Revision History

Schematics taken from P151-A00-X24

MS-8889 00A

00A-0621
1)Page 10,13,18 of the original design (P151) has been delete.
2)Page 10,12 U816,U817,U818,U811(single gate) share one ACT08/SO8.
3.Page 13 a.P300 change reference to P600.
b.Add P300 (long D-sub)for SEC D-sub.
4.Page 14 a.Remove P602.
b.Add S_OUT1,S_IN1,AV_OUT1,AV_IN1,J1,J2 connector.
5.Page 16,17 Modify power supply solution.
a.PWM from SC1102A,SC1541-3.3V,SC1565 share one ISL6529.
b.FBVDDQ is transfered from Q800,U4 by 5V.
c.SC2610 change to HIP6012.

00A-0624
1)Page 16 a.Remove C1250,C1251,R1076,R1071,Q10,U4,Q800.
b.FBVDDQ Remove Q800 and U4 ,Add U812/NIKO-1085S/TO-263.
c.Q905 and Q201 from 45N02LD change to 55N02LD for low Rdson.
2)page 17 Remove Q9,R2086,Q8,R2087.
3)page 11 Add R2217/33ohm and C2495 for "DVOCLK_IN".
4)page 15 change Text Note "PCI_DEVID =253" to "PCI_DEVID =283".
5)page 17 a.R2085 change value to 4.7K.
b.U3 change refernce to U813.

00A-0625
1)Page 16 ADD C1250,C1251,R1076,C1071.
2)page 9 a.ADD RP16/47ohm for "DVOBD12" and "DVOBD13".
b.Add solder side heat sink "K201"
3)page 11 Add SAA7104/5.

00A-0626
1)Page 9 - Change the 47ohm RPack to 33ohm RPack.
2)Page 2 - a.ADD C106/4.7U for "12V to gnd".
b.R80,R81,R82,and R83 from 5% change to 1%.
3)Page 16 - U812 from L1085/3A change to L1084/5A for FBVDDQ.
4)Page 14 - S_OUT1 & S_IN1 chage to P500 & P501.

00A-0701
1)Page 2 - a.ADD thermal sensor RT1 (in GPU solder side).
b.ADD C113/220PF "AGPVREFCG" pull down.
2)Page 14 - Remove J1.
4)Page 16 - a.Remove C1406.
b.ADD CE1,CE2,CE3,CE4 for EMI (FBVDD bypass).
c.ADD R617/1K,R618/6.8K,C1406/470PF for U814.
5)Page 17 - ADD C2307,C2308 for "FBVDDQ".

00A-0702
1)Page 2 - a.Make R80 = 49.9 ohms 1%, Make R81 =
NO_STUFF, Make R82 = 56.2 ohms 1%, and
Make R83 = NO_STUFF.
b.C110 from 0.1uF change to 0.01uF
C113 from 220PF change to 0.22uF
2)Page 16/17 - R617, R618, R624, R616, R1080, R1082,
R1210, R1104, R2085, R2083, R2082 all be 1%.

00A-0703
1)Page 2 - Add R111,R112 0ohm for thermal sensor.
2)Page 11 - Remove U1 7104H/QFP64.

00A-0704
1)Page 11 - Remove R2218.
2)Add 8.a H/W MONITOR for channel only, Medion NO_STUFF.
3)Page 17 - Add C2235 for 12V to GND.

00A-0708
1)Page 2 - RT1 footprint from SMD change to DIP.

00A-0709
1)Page 16 - Remove C1276,C1264,C1366,C1267,C1301,C1379,C1304.
2)Page 5,6,7,8 - Add C550-C565 / 10PF / 0402 from
"FB(A/B/C/D)CLK(0/0-/1/1-) total 16pcs for
EMI engineer.

00A-0712
1)Need to change Power net on R2088 sheet 17 to "12V".
Need to change Power Net on D658 sheet 17 to "12V".

00A-0716
1)Page 2 - a.R80 and R81 needs to be tied to "GND". right now it is tied to VDDQ.
b.R82 and R83 needs to be tied to "VDDQ".
Pin 'R82.2' moved to net 'VDDQ'.
Pin 'R83.2' moved to net 'VDDQ'.
Pin 'R81.1' moved to net 'GND'.
2)Page 2 - Pin 'Q901.3' moved to net 'AGP_MDT2'. This is the collector.
Pin 'Q901.1' moved to net 'AGP_MDT4'. This is the BASE.
Pin 'Q901.2' moved to net '3.3V'. This is the Emitter.
3)Page 2 - Component value changes:
a.R98 please change from 5.76K to 6.49K 1%.
b.R110 and R105 change from 1.5K to 2.32K 1%.
c.Q613 - Changed from 2N7002 to IRLML2502 (N-ch 20V 3A 0.08 on resistence).
d.Q901A - change to MMBT4403LT1.

00B-0728
1)Page 2 - C108 pin 1 & Q901A pin "E" and R94 pin 1 from 3.3V change to 3.3VL.
2)Page 16 - C1303 from SMD change to DIP for low ESR.
3)Page 17 - a.Add CE4-CE8 for EMI 3.3V to FBVDDQ.
b.D658 pin2 connector to "CP_CAP",D658 pin 3 connector to C2273 pin 1.

00B-0730
1)Page 2 - Add U200/FDC6301N,R93/0R,R101/121K,R108/121K,R96/1K for AGPVrefcg.
2)Page 16 - R1076 change to 6.49 ohm / 1%.
C1250 change to 68nF.
R1210 change to 13K / 1%.
C1448 change to 47nF.
C1252 change to 2.2nF.
3)Page 17 - R1067 change to 10 ohm / 1%.
C2230 change to 100nF.
R2081 change to 10K / 1%.
C2234 change to 2.7nF.
R2075 change to 1.58K / 1%.
R2084 change to 49.9K / 1%.

00B-0731
1)We need to change the Device ID from 0x283 to 0x281.
So that means R959 is a NO_STUFF and R258 is 10K.
2)Page 17 - R1121 change to 3.16K / 1%.

00B-0801
1)Page 17 - C2234 change to 2.7nF.
2)Page 15 - Add JP2 connector to "DVOD21 and GND.
3)Page 13 - P300 pin 17,18 floating.

00B-0802
1)Page 16 - Add Cap C1264,C2309,C2310(dual layout) for layout.
2)Page 18 - Add R58,R59,R60 and U2 for FAN power.

Sub Assemblies	Description
COMMON	Components are stuffed for all SKUs
NO_STUFF	Components are not stuffed
PRI_DVI_I	Components stuffed for Primary VGA
PRI_PROT	Components stuffed for Primary Protection
SEC_DVI_I	Components stuffed for Secondary DVI
SEC_PROT	Components stuffed for Secondary Protection
AGP3VFBDQ	Components stuffed for AGP 3.3V to FBVDD
FBVDD-FBDQ	Components stuffed for FBVDDQ 2.5V to FBVDD
PLL-SEQ	Components stuffed for PLL Sequence
PWR-SEQ	Components stuffed for Power Sequence
PWR-SEQ-BP	Components stuffed for Power Sequence By-PASS
NVVDD-2602	Components stuffed for NVVDD Power
FB_2610_SWT	Components stuffed for FBVDD Power
SC1541	Components stuffed for 3.3VL Fixed
SC1565	Components stuffed for SC1565 - 3.3VL Adj.
FB64LO	Components stuffed for FBA_DATA and FBD_DATA
FB64UP	Components stuffed for FBC_DATA and FBD_DATA
SER-PROM	Components stuffed for Serial PROM
PAR-PROM	Components stuffed for Parallel PROM
FAN_HS-LFT	Components stuffed for Fan / Blower left of the GPU
FAN_SNK	Fan Sink Component
HEAT_SNK	Heat Sink Component
VIVO	Components stuffed for Video IN/OUT
VIDO-7104	SAA7104 Video Out
CX-ENC-TVOUT	Components stuffed for CX25871 - TV-OUT
SOCKET	Components stuffed for Socket
64MB-4MX16	Components stuffed for Mem-CFG: 64MB (4Mx16) memory
BRACKET	IO Bracket / VGA-DIN-DVI-I
BRACKET-VGA	IO Bracket / VGA- -DVI-I
FB_2610_LDO	Components stuffed for FBVDDQ Power
FBVDD_ADJ	Components to adjust FBVVD out voltage.
FBVDQ_ADJ	Components to adjust FBVVDQ out voltage.

