

PG161-B00

TU106 8GB GDDR6, 192b, X16 DVI-D + DP + HDMI

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42	MECH

Page	Description
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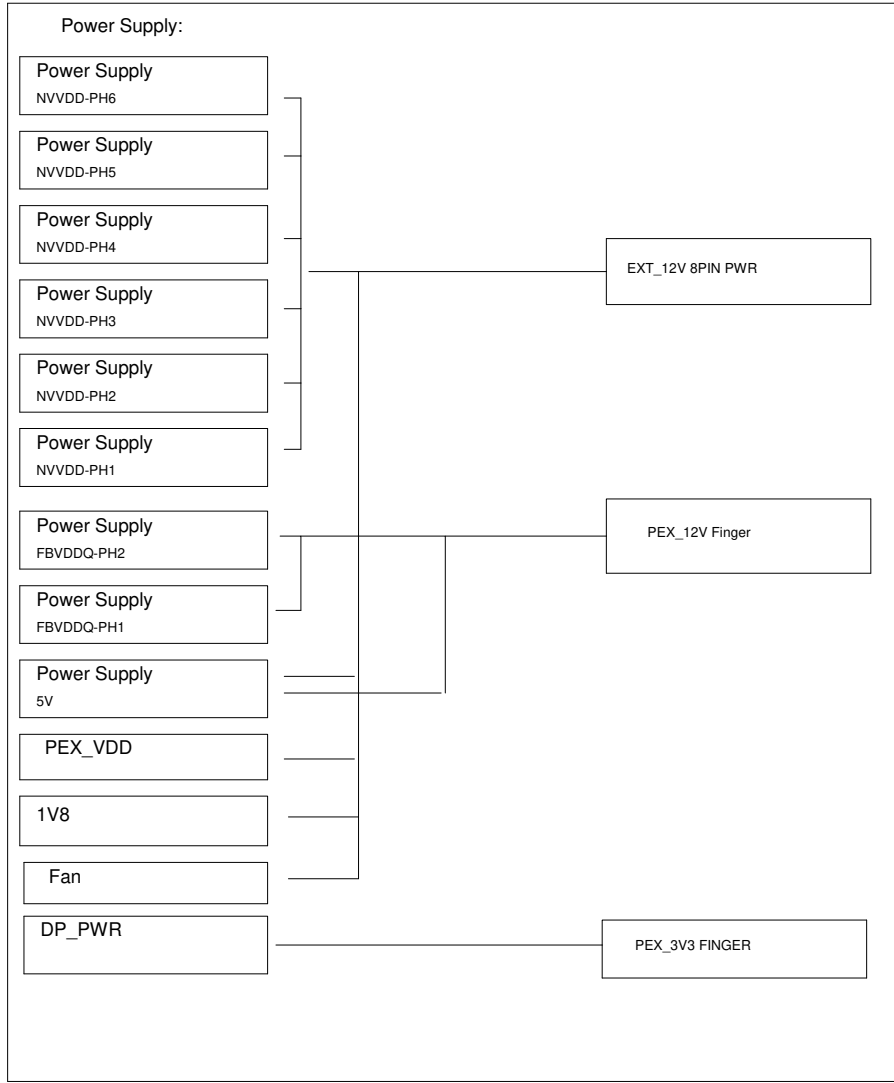
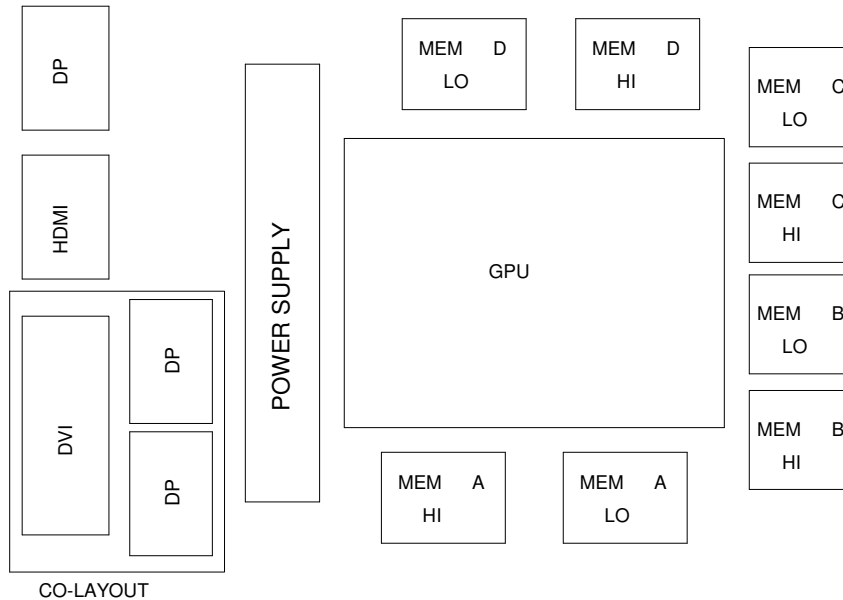
3701 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA



ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	Table of Contents

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ECN REV	A		

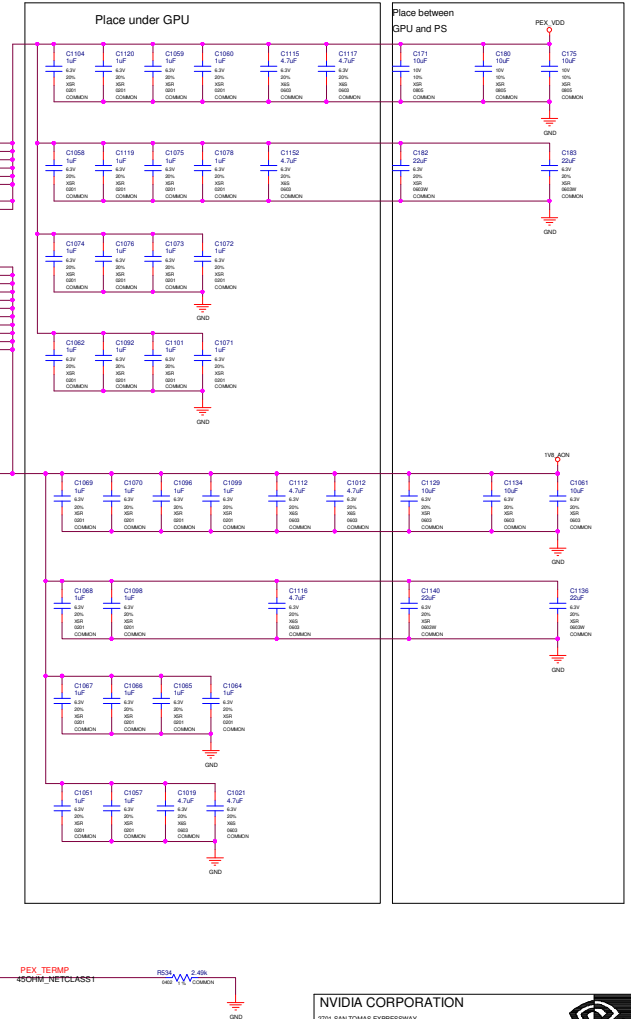
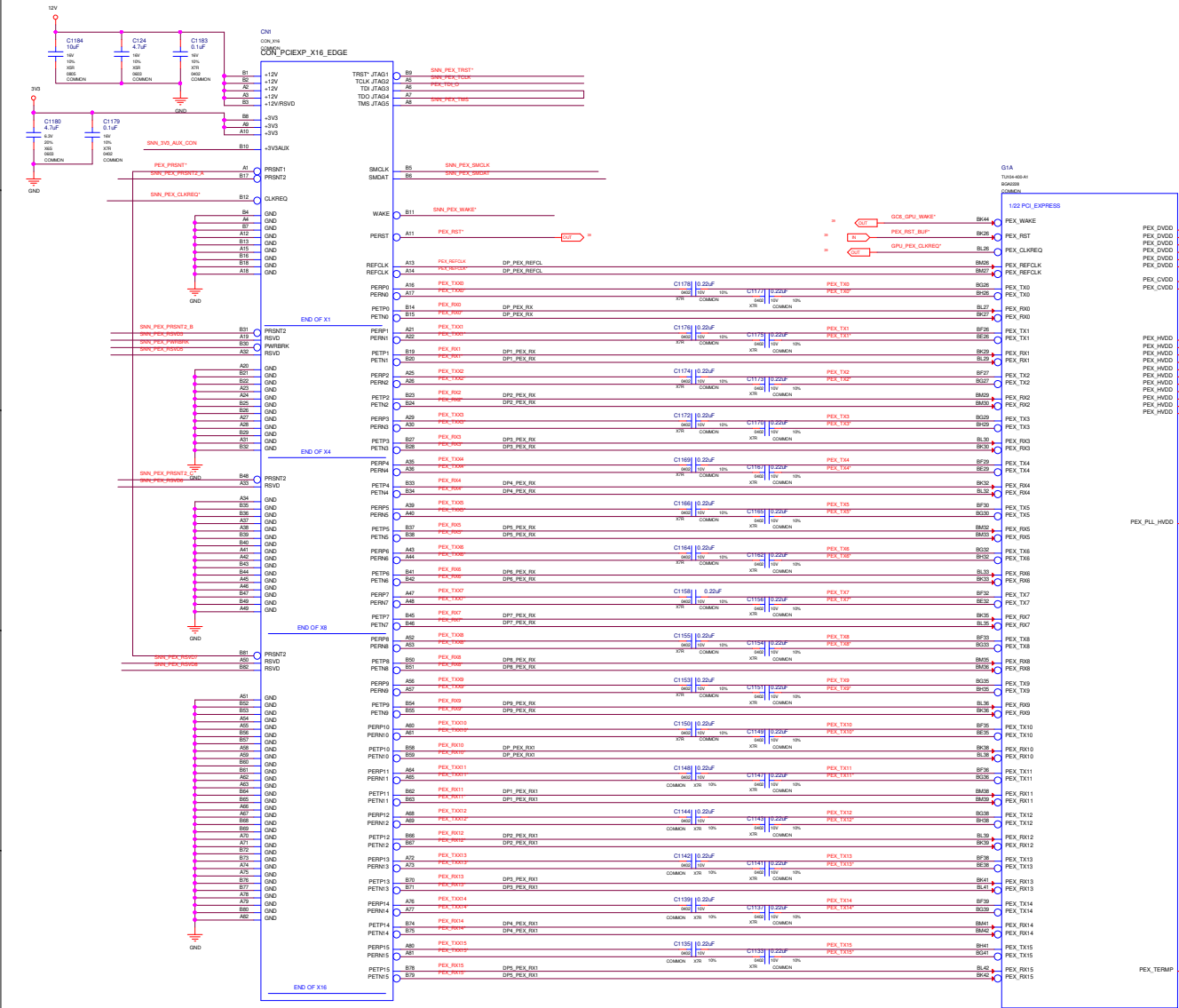
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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	Block Diagram



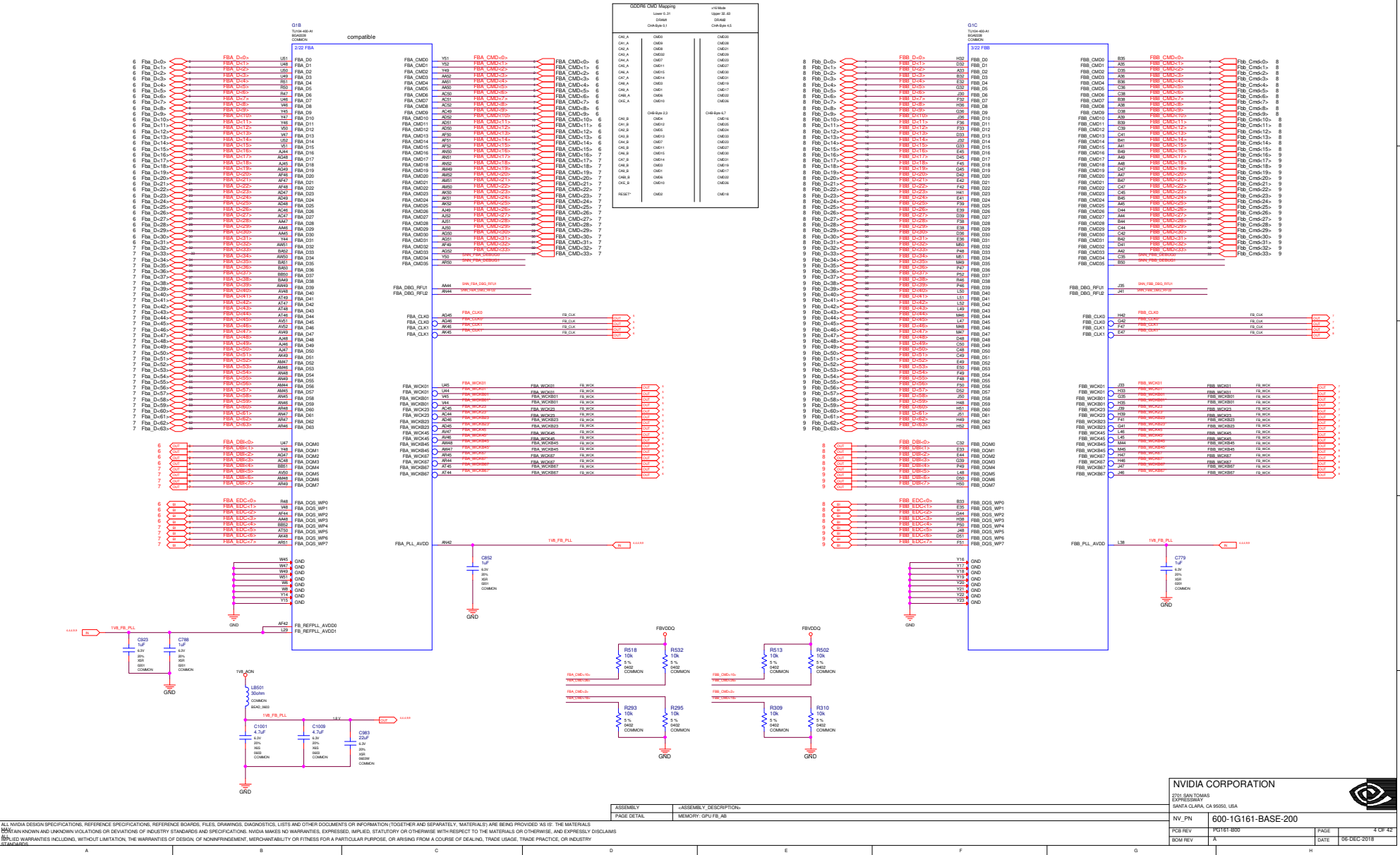


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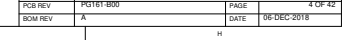
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PAGE DETAIL	PCI Express

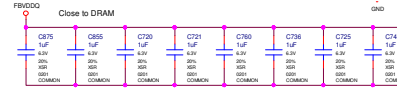
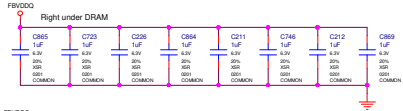
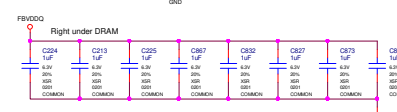
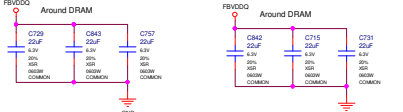
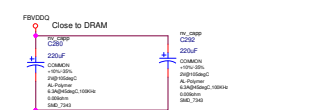
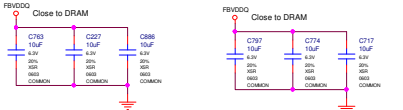
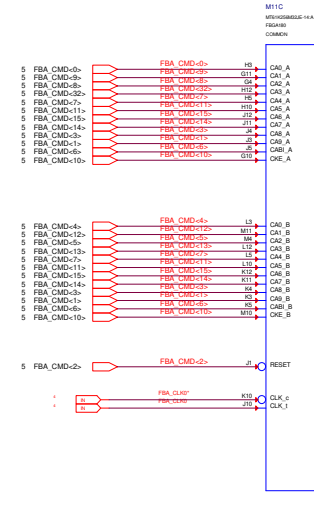
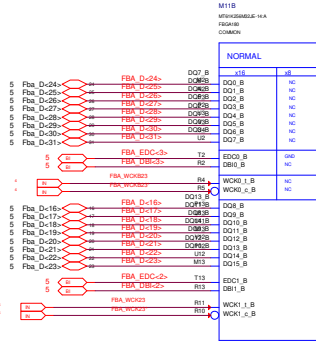
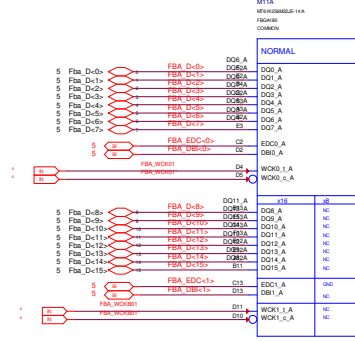
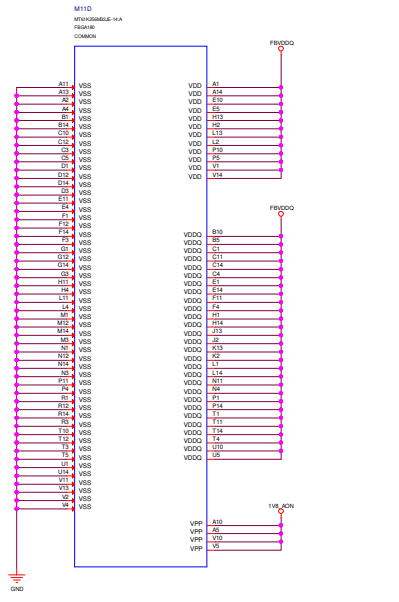
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CMR_C	0x1000	0x1000	0x1000
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CMR_S	0x1000	0x1000	0x1000
CMR_T	0x1000	0x1000	0x1000
CMR_U	0x1000	0x1000	0x1000
CMR_V	0x1000	0x1000	0x1000
CMR_W	0x1000	0x1000	0x1000
CMR_X	0x1000	0x1000	0x1000
CMR_Y	0x1000	0x1000	0x1000
CMR_Z	0x1000	0x1000	0x1000





VREF IS NOT USED IN x16 CONFIGURATION. 1K OHM PULL-DOWN IS IN PLACE OF THE 1.33K FOR R106.



