P872: GT218, DDR3 MEMORY 64MX16/128MX16

SKU	VARIANT	NVPN	ASSEMBLY
B	BASE	600-10872-BASE-100	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	SKU0000	600-10872-0000-100	GT218-300-B, Dual-Rank, 589/1402/790, 1024MB/64bit, 64Mx16 DDR3, DVI-DL+HDMI, DT
2	SKU0001	600-10872-0001-100	GT218-300-B, 589/1042/790, 512MB/64bit, 64MBx16 DDR3, DVI-I+HDMI, DT
3	SKU0002	600-10872-0002-100	GT218-300-B, 589/1402/790, 1024MB/64bit, 128MBx16 DDR3, DVI-I+HDMI, DT
4	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
5	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
6	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
7	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
8	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
9	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
10	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
11	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
12	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
13	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
14	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
15	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	P872 Overview

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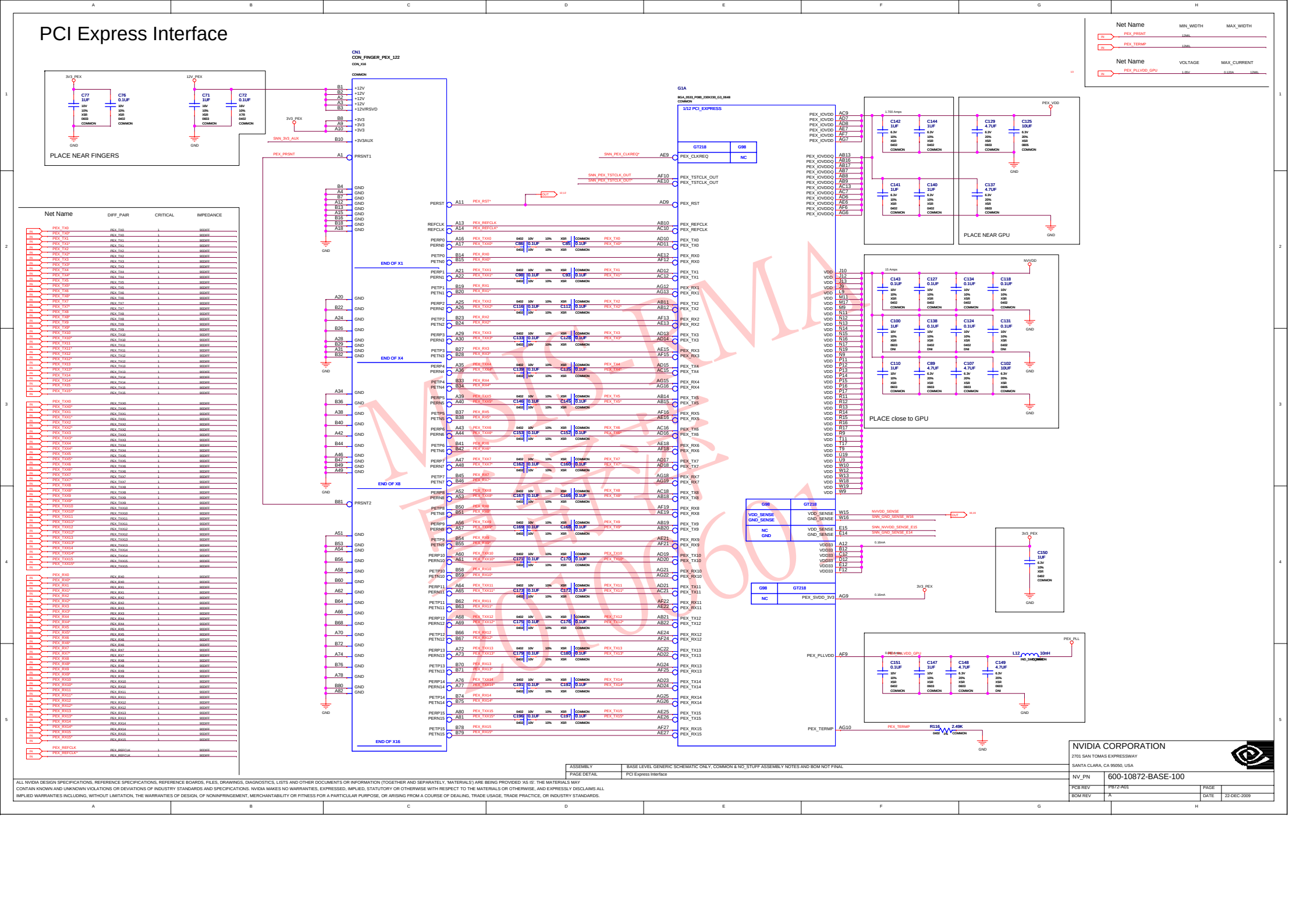
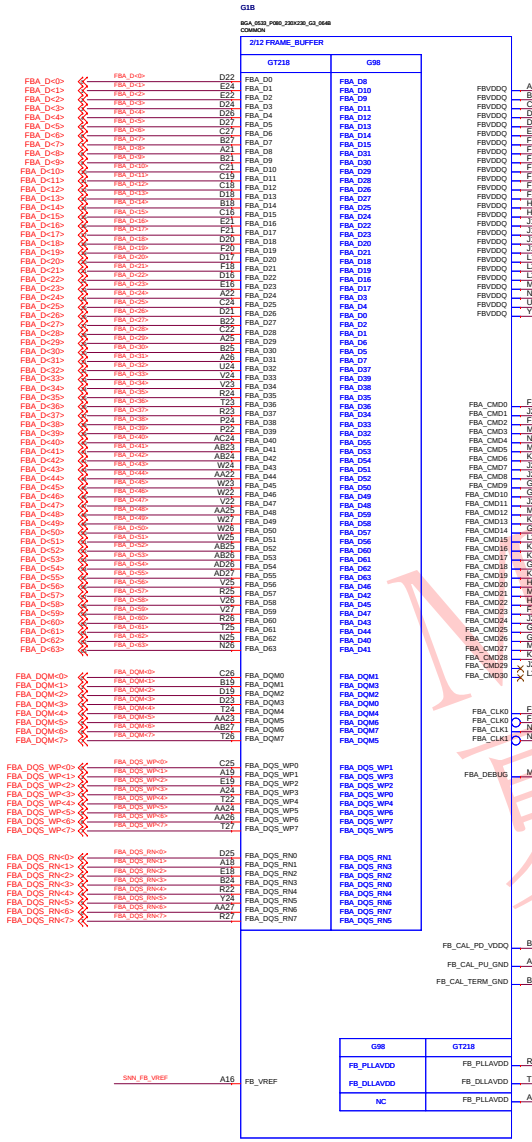
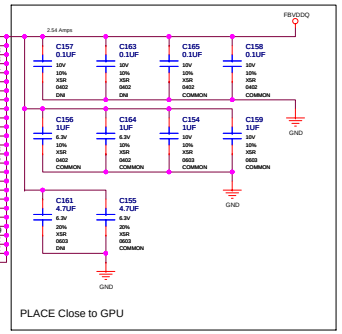
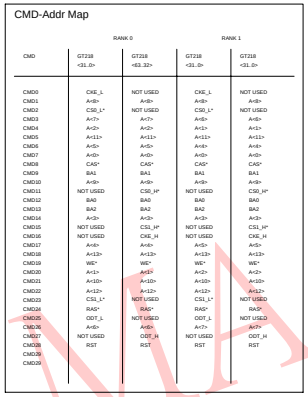
PCI Express Interface

