

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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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
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ASSEMBLY

PAGE DETAIL

DT, GF100-275, 659/2000, 1280MB - 32Mx32 GDDR5, DVI-I + DVI-I + mHDMI

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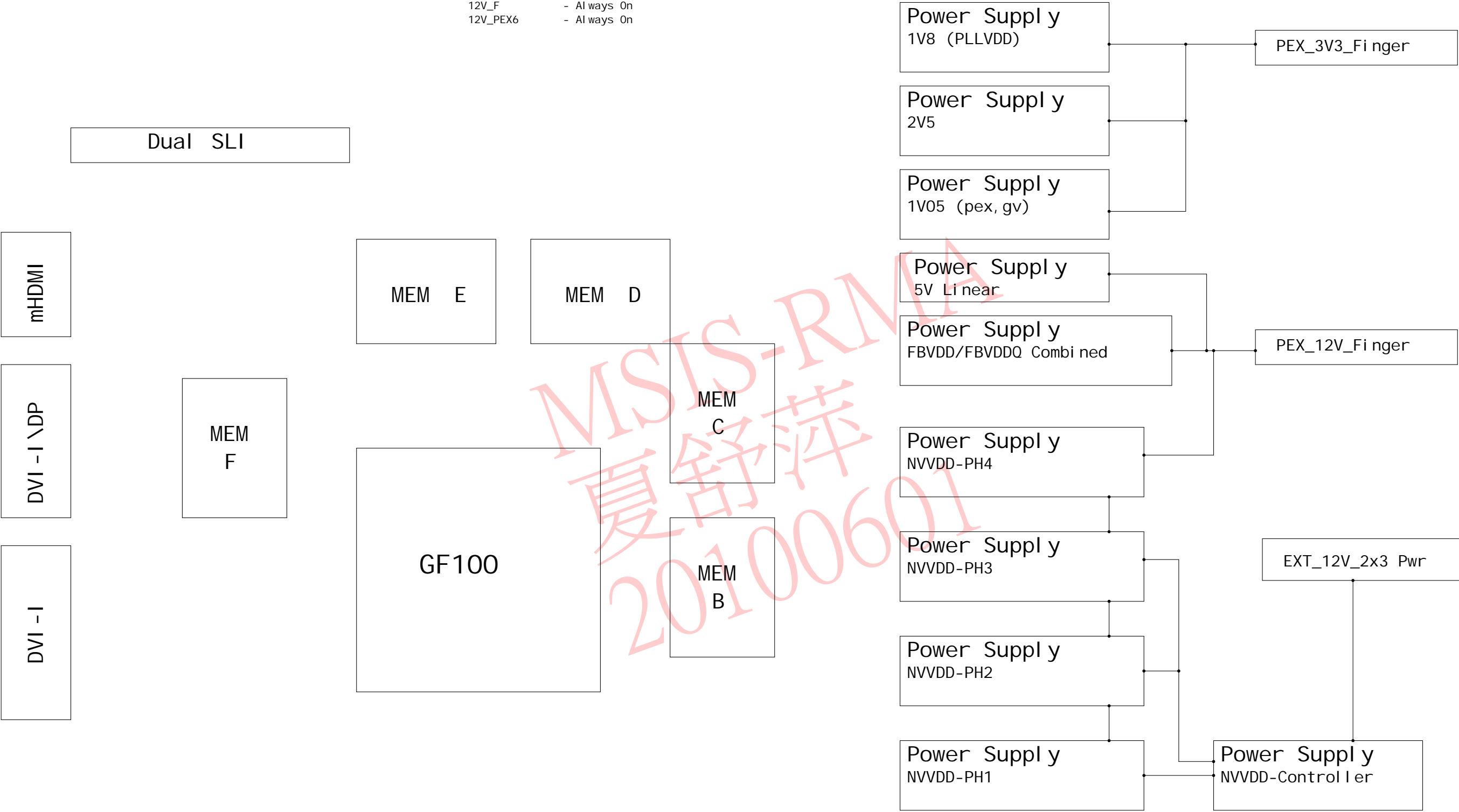
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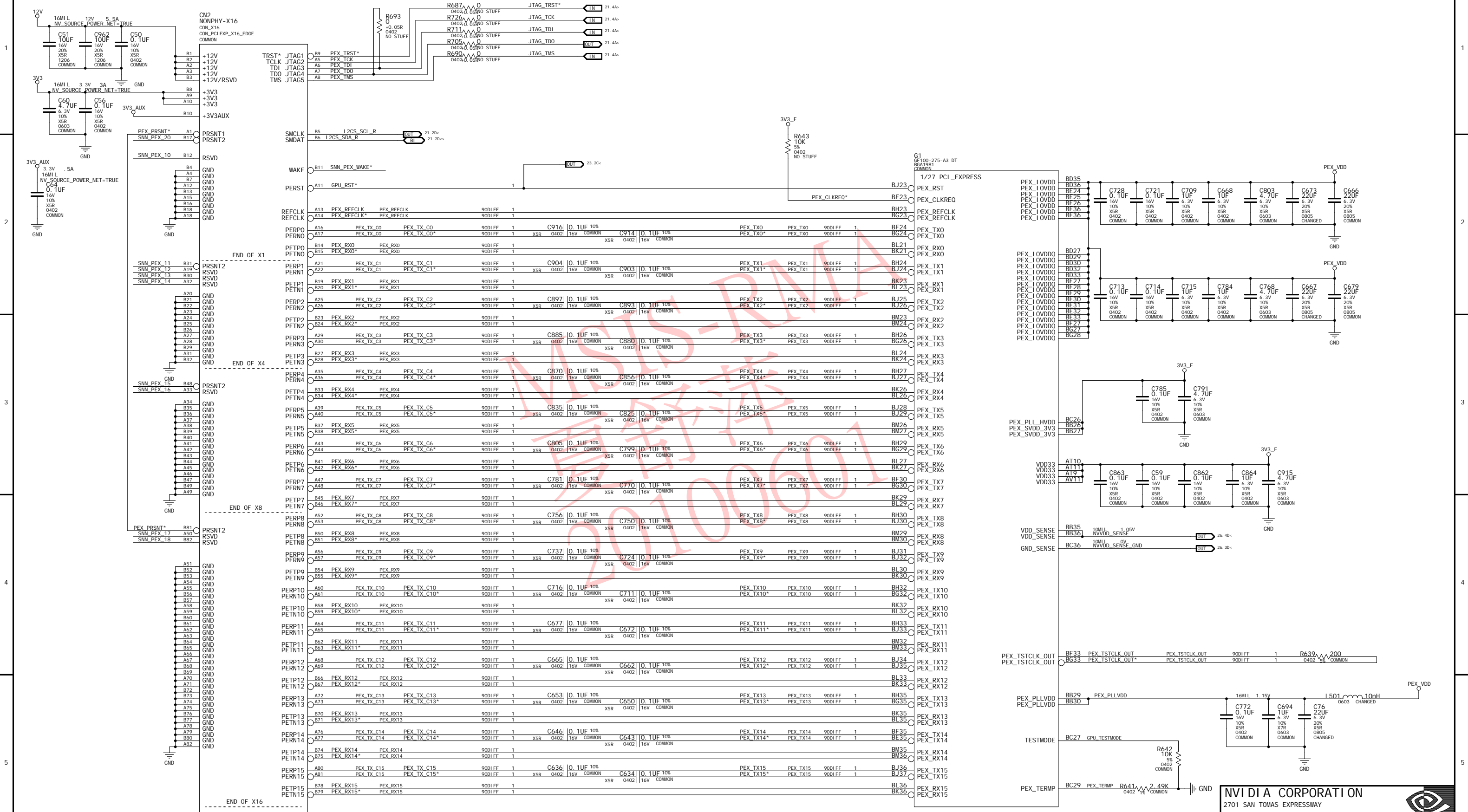
Block Diagram

Power Sequence
5V - Always On
3V3 - Always On
12V_F - Always On
12V_PEX6 - Always On

