TABLE OF CONTENTS

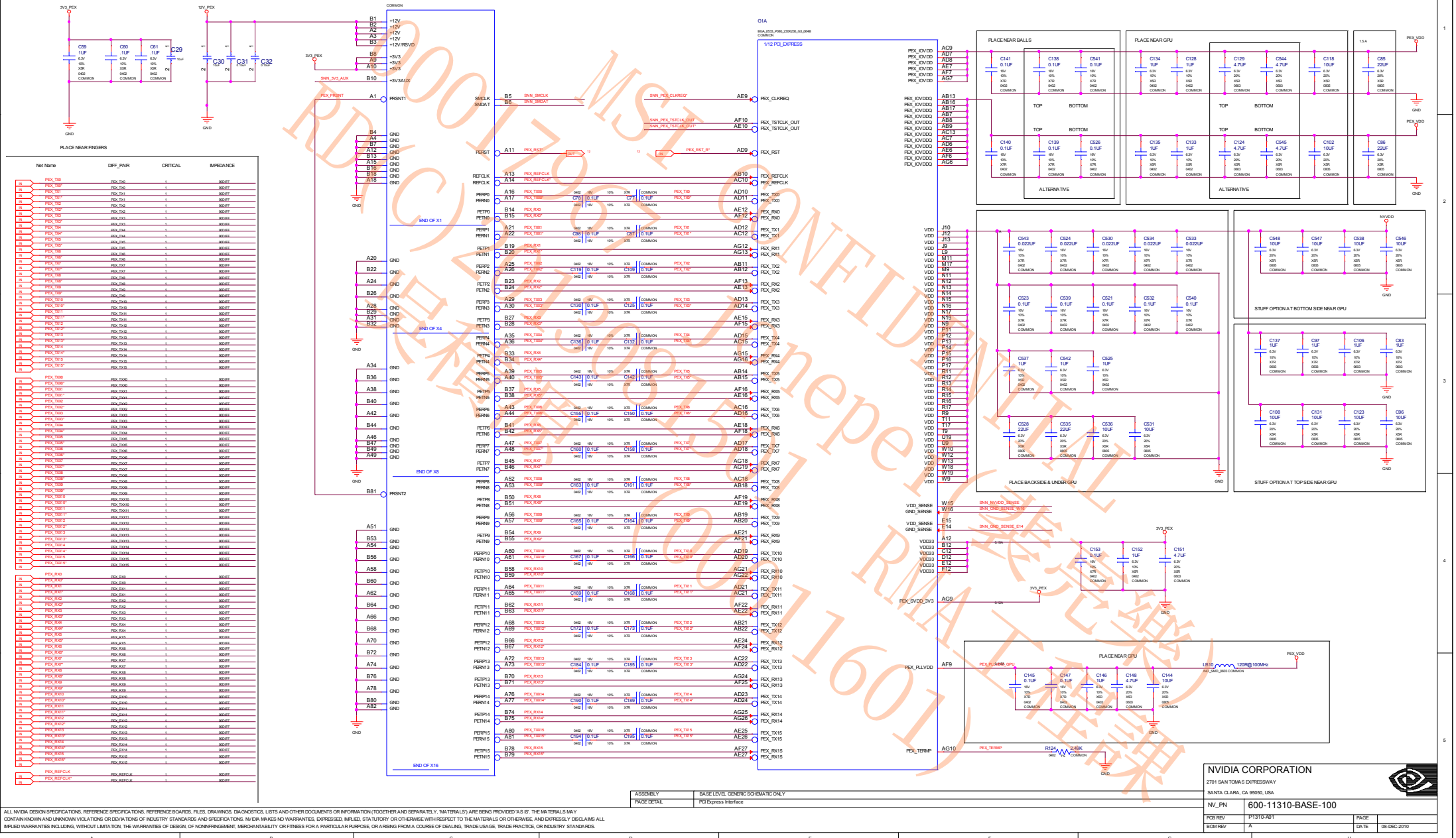
Page Description

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	Table of Contents

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

PCI Express Interface



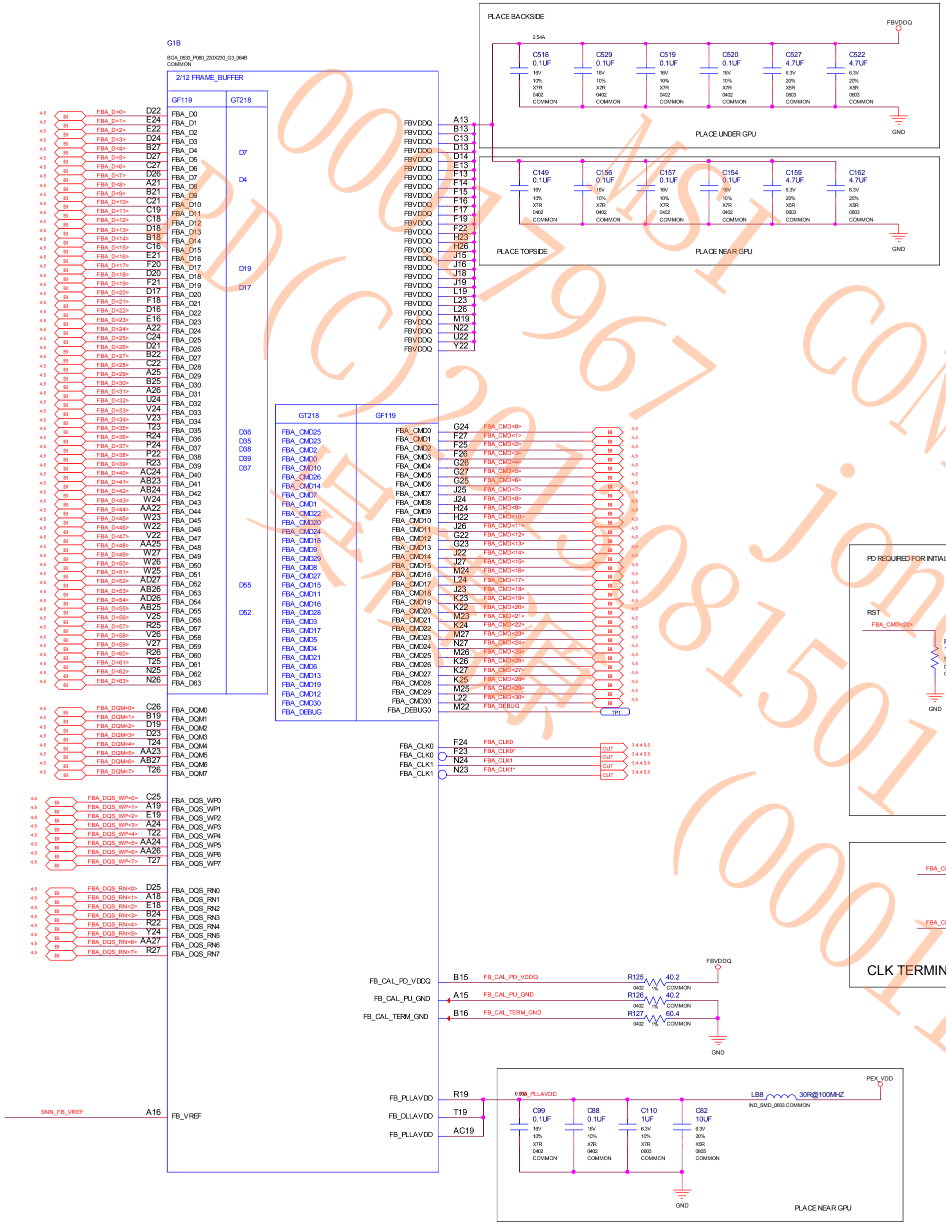
Net Name	DIFF_PAIR	CRITICAL	IMPEDANCE
PEX_TX0	PEX_TX0	1	90DIFF
PEX_TX0*	PEX_TX0	1	90DIFF
PEX_TX1	PEX_TX1	1	90DIFF
PEX_TX1*	PEX_TX1	1	90DIFF
PEX_TX2	PEX_TX2	1	90DIFF
PEX_TX2*	PEX_TX2	1	90DIFF
PEX_TX3	PEX_TX3	1	90DIFF
PEX_TX3*	PEX_TX3	1	90DIFF
PEX_TX4	PEX_TX4	1	90DIFF
PEX_TX4*	PEX_TX4	1	90DIFF
PEX_TX5	PEX_TX5	1	90DIFF
PEX_TX5*	PEX_TX5	1	90DIFF
PEX_TX6	PEX_TX6	1	90DIFF
PEX_TX6*	PEX_TX6	1	90DIFF
PEX_TX7	PEX_TX7	1	90DIFF
PEX_TX7*	PEX_TX7	1	90DIFF
PEX_TX8	PEX_TX8	1	90DIFF
PEX_TX8*	PEX_TX8	1	90DIFF
PEX_TX9	PEX_TX9	1	90DIFF
PEX_TX9*	PEX_TX9	1	90DIFF
PEX_TX10	PEX_TX10	1	90DIFF
PEX_TX10*	PEX_TX10	1	90DIFF
PEX_TX11	PEX_TX11	1	90DIFF
PEX_TX11*	PEX_TX11	1	90DIFF
PEX_TX12	PEX_TX12	1	90DIFF
PEX_TX12*	PEX_TX12	1	90DIFF
PEX_TX13	PEX_TX13	1	90DIFF
PEX_TX13*	PEX_TX13	1	90DIFF
PEX_TX14	PEX_TX14	1	90DIFF
PEX_TX14*	PEX_TX14	1	90DIFF
PEX_TX15	PEX_TX15	1	90DIFF
PEX_TX15*	PEX_TX15	1	90DIFF
PEX_TX0[0]	PEX_TX0[0]	1	90DIFF
PEX_TX0[0]*	PEX_TX0[0]	1	90DIFF
PEX_TX0[1]	PEX_TX0[1]	1	90DIFF
PEX_TX0[1]*	PEX_TX0[1]	1	90DIFF
PEX_TX0[2]	PEX_TX0[2]	1	90DIFF
PEX_TX0[2]*	PEX_TX0[2]	1	90DIFF
PEX_TX0[3]	PEX_TX0[3]	1	90DIFF
PEX_TX0[3]*	PEX_TX0[3]	1	90DIFF
PEX_TX0[4]	PEX_TX0[4]	1	90DIFF
PEX_TX0[4]*	PEX_TX0[4]	1	90DIFF
PEX_TX0[5]	PEX_TX0[5]	1	90DIFF
PEX_TX0[5]*	PEX_TX0[5]	1	90DIFF
PEX_TX0[6]	PEX_TX0[6]	1	90DIFF
PEX_TX0[6]*	PEX_TX0[6]	1	90DIFF
PEX_TX0[7]	PEX_TX0[7]	1	90DIFF
PEX_TX0[7]*	PEX_TX0[7]	1	90DIFF
PEX_TX1[0]	PEX_TX1[0]	1	90DIFF
PEX_TX1[0]*	PEX_TX1[0]	1	90DIFF
PEX_TX1[1]	PEX_TX1[1]	1	90DIFF
PEX_TX1[1]*	PEX_TX1[1]	1	90DIFF
PEX_TX1[2]	PEX_TX1[2]	1	90DIFF
PEX_TX1[2]*	PEX_TX1[2]	1	90DIFF
PEX_TX1[3]	PEX_TX1[3]	1	90DIFF
PEX_TX1[3]*	PEX_TX1[3]	1	90DIFF
PEX_TX1[4]	PEX_TX1[4]	1	90DIFF
PEX_TX1[4]*	PEX_TX1[4]	1	90DIFF
PEX_TX1[5]	PEX_TX1[5]	1	90DIFF
PEX_TX1[5]*	PEX_TX1[5]	1	90DIFF
PEX_RX0	PEX_RX0	1	90DIFF
