

F HSF Property:ROHS or Halogen-Free

2012.11.26

DRAWER		EE	DATE	POWER	DATE	
DESIGN		CHANDU VENKAT	26-JOY-2012	HSEB1-ALN	26-JOY-2012	
CHECK		THANES PABE	26-JOY-2012	HSEB1-ALN	26-JOY-2012	
RESPONSIBLE		VERU AL	26-JOY-2012	HSEB1-ALN	26-JOY-2012	
		DAV DEGIO	26-JOY-2012	HSEB1-ALN	26-JOY-2012	
TITLE						CYCLONE D15 SHARKBAE MAIN BOARD
SIZE: A8		VER: X01		SIZE: A8	CODE: CS	DOC-NUMBER: 1310425664-0-ALG
FILE NAME: C:\PDS\INVENTEC\DESIGN\26-JOY-2012\AMB_VENKAT.DSN		P/N: 1310425664		SHEET: 1		REV: 10

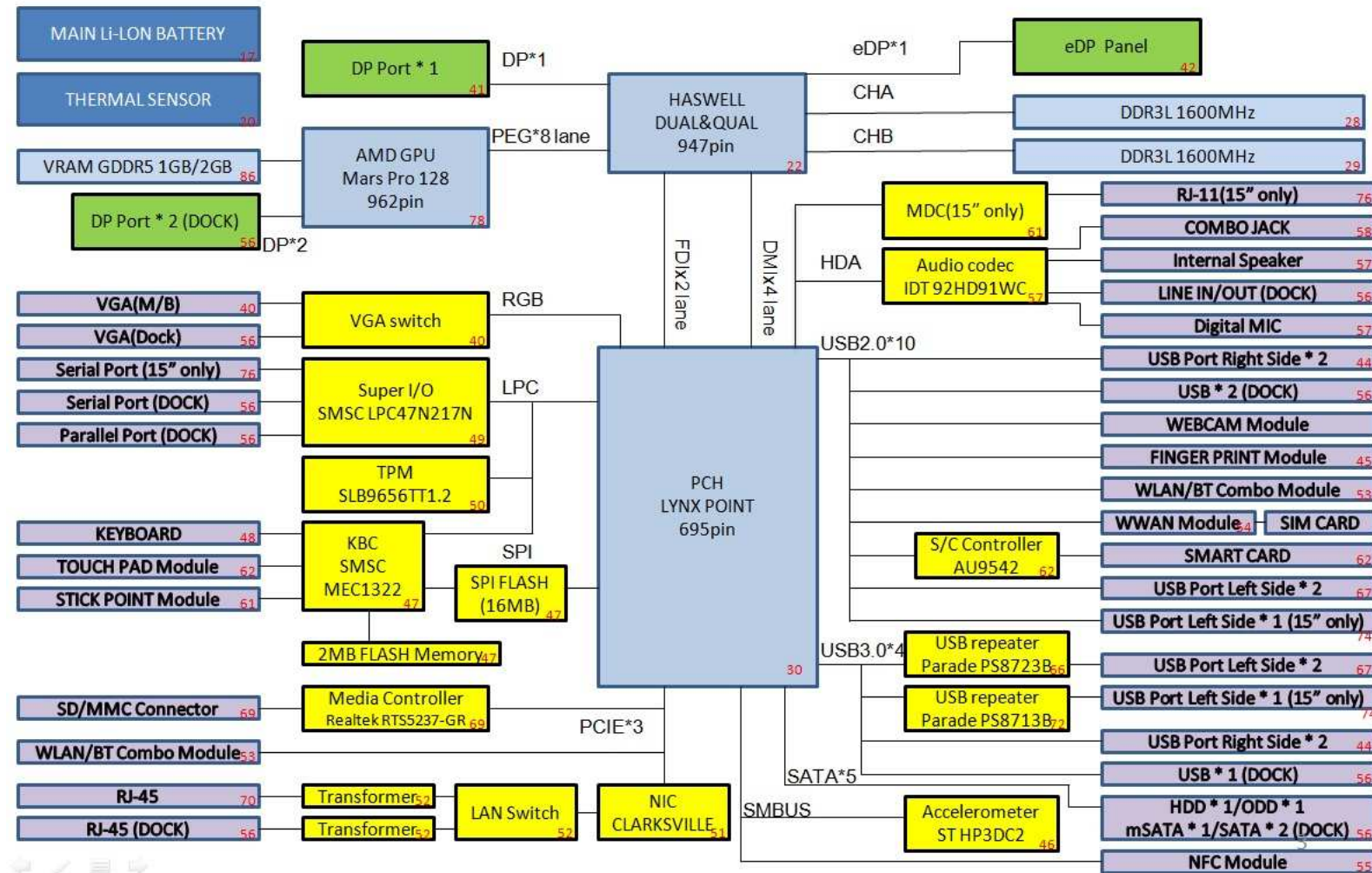
TABLE OF CONTENTS

1. PROJECT NAME	29. DDR3_SO-DIMM0	57. DOCKING CNTR	85. MARS-6
2. TABLE OF CONTENTS	30. DDR3_SO-DIMM1	58. AUDIO	86. MARS-7
3. BLOCK DIAGRAM	31. LYNX POINT_1 (RTC,JTAG,SATA)	59. EXT. MIC / MIC / HP	87 MARS-8
4. POWER DIAGRAM	32. LYNX POINT_2 (SPI,SMBUS,CL)	60. SCREW	88. VRAM-1
5. SYSTEM POWER(CHARGER)	33. LYNX POINT_3 (CLK)	61. RF SOLUTION	89. VRAM-2
6. SYSTEM POWER(OCF)	34. LYNX POINT_4 (DMI,FDI,SPM)	62. MB SIDE CONN	
7. SYSTEM POWER(P3V3A&P5V0A)	35. LYNX POINT_5 (CRT,DP)	63. SMART CARD	
8. P3V3A&P5V0A_CHG PORT	36. LYNX POINT_6 (PCIE,USB)	64. POWER BUTTON BOARD	
9. SYSTEM POWER(PVDDQ)	37. LYNX POINT_7 (GPIO,VSS,MISC)	65. FUNCTION BUTTON BOARD	
10. SYSTEM POWER(P1V05_M)	38. LYNX POINT_8 (POWER)	66. 14 B TO B CONNECTOR	
11. SYSTEM POWER(P1V5S)	39. LYNX POINT_9 (POWER)	67. 14" USB3.0 REDRIVER	
12. SYSTEM POWER(PVCORE1)	40. LYNX POINT_10 (GND)	68. 14" USB CONN (CHARGE)	
13. SYSTEM POWER(PVCORE2)	41. VGA SWITCH / CRT	69. 14" USB CONN	
14. SYSTEM POWER(PVCORE DGPU1)	42. DISPLAY PORT CNTR	70. 14" CARD READER	
15. SYSTEM POWER(P1V5S DGPU)	43. EDP& WEBCAM	71. 14" LAN CONN	
16. SYSTEM POWER (P1V8S)	44. SATA HDD&ODD CNTR	72. 15 B TO B CONNECTOR	
17. SYSTEM POWER(PVPCIE)	45. USB CONN(RIGHT)	73. 15" USB3.0 REDRIVER	
18. SYSTEM POWER(SELECT)	46. FINGER PRINTER CNTR	74 15" USB CONN (CHARGE)	
19. POWER (SLEEP)	47. ACCELEMETOR	75. 15" USB CONN	
20. POWER (SEQUENCE)	48. KBC & SPI	76. 15" CARD READER	
21.FAN & THERMAL	49. KEYBOARD	77. 15" LAN CONN / SERIAL PORT	
22. XDP CONN	50. SUPER I/O	78. 15" SATA ODD DB	
23. HASWELL_1 (CLK,MISC,JTAG)	51. TPM	79. MIC BOARD	
24. HASWELL_2 (POWER)	52. NIC	80. MARS-1	
25. HASWELL_3 (DMI,DP,PEG,FDI)	53. LAN(SWITCH , TRANSFORMER)	81. MARS-2	
26. HASWELL_4 (DDR3)	54. WLAN	82. MARS-3	
27. HASWELL_5 (CFG)	55. WWAN NGFF	83. MARS-4	
28. HASWELL_6 (GND,RESERVED)	56. NFC	84. MARS-5	

INVENTEC

TITLE CYCLONE DIS TABLE OF CONTENTS			
SIZE A3	CODE CS	DOC.NUMBER 1310A2566401-0-ALG	REV X01

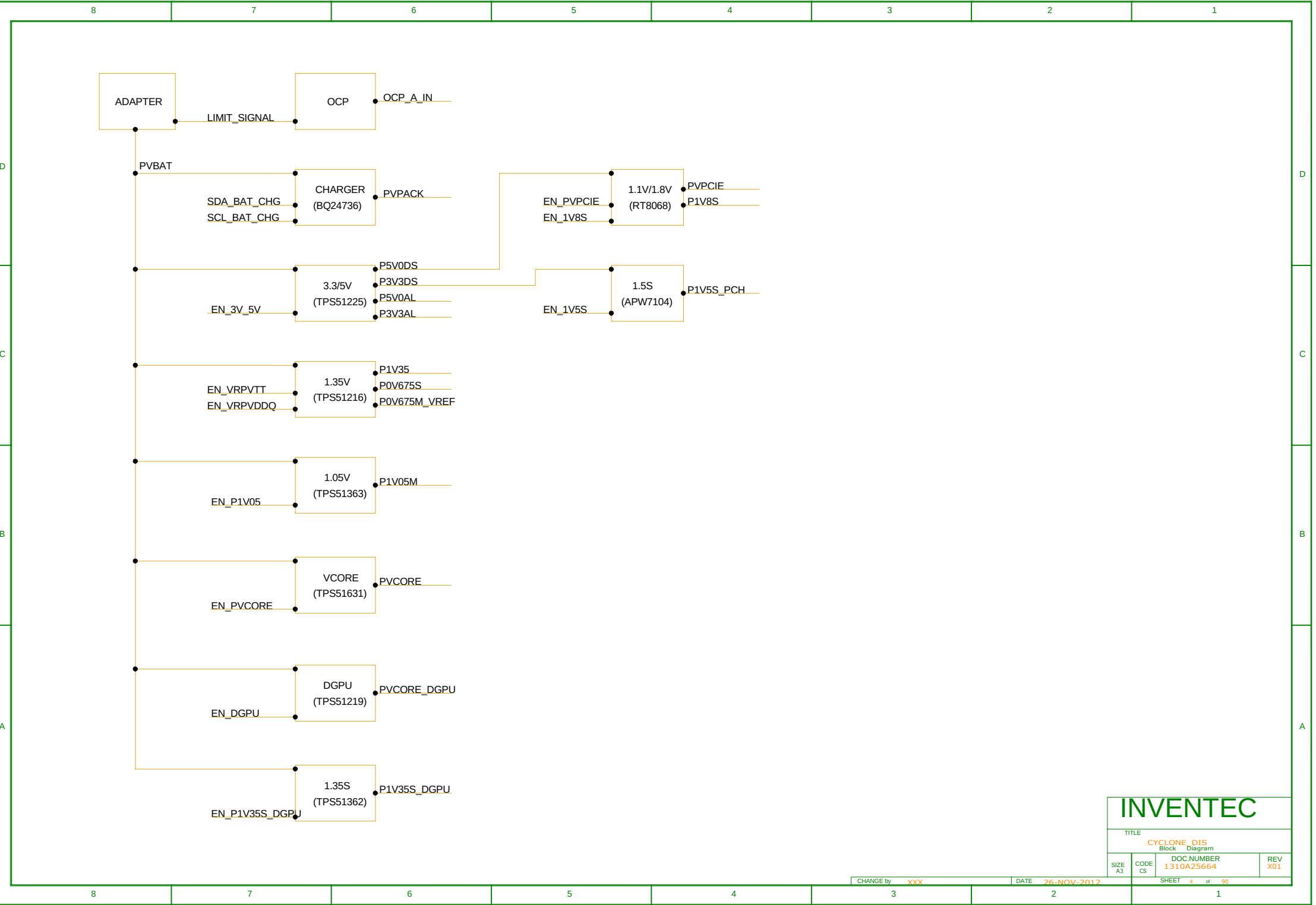
DIS – Block Diagram

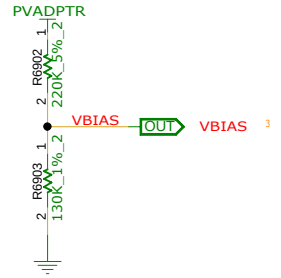
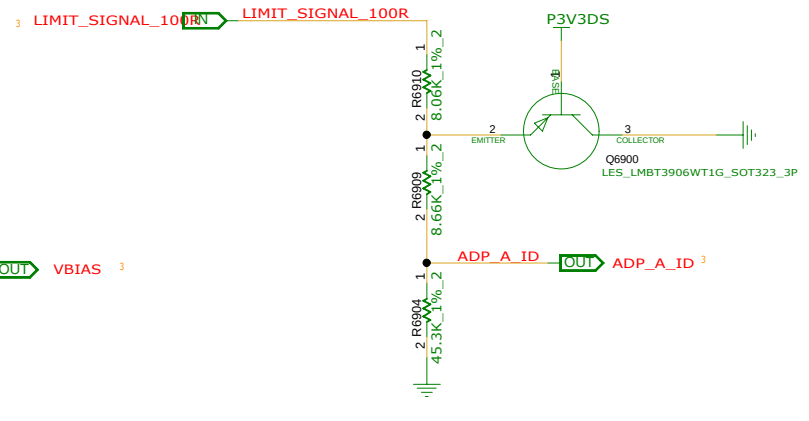
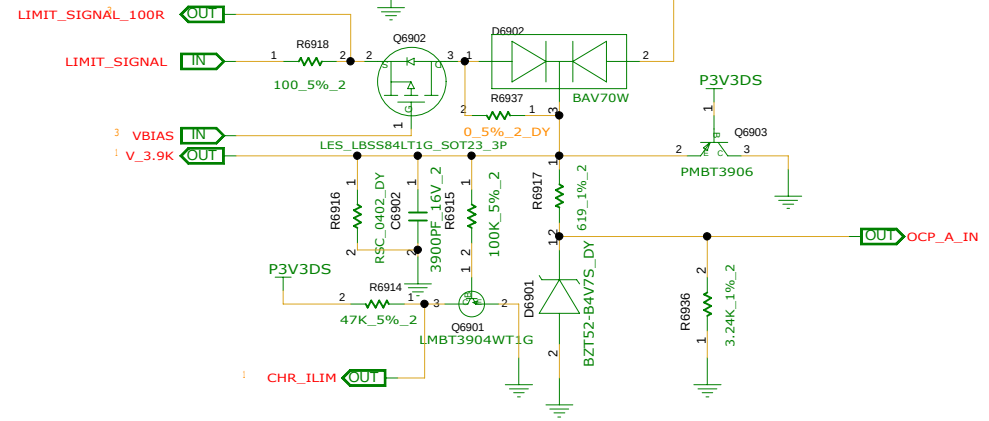
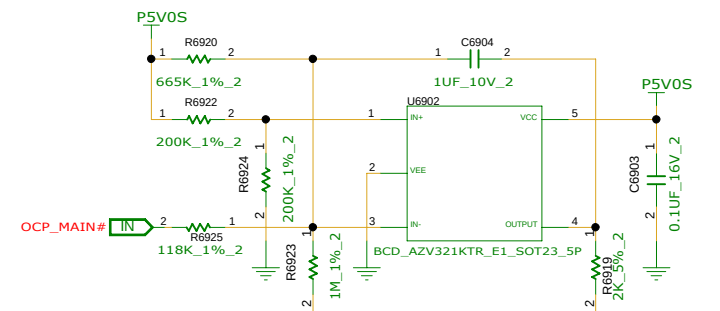
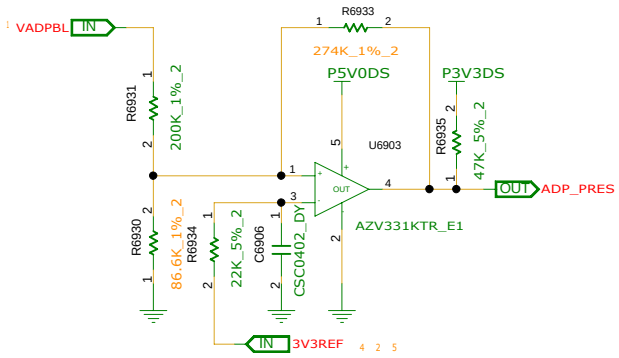


INVENTEC

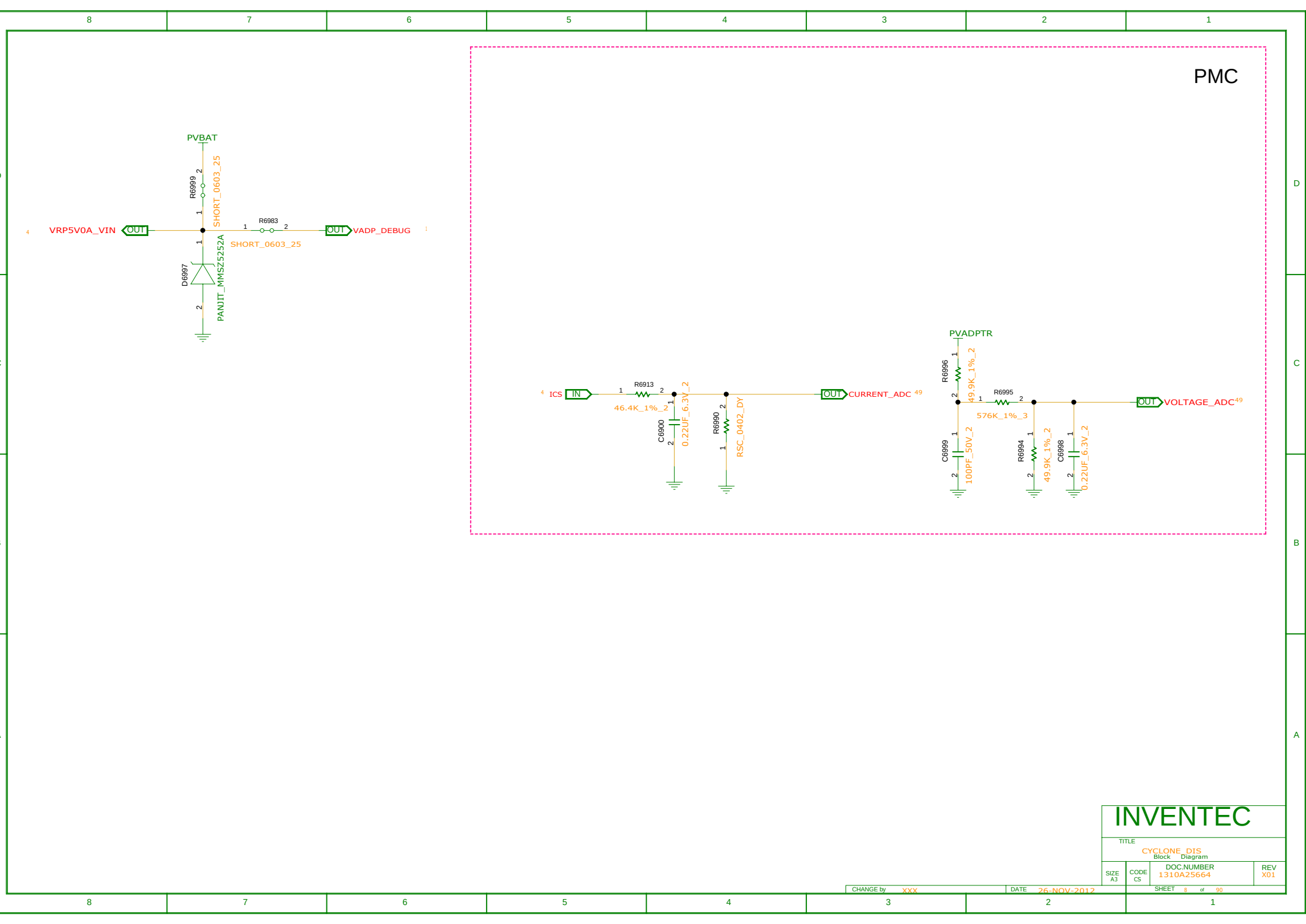
CYCLONE_DIS			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
C	CS	1310A/C35004	201
SHEET		1	of 04

CHANGE BY: xxx DATE: 26/NOV/2012





INVENTEC			
TITLE			
CYCLONE_DIS Block Diagram			
SIZE A3		DOC NUMBER	REV
CODE CS		1310A25664	X01
SHEET 6 of 90			

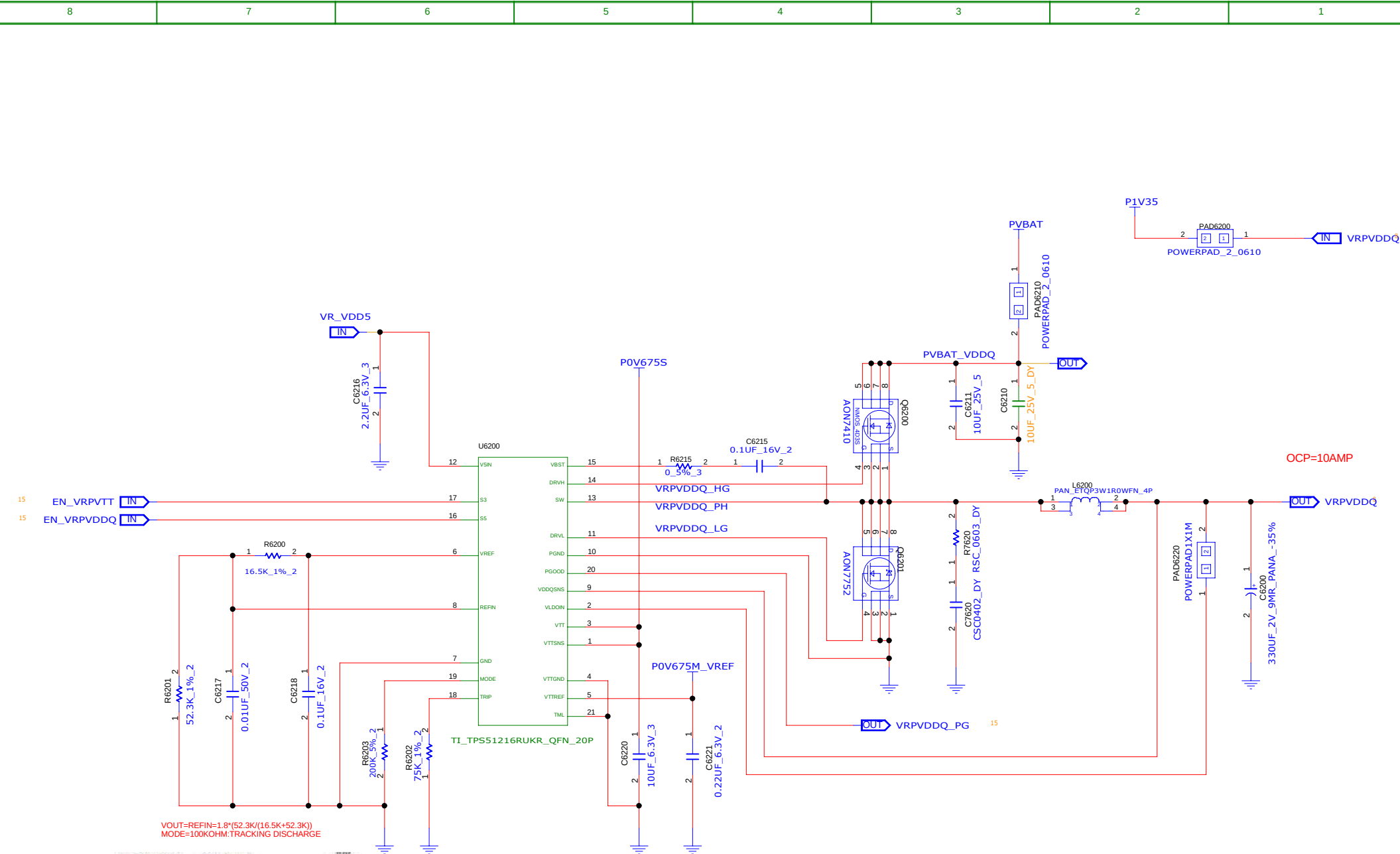


INVENTEC

TITLE			
CYCLONE_DIS Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01

CHANGE by XXX DATE 26-NOV-2012

SHEET 8 of 90



VOUT=REFIN*1.8*(52.3K/(16.5K+52.3K))
MODE=100KOHM:TRACKING DISCHARGE

Table 1. S3/S5 Power State Control

STATE	S3	S5	VREF	VDDQ	VTTREF	VTT
S0	HI	HI	ON	ON	ON	ON
S3	LO	HI	ON	ON	ON	OFF (High-Z)
S4/S5	LO	LO	OFF	OFF (Discharge)	OFF (Discharge)	OFF (Discharge)

INVENTEC

TITLE

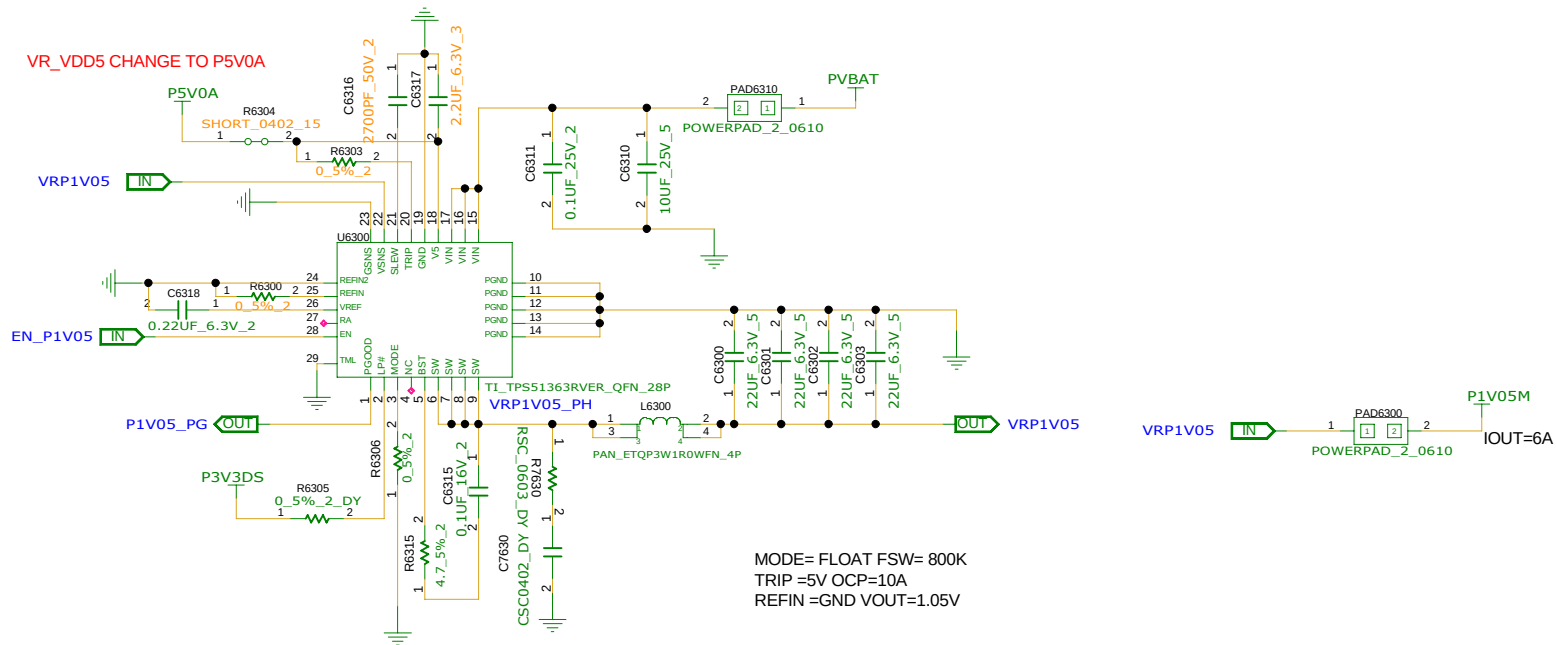
CYCLONE DIS Block Diagram

SIZE A3

CODE CS

DOC NUMBER 1310A25664

REV X01



INVENTEC

TITLE			
CYCLONE DIS Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01

D

C

B

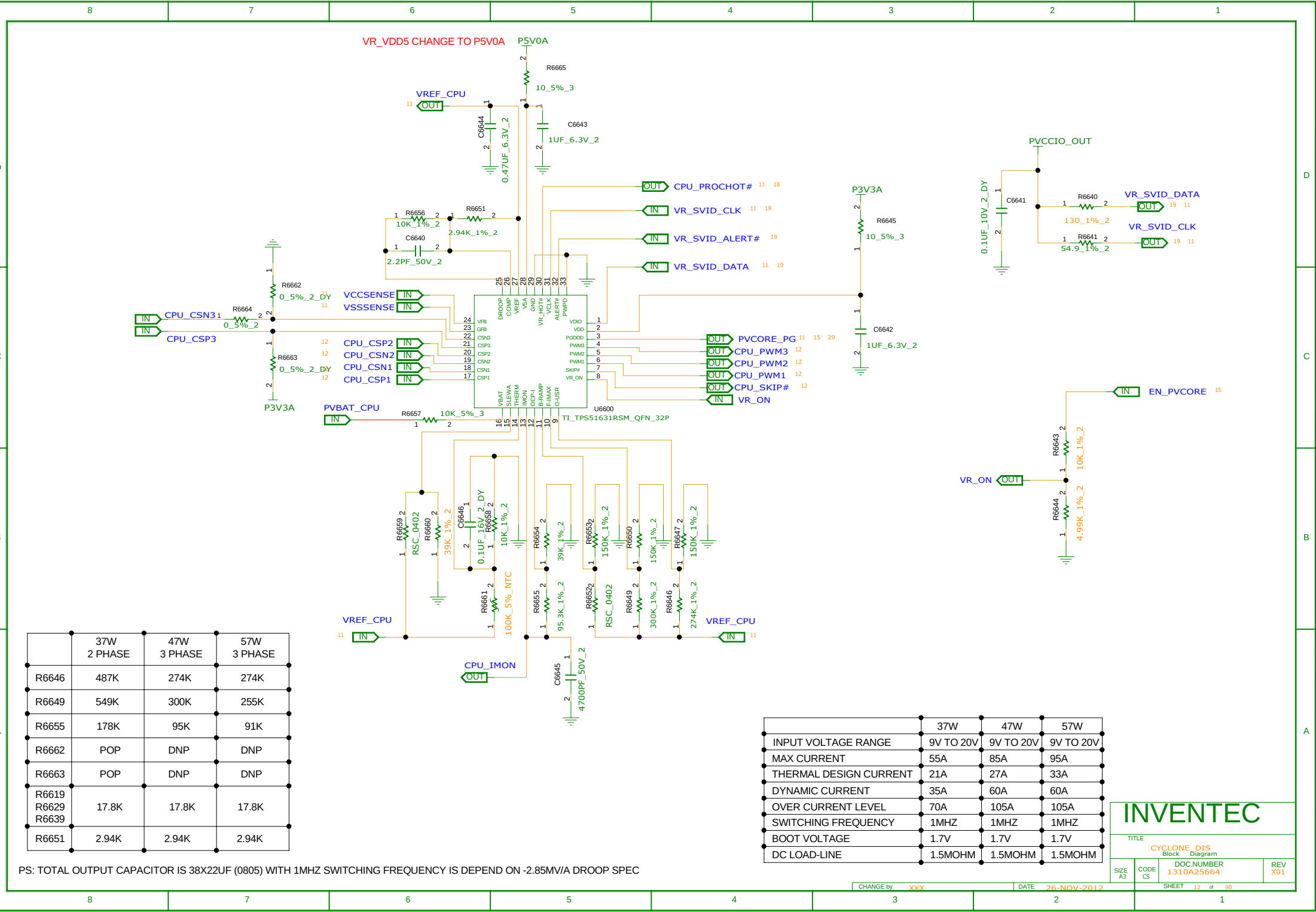
A

D

C

B

A



	37W 2 PHASE	47W 3 PHASE	57W 3 PHASE
R6646	487K	274K	274K
R6649	549K	300K	255K
R6655	178K	95K	91K
R6662	POP	DNP	DNP
R6663	POP	DNP	DNP
R6619	17.8K	17.8K	17.8K
R6629	17.8K	17.8K	17.8K
R6639	17.8K	17.8K	17.8K
R6651	2.94K	2.94K	2.94K

