

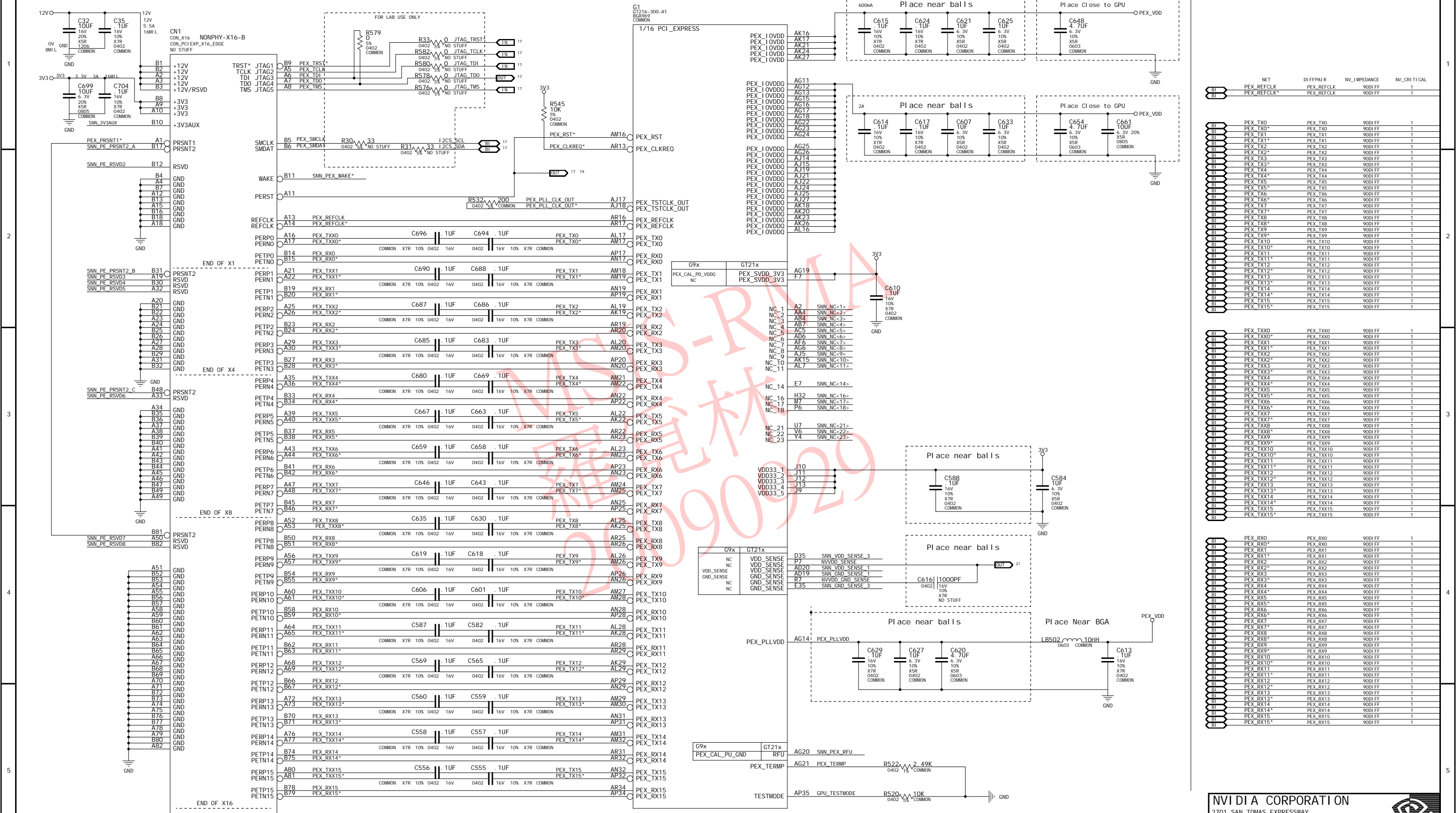
P684-A01 GT216 DESKTOP Low Profile
PCI -EXPRESSx16 DL-DVI HDMI VGA DDR3

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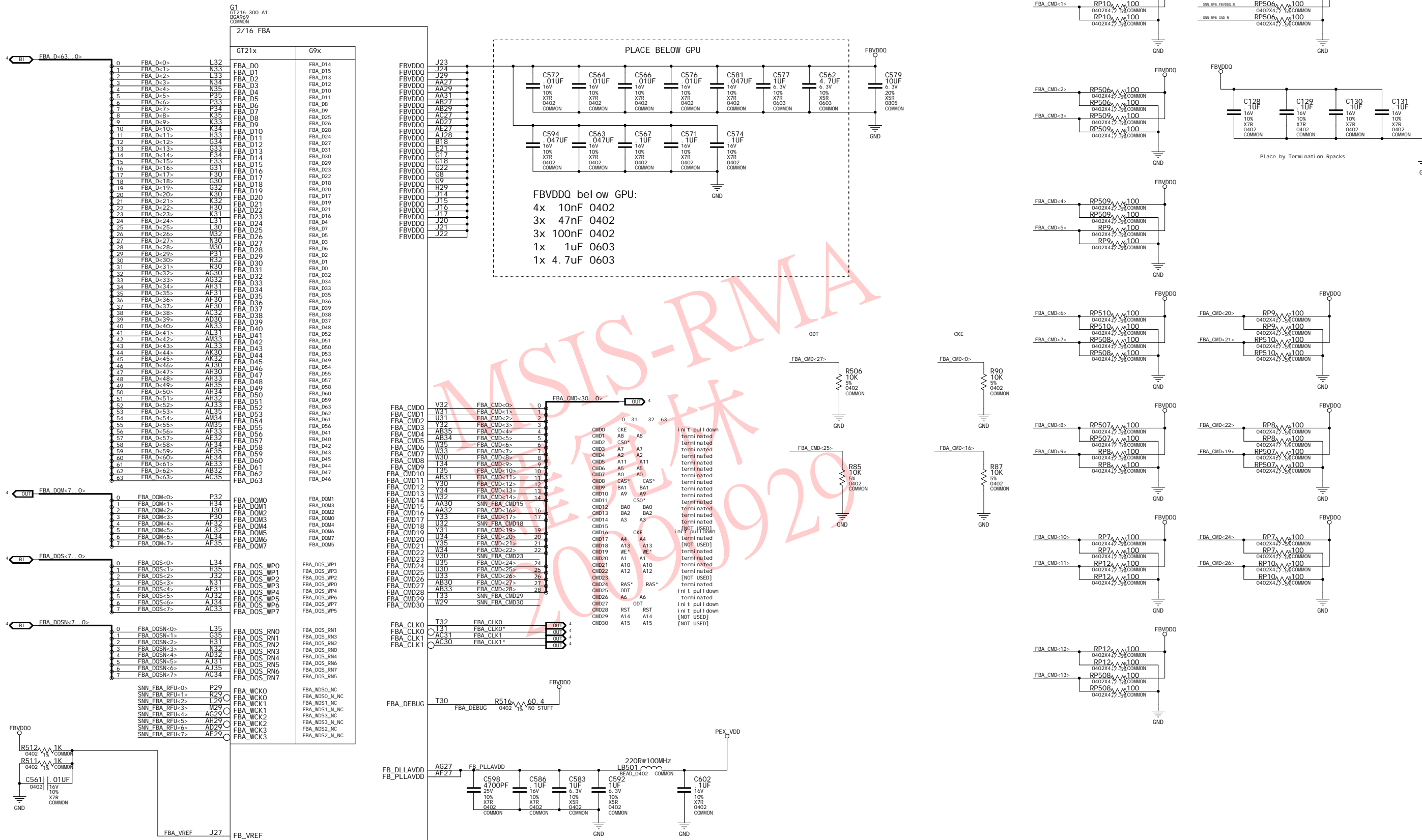
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B	BASE	600-10684-base-100	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	SKU0000	600-10684-0000-100	GT216-350 600/1500MHz 1024MB 64Mx16 BGA100 800MHz DDR3 DVI -I /DP/HDMI /VGA
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PCI -EXPRESS I NTERFACE



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PARTITION A FRAME BUFFER INTERFACE



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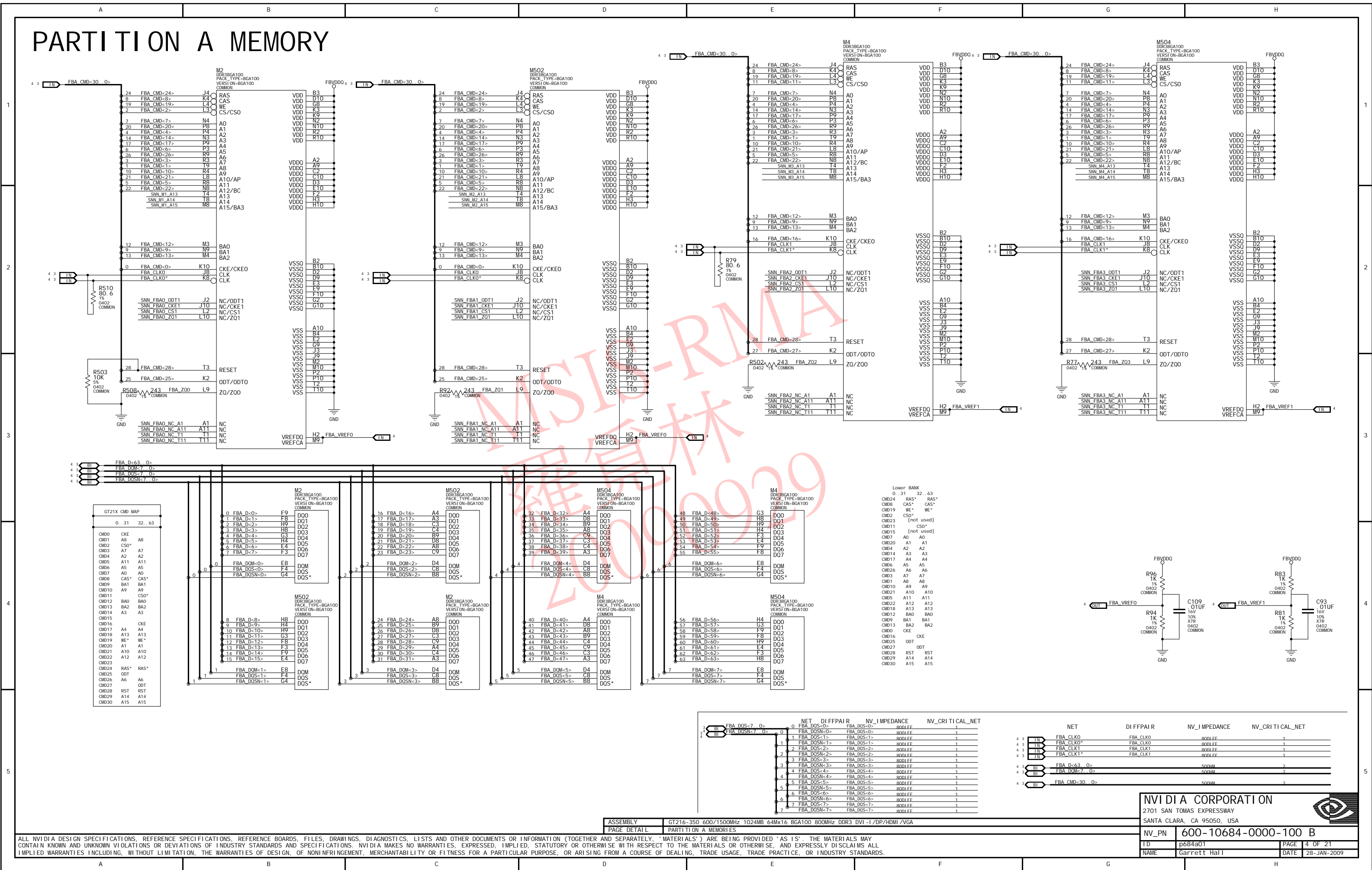