PEX_RX0*	PEX_RX0	1	90DIFF
PEX_RX1	PEX_RX1	1	90DIFF
PEX_RX1*	PEX_RX1	1	90DIFF
PEX_RX2	PEX_RX2	1	90DIFF
PEX_RX2*	PEX_RX2	1	90DIFF
PEX_RX3	PEX_RX3	1	90DIFF
PEX_RX3*	PEX_RX3	1	90DIFF
PEX_RX4	PEX_RX4	1	90DIFF
PEX_RX4*	PEX_RX4	1	90DIFF
PEX_RX5	PEX_RX5	1	90DIFF
PEX_RX5*	PEX_RX5	1	90DIFF
PEX_RX6	PEX_RX6	1	90DIFF
PEX_RX6*	PEX_RX6	1	90DIFF
PEX_RX7	PEX_RX7	1	90DIFF
PEX_RX7*	PEX_RX7	1	90DIFF
PEX_RX8	PEX_RX8	1	90DIFF
PEX_RX8*	PEX_RX8	1	90DIFF
PEX_RX9	PEX_RX9	1	90DIFF
PEX_RX9*	PEX_RX9	1	90DIFF
PEX_RX10	PEX_RX10	1	90DIFF
PEX_RX10*	PEX_RX10	1	90DIFF
PEX_RX11	PEX_RX11	1	90DIFF
PEX_RX11*	PEX_RX11	1	90DIFF
PEX_RX12	PEX_RX12	1	90DIFF
PEX_RX12*	PEX_RX12	1	90DIFF
PEX_RX13	PEX_RX13	1	90DIFF
PEX_RX13*	PEX_RX13	1	90DIFF
PEX_RX14	PEX_RX14	1	90DIFF
PEX_RX14*	PEX_RX14	1	90DIFF
PEX_RX15	PEX_RX15	1	90DIFF
PEX_RX15*	PEX_RX15	1	90DIFF
PEX_REFCLK	PEX_REFCLK	1	90DIFF
PEX_REFCLK*	PEX_REFCLK	1	90DIFF

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	PCI Express Interface

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

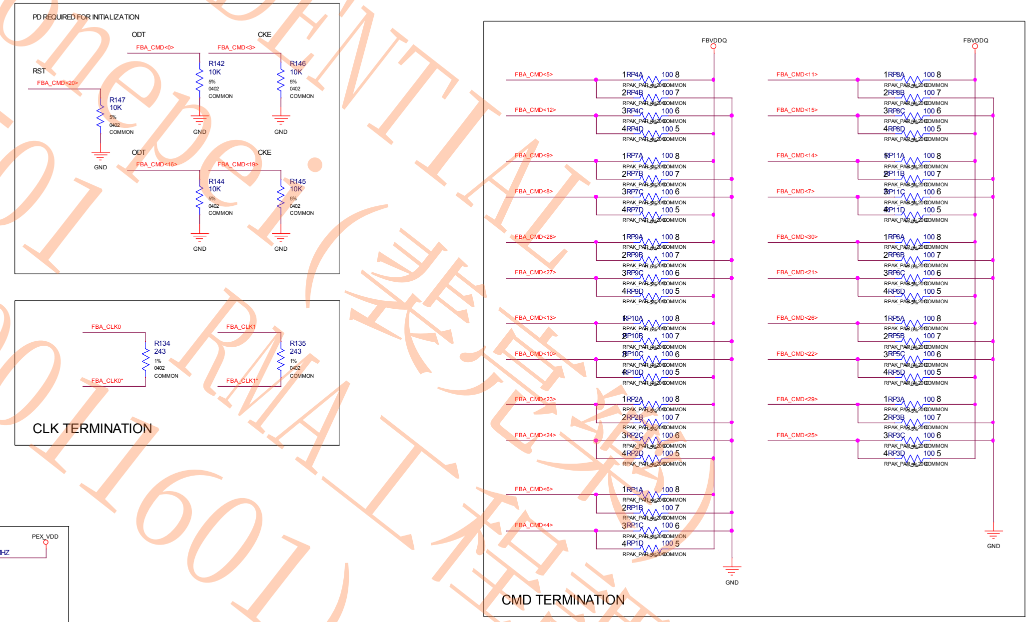
Frame Buffer Interface



GF119 CMD	RANK0		RANK1	
	<31..0>	<63..32>	<31..0>	<63..32>
CMD0	ODT_L	NOT USED	ODT_L	NOT USED
CMD1	NOT USED	NOT USED	CS1_L*	NOT USED
CMD2	CS0_L*	NOT USED	NOT USED	NOT USED
CMD3	CKE_L	NOT USED	CKE_L	NOT USED
CMD4	A<9>	A<9>	A<11>	A<11>
CMD5	A<6>	A<6>	A<7>	A<7>
CMD6	A<3>	A<3>	BA1	BA1
CMD7	A<0>	A<0>	A<12>	A<12>
CMD8	A<8>	A<8>	A<8>	A<8>
CMD9	A<12>	A<12>	A<0>	A<0>
CMD10	A<1>	A<1>	A<2>	A<2>
CMD11	RAS*	RAS*	RAS*	RAS*
CMD12	A<13>	A<13>	A<14>	A<14>
CMD13	BA1	BA1	A<3>	A<3>
CMD14	A14	A14	A<13>	A<13>
CMD15	CAS*	CAS*	CAS*	CAS*
CMD16	NOT USED	ODT_H	NOT USED	ODT_H
CMD17	NOT USED	NOT USED	NOT USED	CS1_H*
CMD18	NOT USED	CS0_H*	NOT USED	NOT USED
CMD19	NOT USED	CKE_H	NOT USED	CKE_H
CMD20	RST	RST	RST	RST
CMD21	A<7>	A<7>	A<6>	A<6>
CMD22	A<4>	A<4>	A<5>	A<5>
CMD23	A<11>	A<11>	A<9>	A<9>
CMD24	A<2>	A<2>	A<1>	A<1>
CMD25	A<10>	A<10>	WE*	WE*
CMD26	A<5>	A<5>	A<4>	A<4>
CMD27	BA2	BA2	NOT USED	NOT USED
CMD28	WE*	WE*	A<10>	A<10>
CMD29	BA0	BA0	BA0	BA0
CMD30	NOT USED	NOT USED	BA2	BA2

