

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

Manaus 10

CS BUILD

2010.03.18

DRAWER	EE	DATE	POWER	DATE	INVENTEC TITLE <i>Berlin 10</i>			
DESIGN								
CHECK								
RESPONSIBLE								
SIZE = 3 VER :					SIZE	CODE	DOC. NUMBER	REV
FILE NAME : XXXX-XXXXXX-XX					A3	CS	ES	AXI
P/N XXXXXXXXXXXX					SHEET 1 OF 61			

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8. SYSTEM POWER
9. SYSTEM POWER
- 10.SYSTEM POWER
- 11.SYSTEM POWER
- 12.SYSTEM POWER
- 13.VGA POWER
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- 16.K/B & TP/B CONN
- 17.FAN & THERMAL CONTROLLER
- 18.LAN
- 19.RJ45 & TRANSFORMER
- 20.AUDIO CODEC
- 21.AUDIO AMP
- 22.BLANK
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- 24.RGB CONN
- 25.BLANK
26. BLANK
27. BLANK
28. BLANK
29. BLANK
- 30.SATA HDD & ODD

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31. BLANK
- 32.USB CONN
33. BLANK
- 34.Camera
35. BLANK
- 36.3D SENSOR
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41. DDR3 DIMM0
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- 43.CPU 1
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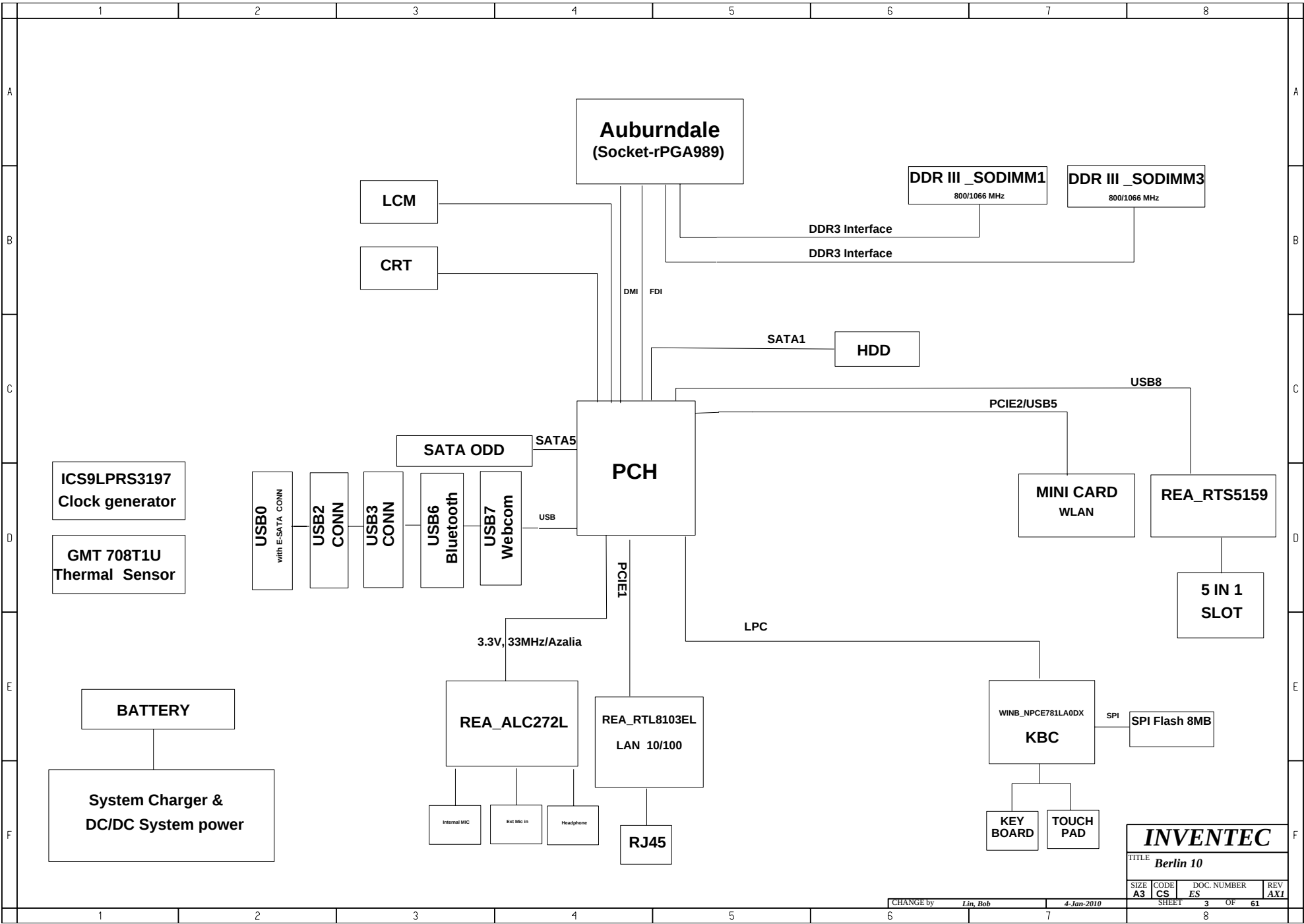
INVENTEC

TITLE **Berlin 10**

SIZE A3	CODE CS	DOC. NUMBER ES	REV AXI
-------------------	-------------------	--------------------------	-------------------

CHANGE by *Lin, Bob* 26-Jan-2010

SHEET 2 OF 61



INVENTEC

TITLE
Berlin 10

SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AX1

SHEET 3 OF 61

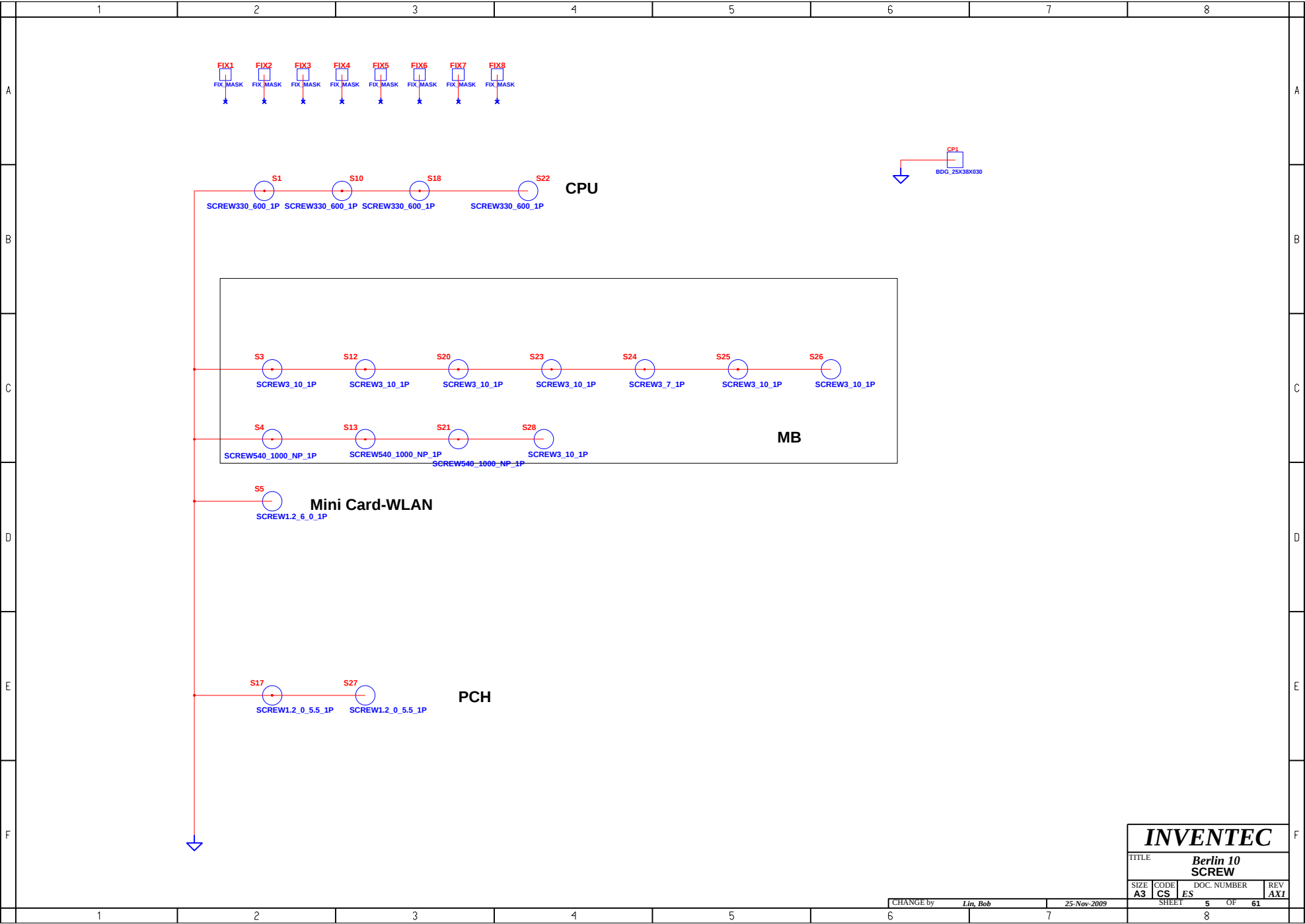
CHANGE by Lin, Bob 4-Jan-2010

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

Add Excel Power map

INVENTEC			
TITLE Berlin 10			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AXI
SHEET		4	OF 61

CHANGE by *Lin, Bob* 25-Nov-2009



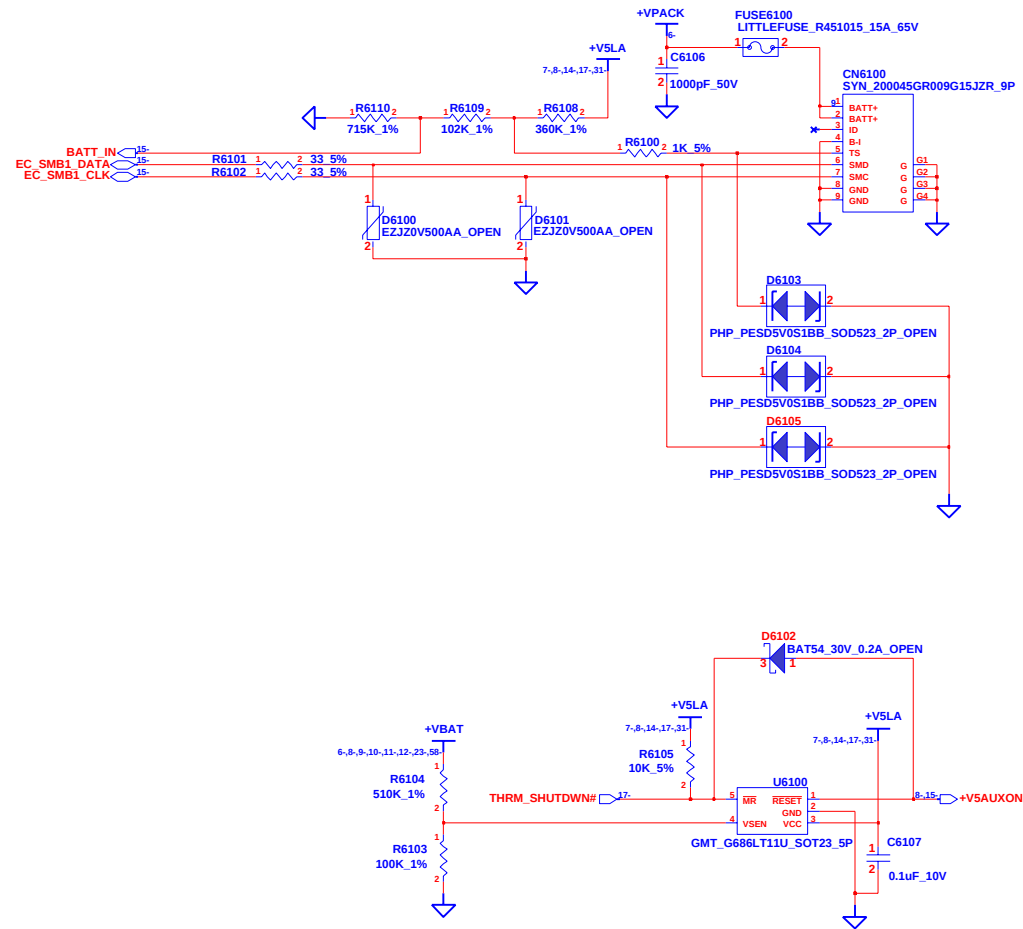
INVENTEC

TITLE **Berlin 10
SCREW**

SIZE A3	CODE CS	DOC. NUMBER ES	REV AX1
-------------------	-------------------	--------------------------	-------------------

