


Tegra X1 Jetson CV-B
HDMI, USB, PCIe, SATA, Gbe

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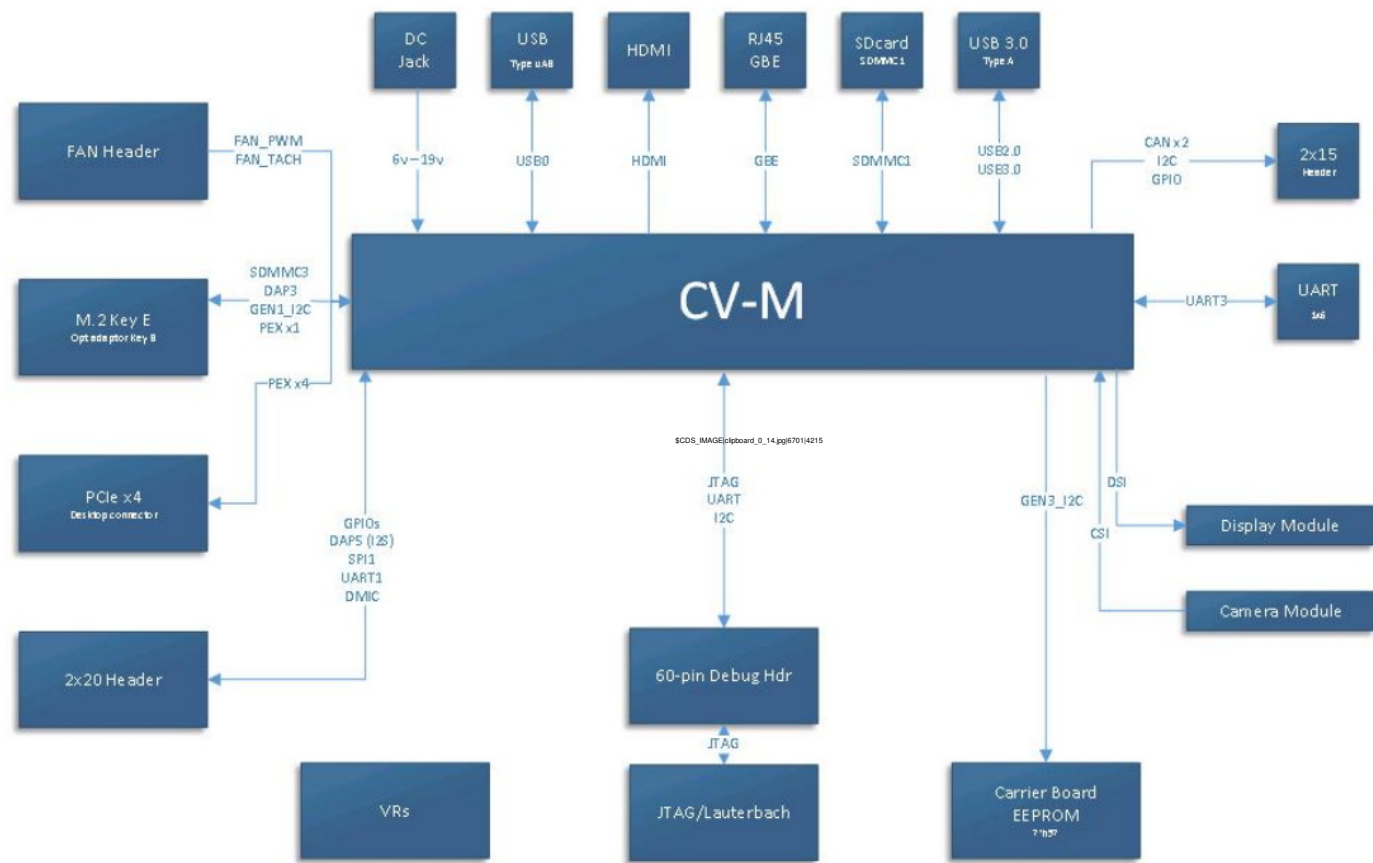
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P2597 I2C Port Assignments	
Slave Device	BUS:Device address
INA3221 (Power measurement)	I2C Gen 2 : 7'h42
INA3221 (Power measurement)	I2C Gen 2 : 7'h43
TCA9539 (GPIO Expander)	I2C Gen 2 : 7'h74
TCA9539 (GPIO Expander)	I2C Gen 2 : 7'h77
BOARDID EEPROM	I2C Gen 3 : 75'h

P2180 I2C Port Assignments	
Slave Device	BUS:Device address
TMP451 (Thermal)	I2C Gen 1 : 7h4C
ADS1015 (ACA detection)	I2C Gen 2 : 7h4A
INA226 (Power measurement)	I2C Gen 2 : 7h46
INA3221 (Power measurement)	I2C Gen 2 : 7h40

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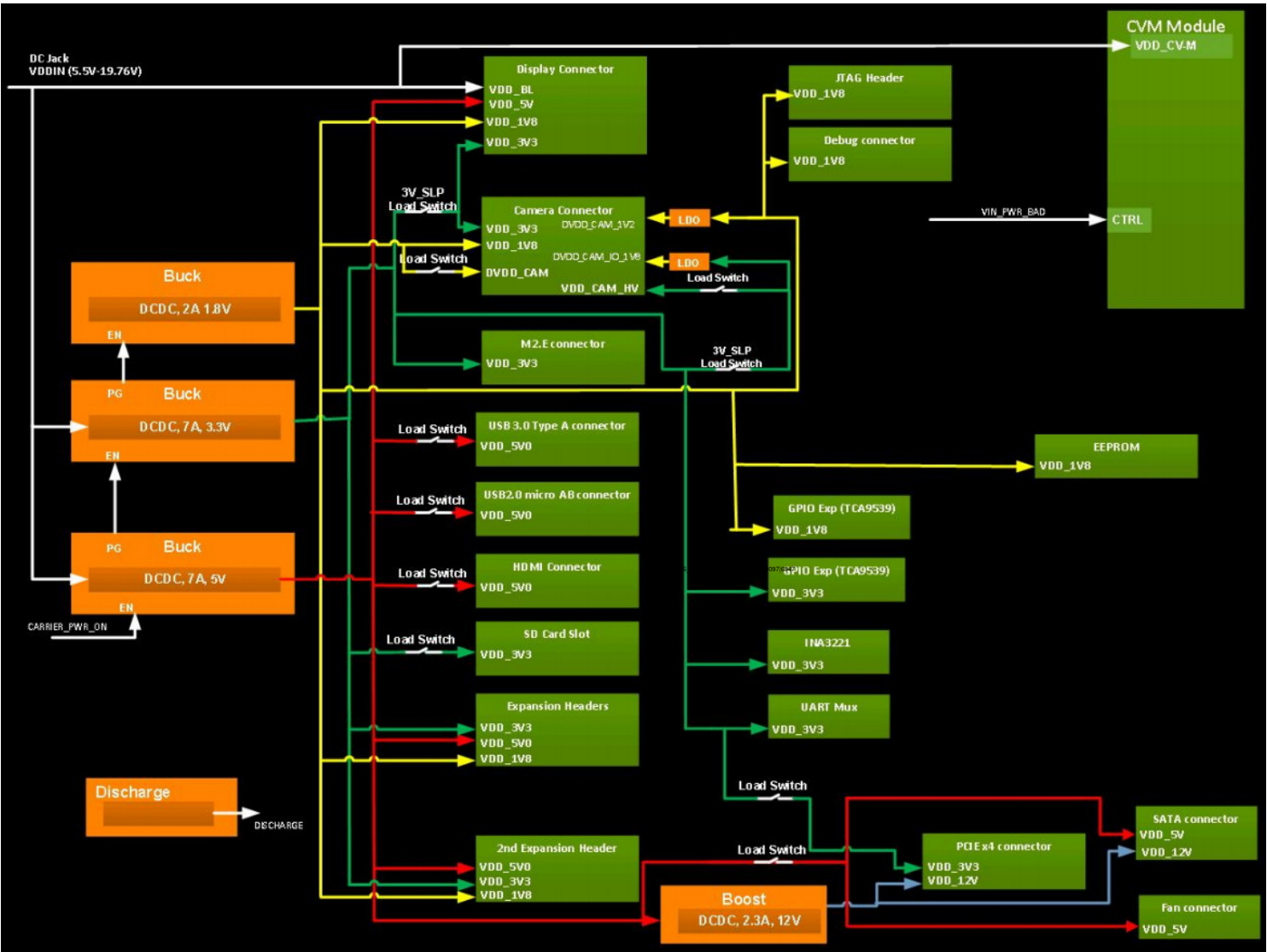
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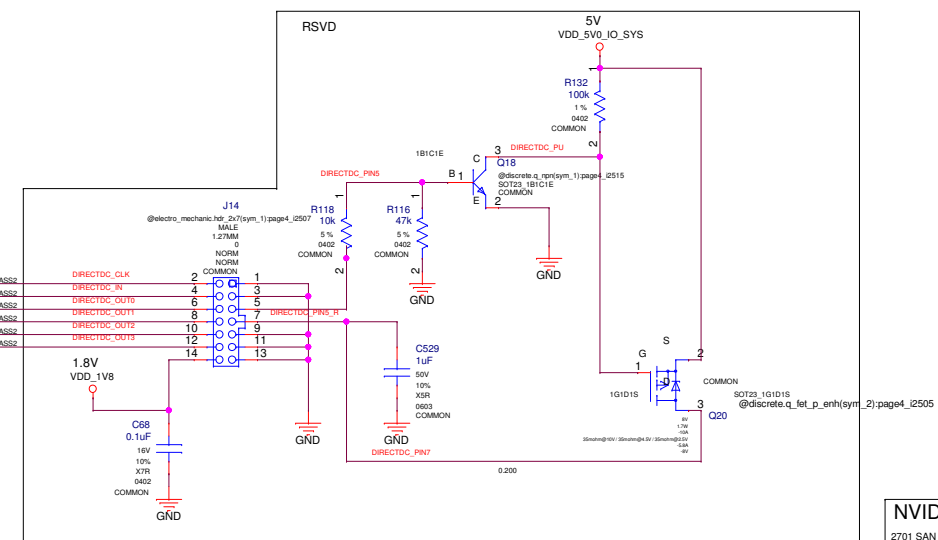
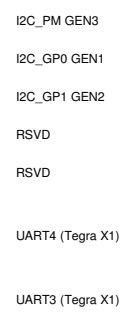
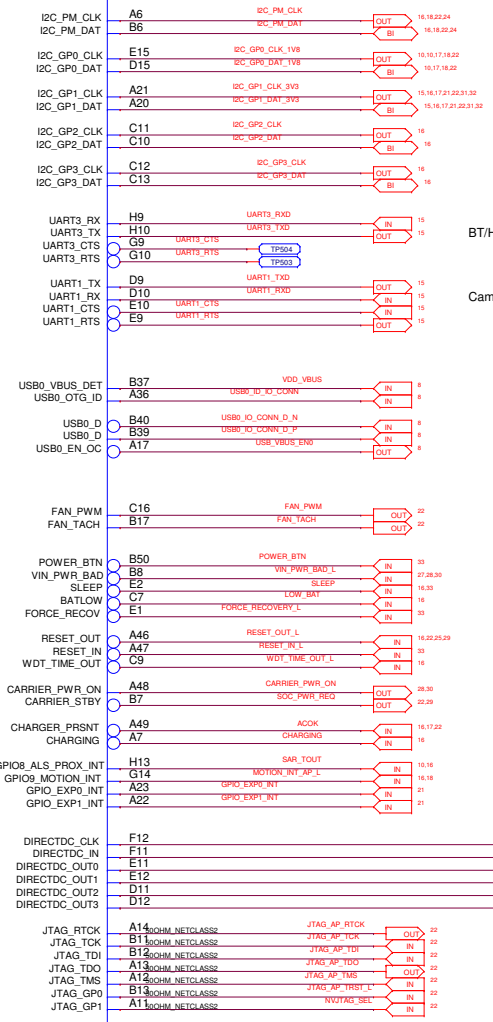
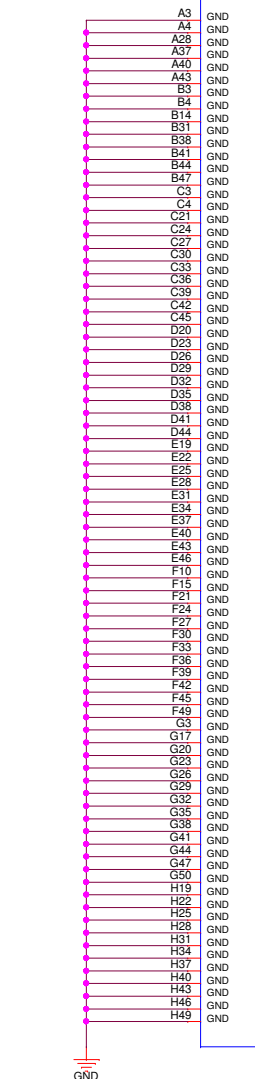
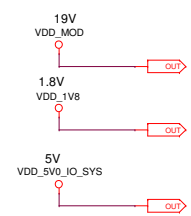
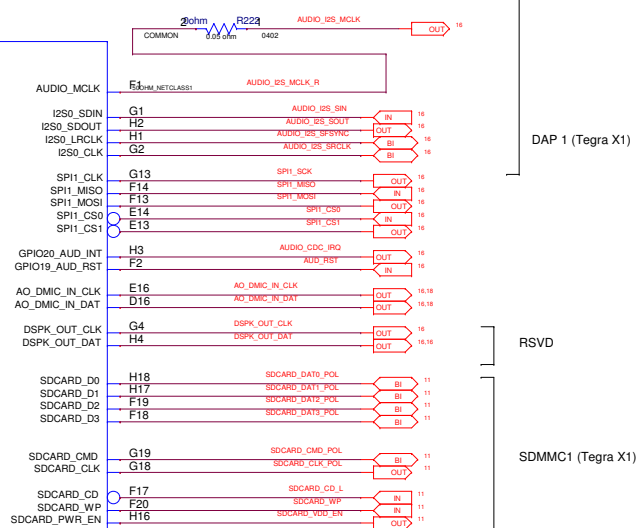
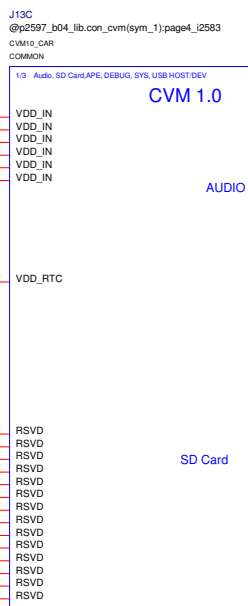
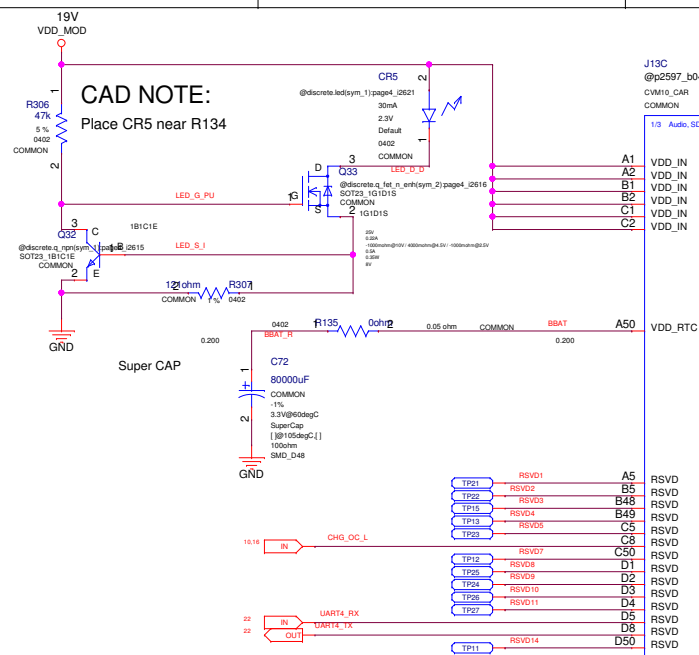
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Power Tree



