

PG160-B02

8GB GDDR6, 256b, X16

Tall DVI-D + USB/DP + DP + HDMI/DP + DP

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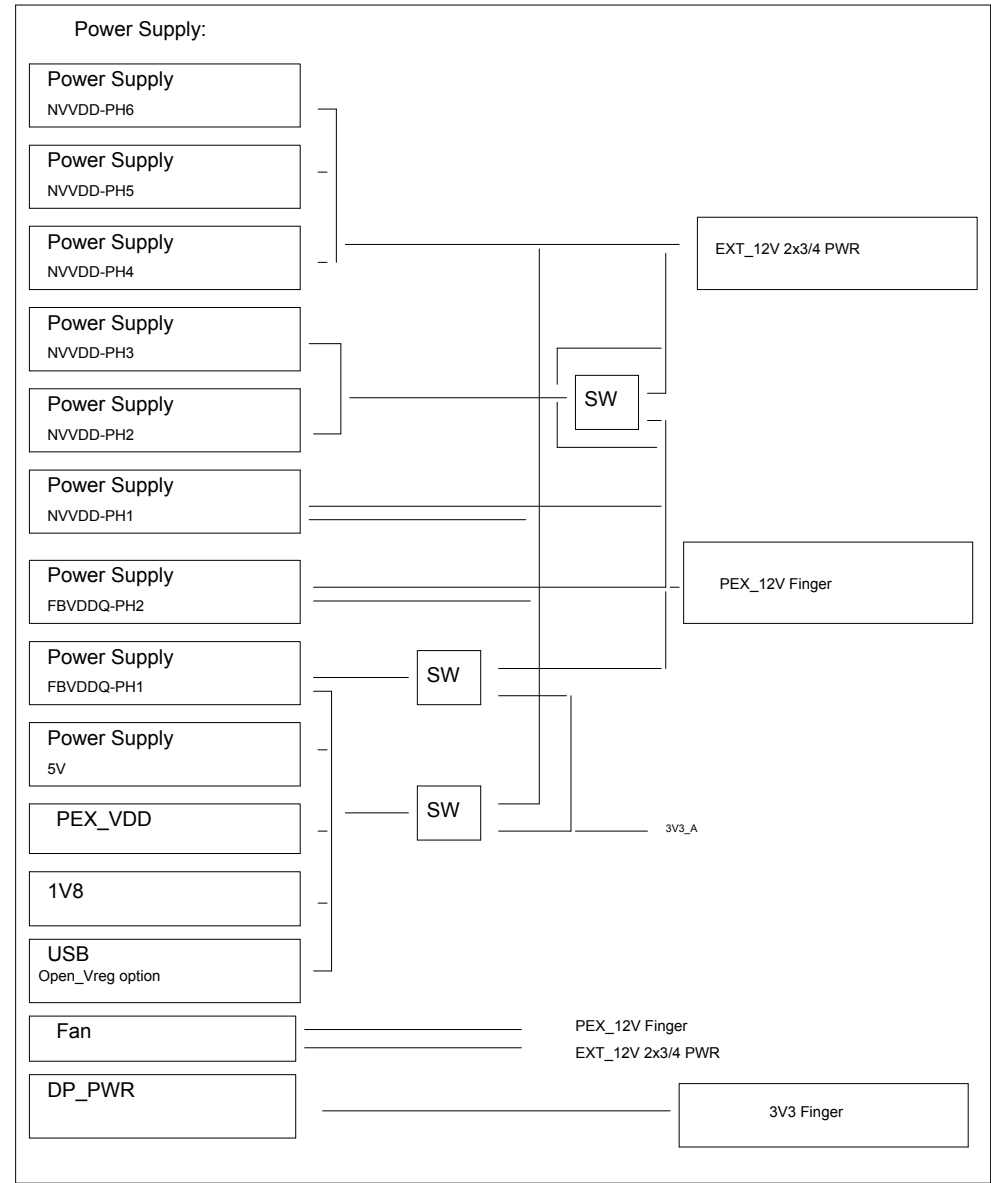
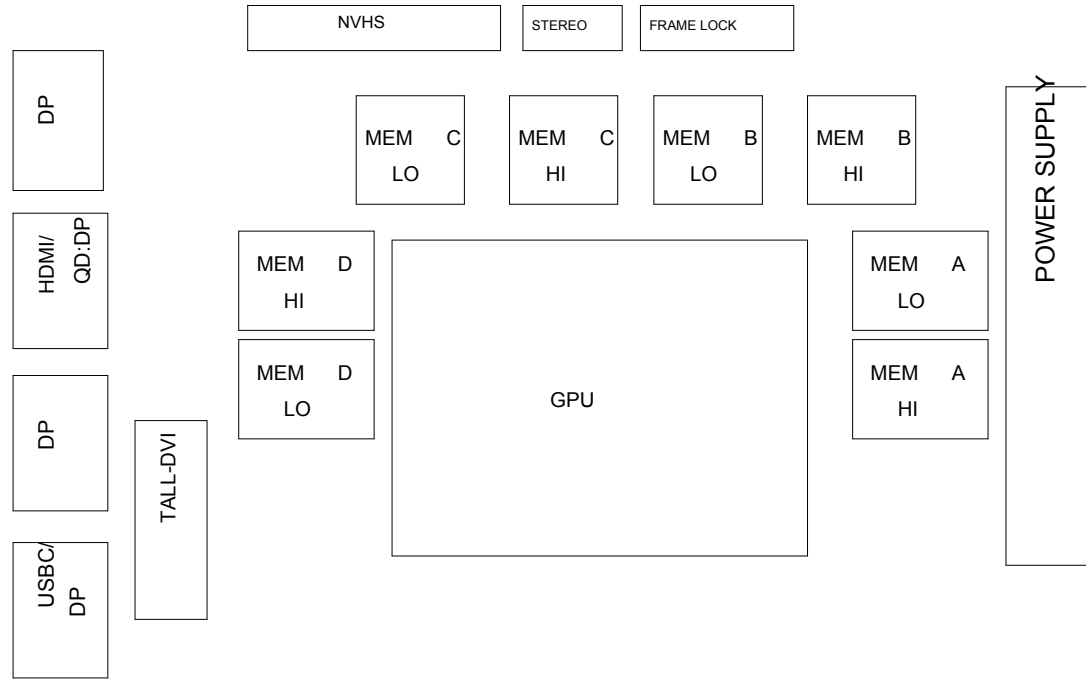
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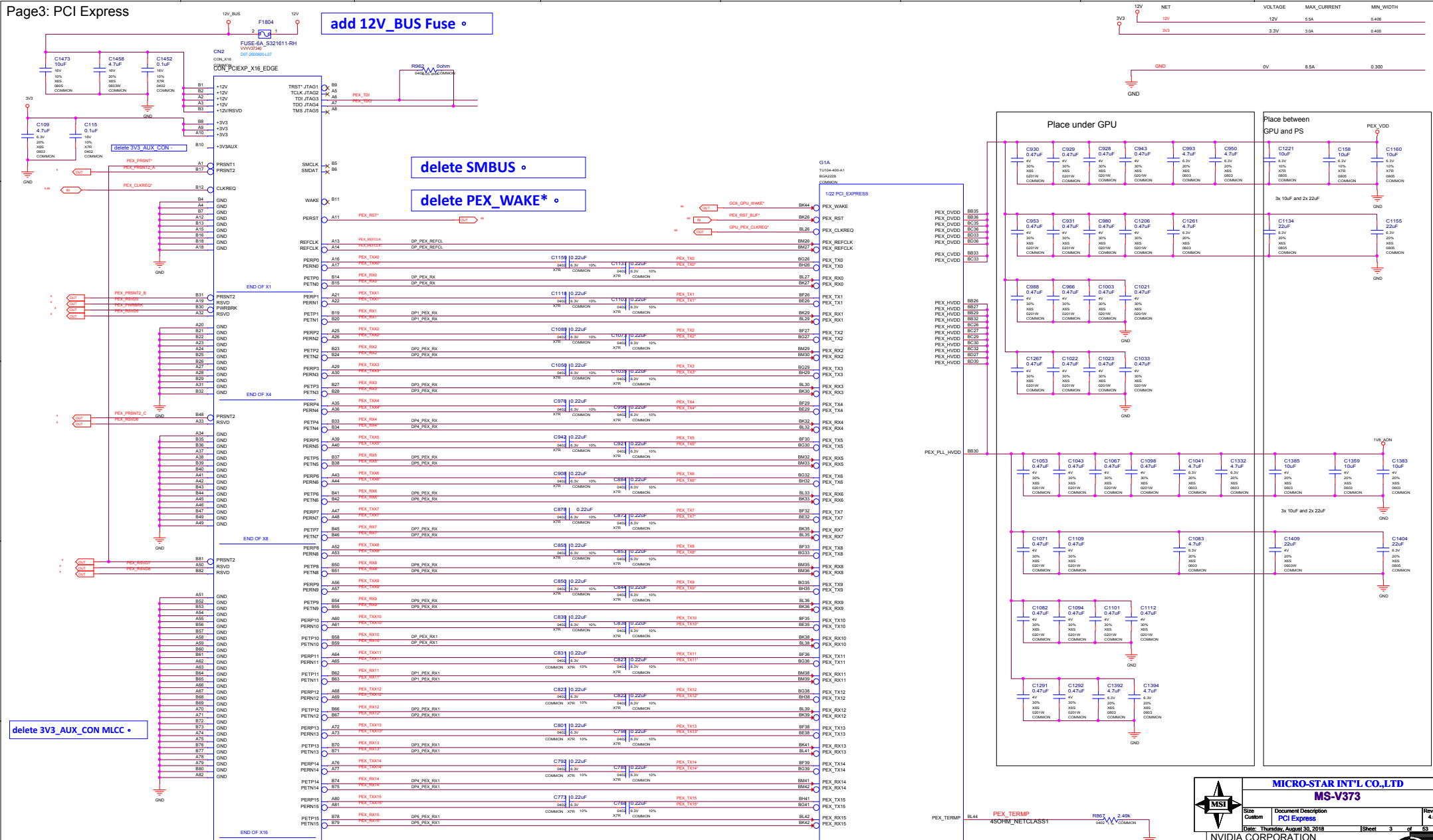


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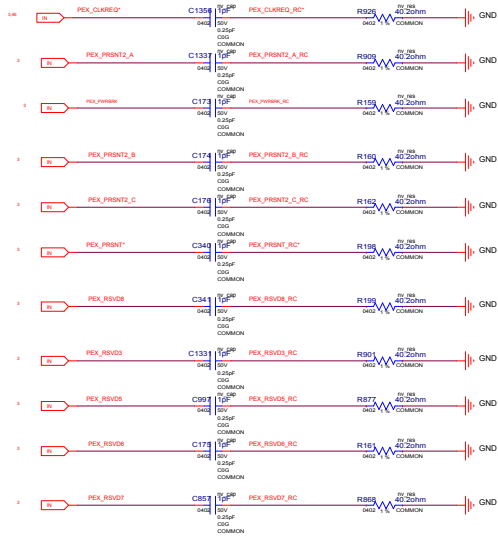
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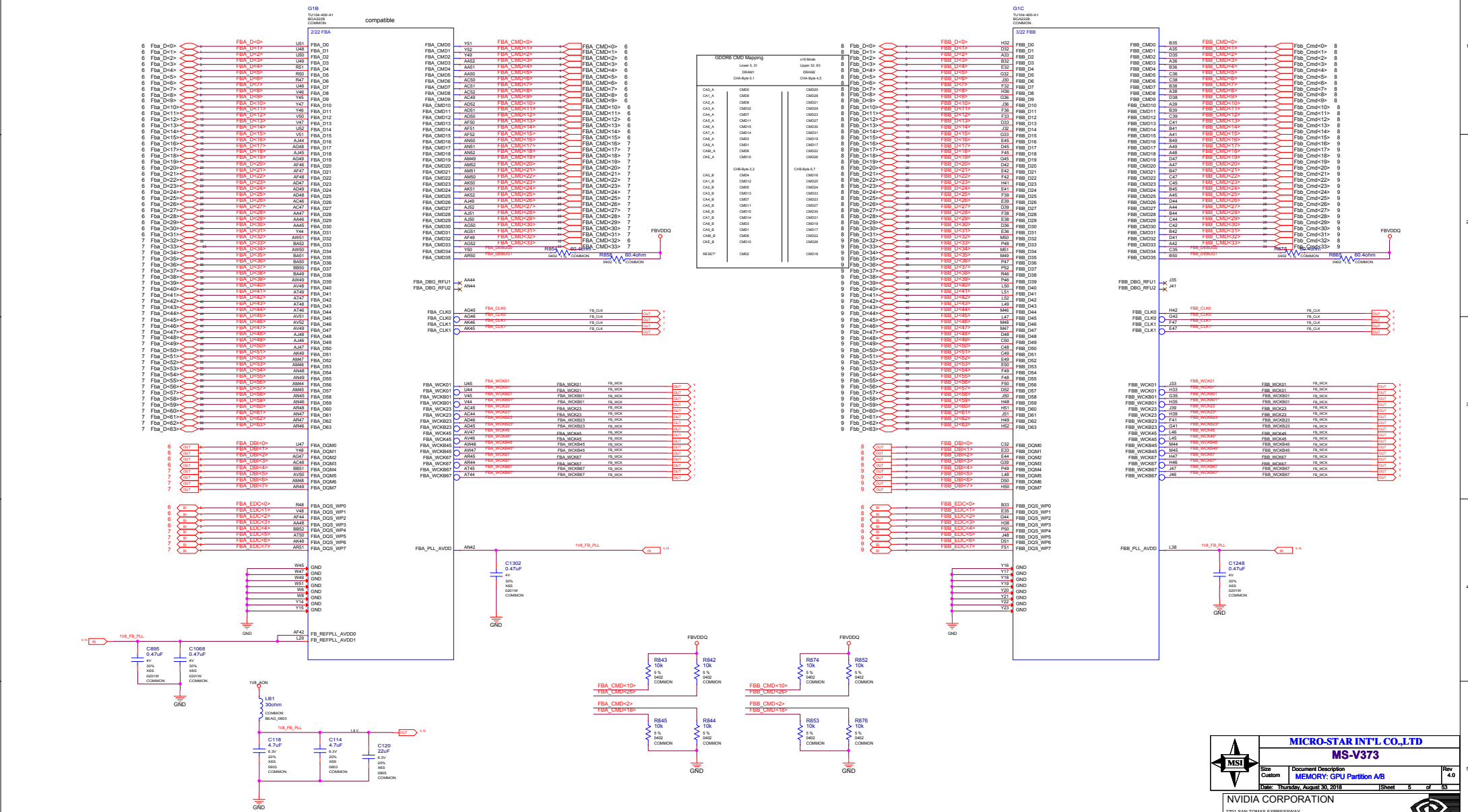
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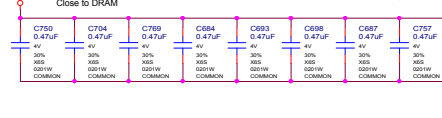
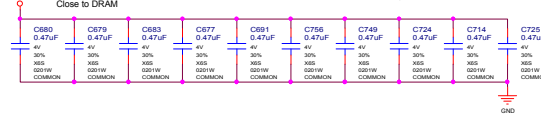
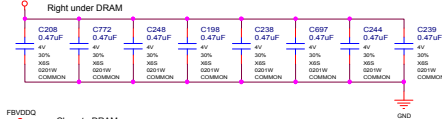
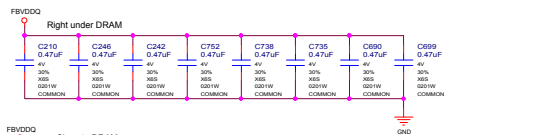
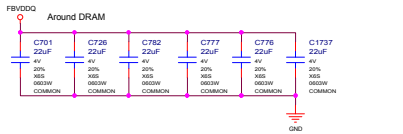
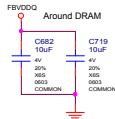
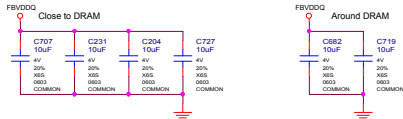
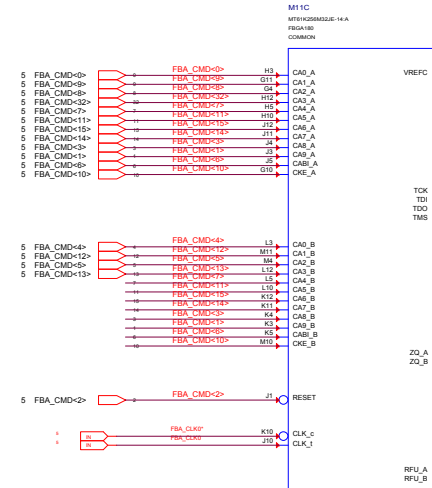
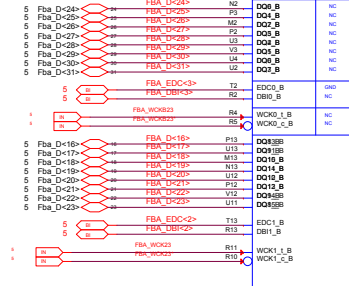
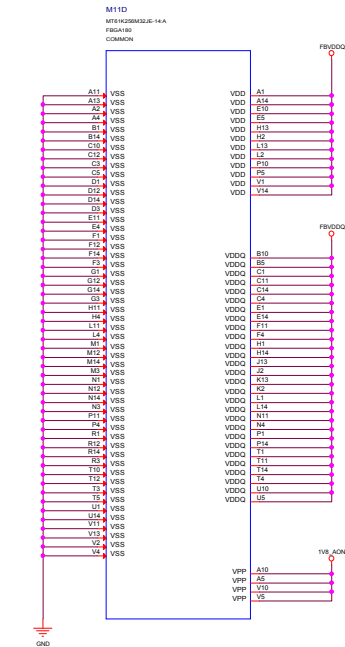


