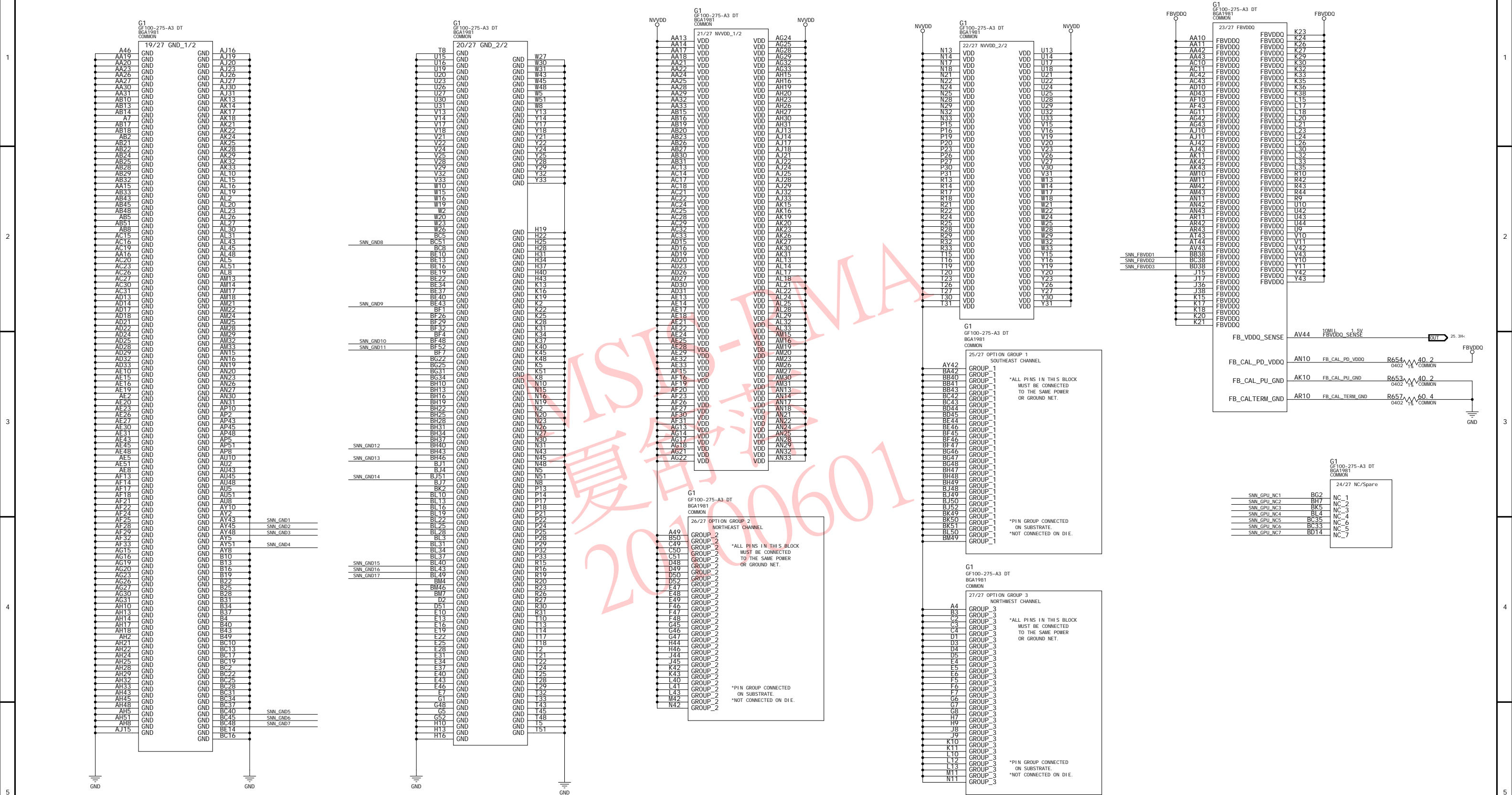
Framebuffer C, D: GPU Section



Framebuffer E, F: GPU Section



GPU Power and GND



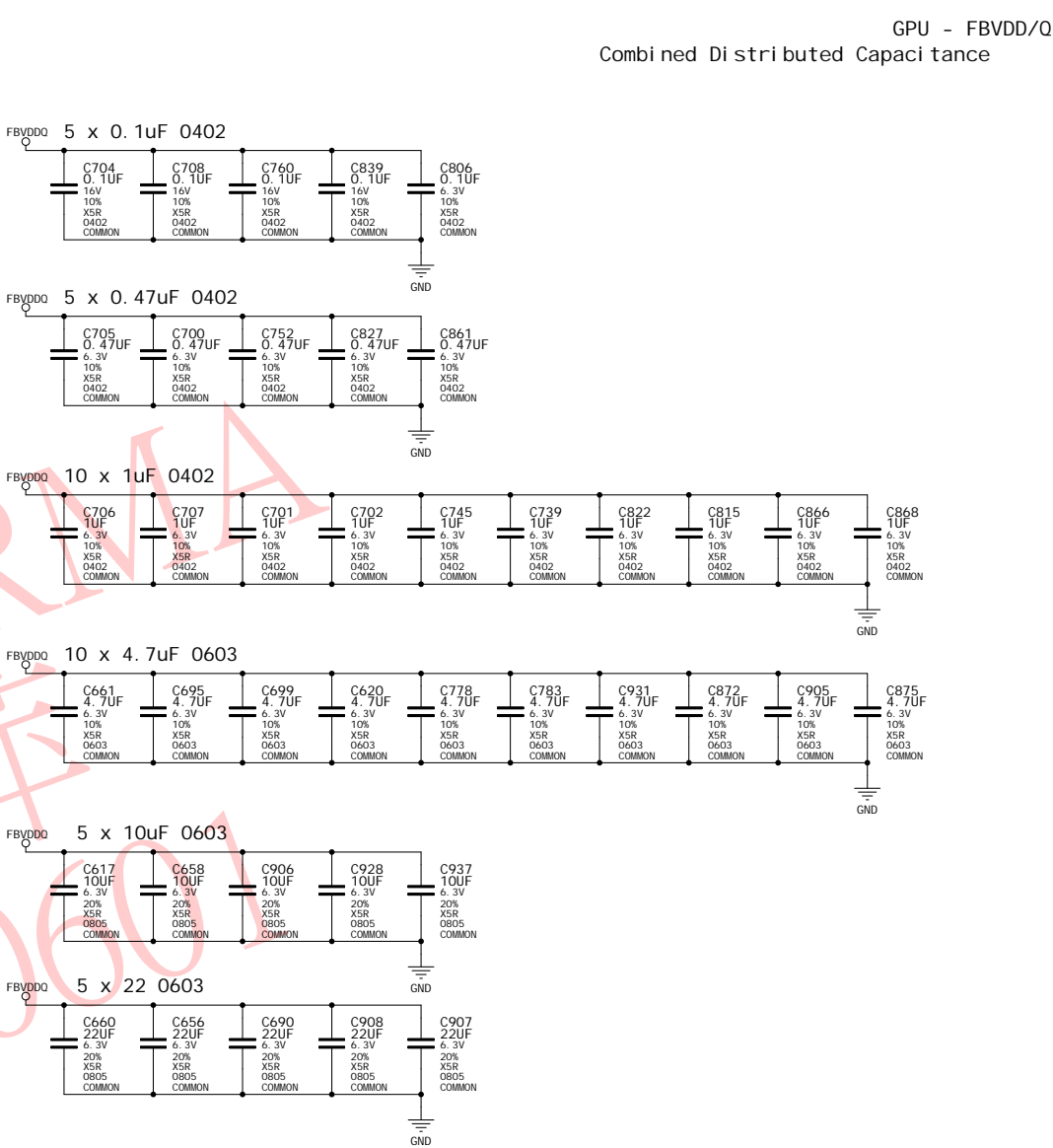


Decoupling: GPU (NVVDD, FBVDDQ)

Decoupling for NVVDD (under GPU)



