

PG180-A02

256b GDDR6 x16  
TALL DP + DP + DP + HDMI/DP + USB

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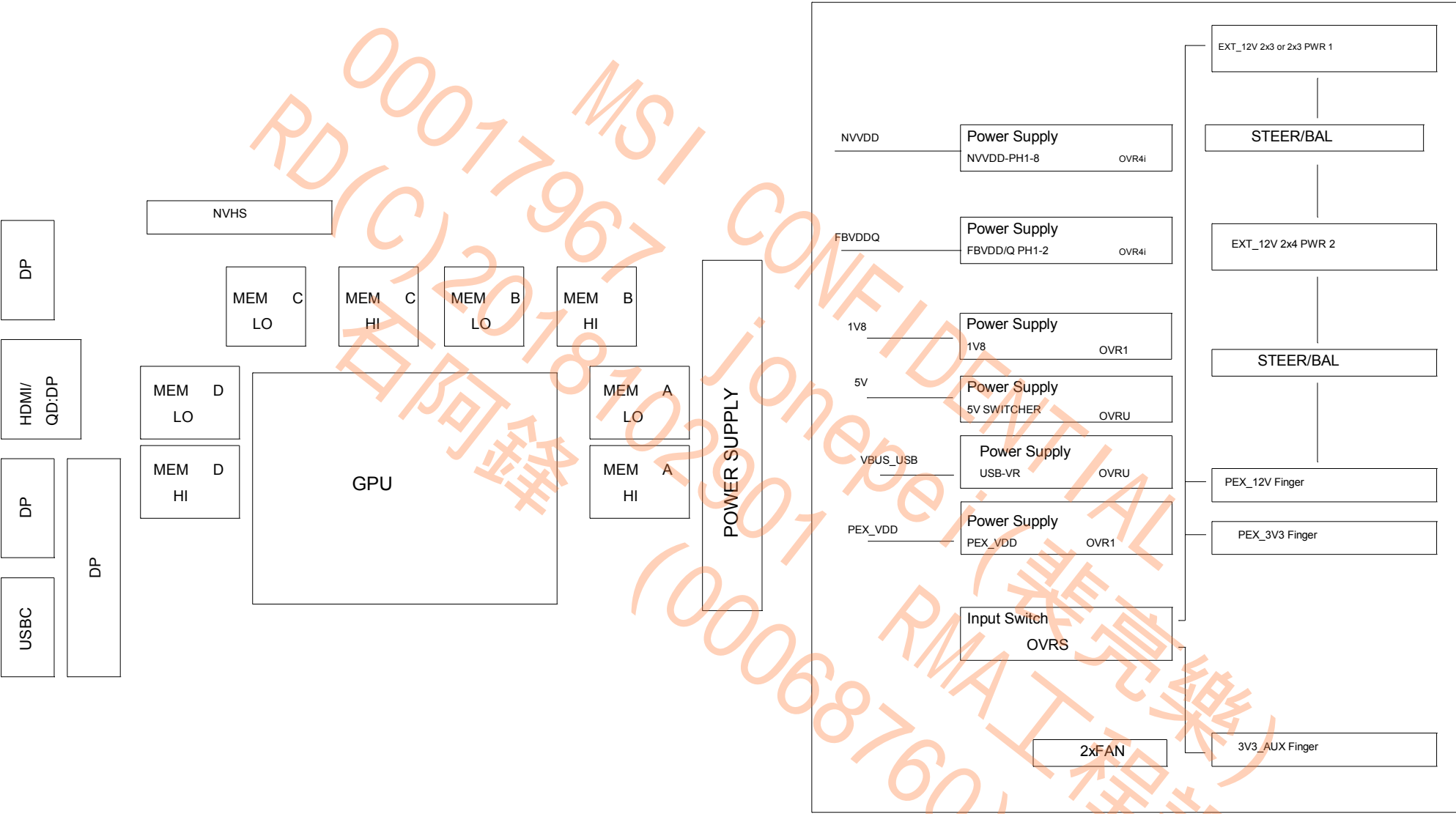
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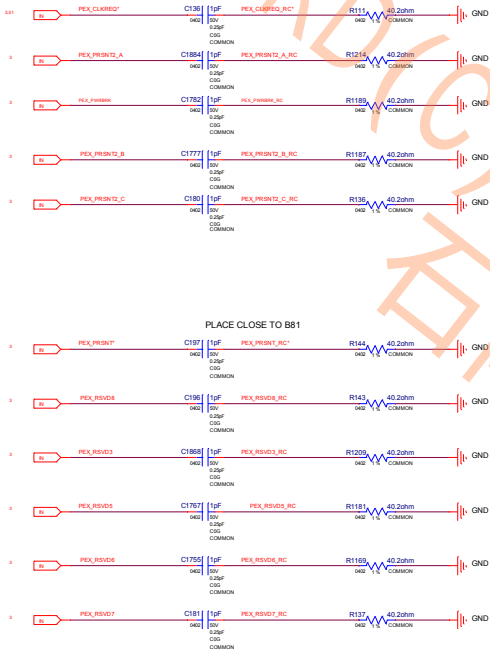


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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	Block Diagram

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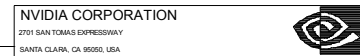


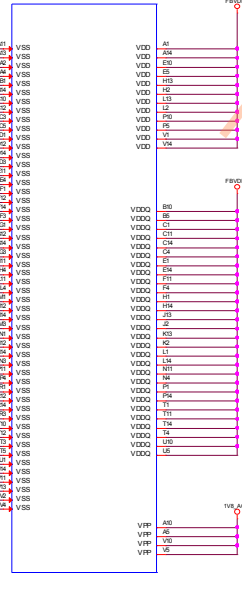
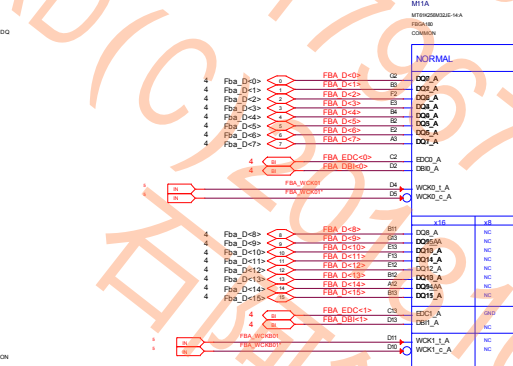
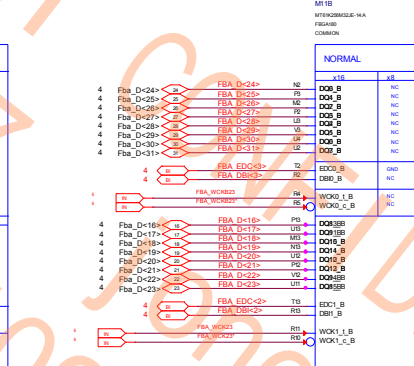
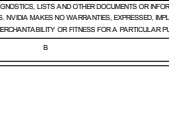
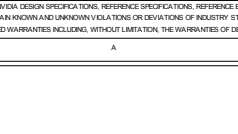
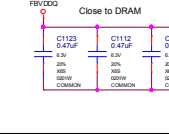
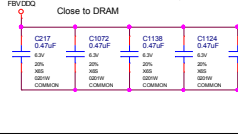
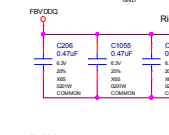
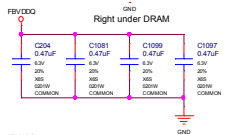
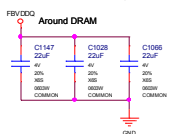
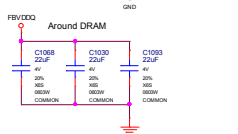
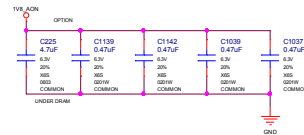
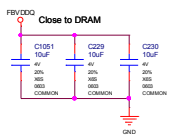
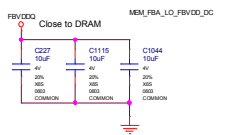
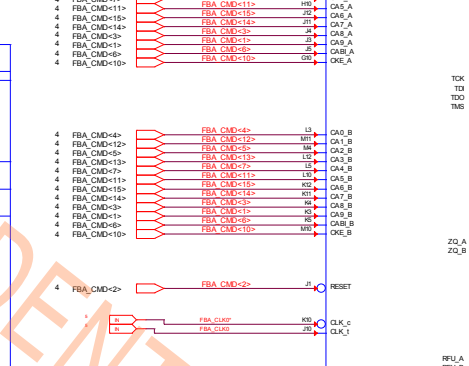
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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PCI Termination

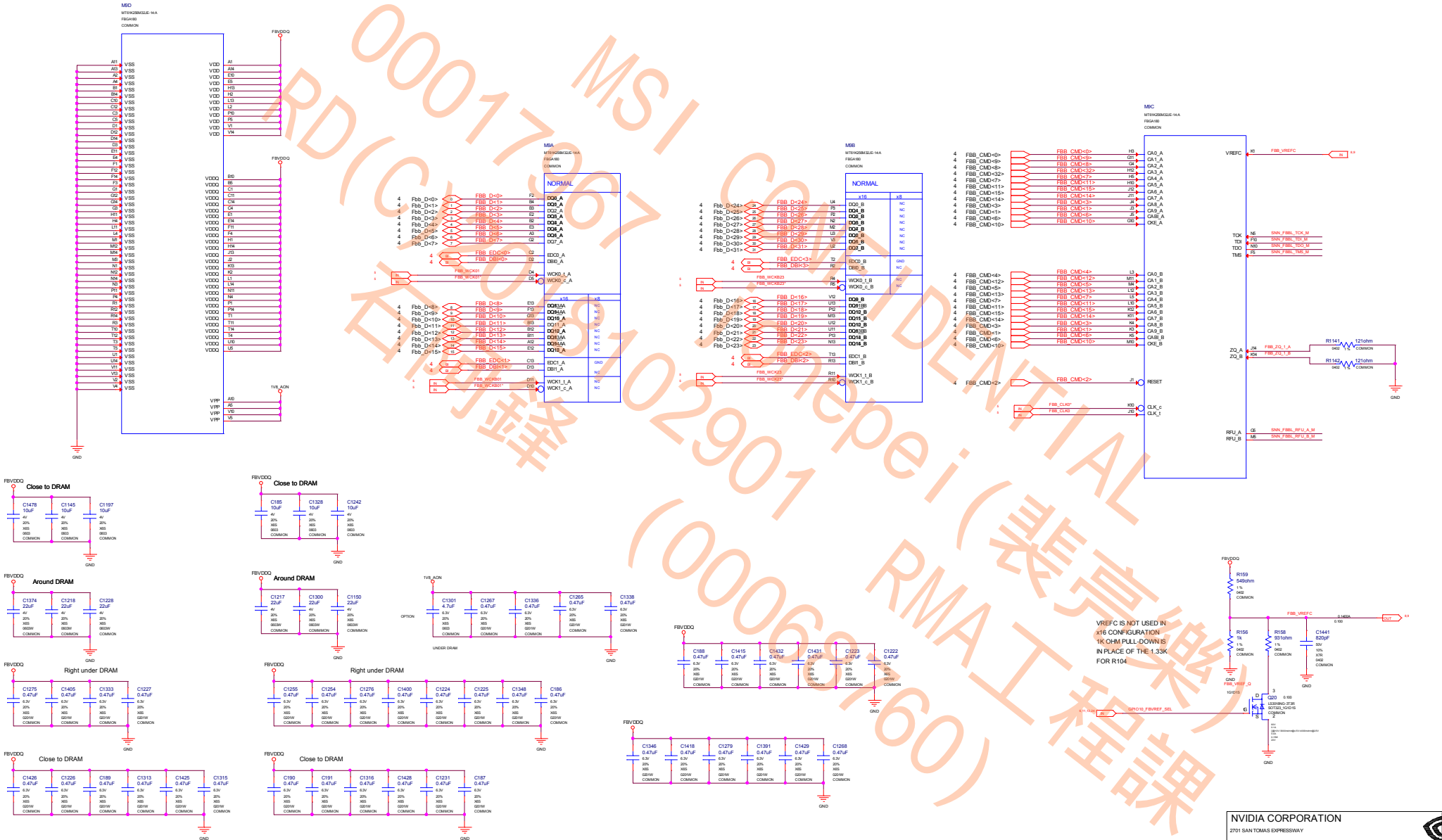
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M11D  
HYPERBORGUS-HA  
FPGA  
COMMONM11A  
HYPERBORGUS-HA  
FPGA  
COMMONM11B  
HYPERBORGUS-HA  
FPGA  
COMMONM11C  
HYPERBORGUS-HA  
FPGA  
COMMON







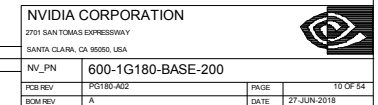
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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	MEMORY: FBB Partition 31..0

