

P1263-A03

GF110, GDDR5, 320-bit, 32Mx32/64Mx32
DVI -I DL, HDMI , DP, 3Way-SLI

TABLE OF CONTENTS

Page	Descripti on
1	Table of Contents
2	Block Diagram
3	PCI Express 2.0
4	GPU Framebuffer: Partition A/B
5	FBB Partition
6	GPU Framebuffer: Partition C/D
7	FBC Partition
8	FBD Partition
9	GPU Framebuffer: Partition E/F
10	FBE Partition
11	FBF Partition
12	GDDR5 Memory Decoupling
13	GPU Decoupling(NVVDD, FBVDDQ)
14	Display: DACA (South DVI -I Lower)
15	Display: DACB (South DVI -I Upper)
16	IFP A/B Interface (South DVI Lower)
17	IFP E/F Interface(South DVI -I Upper)
18	IFPD (North DP)
19	IFPC Interface (Mid HDMI)
20	MISC: GPIO, I2C, ROM, and XTAL
21	Multi-use IO(MIO) Interface
22	GPU POWER CONNECTIONS
23	GPU Strapping Configuration
24	MISC: Thermal / BACKDRIVE
25	Power Supply: PEX PS INPUT, DETECTION LOGIC

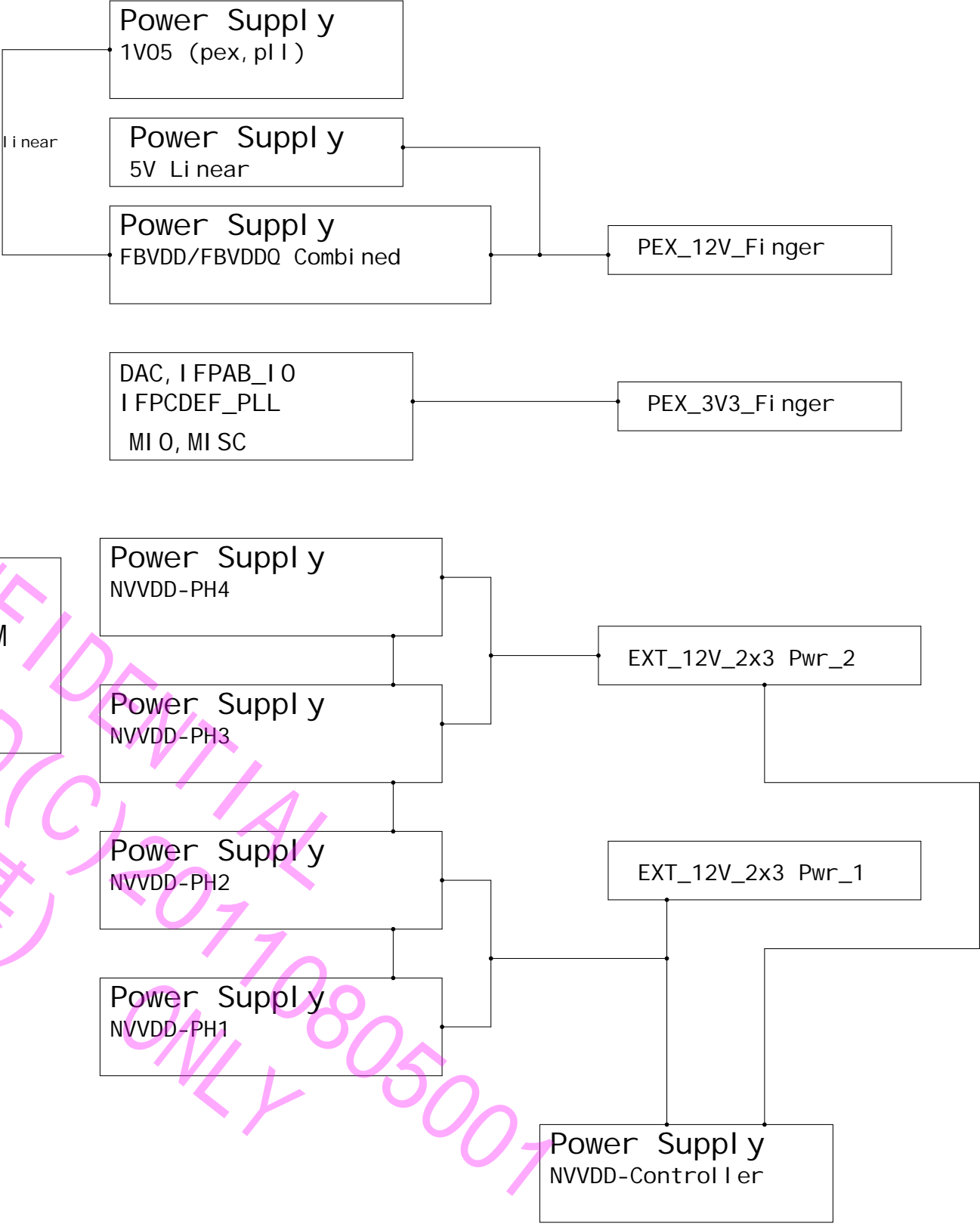
Page	Descripti on
26	Power Supply: DDC5V, PEX_VDD, 5V_PWM, AVDD
27	Power Supply: FBVDDQ
28	Power Supply: NVVDD Controller
29	Power Supply: NVVDD Phase 1,2
30	Power Supply: NVVDD Phase 3,4
31	Thermal , Mechanical

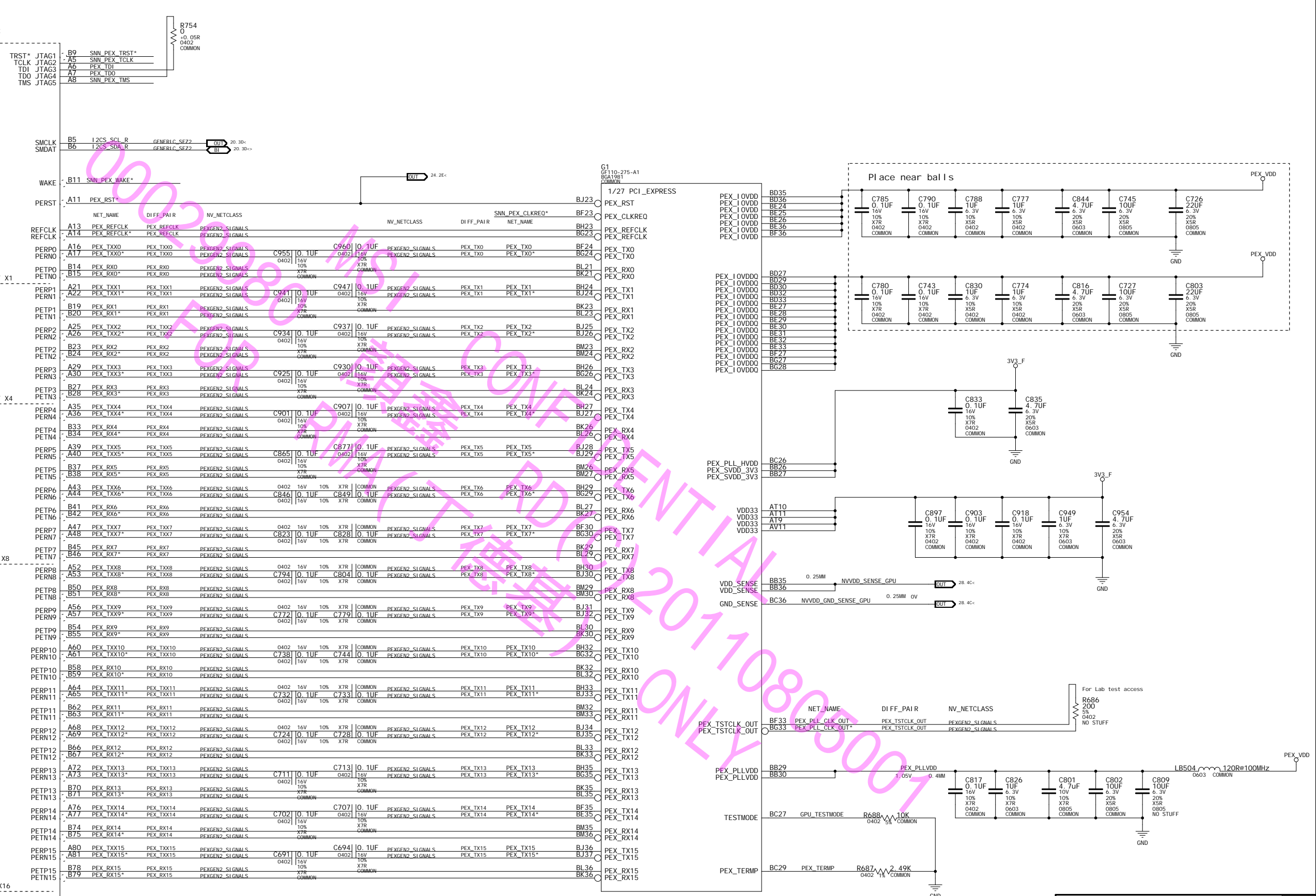
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.


Block Diagram

Power Sequence

- 5V - Always On
- 3V3 - Always On
- 12V_F - Always On
- 12V_PEX6_EXT1 - Always On
- 12V_PEX6_EXT2 - Always On
- NVVDD - Input_Pex_Power_Rail_Enable + Thermal_Shutdown
- FBVDD/FBVDDQ - NVVDD_PG00D
- PEX_VDD - Following FBVDDQ





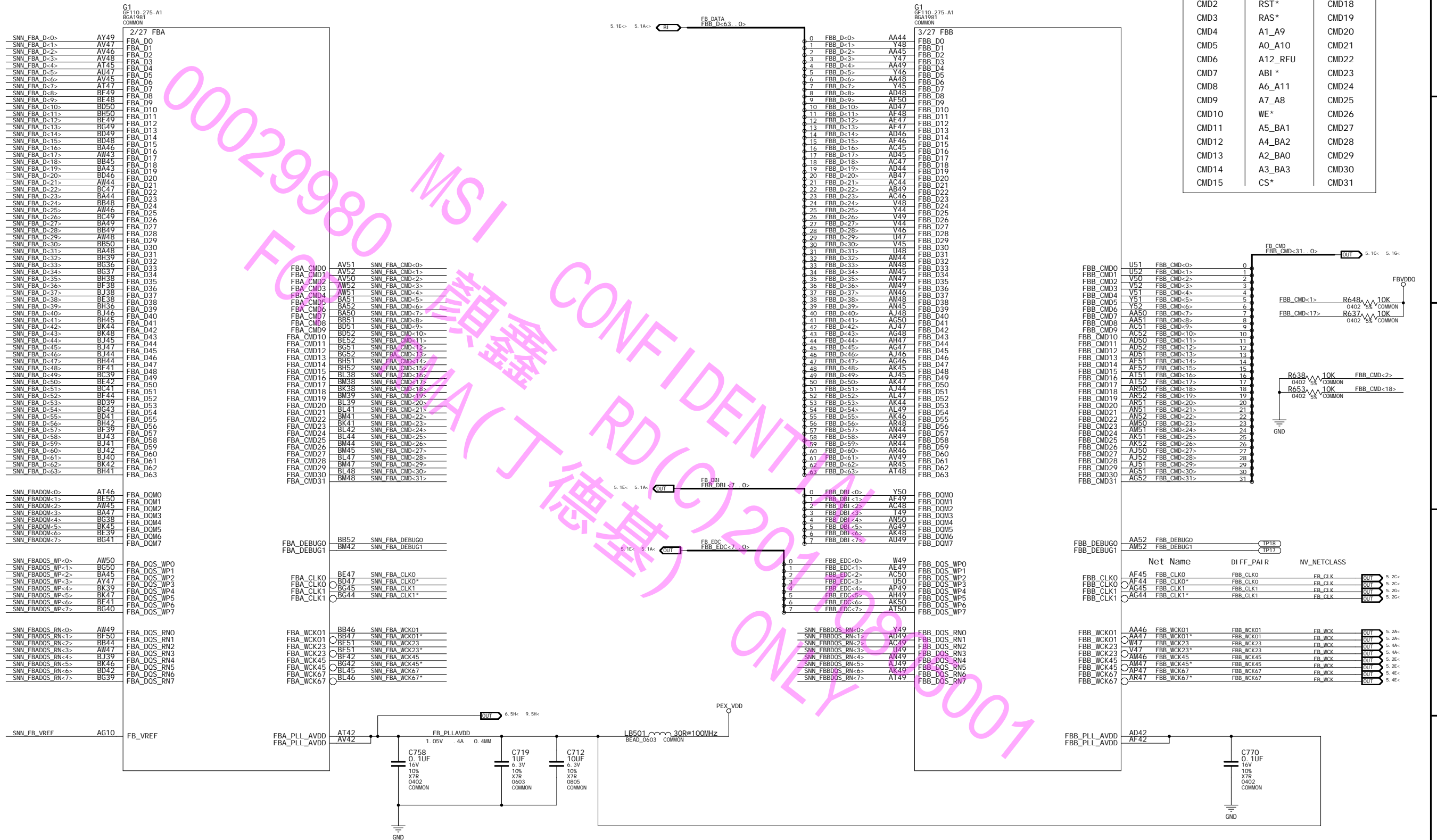
NVIDIA CORPORATION			
2701 SAN TOMAS EXPRESSWAY			
SANTA CLARA, CA 95050, USA			
NV_PN	602-11263-0004-QS2		
PCB REV	P1263-A03	PAGE	3 OF 31
BOM REV	A	DATE	26-NOV-2010

ASSEMBLY	P1263 GF110-040 128OMB GDDR5 32Mx32 DVI -I /DUAL+HDMI +DP
PAGE DETAIL	PCI Express 2.0

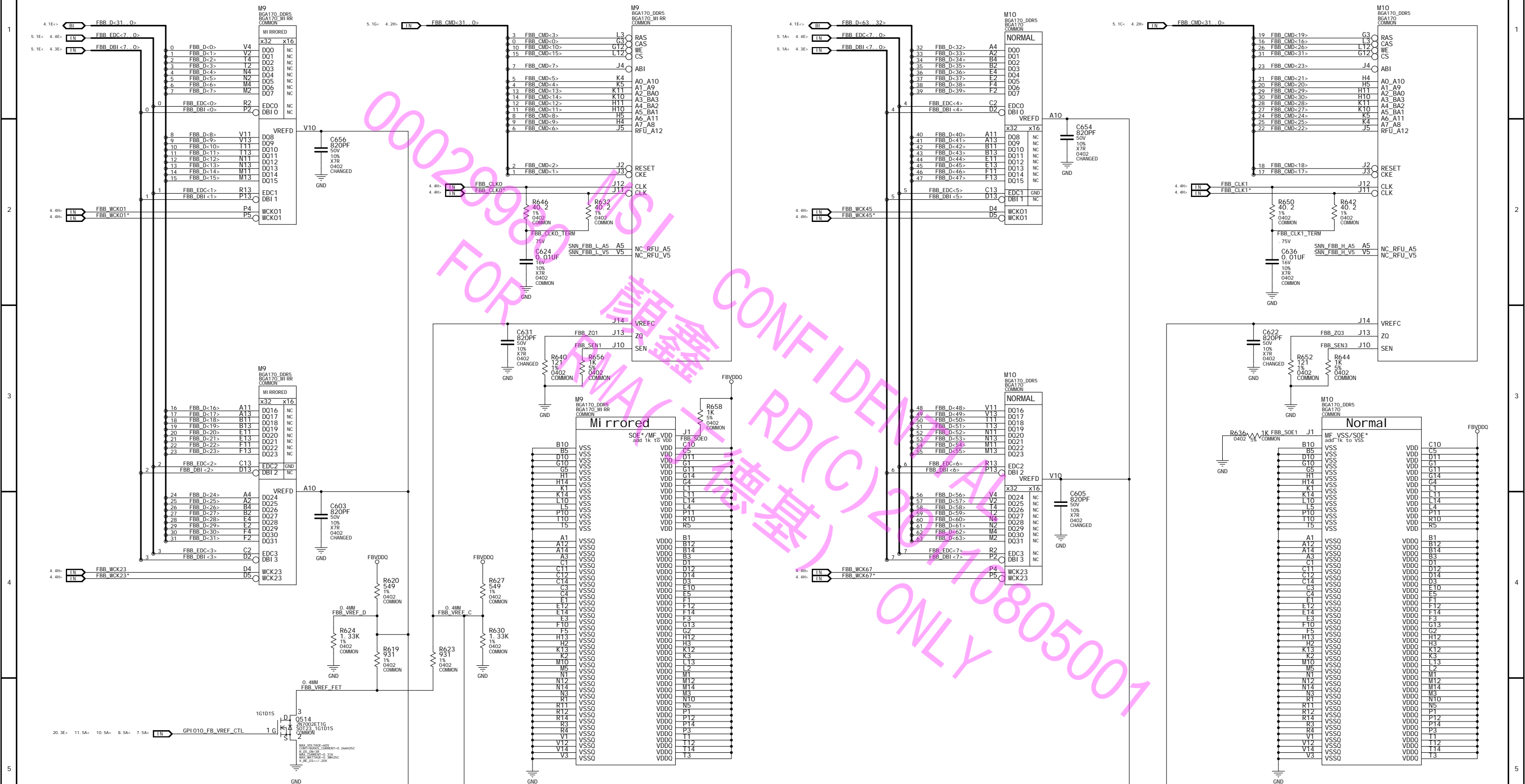
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

