

# Nozomi-4 SWG SOVP LOGIC SCHEMATICS

- 1.TITLE PAGE

2.EC HISTORY

3.CPU(1/8) : DMI/EDP/PEG/FDI

4.CPU(2/8) : CLK/MISC/JTAG

5.CPU(3/8) : DDR3 CHANNEL- A

6.CPU(4/8) : DDR3 CHANNEL- B

7.CPU(5/8) : PROCESSOR POWER

8.CPU(6/8) : GRAPHICS POWER

9.CPU(7/8) : GND

10.CPU(8/8) : CFG/RESERVED

11.XDP CONNECTOR

12.DDR3 SO DIMM CHANNEL-A

13.DDR3 SO DIMM CHANNEL-B

14.DDR3 DECOUPLING

15.N13P-NS1(1/6) : PEG I/F

16.N13P-NS1(2/6) : DIGITAL OUT I/F

17.N13P-NS1(3/6) : VRAM I/F

18.N13P-NS1(4/6) : GPIO

19.N13P-NS1(5/6) : POWER

20.N13P-NS1(6/6) : GND

21.VRAM CHANNEL-A

22.VRAM CHANNEL-B

23.MEMORY TERMINATION

24.PCH(1/9) : HDA/JTAG/SPI/SATA

25.PCH(2/9) : PCI-E/SMBUS/CLK

26.PCH(3/9) : DMI/FDI/PM

27.PCH(4/9) : LVDS/CRT/DDI

28.PCH(5/9) : PCI/USB/NVRAM

29.PCH(6/9) : GPIO/NCTF/RSVD

30.PCH(7/9) : POWER

31.PCH(8/9) : POWER

32.PCH(9/9) : GND

33.LVDS SWITCH

34.LCD CONNECTOR

35.RGB SWITCH

36.EXT CRT INTERFACE
- 37.DISPLAY PORT CONNECTOR

38.DISPLAY PORT MUX

39.RTC BATTERY

40.SATA HDD CONN

41.SATA BAY I/F CONN

42.USB POWER/CONN

43.AUDIO ALC3202-GR

44.AUDIO CONNECTOR

45.AUDIO JACK SENSE

46.AUDIO EXT MIC I/F

47.AUDIO SPEAKER

48.AUDIO BEEP

49.GBE LEWISVILLE

50.GBE LAN SWITCH

51.GBE MAGNETICS

52.I/O SUB CARD I/F

53.PCIE MINI CARD SLOT

54.MEDIA CARD CONTROLLER

55.MEDIA CARD INTERFACE

56.EXPRESS CARD/SMART CARD I/F

57.SLOT POWER CONTROL

58.SPI FLASH

59.DOCKING CONNECTOR

60.MEC1619(1/3)

61.MEC1619(2/3)

62.MEC1619(3/3)

63.KEYBOARD CONNECTOR

64.TOUCH PAD CONNECTOR

65.WIRELESS DISABLE SW

66.FAN CONNECTOR

67.G-SENSOR

68.TPM

69.EEPROM/SMBUS SW

NZM4H-7

VER 7.54

MAR/19/2012

- 70.THINK ENGINE(1/2)
- 71.THINK ENGINE(2/2)
- 72.DC-IN
- 73.BATTERY INPUT
- 74.BATTERY CHARGER(BQ24760)
- 75.CHARGER SELECTOR
- 76.BATTERY MONITOR
- 77.POWER SEQUENCE
- 78.DC/DC VCC5M/VCC3M (TPS51220A)
- 79.DC/DC VCCCPUCORE(VT1318M/VT1324S)
- 80.DC/DC VCCGFXCORE\_I(VT1324S)
- 81.VCCCPUCORE DECOUPLING
- 82.DC/DC VCCGFXCORE\_D (TPS51728)
- 83.DC/DC VCC1R05B\_VTT(VT356)
- 84.DC/DC VCC1R05AMT(VT356)
- 85.DC/DC VCC1R5A(VT357)
- 86.DC/DC VCC0R75B(MAX1510)
- 87.DC/DC VCC1R5VIDEO(VT356)
- 88.DC/DC VCC1R05VIDEO\_PLL(TPS74801)
- 89.DC/DC VCC1R8B(BD9139)
- 90.DC/DC VCCSA(VT370)
- 91.LOAD SW LAN
- 92.LOAD SW VIDEO
- 93.BLANK
- 94.LOAD SW B
- 95.LOAD SW VCC5MUBAY
- 96.LOAD SW WAN & WLAN
- 97.PTH FOR SCREW HOLES

BASE LOGIC :Nozomi-4 SWG SVT

VER 7.03

Jan/25/2012

EC HISTORY

NOZOMI-4 PRE-DV (BASE LOGIC :NZM3H-7 VER 7.00 Nov/30/2010)

VER.0.00 12/08/2010 APPLIED PDV\_EC001  
VER.0.01 12/14/2010 APPLIED PDV\_EC002-012  
VER.0.02 12/15/2010 APPLIED PDV\_EC013-016,018  
VER.0.03 12/16/2010 APPLIED PDV\_EC017,019-026  
VER.0.04 12/21/2010 APPLIED PDV\_EC027-028  
VER.0.05 12/22/2010 APPLIED PDV\_EC030-034  
VER.0.06 12/24/2010 APPLIED PDV\_EC035-037  
VER.0.07 12/27/2010 APPLIED PDV\_EC038-041,043-046  
VER.0.08 12/29/2010 APPLIED PDV\_EC047-049  
VER.0.09 01/06/2011 APPLIED PDV\_EC051-058  
VER.0.10 01/07/2011 APPLIED PDV\_EC042,050,059-063  
VER.0.11 01/11/2011 APPLIED PDV\_EC064-069  
VER.0.12 01/13/2011 APPLIED PDV\_EC070-074  
VER.0.13 01/14/2011 APPLIED PDV\_EC075-077  
VER.0.14 01/17/2011 APPLIED PDV\_EC079,080  
VER.0.15 01/19/2011 APPLIED PDV\_EC078,081  
VER.0.16 01/21/2011 APPLIED PDV\_EC082-085  
VER.0.17 01/24/2011 APPLIED PDV\_EC086,087  
VER.0.18 01/25/2011 APPLIED PDV\_EC088-092  
VER.0.19 01/26/2011 APPLIED PDV\_EC093-095  
VER.0.20 01/27/2011 APPLIED PDV\_EC096,097  
VER.0.21 01/28/2011 APPLIED PDV\_EC098-100  
VER.0.22 01/31/2011 APPLIED PDV\_EC101,102  
VER.0.23 02/01/2011 APPLIED PDV\_EC103-109  
VER.0.24 02/02/2011 APPLIED PDV\_EC110-116  
VER.0.25 02/03/2011 APPLIED PDV\_EC117,118  
VER.0.26 02/04/2011 APPLIED PDV\_EC119-123  
VER.0.27 02/07/2011 APPLIED PDV\_EC124-130  
VER.0.28 02/08/2011 APPLIED PDV\_EC131-133  
VER.0.29 02/09/2011 APPLIED PDV\_EC134-136  
VER.0.30 02/10/2011 APPLIED PDV\_EC139,140  
VER.0.31 02/14/2011 APPLIED PDV\_EC137,138  
VER.0.32 02/15/2011 APPLIED PDV\_EC141-145  
VER.0.33 02/16/2011 APPLIED PDV\_EC146-148  
VER.0.34 02/17/2011 APPLIED PDV\_EC149-151  
VER.0.35 02/18/2011 APPLIED PDV\_EC152-160  
VER.0.36 02/21/2011 APPLIED PDV\_EC161-166  
VER.0.37 02/22/2011 APPLIED PDV\_EC167-183  
VER.0.38 02/23/2011 APPLIED PDV\_EC184-187

NOZOMI-4 SWG SDV (BASE LOGIC :Nozomi-4 SWG Pre-DV VER 0.38 Feb/23/2011)

VER.1.00 02/24/2011 APPLIED SDV\_EC001  
VER.1.01 02/25/2011 APPLIED SDV\_EC002-007  
VER.1.02 02/28/2011 APPLIED SDV\_EC008-033  
VER.1.03 03/01/2011 APPLIED SDV\_EC034-052  
VER.1.04 03/02/2011 APPLIED SDV\_EC053-061  
VER.1.05 03/03/2011 APPLIED SDV\_EC062-076  
VER.1.06 03/04/2011 APPLIED SDV\_EC077-079,081-083  
VER.1.07 03/07/2011 APPLIED SDV\_EC084-089  
VER.1.08 03/08/2011 APPLIED SDV\_EC090-099,101,102  
VER.1.09 03/09/2011 APPLIED SDV\_EC103-114  
VER.1.10 03/10/2011 APPLIED SDV\_EC115-121  
VER.1.11 03/11/2011 APPLIED SDV\_EC122-127  
VER.1.12 03/14/2011 APPLIED SDV\_EC128,130  
VER.1.13 03/15/2011 APPLIED SDV\_EC131-134  
VER.1.14 03/16/2011 APPLIED SDV\_EC129  
VER.1.15 03/17/2011 APPLIED SDV\_EC135  
VER.1.16 03/18/2011 APPLIED SDV\_EC136-141  
VER.1.17 03/22/2011 APPLIED SDV\_EC142-144  
VER.1.18 03/23/2011 APPLIED SDV\_EC145-147  
VER.1.19 03/24/2011 APPLIED SDV\_EC149-154  
VER.1.20 03/25/2011 APPLIED SDV\_EC148  
VER.1.21 03/28/2011 APPLIED SDV\_EC155-158  
VER.1.22 03/29/2011 APPLIED SDV\_EC159-163  
VER.1.23 03/30/2011 APPLIED SDV\_EC164-168  
VER.1.24 03/31/2011 APPLIED SDV\_EC169-171  
VER.1.25 04/01/2011 APPLIED SDV\_EC172,173  
VER.1.26 04/04/2011 APPLIED SDV\_EC174,175  
VER.1.27 04/05/2011 APPLIED SDV\_EC176,177  
VER.1.28 04/06/2011 APPLIED SDV\_EC178-180  
VER.1.29 04/07/2011 APPLIED SDV\_EC181-184  
VER.1.30 04/08/2011 APPLIED SDV\_EC185-189  
VER.1.31 04/11/2011 APPLIED SDV\_EC190,191

VER.1.32 04/13/2011 APPLIED SDV\_EC192-194  
VER.1.33 04/14/2011 APPLIED SDV\_EC195  
VER.1.34 04/15/2011 APPLIED SDV\_EC196  
VER.1.35 04/18/2011 APPLIED SDV\_EC197-199,201  
VER.1.36 04/19/2011 APPLIED SDV\_EC202,203  
VER.1.37 04/20/2011 APPLIED SDV\_EC205-208  
VER.1.38 04/21/2011 APPLIED SDV\_EC209-213  
VER.1.39 04/22/2011 APPLIED SDV\_EC214-217  
VER.1.40 04/25/2011 APPLIED SDV\_EC218-220,224  
VER.1.41 04/26/2011 APPLIED SDV\_EC228-232  
VER.1.42 04/27/2011 APPLIED SDV\_EC236,240,242,245,247  
VER.1.43 04/28/2011 APPLIED SDV\_EC248,251-254,261  
VER.1.44 05/06/2011 APPLIED SDV\_EC262,263  
VER.1.45 05/20/2011 APPLIED SDV\_EC264,265

Nozomi-4 SWG MFVT (BASE LOGIC :Nozomi-4 SWG SDV VER 1.45 May/20/2011)

VER.2.00 05/23/2011 APPLIED MFVT\_EC001-008  
VER.2.01 05/24/2011 APPLIED MFVT\_EC009-014,017  
VER.2.02 05/25/2011 APPLIED MFVT\_EC010,015,016,018  
VER.2.03 05/26/2011 APPLIED MFVT\_EC020  
VER.2.04 05/27/2011 APPLIED MFVT\_EC021,022  
VER.2.05 05/30/2011 APPLIED MFVT\_EC023,025,026  
VER.2.06 05/31/2011 APPLIED MFVT\_EC028  
VER.2.07 06/01/2011 APPLIED MFVT\_EC029,030  
VER.2.08 06/02/2011 APPLIED MFVT\_EC031,032  
VER.2.09 06/03/2011 APPLIED MFVT\_EC033  
VER.2.10 06/06/2011 APPLIED MFVT\_EC037-039,041,042  
VER.2.11 06/07/2011 APPLIED MFVT\_EC043,045,047  
VER.2.12 06/08/2011 APPLIED MFVT\_EC048,053  
VER.2.13 06/09/2011 APPLIED MFVT\_EC055,057,058,060,061  
VER.2.14 06/14/2011 APPLIED MFVT\_EC063  
VER.2.15 06/15/2011 APPLIED MFVT\_EC066  
VER.2.16 06/21/2011 APPLIED MFVT\_EC067

Nozomi-4 SWG FVT (BASE LOGIC :Nozomi-4 SWG MFVT VER 2.16 Jun/21/2011)

VER.3.00 06/23/2011 APPLIED FVT\_EC001-003  
VER.3.01 06/29/2011 APPLIED FVT\_EC006  
VER.3.02 07/01/2011 APPLIED FVT\_EC008  
VER.3.03 07/04/2011 APPLIED FVT\_EC004,009-013  
VER.3.04 07/05/2011 APPLIED FVT\_EC014-017,019  
VER.3.05 07/06/2011 APPLIED FVT\_EC020-024  
VER.3.06 07/07/2011 APPLIED FVT\_EC018,026  
VER.3.07 07/08/2011 APPLIED FVT\_EC028-031,034,036  
VER.3.08 07/11/2011 APPLIED FVT\_EC037  
VER.3.09 07/12/2011 APPLIED FVT\_EC041,044  
VER.3.10 07/13/2011 APPLIED FVT\_EC045,046  
VER.3.11 07/14/2011 APPLIED FVT\_EC048-052,055,056,058-060,063  
VER.3.12 07/15/2011 APPLIED FVT\_EC064  
VER.3.13 07/19/2011 APPLIED FVT\_EC065-070  
VER.3.14 07/21/2011 APPLIED FVT\_EC071-076  
VER.3.15 07/22/2011 APPLIED FVT\_EC078  
VER.3.16 07/26/2011 APPLIED FVT\_EC079-081

Nozomi-4 SWG SIT (BASE LOGIC :Nozomi-4 SWG FVT VER 3.16 Jul/26/2011)

VER.4.00 08/01/2011 APPLIED SIT\_EC001-009  
VER.4.01 08/02/2011 APPLIED SIT\_EC010-012  
VER.4.02 08/03/2011 APPLIED SIT\_EC013  
VER.4.03 08/04/2011 APPLIED SIT\_EC014-019  
VER.4.04 08/05/2011 APPLIED SIT\_EC020,021  
VER.4.05 08/17/2011 APPLIED SIT\_EC022-031,033,034  
VER.4.06 08/22/2011 APPLIED SIT\_EC035,036,039-042  
VER.4.07 08/23/2011 APPLIED SIT\_EC044,045  
VER.4.08 08/24/2011 APPLIED SIT\_EC046-050  
VER.4.09 08/25/2011 APPLIED SIT\_EC037,052-054  
VER.4.10 08/26/2011 APPLIED SIT\_EC055,056  
VER.4.11 08/29/2011 APPLIED SIT\_EC057  
VER.4.12 09/01/2011 APPLIED SIT\_EC059-061  
VER.4.13 09/05/2011 APPLIED SIT\_EC062,063  
VER.4.14 09/07/2011 APPLIED SIT\_EC064,065,070-079  
VER.4.15 09/08/2011 APPLIED SIT\_EC080-089  
VER.4.16 09/09/2011 APPLIED SIT\_EC092,095,096  
VER.4.17 09/12/2011 APPLIED SIT\_EC099,100  
VER.4.18 09/13/2011 APPLIED SIT\_EC101,102

VER.4.19 09/15/2011 APPLIED SIT\_EC104-106  
VER.4.20 09/21/2011 APPLIED SIT\_EC107

Nozomi-4 SWG SIT-R1 (BASE LOGIC :Nozomi-4 SWG SIT VER 4.20 Sep/21/2011)

VER.5.00 09/27/2011 APPLIED SIT-R\_EC001-003  
VER.5.01 10/11/2011 APPLIED SIT-R\_EC004-006  
VER.5.02 10/14/2011 APPLIED SIT-R\_EC007  
VER.5.03 10/28/2011 APPLIED SIT-R\_EC008  
VER.5.04 10/31/2011 APPLIED SIT-R\_EC009-012  
VER.5.05 11/01/2011 APPLIED SIT-R\_EC014  
VER.5.06 11/02/2011 APPLIED SIT-R\_EC015  
VER.5.07 11/04/2011 APPLIED SIT-R\_EC017-020,022  
VER.5.08 11/07/2011 APPLIED SIT-R\_EC023  
VER.5.09 11/09/2011 APPLIED SIT-R\_EC016  
VER.5.10 11/10/2011 APPLIED SIT-R\_EC024  
VER.5.11 11/15/2011 APPLIED SIT-R\_EC025-026

Nozomi-4 SWG SIT-R2 (BASE LOGIC :Nozomi-4 SWG SIT-R1 VER 5.11 Nov/15/2011)


VER.6.00 11/18/2011 APPLIED SIT-R2\_EC001-003  
VER.6.01 11/22/2011 APPLIED SIT-R2\_EC006  
VER.6.02 11/25/2011 APPLIED SIT-R2\_EC007  
VER.6.03 11/28/2011 APPLIED SIT-R2\_EC008  
VER.6.04 11/29/2011 APPLIED SIT-R2\_EC009-010  
VER.6.05 11/30/2011 APPLIED SIT-R2\_EC011-013  
VER.6.06 12/01/2011 APPLIED SIT-R2\_EC016  
VER.6.07 12/05/2011 APPLIED SIT-R2\_EC018

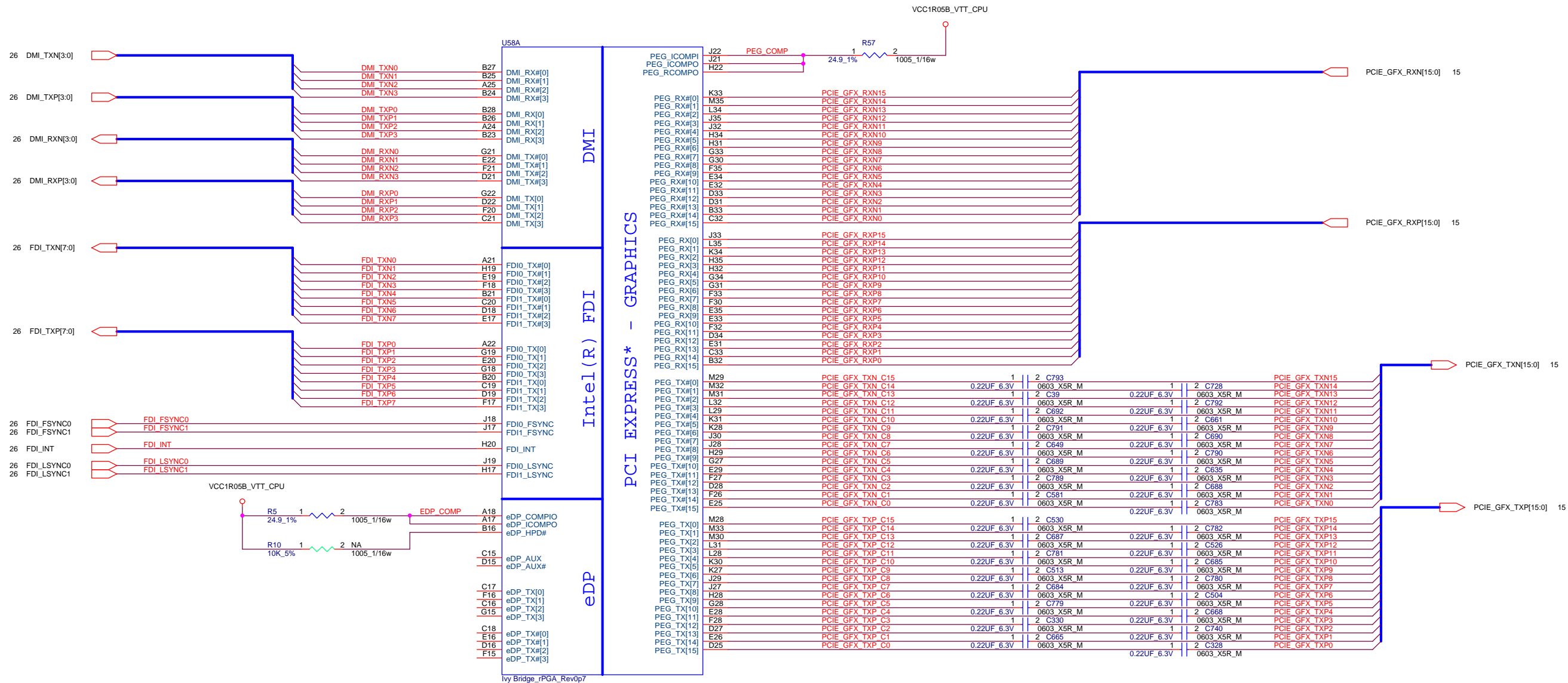
Nozomi-4 SWG SVT (BASE LOGIC :Nozomi-4 SWG SIT-R2 VER 6.07 Dec/05/2011)

VER.7.00 12/13/2011 APPLIED SVT\_EC001-006  
VER.7.01 12/15/2011 APPLIED SVT\_EC007  
VER.7.02 01/17/2012 APPLIED SVT\_EC011  
VER.7.03 01/25/2012 APPLIED SVT\_EC012

Nozomi-4 SWG SOVP (BASE LOGIC :Nozomi-4 SWG SVT VER 7.03 Jan/25/2012)

VER.7.50 02/20/2012 APPLIED SOVP\_EC001-002  
VER.7.51 02/24/2012 APPLIED SOVP\_EC003-004  
VER.7.52 03/05/2012 APPLIED SOVP\_EC005-006  
VER.7.53 03/08/2012 APPLIED SOVP\_EC007  
VER.7.54 03/19/2012 APPLIED SOVP\_EC008

			
Project Name : NZM-4 SWG SOVP		Title : EC HISTORY	
Size : C	Document Number :		Rev : 7.54
Date: Monday, March 19, 2012		Sheet :	2 of 97



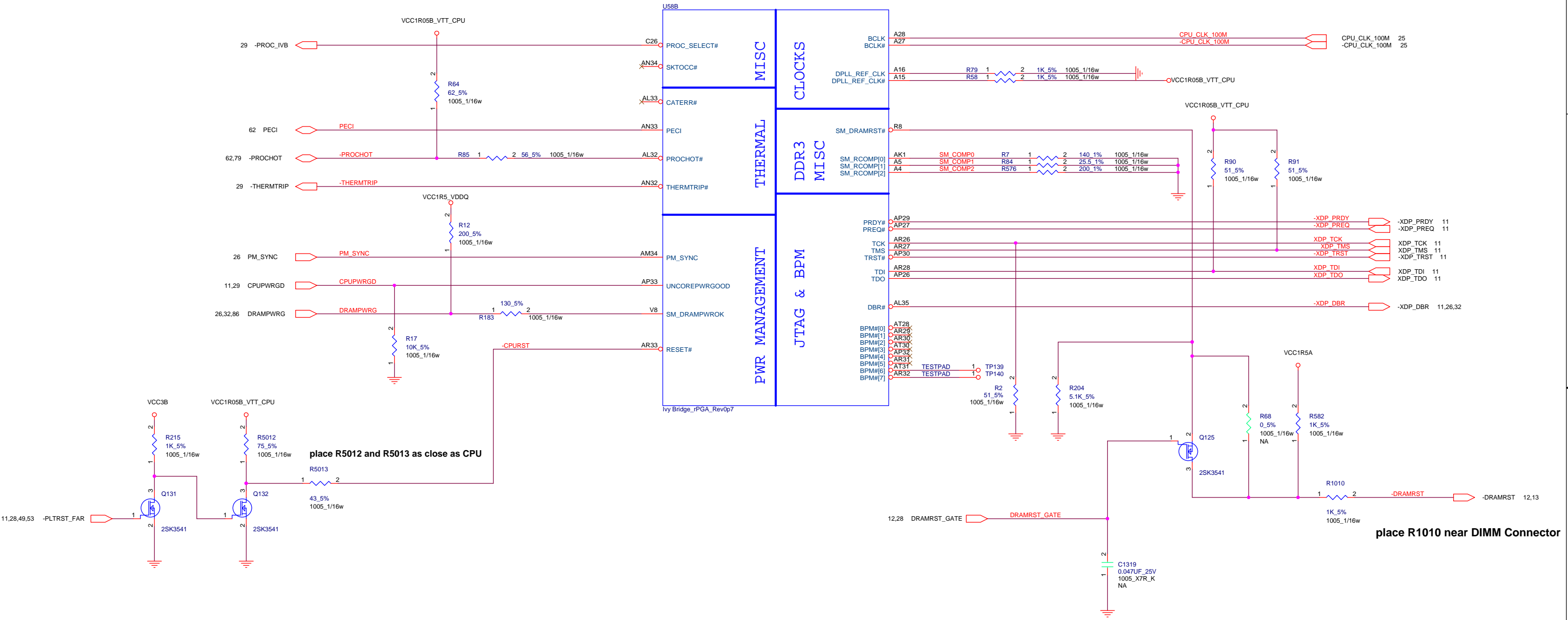
Project Name : NZM-4 SWG SOVP Title : CPU(1/8) DMI/EDP/PEG/FDI

Size : C Document Number : Rev : 7.54

Date: Monday, March 19, 2012 Sheet : 3 of 97

TABLE PROC\_SELECT#(-PROC\_IVB)

Sandy Bridge	High
Ivy Bridge	Low











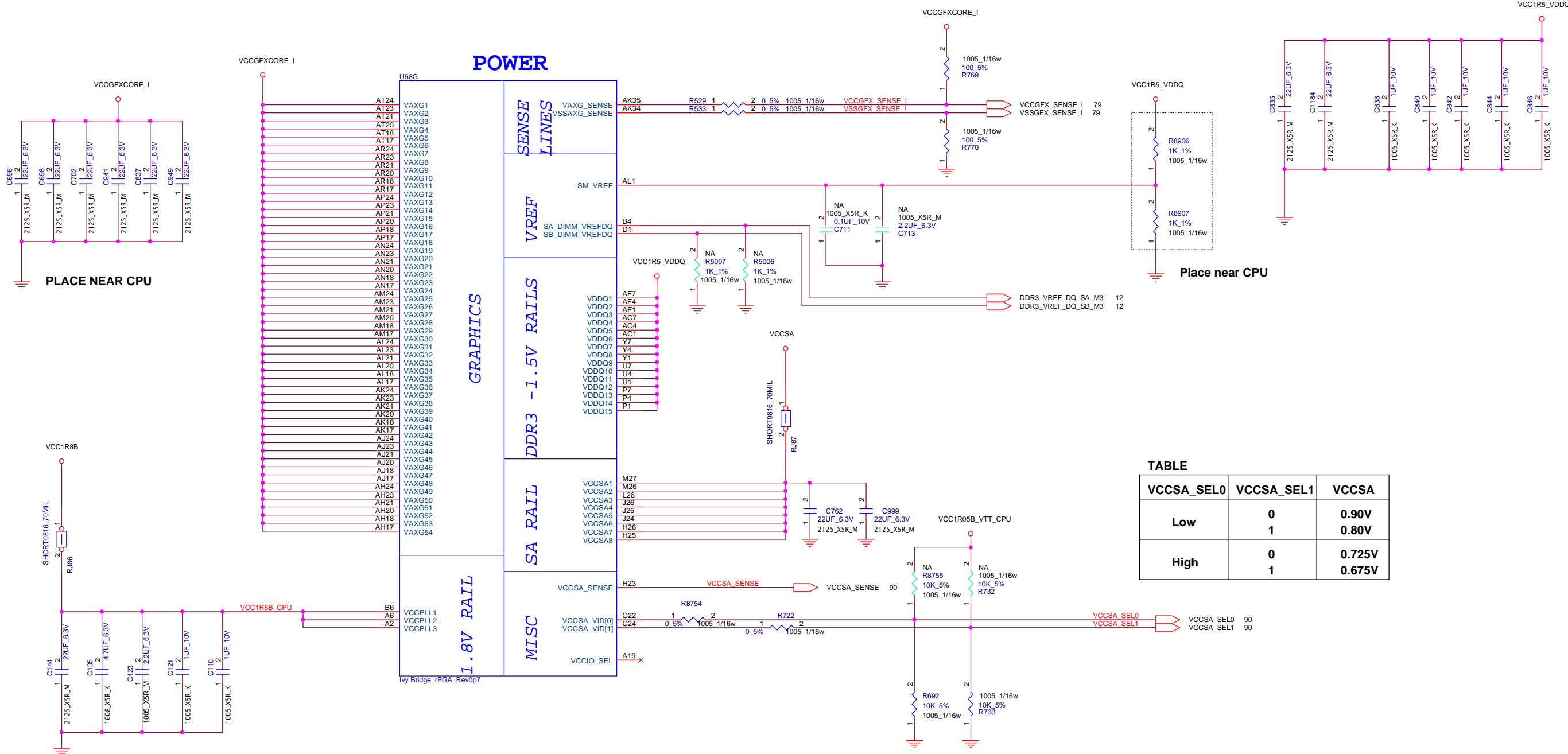
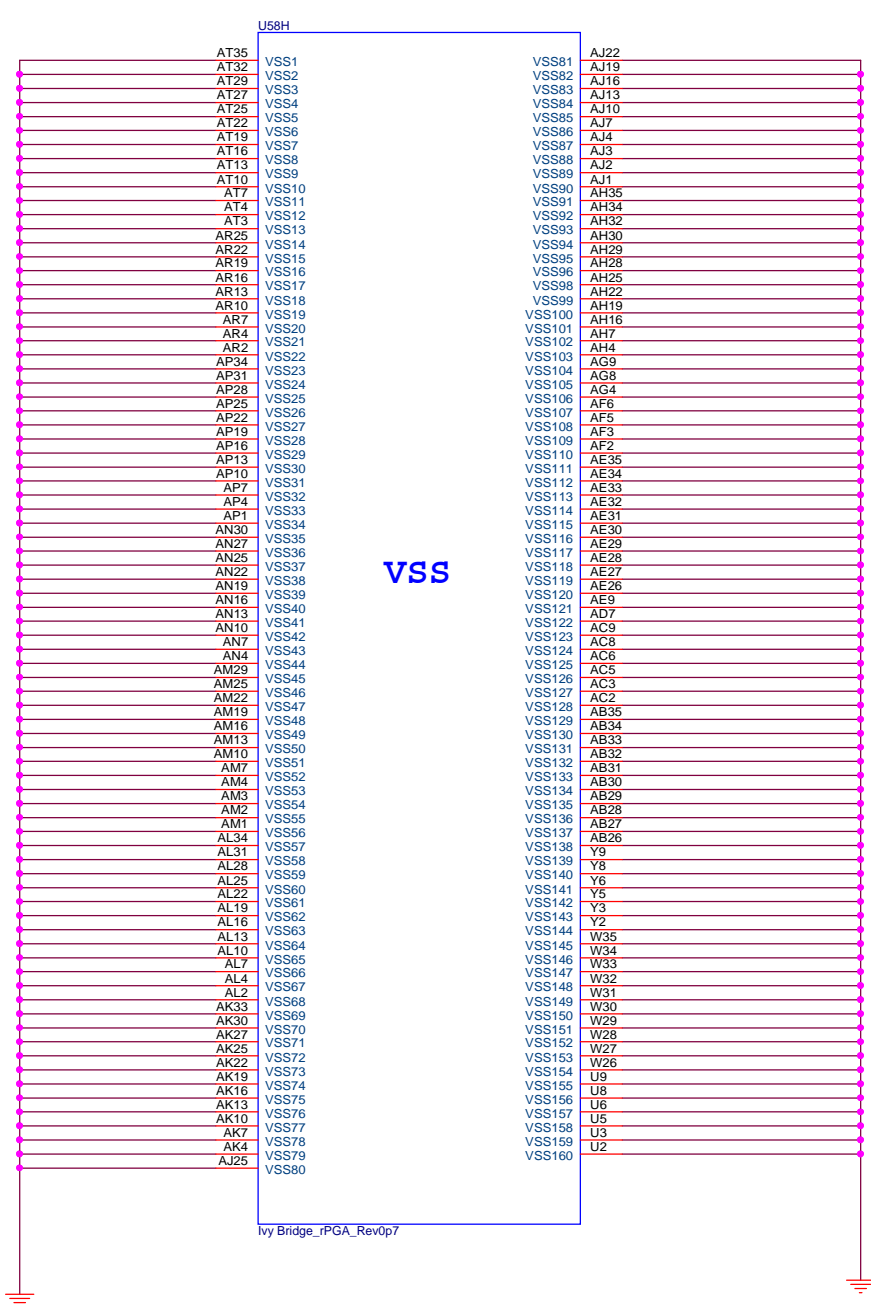
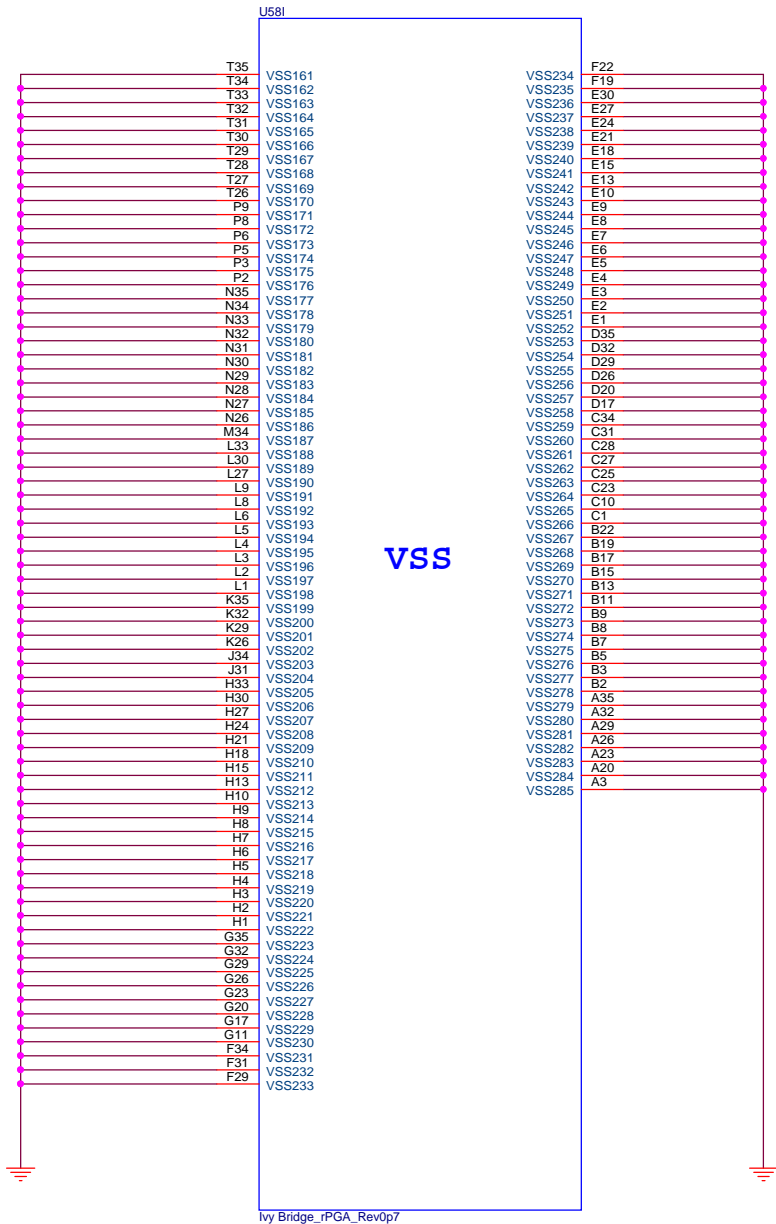


TABLE		
VCCSA_SEL0	VCCSA_SEL1	VCCSA
Low	0	0.90V
	1	0.80V
High	0	0.725V
	1	0.675V





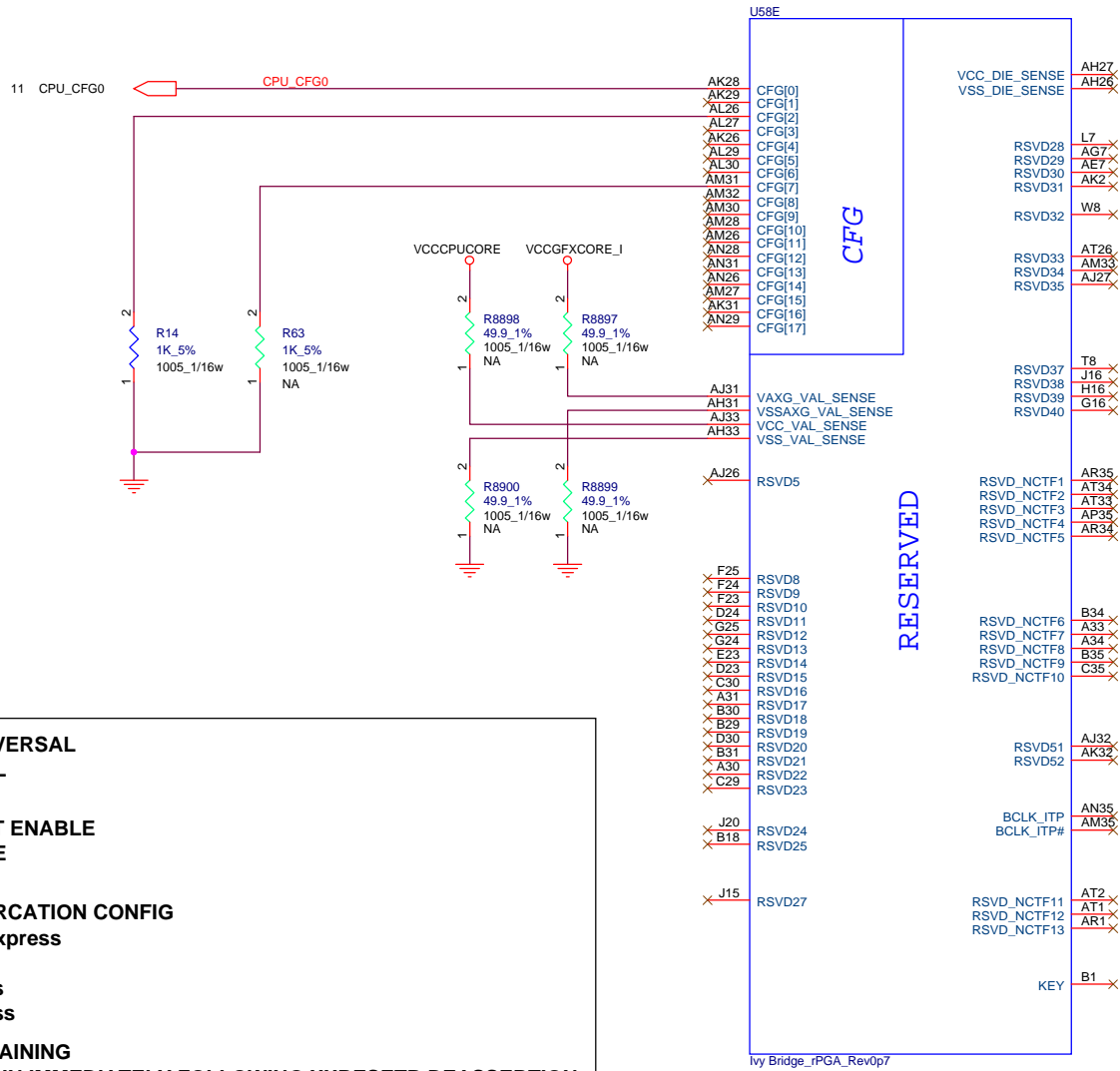
Project Name : NZM-4 SWG SOVP Title : CPU(7/8) GND

Size : C Document Number : Rev : 7.54

Date: Monday, March 19, 2012 Sheet : 9 of 97

TABLE

CFG2 PEG LANE REVERSAL	
1	-NO ASM : NORMAL
0	-ASM : RESVERSE
CFG4 DISPLAY PORT ENABLE	
1	-NO ASM : DISABLE
0	-ASM : ENABLE
CFG[6 : 5] PEG BIFURCATION CONFIG	
00	= 1 x 8, 2 x 4 PCI Express
01	= reserved
10	= 2 x 8 PCI Express
11	= 1 x 16 PCI Express
CFG7 PEG DEFER TRAINING	
1	-NO ASM :PEG TRAIN IMMEDIATELY FOLLOWING XXRESETB DEASSERTION
0	-ASM : PEG WAIT FOR BIOS FOR TRAINING



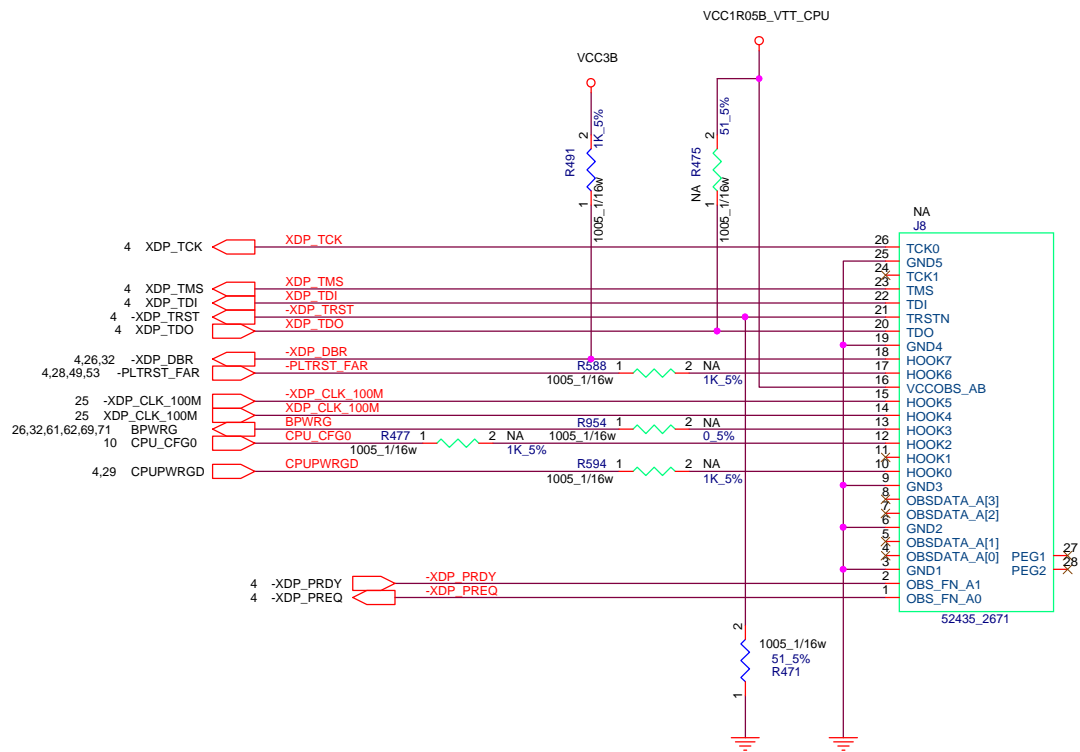


TABLE NOTE: J8 "ASM" FOR PDV/SDV ONLY.