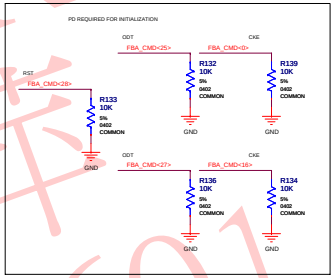


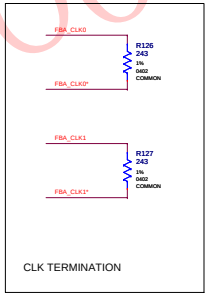
Frame Buffer Interface

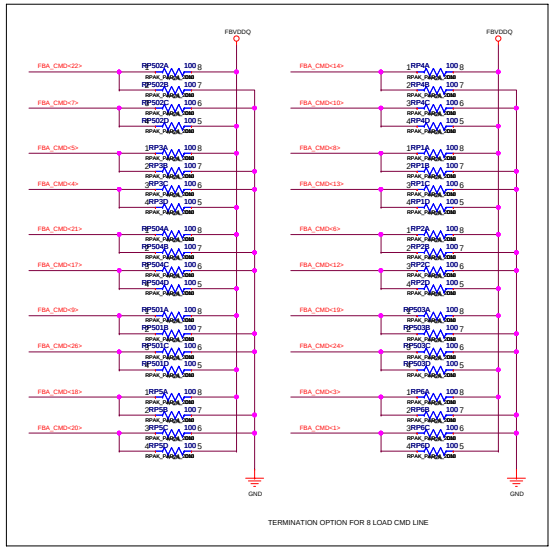


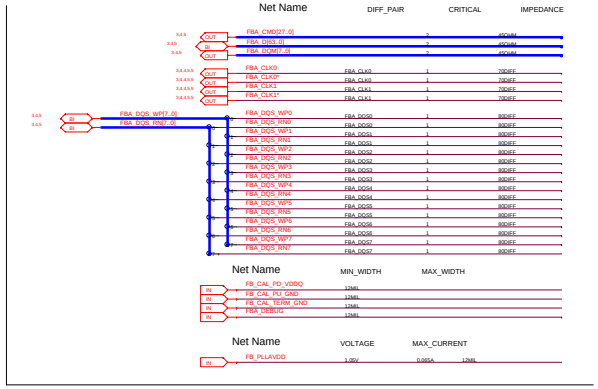












ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	Frame Buffer Interface

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DDR3 Memories Rank 0

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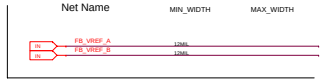
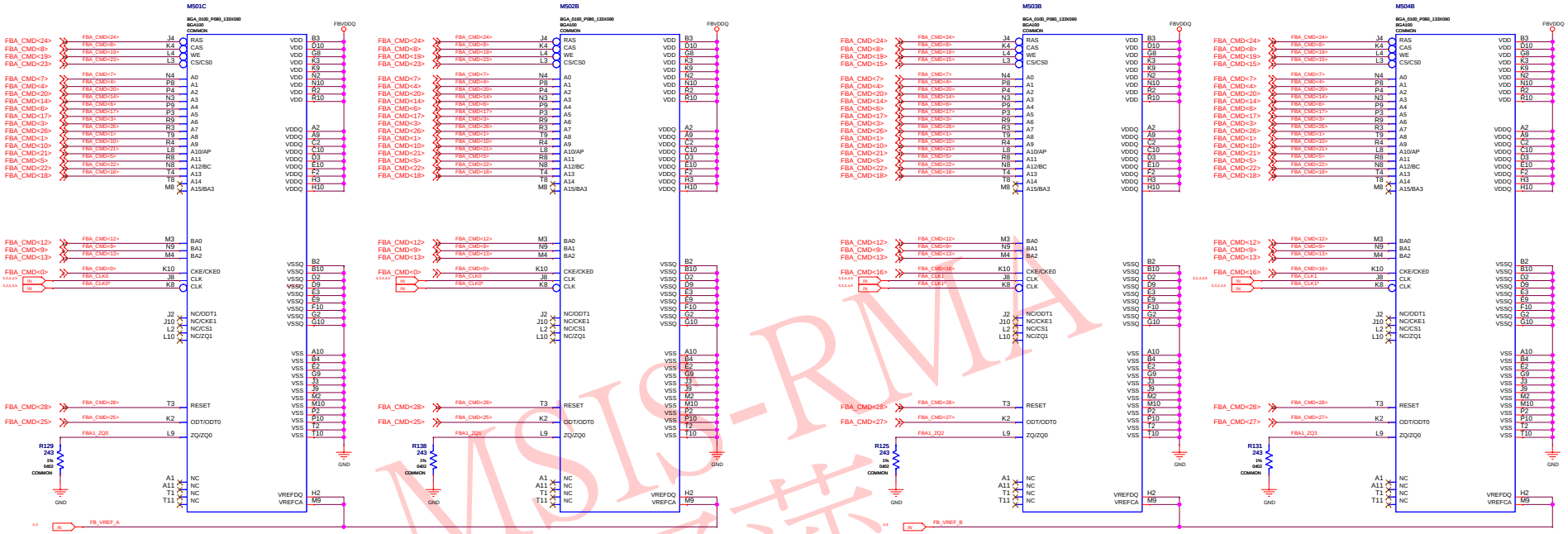
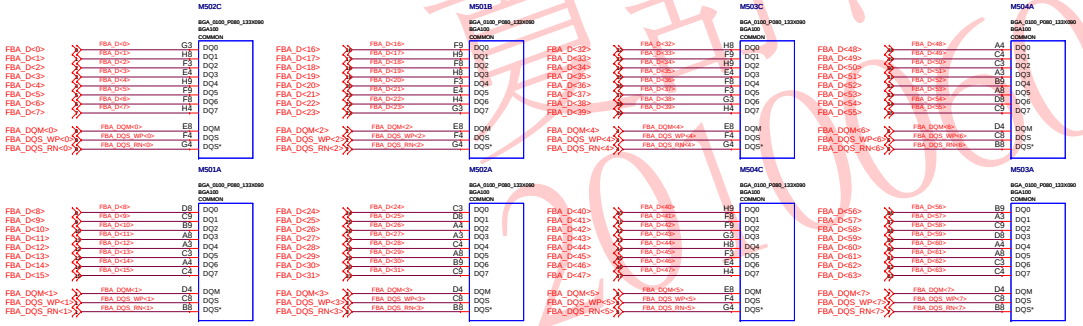
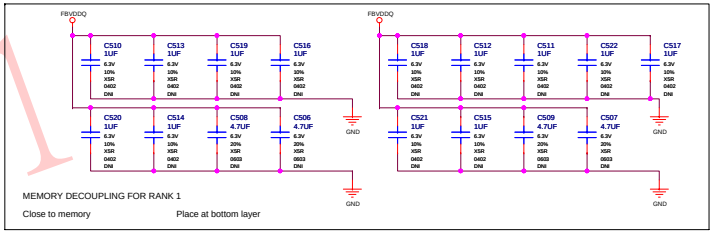
ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	DDR3 Memories Rank 0

