

VB 1.0

MV_BUILD

2007.05.22

DATE	CHANGE NO.	REV

DRAWER	EE	DATE	POWER	DATE	INVENTEC			
DESIGN								
CHECK								
RESPONSIBLE								
TITLE					VB10			
SIZE =	3	VER :			SIZE	CODE	DOC. NUMBER	REV
FILE NAME :	XXXX-XXXXXX-XX				A3	CS	PC3601	A04
PN	XXXXXXXXXXXX				SHEET	1	OF	64
							8	

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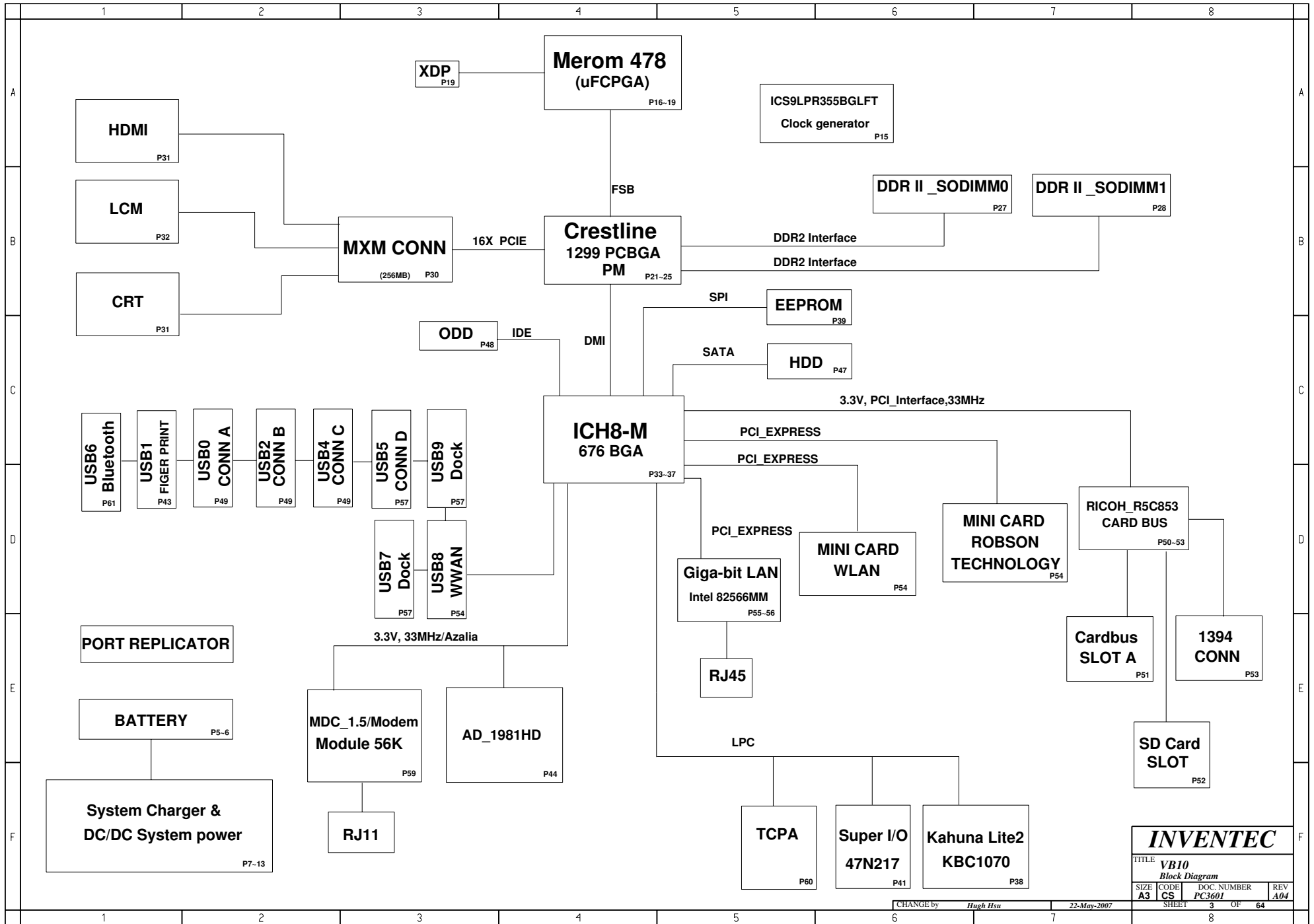
<p>PAGE</p> <p>5- DC& BATTERY CHARGER</p> <p>6- SELECT & BATTERY CONN</p> <p>7- SYSTEM POWER(3V/5V)</p> <p>8- SYSTEM POWER(+V1.8/+V1.25M)</p> <p>9- BLANK</p> <p>10- SYSTEM POWER(+V1.5S/+V1.05M/+VCCP)</p> <p>11- CPU POWER(VCC CORE)</p> <p>12- DDR TERMINATION VOLTAGE</p> <p>13- POWER(SLEEP)</p> <p>14- POWER(SEQUENCE)</p> <p>15- CLOCK GENERATOR</p> <p>16- MEROM-1</p> <p>17- MEROM-2</p> <p>18- MEROM-3</p> <p>19- MEROM-4</p> <p>20- THERMAL&FAN CONTROLLER</p> <p>21- CRESTKINE-1</p> <p>22- CRESTLINE-2</p> <p>23- CRESTLINE-3</p> <p>24- CRESTLINE-4</p> <p>25- CRESTLINE-5</p> <p>25- CRESTLINE-6</p> <p>27- DDR2-DIMM0</p> <p>28- DDR2-DIMM1</p> <p>29- DDR2-DAMPING</p>	<p>PAGE</p> <p>30- VGA CARD CONN</p> <p>31- CRT& HDMI CONN</p> <p>32- LCD CONN</p> <p>33- ICH8-1</p> <p>34- ICH8-2</p> <p>35- ICH8-3</p> <p>36- ICH8-4</p> <p>37- ICH8-5</p> <p>38- KBC</p> <p>39- SPI/HDD PROTECTION</p> <p>40- INT.KB/POINT DEVICES</p> <p>41- SUPER I/O</p> <p>42- BLANK</p> <p>43- FINGER PRINT CONN</p> <p>44- HDA CODEC</p> <p>45- EQ&MIC JACK</p> <p>46- AUDIO AMP&HP JACK</p> <p>47- HDD CONN</p> <p>48- ODD CONN</p> <p>49- USB CONN</p> <p>50- CARDBUS CONTROLL</p> <p>51- PC CARD SLOT</p>	<p>PAGE</p> <p>52- SD CARD CONN</p> <p>53- 1394 CONN</p> <p>54- MINICARD CONN</p> <p>55- LAN INTERFACE-1</p> <p>56- LAN RJ45 CONN</p> <p>57- DOCKING CONN</p> <p>58- SCREW</p> <p>59- MDC1.5 CONN</p> <p>60- TPM V1.2</p> <p>61- BLUETOOTH</p> <p>62- BUTTON & SWITCH & LED</p> <p>63- LED/SWITCH CONN</p> <p>64- FINGER PRINT BOARD</p> <p>65-CHANGE LIST</p>
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INVENTEC

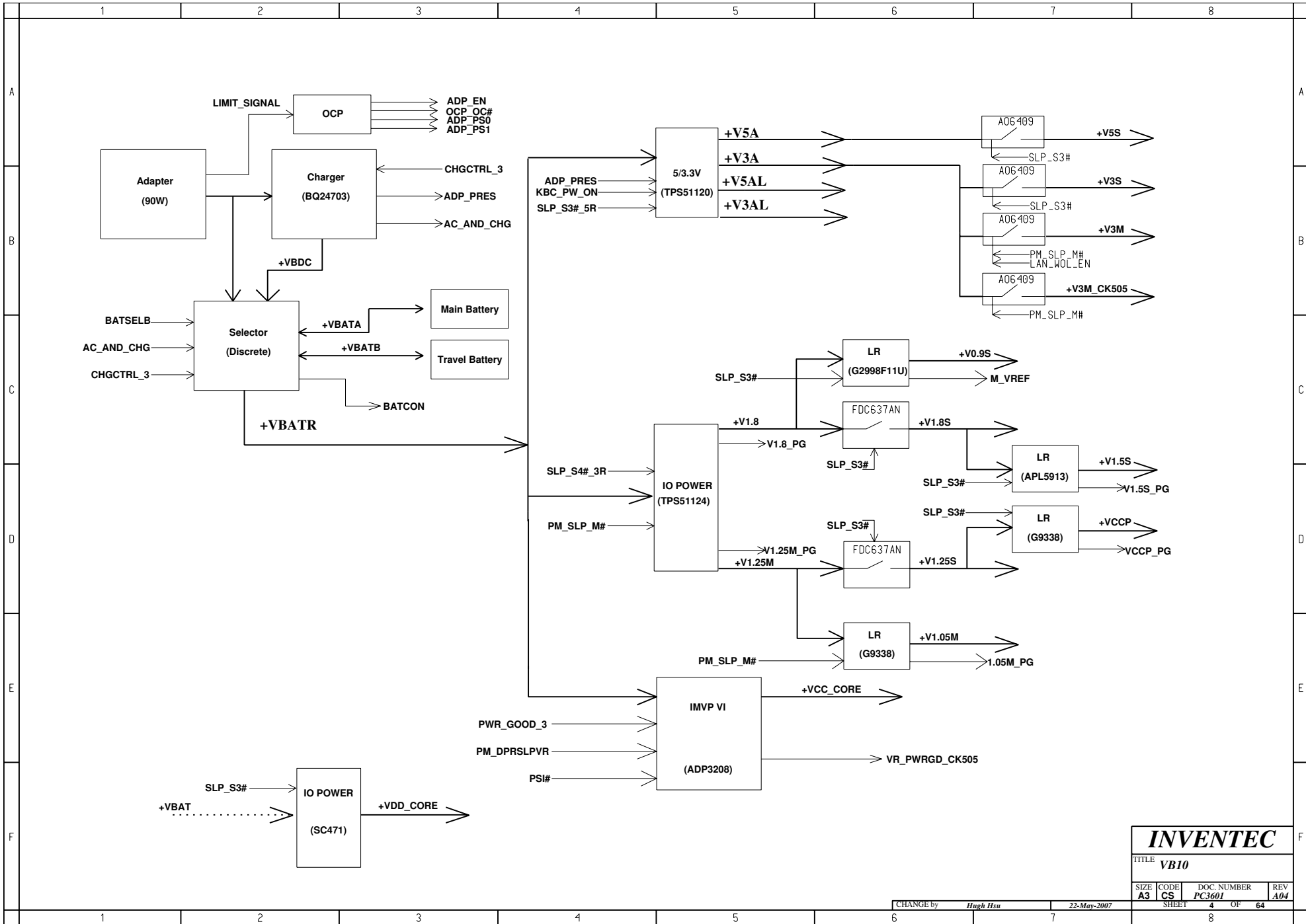
TITLE
VB10

SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
SHEET		2	OF 64

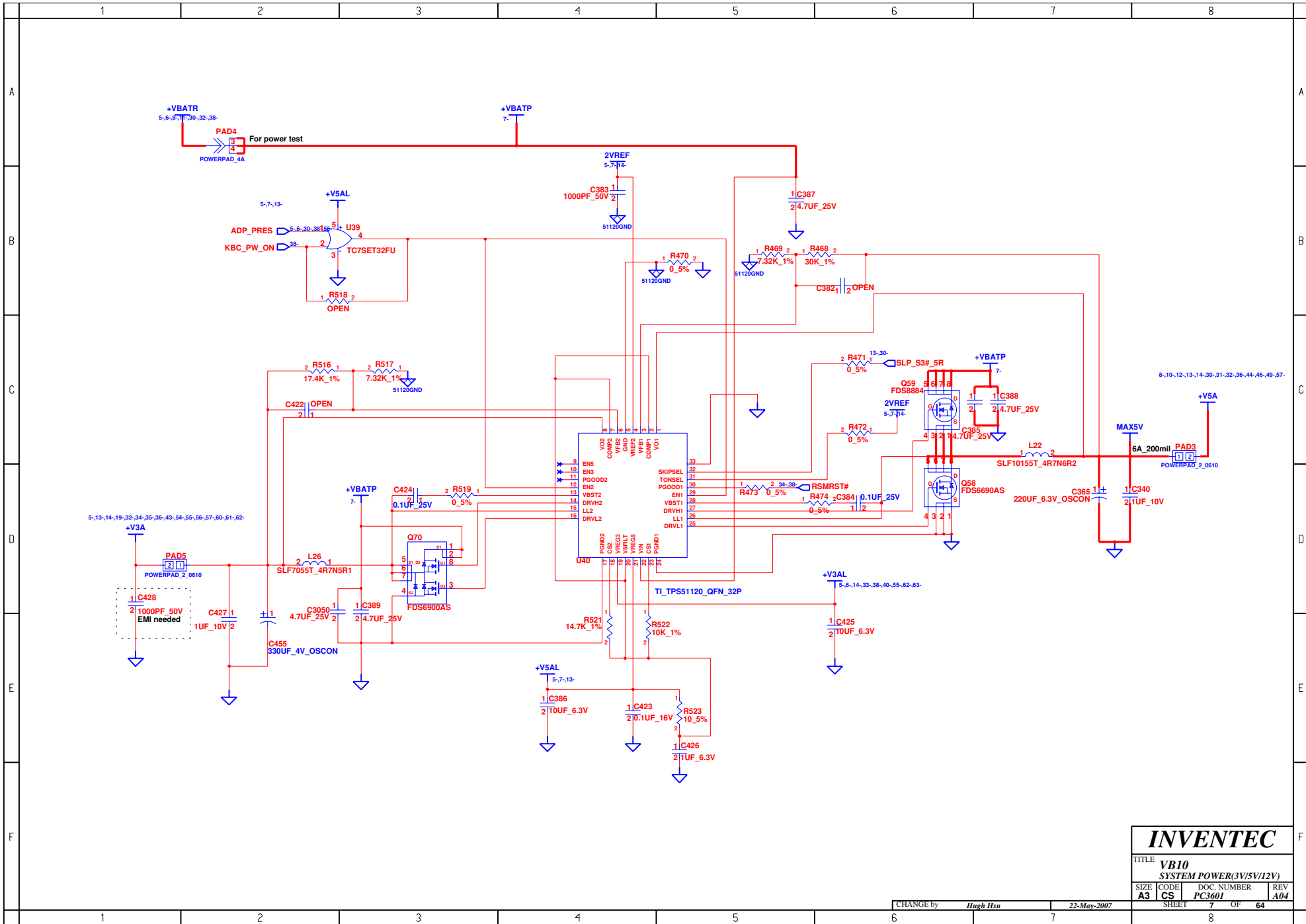
CHANGE by *Hugh Hsu* 22-May-2007



INVENTEC			
TITLE VB10			
Block Diagram			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by Hugh Hsu		22-May-2007	SHEET 3 OF 64



INVENTEC			
TITLE VB10			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 4		OF 64	

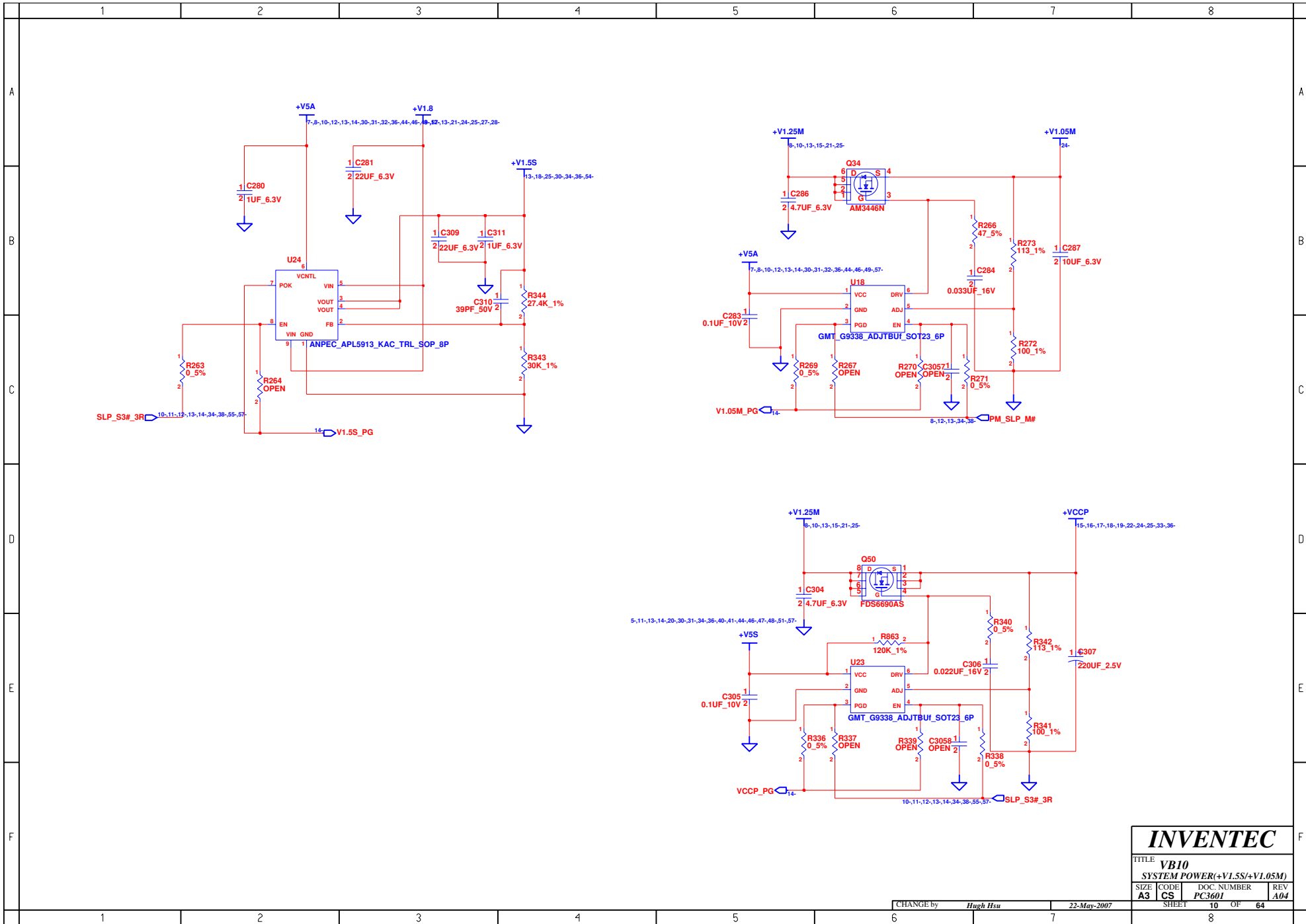


INVENTEC			
TITLE VB10 SYSTEM POWER(3V/5V/12V)			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 7		OF 64	

BLANK

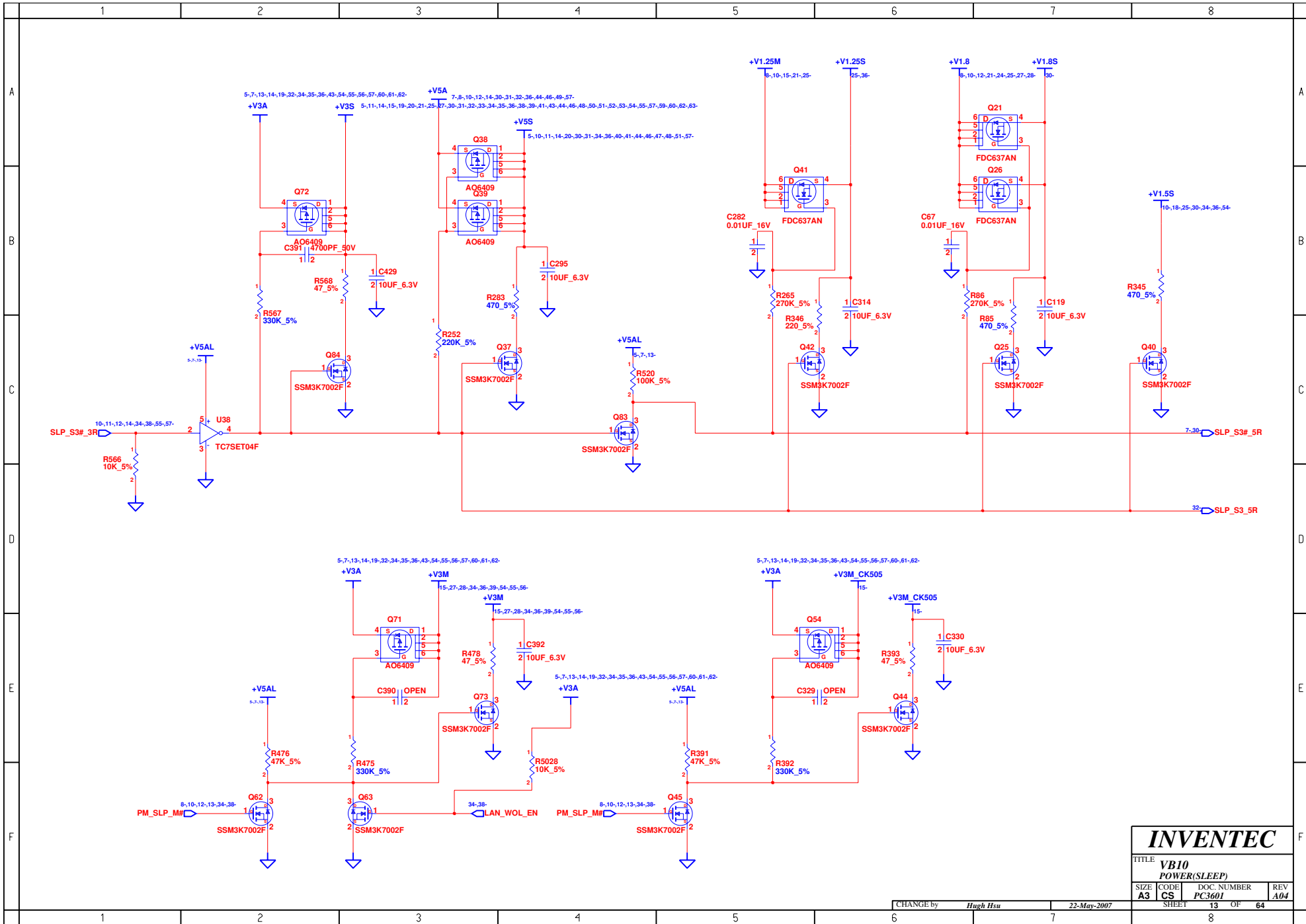
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SYSTEM POWER (BLANK)			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET		9	OF 64

