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DRAWER		EE	DATE	POWER	DATE	<div>INVENTEC</div> <div> <div>TITLE</div> <div>MODEL,PROJECT,FUNCTION</div> <div>Everest Main Board</div> </div>			
DESIGN									
CHECK									
RESPONSIBLE									
SIZE=		VER:			SIZE		CODE	DOC:NUMBER	REV
FILE NAME:					C	CS			X01
P/N	xxx			1310xxxxx-0-0		SHEET		1 of 68	

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ELETRÔNICA

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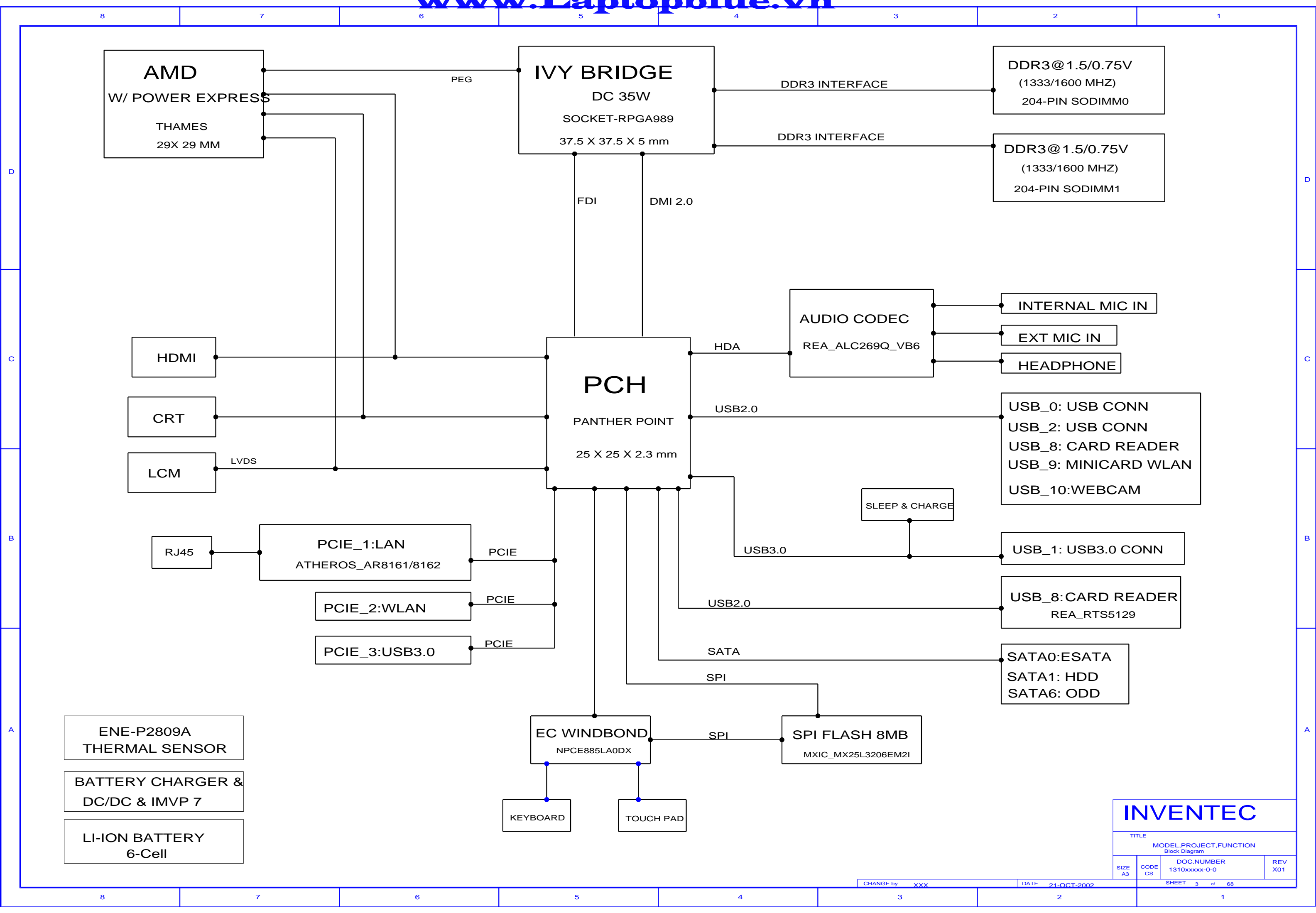
INVENTEC

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Block Diagram

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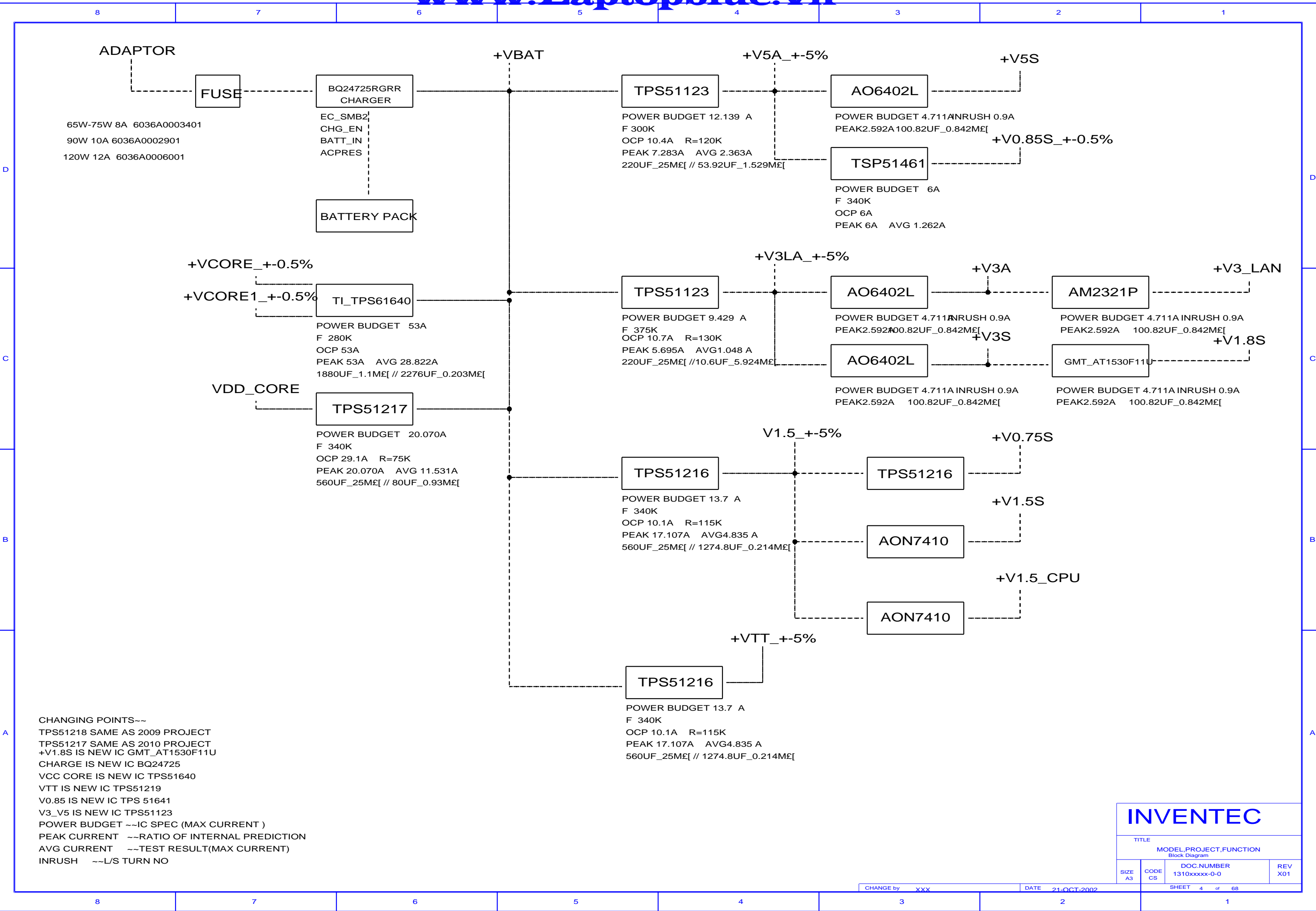
CHANGE by XXX DATE 21-OCT-2002

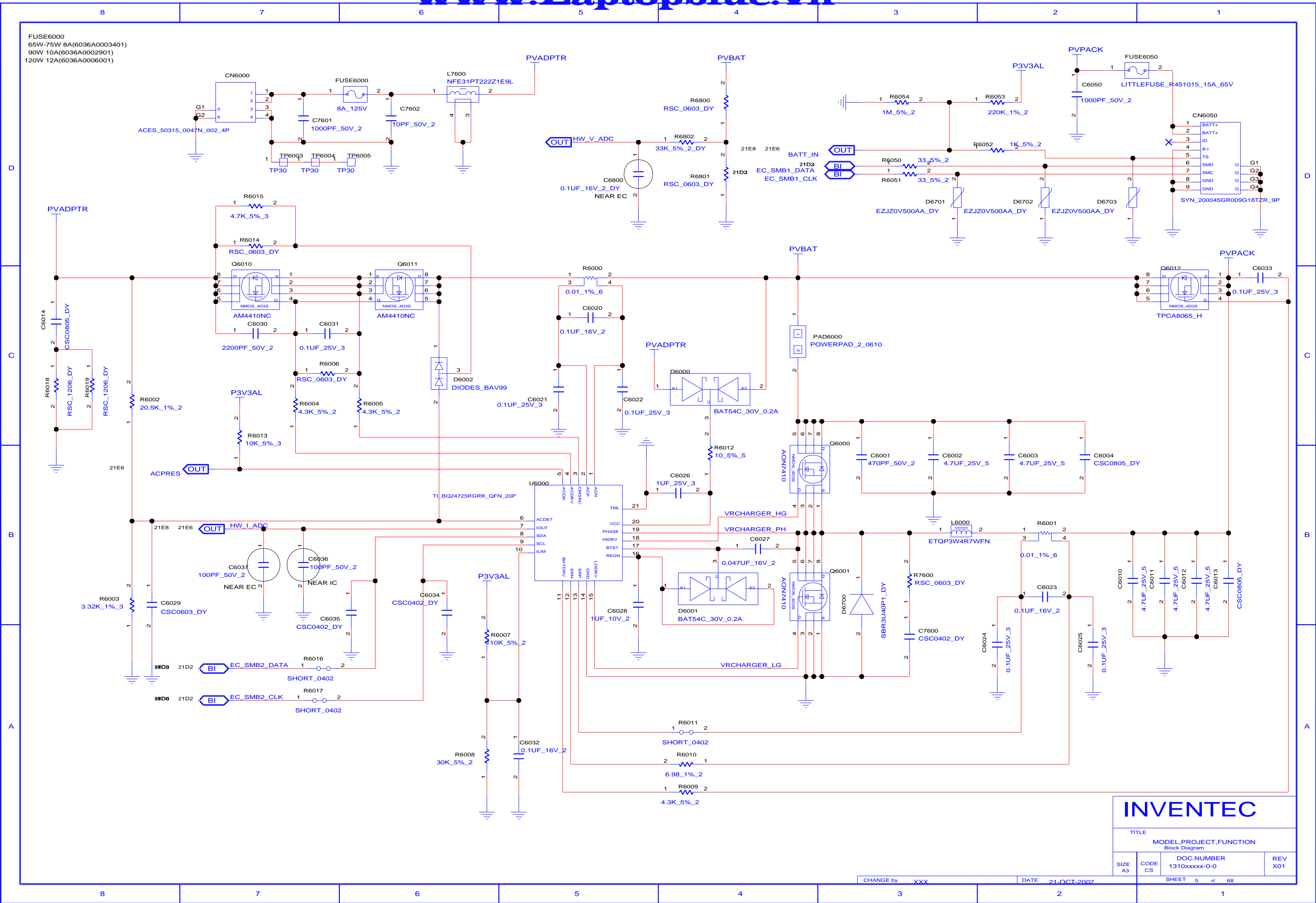
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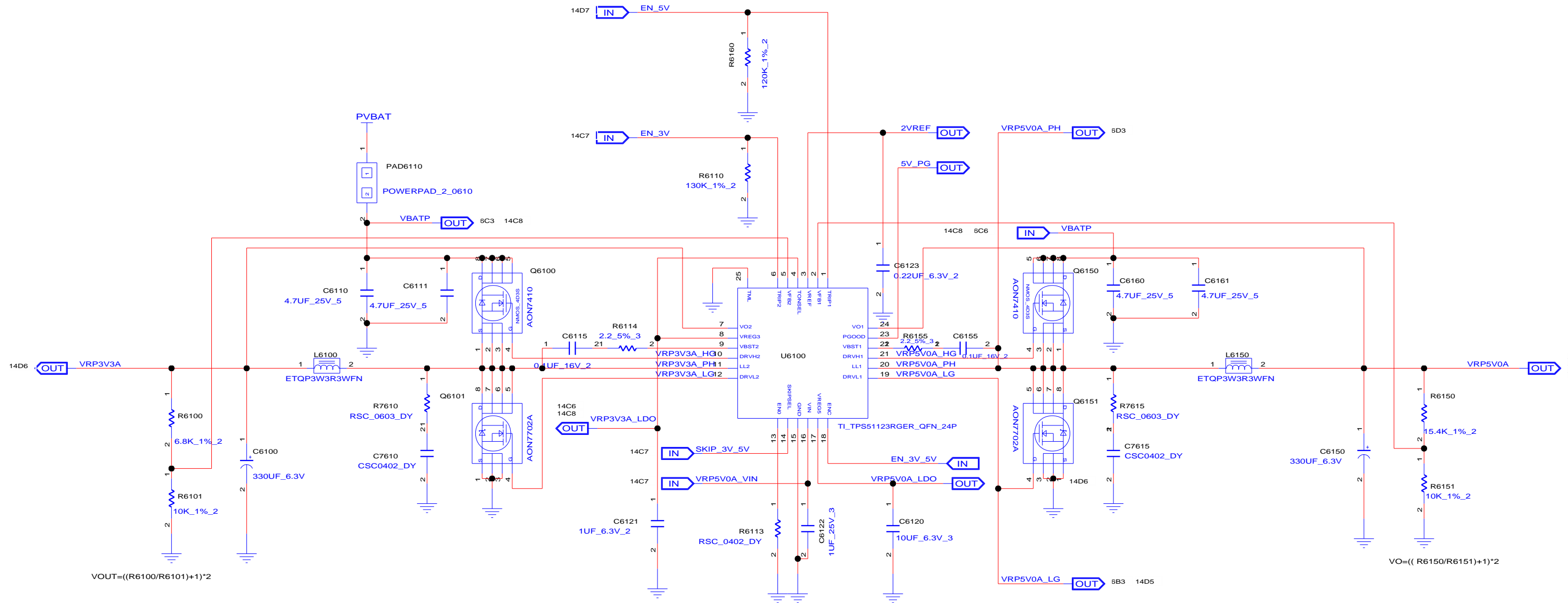


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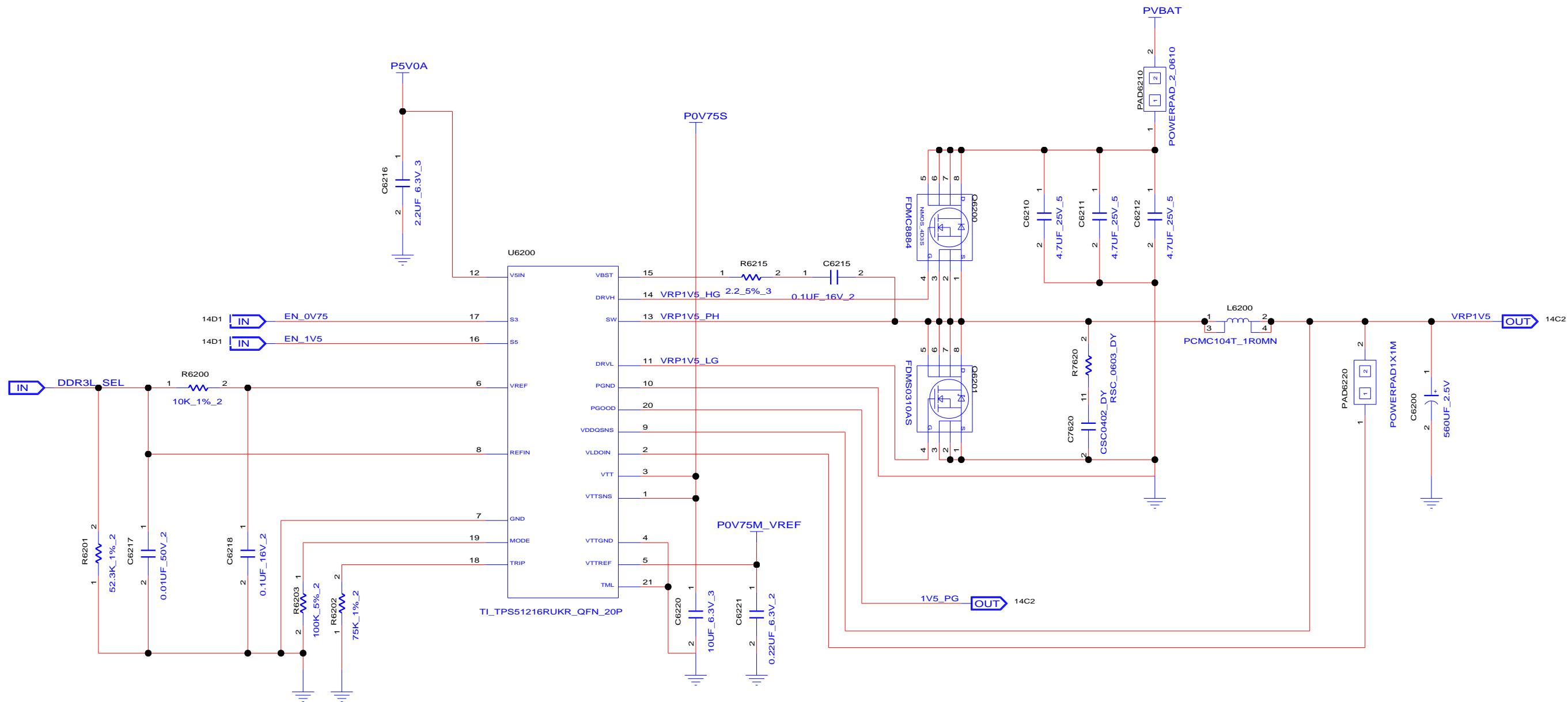


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$$VOUT=REFIN=1.8*(R6201/(R6200+R6201))$$
$$MODE=100KOHM:TRACKING DISCHARGE$$

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

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MODEL,PROJECT,FUNCTION
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CS

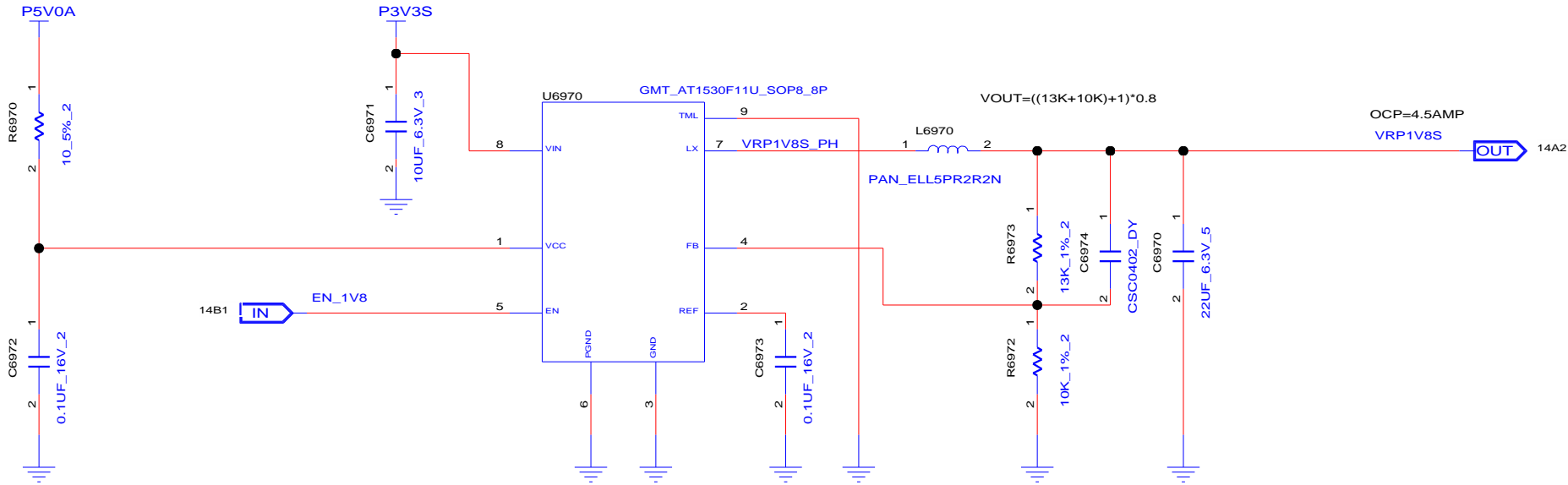
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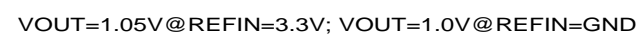
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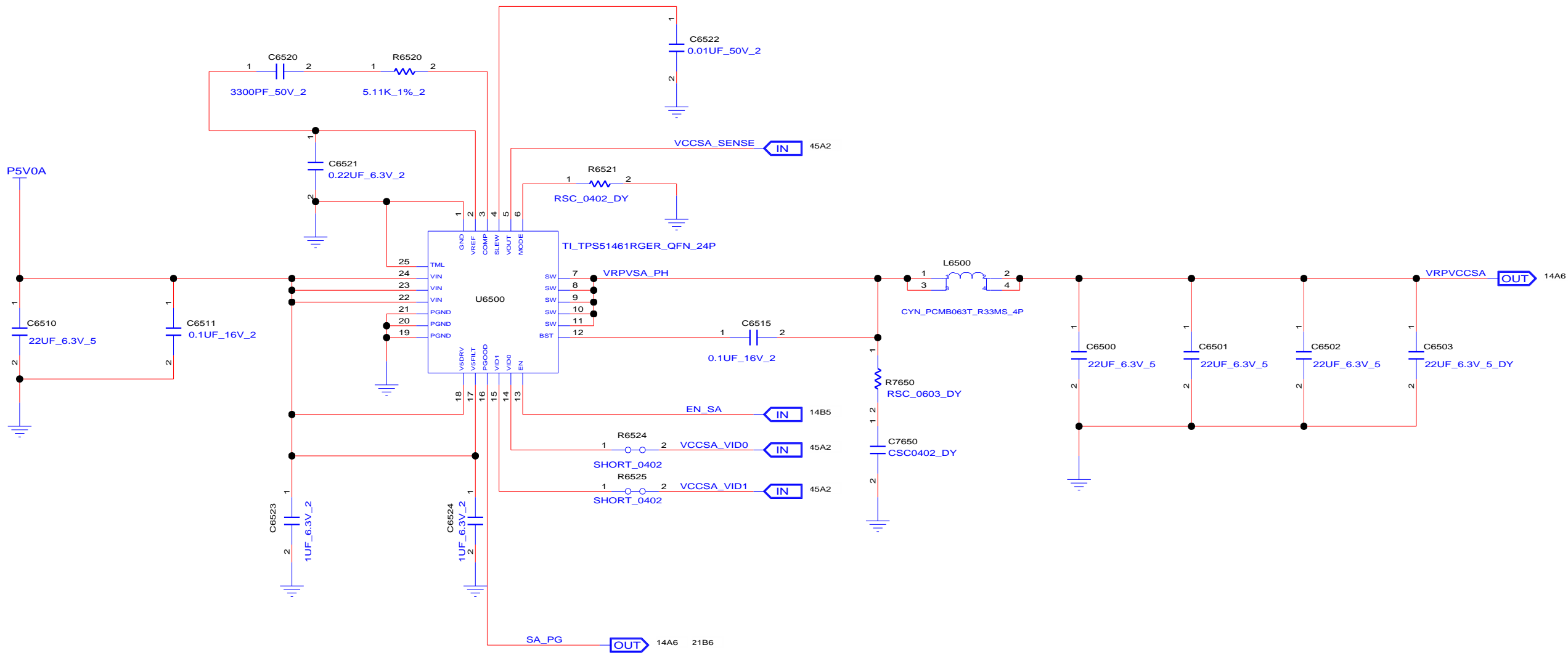
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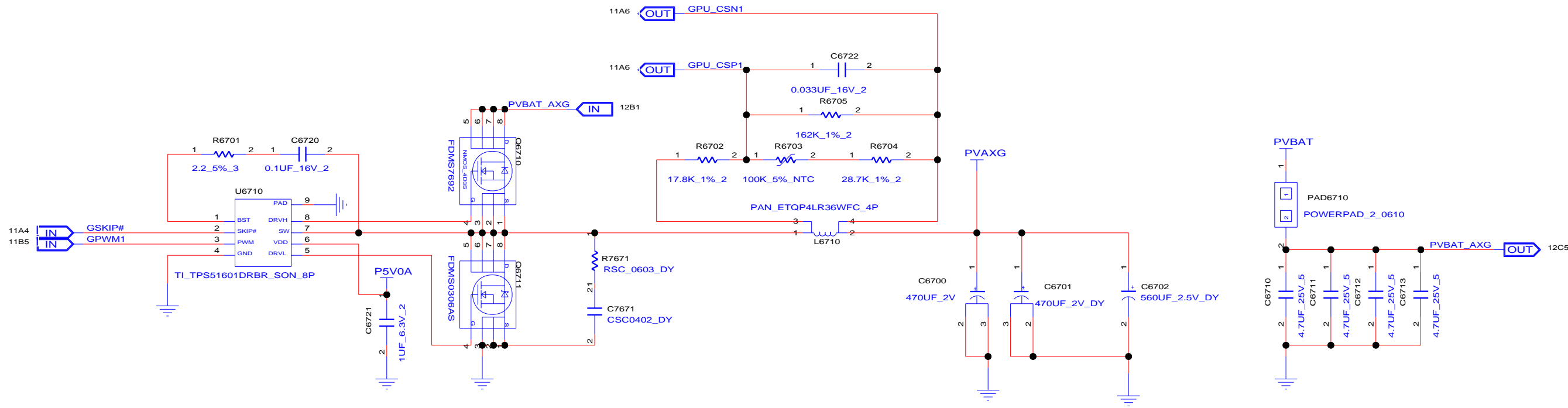
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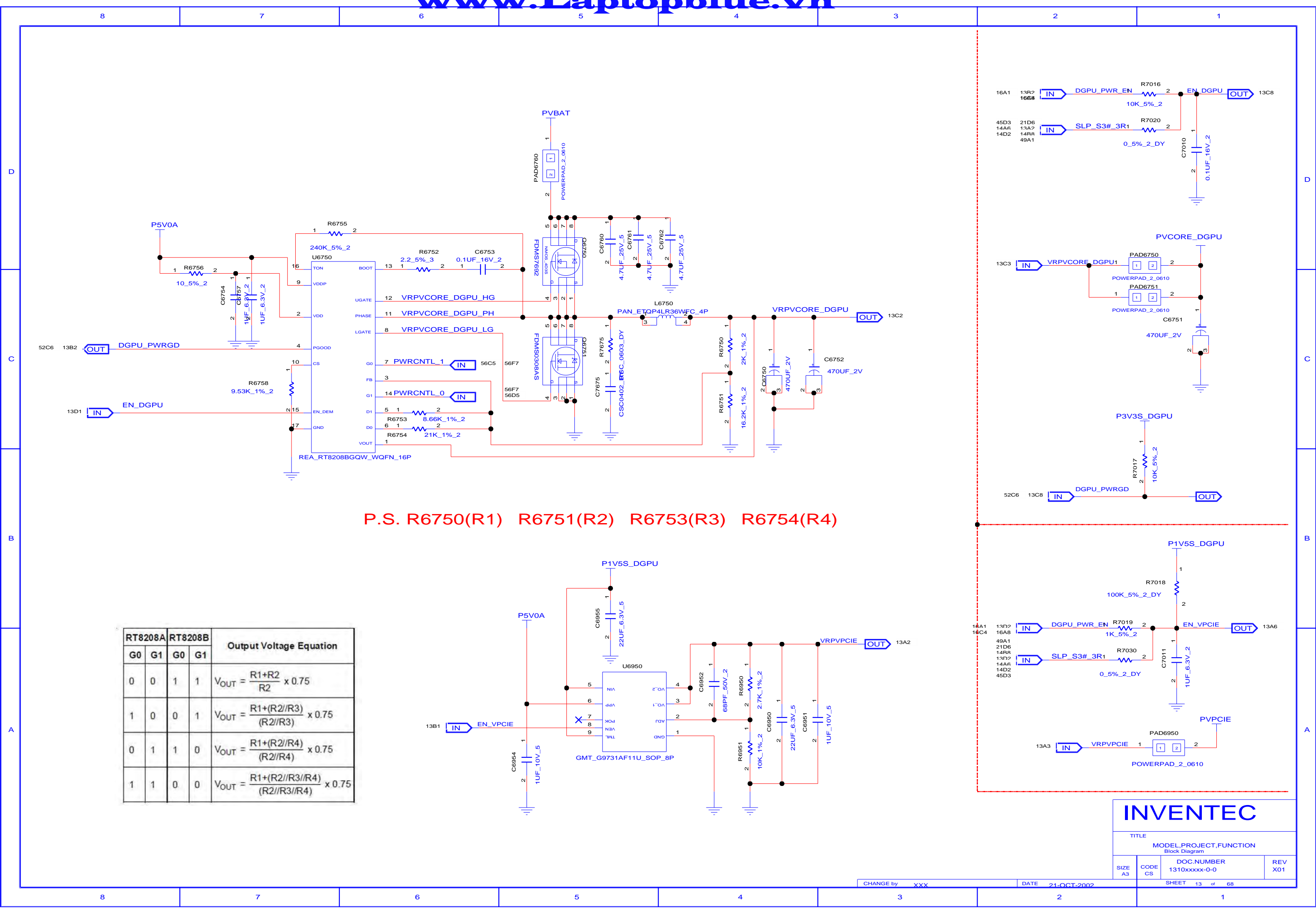