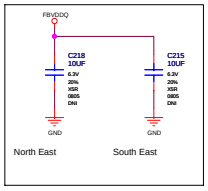
DDR3 Memories Rank 1

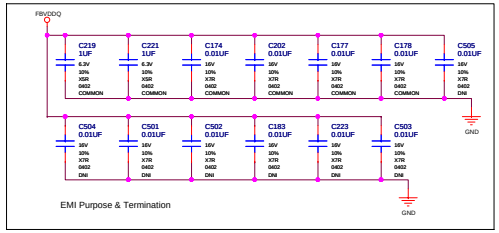












ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	DDR3 Memories Rank 1

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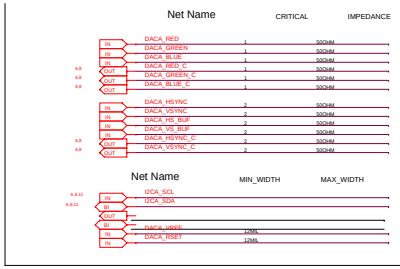
DAC A VGA



EMI Filter
Close to connector

74HCT08DTR2G:115-0557-000
SN74HCT08PWR:115-0568-000
MM74HCT08MTC:115-0570-000

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

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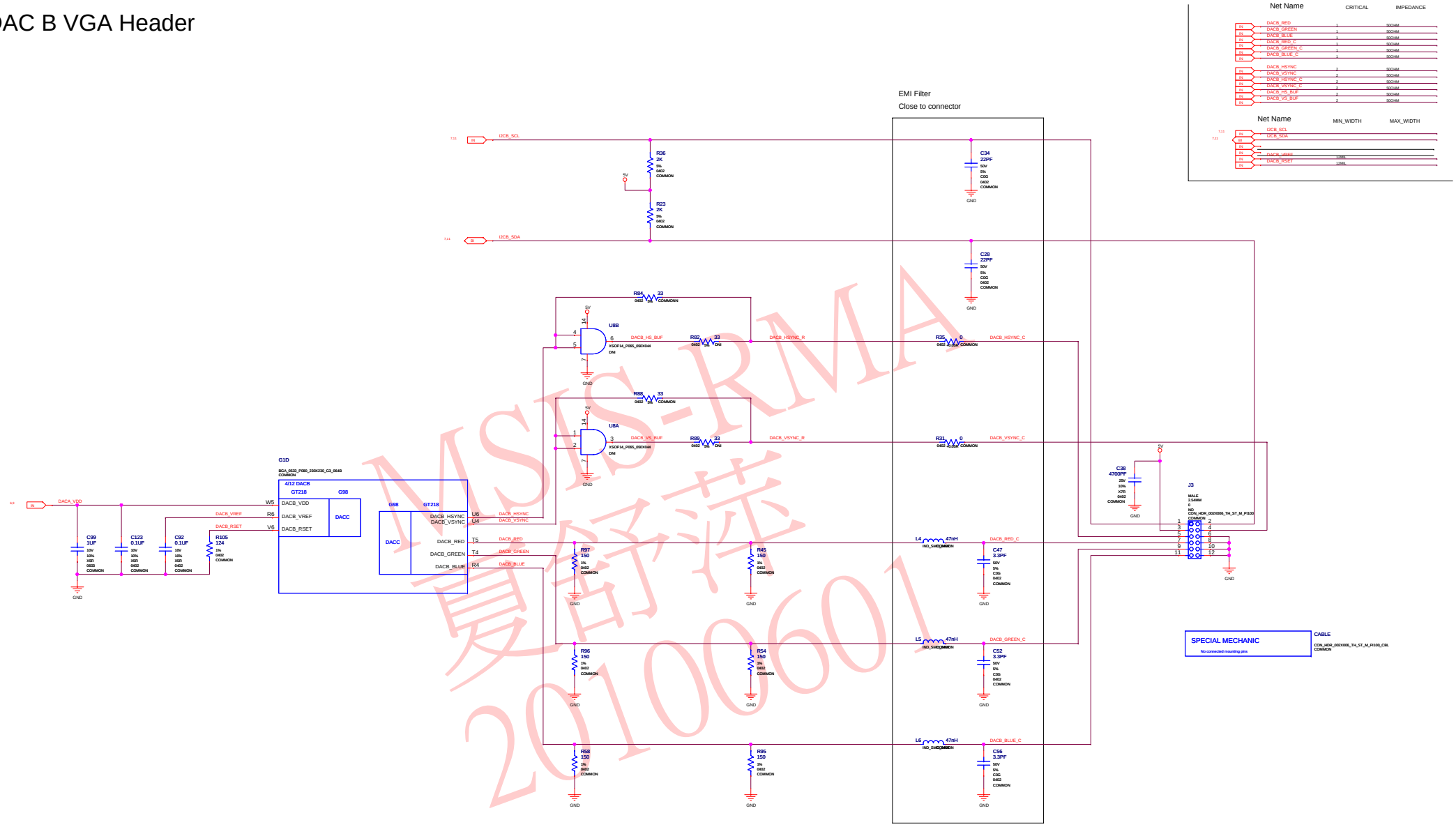
DAC B VGA Header



