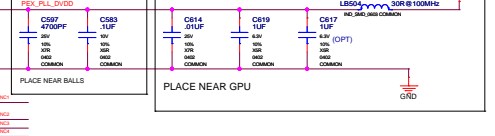
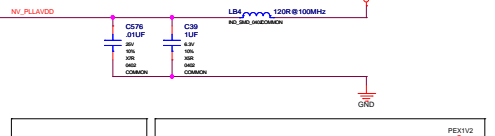
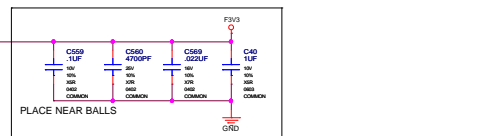
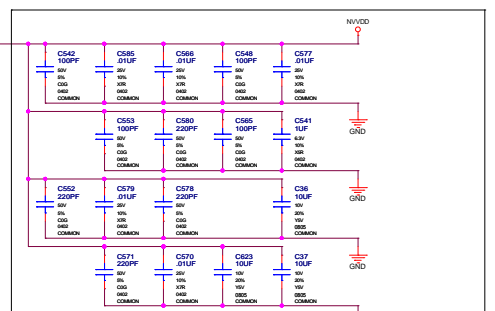
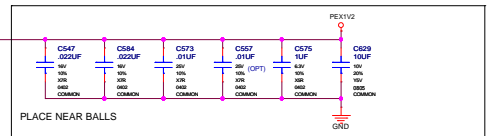
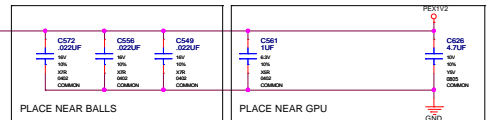
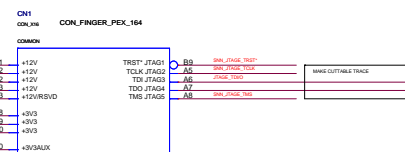


**PLACE NEAR FINGERS**

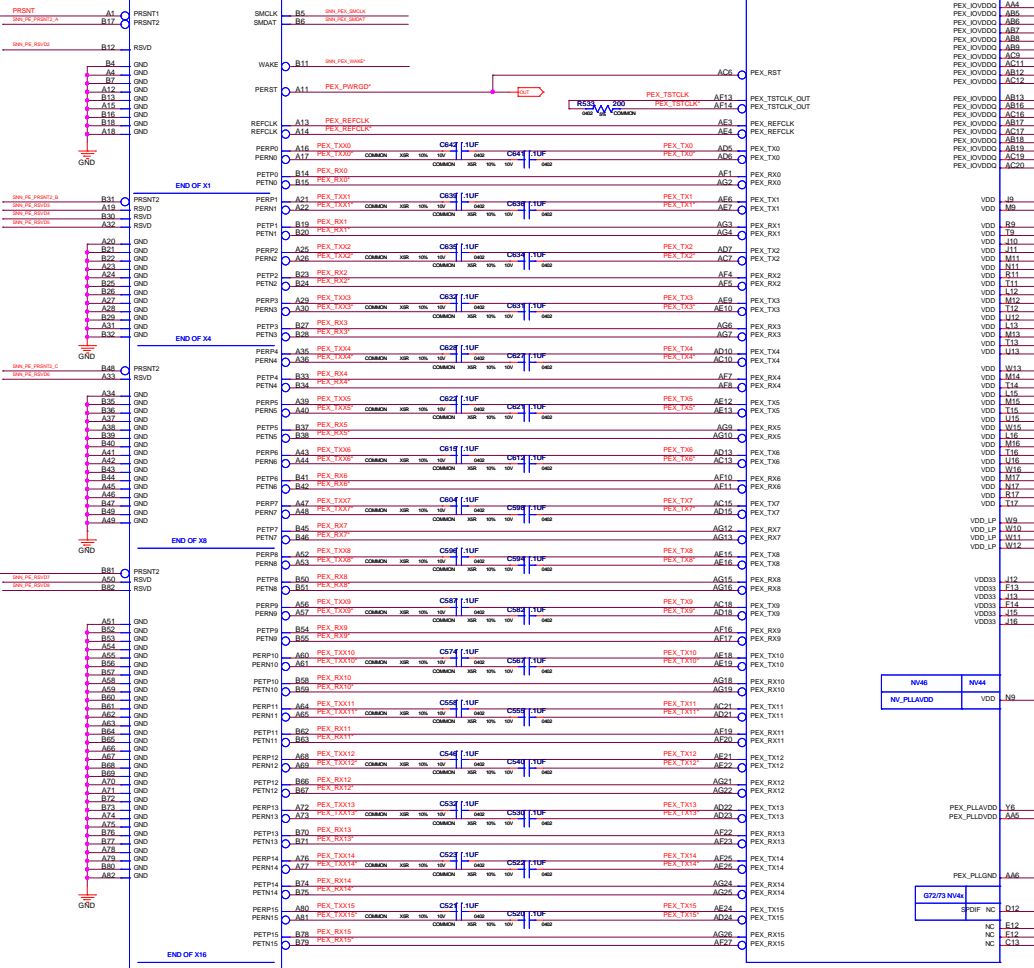
The first diagram shows a pi-network filter with a 3V3 input. The components are C24 (1uF, 50V), C22 (1uF, 50V), and C23 (0.1uF, 50V). The output is labeled 003 COMMON.