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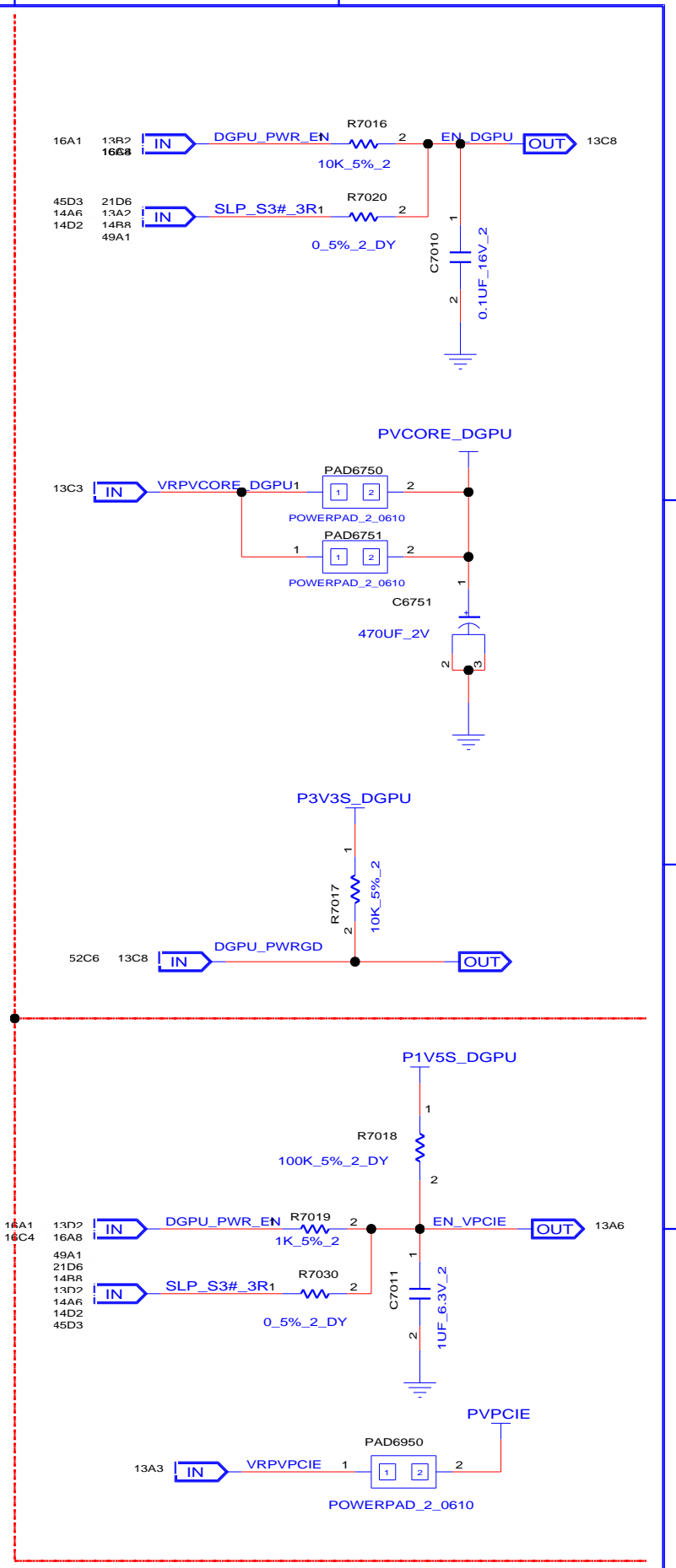


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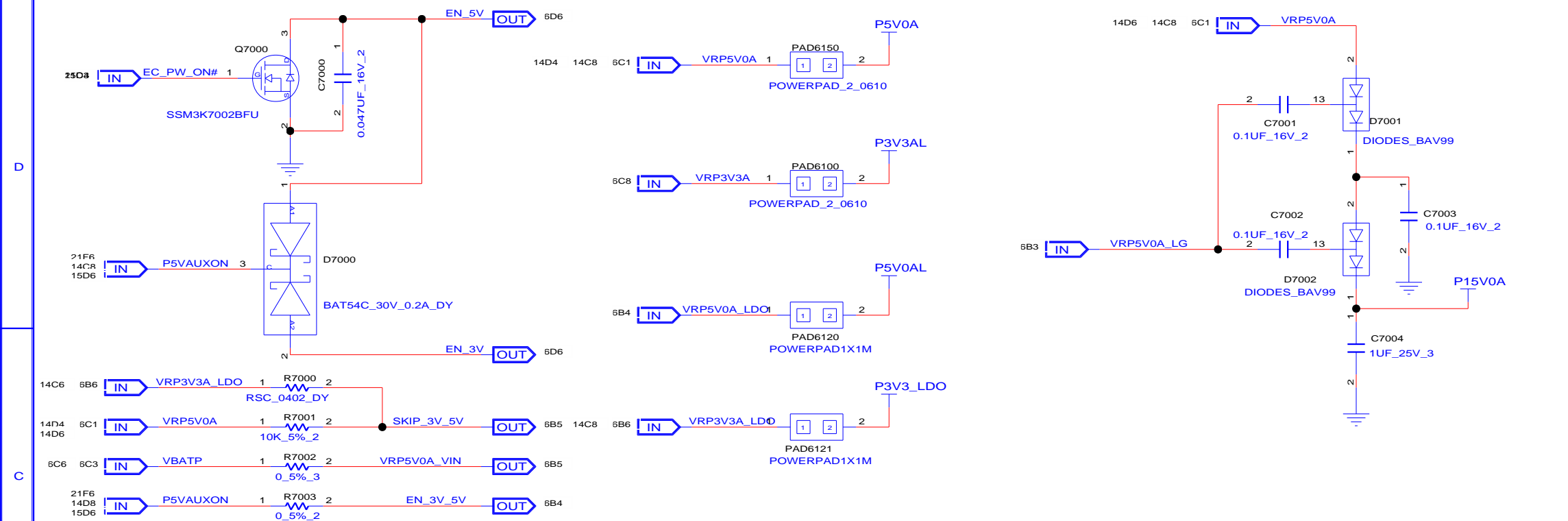
RT8208A	RT8208B	Output Voltage Equation			
G0	G1	G0	G1		
0	0	1	1	$V_{OUT} = \frac{R1+R2}{R2} \times 0.75$	
1	0	0	1	$V_{OUT} = \frac{R1+(R2//R3)}{(R2//R3)} \times 0.75$	
0	1	1	0	$V_{OUT} = \frac{R1+(R2//R4)}{(R2//R4)} \times 0.75$	
1	1	0	0	$V_{OUT} = \frac{R1+(R2//R3//R4)}{(R2//R3//R4)} \times 0.75$	



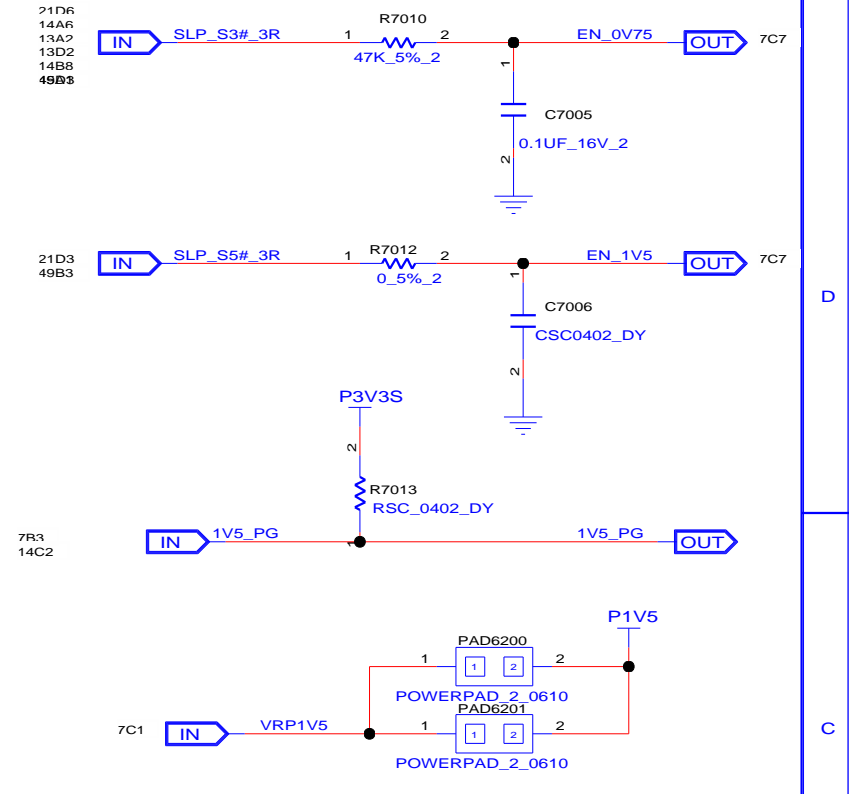
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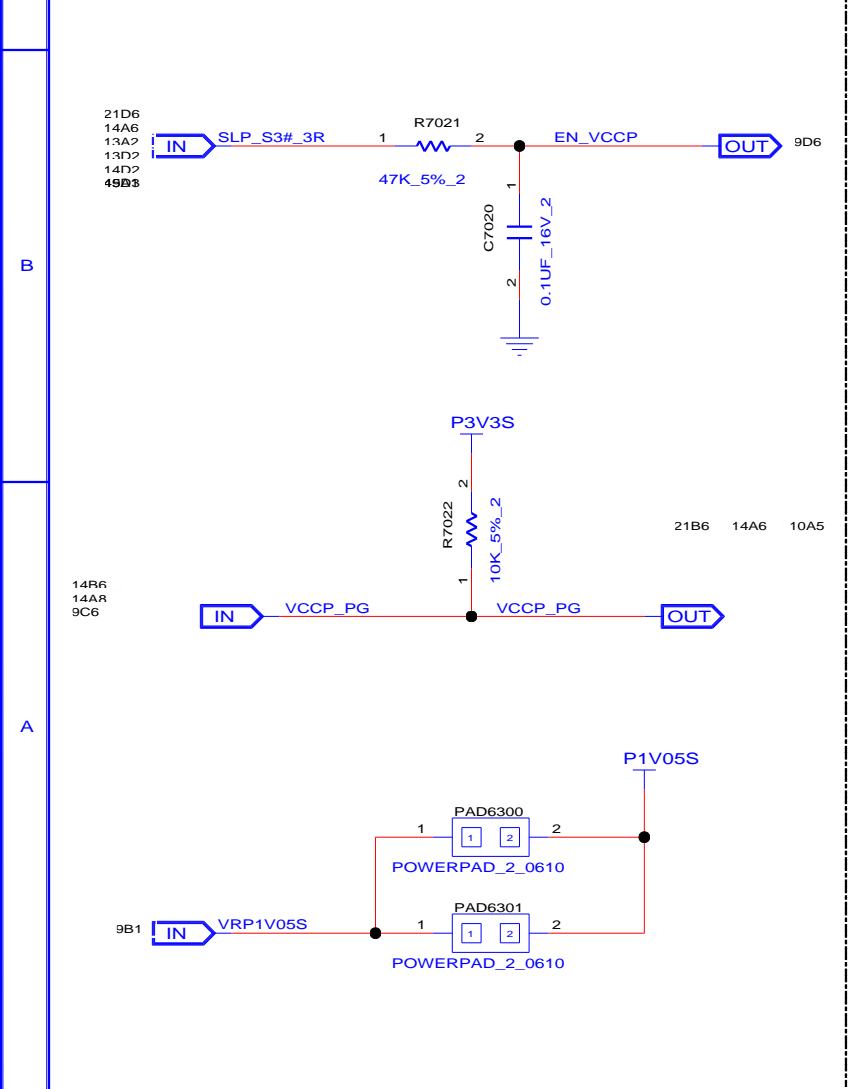
3V & 5V



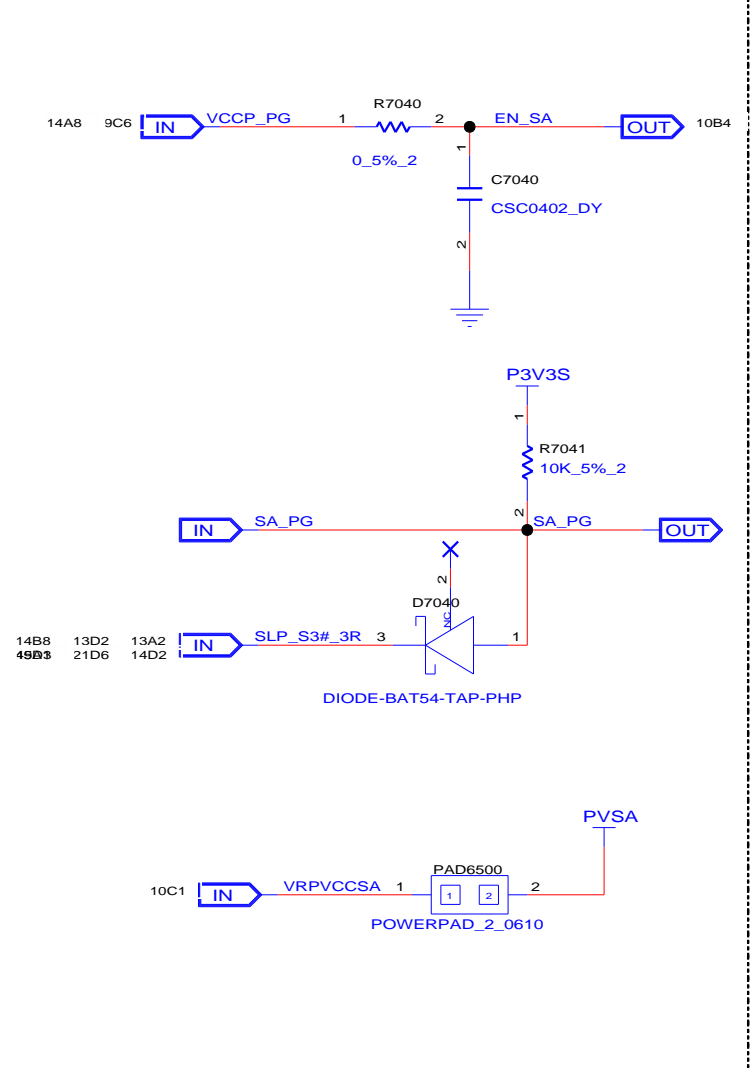
DDR_P1V5



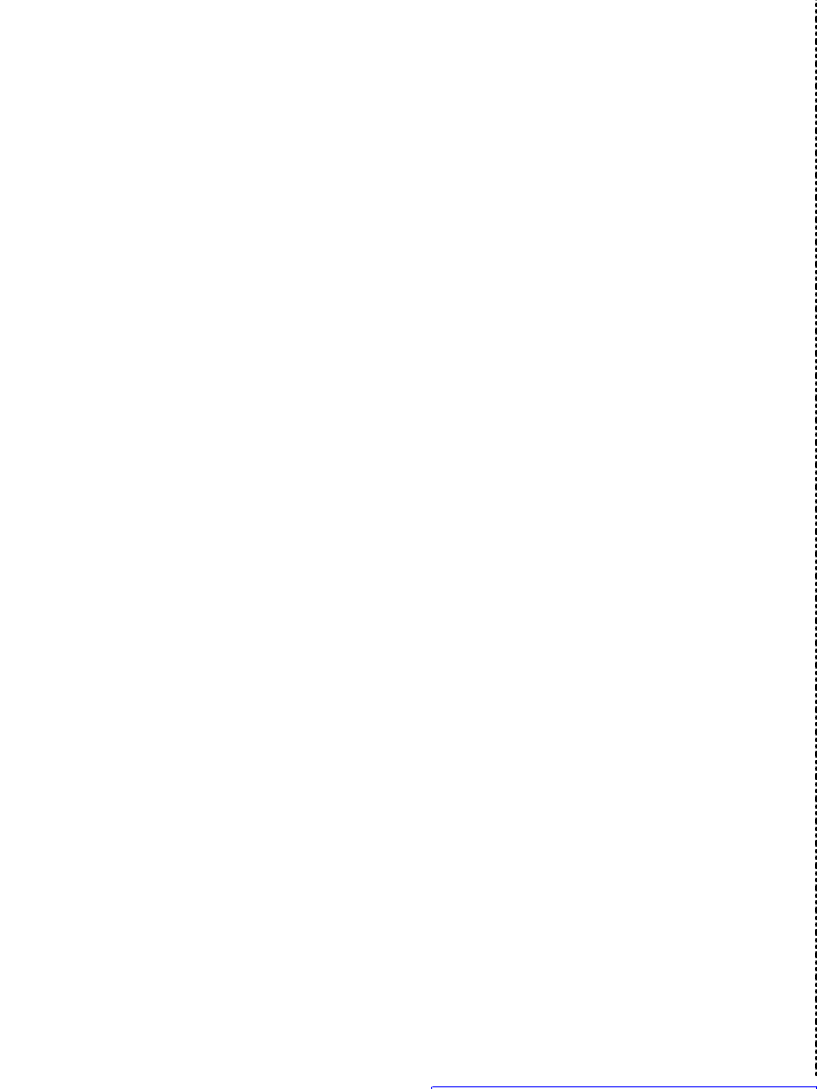
VCCIO



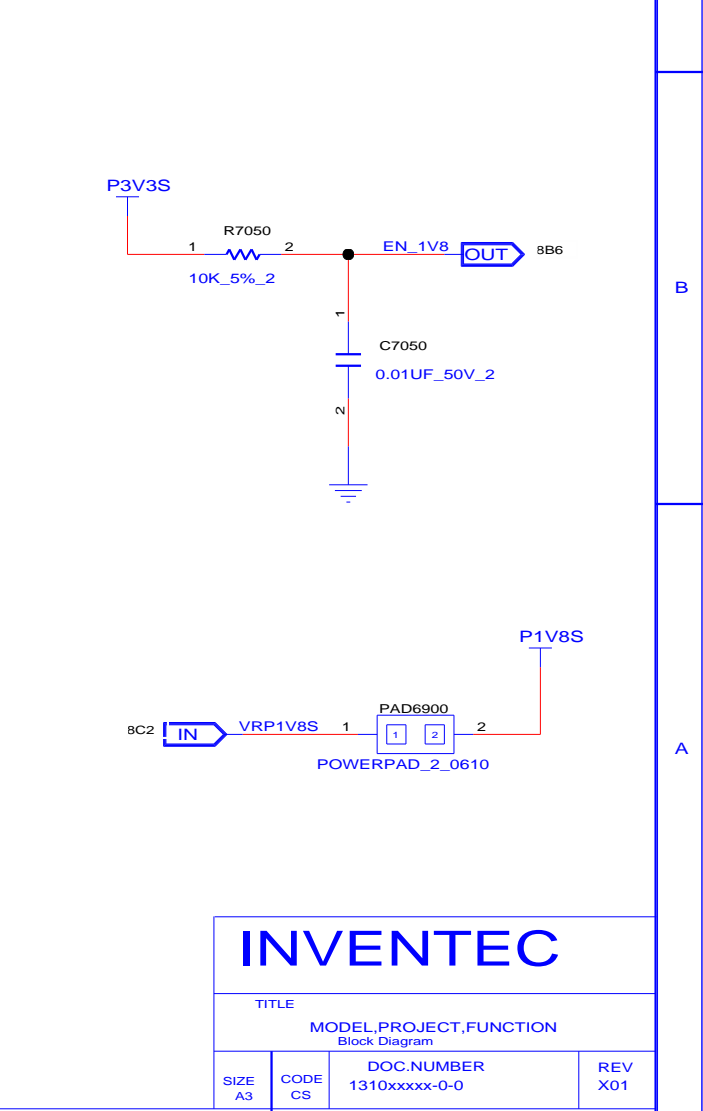
VCCSA



DGPU



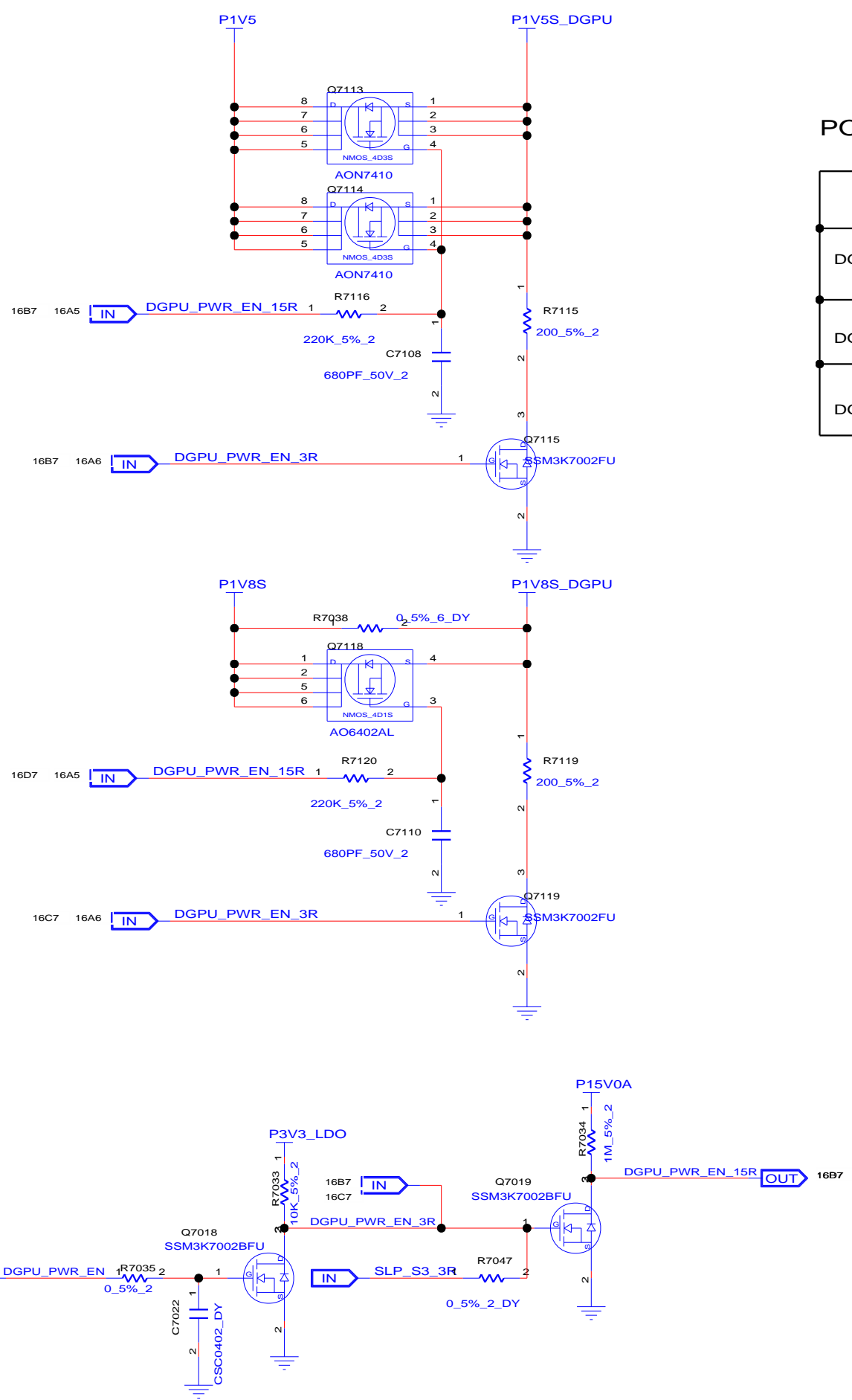
P1V8S



INVENTEC

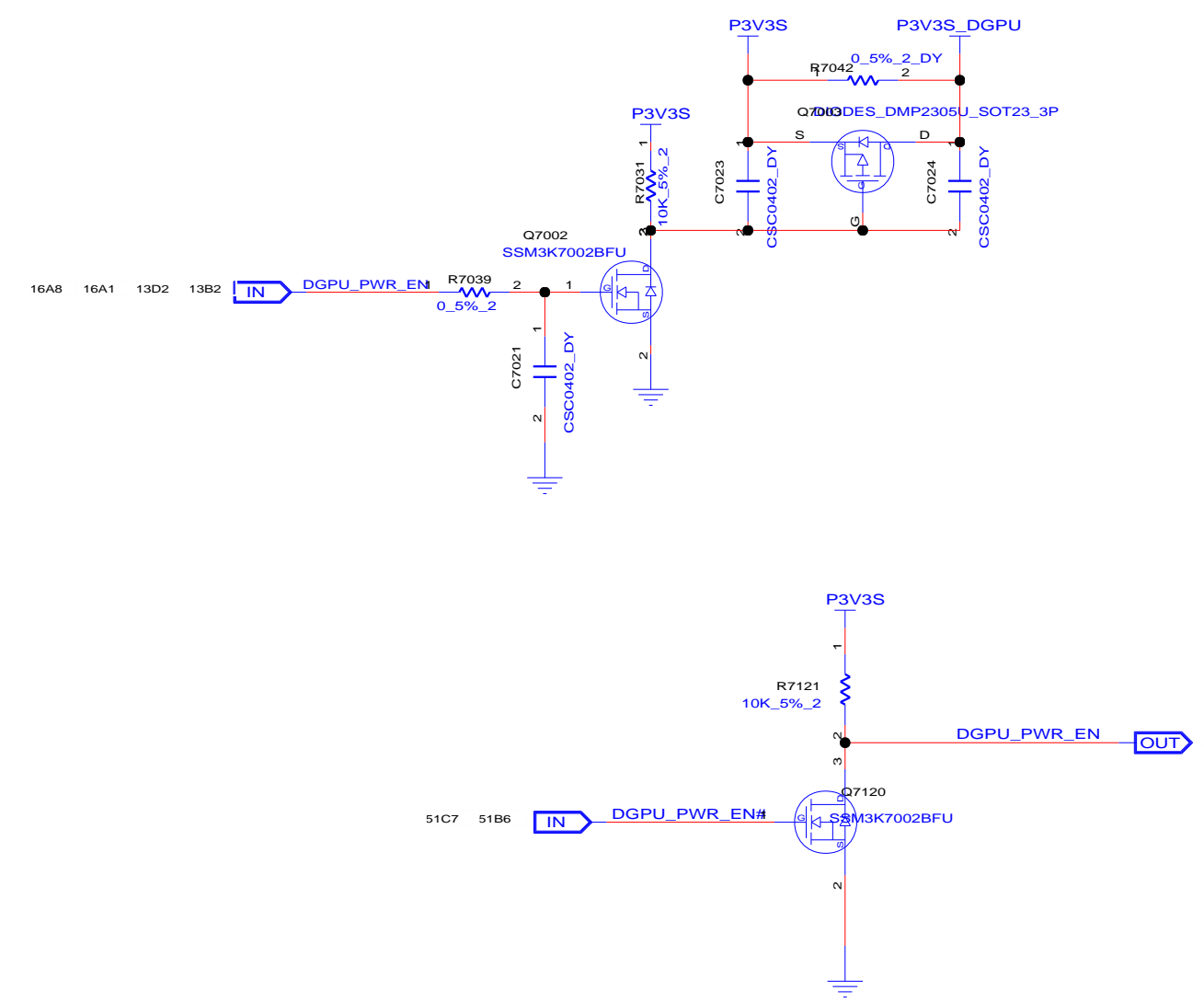
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POWER EXPRESS

	DURING RESET	AFTER RESET	
DGPU_PWR_EN#	HIGH	HIGH	0 : DGPU POWER SWITCH TURNED ON 1 : POWER SWITCH TURNED OFF
DGPU_PWRGD			0 : DGPU POWER IS NOT STABLE 1 : DGPU POWER IS STABLE
DGPU_HOLD_RST#	LOW	LOW	0 : KEEP DGPU IN RESET 1 : RESET IS RELEASED



INVENTEC

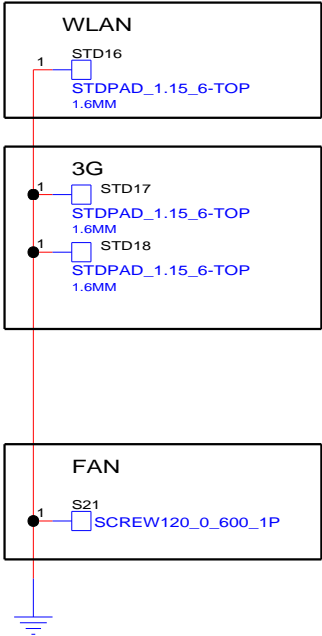
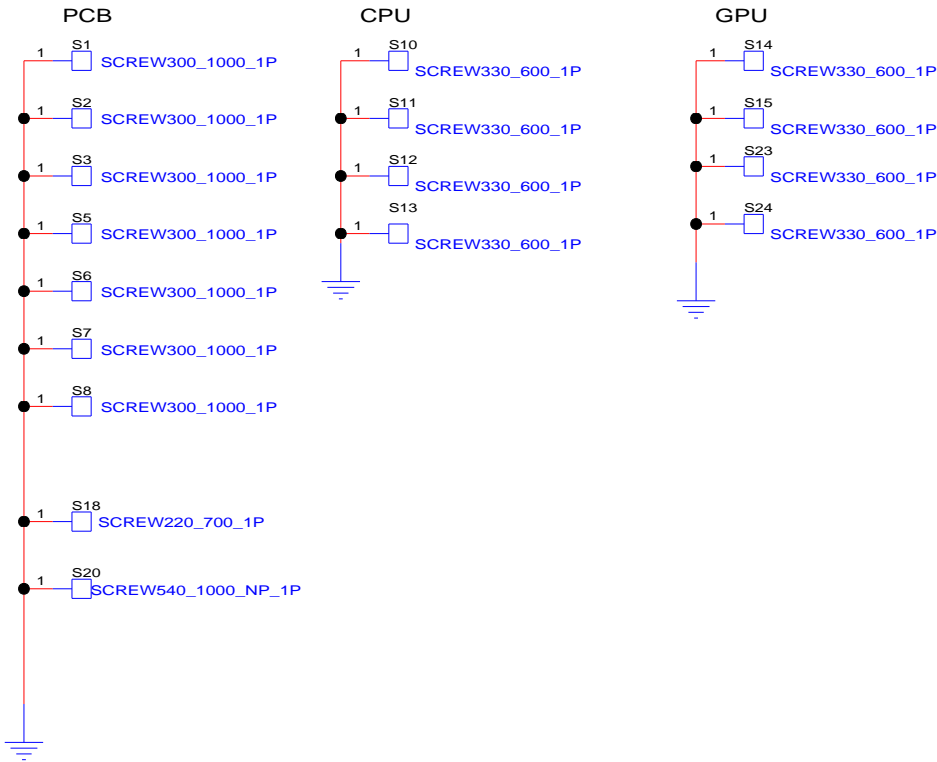
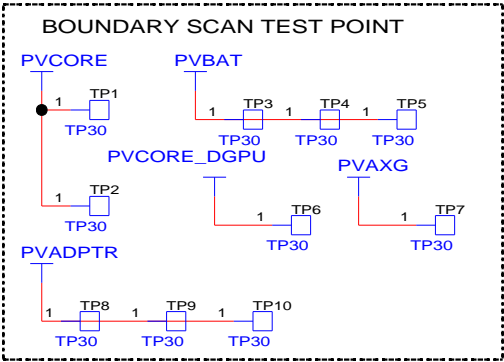
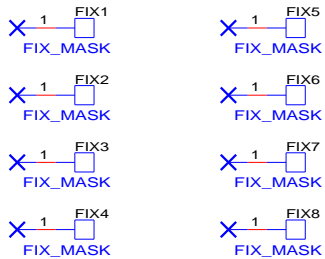
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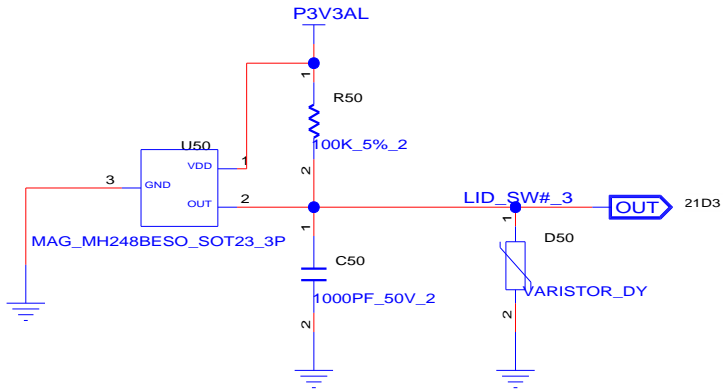
REFERENCE 0~49(PCB SCREW)