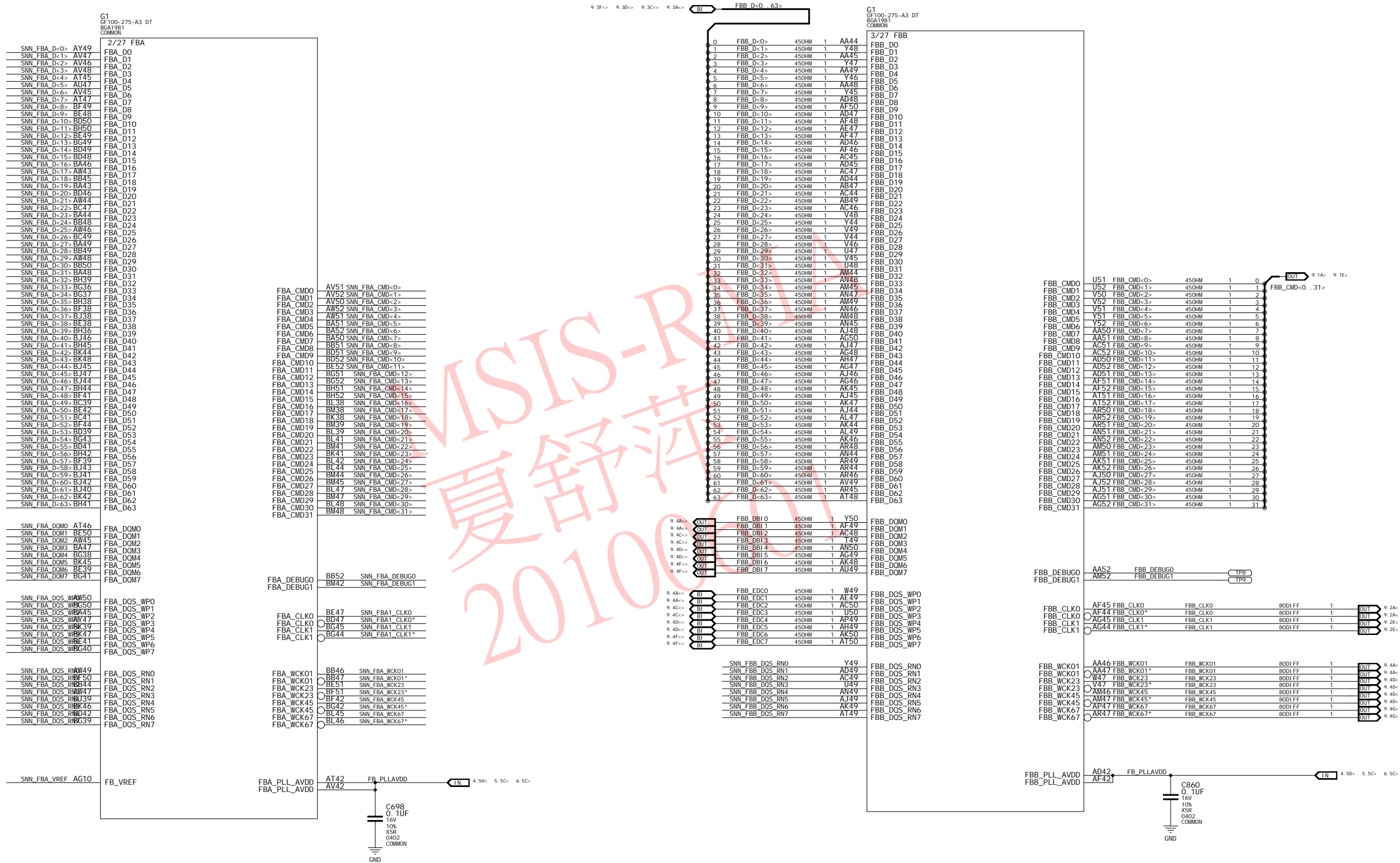


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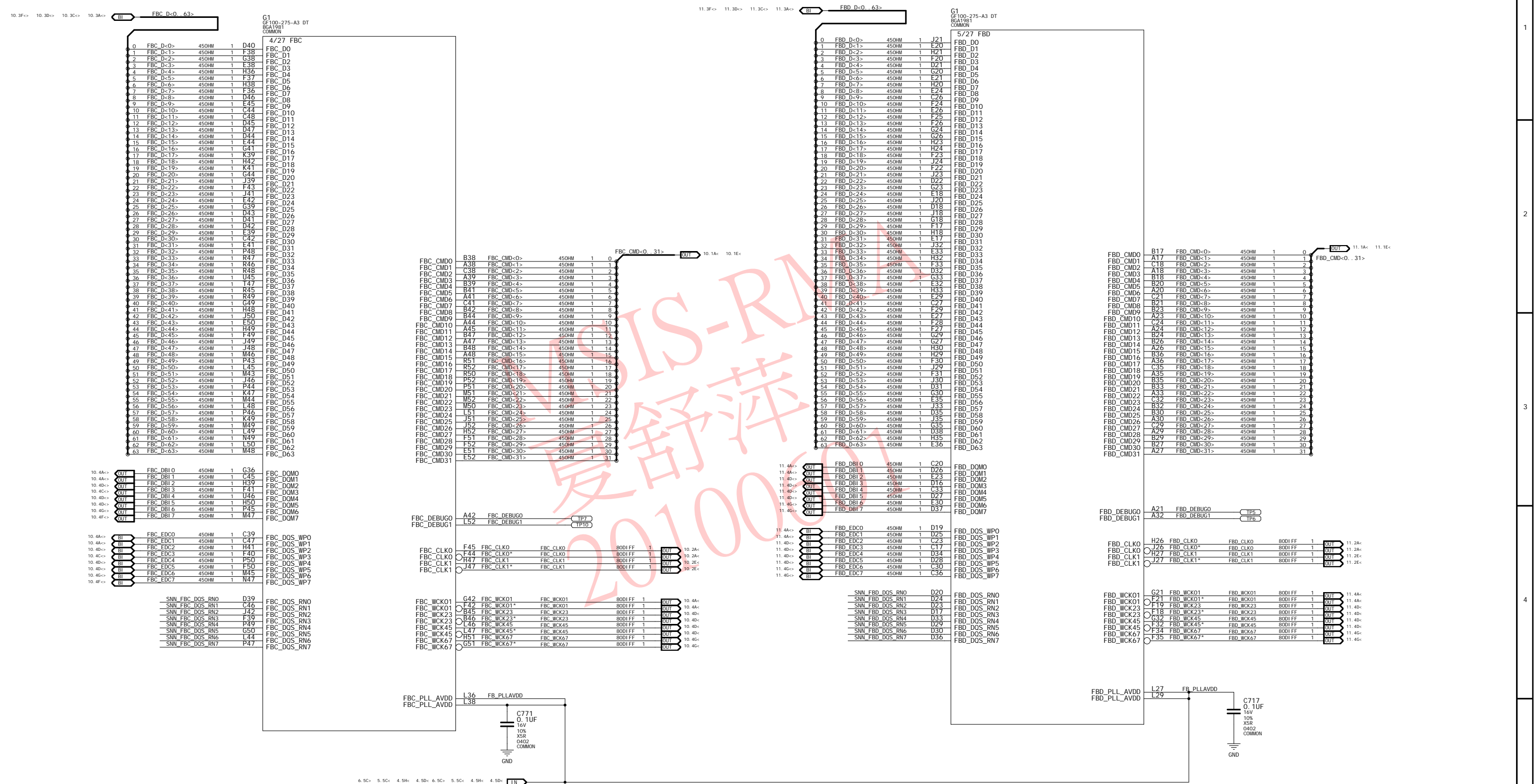
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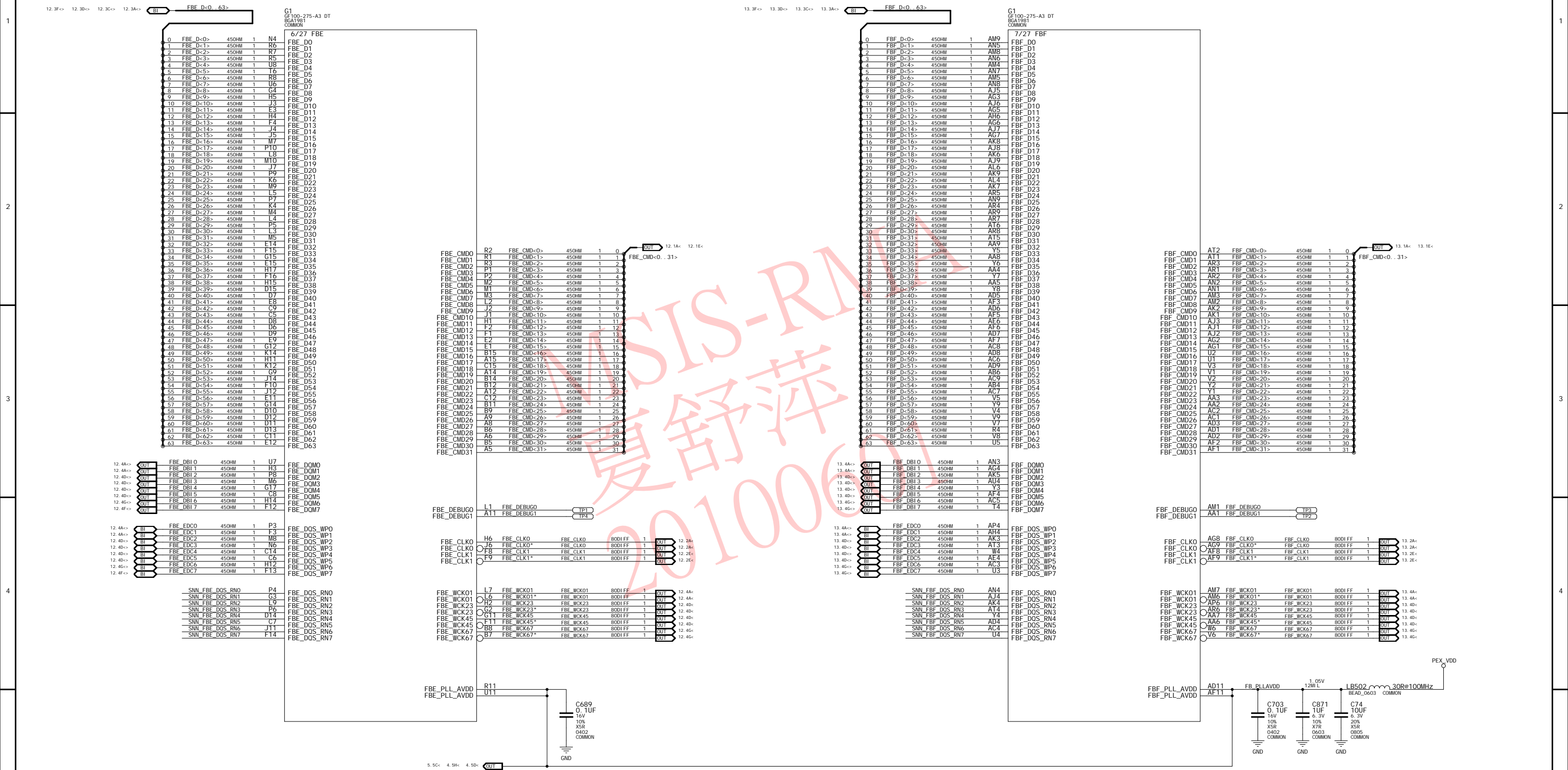
Framebuffer A, B: GPU Section