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NAME	Garrett Hall	DATE	28-JAN-2009

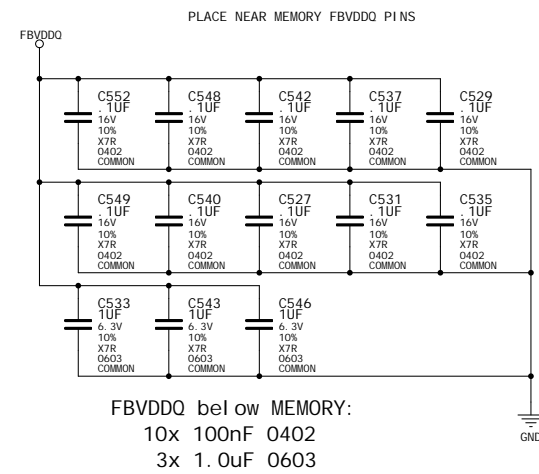
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PARTITION A MEMORY

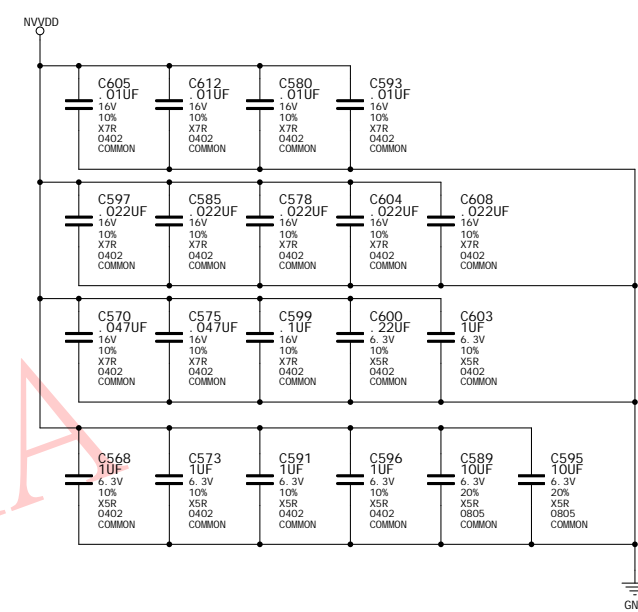
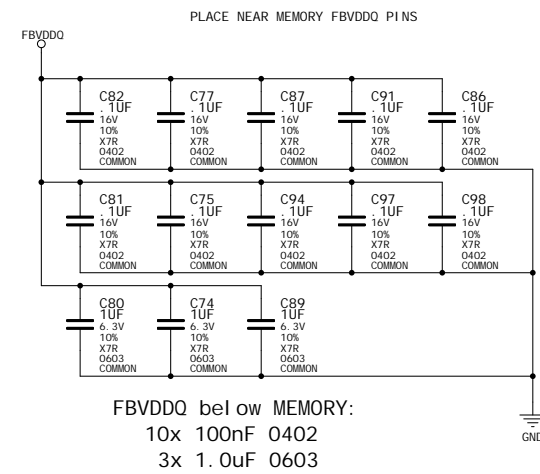


FBA DECOUPLING CAPS & NVVDD DECOUPLING CAPS

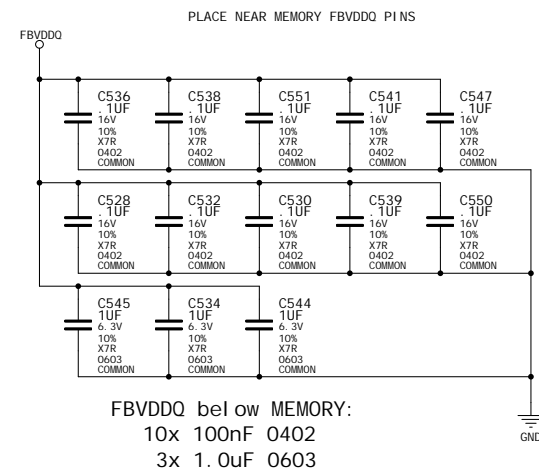
Decoupling for FBA 0..15



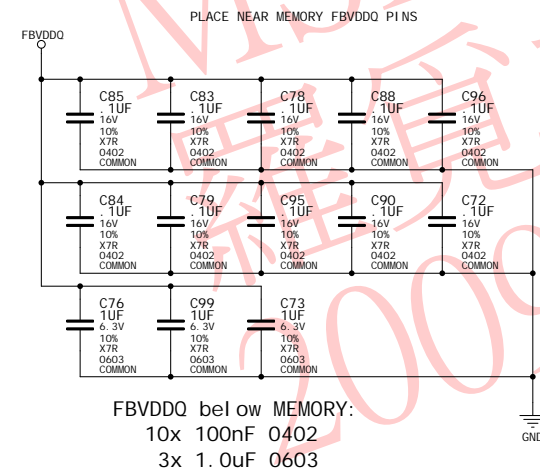
Decoupling for FBA 16..31



Decoupling for FBA 32..47

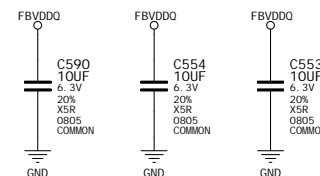
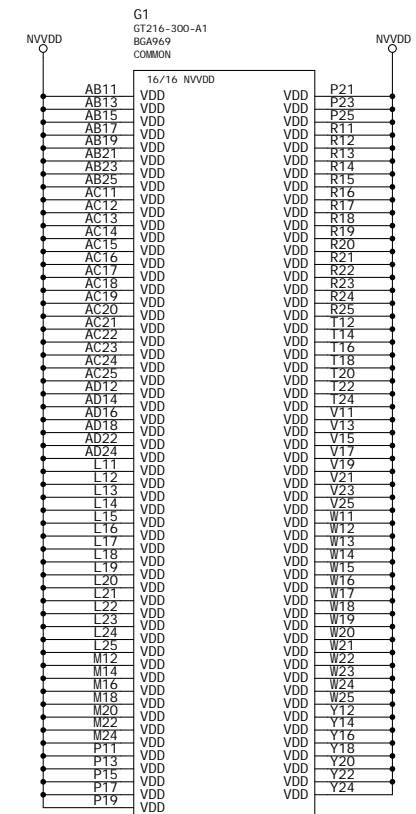


Decoupling for FBA 48..63

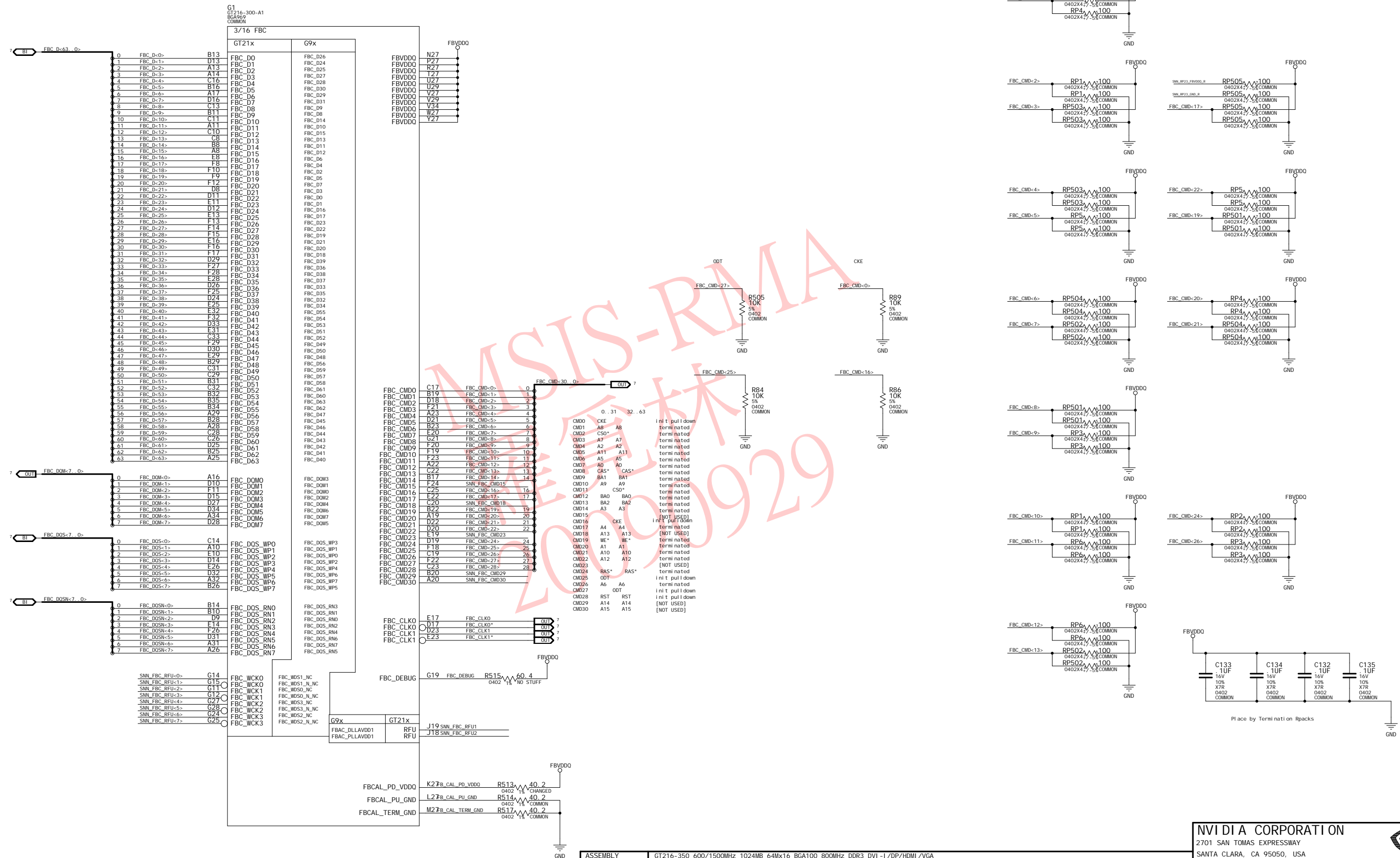


NVVDD under GPU:

