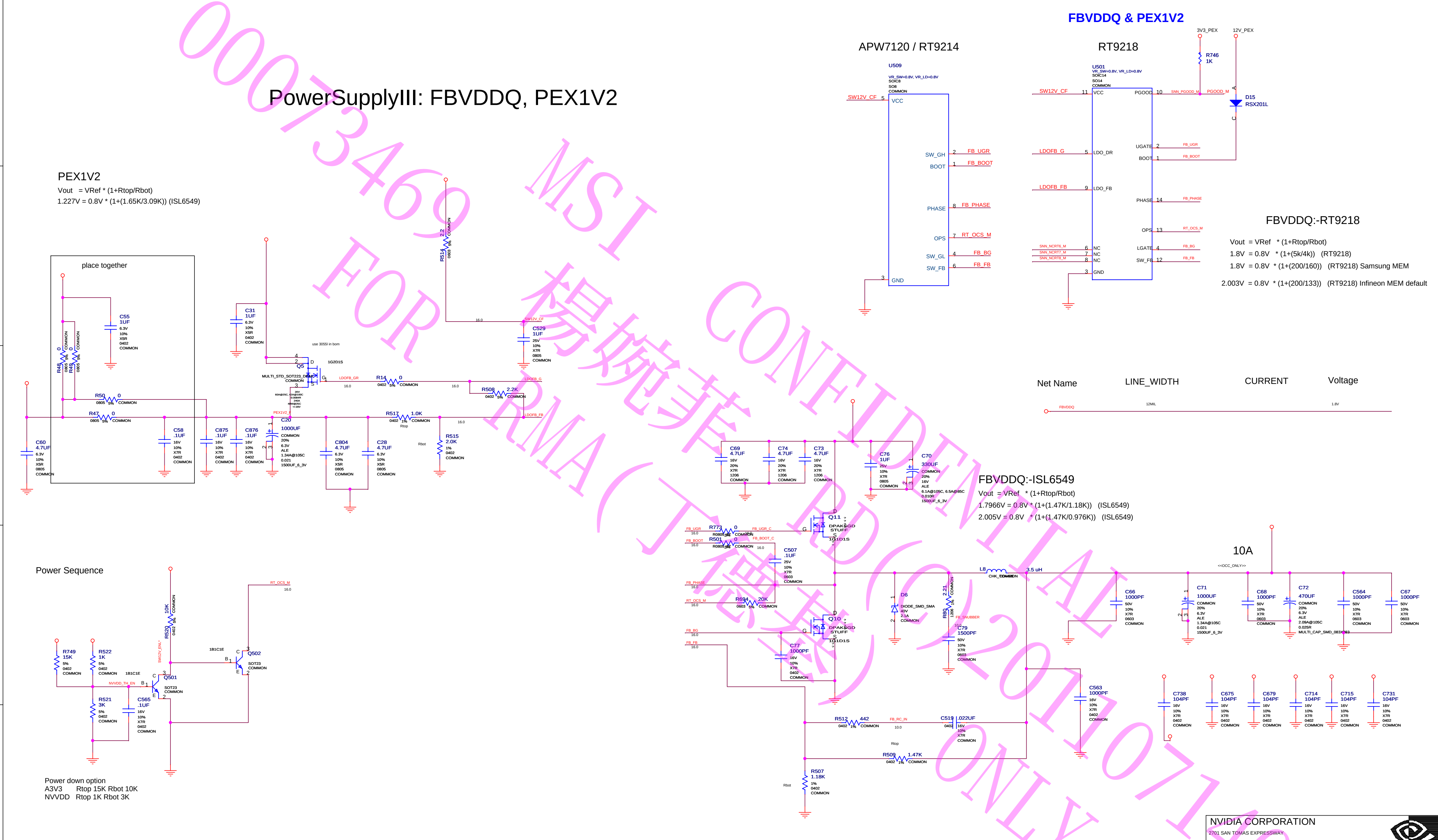
PowerSupplyIII: FBVDDQ, PEX1V2



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	PowerSupplyIII: FBVDDQ, PLLVDD

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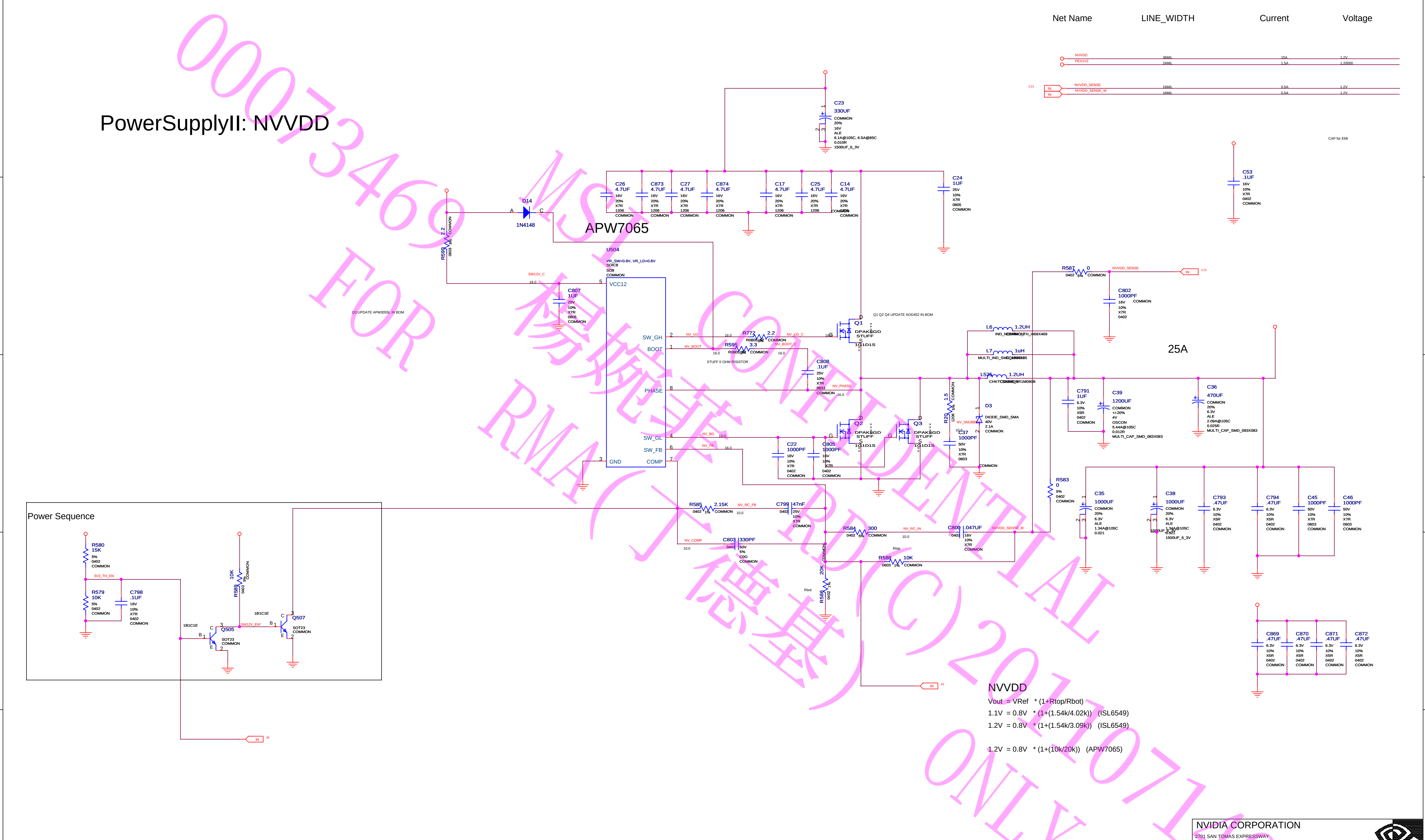
PowerSupplyII: NVVDD



NVVDD

Vout = VRef * (1+Rtop/Rbot)

1.1V = 0.8V * (1+(1.54k/4.02k)) (ISL6549)

1.2V = 0.8V * (1+(1.54k/3.09k)) (ISL6549)

1.2V = 0.8V * (1+(10k/20k)) (APW7065)