INVENTEC

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A3	CS	1310xxxx-0-0	X01

REFERENCE 50-99(HALL SENSOR)



INVENTEC

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MODEL,PROJECT,FUNCTION
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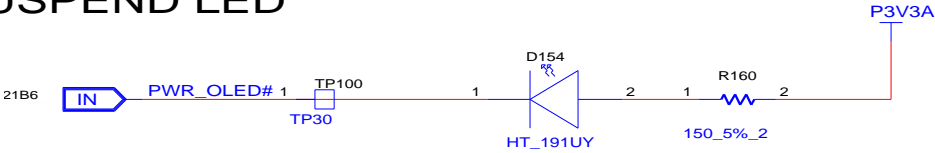
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CHANGE by XXX DATE 21-OCT-2002

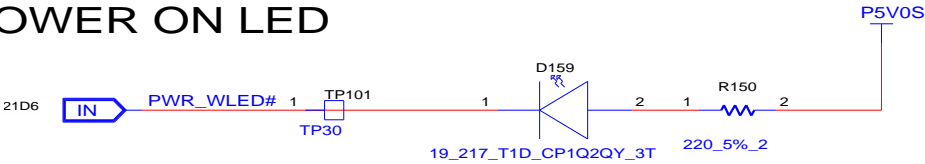
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REFERENCE 100~199(LED)

SUSPEND LED

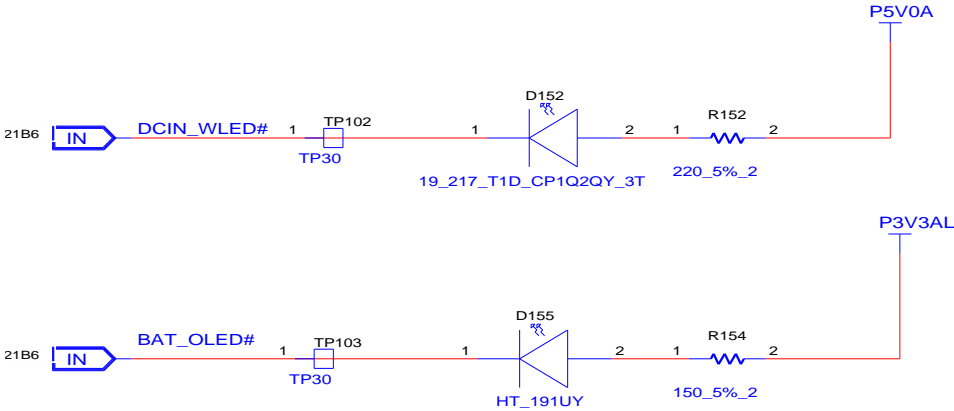


POWER ON LED

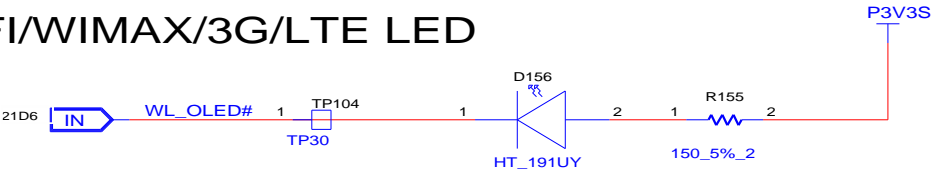


DC IN / BATTERY CHARGE LED

D152 BRIGHT:BOTH AC-ADAPTER IS PLUGGED IN AND BATTERY IS FULL CHARGED
D155 BRIGHT:WHILE CHARGING BATTERY FROM AC-ADAPTER
BLINK:LOW BATTERY



WIFI/WIMAX/3G/LTE LED



INVENTEC

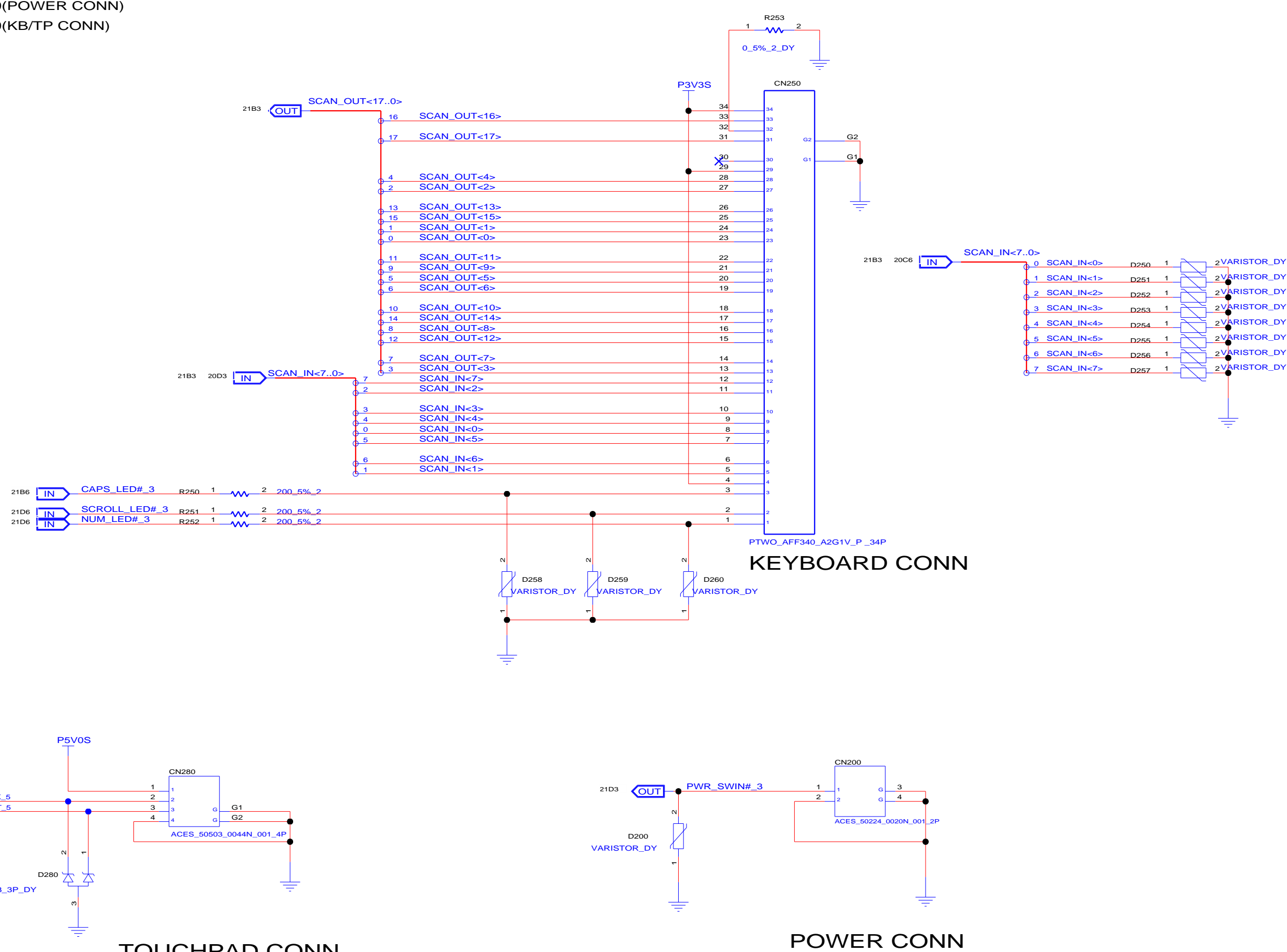
TITLE
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REFERENCE 200~249(POWER CONN)
REFERENCE 250~299(KB/TP CONN)



KEYBOARD CONN

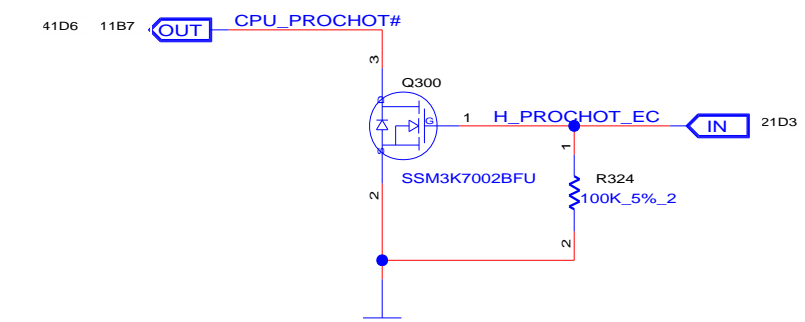
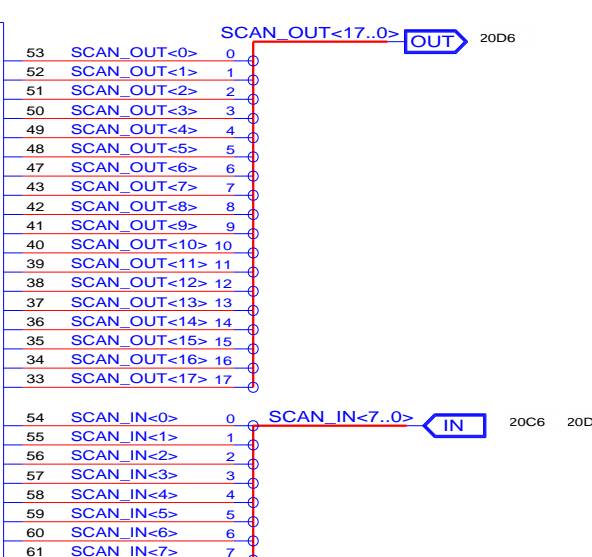
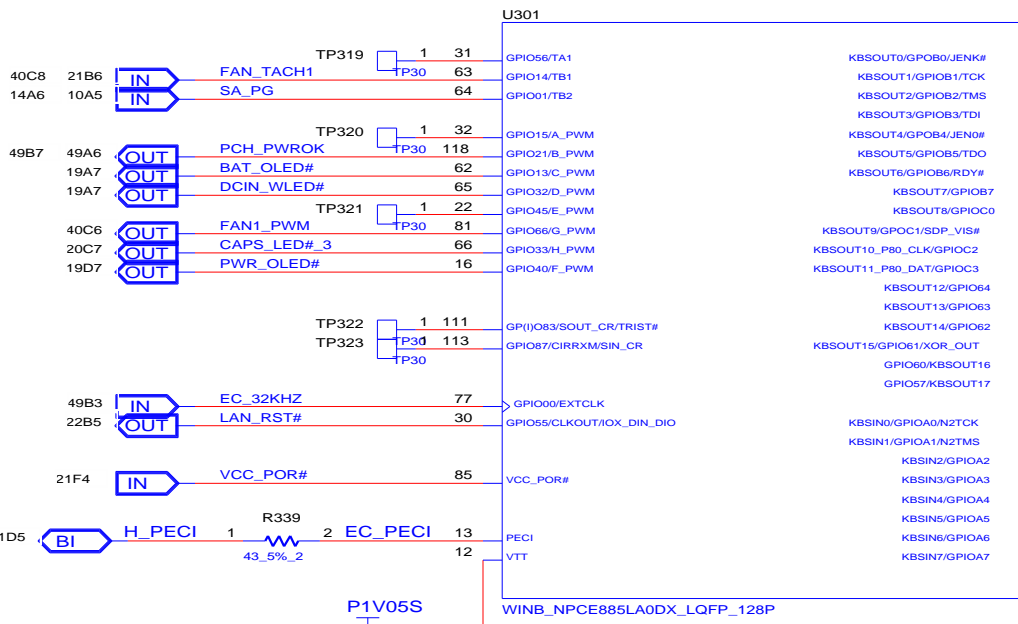
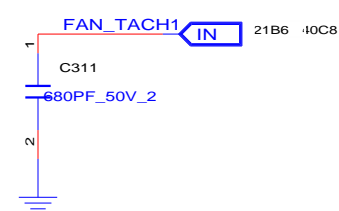
TOUCHPAD CONN

POWER CONN

INVENTEC

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

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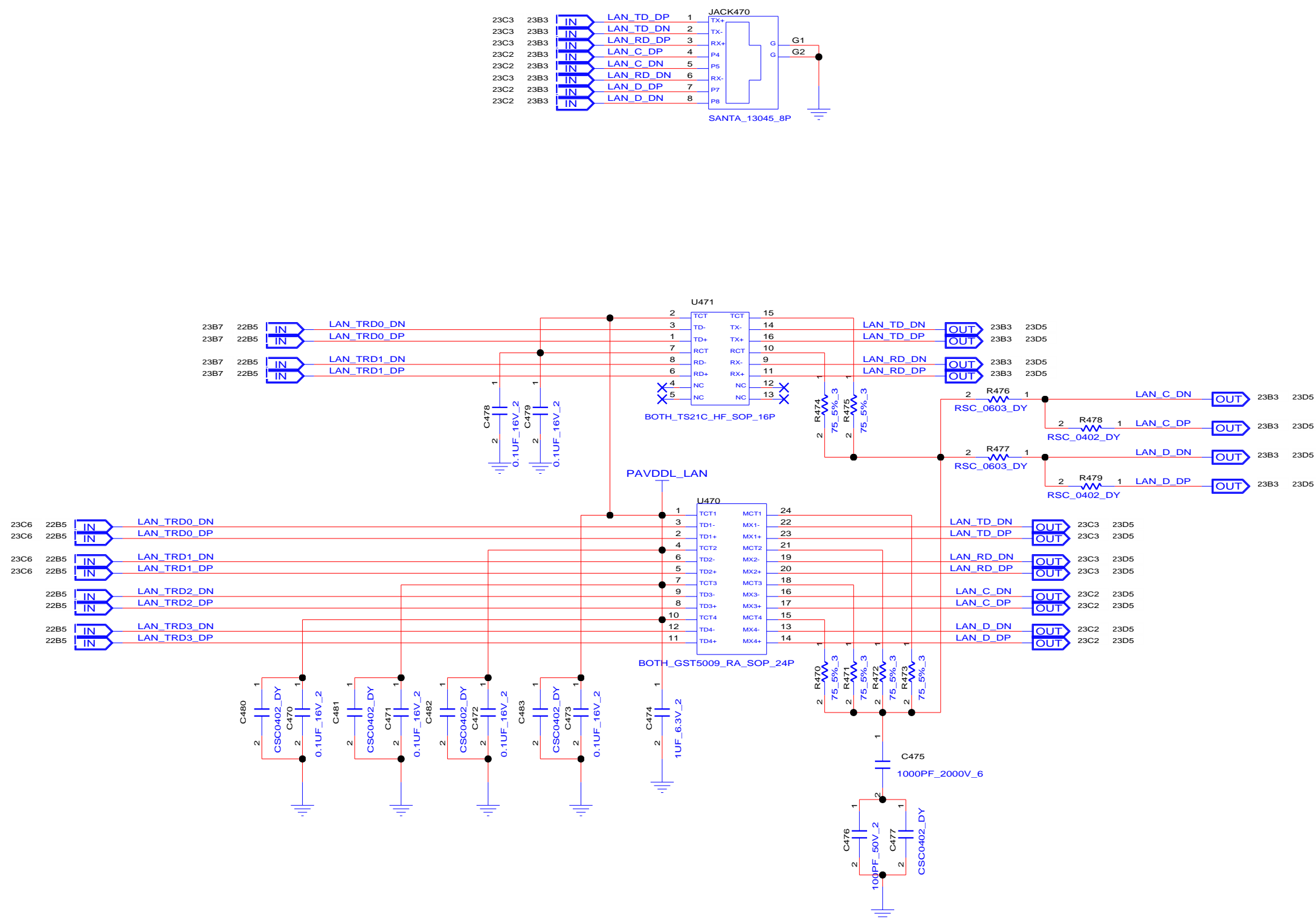


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REFERENCE 400~499(LAN)



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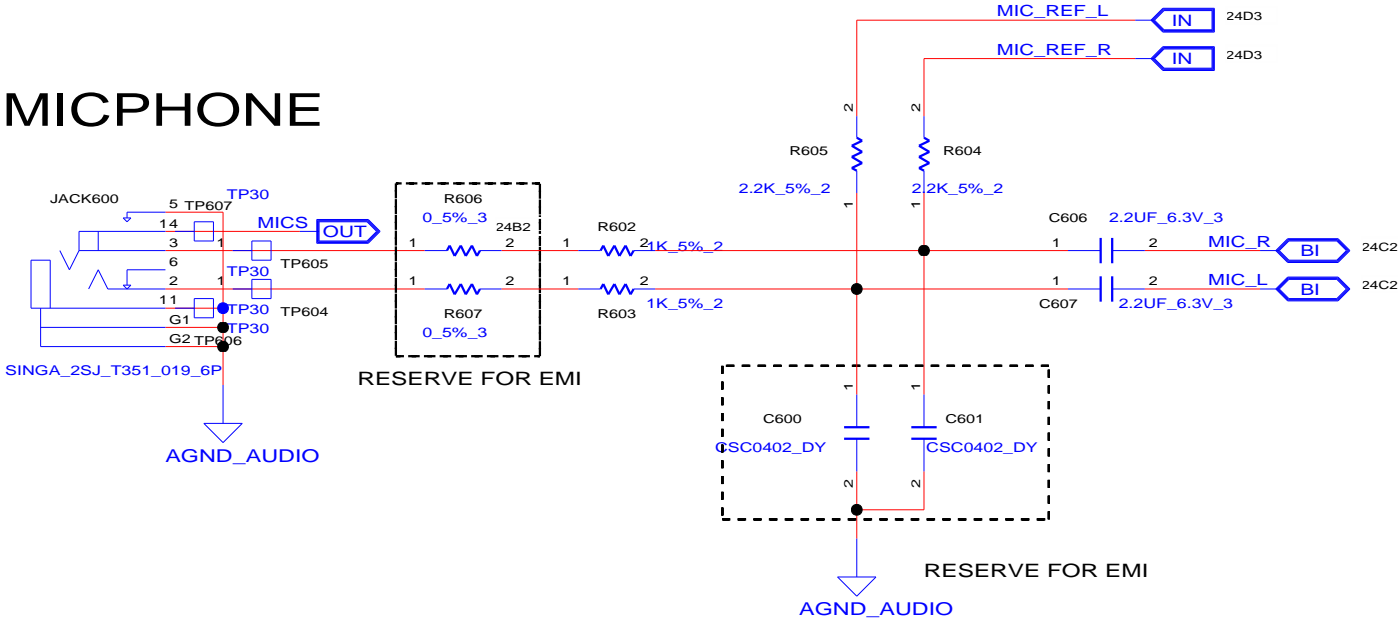


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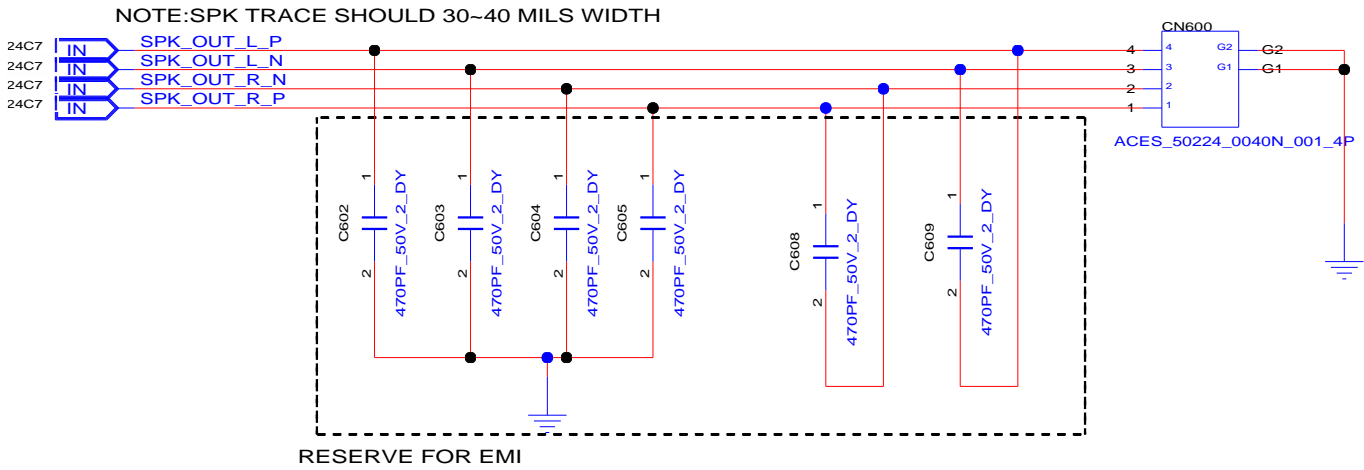
REFERCE 600~649(JACK/MIC/SPEAKER)

AUDIO JACKS

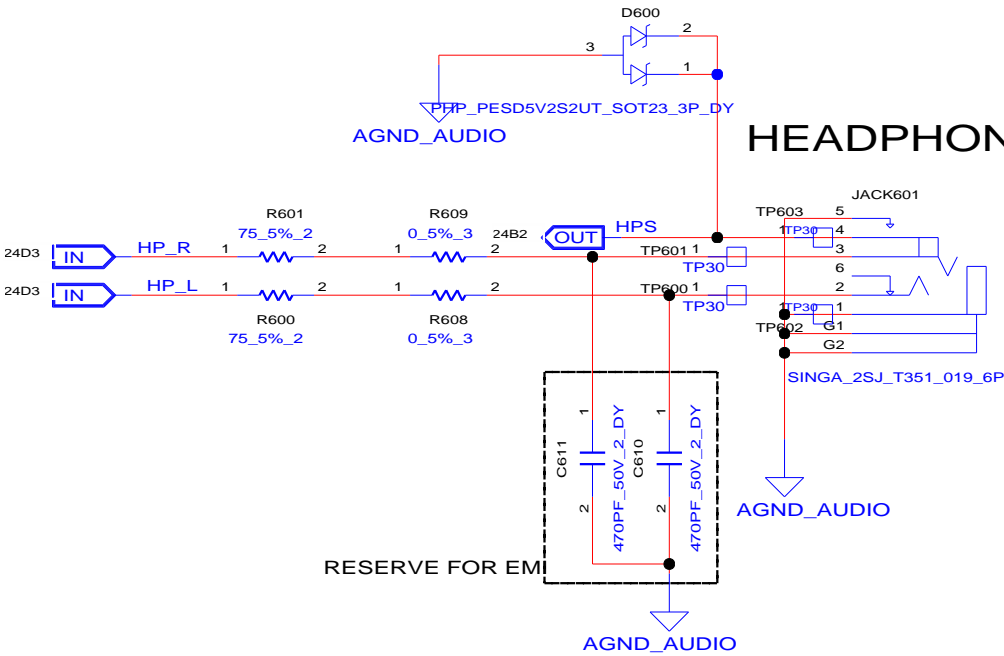
MICPHONE



INTERNAL SPEAKERS



HEADPHONE



INVENTEC

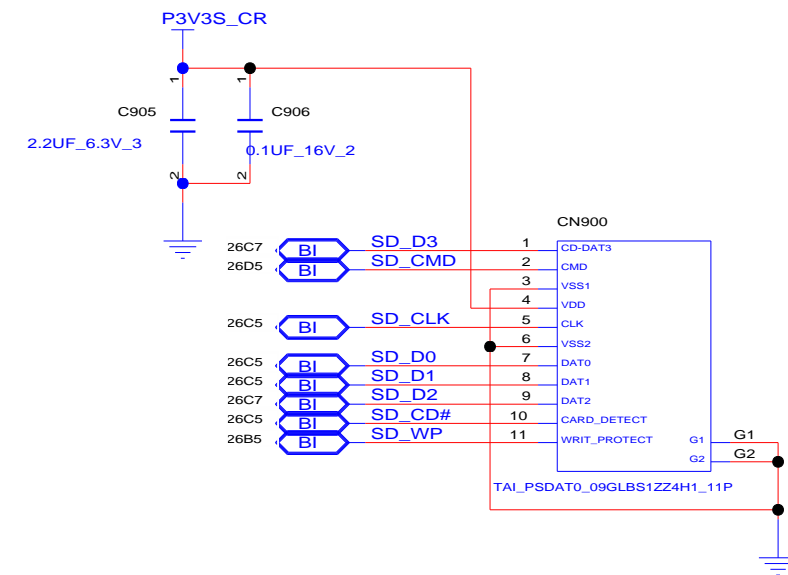
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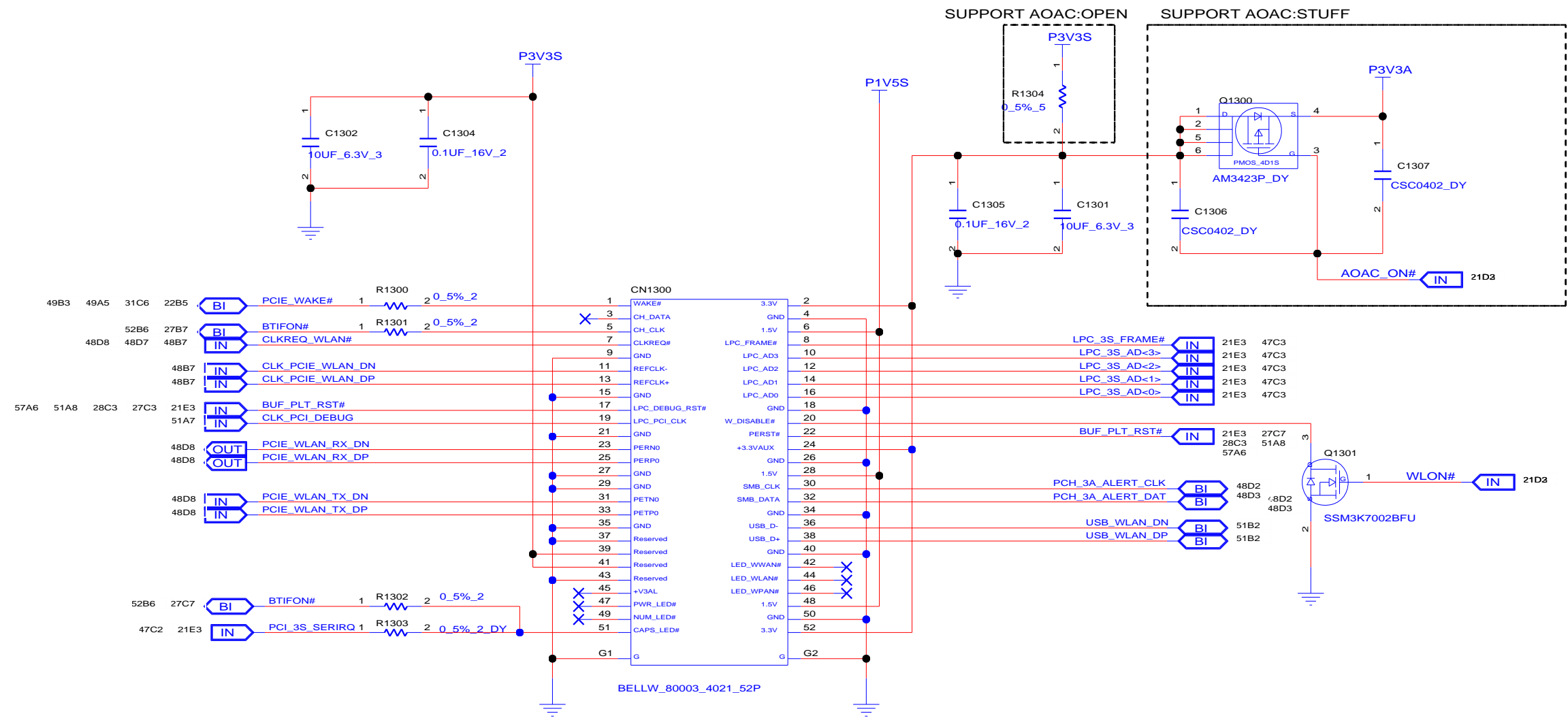
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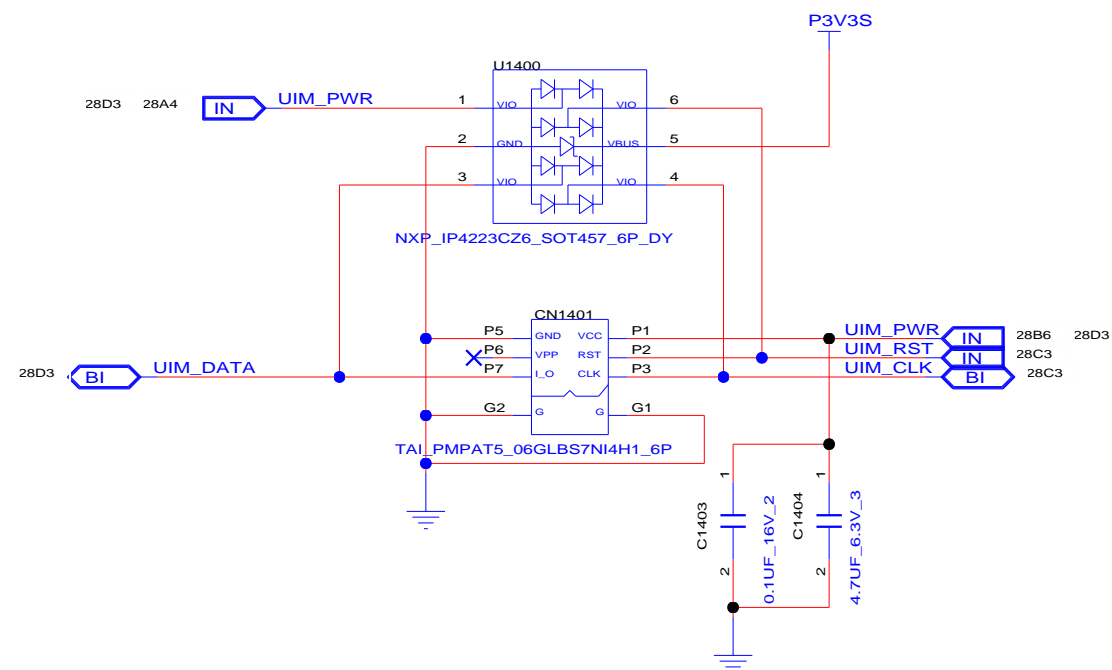
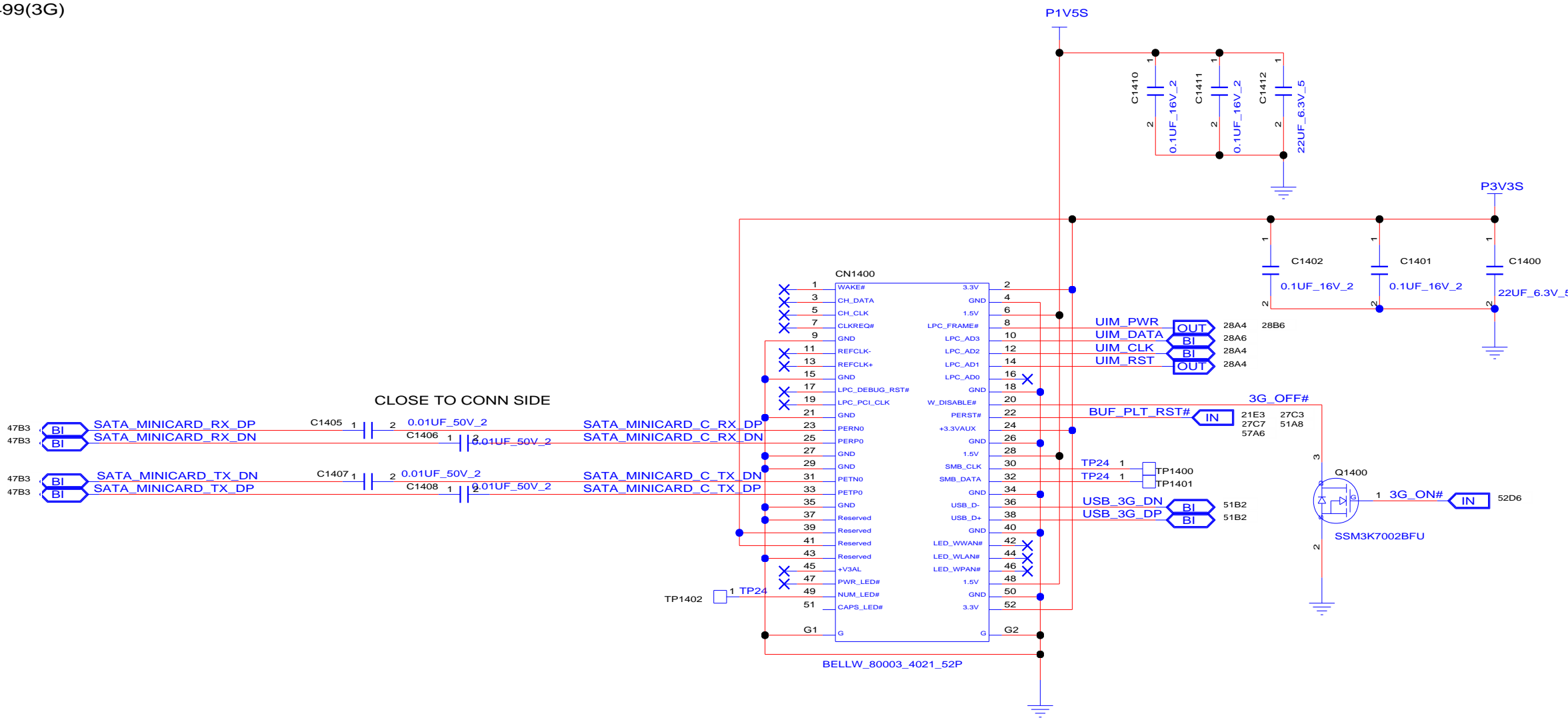
REFERENCE 1300~1349(WLAN)