SIGNAL	REF DES	ENABLE	DISABLE
TDO	R475	ASM	NO ASM
TRST#	R471	ASM	ASM
DBRST#	R491	ASM	ASM
RESET#	R588	ASM	NO ASM
CFG0	R477	ASM	NO ASM
PWRGD	R594	ASM	NO ASM
BPWRG	R954	ASM	NO ASM
	J8	ASM	NO ASM

LOGIC

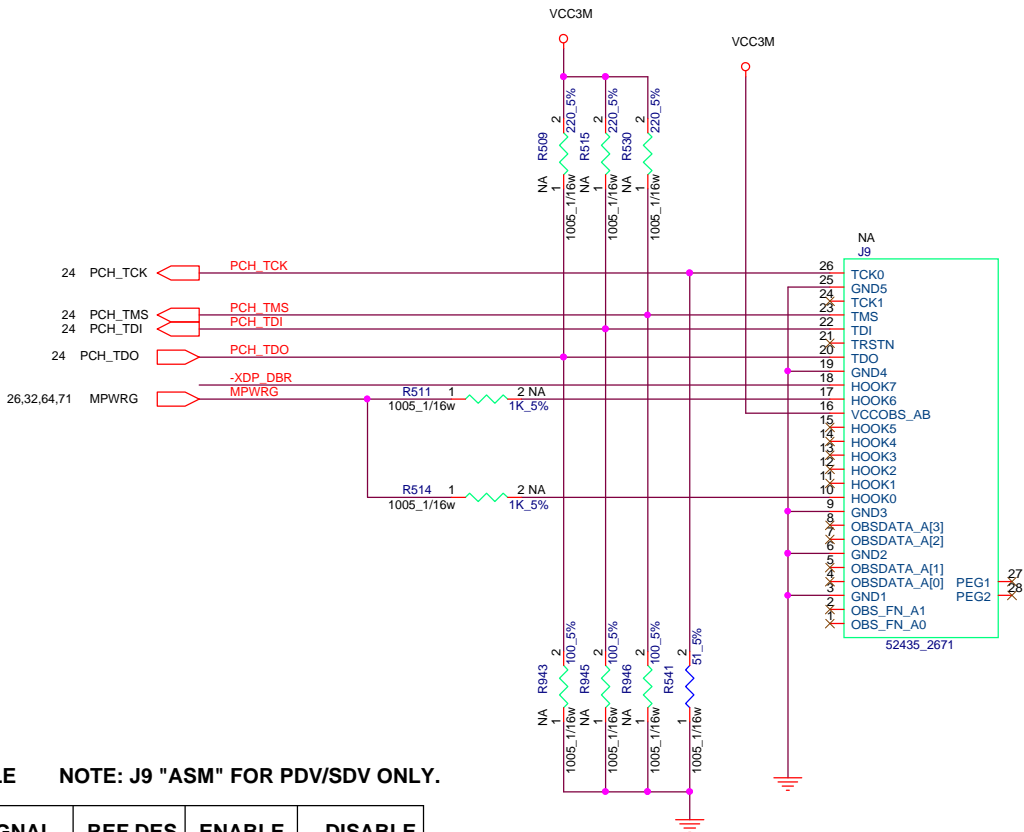


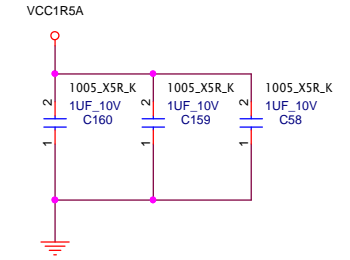
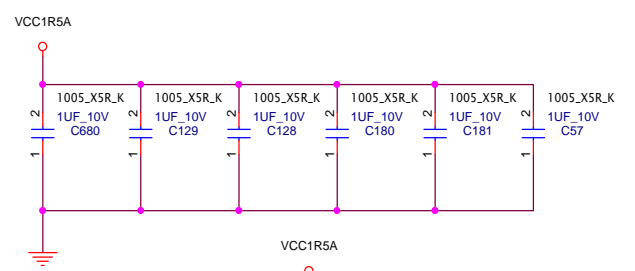
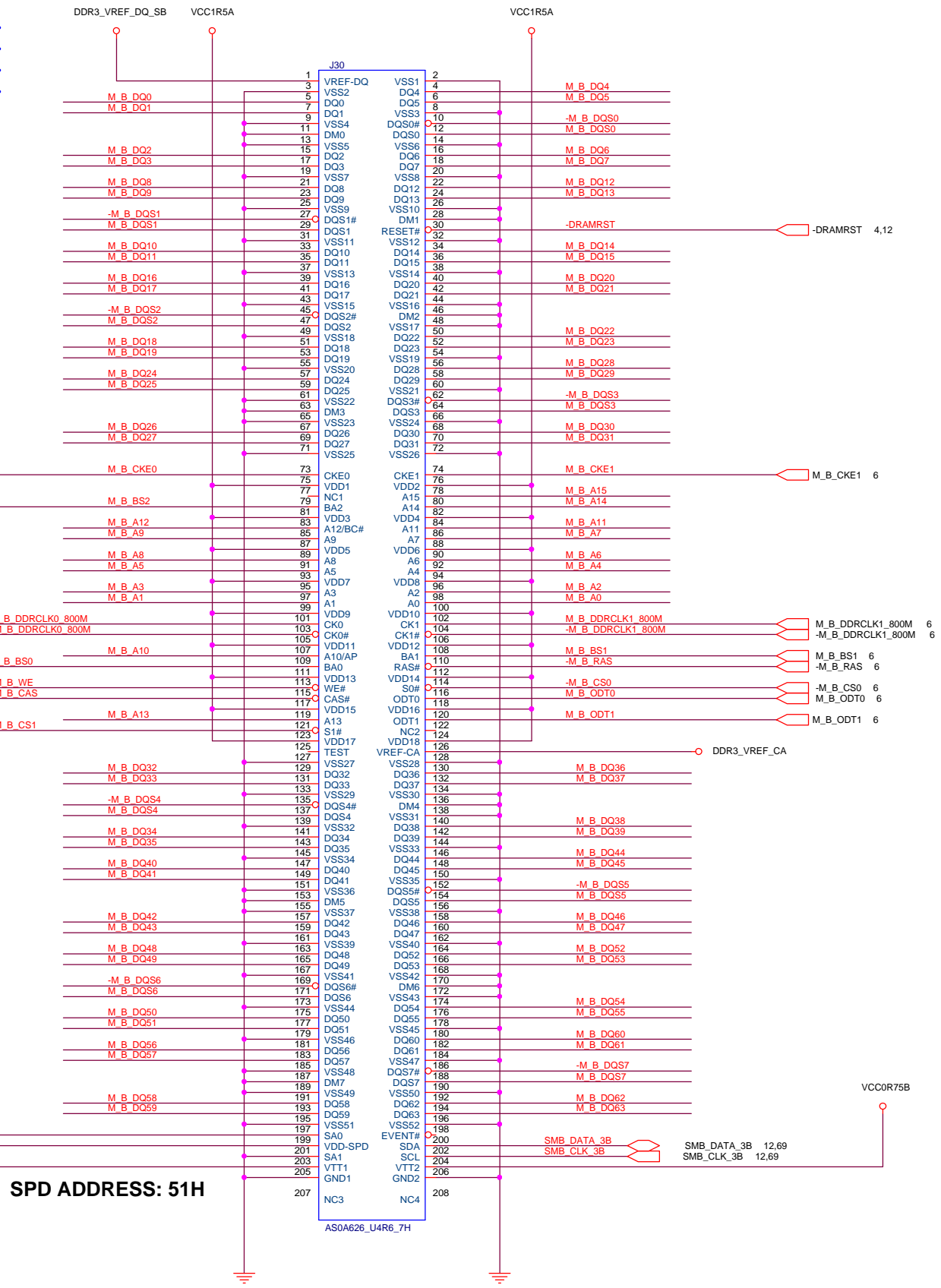
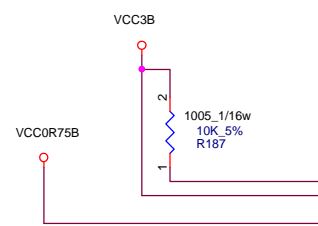
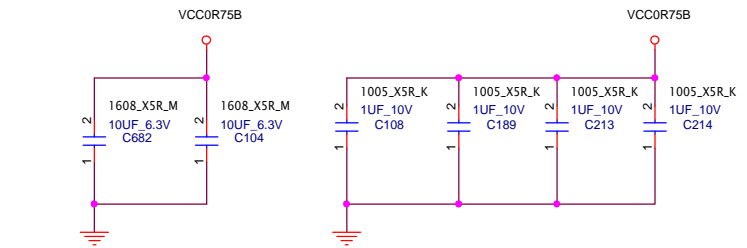
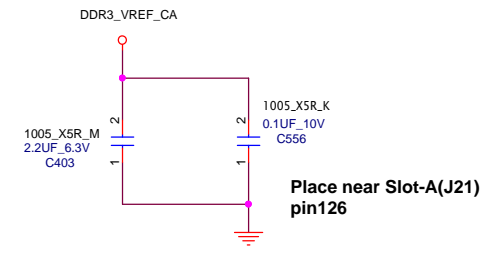
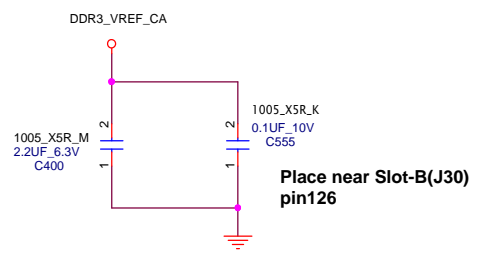
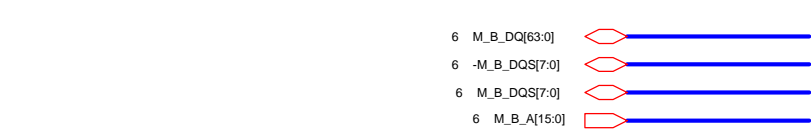
TABLE NOTE: J9 "ASM" FOR PDV/SDV ONLY.

SIGNAL	REF DES	ENABLE	DISABLE
TDO	R509 R943	220 100	NO ASM NO ASM
TMS	R530 R946	220 100	NO ASM NO ASM
TDI	R515 R945	220 100	NO ASM NO ASM
TCK	R541	51	51
MPWRG	R511 R514	ASM ASM	NO ASM NO ASM
	J9	ASM	NO ASM

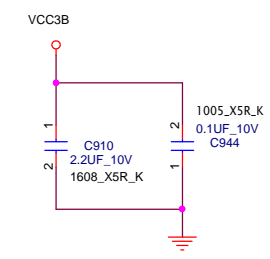
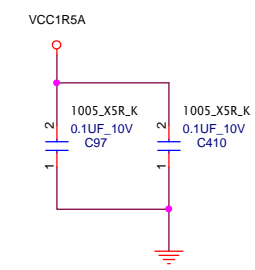
LOGIC





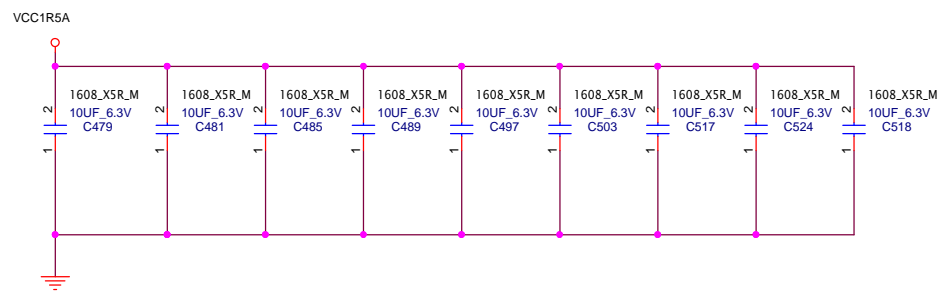
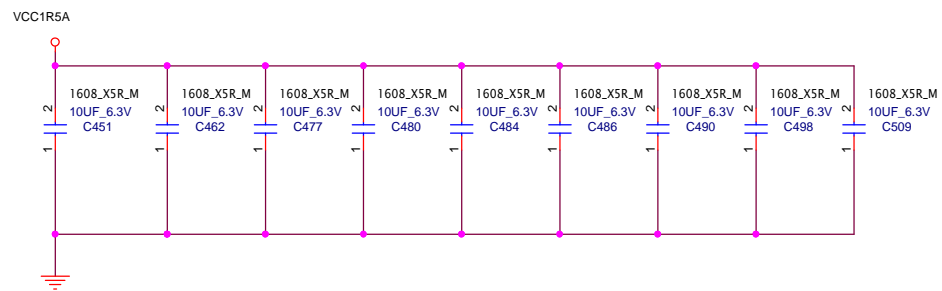
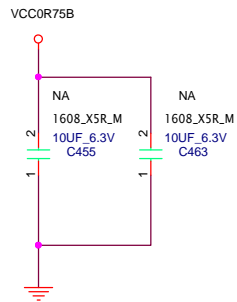


PLACE 1UF NEAR VCC1R5A PIN.



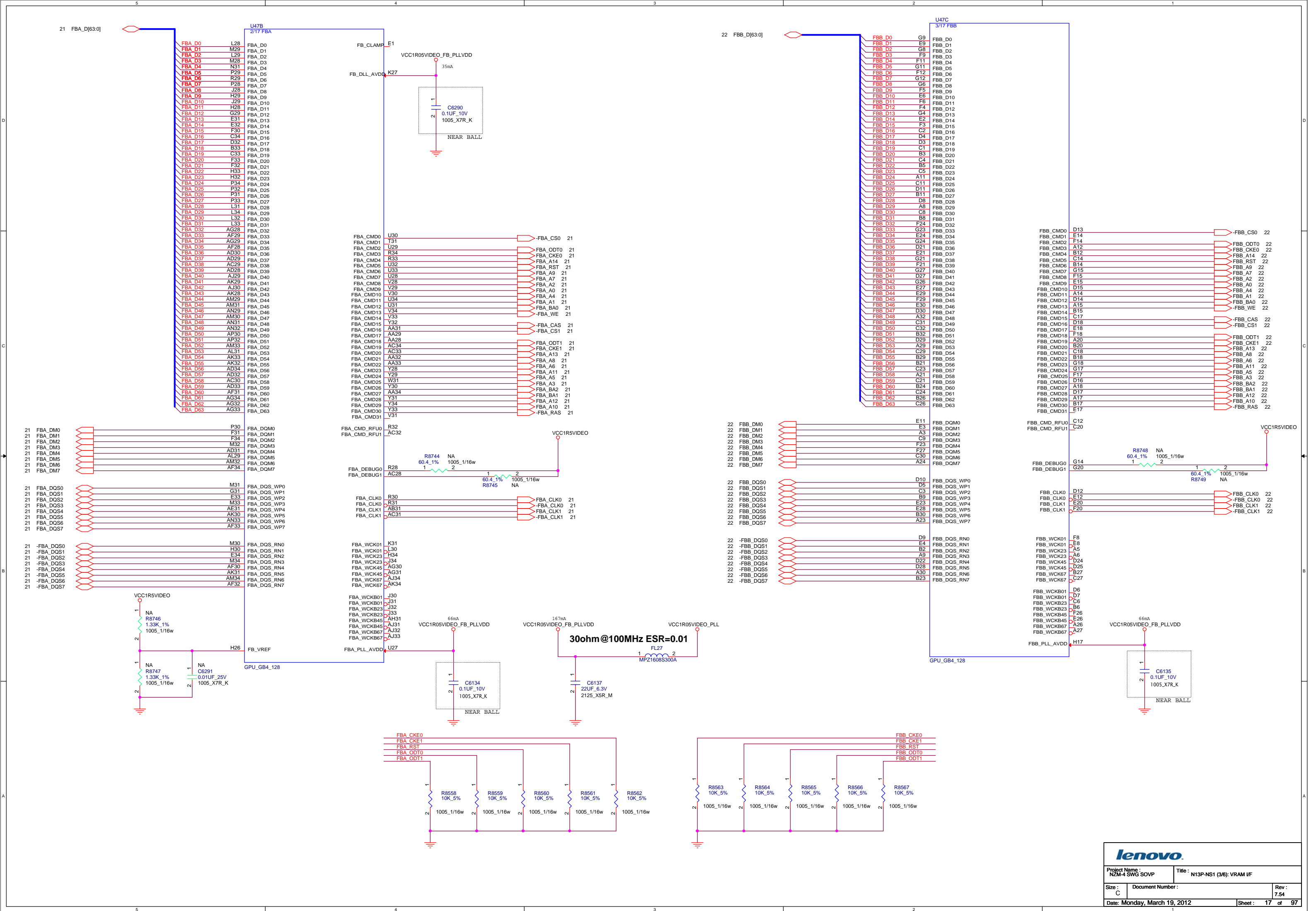
SPD ADDRESS: 51H





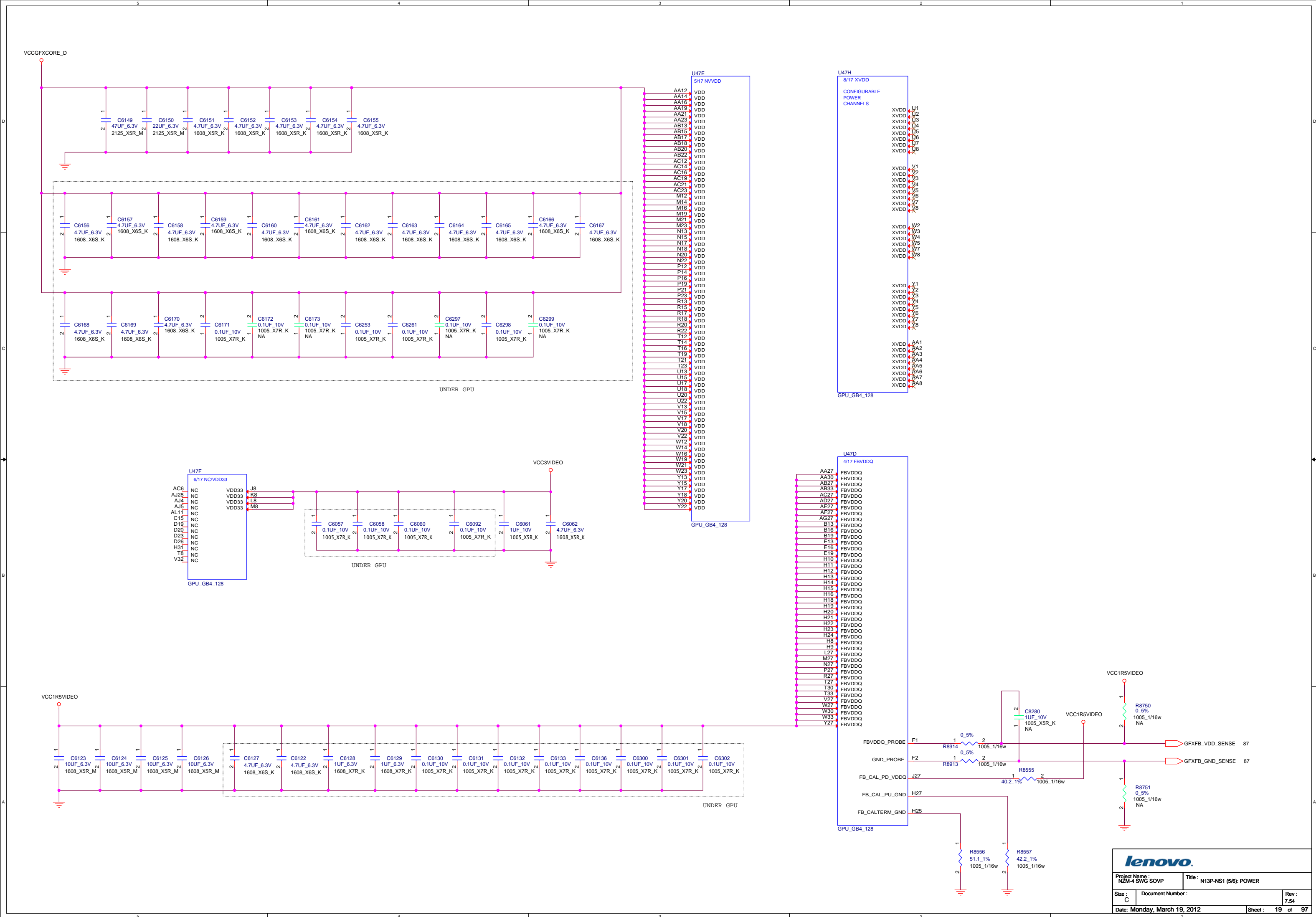


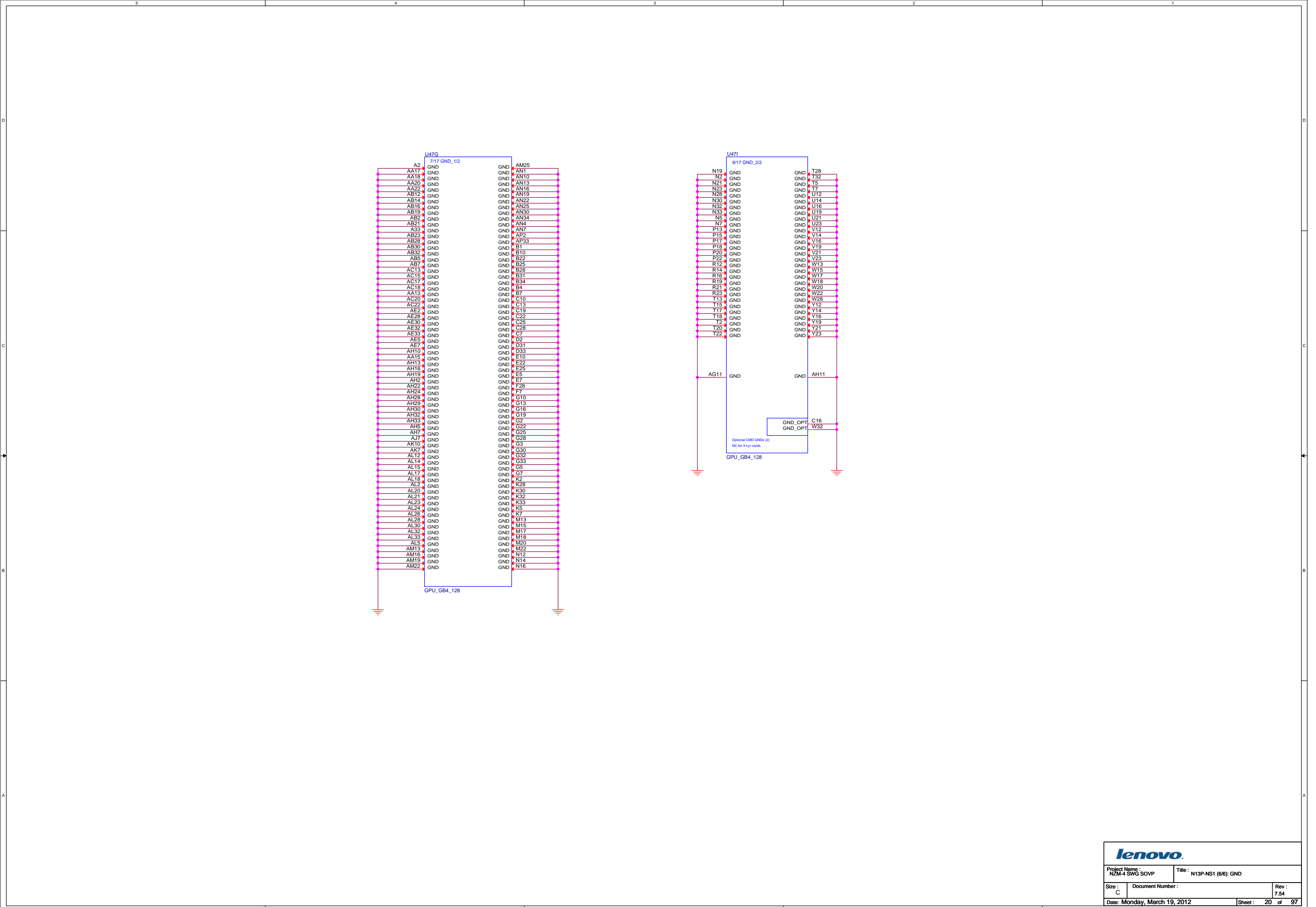












Project Name : NZM-4 SWG SOVP  
Title : N13P-NS1 (6/6): GND

Size : C  
Document Number :  
Rev : 7.54

Date: Monday, March 19, 2012  
Sheet : 20 of 97

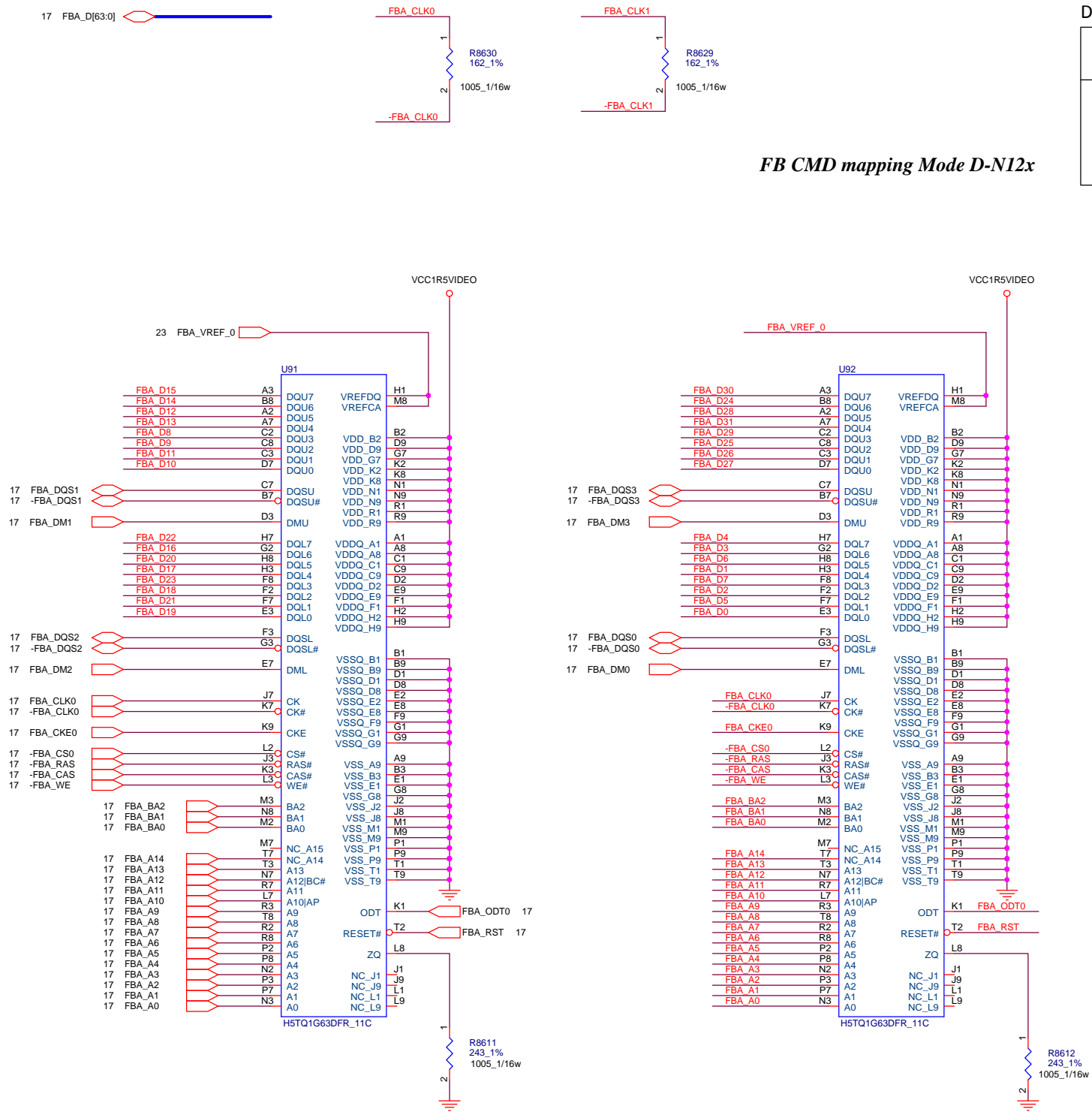
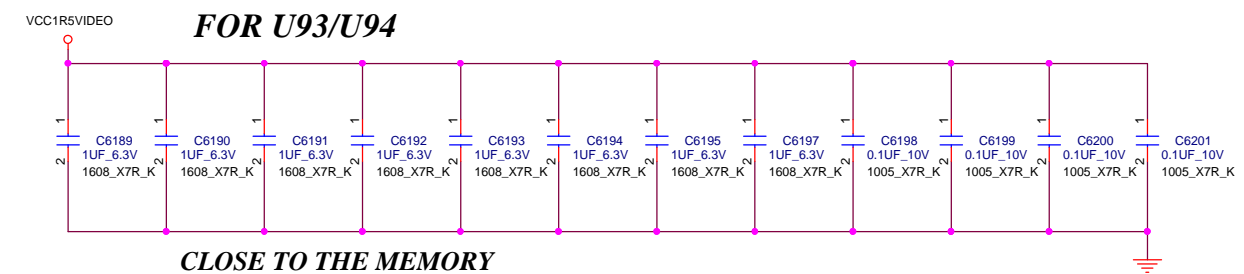
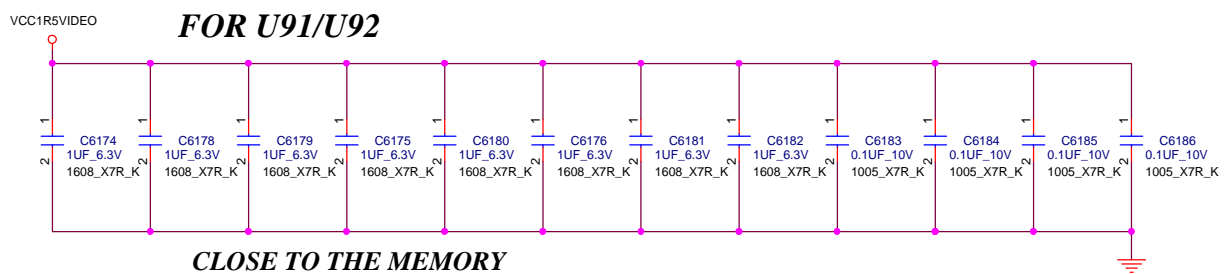
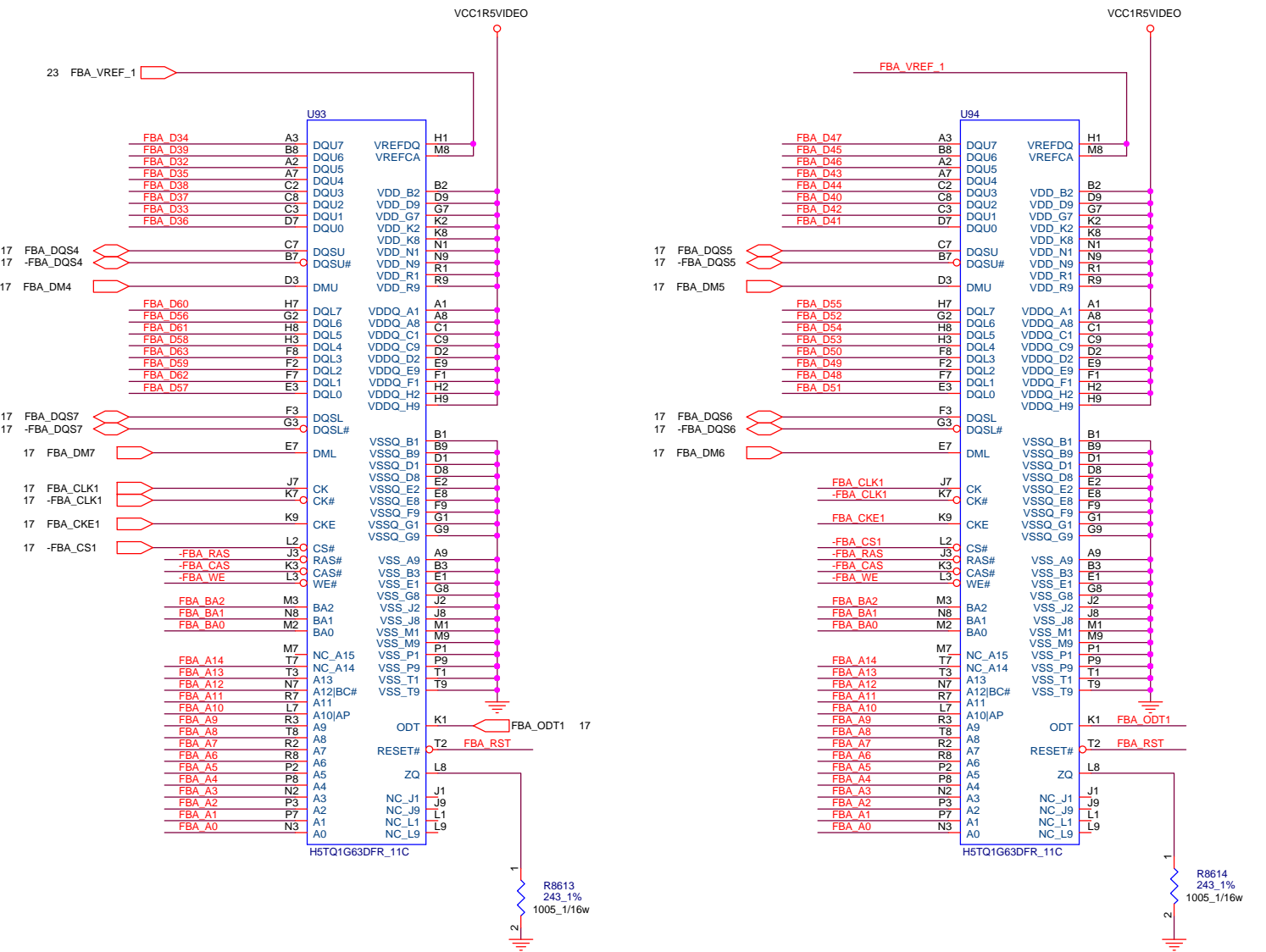


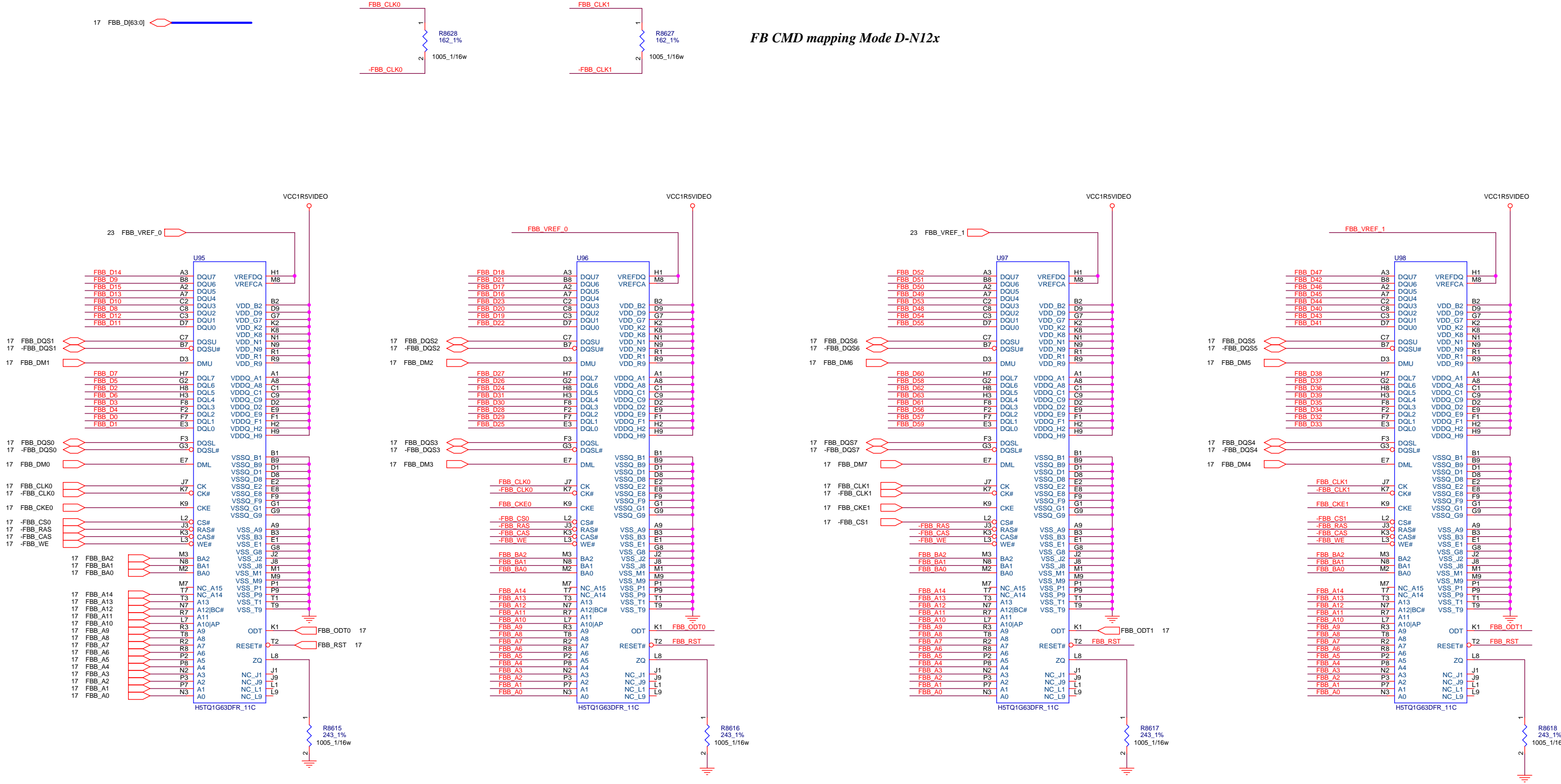
TABLE  
DDR3 VIDEO MEMORY

	HYNIX 1GBITS (64Mx16)	SAMSUNG 1GBITS (64Mx16)	HYNIX 2GBITS (128Mx16)	HYNIX 2GBITS (128Mx16)	SAMSUNG 2GBITS (128Mx16)	HYNIX 4GBITS (256Mx16)
U91 U95 U92 U96 U93 U97 U94 U98	H5TQ1G63DFR-11C	K4W1G1646G-BC11	H5TQ2G63DFR-11C	H5TQ2G63BFR-11C	K4W2G1646C-HC11	TBD

