

1	2	3	4	5	6	7	8
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HSF Property : **RoHS**

Manaus10R

Pre-MP Build(A02)

2011.03.21

DATE	CHANGE NO.	REV

DRAWER	EE	DATE	POWER	DATE	INVENTEC TITLE <i>Manaus10R</i> COVER SIZE = A3 CODE WS DOC. NUMBER 310A2423501-0-MTR REV A FILE NAME : MN10R-6050A2423501-MB-A02 VER : A02 SHEET 1 OF 58
DESIGN	CHUANG, AMINE	2011-MAR-21	YU, MARK	2011-MAR-21	
CHECK	CHUANG, AMINE	2011-MAR-21	YU, MARK	2011-MAR-21	
RESPONSIBLE	CHUANG, AMINE	2011-MAR-21	YU, MARK	2011-MAR-21	

1	2	3	4	5	6	7	8
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- 4. POWER SEQUENCE BLOCK
- 5. PCB SCREW
- 6. SYSTEM POWER
- 7. SYSTEM POWER
- 8. SYSTEM POWER
- 9. SYSTEM POWER
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- 15. EC
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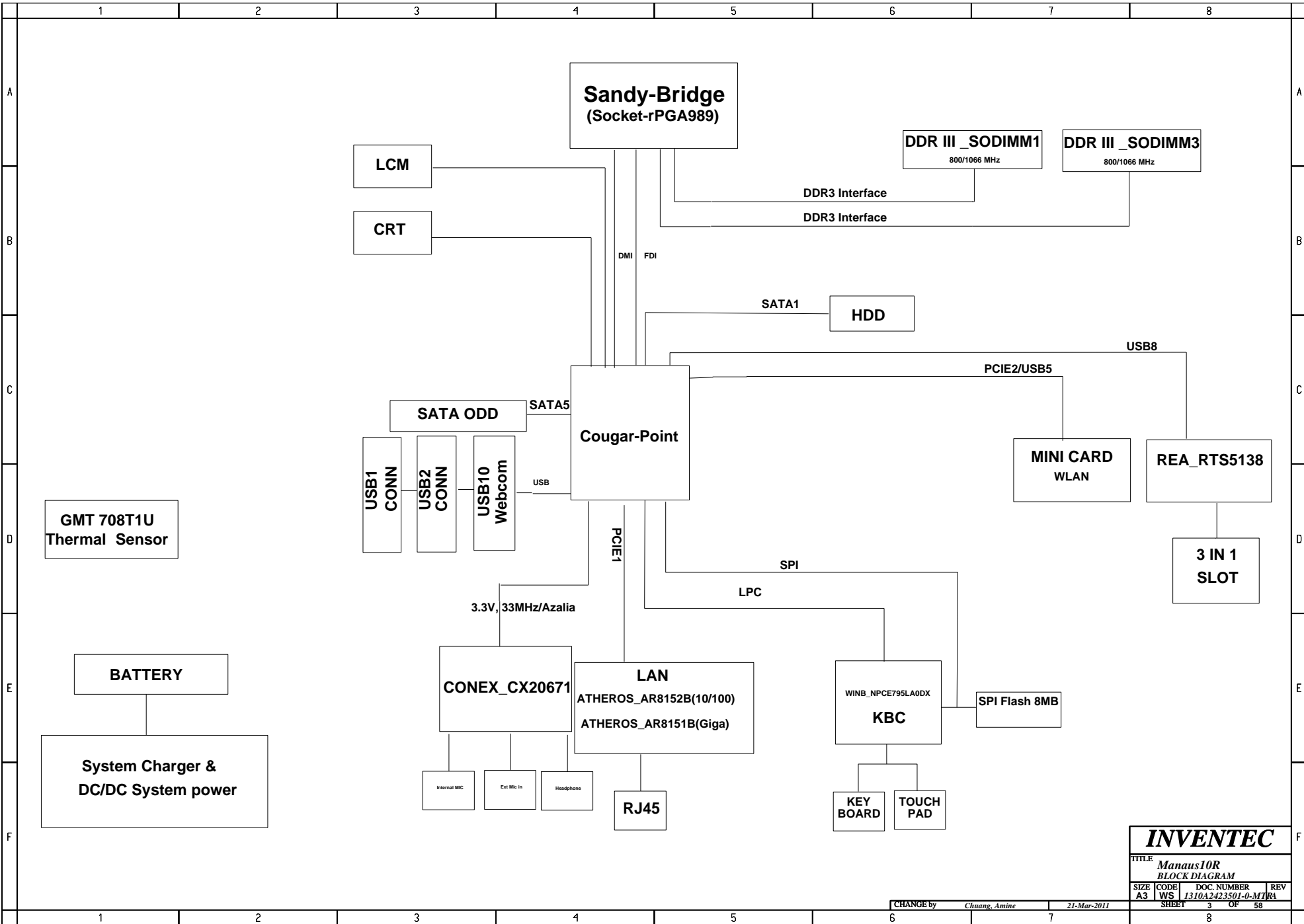
- 28. SATA HDD/SSD & ODD
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- 32. WLAN/DEBUG CARD
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- 34. HALL SENSOR
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- 53. PCH9
- 54. PICK BUTTON

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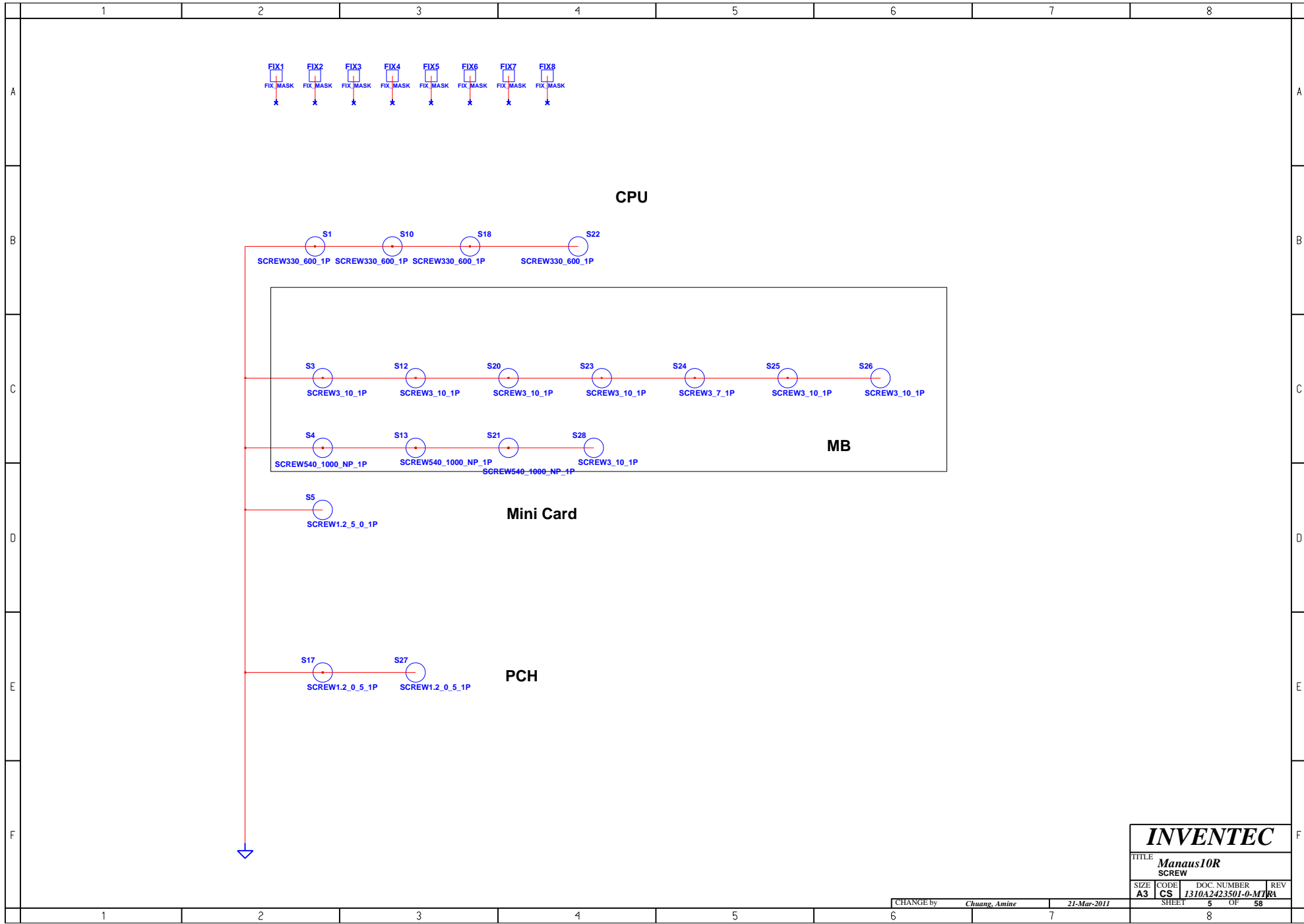
- 55. SKIP
- 56. POWER BUTTON BOARD
- 57. CARDREADER & USB
- 58. EMI

INVENTEC

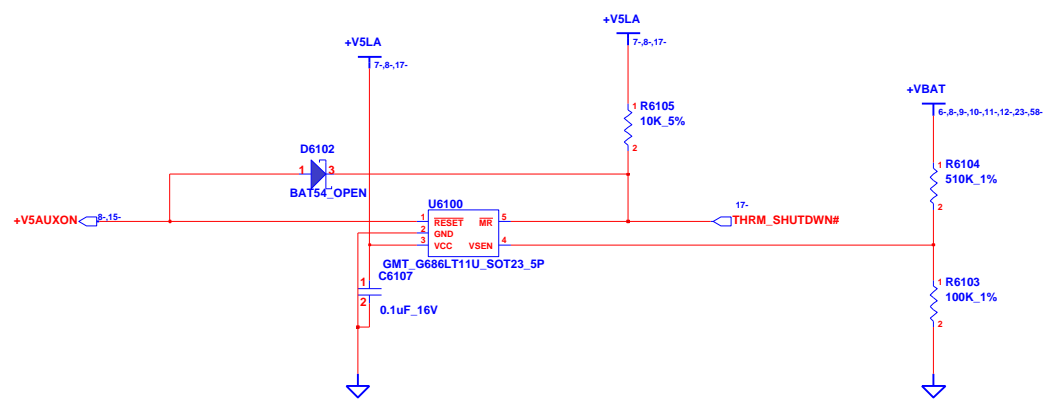
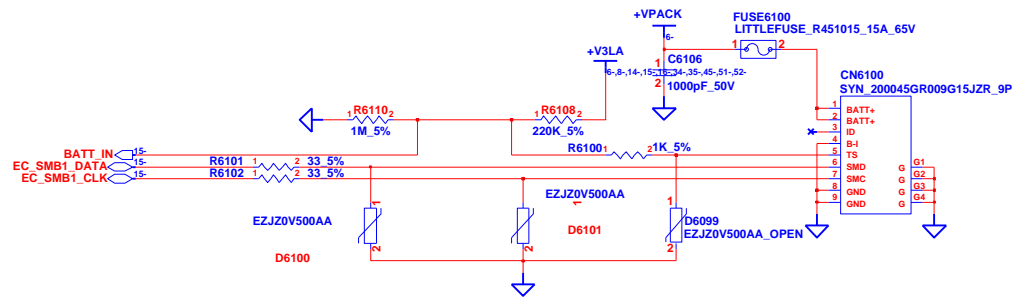
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A3	WS	1310A2423501-0-M1	RA
SHEET		2	OF 58



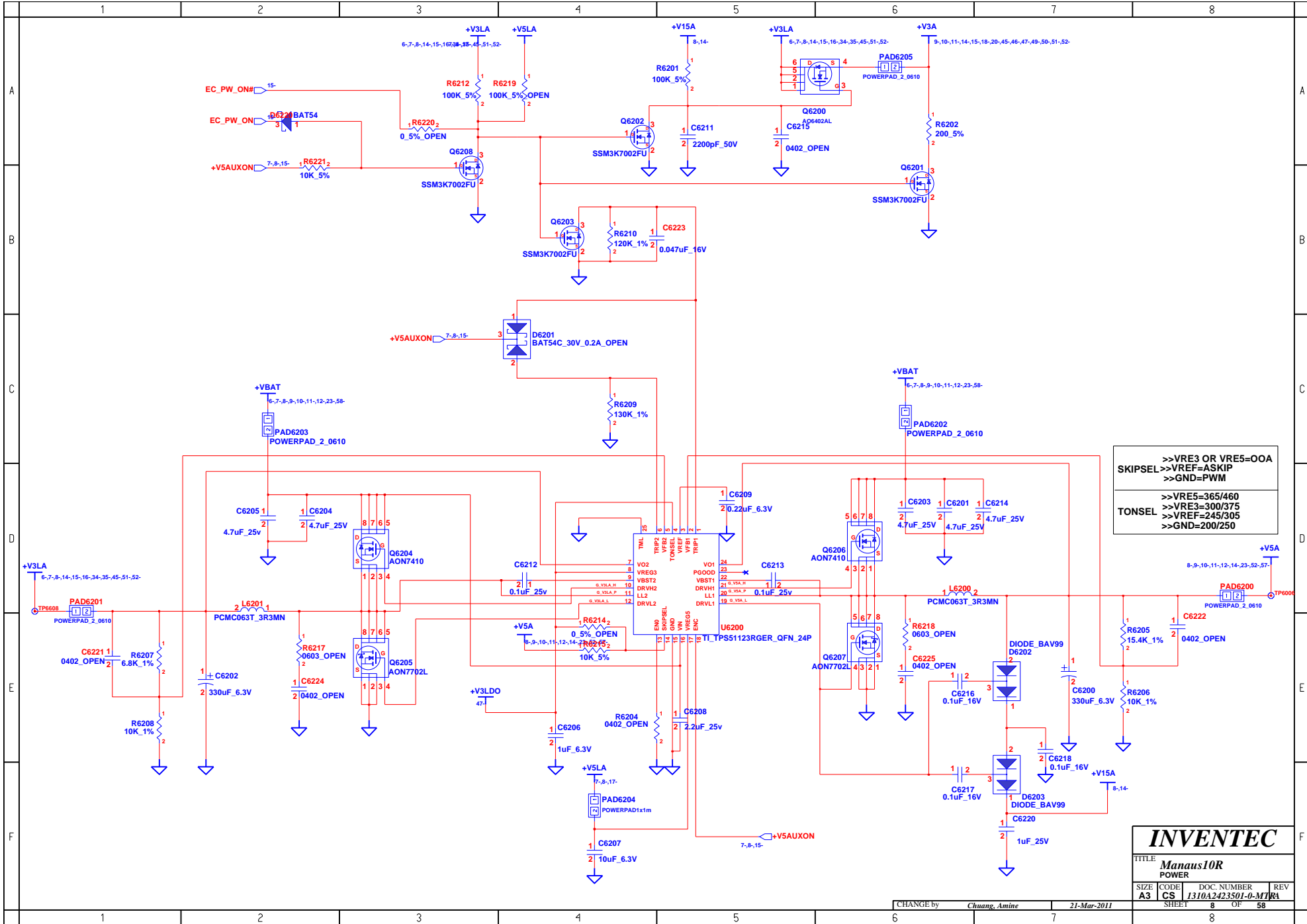
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BLOCK DIAGRAM			
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CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
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INVENTEC			
TITLE Manaus10R			
SCREW			
SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-MTR	REV RA
CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
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INVENTEC			
TITLE Manaus10R			
POWER			
SIZE	CODE	DOC. NUMBER	REV
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CHANGE by		21-Mar-2011	
Chuang, Amine			
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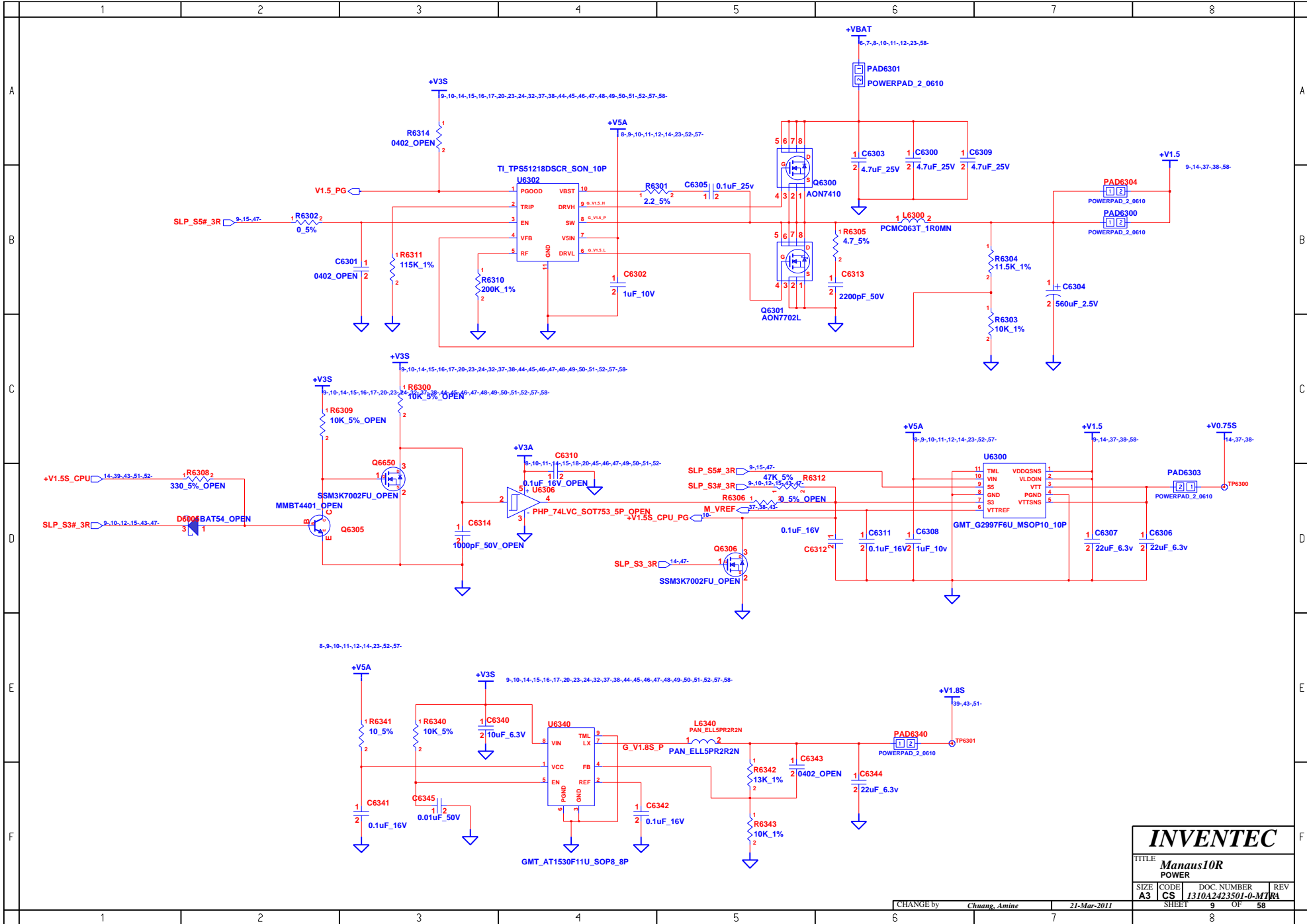