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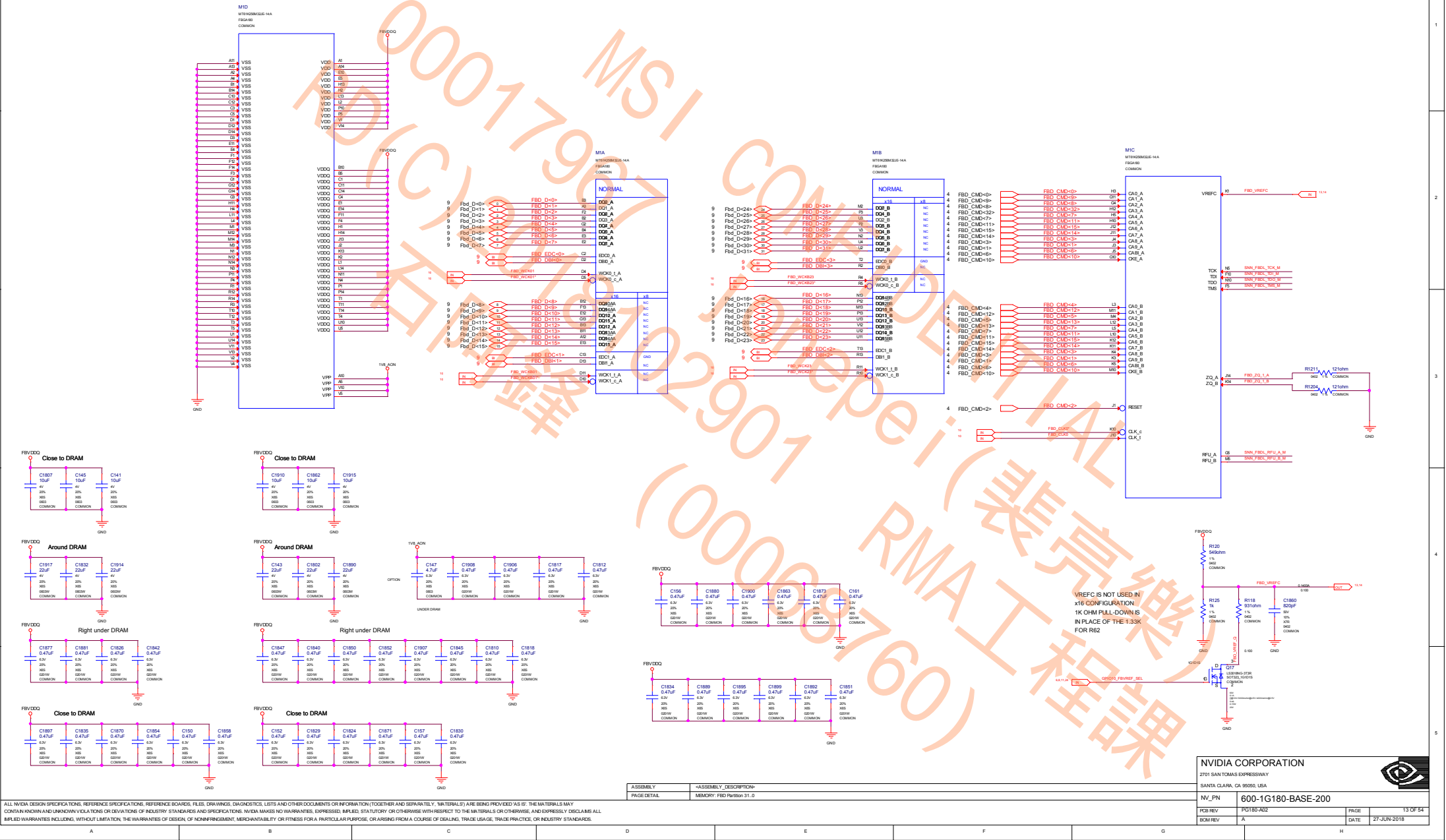






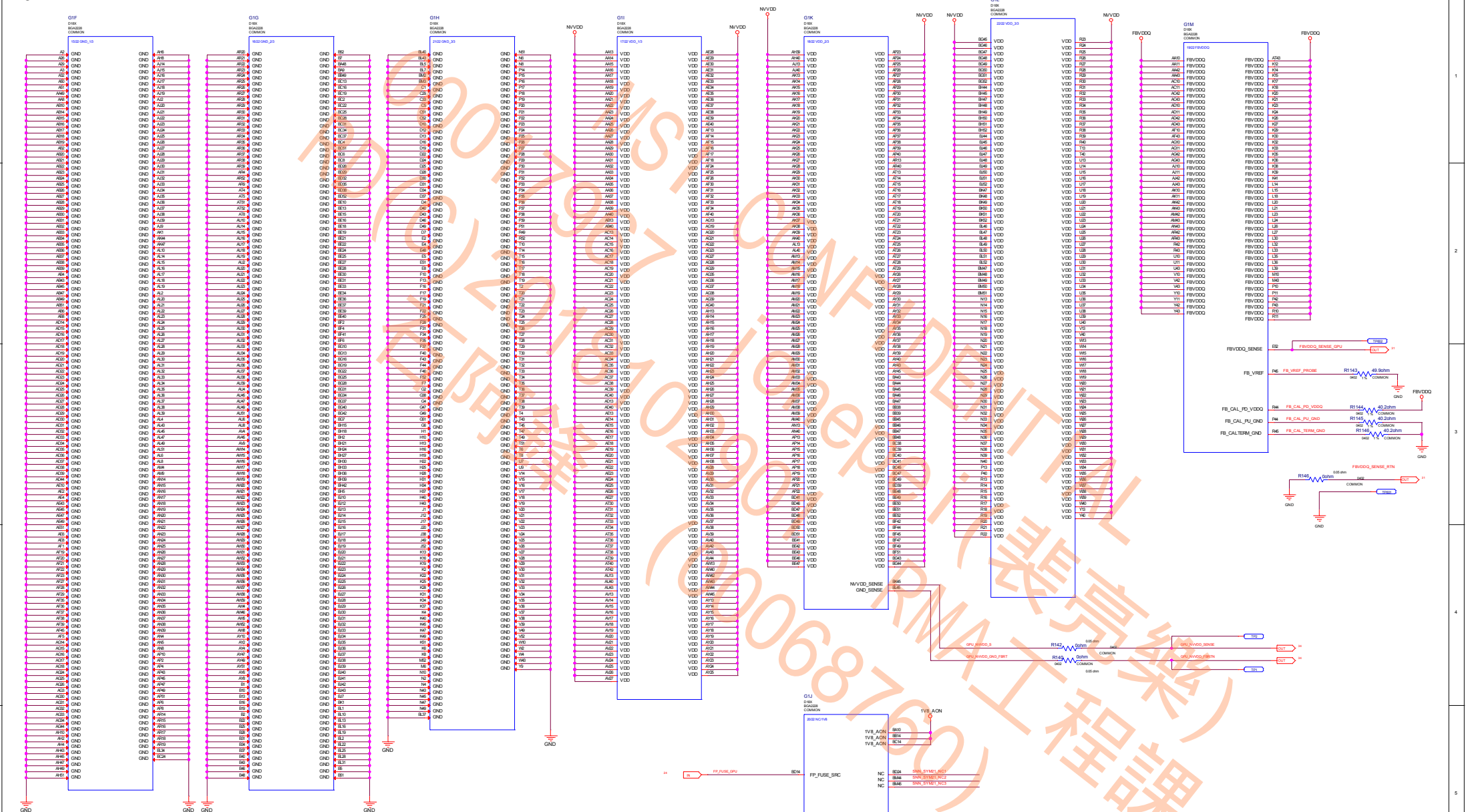


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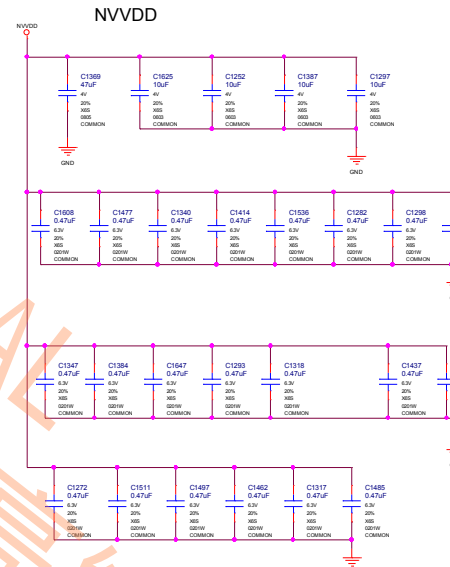
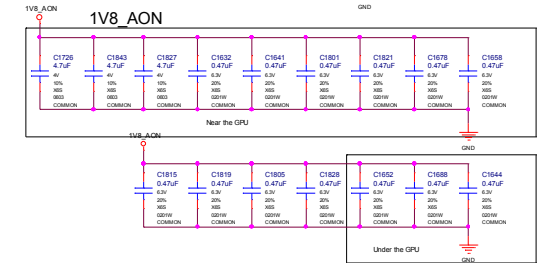
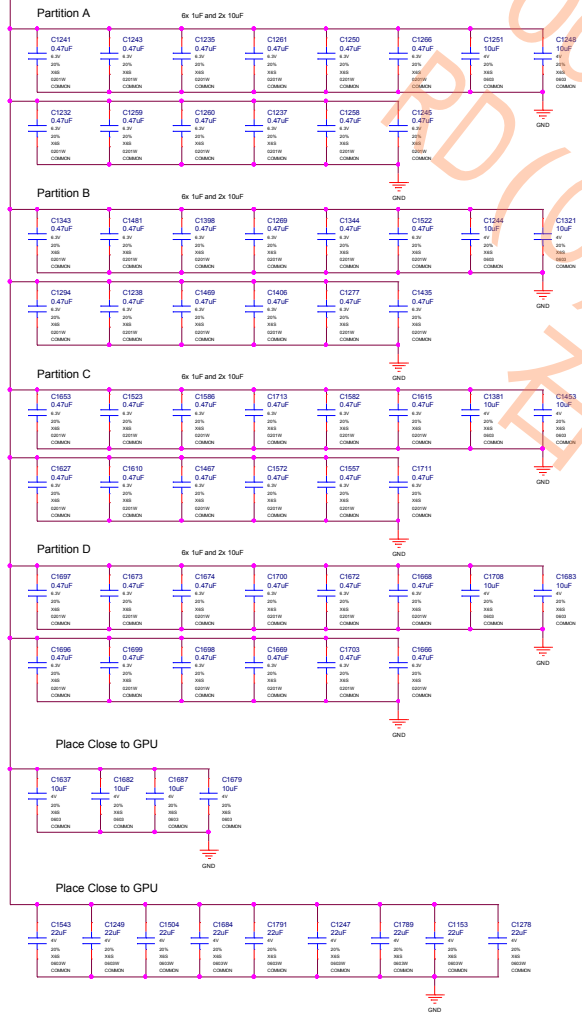




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PAGE DETAIL	GPU PWR AND GND	NV_PN 600-1G180-BASE-200
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## NVVDD

## FBVDDQ

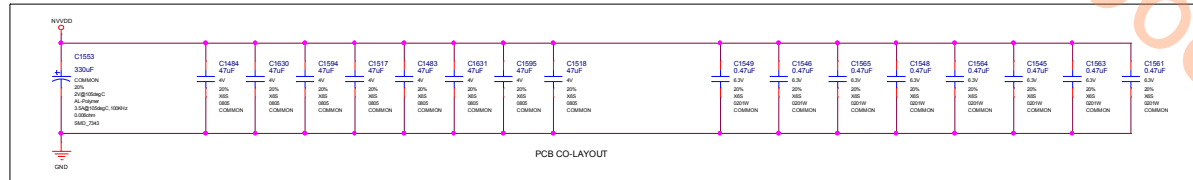
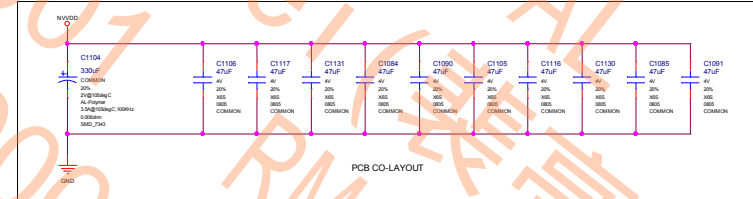
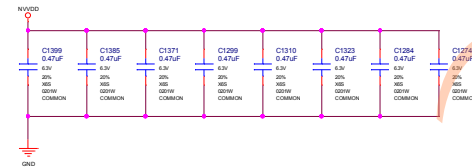
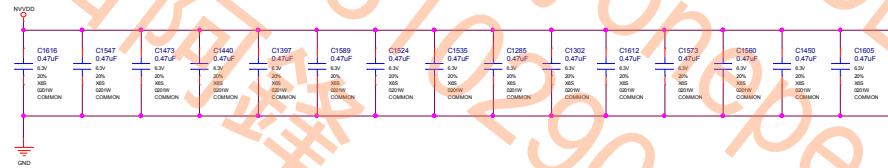
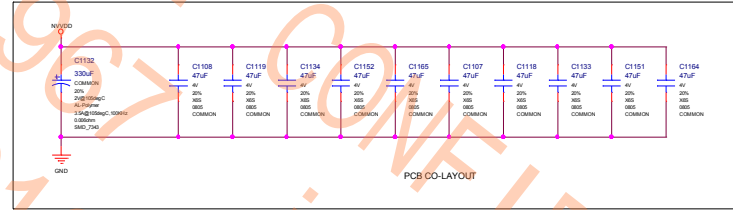
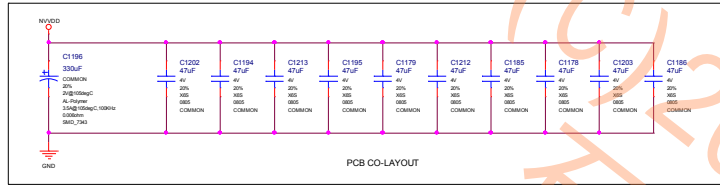
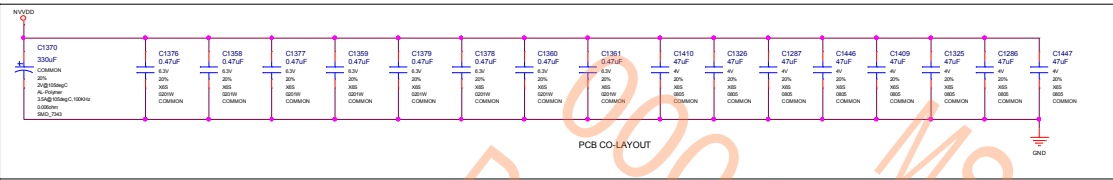


ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	GPU Decoupling

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ASSEMBLY	ASSEMBLY DESCRIPTION
PCB DETAIL	GPU DECOUPLING

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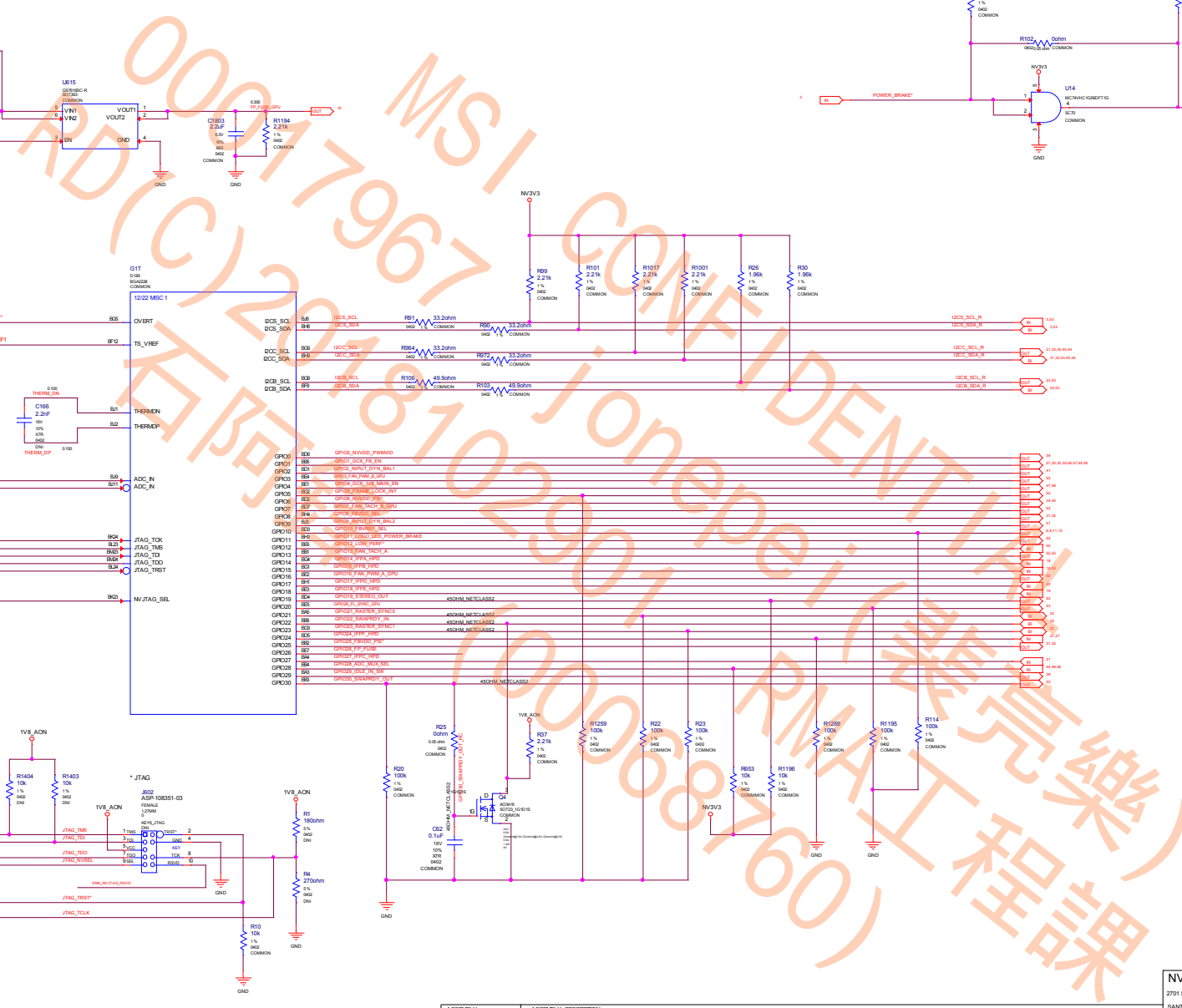












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PAGE DETAIL	MISC: FAN,THERMAL,JTAG,GPIO,STEREO

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

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

DEFAULT

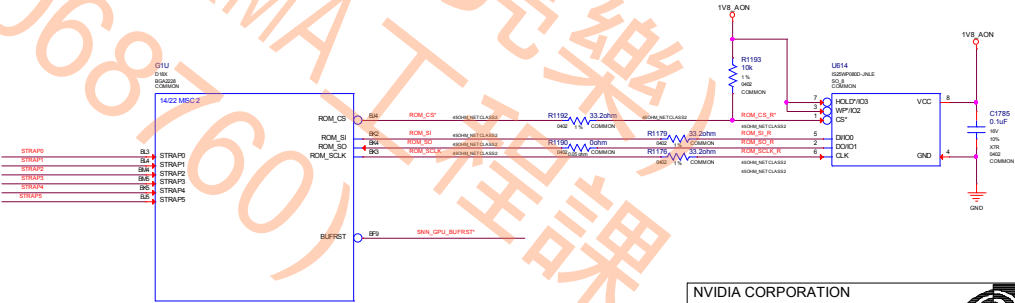
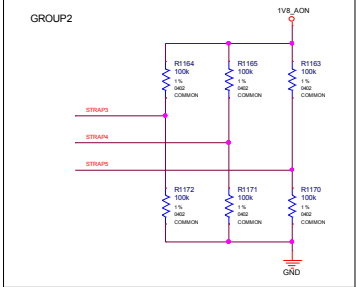
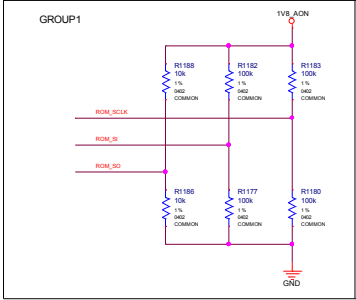
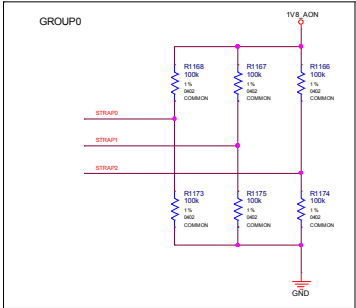
ROM_SO	ROM_SI	ROM_SCLK	DUMMY[2:0]FS_OVERT	
L	L	L	XXX1	1:ENABLE 0:DISABLE
L	L	M	XXX0	FS_OVERT ENABLE
L	L	M	XXX0	FS_OVERT DISABLE

DEFAULT

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	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	0
L	H	L	0	0	0	1
L	L	H	0	0	0	1
L	L	L	0	0	0	0

Default

RAMCFG[4:0]	DENSITY	WIDTH	VENDOR
00000	8Gb	256-bit	Samsung
00001	8Gb	256-bit	Micron
00010	8Gb	256-bit	Hynix
00110	16Gb	256-bit	Samsung
00111	16Gb	256-bit	Samsung



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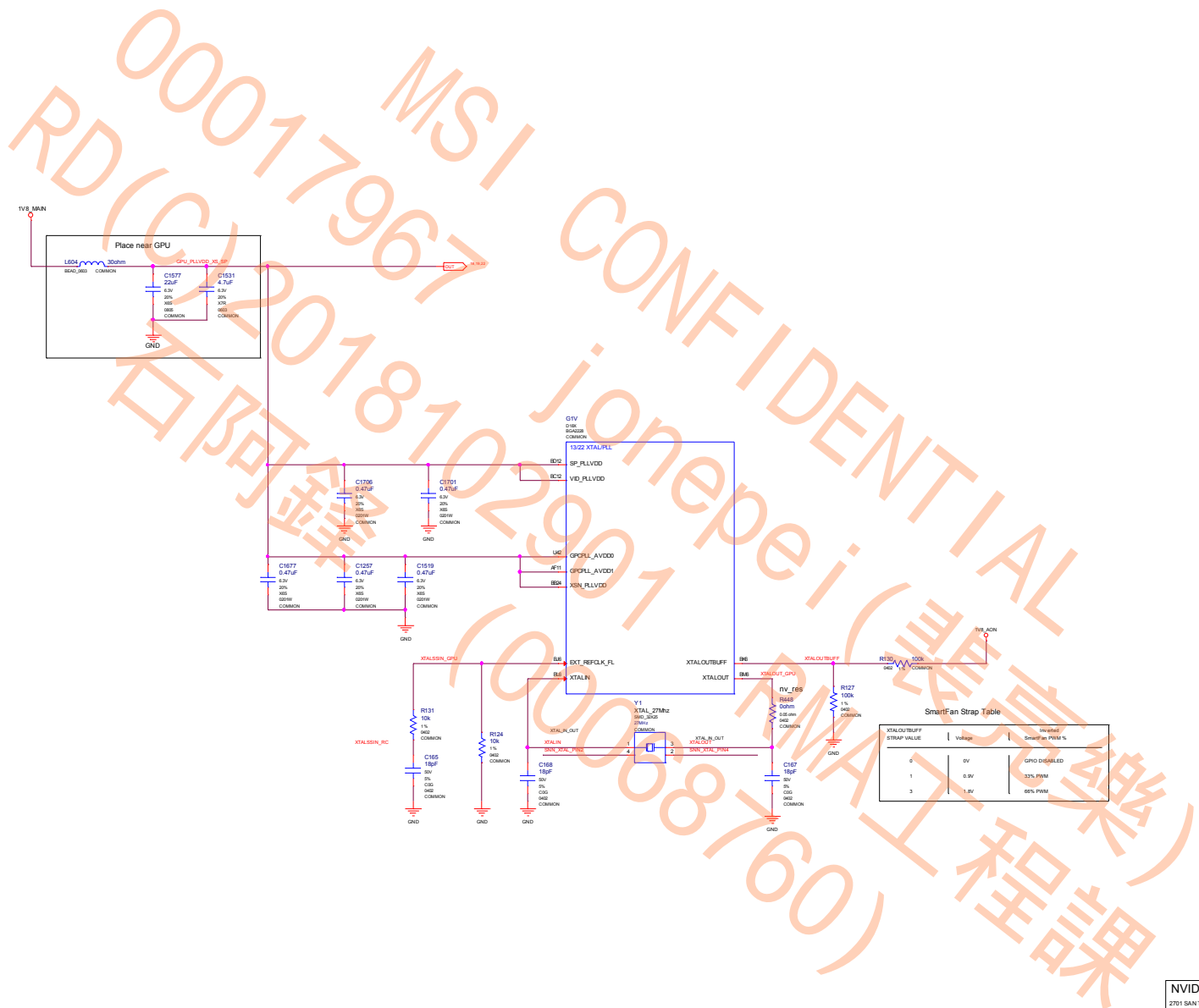
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XTALOUTBUFF STRAP VALUE	Voltage	Inverted Search on PWM %
0	0V	GPI0 DISABLE
1	0.9V	33% PWM
3	1.8V	66% PWM

