

P2010-B01

75W/80W/100W GK107/GK106/GM107 128-BIT GDDR5 in x32/x16 MODE  
DVI-I-DL + DVI-D-DL/HDMI + mHDMI/DP

TABLE OF CONTENTS

Page	Description
1	Table of Contents
2	PCI Express
3	GPU Frame Buffer Partition A/B
4	FBA Partition [31..0]
5	FBA Partition [63..32]
6	FBB Partition [31..0]
7	FBB Partition [63..32]
8	GPU FB Decoupling
9	DACA VGA
10	IFPAB TMDS
11	IFPC mHDMI
12	IFPC DP, IFPD UNUSED, IFPG
13	IFPEF TMDS
14	IFPE Long HDMI
15	GPU Core Decoupling, GPU VDD_3V3
16	Misc Interfaces
17	Straps, FAN Control
18	Power Supply I: Misc Power/PEXVDD LDO (Option)
19	Power supply II: PEX_VDD (Open Vreg)
20	Power Supply III: FBVDDQ
21	Power Supply IV: NVVDD CTRL
22	NVVDD MOSFET
23	12V EXT / 12V PEX Power Select Circuit
24	Thermal, Mechanical


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PAGE DETAIL	Table of Contents

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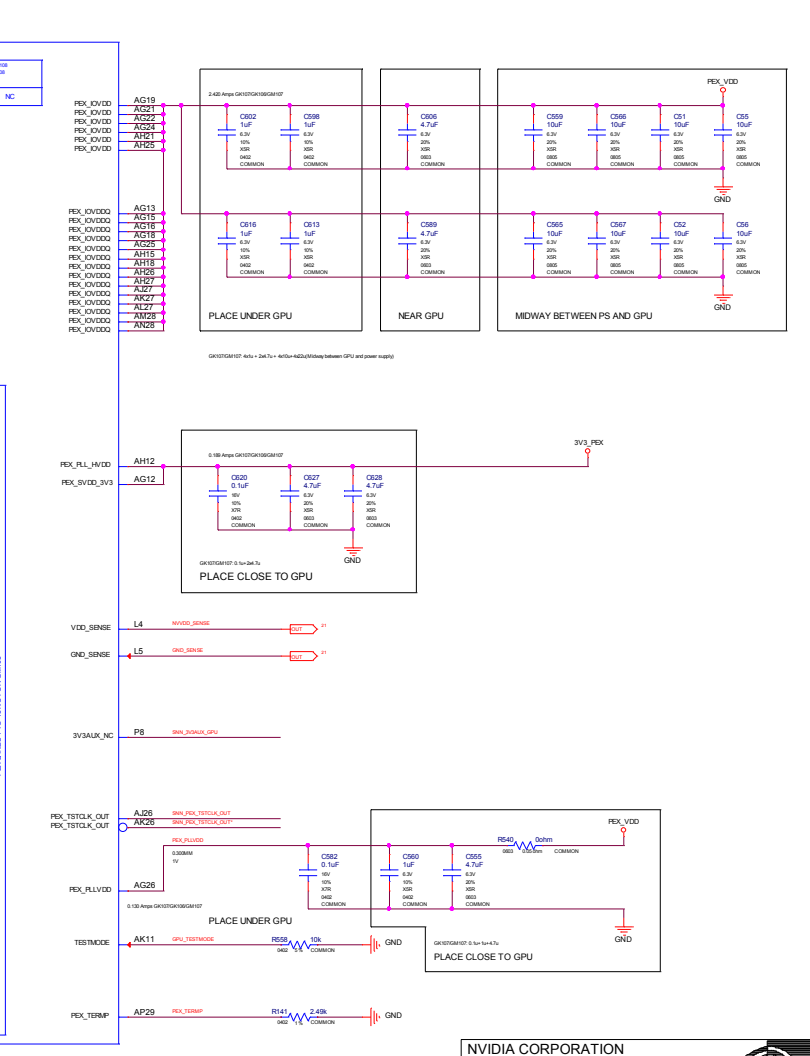
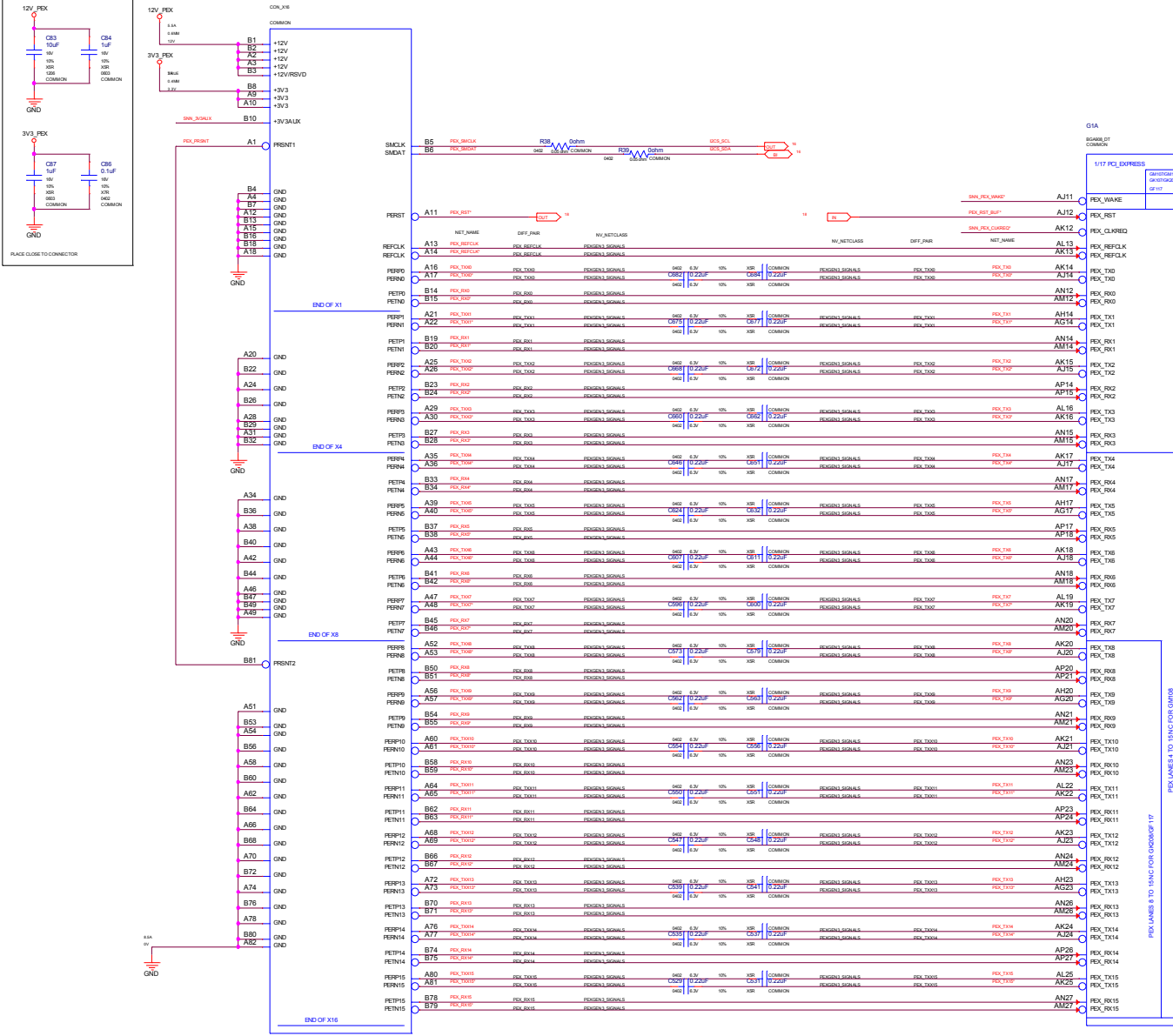
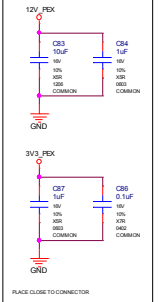
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INV_PN	600-12010-BASE-QS1		
PCR REV	P2010-B01	PAGE	1 OF 24
BOOK REV	A	DATE	28-OCT-2013

