

PG160-B03

TU106 6GB GDDR6, 192b, X16
Tall DVI-D + DP + HDMI

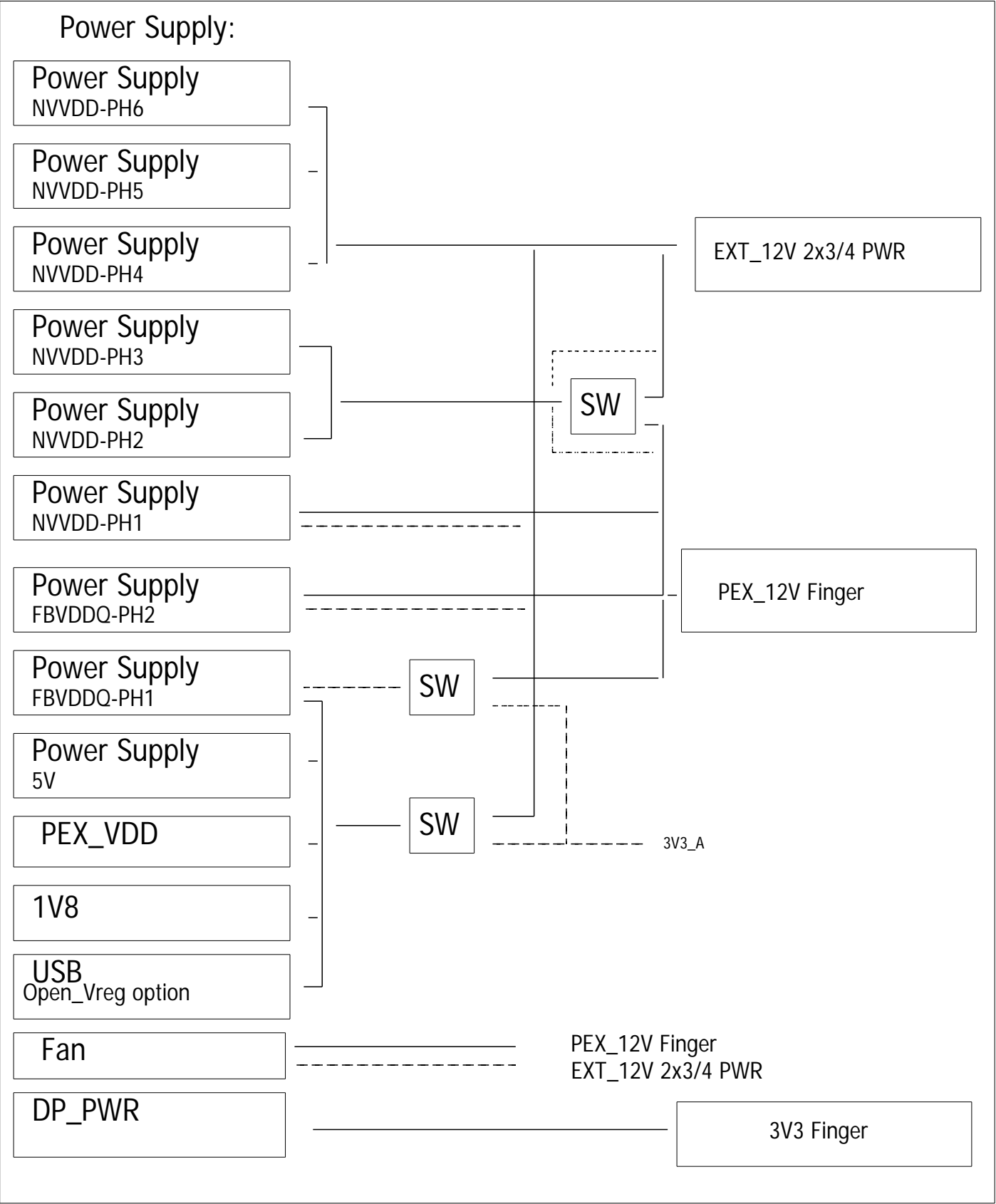
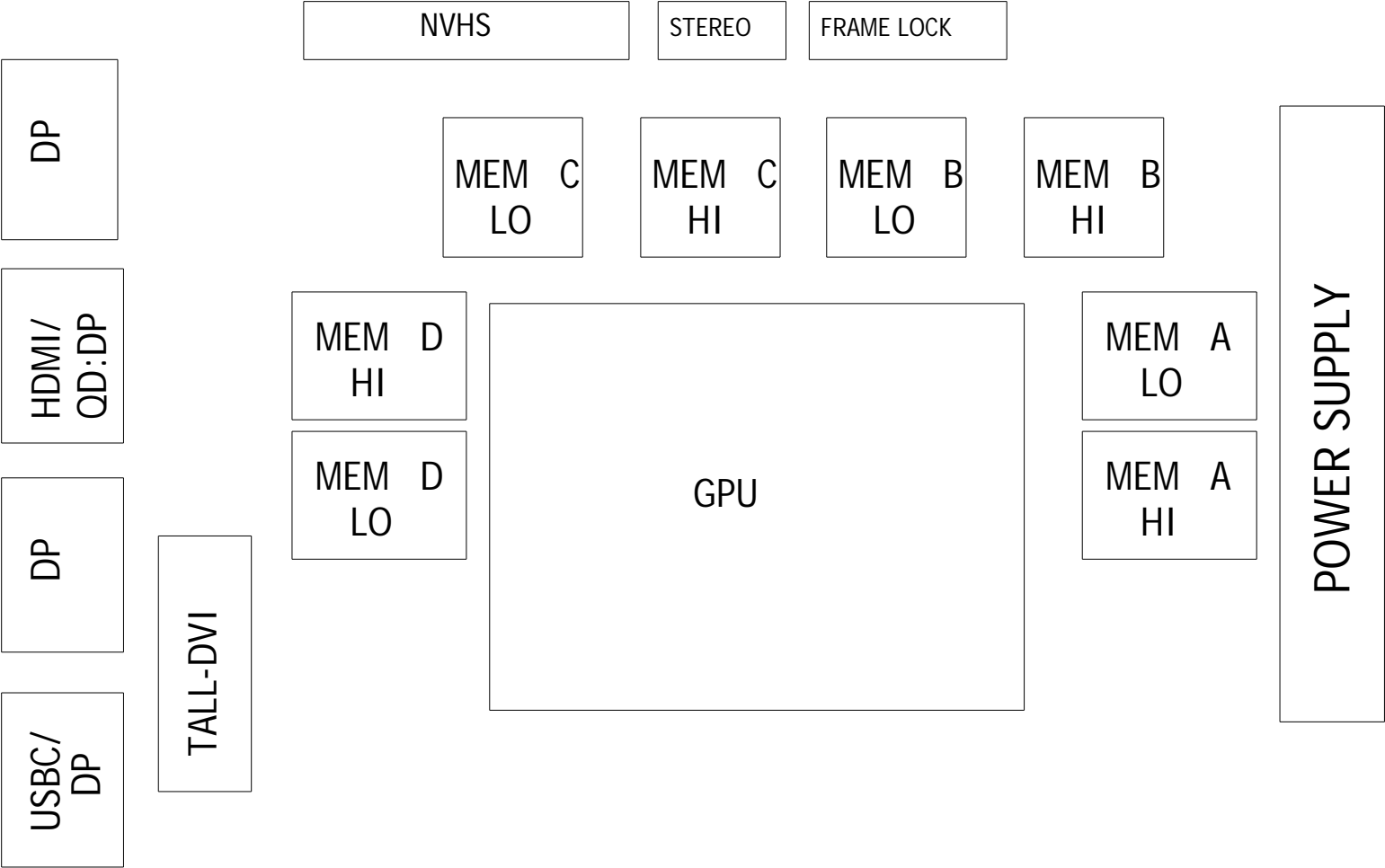
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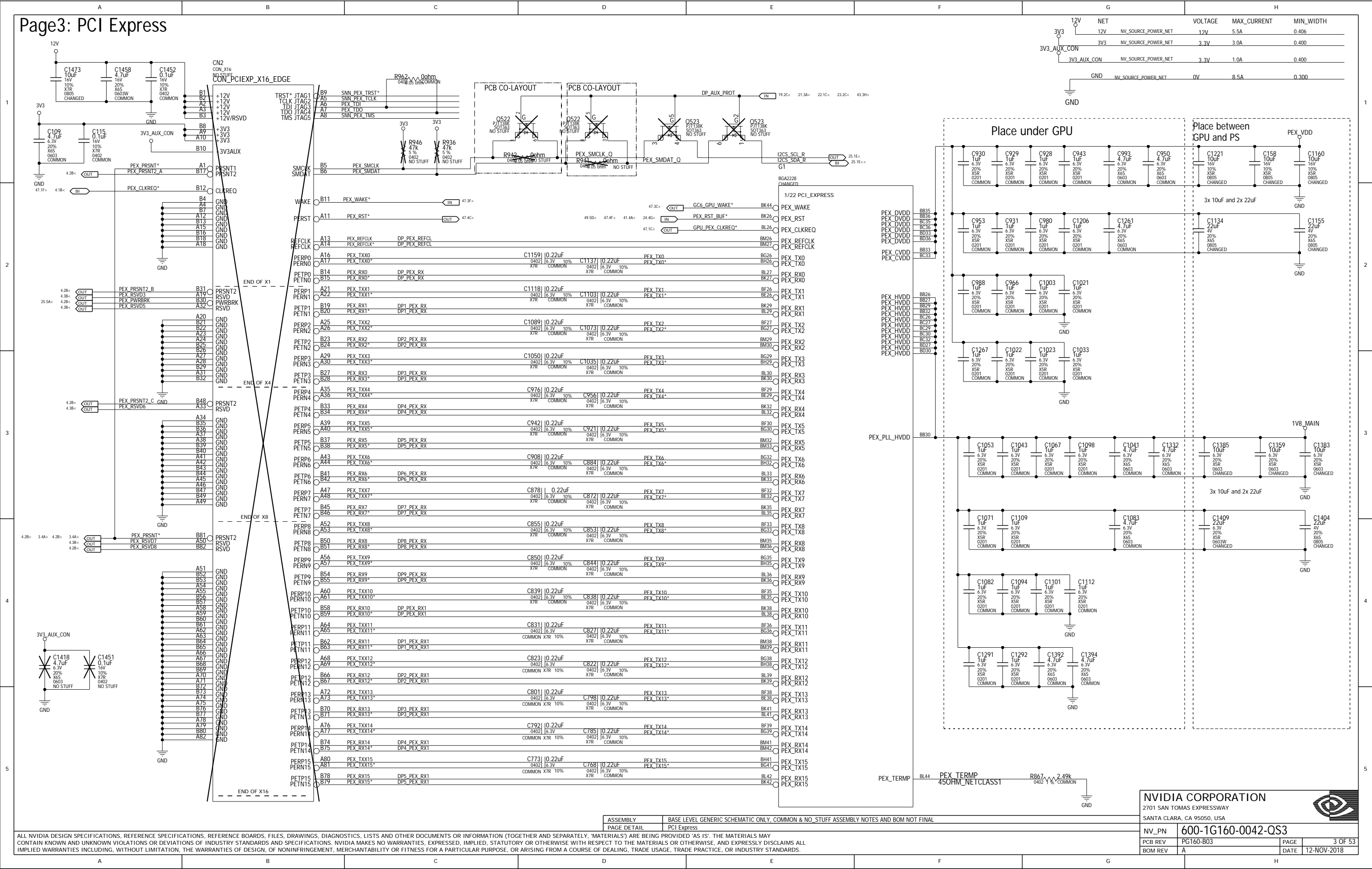
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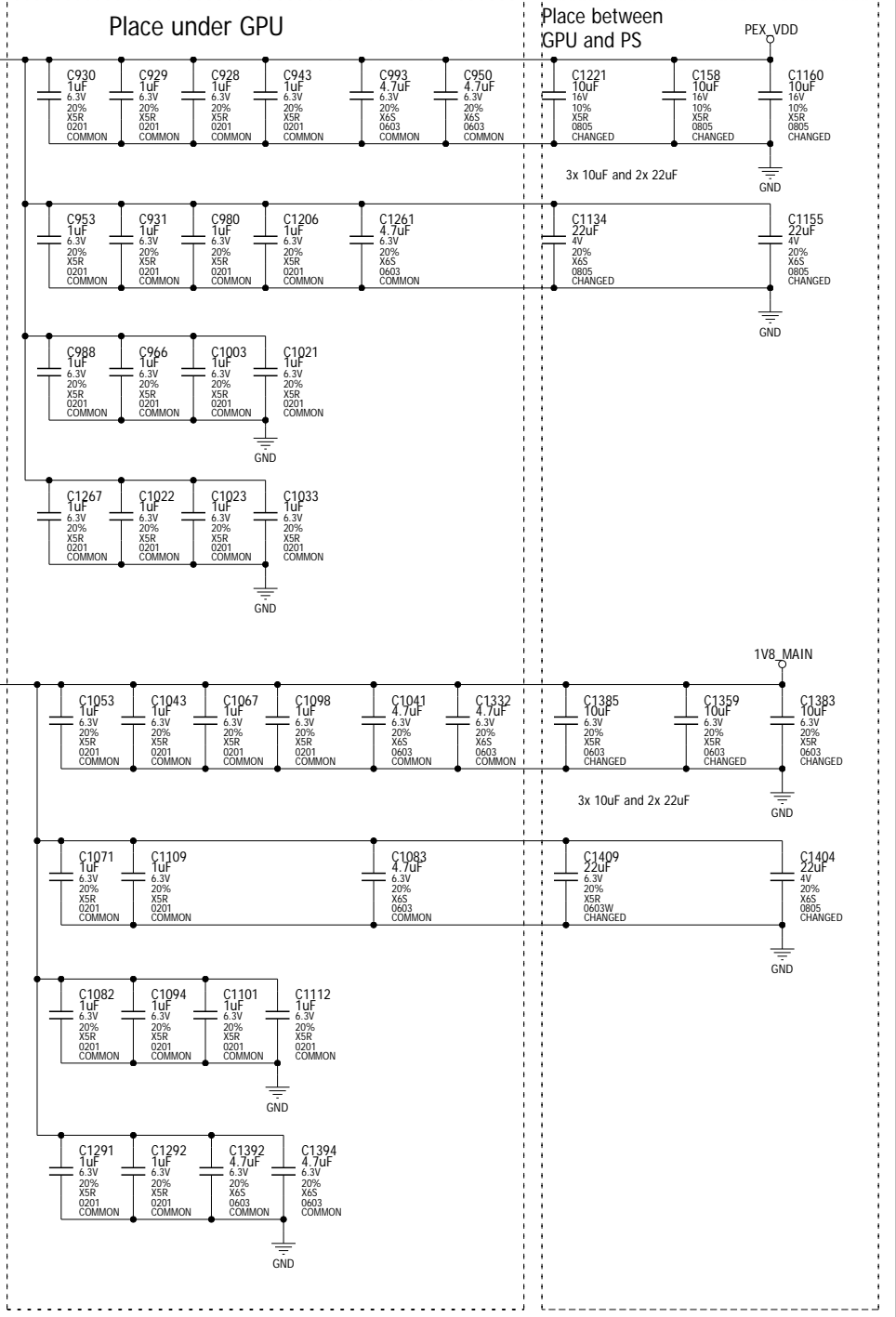


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PAGE DETAIL	Block Diagram		
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			VOLTAGE	MAX_CURRENT	MIN_WIDTH
12V	NET	NV_SOURCE_POWER_NET	12V	5.5A	0.406
3V3	3V3	NV_SOURCE_POWER_NET	3.3V	3.0A	0.400
3V3	3V3_AUX_CON	NV_SOURCE_POWER_NET	3.3V	1.0A	0.400
GND	GND	NV_SOURCE_POWER_NET	0V	8.5A	0.300