>>VRE3 OR VRE5=00A
 SKIPSEL>>VREF=ASKIP
 >>GND=PWM
 >>VRE5=365/460
 >>VRE3=300/375
 TONSEL >>VREF=245/305
 >>GND=200/250

INVENTEC

TITLE			
Mana10R			
POWER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
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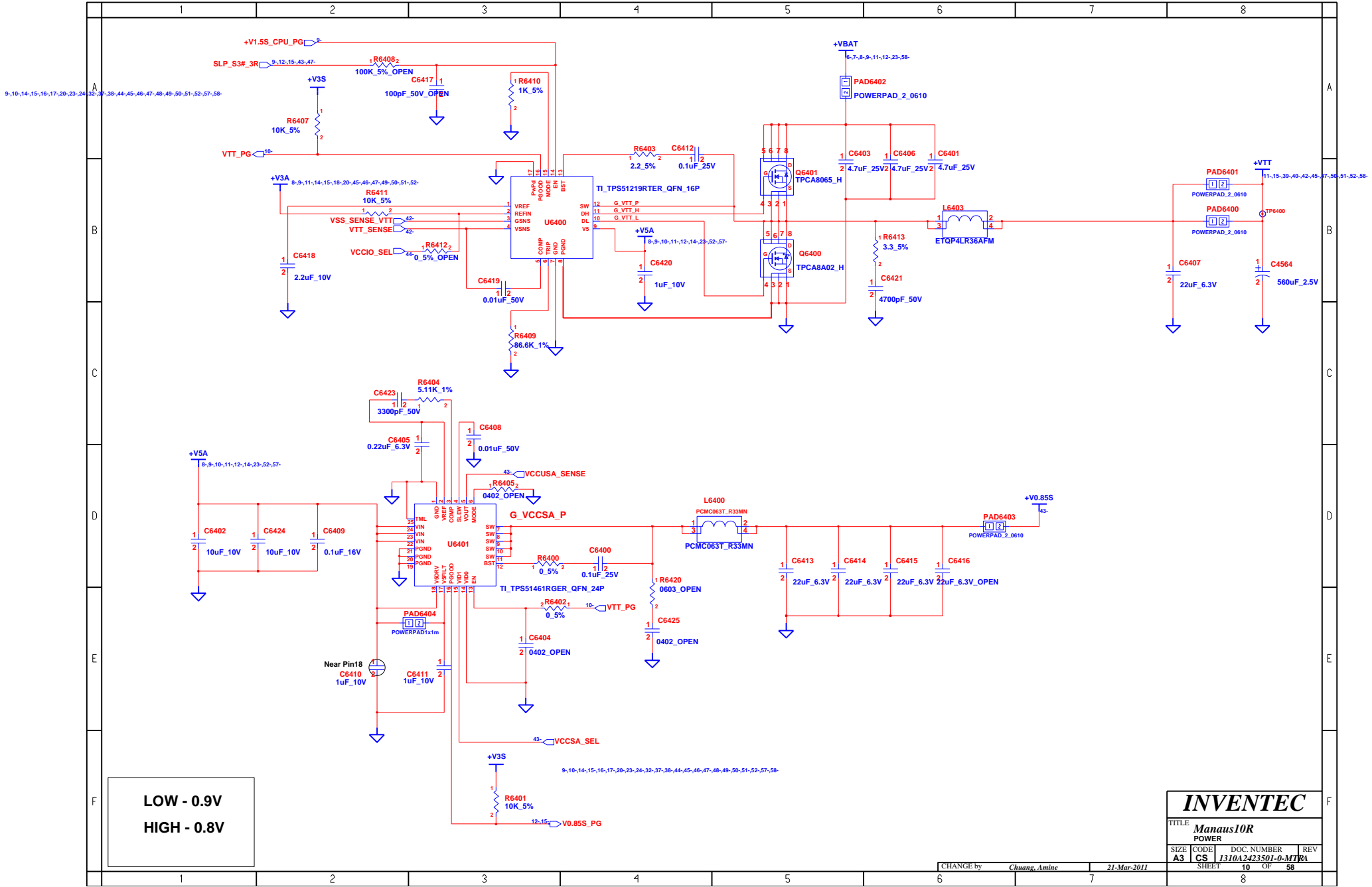
CHANGE by *Chuang, Amine* 21-Mar-2011



INVENTEC

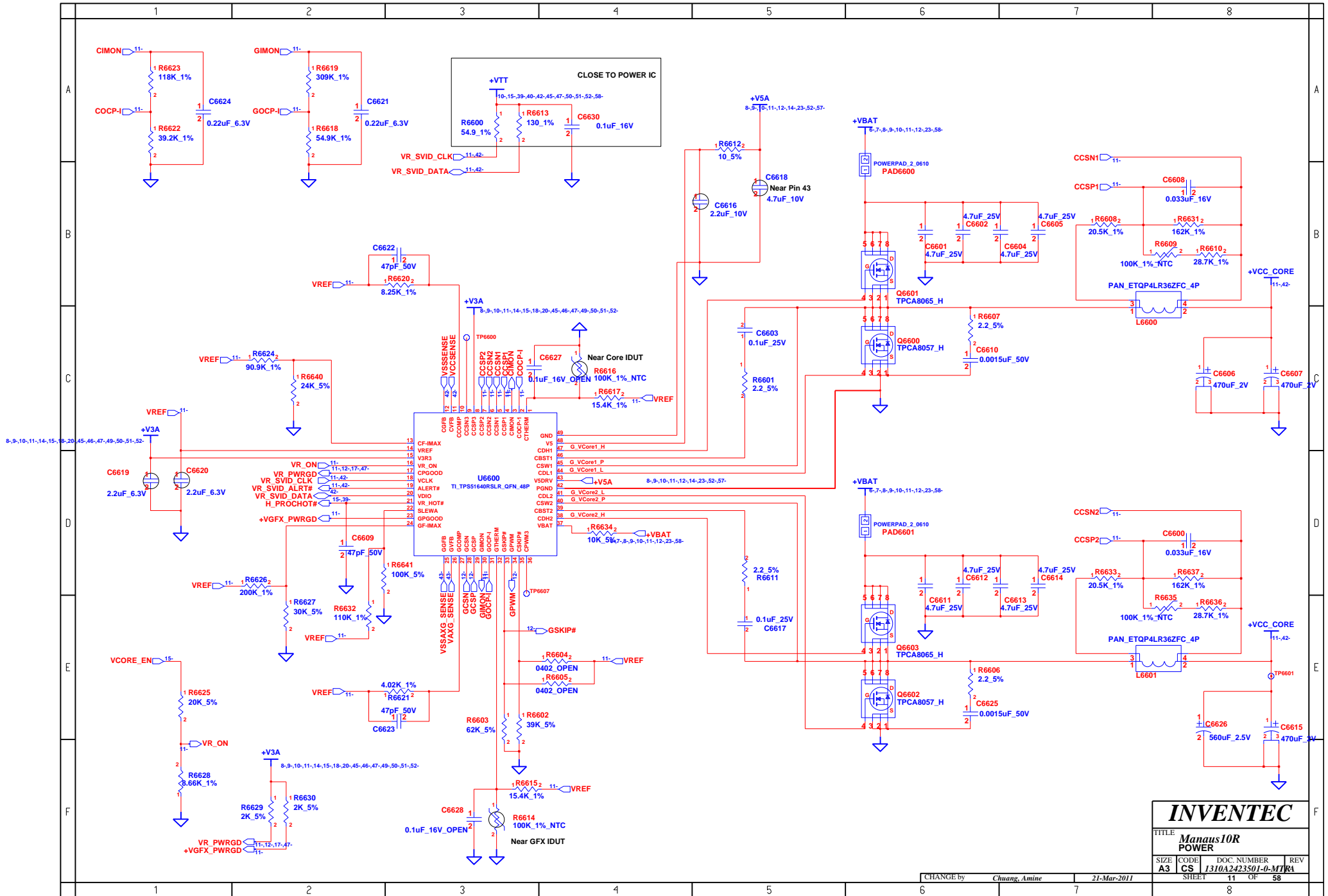
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POWER

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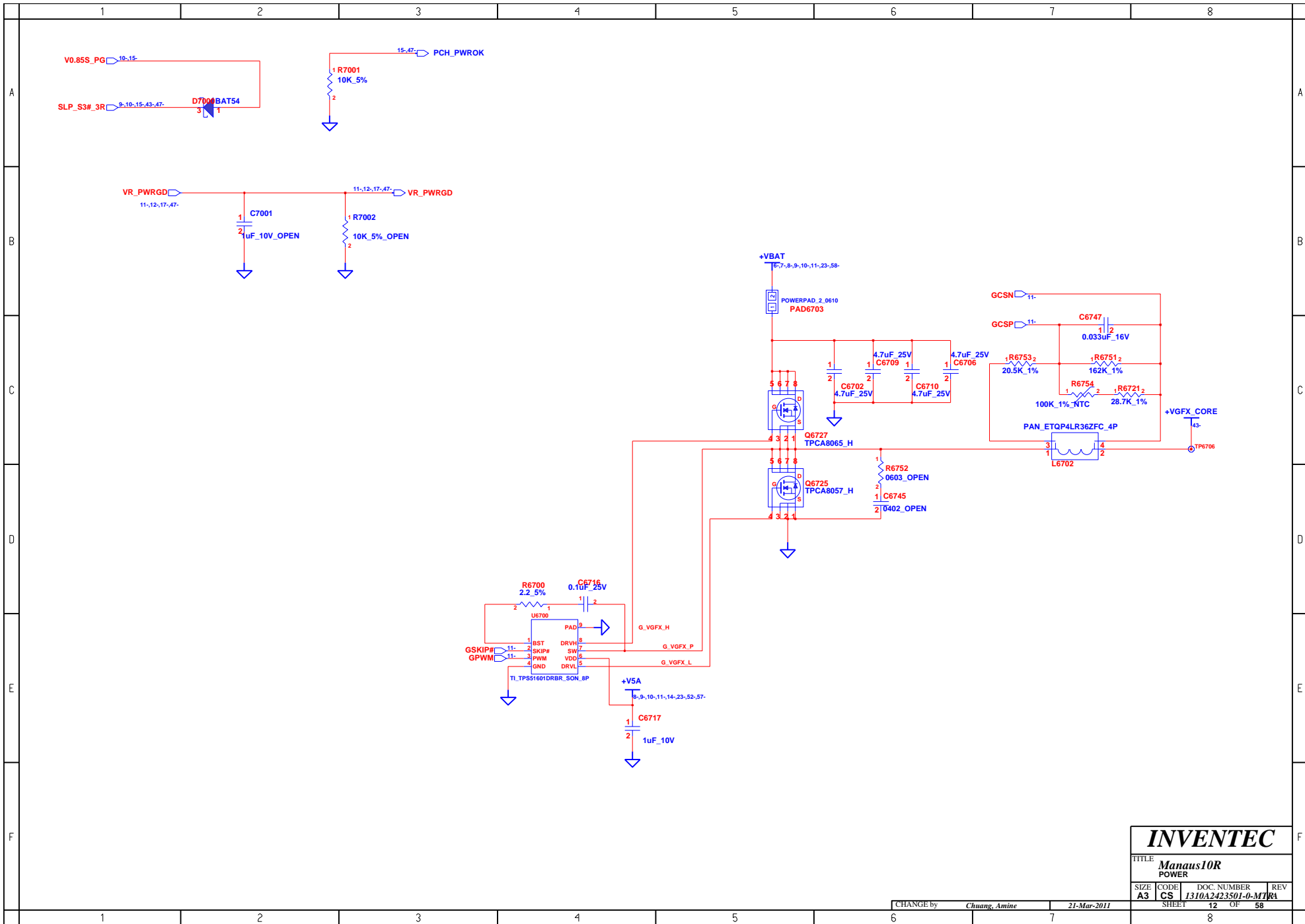


LOW - 0.9V
HIGH - 0.8V

INVENTEC			
TITLE: Manaus10R			
POWER			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A2423501-0-MTR	REV: 1
CHANGE by: <i>Chuang, Amine</i>		21-Mar-2011	
		SHEET: 10 OF 58	



INVENTEC			
TITLE Manaus10R POWER			
SIZE A3	CODE CS	DOC NUMBER 1310A2423501-0-MTR	REV 1
CHANGE by Chuang, Amine		21-Mar-2011	11 OF 58



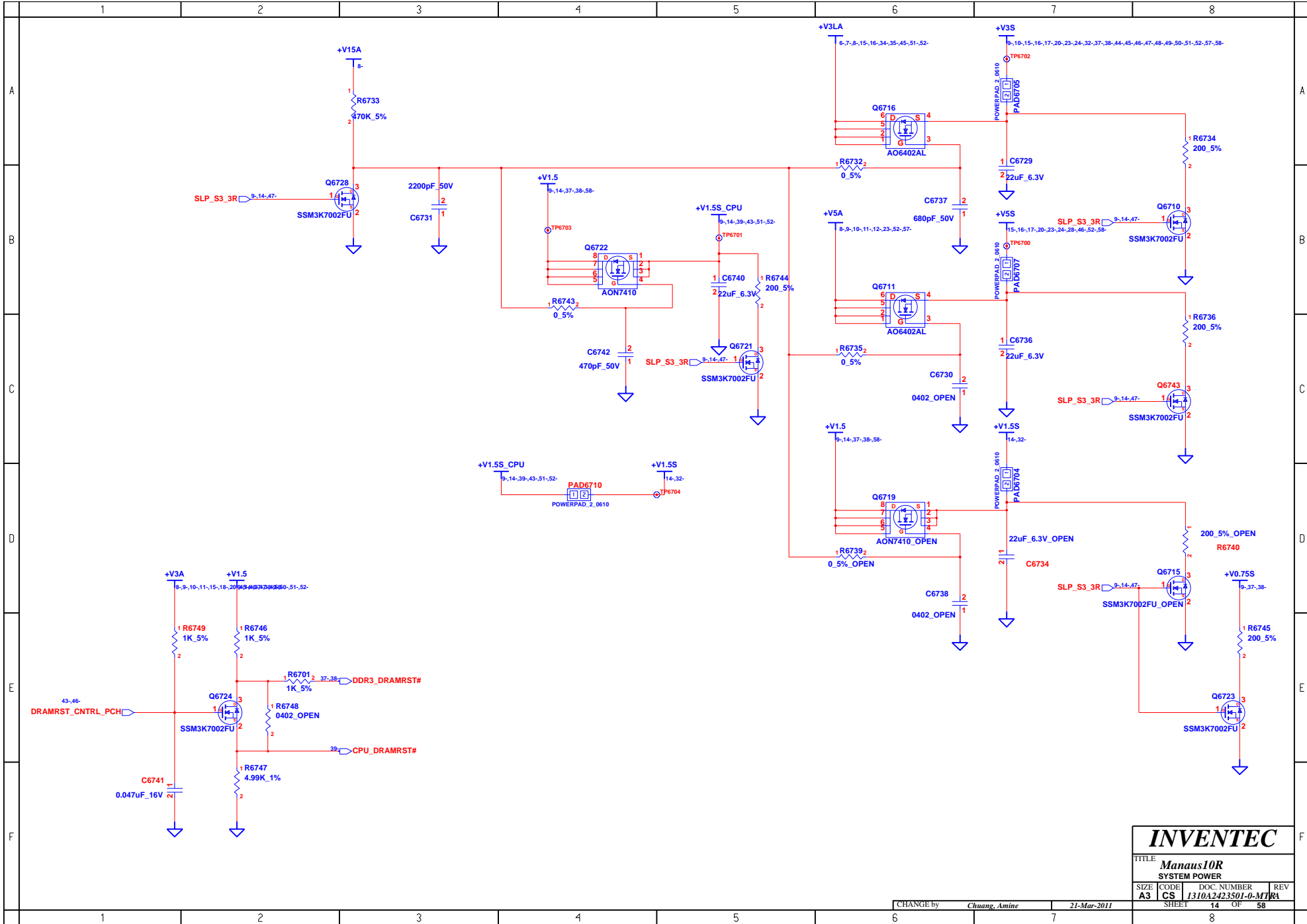
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CHANGE by Chuang, Amine 21-Mar-2011

