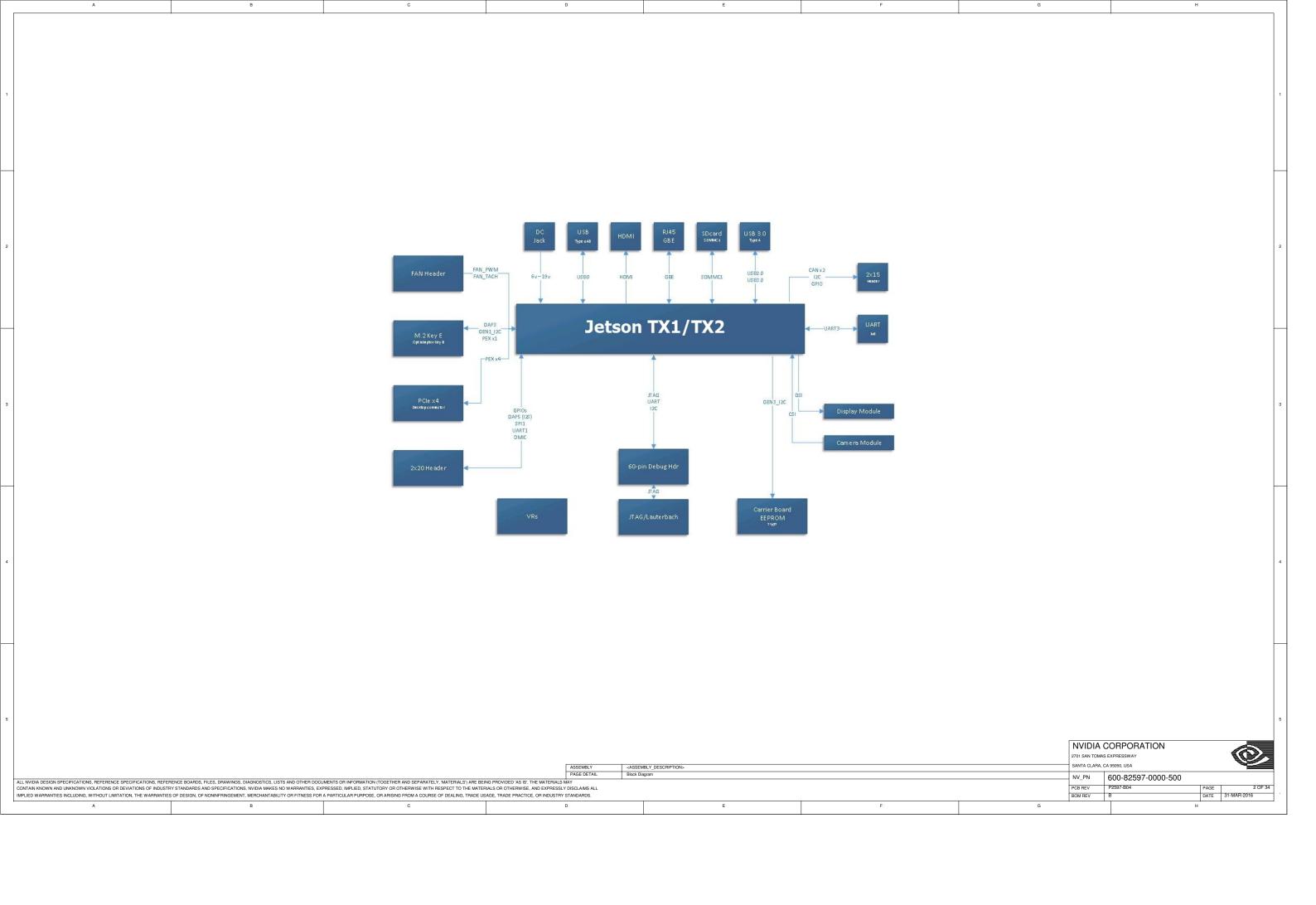
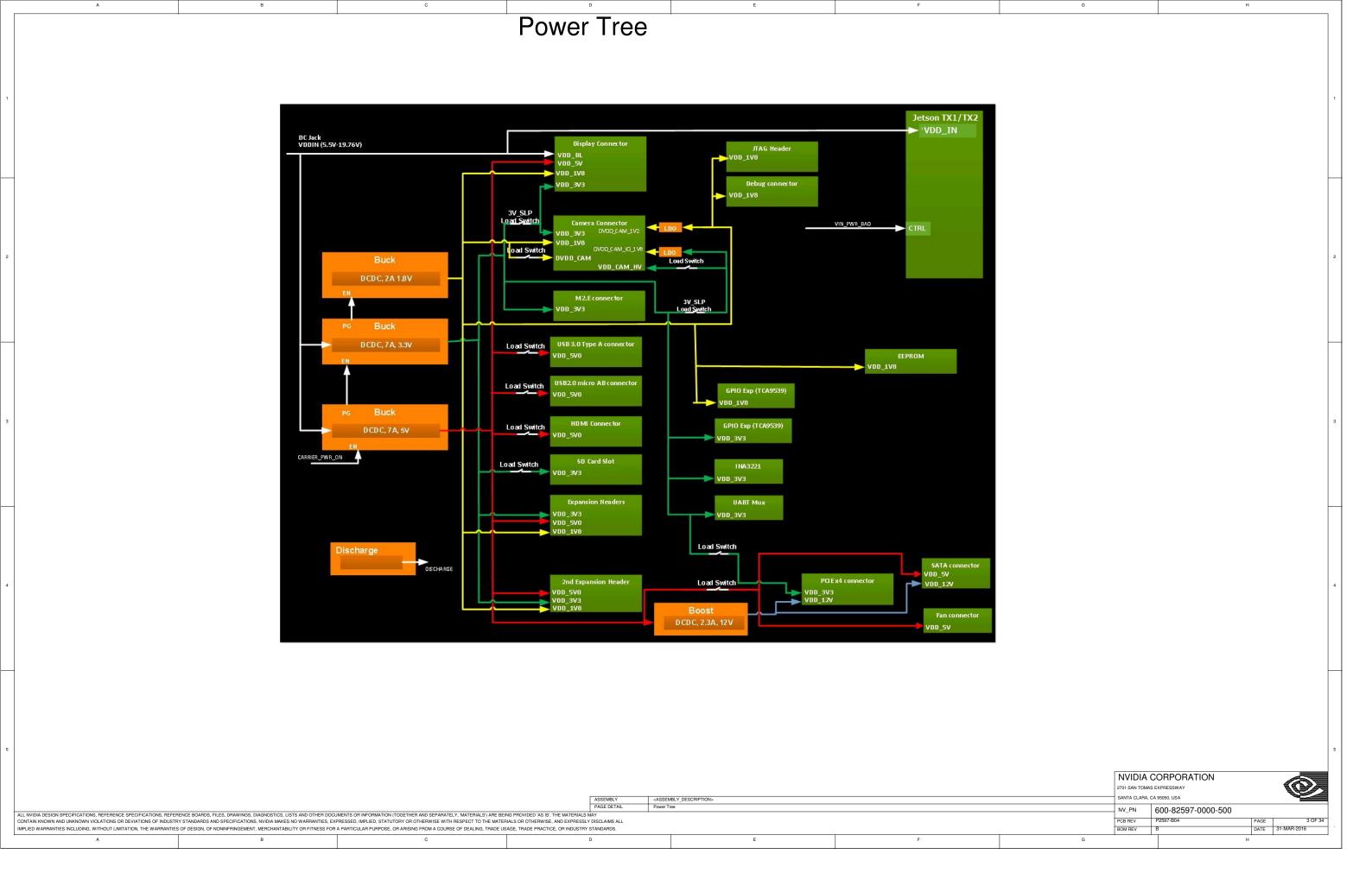
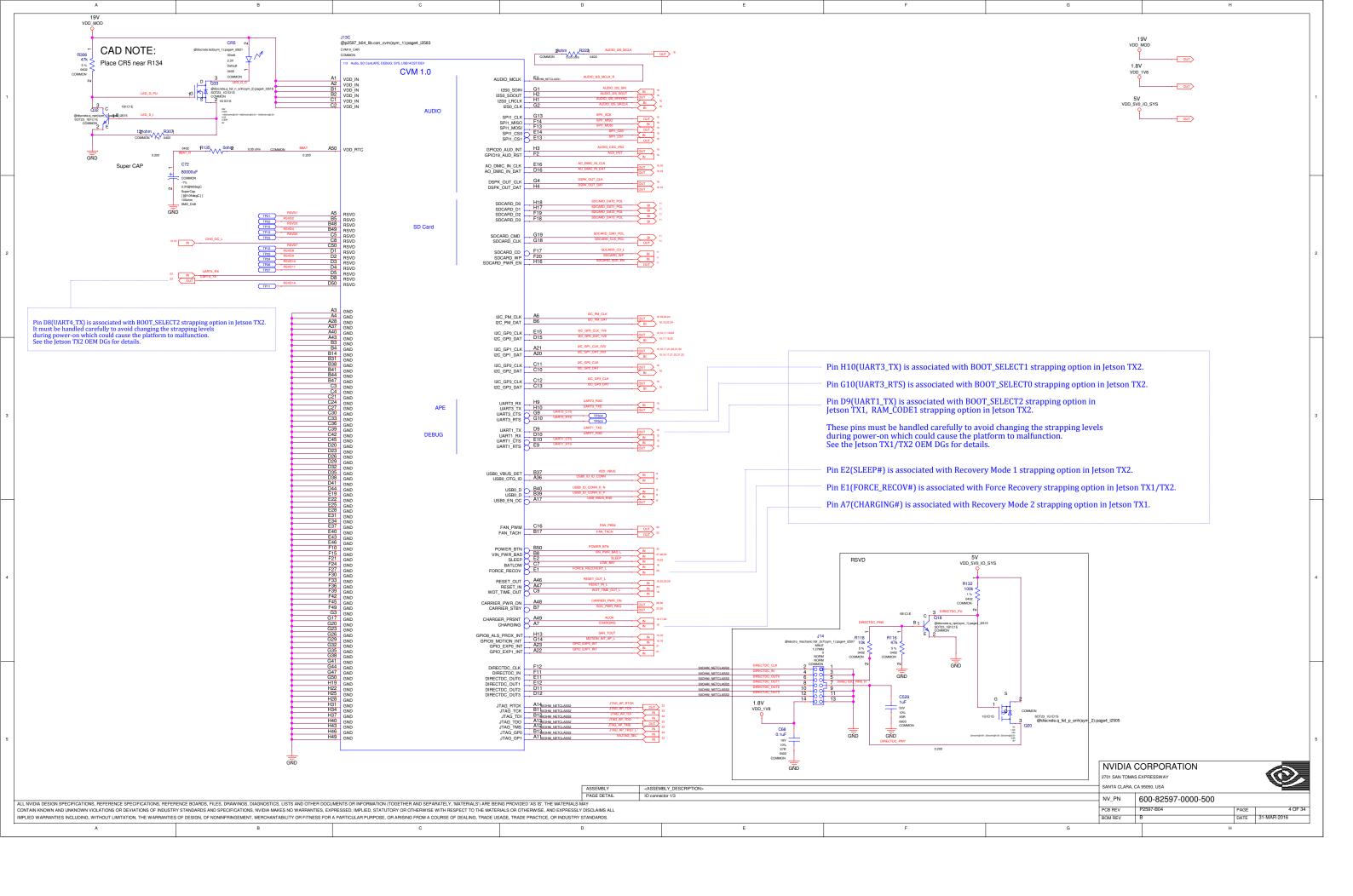
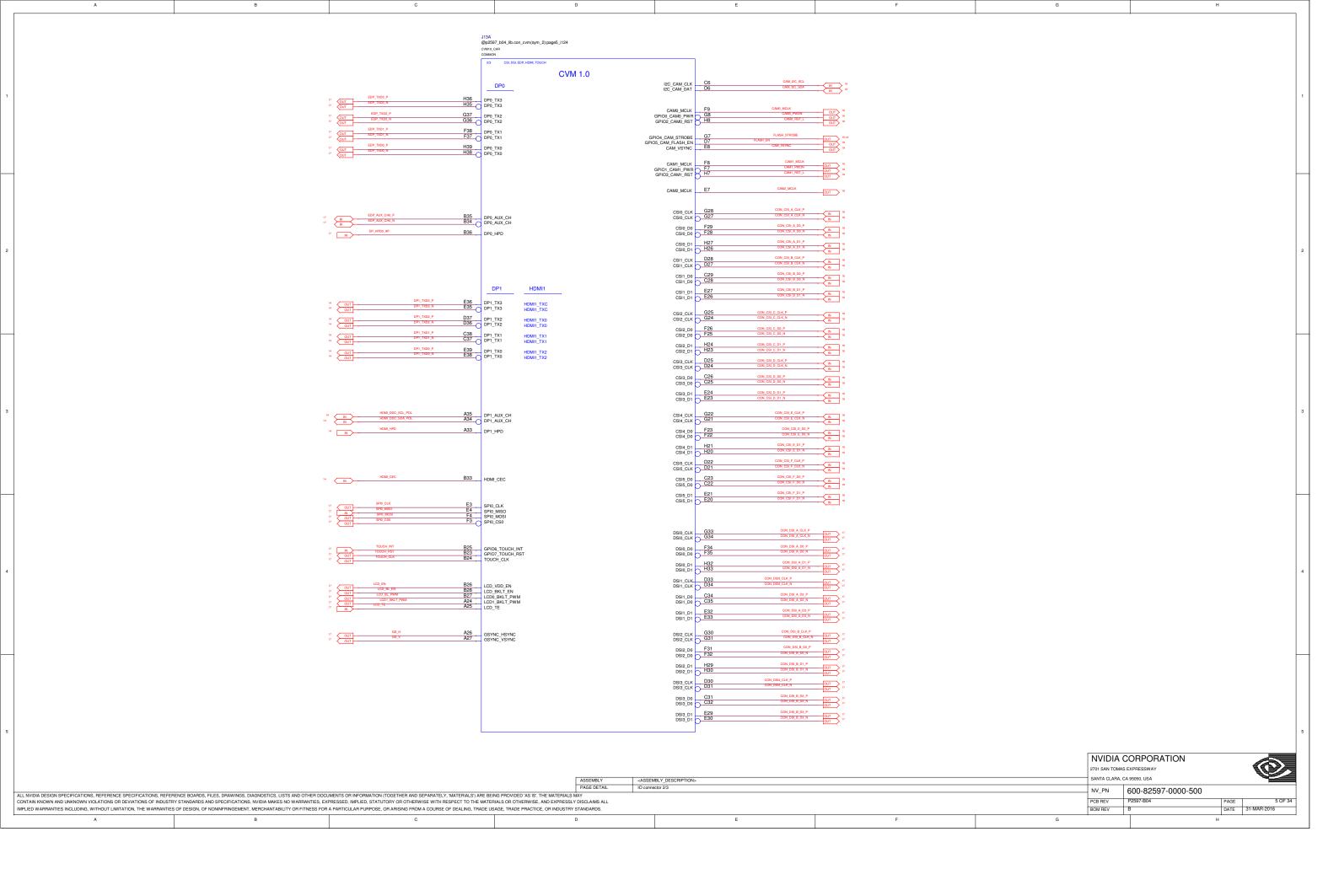
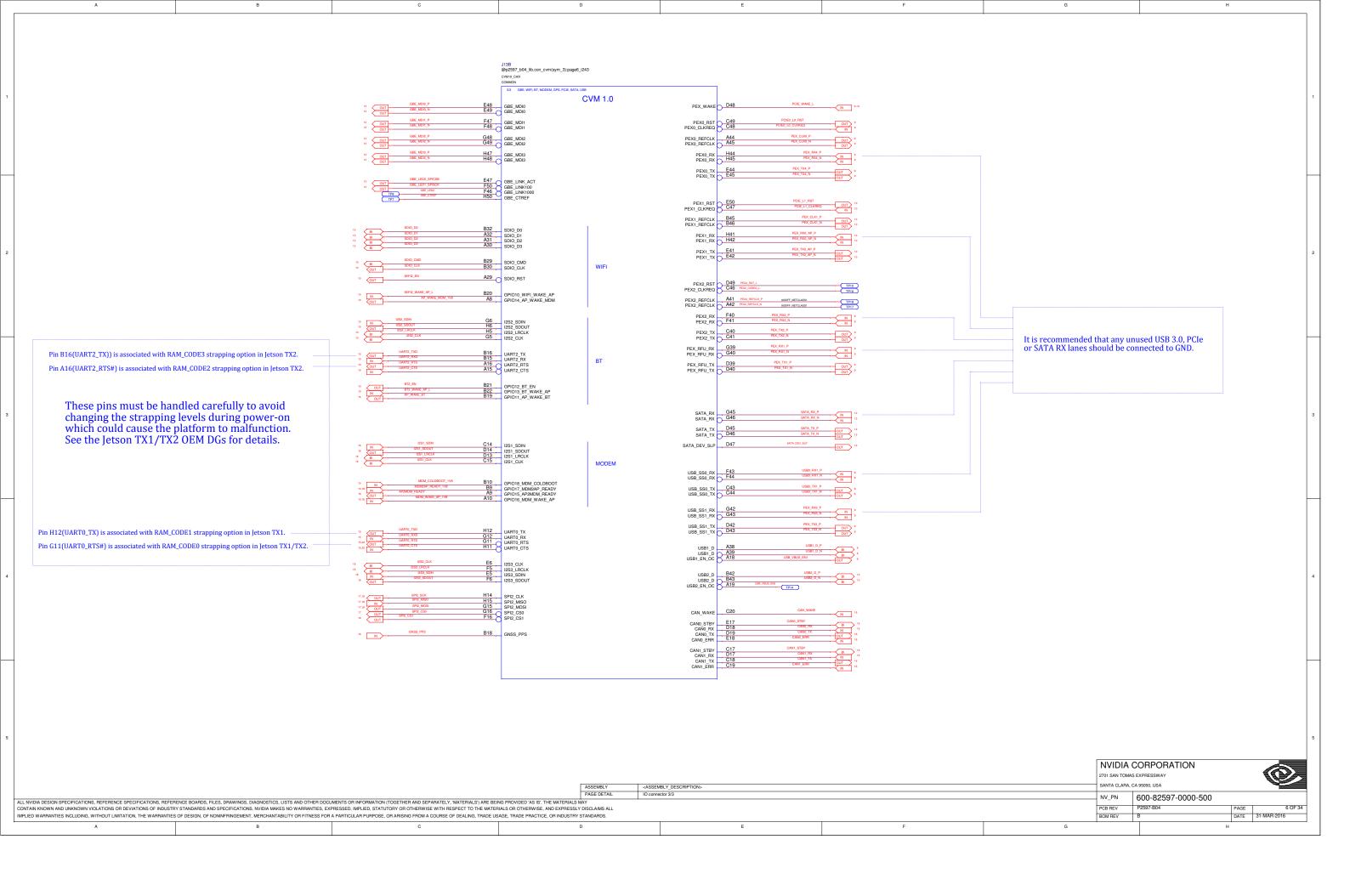
P2597-B04 Jetson TX1/TX2 Developer Kit Carrier Board HDMI, USB, PCIe, SATA, Gbe **TABLE OF CONTENTS** Page Description Page Description Table of Contents BLANK 26 Block Diagram 27 DC Jack Power Tree 5V & 3V3 Vregs IO connector 1/3 29 3V3 SLP AND 1.8V Vregs IO connector 2/3 30 Rail Discharge IO connector 3/3 31 Power Monitor I **BLANK** 32 Power Monitor II USB3.0 type A and USB2.0 micro 33 Buttons and Mechanica PCIe x4 Connector **REVISION HISTORY** 10 M.2 KEY E SDcard Slot 11 SATA 12 13 Gigabit Ethernet 14 **HDMI** 15 Serial port and JTAG **IO Expansion Connector DSI** Connector 17 18 CSI Connector 19 **BLANK** 20 **BLANK GPIO** Expanders 21 FAN AND DEBUG 22 12V BOOST 23 24 **EEPROM** P2597 I2C Port Assignments 25 Supervisor Slave Device BUS:Device address INA3221 (Power measurement) I2C Gen 2 : 7'h42 INA3221 (Power measurement) I2C Gen 2 : 7'h43 TCA9539 (GPIO Expander) TCA9539 (GPIO Expander) BOARDID EEPROM I2C Gen 2 : 7'h77 I2C Gen 3 : 7'57h 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. P2180 I2C Port Assignments In addition, check the Jetson TX1/TX2 OEM Product Design Guides for possible additional guidance. Slave Device BUS:Device address TMP451 (Thermal) I2C Gen 1 : 7'h4C ADS1015 (ACA detection) I2C Gen 2: 7'h4A INA226 (Power measurement) I2C Gen 2: 7'h46 INA3221 (Power measurement) I2C Gen 2: 7'h40 NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWA SANTA CLARA, CA 95050, USA Table of Contents PAGE DETAIL 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 DATE 31-MAR-2016 BOM REV