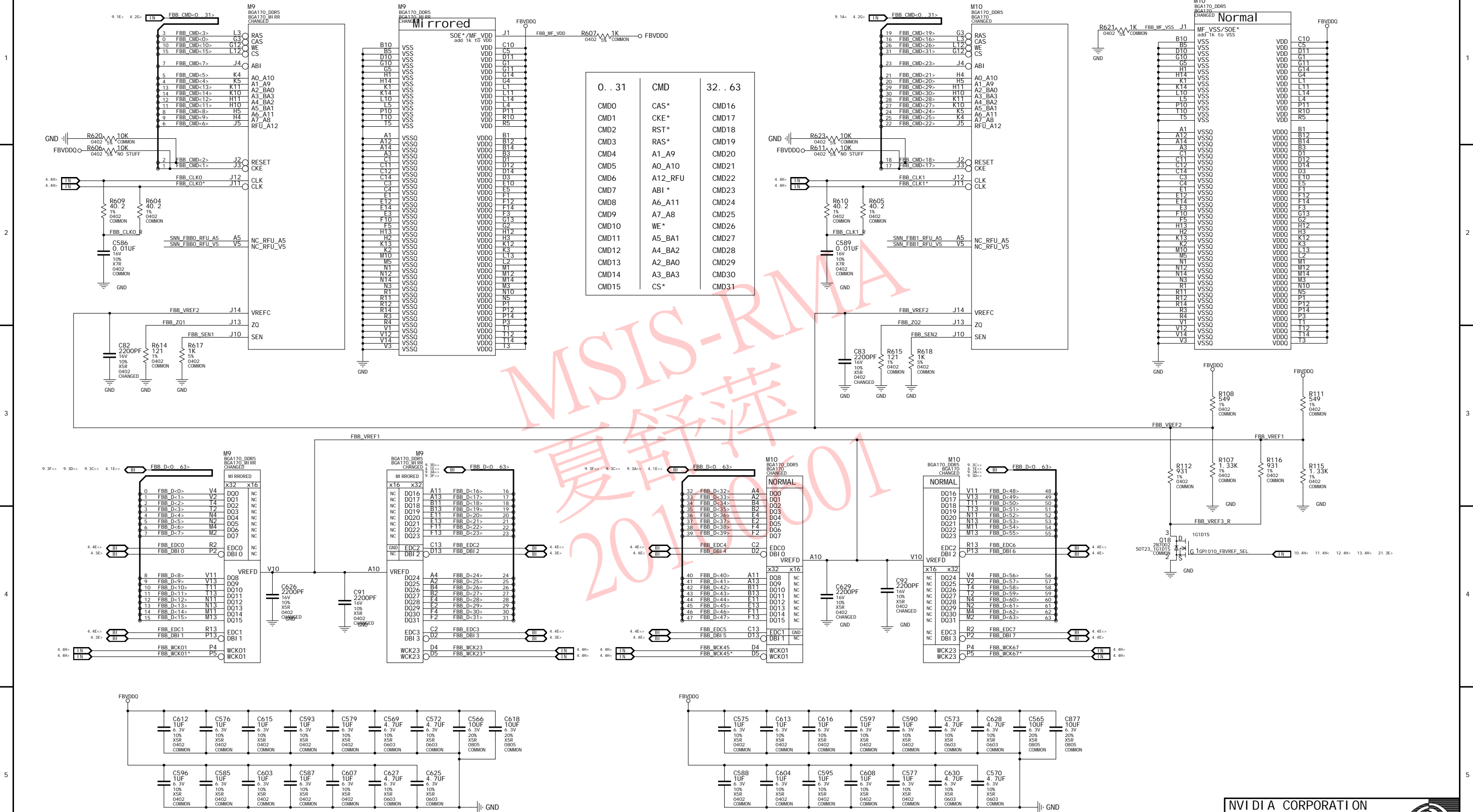
Decoupling for FBVDDQ (under GPU)





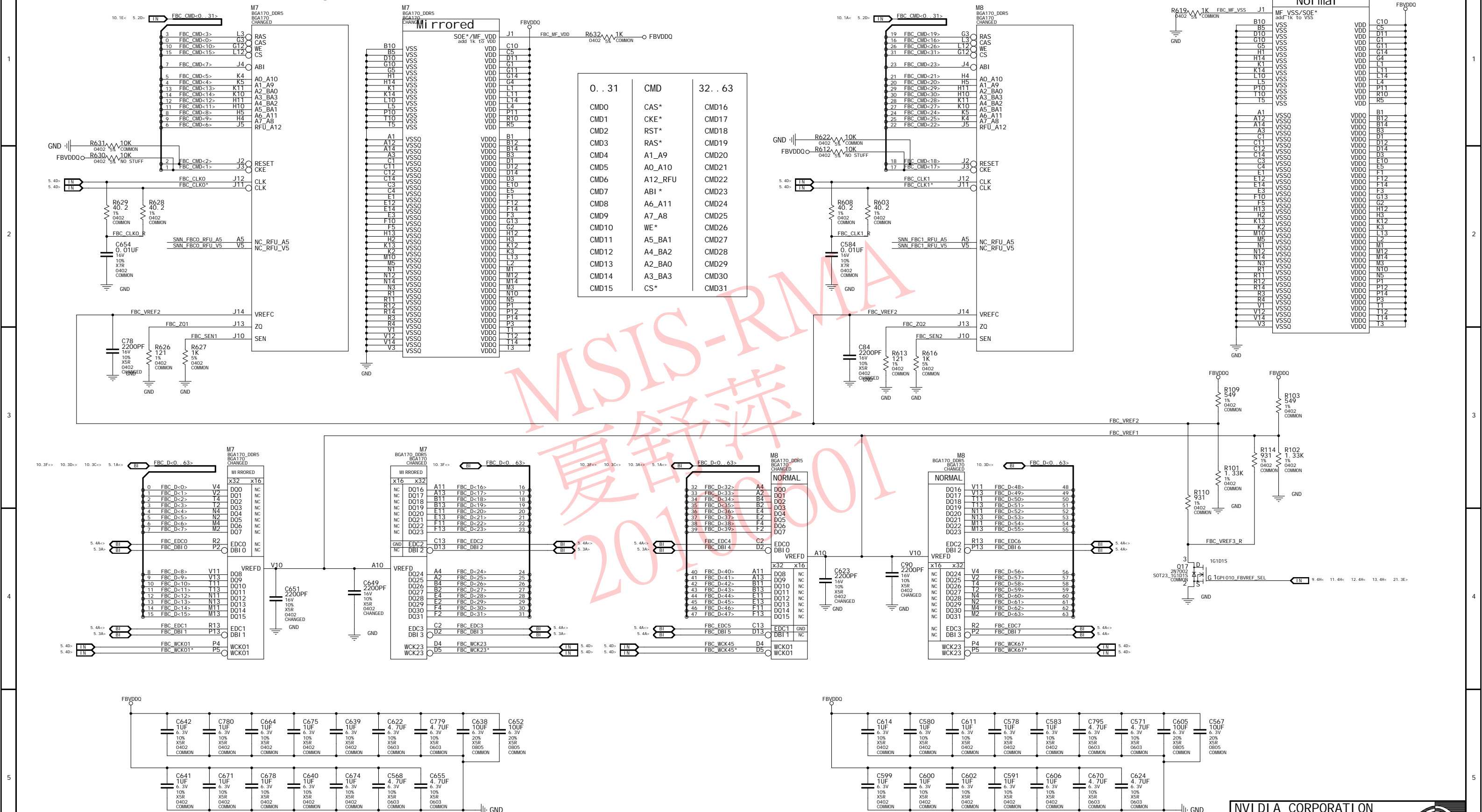
Framebuffer B: Memory Section

Hyni x 32MX32 2000MHZ: 161-0063-100  
SAMSUNG 32MX32 2000MHZ: 161-0051-600



## Framebuffer C: Memory Section

Hyni x	32MX32	2000MHZ:	161-0063-100
SAMSUNG	32MX32	2000MHZ:	161-0051-600



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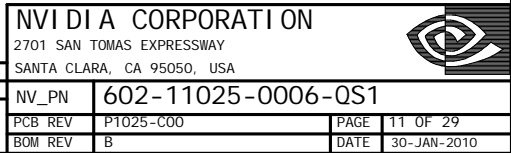


