P681-A01 GT215/216 DESKTOP GB1-128 DDR3

PCI-EXPRESSx16 DL-DVI VGA HDMI

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Page 21: NVVDD POWER SUPPLY

Ver. 0A

05/07

Page 01 1.Remove C690,C70 47uF
Page 10 1.Remove J1 D-Sub
Page 11 1.Remove R16,Q2
Page 12 1.Remove R1,Q1
Page 16 1.Change Crystal Footprint to 2-PIN SMD
2.Remove C71 47uF

05/08

Page 17 1.Remove Thermal Sensor Circuit
Page 18 1.Remove U2,C54,R31,R30,D16 INFOROM circuit
Page 19 1.Remove 3V3 to 1.8V circuit
2.Change 5V REGULATOR Circuit
Page 20 1.Change L8 Footprint to 1.6uH
2.Change Footprint to multi cap for EL 1500uF
Page 21 1.Change NVVDD to UP6161
2.Change L12 footprint to 1.2uH

05/10

Page 05 1. Remove Decoupling for EMI cap
Page 20 1. C84 change Footprint to multi cap

05/11

Page 21 1.Add C39 270uF
2.Add R922,R924 for APW7068 OCSET
Page 16 1.Add XTALIN R566 Riisister
Add XTALOUT R573 Riisister
Page 02 1.Change C51 to 0805 1UF and ADD C54 0805 1UF
Page 03 1.C642,C666,C633 change to .01UF
Page 05 1.Remove C516,C525,C549,C556,C541,C512
Remove C513,C546,C540,C528,C547,C507
Remove C544,C545,C520,C523,C532,C508
Remove C535,C526,C543,C553,C537,C88
Page 08 1.Remove C566,C567,C576,C578,C82,C564
Remove C619,C592,C586,C585,C622,C574
Remove C705,C706,C680,C729,C691,C683
Remove C742,C738,C731,C725,C743,C728
Page 20 1.Remove C86,C562,C563,C87

05/12

Page 17 1.Remove 4-PIN FAN Circuit
Page 12 1.Change Q509 to Q513,Q514 SOT23 footprint
Page 16 1.Change FAN Screw hole
Page 20 1.Add C102 820uF

05/14

Page 21 1.Remove D94 scottky diode

05/19

Page 11 1.Add EMI bridge
Page 12 2.Add EMI bridge

05/21

Page 03 1.Add RP24 termination risister
Page 06 2.Add RP23 termination risister

05/26

SWAP CMD
Page 03/06 RP5.1，RP5.2 FBC_CMD10，RP5.3，RP5.4 FBC_CMD22
RP4.1，RP4.2 FBC_CMD18，RP4.3，RP4.4 FBC_CMD7
RP24.1, RP24.2 FBA_CMD30, RP24.3, RP24.4 FBA_CMD7
RP20.1, RP20.2 FBA_CMD14, RP20.3, RP20.4 FBA_CMD18
RP14.1, RP14.2 FBA_CMD1, RP14.3, RP14.4 FBA_CMD20
RP12.3, RP12.4 FBA_CMD29

05/27

Page 05 1. Add Decoupling for EMI cap C80,C524,C517,C102

Ver. 10

07/31

Page 02 1.Remove JTAG Circuit
Page 09 1.Remove EMI filter,protection diode,C780,C775,C779
Page 10 1.Remove EMI filter,protection diode,C771,C772,C773
Page 12 1.IFP_PLLVDD change netname to 3V3
Page 15 1.Remove R545,C664,R554 of MIOA
Page 17 1.Remove JTAG Circuit
2.Remove FAN PWM Circuit
Page 18 1.Remove HDCP EEROM
Page 19 1.Remove U4 UP7703 Circuit
2.Change 5V Circuit SOT223-->SOT252
Page 20 1.Remove C86,C105,C90
2.Add R917 LMOS Gate risister
3.Add L10
4.Add L9,LB23,LB24
5.Add EL 680UF FootPrint
Page 21 1.Add L13
2.Remove APW7068 OCSET
3.Add GPIO 5,6 Circuit
4.Remove C927,C931

08/04

Page 21 1.Remove C933,C30,C31,C38
2.Change C39 FootPrint for 470uF
3.NVVDD Power Sequencing and PWM power change to 12V from 12V_F

Page 20 1.Add C86,C87,R26
2.Remove C557
3.Power Sequencing and PWM power change to 12V from 12V_F

V241 Ver. 0A (base V804 1.0 GPU I/O SKU+V190 Power)

P4, change DDR3 64Mx8 8EA for FB A
M10~M17
P7, change DDR3 64Mx8 8EA for FB C
M30~M37

P20, change use V190 FBVDDQ/PEX VDD power solution
UP6103, UP7706

P21, change use V190 NVVDD power solution
UP6103

sku	VARIANT	NVPN	ASSEMBLY
B	BASE	600-10681-base-100	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	SKU0001	600-10681-0001-100	GT216-300 600/1500MHz 1024MB 64Mx16 BGA100 800MHz DDR3 DVI-I/VGA/HDMI
2	SKU0002	600-10681-0002-100.	GT216-300 600/1500MHz 1024MB 64Mx16 BGA100 1000MHz DDR3 DVI-I/VGA/HDMI
3	SKU0011	600-10681-0011-100	GT215-300 600/1500MHz 1024MB 64Mx16 BGA100 900MHz DDR3 DVI-I/VGA/HDMI
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PAGE DETAIL	P681-A01 OVERVIEW

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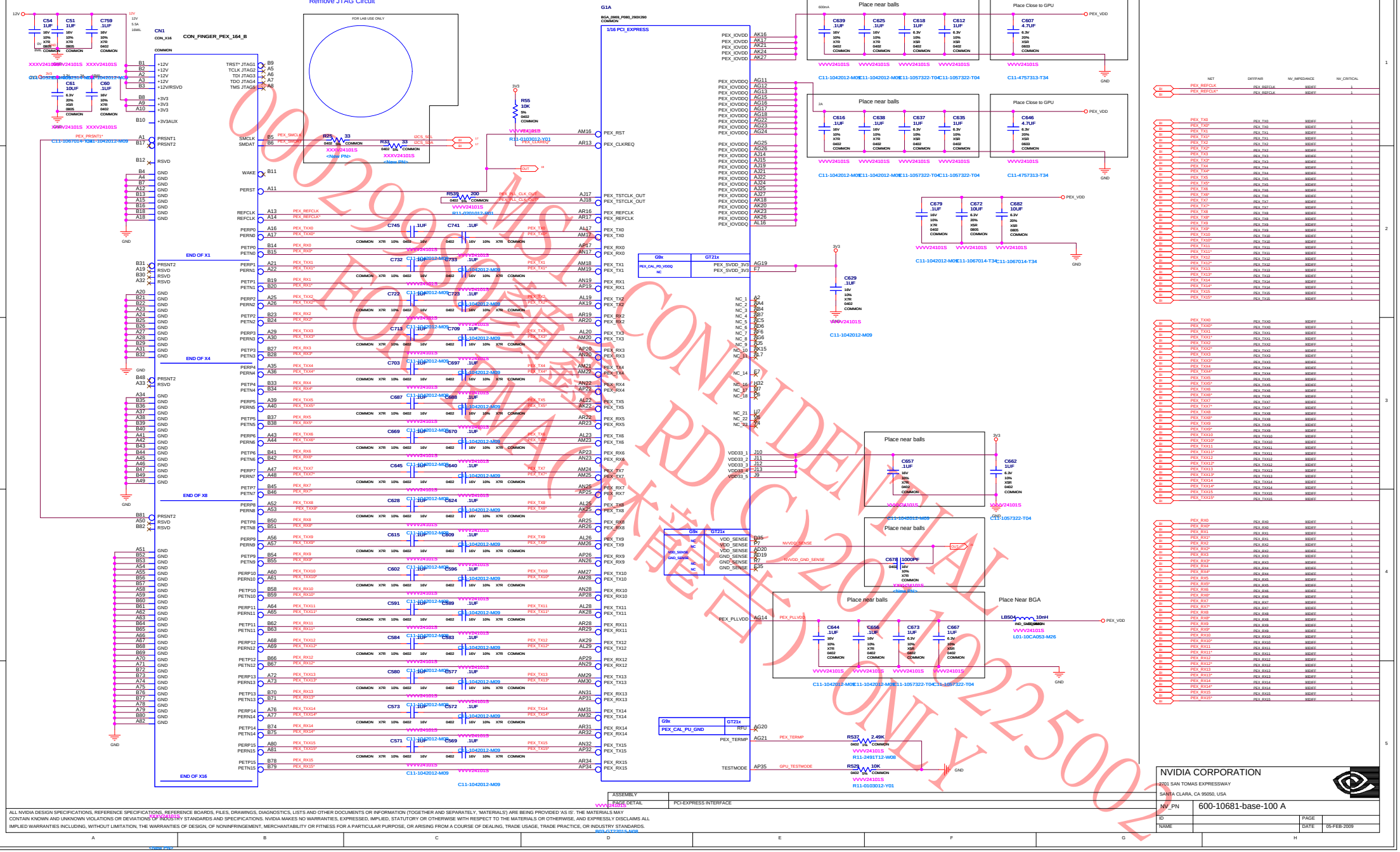
PCI-EXPRESS INTERFACE