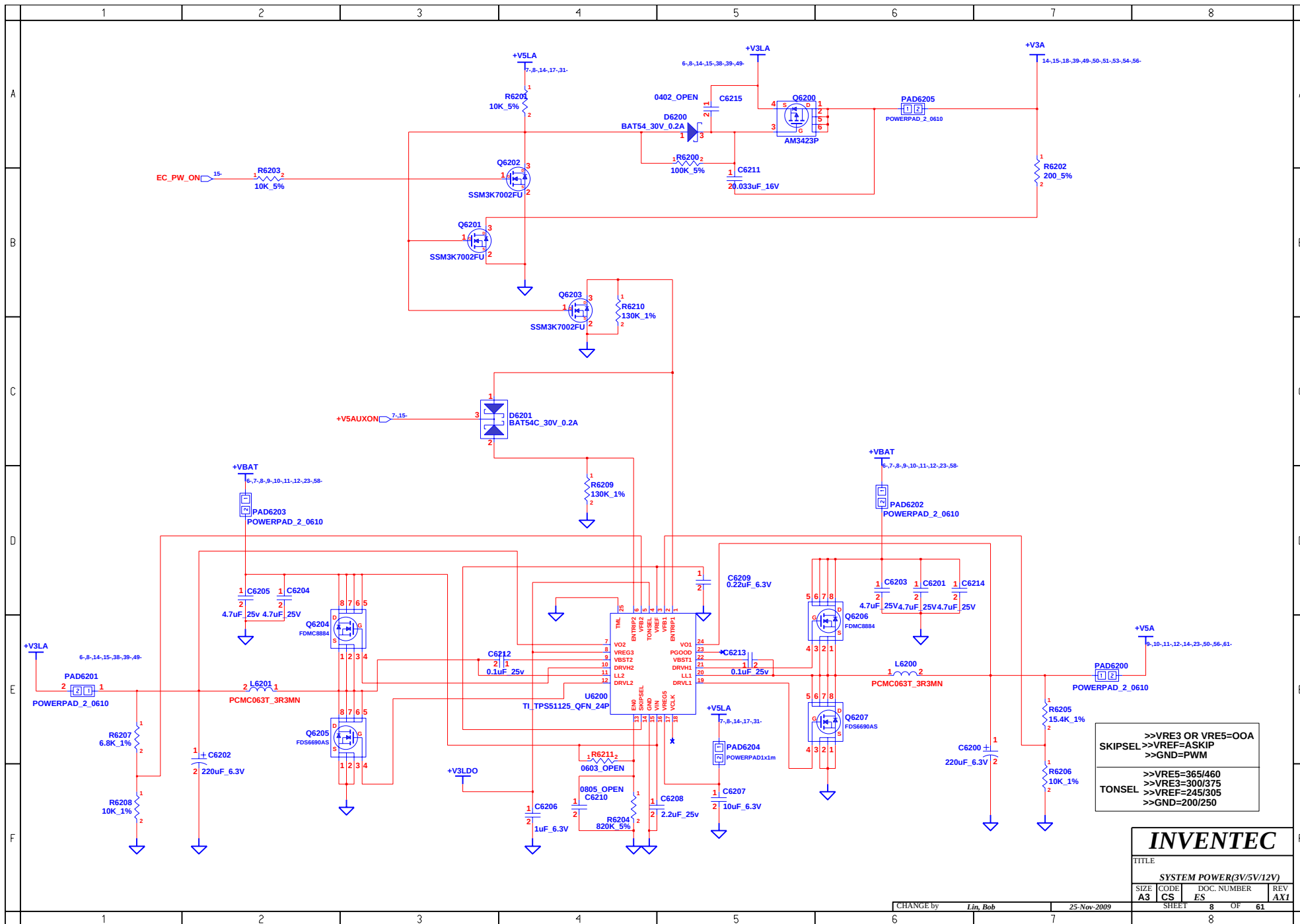
CHANGE by *Lin, Bob* 25-Nov-2009

SHEET 5 OF 61



INVENTEC			
TITLE			
Berlin 10			
SELECT & BATTERY CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI
SHEET 7 OF 61			

CHANGE by Lin, Bob 25-Nov-2009



INVENTEC

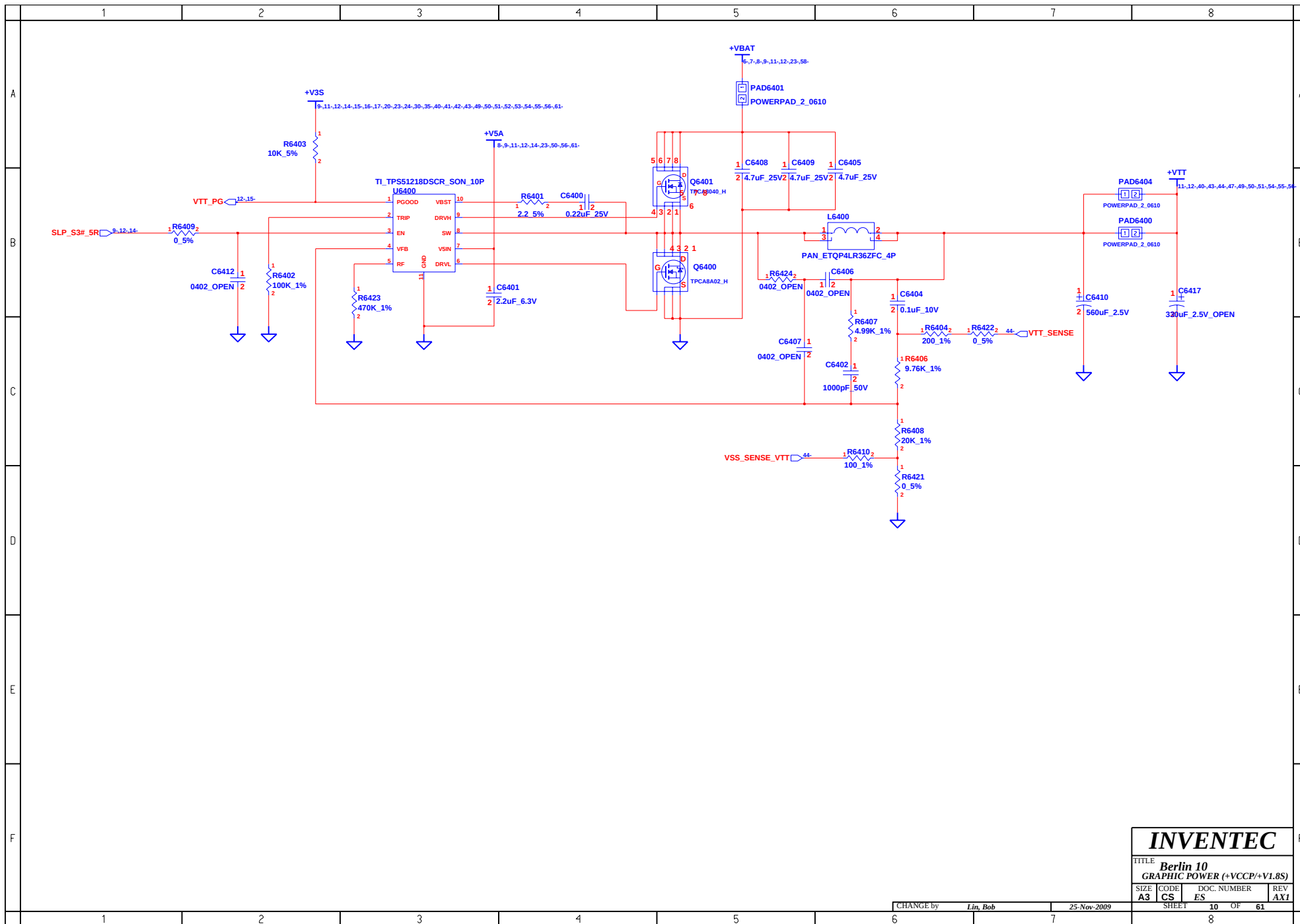
TITLE

SYSTEM POWER(3V/5V/12V)

SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AX1

CHANGE by Lin, Bob 25-Nov-2009

SHEET 8 OF 61



INVENTEC			
TITLE Berlin 10			
GRAPHIC POWER (+VCCP/+VL8S)			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AX1
CHANGE by <i>Lin, Bob</i>		25-Nov-2009	
SHEET 10		OF 61	
		8	

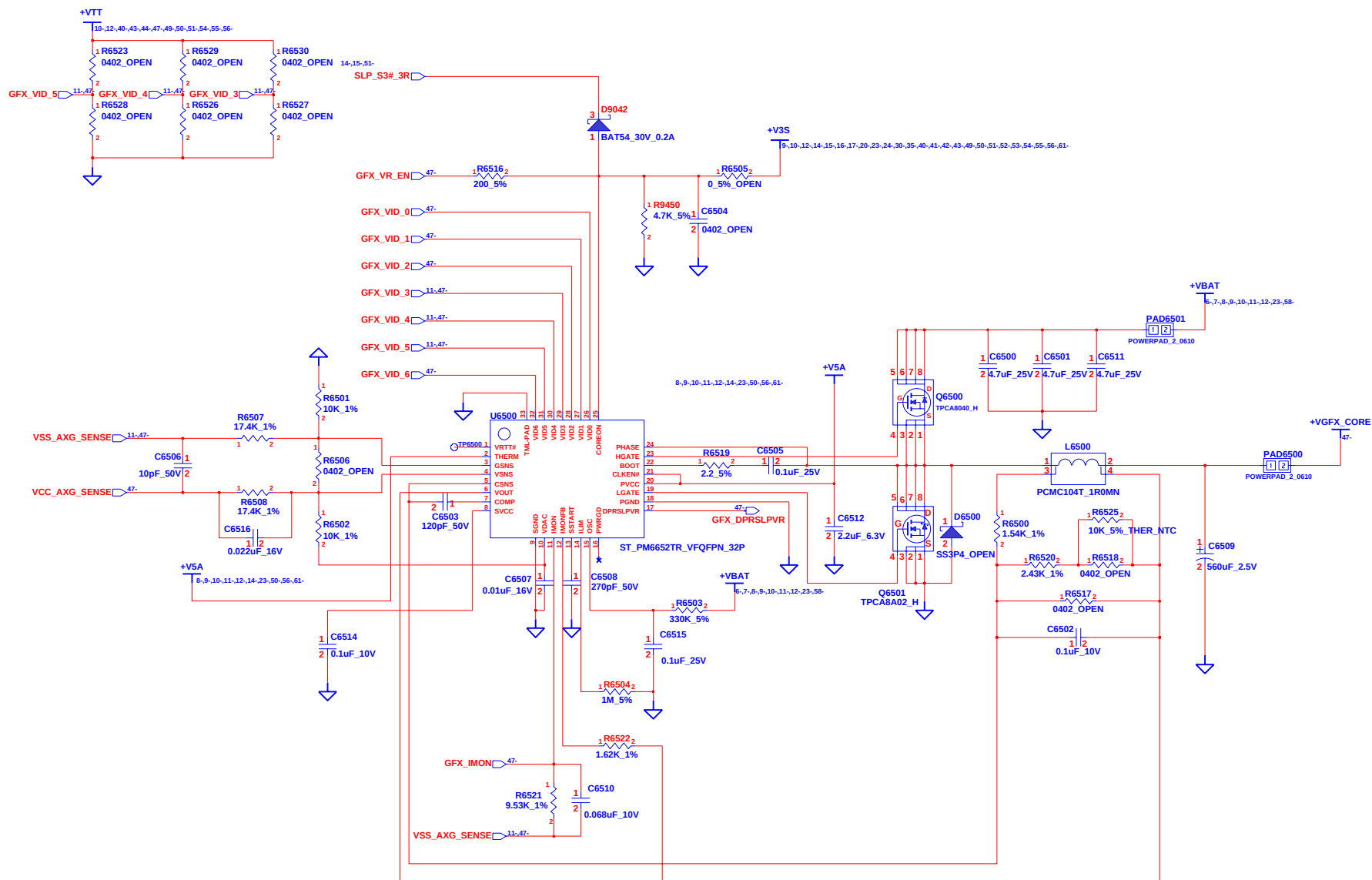
INVENTEC

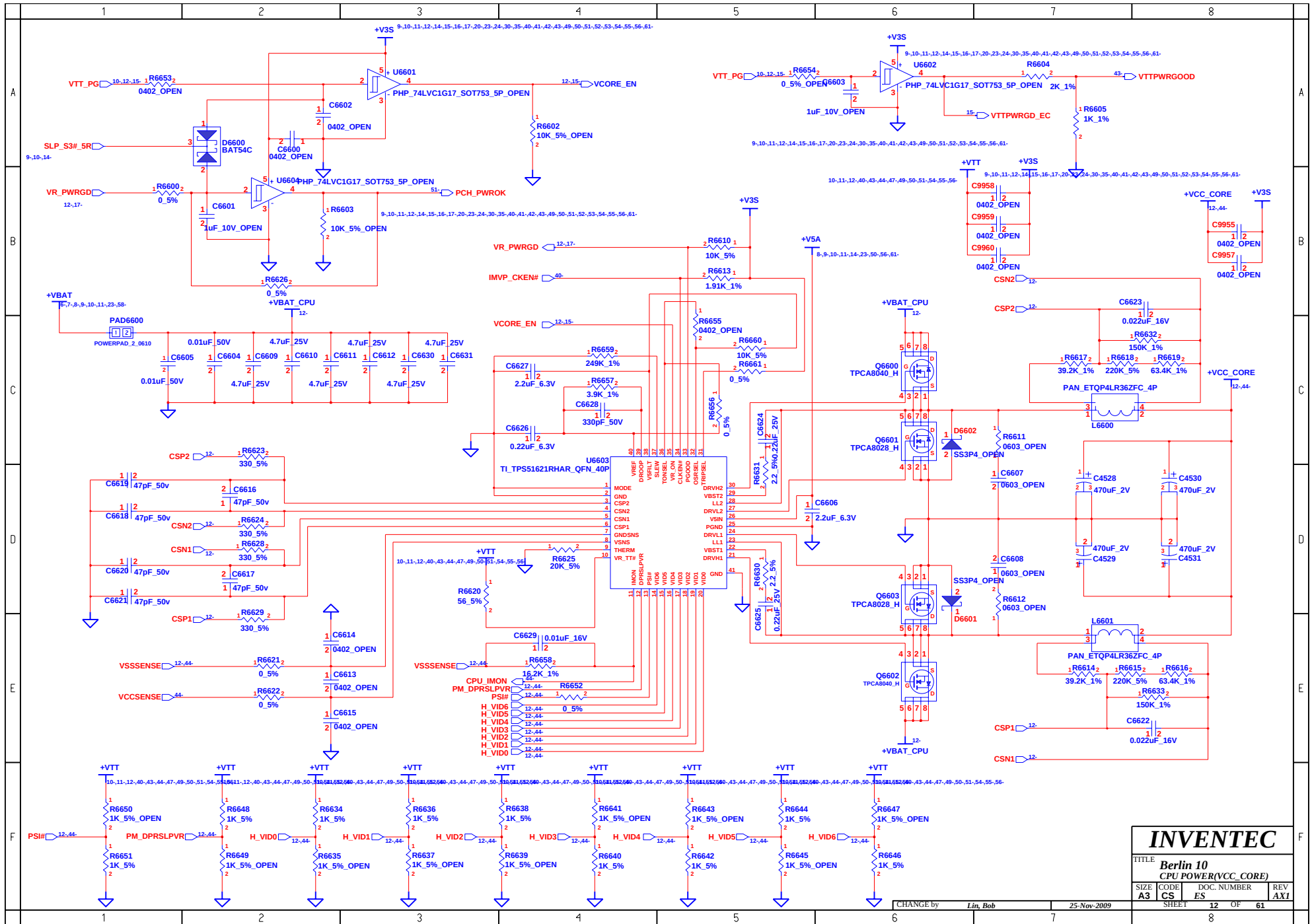
TITLE			
Berlin 10			
SYSTEM POWER(+VGF_X_CORE)			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI

CHANGE by Lin, Bob 25-Nov-2009

SHEET 11 OF 61

8





INVENTEC

TITLE			
Berlin 10			
CPU POWER(VCC_CORE)			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI

CHANGE by Lin, Bob

25-Nov-2009

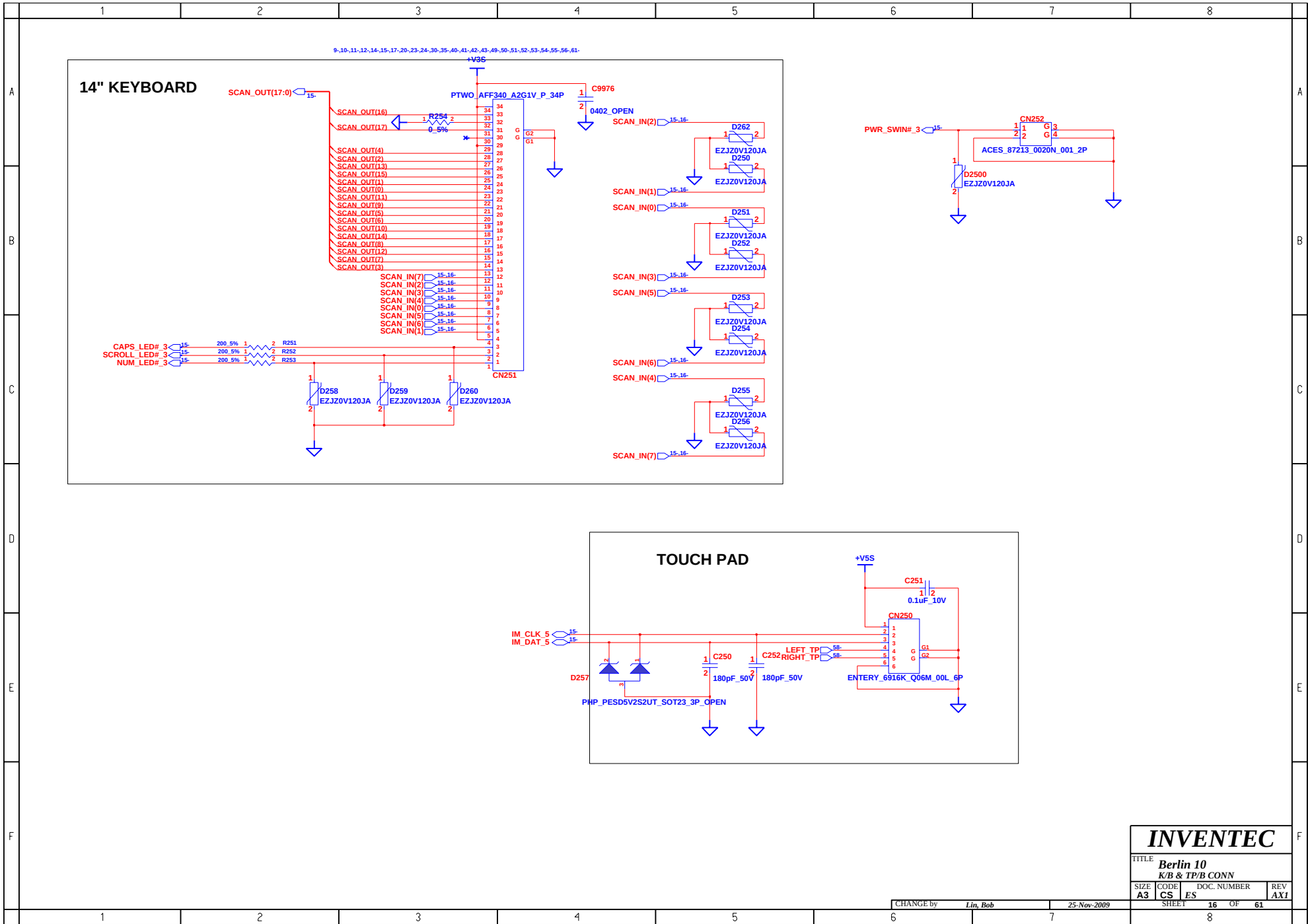
SHEET 12 OF 61

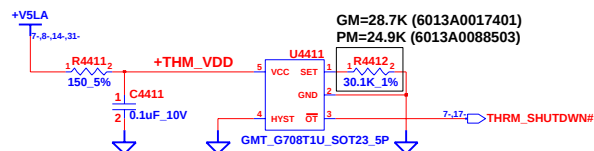
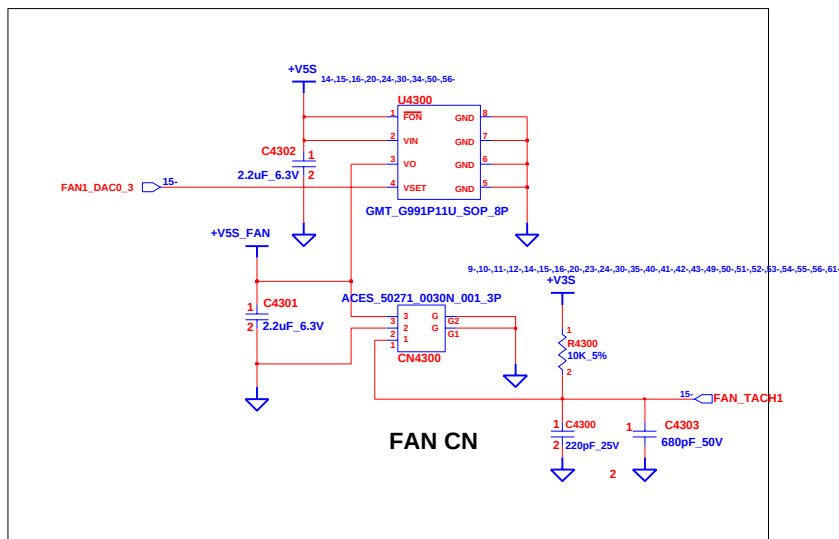
8

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

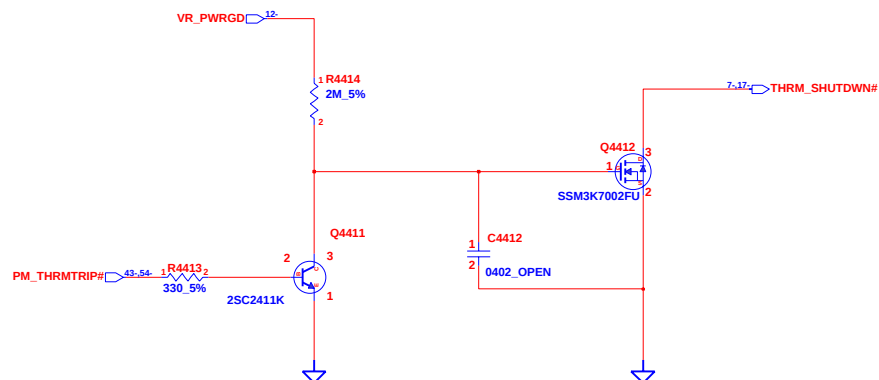
INVENTEC			
TITLE Berlin 10 VGA POWER			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AX1
SHEET 13		OF 61	

CHANGE by Lin, Bob 25-Nov-2009





GM Thermal shutdown at 80.8°C +/-3°C from 60°C to 100°C
 PM Thermal shutdown at 86°C +/-3°C from 60°C to 100°C
 $RSET=0.0012 \cdot T^2 - 0.9308 \cdot T + 96.147$
 Hysteresis is 30C

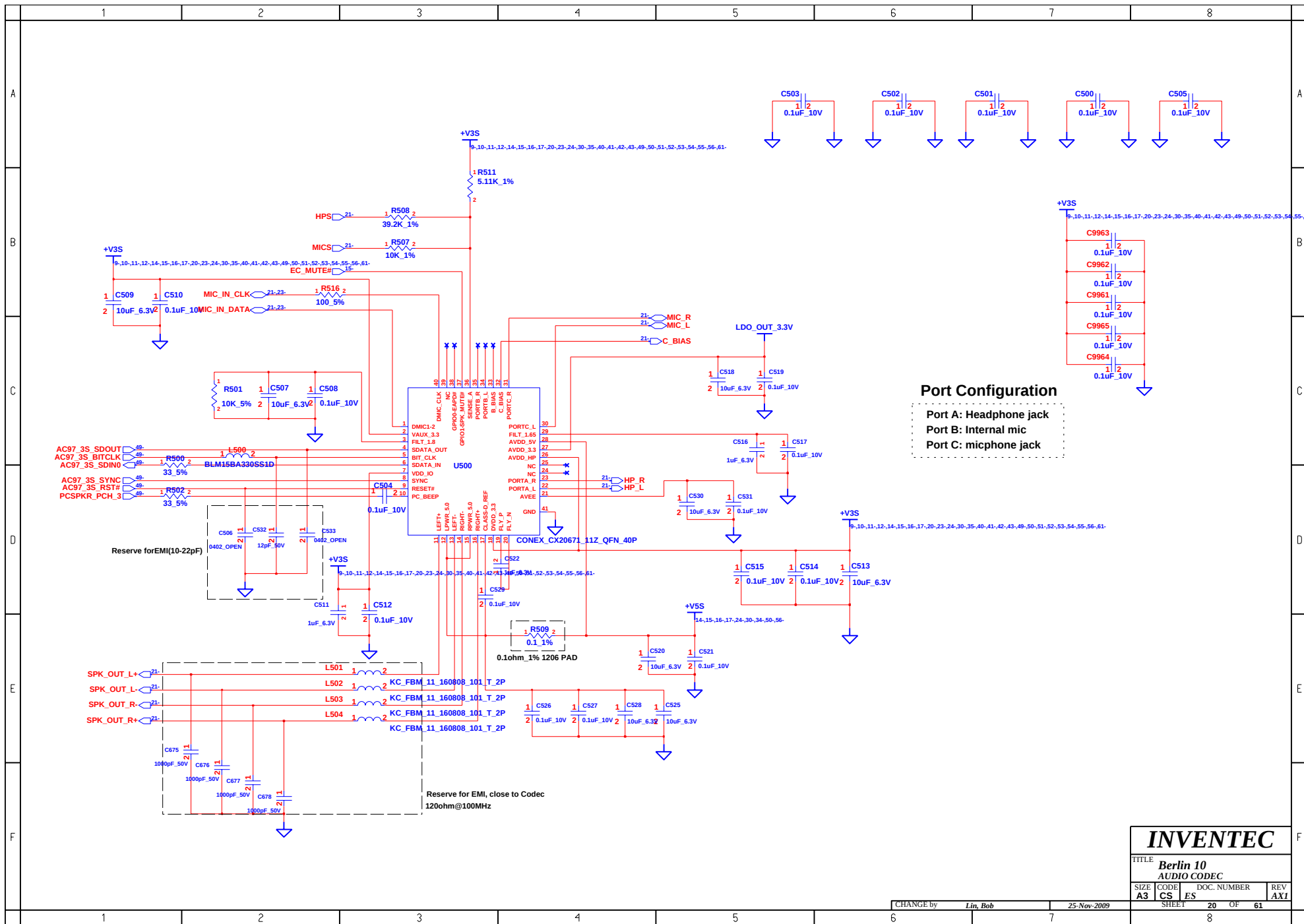


INVENTEC

TITLE
Berlin 10
 FAN, Thermal controller
 SIZE CODE ES DOC. NUMBER REV
 A3 CS ES 17 OF 61 AXI

CHANGE by Lin, Bob 25-Nov-2009

SHEET 17 OF 61



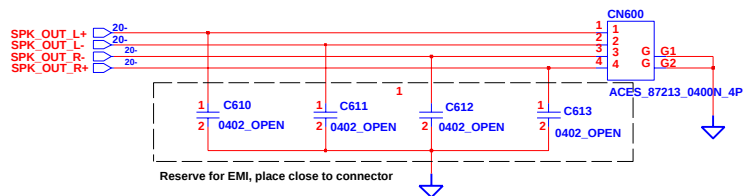
Port Configuration
Port A: Headphone jack
Port B: Internal mic
Port C: microphone jack

INVENTEC

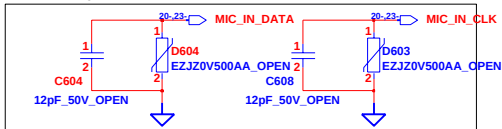
TITLE Berlin 10 AUDIO CODEC			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AX1
SHEET 20		OF 61	