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3.b CX25871 TV-OUT
3.c DACB I/O, I2CB --PRI
3.d Video IN / OUT (SAA7801-SAA7804)
3.e DVOB External XMIT
3.f EX-XMIT Filter / I2CA
3.g DVI-_ / VGA Connectors / HotPlug
3.h S-Video Connector / Filter / Bracket
4.a NV STRAP // P/S-ROM
5.a Power Sequence / 3.3VL Supp
5.b NVVDD Power Supply
5.c.FBVDDQ Power Supply
5.c.FBVDD Power Supply

Legend:

TPNC = Test Point - Not Connected

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Top Page .. P151

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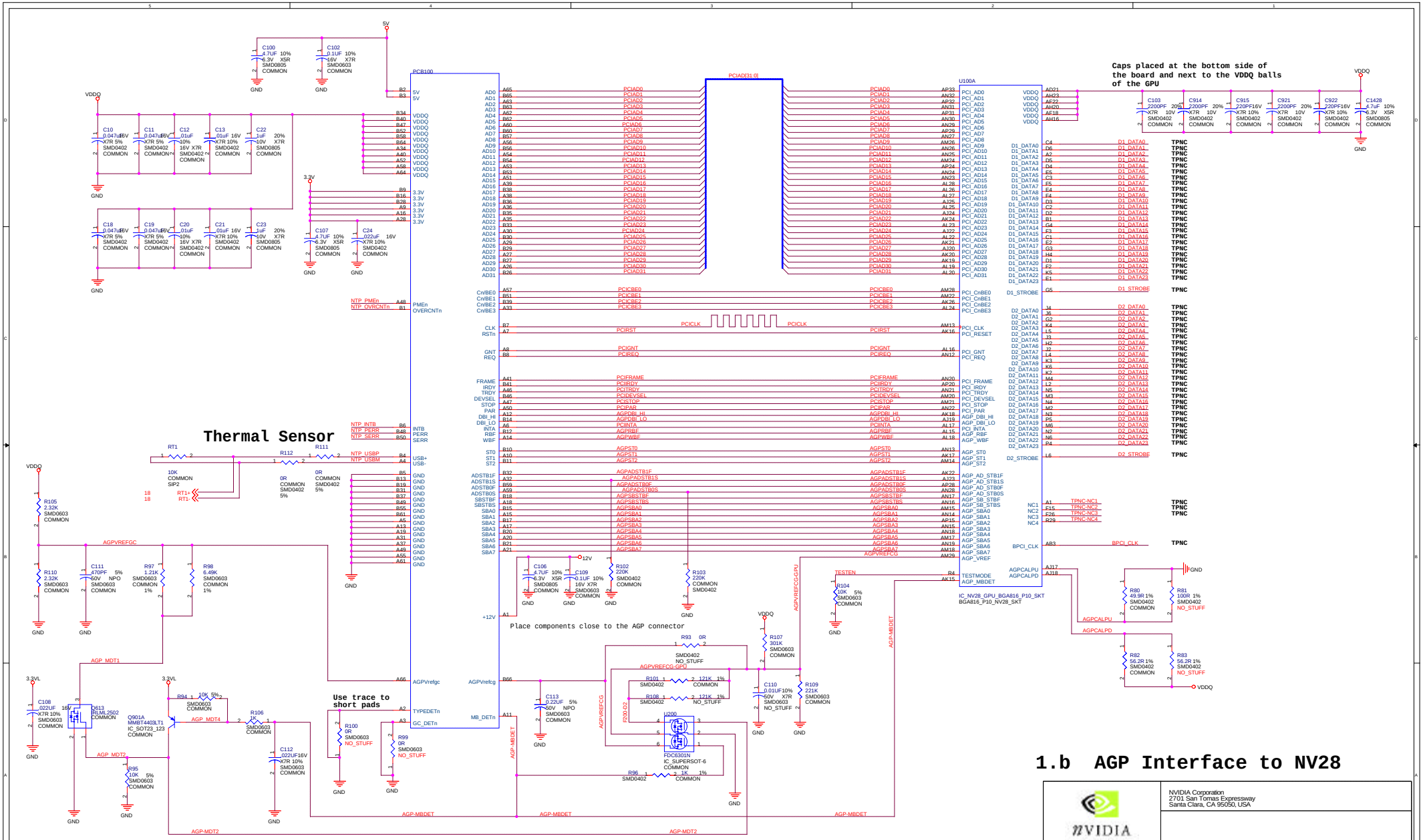

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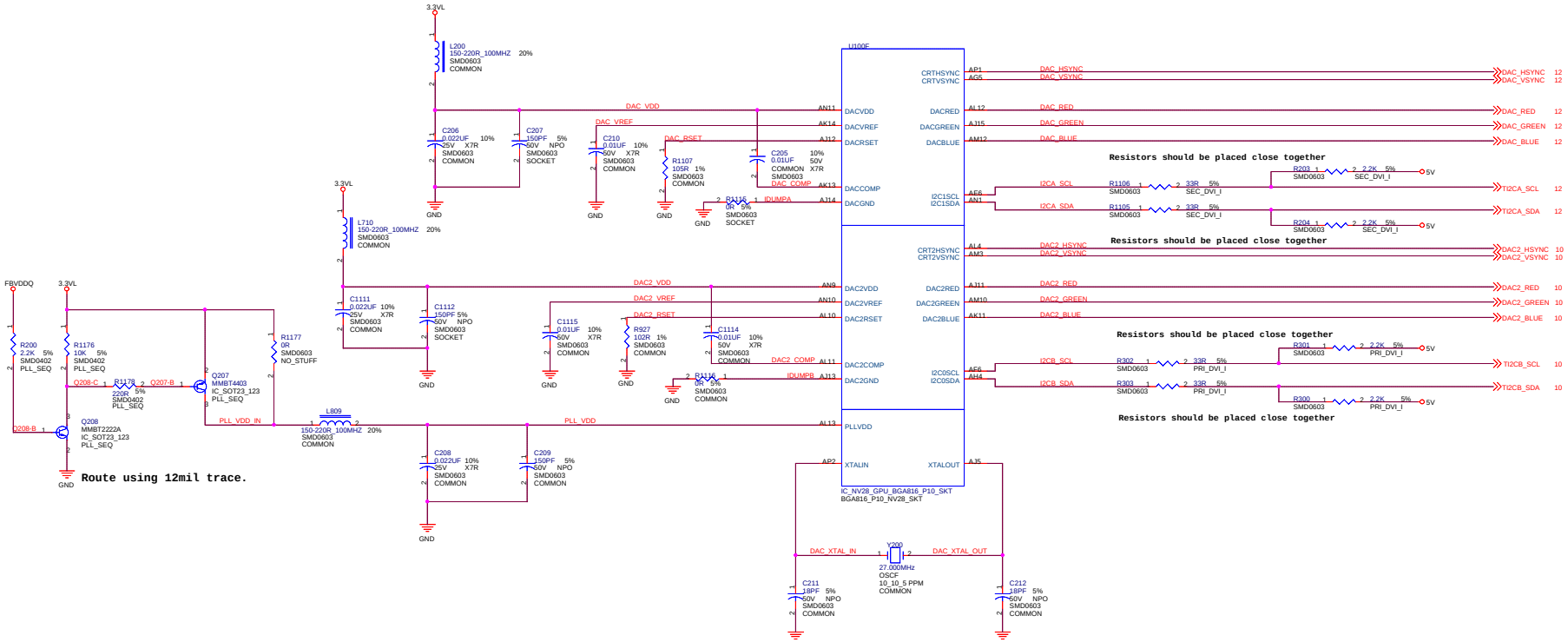

1.c NV28 .. PLL / DAC / I2C

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NV28..PL / DAC / I2C

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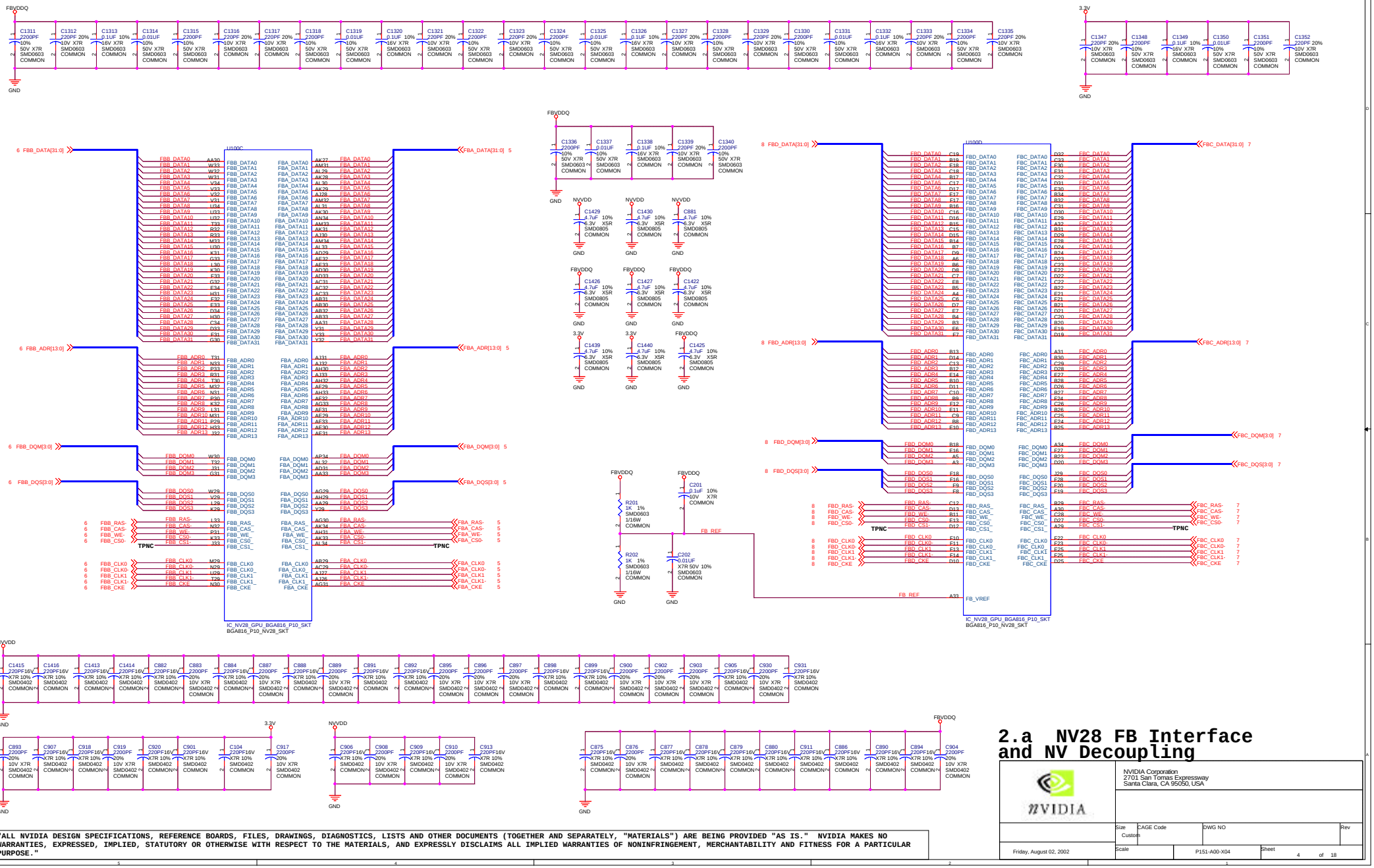