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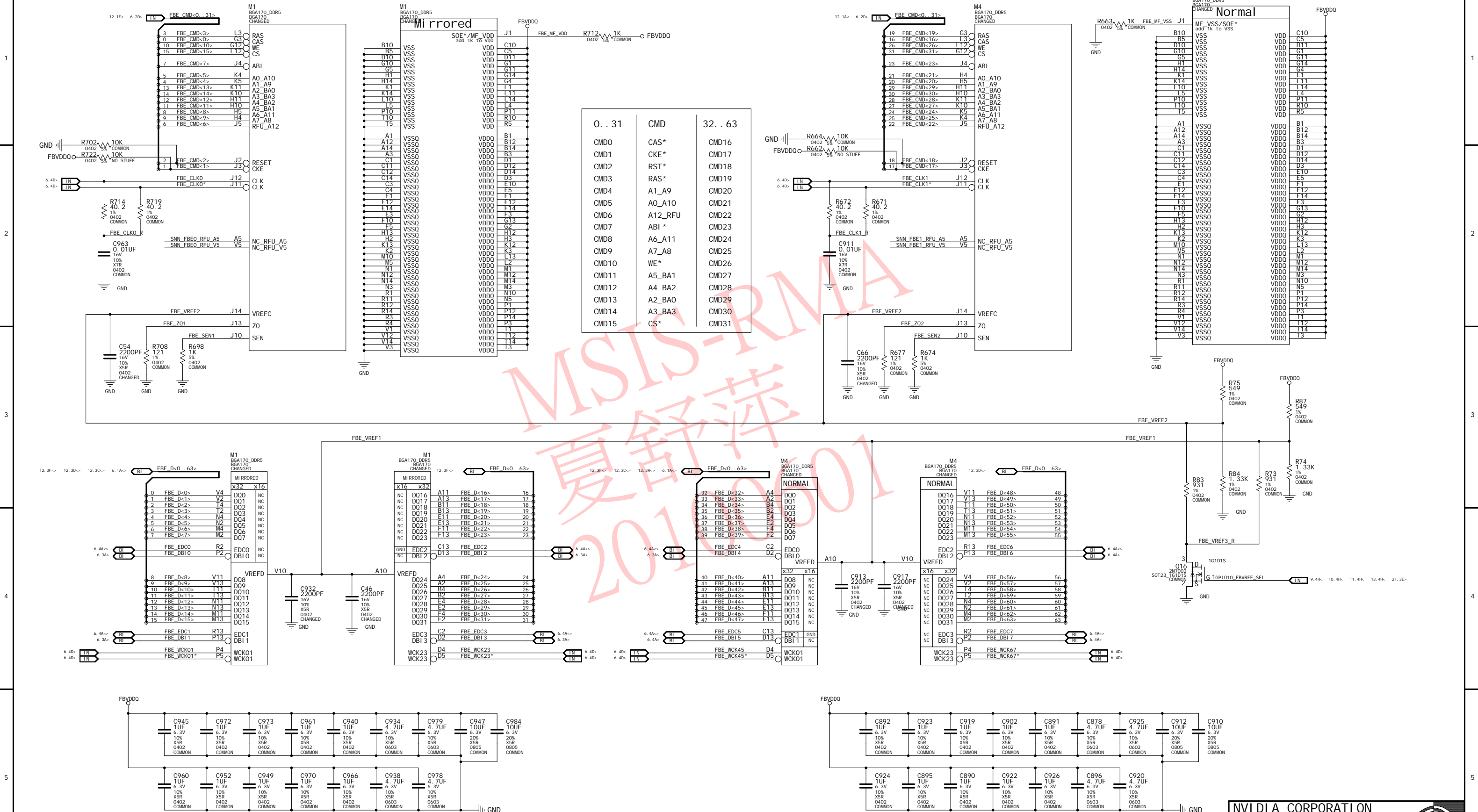
Hyni x	32MX32	2000MHZ:	161-0063-100
SAMSUNG	32MX32	2000MHZ:	161-0051-600





Framebuffer E: Memory Section

Hynix 32MX32 2000MHZ: 161-0063-100  
SAMSUNG 32MX32 2000MHZ: 161-0051-600



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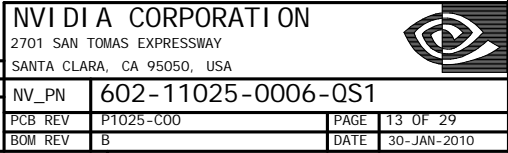
NV\_PN 602-11025-0006-QS1

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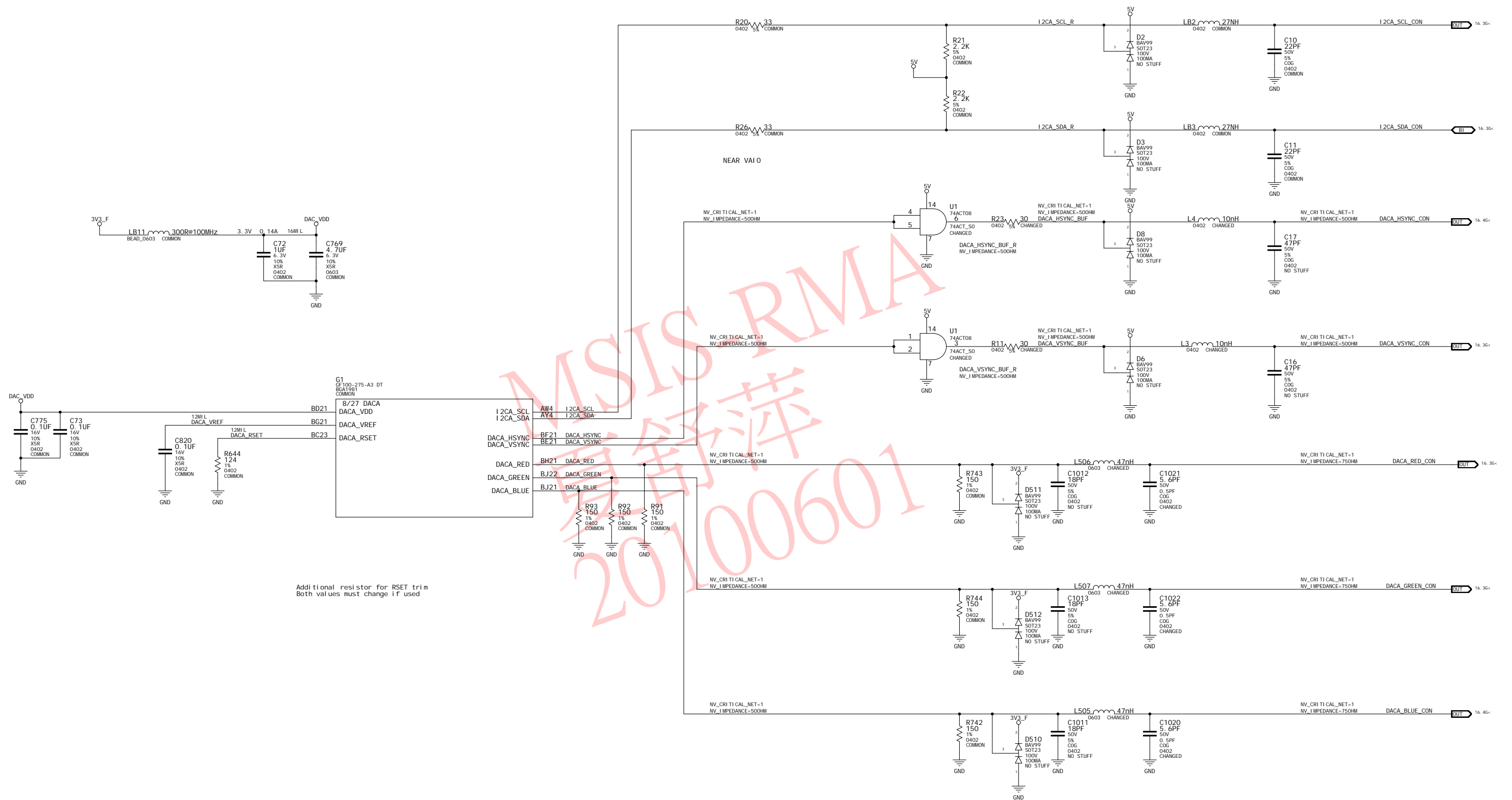
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Hyni x	32MX32	2000MHZ:	161-0063-100
SAMSUNG	32MX32	2000MHZ:	161-0051-600




Display: DACA (South DVI -I)



ASSEMBLY	DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI-I + DVI-I + mHDMI
PAGE DETAIL	Display: DACA (South DVI-I)

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Di spl ay: DACB (Mi ddl e DVI -I )