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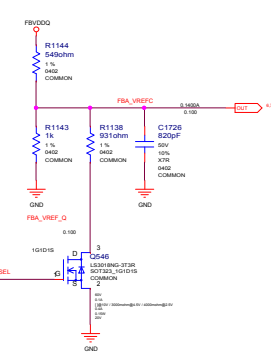


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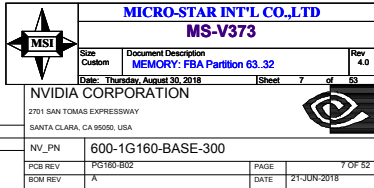
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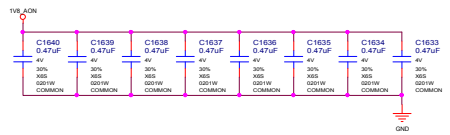
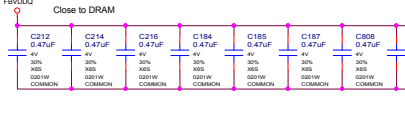
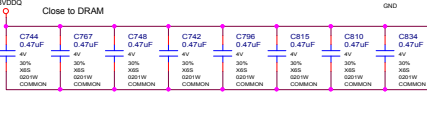
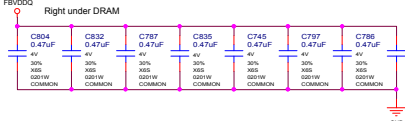
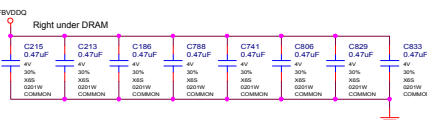
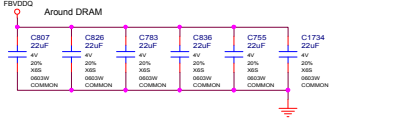
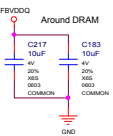
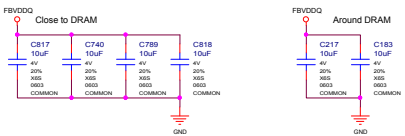
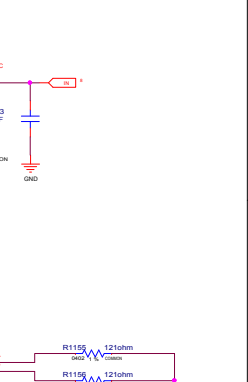
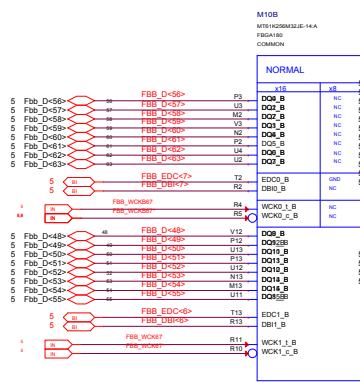
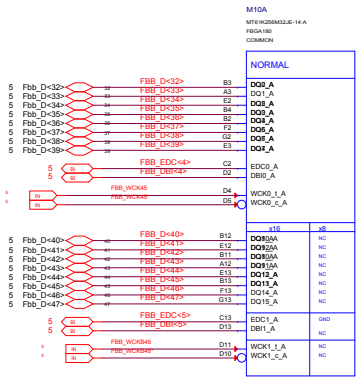
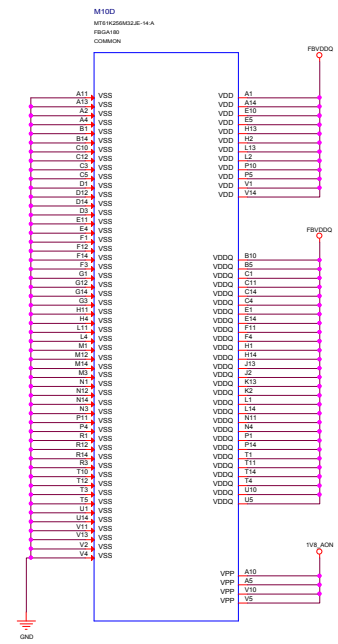
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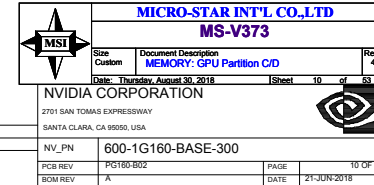