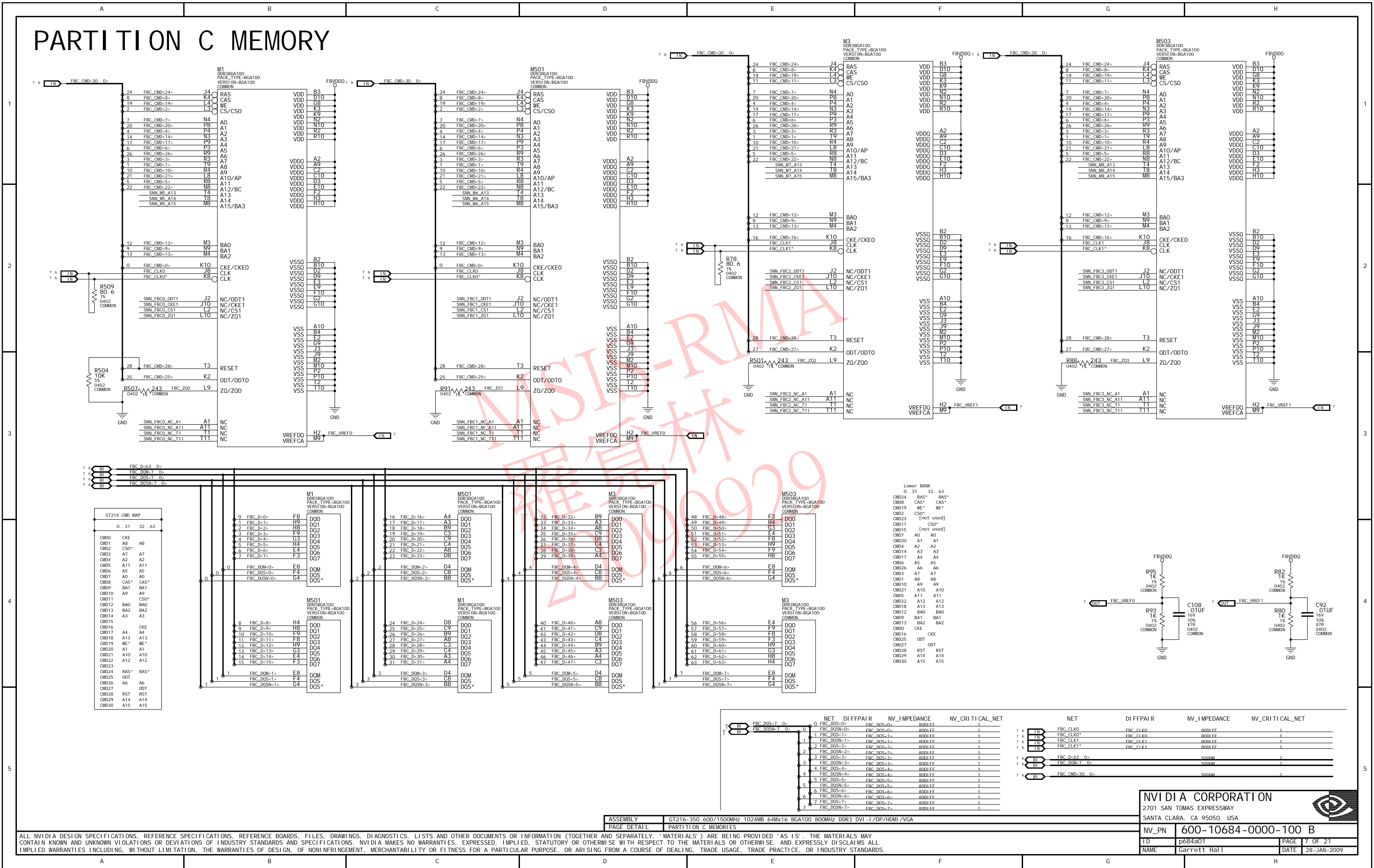
4x	0. 01uF	0402	X7R
5x	0. 022uF	0402	X7R
2x	0. 047uF	0402	X7R
1x	0. 1uF	0402	X7R
1x	0. 22uF	0402	X7R
4x	1. 0uF	0402	X5R
1x	2. 2uF	0402	X5R
2x	10uF	0805	X5R



PARTITION C FRAME BUFFER INTERFACE

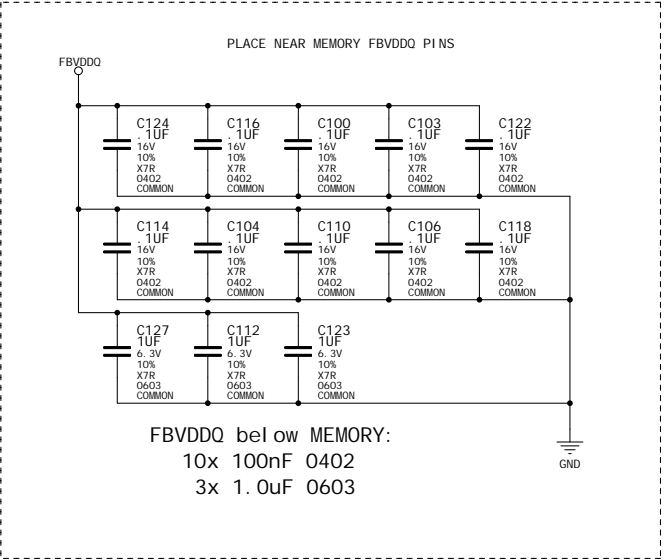


PARTITION C MEMORY

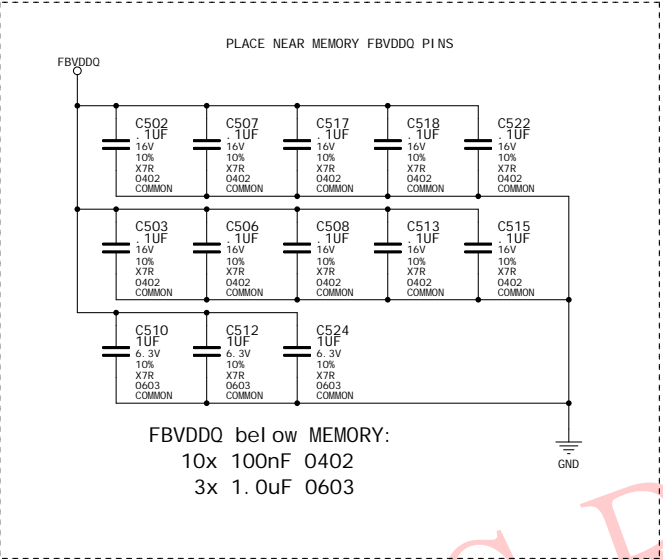


FBC DECOUPLING CAPS & NVVDD DECOUPLING CAPS

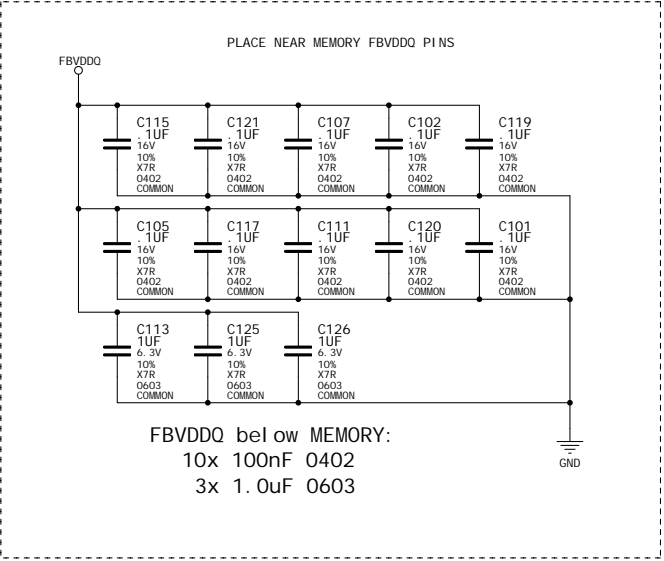
Decoupling for FBC 0..15



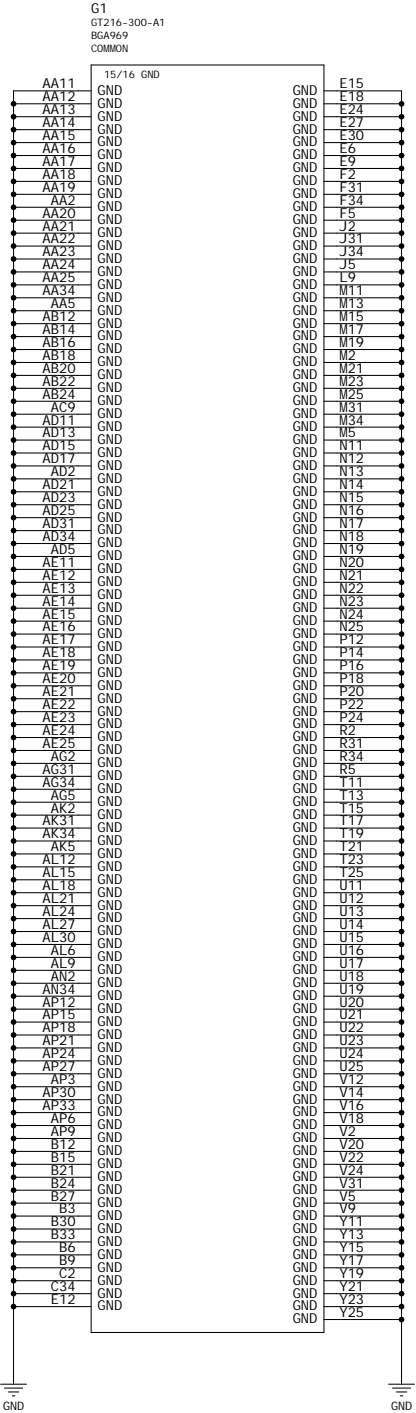
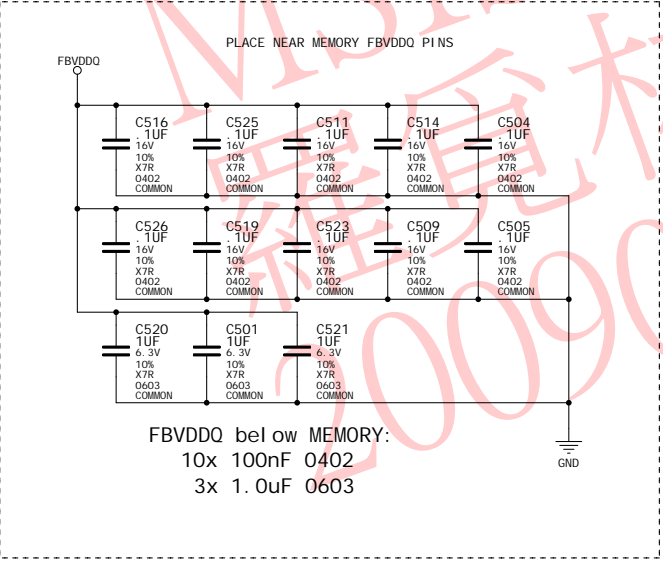
Decoupling for FBC 16..31