Net Name	DIFF_PAIR	CRITICAL	IMPEDANCE
FBA_CLK0	FBA_CLK0	1	80DIFF
FBA_CLK0*	FBA_CLK0	1	80DIFF
FBA_CLK1	FBA_CLK1	1	80DIFF
FBA_CLK1*	FBA_CLK1	1	80DIFF

Net Name	VOLTAGE	MAX_CURRENT	
FB_PLLAVDD	1.05V	0.08A	12MIL

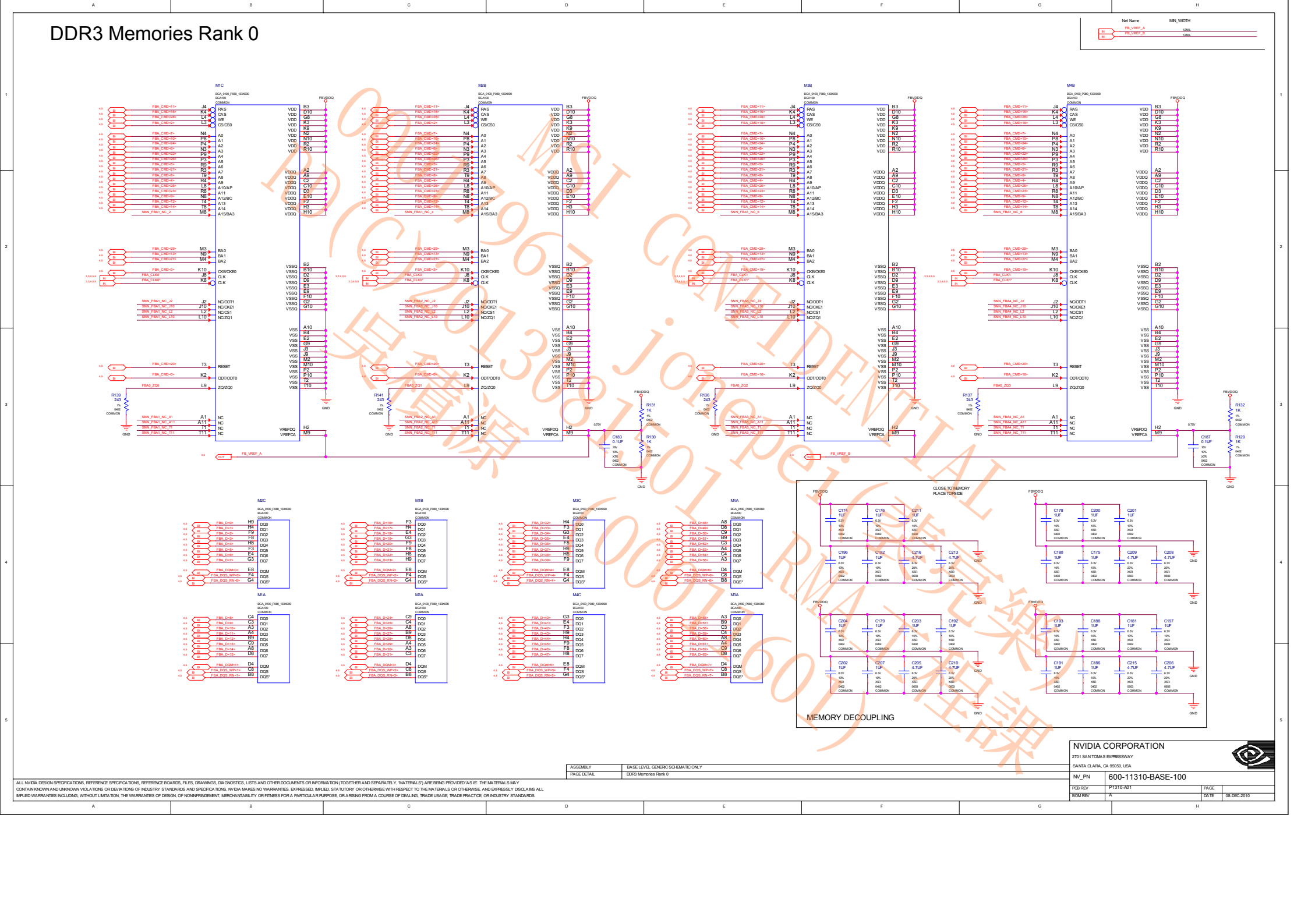


NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	Frame Buffer Interface

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

DDR3 Memories Rank 0



Net Name	MIN_WIDTH
FB_VREF_A	12MIL
FB_VREF_B	12MIL

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	DDR3 Memories Rank 0

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