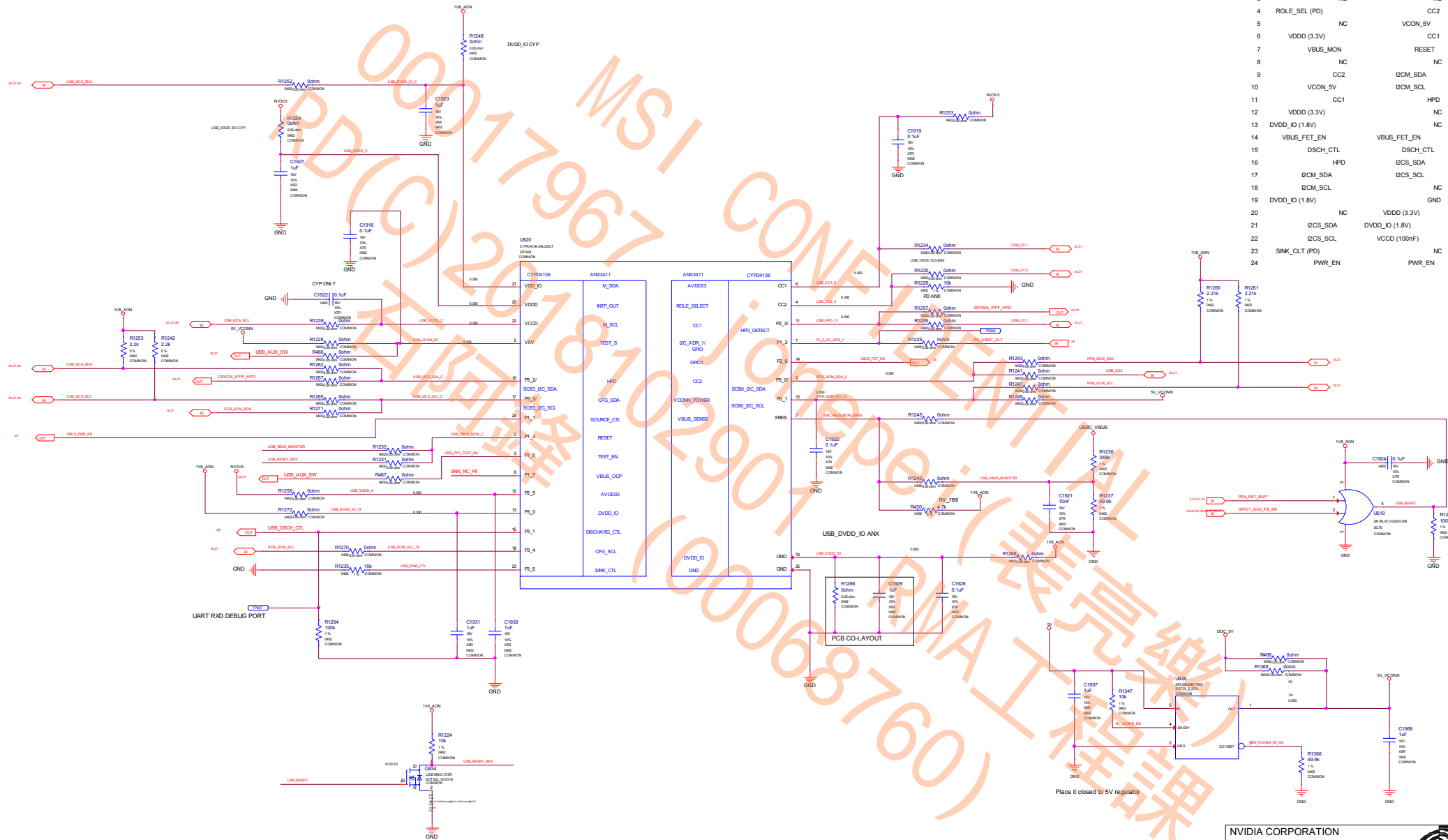


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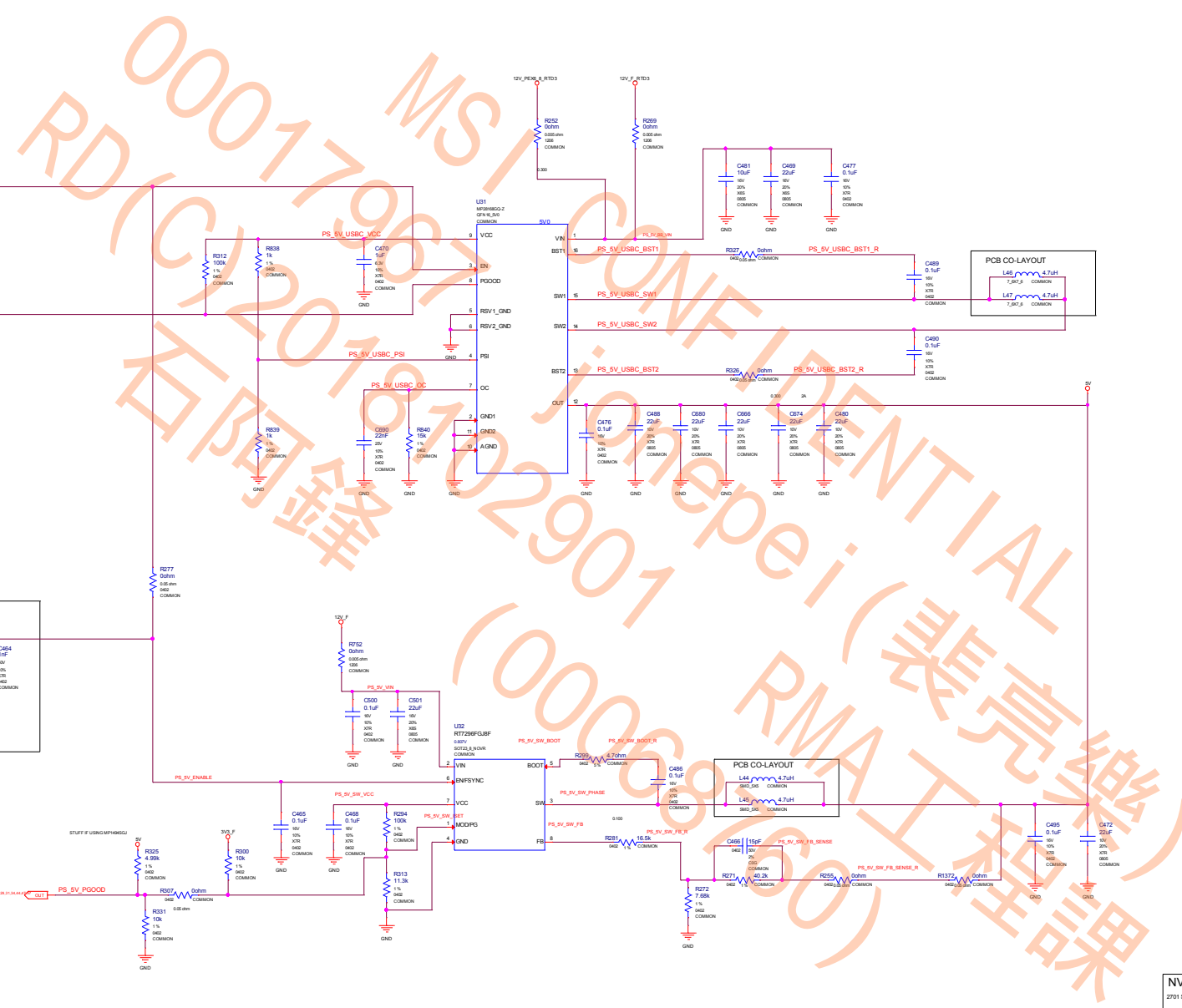
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1	TP	TP
2	RESET	VBUS_MON
3	NC	NC
4	ROLE_SEL (PD)	CC2
5	NC	VCON_SV
6	VDDD (3.3V)	CC1
7	VBUS_MON	RESET
8	NC	NC
9	CC2	I2CM_SDA
10	VCON_SV	I2CM_SCL
11	CC1	HPD
12	VDDD (3.3V)	NC
13	DVDD_IO (1.8V)	NC
14	VBUS_FET_EN	VBUS_FET_EN
15	DSCH_CTL	DSCH_CTL
16	HPD	I2CS_SDA
17	I2CM_SDA	I2CS_SCL
18	I2CM_SCL	NC
19	DVDD_IO (1.8V)	GND
20	NC	VDDD (3.3V)
21	I2CS_SDA	DVDD_IO (1.8V)
22	I2CS_SCL	VCCD (100nF)
23	SINK_CTL (PD)	NC
24	PWR_EN	PWR_EN

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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
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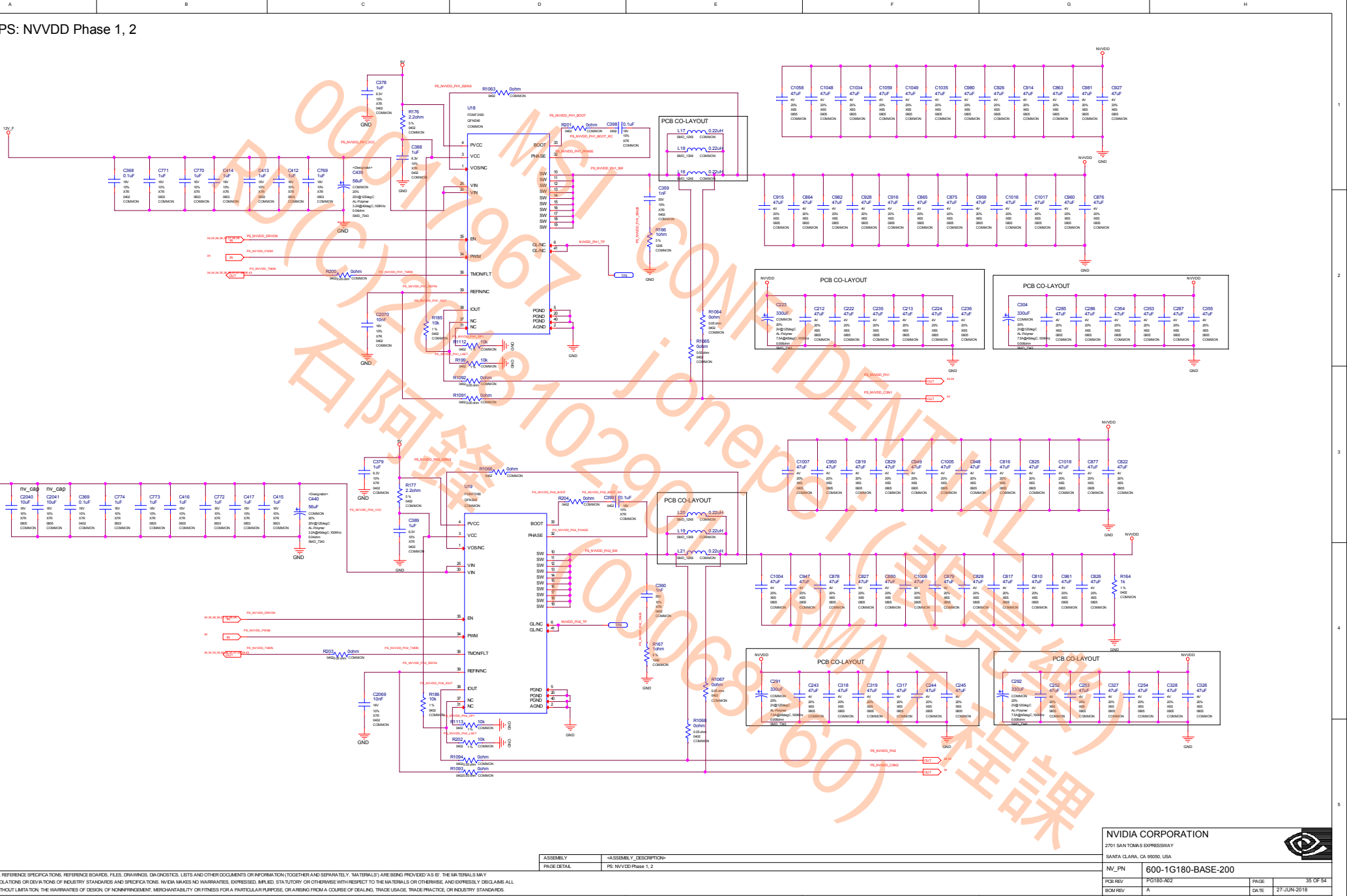
PCB REV	PG180-A02
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BCM REV	A
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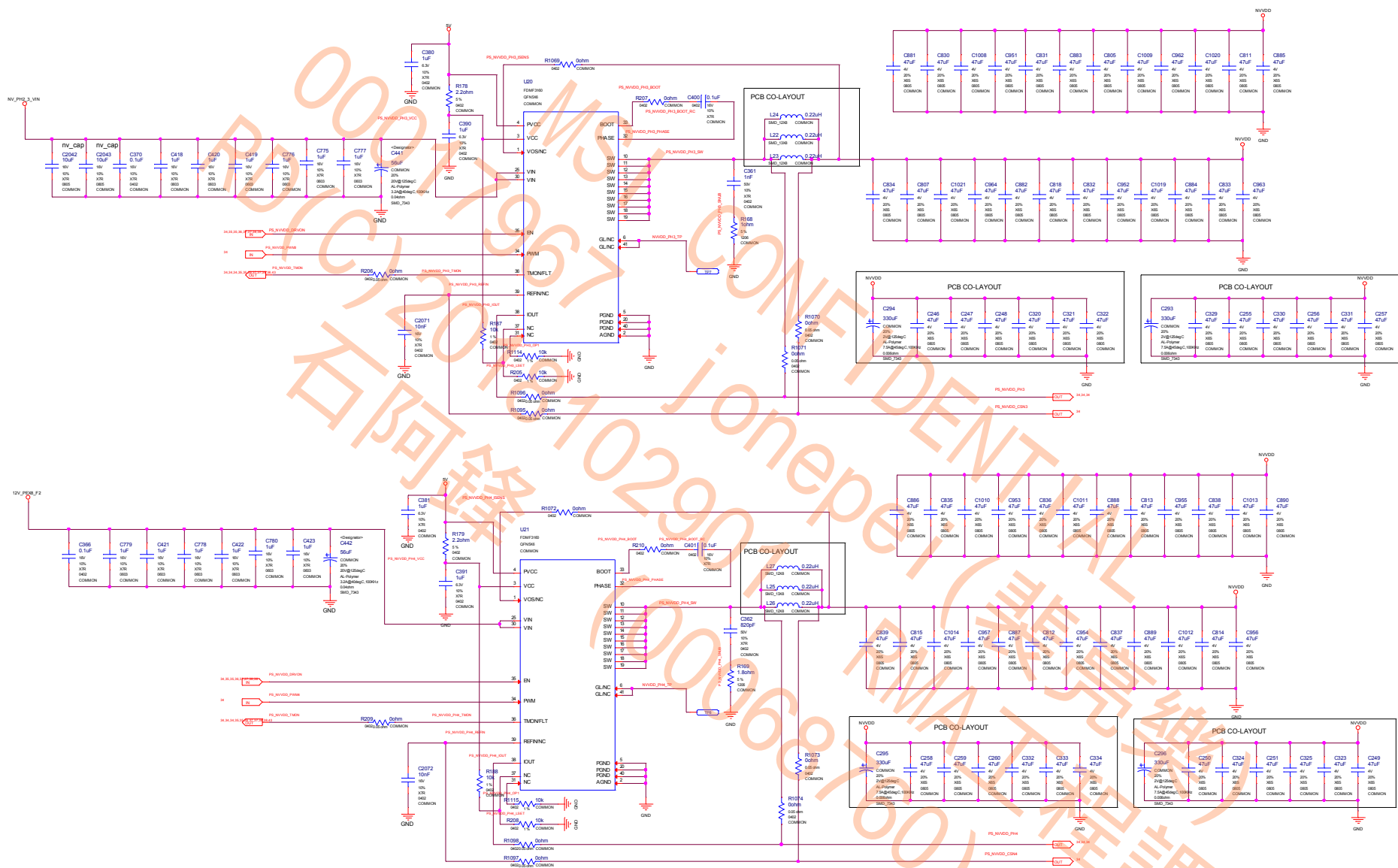
NVIDIA CORPORATION				
2701 SAN TOMAS EXPRESSWAY				
SANTA CLARA, CA 95050, USA				
NV_PN	600-1G180-BASE-200			
PCB REV	PG180-A02	PAGE	34 OF 54	
BOM REV	A	DATE	27-JUN-2018	

