

P872: GT218, DDR3 MEMORY 64MX16/128MX16

- Page 1: P872 Overview
- Page 2: PCI Express Interface
- Page 3: Frame Buffer Interface
- Page 4: DDR3 Memories Rank 0
- Page 5: DDR3 Memories Rank 1
- Page 6: DAC A VGA
- Page 7: DAC B VGA Header
- Page 8: IFPAB TMDS Interface
- Page 9: IFPC HDMI Connector
- Page 10: IFPD, IFPE Interface(Not used), Mechanical
- Page 11: XTAL, ROM, JTAG
- Page 12: Thermal Protection, Protected 3V3, Straps
- Page 13: GPU/Memory decaps on bottom (Test option)
- Page 14: Power Supply I: 5V,PEXVDD
- Page 15: Power Supply II: FBVDDQ
- Page 16: Power Supply II: NVVDD

REV	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/64b, 64Mb/16 DDR3, DVI-DL+HDMI, DT
2	SKU0001	600-10872-0001-100	GT218-300-B, 589/1402/790, 512MB/64b, 64Mb/16 DDR3, DVI-I+HDMI, DT
3	SKU0002	600-10872-0002-100	GT218-300-B, 589/1402/790, 1024MB/64b, 128MB/16 DDR3, DVI-I+HDMI, DT
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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	P872 Overview

NVIDIA CORPORATION

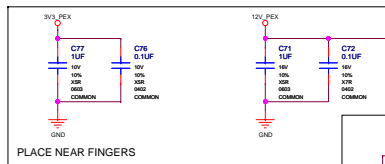
2701 SAN TOMAS EXPRESSWAY

SANTA CLARA, CA 95050, USA

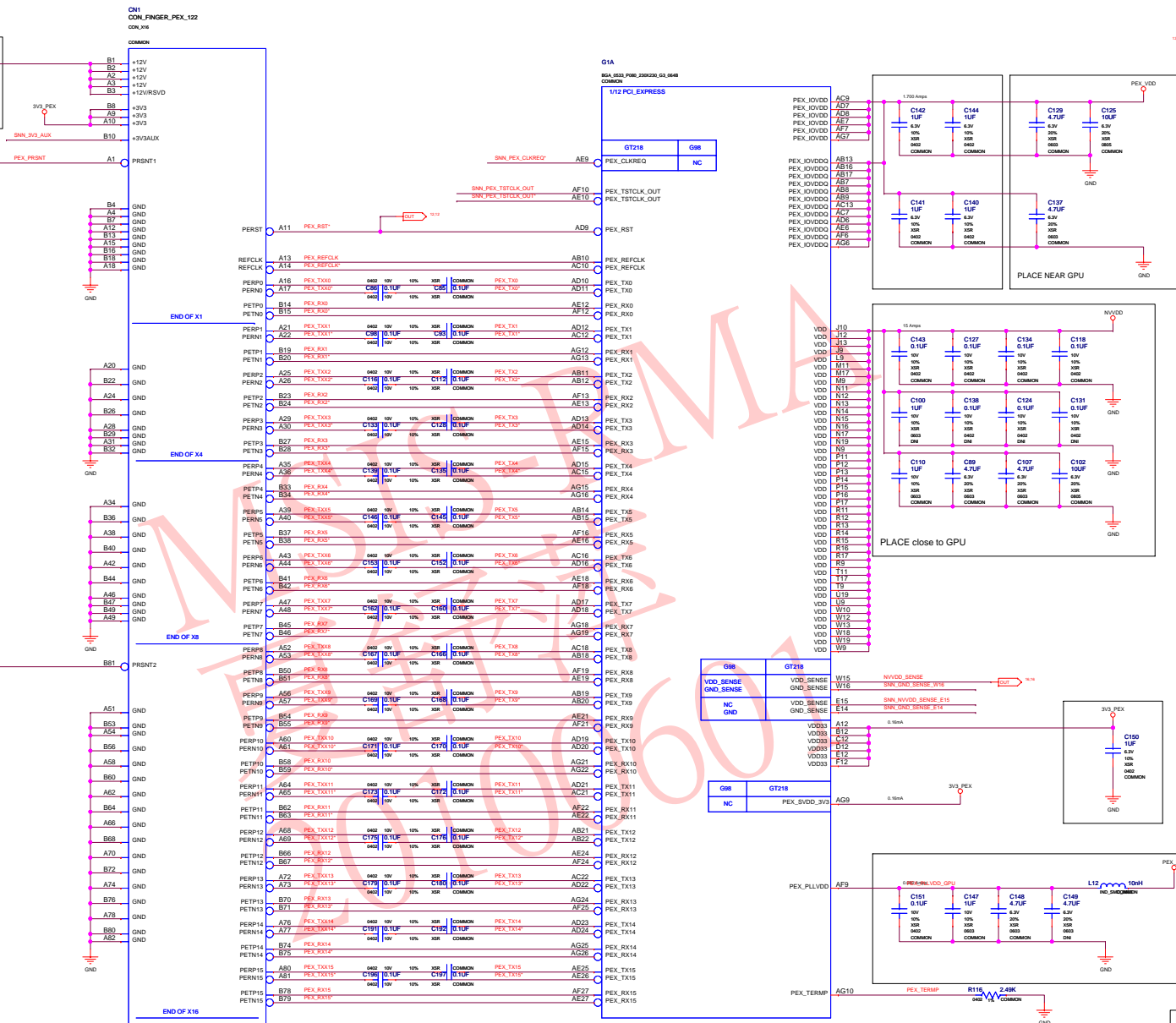


NV_PN	600-10872-BASE-100		
PCB REV	P872-701	PAGE	
BOM REV	A	DATE	22-DEC-2009

PCI Express Interface




	Net Name	DIFF_PAIR	CRITICAL	IMPEDANCE
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263	PEX_T262	PEX_T262	1	50OH
264	PEX_T263	PEX_T263		



Net Name	MIN_WIDTH	MAX_WIDTH
PEX_PRESENT	128b	
PEX_TERMF	128b	

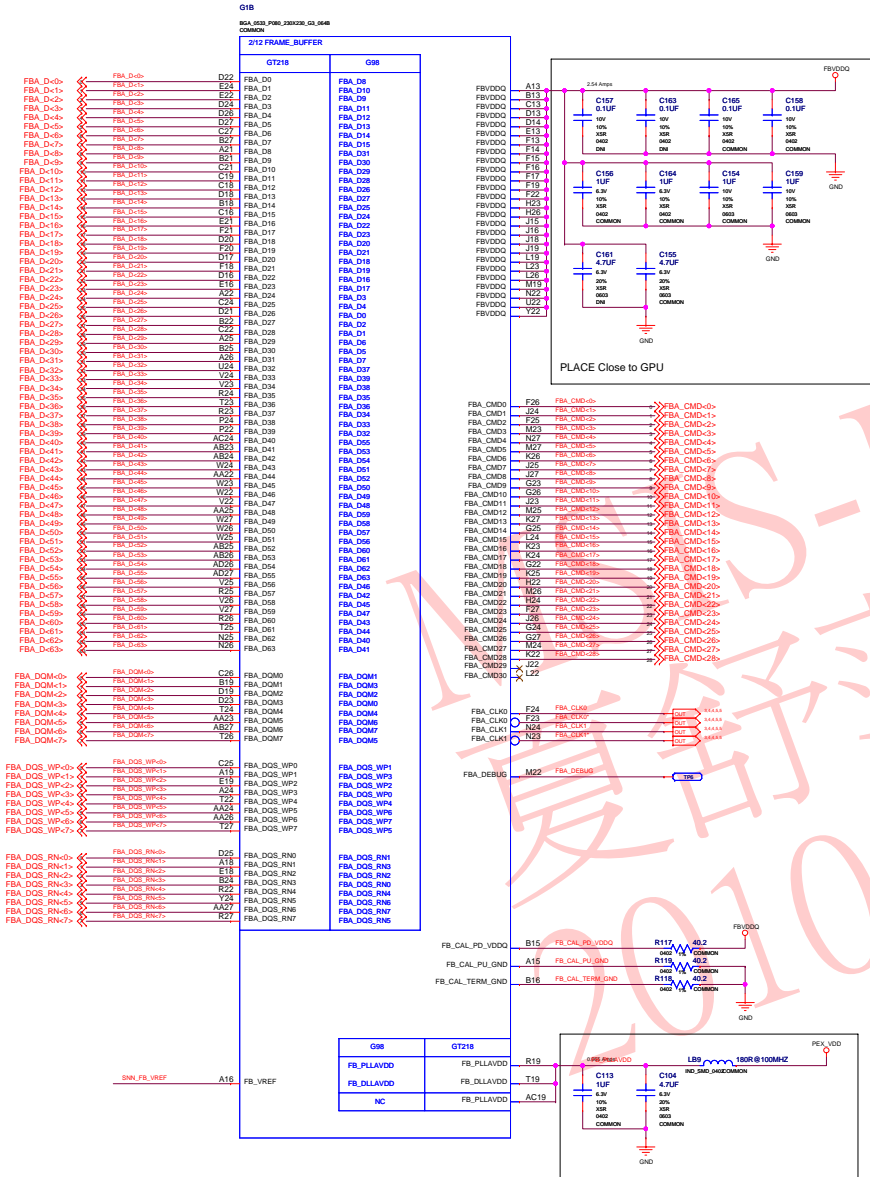
Net Name	VOLTAGE	MAX_CURRENT
PEX_PLLVDD_GPU	1.00V	
PEX_PLLVDD_GPU	0.125V	120mA