Decoupling for FBC 32..47

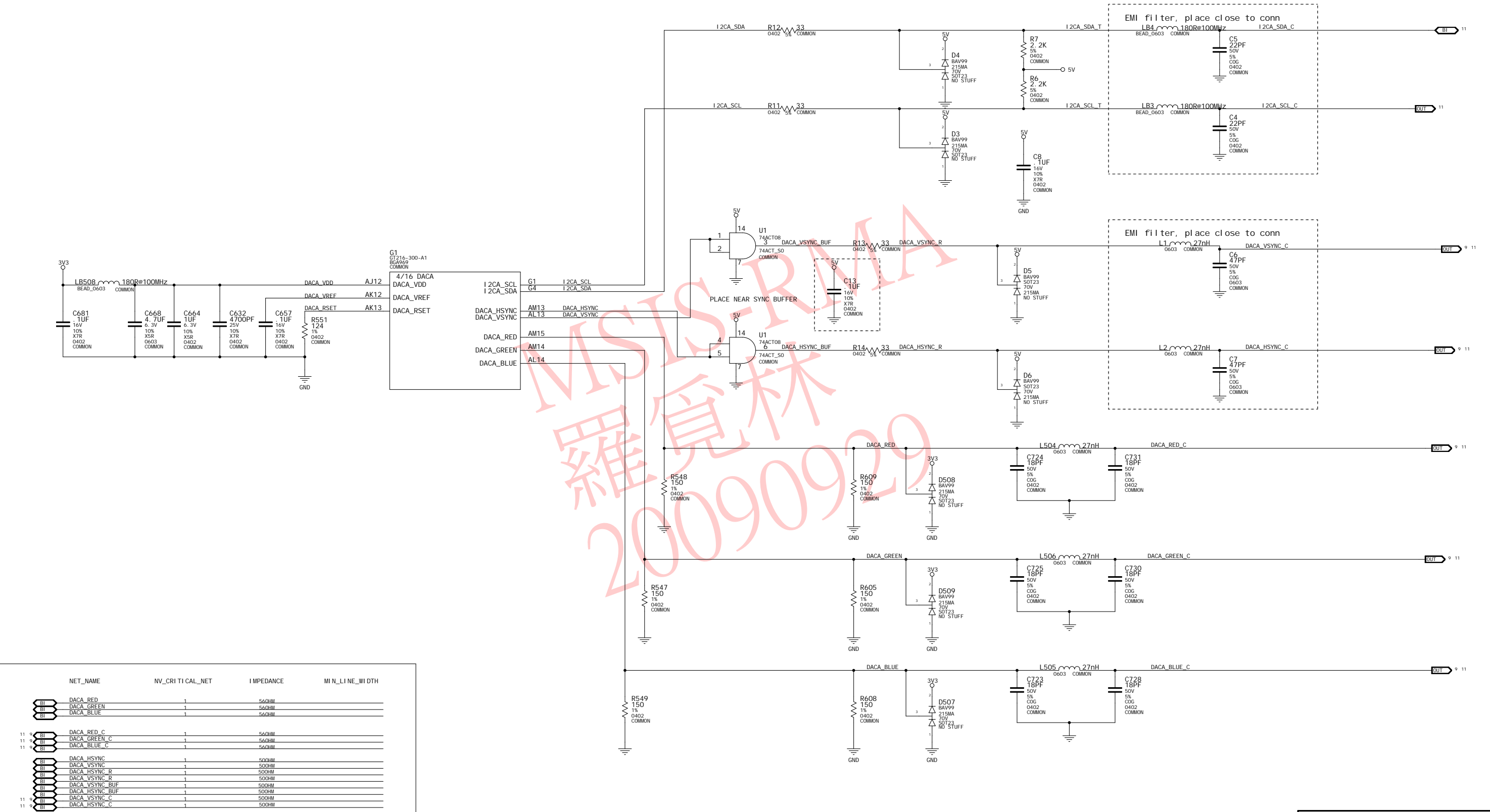


Decoupling for FBC 48..63




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DACA (SOUTH DVI -I)

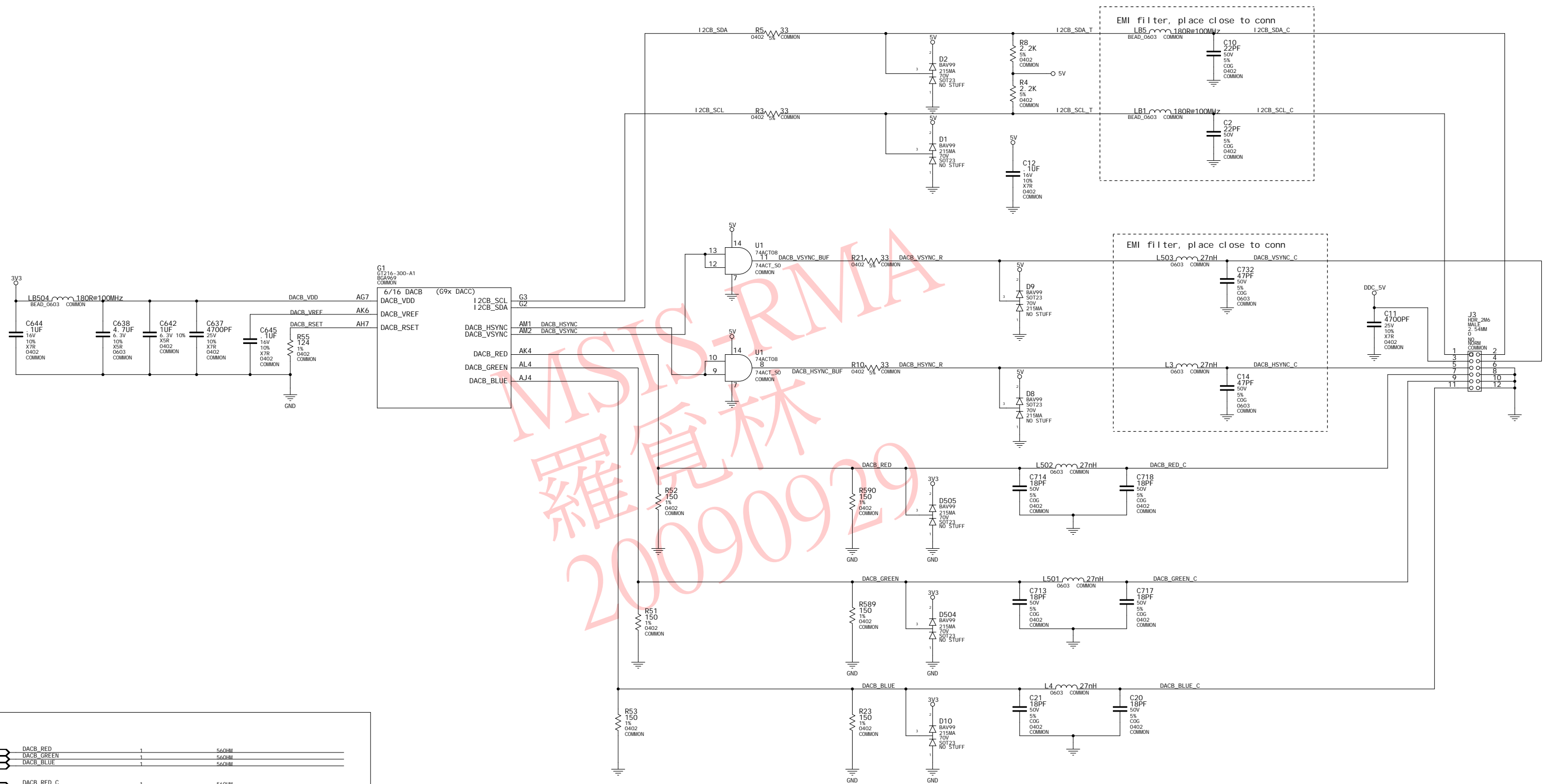


ASSEMBLY	GT216-350 600/1500MHz 1024MB 64Mx16 BGA100 800MHz DDR3 DVI -I /DP/HDMI /VGA
PAGE DETAIL	DACA (SOUTH DVI -I)

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NAME	Garrett Hall	DATE	28-JAN-2009

DACB (cable-up VGA)



[BI]	DACB_RED	1	560HM
[BI]	DACB_GREEN	1	560HM
[BI]	DACB_BLUE	1	560HM
[BI]	DACB_RED_C	1	560HM
[BI]	DACB_GREEN_C	1	560HM
[BI]	DACB_BLUE_C	1	560HM
[BI]	DACB_HSYNC	1	500HM
[BI]	DACB_VSYNC	1	500HM
[BI]	DACB_HSYNC_R	1	500HM
[BI]	DACB_VSYNC_R	1	500HM
[BI]	DACB_HSYNC_BUF	1	500HM
[BI]	DACB_VSYNC_BUF	1	500HM
[BI]	DACB_HSYNC_C	1	500HM
[BI]	DACB_VSYNC_C	1	500HM

ASSEMBLY	GT216-350 600/1500MHz 1024MB 64Mx16 BGA100 800MHz DDR3 DVI -I /DP/HDMI /VGA
PAGE DETAIL	DACB (MID DVI -I)

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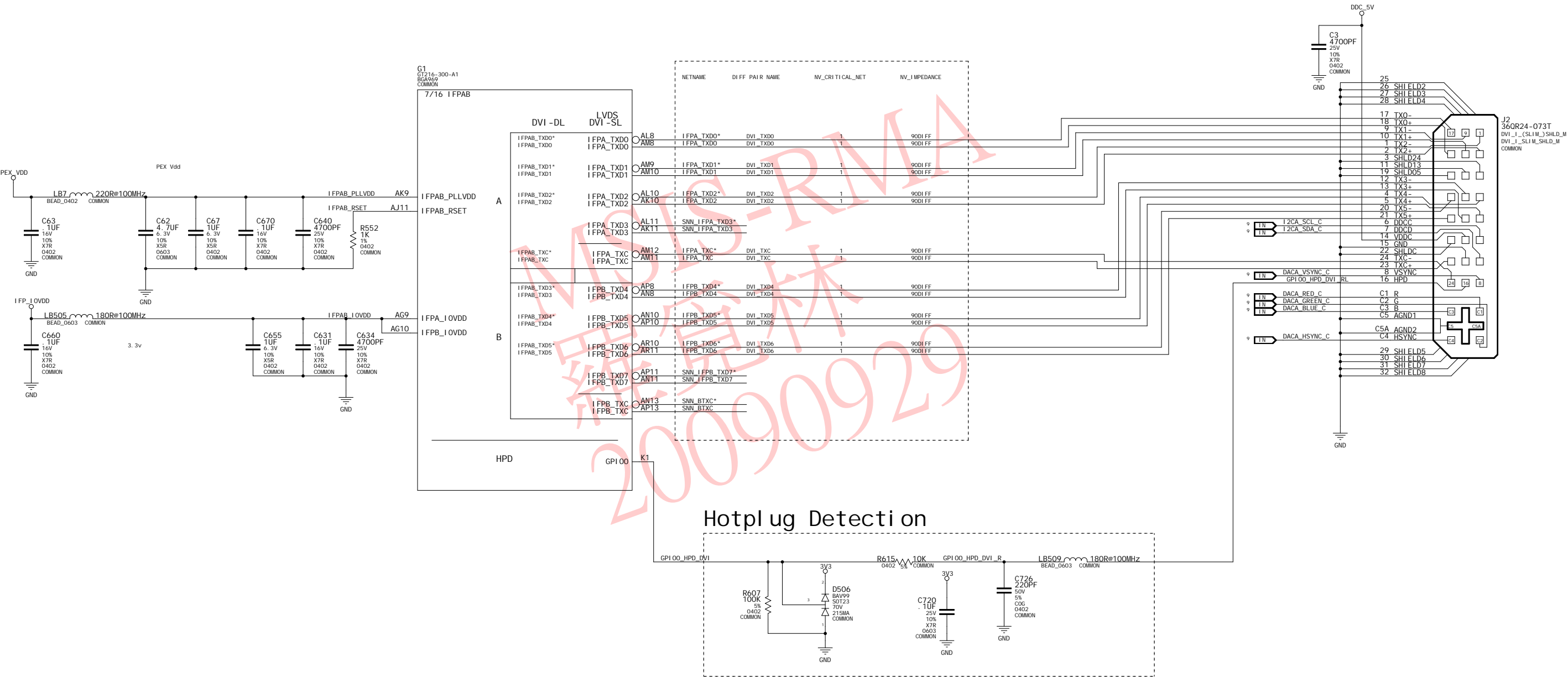
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I FP AB (SOUTH DVI -I)