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	DAC B VGA Header

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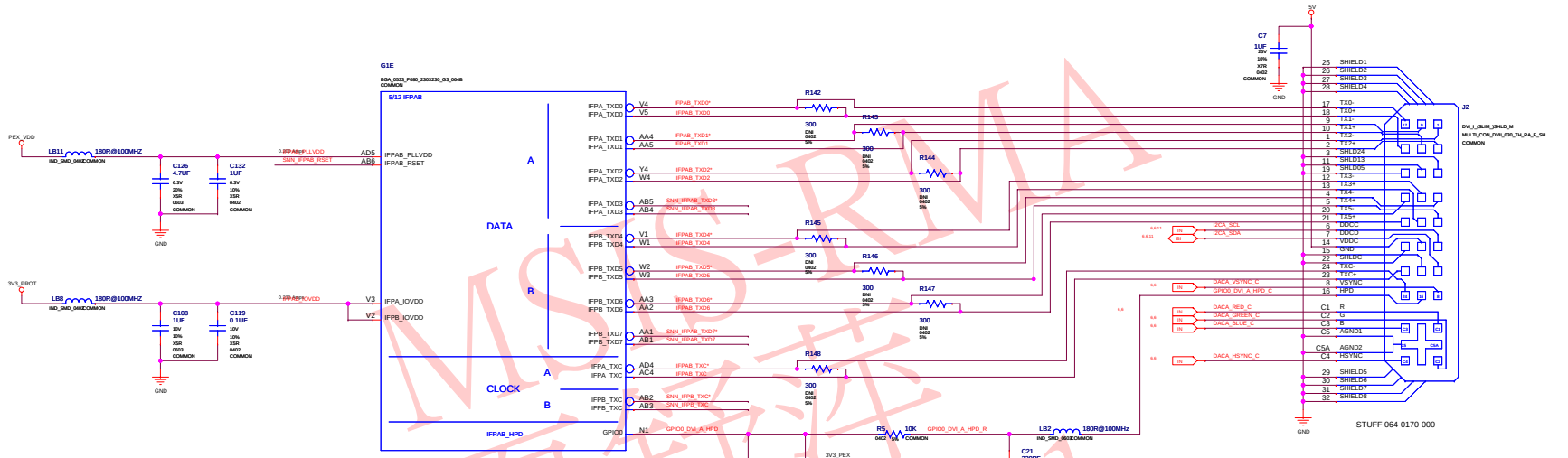
IFPAB TMDS Interface



Net Name	DIFF_PAIR	CRITICAL	IMPEDANCE
IFPAB_TXD0*	IFPAB_TXD0	1	90OHM
IFPAB_TXD0	IFPAB_TXD0	1	90OHM
IFPAB_TXD1*	IFPAB_TXD1	1	90OHM
IFPAB_TXD1	IFPAB_TXD1	1	90OHM
IFPAB_TXD2*	IFPAB_TXD2	1	90OHM
IFPAB_TXD2	IFPAB_TXD2	1	90OHM
IFPAB_TXD4*	IFPAB_TXD4	1	90OHM
IFPAB_TXD4	IFPAB_TXD4	1	90OHM
IFPAB_TXD5*	IFPAB_TXD5	1	90OHM
IFPAB_TXD5	IFPAB_TXD5	1	90OHM
IFPAB_TXD6*	IFPAB_TXD6	1	90OHM
IFPAB_TXD6	IFPAB_TXD6	1	90OHM
IFPAB_TXC*	IFPAB_TXC	1	90OHM
IFPAB_TXC	IFPAB_TXC	1	90OHM

Net Name	MIN_WIDTH	MAX_WIDTH
GPIO0_DVI_A_HPD		
GPIO0_DVI_A_HPD_R		
GPIO0_DVI_A_HPD_C		

Net Name	VOLTAGE	MAX_CURRENT
IFPAB_PLLVDD	1.05V	0.200A
IFPAB_IOVDD	3.3V	0.230A
IFPAB_RSET		

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

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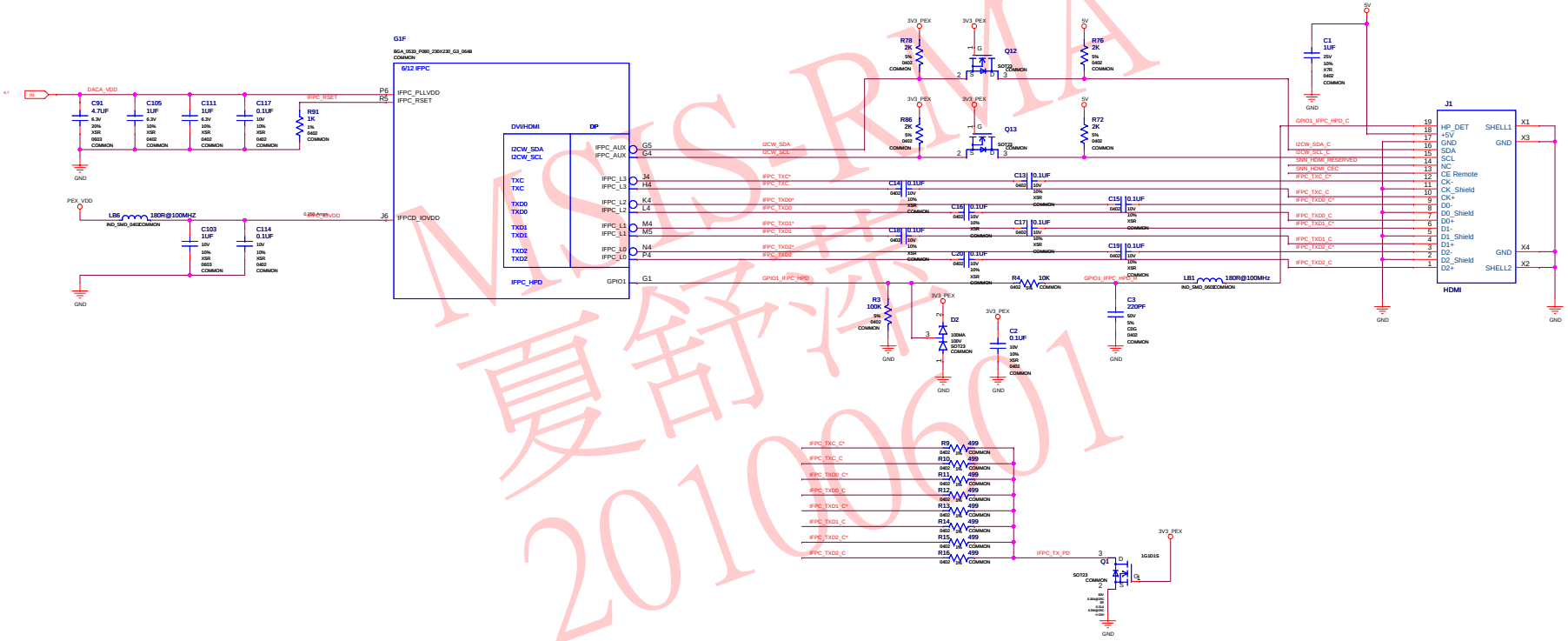
IFPC HDMI Connector