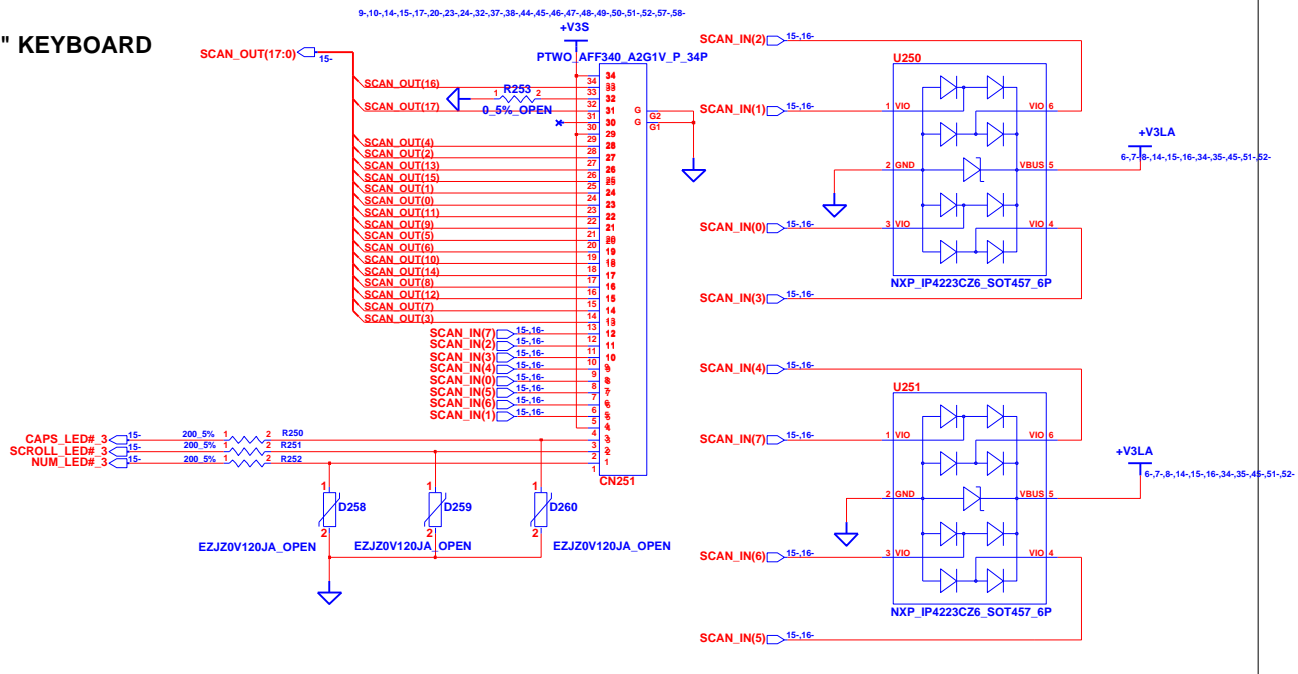
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CHANGE by		21-Mar-2011	
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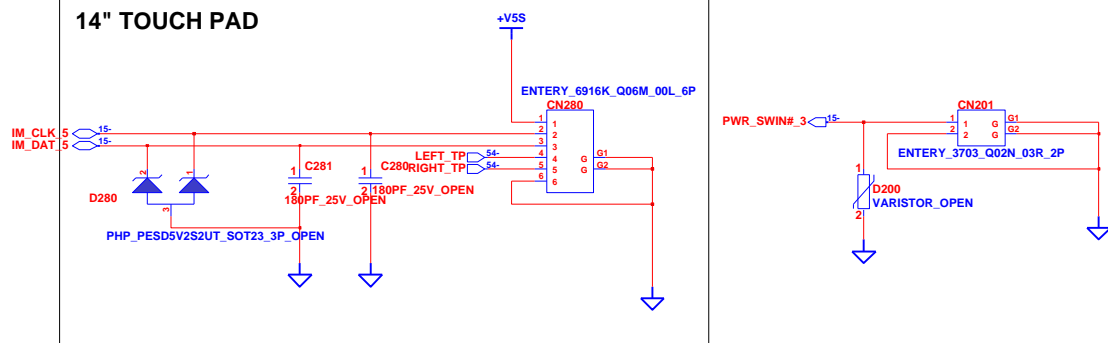


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TITLE: Mana10R			
SYSTEM POWER			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
CHANGE by		21-Mar-2011	
SHEET		14	OF 58

14" KEYBOARD



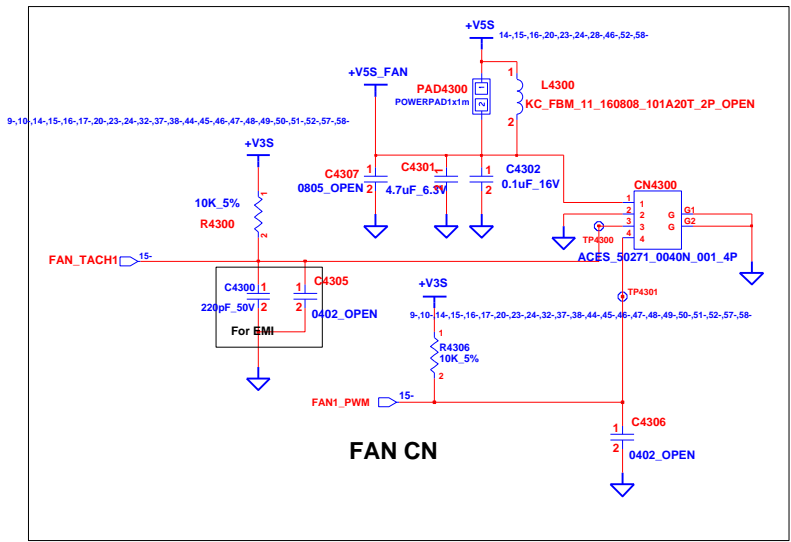
14" TOUCH PAD



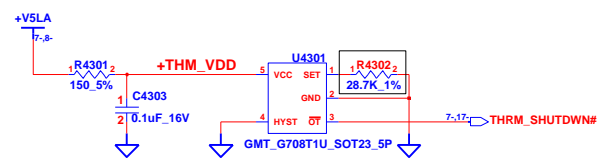
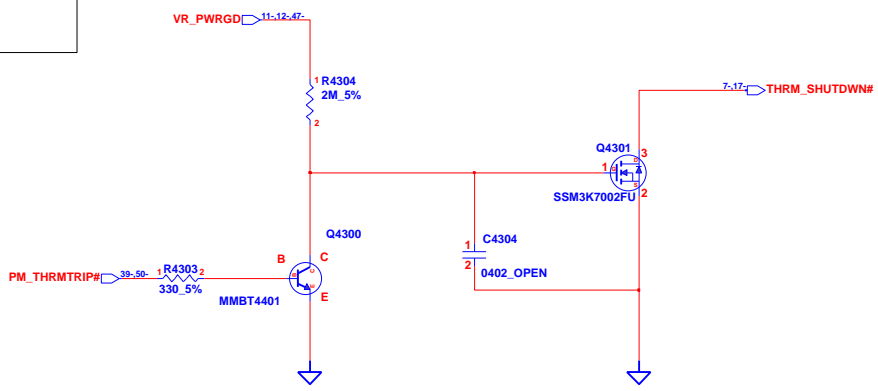
INVENTEC

TITLE			
Manaus10R			
K/B TP/B CONN			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
CHANGE by		SHEET	
Chuang, Amine		16 OF 58	

21-Mar-2011



FAN CN

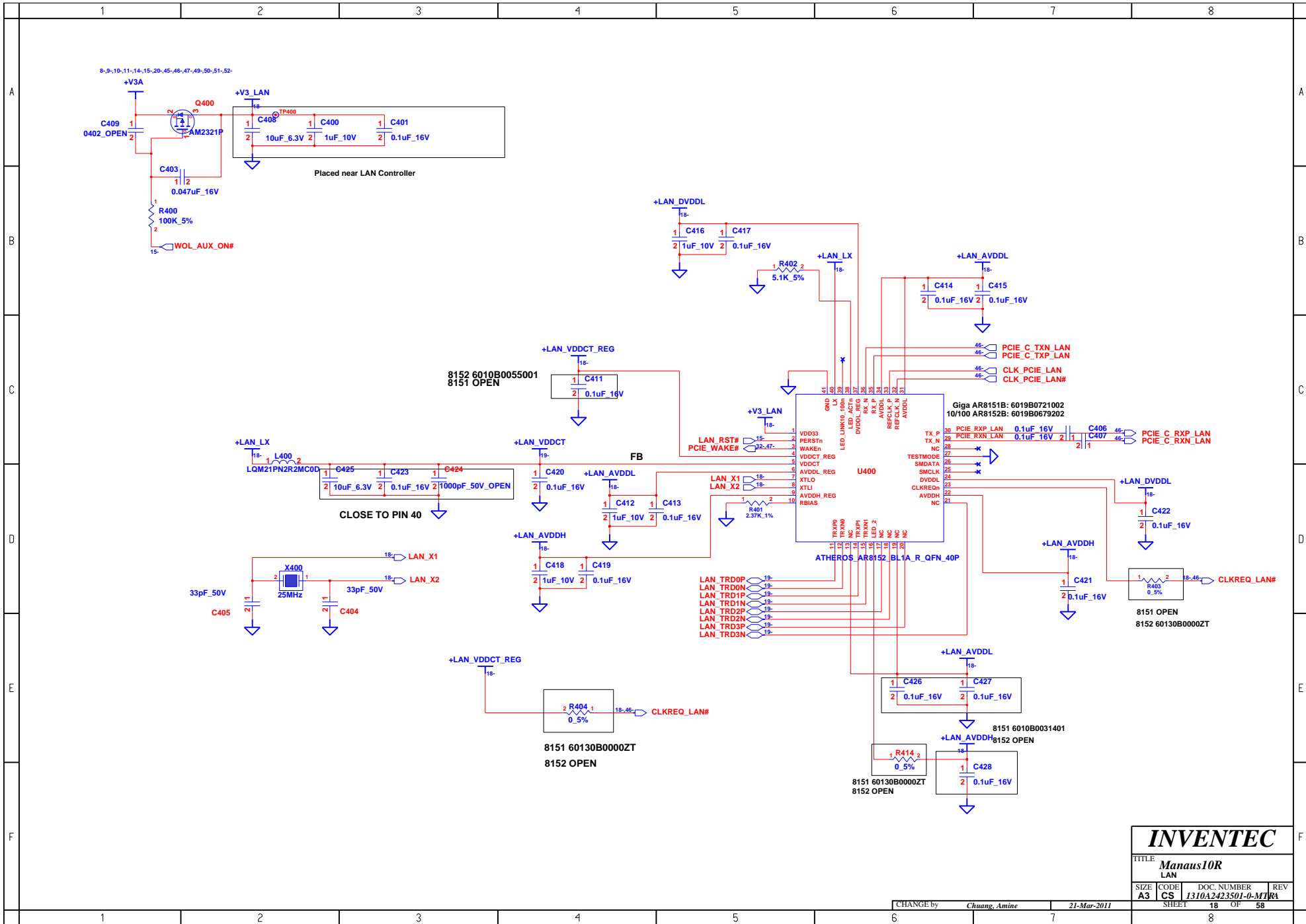


GM Thermal shutdown at 80.9°C +/-3°C from 60°C to 100°C

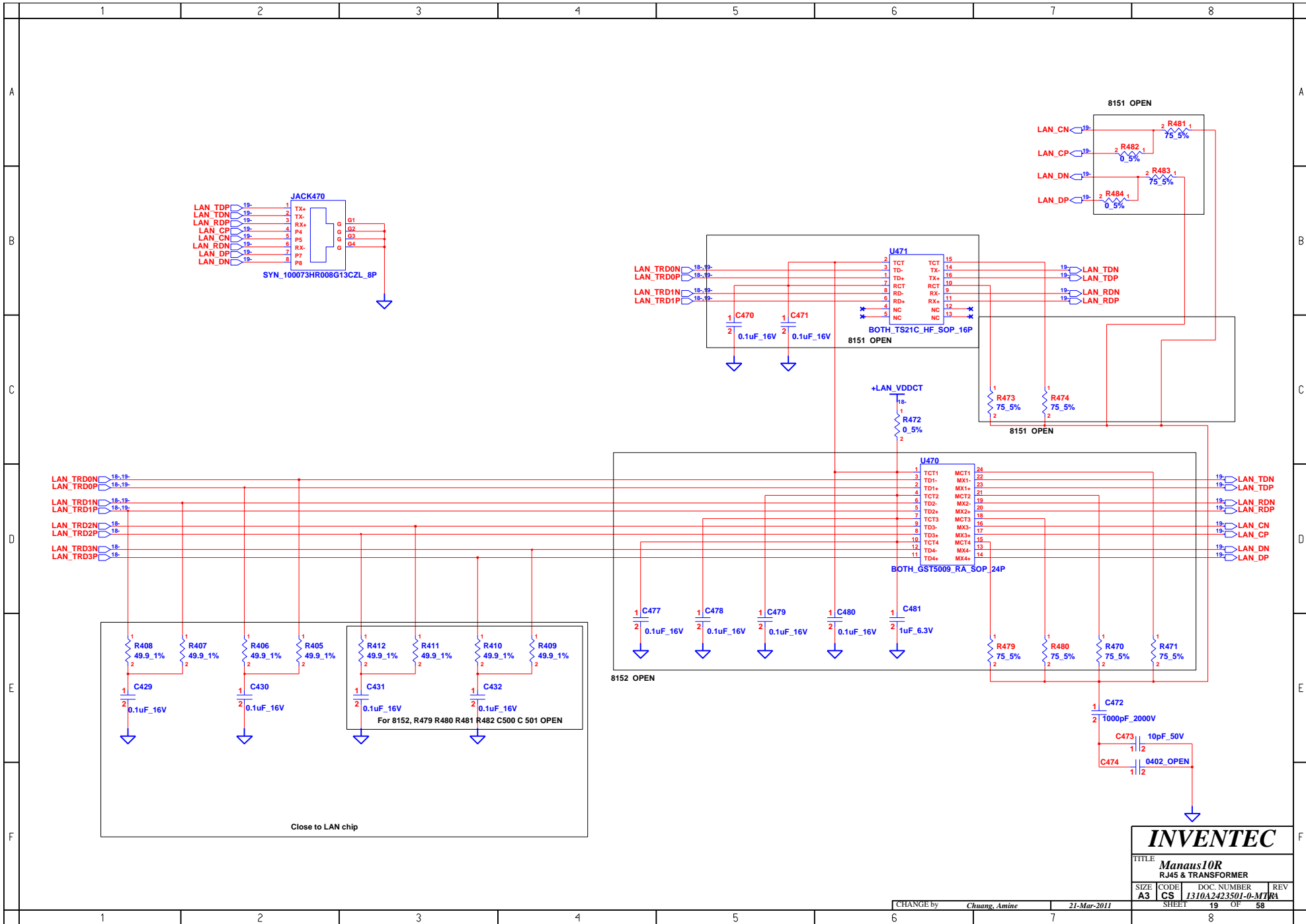
RSET=0.0012*T² - 0.9308*T+96.147
Hysteresis is 30C