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

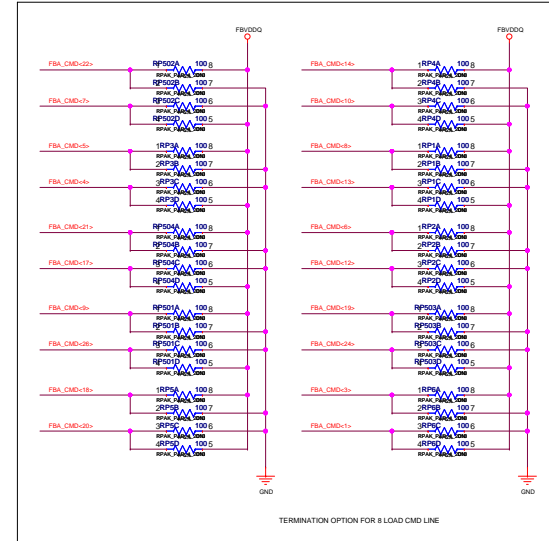
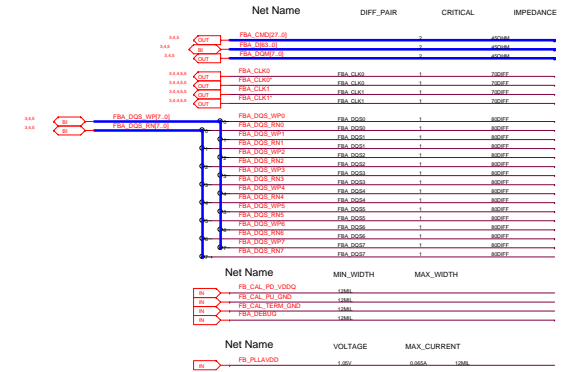
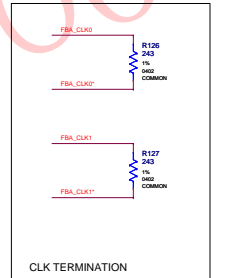
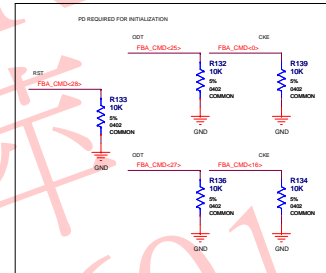
NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA			
NV_PN		600-10872-BASE-100	
PCB REV	P87Z-A01	PAGE	
BOM REV	A	DATE	22-DEC-2009