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

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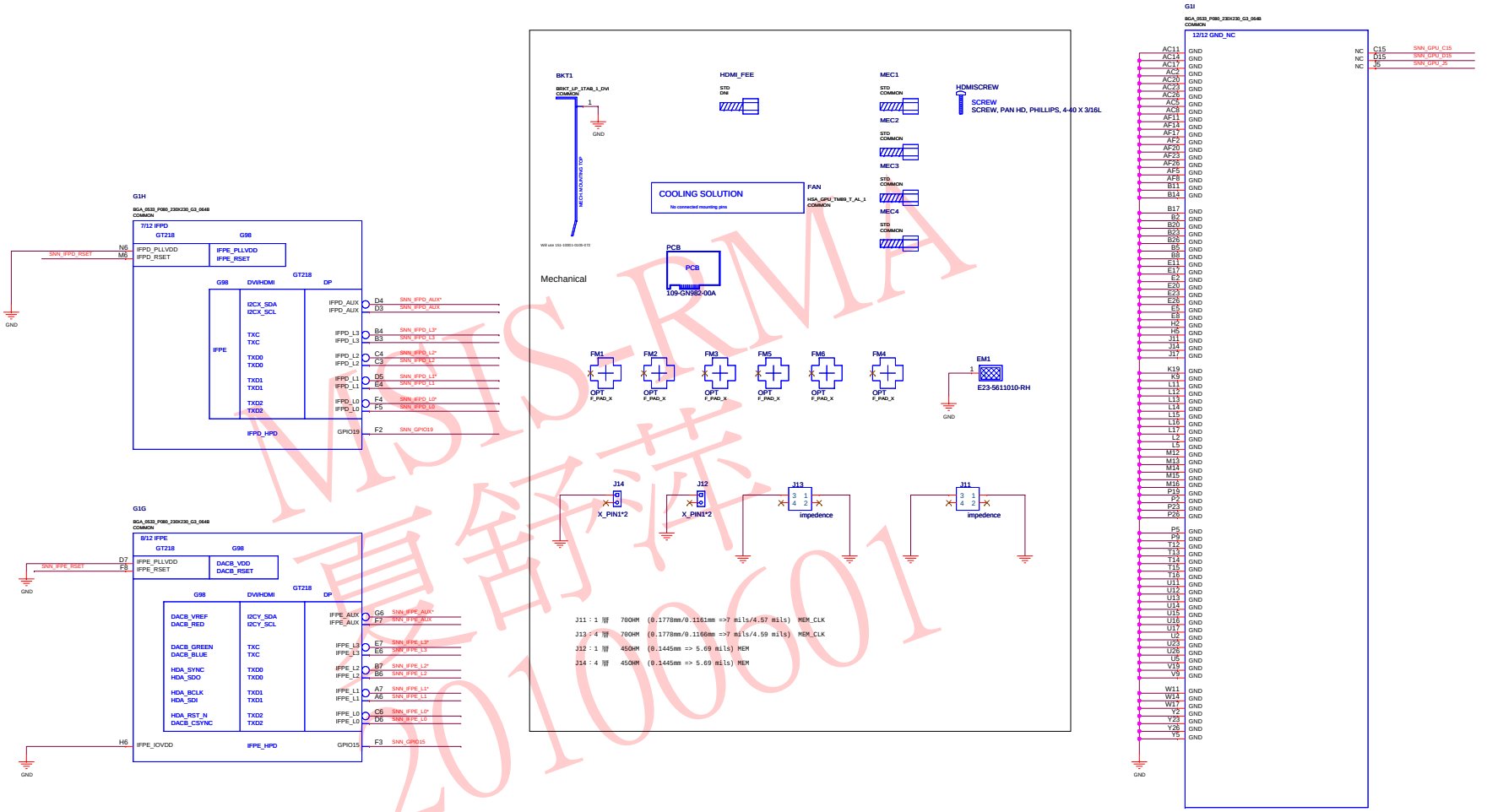
IFPD, IFPE Interface(Not used), Mechanical



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	IFPD, IFPE Interface(Not used), Mechanical

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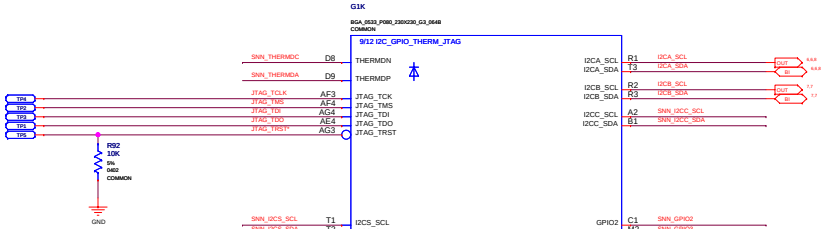
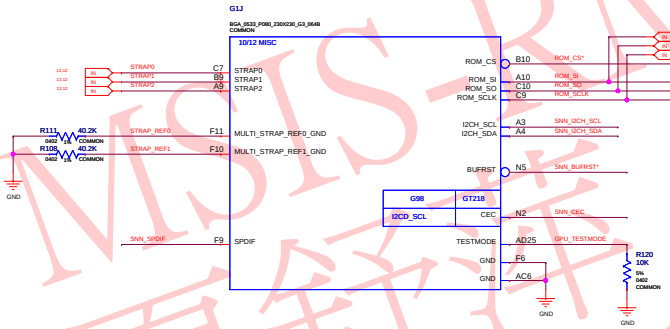
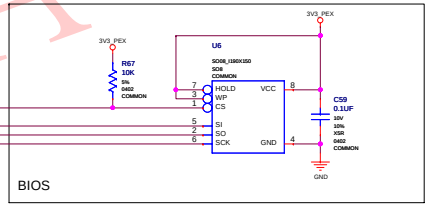
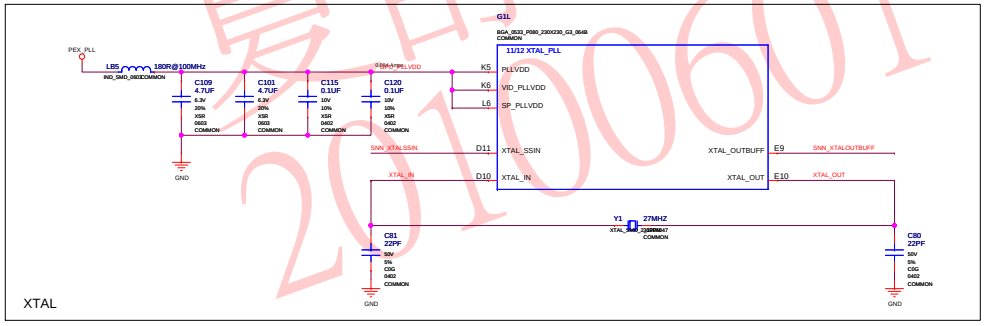
XTAL, ROM, JTAG









