P2597-B04

Jetson TX1/TX2 Developer Kit Carrier Board HDMI, USB, PCIe, SATA, Gbe

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BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO STUFF ASSEMBLY NOTES AND BOM NOT FINA

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Check the Bill of Materials (P2597_B04_BOM.xlsx) for the latest part stuffing information. Items marked as "No Stuff" are not required and should not be populated in a customer design. In addition, check the Jetson TX1/TX2 OEM Product Design Guides for possible additional guidance.

P2597 I2C Port Assignments

P2180 I2C Port Assignments

 Slave Device
 BUS:Device
 address

 TMP451 (Thermal)
 12C Gen 1 : 7'h4C

 ADS1015 (ACA detection)
 12C Gen 2 : 7'h4A

 INA226 (Power measurement)
 12C Gen 2 : 7'h46

 INA3221 (Power measurement)
 12C Gen 2 : 7'h40

NVIDIA CORPORATION

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SANTA CLARA, CA 95050, USA

NV_PN 600-82597-0000-500

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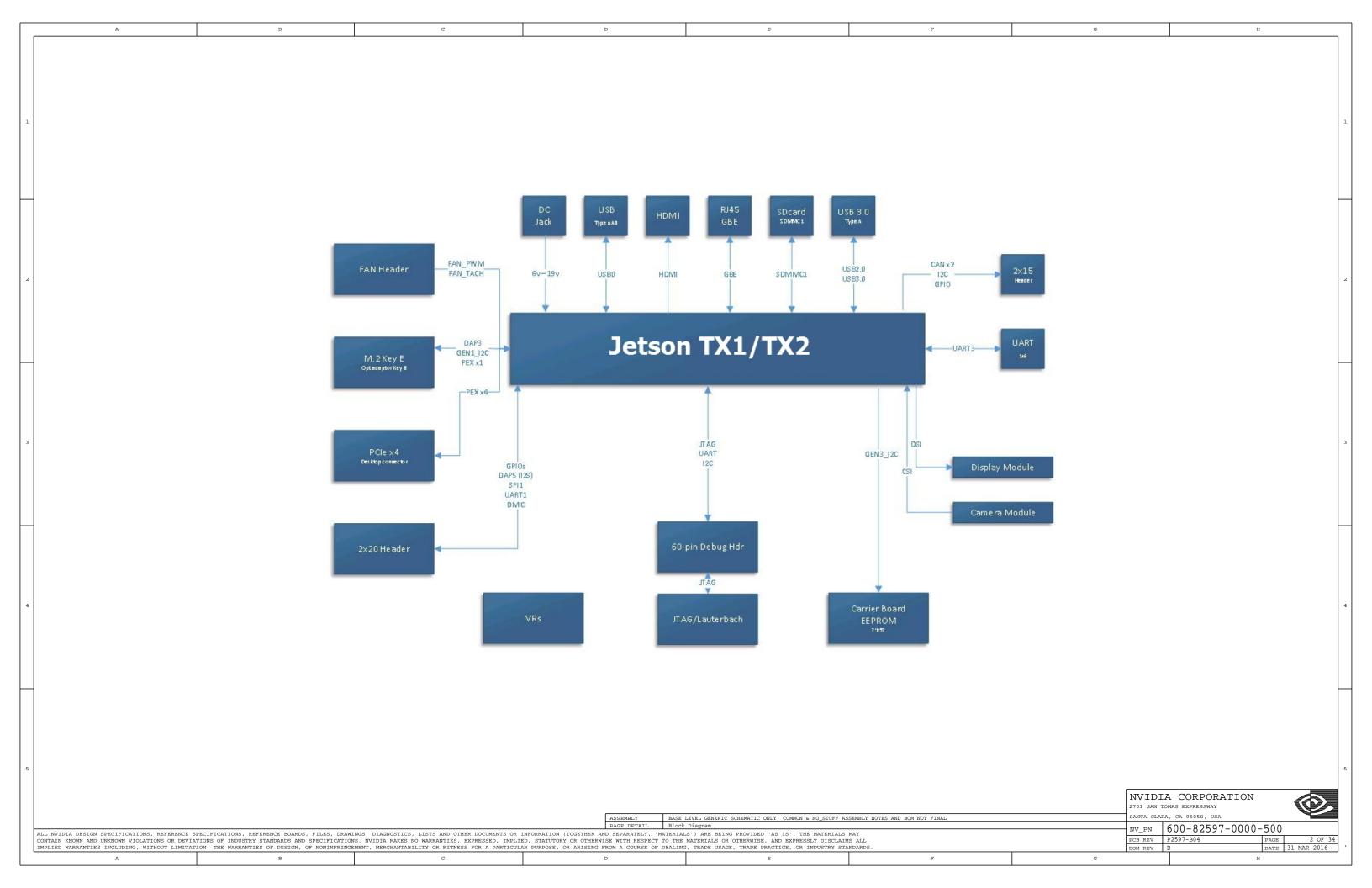
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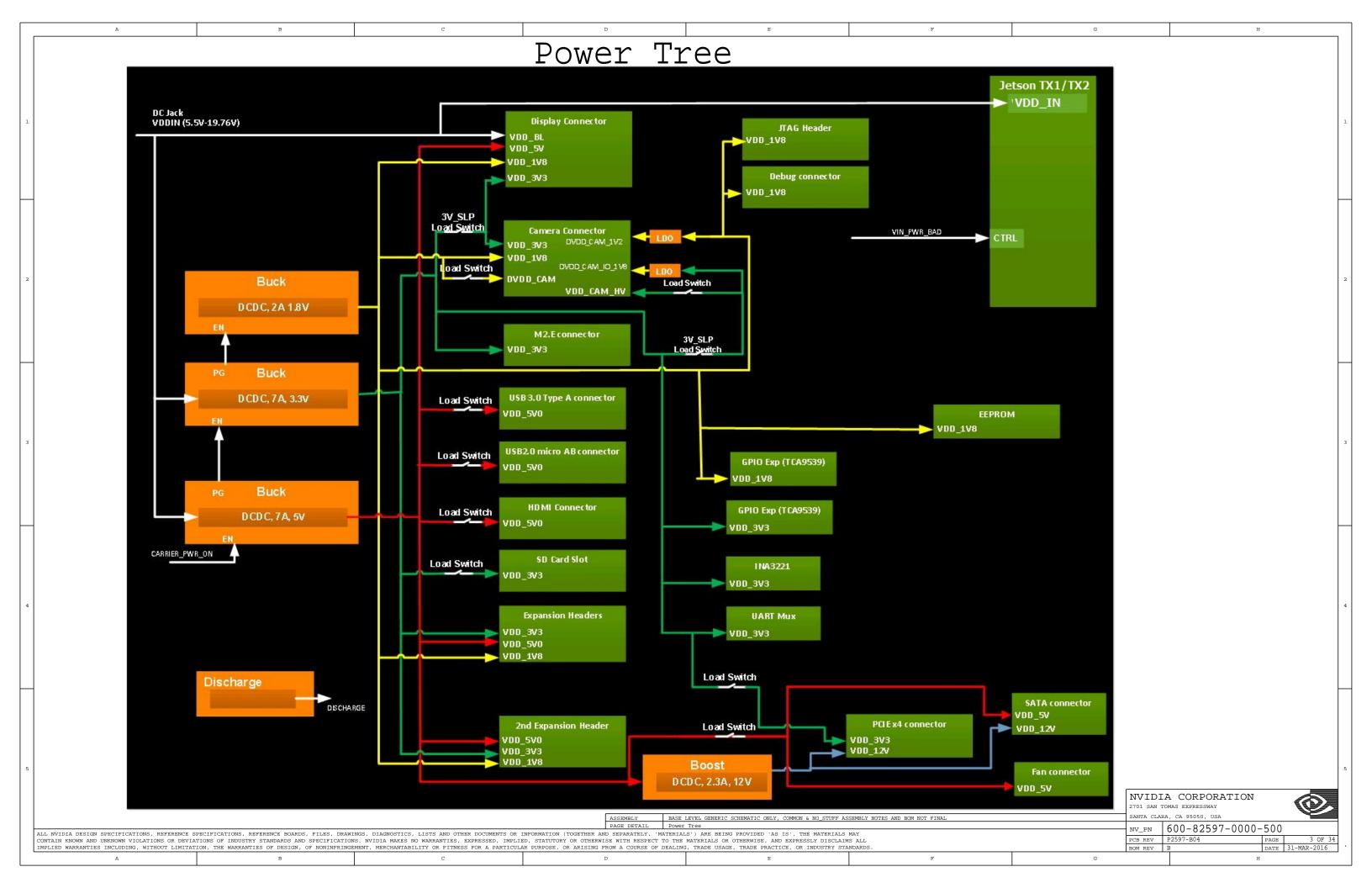
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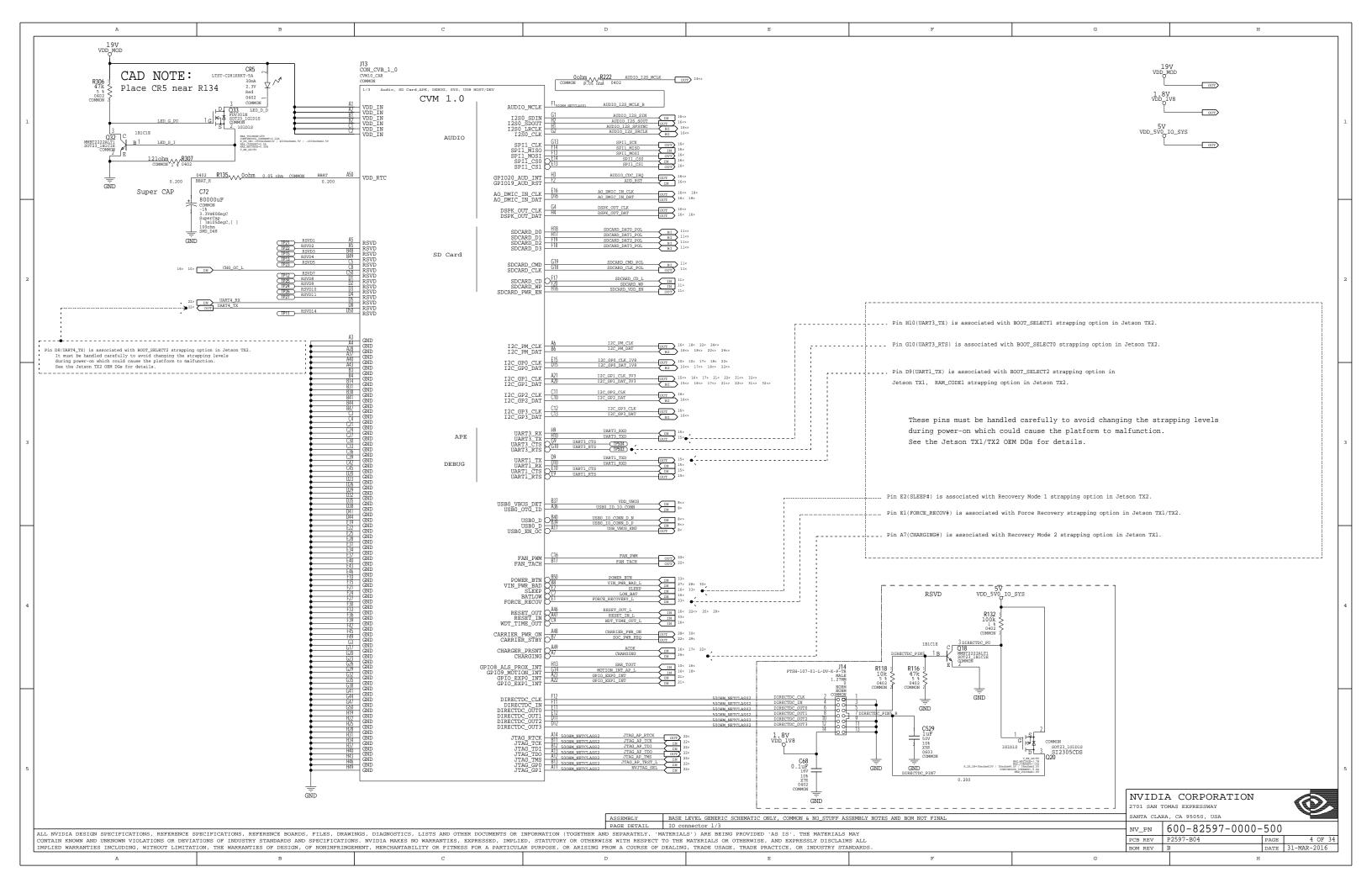
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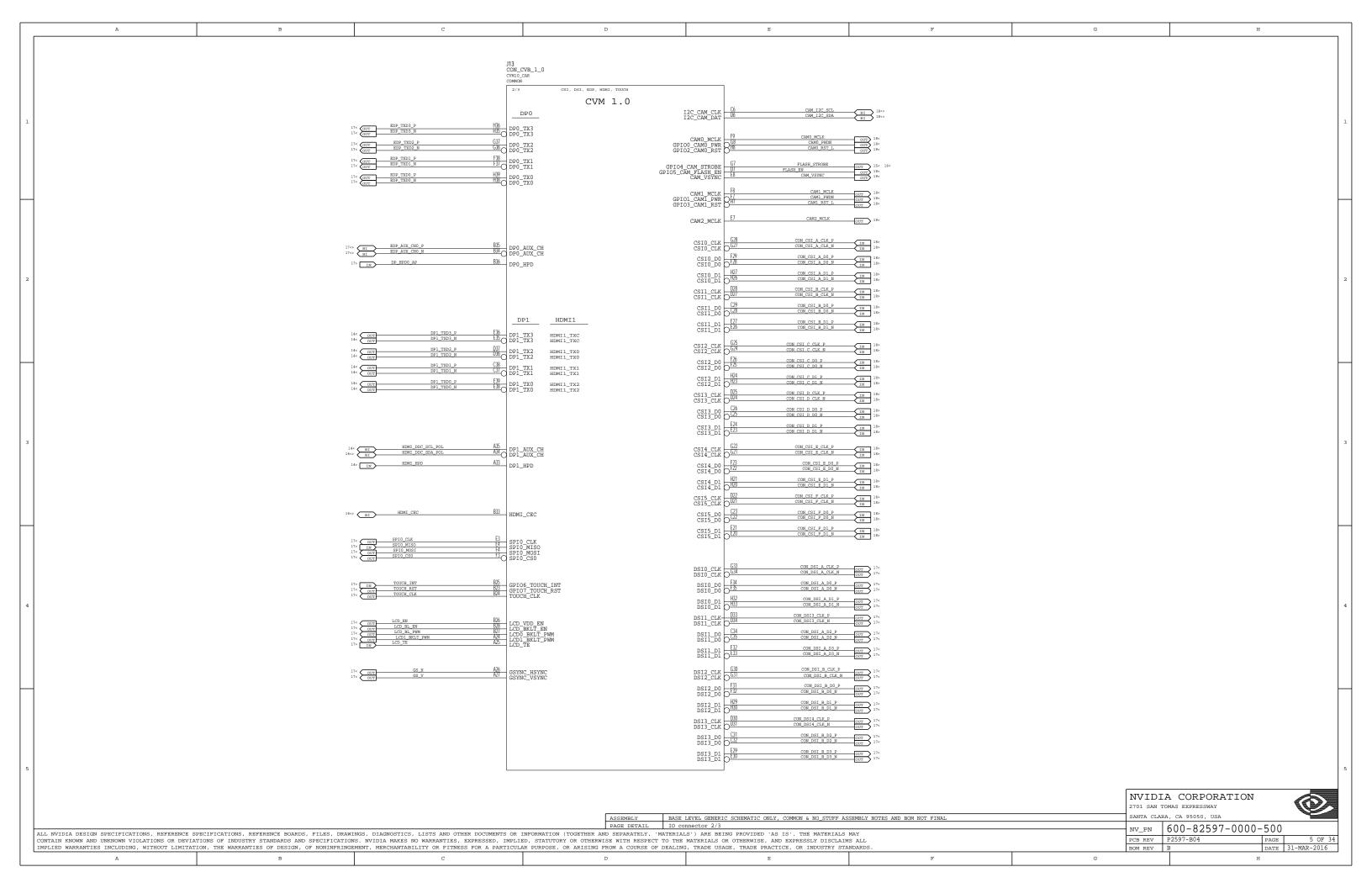
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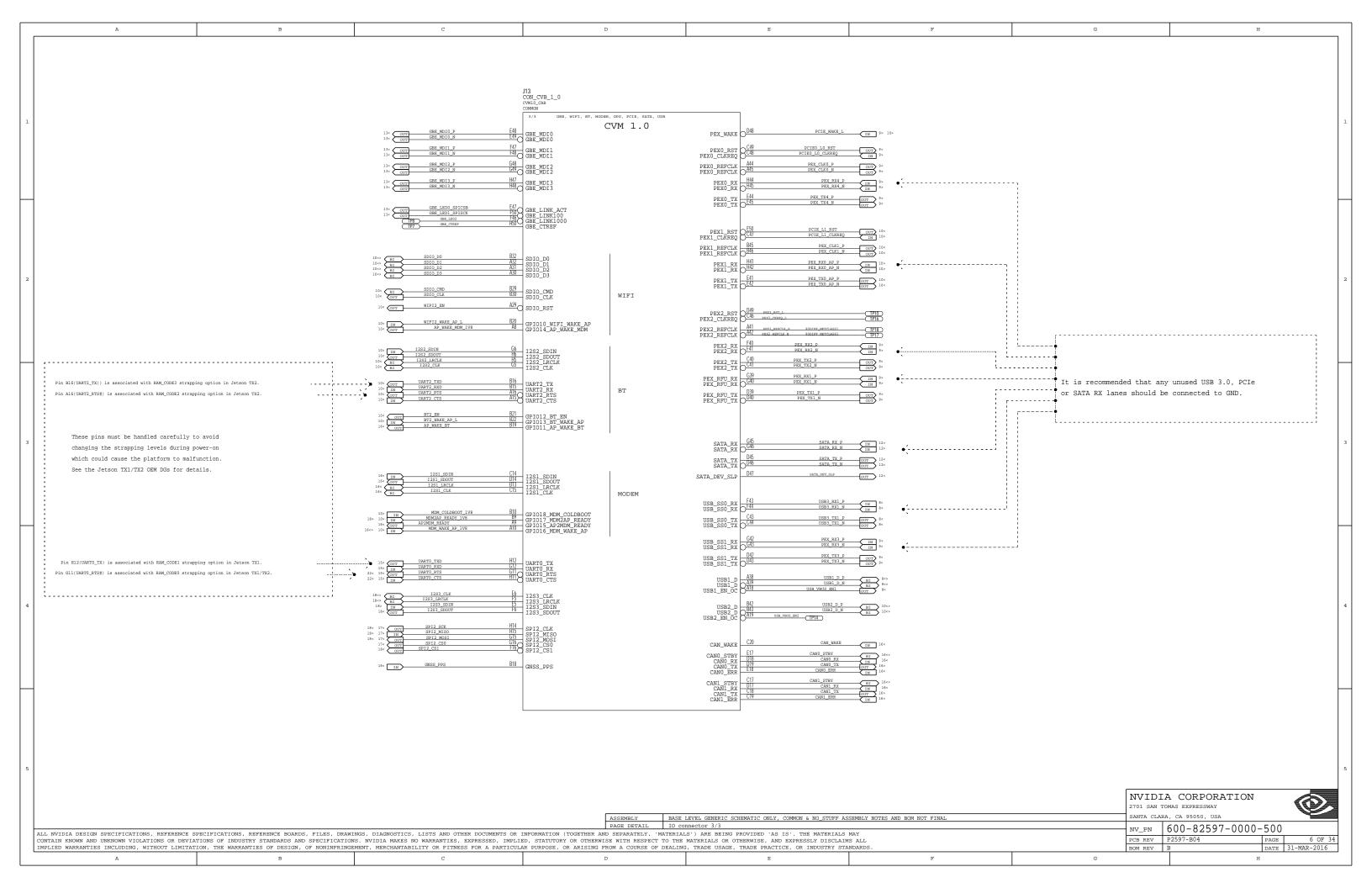
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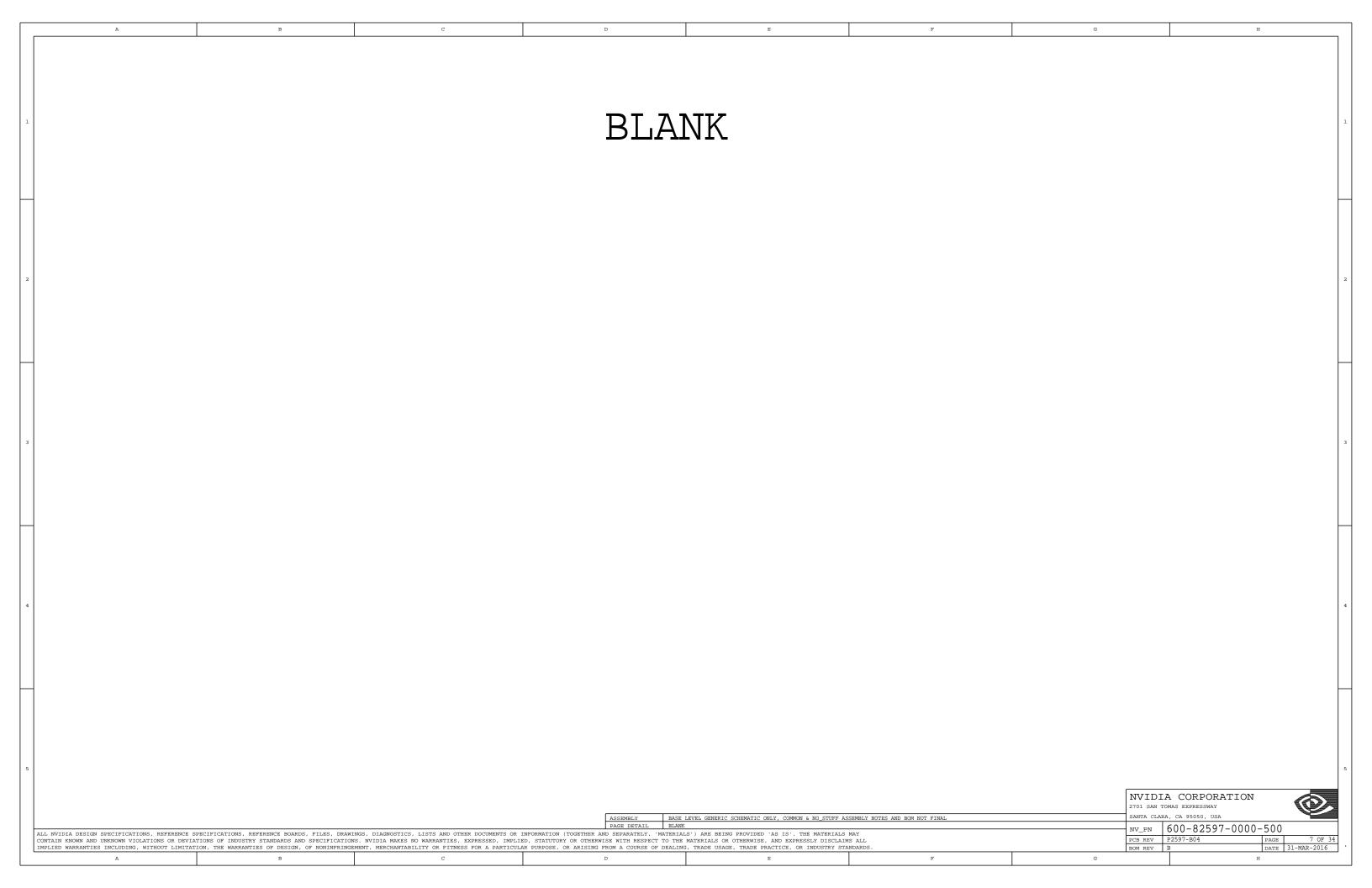