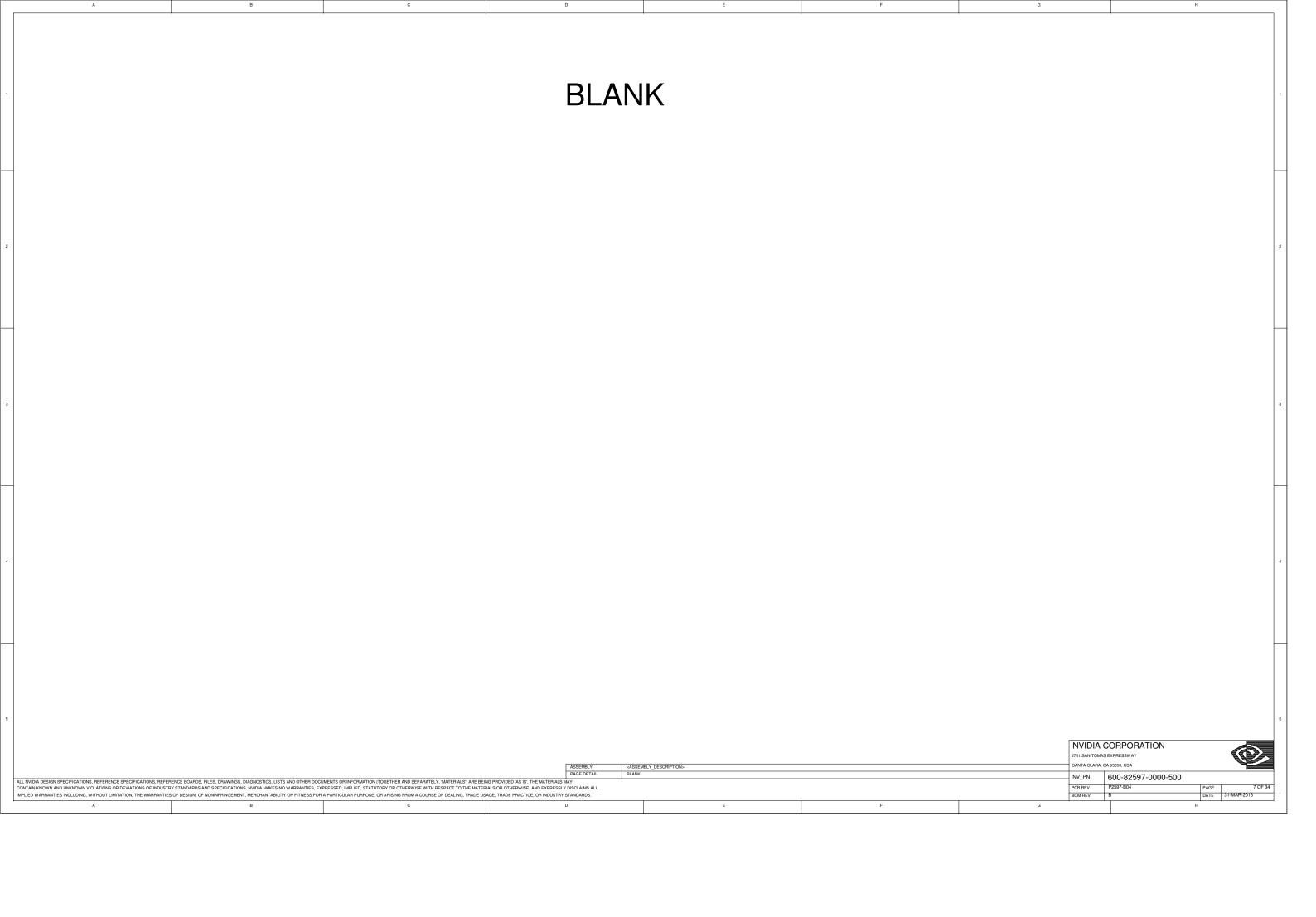


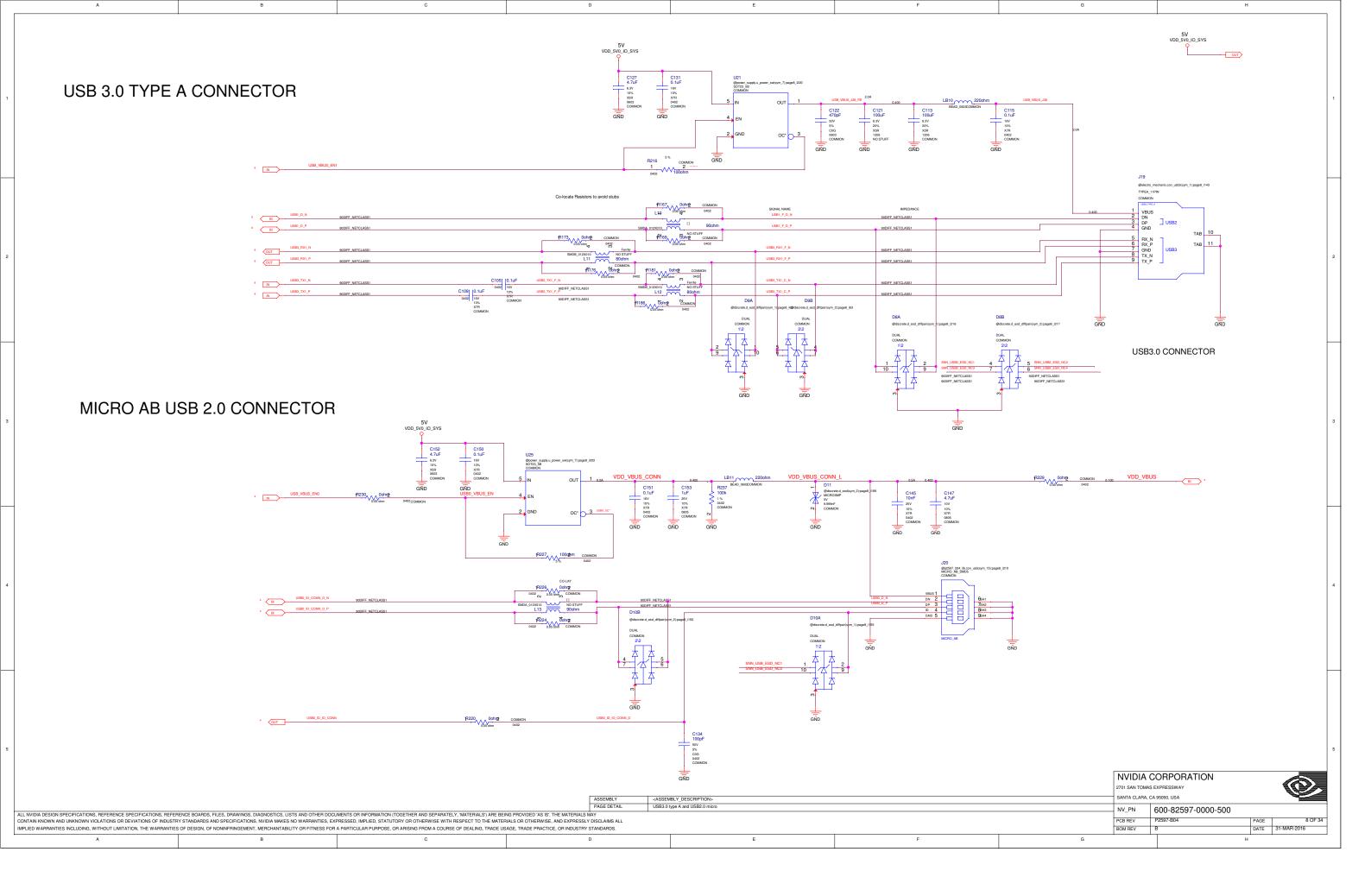


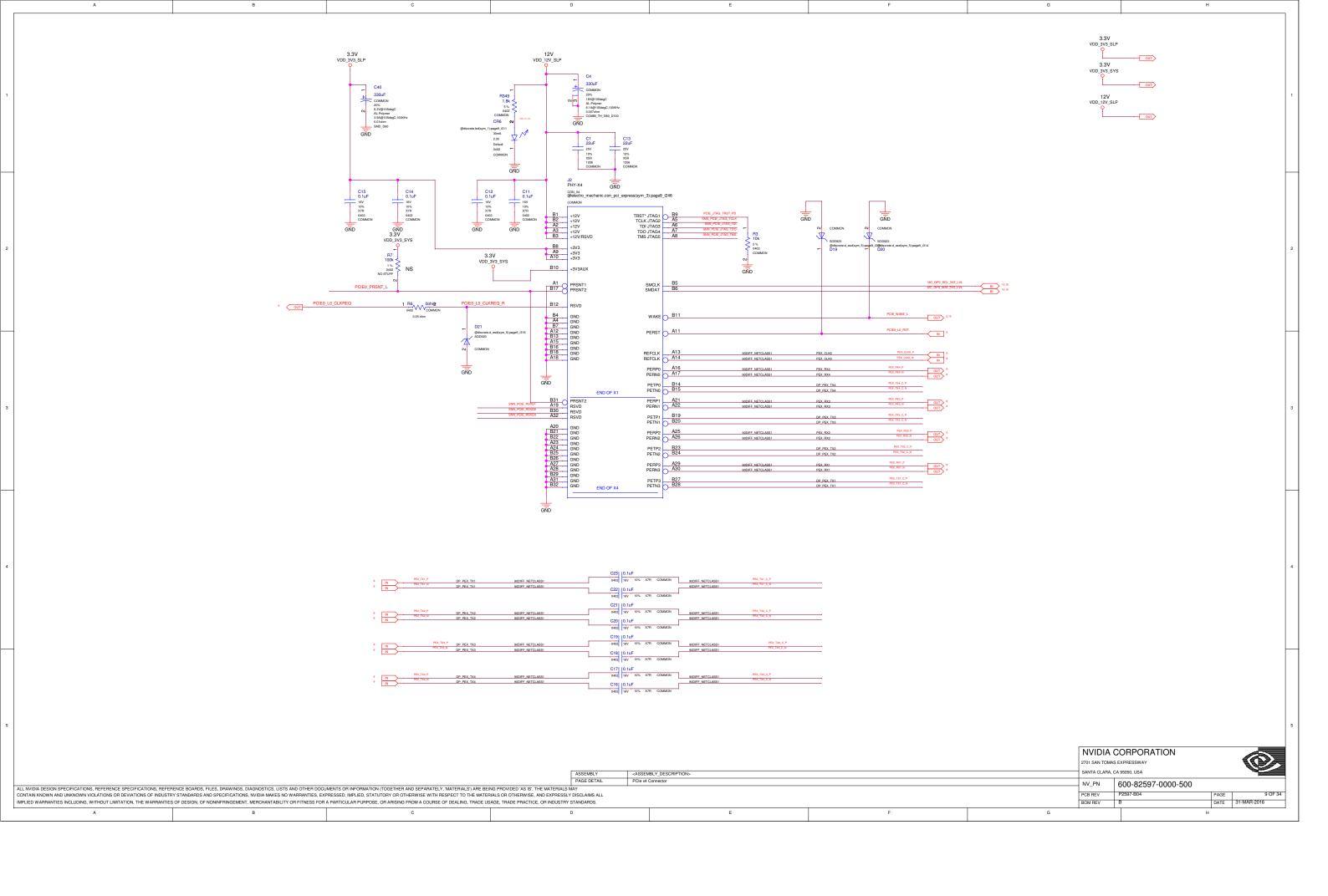


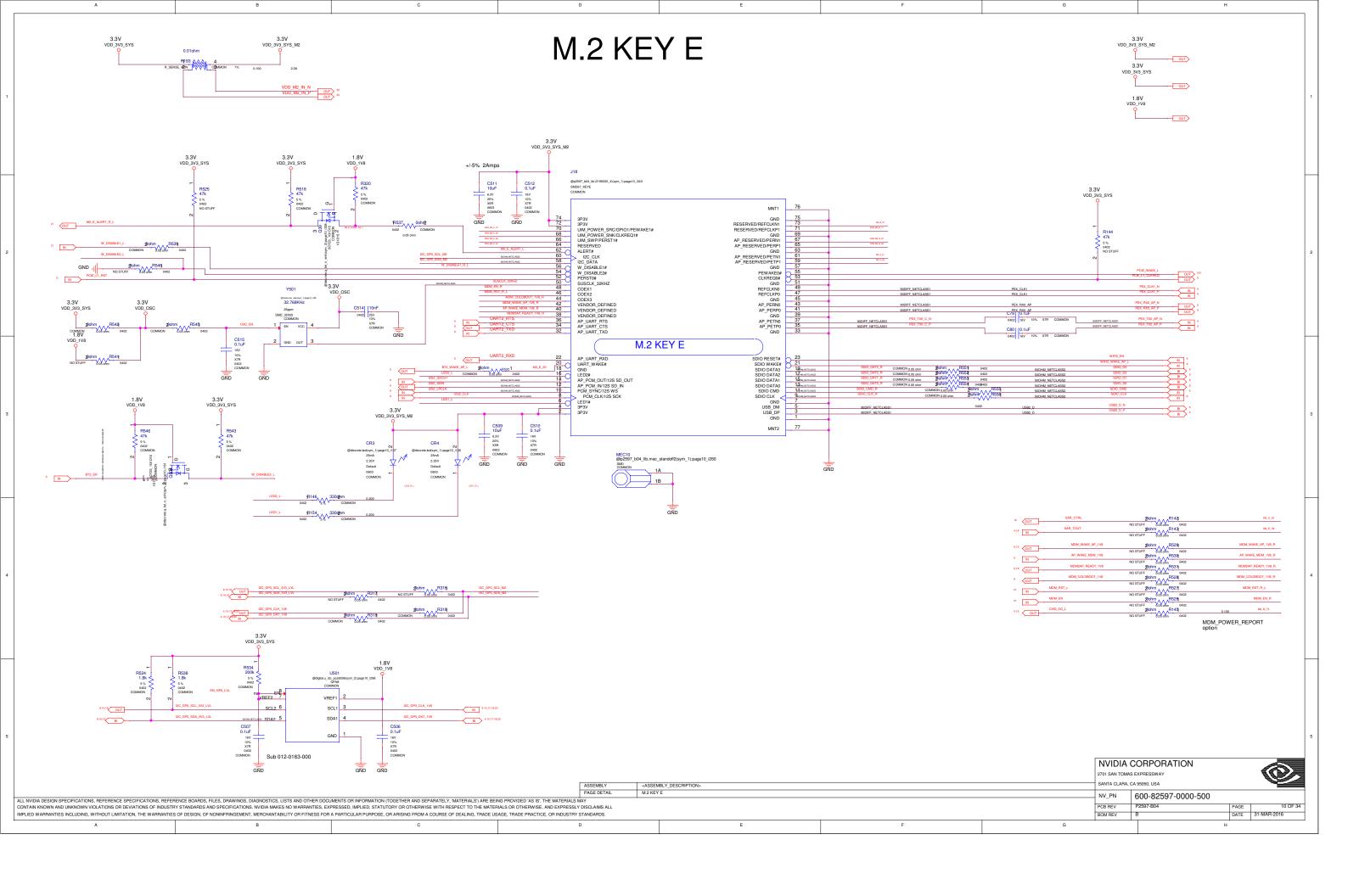


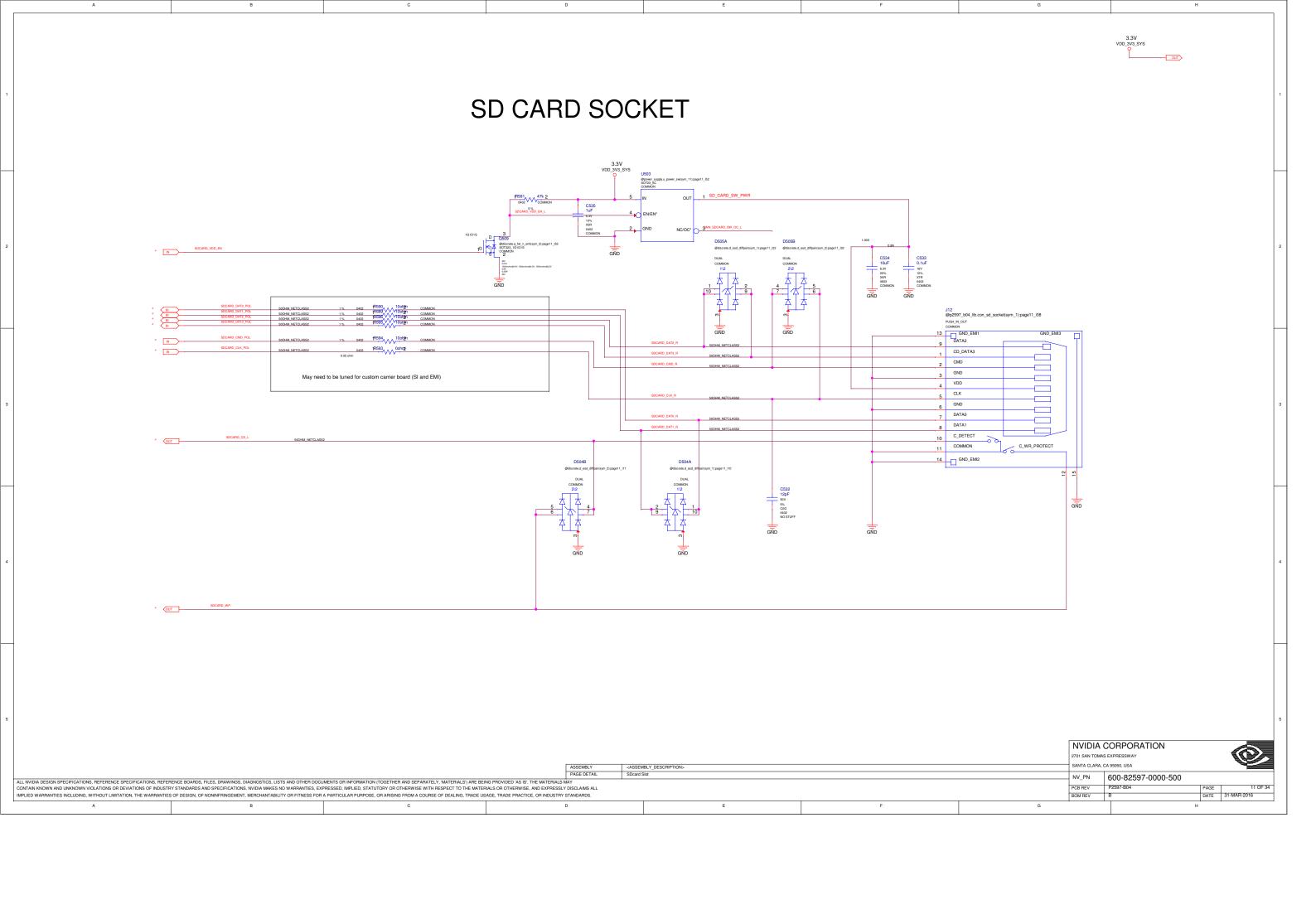