Net Name | CRITICAL | IMPEDANCE
XTAL_OUT | 1
XTAL_IN | 1

Net Name | VOLTAGE | MAX_CURRENT
GPU_PLLVDD | 1.05V | 0.083A | 16MIL

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

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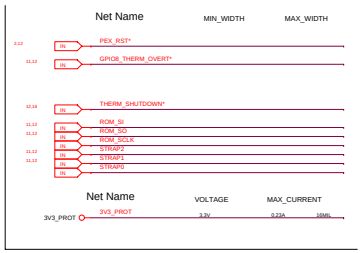
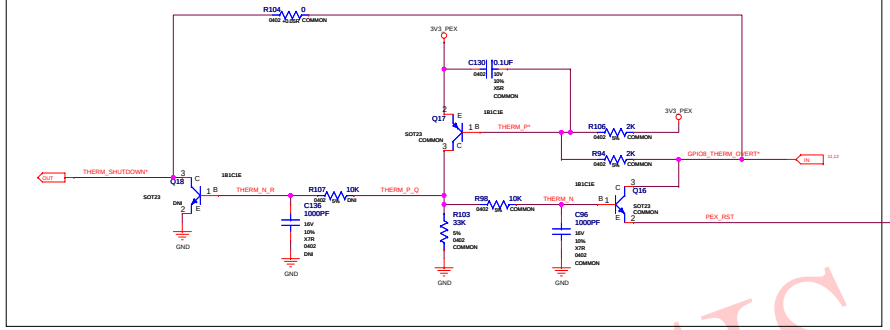
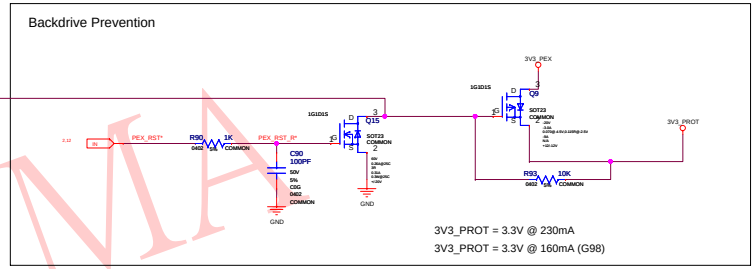
Thermal Protection, Protected 3V3, Straps

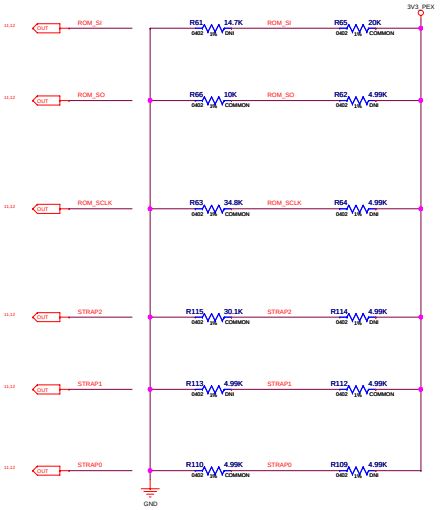


Thermal Shutdown



Backdrive Prevention





GT218 Straps
MLS Mode

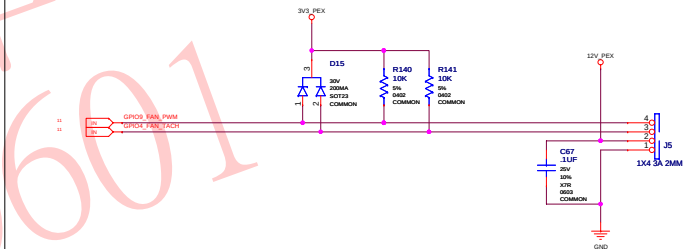
Mode	REF0/REF1
MLS	Stuff

Bit	Signal	Values		
03:	RAMCFG[3]	0010	Hynix(64MBx16)	
02:	RAMCFG[2]	0011	Samsung(64MBx16)	
01:	RAMCFG[1]	1010	Hynix(64MBx16,DualRank)	
00:	RAMCFG[0]	1011	Samsung(64MBx16,DualRank)	
		0110	Hynix(128MBx16)	
		0111	Samsung(128MBx16)	
03:	XCLK_417	0	277 (Default)	
		1		
02:	FB[5]	0	256M (Default)	
		1		
01:	SMB_ALT_ADDR	0	0x8E	
		1	0x8C	
00:	VGA_DEVICE	0	Class code 302	
		1	Class code 300	
03:	PCI_DEVID_EXT	0	GT218-300-A1	
		1		
02:	SUB_VENDOR	0	No BIOS	
		1	BIOS	
01:	SLOT_CLK_CFG	0	Disable	
		1	Enable	
00:	PEX_PLL_EN_TERM100	0	Disable	
		1	Enable	
03:	PCI_DEVID[3]	0101	GT218-300-Bx	
02:	PCI_DEVID[2]			
01:	PCI_DEVID[1]			
00:	PCI_DEVID[0]			
03:	3GIO_PADCFG_LUT_ADR[3]	0000	DSKTOP_DEFAULT	1000 DSKTOP_HTHRS
		0001	MOBILE_DEFAULT	1001 MOBILE_HTHRS_NAMP
02:	3GIO_PADCFG_LUT_ADR[2]	0010	MOBILE_NTHRS_LLAMP	1010 MOBILE_HTHRS_LLAMP
		0011	MOBILE_NTHRS_LAMP	1011 MOBILE_HTHRS_LAMP
01:	3GIO_PADCFG_LUT_ADR[1]	0100	MOBILE_NTHRS_HAMP	1100 MOBILE_HTHRS_HAMP
		0101	MOBILE_NTHRS_HHAMP	1101 MOBILE_HTHRS_HHAMP
00:	3GIO_PADCFG_LUT_ADR[0]	0110	MOBILE_NTHRS_HHHAMP	1110 MOBILE_HTHRS_HHHAMP
		0111	MOBILE_NTHRS_HHHHAMP	1111 MOBILE_HTHRS_HHHHAMP
03:	USER[3]	0000	Default	
02:	USER[2]			
01:	USER[1]			
00:	USER[0]			