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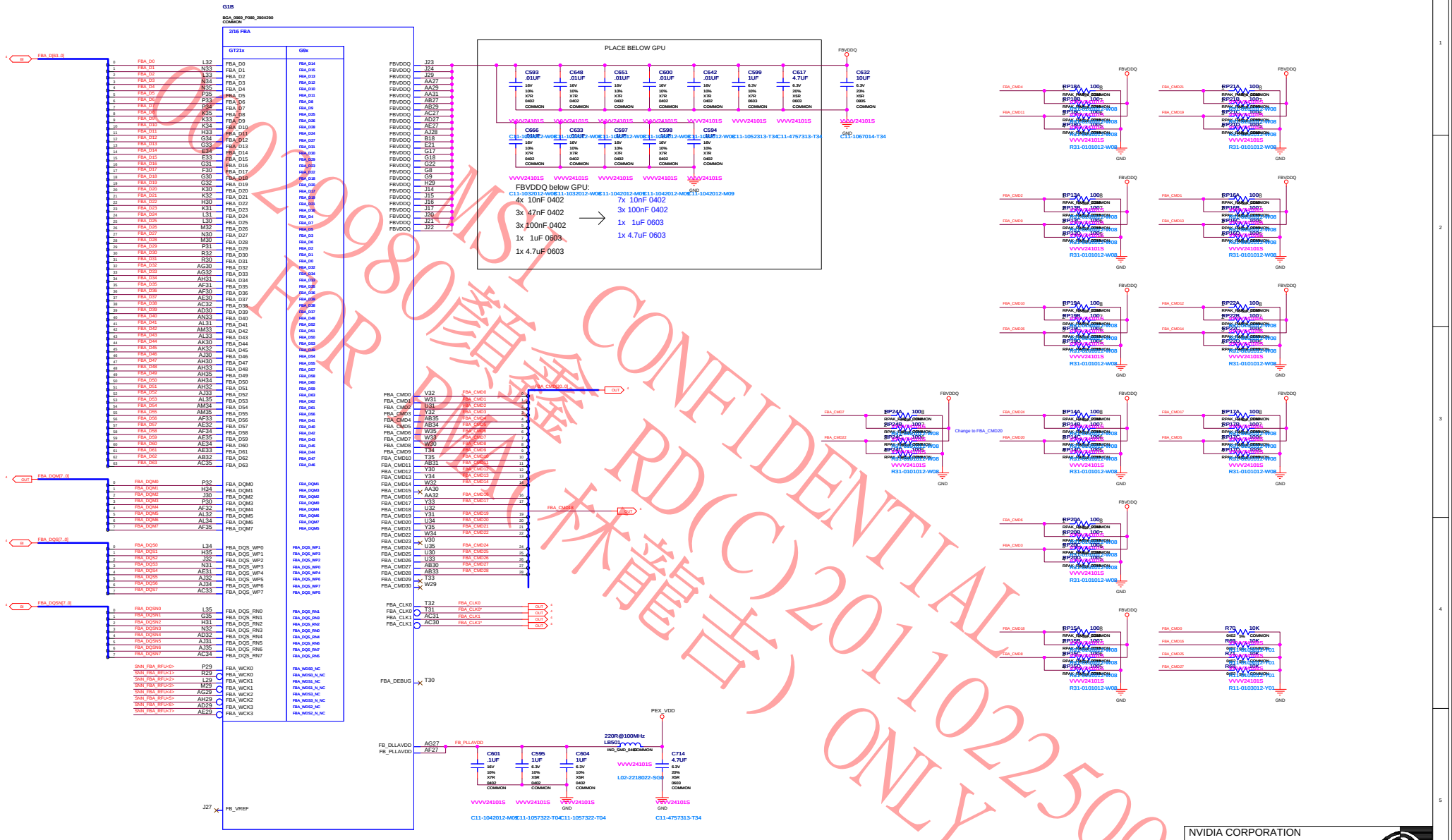
PARTITION A FRAME BUFFER INTERFACE



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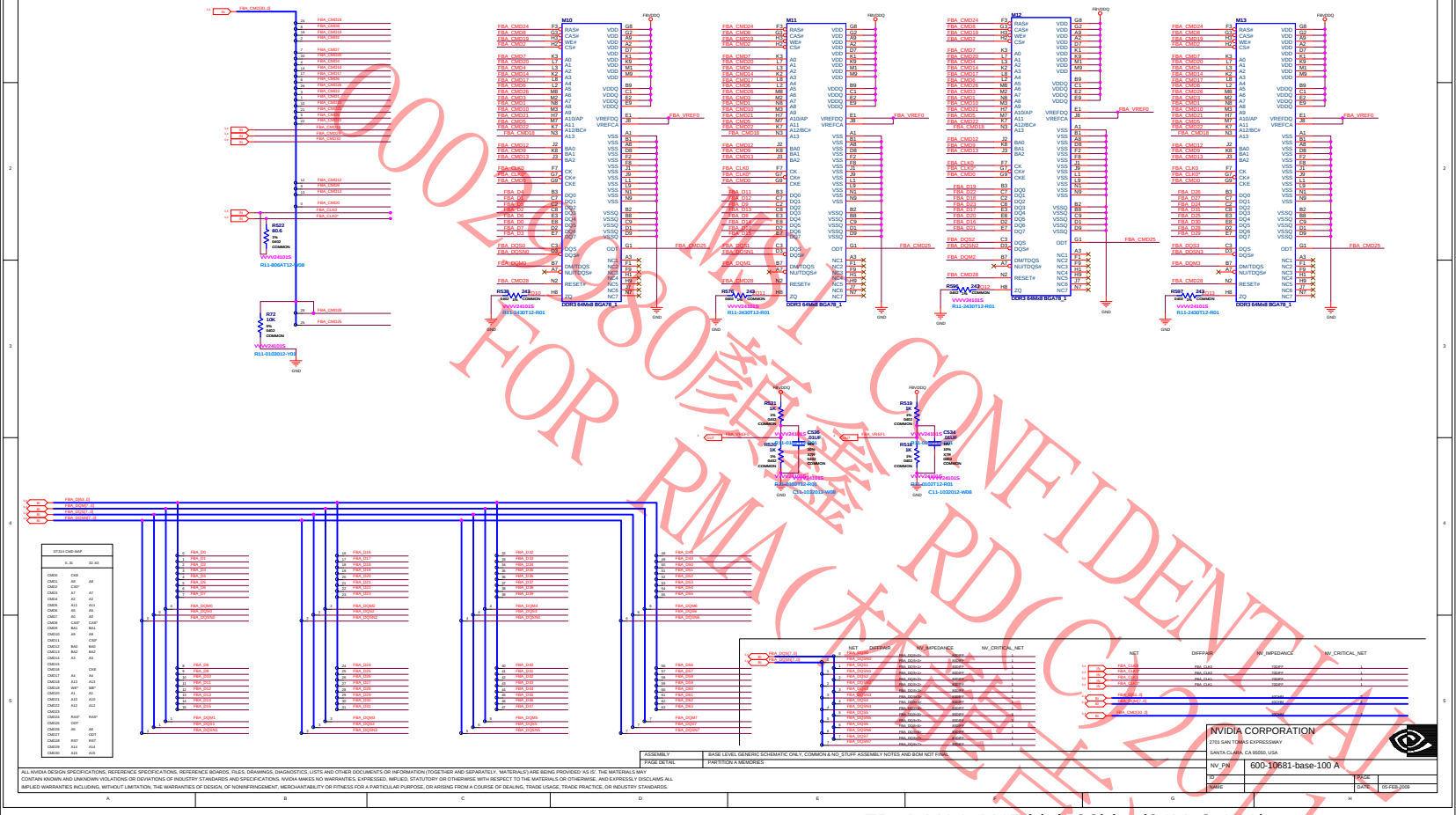
PARTITION A MOMERIES

FB_A M10~M13 low 32bits (64Mx8 4EA)



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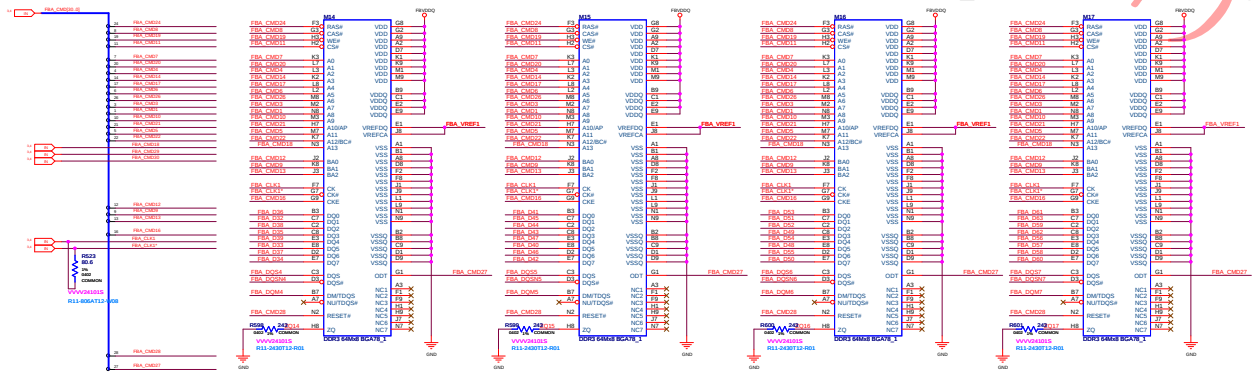

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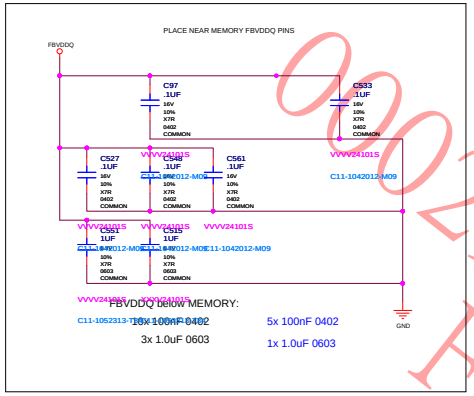
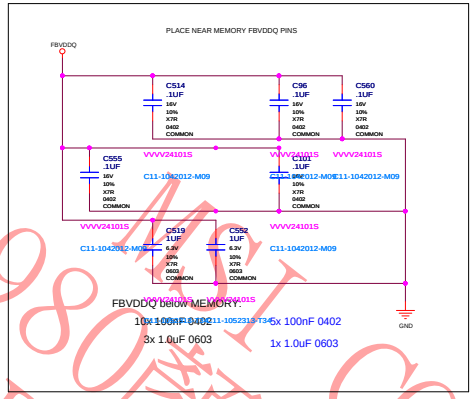
FBA DECOUPLING CAPS & NVVDD DECOUPLING CAPS