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Frame Buffer Interface

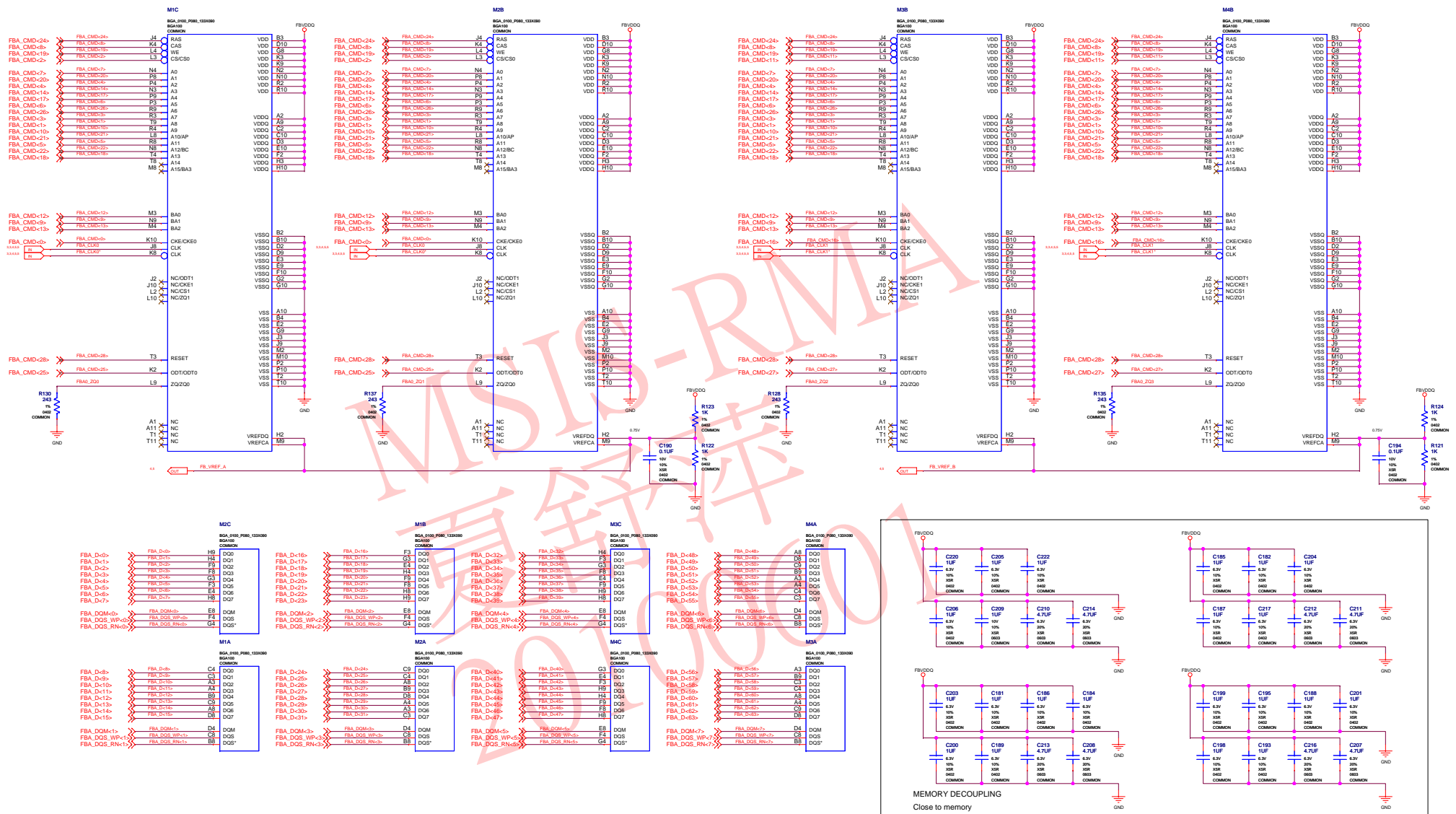


CMD-Add Map		RANK 0		RANK 1	
CMD	GT216 ctrl-20	GT218 ctrl-20	GT216 ctrl-20	GT218 ctrl-20	
CMD00	CHE_1, 1	NOT USED	CHE_1, 1	NOT USED	
CMD01	Az0	Az0	Az0	Az0	
CMD02	CHE_1, 1	NOT USED	CHE_1, 1	NOT USED	
CMD03	Az0, Az0	Az0	CHE_1, 1	Az0	
CMD04	Az0	Az0	Az0	Az0	
CMD05	Az0, Az0	Az0, Az0	Az0, Az0	Az0, Az0	
CMD06	Az0	Az0	Az0	Az0	
CMD07	Az0	Az0	Az0	Az0	
CMD08	CHE_1	CHE_1	CHE_1	CHE_1	
CMD09	BA1	BA1	BA1	BA1	
CMD10	Az0	Az0	Az0	Az0	
CMD11	NOT USED	CHE_1, 1	NOT USED	CHE_1, 1	
CMD12	BA0	BA0	BA0	BA0	
CMD13	BA0	BA0	BA0	BA0	
CMD14	Az0	Az0	Az0	Az0	
CMD15	CHE_1, 1	NOT USED	CHE_1, 1	NOT USED	
CMD16	NOT USED	CHE_1, 1	NOT USED	CHE_1, 1	
CMD17	Az0	Az0	Az0	Az0	
CMD18	Az0, Az0	Az0, Az0	Az0, Az0	Az0, Az0	
CMD19	WE'	WE'	WE'	WE'	
CMD20	Az0	Az0	Az0	Az0	
CMD21	Az0	Az0	Az0	Az0	
CMD22	Az0	Az0	Az0	Az0	
CMD23	CHE_1, 1	NOT USED	CHE_1, 1	NOT USED	
CMD24	BA0	BA0	BA0	BA0	
CMD25	NOT USED	CHE_1, 1	NOT USED	CHE_1, 1	
CMD26	Az0	Az0	Az0	Az0	
CMD27	NOT USED	CHE_1, 1	NOT USED	CHE_1, 1	
CMD28	REST	REST	REST	REST	



DDR3 Memories Rank 0

Net Name MIN_WIDTH MAX_WIDTH



MEMORY DECOUPLING
Close to memory

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

INV_PN 600-10872-BASE-100
PCB REV P072-001
BOM REV A

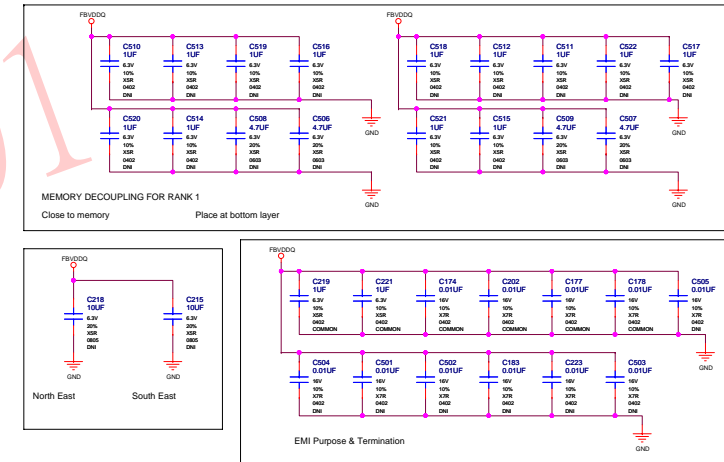
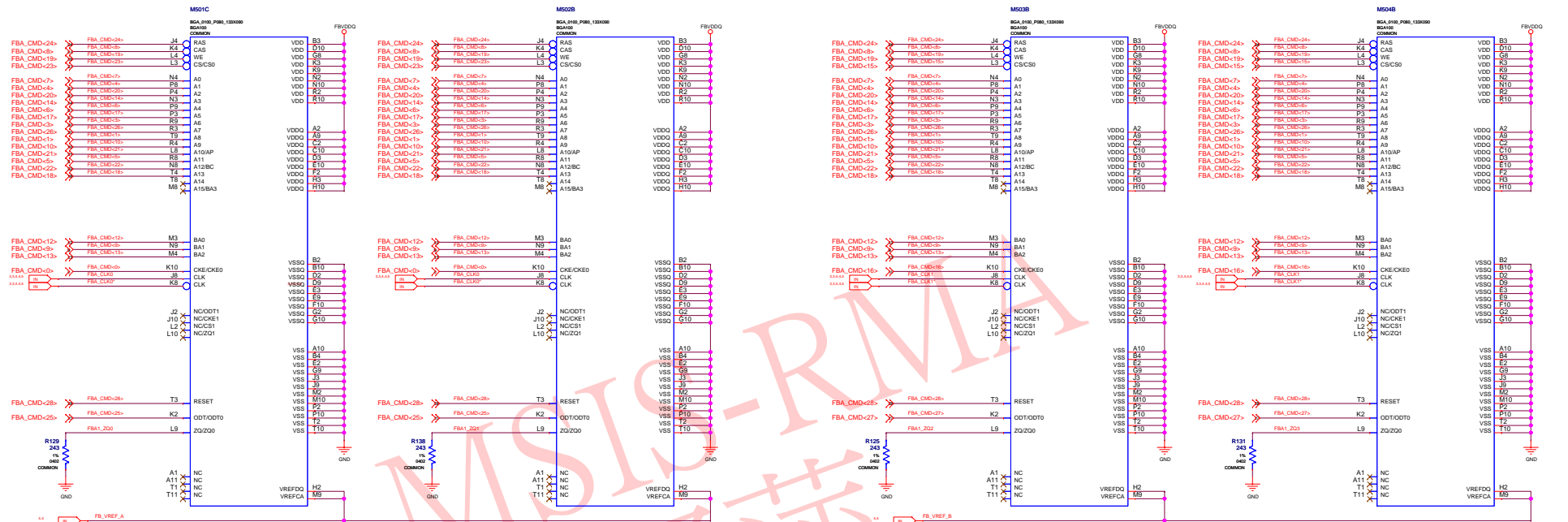
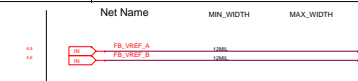
PAGE 22-DEC-2009

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BASE LEVEL GENERIC SCHEMATIC ONLY. COMMON & NO. STUFF ASSEMBLY NOTES AND BOM NOT FINAL