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INV_PN 600-1G161-BASE-200

PCB REV PT16T800

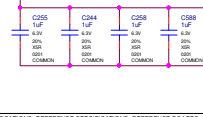
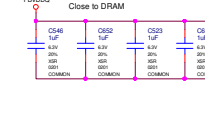
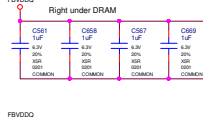
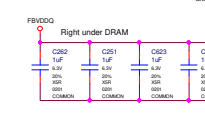
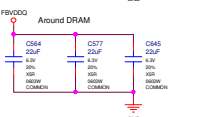
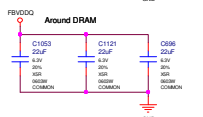
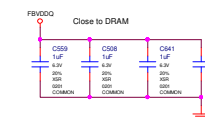
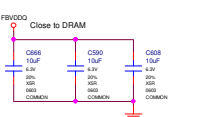
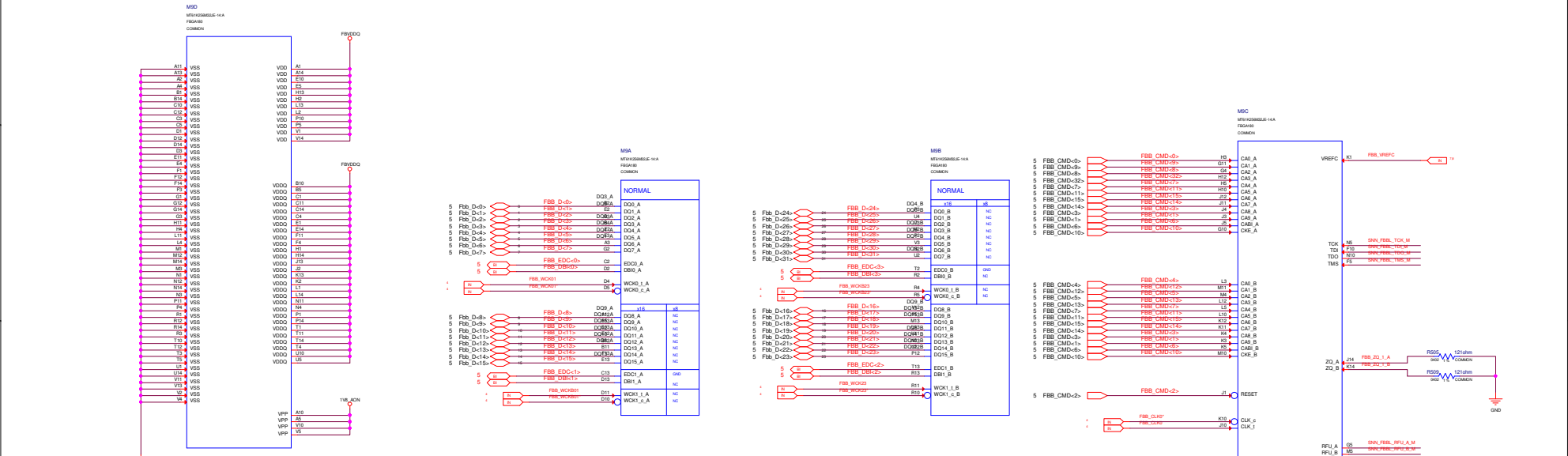
DOM REV A

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DATE 06 DEC 2018


Table with 2 columns: ASSEMBLY and ASSEMBLY DESCRIPTION. Row 1: PAGE DETAIL, MEMORY: FBA(31..0)

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VREFC IS NOT USED IN 1K OHM CONFIGURATION. 1K OHM PULL-DOWN IS IN PLACE OF THE 1.33K FOR R104.

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ASSEMBLY	ASSEMBLY DESCRIPTION
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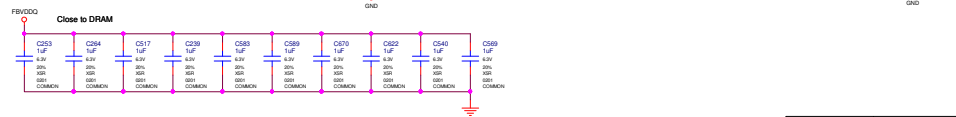
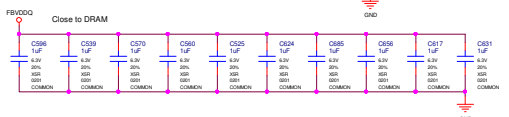
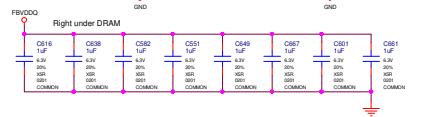
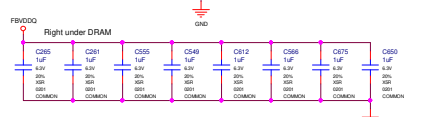
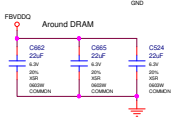
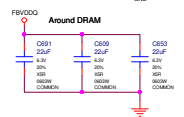
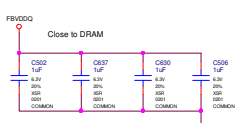
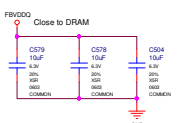
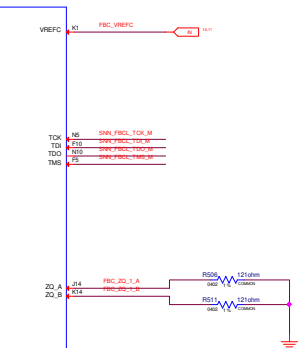
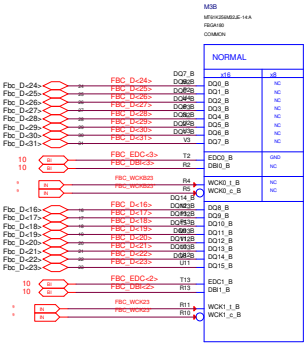
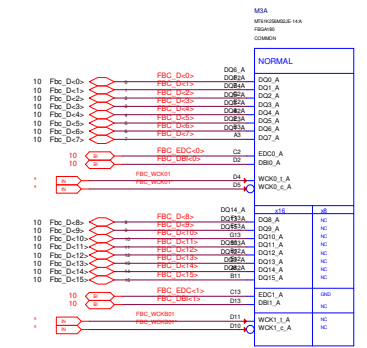
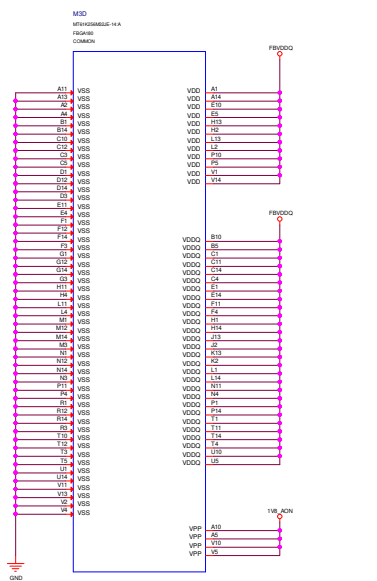
NV_PN	600-1G161-BASE-200
PCB REV	P07H-FBB0
ECN REV	A
PAGE	7 OF 42
DATE	06-DEC-2018

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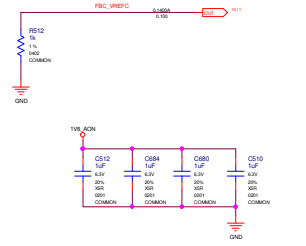


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ASSEMBLY DESCRIPTION		PAGE 8 OF 82	
MEMORY GPU FB_CD		DATE	06/DEC/2016
NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA			
PART NUMBER: 600-1G161-BASE-200		REV: A	



VREFC IS NOT USED IN x16 CONFIGURATION IN PLACE OF THE 1.35K FOR RT5



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Table with 2 columns: ASSEMBLY, ASSEMBLY DESCRIPTION. Row 1: MEMORY: FB031 (3)

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REV. PN 600-TG161-BASE-200



Table with 3 columns: PDS REV, PCB PART NO, PAGE; EDA REV, A, DATE, 06/DEC/2018, 10 OF 42

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- 0..2 FBD_CMD1
- 0..3 FBD_CMD2
- 0..4 FBD_CMD3
- 0..5 FBD_CMD4
- 0..6 FBD_CMD5
- 0..7 FBD_CMD6
- 0..8 FBD_CMD7
- 0..9 FBD_CMD8
- 0..10 FBD_CMD9
- 0..11 FBD_CMD10
- 0..12 FBD_CMD11
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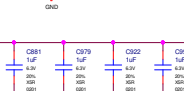
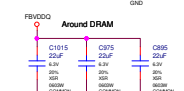
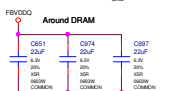
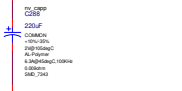
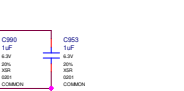
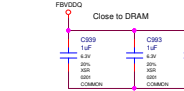
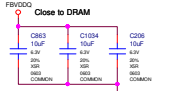
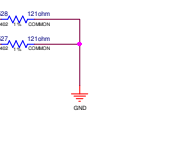
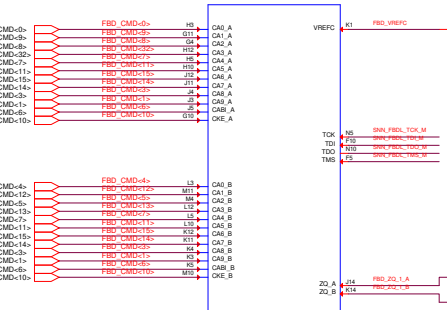
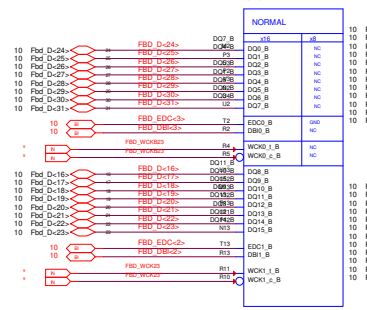
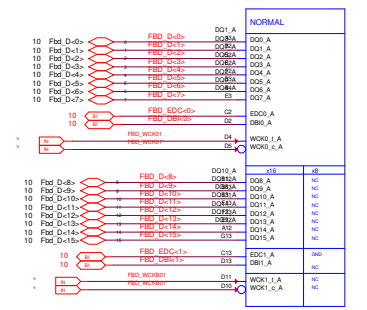
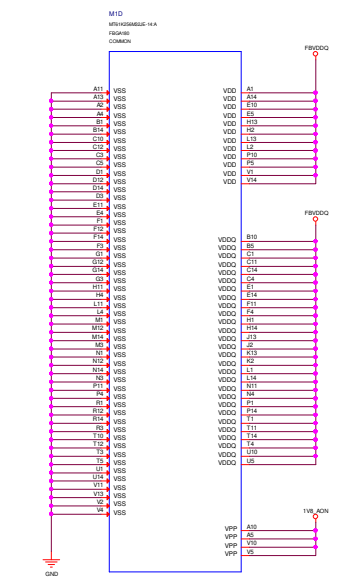
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- 0..7 FBD_CMD6
- 0..8 FBD_CMD7
- 0..9 FBD_CMD8
- 0..10 FBD_CMD9
- 0..11 FBD_CMD10
- 0..12 FBD_CMD11
- 0..13 FBD_CMD12
- 0..14 FBD_CMD13
- 0..15 FBD_CMD14
- 0..16 FBD_CMD15
- 0..17 FBD_CMD16
- 0..18 FBD_CMD17
- 0..19 FBD_CMD18
- 0..20 FBD_CMD19

- 0..1 FBD_CMD0
- 0..2 FBD_CMD1
- 0..3 FBD_CMD2
- 0..4 FBD_CMD3
- 0..5 FBD_CMD4
- 0..6 FBD_CMD5
- 0..7 FBD_CMD6
- 0..8 FBD_CMD7
- 0..9 FBD_CMD8
- 0..10 FBD_CMD9
- 0..11 FBD_CMD10
- 0..12 FBD_CMD11
- 0..13 FBD_CMD12
- 0..14 FBD_CMD13
- 0..15 FBD_CMD14
- 0..16 FBD_CMD15
- 0..17 FBD_CMD16
- 0..18 FBD_CMD17
- 0..19 FBD_CMD18
- 0..20 FBD_CMD19

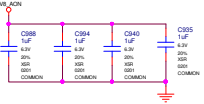
- 0..1 FBD_CMD0
- 0..2 FBD_CMD1
- 0..3 FBD_CMD2
- 0..4 FBD_CMD3
- 0..5 FBD_CMD4
- 0..6 FBD_CMD5
- 0..7 FBD_CMD6
- 0..8 FBD_CMD7
- 0..9 FBD_CMD8
- 0..10 FBD_CMD9
- 0..11 FBD_CMD10
- 0..12 FBD_CMD11
- 0..13 FBD_CMD12
- 0..14 FBD_CMD13
- 0..15 FBD_CMD14
- 0..16 FBD_CMD15
- 0..17 FBD_CMD16
- 0..18 FBD_CMD17
- 0..19 FBD_CMD18
- 0..20 FBD_CMD19

- 0..1 FBD_CMD0
- 0..2 FBD_CMD1
- 0..3 FBD_CMD2
- 0..4 FBD_CMD3
- 0..5 FBD_CMD4
- 0..6 FBD_CMD5
- 0..7 FBD_CMD6
- 0..8 FBD_CMD7
- 0..9 FBD_CMD8
- 0..10 FBD_CMD9
- 0..11 FBD_CMD10
- 0..12 FBD_CMD11
- 0..13 FBD_CMD12
- 0..14 FBD_CMD13
- 0..15 FBD_CMD14
- 0..16 FBD_CMD15
- 0..17 FBD_CMD16
- 0..18 FBD_CMD17
- 0..19 FBD_CMD18
- 0..20 FBD_CMD19

- 0..1 FBD_CMD0
- 0..2 FBD_CMD1
- 0..3 FBD_CMD2
- 0..4 FBD_CMD3
- 0..5 FBD_CMD4
- 0..6 FBD_CMD5
- 0..7 FBD_CMD6
- 0..8 FBD_CMD7
- 0..9 FBD_CMD8
- 0..10 FBD_CMD9
- 0..11 FBD_CMD10
- 0..12 FBD_CMD11
- 0..13 FBD_CMD12
- 0..14 FBD_CMD13
- 0..15 FBD_CMD14
- 0..16 FBD_CMD15
- 0..17 FBD_CMD16
- 0..18 FBD_CMD17
- 0..19 FBD_CMD18
- 0..20 FBD_CMD19