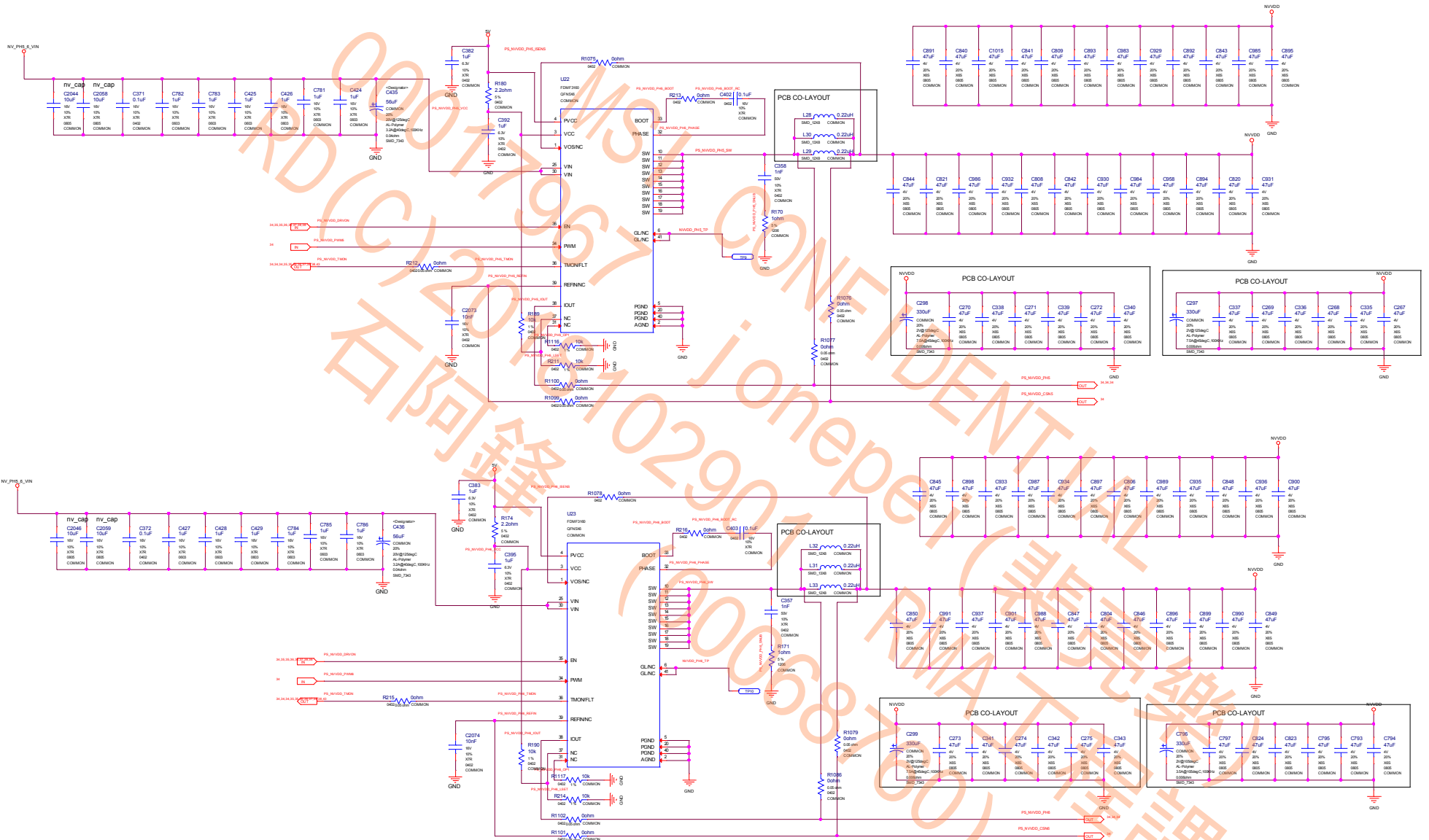


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ASSEMBLY	<ASSEMBLY_DESCRIPTION
PAGE DETAIL	PS: NVDD Phase 1, 2

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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE: 37 OF 54	PS: NVVDD Phase 5, 6

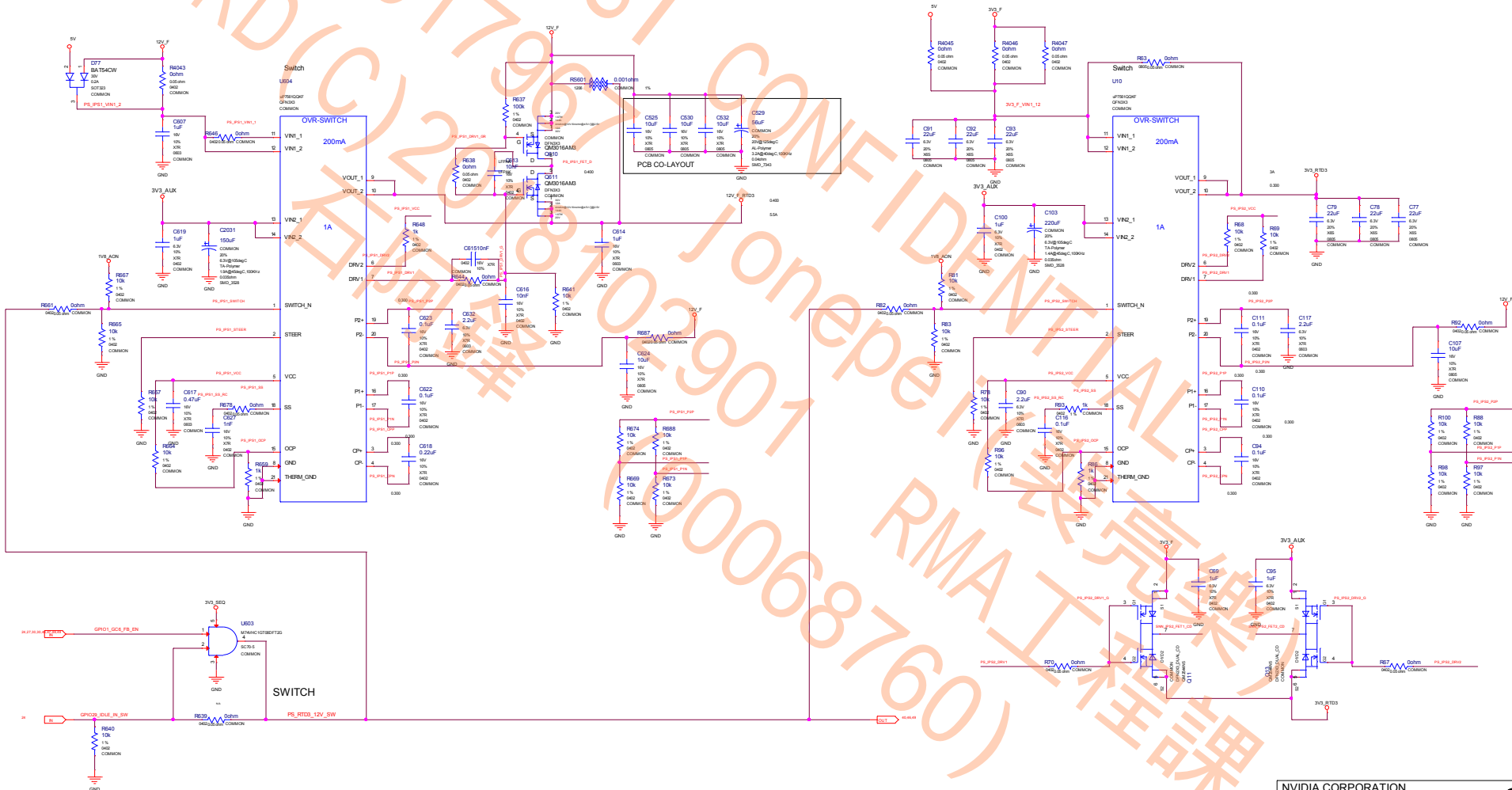
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NV_PN	600-1G180-BASE-200
PCB REV	PG180-A02
ICOM REV	A
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DATE	27-JUN-2018





GPI01	GPI029	SWITCH	VOUT
0	0	0	12V_F
0	1	0	12V_F
1	0	0	12V_F
1	1	1	3V3A

GPIO1	GPIO29	SWITCH	VOUT
0	0	0	3V3
0	1	0	3V3
1	0	0	3V3
1	1	1	3V3A



ASSEMBLY	<ASSEMBLY_DESCRIPTION
PAGE DETAIL	PS: INPUT SWITCH RTD3

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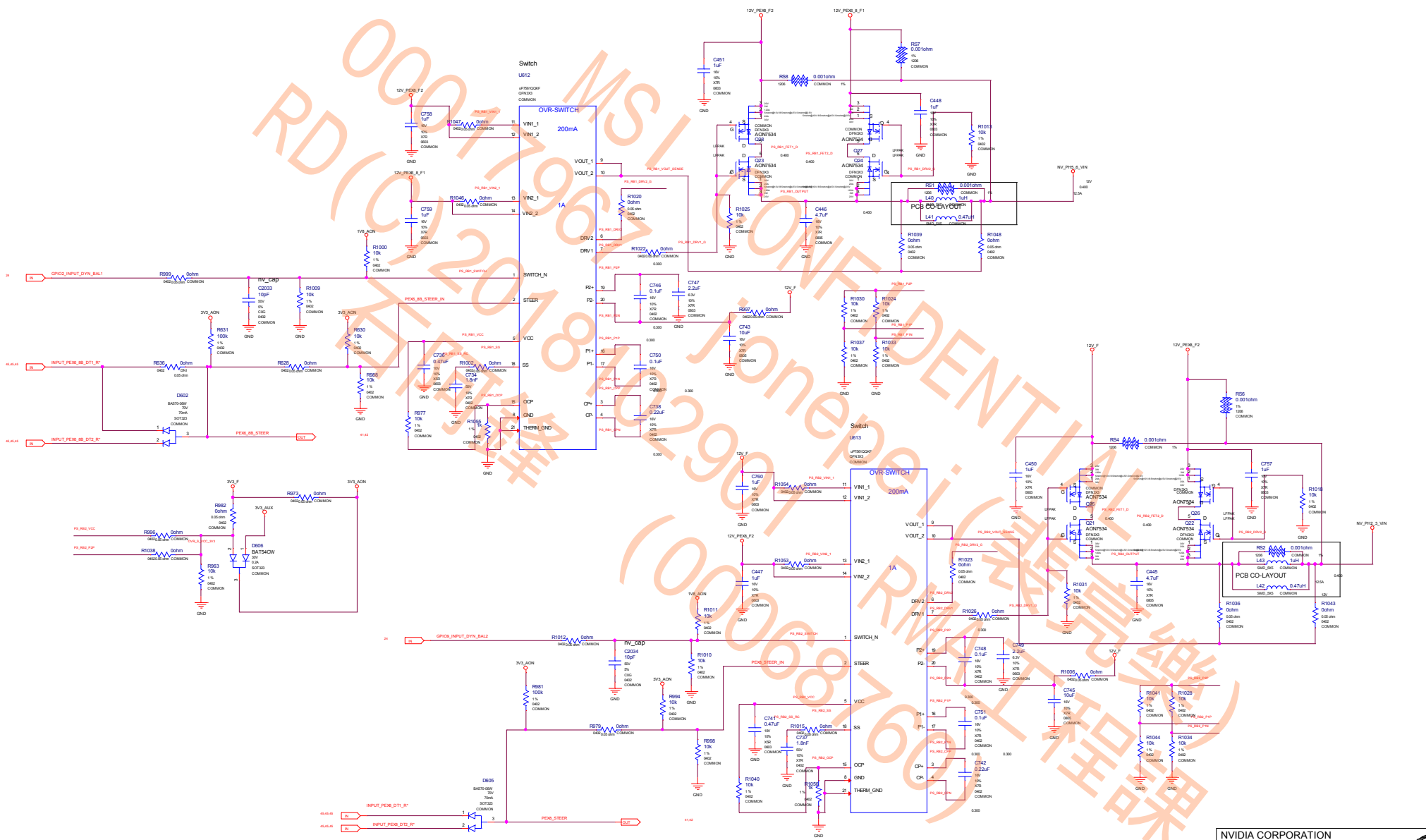
NV_PN	600-1G180-BASE-200
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DATE	27-JUN-2018