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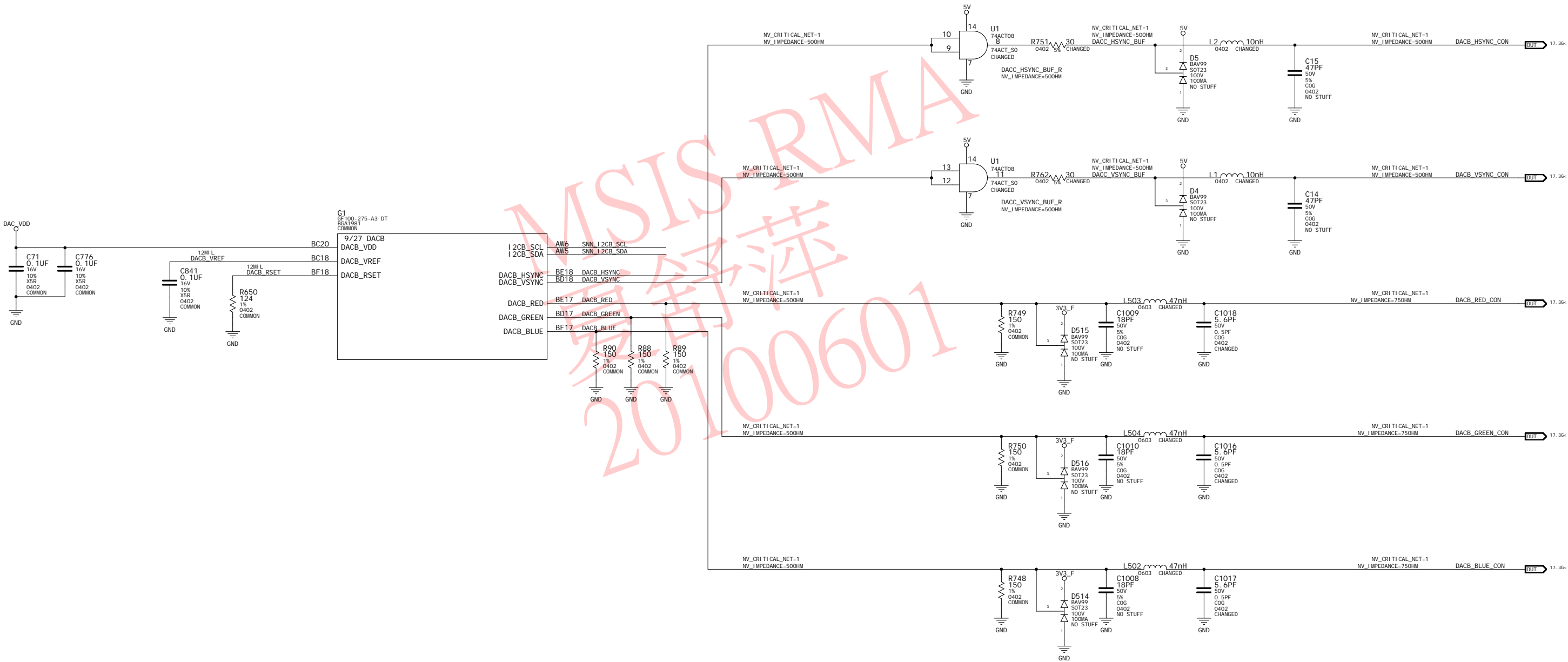
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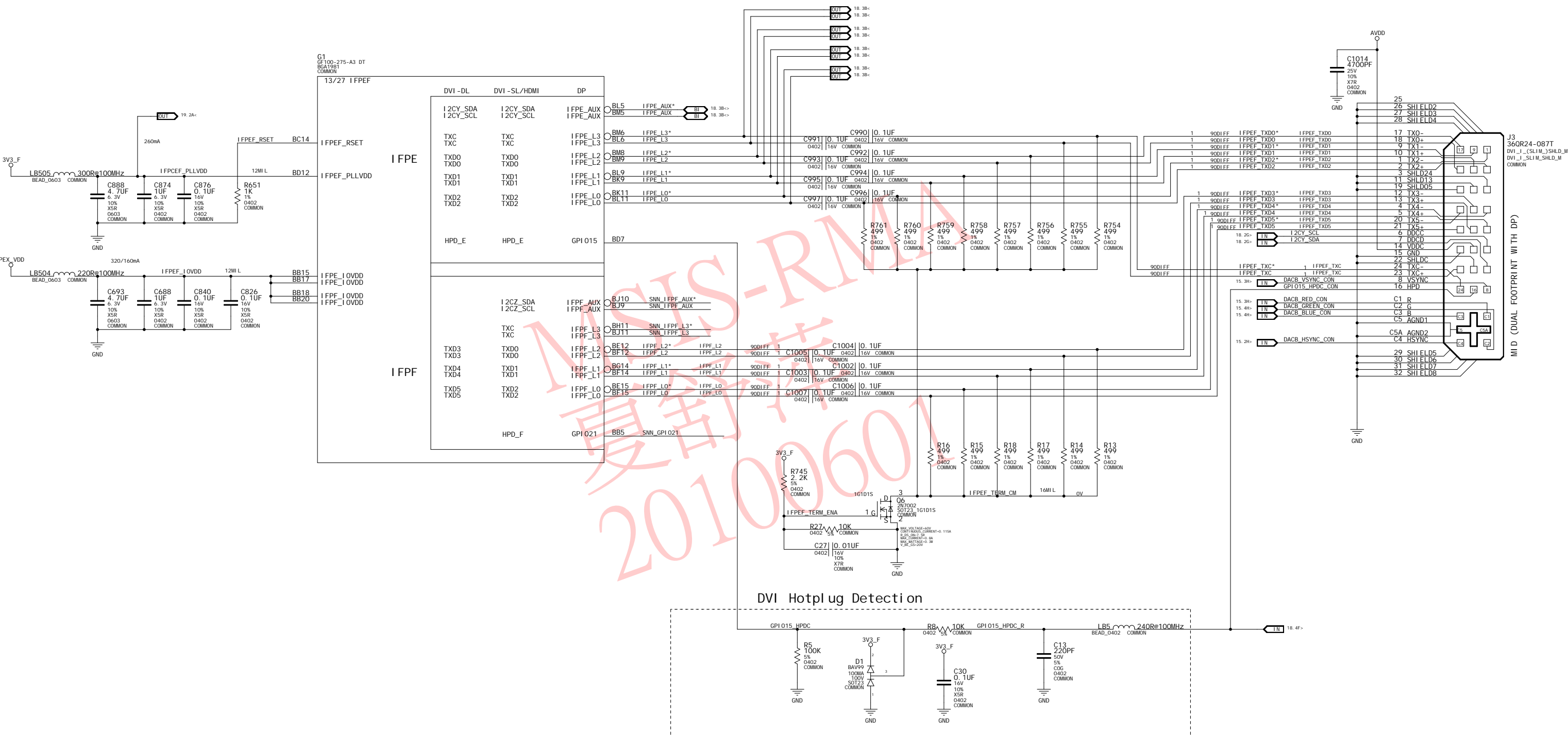
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## IFPEF for Middle DVI-I or DP



ASSEMBLY	DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI-I + DVI-I + mHDM
PAGE DETAIL	1 FPEF for Middle DVI-I or DP

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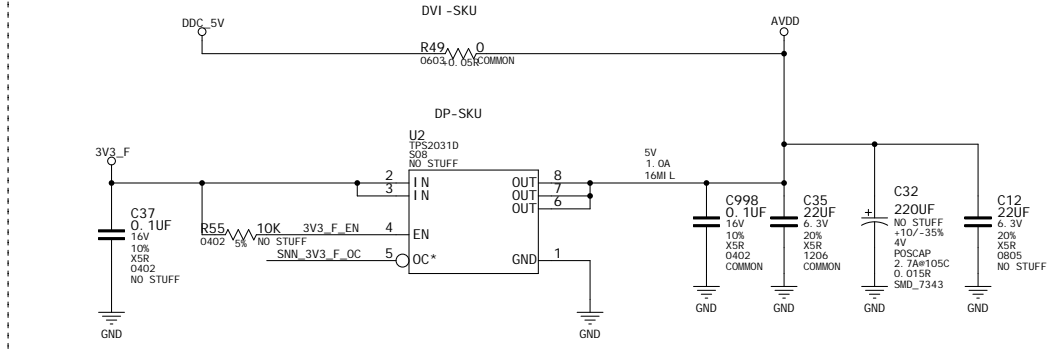
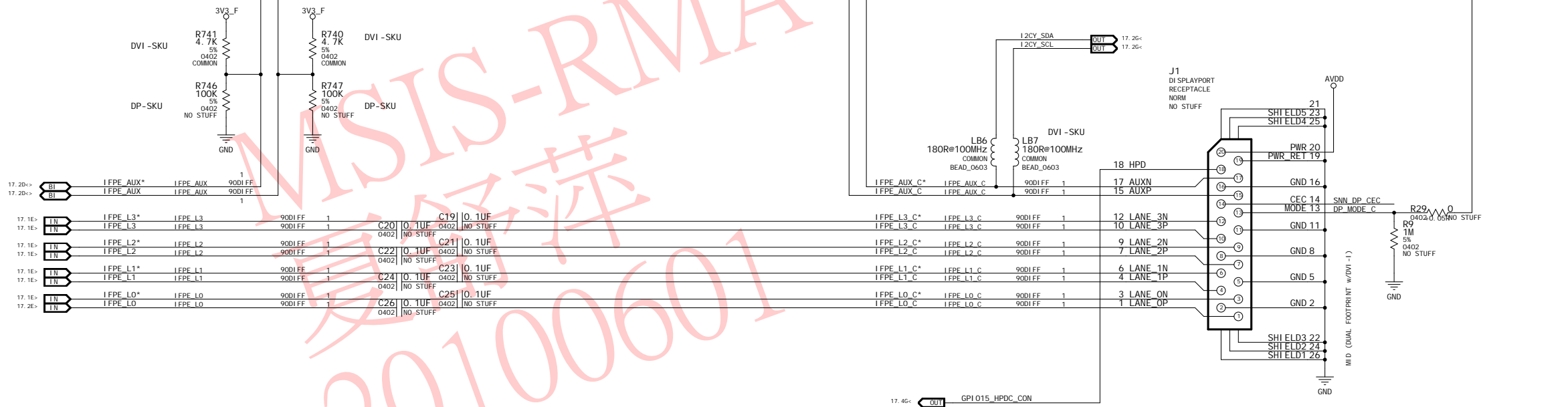
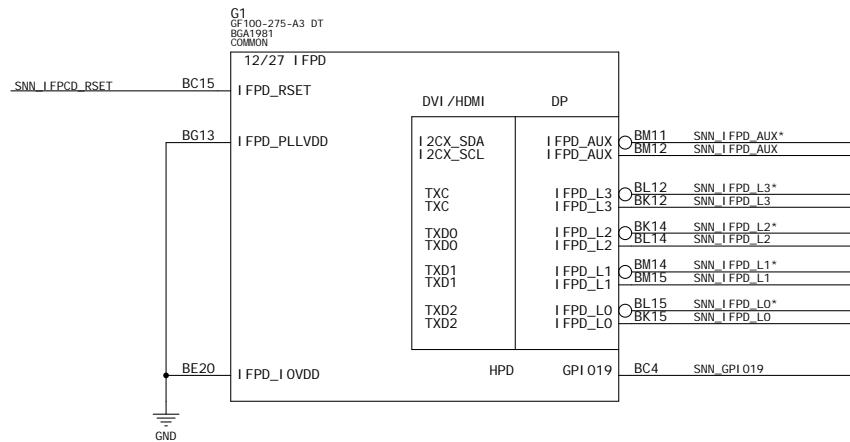
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IFP\_D: UNUSED, (MID DP)