Multilevel Straps

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

FAN CIRCUIT



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	Thermal Protection, Protected 3V3, Straps

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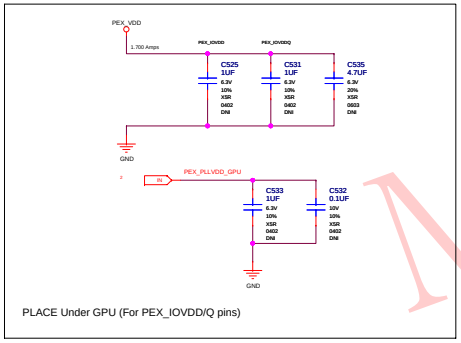
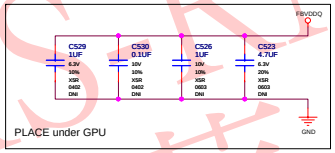
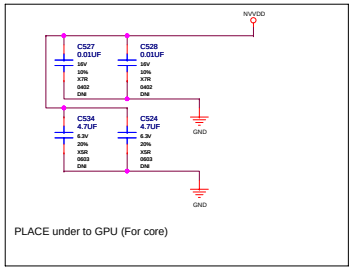
GPU/Memory decaps on Bottom (Test Option)



PLACE Under GPU (For PEX_IOVDD/Q pins)



PLACE under GPU



PLACE under to GPU (For core)

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	GPU/Memory decaps on bottom (Test option)

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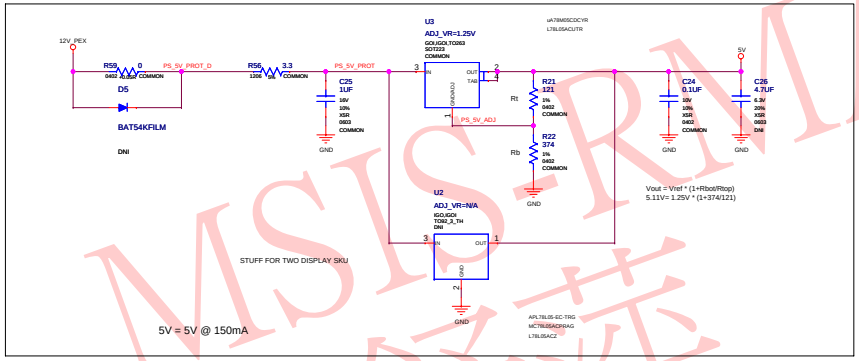
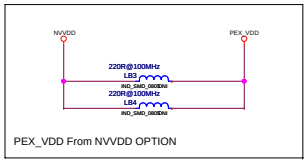
NV_PN	600-10872-BASE-100		
PCB REV	P872-A01	PAGE	
BOM REV	A	DATE	22-DEC-2009