2.a NV28 FB Interface and NV Decoupling

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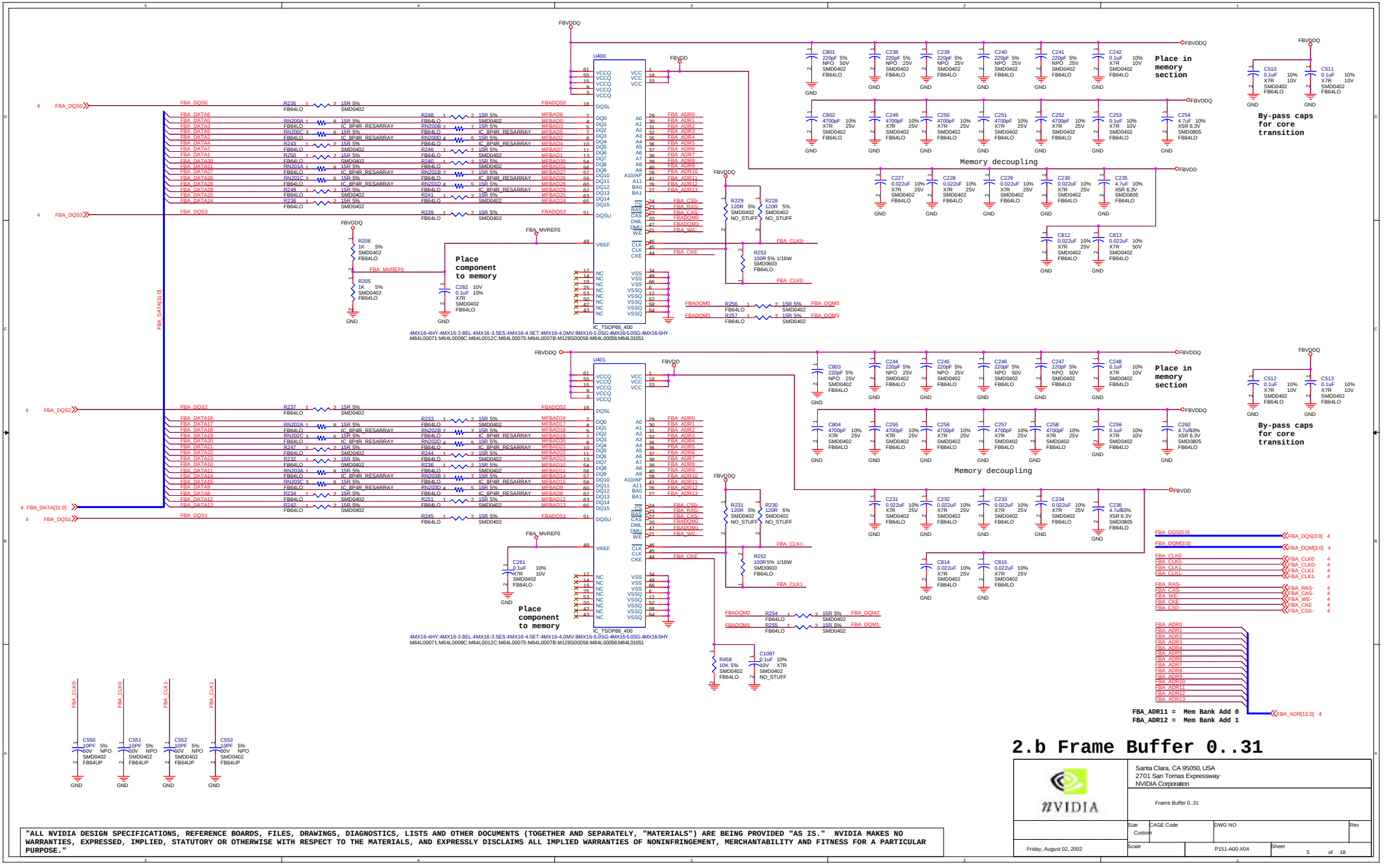

2.b Frame Buffer 0..31

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Frame Buffer 0..31

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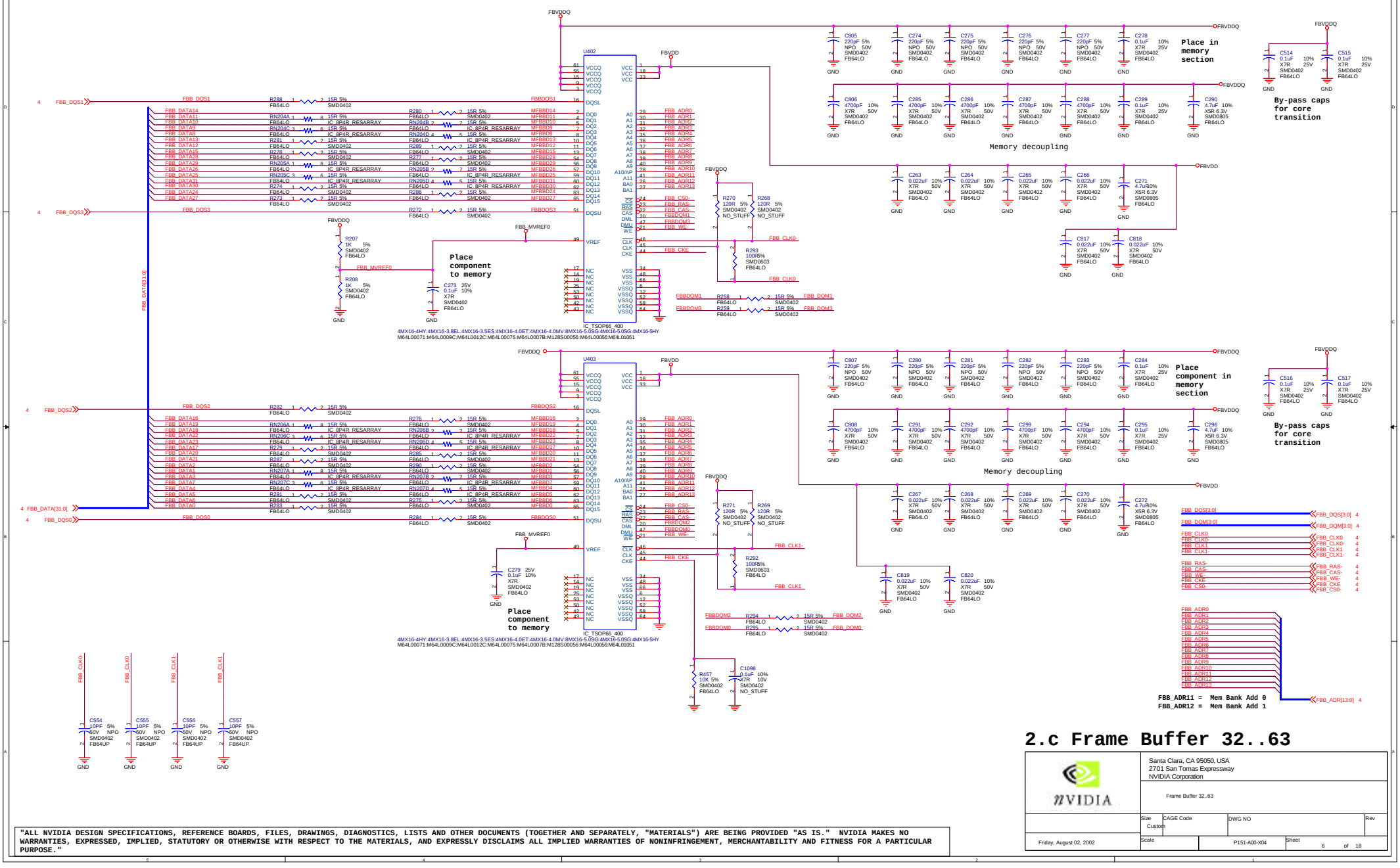