CHANGE by *Lin, Bob* 25-Nov-2009

INTERNAL SPEAKERS

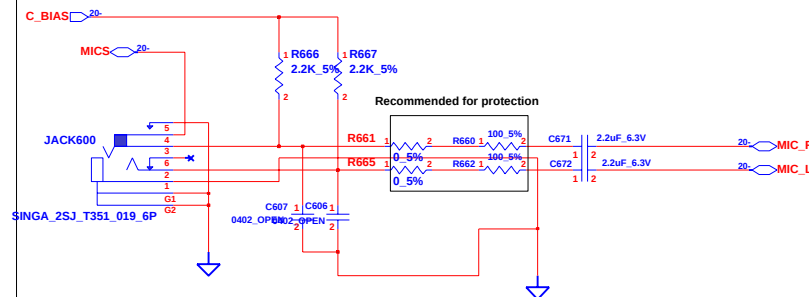


INTERNAL MIC

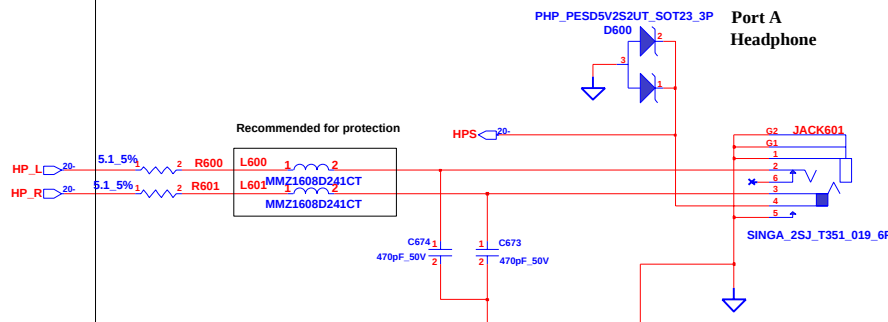


AUDIO JACKS

Port C External microphone



Port A Headphone



INVENTEC

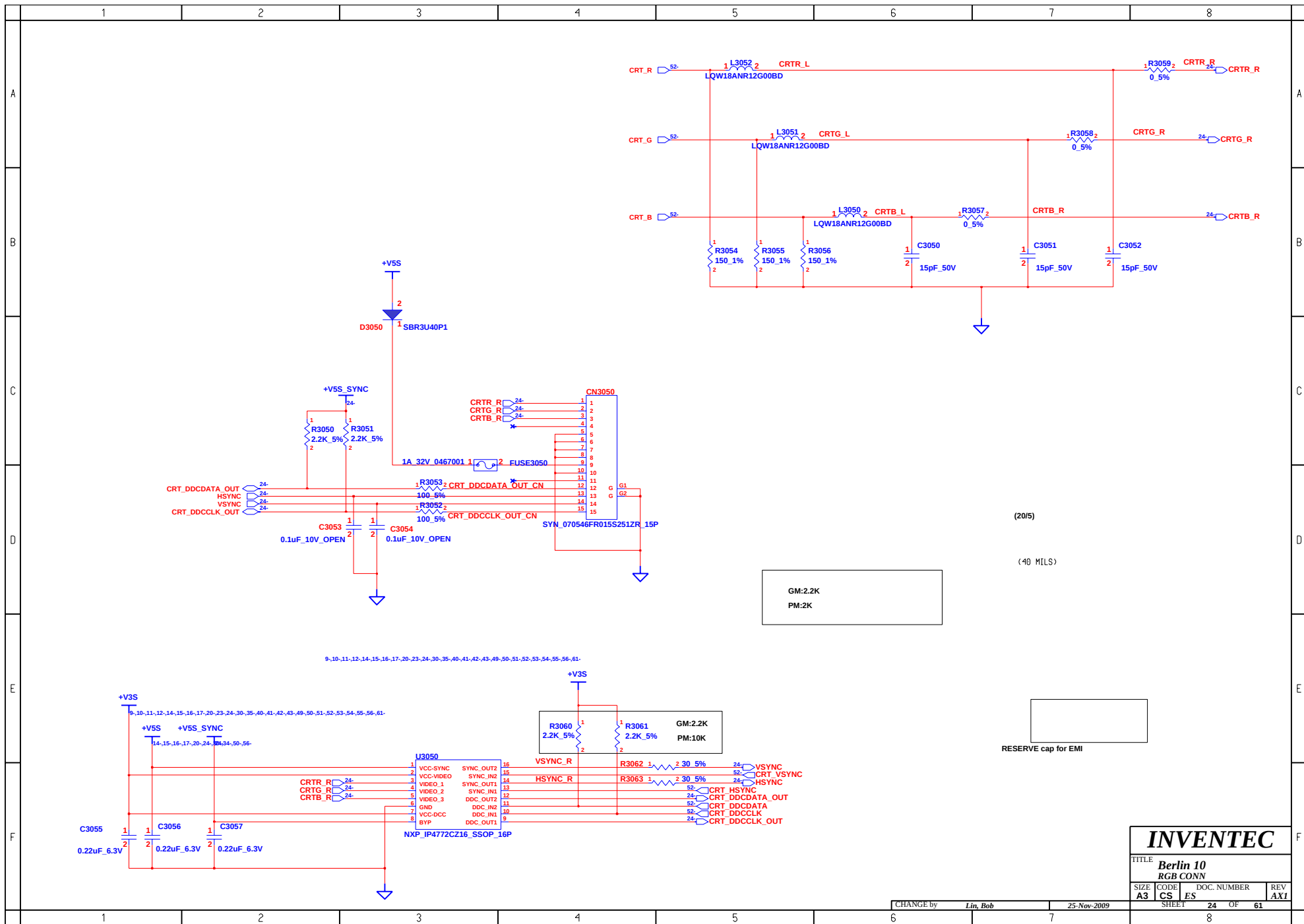
TITLE			
Berlin 10			
AUDIO AMP&MIC&SPEAKER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI

CHANGE by Lin, Bob 25-Nov-2009

SHEET 21 OF 61

	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
						CHANGE by <i>Lin, Bob</i>		<i>4-Jan-2010</i>	
1	2	3	4	5	6	7	8		

INVENTEC			
TITLE <i>Berlin 10</i>			
MDC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	<i>ES</i>	AX1
SHEET		22	OF 61



INVENTEC

TITLE			
Berlin 10 RGB CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI
SHEET		24 OF	61

	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
						CHANGE by <i>Lin, Bob</i>		25-Nov-2009	
1	2	3	4	5	6	7	8		

INVENTEC			
TITLE <i>Berlin 10</i>			
CEC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	<i>ES</i>	AX1
SHEET		25	OF 61

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

INVENTEC			
TITLE Berlin 10 <i>HDMI Level Shifter</i>			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AX1
SHEET		26	OF 61

CHANGE by *Lin, Bob* 4-Jan-2010

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

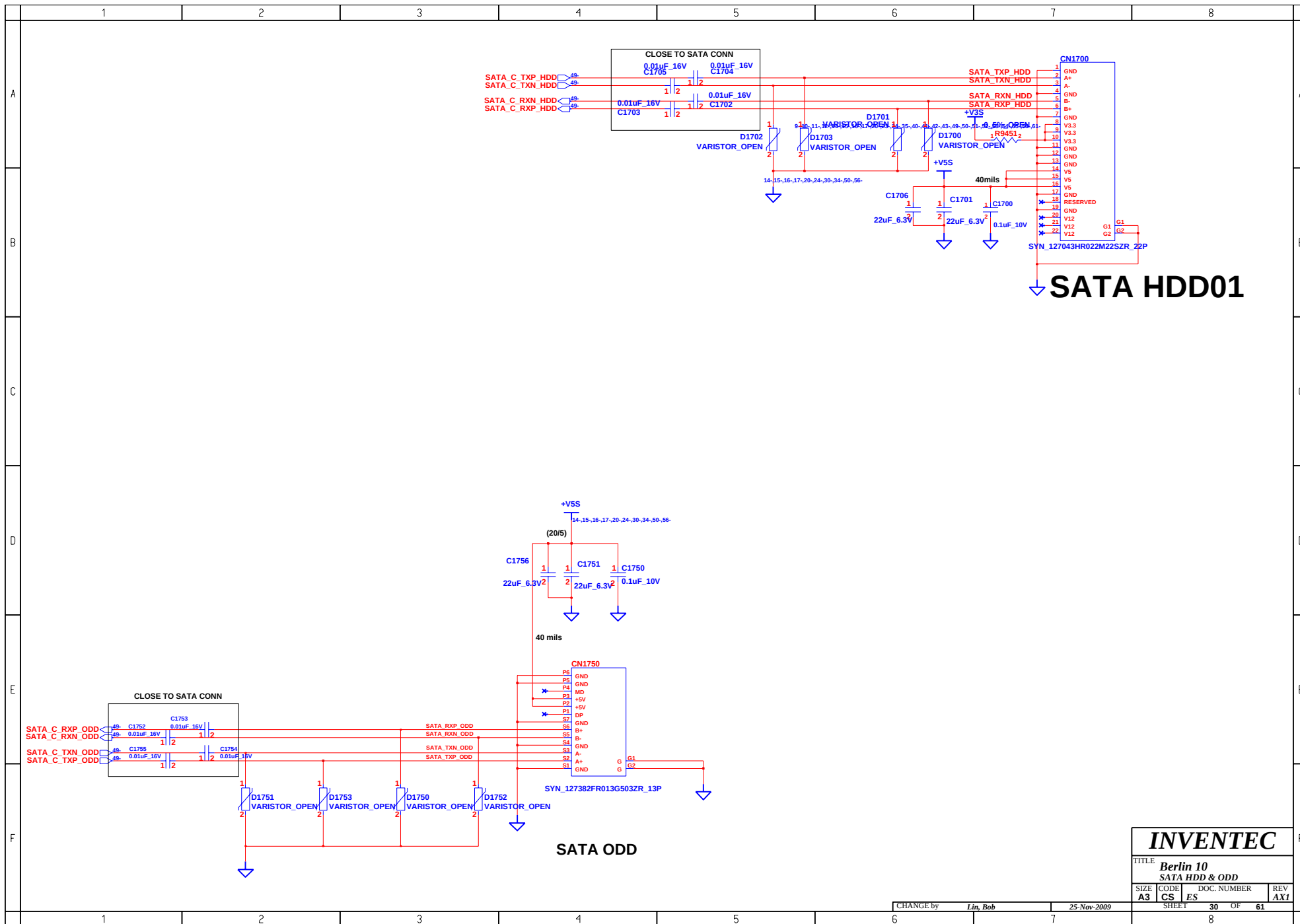
INVENTEC			
TITLE Berlin 10 HDMI CONN			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AX1
CHANGE by <i>Lin, Bob</i>		4-Jan-2010	
SHEET		27	OF 61

	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
						CHANGE by <i>Lin, Bob</i>		4-Jan-2010	
1	2	3	4	5	6	7	8		

INVENTEC			
TITLE <i>Berlin 10 EXPRESS CARD</i>			
SIZE A3	CODE CS	DOC. NUMBER <i>ES</i>	REV AX1
SHEET		28	OF 61

	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
						CHANGE by <i>Lin, Bob</i>		4-Jan-2010	
1	2	3	4	5	6	7	8		

INVENTEC			
TITLE <i>Berlin 10 Cardreader</i>			
SIZE A3	CODE CS	DOC. NUMBER <i>ES</i>	REV <i>AX1</i>
SHEET		29	OF 61

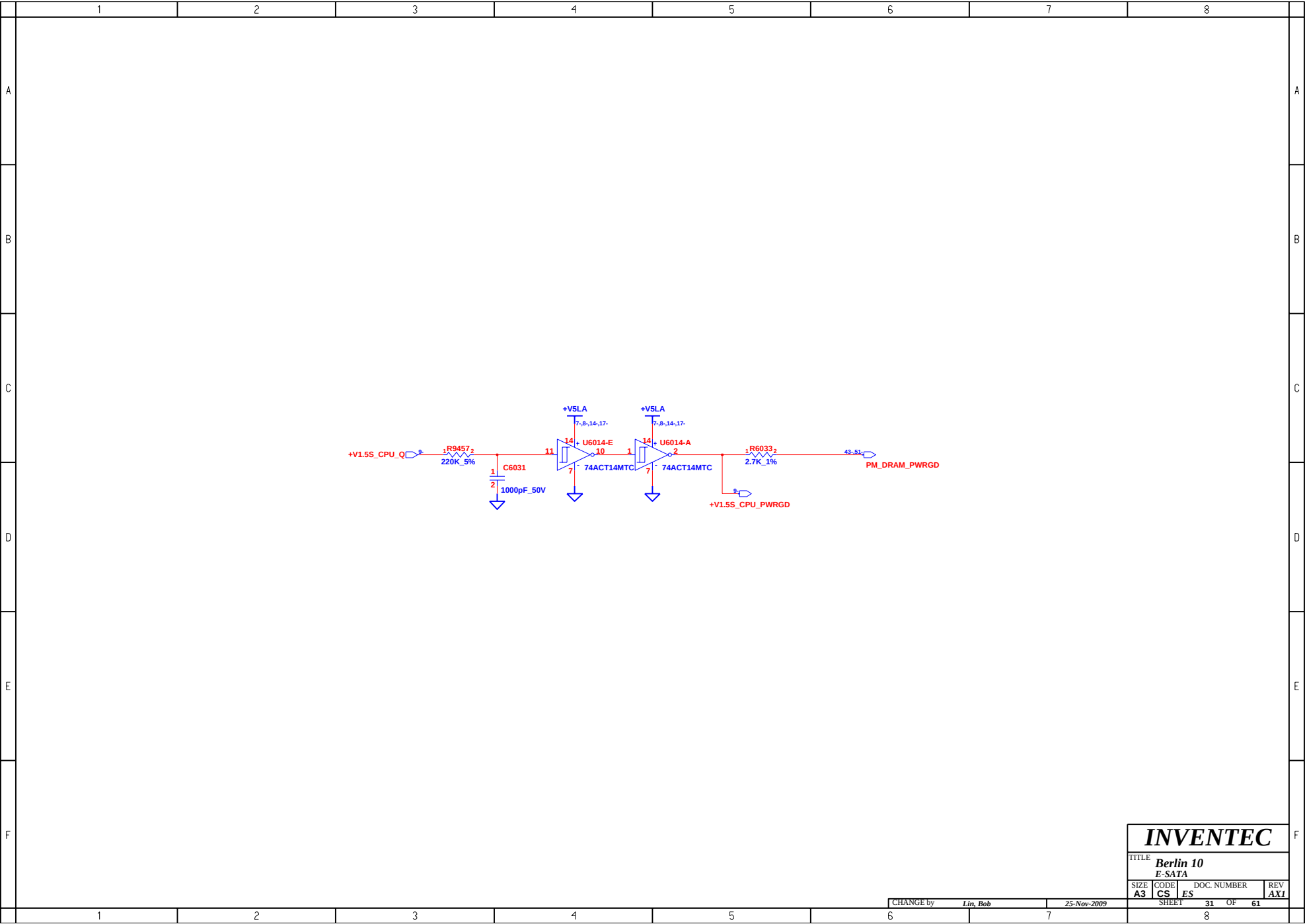


INVENTEC

TITLE			
Berlin 10			
SATA HDD & ODD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI

CHANGE by Lin, Bob 25-Nov-2009

SHEET 30 OF 61



INVENTEC

TITLE			
Berlin 10			
E-SATA			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AX1
SHEET		31 OF	61

CHANGE by Lin, Bob 25-Nov-2009

8

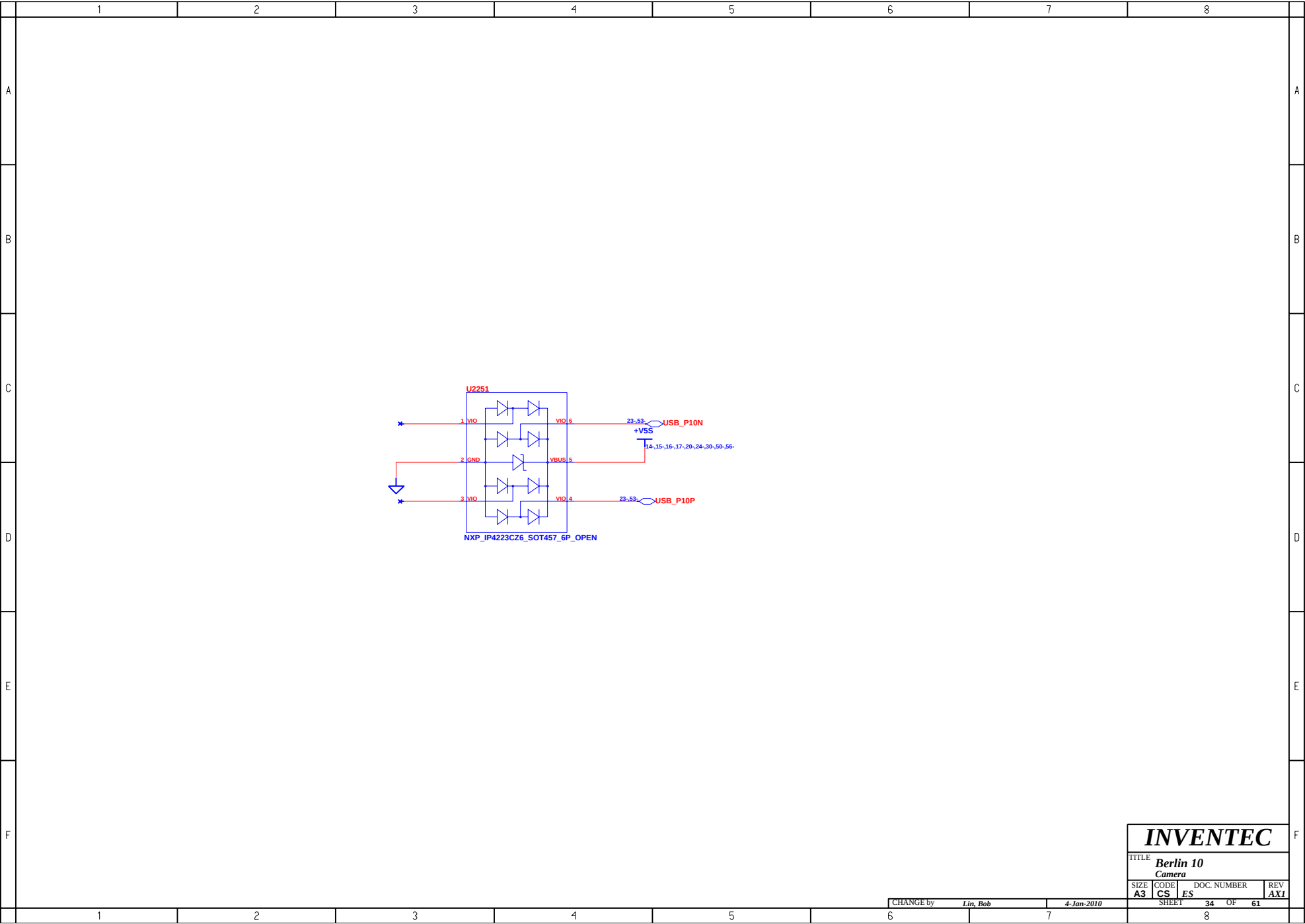
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A									A
B									B
C									C
D									D
E									E
F									F
						CHANGE by <i>Lin, Bob</i>		4-Jan-2010	
1	2	3	4	5	6	7	8		

INVENTEC			
TITLE Berlin 10 USB CONN			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AX1
SHEET 32 OF 61			

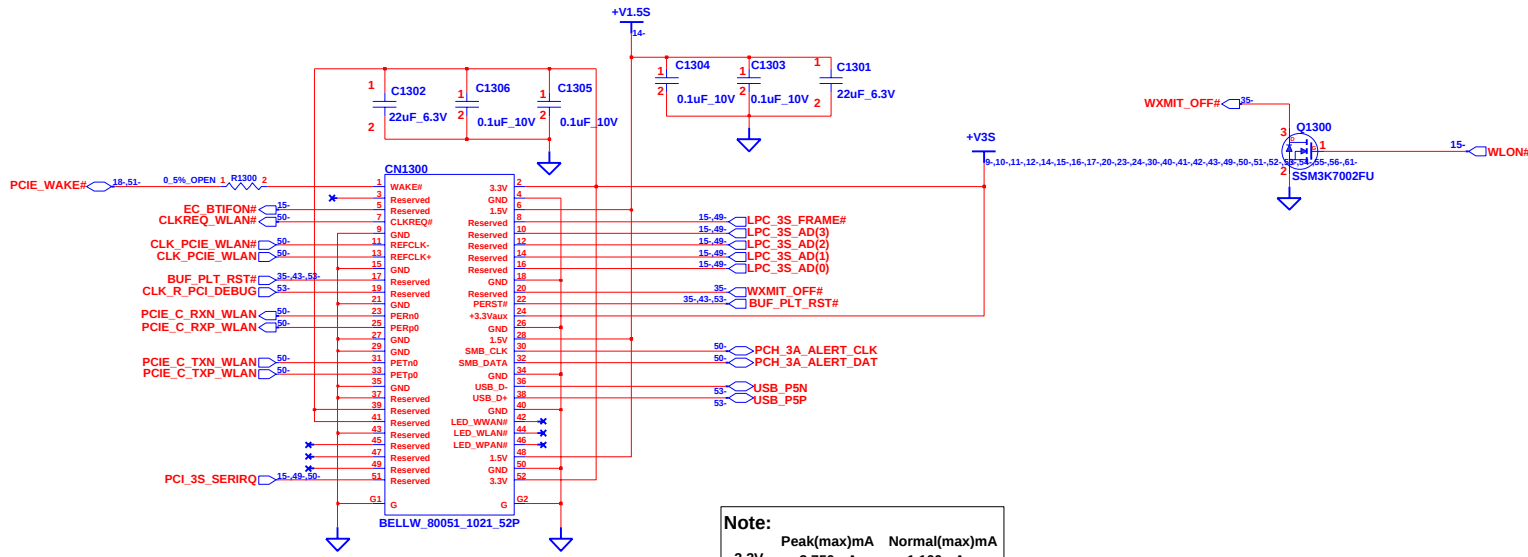
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A									A
B									B
C									C
D									D
E									E
F									F
	1	2	3	4	5	6	7	8	

INVENTEC			
TITLE Berlin 10 Bluetooth			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AXI
SHEET 33 OF 61			

CHANGE by *Lin, Bob* 4-Jan-2010



Wireless & Debug card



MINI CARD 1

INVENTEC

TITLE			
Berlin 10			
WLAN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI
SHEET		35	OF 61

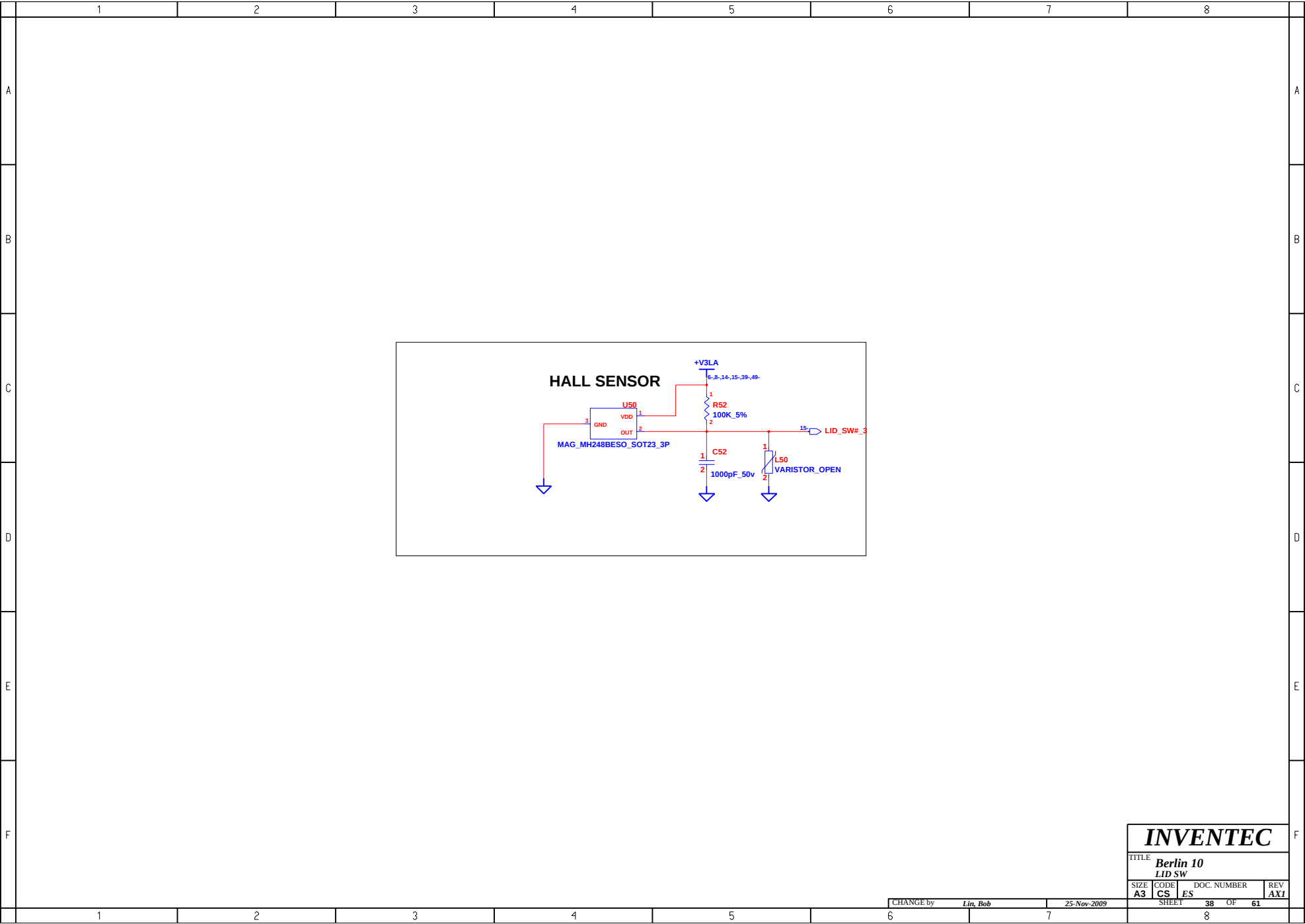
CHANGE by Lin, Bob 25-Nov-2009

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B									B
C									C
D									D
E									E
F									F
						CHANGE by <i>Lin, Bob</i>		4-Jan-2010	
1	2	3	4	5	6	7	8		

INVENTEC			
TITLE <i>Berlin 10</i> <i>3D sensor</i>			
SIZE A3	CODE CS	DOC. NUMBER <i>ES</i>	REV <i>AX1</i>
SHEET		36	OF 61