INVENTEC

TITLE			
Manaus10R			
FAN & THERMAL			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A2423501-0-MT	KA
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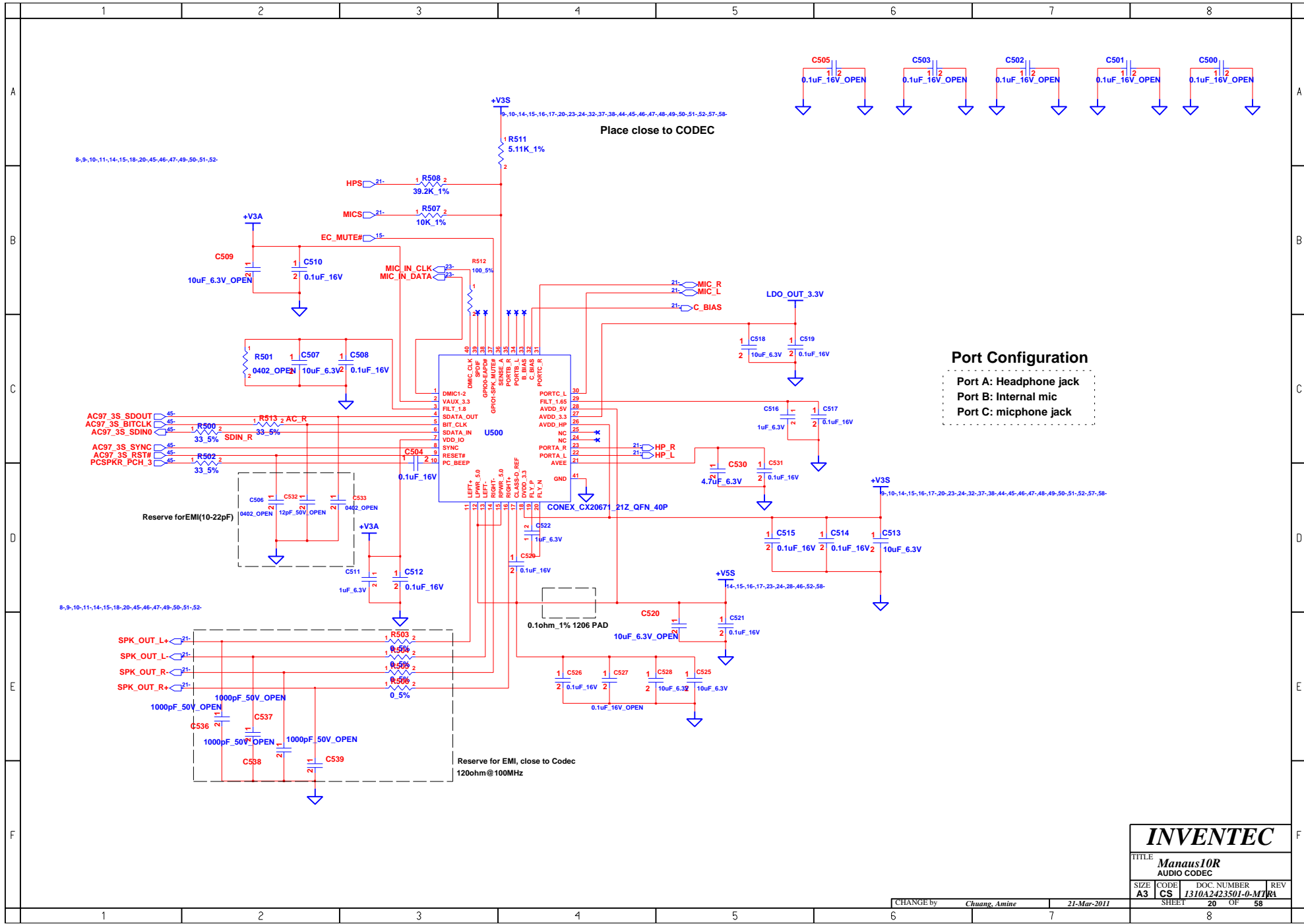
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LAN			
SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-M1	REV KA
CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
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INVENTEC

TITLE			
Manauius10R			
RJ45 & TRANSFORMER			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A2423501-0-MT	KA
CHANGE by		21-Mar-2011	SHEET 19 OF 58

CHANGE by Chuang, Amine 21-Mar-2011



Port Configuration

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

INVENTEC

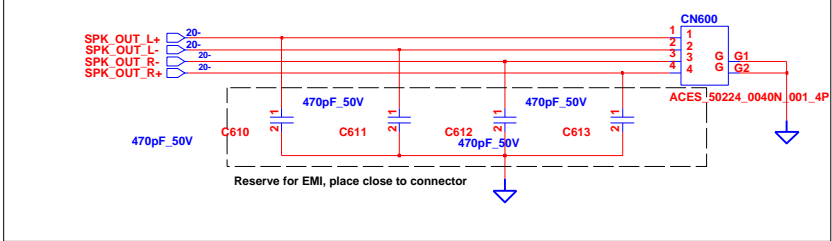
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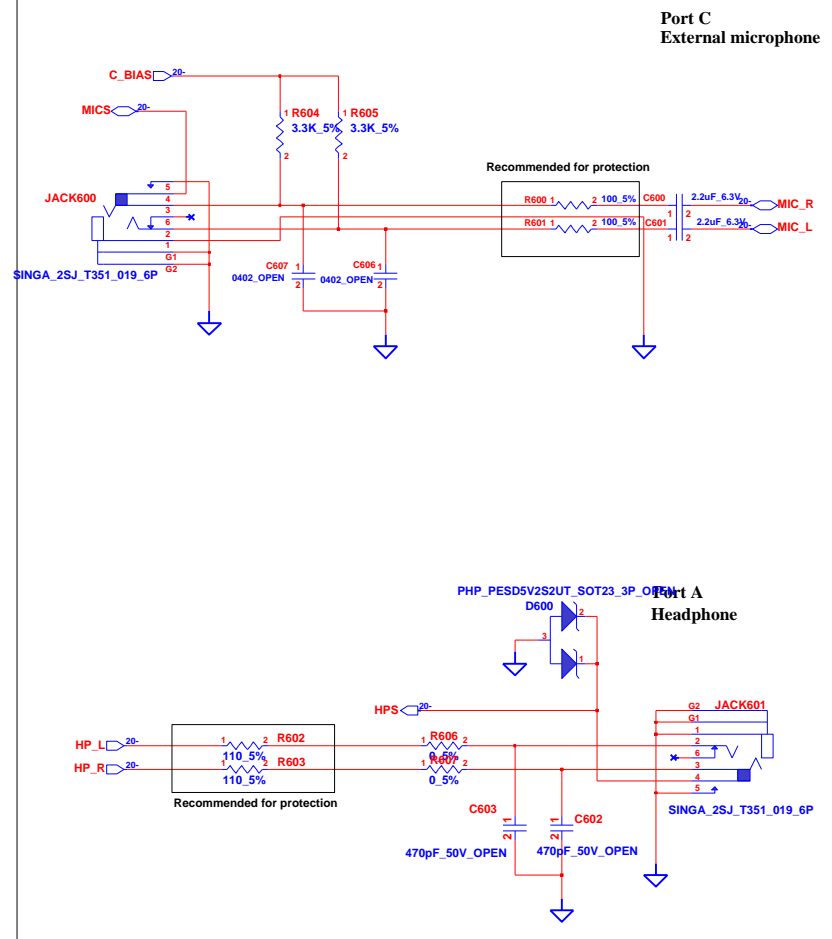
CHANGE by *Chuang, Amine* 21-Mar-2011

SHEET	20	OF	58
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INTERNAL SPEAKERS



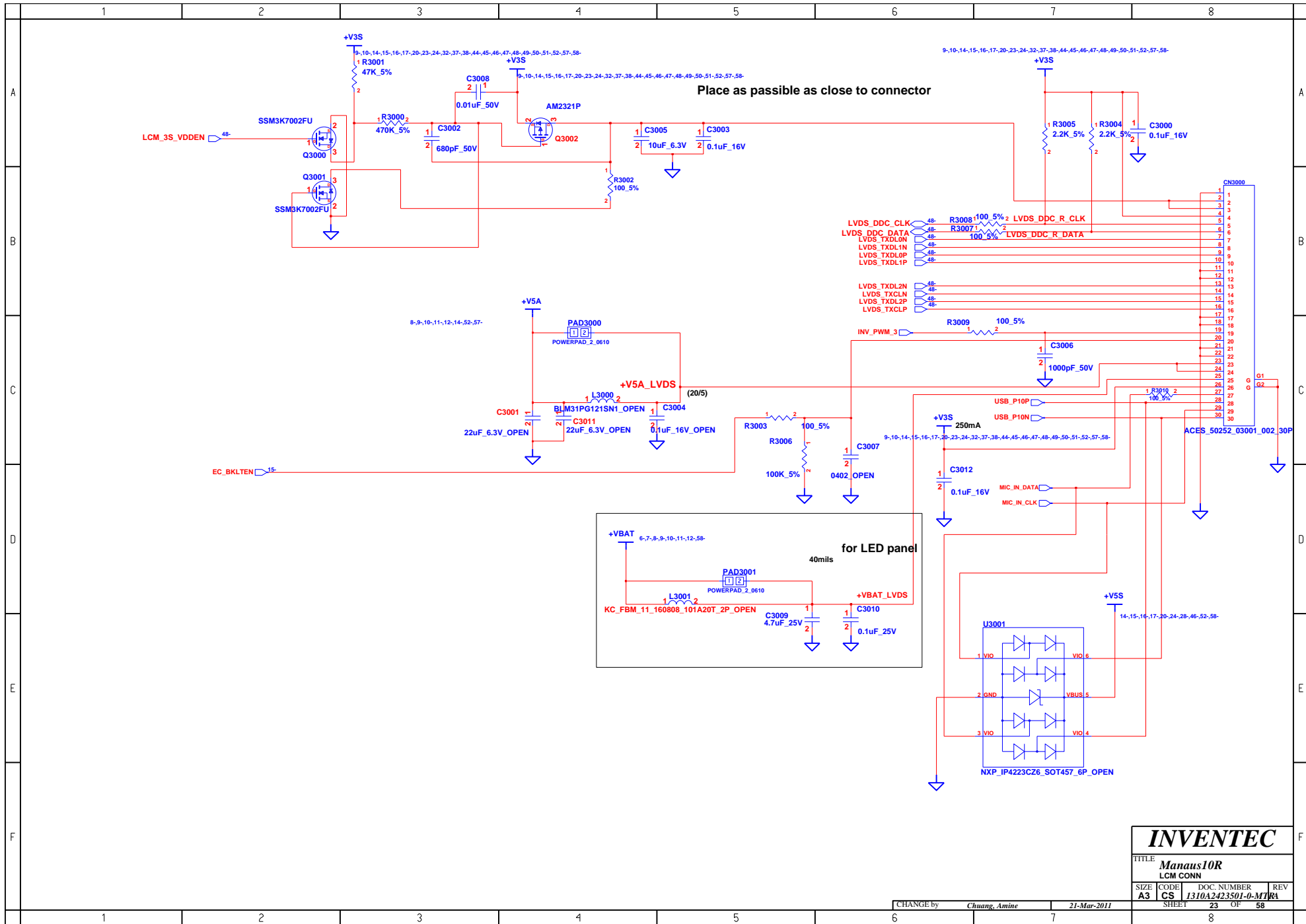
AUDIO JACKS

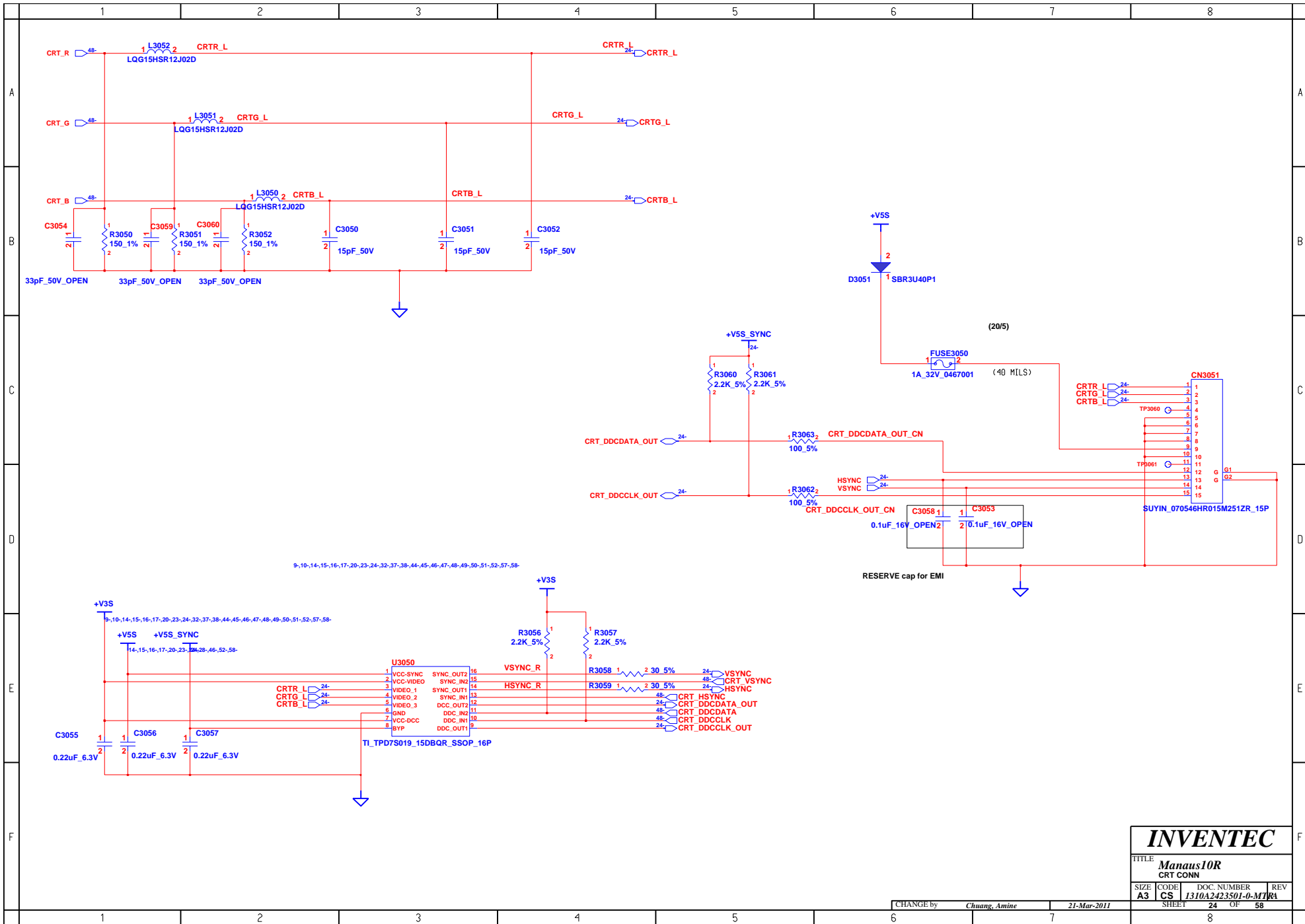


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AUDIO JACK & INTERNAL SPEAKER			
SIZE A3	CODE CS	DOC NUMBER 1310A2423501-0-M1	REV 1
CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
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SIZE	CODE	DOC. NUMBER	REV
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CHANGED by Chuang, Amine			
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INVENTEC			
TITLE Manaus10R CRT CONN			
SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-MT	REV KA
CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
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INVENTEC

TITLE **Manaus10R**

SIZE	CODE	DOC. NUMBER	REV
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SKIP

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TITLE Manaus10R			
SIZE	CODE	DOC. NUMBER	REV
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CHANGE by Chuang, Amine		21-Mar-2011	
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SKIP