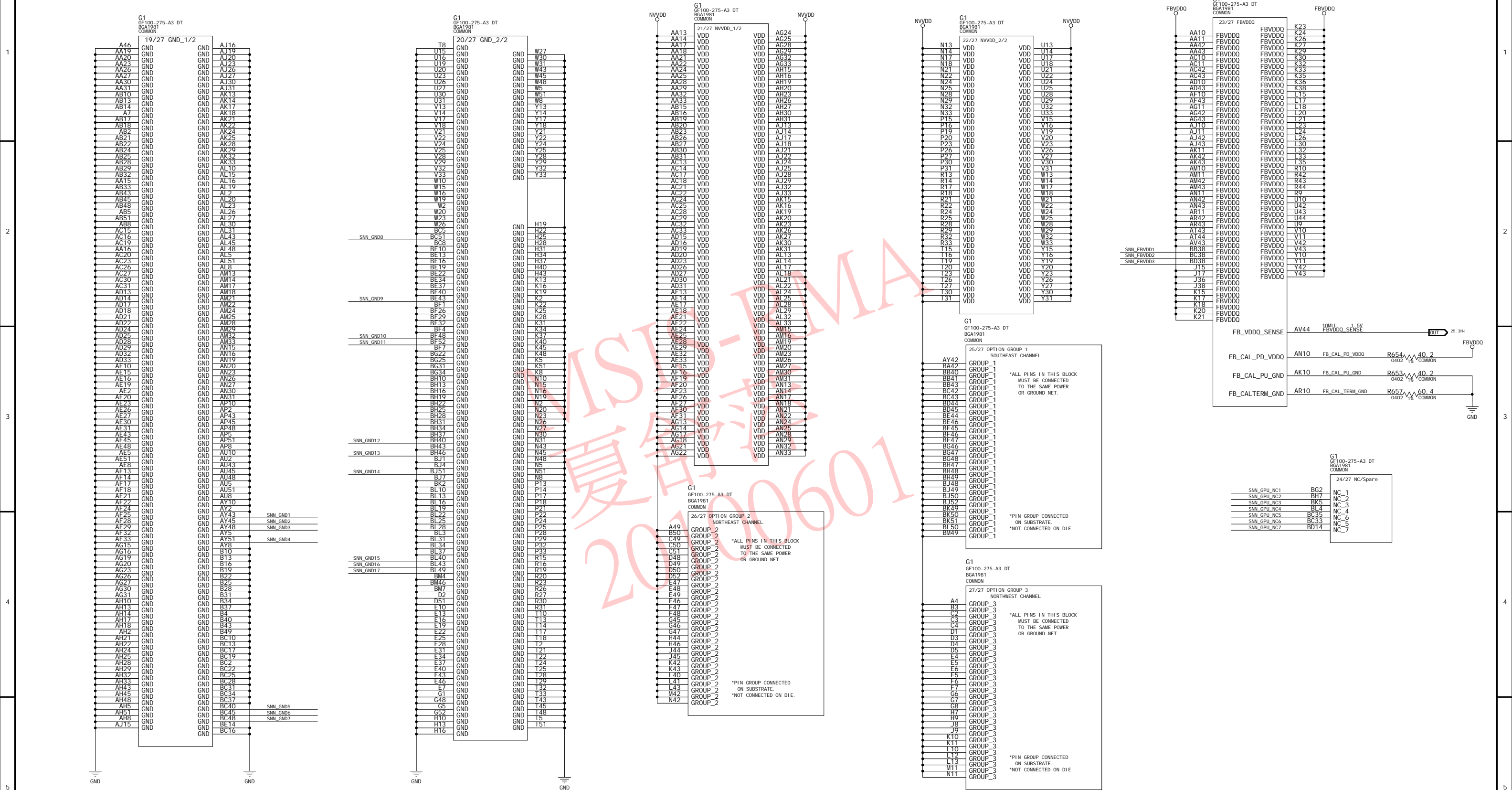
Framebuffer C, D: GPU Section



Framebuffer E, F: GPU Section



GPU Power and GND

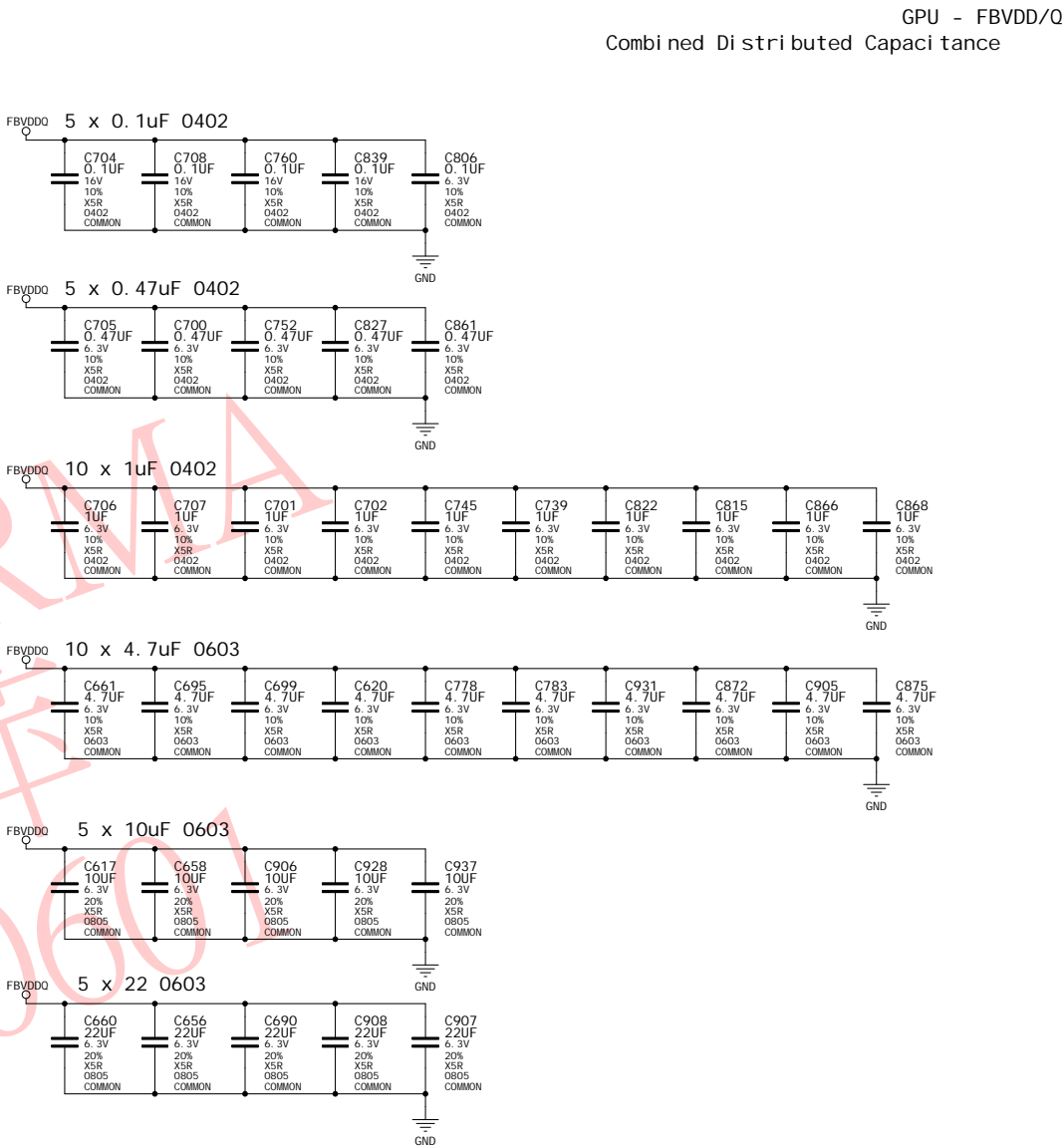


Decoupling: GPU (NVVDD, FBVDDQ)

Decoupling for NVVDD (under GPU)

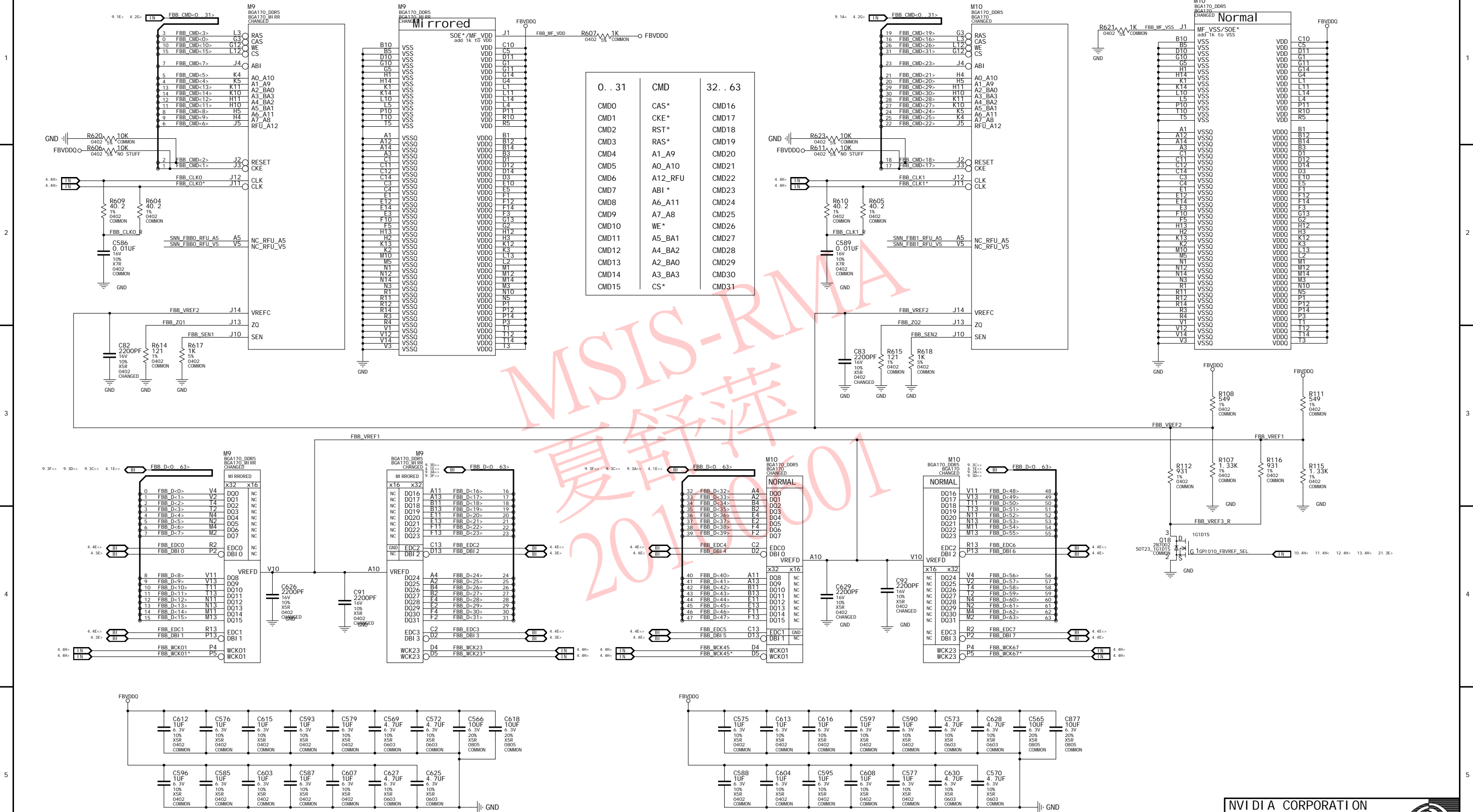


Decoupling for FBVDDQ (under GPU)

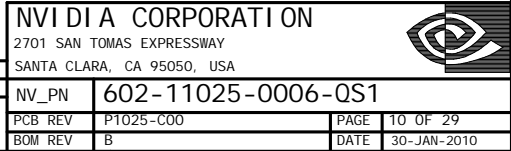


Framebuffer B: Memory Section

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SAMSUNG 32MX32 2000MHZ: 161-0051-600



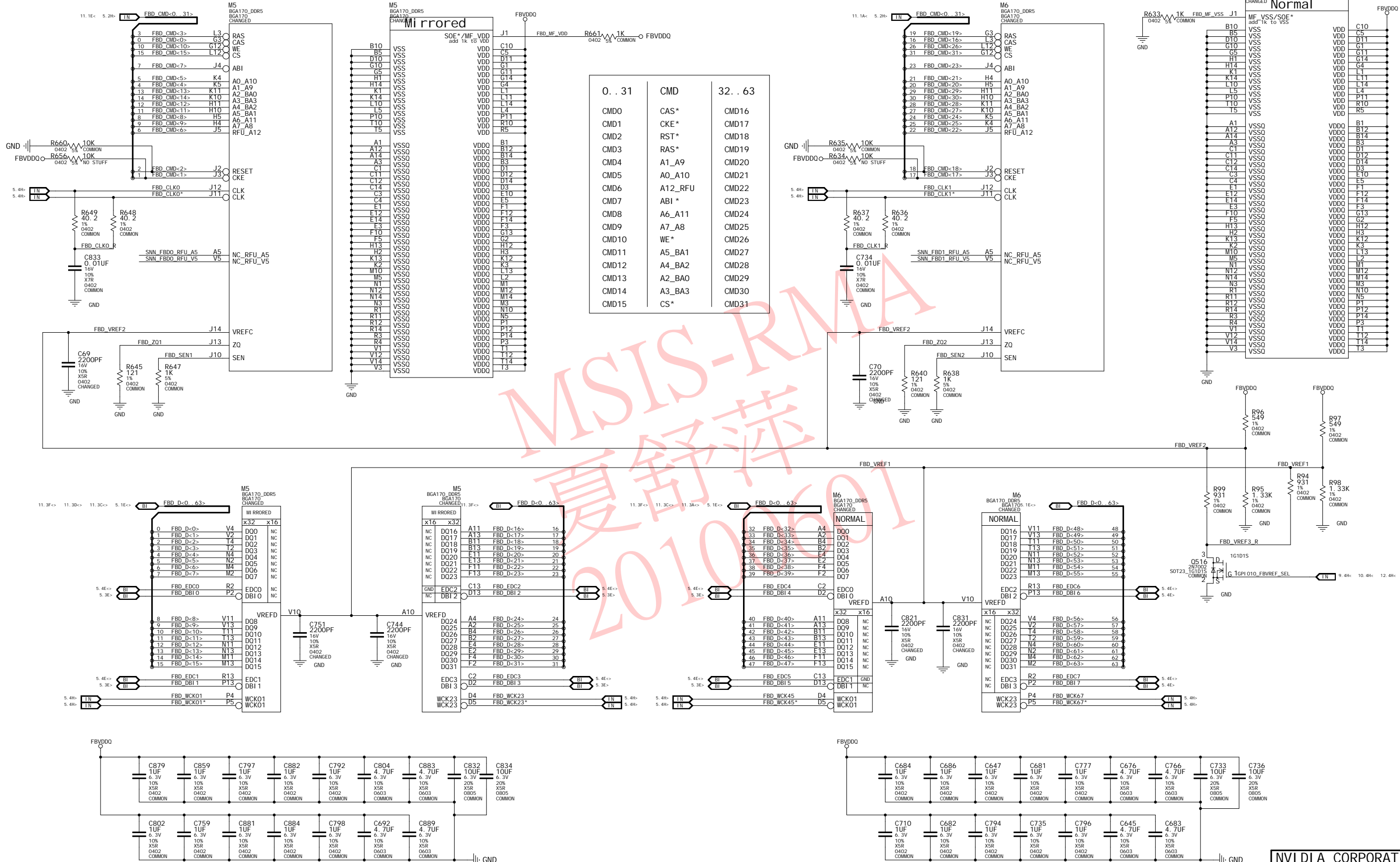
Hyni x	32MX32	2000MHZ:	161-0063-100
SAMSUNG	32MX32	2000MHZ:	161-0051-600