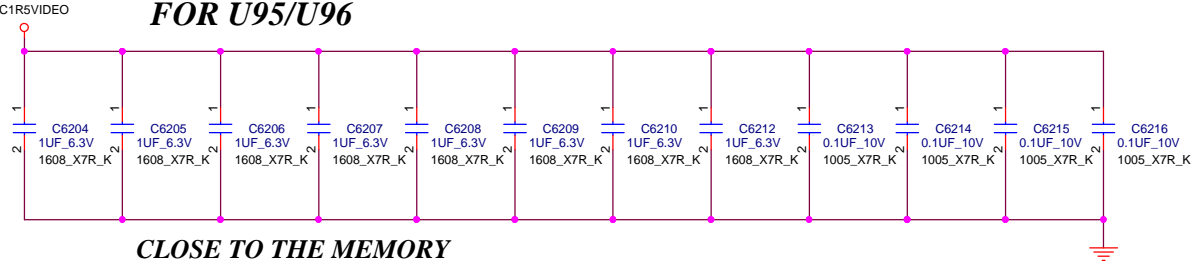
LOGIC



FB CMD mapping Mode D-N12x

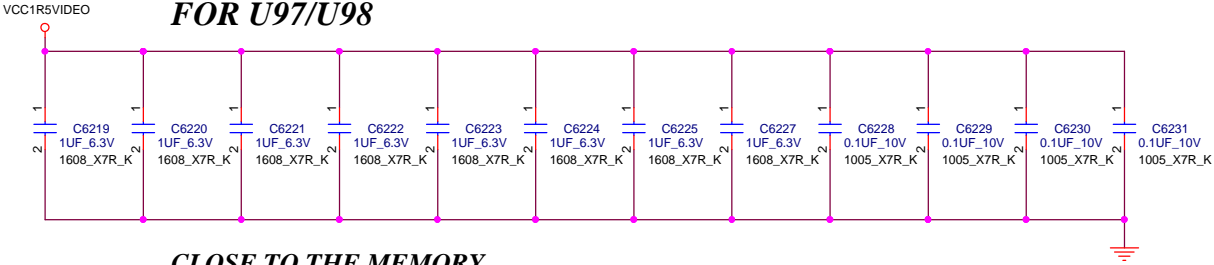


FOR U95/U96



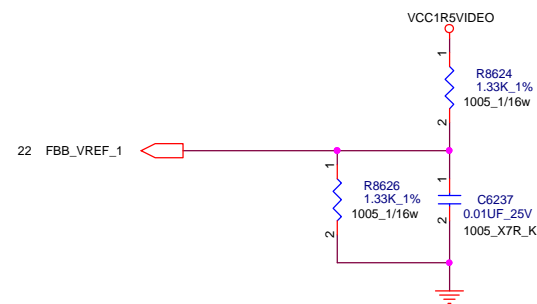
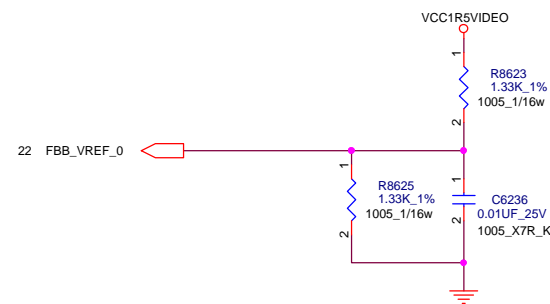
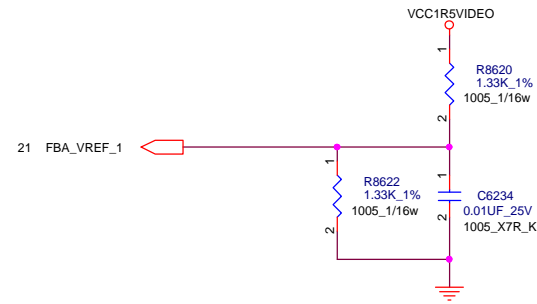
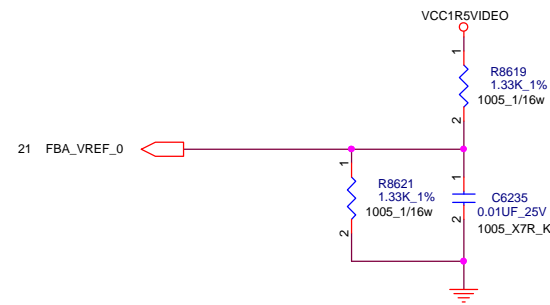
CLOSE TO THE MEMORY

FOR U97/U98



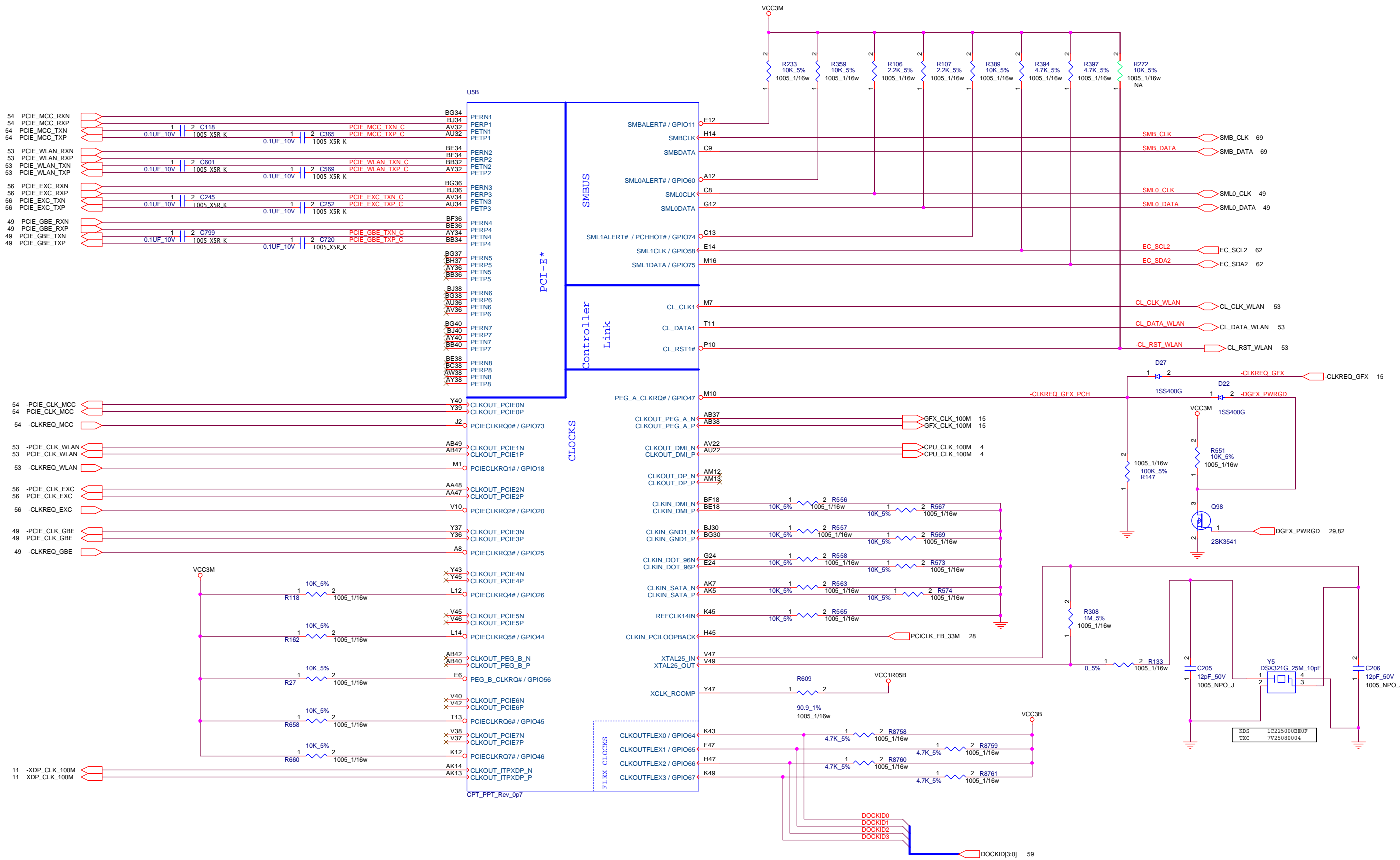
CLOSE TO THE MEMORY

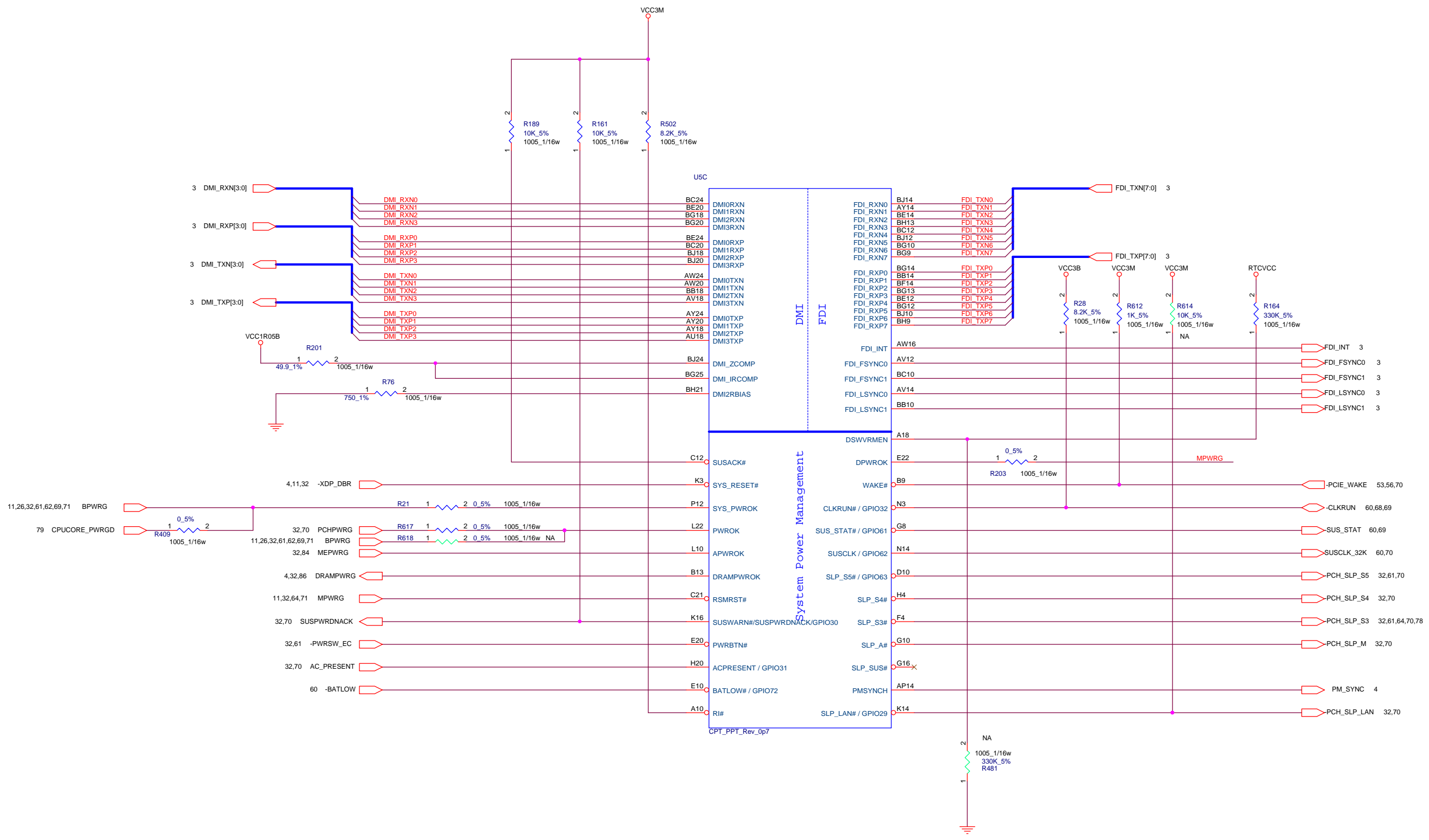


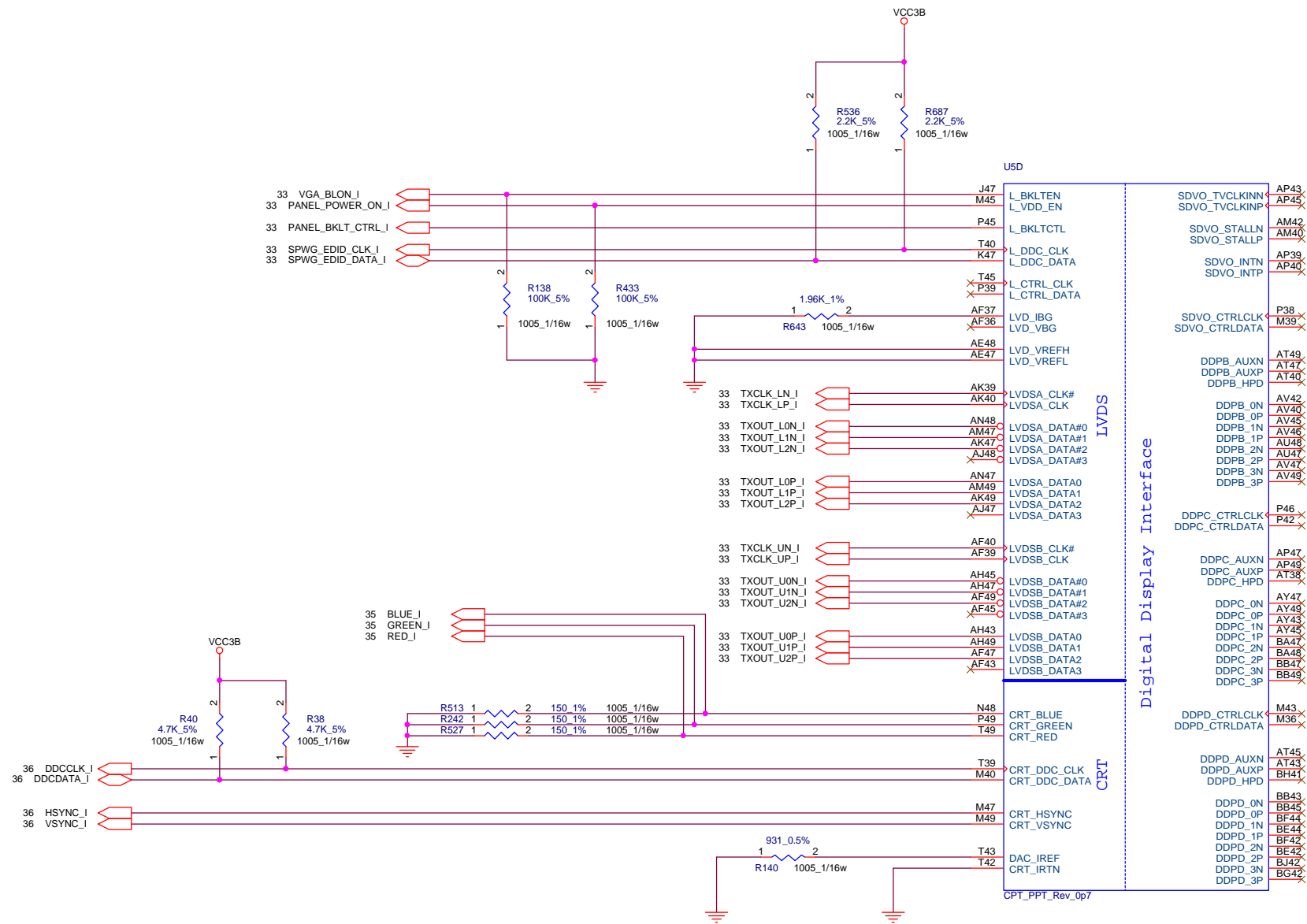














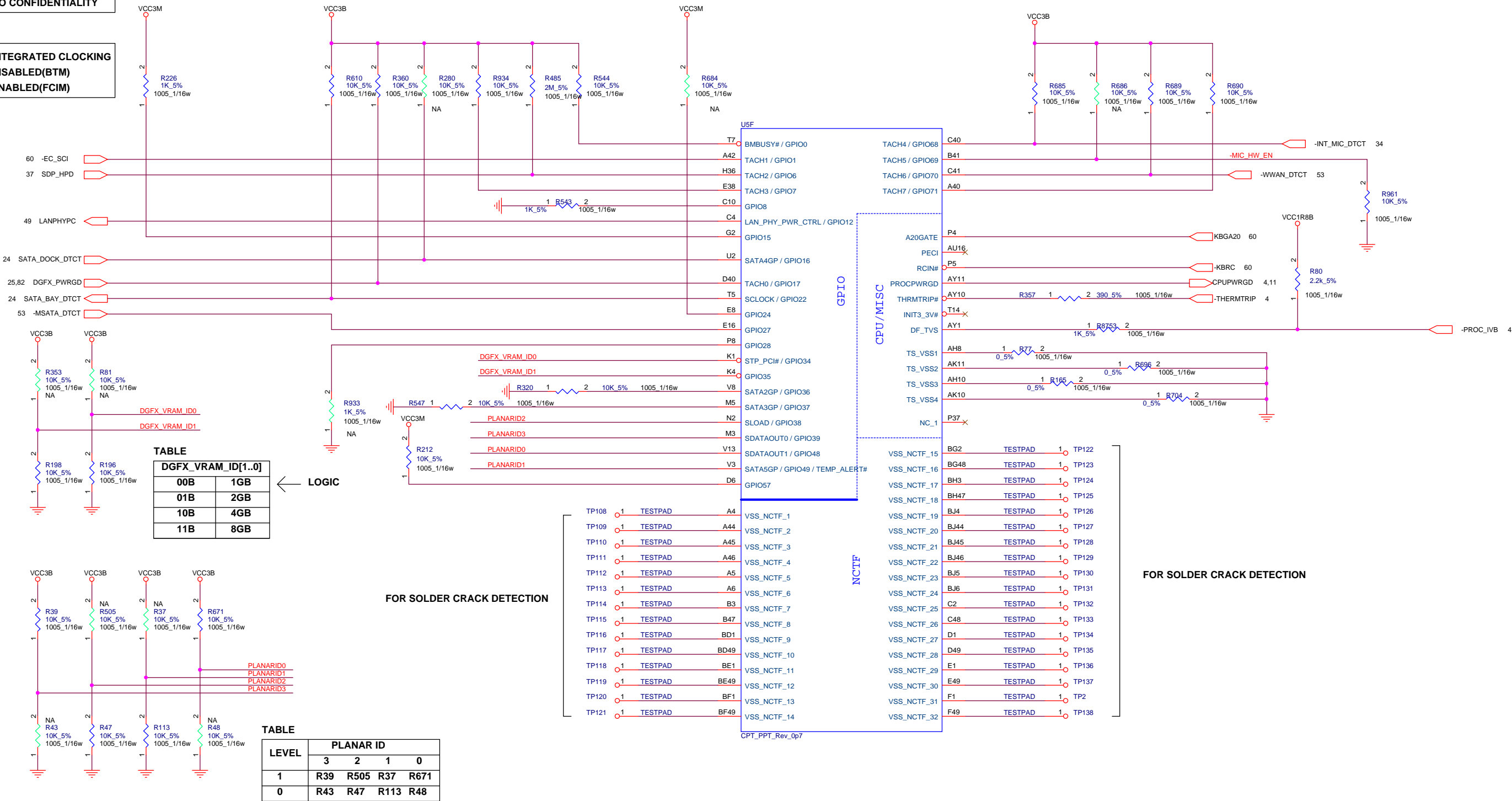


TABLE

GPIO15	ME CRYPTO STRAP WITH CONFIDENTIALITY
HIGH	NO CONFIDENTIALITY
LOW	NO CONFIDENTIALITY

TABLE

GPIO8	INTEGRATED CLOCKING
HIGH	DISABLED(BTM)
LOW	ENABLED(FCIM)

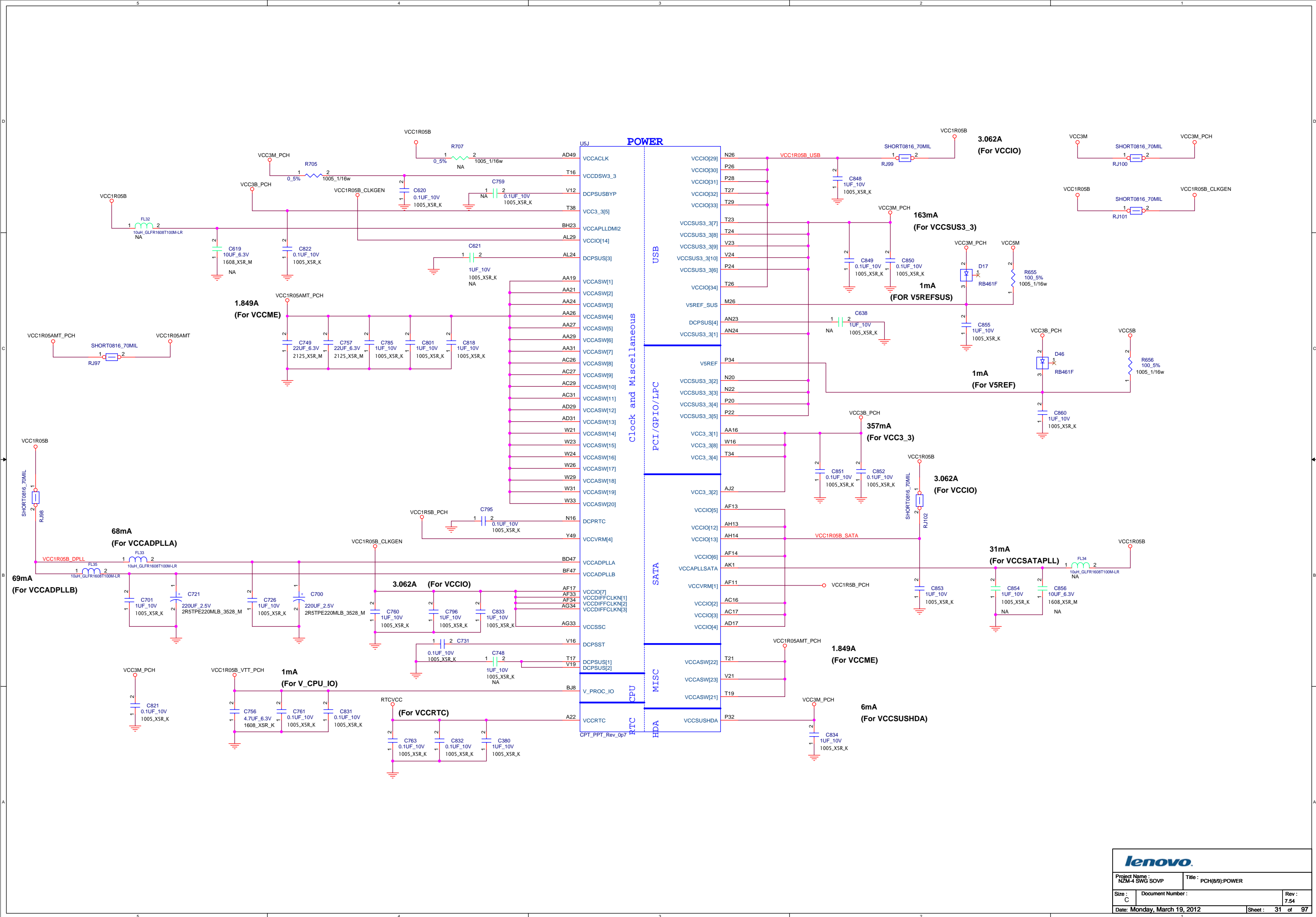


Project Name : N2M-4 SWG SOVP Title : PCH(6/9):GPIONCTF/RSVD

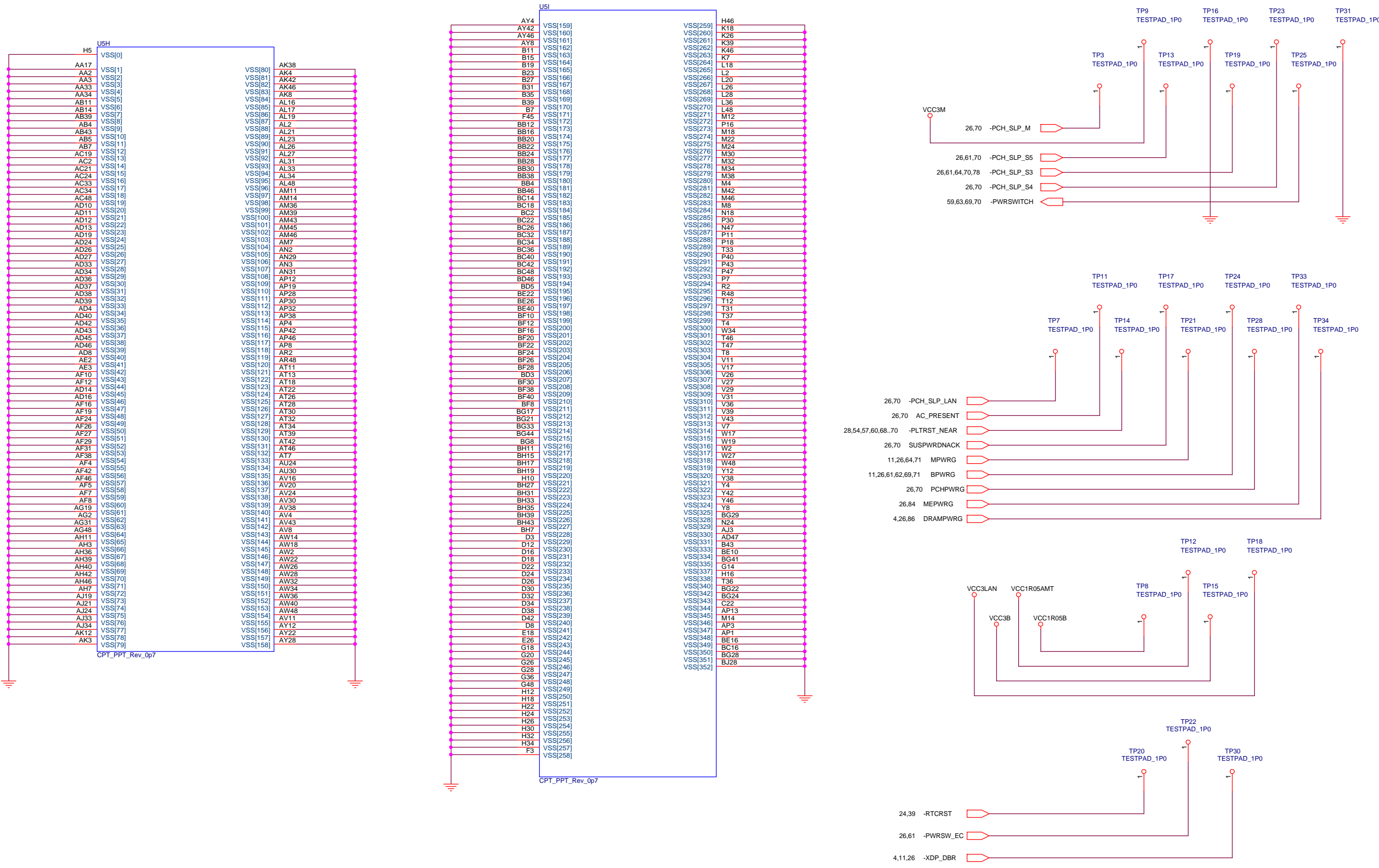
Size : C Document Number : Rev : 7.54

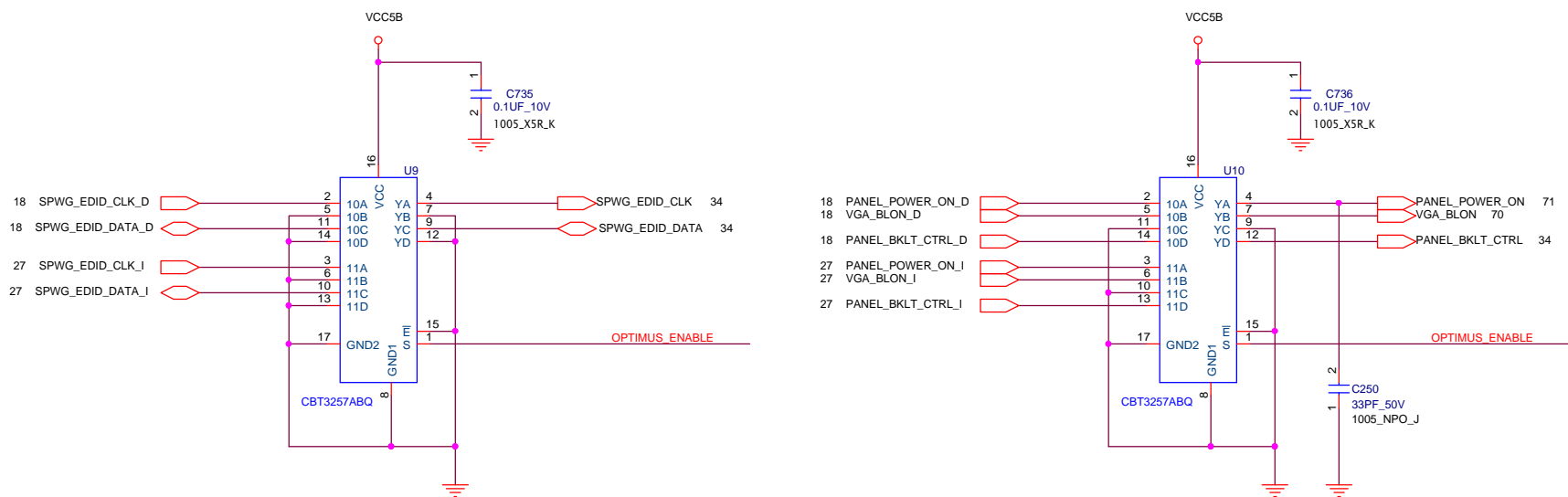
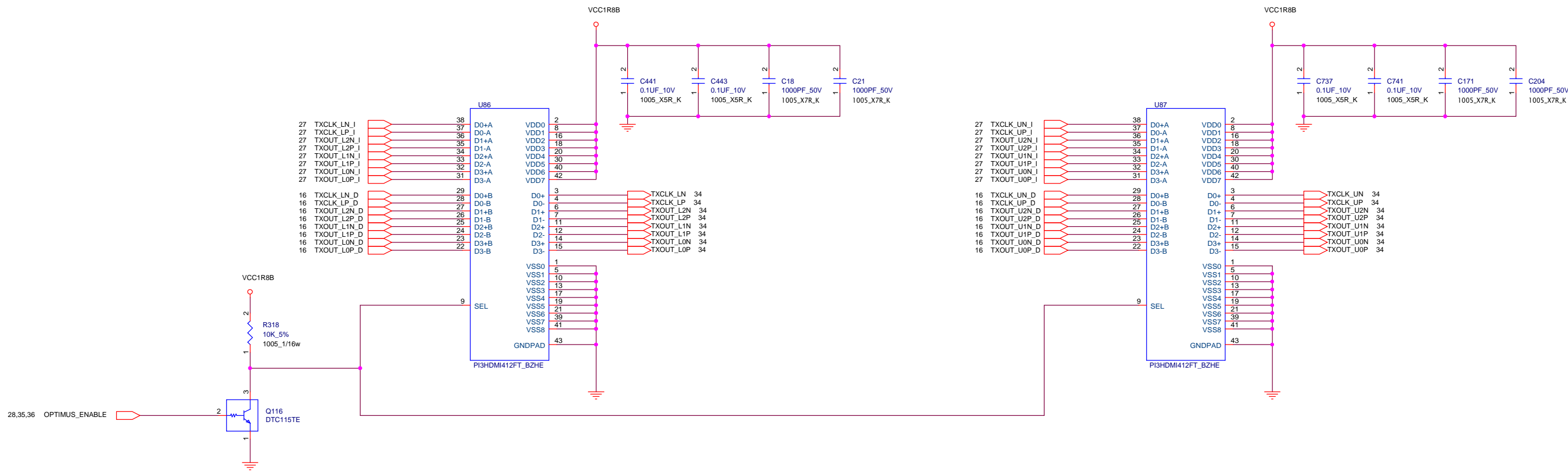
Date: Monday, March 19, 2012 Sheet : 29 of 97





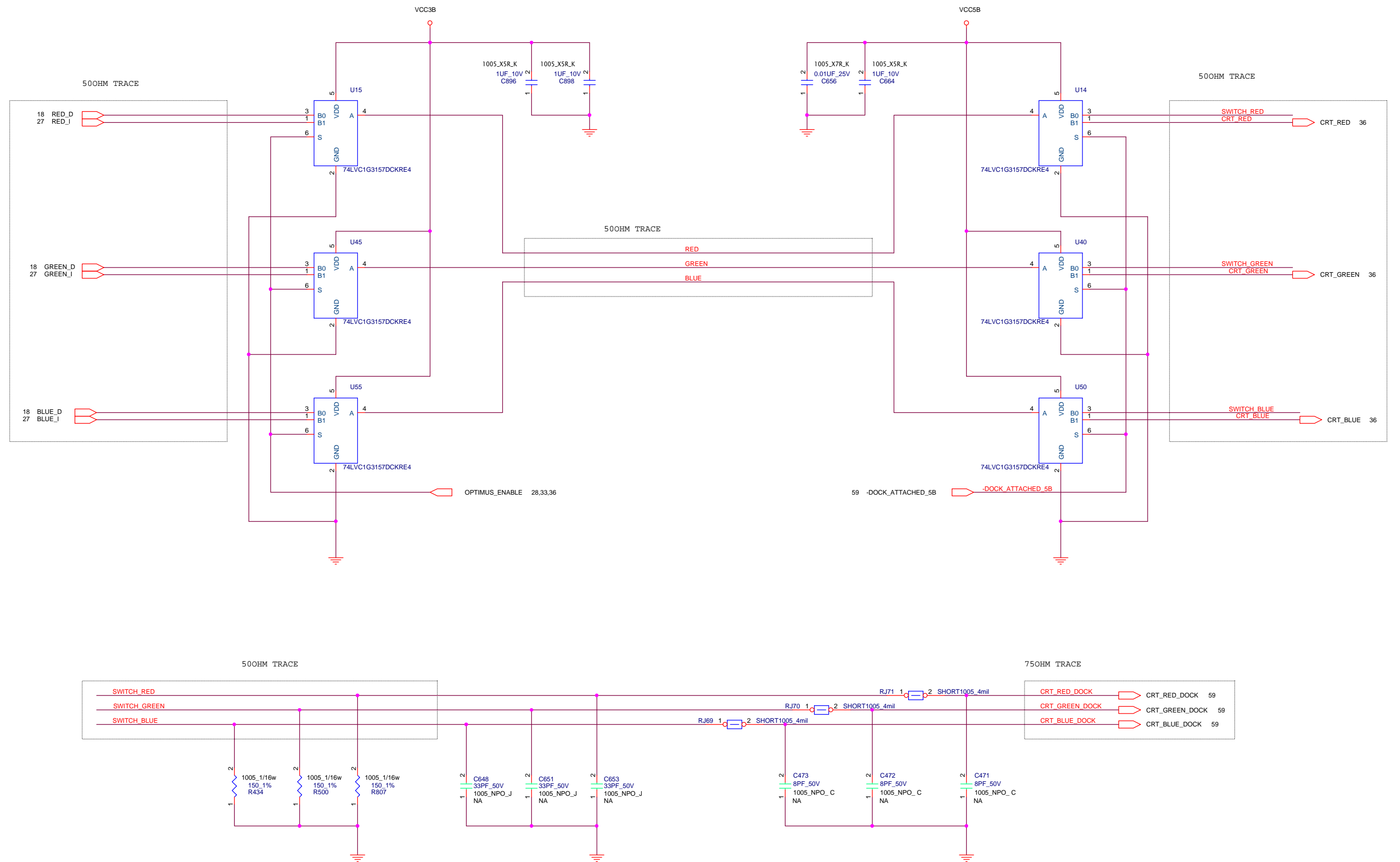
TEST PAD FOR METS/APS











Project Name :  
NZM-4 SWG SOVP

Title :  
RGB SWITCH

Size :  
C

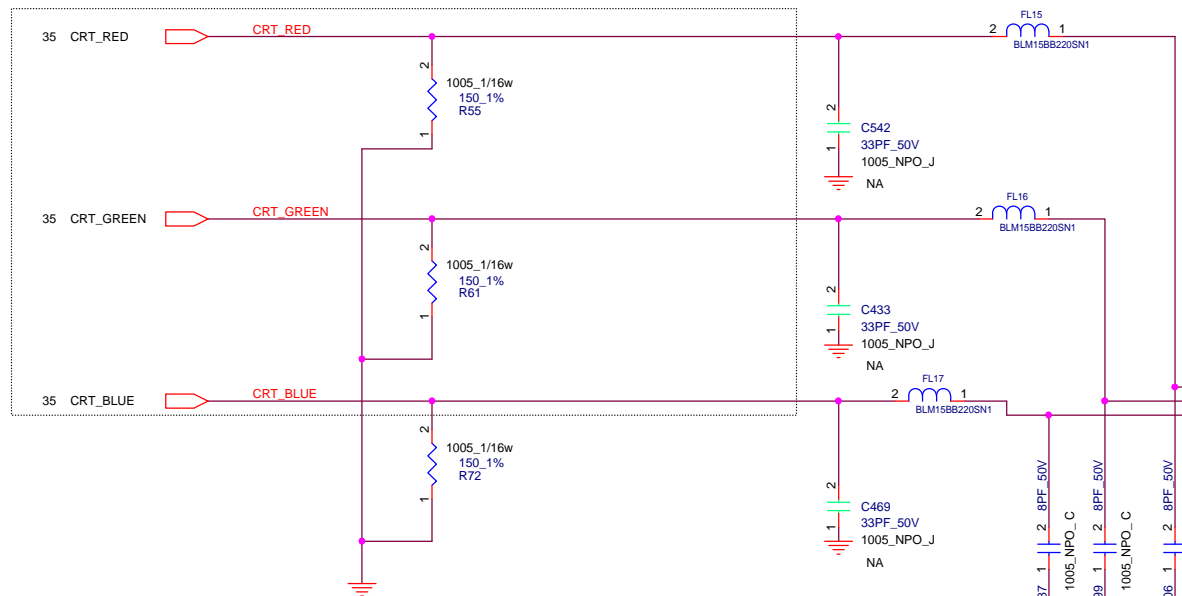
Document Number :

Rev :  
7.54

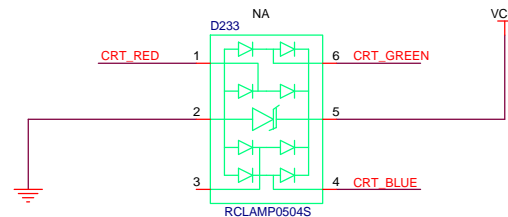
Date: Monday, March 19, 2012

Sheet : 35 of 97

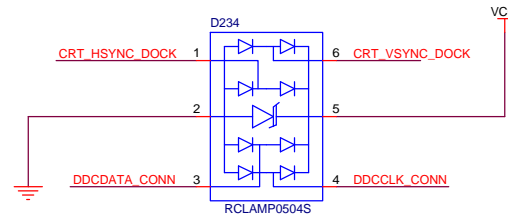
500OHM TRACE



NEAR CRT CONN



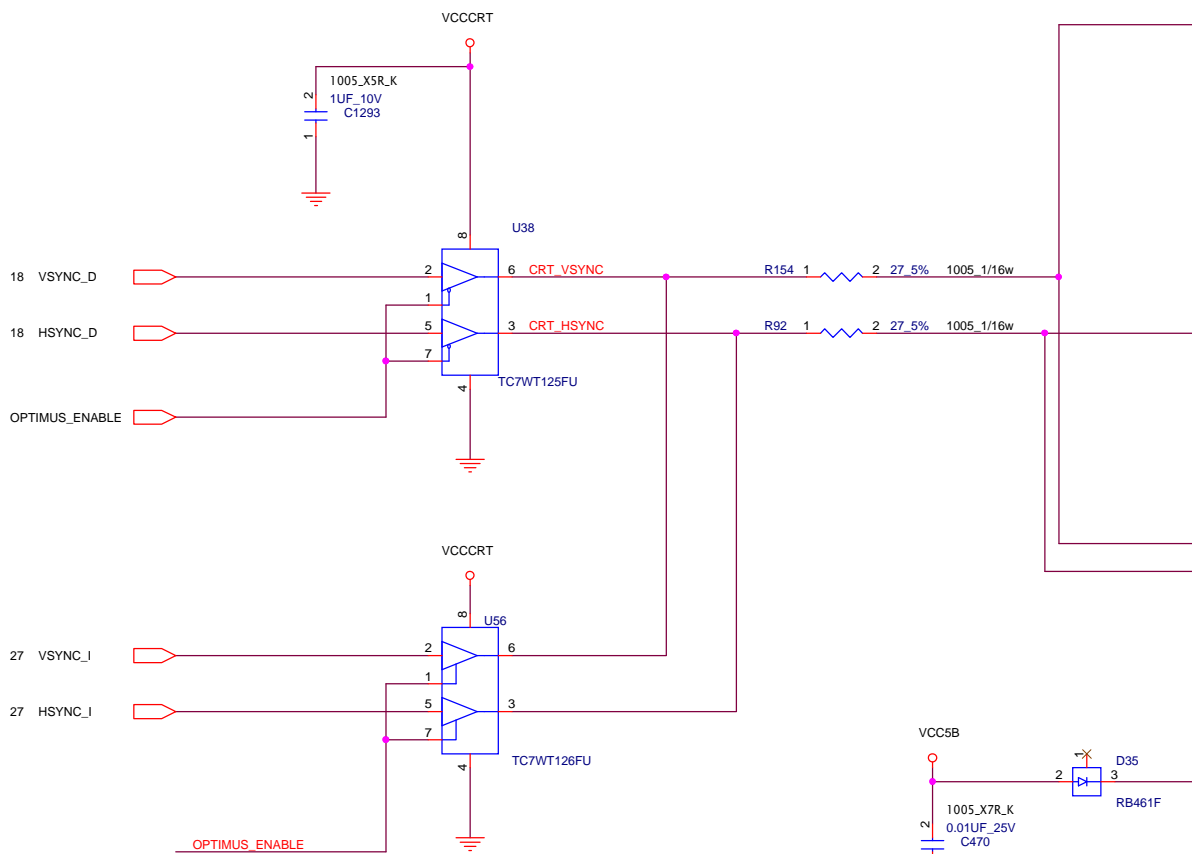
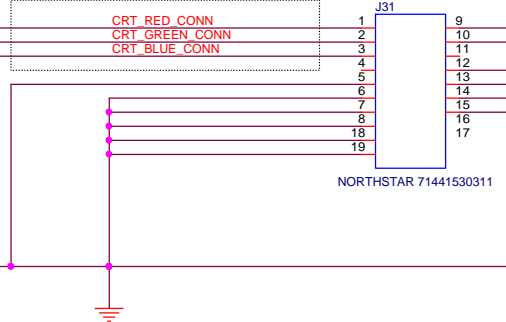
NEAR CRT CONN