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PAGE DETAIL	PCI Express

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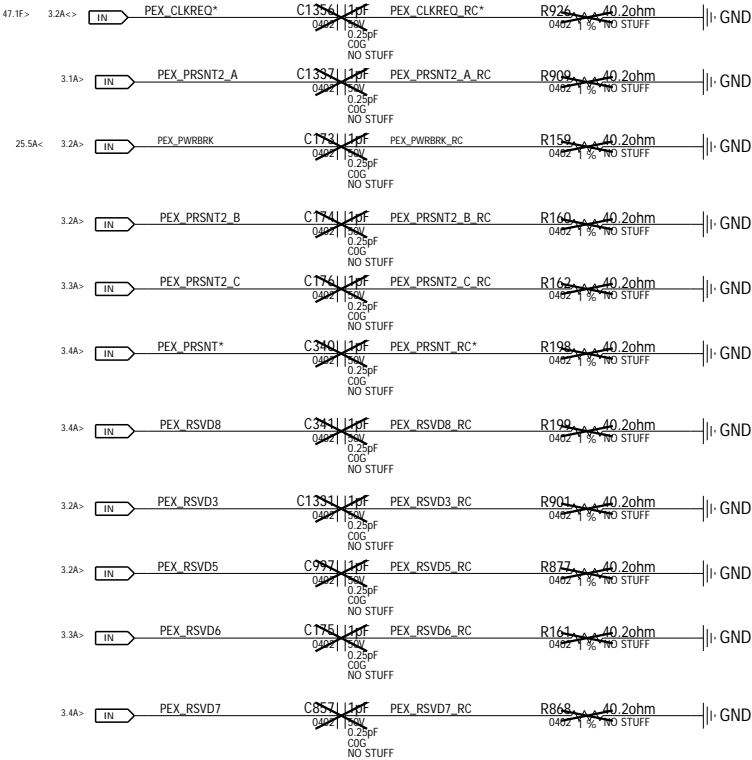
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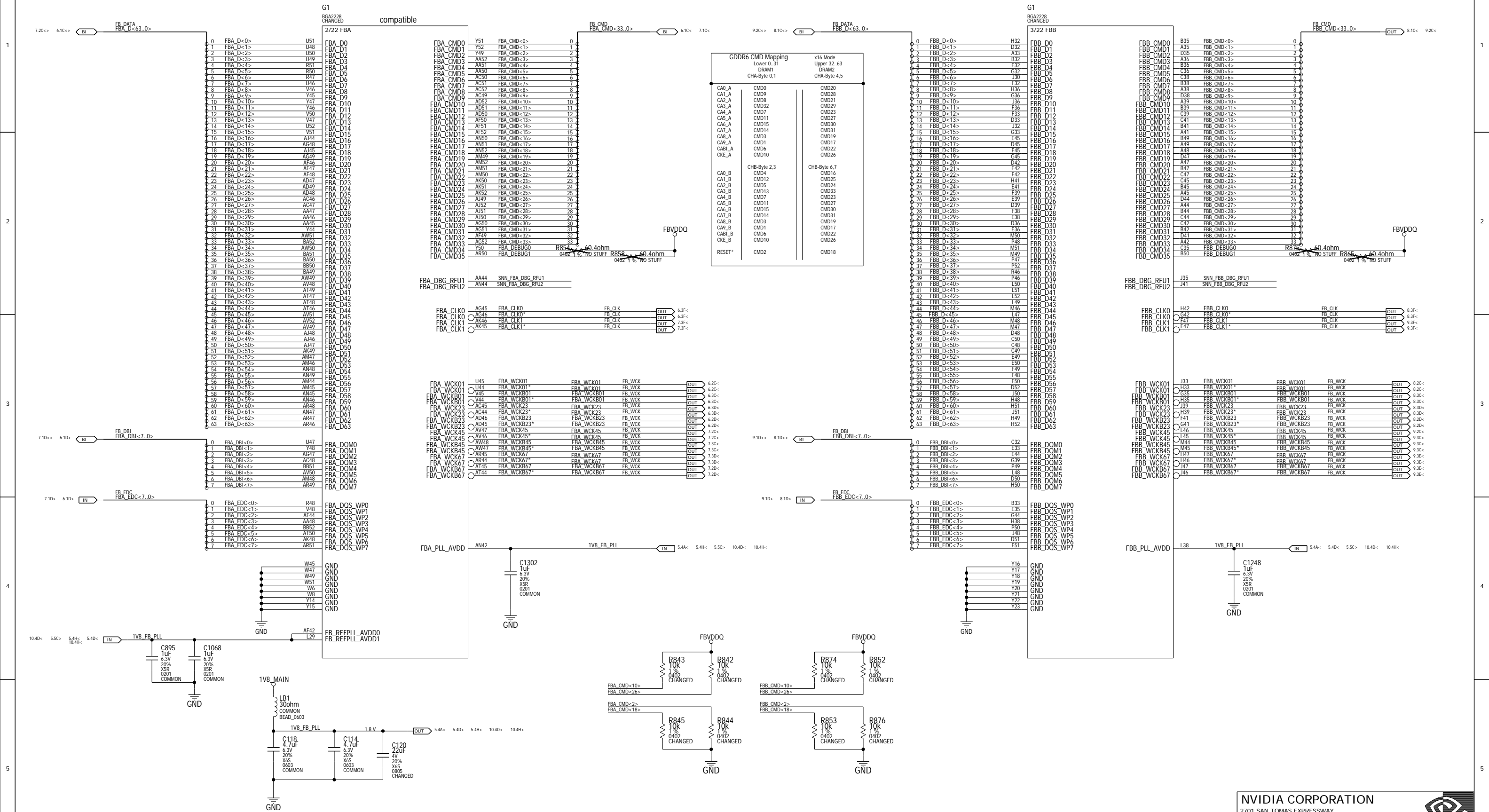
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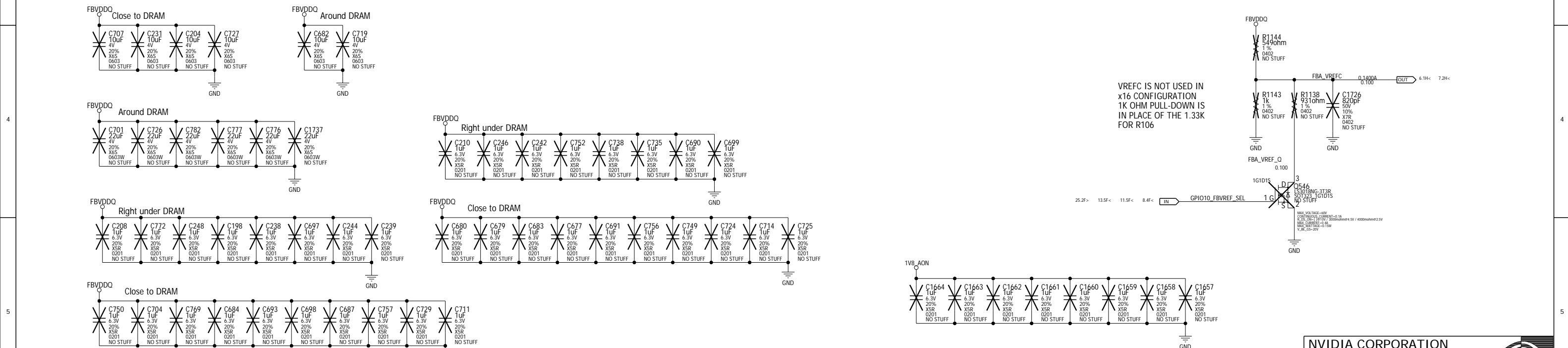
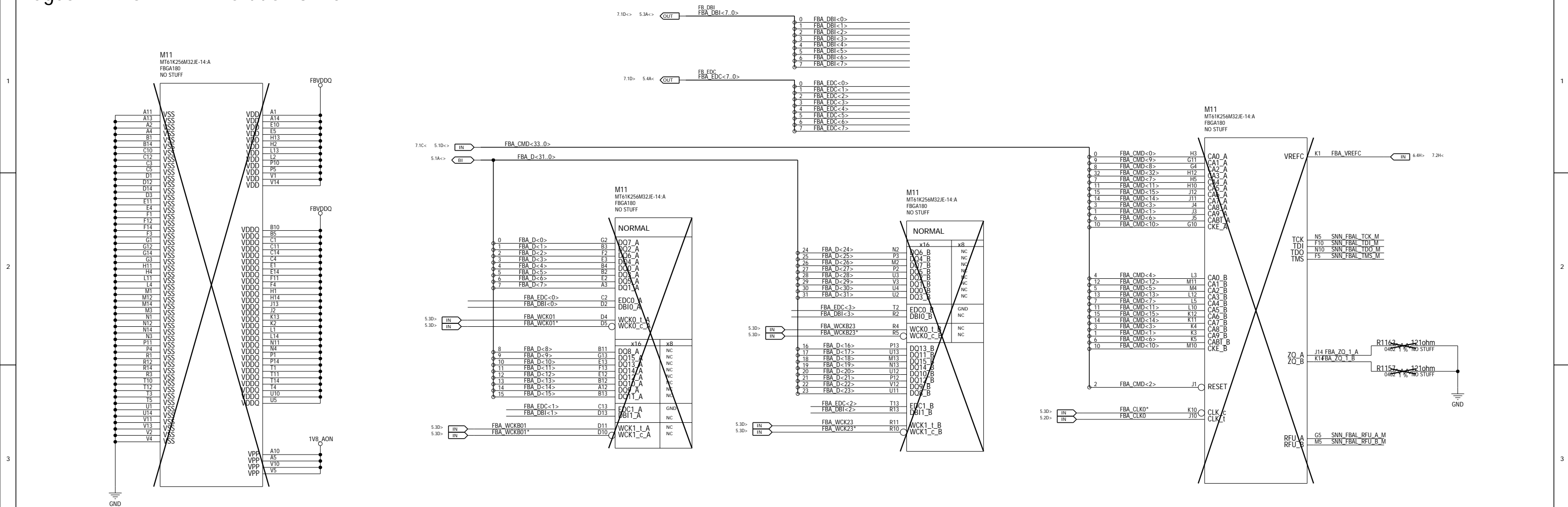
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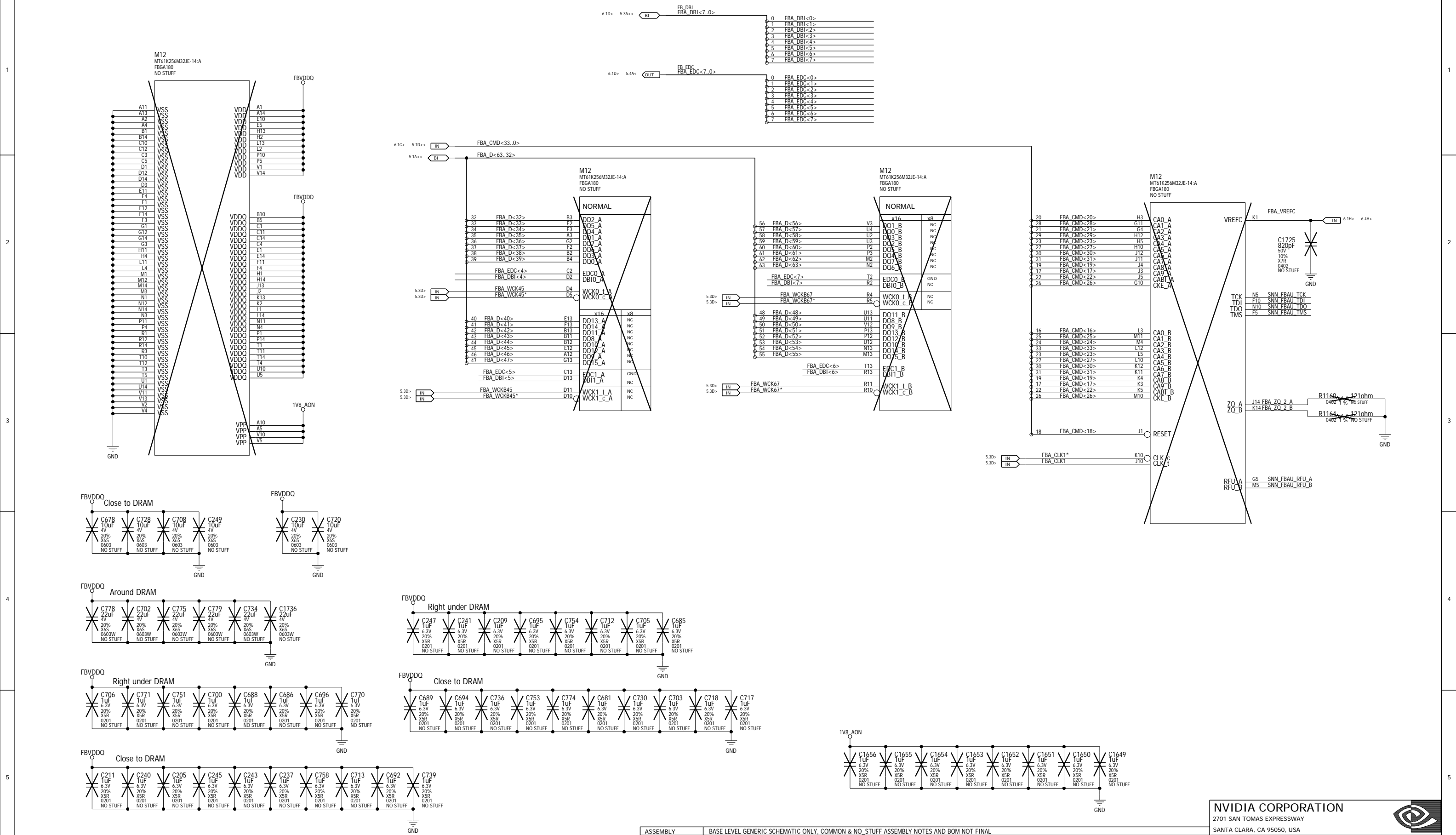
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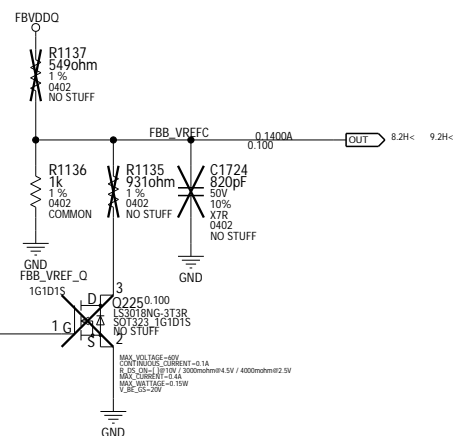
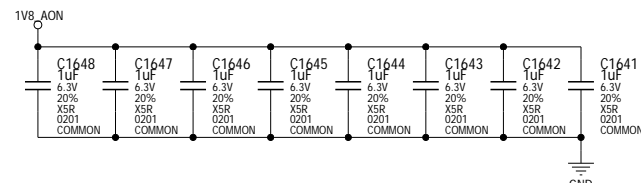
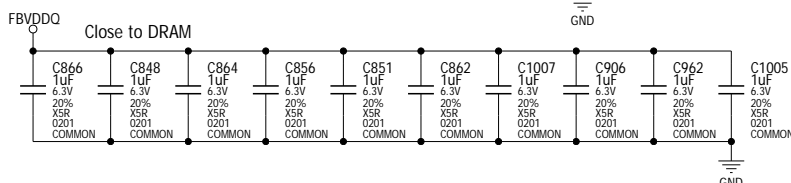
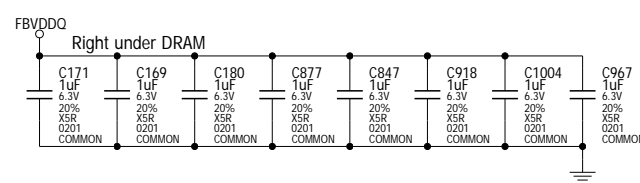
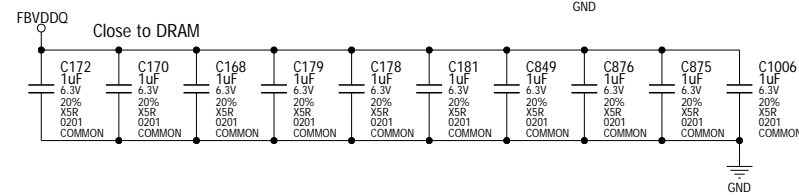
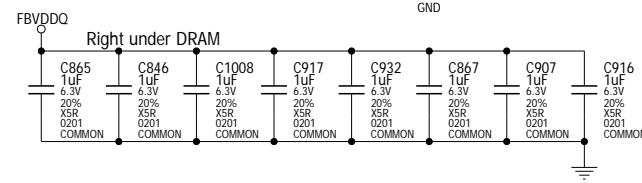
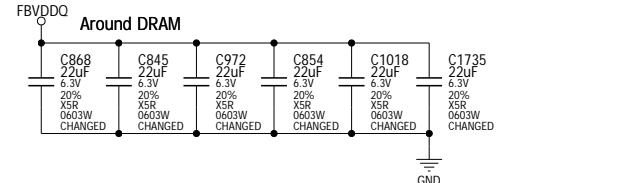
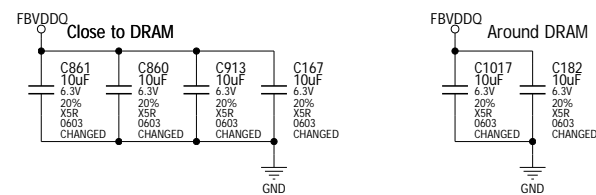
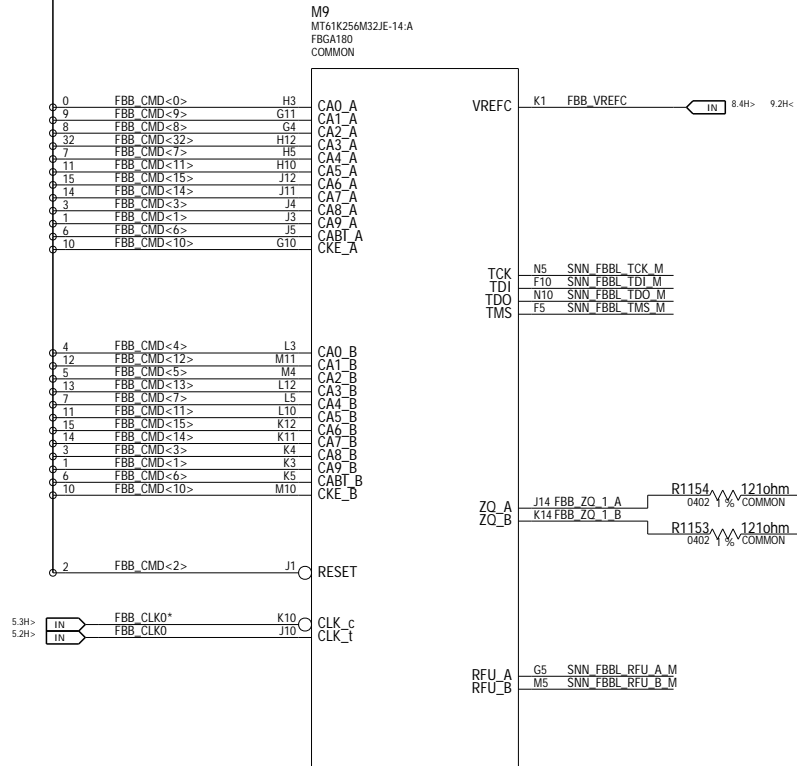
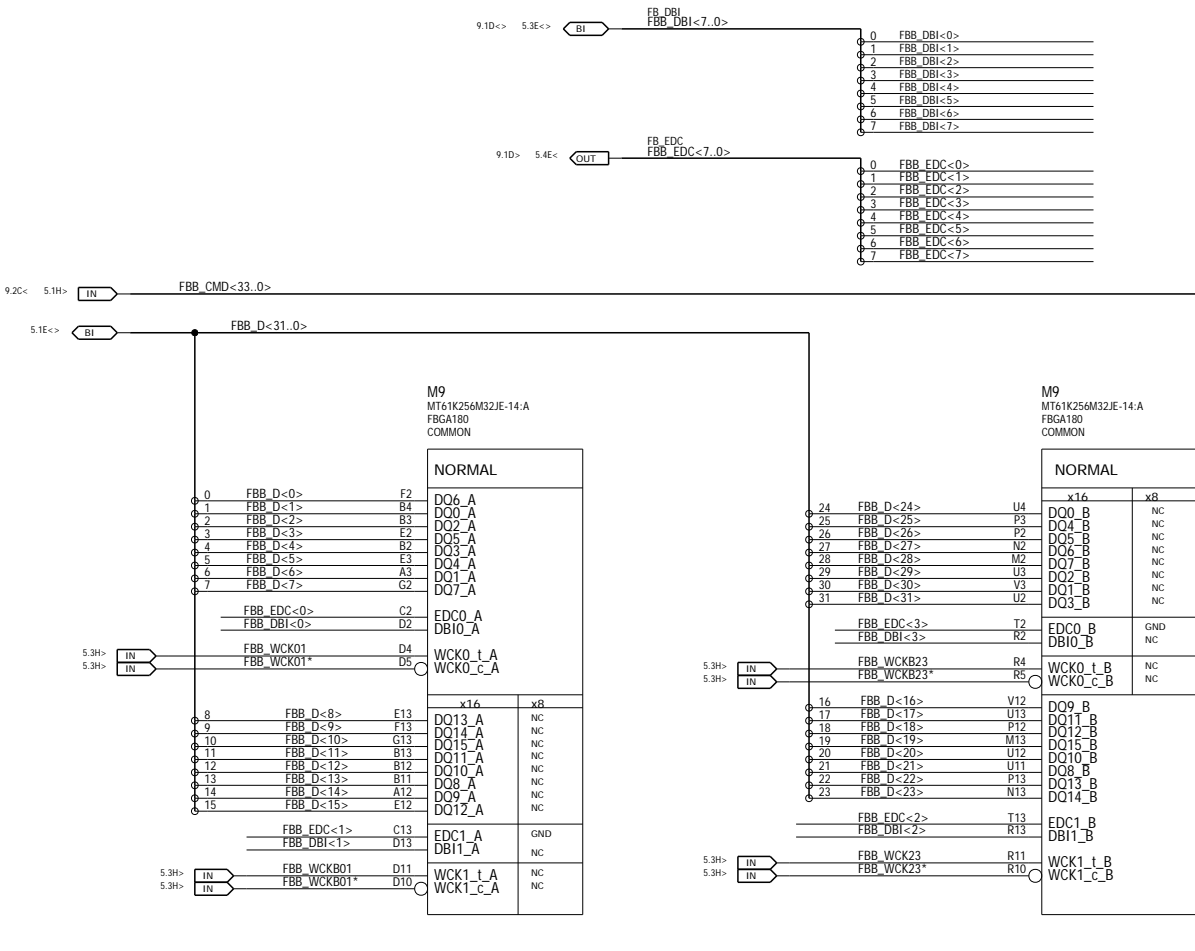
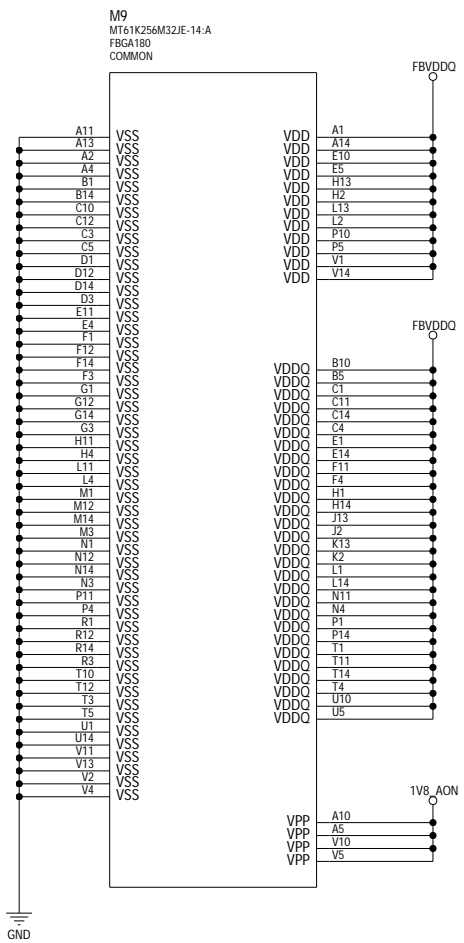
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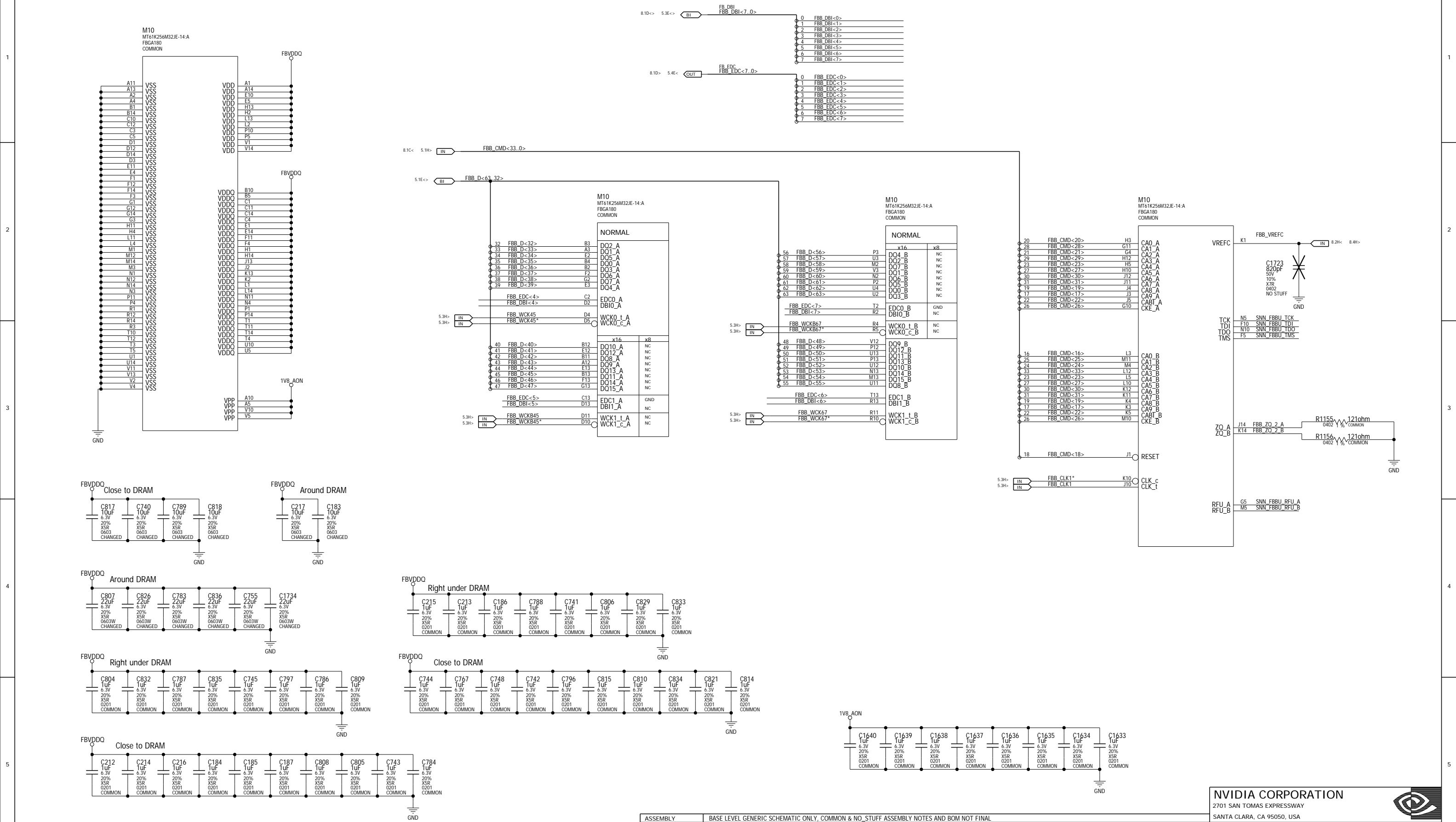




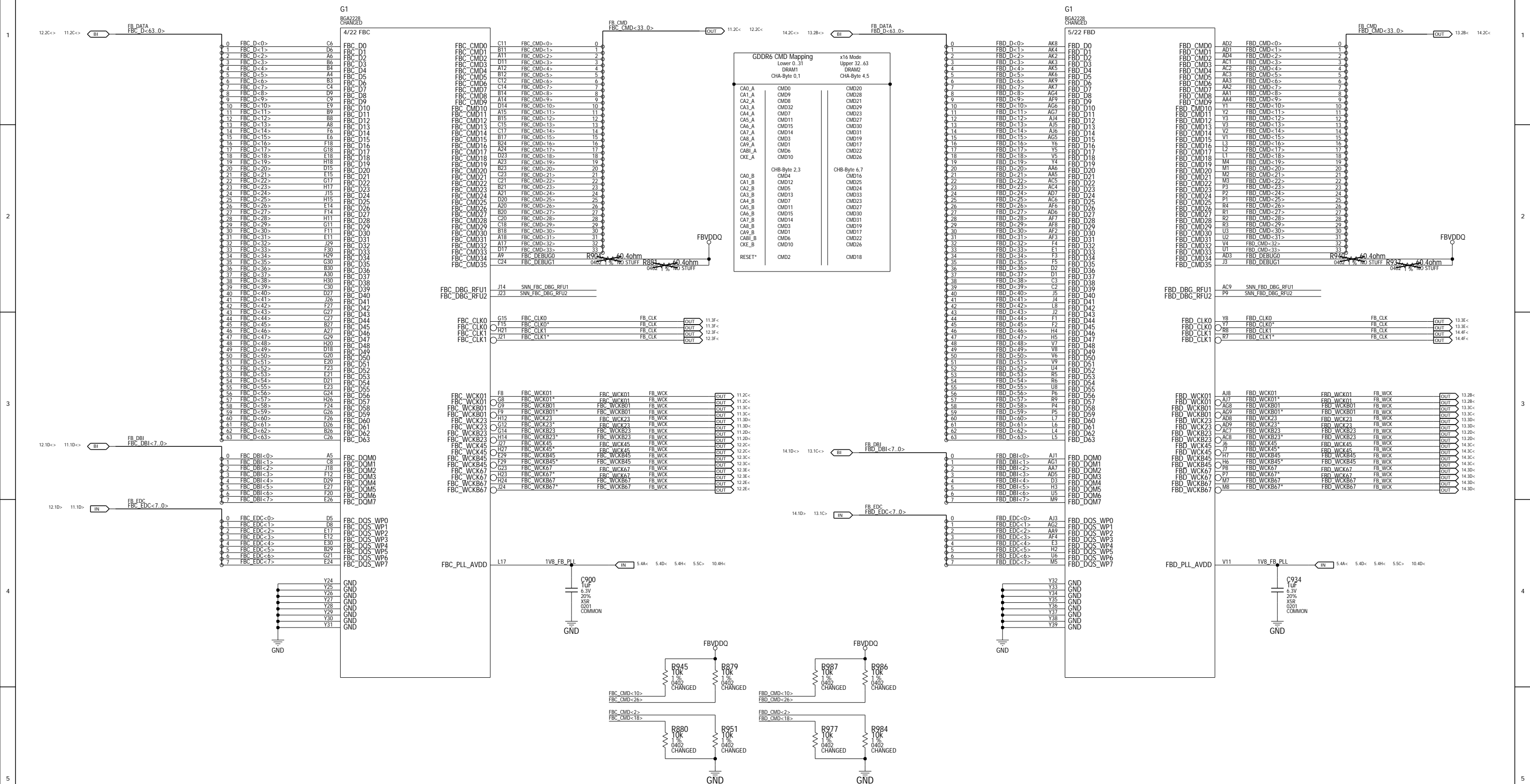
VREFC IS NOT USED IN
x16 CONFIGURATION
1K OHM PULL-DOWN IS
IN PLACE OF THE 1.33K
FOR R104

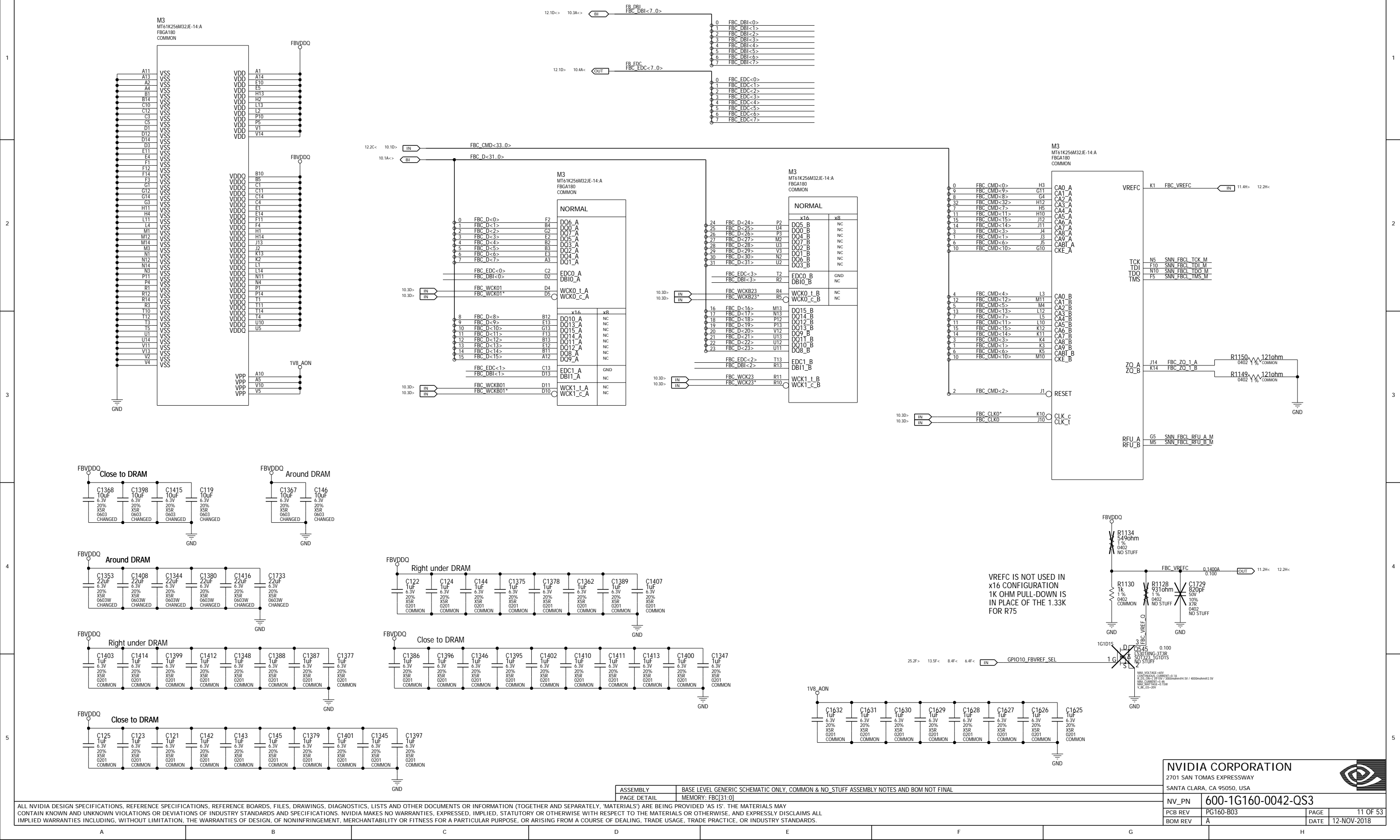
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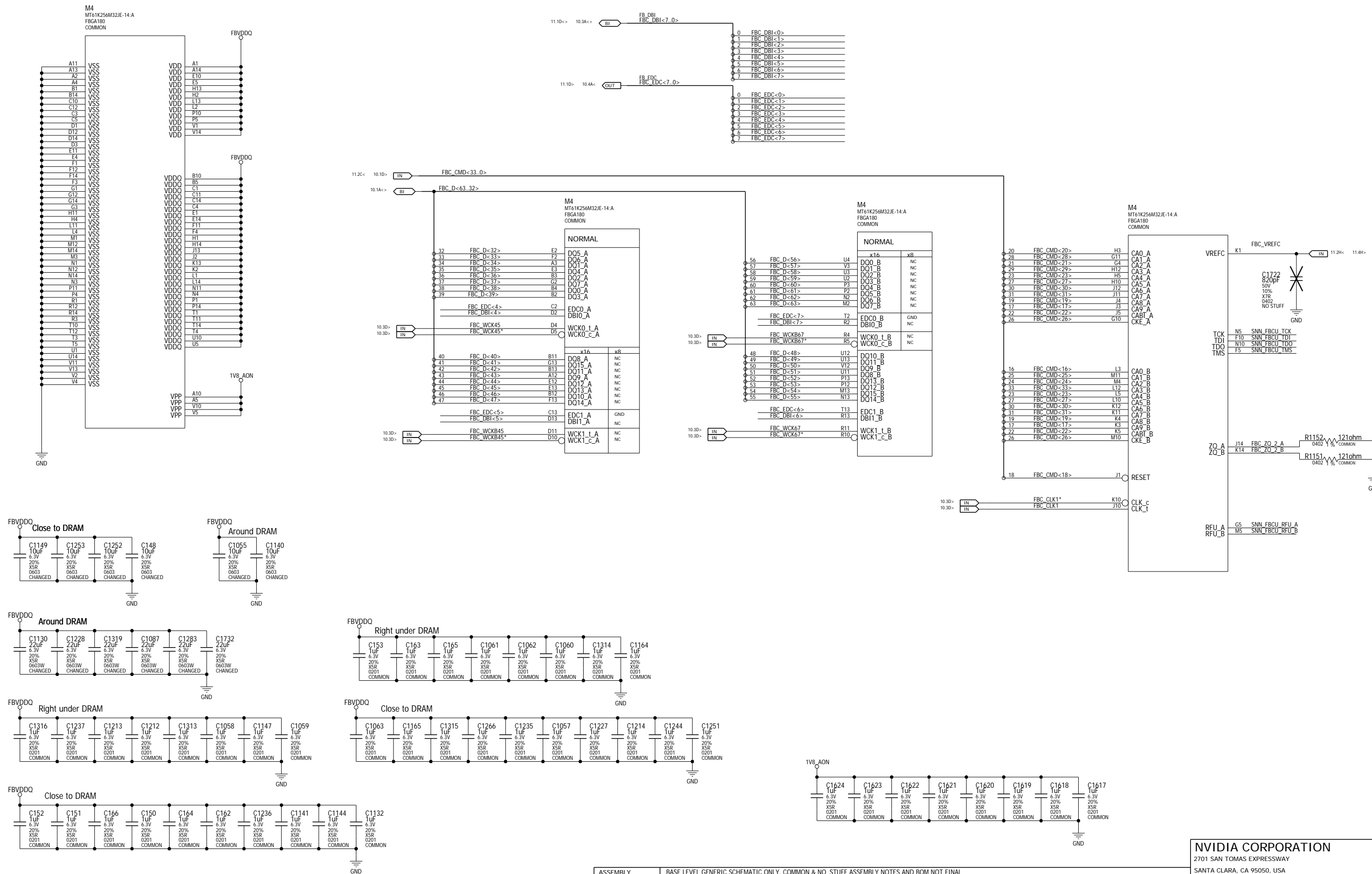
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Page12: MEMORY: FBC Partition 63..32