PS: TOTAL OUTPUT CAPACITOR IS 38X22UF (0805) WITH 1MHZ SWITCHING FREQUENCY IS DEPEND ON -2.85MV/A DROOP SPEC

	37W	47W	57W
INPUT VOLTAGE RANGE	9V TO 20V	9V TO 20V	9V TO 20V
MAX CURRENT	55A	85A	95A
THERMAL DESIGN CURRENT	21A	27A	33A
DYNAMIC CURRENT	35A	60A	60A
OVER CURRENT LEVEL	70A	105A	105A
SWITCHING FREQUENCY	1MHZ	1MHZ	1MHZ
BOOT VOLTAGE	1.7V	1.7V	1.7V
DC LOAD-LINE	1.5MOHM	1.5MOHM	1.5MOHM

INVENTEC

TITLE

CYCLONE DIS
Block Diagram

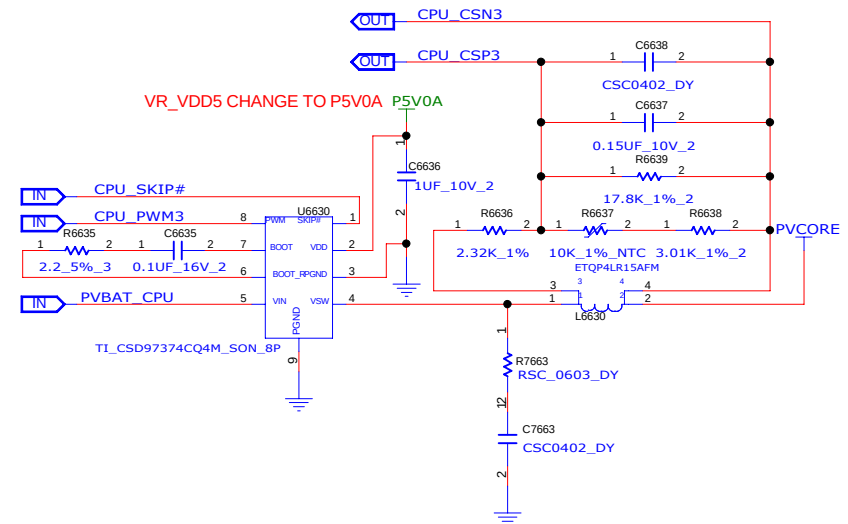
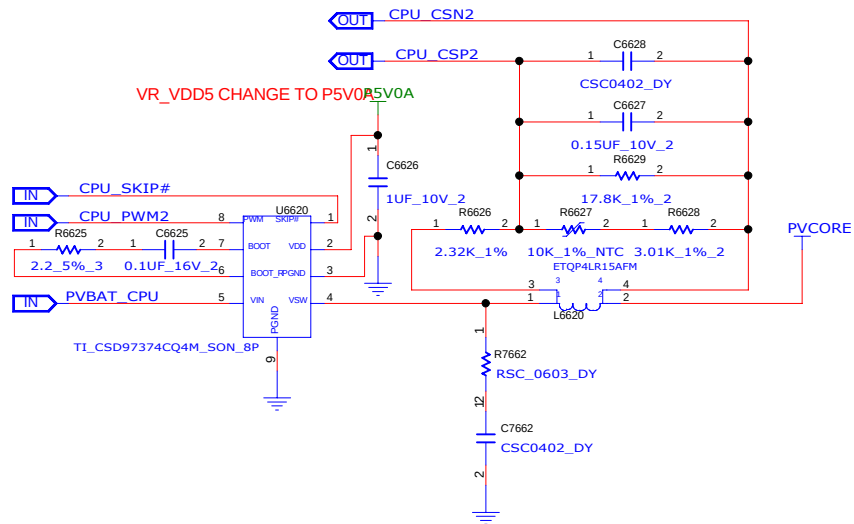
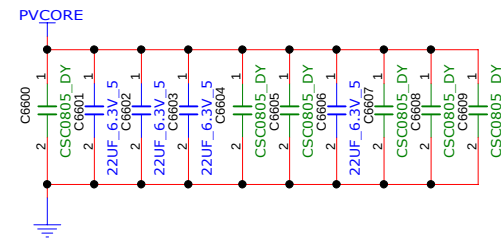
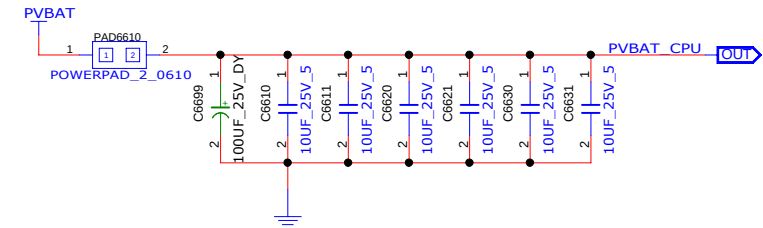
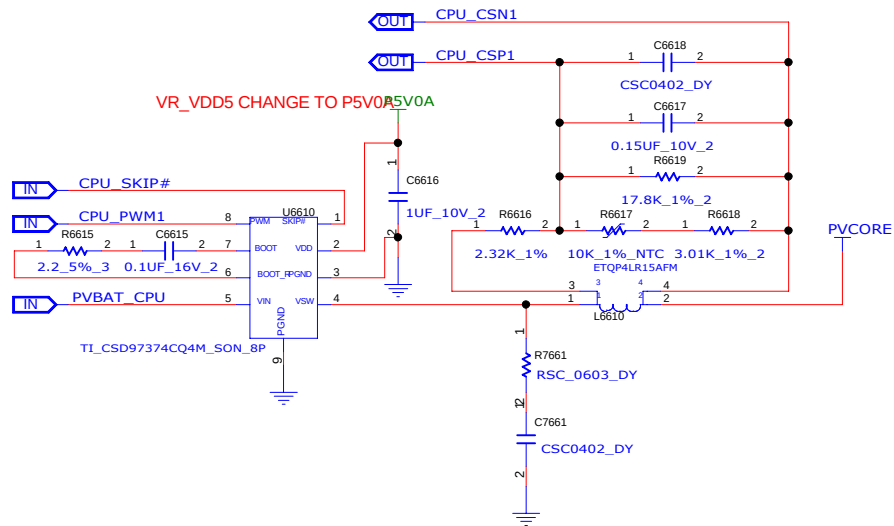
SIZE
A3

CODE
CS

DOC NUMBER
1310A25664

REV
X01

SHEET 12 of 90



INVENTEC

TITLE

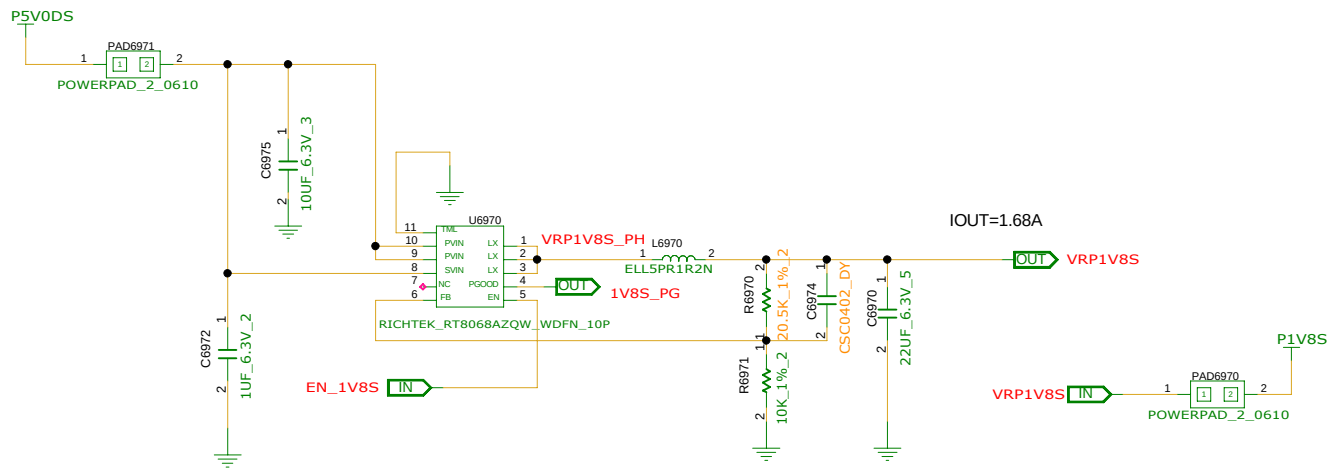
CYCLONE DIS
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310A25664
------------	------------	--------------------------

SHEET 13 of 90

CHANGE by	XXX	DATE	26-NOV-2012
-----------	-----	------	-------------

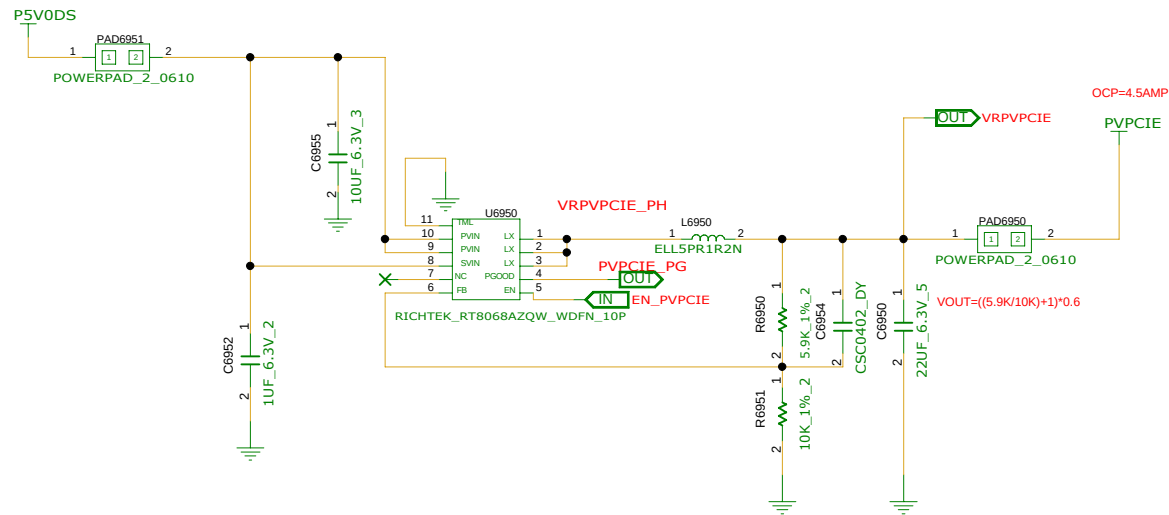
STREET 13 01 90



VREF=0.6V
15K=1.5V
10K=1.2V
20.5K=1.83V
MODE= FLOAT=SKIP MODE
MODE=VIN=FCCM MODE

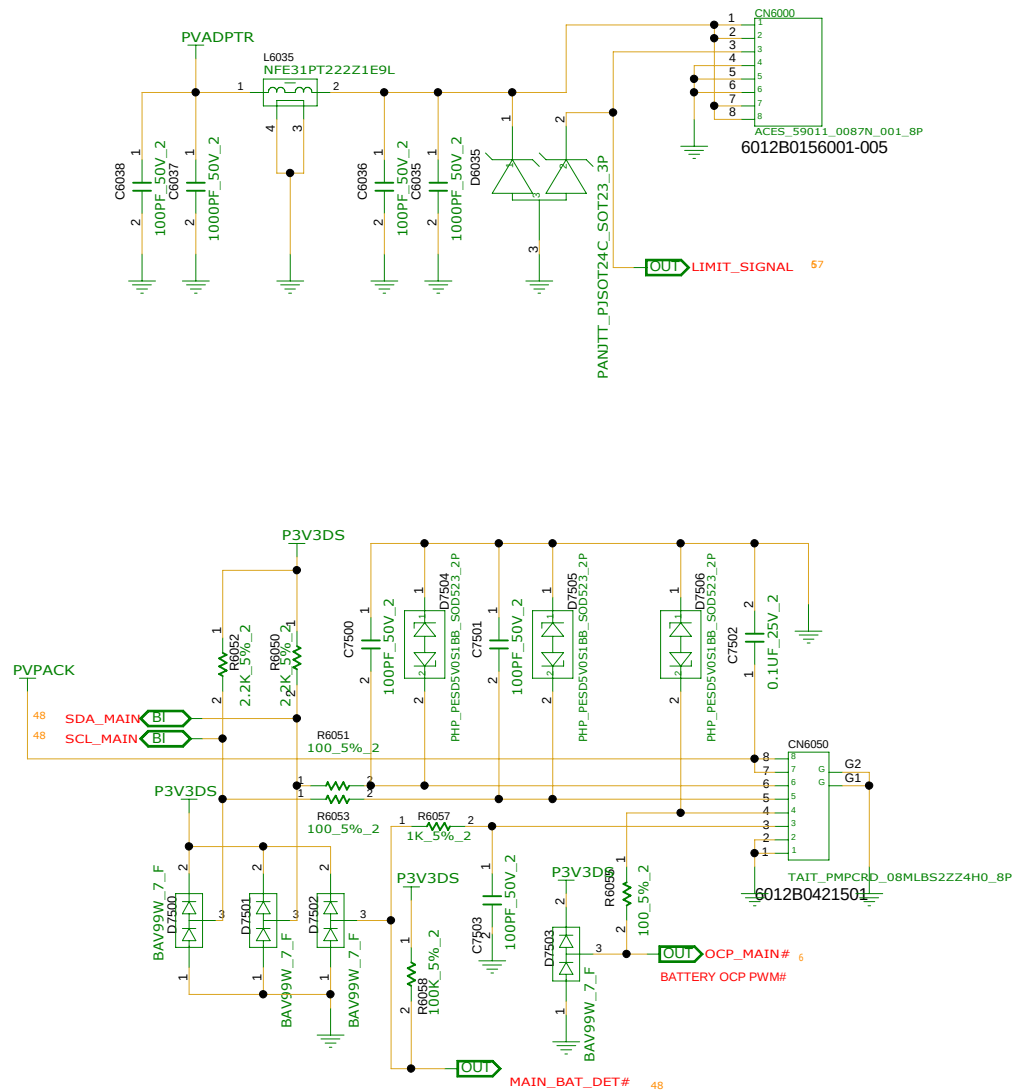
INVENTEC

TITLE			
CYCLONE DIS Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01



INVENTEC

TITLE			
CYCLONE DIS Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01

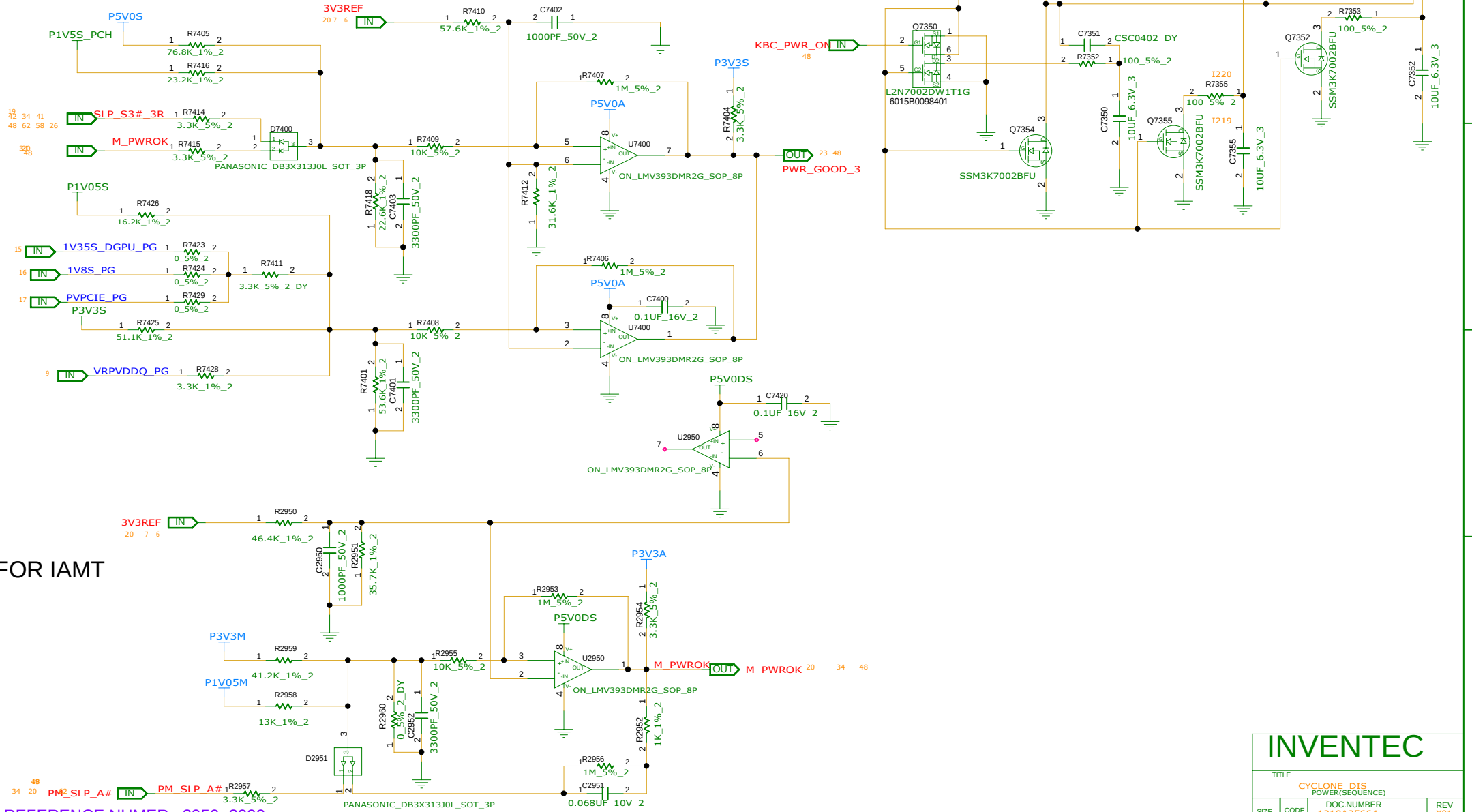


INVENTEC

TITLE			
CYCLONE DIS Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01

[illegible]

REFERENCE NUMER : 7400~7450



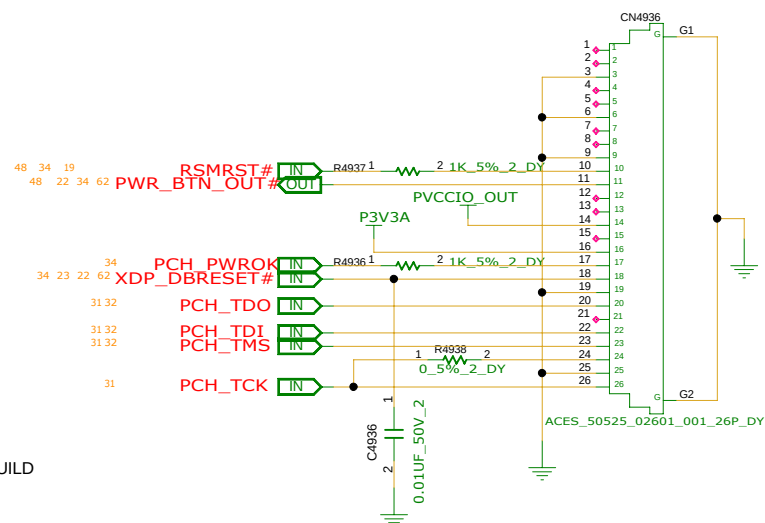
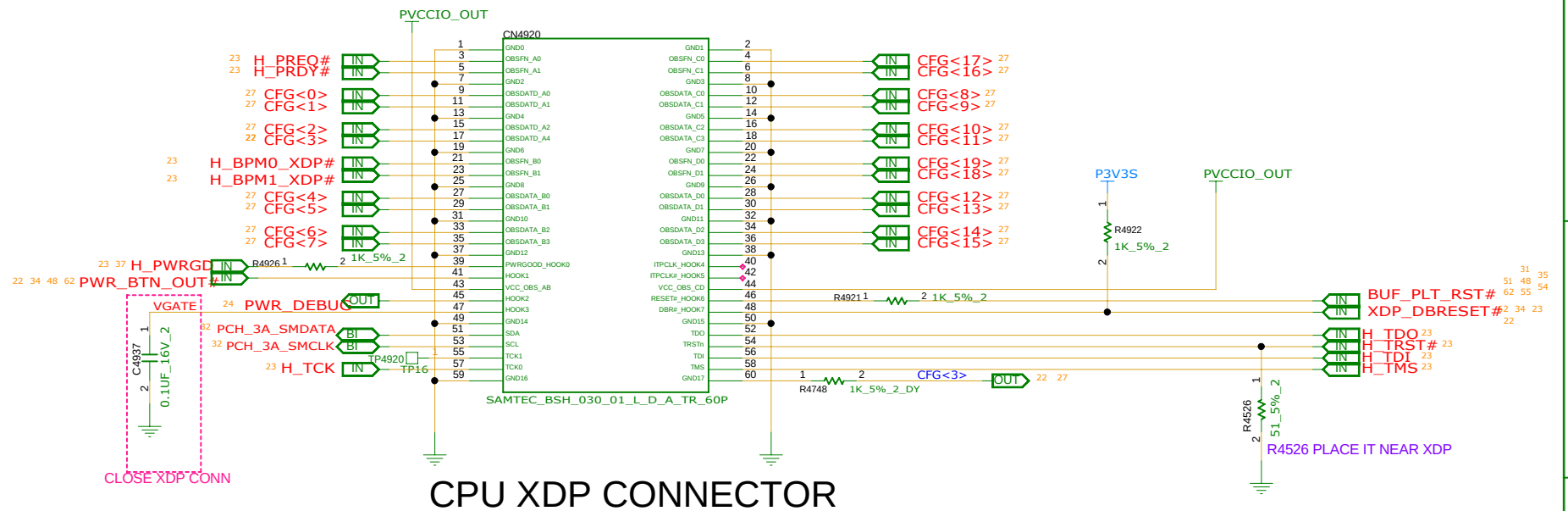
INVENTEC

TITLE
CYCLONE DIS
POWER(SIQUENCE)

DOC NUMBER
1310A25664

REV
X01

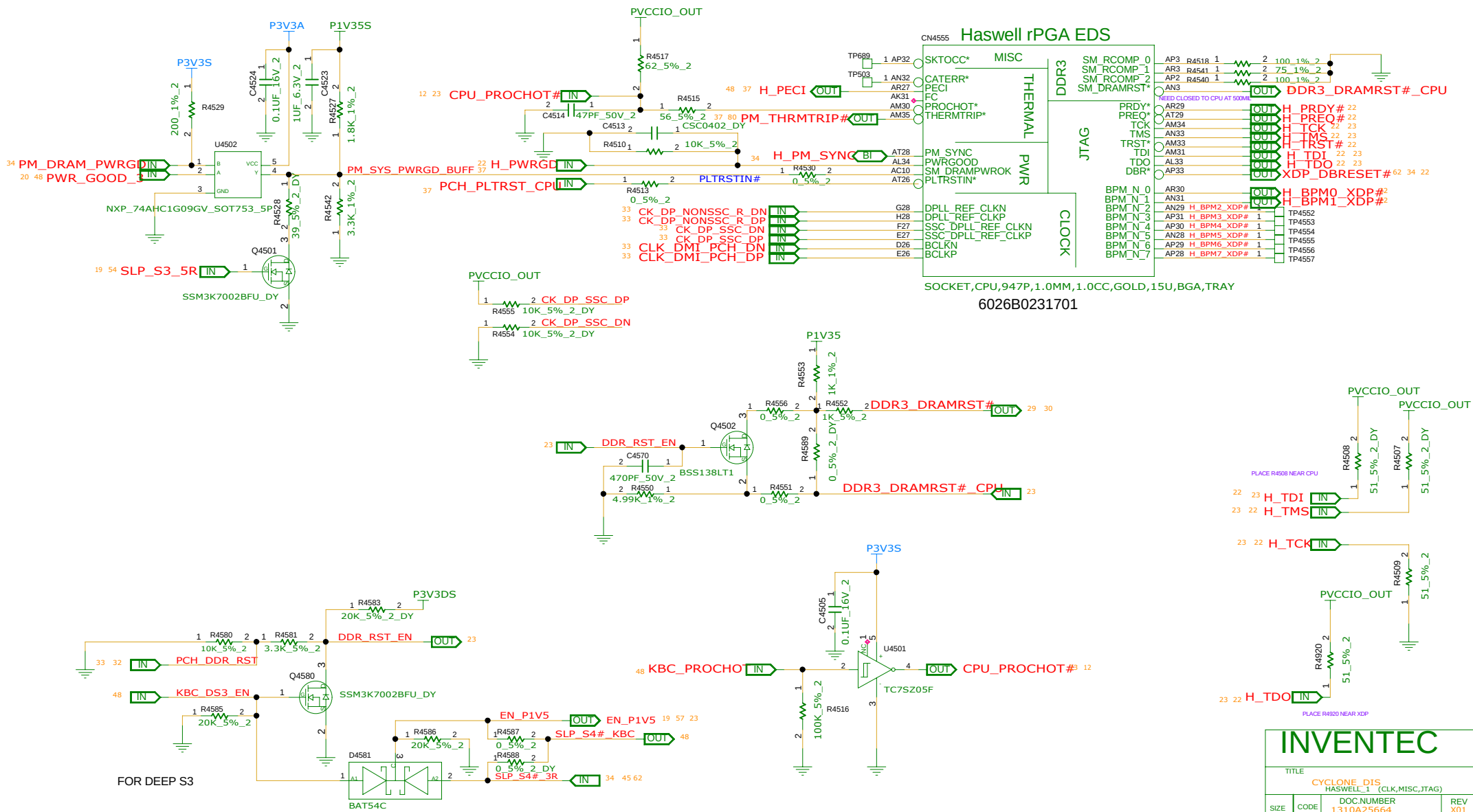
CHANGE by XXX DATE 26-NOV-2012 SHEET 20 of 90