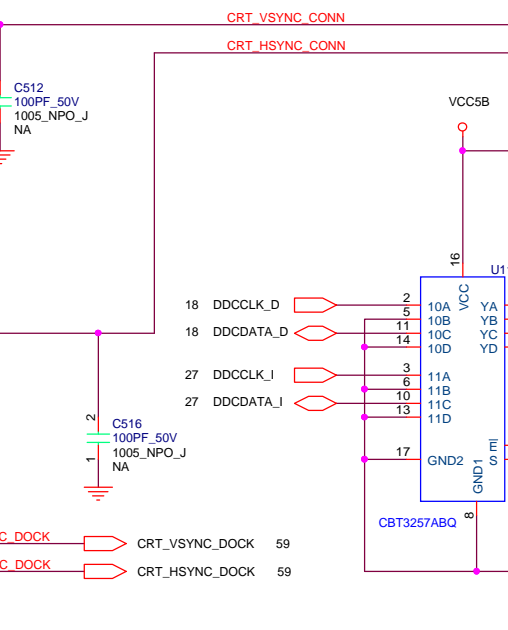
NEAR CRT CONN

CRT CONN

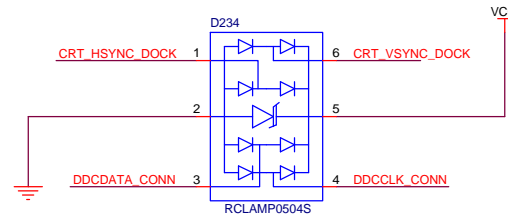
750HM TRACE



NEAR CRT CONN



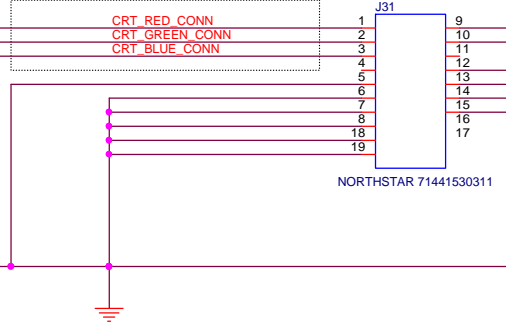
NEAR CRT CONN



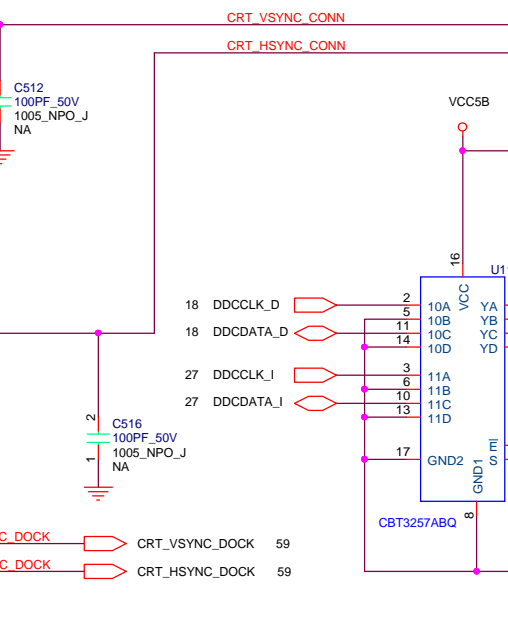
NEAR CRT CONN

CRT CONN

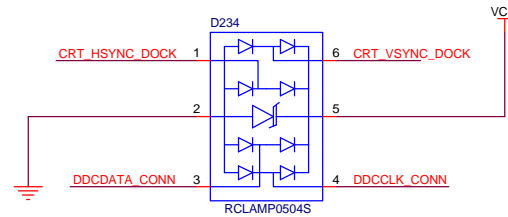
750HM TRACE



NEAR CRT CONN



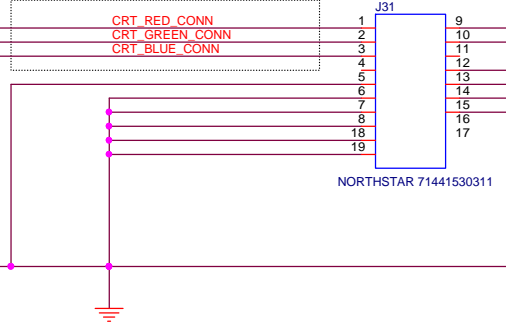
NEAR CRT CONN



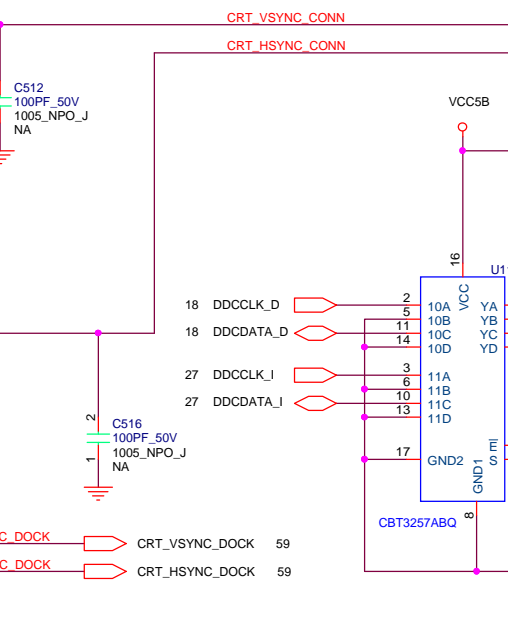
NEAR CRT CONN

CRT CONN

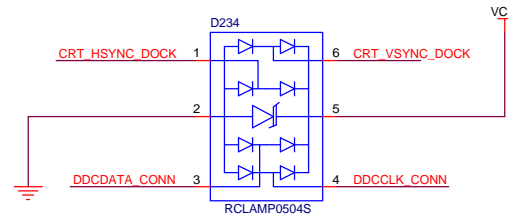
750HM TRACE



NEAR CRT CONN



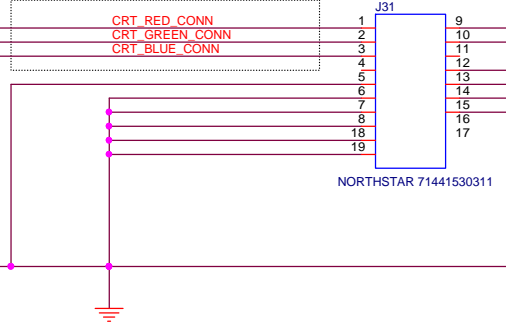
NEAR CRT CONN



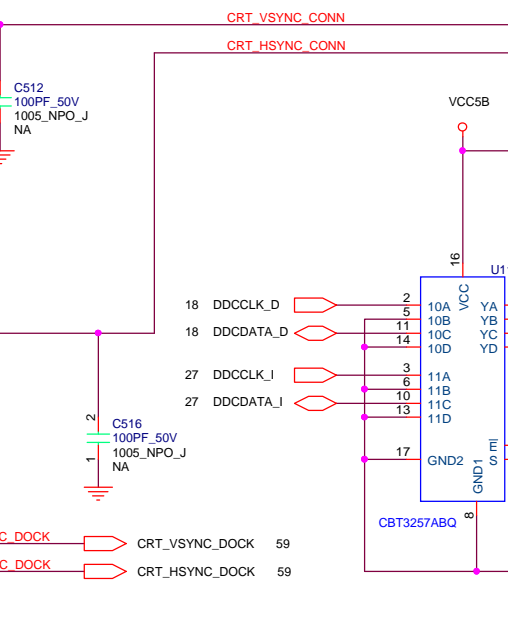
NEAR CRT CONN

CRT CONN

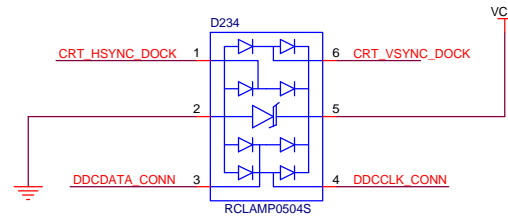
750HM TRACE



NEAR CRT CONN



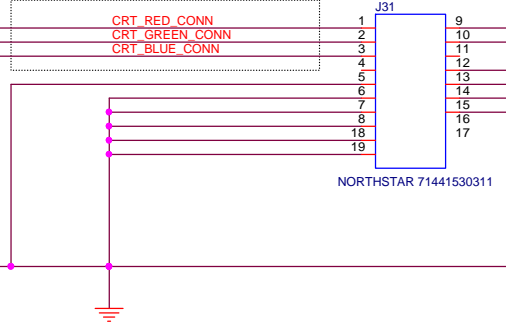
NEAR CRT CONN



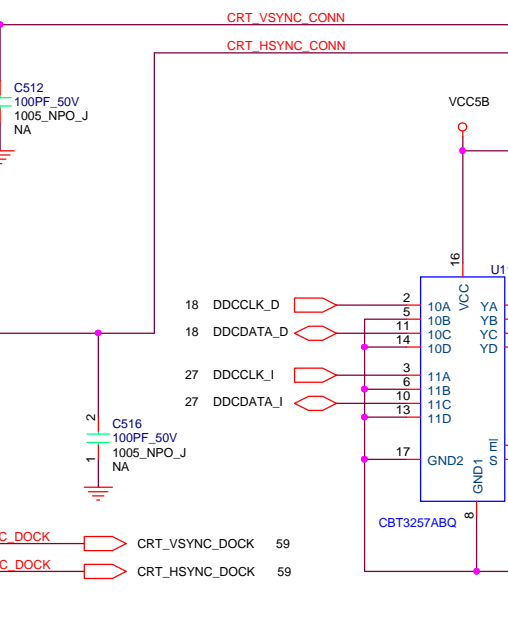
NEAR CRT CONN

CRT CONN

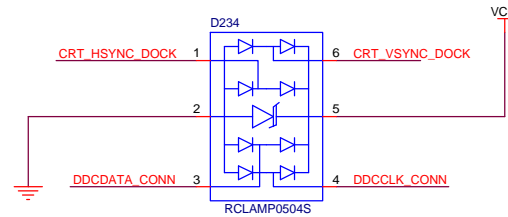
750HM TRACE



NEAR CRT CONN



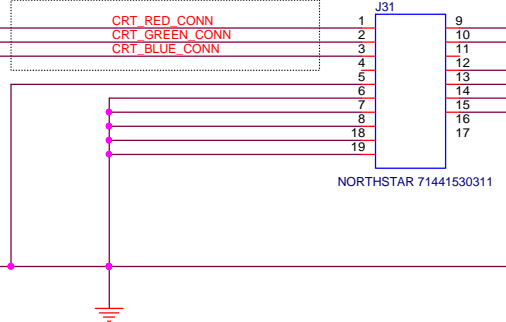
NEAR CRT CONN



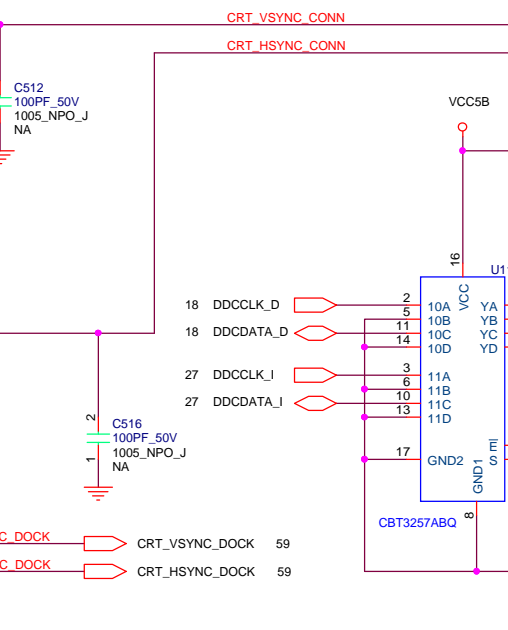
NEAR CRT CONN

CRT CONN

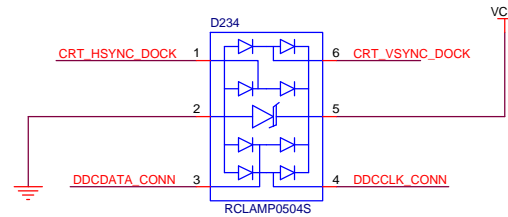
750HM TRACE



NEAR CRT CONN



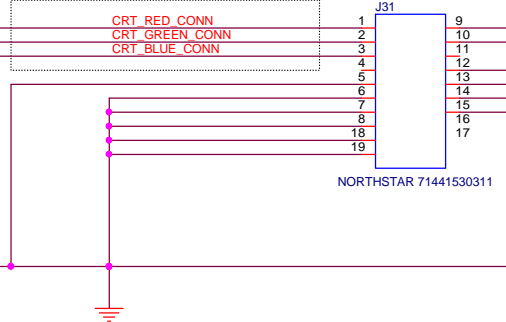
NEAR CRT CONN



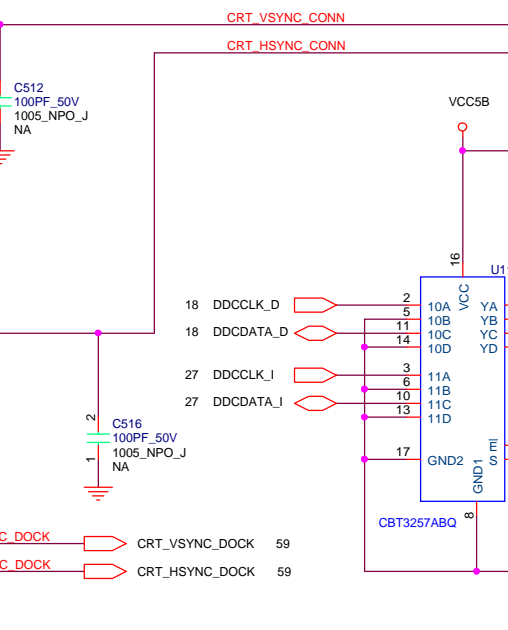
NEAR CRT CONN

CRT CONN

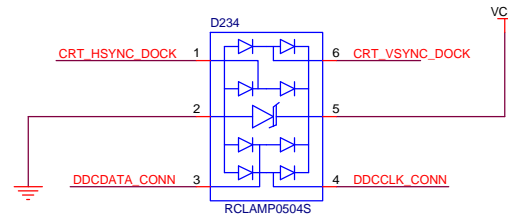
750HM TRACE



NEAR CRT CONN



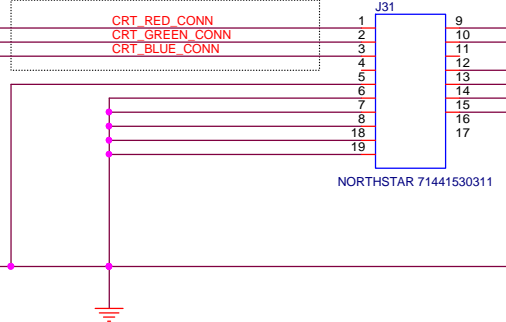
NEAR CRT CONN



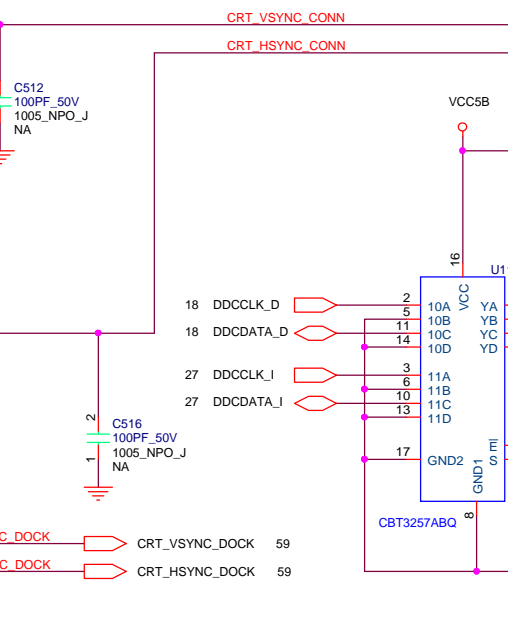
NEAR CRT CONN

CRT CONN

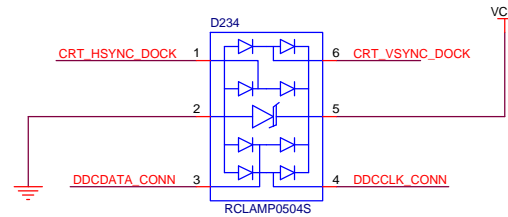
750HM TRACE



NEAR CRT CONN



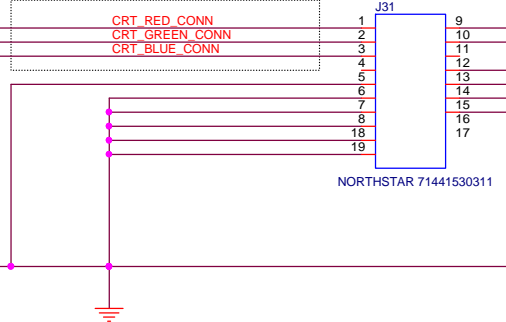
NEAR CRT CONN



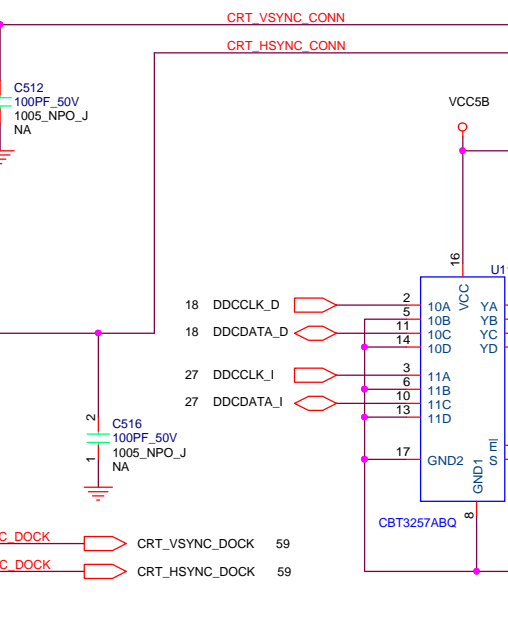
NEAR CRT CONN

CRT CONN

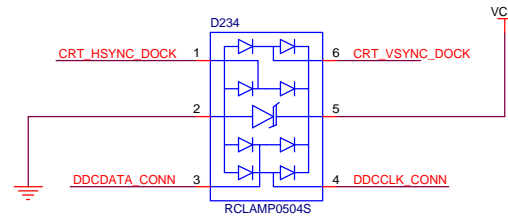
750HM TRACE



NEAR CRT CONN



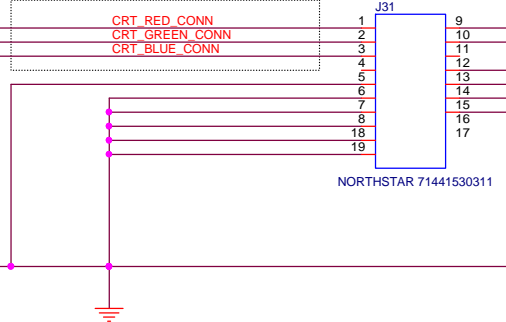
NEAR CRT CONN



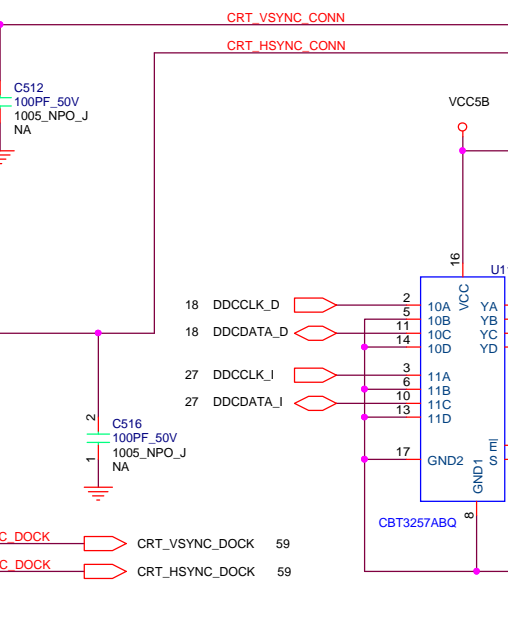
NEAR CRT CONN

CRT CONN

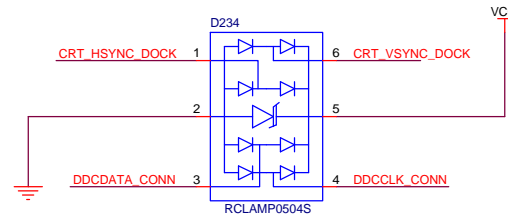
750HM TRACE



NEAR CRT CONN



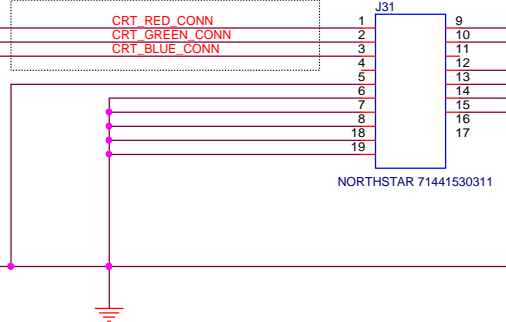
NEAR CRT CONN



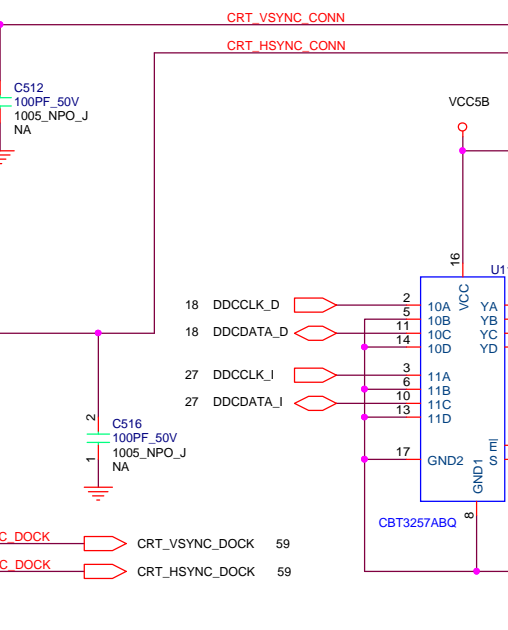
NEAR CRT CONN

CRT CONN

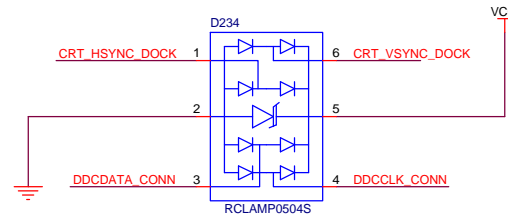
750HM TRACE



NEAR CRT CONN



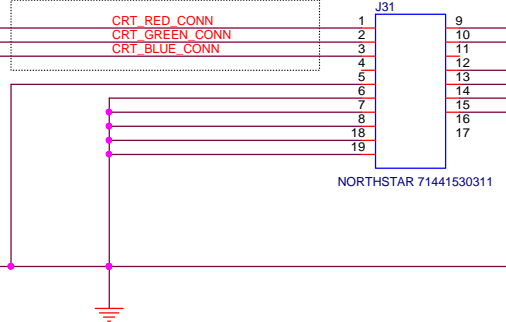
NEAR CRT CONN



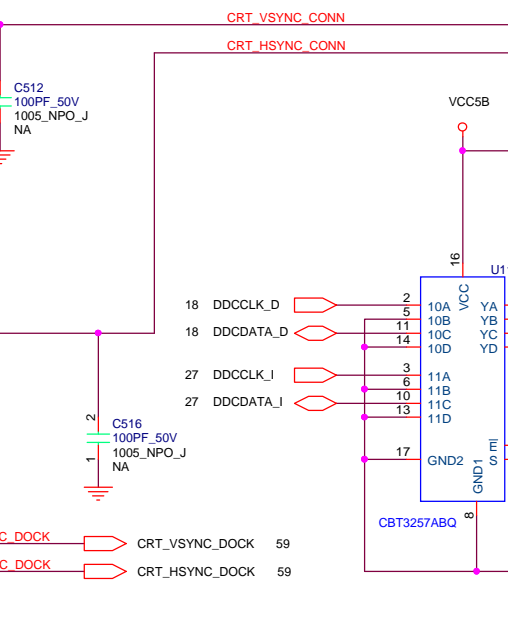
NEAR CRT CONN

CRT CONN

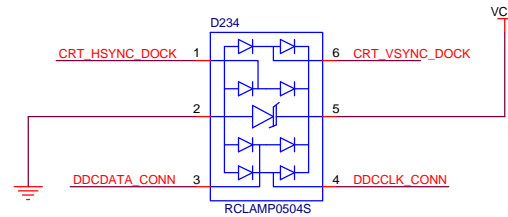
750HM TRACE



NEAR CRT CONN



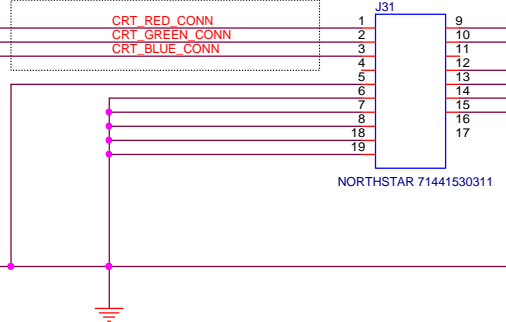
NEAR CRT CONN



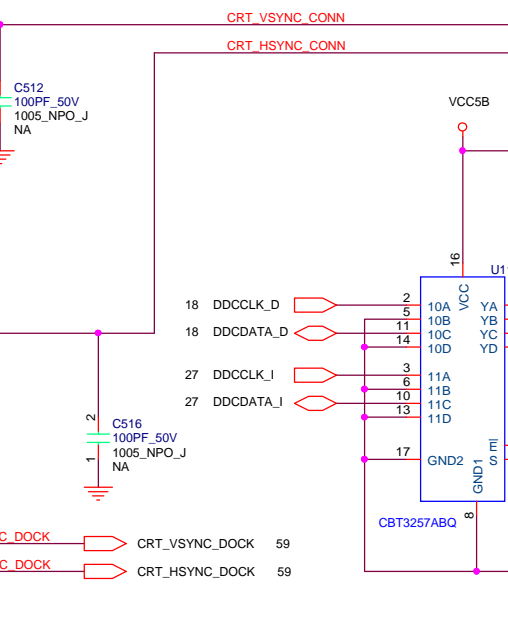
NEAR CRT CONN

CRT CONN

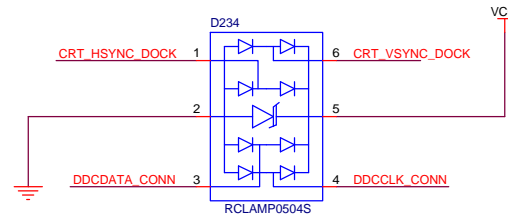
750HM TRACE



NEAR CRT CONN



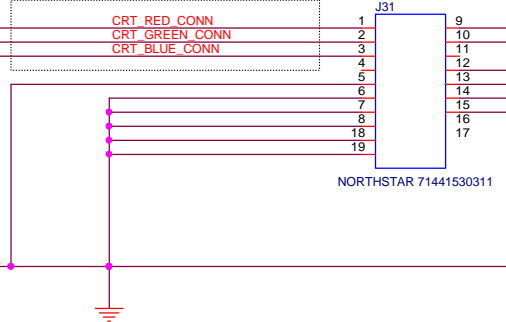
NEAR CRT CONN



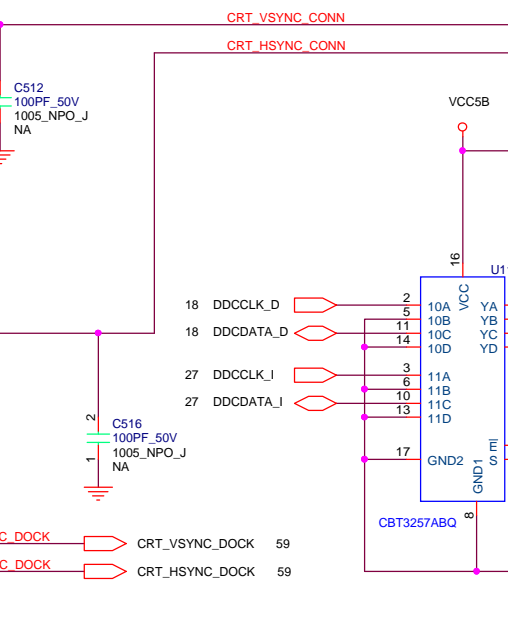
NEAR CRT CONN

CRT CONN

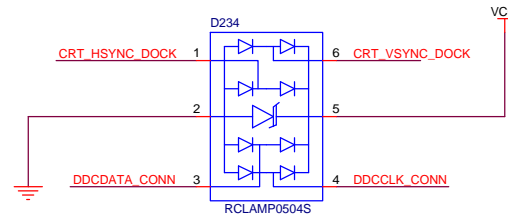
750HM TRACE



NEAR CRT CONN



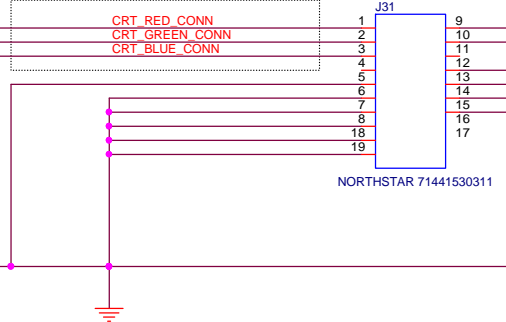
NEAR CRT CONN



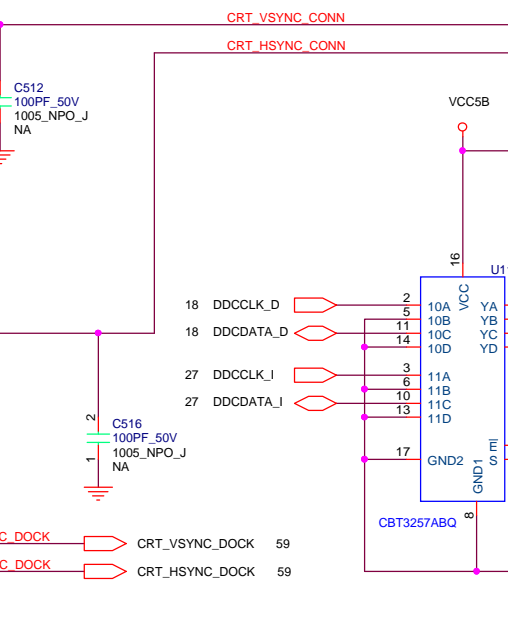
NEAR CRT CONN

CRT CONN

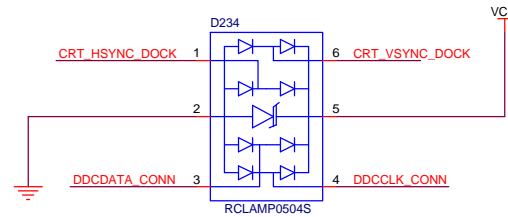
750HM TRACE



NEAR CRT CONN



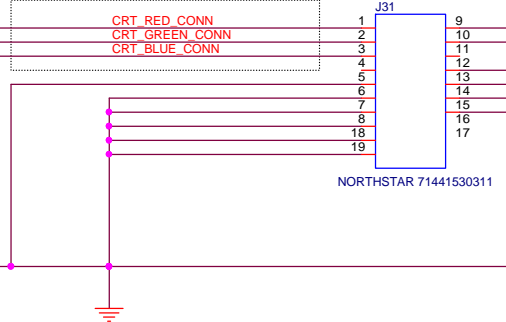
NEAR CRT CONN



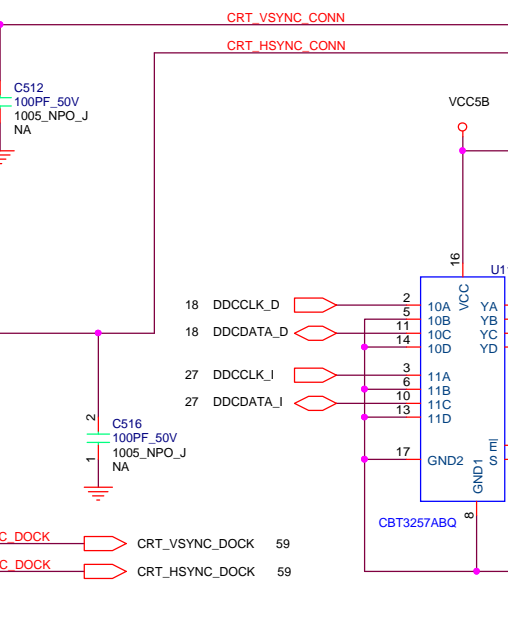
NEAR CRT CONN

CRT CONN

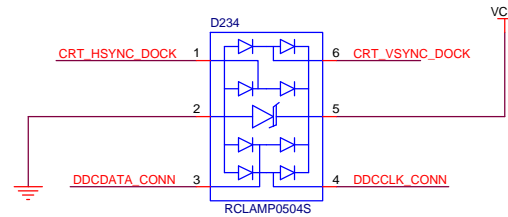
750HM TRACE



NEAR CRT CONN



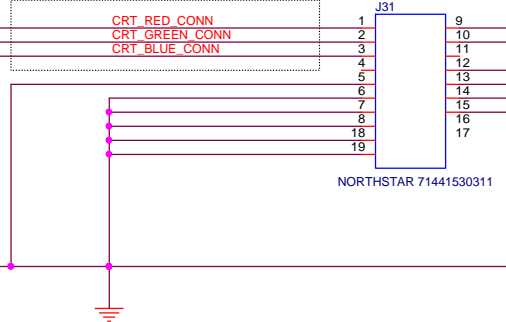
NEAR CRT CONN



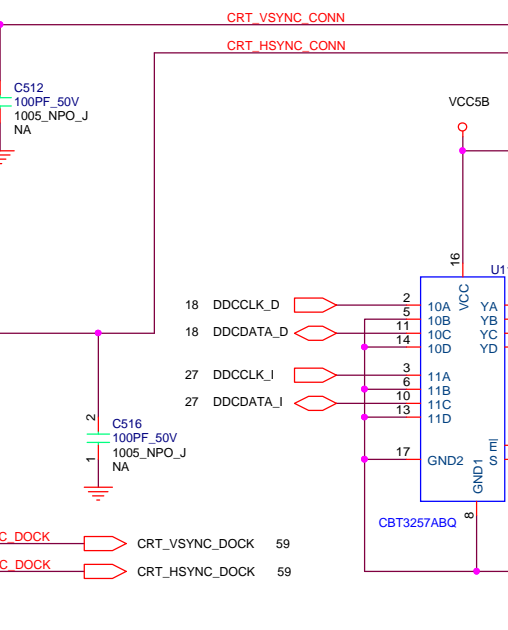
NEAR CRT CONN

CRT CONN

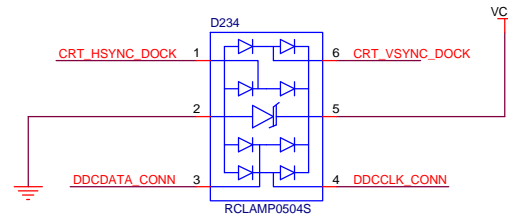
750HM TRACE



NEAR CRT CONN



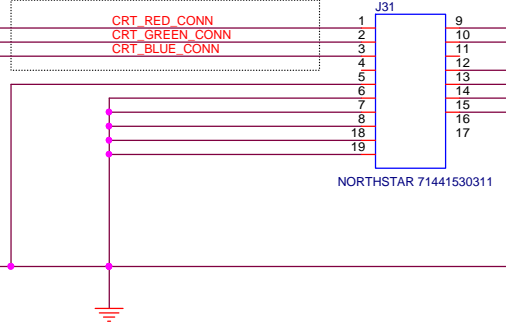
NEAR CRT CONN



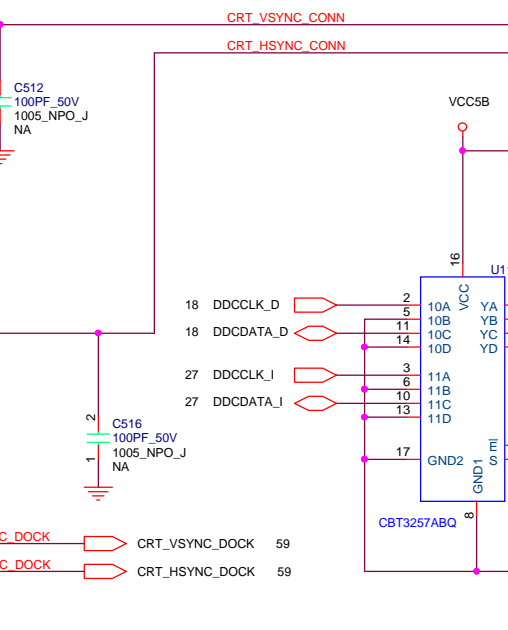
NEAR CRT CONN

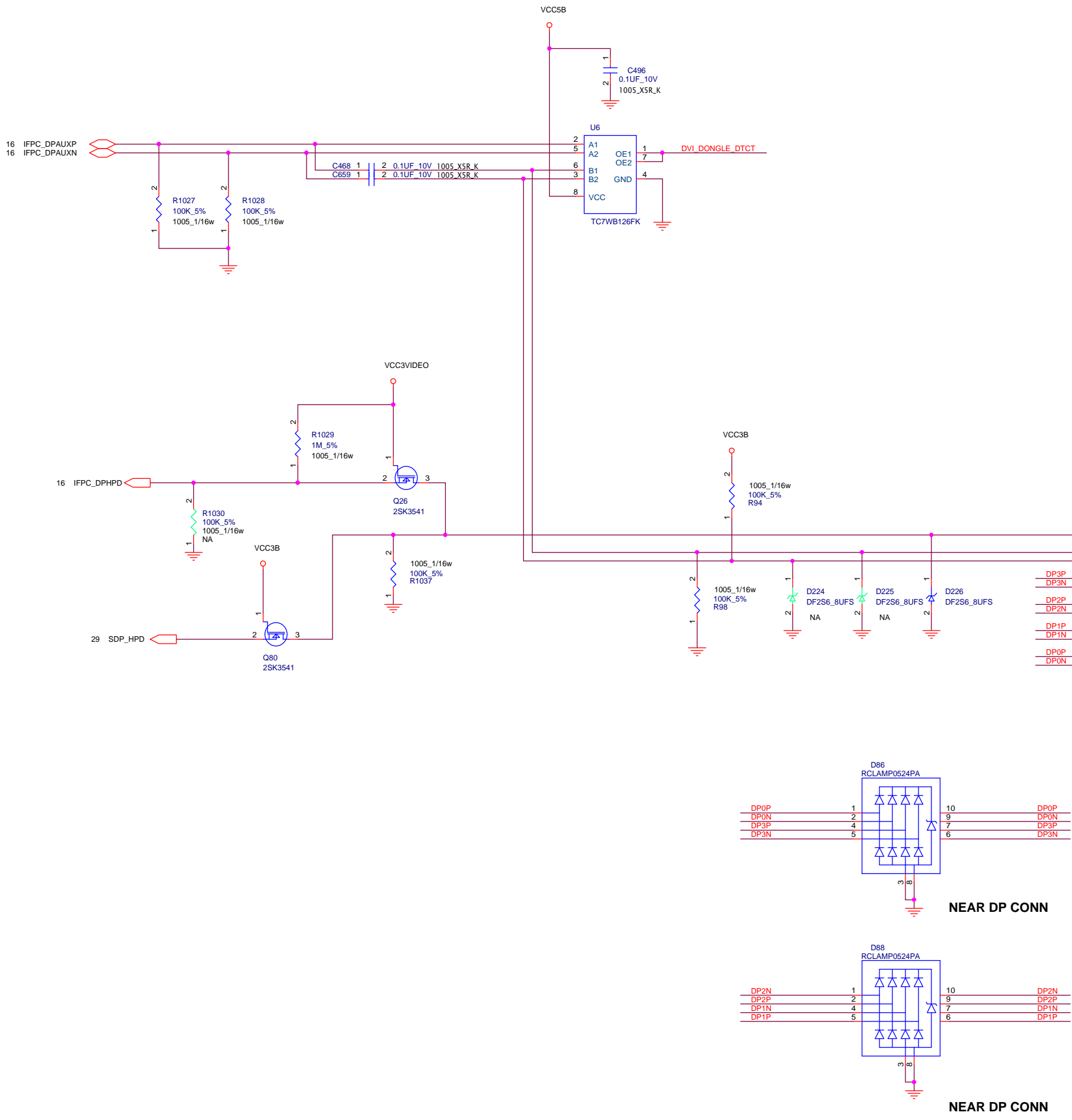
CRT CONN

750HM TRACE



NEAR CRT CONN

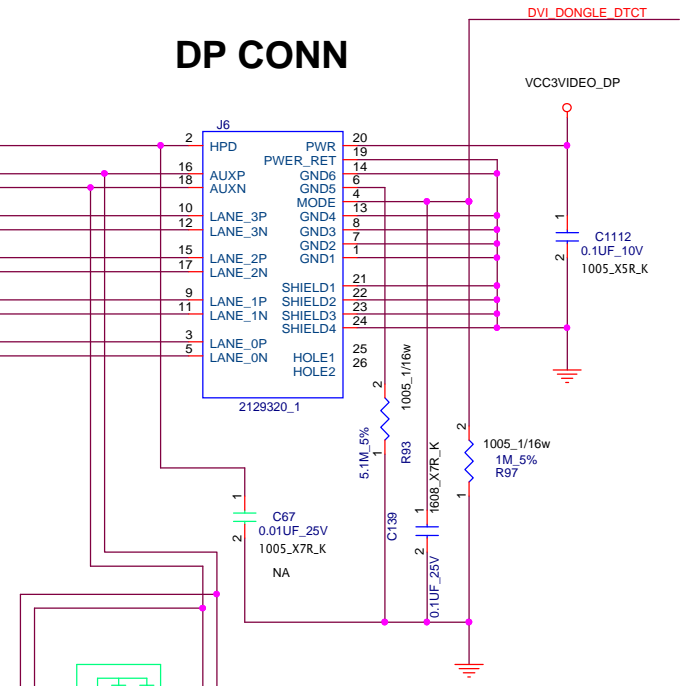




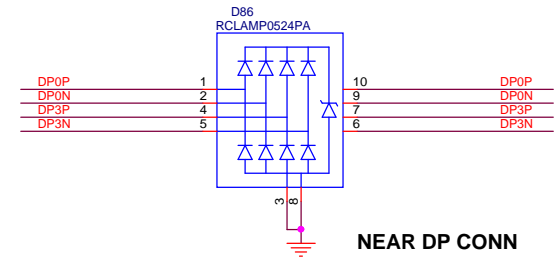
FOR SYSTEM DP NEAR DP CONN

16	IFPC_DP3N	C339	2	1	0.1UF_10V	1005_X5R_K	DP3N
16	IFPC_DP3P	C323	2	1	0.1UF_10V	1005_X5R_K	DP3P
16	IFPC_DP2N	C312	2	1	0.1UF_10V	1005_X5R_K	DP2N
16	IFPC_DP2P	C317	2	1	0.1UF_10V	1005_X5R_K	DP2P
16	IFPC_DP1N	C277	2	1	0.1UF_10V	1005_X5R_K	DP1N
16	IFPC_DP1P	C276	2	1	0.1UF_10V	1005_X5R_K	DP1P
16	IFPC_DP0N	C218	2	1	0.1UF_10V	1005_X5R_K	DP0N
16	IFPC_DP0P	C226	2	1	0.1UF_10V	1005_X5R_K	DP0P