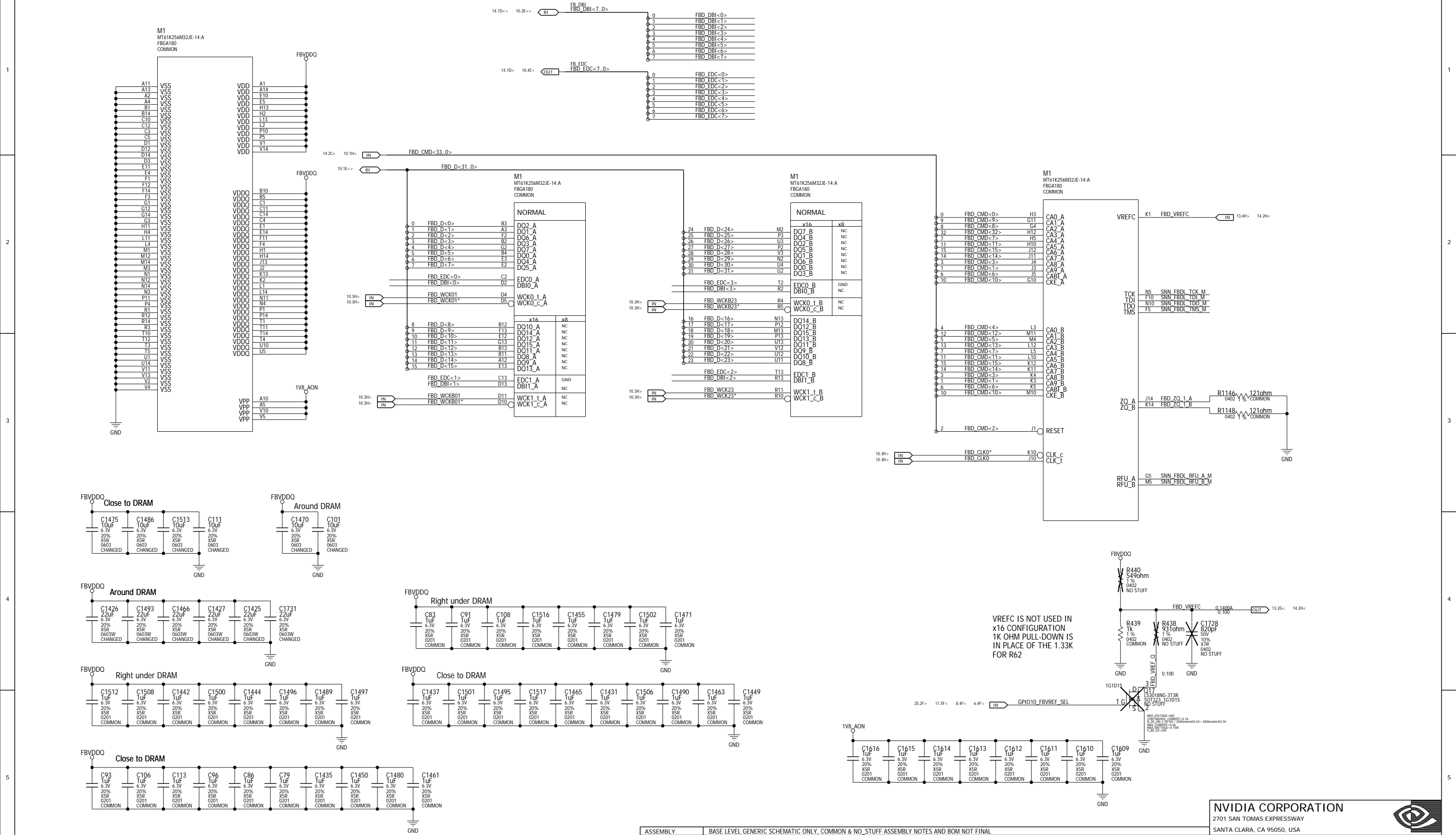


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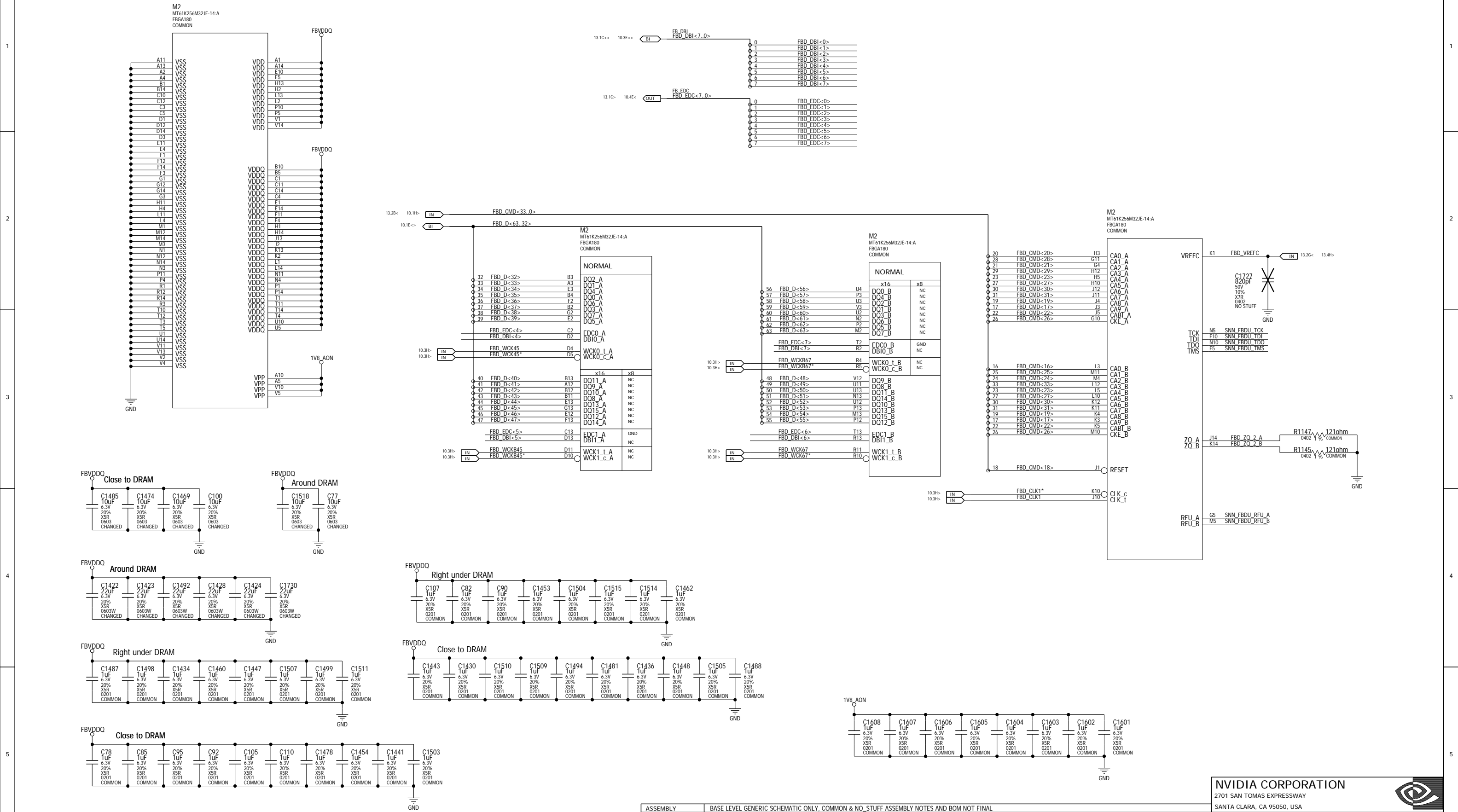
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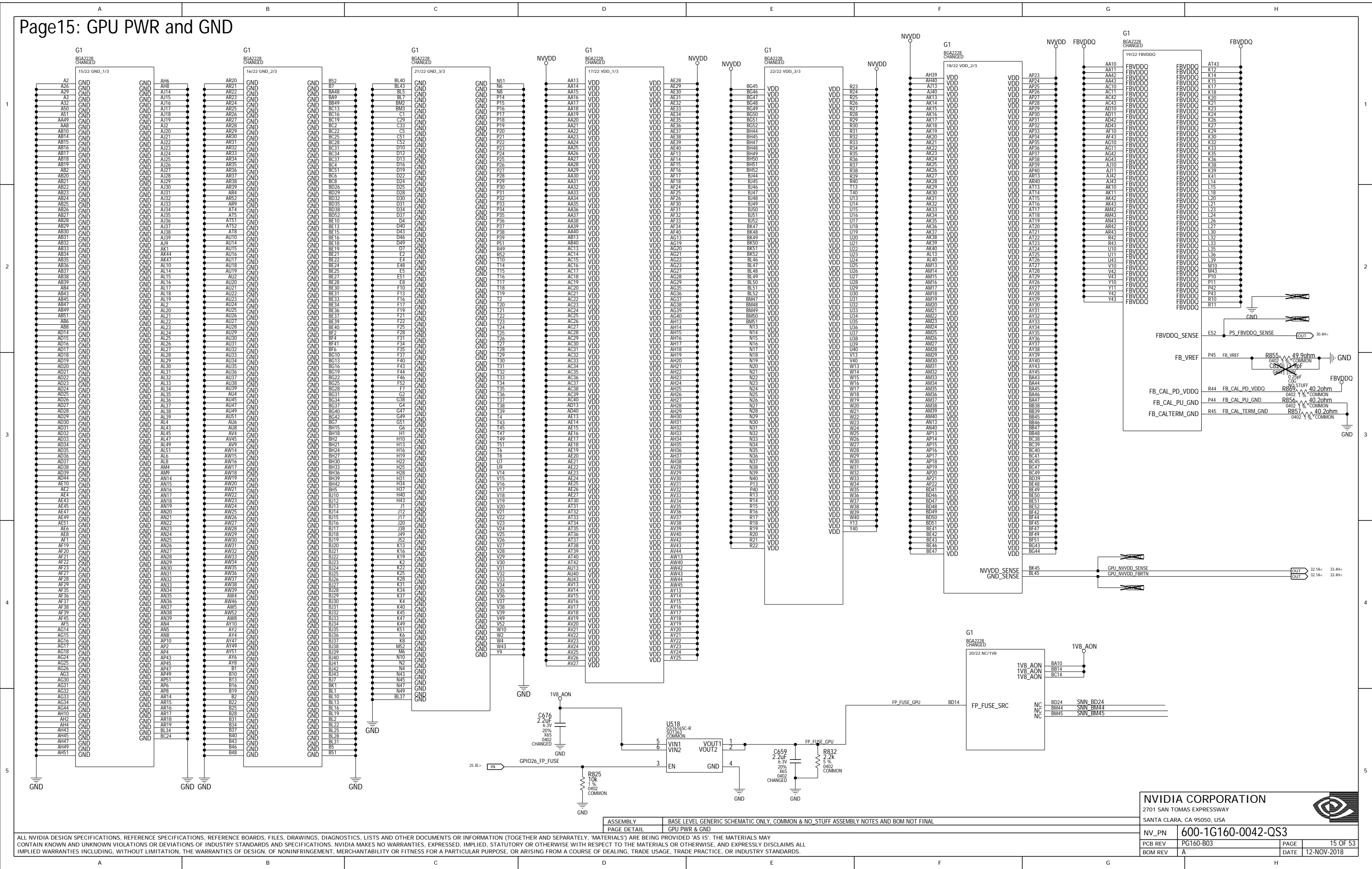
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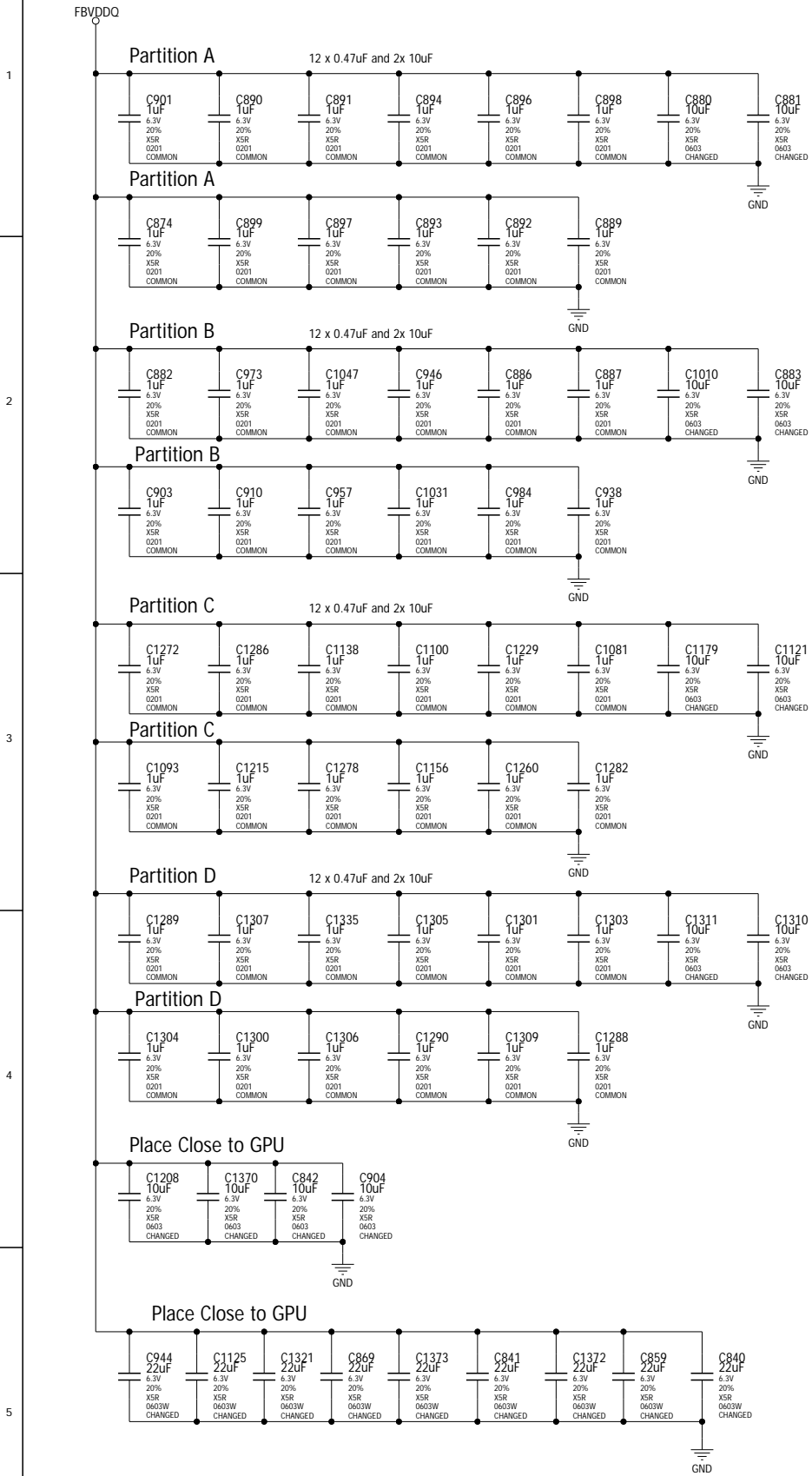
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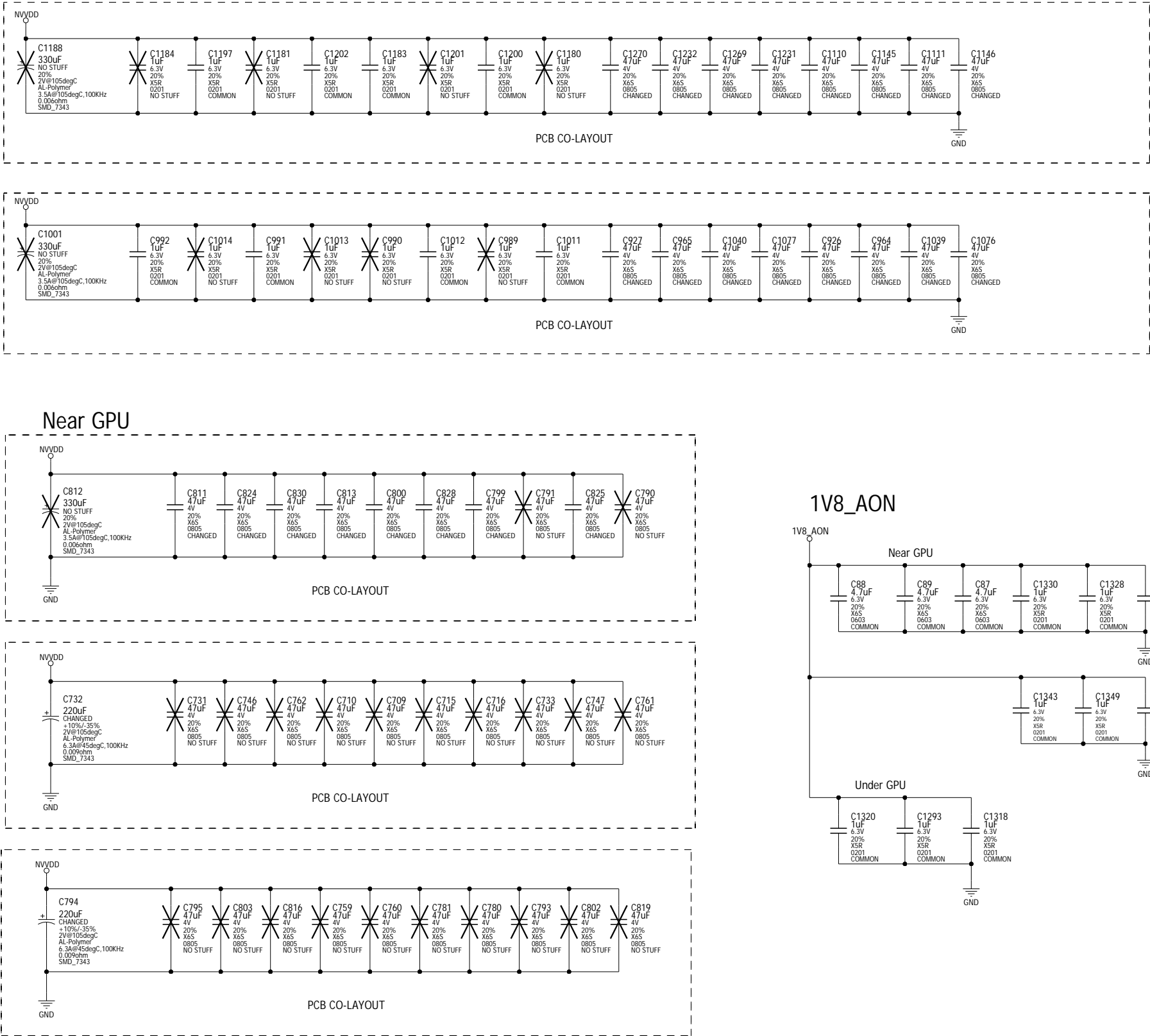
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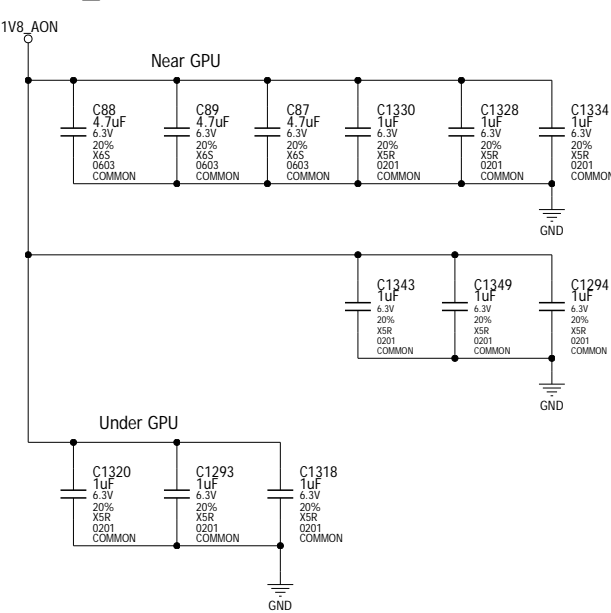
FBVDDQ



Under GPU



1V8_AON



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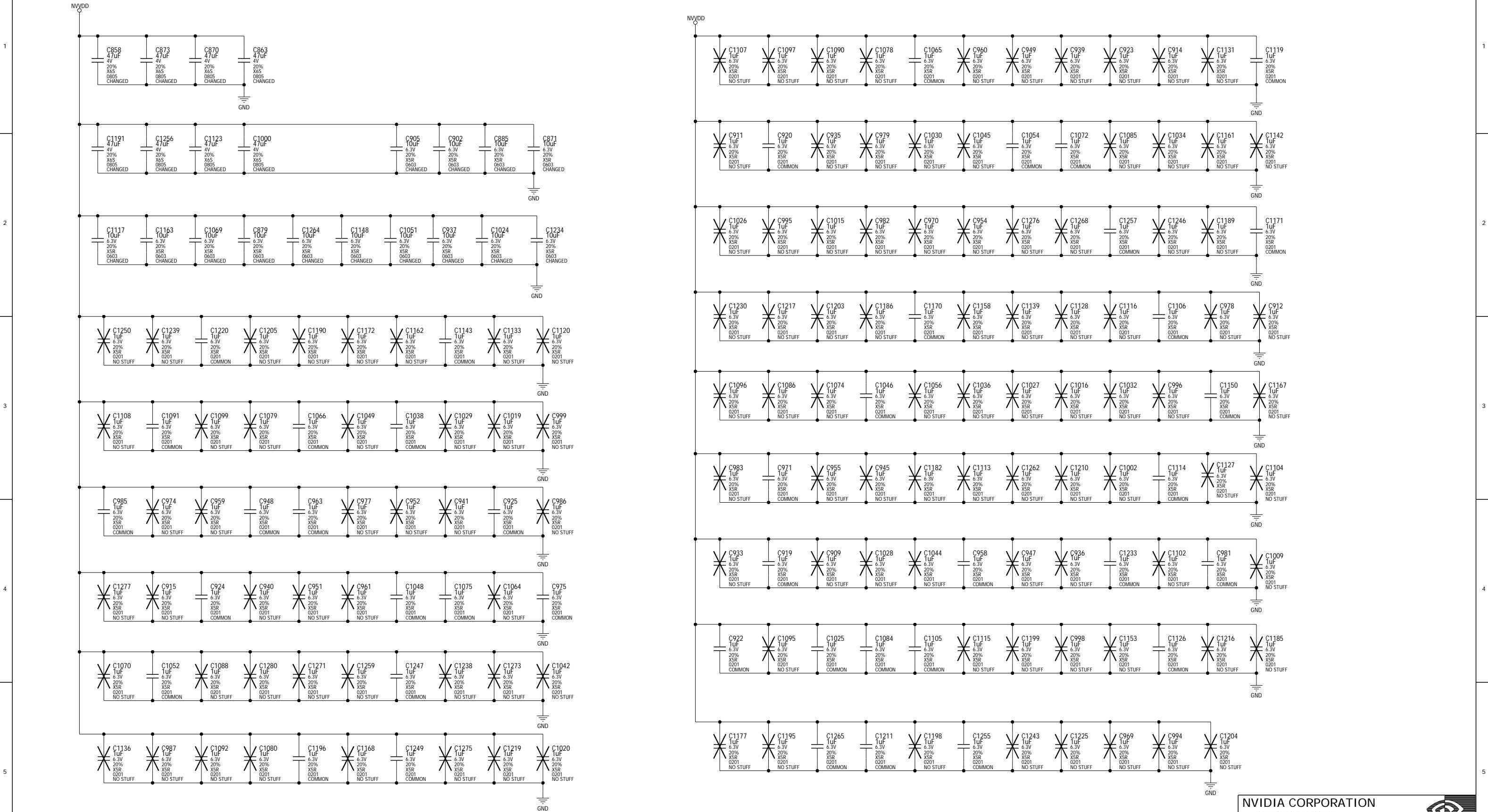
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PAGE DETAIL	GPU Decoupling