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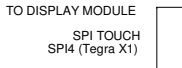



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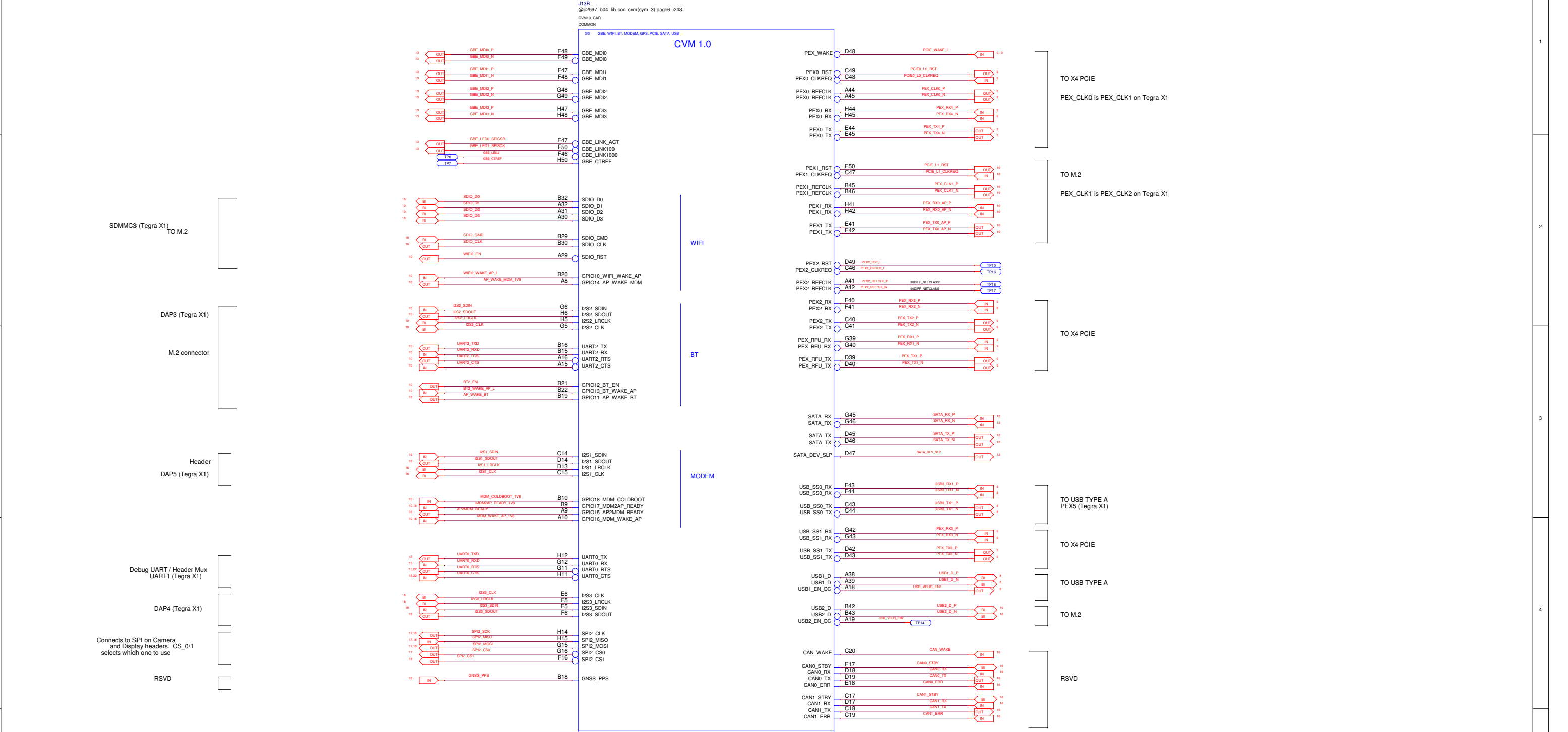
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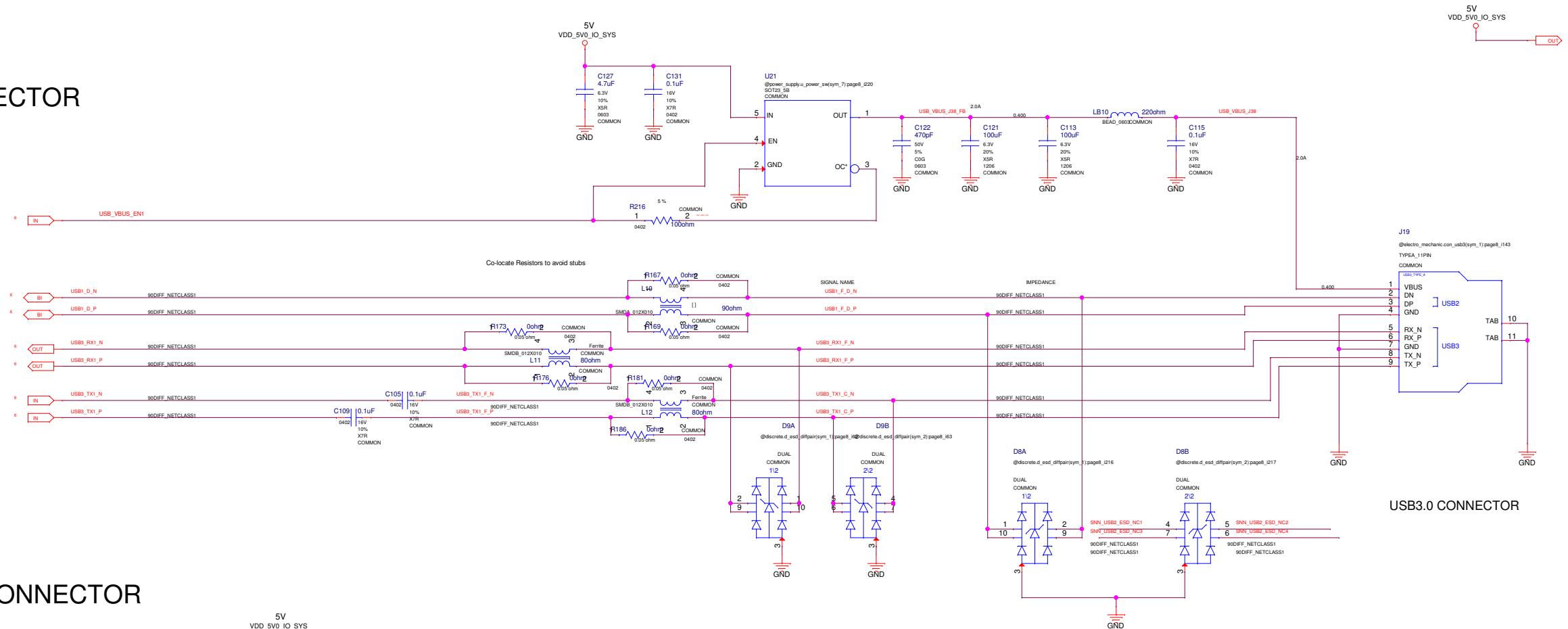
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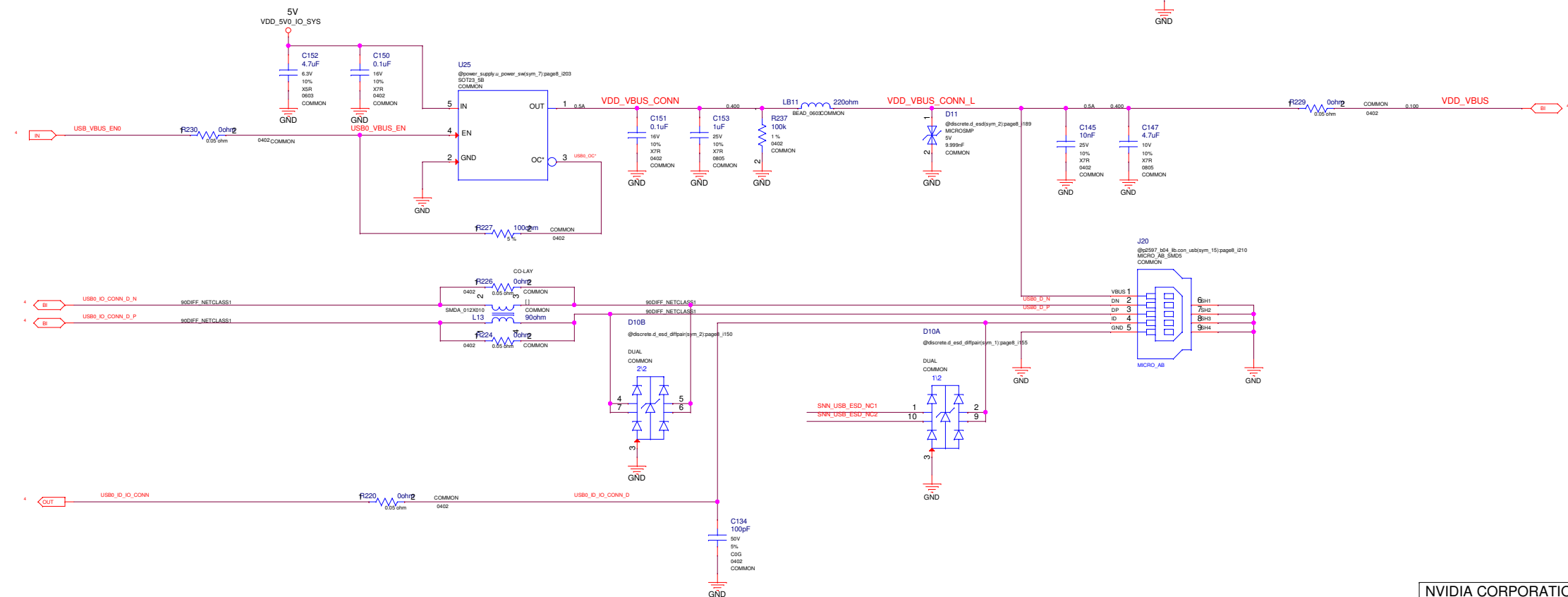
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USB 3.0 TYPE A CONNECTOR



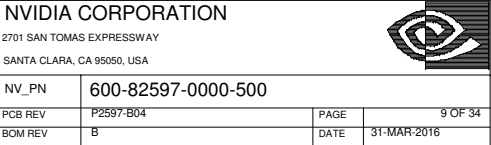
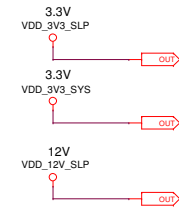
MICRO AB USB 2.0 CONNECTOR