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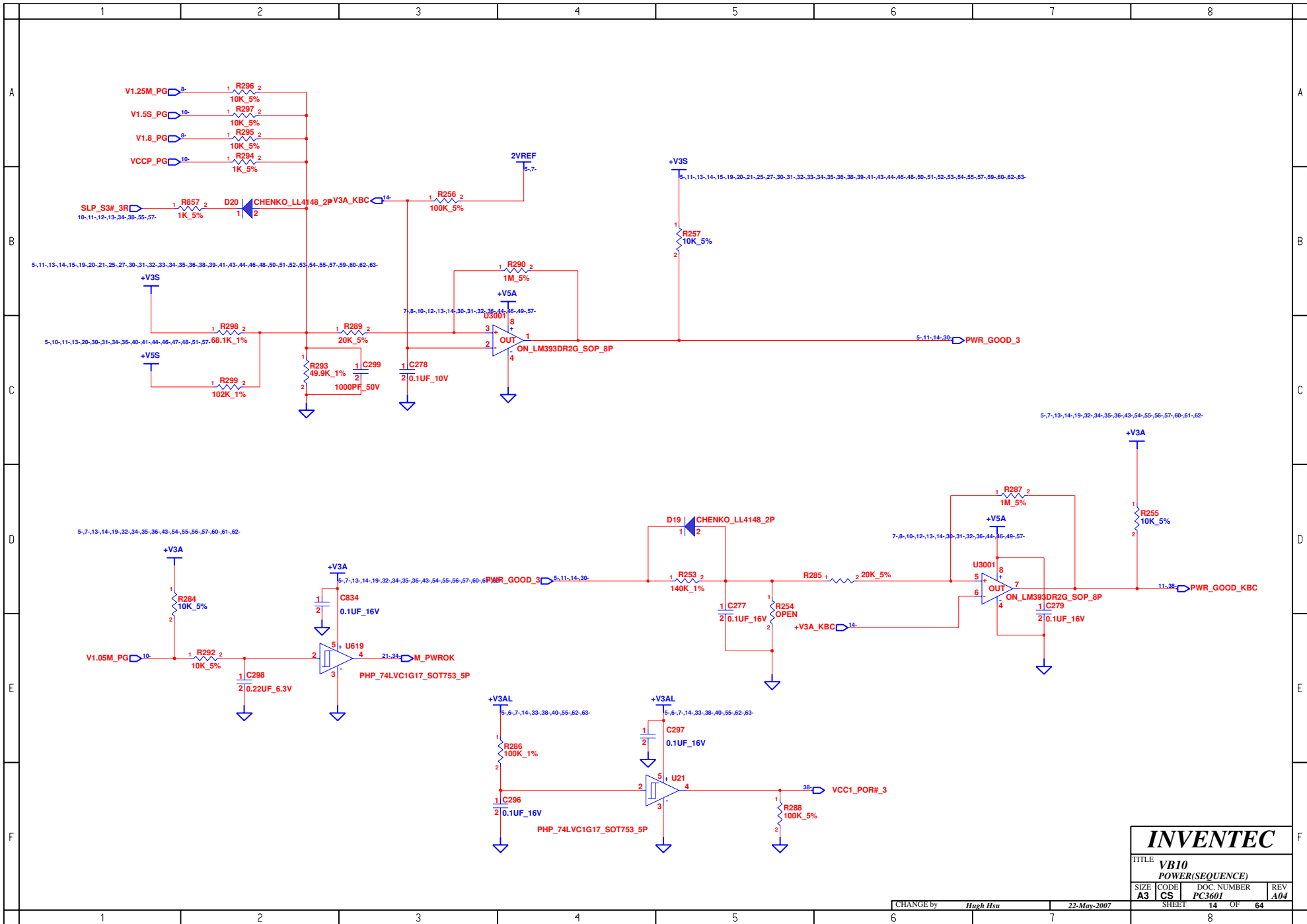


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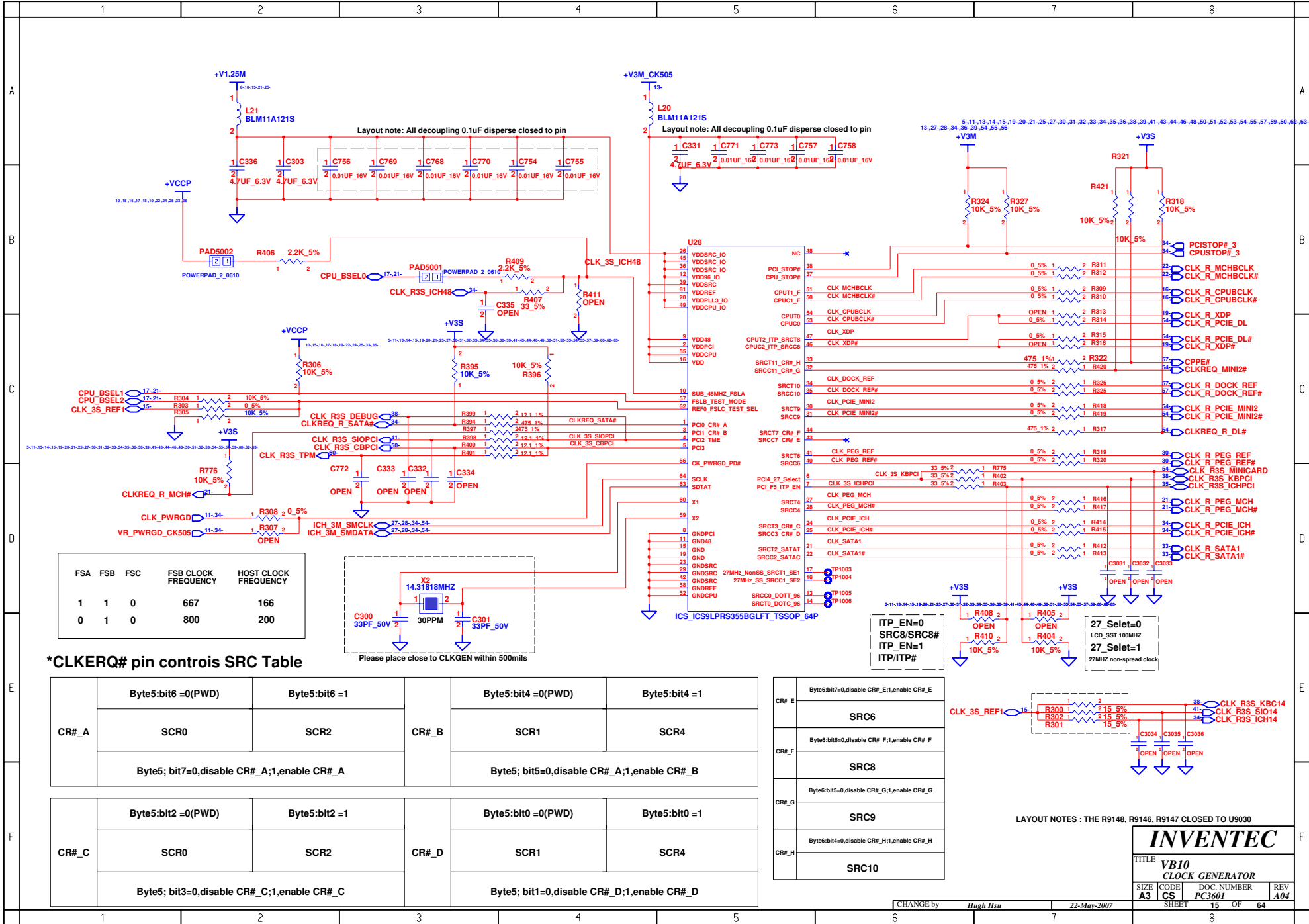
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VB10			
SYSTEM POWER(+V1.5S/+V1.05M)			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04



INVENTEC			
TITLE VB10 POWER(SLEEP)			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 13		OF 64	



INVENTEC			
TITLE VB10 POWER(SEQUENCE)			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 14		OF 64	



FSA	FSB	FSC	FSB CLOCK FREQUENCY	HOST CLOCK FREQUENCY
1	1	0	667	166
0	1	0	800	200

*CLKERQ# pin controls SRC Table

CR#_A	Byte5:bit6 =0(PWD)	Byte5:bit6 =1	CR#_B	Byte5:bit4 =0(PWD)	Byte5:bit4 =1
	SCR0	SCR2		SCR1	SCR4
Byte5; bit7=0,disable CR#_A;1,enable CR#_A			Byte5; bit5=0,disable CR#_A;1,enable CR#_B		

CR#_C	Byte5:bit2 =0(PWD)	Byte5:bit2 =1	CR#_D	Byte5:bit0 =0(PWD)	Byte5:bit0 =1
	SCR0	SCR2		SCR1	SCR4
Byte5; bit3=0,disable CR#_C;1,enable CR#_C			Byte5; bit1=0,disable CR#_D;1,enable CR#_D		

CR#_E	Byte6:bit7=0,disable CR#_E;1,enable CR#_E	SCR6
CR#_F	Byte6:bit6=0,disable CR#_F;1,enable CR#_F	SCR8
CR#_G	Byte6:bit5=0,disable CR#_G;1,enable CR#_G	SCR9
CR#_H	Byte6:bit4=0,disable CR#_H;1,enable CR#_H	SCR10

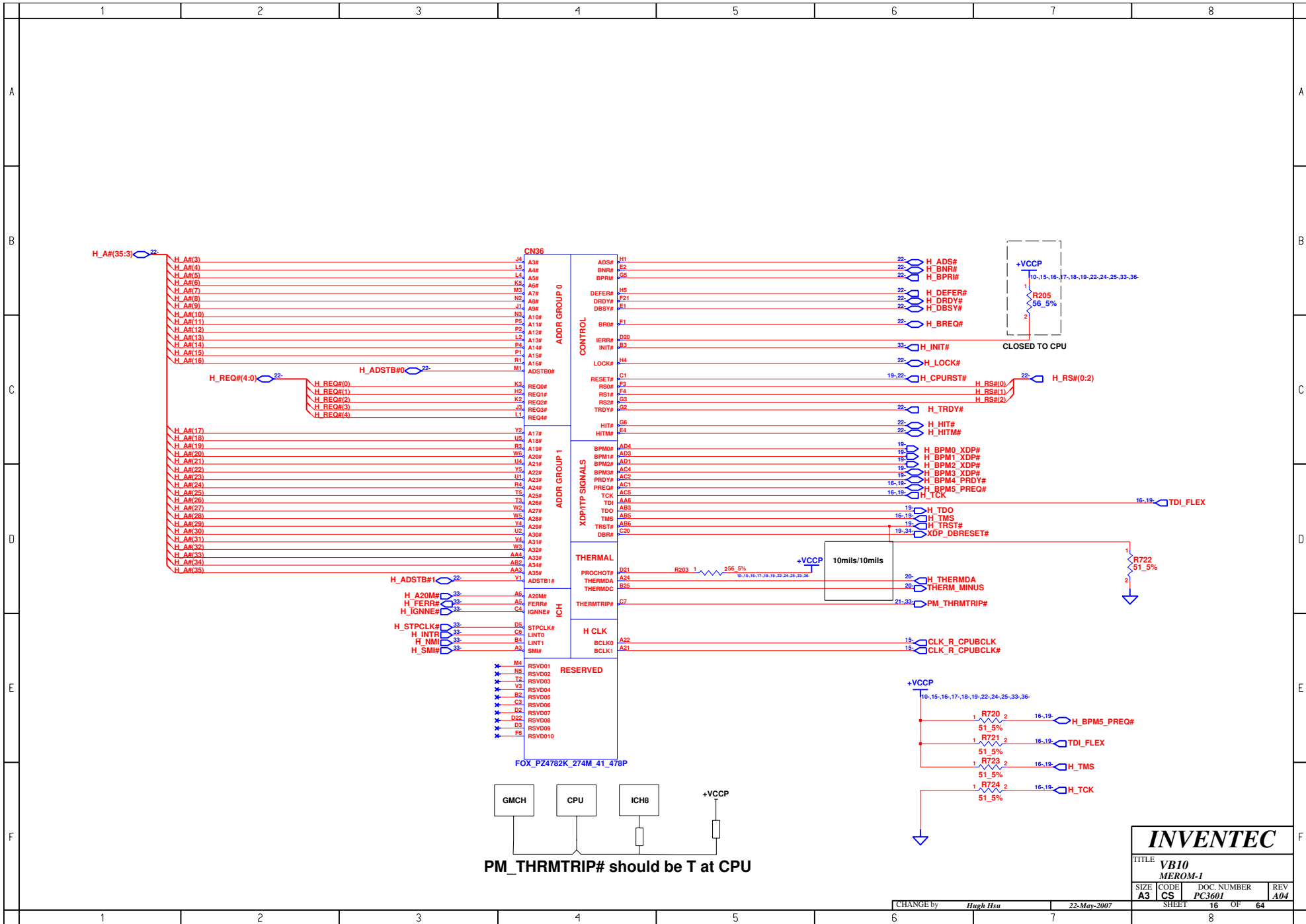
LAYOUT NOTES : THE R9148, R9146, R9147 CLOSED TO U9030

INVENTEC

TITLE
**VB10
CLOCK GENERATOR**

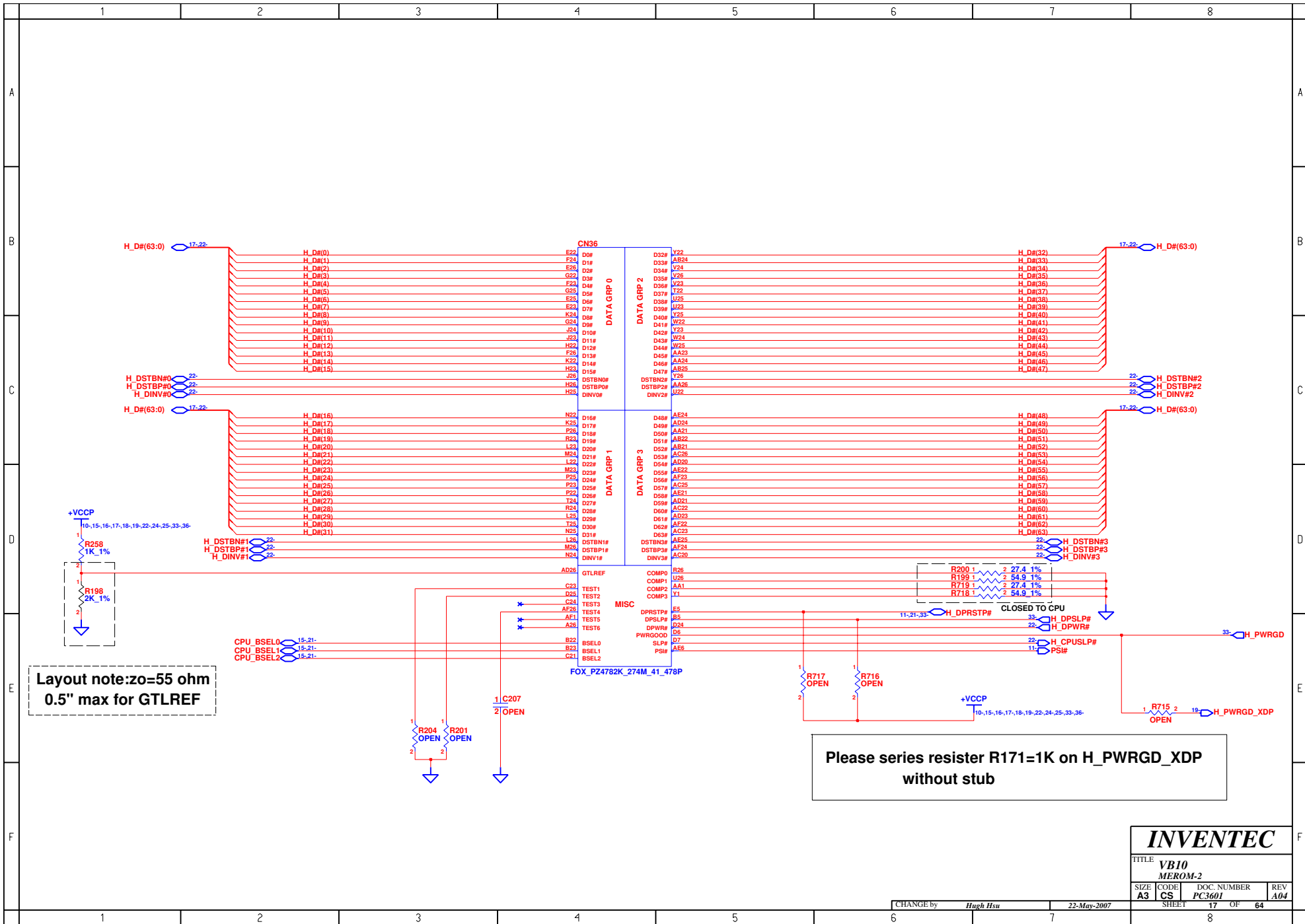
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
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SHEET 15 OF 64



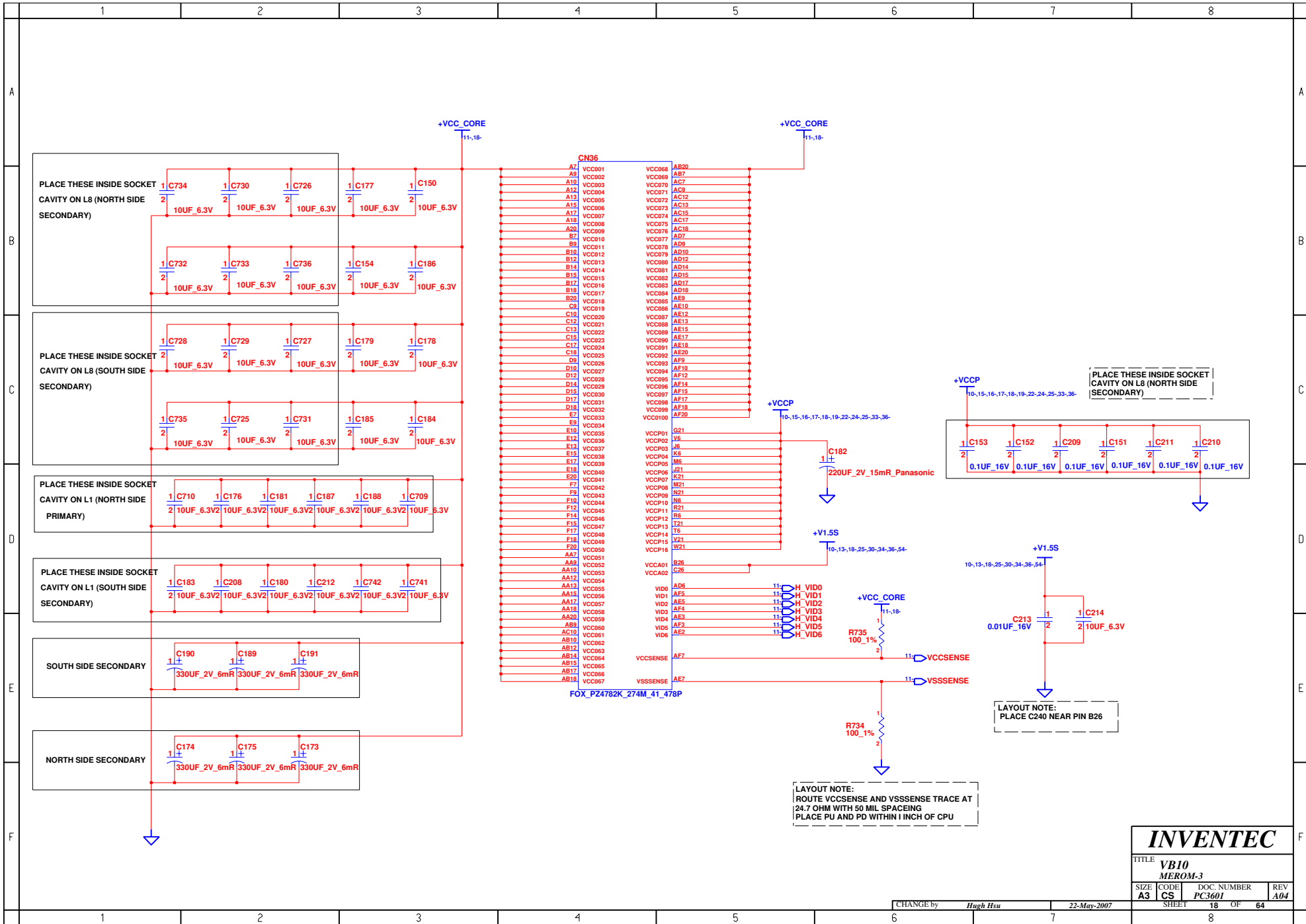
PM_THRMTRIP# should be T at CPU

INVENTEC			
TITLE VB10			
MEROM-1			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 16		OF 64	

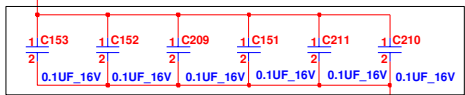


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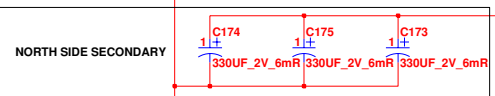
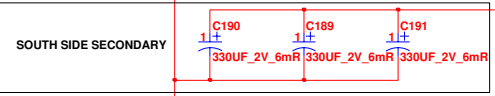
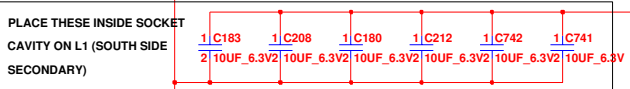
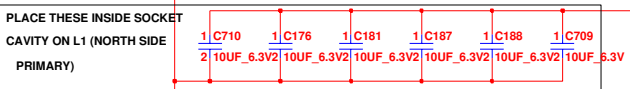
TITLE			
VB10			
MEROM-2			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04



PLACE THESE INSIDE SOCKET CAVITY ON L8 (NORTH SIDE SECONDARY)



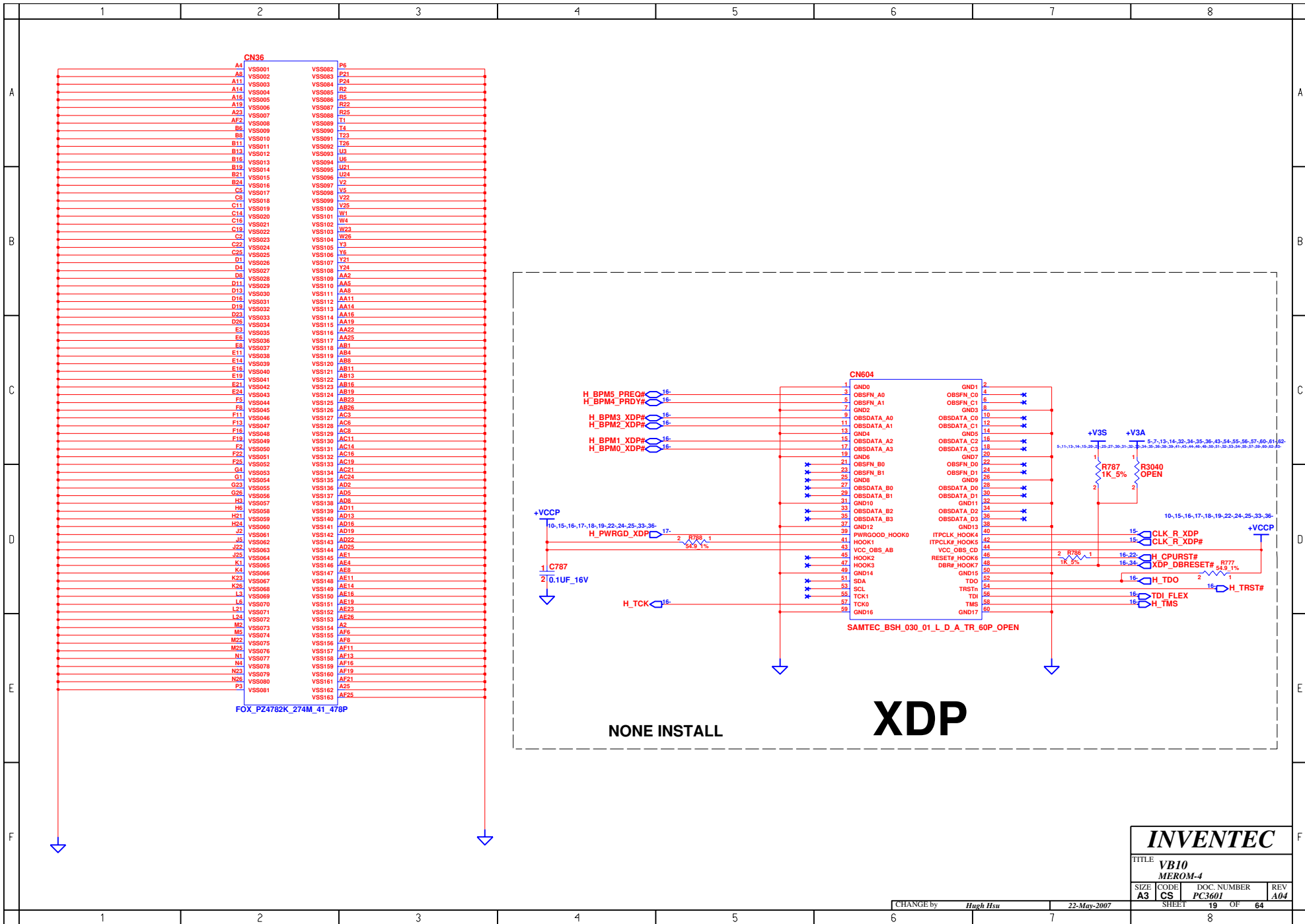
PLACE THESE INSIDE SOCKET CAVITY ON L1 (NORTH SIDE PRIMARY)