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	PowerSupplyI: NVVDD

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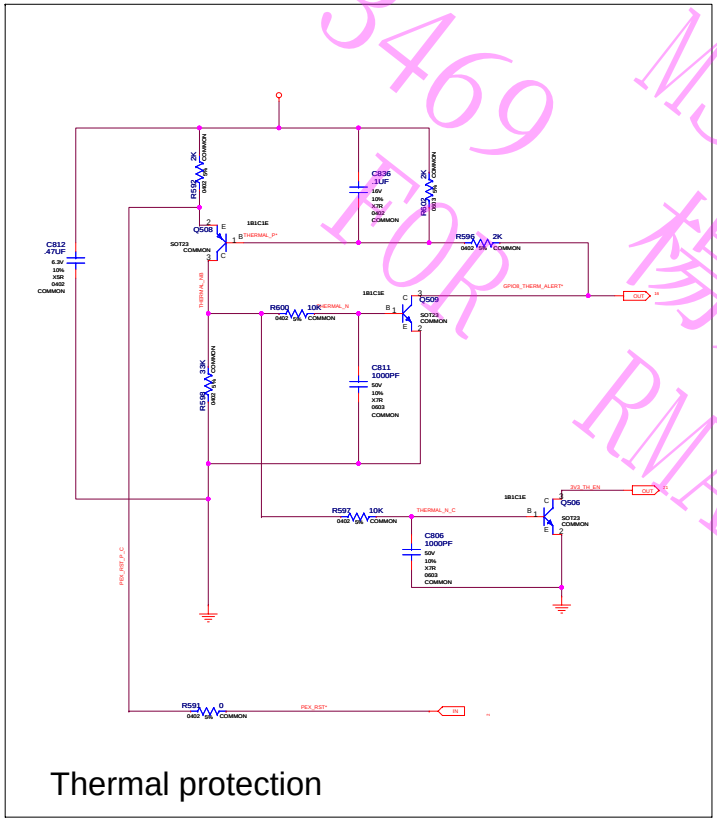
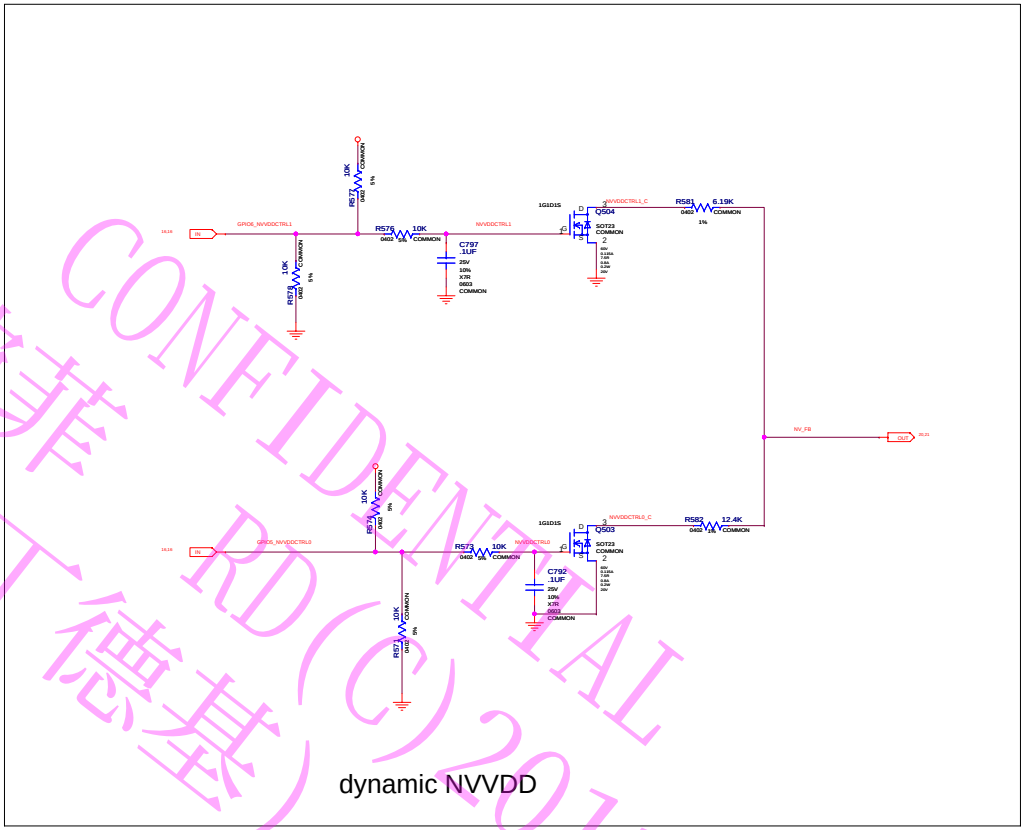
thermal protection and dynamic NVVDD



Thermal protection



dynamic NVVDD

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	thermal protection and dynamic NVVDD

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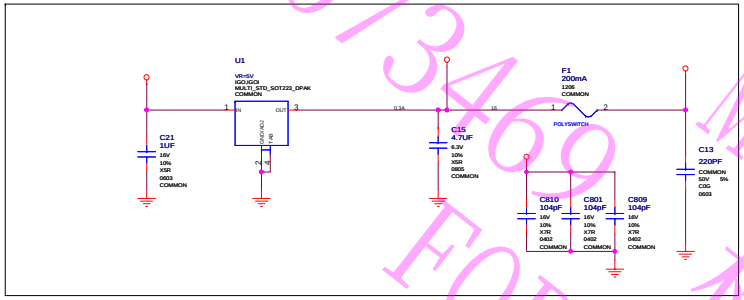
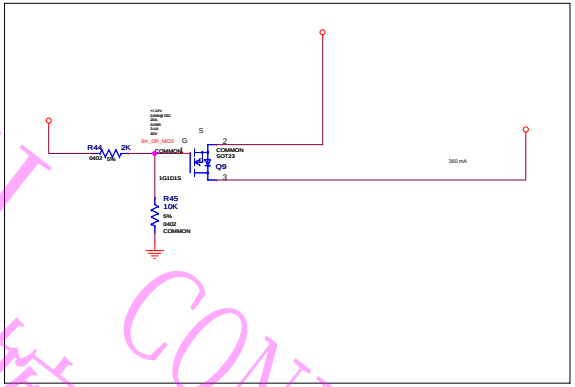
Power SupplyI:TMDS_IOVDD A3V3 DDC_5V IFP_PLLVDD

NETNAME	MAX_CURRENT	MIN_LINE_WIDTH	VOLTAGE
DDC_5V	0.1A	12.0	5.00000V
A3V3	1.5A	30.0	3.30000V
IFPAB_IOVDD	0.3A	16	3.30000V
GND		35.0	0.000000V
IFP_PLLVDD	0.3A	16	1.80000V

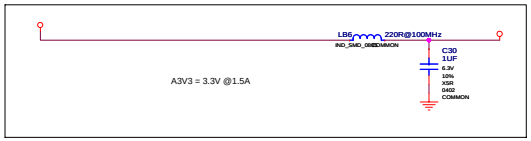
DDC 5V



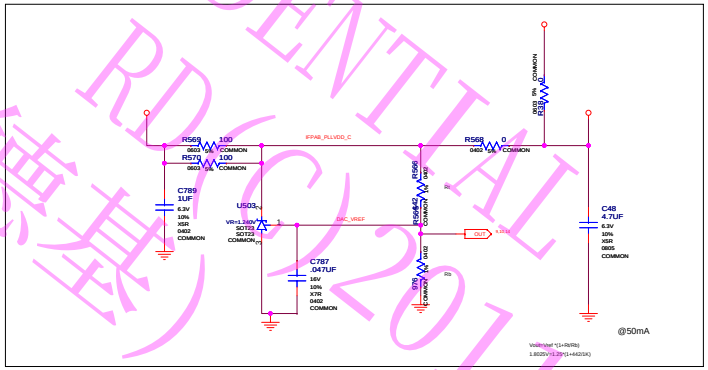
TMDS IO SUPPLY WITH BACKDRIVE PROTECTION



A3V3 Power Supply



IFP_PLL SUPPLY



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	POWER SUPPLY: TMDS IOVDD,5V,A3V3

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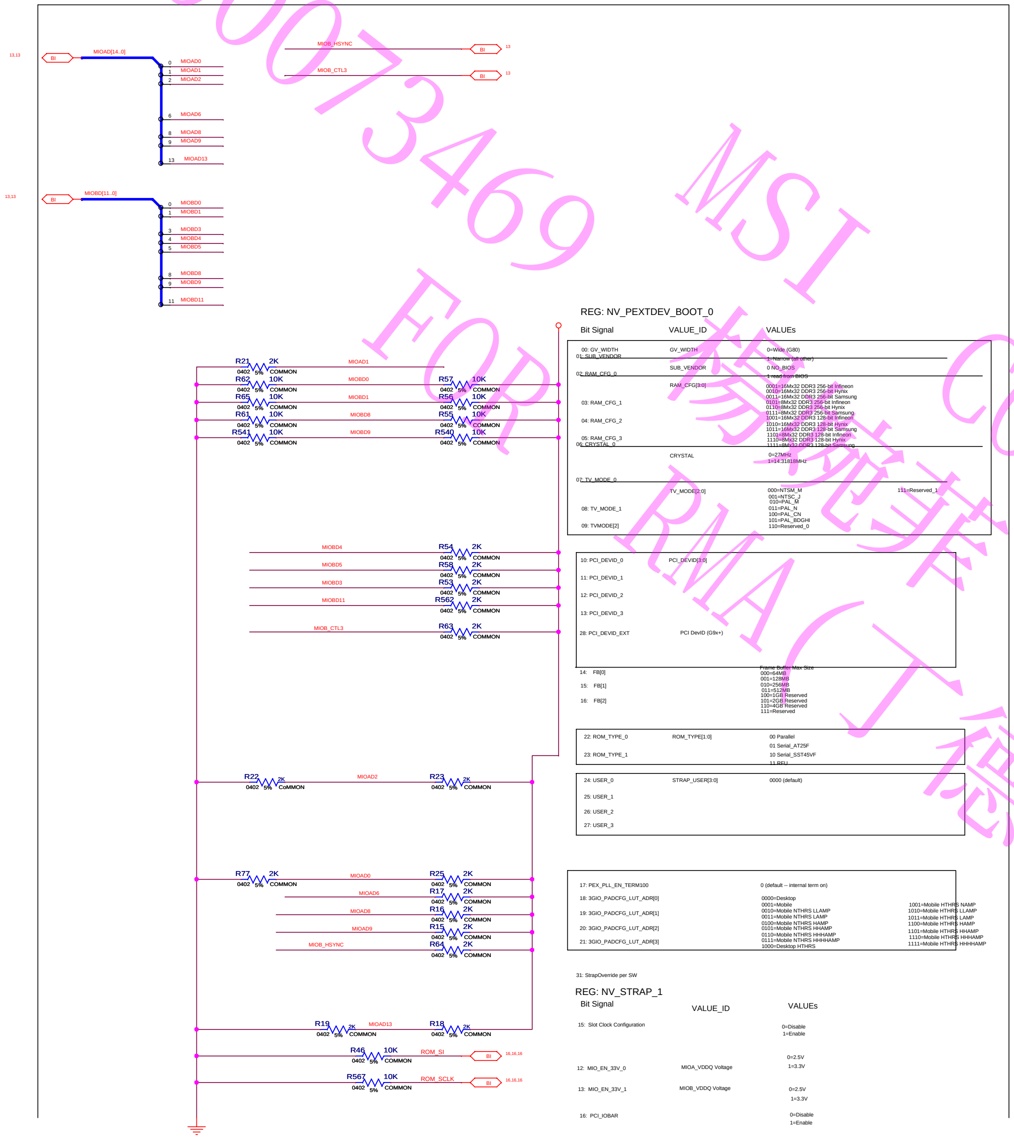
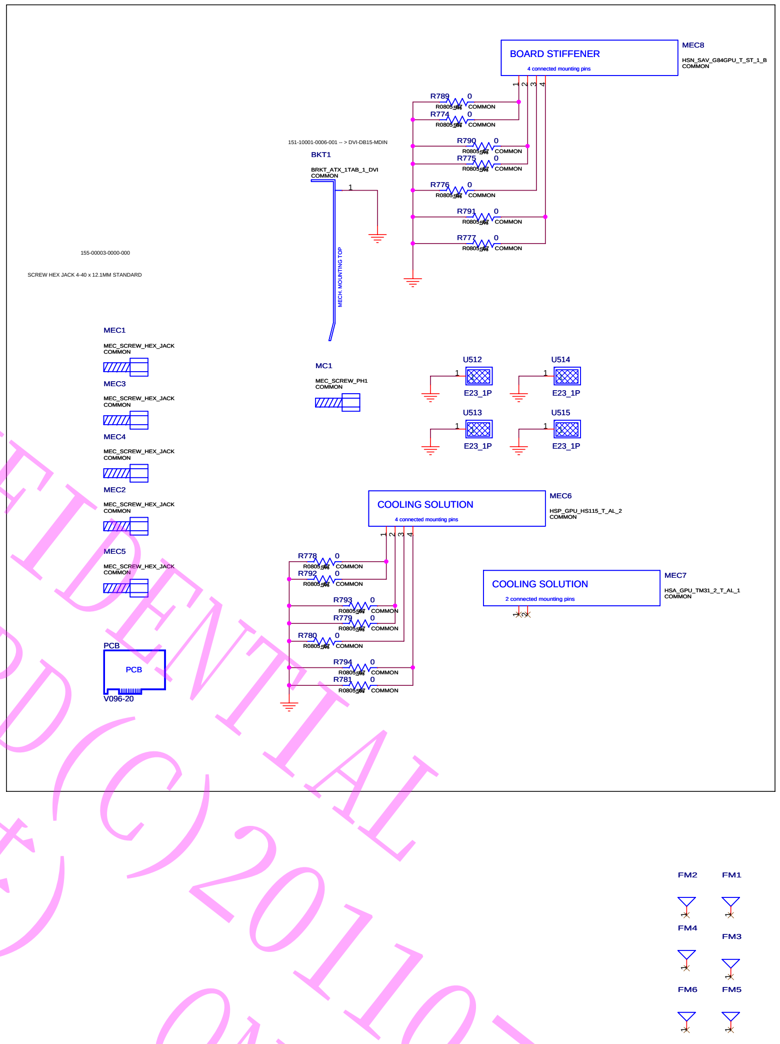
BIOS, Straps, Misc