GPU Framebuffer: Partition A/B

GDDR5 CMD Mapping		
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



MEMORY: FBB Parti ti on



NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY



NV_PN	602-11263-0004-QS2
-------	--------------------

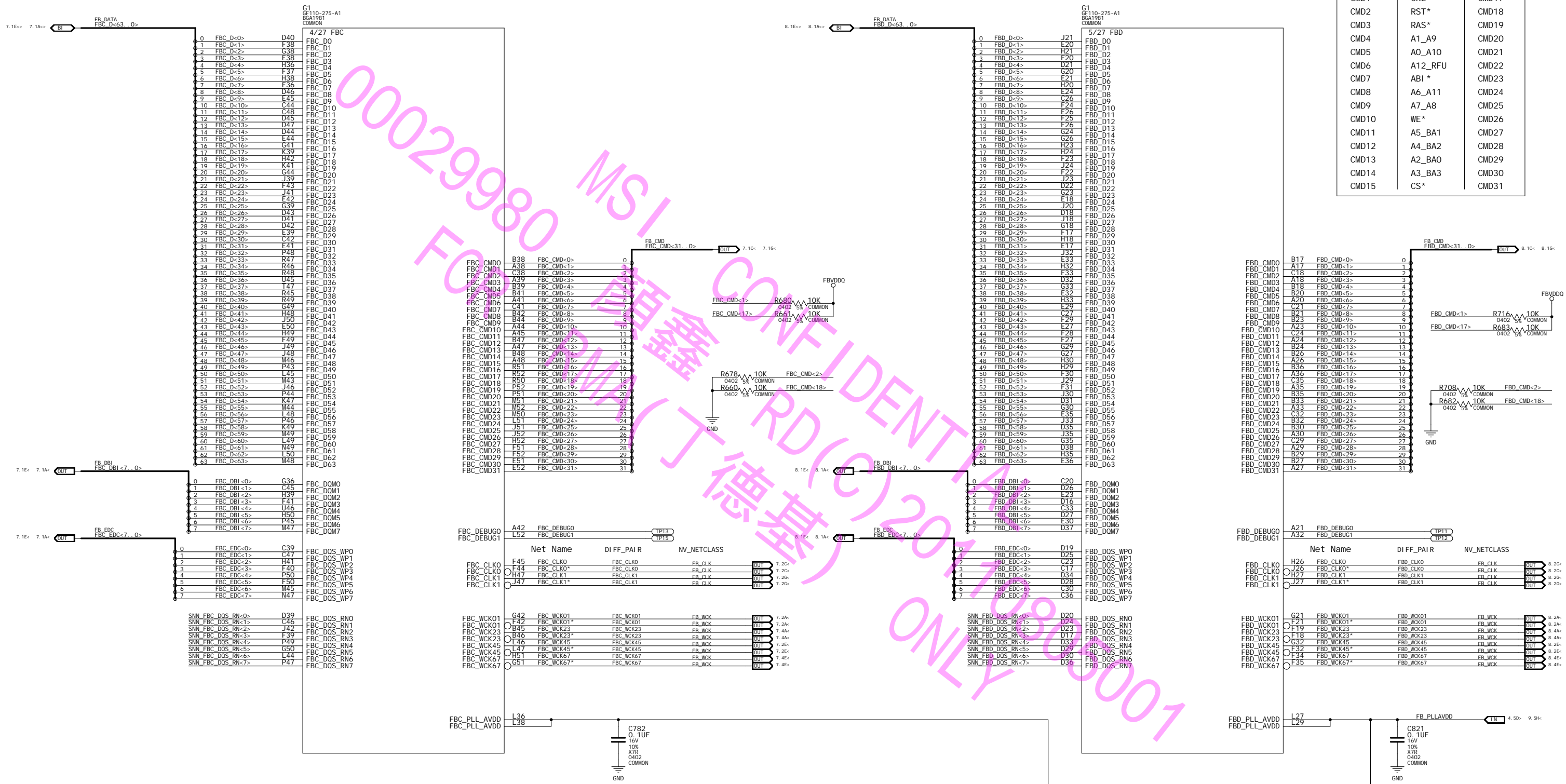
PCB REV	P1263-A03	PAGE	5 OF 31
---------	-----------	------	---------

BOM REV	A	DATE	26-NOV-2010
---------	---	------	-------------

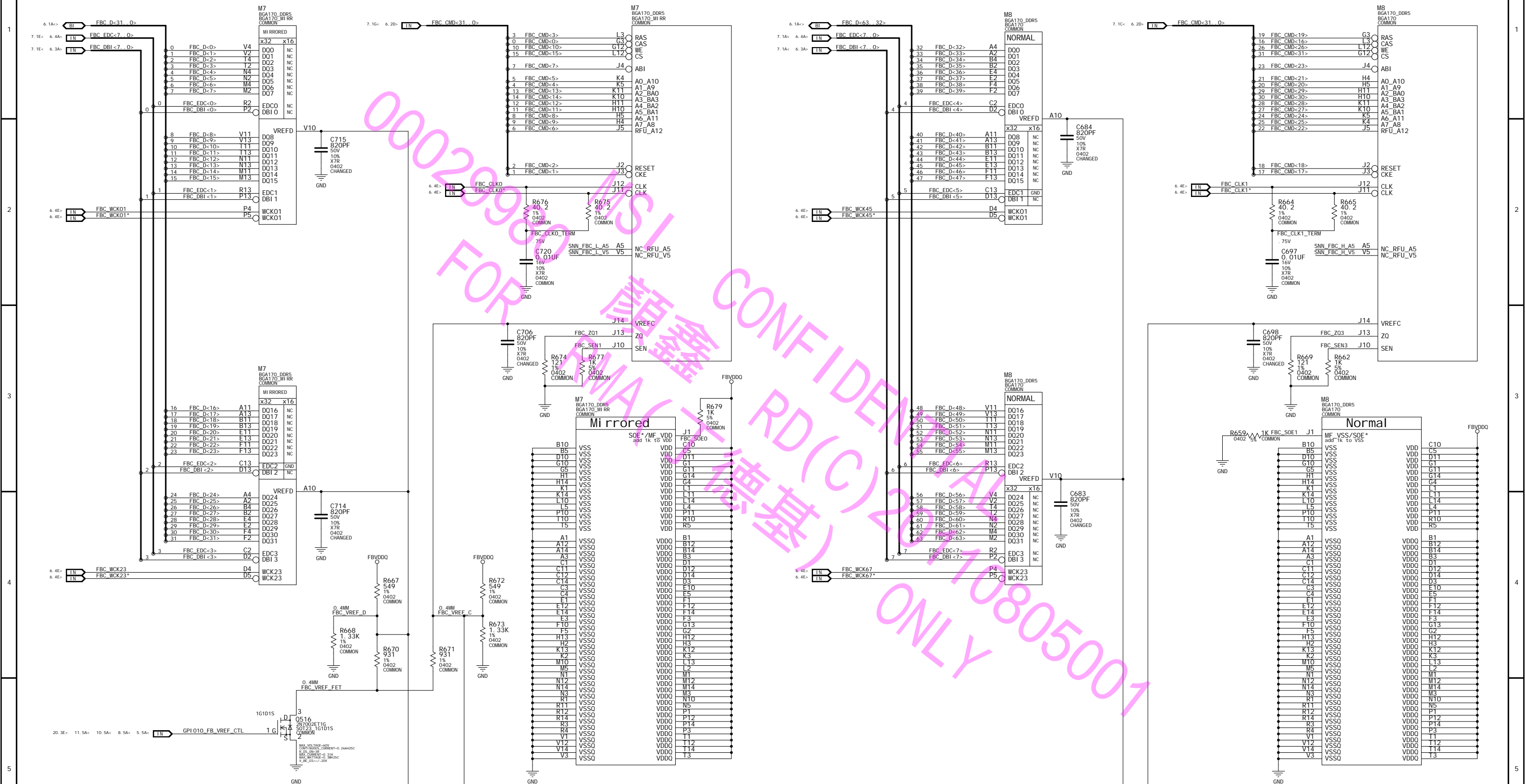
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

GPU Framebuffer: Partition C/D

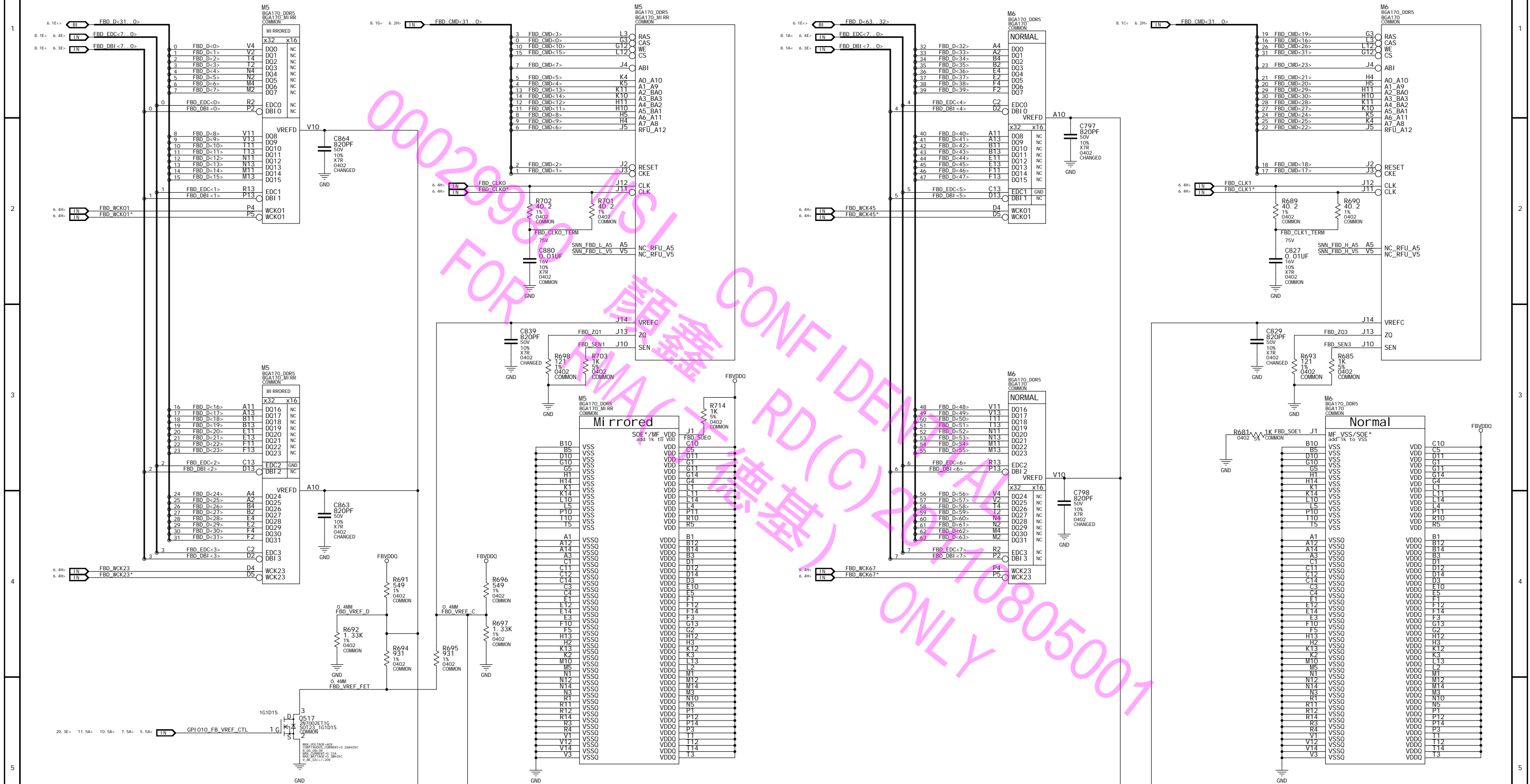
GDDR5 CMD Mapping		
0. . 31	CMD	32. . 63
CMD0	CAS*	CMD16
CMD1	CKE*	CMD17
CMD2	RST*	CMD18
CMD3	RAS*	CMD19
CMD4	A1_A9	CMD20
CMD5	A0_A10	CMD21
CMD6	A12_RFU	CMD22
CMD7	AB1 *	CMD23
CMD8	A6_A11	CMD24
CMD9	A7_A8	CMD25
CMD10	WE*	CMD26
CMD11	A5_BA1	CMD27
CMD12	A4_BA2	CMD28
CMD13	A2_BAO	CMD29
CMD14	A3_BA3	CMD30
CMD15	CS*	CMD31



MEMORY: FBC Parti ti on



MEMORY: FBD Parti ti on



NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95050, USA

NV PN	602-11263-0004-0S2
-------	--------------------

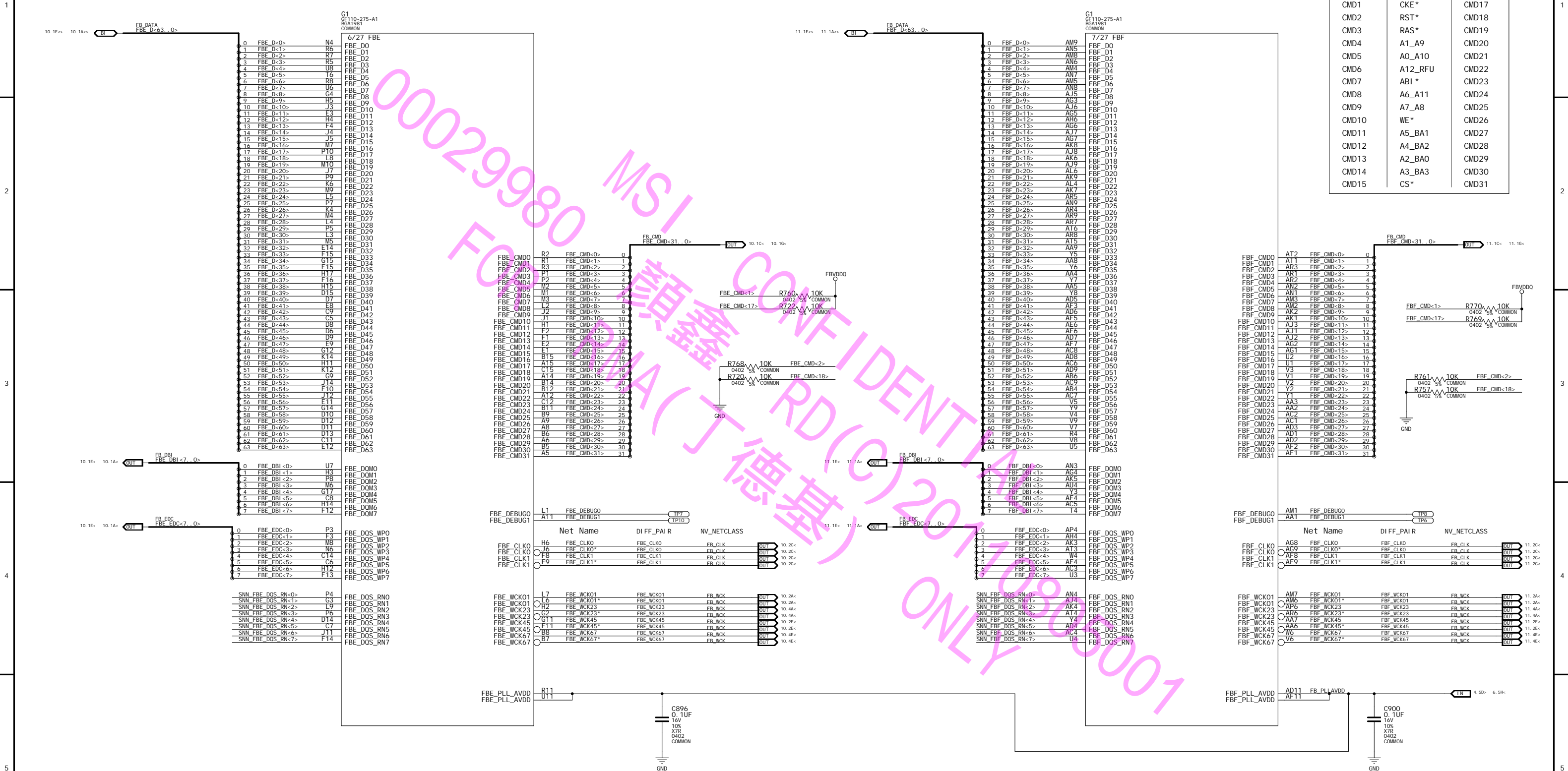
PCB REV	P1263-A03	PAGE	8 OF 31
---------	-----------	------	---------