VREFC IS NOT USED IN x16 CONFIGURATION
1K OHM PULL-DOWN IS IN PLACE OF THE 1.33K FOR R62



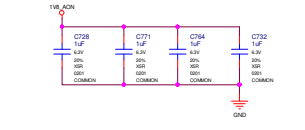
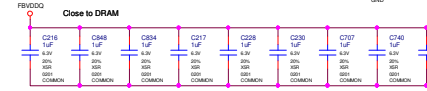
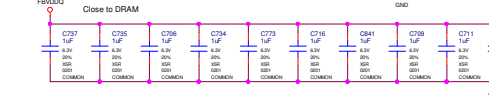
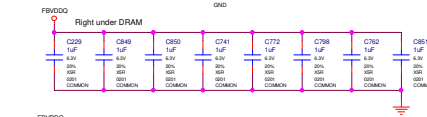
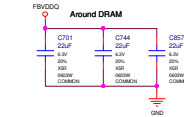
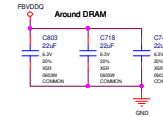
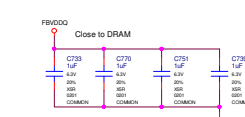
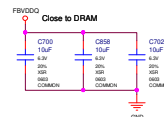
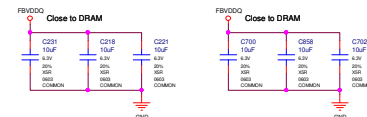
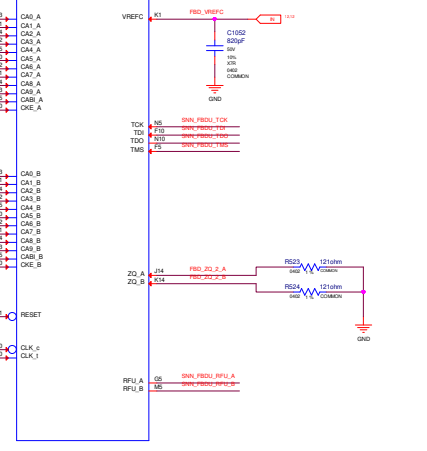
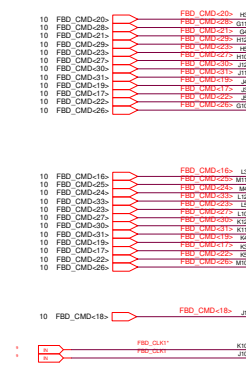
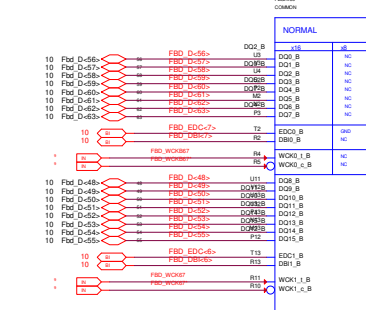
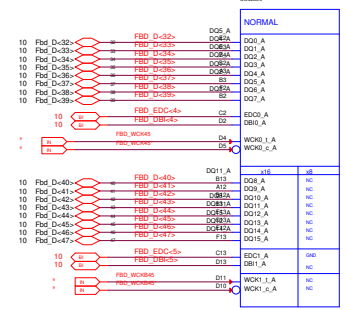
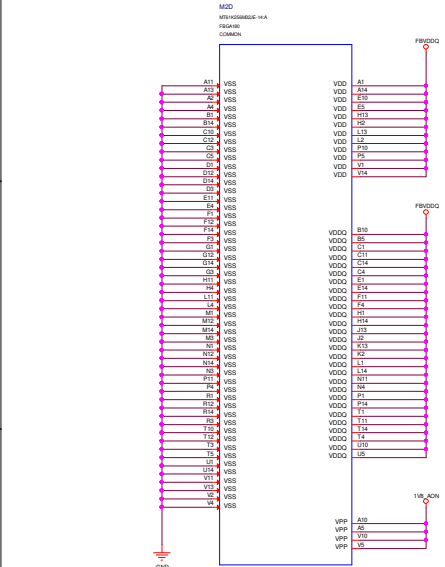
820 SAN TOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA



NV_PN 600-1G161-BASE-200

753 REV P1617580 PAGE 12 OF 21

820M REV A DATE 06 DEC 2016



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 3755 SAN TOMAS EXPRESS DR
 SANTA CLARA, CA 95051, USA

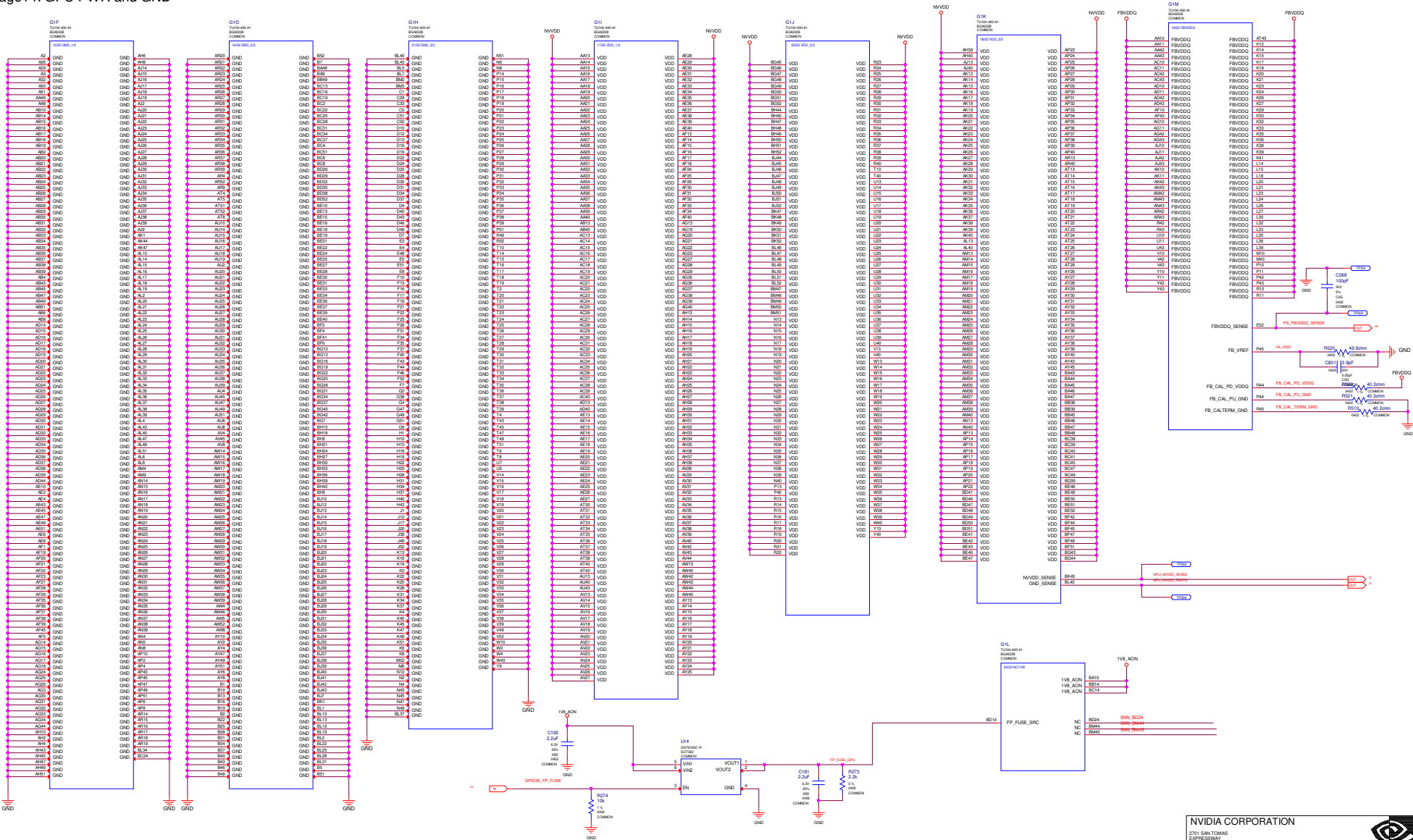
ASSEMBLY: MEM000021-001
 DESCRIPTION: MEMORY: FBD03-32

ASSEMBLY: MEM000021-001
 DESCRIPTION: MEMORY: FBD03-32

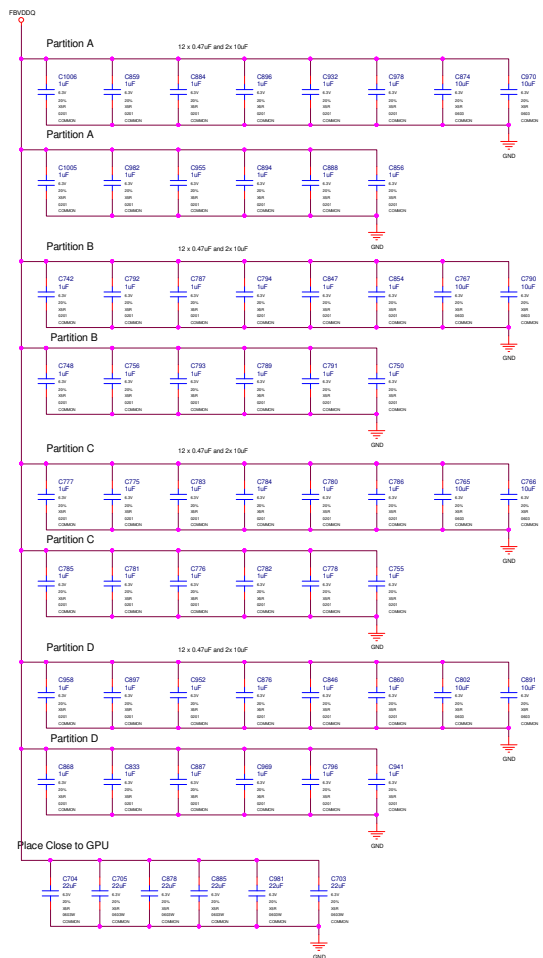
NAV: PN: 600-1G161-BASE-200
 PCB REV: POT107-000
 EQN REV: A

PAGE: 12 OF 42
 DATE: 06-DEC-2018

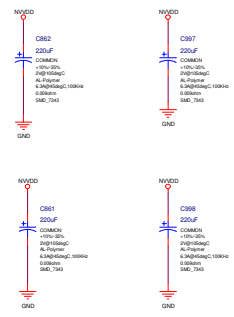




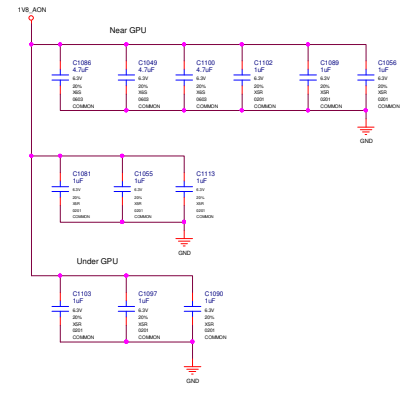
FBVDDQ



NVVD



1V8_AON

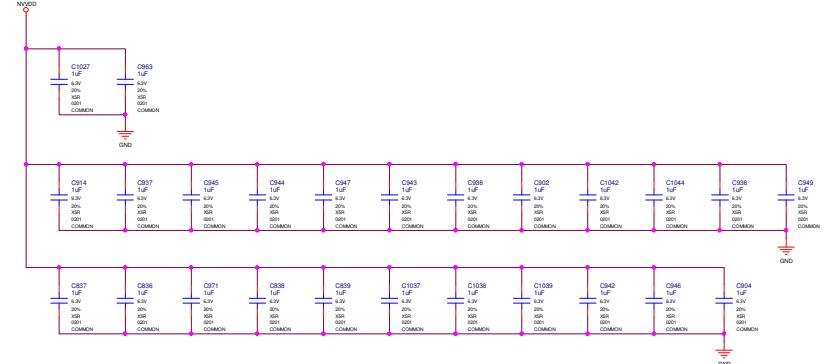
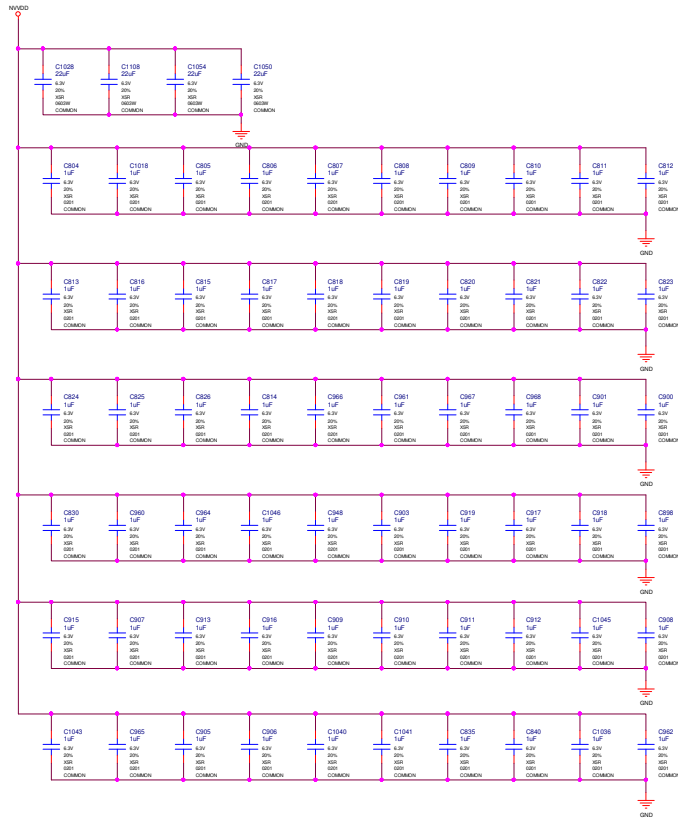


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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	GPU DECOUPLING 1

NVIDIA CORPORATION			
3701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA			
NV_PN	600-1G161-BASE-200		
PCS_REV	P01R1-0800	PAGE	15 OF 42
ECM_REV	A	DATE	06-DEC-2018

NVVDD

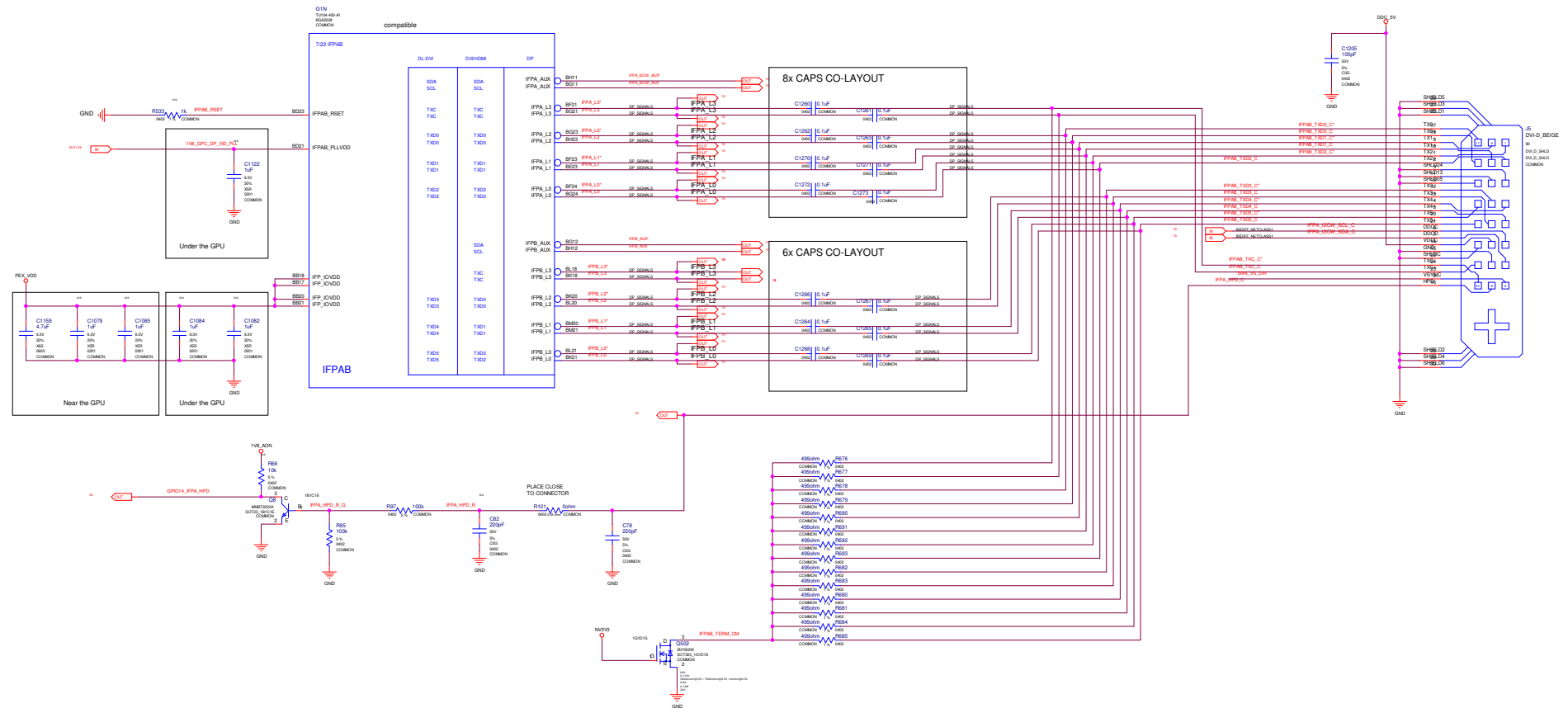


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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	GPU DECOUPLING 2

NVIDIA CORPORATION		16 OF 24	
3701 SAN TOMAS EXPRESSWAY		PAGE	
SANTA CLARA, CA 95050, USA		DATE	
NV_PN	600-1G161-BASE-200		
POS_REV	A		
ESM_REV	A		