Straps

Assembly: BIOS



Mechanical parts



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	BIOS STRAPS & MECHANICALS

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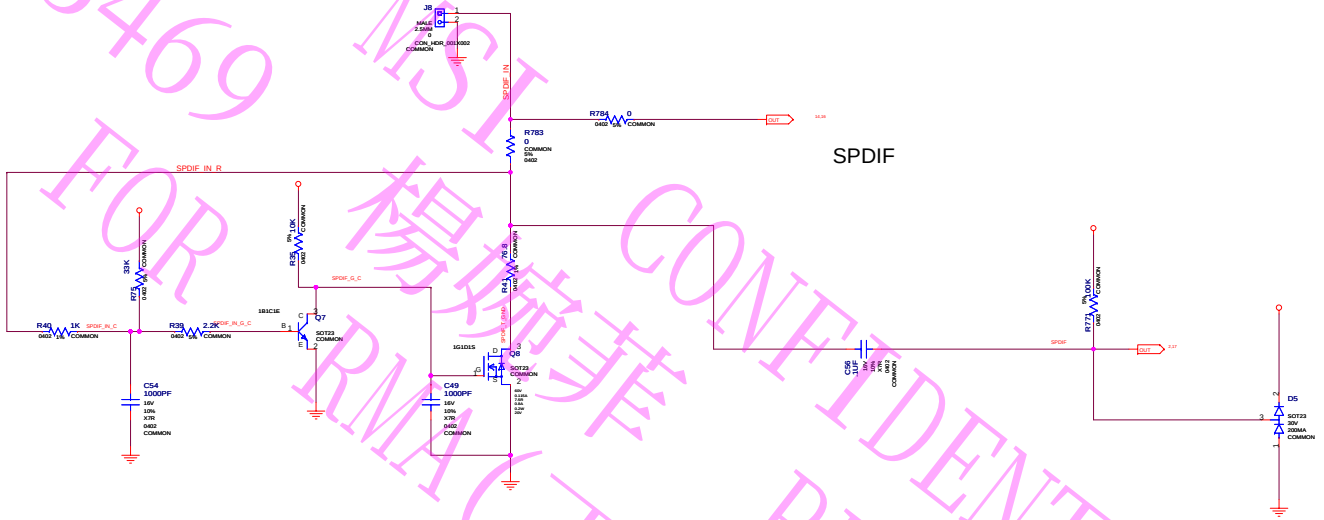
SPDIF



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	SPDIF

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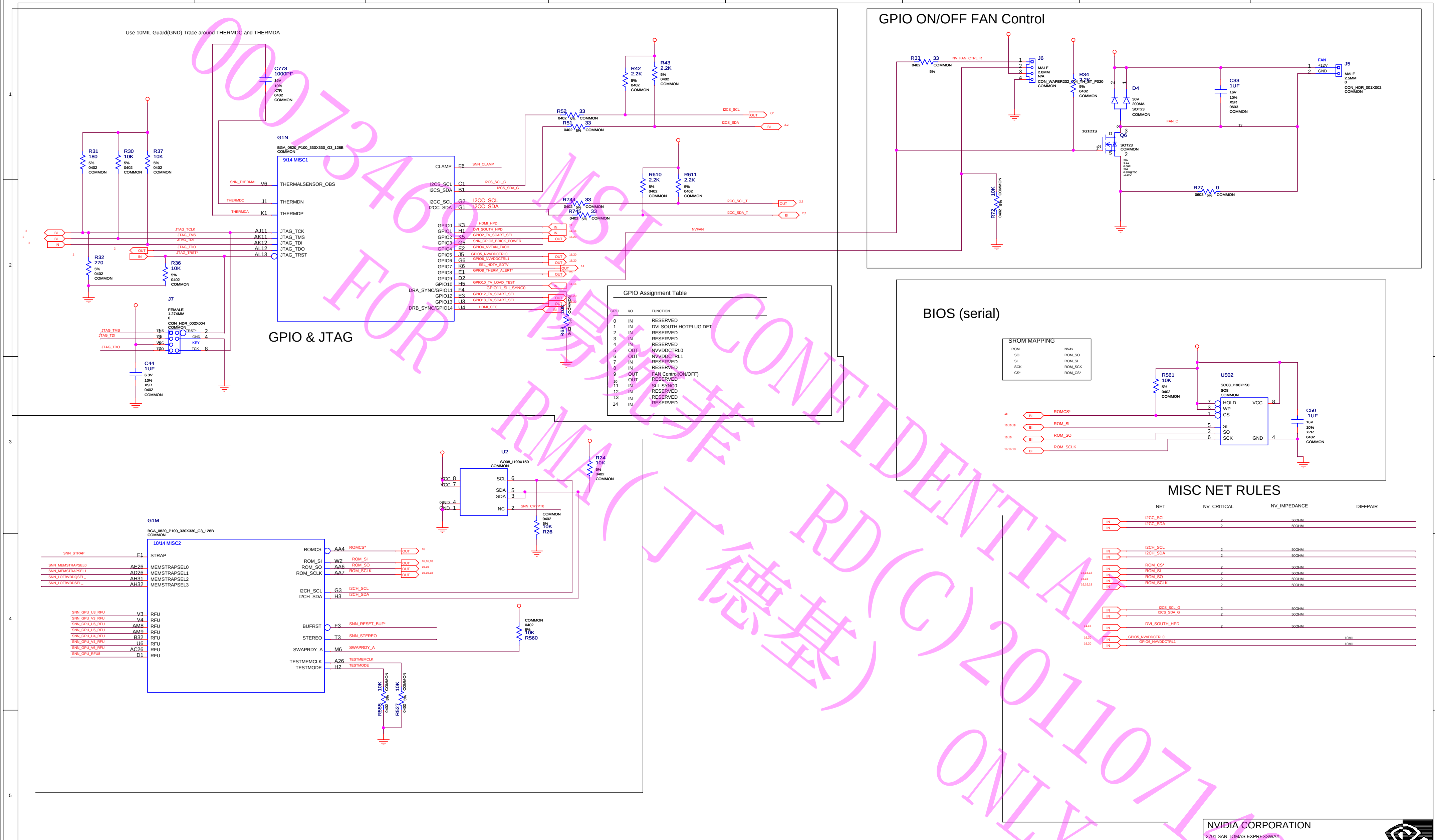

GPIO Assignment Table

GPIO	I/O	FUNCTION
0	IN	RESERVED
1	IN	DVI SOUTH HOTPLUG DET
2	IN	RESERVED
3	IN	RESERVED
4	IN	RESERVED
5	OUT	NVVDDCTRL0
6	OUT	NVVDDCTRL1
7	IN	RESERVED
8	IN	RESERVED
9	OUT	FAN Control(ON/OFF)
10	OUT	RESERVED
11	IN	SLI_SYNC0
12	IN	RESERVED
13	IN	RESERVED
14	IN	RESERVED

MISC NET RULES

NET	NV_CRITICAL	NV_IMPEDANCE	DIFFPAIR
I2CC_SCL	2	50OHM	
I2CC_SDA	2	50OHM	
I2CH_SCL	2	50OHM	
I2CH_SDA	2	50OHM	
ROM_CS*	2	50OHM	
ROM_SI	2	50OHM	
ROM_SO	2	50OHM	
ROM_SCLK	2	50OHM	
I2CS_SCL_G	2	50OHM	
I2CS_SDA_G	2	50OHM	
DVI_SOUTH_HPD	2	50OHM	
GPIO5_NVVDDCTRL0		10MIL	
GPIO6_NVVDDCTRL1		10MIL	

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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	JTAG, BIOS ROM, HDCP ROM, FAN CONTROL, GPIO