BOM REV	A	DATE	26-NOV-2010
---------	---	------	-------------

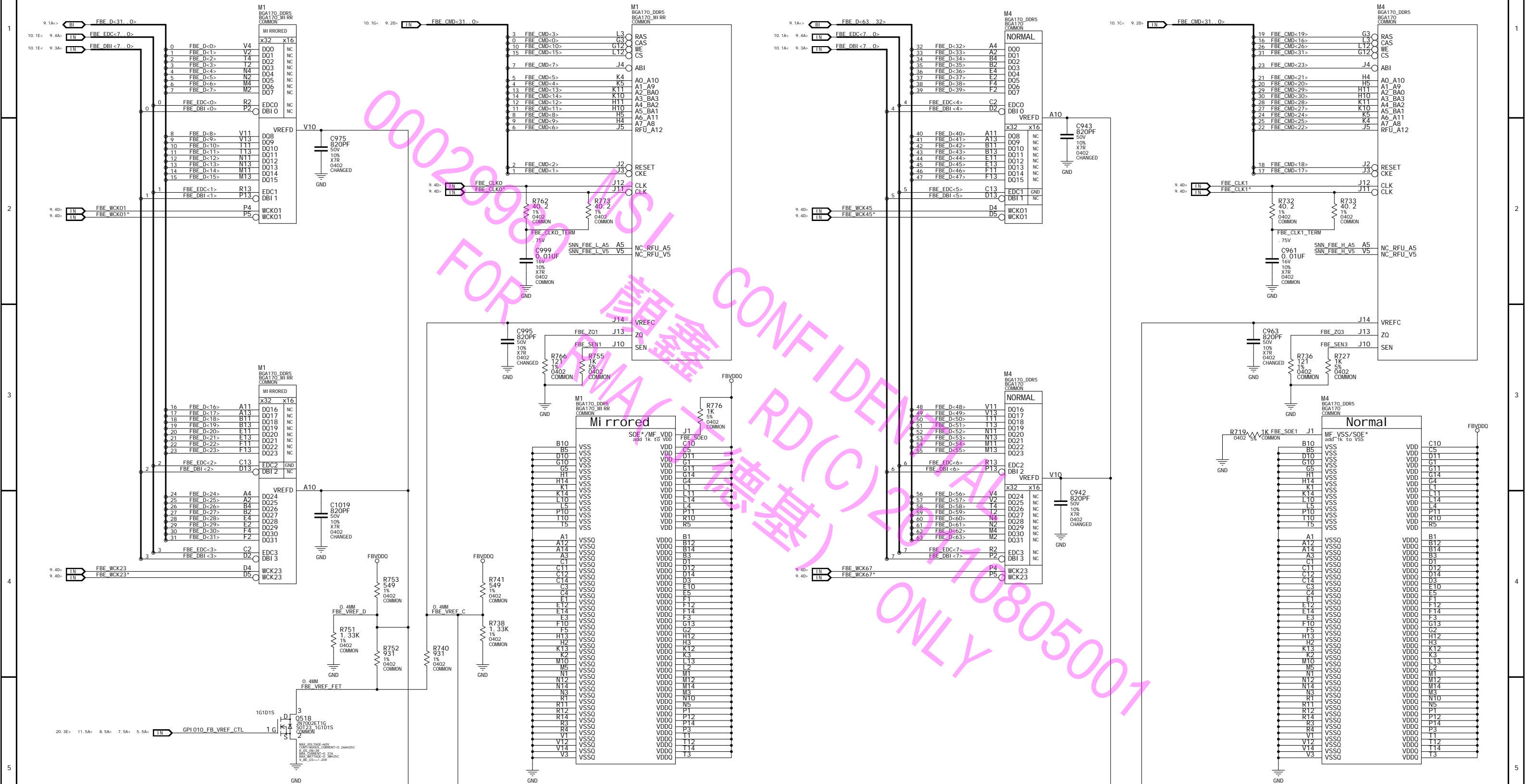
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

GPU Framebuffer: Parti ti on E/F

GDDR5 CMD Mappi ng		
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	AB1 *	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



MEMORY: FBE Parti ti on



NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

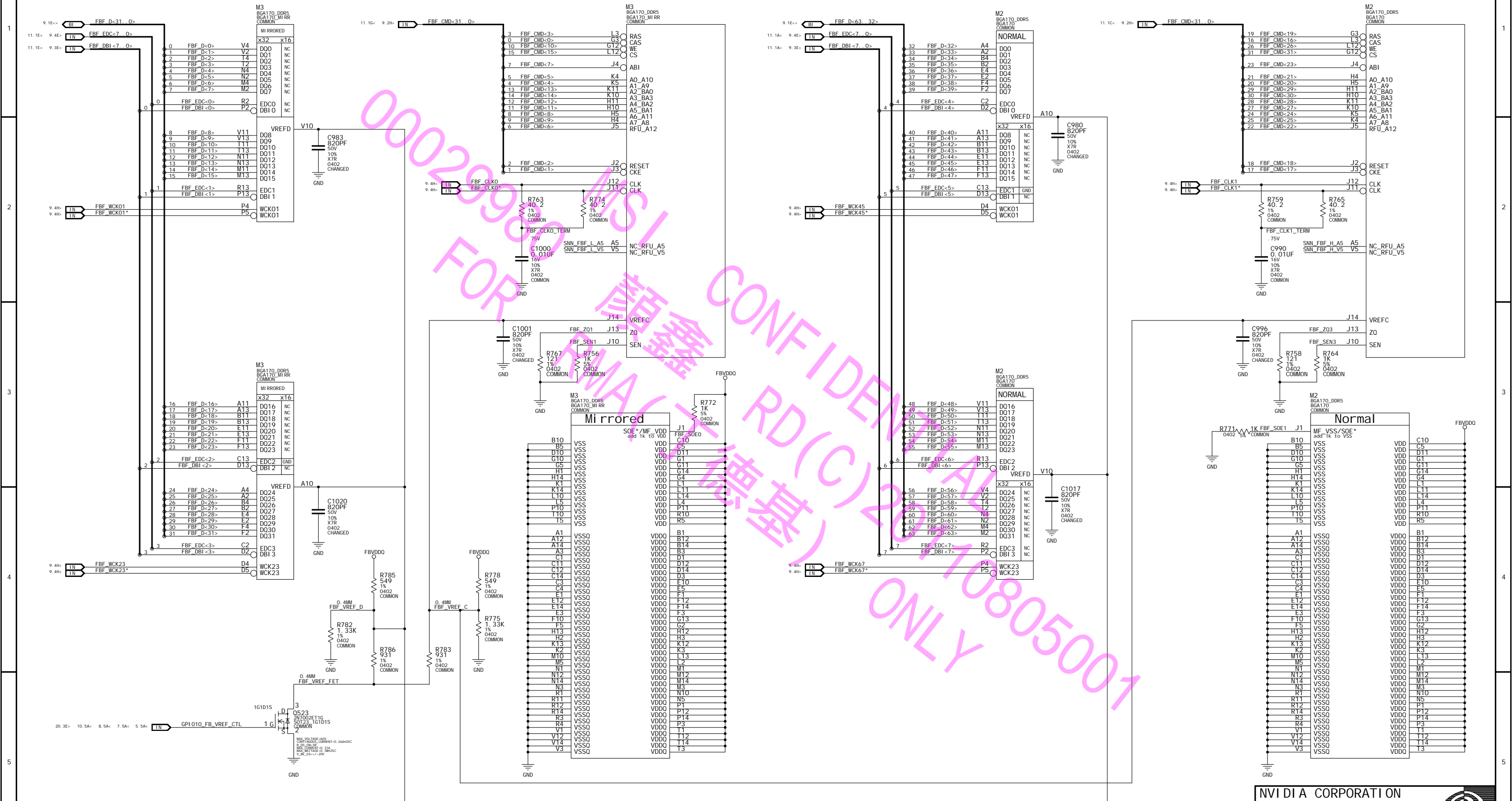
SANTA CLARA, CA 95050, USA

NV_PN	602-11263-0004-QS2
-------	--------------------

PCB REV	P1263-A03	PAGE	10 OF 31
BOM REV	A	DATE	26-NOV-2010

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

MEMORY: FBF Parti ti on



NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95050, USA

NV_PN	602-11263-0004-QS2
-------	--------------------

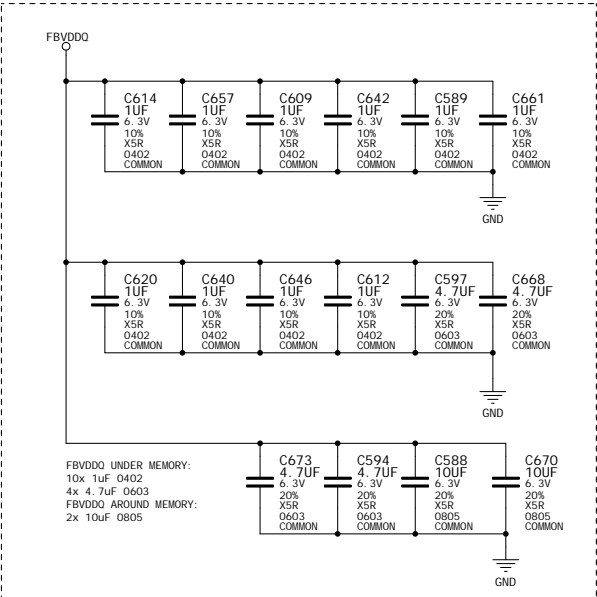
PCB REV	P1263-A03	PAGE	11 OF 31
---------	-----------	------	----------

BOM REV	A	DATE	26-NOV-2010
---------	---	------	-------------

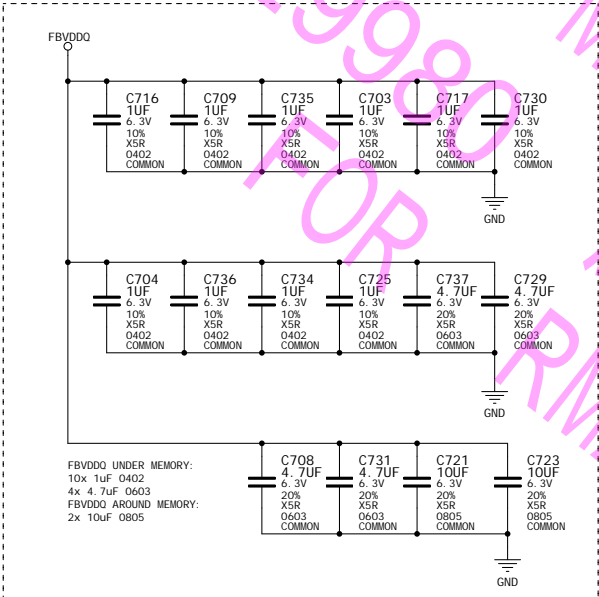
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