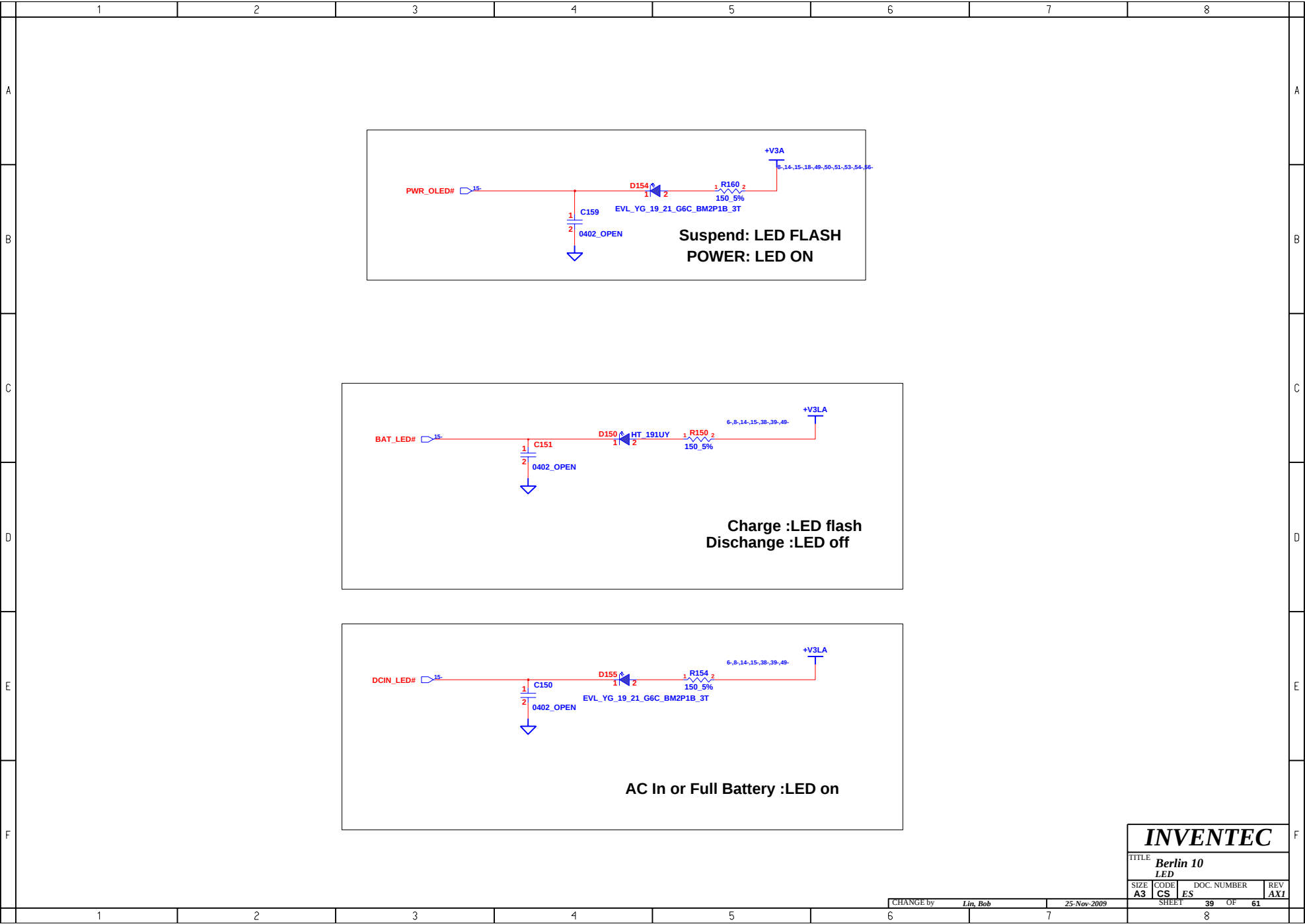
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B									B
C									C
D									D
E									E
F									F
	1	2	3	4	5	6	7	8	

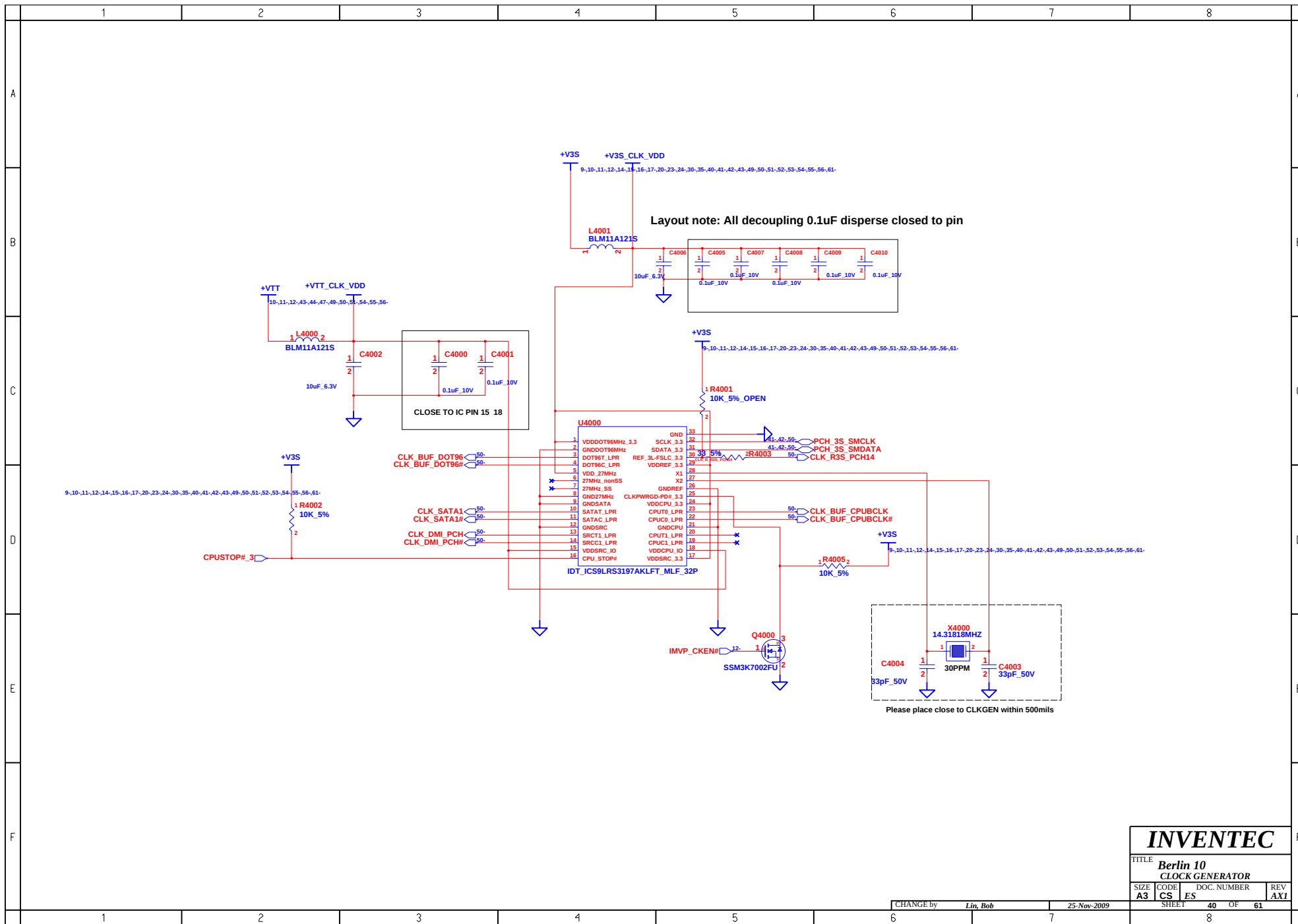
INVENTEC			
TITLE Berlin 10 KILL SW			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AX1
CHANGE by <i>Lin, Bob</i>		4-Jan-2010	
SHEET		37	OF 61



INVENTEC

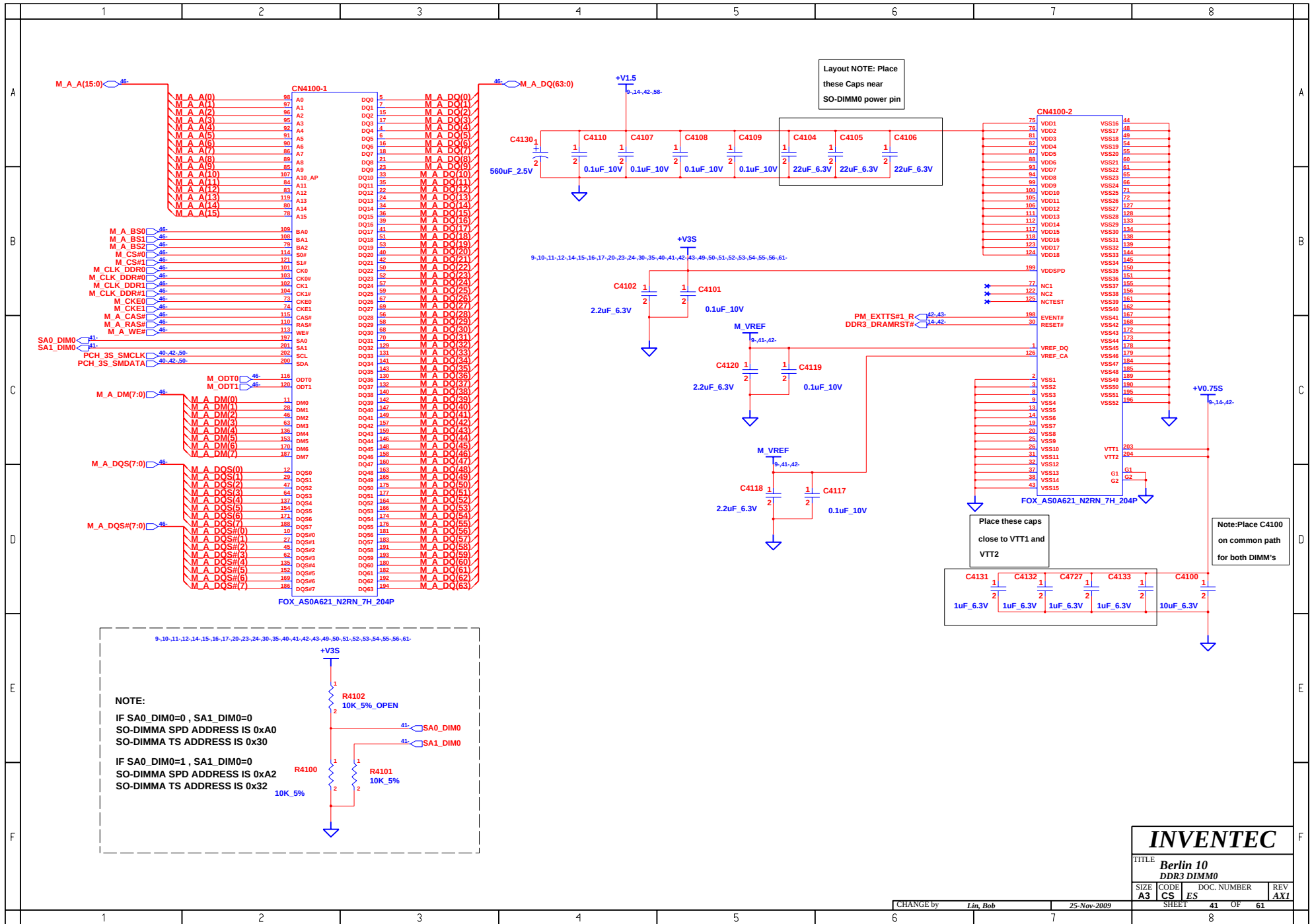
TITLE			
Berlin 10			
LID SW			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AX1