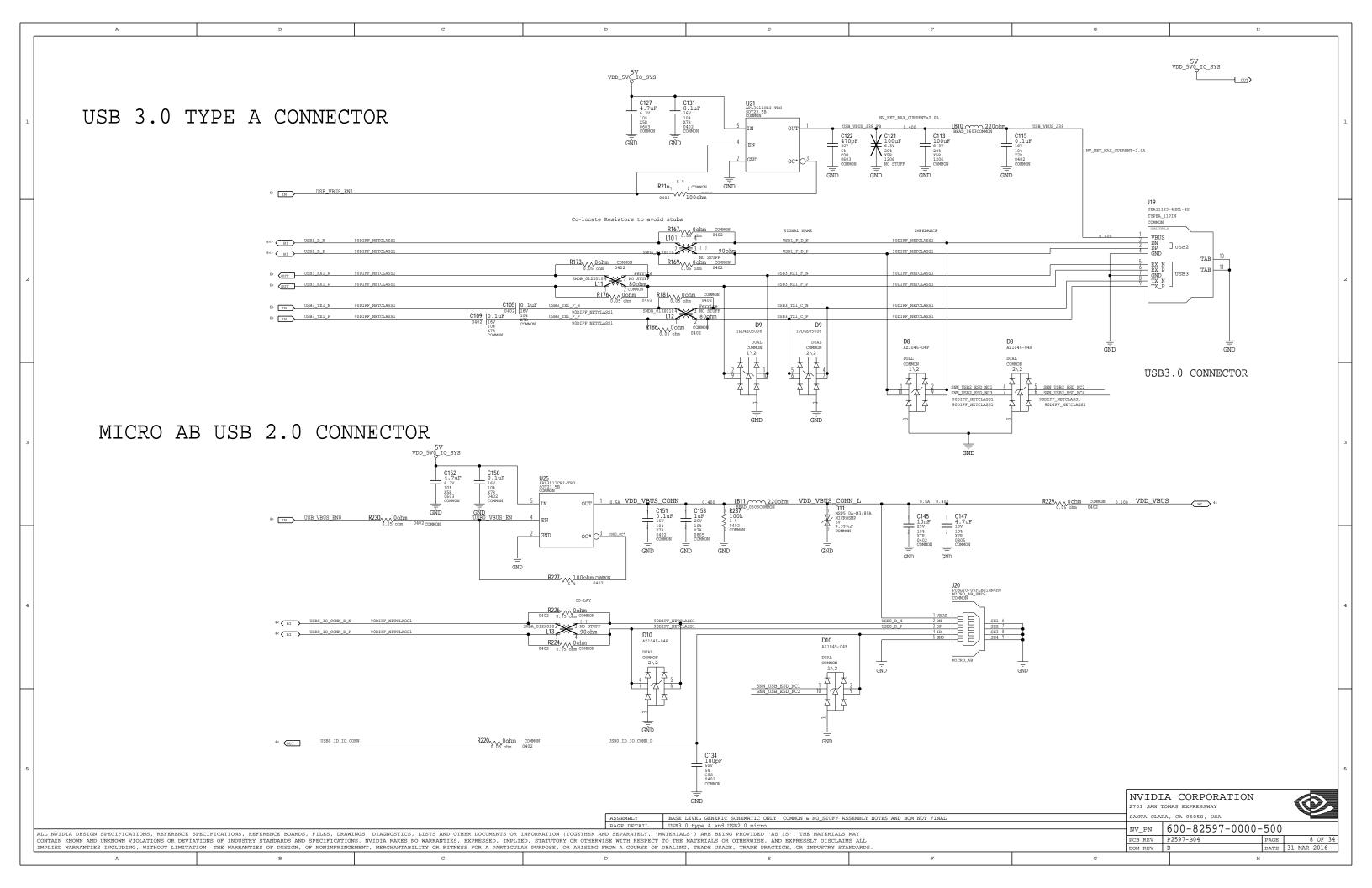


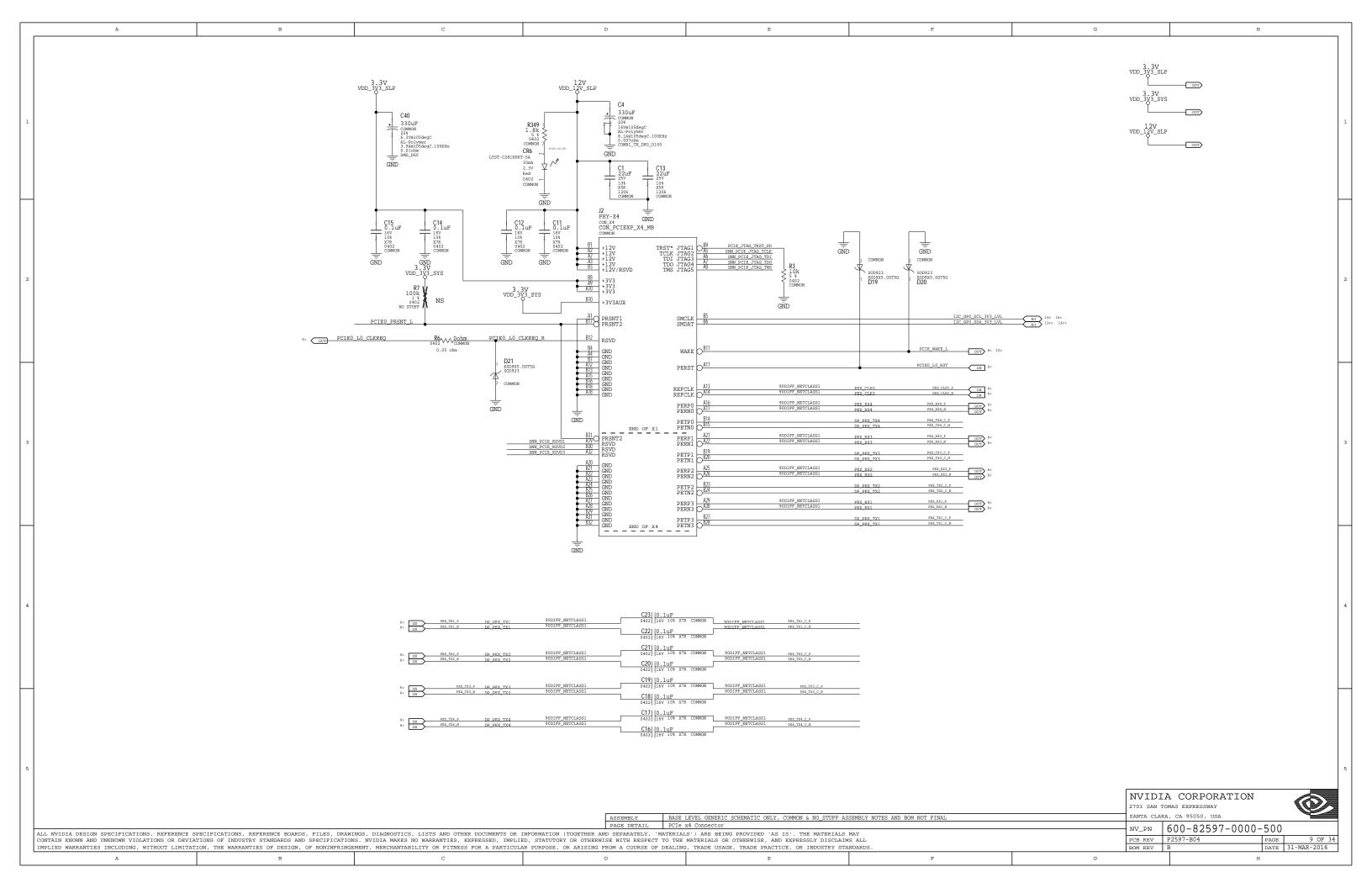


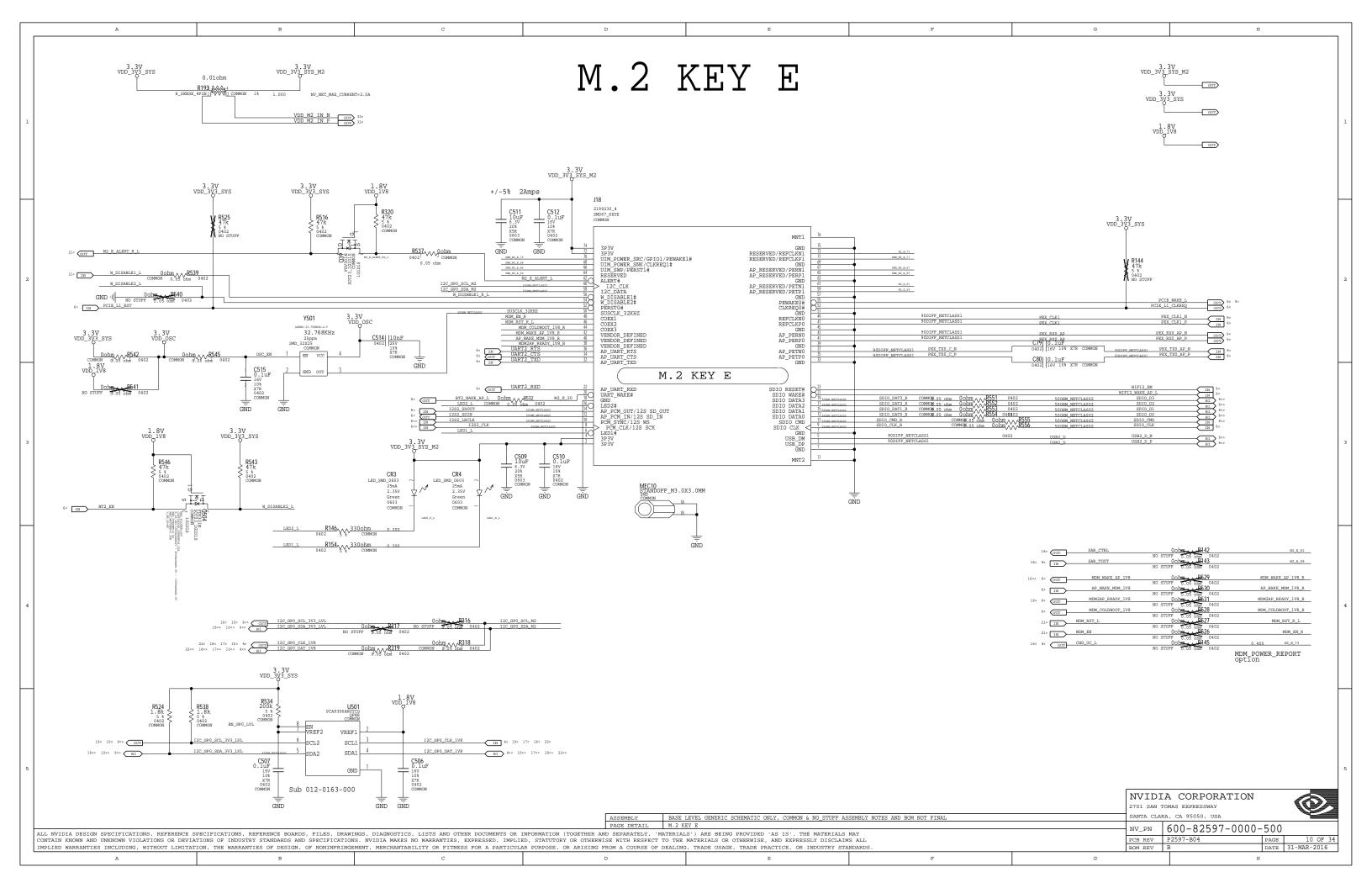


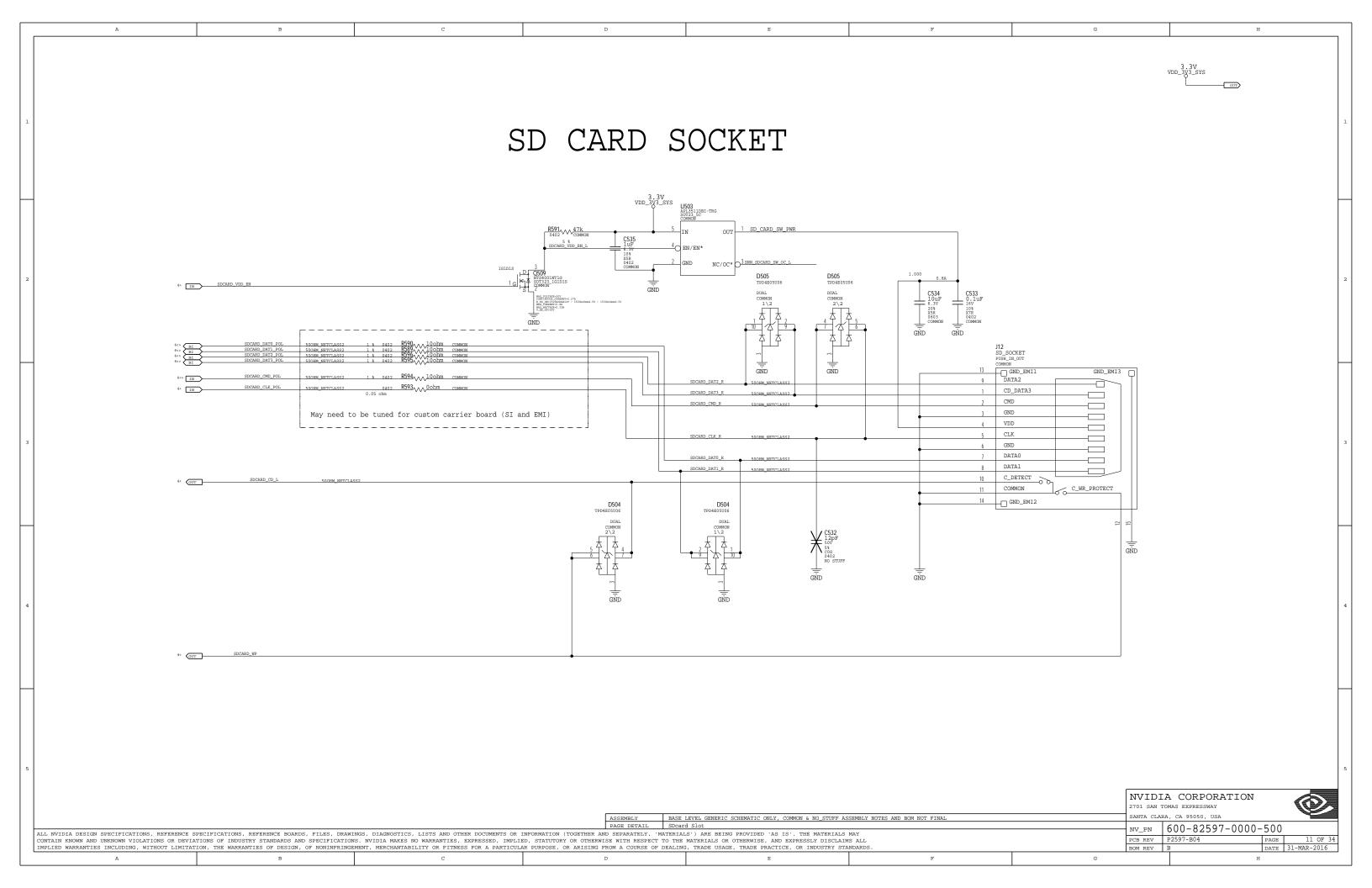


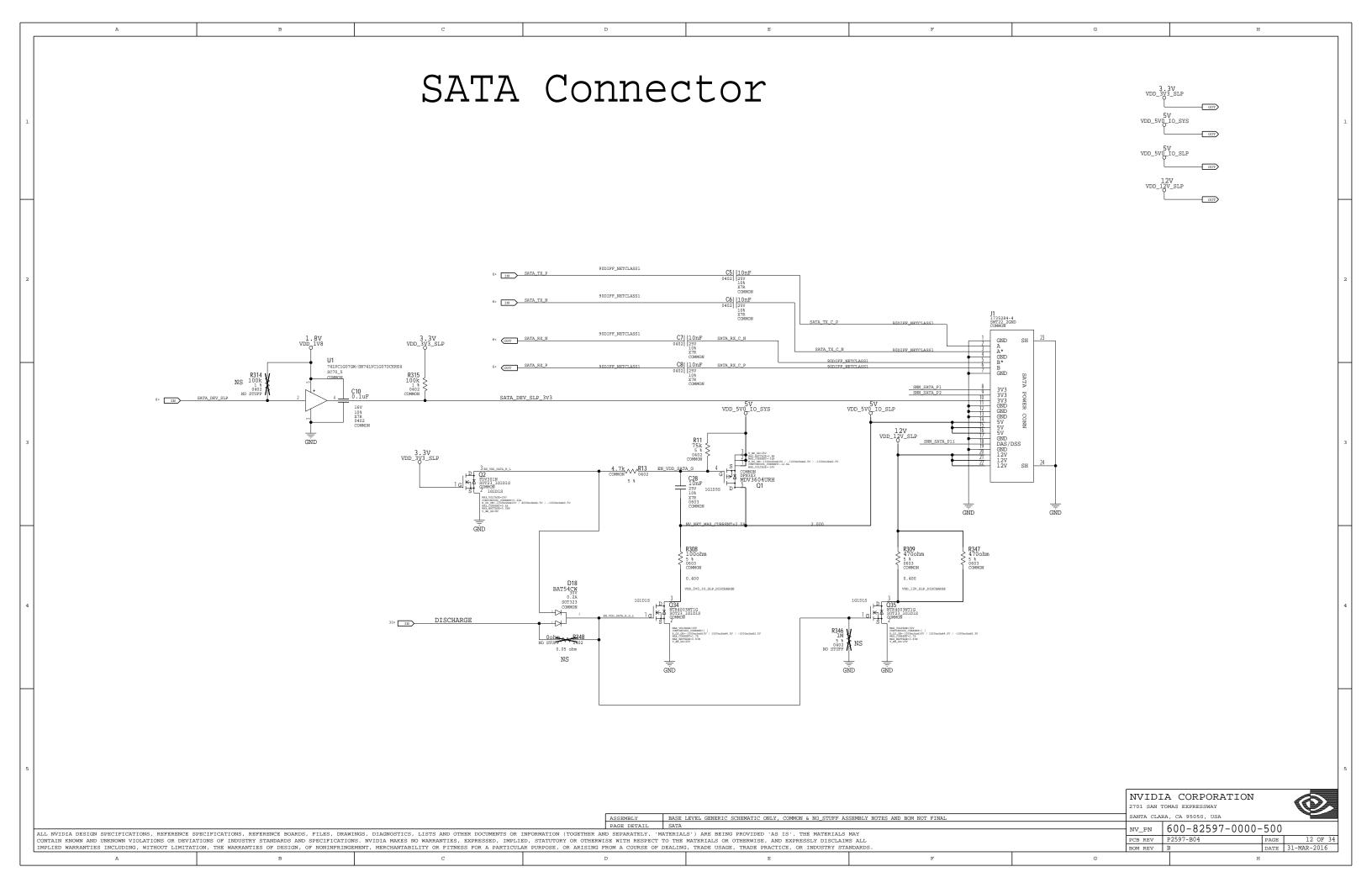










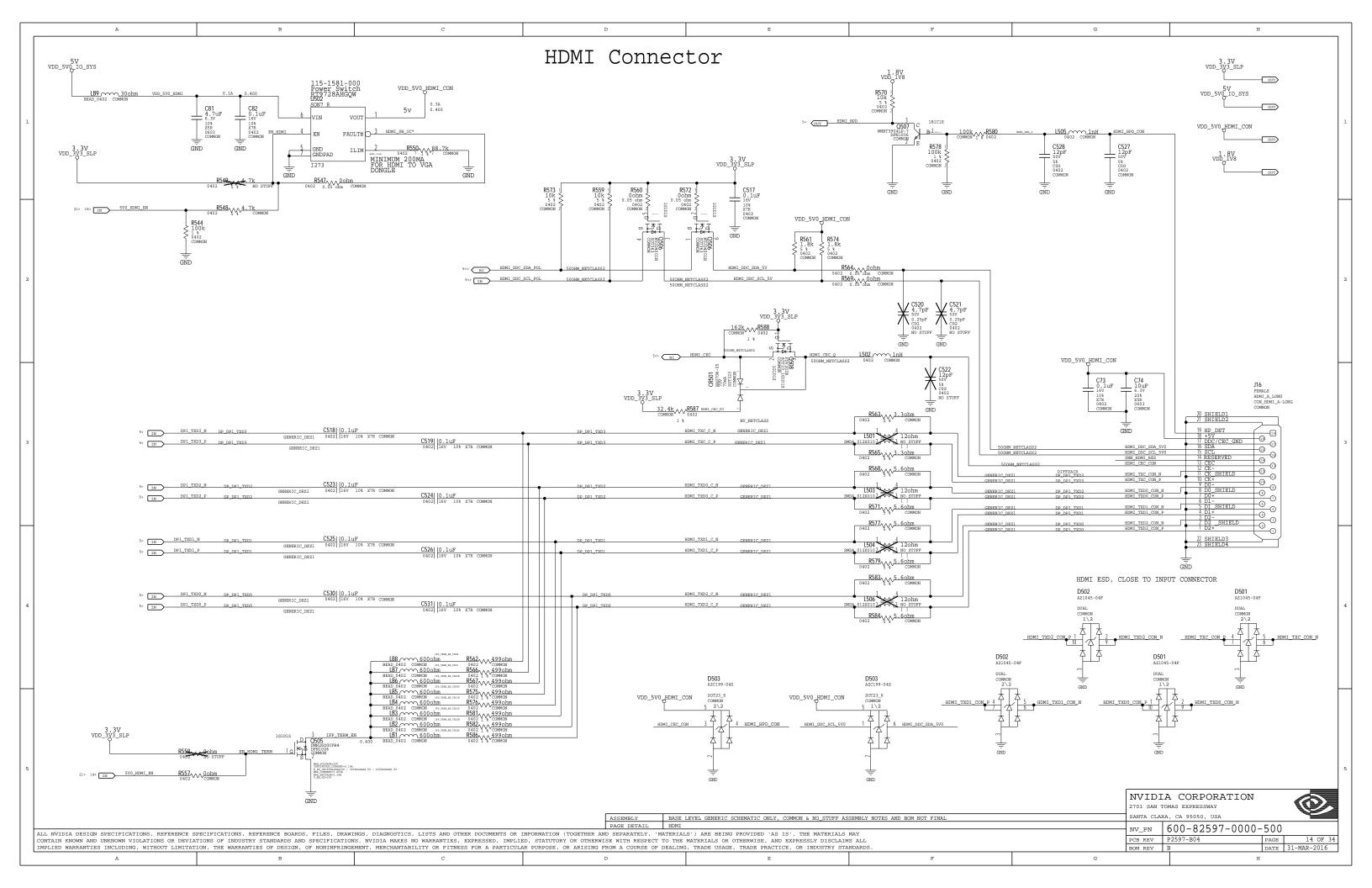


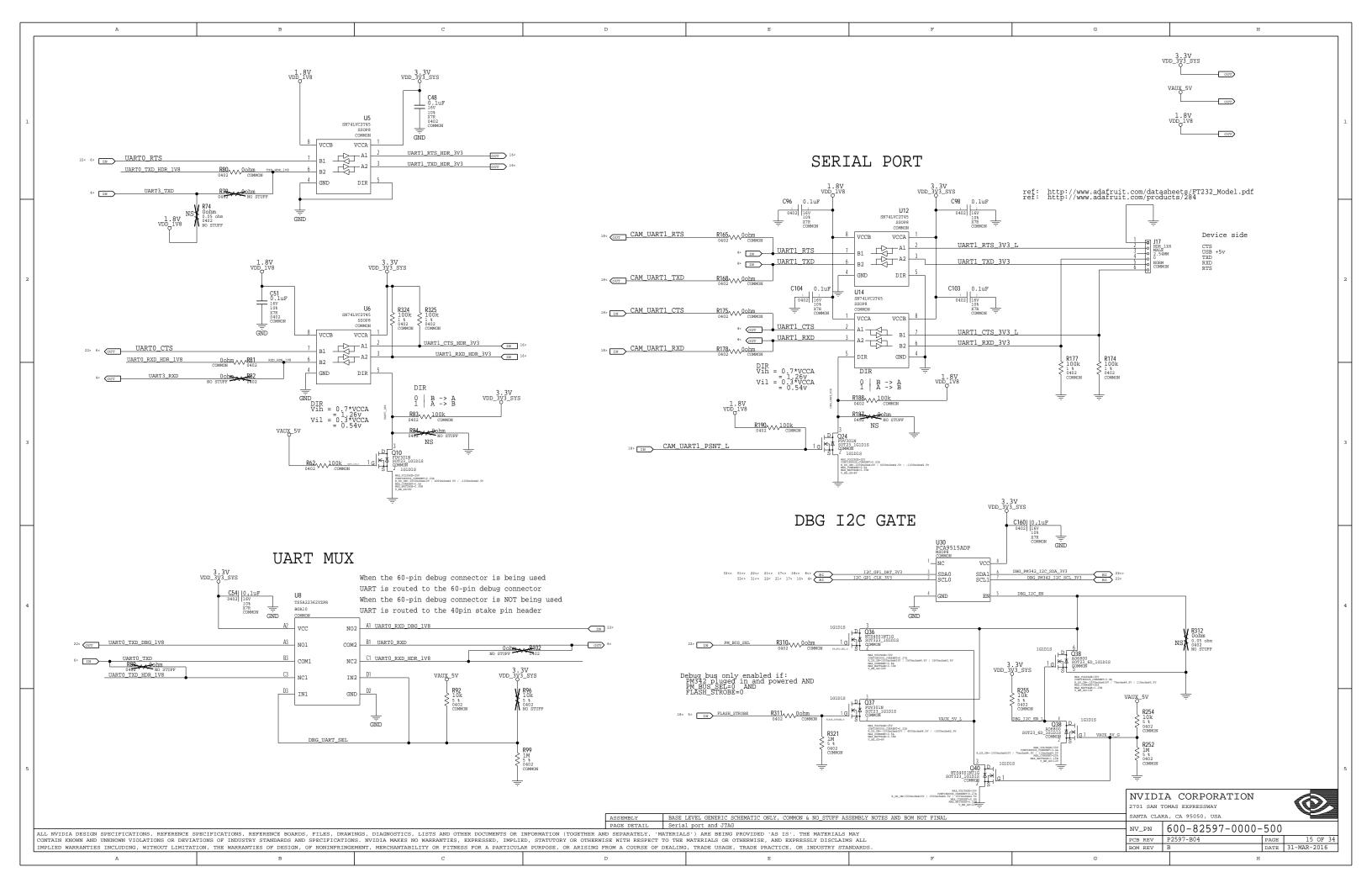
Gigiabit Ethernet 3.3V VDD_3V3_SLP GND R18 Oohm
0402 0.05 Ohm COMMON DP RJ45 TD
DP RJ45 TD
DP RJ45 TD
DP RJ45 TD1
DP RJ45 TD1
DP RJ45 TD1 R598 75 ohm COMMON 12 LED2A R597 0402 \ \sqrt{8} \ \tag{750hm}{COMMON} 13 NC/GND R10 6810hm 0.200 0402 8 COMMON R44 6810hm 0.200 0.200 R8 Oohm