# PCI Express



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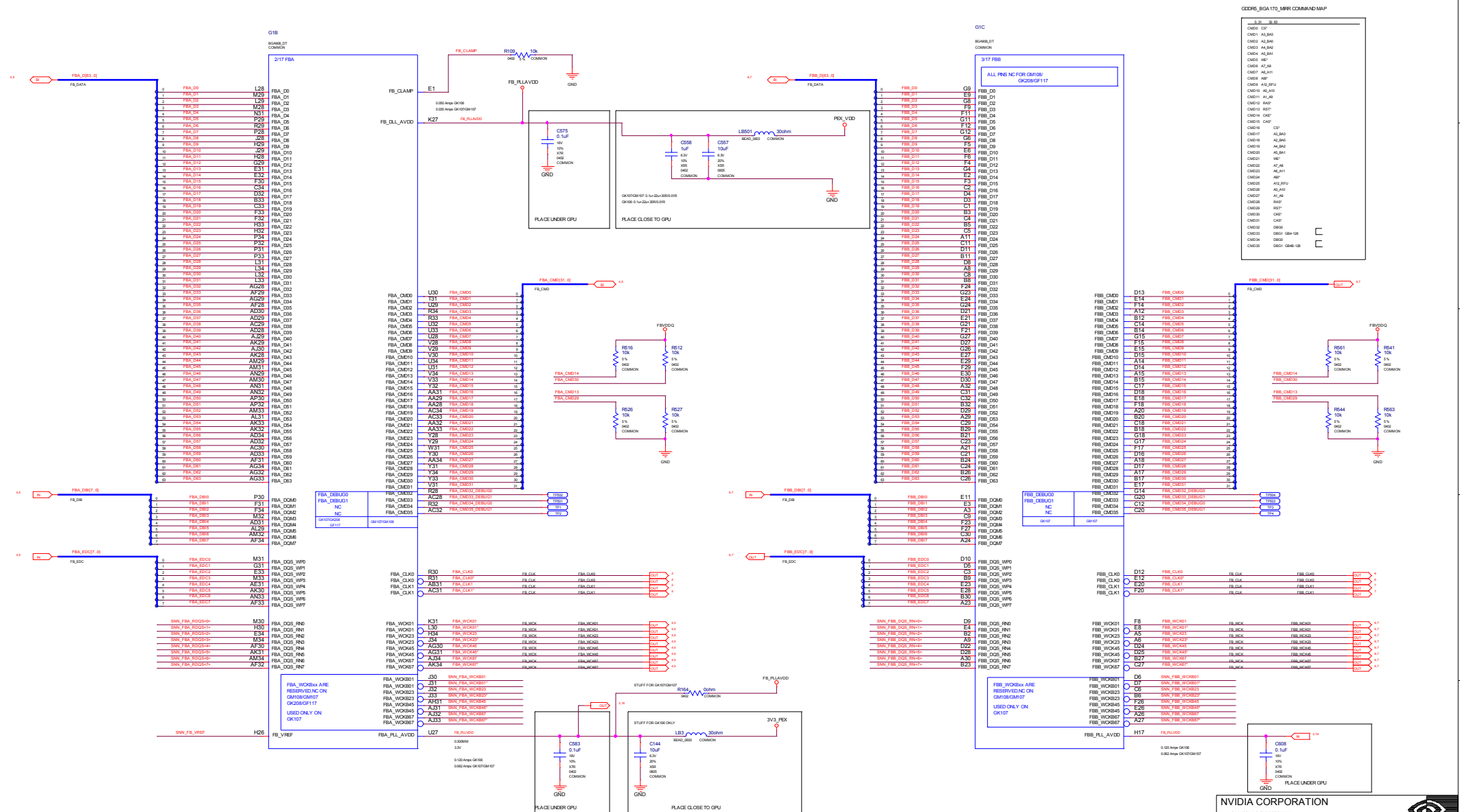
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PACKAGE	PCI Express

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**TCR REV** P2010301  
**ICM REV** A

**DATE** 28-OCT-2013  
**PAGE** 2 OF 24

## GPU Frame Buffer Partition A/B



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NV_PN	600-12010-BASE-QS1
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PCB REV	P2010-B01	PAGE	3 OF 2
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BOM REV	A	DATE	28-OCT-2017
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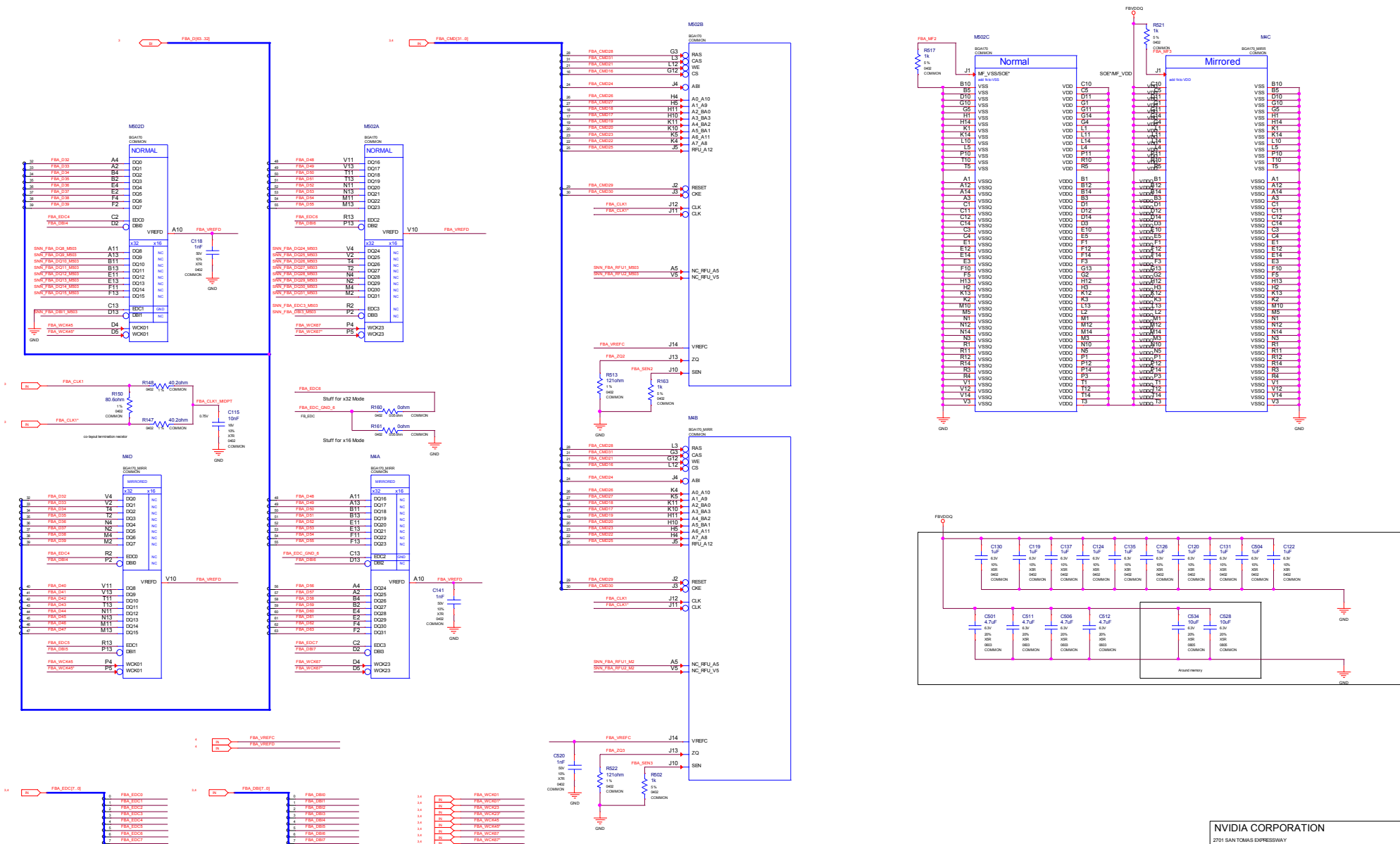
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NV_PN	600-12010-BASE-QS1
PCB REV	P2010-B01
BOM REV	A

PAGE	4 OF 24
DATE	28-OCT-2013

A	B	C	D	E	F	G	H
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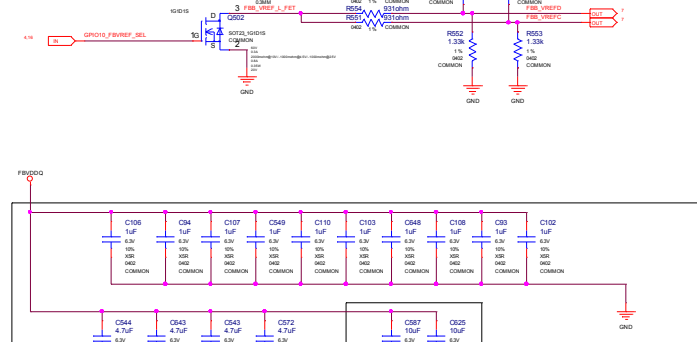
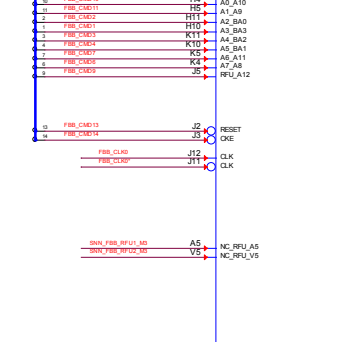
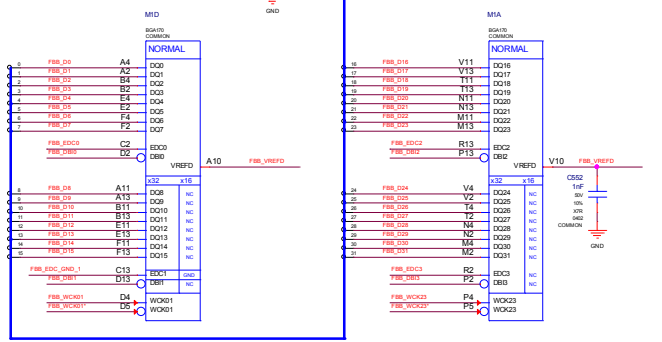
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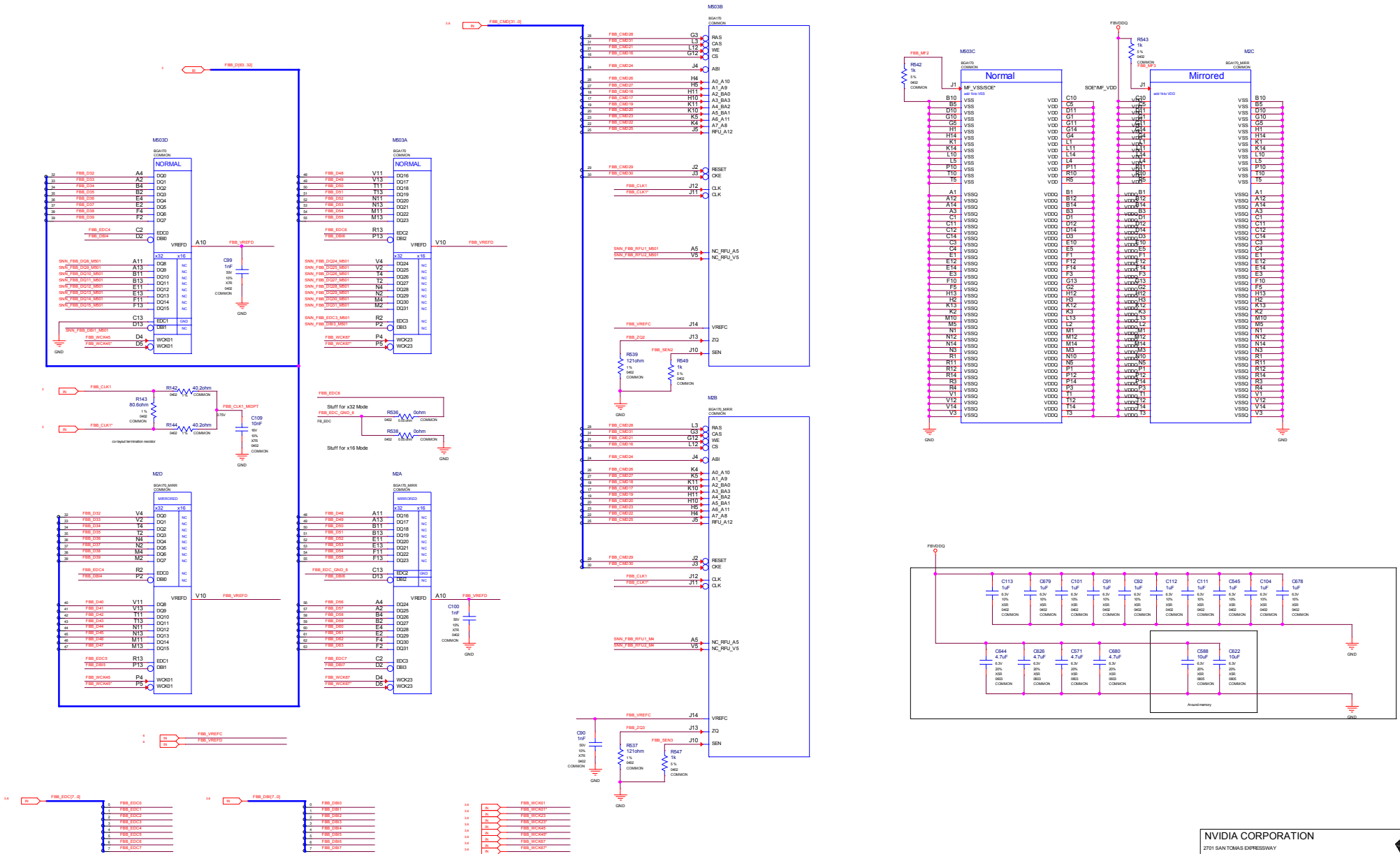
TCB REV P2010-001  
ROM REV APAGE 5 OF 24  
DATE 28-OCT-2013