MINI CARD 1(WLAN)

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REFERENCE 1400~1499(3G)



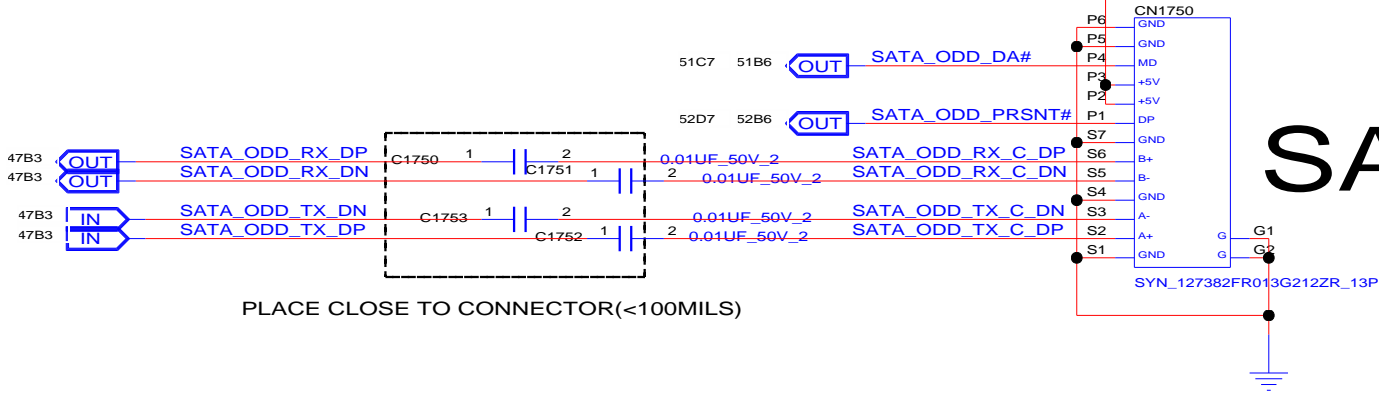
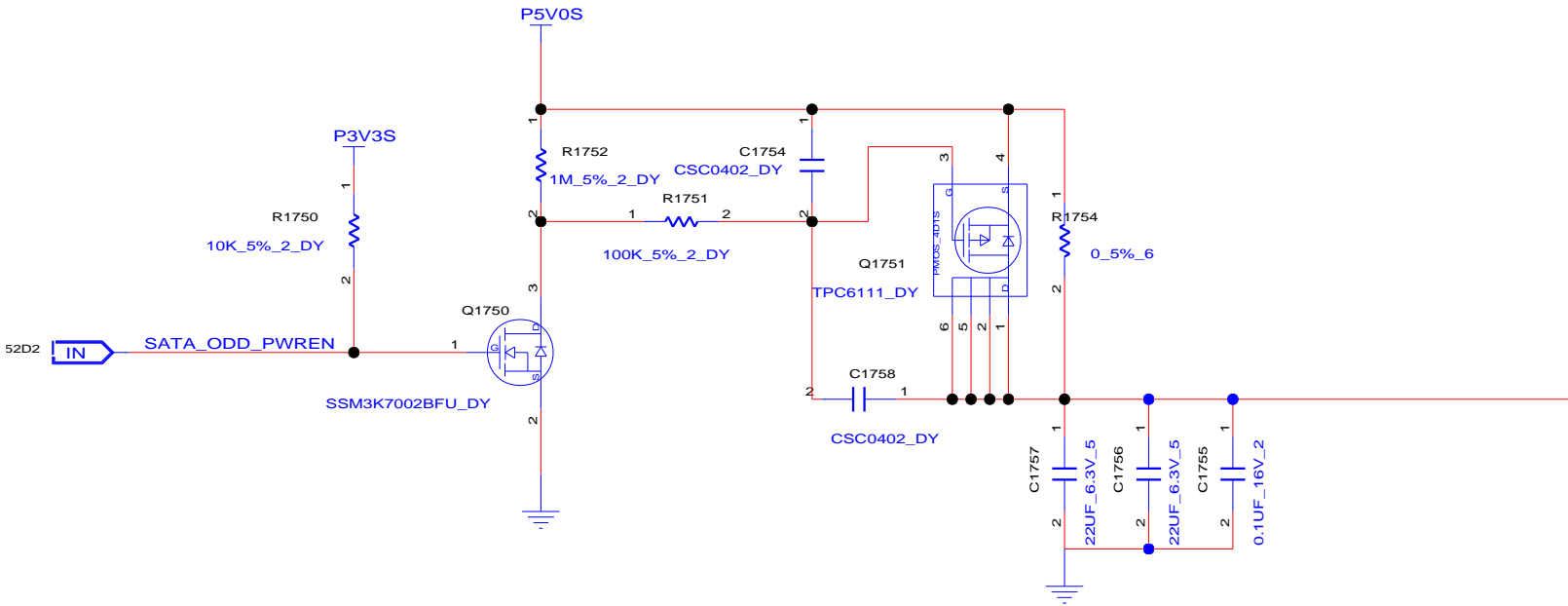
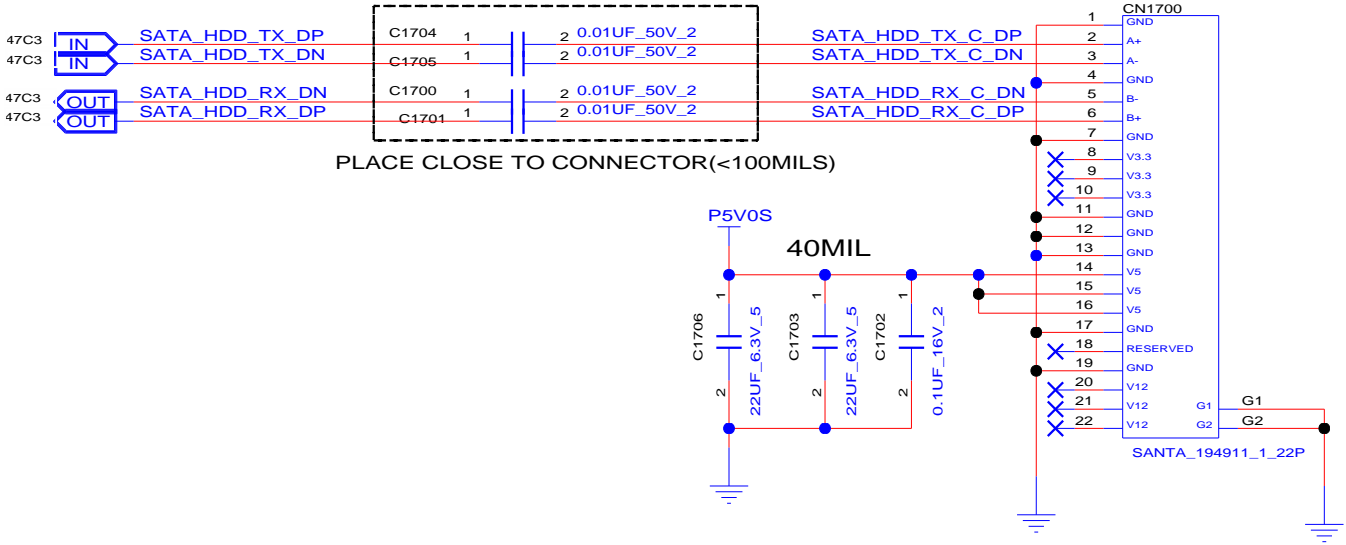
INVENTEC

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REFERENCE 1700~1749(HDD)
REFERENCE 1750~1799(ODD)

SATA HDD



SATA ODD

INVENTEC

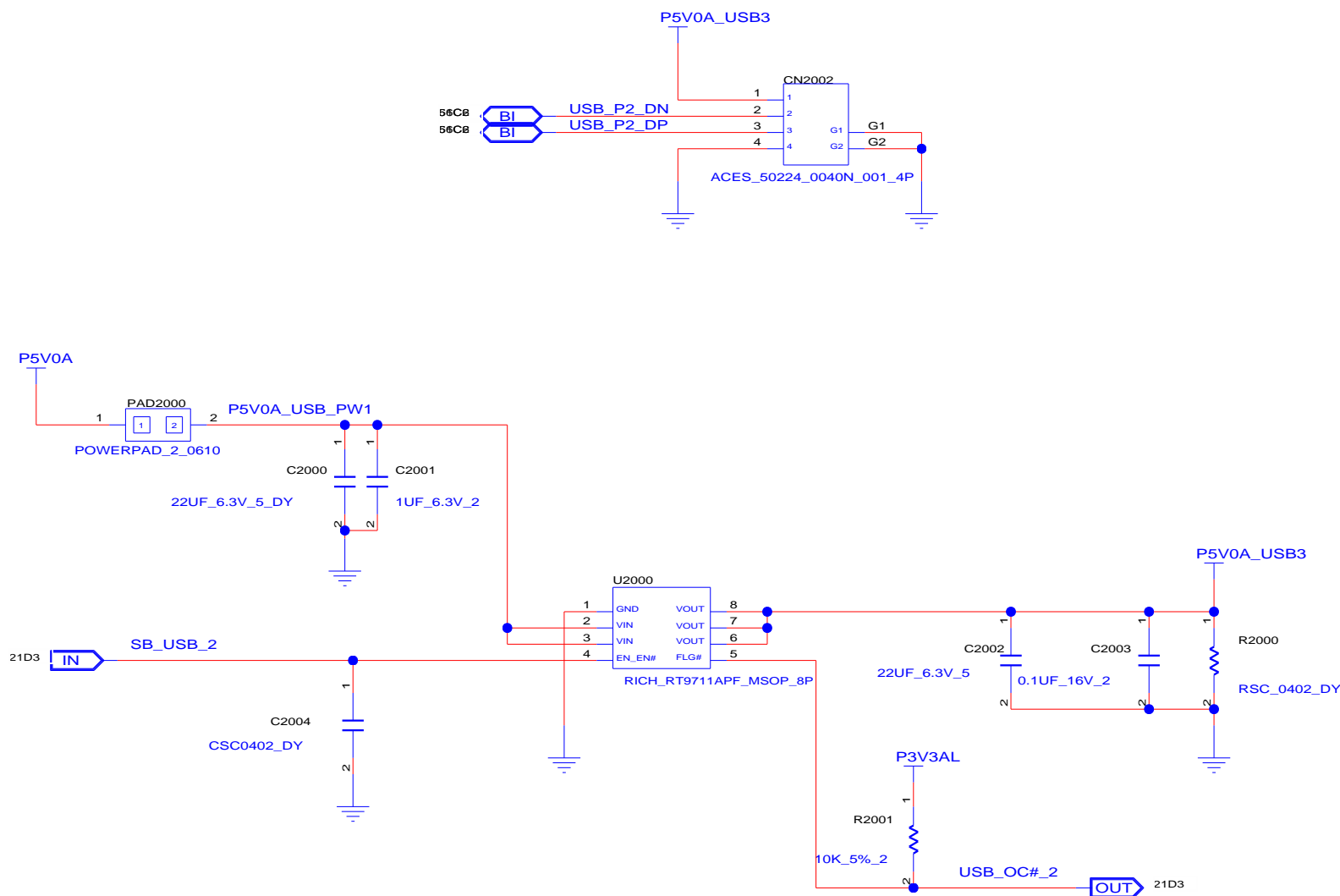
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REFERENCE 2000~2099(USB)



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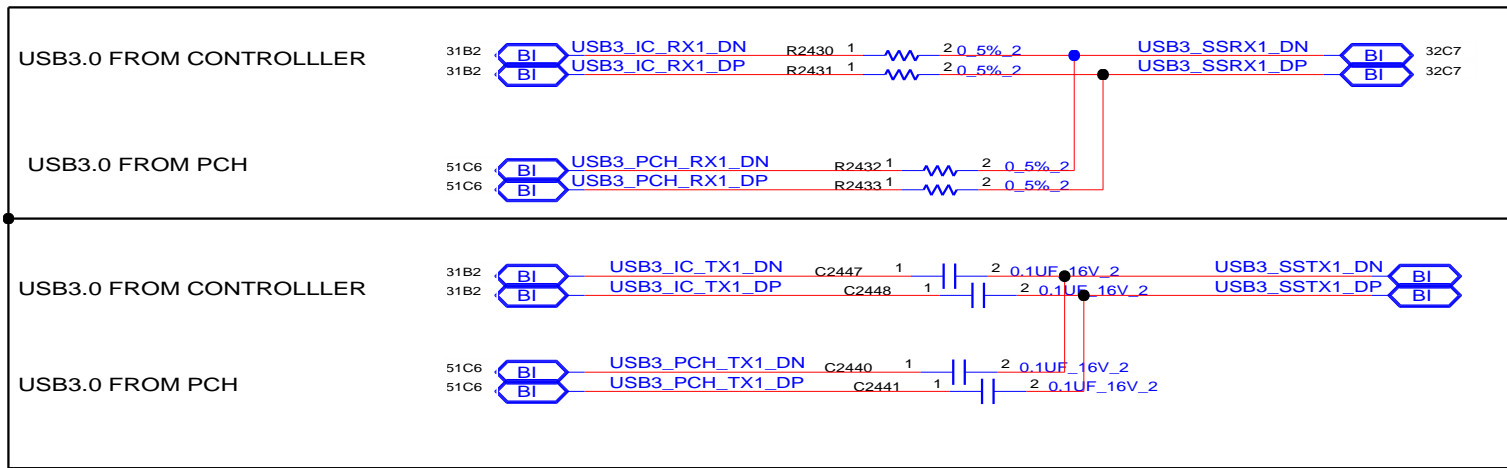
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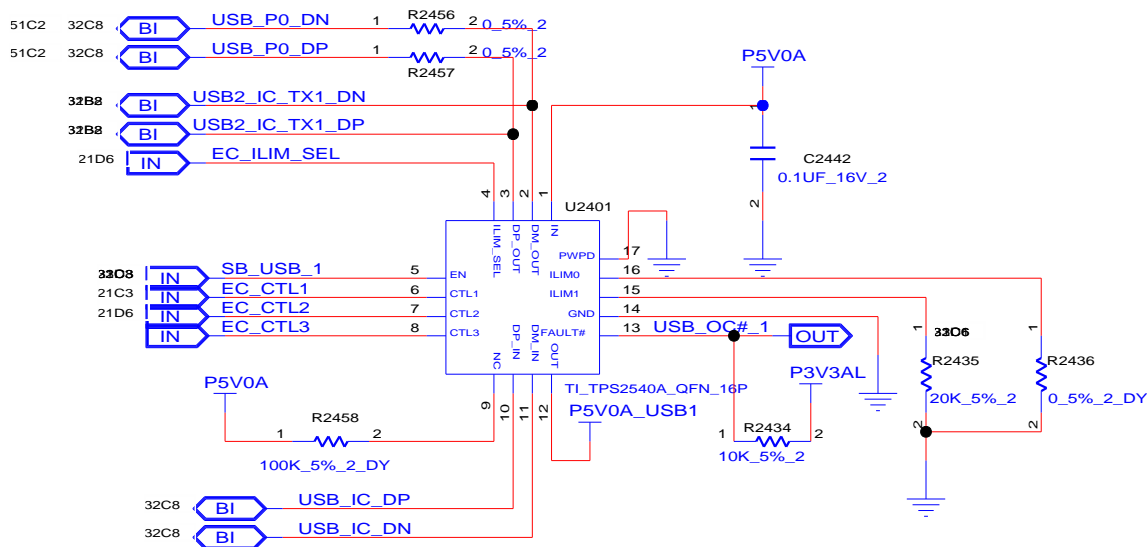
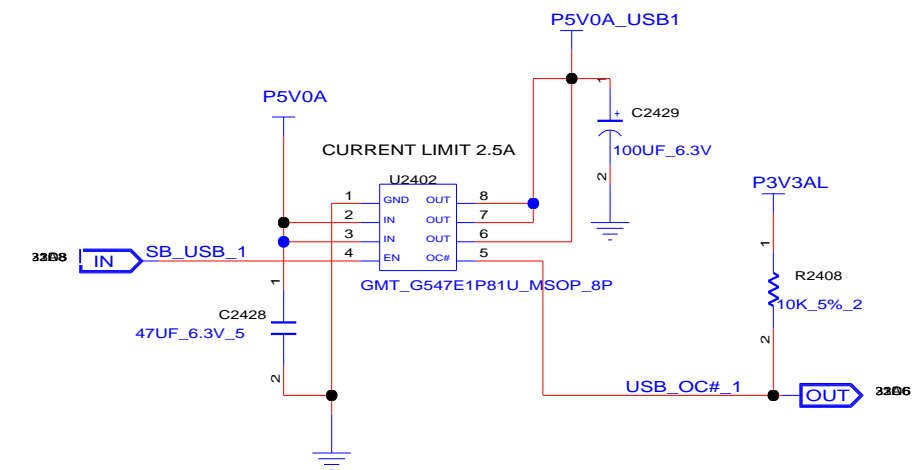
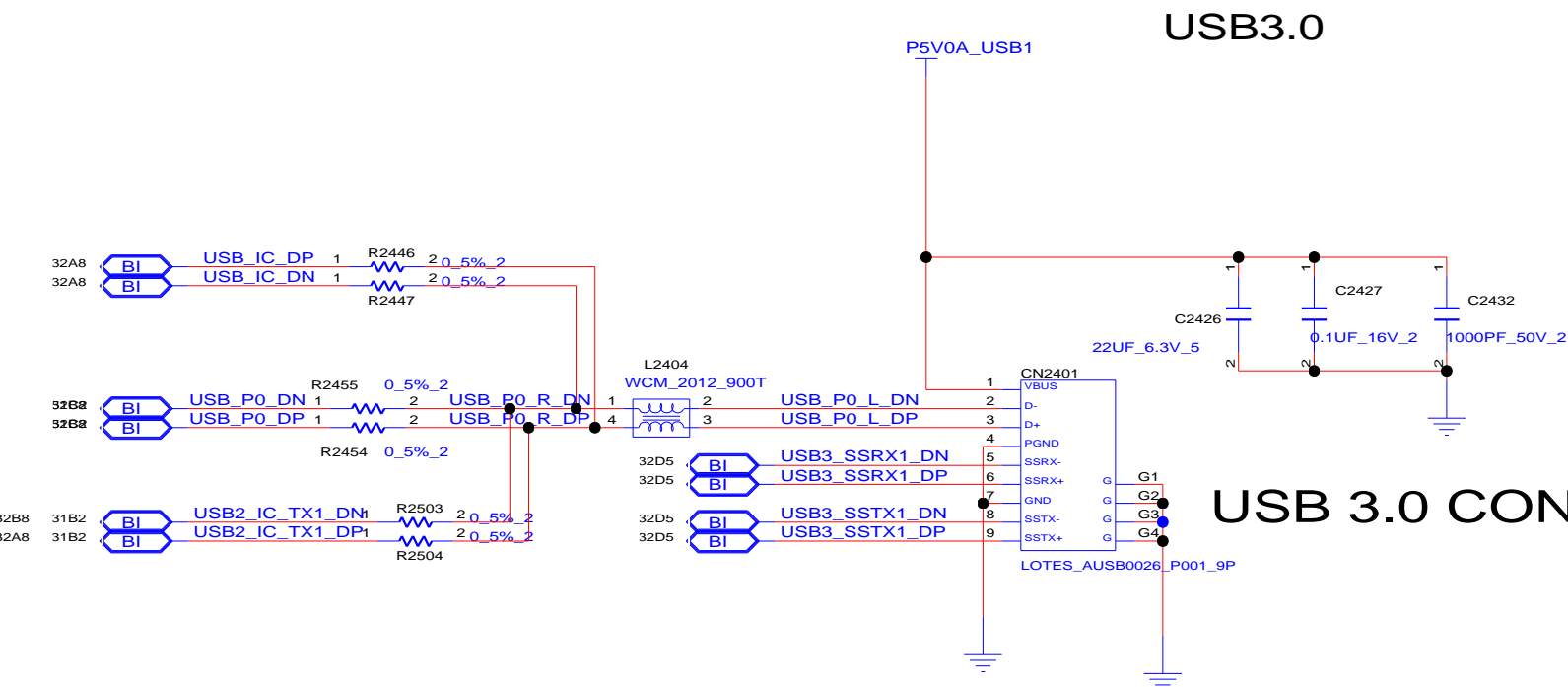
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REFERENCE 2400~2499(USB3.0)



USB3.0



CTL1	CTL2	CTL3	Mode
0	0	X	Dedicated Charging Port, Auto-detect
0	1	X	Dedicated Charging Port, BC Specification 1.1 Only
1	0	X	Dedicated Charging Port, Apple Only
1	1	0	Standard Downstream Port, USB 2.0 Mode
1	1	1	Charging Downstream Port, BC Specification 1.1

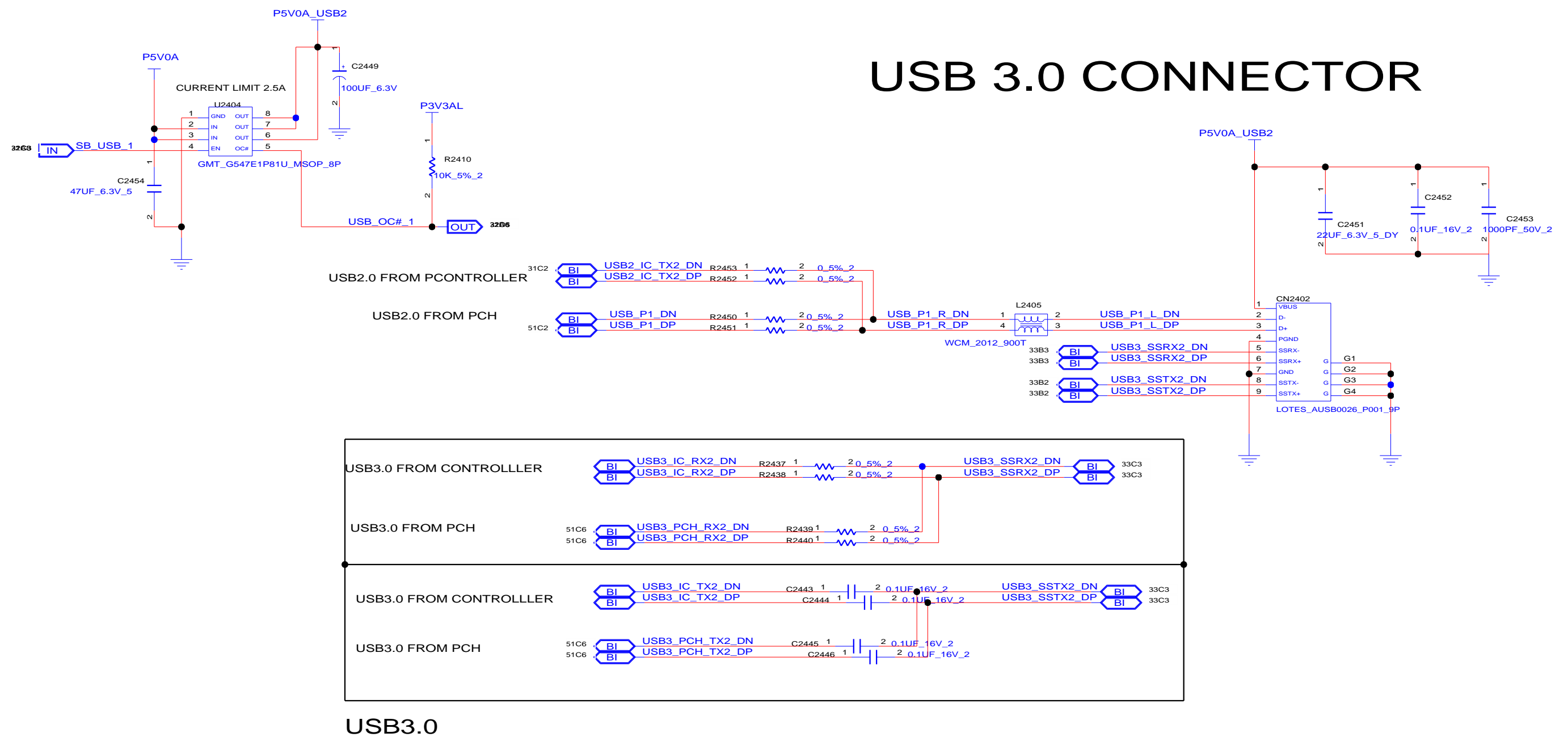
Table 3 – TPS2541 Control Truth Table

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A3	CS	1310xxxx-0-0	X01

REFERENCE 2400~2499(USB3.0)

USB 3.0 CONNECTOR



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REFERENCE 3000~3049(LCM)