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Framebuffer D: Memory Section

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



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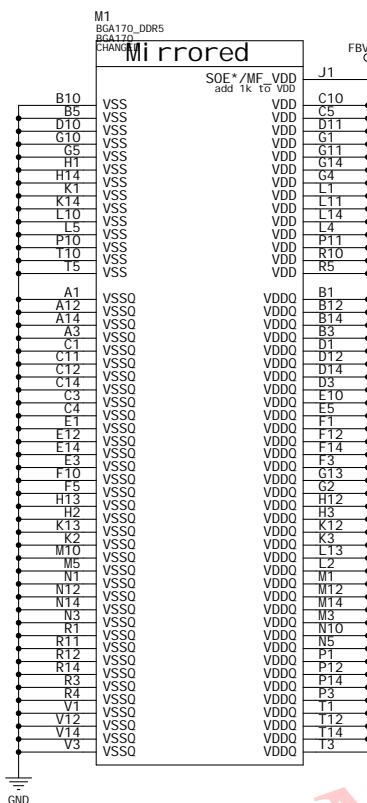
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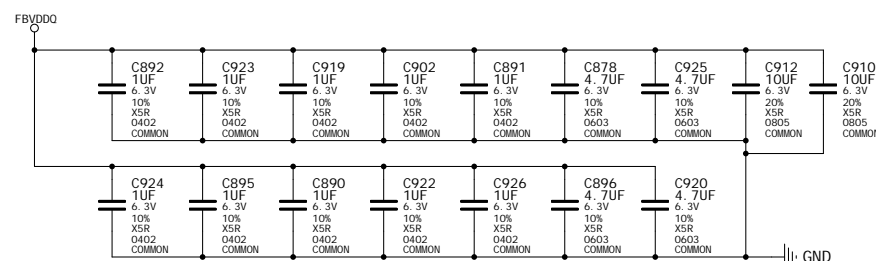
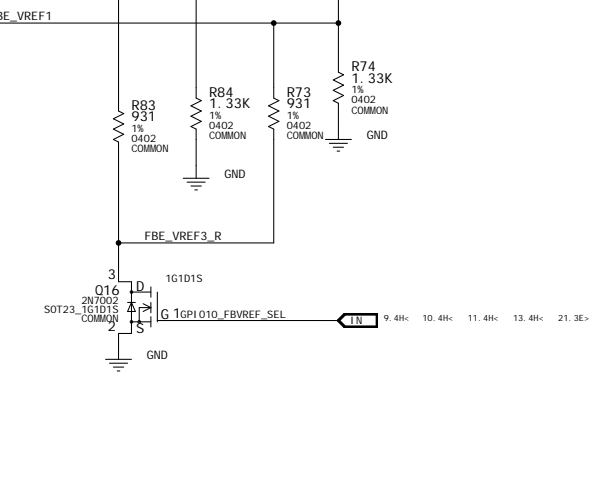
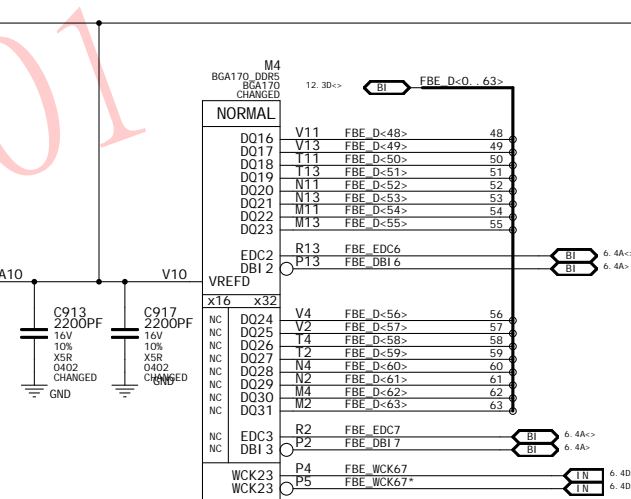
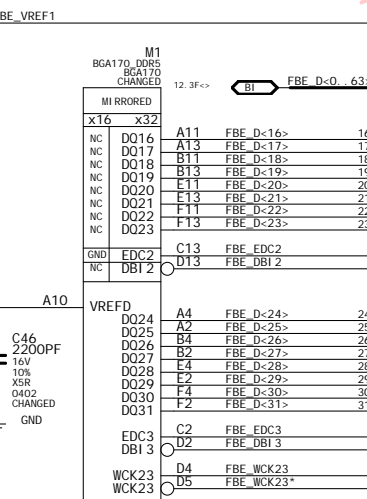
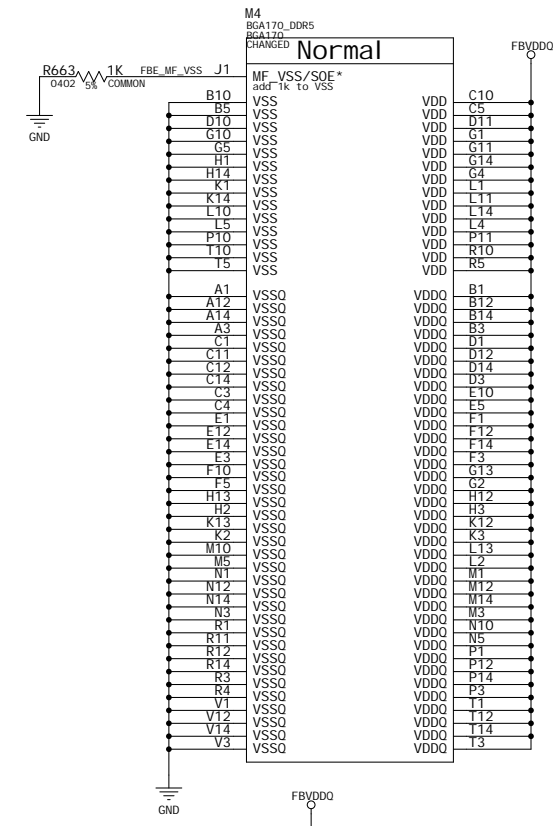
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Hyni x	32MX32	2000MHZ:	161-0063-100
SAMSUNG	32MX32	2000MHZ:	161-0051-600

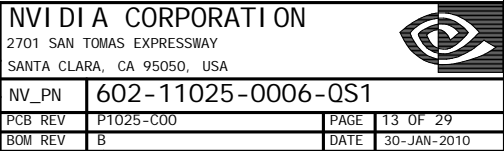


0. . 31	CMD	32. . 63
CMD0	CAS*	CMD16
CMD1	CKE*	CMD17
CMD2	RST*	CMD18
CMD3	RAS*	CMD19
CMD4	A1_A9	CMD20
CMD5	A0_A10	CMD21
CMD6	A12_RFU	CMD22
CMD7	ABI *	CMD23
CMD8	A6_A11	CMD24
CMD9	A7_A8	CMD25
CMD10	WE*	CMD26
CMD11	A5_BA1	CMD27
CMD12	A4_BA2	CMD28
CMD13	A2_BA0	CMD29
CMD14	A3_BA3	CMD30
CMD15	CS*	CMD31



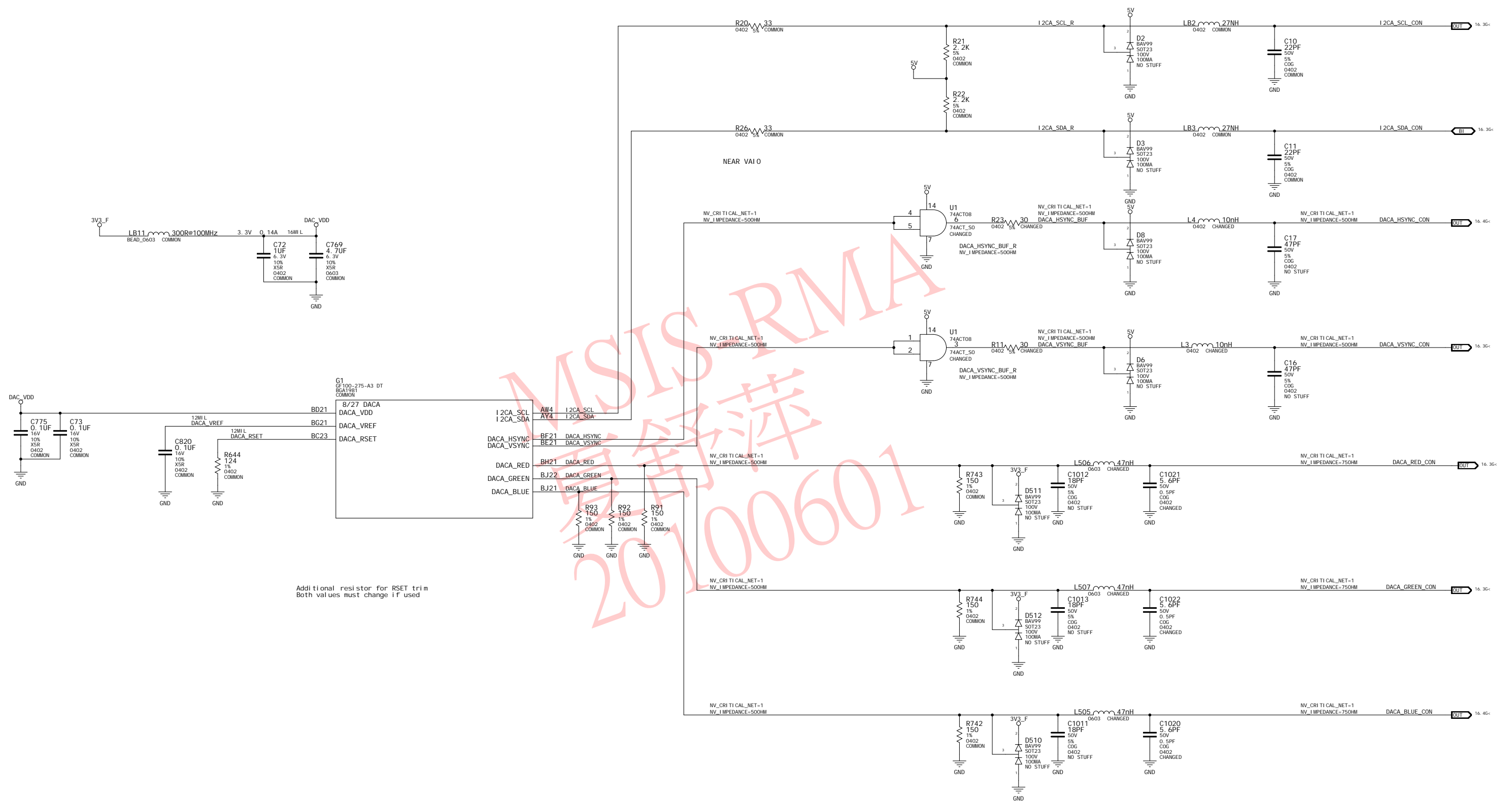
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Hyni x	32MX32	2000MHZ:	161-0063-100
SAMSUNG	32MX32	2000MHZ:	161-0051-600