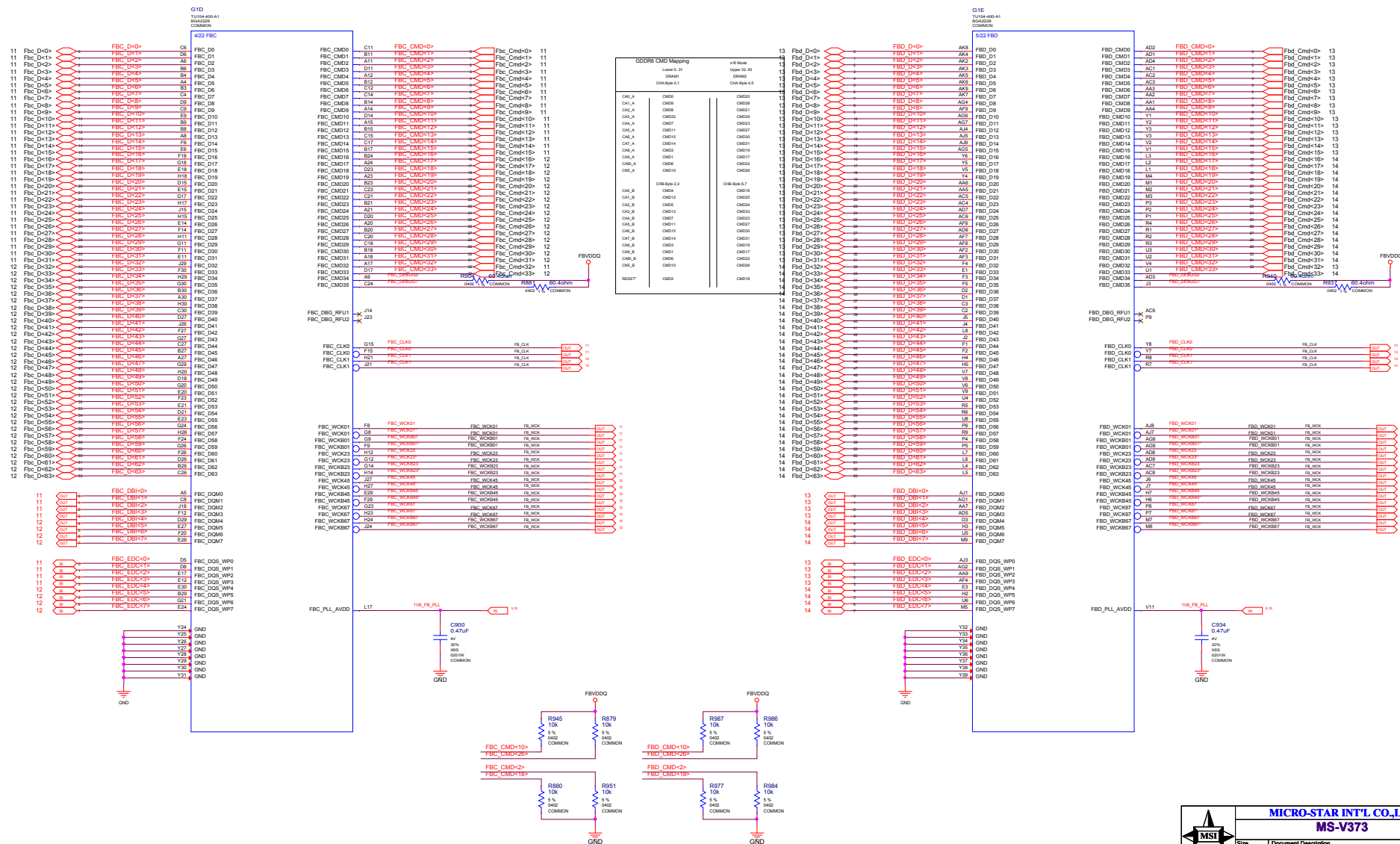
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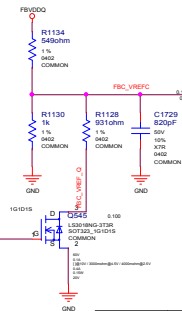
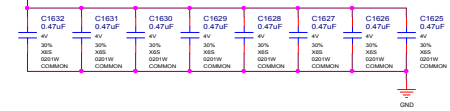
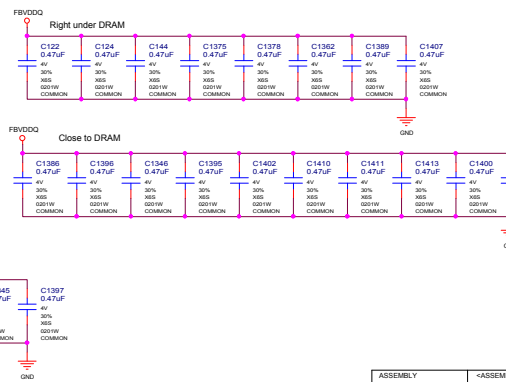
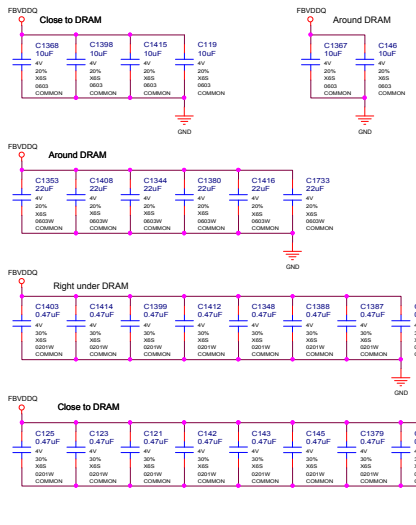
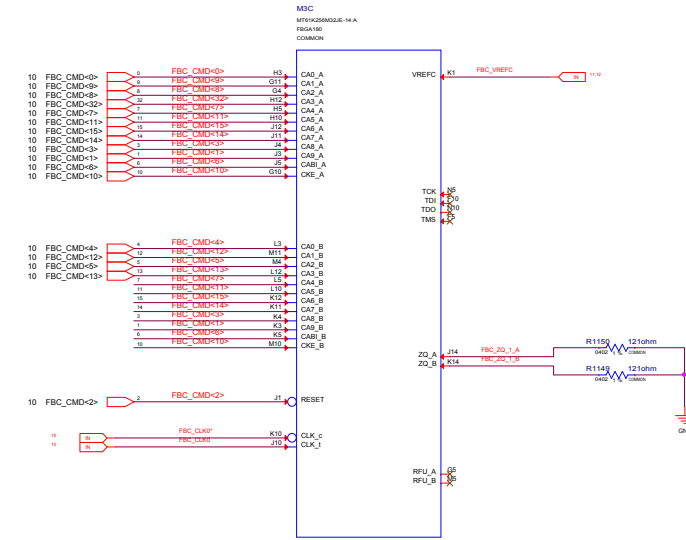
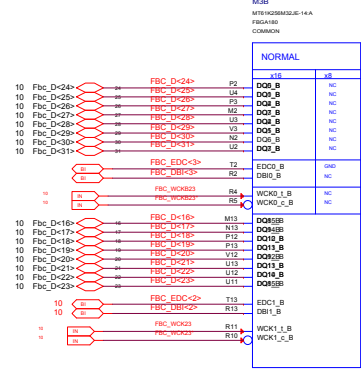
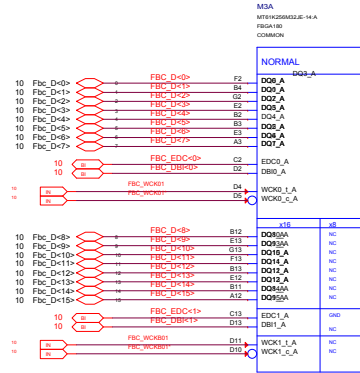
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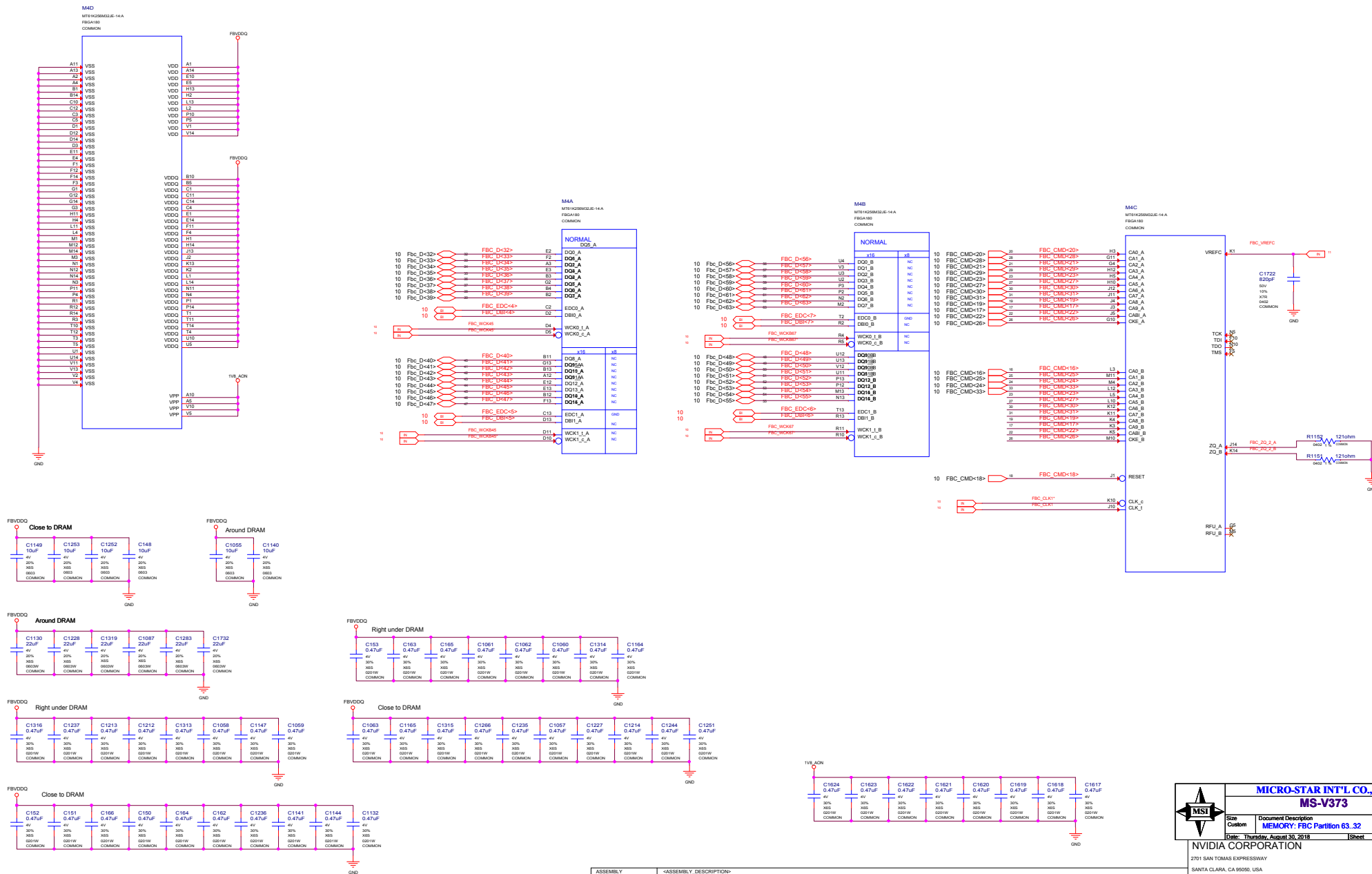
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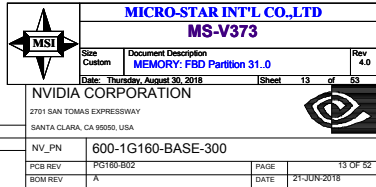
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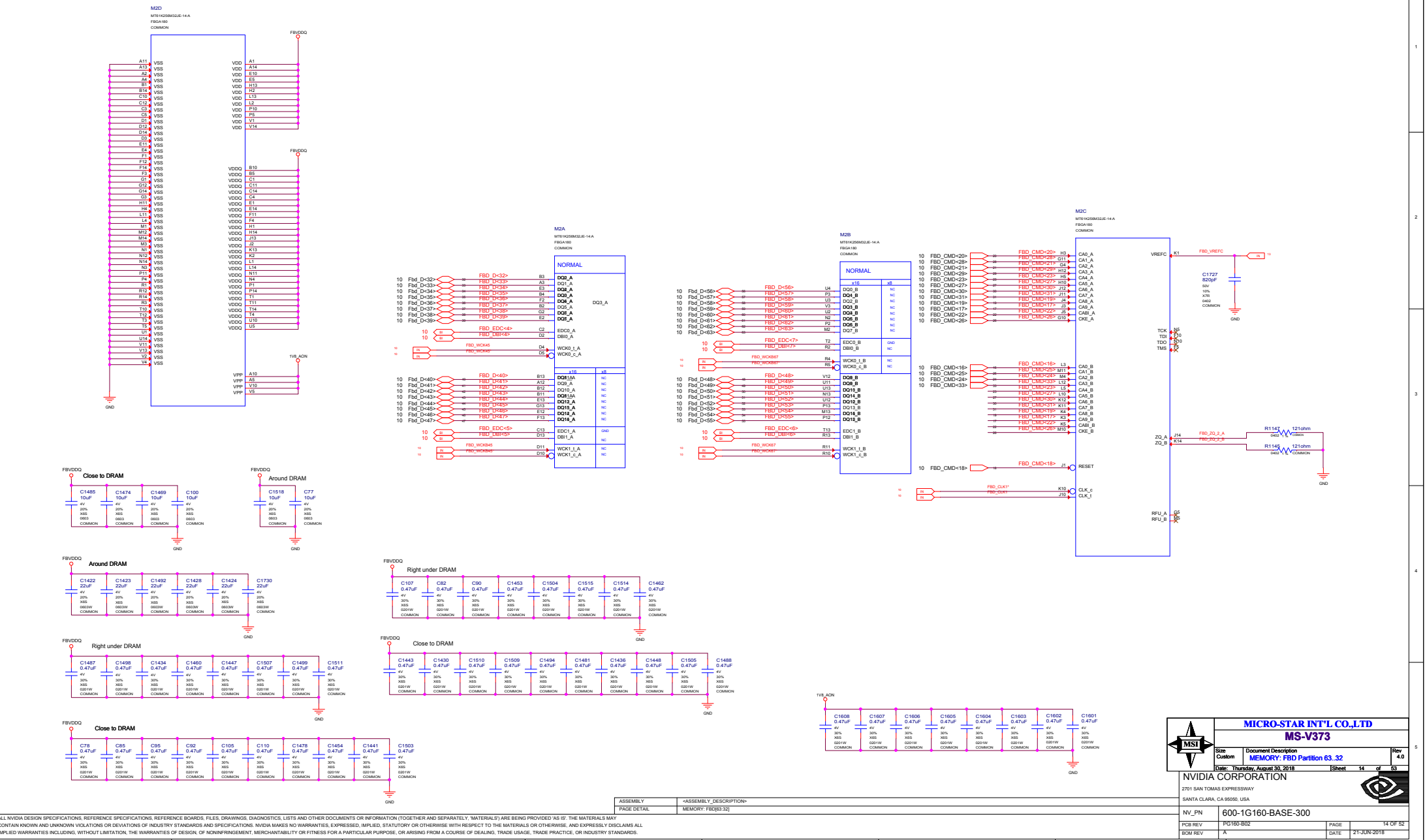
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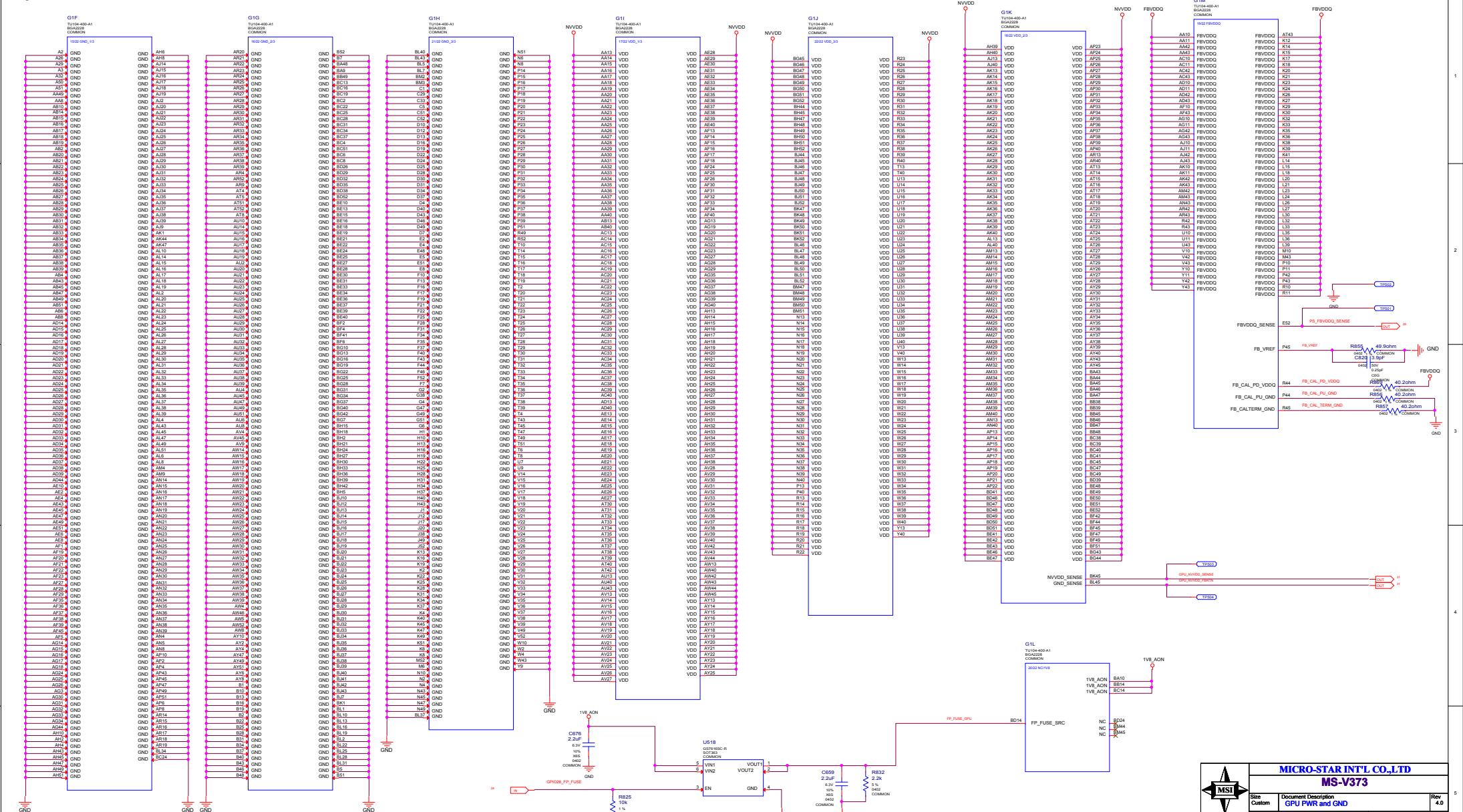
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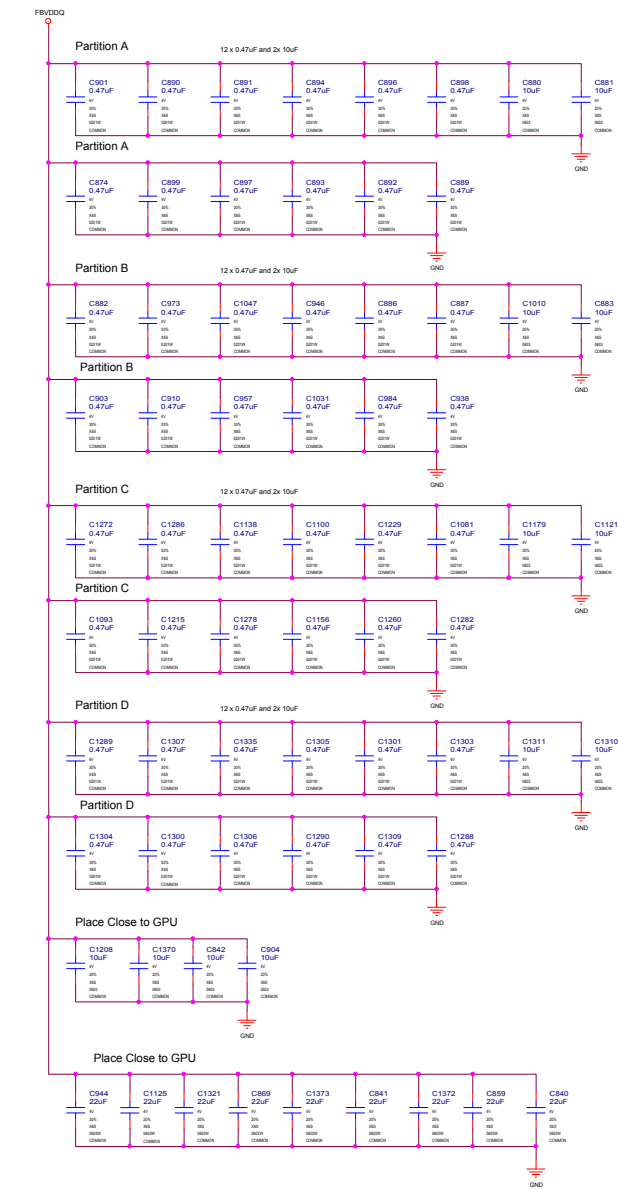