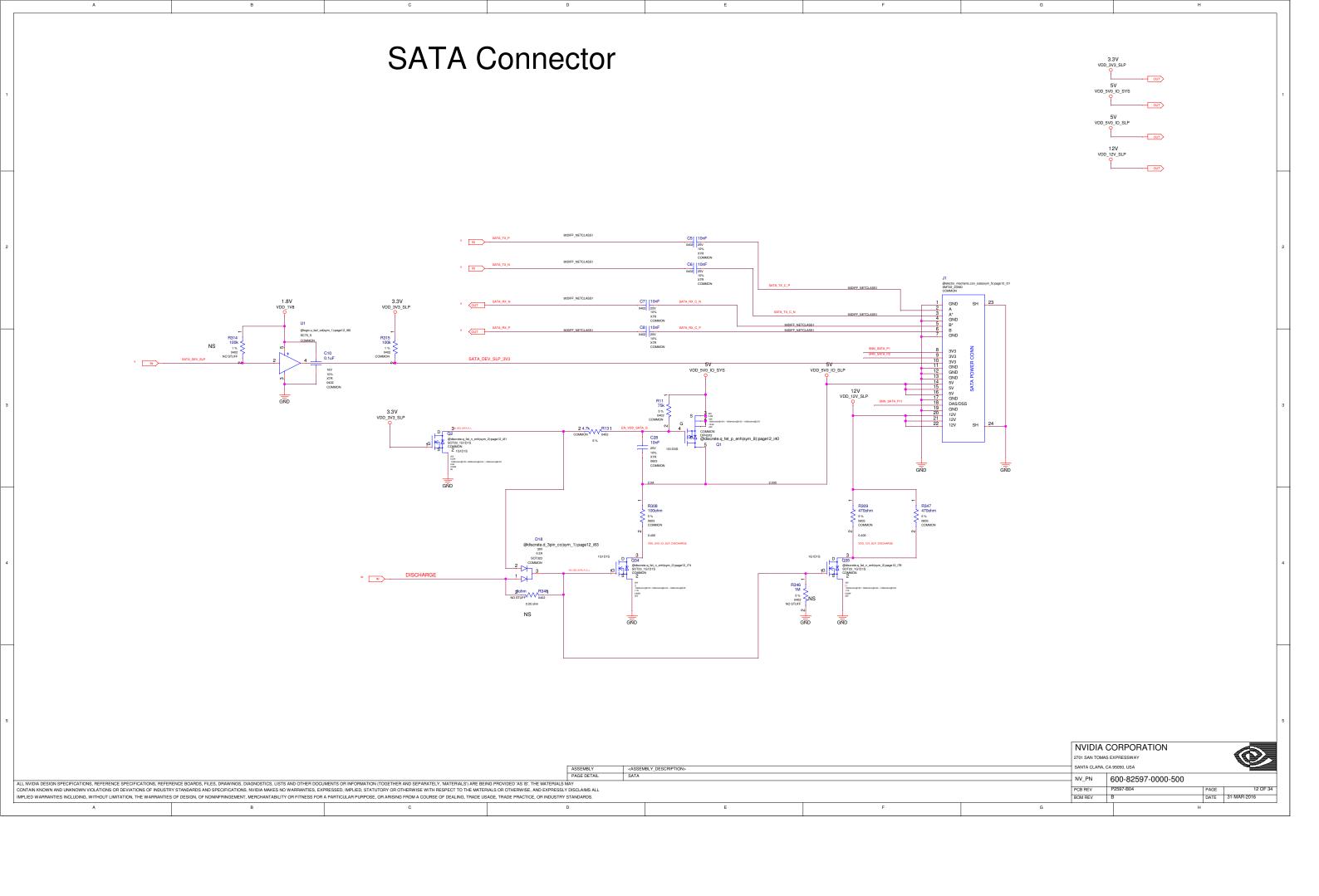


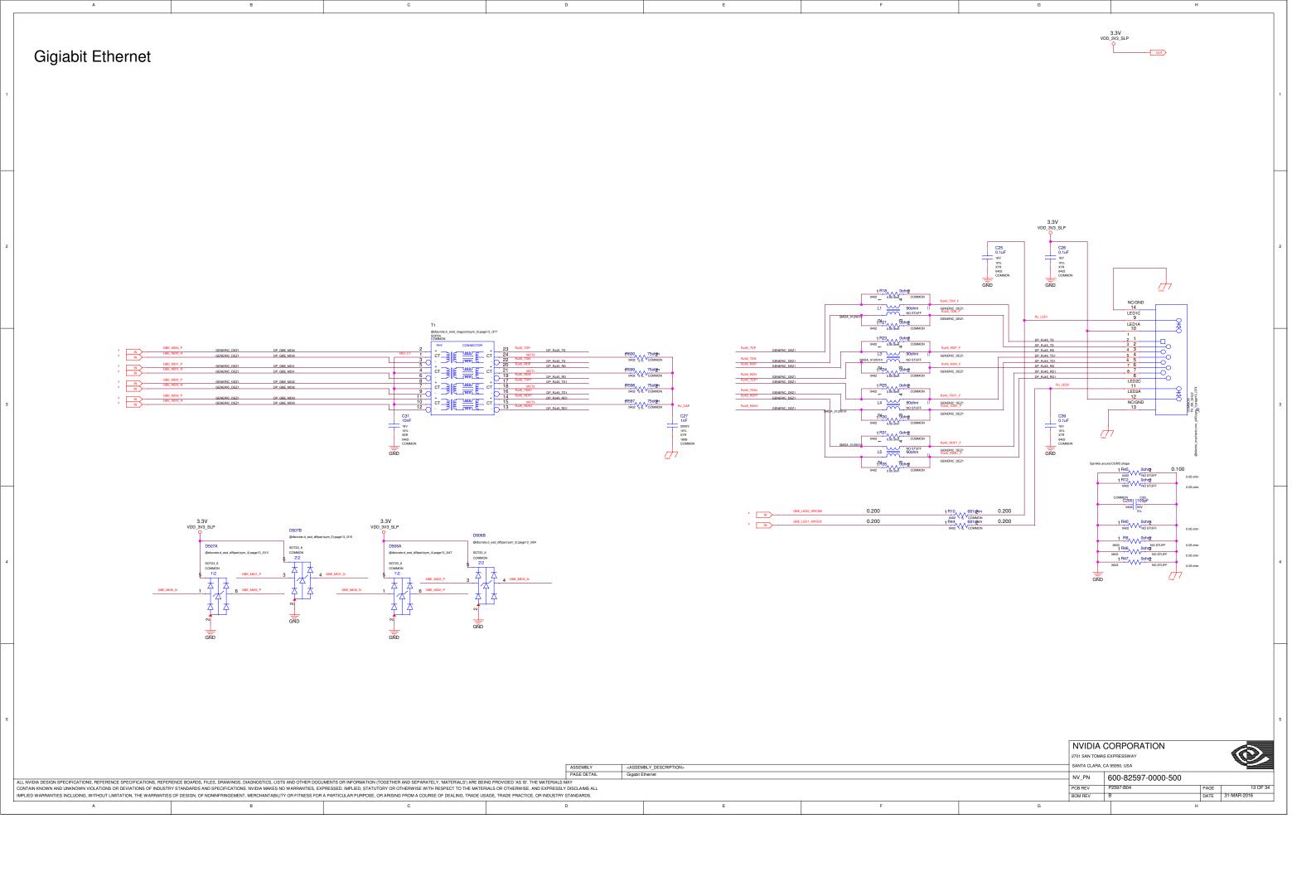


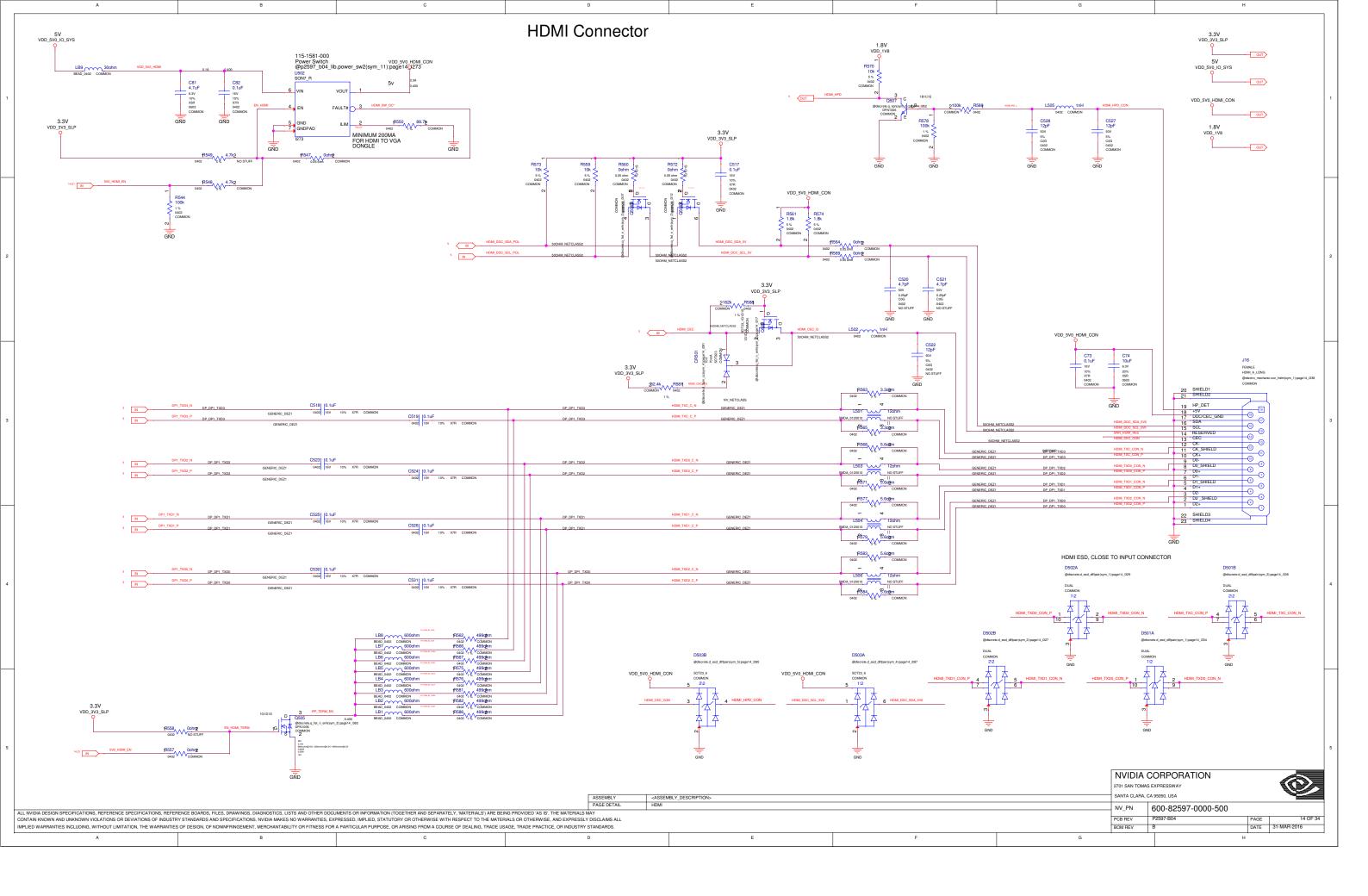


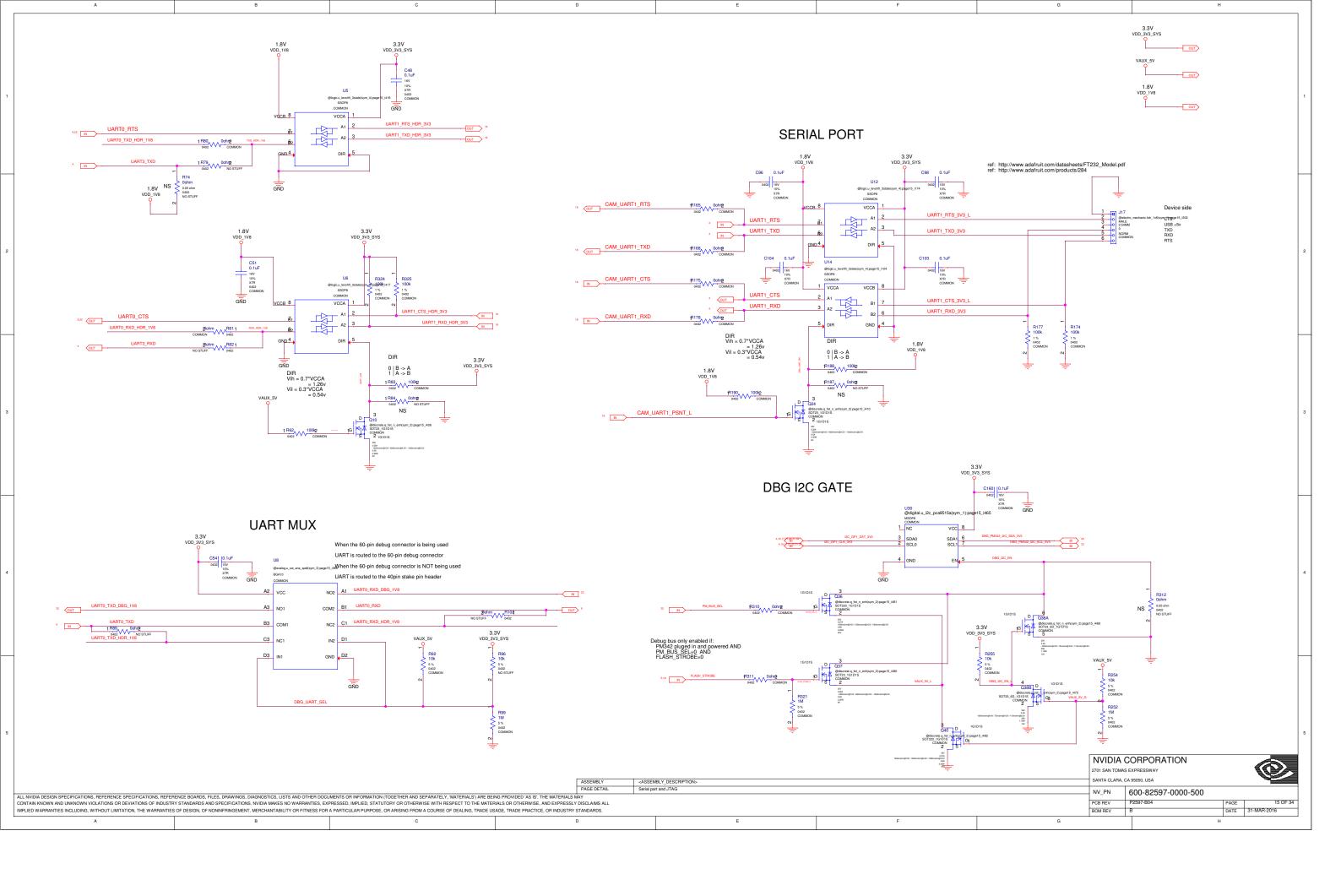


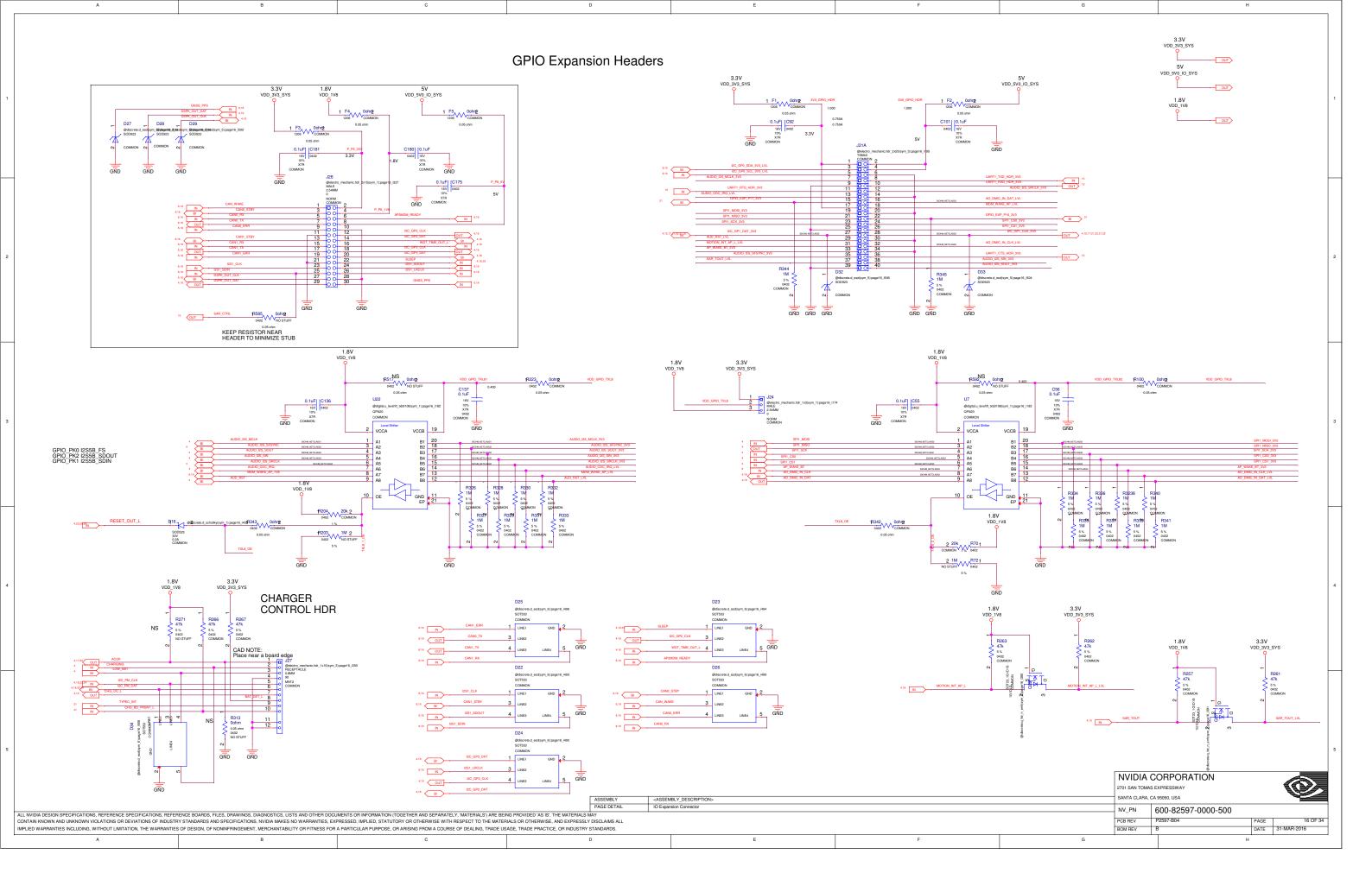