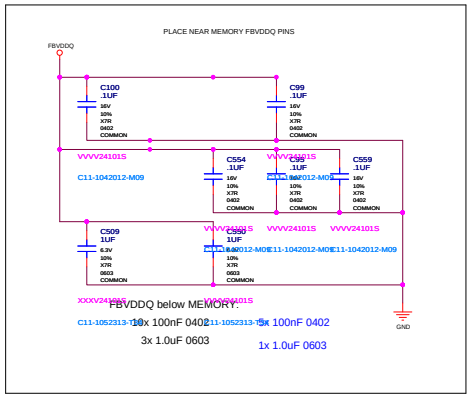
Decoupling for FBA 0..15



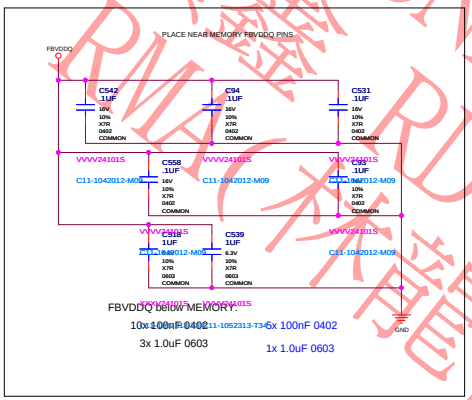
Decoupling for FBA 16..31

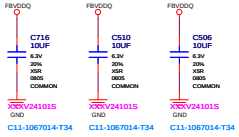


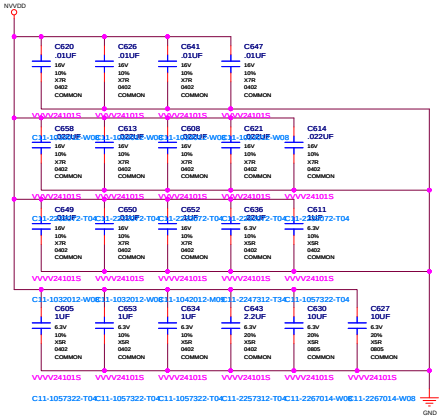
Decoupling for FBA 32..47



Decoupling for FBA 48..63



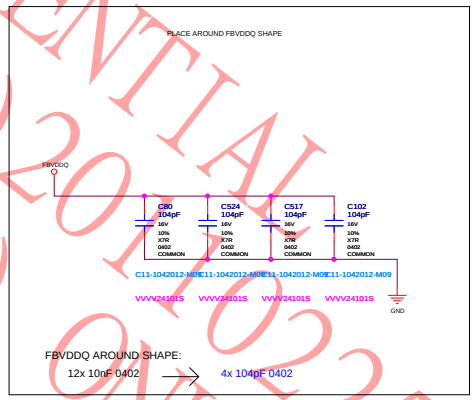


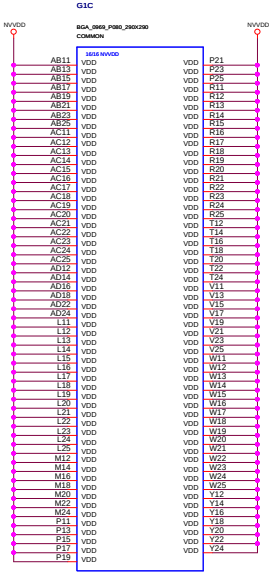


NVVDD under GPU:

4x 0.01uF 0402 X7R	6x 0.01uF 0402 X7R
5x 0.022uF 0402 X7R	
2x 0.047uF 0402 X7R	0x 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	

Decoupling for EMI





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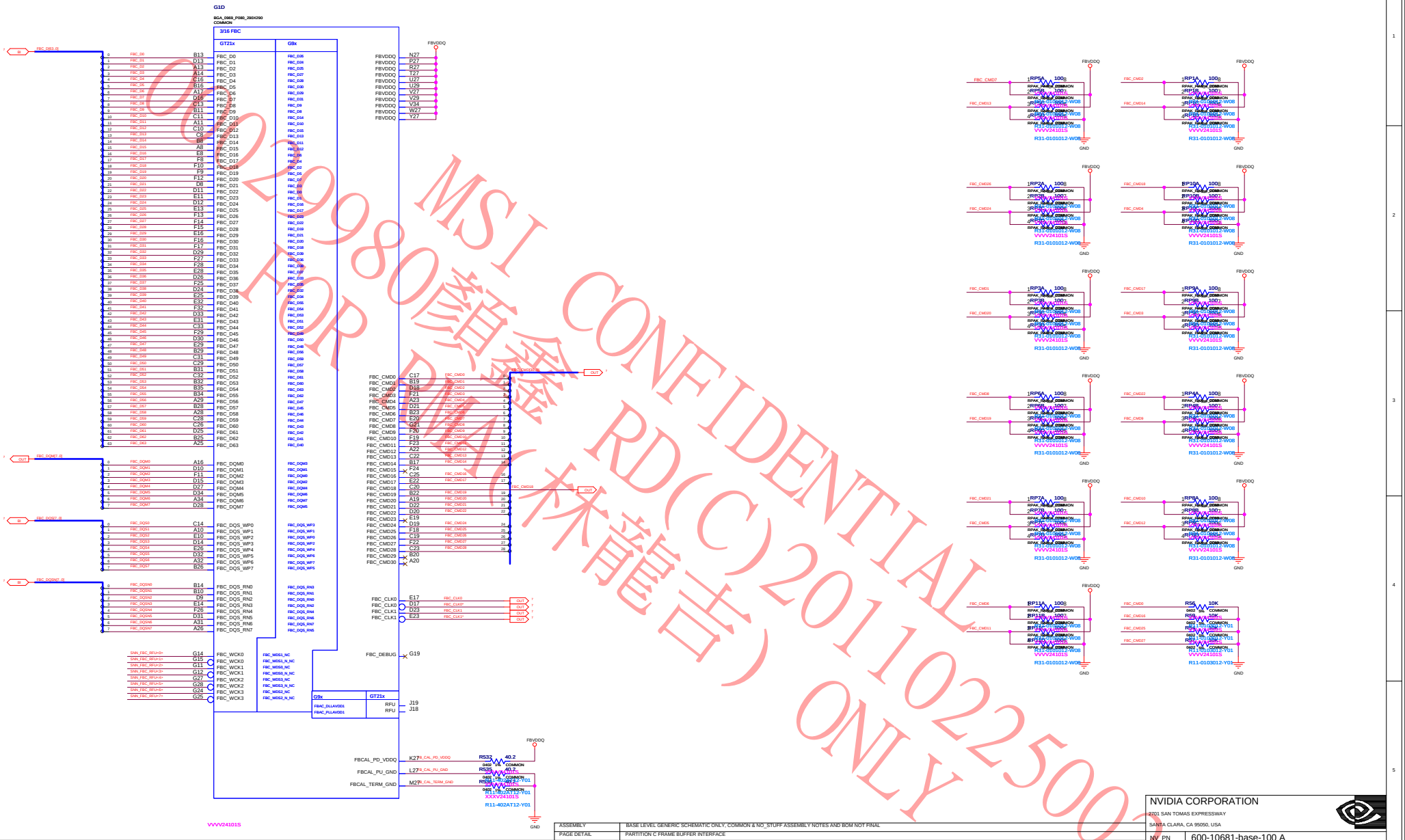
PARTITION C FRAME BUFFER INTERFACE



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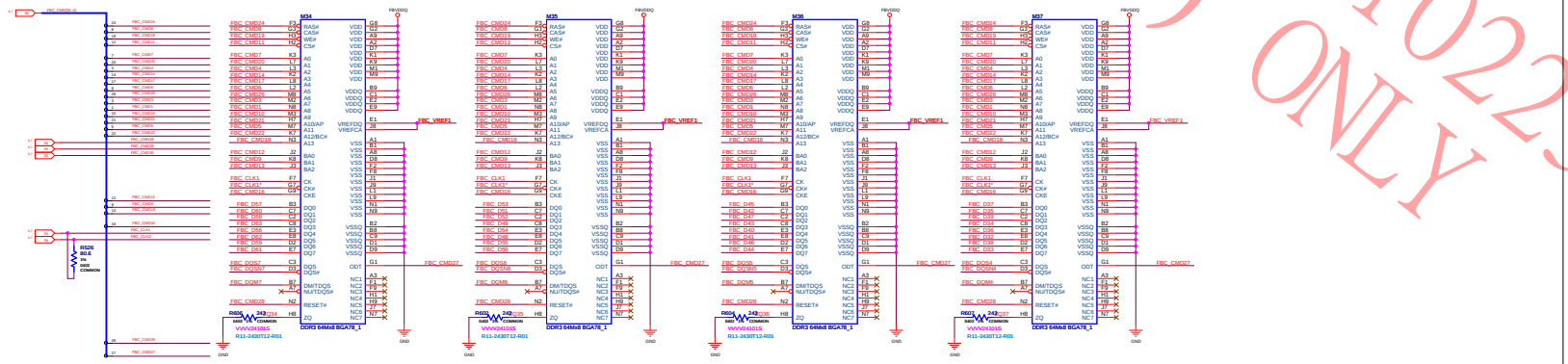
PARTITION C MOMERIES

FB_C M30~M33 low 32bits (64Mx8 4EA)

FB_C M34~M37 high 32bits (64Mx8 4EA)



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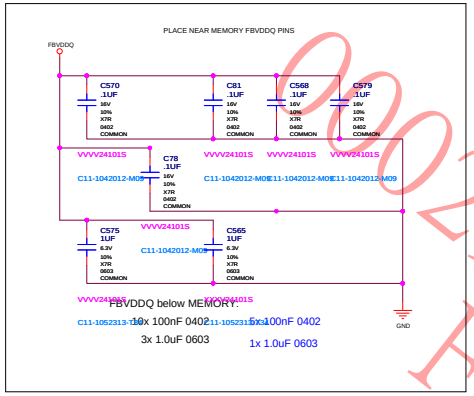
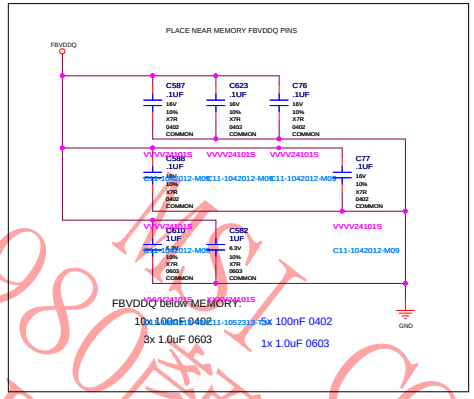
FBC DECOUPLING CAPS & NVVDD DECOUPLING CAPS