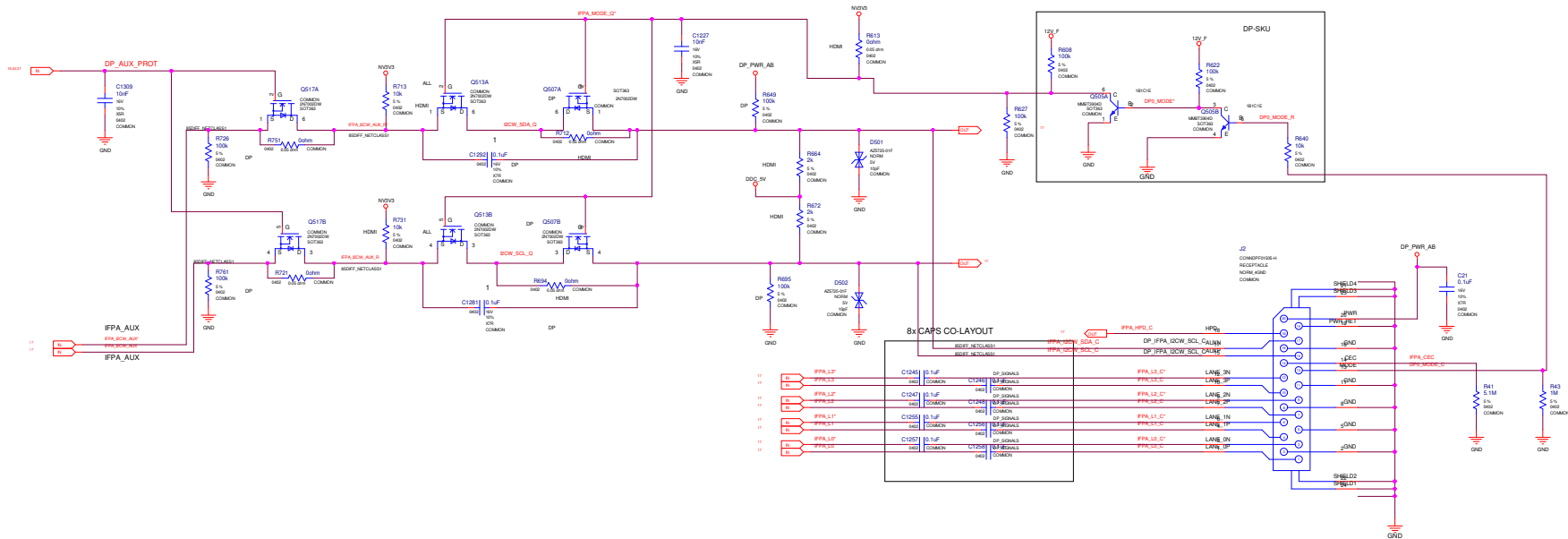


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ASSEMBLY	ASSEMBLY DESCRIPTION:
PAGE DETAIL	17: IFPAB DVI-D-DL

NVIDIA CORPORATION	
2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA	
NV_PN	600-1G161-BASE-200
PCB REV	PT181B00
SDM REV	A
PAGE	17 OF 42
DATE	16/DEC/2016



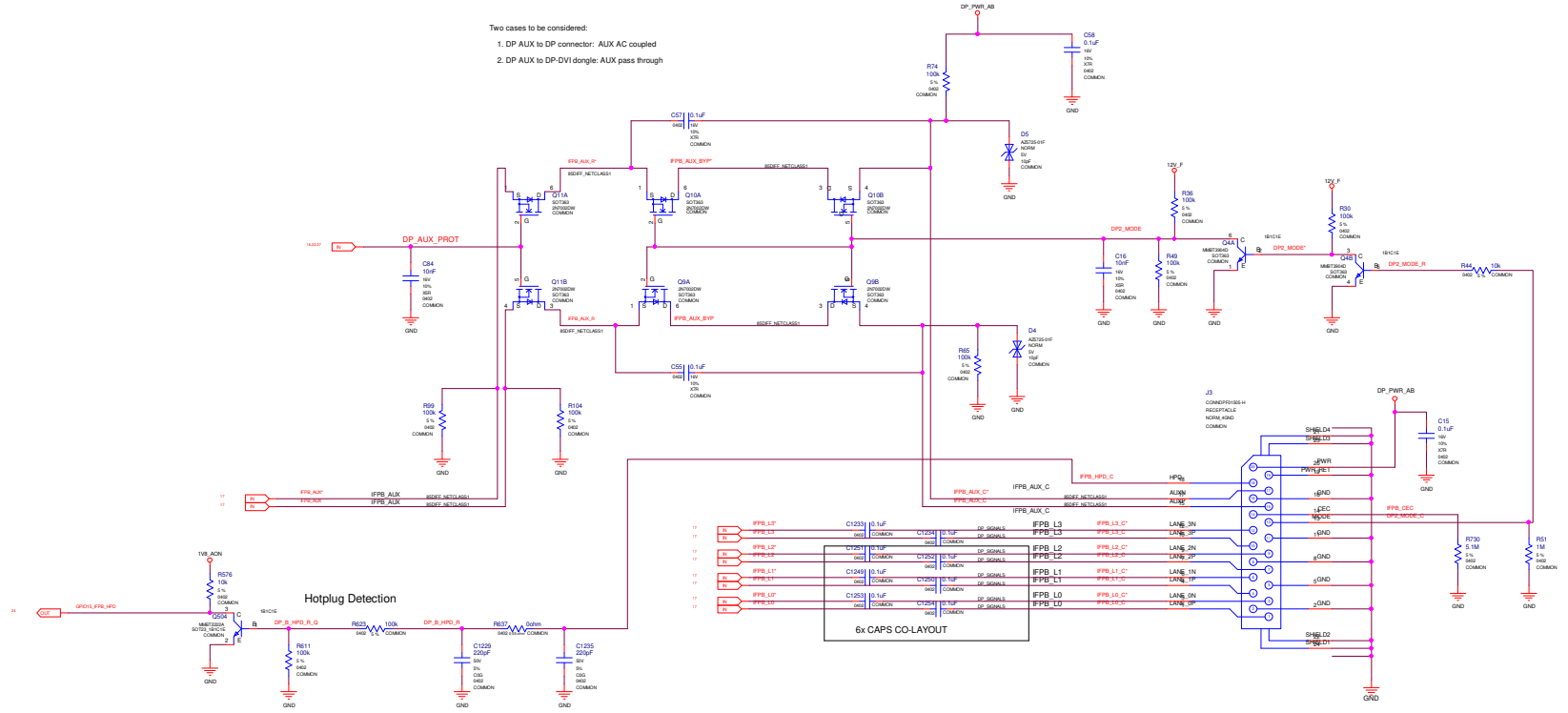


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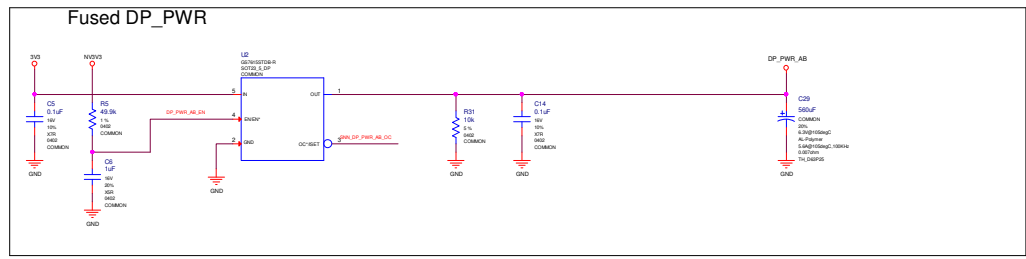
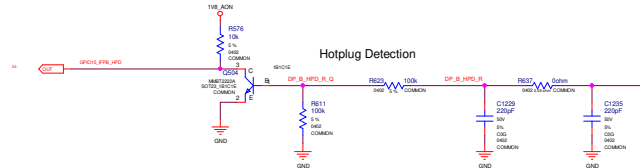
ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	10: IFPA DP

NVIDIA CORPORATION	
3701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA	
NV_P/N	600-1G161-BASE-200
DESIGN REV	P1216T1200
ESM REV	A
PAGE	18 OF 24
DATE	06/DEC/2016



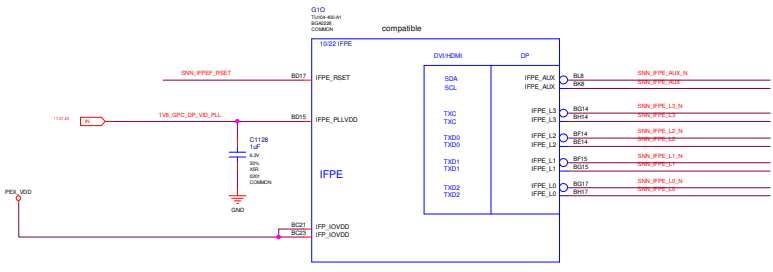
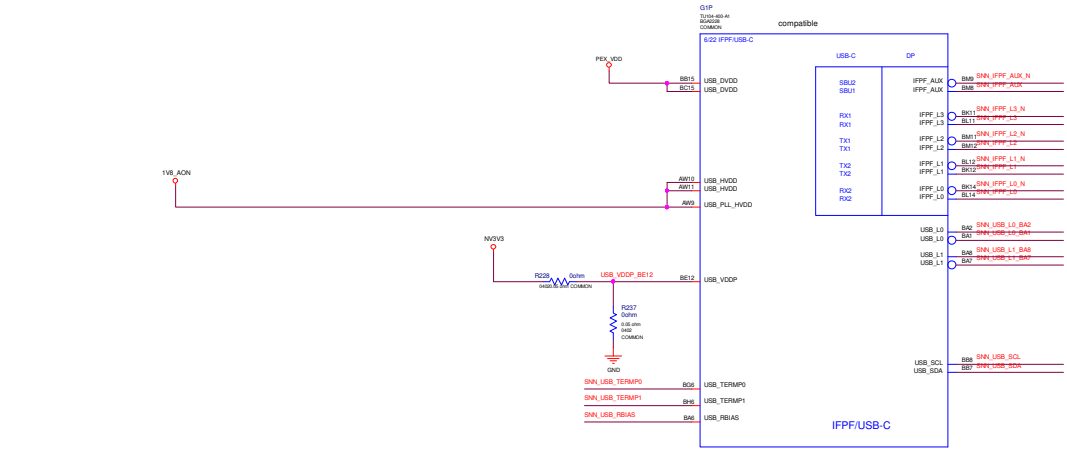


Two cases to be considered:
 1. DP AUX to DP connector: AUX AC coupled
 2. DP AUX to DP-DVI dongle: AUX pass through



ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	ID: IFPB DP

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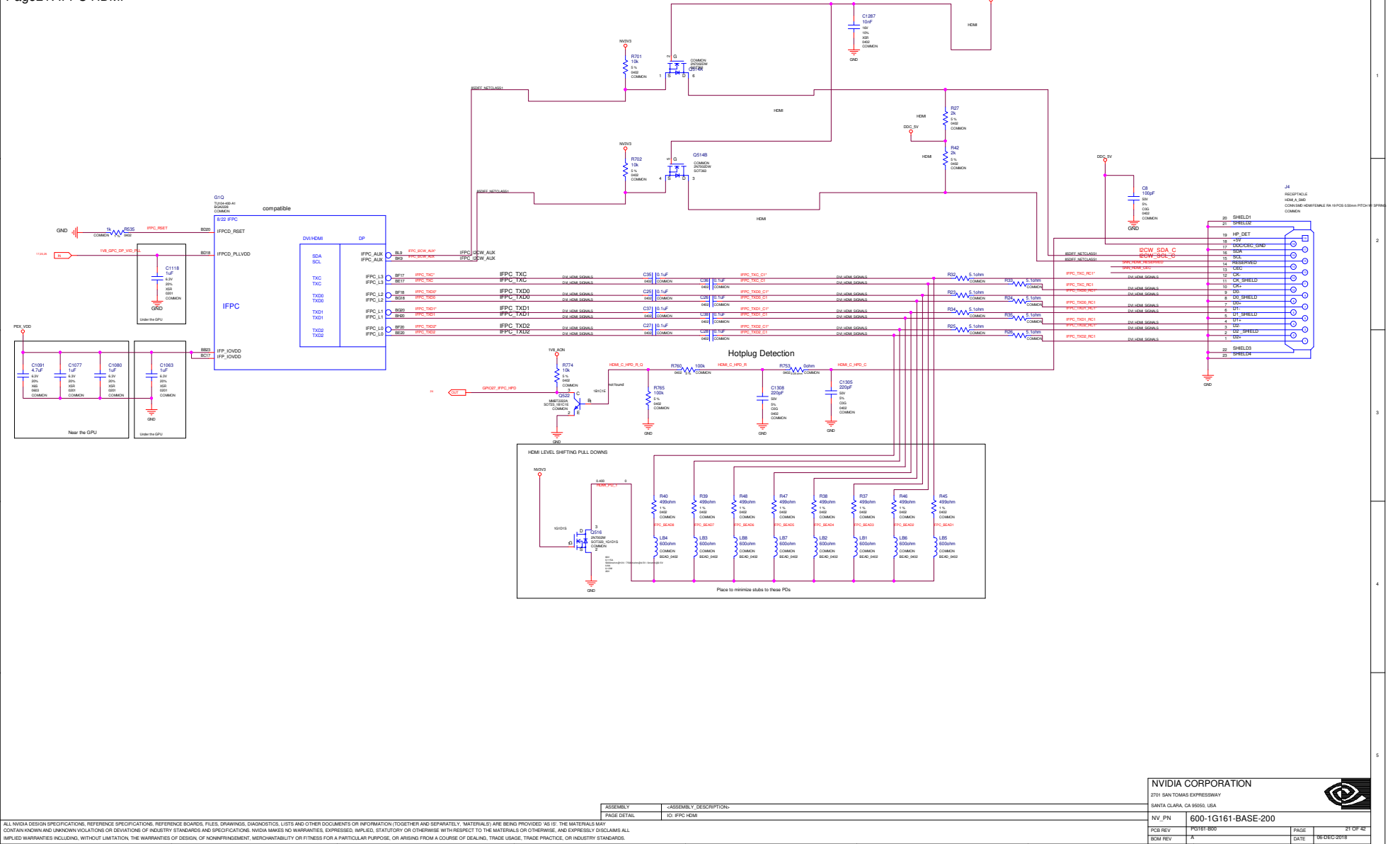
ASSEMBLY	-ASSEMBLY DESCRIPTION-
TRADE DETAIL	

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

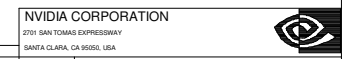
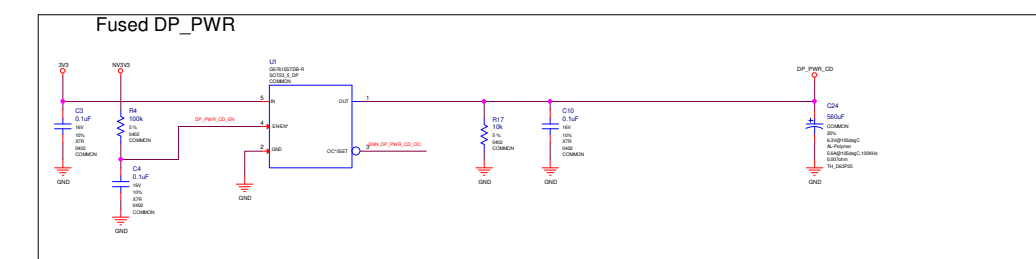
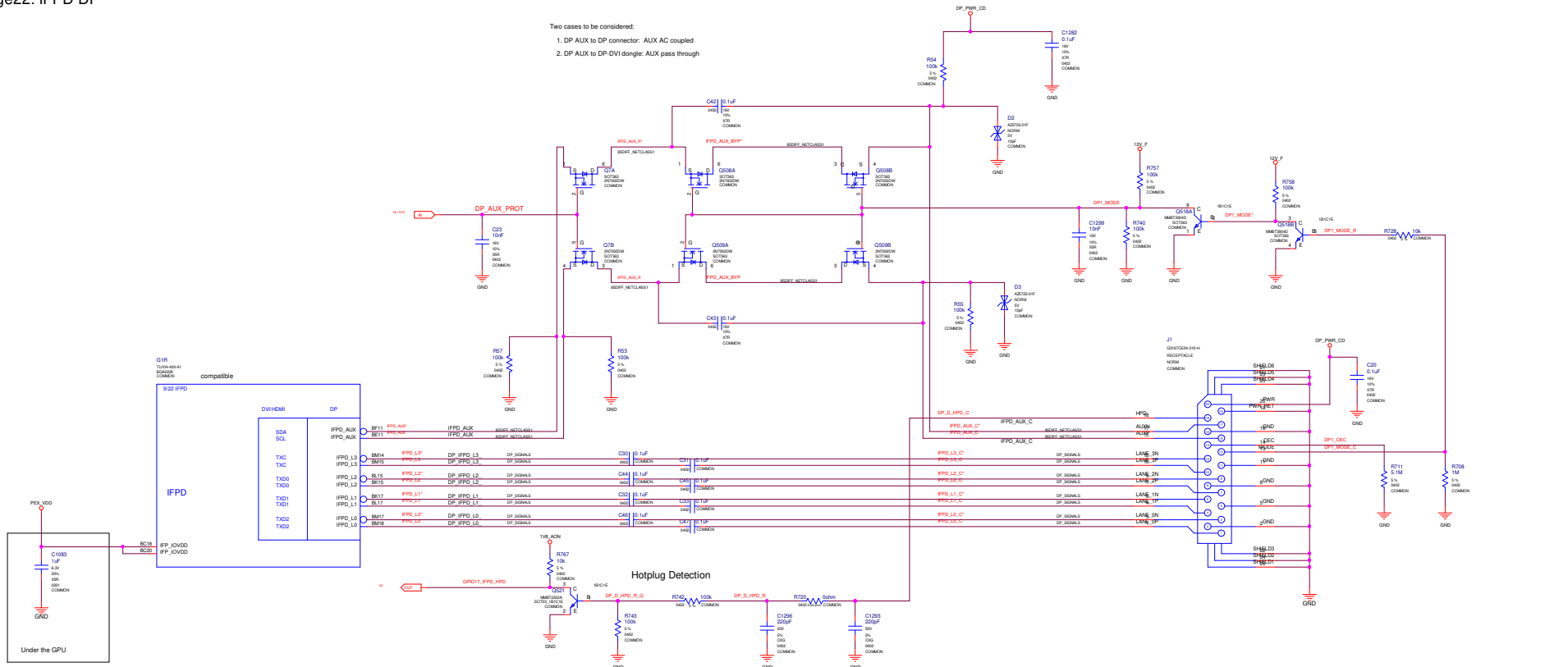
NV_PN	600-1G161-BASE-200
PCB REV	PS16T B00
SDM REV	A