The second diagram shows a T-network filter with a 12V input. The components are C11 (4.7uF, 50V), C658 (4.7uF, 50V), and C647 (0.1uF, 50V). The output is labeled 120 COMMON.

The third diagram shows a common-mode filter with a 3V3 input. The components are C11 (4.7uF, 50V), C658 (4.7uF, 50V), and C647 (0.1uF, 50V). The output is labeled 120 COMMON.

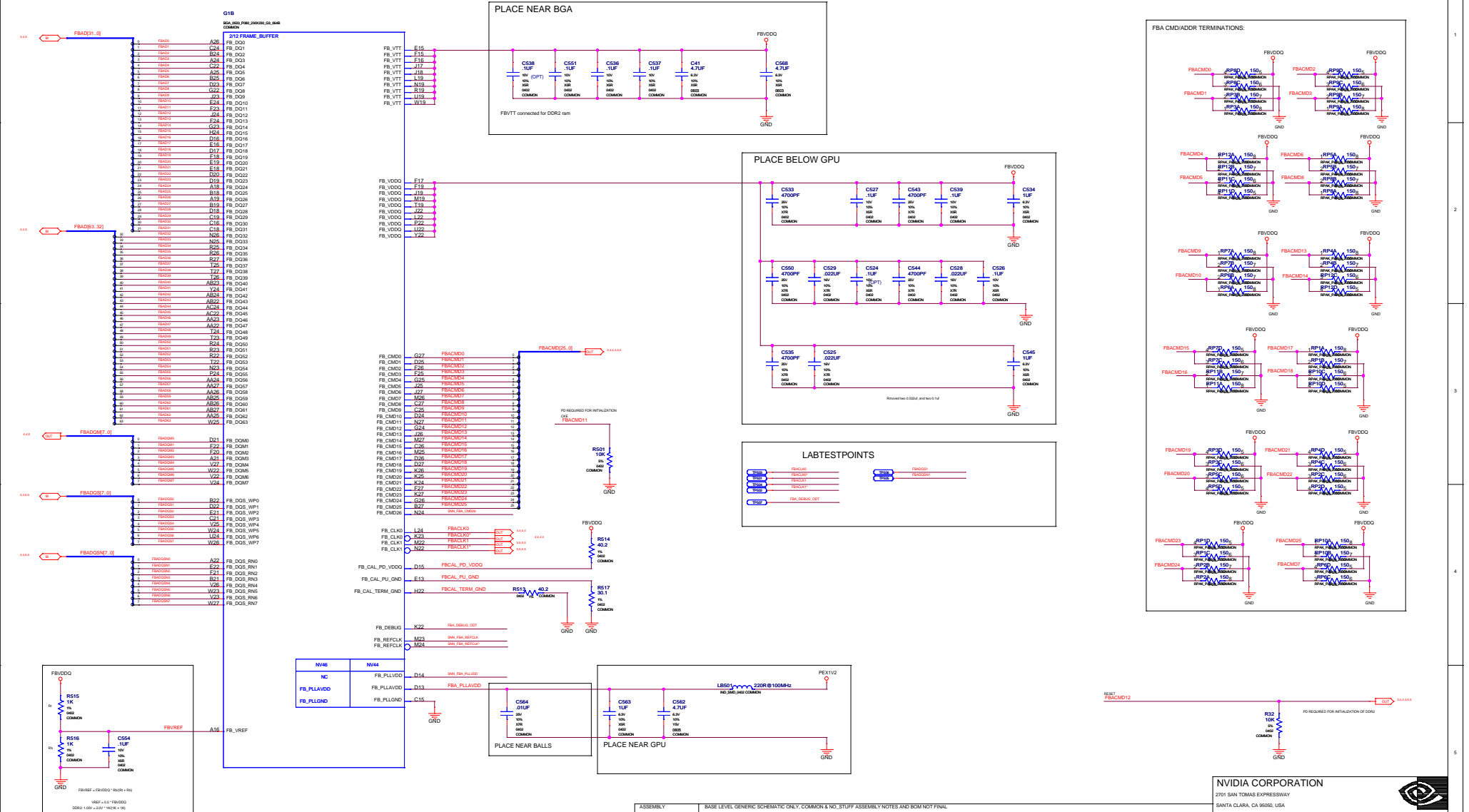


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## GPU: FB-Interface



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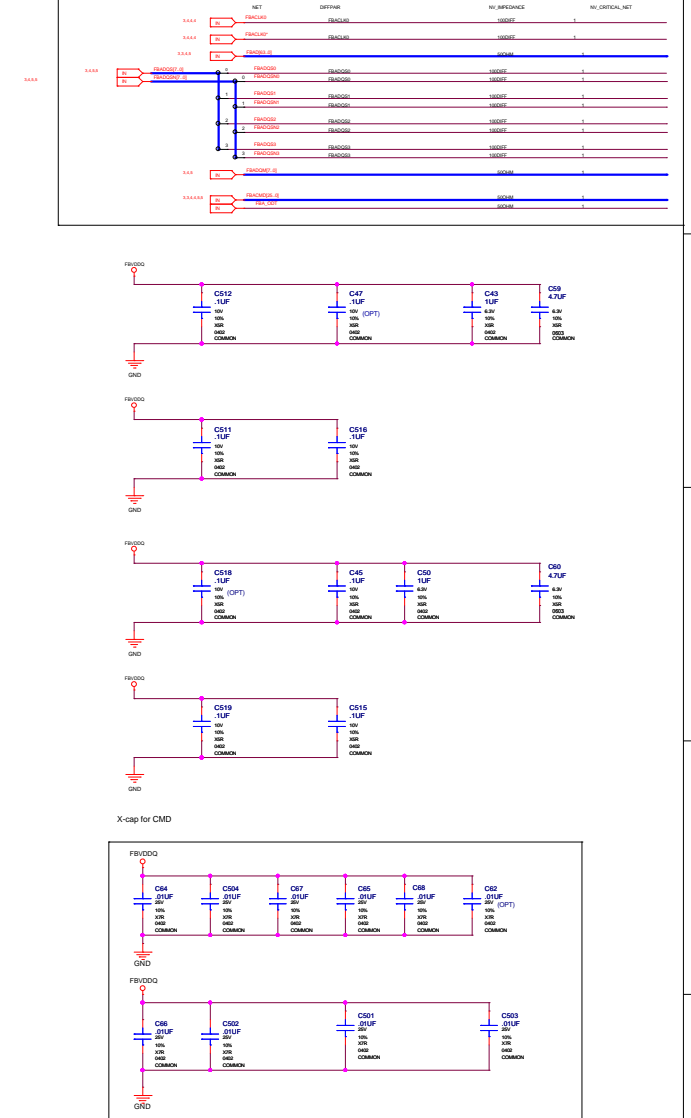