Hotplug Detecti on

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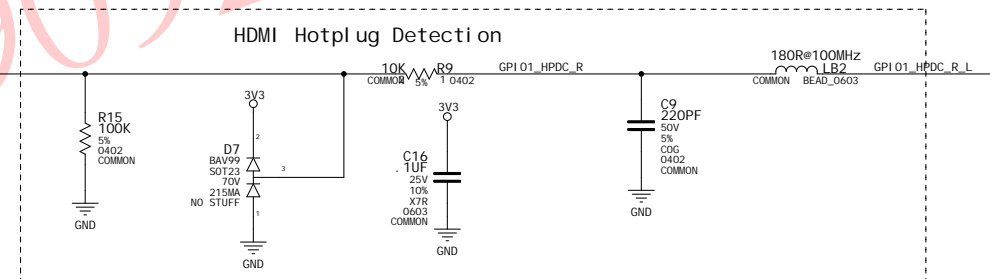
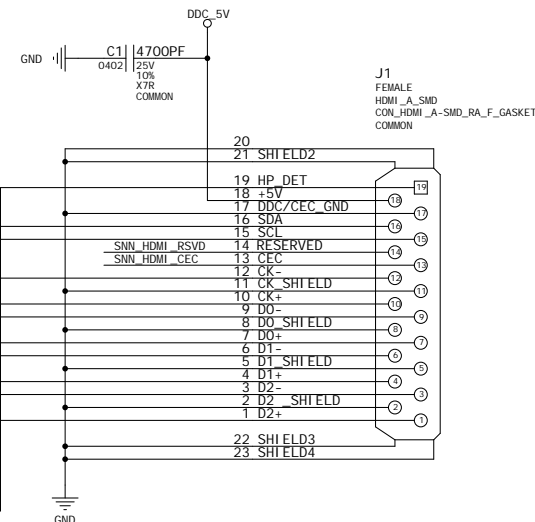
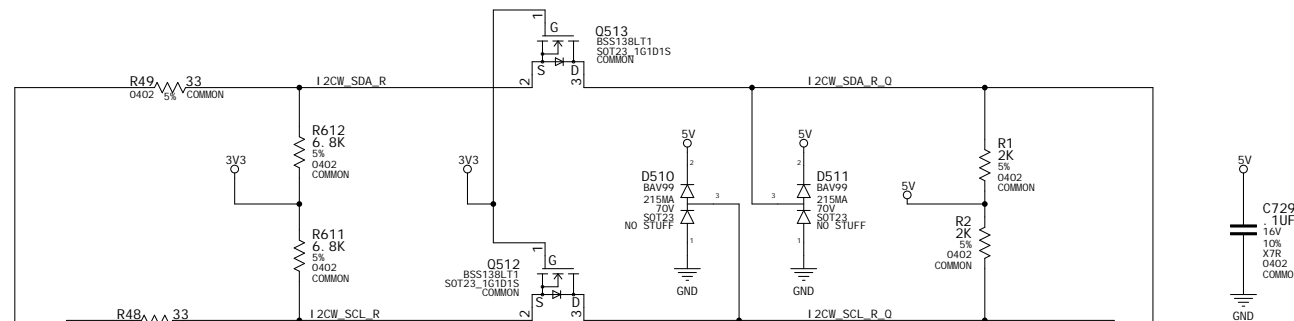
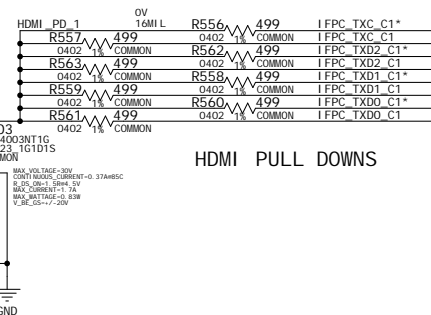
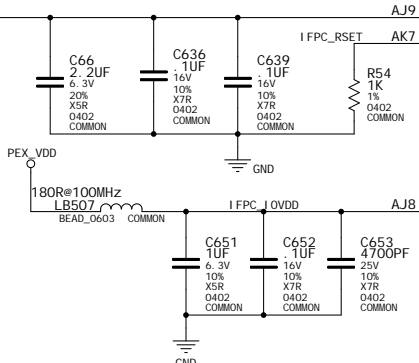
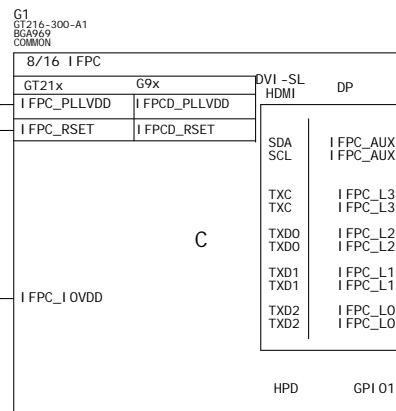
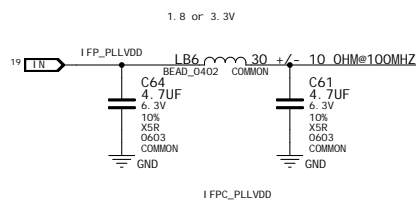
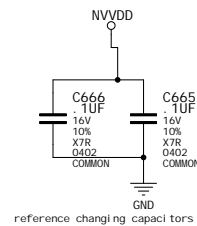
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IFP C (NORTH HDMI)



ASSEMBLY	GT216-350 600/1500MHz 1024MB 64Mx16 BGA100 800MHz DDR3 DVI-I /DP/HDMI /VGA
PAGE DETAIL	1FP C (NORTH mHDMI)

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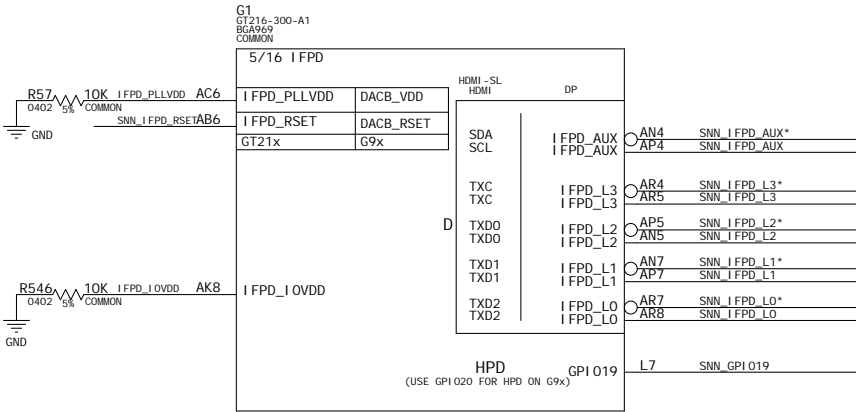
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I F P D (UNUSED)



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NET	PAIR	NV_CRITICAL	IMPEDANCE
I F P E _ A U X _ B Y P	I F P E _ A U X _ B Y P	1	90DI FF
I F P E _ A U X _ B Y P *	I F P E _ A U X _ B Y P	1	90DI FF

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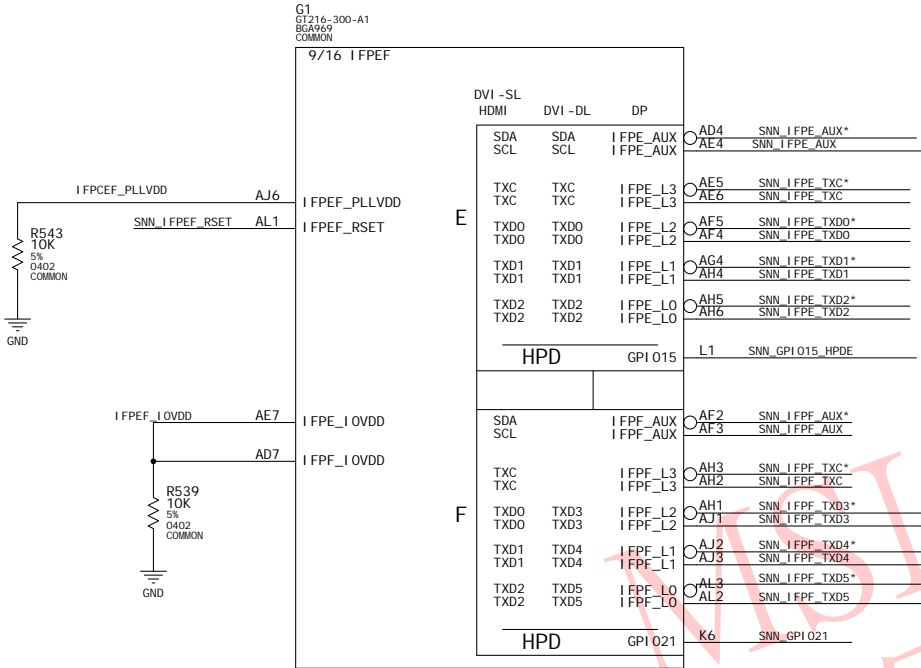
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NAME	Garrett Hall	DATE	28-JAN-2009

I FP EF (unused)



NET	PAI R	NV_CRI TI CAL	I MPEDANCE
I FPEF_TXC*	I FPEF_TXC	1	900I FF
I FPEF_TXC	I FPEF_TXC	1	900I FF
I FPE_TXC*	I FPE_TXC	1	900I FF
I FPE_TXC	I FPE_TXC	1	900I FF
I FPE_TXD0*	I FPE_TXD0	1	900I FF
I FPE_TXD0	I FPE_TXD0	1	900I FF
I FPE_TXD1*	I FPE_TXD1	1	900I FF
I FPE_TXD1	I FPE_TXD1	1	900I FF
I FPE_TXD2*	I FPE_TXD2	1	900I FF
I FPE_TXD2	I FPE_TXD2	1	900I FF
I FPF_TXD3*	I FPF_TXD3	1	900I FF
I FPF_TXD3	I FPF_TXD3	1	900I FF
I FPF_TXD4*	I FPF_TXD4	1	900I FF
I FPF_TXD4	I FPF_TXD4	1	900I FF
I FPF_TXD5*	I FPF_TXD5	1	900I FF
I FPF_TXD5	I FPF_TXD5	1	900I FF
I FPEF_TXD3*	I FPEF_TXD3	1	900I FF
I FPEF_TXD3	I FPEF_TXD3	1	900I FF
I FPEF_TXD4*	I FPEF_TXD4	1	900I FF
I FPEF_TXD4	I FPEF_TXD4	1	900I FF
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I FPEF_TXD1*	I FPEF_TXD1	1	900I FF
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I FPEF_TXD2*	I FPEF_TXD2	1	900I FF
I FPEF_TXD2	I FPEF_TXD2	1	900I FF
I FPE_AUX*	I FPE_AUX	1	900I FF
I FPE_AUX	I FPE_AUX	1	900I FF