DDR3 Memories Rank 0

DDR3 Memories Rank 1

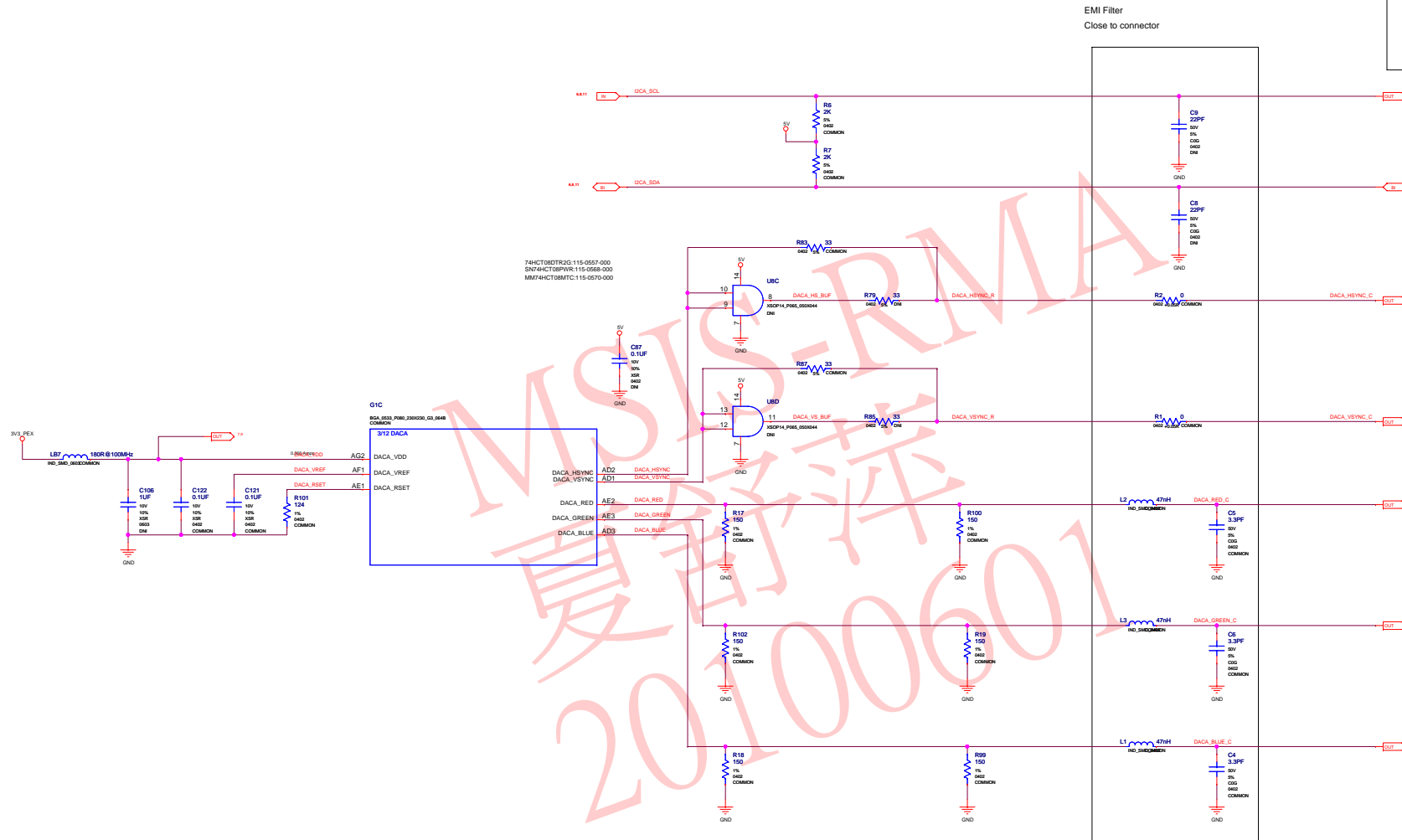


ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	DDR3 Memories Rank 1

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NV_PN	600-10872-BASE-100		
PCB REV	P672-AD1	PAGE	
BOM REV	A	DATE	22-DEC-2009

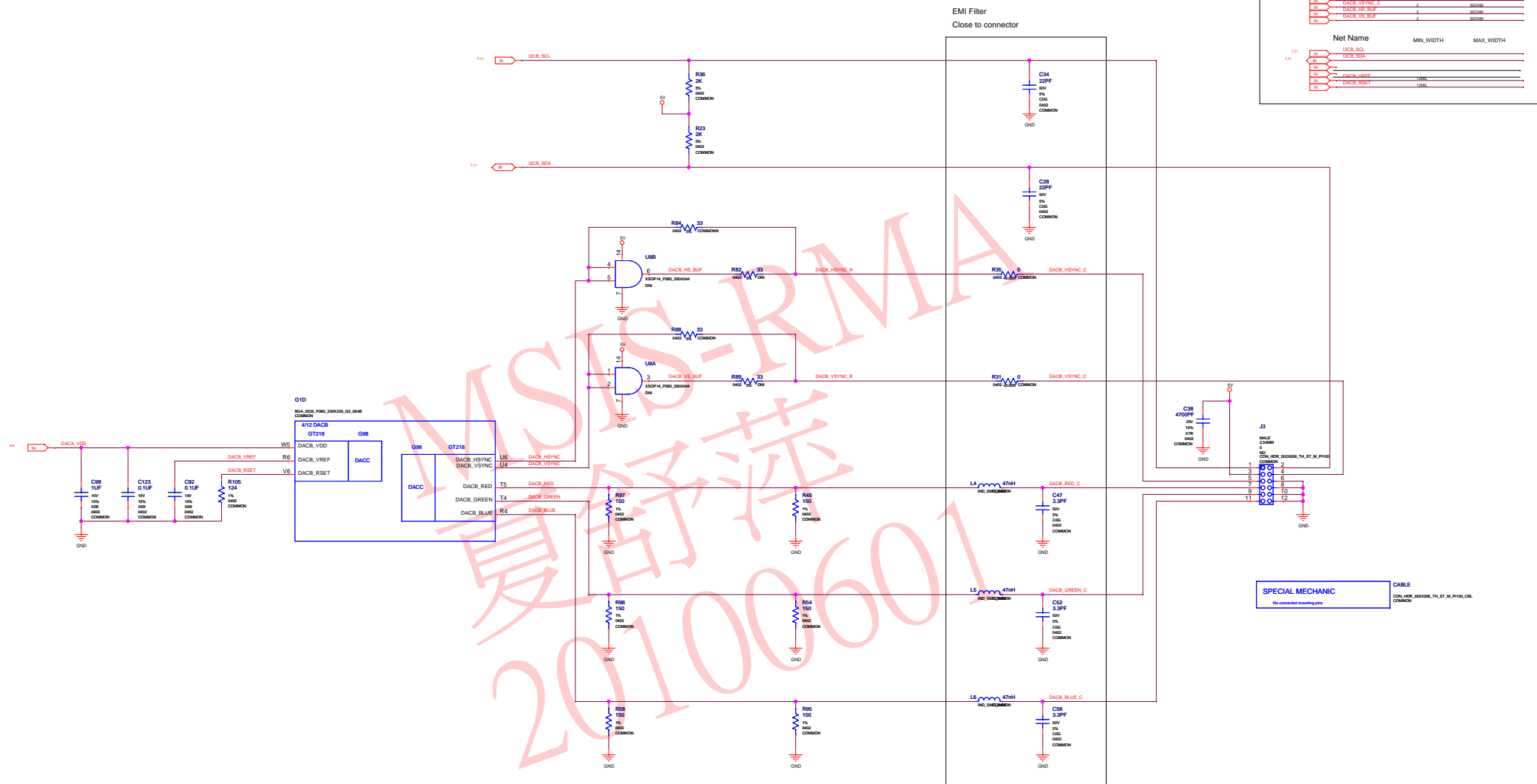
DAC A VGA




Net Name		CRITICAL	IMPEDANCE
0.0	DACA_RED	1	30049
0.0	DACA_GREEN	1	30049
0.0	DACA_BLUE	1	30049
0.0	DACA_RED_C	1	30049
0.0	DACA_GREEN_C	1	30049
0.0	DACA_BLUE_C	1	30049
0.0	DACA_HVING	2	30049
0.0	DACA_VTRNG	2	30049
0.0	DACA_PIR_BUP	2	30049
0.0	DACA_PIR_C	2	30049
0.0	DACA_HVING_C	2	30049
0.0	DACA_VTRNG_C	2	30049

Net Name	MIN_WIDTH	MAX_WIDTH
0.011	DACA_S01	12061
0.011	DACA_S0A	12061
0.011	DACA_S0B	12061
0.011	DACA_S0E	12061
0.011	DACA_S0EY	12061
0.011	DACA_S0EY1	12061