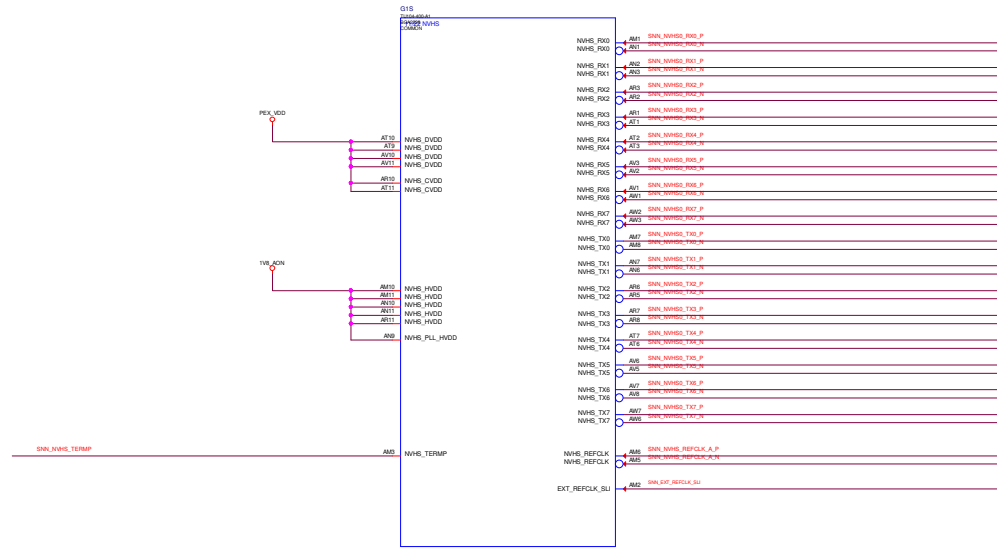
PAGE	20 OF 42
DATE	

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Two cases to be considered:
 1. DP AUX to DP connector: AUX AC coupled
 2. DP AUX to DP-DVI dongle: AUX pass through

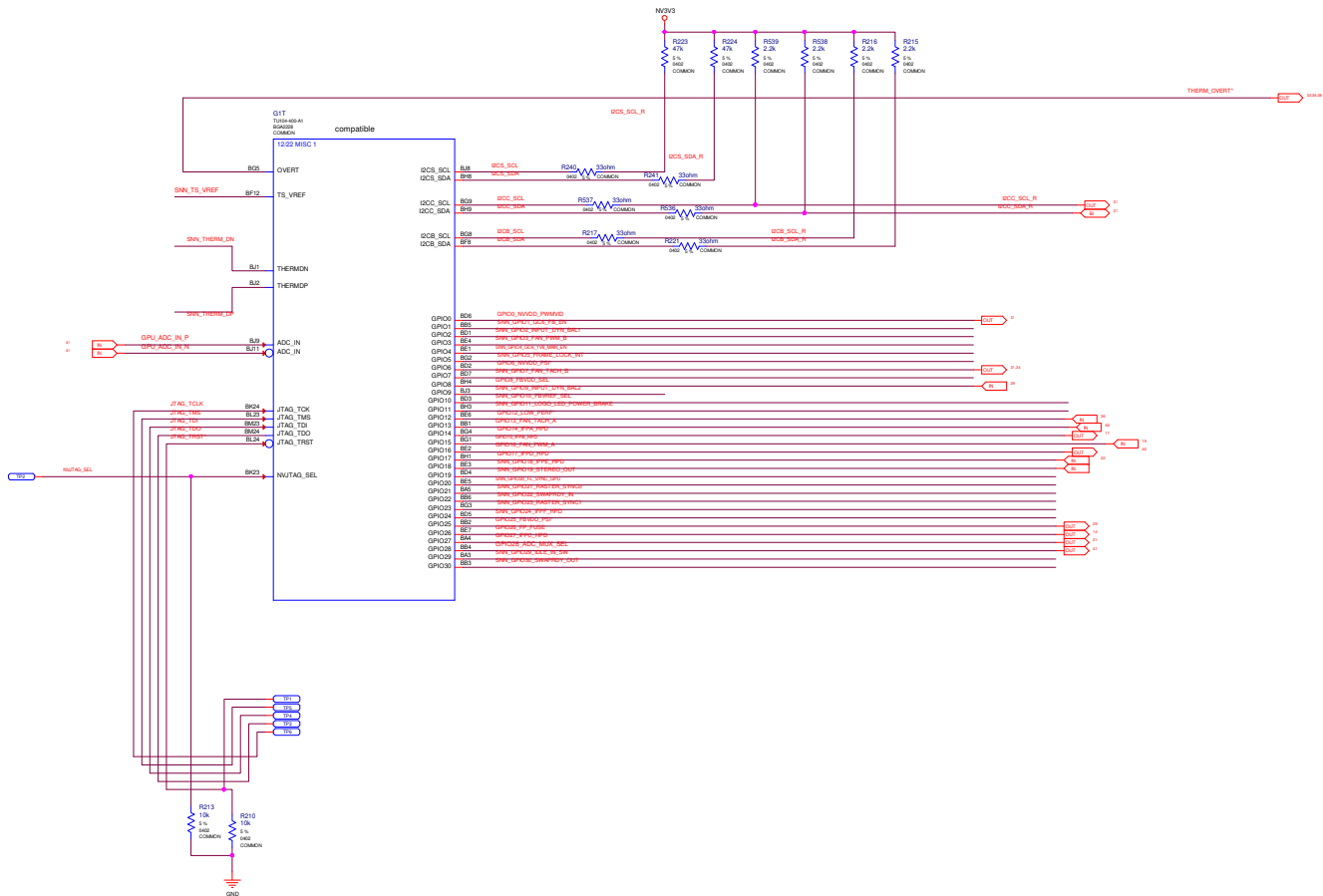




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ASSEMBLY	ASSEMBLY DESCRIPTION
TRADE DETAIL	ID: NVHS INTERFACE AND FRAME LOCK

NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA		
NV_PN	600-1G161-BASE-200	
PCB REV	P5161B00	PAGE 23 OF 42
BOM REV	A	DATE 16/DEC/2016



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ASSEMBLY	ASSEMBLY DESCRIPTION
TRADE DETAIL	MISC1: JTAG,GPIO,ADC,I2C,OVERT

NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95051, USA			
NV_PN	600-1G161-BASE-200	PAGE	24 OF 42
PCB REV	P518T B00	DATE	16/DEC/2016
BOM REV	A		



Page25: MISC2: ROM, XTAL, Straps

STRAP2	STRAP1	STRAP0	RAMCFG[4:0]
L	L	L	0000
L	L	H	0001
L	H	L	0010
L	H	H	0011
H	H	L	0110
H	H	H	0111
L	L	M	0100

RAMCFG[4:0]	DENSITY	WIDTH	VENDOR	DIE
0000	8Gb	256-bit	Samsung	C
0001	8Gb	256-bit	Micron	A
0010	8Gb	256-bit	Hynix	M
0011	8Gb	256-bit	Samsung	C
0100	8Gb	256-bit	Micron	A
0101	8Gb	256-bit	Hynix	M
0110	16Gb	256-bit	Samsung	M
0111				

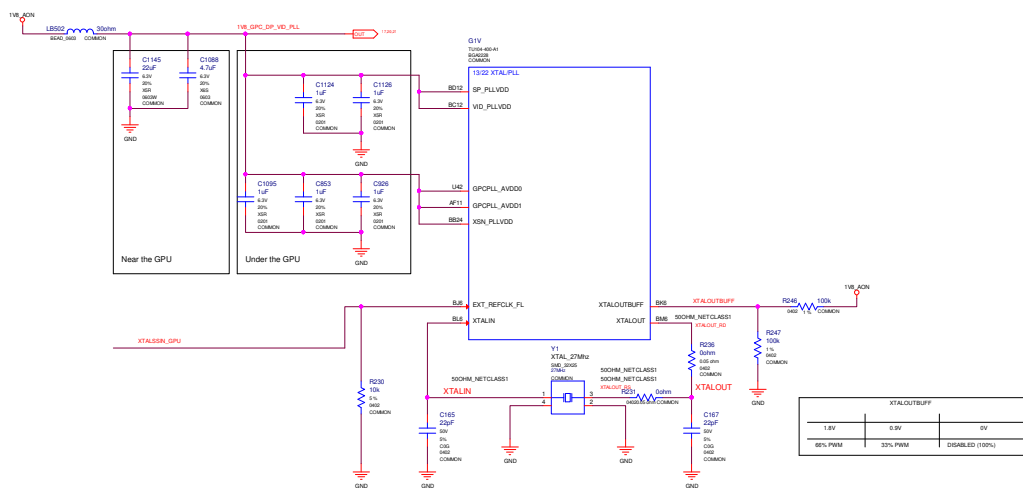
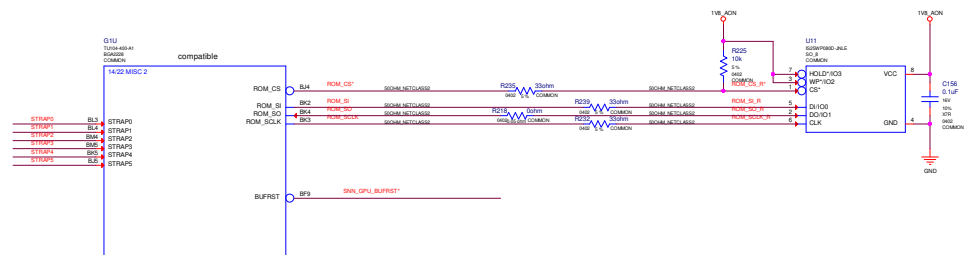
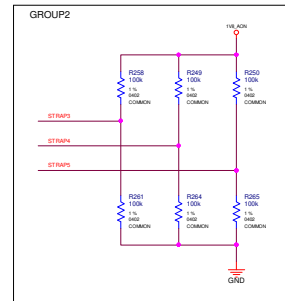
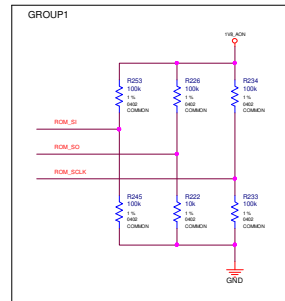
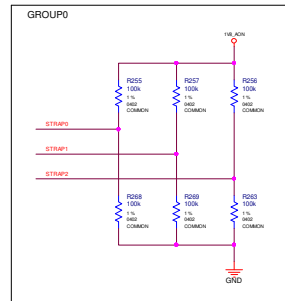
ROM_SO	ROM_SI	ROM_SCLK	DUMMY[2:0],FS_OVERT	1:ENABLE 0:DISABLE	DEFAULT
L	L	L	XXX1	FS_OVERT ENABLE	DEFAULT
L	L	M	XXX0	FS_OVERT DISABLE	

STRAPS	STRAP4	STRAP3	SMB_ALT_ADDR	DEVID_SEL	PCIE_CFG	VGA_DEVICE
M	H	H	1	1	1	1
M	H	L	1	1	1	0
M	L	H	1	1	0	1
M	L	L	1	1	0	0
L	H	M	1	0	1	1
L	M	H	1	0	1	0
L	M	L	1	0	0	1
L	L	M	1	0	0	0
H	H	H	0	1	1	1
H	H	L	0	1	1	0
H	L	H	0	1	0	1
H	L	L	0	1	0	0
L	H	H	0	0	1	1
L	H	L	0	0	1	0
L	L	H	0	0	0	1 DEFAULT
L	L	L	0	0	0	0

H=High :Tied to 1.8V
M=Middle:Tied to 0.9V
L=Low :Tied to 0V

1:SMB_ALT_ADDR ENABLE
0:SMB_ALT_ADDR DISABLE
1:DEVID_SEL REBRAND
0:DEVID_SEL ORIGINAL

1:PCIE_CFG LOW POWER
0:PCIE_CFG HIGH POWER
1:VGA_DEVICE ENABLE
0:VGA_DEVICE DISABLE



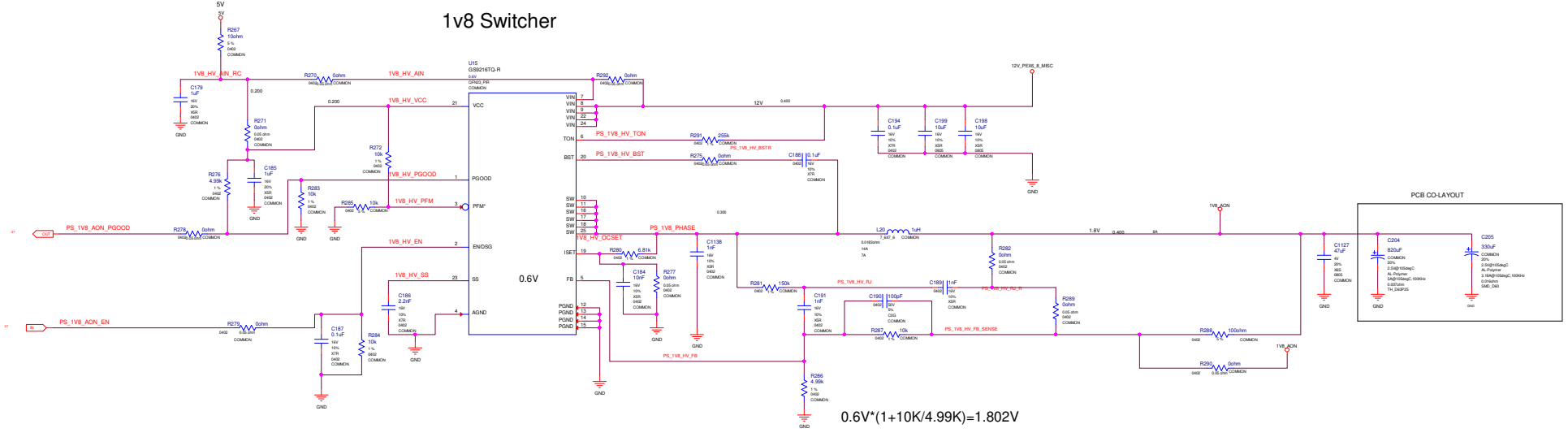
XTALOUTBUFF		
1.8V	0.9V	0V
65% PWM	33% PWM	DISABLED (100%)