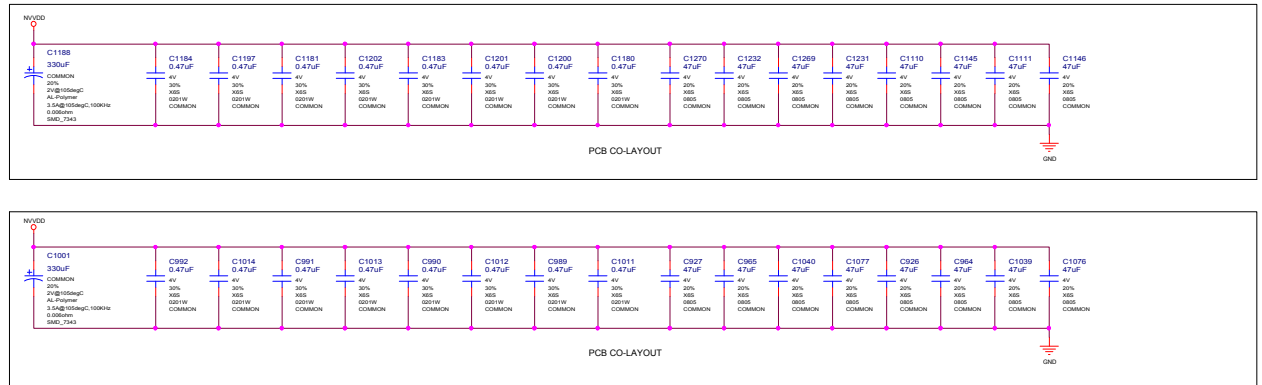
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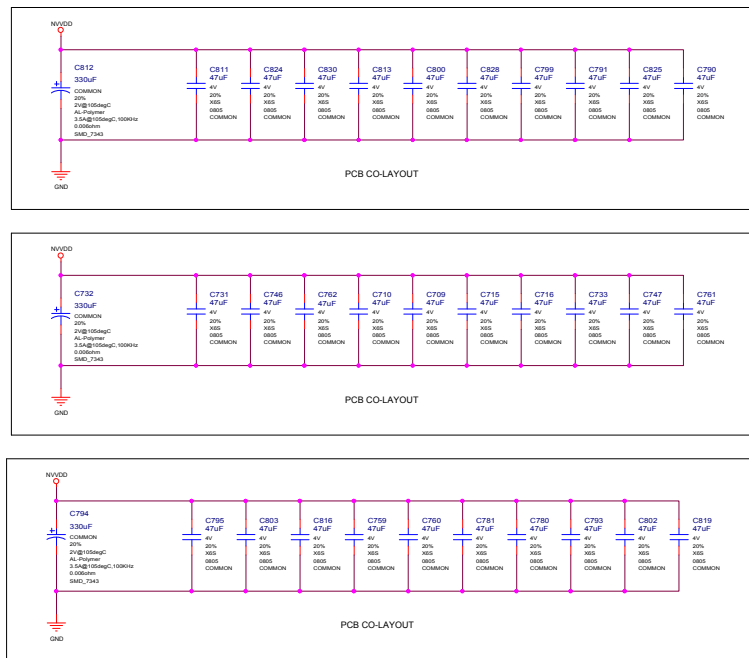
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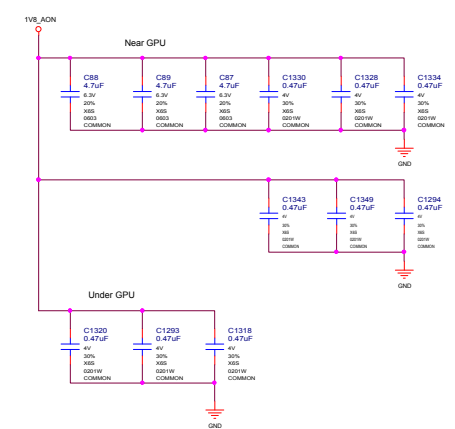
Under GPU



Near GPU



1V8_AON



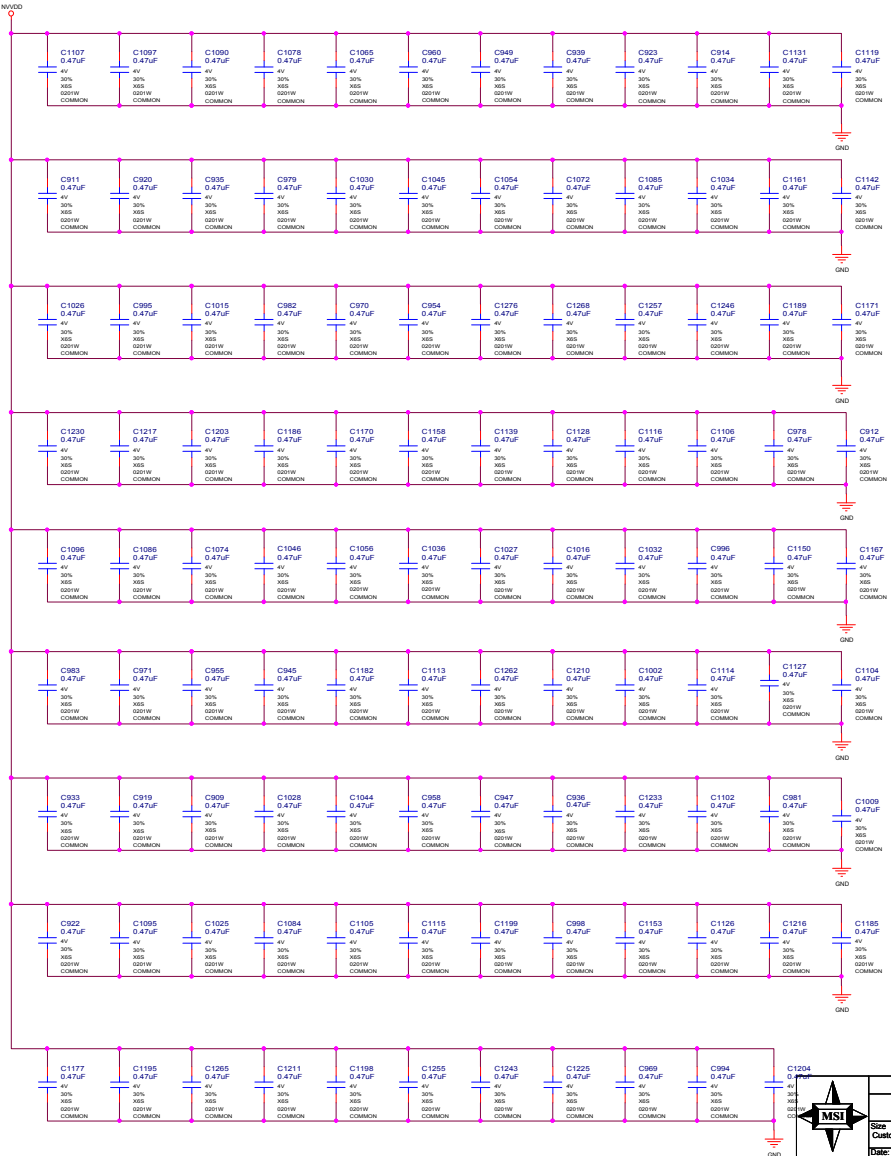
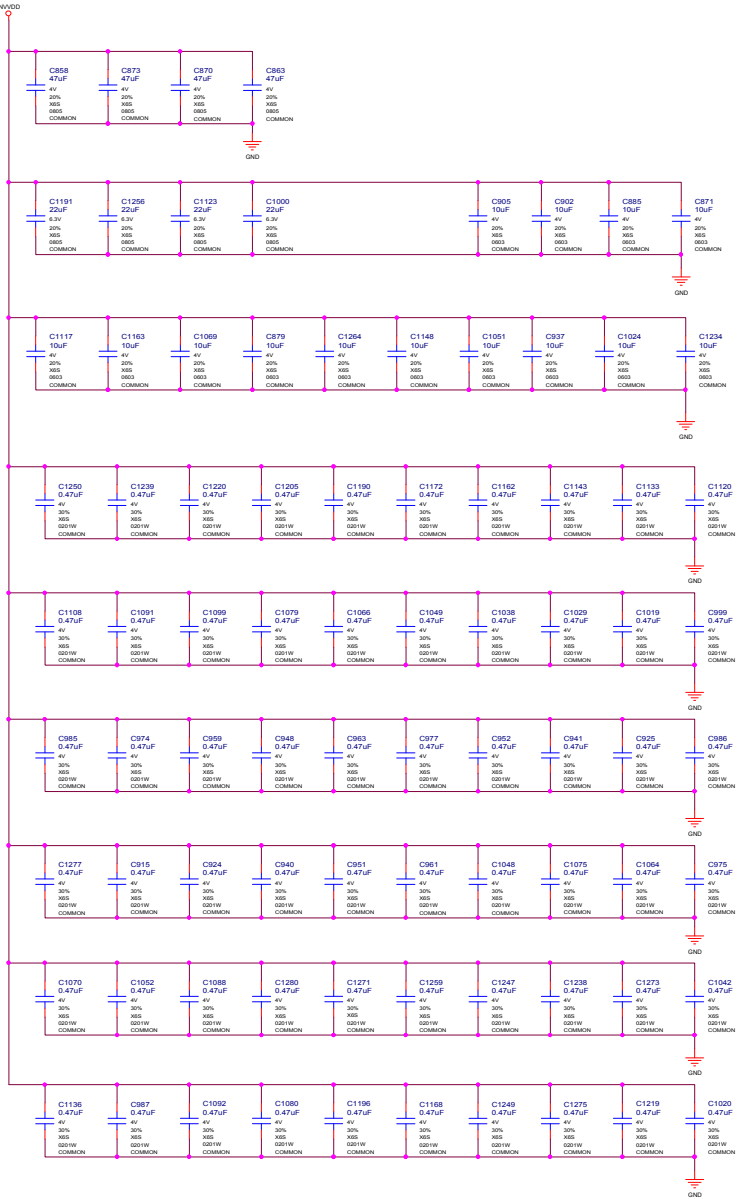
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ASSEMBLY	<ASSEMBLY DESCRIPTION>
PAGE: DETAIL	GPU Decoupling

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NVDD





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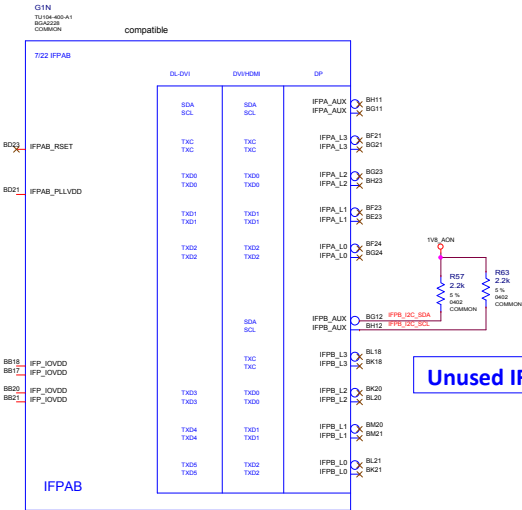
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ASSEMBLY	<ASSEMBLY_DESCRIPTION>		
PAGE DETAIL	GPU Decoupling2		
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delete Link AB °



Unused IFPB_I2C* leaving Pull high resistor to 1.8V °

9.3 UNUSED PINS

If an IFP link is unused, in general it should be left unconnected. This includes Main and Aux links. IFPxy_RSET and IFPxy_PLLVDD (xy=AB,CD,EF) can be left unconnected if neither of IFPx /IFPy is in use. For example, If neither link of the IFPA/IFPB macro is to be used, then IFPAB_PLLVDD and IFPAB_RSET should be left disconnected, and all signals and references associated with Link A and Link B should also be left unconnected.

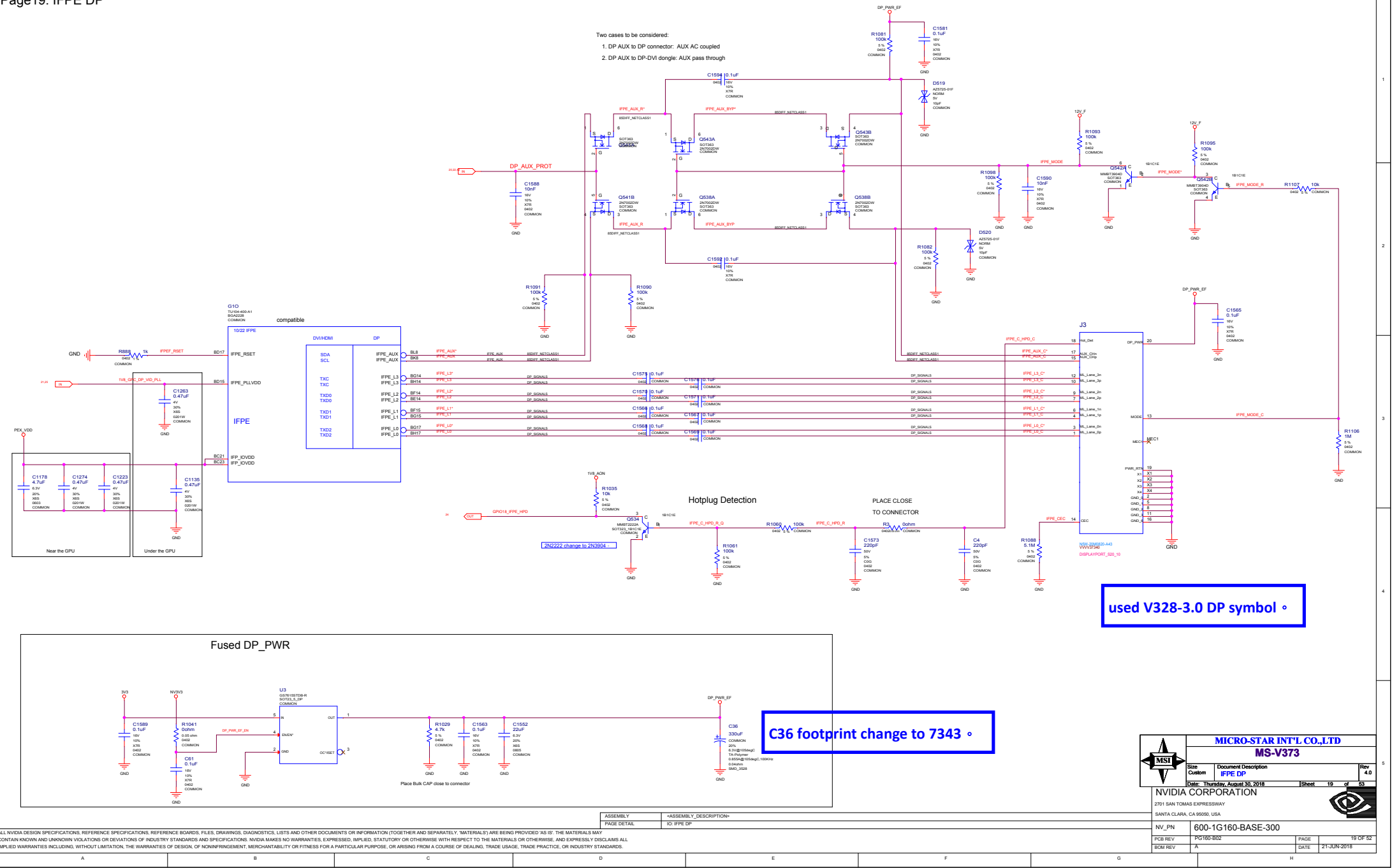
IFP_IOVDD rail can be unconnected if no IFP link is used.If any IFP is used, all IFP_IOVDD balls must be connected to power rail.