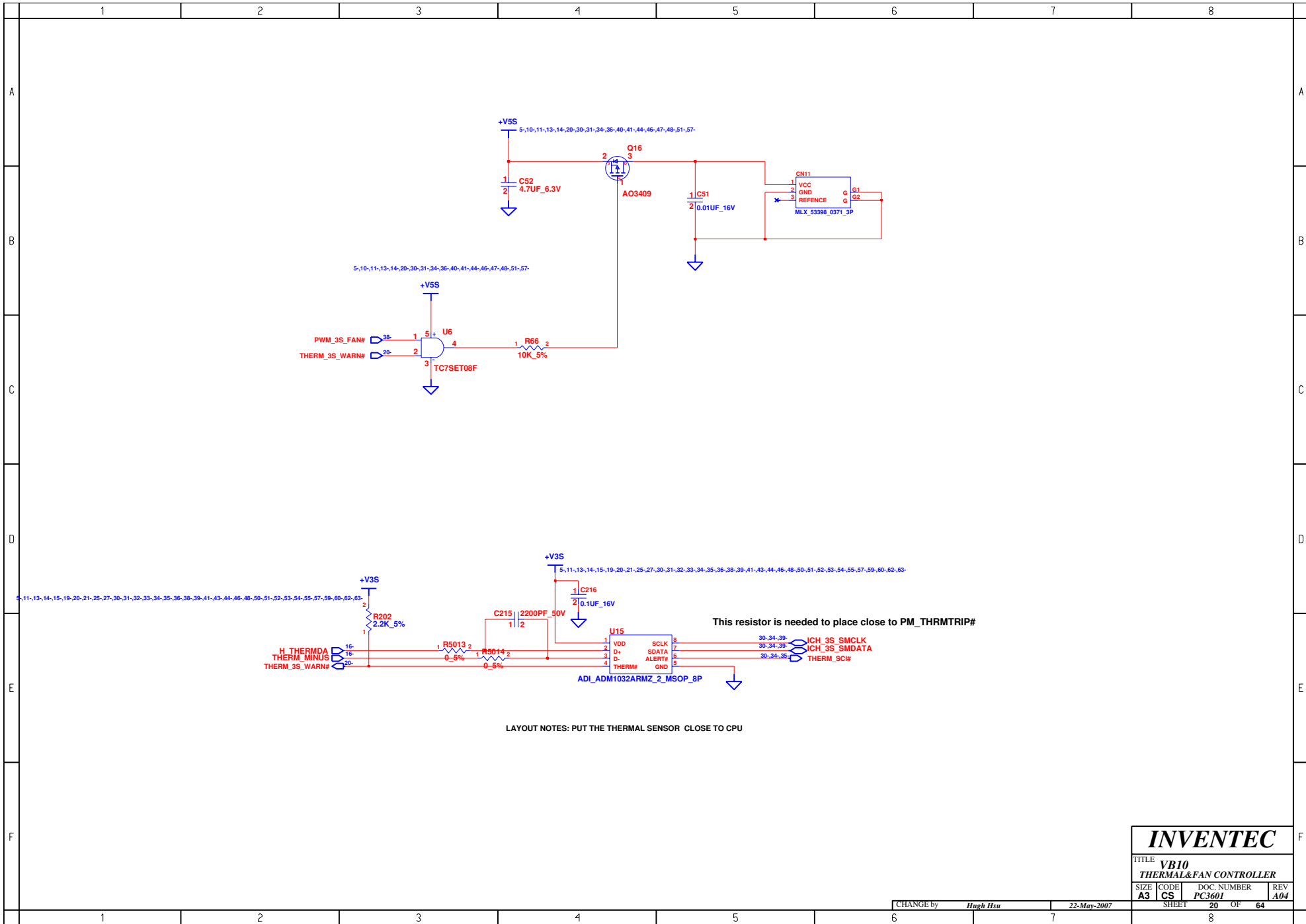


LAYOUT NOTE:
ROUTE VCCSENSE AND VSSSENSE TRACE AT 24.7 OHM WITH 50 MIL SPACING
PLACE PU AND PD WITHIN 1 INCH OF CPU

LAYOUT NOTE:
PLACE C240 NEAR PIN B26

INVENTEC			
TITLE VBI0 MEROM-3			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	SHEET 18 OF 64

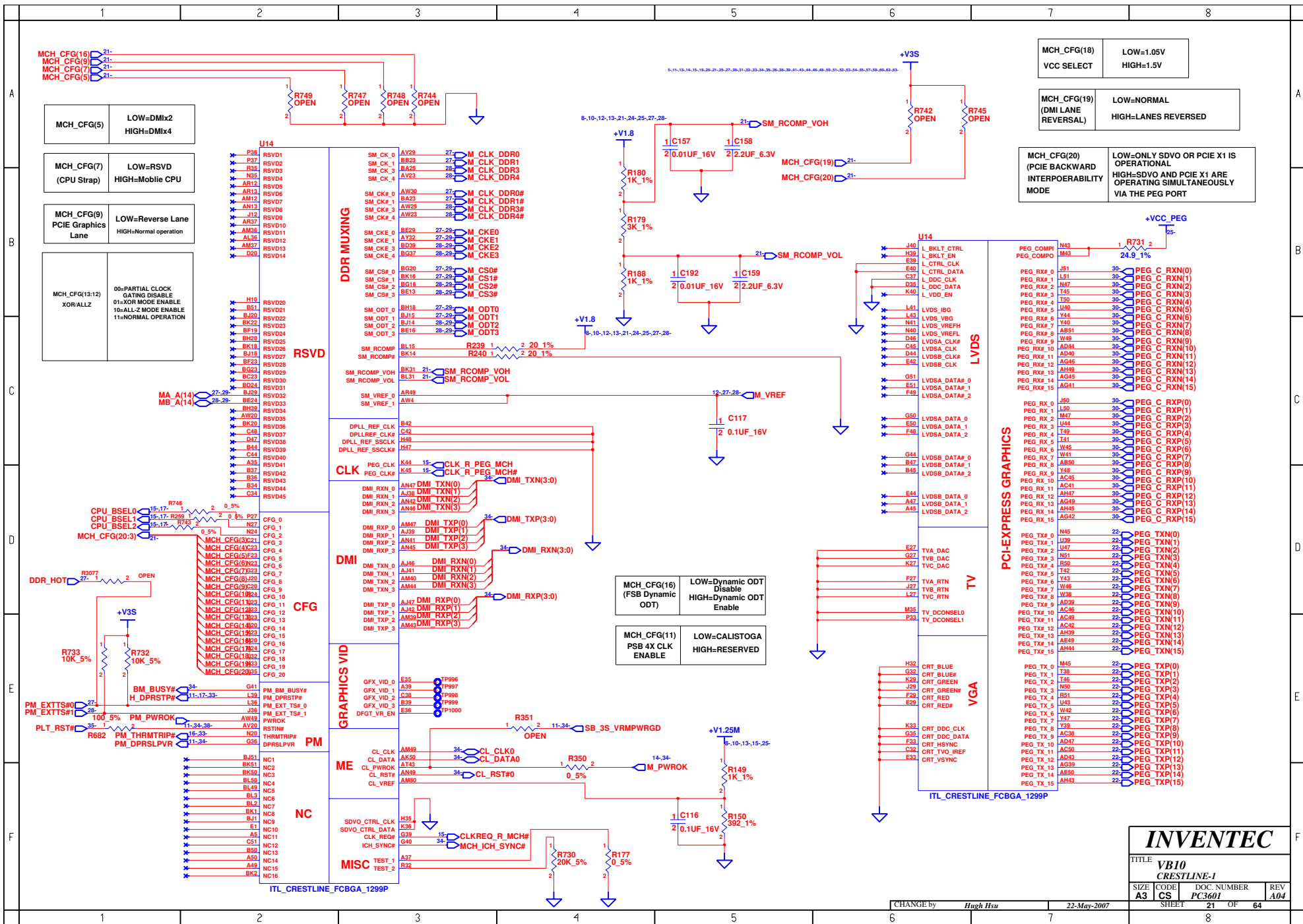




INVENTEC

TITLE			
VB10			
THERMAL&FAN CONTROLLER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04

CHANGE by	Hugh Hsu	22-May-2007	SHEET	20	OF	64
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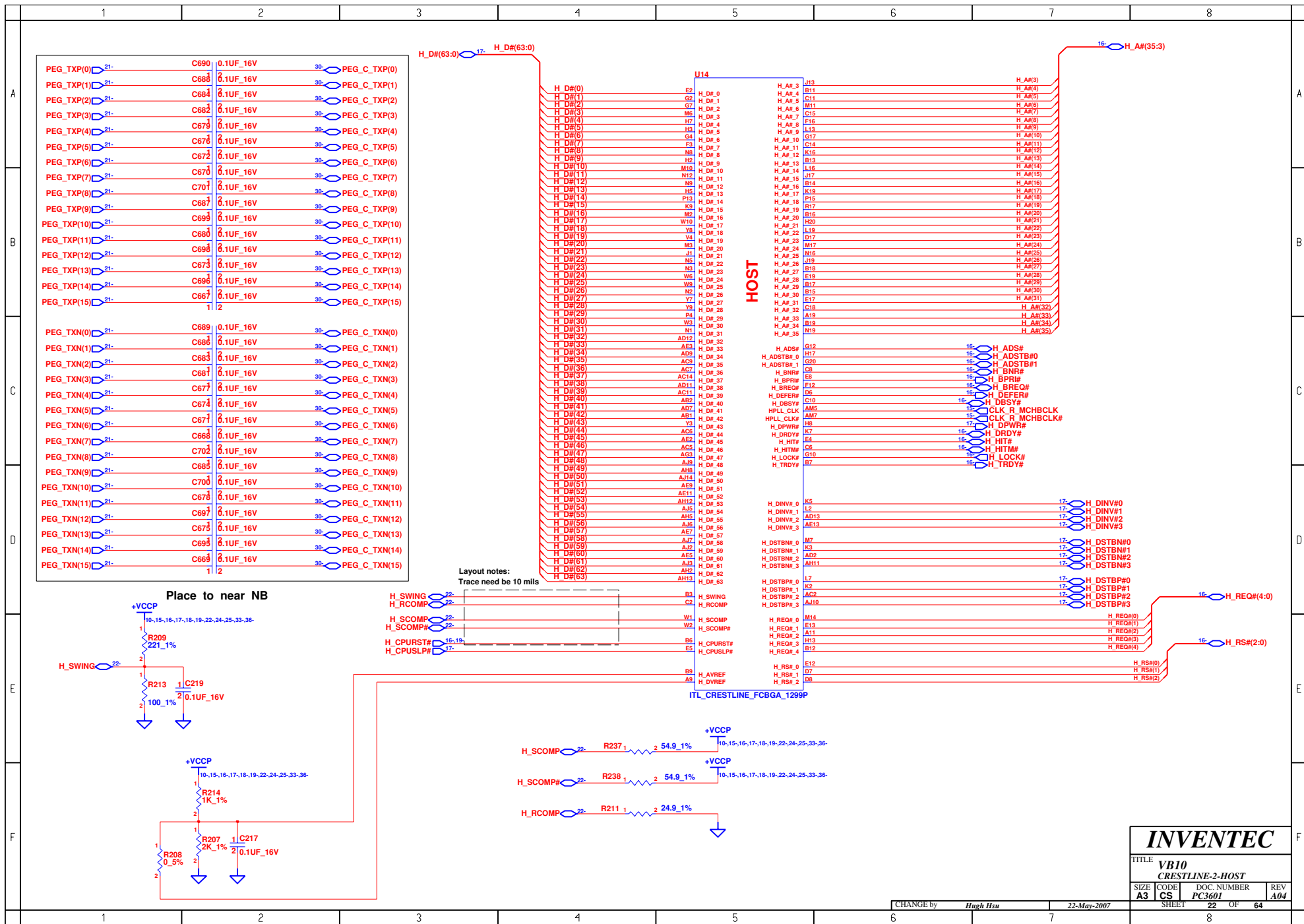


INVENTEC

TITLE: **VB10 CRESTLINE-1**

SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04

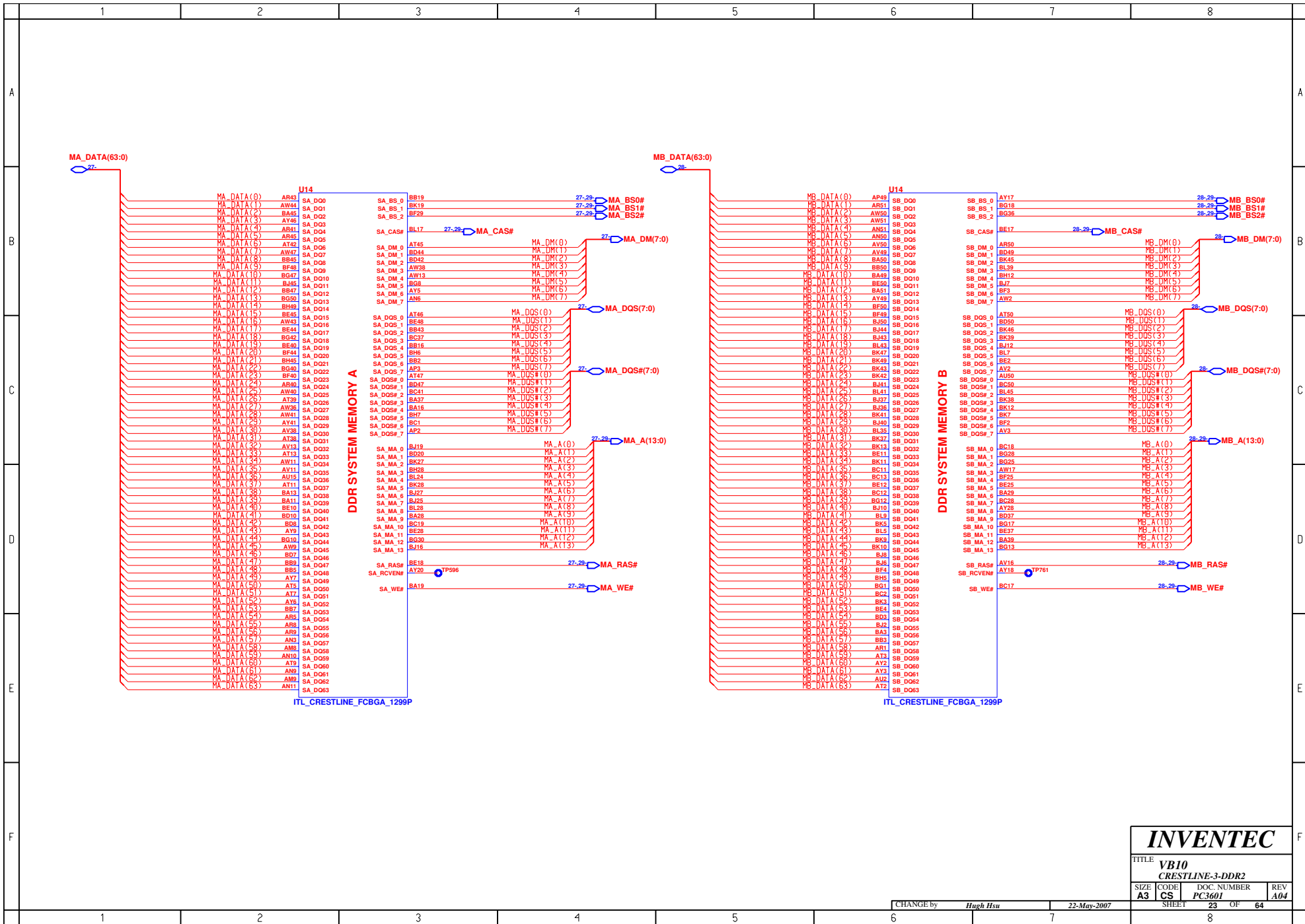
SHEET 21 OF 64



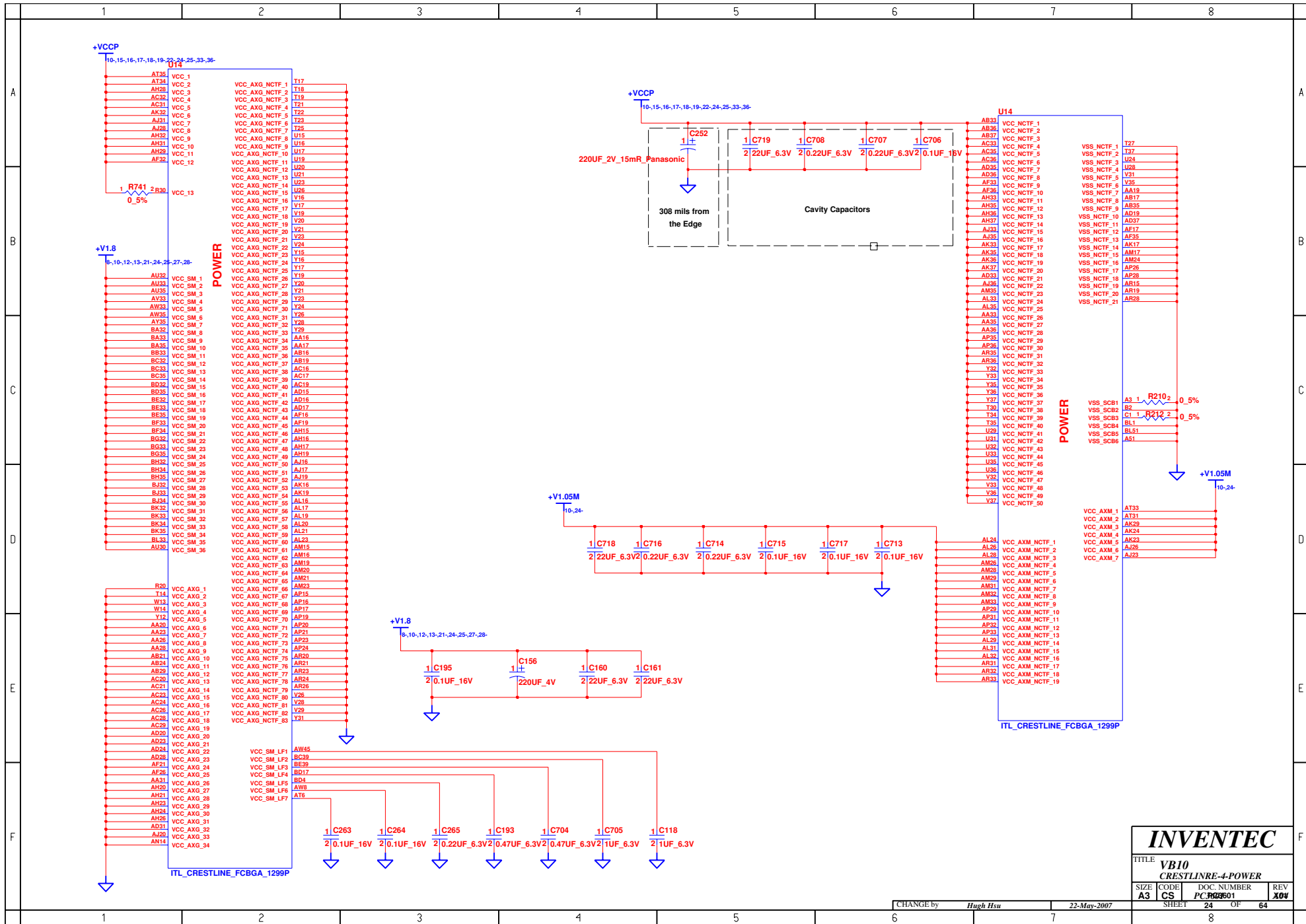
Layout notes:
Trace need be 10 mils

Place to near NB

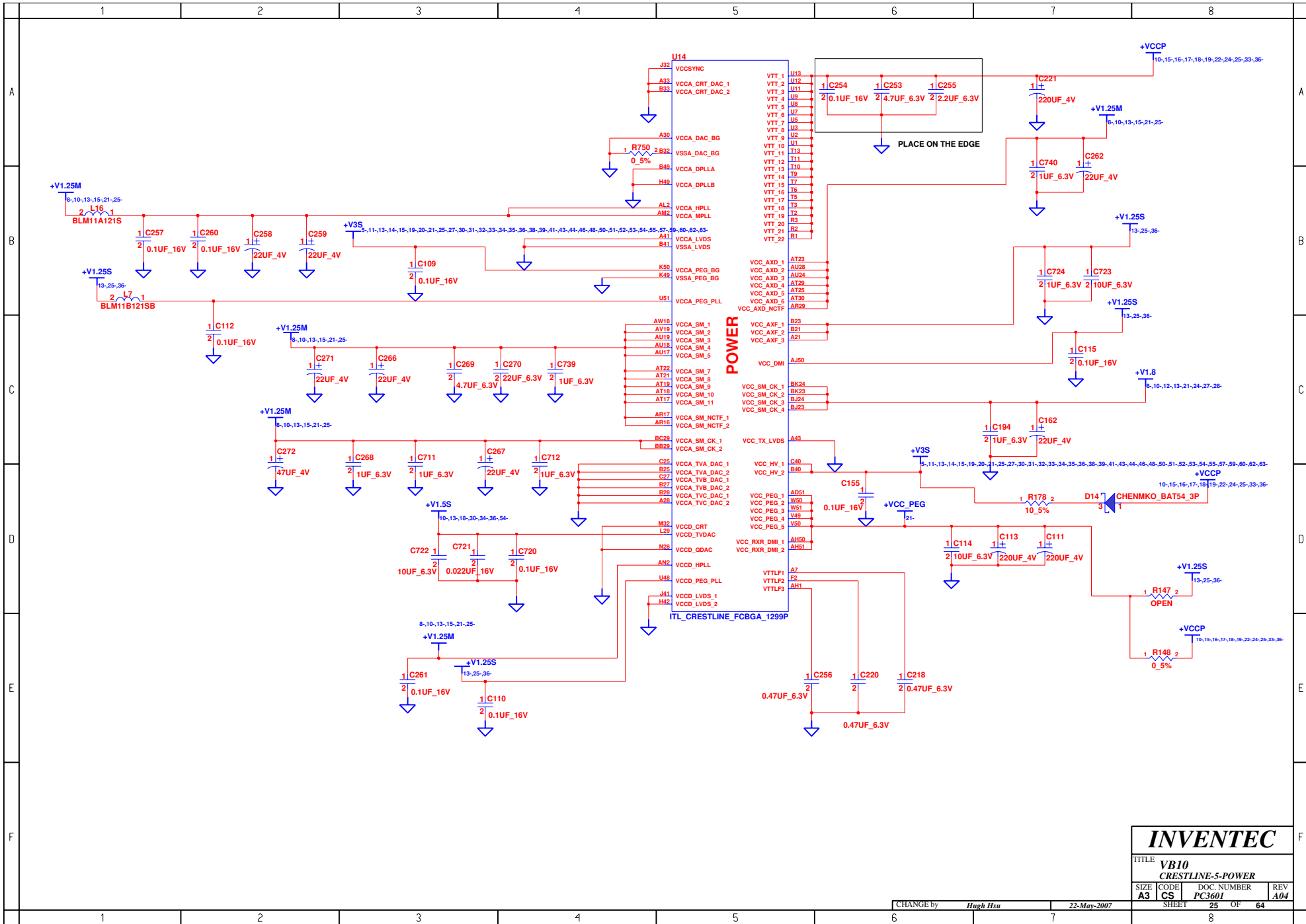
INVENTEC			
TITLE VB10 CRESTLINE-2-HOST			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		DATE <i>22-May-2007</i>	
SHEET 22		OF 64	