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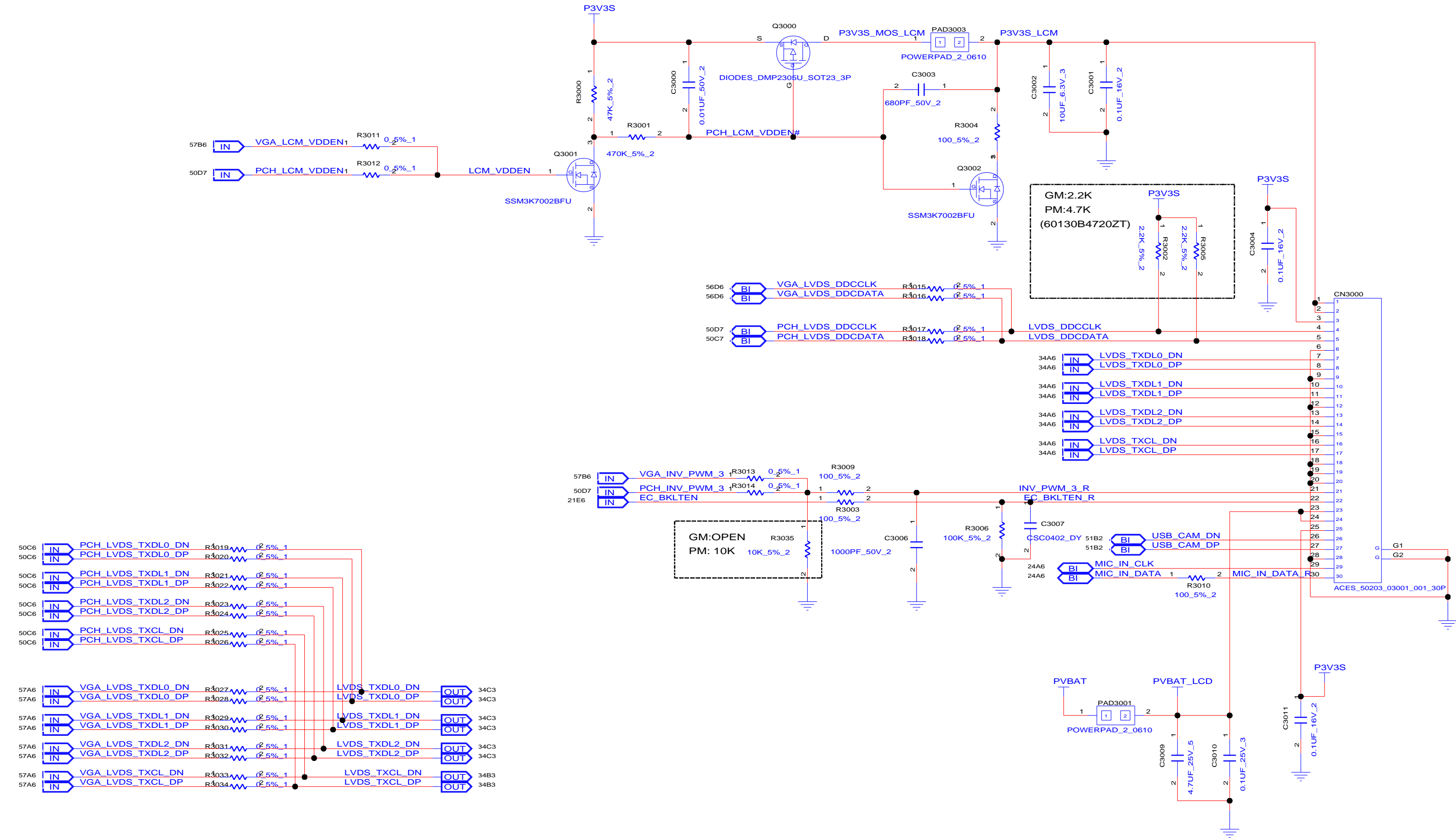
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REFERENCE 3050~3099(CRT)

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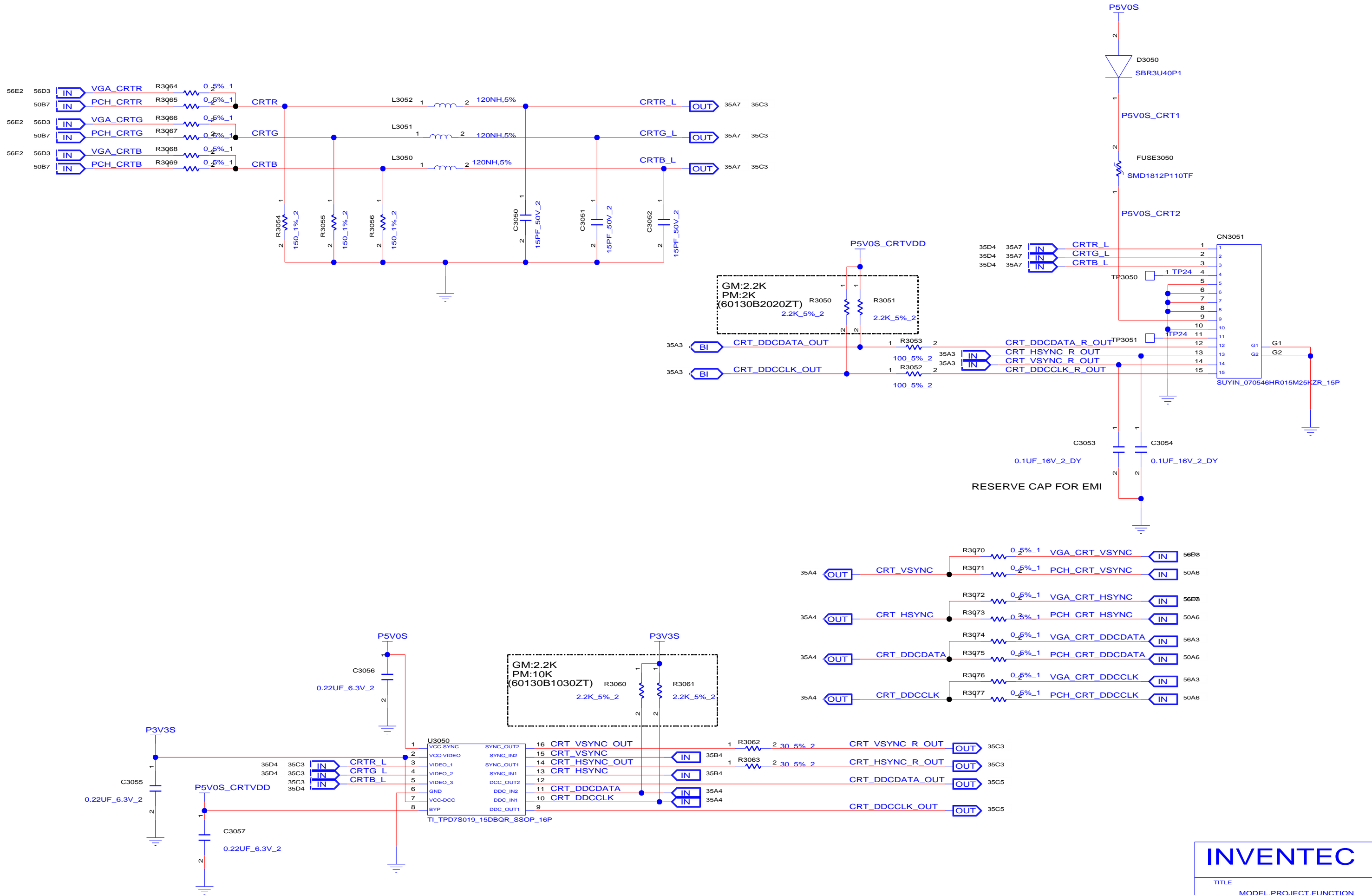
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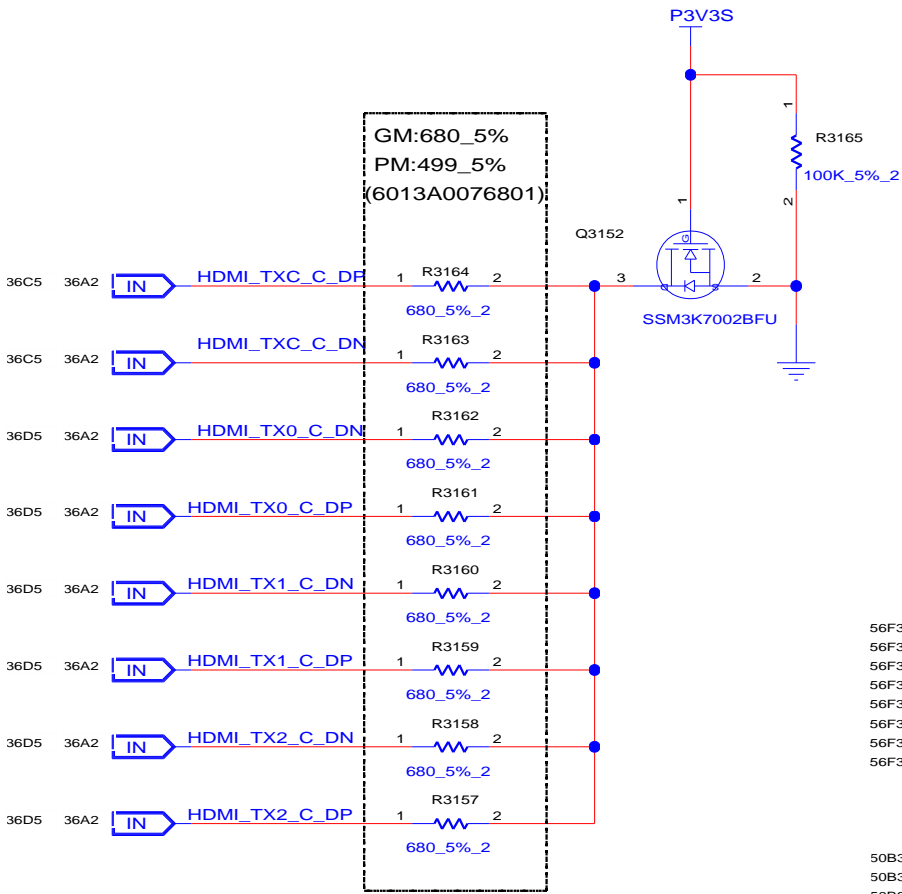
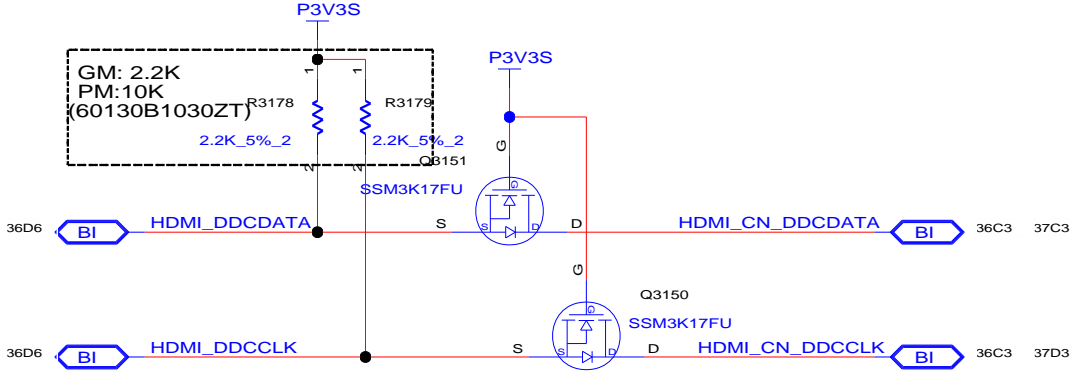
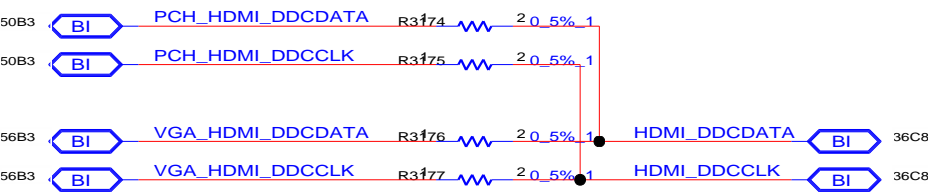
INVENTEC

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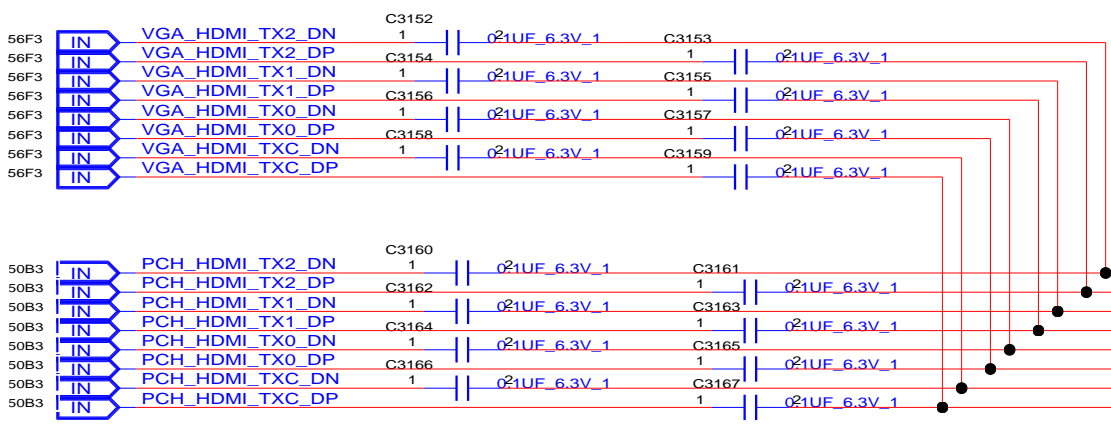
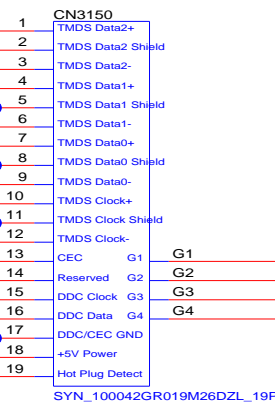
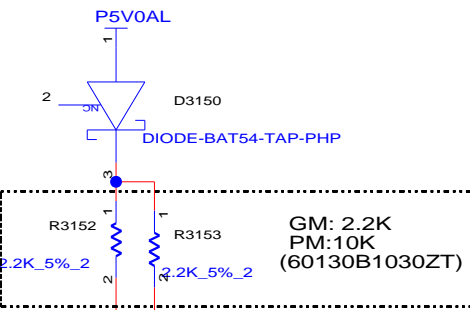
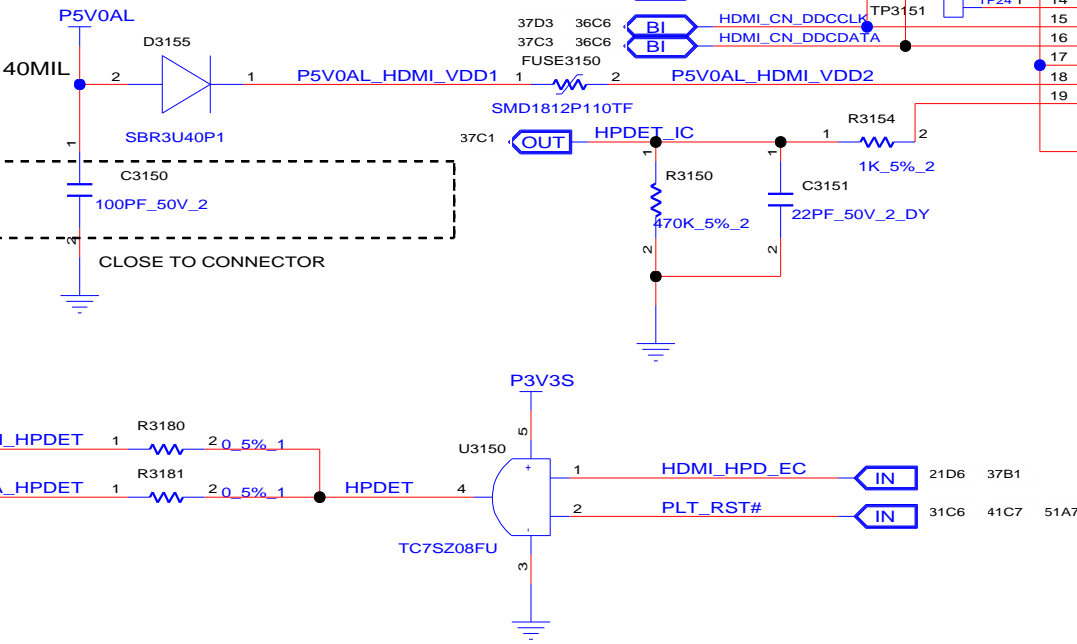
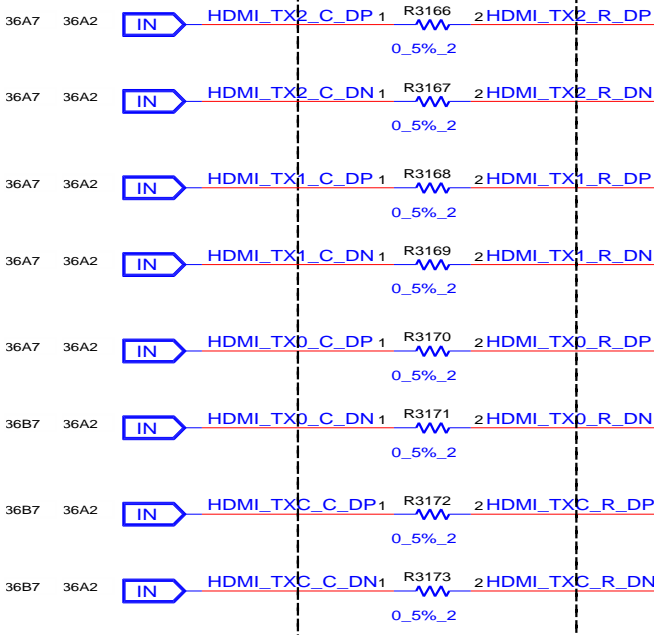
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01

CHANGE by XXX DATE 21-OCT-2002 SHEET 35 of 68

REFERENCE 3150~3199(HDMI)



PLACE CLOSE TO CONNECTOR



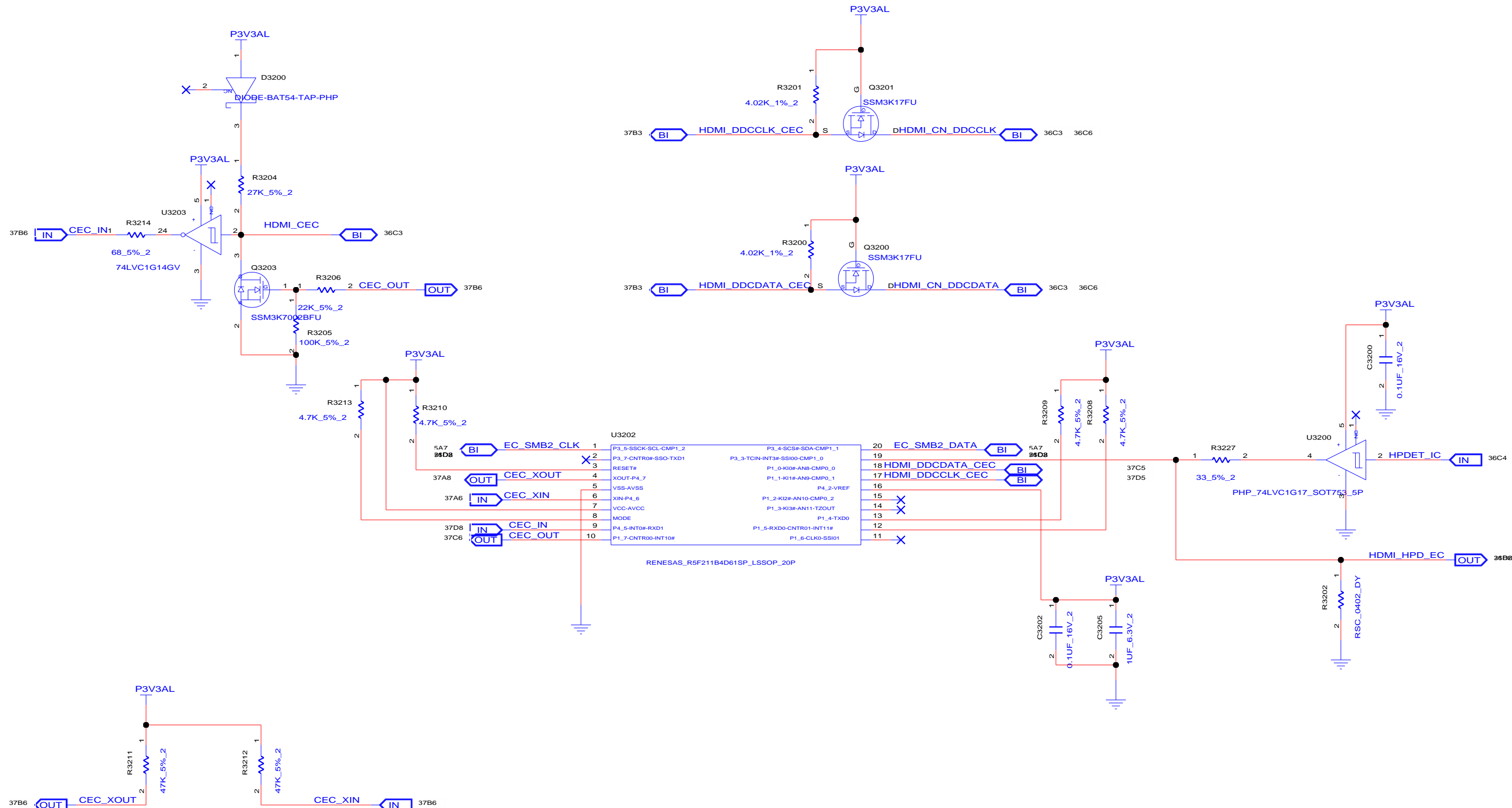
INVENTEC

TITLE MODEL,PROJECT,FUNCTION Block Diagram

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

CHANGE by XXX DATE 21-OCT-2002

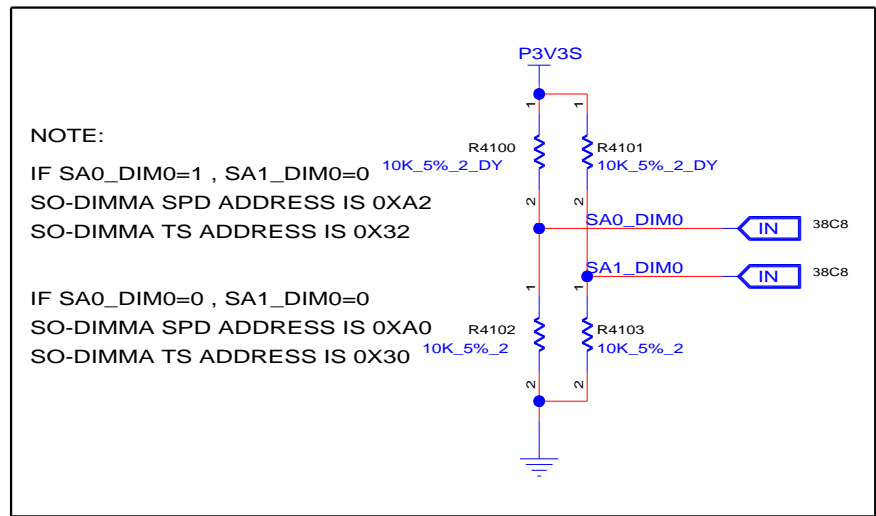
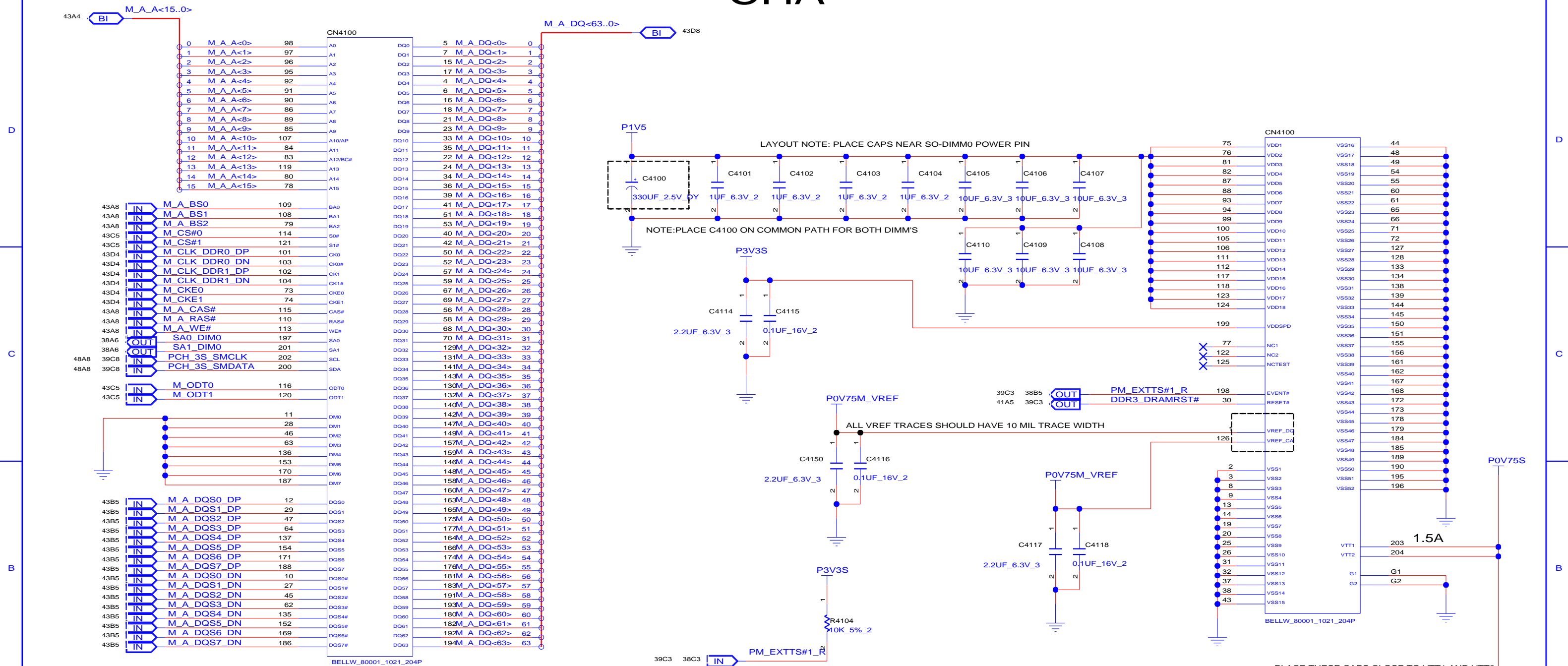
SHEET 36 of 68



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

CHA

REFERENCE 4100~4299(DDR)



INVENTEC

TITLE

MODEL,PROJECT,FUNCTION
Block Diagram

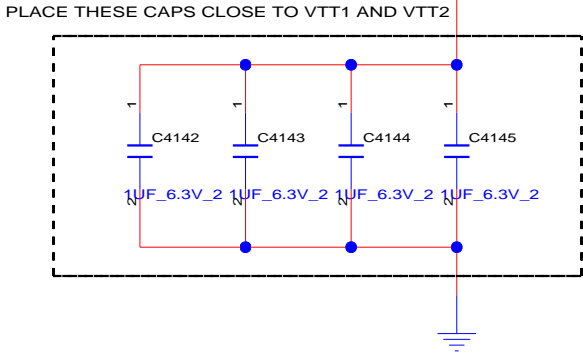
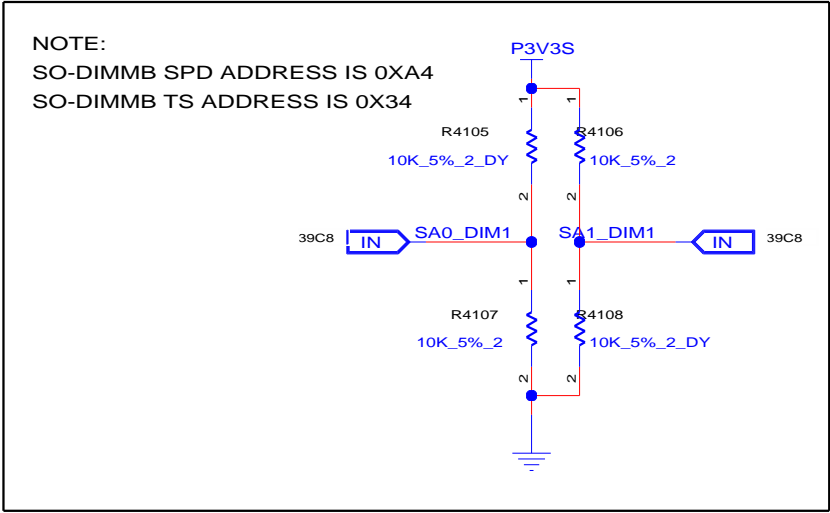
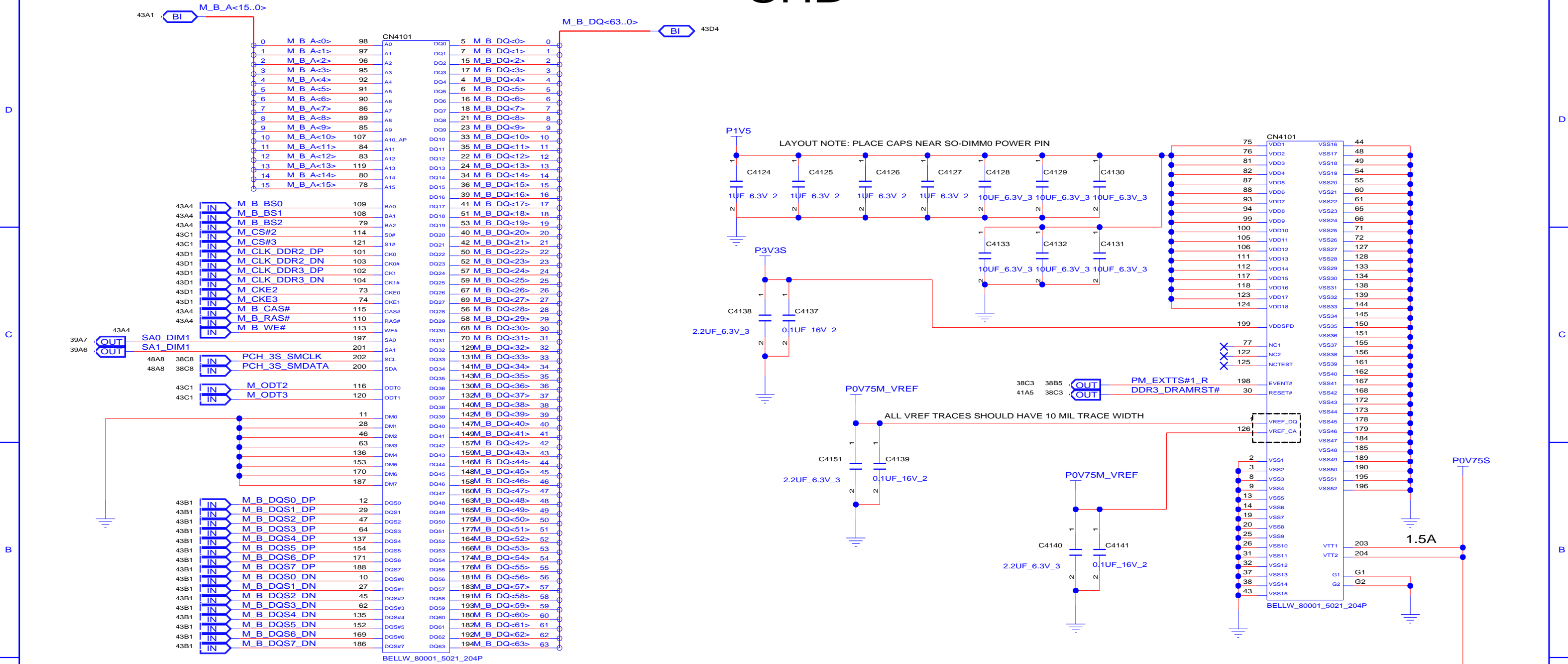
SIZE A3 CODE CS DOC.NUMBER 1310xxxx-0-0 REV X01