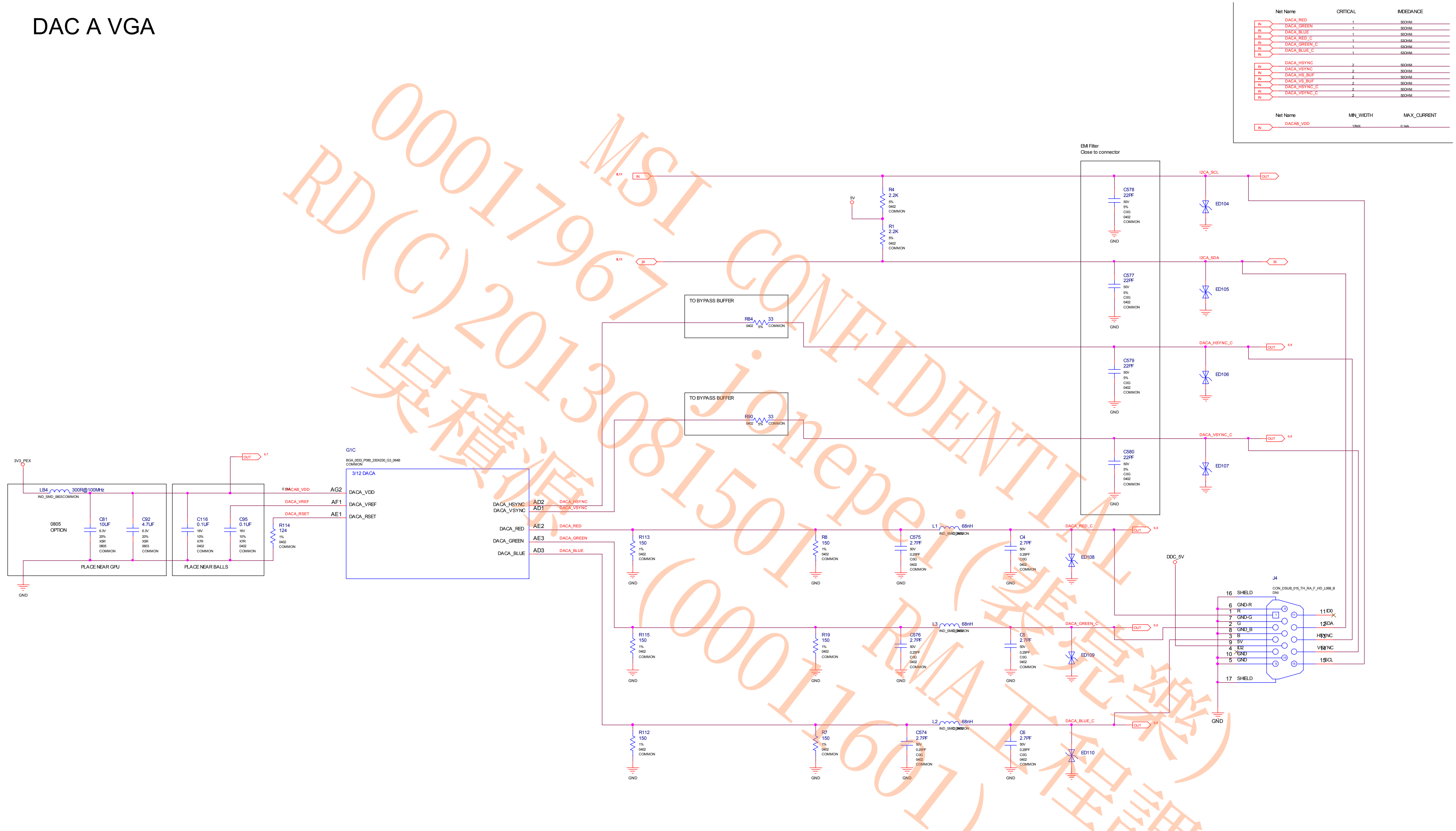
DDR3 Memories Rank 1

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	DDR3 Memories Rank 1

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

DAC A VGA

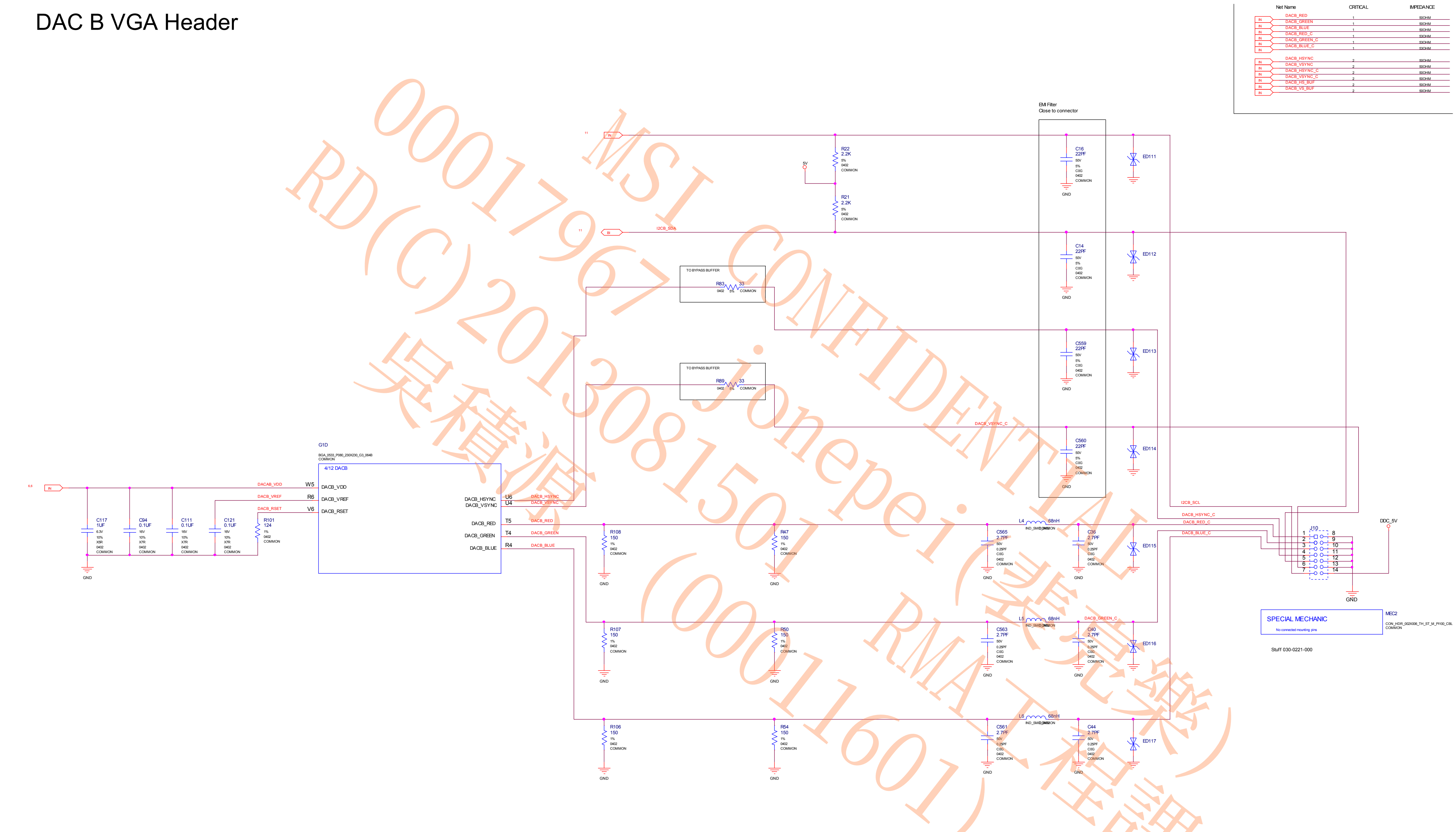


ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	DAC A VGA

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

DAC B VGA Header

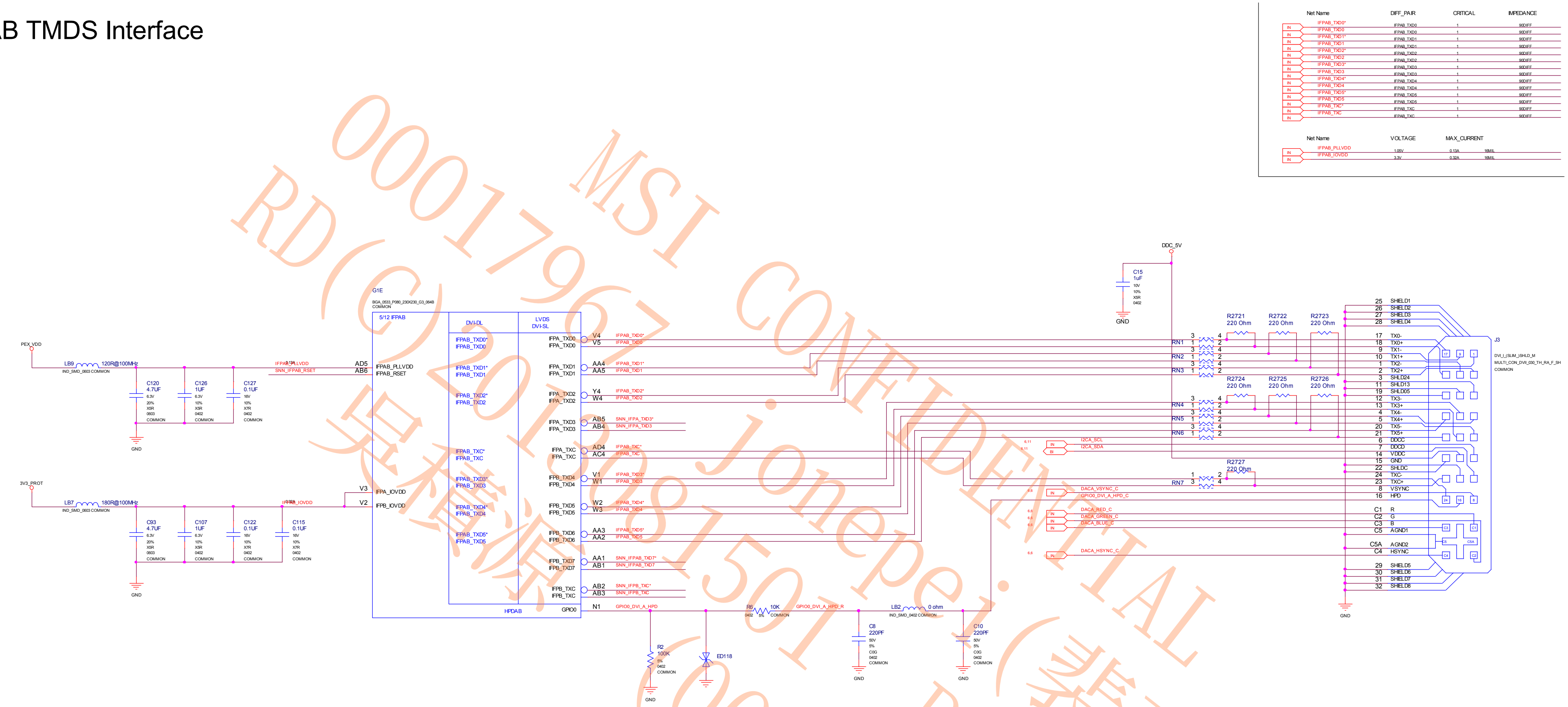


ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	DAC B VGA Header

NVIDIA CORPORATIONV
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