ASSEMBLY	ASSEMBLY DESCRIPTION
TRADE DETAIL	MISC2: ROM, XTAL, STRAPS

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2701 SAN TOMAS EXPRESSWAY
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NV_PN	600-1G161-BASE-200
PCB REV	PS181800
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PAGE DETAIL		PS: 1V8_AON	REV		DATE	
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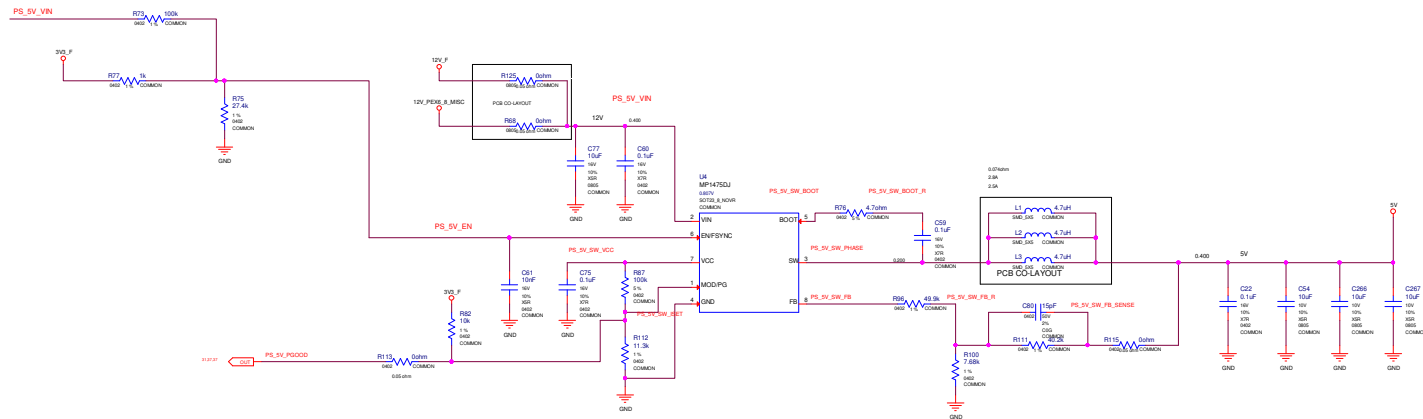
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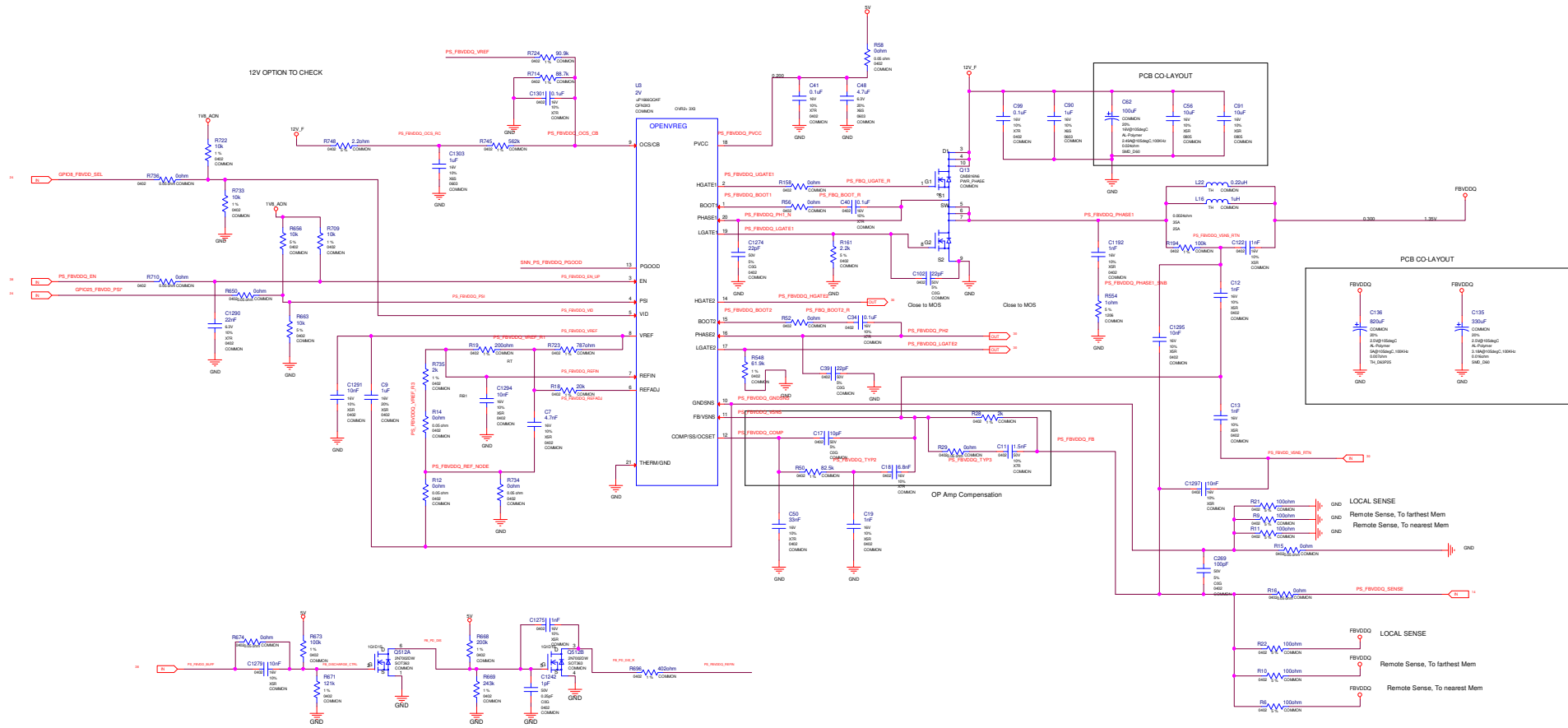
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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	PS: 5V

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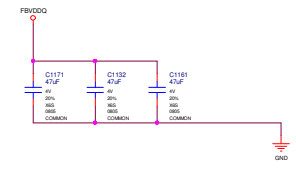
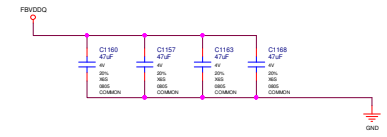
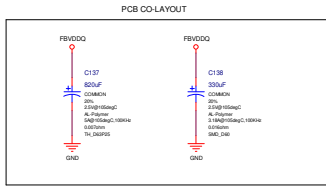
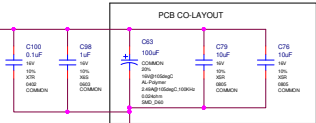
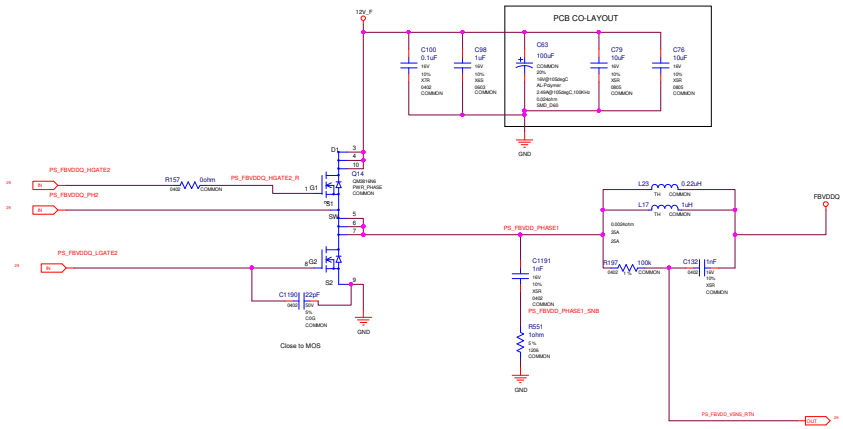
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TRADE DETAIL	PS: FBVDDQ

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600-1G161-BASE-200

NV_PN	PS1818 B00	PAGE	29 OF 42
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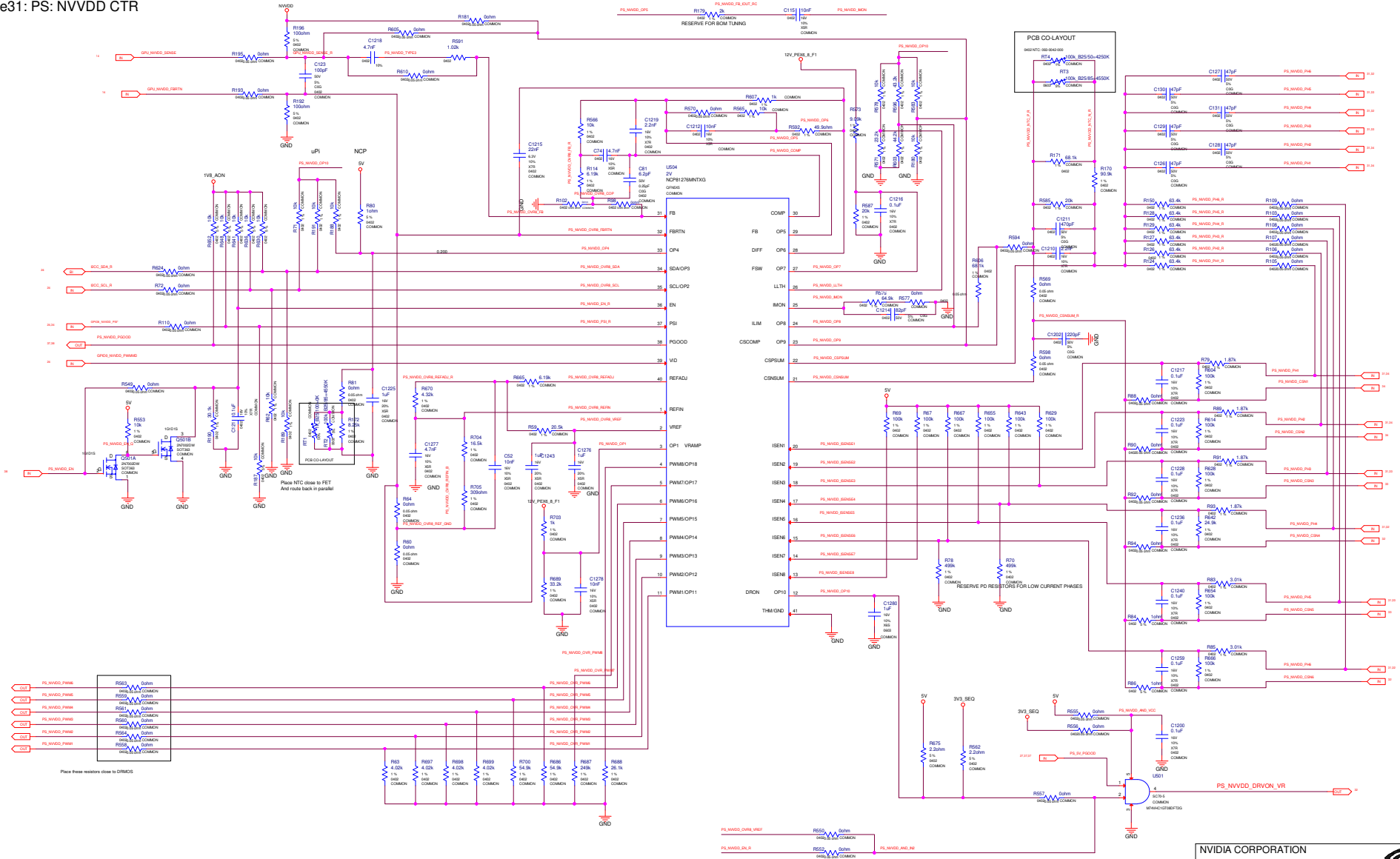
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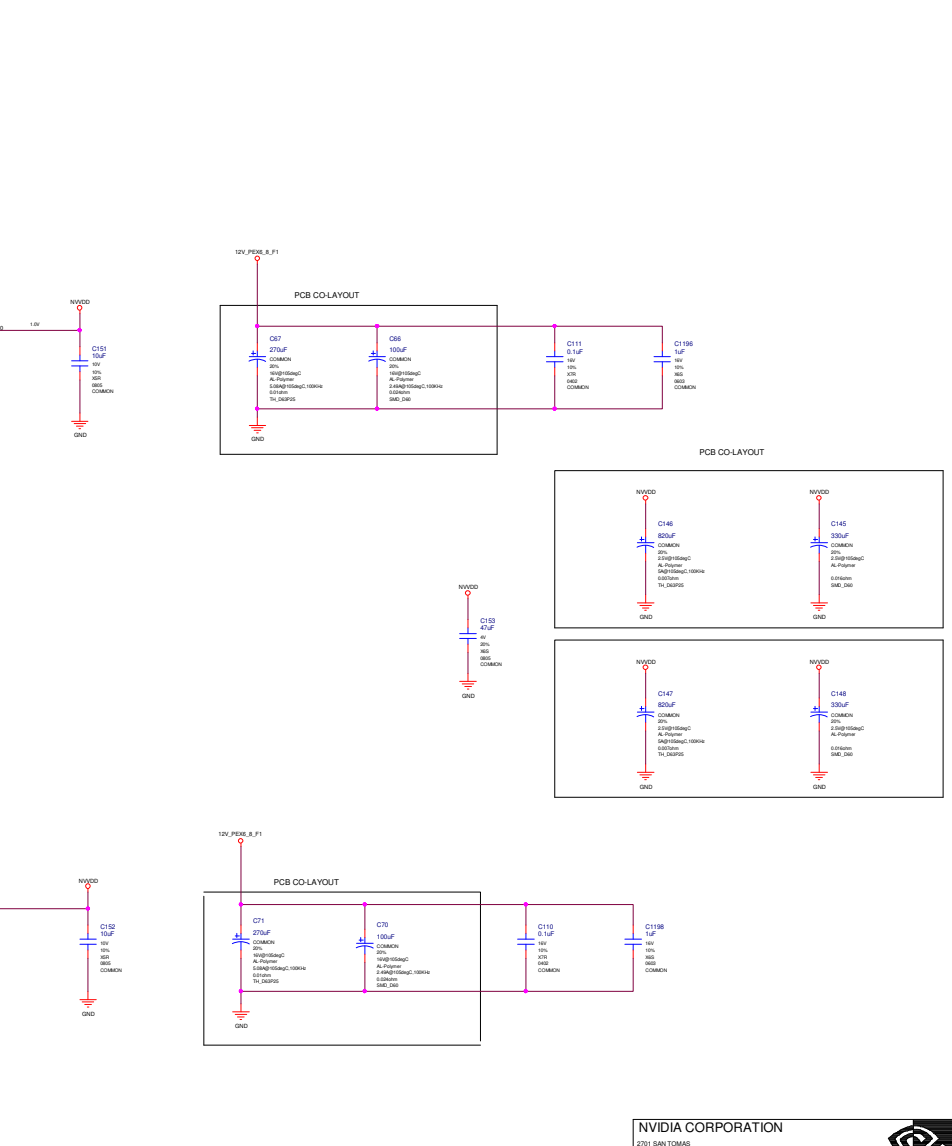
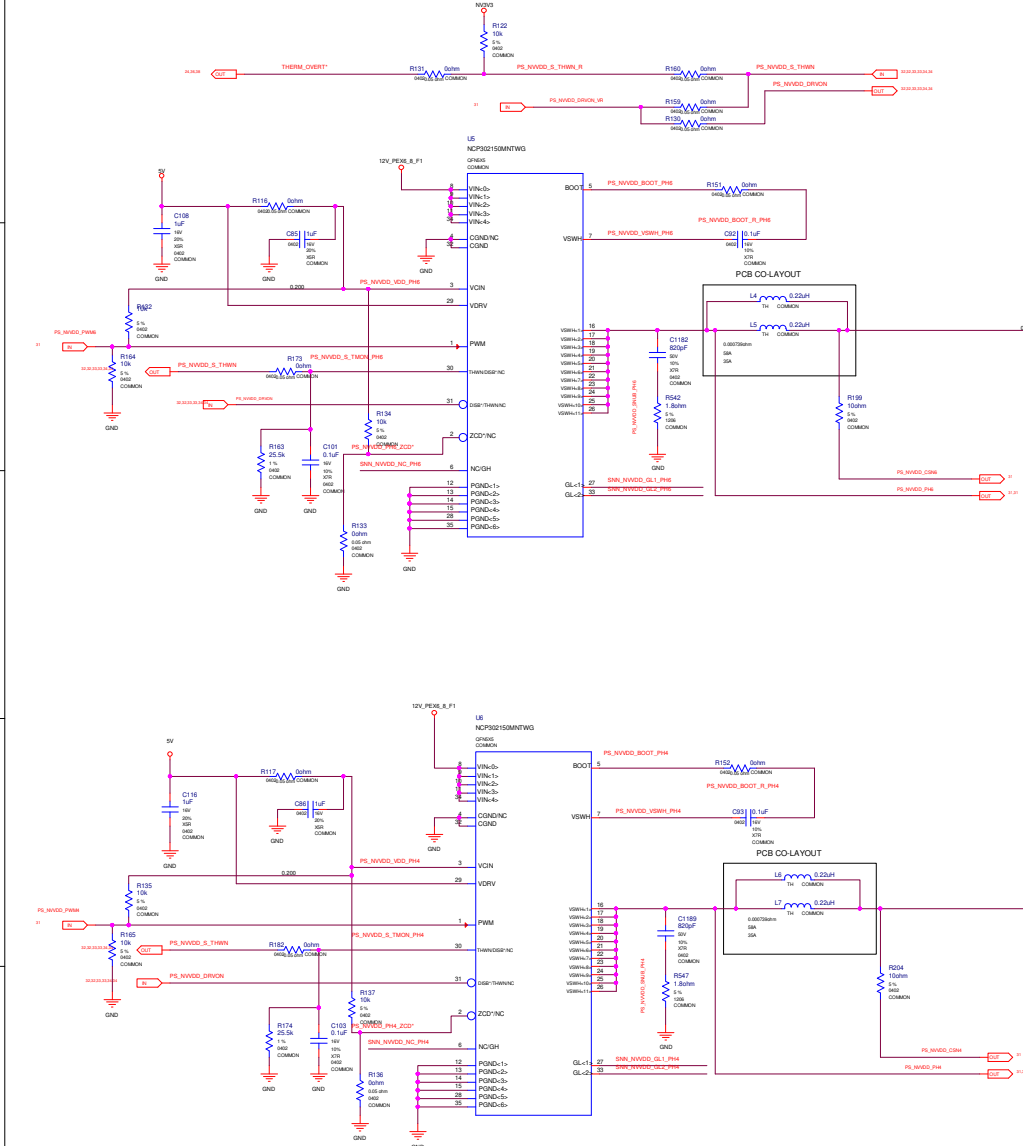
NV_PN	600-1G161-BASE-200	PAGE	30 OF 42
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ECN REV	A		