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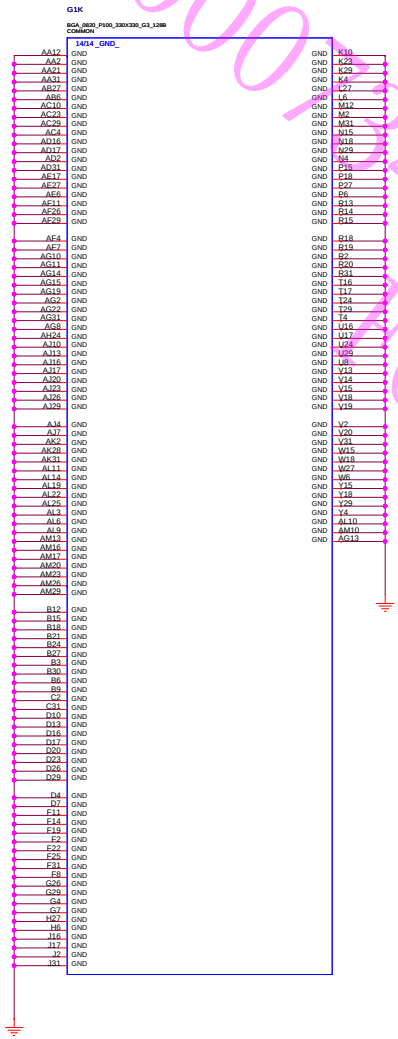
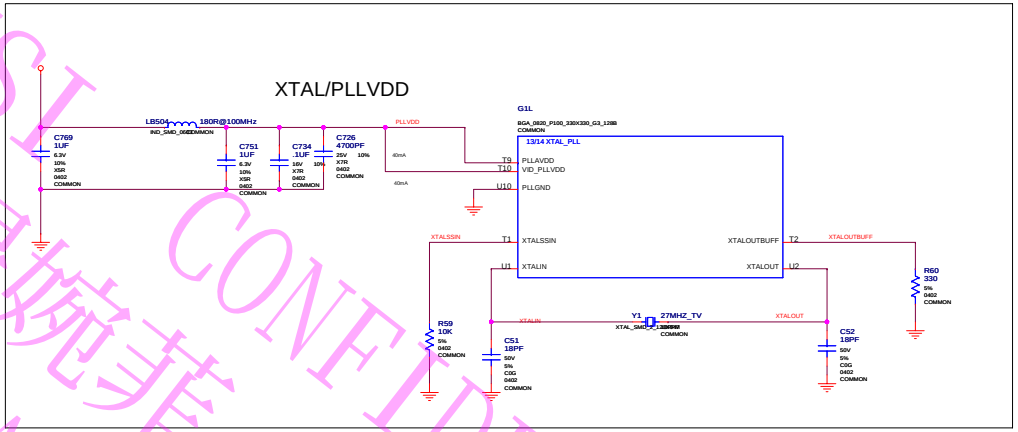
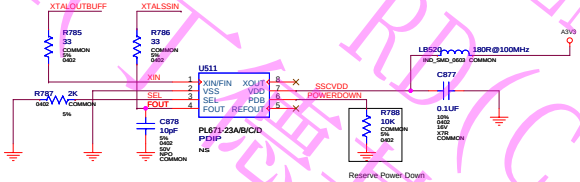
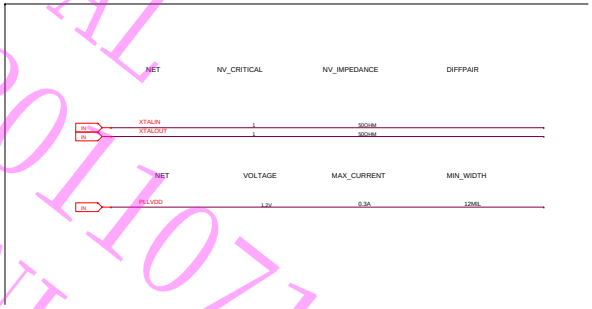
GPU GND CONNECTION, XTAL









ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	GPU GND CONNECTION, XTAL

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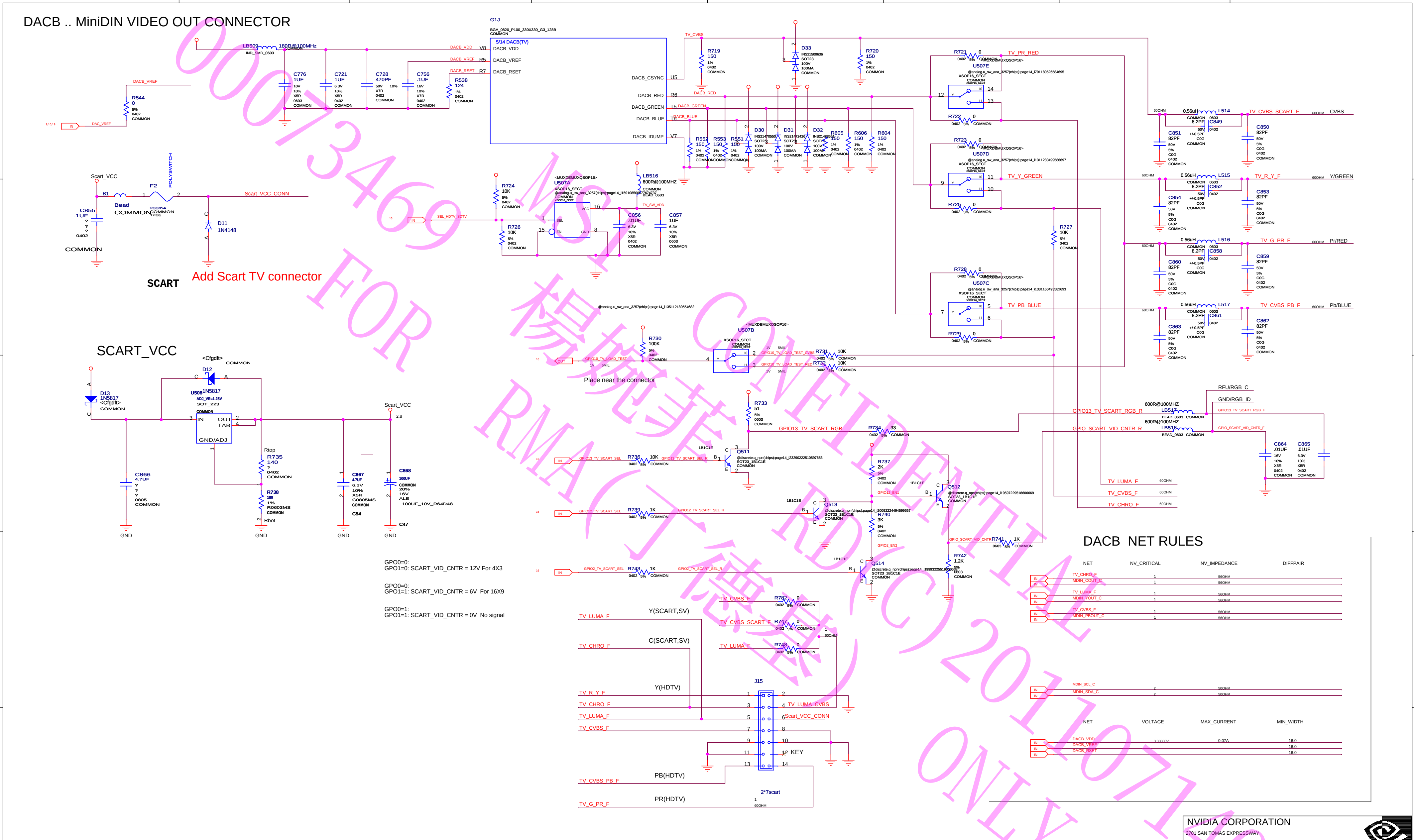

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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	DACB FILTERS, SYNC STRIPPER, MINIDIN CONNECTOR NORTH,HDTV HEADER
NV_PN	600-10403-0000-200 A
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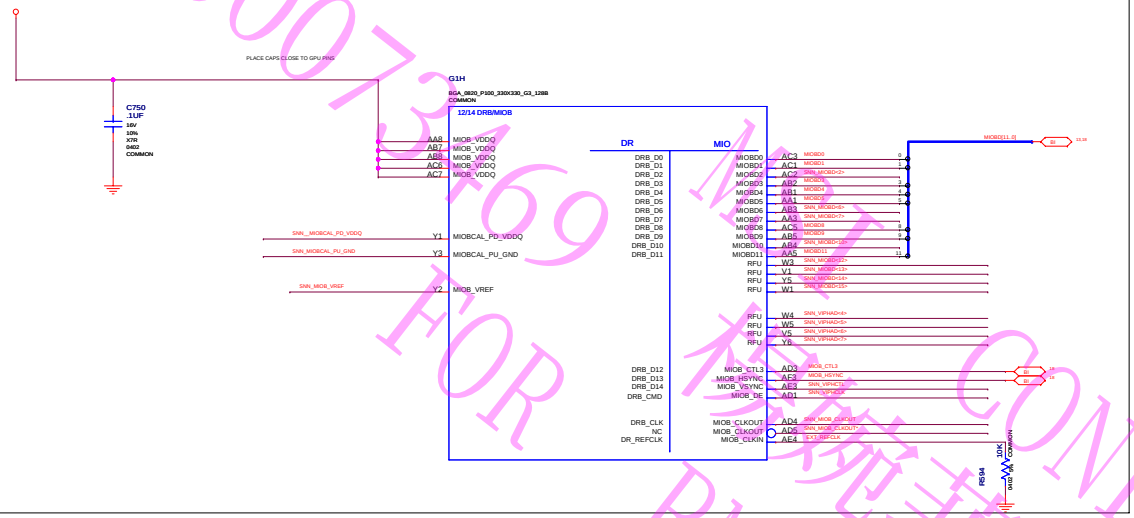
G3 VIP/MIOB