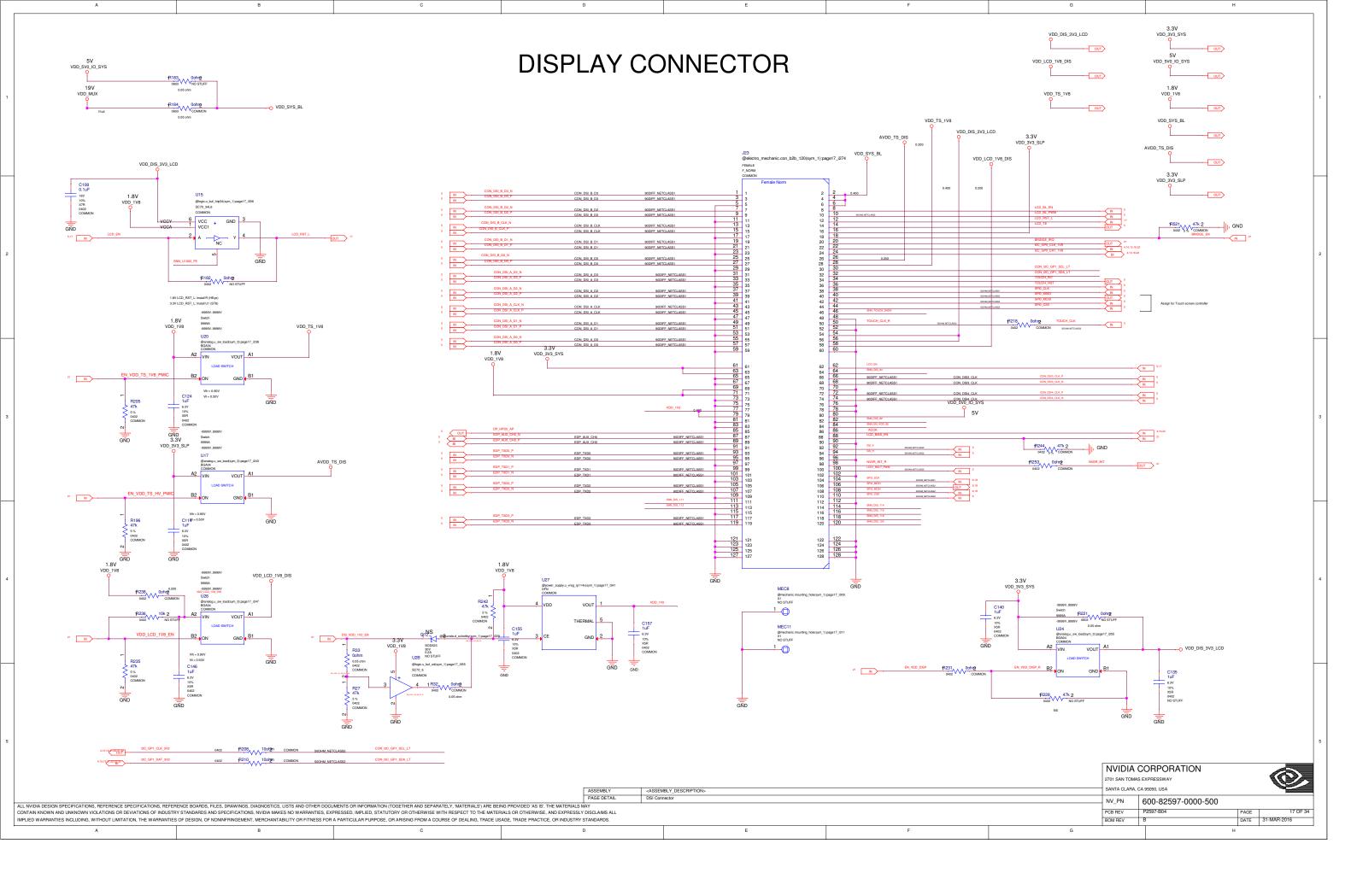


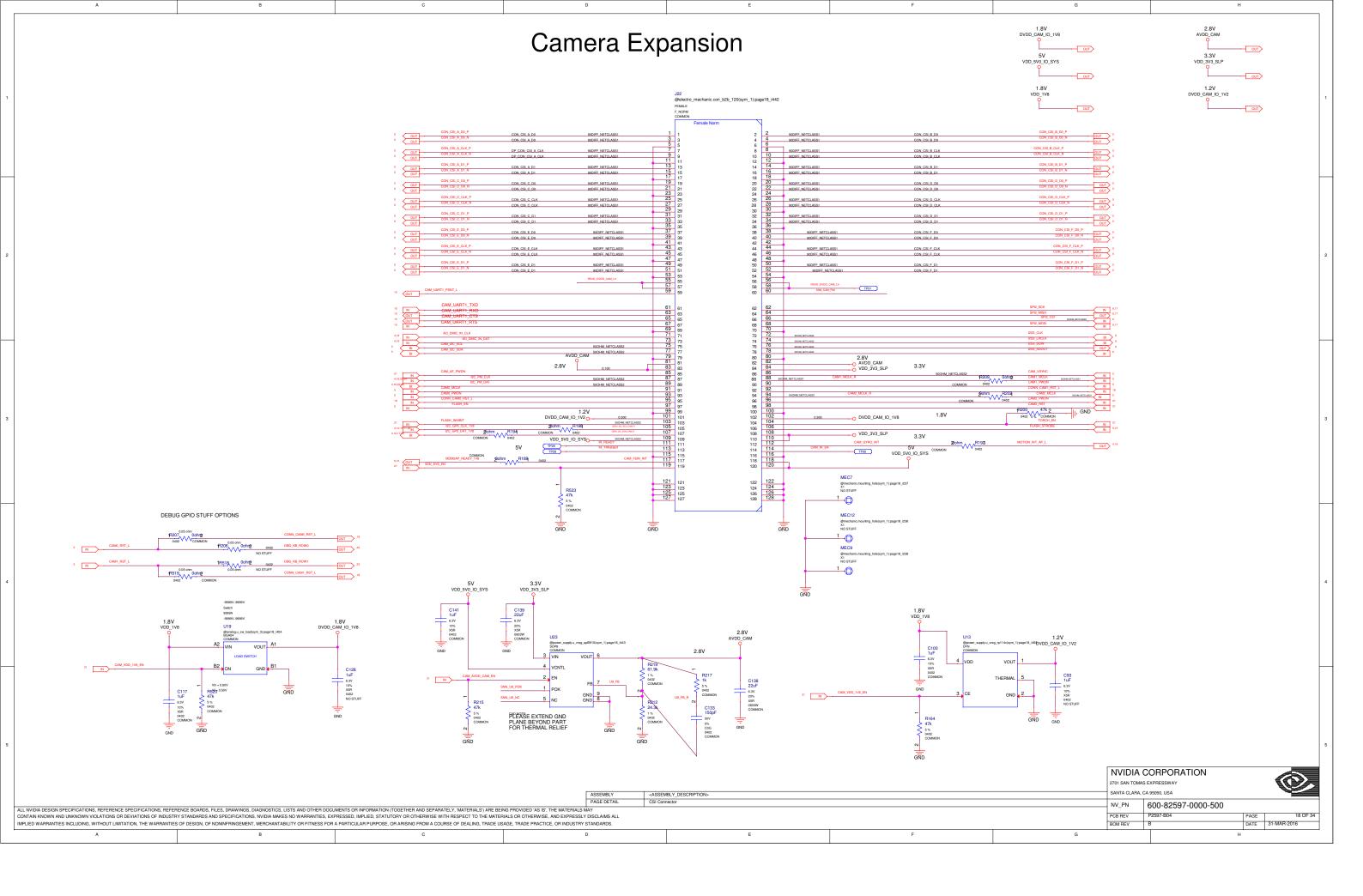


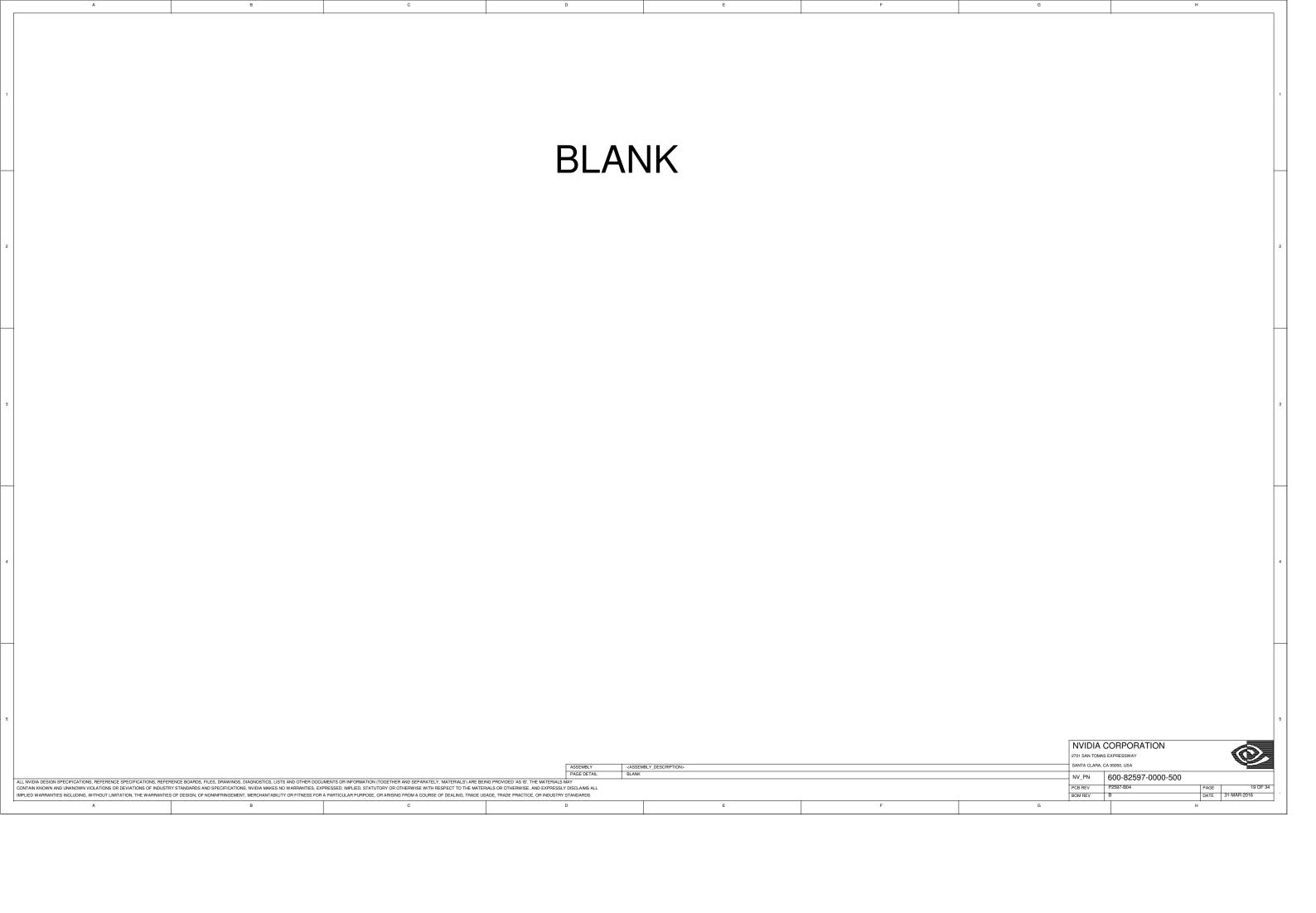


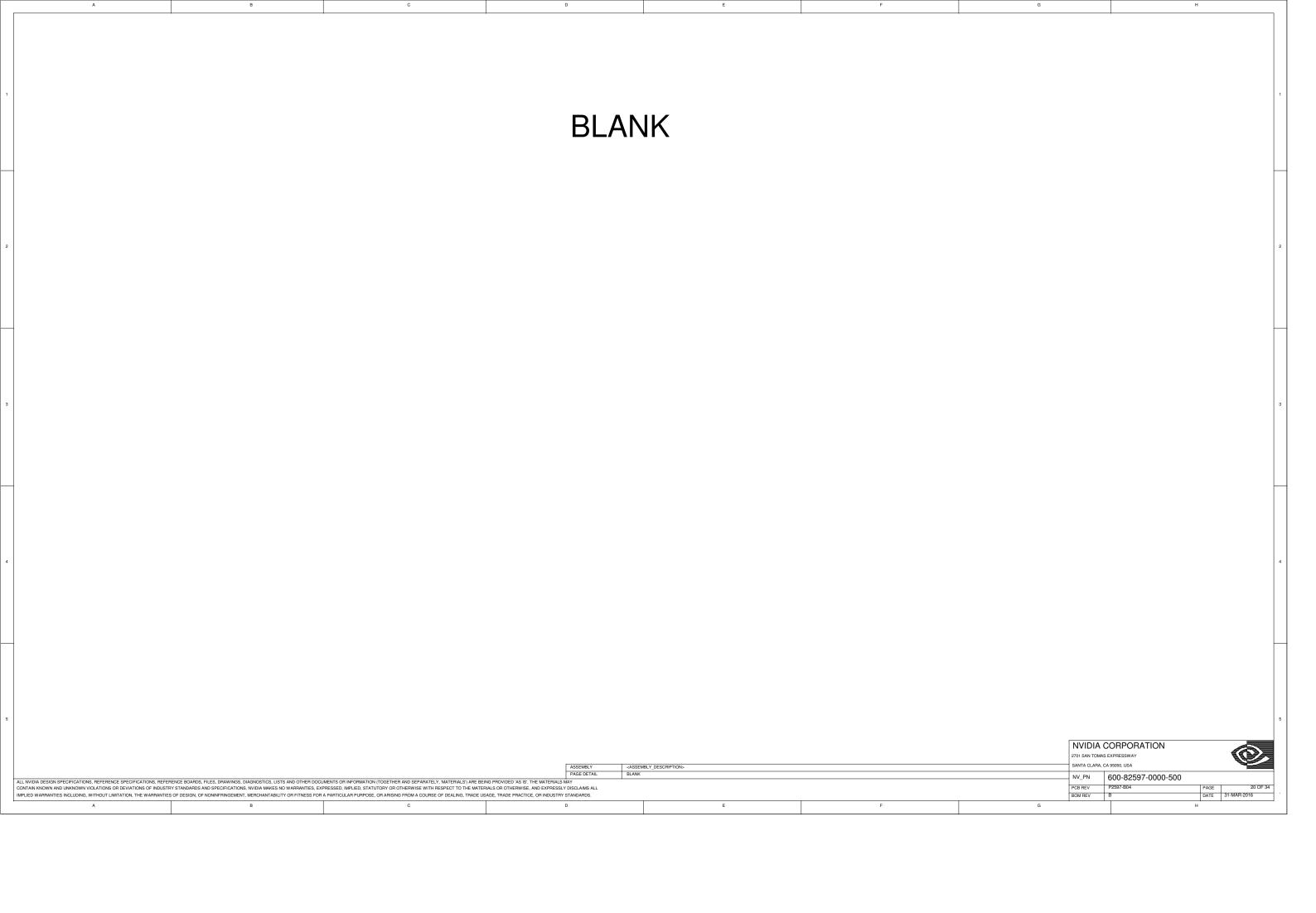


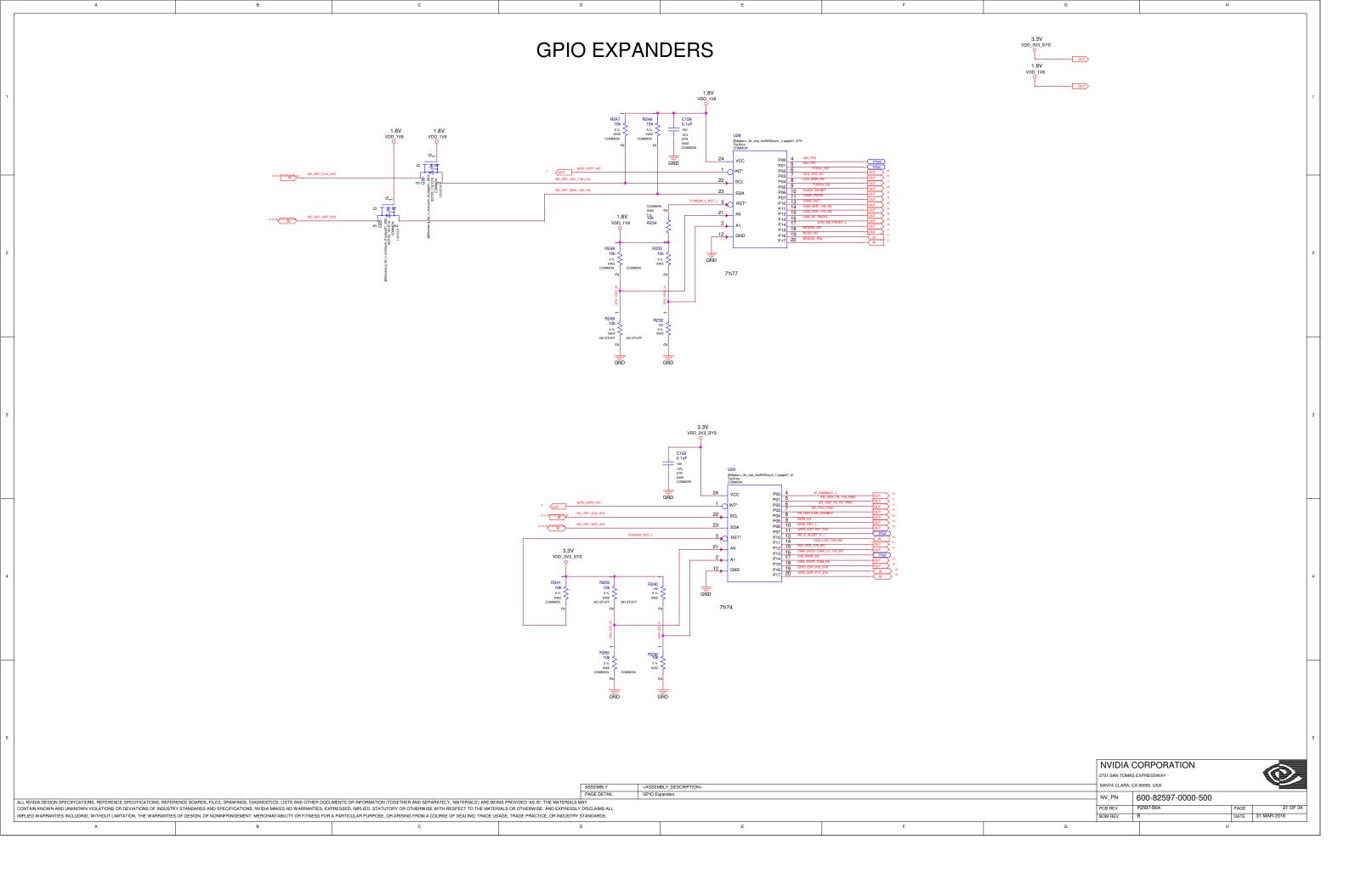