GDDR5 Memory Decoupling

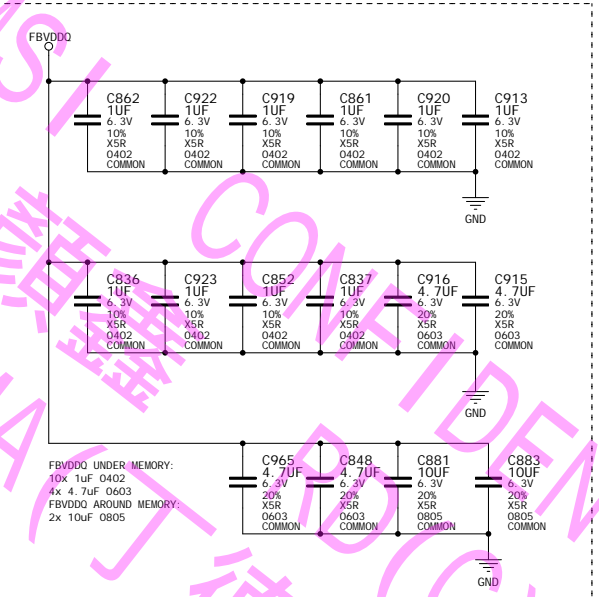
DECOUPLING: FBB<31..0>



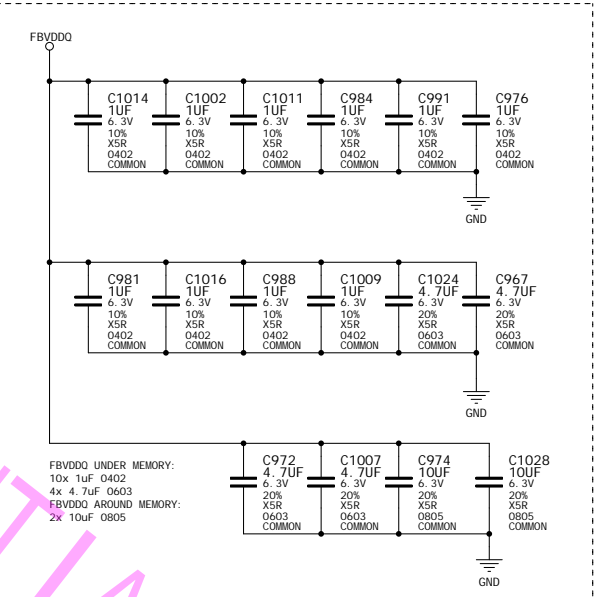
DECOUPLING: FBC<31..0>



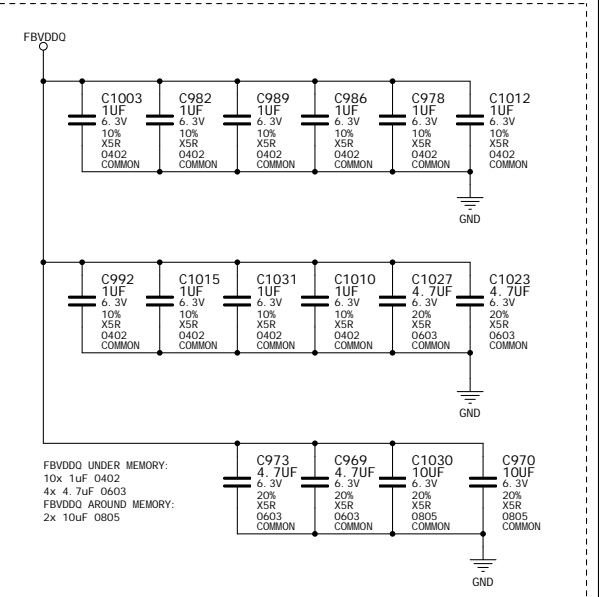
DECOUPLING: FBD<31..0>



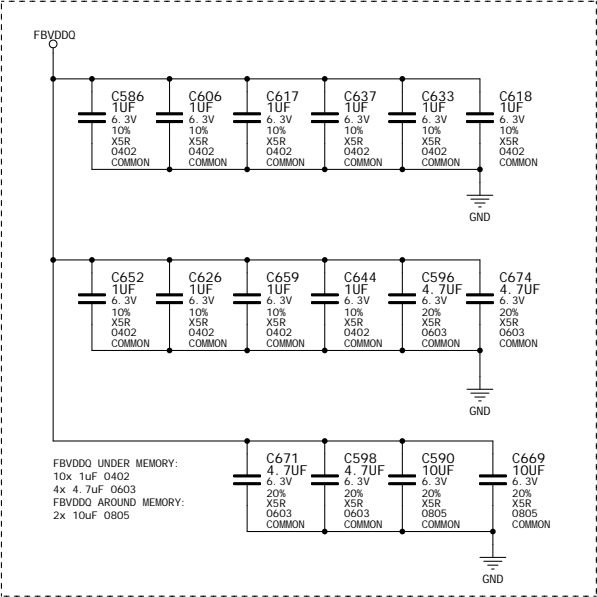
DECOUPLING: FBE<31..0>



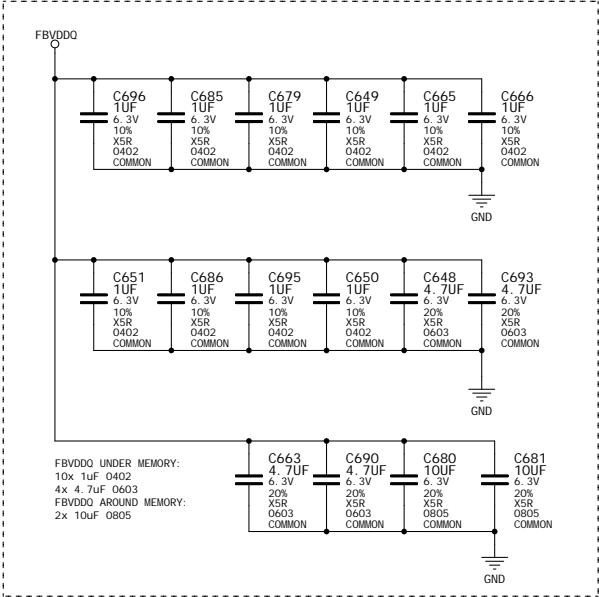
DECOUPLING: FBF<31..0>



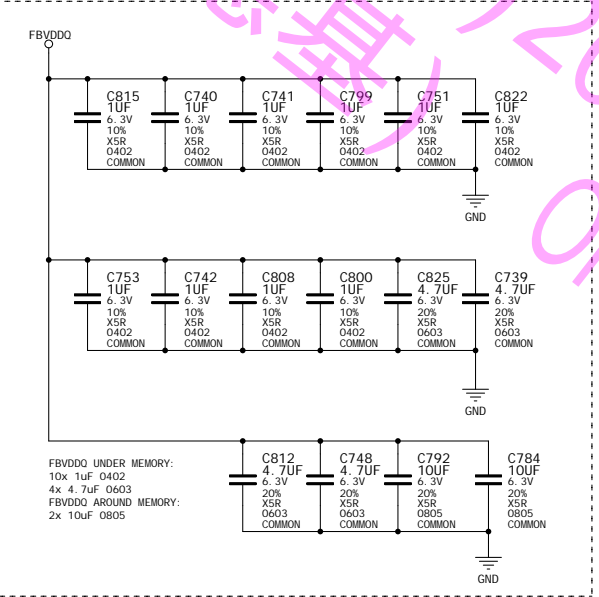
DECOUPLING: FBB<63..32>



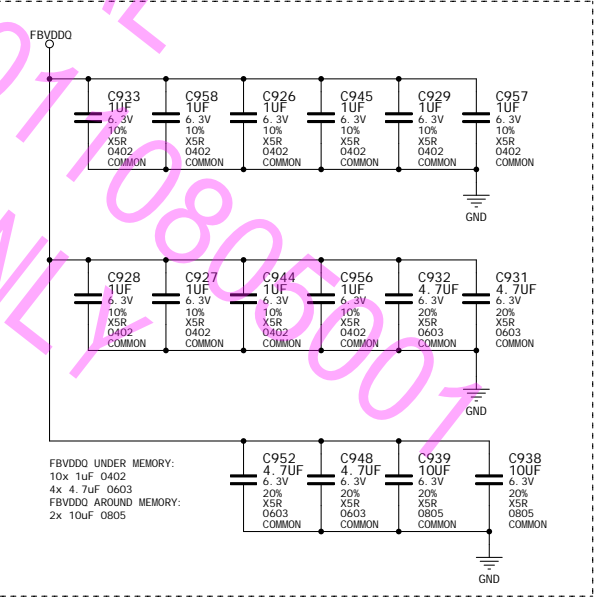
DECOUPLING: FBC<63..32>



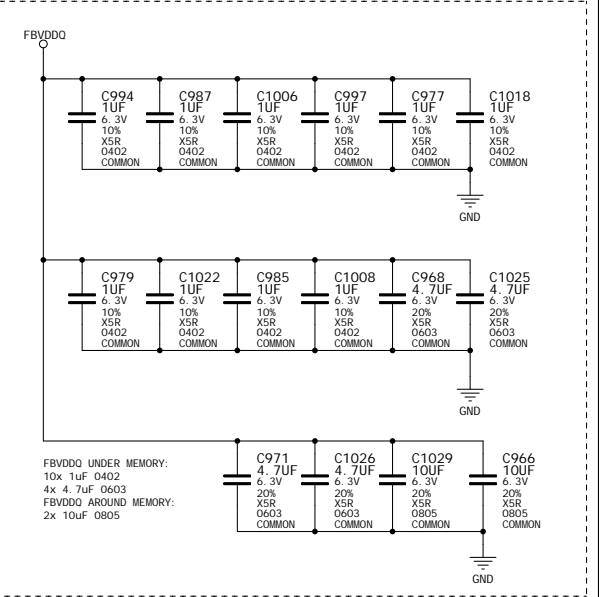
DECOUPLING: FBD<63..32>



DECOUPLING: FBE<63..32>



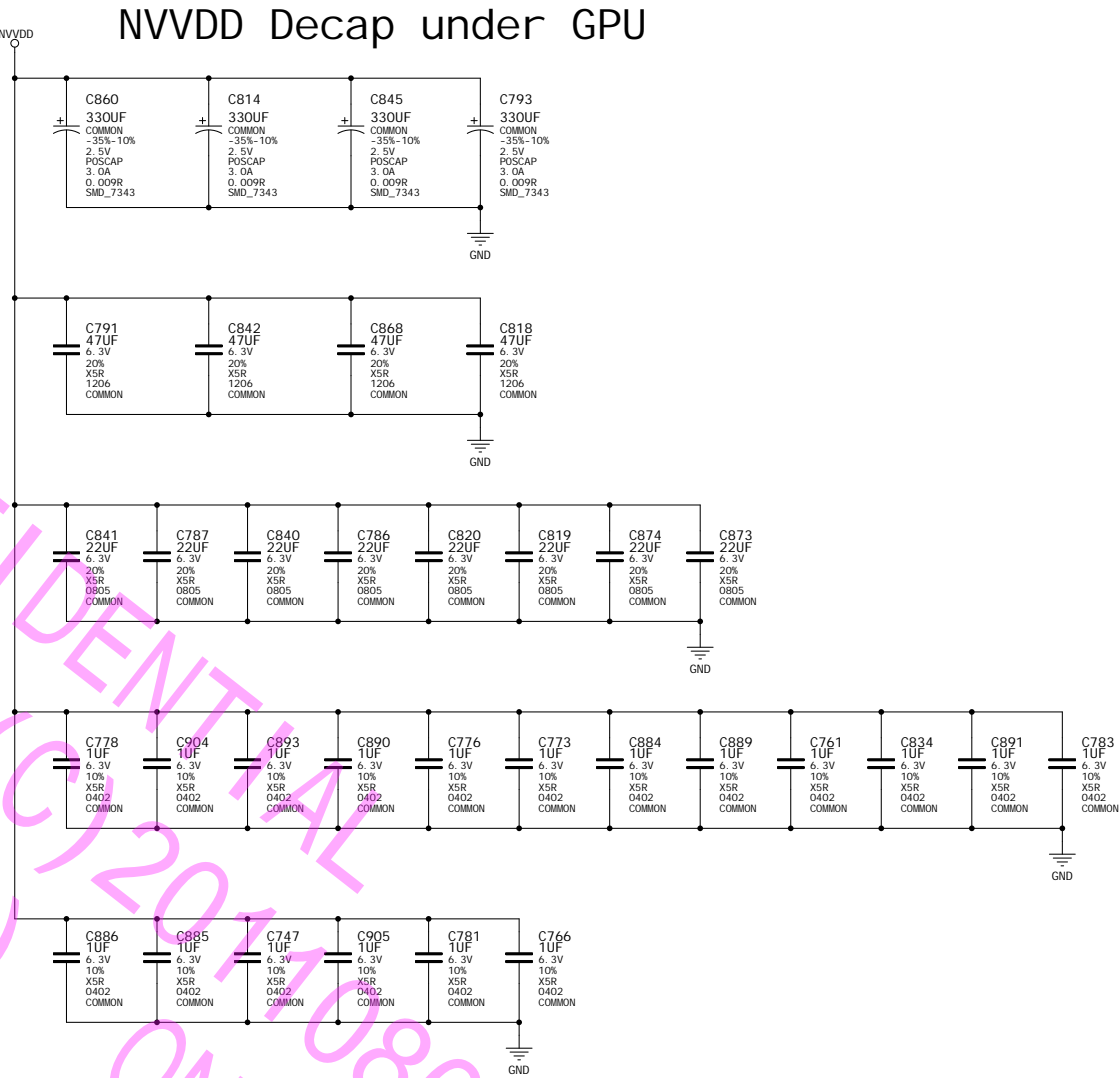
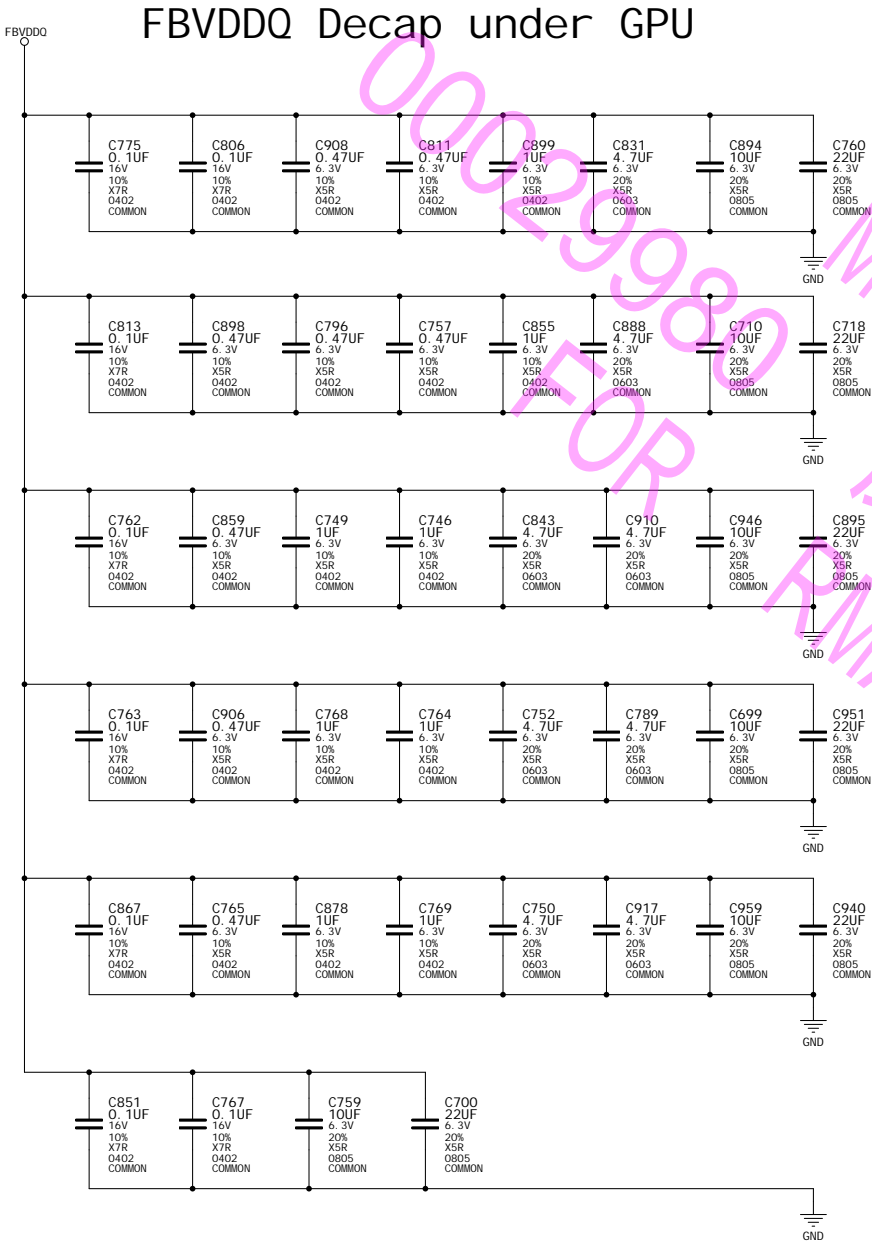
DECOUPLING: FBF<63..32>



ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

NVIDIA CORPORATION		
2701 SAN TOMAS EXPRESSWAY		
SANTA CLARA, CA 95050, USA		
NV_PN	602-11263-0004-QS2	
PCB REV	P1263-A03	PAGE 12 OF 31
BOM REV	A	DATE 26-NOV-2010

GPU DECOUPLING (NVVDD, FBVDDQ)