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PCB REV	P2010-B01	PAGE	5 OF 24
BOM REV	A	DATE	28-OCT-2013





ASSEMBLY BASE LEVEL GENERIC SCHEMATIC ONLY  
PAGE DETAIL FBB Partition [63..32]

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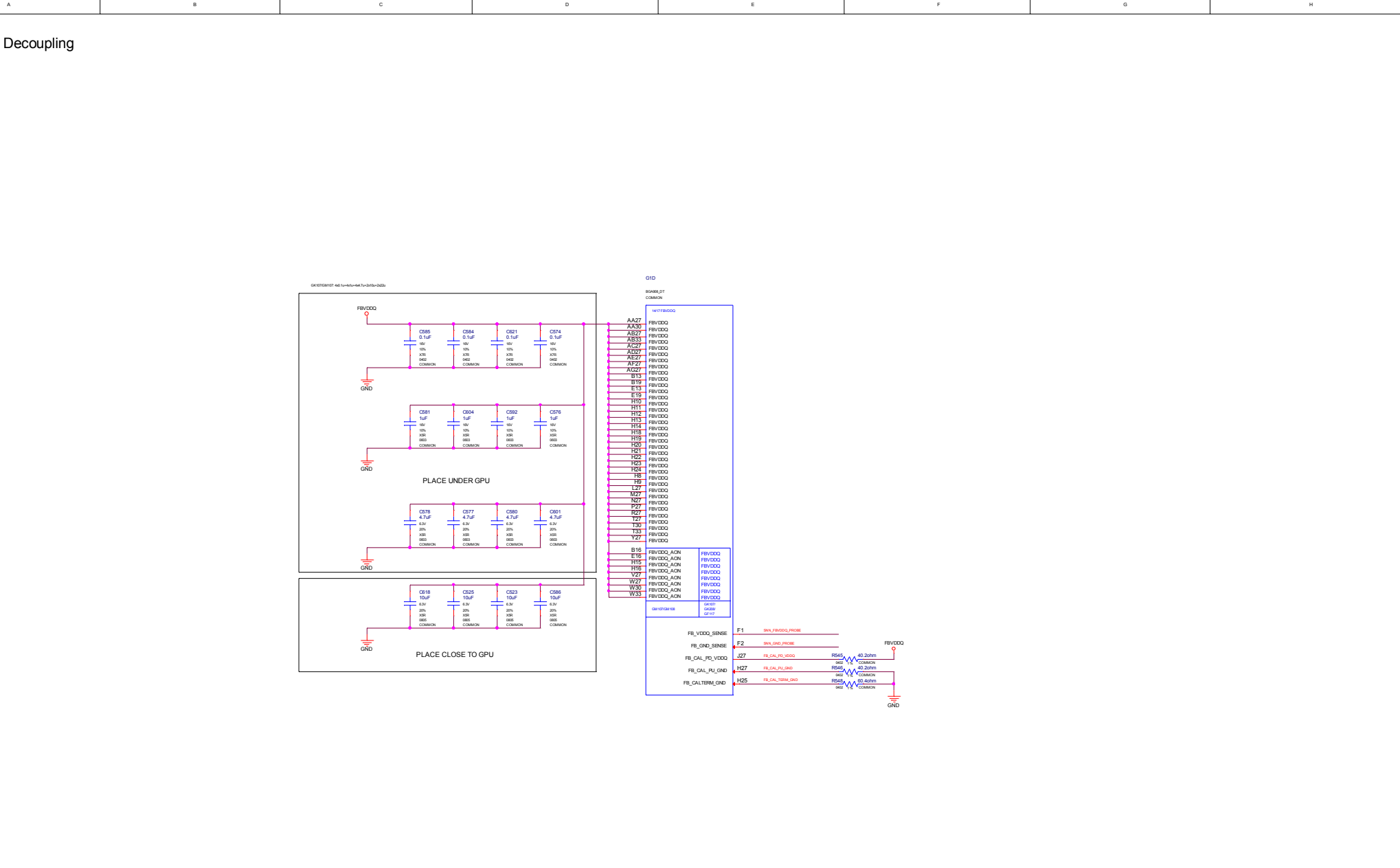
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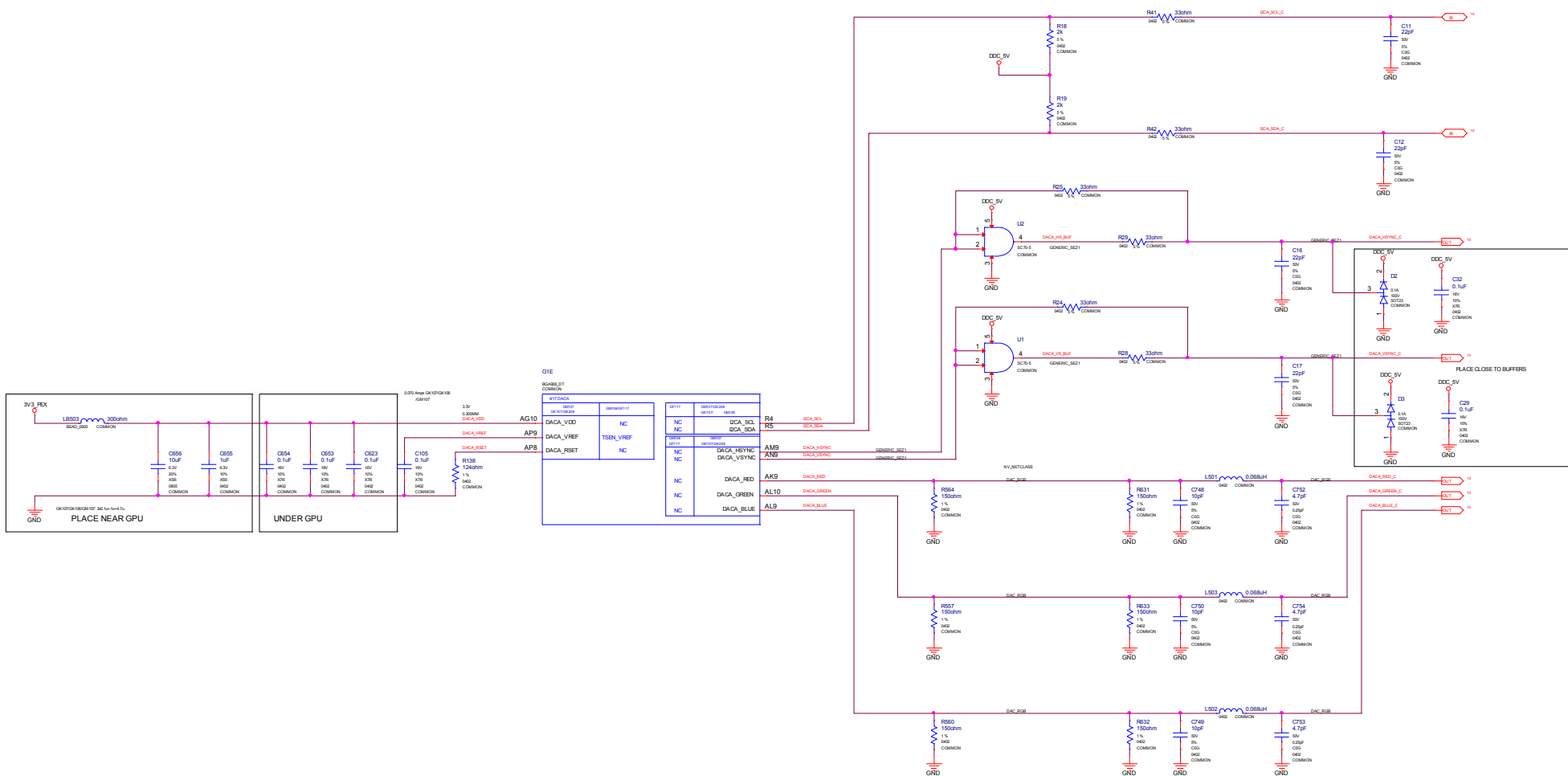
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## DACA VGA