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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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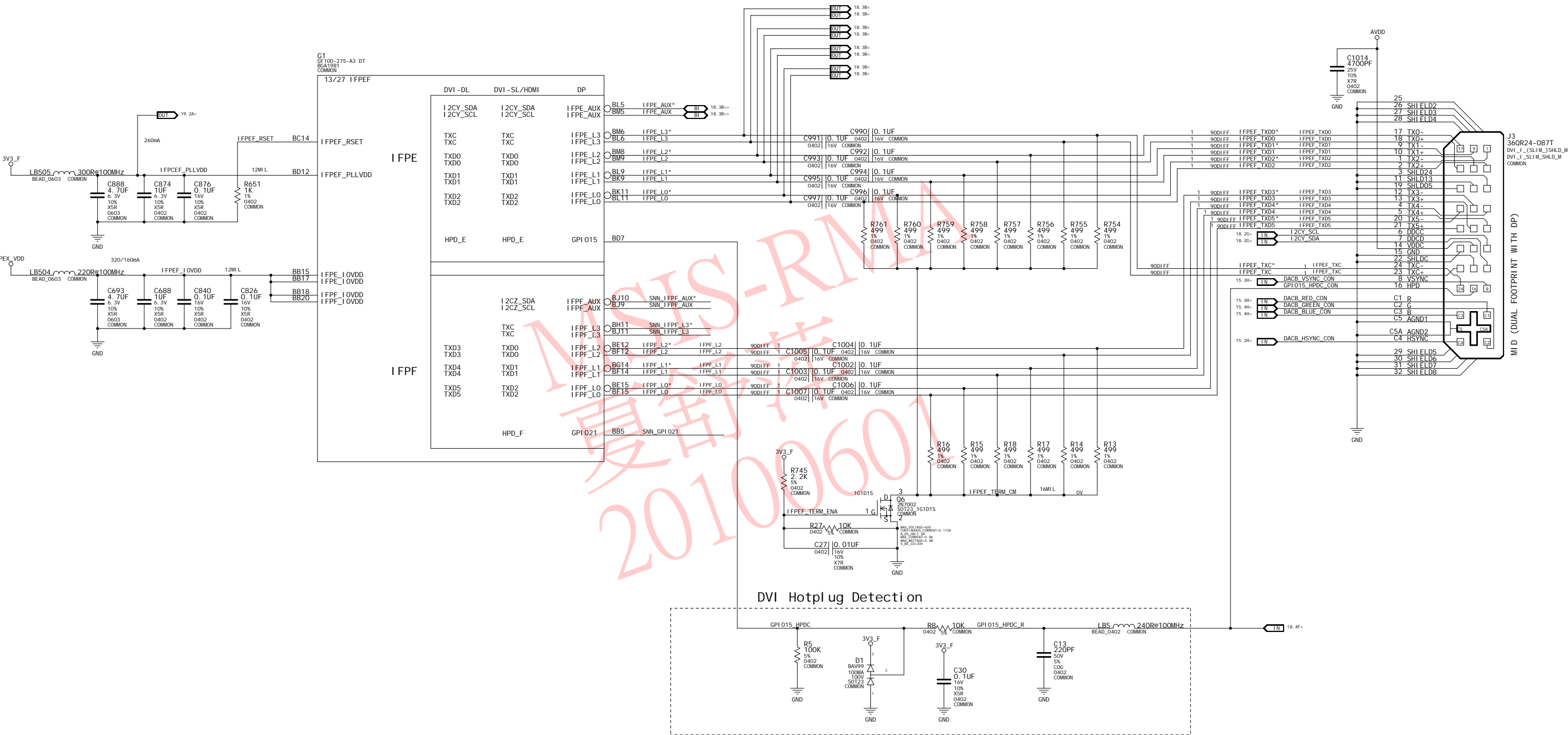
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I FPEF for Middle DVI-I or DP



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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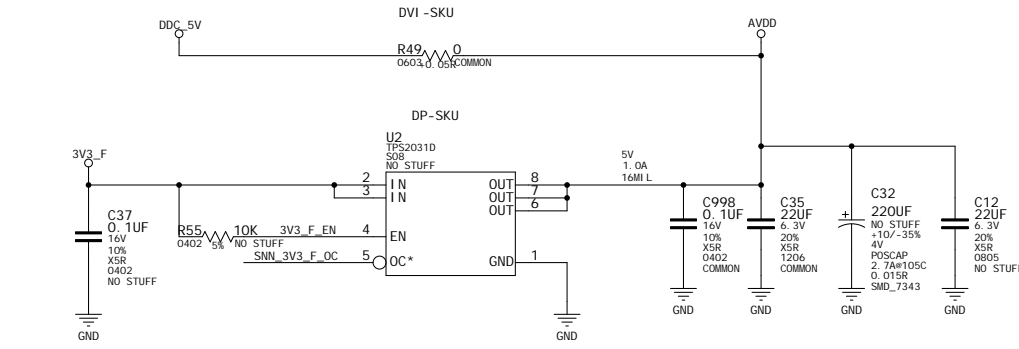
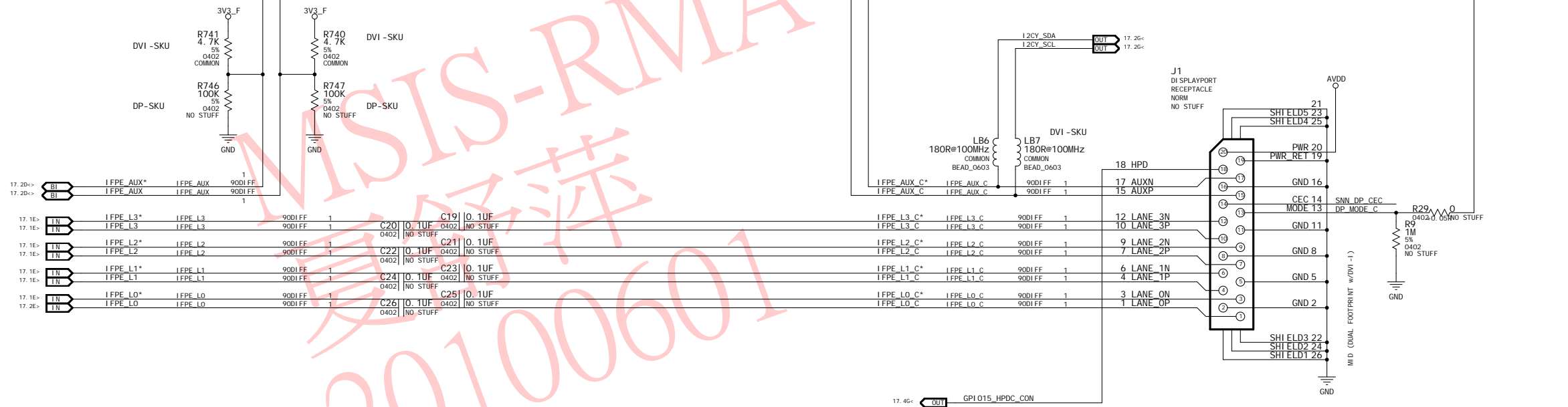
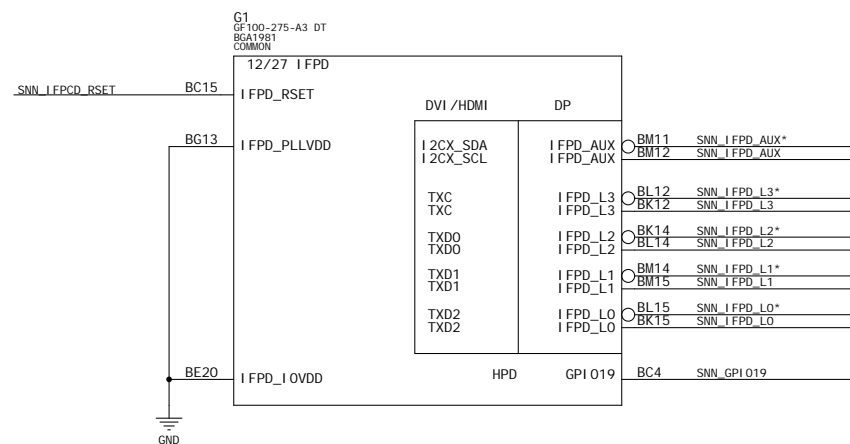
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I FP_D:  UNUSED,  (MI D DP)

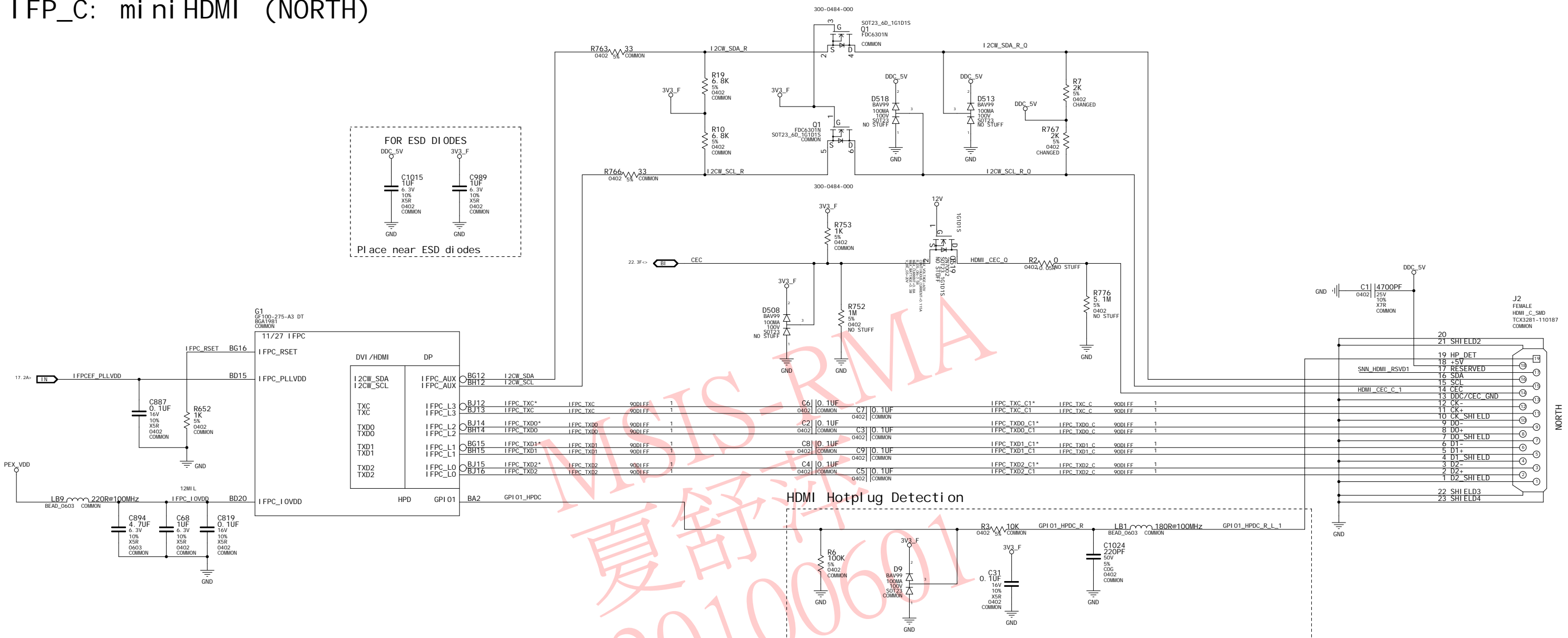
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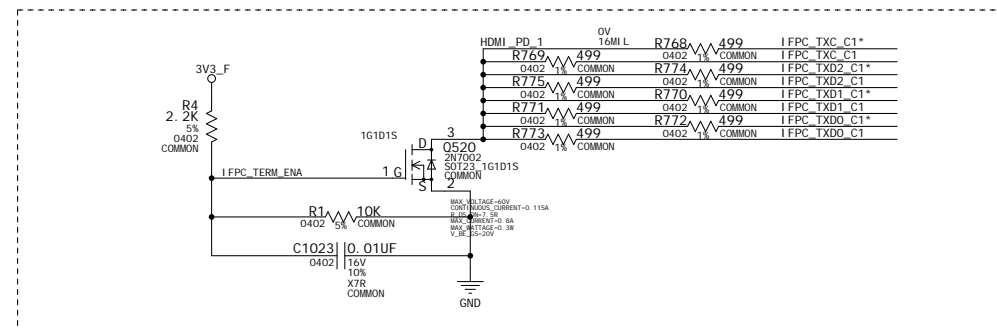
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IFP_C: mini HDMI (NORTH)