ASSEMBLY	DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI -I + DVI -I + mHDMI
PAGE DETAIL	IFP_D: UNUSED, (MI D DP)

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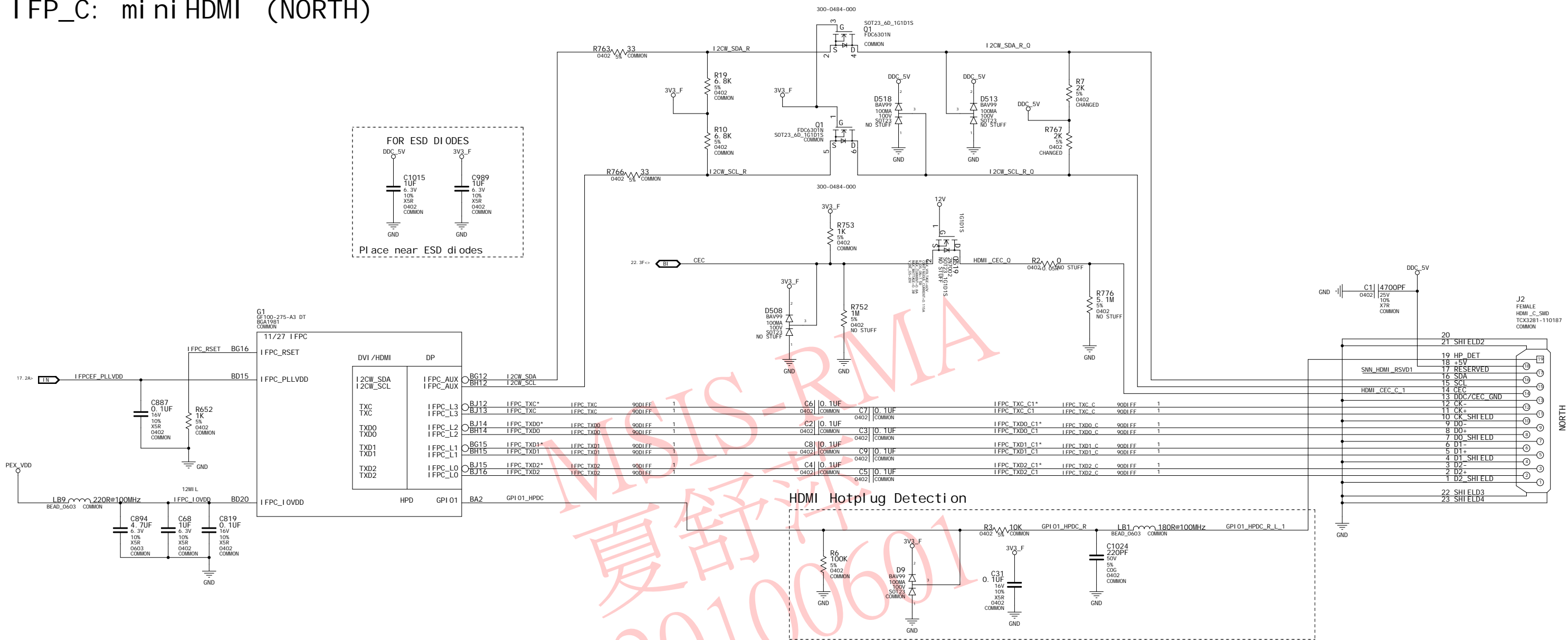
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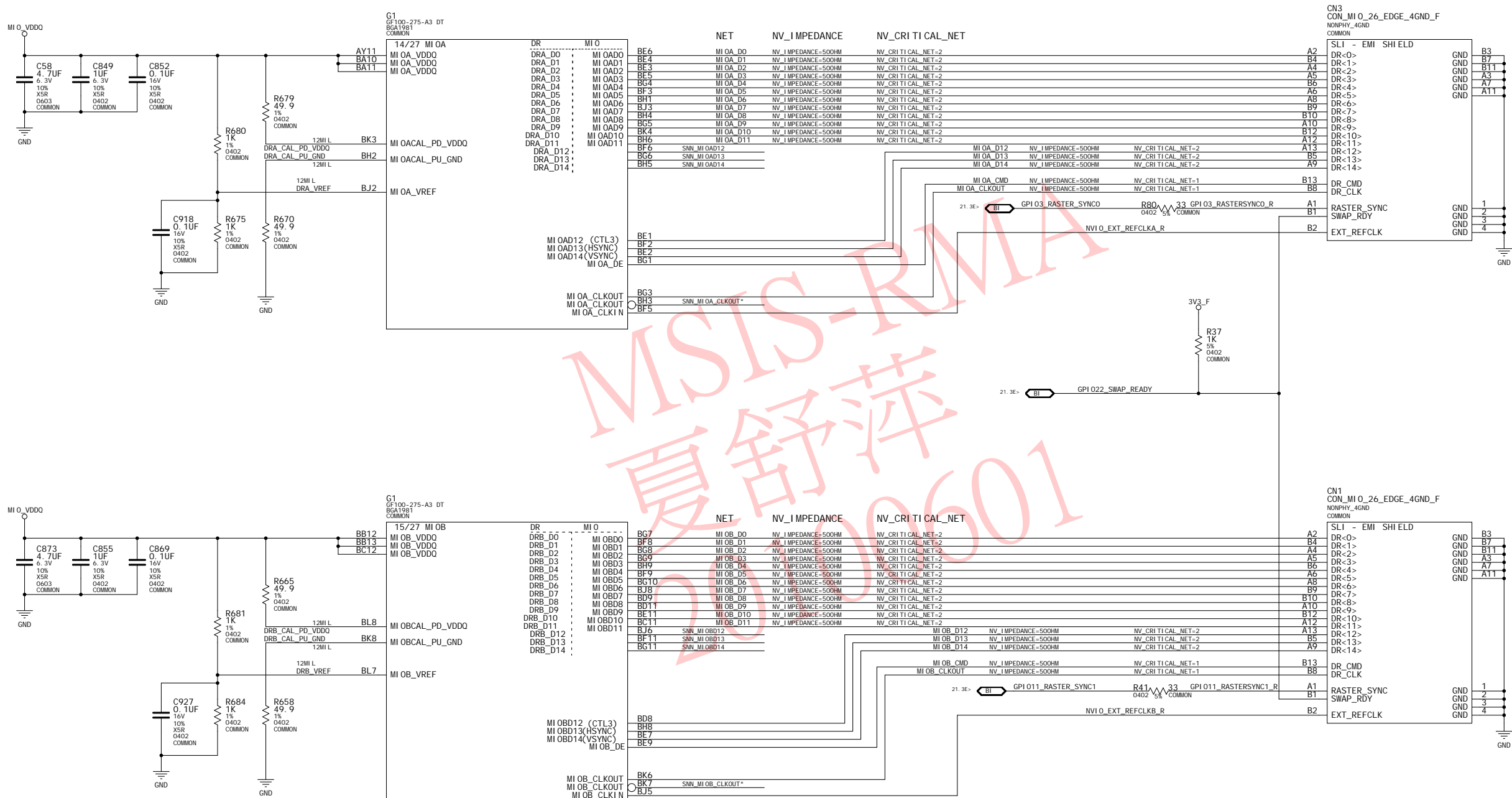
# I FP\_C: mi ni HDMI (NORTH)