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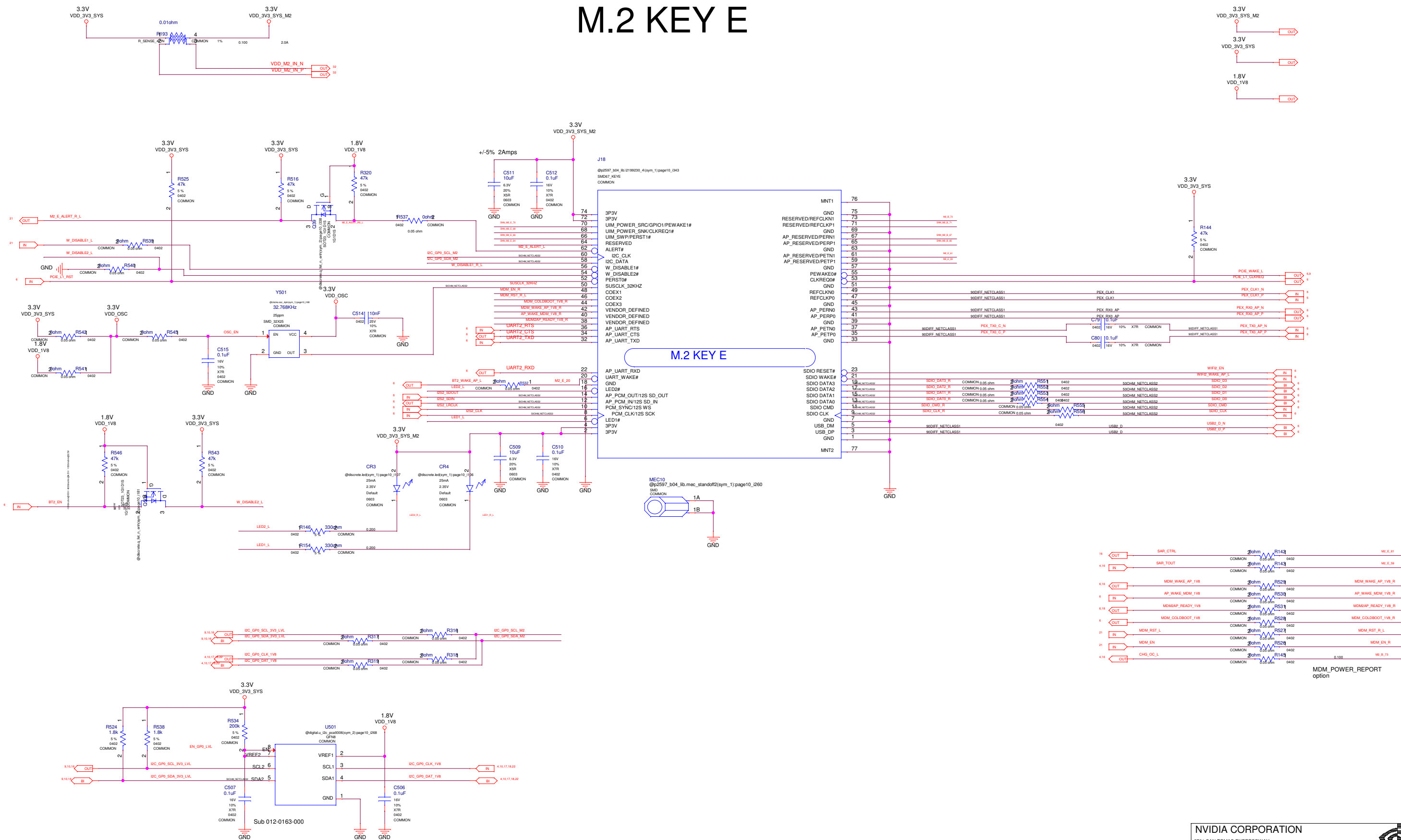
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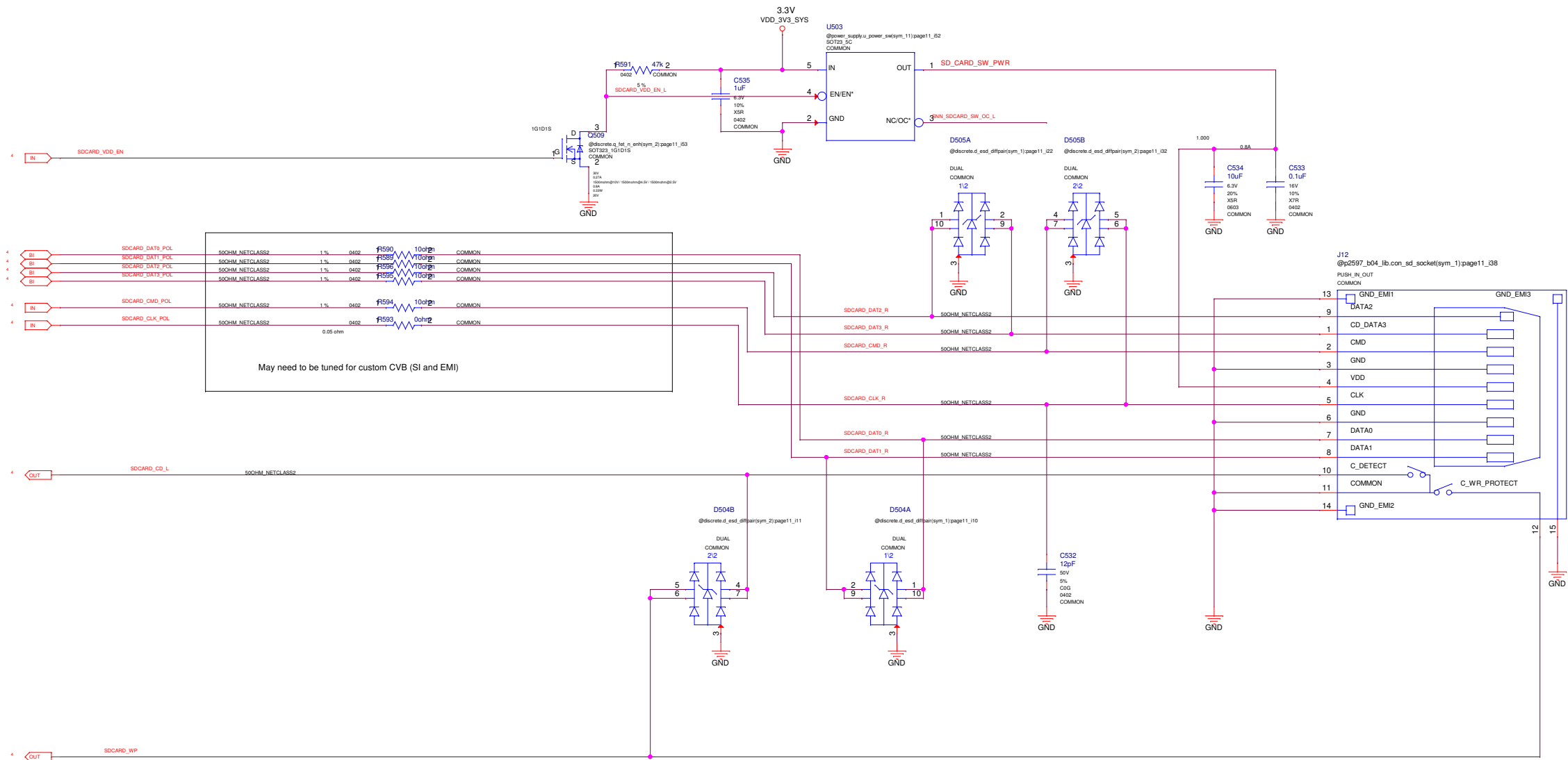
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SD CARD SOCKET



3.3V
VDD_3V3_SYS

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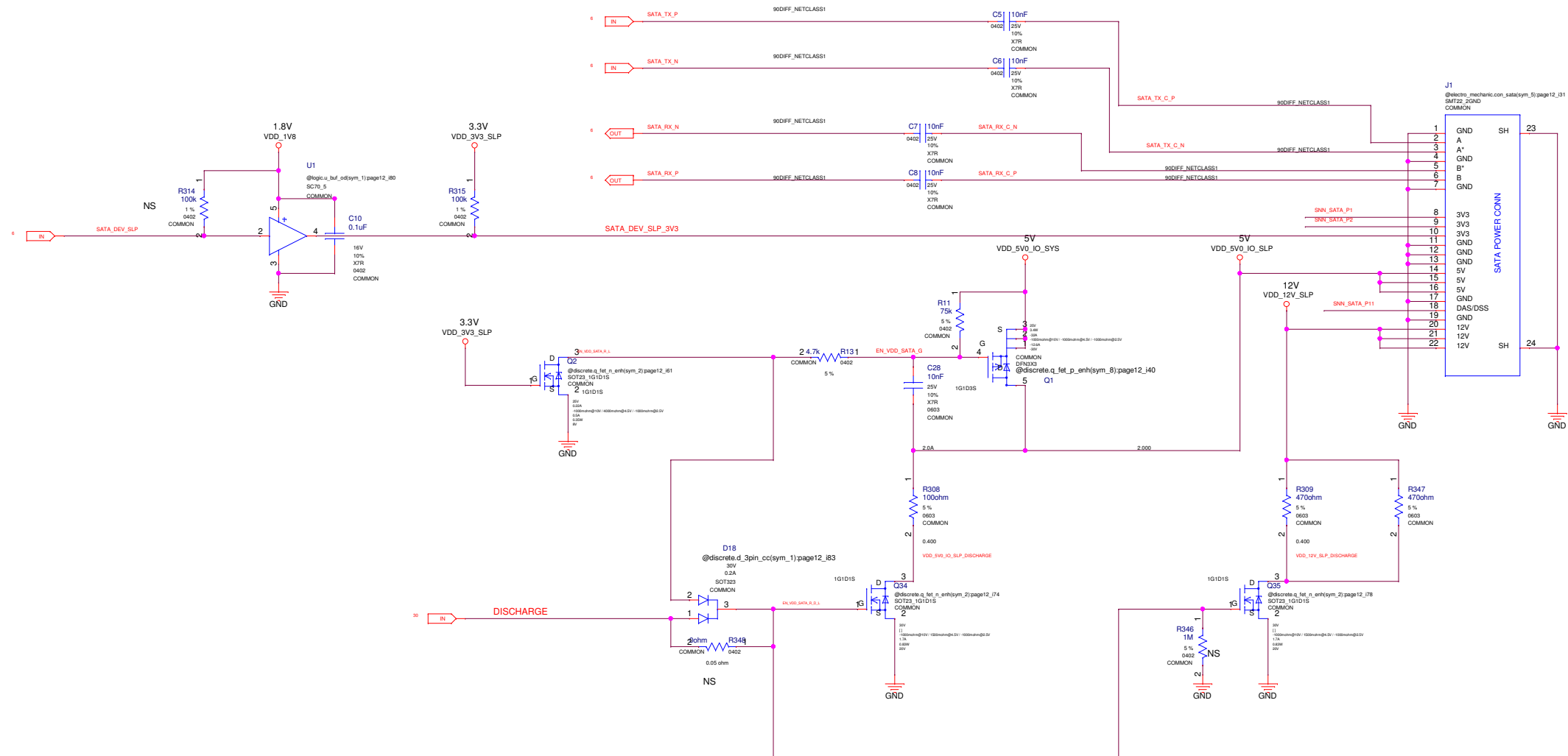
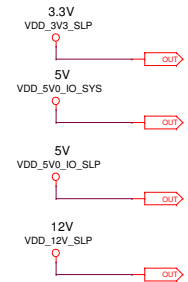
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SATA Connector



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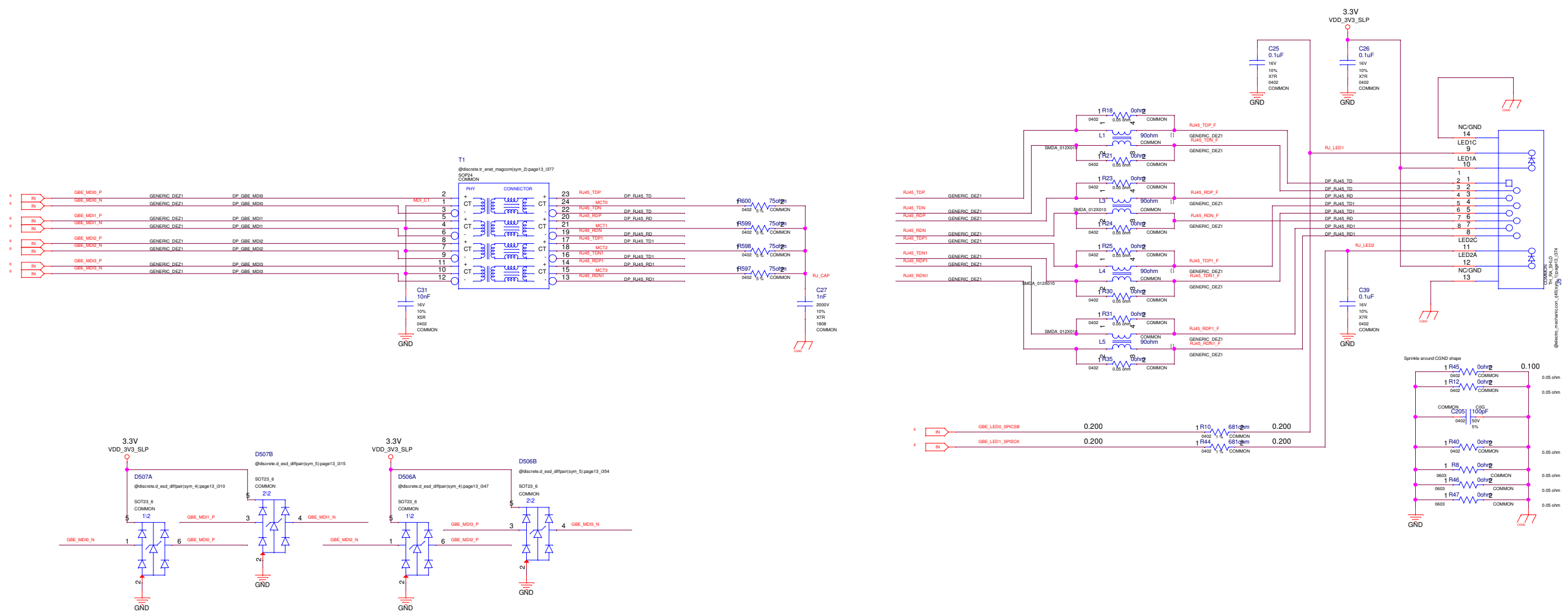
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Gigabit Ethernet