FBVDDQ under GPU

0.1uF 0402 X7R x8

0.47uF 0402 X5R x8

1uF 0402 X5R x8

FBVDDQ around GPU

4.7uF 0603 X5R x8

10uF 0805 X5R x6

22uF 0805 X5R x6

NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95050, USA



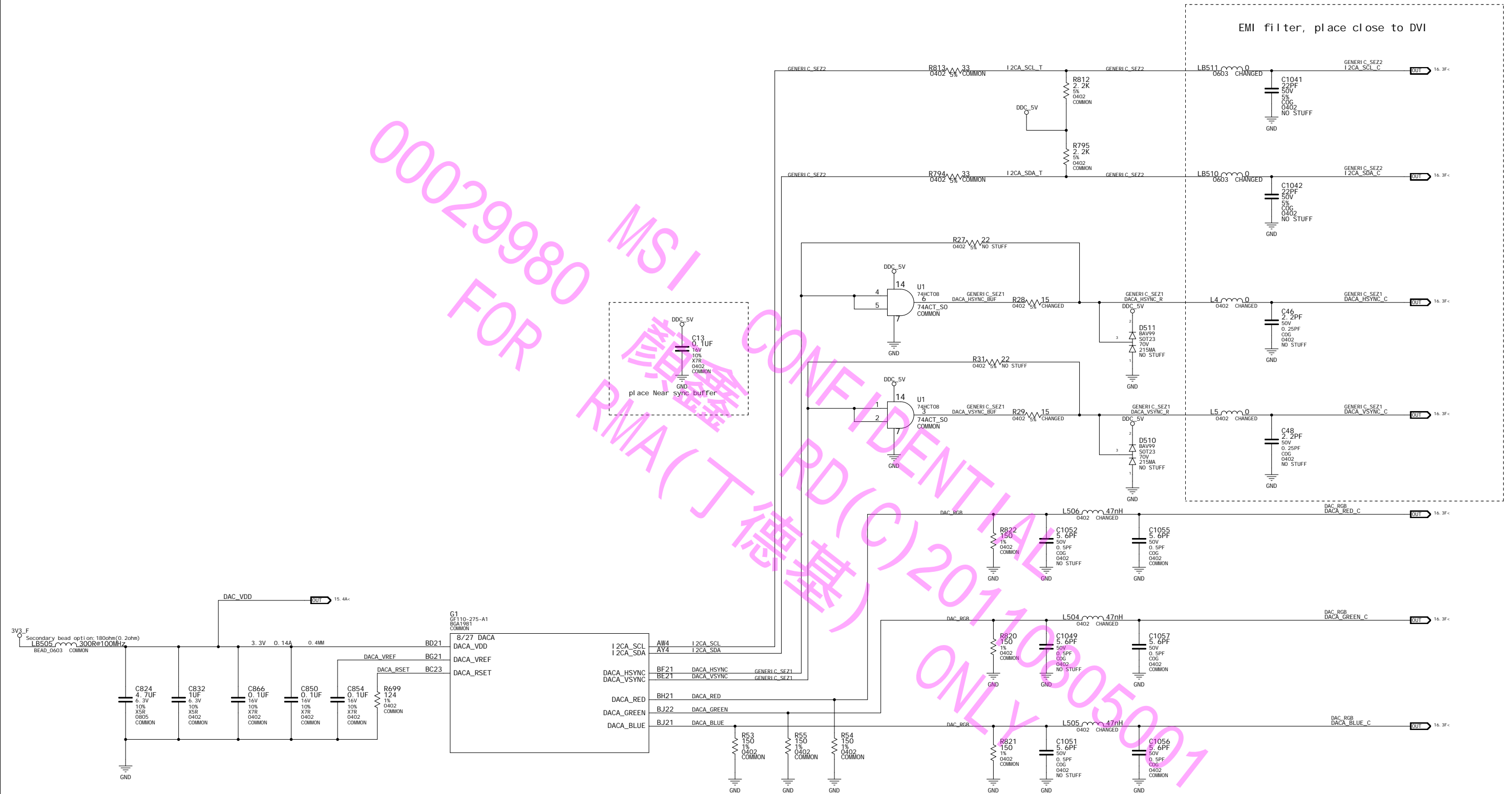
NV_PN 602-11263-0004-QS2

PCB REV P1263-A03 PAGE 13 OF 31

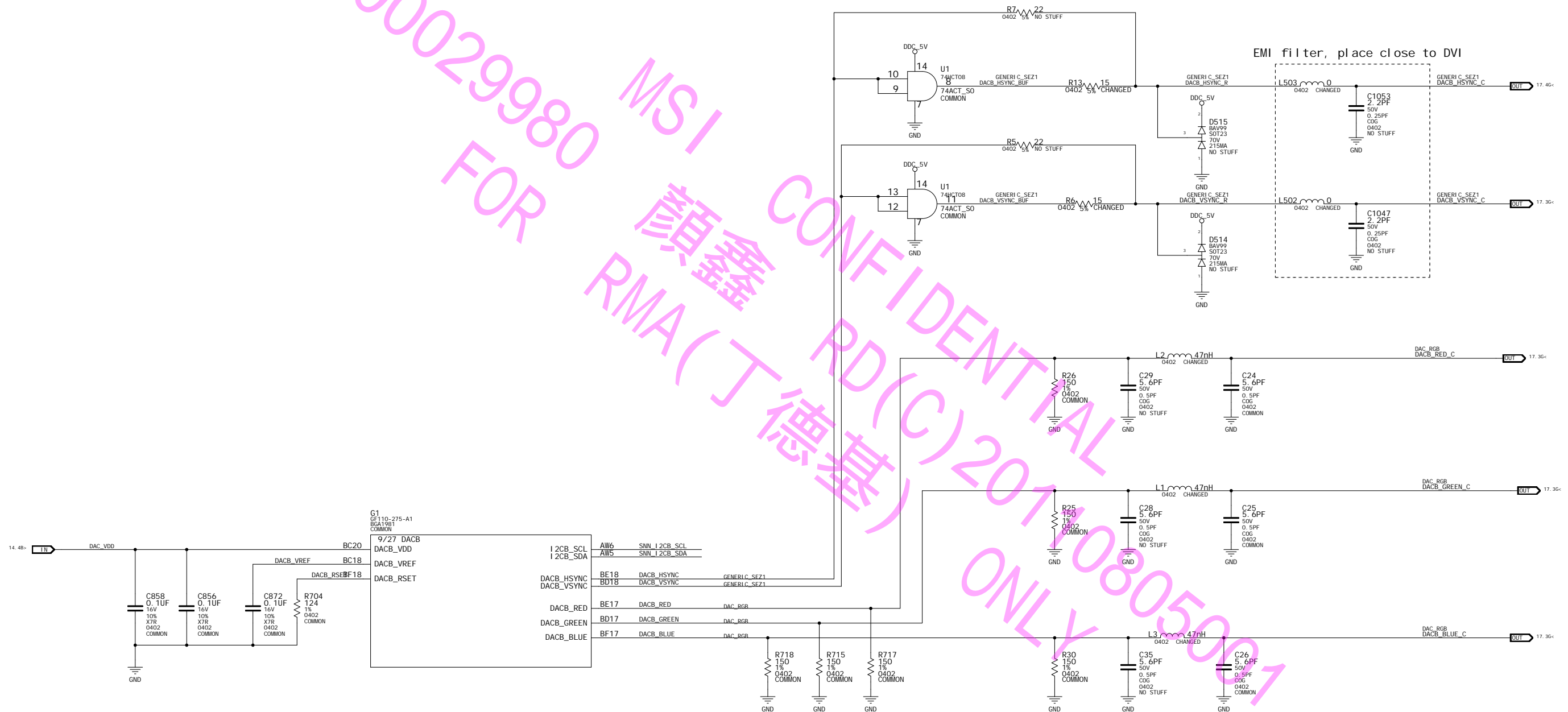
BOM REV A DATE 26-NOV-2010

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

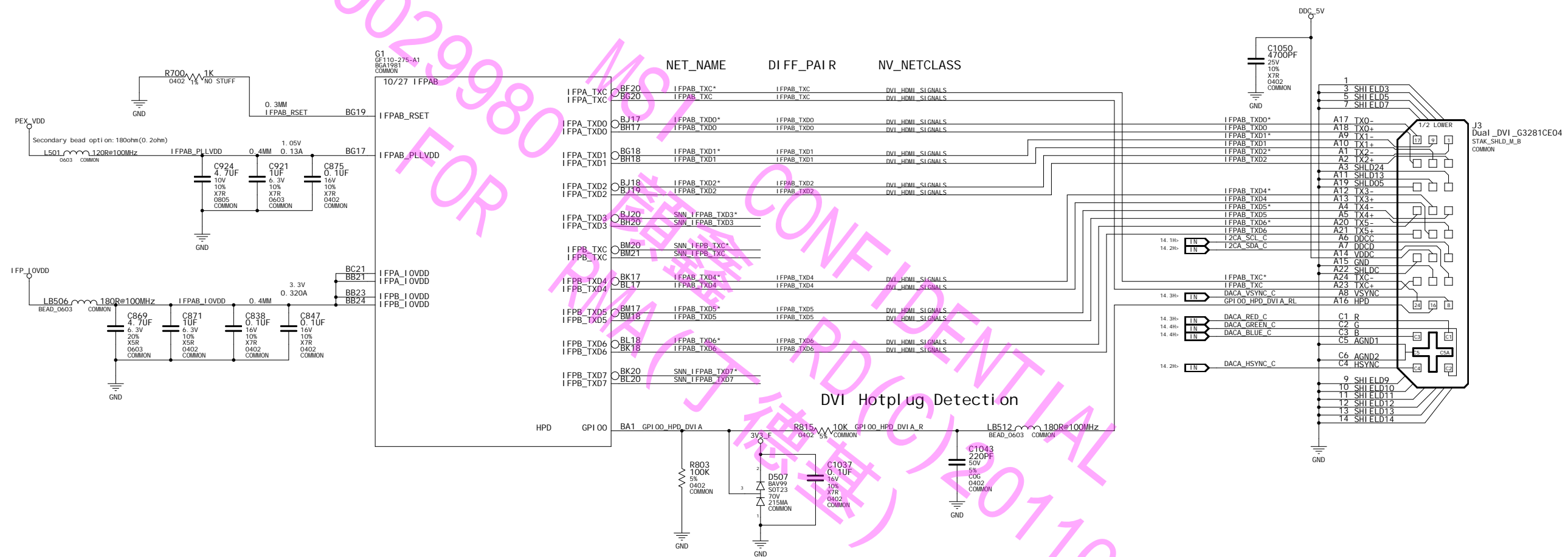
Display: DACA (South DVI -I Lower)



Display: DACB (South DVI -I Upper)

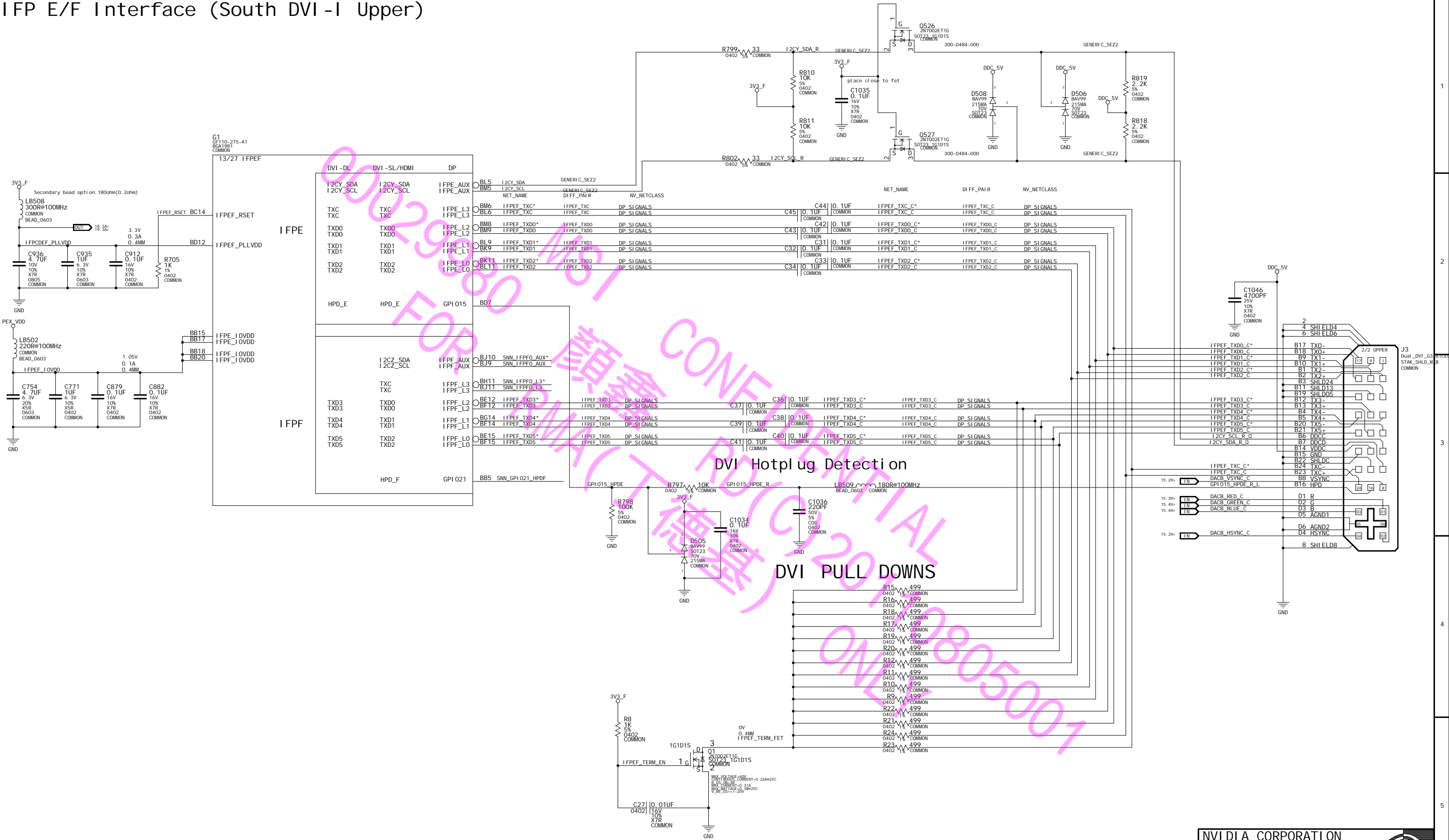


IFP A/B Interface (South DVI -I Lower)



I/F E/F Interface (South DVI -I Upper)