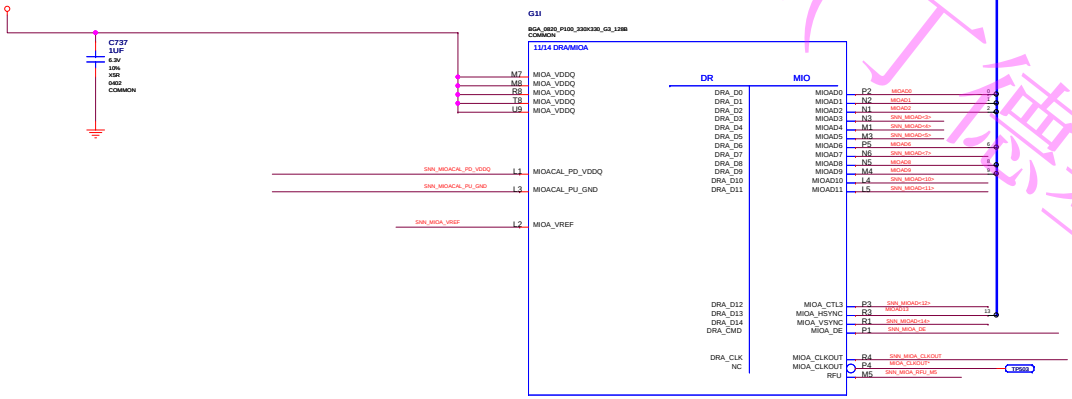


MIO NET RULES

NET	NV_CRITICAL	NV_IMPEDANCE	DIFFPAIR
MIOAD[14..0]	2	50OHM	
EXT_REFCLK	2	50OHM	
MIOA_CLKOUT	2	50OHM	
MIOA_DE	2	50OHM	
MIOBD[11..0]	2	50OHM	

NET	VOLTAGE	MAX_CURRENT	MIN_WIDTH
MIOA_VREF	1.25000V		12.0
MIOACAL_PD_VDDQ	2.50000V		12.0
MIOACAL_PU_GND	0.0000000V		12.0

G3 MIOA



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	MIOA & MIOB

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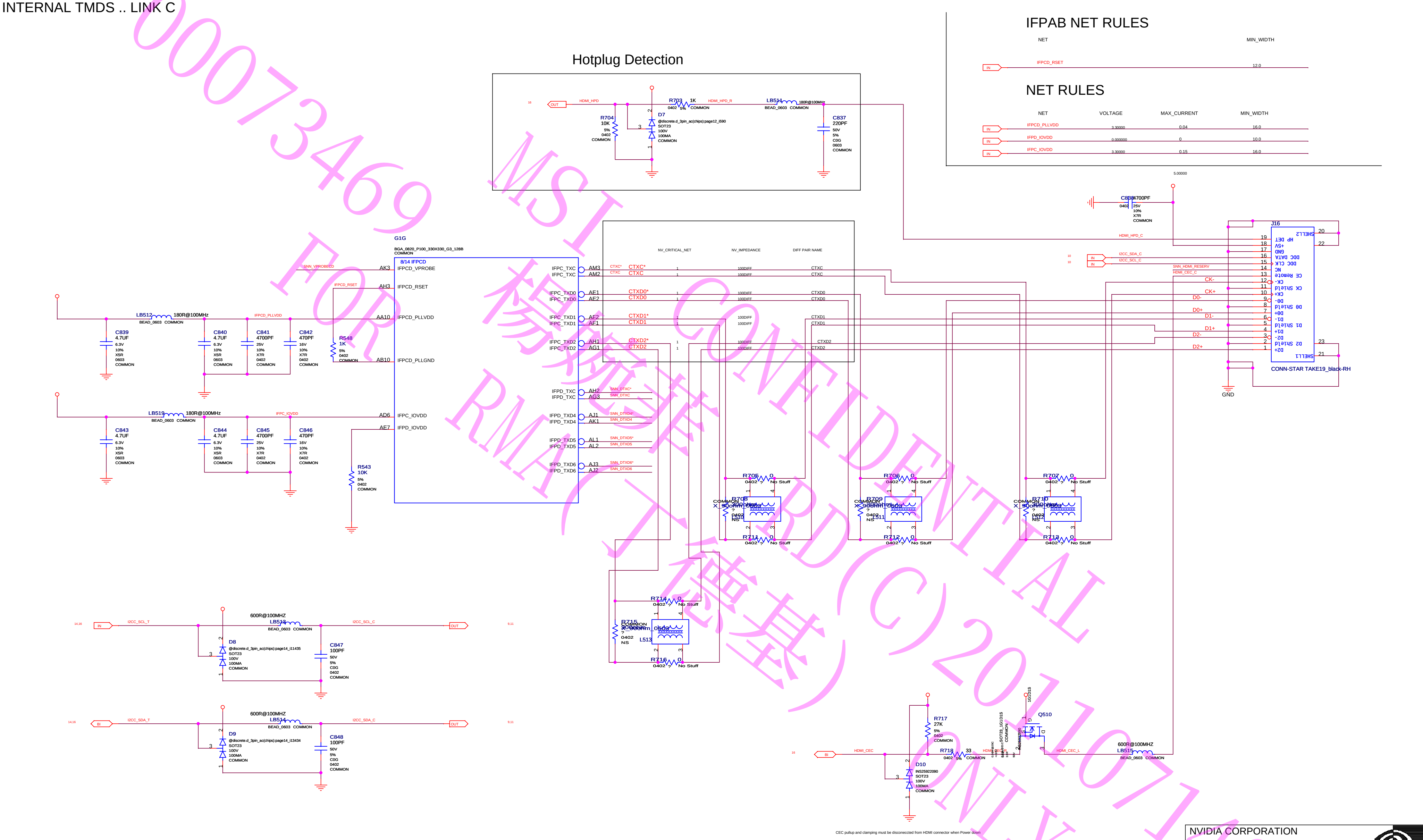
INTERNAL TMDS .. LINK C



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL	
PAGE DETAIL	TMDS LINK C	

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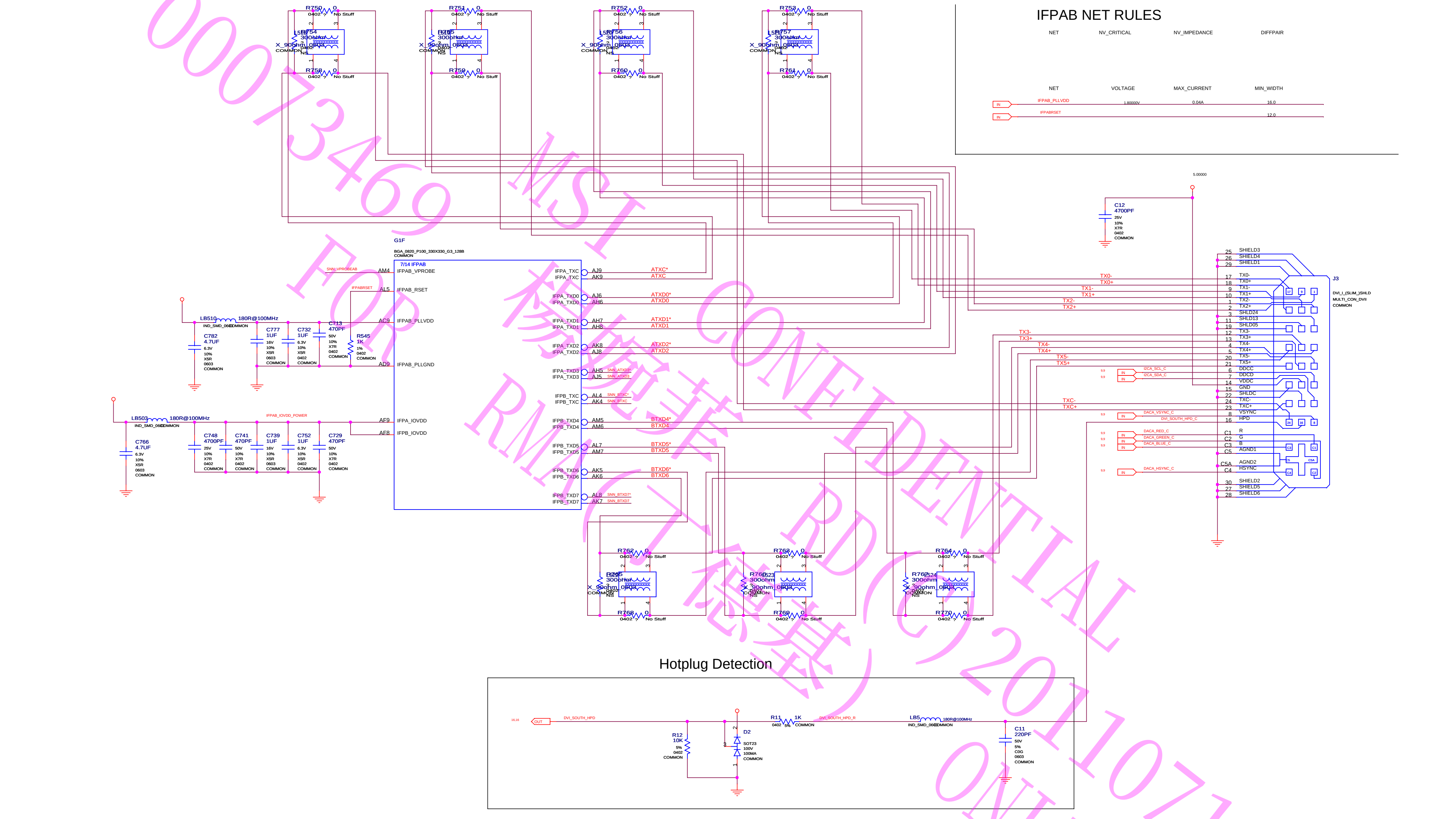
INTERNAL TMDS .. LINK A & B



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	TMDS LINK A & PU's, DVI CONNECTOR SOUTH

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Secondary Display (DACC), DB15

DACC NET RULES

NET	NV_CRITICAL	NV_IMPEDANCE	DIFFPAIR
DACC_RED	1	56OHM	
DACC_GREEN	1	56OHM	
DACC_BLUE	1	56OHM	
DACC_RED_C	1	56OHM	
DACC_GREEN_C	1	56OHM	
DACC_BLUE_C	1	56OHM	
DACC_HSYNC	2	50OHM	
DACC_VSYNC	2	50OHM	
CVB	2	50OHM	
CHB	2	50OHM	
DACC_HSYNC_BUF	2	50OHM	
DACC_VSYNC_BUF	2	50OHM	
DACC_HSYNC_C	2	50OHM	
DACC_VSYNC_C	2	50OHM	
I2CB_SCL	2	50OHM	
I2CB_SDA	2	50OHM	
I2CB_SCL_T	2	50OHM	
I2CB_SDA_T	2	50OHM	
I2CB_SCL_C	2	50OHM	
I2CB_SDA_C	2	50OHM	