PCH XDP CONNECTOR

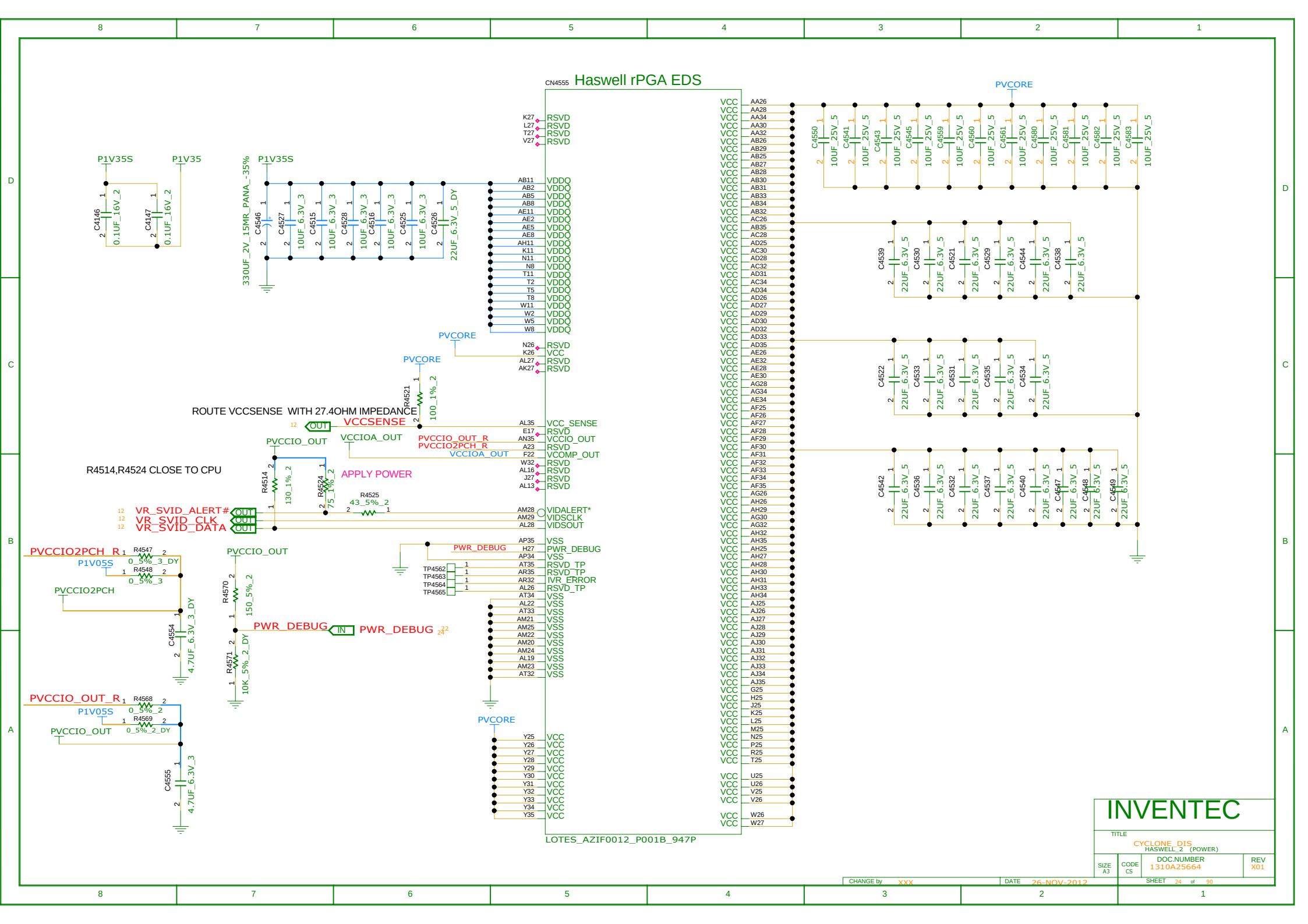
NON-INSTALL CN4936,R4937,R4936 ON PV BUILD

INVENTEC			
TITLE			
CYCLONE DIS XDP CONN			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 22 of 90			



INVENTEC

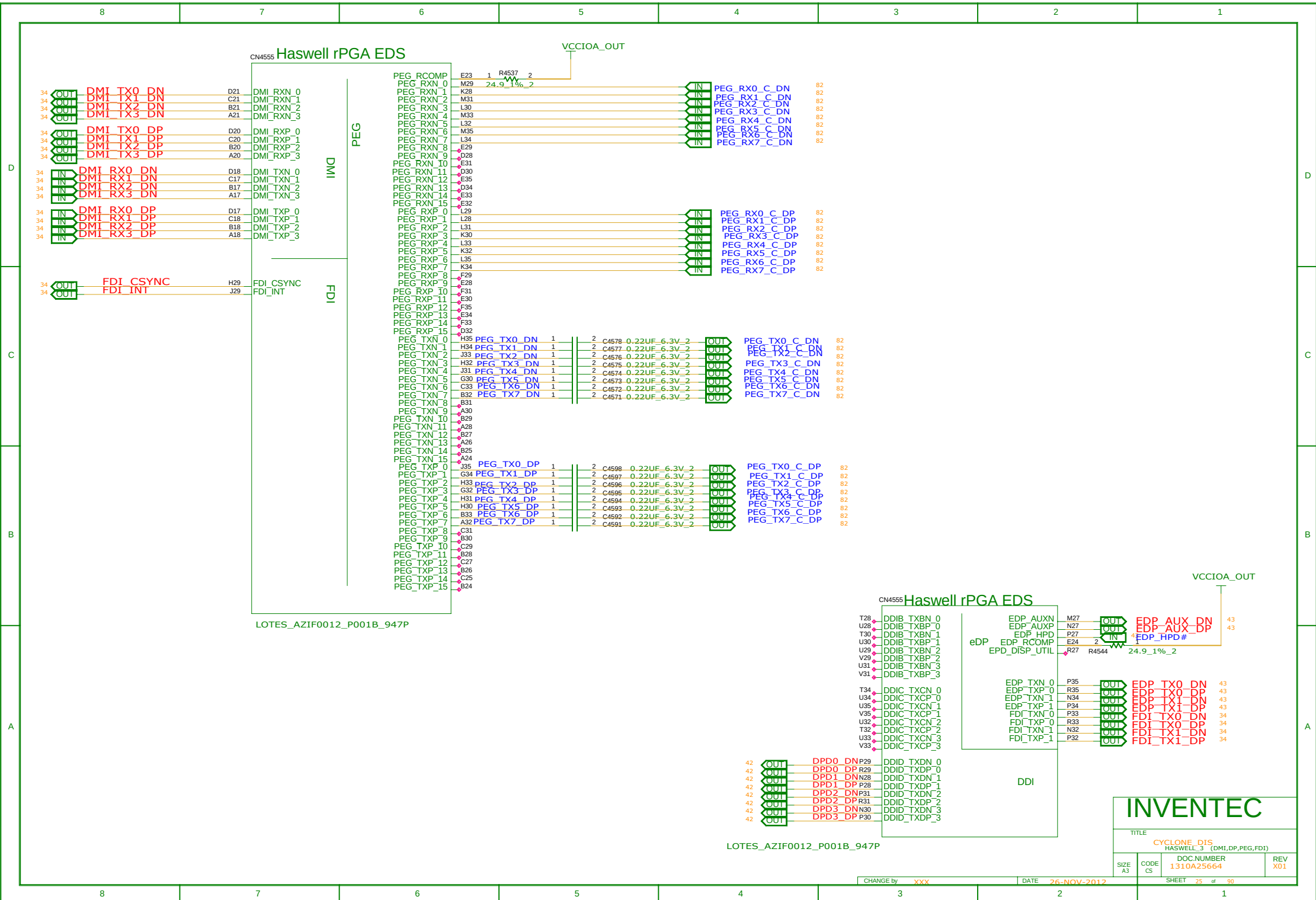
TITLE			
CYCLONE_DIS HASWELL_1 (CLK,MISC,JTAG)			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01

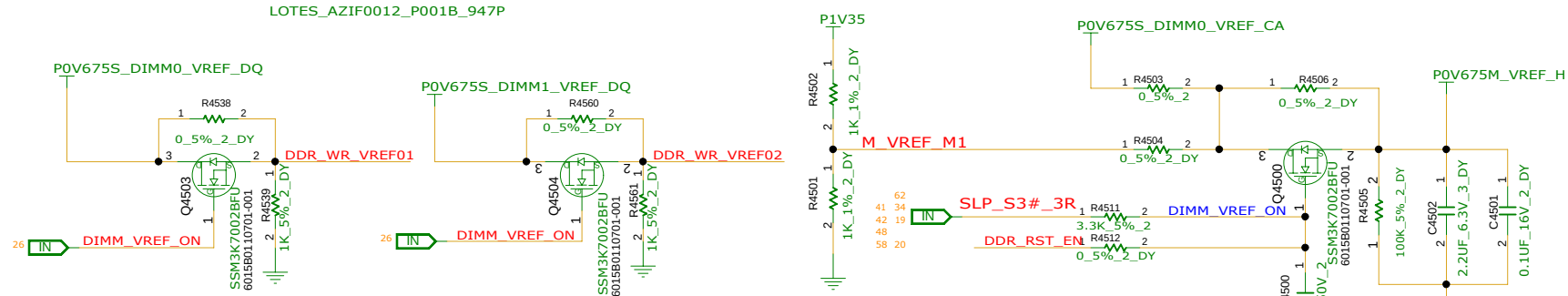
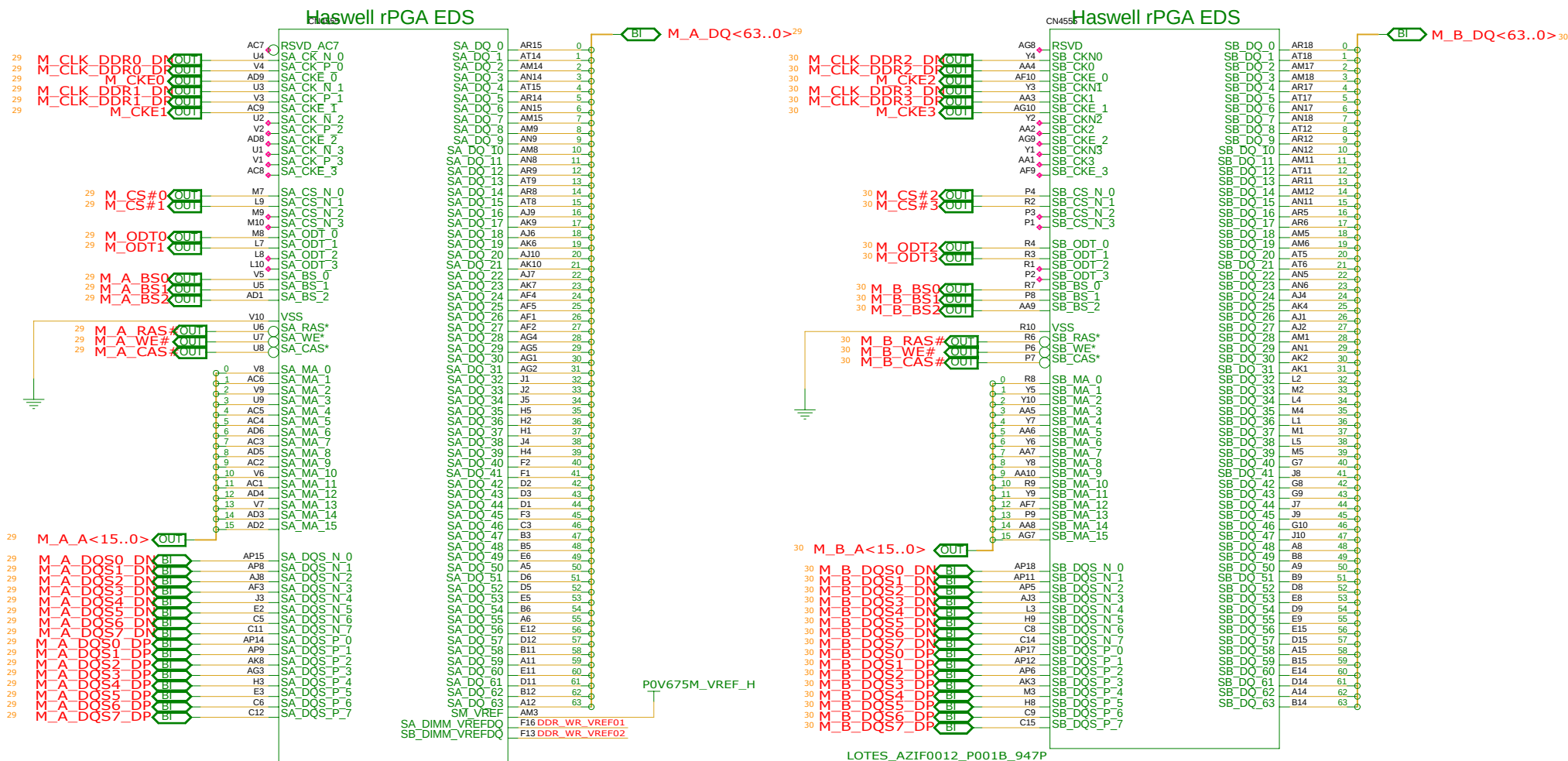


INVENTEC

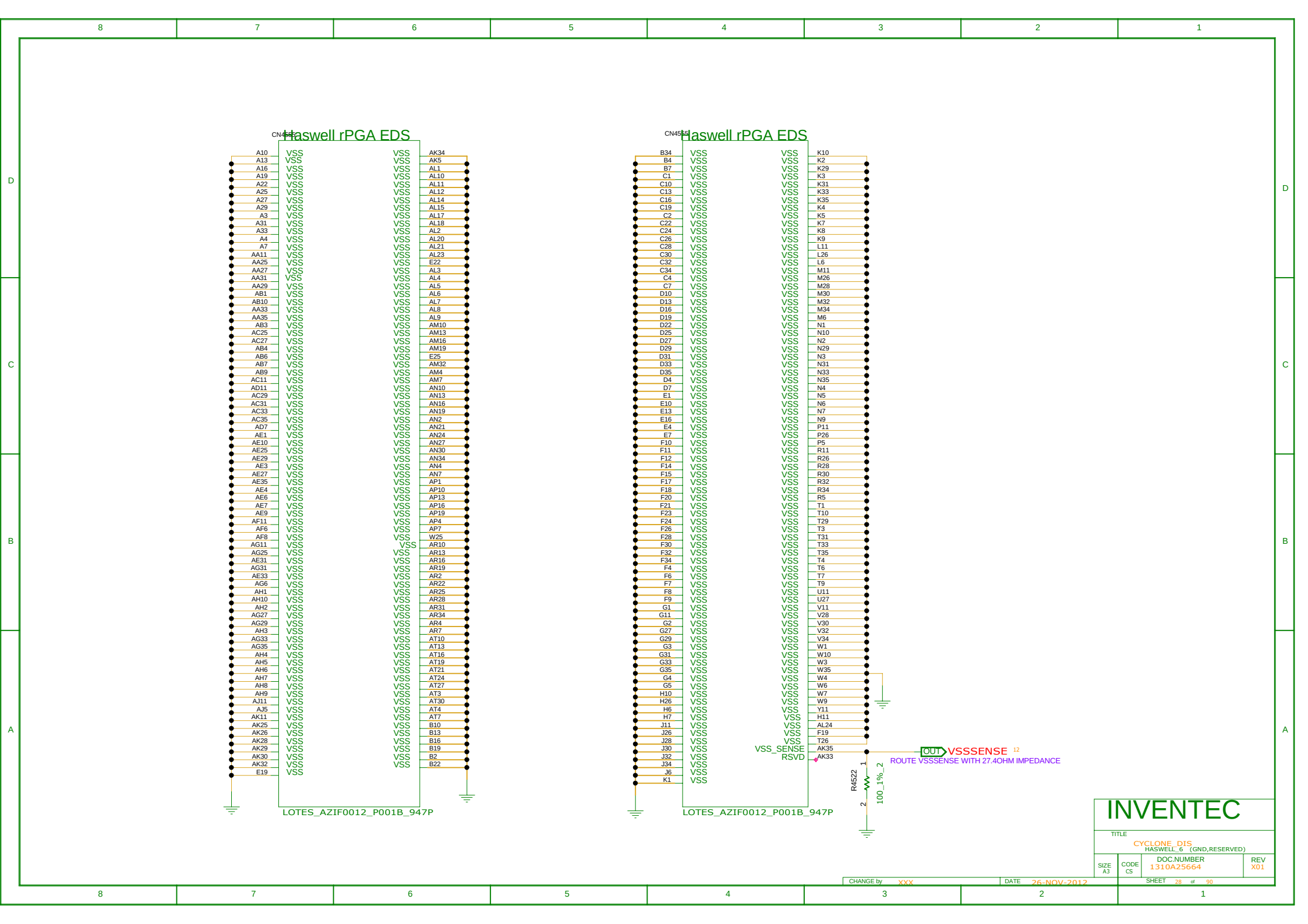
TITLE
CYCLONE DIS
HASWELL 2 (POWER)
DOC NUMBER
1310A25664
REV
X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 24 of 90





INVENTEC			
TITLE			
CYCLONE_DIS HASWELL_4 (DDR3)			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01

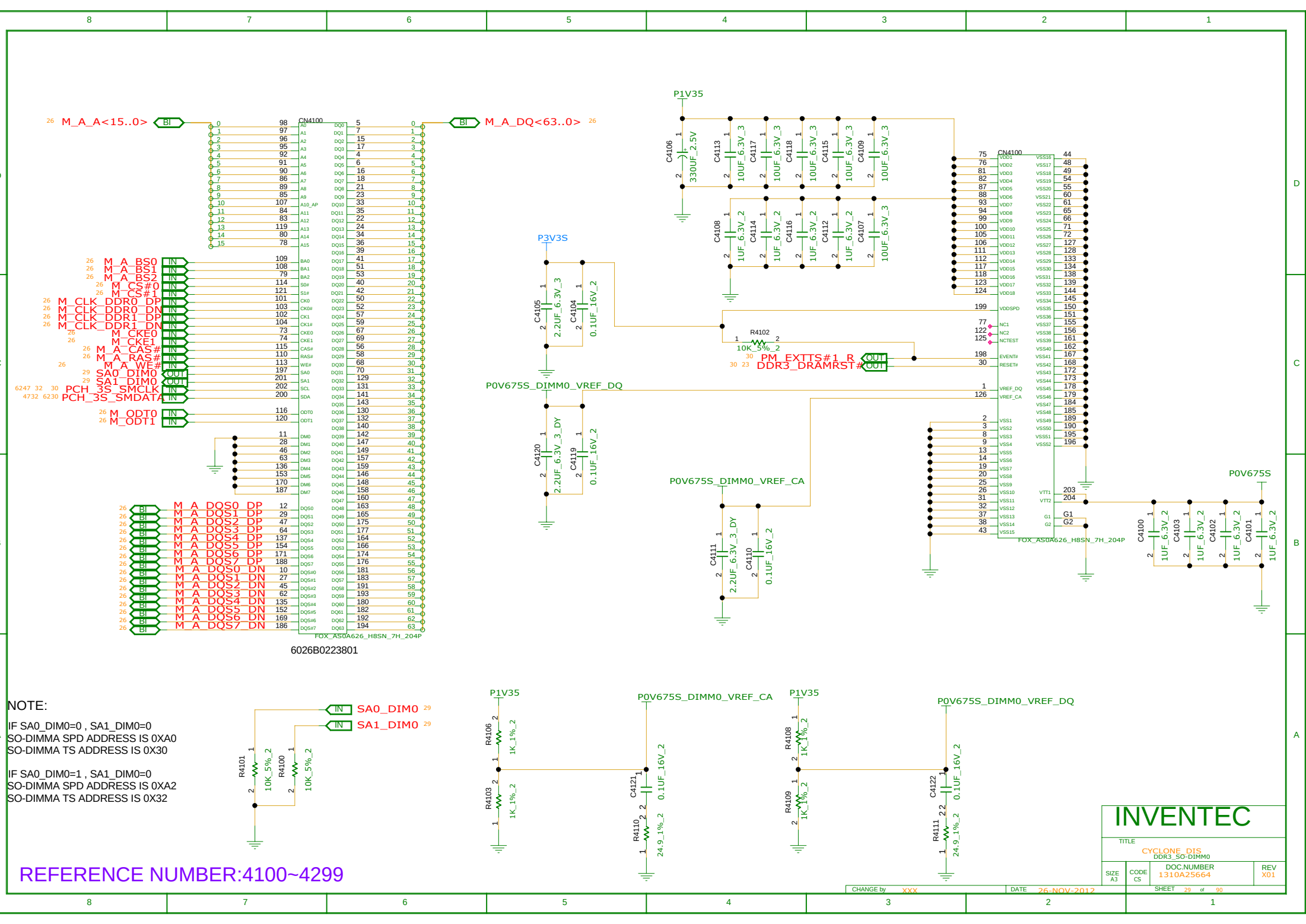


INVENTEC

TITLE CYCLONE D1S HASWELL_6 (GND,RESERVED)

SIZE A3 CODE CS DOC NUMBER 1310A25664 REV X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 28 of 90



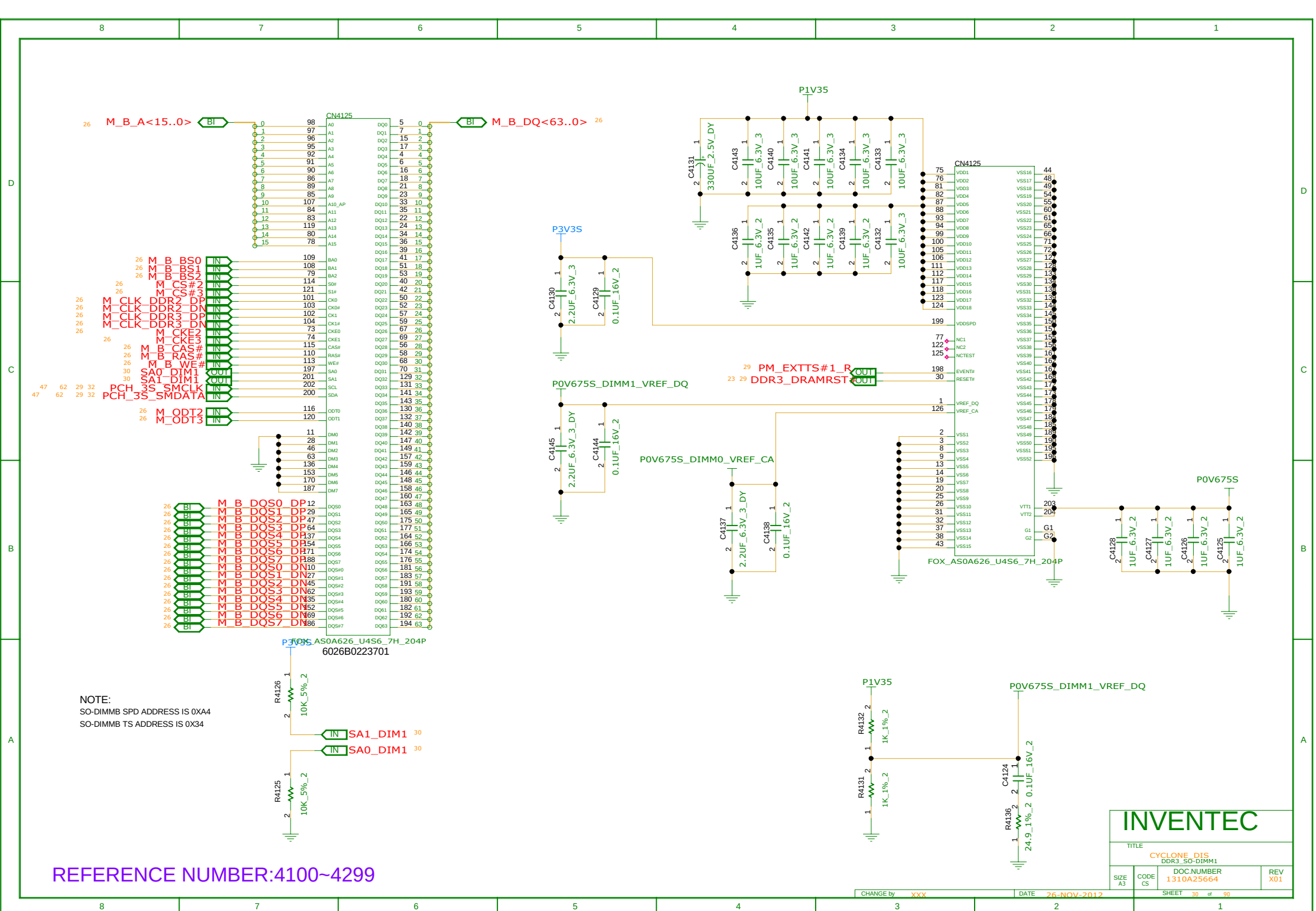
NOTE:

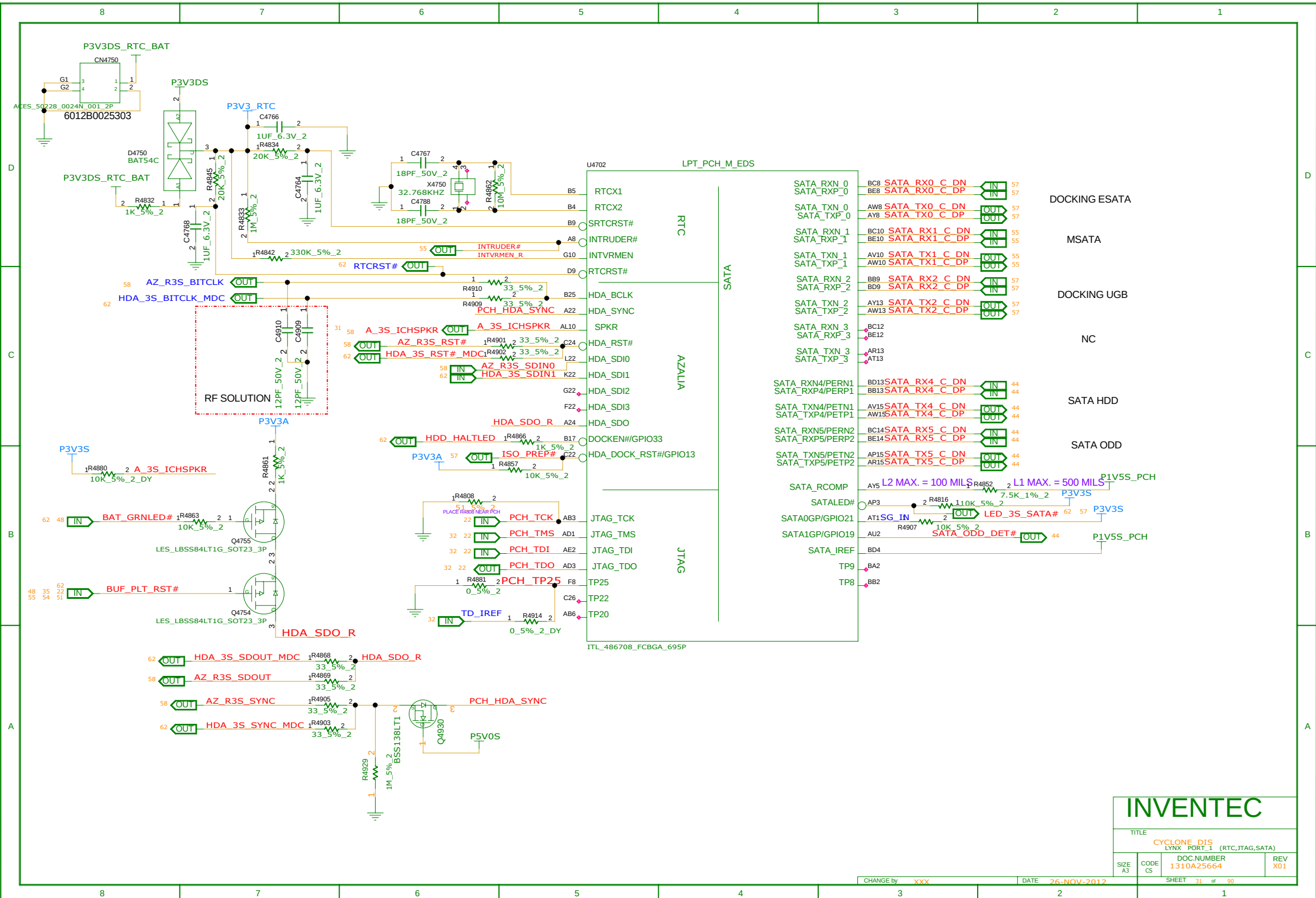
IF SA0_DIM0=0 , SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0XA0
SO-DIMMA TS ADDRESS IS 0X30

IF SA0_DIM0=1 , SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0XA2
SO-DIMMA TS ADDRESS IS 0X32