Decoupling for FBC 0..15



Decoupling for FBC 16..31



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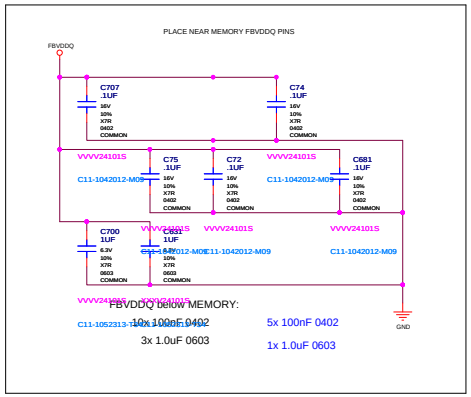
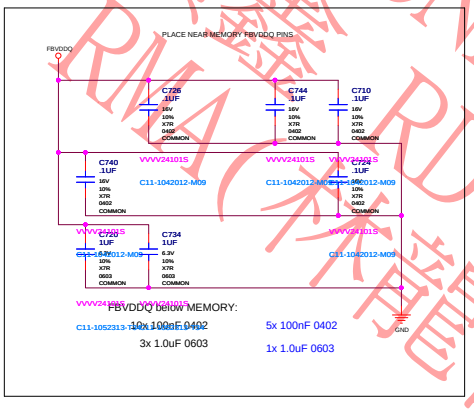
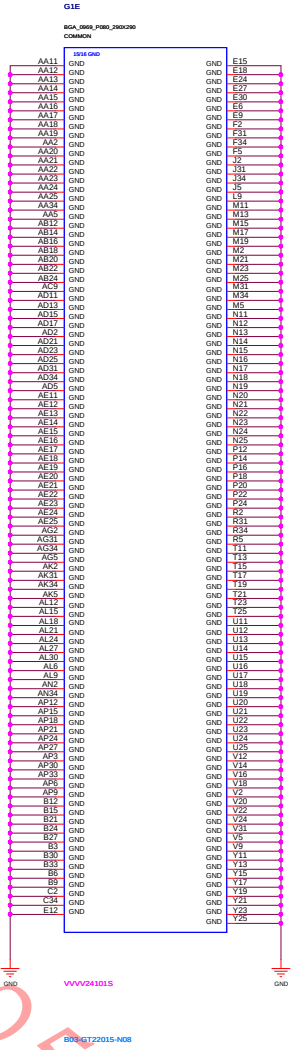


Decoupling for FBC 48..63





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PAGE DETAIL	FBC DECOUPLING CAPS

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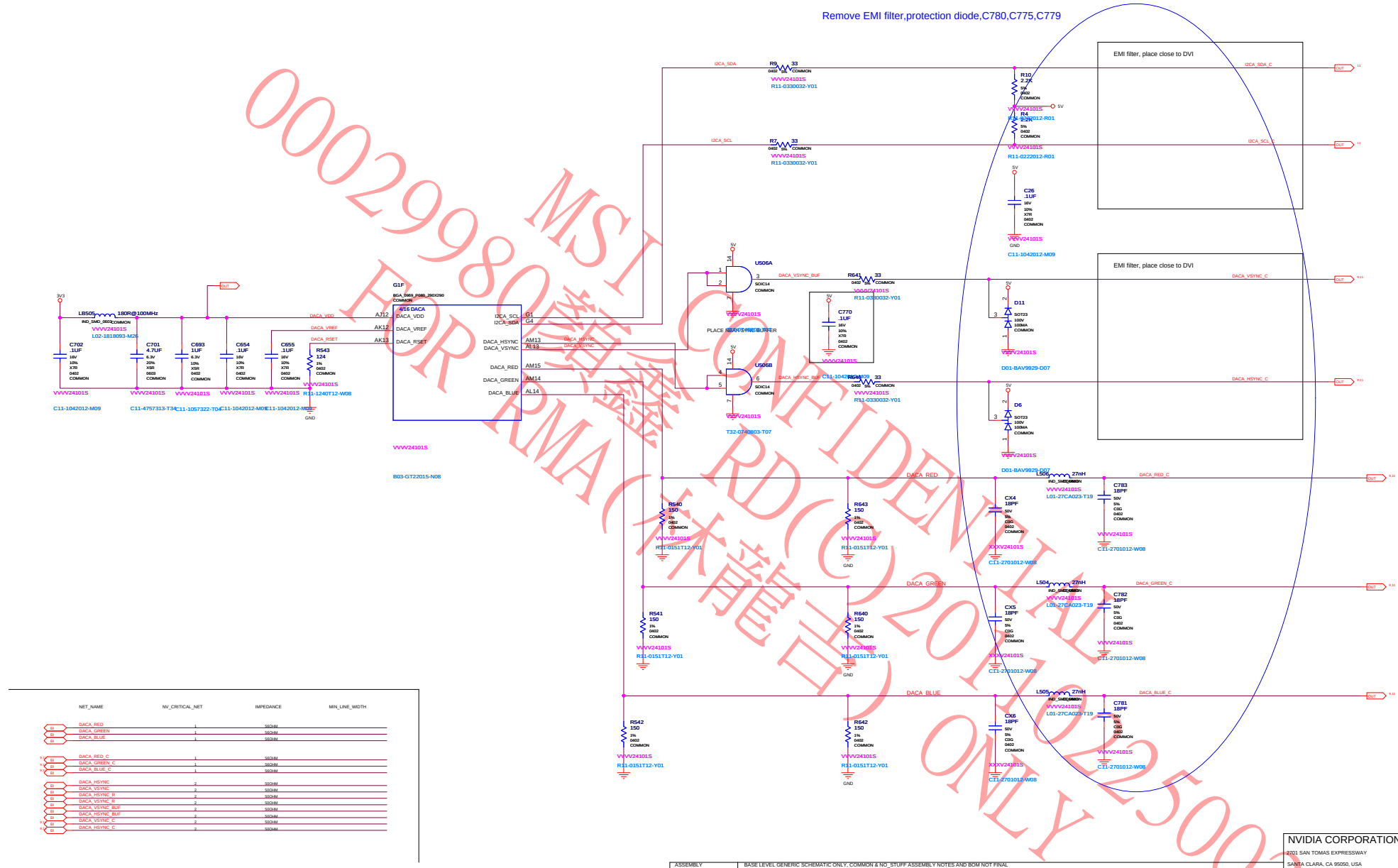
DACA (SOUTH DVI-I)



NET_NAME	NV_CRITICAL_NET	IMPEDANCE	MIN_LINE_WIDTH
DACA_RED	1	50OHM	
DACA_GREEN	1	50OHM	
DACA_BLUE	1	50OHM	
DACA_RED_C	1	50OHM	
DACA_GREEN_C	1	50OHM	
DACA_BLUE_C	1	50OHM	
DACA_HSYNC	2	50OHM	
DACA_VSYNC	2	50OHM	
DACA_HSYNC_R	2	50OHM	
DACA_VSYNC_R	2	50OHM	
DACA_VSYNC_BUF	2	50OHM	
DACA_HSYNC_BUF	2	50OHM	
DACA_VSYNC_C	2	50OHM	
DACA_HSYNC_C	2	50OHM	

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PAGE DETAIL	DACA (SOUTH DVI-I)

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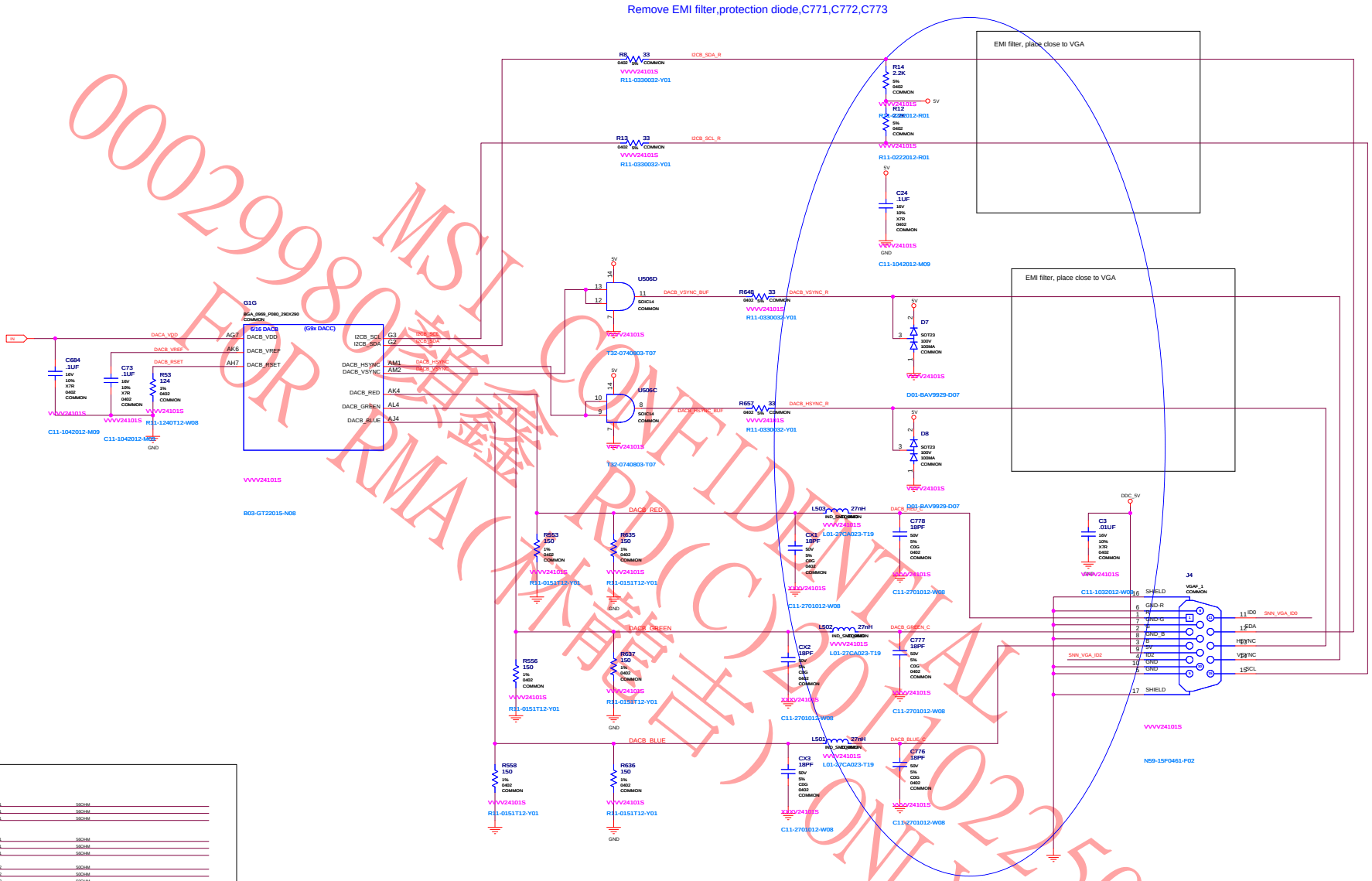
DACB (MID VGA)



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PAGE DETAIL	DACB (MID VGA)