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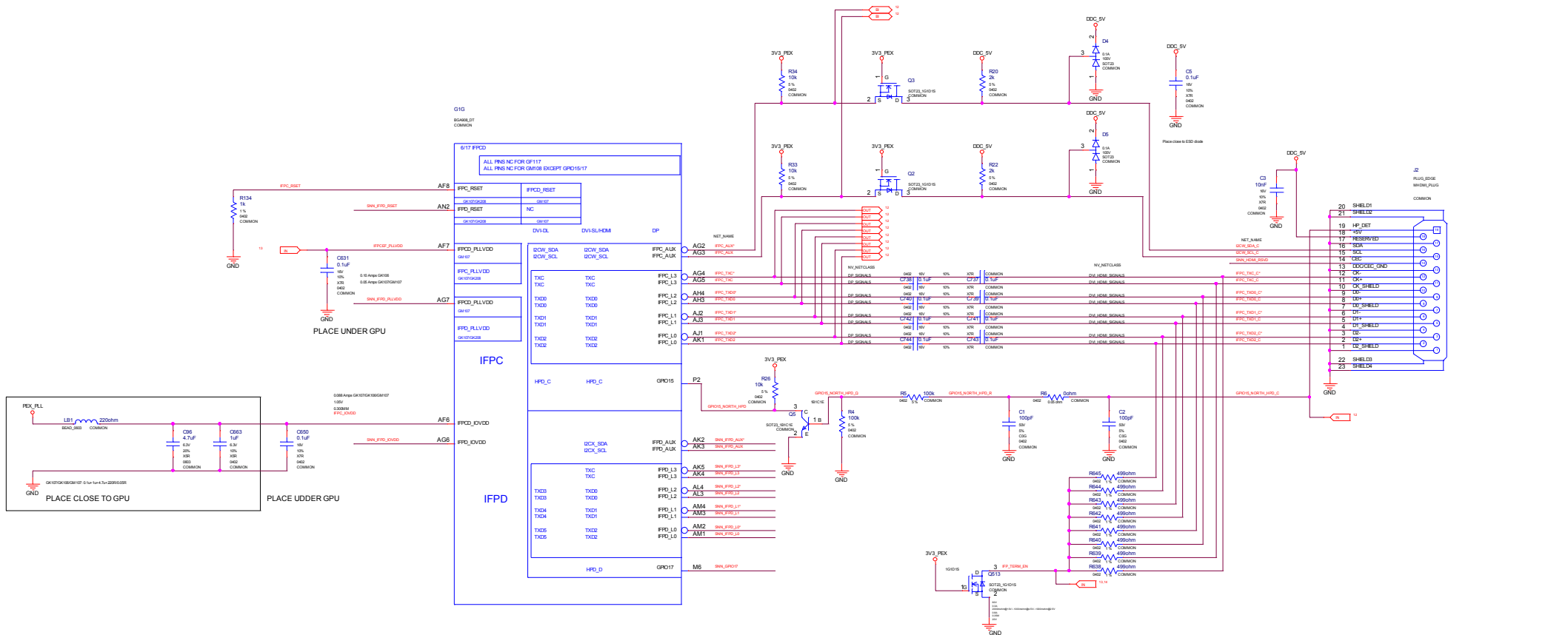


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NV_PN	600-12010-BASE-QS1		
PCB REV	P2010-B01	PAGE	9 OF 24
BOM REV	A	DATE	28-OCT-2013