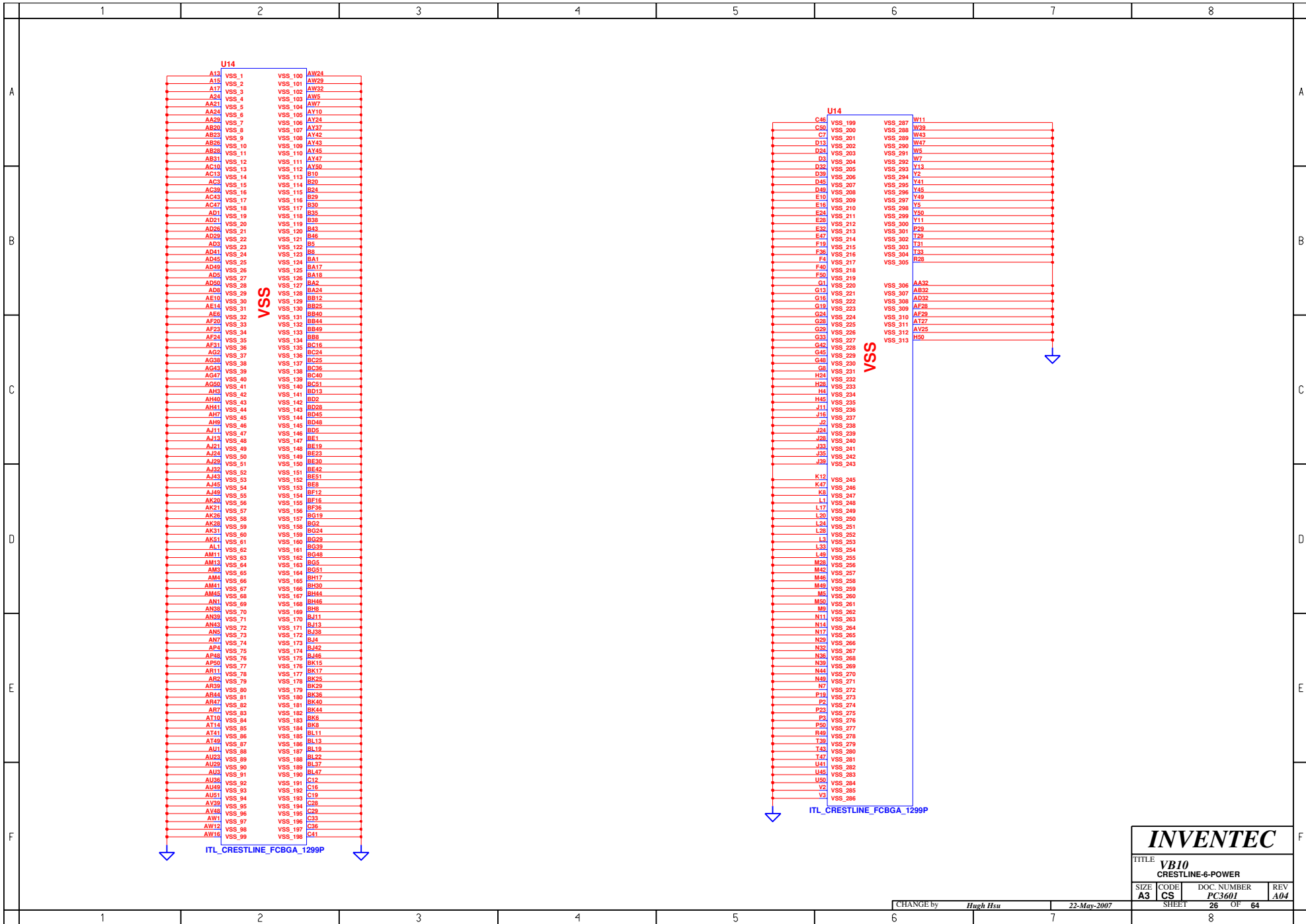
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TITLE			
VB10 CRESTLINE-3-DDR2			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04
CHANGE by		SHEET	
Hugh Hsu		23 OF 64	



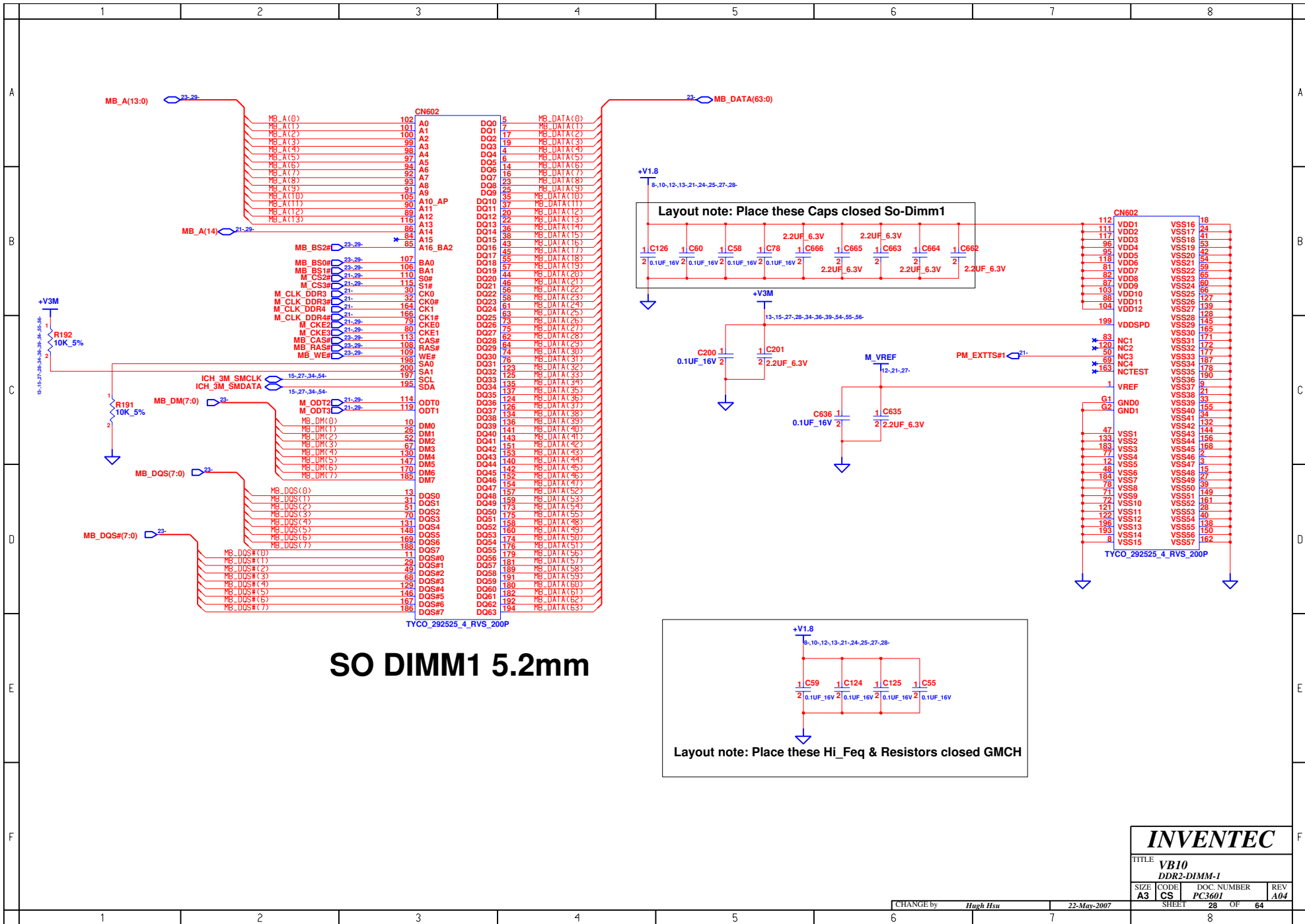
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TITLE VB10 CRESTLINRE-4-POWER			
SIZE A3	CODE CS	DOC. NUMBER PC 100001	REV X01
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 24		OF 64	



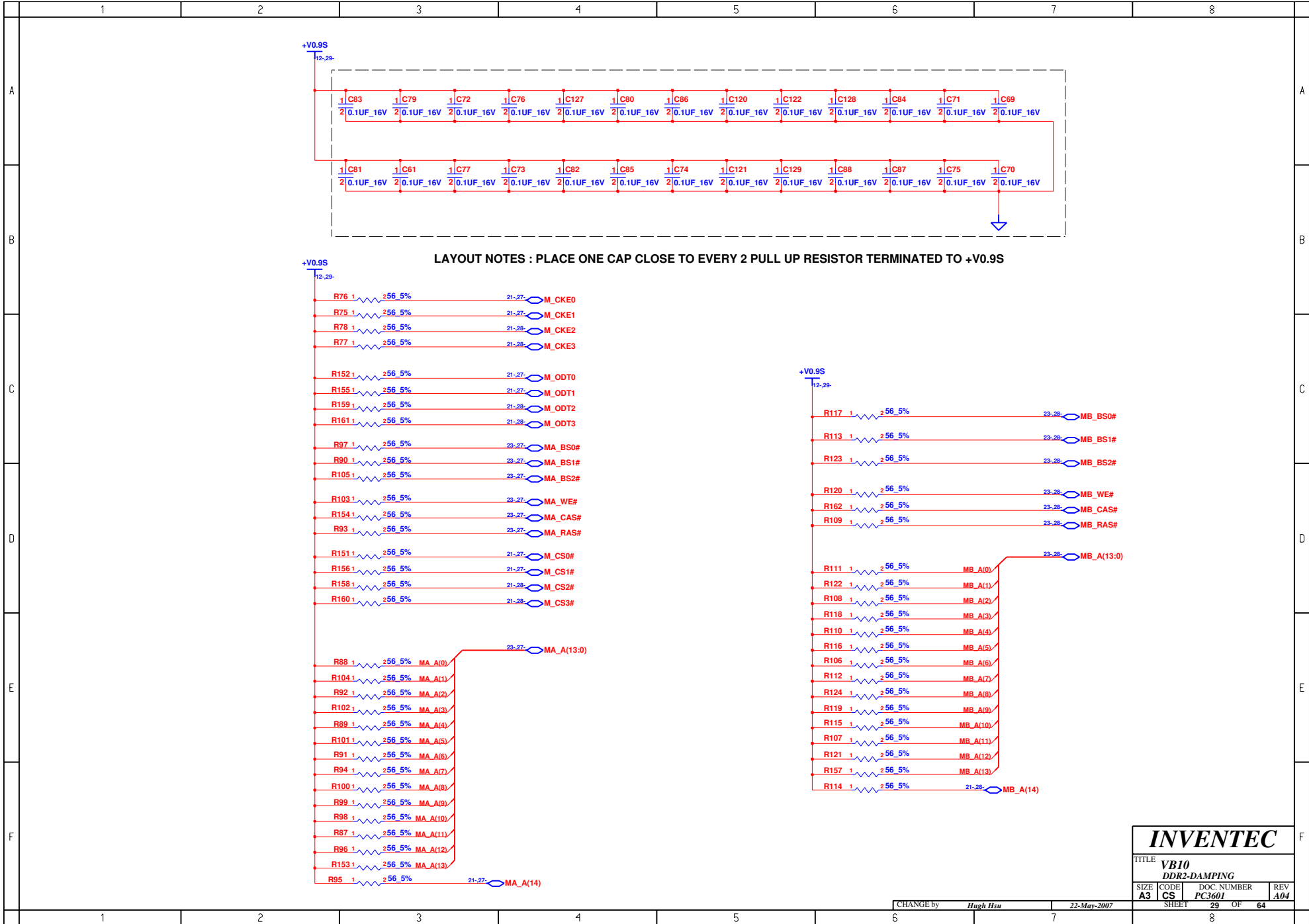
INVENTEC			
TITLE VB10 CRESTLINE-5-POWER			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 25		OF 64	



INVENTEC			
TITLE VB10 CRESTLINE-6-POWER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04
CHANGE by		22-May-2007	
SHEET		26 OF 64	

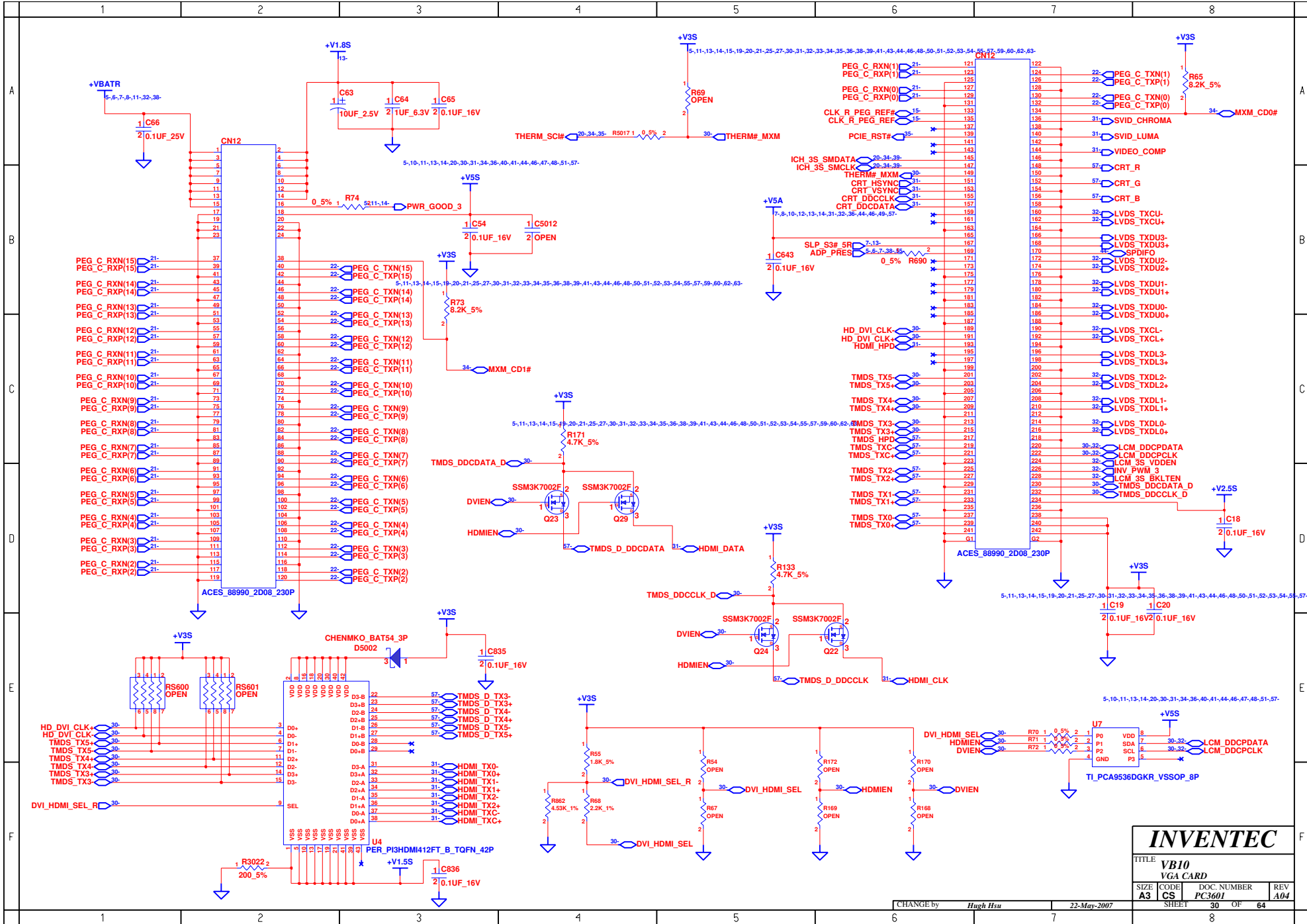


INVENTEC			
TITLE VB10			
DDR2-DIMM-1			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	SHEET 28 OF 64



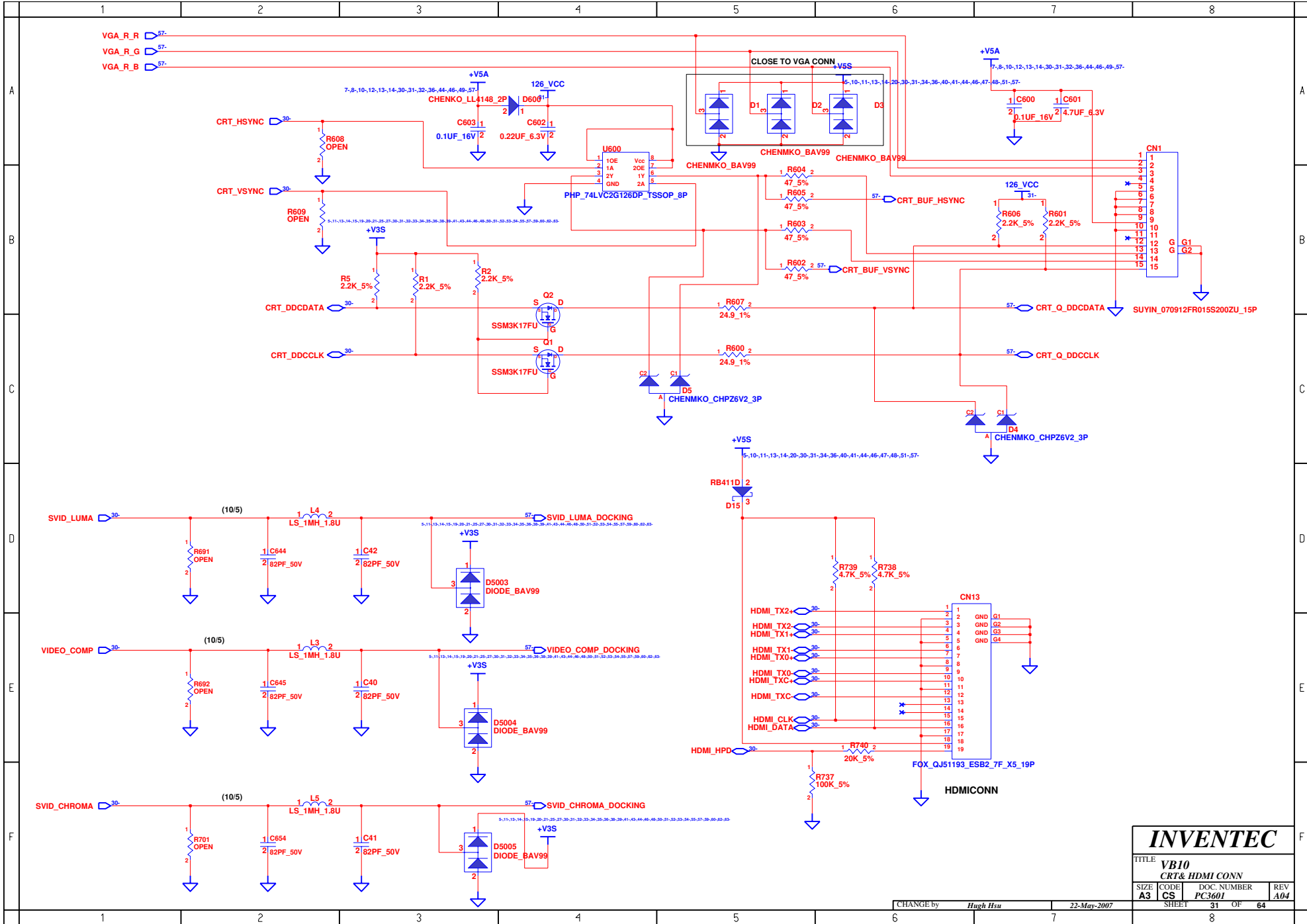
INVENTEC

TITLE			
VB10			
DDR2-DAMPING			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04



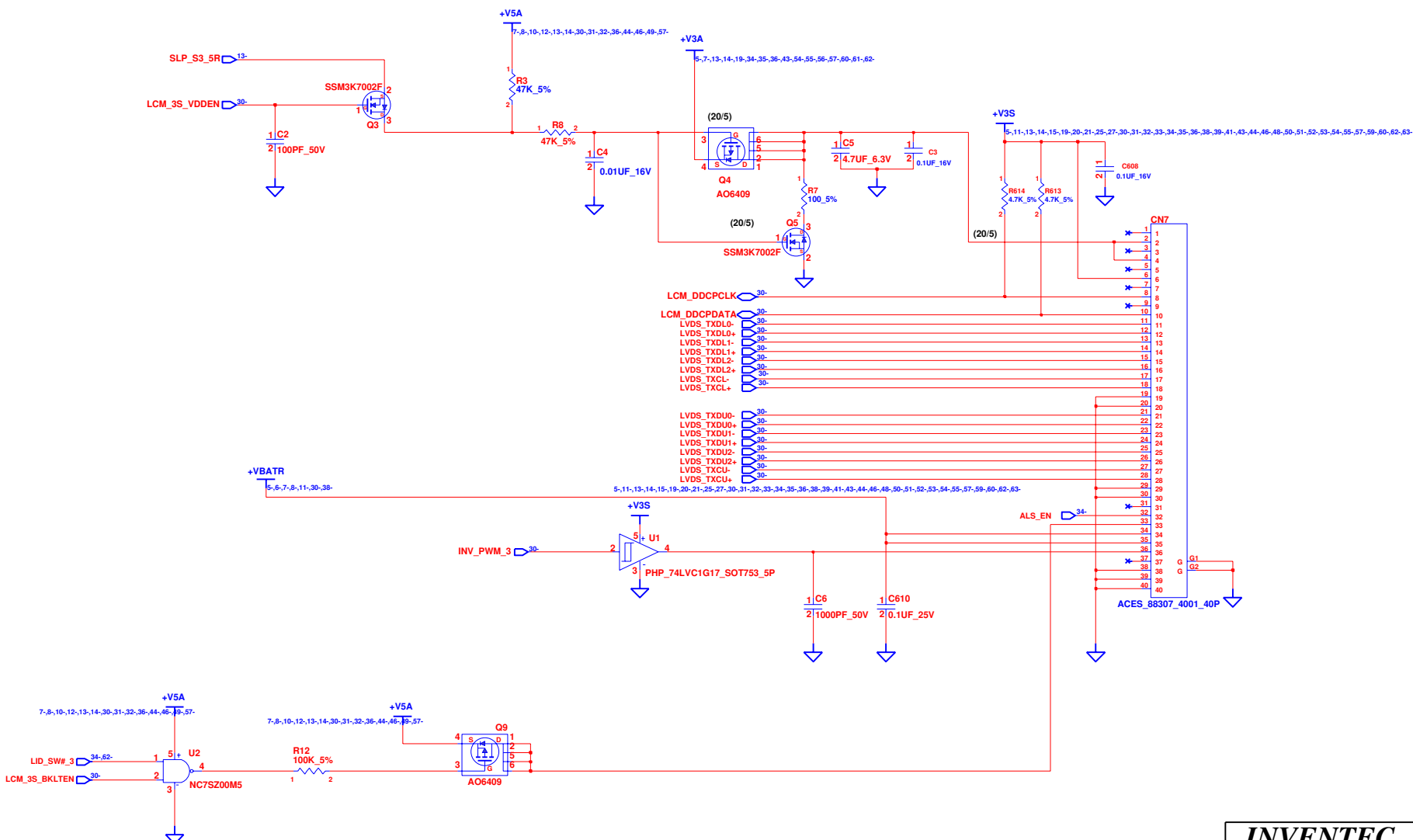
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VGA CARD			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
SHEET 30		OF 64	