Page17: GPU Decoupling 2

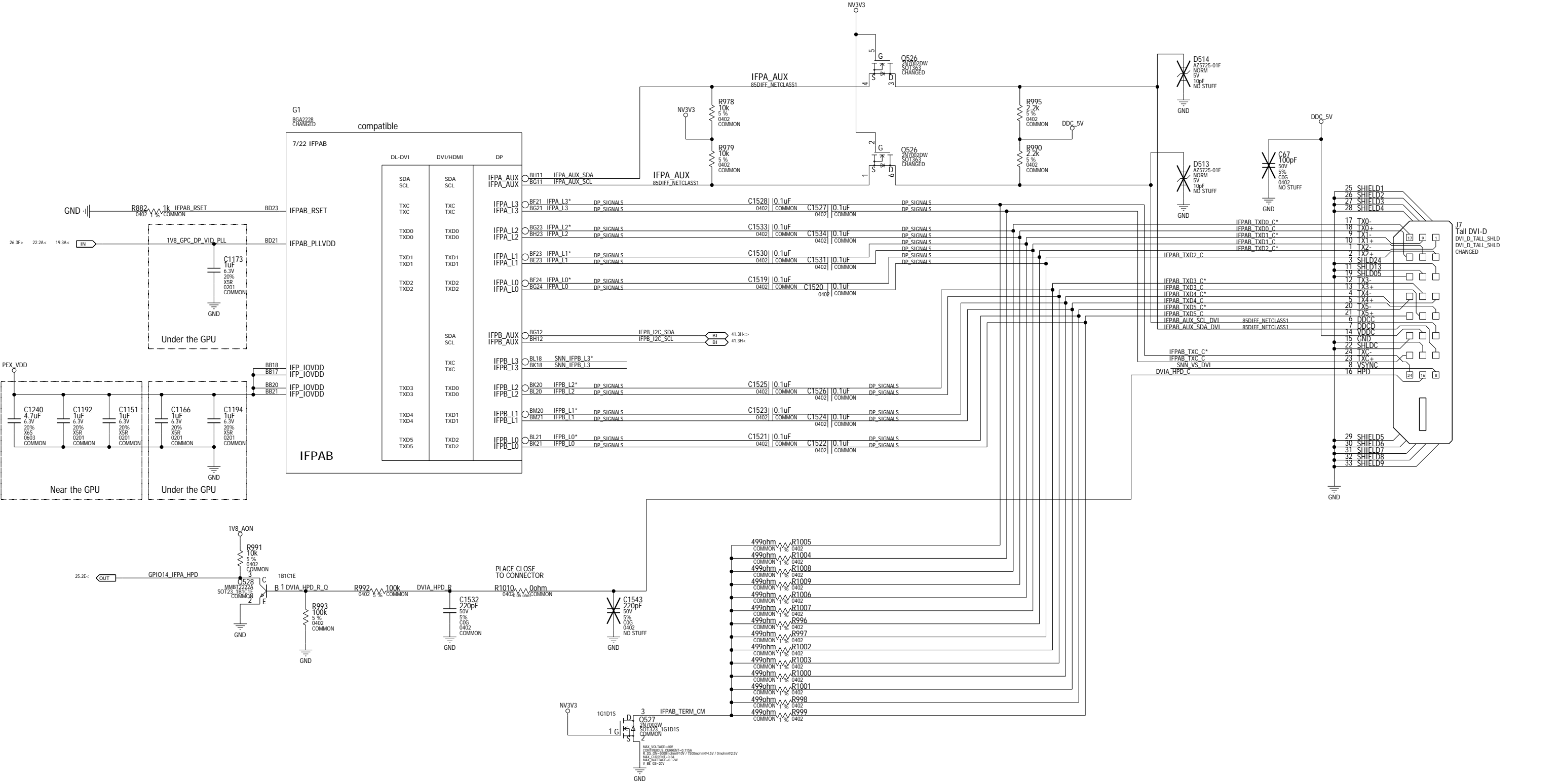
NVVDD



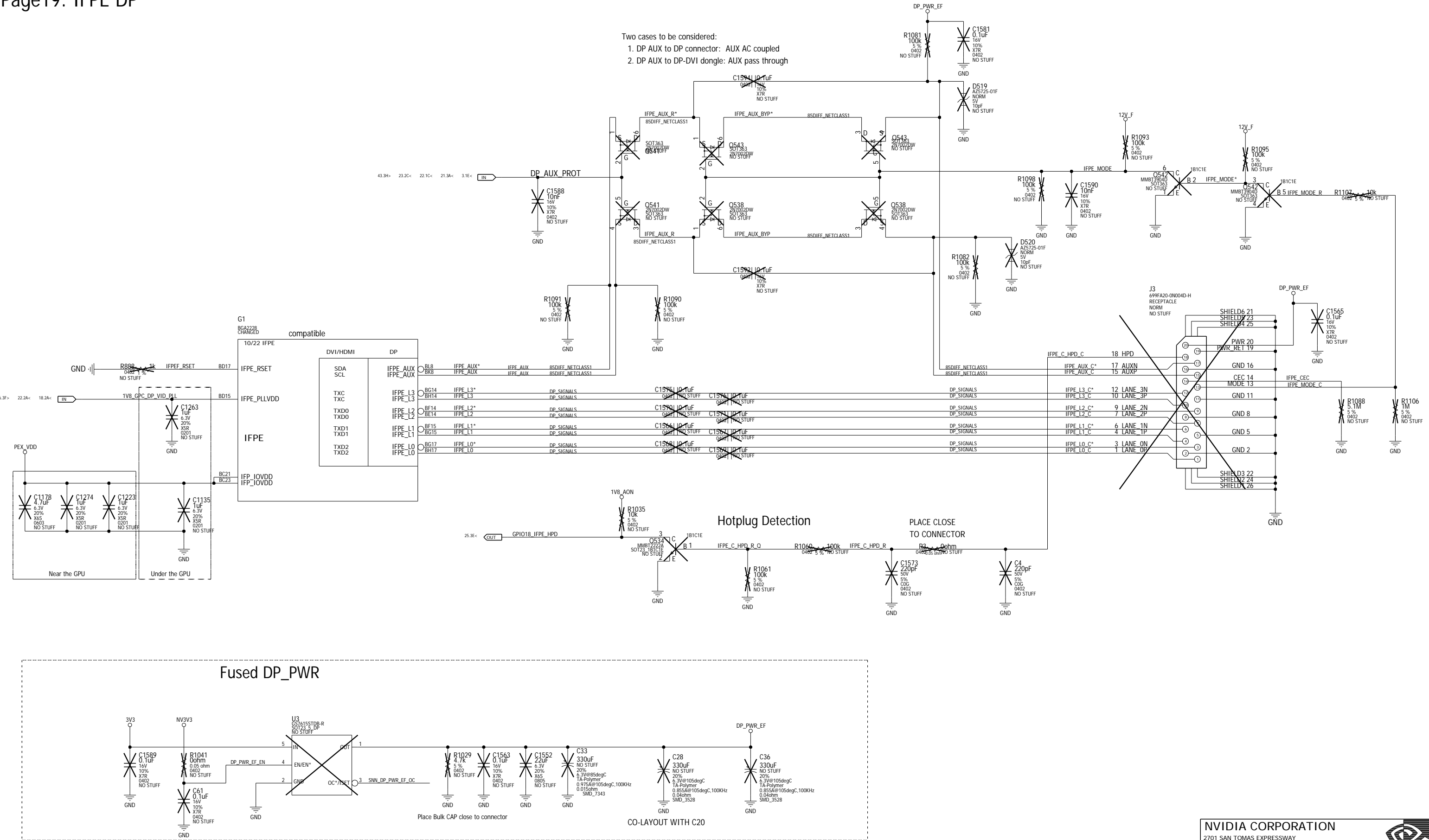
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PAGE DETAIL	GPU Decoupling2

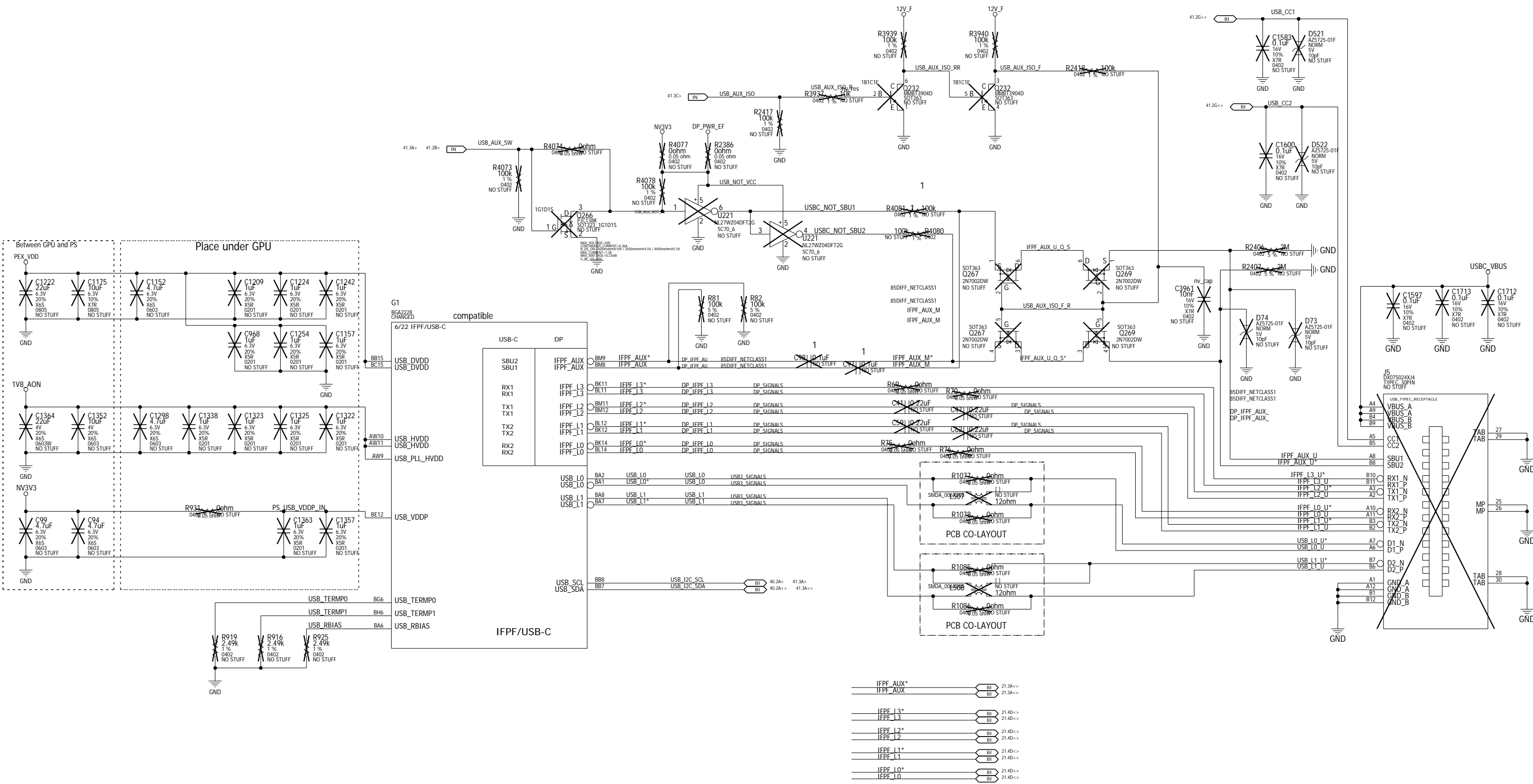
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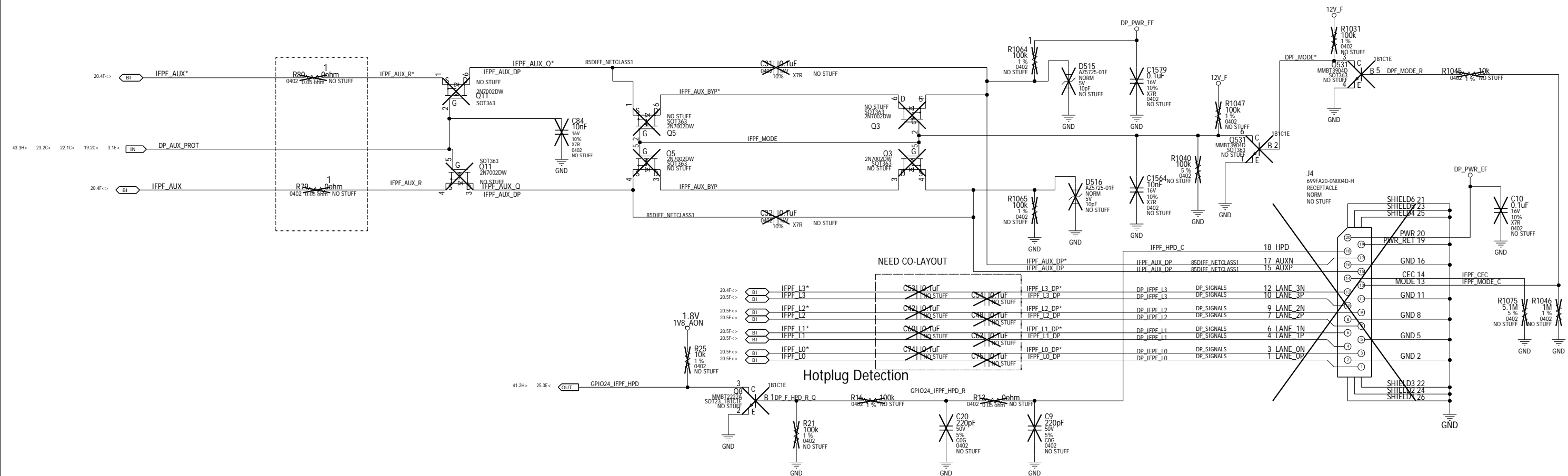


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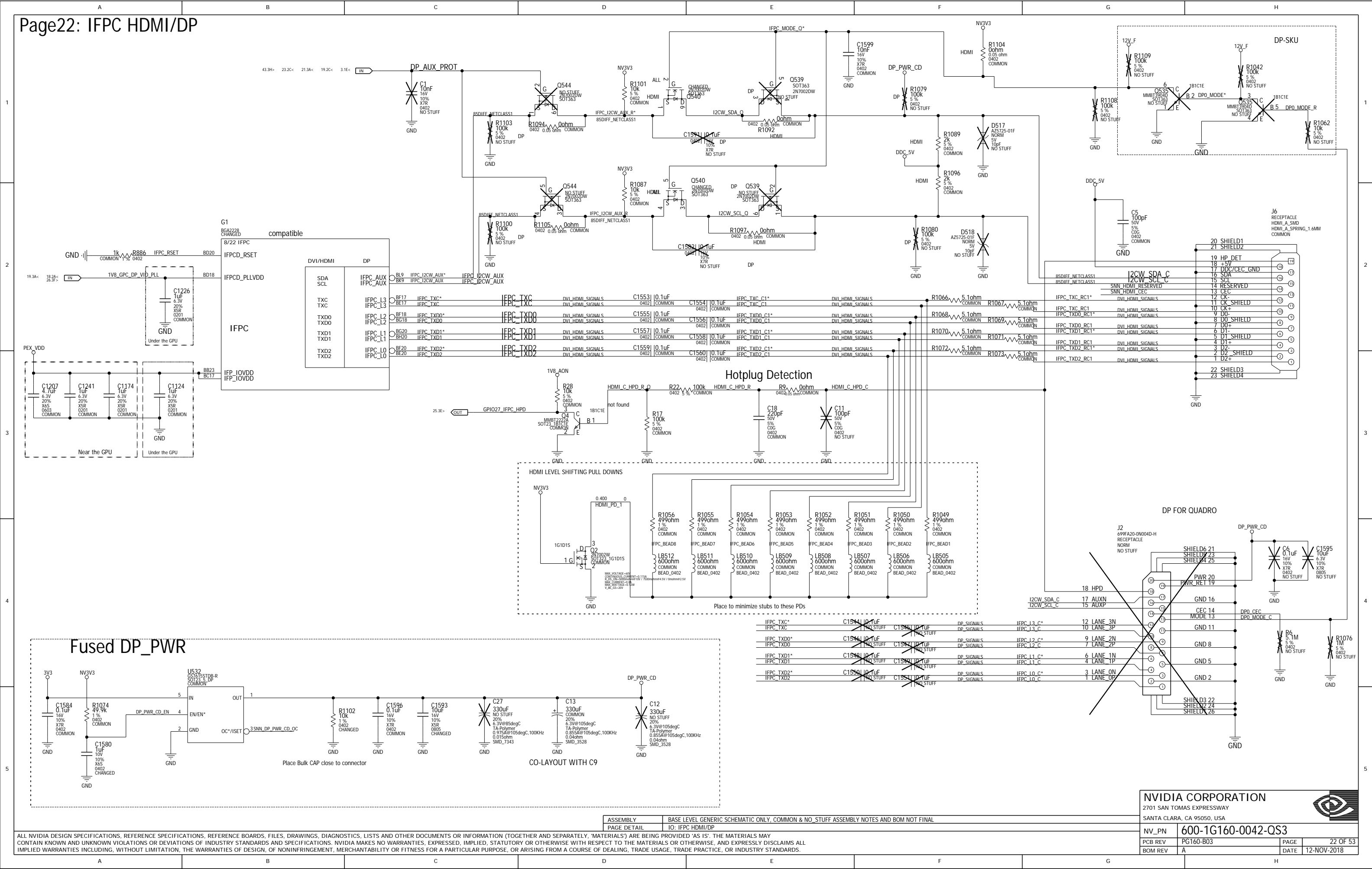
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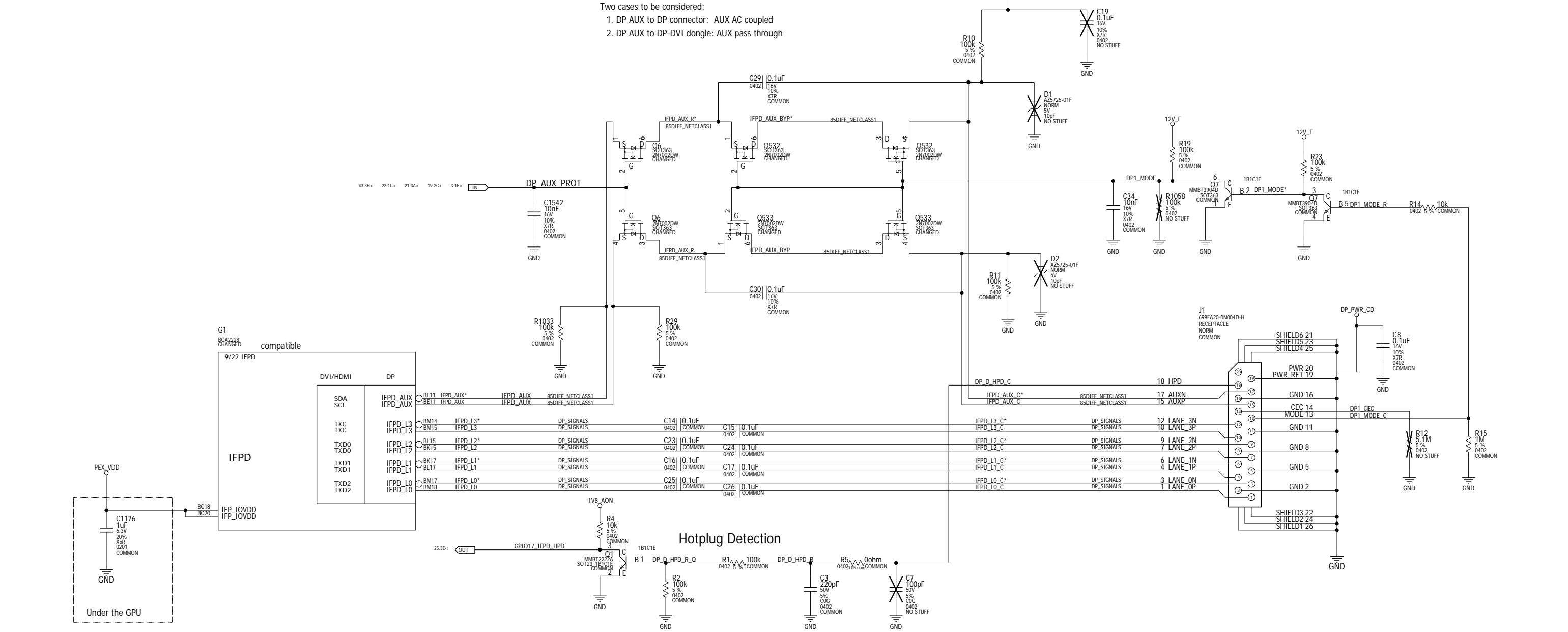


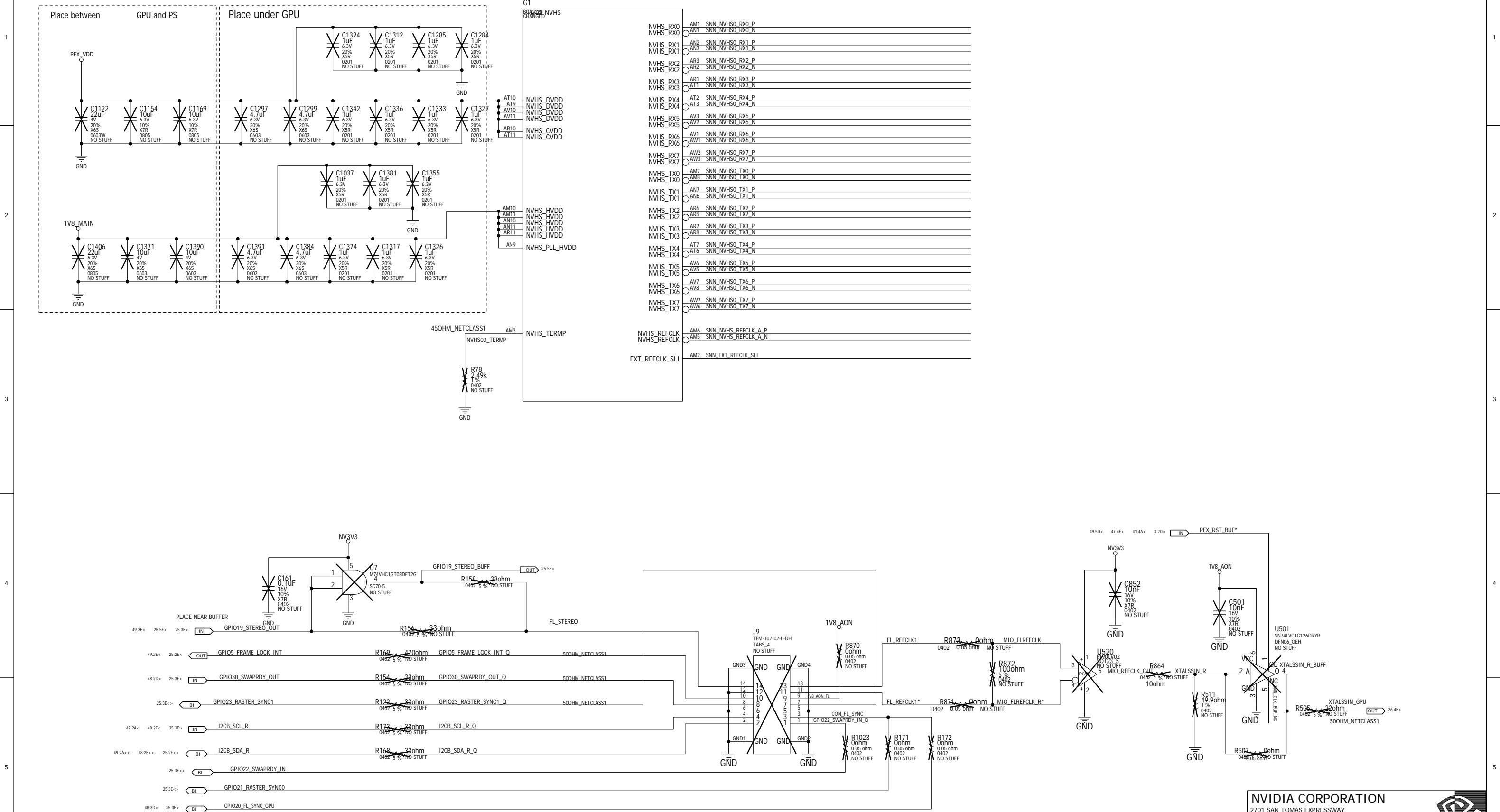
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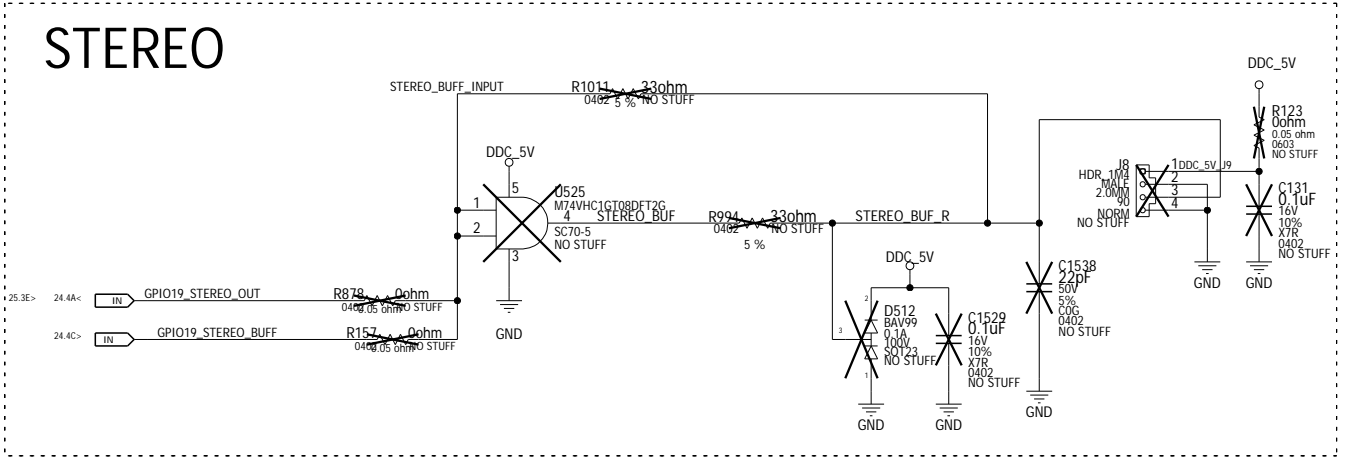
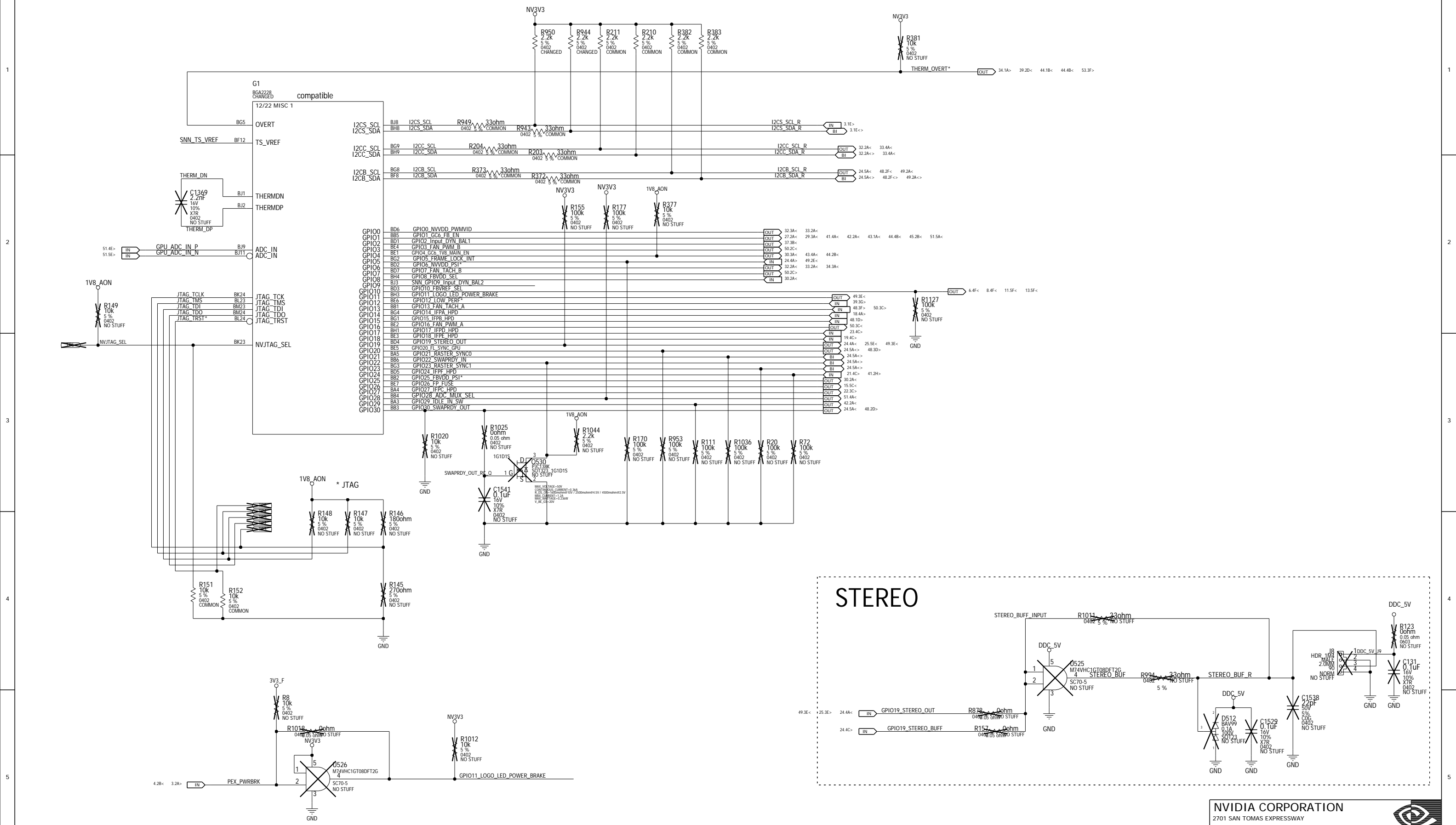