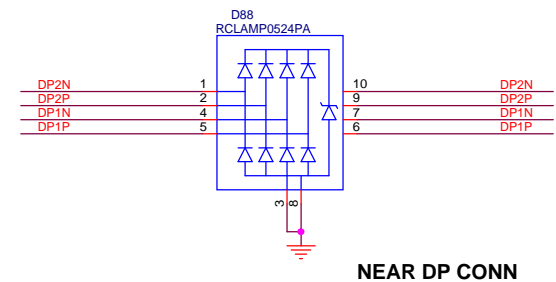
DP CONN



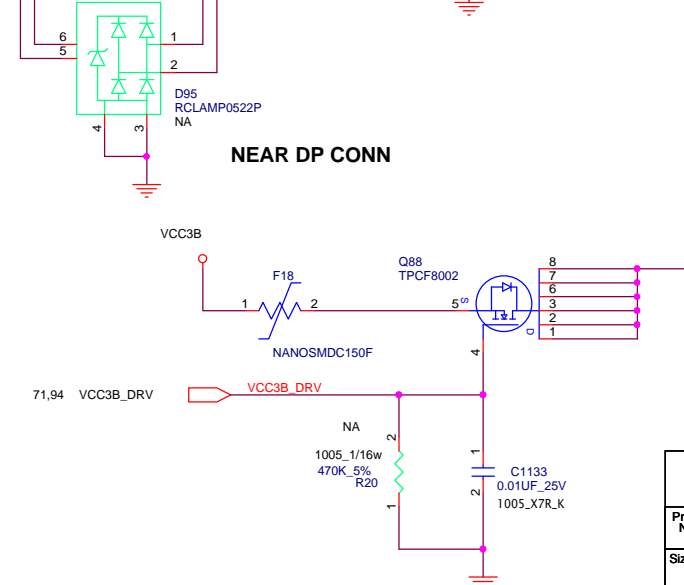
NEAR DP CONN

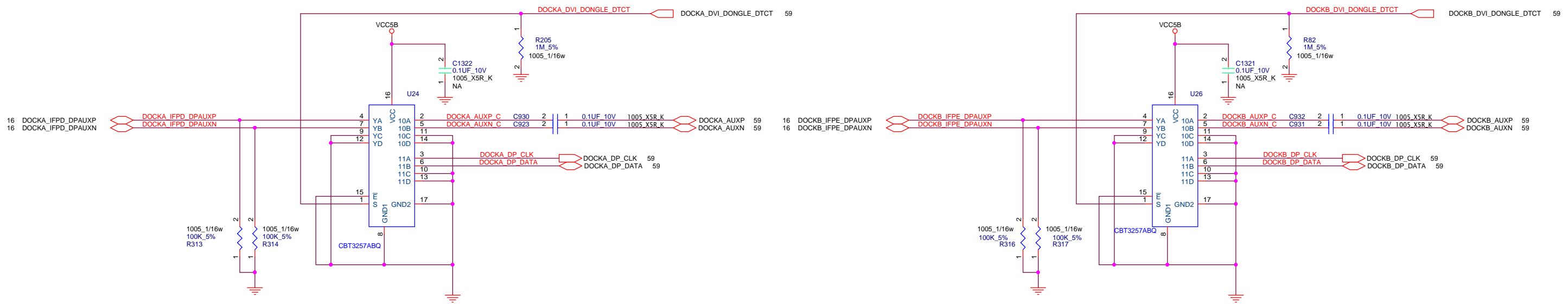
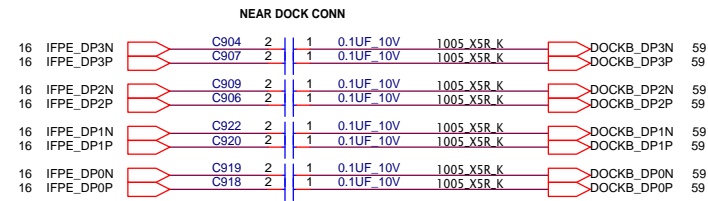
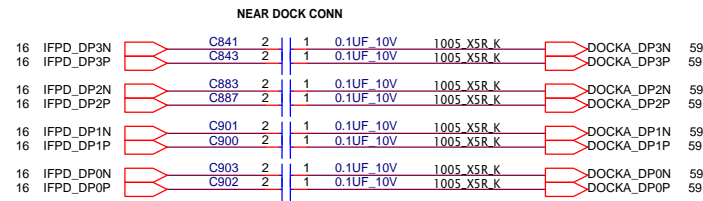


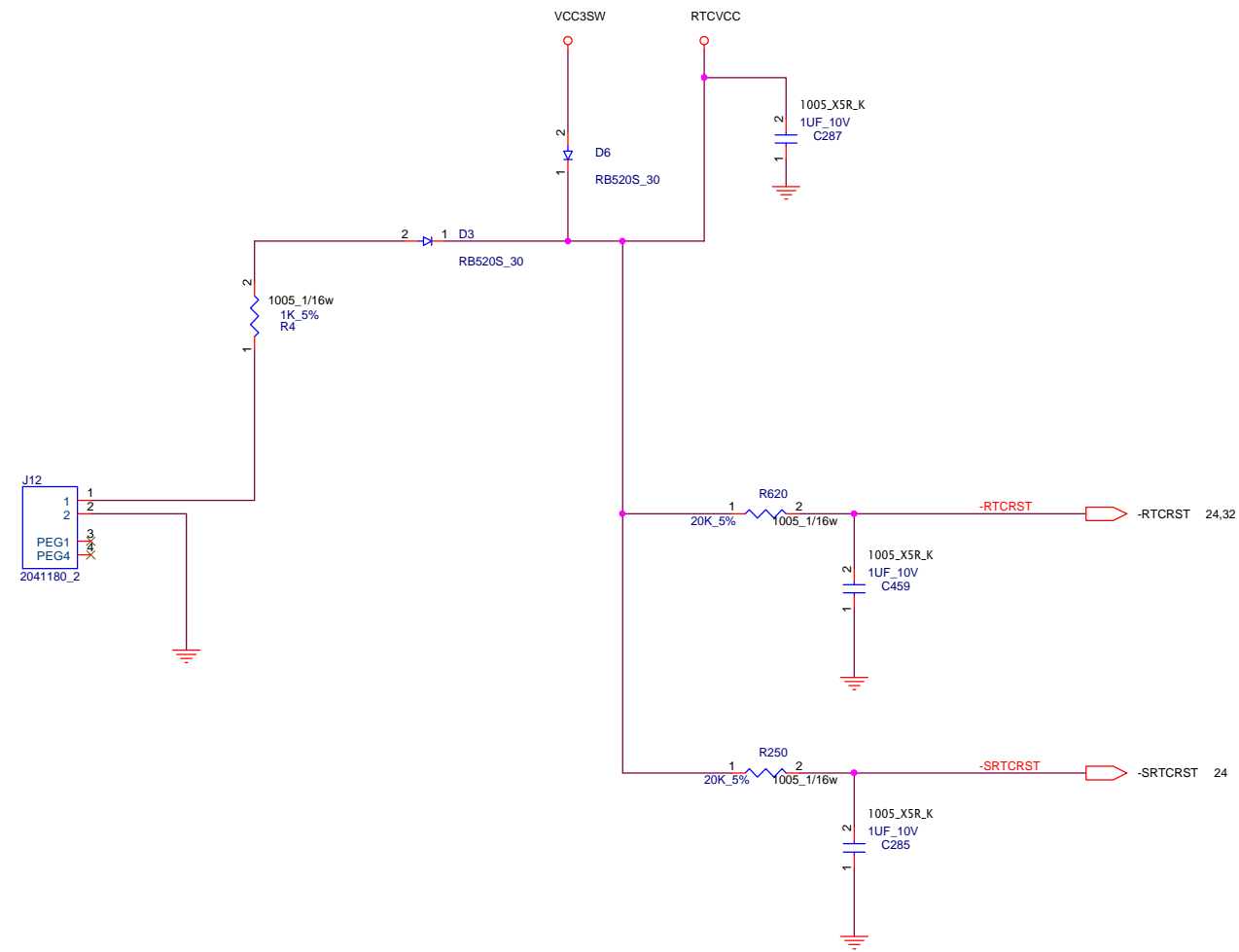
NEAR DP CONN

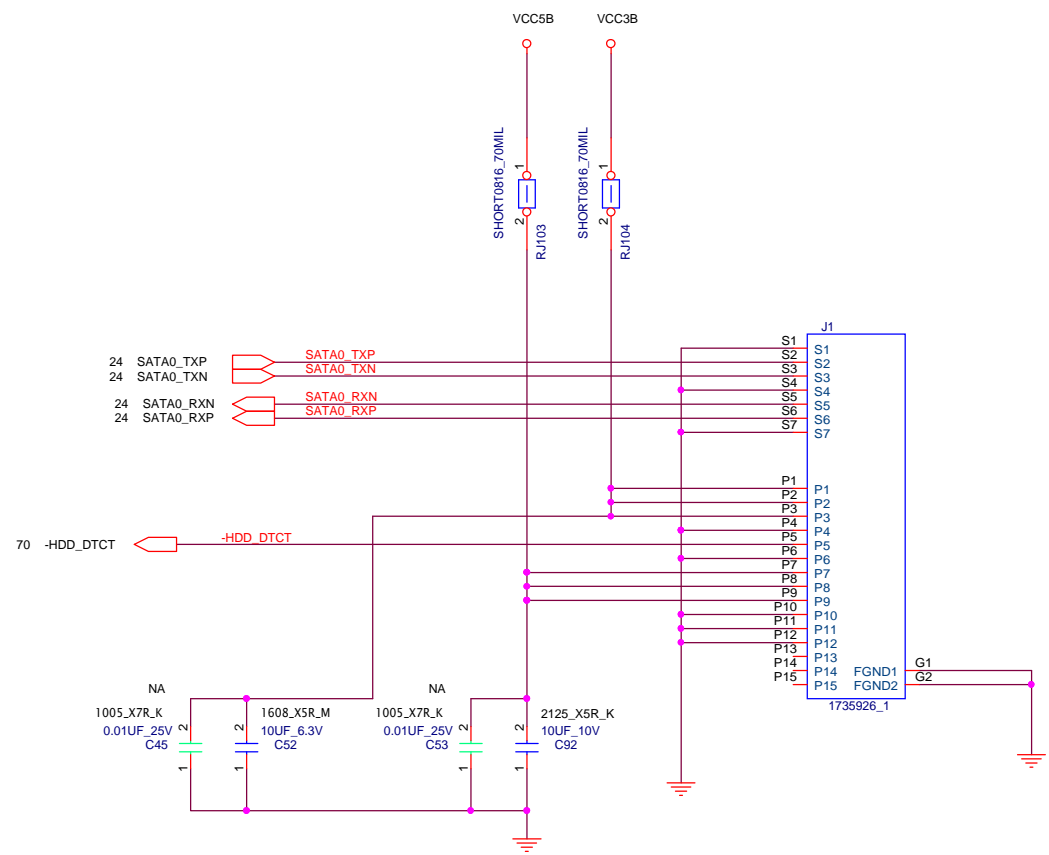


NEAR DP CONN

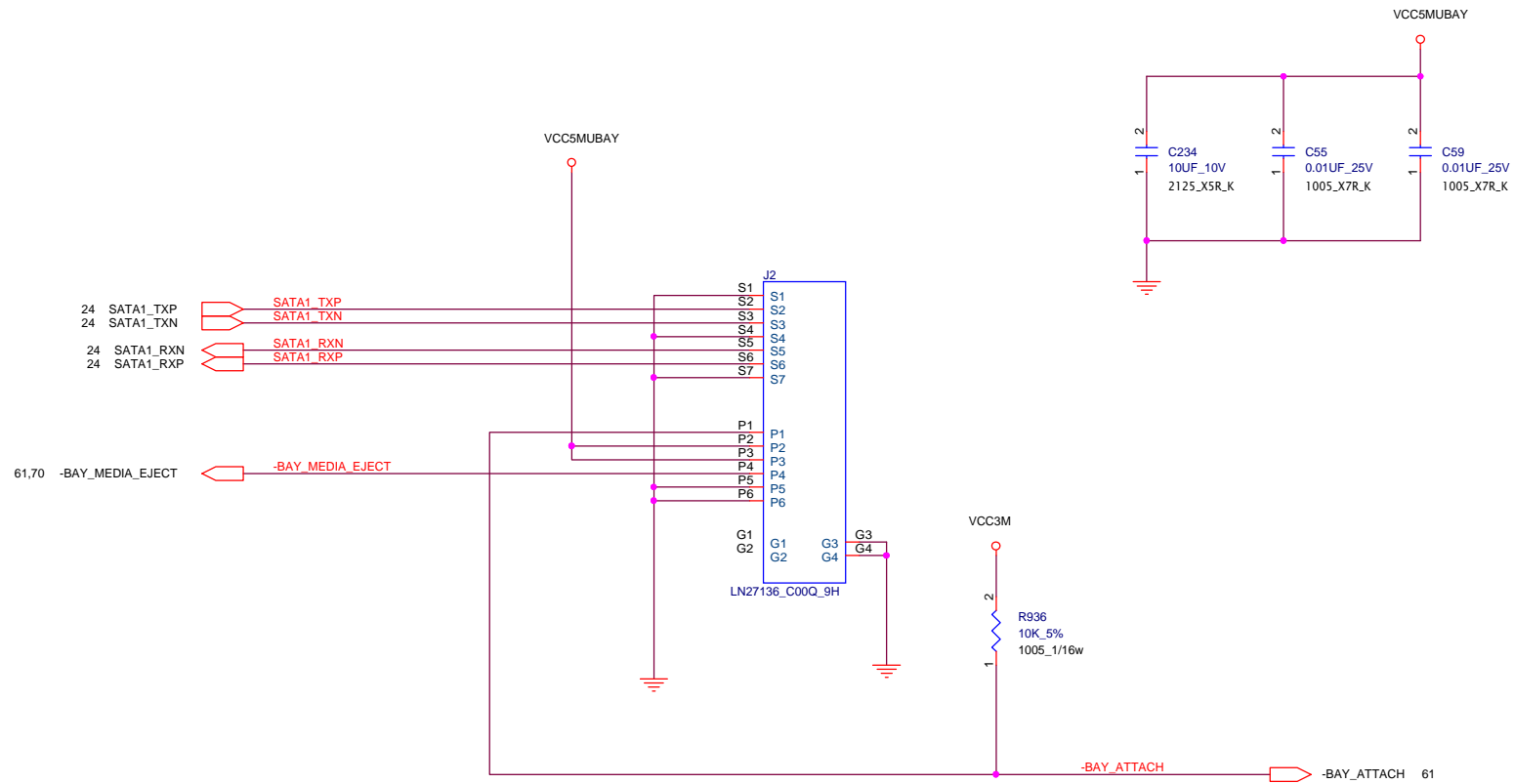












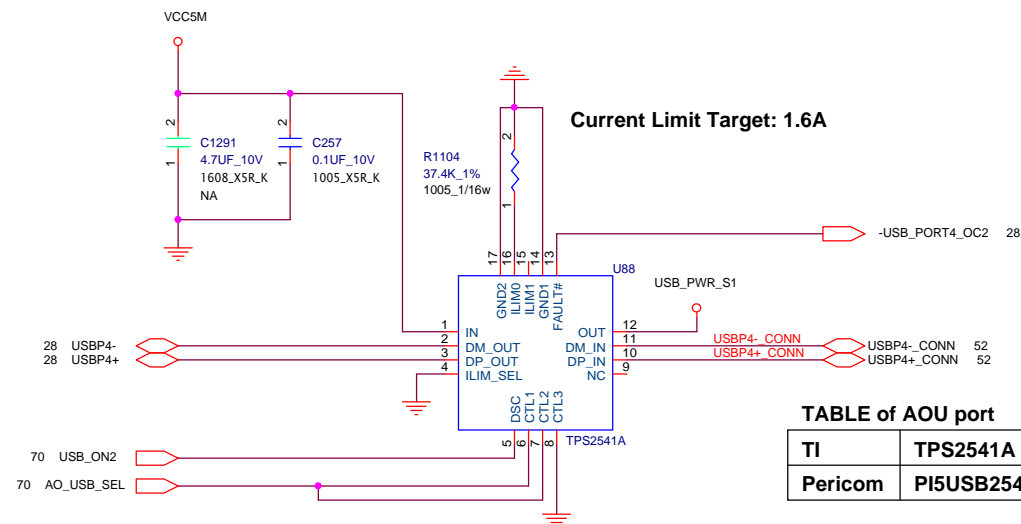
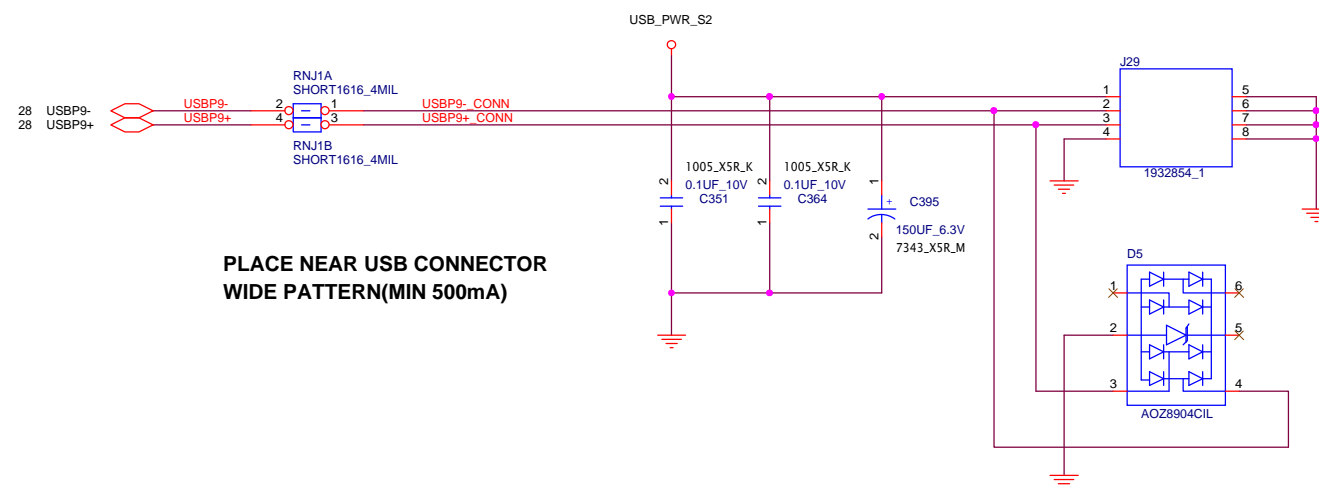
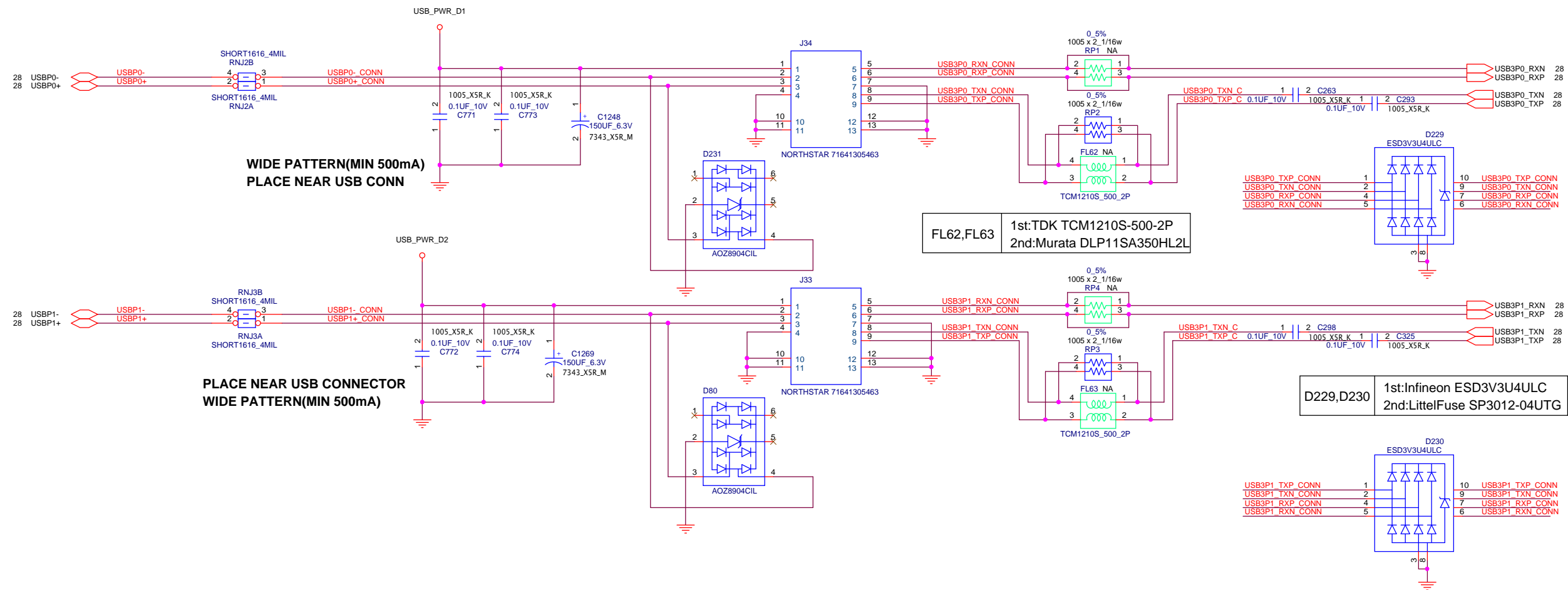
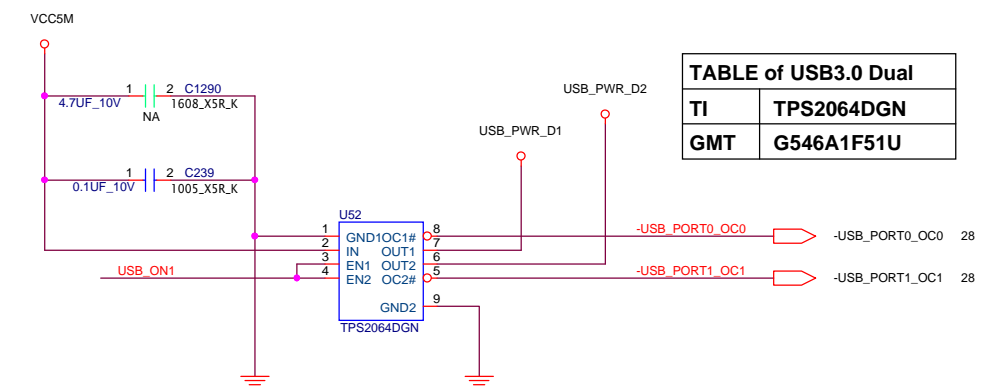
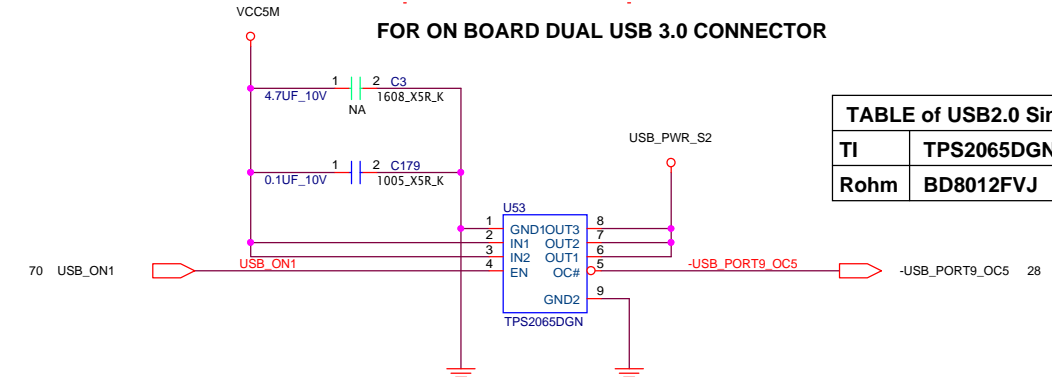


TABLE of AOU port

TI	TPS2541A
Pericom	PI5USB2541



FOR ON BOARD DUAL USB 3.0 CONNECTOR



FOR ON BOARD SINGLE USB 2.0 CONNECTOR

TABLE of USB3.0 Dual	
TI	TPS2064DGN
GMT	G546A1F51U

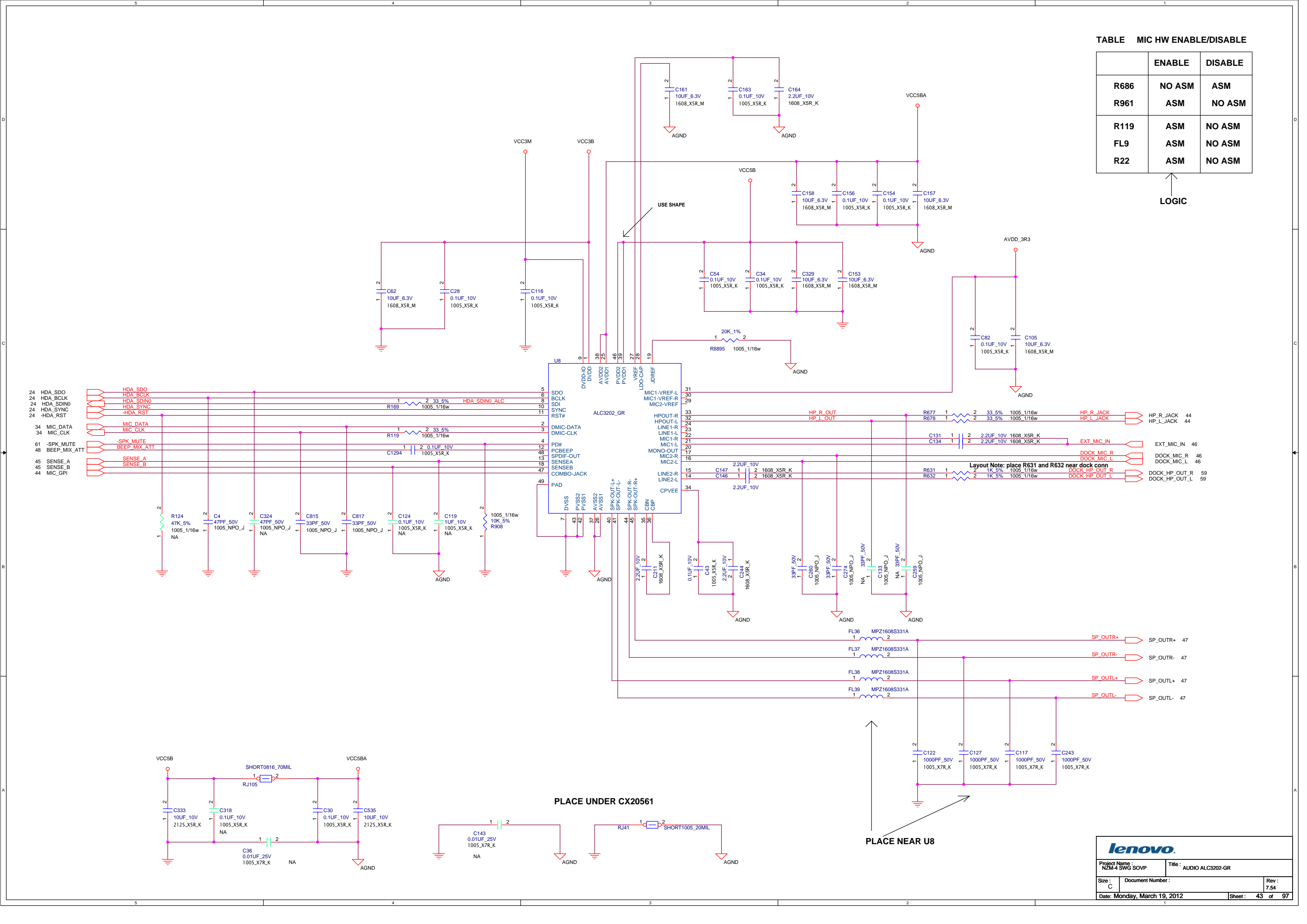
TABLE of USB2.0 Single	
TI	TPS2065DGN
Rohm	BD8012FVJ