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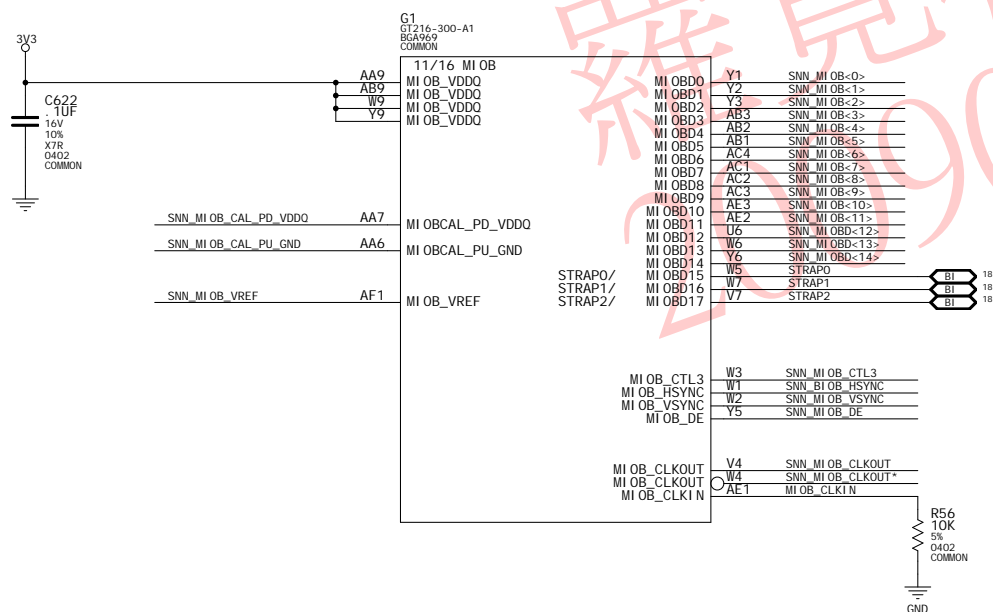
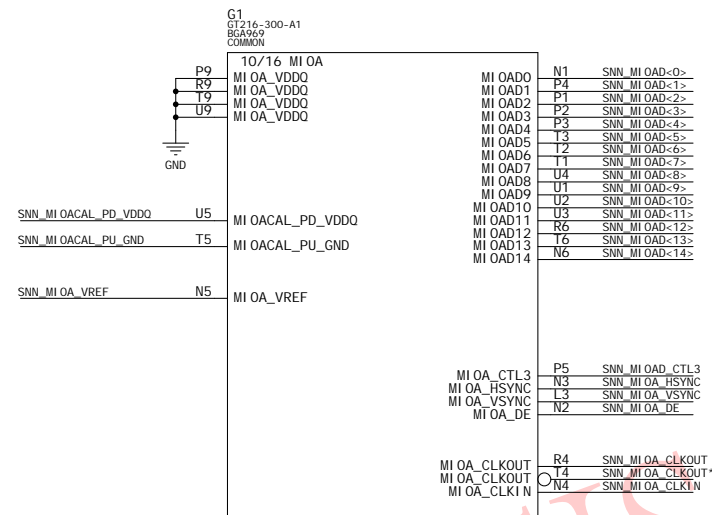
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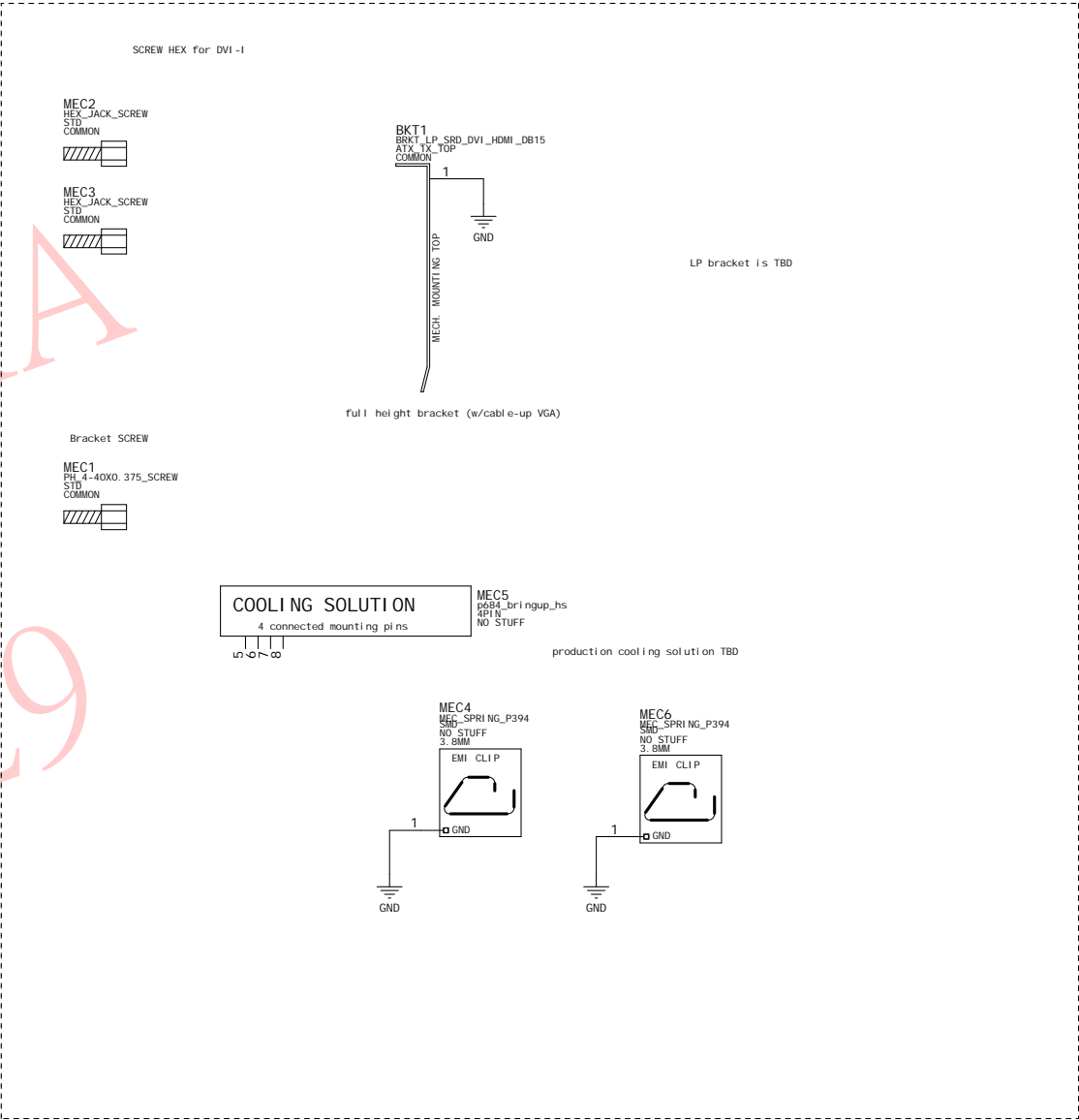
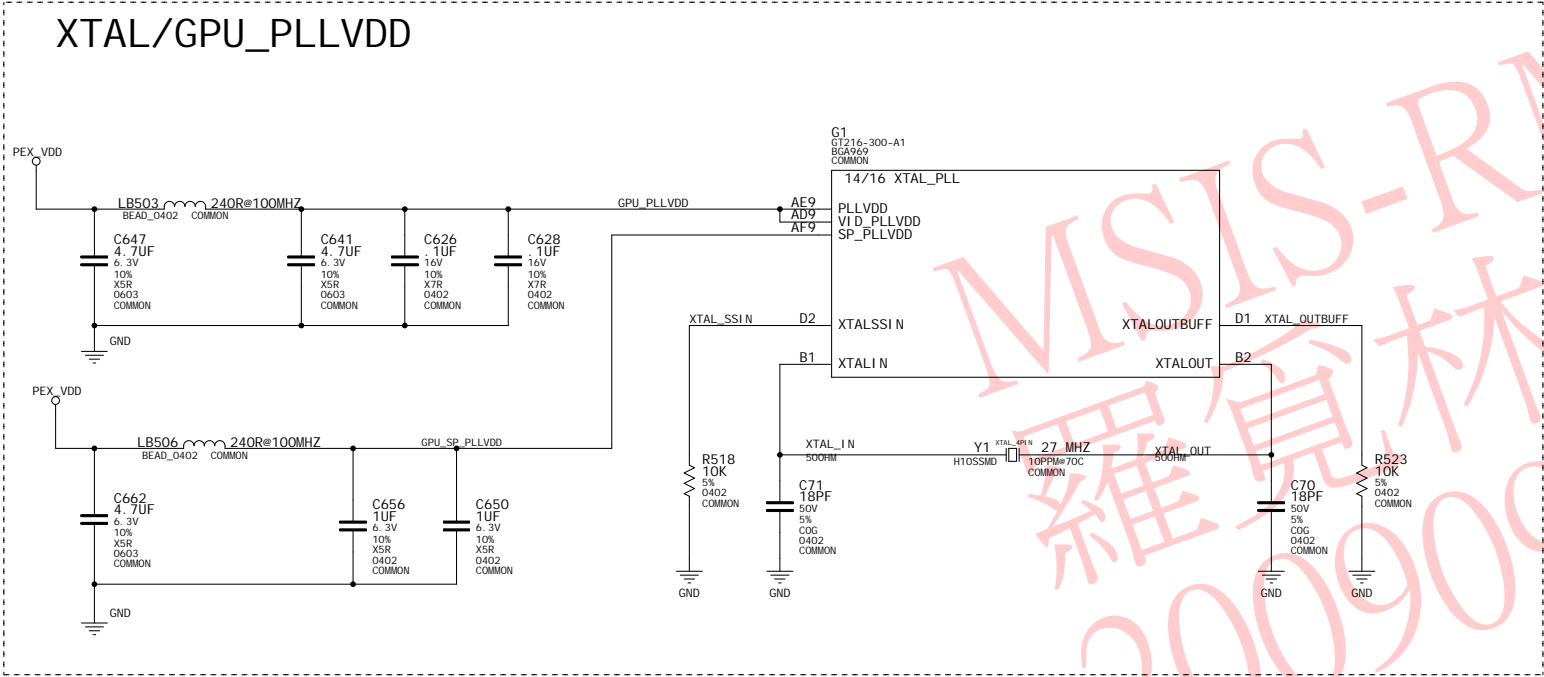
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NAME Garrett Hall DATE 28-JAN-2009