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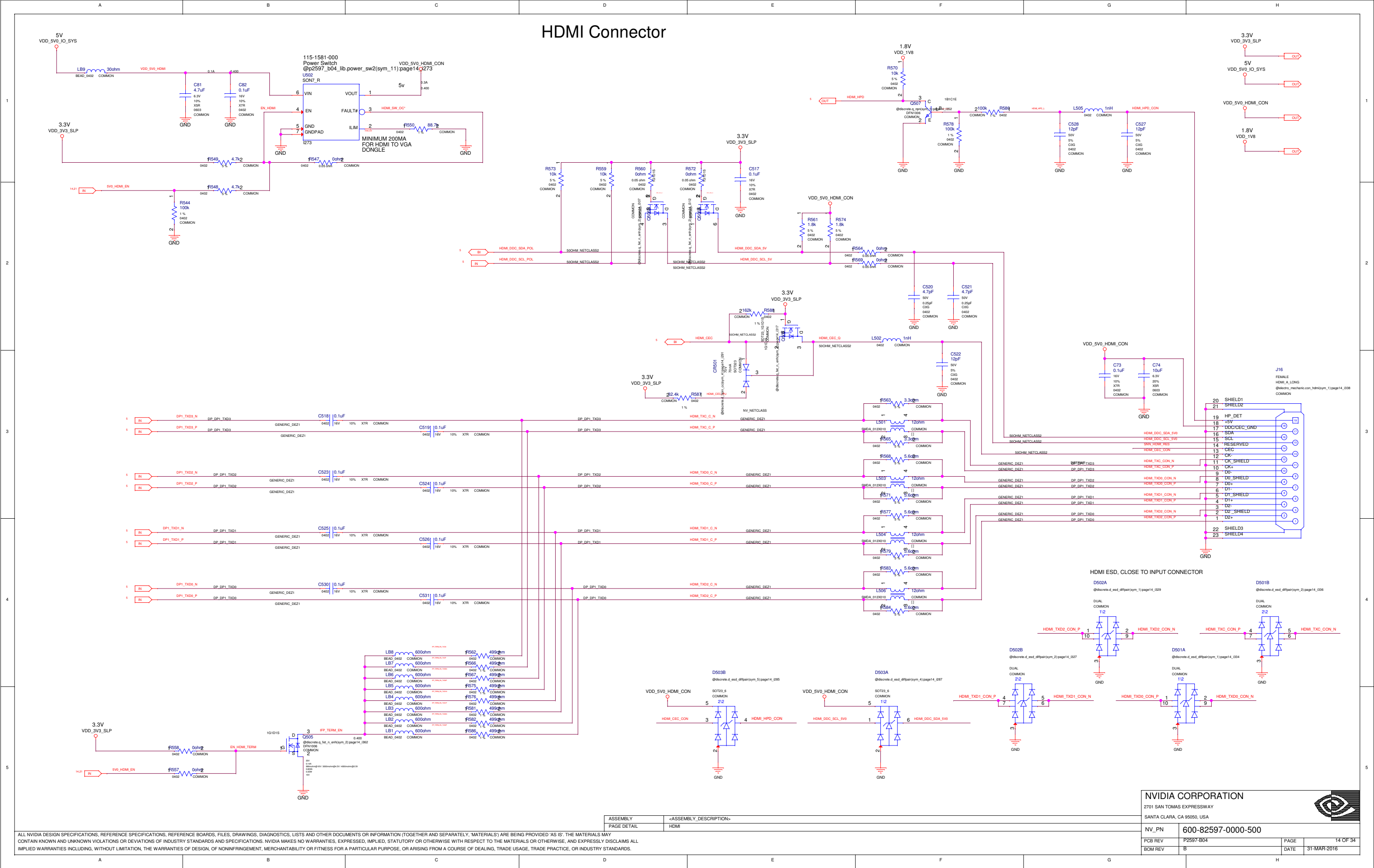
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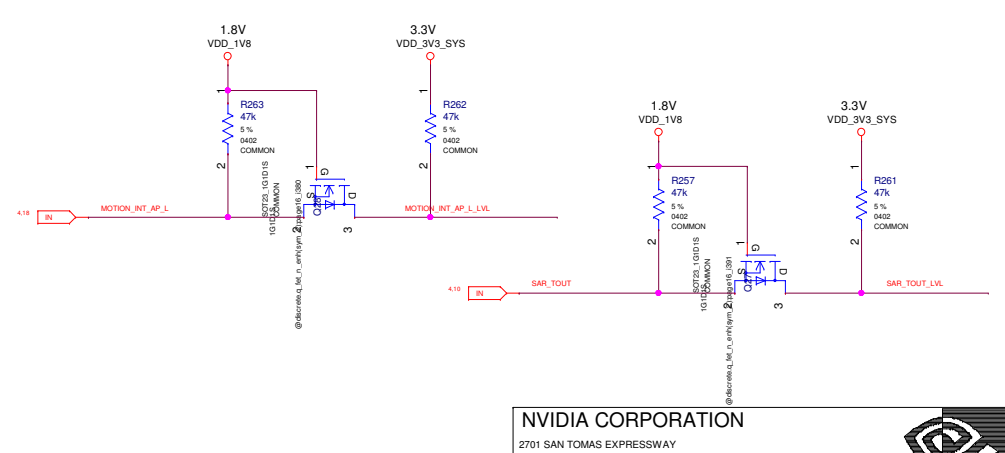
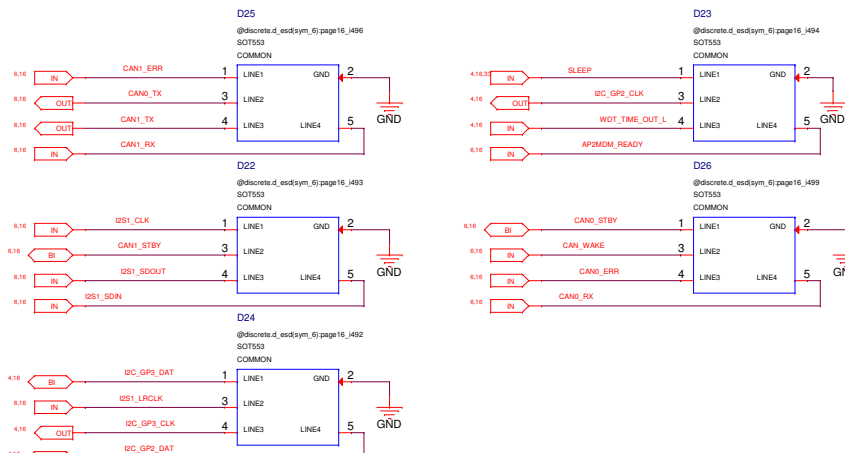
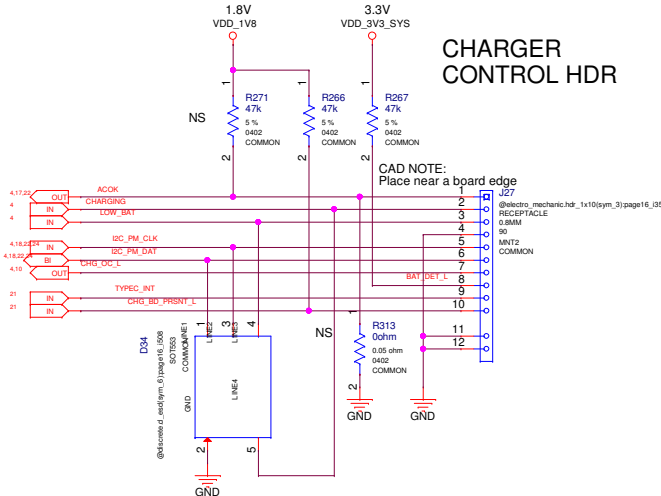
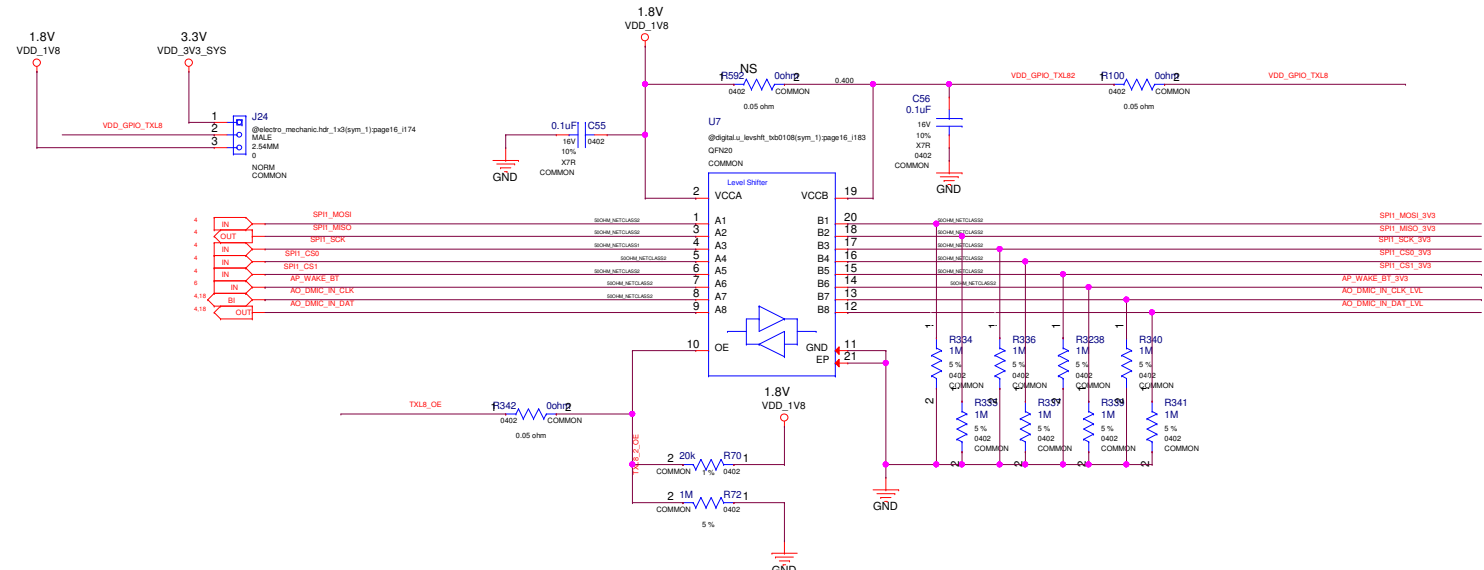
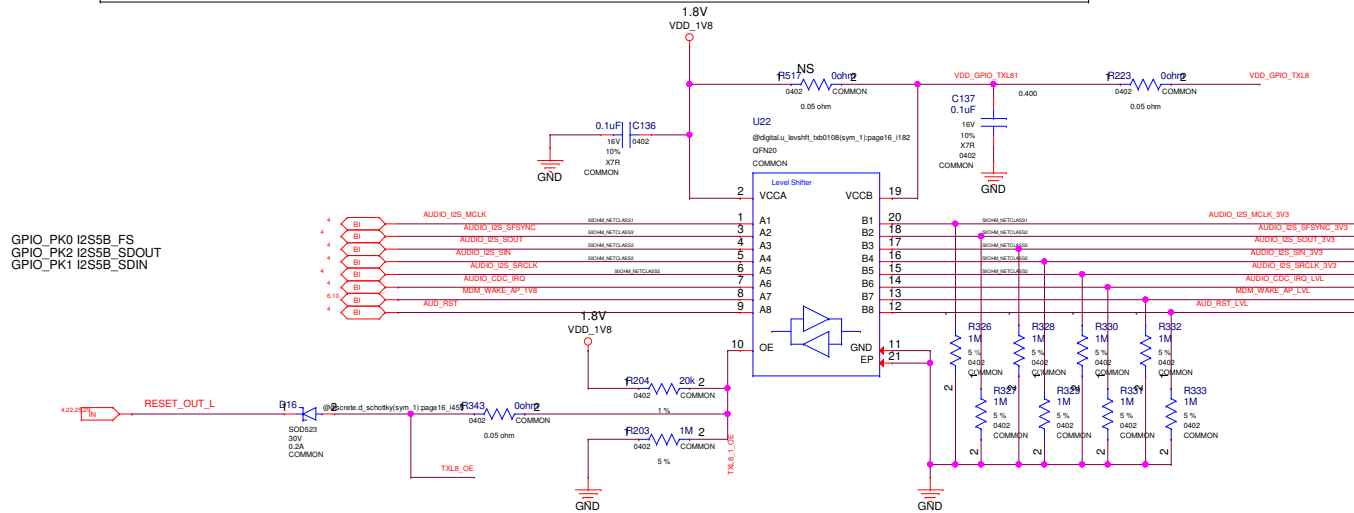
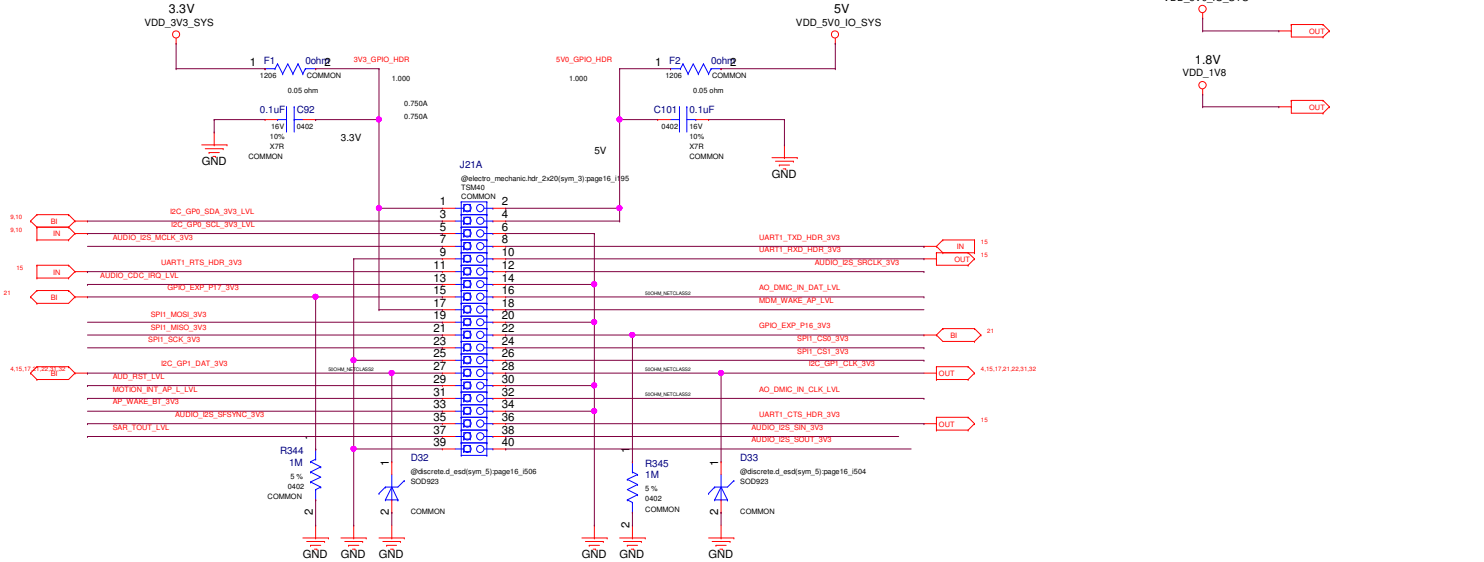
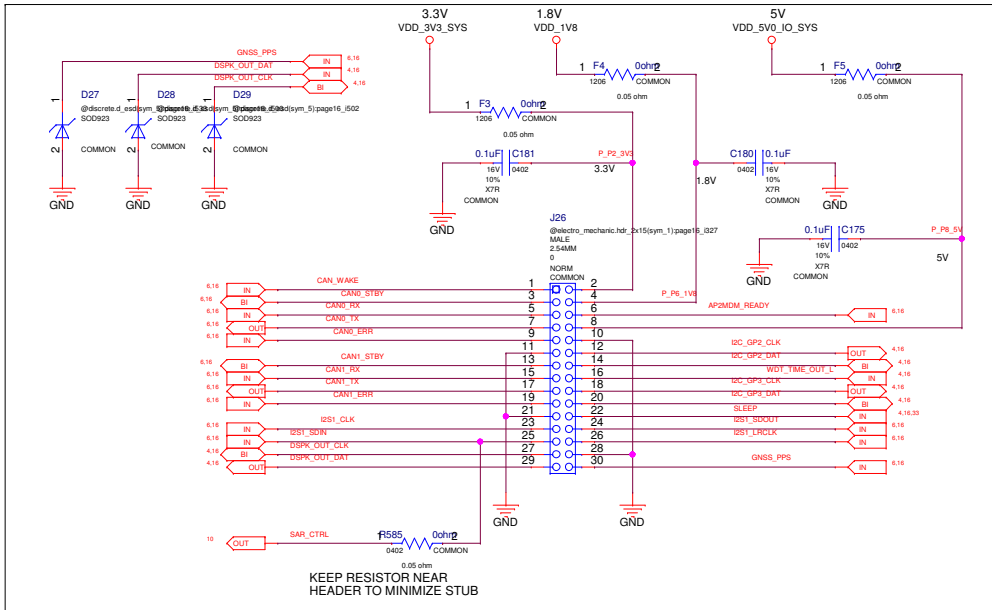
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HDMI Connector