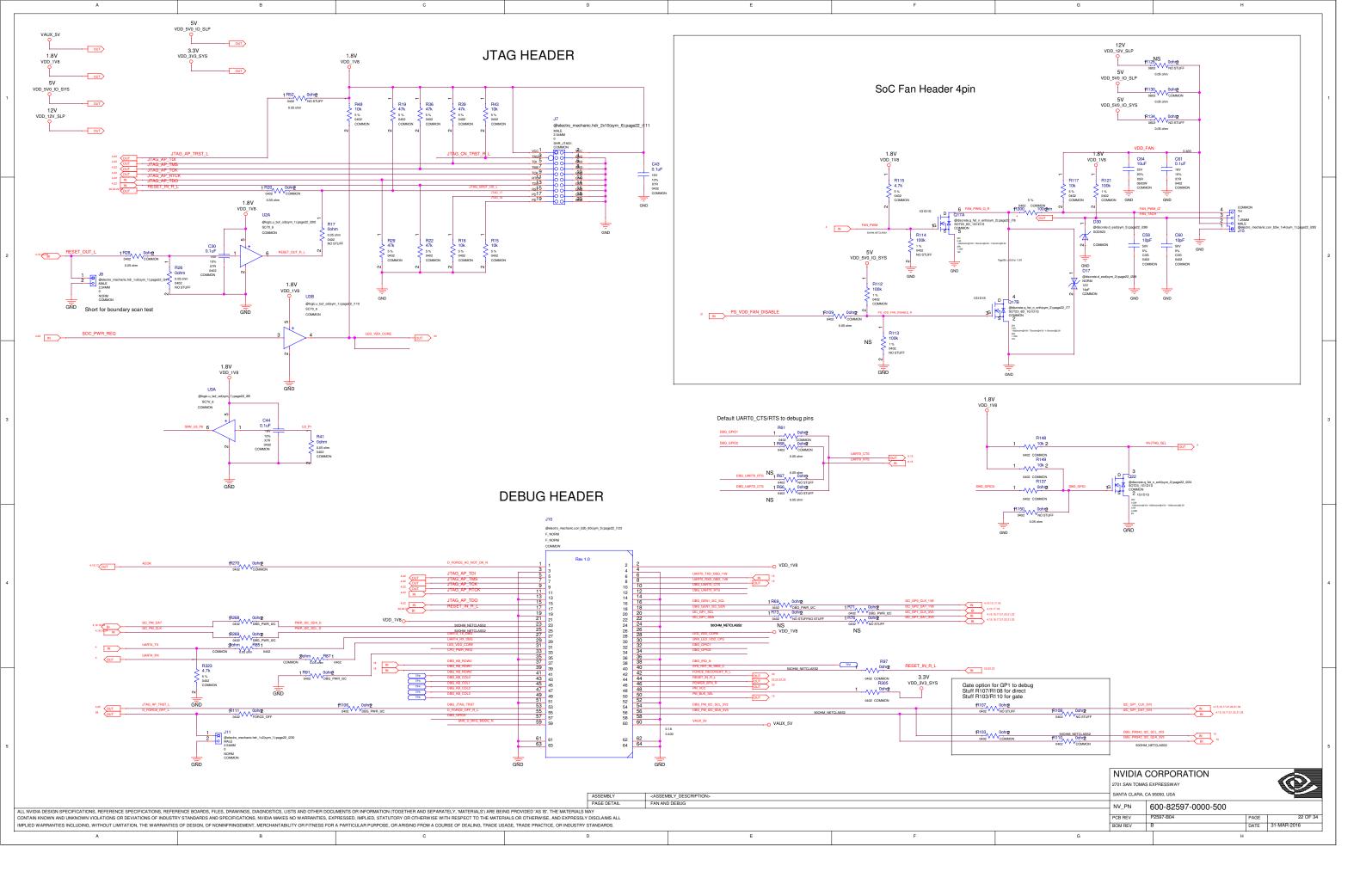


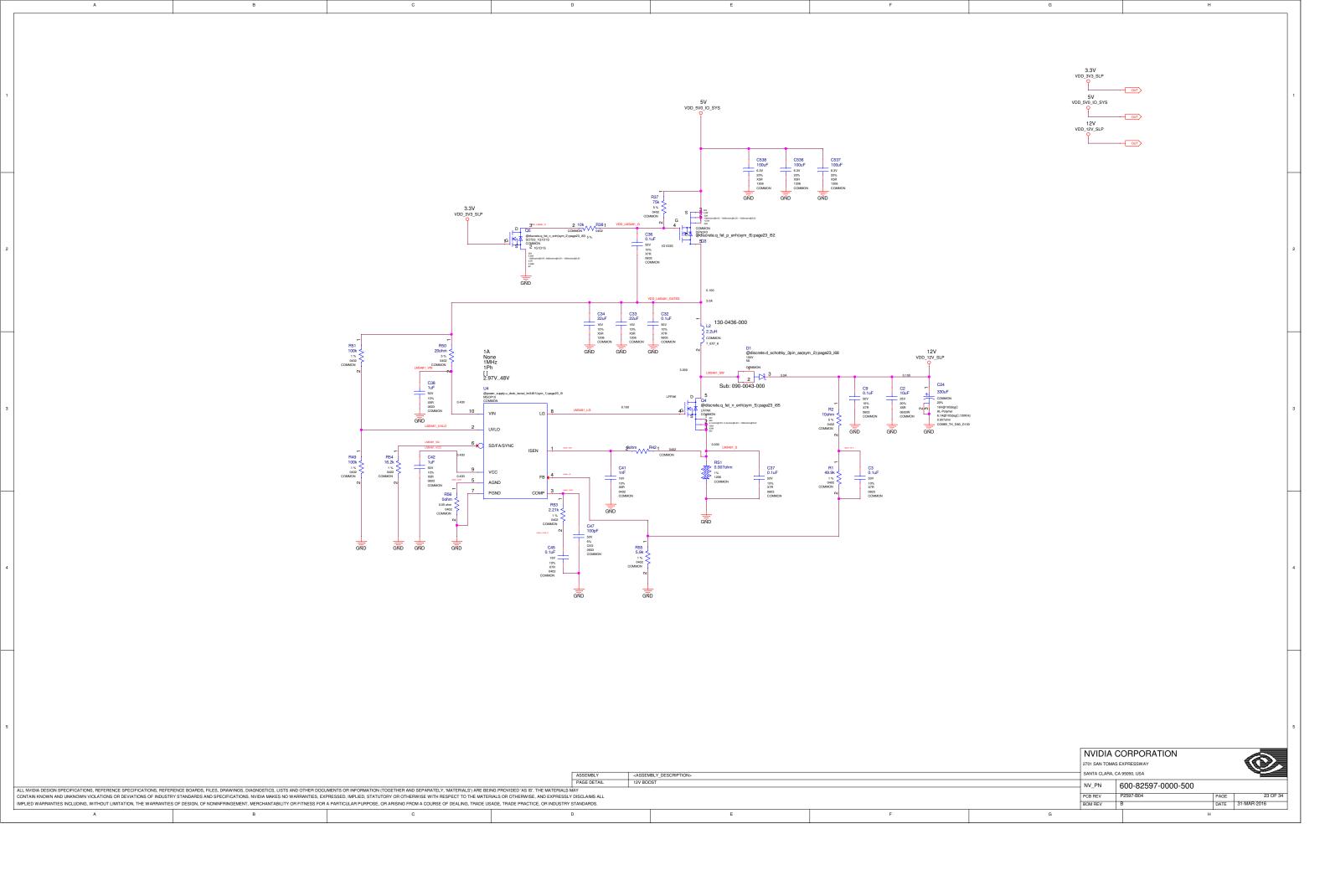


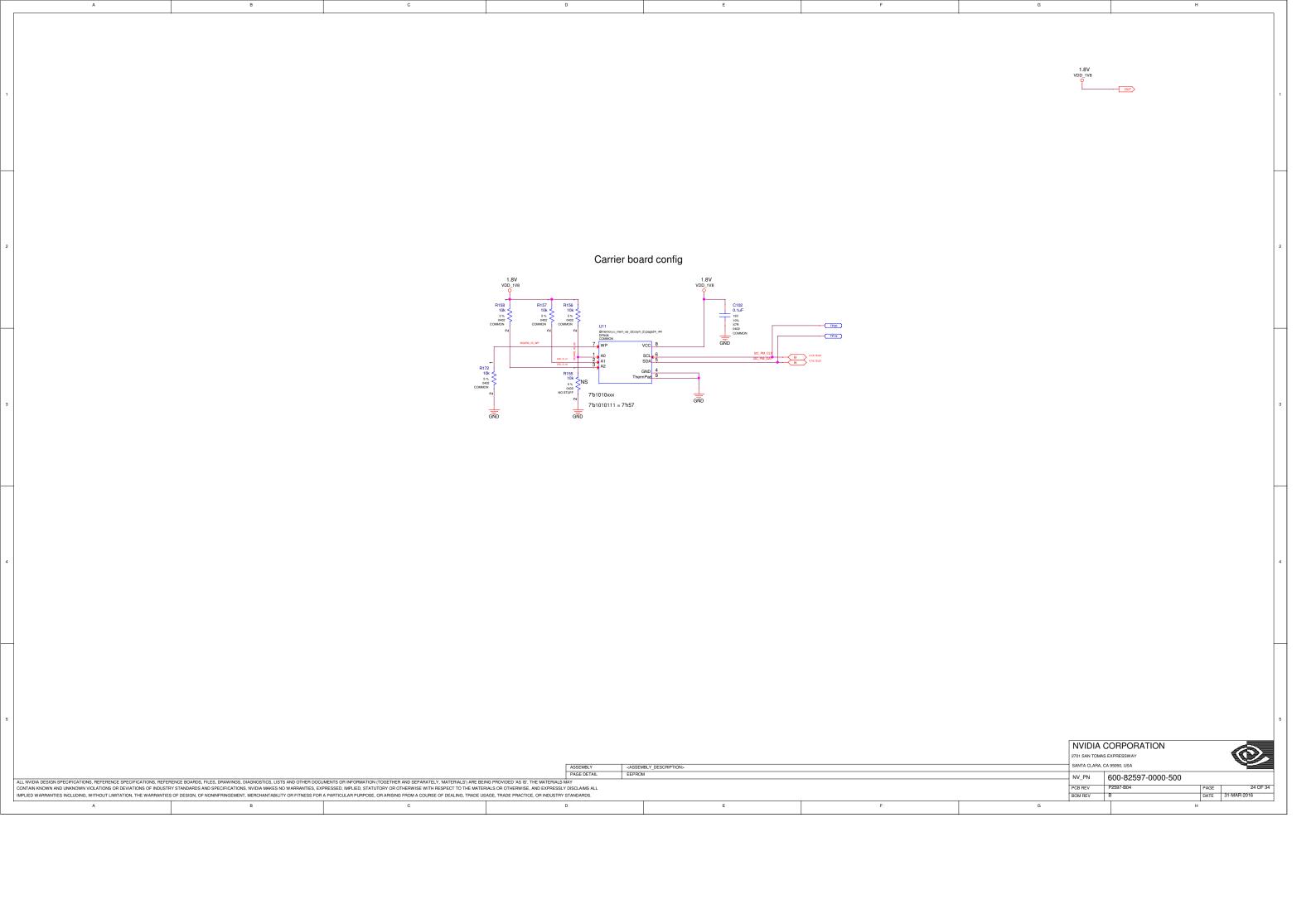


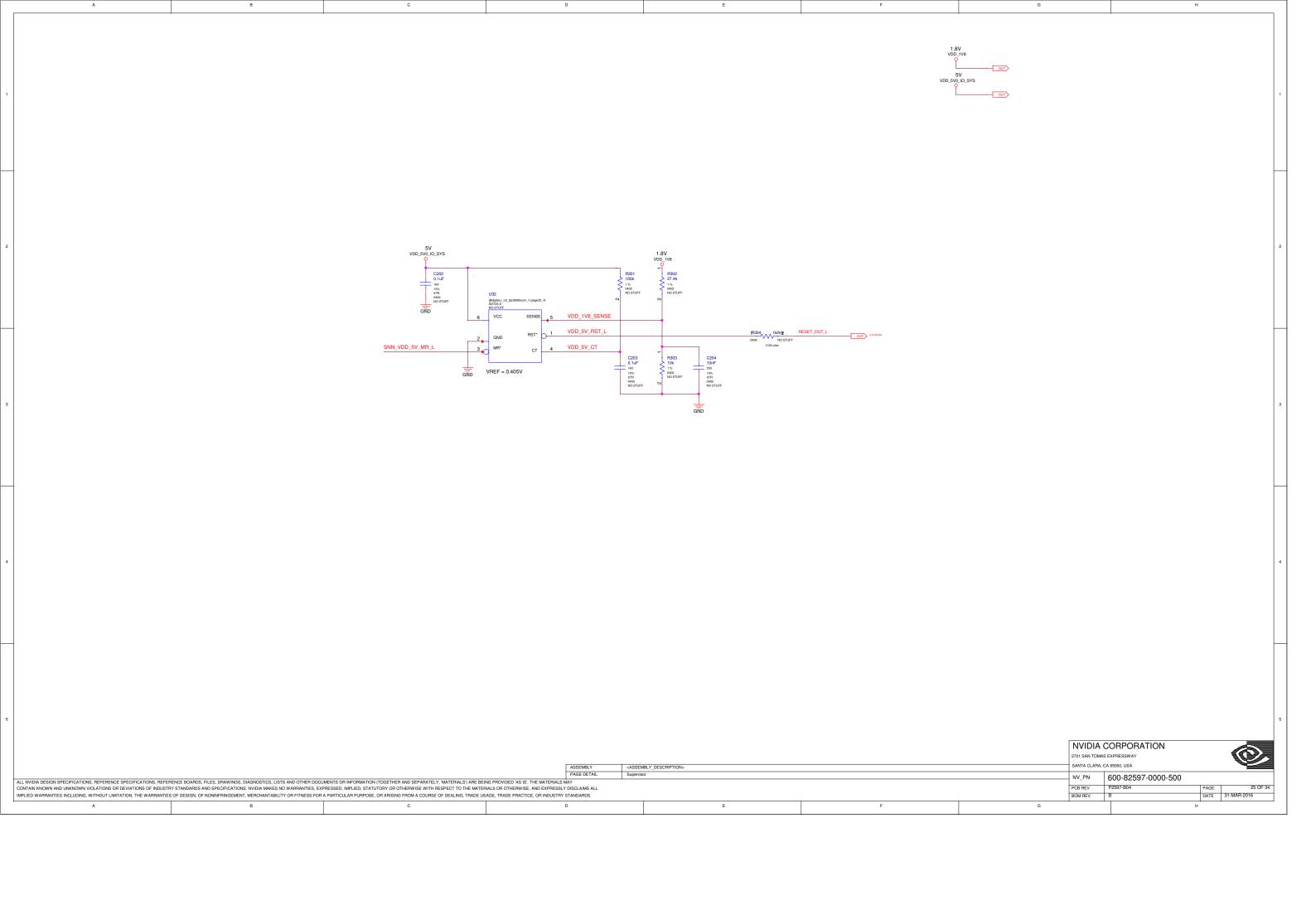


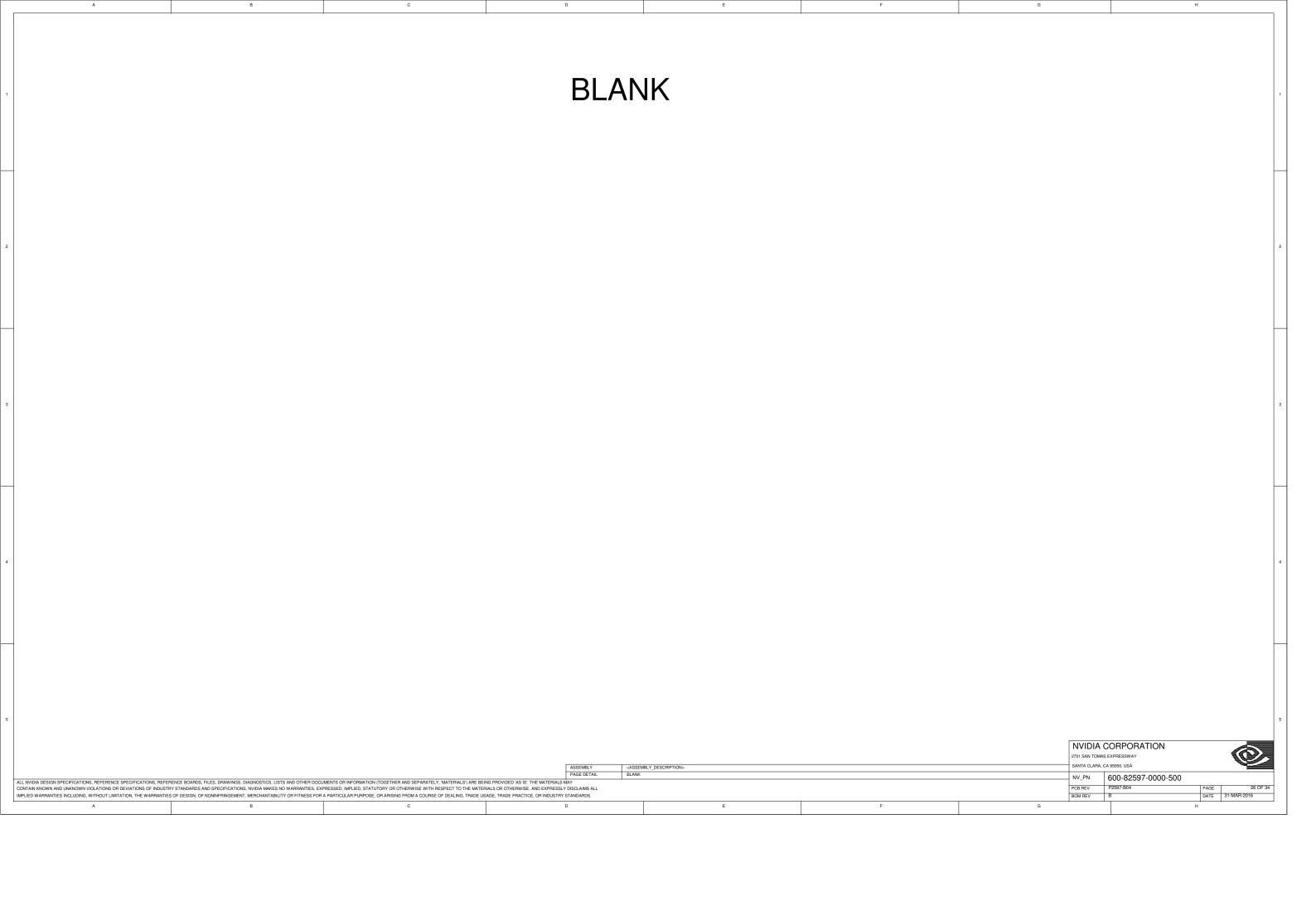