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PAGE DETAIL	DACA VGA



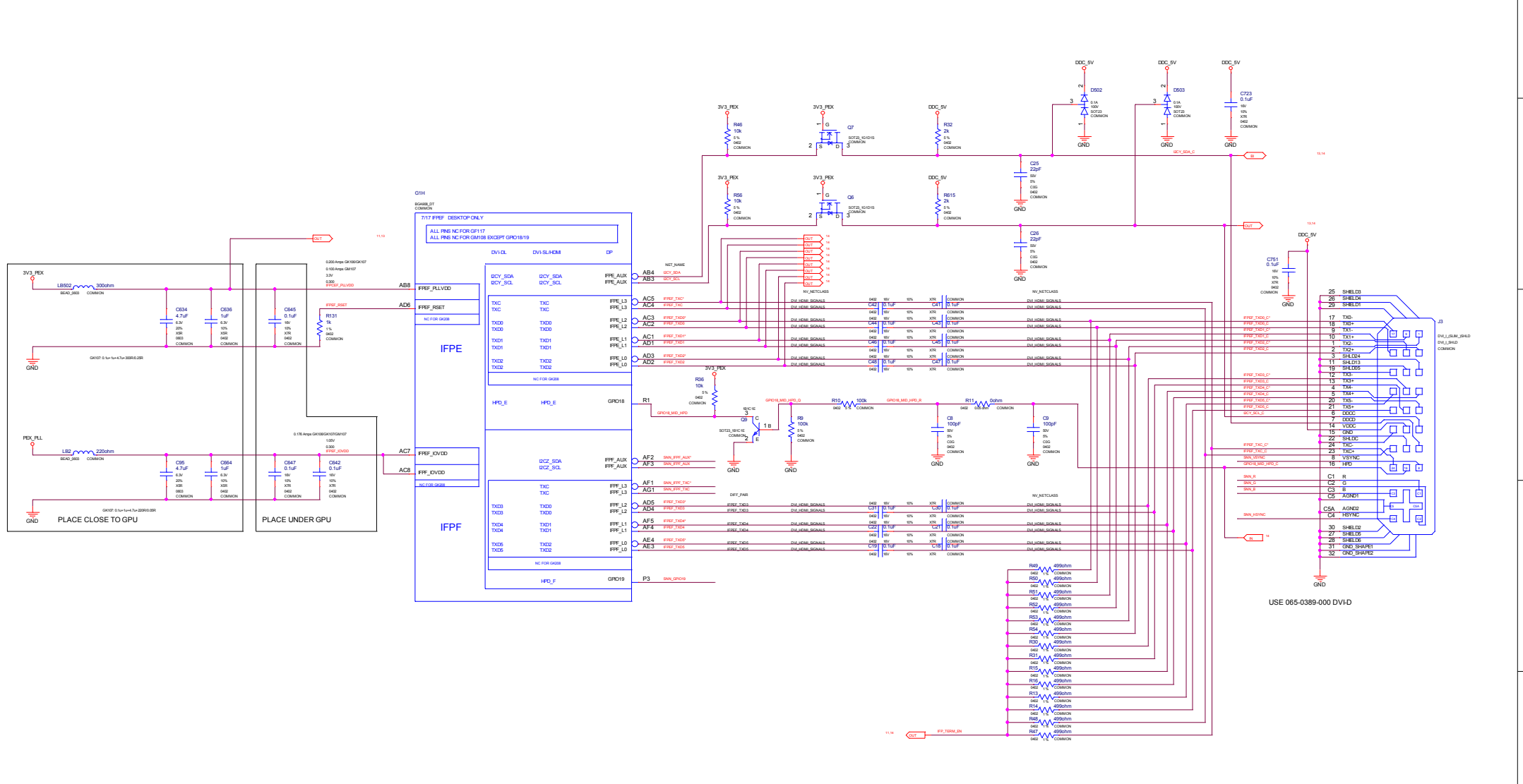


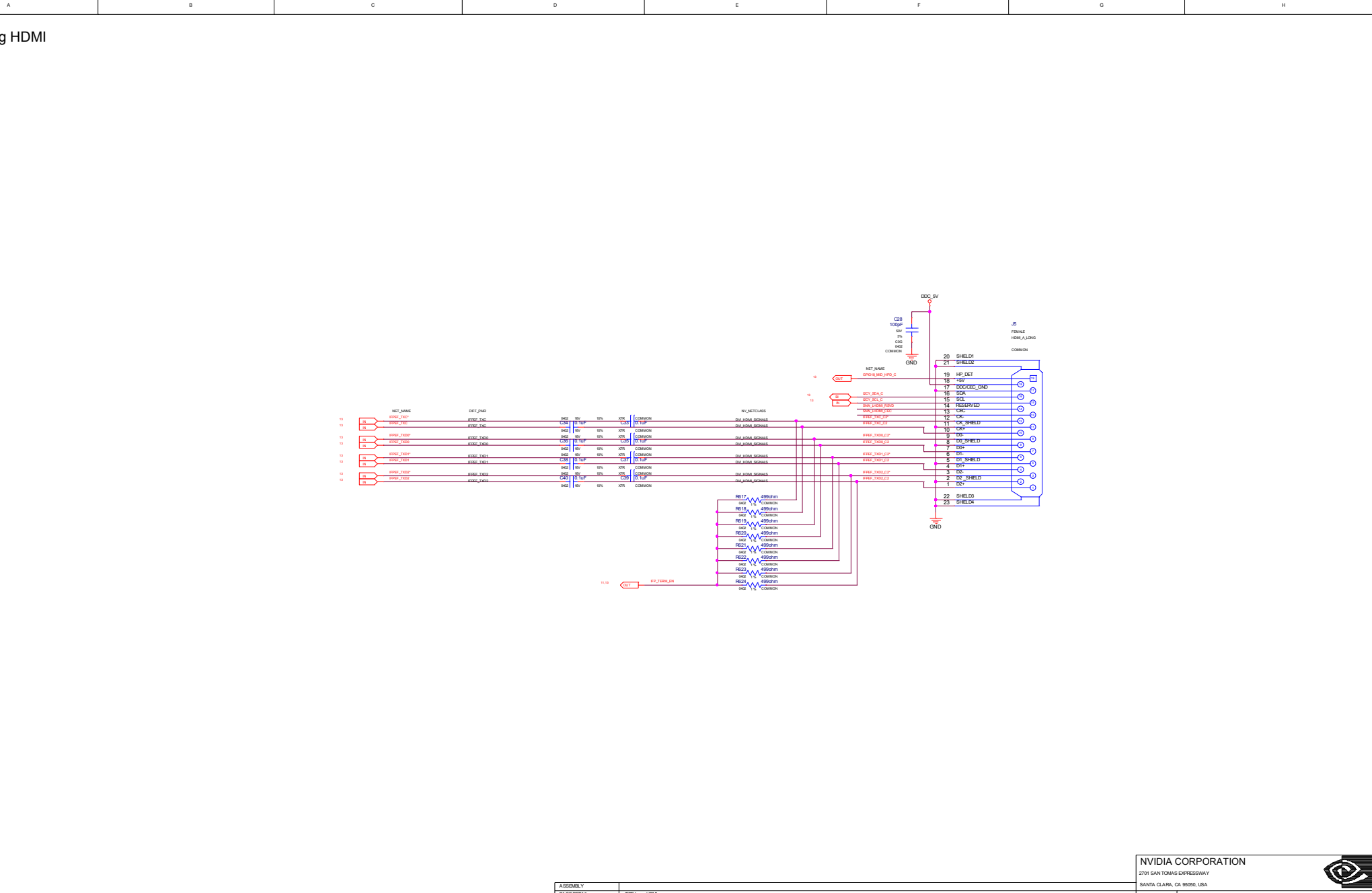
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NV_PN	600-12010-BASE-QS1		
TCB REV	P2010-001	PAGE	11 OF 24
BCM REV	A	DATE	28-OCT-2013





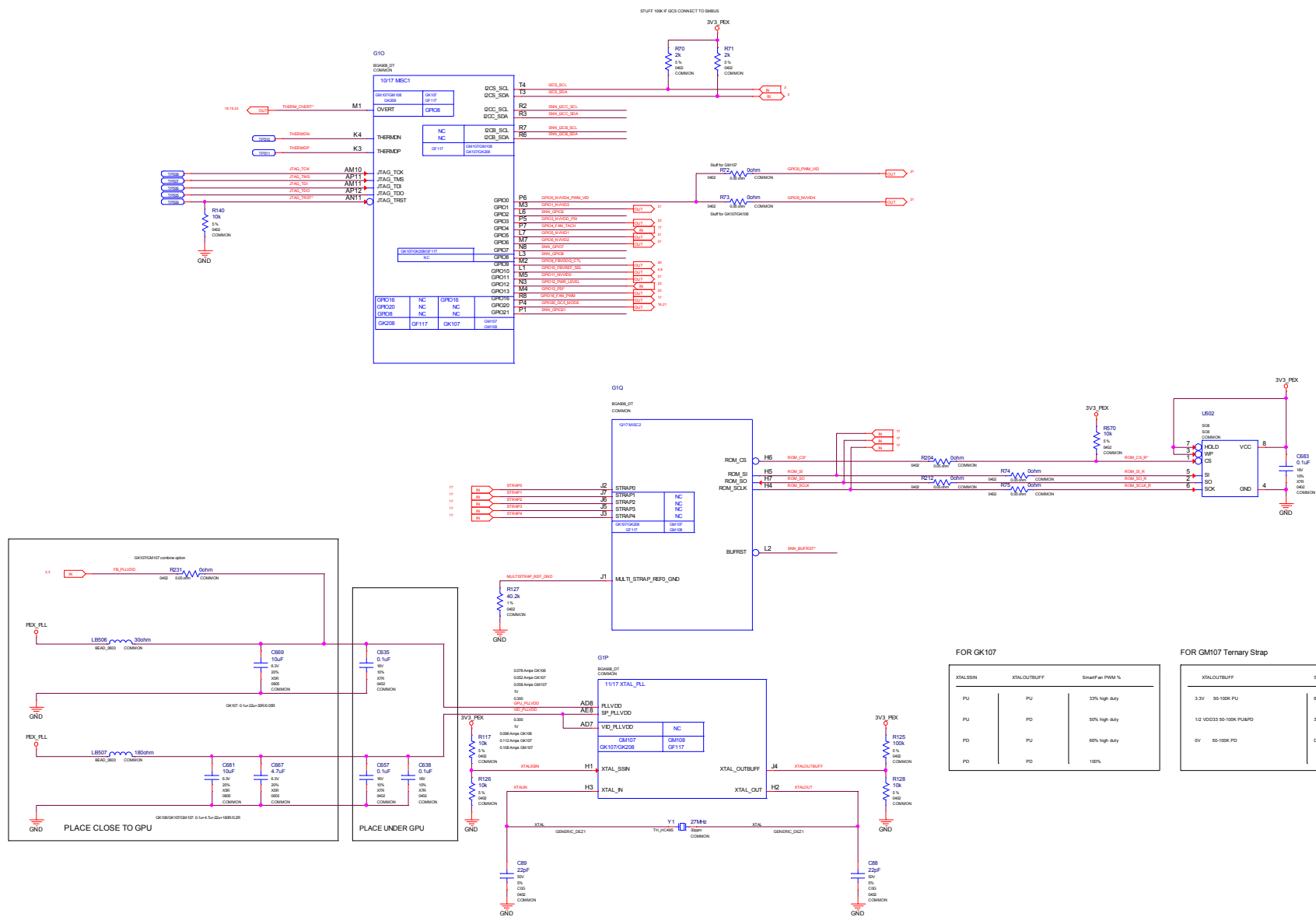


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<p>PNV_PN</p> <p>600-12010-B01</p>		<p>PRICE</p> <p>14 OF 24</p>		<p>REV/PN</p> <p>600-12010-B01</p>	
<p>DATE</p> <p>28-09-2013</p>		<p>REV/PN</p> <p>600-12010-B01</p>		<p>PRICE</p> <p>14 OF 24</p>	
<p>DATE</p> <p>28-09-2013</p>		<p>REV/PN</p> <p>600-12010-B01</p>		<p>PRICE</p> <p>14 OF 24</p>	

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				PCB REV	P210-B01
				BOARD REV	A
				DATE	28-OCT-2013



## Misc Interfaces



14ci203



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XOAL SSIN	XOAL OUTBUFF	Smart on PWM %
PU	PU	33% high duty
PU	PD	50% high duty
PD	PU	66% high duty
PD	PD	100%

XTALOUTBUFF	SmartF on PWM
3.3V 50-100K PU	66% High duty
1/2 VDD13 50-100K PU&PD	33% High duty
0V 50-100K PD	DISABLE

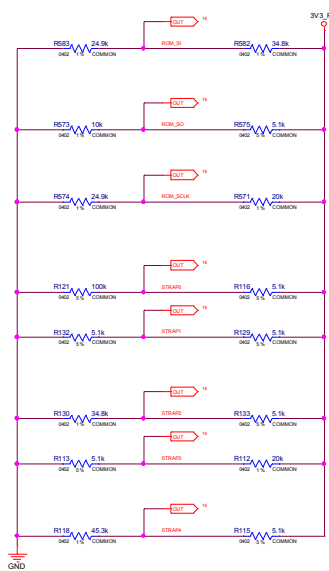
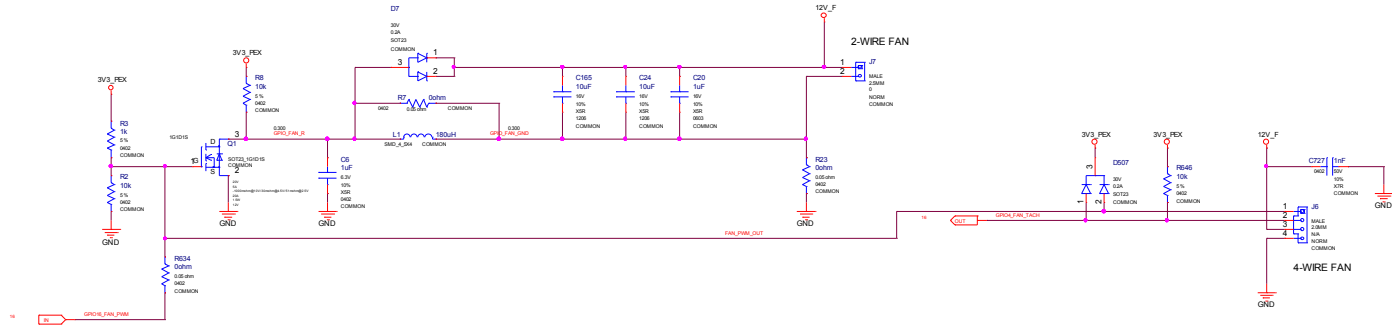
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PAGE DETAIL	Misc interfaces