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Page26: MISC2: ROM, XTAL, Straps

STRAP2	STRAP1	STRAP0	RAMCFG[4:0]
L	L	L	00000
L	L	H	00001
L	H	L	00010
L	H	H	00011
H	H	L	00110
H	H	H	00111
L	L	M	01000

RAMCFG[4:0]	DENSITY	WIDTH	VENDOR	DIE
00000	8Gb	256-bit	Samsung	C
00001	8Gb	256-bit	Micron	A
00010	8Gb	256-bit	Hynix	M
00011	8Gb	256-bit	Samsung	C
00100	8Gb	256-bit	Micron	A
00101	8Gb	256-bit	Hynix	M
00110	16Gb	256-bit	Samsung	M
00111				

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

STRAP5	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	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

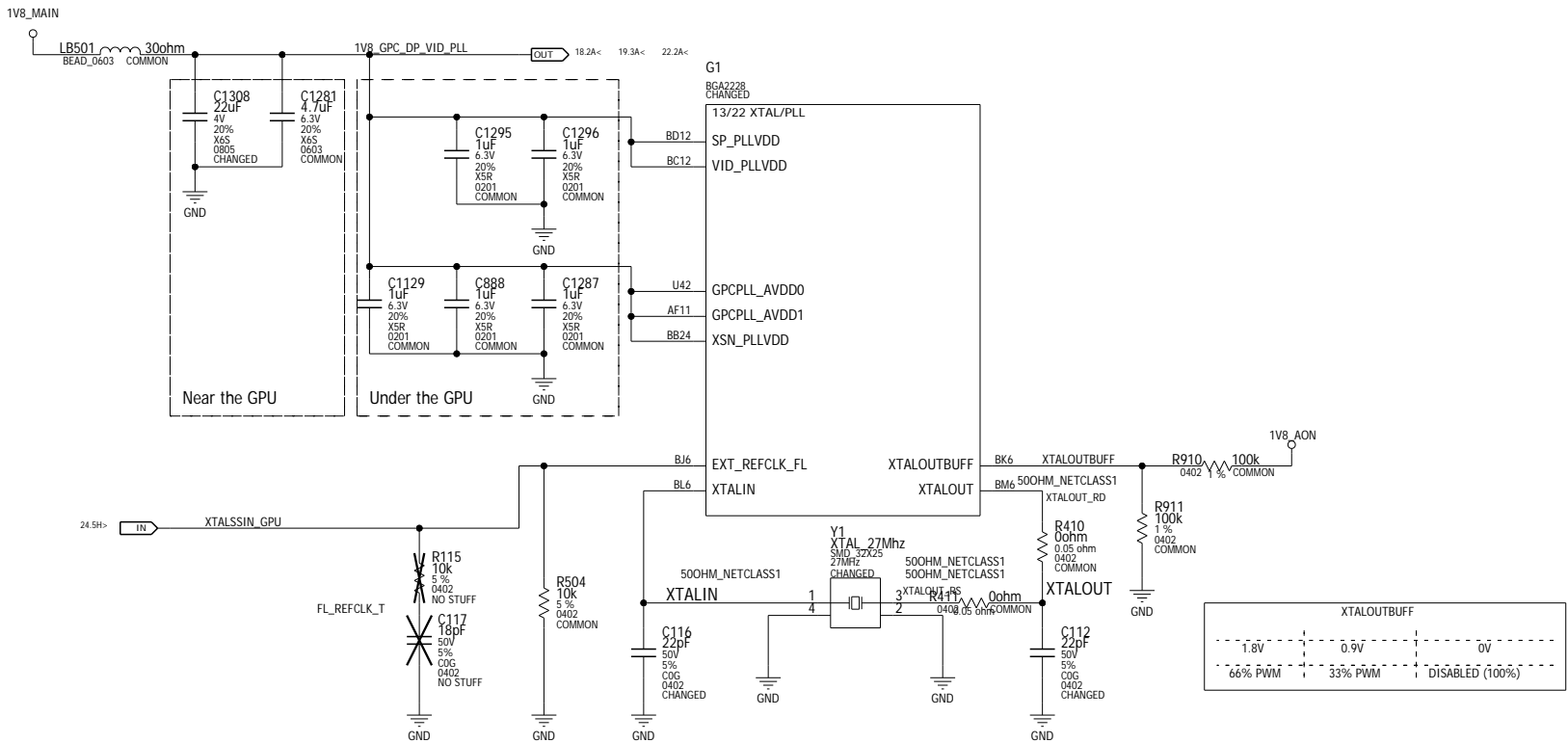
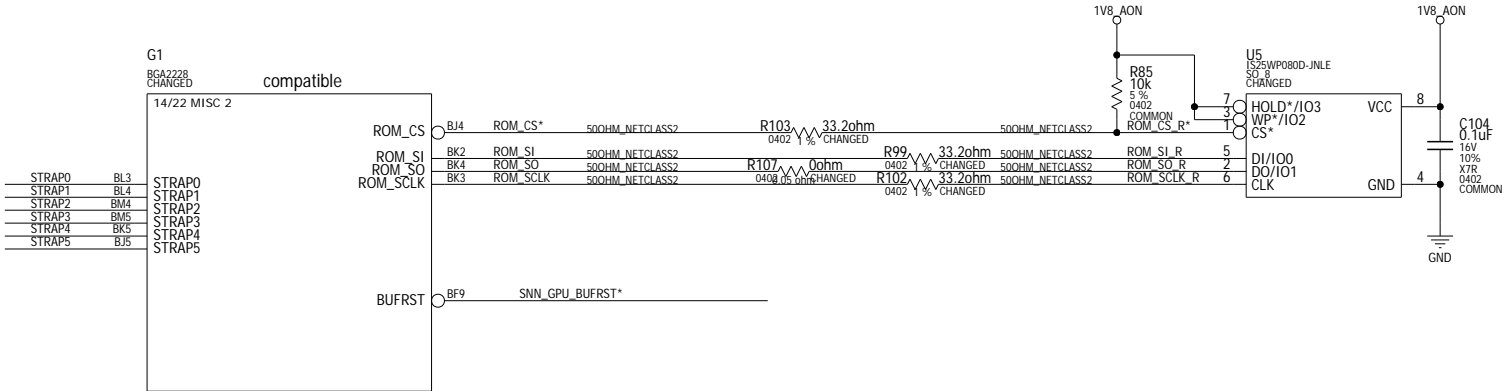
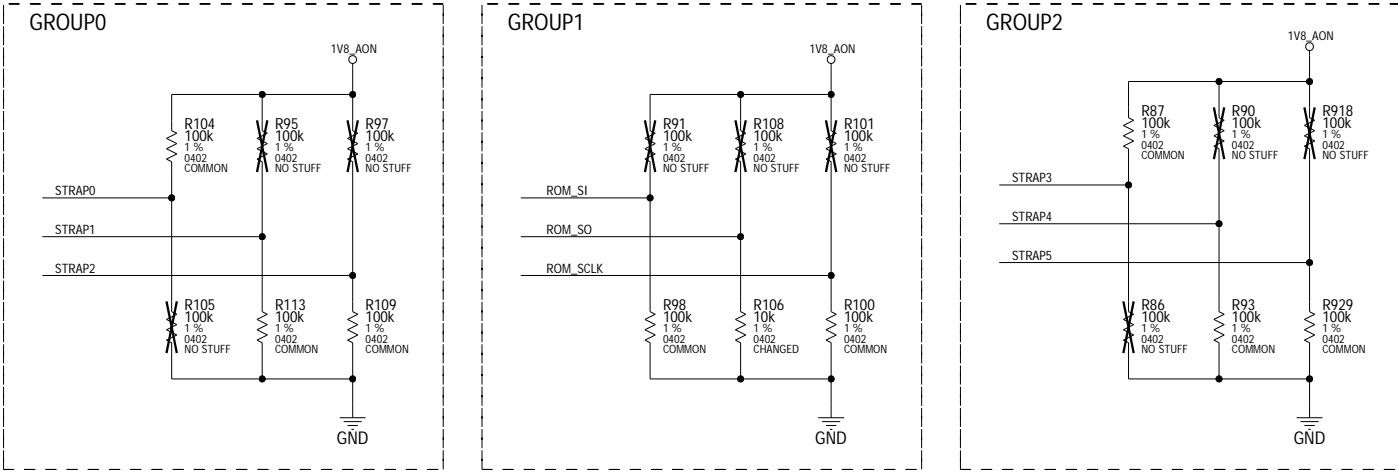
H=High :Tied to 1.8V
M=Middle:Tied to 0.9V
L=Low :Tied to 0V

1:SMB_ALT_ADDR ENABLE
0:SMB_ALT_ADDR DISABLE

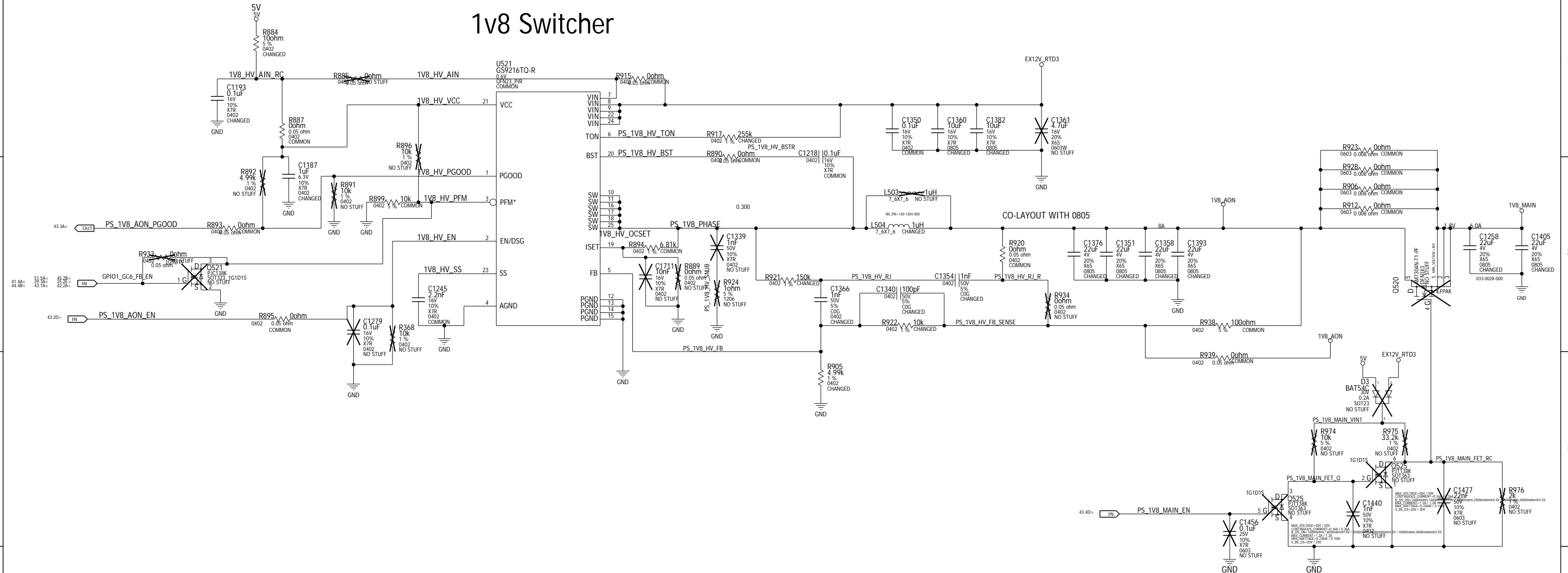
1:DEVID_SEL REBRAND
0:DEVID_SEL ORIGINAL

1:PCIE_CFG LOW POWER
0:PCIE_CFG HIGH POWER

1:VGA_DEVICE ENABLE
0:VGA_DEVICE DISABLE



1v8 Switcher



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	PS: 1V8_PLL, 1V8_AON

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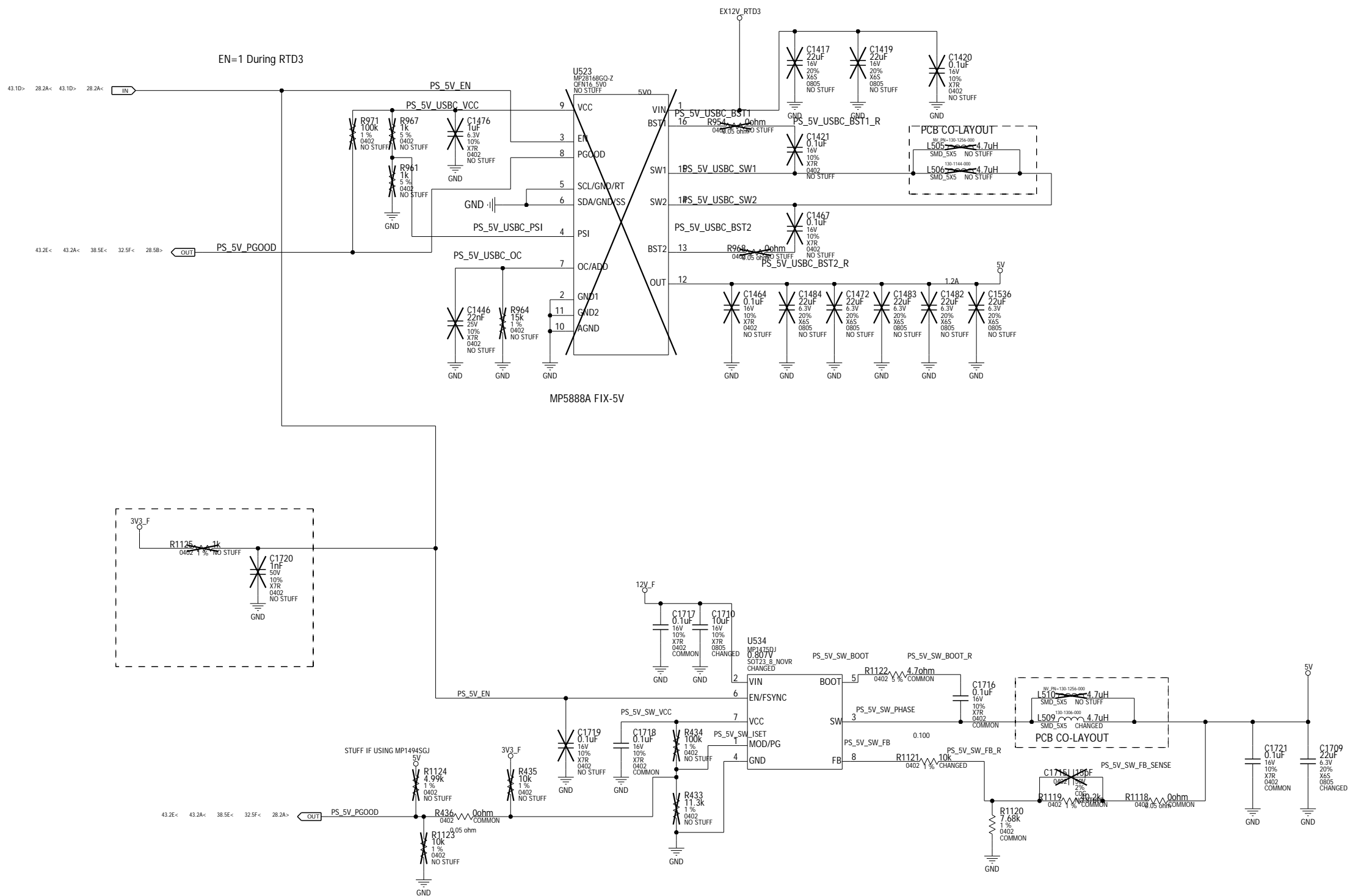
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NV PN	600-1G160-0042-OS3
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PCB REV	PG160-B03	PAGE	27 OF 53
BOM REV	A	DATE	12-NOV-2018

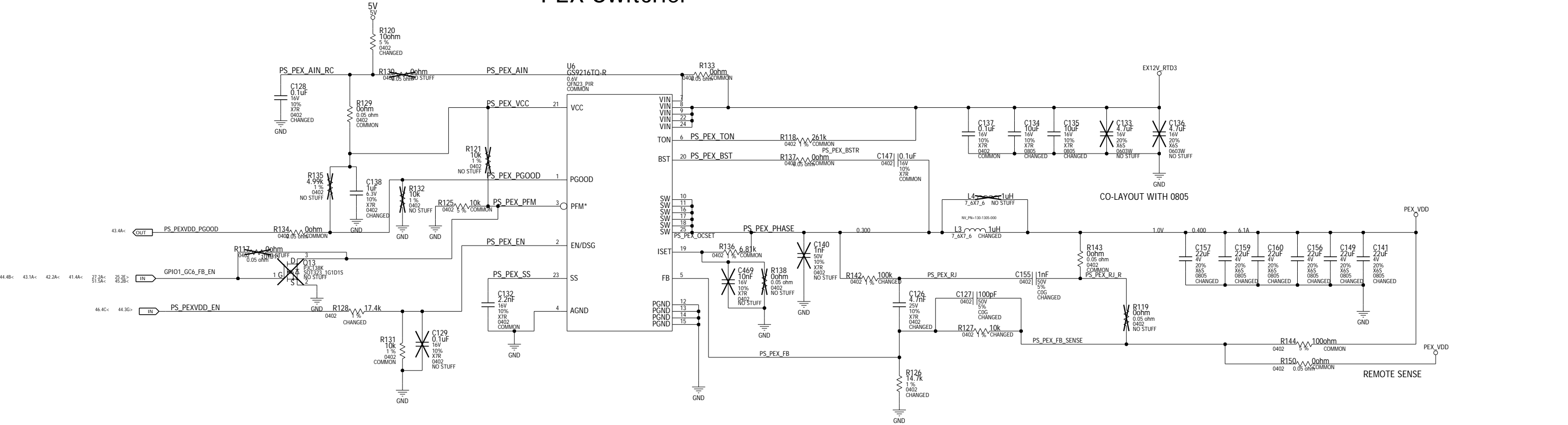




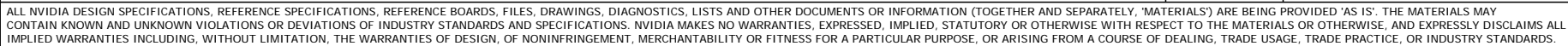
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NV_PN		600-1G160-0042-QS3		
PCB REV		PG160-B03		PAGE 28 OF 53
BOM REV		A		DATE 12-NOV-2018

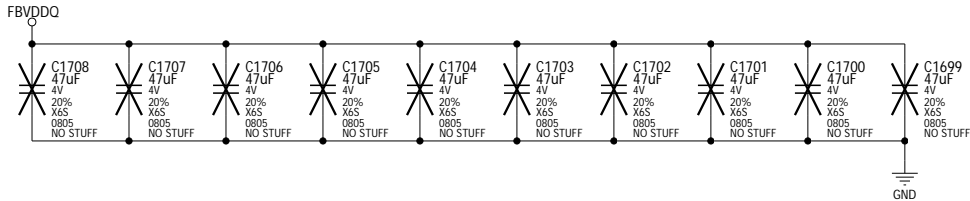
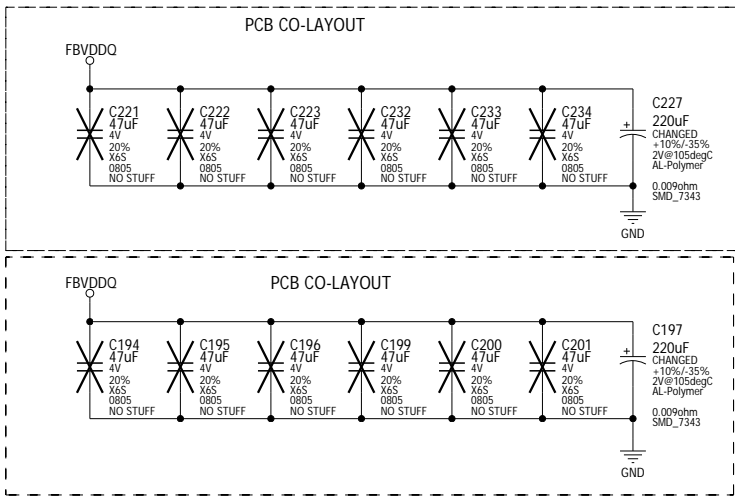
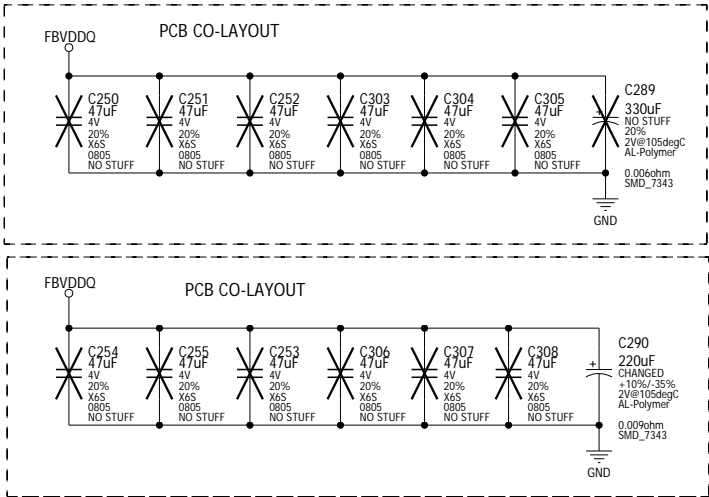
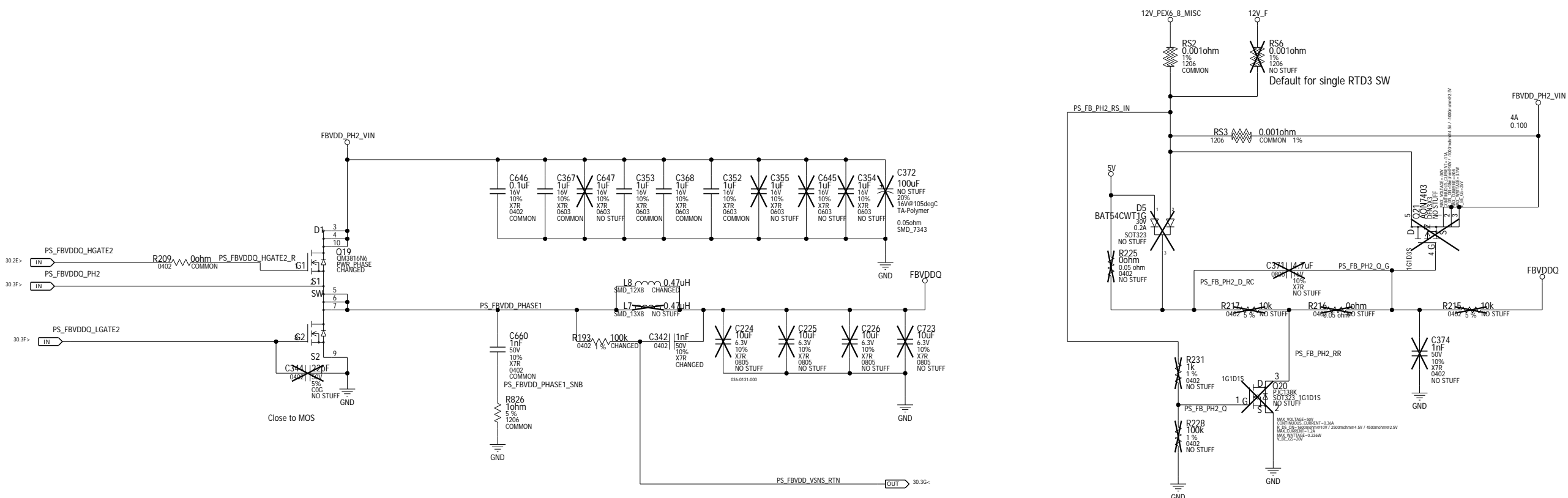
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PEX Switcher