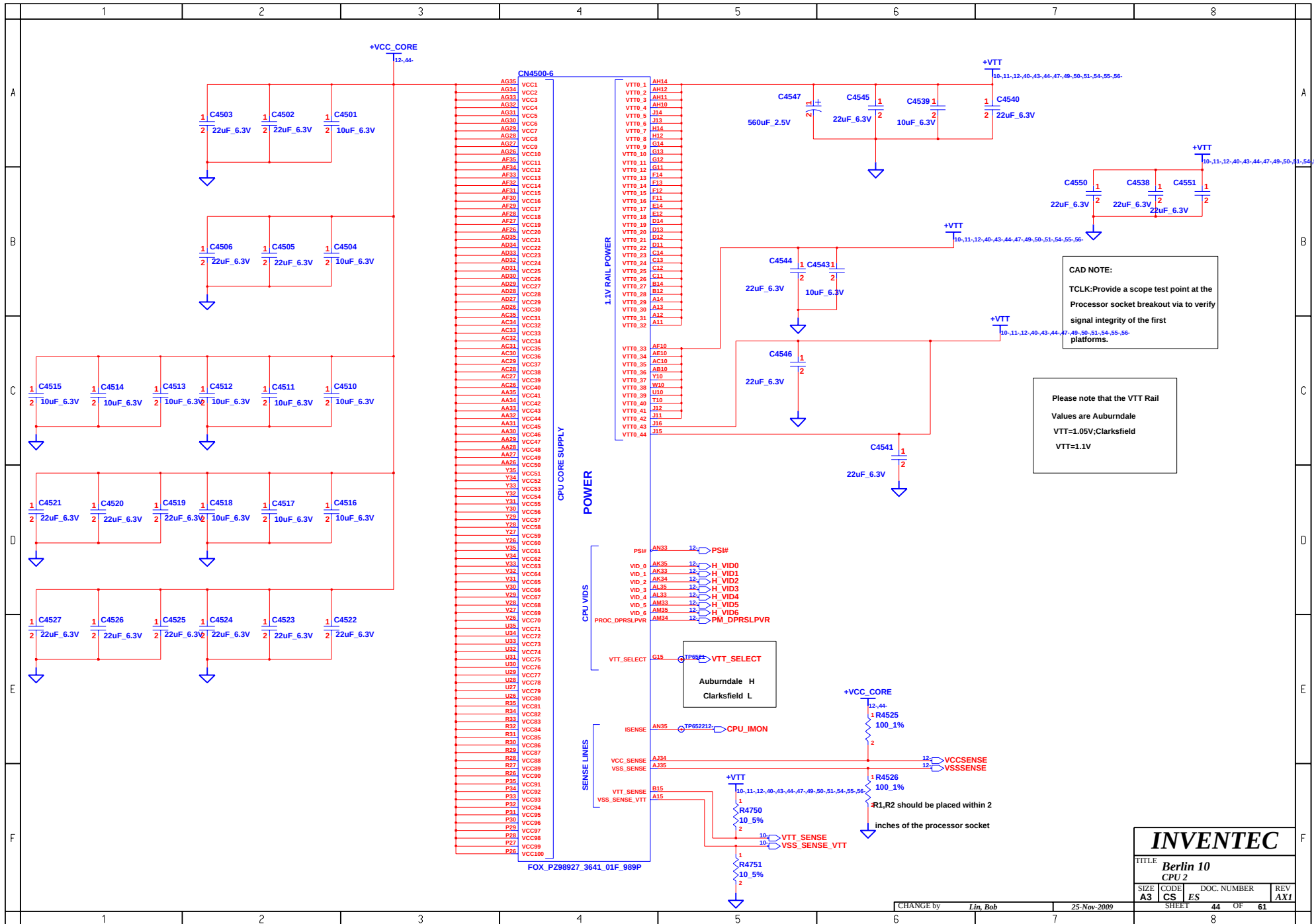


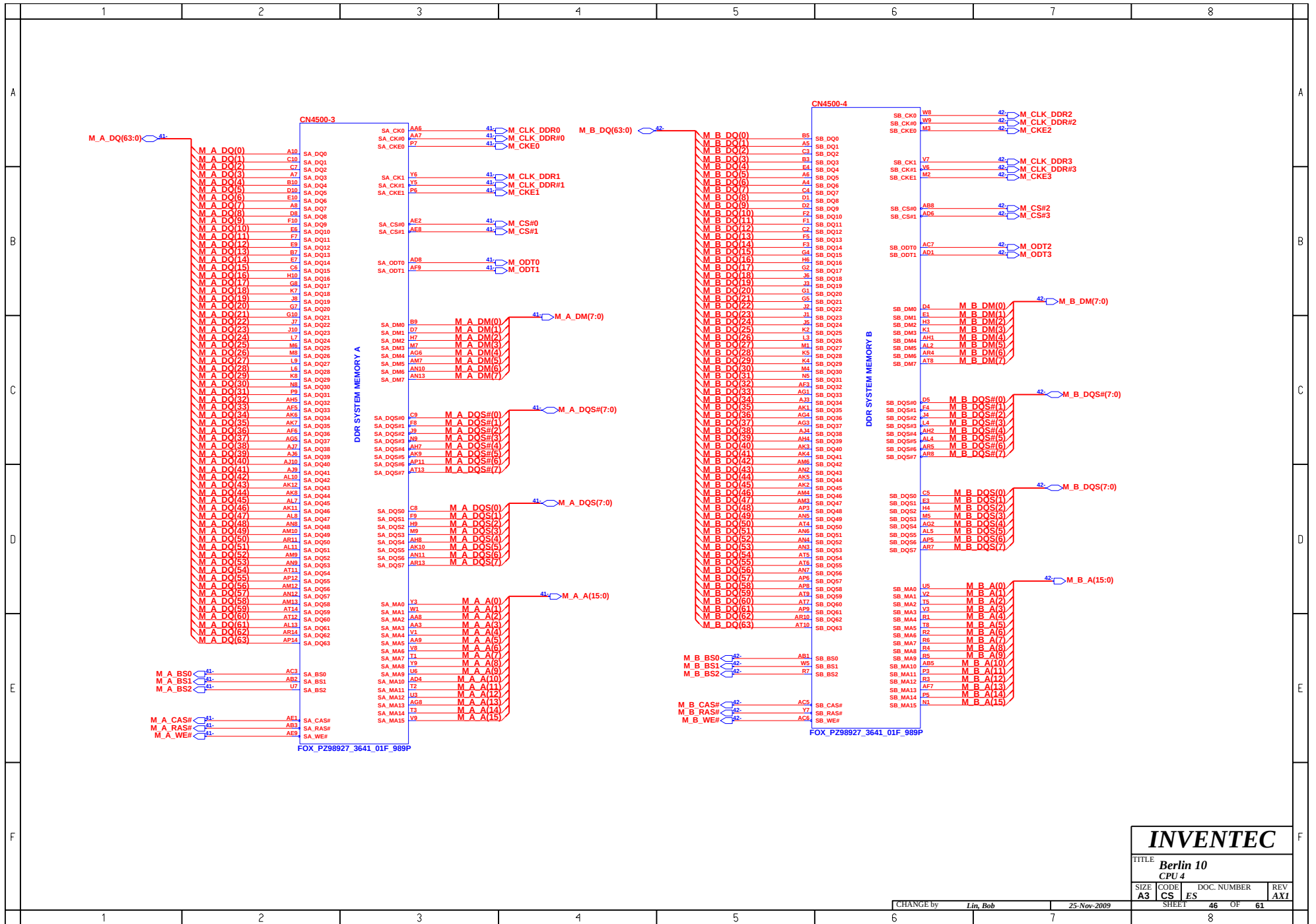


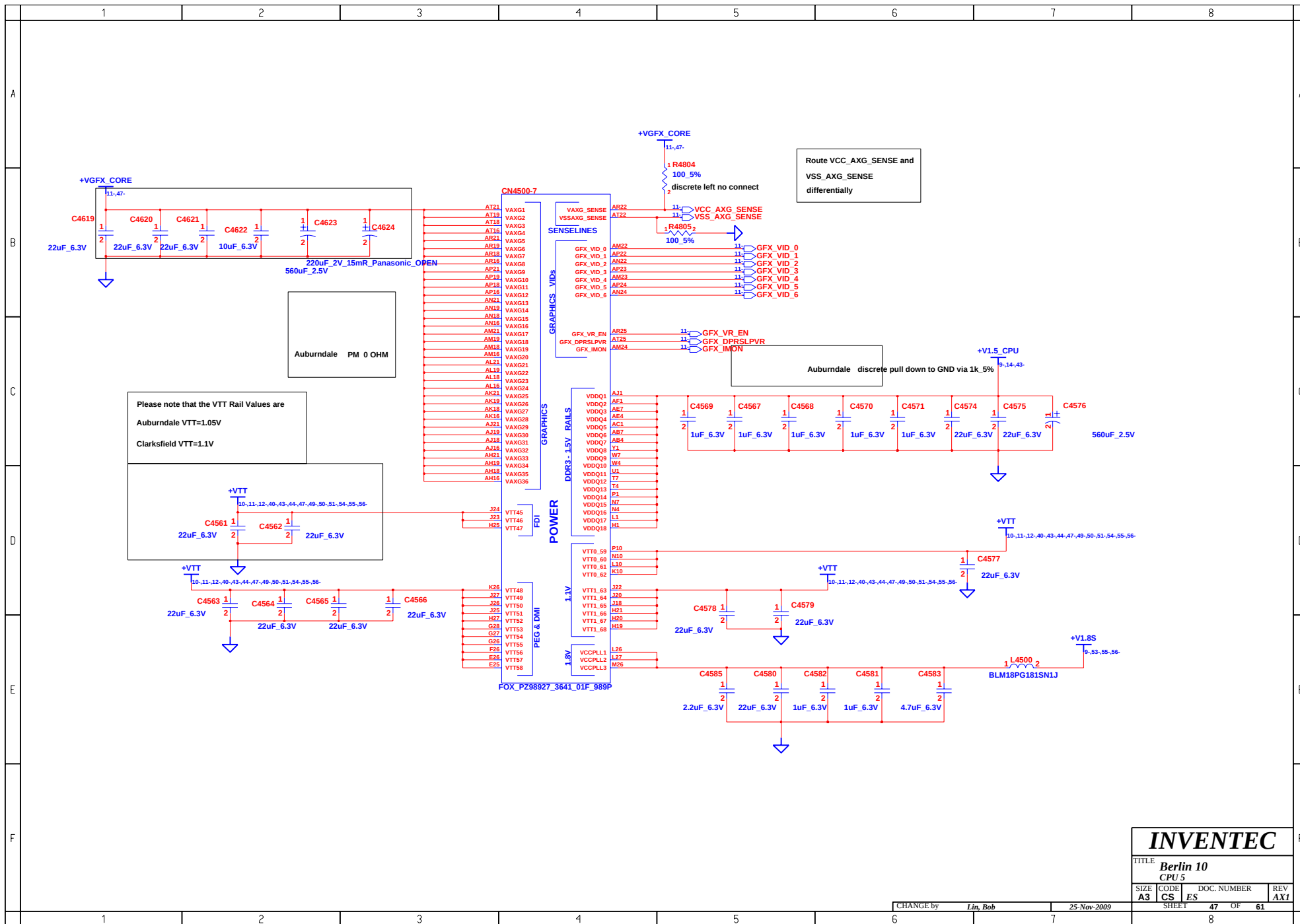
INVENTEC			
TITLE			
Berlin 10			
CLOCK GENERATOR			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AX1
SHEET		40 OF	61

CHANGE by Lin, Bob 25-Nov-2009



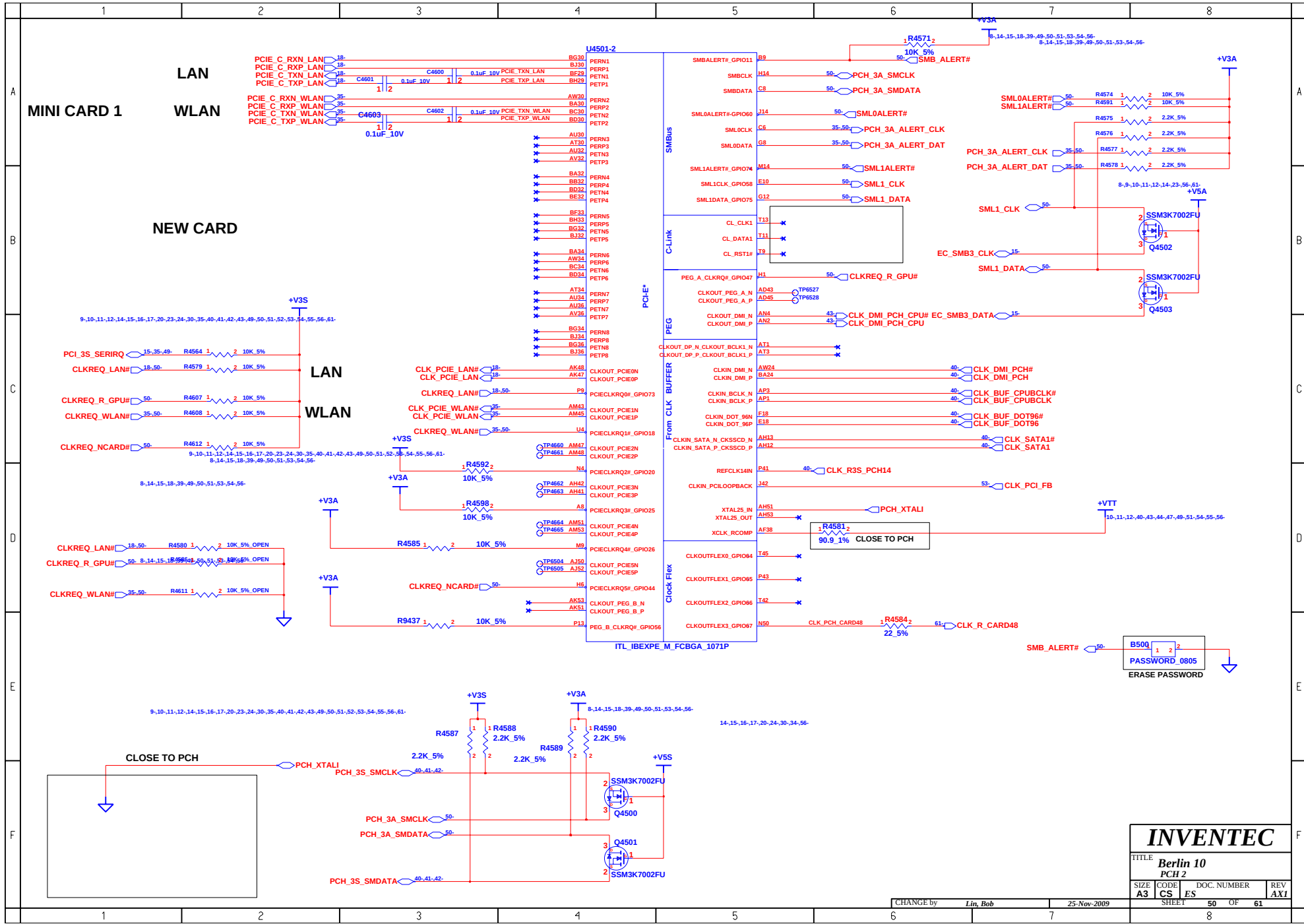






INVENTEC

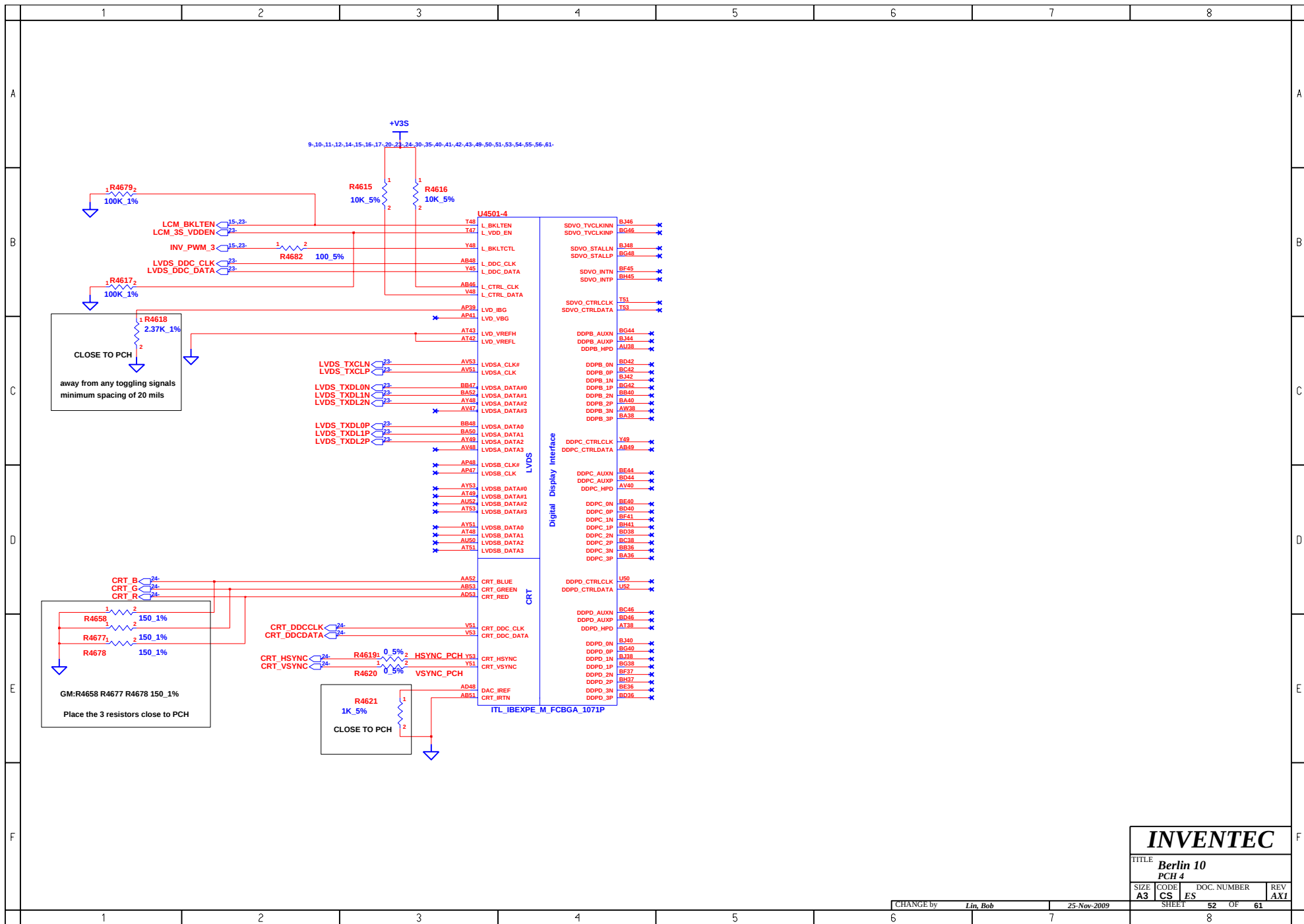
TITLE			
Berlin 10			
CPU 5			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AX1
SHEET		47 OF	61