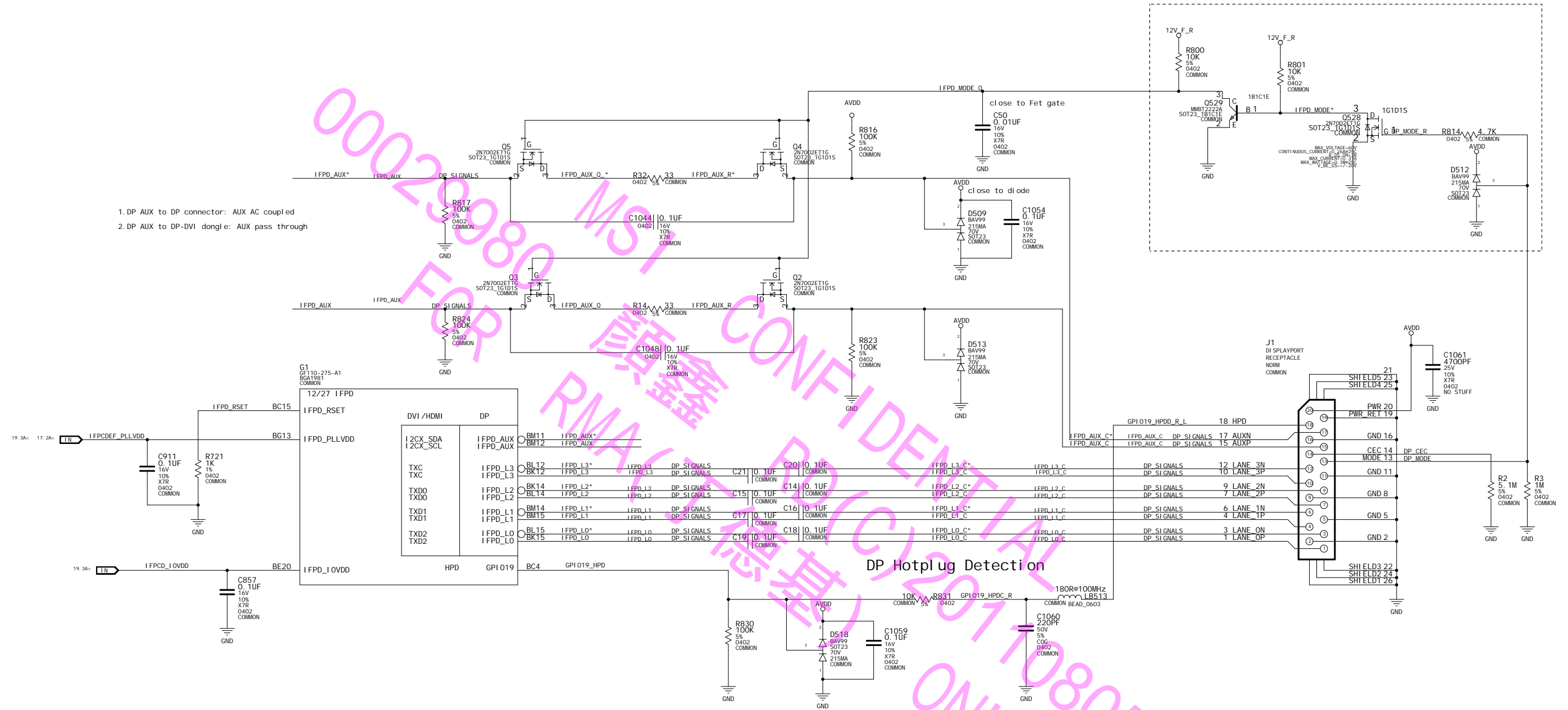
1
2
3
4
5



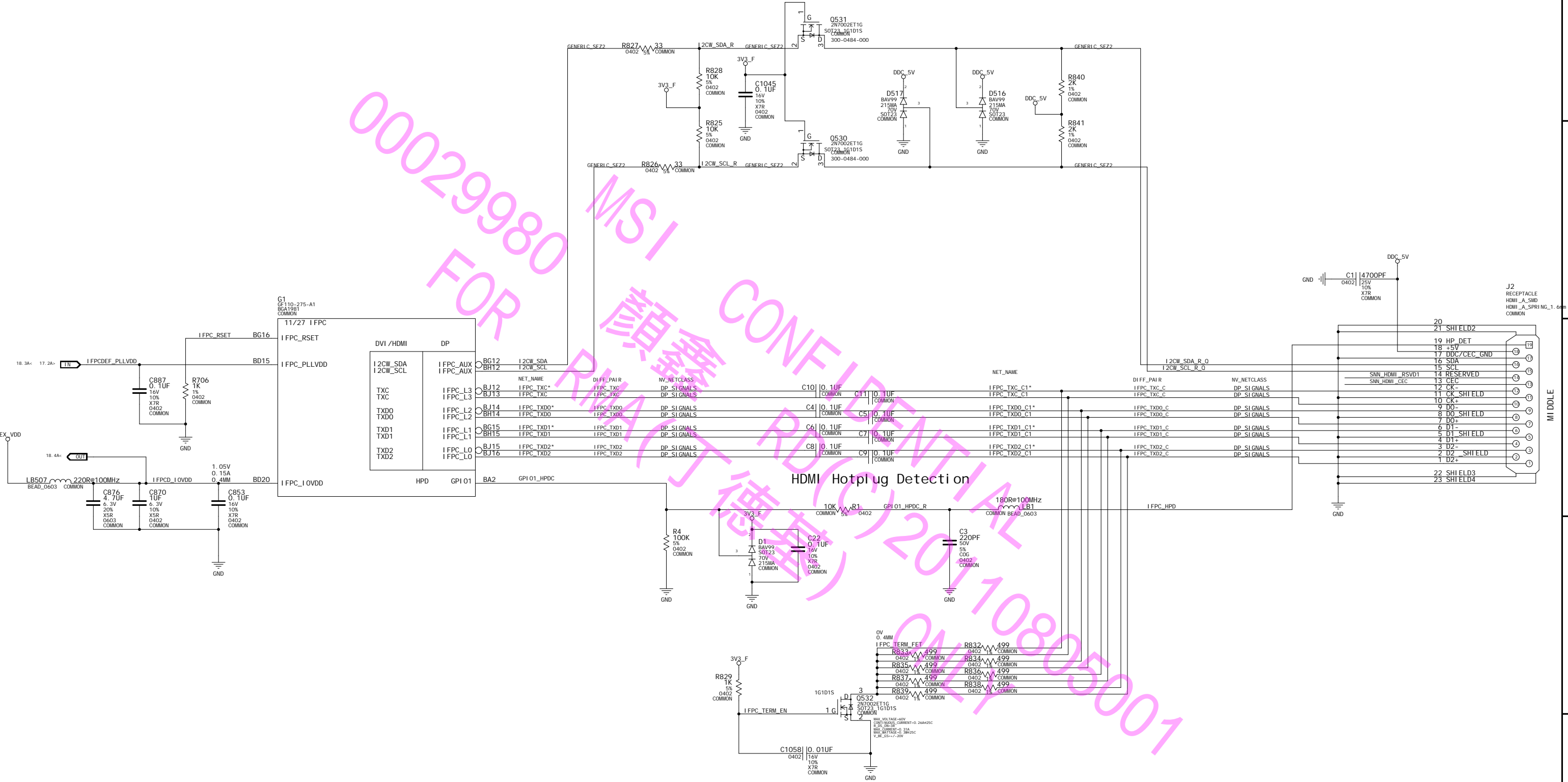
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

NVIDIA CORPORATION	
2701 SAN TOMAS EXPRESSWAY	
SANTA CLARA, CA 95050, USA	
NV_PN	602-11263-0004-QS2
PCB REV	P1263-A03
BOM REV	A
PAGE	17 OF 31
DATE	26-NOV-2010

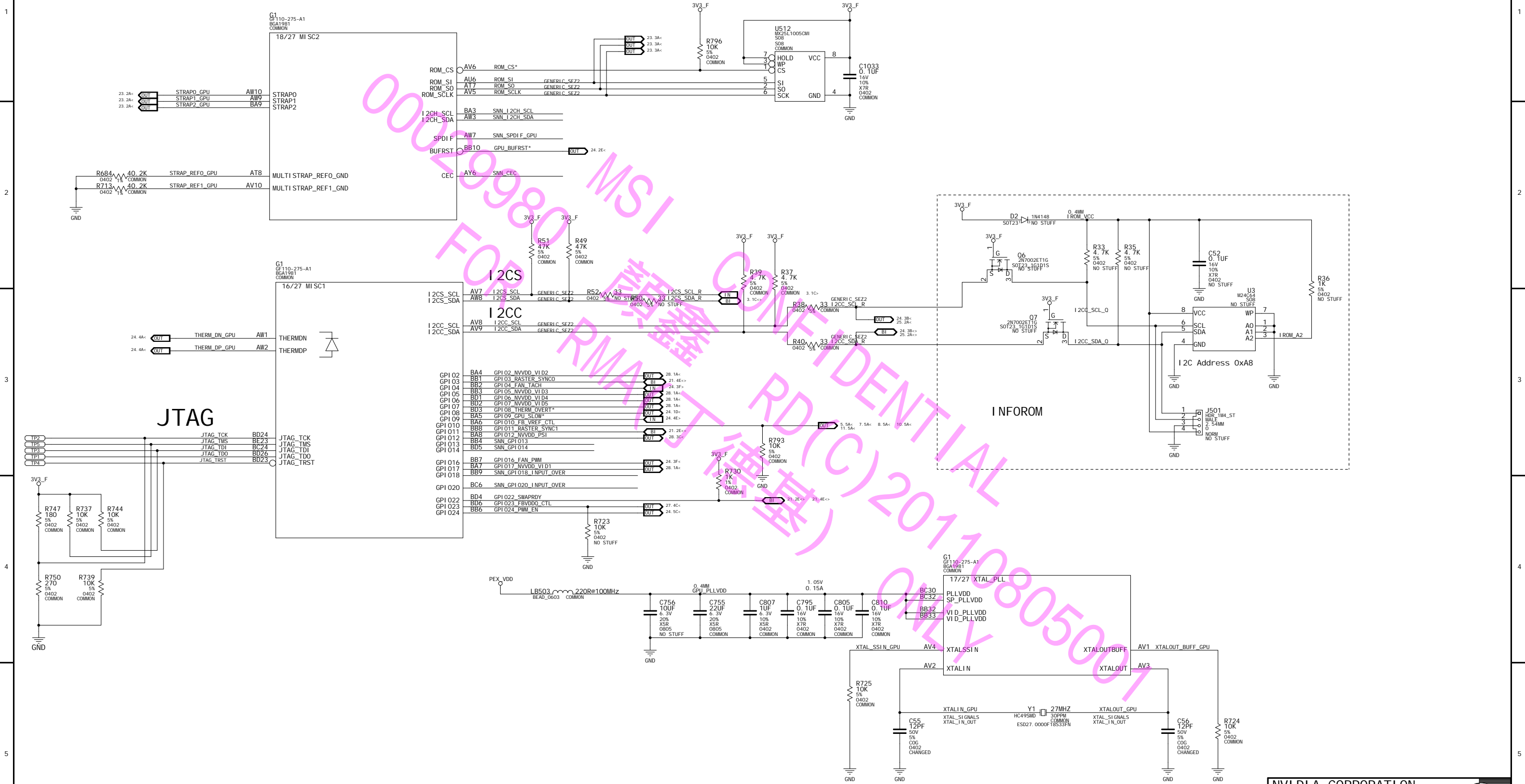
I FPD, (North DP)



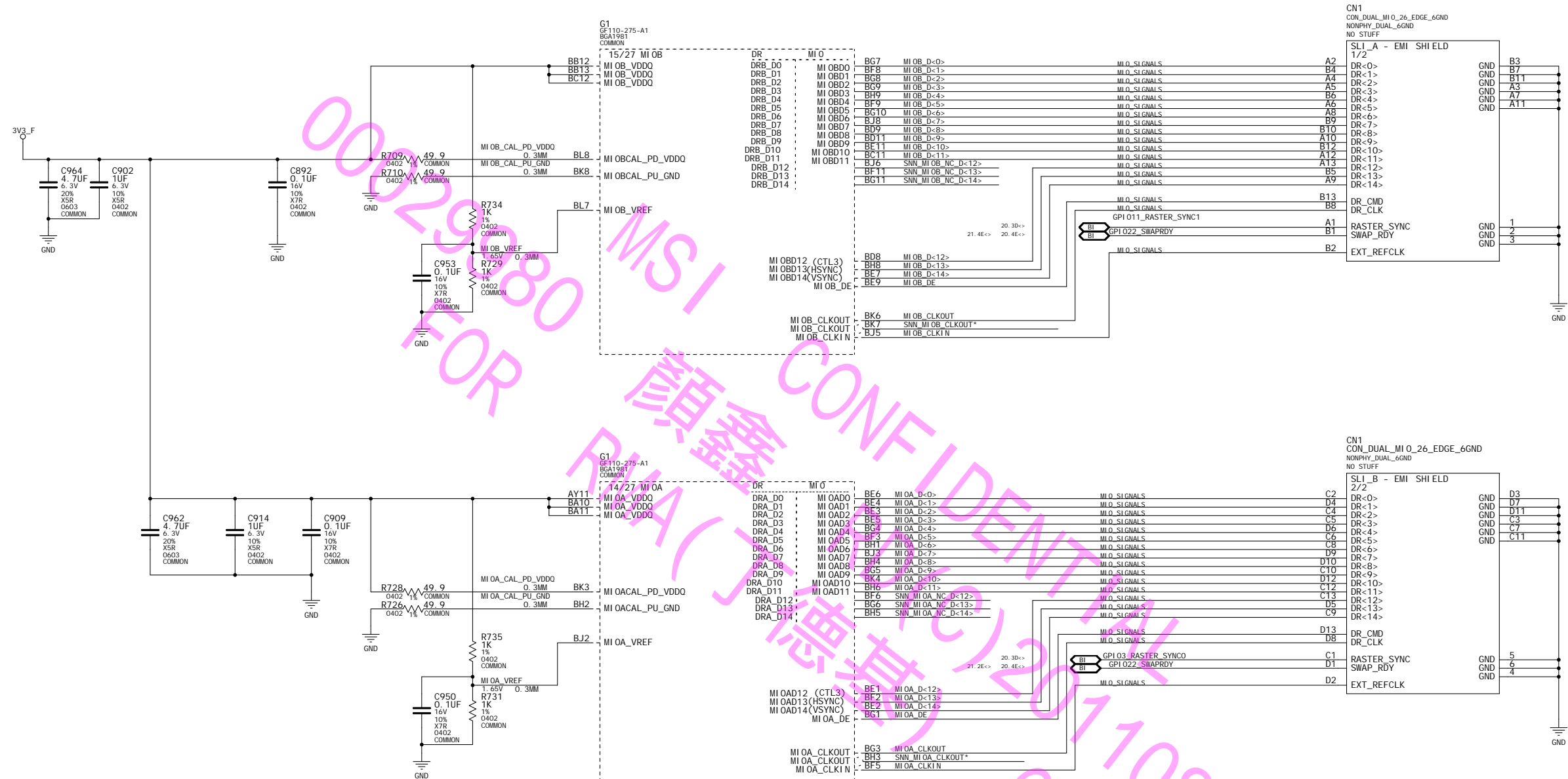
I FPC Interface (Mi d HDMI)