CHANGE by XXX DATE 21-OCT-2002

SHEET 38 of 68

CHB

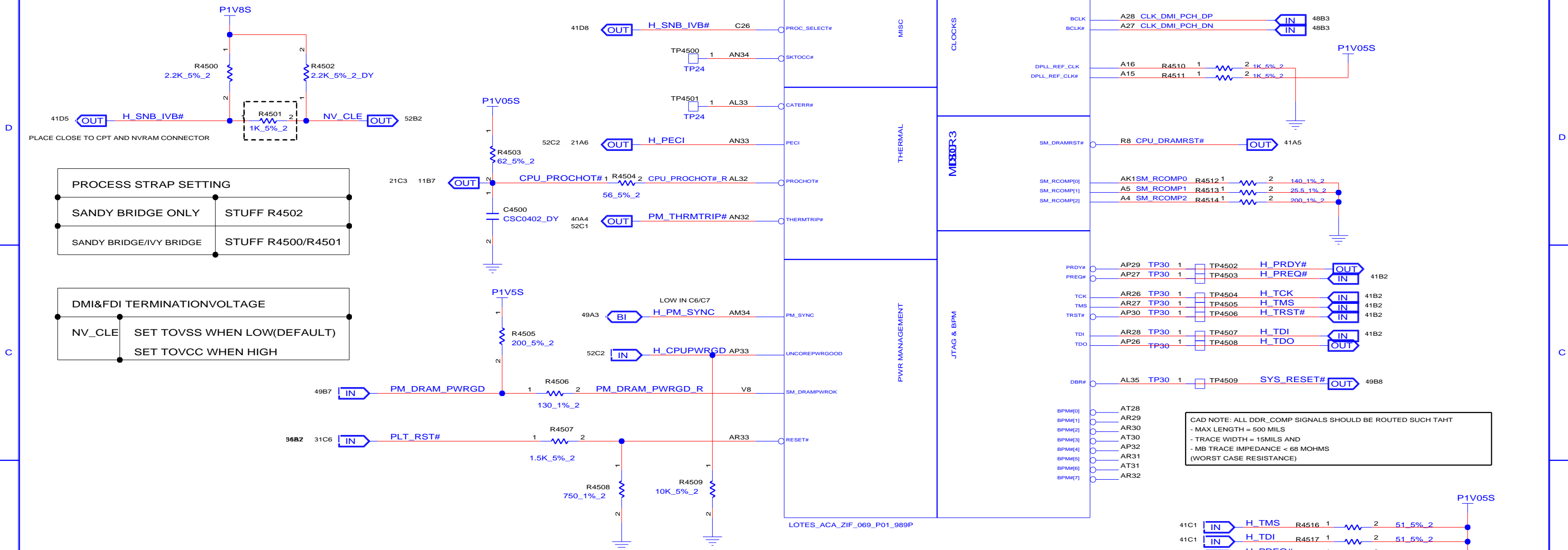
REFERENCE 4100~4299(DDR)



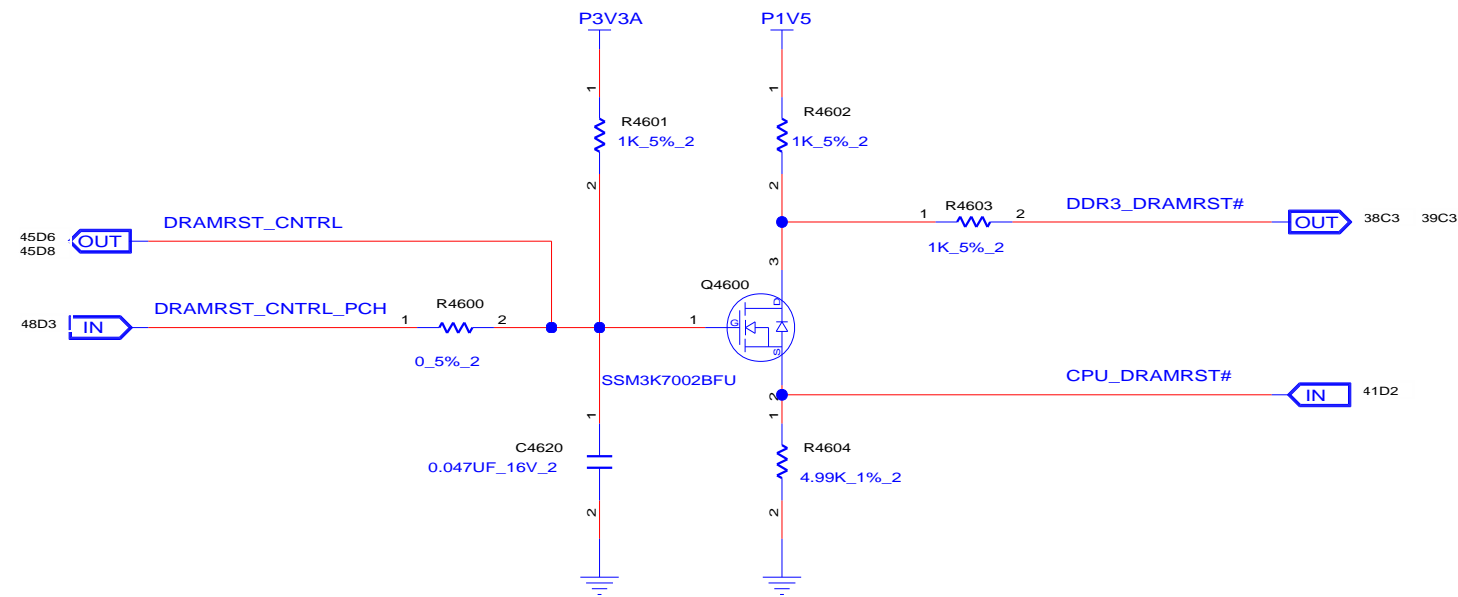
INVENTEC

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

REFERENCE 4500~4699(CPU)



S3 CIRCUIT: DRAM_RST# TO MEMORY SHOULD BE HIGH DURING S3



INVENTEC

TITLE
MODEL,PROJECT,FUNCTION
Block Diagram

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

CHANGE by XXX DATE 21-OCT-2002 SHEET 41 of 68

REFERENCE 4500~4699(CPU)

D

C

B

A

D

C

B

A



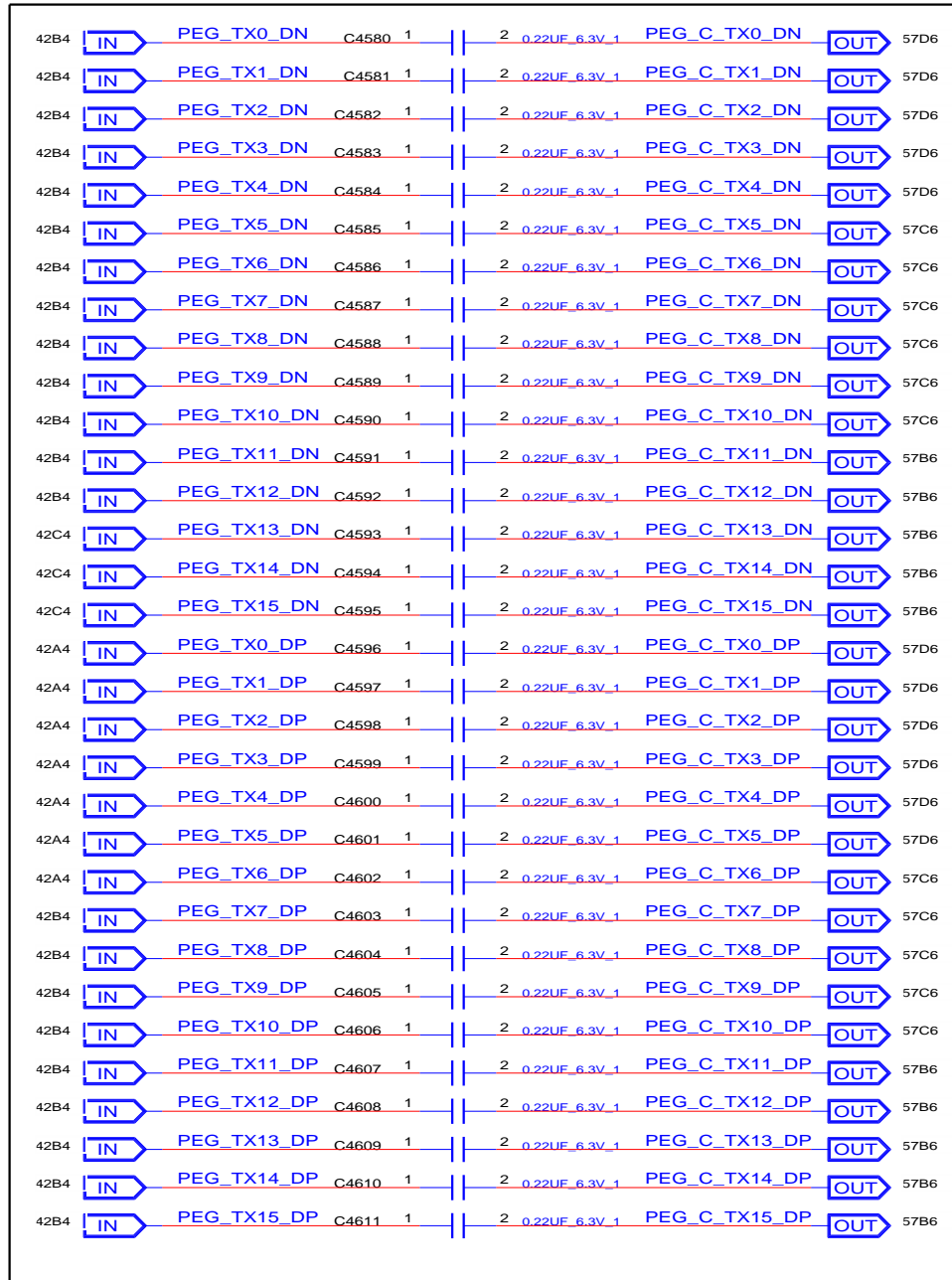
CAD NOTE: PEG_ICOMPI AND RCOMP SIGNALS SHOULD BE SHORTED AND ROUTED WITH

- MAX LENGTH = 500 MILS
- TYPICAL IMPEDANCE = 43 MOHMS

PEG_ICOMPO SIGNALS SHOULD BE ROUTED WITH

- MAX LENGTH = 500 MILS
- TYPICAL IMPEDANCE = 14.5 MOHMS

CLOSE TO CPU



CAD NOTE: DP_COMPIO AND ICOMPO SIGNALS SHOULD BE SHORTED NEAR BALLS AND ROUTED WITH

- TYPICAL IMPEDANCE < 25 MOHMS

INVENTEC

TITLE
MODEL,PROJECT,FUNCTION
Block Diagram

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

CHANGE by XXX DATE 21-OCT-2002 SHEET 42 of 68

D

C

B

A

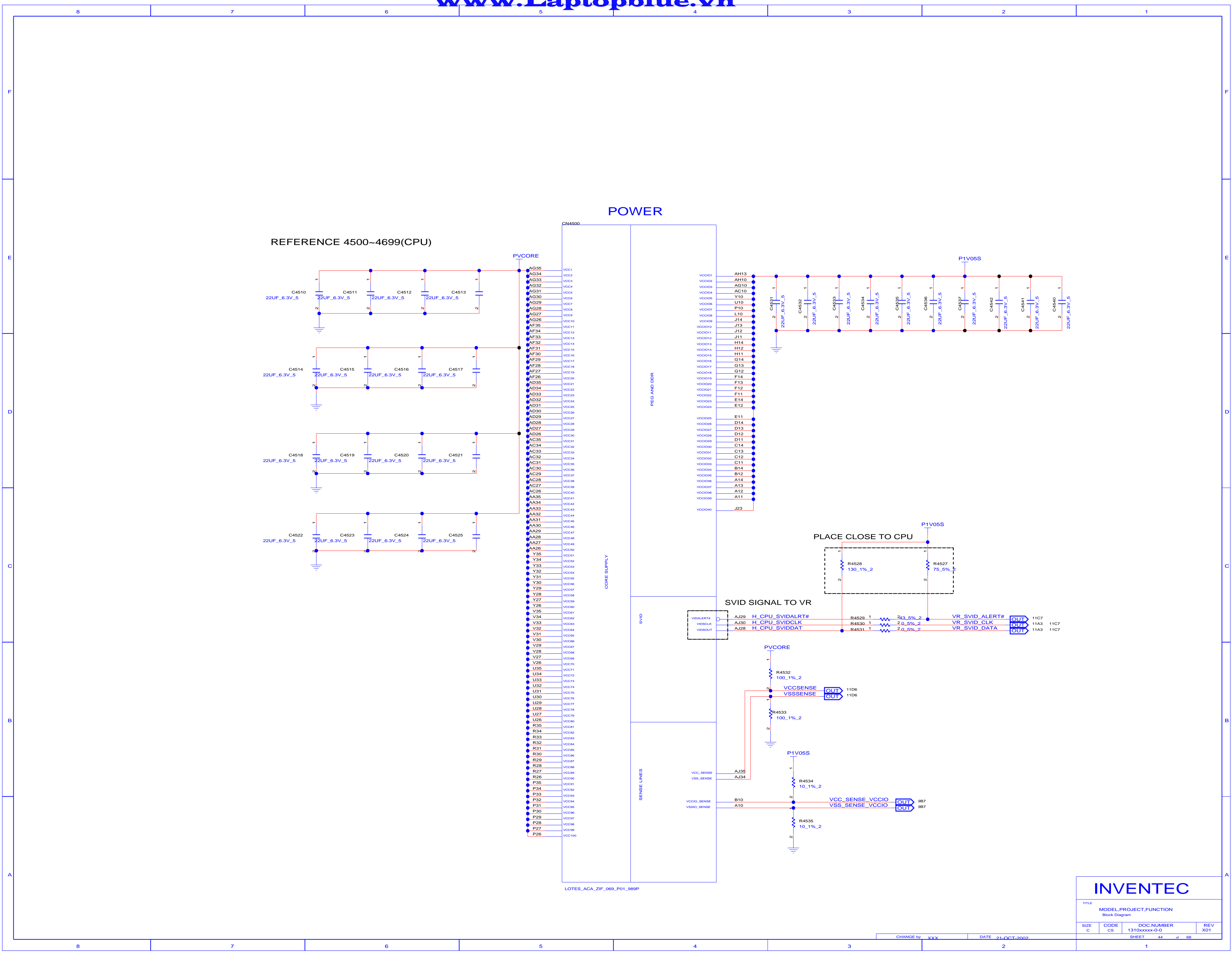
D

C

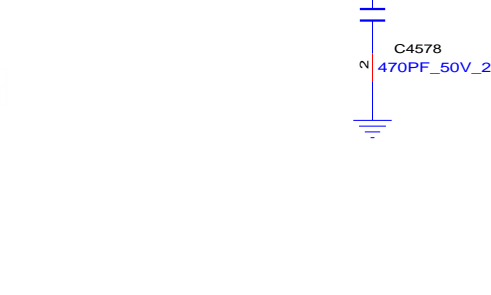
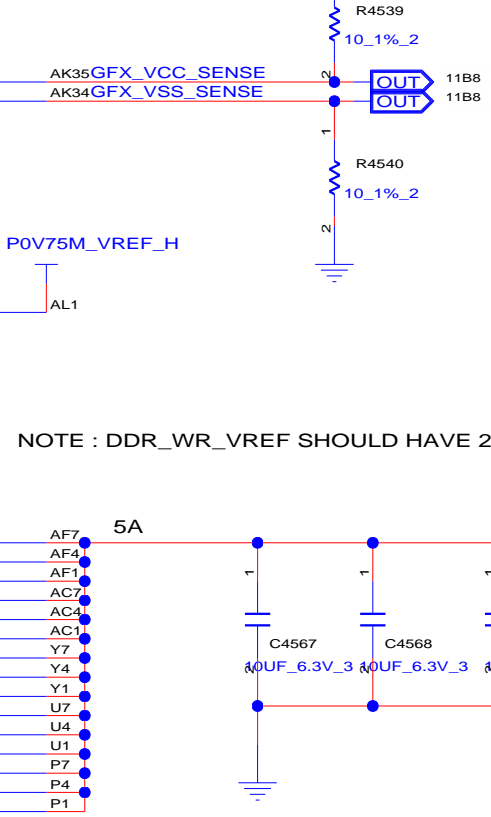
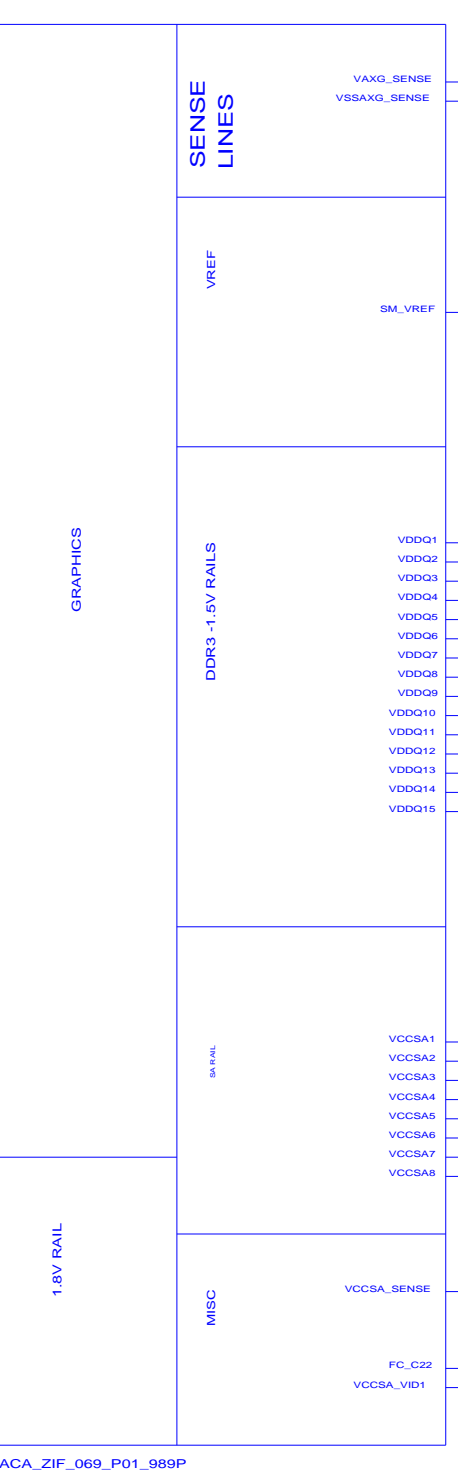
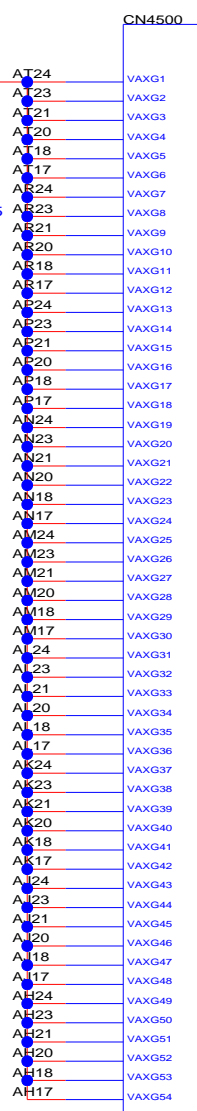
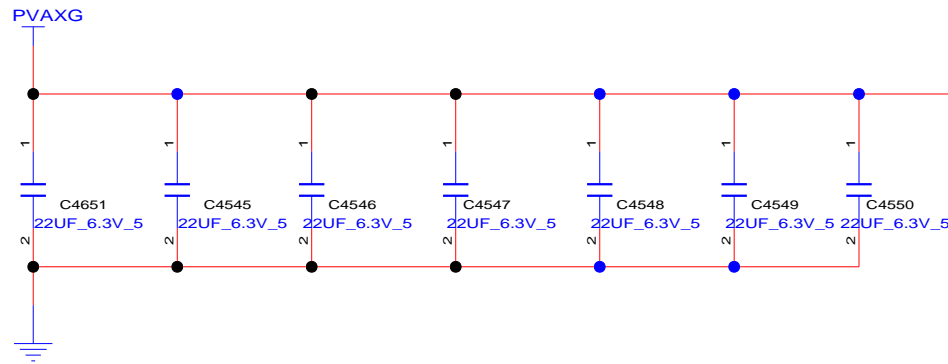
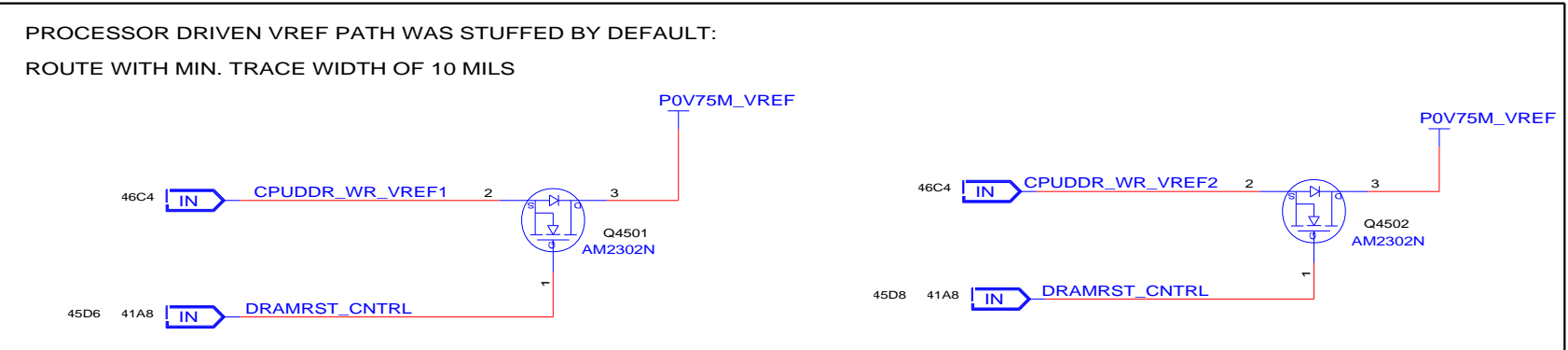
B

A

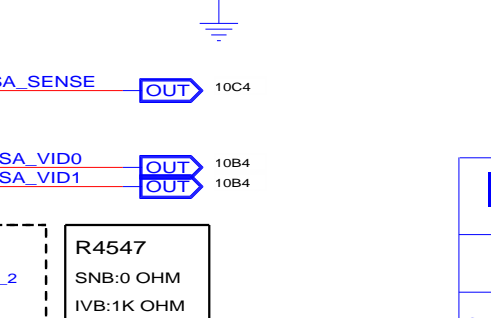
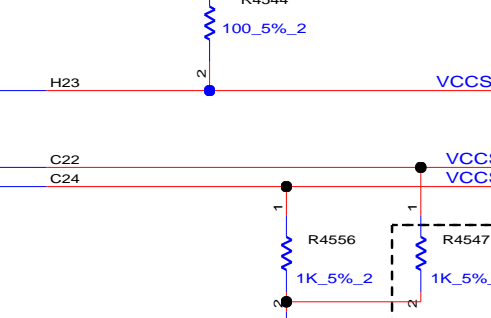
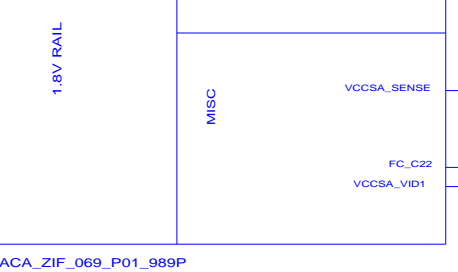
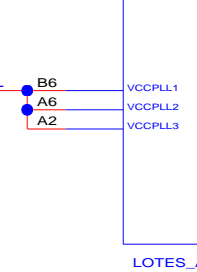
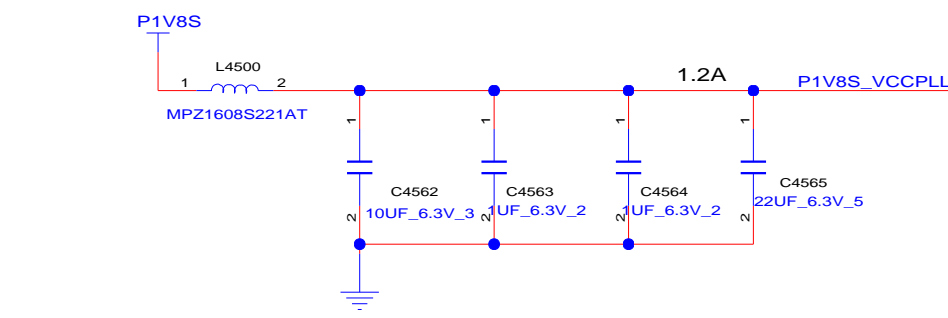




POWER

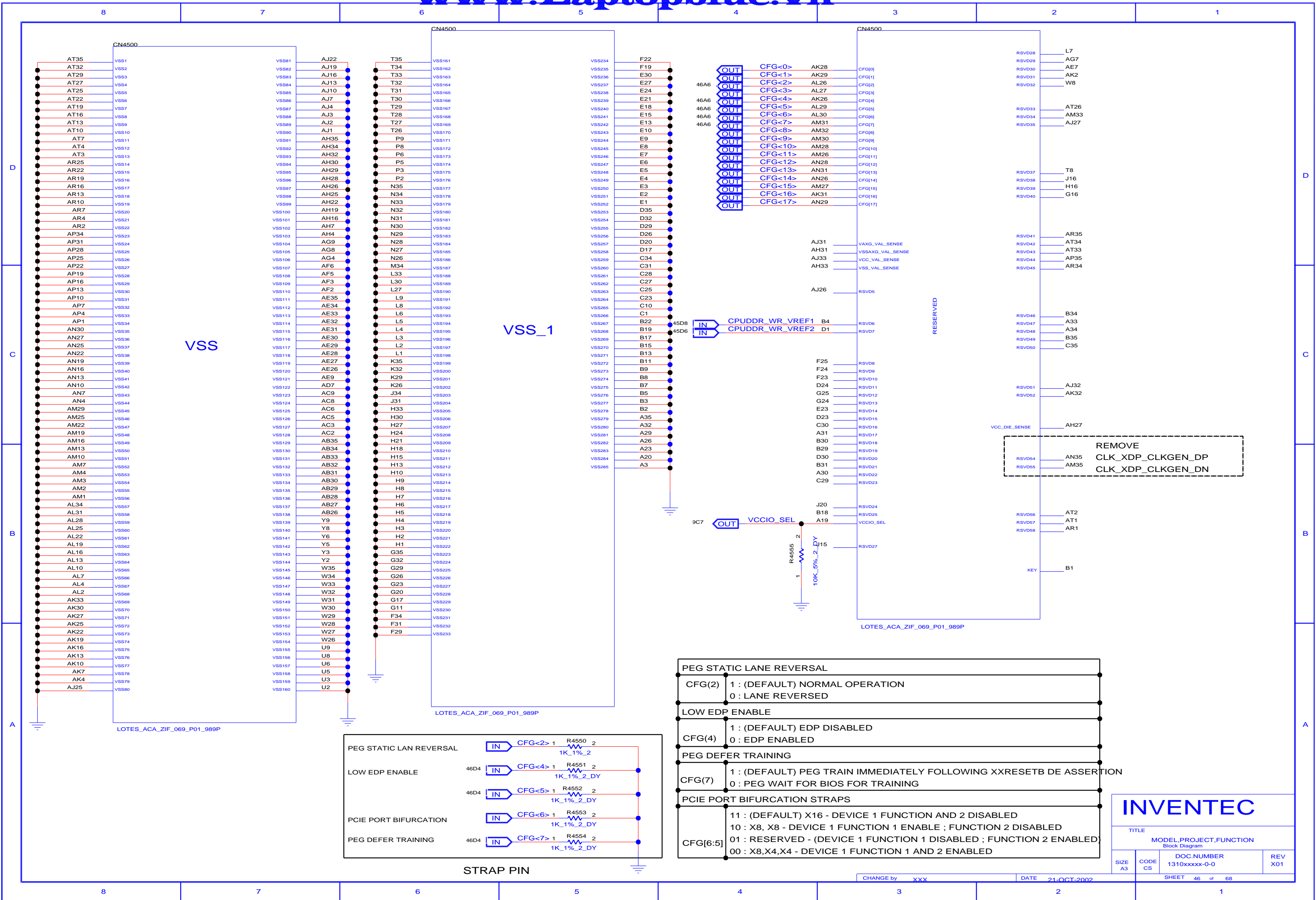


NOTE : DDR_WR_VREF SHOULD HAVE 20/20 MIL WHEREVER POSSIBLE



INVENTEC

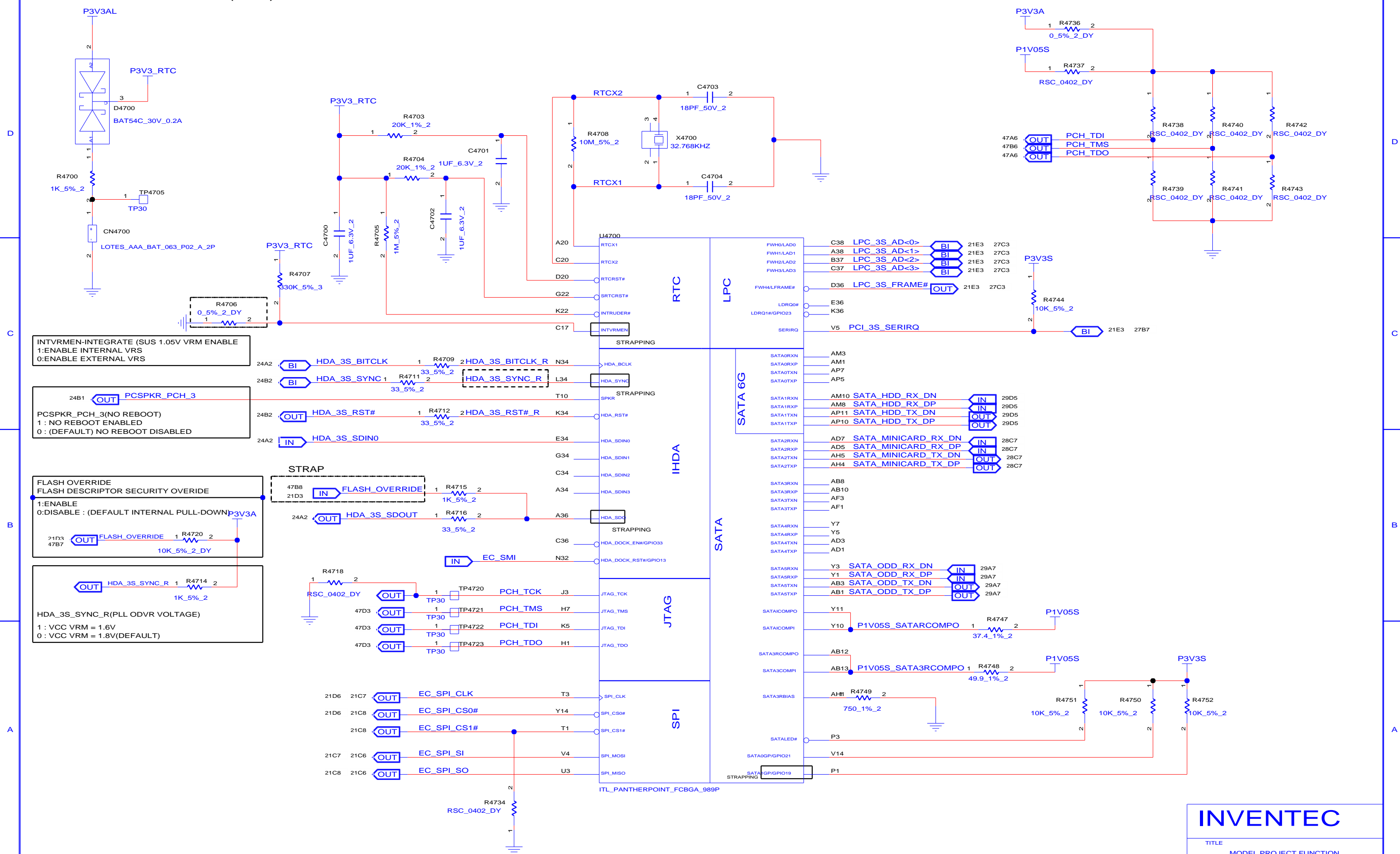
TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01