GPIO Expansion Headers



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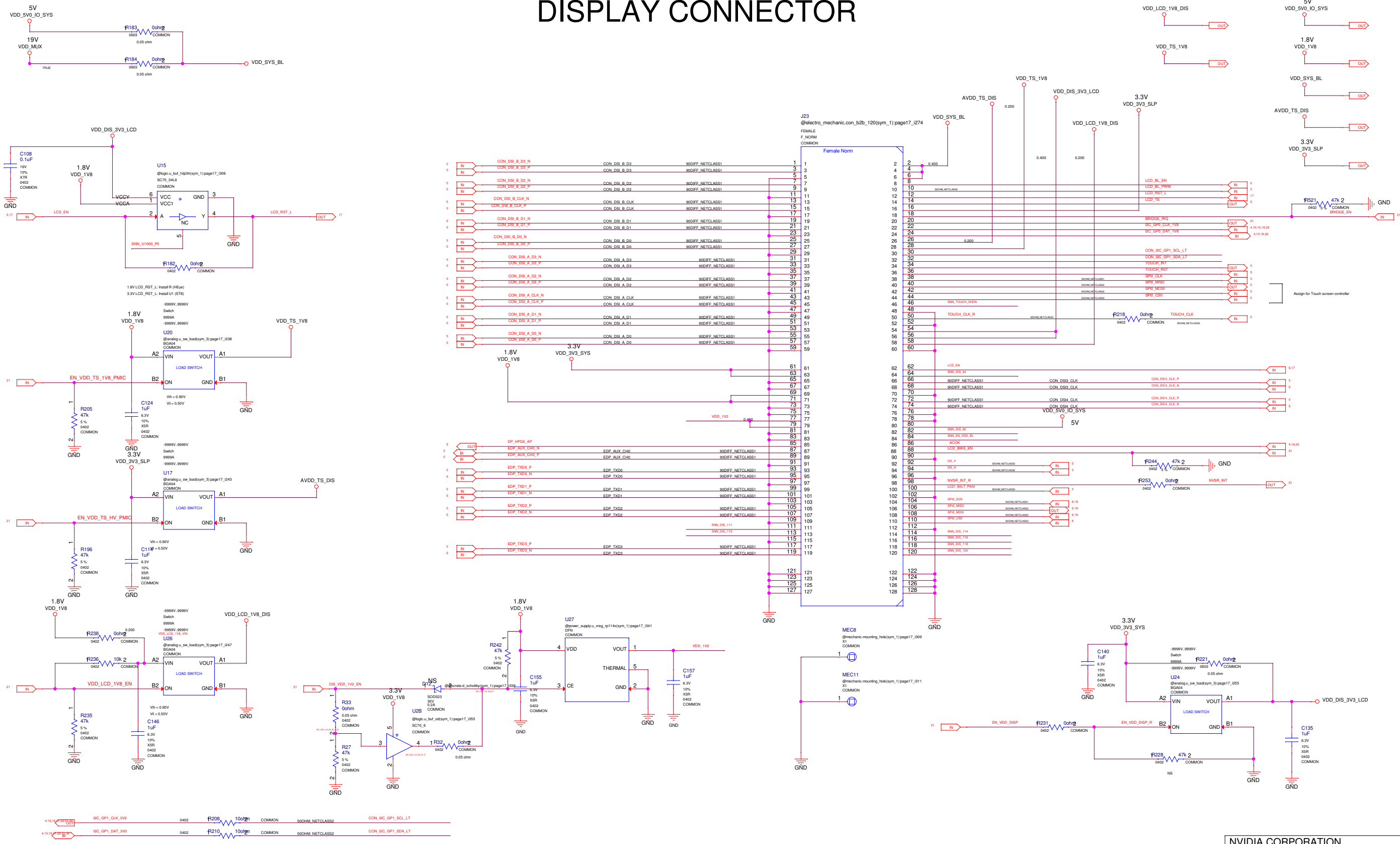
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DISPLAY CONNECTOR

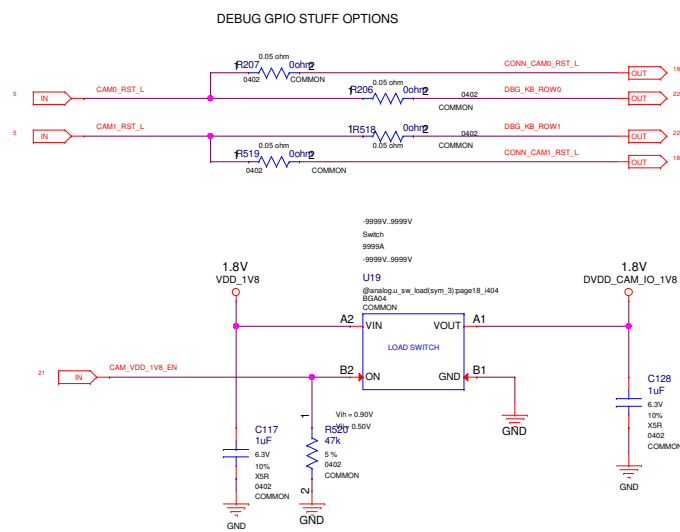
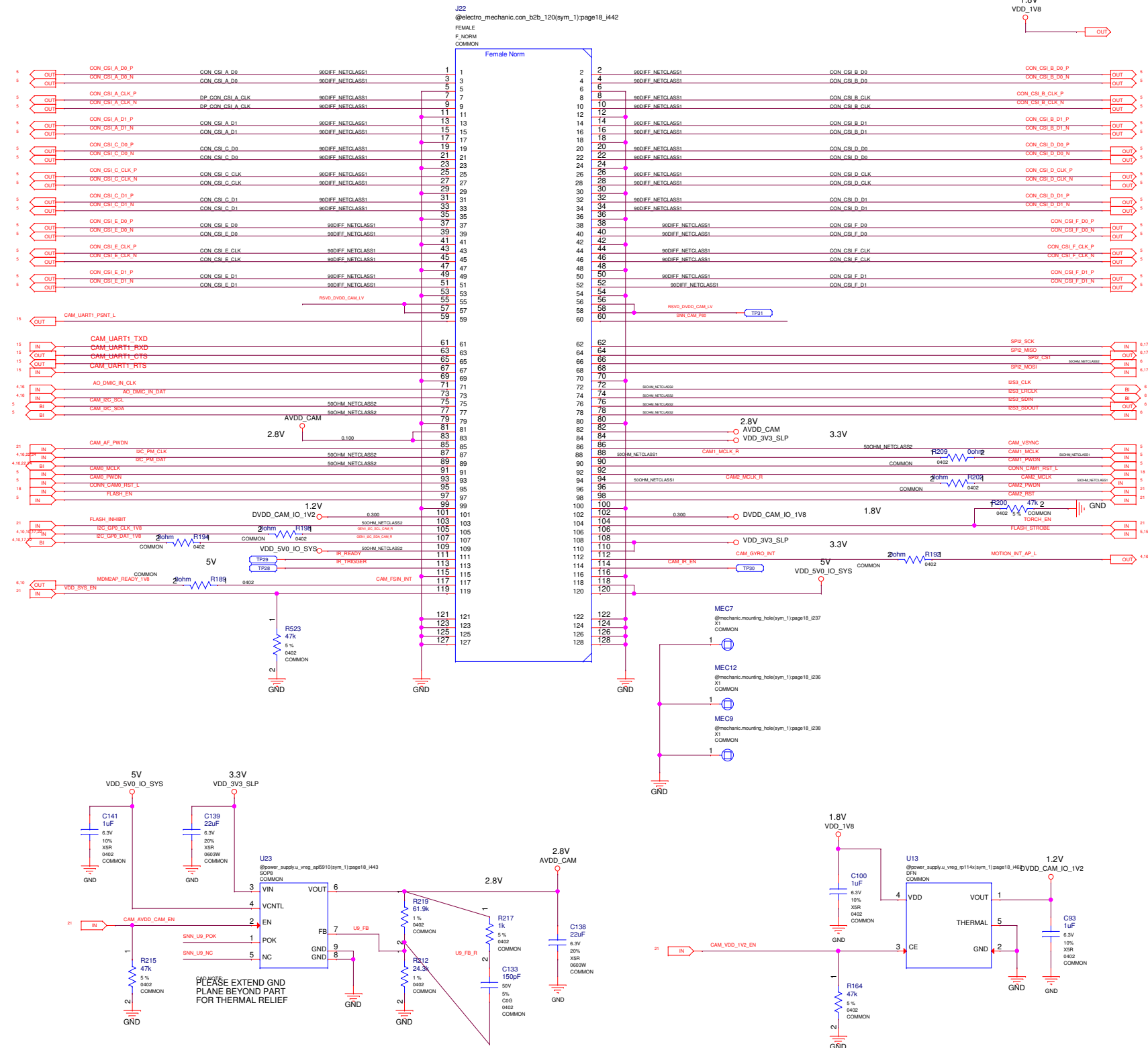