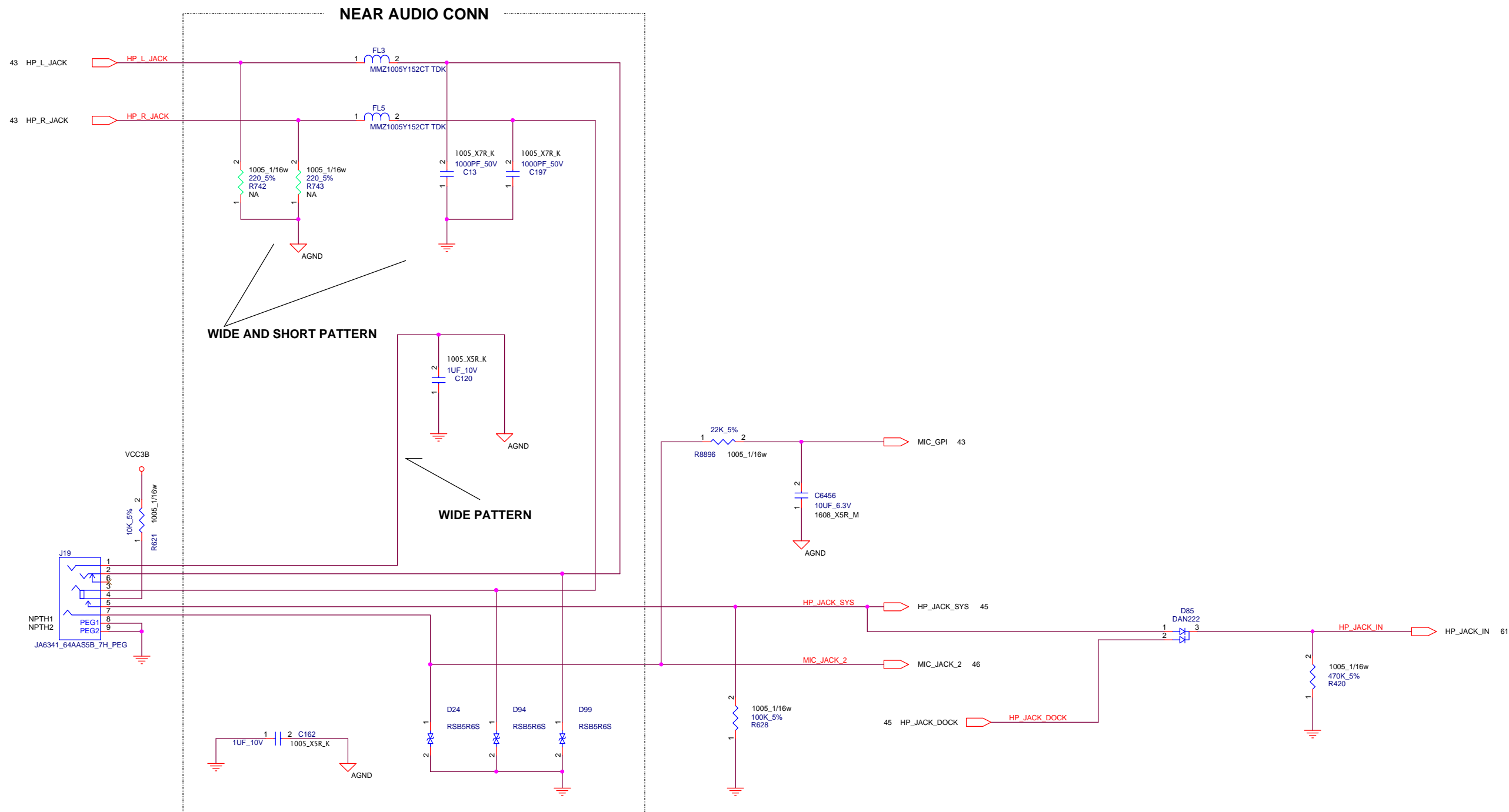


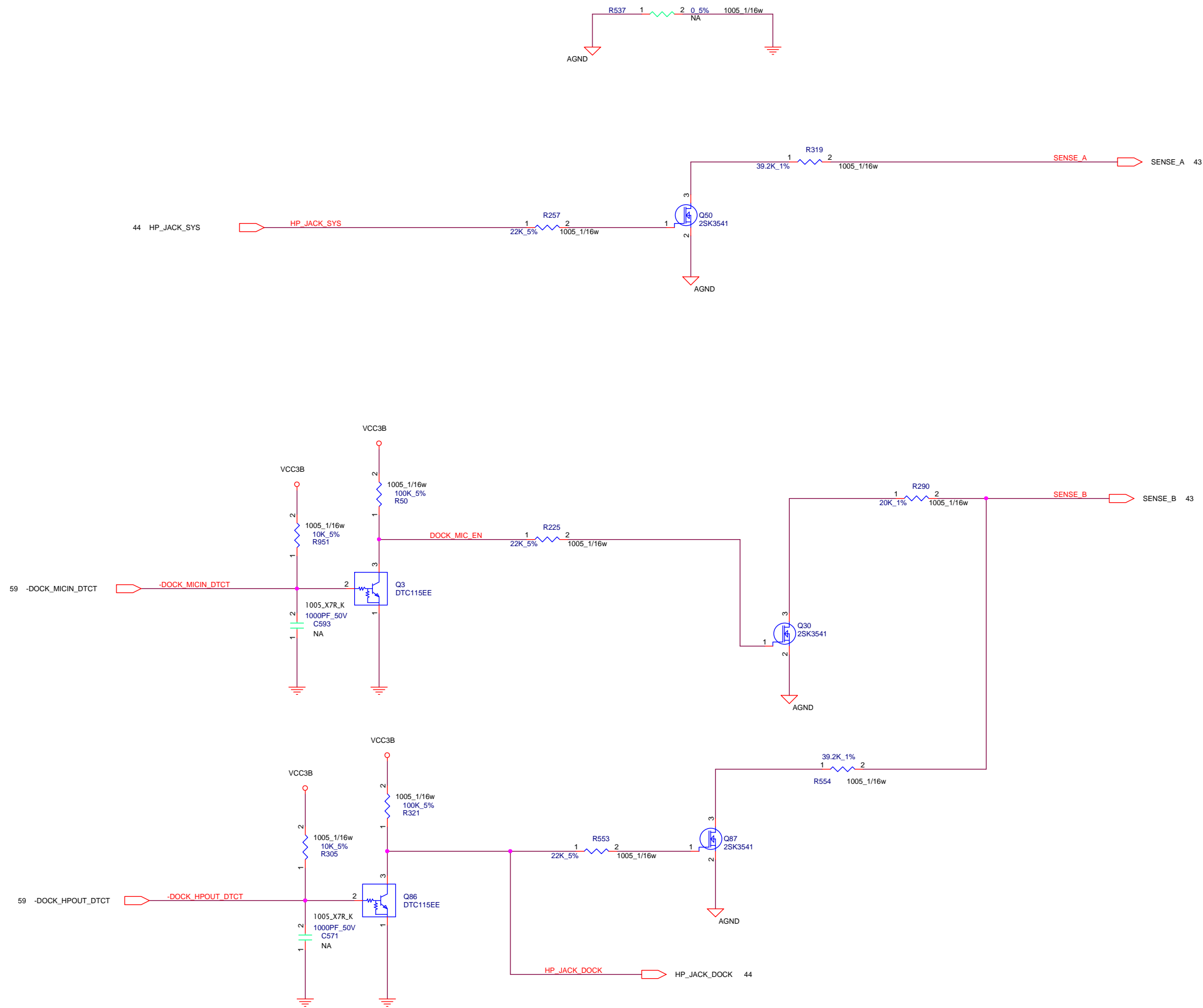
TABLE MIC HW ENABLE/DISABLE

	ENABLE	DISABLE
R686	NO ASM	ASM
R961	ASM	NO ASM
R119	ASM	NO ASM
FL9	ASM	NO ASM
R22	ASM	NO ASM

LOGIC

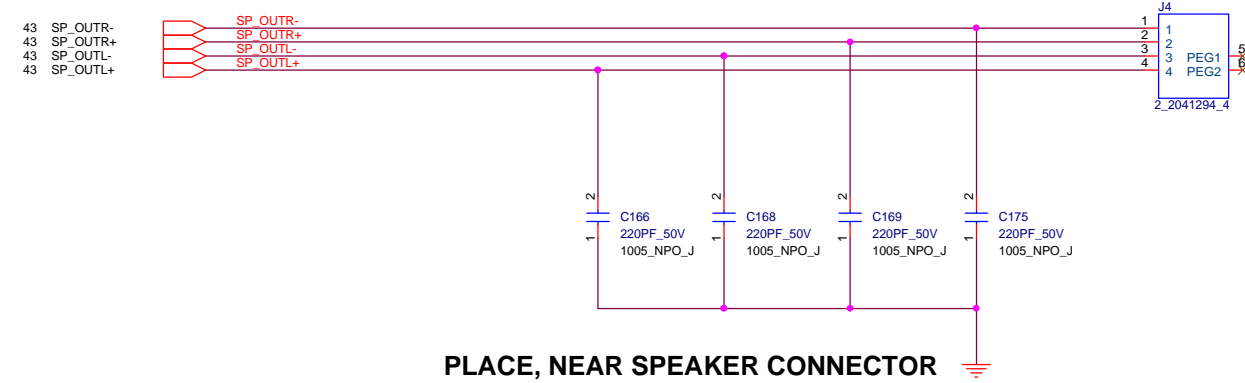






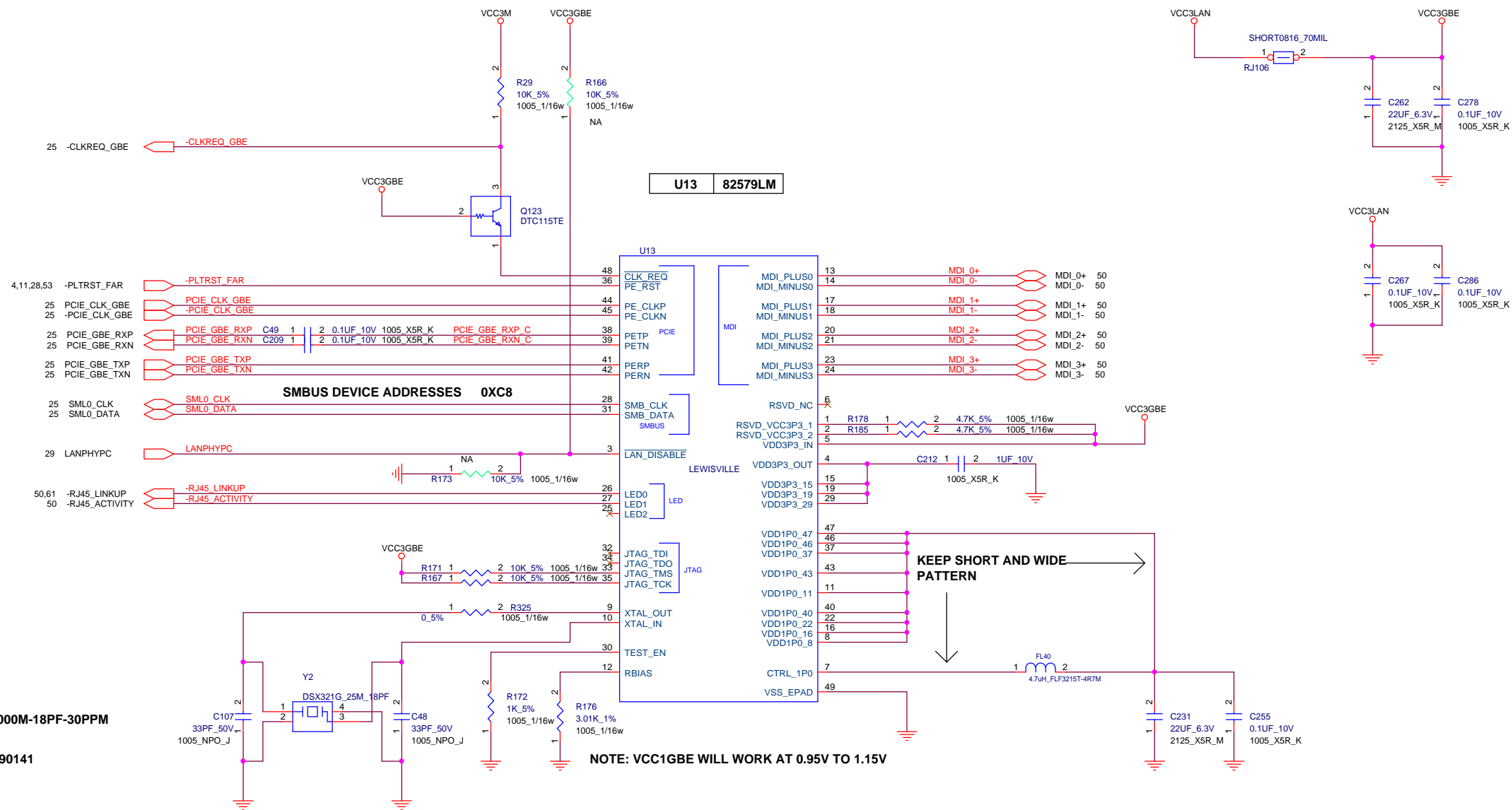


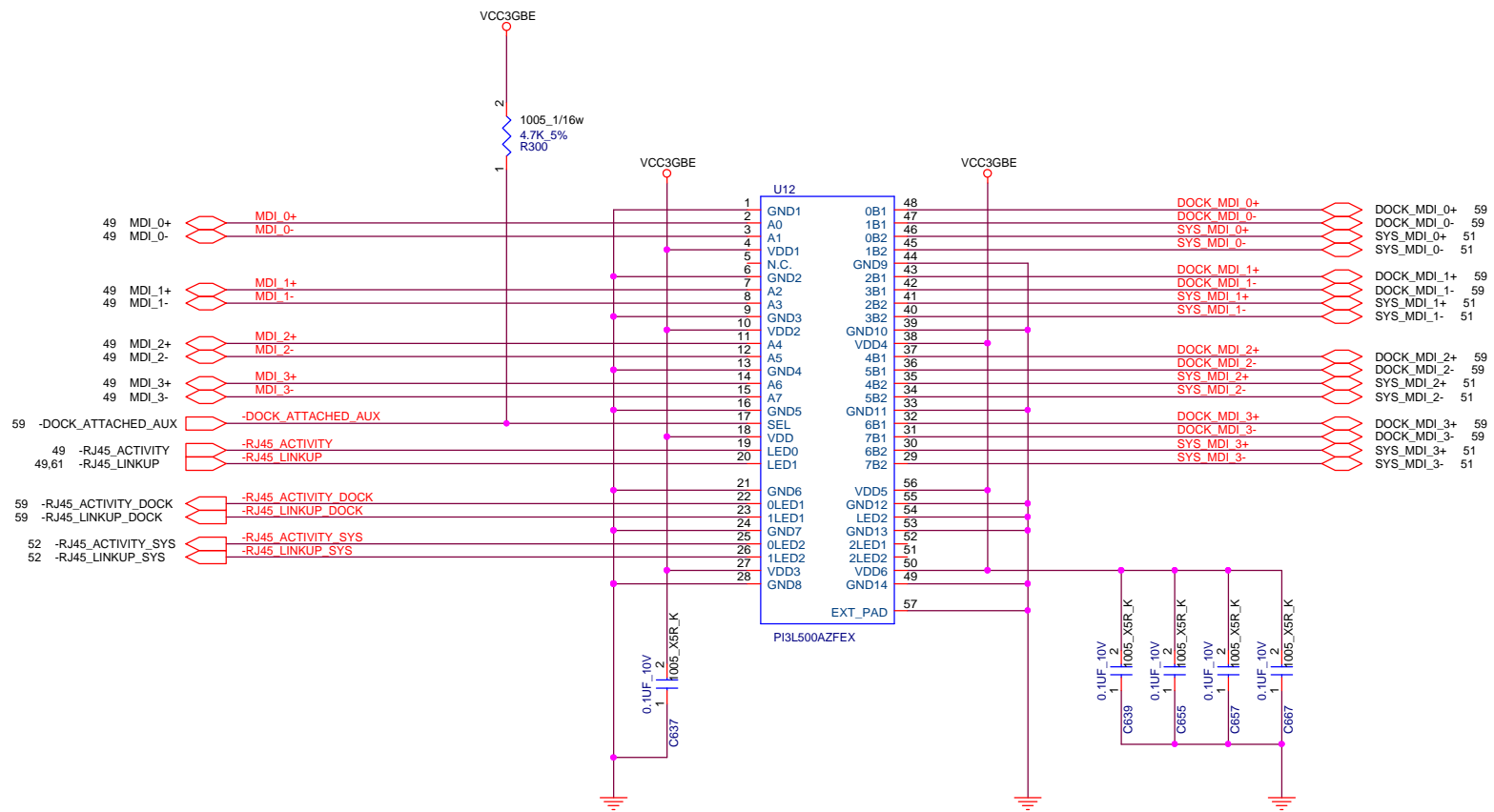






P/N 41U6141  
KDS DSX321G-25.000M-18PF-30PPM  
TXC 7V25020001  
RIVER FCX-04-25MJ90141

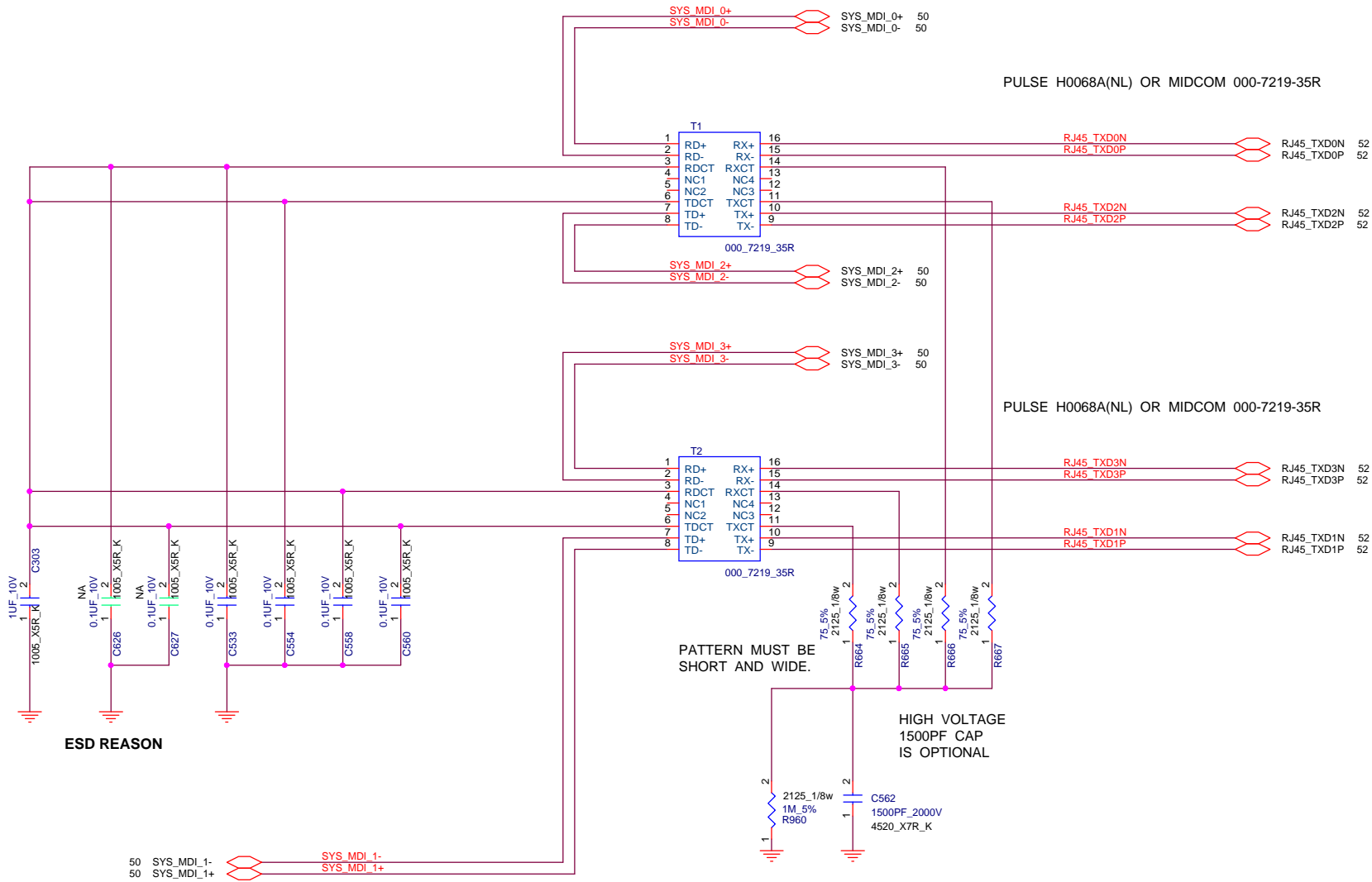


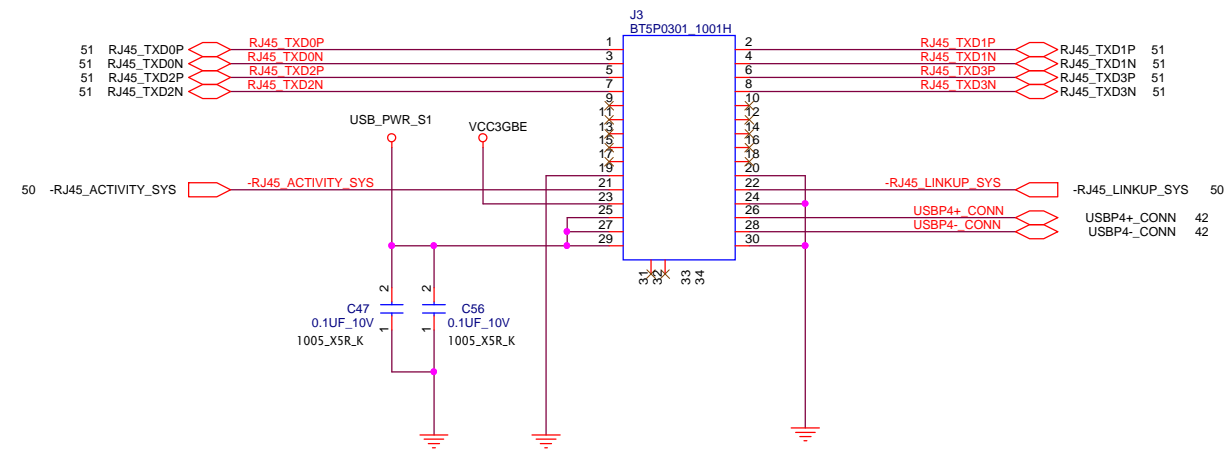


THE WIDTH OF THESE TRACE SHOULD  
BE WIDER THAN 35MIL TO PREVENT  
VOLTAGE DROP.



C303  
SHOULD BE PLACED AS CLOSE  
TO MAGNETICS AS POSSIBLE.





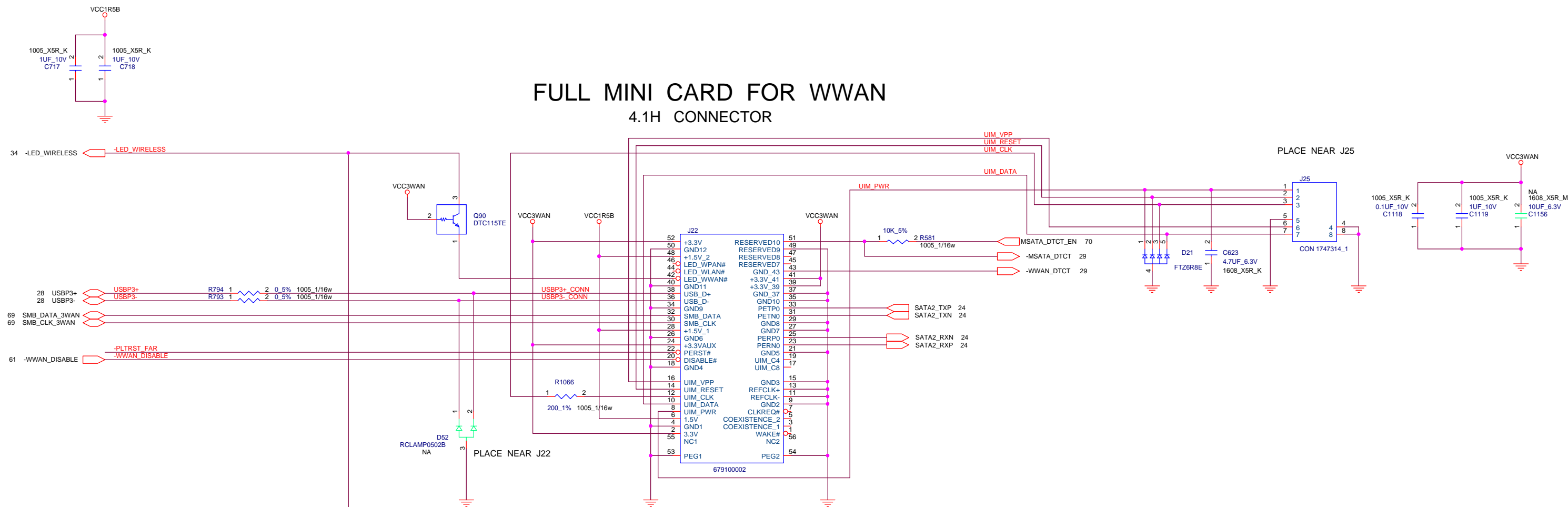
PLACE NEAR SUB CARD CONNECTOR  
WIDE PATTERN(MIN 500mA)





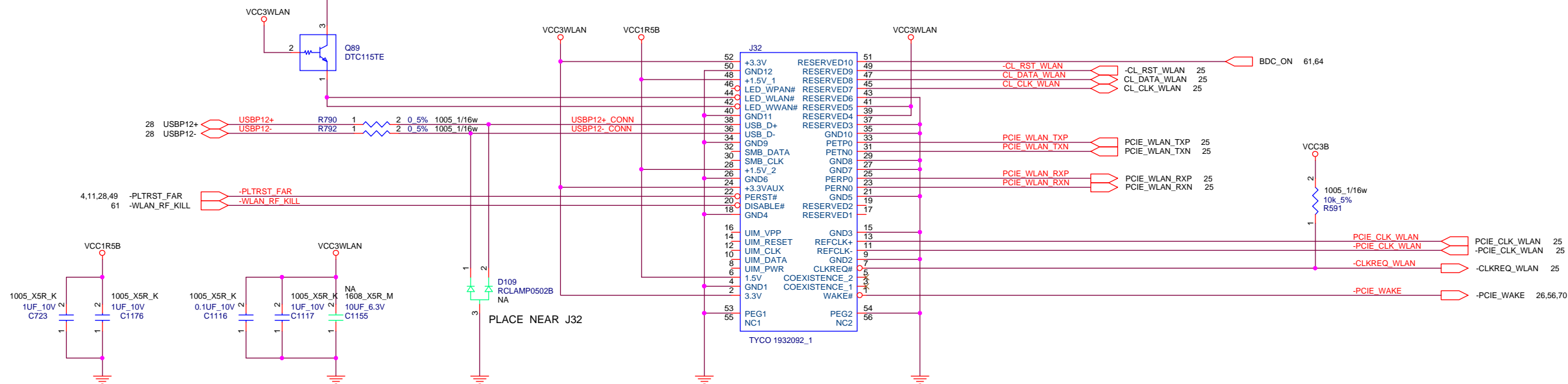
# FULL MINI CARD FOR WWAN

## 4.1H CONNECTOR

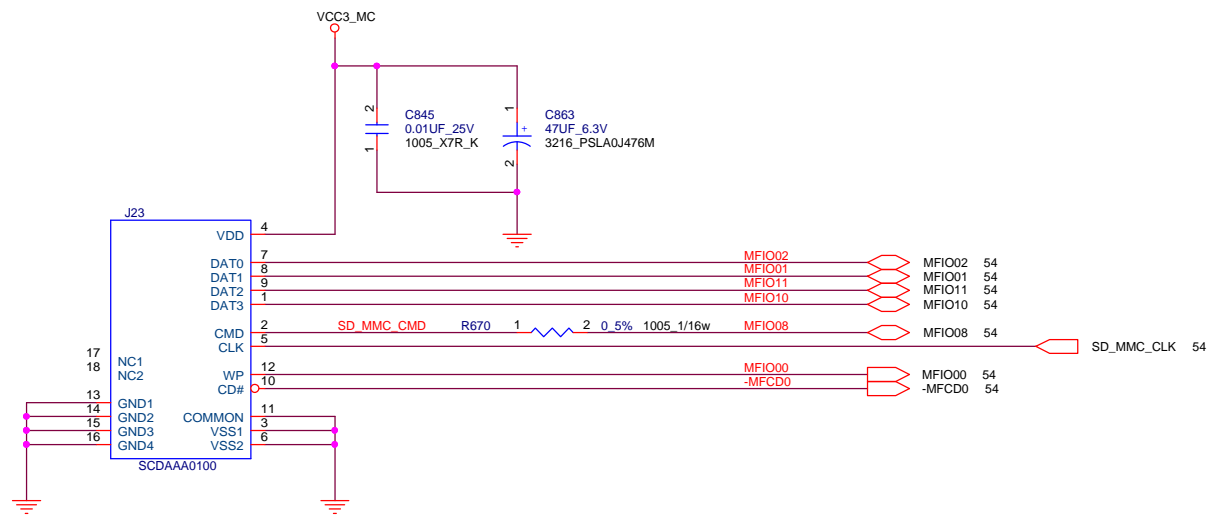


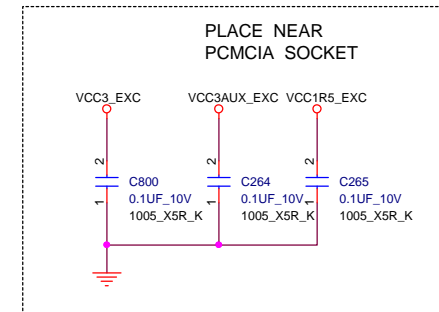
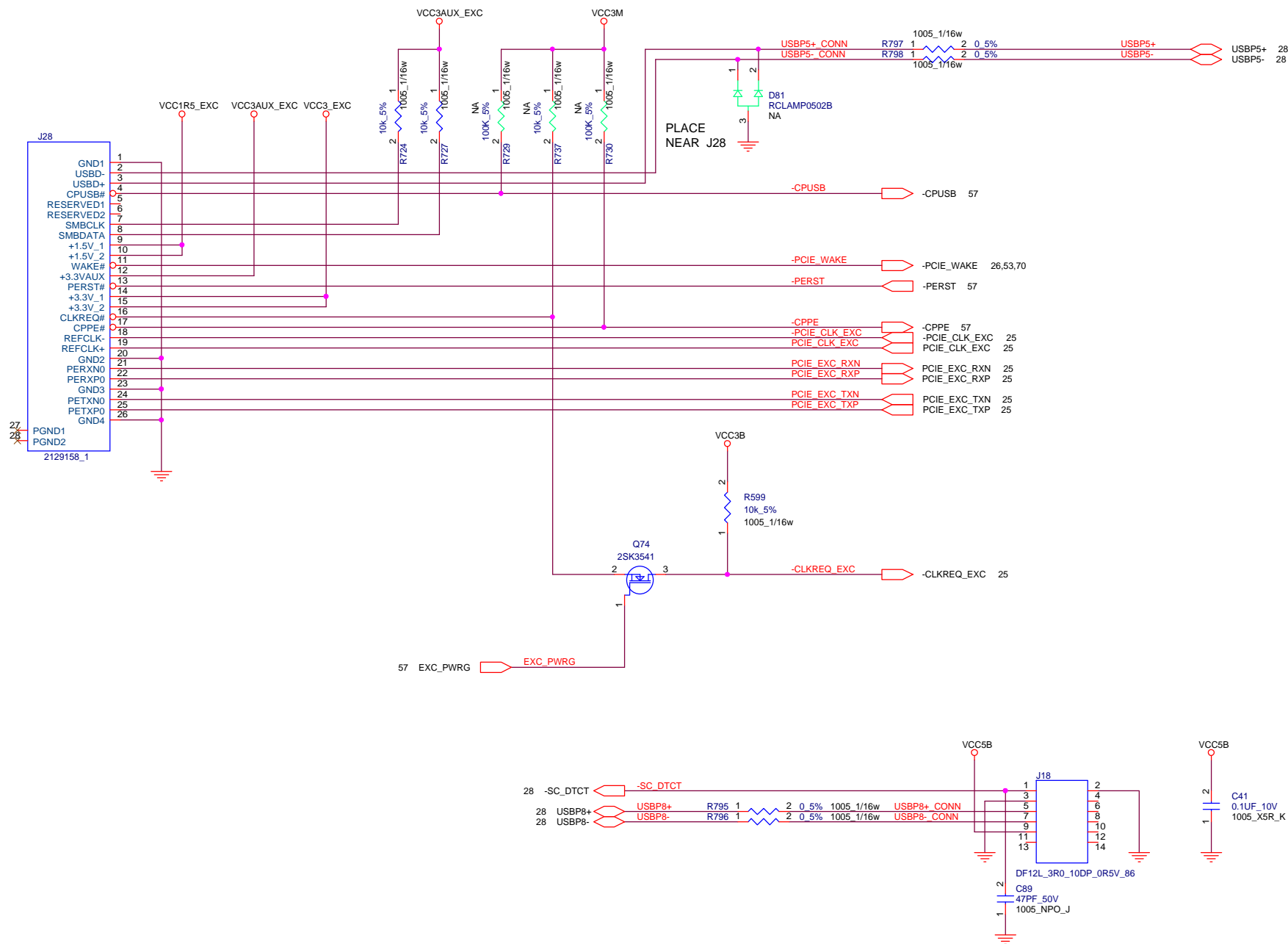
# HALF MINI CARD FOR WLAN

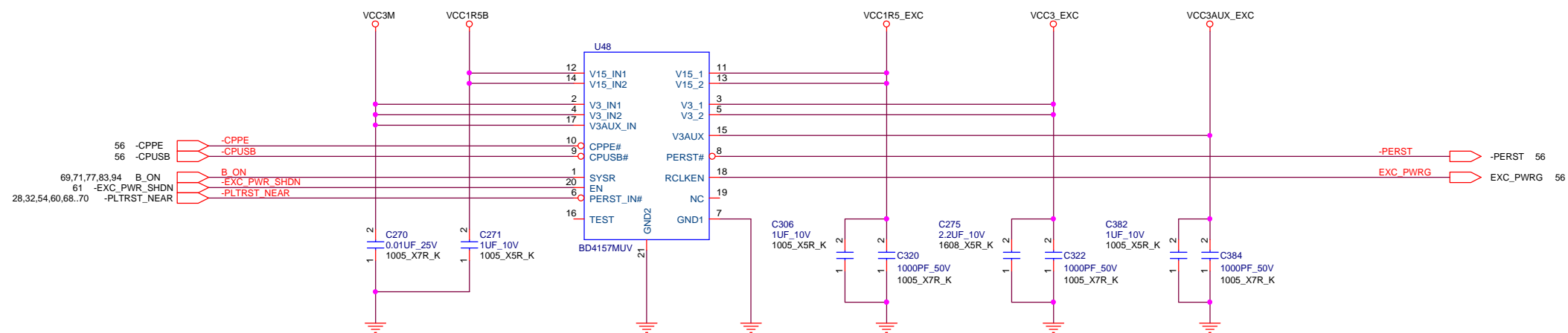
## 7.0H CONNECTOR

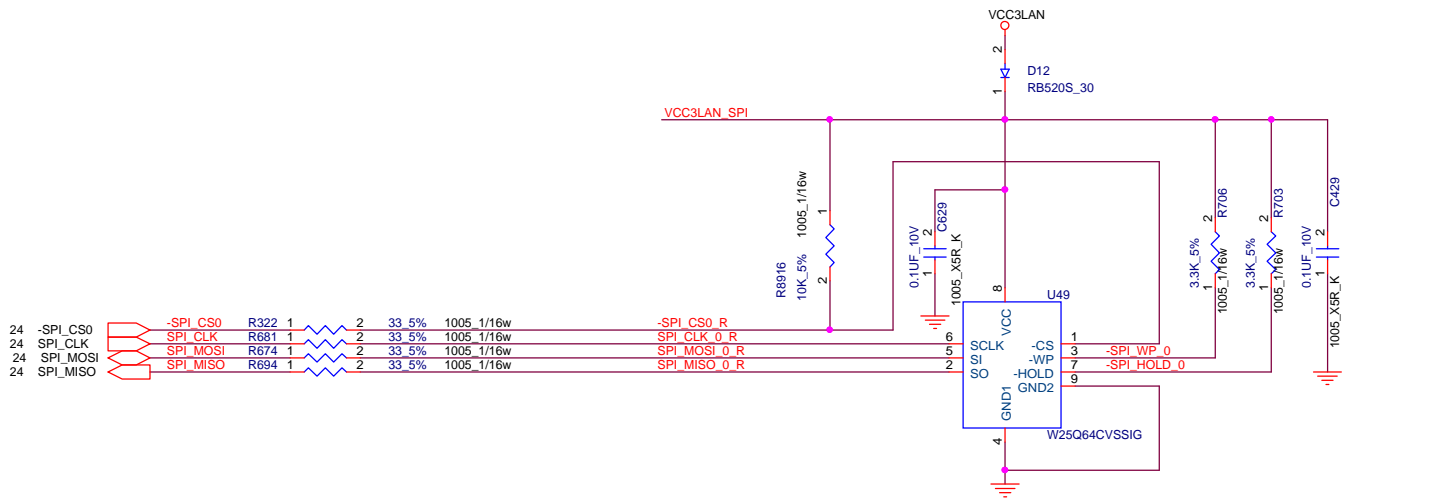






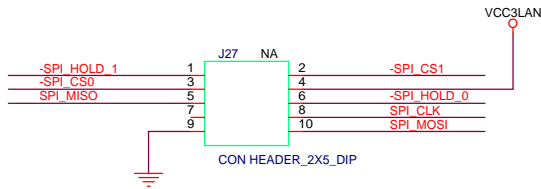




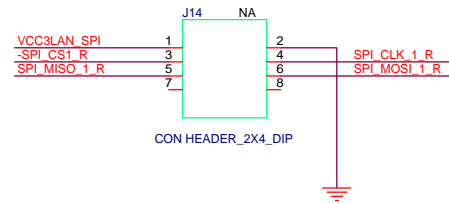


8MB SOIC8  
MACRONIX MX25L6406EM2I-12G  
WINBOND W25Q64CVSSIG

16MB WSON8  
MACRONIX MX25L12835EZNI-10G  
WINBOND W25Q128BVEIG



EM100 PIN HEADER INTERFACE (TOP VIEW)					
1	(HOLD1#)	(CS1#)	2		
3	CS0#	VCC	4		
5	MISO	HOLD0#	6		
7	WP0#	CLK	8		
9	GND	MOSI	10		

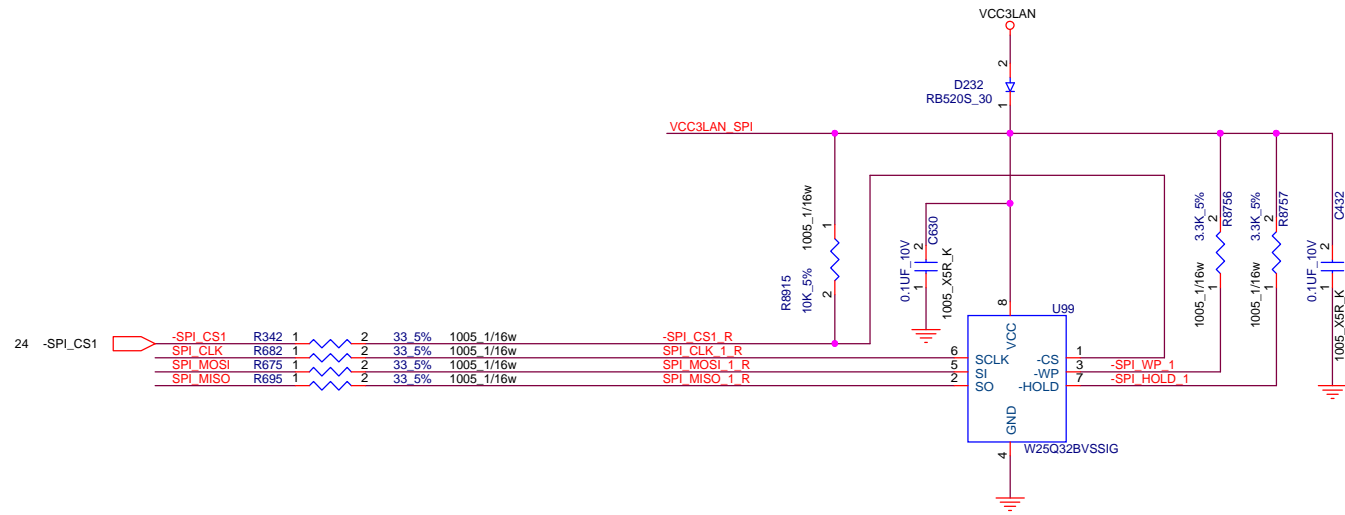


SF100 PIN HEADER INTERFACE (TOP VIEW)							
1	VCC	D232.1	GND	GND	2		
3	CS#	R342.2	R682.2	CLK	4		
5	MISO	R695.2	R675.2	MOSI	6		
7	(KEY)	N/A	N/A	(RESET)	8		

	CONFIG-1 16MB	CONFIG-2 12MB	CONFIG-3 8MB
U49 U99	16MB NO_ASM	8MB 4MB	8MB NO_ASM
D232 R8756 R8757 R8915 C432 C630	NO_ASM NO_ASM NO_ASM NO_ASM NO_ASM NO_ASM	ASM ASM ASM ASM ASM ASM	NO_ASM NO_ASM NO_ASM NO_ASM NO_ASM NO_ASM
R342 R682 R675 R695	NO_ASM NO_ASM NO_ASM NO_ASM	ASM ASM ASM ASM	NO_ASM NO_ASM NO_ASM NO_ASM



LOGIC



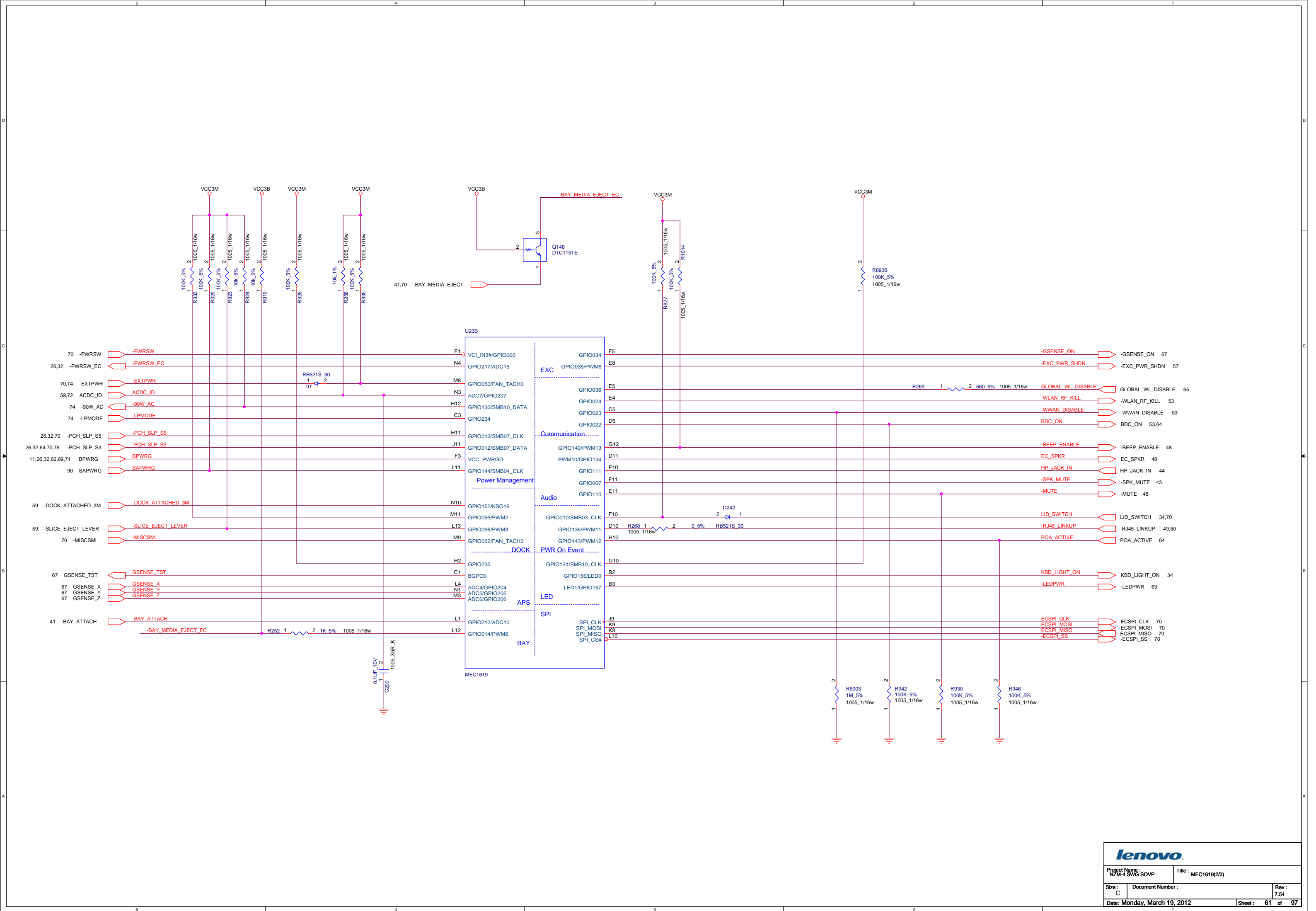
4MB SOIC8  
MACRONIX MX25L3206EM2I-12G  
WINBOND W25Q32BVSSIG







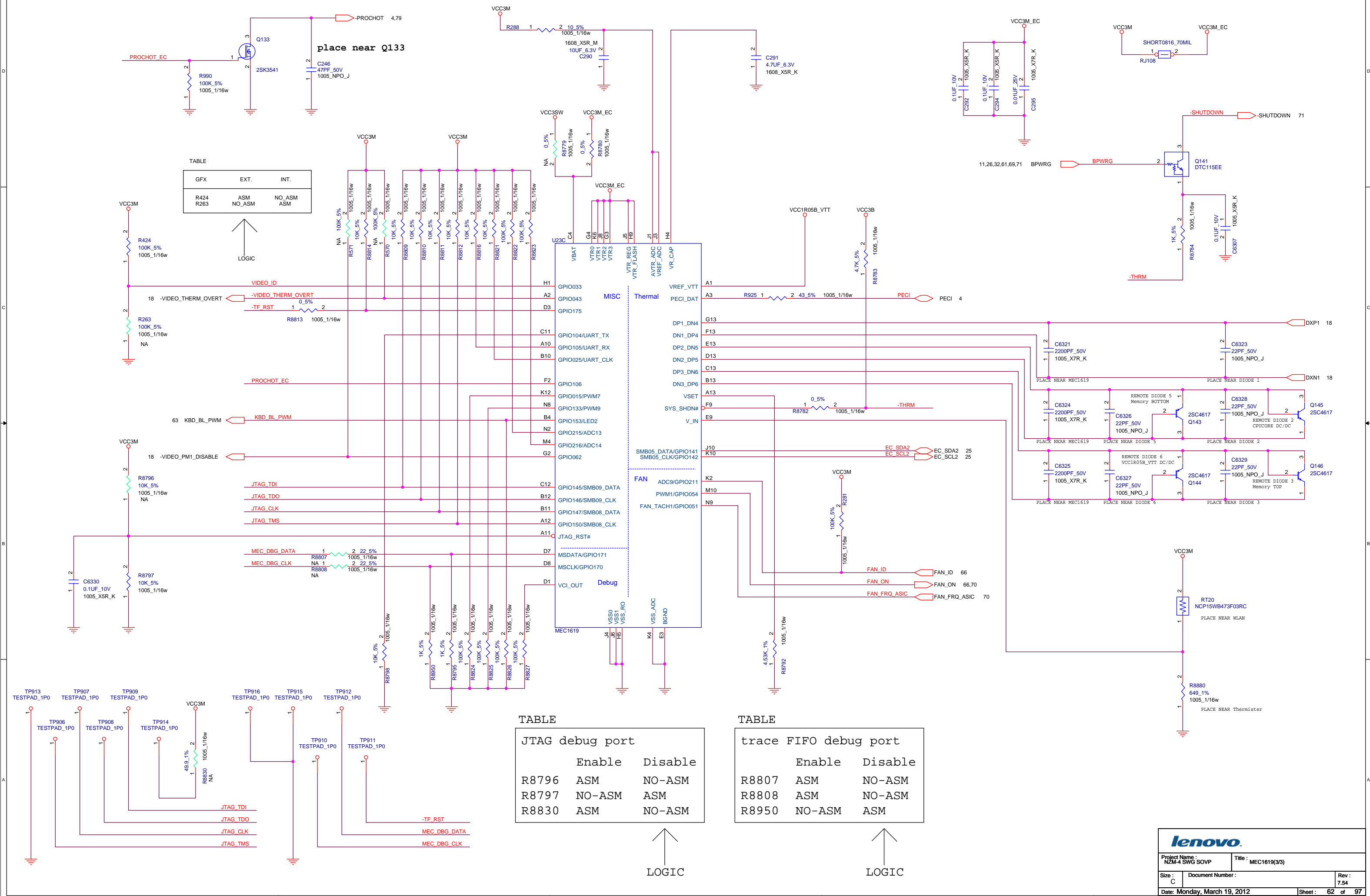


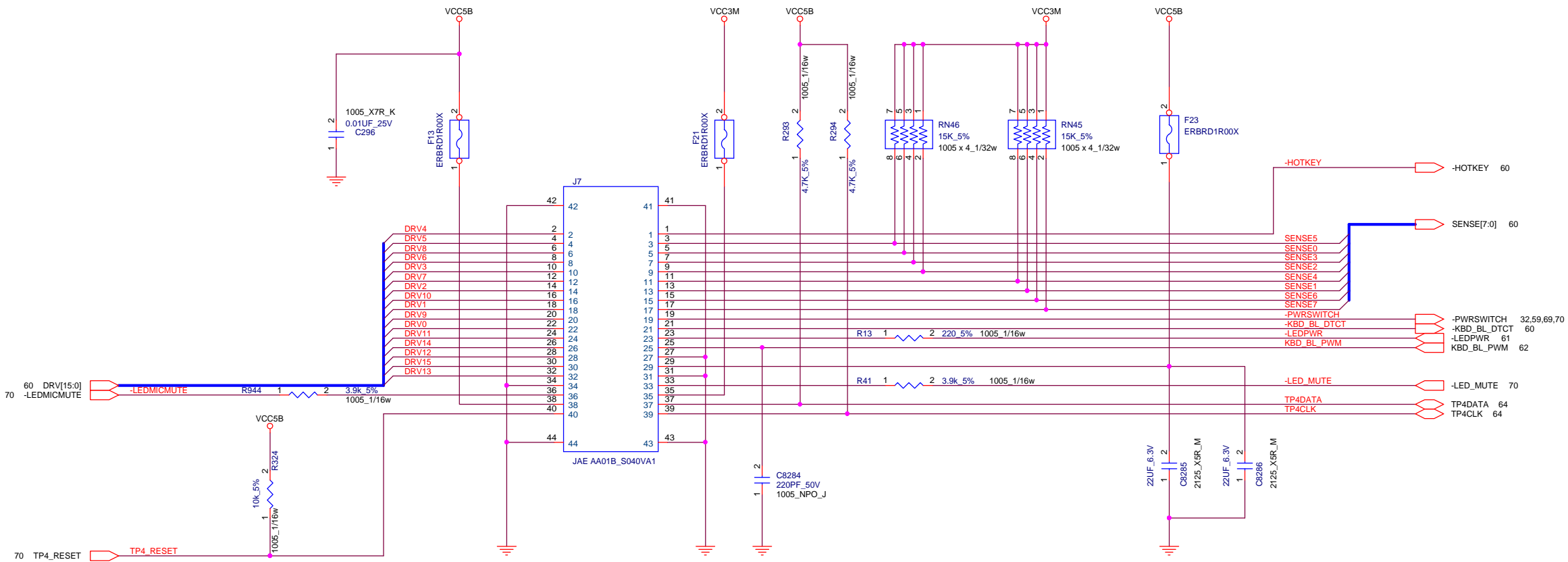


Project Name : NZM-4 SWG SOVP Title : MEC1619(2/3)