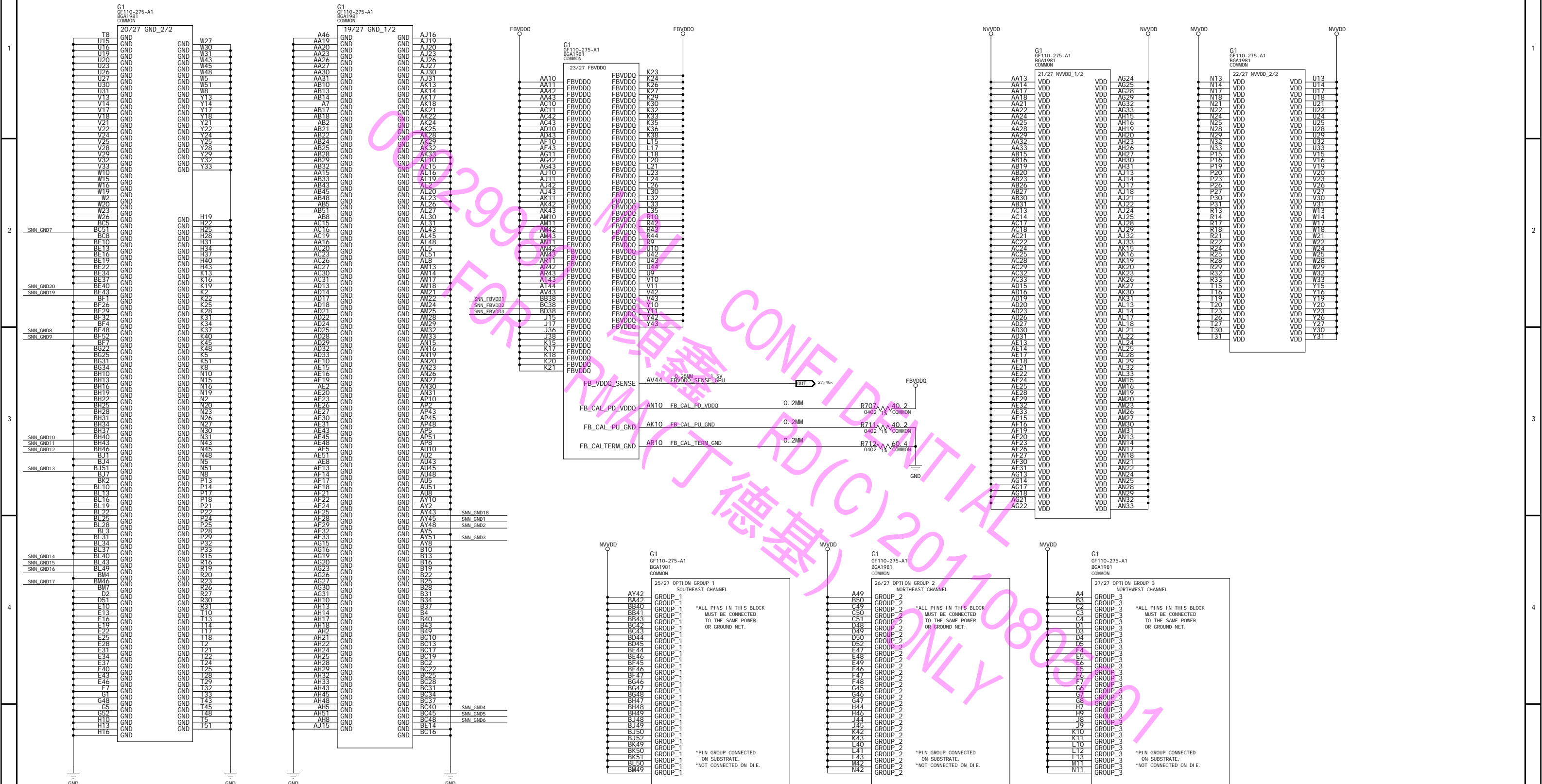
MI SC: GPIO, I2C, ROM, and XTAL



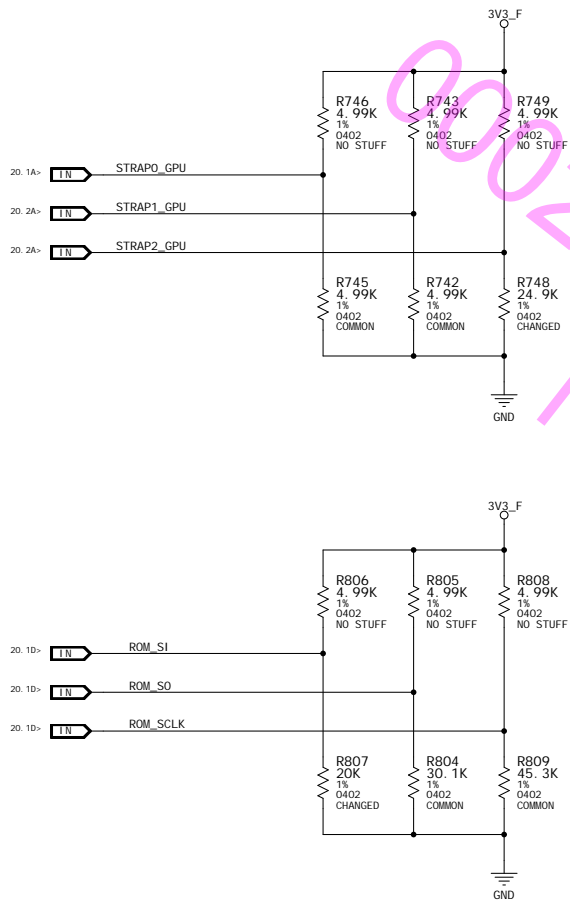
Multi-use I/O(MI O) Interface



GPU POWER CONNECTIONS



GPU Strapping Configuration

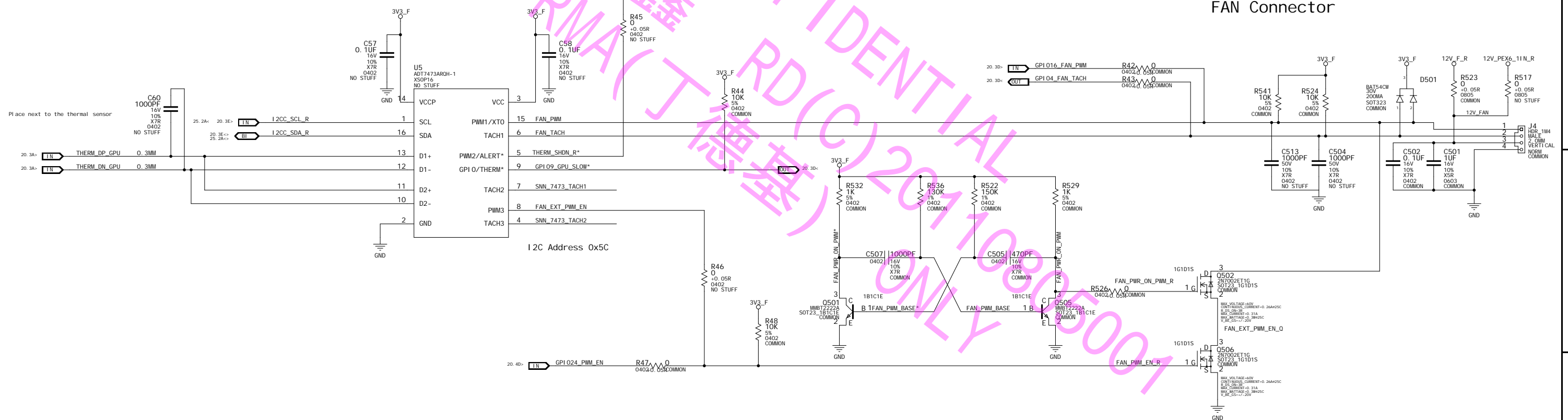
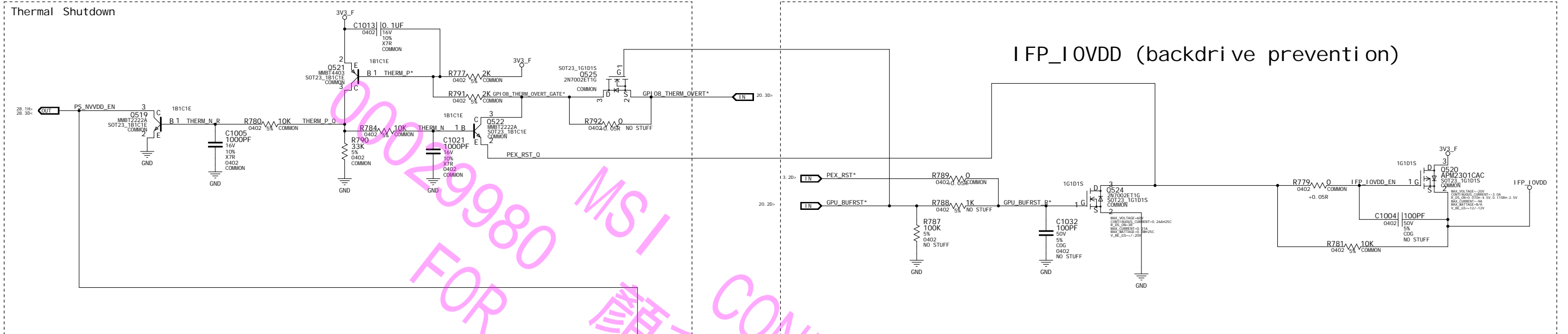


ROM_SI	RAMCFG[0]	0010 32Mx32 GDDR5 320-bit Hynix
	RAMCFG[1]	0011 32Mx32 GDDR5 320-bit Samsung
	RAMCFG[2]	0110 64Mx32 GDDR5 320-bit Hynix
	RAMCFG[3]	0111 64Mx32 GDDR5 320-bit Samsung
ROM_SO	VGA_DEVICE	1 0=Disabled(3D Only) 1=Enabled(VGA Display Device)
	SMB_ALT_ADDR	0
	FB[0]_BAR_SIZE	1 128MB 30k PD
	XCLK_417	0
ROM_SCLK	PEX_PLC_EN_TERM100	1 ENABLE 0 DISABLED
	SLOT_CLK_CFG	1 ENABLE 45K PD
	SUB_VENDOR	1 Dedicated BIOS
	PCI_DEVID_EXT	0 0x108
STRAP0	USER_BIT [3..0]	0000: => 5K PD Default
STRAP1	3GIO_PADCFG_LUT_ADR	0000 : =>5K PD Desktop Default
STRAP2	PCI_DEVID [3:0]	0110 : =>35K PD For 0x1086 0010 : =>15K PD For 0x1082 0100 : =>25K PD For 0x1084

G1 GF110-275-A1 BGA1981 COMMON		
24/27 NC/Spare		
SNN_G1_NC_1	BG2	NC_1
SNN_G1_NC_2	BH7	NC_2
SNN_G1_NC_3	BK5	NC_3
SNN_G1_NC_4	BL4	NC_4
SNN_G1_NC_5	BC35	NC_5
SNN_G1_NC_6	BC33	NC_6
SNN_G1_NC_7	BD14	NC_7

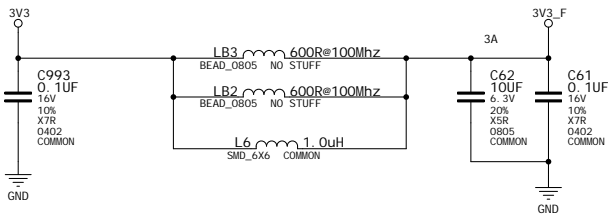
	GND	3V3
5k	0000	1000
10k	0001	1001
15k	0010	1010
20k	0011	1011
25k	0100	1100
30k	0101	1101
35k	0110	1110
45k	0111	1111

MI SC: THERMAL/BACKDRIVE

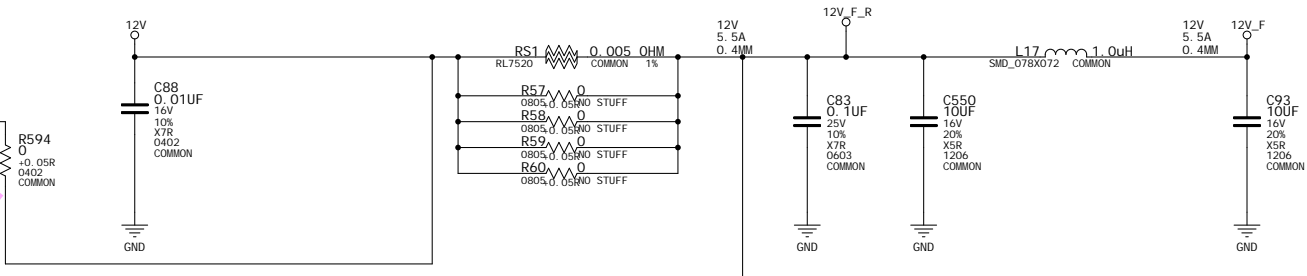


Power Supply: PEX PS INPUT, DETECTION LOGIC

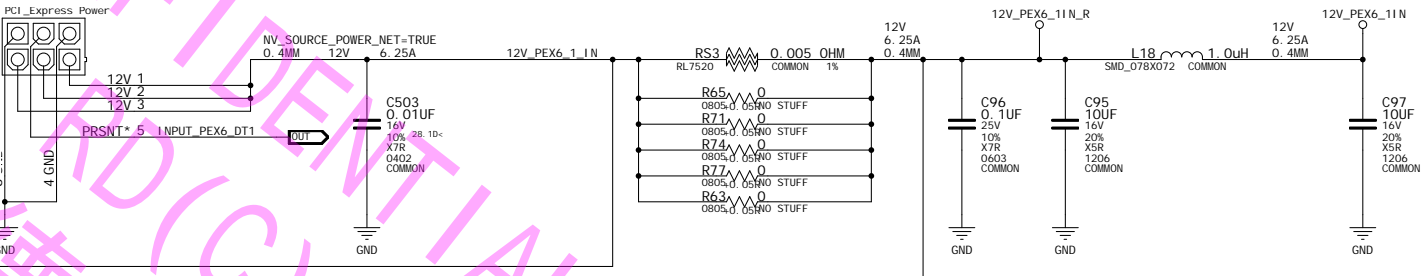
PEX_3V3 INPUT - 10W



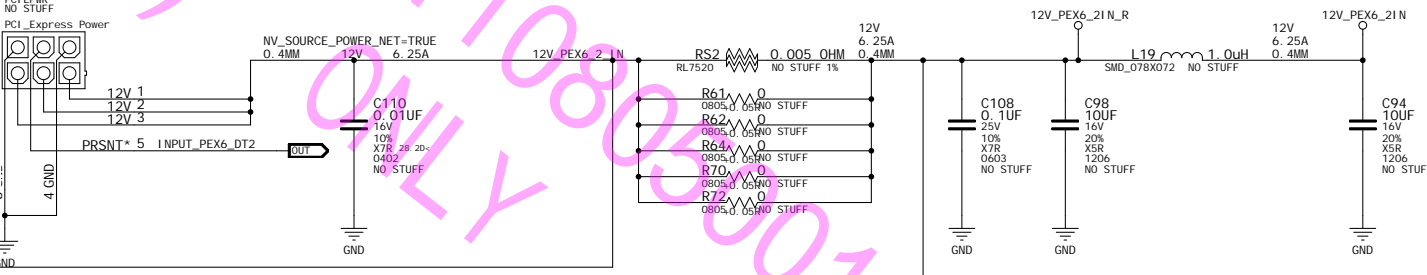
PEX_12V INPUT - 66W



PEX6 INPUT 1 - 2x3 PCIE CON 75W



PEX6 INPUT 2 - 2x3 PCIE CON 75W



ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

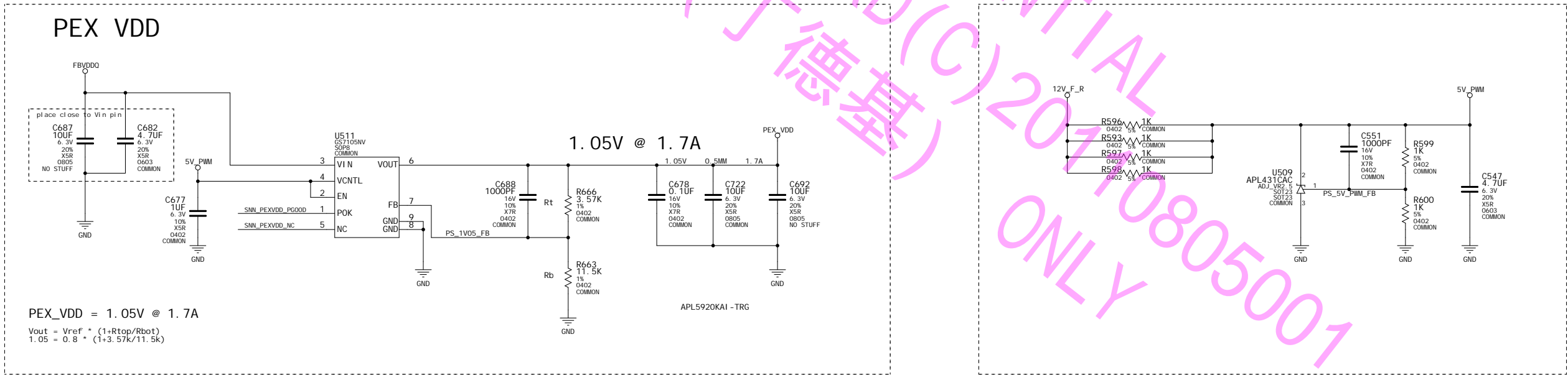
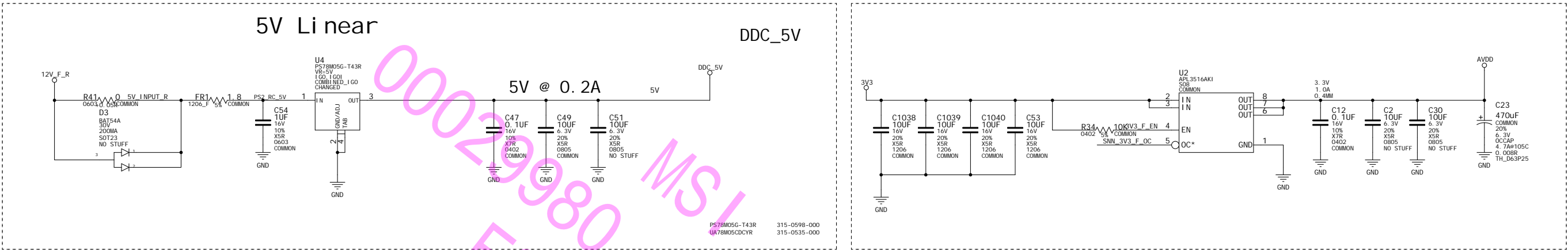
SANTA CLARA, CA 95050, USA



ASSEMBLY	P1263 GF110-040 1280MB GDDR5 32Mx32 DVI-I / DUAL+HDMI+DP
PAGE DETAIL	Power Supply: PEX PS INPUT, DETECTION LOGIC