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NV_PN	600-12010-BASE-QS1		
PCB REV	P2010-B01	PAGE	16 OF 24
BOM REV	A	DATE	28-OCT-2013



## Straps, FAN Control



## GK107 Straps

[illegible]

## GM107 Straps

Bit Signal		Values	
03	IRAWICFG	0000	GRAM2 USB0 H-type
		0001	GRAM2 USB0 E-type
		0010	GRAM2 USB0 S-sensing
		0011	Reserved
04	IRAWICFG	0000	GRAM2 USB0 H-type
		0001	GRAM2 USB0 E-type
		0010	Reserved
		0011	Reserved
05	IRAWICFG	0110	GRAM2 USB0 S-sensing
		0111	Reserved
09	DEV0_SEL	0	DEV0 A
		1	DEV0 B
12	PCIE_CFG	0	DESKTOP
		1	LAPTOP
01	IMBIACT_AZDIR	0	DISABLED
		1	ENABLED
06	VGA_DEVICE	0	DISABLED
		1	ENABLED
10	SC0L_DISP0SD	0	DISABLED
		1	ENABLED
02	SC0L_DISP0SD	0	DISABLED
		1	ENABLED
01	SC0L_DISP0SD	0	DISABLED
		1	ENABLED
00	SC0L_DISP0SD	0	DISABLED
		1	ENABLED
MEMORY STRAP			
33H	IOA_ENABLE	05 100K RU ONLY	
15H	IOFB_ENABLE	00 100K RU ONLY	
04H	IOGA_ENABLE	00 100K RU ONLY	

### Multilevel Straps

0000	5.1K to GND	1000	5.1K to VCC
0001	10K to GND	1001	10K to VCC
0010	15K to GND	1010	15K to VCC
0011	20K to GND	1011	20K to VCC
0100	24.3K to GND	1100	24.3K to VCC
0101	30.1K to GND	1101	30.1K to VCC
0110	34.3K to GND	1110	34.3K to VCC
0111	45.3K to GND	1111	45.3K to VCC

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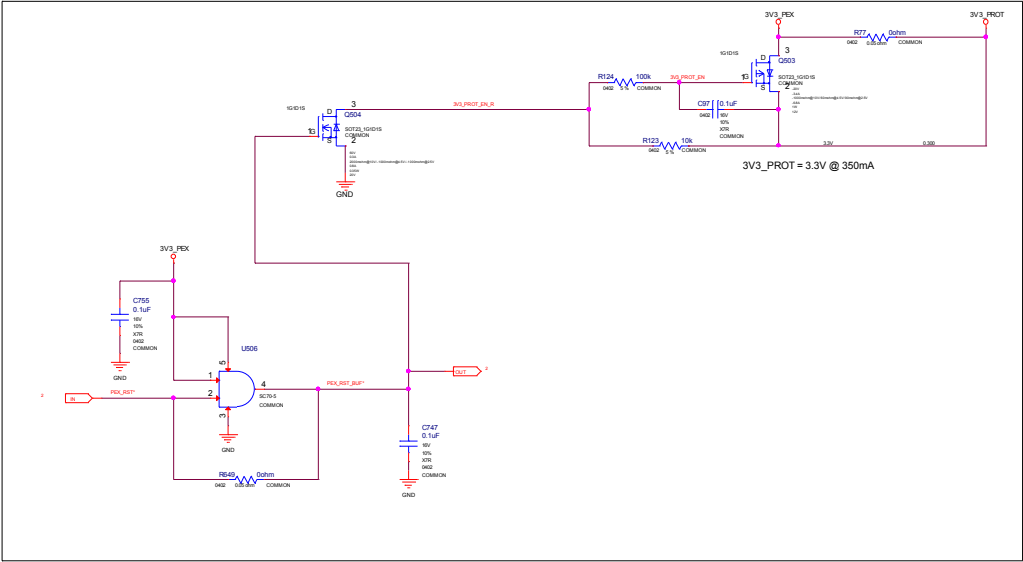
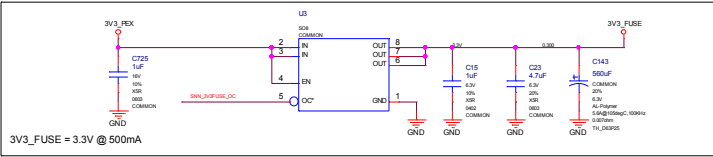
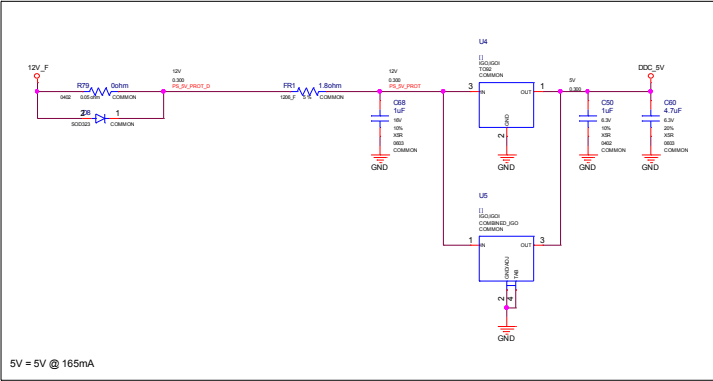
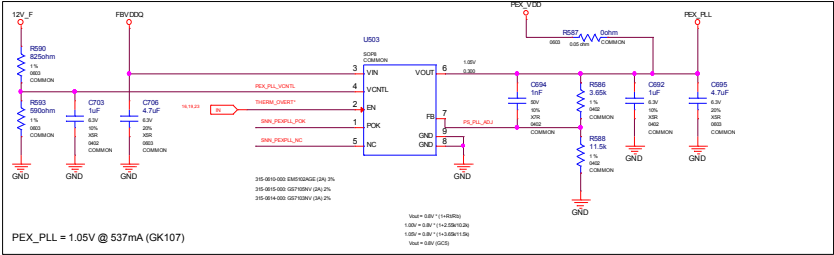
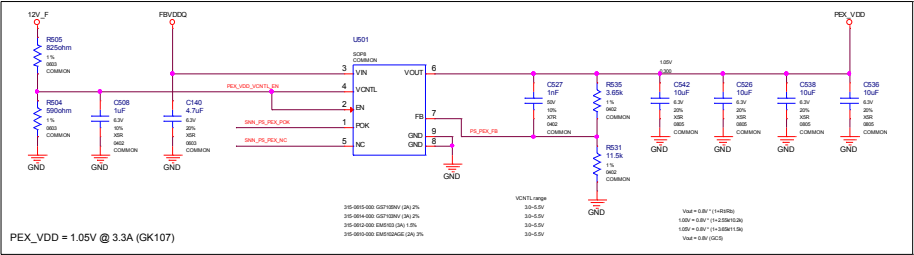
NV_PN	600-12010-BASE-QS1
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PCB REV	P2010-B01	PAGE	17 OF 24
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BOM REV	A	DATE	28-OCT-2013
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Power Supply I: Misc Power/PEXVDD LDO(Optional)



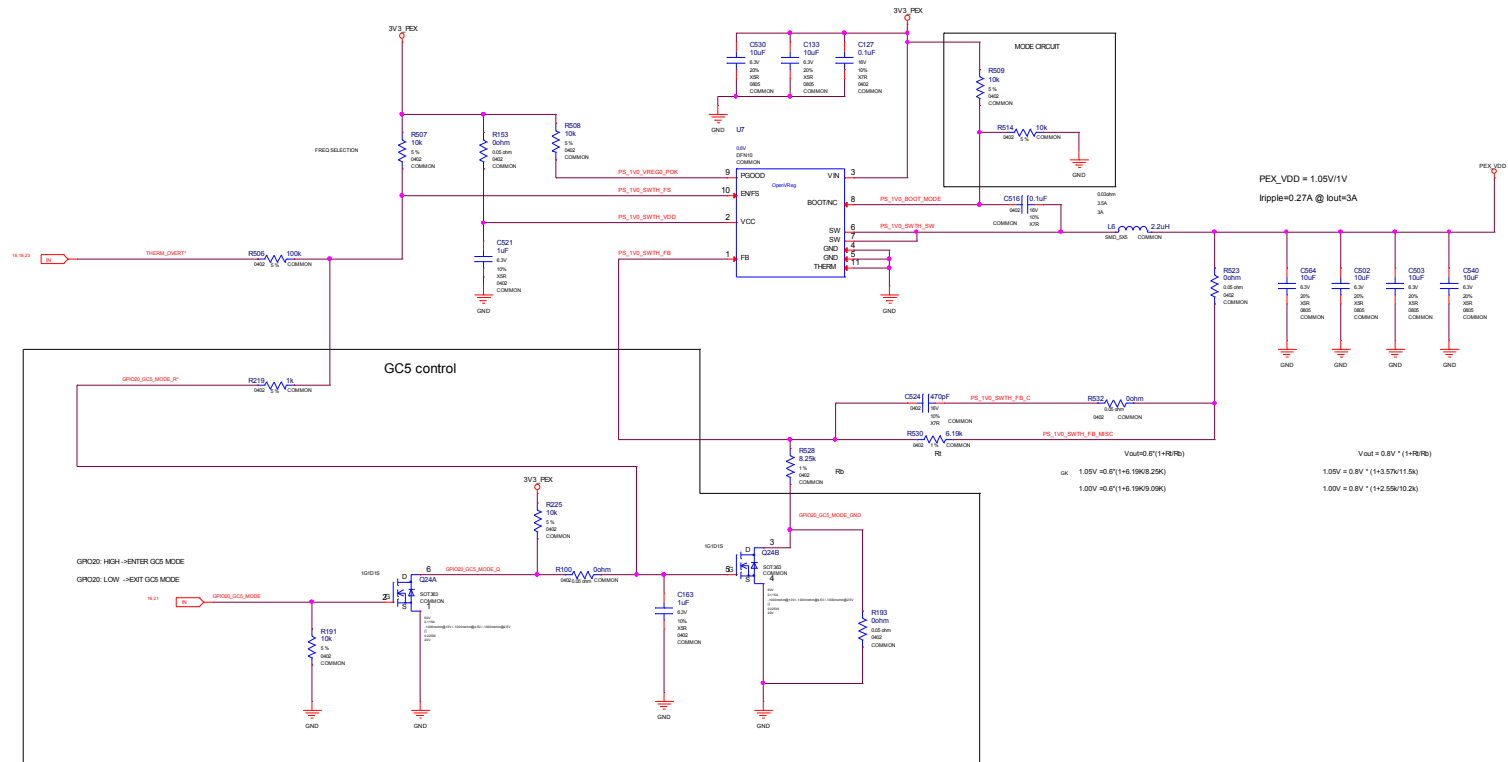
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PAGE DETAIL	Power Supply I Misc Power/PEXVDD LDO (Optional)