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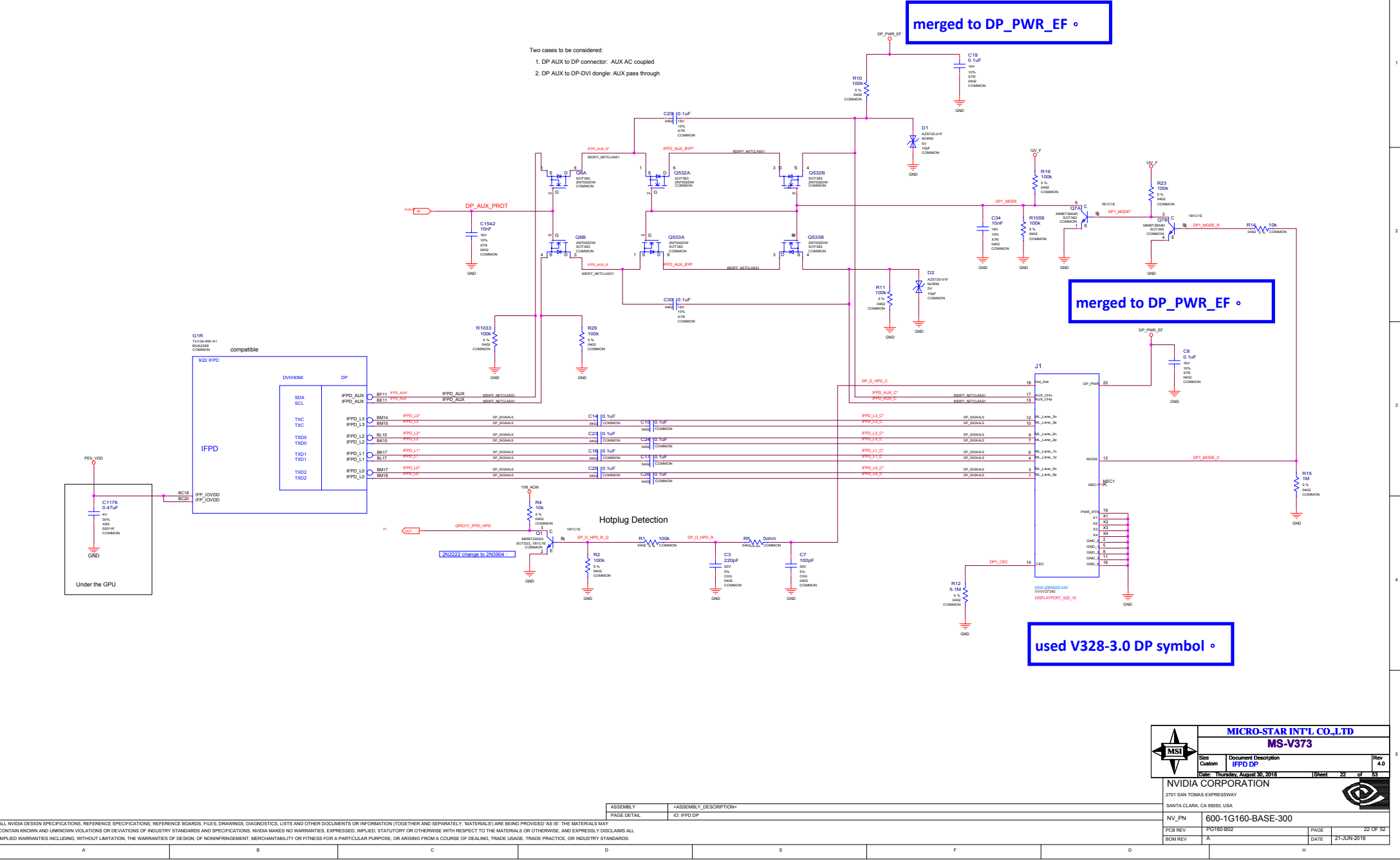
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Size: Custom
Document Description: IFPAB DVI-D-DL
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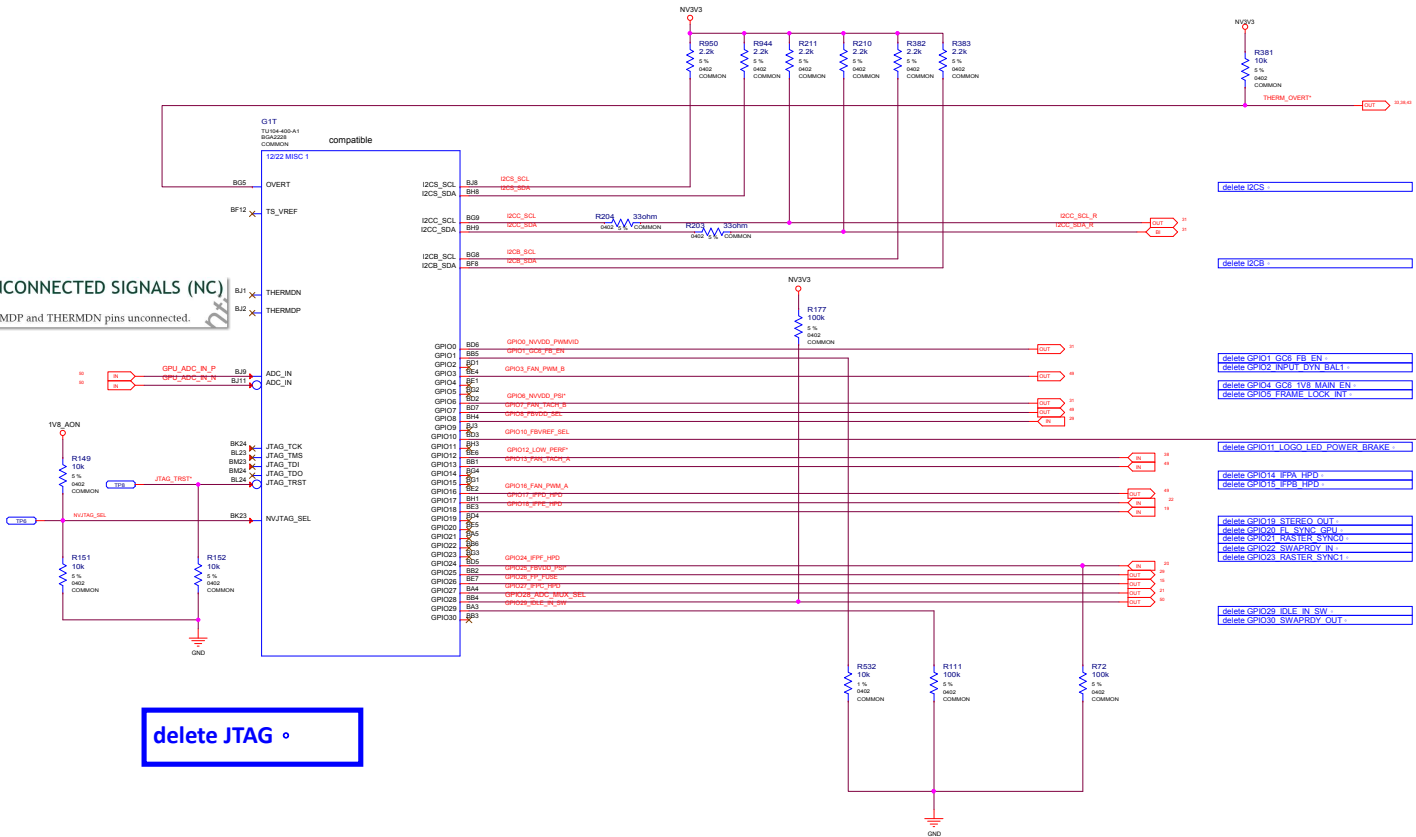
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14.5 UNCONNECTED SIGNALS (NC)

Leave the THERMDP and THERMDN pins unconnected.



delete JTAG °

Unused delete GPIO11_LOGO_LED_POWER_BRAKE °

16.3.3.1.1 Unconnected I2C Pins
Do not route unused I2C signals on the PCB in order to protect the GPU from outside ESD risk. For unused I2C lines, pull up both the I2C_SCL and I2C_SDA lines to 1.8V or 3.3V using a 2.2 kΩ resistor. Although unused I2C lines can be soft-grounded (that is, grounded using a resistor), NVIDIA's diagnostic program expects them to be pulled up and will flag an error. So it is generally recommended that unused I2C lines be pulled up.

15.2.1 Unconnected Signals
Unused GPIOs may be left floating (NC) on the board design.

Unused delete STEREO °

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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	MISC1: Thermal, JTAG, GPIO, STEREO



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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	H	1	0	1	0
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

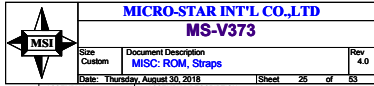
H=High :Tied to 1.8V
M=Middle:Tied to 0.9V
L=Low :Tied to 0V

1:SMB_ALT_ADDR ENABLE
0:SMB_ALT_ADDR DISABLE

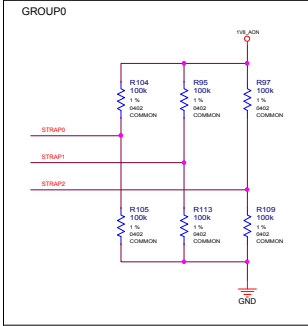
1:DEVID_SEL REBRAND
0:DEVID_SEL ORIGINAL

1:PCIE_CFG LOW POWER
0:PCIE_CFG HIGH POWER

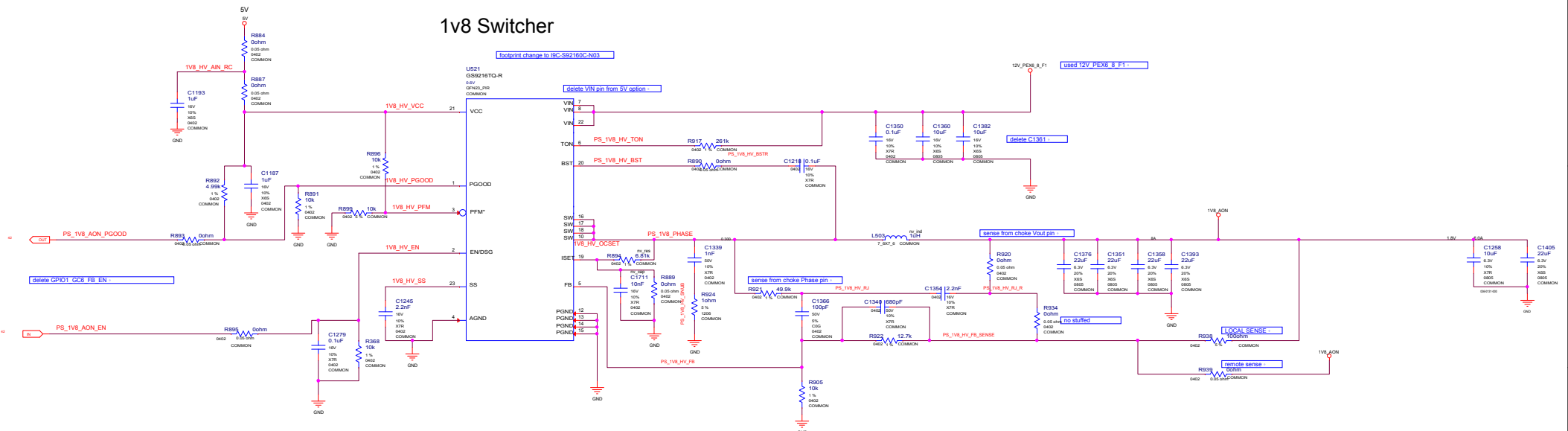
1:VGA_DEVICE ENABLE
0:VGA_DEVICE DISABLE



ASSEMBLY PAGE DETAIL MISC2: ROM, XTAL, STRAPS



1v8 Switcher

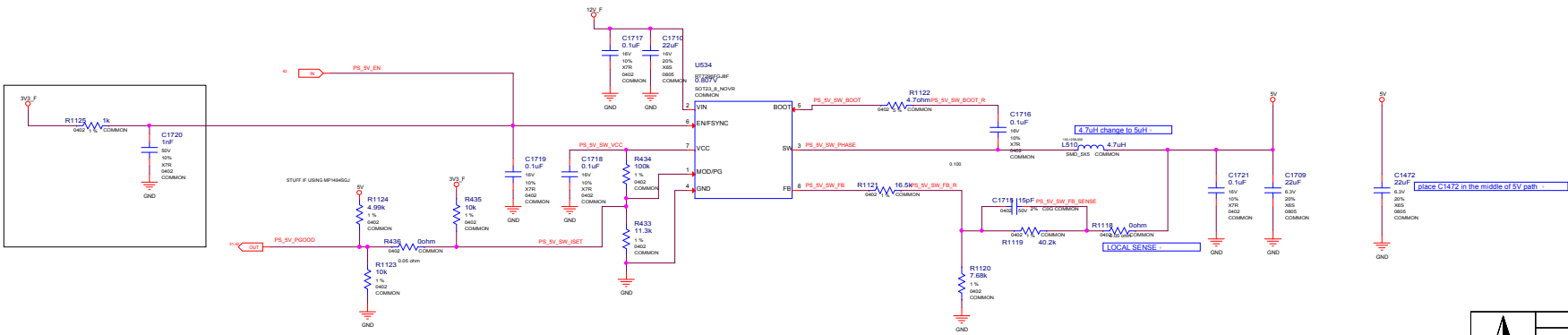


- 1、L503 PN : L04-01074K0-L65 / footprint : CHK_S2_7_3X6_6_1
- 2、delete co-layout PWM ouput choke。
- 3、delete 1V8_MAIN and merged to 1V8_AON。

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- 1、L510 PN : L04-0507010-L65 / footprint : CHK_S2_5_4X5_2_3
- 2、delete co-layout PWM ouput choke。
- 3、unused RTD3 delete Buck-Boost regulator。



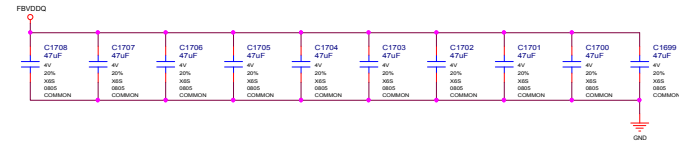
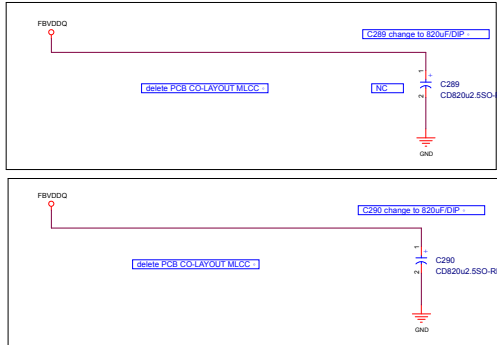
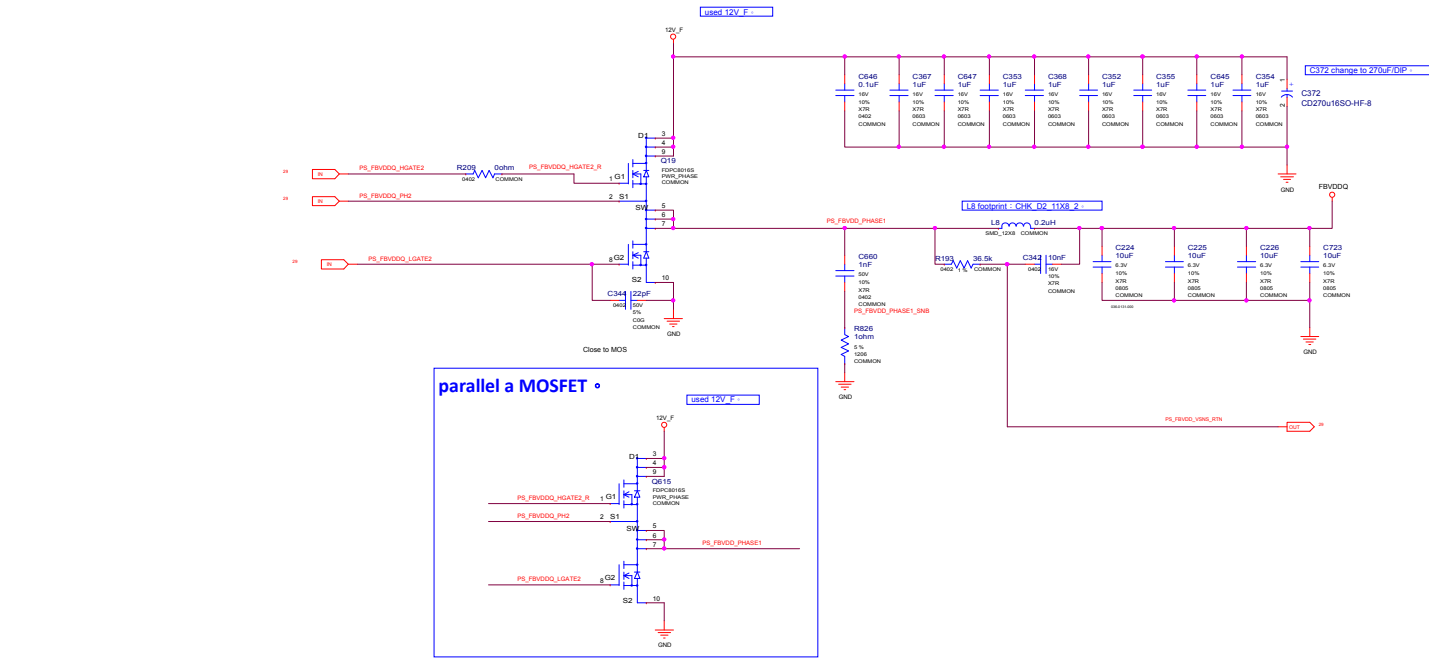
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delete all , unused °