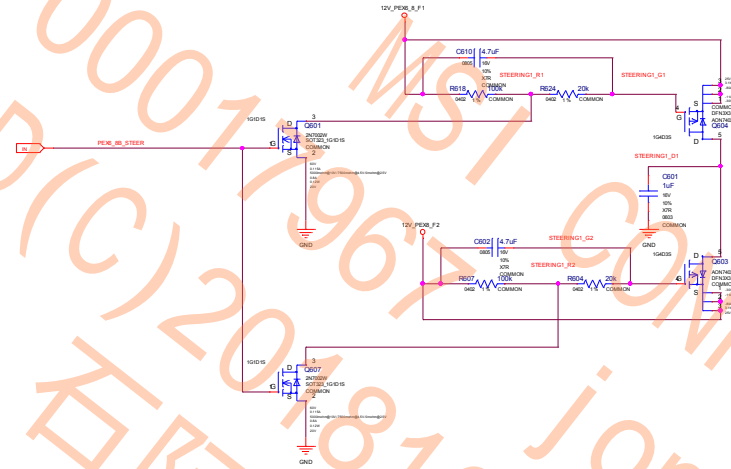
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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	PS: INPUT SWITCH RAIL BALANCE

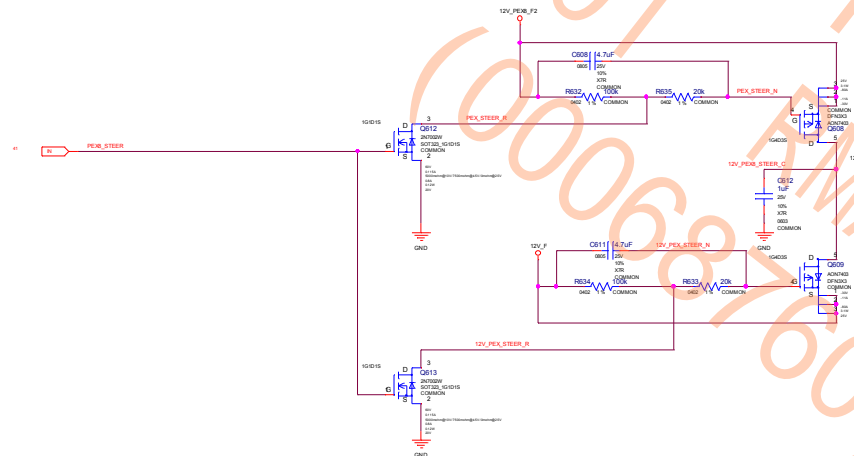
NVIDIA CORPORATION			
7701 SANTA CLARA EXPRESSWAY			
SANTA CLARA, CA 95050, USA			
NV_PN	600-1G180-BASE-200		
PCB REV	PG180-A02	PAGE	41 OF 54
BCM REV	A	DATE	27-JUN-2018



12V CURRENT STEERING (UNDER POWER BOOT):  
GUIDES CURRENT FROM PEX EDGE TO PEX 6/8 PIN INPUT AREA



12V CURRENT STEERING (UNDER POWER BOOT):  
GUIDES CURRENT FROM PEX EDGE TO PEX 8 PIN INPUT AREA

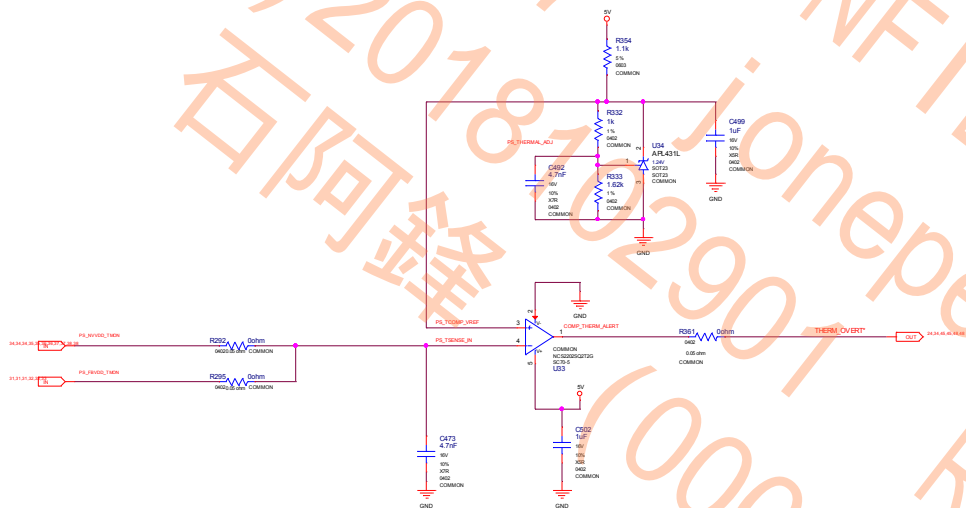


ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PS: 12V CURRENT STEERING

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NV_PN	600-1G180-BASE-200		
PCB REV	PG180-A02	PAGE	42 OF 54
BOM REV	A	DATE	27-JUN-2018




ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PS: VR THERMAL PROTECTION

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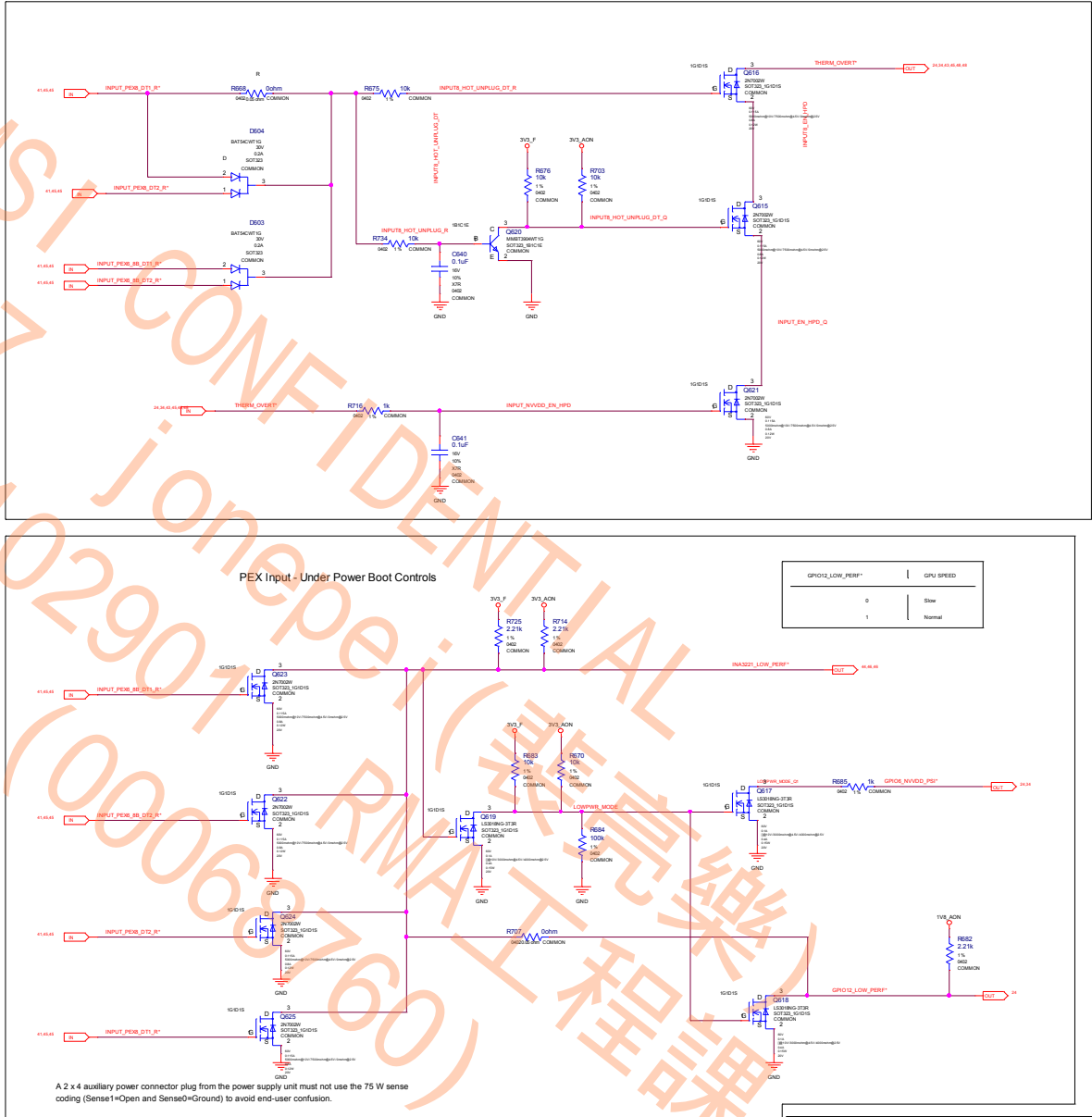
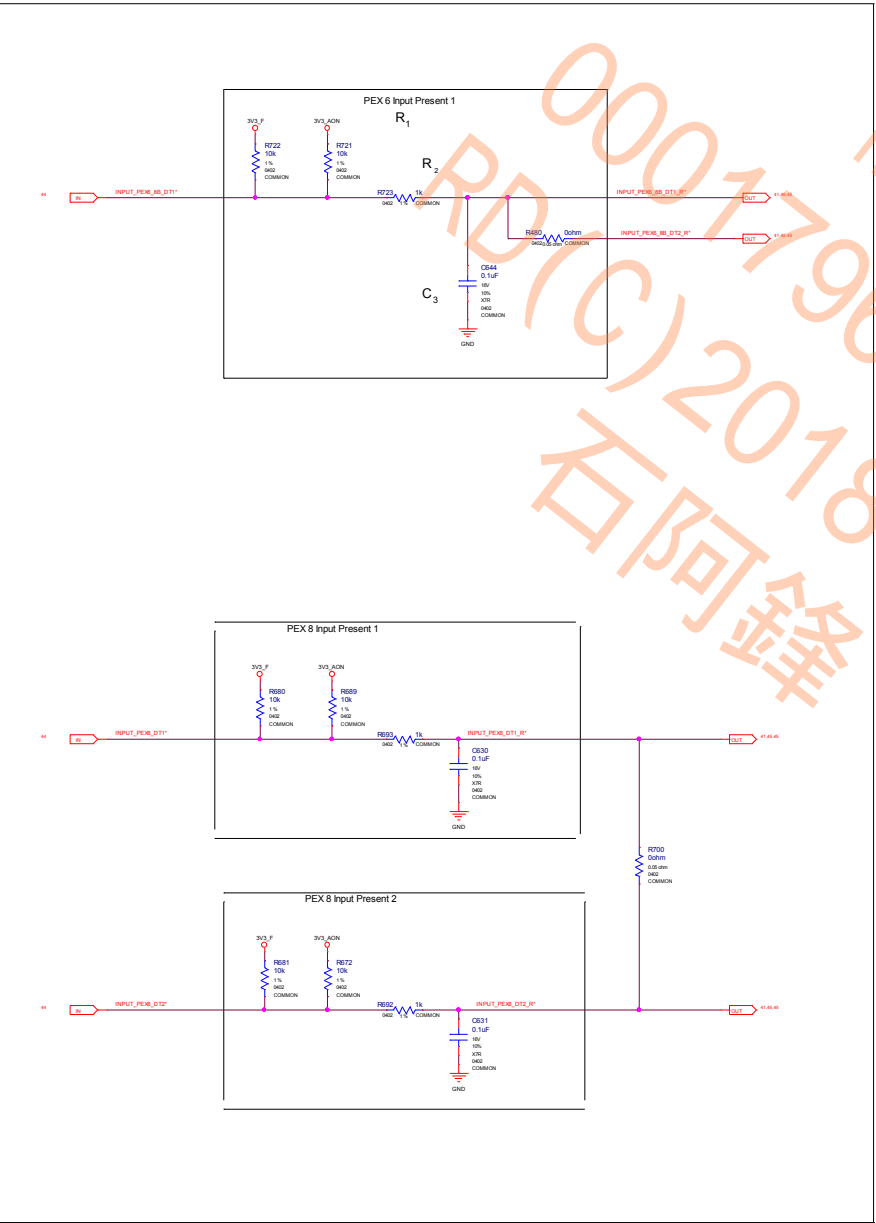
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SANTA CLARA, CA 95050, USA				
NV_PN		600-1G180-BASE-200		
PCB REV	PG180-A02	PAGE	43 OF 54	
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<b>NV_PN</b> 600-1G180-BASE-200				
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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	PS: CURRENT STEERING, HOT UNPLUG DETECT