INVENTEC

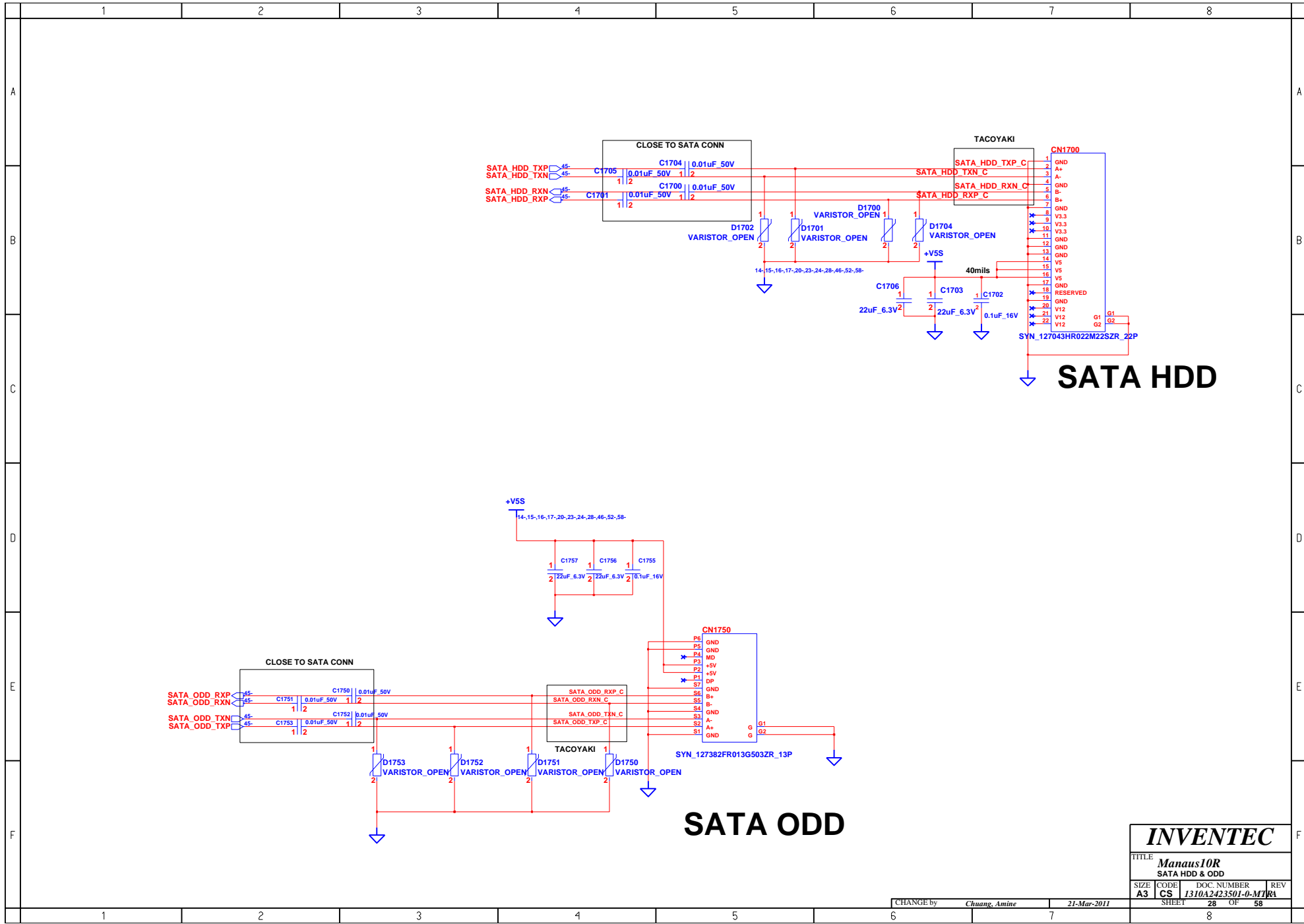
TITLE
Manaus10R

SIZE	CODE	DOC. NUMBER	REV
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SHEET 27 OF 58

CHANGE by *Chuang, Amine* 21-Mar-2011

	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	



SATA HDD

SATA ODD

INVENTEC

TITLE			
Manaus10R			
SATA HDD & ODD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
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Chuang, Amine		28	58

21-Mar-2011

SKIP

INVENTEC			
TITLE Manaus10R			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-MT	RA
CHANGE by		21-Mar-2011	
CHANGED by Chuang, Amine			
SHEET		29 OF 58	

	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	

SKIP

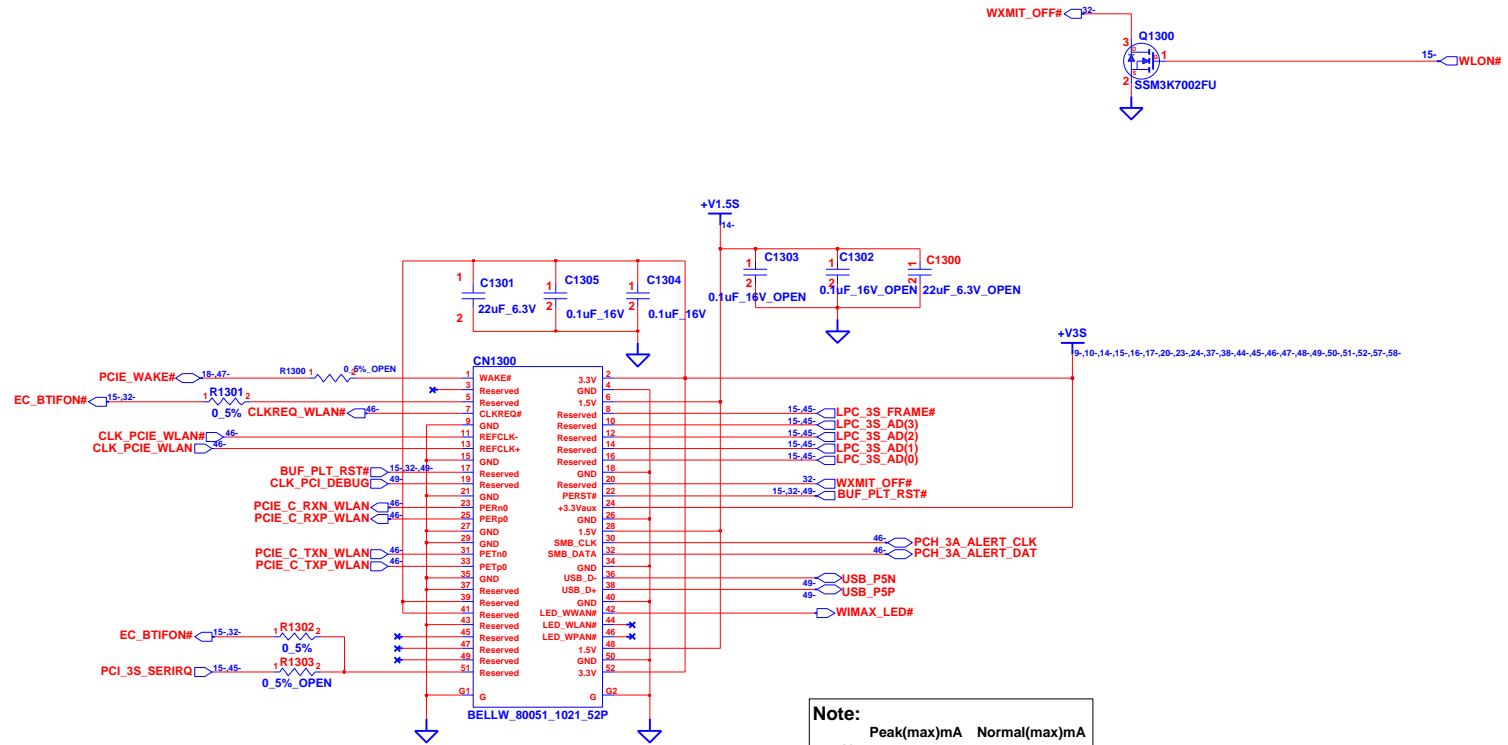
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6		7	
SHEET		OF	
30		58	

	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	

SKIP

INVENTEC			
TITLE Manaus10R			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-MT	RA
CHANGE by		21-Mar-2011	
CHANGED BY Chuang, Amine		DATE	
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Wireless & Debug card



MINI CARD 1

INVENTEC

TITLE			
Manaus10R			
WLAN/DEBUG CARD			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
SHEET		32	OF 58

CHANGE by Chuang, Amine 21-Mar-2011

8

SKIP

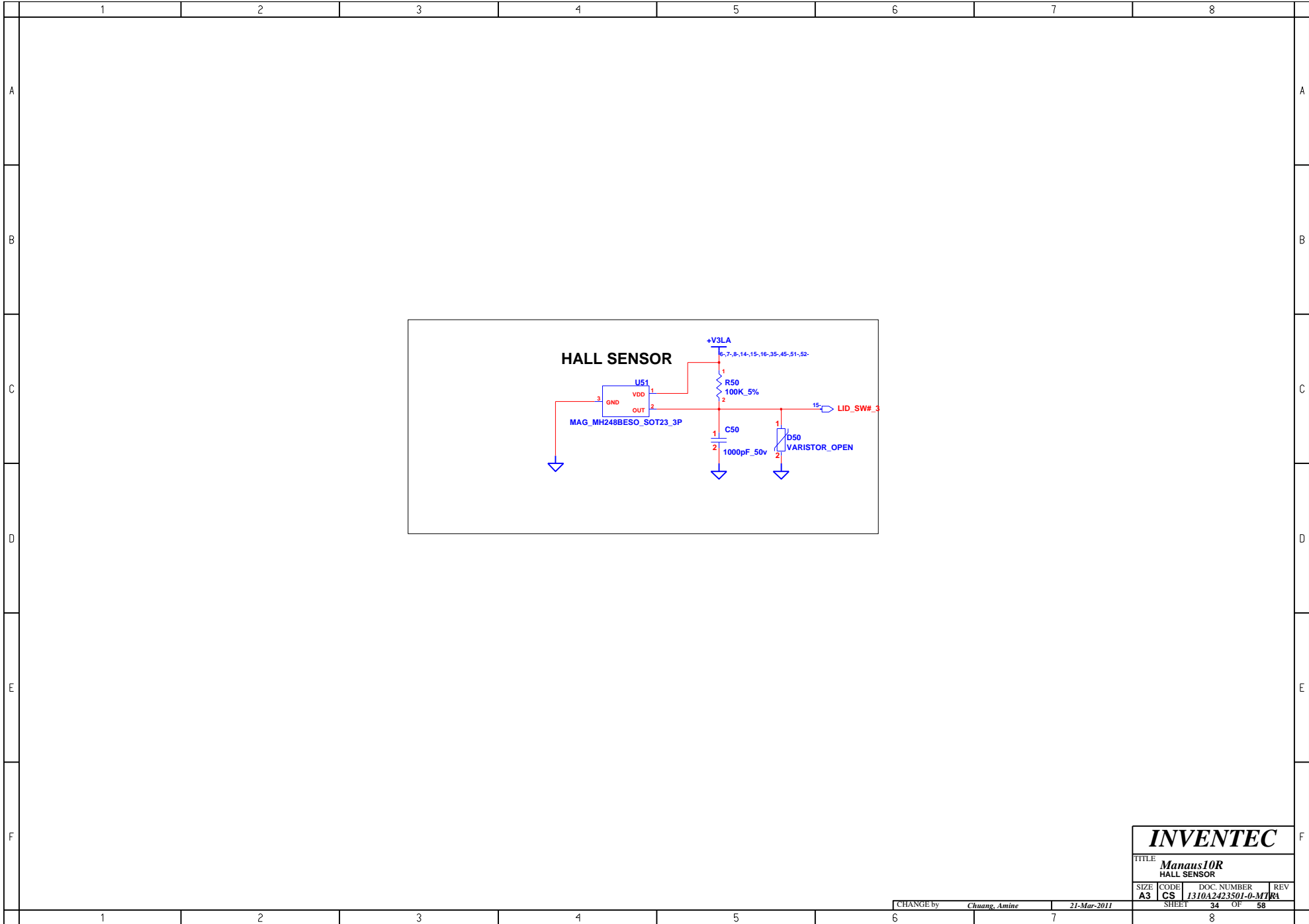
INVENTEC

TITLE
Manaus10R

SIZE	CODE	DOC. NUMBER	REV
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CHANGE by *Chuang, Amine* 21-Mar-2011

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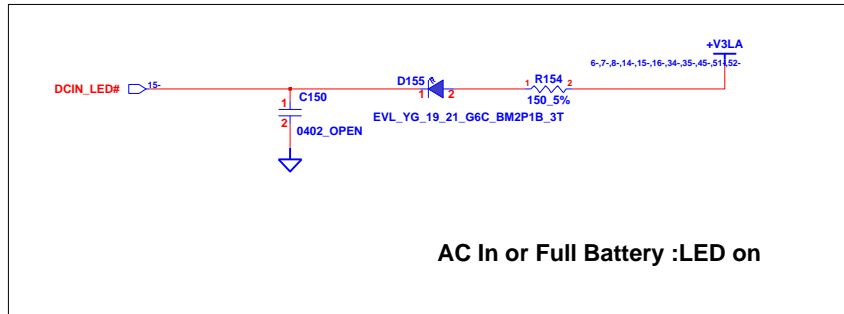
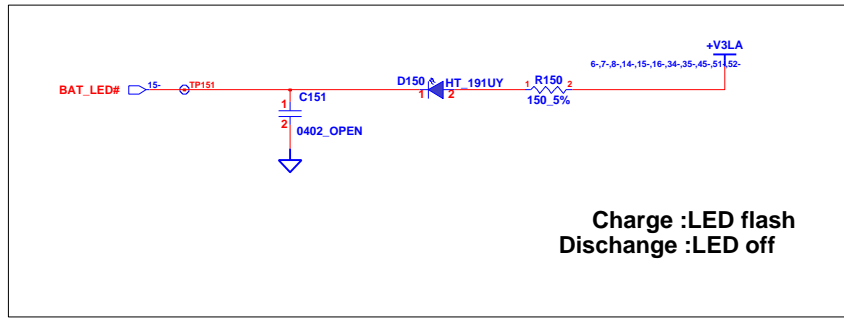
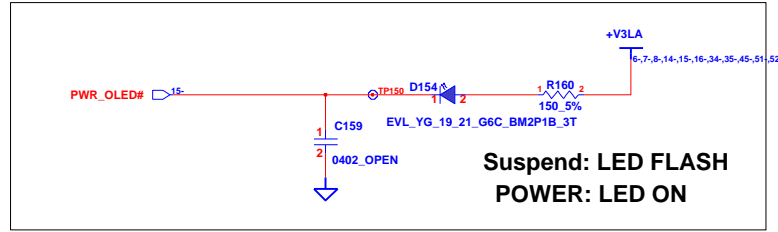
INVENTEC

TITLE
Manaus10R
HALL SENSOR

SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-MT	REV KA
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CHANGE by *Chuang, Amine* 21-Mar-2011

SHEET 34 OF 58



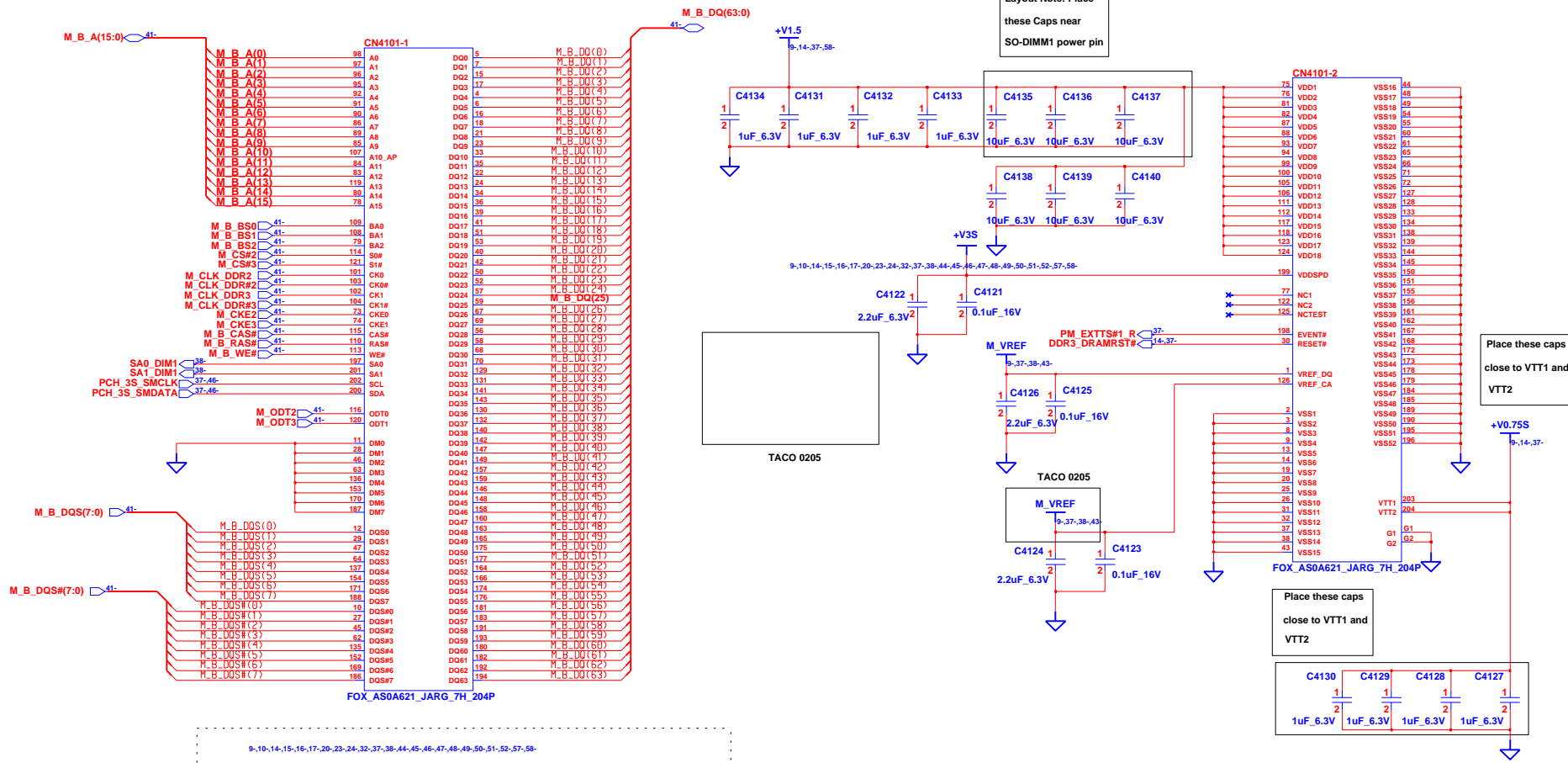
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LED			
SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-MT	REV KA
CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
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SKIP