2.c Frame Buffer 32..63

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Frame Buffer 32..63

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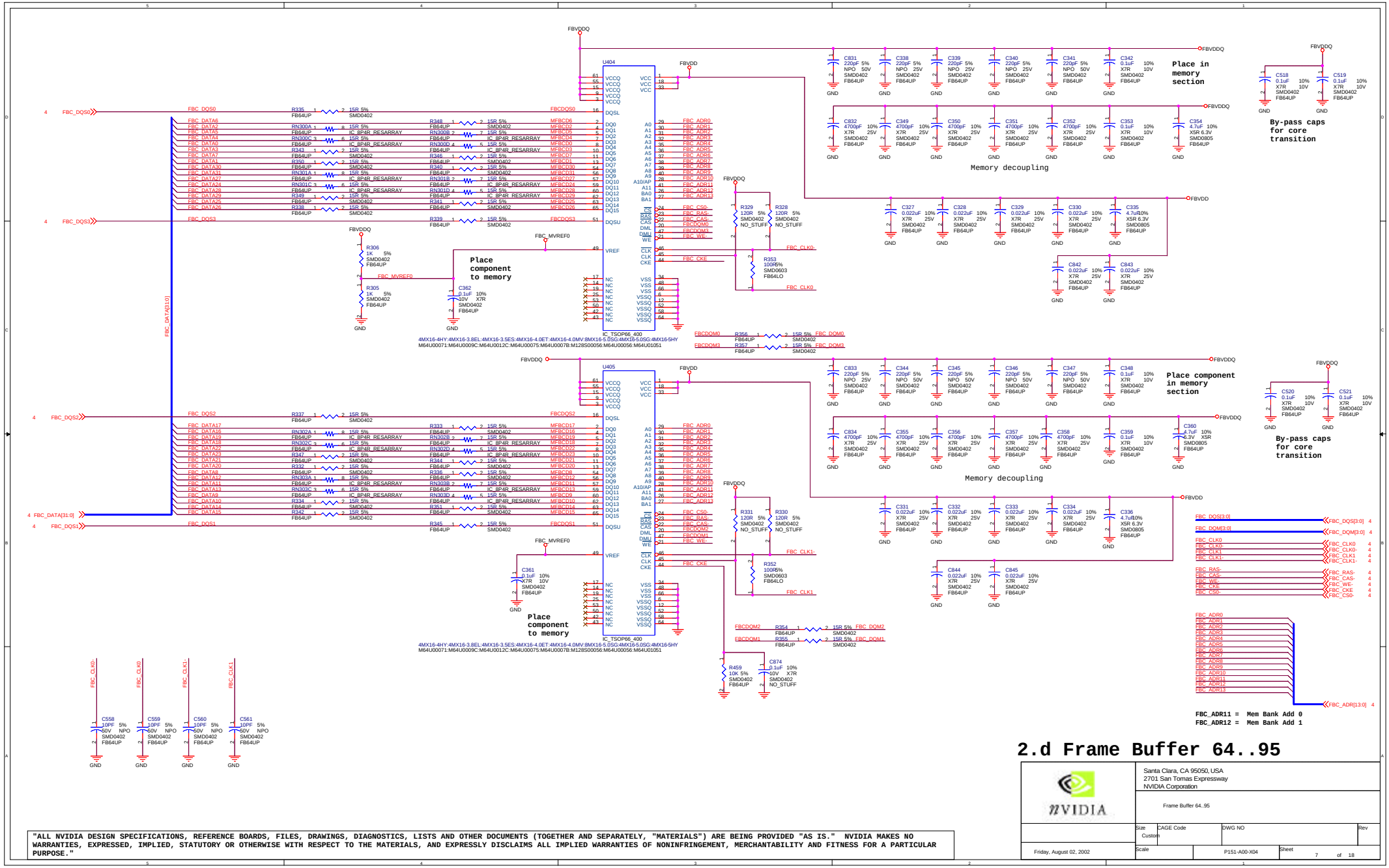

2.d Frame Buffer 64..95

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Frame Buffer 64..95

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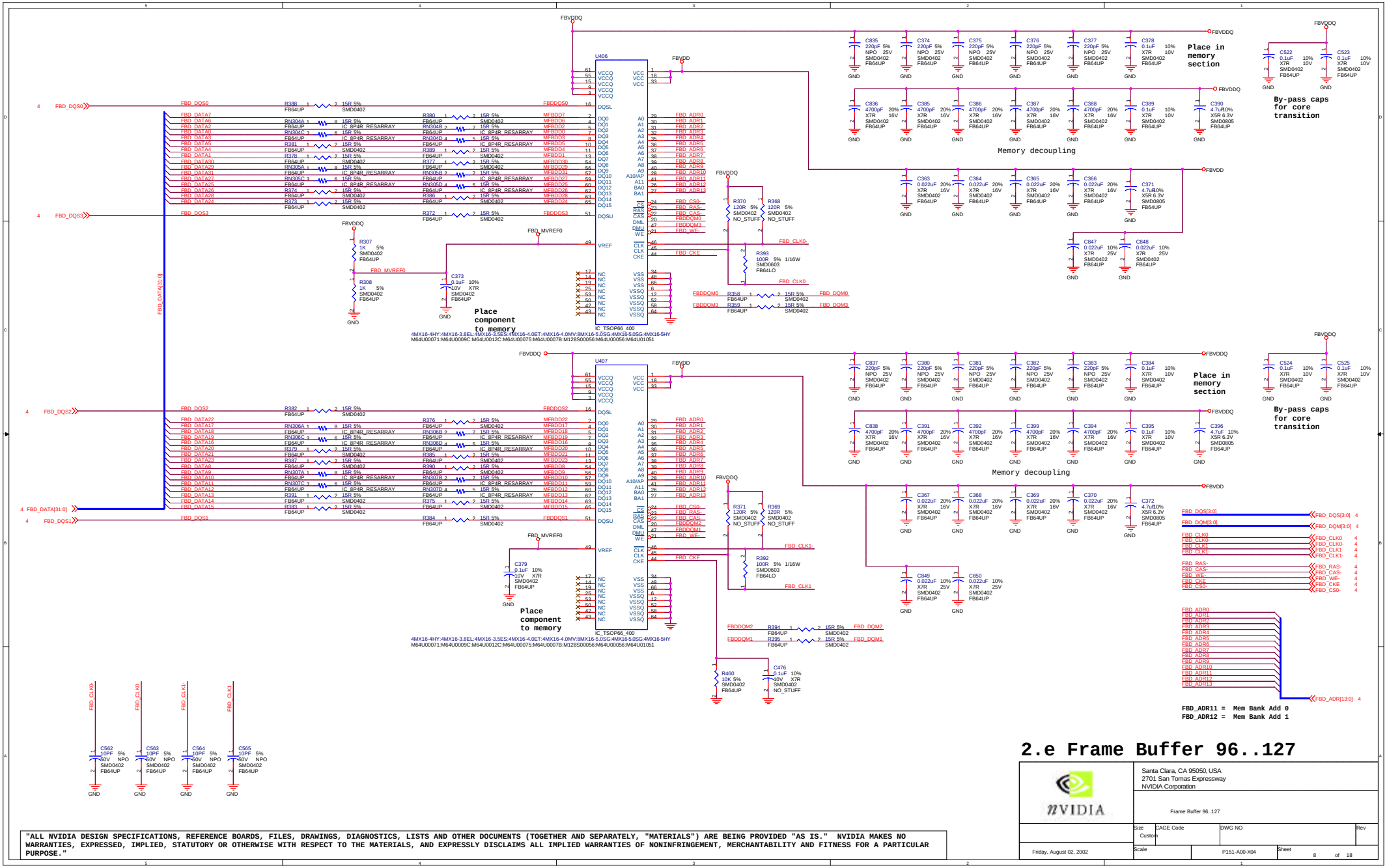

2.e Frame Buffer 96..127

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Frame Buffer 96..127

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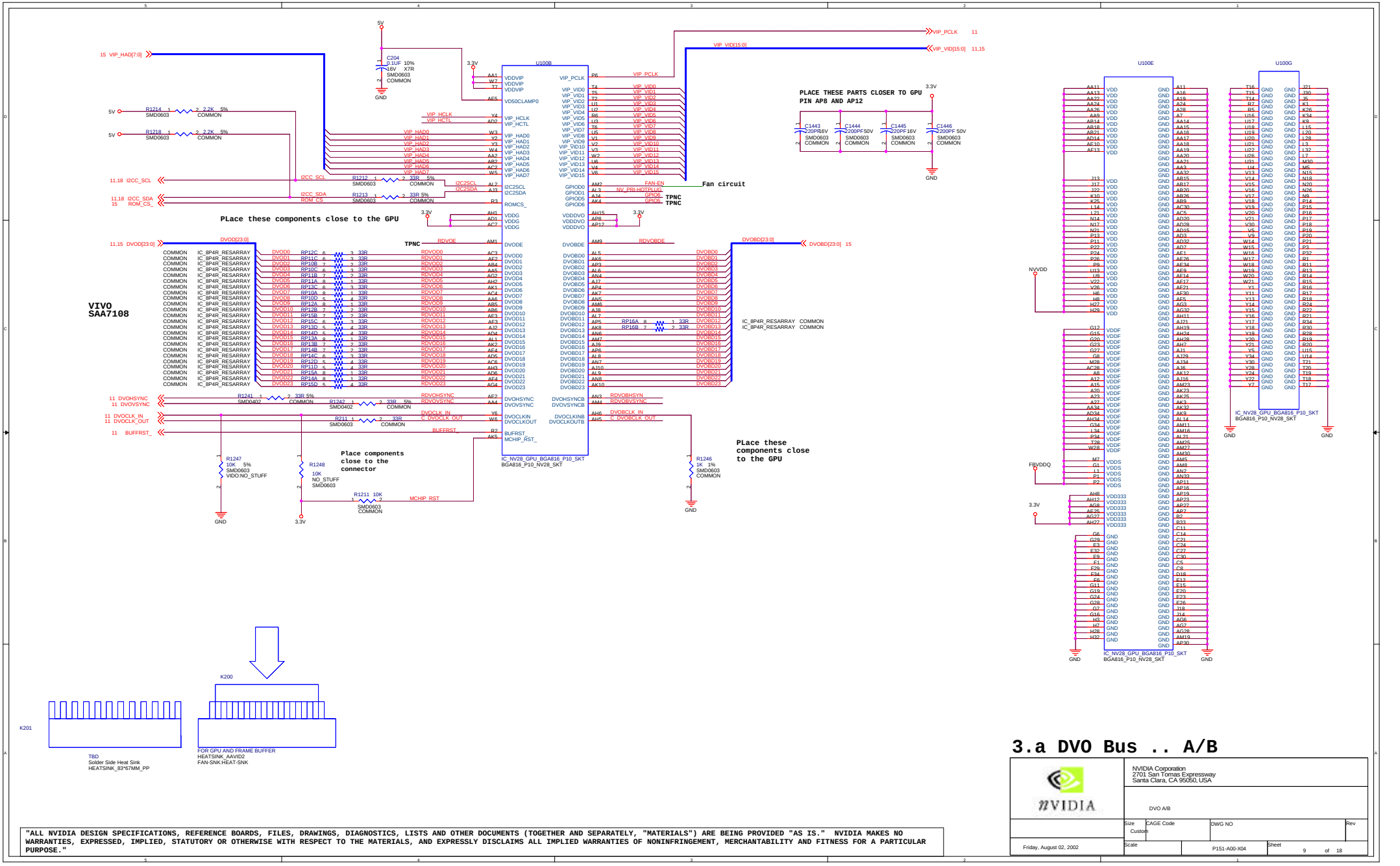