IFPAB TMDS Interface

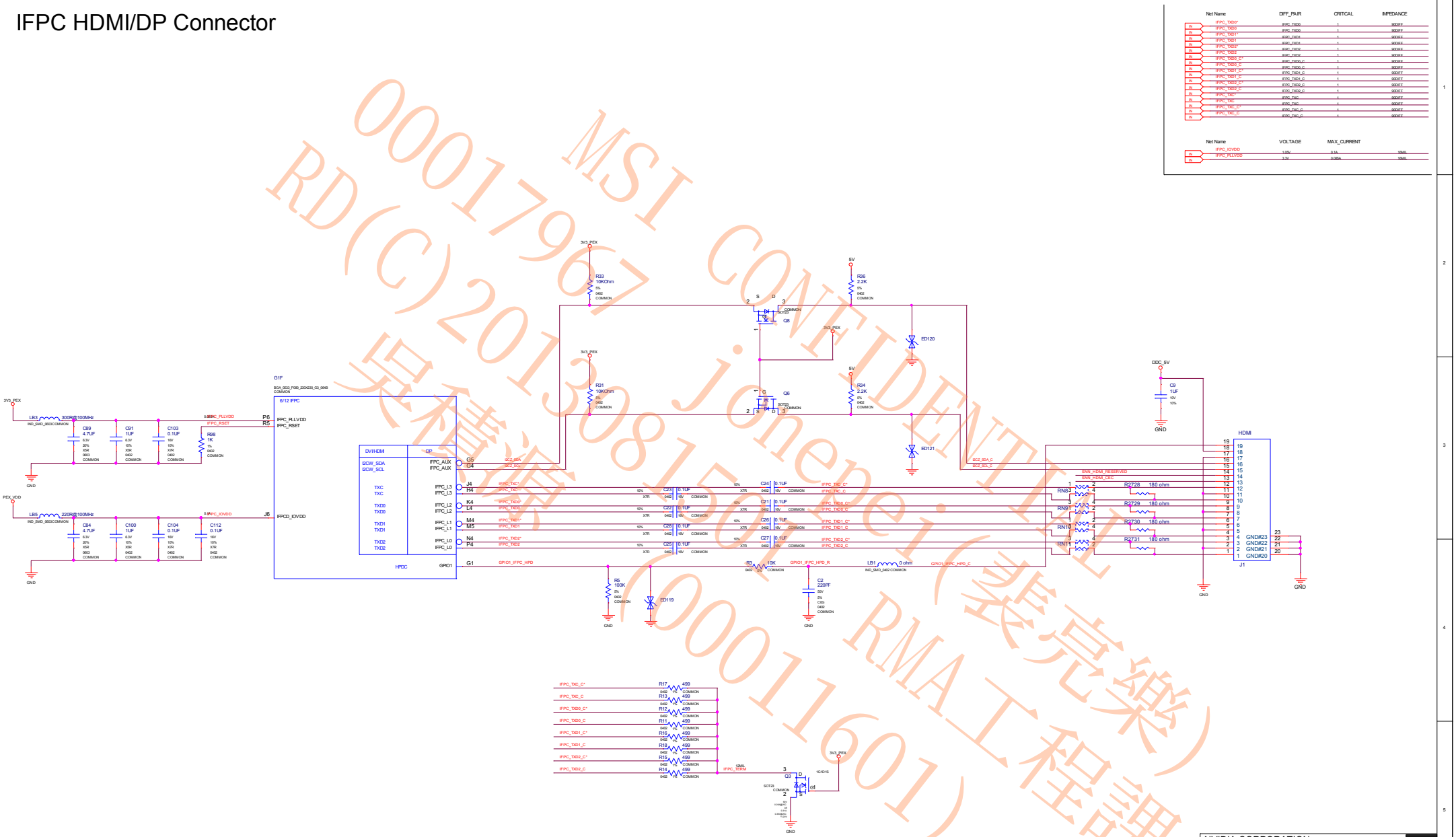


ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	IFPAB TMDS Interface

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

IFPC HDMI/DP Connector

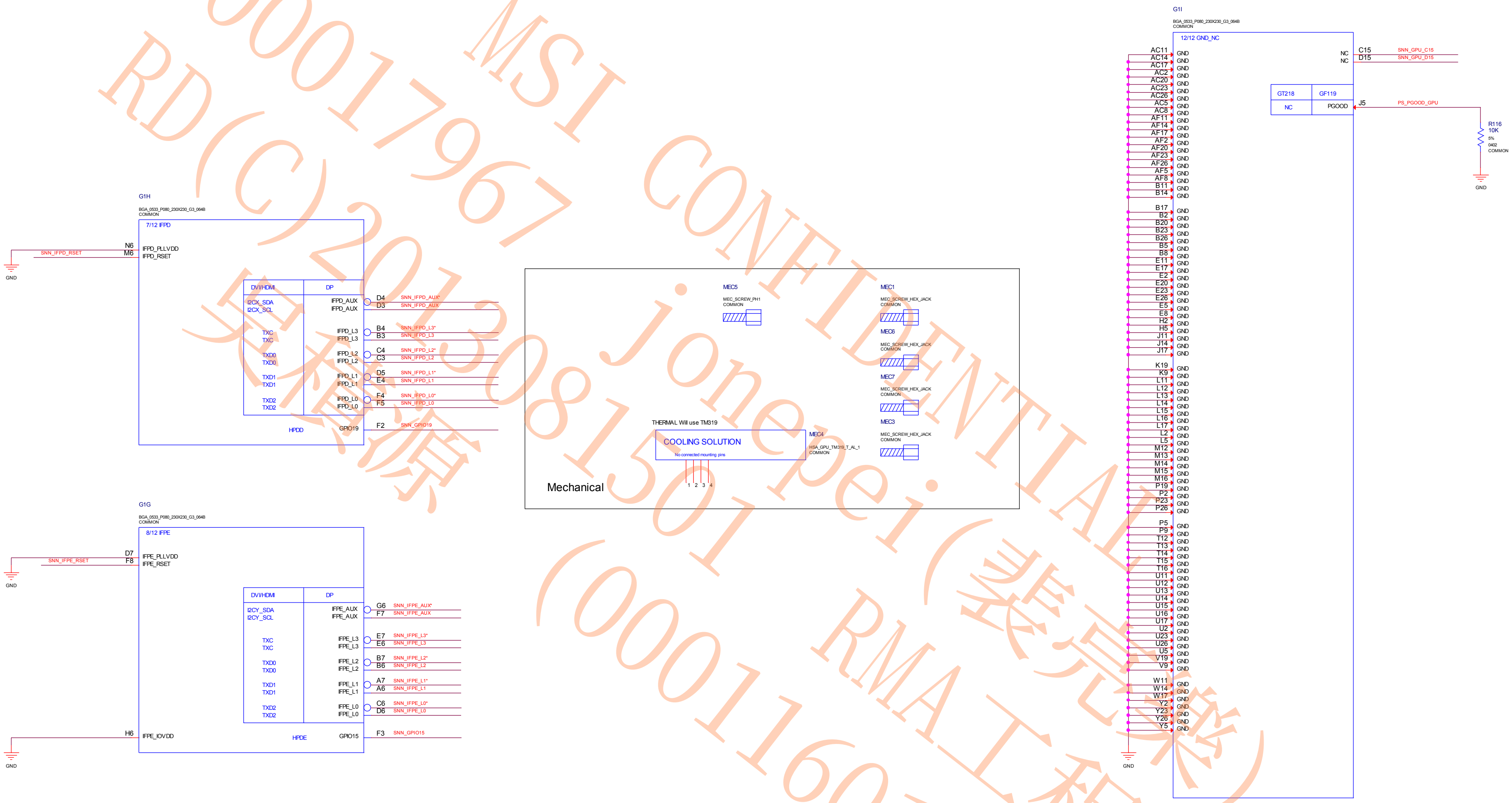


ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	IFPC HDMI/DP Connector

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

IFPD, IFPE Interface(Not used), Mechanical parts



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	IFPD, IFPE Interface(Not used), Mechanical parts