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PCB REV	P2010-301
ICM REV	A
DATE	28-OCT-2013

A	B	C	D	E	F	G	H
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OPEN VREG TYPE-0

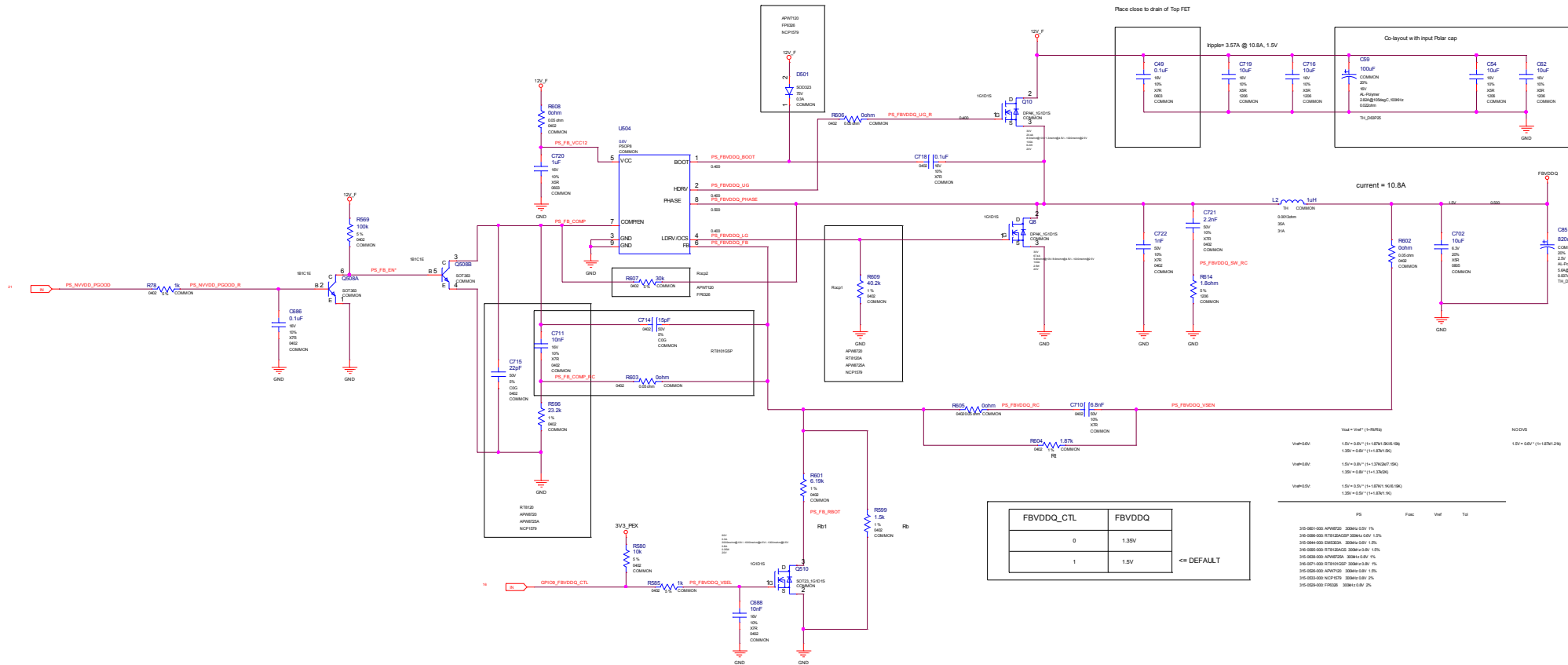


ASSEMBLY	
PAGE DETAIL	Power supply IPEX <sub>sm</sub> VDD(Open Vreg

NV_PN	600-12010-BASE-QS1		
PCB REV	P2010-B01	PAGE	19 OF 24
BOM REV	A	DATE	28-OCT-2013

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### Power Supply III: FBVDDQ



FBVDDQ_CTL	FBVDDQ
0	1.35V
1	1.5V

<= DEFAULT

	$V_{\text{ind}} = V_{\text{ind}}^{\text{ind}} (1 - 0.0383)$	N/D 0.05
$V_{\text{ind}} = 0.01$	$1.50 = 0.01^{*} (1 + 1.8761/0.015)$ $1.350 = 0.01^{*} (1 + 1.8761/1.50)$	$1.50 = 0.01^{*} (1 + 1.8761/2.00)$
$V_{\text{ind}} = 0.02$	$1.50 = 0.02^{*} (1 + 1.2762/0.150)$ $1.350 = 0.02^{*} (1 + 1.2762/0.150)$	
$V_{\text{ind}} = 0.03$	$1.50 = 0.03^{*} (1 + 1.8761/0.015)$ $1.350 = 0.03^{*} (1 + 1.8761/0.150)$	

PS                      Fosc                      Vef                      Tot

215-0821-030 APW8725 300kHz 0.5V 1%

215-0886-030 R7818AGSP 300kHz 0.6V 1.5%

215-0844-030 EM53E3A 300kHz 0.6V 1.5%

215-0885-030 R7818AGS 300kHz 0.6V 1.5%

215-0838-030 APW8725A 300kHz 0.8V 1%

215-0071-030 R7810H2GP 300kHz 0.8V 1%

215-0528-030 APW172G 300kHz 0.8V 1.5%

215-0523-030 NCP1579 300kHz 0.8V 2%

215-0520-030 CPM706 300kHz 0.8V 2%

14ci203

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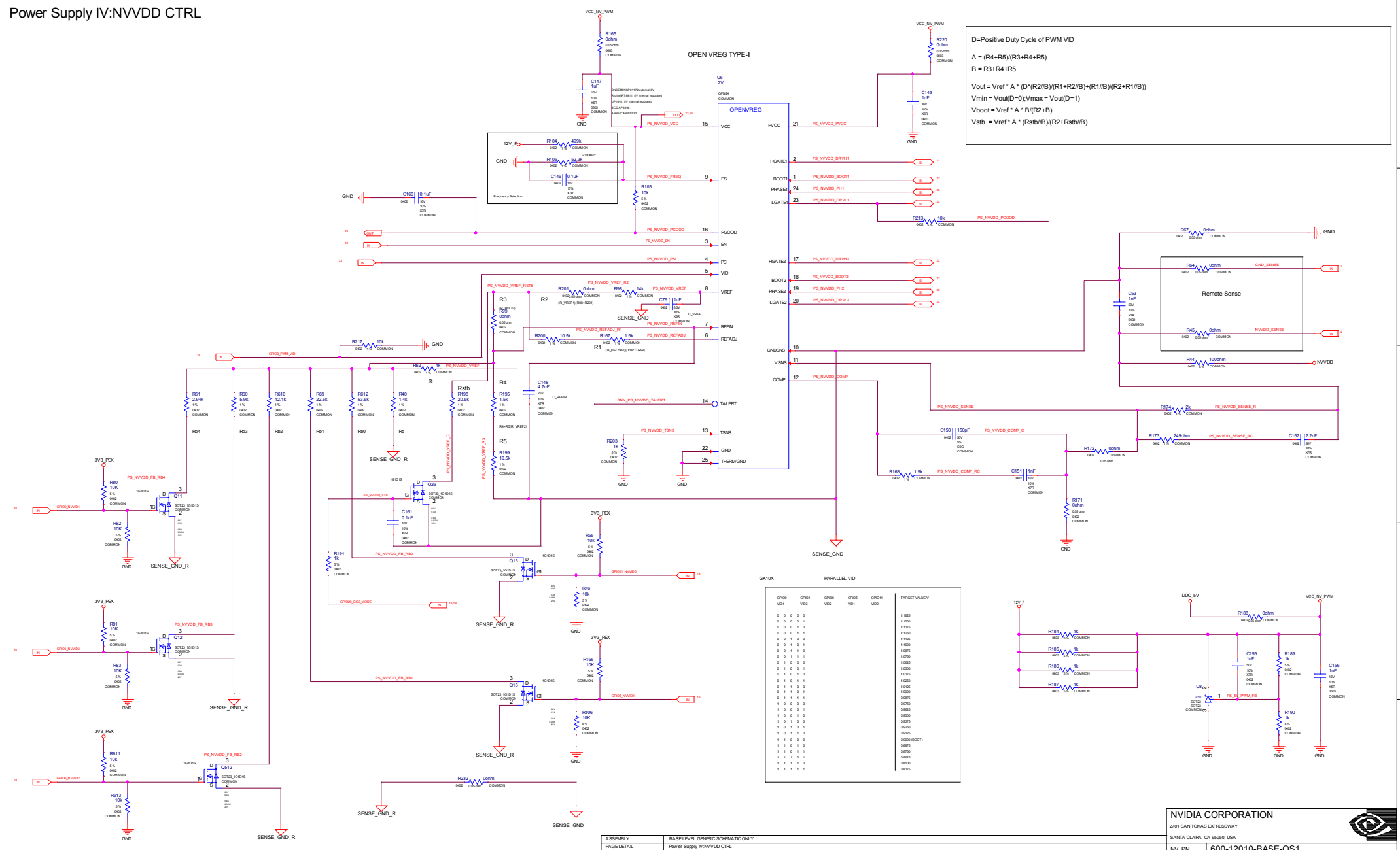


ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	Power Supply II: FBVDDQ

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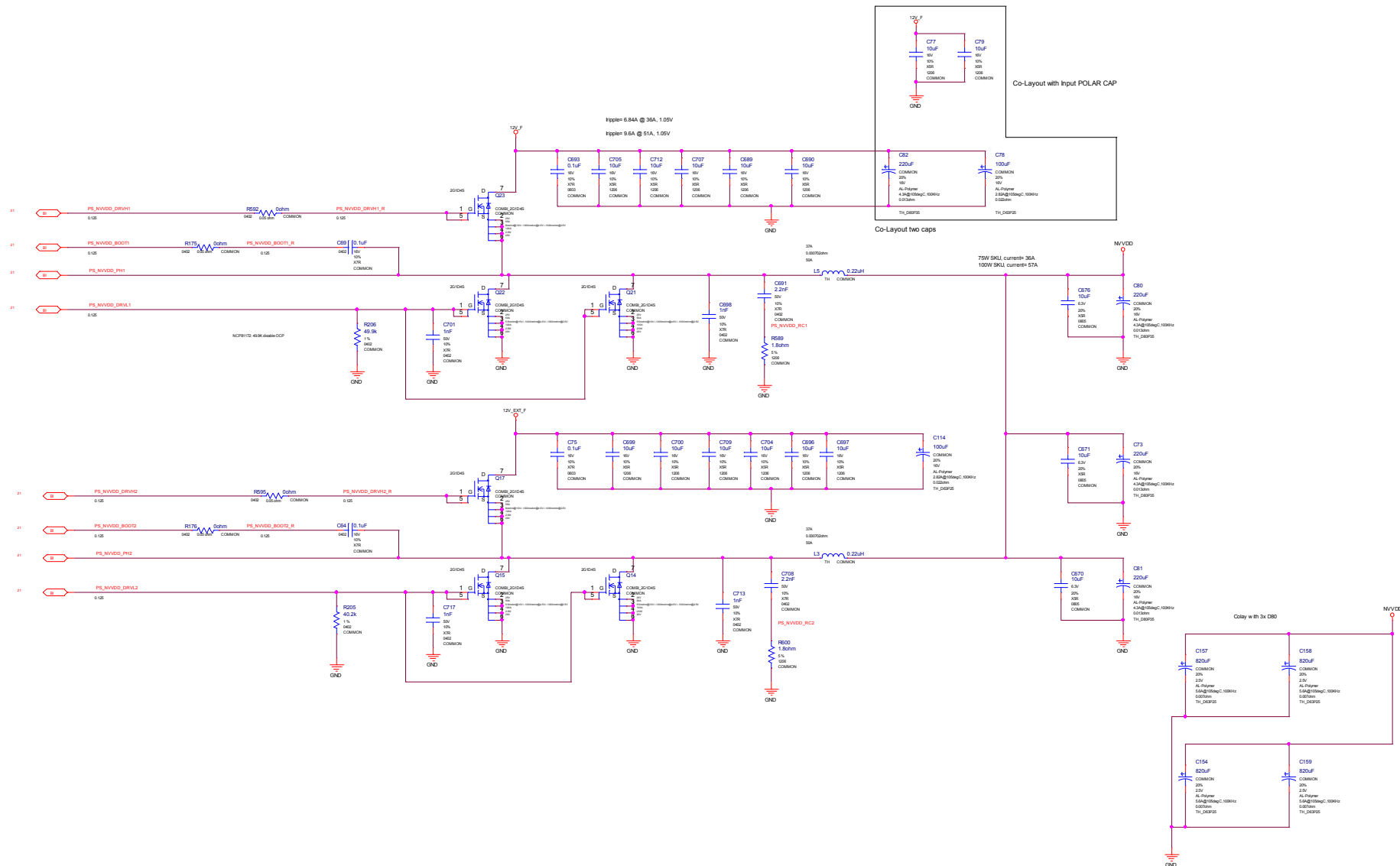
NV_PN	600-12010-BASE-QS1		
PCB REV	P2010-B01	PAGE	20 OF 24
BOM REV	A	DATE	28-OCT-2013

#### Power Supply IV:NVVDD CTRL



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# NVDD MOSFET



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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY
PAGE DETAIL	NVDD MOSFET

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NV\_PN 600-12010-BASE-QS1

FCB REV P2010301

BCM REV A

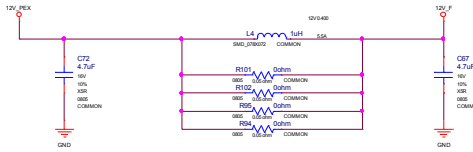
PAGE 22 OF 24

DATE 28-OCT-2013



12V EXT / 12V PEX Power Select Circuit

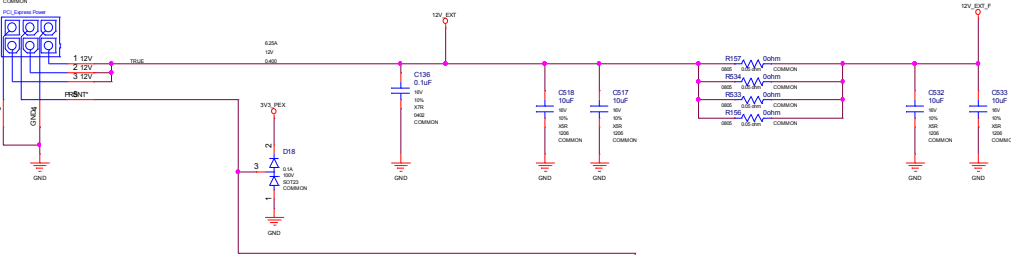
PEX\_12V INPUT - 66W



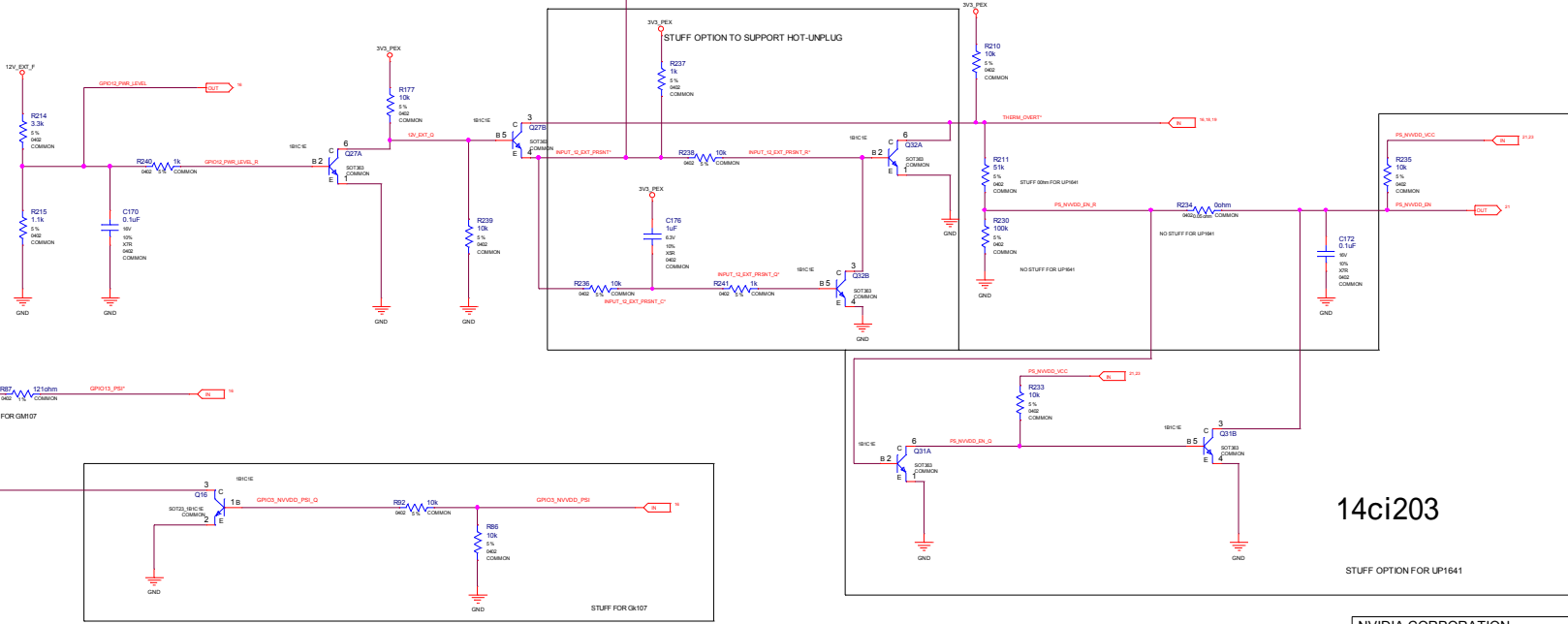
for 75W SKU without 12\_EXT



EXT\_12V INPUT - 75W



GPIO12_LOW_PERR*	GPU SPEED
0	SLOW
1	NORMAL



14ci203

STUFF OPTION FOR UP1641

NVIDIA CORPORATION	
2701 SANTOMAS EXPRESSWAY	
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