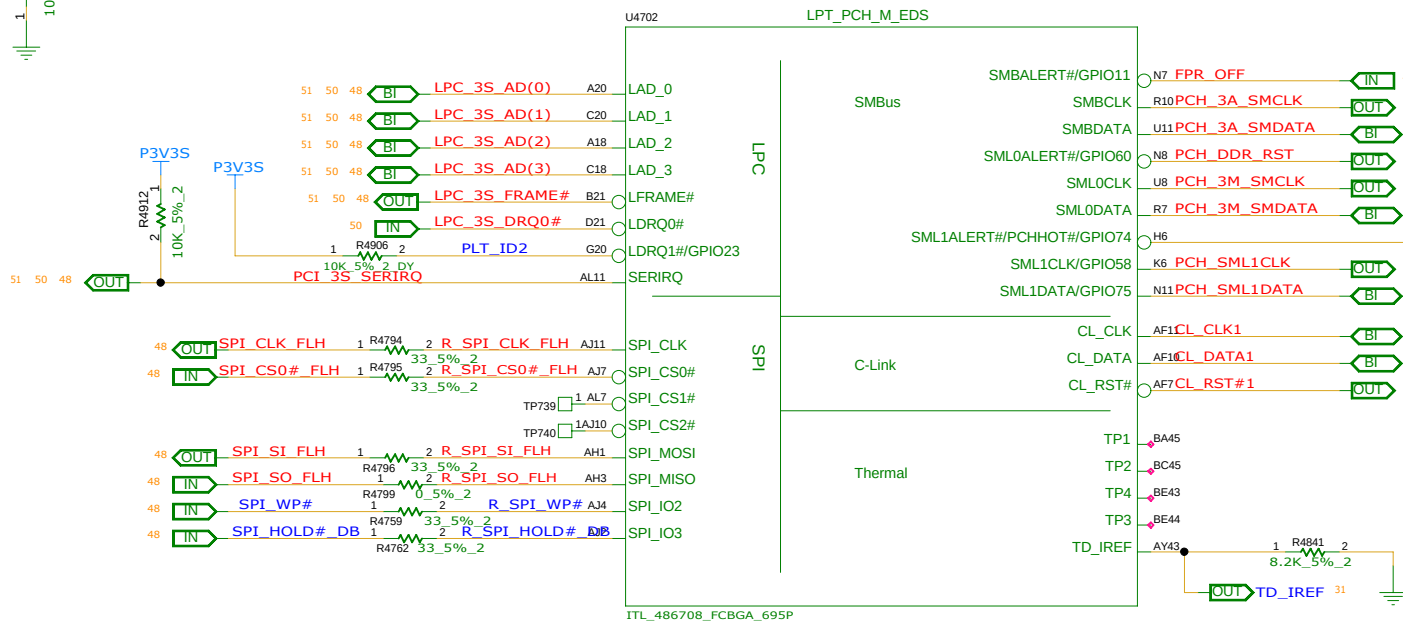
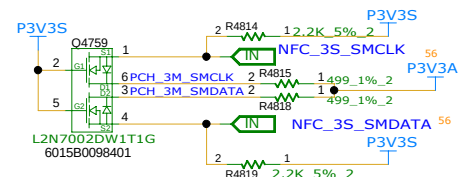
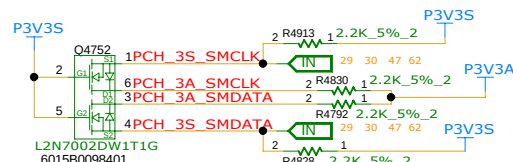
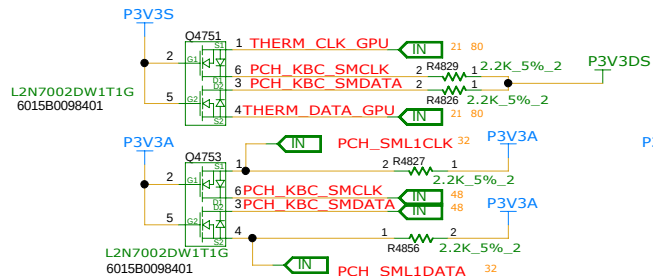
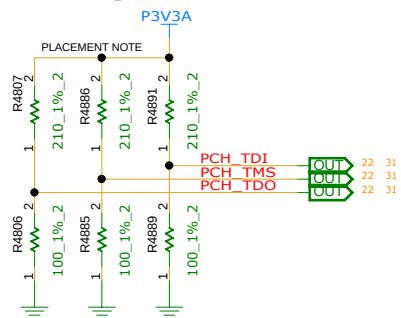
REFERENCE NUMBER:4100~4299

INVENTEC			
TITLE			
CYCLONE DIS DDR3 SO DIMM0			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 29 of 90			





LAYOUT NOTE: JTAG_TMS TERMINATIONS NEED TO BE PLACED NEAR PCH
LAYOUT NOTE: JTAG_TDI TERMINATIONS NEED TO BE PLACED NEAR PCH
LAYOUT NOTE: JTAG_TDO TERMINATIONS NEED TO BE PLACED NEAR XDP



INVENTEC

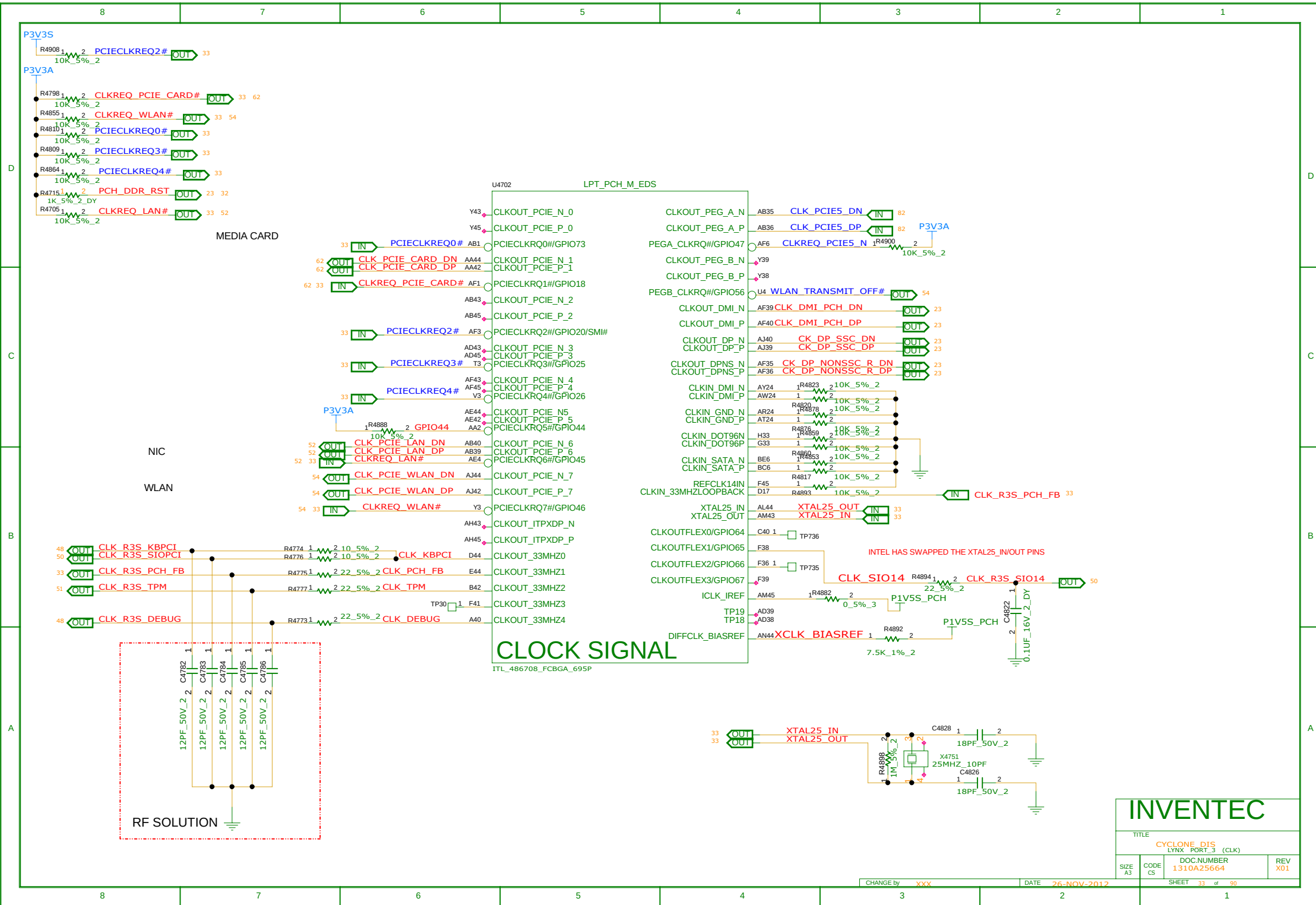
TITLE CYCLONE_DIS

LYNX_PORT_2 (SPI,SMBUS,CL)

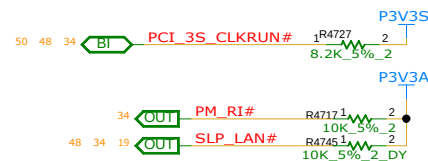
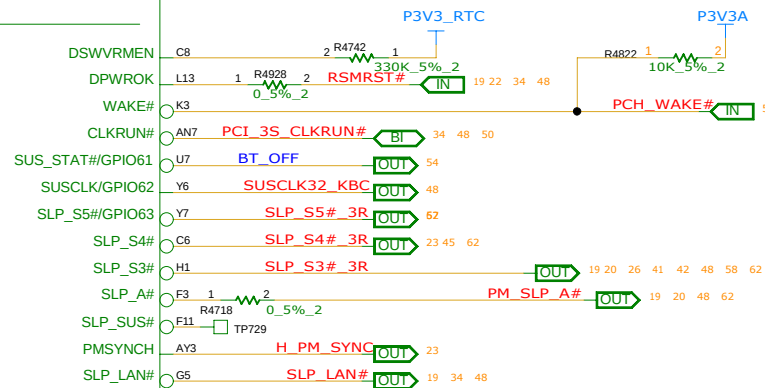
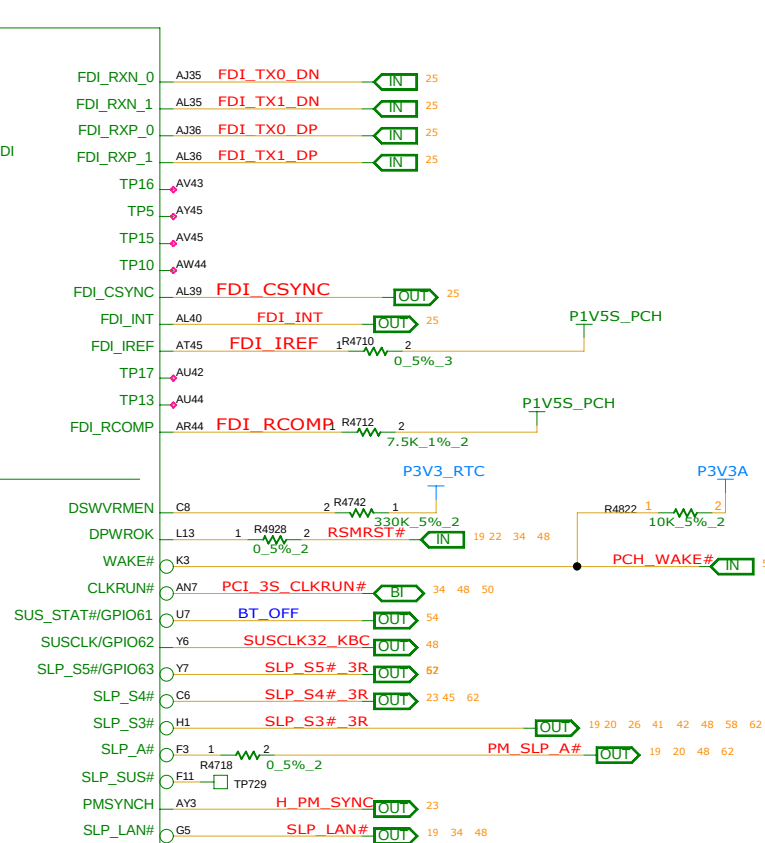
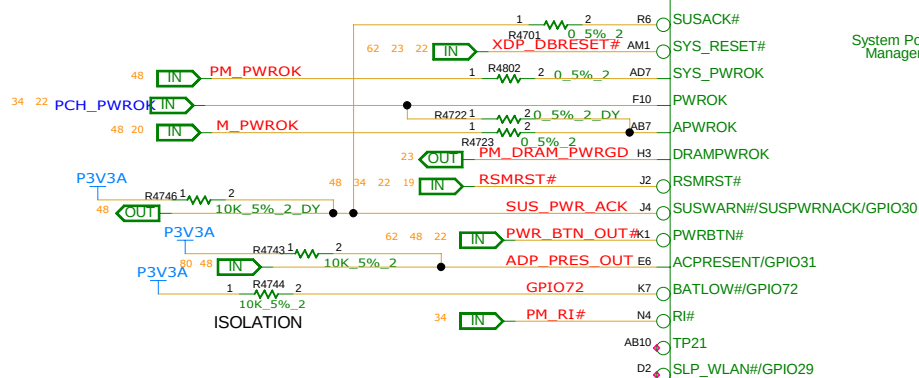
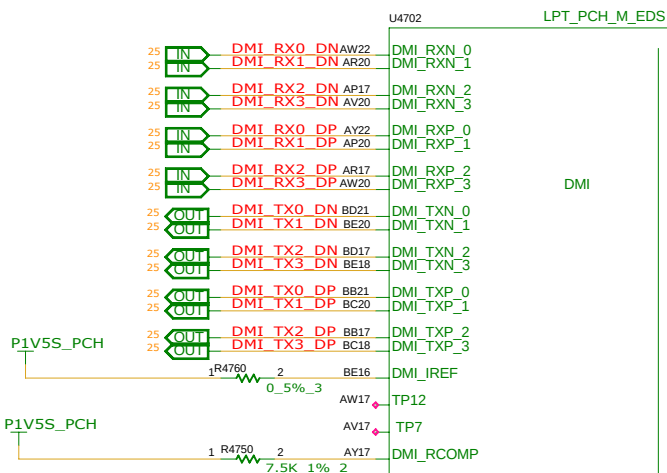
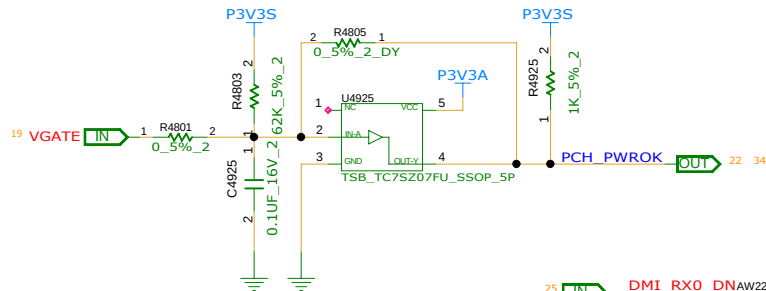
SIZE CODE DOC NUMBER REV

A3 CS 1310A25664 X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 32 of 90

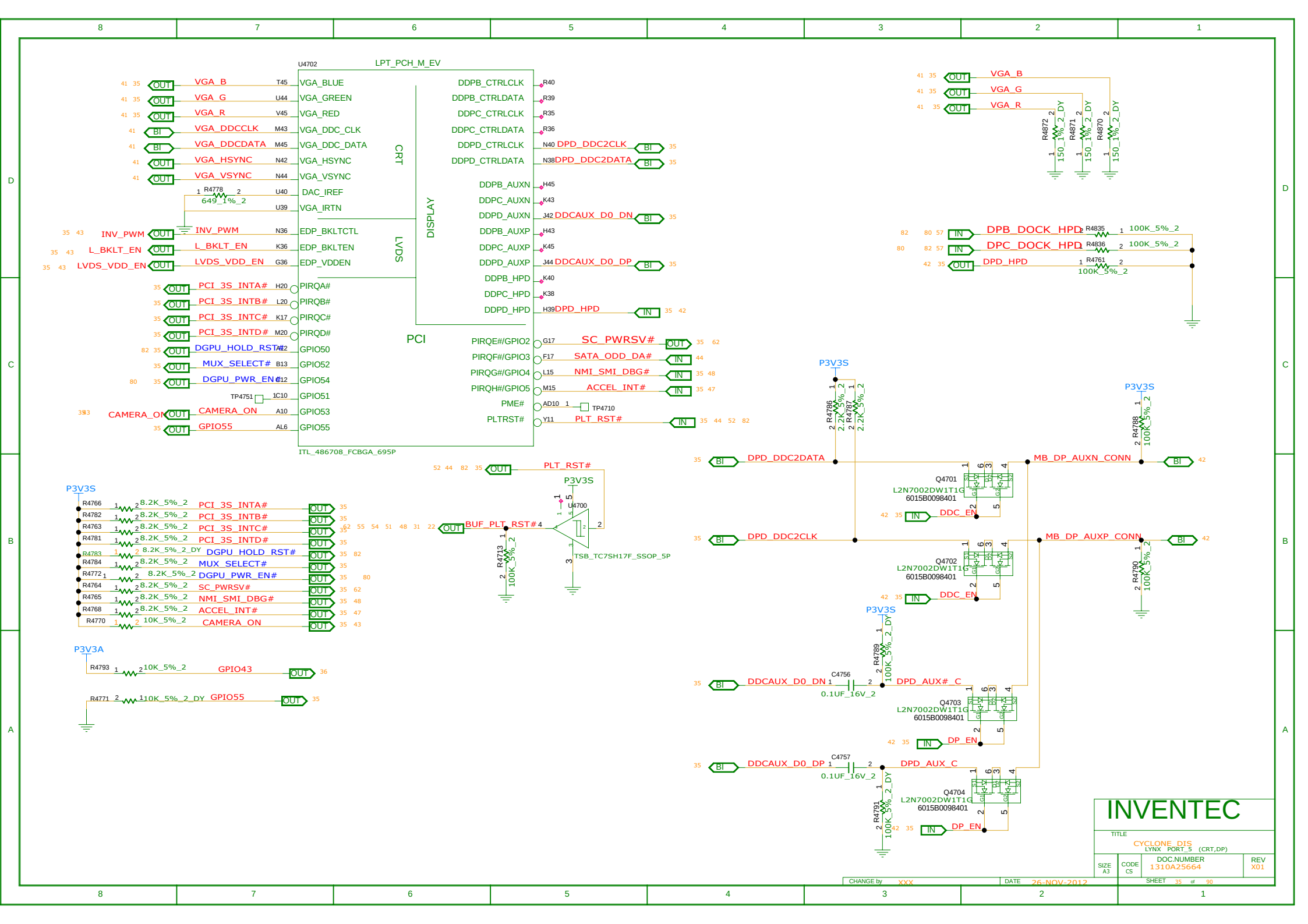


	IAMT	NON-IAMT
R4718	INSTALL	UNINSTALL
R4723	INSTALL	UNINSTALL
R4722	UNINSTALL	INSTALL

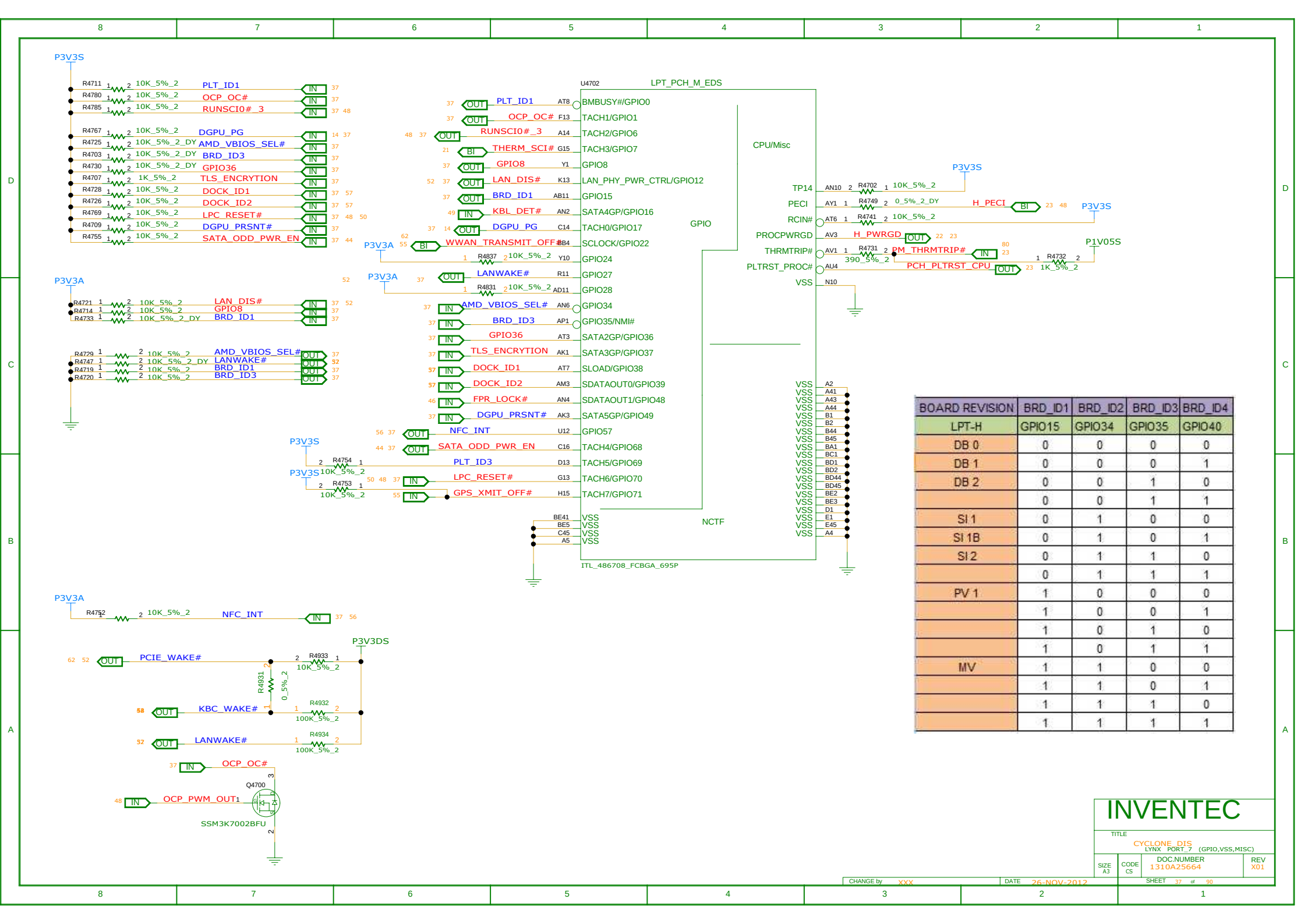


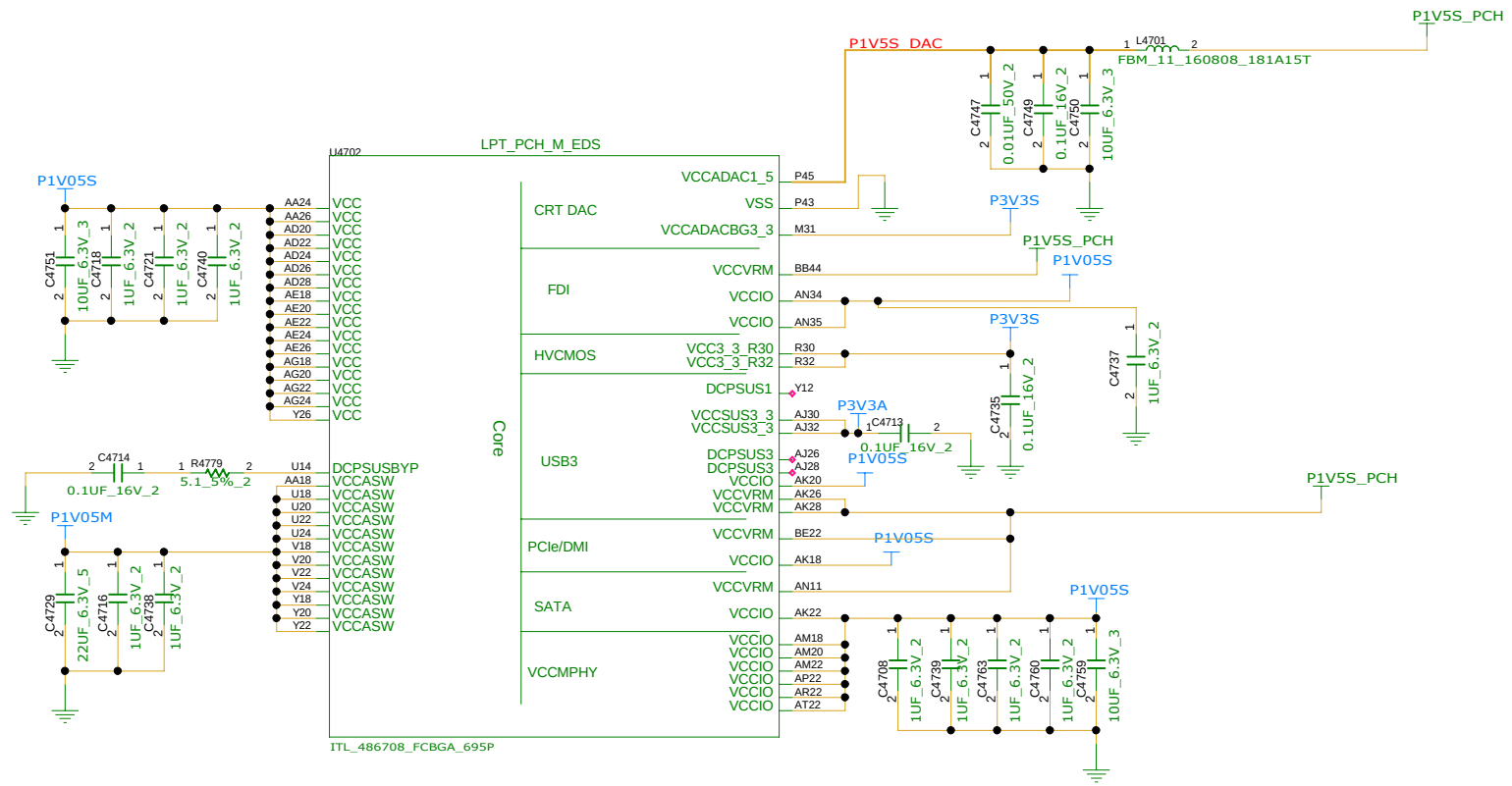
INVENTEC

TITLE			
CYCLONE_DIS			
LYNX_FORT_4(DMI,FDI,SPM)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01



INVENTEC			
TITLE			
CYCLONE_DIS			
LWNX_PORT.5 (CRT,DP)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01
SHEET 35 of 90			





INVENTEC

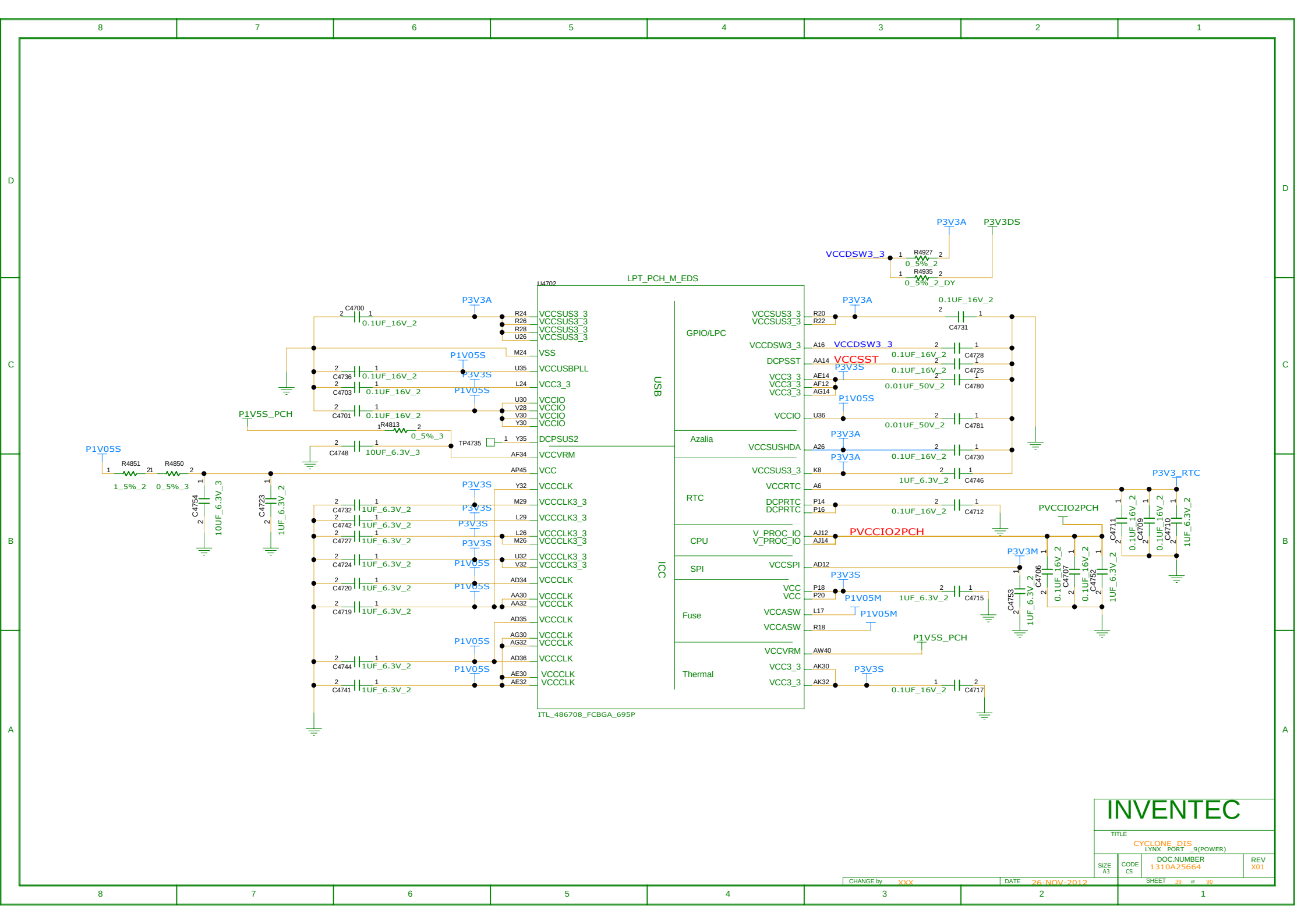
TITLE
CYCLONE DIS
LWXX PORT 8 (POWER)