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 PCB REV P16187800
 BOM REV A

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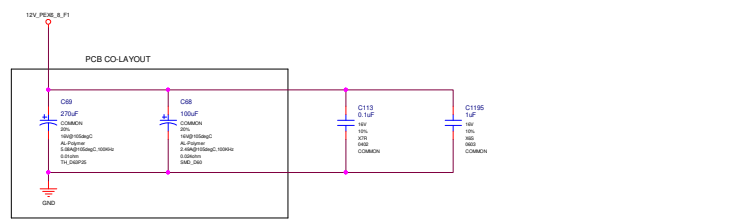
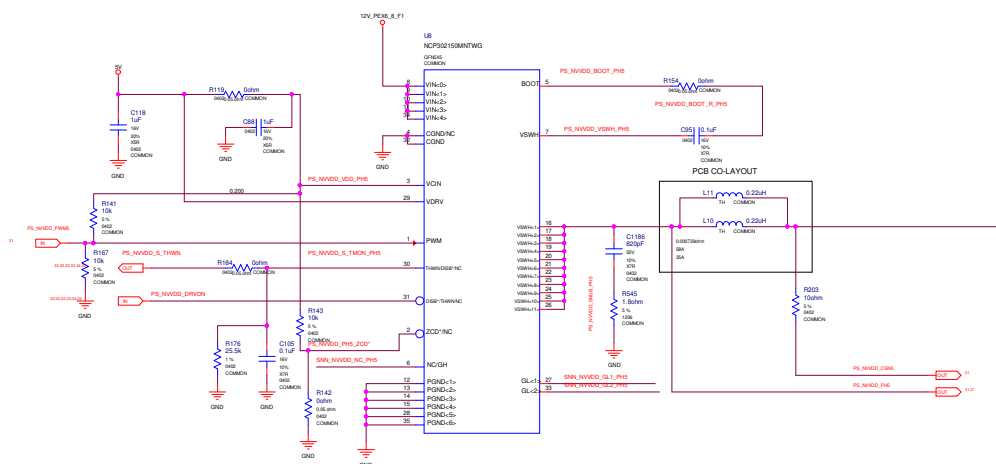
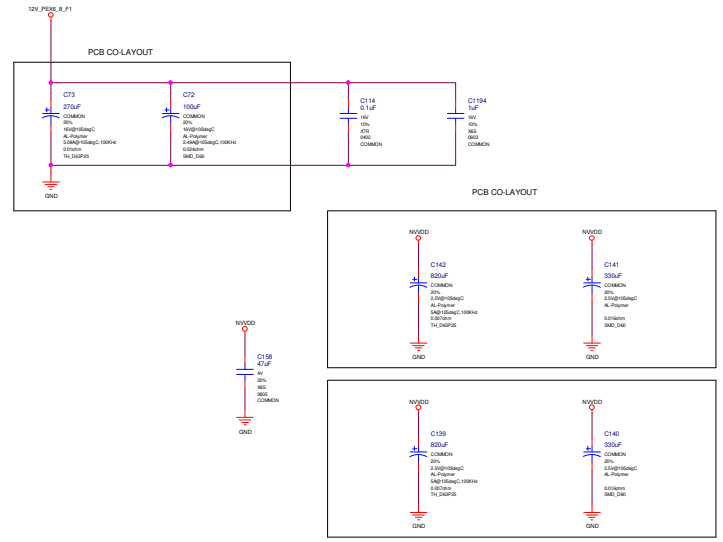
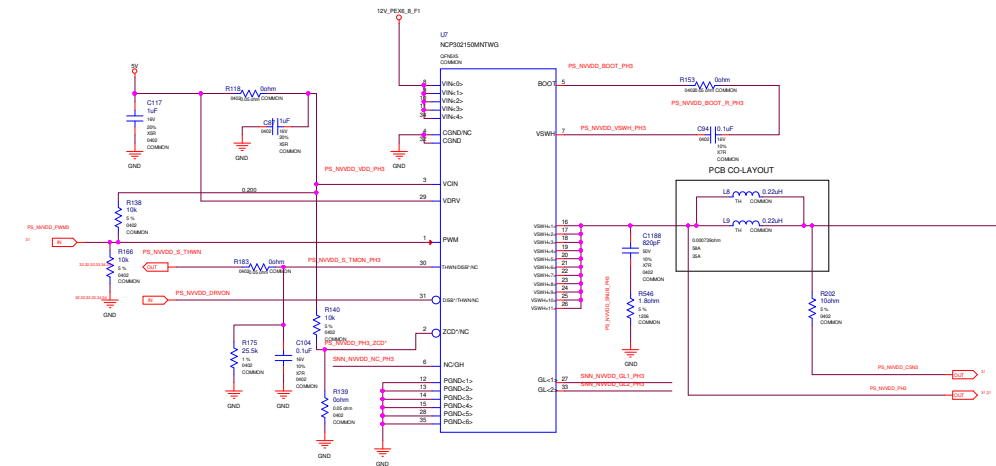


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ASSEMBLY	ASSEMBLY DESCRIPTION:
PAGE DETAIL	PS: NVVDD PH6&4

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2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA	
NV_PN	600-1G161-BASE-200
PCB REV	PS16T B00
SDM REV	A
PAGE	32 OF 42
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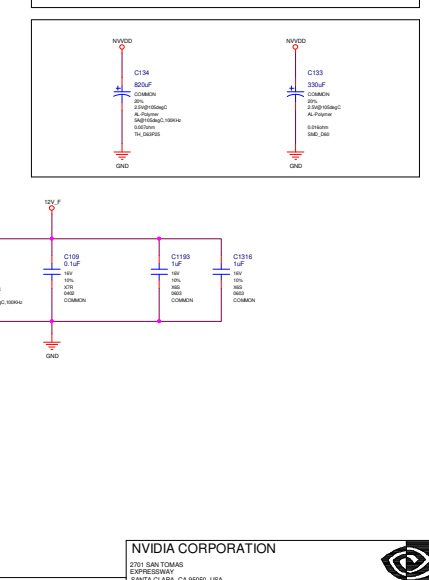
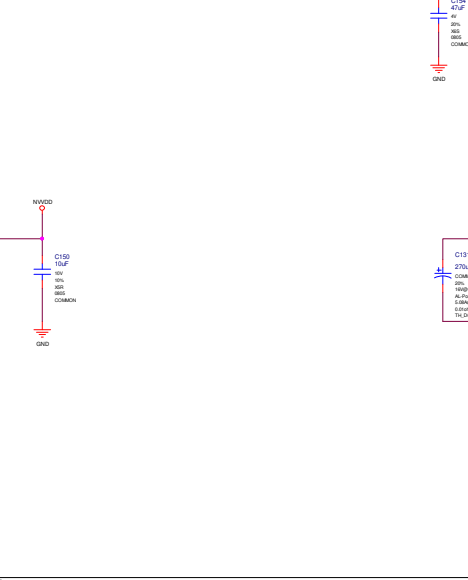
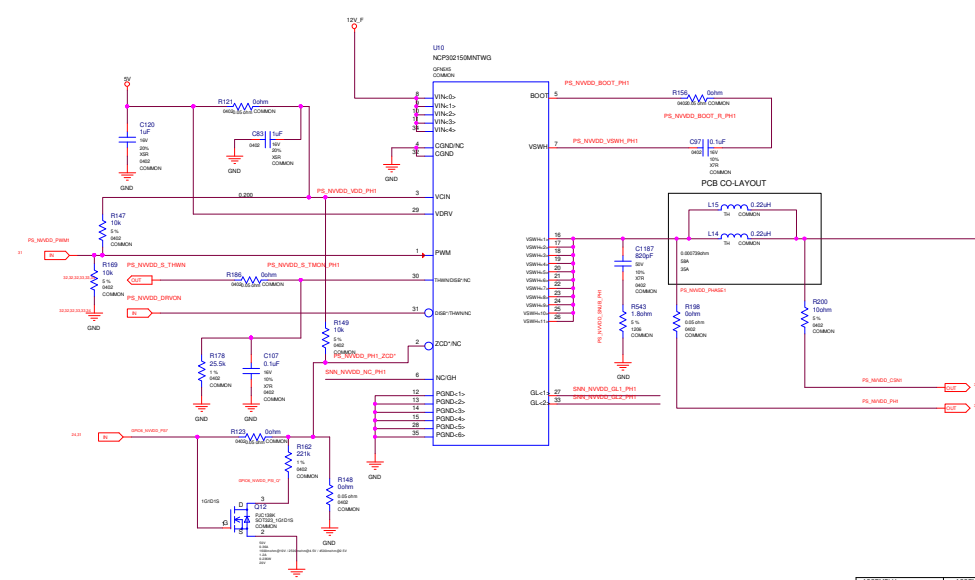
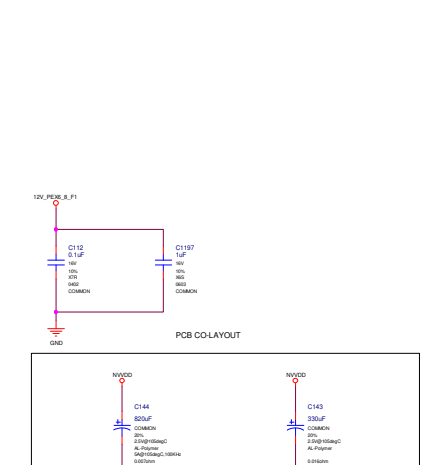
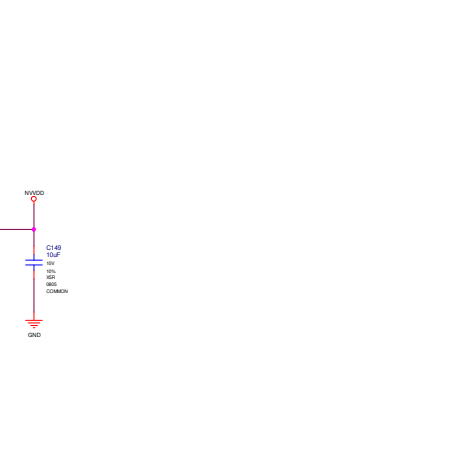
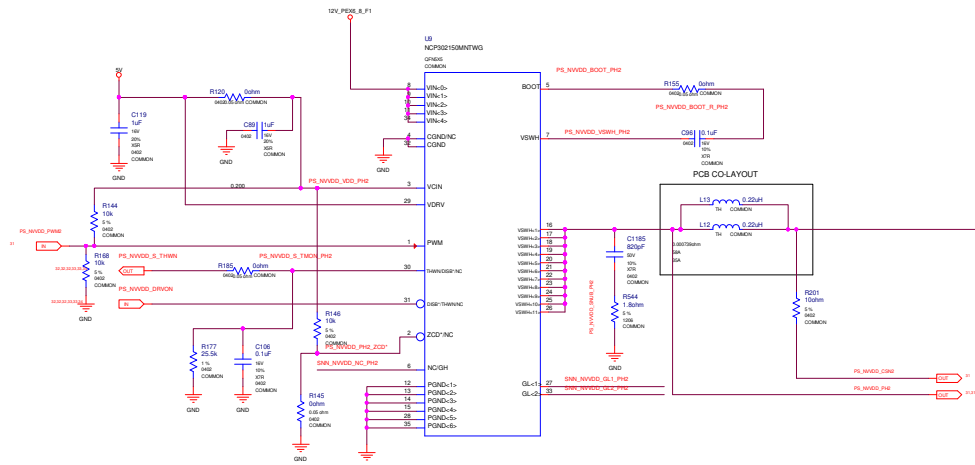




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ASSEMBLY	ASSEMBLY DESCRIPTION:
TRADE DETAIL	PS: NVVDD PH3&5

NVIDIA CORPORATION	
2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95051, USA	
NV_PN	600-1G161-BASE-200
PCB REV	PS1818 B00
SDM REV	A
PAGE	33 OF 42
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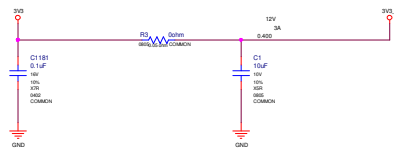
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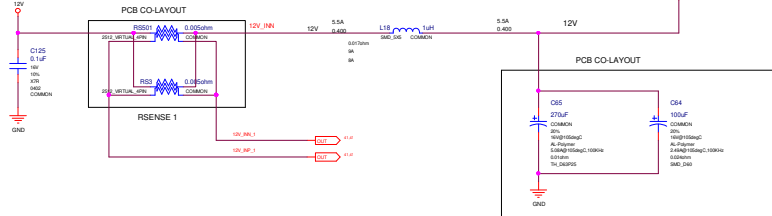
NV_PN	600-1G161-BASE-200	PAGE	34 OF 42
PCB REV	PS1818 B00	DATE	06/DEC/2018

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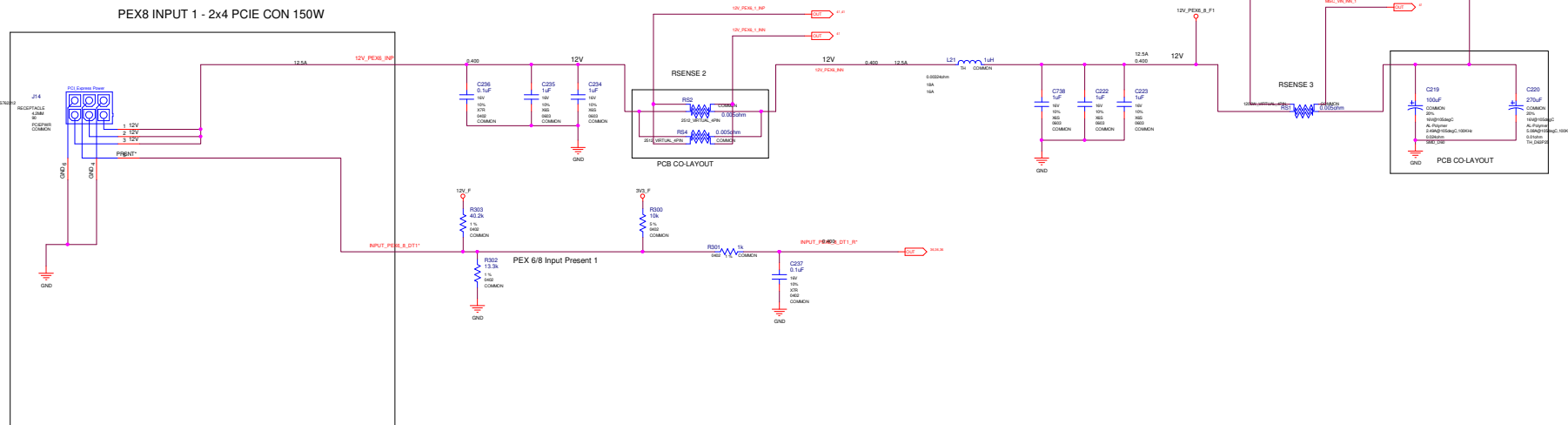
PEX 3V3 INPUT - 10W



PEX_12V INPUT - 66W



PEX8 INPUT 1 - 2x4 PCIE CON 150W



1 NVDA CORPORATION

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SANTA CLARA, CA 95050, USA



ASSEMBLY PAGE DETAIL	ASSEMBLY DESCRIPTION: PS: PEX_INPUT, 12V_EXT_INPUT, FILTERING
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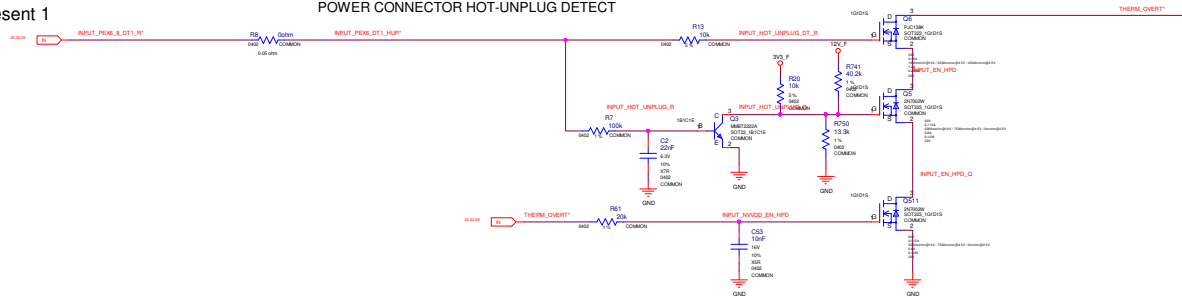
NV_P/N 600-1G161-BASE-200