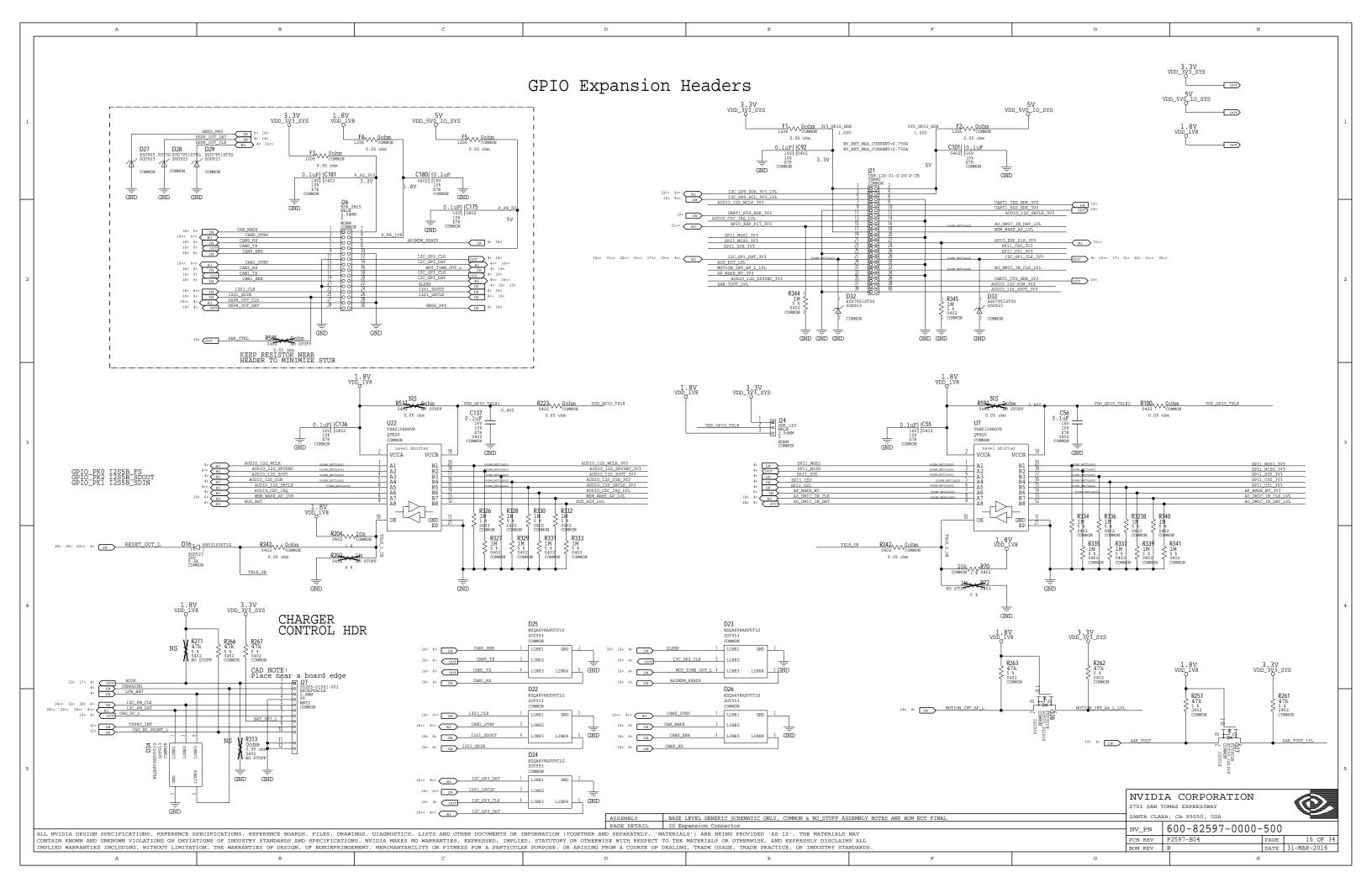
0603 R46 Oohm

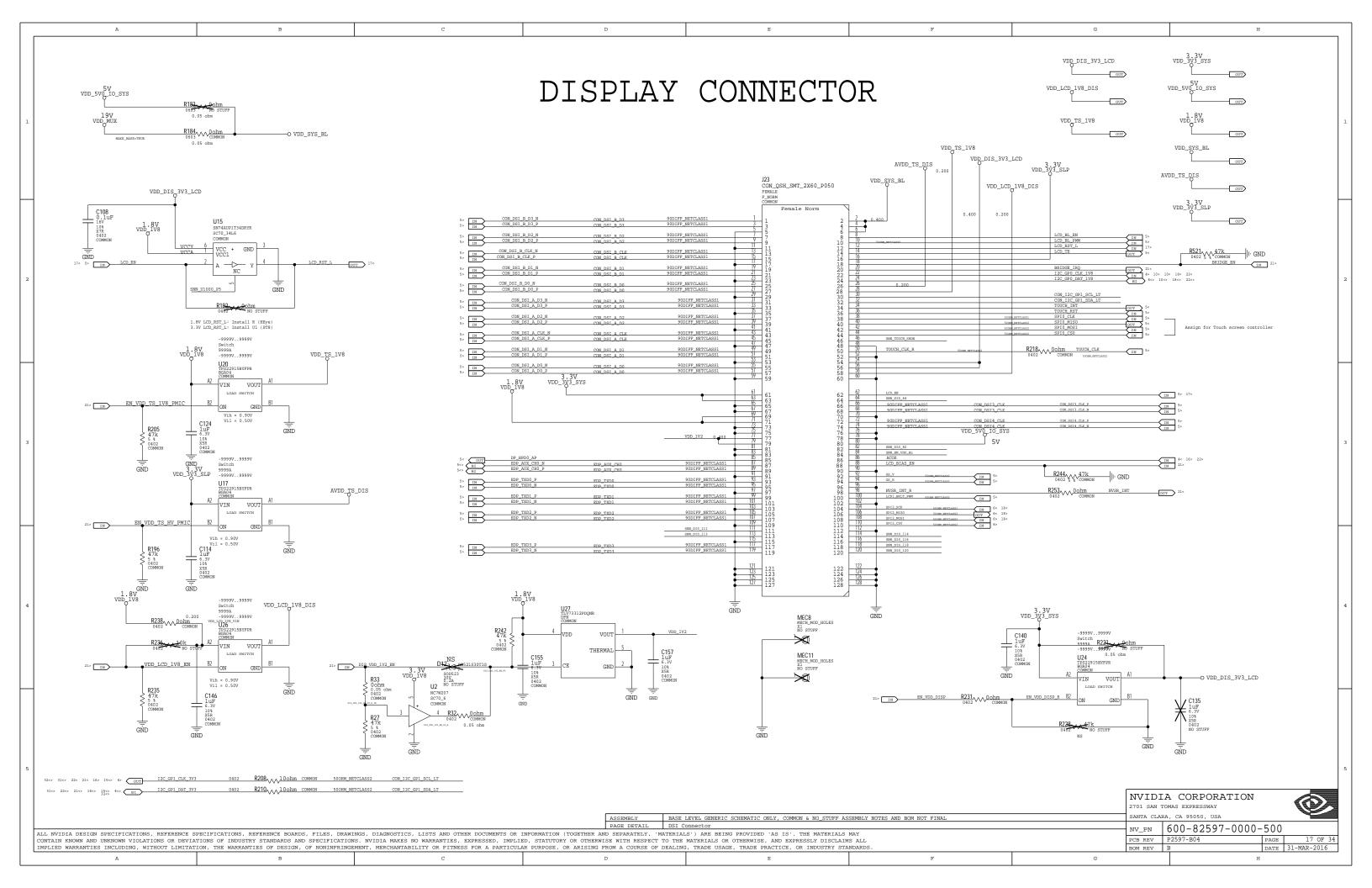
0603 NO STUFF 0.05 ohm

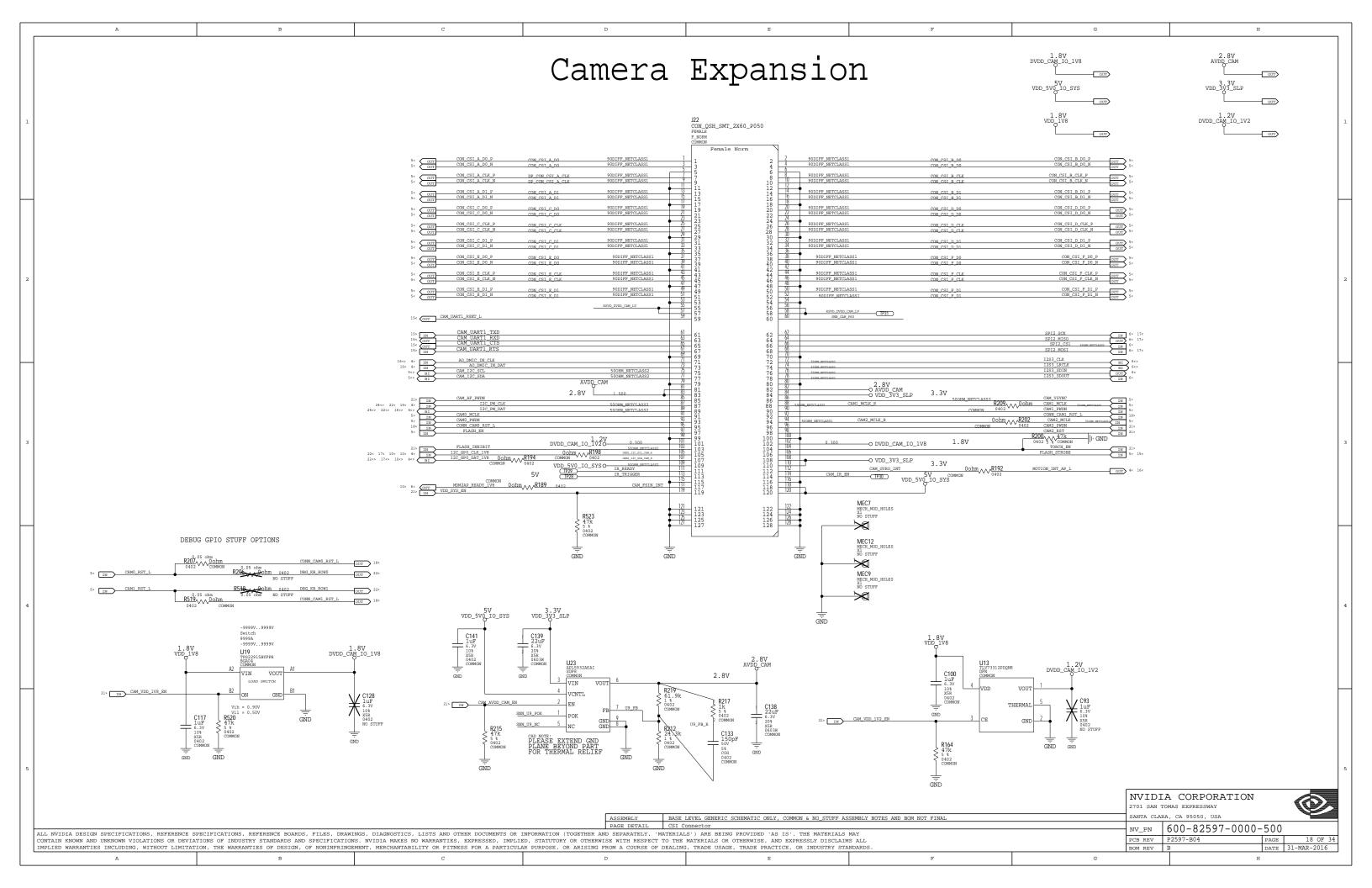
NO STUFF 0.05 ohm D507 AZC199-04S SOT23_6 COMMON 2\2 D506 AZC199-04S SOT23_6 COMMON 2\2 R47 Oohm 0603 NO STUFF 0.05 ohm SOT23_6 COMMON 5 1\2 NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA ASSEMBLY BASE LEVEL GENERIC SCHEMATIC ONLY, COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL PAGE DETAIL Gigabit Ethernet NV_PN 600-82597-0000-500 ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS AND OTHER DOCUMENTS OR INFORMATION (TOGETHER AND SEPARATELY, 'MATERIALS') ARE BEING PROVIDED 'AS IS'. THE MATERIALS MAY CONTAIN KNOWN AND UNKNOWN VIOLATIONS OR DEVIATIONS OF INDUSTRY STANDARDS AND SPECIFICATIONS. NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE MATERIALS OR OTHERWISE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF DESIGN, OF NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, TRADE USAGE, TRADE PRACTICE, OR INDUSTRY STANDARDS. PCB REV P2597-B04 DATE 31-MAR-2016 BOM REV B