INVENTEC			
TITLE Manaus10R			
SIZE	CODE	DOC. NUMBER	REV
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CHANGE by Chuang, Amine		21-Mar-2011	
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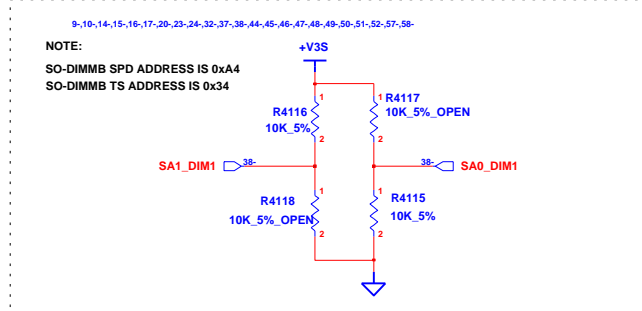
CHB

Layout Note: Place these Caps near SO-DIMM1 power pin

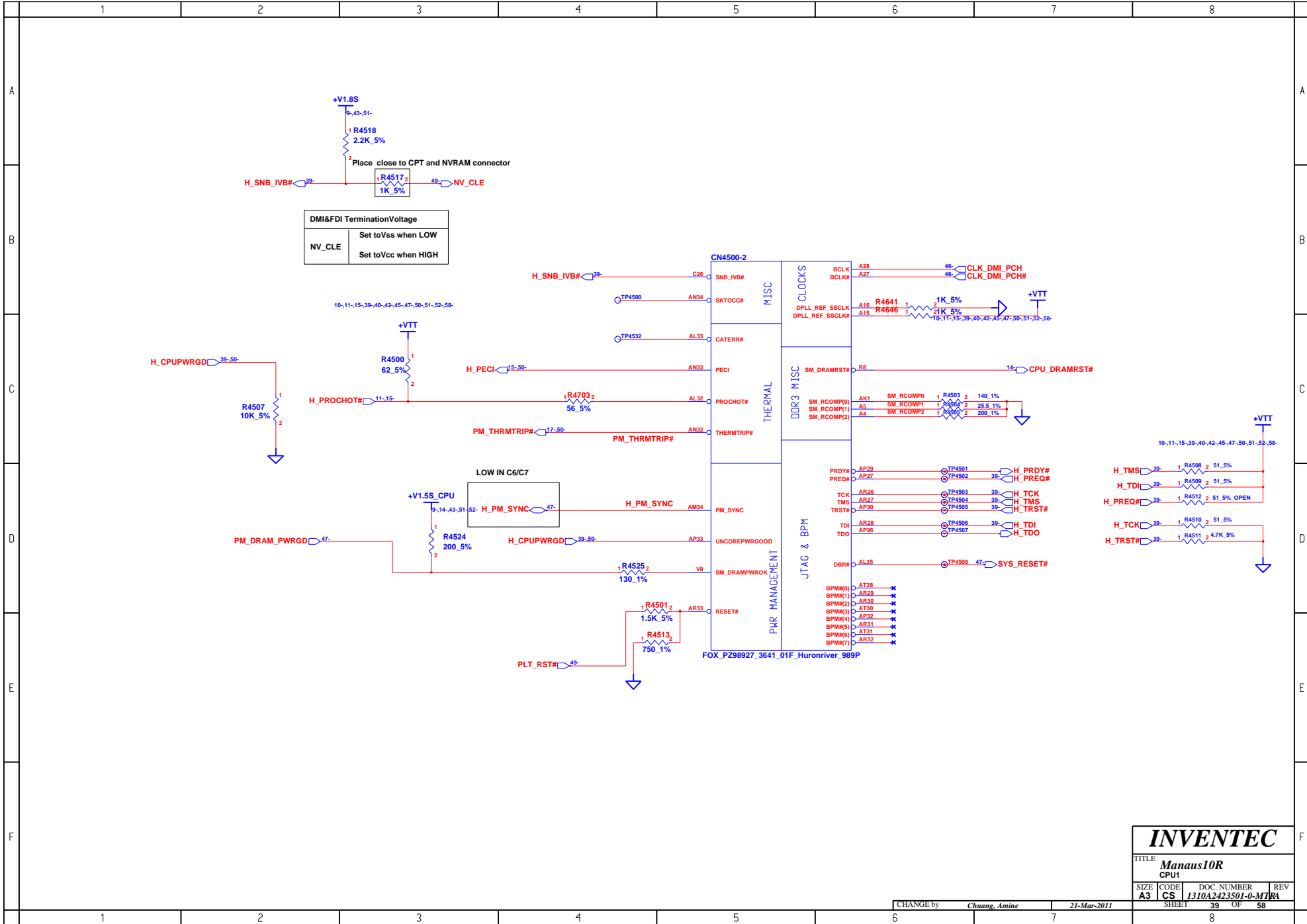


Place these caps close to VTT1 and VTT2

Place these caps close to VTT1 and VTT2

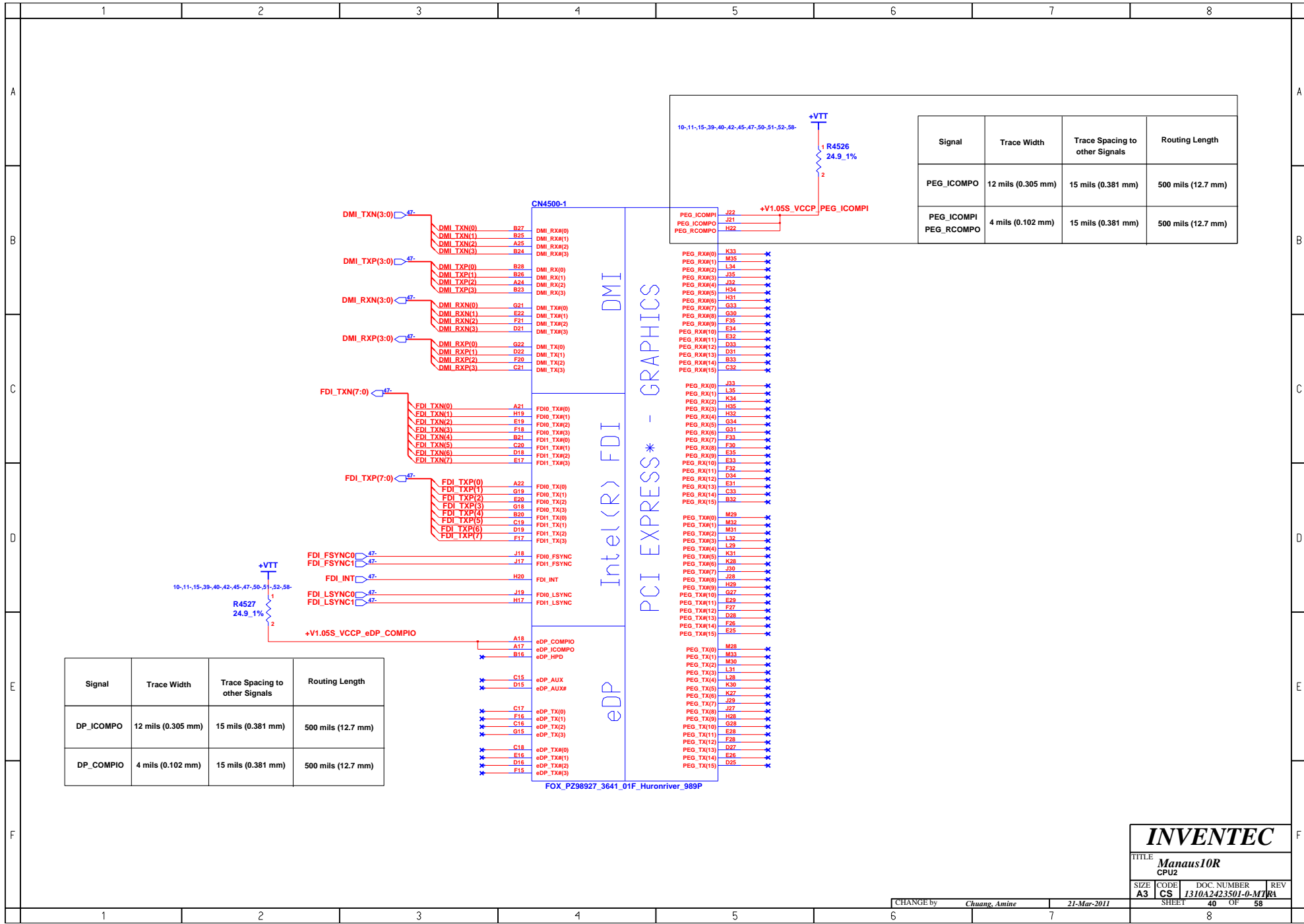


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TITLE: Manaus10R			
DDR3 DIMM1			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
CHANGE by		21-Mar-2011	REV
Chuang, Amine			38 OF 58
SHEET			



DMI&FDI TerminationVoltage	
NV_CLE	Set to Vss when LOW
	Set to Vcc when HIGH

INVENTEC			
TITLE Mana10R CPU1			
SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-MJ	REV KA
CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
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Signal	Trace Width	Trace Spacing to other Signals	Routing Length
PEG_ICOMPO	12 mils (0.305 mm)	15 mils (0.381 mm)	500 mils (12.7 mm)
PEG_ICOMPI PEG_RCOMP	4 mils (0.102 mm)	15 mils (0.381 mm)	500 mils (12.7 mm)

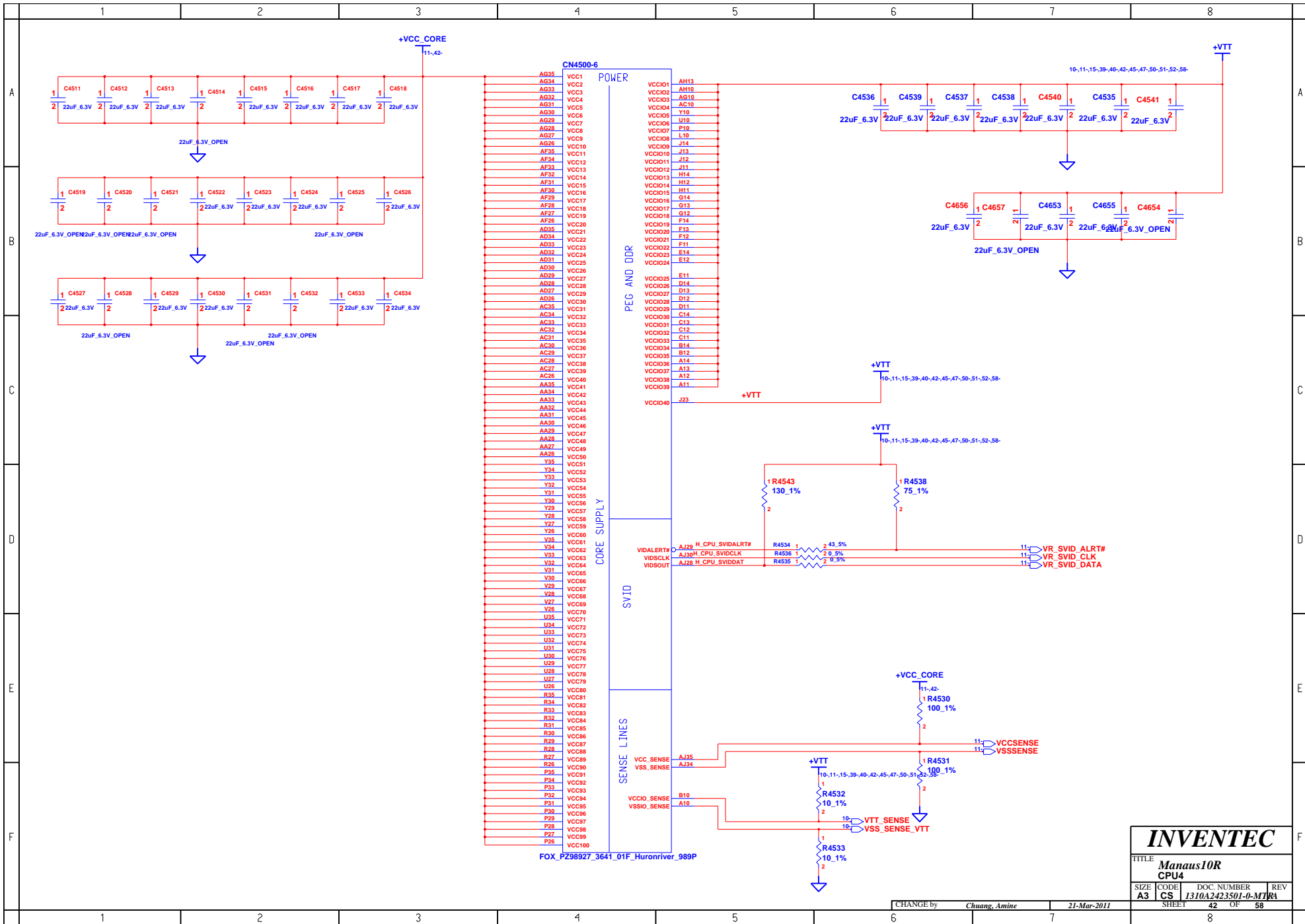
Signal	Trace Width	Trace Spacing to other Signals	Routing Length
DP_ICOMPO	12 mils (0.305 mm)	15 mils (0.381 mm)	500 mils (12.7 mm)
DP_COMPIO	4 mils (0.102 mm)	15 mils (0.381 mm)	500 mils (12.7 mm)

- PEG_RX#(0) -K33 *
- PEG_RX#(1) -M33 *
- PEG_RX#(2) -L34 *
- PEG_RX#(3) -J35 *
- PEG_RX#(4) -H32 *
- PEG_RX#(5) -H34 *
- PEG_RX#(6) -H31 *
- PEG_RX#(7) -G33 *
- PEG_RX#(8) -G30 *
- PEG_RX#(9) -F35 *
- PEG_RX#(10) -E34 *
- PEG_RX#(11) -E32 *
- PEG_RX#(12) -D33 *
- PEG_RX#(13) -D31 *
- PEG_RX#(14) -B33 *
- PEG_RX#(15) -C32 *
- PEG_RX(0) -J33 *
- PEG_RX(1) -L36 *
- PEG_RX(2) -H35 *
- PEG_RX(3) -H32 *
- PEG_RX(4) -H32 *
- PEG_RX(5) -G34 *
- PEG_RX(6) -G33 *
- PEG_RX(7) -F33 *
- PEG_RX(8) -F30 *
- PEG_RX(9) -E33 *
- PEG_RX(10) -E33 *
- PEG_RX(11) -F32 *
- PEG_RX(12) -D34 *
- PEG_RX(13) -E31 *
- PEG_RX(14) -C33 *
- PEG_RX(15) -B32 *
- PEG_TX#(0) -M29 *
- PEG_TX#(1) -M32 *
- PEG_TX#(2) -M31 *
- PEG_TX#(3) -L32 *
- PEG_TX#(4) -K31 *
- PEG_TX#(5) -L29 *
- PEG_TX#(6) -K28 *
- PEG_TX#(7) -J30 *
- PEG_TX#(8) -J28 *
- PEG_TX#(9) -H29 *
- PEG_TX#(10) -G27 *
- PEG_TX#(11) -E29 *
- PEG_TX#(12) -F27 *
- PEG_TX#(13) -D28 *
- PEG_TX#(14) -F26 *
- PEG_TX#(15) -E25 *
- PEG_TX(0) -M28 *
- PEG_TX(1) -M33 *
- PEG_TX(2) -M30 *
- PEG_TX(3) -L31 *
- PEG_TX(4) -L28 *
- PEG_TX(5) -K30 *
- PEG_TX(6) -K27 *
- PEG_TX(7) -J25 *
- PEG_TX(8) -J27 *
- PEG_TX(9) -H28 *
- PEG_TX(10) -G28 *
- PEG_TX(11) -E28 *
- PEG_TX(12) -F28 *
- PEG_TX(13) -D27 *
- PEG_TX(14) -E26 *
- PEG_TX(15) -D25 *