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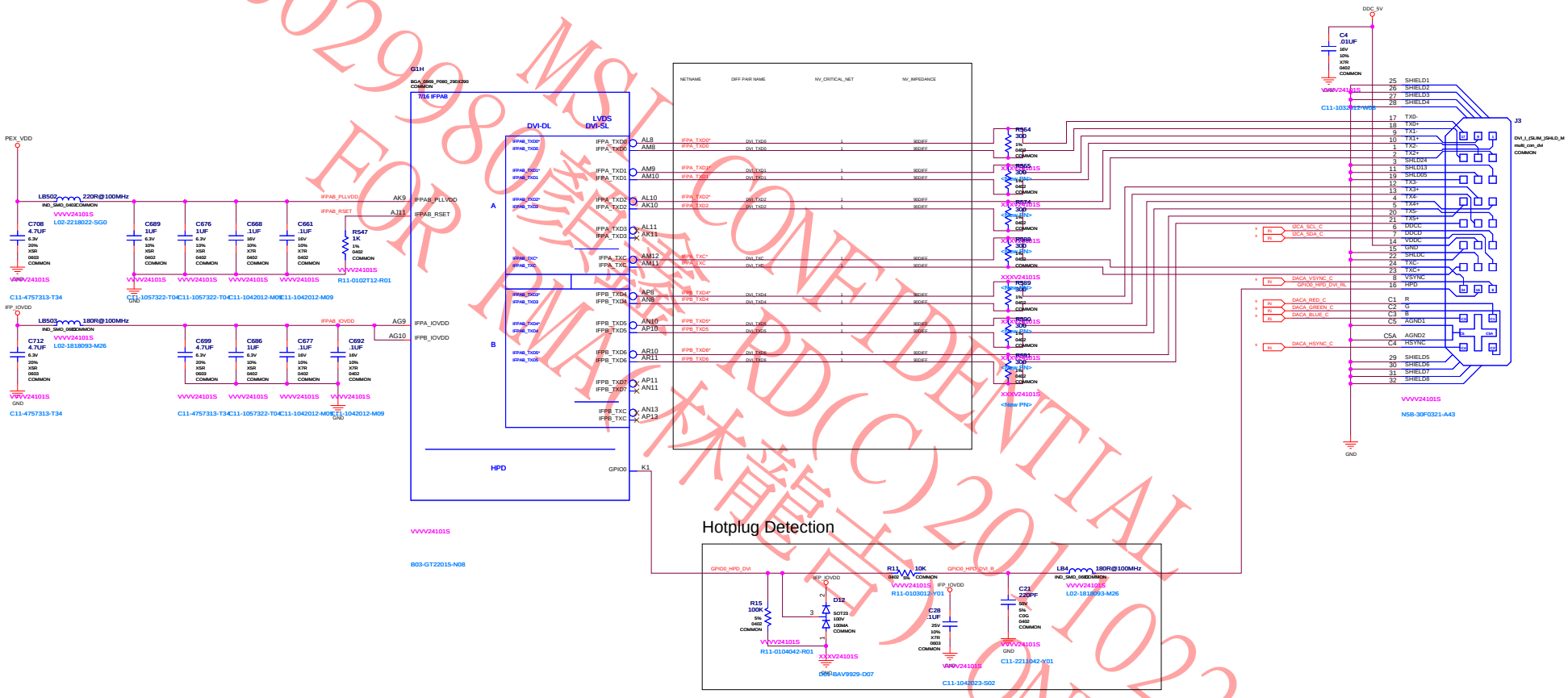
IFP AB (SOUTH DVI-I)



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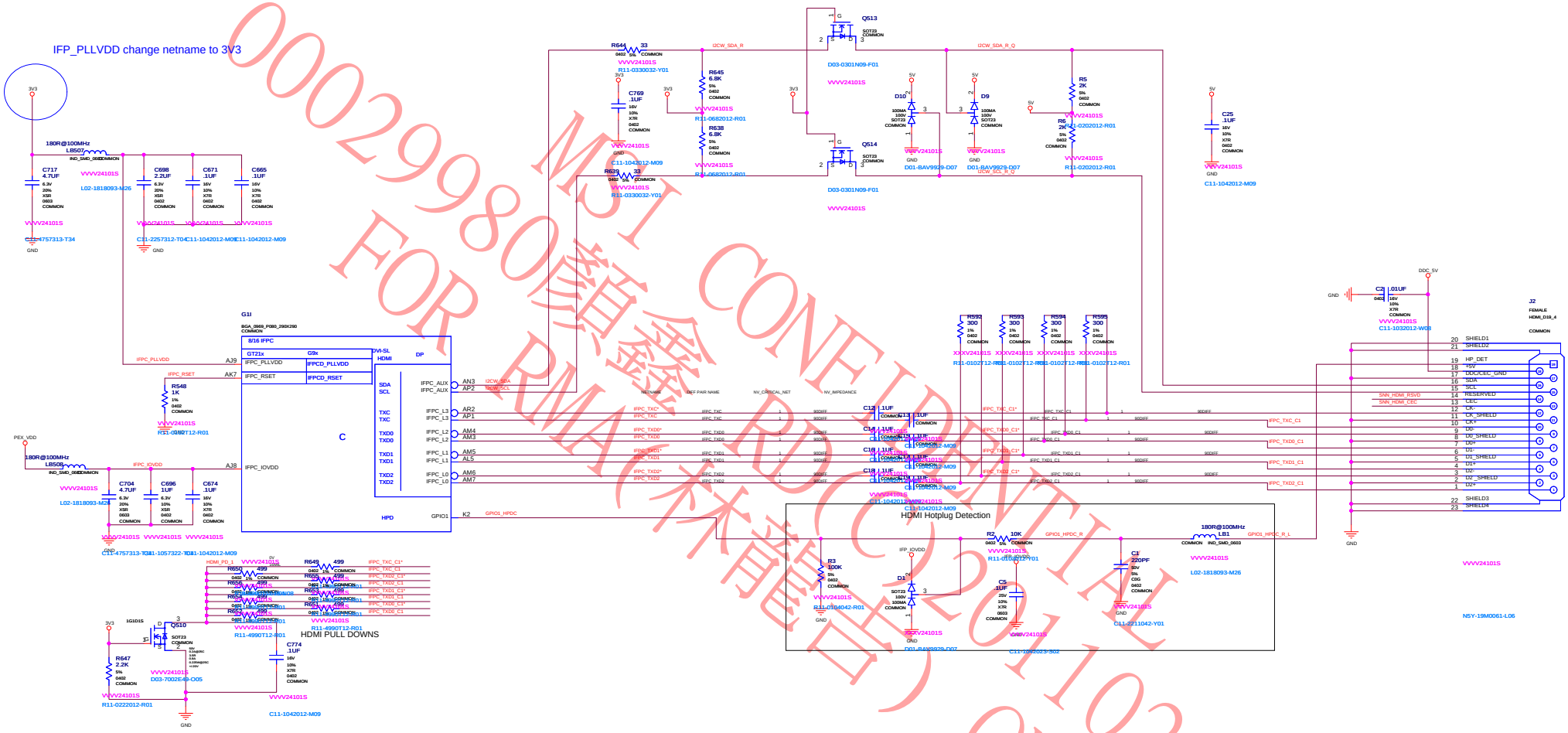
IFP C (NORTH HDMI)



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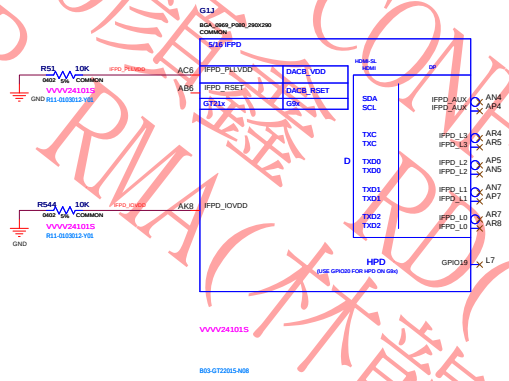
IFP D (UNUSED)



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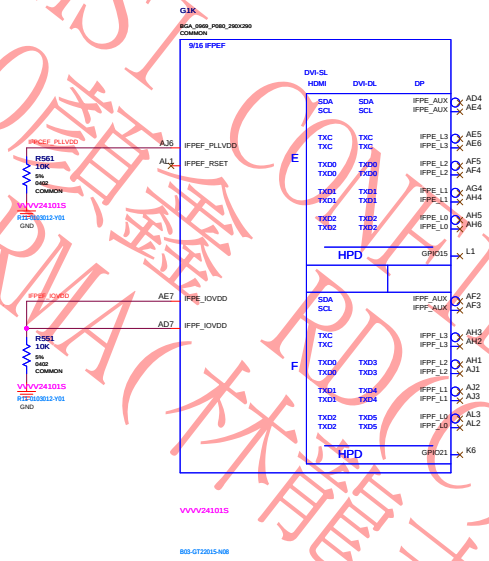
IFP EF (UNUSED)



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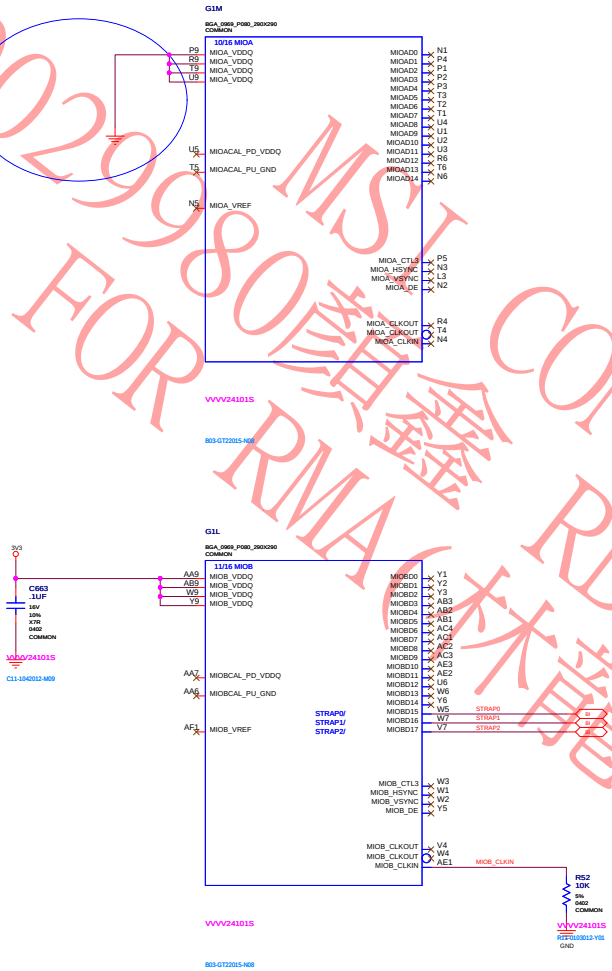
MIOA & MIOB