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NV\_PN

600-1G180-BASE-200

PCB REV

PG180-A02

BCM REV

A

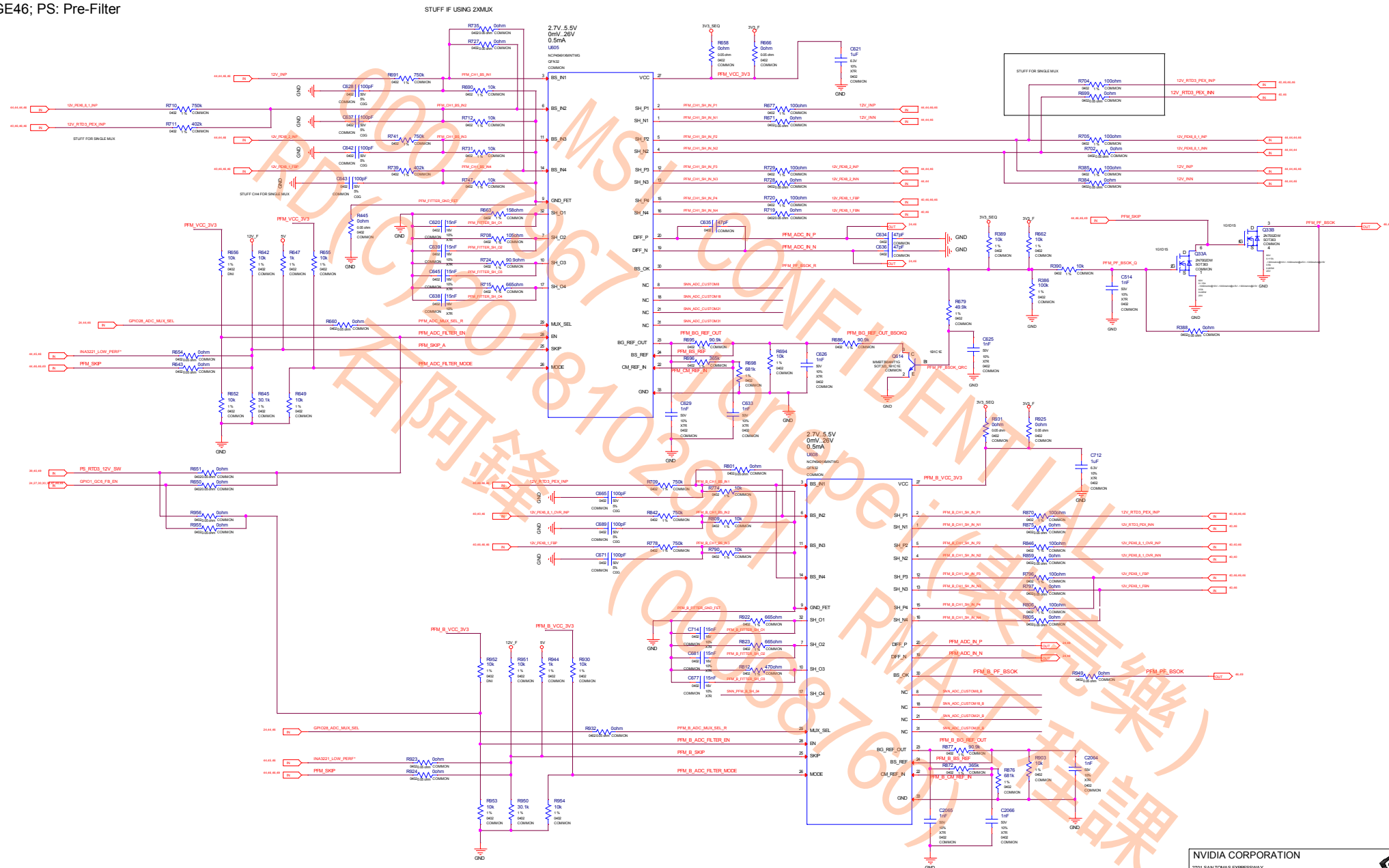
DATE

27-JUN-2018

PAGE

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ASSEMBLY	<ASSEMBLY_DESCRIPTION
PAGE DETAIL	PS: PRE-FILTER

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NV_PN	600-1G180-BASE-200
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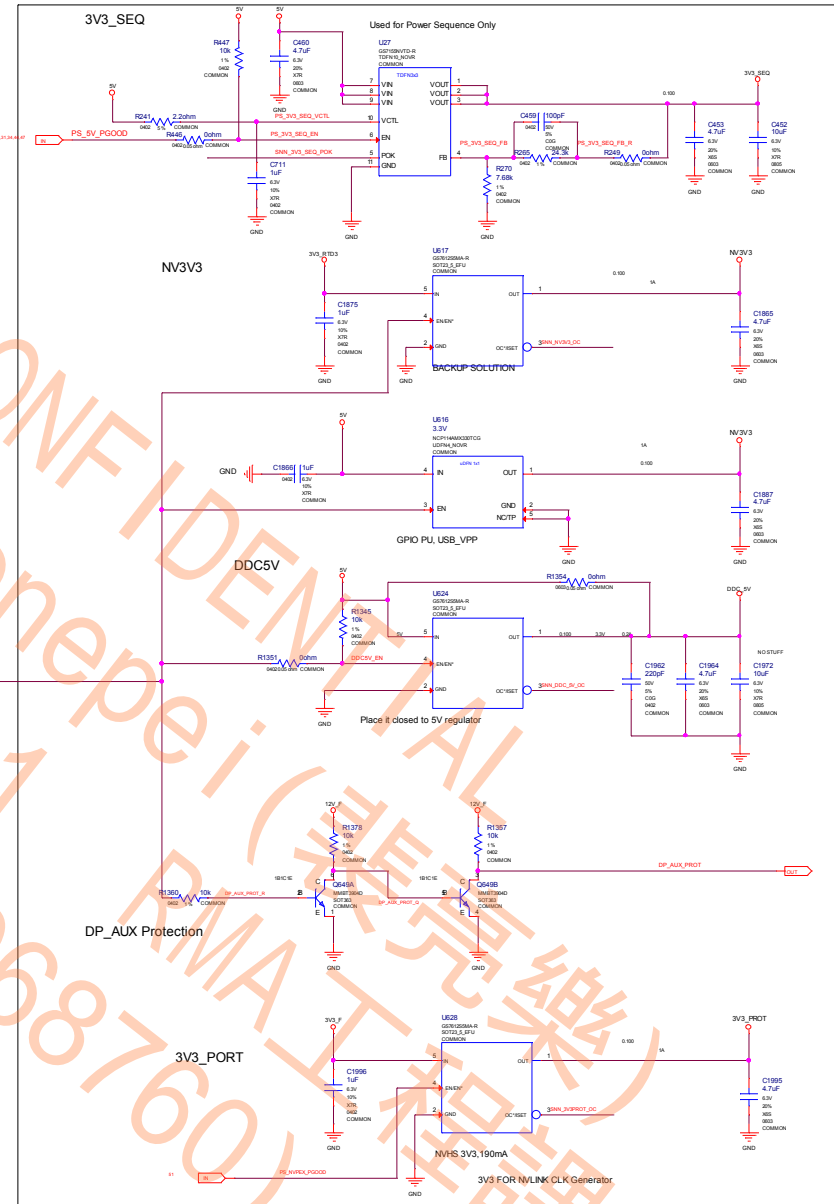
PCB REV	PG180-A02
BOM REV	A

PAGE	46 OF 5
DATE	27-JUN-2018

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PAGE DETAIL	SEQUENCE: 5V, 1V8, NV3V3 ENABLE

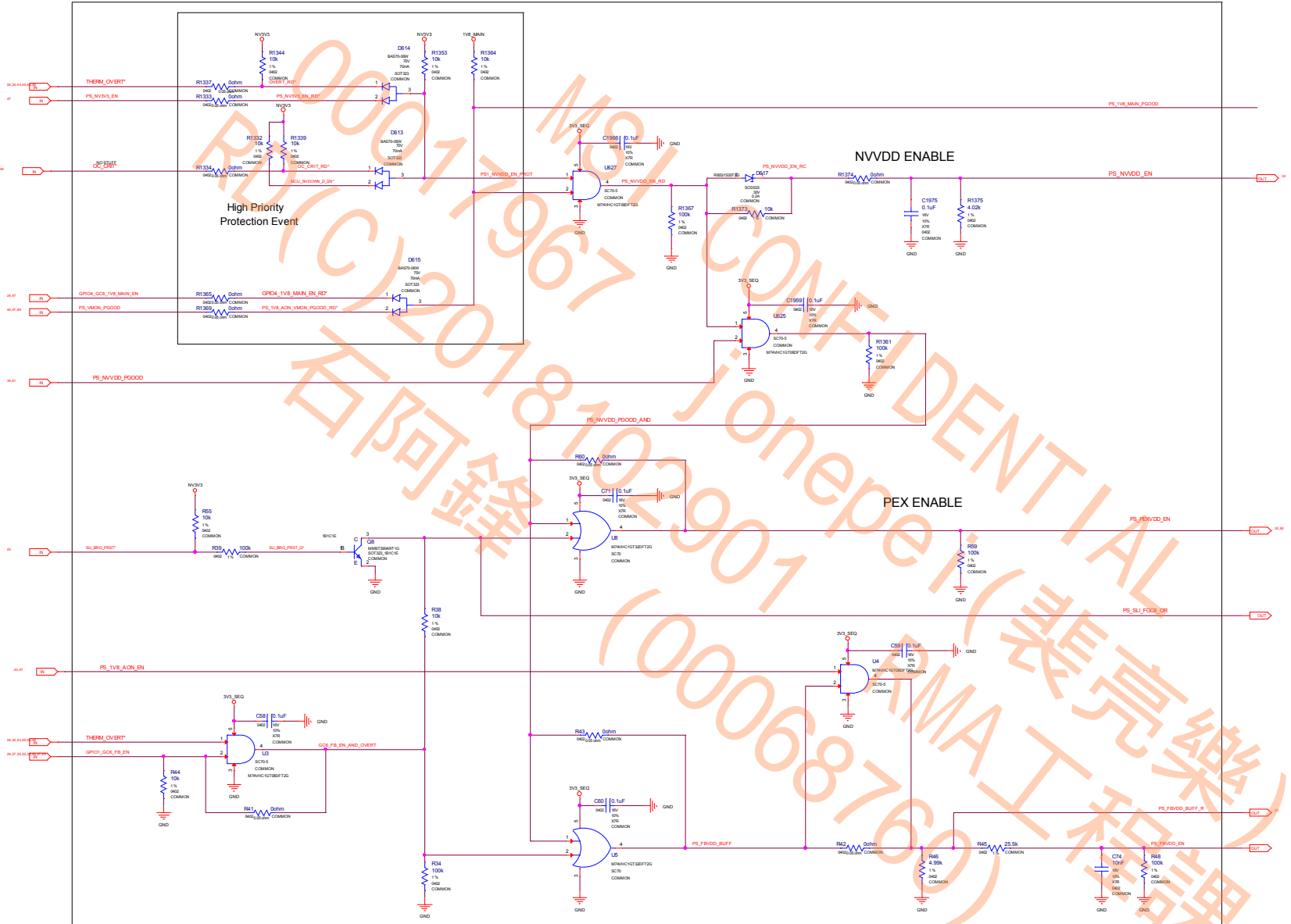
NV_PN	600-1G180-BASE-200
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NV_PN	600-1G180-BASE-200
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PCB REV	PG180-A02
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BOM REV	A	DATE	27-JUN-2018
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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	SEQUENCE: NV, PEX, FB ENABLE

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NV_PN	600-1G180-BASE-200
PCB REV	PG180-A02
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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_FF_SKP	INPUT	From IN3321 (VPU) or Pre-filter (SKP)
PS_FF_BSK	INPUT	From IN3321 (PV) or Pre-filter (BS_SK)
S_RTD3_12V_SW	INPUT	GC6_FB_EN && IDLE_IN_SW



OPTIONS	PEX1V3_SENSE	PEX12V_SENSE	OTHER_12V_SENSE
Use Pre-Filter	Pre-Filter NO STUFF U12 NO STUFF Q3,Q5 NO STUFF D15	Pre-Filter NO STUFF U13 NO STUFF Q4	Pre-Filter
Use INA3221	Voltage_Monitor	INA3221 NO STUFF U12 NO STUFF Q4	INA3221
NO INA3221 NO Pre-Filter	Voltage_Monitor	Voltage_Monitor	N/A

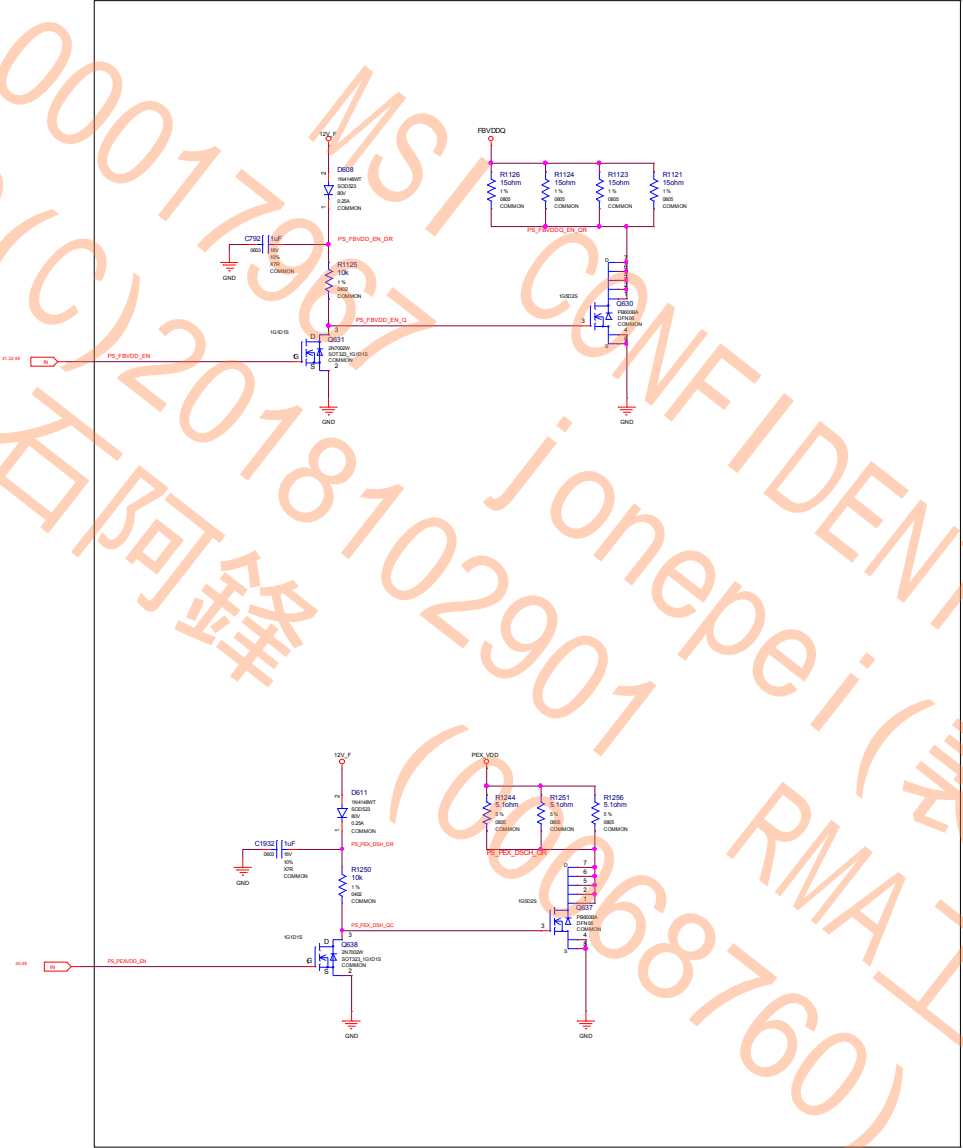
### Power Supply

INA3221:3V3\_SEQ

Pre\_Filter(ADC\_MUX):3V3(P~~EX~~)