DAC B VGA Header

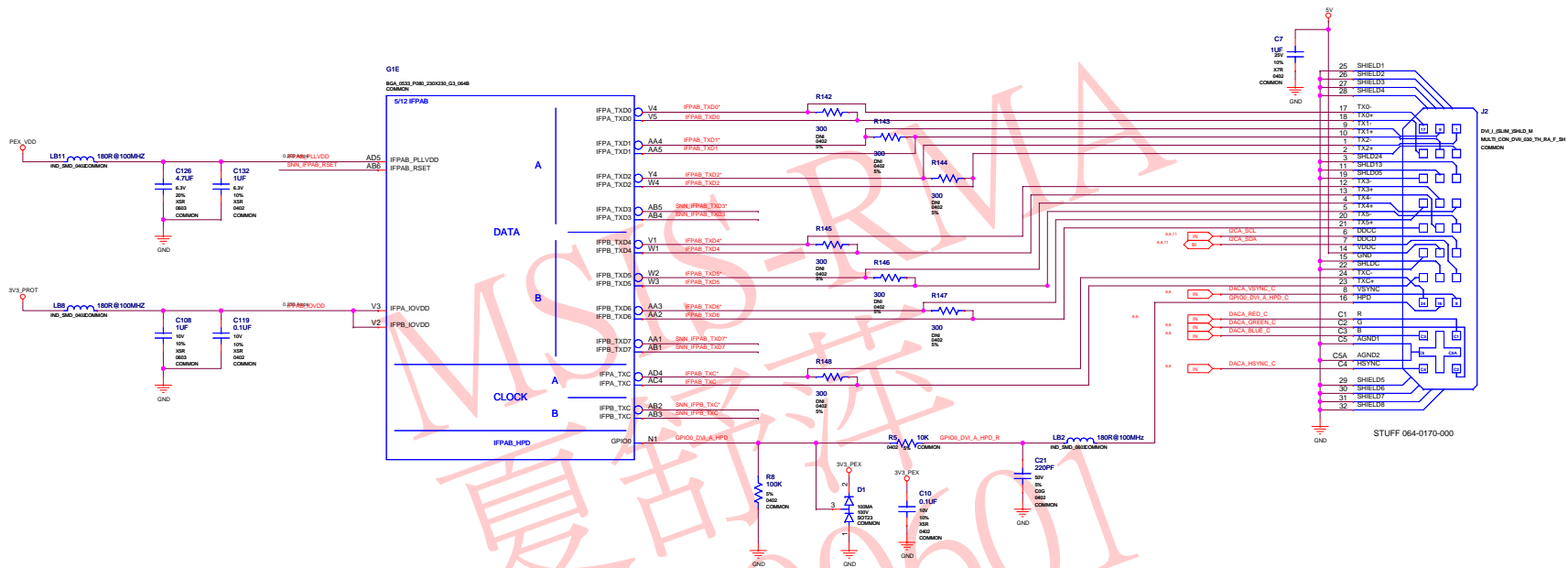


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26	DACR_GREEN	1	50OHM
27	DACR_BLUE	1	50OHM
28	DACR_PINK	1	50OHM
29	DACR_GREEN_C	1	50OHM
30	DACR_BLUE_C	1	50OHM
31	DACR_PINK_C	1	50OHM
32	DACR_YELLOW	2	50OHM
33	DACR_YELLOW_C	2	50OHM
34	DACR_PINK_C	2	50OHM
35	DACR_YELLOW_C	2	50OHM
36	DACR_VIO_BUF	2	50OHM
37	DACR_VIO_BUF	2	50OHM
38	DACR_VIO_BUF	2	50OHM
39	DACR_VIO_BUF	2	50OHM
40	DACR_VIO_BUF	2	50OHM
41	DACR_VIO_BUF	2	50OHM
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116	DACR_VIO_BUF	2	50OHM
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118	DACR_VIO_BUF	2	50OHM

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

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IFPAB TMDS Interface



	Net Name	DIFF_PAIR	CRITICAL	IMPEDANCE
IN	PP4B_T2D01	PP4B_T2D0	1	50OHM
IN	PP4B_T2D02	PP4B_T2D0	1	50OHM
IN	PP4B_T2D03	PP4B_T2D0	1	50OHM
IN	PP4B_T2D04	PP4B_T2D0	1	50OHM
IN	PP4B_T2D05	PP4B_T2D0	1	50OHM
IN	PP4B_T2D06	PP4B_T2D0	1	50OHM
IN	PP4B_T2D07	PP4B_T2D0	1	50OHM
IN	PP4B_T2D08	PP4B_T2D0	1	50OHM
IN	PP4B_T2D09	PP4B_T2D0	1	50OHM
IN	PP4B_T2D10	PP4B_T2D0	1	50OHM
IN	PP4B_T2C0	PP4B_T2C	1	50OHM
IN	PP4B_T2C	PP4B_T2C	1	50OHM

Net Name	MIN_WIDTH	MAX_WIDTH
IN	GPIOS_DVI_A_HPD	
IN	GPIOS_DVI_A_HPD_R	
IN	GPIOS_DVI_A_HPD_C	

Net Name	VOLTAGE	MAX_CURRENT
IN IFPAB_PLLVDD	1.05V	0.230A 500K
IN IFPAB_IQVDD	3.3V	0.230A 500K
IN IFPAB_RSET		1.30K

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	IFPAB TMD5 Interface

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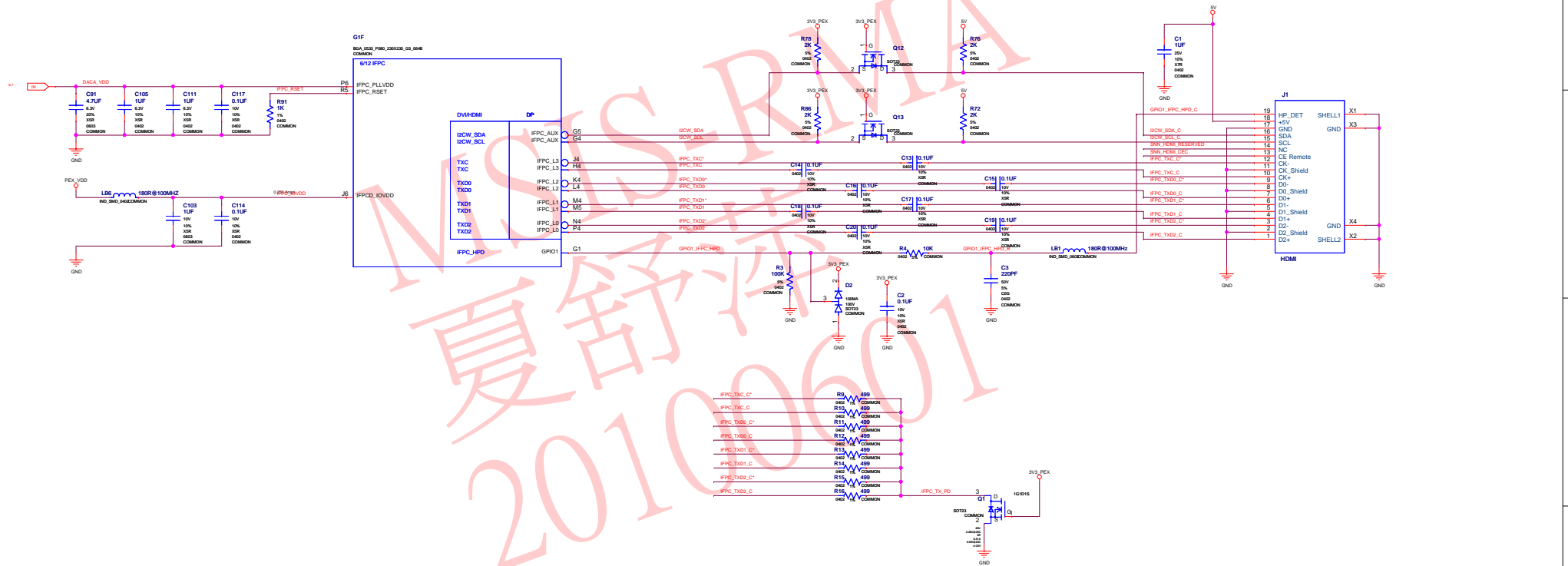
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SANTA CLARA, CA 95050, USA