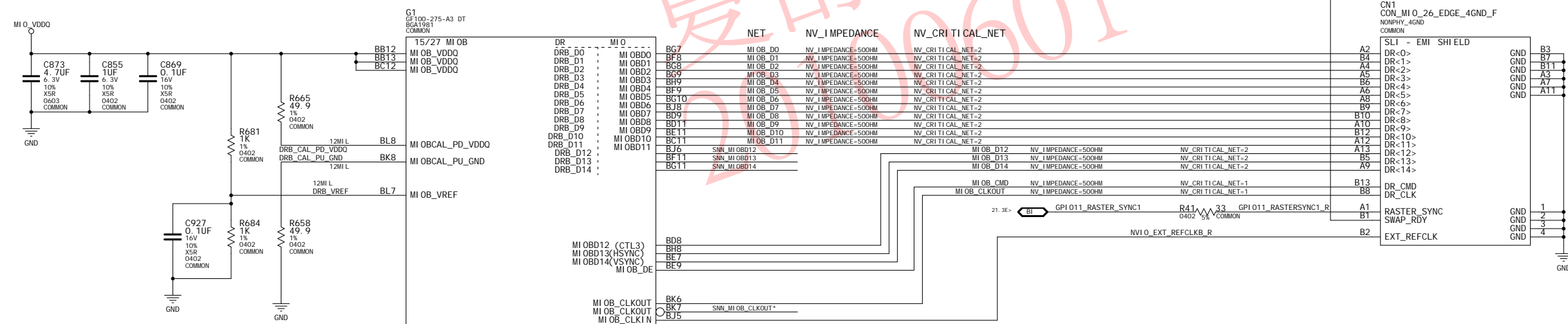
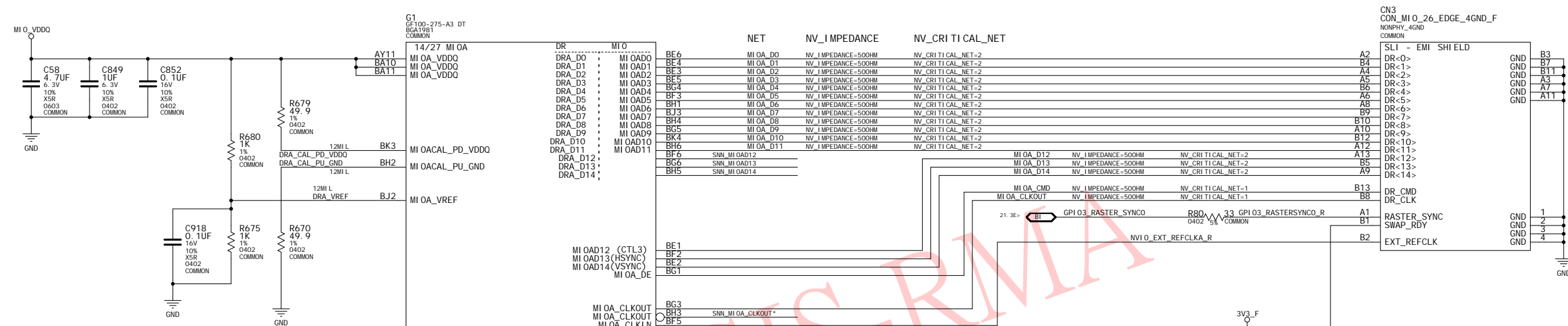
HDMI PULL DOWNS



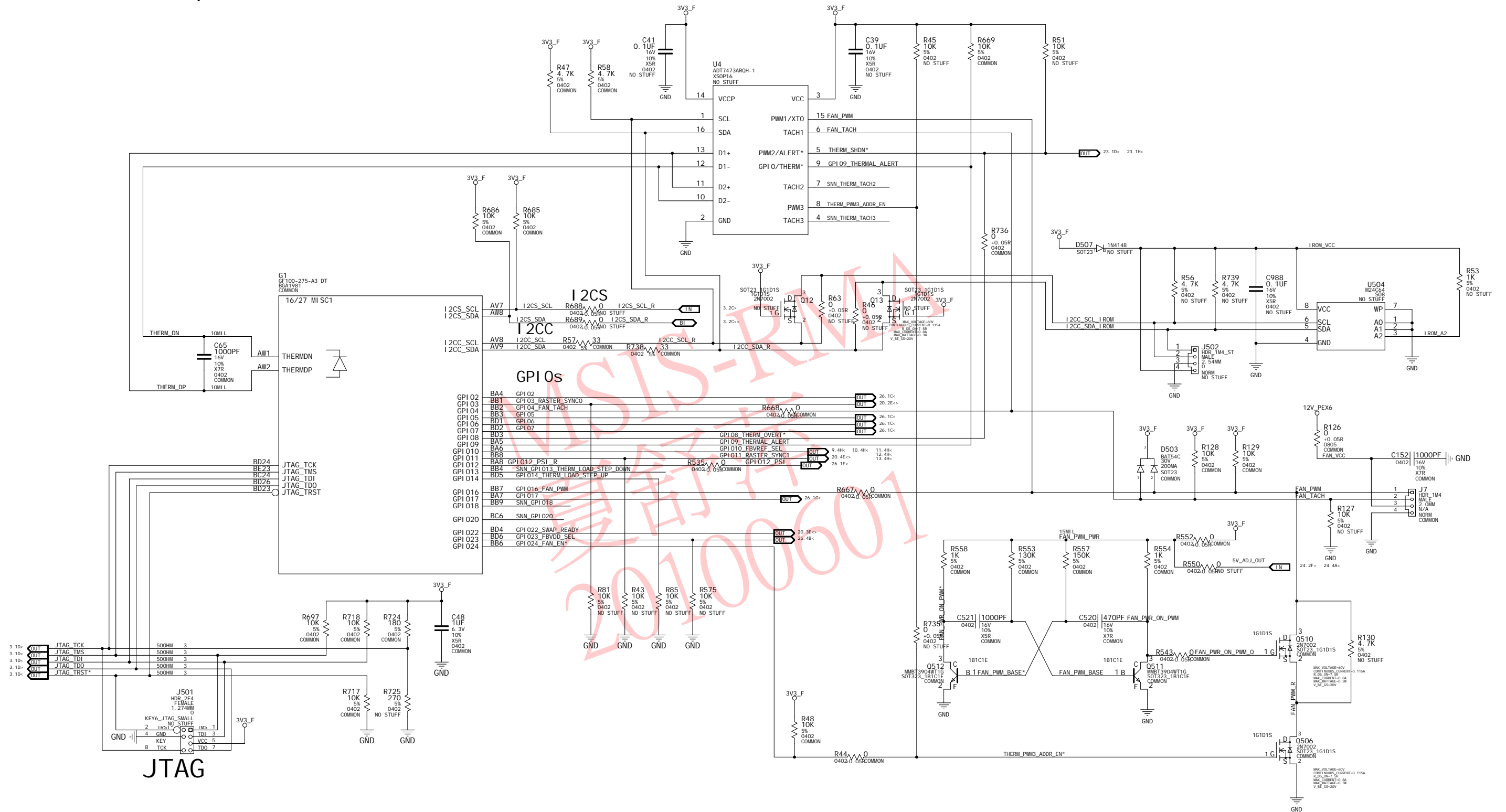
NVI D I A C O R P O R A T I O N 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA			
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Connectors: DR Interface (Dual SLI)



FAN CONTROL, GPIO & JTAG



JTAG

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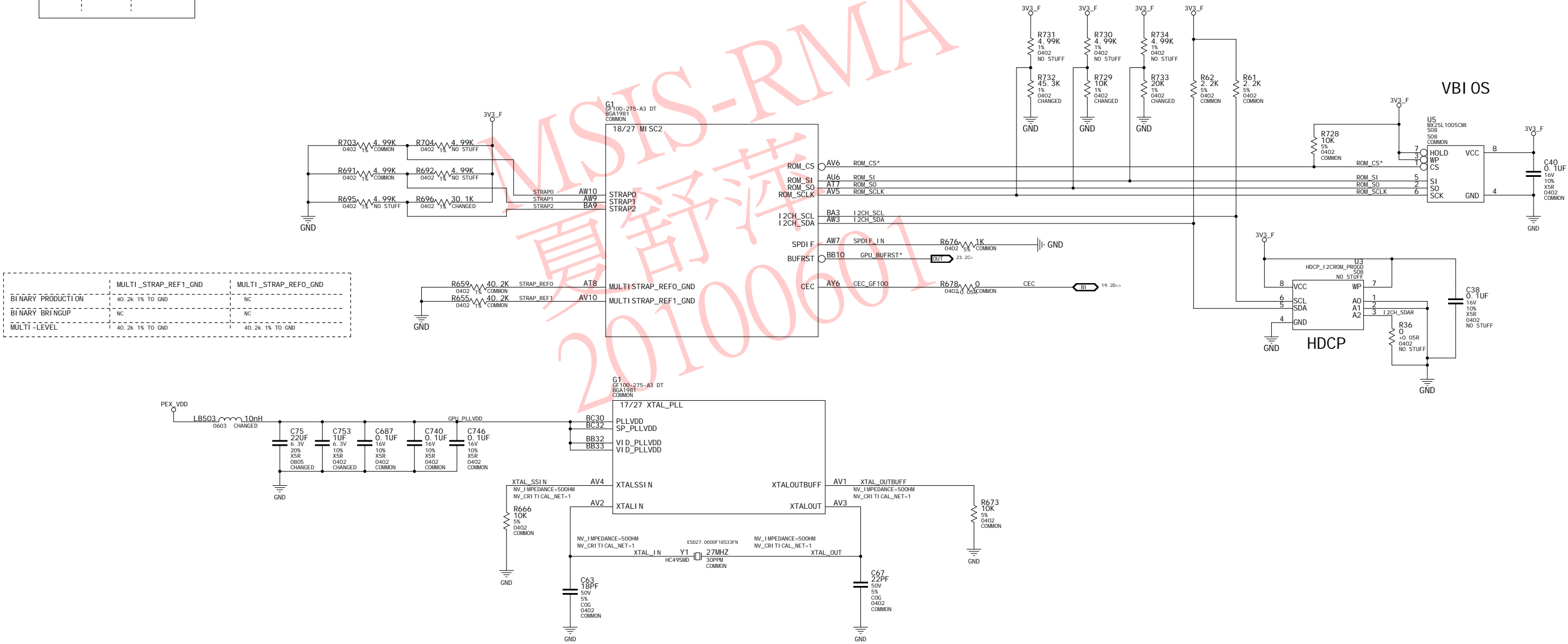
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BIOS ROM, HDCP ROM, STRAPPING OPTIONS

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
	SUB_VENDOR	1 Dedicated BIOS
	PCI_DEVID_EXT	0 0xC
		45K PD



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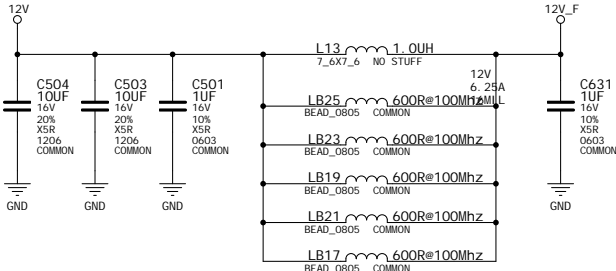
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PCB REV	P1025-C00
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Power Supply: PEX PS INPUT, DETECTION LOGIC, THERM SHUTDOWN LATCH / IFP_IOVDD