NET	VOLTAGE	MAX_CURRENT	MIN_WIDTH
DACC_VDD	3.30000V	0.14A	16.0
DACC_VREF			10.0
DACC_RSET			10.0

DACC RGB-FILTER

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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	DACC FILTERS, DACC SYNC BUFFERS & DB15 MID

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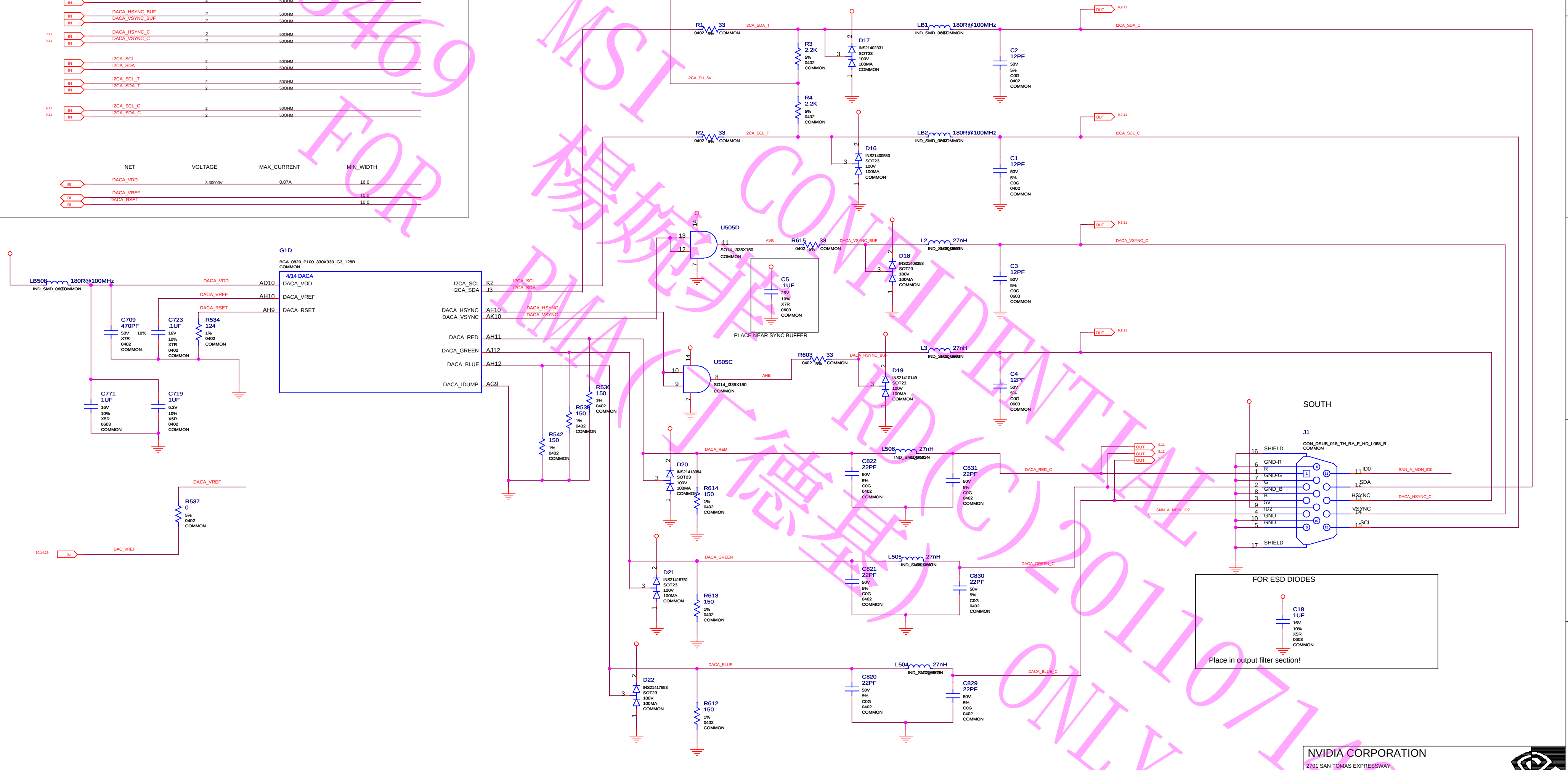
Primary Display (DACA), Slim DB15

DACA NET RULES

	NET	NV_CRITICAL	NV_IMPEDANCE	DIFFPAIR
IN	DACA_RED	1	56OHM	
IN	DACA_GREEN	1	56OHM	
IN	DACA_BLUE	1	56OHM	
9,11 IN	DACA_RED_C	1	56OHM	
9,11 IN	DACA_GREEN_C	1	56OHM	
9,11 IN	DACA_BLUE_C	1	56OHM	
IN	DACA_HSYNC	2	50OHM	
IN	DACA_VSYNC	2	50OHM	
IN	AVB	2	50OHM	
IN	AHB	2	50OHM	
IN	DACA_HSYNC_BUF	2	50OHM	
IN	DACA_VSYNC_BUF	2	50OHM	
9,11 IN	DACA_HSYNC_C	2	50OHM	
9,11 IN	DACA_VSYNC_C	2	50OHM	
IN	I2CA_SCL	2	50OHM	
IN	I2CA_SDA	2	50OHM	
IN	I2CA_SCL_T	2	50OHM	
IN	I2CA_SDA_T	2	50OHM	
9,11 IN	I2CA_SCL_C	2	50OHM	
9,11 IN	I2CA_SDA_C	2	50OHM	

	NET	VOLTAGE	MAX_CURRENT	MIN_WIDTH
BI	DACA_VDD	3.30000V	0.07A	16.0
BI	DACA_VREF			10.0
BI	DACA_RSET			10.0

DACA RGB-FILTER



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	DACA FILTERS, DACA SYNC BUFFERS & DB15 SOUTH

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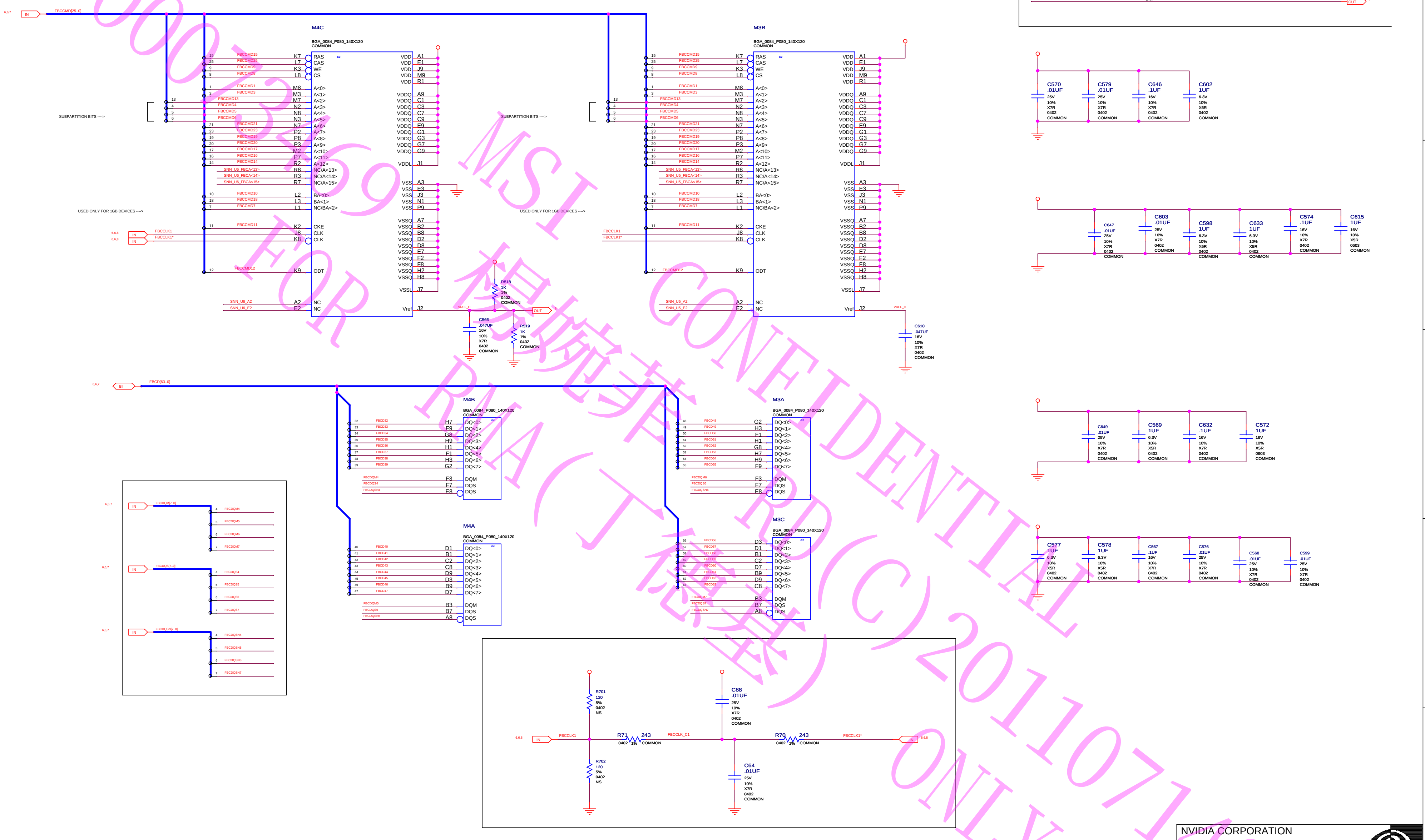
FBC MEMORY 2nd bank 32..63

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	FBC 16Mx16 DDR2 MEMORIES, 2ND BANK 32..63