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

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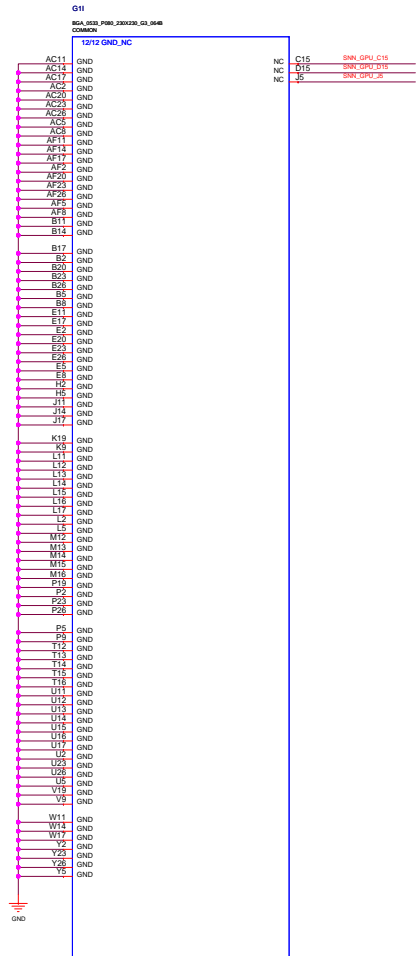
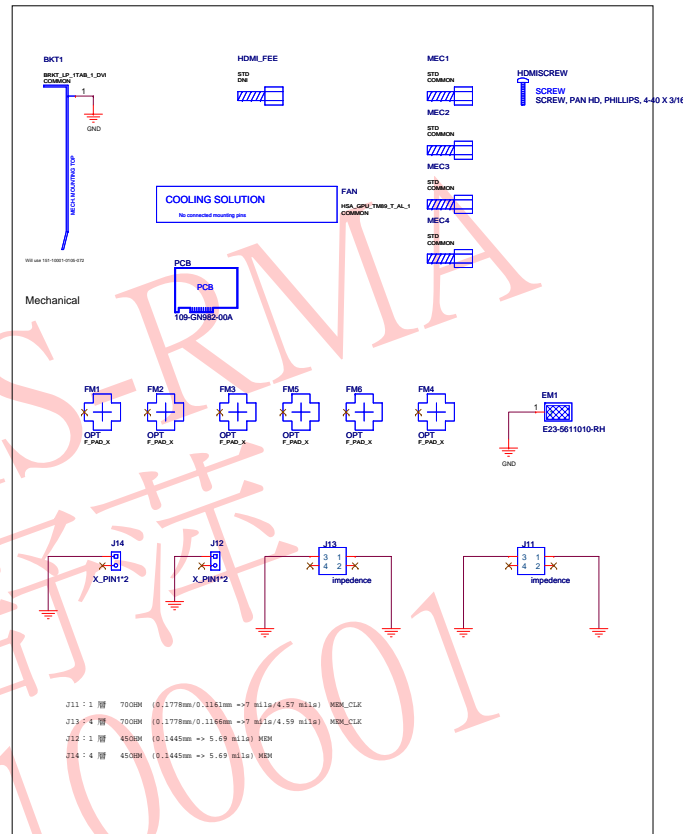
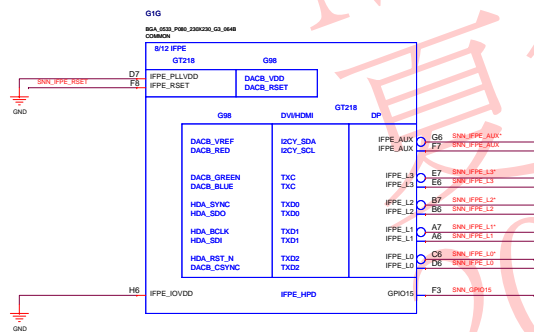
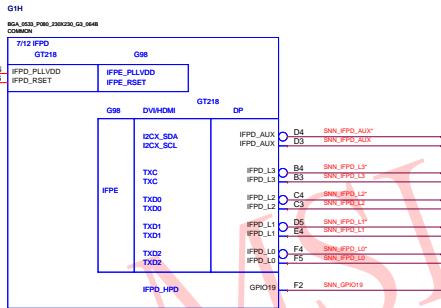
IFPC HDMI Connector


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

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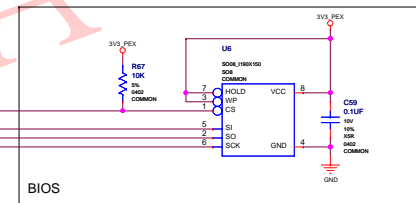
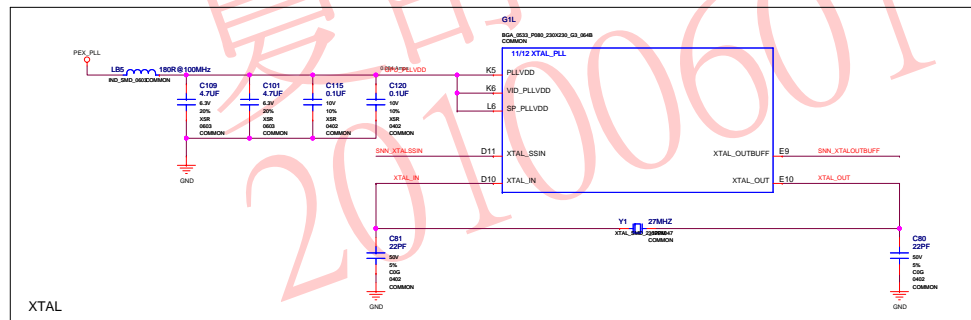
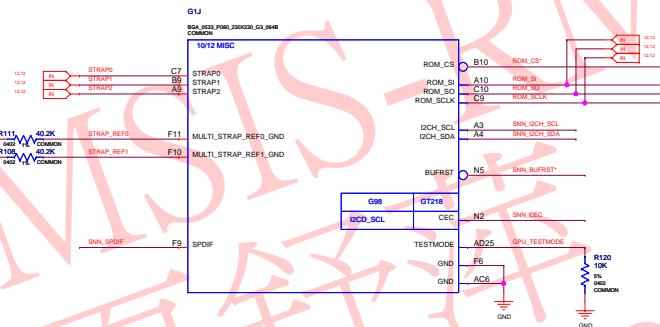
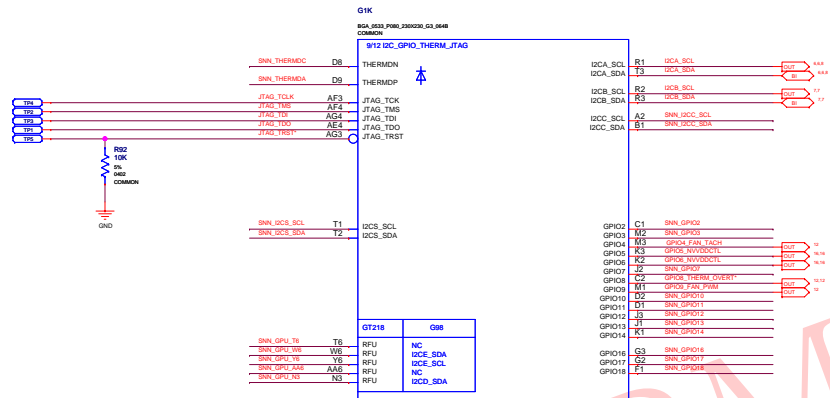
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PCB REV	P872-A01	PAGE	
BOM REV	A	DATE	22-DEC-2009