MI OA & MI OB



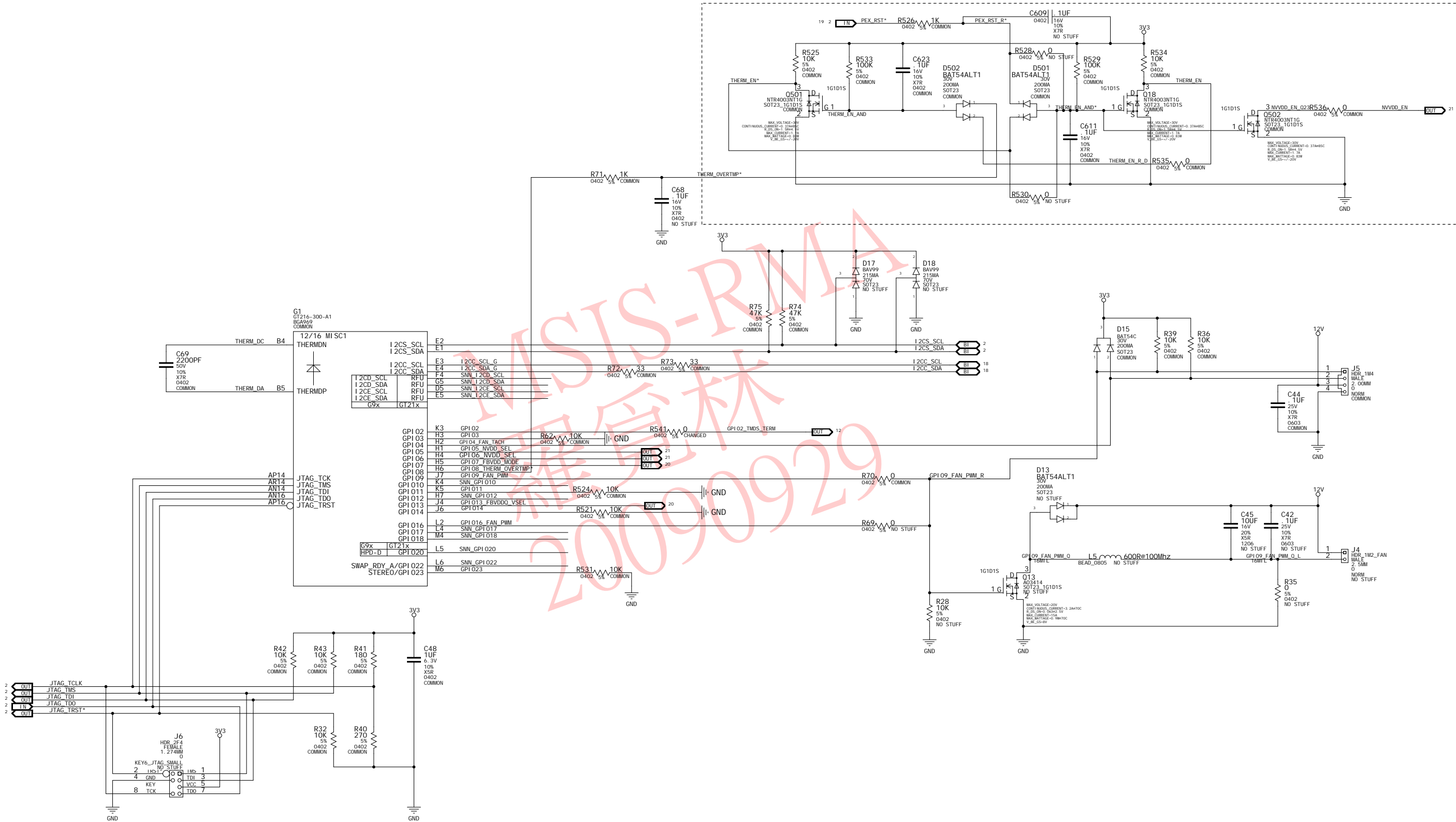
XTAL, MECHANICALS, THERMALS



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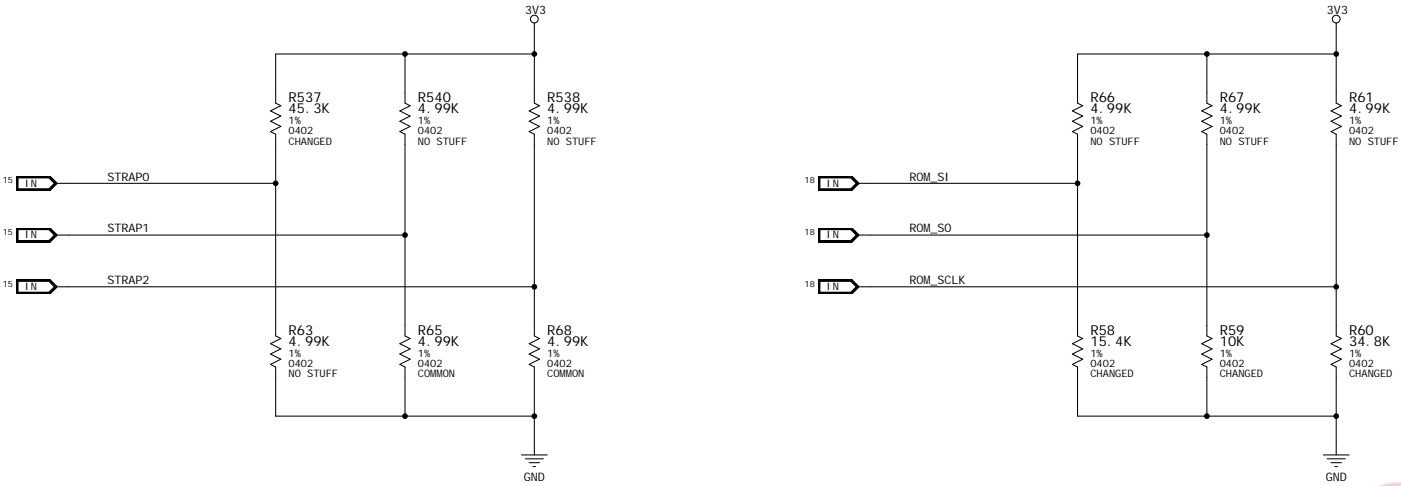
FAN CONTROL, GPIO, JTAG

OVERTEMP LATCH



BIOS ROM, HDCP ROM, STRAPPING OPTIONS

STRAPPING OPTIONS



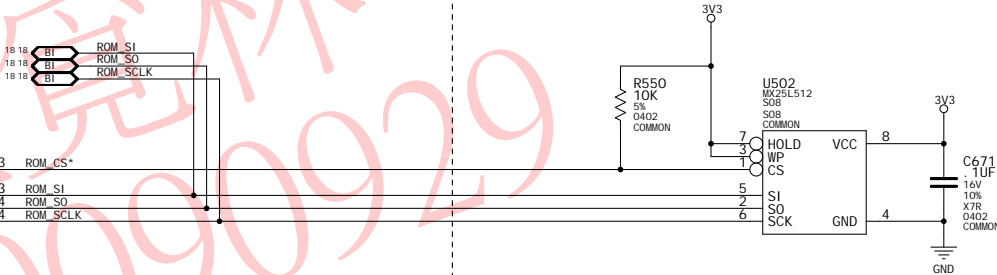
Strap0	USER[3:0]	EDID: 1111	45k pull up	0 5k PD	8 5k PU
Strap1	3G0PADCFG[3:0]	Desktop: 0000	5k pull down	1 10k PD	9 10k PU
Strap2	PCI_DEVICE[3:0]	GT216-350: 0A20	5k pull down	2 15k PD	10 15k PU
				3 20k PD	11 20k PU
				4 25k PD	12 25k PU
				5 30k PD	13 30k PU
				6 35k PD	14 35k PU
				7 45k PD	15 45k PU

ROM_SI	RAMCFG[3:0]	64Mx16 DDR3 Hynix: 0010	15k pull down
		64Mx16 DDR3 Samsung: 0011	20k pull down

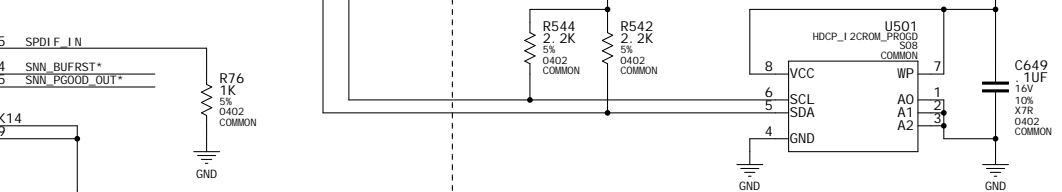
ROM_SO	3: XCLK_417		
	2: FB[0]		
	1: SMBL_ALT_ADDR	0010	10k PD
	0: VGA_DEVICE		

ROM_SCLK	3: PCI_DEV_EXT		35k PD
	2: SUB_VENDOR		
	1: SLOT_CLK_CFG	0110	
	0: PEX_PLL_EN_TERM100		

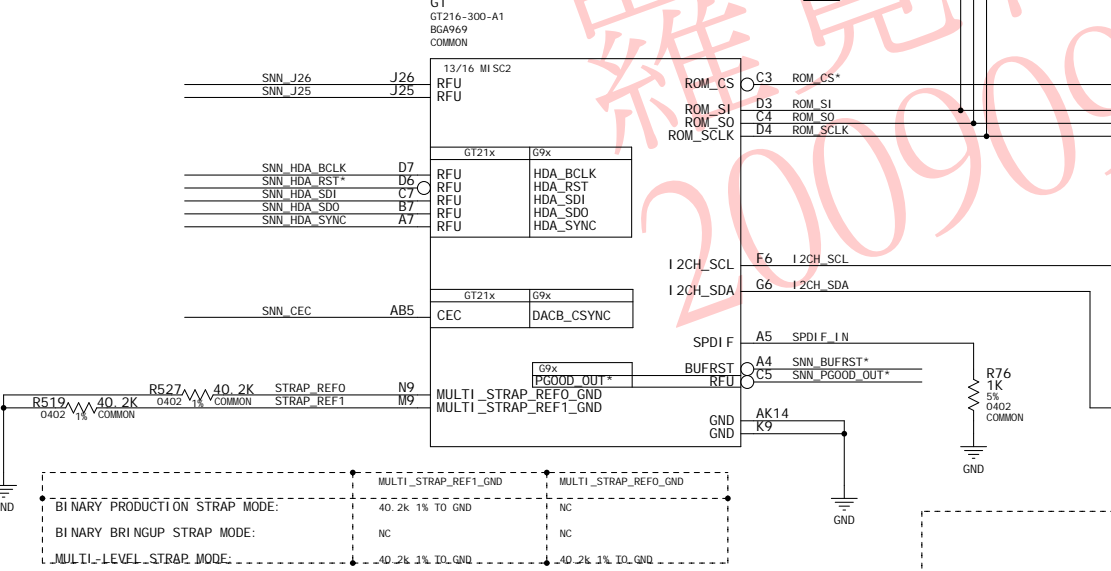
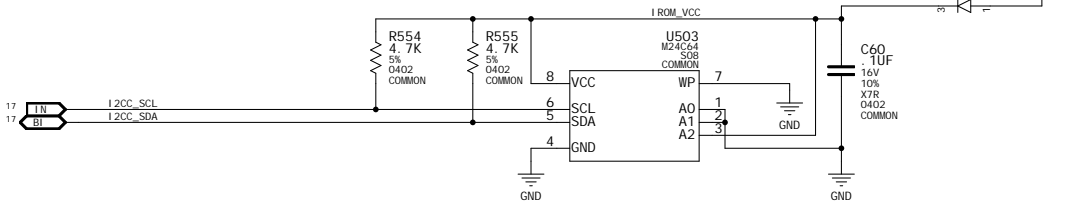
BIOS ROM(serial)



HDCP I2C EEPROM



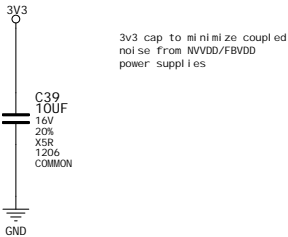
INFOROM



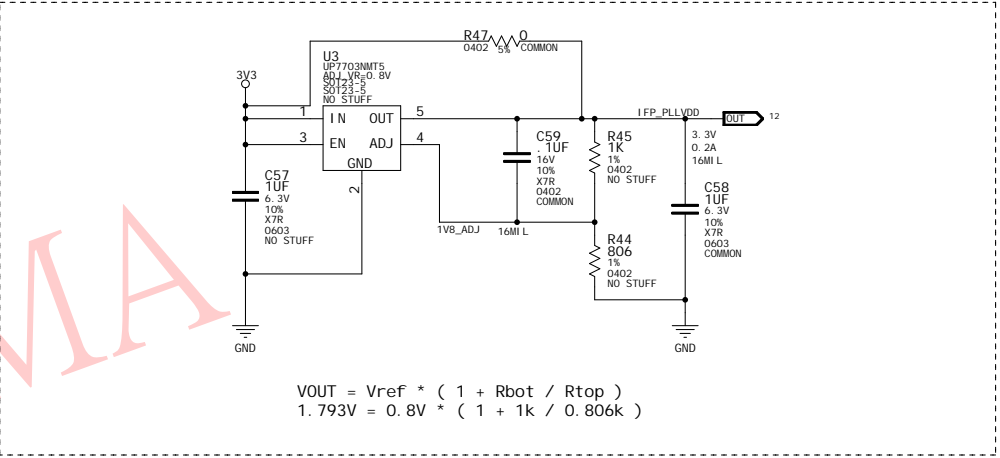
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ID	p684a01	PAGE	18 OF 21
NAME	Garrett Hall	DATE	28-JAN-2009