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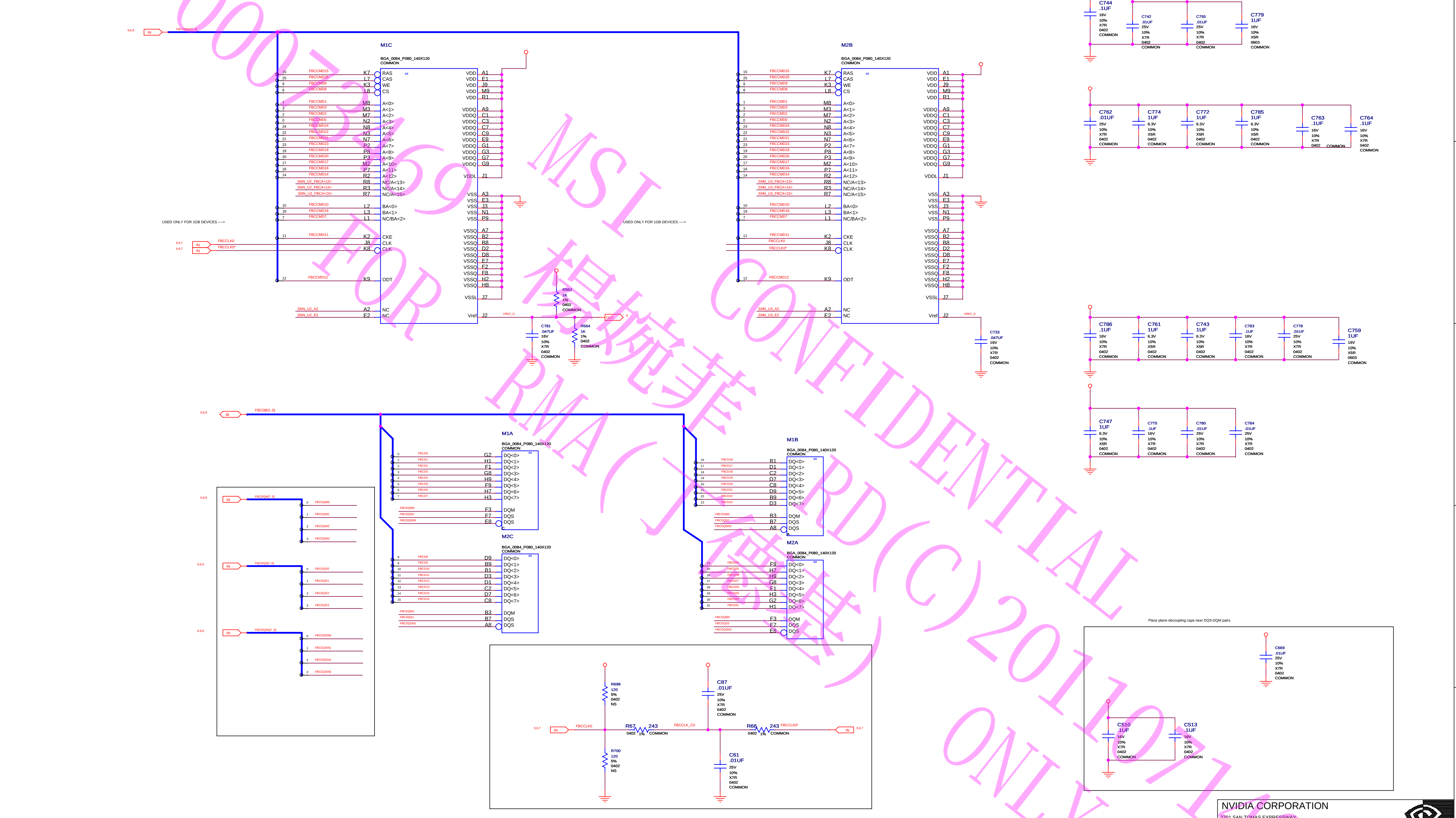
FBC MEMORY 2nd bank 0..31

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	FBC 16MX16 DDR2 MEMORIES, 2ND BANK 0..31

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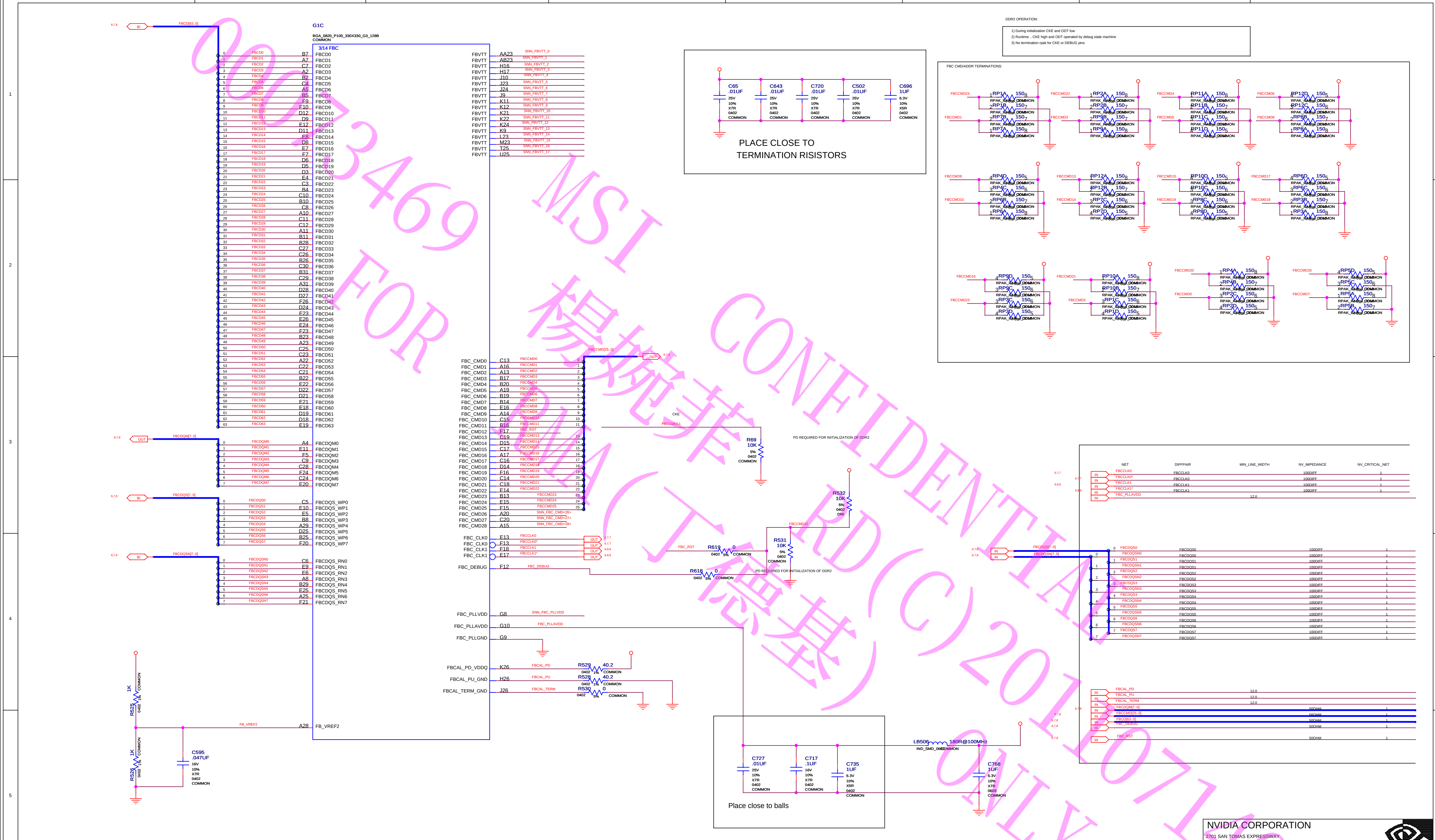

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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	FBC MEMORY INTERFACE, GPU FBVTT, FBVDDQ
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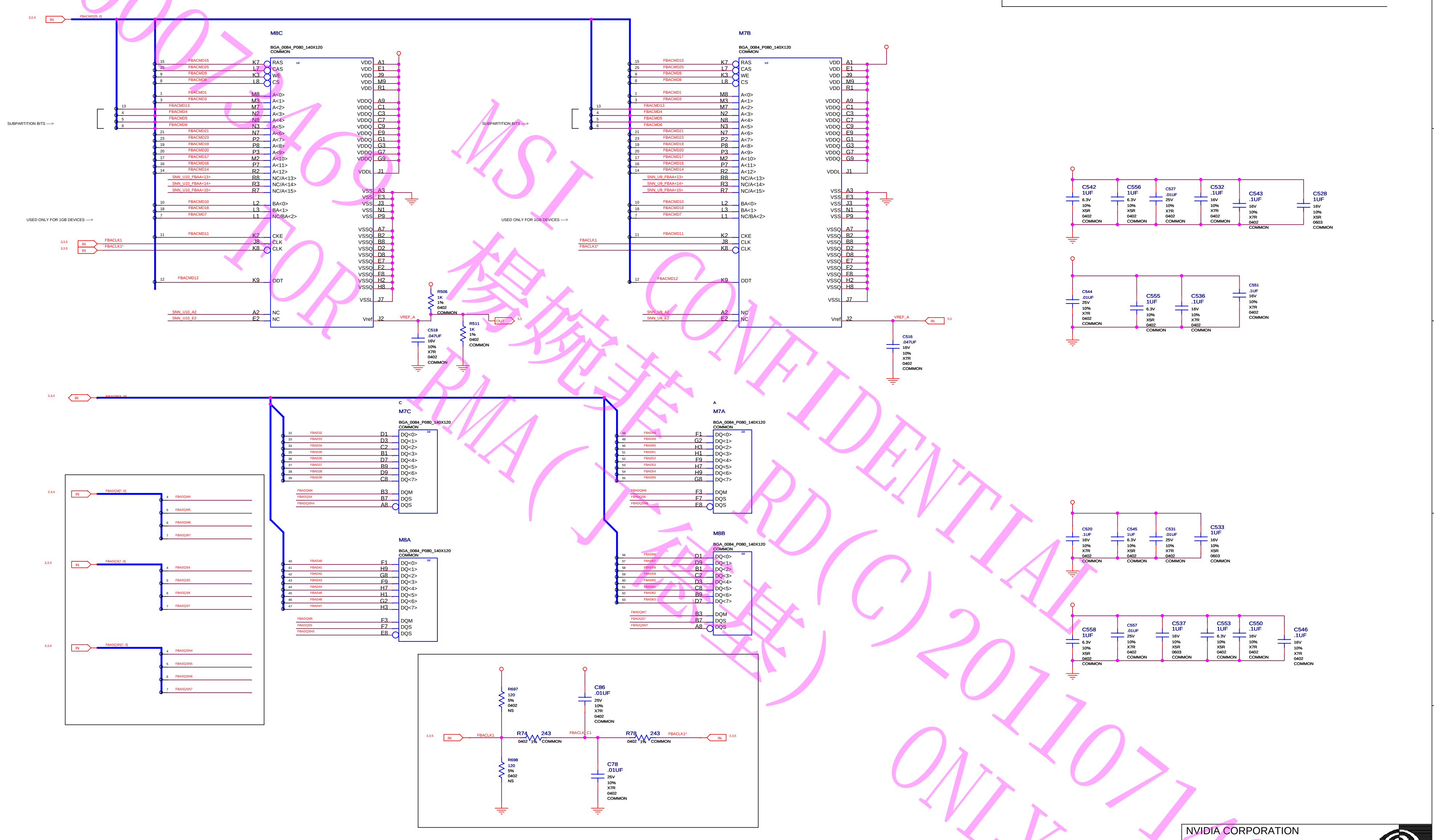
FBA MEMORY 1st bank 32..63