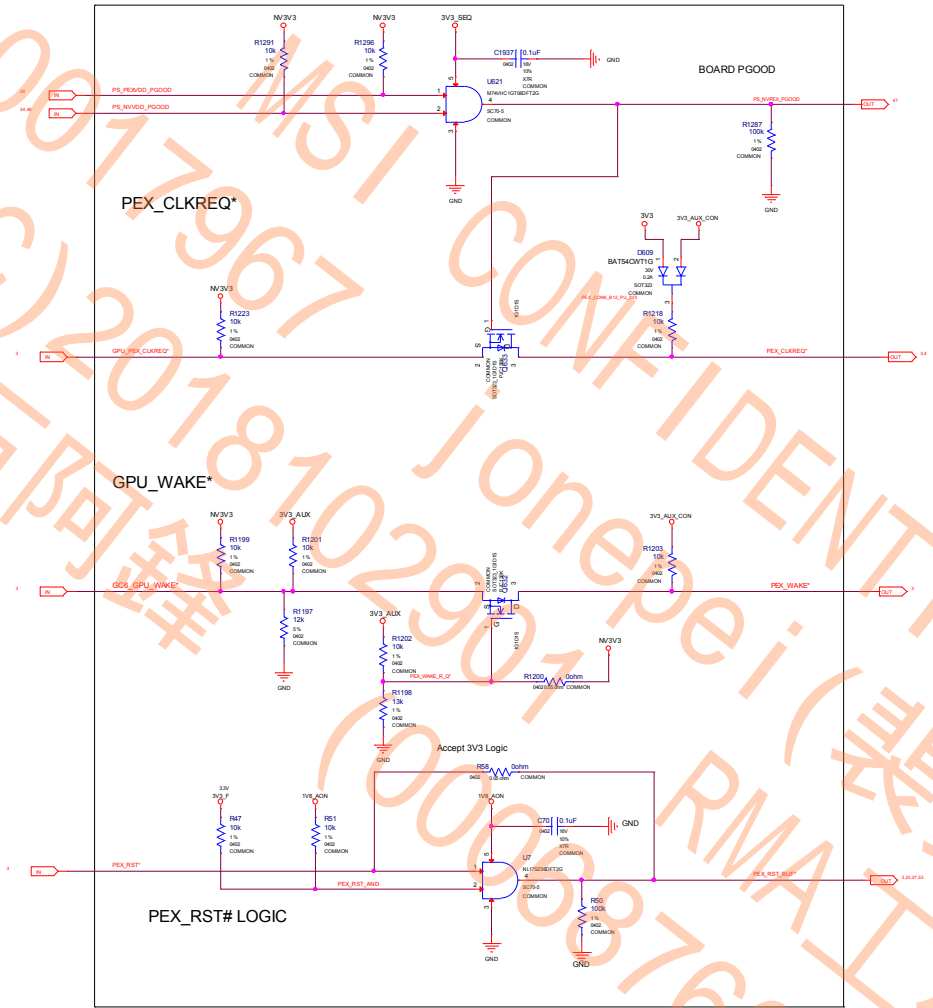
Dual Pre-Filter case:

Only use the Primary Pre-Filter to sense 3V3PEX  
and All Input 12Vs



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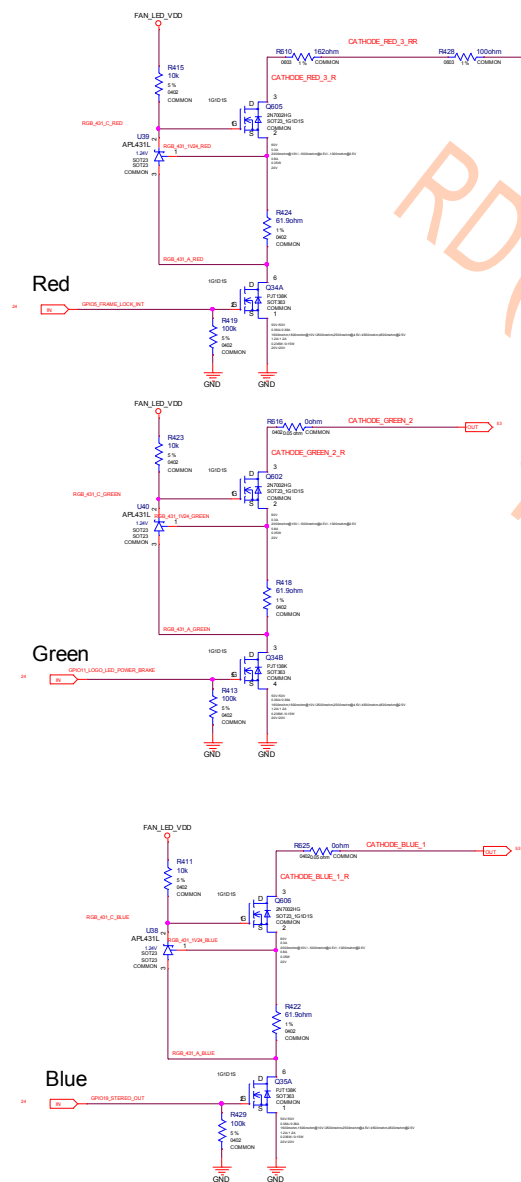
NVIDIA CORPORATION			
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NV_PN	600-1G180-BASE-200		
PCB REV	PG180-A02	PAGE	50 OF 54
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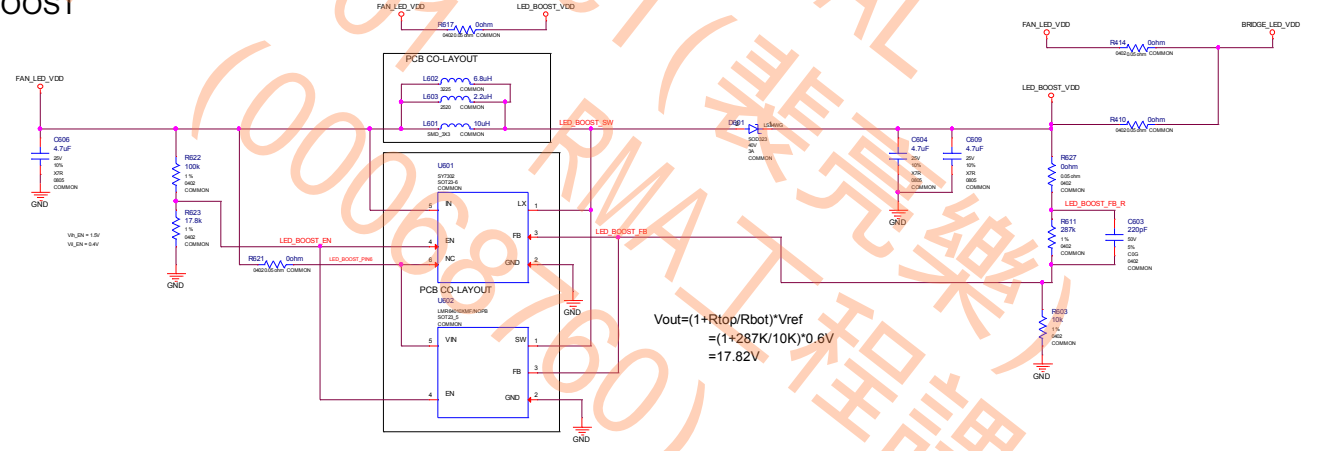
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ASSEMBLY	ASSEMBLY DESCRIPTION
PAGE DETAIL	SEQUENCE: MISC

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## LED BOOST



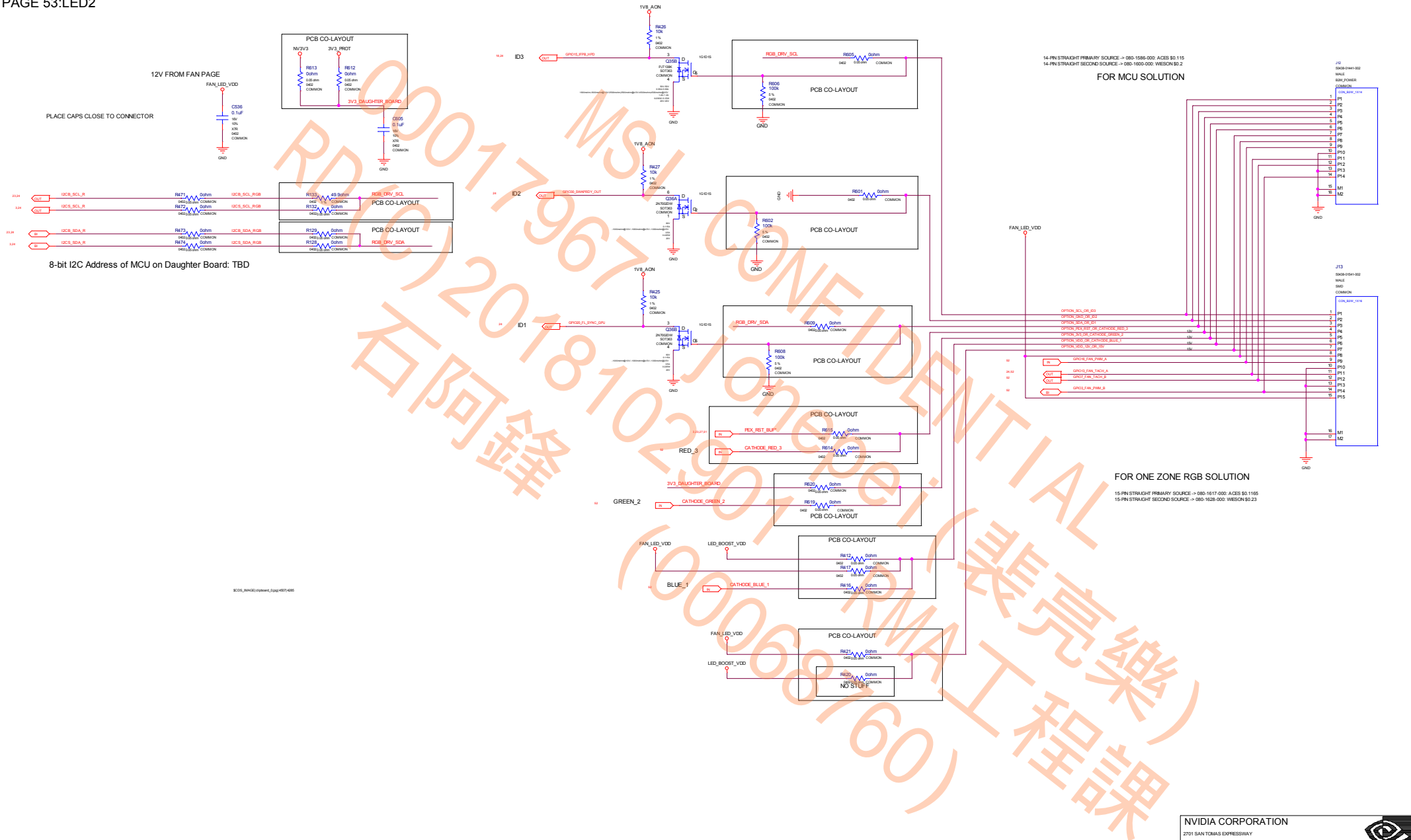
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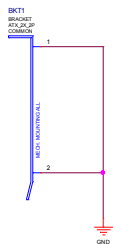
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ASSEMBLY	ASSEMBLY DESCRIPTION
LED 2	

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NV_PN	600-1G180-BASE-200
PCB REV	PG180-A02
PCB REV	A
DATE	27-JUN-2018



Brackets:



Bracket Screw



BOARD STIFFENER

MEC501  
BOARD STIFFENER  
COMMON

GPU Socket Symbol

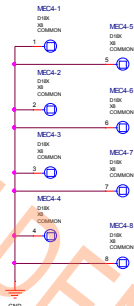
BGA SOCKET ASSY

12 connected mounting pins

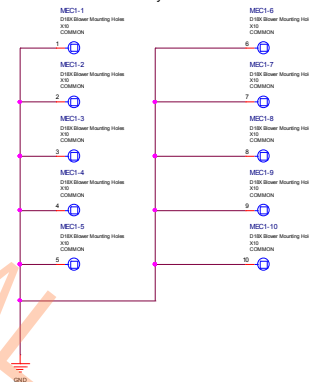


MEC3  
GPU SOCKET ASSY  
COMMON

GPU Mounting holes



Mechanical Holes Symbol



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