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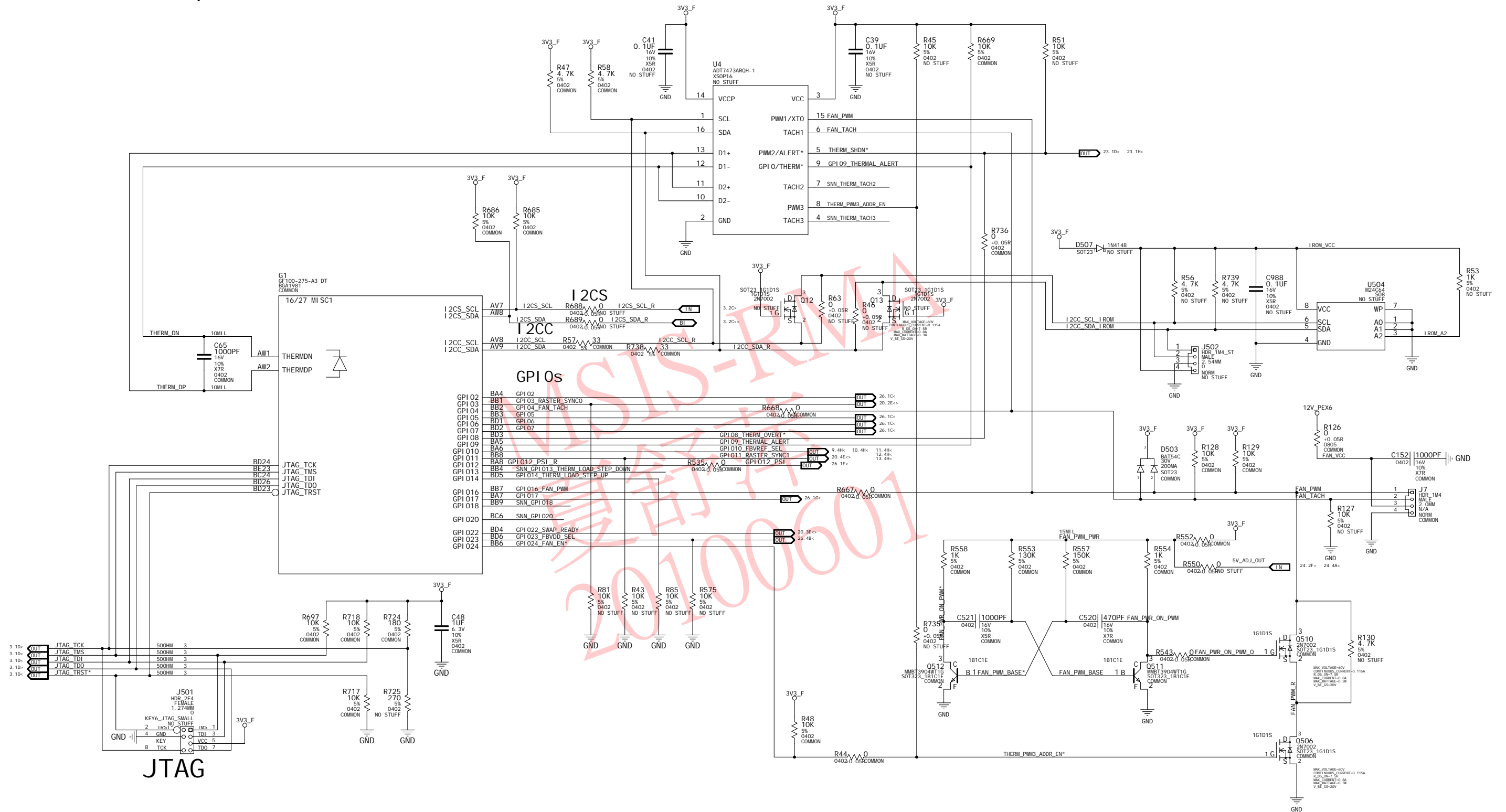
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Connectors: DR Interface (Dual SLI)





## FAN CONTROL, GPIO & JTAG



JTAG

ASSEMBLY	DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI-I + DVI-I + mHDMI
PAGE DETAIL	FAN CONTROL, GPIO & JTAG

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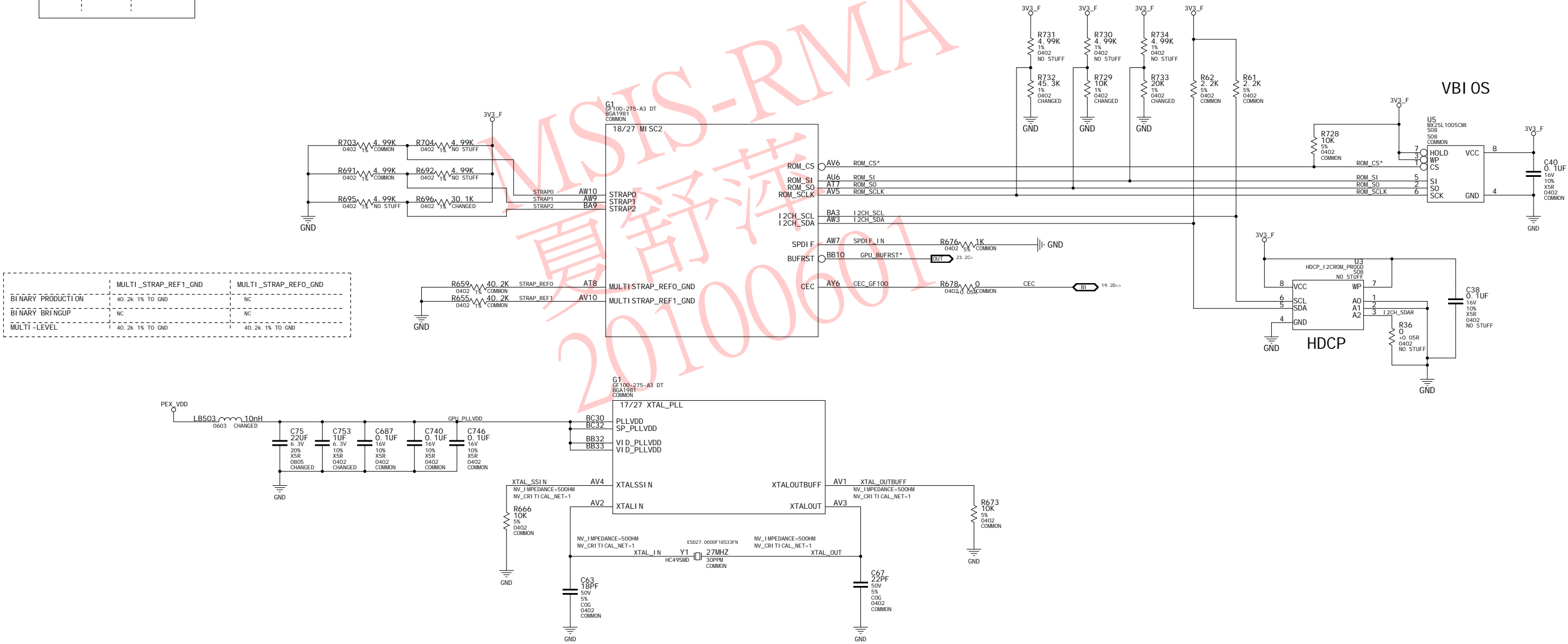


BIOS ROM, HDCP ROM, STRAPPING OPTIONS

STRAP0	USER_BIT [3..0]	0000: => 5K PD	
STRAP1	3GIO_PADCFG_LUT_ADR	0000 : =>5K PD	0000 Desktop
STRAP2	PCI_DEVID [3:0]	0000 : =>5K PD	For 0x06C0

	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

ROM_SI	RAMCFG[0]	0010 32Mx32 GDDR5 320-bit Hynix
	RAMCFG[1]	0011 32Mx32 GDDR5 320-bit Samsung
	RAMCFG[2]	0110 64Mx32 GDDR5 320-bit Hynix
	RAMCFG[3]	0111 64Mx32 GDDR5 320-bit Samsung
ROM_SO	VGA_DEVICE	1 FOR GPU0; 0 FOR GPU1
	SMB_ALT_ADDR	0
	FB[0]_BAR_SIZE	0
		10k PD FOR GPU0 5K PD FOR GPU1
ROM_SCLK	XCLK_417	0
	PEX_PLL_EN_TERM100	1 ENABLE
	SLOT_CLK_CFG	1 ENABLE
		45K PD
	SUB_VENDOR	1 Dedicated BIOS
	PCI_DEVID_EXT	0 0xC



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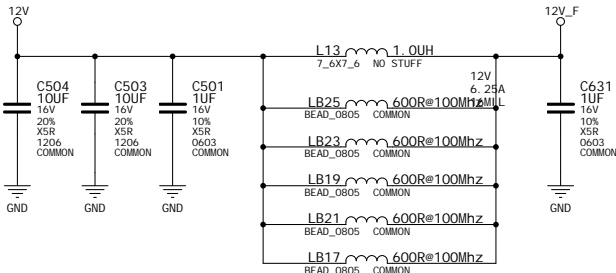
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Power Supply: PEX PS INPUT, DETECTION LOGIC, THERM SHUTDOWN LATCH / IFP\_IOVDD