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Camera Expansion



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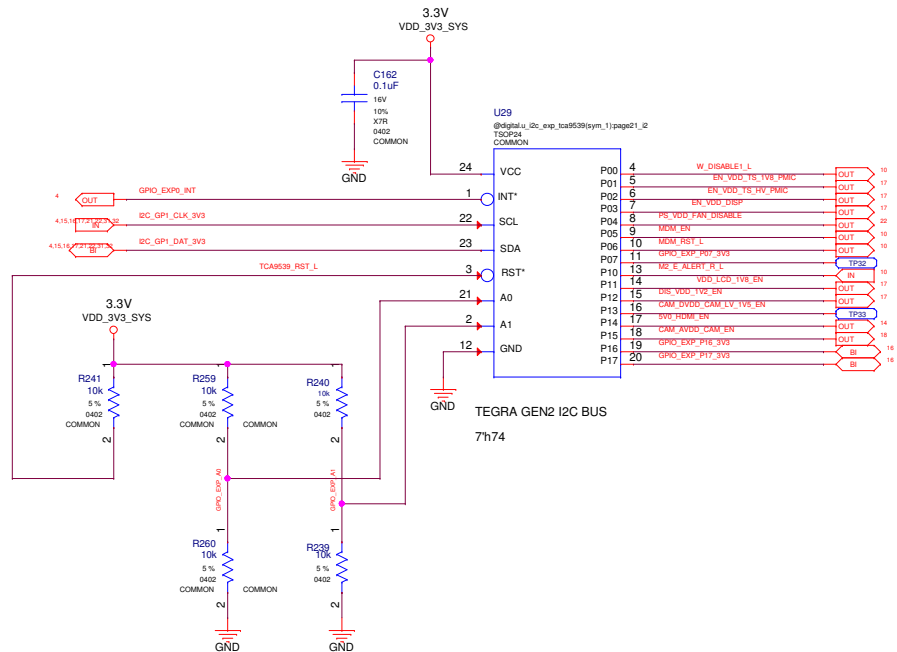
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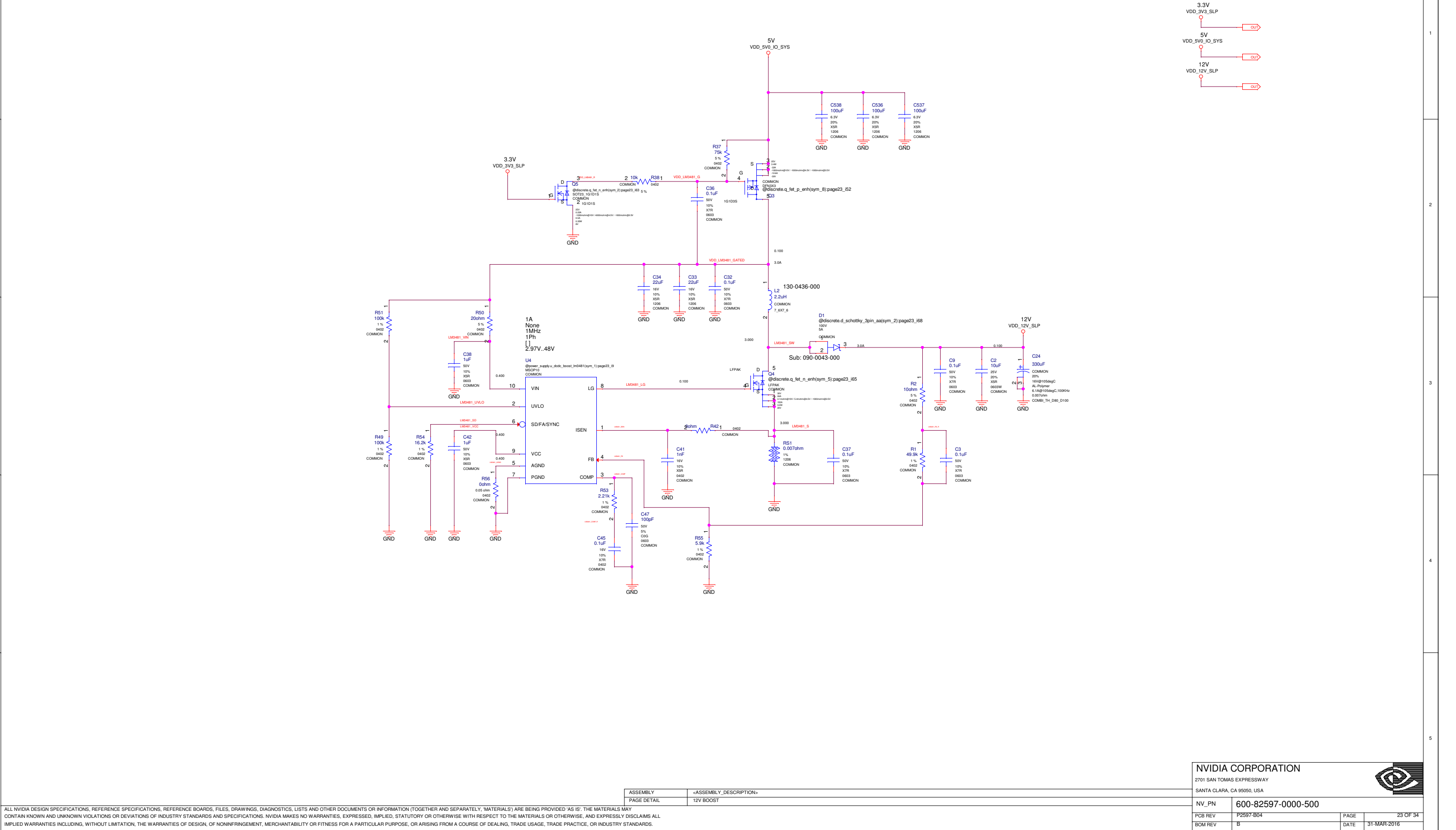
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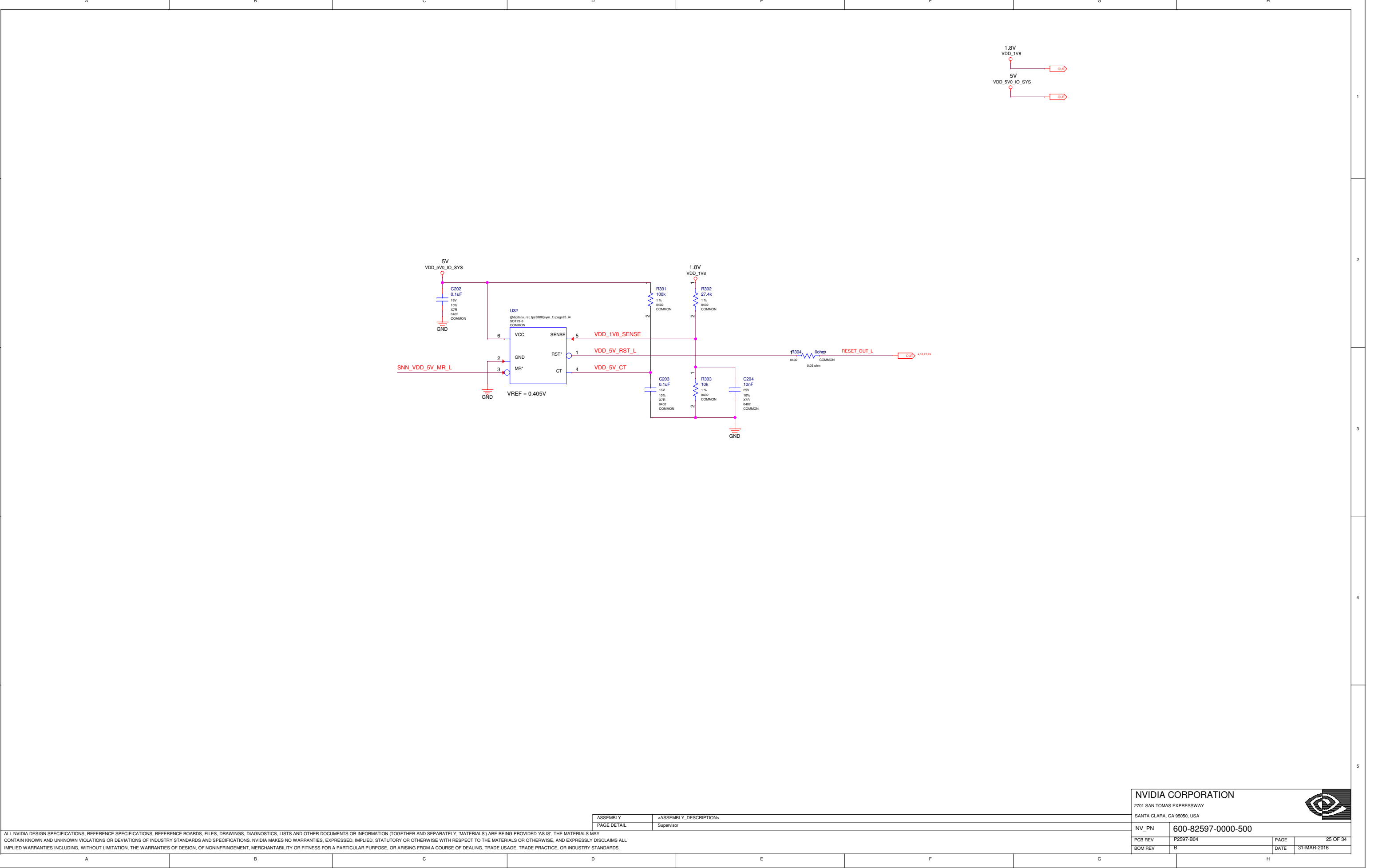
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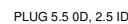
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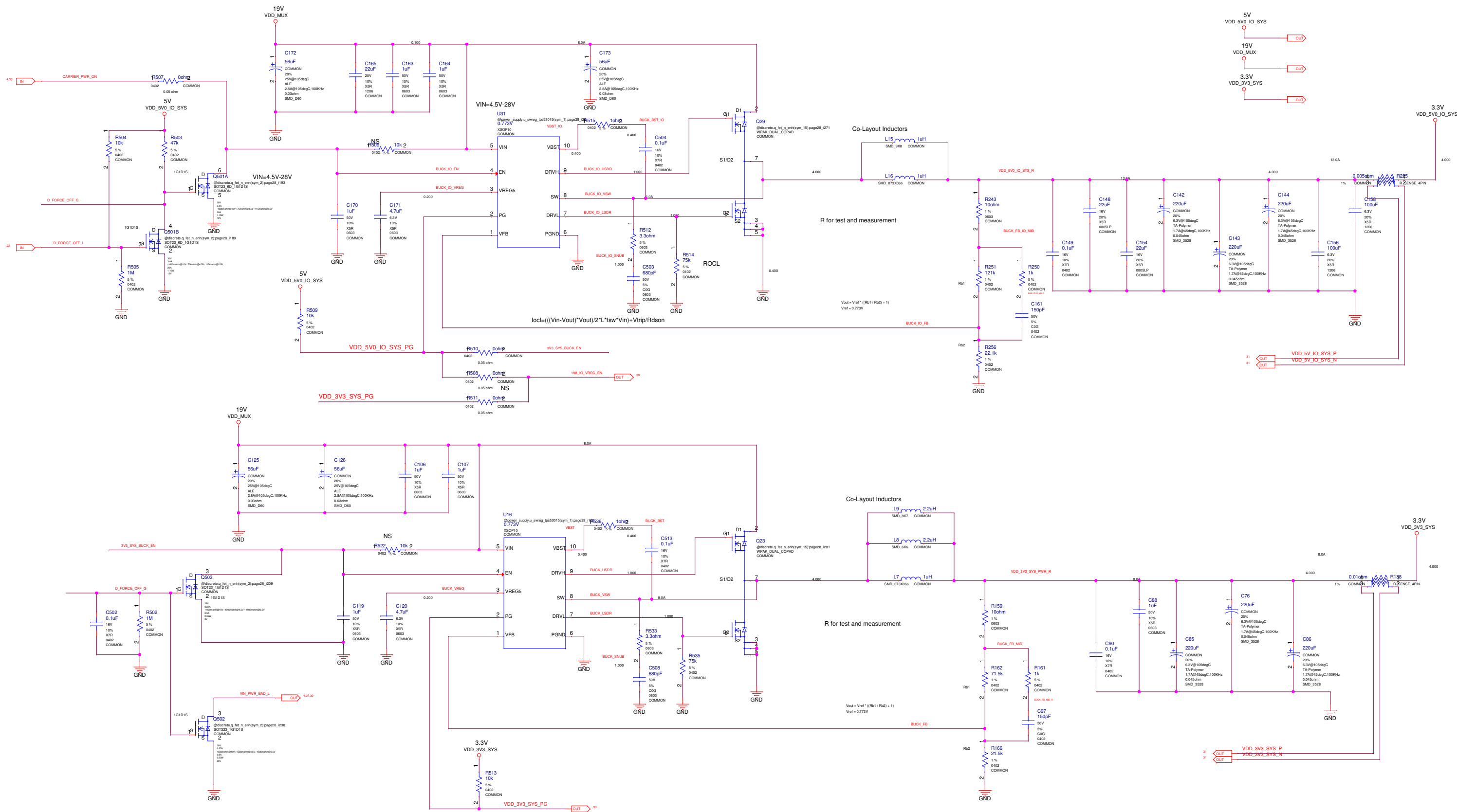