DOC NUMBER
1310A25664

REV
X01

CHANGE by XXX DATE 26-NOV-2012

SHEET 38 of 90



INVENTEC

TITLE			
CYCLONE_DIS LYNX_PORT_9(POWER)			
SIZE A3		DOC NUMBER 1310A25664	
CODE CS		REV X01	

D

C

B

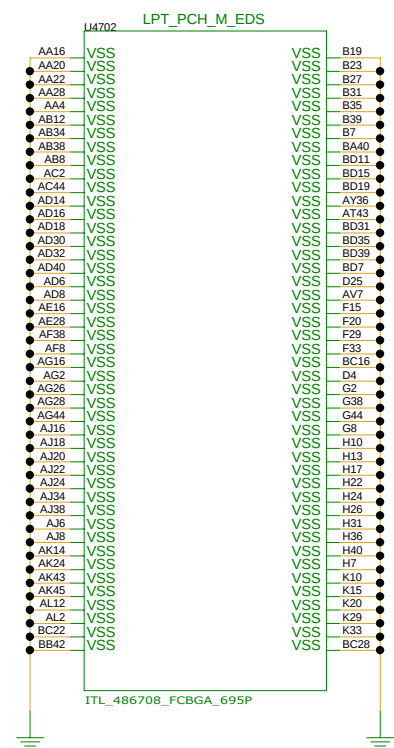
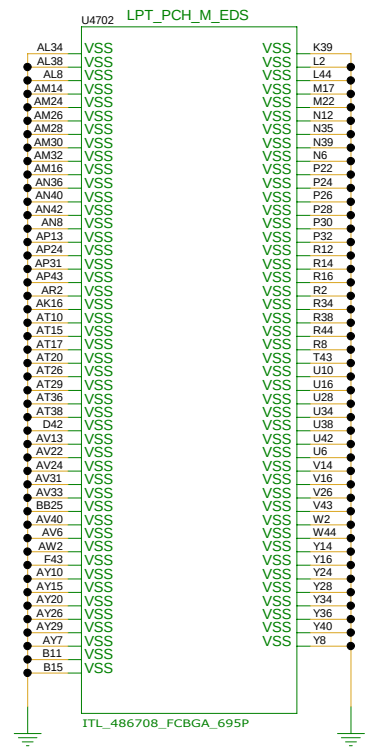
A

D

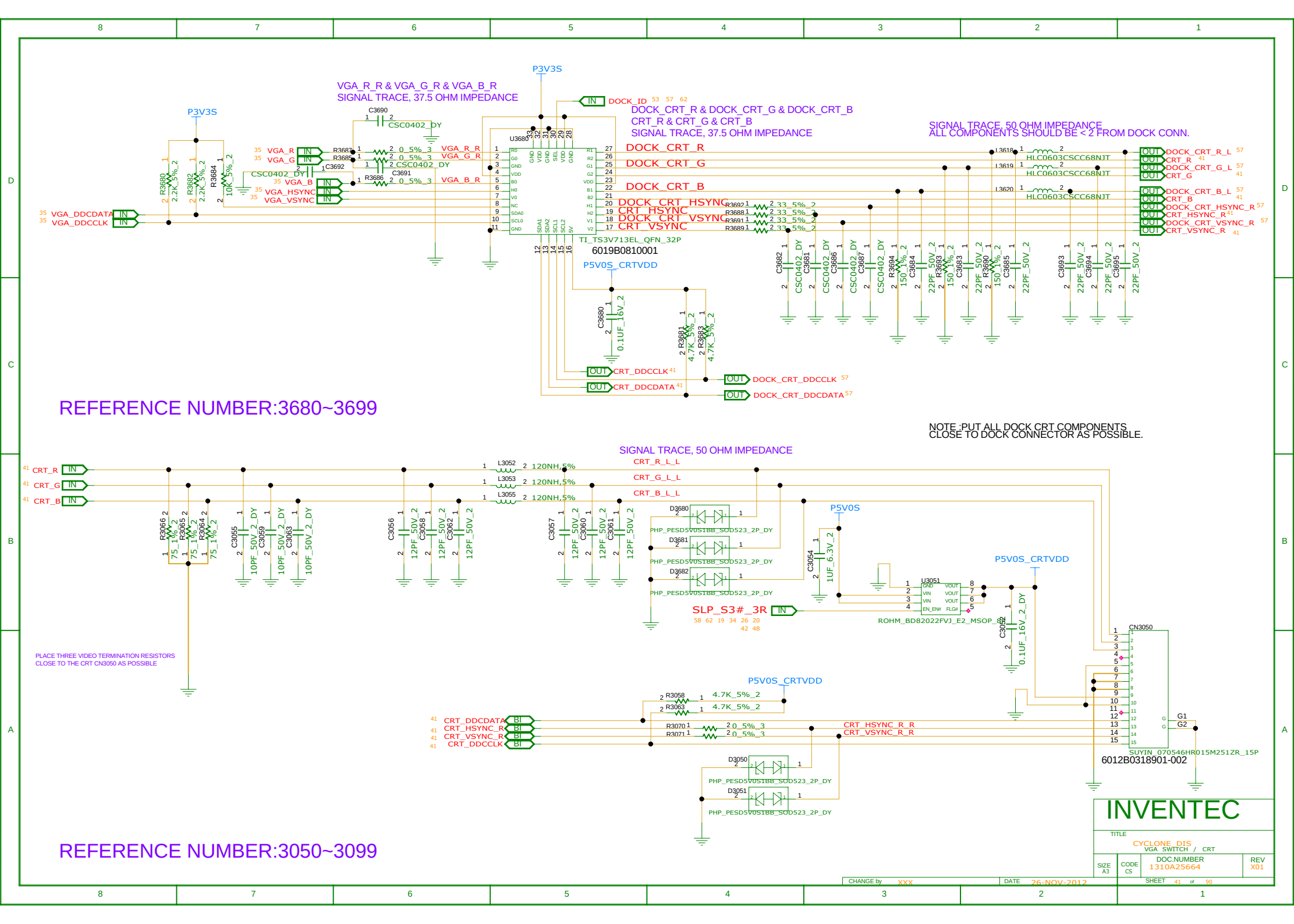
C

B

A



INVENTEC			
TITLE			
CYCLONE DIS LYNX PORT 10 (GND)			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01

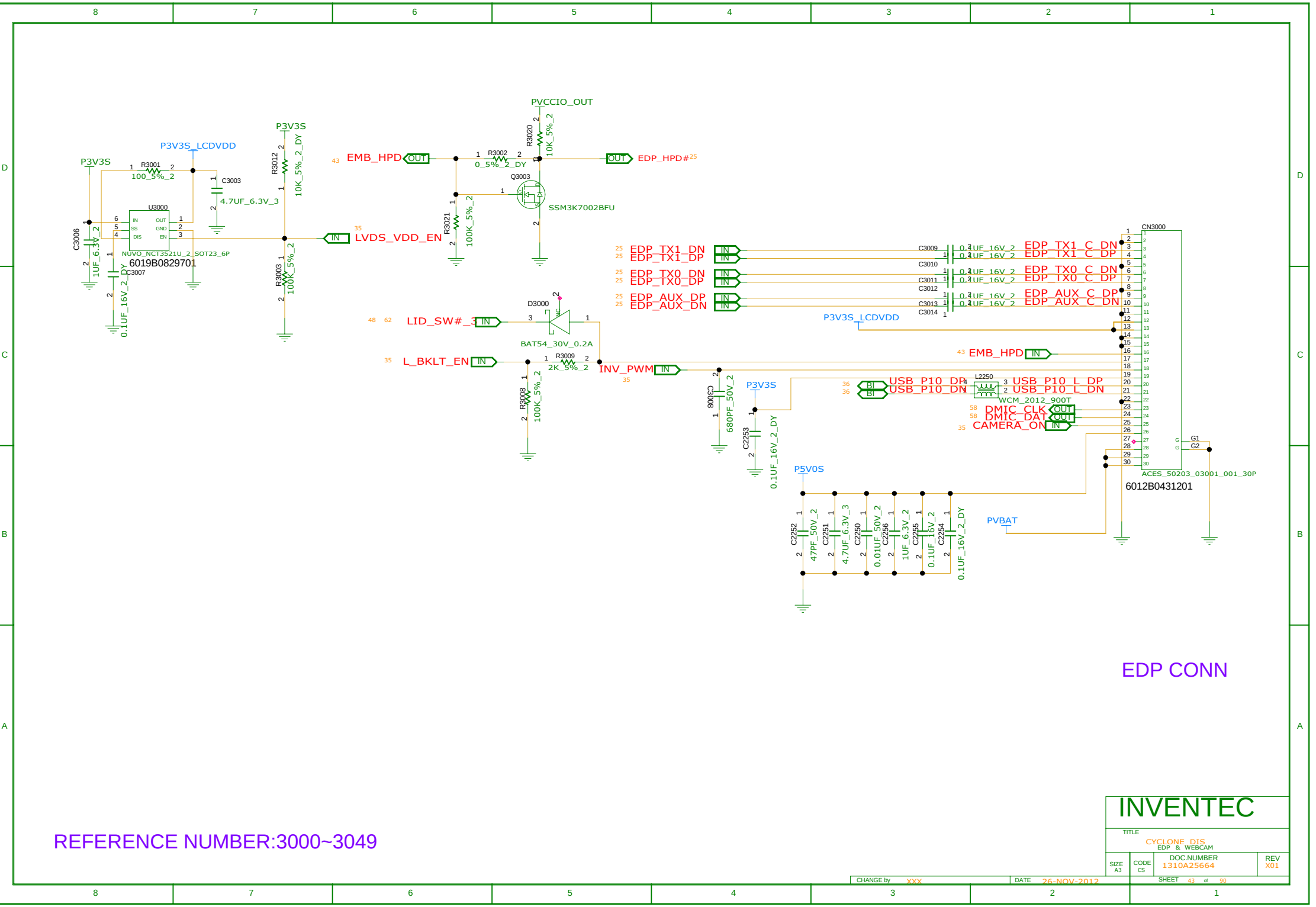


REFERENCE NUMBER:3680~3699

REFERENCE NUMBER:3050~3099

NOTE: PUT ALL DOCK CRT COMPONENTS
CLOSE TO DOCK CONNECTOR AS POSSIBLE.

INVENTEC			
TITLE CYCLONE DIS VGA SWITCH / CRT			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 41 of 90			



REFERENCE NUMBER:3000~3049

EDP CONN

INVENTEC

TITLE			
CYCLONE DIS EDP & WEBCAM			
DOC NUMBER			
1310A25664			
SIZE	CODE	REV	
A3	CS	X01	

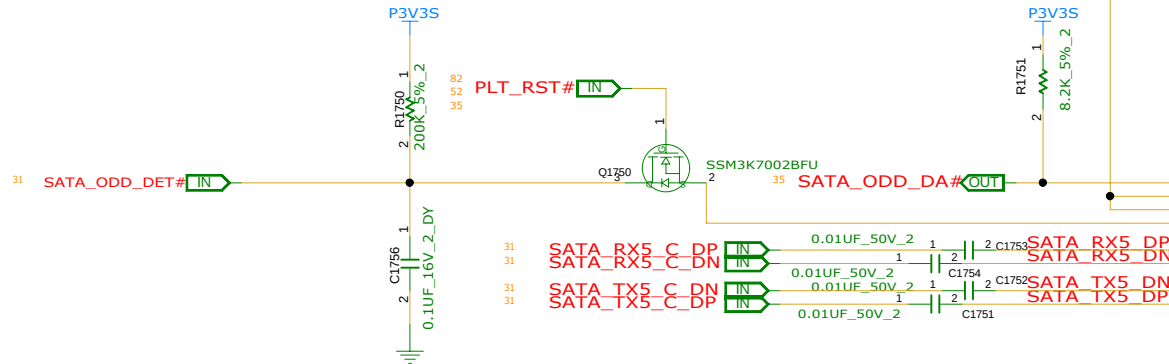
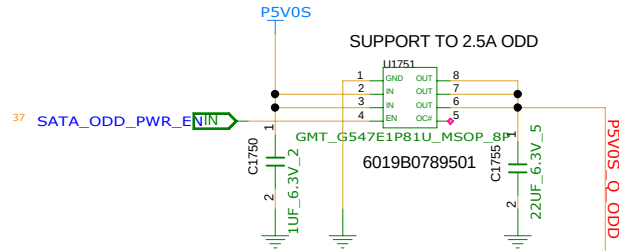
31 44 SATA_RX4_C_DP OUT R1710 1 2 0.5%_2_DY SATA_C_RXP4_O 44
44 31 SATA_RX4_C_DN OUT R1711 1 2 0.5%_2_DY SATA_C_RXN4_O 44
44 31 SATA_TX4_C_DN IN R1712 1 2 0.5%_2_DY SATA_C_TXN4_O 44
44 31 SATA_TX4_C_DP IN R1713 1 2 0.5%_2_DY SATA_C_TXP4_O 44

44 31 SATA_RX4_C_DP OUT 0.01UF_50V_2 1 2 C1706 SATA_C_RXP4_I 9
31 44 SATA_RX4_C_DN OUT 0.01UF_50V_2 1 2 C1707 SATA_C_RXN4_I 7
44 31 SATA_TX4_C_DN IN 0.01UF_50V_2 1 2 C1708 SATA_C_TXN4_I 2
31 44 SATA_TX4_C_DP IN 0.01UF_50V_2 1 2 C1709 SATA_C_TXP4_I 4

44 SATA_C_TXP4_O OUT 0.01UF_50V_2 1 2 C1705 SATA_TX4_DP
44 SATA_C_TXN4_O OUT 0.01UF_50V_2 1 2 C1704 SATA_TX4_DN
44 SATA_C_RXN4_O IN 0.01UF_50V_2 1 2 C1702 SATA_RX4_DN
44 SATA_C_RXP4_O IN 0.01UF_50V_2 1 2 C1703 SATA_RX4_DP

SATA HDD CONN

REFERENCE NUMBER:1700~1749



REFERENCE NUMBER:1750~1799

SATA ODD

INVENTEC

TITLE			
CYCLONE_D1S SATA HDD 8. ODD CNTR			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01

D

D

C

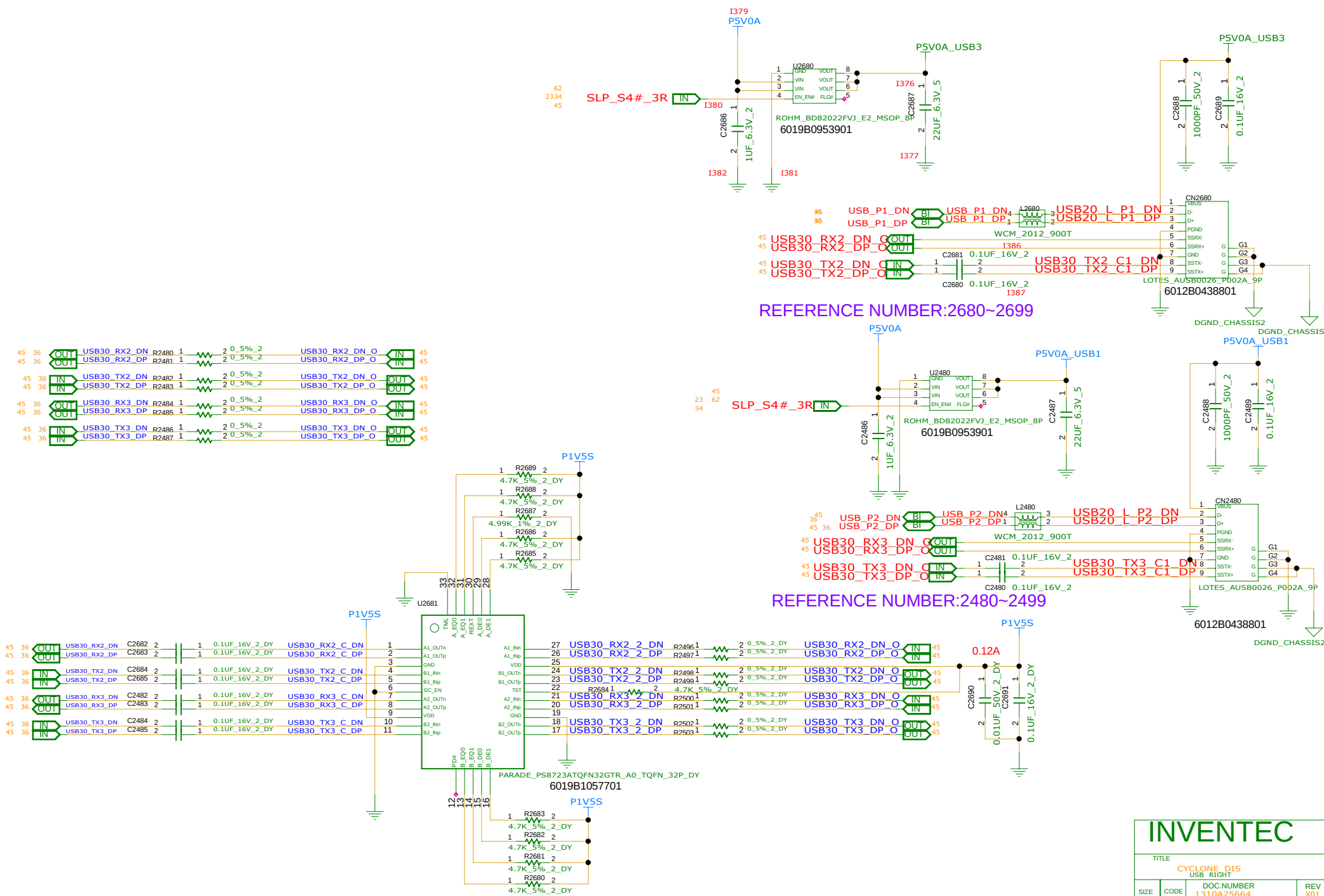
C

B

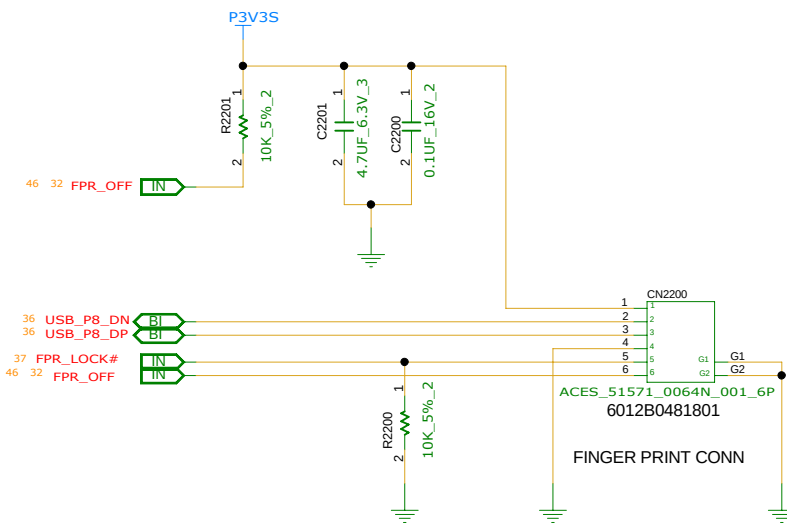
B

A

A



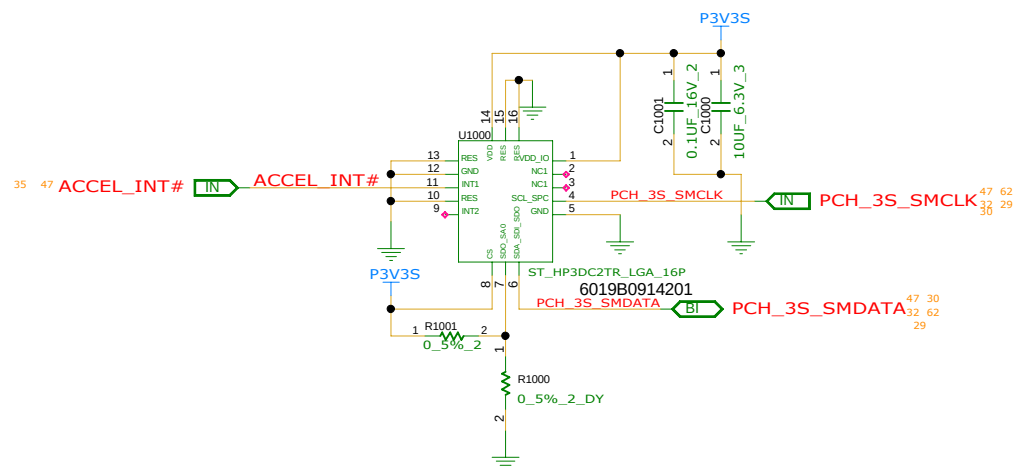
INVENTEC				
TITLE				
CYCLONE DIS USB RIGHT				
SIZE	CODE	DOC NUMBER	REV	
A3	CS	1310A25664	X01	



REFERENCE:2200~2249

INVENTEC			
TITLE			
CYCLONE DIS FINGER PRINTER CNTR			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 46 of 90			

LAYOUT NOTE
FOLLOW DESIGNATED PIN1 ORIENTATION WITH SUPPORT APPS



ACCELEMETOR

REFERENCE NUMER : 1000~1099

INVENTEC			
TITLE CYCLONE_DIS ACCELEMETOR			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 47 of 90			

CHANGE by XXX DATE 26-NOV-2012



SCAN_3S_OUT<13..0>

SCAN_3S_OUT<13..0>

- 0 SCAN_3S_OUT<0>
- 1 SCAN_3S_OUT<1>
- 2 SCAN_3S_OUT<2>
- 3 SCAN_3S_OUT<3>
- 4 SCAN_3S_OUT<4>
- 5 SCAN_3S_OUT<5>
- 6 SCAN_3S_OUT<6>
- 7 SCAN_3S_OUT<7>
- 8 SCAN_3S_OUT<8>
- 9 SCAN_3S_OUT<9>
- 10 SCAN_3S_OUT<10>
- 11 SCAN_3S_OUT<11>
- 12 SCAN_3S_OUT<12>
- 13 SCAN_3S_OUT<13>

SCAN_3S_IN<7..0>

SCAN_3S_IN<7..0>

- 0 SCAN_3S_IN<0>
- 1 SCAN_3S_IN<1>
- 2 SCAN_3S_IN<2>
- 3 SCAN_3S_IN<3>
- 4 SCAN_3S_IN<4>
- 5 SCAN_3S_IN<5>
- 6 SCAN_3S_IN<6>
- 7 SCAN_3S_IN<7>

P3V3DS

- SCAN_3S_IN<4> 1 R373 2 10K_5%_2
- SCAN_3S_IN<5> 1 R374 2 10K_5%_2
- SCAN_3S_IN<6> 1 R375 2 10K_5%_2
- SCAN_3S_IN<7> 1 R376 2 10K_5%_2
- SCAN_3S_IN<3> 1 R377 2 10K_5%_2
- SCAN_3S_IN<2> 1 R378 2 10K_5%_2
- SCAN_3S_IN<1> 1 R379 2 10K_5%_2
- SCAN_3S_IN<0> 1 R384 2 10K_5%_2

TP300
TP24

P3V3S

REC_MUTE_LED
R381
270_5%_2

8051_RX_CAPS_LED#
8051_RECOVER#
NUM_LOCK_LED#

- KSCAN_3S_IN(9)
- KSCAN_3S_IN(11)
- KSCAN_3S_IN(13)
- KSCAN_3S_IN(7)
- KSCAN_3S_IN(6)
- KSCAN_3S_IN(5)
- SCAN_3S_OUT(1)
- SCAN_3S_OUT(10)
- SCAN_3S_OUT(6)
- SCAN_3S_OUT(7)
- SCAN_3S_OUT(4)
- SCAN_3S_OUT(8)
- SCAN_3S_OUT(15)
- KSCAN_3S_IN(3)
- KSCAN_3S_IN(1)
- KSCAN_3S_IN(2)
- KSCAN_3S_IN(4)
- KSCAN_3S_IN(0)
- KSCAN_3S_IN(10)
- KSCAN_3S_IN(12)
- KSCAN_3S_IN(8)
- KSCAN_3S_IN(14)
- SCAN_3S_OUT(5)
- SCAN_3S_OUT(2)
- SCAN_3S_OUT(0)
- SCAN_3S_OUT(11)

CN360
ACES_50524_0340N_001_34P
6012B0449601

- KSCAN_3S_IN(4)
- KSCAN_3S_IN(12)
- SCAN_3S_IN(5)
- KSCAN_3S_IN(5)
- KSCAN_3S_IN(13)

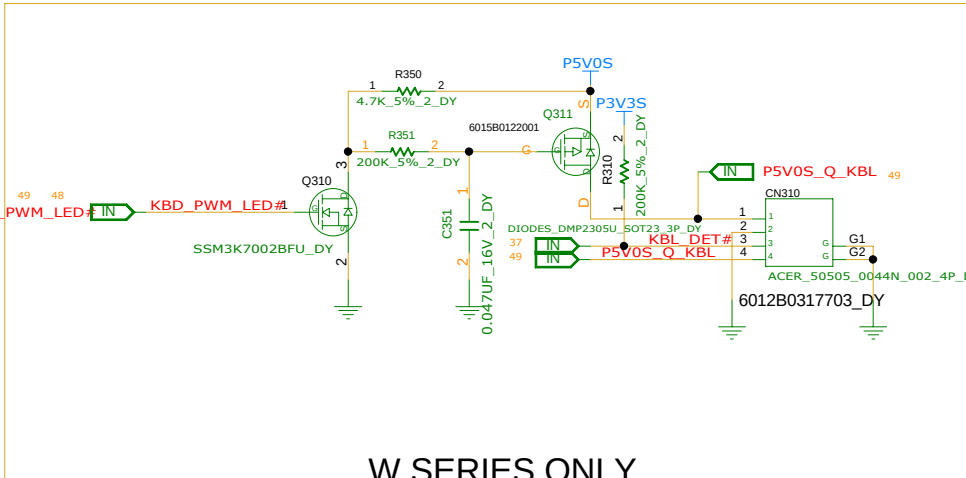
BAW56DW_7_F

- KSCAN_3S_IN(2)
- KSCAN_3S_IN(10)
- SCAN_3S_IN(3)
- KSCAN_3S_IN(3)
- KSCAN_3S_IN(11)

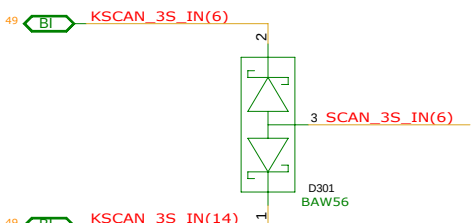
BAW56DW_7_F

- KSCAN_3S_IN(0)
- KSCAN_3S_IN(8)
- SCAN_3S_IN(1)
- KSCAN_3S_IN(1)
- KSCAN_3S_IN(9)

BAW56DW_7_F



W SERIES ONLY



REFERENCE NUMER : 300~389

INVENTEC			
TITLE CYCLONE_DIS KEYBOARD			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 49 of 90			



INVENTEC

CHANGE by	XXX	DATE	26-NOV-2012	SHEET	51	of	90
-----------	-----	------	-------------	-------	----	----	----

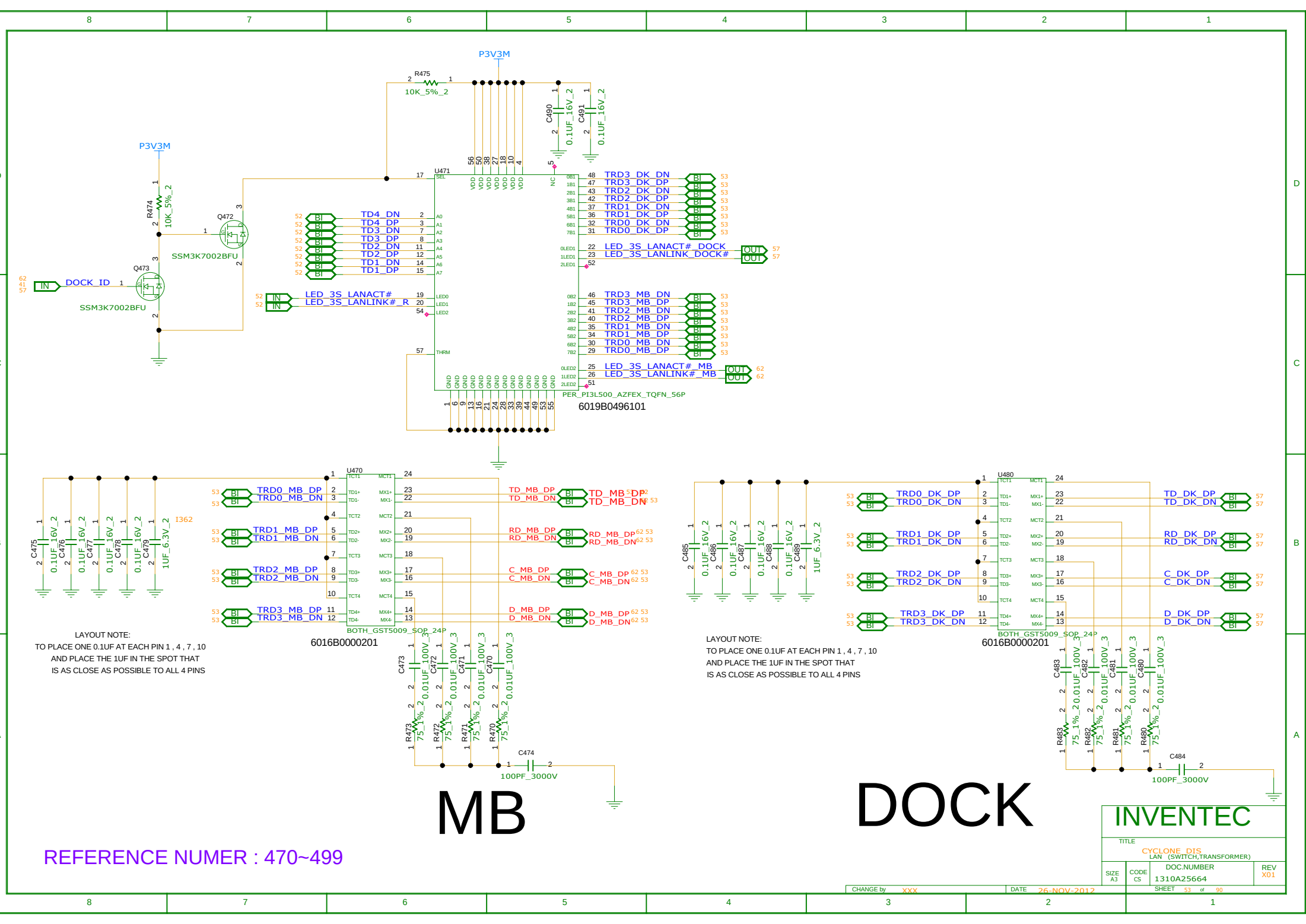
NOTE:
NON-VPRO SKU U400 MOUNT 6019B0836601
VPRO SKU U400 MOUNT 6019B0746801