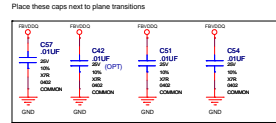
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PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY



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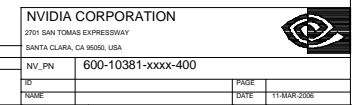


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PAGE DETAIL	Memory 1st bank 0..31

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PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY

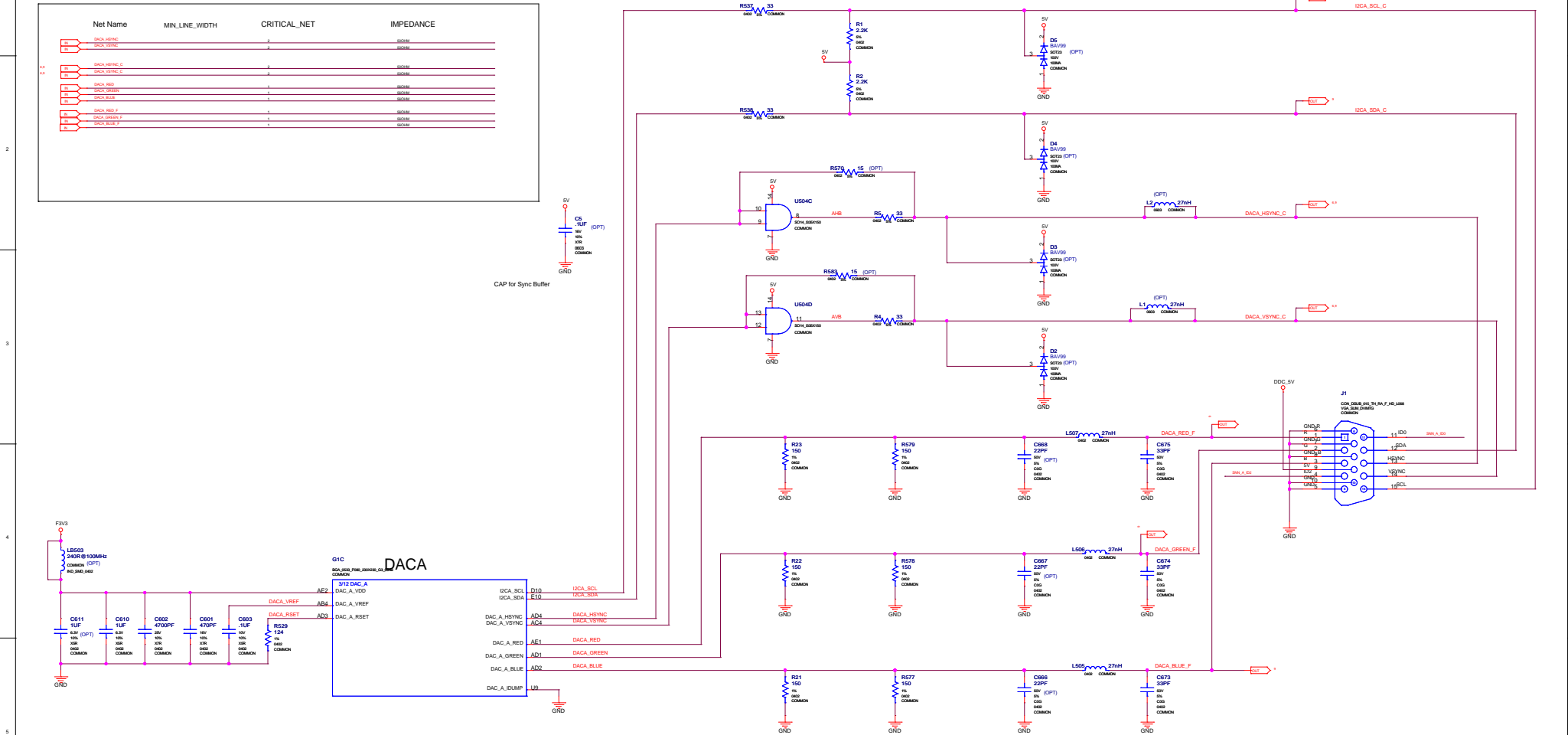
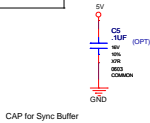