Remove R545,C664,R554 of MIOA



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PAGE DETAIL	MIOA & MIOB

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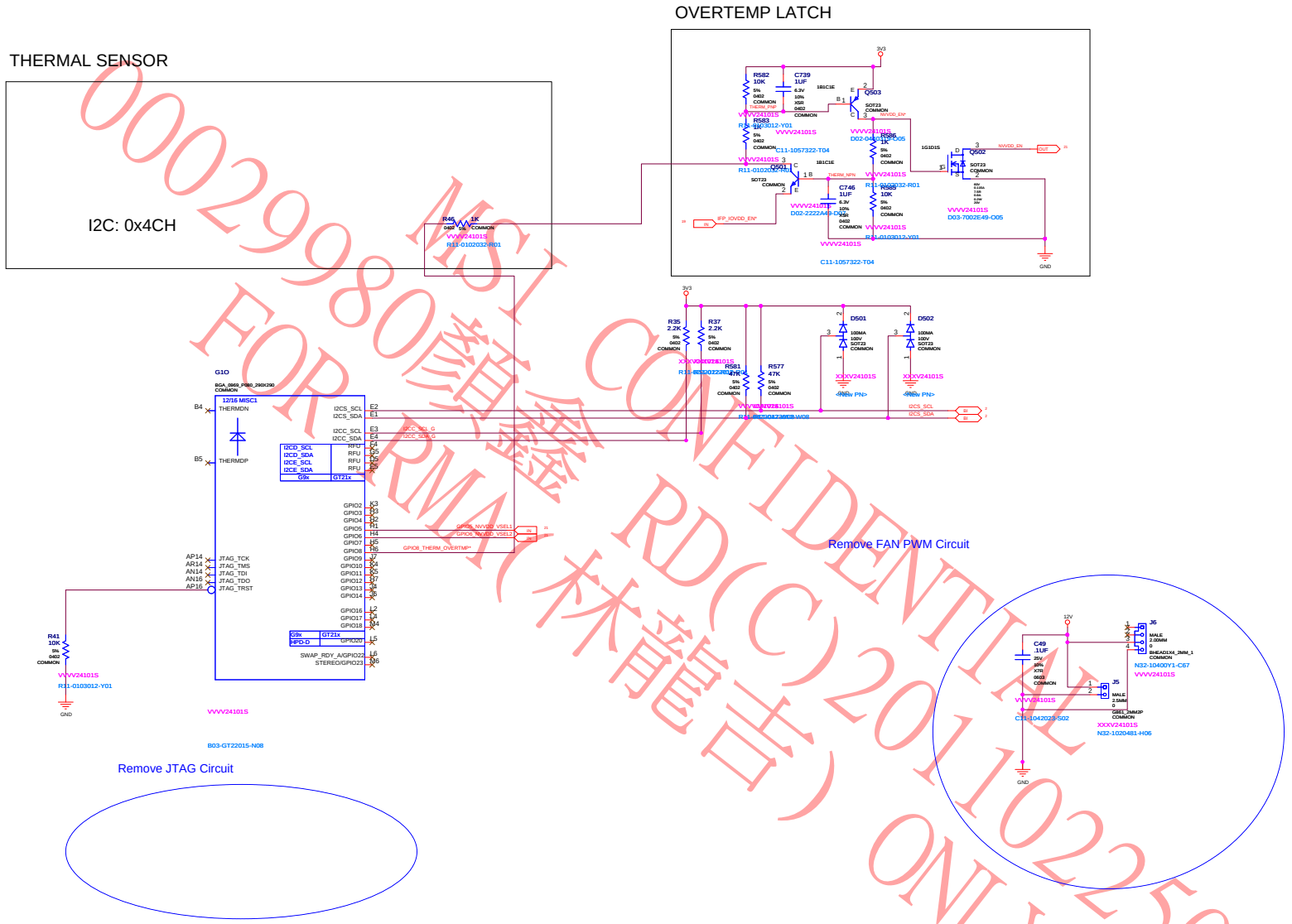
EXTERNAL THERMAL SENSOR, FAN CONTROL, GPIO, JTAG



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PAGE DETAIL	EXTERNAL THERMAL SENSOR, FAN CONTROL, GPIO, JTAG

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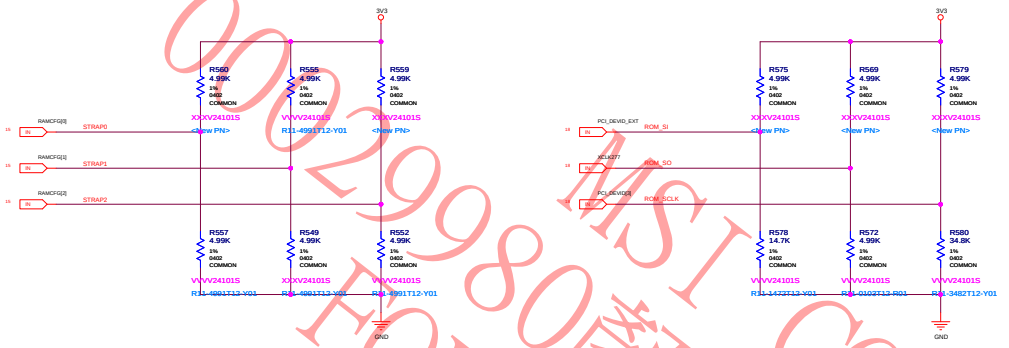
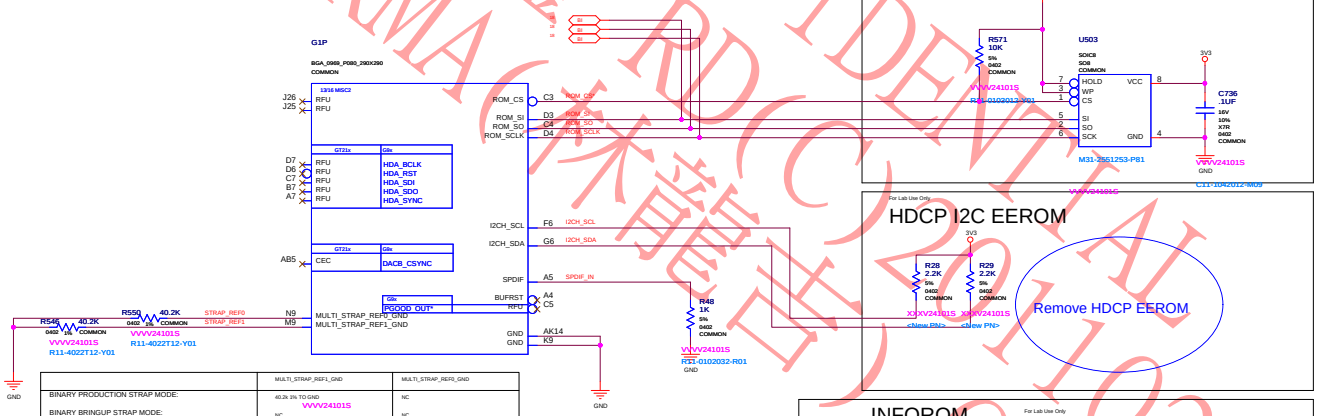
BIOS ROM, HDCP ROM, STRAPPING OPTIONS

STRAPPING OPTIONS



Strap0	USER[3:0]	EDID: 1111	45k PU
Strap1	3GIO_PADCFG[2:0]	DESKTOP: 0000	5k PD
Strap2	PCI_DEVID[3:0]	GT216-200: 0A21 0001	10k PD
ROM_SI	RAMCFG[3:0]	0001 128bit 64Mx16 DDR3 Qimonda 0010 128bit 64Mx16 DDR3 Hynix 0011 128bit 64Mx16 DDR3 Samsung 0101 128bit 128Mx16 DDR3 Qimonda 0110 128bit 128Mx16 DDR3 Hynix 0111 128bit 128Mx16 DDR3 Samsung 1001 64bit 64Mx16 DDR3 Qimonda 1010 64bit 64Mx16 DDR3 Hynix 1011 64bit 64Mx16 DDR3 Samsung 1101 64bit 128Mx16 DDR3 Qimonda 1110 64bit 128Mx16 DDR3 Hynix 1111 64bit 128Mx16 DDR3 Samsung	
ROM_SCLK	3: PCI_DEVID_EXT 2: SUB_VENDOR (1 = BIOS rom present) 1: SLOT_CLK_CFG (1 = common clk MCH/CPU) 0: PEX_PLL_EN_TERM (0 = disable pll term)	0110	35k PD
ROM_SO	3: XLK_417 (0 = POR 277MHz) 2: FB_0_BAR_SIZE (0 = POR 256MB) 1: SMB_ALT_ADDR (0=POR, 1= multiGPU) 0: VGA_DEVICE (0=3D device, 1=POR VGA device)	0001	5k PD

0	PD 5k	8	PU 5k
1	PD 10k	9	PU 10k
2	PD 15k	10	PU 15k
3	PD 20k	11	PU 20k
4	PD 25k	12	PU 25k
5	PD 30k	13	PU 30k
6	PD 35k	14	PU 35k
7	PD 45k	15	PU 45k



	MULTI_STRAP_REF1_GND	MULTI_STRAP_REF0_GND
BINARY PRODUCTION STRAP MODE:	40.2k 1% TO GND	NC
BINARY BRINGUP STRAP MODE:	NC	NC
MULTI-LEVEL STRAP MODE:	40.2k 1% TO GND	40.2k 1% TO GND

B03-GT22015-N08

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PAGE DETAIL	BIOS ROM, HDCP ROM, STRAPPING OPTIONS

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LINEAR POWER SUPPLIES

Remove U4 UP7703 Circuit

PEX_PLLVDD SUPPLY (OPTIAN)

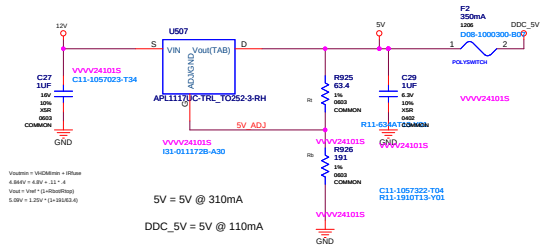
VOUT = Vref * (1 + Rbot / Rtop)
1.053V = 0.8V * (1 + 1k / 3.16k)