INVENTEC

TITLE MODEL,PROJECT,FUNCTION
Block Diagram

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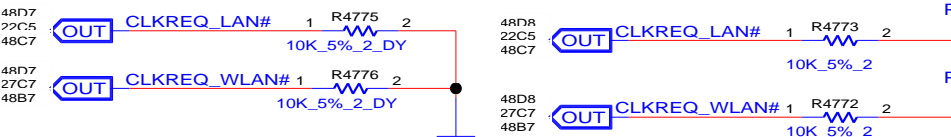
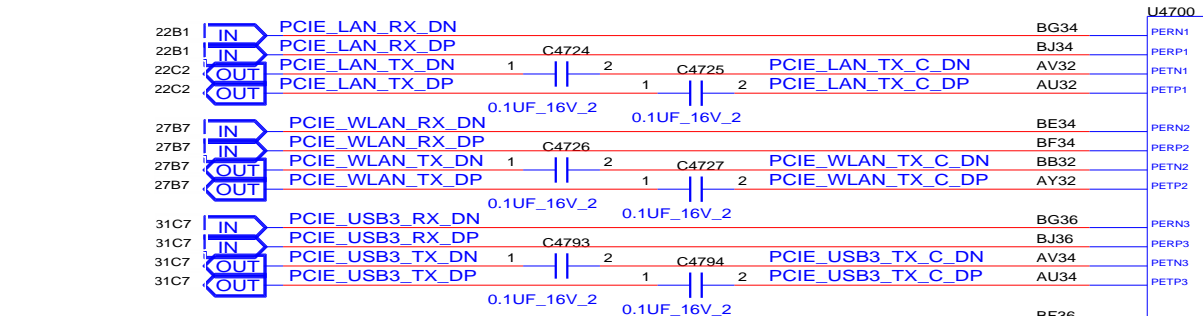
TITLE	MODEL,PROJECT,FUNCTION
	Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
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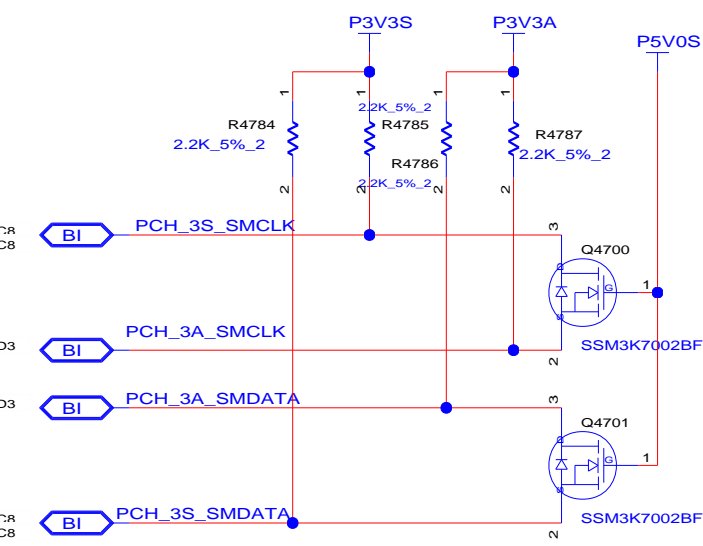
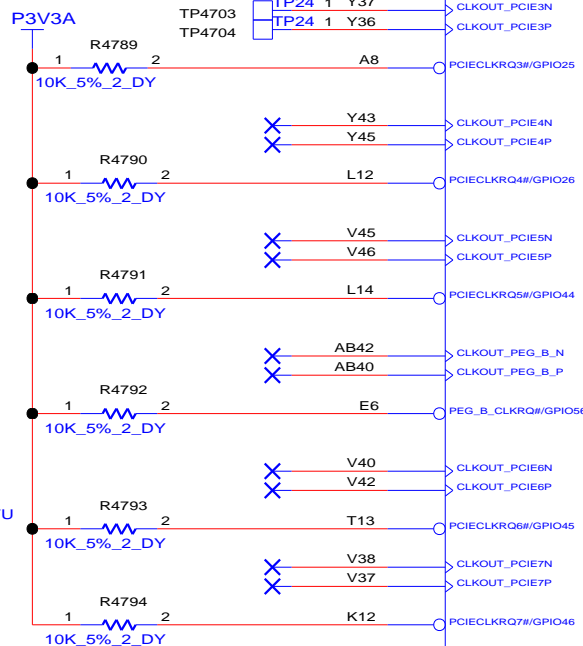
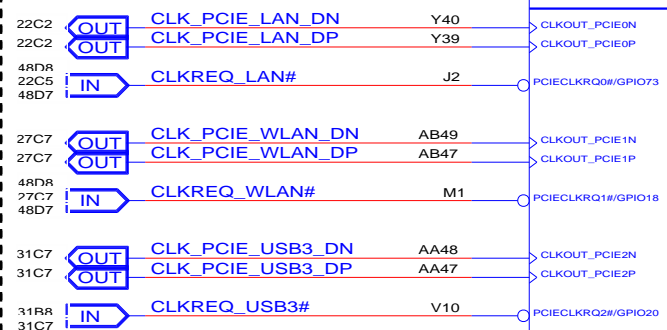
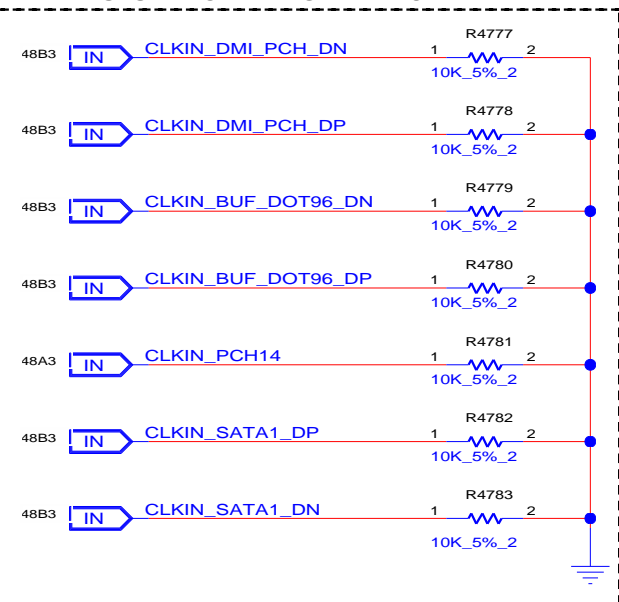
CHANGE by	xxx	DATE	21-OCT-2002
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SHEET 47 of 68

REFERENCE 4700~4949(PCH)



CLOCK TERMINATION FOR FICM
STUFF FOR INTEGRATED CLK



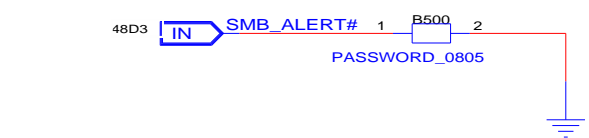
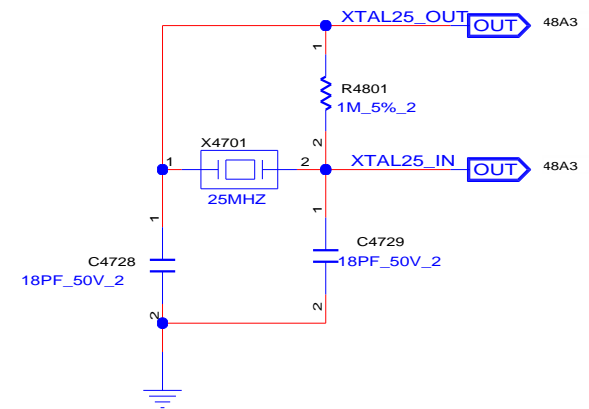
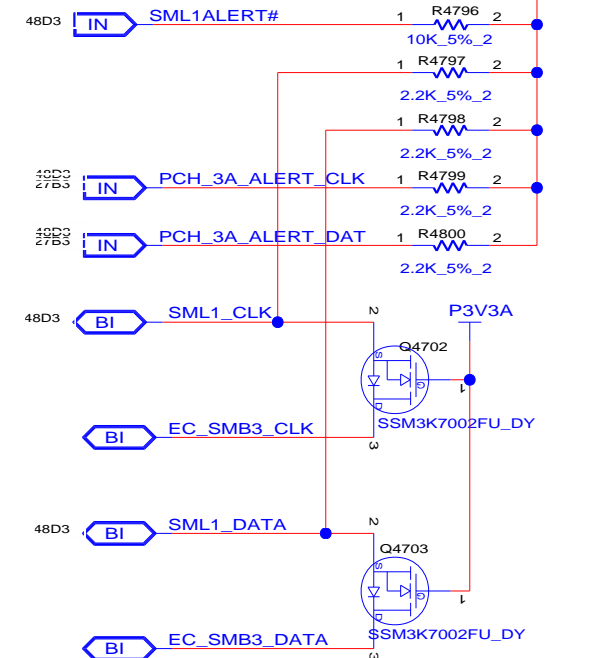
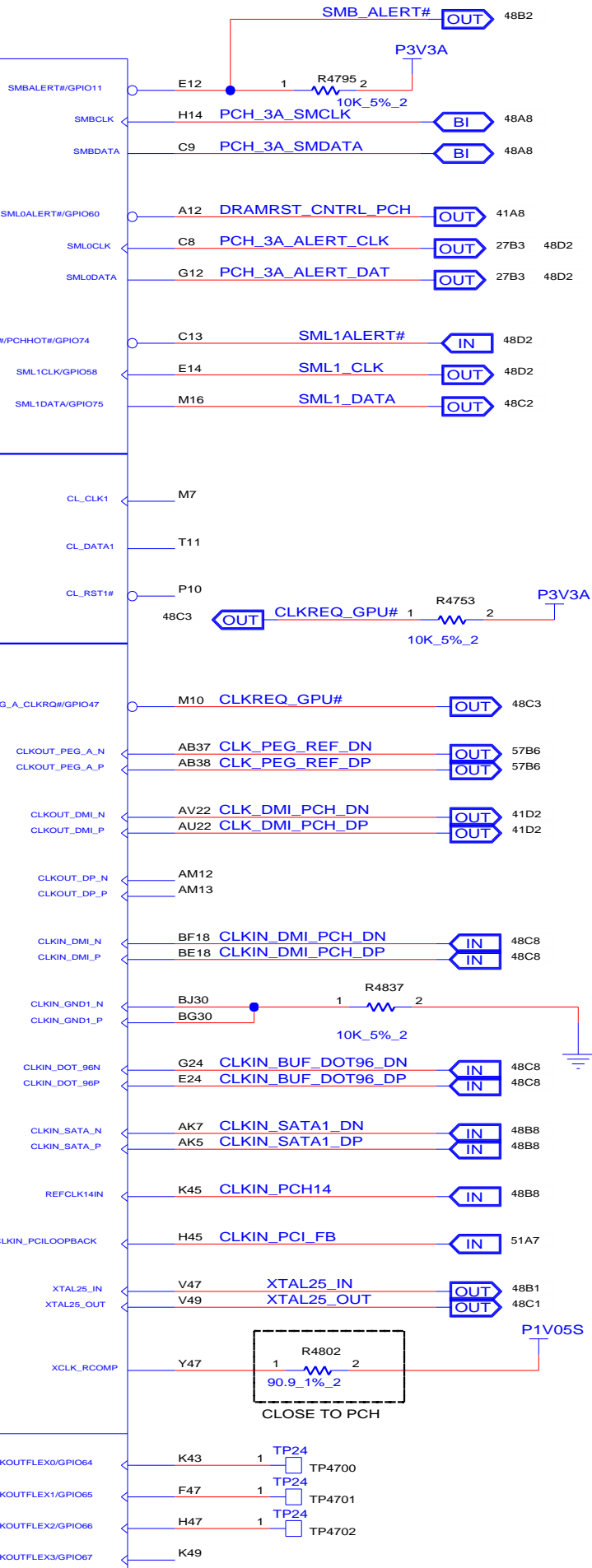
PCIE*

SMBUS

Controller Link

CLOCKS

FLEX CLOCKS



INVENTEC

TITLE

MODEL,PROJECT,FUNCTION

Block Diagram

SIZE A3

CODE CS

DOC.NUMBER

1310xxxx-0-0

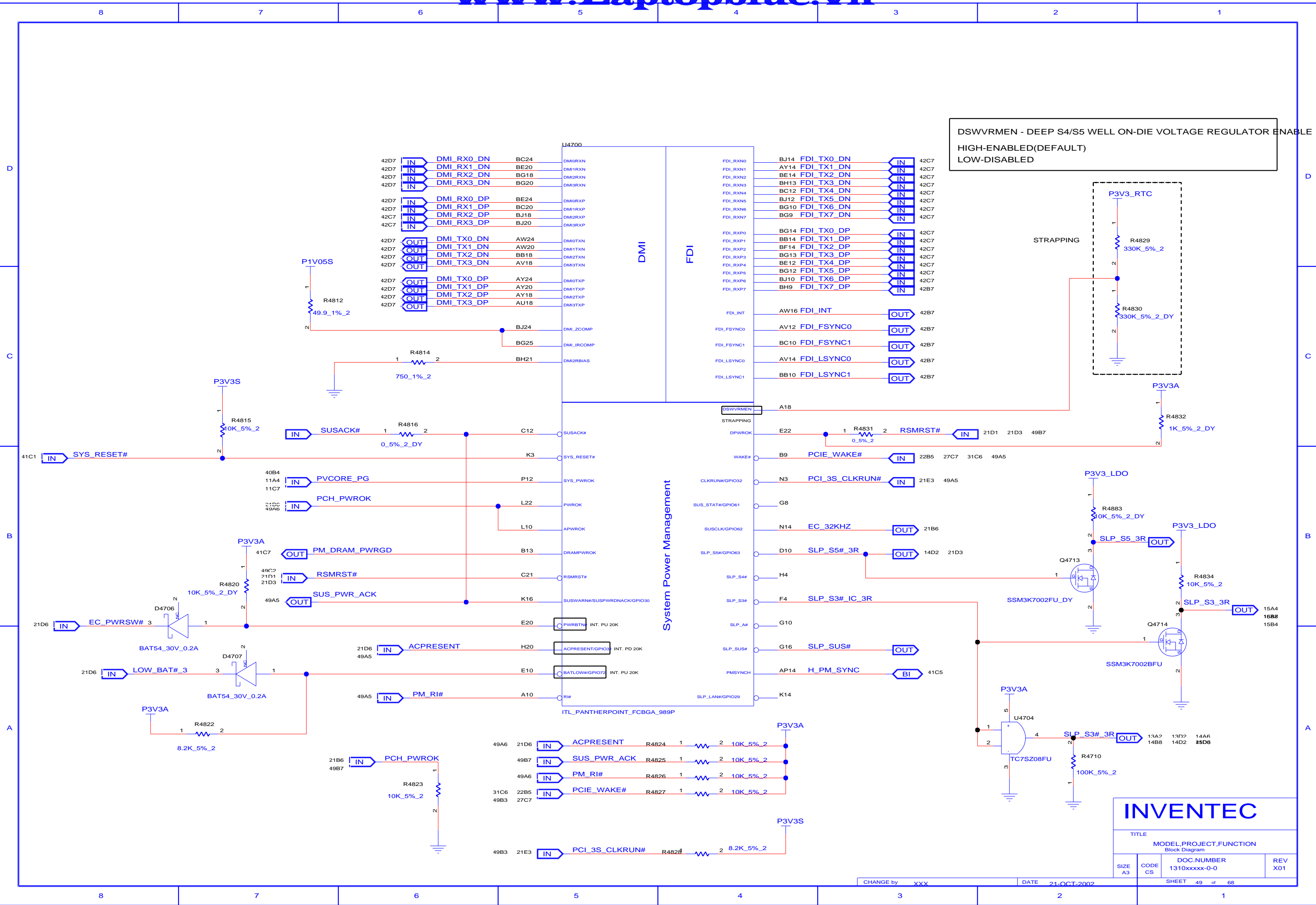
REV

X01

CHANGE by XXX

DATE 21-OCT-2002

SHEET 48 of 68



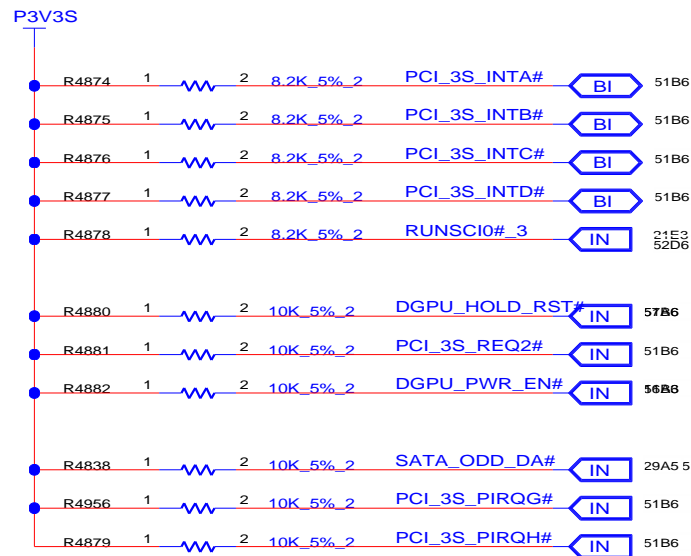
A



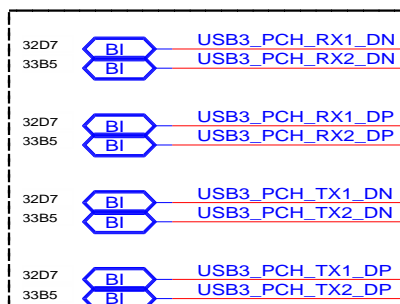
SHEET 50 of 68

REFERENCE 4700~4949(PCH)

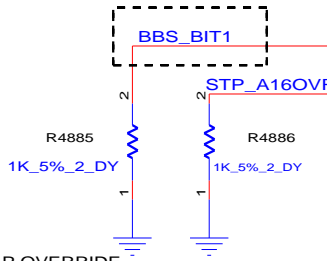
GPIO51 BBS_BIT1	GPIO19 BBS_BIT0	BOOT BIOS DESTINATION
0	1	RESERVED(NAND)
1	0	-----
1	1	SPI (DEFAULT)
0	0	LPC



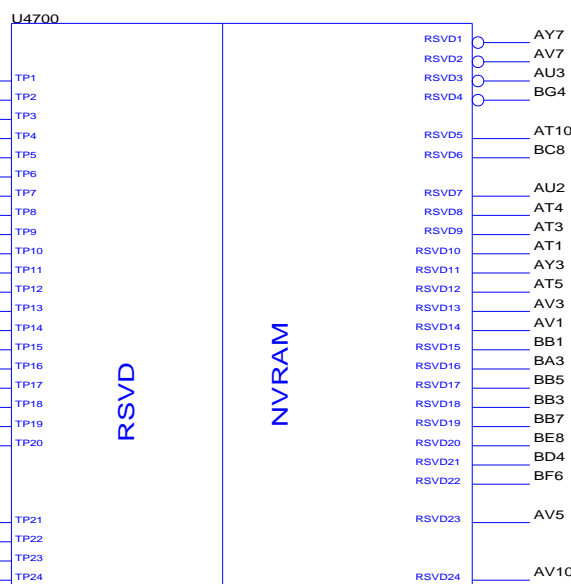
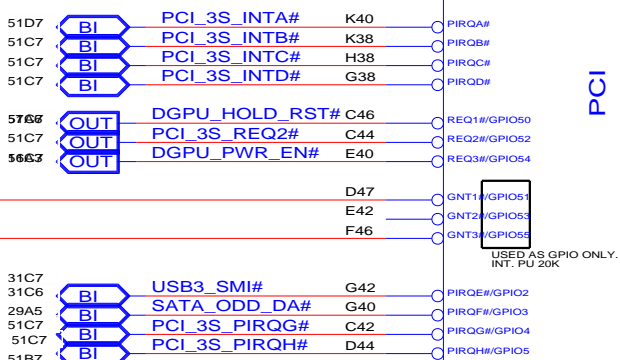
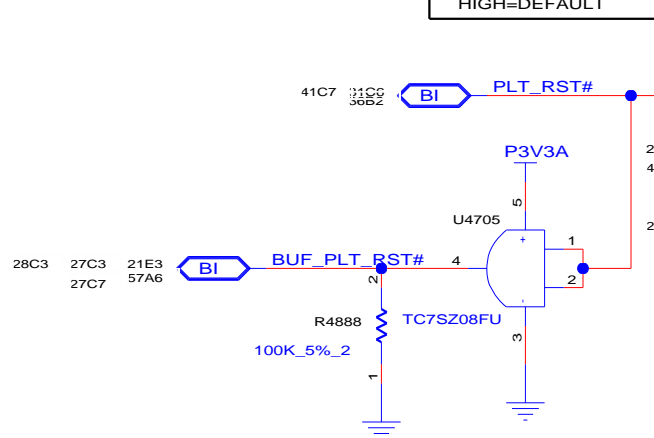
ROUTE WITH 90 OHMS IMPEDANCE
TOTAL LENGTH NO LONGER THAN 11 INCHES



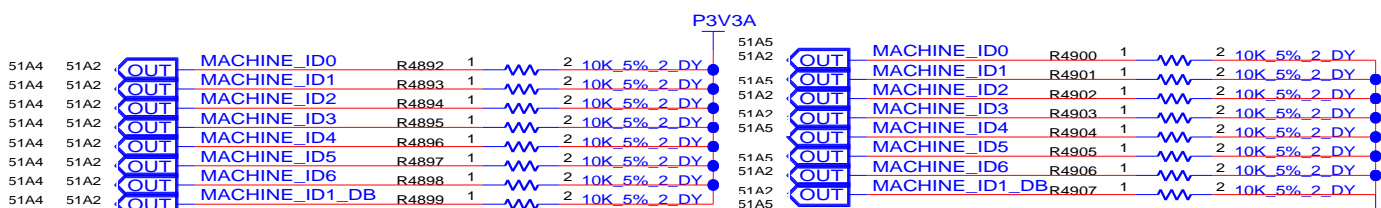
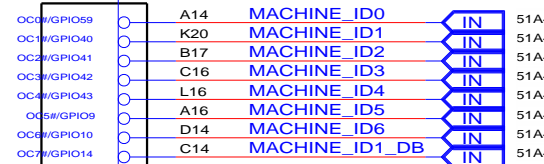
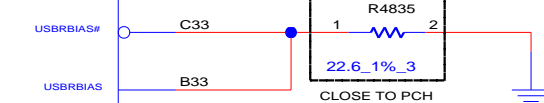
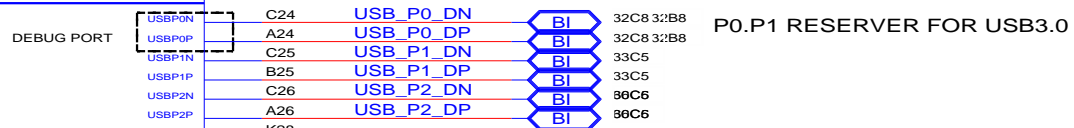
BBS STRAPING



LOW=A16 SWAP OVERRIDE
STP_A16OVR
TOP-BLOCK SWAP OVERRIDE
HIGH=DEFAULT



NOTE:
USB2.0/3.0 COMBO-USB2.0 PORT 0,1 MAPPED USB3.0 PORT 1,2



NOTE:10K_5%(60130B1030ZT)

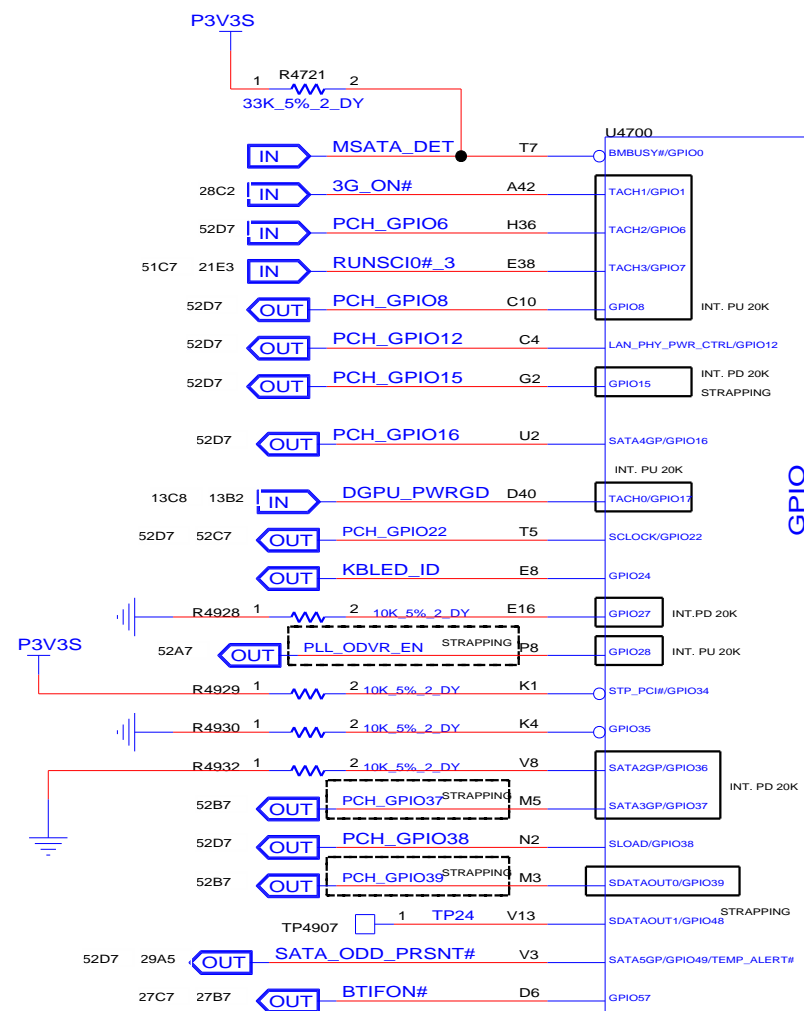
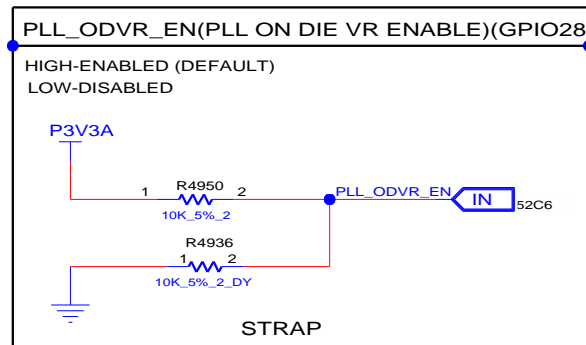
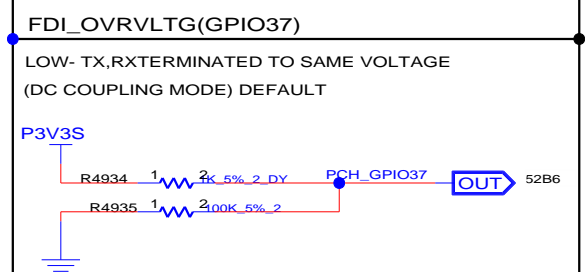
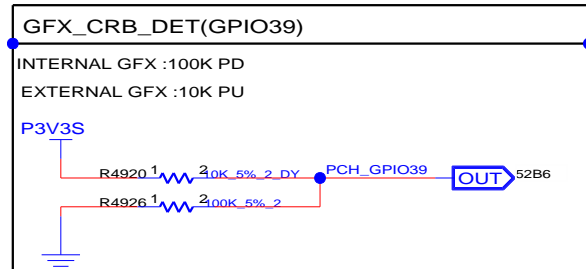
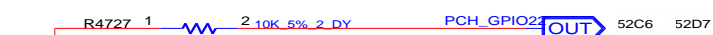
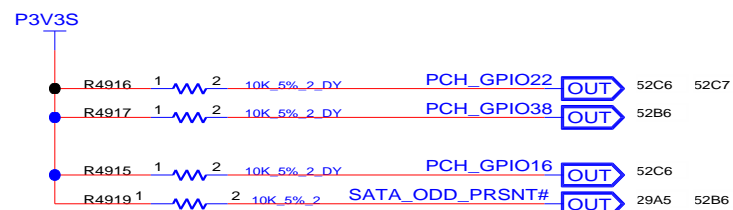
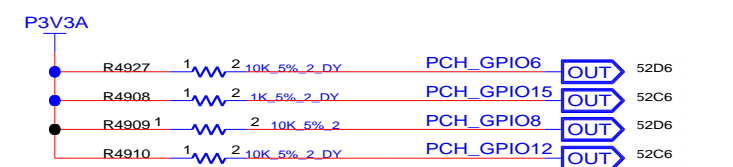
NOTE:10K_5%(60130B1030ZT)

INVENTEC

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

CHANGE by XXX DATE 21-OCT-2002 SHEET 51 of 68

REFERENCE 4700~4949(PCH)