CHANGE by *Hugh Hsu* 22-May-2007

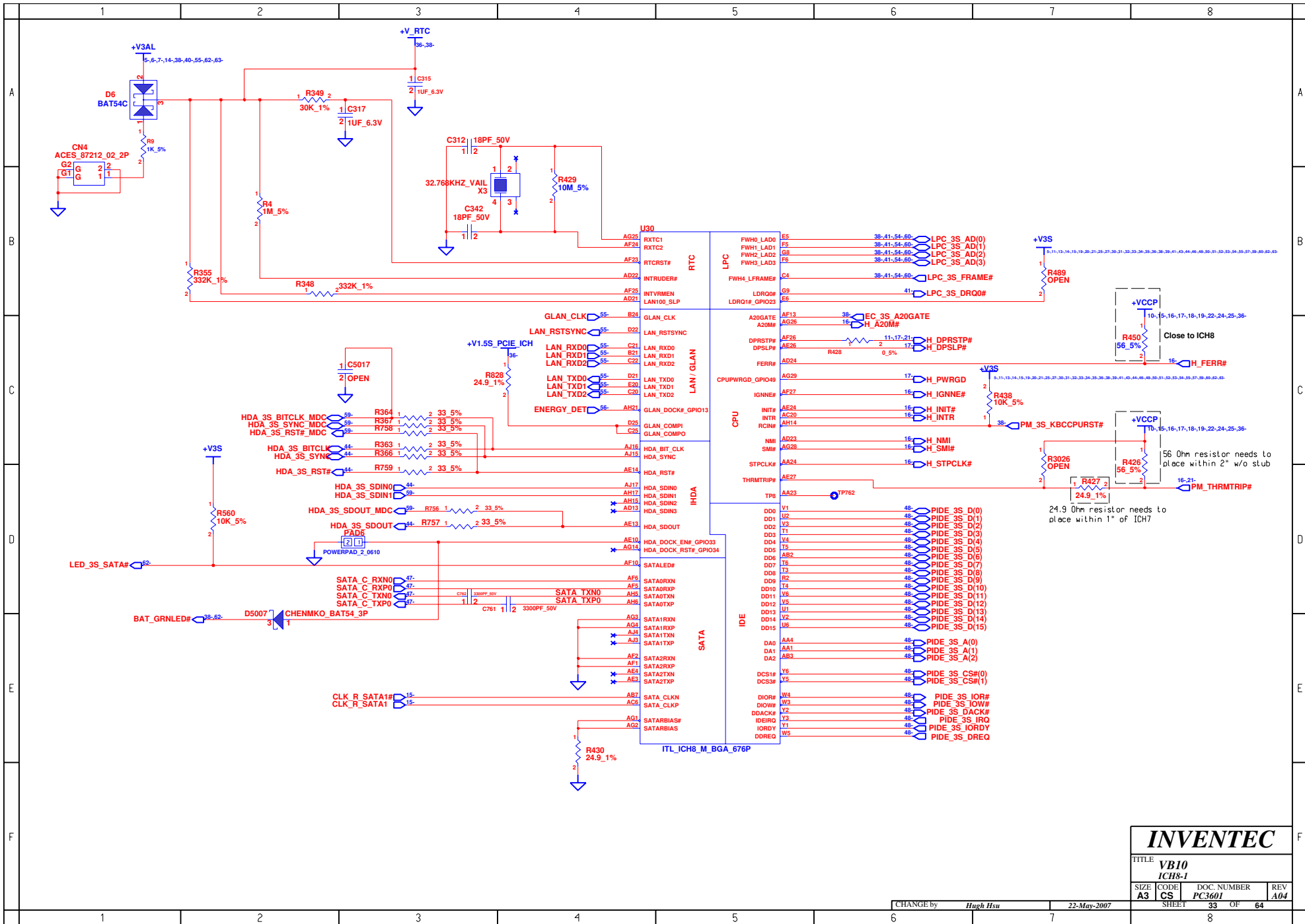


INVENTEC			
TITLE VB10 CRT & HDMI CONN			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 31		OF 64	

Place closed to connector

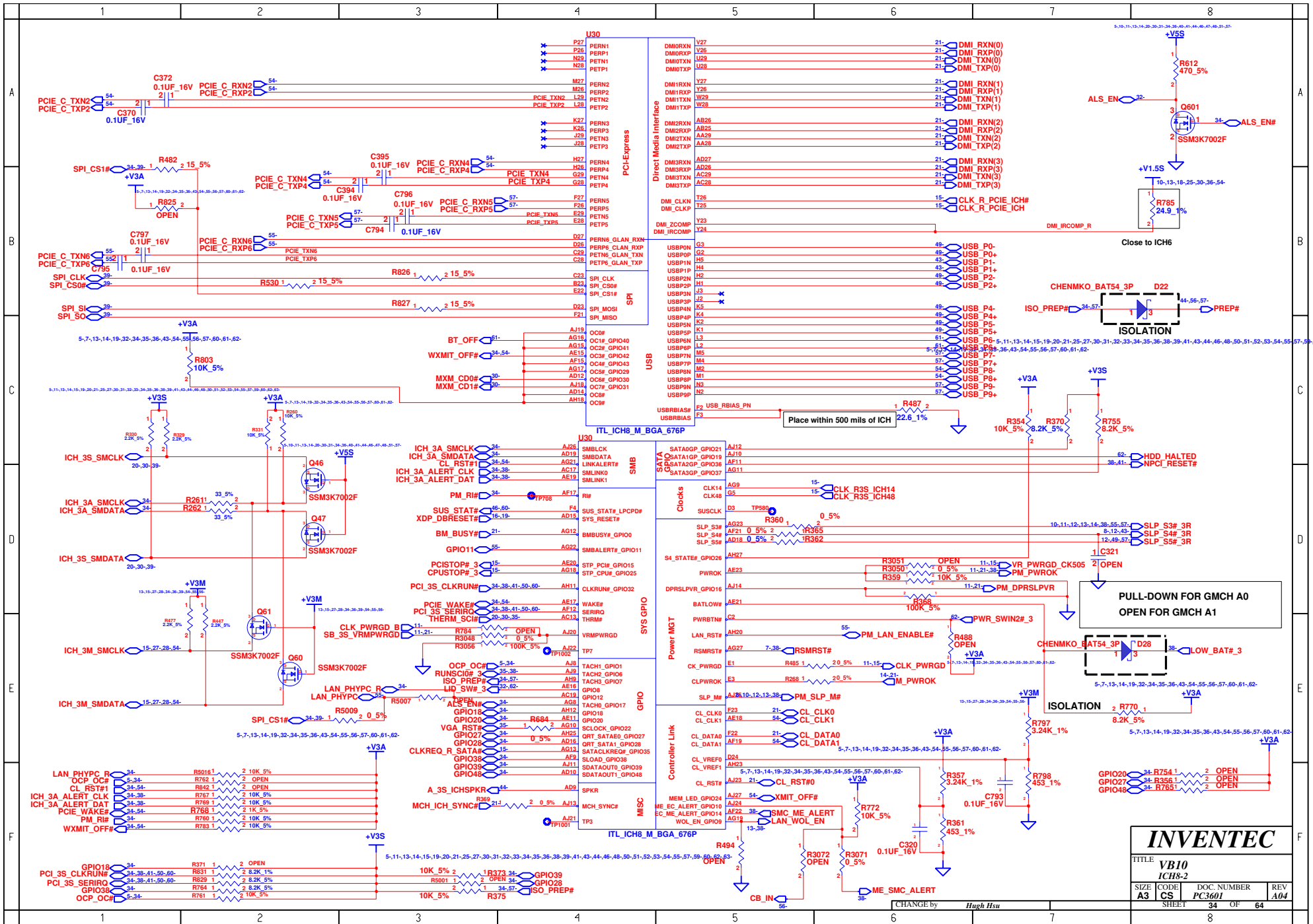


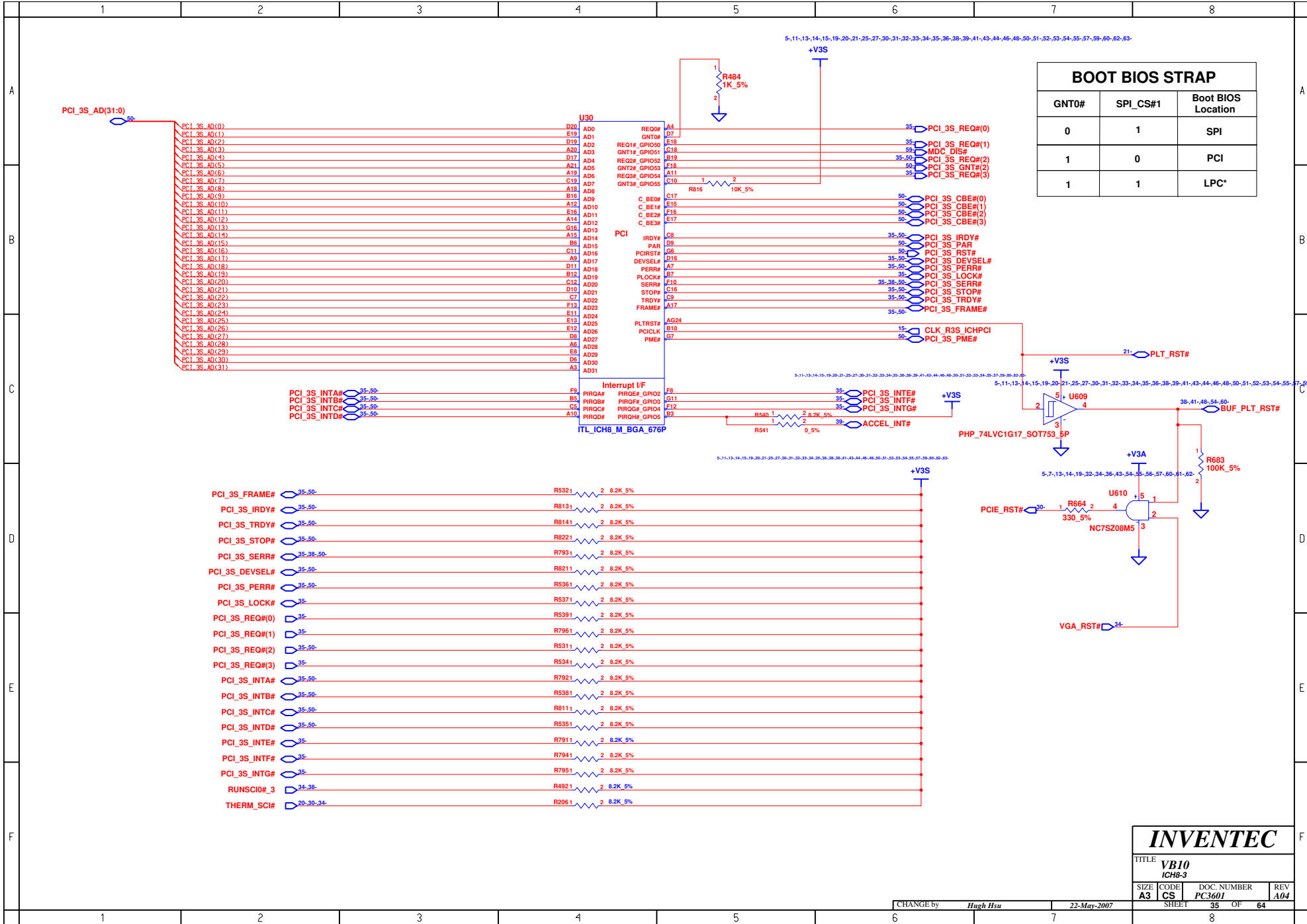
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SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET		32	OF 64



INVENTEC

TITLE			
VB10			
ICH8-1			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04





BOOT BIOS STRAP		
GNT0#	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC*

INVENTEC

TITLE VB10 ICH8-3			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by Hugh Hsu		22-May-2007	SHEET 35 OF 64

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B								
C								
D								
E								
F								

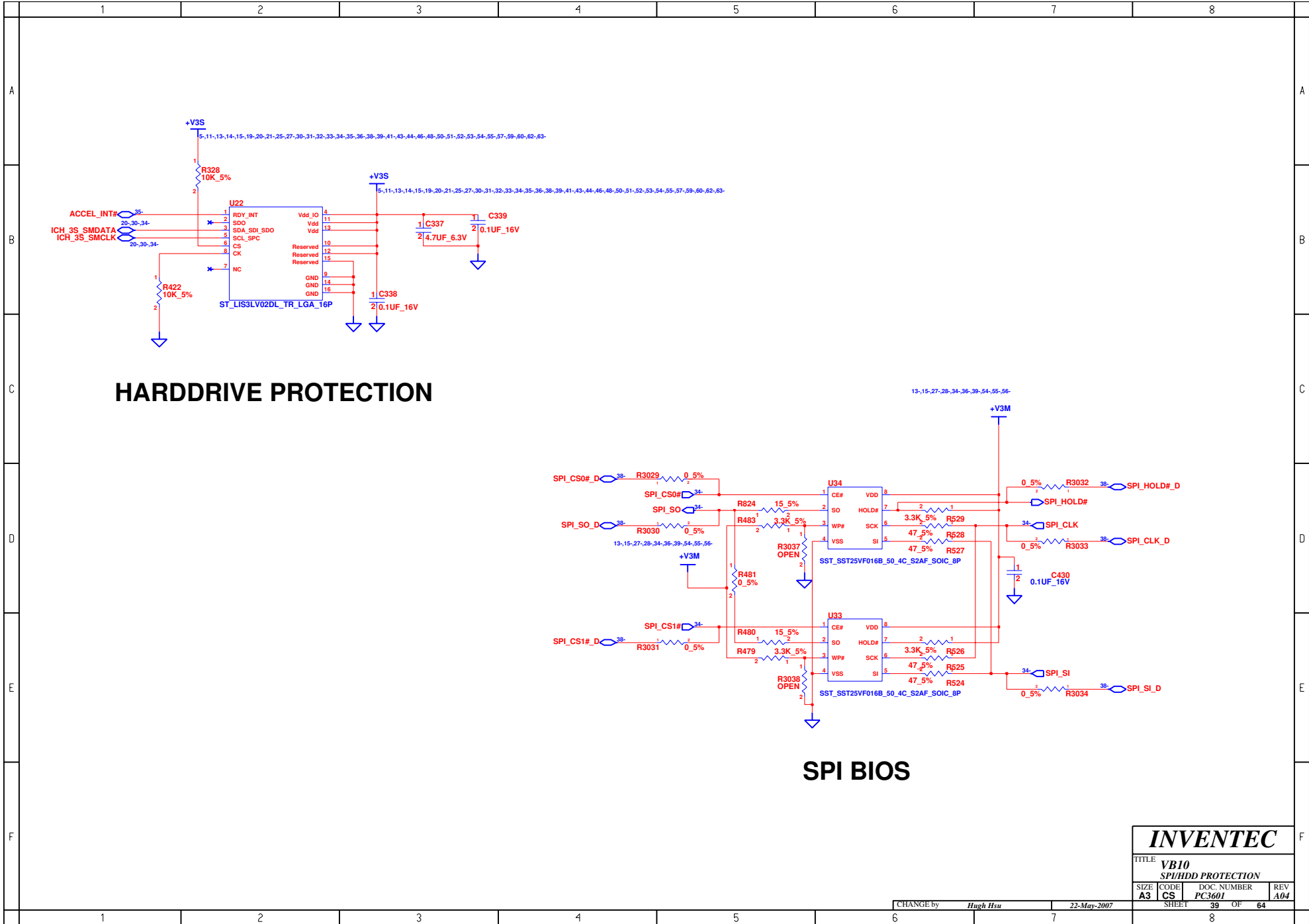
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AA	VSS002
AA2	VSS003
AA7	VSS004
AA8	VSS005
AB1	VSS006
AB24	VSS007
AC11	VSS008
AC14	VSS009
AC25	VSS010
AC26	VSS011
AC27	VSS012
AD17	VSS013
AD20	VSS014
AD28	VSS015
AD29	VSS016
AD3	VSS017
AD4	VSS018
AD6	VSS019
AE1	VSS020
AE12	VSS021
AE2	VSS022
AE22	VSS023
AD1	VSS024
AE24	VSS025
AE5	VSS026
AE6	VSS027
AE9	VSS028
AF14	VSS029
AF16	VSS030
AF18	VSS031
AF3	VSS032
AF4	VSS033
AG5	VSS034
AG6	VSS035
AH10	VSS036
AH13	VSS037
AH16	VSS038
AH19	VSS039
AH2	VSS040
AP28	VSS041
AH22	VSS042
AH24	VSS043
AH26	VSS044
AH3	VSS045
AH4	VSS046
AH8	VSS047
AH5	VSS048
B11	VSS049
B14	VSS050
B17	VSS051
B2	VSS052
B20	VSS053
B22	VSS054
B6	VSS055
C24	VSS056
C26	VSS057
C27	VSS058
C6	VSS059
D12	VSS060
D15	VSS061
D18	VSS062
D2	VSS063
D4	VSS064
E21	VSS065
E24	VSS066
E4	VSS067
E9	VSS068
F15	VSS069
E24	VSS070
F28	VSS071
F29	VSS072
F7	VSS073
G1	VSS074
E2	VSS075
G10	VSS076
G13	VSS077
G18	VSS078
G23	VSS079
G25	VSS080
G26	VSS081
G27	VSS082
H25	VSS083
H28	VSS084
H29	VSS085
H2	VSS086
H6	VSS087
J1	VSS088
J26	VSS089
J28	VSS090
J27	VSS091
J4	VSS092
J5	VSS093
K23	VSS094
K28	VSS095
K29	VSS096
K3	VSS097
K8	VSS098
	VSS099
	VSS100
	VSS101
	VSS102
	VSS103
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ITL_ICH8_M_BGA_676P



INVENTEC			
TITLE VB10			
ICH8-5			
SIZE	CODE	DOC. NUMBER	REV
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37		64	

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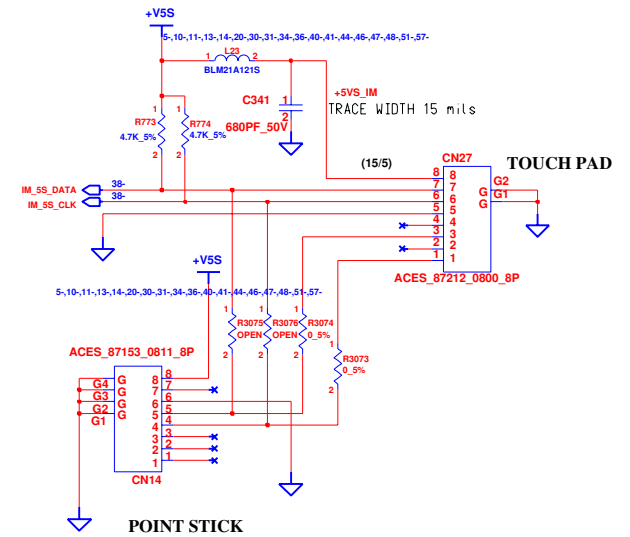
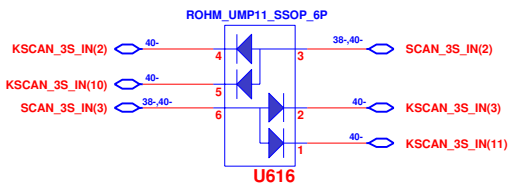
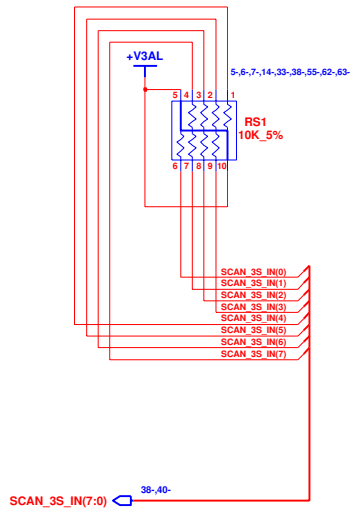
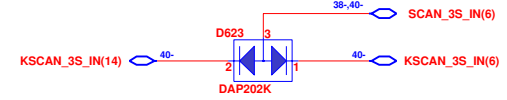
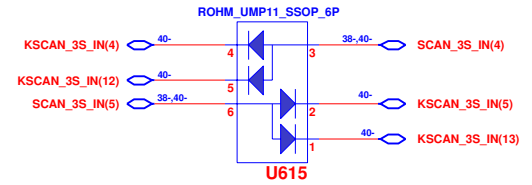
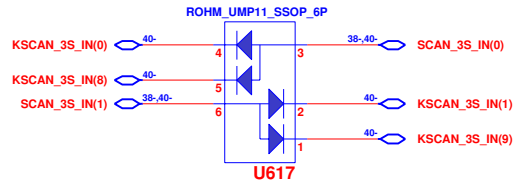
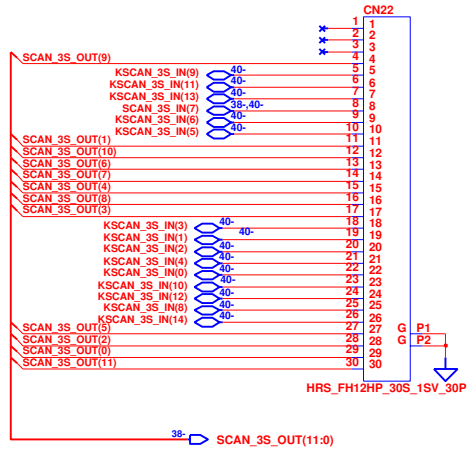


HARDDRIVE PROTECTION

SPI BIOS

INVENTEC

TITLE			
VB10 SPI/HDD PROTECTION			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04



INVENTEC			
TITLE VB10			
INT.KB/POINT DEVICES			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04

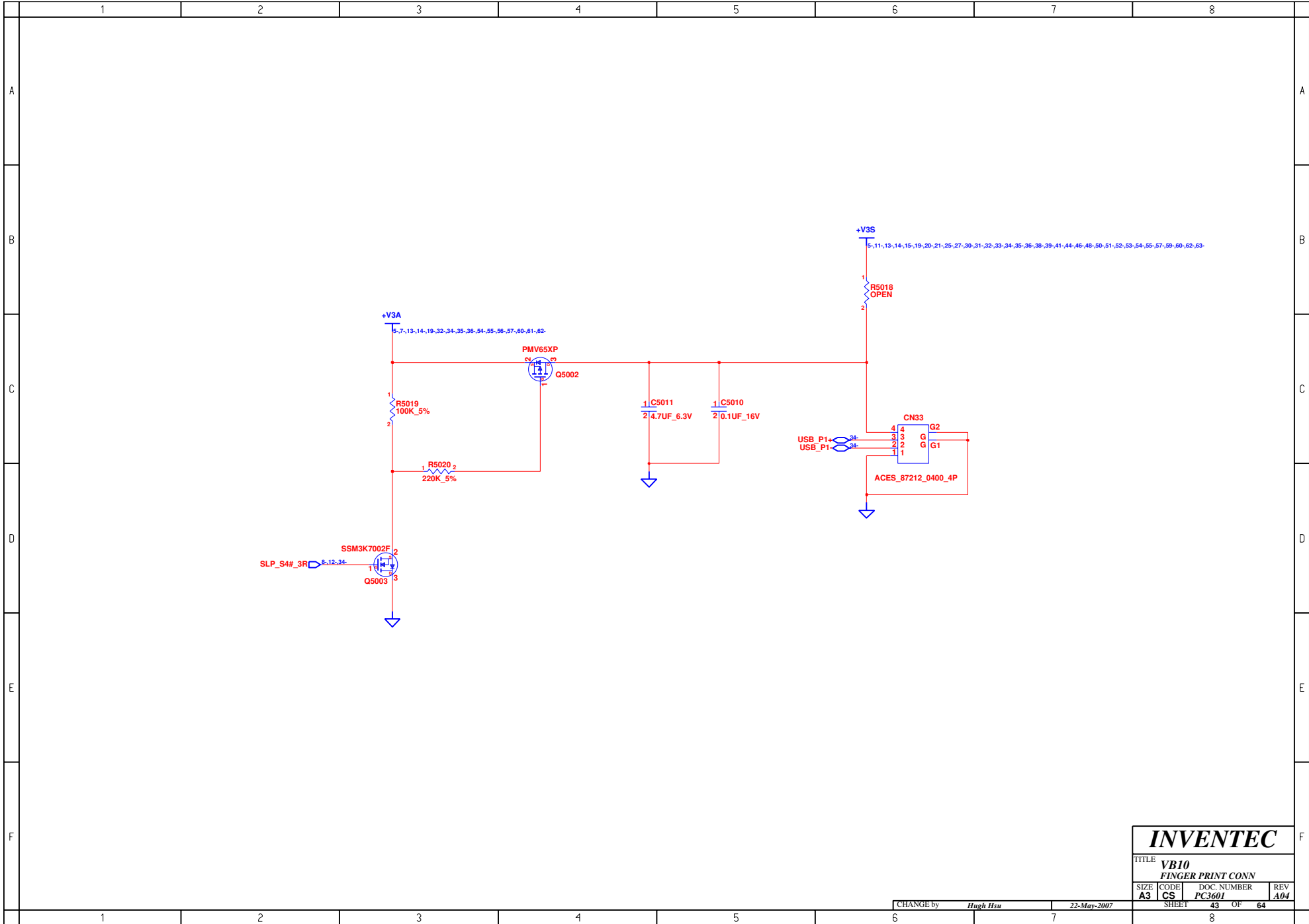
BLANK

INVENTEC

TITLE			
<i>VB10</i>			
<i>BLANK</i>			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	<i>PC3601</i>	<i>A04</i>