IFP_PLLVDD SUPPLY

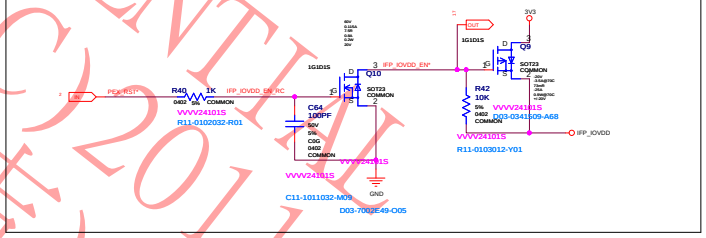
VOUT = Vref * (1 + Rbot / Rtop)
1.793V = 0.8V * (1 + 1k / 0.806k)

Change 5V Circuit SOT223-->SOT252

5V & DDC_5V REGULATOR



IFP_IOVDD BACKDRIVE PREVENTION



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PAGE DETAIL	LINEAR POWER SUPPLIES

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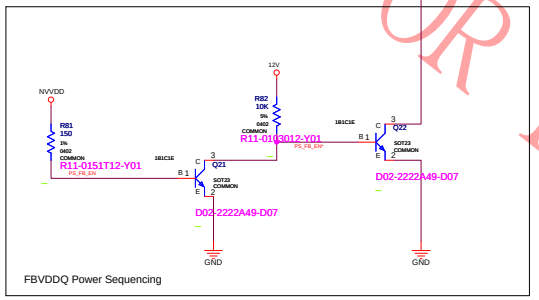
FBVDDQ/PEXVDD POWER SUPPLY

Vin Irms = 2.3A @ 1.8V/6A

Vout Iripple = 3.5A @ 300kHz

UP6103ASU8:315-0524-000 300KHZ 0.6V
APW7165KE :315-0460-000 300KHZ 0.8V
UP6101BU8 :315-0462-000 300KHZ 0.8V
ISL6545CBZ:316-0067-000 300KHZ 0.6V
NCP1579 :315-xxxx-000 300KHZ 0.8V
L6783A :315-xxxx-000 300KHZ 0.8V



FBVDDQ = Vref * (1 + Rtop / Rbot)
1.50V = 0.8V * (1 + 1.58k / 1.82k)
1.80V = 0.8V * (1 + 1.58k / 1.26k)

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PAGE DETAIL	FBVDDQ/PEXVDD POWER SUPPLY

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Power Supply III: NVVDD

Vin Irms = 6.4A @ 0.925V/21A
Vin Irms = 7.4A @ 0.875V/25A

UP6103ASU8:315-0524-000 300KHZ 0.6V
APW7165KE :315-0460-000 300KHZ 0.8V
UP6101BU8 :315-0462-000 300KHZ 0.8V
ISL6545CBZ:316-0067-000 300KHZ 0.6V
NCP1579 :315-xxxx-000 300KHZ 0.8V
L6783A :315-xxxx-000 300KHZ 0.8V

NVVDD Power Sequencing

Vout Iripple = 3.2A @ 300kHz

GPIO5	GPIO6	Rbn	Vout
0	1	Rb1	0.9000V
1	0	Rb2	1.0000V
0	0	Rb3	1.0625V

Vout=Vref*(1+Rt/Rb)
Vout=0.8*(1+1.24k/Rbn)

Rb1 = R919 // R545 =8.75K
Rb2 = R919 // R554 =4.61K
Rb3 = R919 // R545 // R554 =3.78K

GPIO5	GPIO6	NVVDD	STATES
0 (HW DEFAULT)	1	0.875V SKU0 0.975V SKU5	VB0: BOOT,P8,P12 VB1: BOOT,P0,P8,P12,DOS
1		0.925V SKU0 1.025V SKU5	VB0: P0,DOS

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PAGE DETAIL	NVVDD POWER SUPPLY

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Title: Basenet Report
Design: p681
Date: Jan 22 13:35:02 2009

Base nets and synonyms for
p681_lib:P681(@p681_lib,p681(sch_1))
Base Signal Location([Zone][dir])