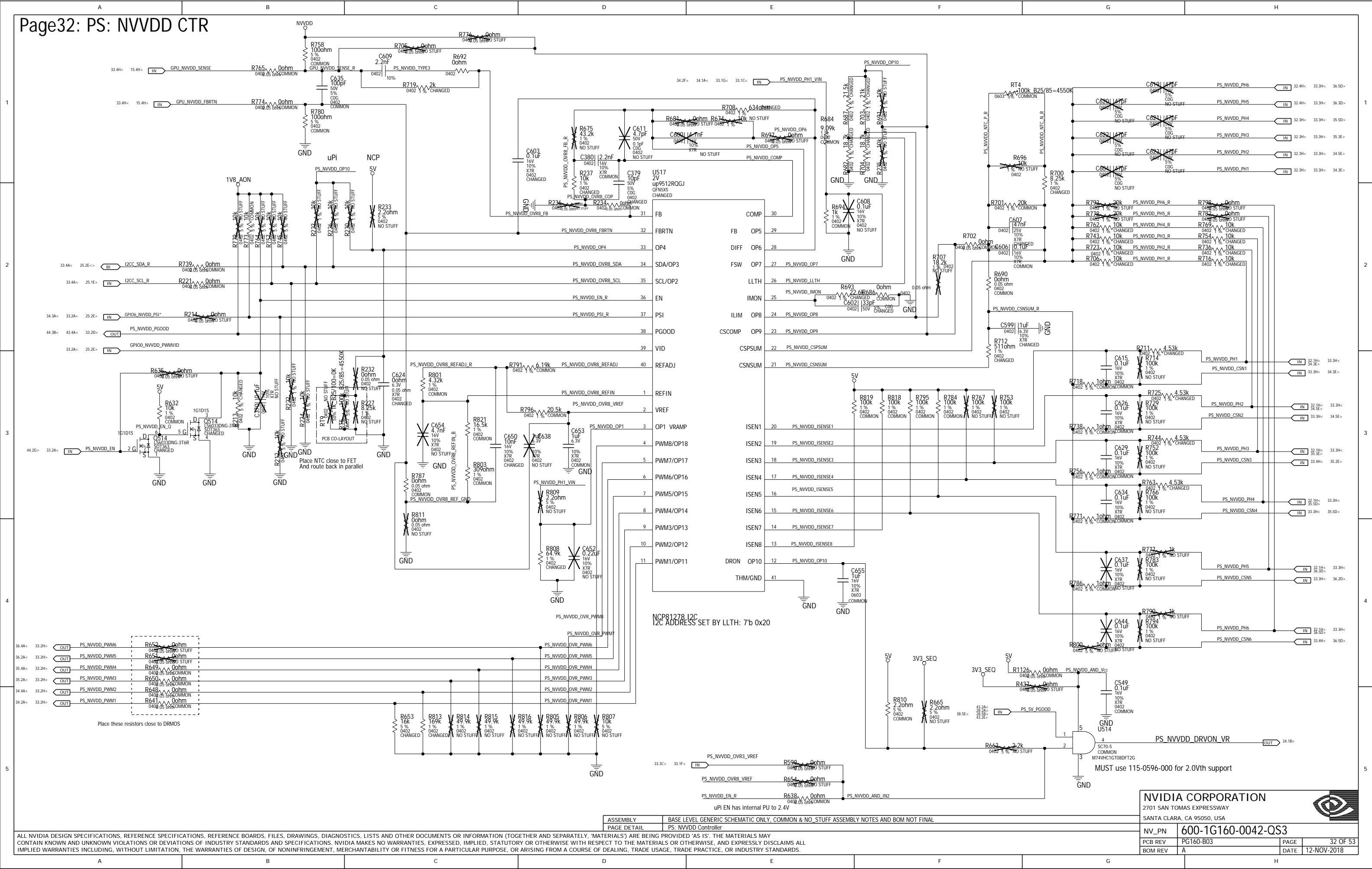


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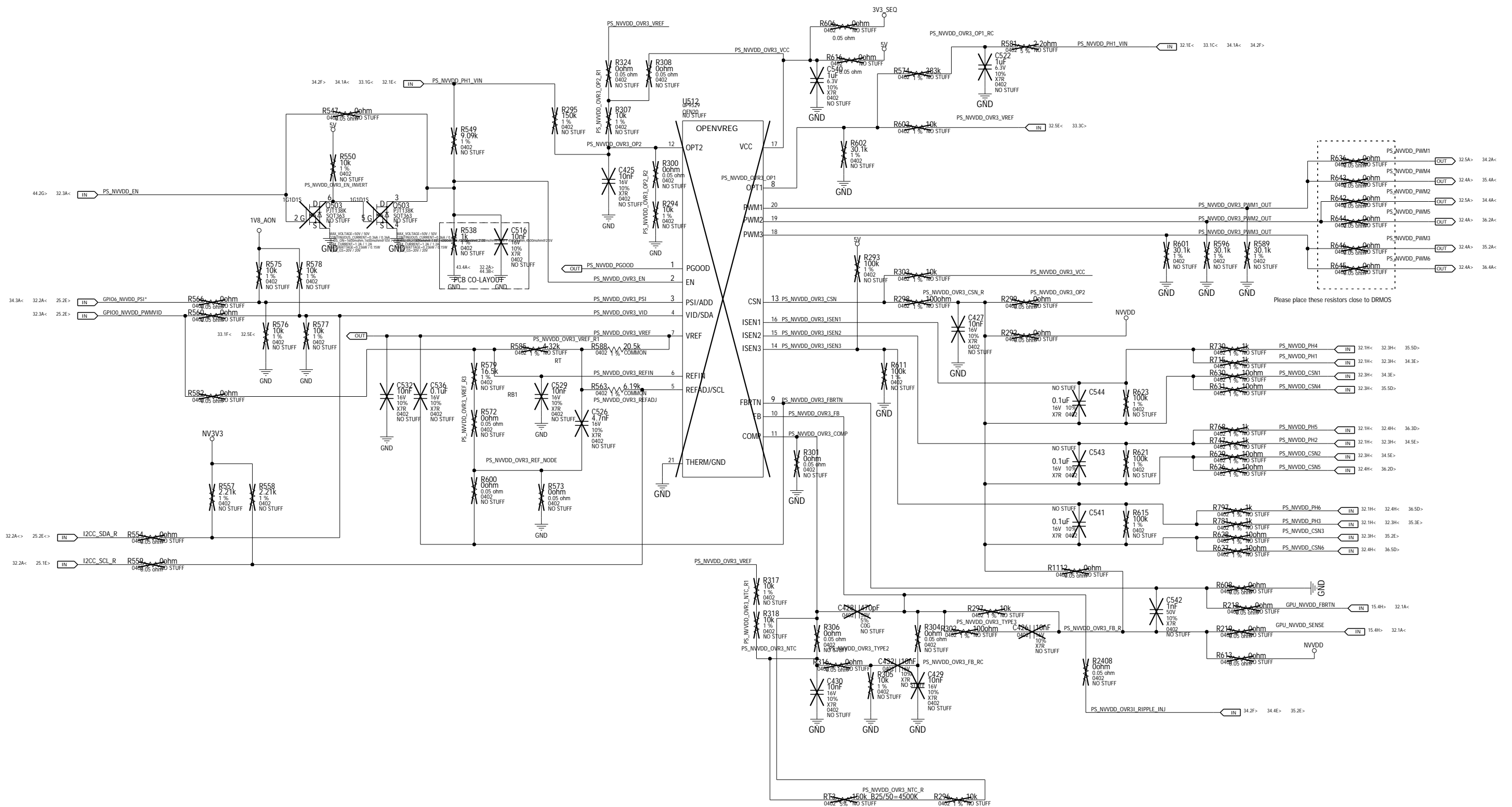
NV_PN 600-1G160-0042-QS3

PCB REV PG160-B03

BOM REV A

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DATE 12-NOV-2018



ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	PS: NVVDD Controller OVR3i

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NV_PN	600-1G160-0042-QS3
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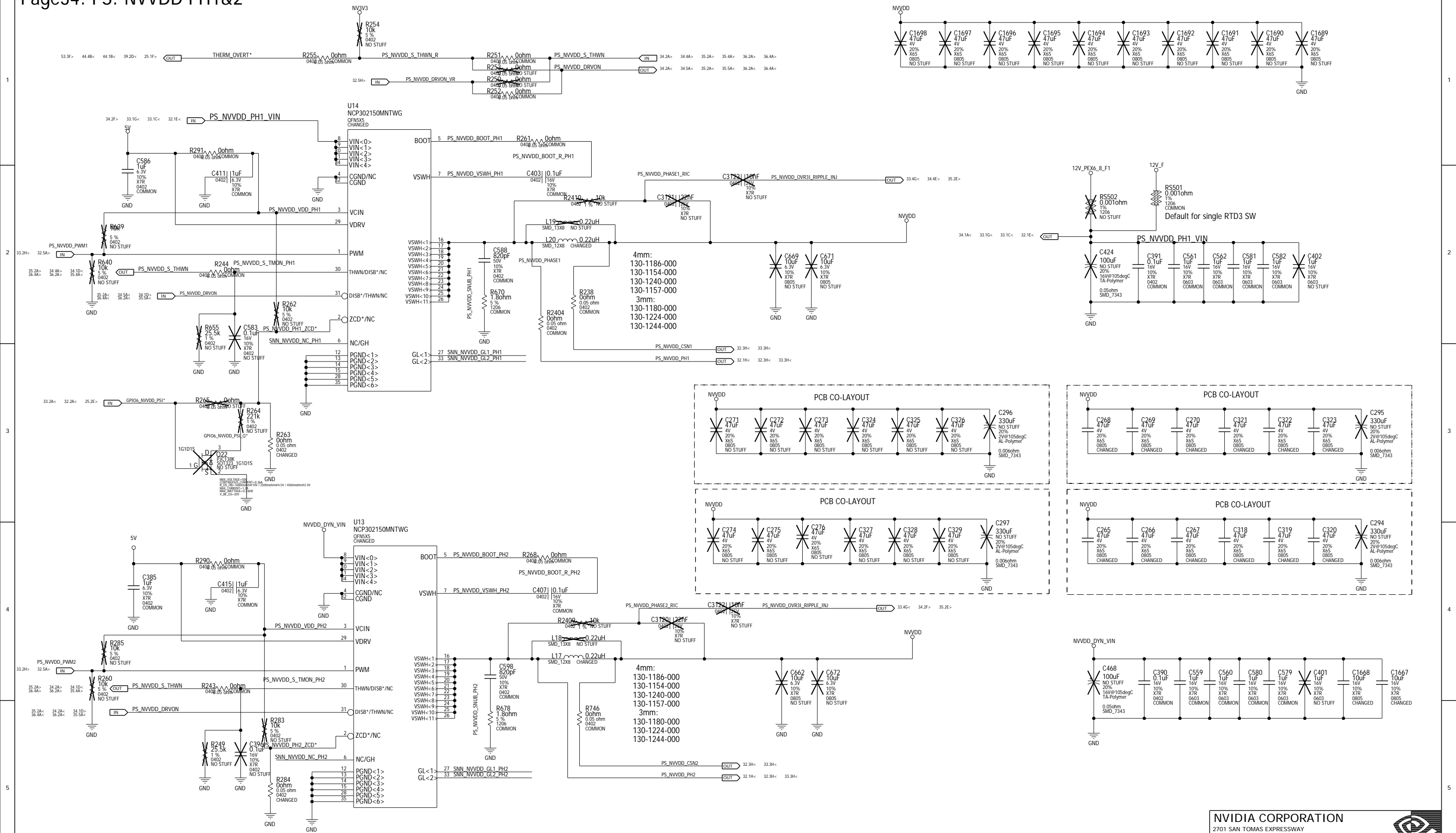
PAGE	33 OF 53
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BOM REV	A
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DATE	12-NOV-2018
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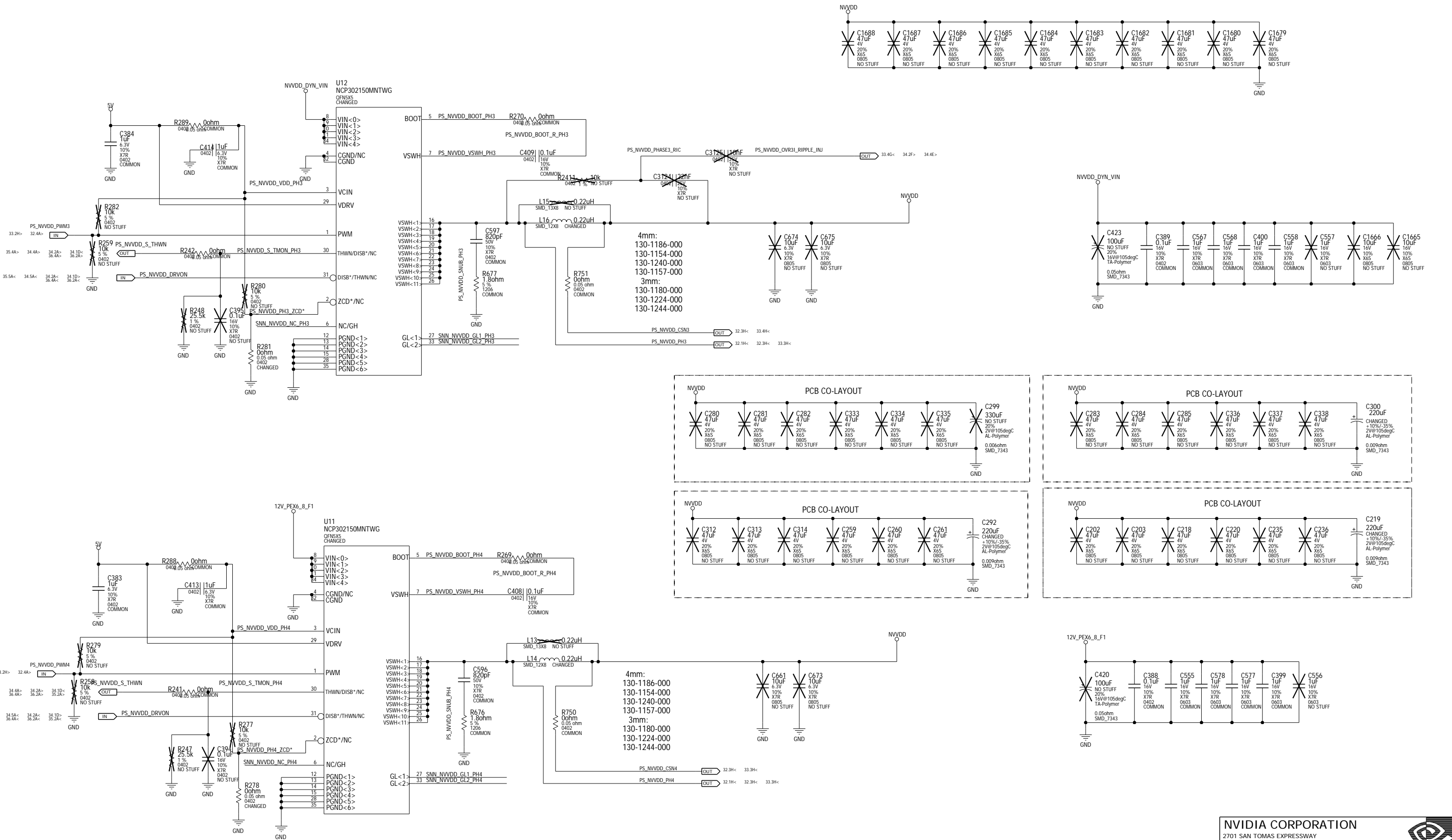
Page34: PS: NVVDD PH1&2



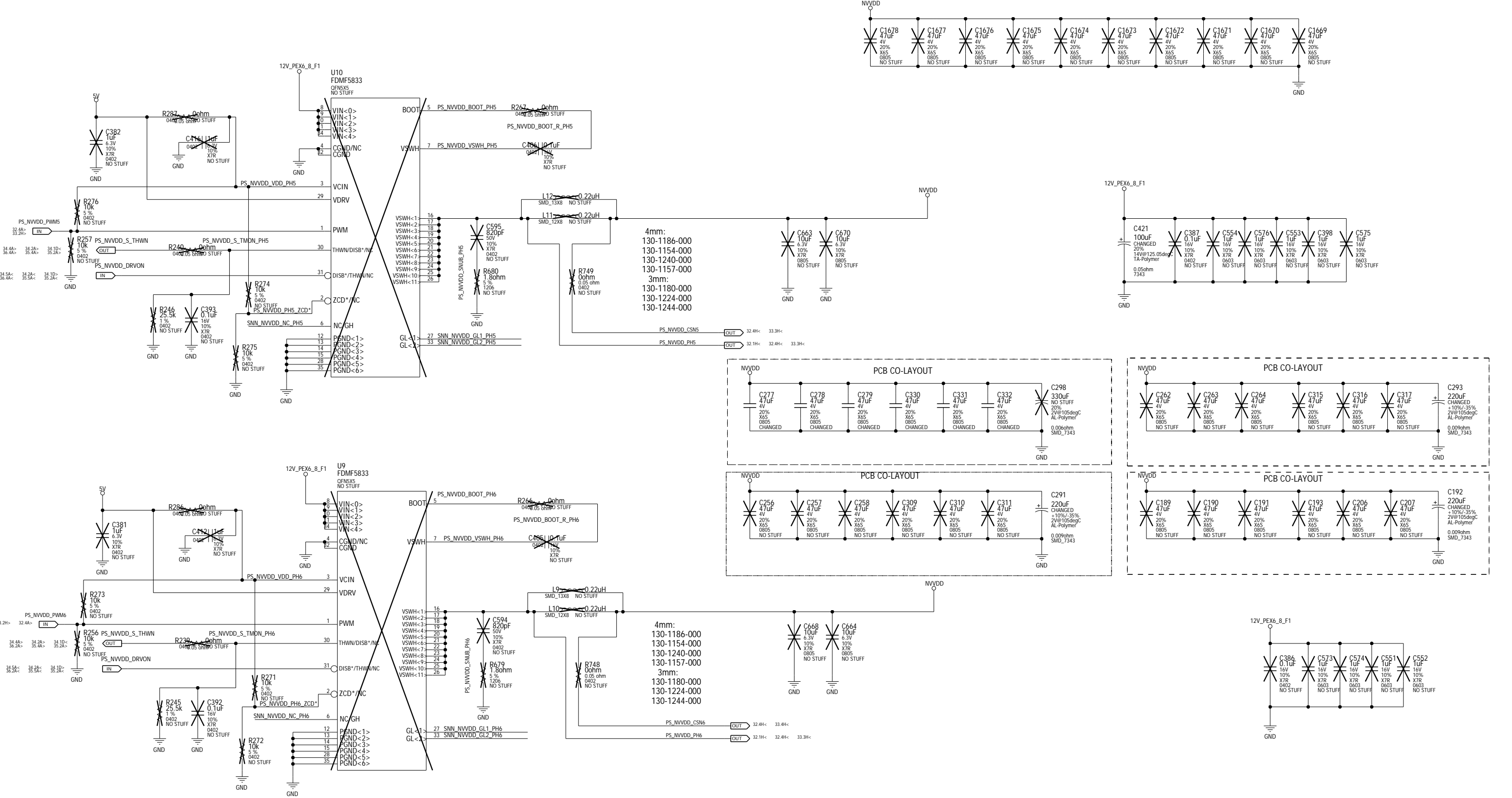
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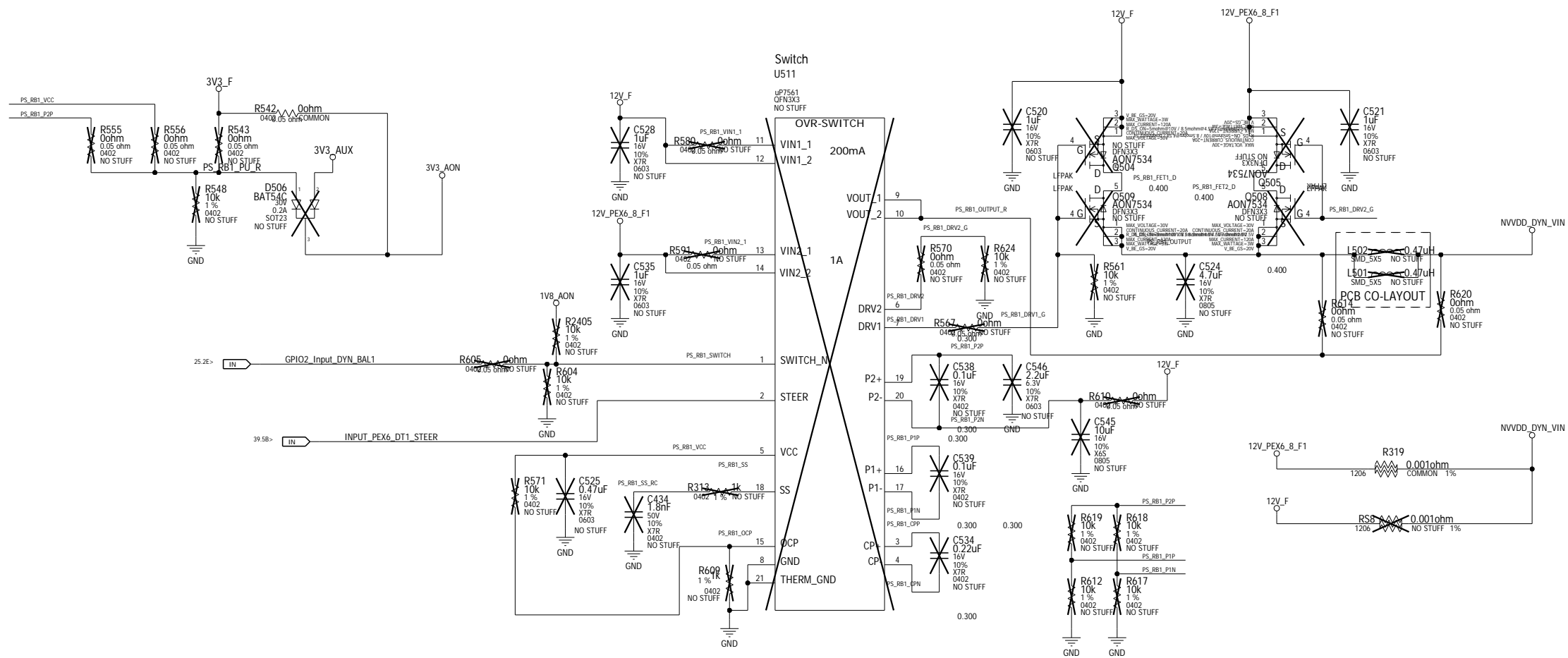
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PAGE DETAIL	PS: NVVDD Phase 1,2

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NV_PN		600-1G160-0042-QS3		
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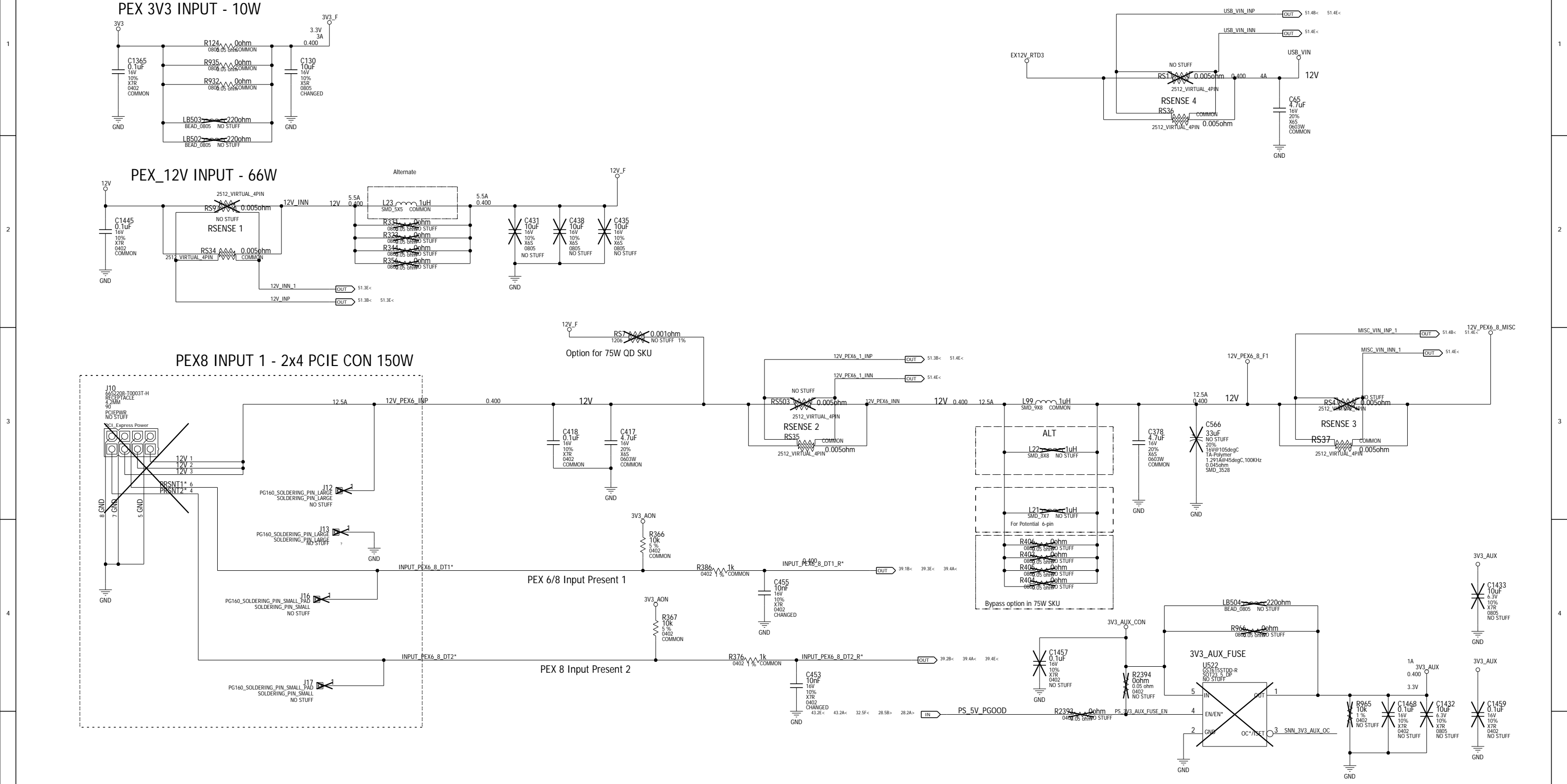




ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	PS: Input Power Balancing Switcher

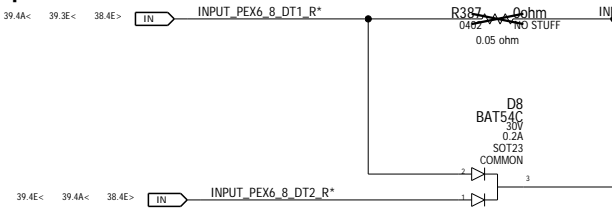
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Page38: PS: Inputs, Filtering, and Monitoring