CHANGE by *Hugh Hsu* 22-May-2007

SHEET 42 OF 64

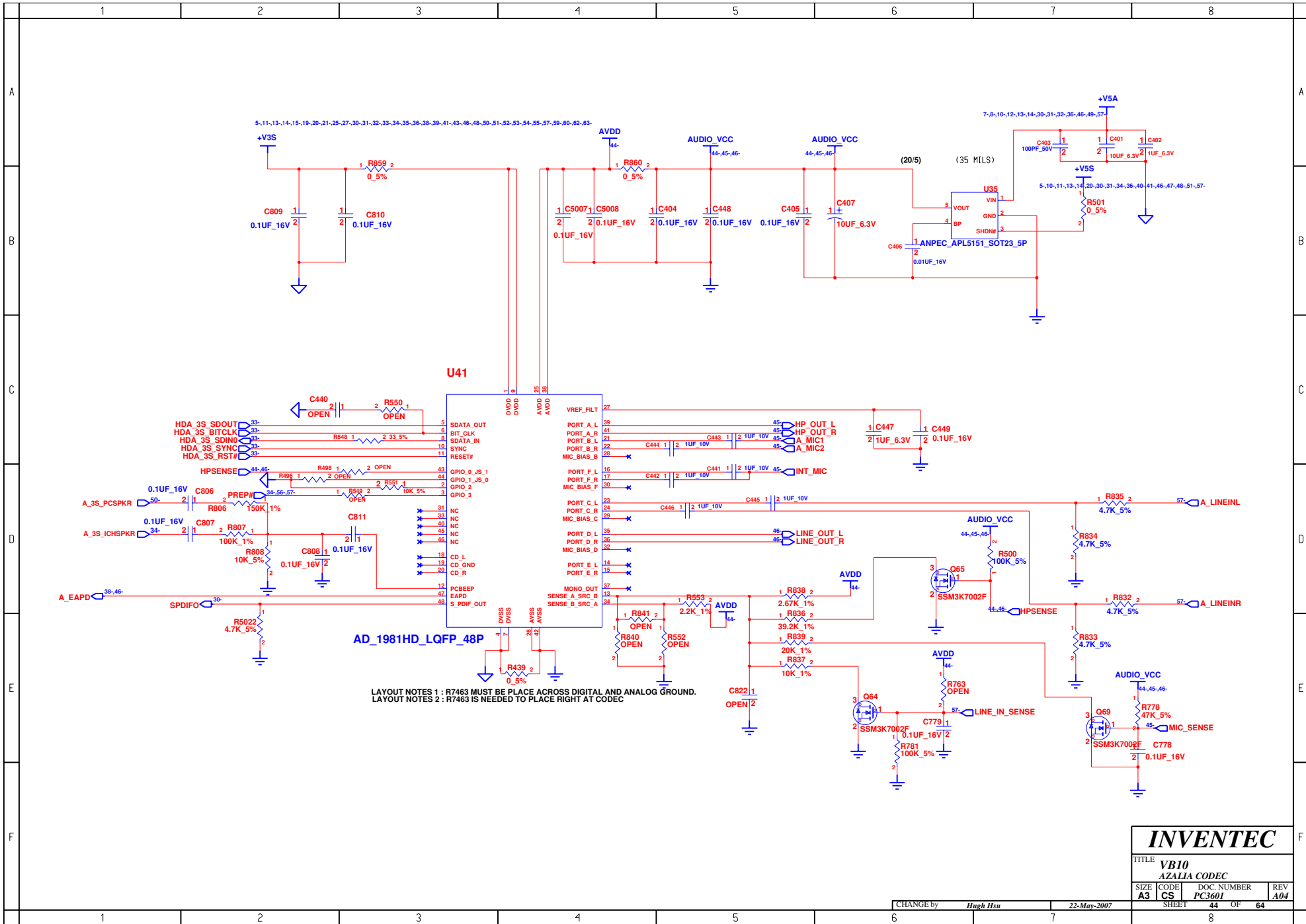


INVENTEC

TITLE
VB10
 FINGER PRINT CONN

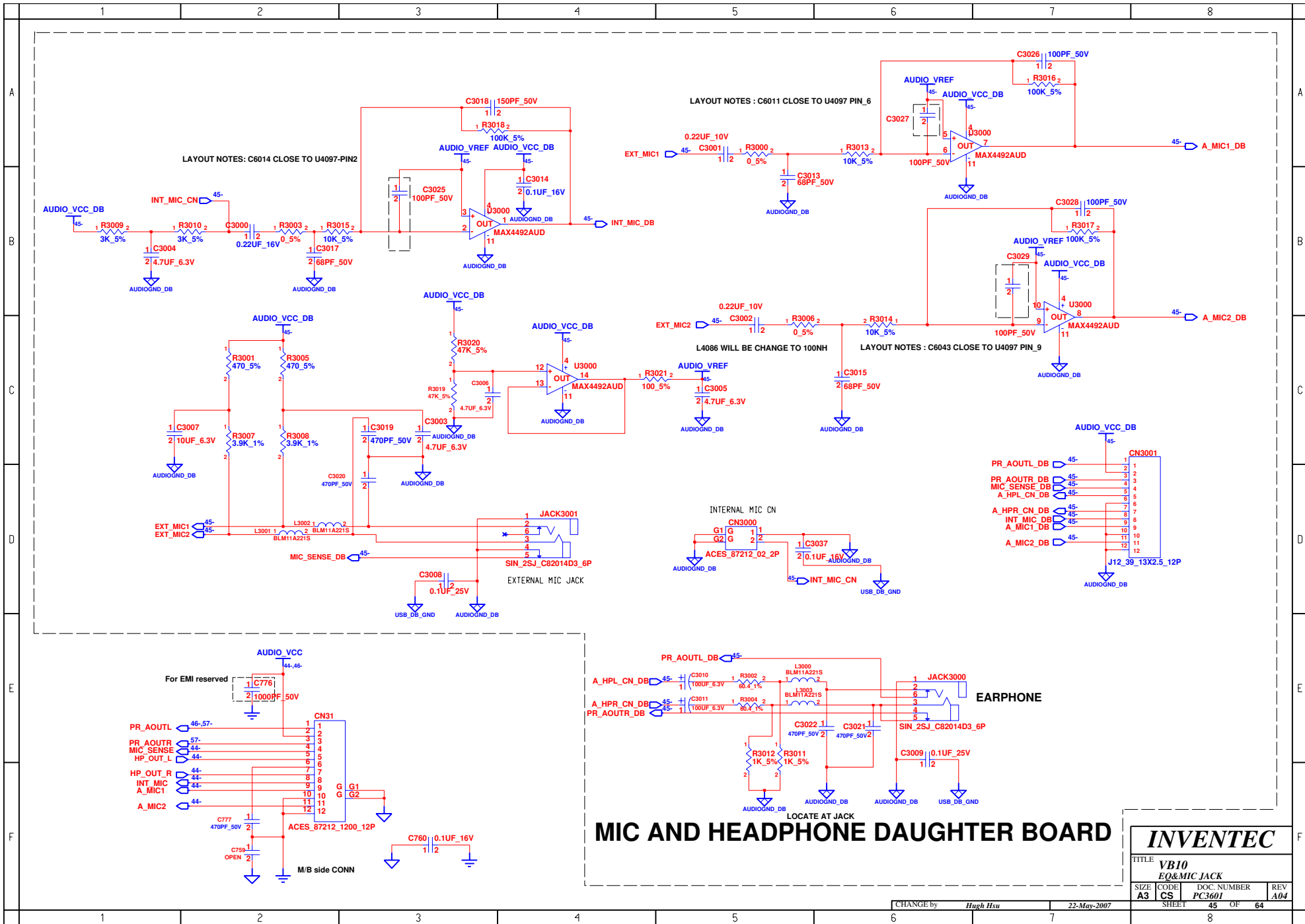
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
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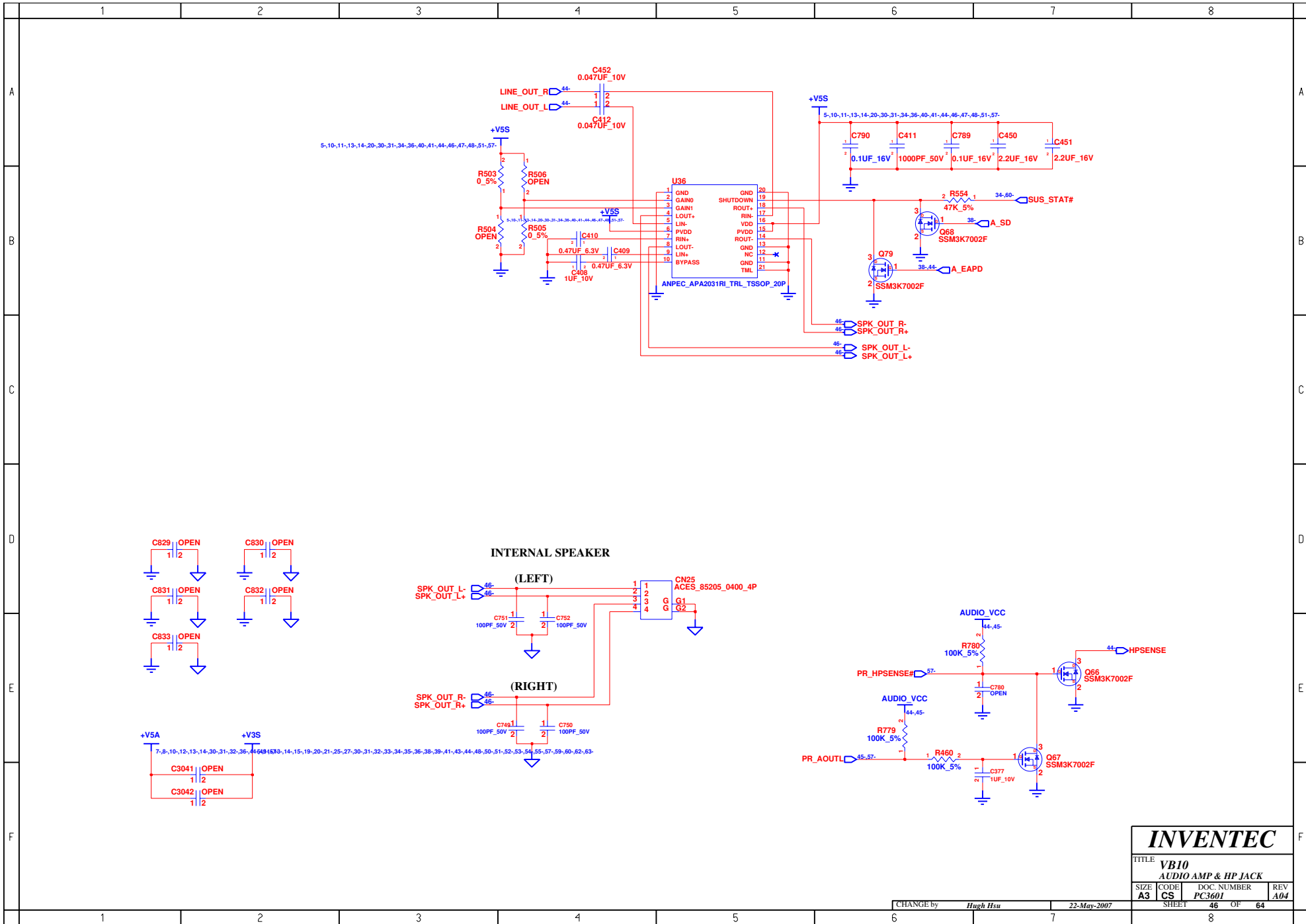
CHANGE by *Hugh Hsu* 22-May-2007 SHEET 43 OF 64



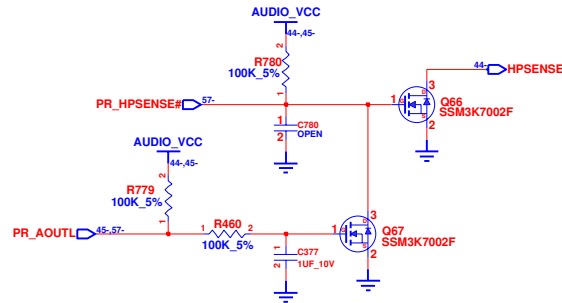
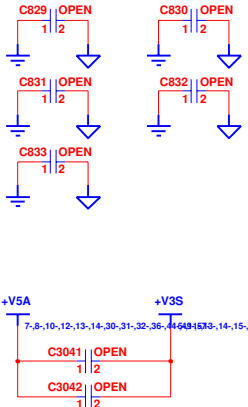
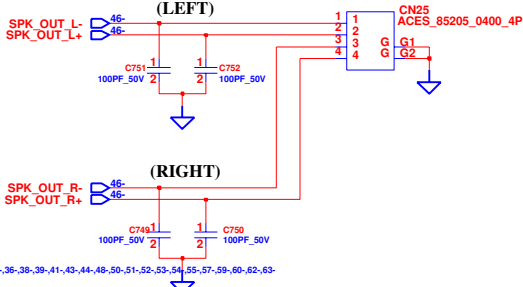
LAYOUT NOTES 1 : R7463 MUST BE PLACE ACROSS DIGITAL AND ANALOG GROUND.
 LAYOUT NOTES 2 : R7463 IS NEEDED TO PLACE RIGHT AT CODEC

INVENTEC			
TITLE VB10 AZALIA CODEC			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 44		OF 64	

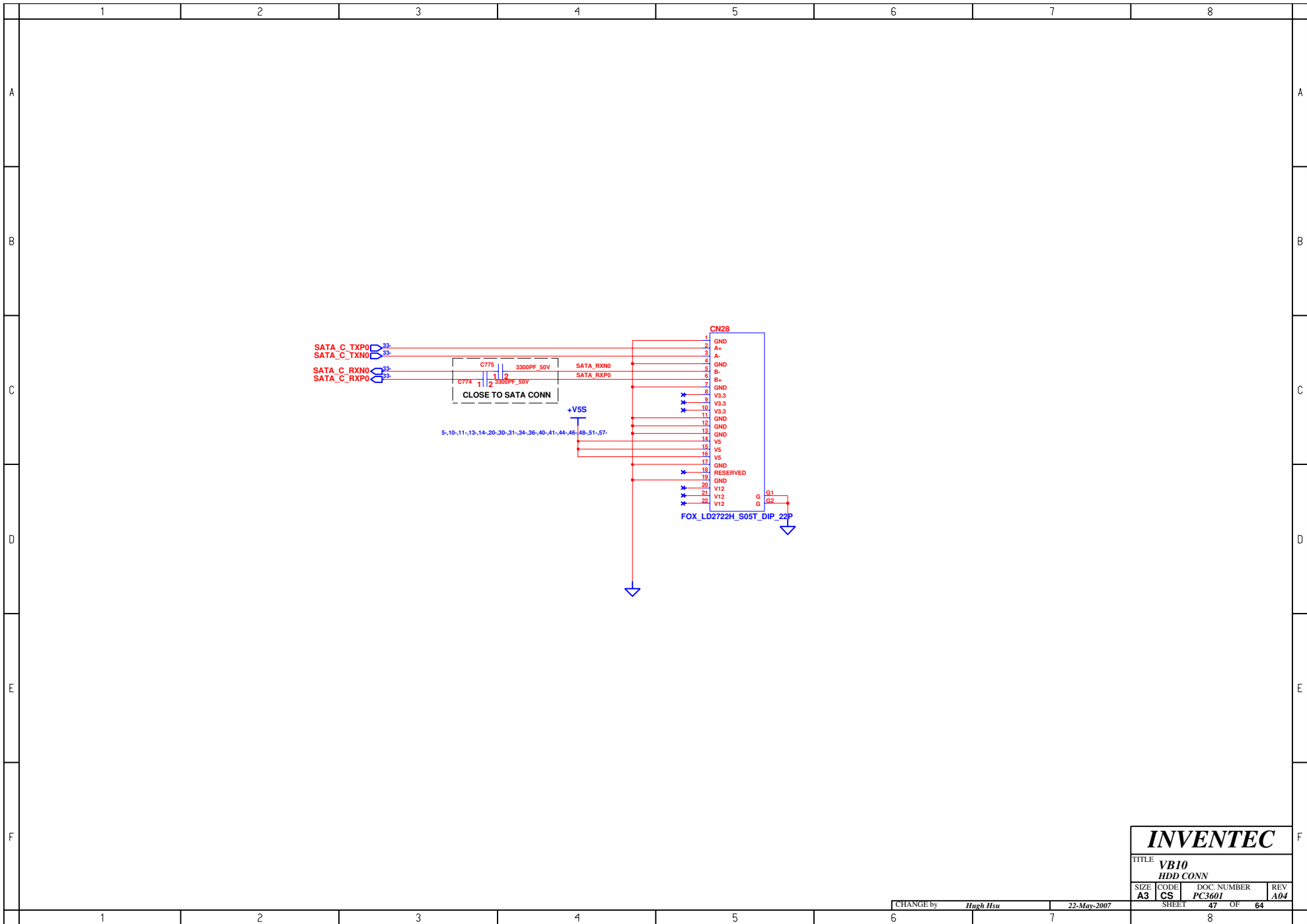




INTERNAL SPEAKER



INVENTEC			
TITLE VB10 AUDIO AMP & HP JACK			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 46		OF 64	

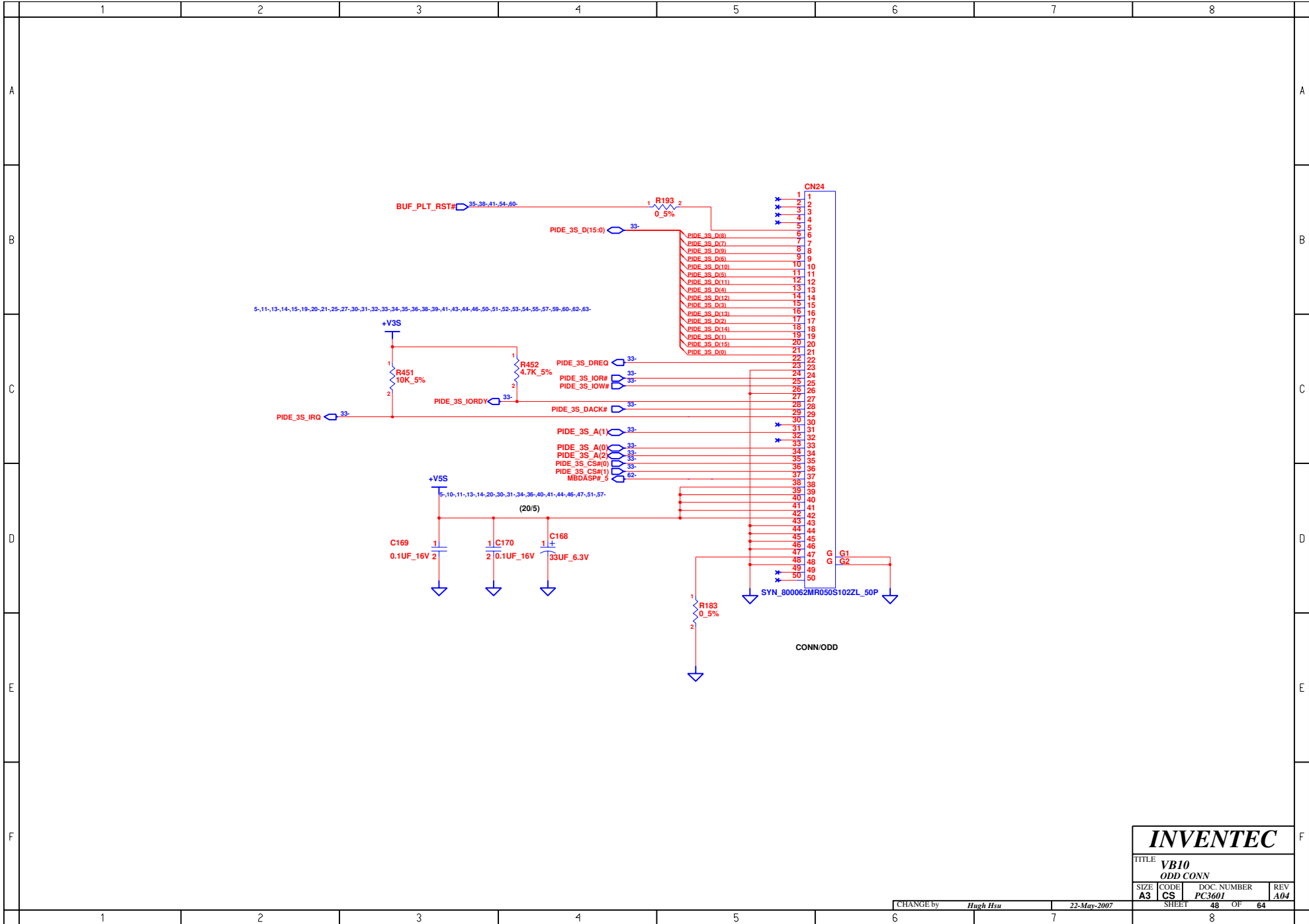


INVENTEC

TITLE			
VB10			
HDD CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04

CHANGE by *Hugh Hsu* 22-May-2007

SHEET 47 OF 64



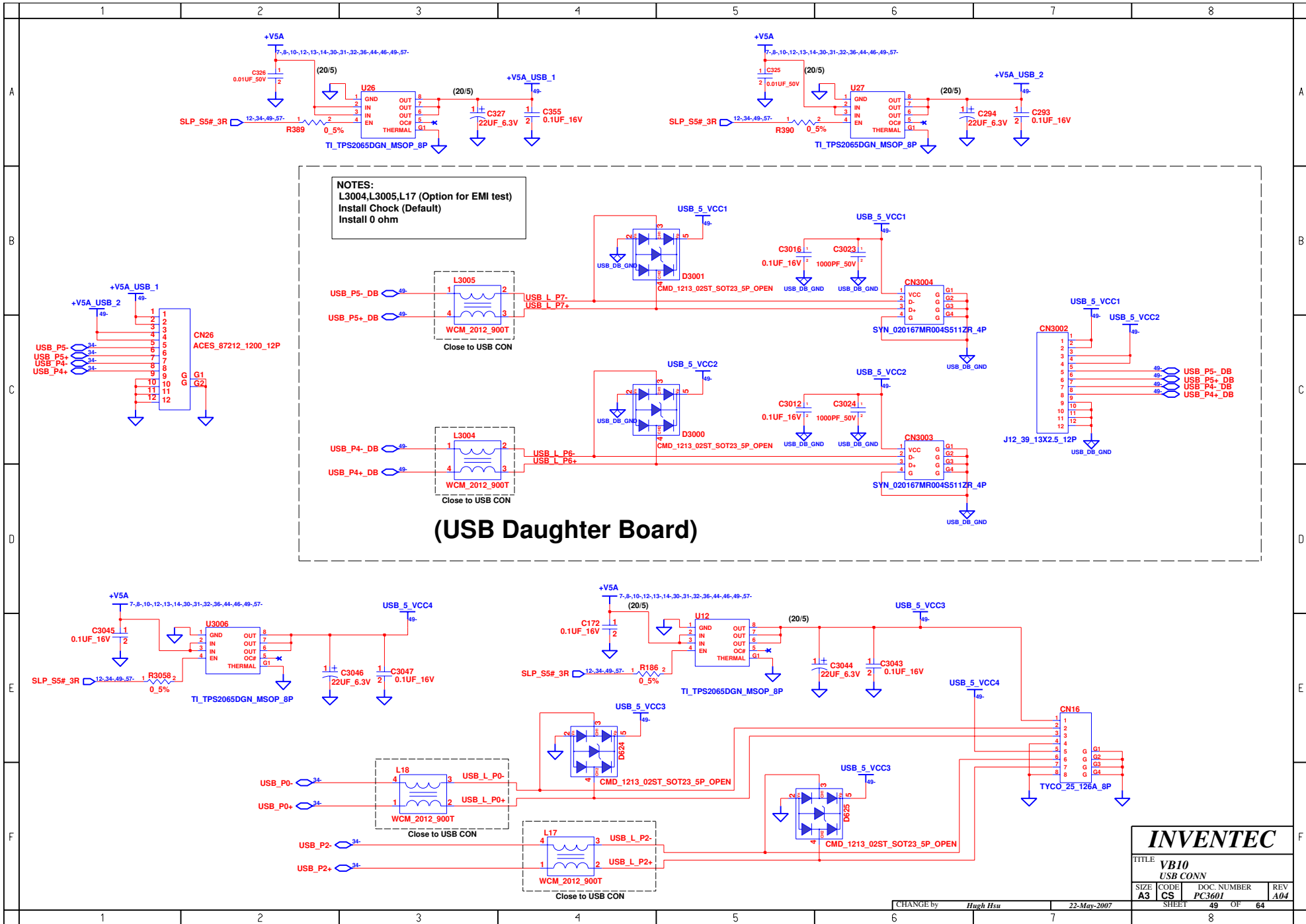
INVENTEC

TITLE
VB10
ODD CONN

SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
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CHANGE by *Hugh Hsu* 22-May-2007