3.a DVO Bus .. A/B

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DVO A/B

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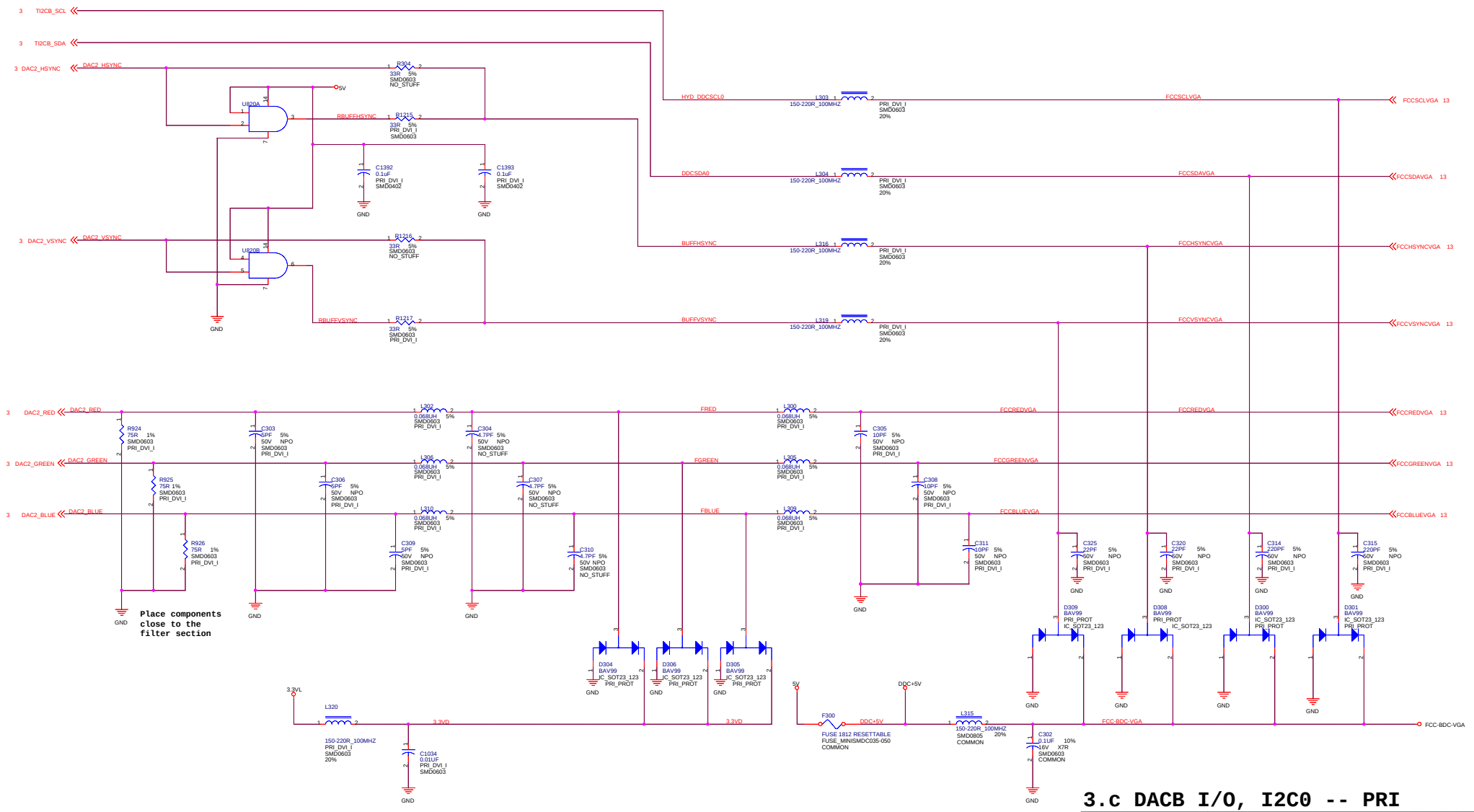

3.c DACB I/O, I2C0 -- PRI

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DACB I/O, I2C0 -- PRI

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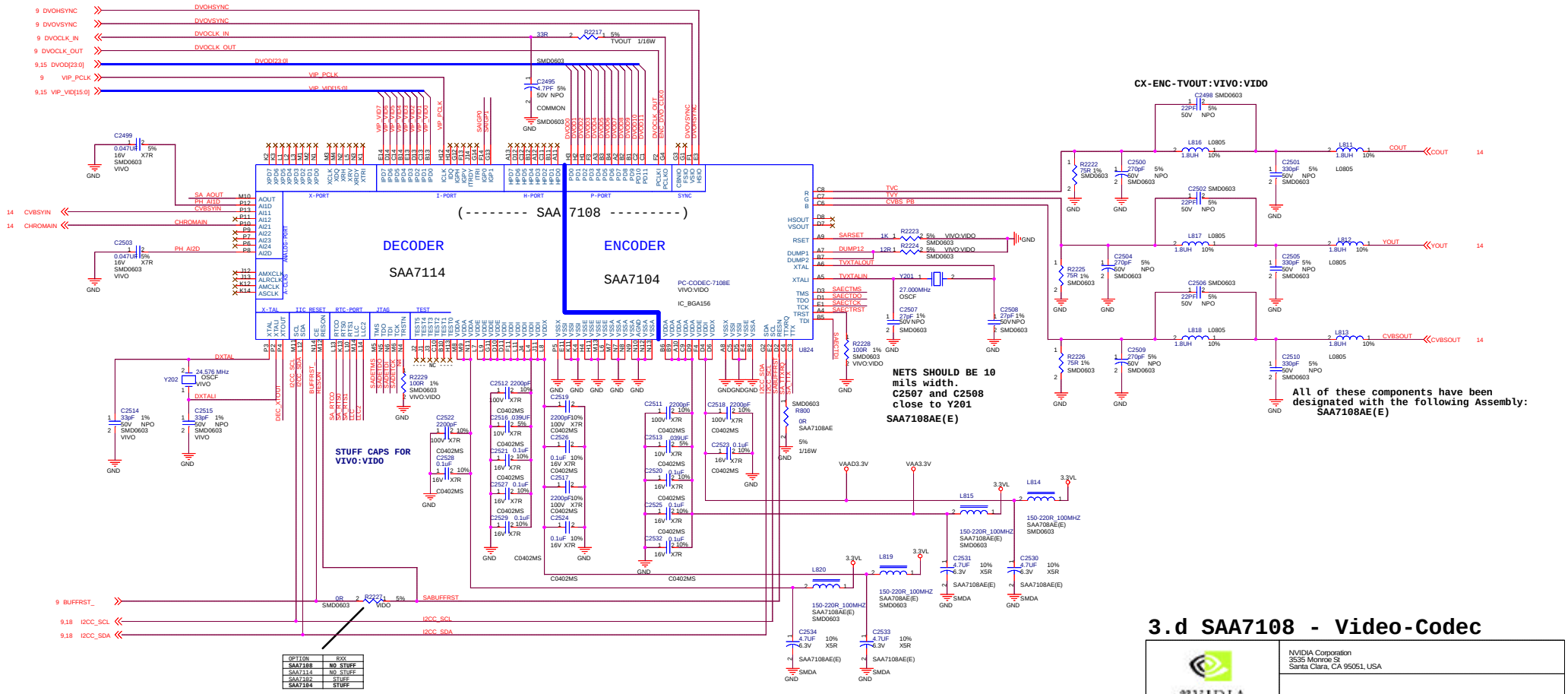