REFERENCE NUMER : 400~469

INVENTEC

TITLE			
CYCLONE_DIS LAN (NIC)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 52 of 90

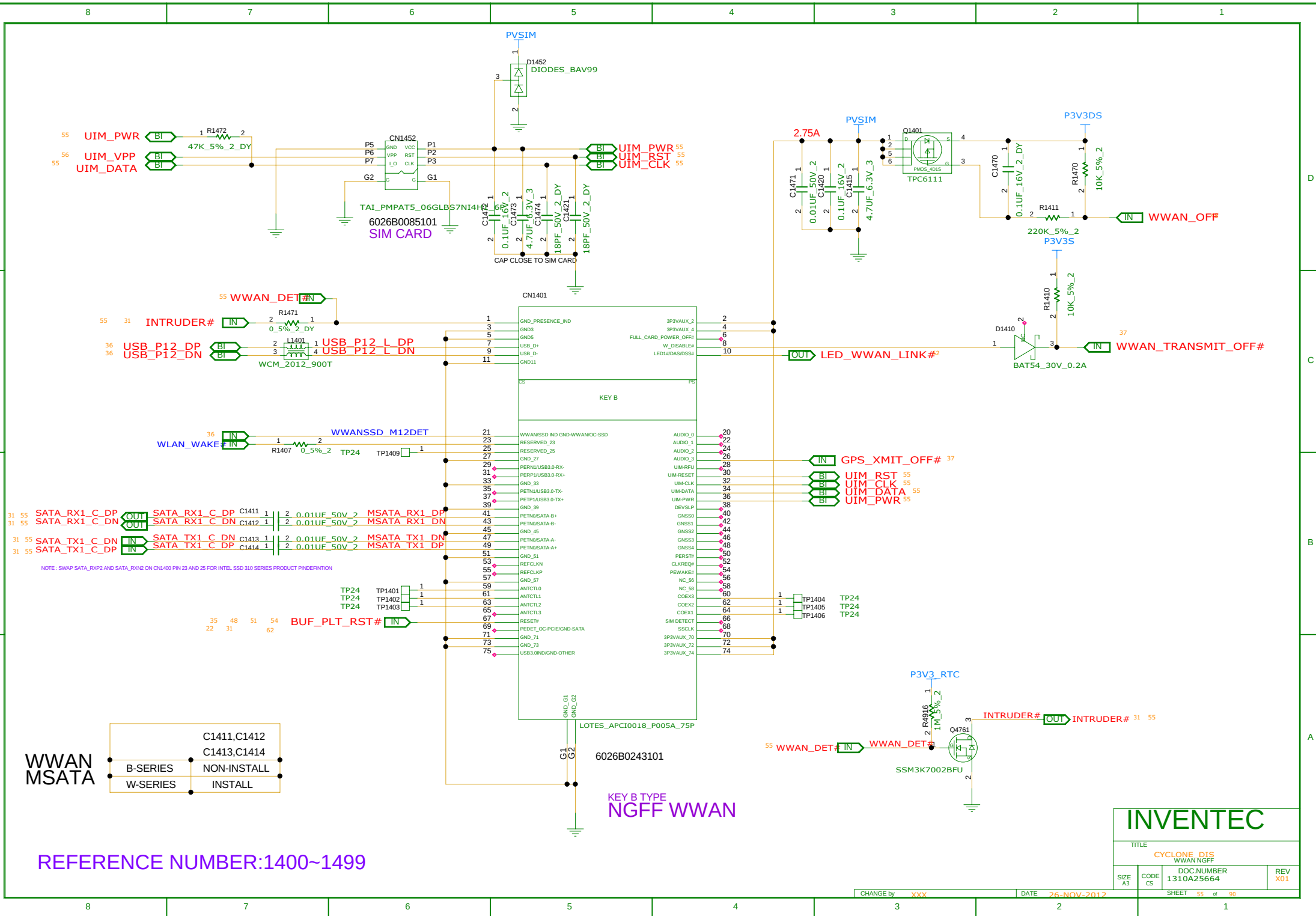


MB

DOCK

INVENTEC

TITLE			
CYCLONE DIS LAN (SWITCH, TRANSFORMER)			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A25664	X01
SHEET 53 of 90			



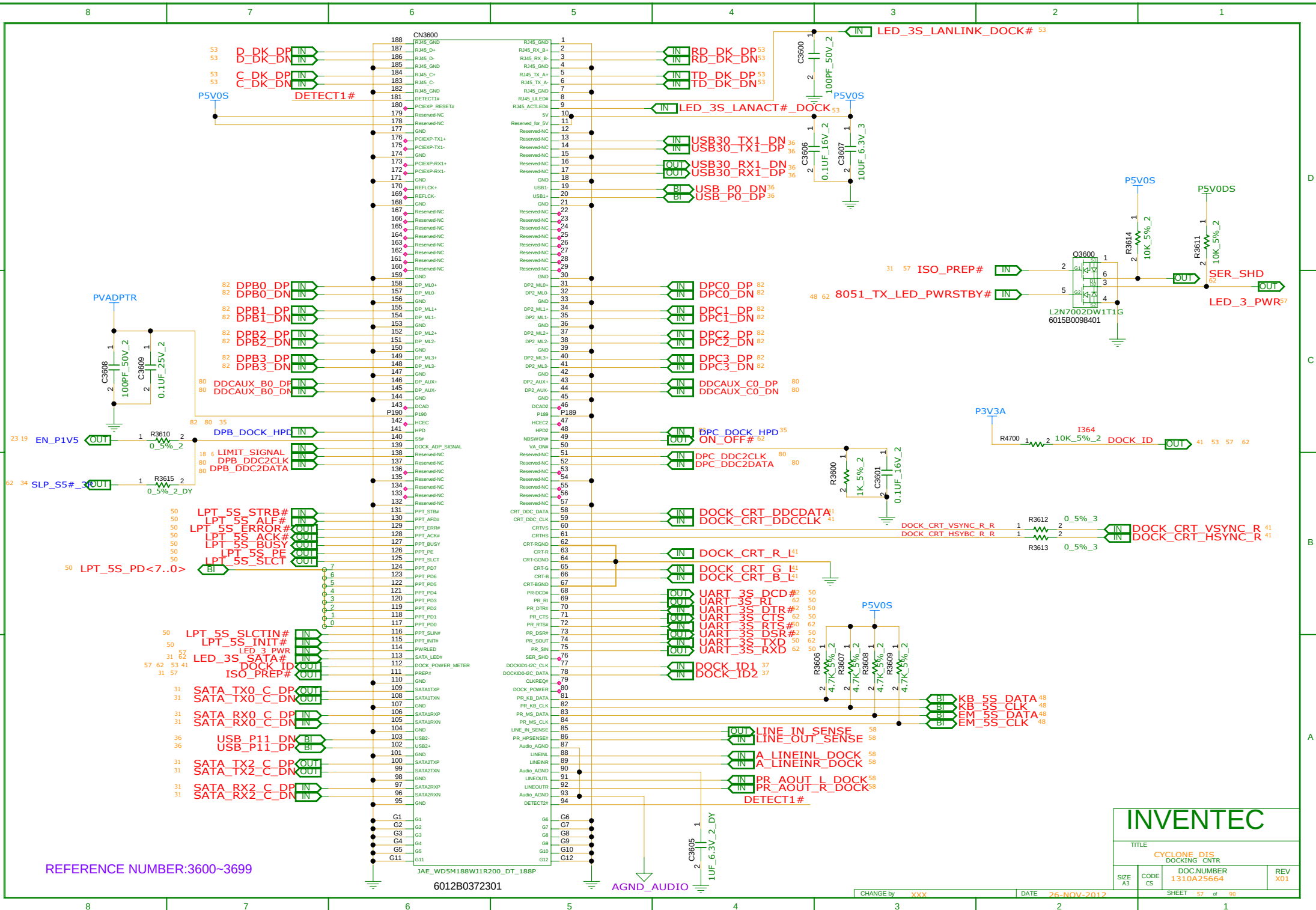
REFERENCE:2200~2249

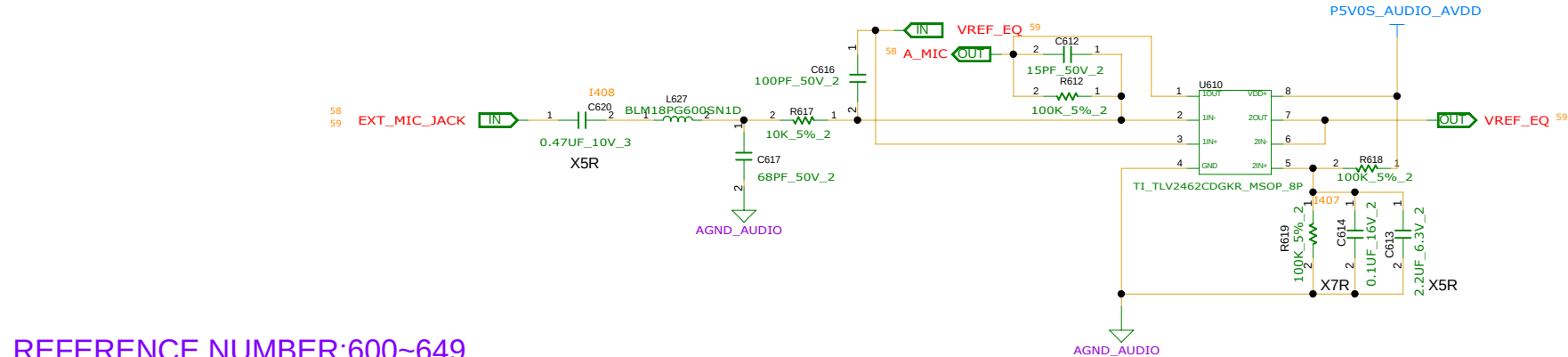


REFERENCE:4350~4399

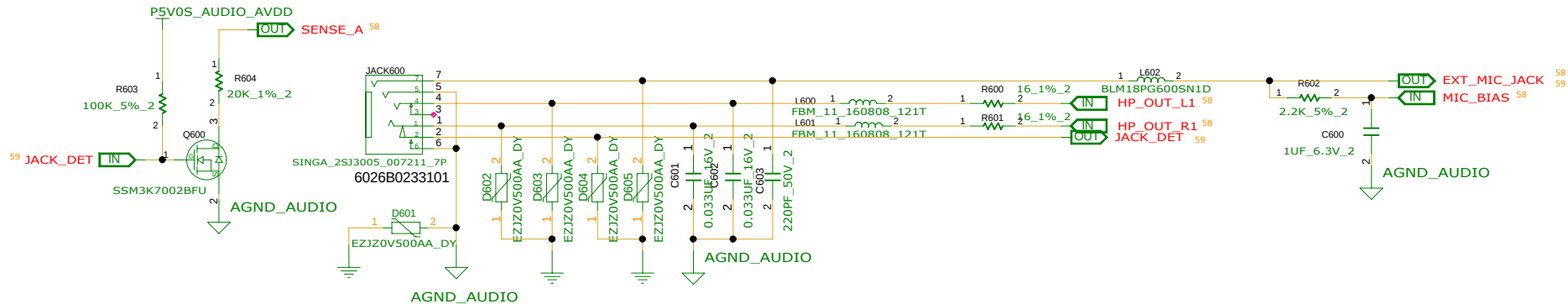
INVENTEC

TITLE			
CYCLONE_DIS NFC			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
SHEET 001 OF 001			



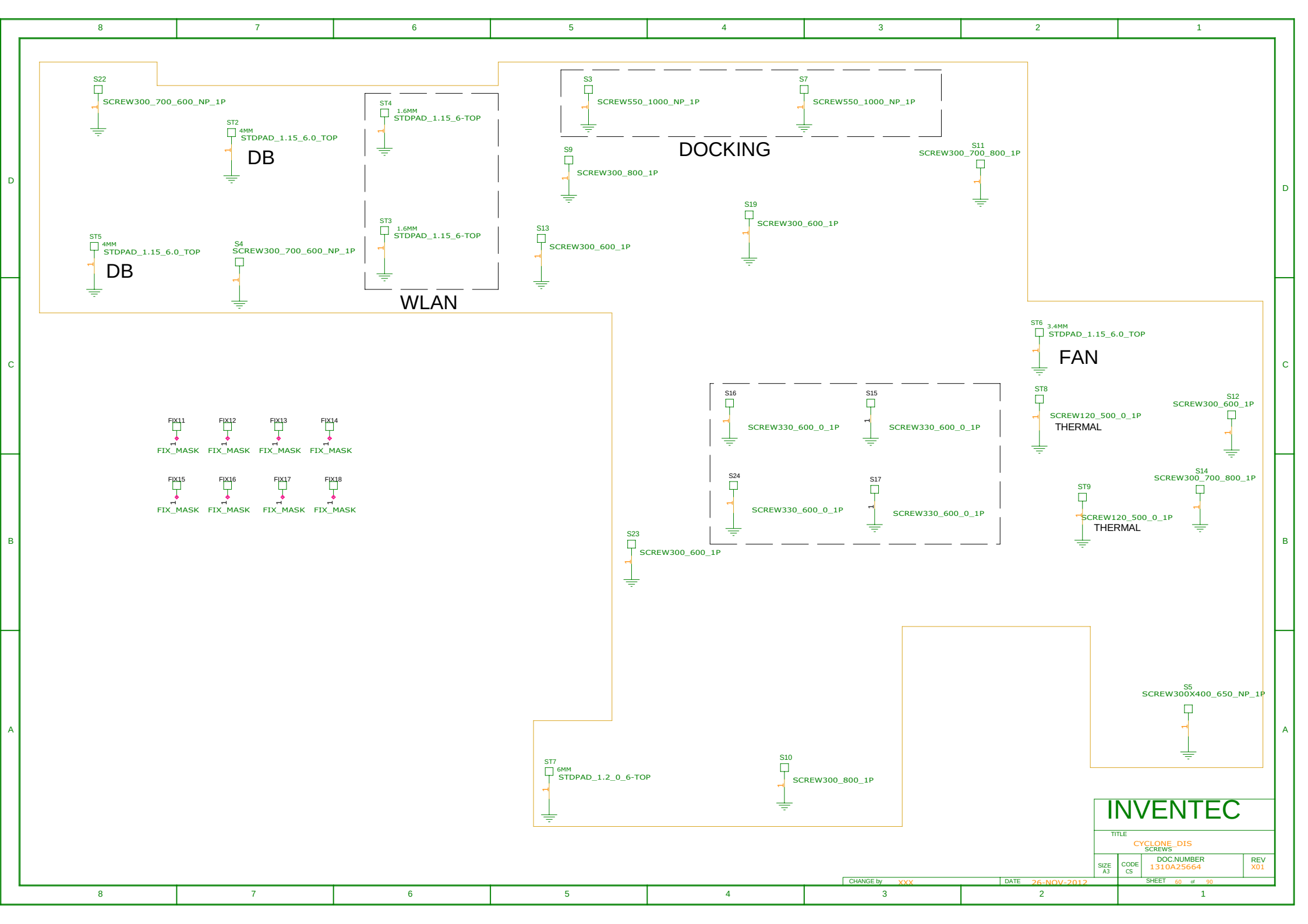


REFERENCE NUMBER:600~649



REFERENCE NUMBER:600~610

INVENTEC			
TITLE			
CYCLONE_DIS EXT.MIC / MIC / HP			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
CHANGE by XXX		DATE 26-NOV-2012	SHEET 59 of 90

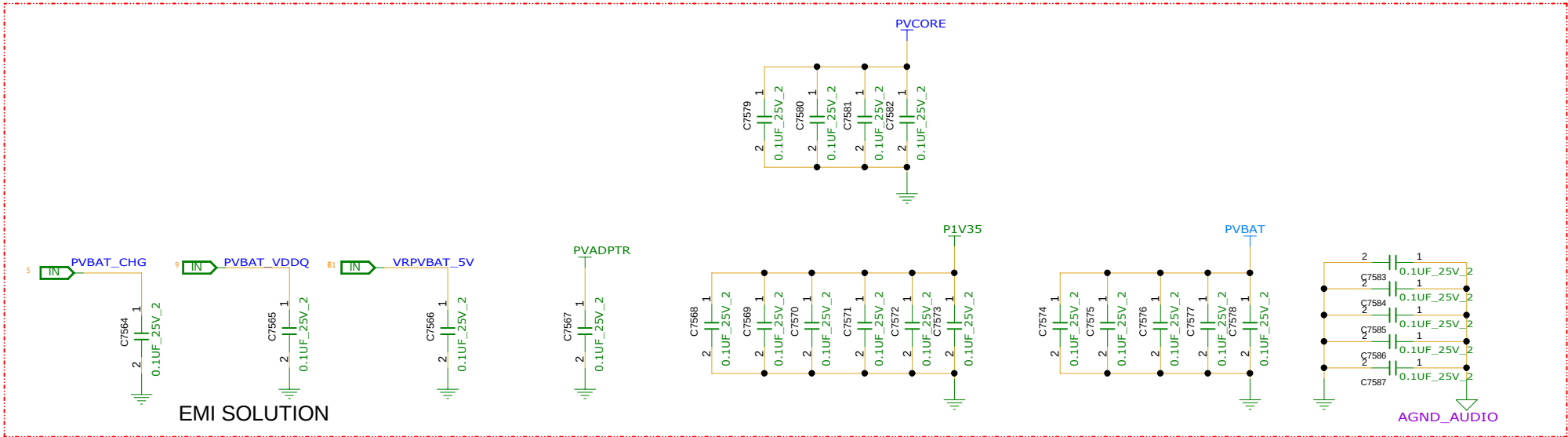


INVENTEC

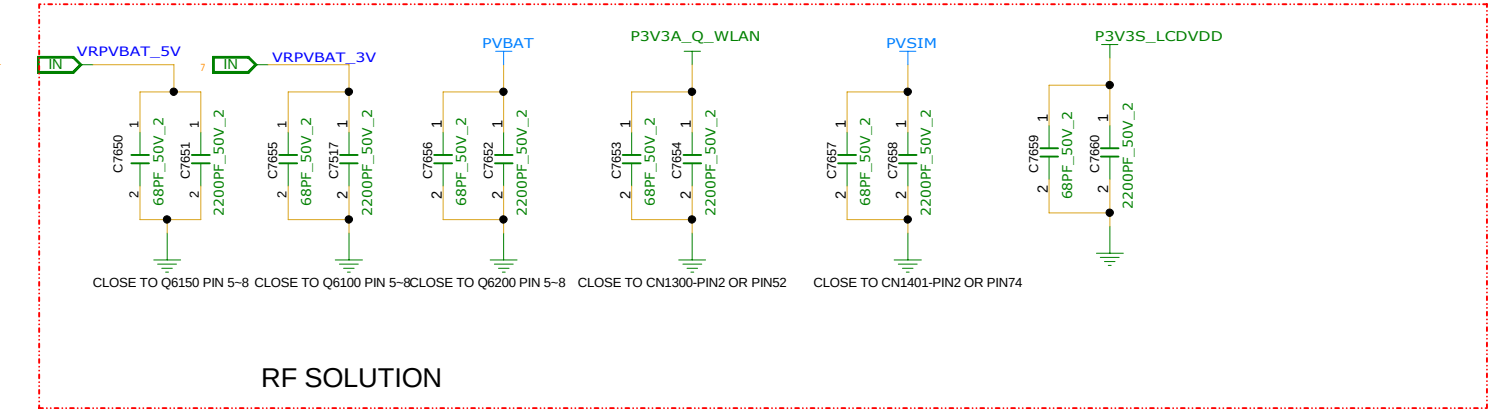
TITLE
CYCLONE-DIS
SCREWS

SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
------------	------------	--------------------------	------------

CHANGE by XXX DATE 26-NOV-2012 SHEET 60 of 90



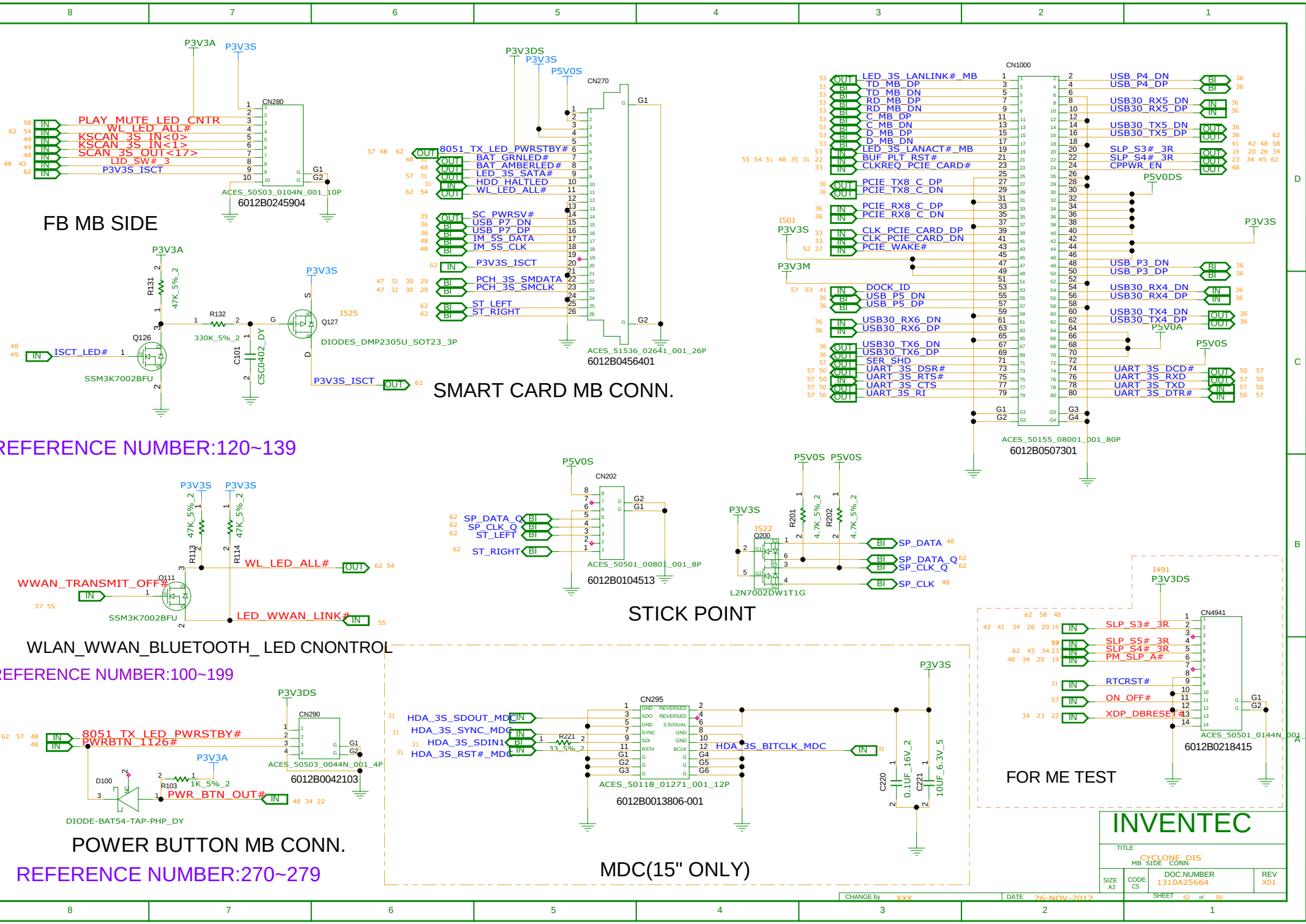
EMI SOLUTION



RF SOLUTION

INVENTEC

TITLE			
CYCLONE_DIS EMI & RF SOLUTION			
SIZE	CODE	DOC NUMBER	
A3	CS	1310A25664	
REV		X01	



FB MB SIDE

SMART CARD MB CONN.

STICK POINT

WLAN_WWAN_BLUETOOTH_LED CNCONTROL

MDC(15" ONLY)

FOR ME TEST

INVENTEC

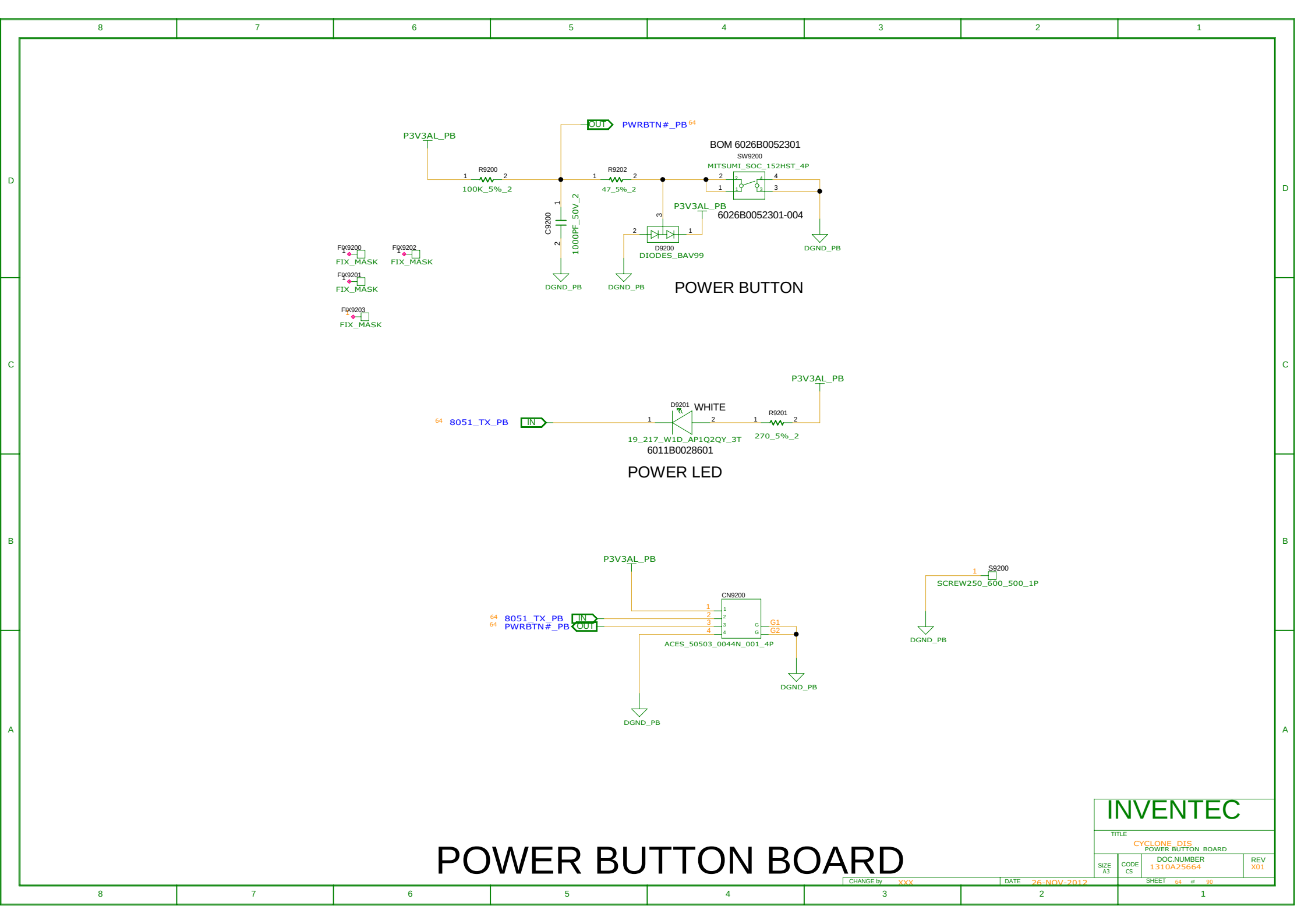
TITLE			
CYCLONE_D1S MB SIDE CONN			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01

REFERENCE NUMBER:120~139

REFERENCE NUMBER:100~199

POWER BUTTON MB CONN.

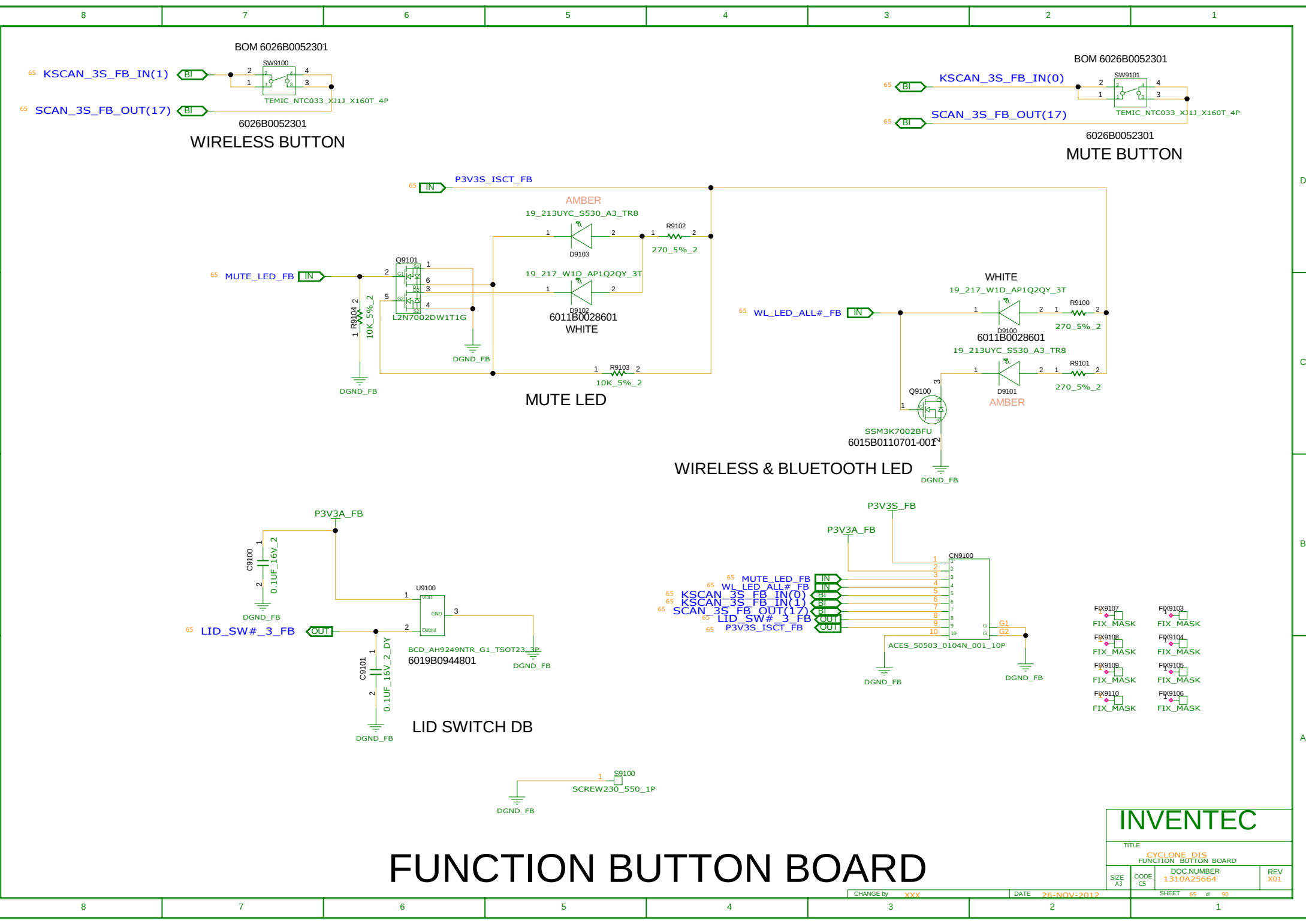
REFERENCE NUMBER:270~279



POWER BUTTON BOARD

INVENTEC

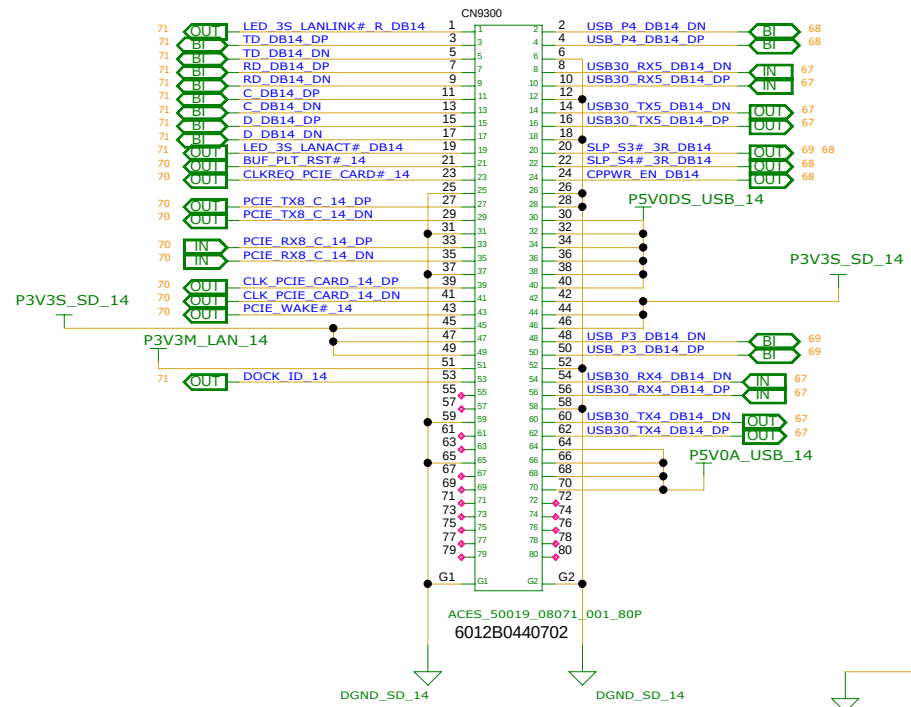
TITLE CYCLONE DIS POWER BUTTON BOARD			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01



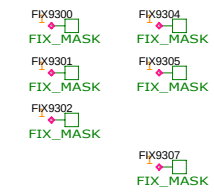
FUNCTION BUTTON BOARD

INVENTEC			
TITLE			
CYCLONE DIS FUNCTION BUTTON BOARD			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 65 of 90			

CHANGE by XXX DATE 26-NOV-2012

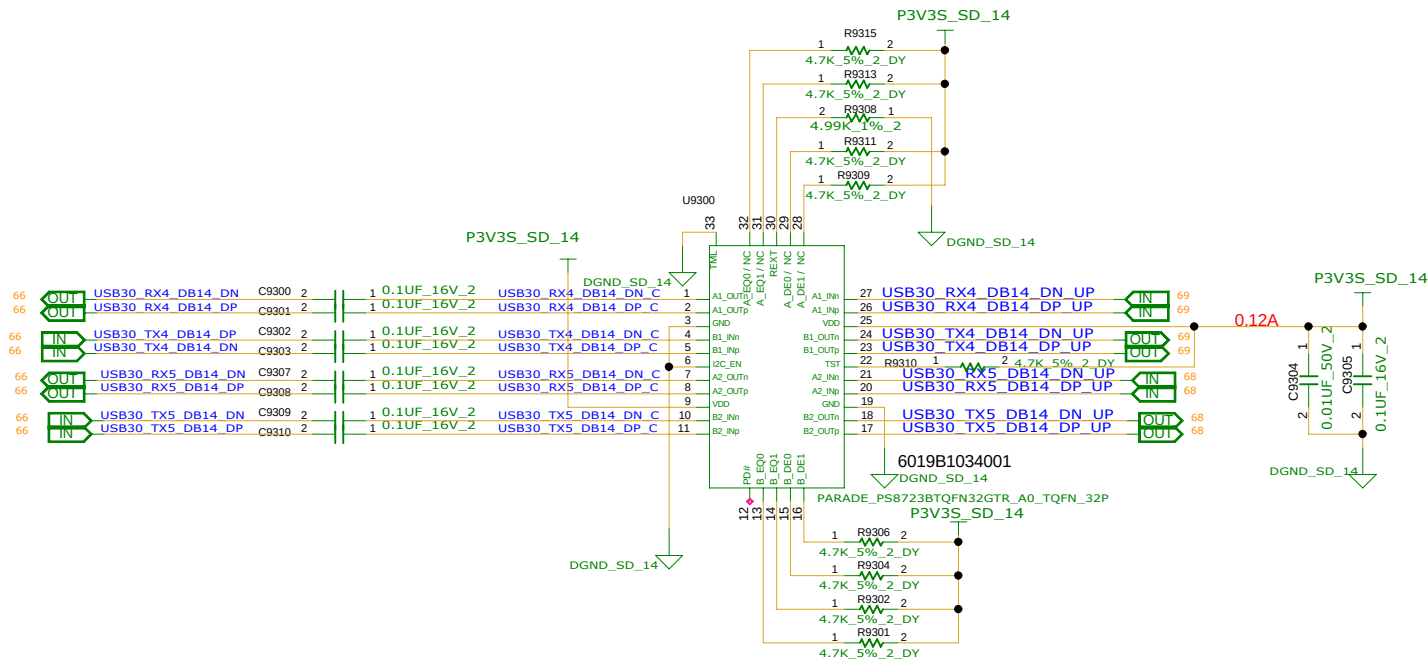


REFERENCE NUMBER:9300~9339



14" USB DAUGHTER BOARD

INVENTEC			
TITLE			
CYCLONE_DIS			
14 B TO B CONN			
DOC NUMBER			
1310A25664			
REV			
X01			
SIZE	CODE	SHEET	
A3	CS	66 of 90	



REFERENCE NUMBER:9300~9339

14" USB DAUGHTER BOARD

INVENTEC

TITLE CYCLONE_DIS

14 USB30 REDRIVER

DOC NUMBER 1310A25664

REV X01

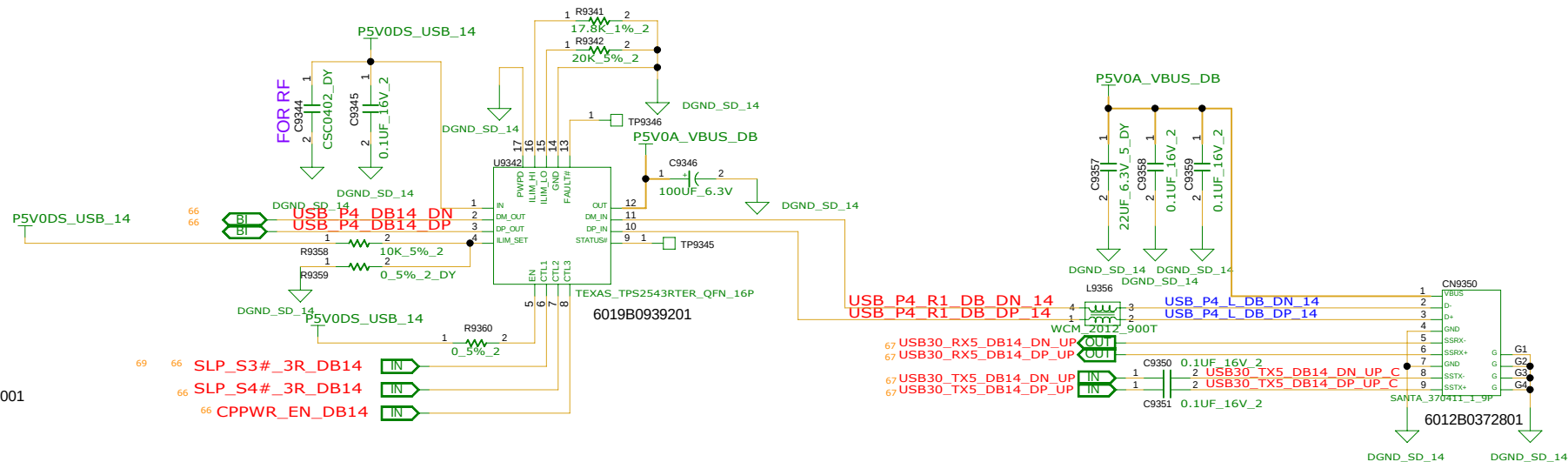
SIZE A3 CODE CS SHEET 67 of 90

CHANGE by XXX DATE 26-NOV-2012

TI TPS2543 P/N:6019B0939201
PERICOM PI5USB2543 P/N:6019B0932001

	R9358	R9359	R9342
* TPS2543	10K	NI	20K
PI5USB2543	NI	0	0

REFERENCE NUMBER:9340~9359

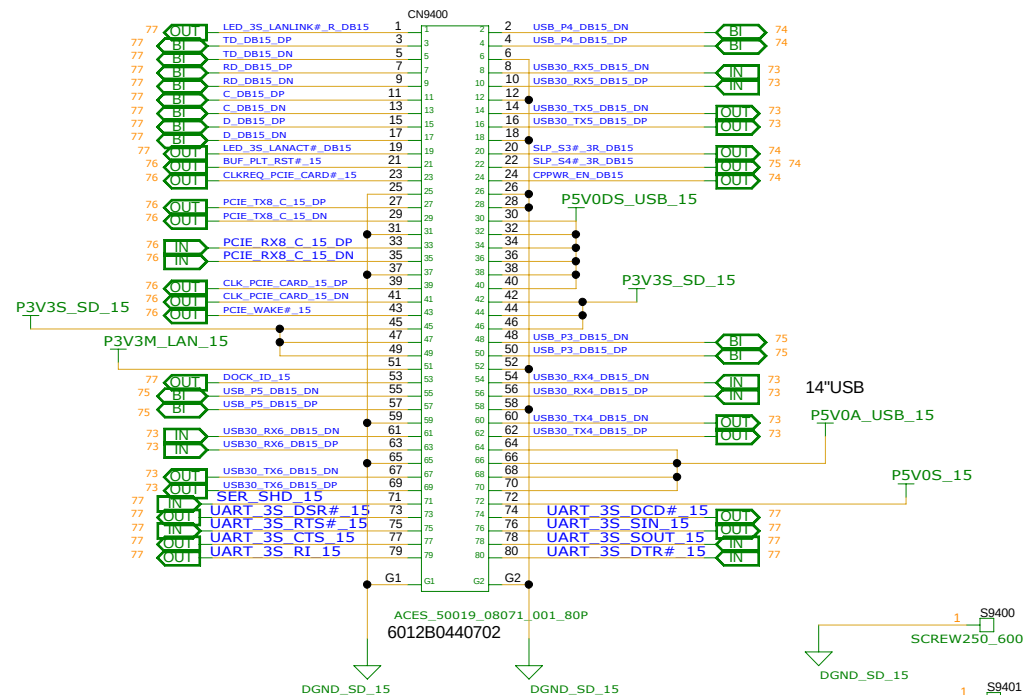


USB CNTR

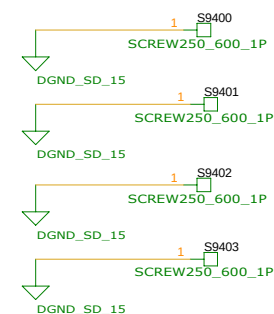
14" USB DAUGHTER BOARD

INVENTEC

TITLE CYCLONE DIS 14 USB CHARGER			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01



REFERENCE NUMBER:9400-9449



15" USB DAUGHTER BOARD

INVENTEC			
TITLE			
CYCLONE_DIS			
15 B TO B CONN			
DOCNUMBER			
1310A25664			
REV			
X01			
SIZE	CODE	SHEET	
A3	CS	72 of 90	

D

C

B

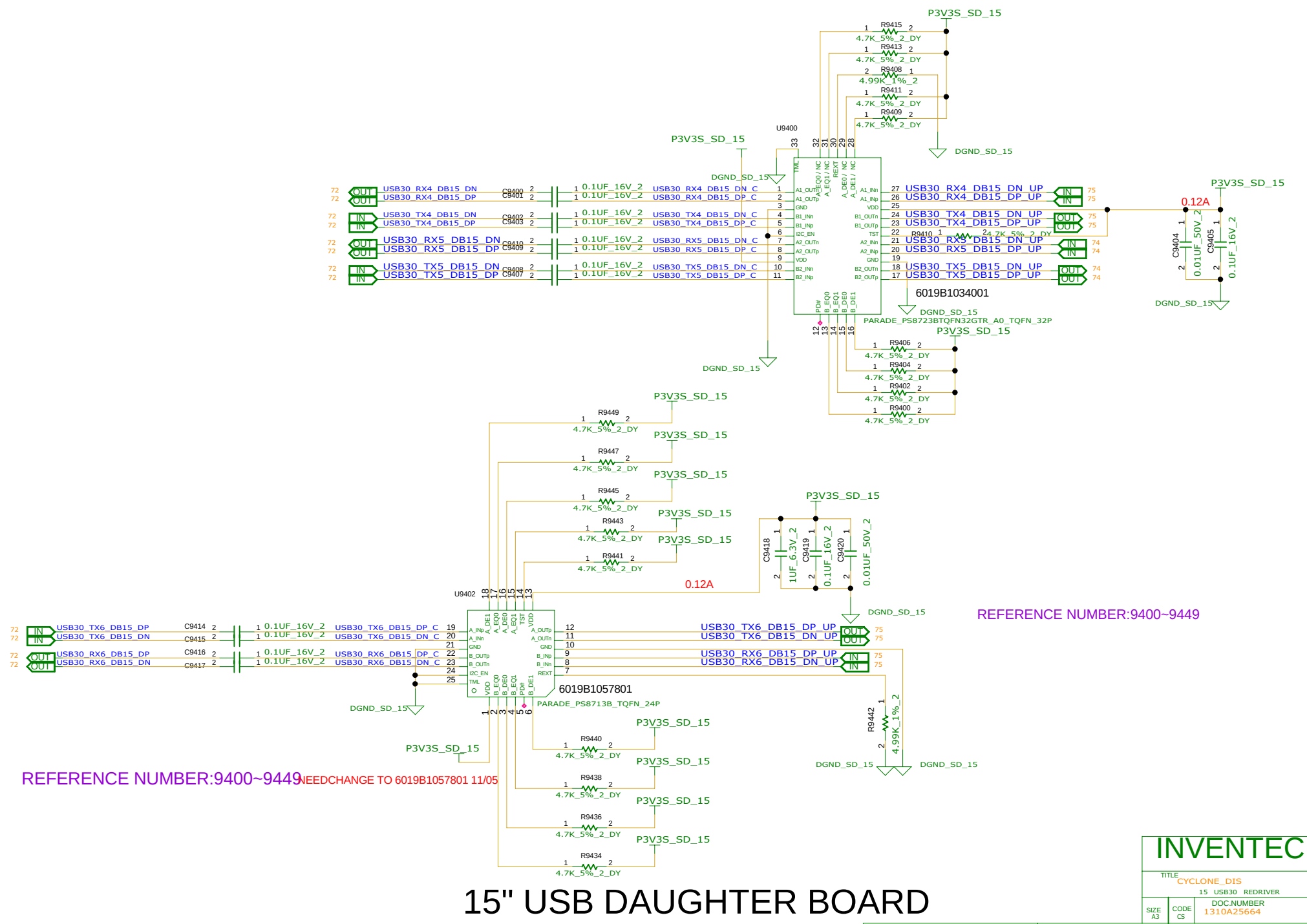
A

D

C

B

A



REFERENCE NUMBER:9400~9449NEEDCHANGE TO 6019B1057801 11/05

REFERENCE NUMBER:9400~9449

15" USB DAUGHTER BOARD

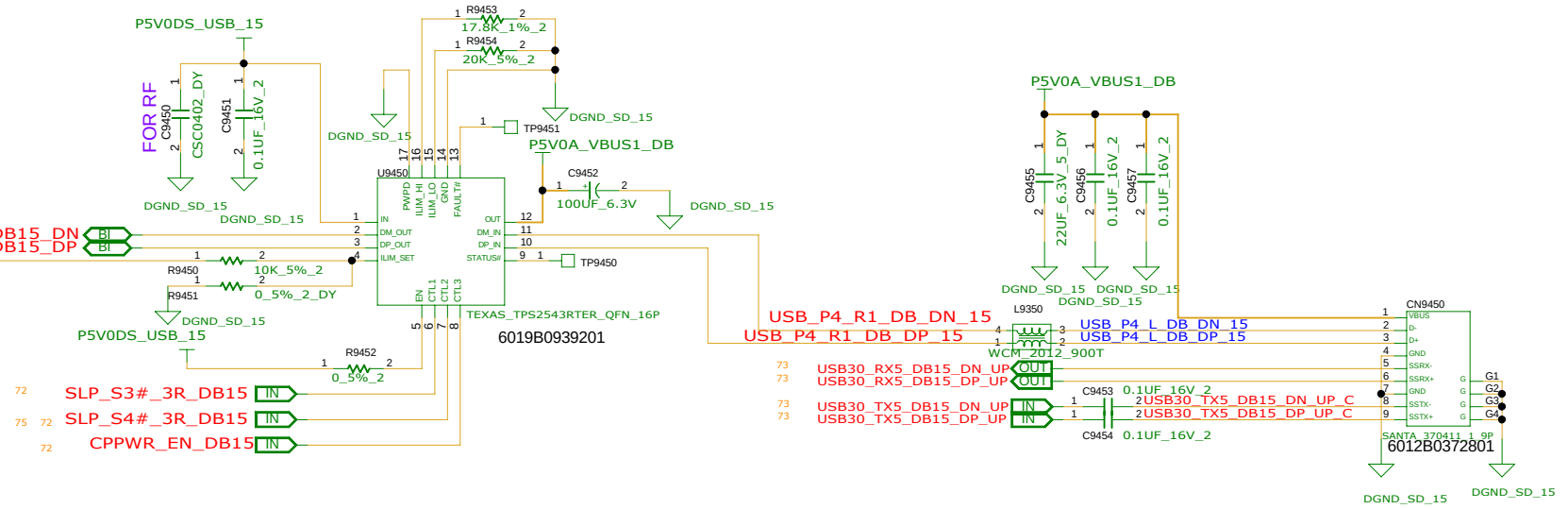
INVENTEC			
TITLE CYCLONE_DIS			
15 USB30 REDRIVER			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
CHANGE by XXX DATE 26-NOV-2012 SHEET 73 of 90			

TI TPS2543 P/N:6019B0939201
PERICOM PI5USB2543 P/N:6019B0932001

	R9450	R9451	R9454
* TPS2543	10K	NI	20K
PI5USB2543	NI	0	0

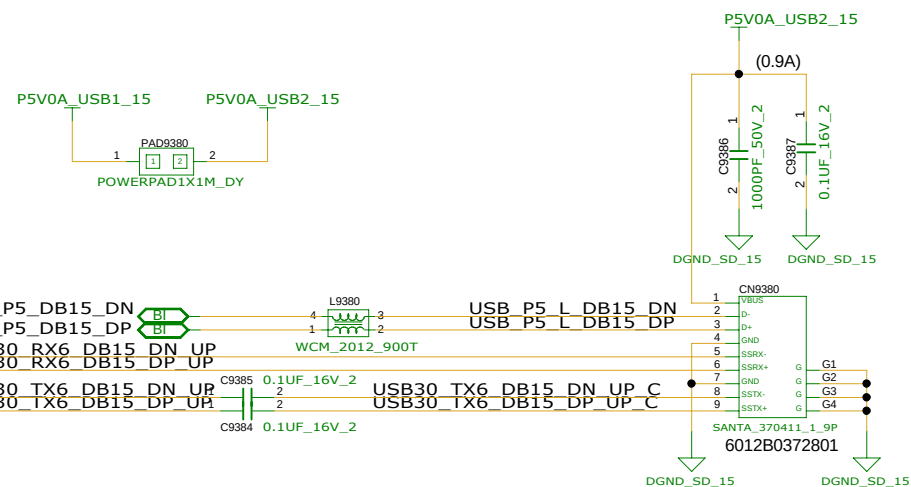
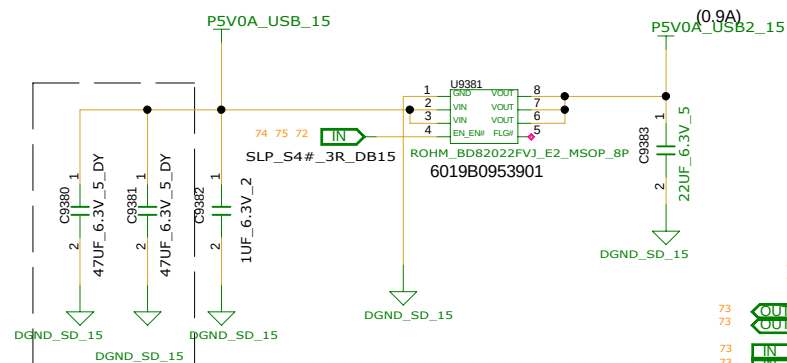
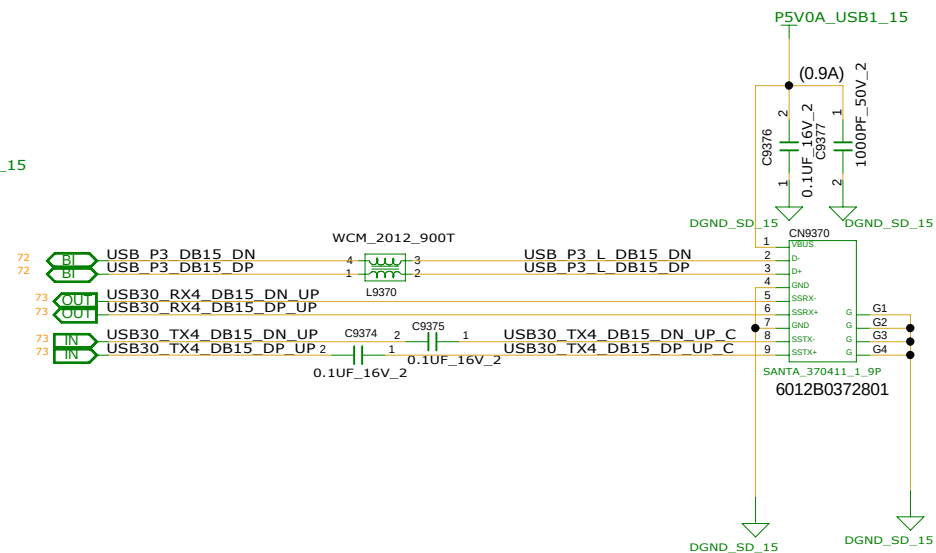
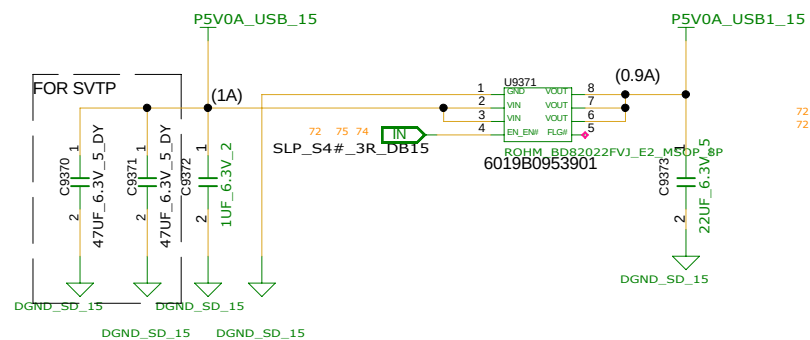
REFERENCE NUMBER:9450~9499

15" USB DAUGHTER BOARD



USB CNTR

INVENTEC			
TITLE CYCLONE DIS 15" USB CHARGER			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 74 of 90			

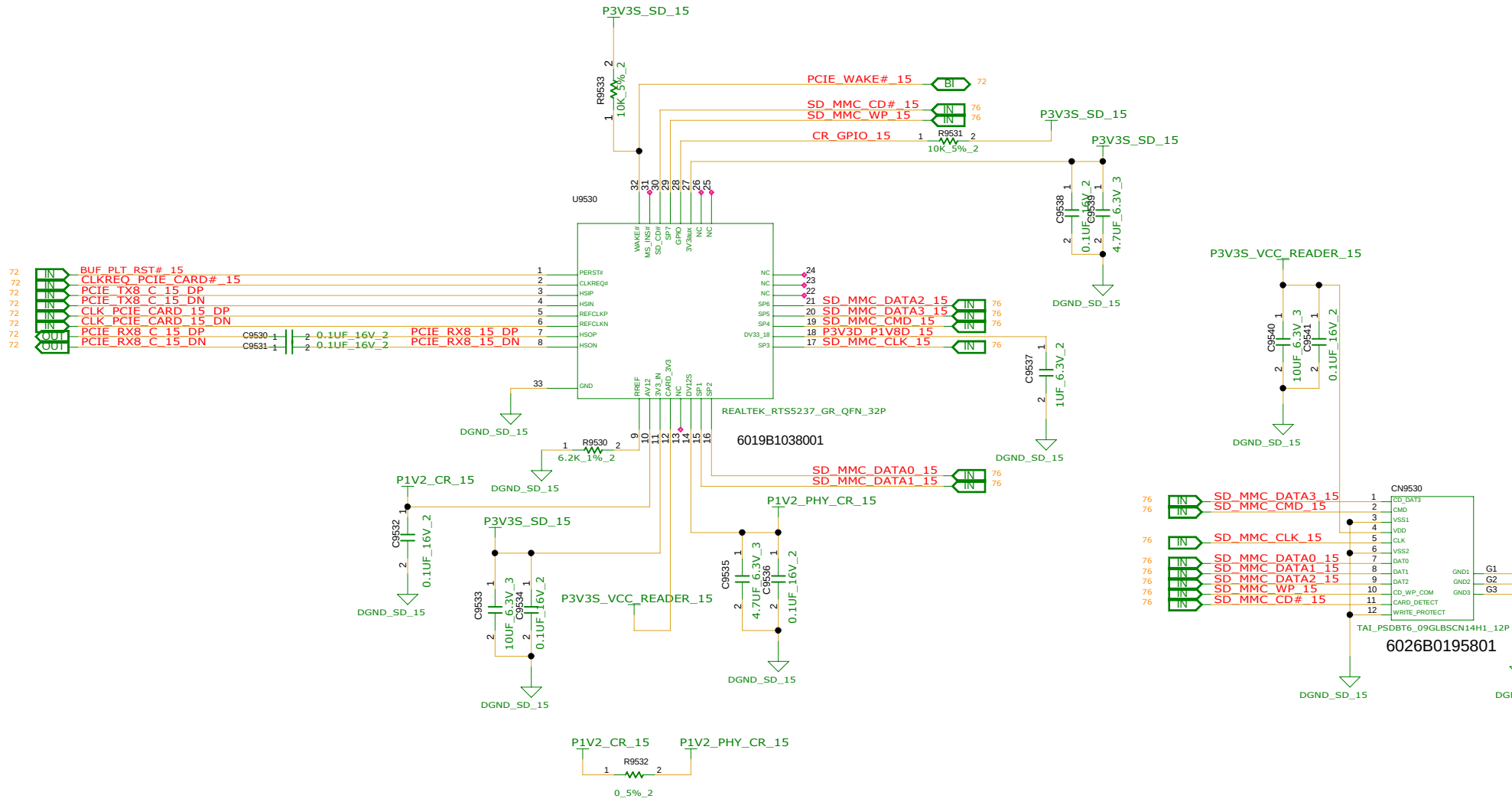


REFERENCE NUMBER:9370~9399

15" USB DAUGHTER BOARD

INVENTEC

TITLE			
CYCLONE DIS 15 USB CONN			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01