Size : C Document Number : Rev : 7.54

Date : Monday, March 19, 2012 Sheet : 61 of 97

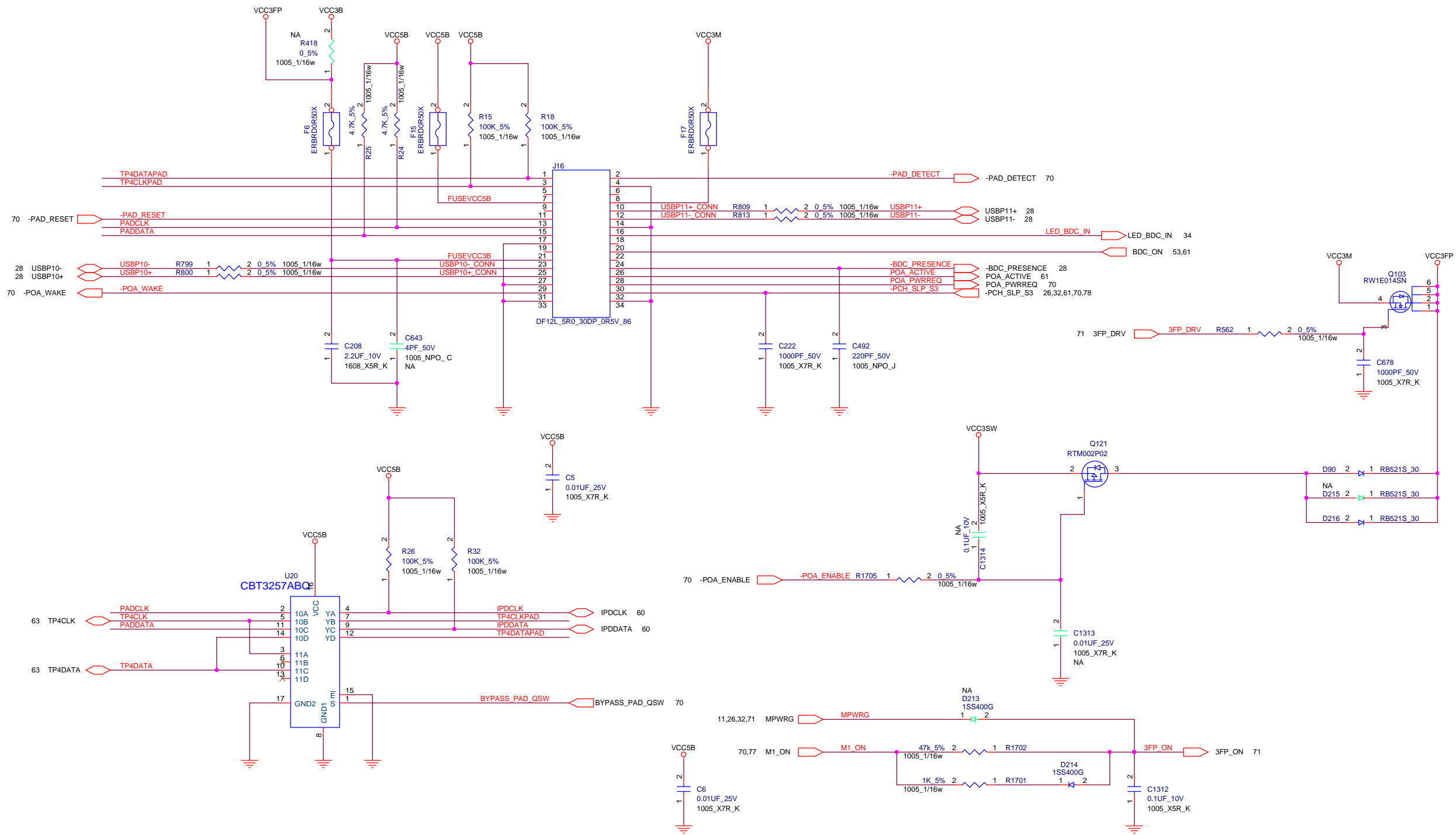


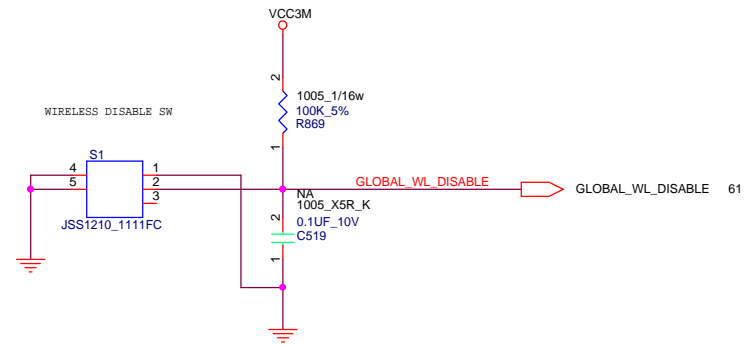


Project Name : NZM-4 SWG SOVP Title : KEYBOARD CONNECTOR

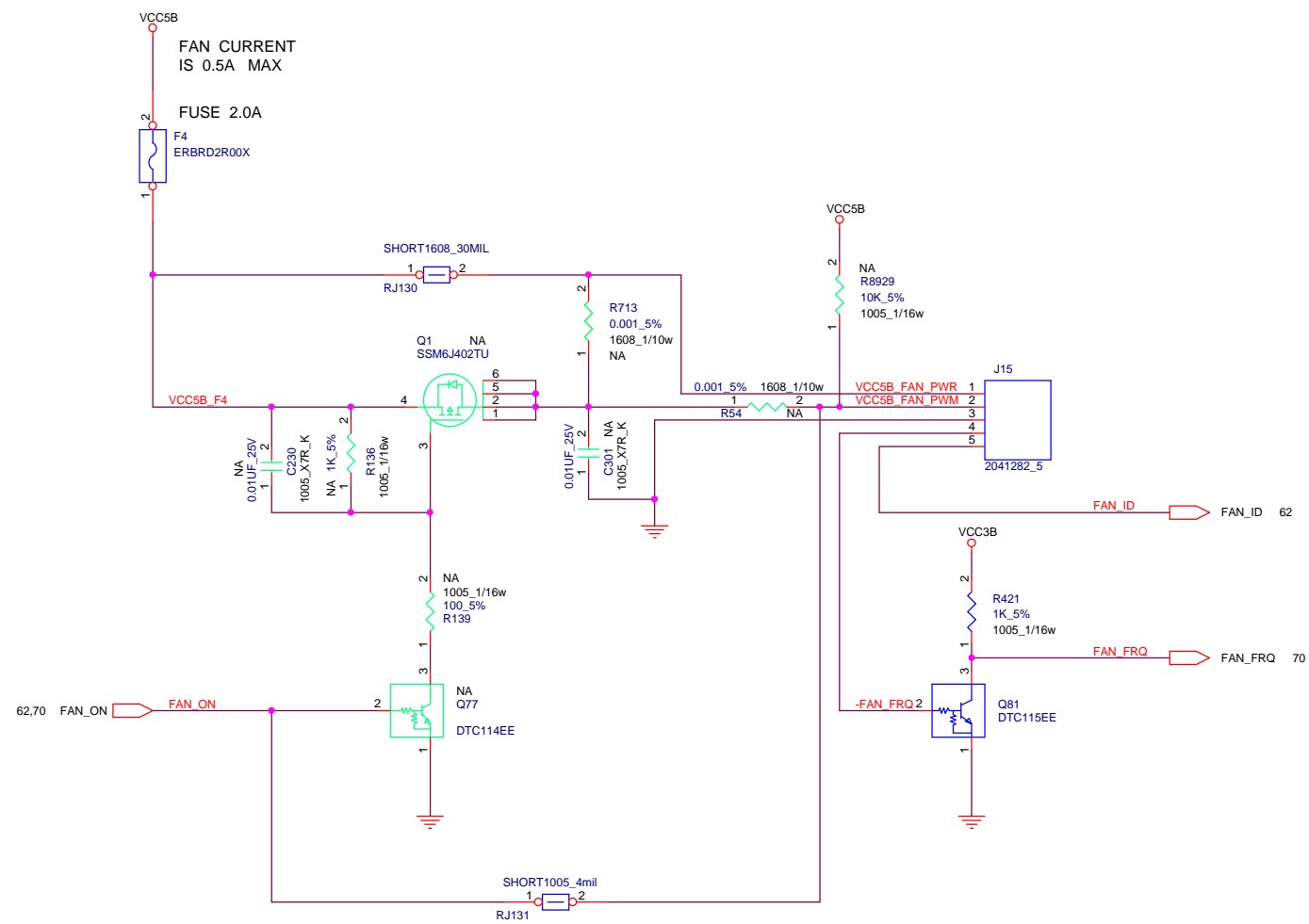
Size : C Document Number : Rev : 7.54

Date: Monday, March 19, 2012 Sheet : 63 of 97





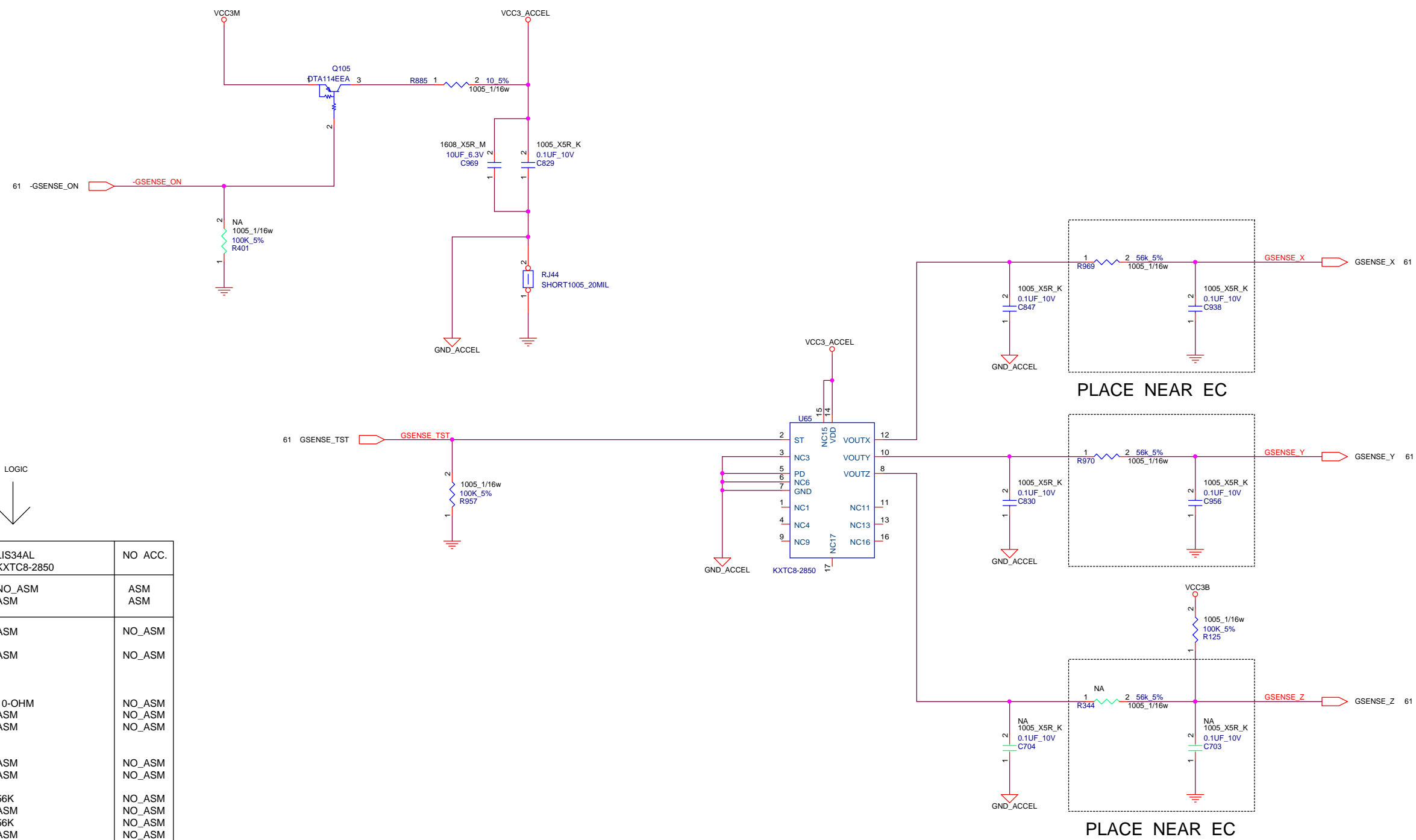
Project Name : NZM-4 SWG SOVP		Title : WIRELESS DISABLE SW	
Size : C	Document Number :		Rev : 7.54
Date: Monday, March 19, 2012		Sheet : 65 of 97	



TABLE

	LIS34AL KXTC8-2850	NO ACC.
R401 R957	NO_ASM ASM	ASM ASM
U65	ASM	NO_ASM
Q105	ASM	NO_ASM
R885 C829 C969	10-OHM ASM ASM	NO_ASM NO_ASM NO_ASM
C830 C847	ASM ASM	NO_ASM NO_ASM
R969 C938 R970 C956	56K ASM 56K ASM	NO_ASM NO_ASM NO_ASM NO_ASM
C704 R344 C703	NO_ASM NO_ASM NO_ASM	NO_ASM NO_ASM NO_ASM
R125	ASM	ASM

LOGIC





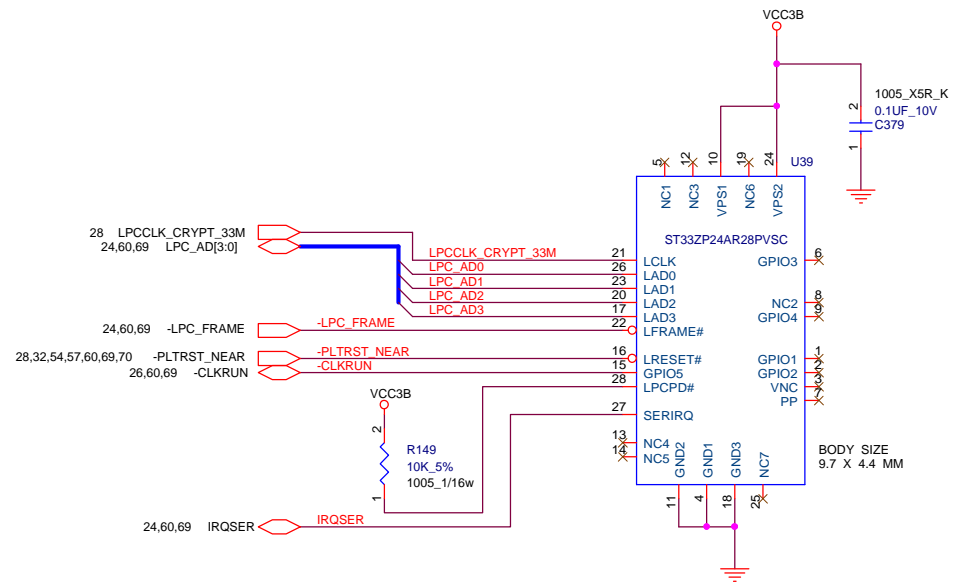


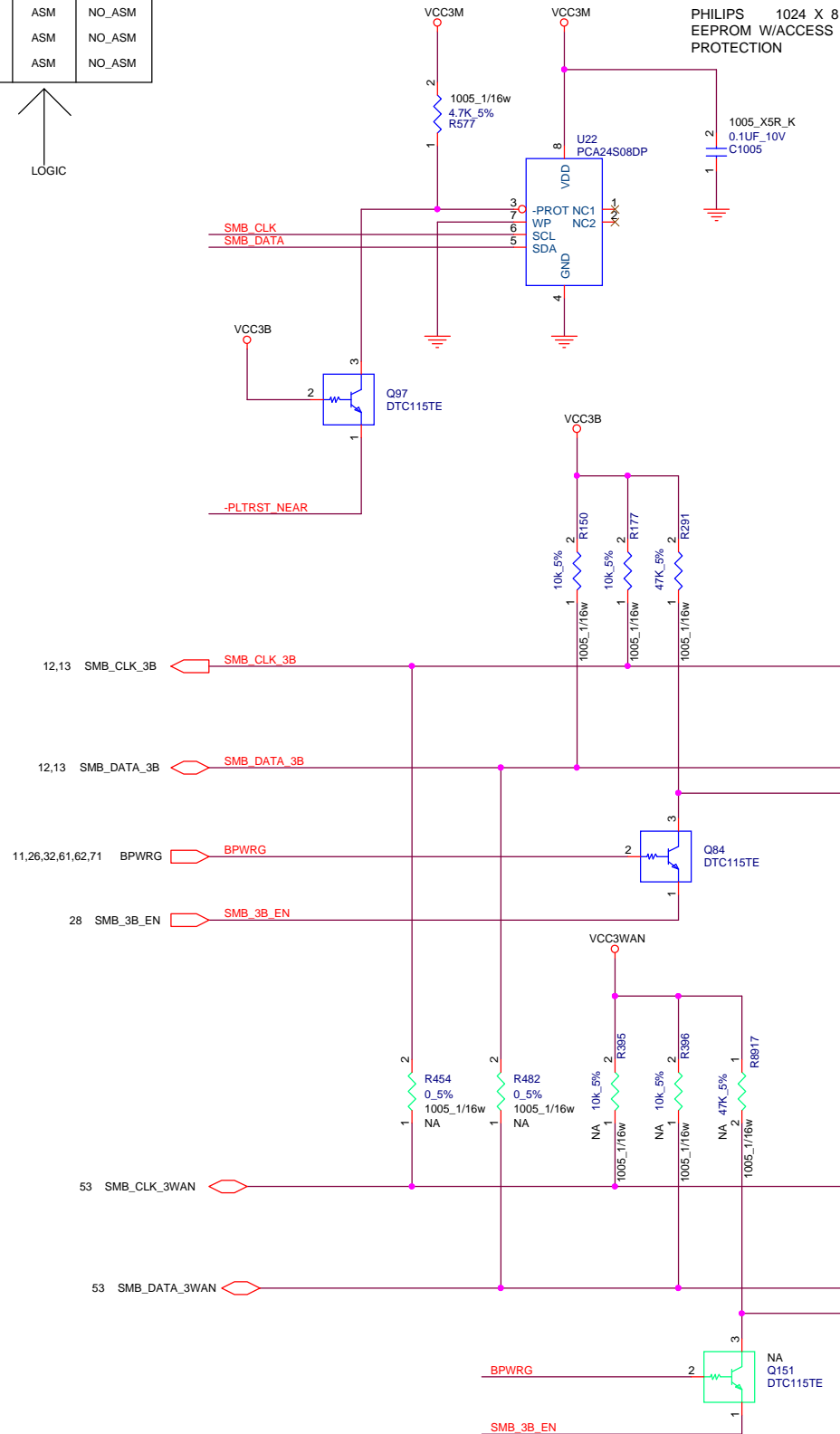
TABLE		
SDV and Mech FVT	ST19NP18ER28PVMO	1.2.8.20
FVT	ST33ZP24AR28PVOG	1.2.A.C
SW SIT-1, SIT, and SIT-R1	ST33ZP24AR28PVRC	1.2.C.0
SIT-R2 and SVT	ST33ZP24AR28PVSC Rev.I	1.2.D.0
SOVP	ST33ZP24AR28PVSC Rev.J	(1.2.D.0) 1.2.D.8 by FW Update
MP	ST33ZP24AR28PVSH	1.2.D.8



TABLE

EEPROM	U22	U23
U22	ASM	NO_ASM
C1005	ASM	NO_ASM
R577	ASM	NO_ASM
Q97	ASM	NO_ASM

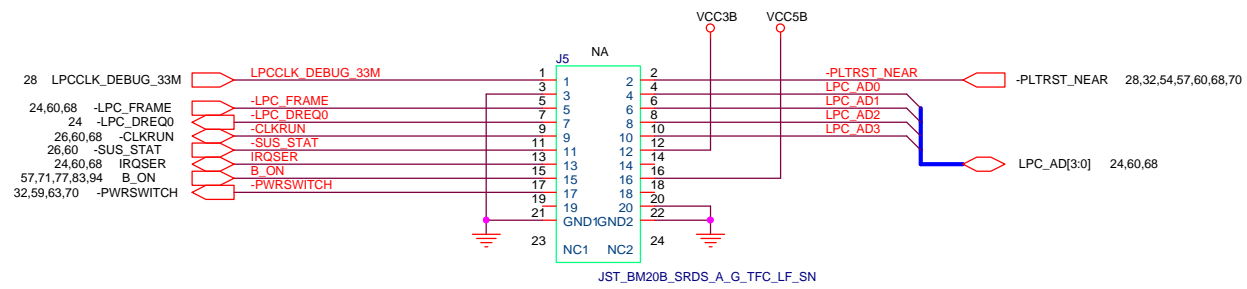
LOGIC



TABLE

REF DES	ENABLE	DISABLE
J5	ASM	NO_ASM
R220	ASM	NO_ASM

LOGIC



TABLE

AOAC	YES	YES	YES	YES	NO	NO	NO	NO
Anti Theft	YES	YES	NO	NO	YES	YES	NO	NO
EEPROM	U22	U23	U22	U23	U22	U23	U22	U23
U27	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
U33	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
C297	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
R395	ASM	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
R396	ASM	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
R8917	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
Q151	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
U21	ASM	ASM	ASM	ASM	ASM	ASM	ASM	ASM
U31	ASM	ASM	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM
C25	ASM	ASM	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM
R291	ASM	ASM	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM
Q84	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM
R454	NO_ASM	NO_ASM	NO_ASM	NO_ASM	ASM	ASM	NO_ASM	NO_ASM
R482	NO_ASM	NO_ASM	NO_ASM	ASM	ASM	ASM	NO_ASM	NO_ASM
R8943	NO_ASM	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
R8942	NO_ASM	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
R8941	NO_ASM	NO_ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM	ASM
R8940	NO_ASM	NO_ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM	ASM
R30	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM
R45	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM	ASM	NO_ASM

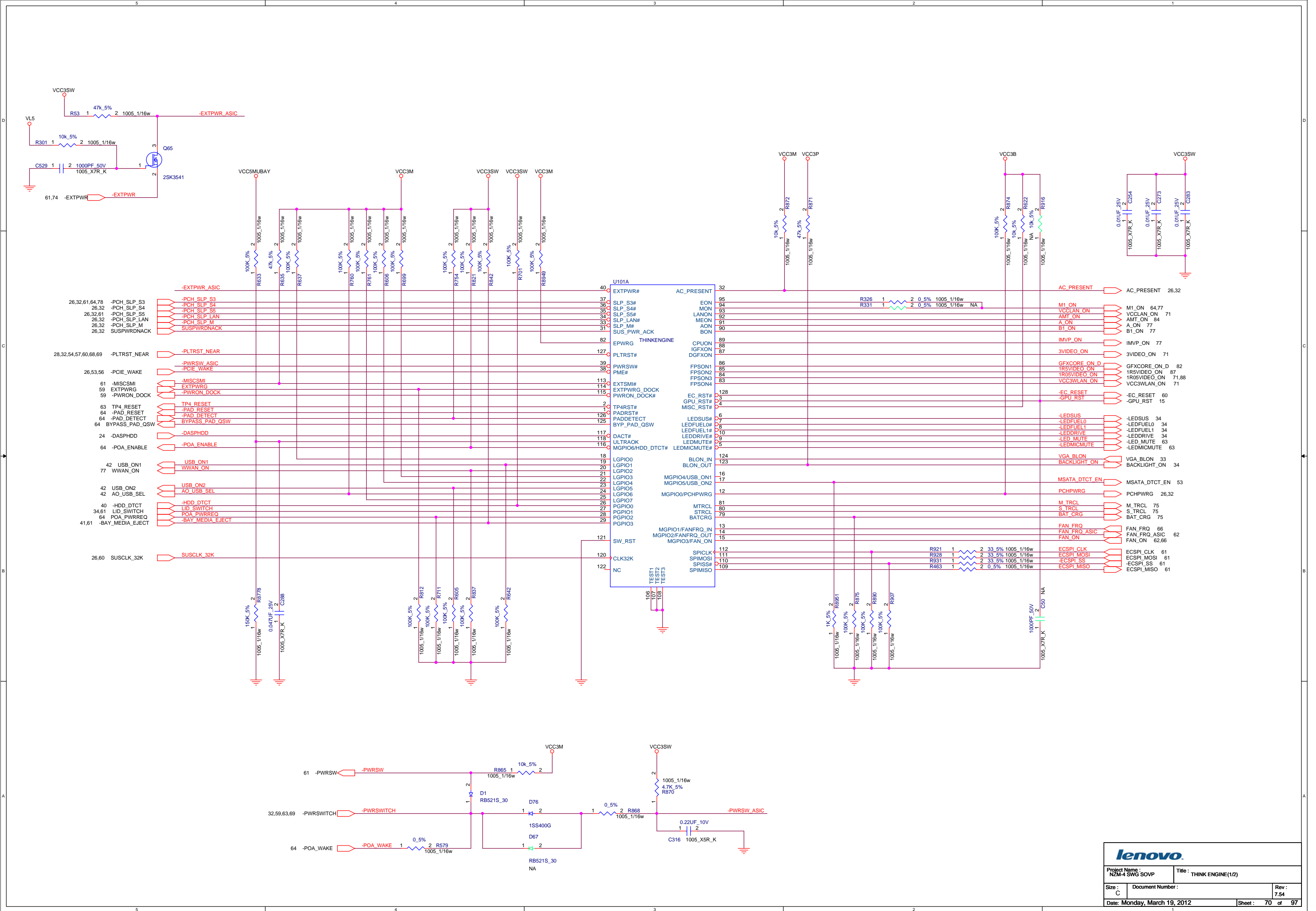
LOGIC



Project Name : NZM-4 SWG SOVP Title : EEPROM/SMBUS SW

Size : C Document Number : Rev : 7.54

Date : Monday, March 19, 2012 Sheet : 69 of 97





DCIN

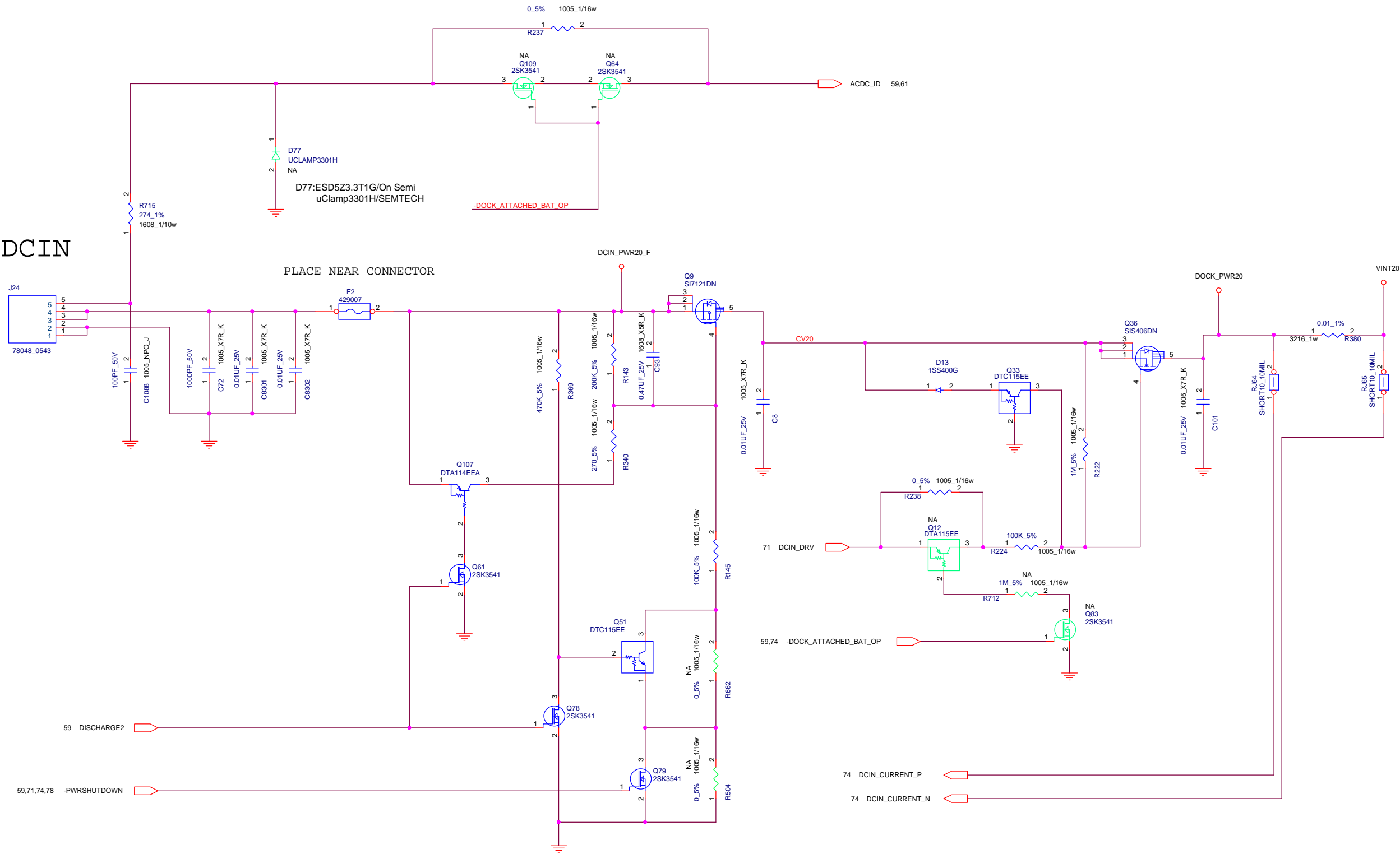
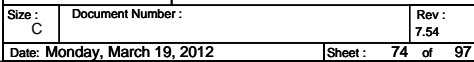
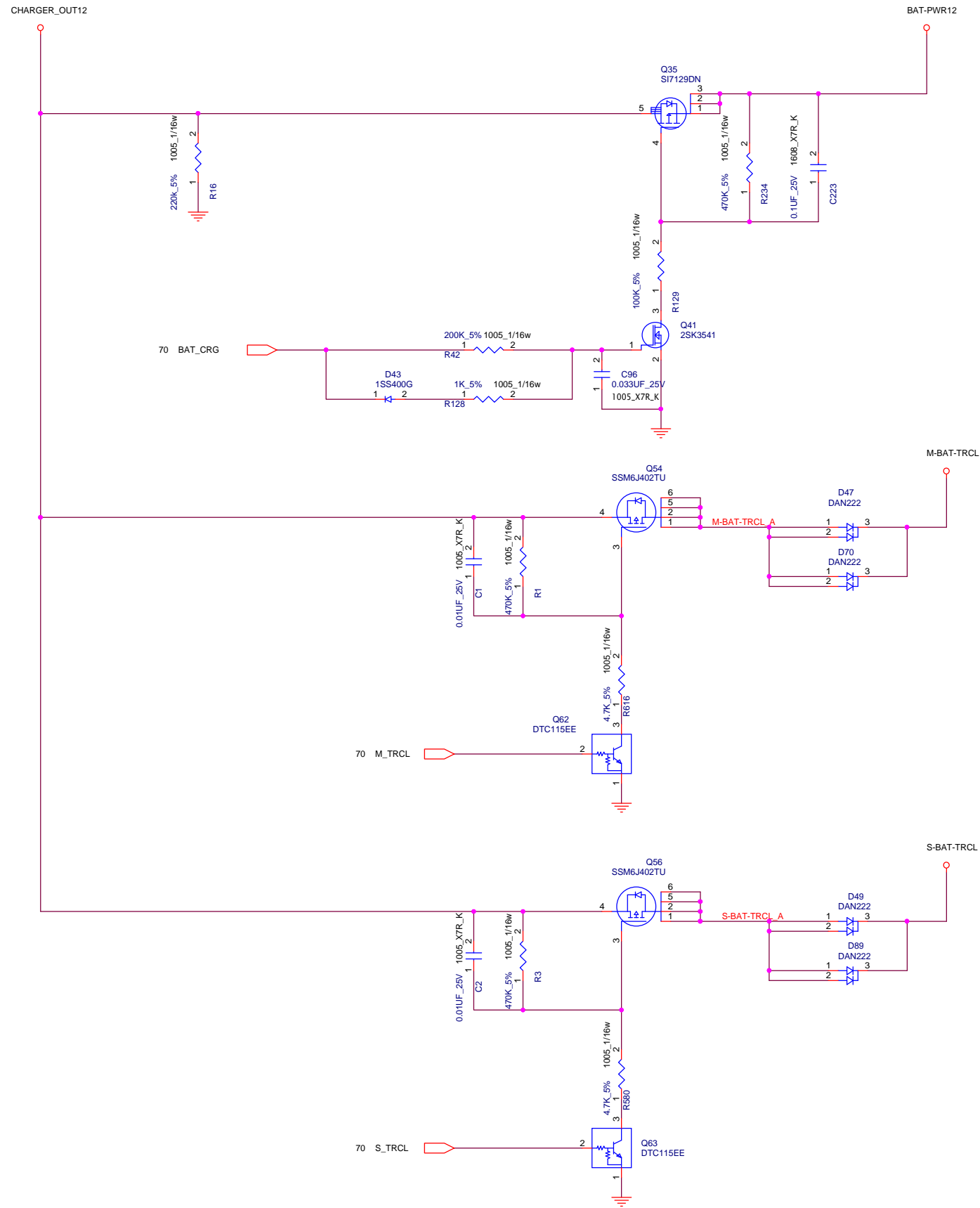