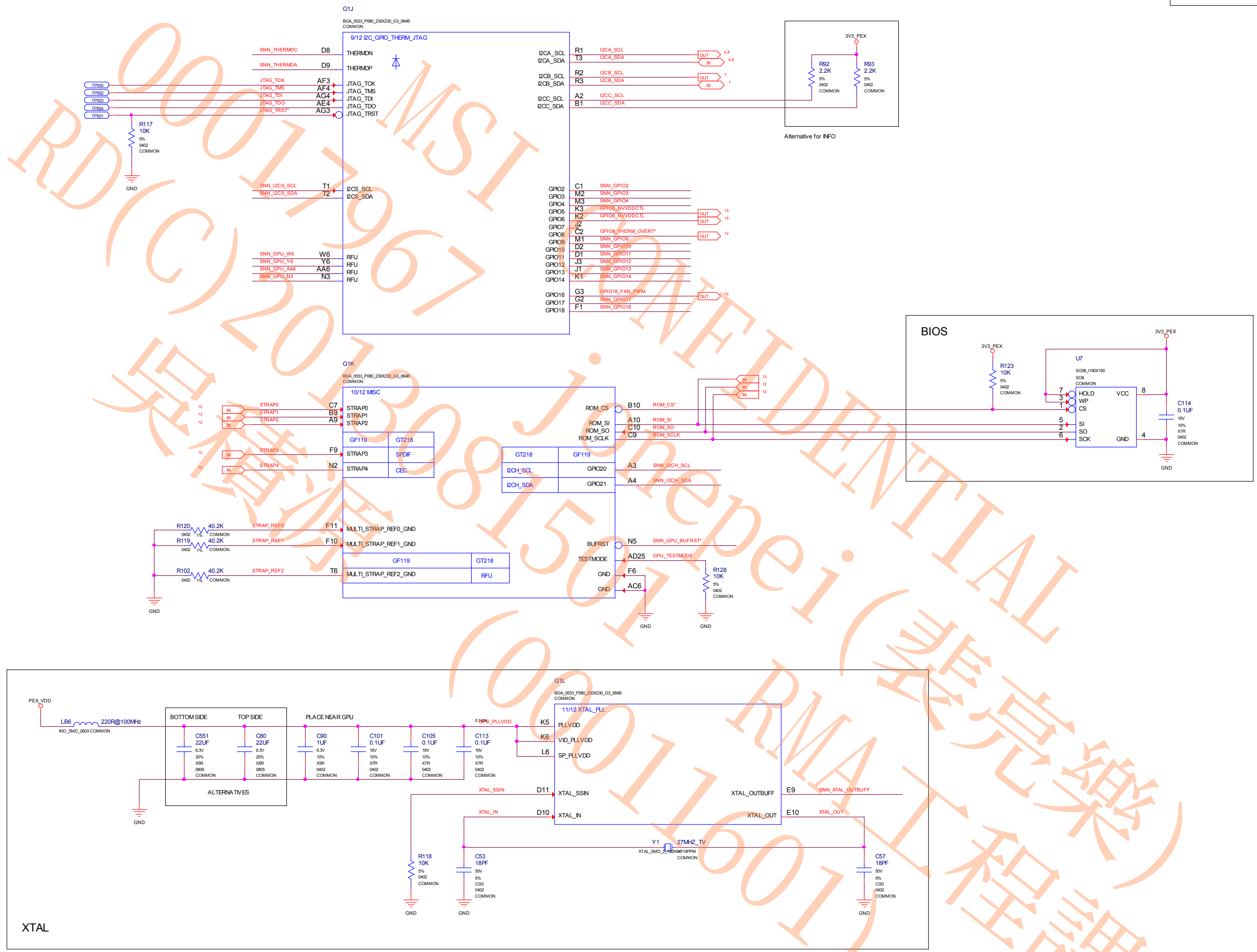
NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

XTAL, ROM, INFO ROM,JTAG

Net Name	DIFF_PAIR	CRITICAL	IMPEDANCE
XTAL_OUT	XTAL	1	90DIFF
XTAL_IN	XTAL	1	90DIFF

Net Name	VOLTAGE	MAX_CURRENT	
GPU_PLLVDD	1.05V	0.143A	16MIL
3V3_D			12MIL



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	XTAL, ROM, INFO ROM,JTAG

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

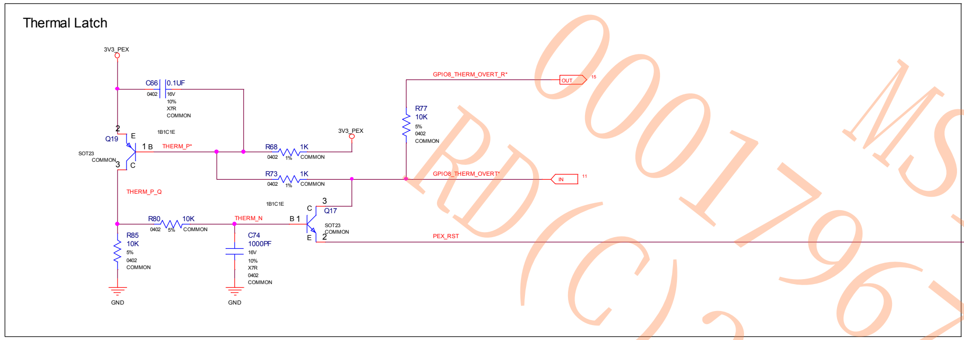
NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

Thermal Protection, Protected 3V3, Straps, Fan

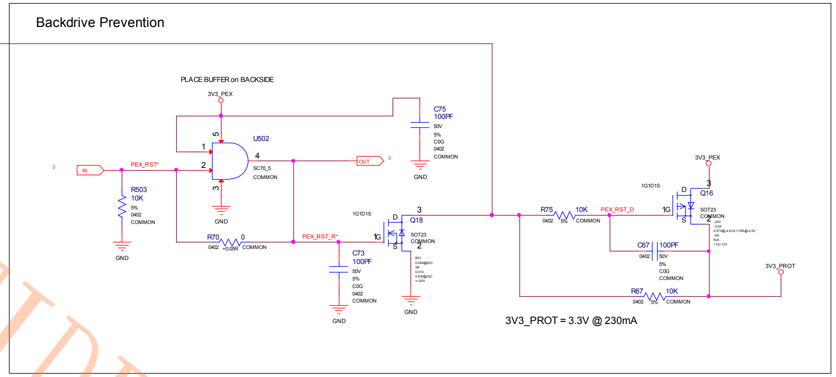
Net Name	VOLTAGE	MAX_CURRENT	
3V3_PROT	3.3V	0.23A	10MIL

Net Name	MIN_WIDTH
GPIO18_FAN_R	12MIL
GPIO18_FAN_PWM_R	12MIL

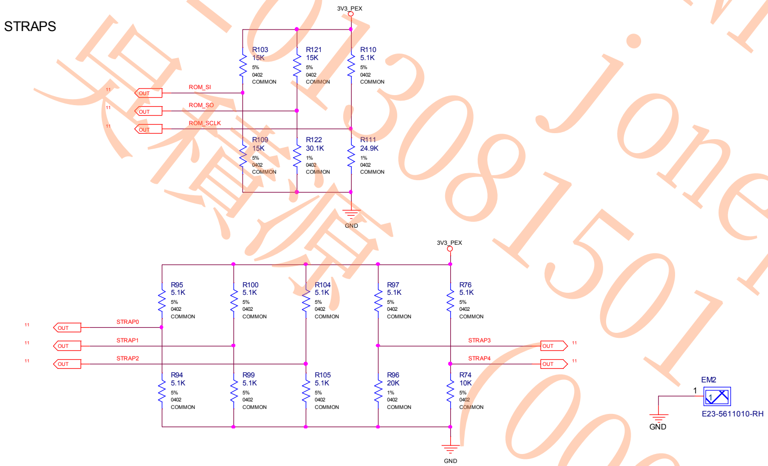
Thermal Latch



Backdrive Prevention



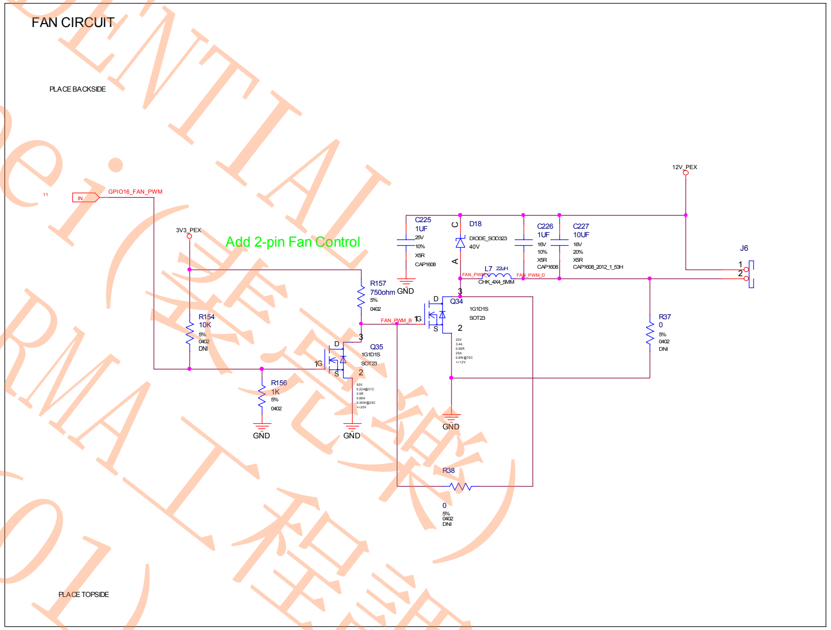
STRAPS



Strap	PU/PD	Rval
0	PD	5k
1	PD	10k
2	PD	15k
3	PD	20k
4	PD	25k
5	PD	30k
6	PD	35k
7	PD	45k
8	PU	5k
9	PU	10k
A	PU	15k
B	PU	20k
C	PU	25k
D	PU	30k
E	PU	35k
F	PU	45k