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5V & 3V3 SYS POWER SUPPLIES



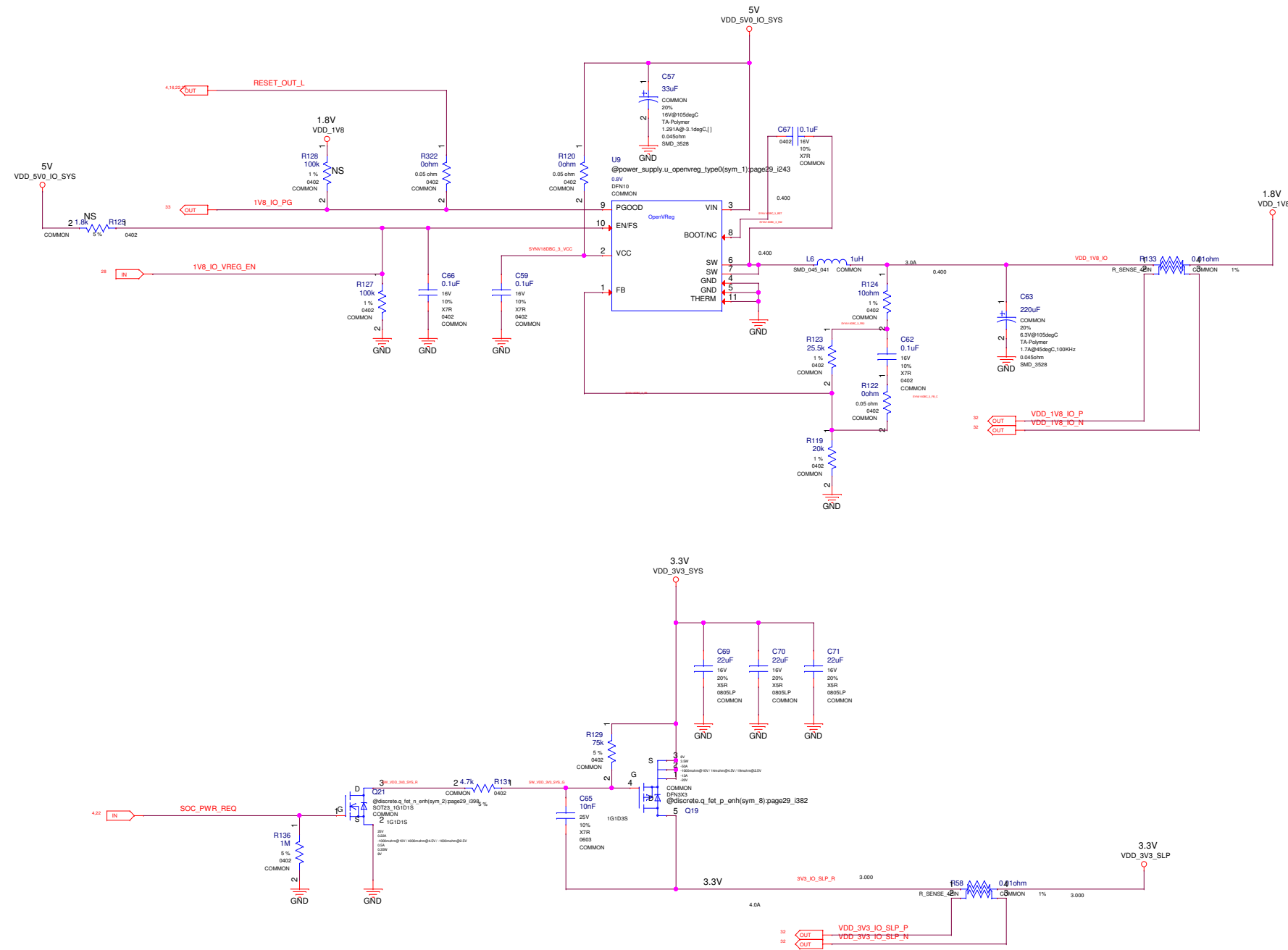
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PAGE DETAIL	5V & 3V3 Vregs


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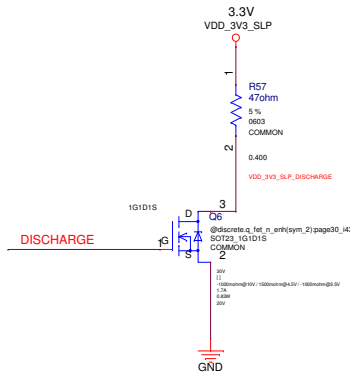
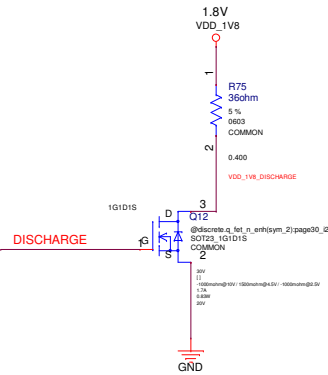
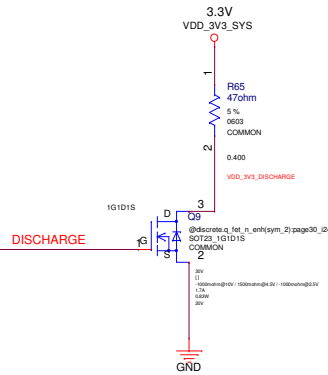
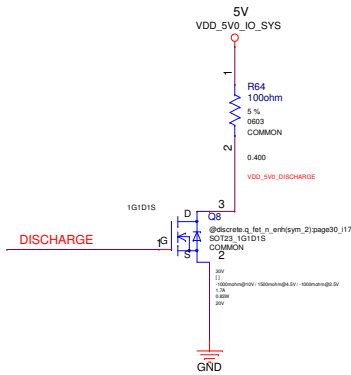
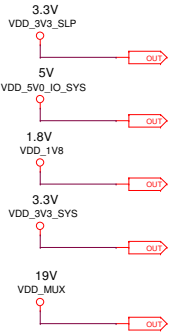
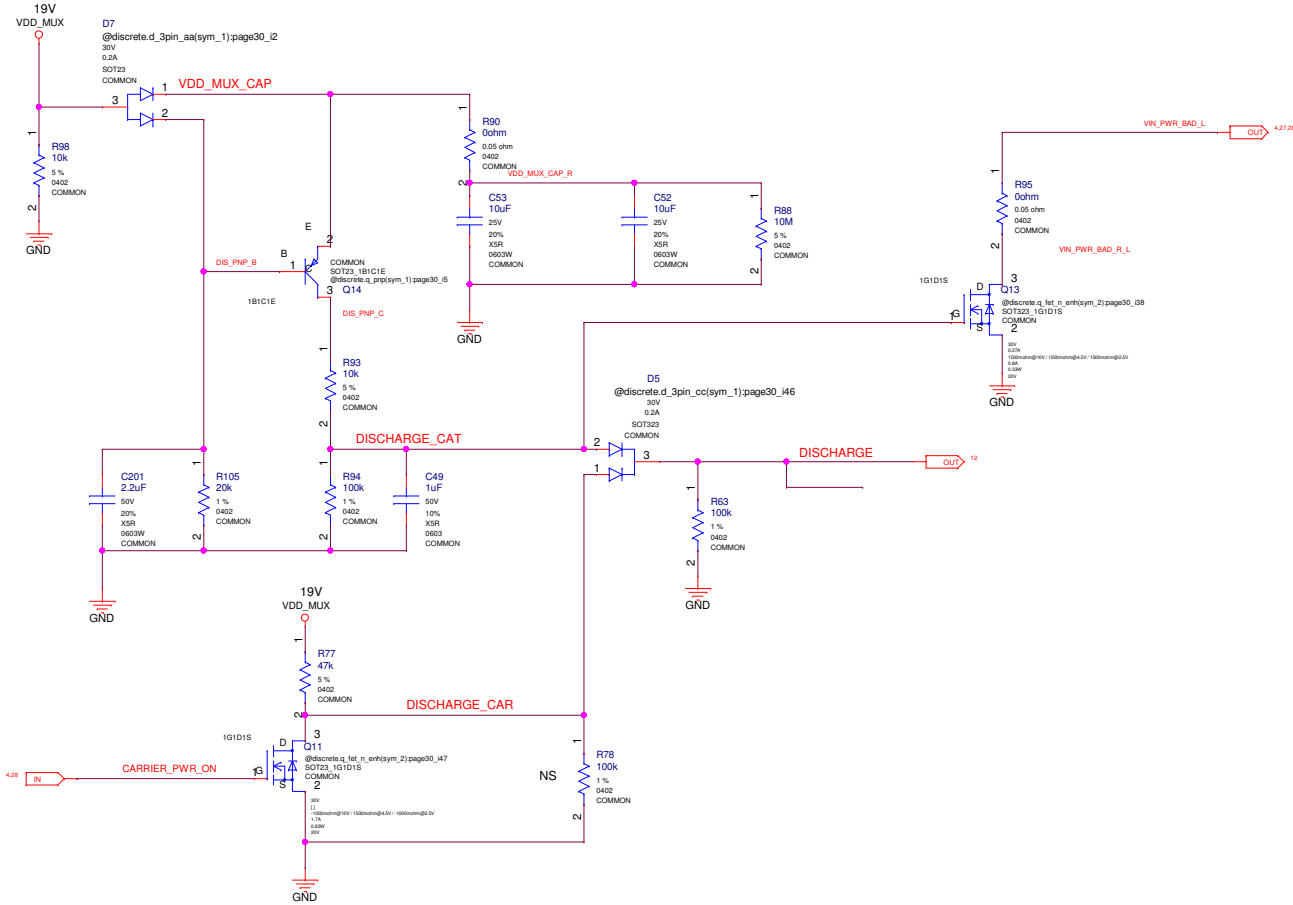
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RAIL DISCHARGE

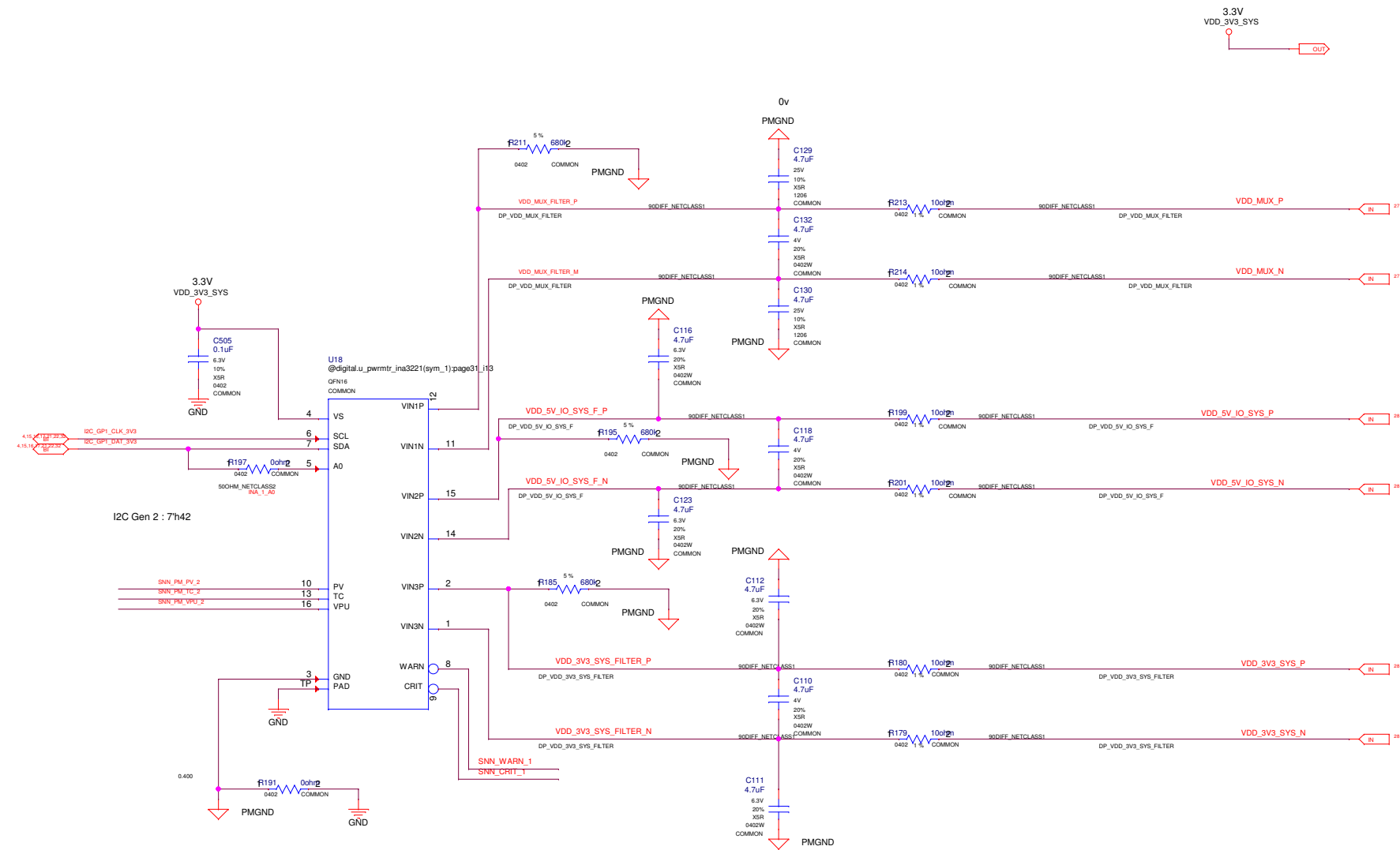


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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
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POWER MONITORS I