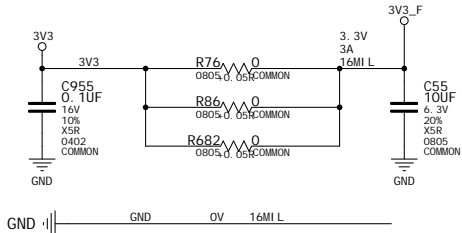
Connector Power State Table

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

PEX_12V INPUT - 66W



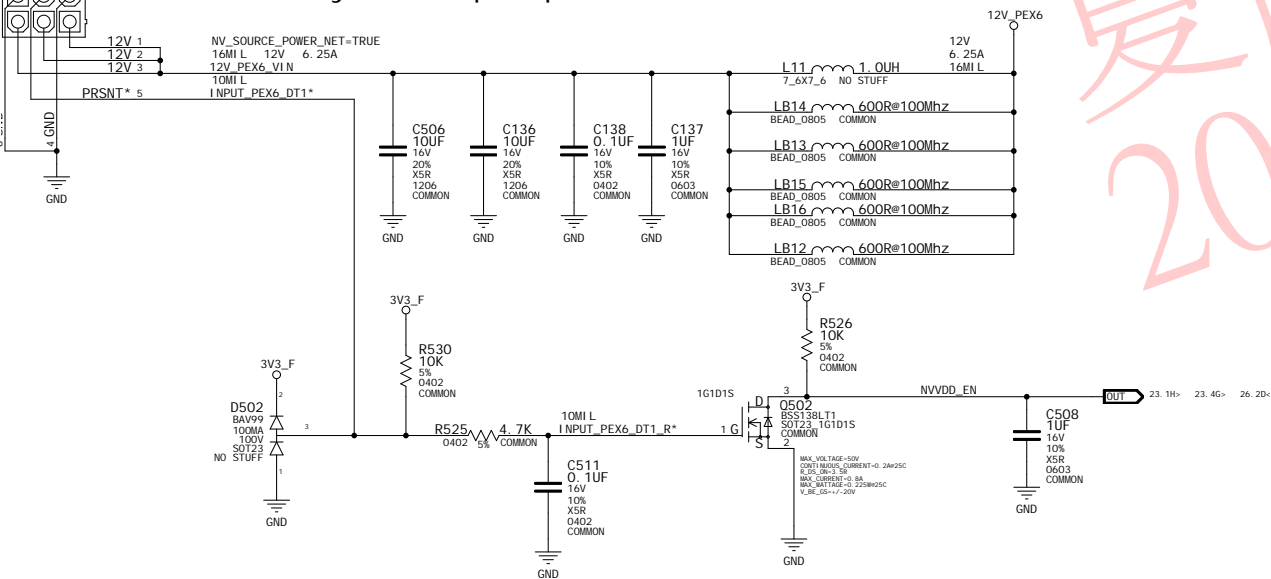
PEX 3V3 INPUT - 10W



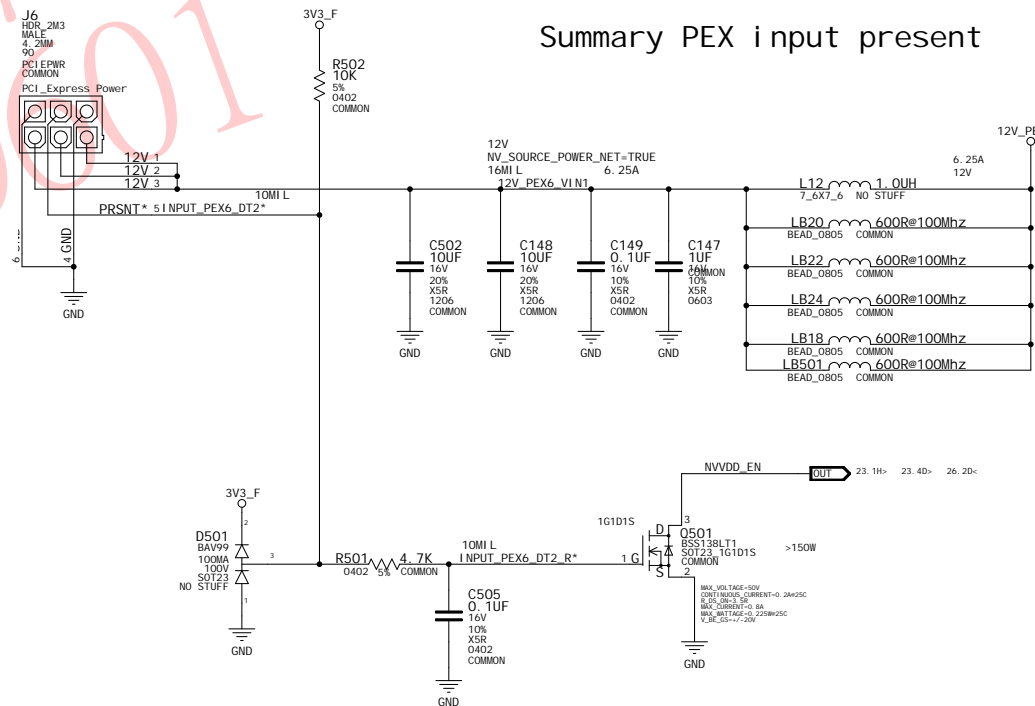
MUST BE ATTACHED AND POWERED TO START BOARD

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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1



3

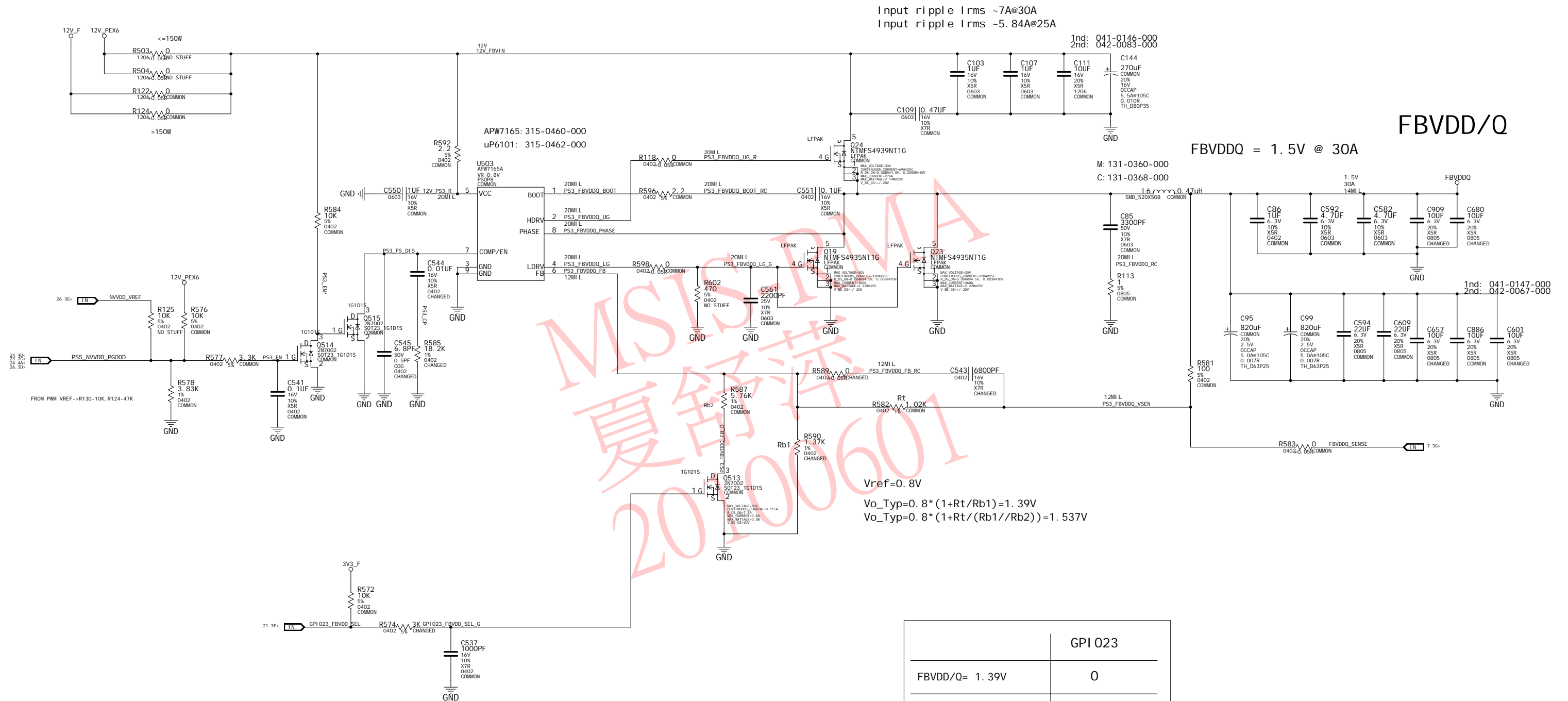
4



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Power Supply: FBVDD/Q



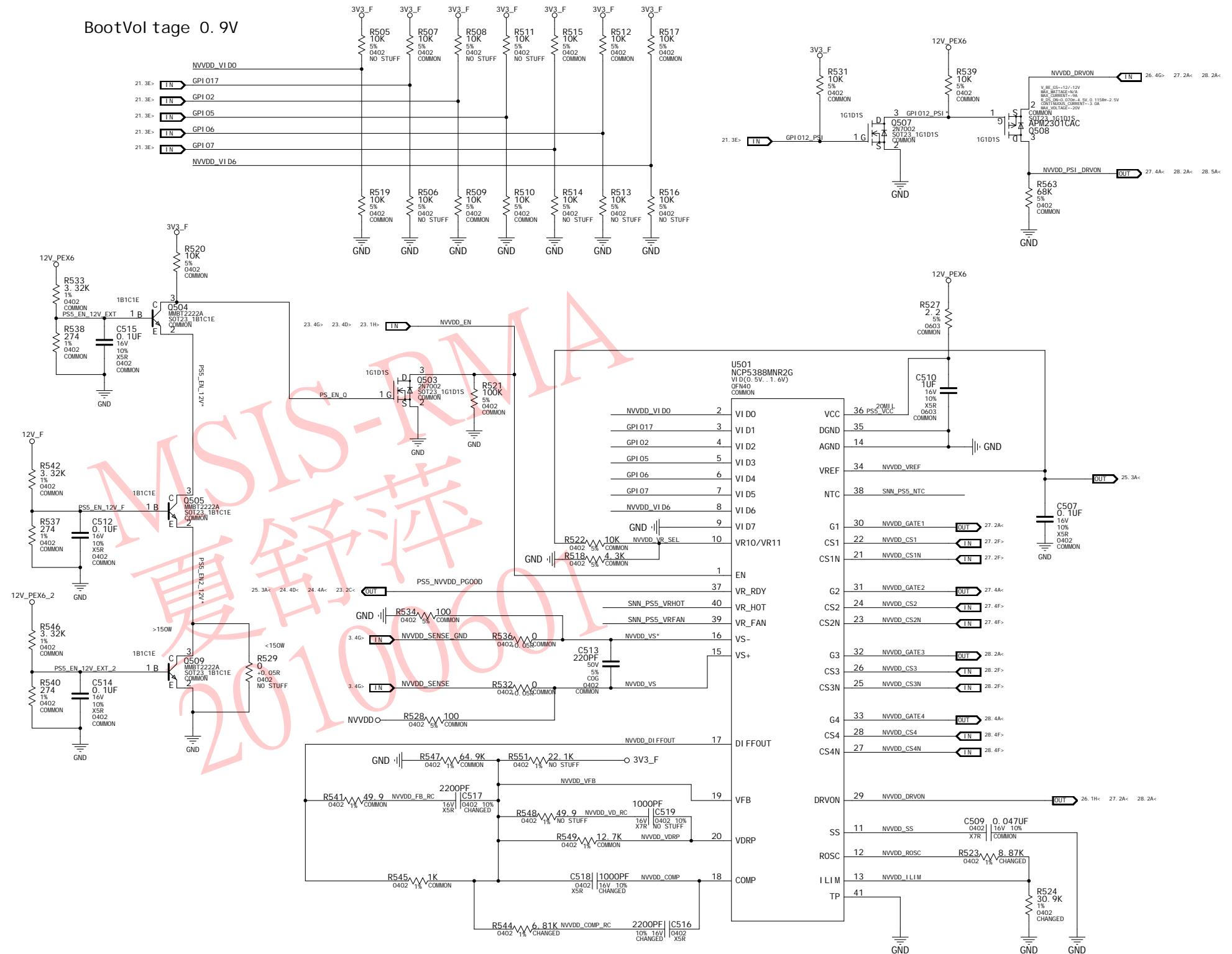
	GPI 023
FBVDD/Q= 1.39V	0
FBVDD/Q= 1.537V	1