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3.d SAA7108 - Video-Codec

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SAA7108 - Video-Codec

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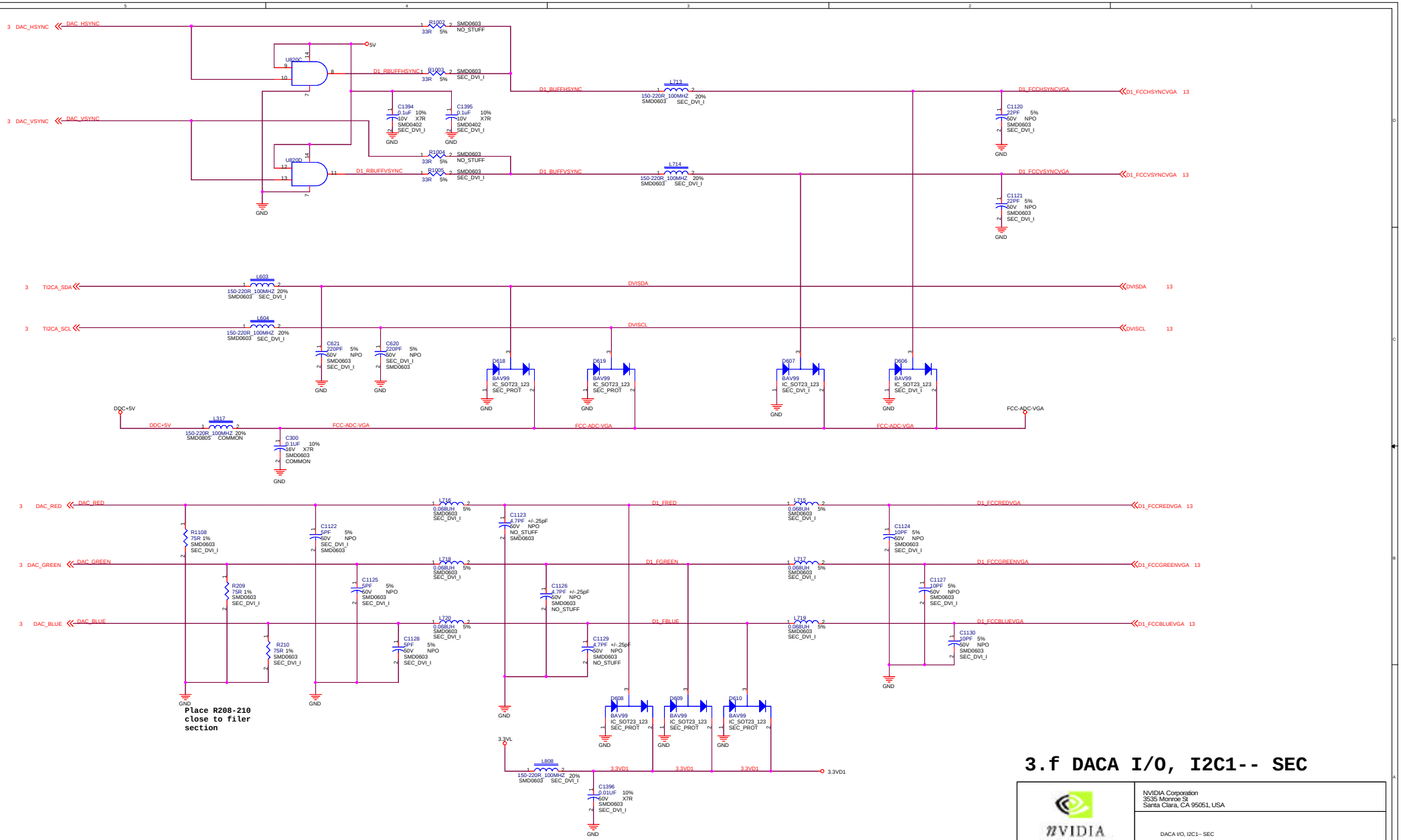

3.f DACA I/O, I2C1-- SEC

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DACA I/O, I2C1-- SEC

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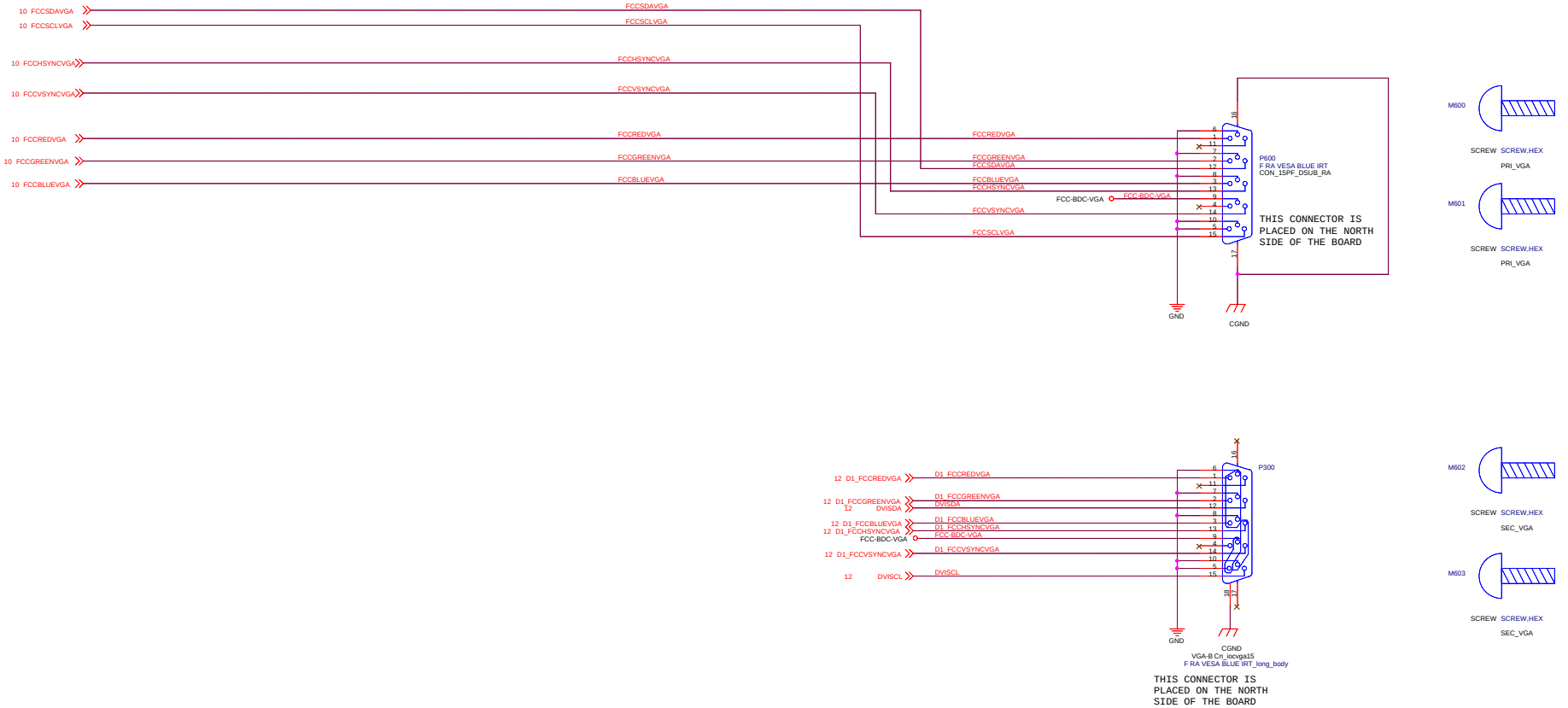

3.g DACB(A)/VGA-DB15 Connectors

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DACB(A)/VGA-DB15 Connectors

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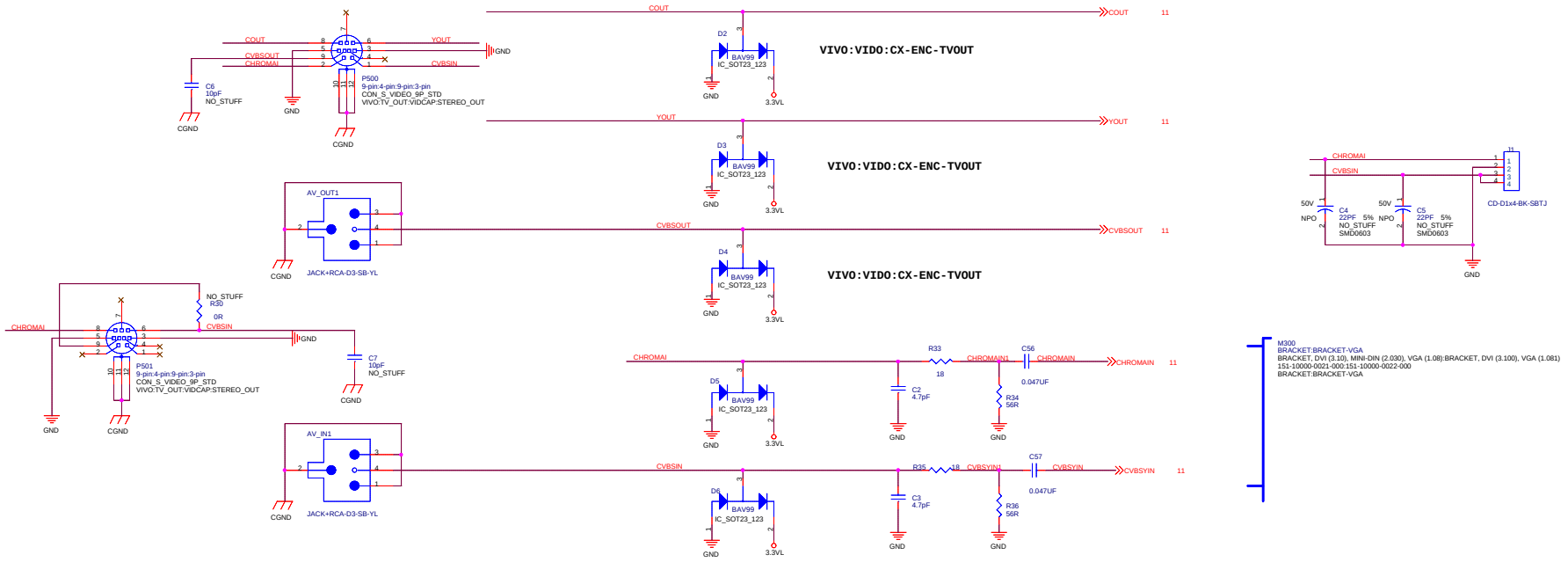
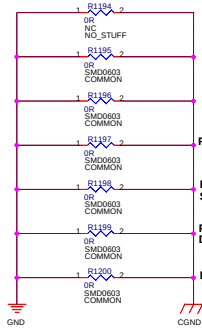


X-Components

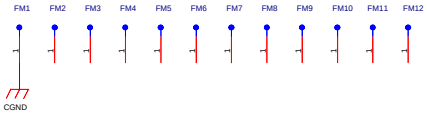


Place resistor above VGA connector

Place resistor between the DVI and S-Video connectors

Place resistor below S-Video and DVIconnectors

Place resistor below the DVIconnector



All of these components have been designated with the following Assembly: VIVO

3.h Connector - S-Video-Vidcap.