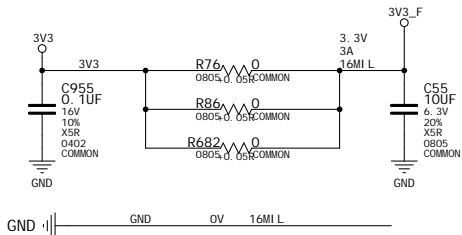
Connector Power State Table

2x3 Connector	Power	STATE
Connected	150W	Full Perf
Not Connected	75W	Board Off

PEX\_12V INPUT - 66W



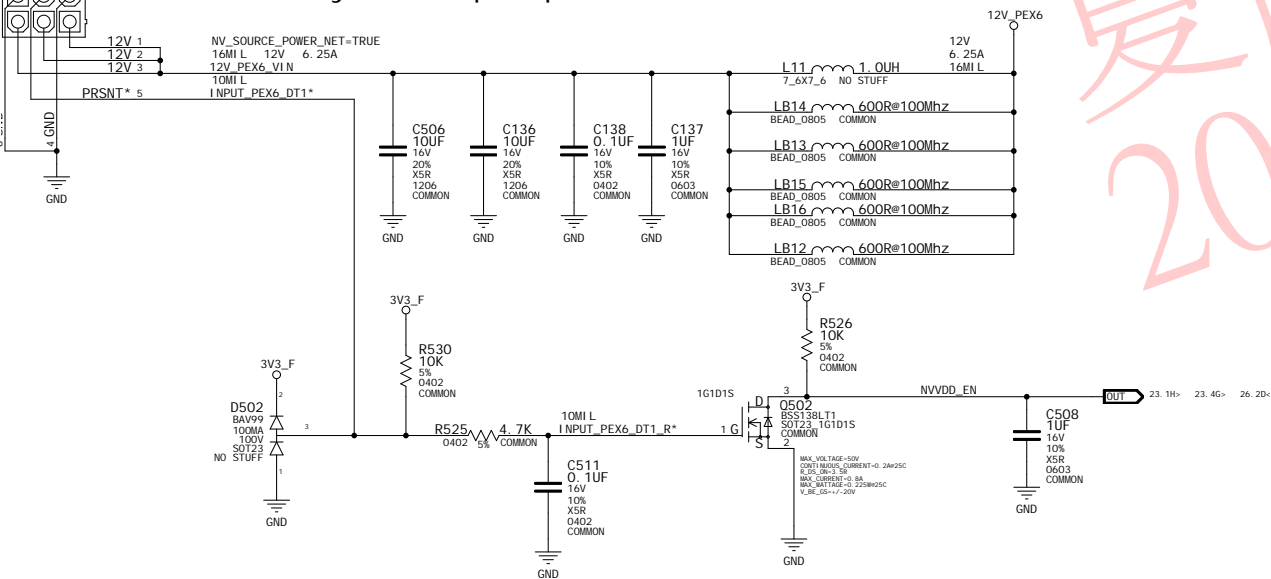
PEX 3V3 INPUT - 10W



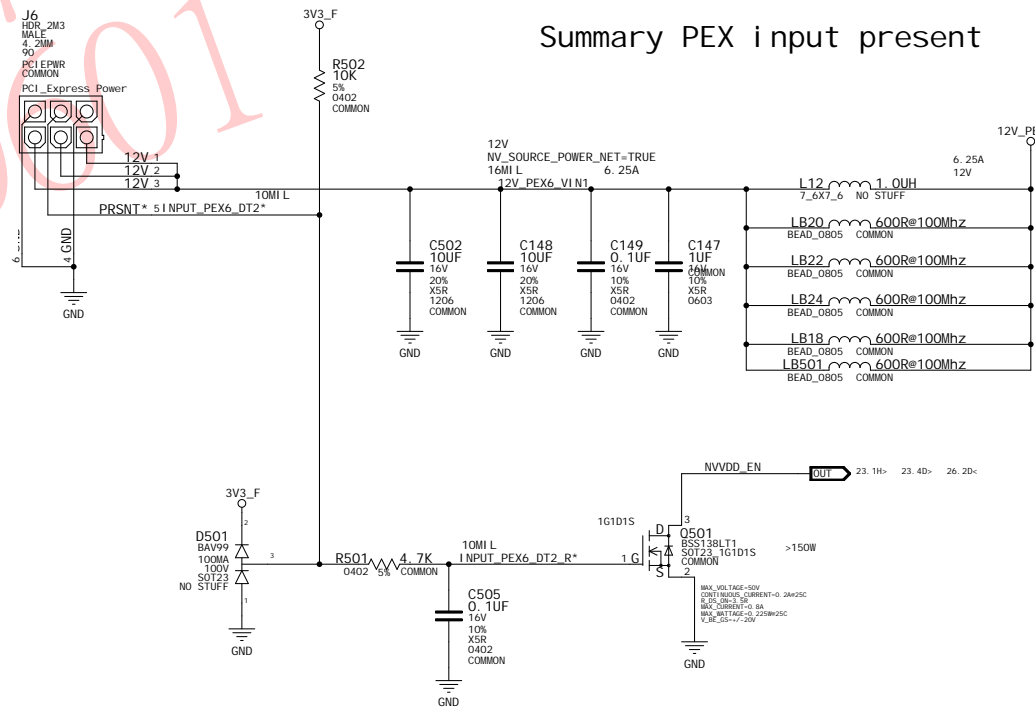
MUST BE ATTACHED AND POWERED TO START BOARD

PEX6 INPUT 1 - 2x3 PCIe CON 75W

Summary PEX input present



Summary PEX input present



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ASSEMBLY	DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI-I + DVI-I + mHDMI
PAGE DETAIL	PEX PS INPUT, DET LOGIC, THERM SHUTDOWN LATCH / IFP_IOVDD

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SANTA CLARA, CA 95050, USA

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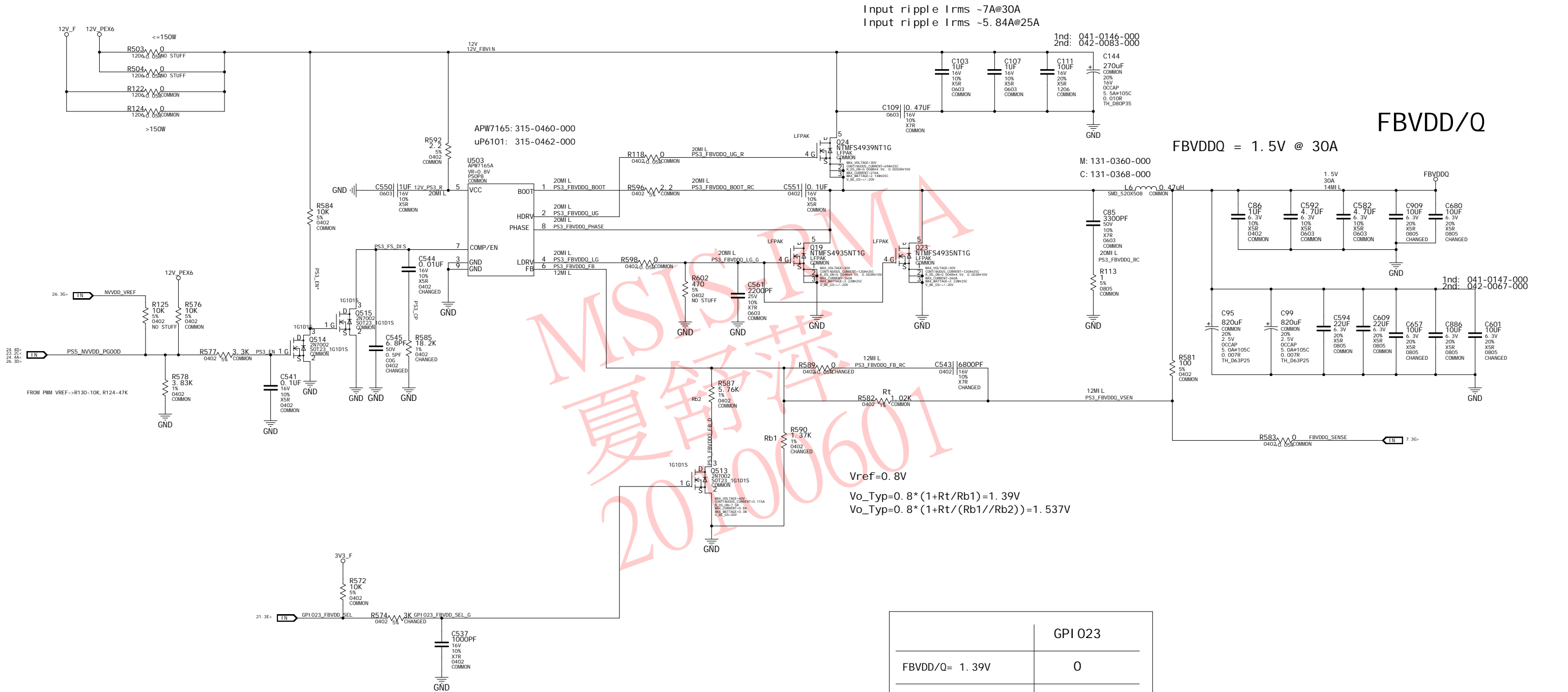
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Power Supply: FBVDD/Q