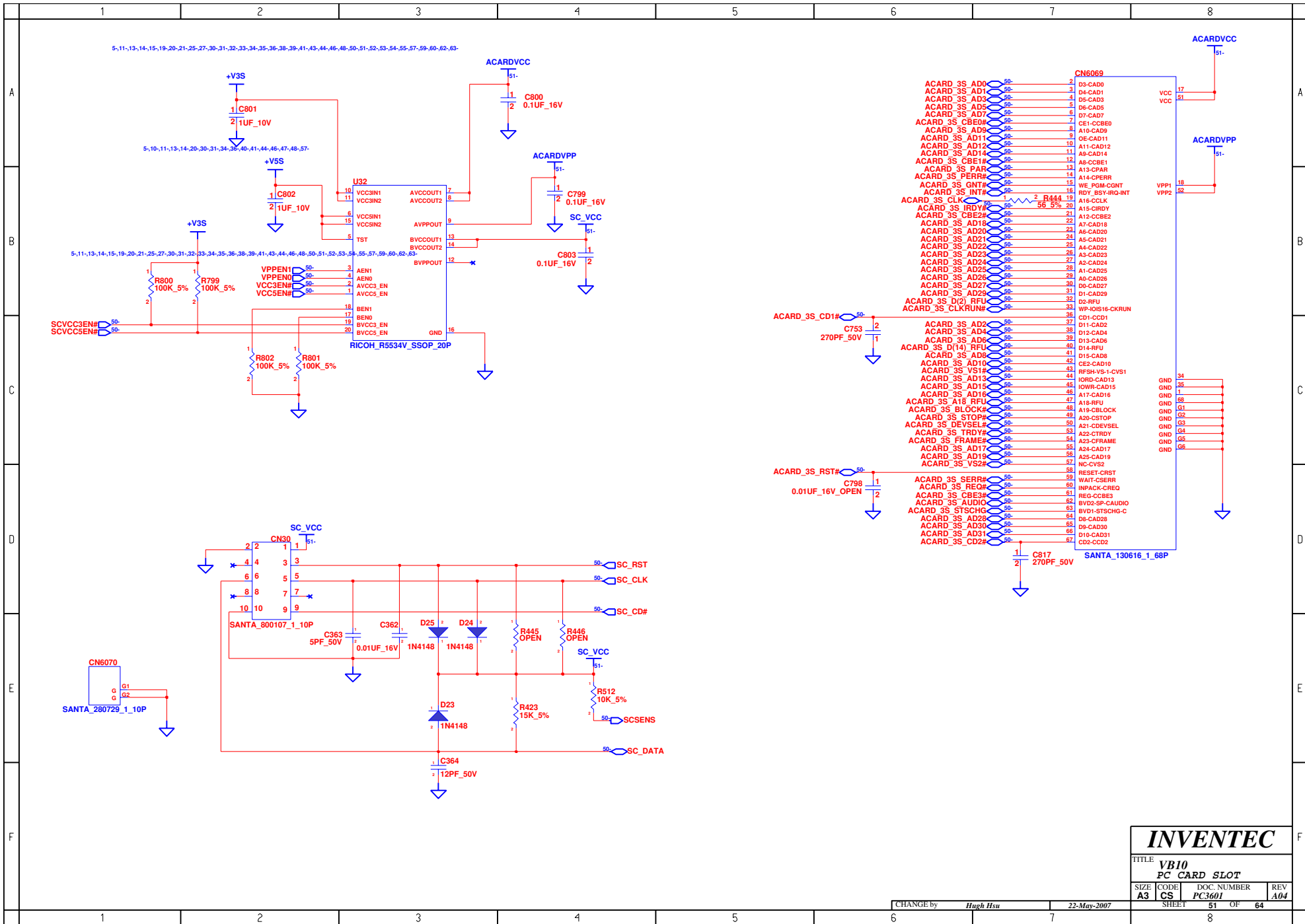
SHEET 48 OF 64



INVENTEC

TITLE			
VB10			
USB CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04
SHEET		OF	
49		64	

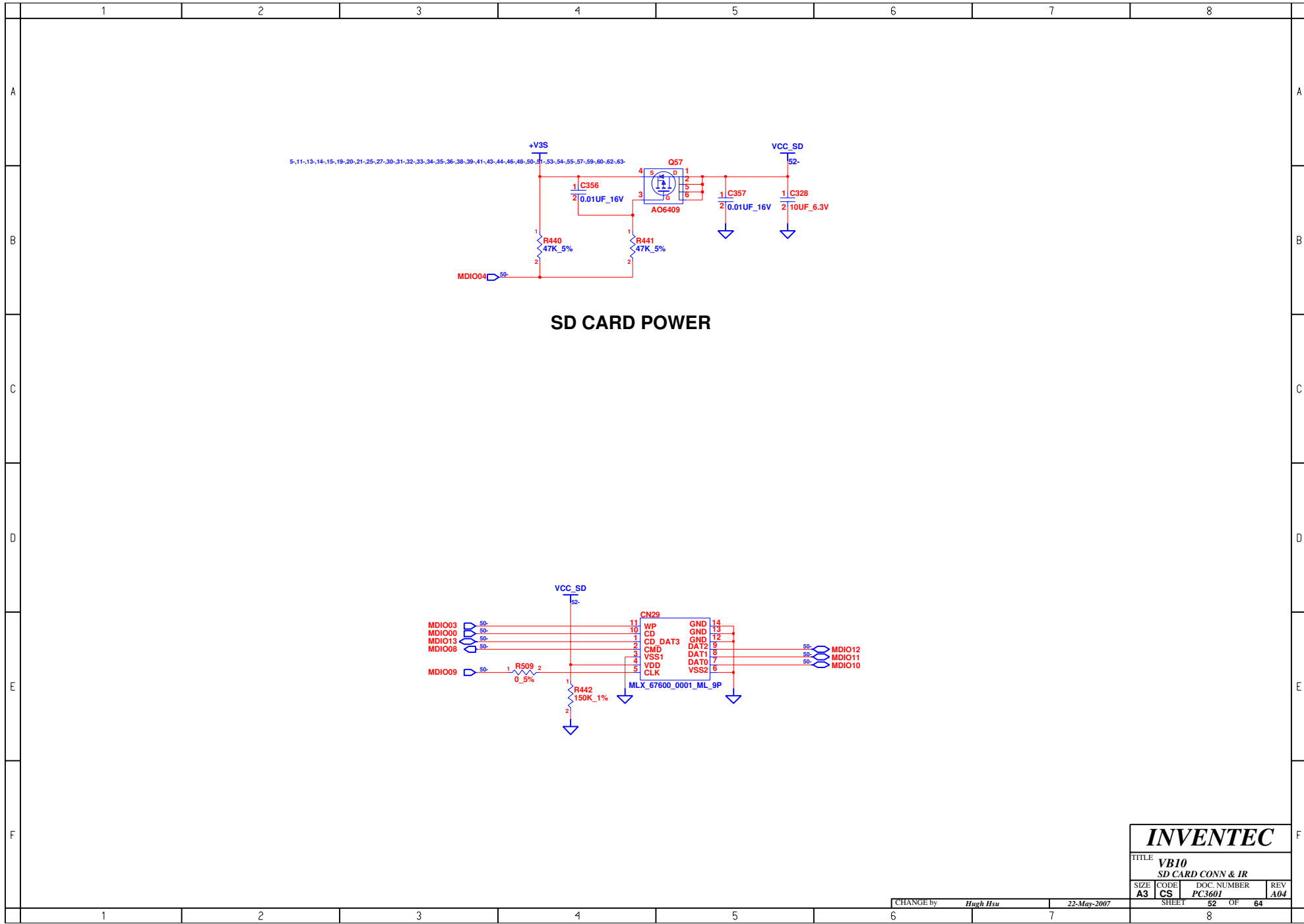
CHANGE by *Hugh Hsu* 22-May-2007



INVENTEC

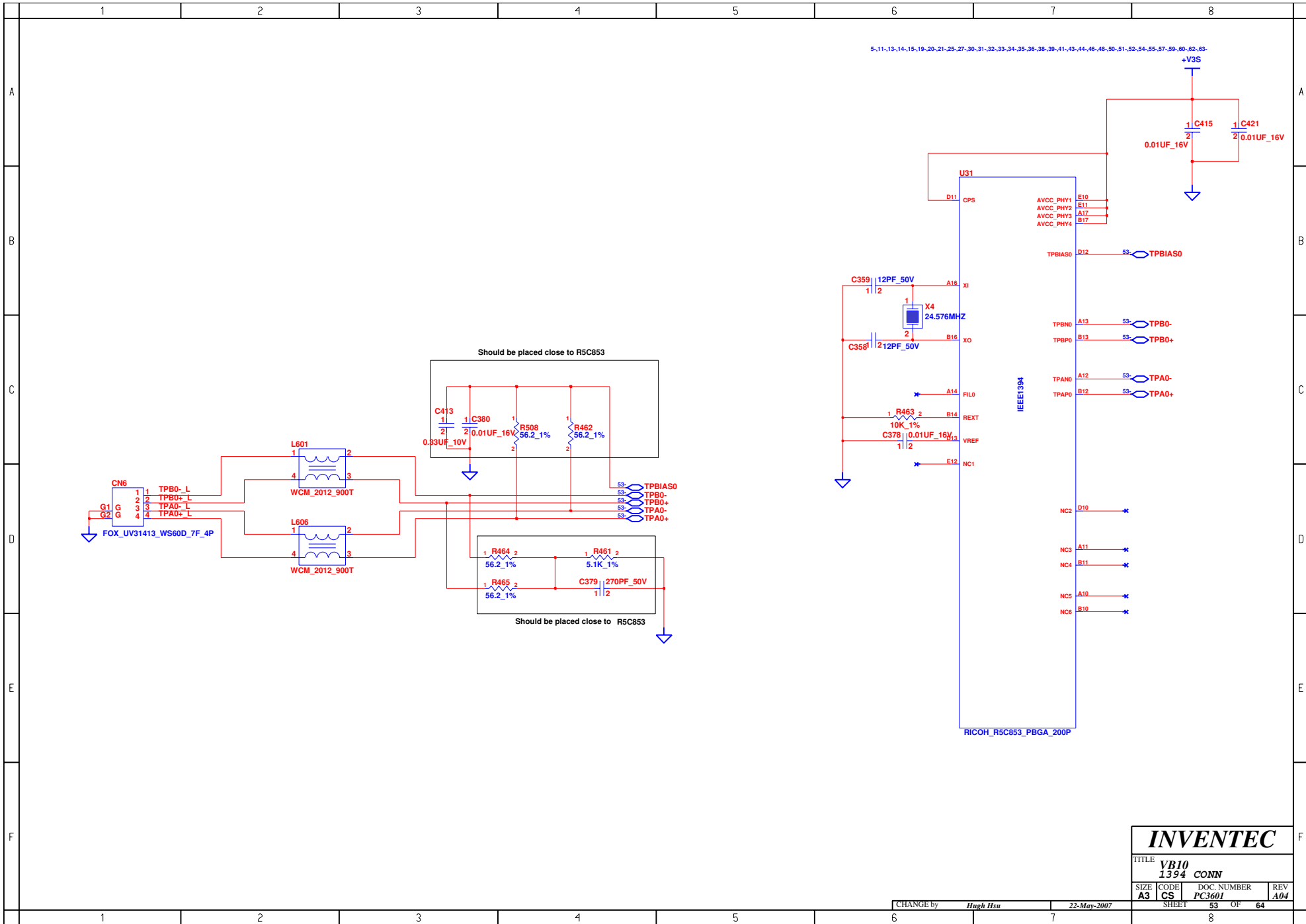
TITLE
VB10
PC CARD SLOT

SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04



SD CARD POWER

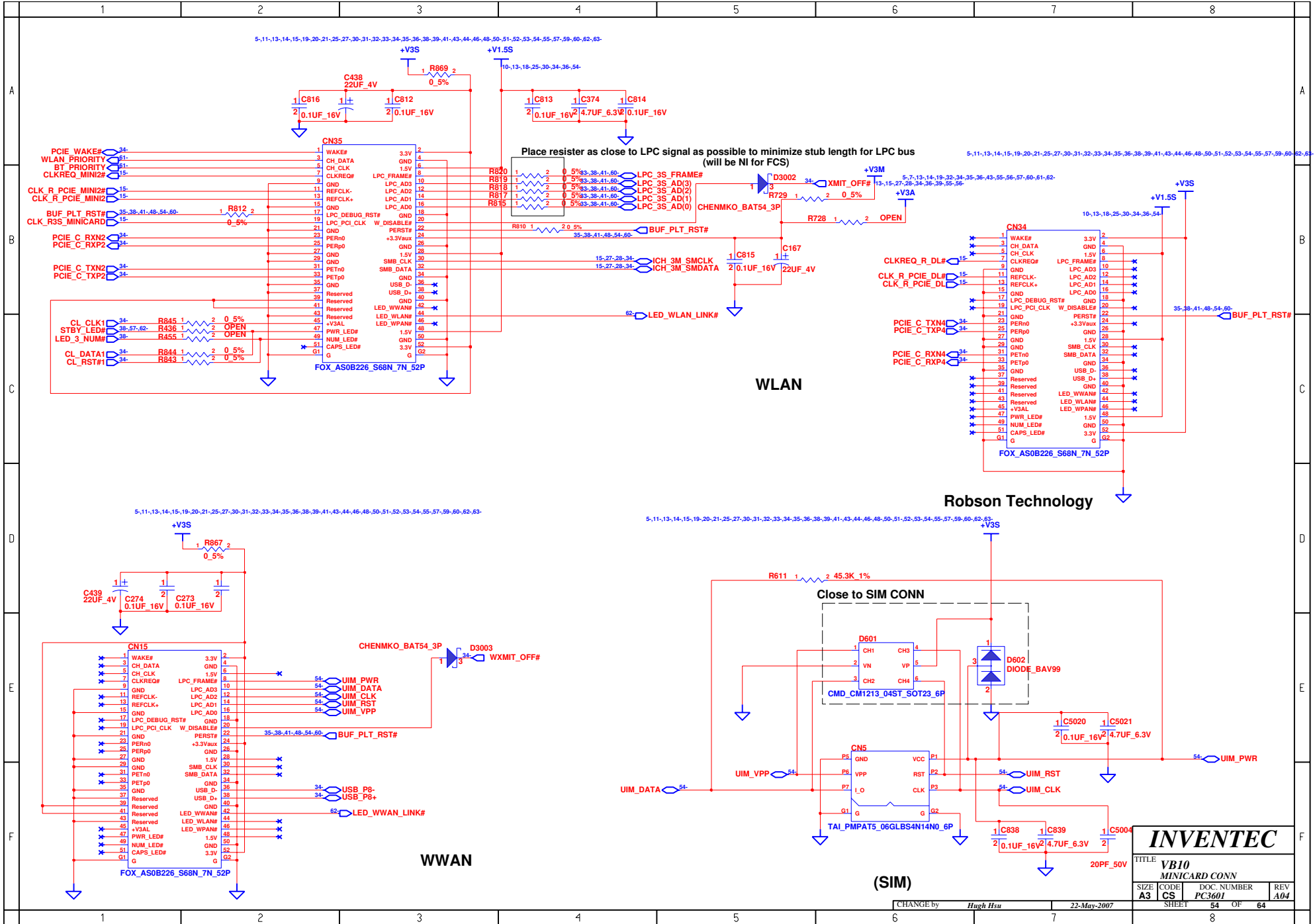
INVENTEC			
TITLE			
VB10			
SD CARD CONN & IR			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04
CHANGE by		22-May-2007	
Hugh Hsu		SHEET 52 OF 64	



INVENTEC

TITLE			
VB10			
1394 CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04

CHANGE by	Hugh Hsu	22-May-2007	SHEET	53	OF	64
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WLAN

Robson Technology

WWAN

(SIM)

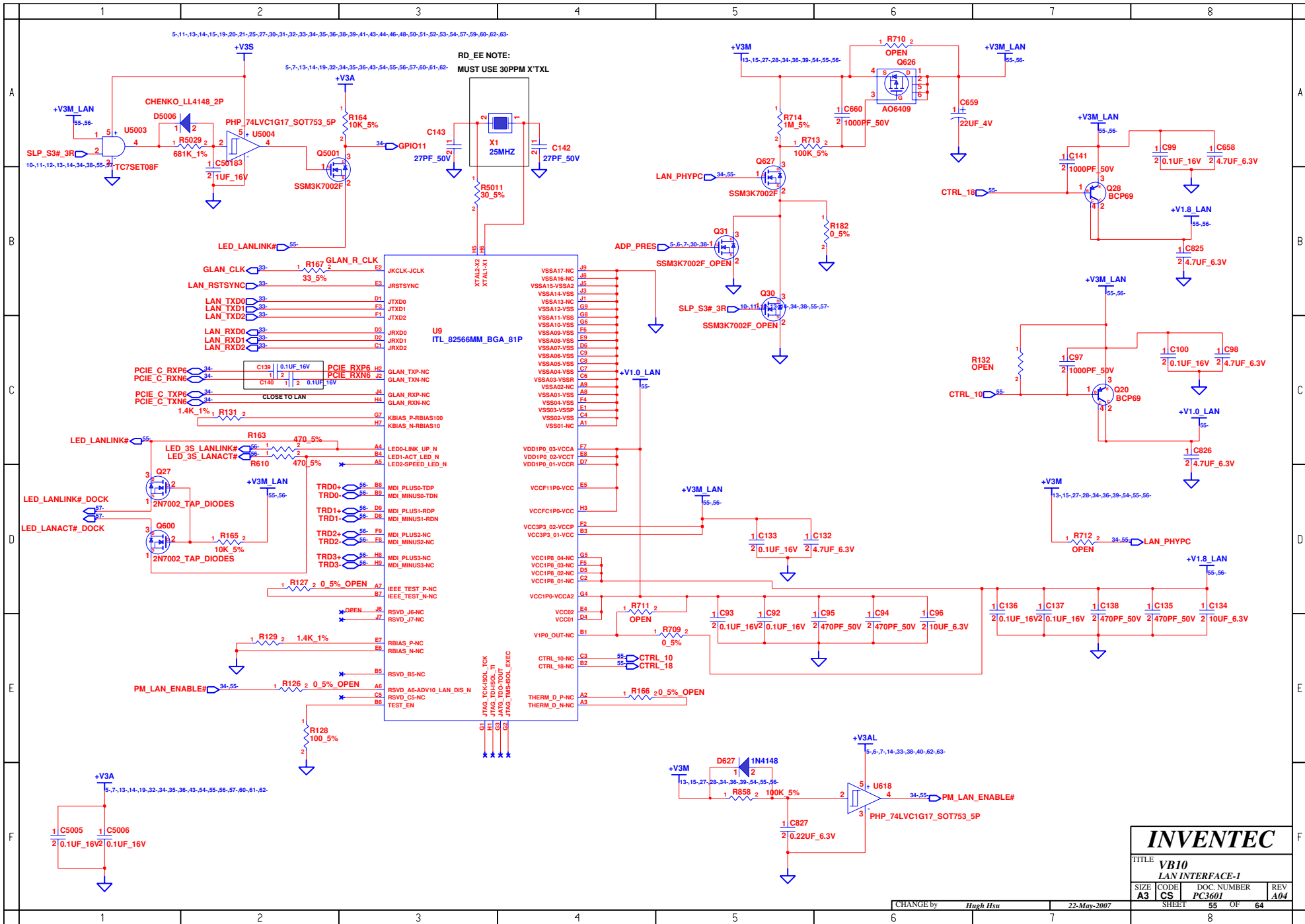
INVENTEC

TITLE **VB10 MINICARD CONN**

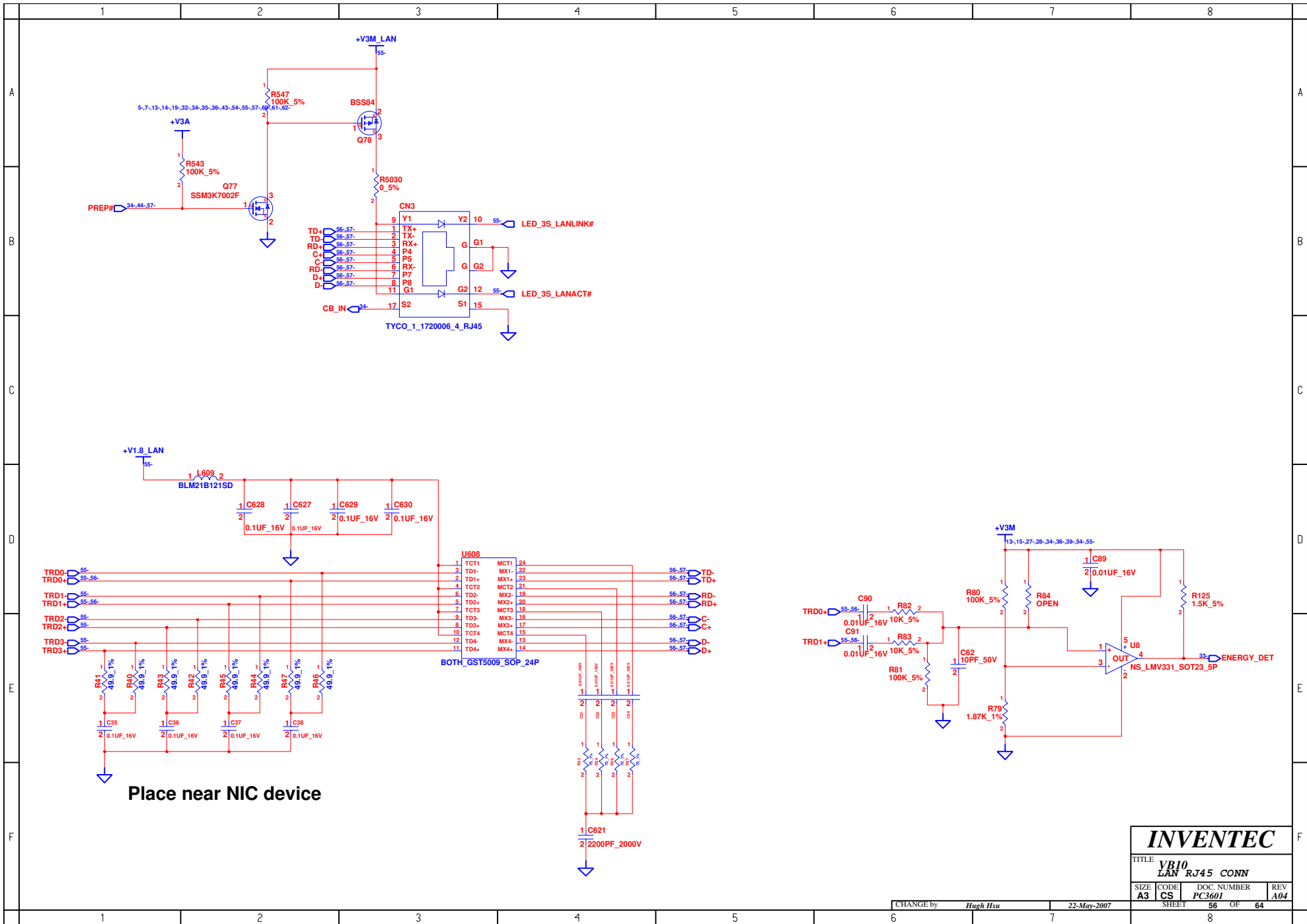
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
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CHANGE by *Hugh Hsu* 22-May-2007