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Connector - S-Video-Vidcap.

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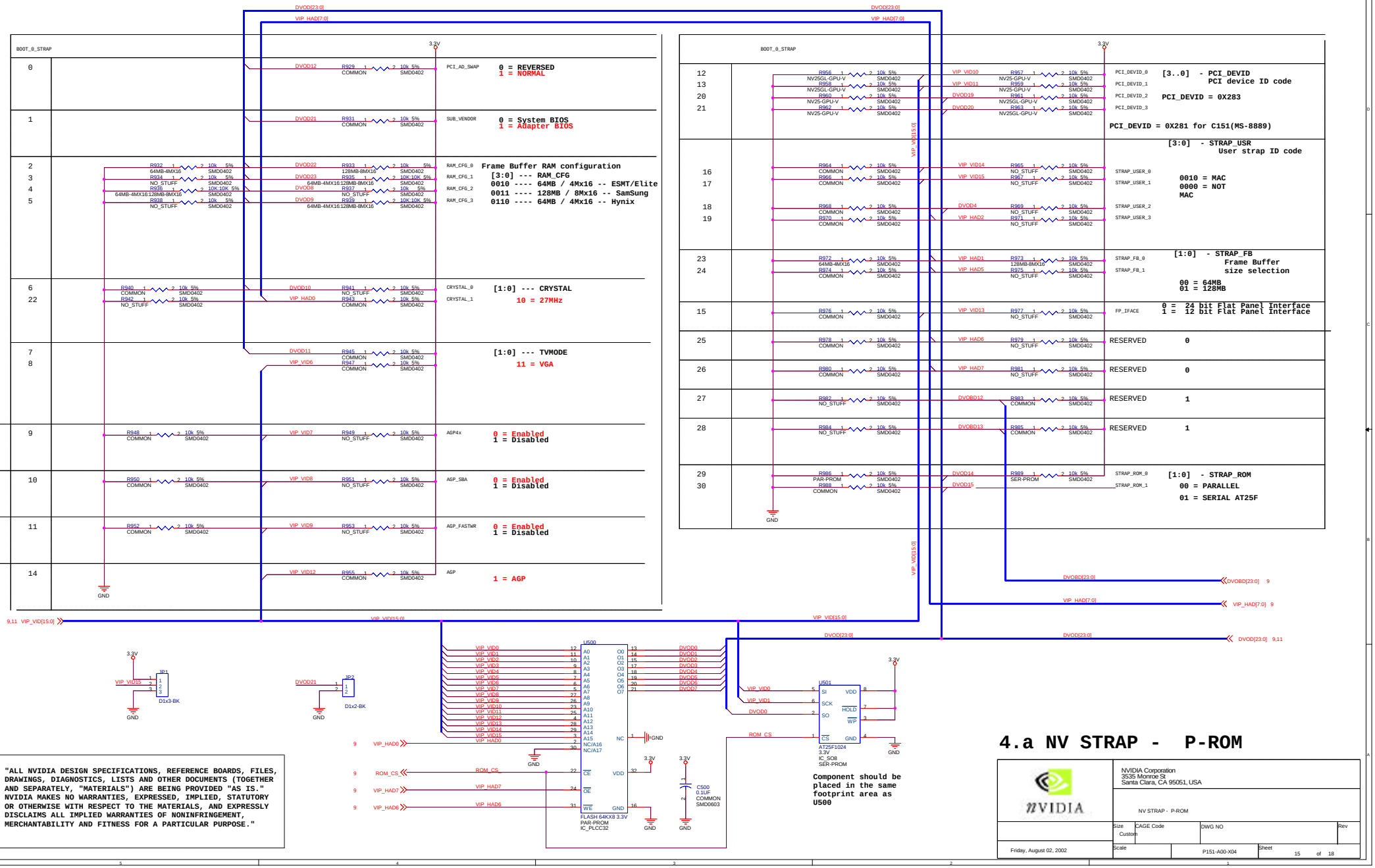

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4.a NV STRAP - P-ROM

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NV STRAP - P-ROM

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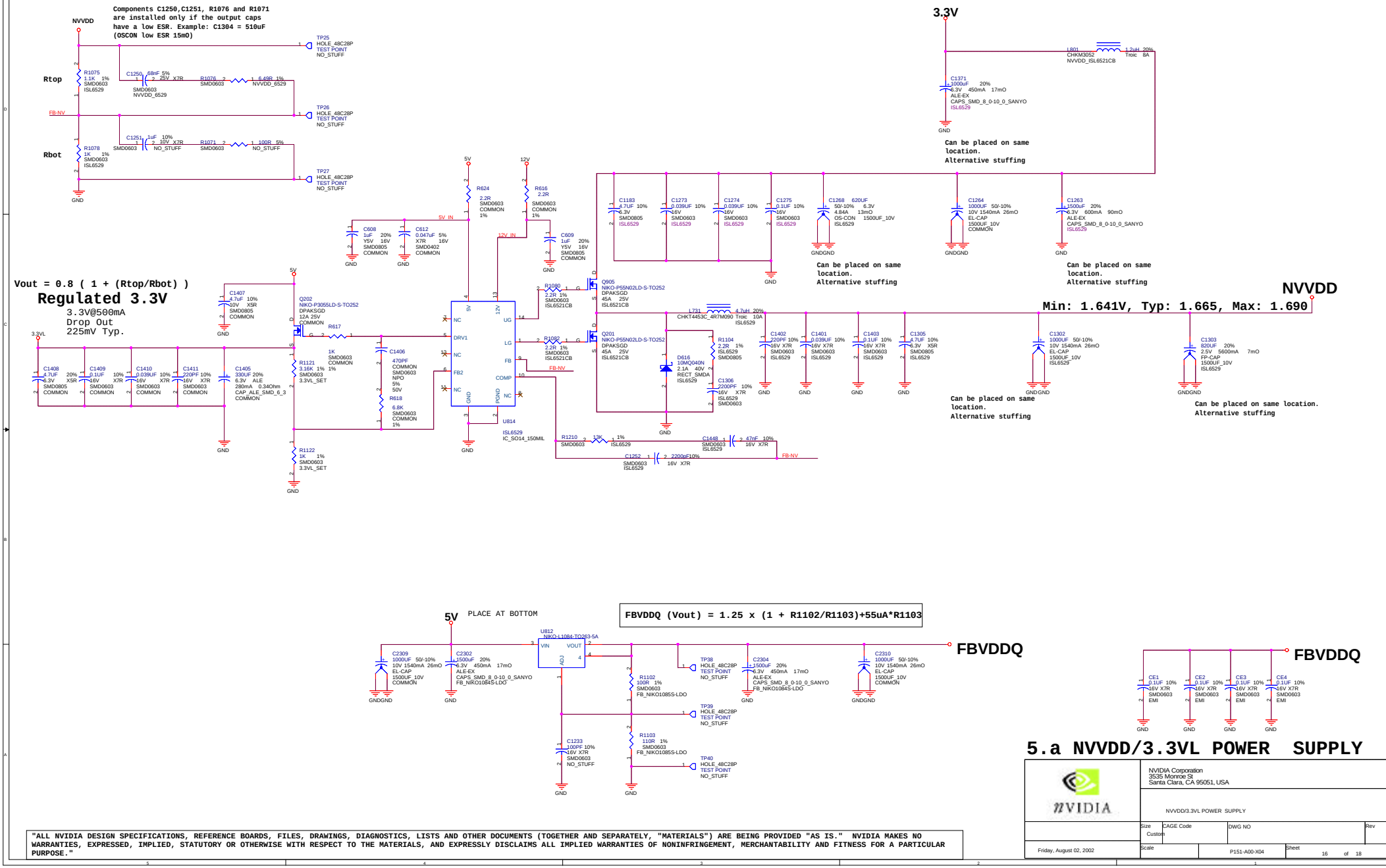