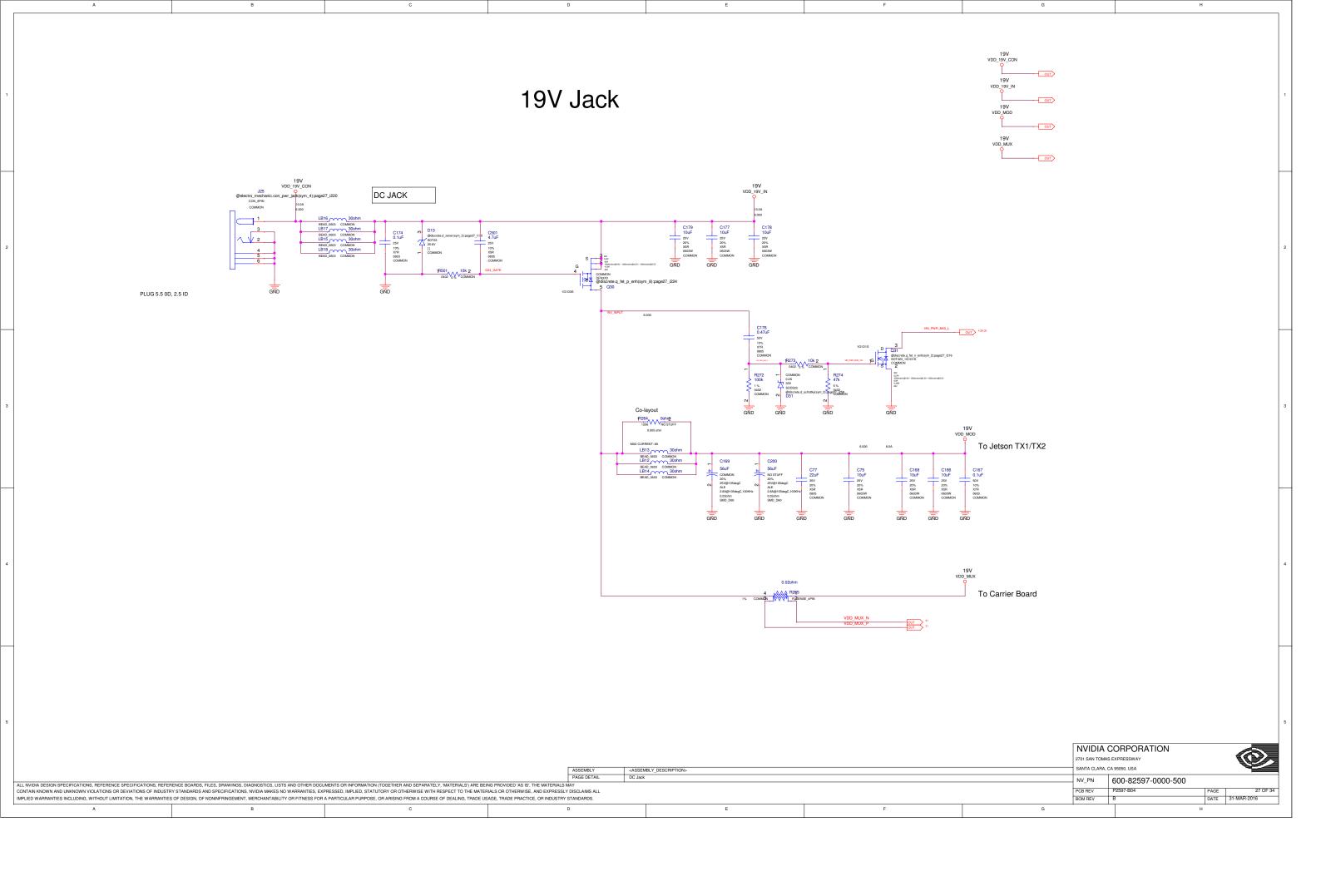


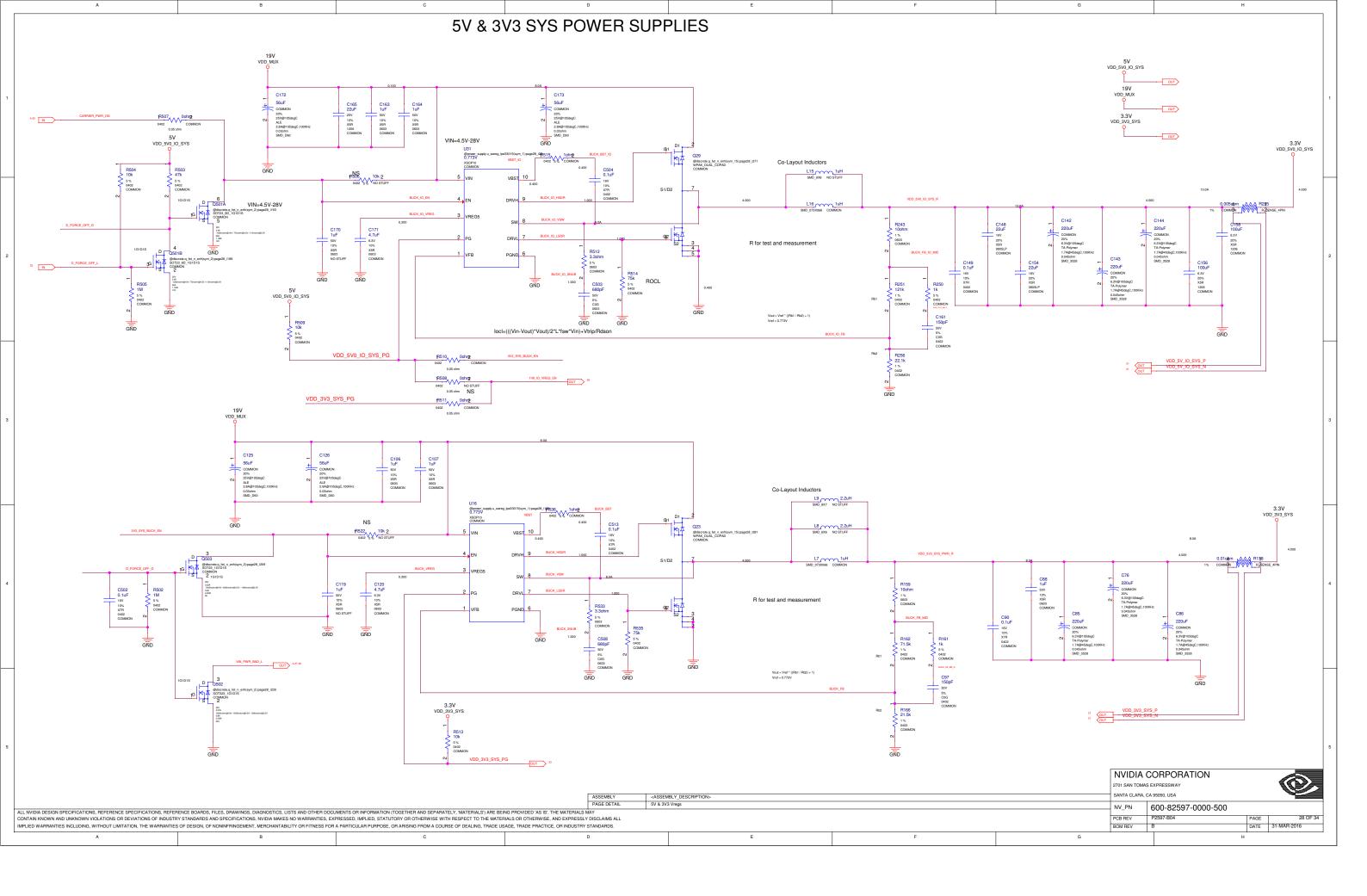


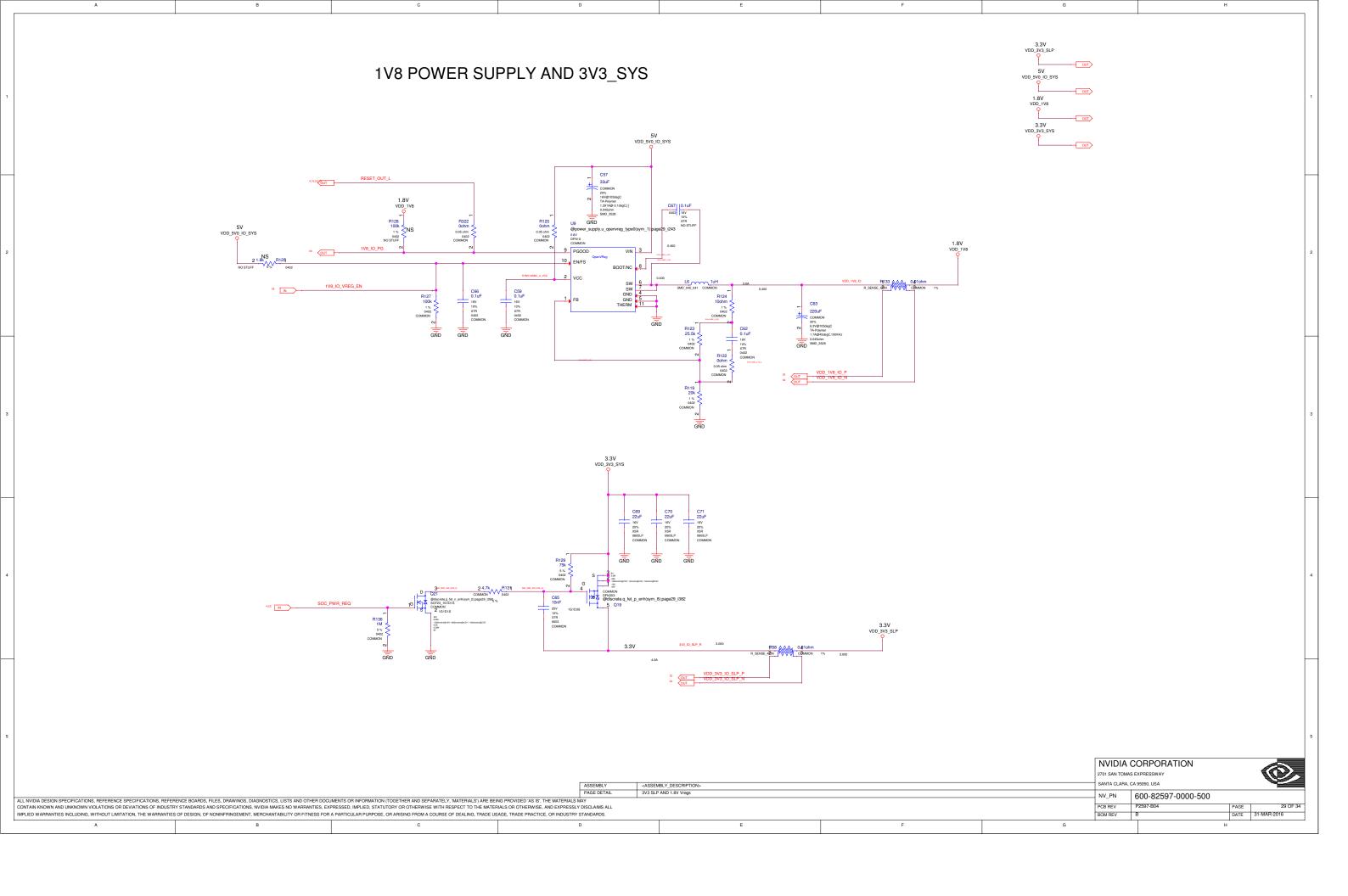


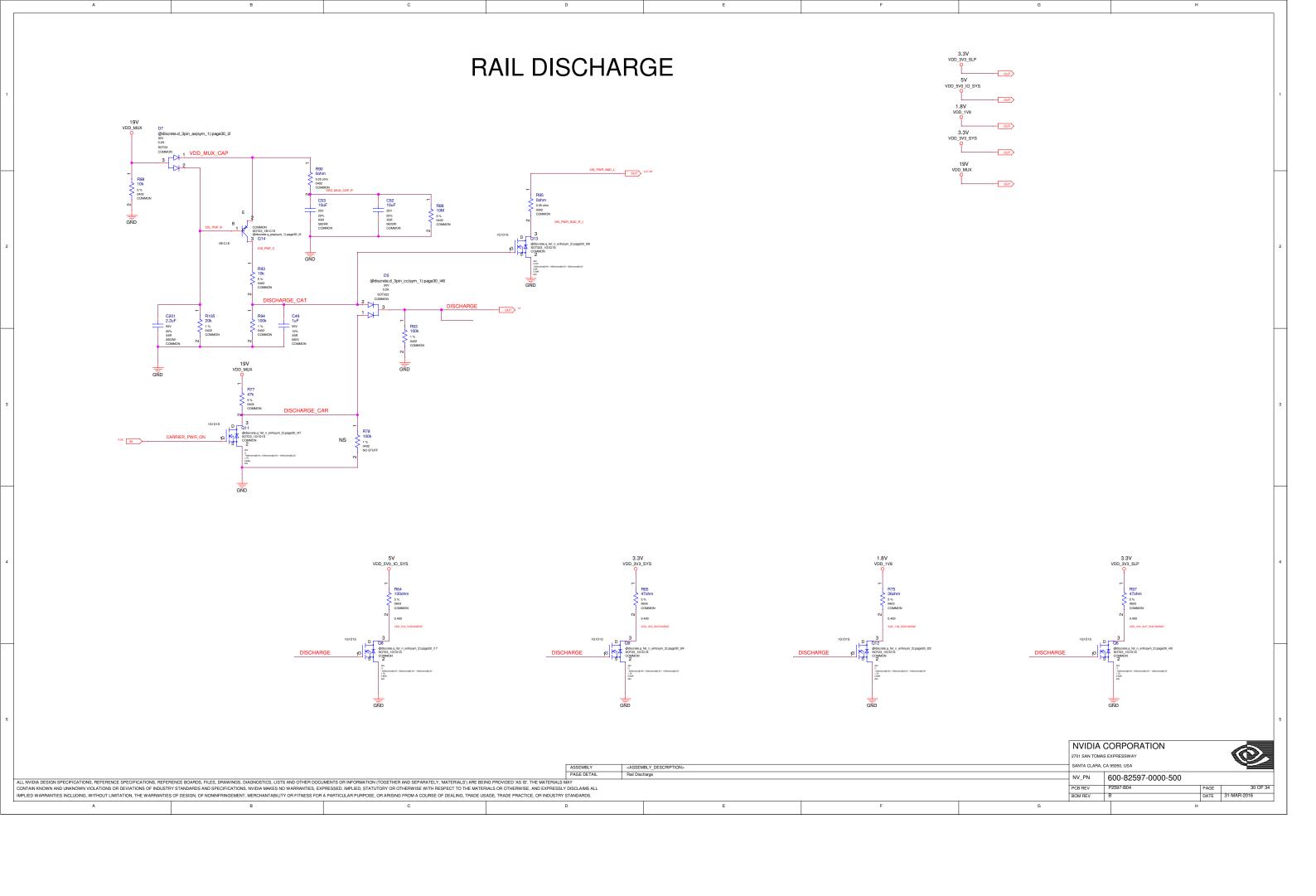


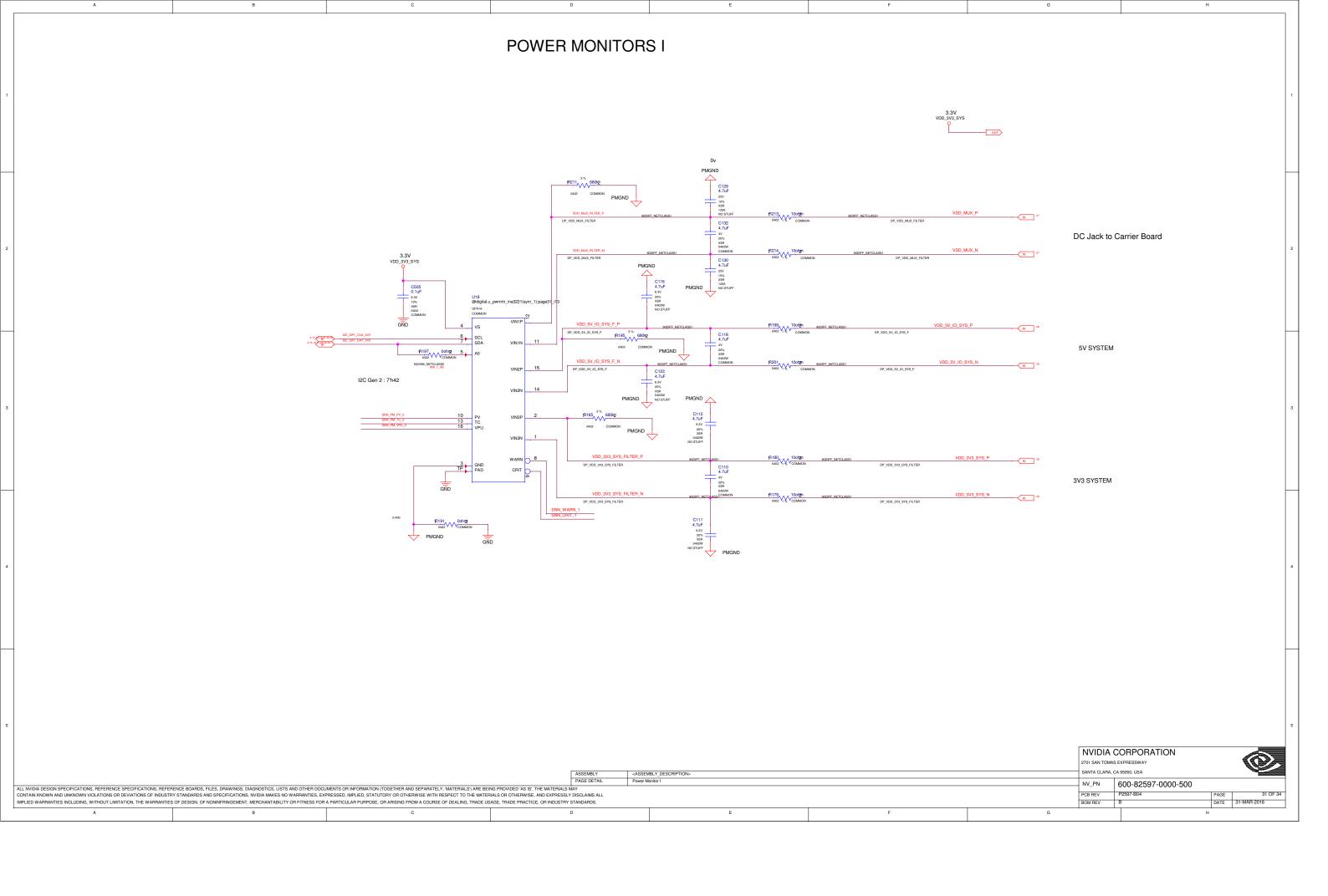