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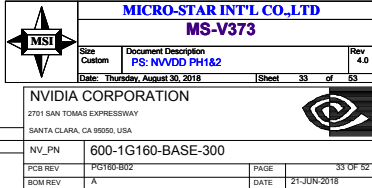
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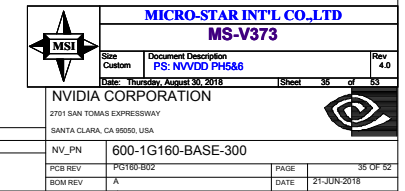
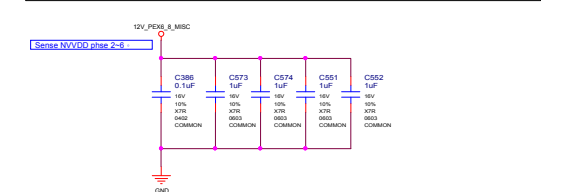
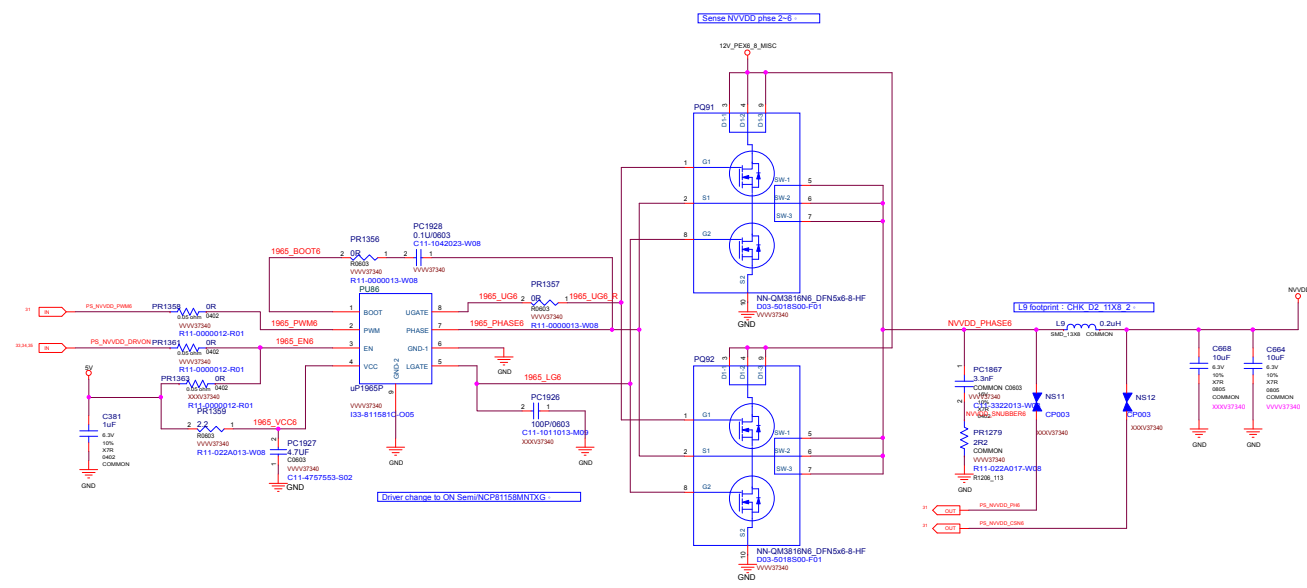
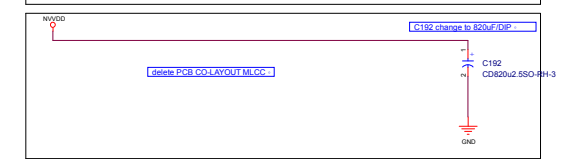
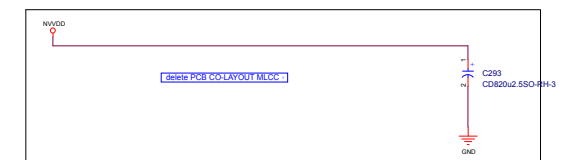
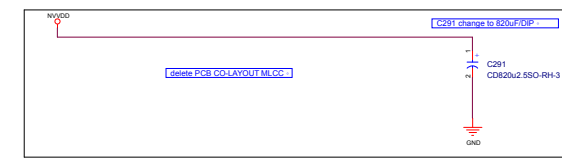
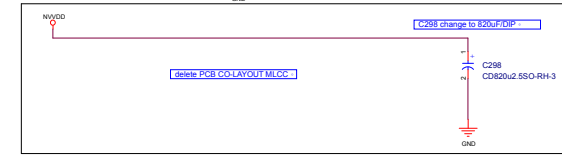
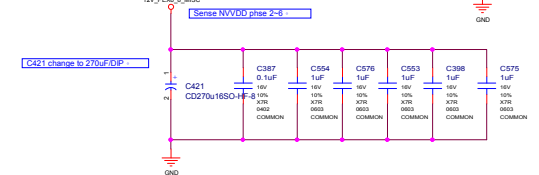
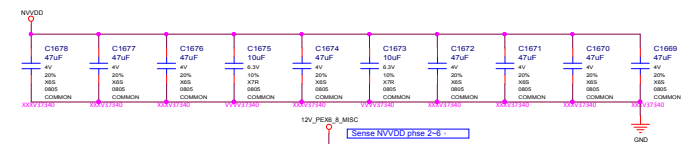
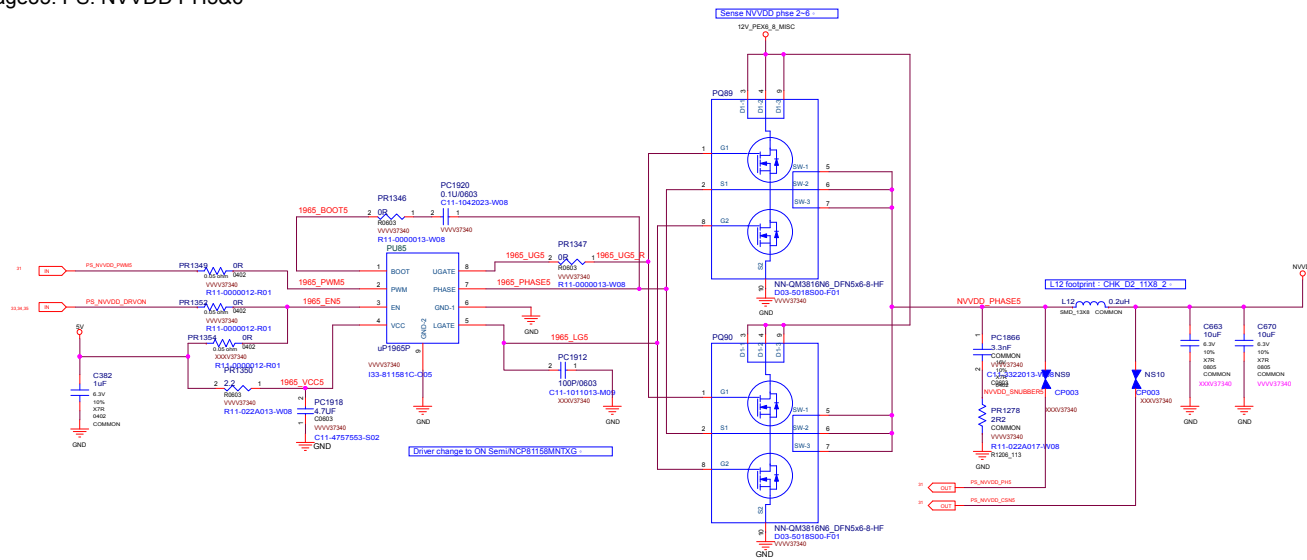
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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PS: NVVDD Phase 5,6

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removed U511 for fixed NVVDD 12V input :
1 、merged 3V3_AON to 3V3_F 。
2 、unused and delete 3V3_AUX 。
3 、unused and delete 3V3_AUX_CON 。
4 、NVVDD_DYN_VIN merged to 12V_PEX6_8_F1 。

delete GP02_INPOT_DYN_BALL
delete INPOT_PEX6_DT1_STEER

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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PS: Input Power Balancing Switcher



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Size: Custom

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NV_PN600-1G160-BASE-300

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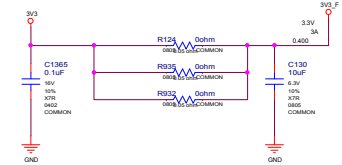
BOM REV: A

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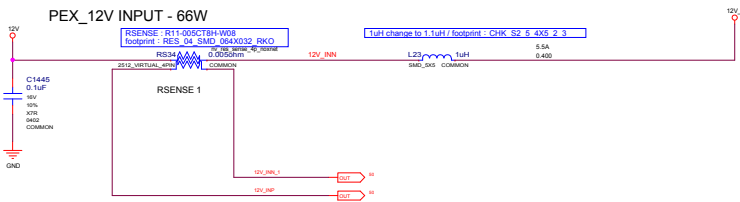
DATE: 21-JUN-2018

- 1 、 changed EXT 12V 8pin PN and footprint 。
2 、 add EXT 12V 8pin Fuse 。
3 、 delete unused parts 。
4 、 RSENSE 3 change to sense NVVDD PEX 12V 。
5 、 RSENSE 4 change to sense NVVDD EXT 12V 。
6 、 change RSENSE parts and footprint 。

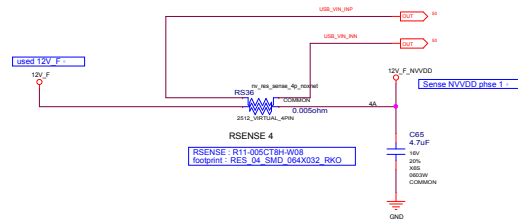
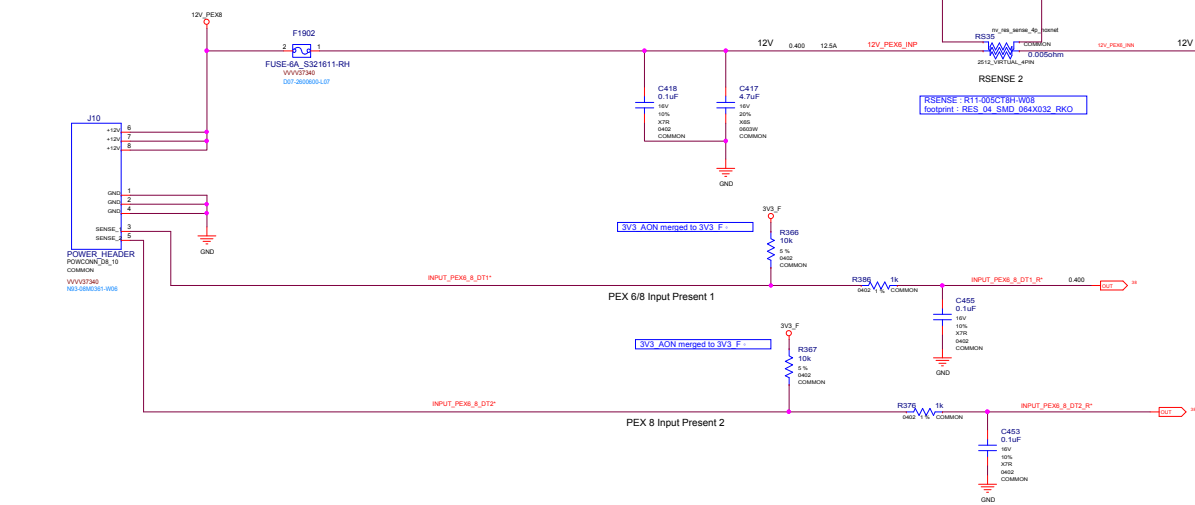
PEX 3V3 INPUT - 10W



PEX_12V INPUT - 66W



PEX8 INPUT 1 - 2x4 PCIe CON 150W



Sense resistors should be located as close as possible to the OVR-M input pins. Otherwise sensor output signals may exhibit larger measurement errors due to additional trace inductance and noise coupling in the signal from nearby noise-generating sections of the board.

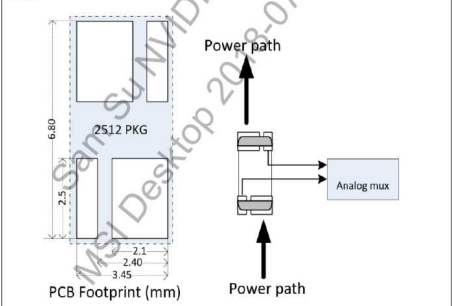


Figure 5.10 Connection for 2-Pin Sense Resistor (2512 Package)

If customer prefers using a 2-pin sense resistor instead, we recommend implementing a 4-pin footprint with two large PADs for the high current path and two small PADs for sensing line, to emulate the functionality of a 4-pin resistor.

Note: Two-pin sense resistor can be used, but the sensing signal MUST connect to resistor pad directly. Connect the sensing signal to nearby power plane may cause large measurement error.