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XTAL, ROM, JTAG



Net Name **CRITICAL** **IMPEDANCE**

IN **XTAL_OUT** 1 1

IN **XTAL_IN** 1 1

Net Name **VOLTAGE** **MAX_CURRENT**

IN **GPU_PLLVDD** 1.0V 0.05A 100ns

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

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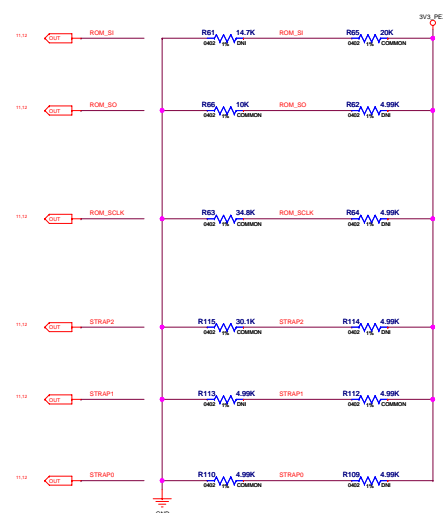
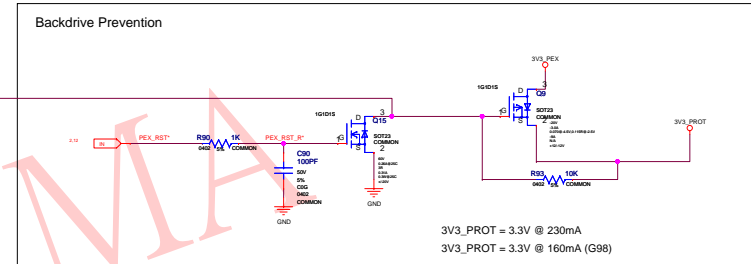
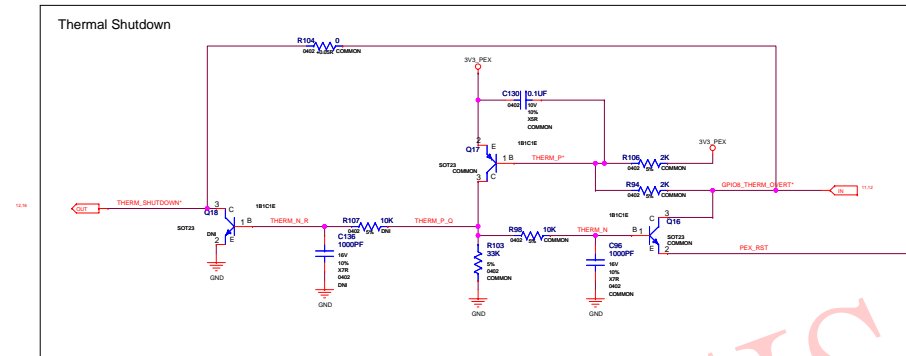
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NV_PN	600-10872-BASE-100		
PCB REV	P872-A01	PAGE	
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Thermal Protection, Protected 3V3, Straps



G7218 Straps

MLS Mode

Bit Signal

Values

Mode

M.S

REPERT

Rate

03

RANGE[Q1E]

0000

Range(4480x16)

0001

Range(4480x16)

1000

Range(8960x16, DoubleRate)

1001

Range(8960x16, DoubleRate)

04

RANGE[Q2E]

0010

Range(13440x16)

0111

Range(13440x16)

05

RANGE[Q3E]

0111

Range(26880x16)

06

XCIL_471

0

277 (Default)

1

07

FRSE

0

2RM (Default)

1

08

DSB6_ALT_ADDR0

0

LS0E

1

LS0C

09

VGA_DEV0CE

0

Class 0x00-207

1

Class 0x00-300

10

POL_DEV0E_EXT

0

GT218-90CA-1

12

SUB_VENDOR

0

No RDCS

1

BIOS

0

Display

1

Encoder

13

PEX_PU3_ENL_TEST010

0

Enable

1

Disable

03

POL_DEV0E[0]

0101

GT218-90CA-0x

0110

04

POL_DEV0E[1]

0101

0110

05

POL_DEV0E[2]

0101

0110

06

POL_DEV0E[3]

0101

0110

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1110

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1111

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100 to QHD

0010

15K to QHD

0011

20K to QHD

0100

25K to QHD

0101

30K to QHD

0110

35K to QHD

0111

7K to VCC

1000

8K to VCC

1001

10K to VCC

1010

12K to VCC

1011

15K to VCC

1100

30K to VCC

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Default

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USER[1]

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05

USER[2]

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06

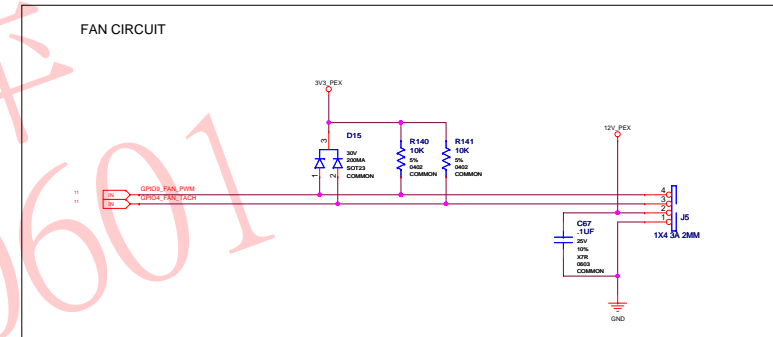
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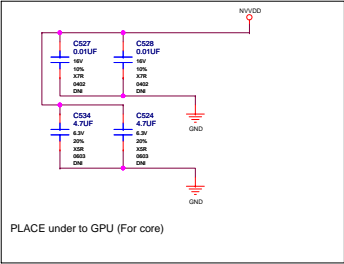
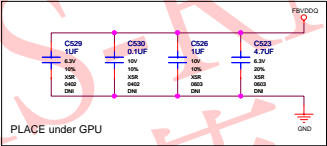
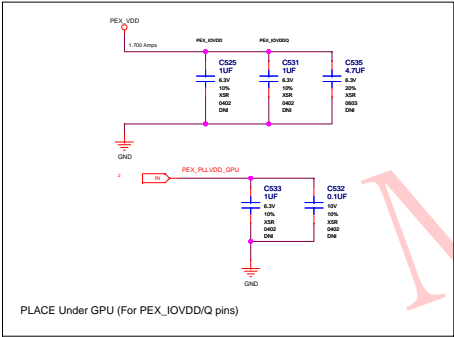
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[illegible]

GPU/Memory decaps on Bottom (Test Option)



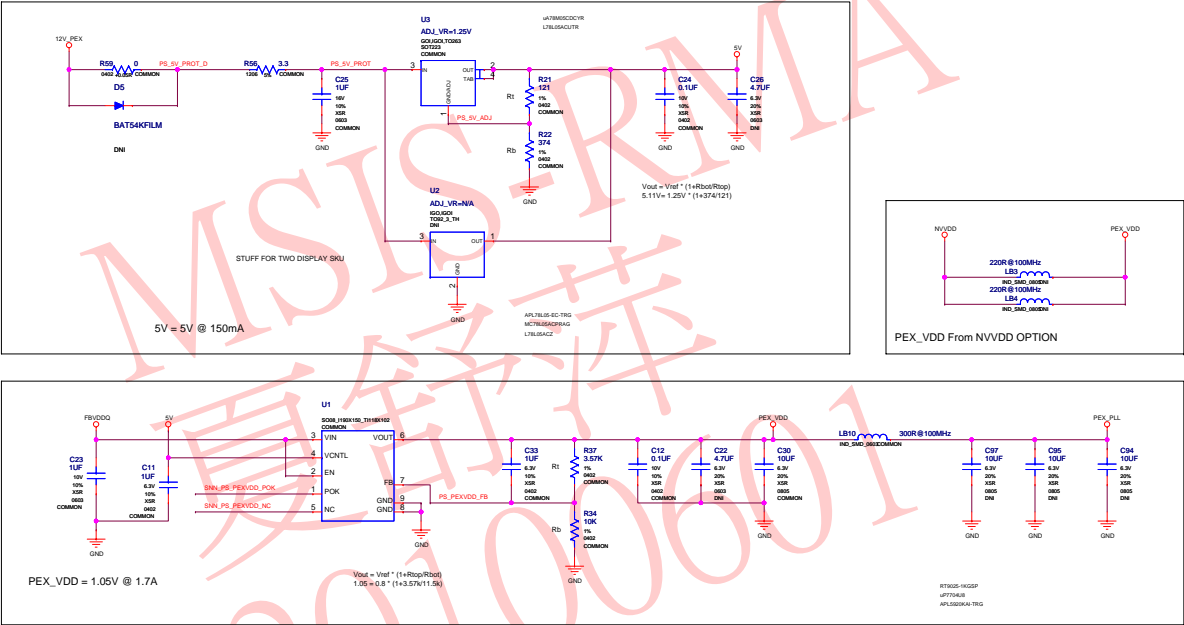
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NV_PN	600-10872-BASE-100		
PCB REV	P072-701	PAGE	
BOM REV	A	DATE	22-DEC-2009