TABLE		
PEAK SHIFT	YES	NO
R662	NO-ASM	ASM
R369	ASM	NO-ASM
Q78	ASM	NO-ASM
Q51	ASM	NO-ASM

↑  
LOGIC





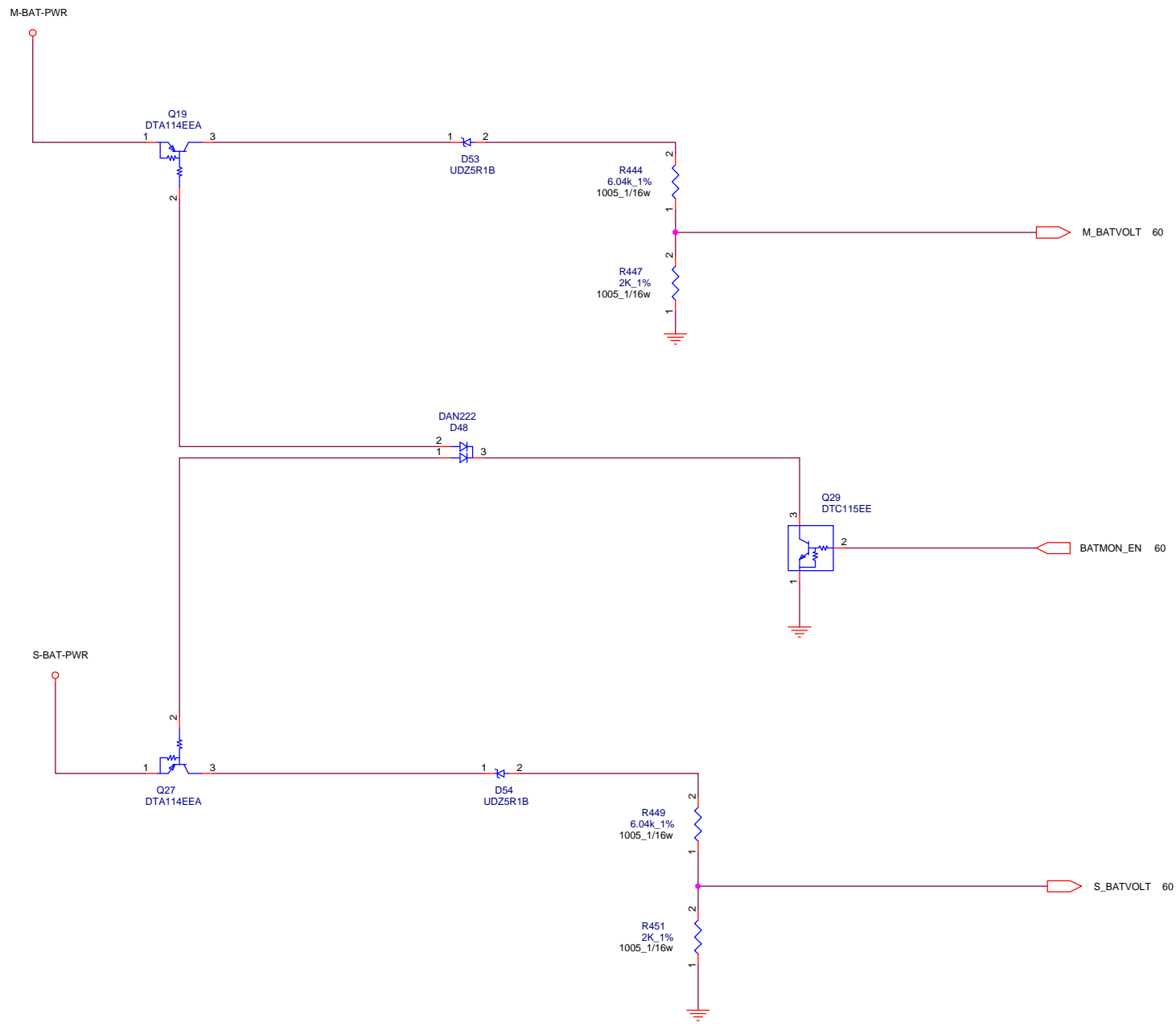


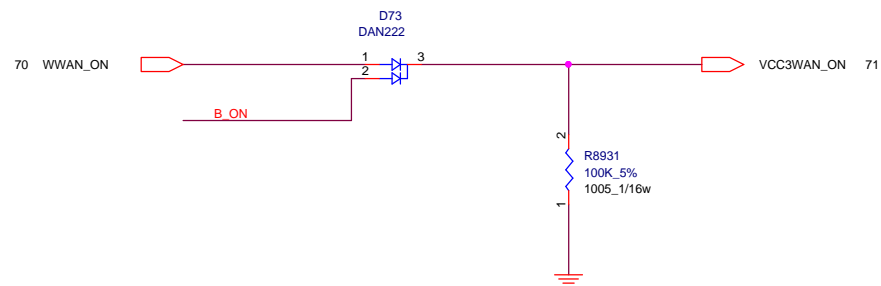
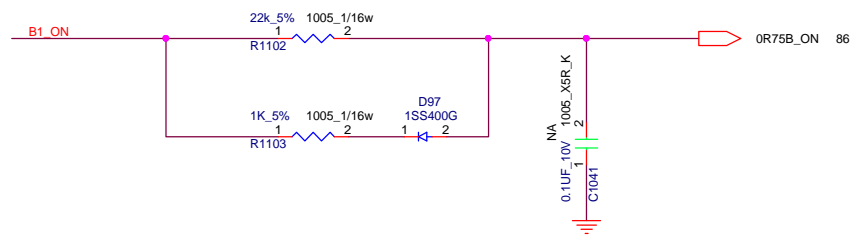
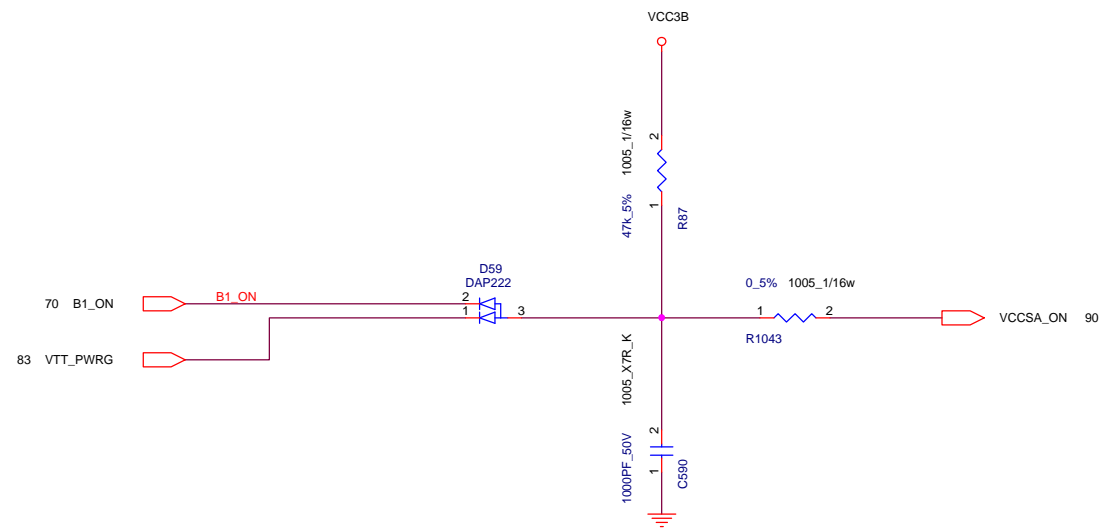
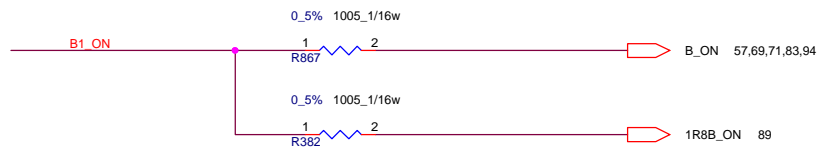
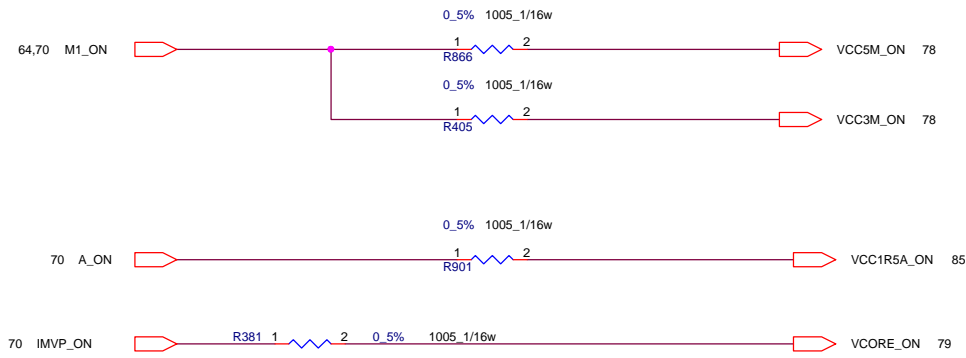
Project Name : NZM-4 SWG SOVP  
Title : CHARGER SELECTOR

Size : C  
Document Number :  
Rev : 7.54

Date: Monday, March 19, 2012  
Sheet : 75 of 97





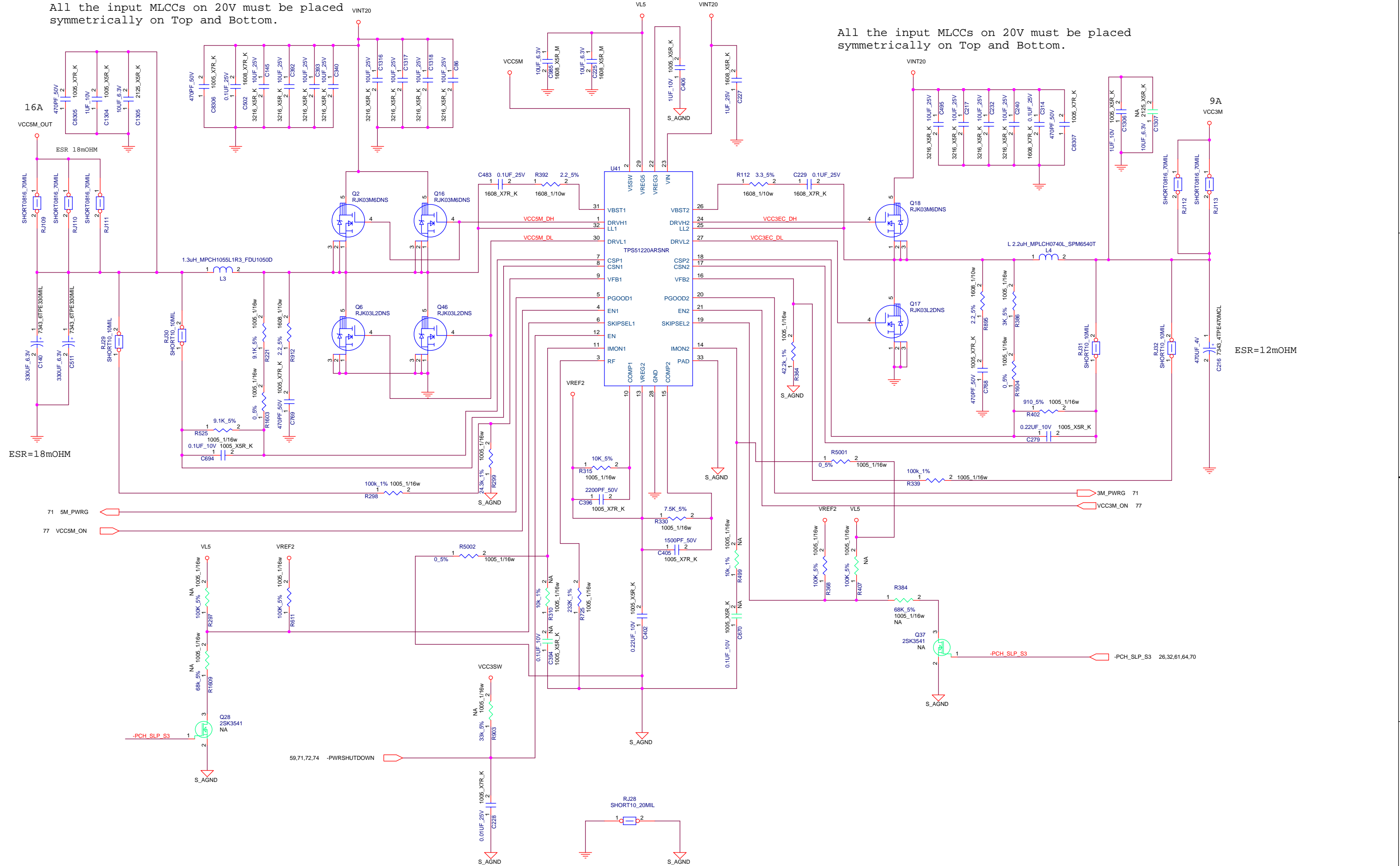


TABLE

AOAC	YES	NO
D73	ASM	NO-ASM
R8931	ASM 100K-ohm	ASM 0-ohm

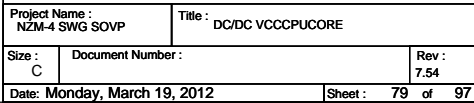
↑  
LOGIC

All the input MLCCs on 20V must be placed symmetrically on Top and Bottom.

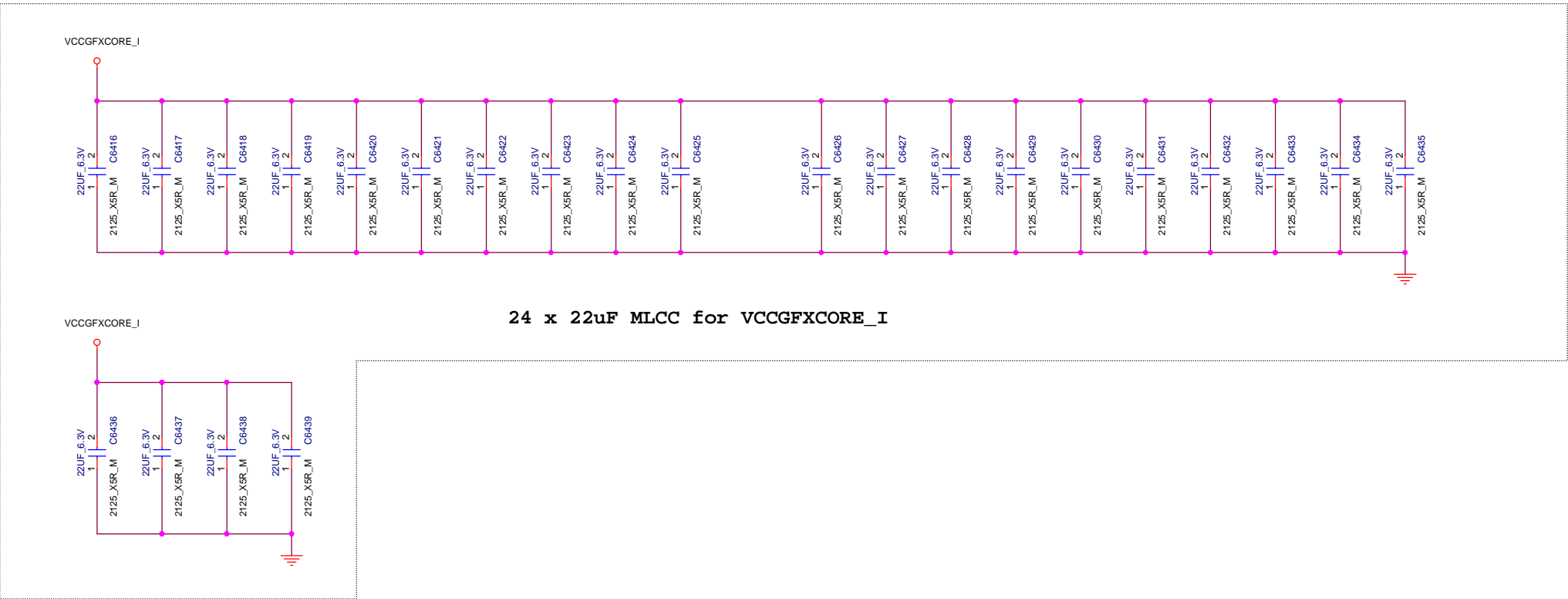
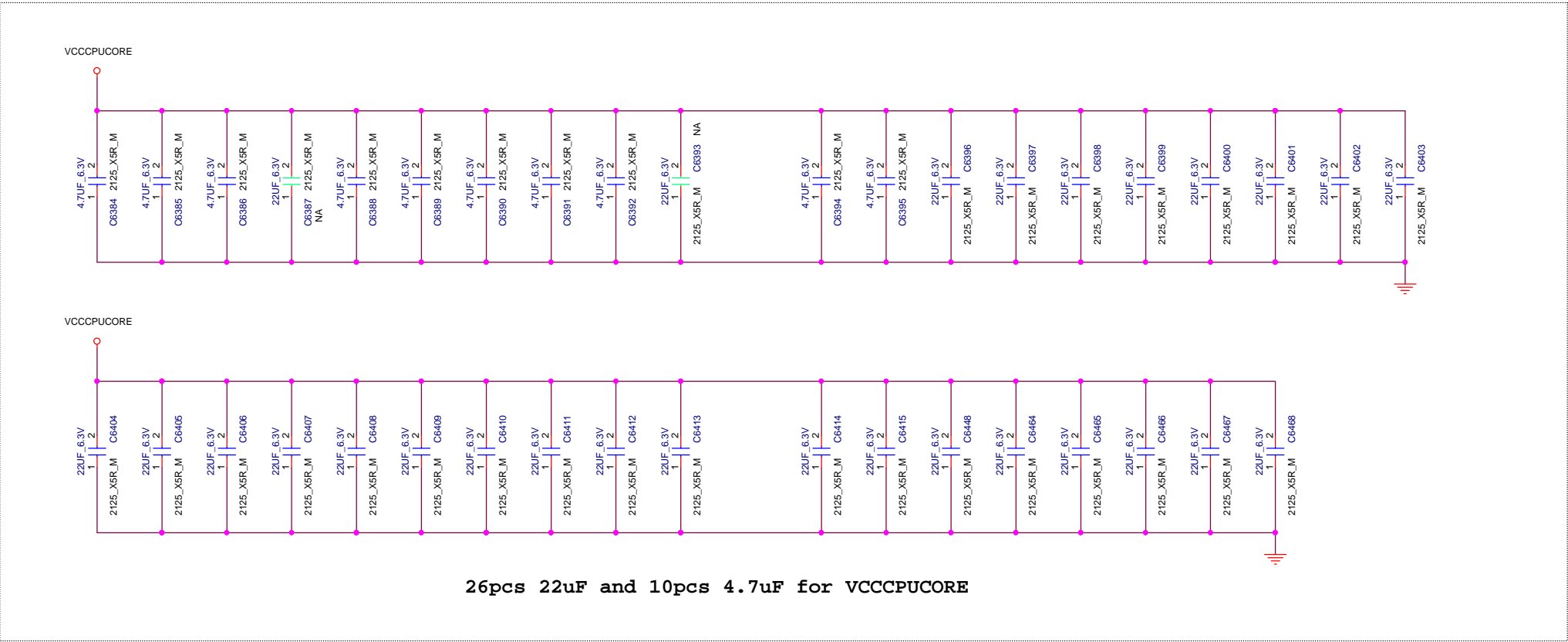


All the input MLCCs on 20V must be placed symmetrically on Top and Bottom.

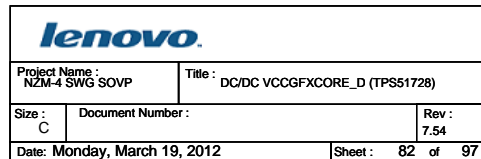








All the input MLCCs on 20V must be placed symmetrically on Top and Bottom.





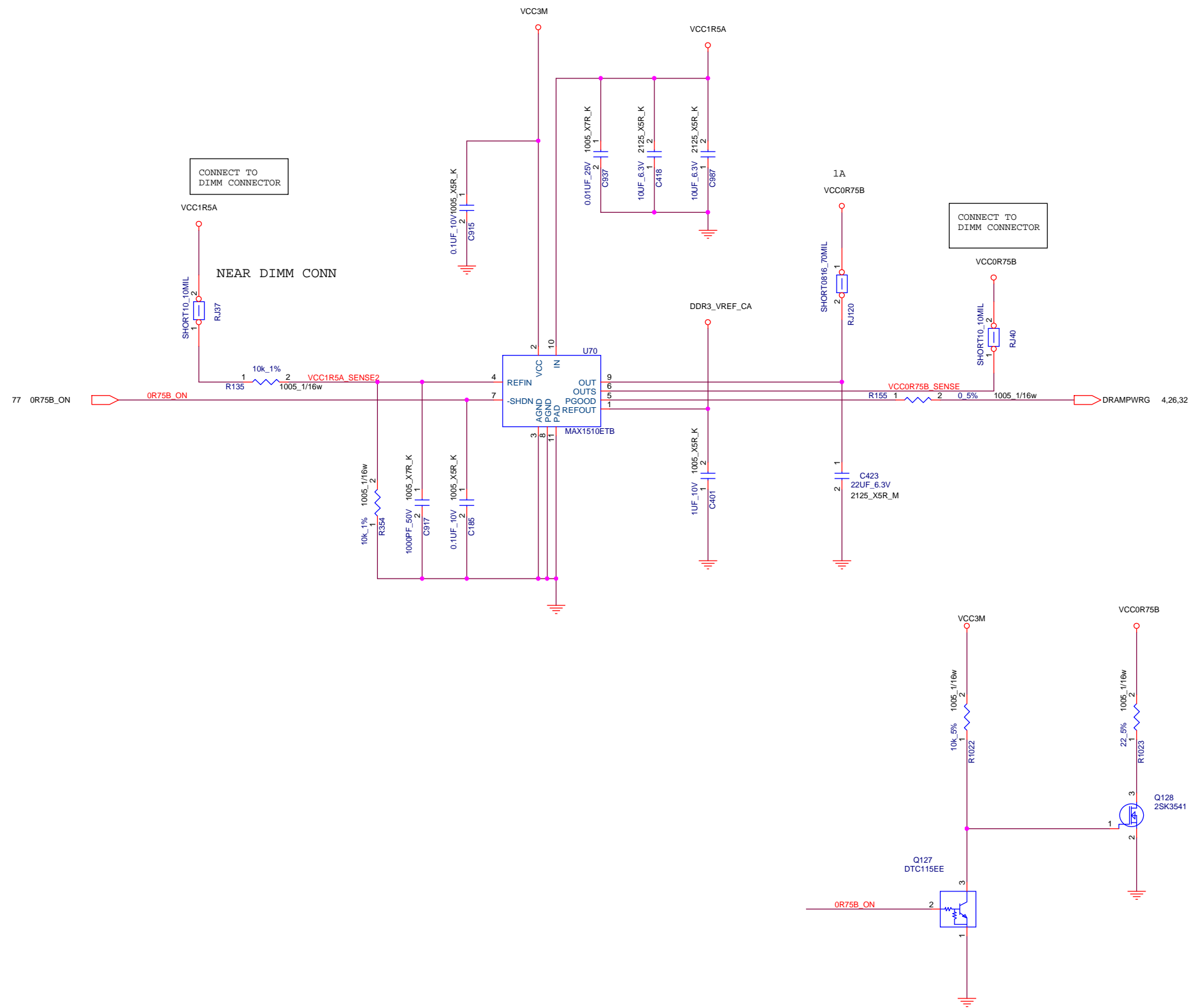
## TABLE

**lenovo**









Project Name :  
NZM-4 SWG SOVP

Title :  
DC/DC VCC0R75B

Size :  
C

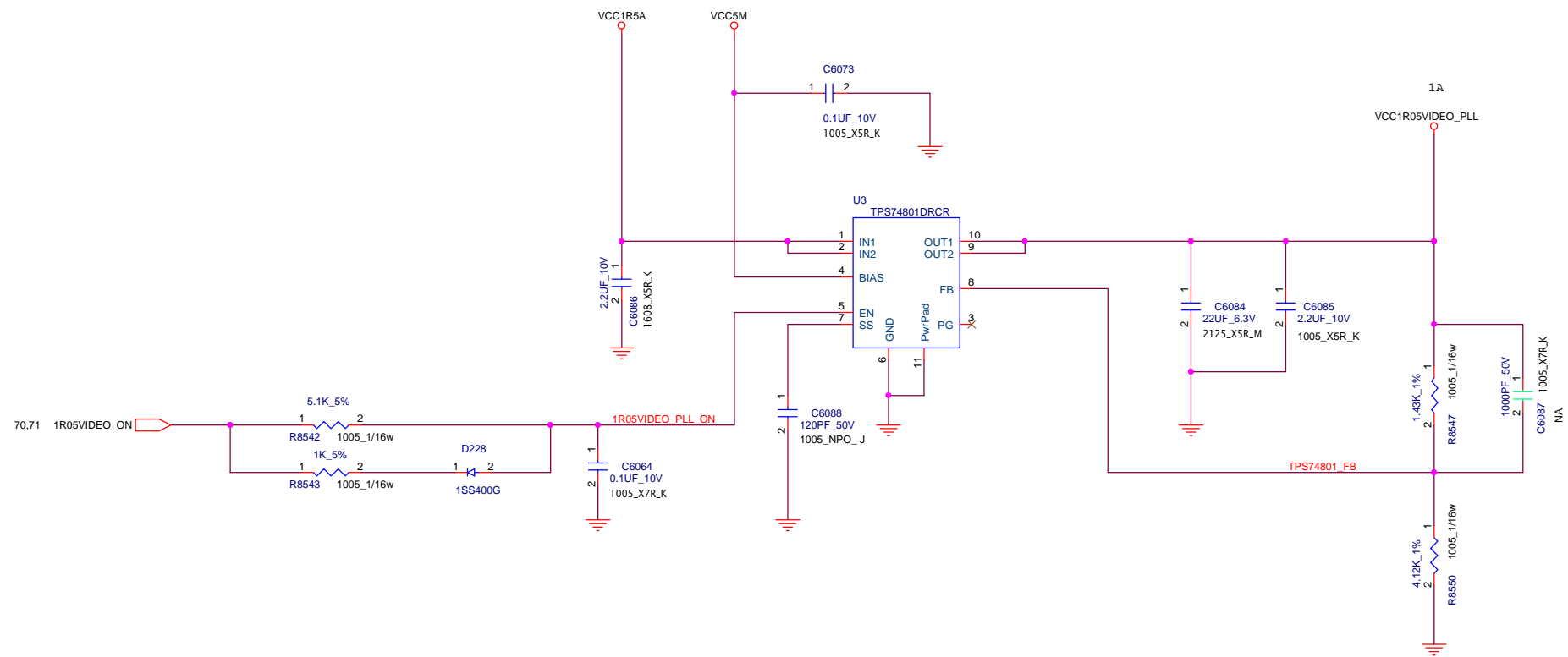
Document Number :

Rev :  
7.54

Date: Monday, March 19, 2012

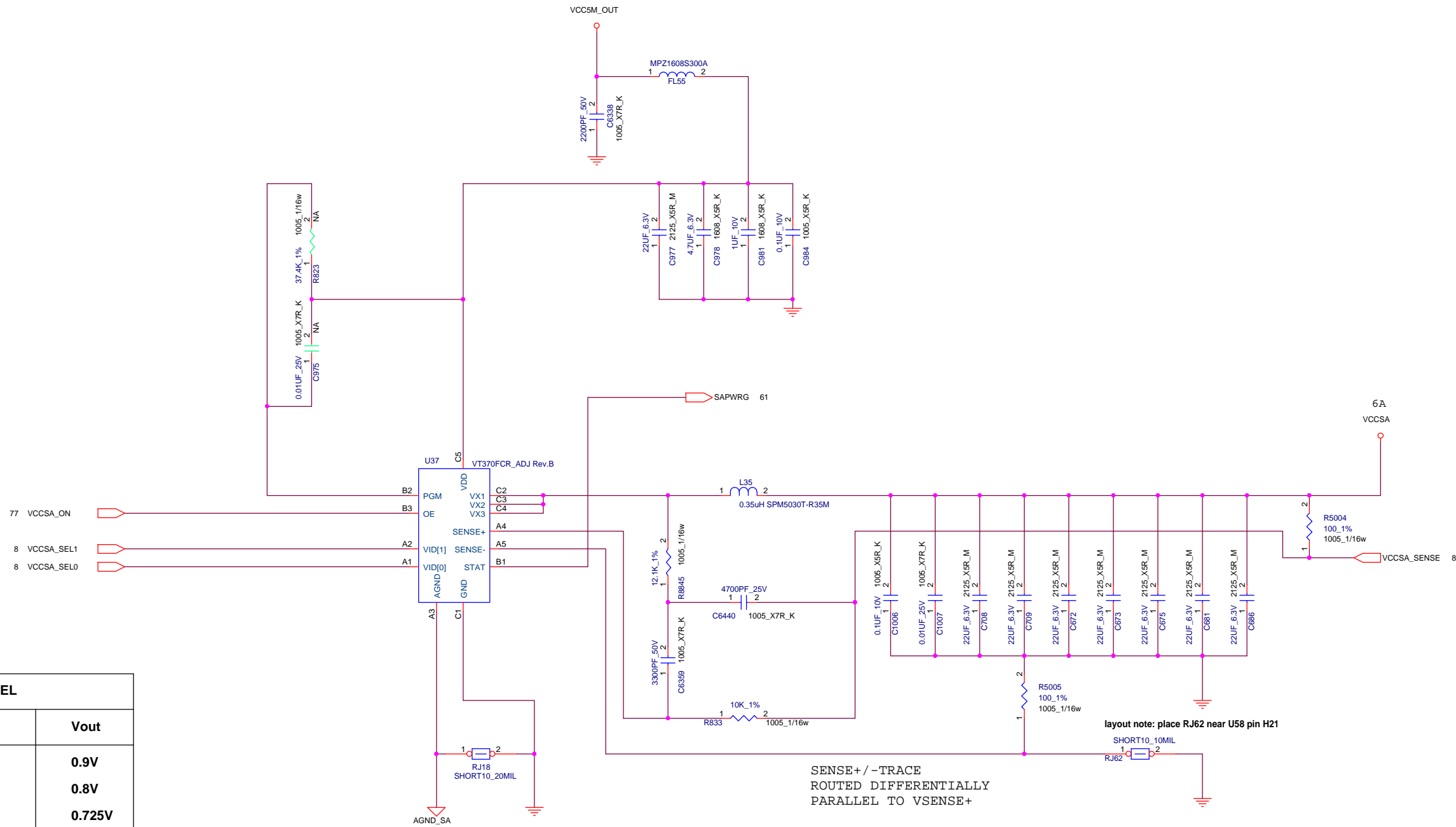
Sheet : 86 of 97

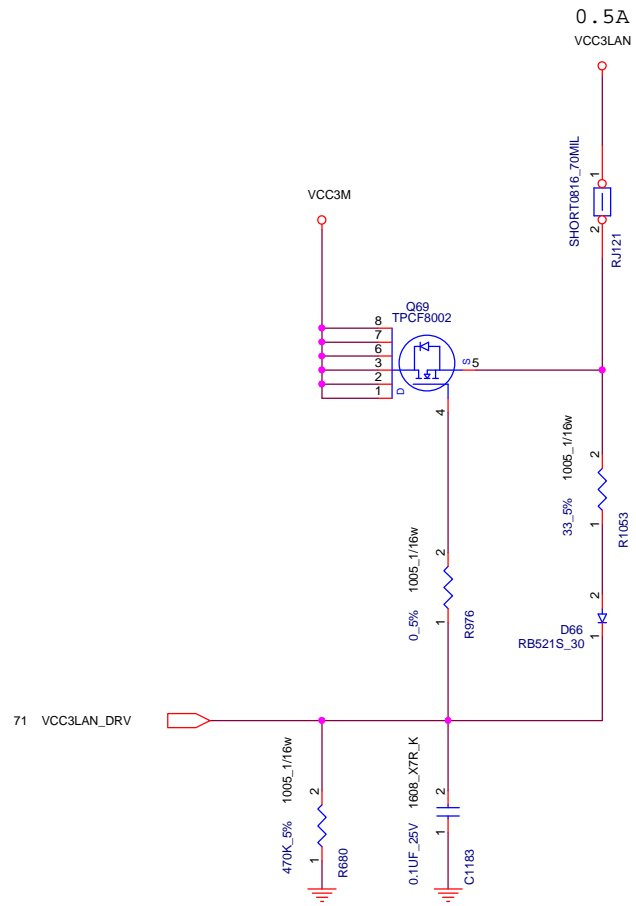






VCCSA_SEL		
VID0	VID1	Vout
L	L	0.9V
L	H	0.8V
H	L	0.725V
H	H	0.675V





Project Name :  
NZM-4 SWG SOVP

Title :  
LOAD SW LAN

Size :  
C

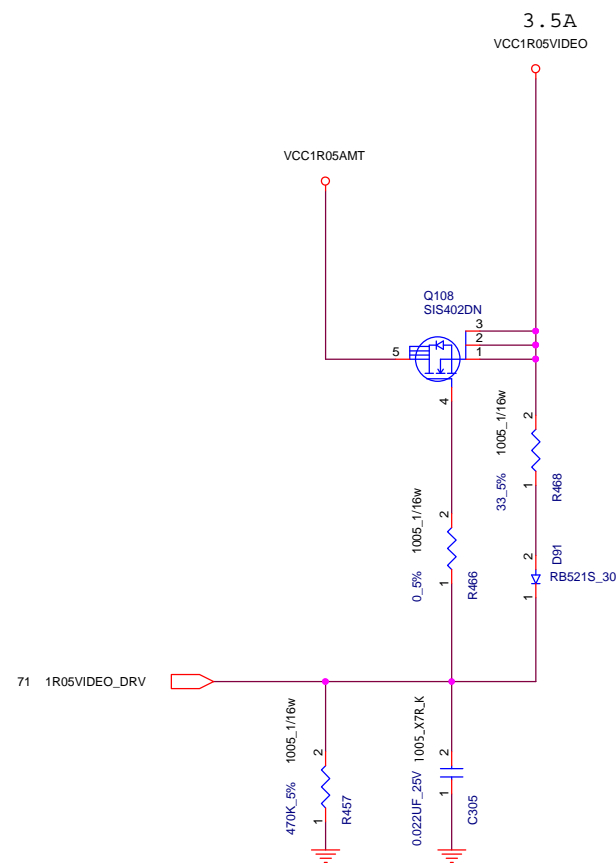
Document Number :

Rev :  
7.54

Date: Monday, March 19, 2012

Sheet : 91 of 97





BLANK





**Project Name :**  
**NZM-4 SWG SOVP**

**Project Name :  
NZM-4 SWG SOVP**

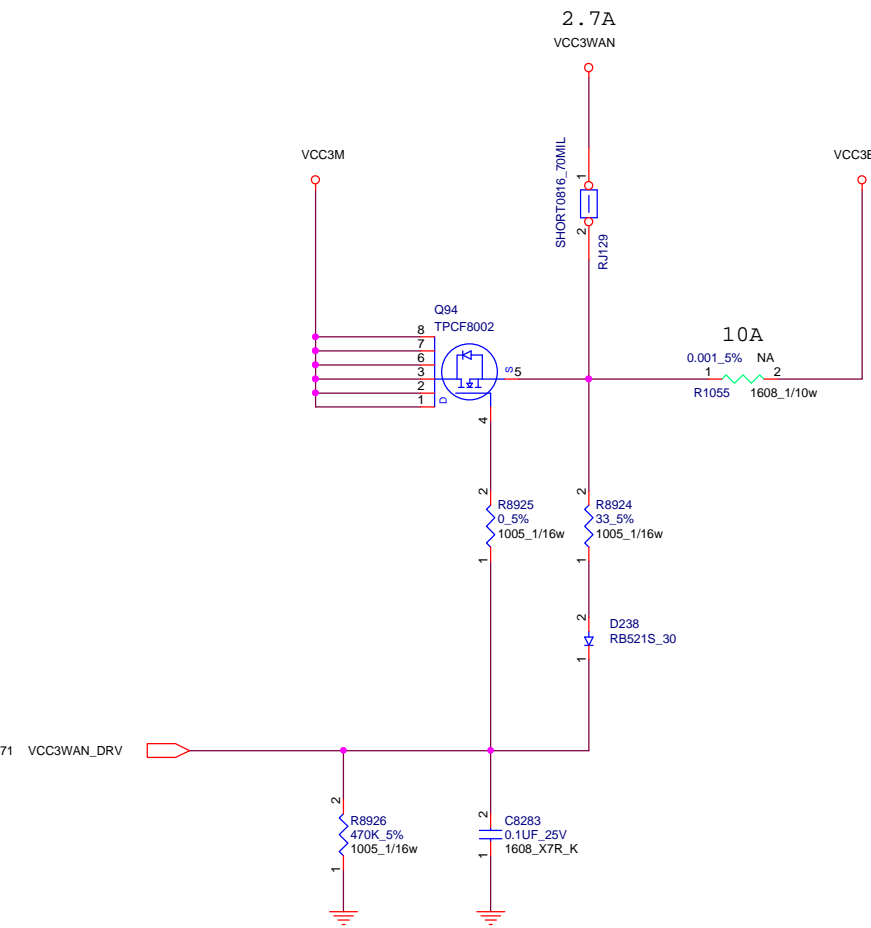
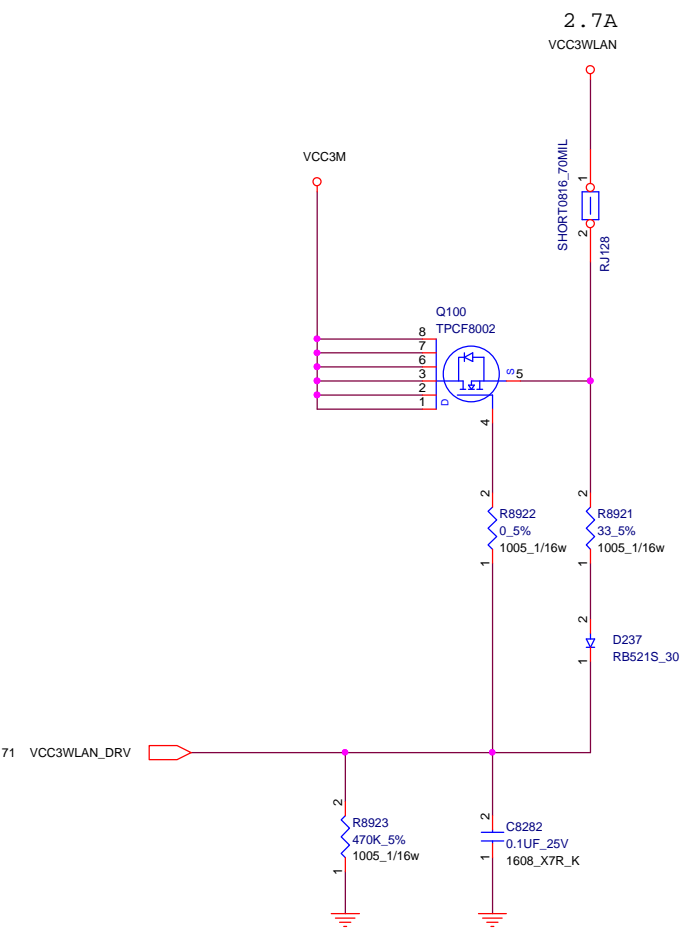
Size :  
C

Document Number :

Date: Monday, March 19, 2012

	Rev : 7.54
--	---------------

Sheet : 95 of 97

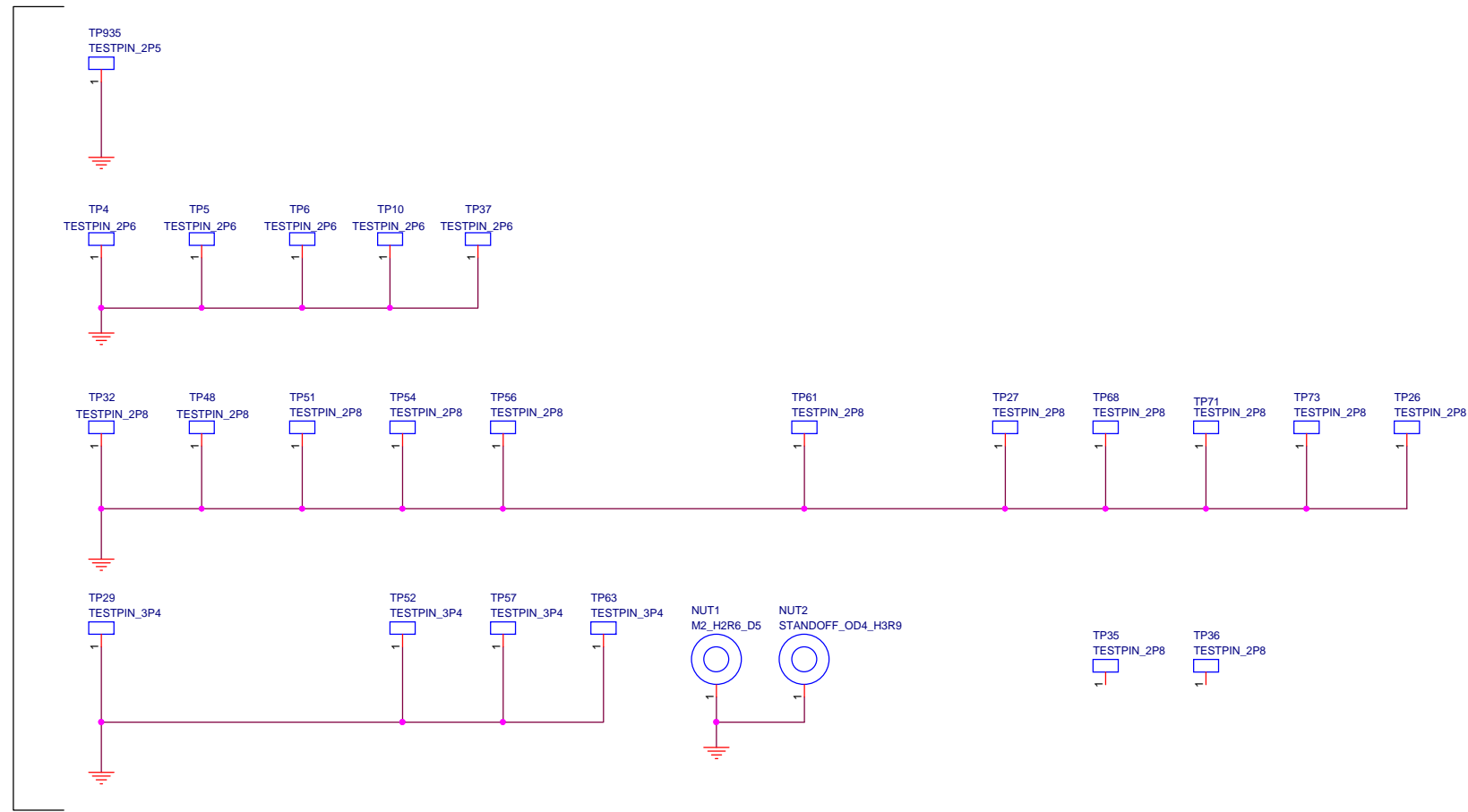


TABLE

AOAC	YES	NO
R1055	NO-ASM	ASM
Q94	ASM	NO-ASM
R8924	ASM	NO-ASM
R8925	ASM	NO-ASM
R8926	ASM	NO-ASM
C8283	ASM	NO-ASM
D238	ASM	NO-ASM

↑  
LOGIC

PTH FOR SCREW HOLE



NPTH



FID  
Board Area

FID  
Component Area

FD1  
1 NC, NO CONNECT TO ANY.

FD2  
1 NC, NO CONNECT TO ANY.

FD3  
1 NC, NO CONNECT TO ANY.

FD4  
1 NC, NO CONNECT TO ANY.

FD5  
1 NC, NO CONNECT TO ANY.

FD6  
1 NC, NO CONNECT TO ANY.

CF1  
1 NC, NO CONNECT TO ANY.

CF2  
1 NC, NO CONNECT TO ANY.

CF3  
1 NC, NO CONNECT TO ANY.

CF4  
1 NC, NO CONNECT TO ANY.

CF5  
1 NC, NO CONNECT TO ANY.

CF6  
1 NC, NO CONNECT TO ANY.

CF7  
1 NC, NO CONNECT TO ANY.

CF8  
1 NC, NO CONNECT TO ANY.

CF9  
1 NC, NO CONNECT TO ANY.

CF10  
1 NC, NO CONNECT TO ANY.

CF15  
1 NC, NO CONNECT TO ANY.

CF16  
1 NC, NO CONNECT TO ANY.

CF17  
1 NC, NO CONNECT TO ANY.

CF18  
1 NC, NO CONNECT TO ANY.

CF19  
1 NC, NO CONNECT TO ANY.

CF20  
1 NC, NO CONNECT TO ANY.

CF21  
1 NC, NO CONNECT TO ANY.

CF22  
1 NC, NO CONNECT TO ANY.

CF23  
1 NC, NO CONNECT TO ANY.

CF24  
1 NC, NO CONNECT TO ANY.

CF25  
1 NC, NO CONNECT TO ANY.

CF26  
1 NC, NO CONNECT TO ANY.