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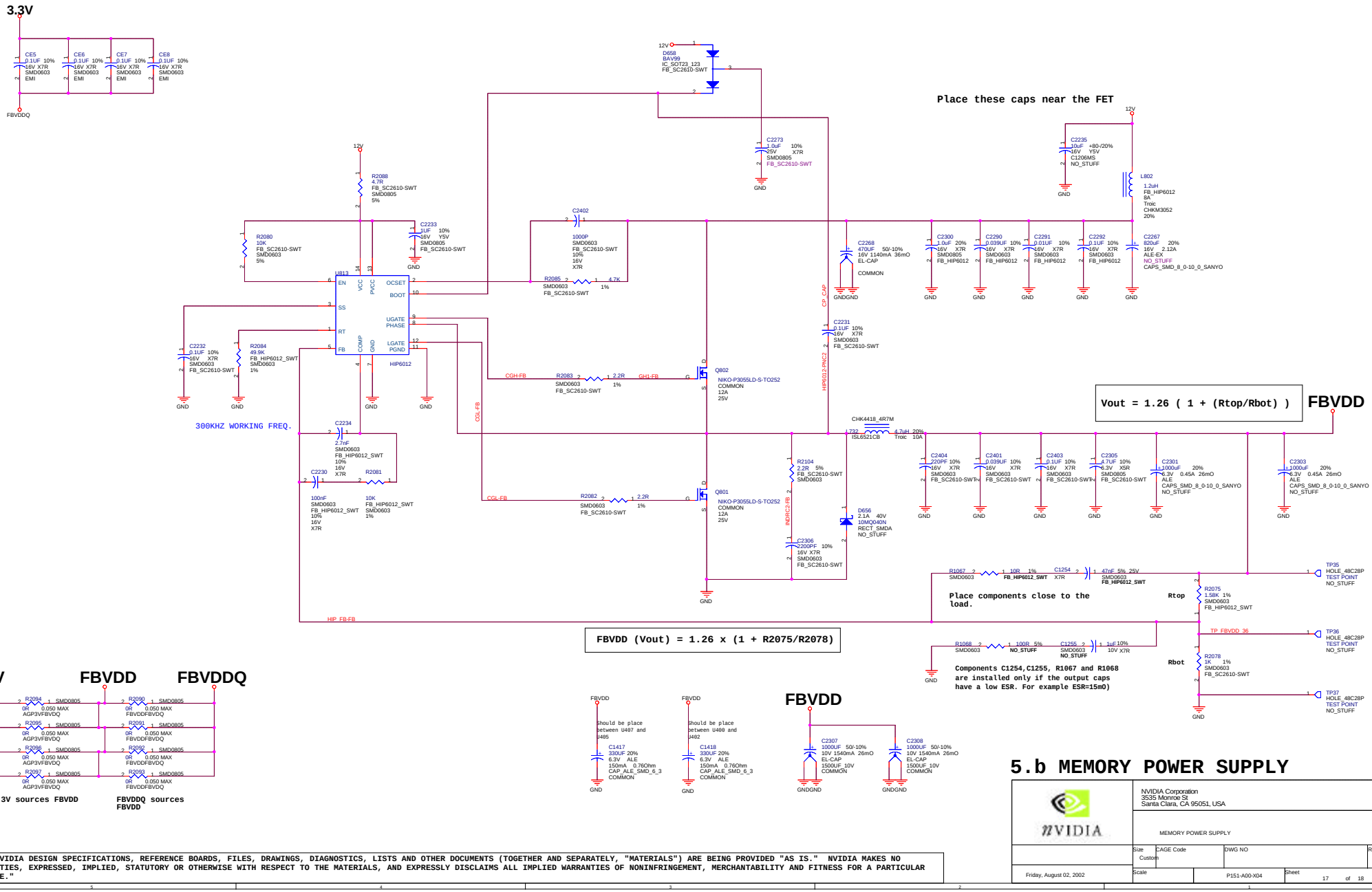

5.b MEMORY POWER SUPPLY

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NVIDIA Corporation
3535 Monroe St
Santa Clara, CA 95051, USA

MEMORY POWER SUPPLY

Size	CAGE Code	DWG NO	Rev
Custom			

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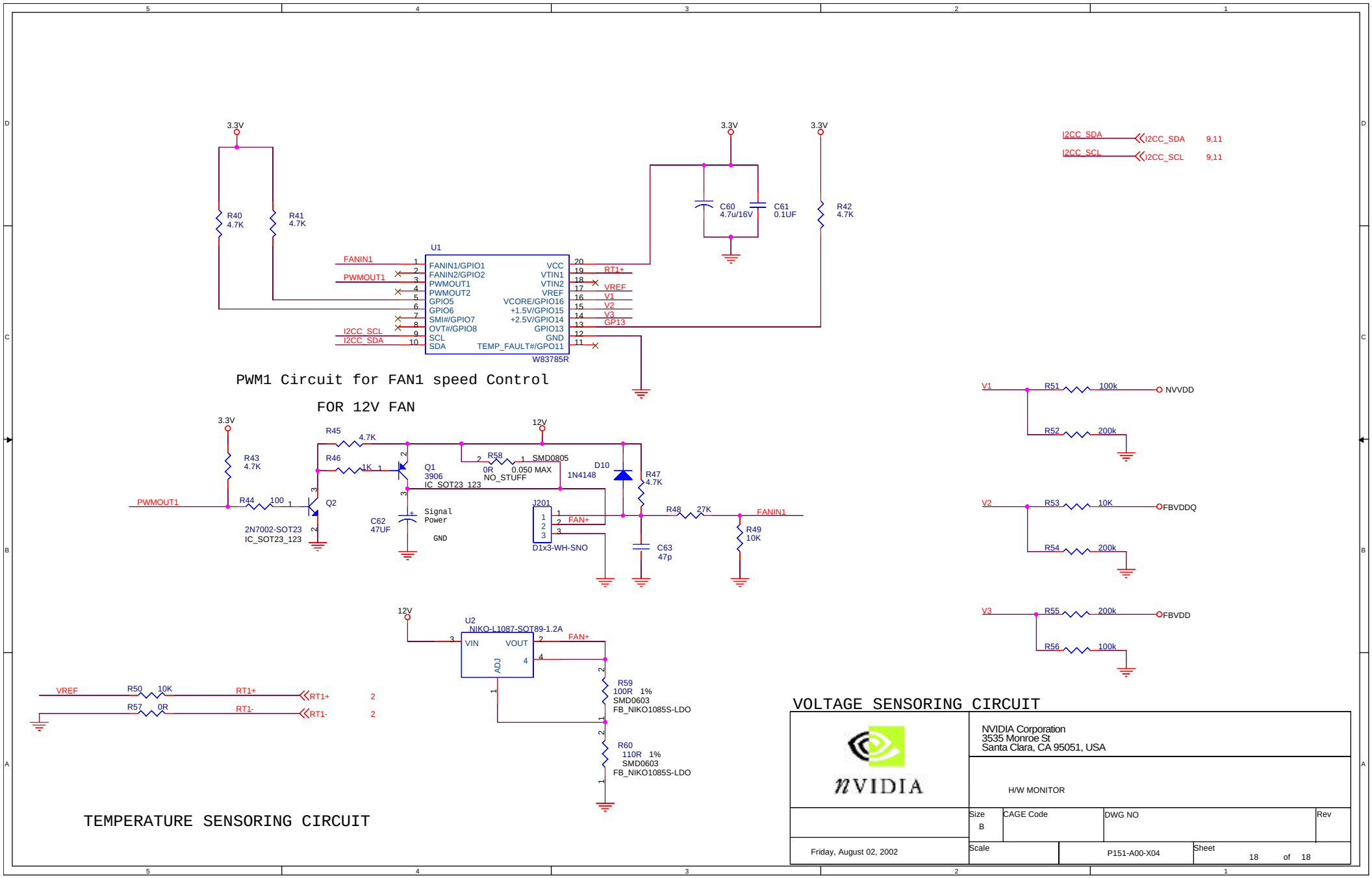
3.3V
R40
4.7K
R41
4.7K
U1
FANIN1
PWMOUT1
I2CC_SCL
I2CC_SDA
FANIN1/GPIO1
FANIN2/GPIO2
PWMOUT1
PWMOUT2
GPIO5
GPIO6
SMI#/GPIO7
OVT#/GPIO8
SCL
SDA
VCC
VTIN1
VTIN2
VREF
VCORE/GPIO16
+1.5V/GPIO15
+2.5V/GPIO14
GPIO13
GND
TEMP_FAULT#/GPO11
W83785R
RT1+
VREF
V1
V2
V3
GP13
C60
4.7u/16V
C61
0.1UF
R42
4.7K
I2CC_SDA
I2CC_SCL
9,11
PWM1 Circuit for FAN1 speed Control
FOR 12V FAN
R43
4.7K
R45
4.7K
R46
1K
R44
100
Q2
2N7002-SOT23
IC_SOT23_123
Q1
3906
IC_SOT23_123
R58
0R
0.050 MAX
NO_STUFF
SMD0805
D10
1N4148
R47
4.7K
C62
47UF
Signal
Power
GND
J201
D1x3-WH-SNO
FAN+
R48
27K
R49
10K
C63
47p
12V
V1
R51
100k
NVVDD
R52
200k
V2
R53
10K
FBVDDQ
R54
200k
V3
R55
200k
FBVDD
R56
100k
VREF
R50
10K
R57
0R
RT1+
RT1-
U2
NIKO-L1087-SOT89-1.2A
VIN
VOUT
ADJ
R59
100R 1%
SMD0603
FB_NIKO1085S-LDO
R60
110R 1%
SMD0603
FB_NIKO1085S-LDO
TEMPERATURE SENSORING CIRCUIT
VOLTAGE SENSORING CIRCUIT
NVIDIA Corporation
3535 Monroe St
Santa Clara, CA 95051, USA
H/W MONITOR
Size
B
CAGE Code
DWG NO
Rev
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