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PCB REV PG100-B02

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delete regulator for USBC_VBUS ◦

Unused USB_I2C* leaving Pull high resistor to 1.8V ◦



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delete PPC ◦

Unused USB_I2C* leaving Pull high resistor to 1.8V ◦

Unused IFPB_I2C* leaving Pull high resistor to 1.8V ◦

delete GPI024 IFPB HPD ◦

delete PEX_RST_BMP* ◦

delete GPI001 GPIO_FIL_EN ◦



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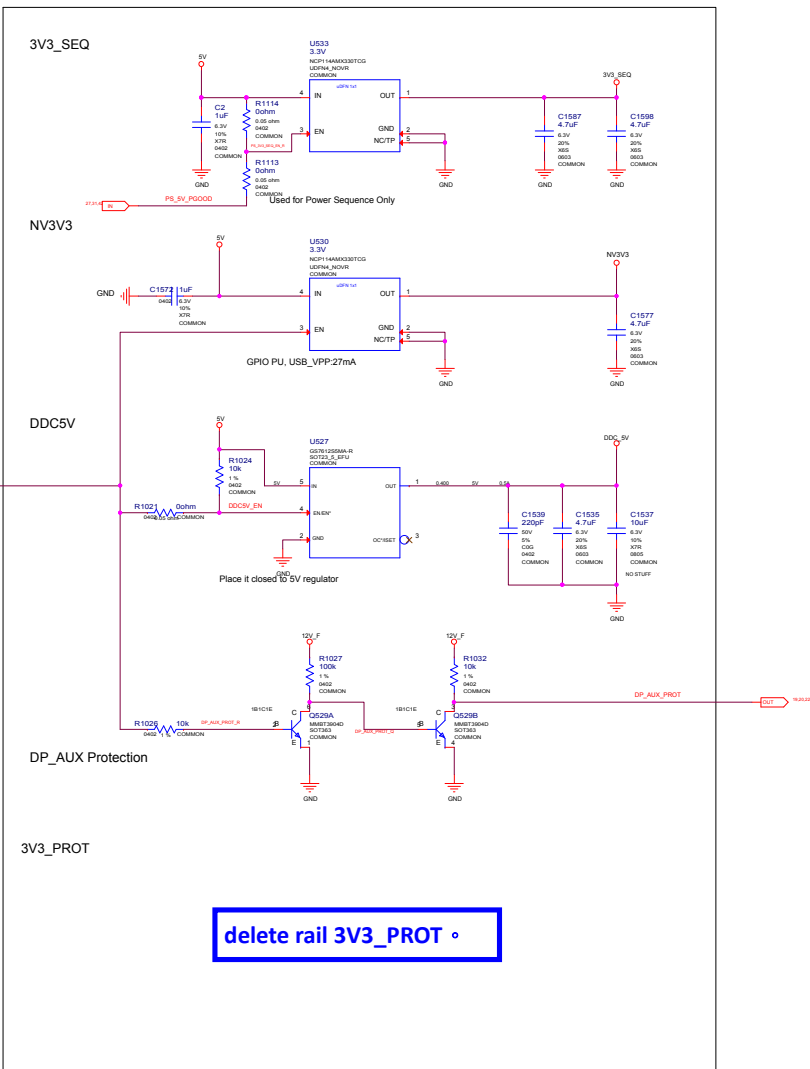
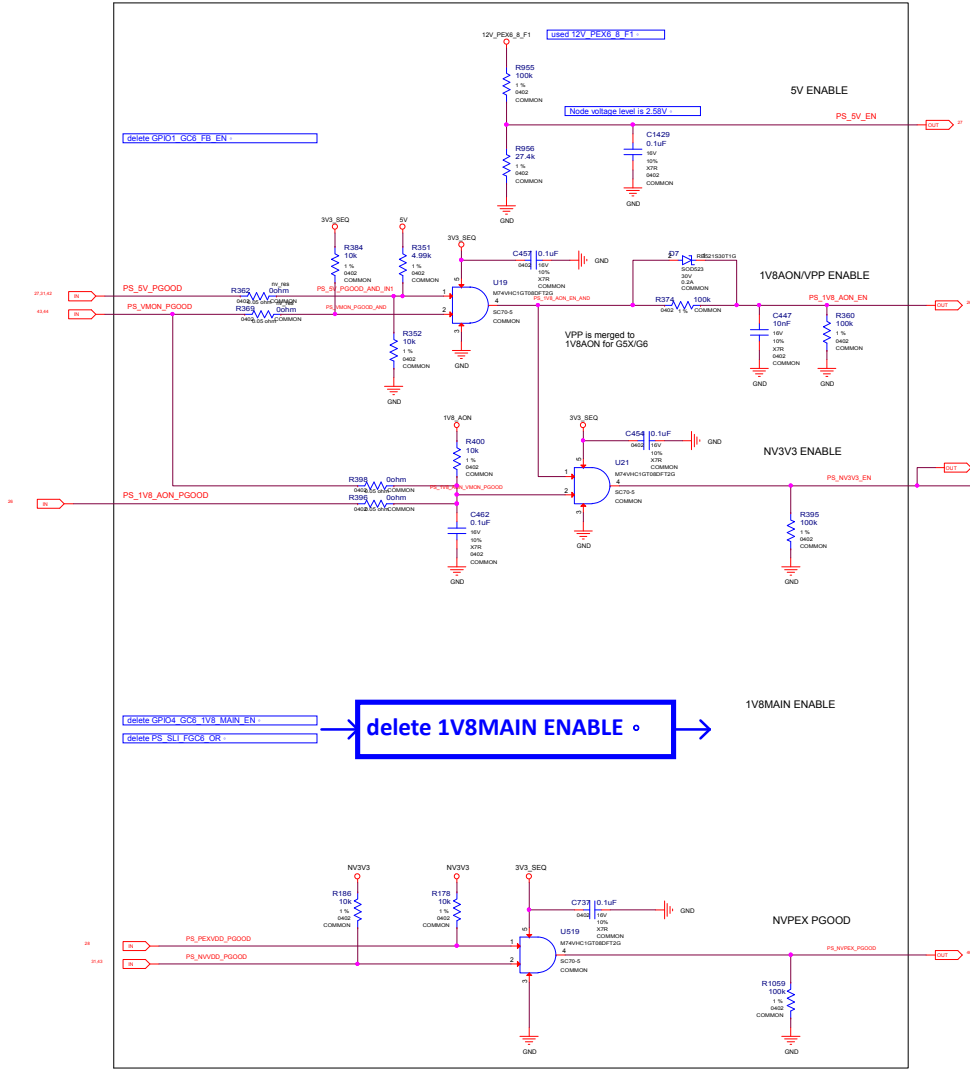
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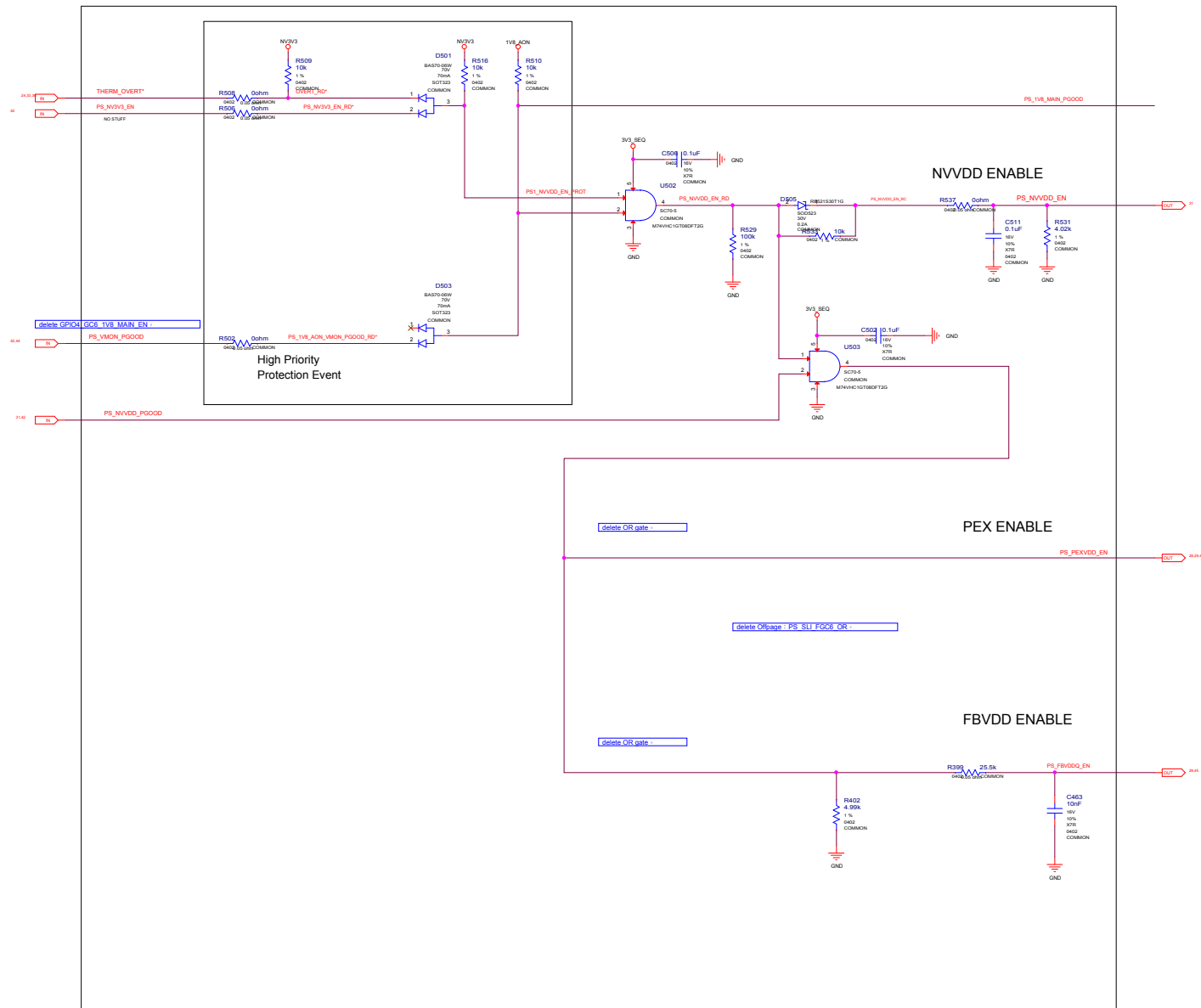
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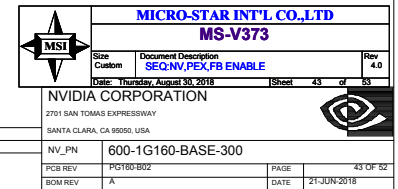
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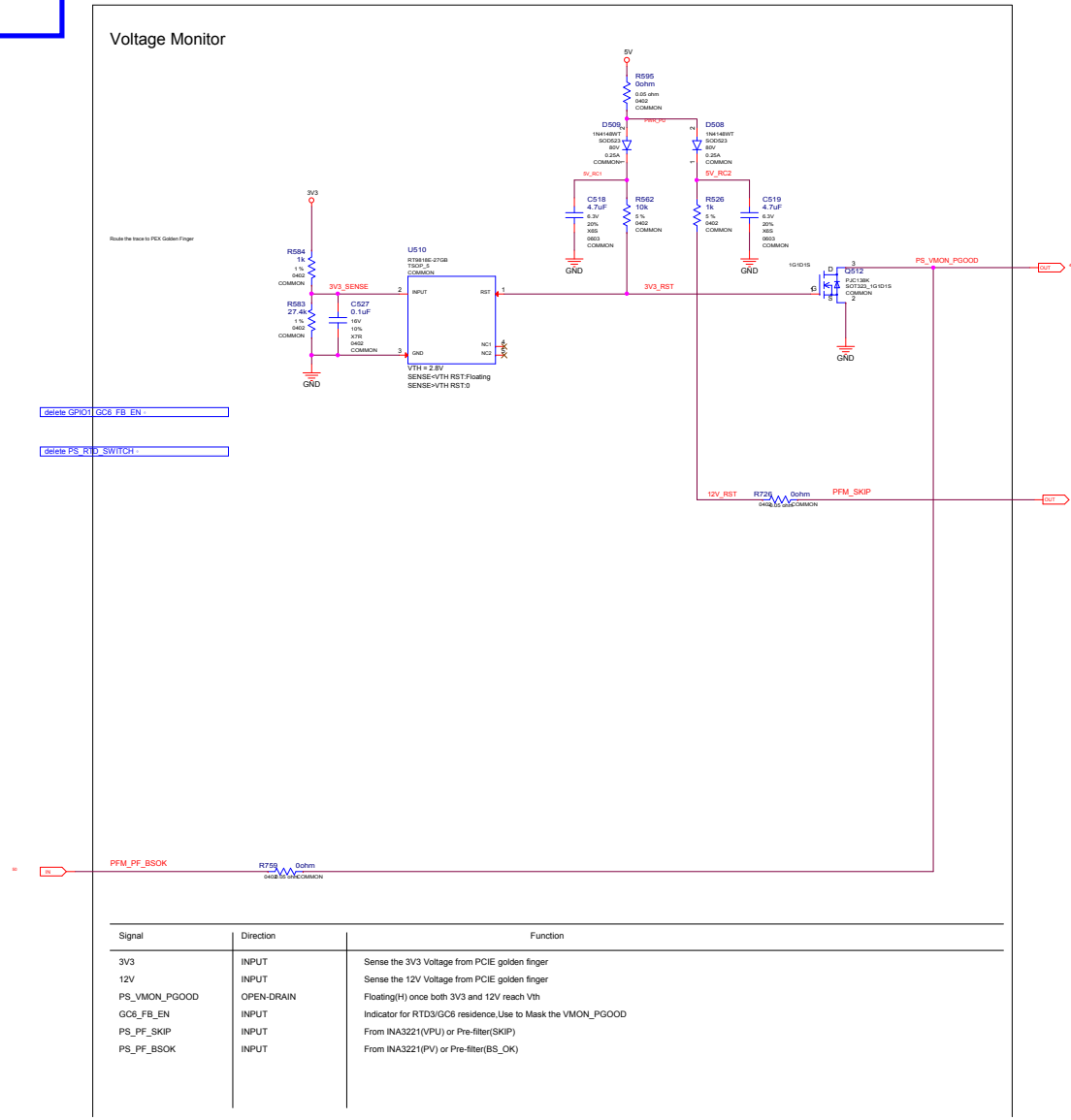


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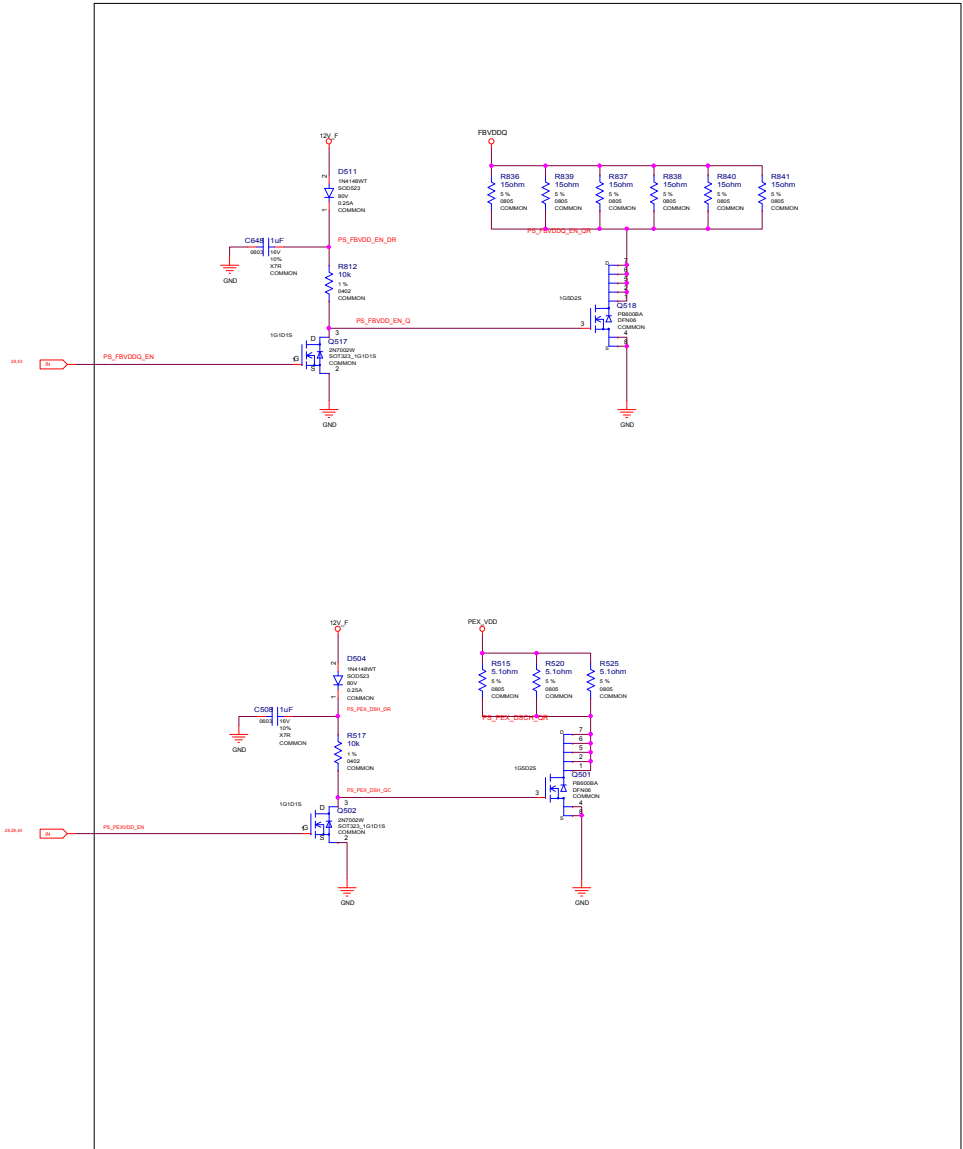
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NO INA3221 NO Pre-Filter	Voltage_Monitor	Voltage_Monitor	N/A