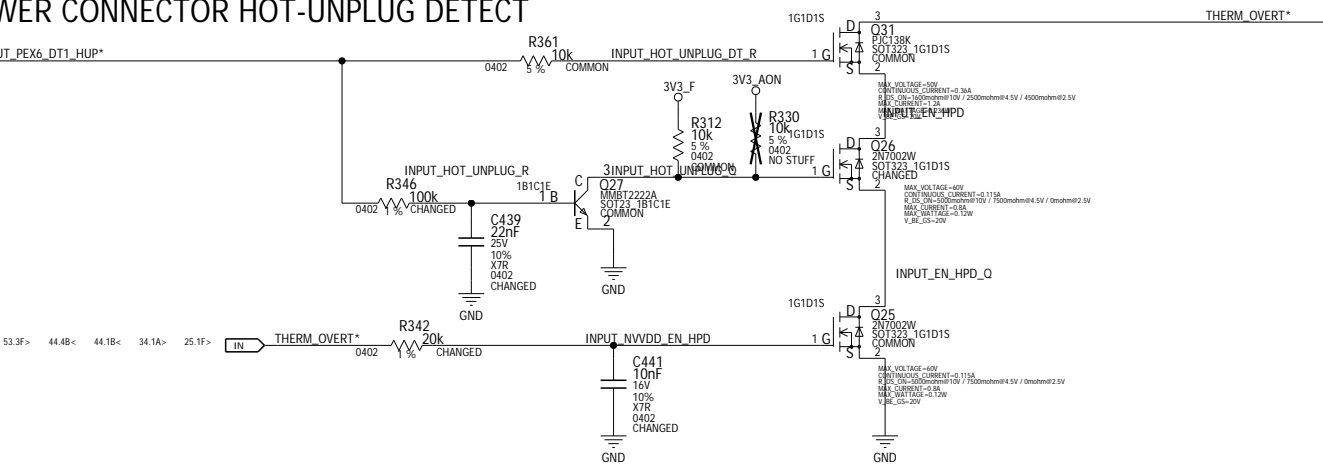


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PEX Input Present 1

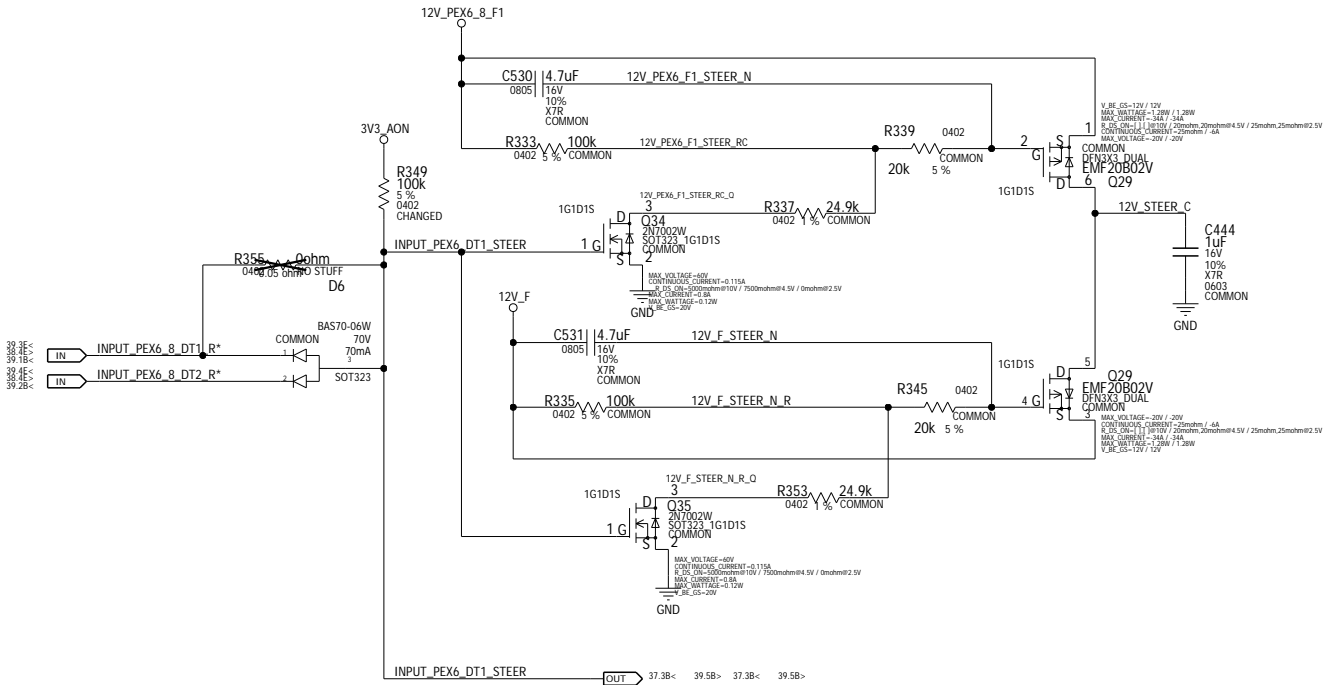


POWER CONNECTOR HOT-UNPLUG DETECT

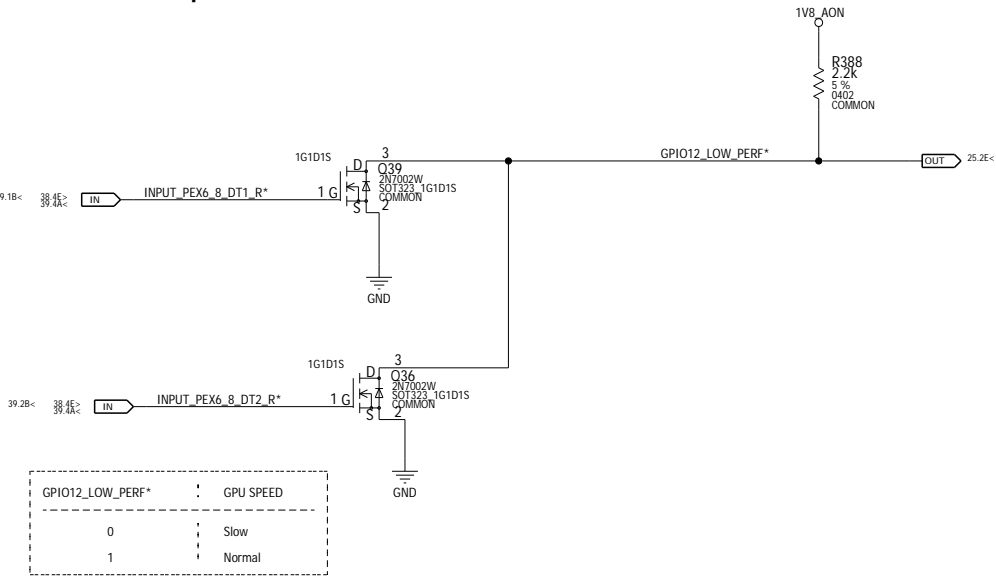


12V CURRENT STEERING (UNDER POWER BOOT):

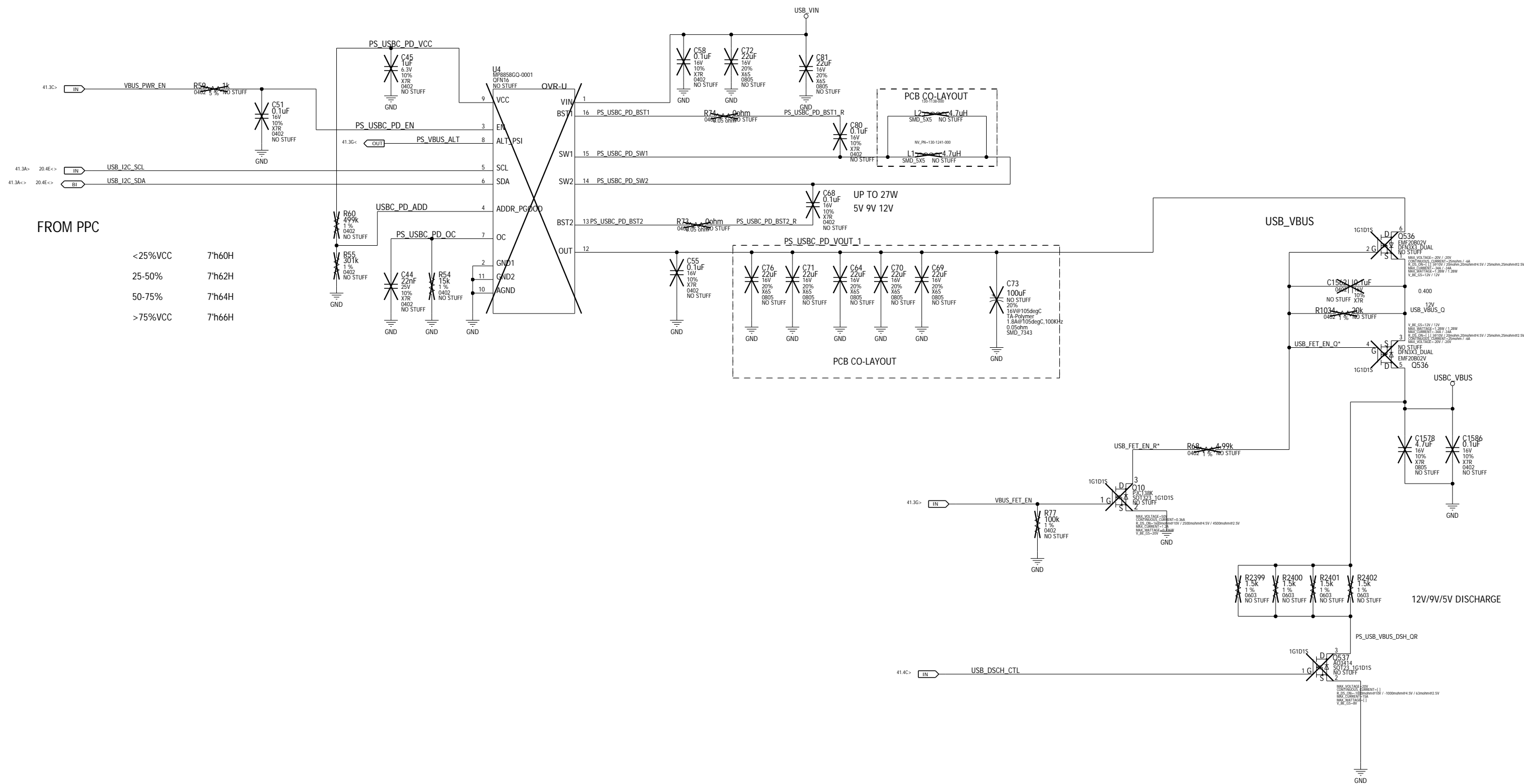
GUIDES CURRENT FROM PEX EDGE TO PEX 6 PIN INPUT AREA



PEX Input - Power Level/PSI* Control



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PAGE DETAIL	PS: Type-C BuckBoost

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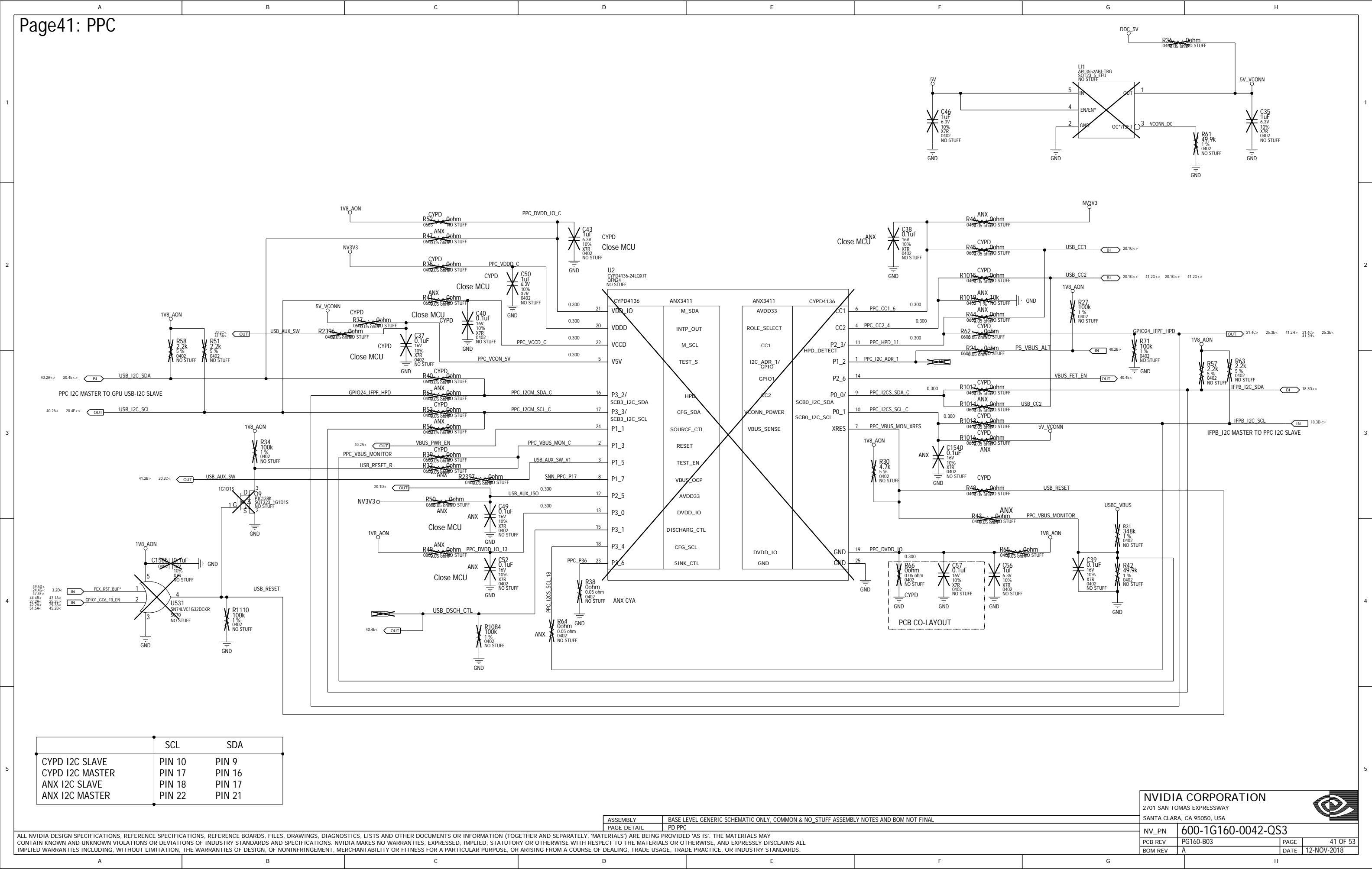
NV_PN	600-1G160-0042-QS3
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PCB REV	PG160-B03
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PAGE	40 OF 53
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DATE	12-NOV-2018
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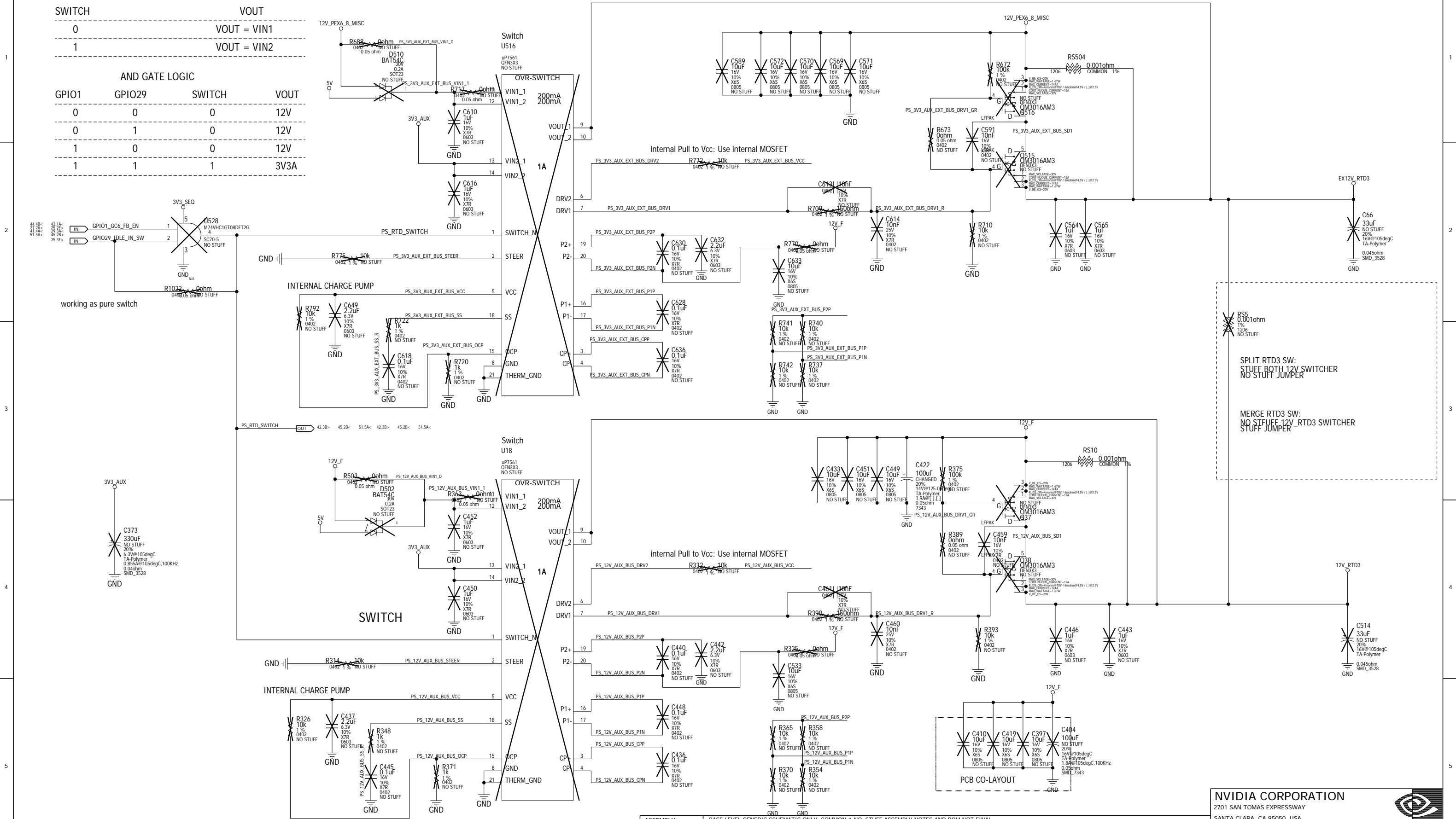




Page42: 12V & 3V3_A SWITCHER


SWITCH	VOUT
0	VOUT = VIN1
1	VOUT = VIN2

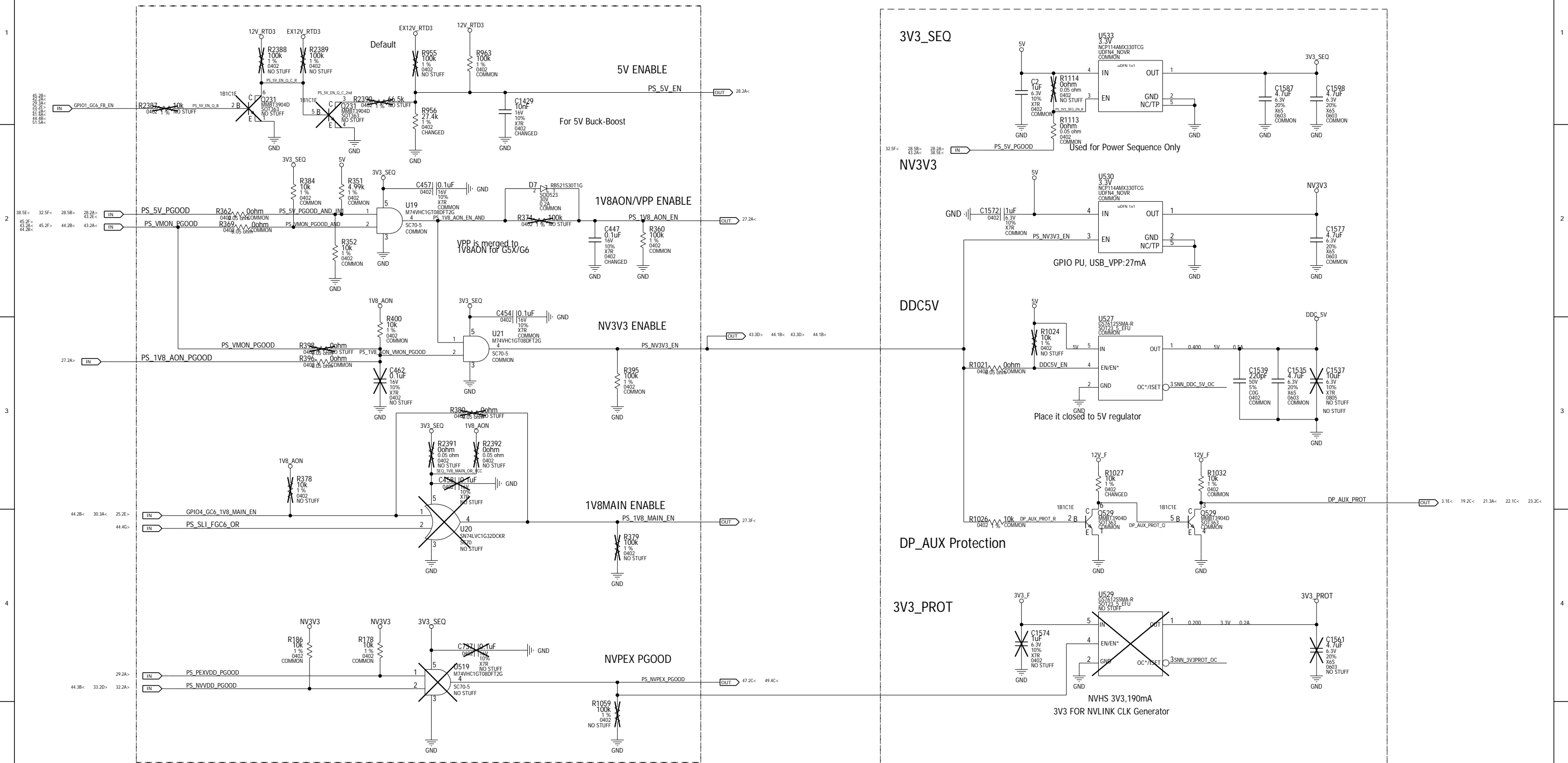
AND GATE LOGIC			
GPIO1	GPIO29	SWITCH	VOUT
0	0	0	12V
0	1	0	12V
1	0	0	12V
1	1	1	3V3A

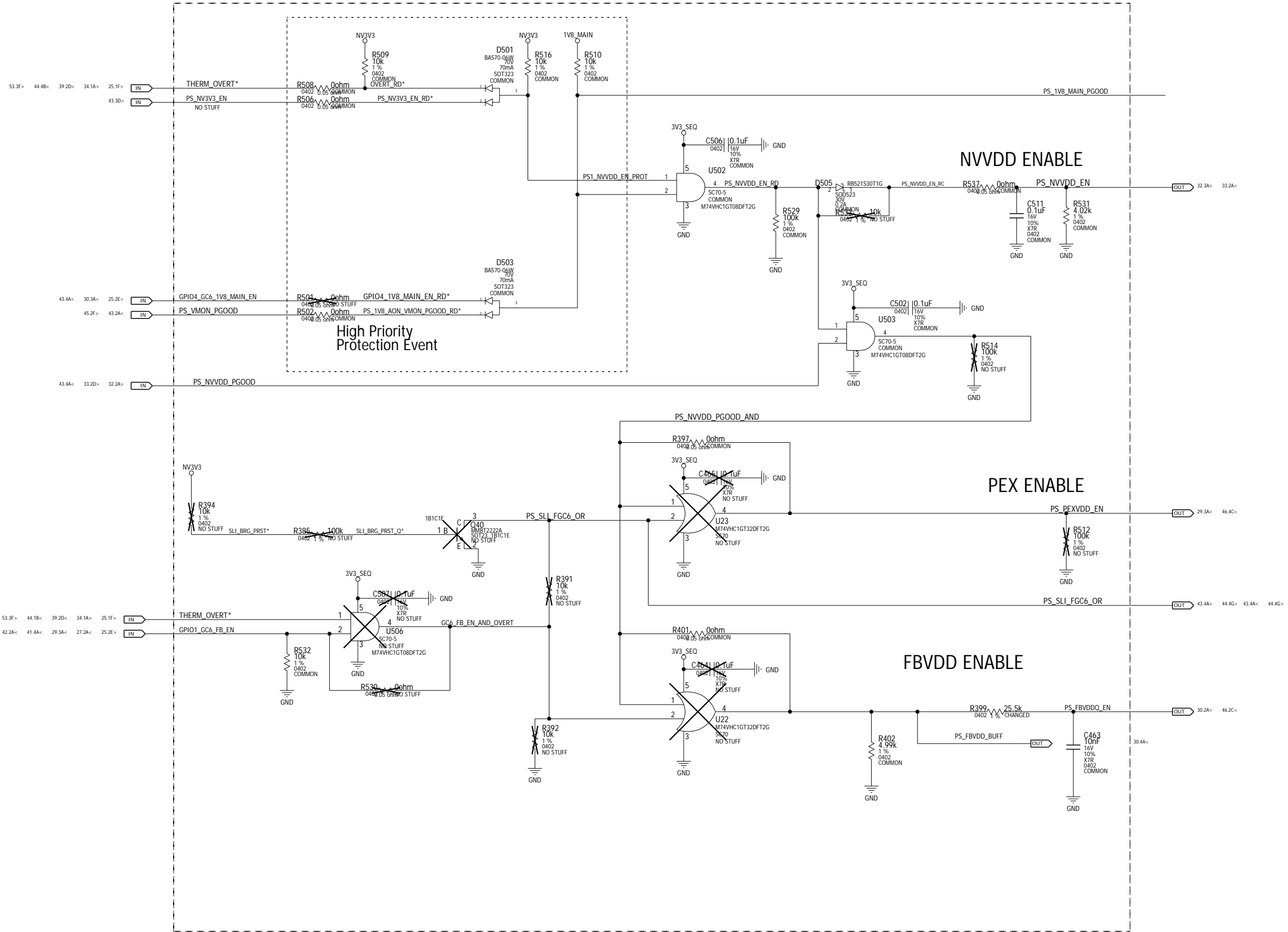


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ASSEMBLY	BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
PAGE DETAIL	PS: 12V & 3V3_A SWITCHER

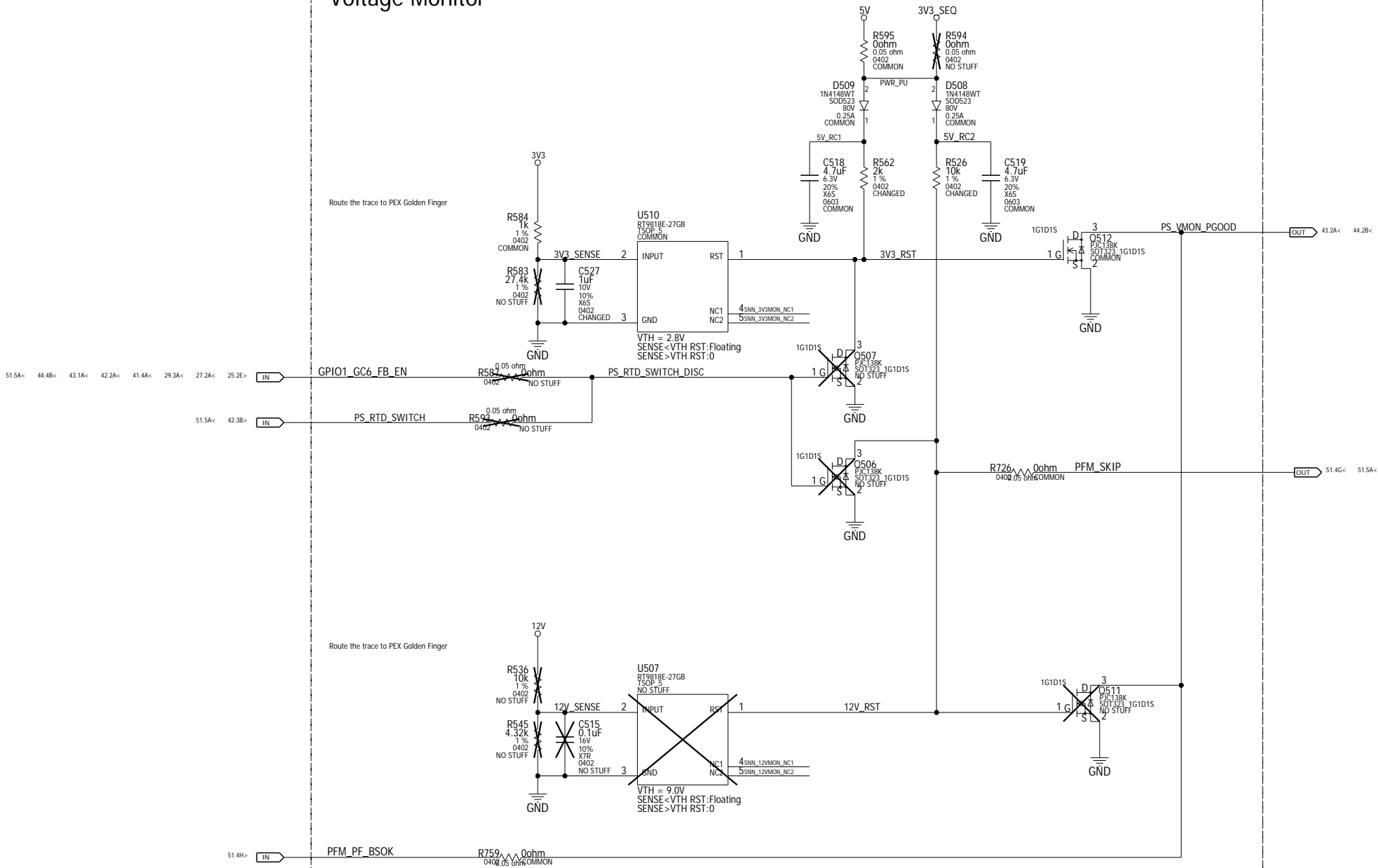
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NV_PN		600-1G160-0042-QS3		
PCB REV	PG160-B03	PAGE	42 OF 53	
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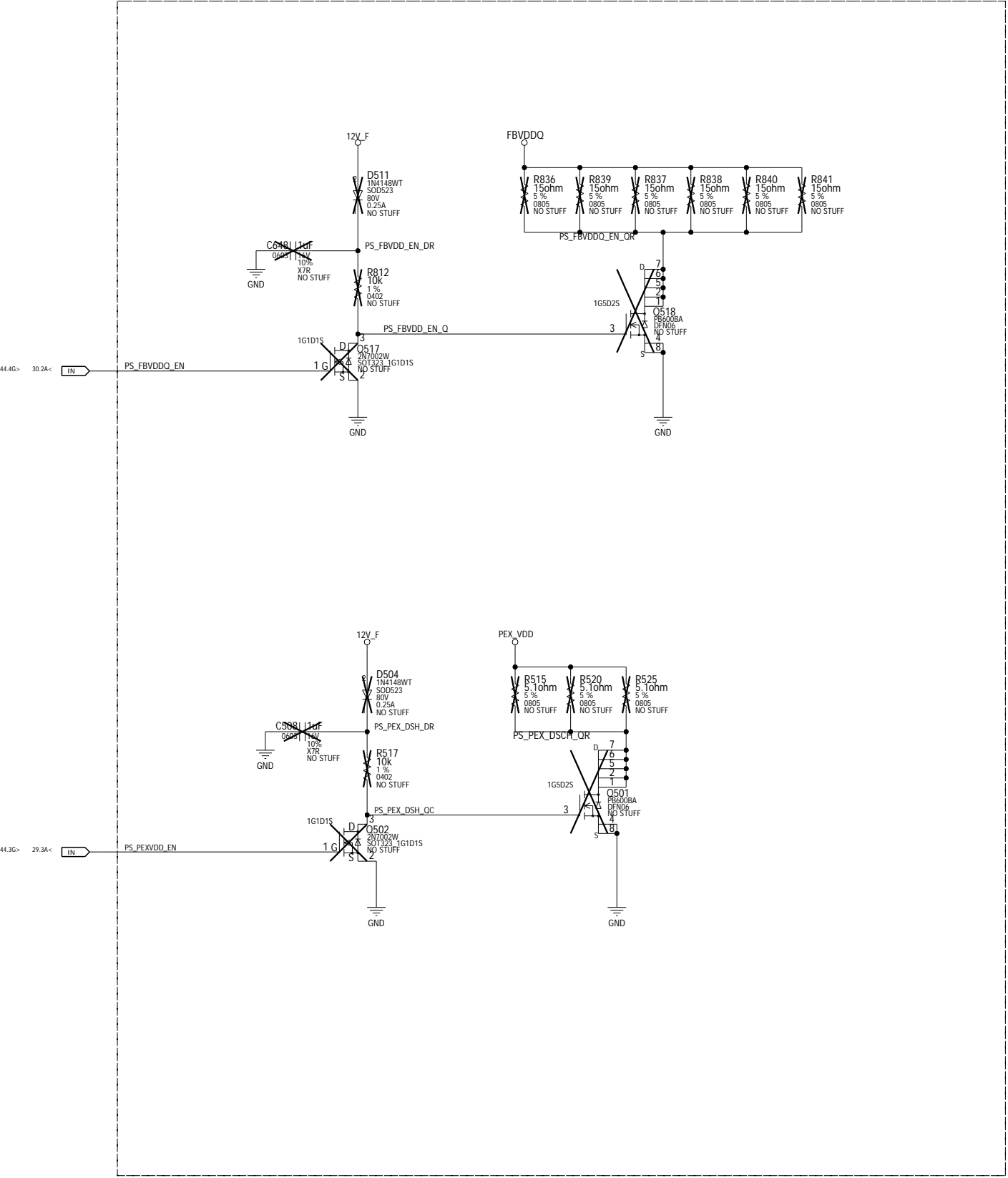
Voltage Monitor