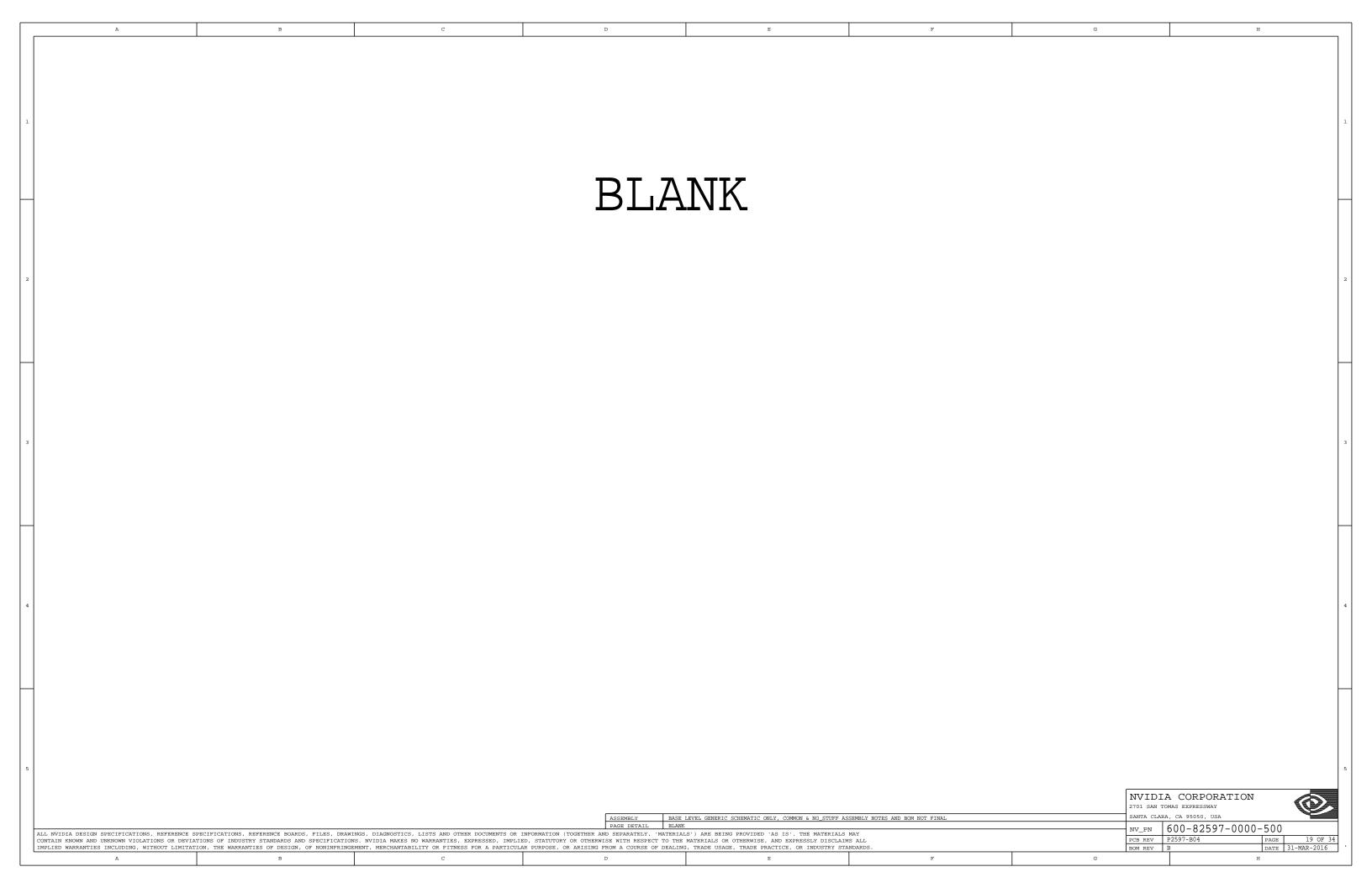


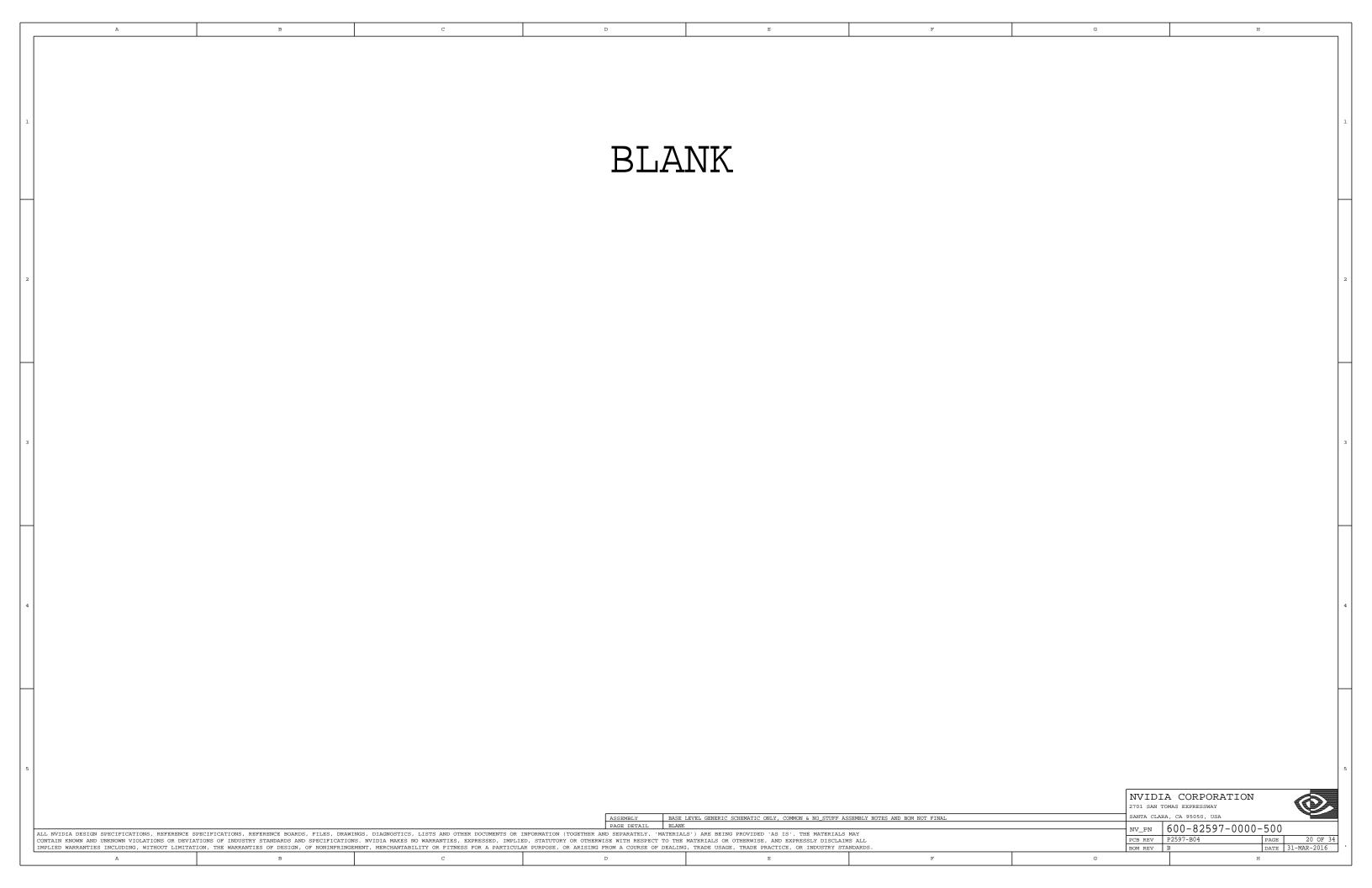


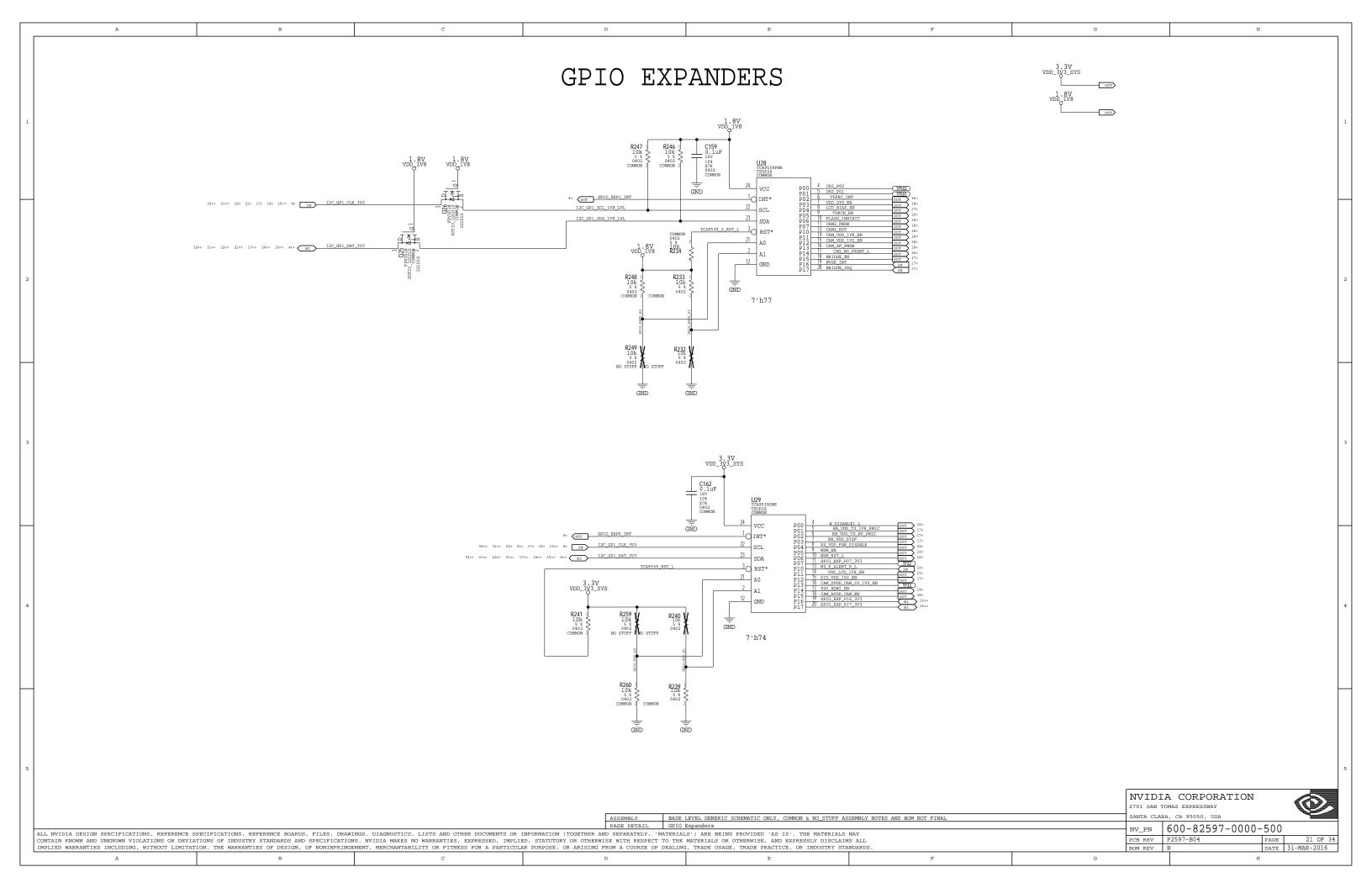


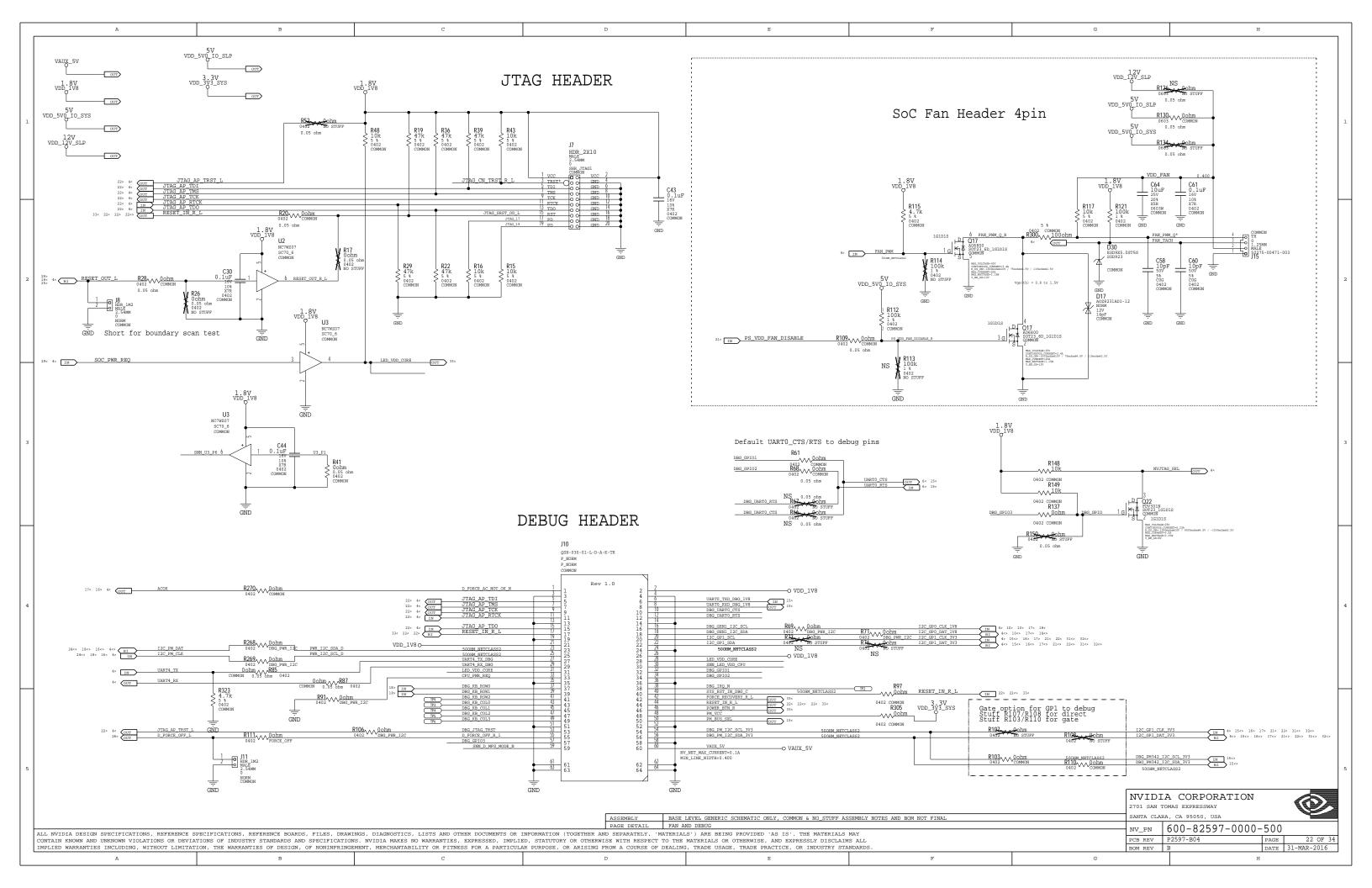


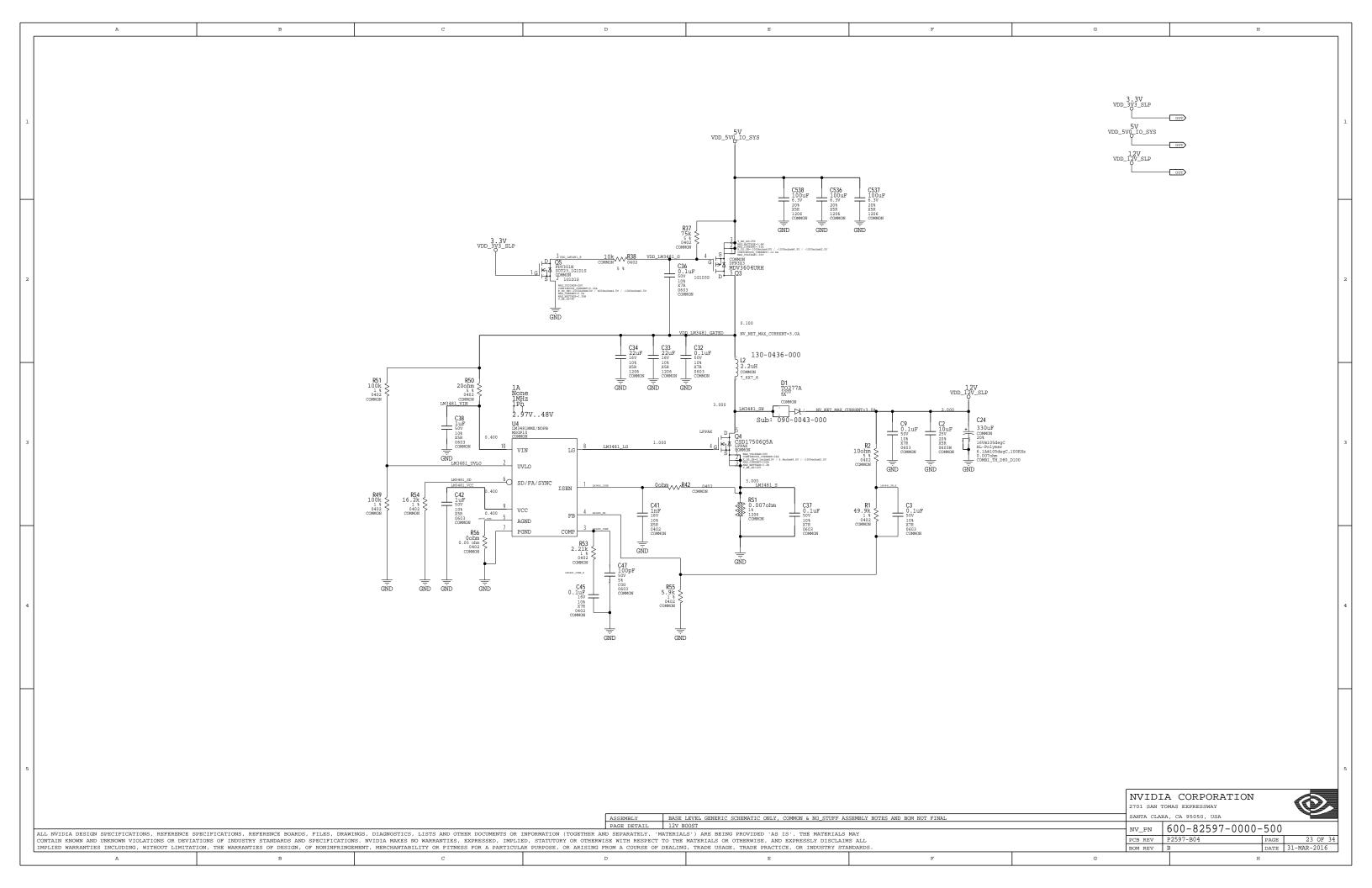


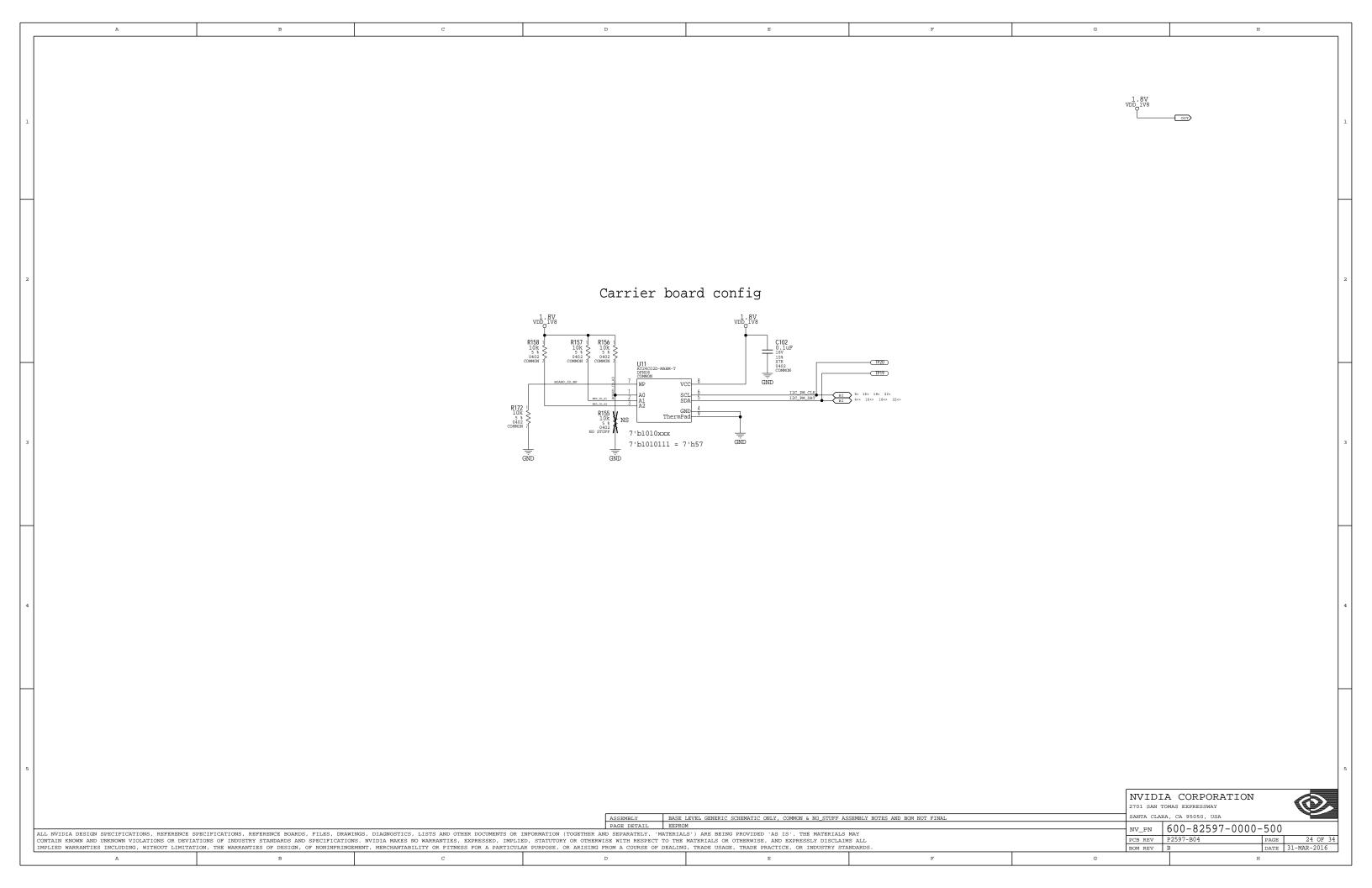


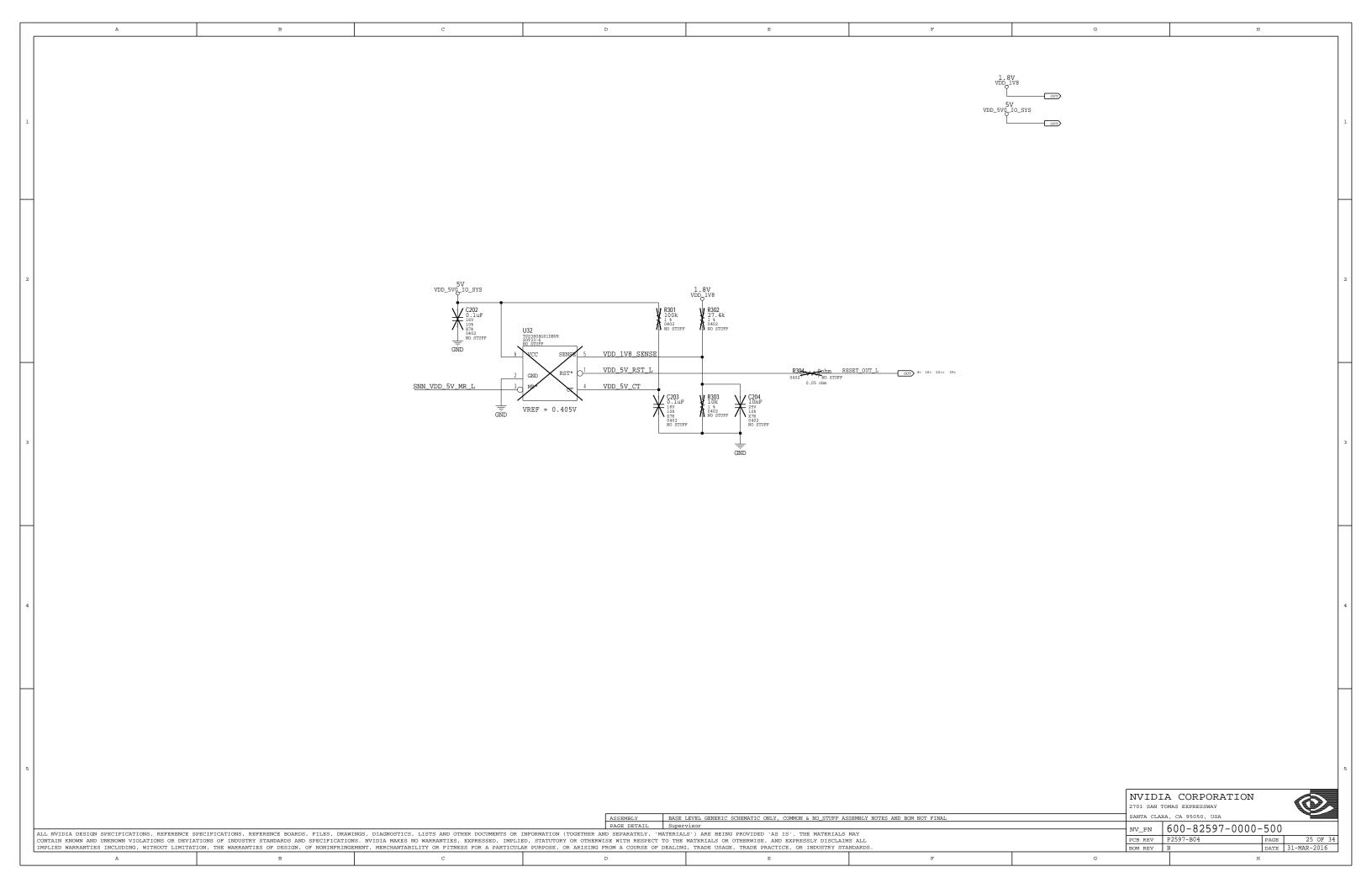