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)

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
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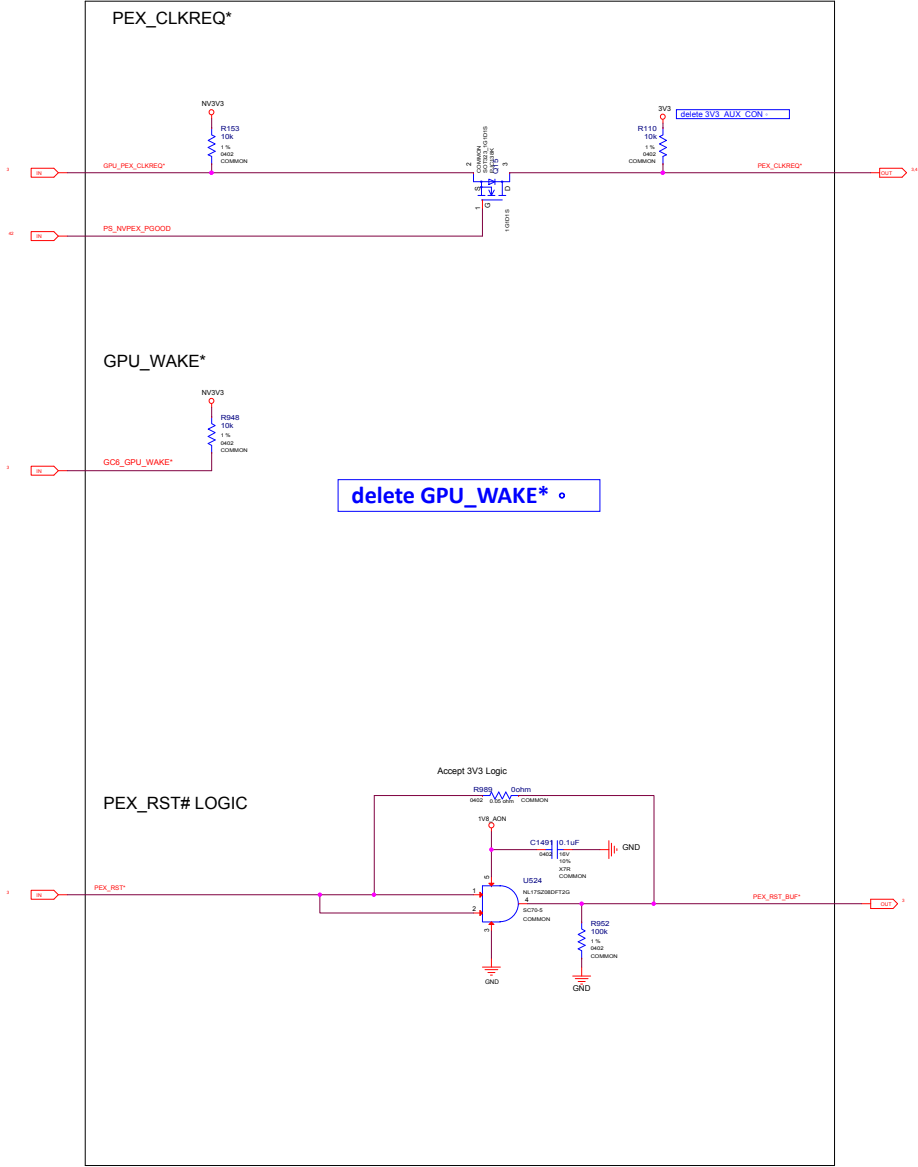
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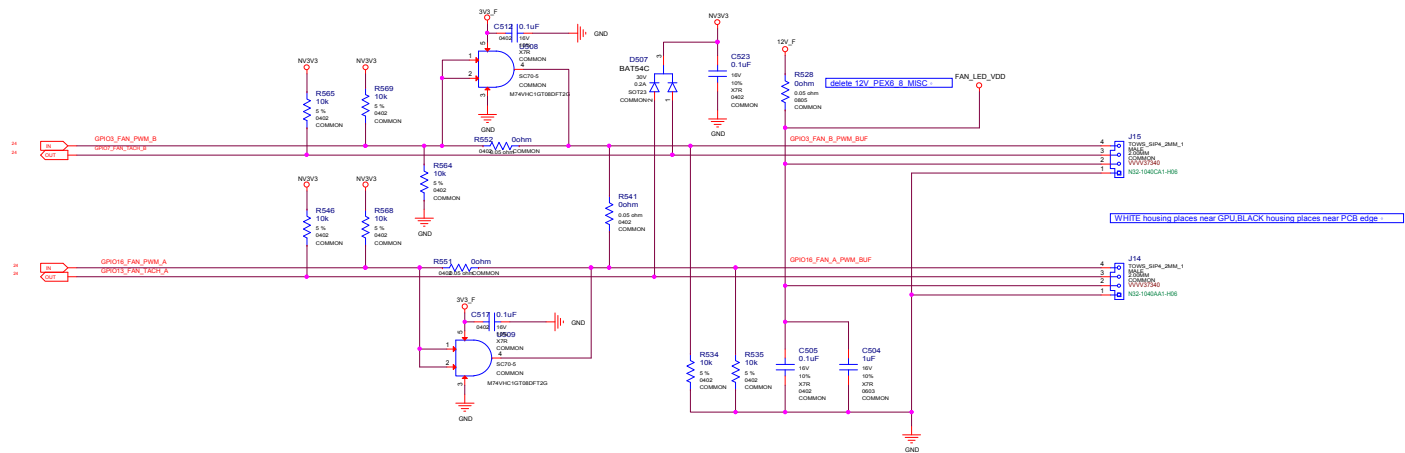
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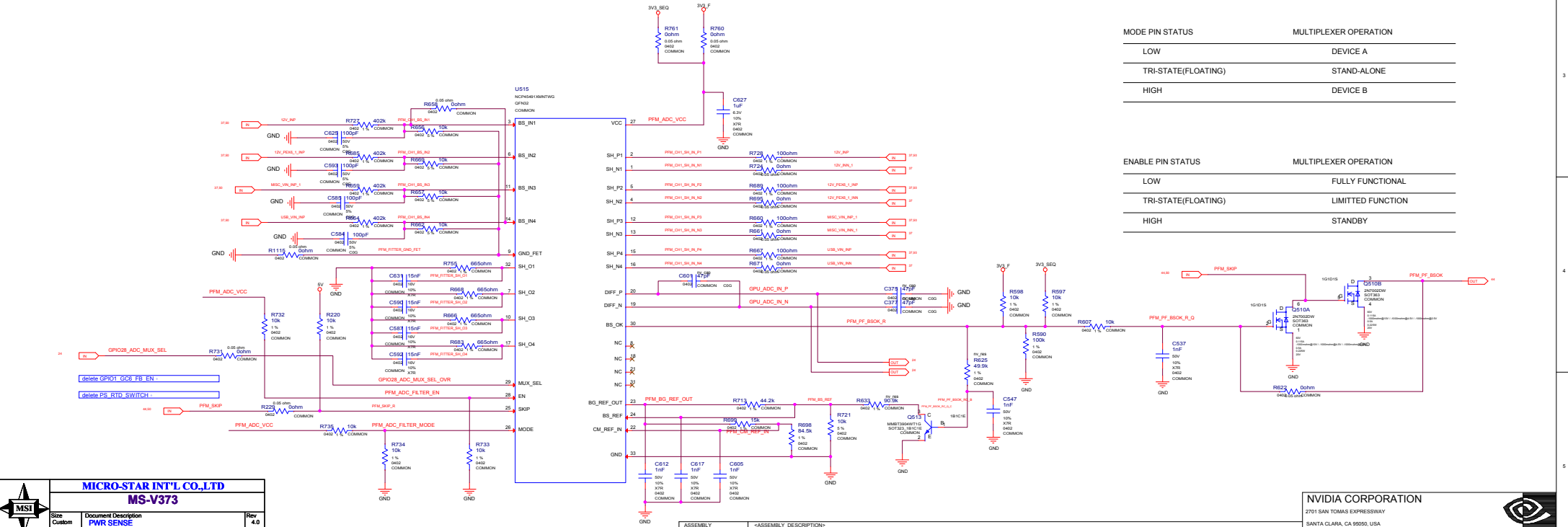
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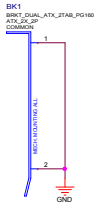
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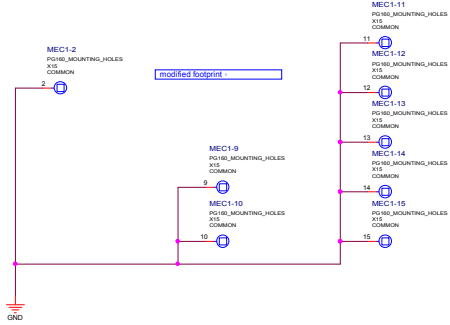
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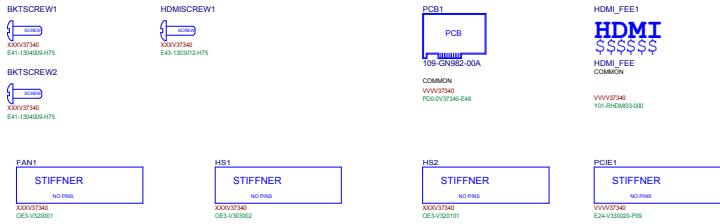
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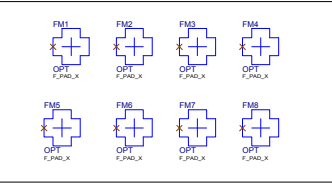
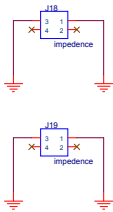
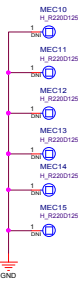
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Bracket Screw



Mechanical Holes Symbol



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PAGE DETAIL	MECH

improved FBVDDQ PSU parts don't require a PTC ◦

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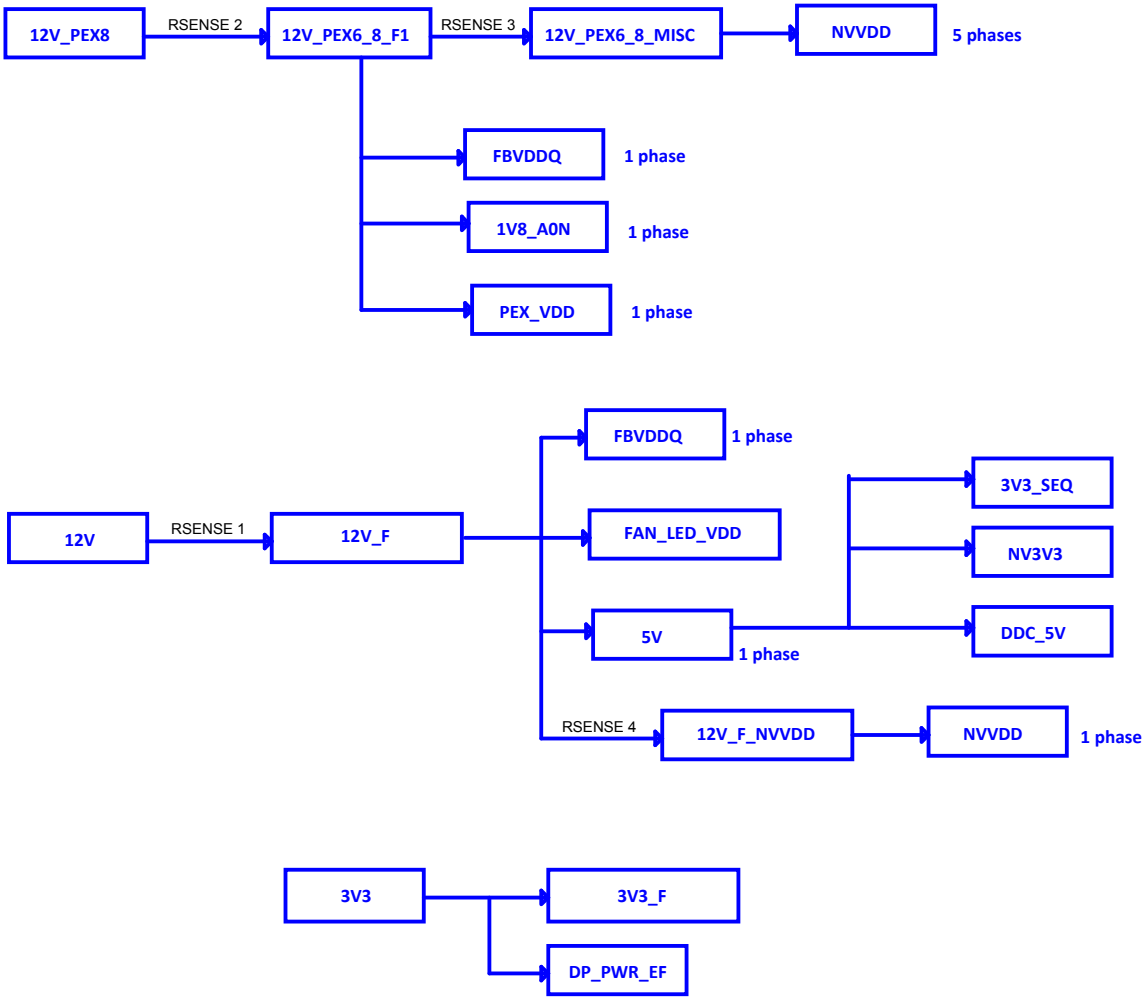
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Power on Sequence