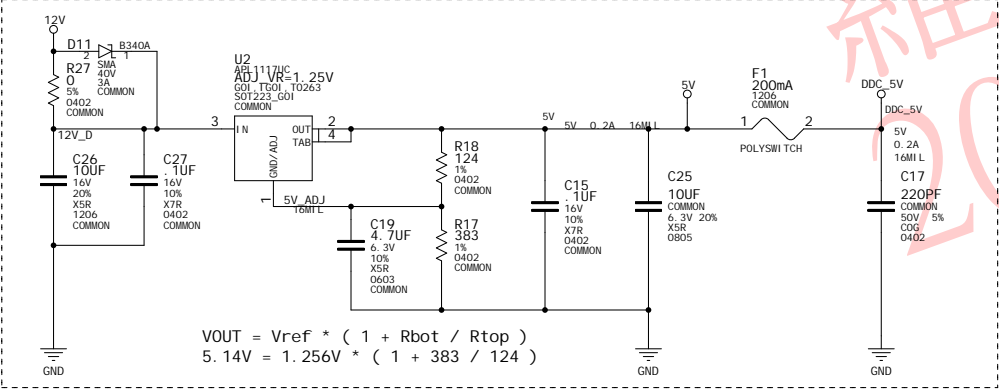
LINEAR POWER SUPPLIES



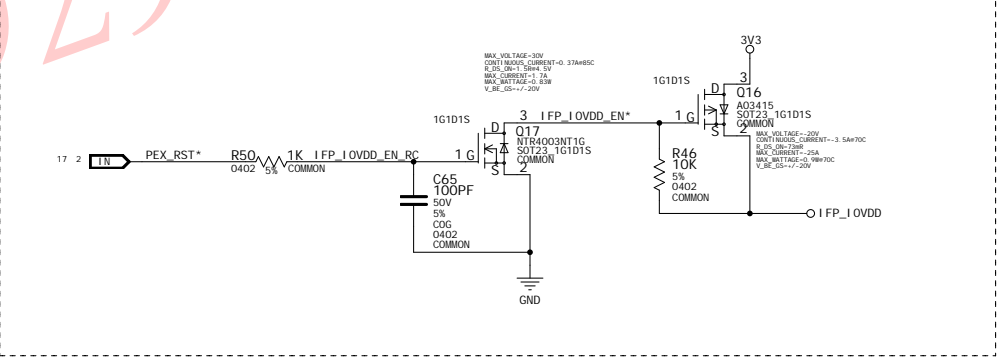
IFP_PLLVDD SUPPLY



5V & DDC_5V REGULATOR

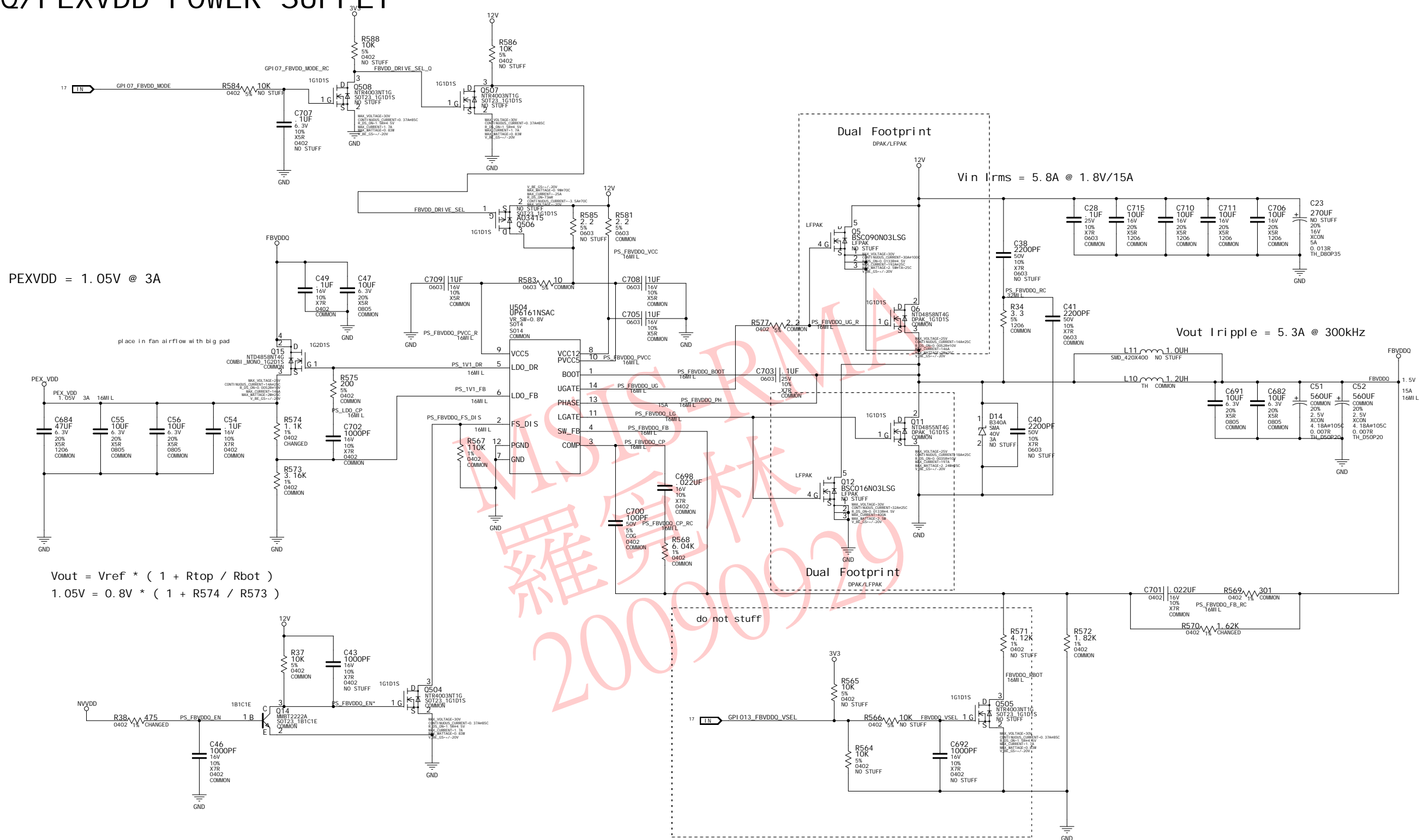


IFP_IOVDD BACKDRIVE PREVENTION



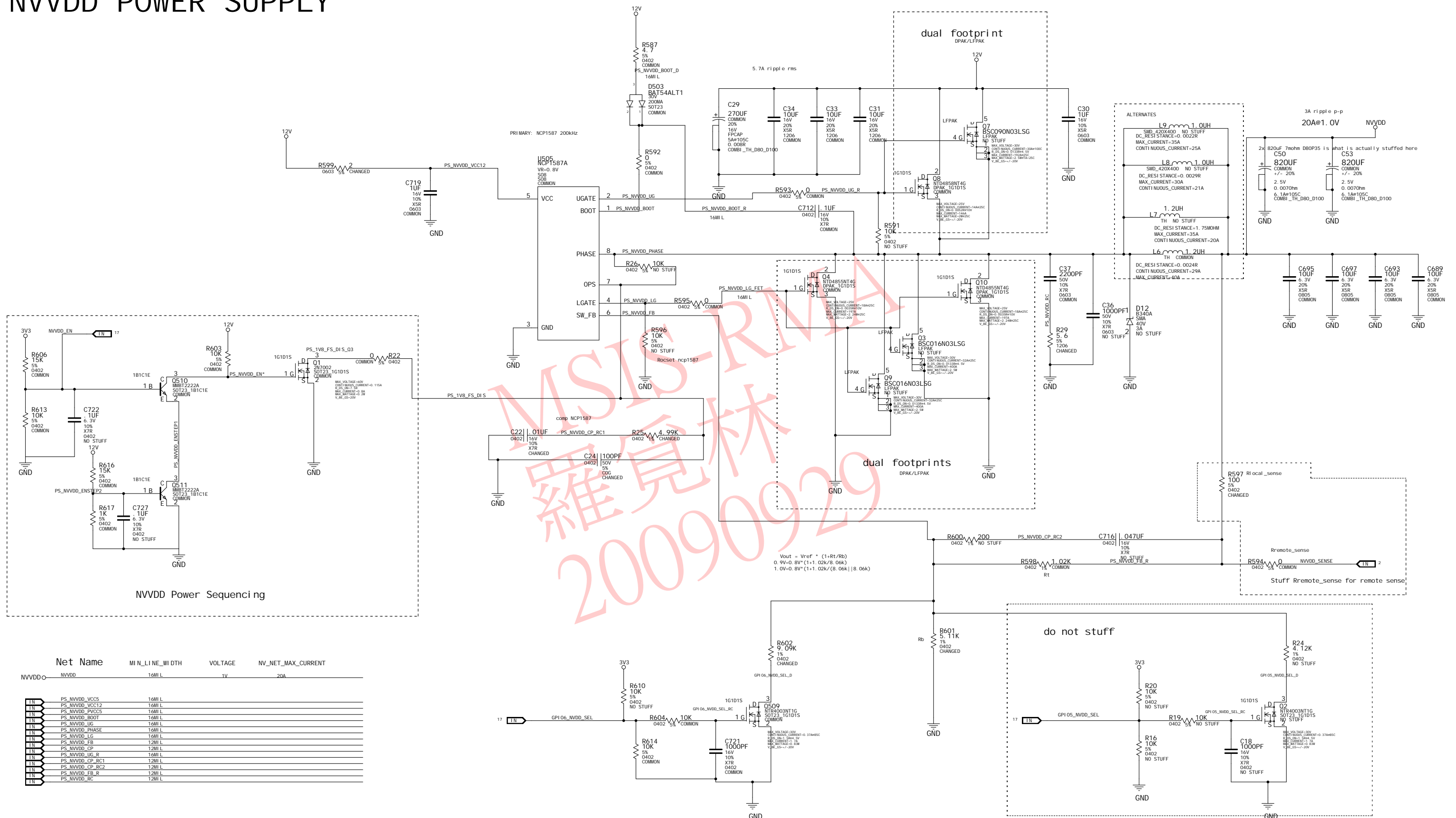
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FBVDDQ/PEXVDD POWER SUPPLY



$$1.50V = 0.8V * (1 + R570 / R572) @ GPI013 = 0 \text{ [DEFAULT]}$$

NVVDD POWER SUPPLY



ASSEMBLY	GT216-350 600/1500MHz 1024MB 64Mx16 BGA100 800MHz DDR3 DVI -I /DP/HDMI /VGA
PAGE DETAIL	NVVD POWER SUPPLY

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