NV_PN	602-11263-0004-QS2
PCB REV	P1263-A03
BOM REV	A
PAGE	25 OF 31
DATE	26-NOV-2010

Power Supply: DDC5V, PEX_VDD, 5V_PWM, AVDD



NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95050, USA



ASSEMBLY
PAGE DETAIL
Power Supply: DDC5V, PEX_VDD, 5V_PWM, AVDD

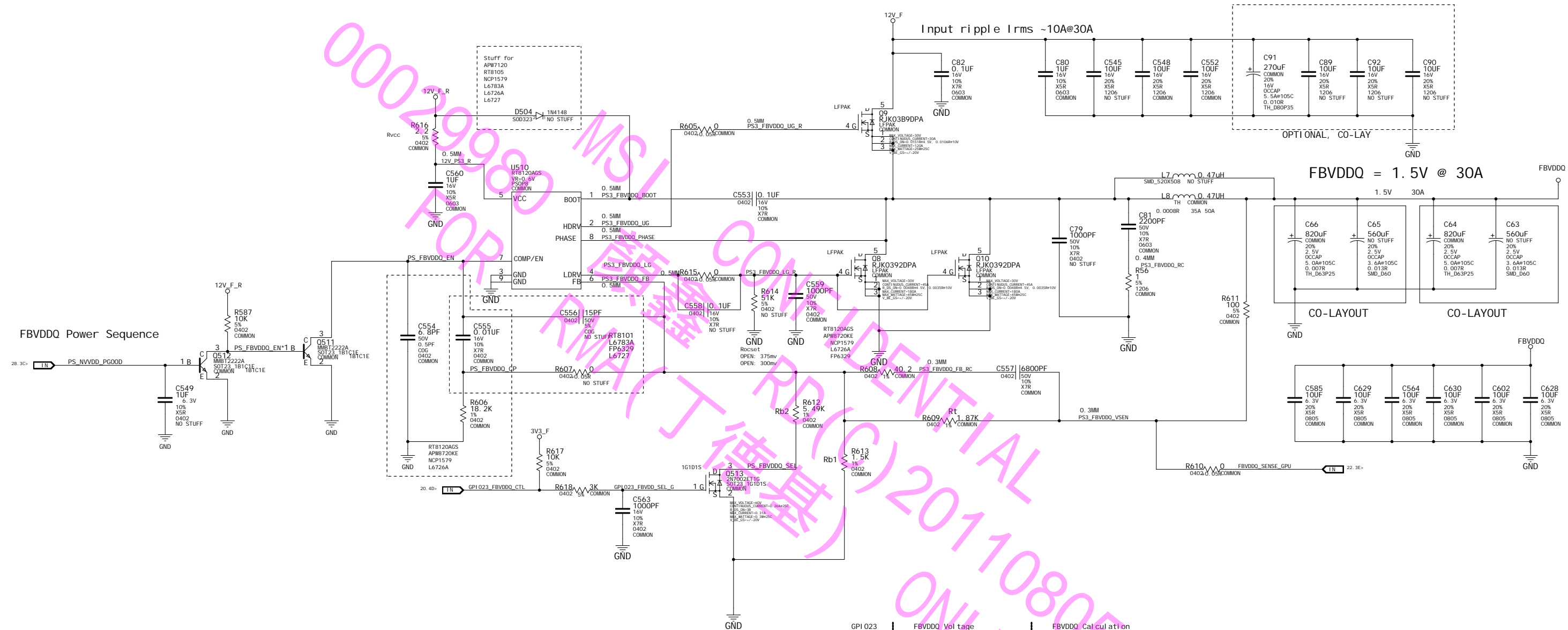
NV_PN 602-11263-0004-QS2

PCB REV P1263-A03
BOM REV A

PAGE 26 OF 31
DATE 26-NOV-2010

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

Power Supply: FBVDDQ



GPI023	FBVDDQ Voltage	FBVDDQ Calculation	
		FBVDDQ = 0.8V * (1 + 1.37K / 2K) = 1.348V	1%
0	1.35V (Low perfmode)	FBVDDQ = 0.6V * (1 + 1.87K / 1.5K) = 1.348V	1.5%
		FBVDDQ = 0.5V * (1 + 1.87K / 1.1K) = 1.35V	1%
1	1.5V (3D)	FBVDDQ = 0.8V * (1 + 1.37K / (2K // 5.36K)) = 1.55V	1%
		FBVDDQ = 0.6V * (1 + 1.87K / (1.5K // 5.49K)) = 1.55V	1.5%
		FBVDDQ = 0.5V * (1 + 1.87K / (1.1K // 4.64K)) = 1.55V	1%

Vref

RT8120A 300KHz 0.6V 1.5%

APW8720KE300KHz 0.5V 1%

APW7120K 300KHz 0.8V

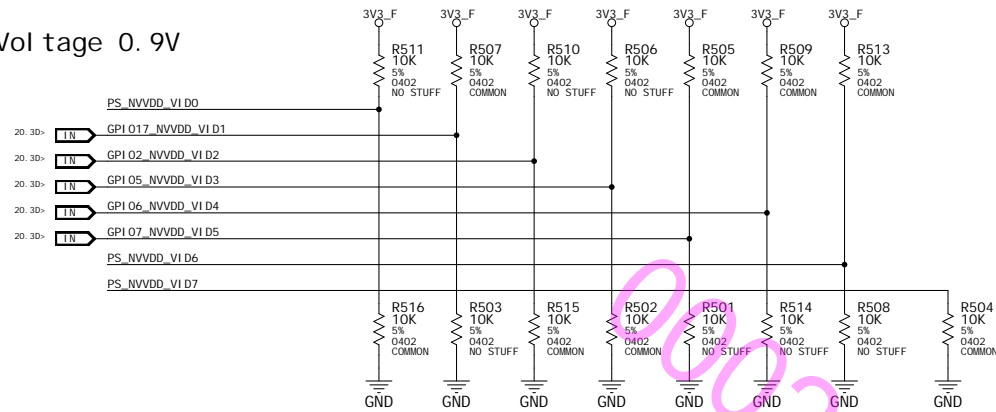
RT8101 300KHz 0.8V

RT8105 300KHz 0.8V

NCP1579 275KHz 0.8V

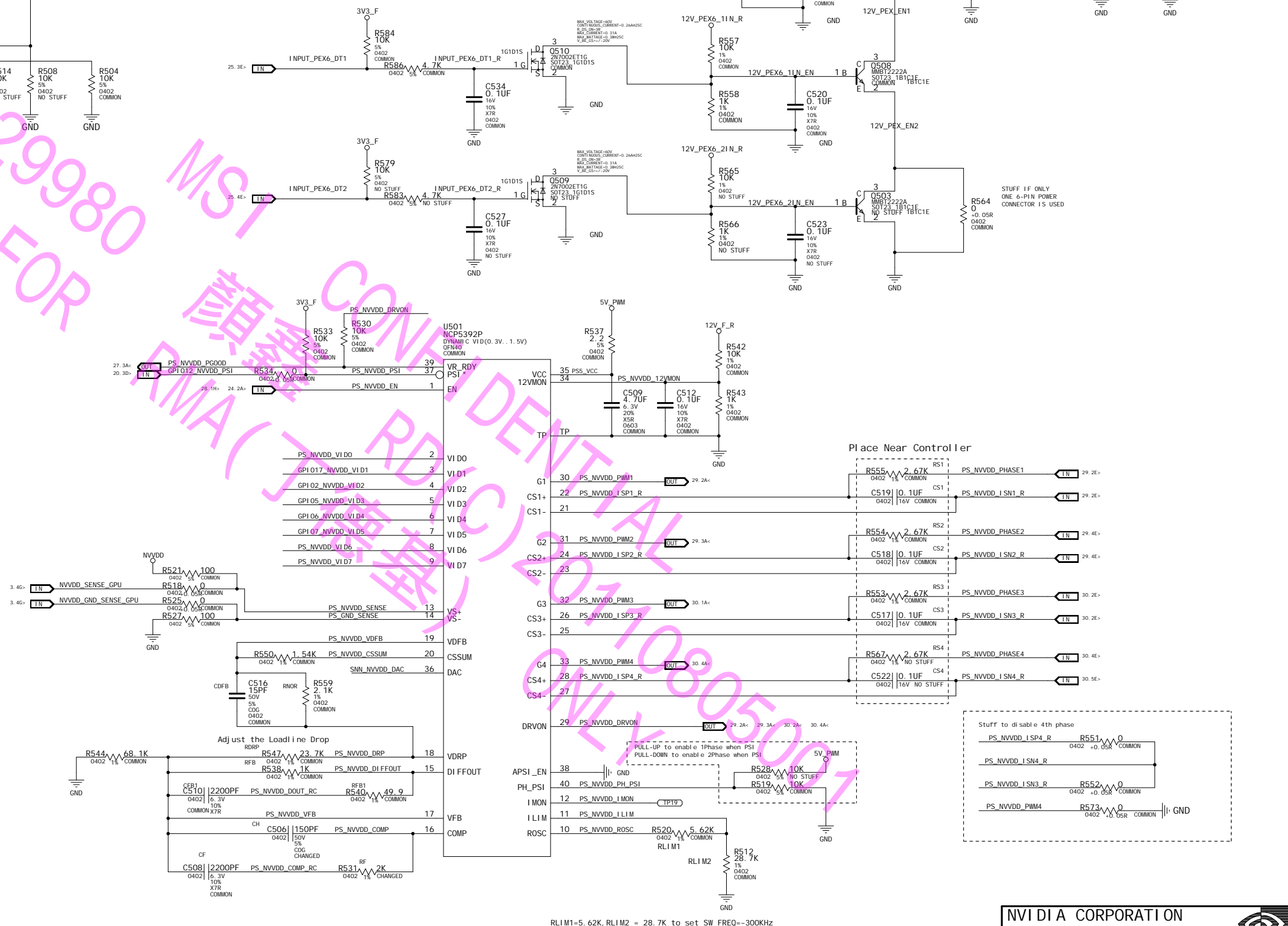
Power Supply: NVVDD Controller

BootVoltage 0.9V



VI D Table

GPI 07 VID_5	GPI 06 VID_4	GPI 05 VID_3	GPI 02 VID_2	GPI 017 VID_1	VRM11.0 VID Setting
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	1.15000V
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



RLIM1=5.62K, RLIM2 = 28.7K to set SW FREQ=-300KHz

NVIDIA CORPORATION

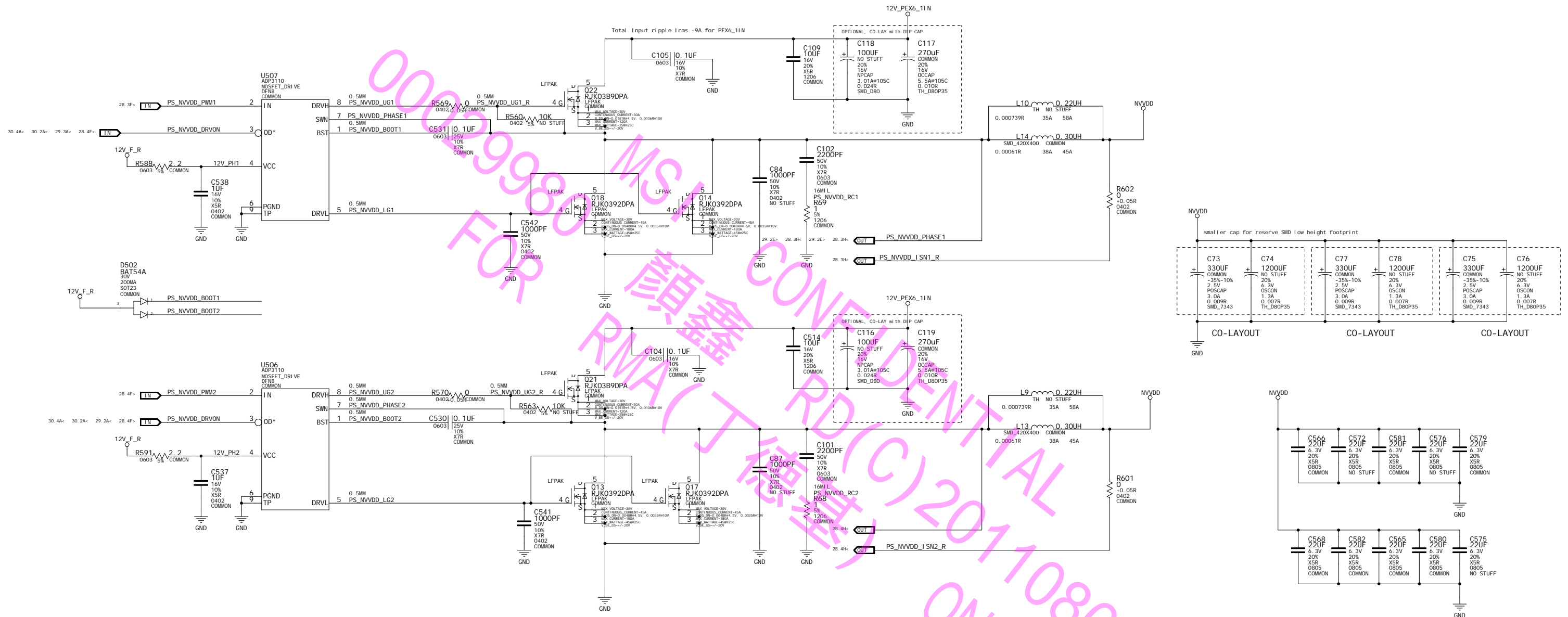
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	602-11263-0004-QS2
-------	--------------------

PCB REV	P1263-A03	PAGE	28 OF 31
BOM REV	A	DATE	26-NOV-2010

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS, AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

Power Supply: NVVDD PHASE 1, 2



ASSEMBLY	
PAGE DETAIL	Power Supply: NVDD Phase 1, 2

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS, AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA




NV_PN	602-11263-0004-QS2
-------	--------------------

PCB REV	P1263-A03	PAGE	29 OF 31
BOM REV	A	DATE	26-NOV-2010

1

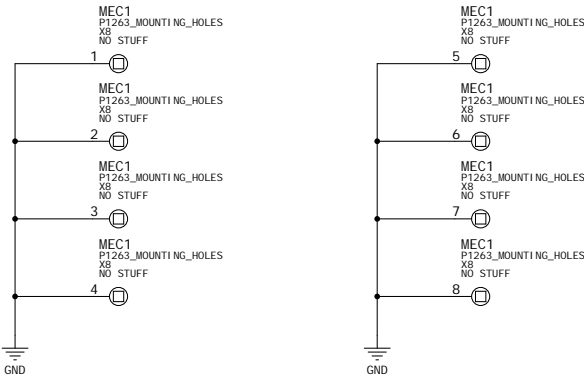


NVI DI A CORPORATI ON 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA			
NV_PN 602-11263-0004-QS2			
PCB REV	P1263-A03	PAGE	30 OF 31
BOM REV	A	DATE	26-NOV-2010

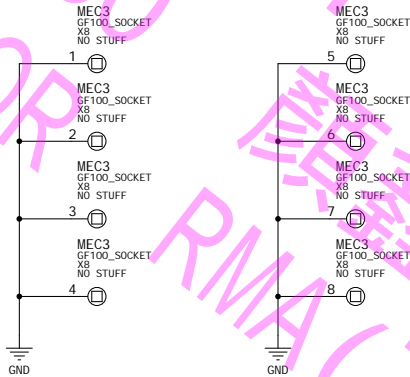
ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS, AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.

Thermal /Mechanical

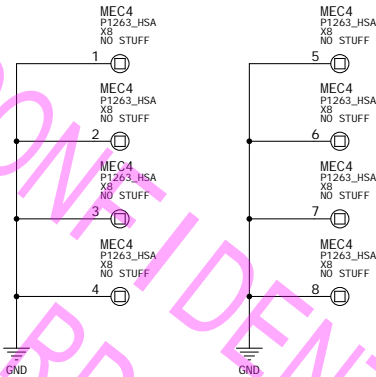
BASEPLATE MOUNTING HOLES



SOCKET (FOR LAB USE ONLY)

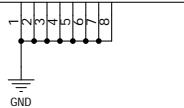


FANSINK HOLE

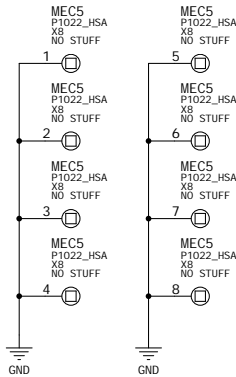
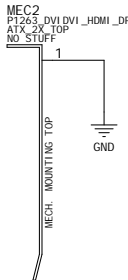


BOARD STIFFENER

8 connected mounting pins



MEC6
GPU_STIFFENER_GF100
8PINS
NO STUFF



NVIDIA CORPORATION

2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA



ASSEMBLY	P1263 GF110-040 1280MB GDDR5 32Mx32 DVI-I/DUAL+HDMI+DP
PAGE DETAIL	Thermal, Mechanical

NV_PN	602-11263-0004-QS2		
PCB REV	P1263-A03	PAGE	31 OF 31
BOM REV	A	DATE	26-NOV-2010

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS". THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS.