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HSF Property:ROHS or Halogen-Free

BANDIT M2 HD+

MV BUILD

2013.01.04

2012/09/10	2012:ECO-017507	A
DATE	CHANGE NO.	REV

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INVENTEC			
DRAWER	EE	DATE	POWER
DESIGN	xxx	21-OCT-2002	RAY CHEN
CHECK	xxx	21-OCT-2002	RAY CHEN
RESPONSIBLE	xxx	21-OCT-2002	RAY CHEN
TITLE			
MODEL PROJECT FUNCTION			
ULTRABOOK MAIN BOARD			
SIZE	A3	CODE	CS
FILE TYPE	BANDIT.MB	DOC NUMBER	1310000000-0-0
PIN	g224k5c24102	REV	Y01
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 58. CARD READER
 59. BUTTON LED
 60. SMART VARD & LED DB
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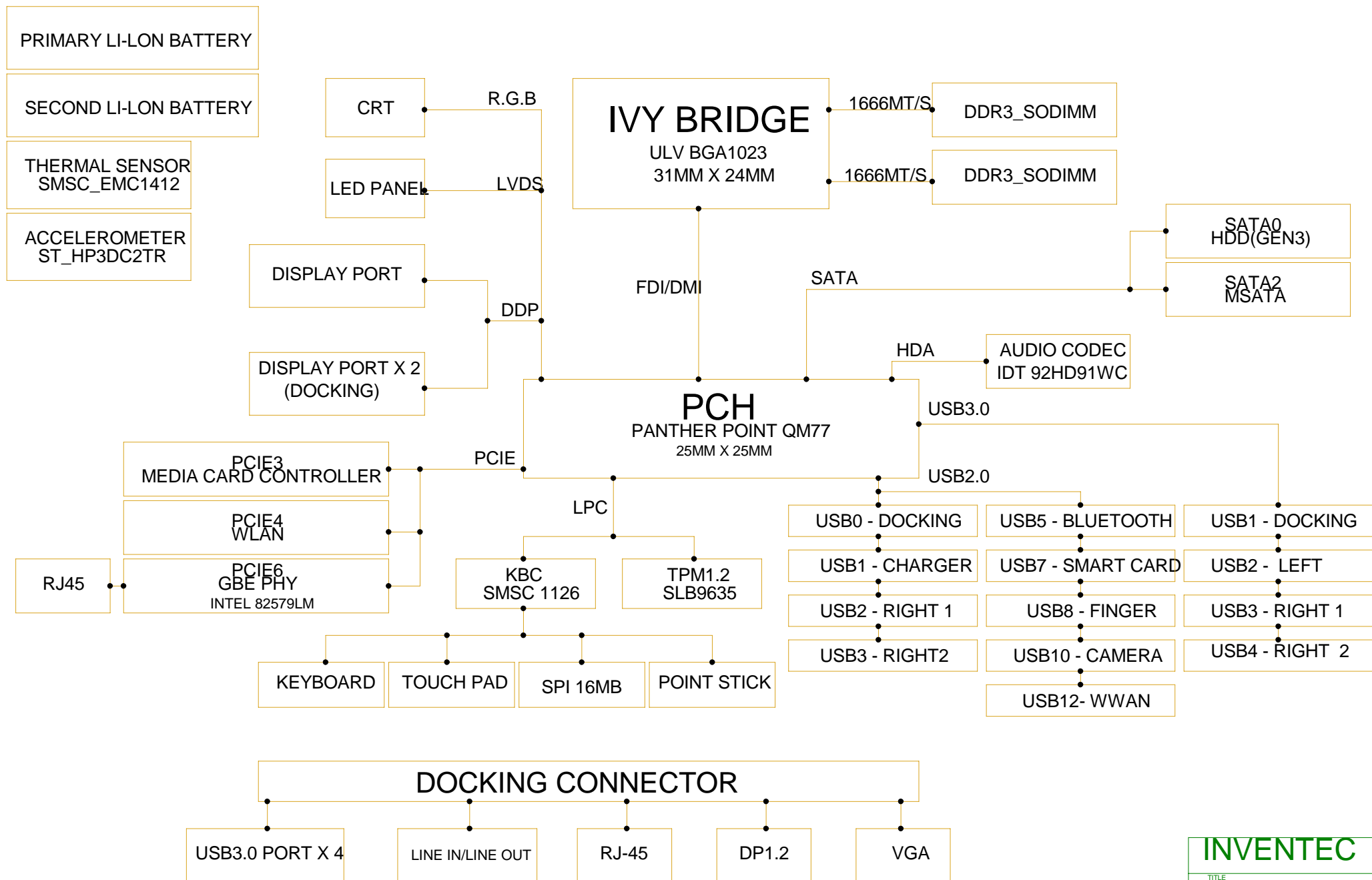
INVENTEC

TITLE
 MODEL PROJECT FUNCTION
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SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
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TITLE

BLOCK DIAGRAM

MODEL PROJECT FUNCTION

DOC NUMBER

1310xxxxx-0-0

REV

X01

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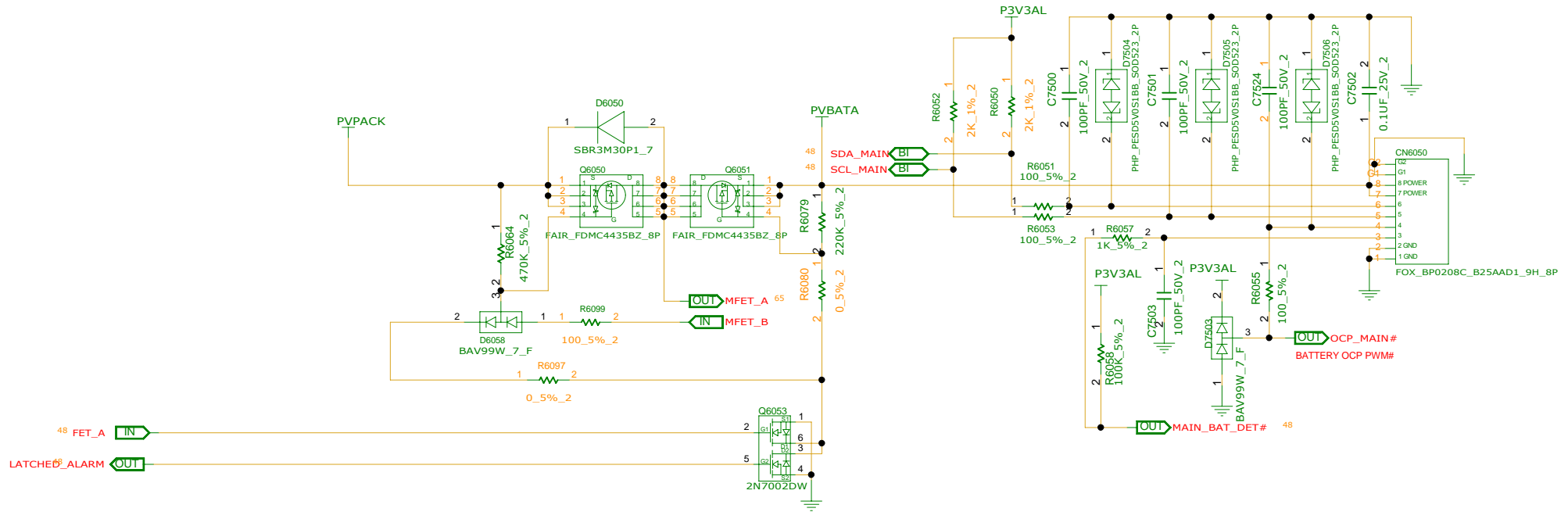


TITLE	MODEL,PROJECT,FUNCTION
	Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	F X
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CHANGE by	XXX	DATE	21-OCT-2002
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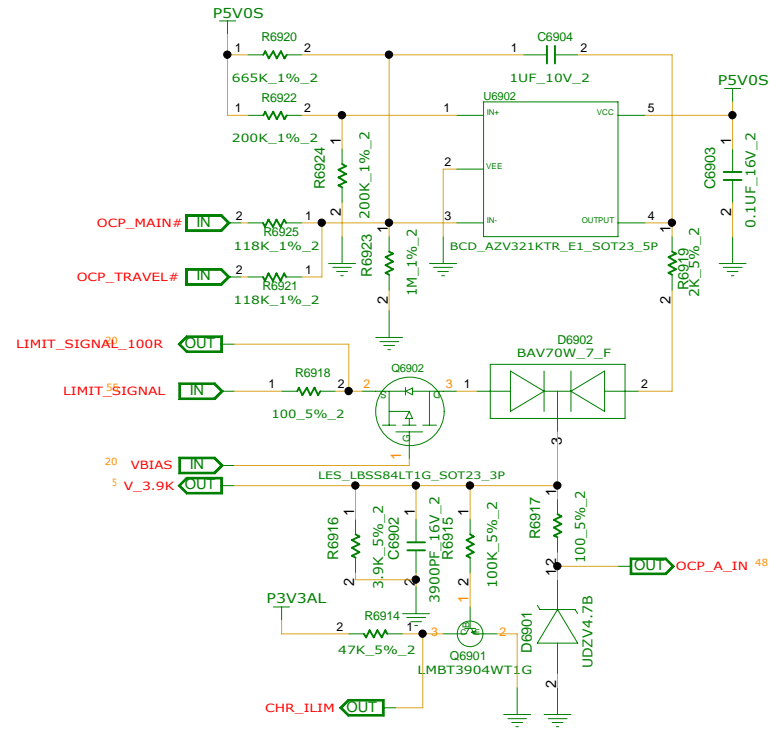
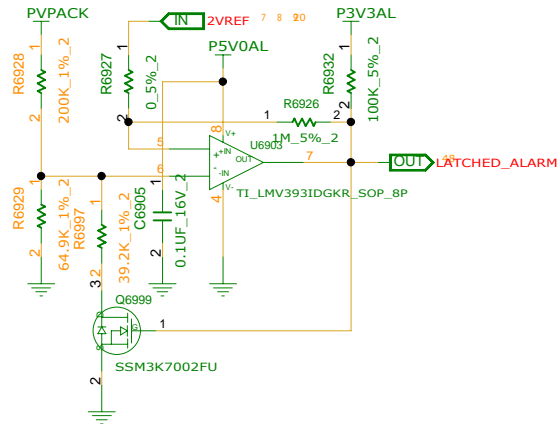
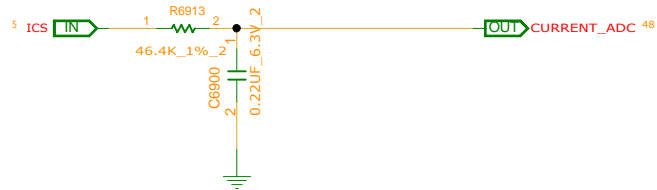
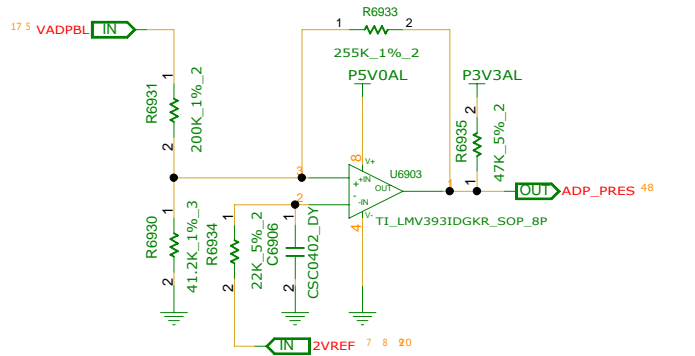


INVENTEC

TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01

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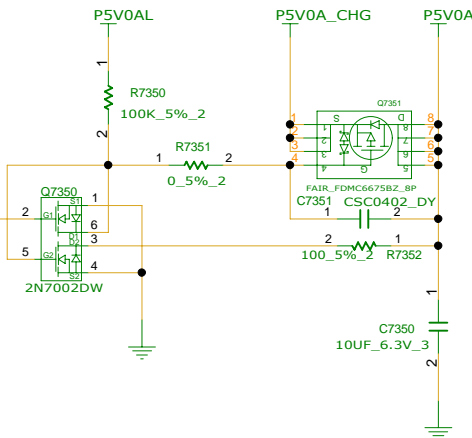
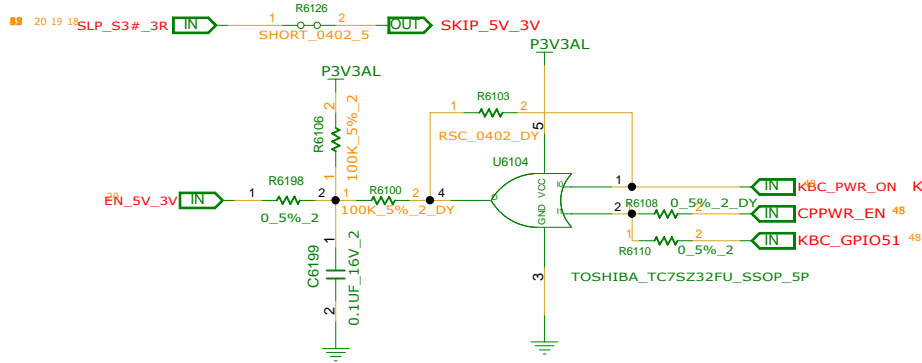
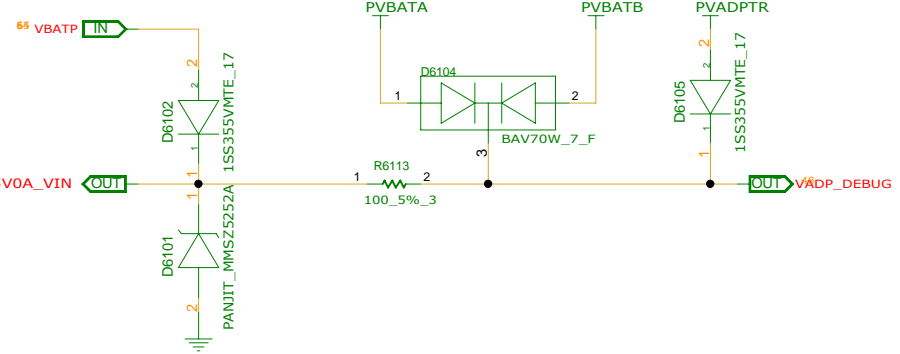
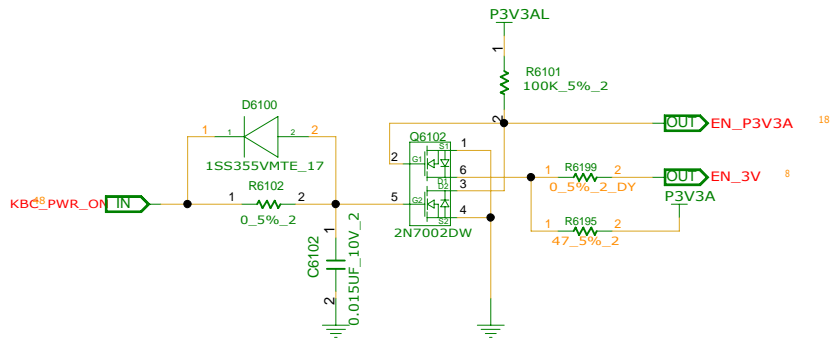
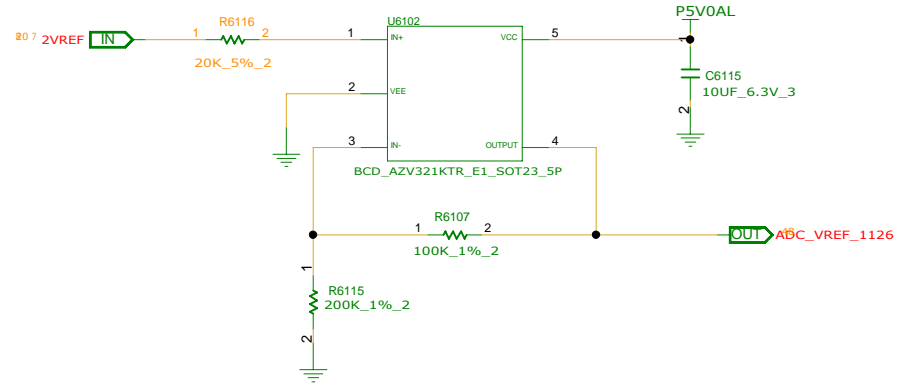
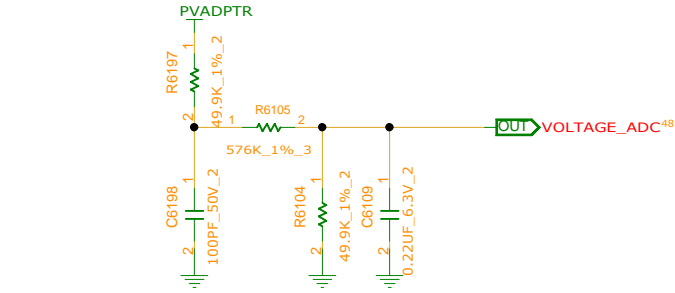


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TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
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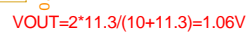
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MODEL,PROJECT,FUNCTION			
Block Diagram			
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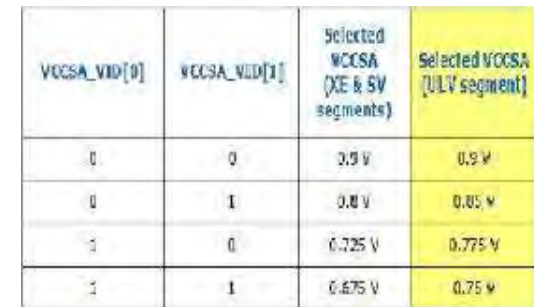
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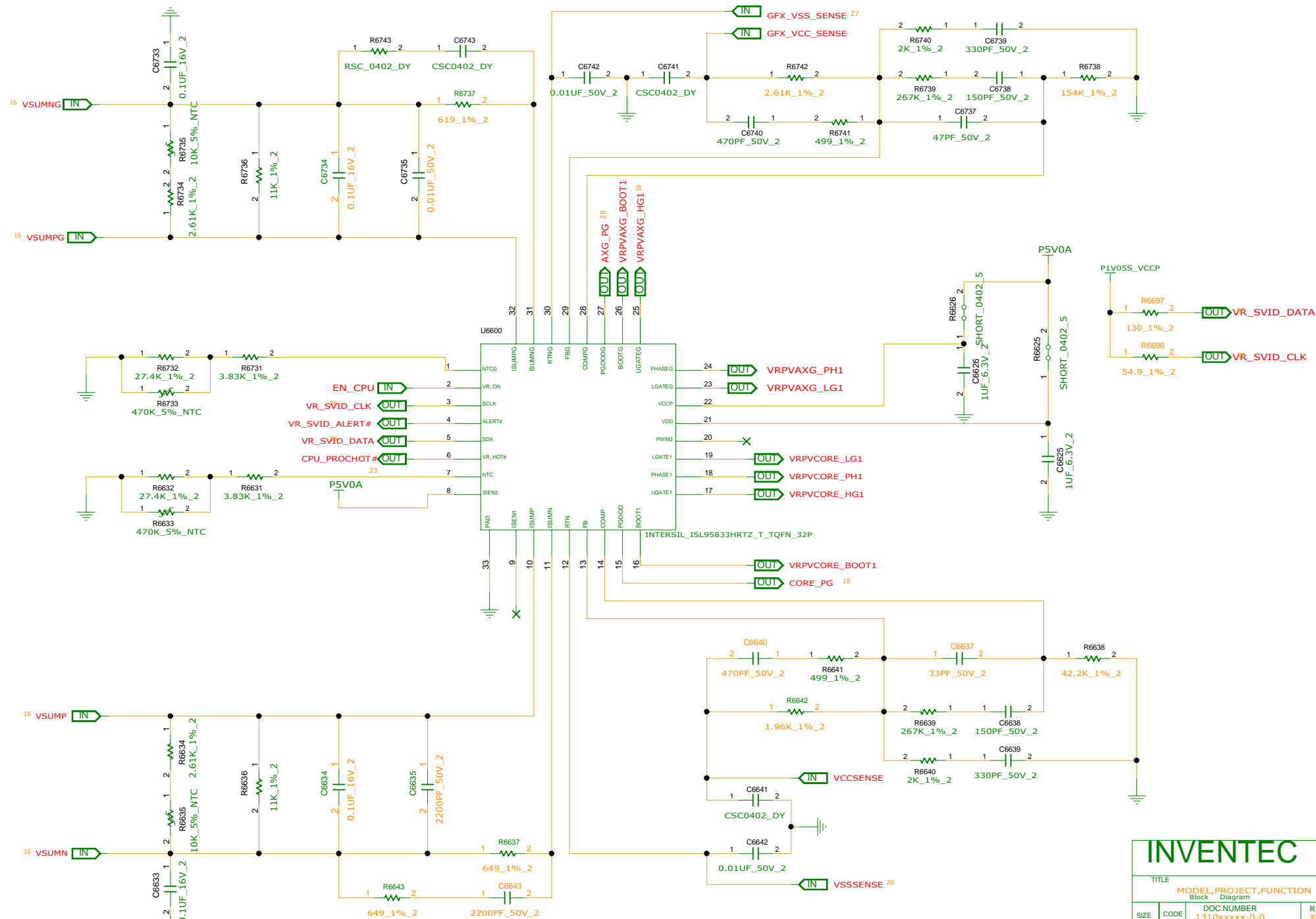




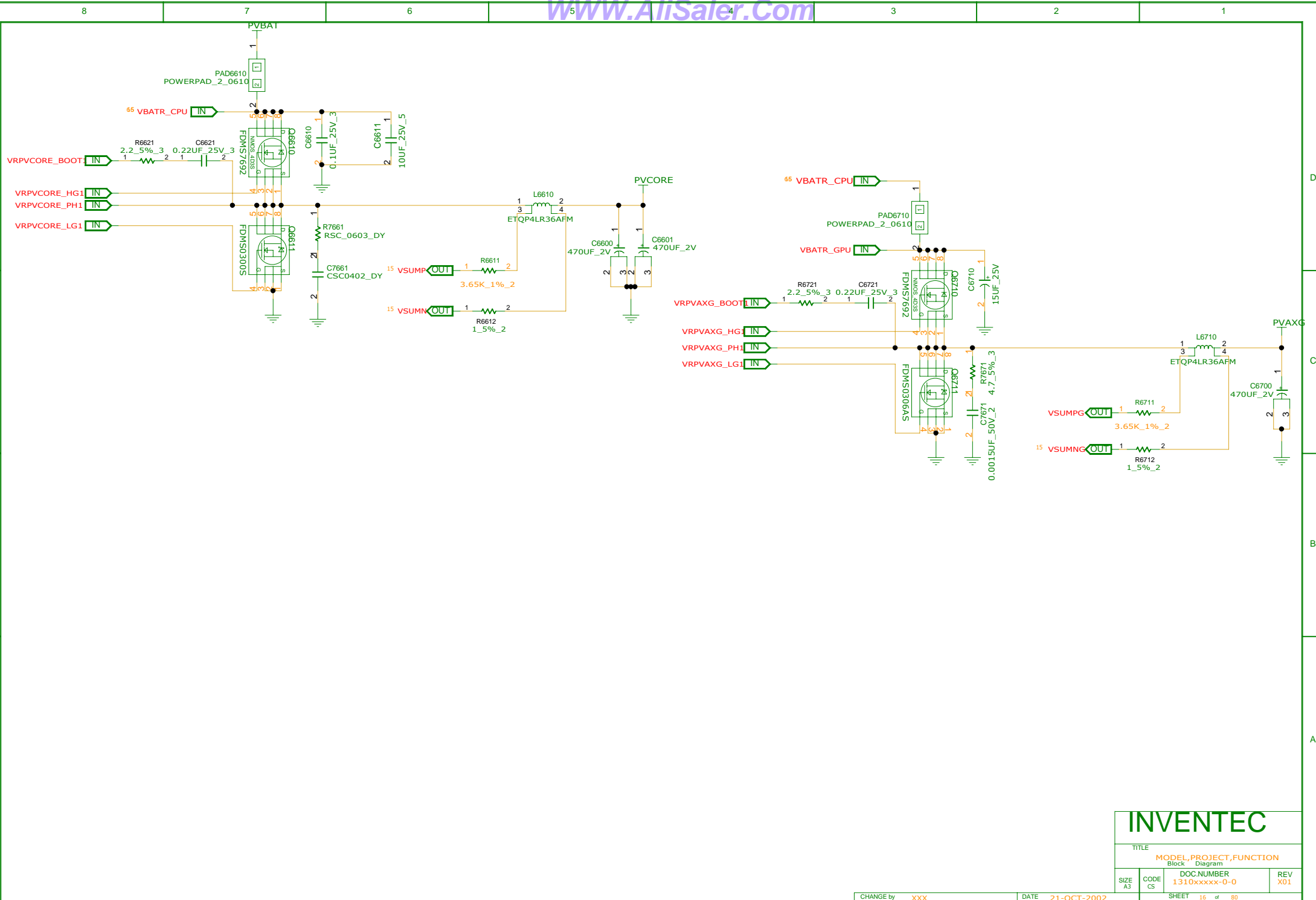
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INVENTEC			
TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
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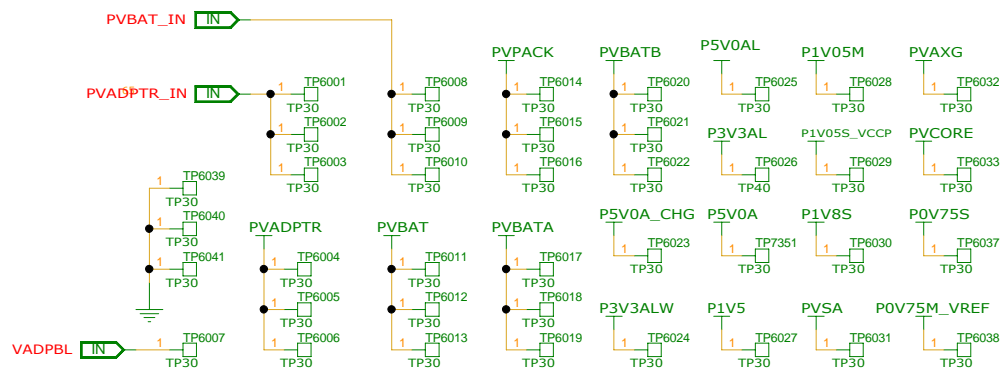


INVENTEC

TITLE
MODEL, PROJECT, FUNCTION
Block Diagram

SIZE CODE DOC NUMBER REV
A3 CS 1310xxxxx-0-0 X01

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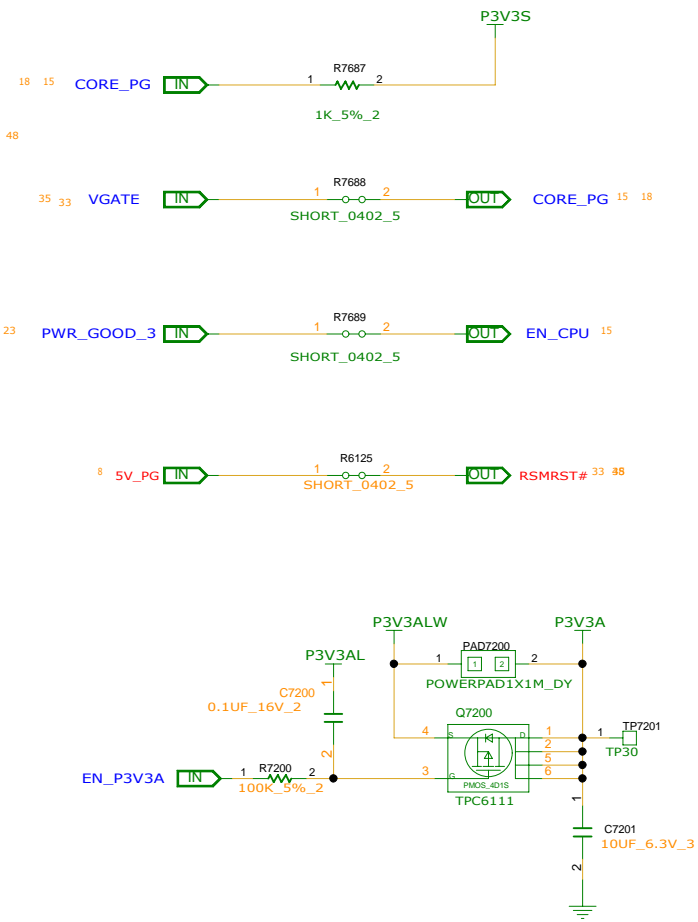
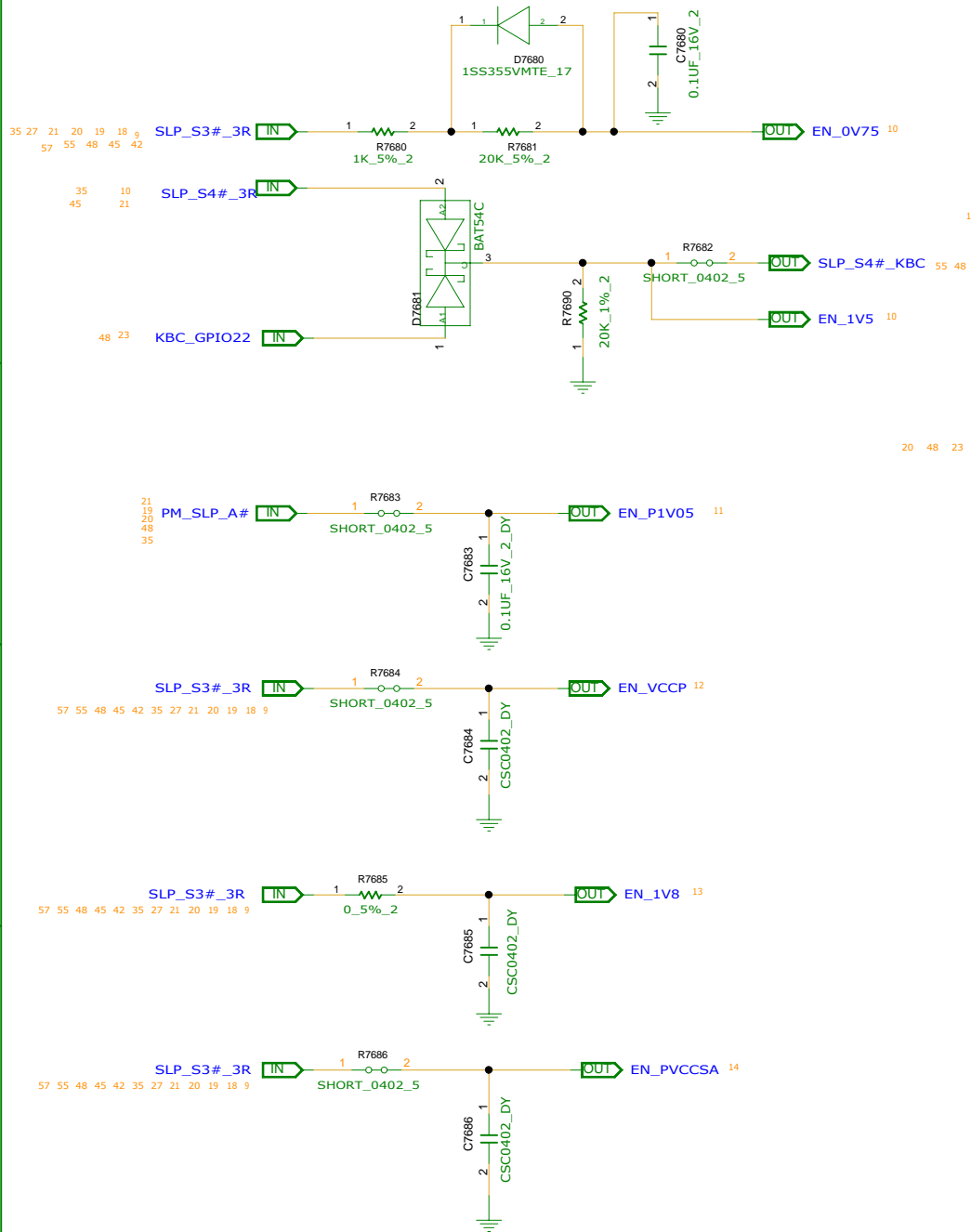
INVENTEC

TITLE
MODEL, PROJECT, FUNCTION

SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
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INVENTEC			
TITLE			
MODEL PROJECT FUNCTION			
POWER SEQUENCE			
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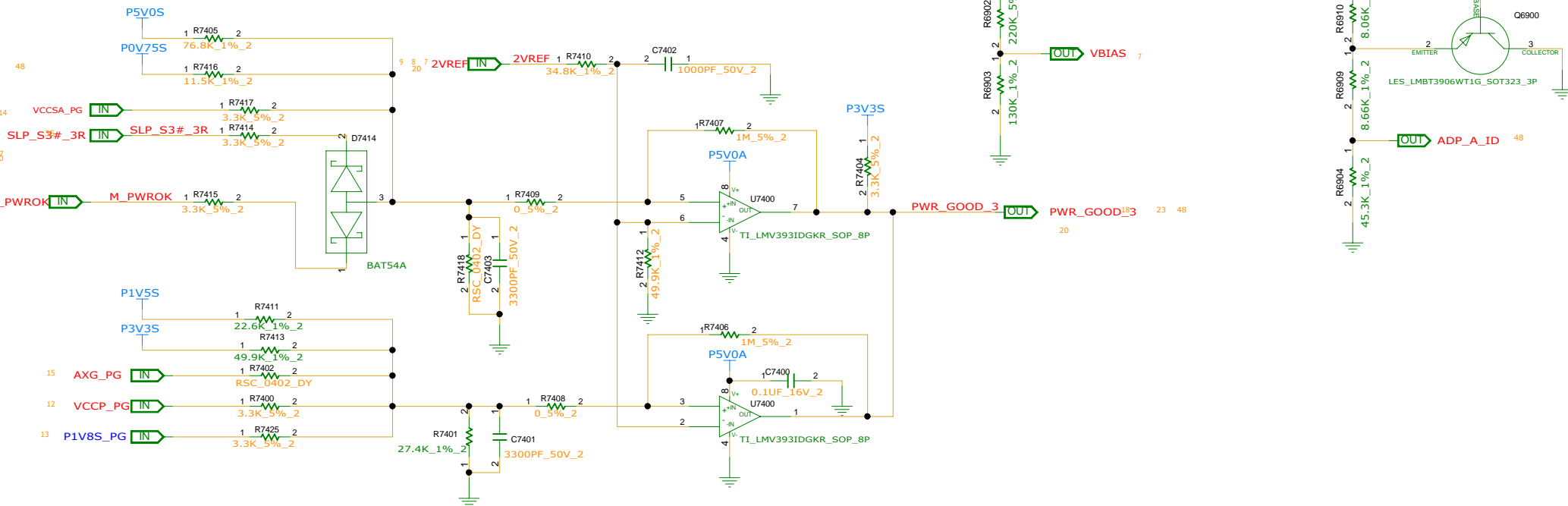
Q2971 WHETHER CAN CHANGE TO
6015B0017101 PMV65XP OR NOT



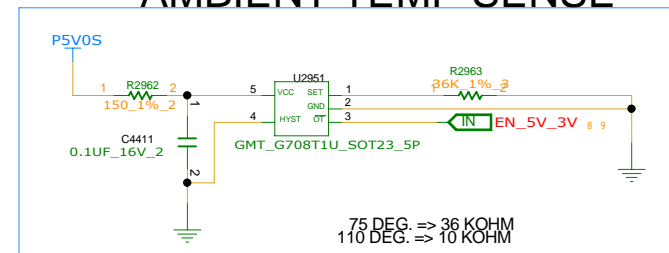
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TITLE			
MODEL,PROJECT,FUNCTION POWER(SLEEP)			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01

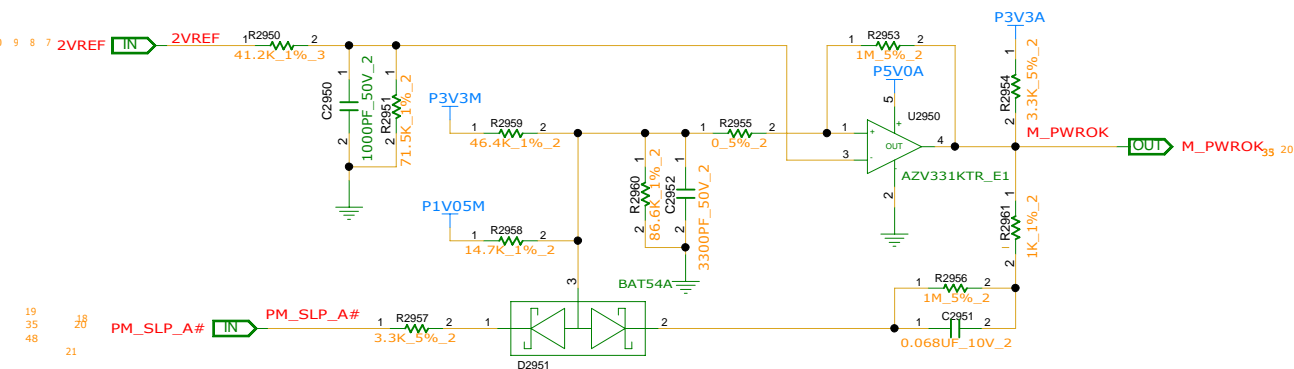
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AMBIENT TEMP SENSE



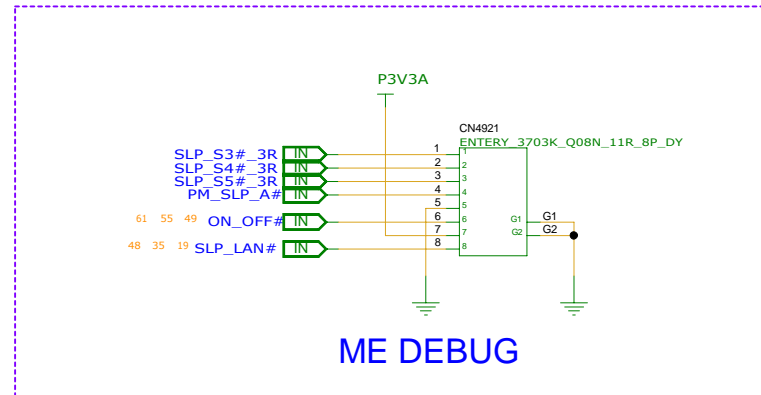
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INVENTEC

TITLE			
MODEL PROJECT FUNCTION POWER (SEQUENCE)			
SIZE A3	CODE CS	DOC NUMBER 1310xxxx-0-0	REV X01
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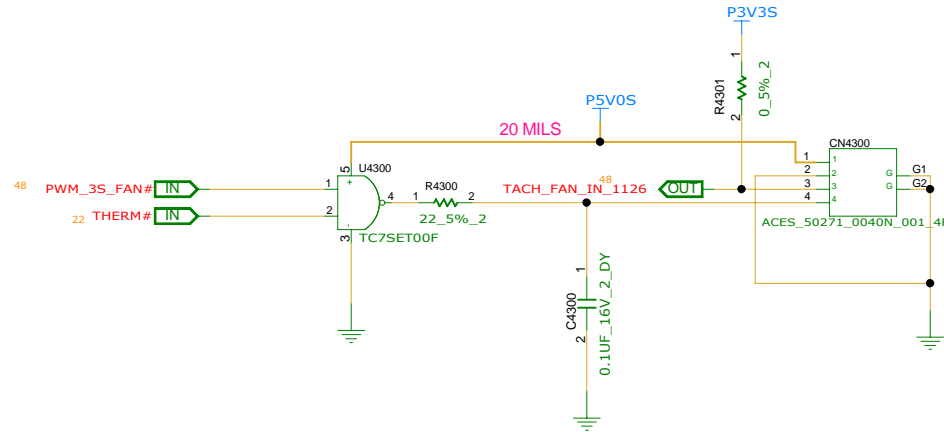
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MODEL PROJECT,FUNCTION
XDP_CONN

SIZE A3 CODE CS DOC NUMBER 1310xxxxx-0-0 REV X01

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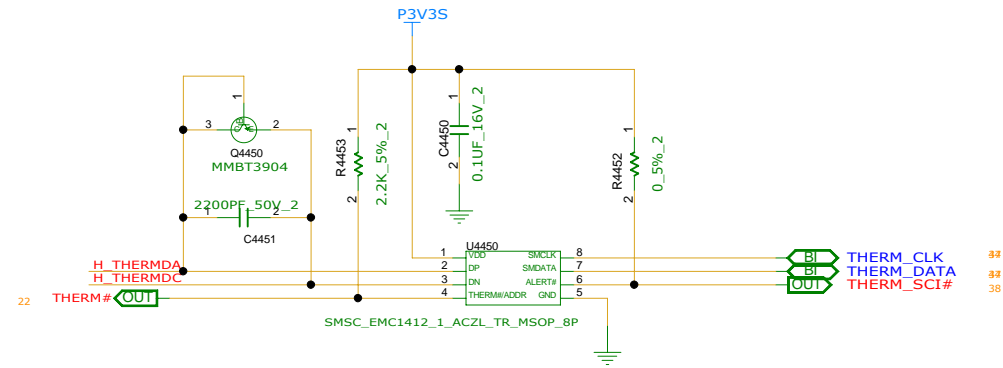
CHANGE by XXX DATE 21-OCT-2002

REFERENCE NUMBER:4400~4349



REFERENCE NUMBER:4450~4499

THERM SENSOR



REFERENCE NUMBER:4411~4449

INVENTEC

TITLE MODEL PROJECT,FUNCTION FAN & THERMAL

DOC NUMBER 1310xxxxx-0-0

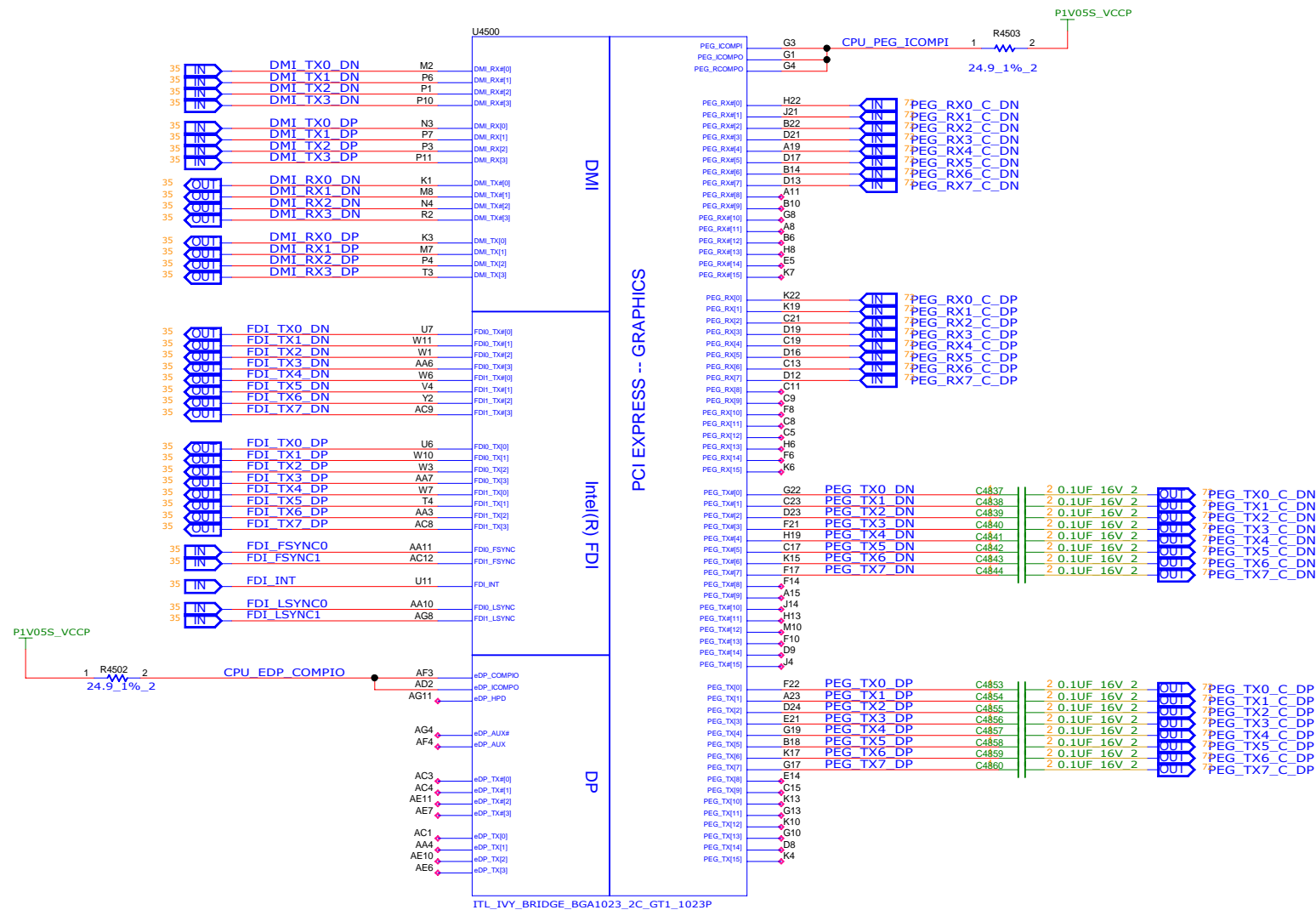
REV X01

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INVENTEC

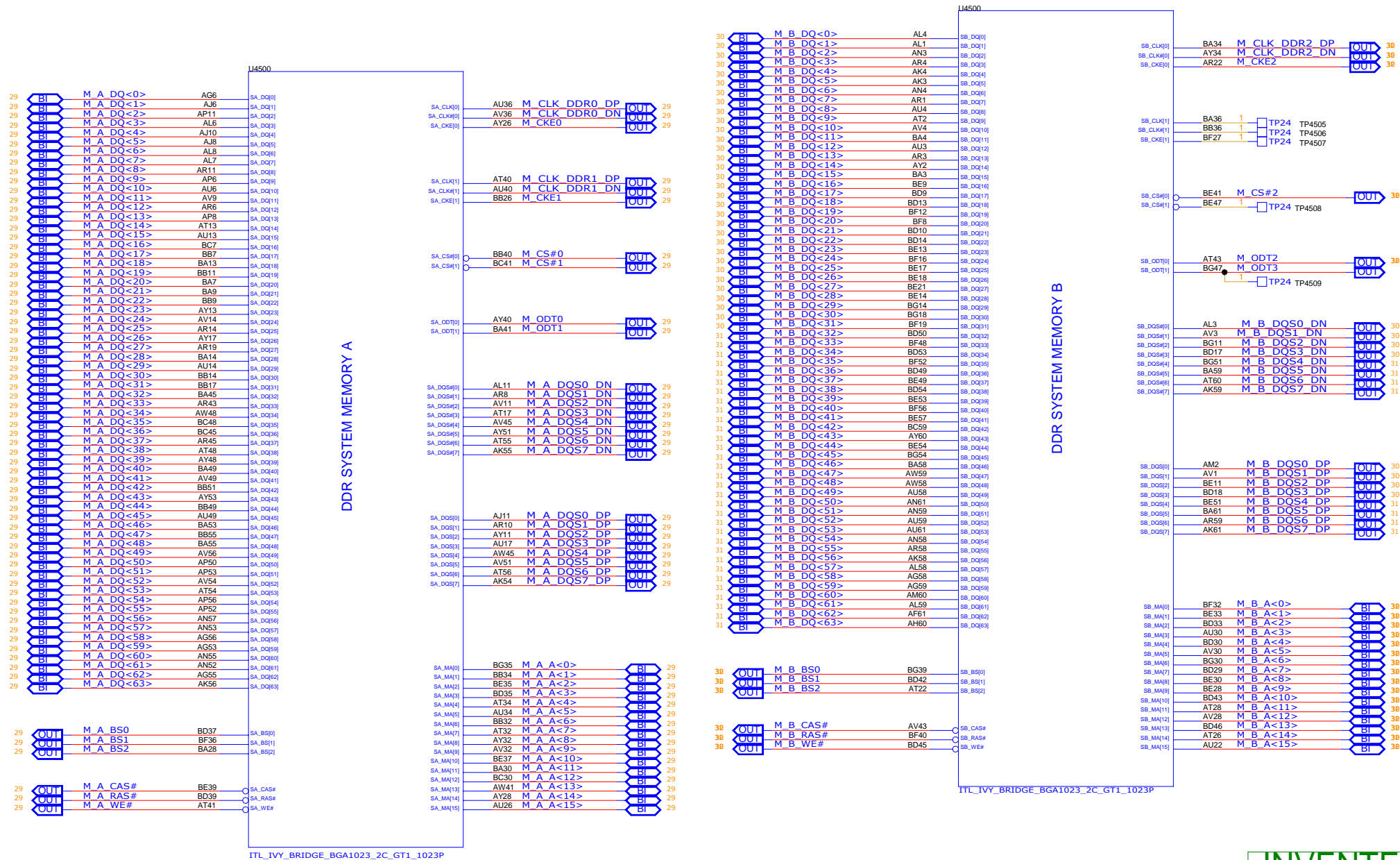
TITLE			
MODEL PROJECT,FUNCTION			
CPU_2/5			
SIZE	CODE	DOC.NUMBER	REV
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D

C

B

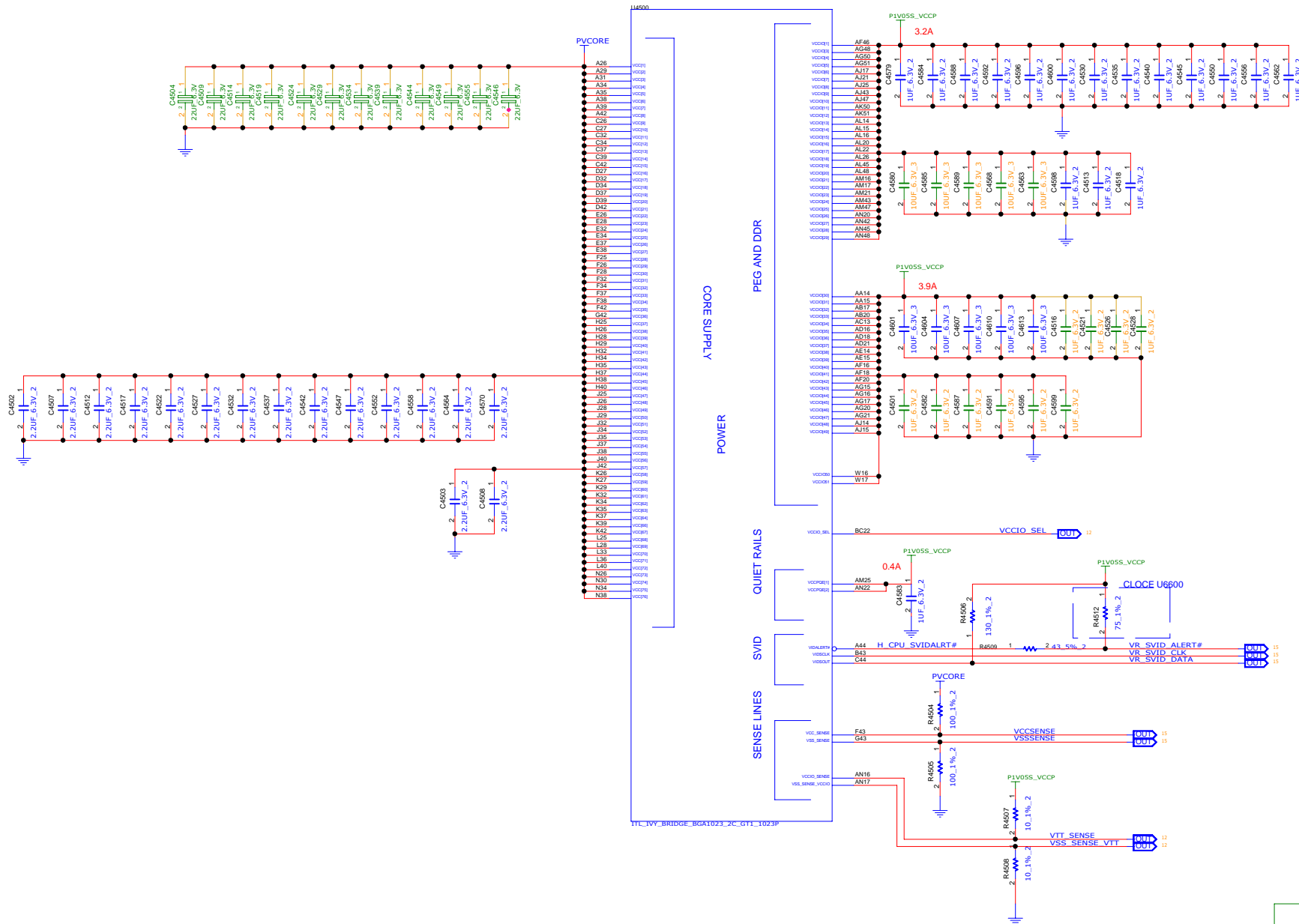
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INVENTEC

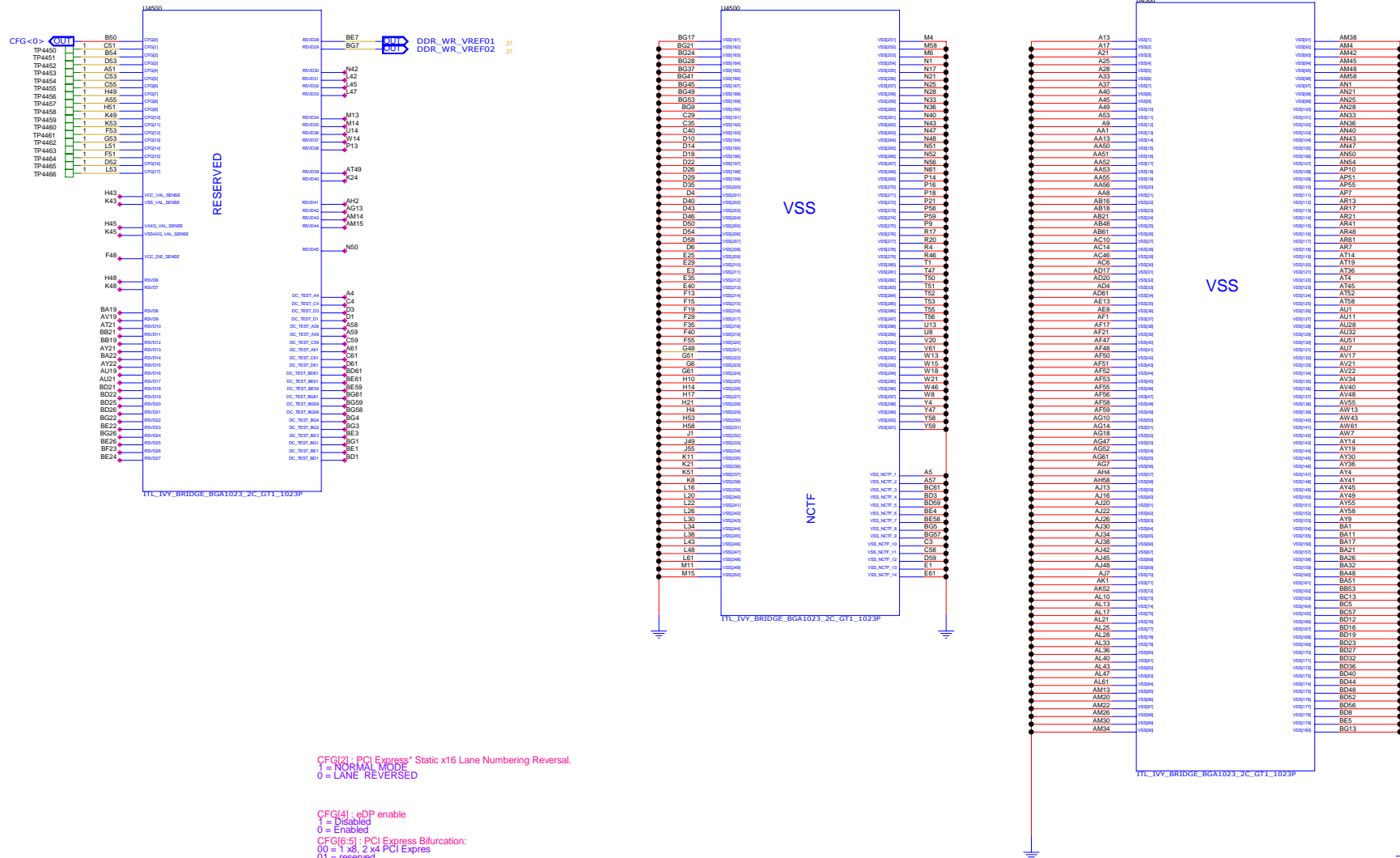
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MODEL,PROJECT,FUNCTIONSIZE CODE DOC NUMBER REV
A3 CS 1310xxxxx-0-0 X01

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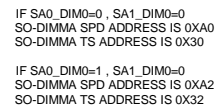


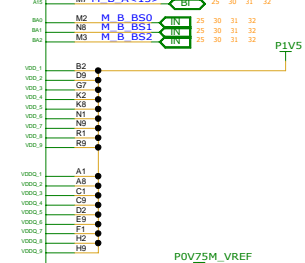
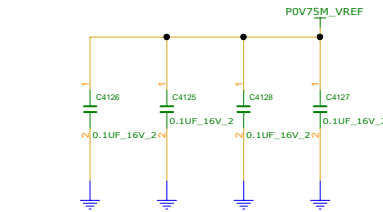
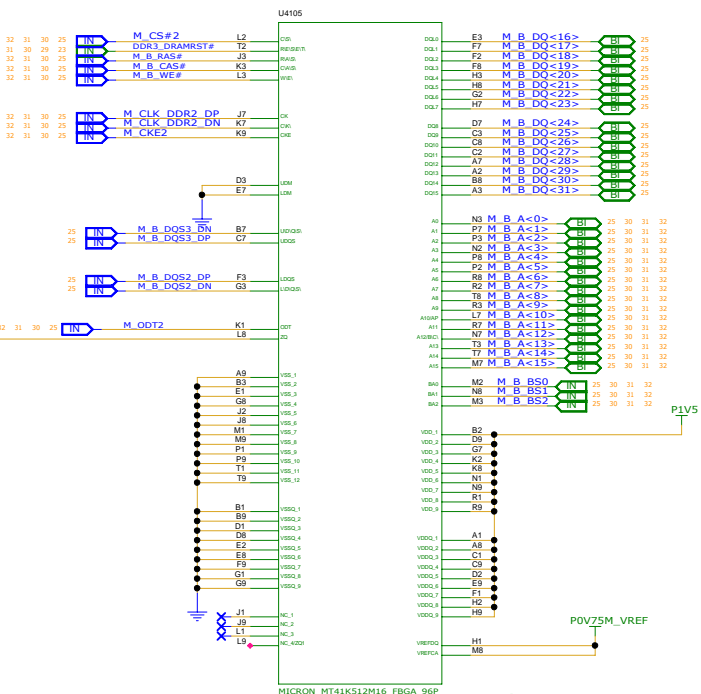
CHANGE by	xxx	DATE	21-OCT-2002
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INVENTEC

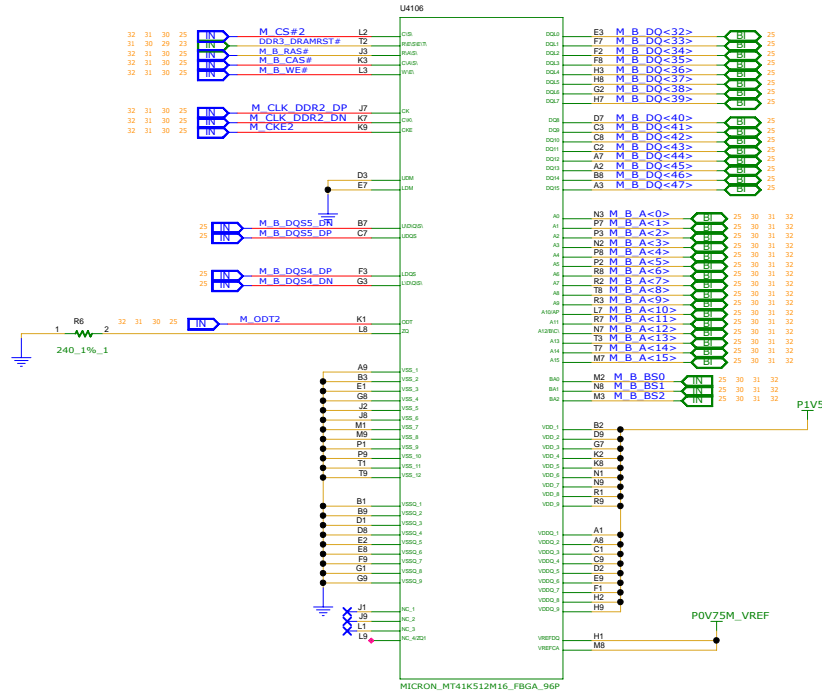
MODEL, PROJECT, FUNCTION			
SIZE	CODE	DOC NUMBER	REV
C	CS	1310XXXX-0-0	701
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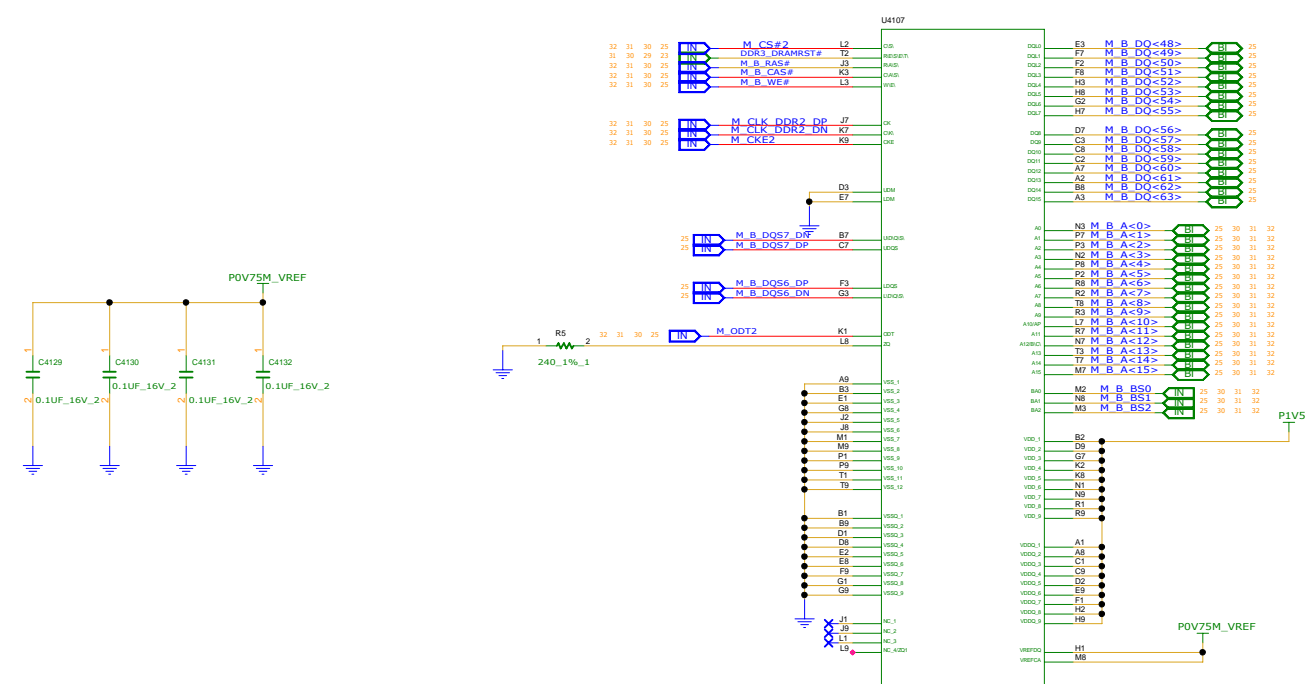


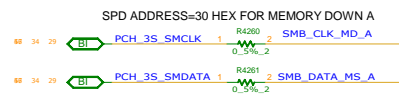
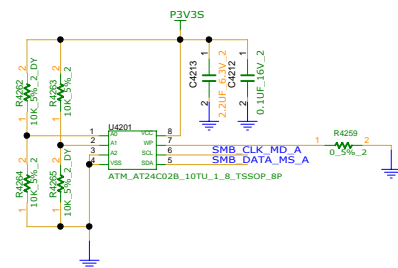
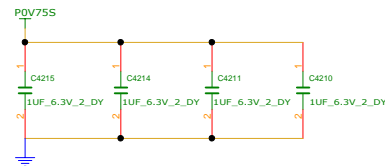
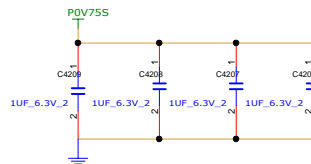
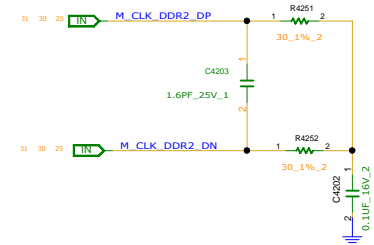
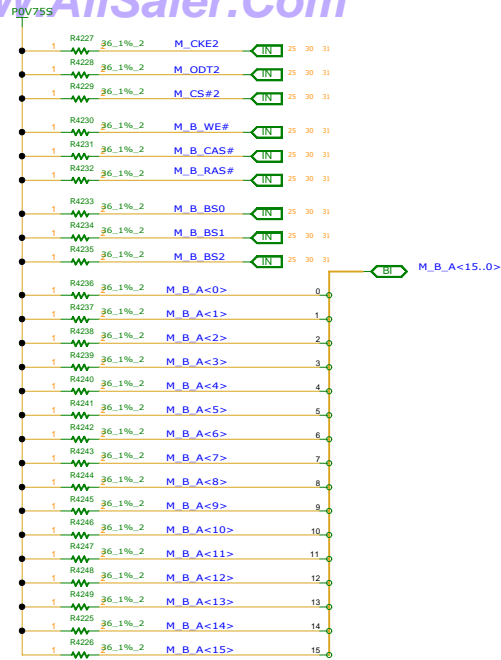
RON MT41K512M16 FBGA 96

TITLE			
MODEL,PROJECT,FUNCTION 35_DDR3L-2			
SIZE C	CODE CS	DOC NUMBER 1310xxxxxx-0-0	REV X01
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DDR3L_B_3

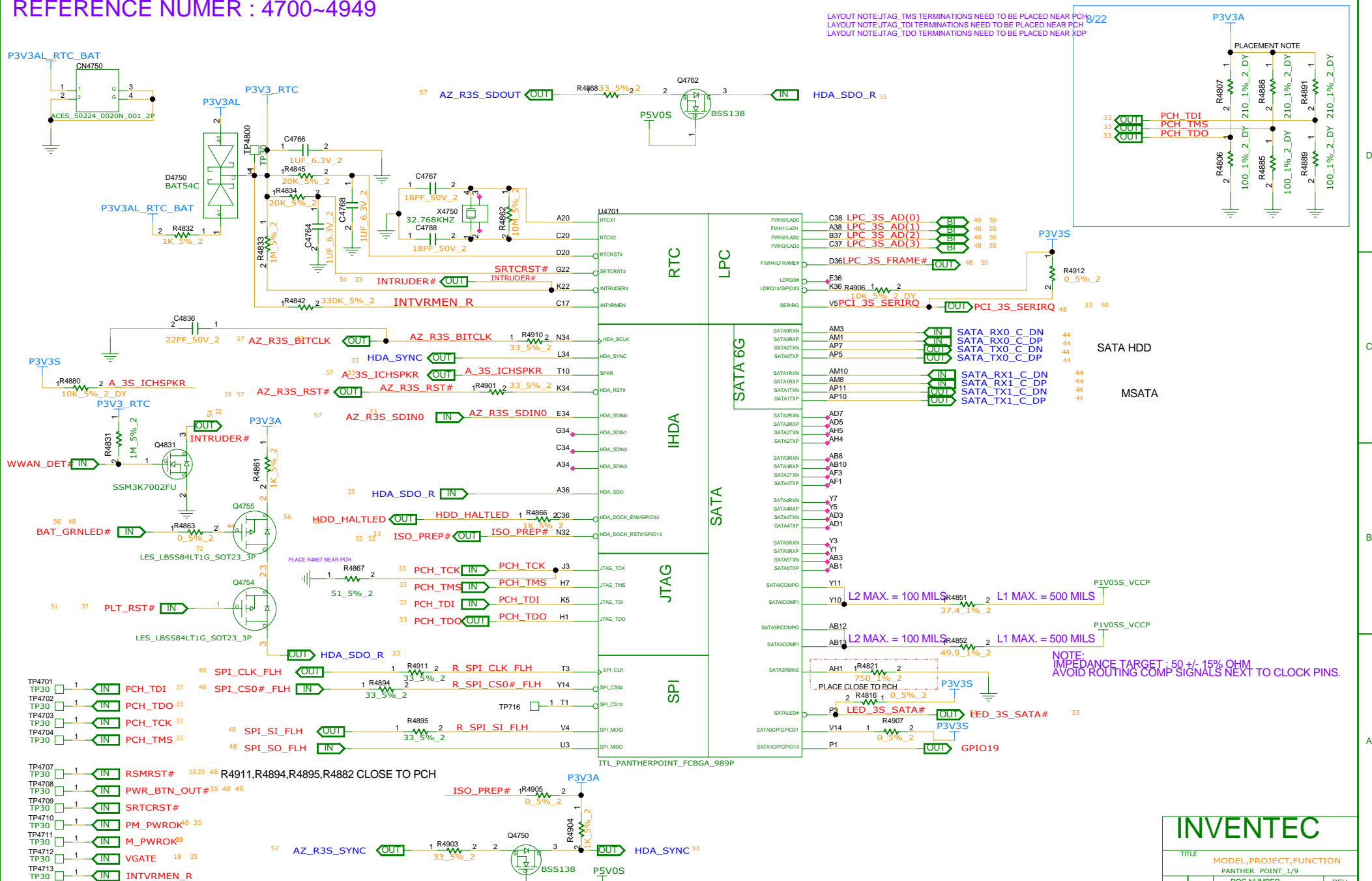




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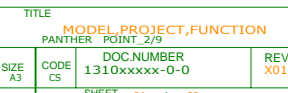
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MODEL,PROJECT,FUNCTION			
37_DDR TERMINAL			
SIZE	CODE	DOC NUMBER	REV
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REFERENCE NUMBER : 4700~4949



INVENTEC			
TITLE PANTHER POINT_1/9			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
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INVENTEC

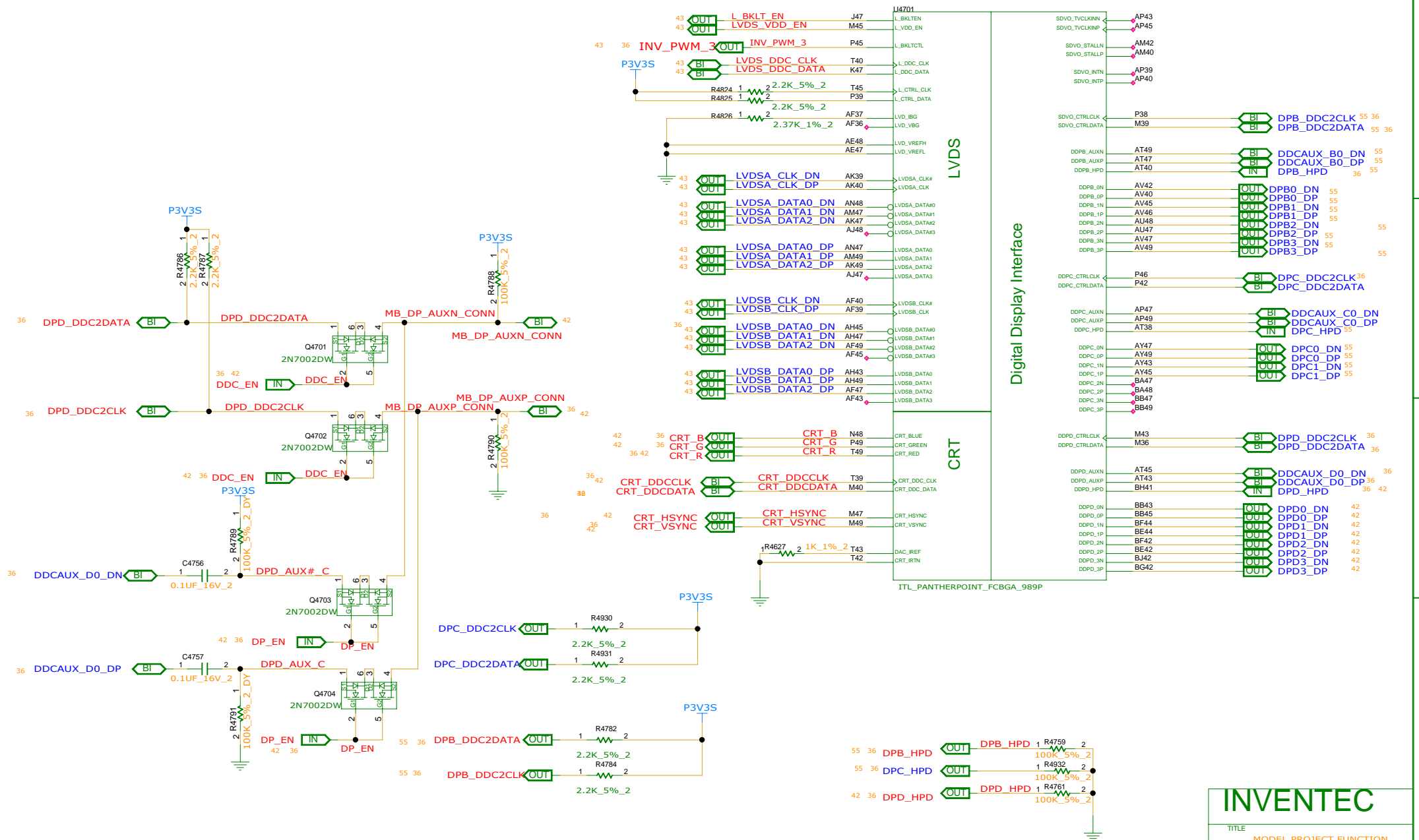


3.PCH DPWROK PULL UP TO P3V3S ENABLES DSW WUPPORT. NO INSTALL R4752 TO DISABLE DSW



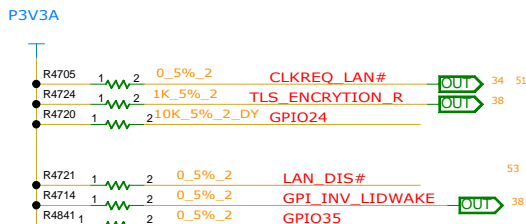
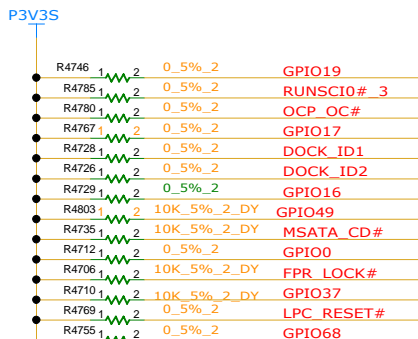
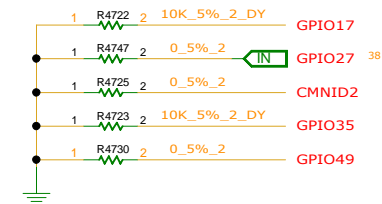
CHANGE by	XXX	DATE	21-OCT-2002
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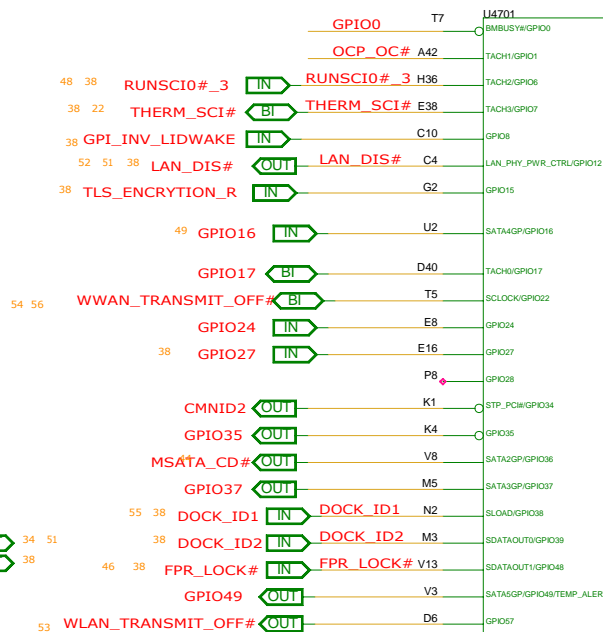


INVENTEC			
TITLE			
MODEL PROJECT FUNCTION			
PANTHER POINT_4/9			
SIZE	CODE	DOC NUMBER	REV
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REFERENCE NUMER : 4700~4949



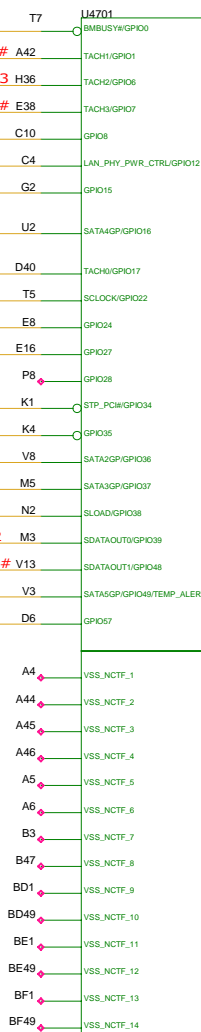
GPIO17	GPIO35	GPIO49	GPIO50	
R4767	R4841	R4803	R4758	H
R4722	R4723	R4730	R4719	L
0	1	0	0	SI 1
0	1	0	1	SI 1B
0	1	1	0	SI 2
1	0	0	0	PV 1
1	1	0	0	MV



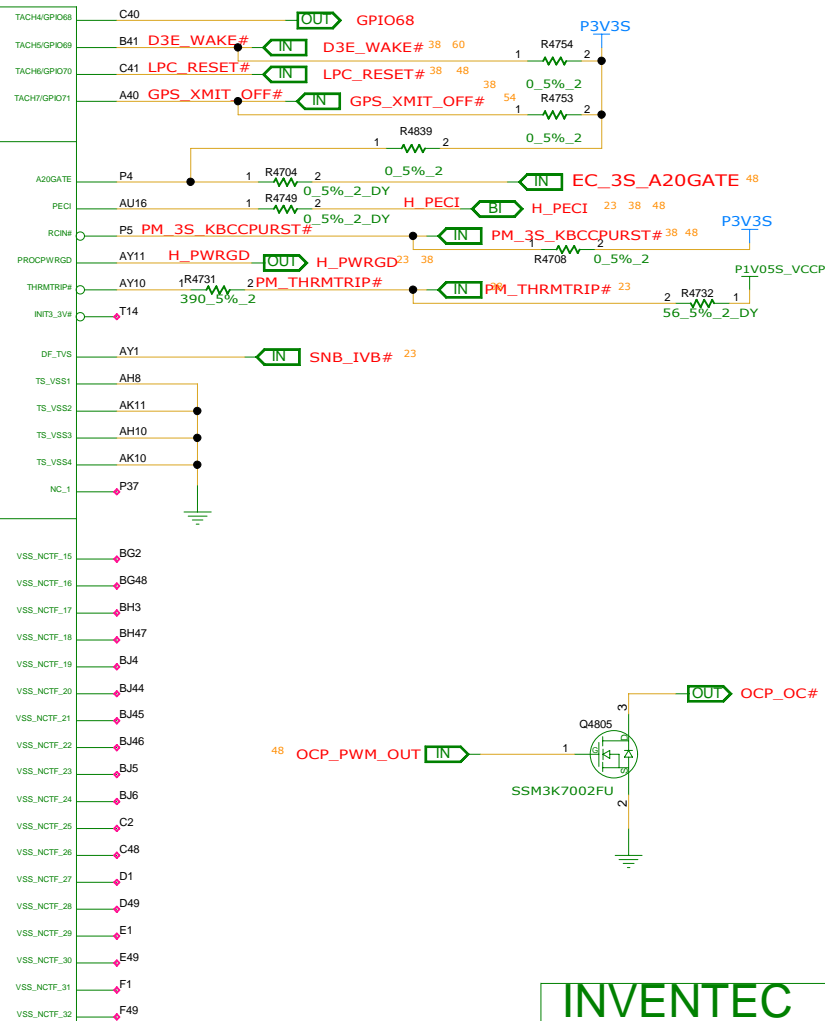
GPIO

CPU/MISC

NCTF



ITL_PANTHERPOINT_FCBGA_989P

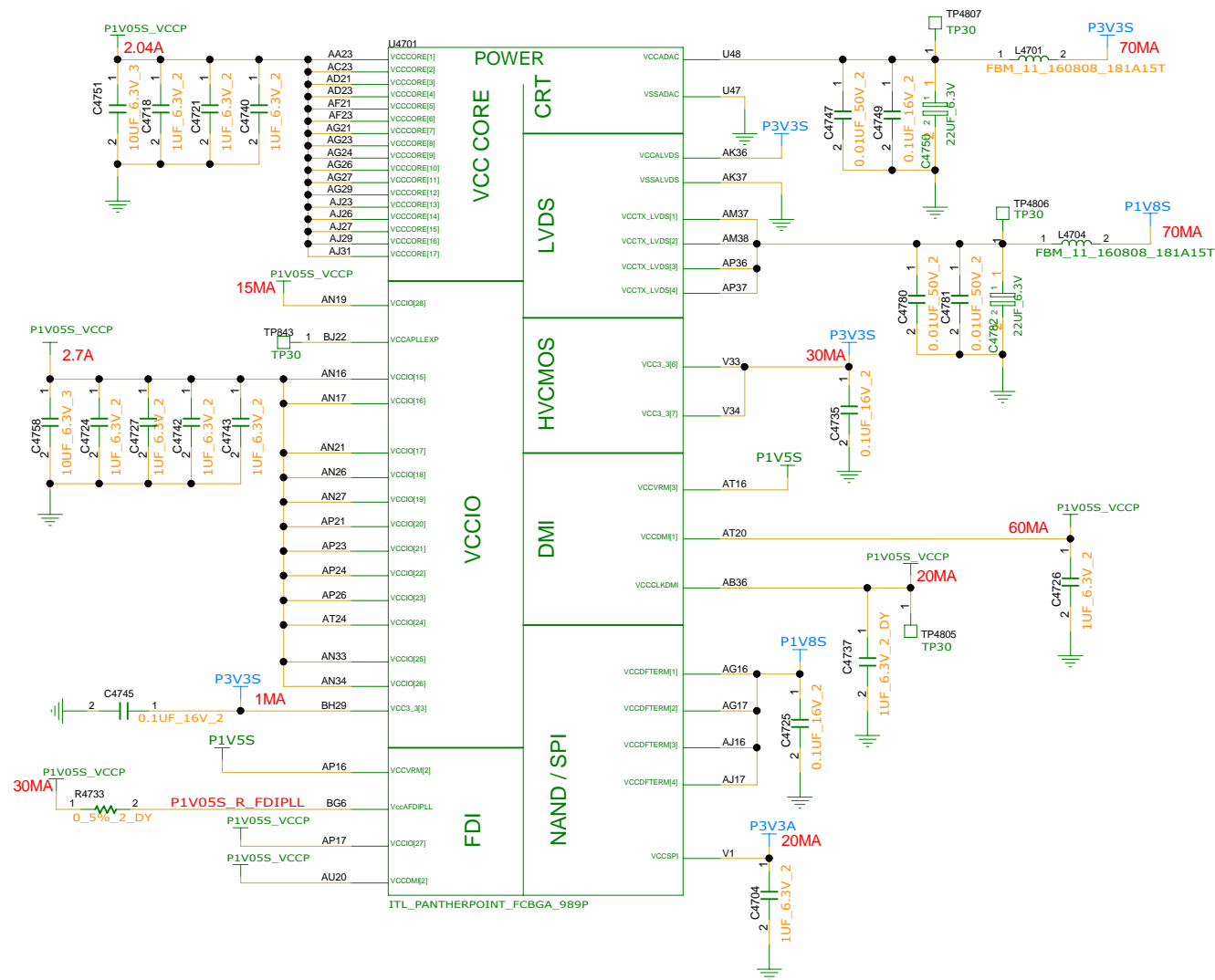


INVENTEC

TITLE			
MODEL PROJECT FUNCTION			
PANTHER POINT_6/9			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxx-0-0	X01

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REFERENCE NUMER : 4700~4949



INVENTEC

TITLE
MODEL PROJECT FUNCTION
PANTHER POINT 7/9

DOC NUMBER
1310xxxx-0-0

REV
X01

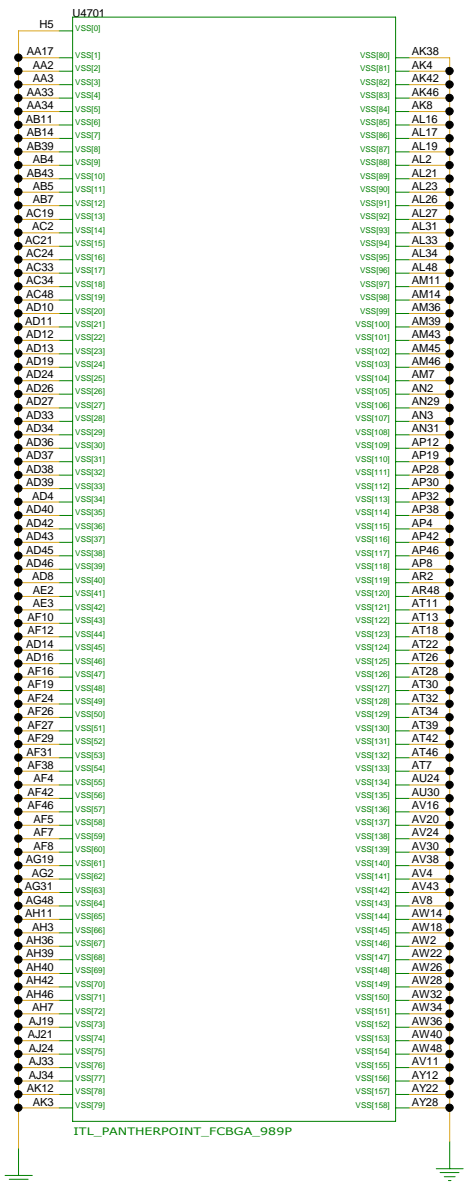
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REFERENCE NUMBER : 4700~4949



INVENTEC

TITLE
MODEL,PROJECT,FUNCTION
PANTHER POINT_3/9

SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
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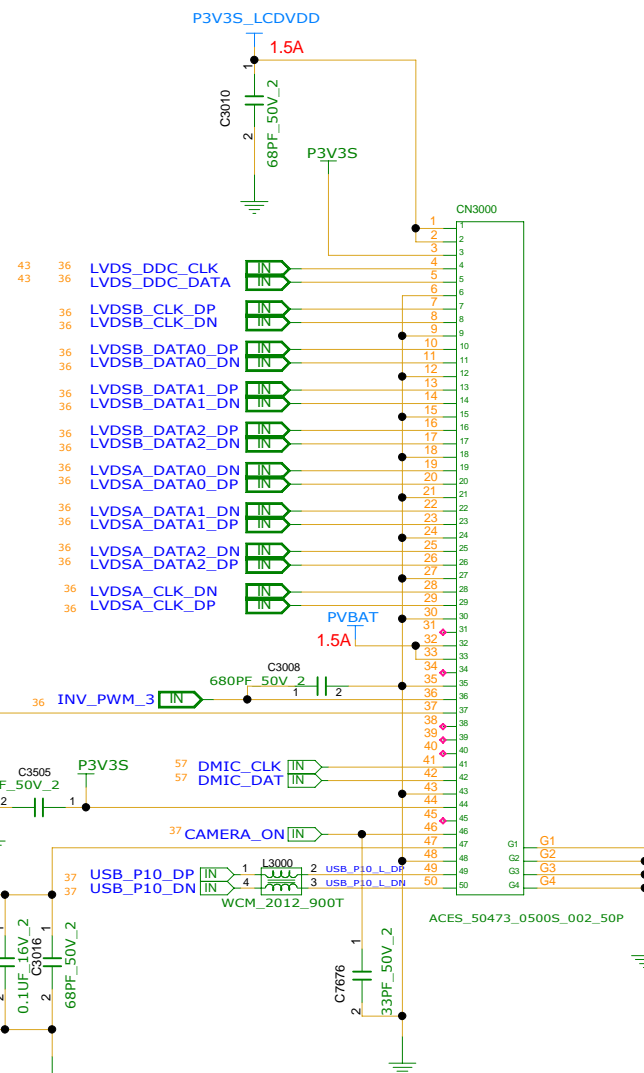


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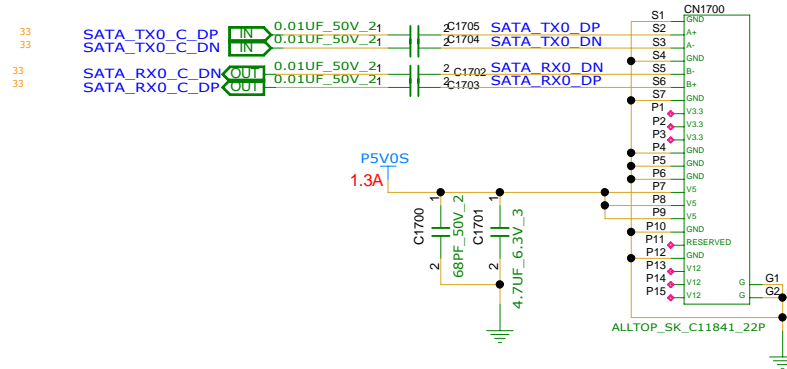


REFERENCE NUMBER:3300~3399

CHANGE by	XXX	DATE	21-OCT-2002
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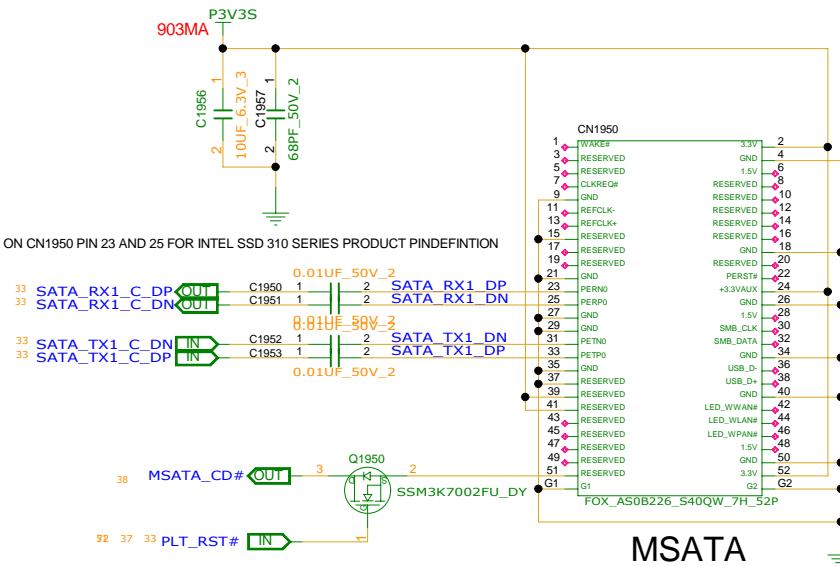
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HDD (CN1700) : P/N 6012B0449501
HDD TRANSFOR CNTR (CN1701) : P/N 6012B0451301

SATA HDD

REFERENCE NUMBER:1700~1749



NOTE : SWAP SATA_RXP2 AND SATA_RXN2 ON CN1950 PIN 23 AND 25 FOR INTEL SSD 310 SERIES PRODUCT PINDEFINTION

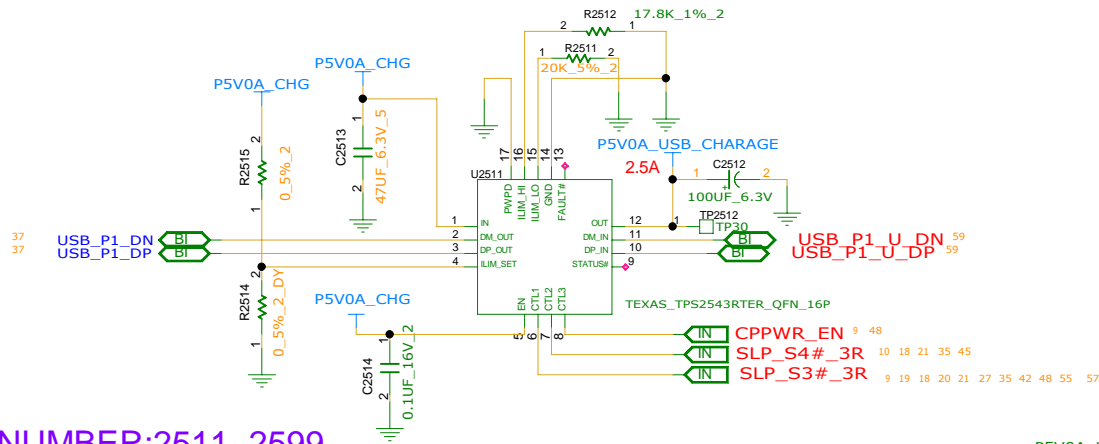
MSATA

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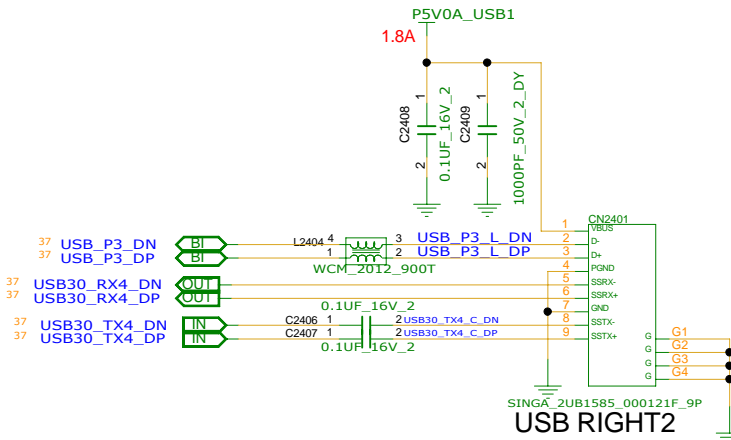
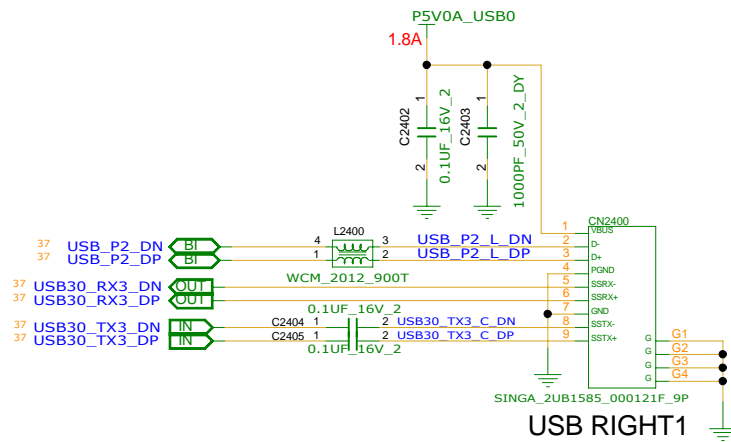
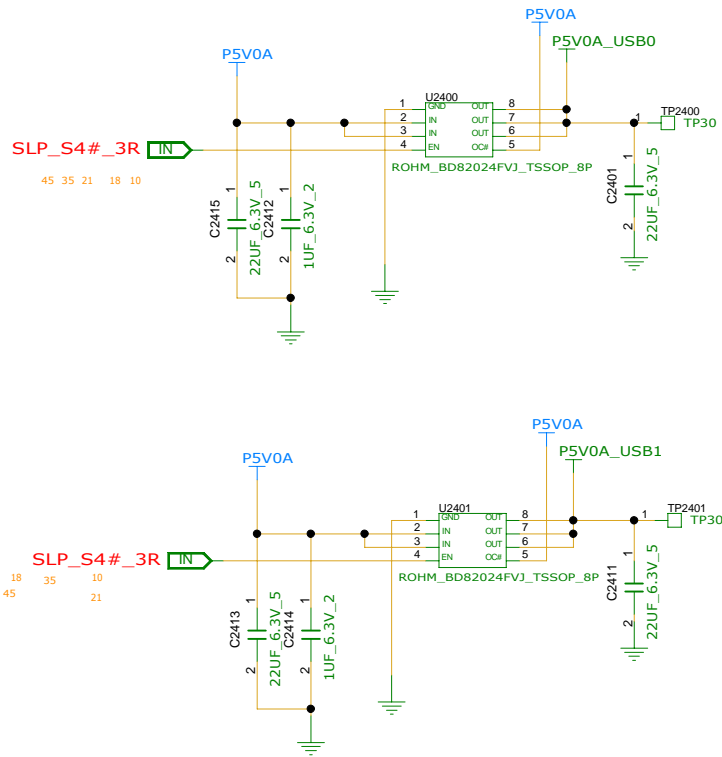
INVENTEC			
TITLE			
MODEL/PROJECT/FUNCTION SATA HDD & M-SATA CNTR			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01

CHANGE by XXX DATE 21-OCT-2002

SHEET 44 of 80



REFERENCE NUMBER:2511~2599



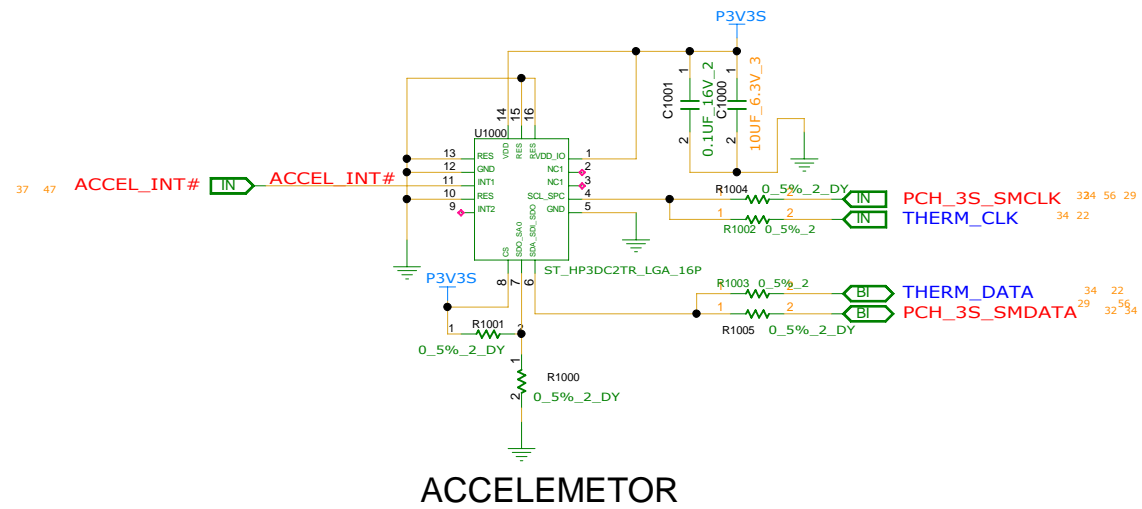
REFERENCE NUMBER:2400~2499

INVENTEC

TITLE			
MODEL PROJECT FUNCTION USB & USB CHARGER			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
SHEET 45 of 80			



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REFERENCE NUMER : 1000~1099

INVENTEC

TITLE			
MODEL PROJECT,FUNCTION ACCELEMATOR			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
SHEET 47 of 80			

D

C

B

A

D

C

B

A

16M ROM SOCKET(CN365):6026B0150101
16M_8P_MICRO N25Q128A13ESEC0F(U365):6019B0988601

SPI BIOS

INVENTEC

TITLE		MODEL,PROJECT,FUNCTION	
KBC & SPI			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
SHEET		48	of 80

A



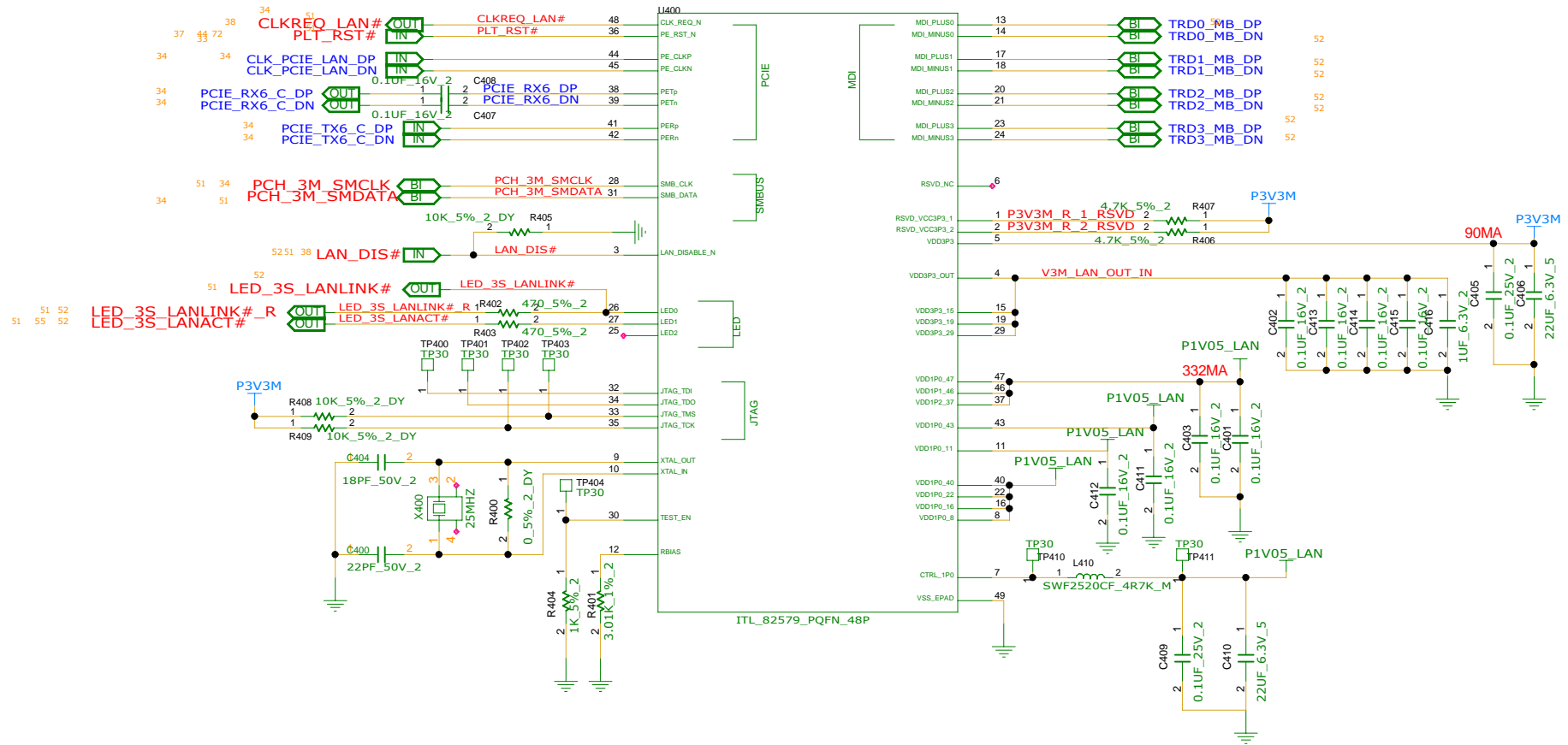


R3507	INSTALL	OPEN
R3508	OPEN	INSTALL
R3509	OPEN	INSTALL
R3510	OPEN	INSTALL
R3511	INSTALL	OPEN
R3512	OPEN	INSTALL
R3513	OPEN	INSTALL
R3514	INSTALL	OPEN
X3500	OPEN	INSTALL
C3507	OPEN	INSTALL
C3508	OPEN	INSTALL

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SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
SHEET 50 of 80			

REFERENCE NUMER : 400~469



INVENTEC

TITLE
MODEL,PROJECT,FUNCTION

DOC NUMBER
1310xxxx-0-0

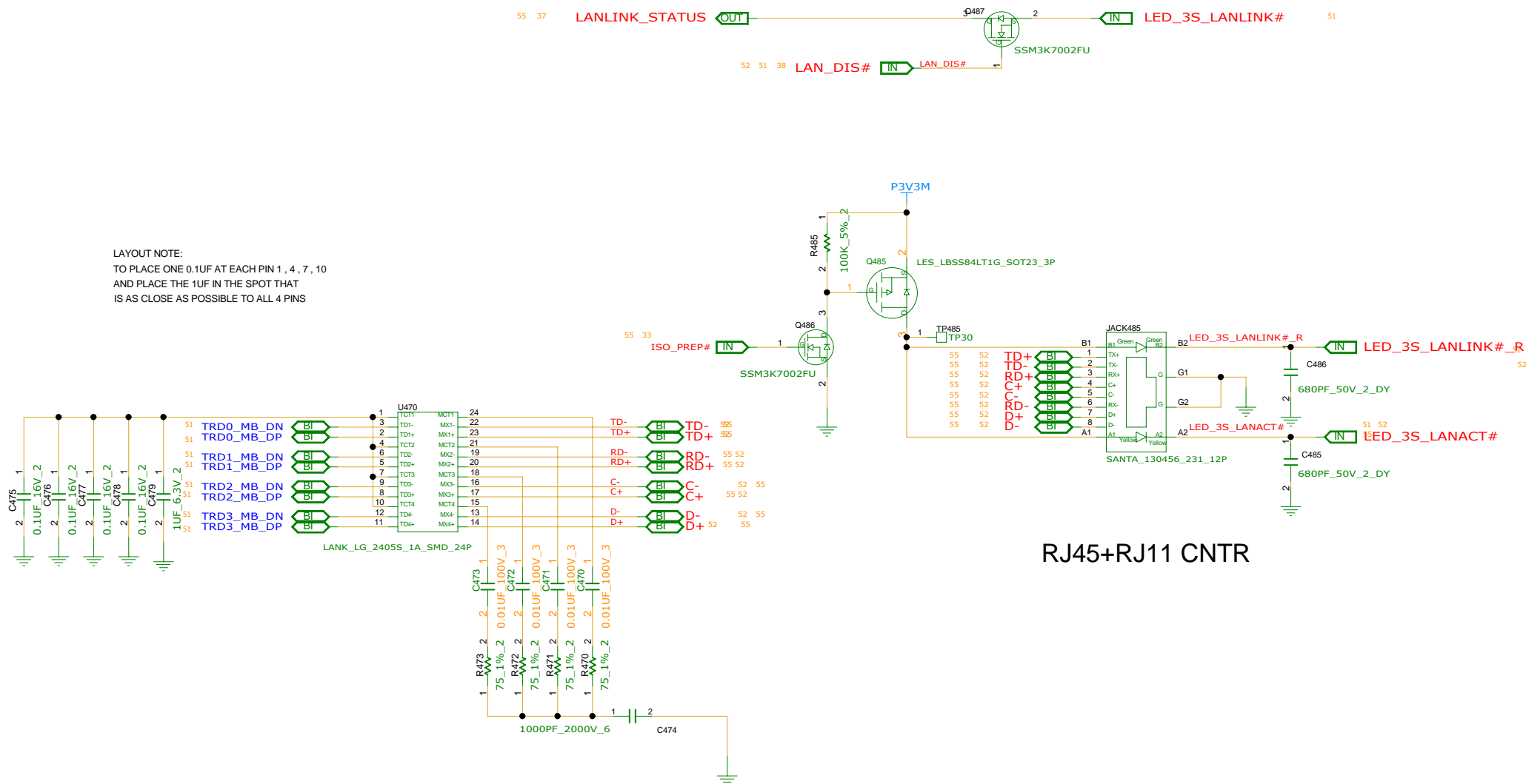
REV
X01

CHANGE by XXX DATE 21-OCT-2002

SHEET 51 of 80

REFERENCE NUMER : 470~499

LAYOUT NOTE:
TO PLACE ONE 0.1UF AT EACH PIN 1 , 4 , 7 , 10
AND PLACE THE 1UF IN THE SPOT THAT
IS AS CLOSE AS POSSIBLE TO ALL 4 PINS



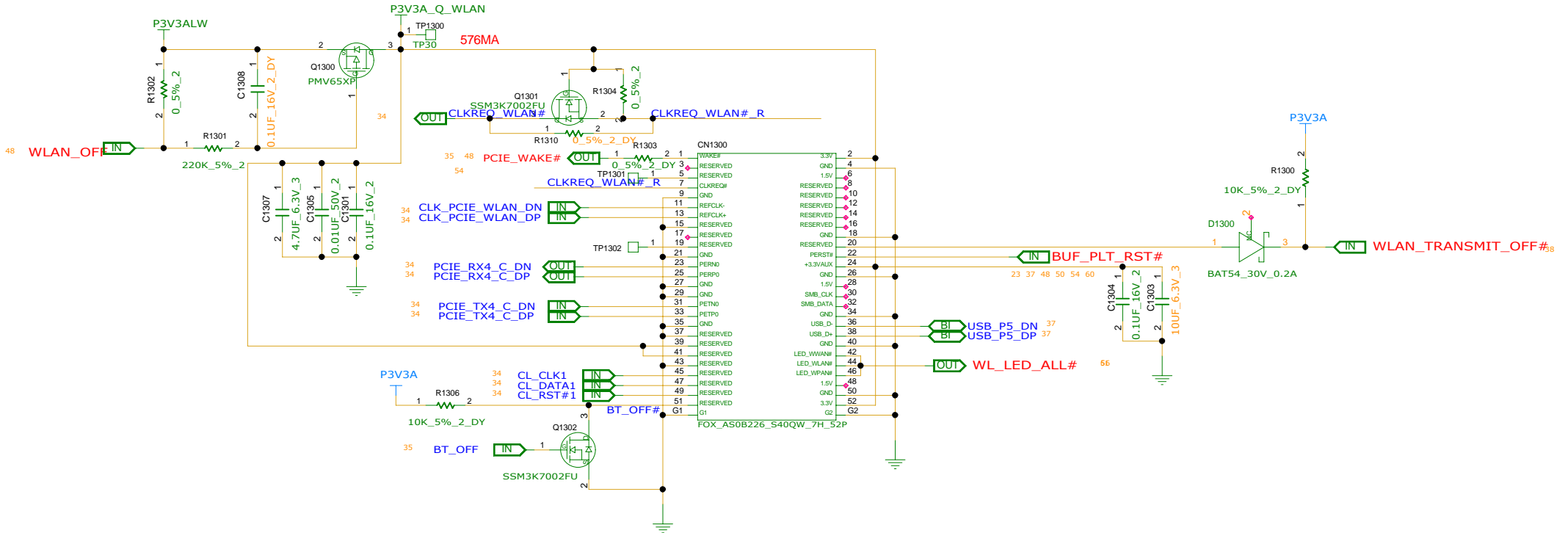
RJ45+RJ11 CNTR

INVENTEC

TITLE
MODEL PROJECT,FUNCTION
LAN RJ45+RJ11 CNTRSIZE
A3
CODE
CS
DOC NUMBER
1310xxxxx-0-0
REV
X01

SHEET 52 of 80

CHANGE by XXX DATE 21-OCT-2002



WLAN

REFERENCE NUMBER:1300~1349

INVENTEC

TITLE
MODEL,PROJECT,FUNCTION

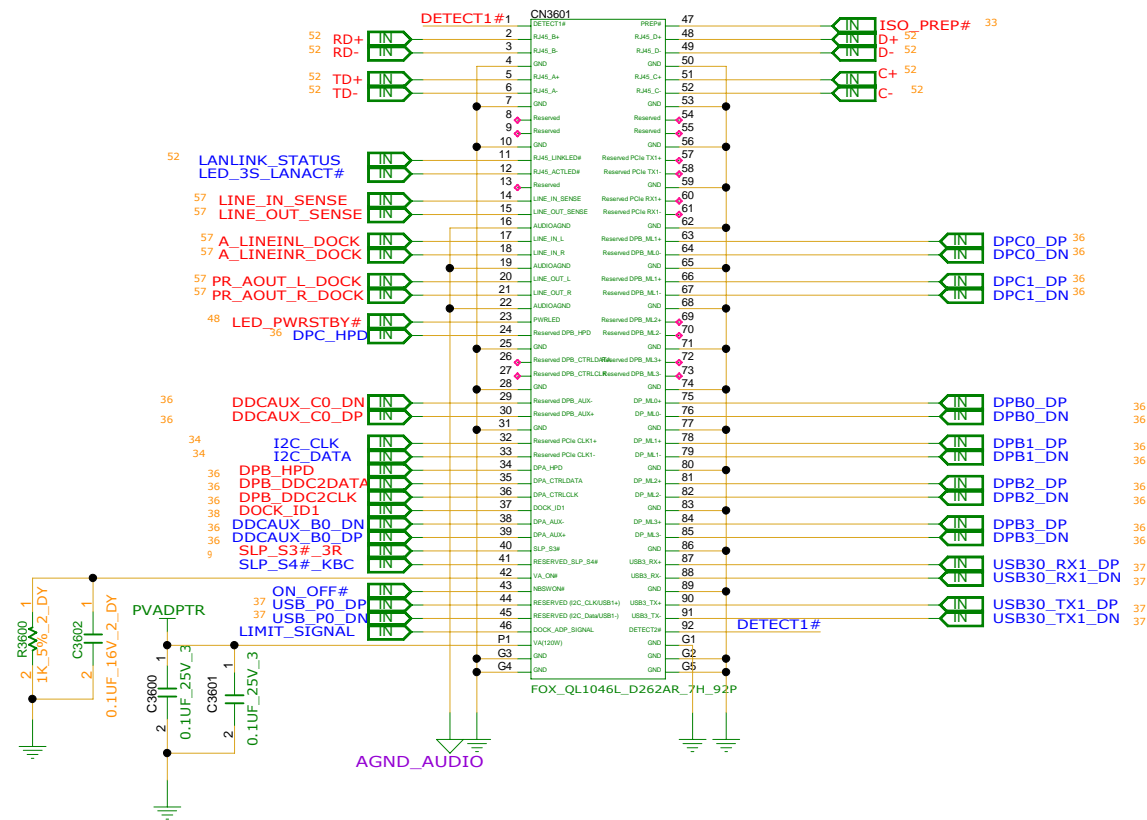
SIZE A3 CODE CS DOC NUMBER 1310xxxx-0-0 REV X01

SHEET 53 of 80

CHANGE by XXX DATE 21-OCT-2002



CHANGE by	XXX	DATE	21-OCT-2002
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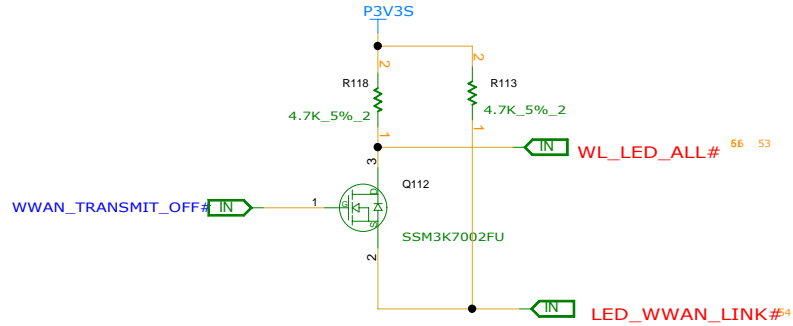


INVENTEC

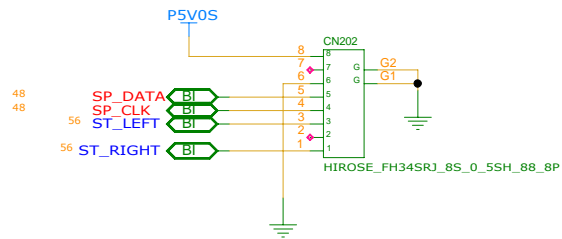
TITLE MODEL PROJECT,FUNCTION

SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
SHEET 55 of 80			

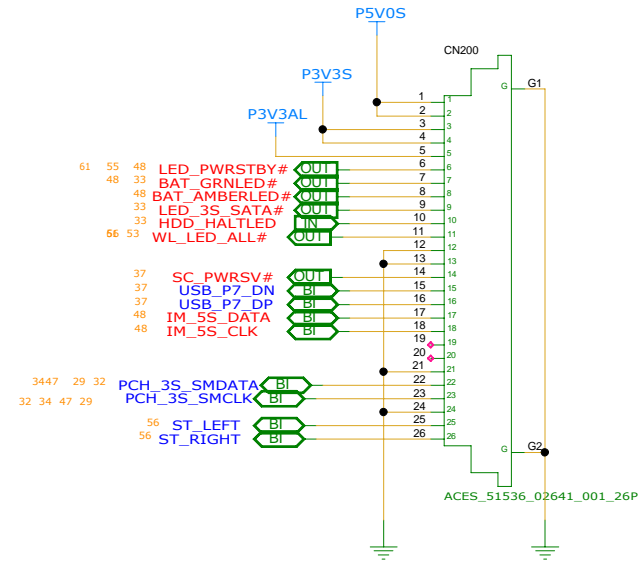
CHANGE by XXX DATE 21-OCT-2002



WLAN_WWAN_BLUETOOTH_LED



POINT STICK

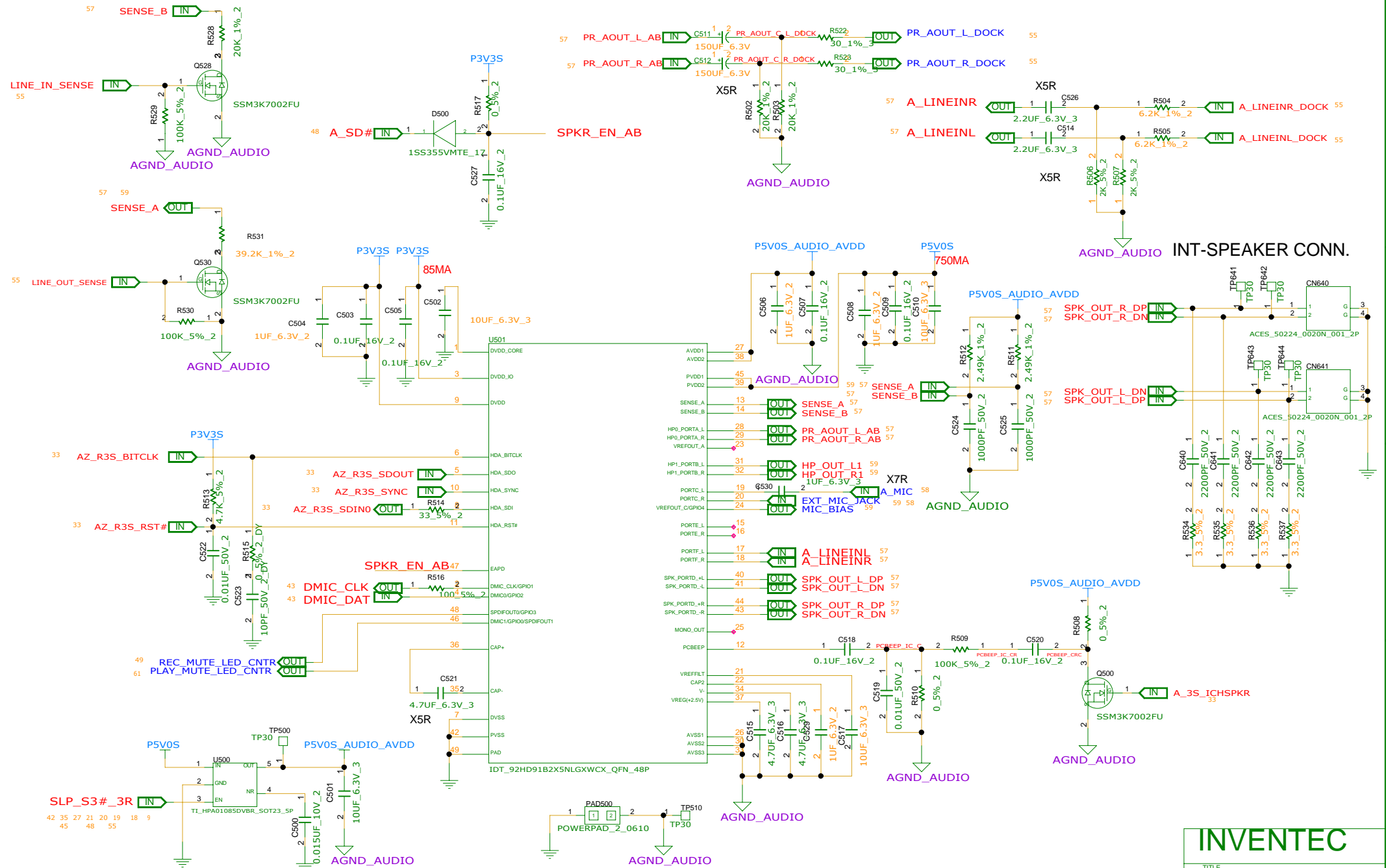


SMART CARD

INVENTEC

REFERENCE NUMBER:100~199

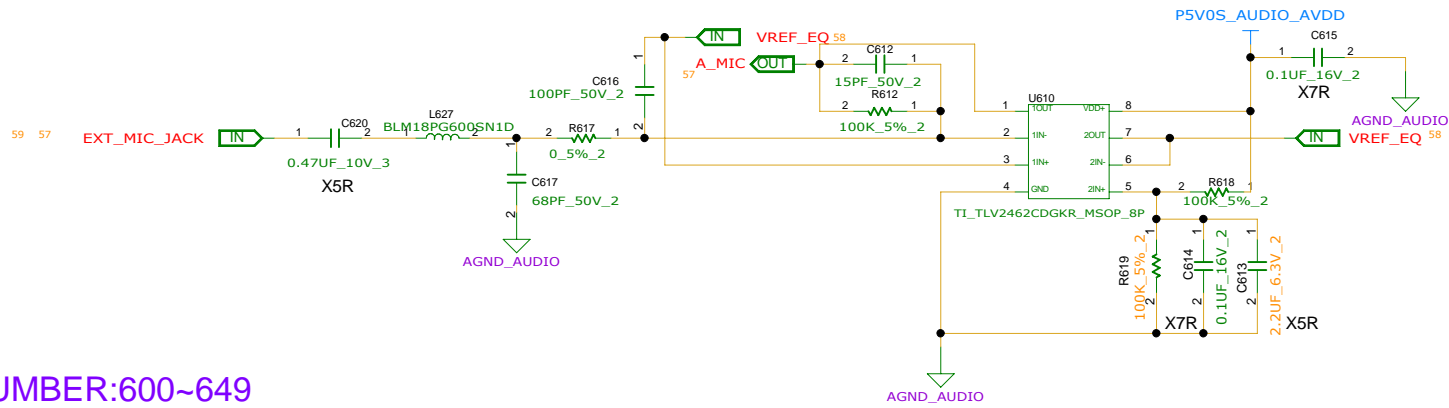
TITLE			
MODEL PROJECT FUNCTION STICK POINT & B2B CNTR			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
SHEET 56 of 80			



REFERENCE NUMBER:500~549

INVENTEC			
TITLE			
MODEL PROJECT,FUNCTION			
AUDIO CODEC			
SIZE	CODE	DOC NUMBER	REV
A4	CS	1310xxxxx-0-0	X01
SHEET 57 of 80			

REFERENCE NUMBER:600~649



INVENTEC

TITLE
MODEL,PROJECT,FUNCTION
EXT. MIC AMPLIFIER

SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
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CHANGE by XXX DATE 21-OCT-2002

SHEET 58 of 80



USB CHARGER



TITLE _____

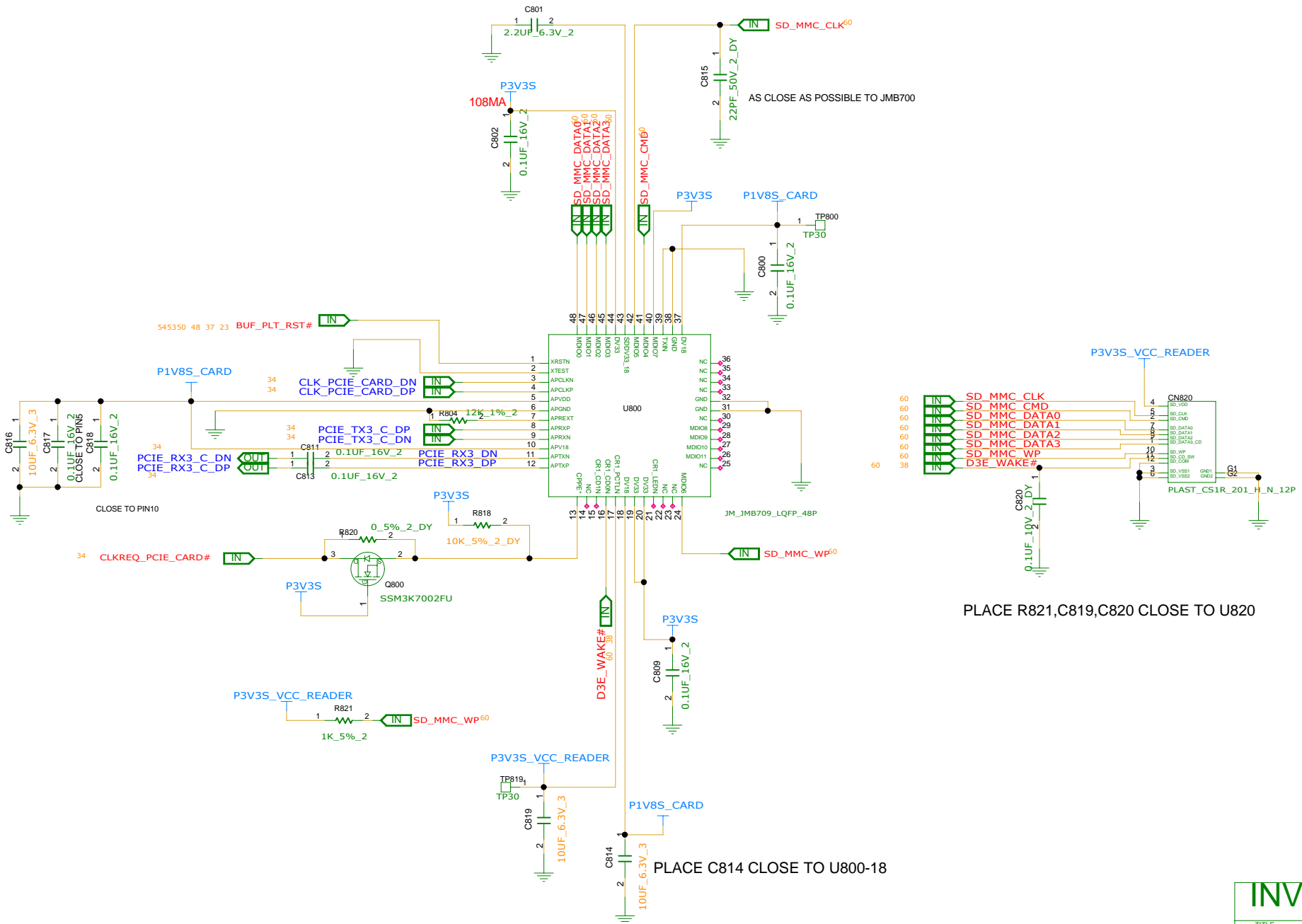
MODEL,PROJECT,FUNCTION	AUDI JACK & USB3.0(LEFT)	DE

SIZE	CODE	DOC.NUMBER 1310xxxxx-0-0	REV X01
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A3 CS 15100000 0 0 702

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	99	99
	1	



PLACE R821,C819,C820 CLOSE TO U820

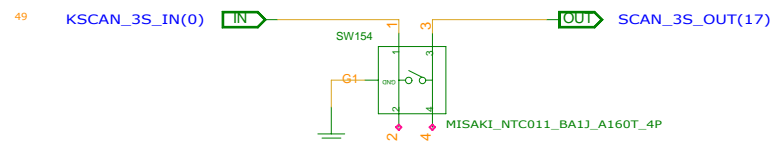
PLACE C814 CLOSE TO U800-18

REFERENCE NUMBER:800~899

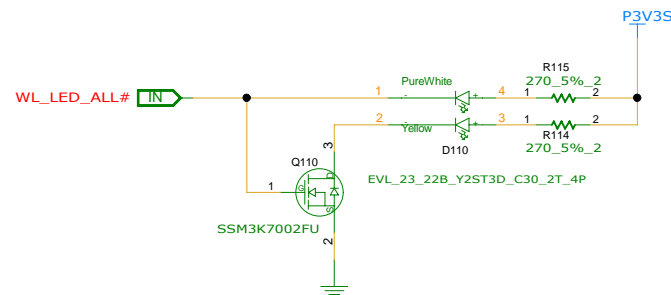
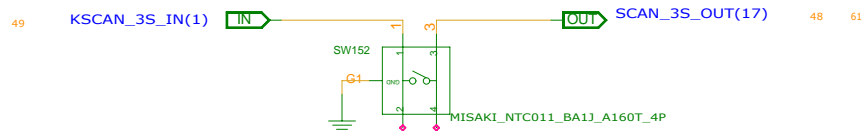
INVENTEC

TITLE			
MODEL PROJECT,FUNCTION			
CARD READER			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxxx-0-0	X01
SHEET 60 of 80			

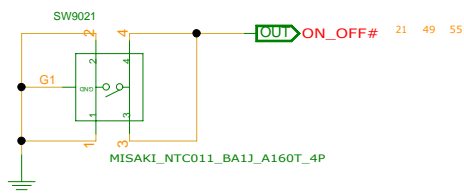
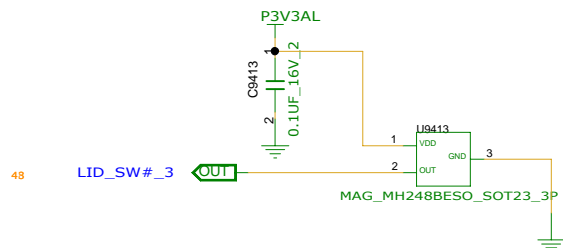
MUTE BUTTON



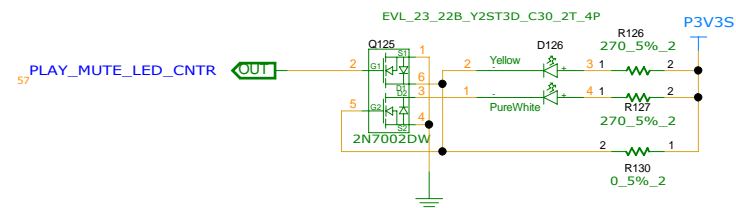
WIRELESS BOTTOM



WIRELESS/BLUETOOTH LED



POWER SWITCH



MUTE LED

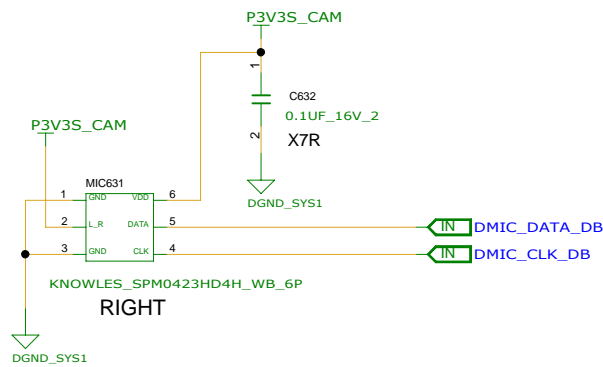
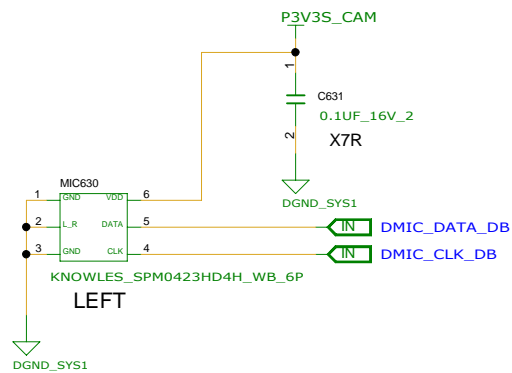
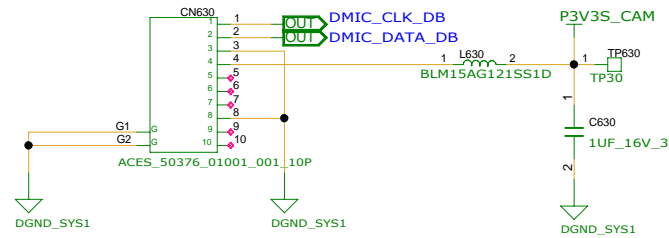
INVENTEC

TITLE
MODEL PROJECT,FUNCTION

SIZE CODE DOC NUMBER REV
A3 CS 1310xxxx-0-0 X01

CHANGE by XXX DATE 21-OCT-2002

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REFERENCE NUMBER:630-639
MIC DOUGHTER BOARD

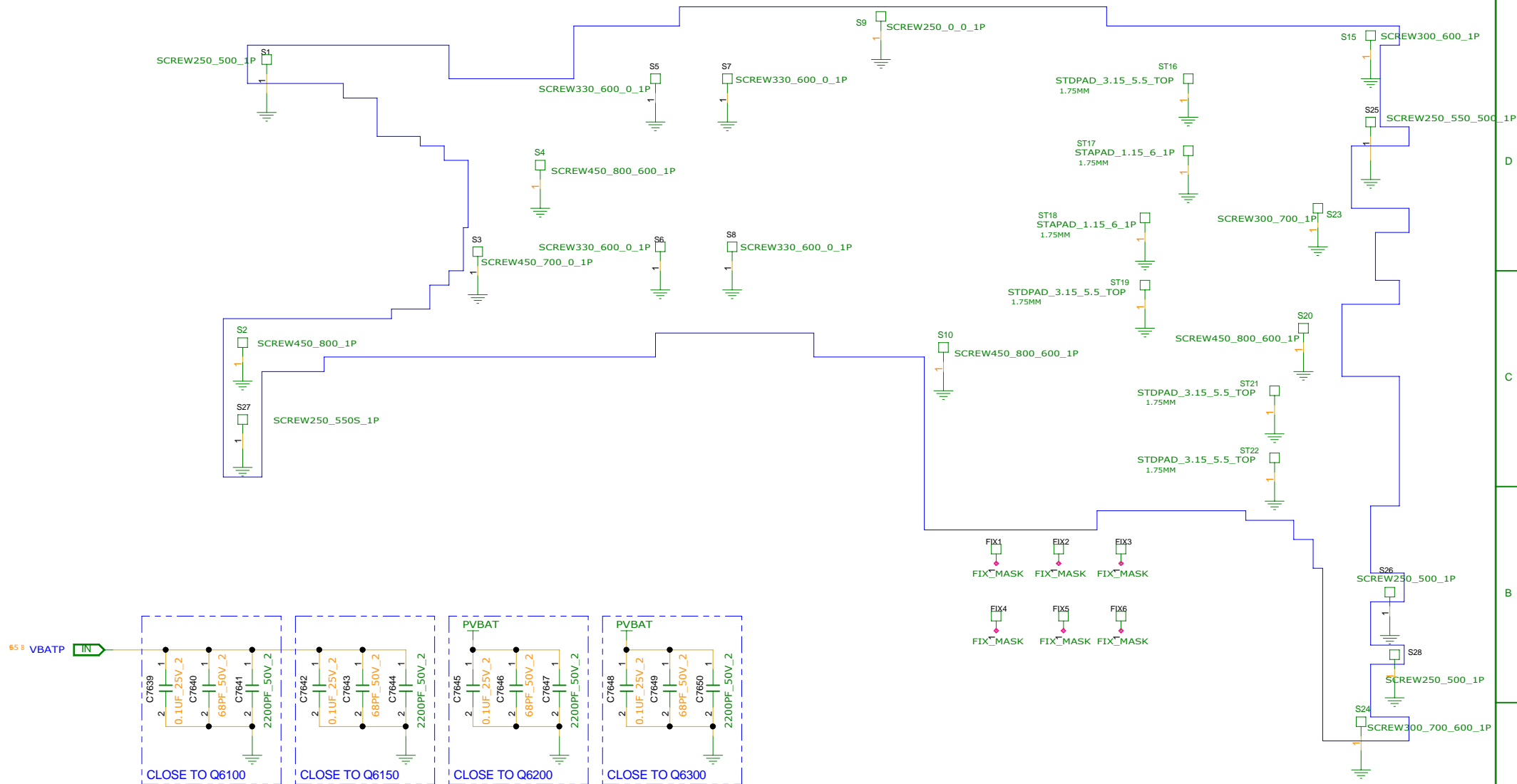
FIX630
FIX_MASK_0.8

FIX631
FIX_MASK_0.8

FIX632
FIX_MASK_0.8

INVENTEC			
TITLE			
MODEL PROJECT,FUNCTION			
MIC DB			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxxx-0-0	X01
SHEET 63 of 80			

CHANGE by XXX DATE 21-OCT-2002

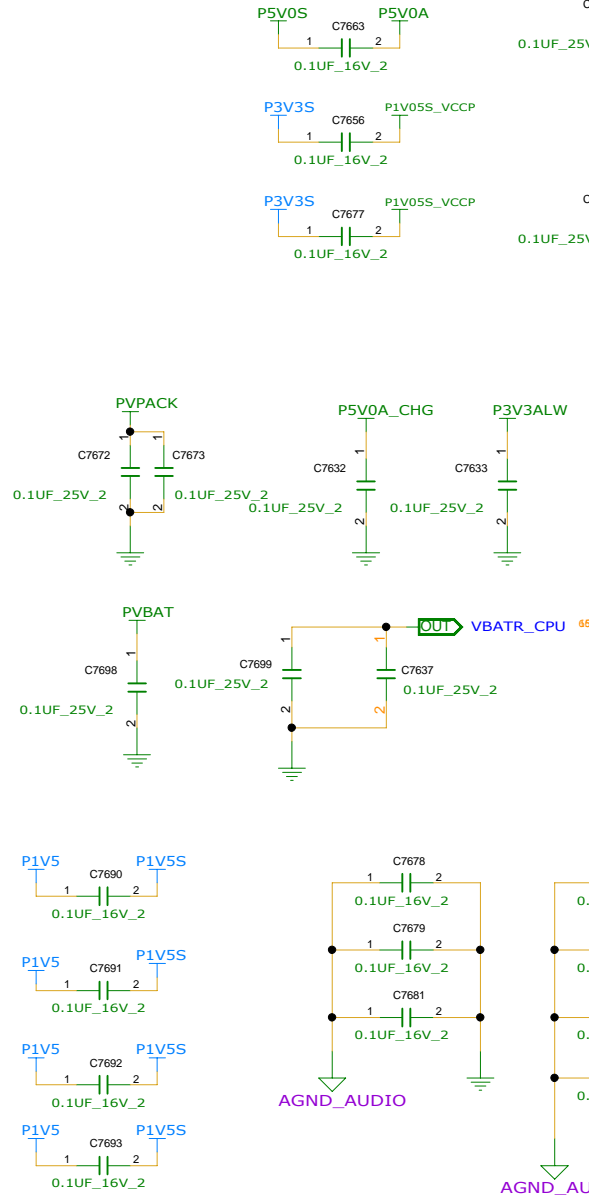
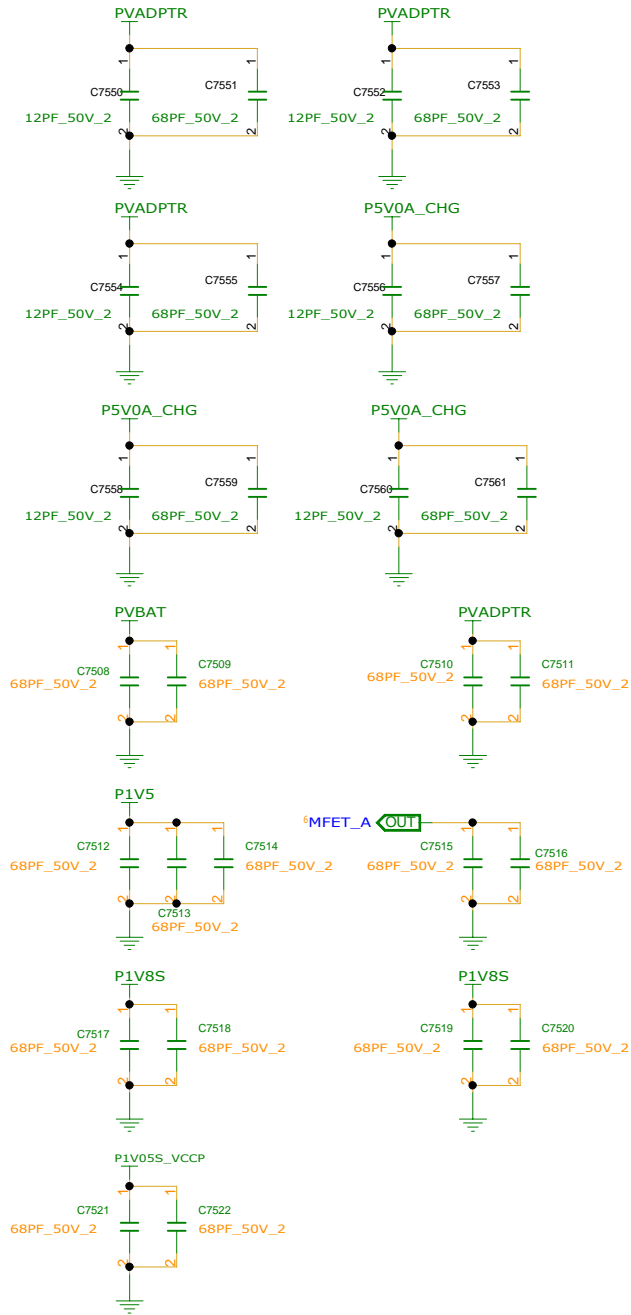


INVENTEC

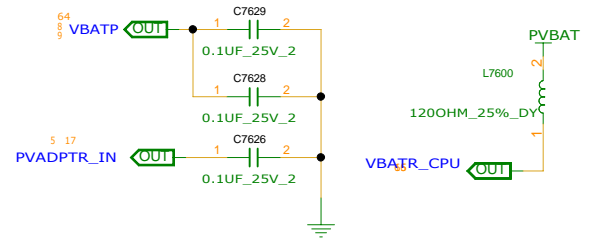
TITLE
MODEL PROJECT,FUNCTION
SCREW

SIZE A3	CODE CS	DOC NUMBER 1310xxxx-0-0	REV X01
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CHANGE by XXX DATE 21-OCT-2002 SHEET 64 of 80

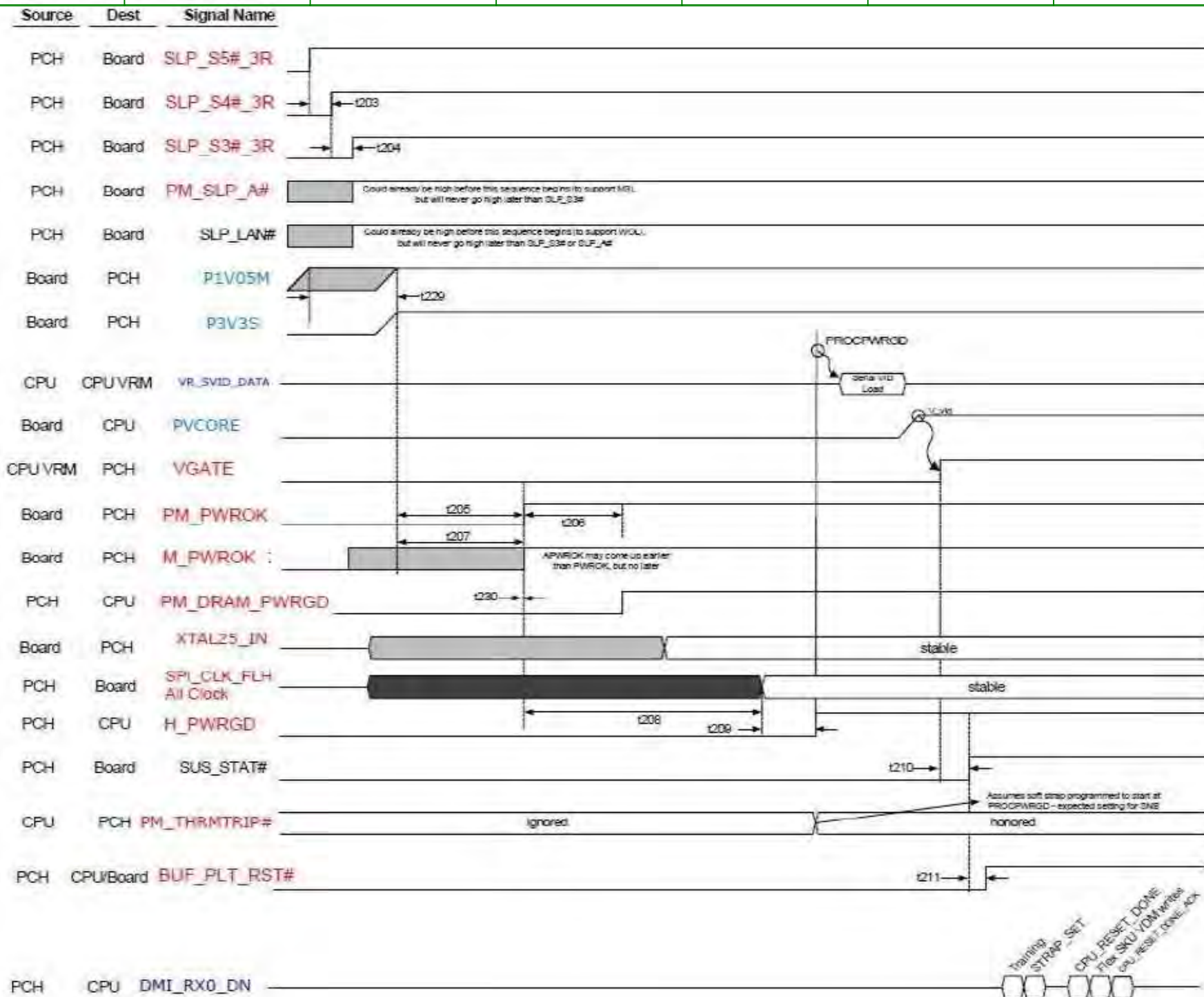


EMI SOLUTION



INVENTEC

TITLE			
MODEL PROJECT FUNCTION			
EMI & RF SOLUTION			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxxx-0-0	X01
SHEET 65 of 80			

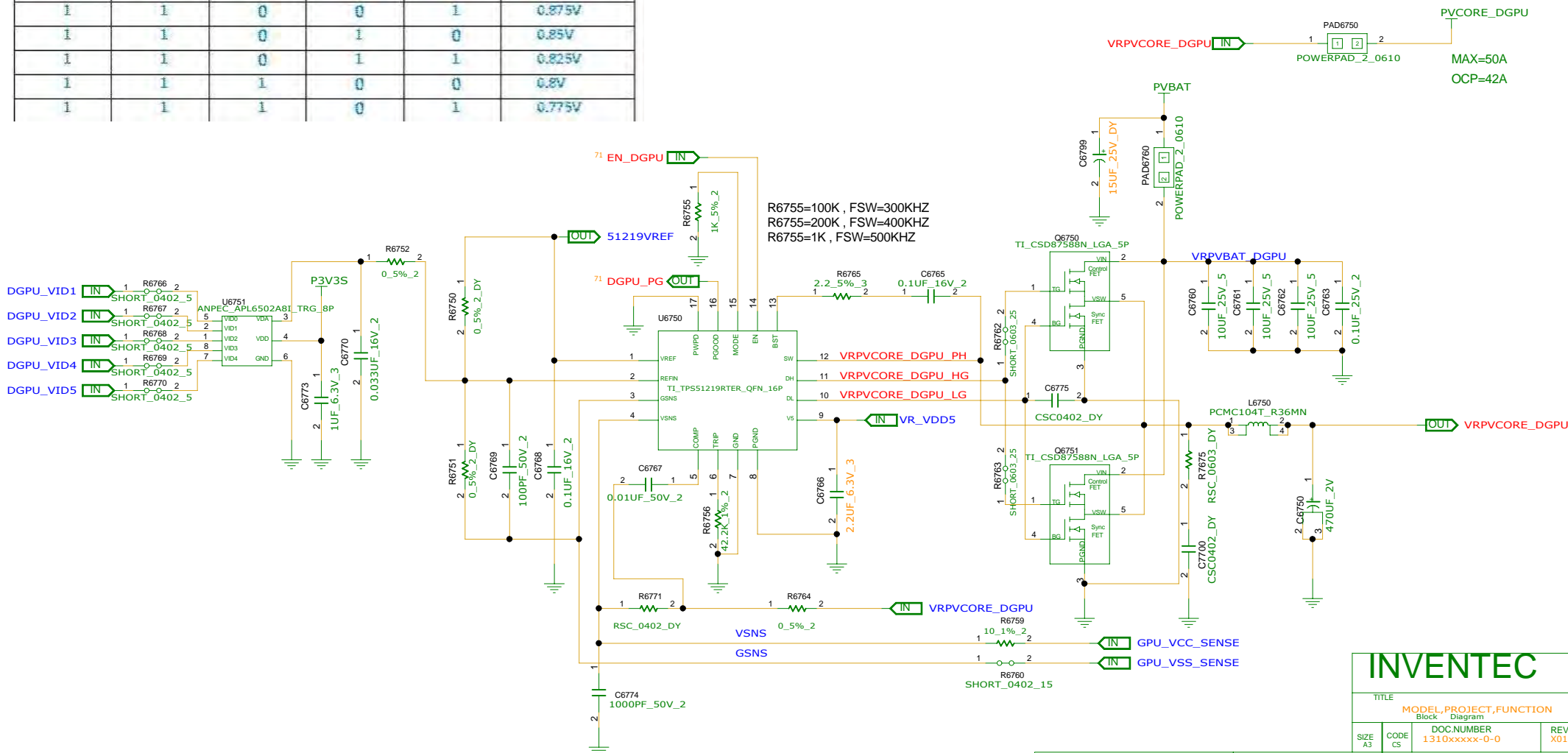


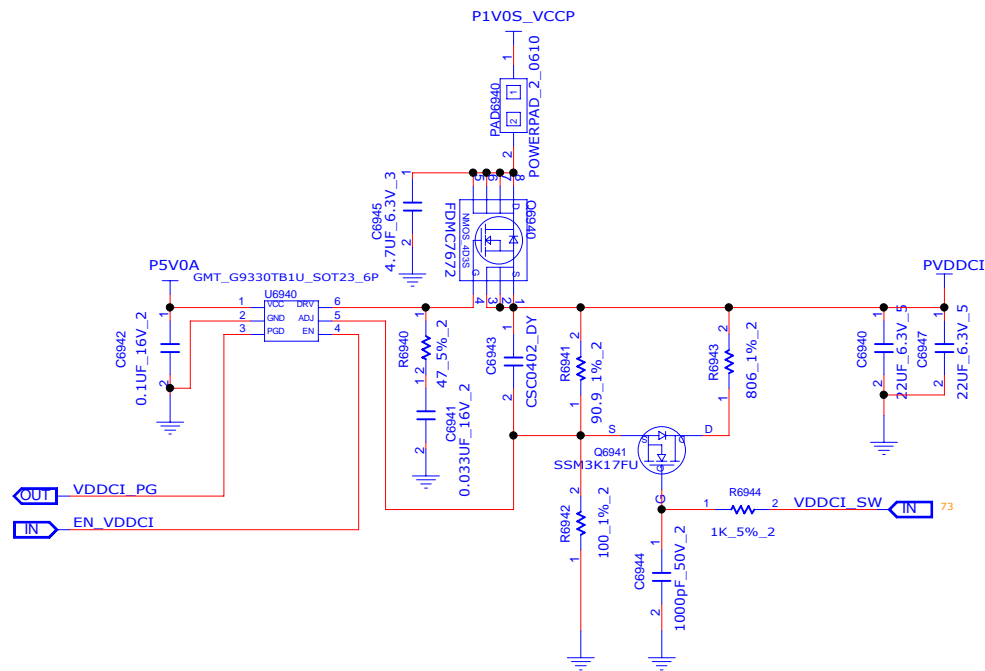
NVENTEC

TITLE		
MODEL PROJECT FUNCTION SYSTEM SEQUENCE		
CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
SHEET 66 of 80		

GPU_VID5 GPIO_10	GPU_VID4 GPIO_14	GPU_VID3 GPIO_15	GPU_VID2 GPIO_16	GPU_VID1 GPIO_20	Core Voltage Level
0	1	1	1	1	1.125V
1	0	0	0	0	1.1V
1	0	0	0	1	1.075V
1	0	0	1	0	1.05V
1	0	0	1	1	1.025V
1	0	1	0	0	1.0V
1	0	1	0	1	0.975V
1	0	1	1	0	0.95V
1	0	1	1	1	0.925V
1	1	0	0	0	0.9V
1	1	0	0	1	0.875V
1	1	0	1	0	0.85V
1	1	0	1	1	0.825V
1	1	1	0	0	0.8V
1	1	1	0	1	0.775V

	C6762	C6752	L6750	Q6751	R6756
17W	OPEN	OPEN	ETQP4LR36AFM 6014B0164501	OPEN	80.6K_1% 6013A0072901
25W	install	install	PCMC104T-R36MN 6014B0024003	install	42.2K_1% 6013A0017701

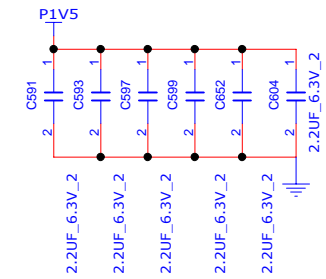
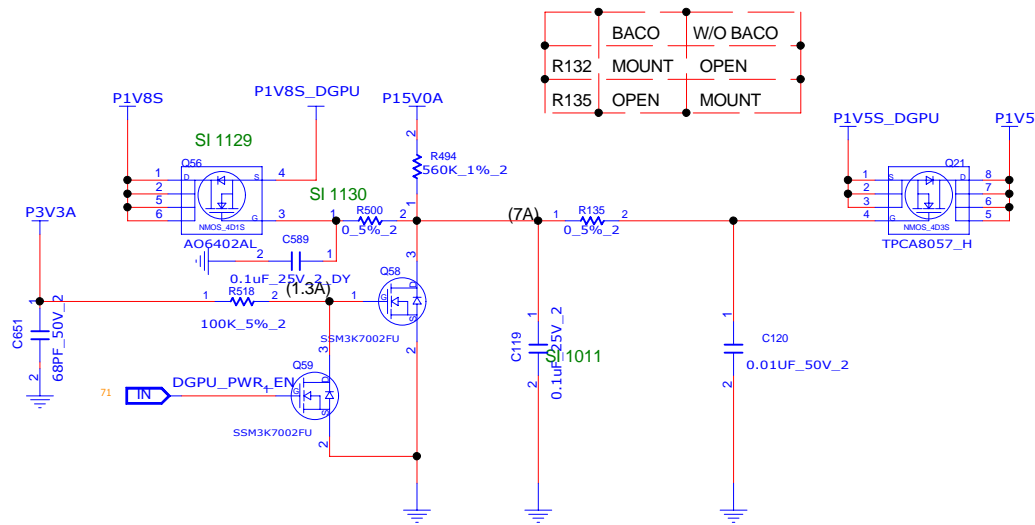




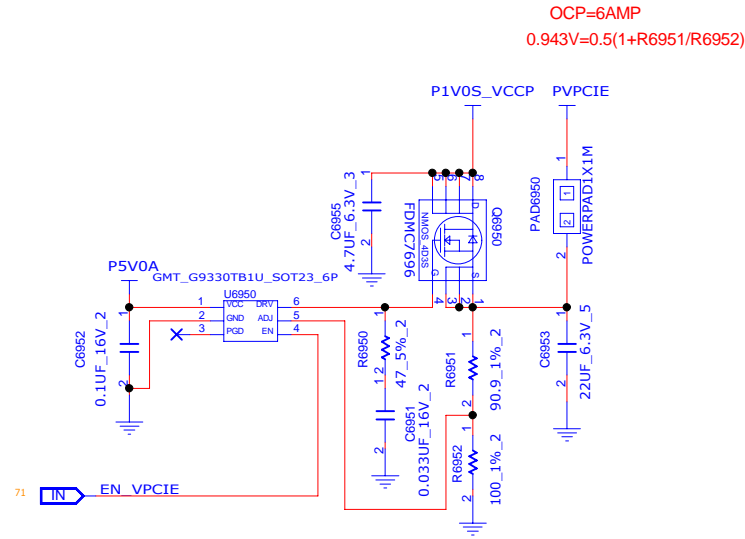
OCP=8AMP
 HIGH : 0.908V = 0.5 [1 + ((R6941//R6943) / R6942)]
 LOW : 0.954V=0.5 (1+ R6941/R6942)

INVENTEC

TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01

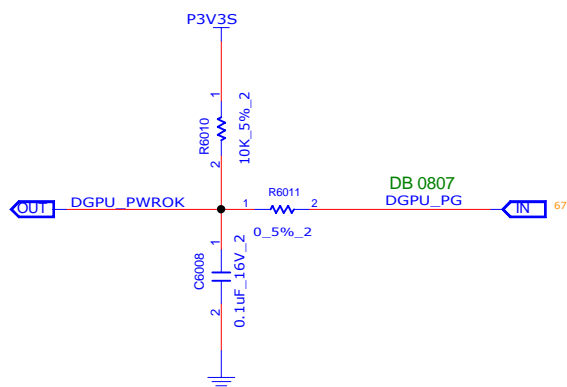


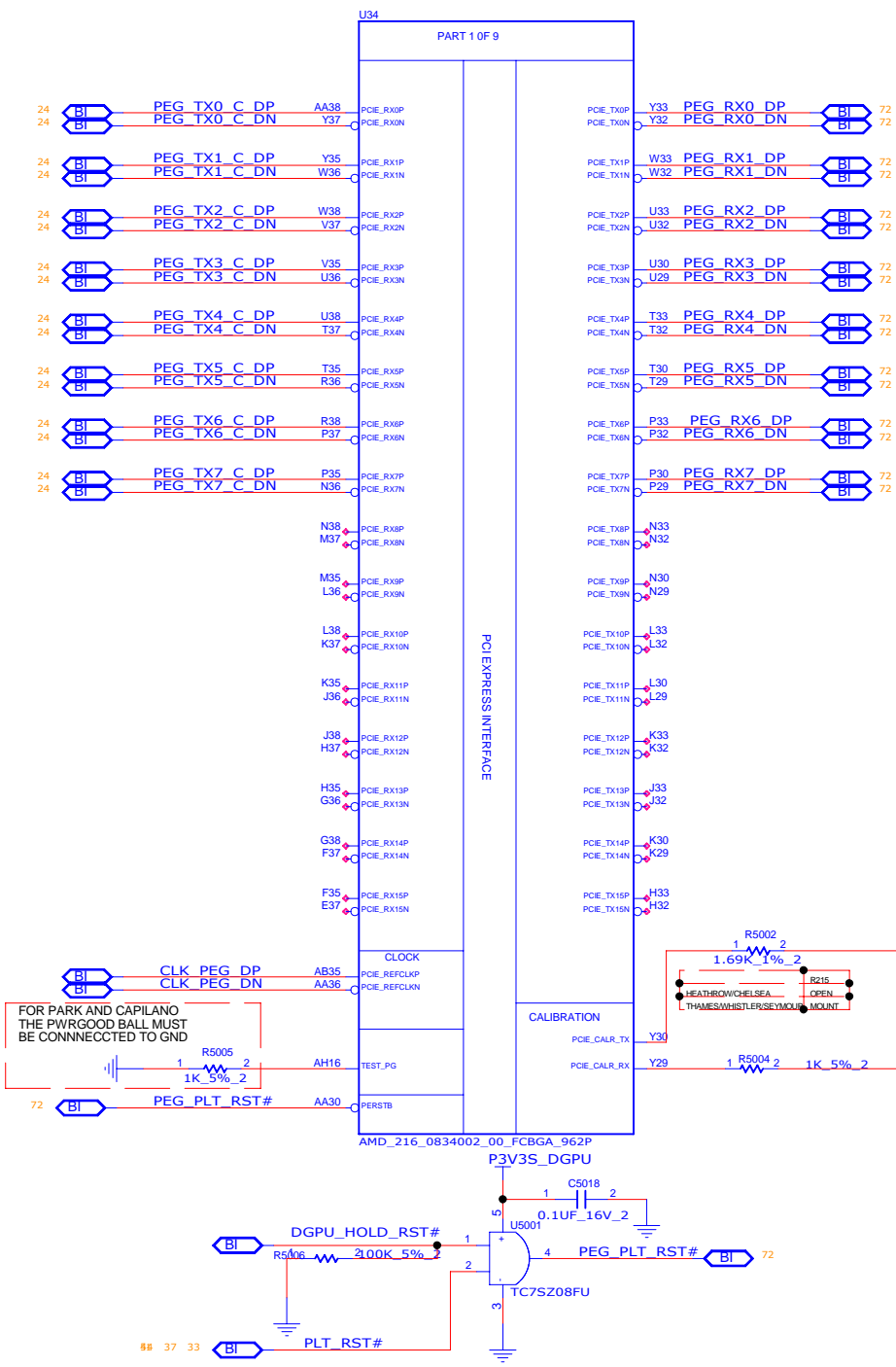
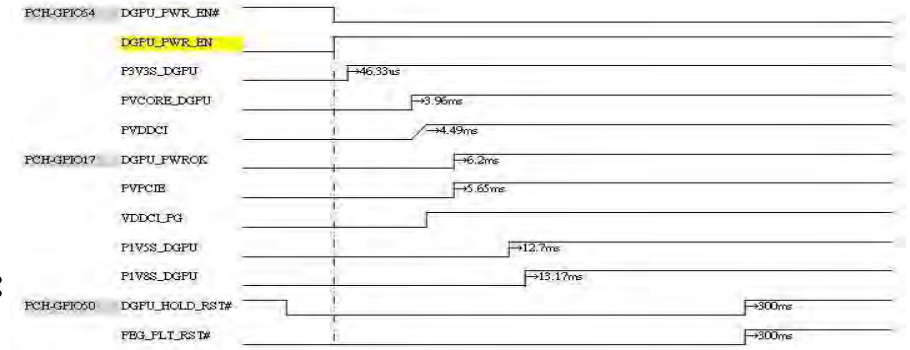
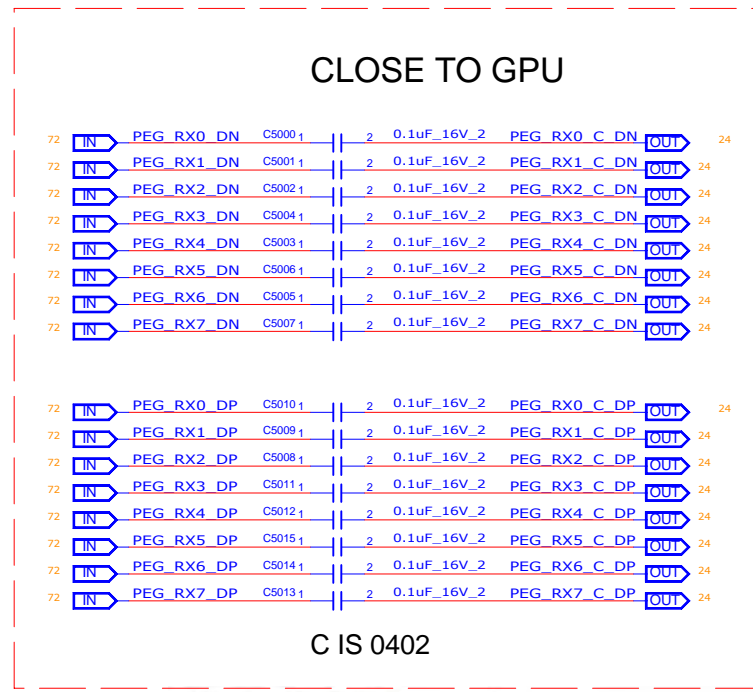
INVENTEC			
TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxxx-0-0	X01
SHEET 69 of 80			



INVENTEC

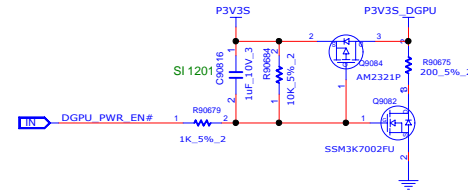
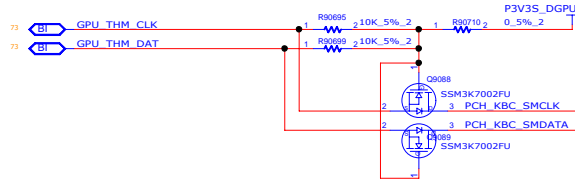
TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxxx-0-0	X01



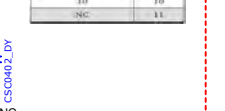
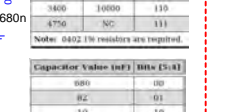
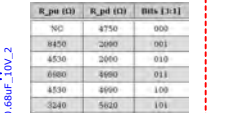
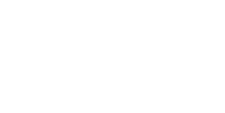
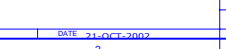
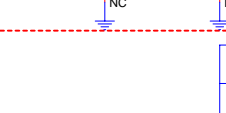
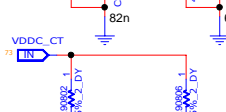
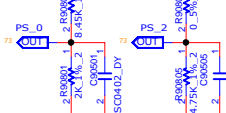
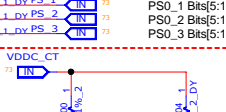
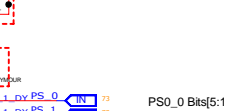
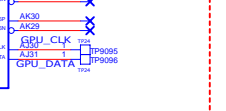
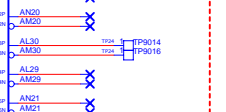
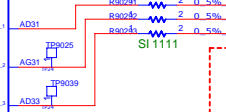
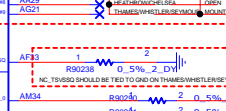
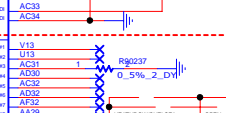
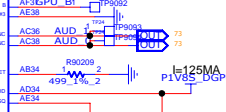
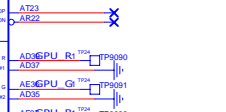
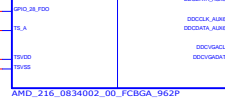
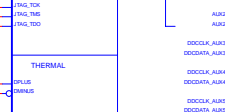
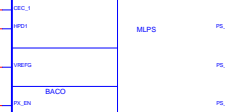
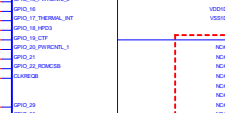
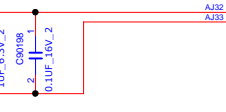
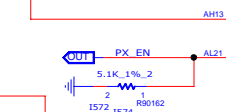
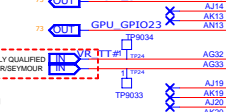
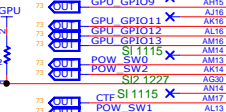
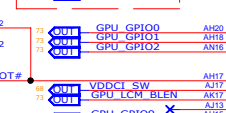
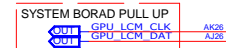
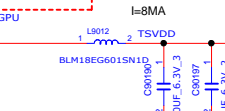
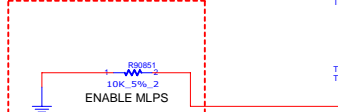
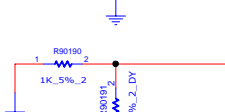
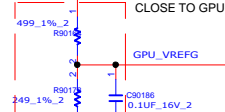
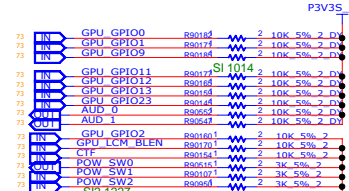


INVENTEC			
TITLE			
MODEL,PROJECT,FUNCTION			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
SHEET 72 of 80			

MEM_ID3 (R514)	MEM_ID2 (R507)	MEM_ID1 (R510)	MEM_ID0 (R497)	VENDOR	Die Ver	IEC P/N
0	0	0	0	SAMSUNG(2GB) (K4G20325FC-HC04)	C	6019B0842201
0	0	0	1	SAMSUNG(2GB) (K4G20325FD-FC04) MV NEW	D	6019B0971801
0	0	1	0	HYNIX (2GB)(DEFAULT) (H5GQ2240MR-T2C) MV NEW	VEGA	6019B0843001
0	0	1	1	HYNIX (2GB) (H5GQ2240MR-T2C) MV NEW	A	6019B0971701
0	1	0	0	ELPIDA (2GB) NONE	NONE	NONE

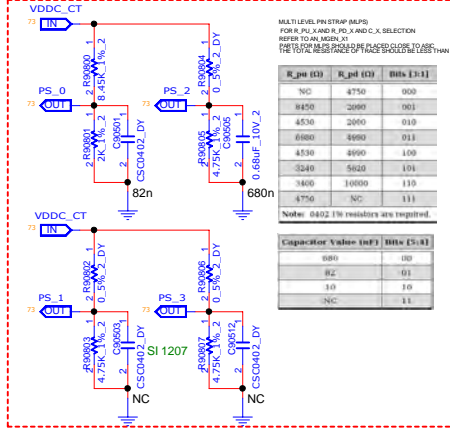


GPIO_13	GPIO_12	GPIO_11	MEMORY APERTURE SIZE
0	0	1	2GB / 1GB (DEFAULT)
1	1	0	RESERVED



THAMES/WHISTLER/SEYMOUR ONLY
DO NOT INSTALL FOR HEATHROW/CHELSEA
NC, TSVDV SHOULD BE TIED TO GND ON THAMES/WHISTLER/SEYMOUR
PS_0 SHOULD BE TIED TO GND ON THAMES/WHISTLER/SEYMOUR

PS0_0 Bits[5:1]: 11|001
PS0_1 Bits[5:1]: 11|000
PS0_2 Bits[5:1]: 00|000
PS0_3 Bits[5:1]: 11|000



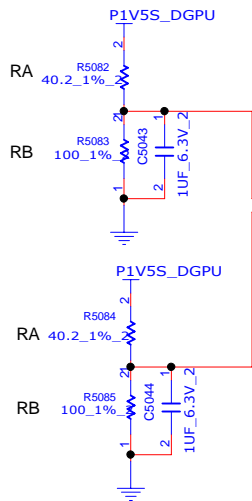
INVENTEC

MODEL/PROJECT/FUNCTION	REV
GPU-2	X01

CHANNEL A

DDR3/GDDR3MEMORY STUFF OPTION

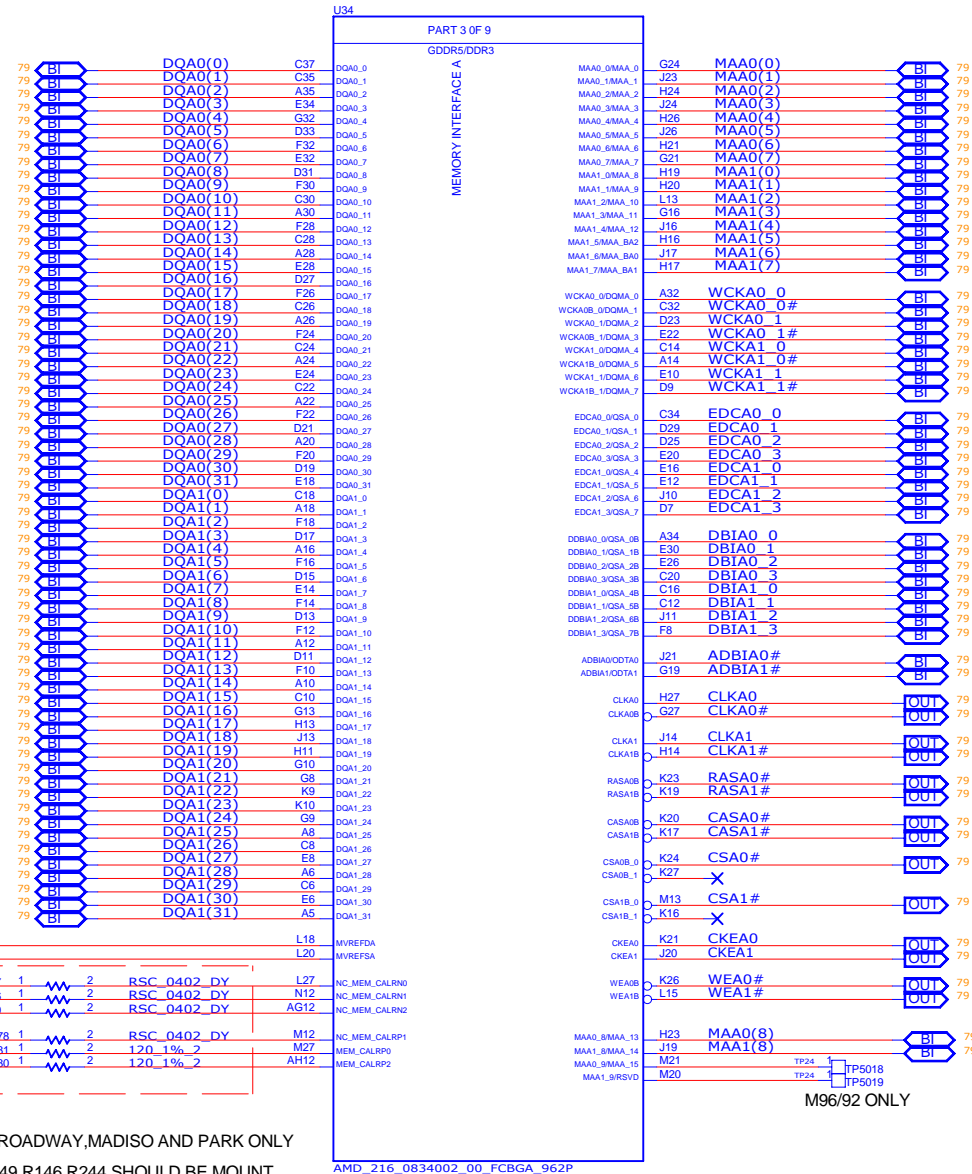
	GDDR5	GDDR3	DDR3
MVDDQ	1.5V	1.8V/1.5V	1.5V
RA	40.2R	40.2R	40.2R
RB	100R	100R	100R



MVREFDA_GPU
MVREFSA_GPU

P1V55_DGPU

FOR M97,BROADWAY,MADISO AND PARK ONLY
IF R258,R249,R146,R244 SHOULD BE MOUNT,
P/N 6013A0087806 (243OHM,1%)



INVENTEC

TITLE
MODEL PROJECT,FUNCTION

SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxx-0-0	X01

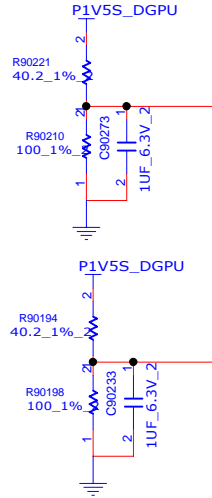
CHANGE by XXX DATE 21-OCT-2002

SHEET 74 of 80

CHANNEL B

DDR3/GDDR3MEMORY STUFF OPTION

	GDDR5	GDDR3	DDR3
MVDDQ	1.5V	1.8V/1.5V	1.5V
RA	40.2R	40.2R	40.2R
RB	100R	100R	100R



MVREFDB_GPU

MVREFSB_GPU

U34 PART 4 OF 9

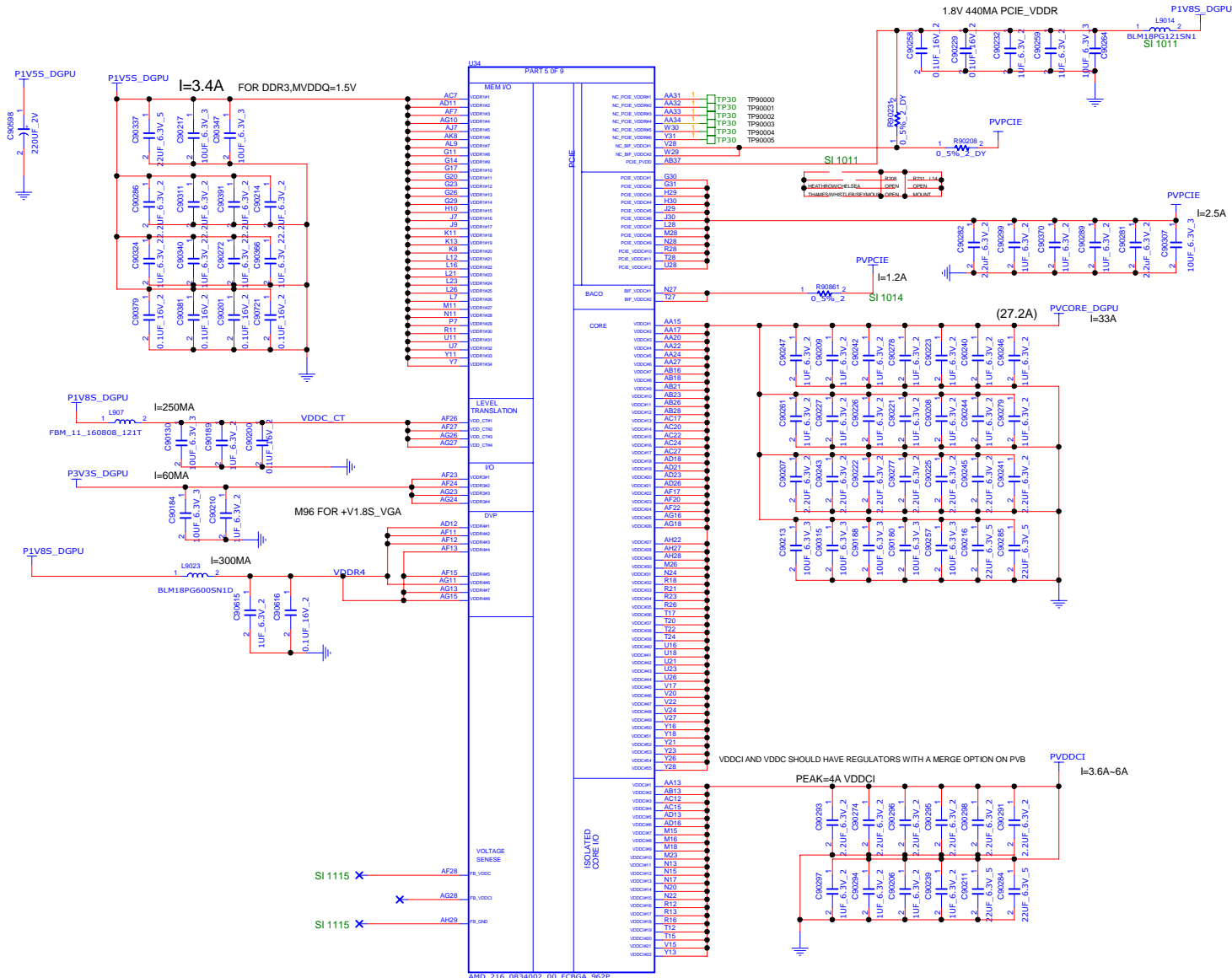


AMD_216_0834002_00_FCBGA_962P

Place all these components vry close to GPU (Within 25mm)
and keep all component close to each other (within 5mm) except Rser2
** This basic topology should be used for DDR3/GDDR3/GDDR5
These Capacitors and Resistor values are an example only.
The Series R and || Cap values will depend on the DRAM load and will have to be
calculated for different Memory , DRAM Load and board to pass Reset Signal Spec.

INVENTEC

TITLE MODEL,PROJECT,FUNCTION			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01



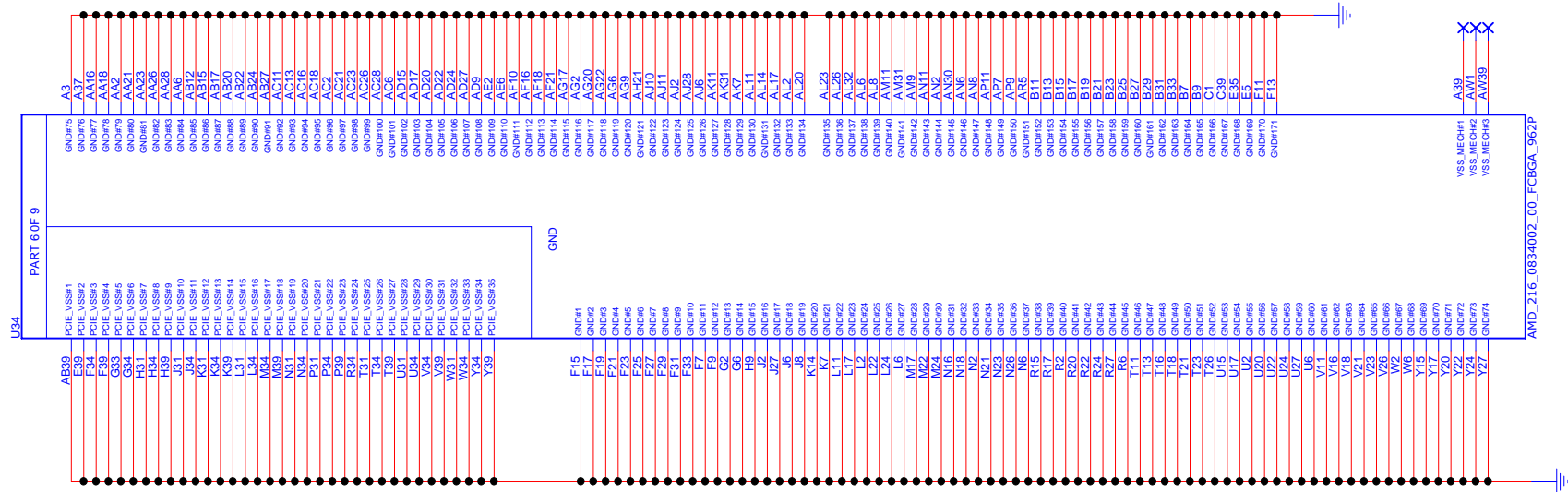
INVENTEC

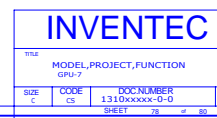
TITLE
MODEL,PROJECT,FUNCTION

SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
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SHEET 77 of 80

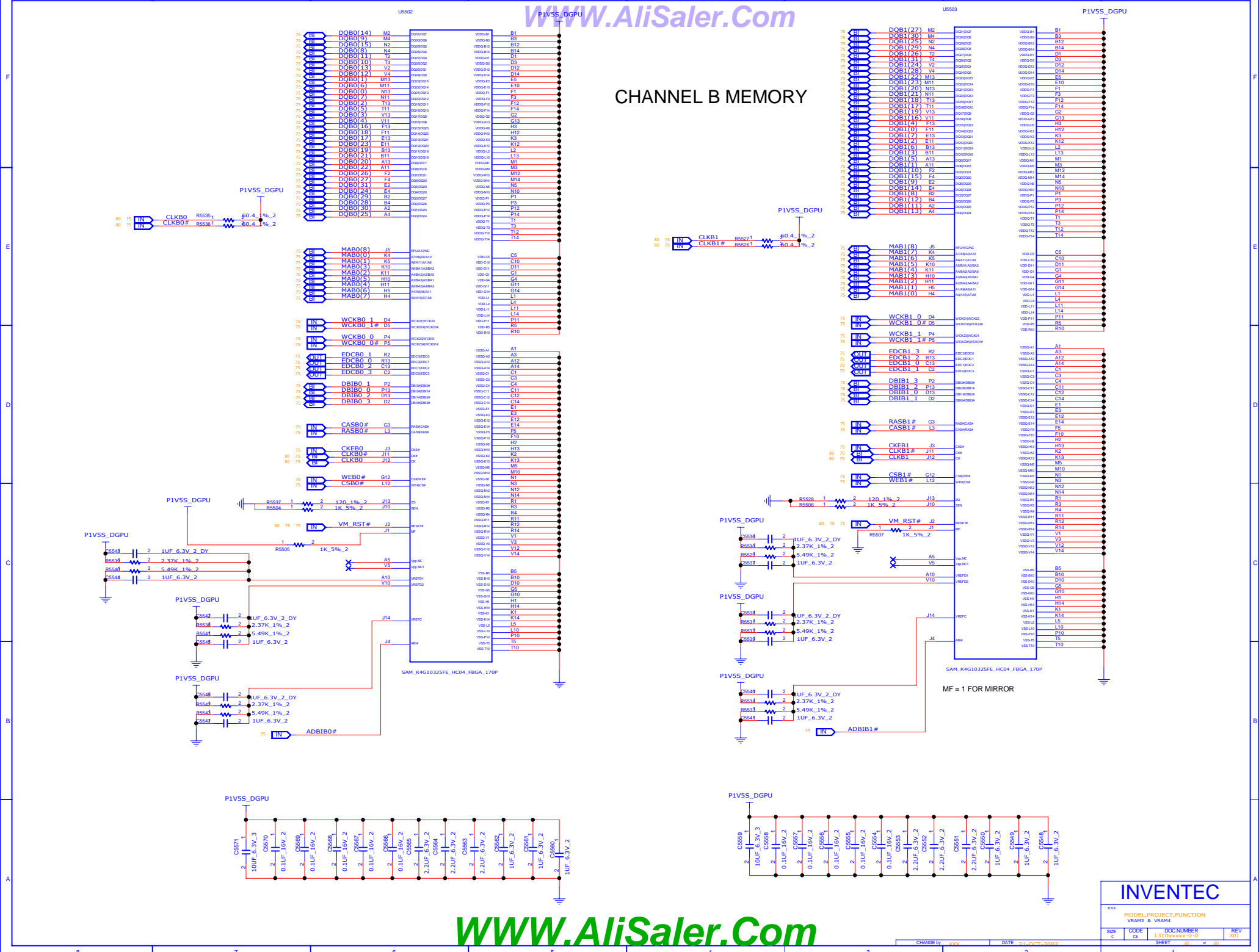
CHANGE by XXX DATE 21-OCT-2002







CHANNEL B MEMORY



INVENTEC

TITLE			
MODEL,PROJECT,FUNCTION			
VRAN3 & VRAN4			
SIZE	CODE	DOC NUMBER	REV
C	IS	1310VANKS-0-0	001
SHEET		31	31