Power Supply I: 5V,PEXVDD

Net Name		MIN_WIDTH	MAX_WIDTH
1V	PS_PEXVDD_ADJ	120MIL	
1V	PS_V5_PEXVDD	120MIL	
1V	PS_PEXVDD_DR	120MIL	
1V	PS_PEXVDD_FB	120MIL	

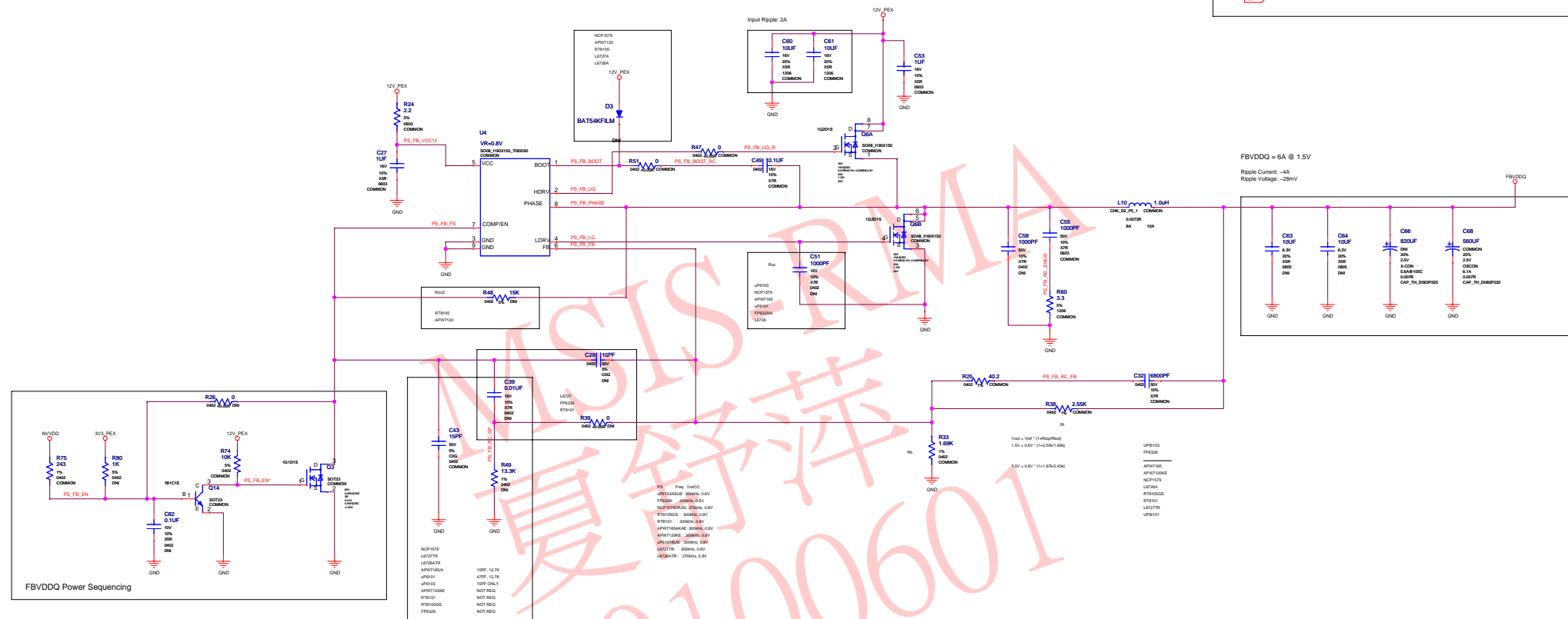
Net Name		VOLTAGE	MAX_CURRENT
5V	PS_PEXVDD	5V	0.365A 100MIL
PEX_VDD	PEX_VDD	1.05V	1.7A 100MIL
3V3_PEX	3V3_PEX	3.3V	0.5A 100MIL



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Power Supply II: FBVDDQ



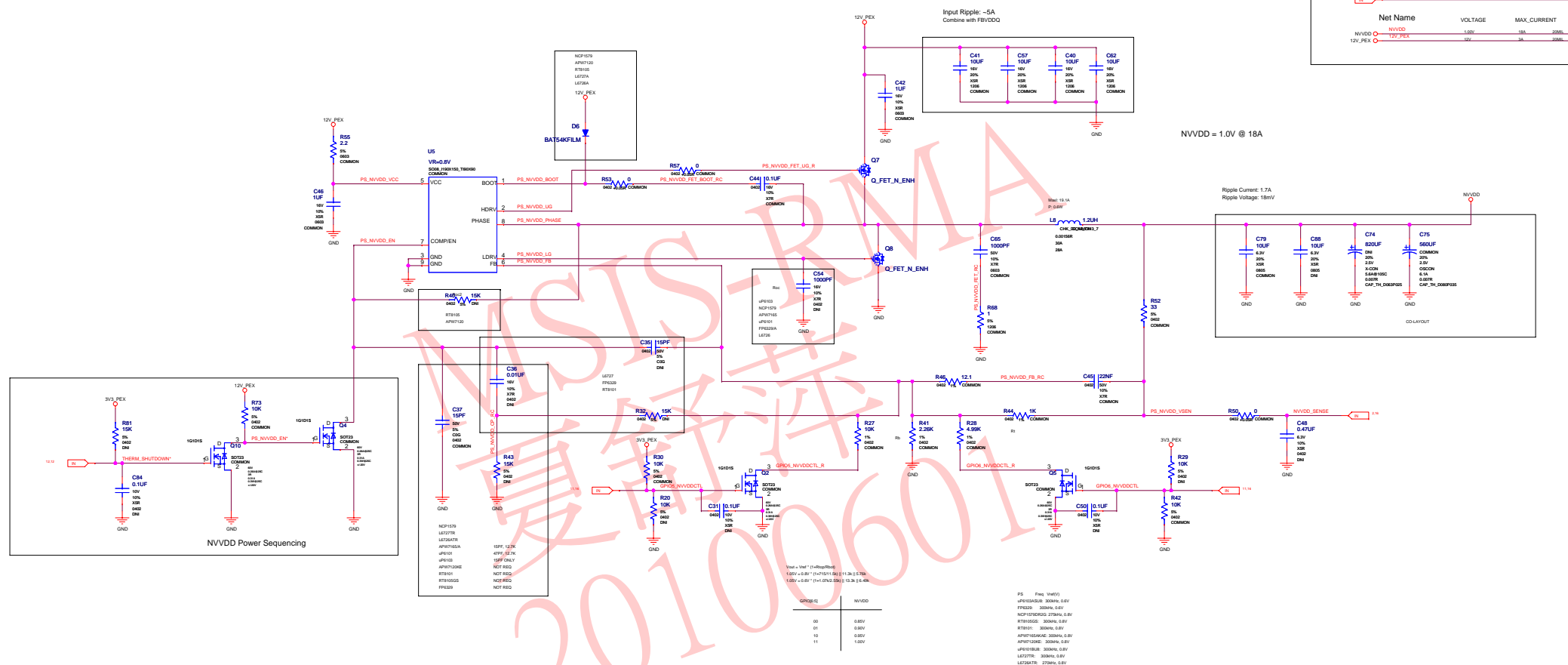
Net Name		MIN_LINE_WIDTH	VOLTAGE	IV_NET_MAX_CURRENT
FIVDDQ	FIVDDQ	20MIL	1.5V	5A
U1	PS_FB_FS	10MIL		
U1	PS_FB_VOC12	10MIL		
U1	PS_FB_BOOT	10MIL		
U1	PS_FB_IG	10MIL		
U1	PS_FB_PHASE	10MIL		
U1	PS_FB_IG	10MIL		
U1	PS_FB_FB	10MIL		
U1	PS_FB_OP	10MIL		
U1	PS_FB_IG_R	10MIL		
U1	PS_FB_RC_OP	10MIL		
U1	PS_FB_RC_FB	10MIL		
U1	PS_FB_RC_ORLUP	10MIL		


[illegible]

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Power Supply III: NVVDD



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