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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	Memory 1st bank 32..63

DAC-A, DB15 Connector

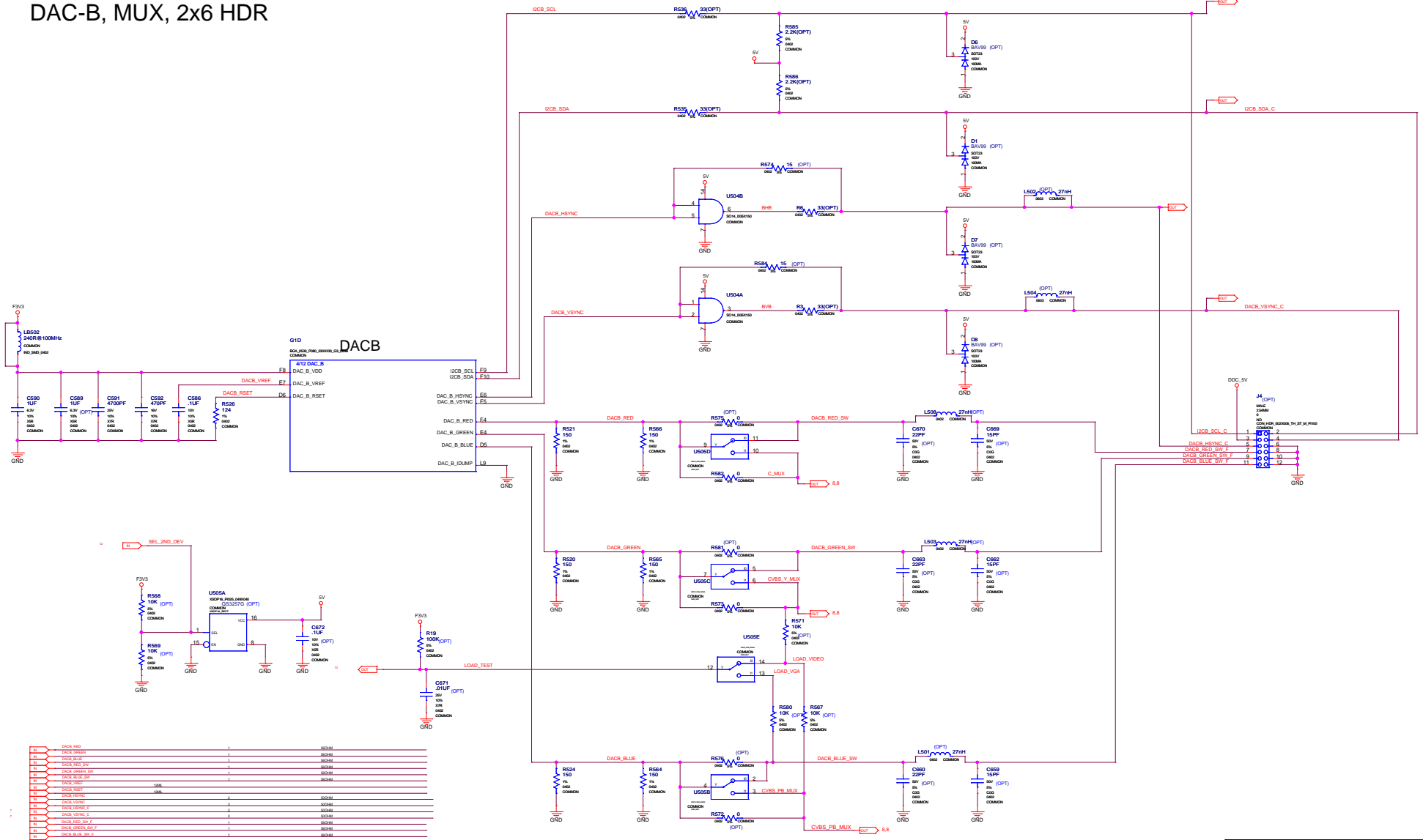
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DACA_VREF_C	2		100OHM
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DACA_GREEN	1		100OHM
DACA_BLUE	1		100OHM
DACA_RED_F	1		100OHM
DACA_GREEN_F	1		100OHM
DACA_BLUE_F	1		100OHM