Power Supply: NVVDD Regulator

VI D Table

GPI 07 VID_5	GPI 06 VID_4	GPI 05 VID_3	GPI 02 VID_2	GPI 017 VID_1	VOUT
0	0	0	0	0	1. 21250V
0	0	0	0	1	1. 20000V
0	0	0	1	0	1. 18750V
0	0	0	1	1	1. 17500V
0	0	1	0	0	1. 16250V
0	0	1	0	1	1. 11500V
0	0	1	1	0	1. 13750V
0	0	1	1	1	1. 12500V
0	1	0	0	0	1. 11250V
0	1	0	0	1	1. 10000V
0	1	0	1	0	1. 08750V
0	1	0	1	1	1. 07500V
0	1	1	0	0	1. 06250V
0	1	1	0	1	1. 05000V
0	1	1	1	0	1. 03750V
0	1	1	1	1	1. 02500V
1	0	0	0	0	1. 01250V
1	0	0	0	1	1. 00000V
1	0	0	1	0	0. 98750V
1	0	0	1	1	0. 97500V
1	0	1	0	0	0. 96250V
1	0	1	0	1	0. 95000V
1	0	1	1	0	0. 93750V
1	0	1	1	1	0. 92500V
1	1	0	0	0	0. 91250V
1	1	0	0	1	0. 90000V
1	1	0	1	0	0. 88750V
1	1	0	1	1	0. 87500V
1	1	1	0	0	0. 86250V
1	1	1	0	1	0. 85000V
1	1	1	1	0	0. 83750V
1	1	1	1	1	0. 82500V

BootVoltage 0.9V



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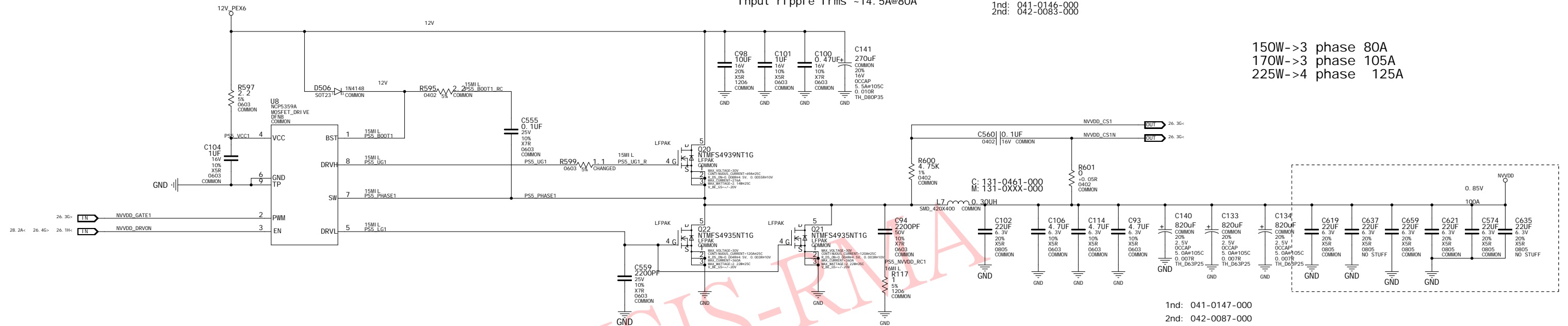
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Power Supply: NVVDD PHASE 1, 2

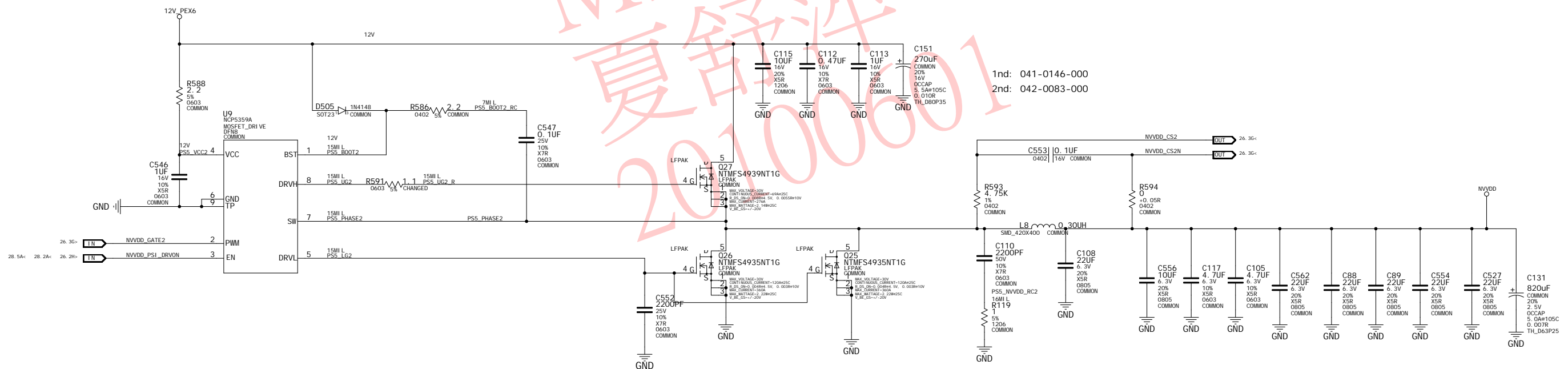
Input ripple Irms ~18A@100A
Input ripple Irms ~14.5A@80A

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



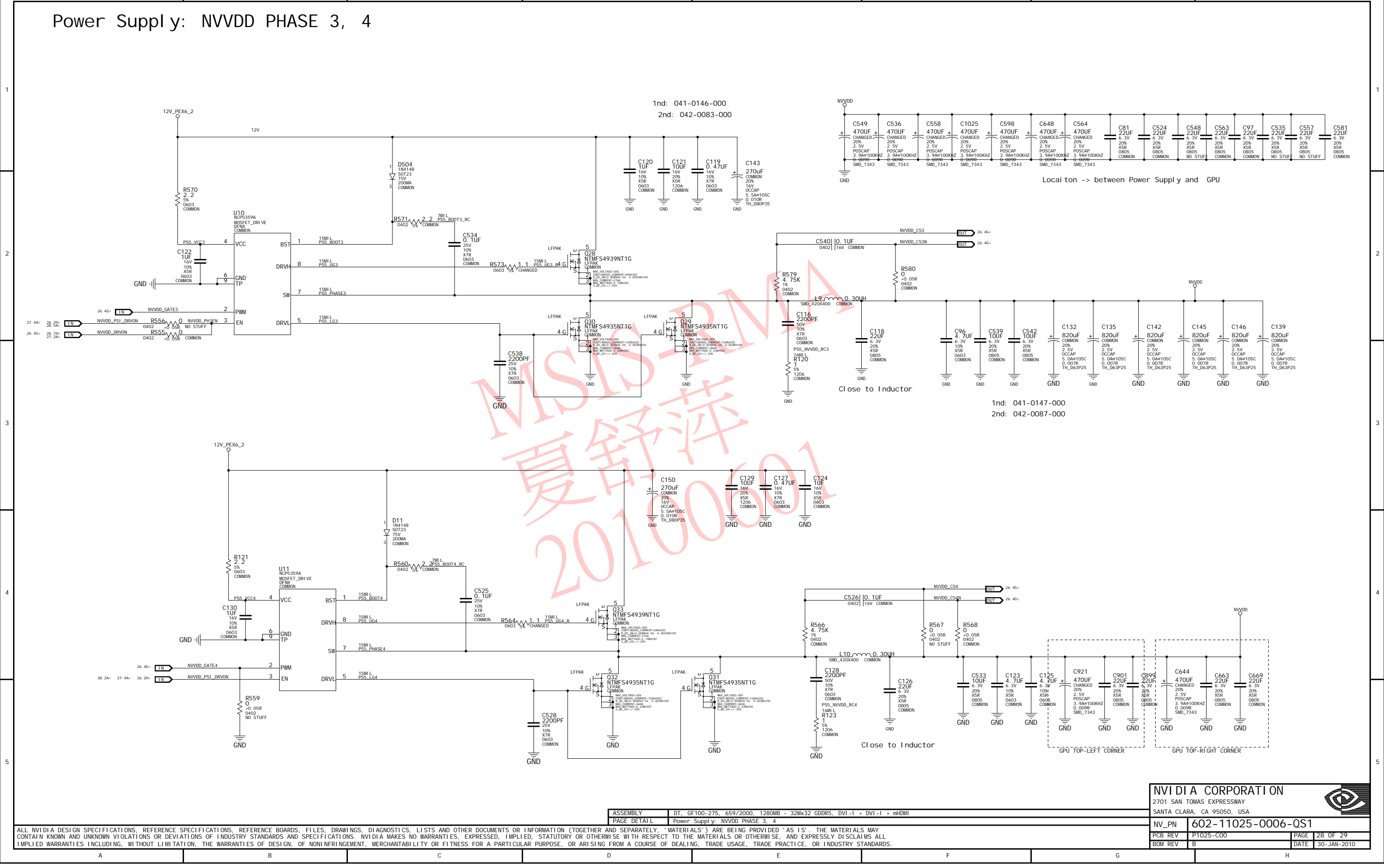
1nd: 041-0146-000
2nd: 042-0083-000

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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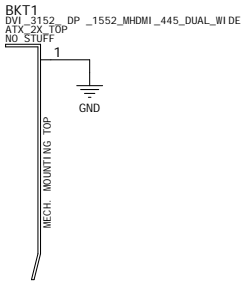


Thermal /Mechanical /ID

Manual BOM Change

Bracket and Assembly

Bracket with DVI_DP_mHDMI : 151-10001-0321-058
Bracket with DVI_DVI_mHDMI : 151-10001-0322-058

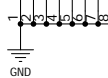


GPU Stiffener

BOARD STIFFENER

8 connected mounting pins

MEC3
GPU STIFFENER_GF100
8PIN
NO STUFF

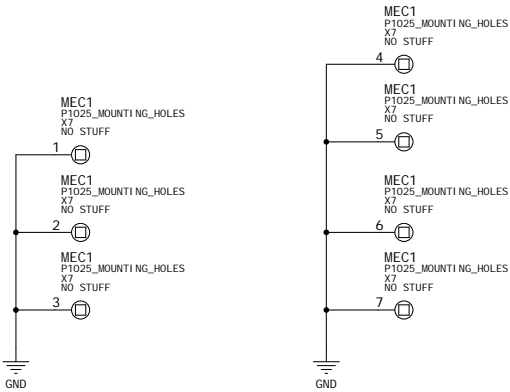


BOARD STIFFENER

No connected mounting pins

MEC501
GF100 Bottom Stiffener
NO PIN
NO STUFF

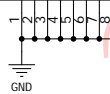
THERMAL/MECHANICAL HOLES



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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