INVENTEC

TITLE				
Berlin 10				
PCH 2				
SIZE	CODE	ES	DOC. NUMBER	REV
A3	CS	ES	50 OF 61	AX1
SHEET				

CHANGE by Lin, Bob 25-Nov-2009

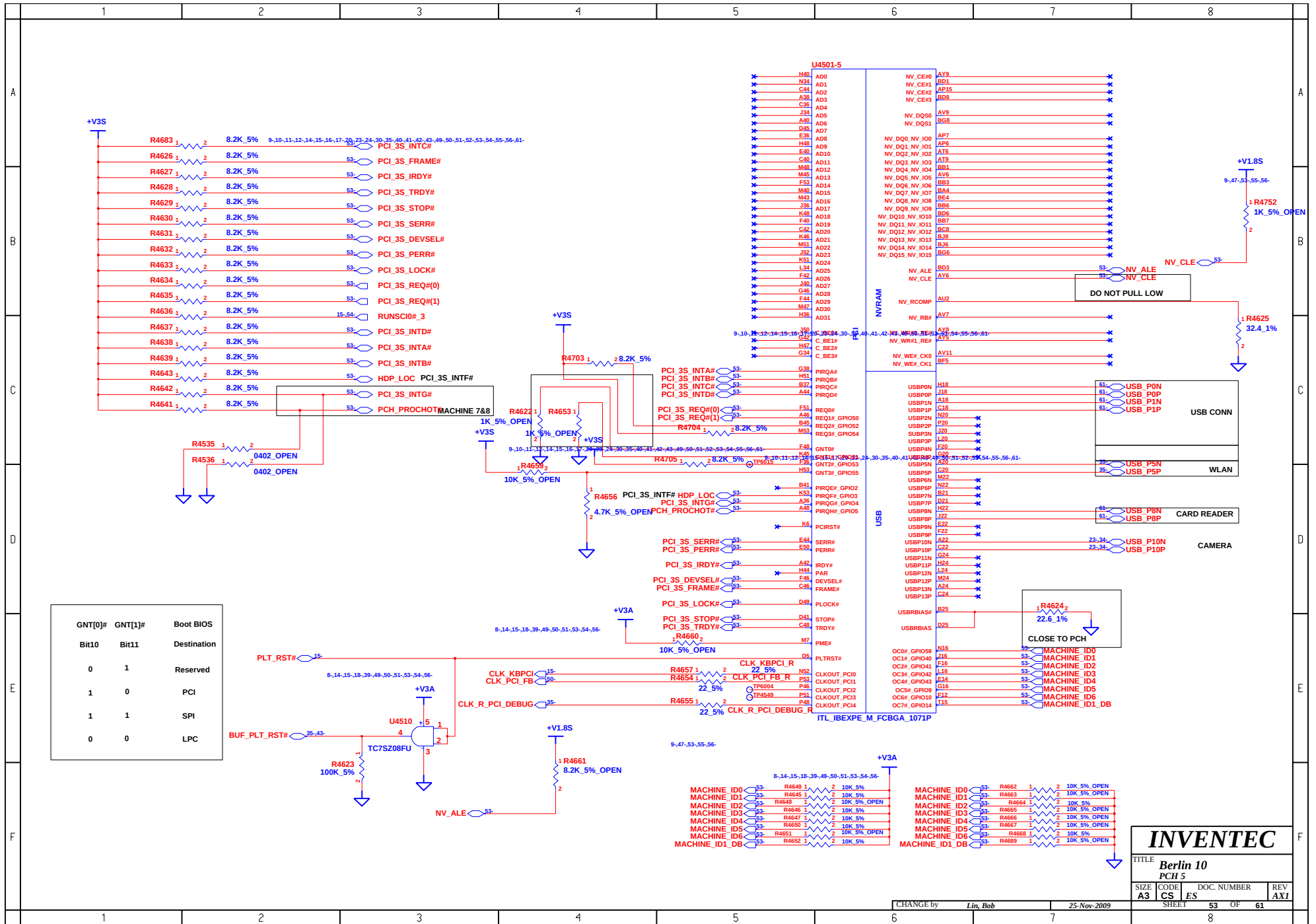


INVENTEC

TITLE			
Berlin 10			
PCH 4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AX1

CHANGE by Lin, Bob 25-Nov-2009

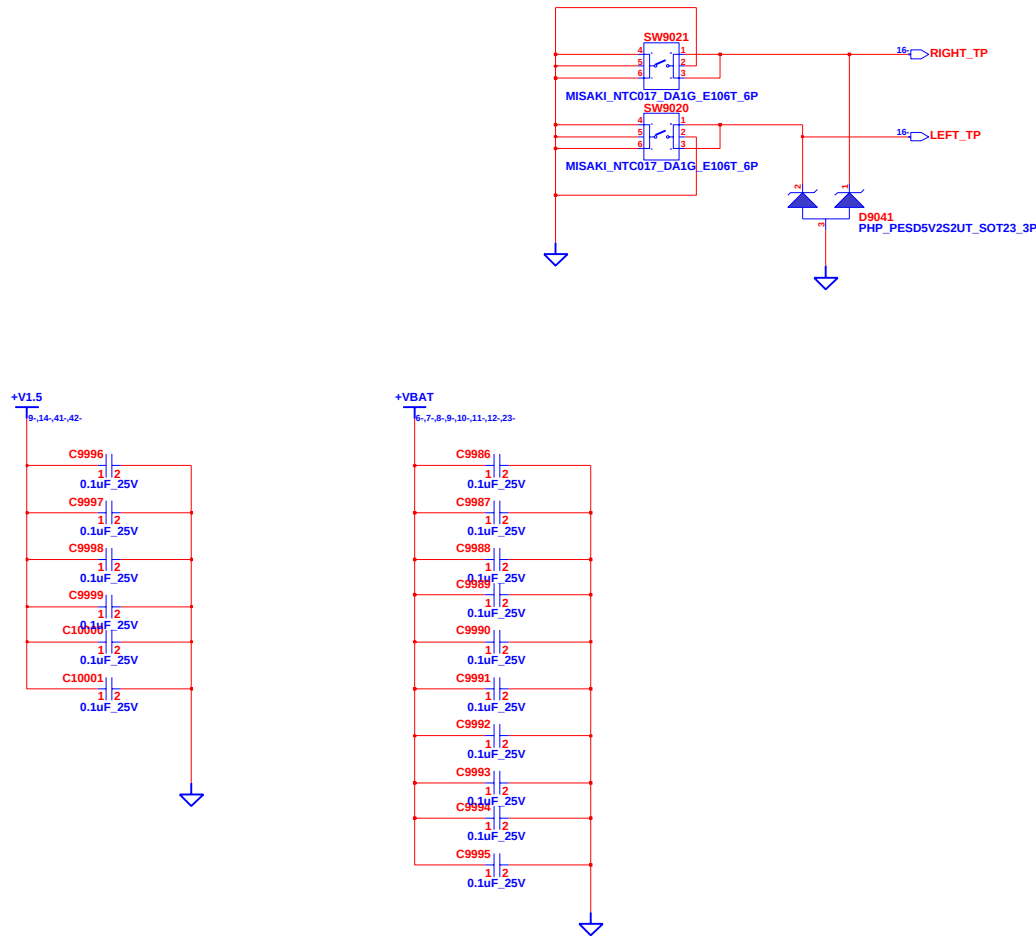
SHEET 52 OF 61



[illegible]

PICK BUTTON and EMI

(For - Touchpad Module, Touchpad Switch)



INVENTEC

TITLE			
Berlin 10			
Hot key board			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI
SHEET		58 OF	61

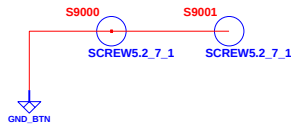
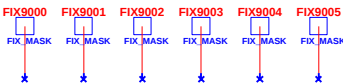
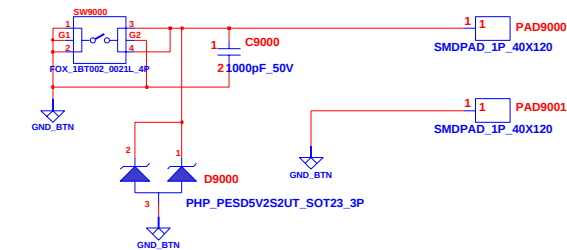
CHANGE by Lin, Bob 7-Jan-2010

8

	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
						CHANGE by <i>Lin, Bob</i>		5-Jan-2010	
1	2	3	4	5	6	7	8		

INVENTEC			
TITLE <i>Berlin 10 Touch pad</i>			
SIZE A3	CODE CS	DOC. NUMBER ES	REV AX1
SHEET		59 OF	61

POWER BUTTON



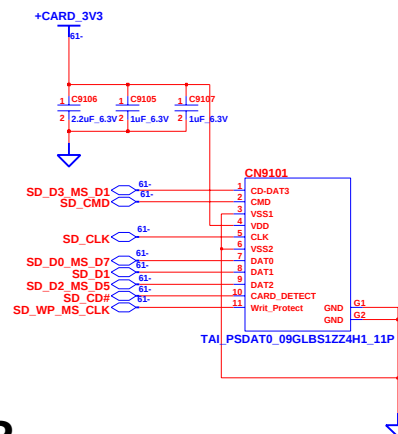
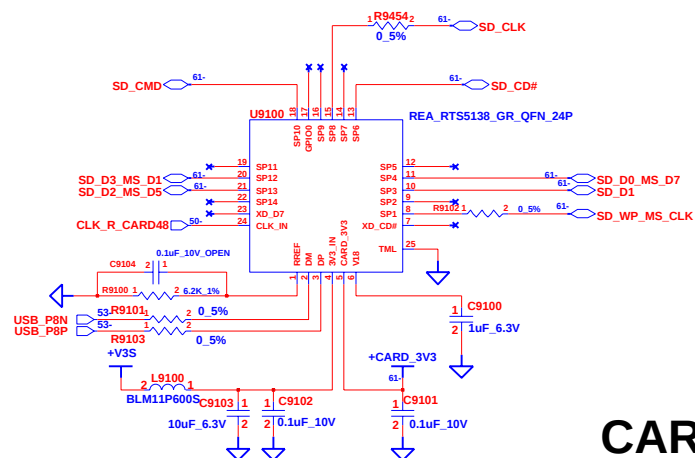
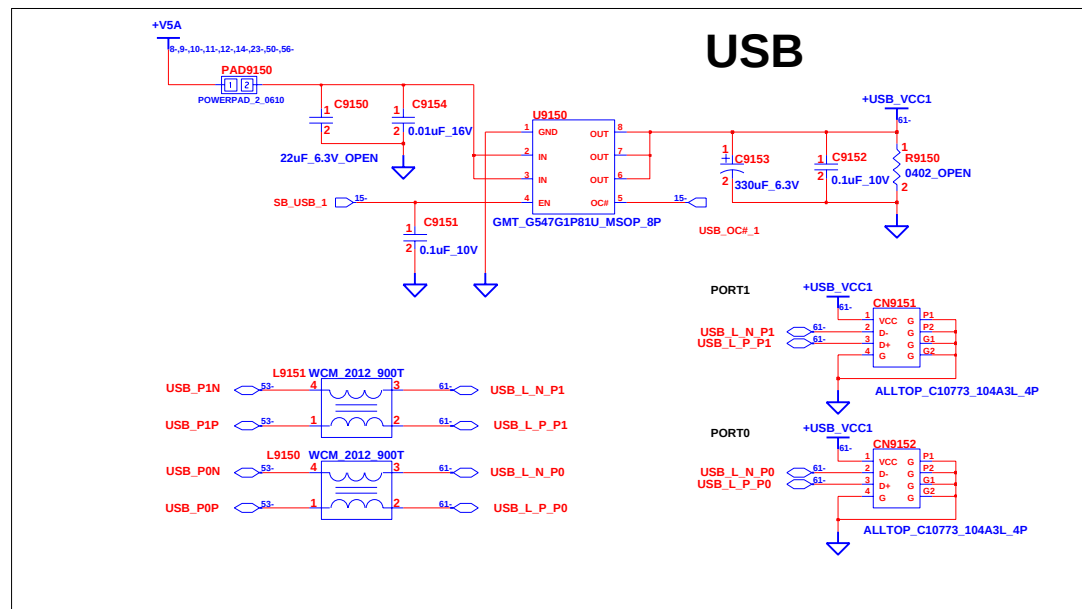
EMI

INVENTEC

TITLE			
Berlin 10			
EMI			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	ES	AXI
SHEET		60 OF	61

CHANGE by Lin, Bob 17-Mar-2010

CARD READER & USB



CARD READER

INVENTEC

TITLE
Berlin 10

SIZE CODE DOC. NUMBER REV
A3 CS ES

CHANGE by *Lin, Bob* 25-Nov-2009

SHEET 61 OF 61

8