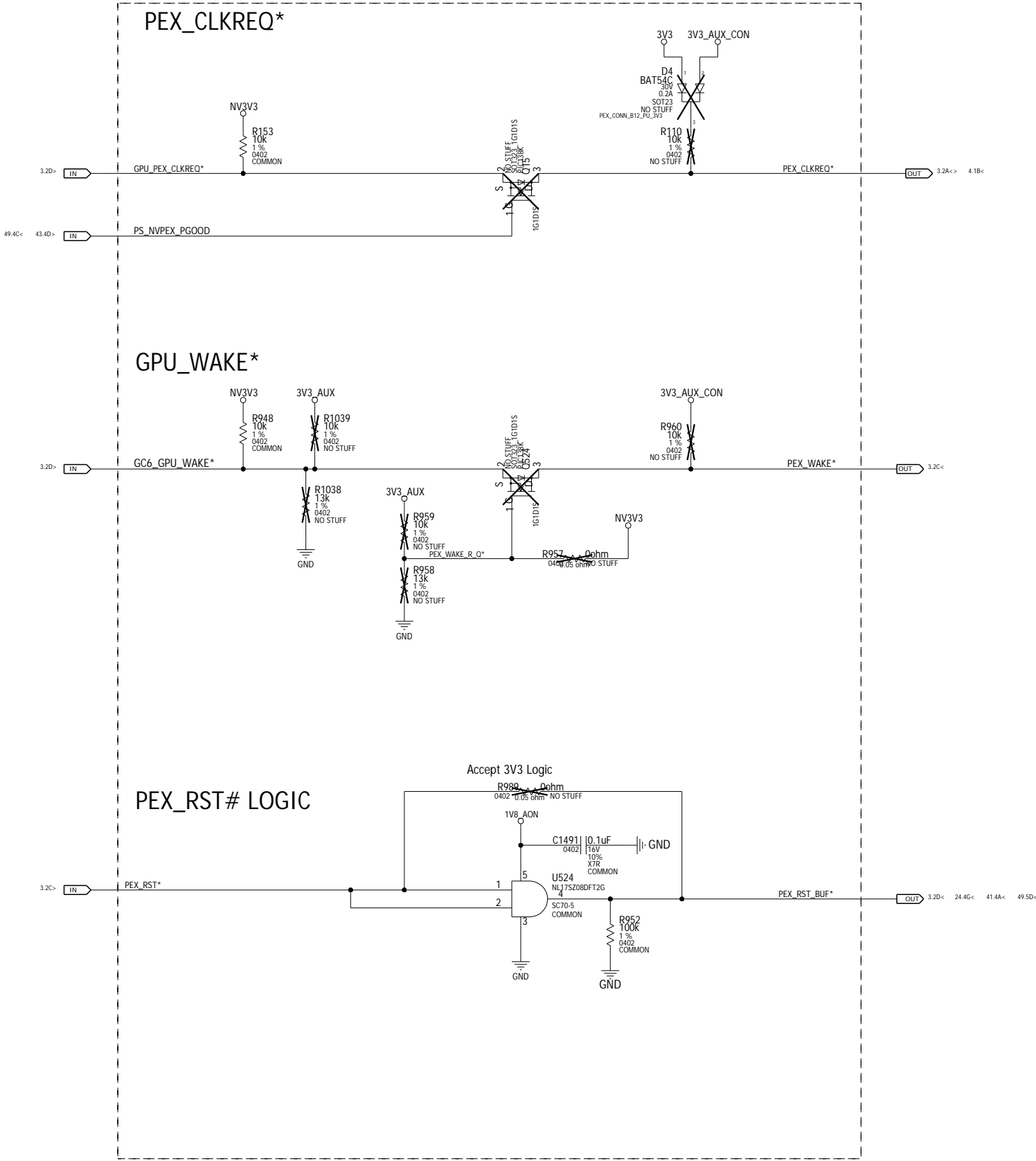
BOM Configuration

OPTIONS	PEX3V3_SENSE	PEX12V_SENSE	OTHER_12V_SENSE
Use Pre-Filter	Pre-Filter	Pre-Filter	Pre-Filter
Use INA3221	Voltage_Monitor	INA3221	INA3221
NO INA3221 NO Pre-Filter	Voltage_Monitor	Voltage_Monitor	N/A

Signal	Direction	Function
3V3	INPUT	Sense the 3V3 Voltage from PCIE golden finger
12V	INPUT	Sense the 12V Voltage from PCIE golden finger
PS_VMON_PGOOD	OPEN-DRAIN	Floating(H) once both 3V3 and 12V reach Vth
GC6_FB_EN	INPUT	Indicator for RTD3/GC6 residence, Use to Mask the VMON_PGOOD
PS_PF_SKIP	INPUT	From INA3221(VPU) or Pre-filter(SKIP)
PS_PF_BSOK	INPUT	From INA3221(PV) or Pre-filter(BS_OK)



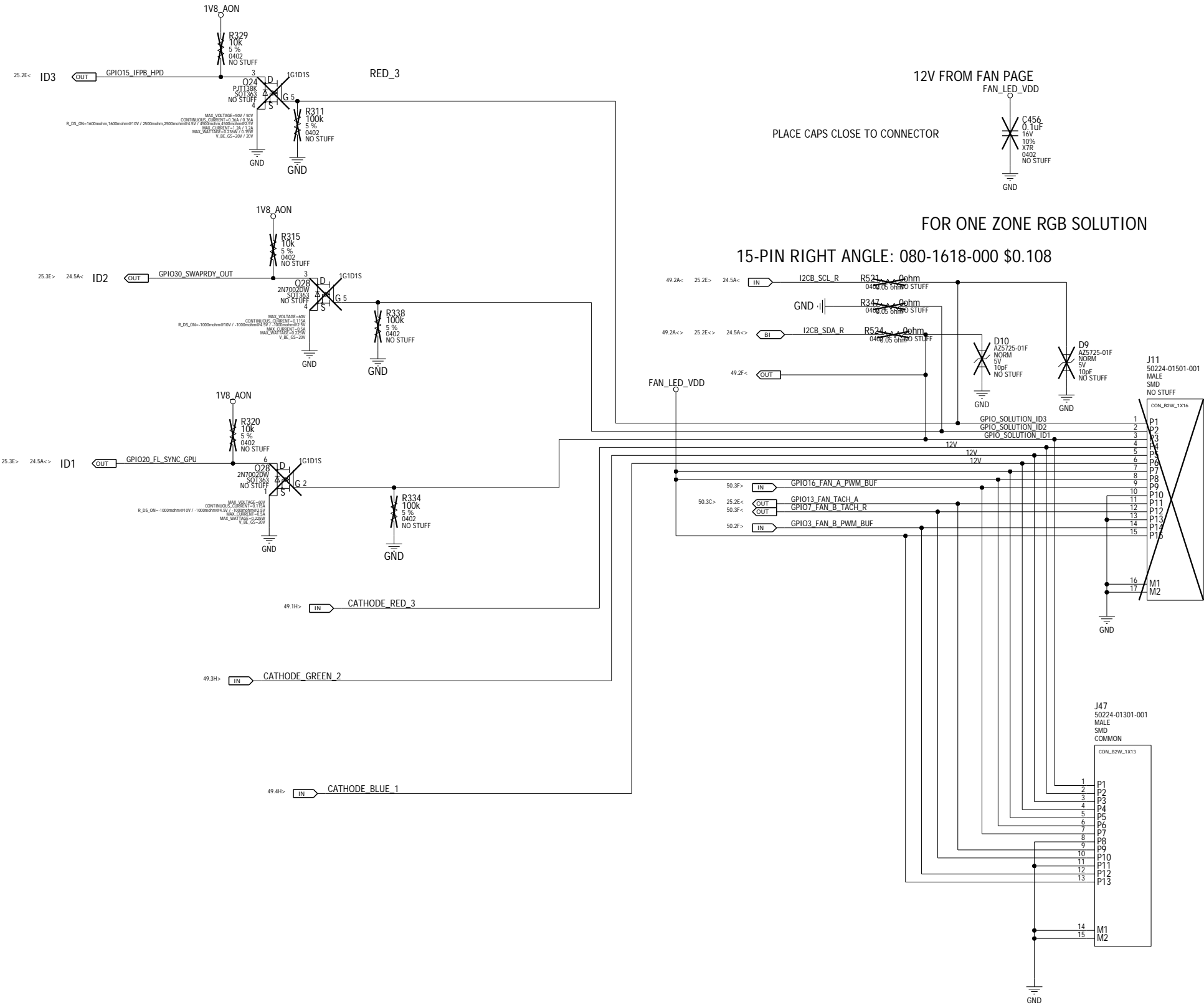
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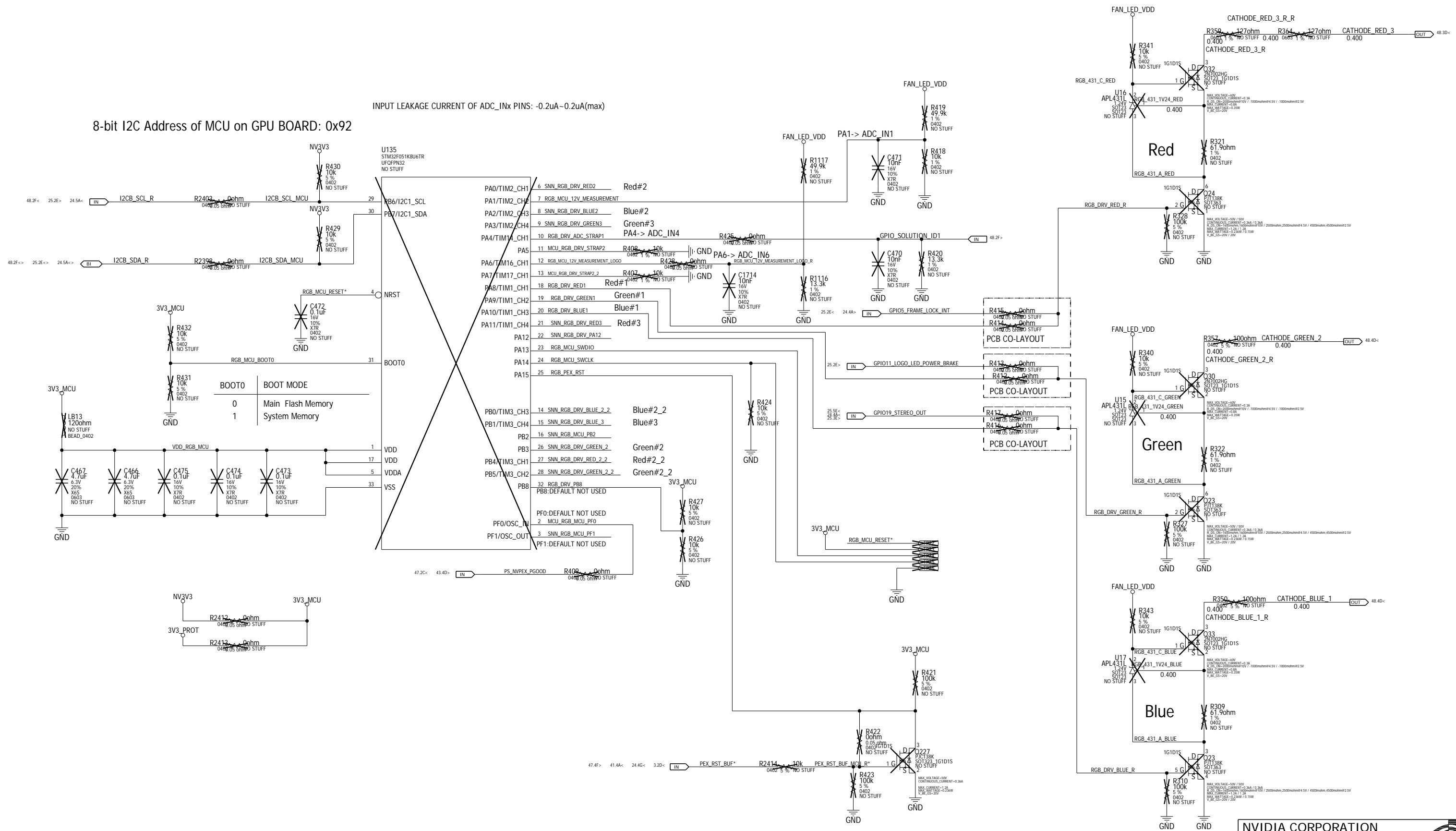
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2701 SAN TOMAS EXPRESSWAY			
SANTA CLARA, CA 95050, USA			
NV_PN	600-1G160-0042-QS3		
PCB REV	PG160-B03	PAGE	47 OF 53
BOM REV	A	DATE	12-NOV-2018


For ONE ZONE RGB/cable	
PIN SEQ	Pin Name
1	ID3
2	ID2
3	ID1
4	DRIVE3/R
5	DRIVE2/G
6	DRIVE1/B
7	12V
8	12V
9	FAN_PWM1
10	GND
11	FAN_TACH1
12	FAN_TACH2
13	GND
14	FAN_PWM2
15	12V



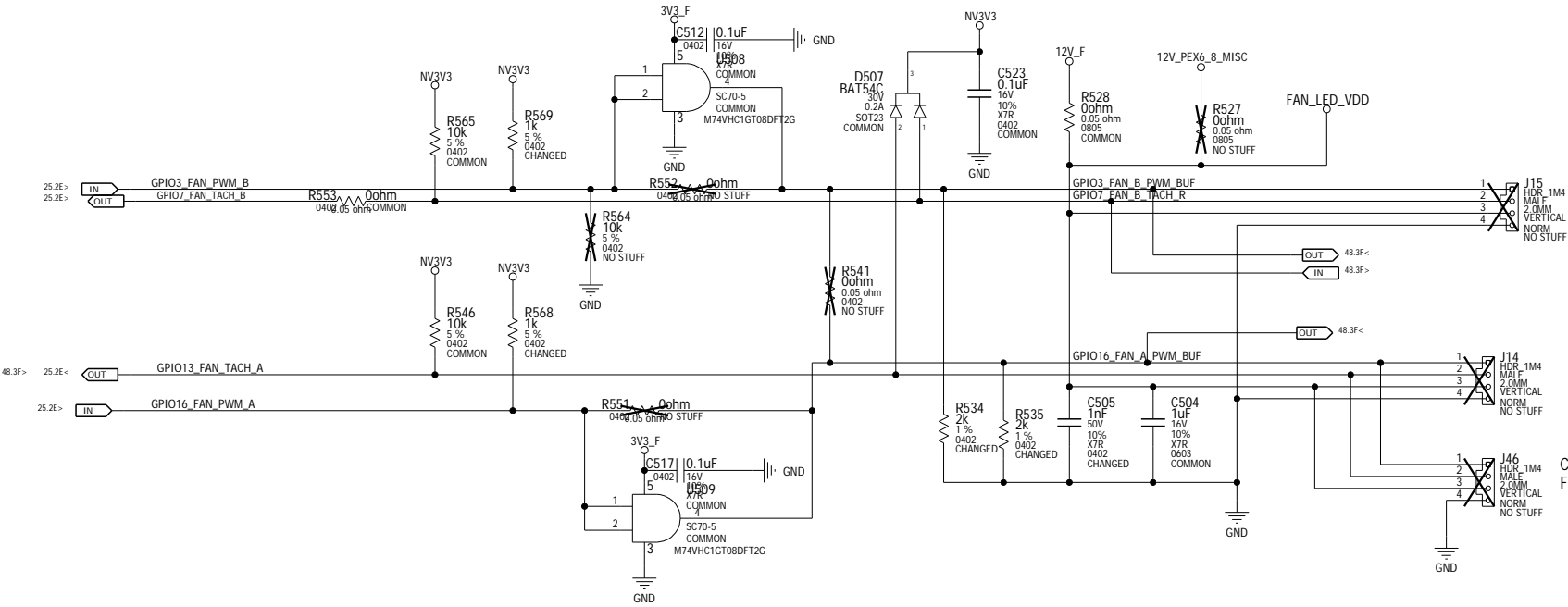
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Page49: LED DRIVER & Boost

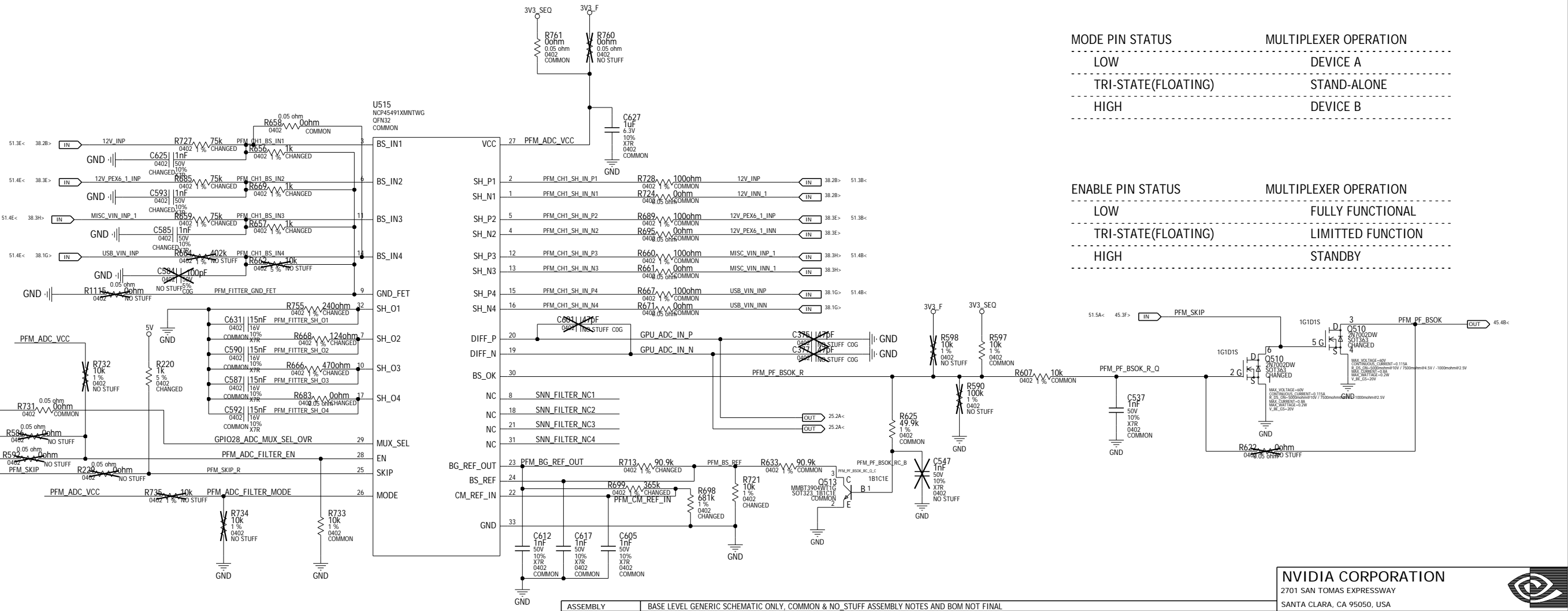


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PCB REV	PG160-B03	PAGE	49 OF 53	
BOM REV	A	DATE	12-NOV-2018	

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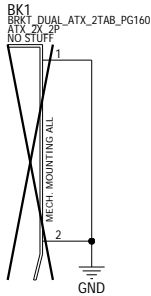


MODE PIN STATUS	MULTIPLEXER OPERATION
LOW	DEVICE A
TRI-STATE(FLOATING)	STAND-ALONE
HIGH	DEVICE B

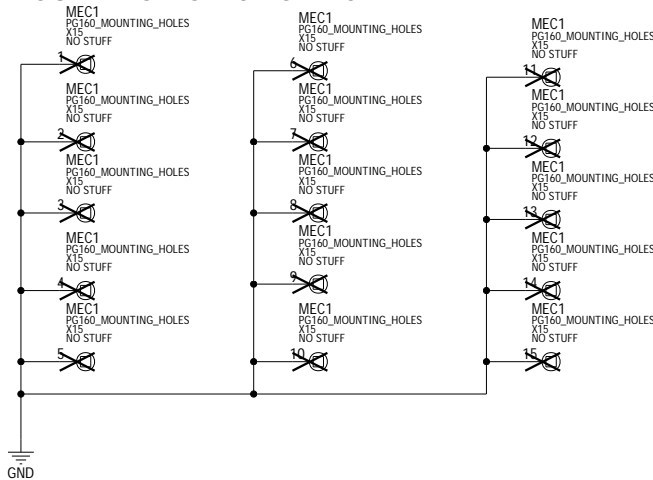
ENABLE PIN STATUS	MULTIPLEXER OPERATION
LOW	FULLY FUNCTIONAL
TRI-STATE(FLOATING)	LIMITED FUNCTION
HIGH	STANDBY

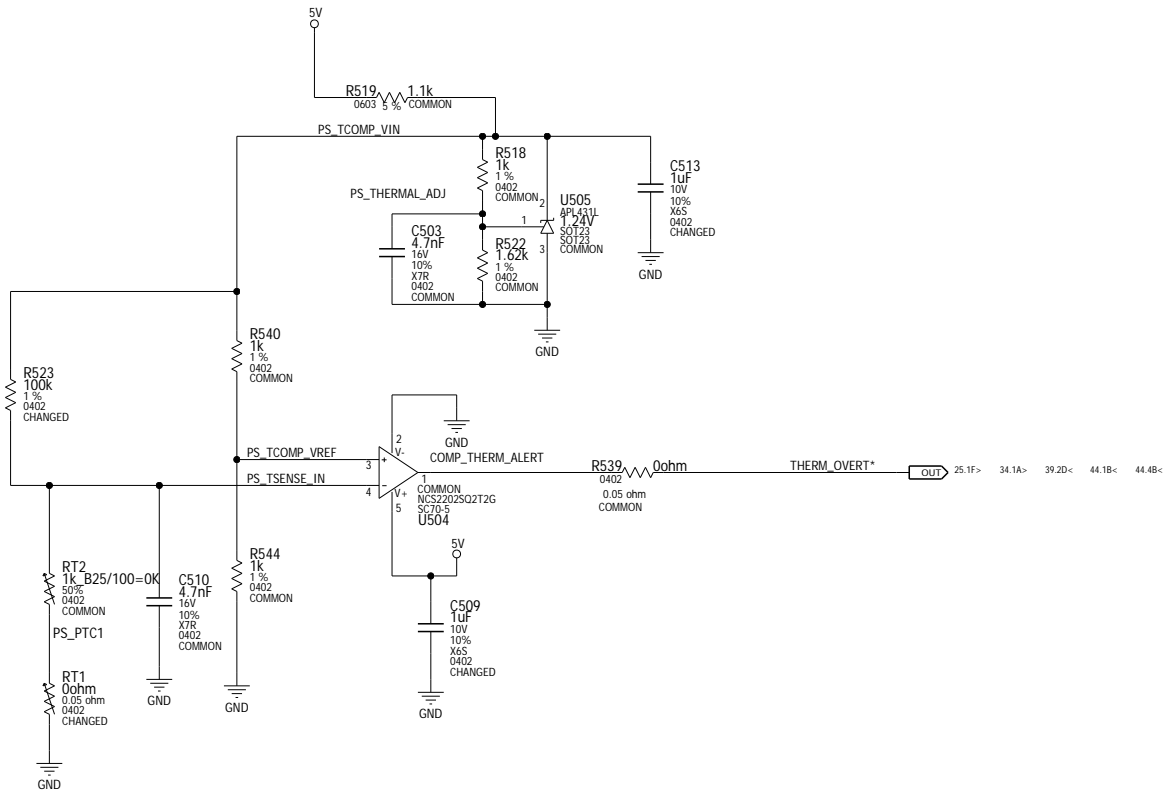
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Brackets:



MOUNTING HOLES FOR HS:





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