A4 VSS_NCTF_1

A44 VSS_NCTF_2

A45 VSS_NCTF_3

A46 VSS_NCTF_4

A5 VSS_NCTF_5

A6 VSS_NCTF_6

B3 VSS_NCTF_7

B47 VSS_NCTF_8

BD1 VSS_NCTF_9

BD49 VSS_NCTF_10

BE1 VSS_NCTF_11

BE49 VSS_NCTF_12

BF1 VSS_NCTF_13

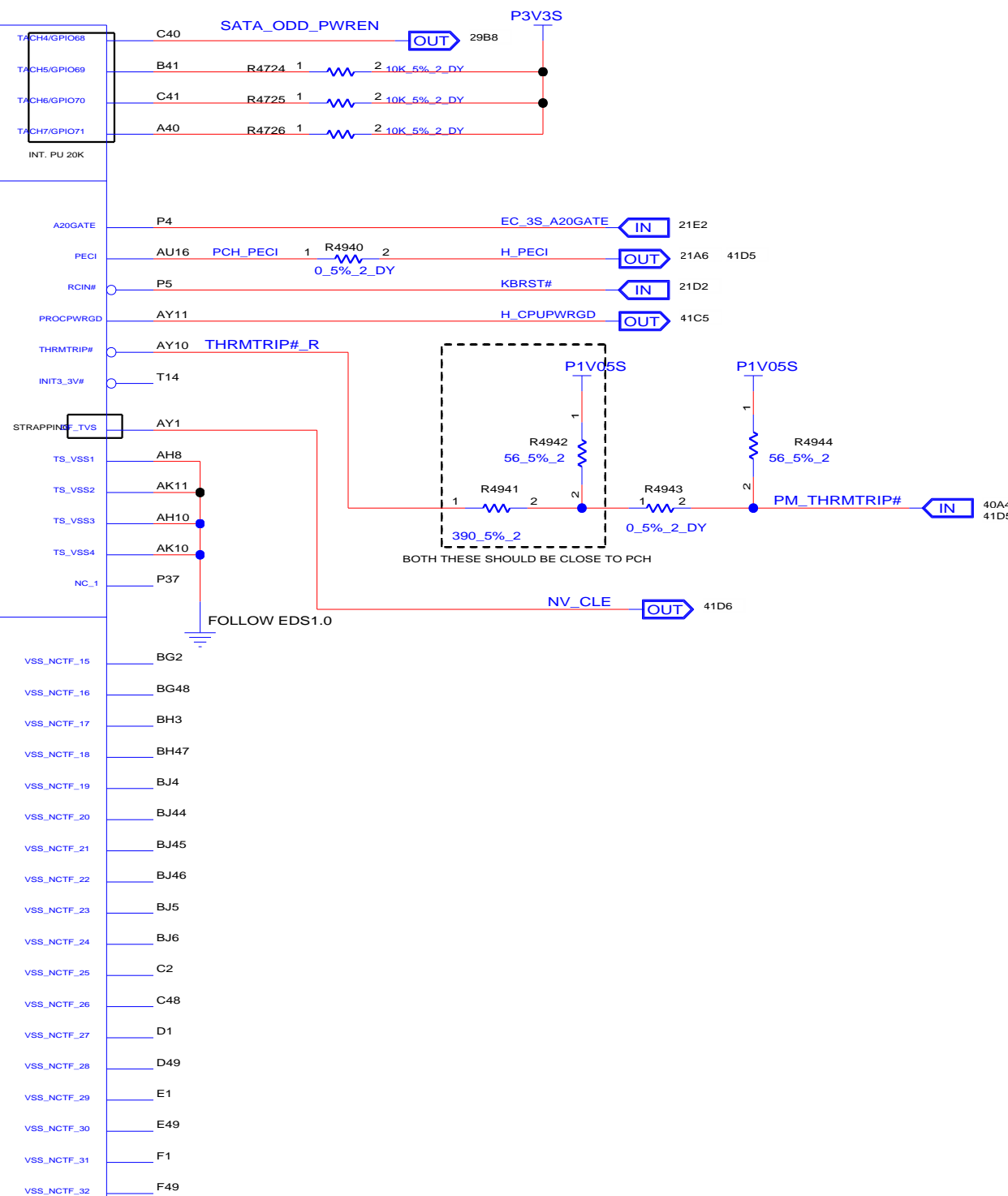
BF49 VSS_NCTF_14

ITL_PANTHERPOINT_FCBGA_989P

GPIO

NCTF

CPU/MISC



INVENTEC

TITLE

MODEL,PROJECT,FUNCTION

Block Diagram

SIZE A3

CODE CS

DOC.NUMBER 1310xxxx-0-0

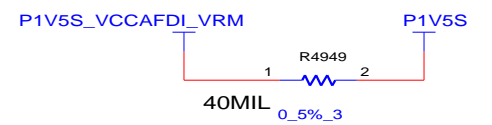
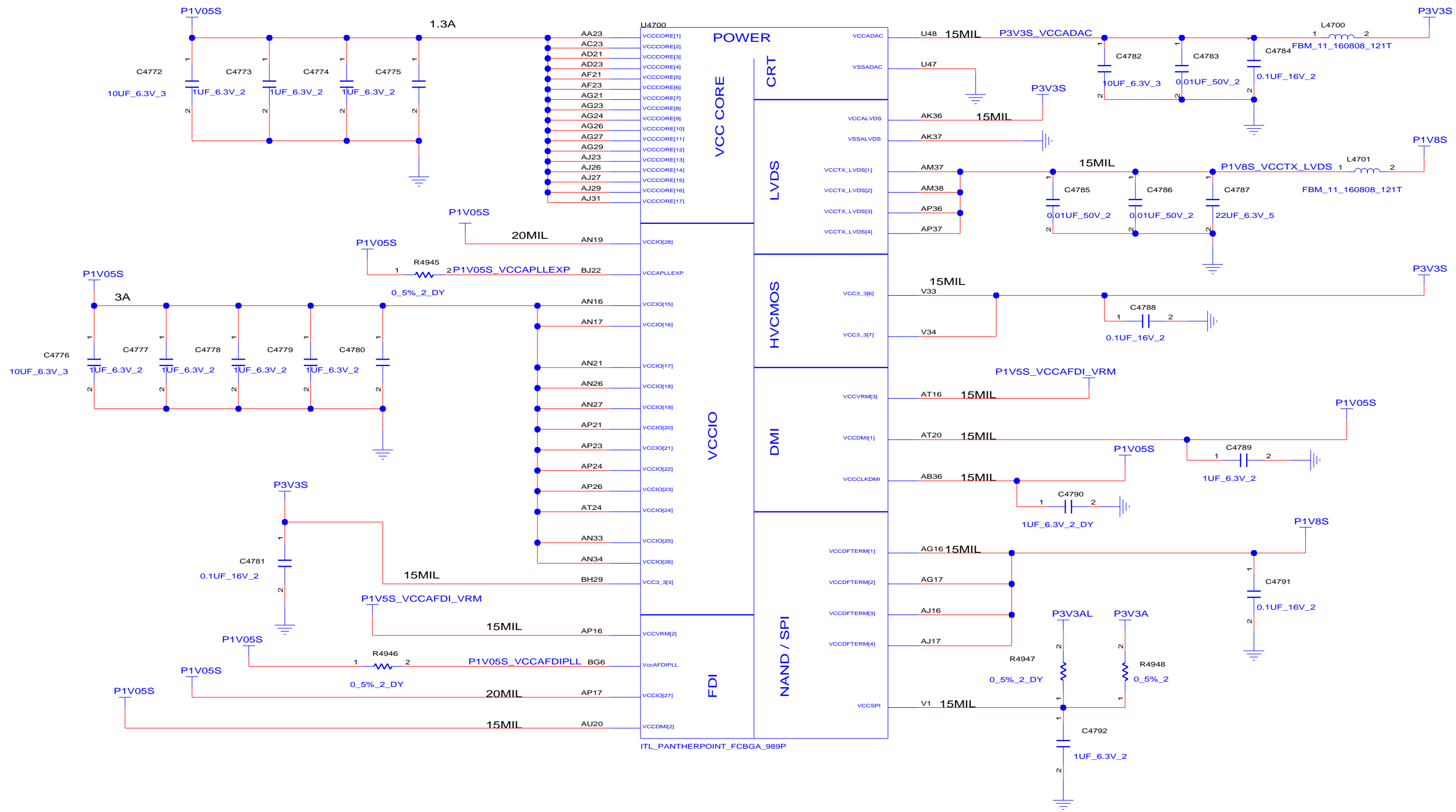
REV X01

CHANGE by XXX

DATE 21.OCT-2002

SHEET 52 of 68

REFERENCE 4700~4949(PCH)

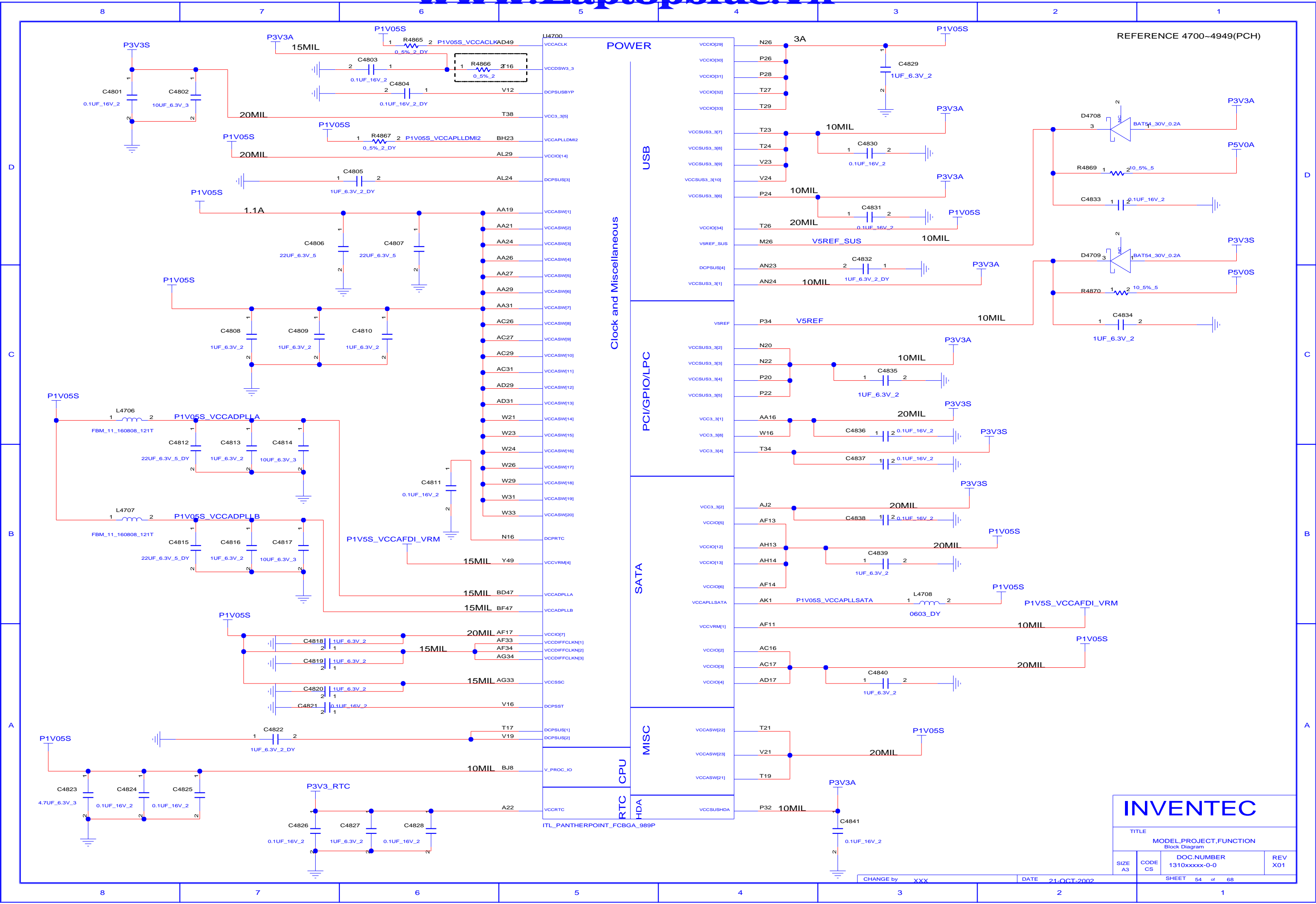


INVENTEC

TITLE
MODEL,PROJECT,FUNCTION
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
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CHANGE by XXX DATE 21-OCT-2002 SHEET 53 of 68

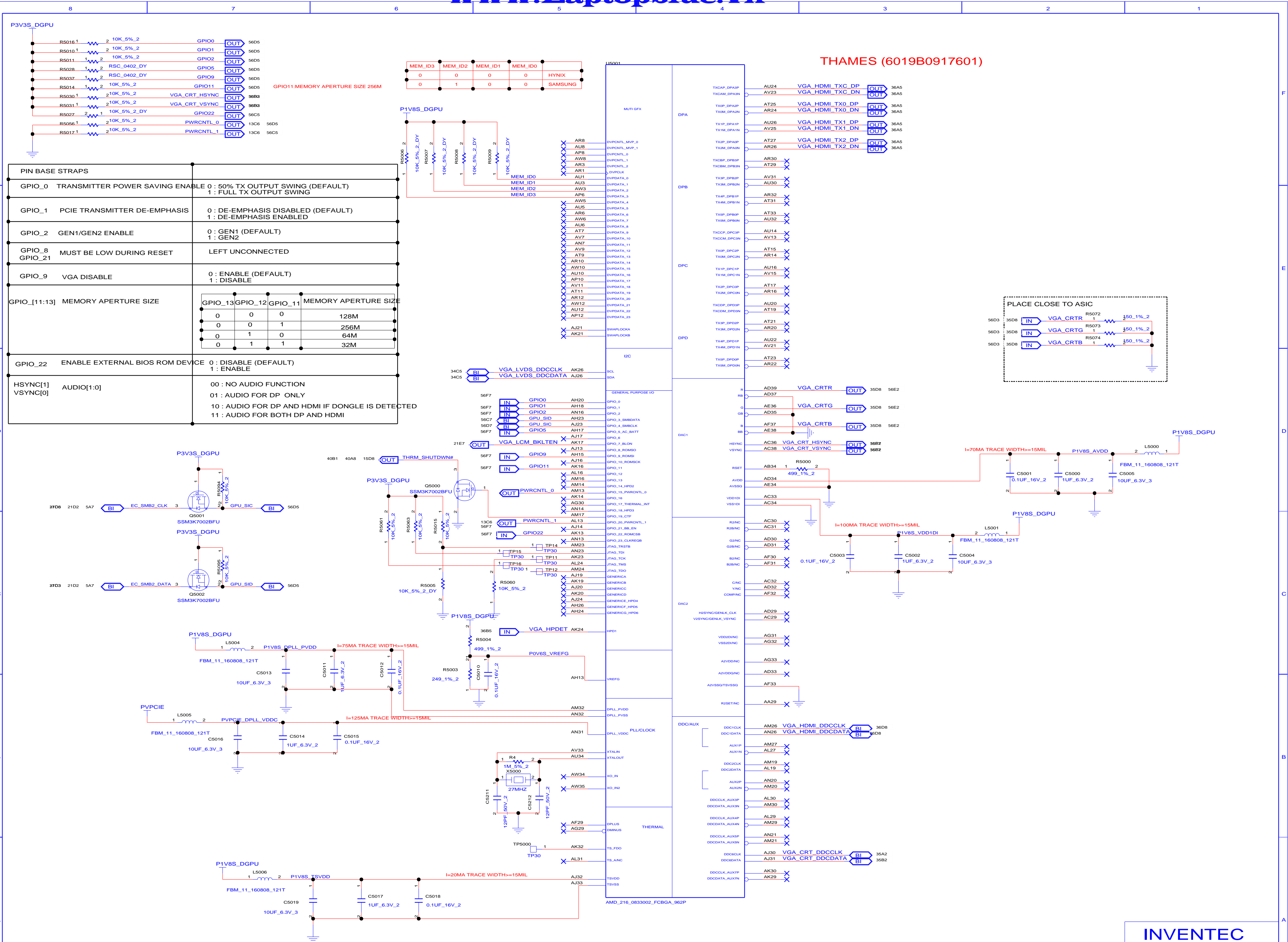


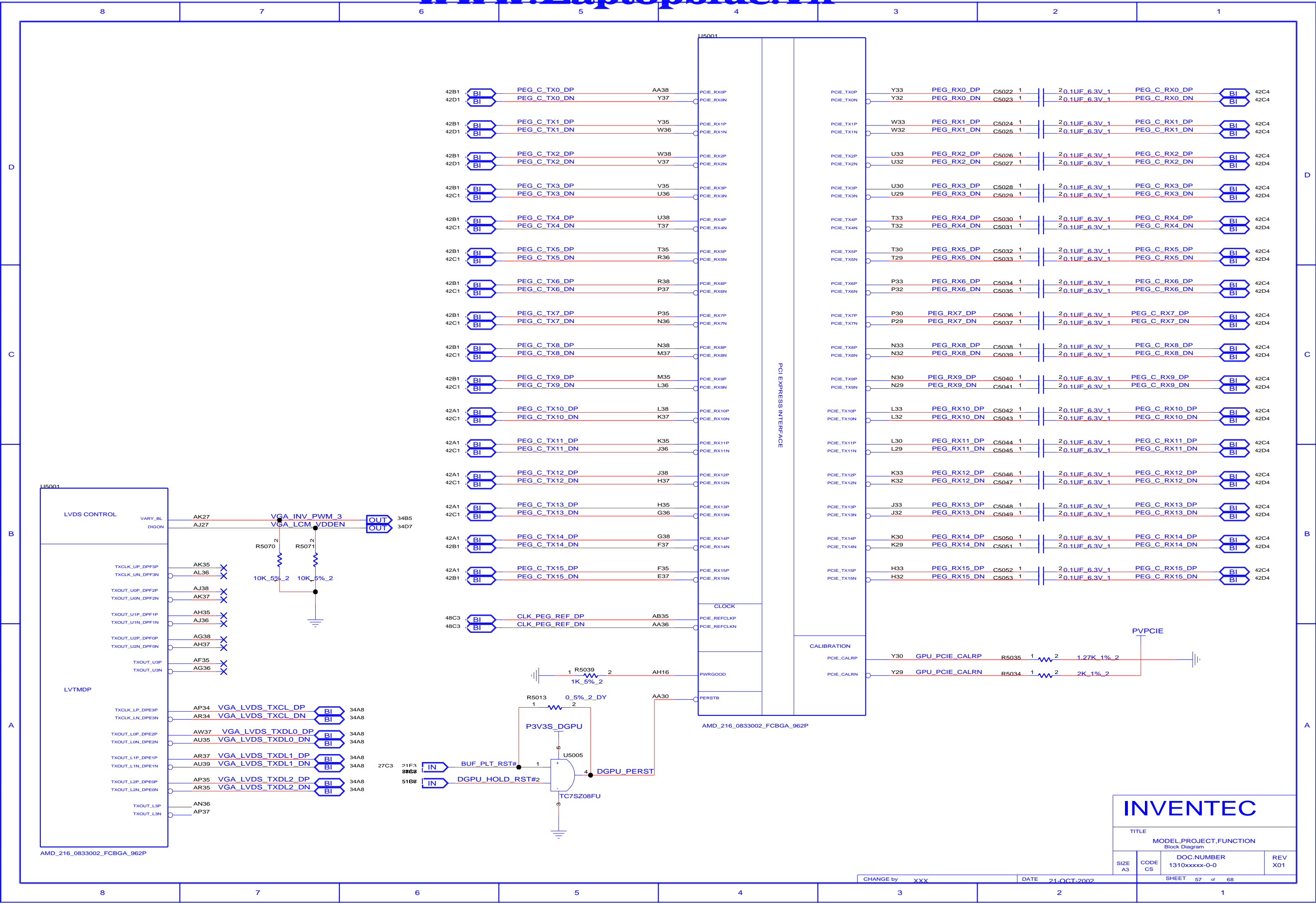
INVENTEC

TITLE
MODEL,PROJECT,FUNCTION
Block Diagram

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

CHANGE by XXX DATE 21-OCT-2002 SHEET 54 of 68





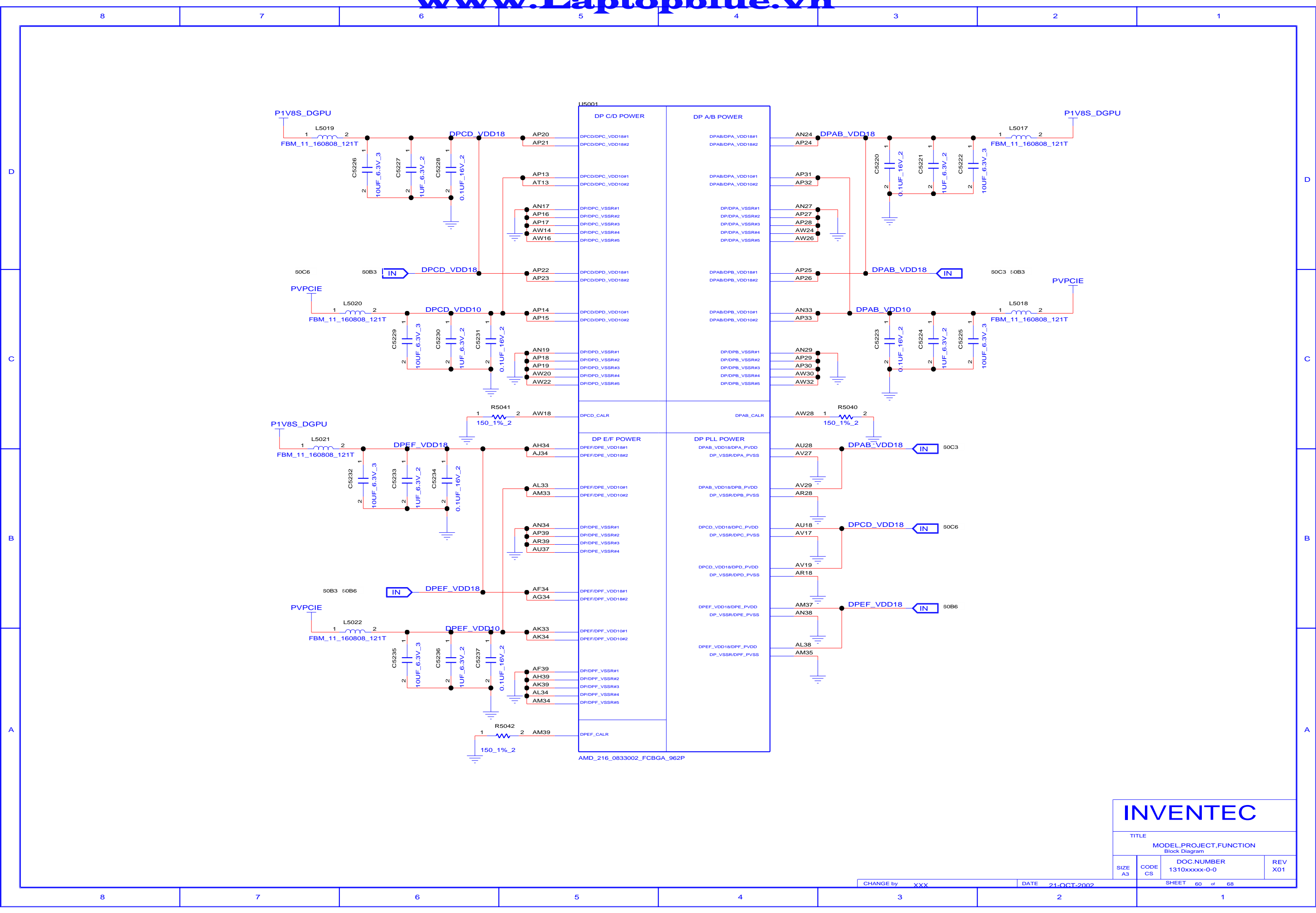
INVENTEC

TITLE
MODEL,PROJECT,FUNCTION
Block Diagram

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

CHANGE by XXX DATE 21-OCT-2002 SHEET 57 of 68



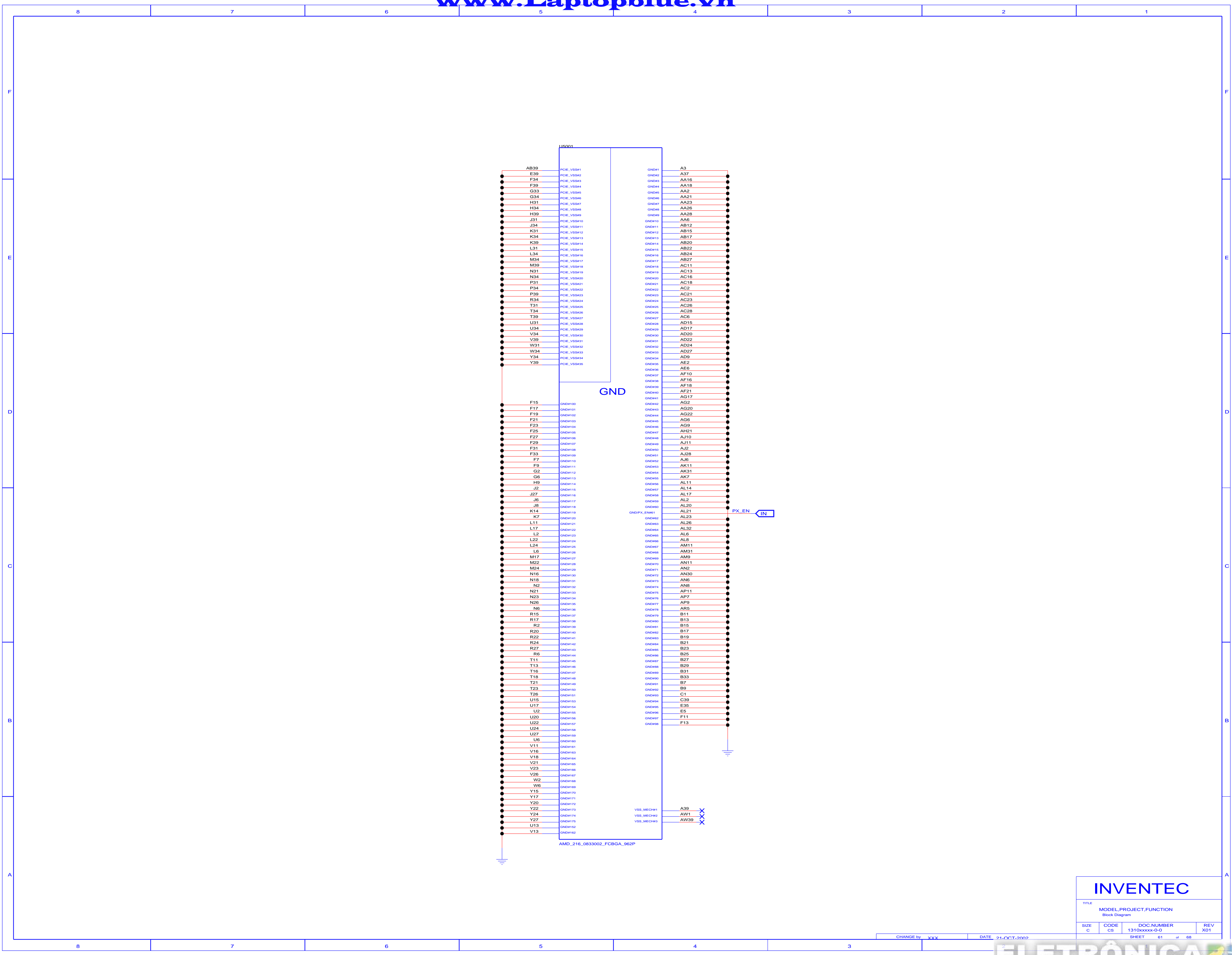


INVENTEC

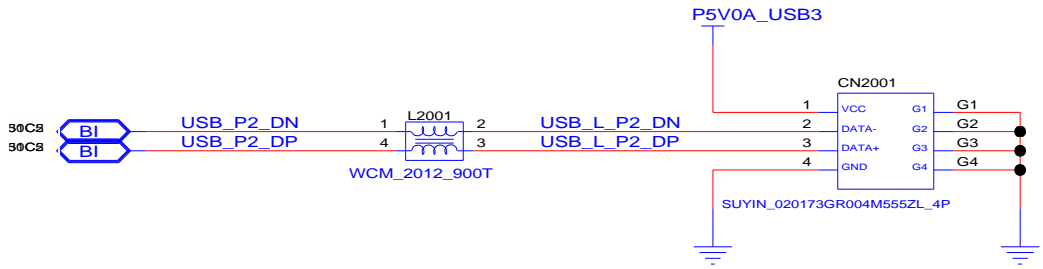
TITLE
MODEL,PROJECT,FUNCTION
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
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CHANGE by XXX DATE 21-OCT-2002 SHEET 60 of 68



INVENTEC			
TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
C	CS	1310xxxxx-0-0	X01
SHEET		61	of 68



INVENTEC

TITLE
MODEL,PROJECT,FUNCTION
Block Diagram

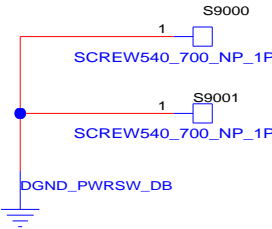
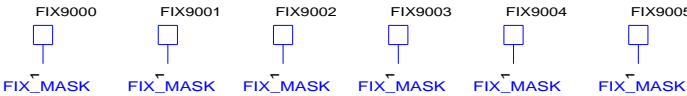
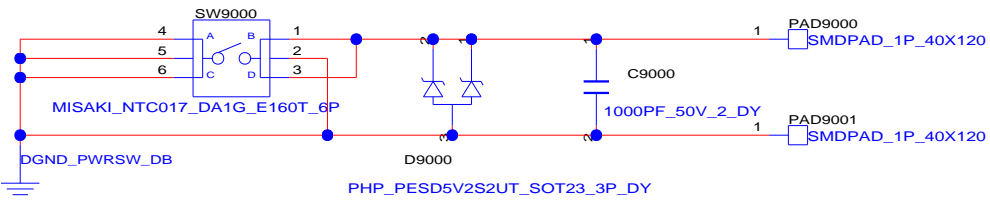
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
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CHANGE by XXX DATE 21-OCT-2002

SHEET 66 of 68

REFERENCE 9000~9999(SMALL BOARD)

POWER BUTTON



INVENTEC			
TITLE MODEL,PROJECT,FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
CHANGE by XXX		DATE 21-OCT-2002	SHEET 67 of 68