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## DAC-B, MUX, 2x6 HDR



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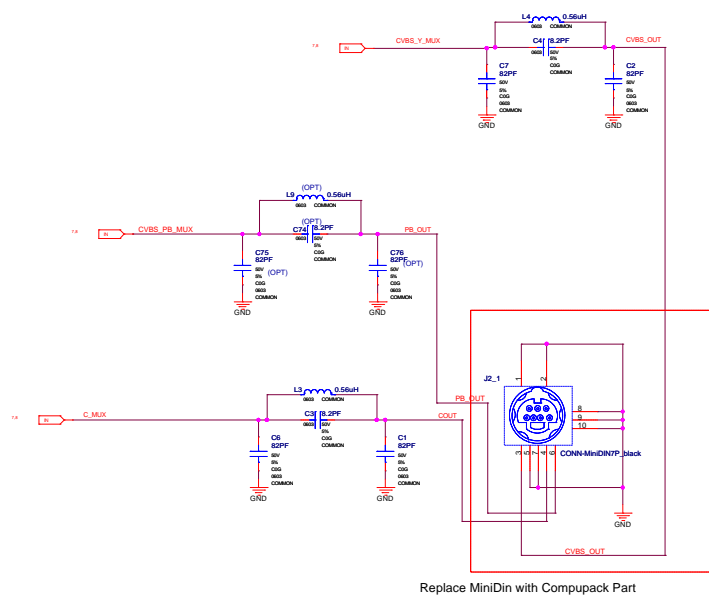
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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	DACB, VGA Output, TV Out

## VIDEO CONNECTORS: MiniDIN

	Name	LINE_WIDTH	CRITICAL	IMPEDANCE
13	IN	C_MUX	1	50OHM
13	IN	C_MUX_IN	1	50OHM
	IN	COUT	1	50OHM
	IN	COUT_OUT	1	50OHM



### Replace MiniDin with Compupack Part

ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	VIDEO CONNECTORS: MiniDIN, 2x6 HDR

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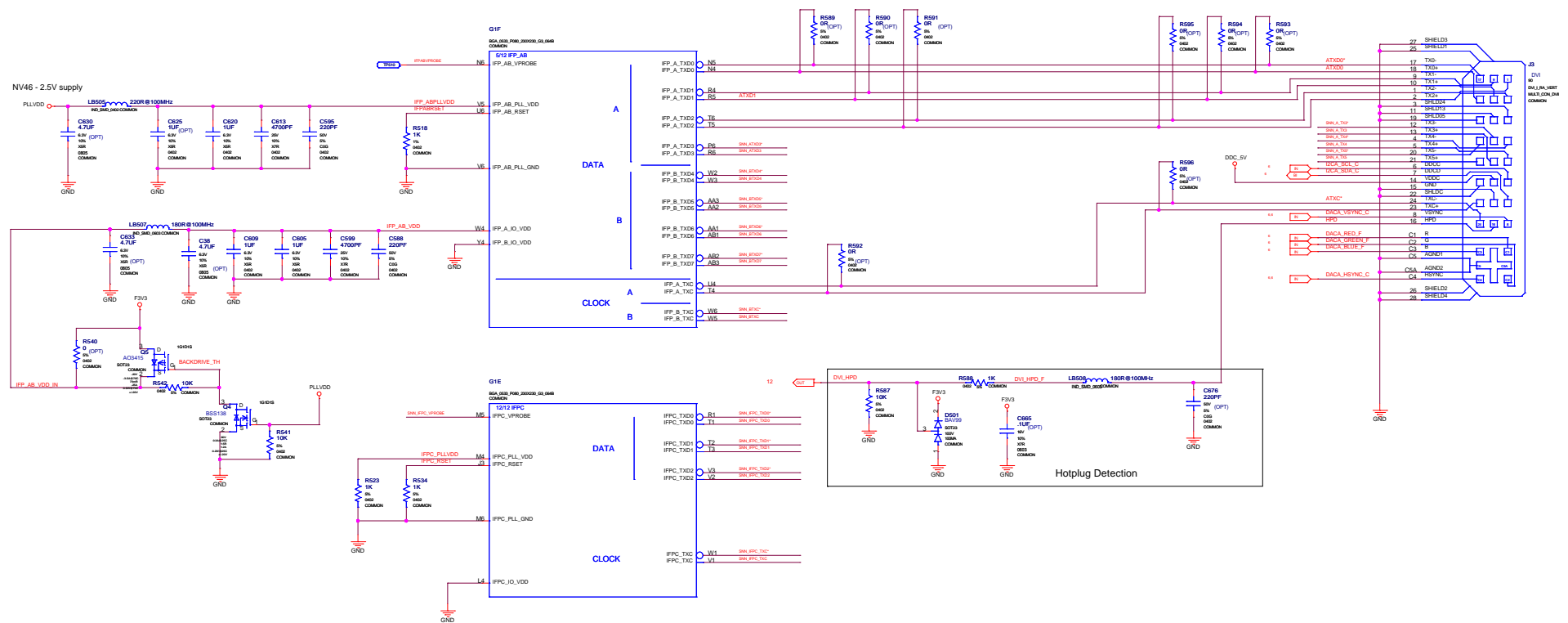
ID		PAGE	
NAME		DATE	11-MAR-2006

## Internal TMDS, DVI-Connector

Net Name		Diff	CRITICAL	IMPEDANCE
1	ATNC	ATNC	1	100000F
2	ATNC	ATNC	1	100000F
3	PZDNC	ATNC	1	100000F
4	PZDNC	ATNC	1	100000F
5	PZDNC	ATNC	1	100000F
6	PZDNC	ATNC	1	100000F
7	PZDNC	ATNC	1	100000F
8	PZDNC	ATNC	1	100000F