0010 64Mx16 sDDR3 64-bit Hynix
0011 64Mx16 sDDR3 64-bit Samsung
0110 128Mx16 sDDR3 64-bit Hynix
0111 128Mx16 sDDR3 64-bit Samsung
1010 64Mx16 sDDR3 64-bit DR Hynix
1011 64Mx16 sDDR3 64-bit DR Samsung
1110 128Mx16 sDDR3 64-bit DR Hynix
1111 128Mx16 sDDR3 64-bit DR Samsung

FAN CIRCUIT



STRAP PIN MODE TABLE

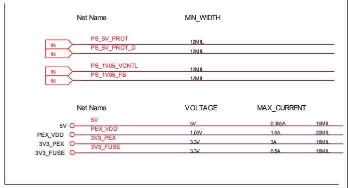
	PIN NAME	MULTI-LEVEL bit [3:0]	BINARY PRODUCTION	BINARY BRINGUP
	STRAP0	USER[3:0]	RAMCFG0	3GIO_PADCFG_LUT_ADR0
	STRAP1	3GIO_PADCFG_ADR[3:0]	RAMCFG1	3GIO_PADCFG_LUT_ADR1
	STRAP2	PCI_DEVID[3:0]	RAMCFG2	3GIO_PADCFG_LUT_ADR2
GF119	STRAP3	SOR[3:0]_EXPOSED	TBD	TBD
GF119	STRAP4	RESERVED,RESERVED,PCIE_MAX_SPEED,DP_PLL_VDD33V	TBD	TBD
	ROM_SCLK	PCIDEVID[4], SUB_VENDOR, SLOT_CLK, PEX_PLL_EN_TERM	PCI_DEVID3	3GIO_PADCFG_LUT_ADR3
GF119	ROM_SCLK	PCI_DEVID[4],SUB_VENDOR,PCI_DEVID[5],PEX_PLL_EN_TERM	TBD	TBD
	ROM_SI	RAMCFG[3:0]	PCI_DEVID_EXT	SUB_VENDOR
	ROM_SO	XCLK_417, FB0_BAR_SIZE, SMB_ALT_ADDR, VGA_DEVICE	XCLK_417	XCLK_277
GF119	ROM_SO	FB[1],FB[0],SMB_ALT_ADDR,VGA_DEVICE	TBD	TBD

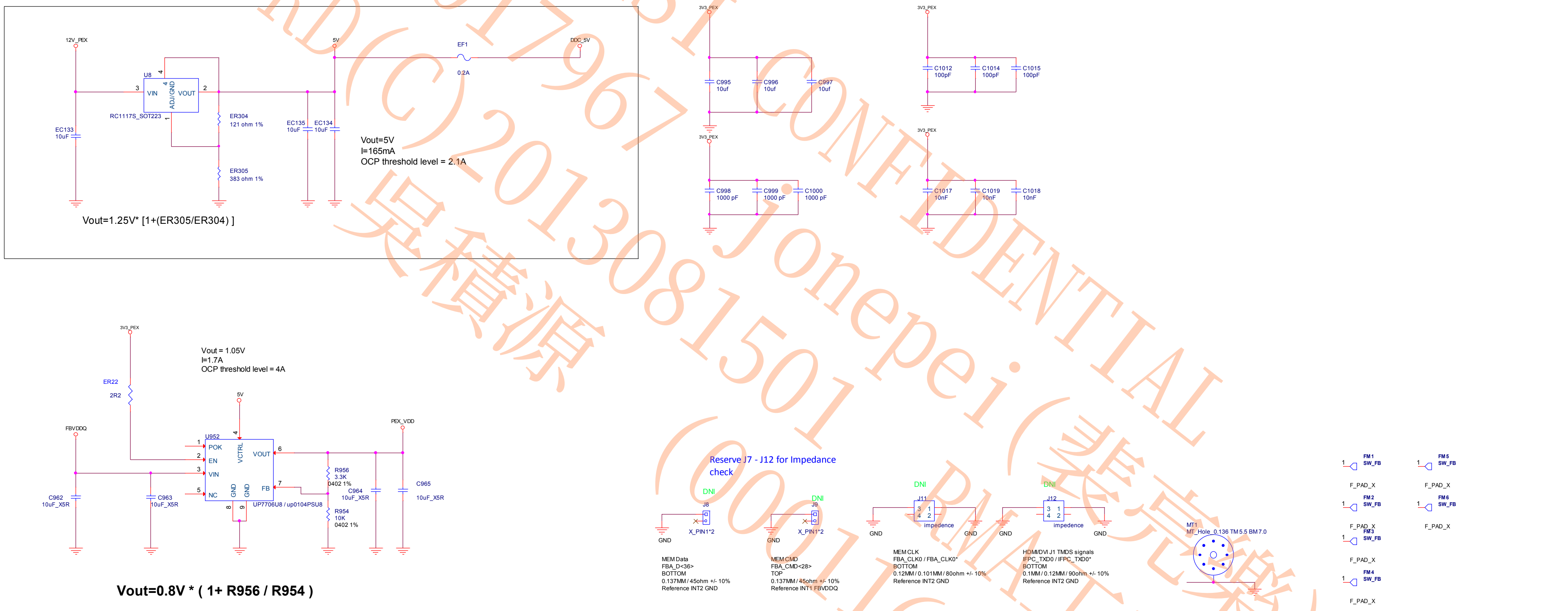
ASSEMBLY	
PAGE DETAIL	Thermal Protection, Protected 3V3, Straps, Fan

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

Power Supply I: 3V3_FUSE,5V,PEXVDD





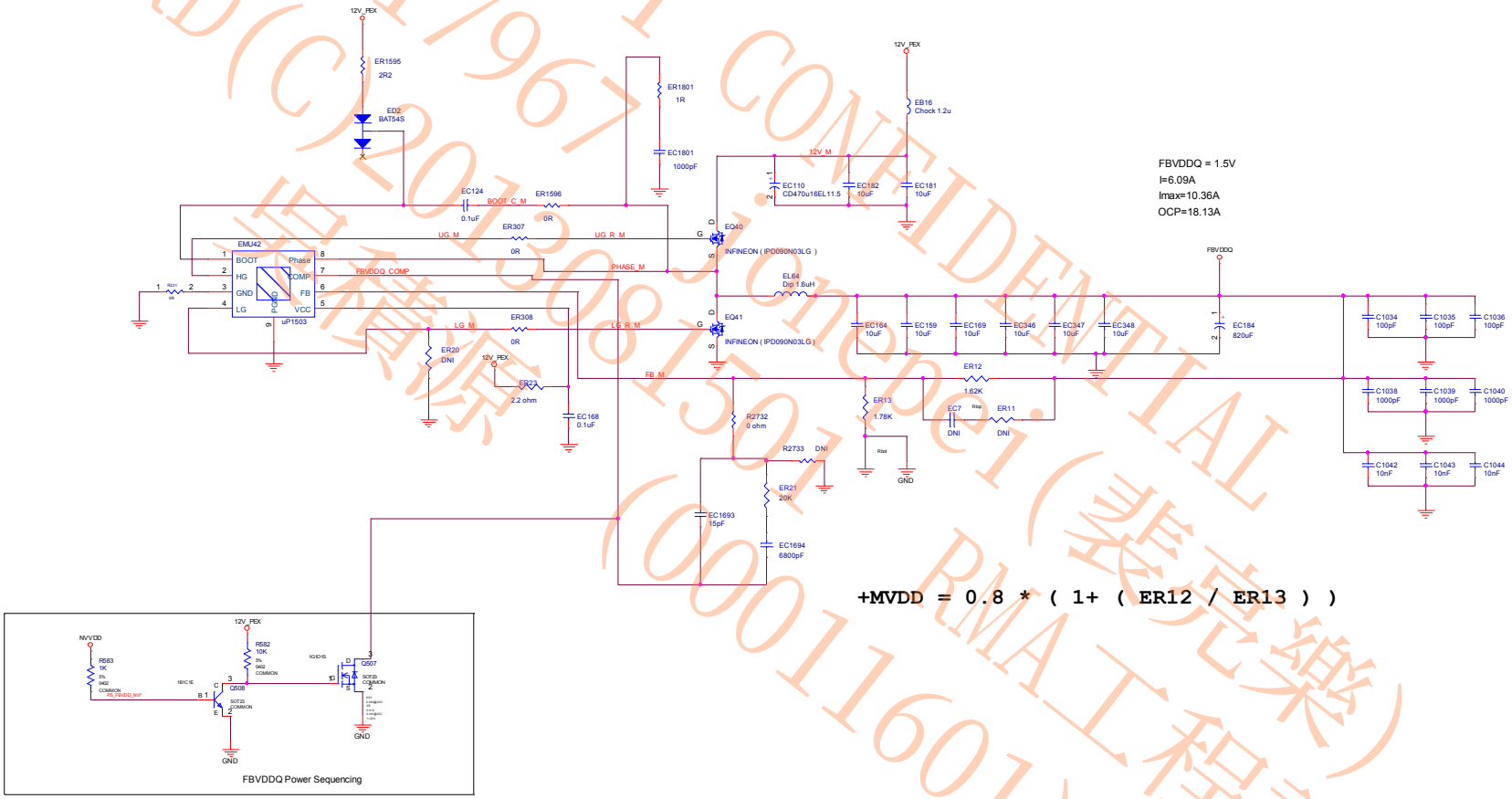
ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	Power Supply I: 3V3_FUSE,5V,PEXVDD