Input ripple Irms ~7A@30A  
Input ripple Irms ~5.84A@25A

1nd: 041-0146-000  
2nd: 042-0083-000

FBVDD/Q

FBVDDQ = 1.5V @ 30A

M: 131-0360-000  
C: 131-0368-000

1nd: 041-0147-000  
2nd: 042-0067-000


Vref=0.8V  
Vo\_Typ=0.8\*(1+Rt/Rb1)=1.39V  
Vo\_Typ=0.8\*(1+Rt/(Rb1//Rb2))=1.537V

	GPI 023
FBVDD/Q= 1.39V	0
FBVDD/Q= 1.537V	1

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<b>NV_PN</b>		<b>602-11025-0006-QS1</b>			
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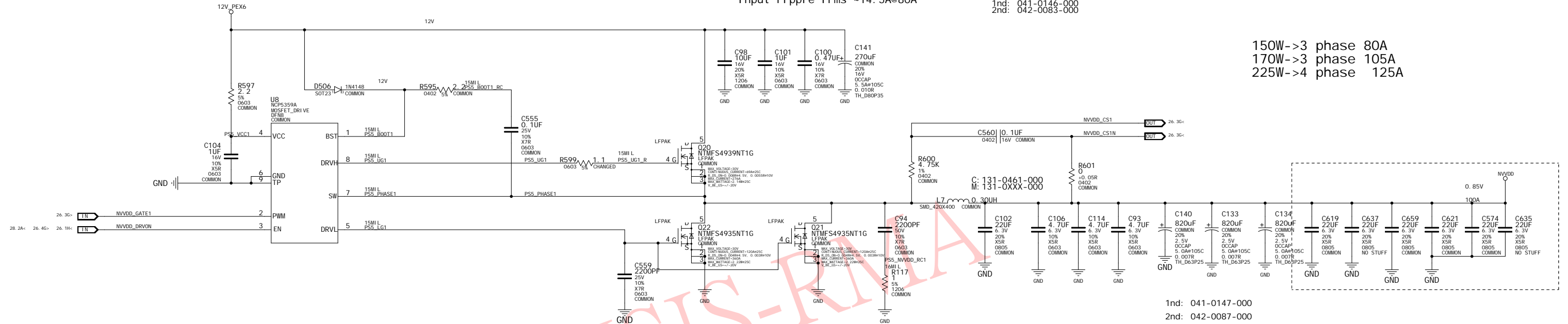
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Power Supply: NVVDD PHASE 1, 2

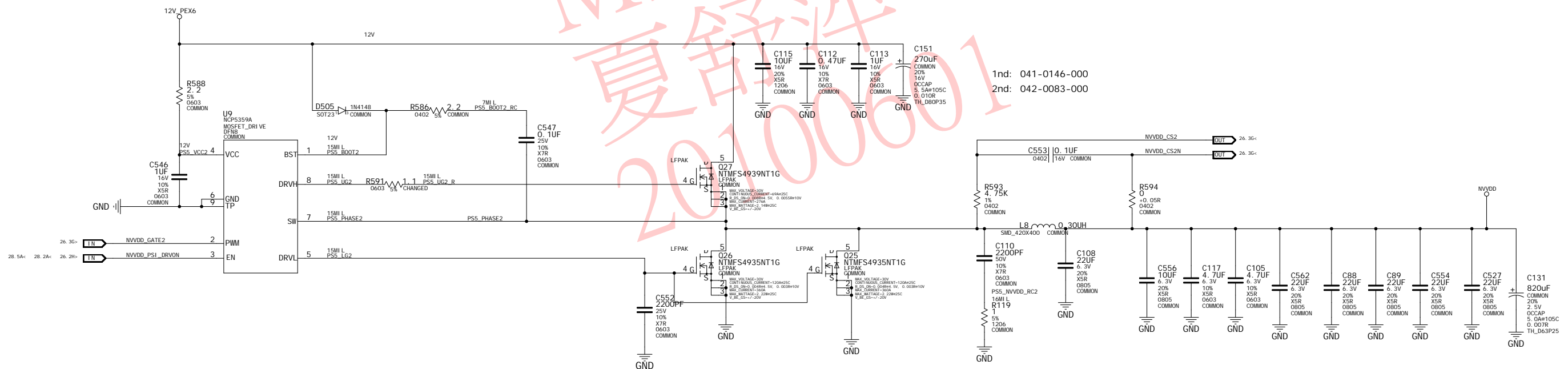
Input ripple Irms ~18A@100A  
Input ripple Irms ~14.5A@80A

1nd: 041-0146-000  
2nd: 042-0083-000

150W->3 phase 80A  
170W->3 phase 105A  
225W->4 phase 125A




1nd: 041-0147-000  
2nd: 042-0087-000



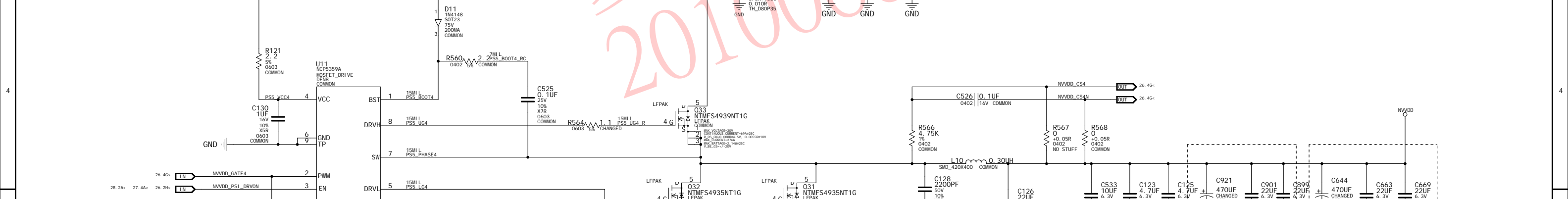
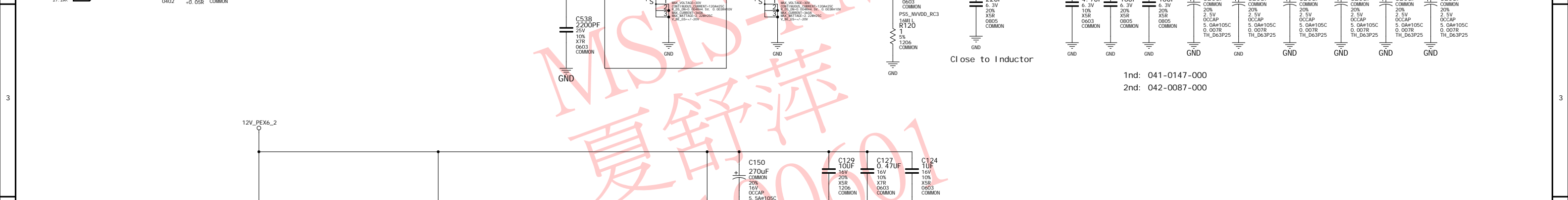
1nd: 041-0146-000  
2nd: 042-0083-000

ASSEMBLY	DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI-I + DVI-I + mHDMI
PAGE DETAIL	Power Supply: NVDD PHASE 1, 2

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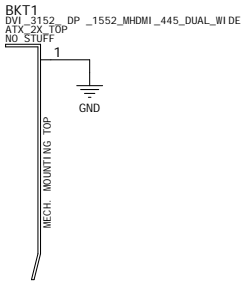


Thermal /Mechanical /ID

Manual BOM Change

Bracket and Assembly

Bracket with DVI\_DP\_MHDMI : 151-10001-0321-058  
Bracket with DVI\_DVI\_MHDMI : 151-10001-0322-058



GPU Stiffener

BOARD STIFFENER  
8 connected mounting pins

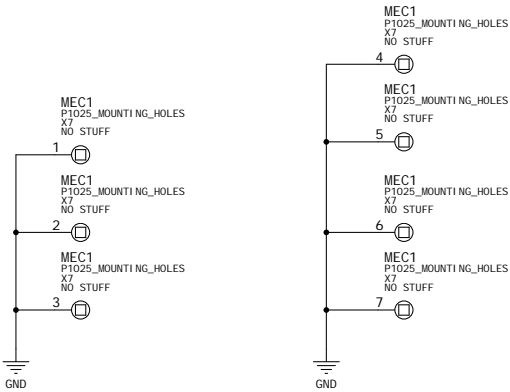
MEC3  
GPU STIFFENER\_GF100  
8PIN  
NO STUFF



BOARD STIFFENER  
No connected mounting pins

MEC501  
GF100 Bottom Stiffener  
NO PIN  
NO STUFF

THERMAL/MECHANICAL HOLES



BOARD STIFFENER  
8 connected mounting pins

MEC2  
GF100 Bring-up cooler  
8PIN  
NO STUFF



COOLING SOLUTION  
3 connected mounting pins

MEC4  
GF100\_SINGLE  
3PIN  
NO STUFF



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