PSB REV: A	PCIEBT1800	PAGE: 35 OF 47
DATE: 06/DEC/2018		

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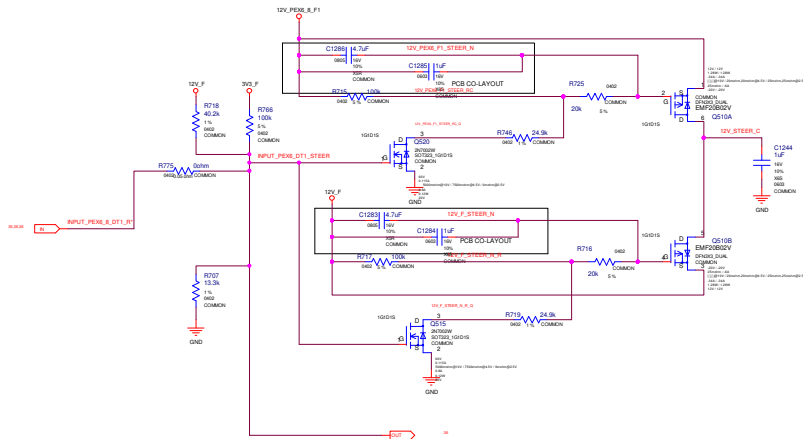
PEX Input Present 1

POWER CONNECTOR HOT-UNPLUG DETECT

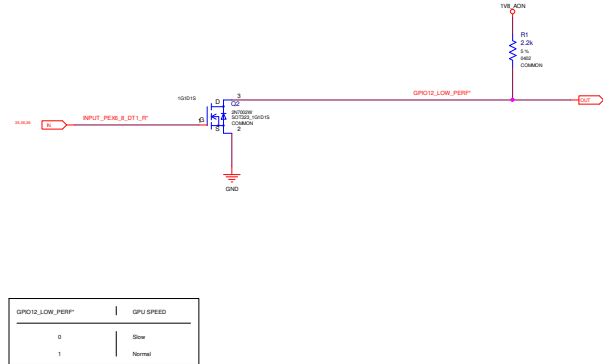


12V CURRENT STEERING (UNDER POWER BOOT):

GUIDES CURRENT FROM PEX EDGE TO PEX 6 PIN INPUT AREA



PEX input - Power Level/PSI* Control



GPU12_LOW_PSEFF	GPU SPEED
0	Slow
1	Normal

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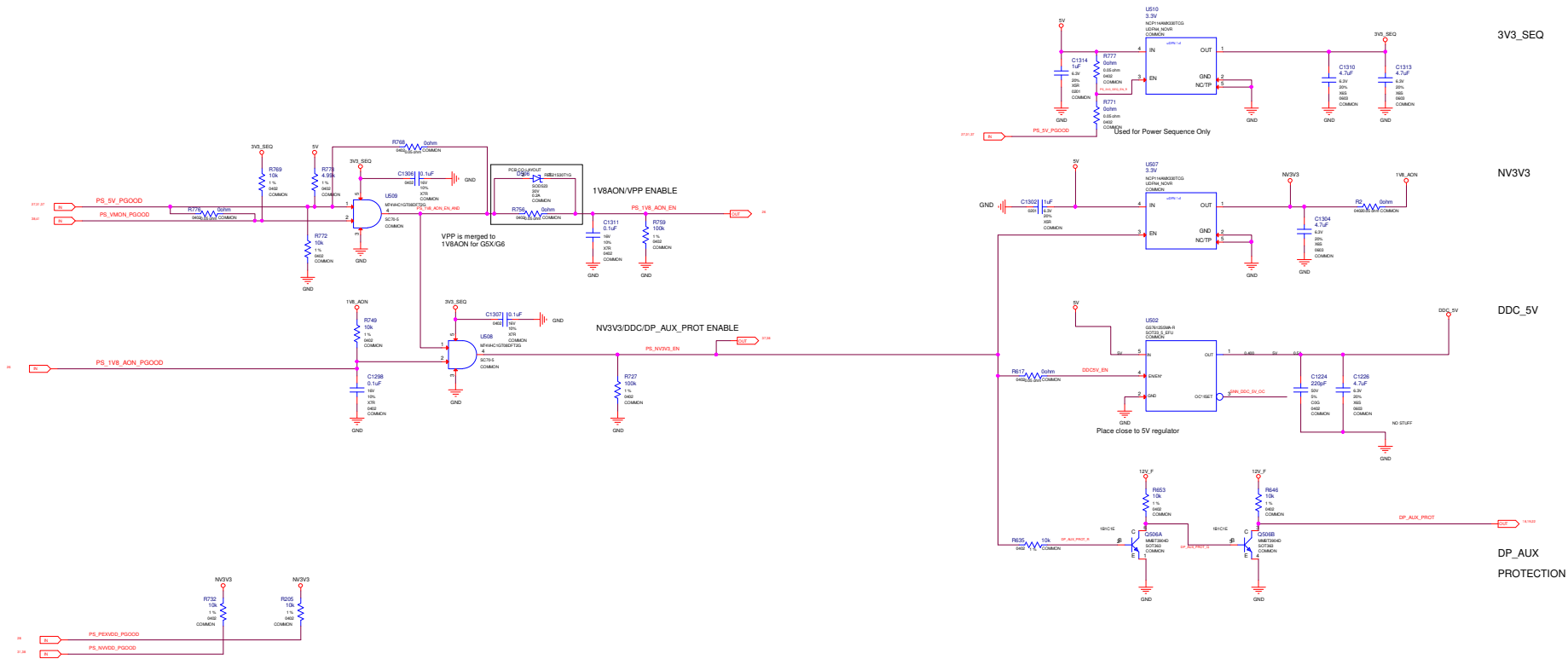
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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	PS CURRENT STEERING/LIFE/HOT UNPLUG

NV_PN	600-1G161-BASE-200	PAGE	36 OF 42
PCS REV	PC1017-080	DATE	06-DEC-2018
ECN REV	A		

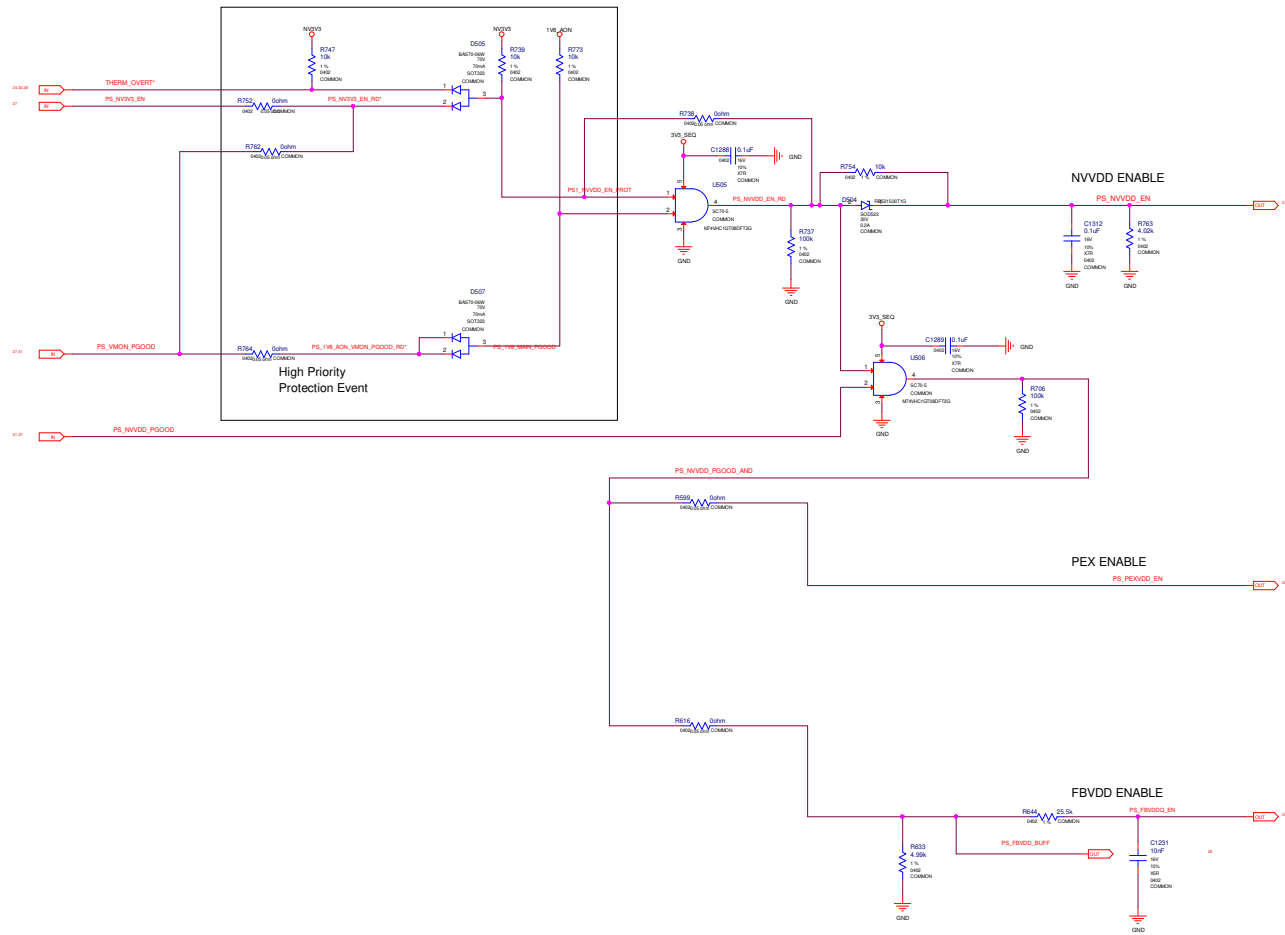
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PAGE DETAIL	SEQ:1V8_AON, 3V3_SEQ, NV3V3, DDC_5V, DP_AUX_PROT

NVIDIA CORPORATION			
2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA			
NV_PN	600-1G161-BASE-200	PAGE	37 OF 42
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BOM REV	A		



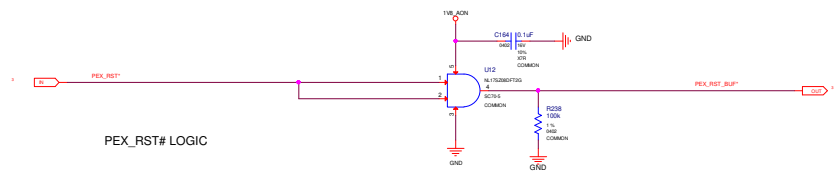
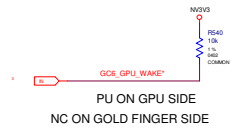
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TRADE DETAIL	SEQ: NVVDD, PEX, FBVDDQ ENABLE

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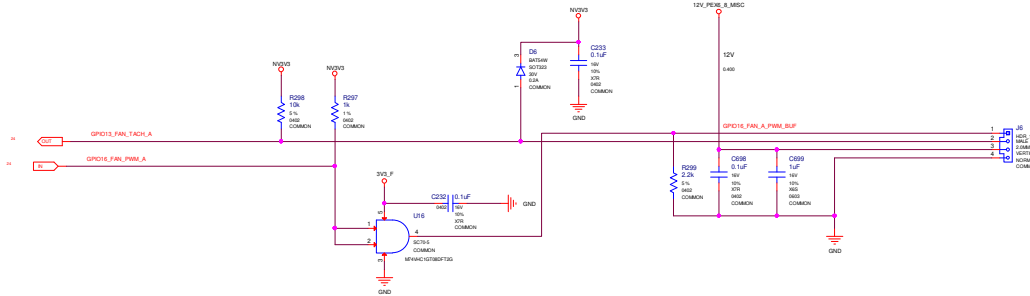
NV_PN	600-1G161-BASE-200	PAGE	38 OF 42
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SOM REV	A		



ASSEMBLY	ASSEMBLY DESCRIPTION:
PAGE DETAIL	SEQ: MISC

NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA			
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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	FAN

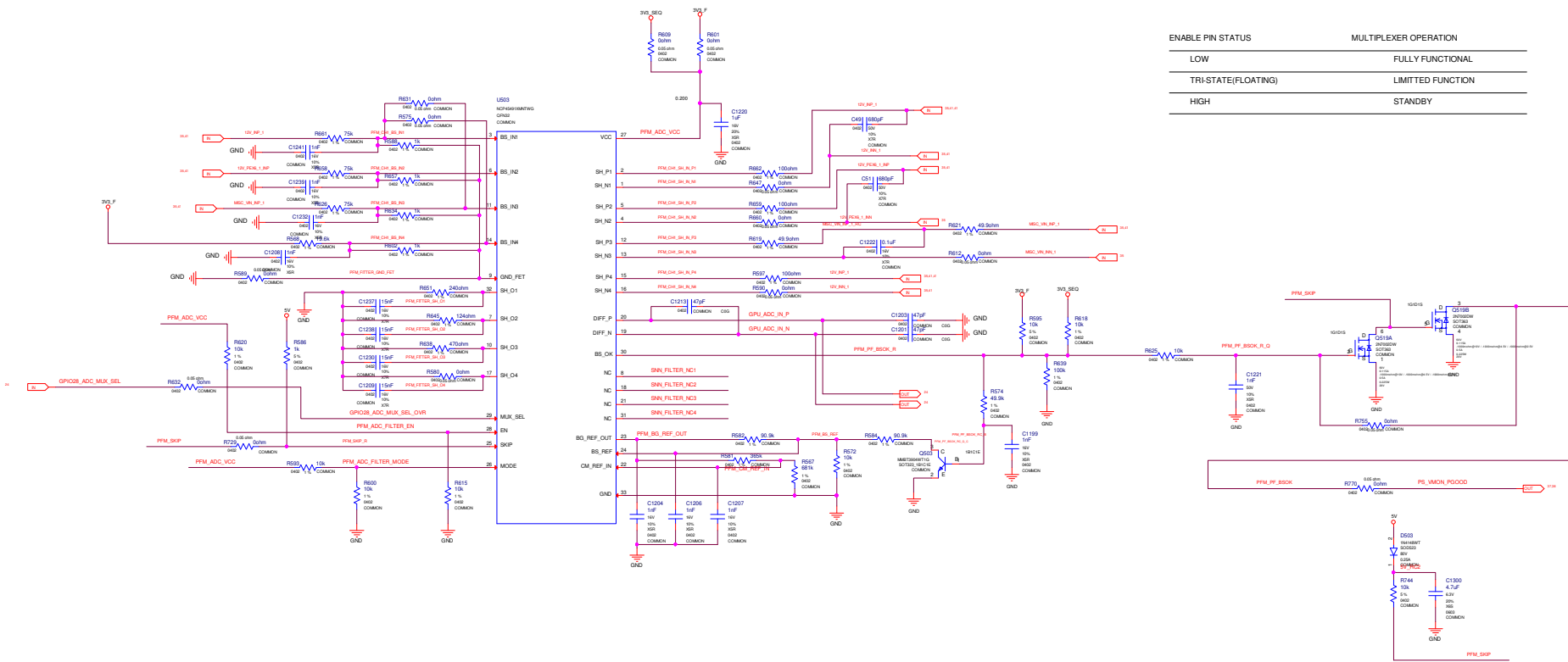
NV_PN 600-1G161-BASE-200

P/CB REV	P0187-000	PAGE	40 OF 42
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MODE PIN STATUS	MULTIPLEXER OPERATION
LOW	DEVICE A
TRI-STATE(FLOATING)	STAND-ALONE
HIGH	DEVICE B

ENABLE PIN STATUS	MULTIPLEXER OPERATION
LOW	FULLY FUNCTIONAL
TRI-STATE(FLOATING)	LIMITED FUNCTION
HIGH	STANDBY




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PAGE DETAIL	PP: OVRM_PWR SENSE

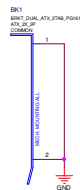
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 SANTA CLARA, CA 95050, USA

NV_PFN: **600-1G161-BASE-200**
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 ESM REV: A

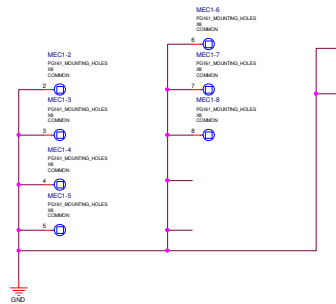
PAGE: 41 OF 84
 DATE: 06 DEC 2016



Bracket:



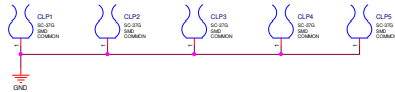
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BACK STIFFENER:



EMI Clip Options:



ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	MECH

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