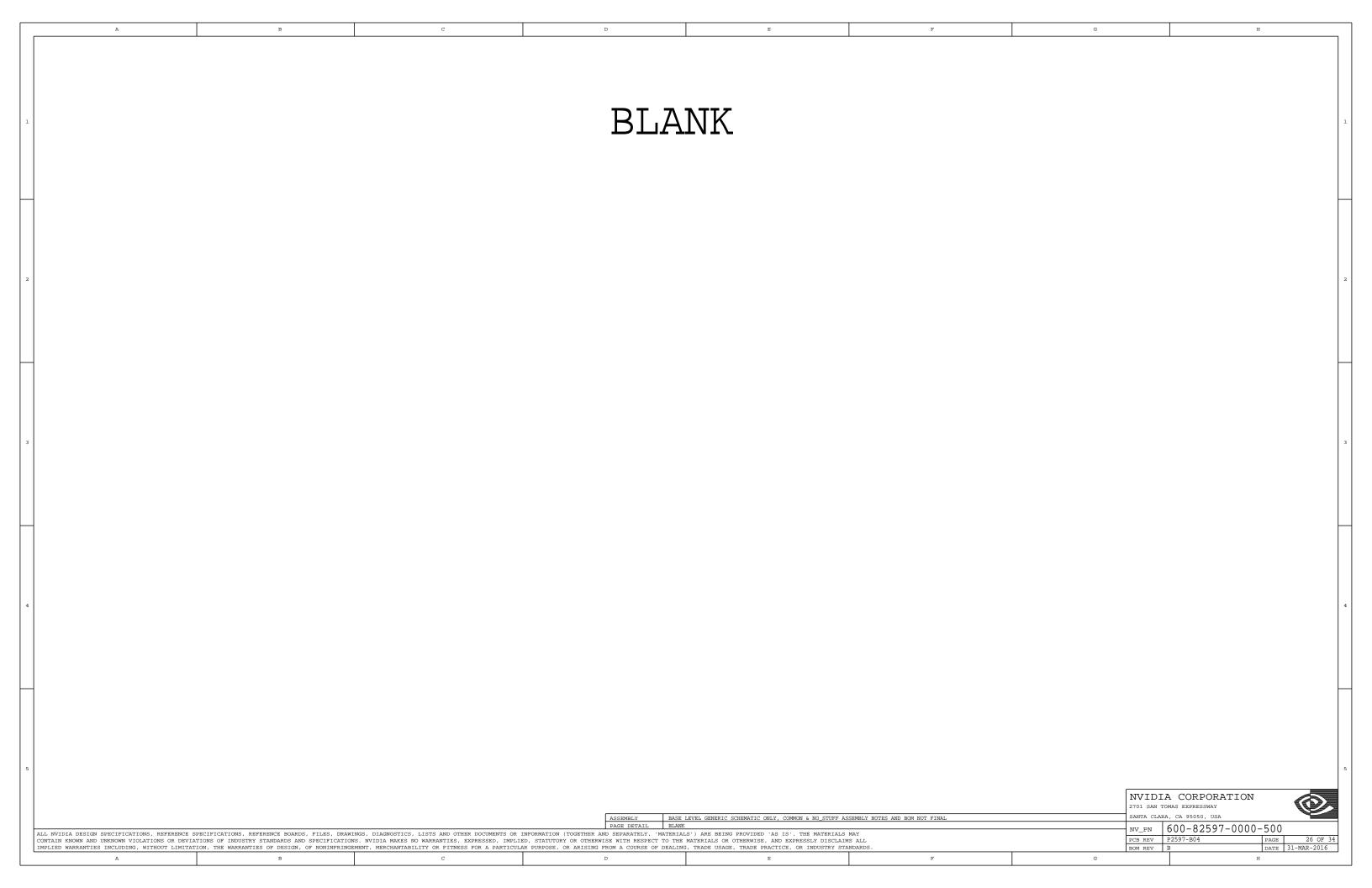


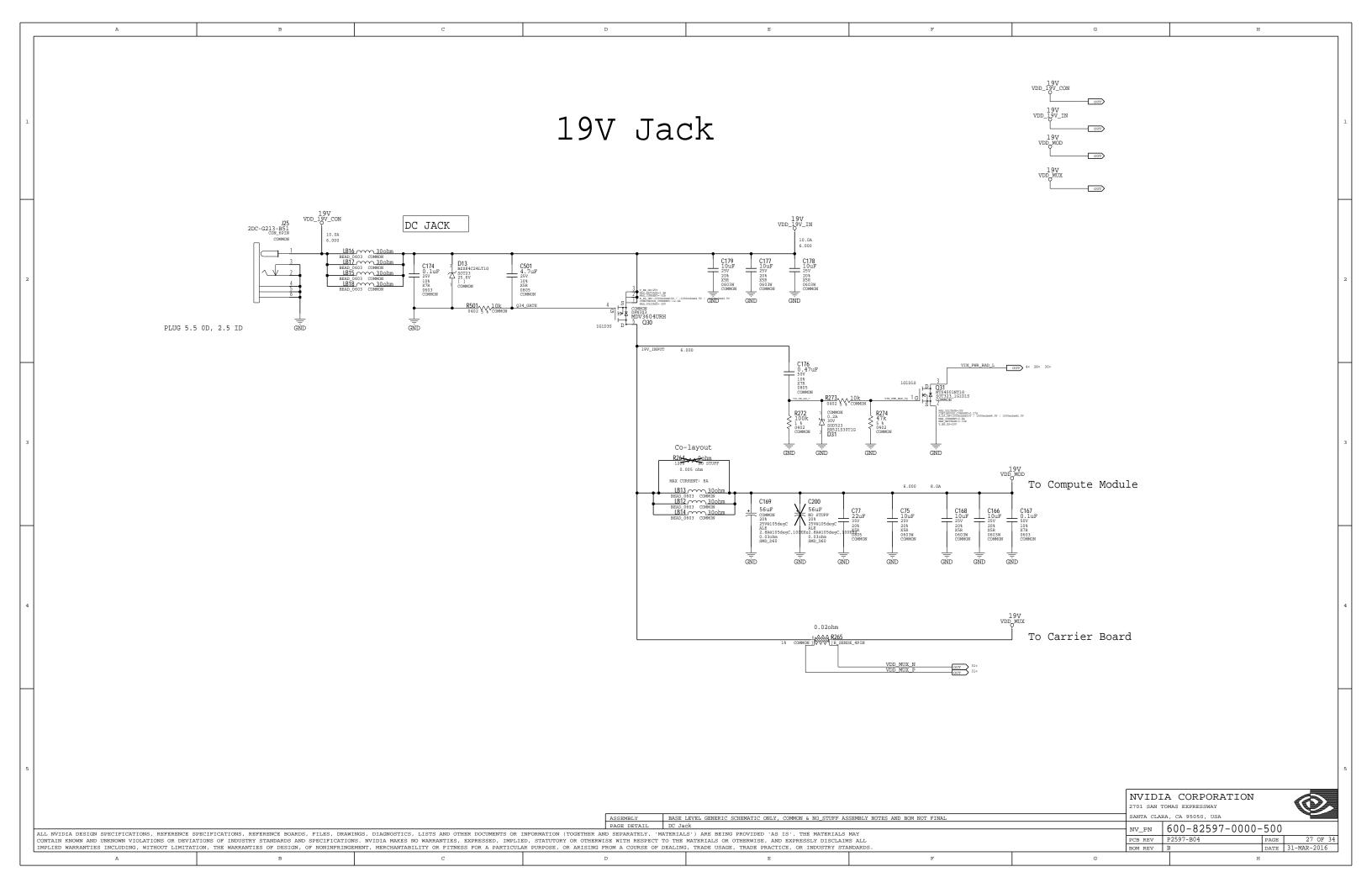


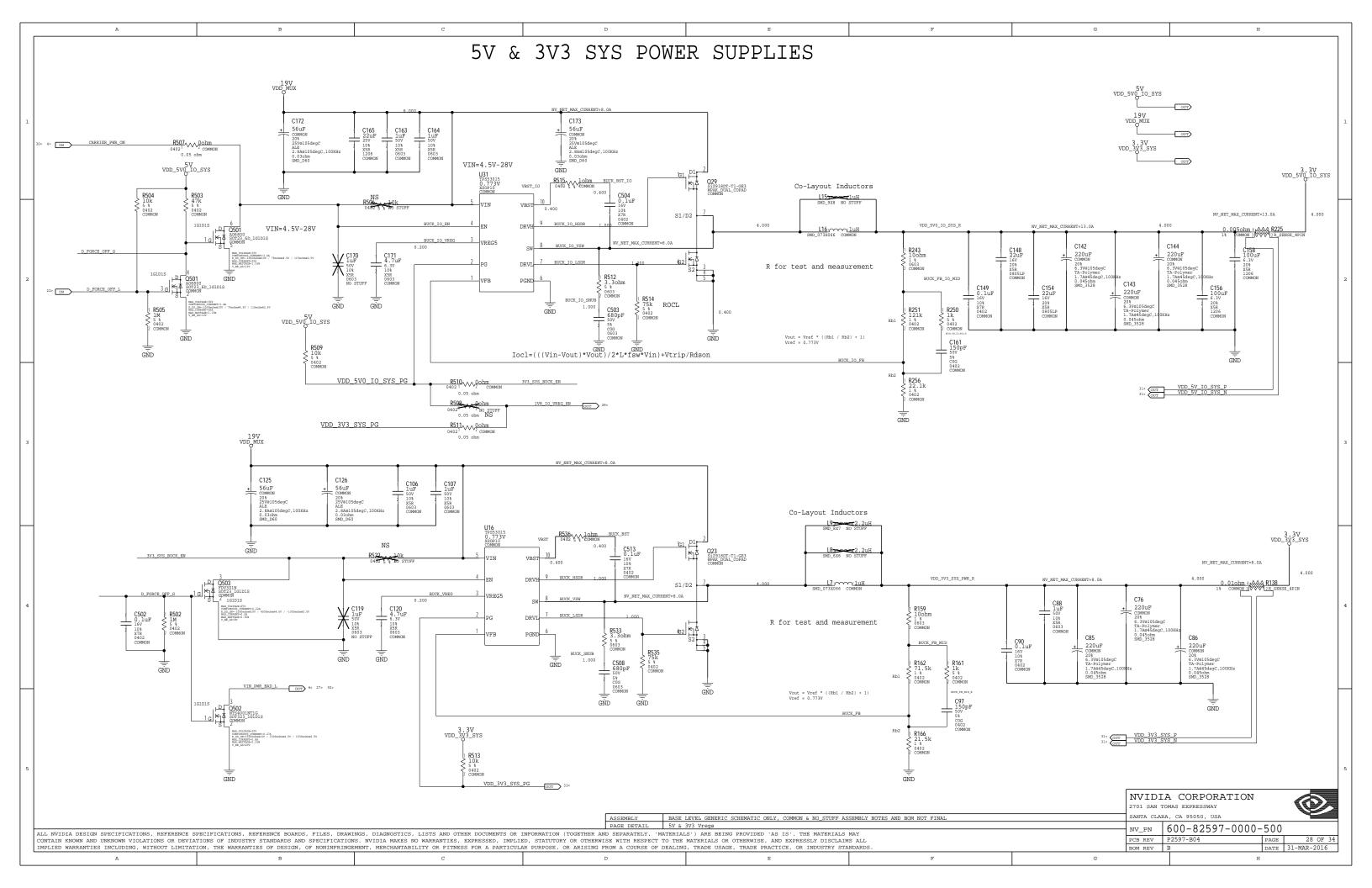


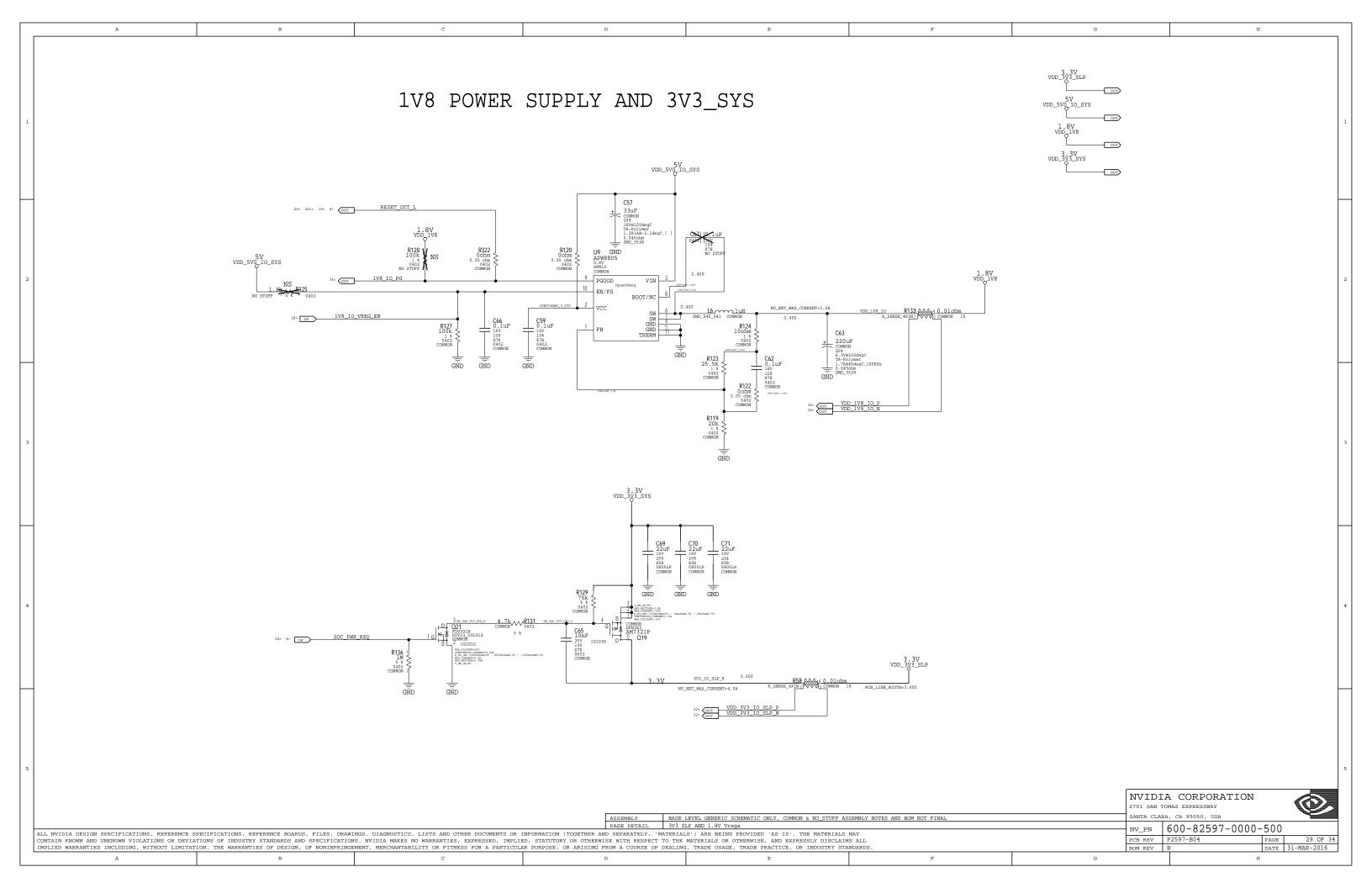


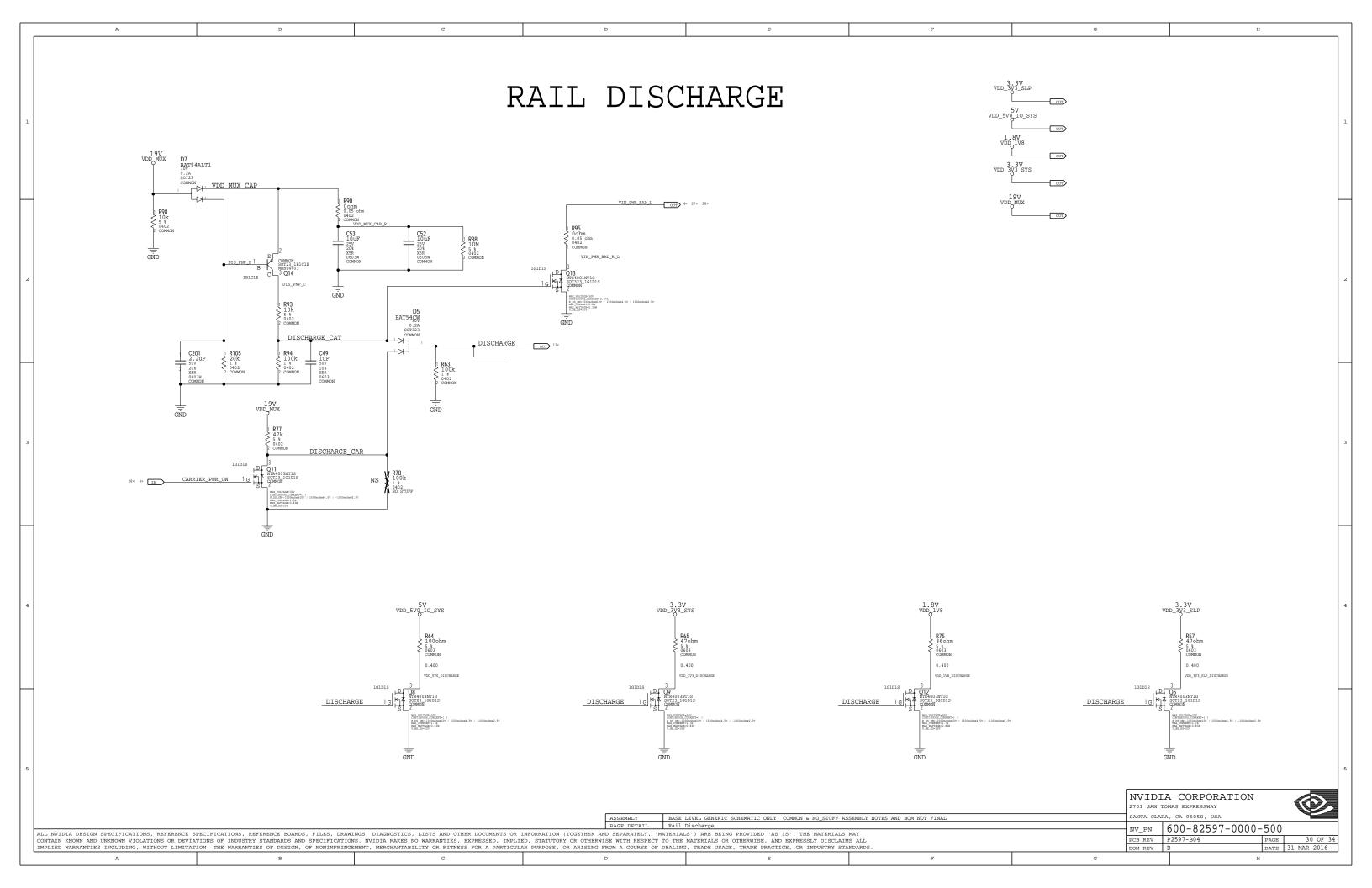


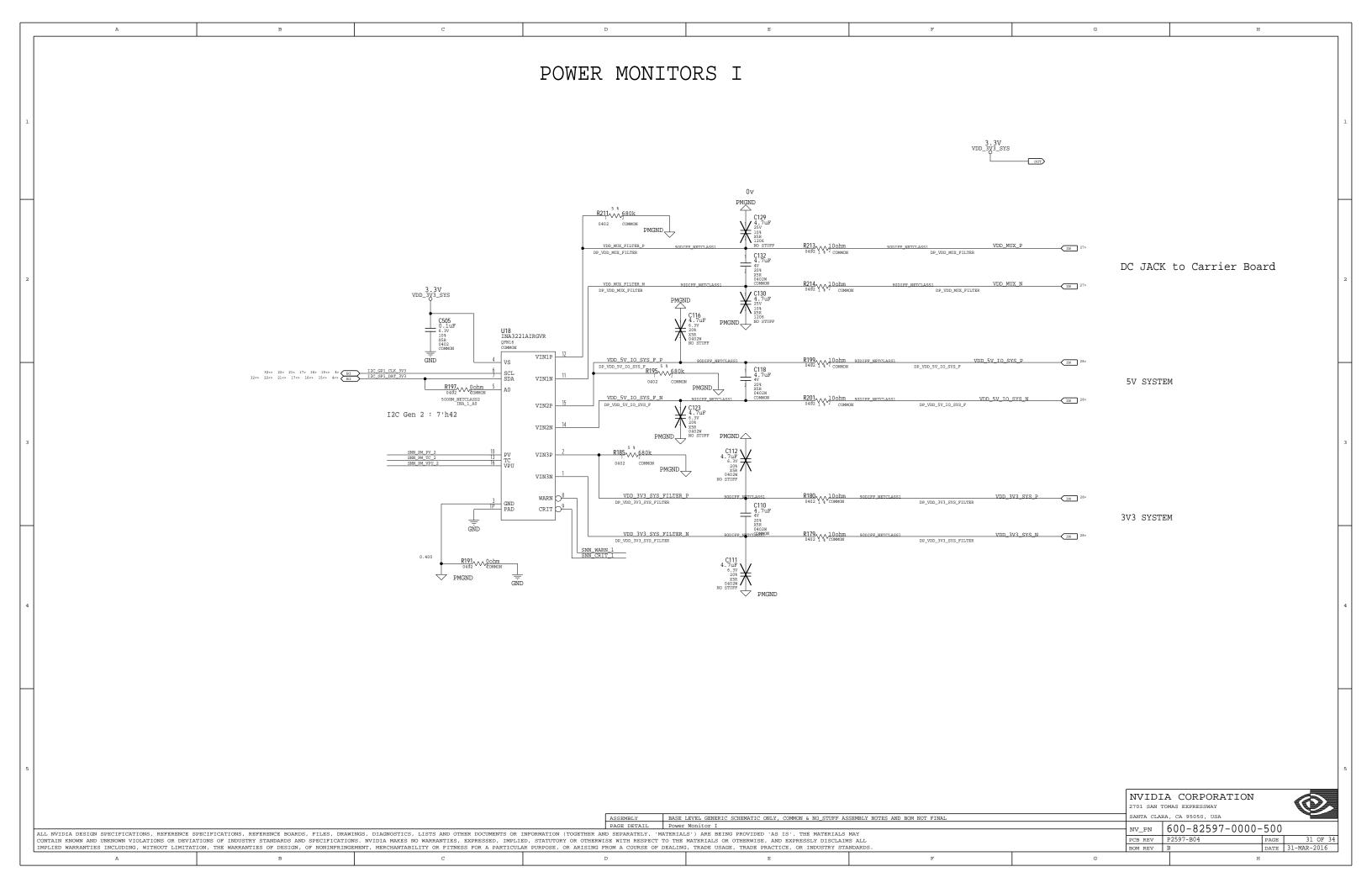