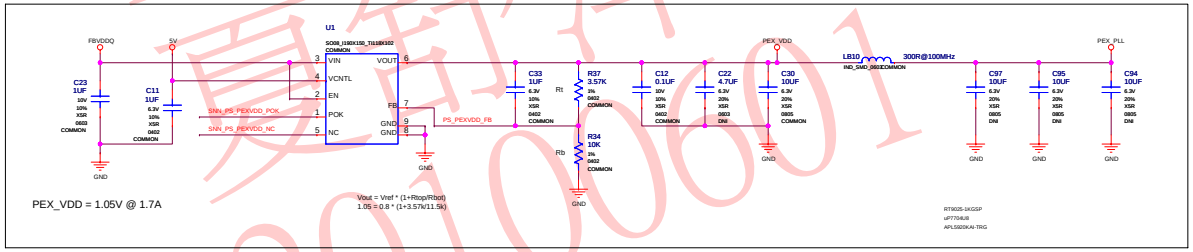
Power Supply I: 5V,PEXVDD

Net Name	MIN_WIDTH	MAX_WIDTH
PS_PEXPLL_ADJ	12MIL	
PS_5V_PROT	12MIL	
PS_PEXVDD_DR	12MIL	
PS_PEXVDD_FB	12MIL	

Net Name	VOLTAGE	MAX_CURRENT	
5V	5V	0.365A	16MIL
PEX_VDD	1.05V	1.7A	20MIL
3V3_PEX	3.3V	0.1A	14MIL







ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	Power Supply I: 5V,PEXVDD

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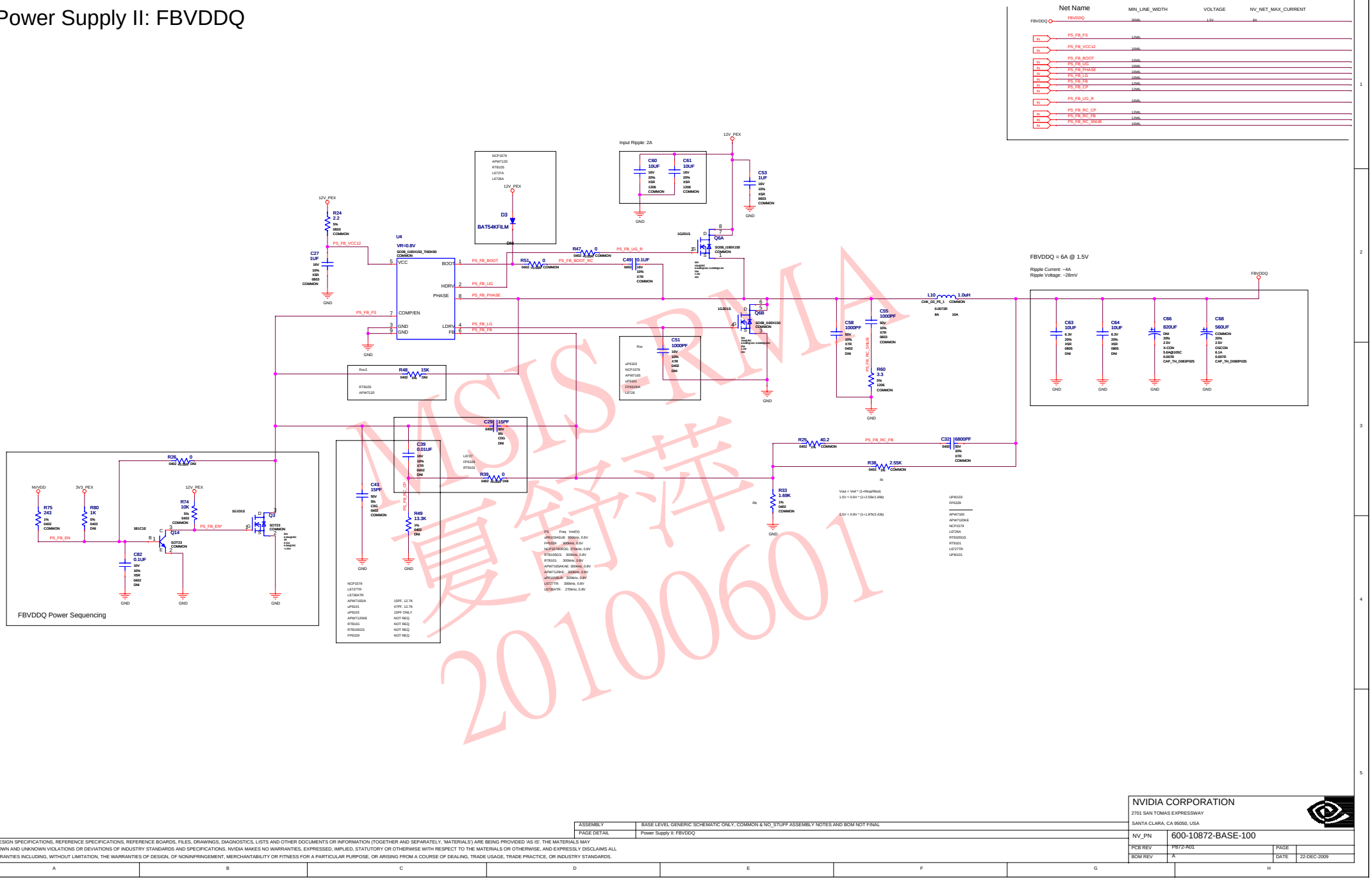
PCB REV	P872-A01	PAGE	
BOM REV	A	DATE	22-DEC-2009

Power Supply II: FBVDDQ



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	Power Supply II: FBVDDQ

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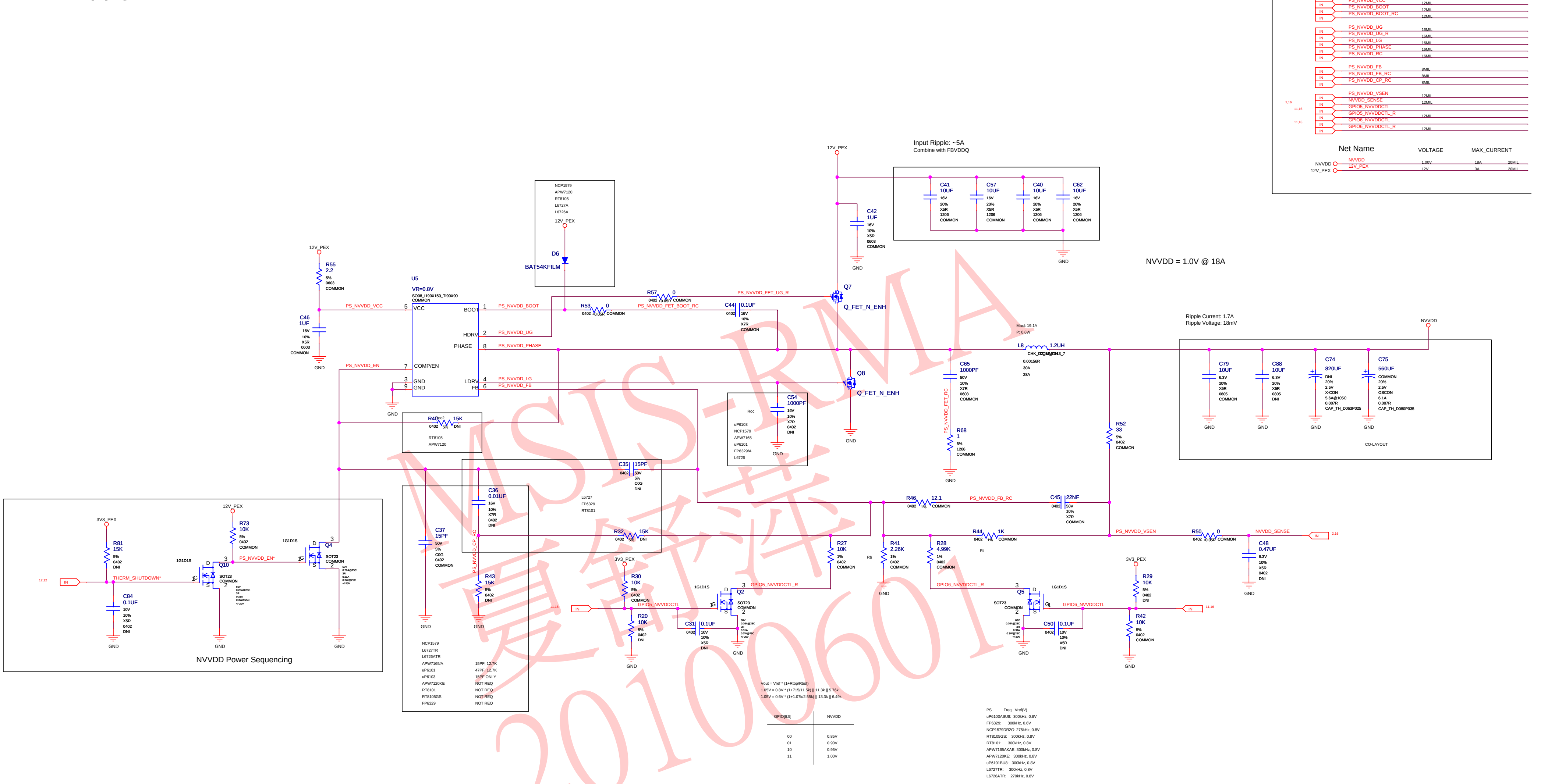
NV_PN	600-10872-BASE-100		
PCB REV	P872-A01	PAGE	
BOM REV	A	DATE	22-DEC-2009

Power Supply III: NVVDD



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

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NV_PN	600-10872-BASE-100		
PCB REV	P872-A01	PAGE	
BOM REV	A	DATE	22-DEC-2009