Net Name		Min Line Width	Voltage
1	REF_APL11VDD	0.000	3.3V
2	REF_APL11VDD	0.000	3.3V
3	REF_APL11VDD	0.000	3.3V



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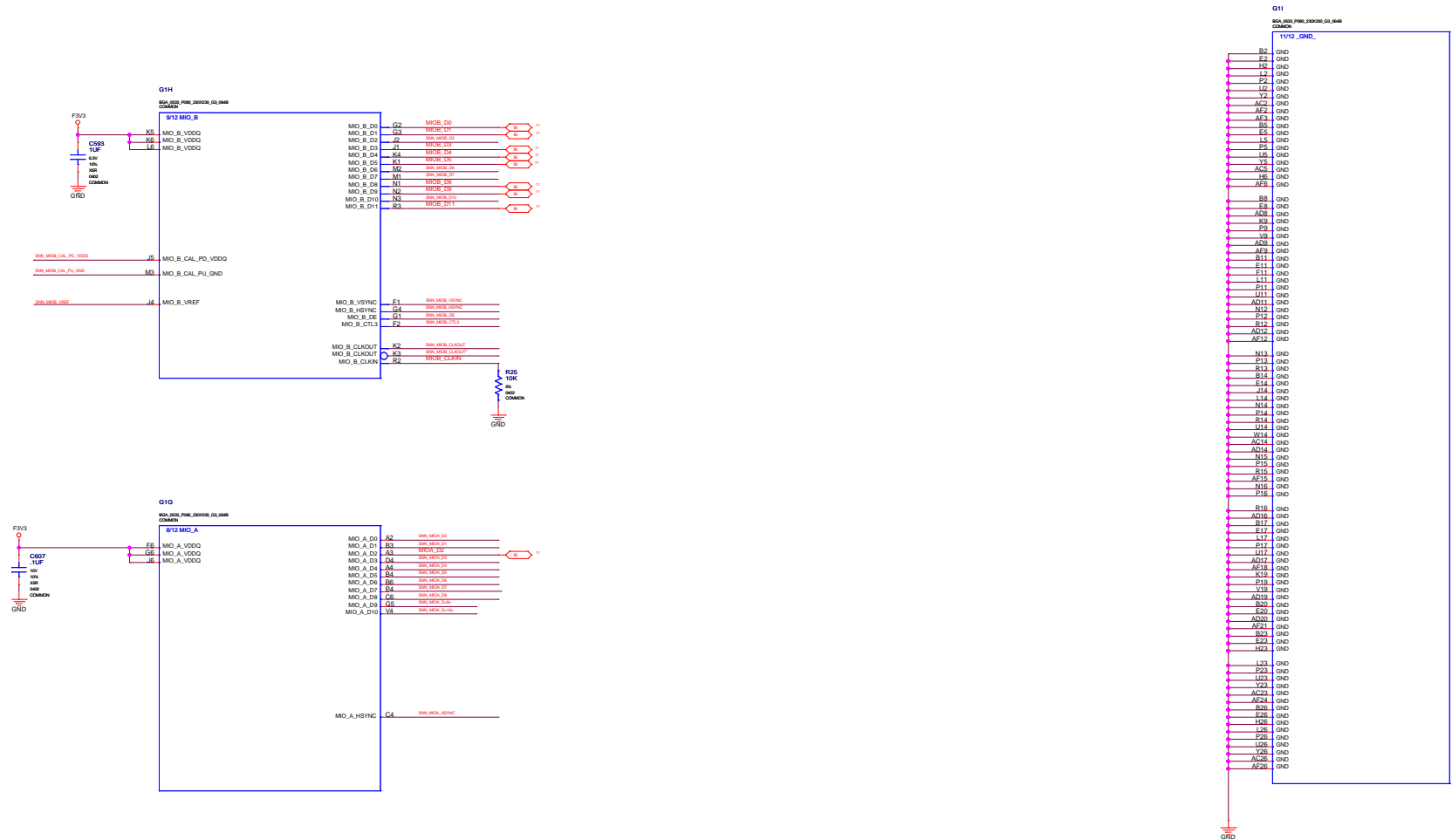
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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	TMDS Interface