DC JACK to IO board

5V SYSTEM

3V3 SYSTEM

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	Power Monitor I

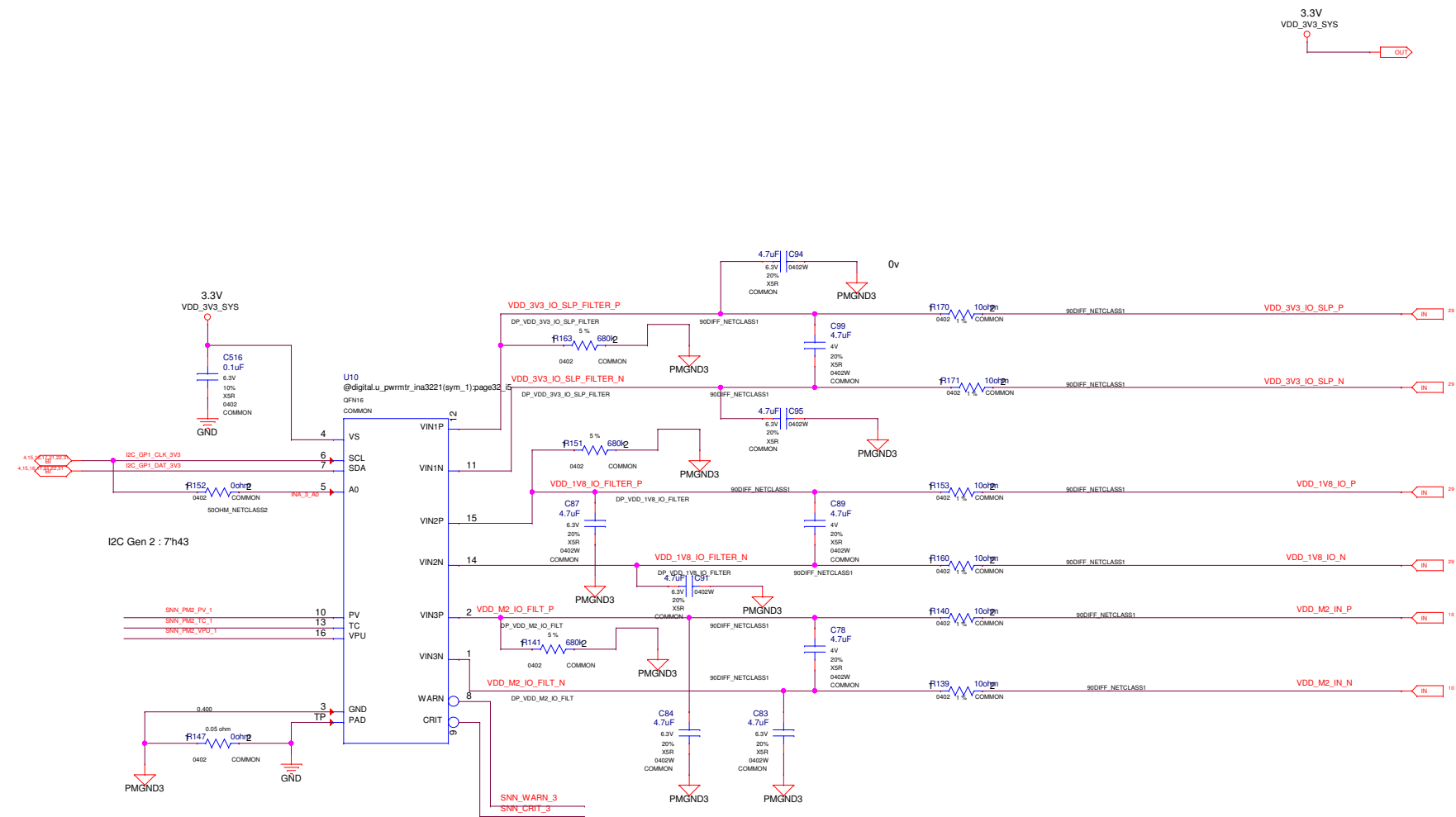
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POWER MONITORS II



3V3 RUN RAIL

1.8V SYSTEM

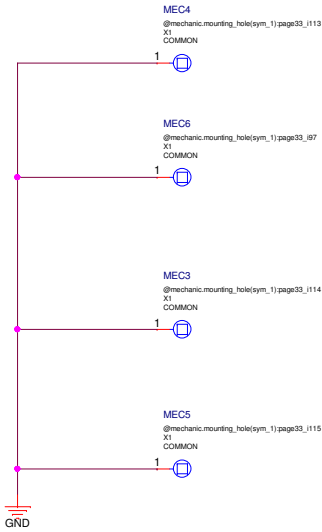
M.2 3.3V

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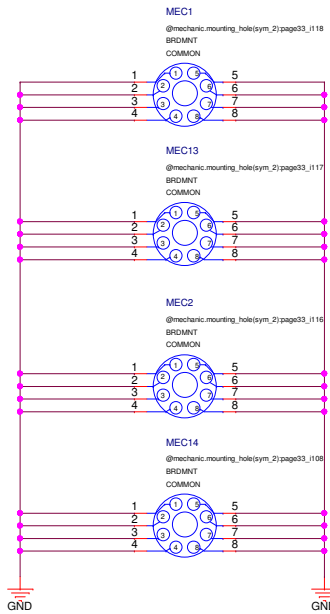


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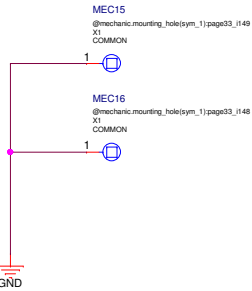
MODULE MOUNTING STANDOFFS



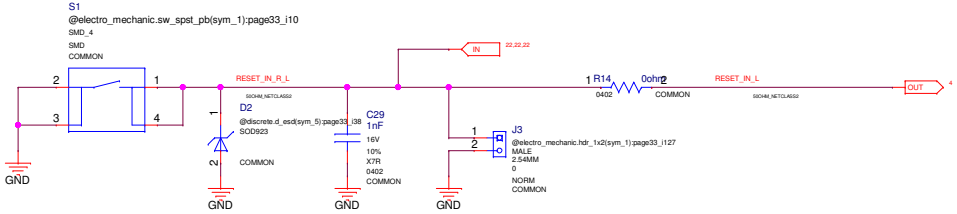
FOUR CORNER miniITX MOUNTING HOLES



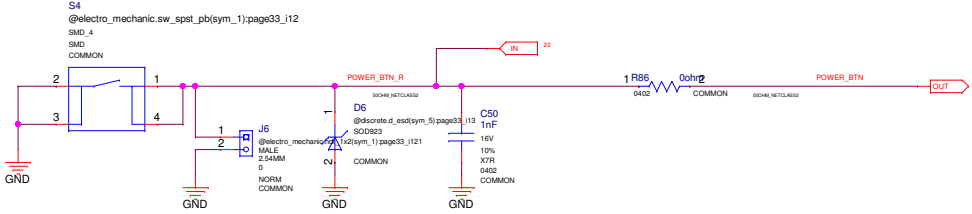
Antenna bracket mount



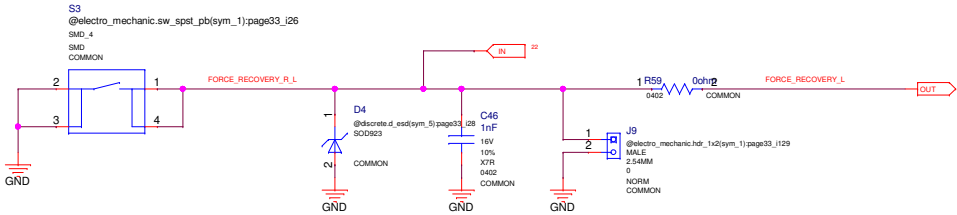
RESET



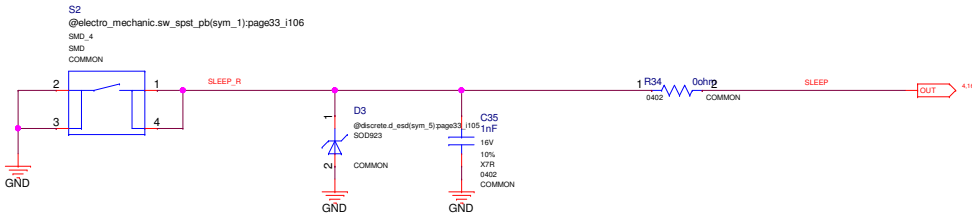
POWER



RECOVERY

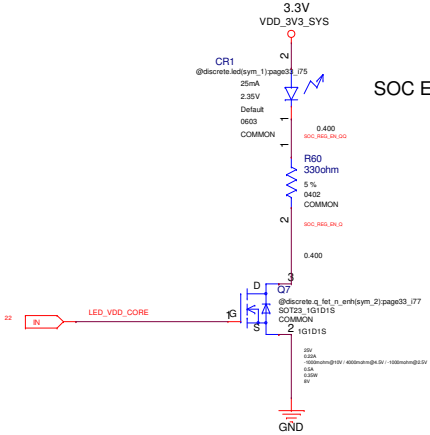


VOL DOWN

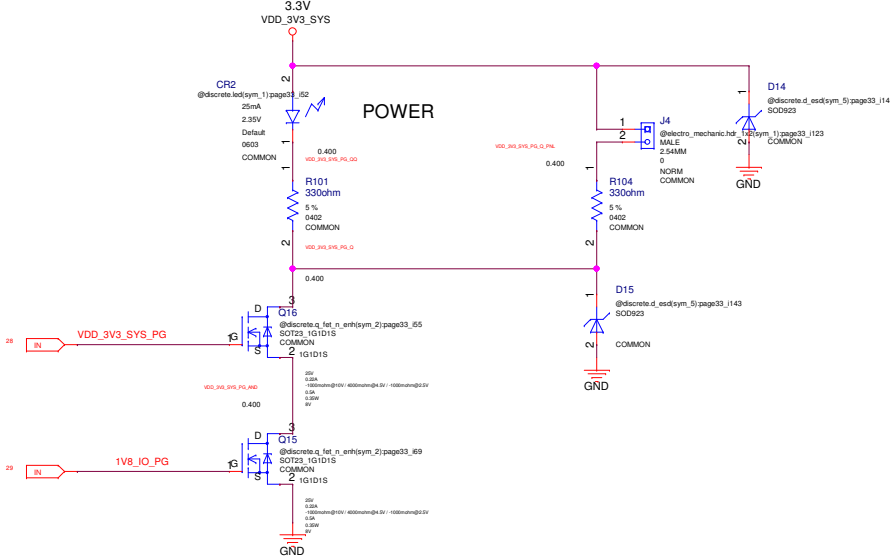


CAD NOTE:
Please place LEDs near the
power button in the front
label slik per text below

SOC EN



POWER



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Revision History

P2597-B03

Page 4: Added a red LED to indicate power is active on the CVM
Page 8: Replaced U21 due to EOL on previous part
Page 9: Changed an unused pull up to a TVS device on PCIe RST
PCIE_WAKE_L and PCIE_CLKREQ
Page 10: Change R524 and R538 to 1.8k (tune for gyro bypass)
Page 10: Changed M.2 I2C to 1.8v
Page 12: Added discharge for VDD_5V0_IO_SLP and VDD_12V_SLP
Added a red LED to 12v at PCIe connector
Changed DEV_SLP buffer to OD
Page 13: Changed R9 to 100pF cap C205 (EU emissions)
Page 14: Changed R548 to 4.7k ohm and R544 to 100k
Page 15: Changed DBG I2C MUX to I2C repeater with enable
Added pull ups on inputs to U6
Page 16: Added 1206 0ohm resistors on J26
Added pull downs on J21 side of U22 and U7
Added reset connection to U22 and U7
Added ESD protection
Page 22: Added pull-up on J10 pin 48 for direct INA support
Added 0ohm resistor on the fan PWM to allow always on
Added a pull down on UART4_TX
Added ESD protection to pins 4 and 6 of Q17
Page 24: Changed U11 EEPROM to AT24C02D-MAHM-T
Page 25: Added supervisor to hold Tegra in reset until 1.8v up
Page 27: Added additional bulk site on VDD_MOD
Page 28: Changed 5v and 3.3v VR FETs for better thermal perf
Page 30: Added C201 and changed C49 to 1uF to filter DC loss
Page 33: Added ESD option for power LED

P2597-B04

Corrected minor solderpaste issue

Page 12: Stuffed R315
Page 14: Changed R563 and R565 to 3.3ohm
Page 25: Unstuffed page

BOM rev B

Page 23: Changed C36 to 0.1uF
Page 30: Changed C201 to 2.2uF and R105 to 20k

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