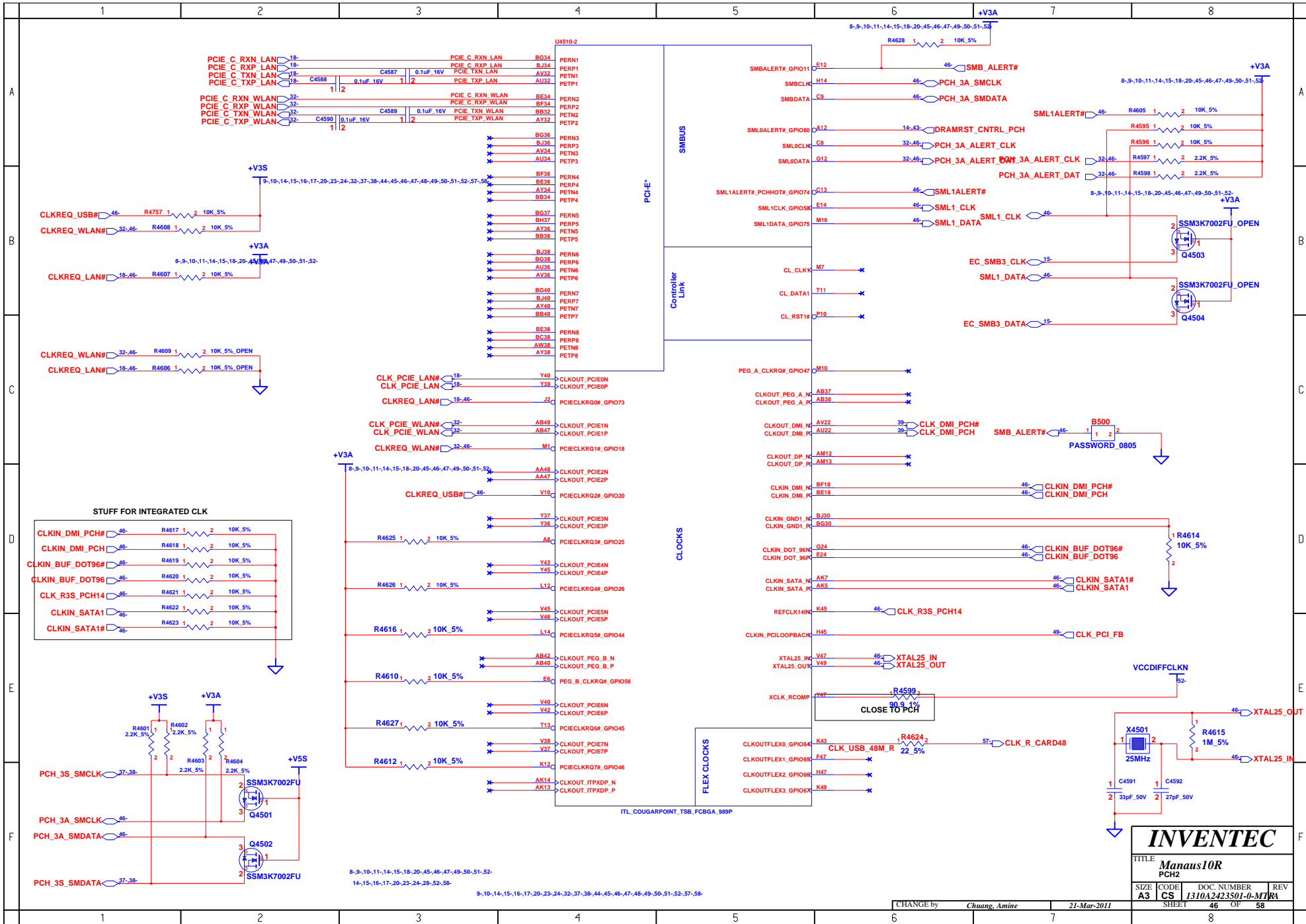
Intel(R) FDI PCI EXPRESS* - GRAPHICS
 eDP

FOX_PZ98927_3641_01F_Huronriver_989P

INVENTEC			
TITLE Manaus10R CPUz			
SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-M1	REV KA
CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
SHEET 40		OF 58	

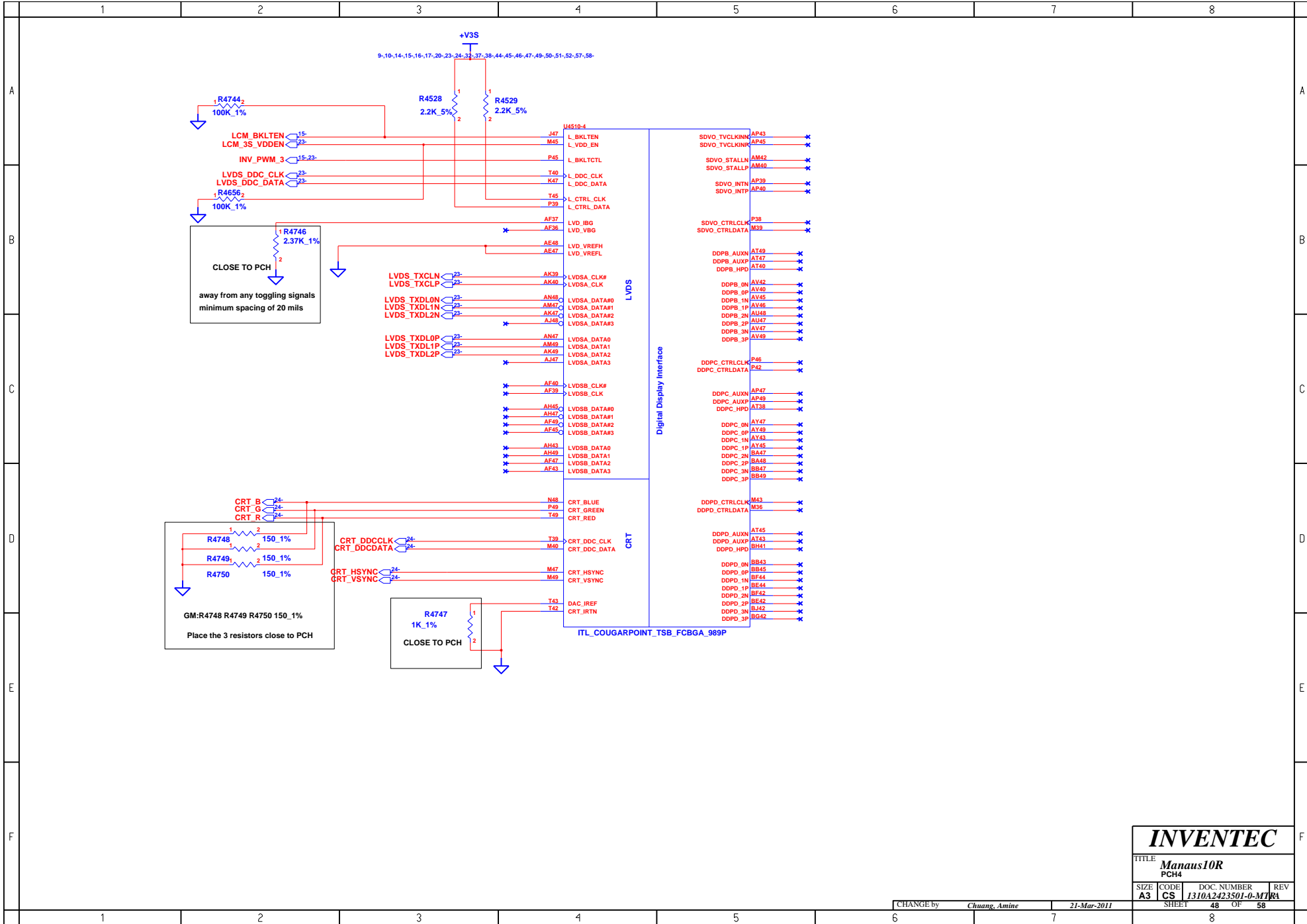


INVENTEC			
TITLE: Manaus10R CPU4			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A2423501-0-MTR	REV: 1
CHANGE by: Chuang, Amine		21-Mar-2011	
SHEET: 42		OF: 58	



INVENTEC			
TITLE Manaus10R PCH2			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
		SHEET 46	OF 58

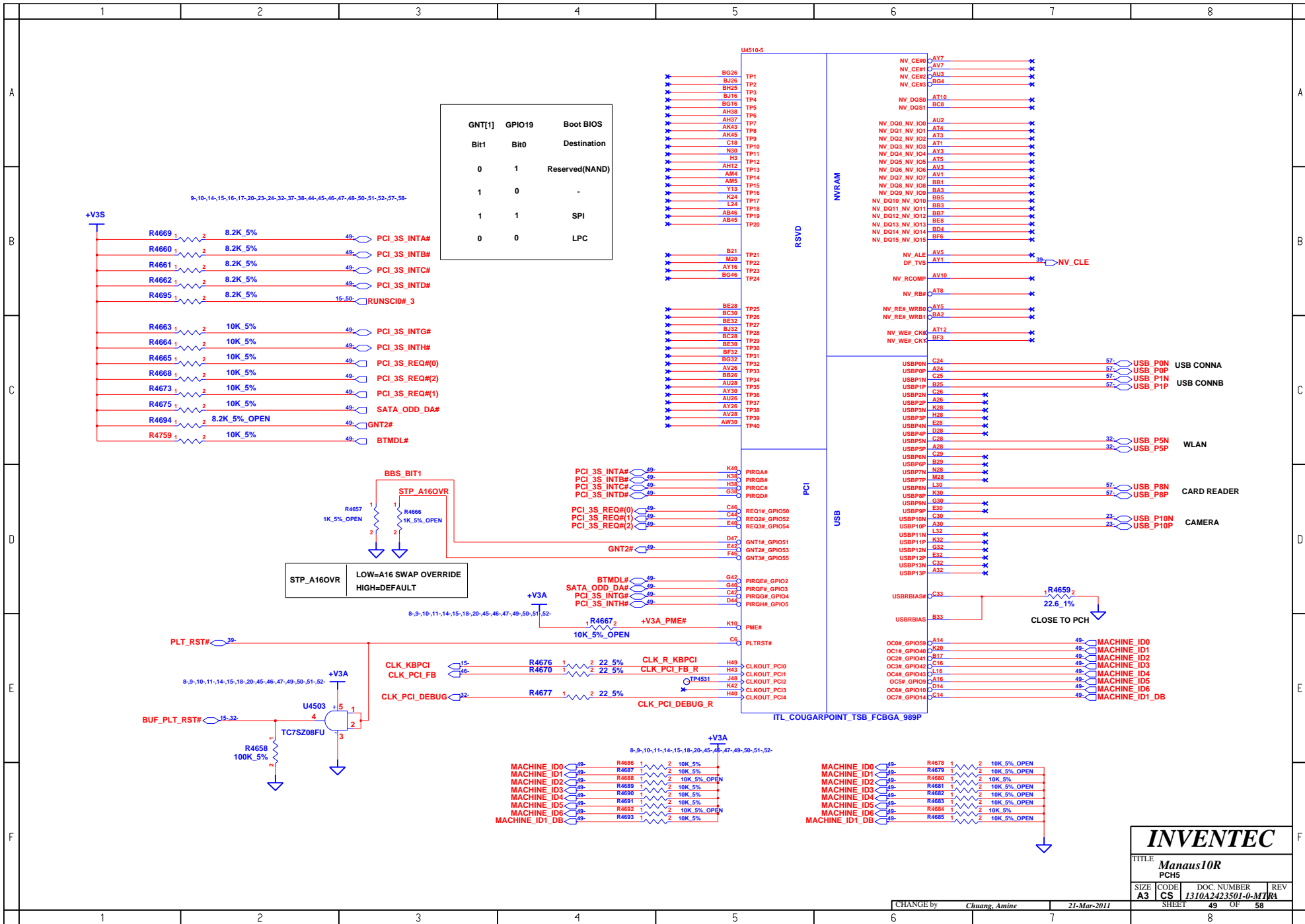
CHANGE by *Chuang, Amine* 21-Mar-2011



INVENTEC

TITLE			
Manaus10R			
PCH4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-MT	KA
SHEET		48	OF 58

CHANGE by *Chuang, Amine* 21-Mar-2011



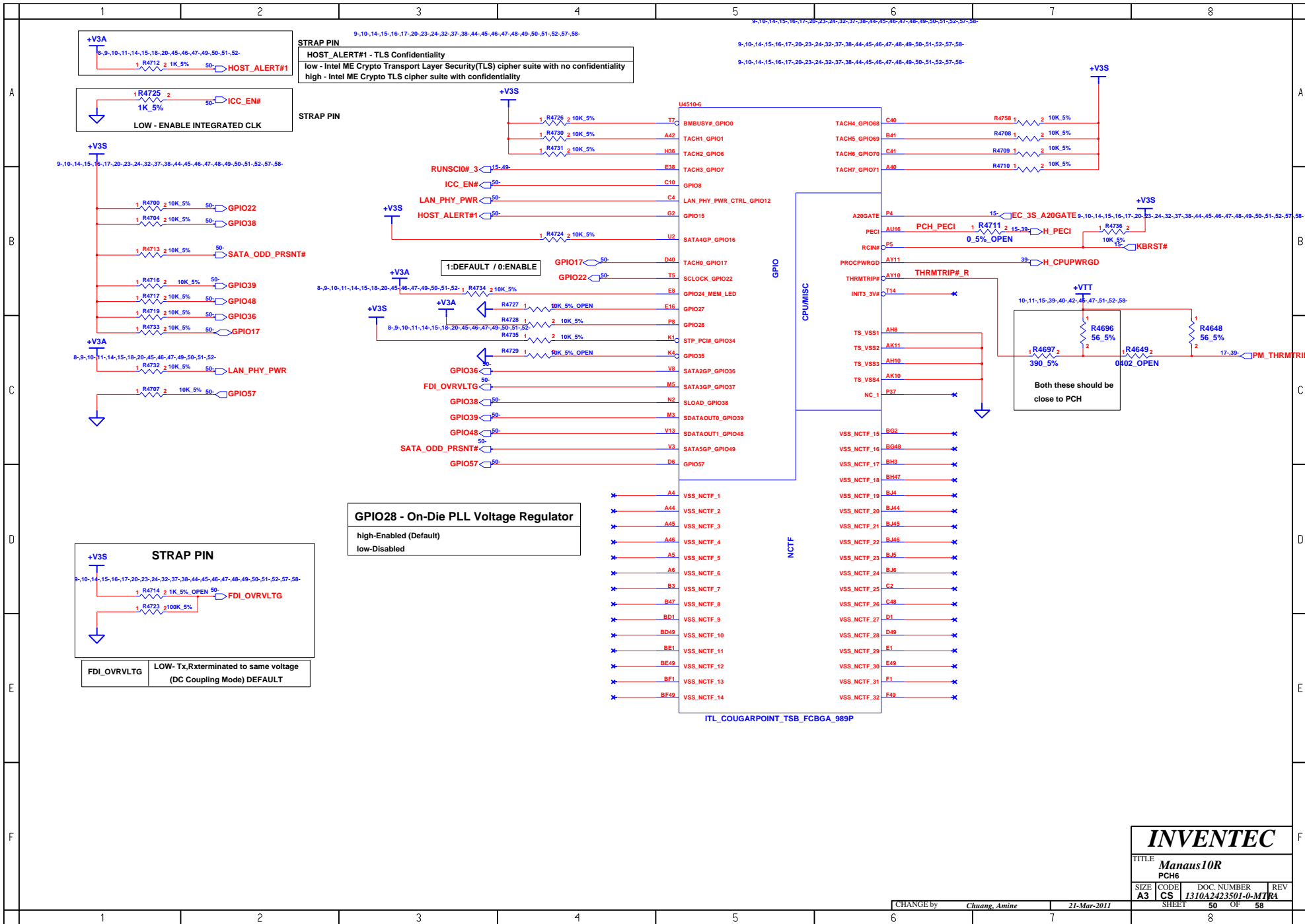
INVENTEC

TITLE: **Manaus10R PCH5**

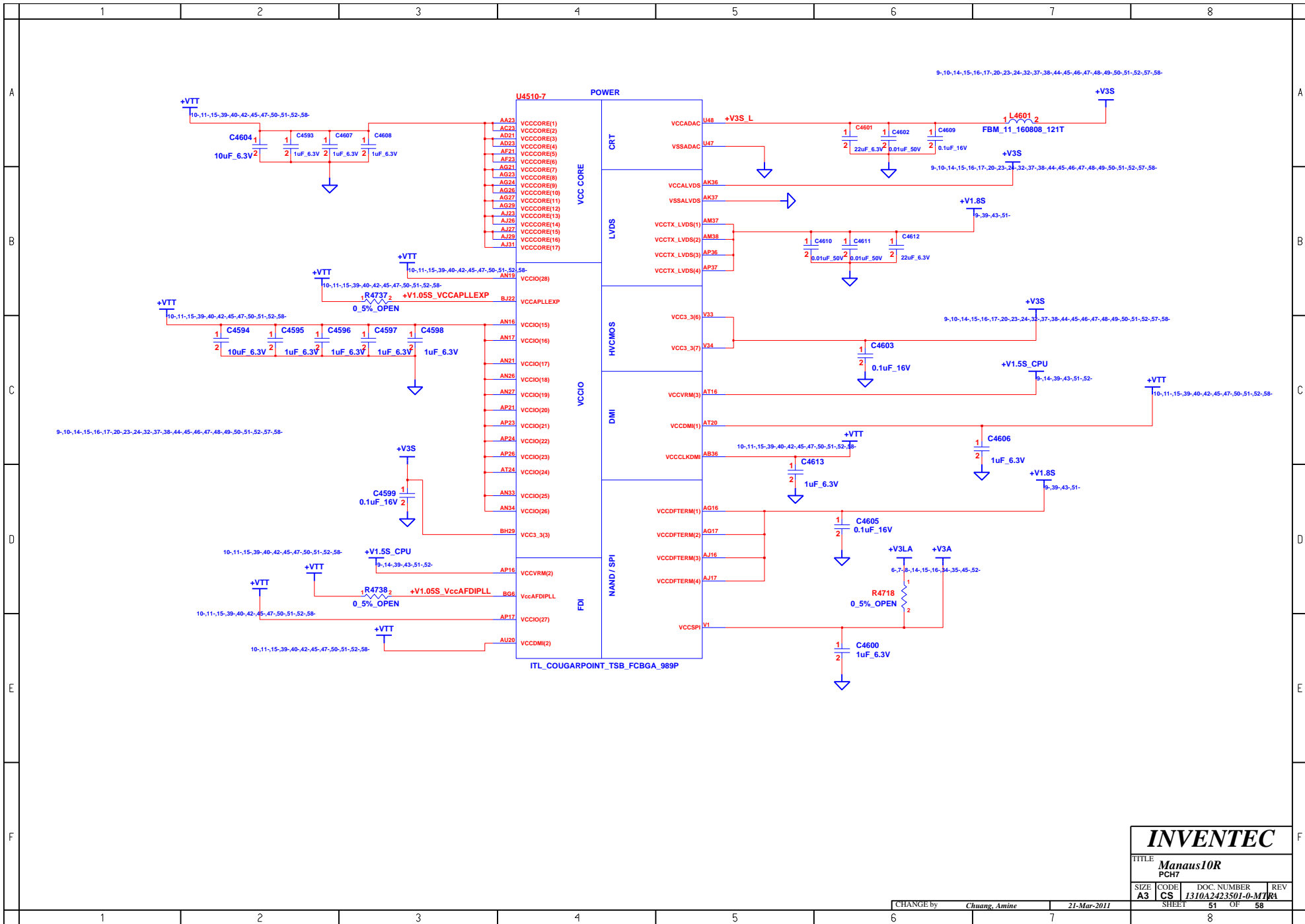
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-MT	KA