## MIOA, MIOB Interface



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

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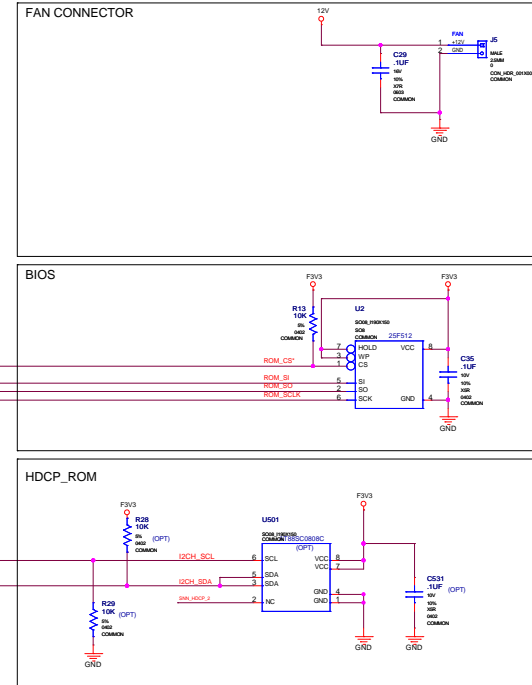
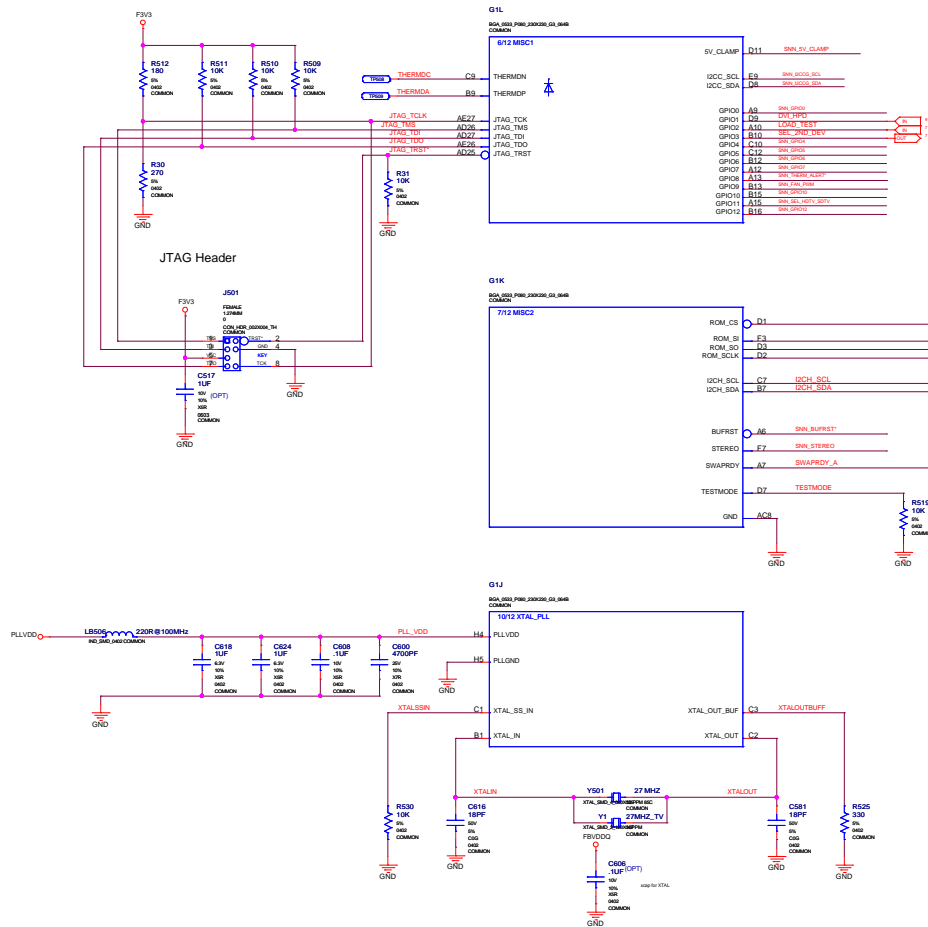
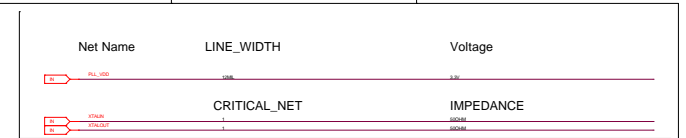
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## S

S

## XTAL, GPIO, BIOS, FAN, JTAG, THERMAL



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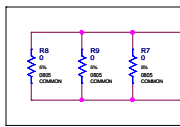
ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	XTAL, GPIO, BIOS, FAN, JTAG, THERMAL

PowerSupplyI: NVVDD, PLLVDD

Net Name	LINE_WIDTH	Current	Voltage
12V	360L	4	12V
12V_F	360L	10	12V
NVDD	360L	15	1.2V
PEX1V2	360L	1.25A	1.2V
3V3	360L		0V

PLLVDD  
 $V_{out} = V_{Ref} \cdot (1 + R_{top}/R_{bot})$   
 $2.49V = 0.8V \cdot (1 + (2.43K/1.15K))$

Inductor Bypass



ISL6549/APW7067N

NVVDD  
 $V_{out} = V_{Ref} \cdot (1 + R_{top}/R_{bot})$   
 $1.20V = 0.8V \cdot (1 + (1.54K/3.09K))$  (ISL6549)  
 $1.22V = 0.8V \cdot (1 + (1.54K/2.94K))$  (ISL6549)  
 $1.28V = 0.8V \cdot (1 + (1.54K/2.55K))$  (ISL6549)

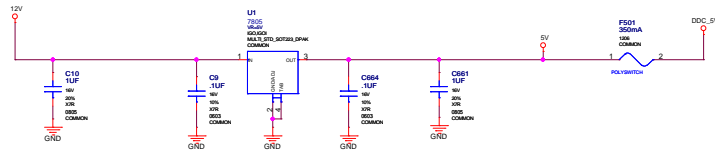
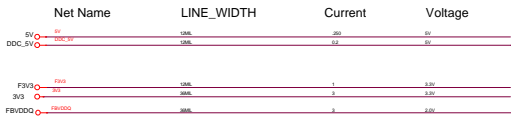
Replace SO-8 FETs with AO4422