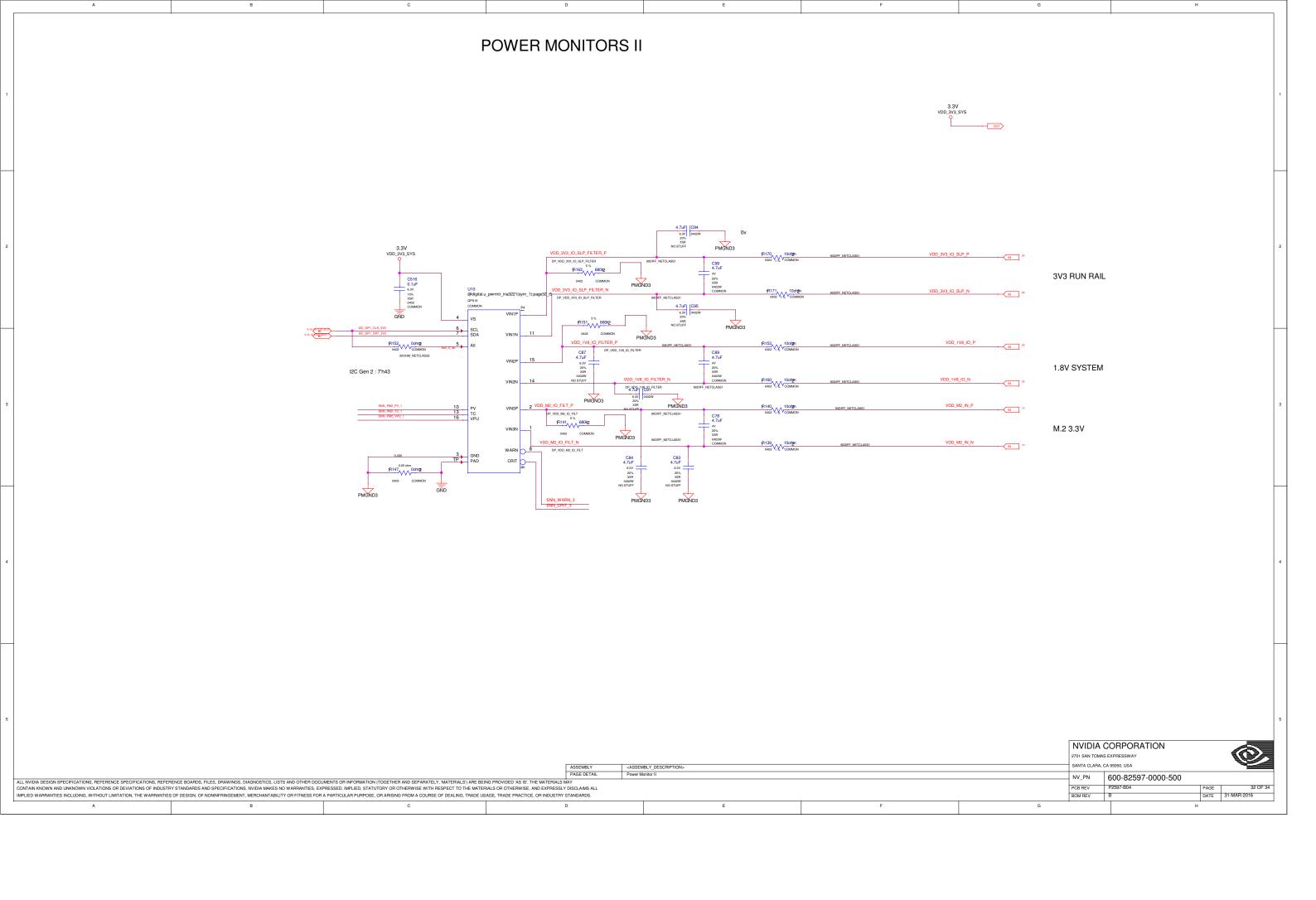


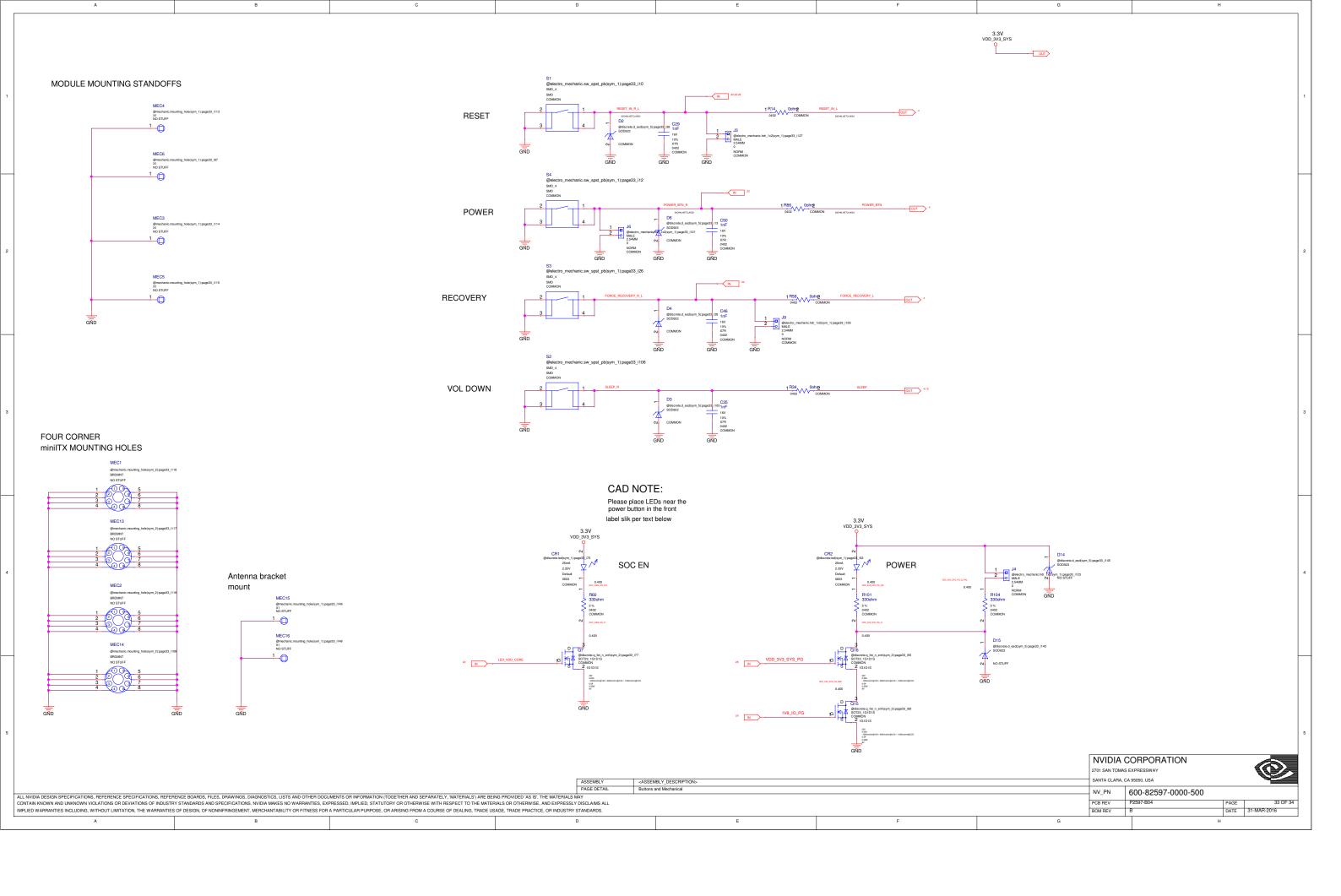












Revision History

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_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 PCle 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

NVIDIA CORPORATION
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NV_PN 600-82597-0000-500
PCB REV P2597-B04
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