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

Power Supply II: FBVDDQ

Net Name	MIN_LINE_WIDTH	VOLTAGE	NV_NET_MAX_CURRENT
FBVDDQ	12MIL	1.5V	6A
PS_FB_VCC12	10MIL		
PS_FB_FS	8MIL		
PS_FB_FB	8MIL		
PS_FB_RC_FB	8MIL		
PS_FB_RC_CP	8MIL		
PS_FB_BOOT	10MIL		
PS_FB_UG	10MIL		
PS_FB_PHASE	10MIL		
PS_FB_LG	10MIL		
PS_FB_UG_R	10MIL		
PS_FB_RC_SNUB	10MIL		



FBVDDQ = 1.5V
I=6.09A
Imax=10.36A
OCP=18.13A

+MVDD = 0.8 * (1+ (ER12 / ER13))

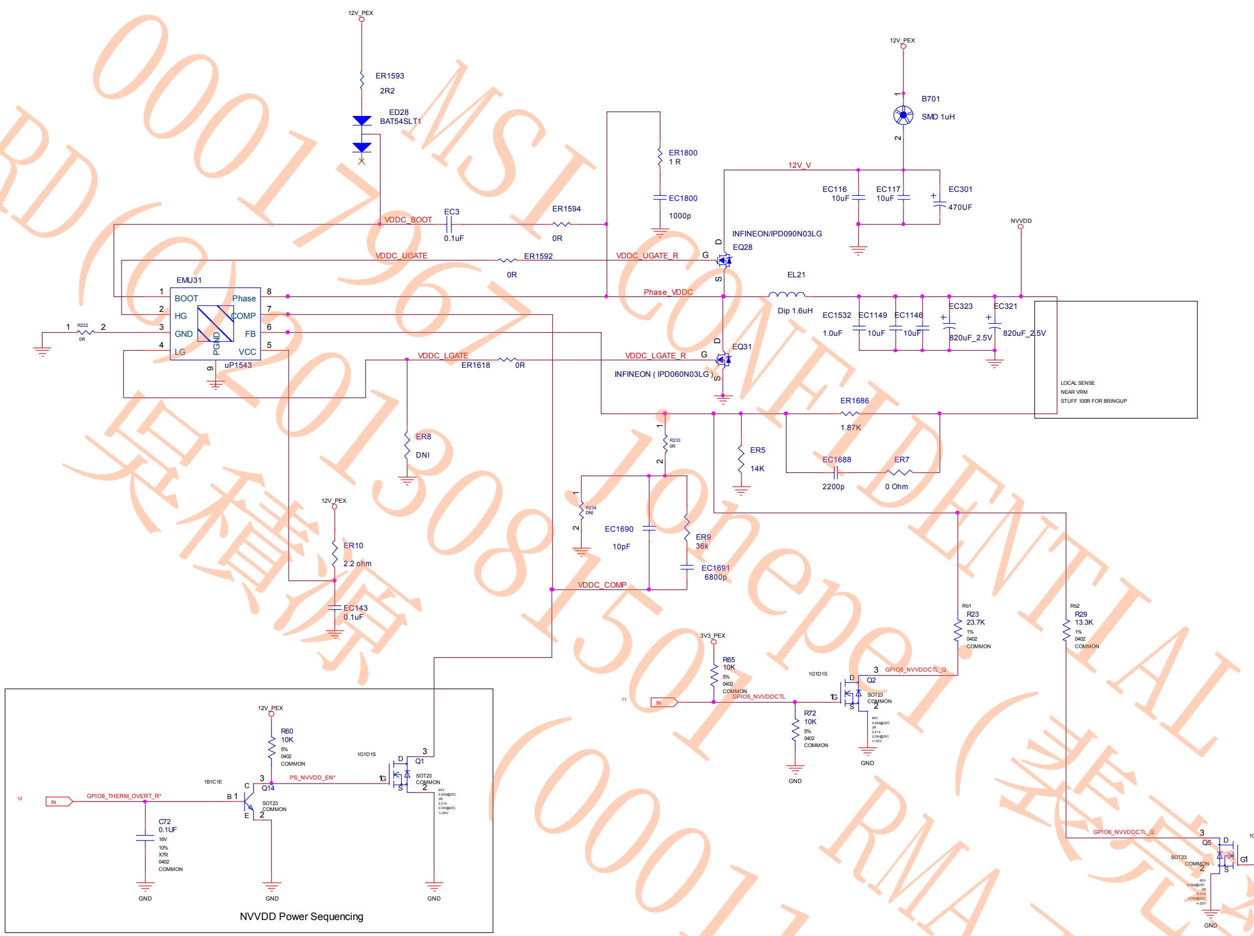
FBVDDQ Power Sequencing

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	Power Supply II: FBVDDQ

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010

Power Supply III: NVVDD



Net Name	MIN_WIDTH
PS_NVVDD_EN	8MIL
PS_NVVDD_VCC	16MIL
PS_NVVDD_BOOT	16MIL
PS_NVVDD_UG	16MIL
PS_NVVDD_UG_R	16MIL
PS_NVVDD_LG	16MIL
PS_NVVDD_PHASE	16MIL
PS_NVVDD_FET_RC	16MIL
PS_NVVDD_FB	8MIL
PS_NVVDD_FB_RC	8MIL
PS_NVVDD_CP_RC	8MIL

	Net Name	VOLTAGE	MAX_CURRENT	
NVVDD	NVVDD	1.00V	18A	20MIL
12V_PEX	12V_PEX	12V	3A	20MIL

NVVDD = 1.0V @ 18A

Vout = Vref * (1+Rtop/Rbot)

	GPIO[7:6:5]	NVVDD
P8(BOOT) -->	0 0 0	0.899V
	0 0 1	0.929V
	0 1 0	0.952V
	0 1 1	0.982V
P0(VB1) -->	1 0 0	1.022V
	1 0 1	1.052V
	1 1 0	1.075V
P0(VB0) -->	1 1 1	1.105V

PWM Freq Vref(V)
RT8120AGS: 300kHz, 0.6V
FP6329: 300kHz, 0.6V
NCP1579DR2G: 275kHz, 0.8V
RT8105GS: 300kHz, 0.8V
RT8101: 300kHz, 0.8V
APW7165AKAE: 300kHz, 0.8V
APW7120KE: 300kHz, 0.8V
L6727TR: 300kHz, 0.8V
L6726ATR: 270kHz, 0.8V

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	Power Supply III: NVVDD

NVIDIA CORPORATION
2701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

NV_PN	600-11310-BASE-100		
PCB REV	P1310-A01	PAGE	
BOM REV	A	DATE	08-DEC-2010