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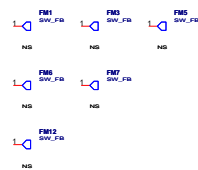
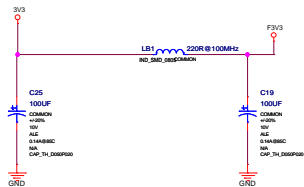
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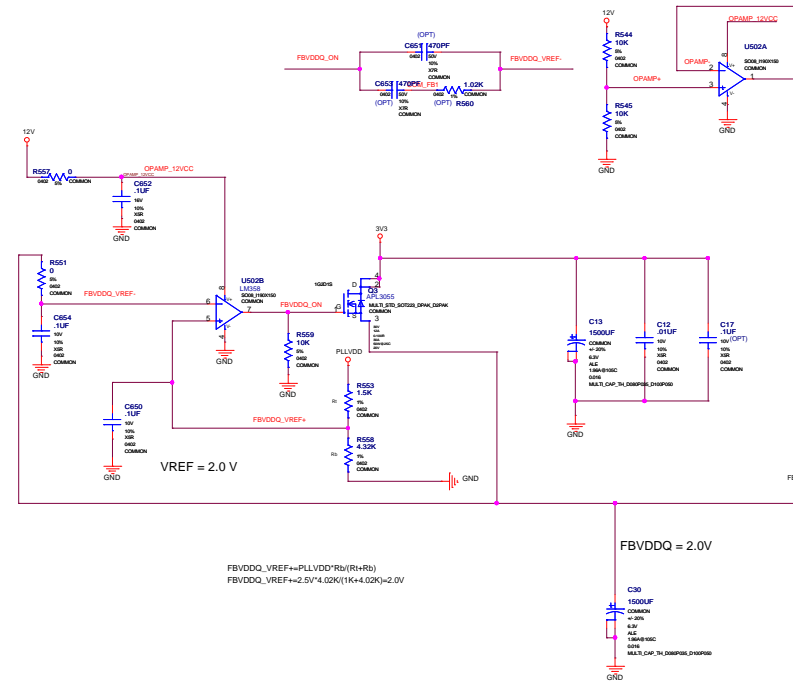
## PowerSupplyII: 5V, DDC5V, F3V3, FBVDDQ



## F3V3



## FBVDDQ


$$\text{FBVDDQ\_VREF} = \text{PLLVDQ} \cdot R_b / (R_t + R_b)$$

$$\text{FBVDDQ\_VREF} = 2.5\text{V} \cdot 4.02\text{K} / (1\text{K} + 4.02\text{K}) = 2.0\text{V}$$

FBVDDQ = 2.0V



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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	PowerSupply1: 5V, DDC5V, F3V3, TMD5_PLLVDD

P381: G72, DDR2 MEMORY 16Mx16

- Page 1: P381 Overview  
Page 2: PCI Express Interface  
Page 3: Frame Buffer Interface  
Page 4: Memory 1st bank 0..31  
Page 5: Memory 1st bank 32..63  
Page 6: DACA, DACB, DACC, Sync Buffers  
Page 7: DACB, VGA Output, TV Out  
Page8: S-Video Minidin Connector  
Page 9: TMDs Interface  
Page 10: MIOA, MIOB Interface, LPC-ROM  
Page 11: STRAPS, Mechanical Parts  
Page 12: XTAL, GPIO, BIOS, FAN, JTAG, THERMAL  
Page 13: PowerSupplyI: NVVDD, A3V3  
Page 14: PowerSupplyII: 5V, DDC5V, F3V3, TMDs\_PLLVDD

Base on P381\_ A04 (V056-V3.0)modify

- Page8, removed mini-din 4pin. add mini-din 7pin support HDTV  
Page 13: PowerSupplyI: NVVDD, A3V3 add mlcc 10U/16V 1206 5pcs  
remove L5 1R0  
Page 9: ADD 預留R589,R590,R591,R592,R593,R594,R595,R596 FOR EMI  
Page 12: XTAL 雙LOAYOUT SMD 49US

REV	VARIANT	NVPN	ASSEMBLY
B	BASE	600-10381-xxxx-400	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	SKU0010	600-10381-0010-400	P381: G3-64.7300LE, 64 BIT DDR2 18Mx16 MEMORY, VGA+DVI+TVout
2	SKU0011	600-10381-0011-400	P381: G3-64.7300LE, 64 BIT DDR2 32Mx16 MEMORY, VGA+DVI+TVout
3	SKU0012	600-10381-0012-400	P381: G3-64.7300QS, 64 BIT DDR2 32Mx16 MEMORY, VGA+DVI+TVout
4	SKU0013	600-10381-0013-400	P381: G3-64.7300QS, 64 BIT DDR2 18Mx16 MEMORY, VGA+DVI+TVout
5	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
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ASSEMBLY

BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO\_STUFF ASSEMBLY NOTES AND BOM NOT FINAL

PAGE DETAIL

P381 Overview

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