CHANGE by: *Chuang, Amine* 21-Mar-2011

SHEET 49 OF 58



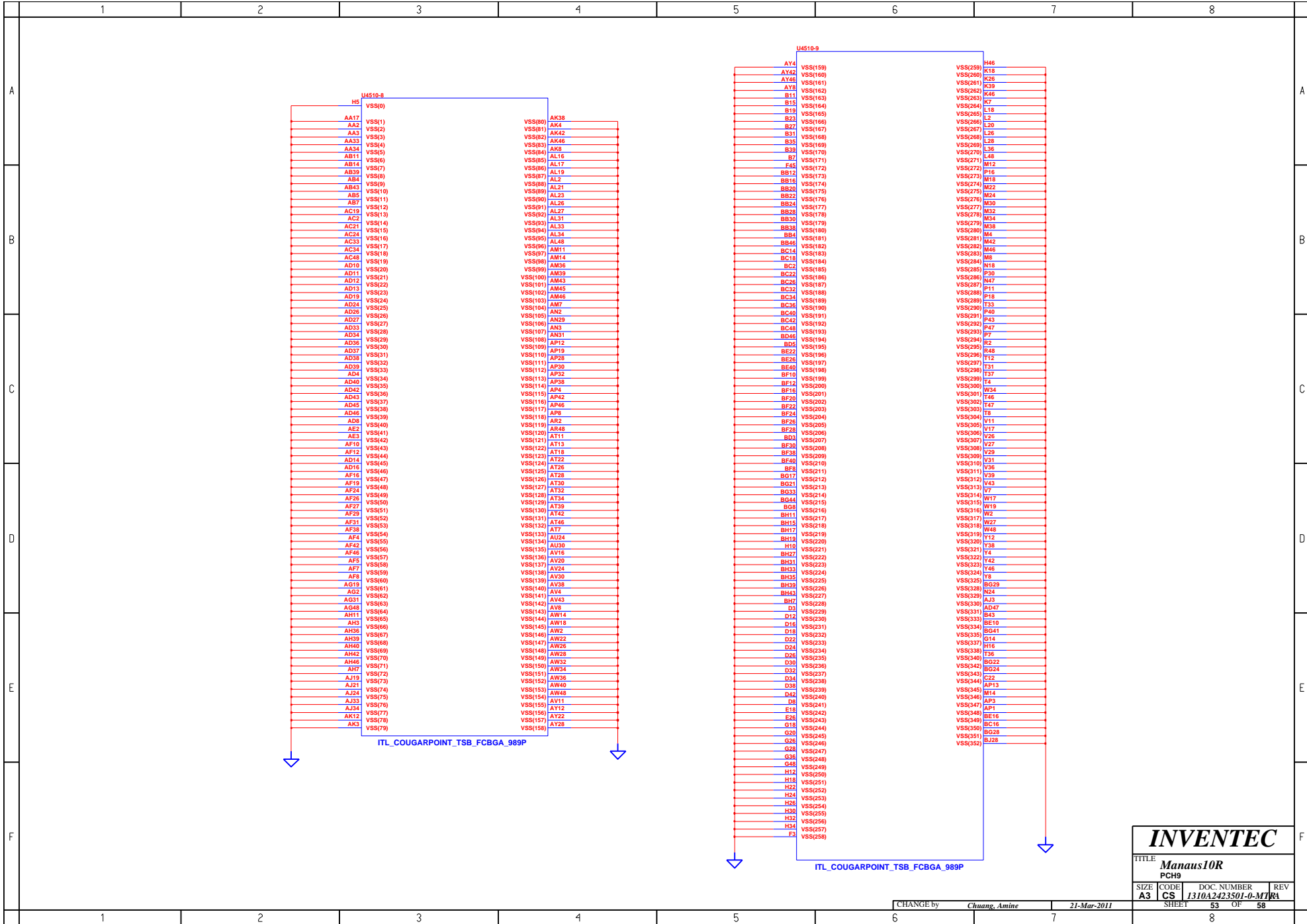
INVENTEC			
TITLE Manaus10R			
PCH6			
SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-MTR	REV RA
CHANGE by <i>Chuang, Amine</i>		21-Mar-2011	
SHEET 50		OF 58	



INVENTEC

TITLE			
Manaus10R			
PCH7			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-MTR	
CHANGE by		SHEET	
Chuang, Amine		51 OF 58	

21-Mar-2011



INVENTEC

TITLE **Manaus10R**

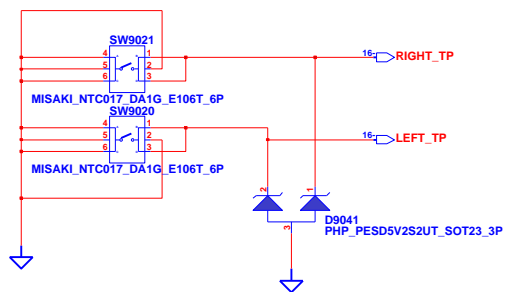
PCH9

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-M1	KA

SHEET 53 OF 58

CHANGE by *Chuang, Amine* 21-Mar-2011

PICK BUTTON



INVENTEC			
TITLE Manaus10R			
PICK BUTTON			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-MJ	KA
CHANGE by		21-Mar-2011	
Chuang, Amine			
SHEET		54	OF 58

CHANGE by *Chuang, Amine* 21-Mar-2011

SHEET 54 OF 58

SKIP

INVENTEC

TITLE
Manaus10R

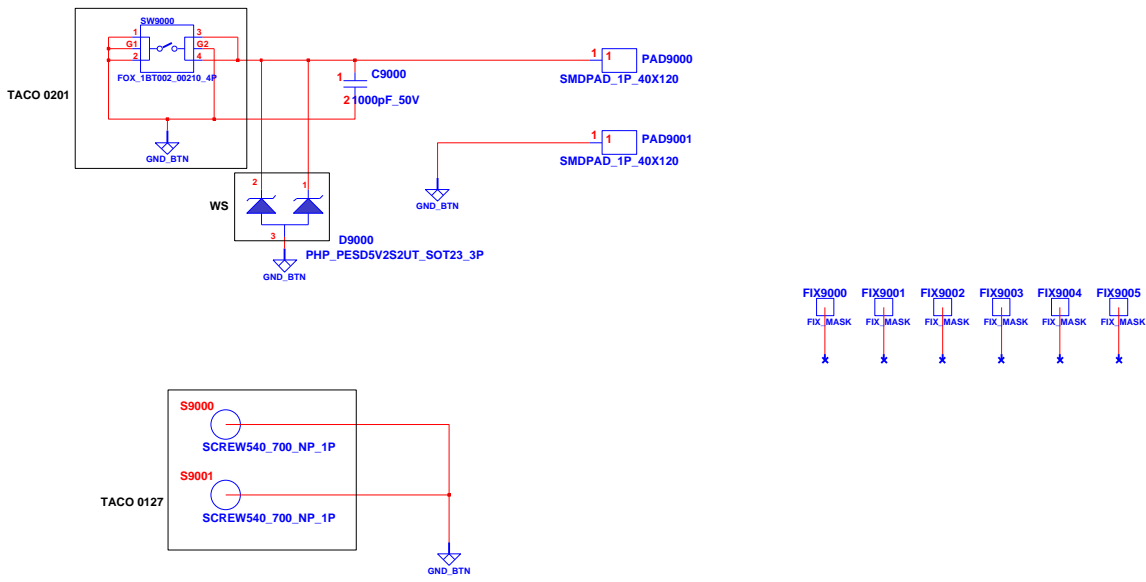
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-MT	RA

SHEET 55 OF 58

CHANGE by *Chuang, Amine* 21-Mar-2011

	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	

POWER BUTTON

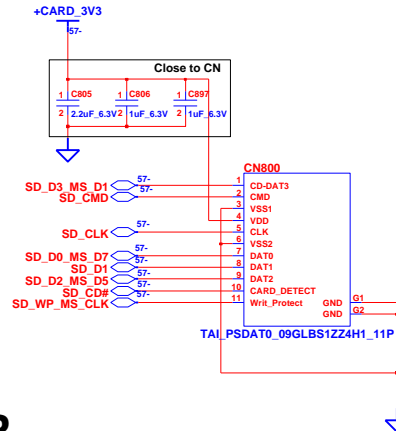
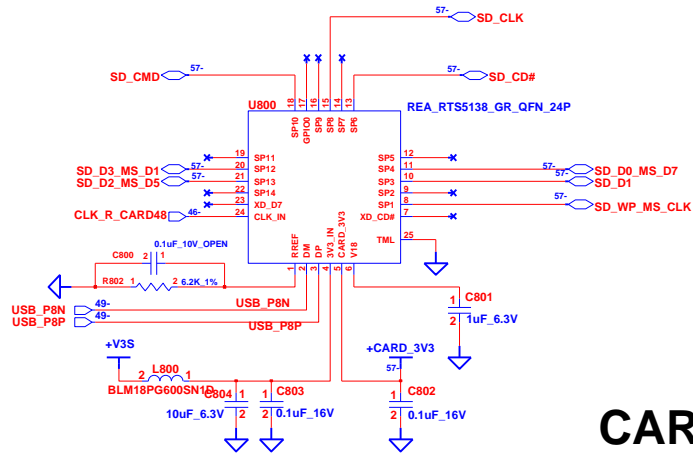
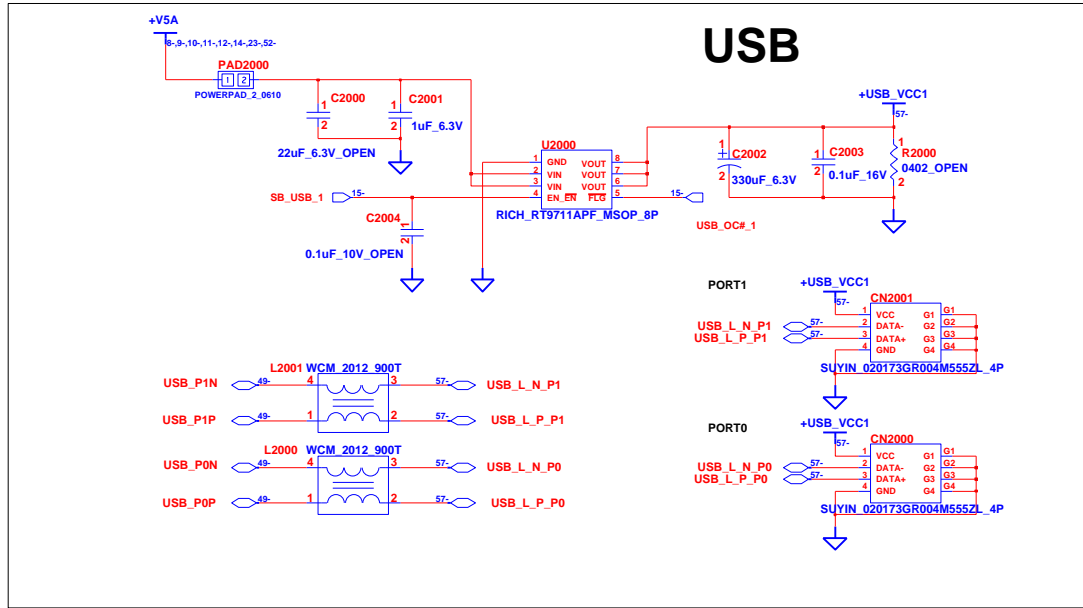


INVENTEC

TITLE			
Manaus10R POWER BUTTON BOARD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
SHEET		56	OF 58

CHANGE by *Chuang, Amine* 21-Mar-2011

CARD READER & USB BOARD

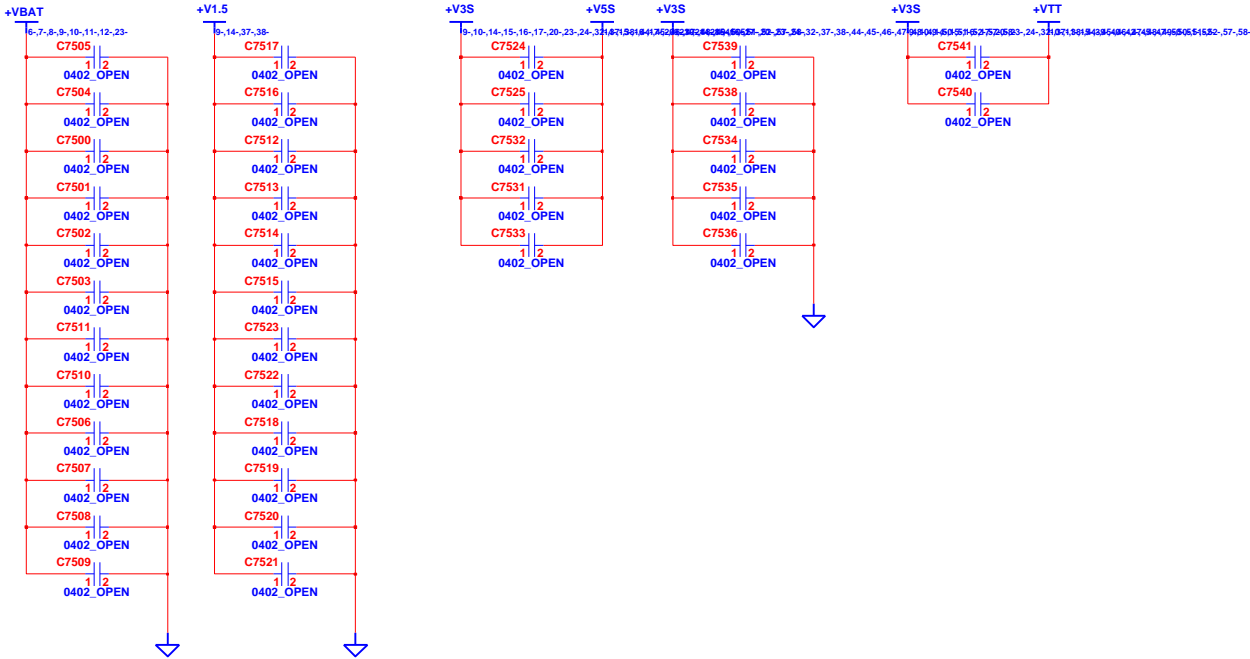


CARD READER

INVENTEC

TITLE			
Manaus10R			
CARDREADER & USB			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2423501-0-M1	KA
SHEET		OF	
57		58	

EMI



INVENTEC

TITLE
Manaus10R
EMI

SIZE A3	CODE CS	DOC. NUMBER 1310A2423501-0-MT	REV 1
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CHANGE by *Chuang, Amine* 21-Mar-2011

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