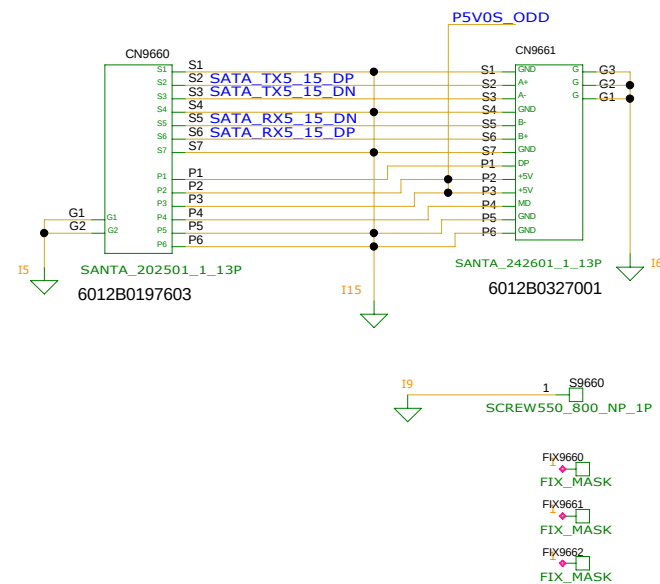


REFERENCE NUMBER:9530~9549

15" USB DAUGHTER BOARD

INVENTEC

TITLE			
CYCLONE DIS 15 CARD READER			
DOC.NUMBER		REV	
1310A25664		X01	
SIZE	CODE	SHEET	
A3	CS	76 of 90	

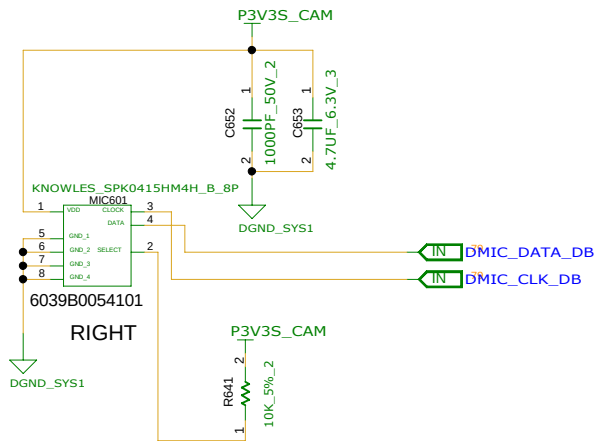
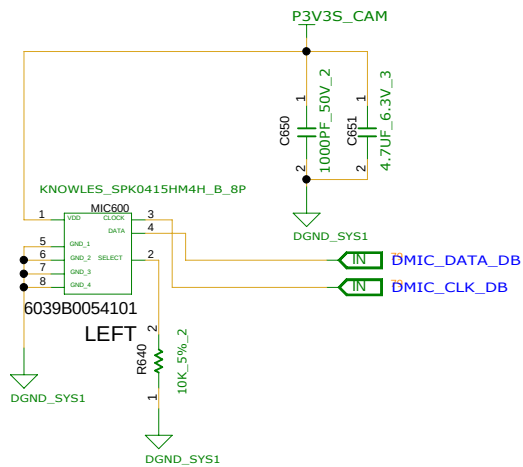
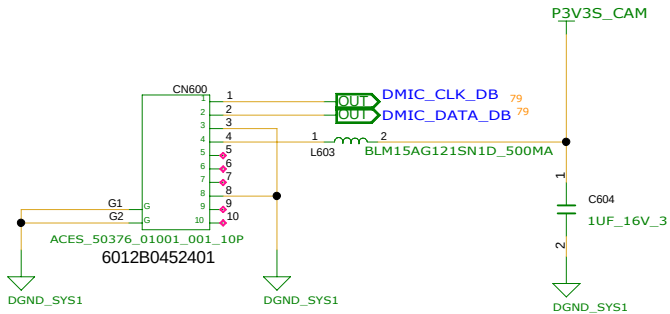


REFERENCE NUMBER:9660~9669

15" SATA ODD BOARD

INVENTEC

TITLE			
CYCLONE DIS 15 SATA ODD DB			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01



REFERENCE NUMBER:600~649

FIX600
FIX_MASK

FIX601
FIX_MASK

MIC DOUGHTER BOARD

INVENTEC

TITLE			
CYCLONE DIS MIC BOARD			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01

THERM SENSOR

R _{pu} (Ω)	R _{pd} (Ω)	Bits [3:1]	Capacitor Value (nF)	Bits [5:4]
NC	4750	000	680	00
8450	2000	001	82	01
4530	2000	010	10	10
6980	4990	011	NC	11
4530	4990	100		
3240	5620	101		
3400	10000	110		
4750	NC	111		
Note: 0402 1% resistors are required.				



TITLE			
CYCLONE_DIS AMD-MARS-1			
SIZE C	CODE CS	DOC NUMBER 1310A25664	REV X01
SHEET 80 of 90			

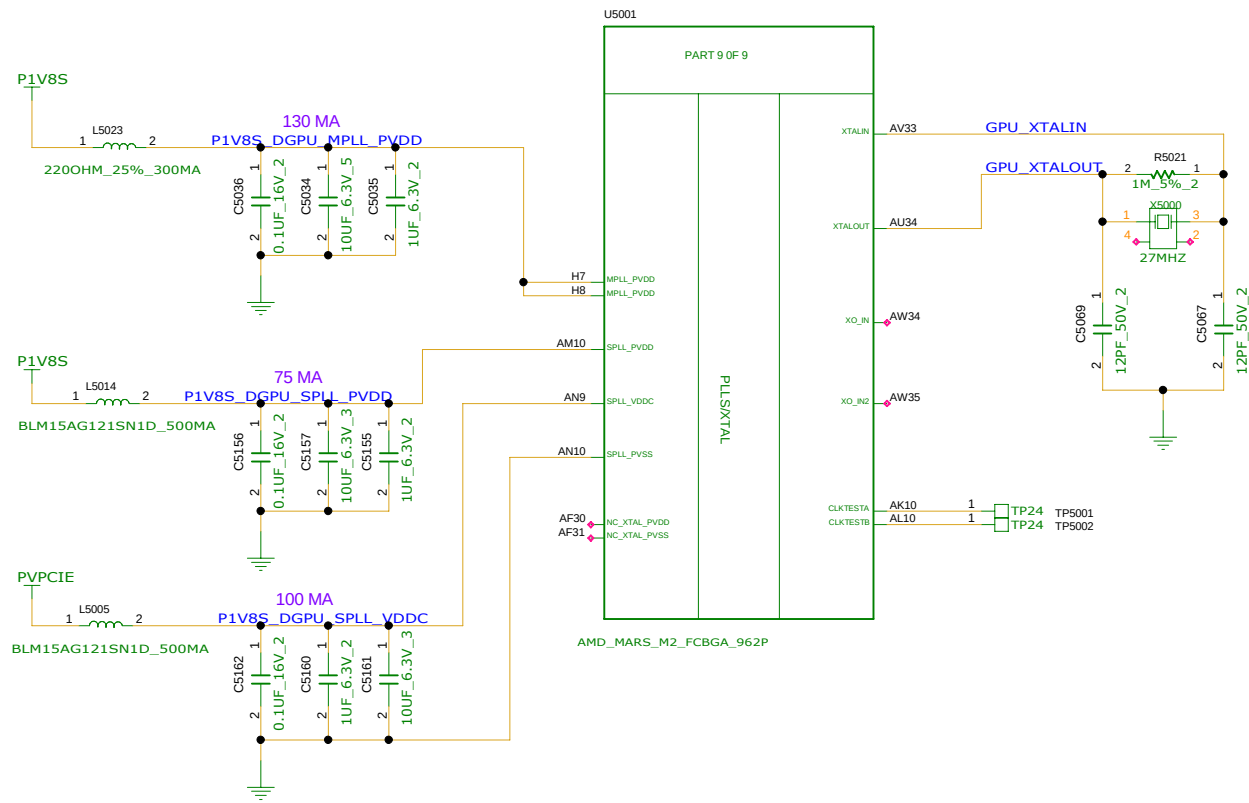
MLPS Bit	Strap Name	Description
PS_0[1]	ROM_CONFIG[0]	See Primary Memory Aperture Sizes.
PS_0[2]	ROM_CONFIG[1]	
PS_0[3]	ROM_CONFIG[2]	
PS_0[4]	N/A	Reserved for internal use only. Must be 1 at reset.
PS_0[5]	AUD_PORT_CONN_PINSTRAP[0]	The LSB (least significant bit) of the strap option that indicates the number of audio-capable display outputs.
PS_1[1]	STRAP_BIF_GEN3_EN_A	PCIe GEN3 capability. 1 = PCIe GEN3 is supported.
PS_1[2]	STRAP_BIF_CLK_PM_EN	Determines whether or not the PCIe reference clock power management capability is reported in the PCI configuration space (otherwise known as CLKREQB). 0 = The CLKREQB power management capability is disabled
PS_1[3]	N/A	Reserved for internal use only. Must be 0 at reset.
PS_1[4]	STRAP_TX_CFG_DRV_FULL_SWING	Control the transmitter full-/half-swing mode 1 = The transmitter full-swing is enabled
PS_1[5]	STRAP_TX_DEEMPH_EN	PCI EXPRESS® transmitter, de-emphasis enable. 1 = Tx deemphasis enabled.
PS_2[1]	N/A	Reserved.
PS_2[2]	N/A	Reserved.
PS_2[3]	STRAP_BIOS_ROM_EN	To enable the external BIOS ROM device. 0 = Disable the external BIOS ROM device.
PS_2[4]	STRAP_BIF_VGA_DIS	VGA disable determines whether or not the card will be recognized as the system's VGA controller (through the SUBCLASS field in the PCI configuration space). 0 = VGA controller capacity enabled.
PS_2[1]	N/A	Reserved.
PS_2[2]	N/A	Reserved.
PS_2[3]	STRAP_BIOS_ROM_EN	To enable the external BIOS ROM device. 0 = Disable the external BIOS ROM device.
PS_2[4]	STRAP_BIF_VGA_DIS	VGA disable determines whether or not the card will be recognized as the system's VGA controller (through the SUBCLASS field in the PCI configuration space). 0 = VGA controller capacity enabled.
PS_2[5]	N/A	Reserved
PS_3[1]	BOARD_CONFIG[0]	See Board configuration related strapping, such as for memory ID.
PS_3[2]	BOARD_CONFIG[1]	
PS_3[3]	BOARD_CONFIG[2]	
PS_3[4]	AUD_PORT_CONN_PINSTRAP[1]	Determines the maximum number of digital display audio endpoints that will be presented to the OS and user.
PS_3[5]	AUD_PORT_CONN_PINSTRAP[2]	111 = No usable endpoints. 110 = One usable endpoint. 101 = Two usable endpoints. 100 = Three usable endpoints. 011 = Four usable endpoints. 010 = Five usable endpoints. 001 = Six usable endpoints. 000 = All endpoints are usable.

Note : AUD[1] (on HYSNC) and AUD[0] (on VSYNC) still need to be properly pin strapped even in a MLPS-based design.

LPT-LP GPIO 34	MARS MLPS Bit: PS_3 [3:1]			R_pu (Ω)	R_pd (Ω)	Vendor & PN	Die Ver.	
0	0	0	0	NC	4750	Samsung - K4G20325FD-FC04	D	GDDR5 - 64Mx32/128Mx16, 1.5V/1.35V, 5.0Gbps/4Gbps
	0	0	1	8450	2000	Hynix - H5GQ2H24AFR-T2C	A (Gemma)	GDDR5 - 64Mx32/128Mx16, 1.5V/1.35V, 5.0Gbps/4Gbps
1	1	1	0	3400	10000	*Samsung - K4G41325FC-HC04	C	*GDDR5 - 128Mx32/256Mx16, 1.5V/1.35V, 5.0Gbps/4Gbps
	1	1	1	4759	NC	*Hynix - H5GC4H24MFR-T0C	Huma	*GDDR5 - 128Mx32/256Mx16, 1.5V/1.35V, 5.0Gbps/4Gbps
VBIOS selection : 0 : VBIOS 1, 64Mx32 for 1GB sku 1 : VBIOS 2, 128Mx32 for 2GB sku	Vram configuration 00: 64Mx32 (2Gb) 11: 128Mx32 (4Gb)	Vendor ID 0: Samsung 1: Hynix	Resistor Divider Lookup Table	Vram information * 2GB sku, TBD				

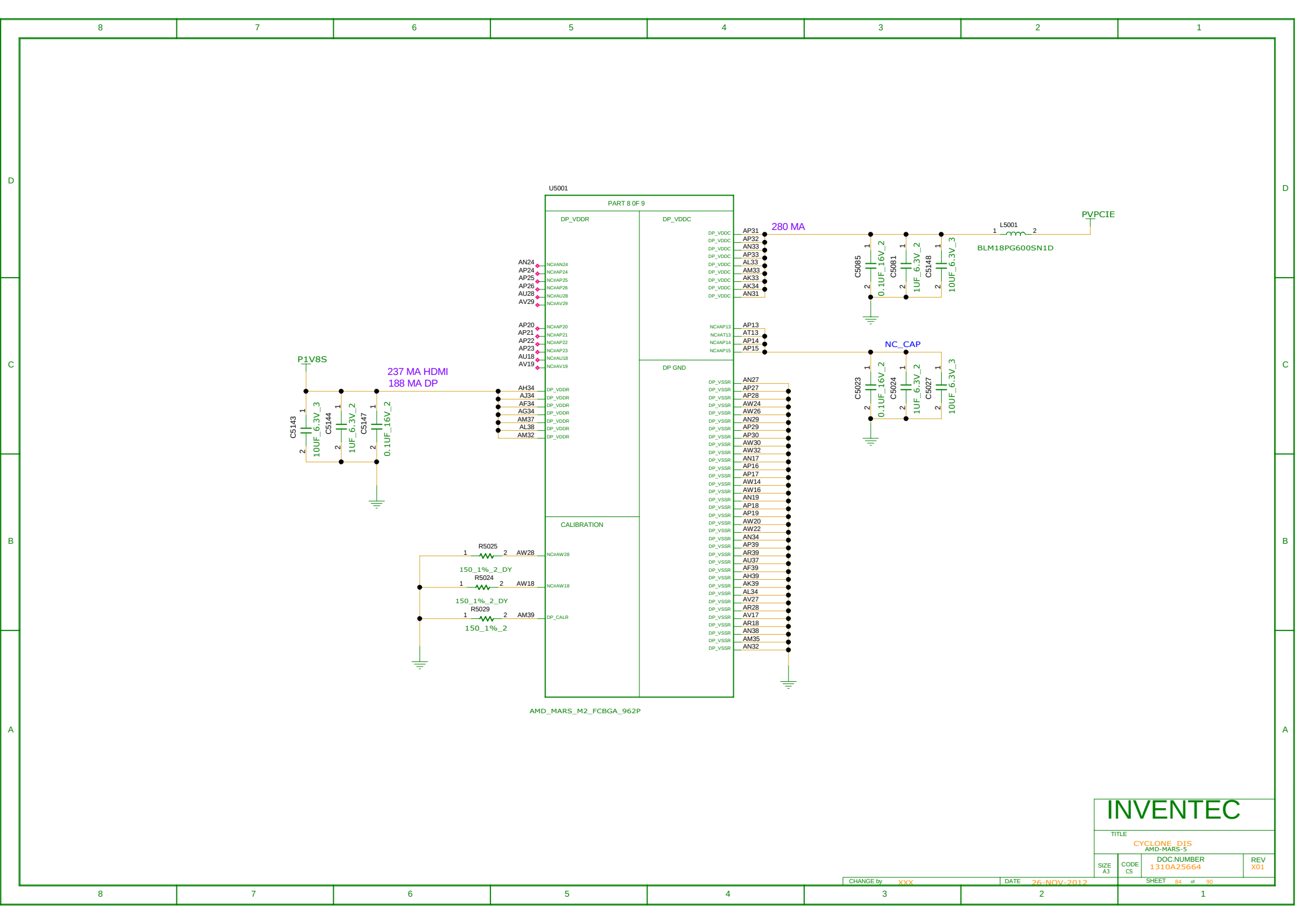
INVENTEC

TITLE CYCLONE_DIS AMD-MARS-2			
SIZE C	CODE CS	DWG NUMBER 1310A25564	REV 201
SHEET		of	60



INVENTEC

TITLE			
CYCLONE_D1S AMD_MARS-4			
SIZE A3	CODE CS	DOC NUMBER 1310A25664	REV X01



INVENTEC

TITLE

CYCLONE_DIS

AMD-MARS-5

SIZE
A3

CODE
CS

DOC NUMBER
1310A25664

REV
X01

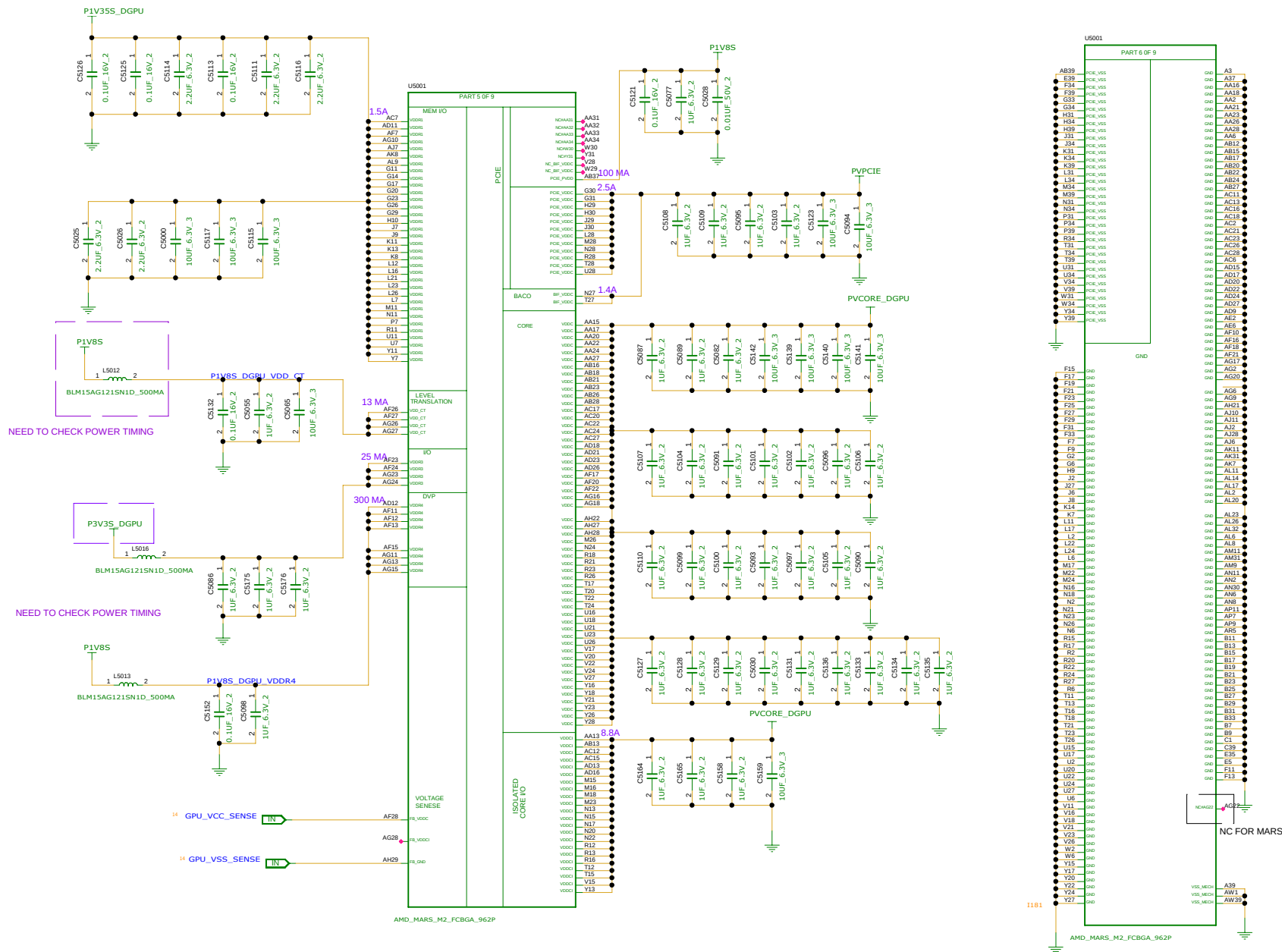
CHANGE by

XXX

DATE

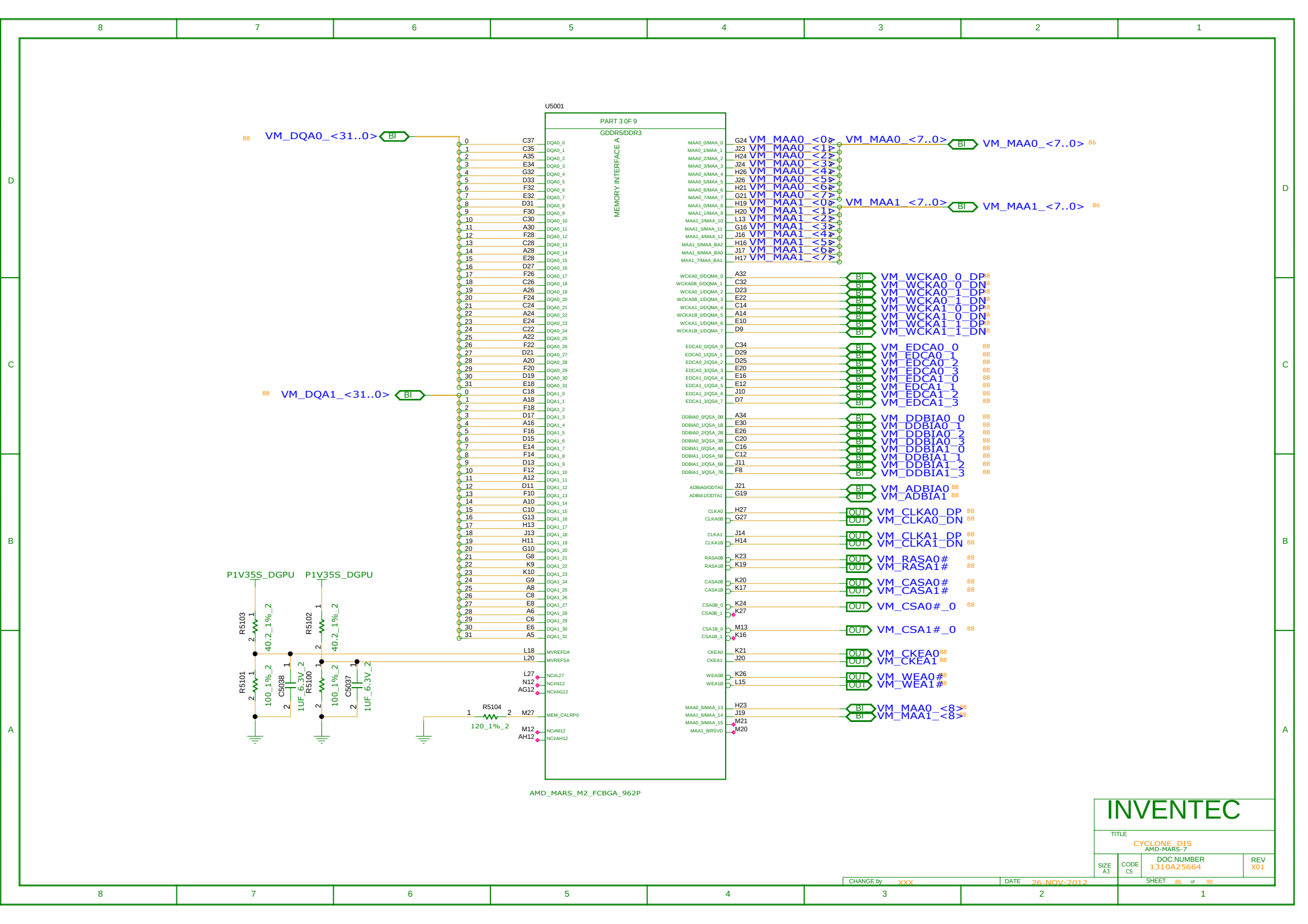
26-NOV-2012

SHEET 84 of 90



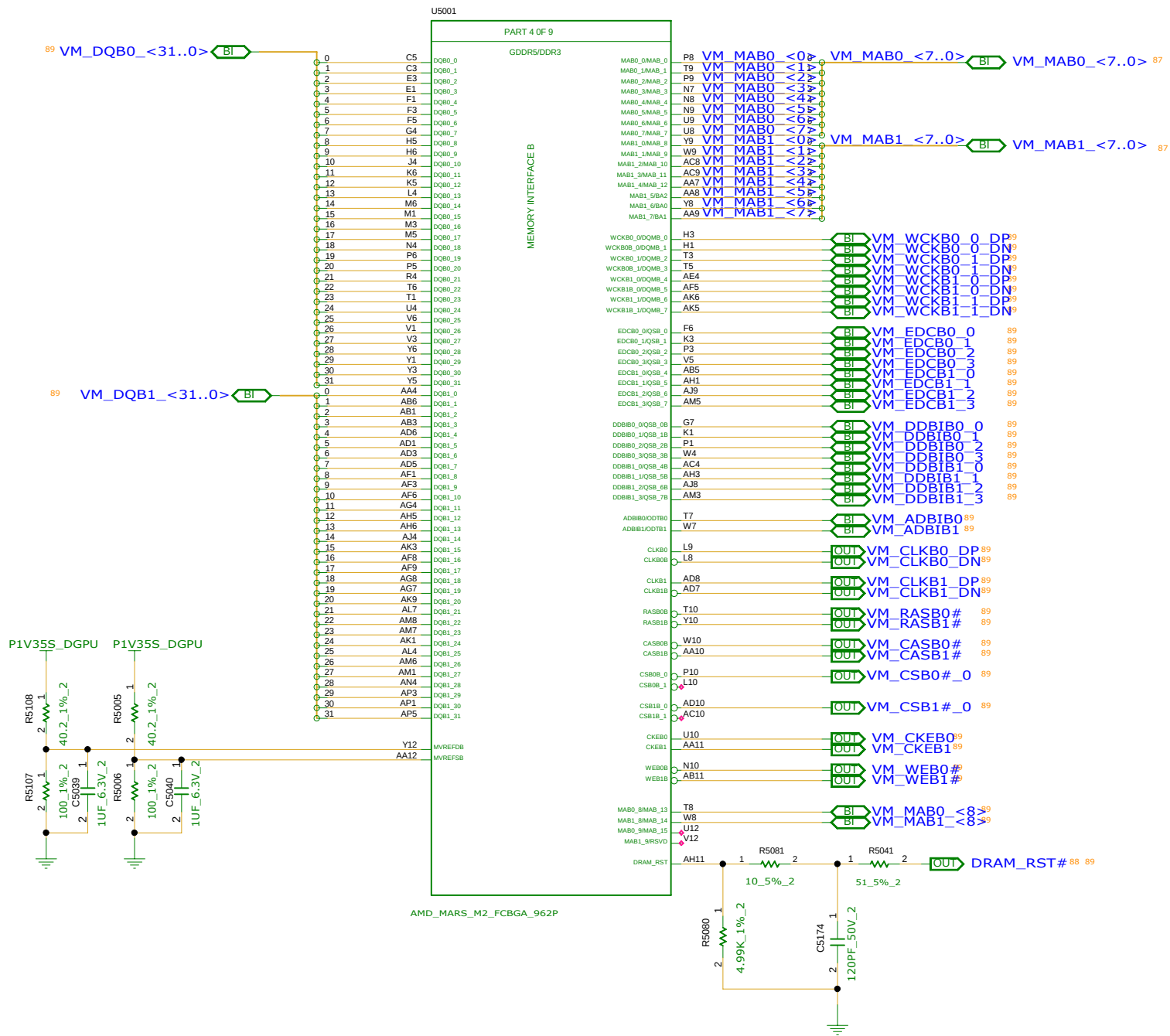
INVENTEC

TITLE			
CYCLONE_DIS AMD-MARS-6			
SIZE	CODE	DOC NUMBER	REV
C	CS	1310A25664	X01
SHEET		85	of 90

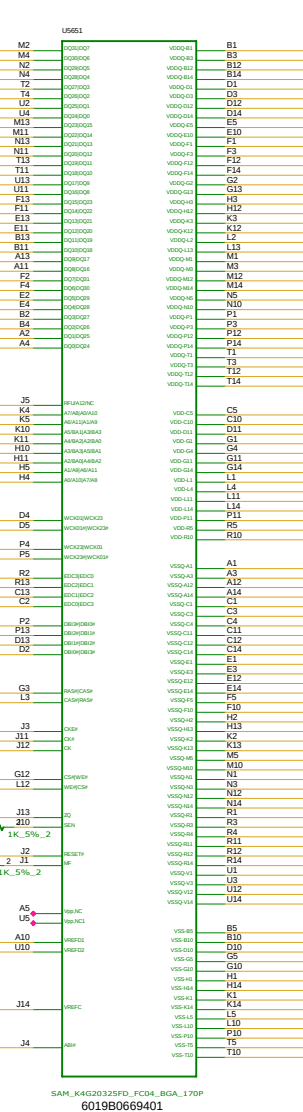


INVENTEC

TITLE			
CYCLONE_DIS AMD-MARS-7			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A25664	X01







8								7								6								5								4								3								2								1							
D																																																															
C																																																															
B																																																															
A																																																															
8								7								6								5								4								3								2								1							