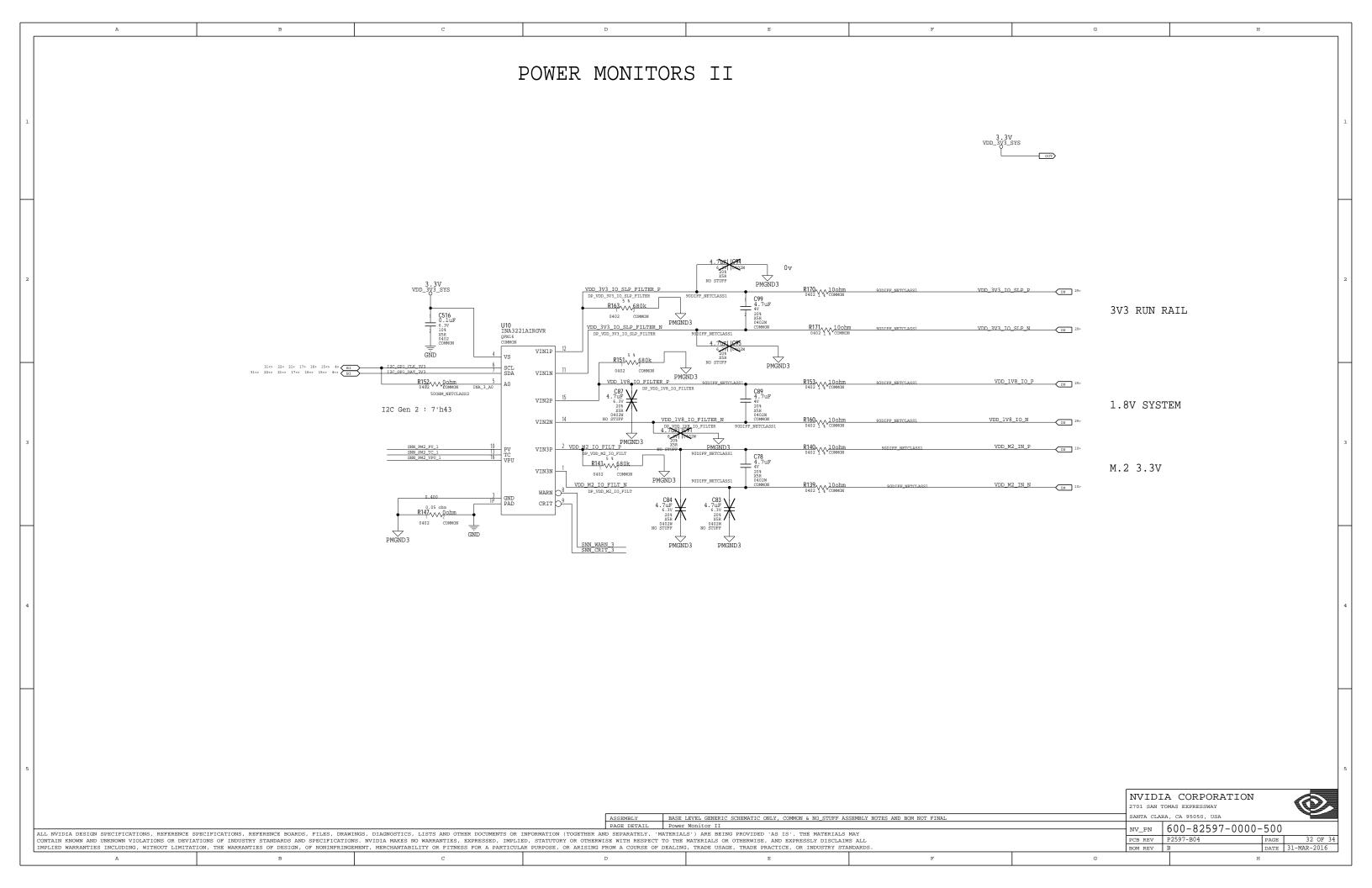


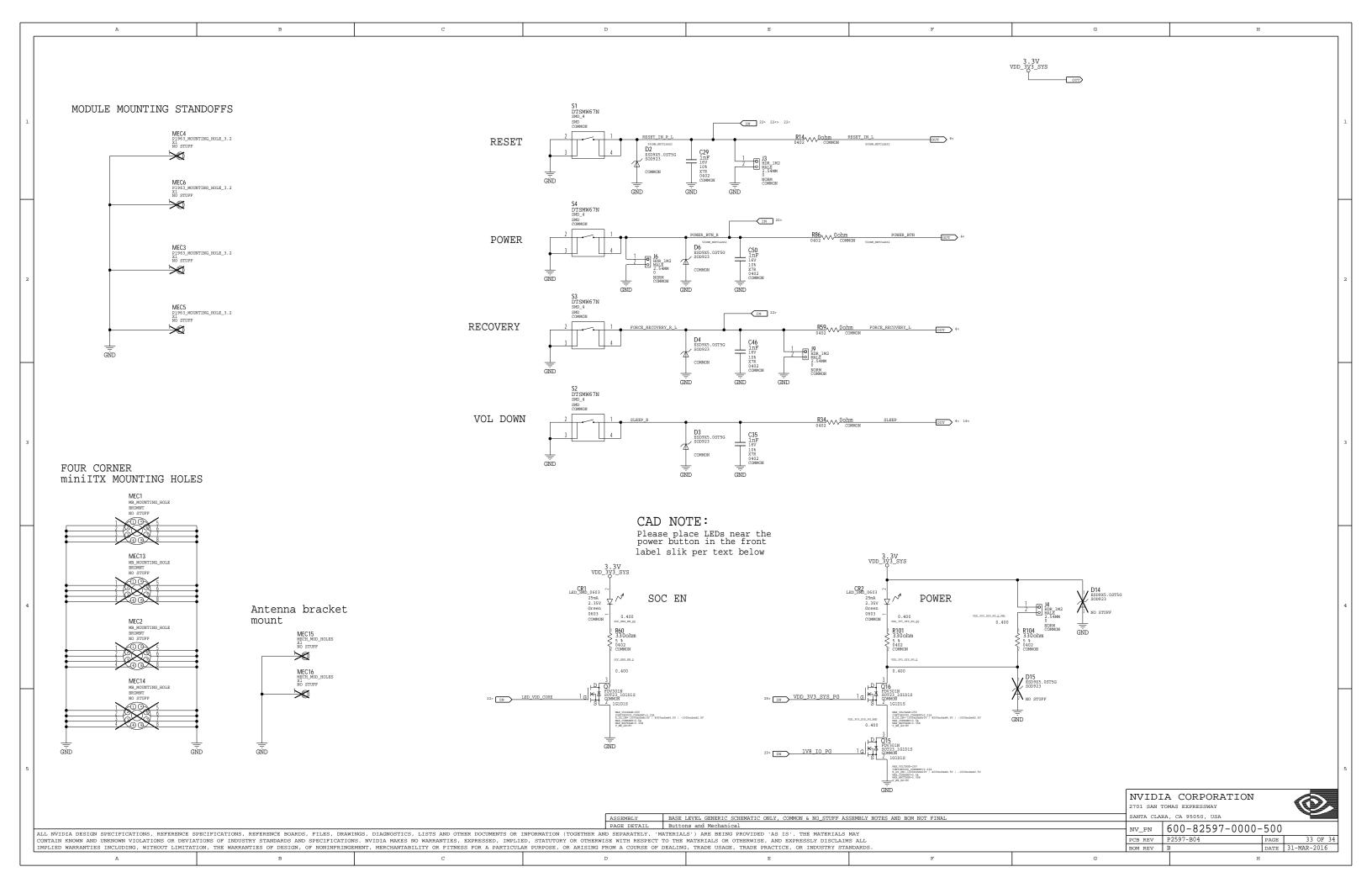












Revision History

P2597-B03

Page 4: Added a red LED to indicate power is active on the Jetson TX1/TX2. 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 CLKREO 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 Oohm 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 Oohm resistor on the fan PWM to allow always on Added a pull down on UART4_TX for bug 200160113 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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