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	FBA 16Mx16 DDR2 MEMORIES, 1ST BANK 32..63

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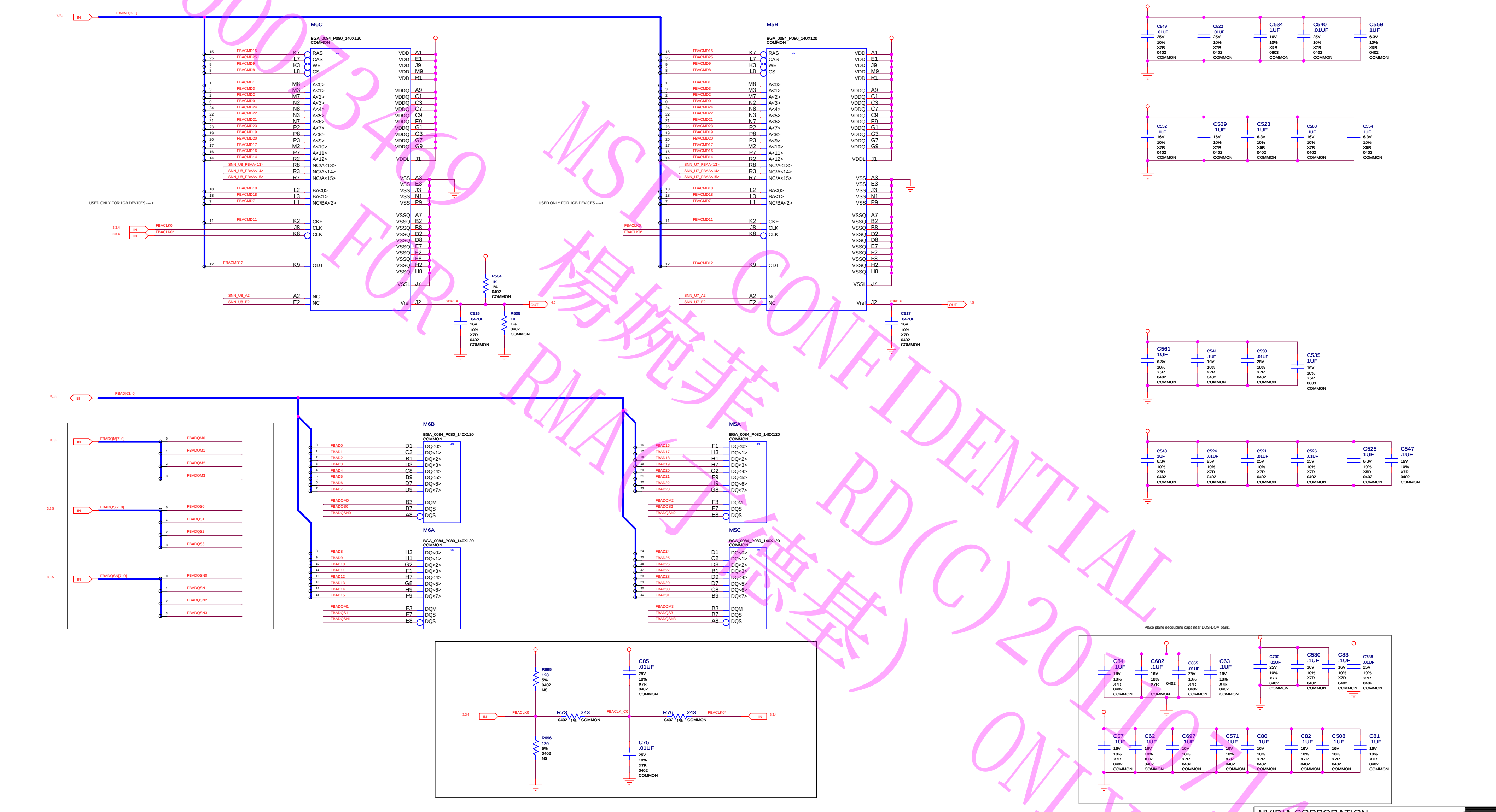
FBA MEMORY 1st bank 0..31

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY



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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	FBA 16Mx16 DDR2 MEMORIES, BANK 0..31

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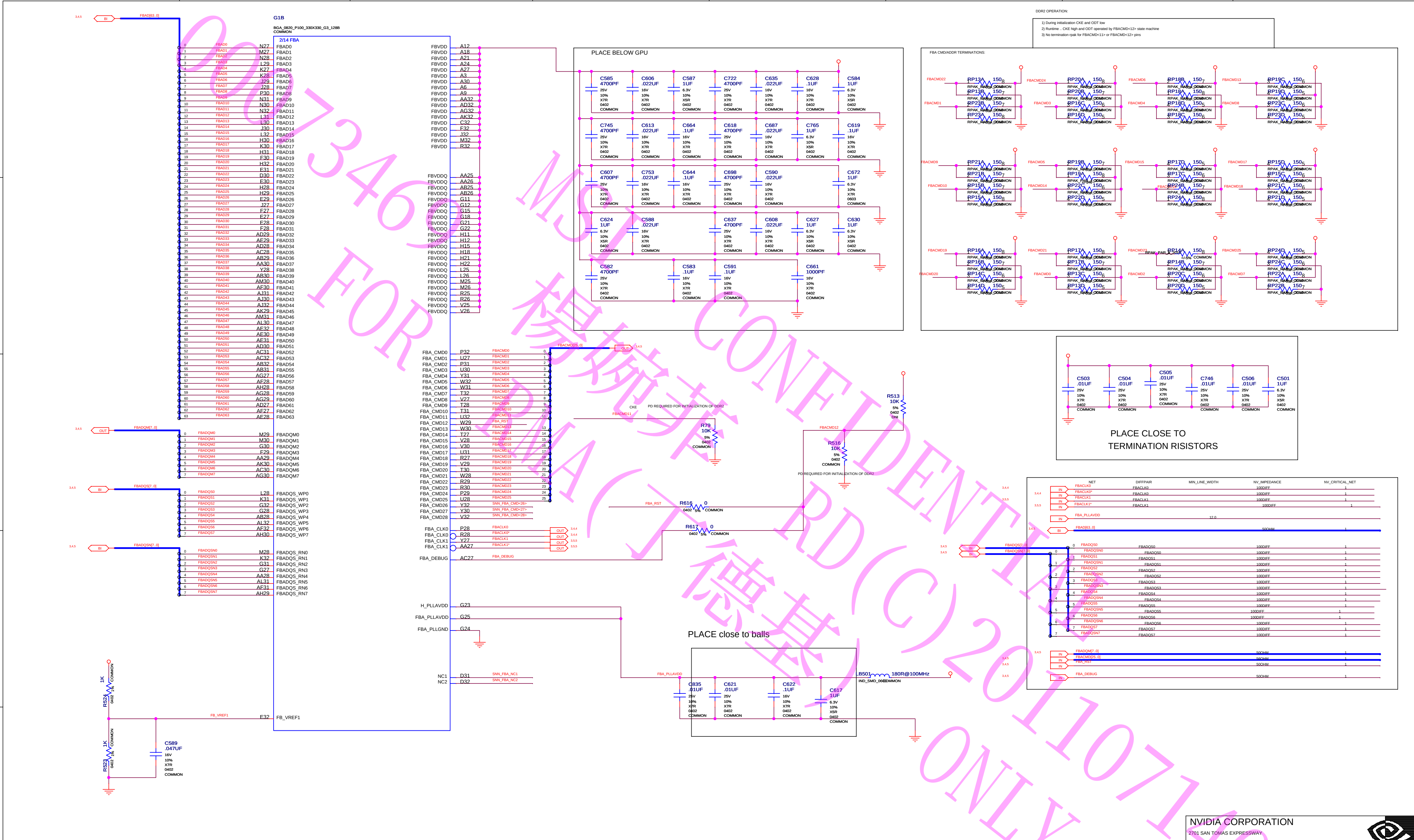

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	FBA MEMORY INTERFACE, GPU FBVDD/Q DECOUPLING CAPS, FBVTT TERMINATION

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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	PCI EXPRESS 16X, NVVDD DECOUPLING CAPS,PEX_IOVDD/Q DECOUPLING CAPS

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P403-B00 DESIGN -- G84-200, 256 MB DDR2,DVI-I, VGA, HDTV

PAGE SUMMARY:

No.	VARIANT	NVPN	ASSEMBLY
B	BASE	600-10403-0000-200	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	SKU0020	600-10403-0020-200	P403-B00 G86-300 459/400MHz 256MB 16Mx16 BGA84 GDDR2 DVI-I DL+VGA+HDTV-Out
2	SKU0021	600-10403-0021-200	P403-B00 G84-200 459/400MHz 256MB 16Mx16 BGA84 GDDR2 DVI-I DL+VGA+HDTV-Out
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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
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NV_PN	600-10403-0000-200 A		
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NAME		DATE	12-JAN-2007