1V1_ADJ 19.2B
1V1_PLLVDD 2.4G 3.5E 11.2A 16.3A 19.2C
1V8_ADJ 19.2F
3V3 2.1A
3V3_INFO 18.5F
5V 19.4C
5V_ADJ 19.4B
12V 2.1A
12V_D 19.4A
12V_F 21.1F
DACA_BLUE 9.4E 9.5A
DACA_BLUE_C 9.4H 9.5A 11.3G
DACA_GREEN 9.4E 9.5A
DACA_GREEN_C 9.4H 9.5A 11.3G
DACA_HSYNC 9.3C 9.5A
DACA_HSYNC_BUF 9.3E 9.5A
DACA_HSYNC_C 9.3H 9.5A 11.3G
DACA_HSYNC_R 9.3E 9.5A
DACA_RED 9.3E 9.5A
DACA_RED_C 9.3H 9.5A 11.3G
DACA_RSET 9.3B
DACA_VDD 9.2B
DACA_VREF 9.3B
DACA_VSYNC 9.3C 9.5A
DACA_VSYNC_BUF 9.2E 9.5A
DACA_VSYNC_C 9.2H 9.5A 11.3G
DACA_VSYNC_R 9.2E 9.5A
DACB_BLUE 10.4D 10.5A
DACB_BLUE_C 10.4F 10.5A
DACB_GREEN 10.4D 10.5A
DACB_GREEN_C 10.4F 10.5A
DACB_HSYNC 10.3C 10.5A
DACB_HSYNC_BUF 10.3E 10.5A
DACB_HSYNC_C 10.3G 10.5A
DACB_HSYNC_R 10.3E 10.5A
DACB_RED 10.3D 10.5A
DACB_RED_C 10.3F 10.5A
DACB_RSET 10.3B
DACB_VDD 10.2B
DACB_VREF 10.2B
DACB_VSYNC 10.3C 10.5A
DACB_VSYNC_BUF 10.2E 10.5A
DACB_VSYNC_C 10.2G 10.5A
DACB_VSYNC_R 10.2E 10.5A
DDC_5V 19.4D
FBA_CLK0 3.4D 4.2A 4.2C 4.5G
FBA_CLK0* 3.4D 4.2A 4.2C 4.5G
FBA_CLK1 3.4D 4.2D 4.2F 4.5G
FBA_CLK1* 3.4D 4.2D 4.2F 4.5G
FBA_CMD<0> 3.3C 3.4G 4.2A 4.2C
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FBA_CMD<3> 3.2G 3.3C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<4> 3.1F 3.3C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<5> 3.3C 3.3G 4.1A 4.1C 4.1E 4.1G
FBA_CMD<6> 3.3G 3.3C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<7> 3.3C 3.4F 4.1A 4.1C 4.1E 4.1G
FBA_CMD<8> 3.3C 3.4F 4.1A 4.1C 4.2E 4.2G
FBA_CMD<9> 3.2F 3.3C 4.2A 4.2C 4.2E 4.2G
FBA_CMD<10> 3.2F 3.3C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<11> 3.1F 3.3C 4.1E 4.1G
FBA_CMD<12> 3.1G 3.3C 4.2A 4.2C 4.2E 4.2G
FBA_CMD<13> 3.3C 3.3G 4.2A 4.2C 4.2E 4.2G
FBA_CMD<14> 3.3C 3.3F 4.1A 4.1C 4.1E 4.1G
FBA_CMD<16> 3.3C 3.4G 4.2E 4.2G
FBA_CMD<17> 3.3C 3.3G 4.1A 4.1C 4.1E 4.1G
FBA_CMD<18> 3.3C 3.4G 4.1E 4.1G 4.2A 4.2C
FBA_CMD<19> 3.2G 3.3C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<20> 3.3F 3.4C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<21> 3.2G 3.4C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<22> 3.4C 3.4F 4.1E 4.1G 4.2A 4.2C
FBA_CMD<24> 3.3F 3.4C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<25> 3.4C 3.4G 4.3A 4.3C
FBA_CMD<26> 3.2F 3.4C 4.1A 4.1C 4.1E 4.1G
FBA_CMD<27> 3.4C 3.4G 4.2E 4.2G
FBA_CMD<28> 3.4C 4.2E 4.2G 4.3A 4.3C
FBA_D<0> 3.1B 4.3B
FBA_D<63..0> 3.1A 4.3A 4.5G
FBA_D<1> 3.1B 4.3B
FBA_D<2> 3.1B 4.4B
FBA_D<3> 3.1B 4.4B
FBA_D<5> 3.1B 4.4B
FBA_D<6> 3.1B 4.4B
FBA_D<7> 3.1B 4.4B
FBA_D<8> 3.1B 4.4B
FBA_D<9> 3.1B 4.4B
FBA_D<10> 3.1B 4.4B
FBA_D<11> 3.1B 4.4B
FBA_D<12> 3.2B 4.4B
FBA_D<13> 3.2B 4.4B
FBA_D<14> 3.2B 4.4B
FBA_D<15> 3.2B 4.4B
FBA_D<16> 3.2B 4.3C
FBA_D<17> 3.2B 4.3C
FBA_D<18> 3.2B 4.4C
FBA_D<19> 3.2B 4.4C
FBA_D<20> 3.2B 4.4C
FBA_D<21> 3.2B 4.4C
FBA_D<22> 3.2B 4.4C
FBA_D<23> 3.2B 4.4C
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FBA_D<25> 3.2B 4.4C
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FBA_D<60> 3.3B 4.4E
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FBA_D<62> 3.3B 4.4E
FBA_D<63> 3.3B 4.4E
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FBA_DQM<2> 3.3B 4.4C
FBA_DQM<3> 3.3B 4.4C
FBA_DQM<5> 3.3B 4.4D
FBA_DQM<6> 3.4B 4.4E
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FBA_DQS<2> 3.4B 4.4C 4.5E
FBA_DQS<3> 3.4B 4.4C 4.5E
FBA_DQS<4> 3.4B 4.4D 4.5E
FBA_DQS<5> 3.4B 4.4D 4.5E
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FBA_ZQ1 4.3C
FBA_ZQ2 4.3E
FBA_ZQ3 4.3G
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FBC_CLK0* 6.4D 7.2A 7.2C 7.5G
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FBC_VREF1 7.3F 7.3H 7.4H
FBC_ZQ0 7.3A
FBC_ZQ1 7.3C
FBC_ZQ2 7.3E
FBC_ZQ3 7.3G
FBVDDQ 20.2H
FBVDDQ_RBOT 20.4F
FBVDDQ_VSEL 20.4E
FB_CAL_PD_VDDQ 6.5C
FB_CAL_PU_GND 6.5C
FB_CAL_TERM_GND 6.5C
FB_PLLAVDD 3.5C
GPIO0_HPD_DVI 11.4D
GPIO0_HPD_DVI_Q 11.4D
GPIO0_HPD_DVI_R 11.4E
GPIO0_HPD_DVI_RL 11.3G
GPIO1_HPDC 12.4C
GPIO1_HPDC_Q 12.4D
GPIO1_HPDC_R 12.4F
GPIO1_HPDC_R_L 12.4G
GPIO4_FAN_TACH 17.3C
GPIO5_NVVDD_VSEL1 17.3D 21.1A 21.3A
GPIO6_NVVDD_VSEL2 17.3D 21.3A
GPIO7_NVVDD_VSEL3 17.3D 21.2A 21.4A
GPIO8_THERM_OVERTM 17.3C
I²
GPIO9_FAN_PWM 17.3C
GPIO9_FAN_PWM_Q 17.4F
GPIO9_FAN_PWM_Q_L 17.4G
GPIO9_FAN_PWM_R 17.3F
GPIO13_FBVDDQ_VSEL 17.4D 20.4D
GPIO16_FAN_PWM 17.4C
GPU_PLLVDD 16.3B
GPU_TESTMODE 2.5E
HDMI_PD_1 12.4B
I2CA_SCL 9.2C 9.2D
I2CA_SCL_C 9.2H 11.3G
I2CA_SCL_T 9.2F
I2CA_SDA 9.1D 9.2C
I2CA_SDA_C 9.1H 11.3G
I2CA_SDA_T 9.1F
I2CB_SCL 10.2C
I2CB_SCL_R 10.1E
I2CB_SCL_R_L 10.1G
I2CB_SDA 10.2C
I2CB_SDA_R 10.1E
I2CB_SDA_R_L 10.1G
I2CC_SCL 17.2B 17.3F 18.5E
I2CC_SCL_G 17.3C
I2CC_SDA 17.2B 17.3F 18.5E
I2CC_SDA_G 17.3C
I2CH_SCL 18.4D
I2CH_SDA 18.4D
I2CS_SCL 2.1C 17.3F
I2CS_SDA 2.2C 17.3F
I2CW_SCL 12.3C
I2CW_SCL_R 12.2D
I2CW_SCL_R_Q 12.2E
I2CW_SDA 12.3C
I2CW_SDA_R 12.1D
I2CW_SDA_R_Q 12.1E
IFPAB_IOVDD 11.3B
IFPAB_PLLVDD 11.2B
IFPAB_RSET 11.3B
IFPA_TXC 11.3D
IFPA_TXC* 11.3D
IFPA_TXD0 11.2D
IFPA_TXD0* 11.2D
IFPA_TXD1 11.2D
IFPA_TXD1* 11.2D
IFPA_TXD2 11.3D
IFPA_TXD2* 11.2D
IFPB_TXD4 11.3D
IFPB_TXD4* 11.3D
IFPB_TXD5 11.3D
IFPB_TXD5* 11.3D
IFPB_TXD6 11.3D
IFPB_TXD6* 11.3D
IFPCEF_PLLVDD 14.3C
IFPC_IOVDD 12.3A
IFPC_PLLVDD 12.3A
IFPC_RSET 12.3A
IFPC_TXC 12.3D
IFPC_TXC* 12.3D
IFPC_TXC_C1 12.3F 12.4B
IFPC_TXC_C1* 12.3F 12.4B
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IFPC_TXD0* 12.3D
IFPC_TXD0_C1 12.3F 12.4B
IFPC_TXD0_C1* 12.3F 12.4B
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IFPC_TXD1_C1* 12.3F 12.4B
IFPC_TXD2 12.3D
IFPC_TXD2* 12.3D
IFPC_TXD2_C1 12.3F 12.4B
IFPC_TXD2_C1* 12.3F 12.4B
IFPD_IOVDD 13.3C
IFPD_PLLVDD 13.3C
IFPEF_IOVDD 14.3C
IFP_IOVDD_EN* 17.2E 19.4G
IFP_IOVDD_EN_RC 19.4F
IFP_PLLVDD 12.2A 12.2G
JTAG_TCLK 2.1C 17.4A
JTAG_TDI 2.1C 17.4A
JTAG_TDO 2.1C 17.5A
JTAG_TMS 2.1C 17.4A
JTAG_TRST* 2.1C 17.5A
MIOA_CLKIN 15.2D
MIOA_VDDQ 15.1C
MIOB_CLKIN 15.4D
NVVDD 21.2H
NVVDD_CP 21.3C
NVVDD_CP_RC 21.4D
NVVDD_CSN 21.3D
NVVDD_CSN_R 21.3D
NVVDD_CSP 21.3D
NVVDD_EAP 21.3C
NVVDD_EN 17.2F 21.2A
NVVDD_EN* 17.1E
NVVDD_FB 21.4D
NVVDD_FB_RC 21.4D
NVVDD_GND_SENSE 2.4F 21.4B
NVVDD_GND_SENSE_R 21.2B 21.4C
NVVDD_IOFS 21.2C
NVVDD_MODE 21.2C
NVVDD_MODE_Q 21.1B
NVVDD_MODE_R 21.2B
NVVDD_REFIN 21.3C
NVVDD_RSET 21.3C
NVVDD_SENSE 2.4F 21.4D
NVVDD_SENSE_R 21.4E
NVVDD_SS 21.3C
NVVDD_VID 21.3C
NVVDD_VREF 21.3C
NVVDD_VSEL2 21.3B
NVVDD_VSEL2_Q 21.3B
NVVDD_VSEL3 21.4B
NVVDD_VSEL3_Q 21.3C
PEX_CLKREQ* 2.1C
PEX_PLLVDD 2.4E
PEX_PLL_CLK_OUT 2.2C
PEX_PLL_CLK_OUT* 2.2C
PEX_PRSNT1* 2.1A
PEX_REFCLK 2.1G 2.2B
PEX_REFCLK* 2.1G 2.2B
PEX_RST* 2.2D 19.4E
PEX_RX0 2.2B 2.4G
PEX_RX0* 2.2B 2.4G
PEX_RX1 2.2B 2.4G
PEX_RX1* 2.2B 2.4G
PEX_RX2 2.2B 2.4G
PEX_RX2* 2.3B 2.4G
PEX_RX3 2.3B 2.4G
PEX_RX3* 2.3B 2.4G
PEX_RX4 2.3B 2.4G
PEX_RX4* 2.3B 2.4G
PEX_RX5 2.3B 2.4G
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PEX_RX7* 2.4B 2.4G
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PEX_RX13* 2.5B 2.5G
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PEX_RX14* 2.5B 2.5G
PEX_RX15 2.5B 2.5G
PEX_RX15* 2.5B 2.5G
PEX_TX0 2.2B 2.3G
PEX_TX0* 2.2B 2.3G
PEX_TX1 2.2B 2.3G
PEX_TX1* 2.2B 2.3G
PEX_TX2 2.2B 2.3G
PEX_TX2* 2.2B 2.3G
PEX_TX3 2.3B 2.3G
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PEX_TX4* 2.3B 2.3G
PEX_TX5 2.3B 2.3G
PEX_TX5* 2.3B 2.3G
PEX_TX6 2.3B 2.3G
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PEX_TX7 2.3B 2.3G
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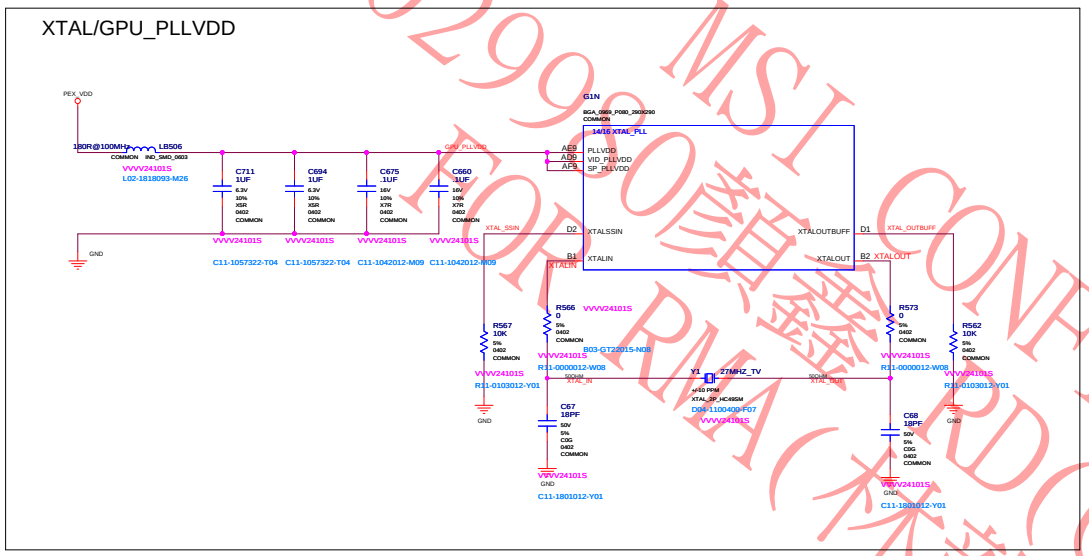

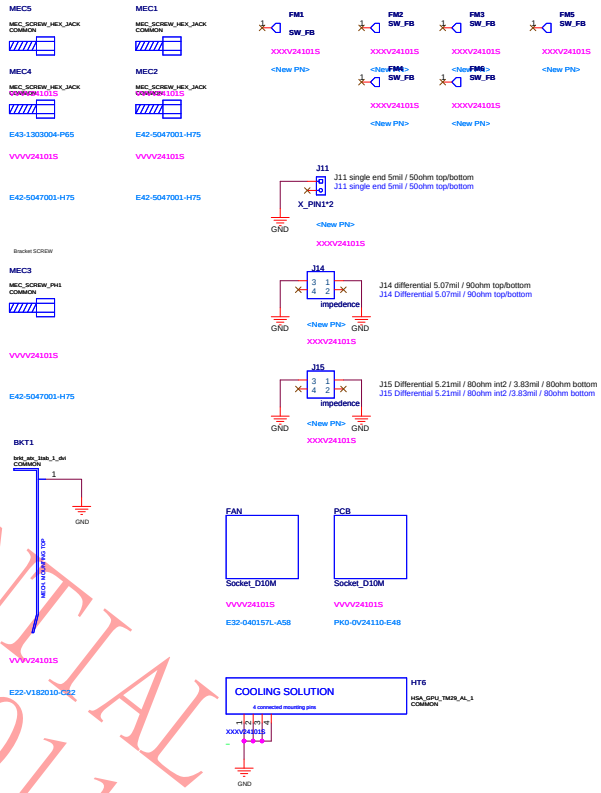

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