SHEET 54	OF 64
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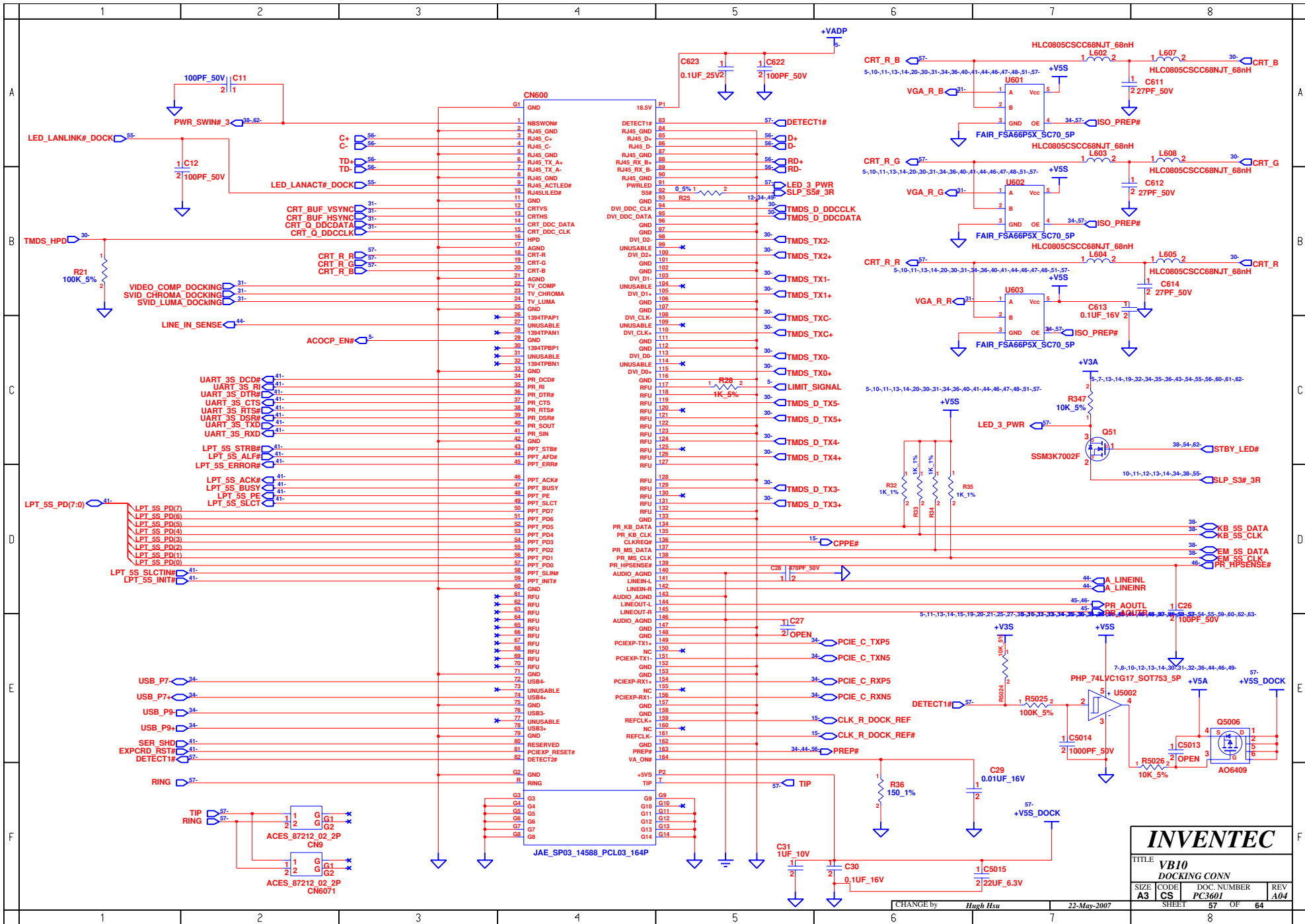


INVENTEC			
TITLE VB10 LAN INTERFACE-1			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 55		OF 64	



Place near NIC device

INVENTEC			
TITLE VB10 LAN RJ45 CONN			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 56		OF 64	



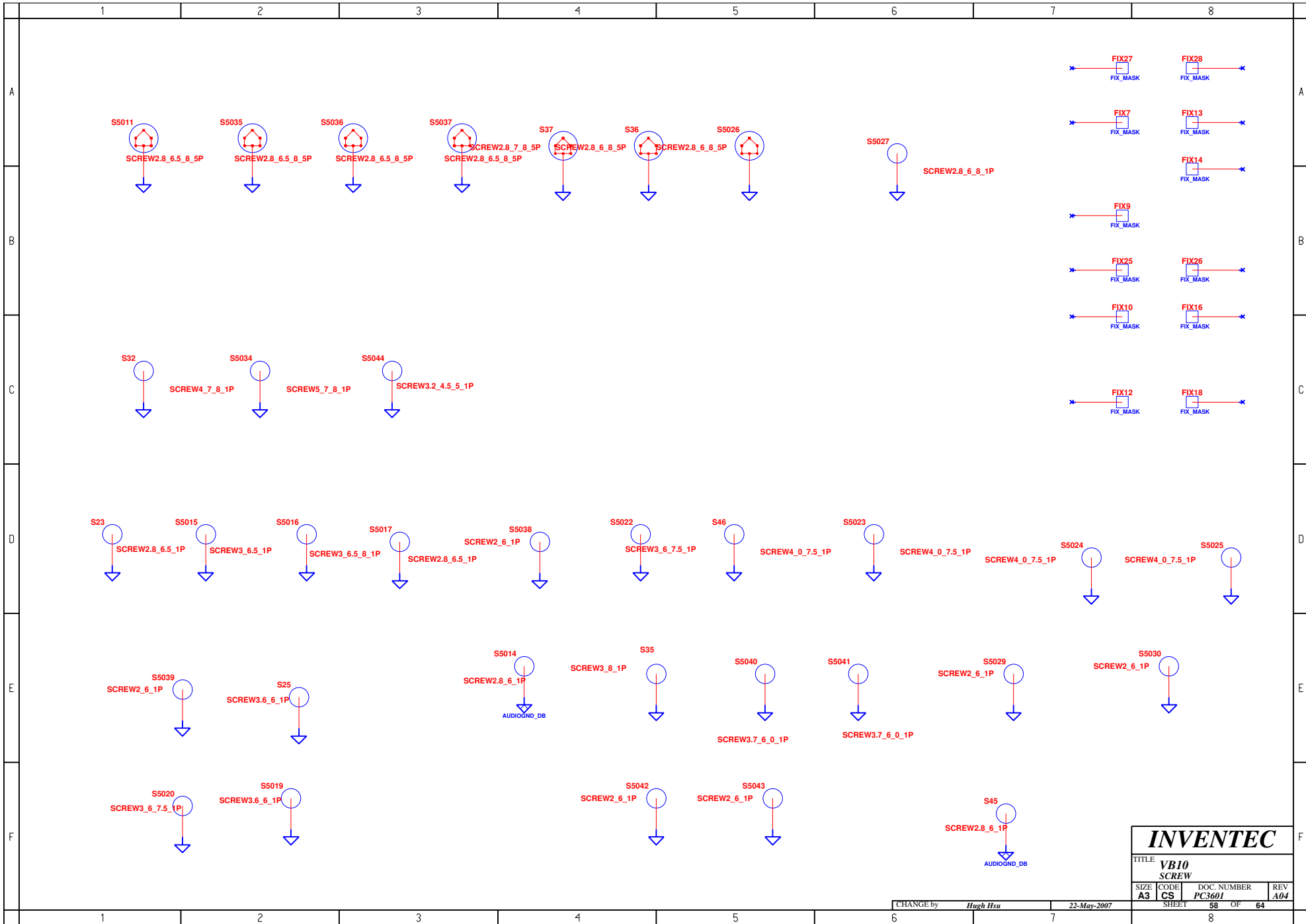
INVENTEC

TITLE **VB10 DOCKING CONN**

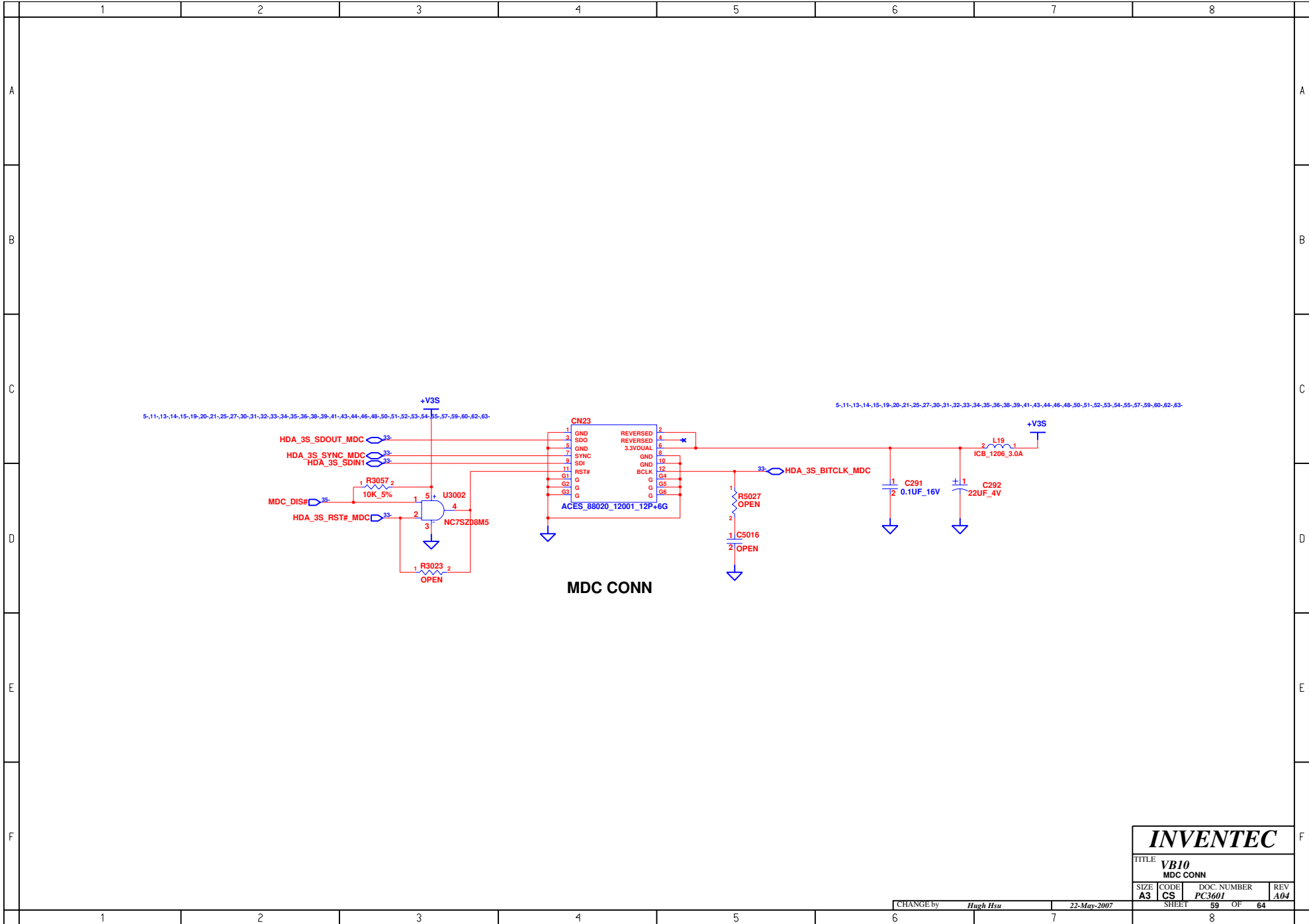
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04

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CHANGE by **Hugh Hsu** 22-May-2007



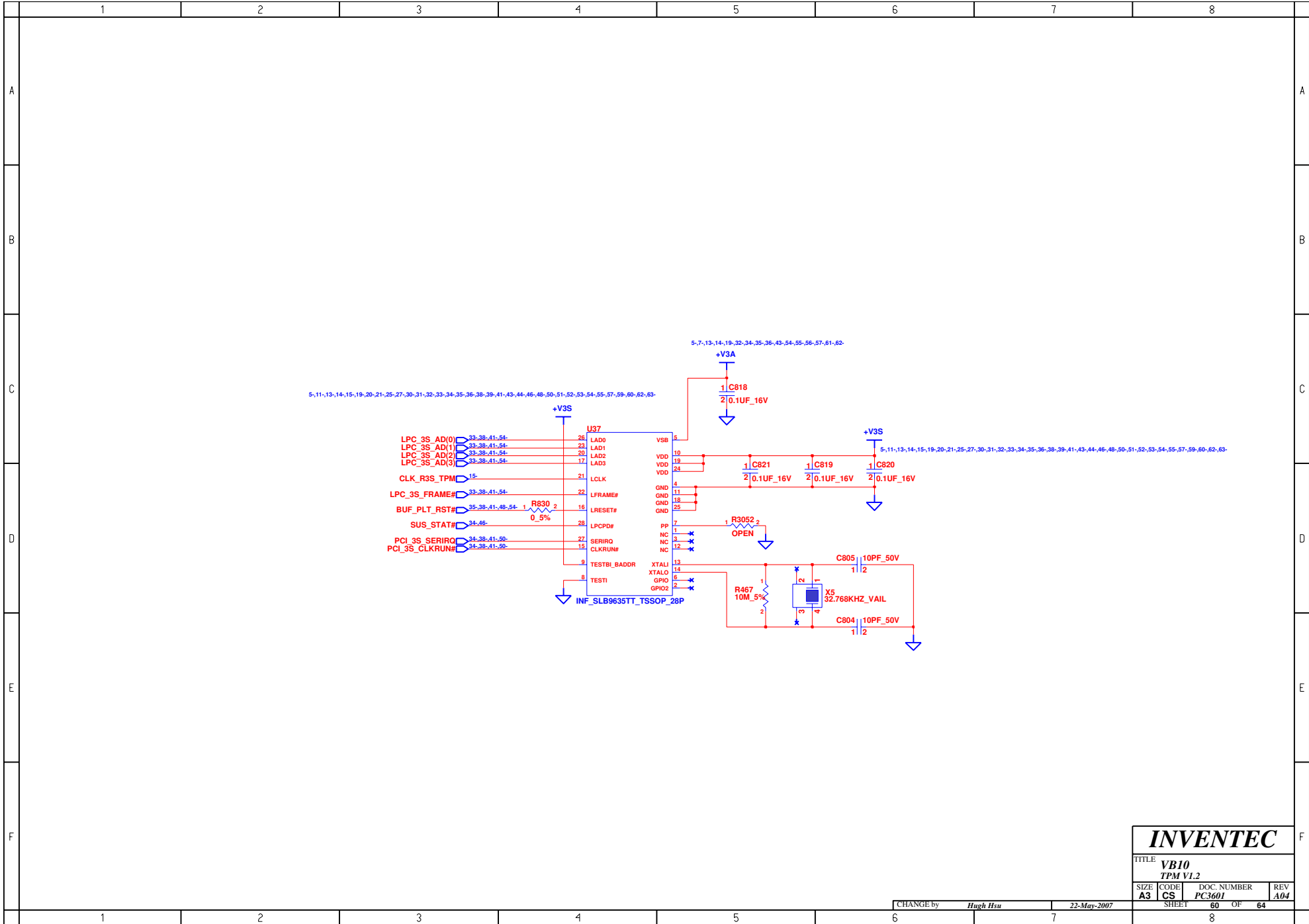
INVENTEC			
TITLE VB10			
SCREW			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 58		OF 64	



INVENTEC

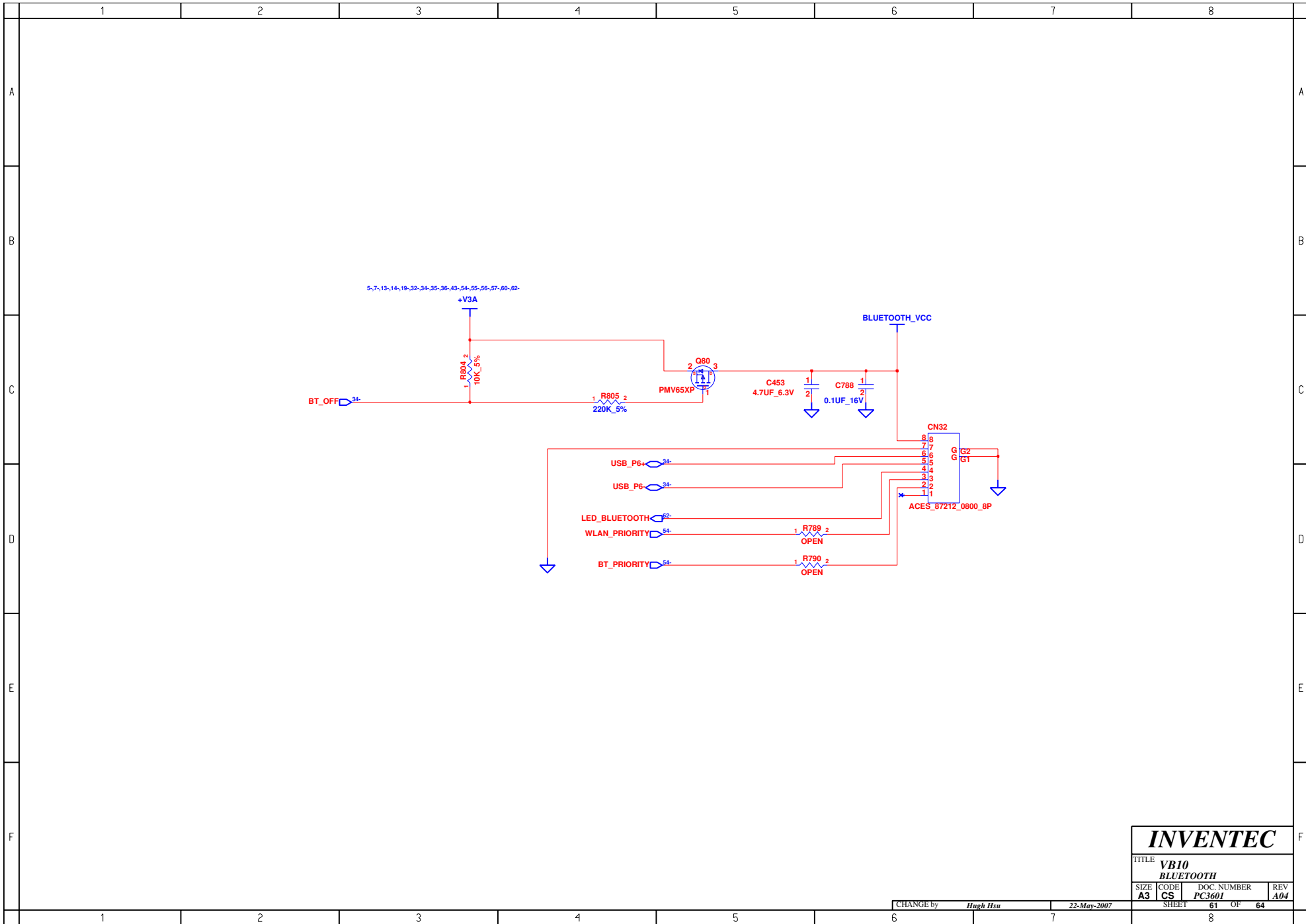
TITLE			
VB10			
MDC CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04
SHEET		OF	
59		64	

CHANGE by *Hugh Hsu* 22-May-2007



INVENTEC

TITLE			
VB10			
TPM V1.2			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04

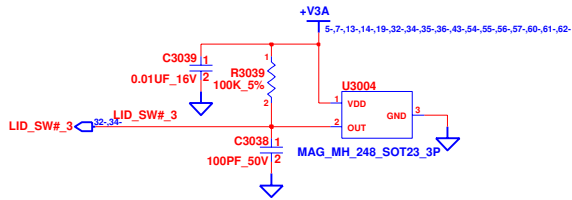


INVENTEC

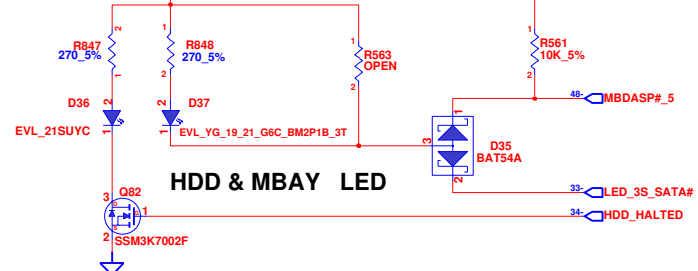
TITLE			
VB10			
BLUETOOTH			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04
SHEET		61	OF 64

CHANGE by *Hugh Hsu* 22-May-2007

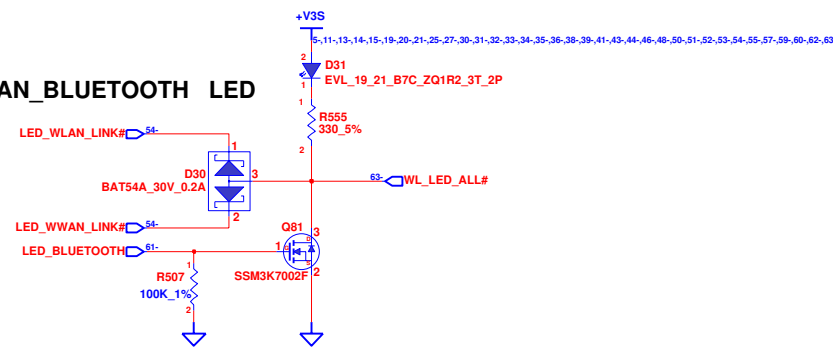
LID SWITCH



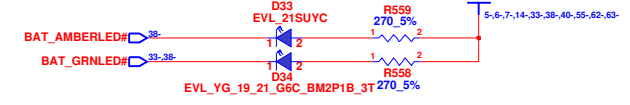
HDD & MBAY LED



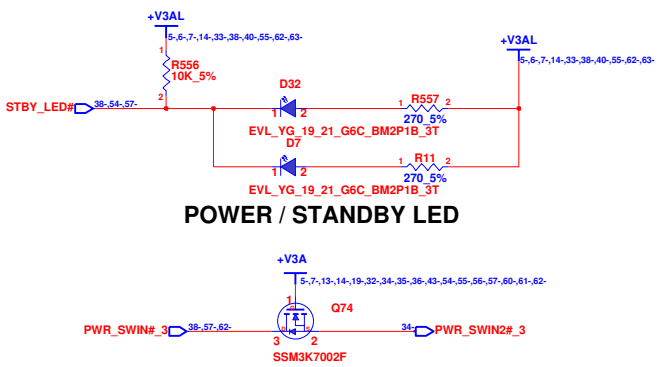
WLAN_WWAN_BLUETOOTH LED



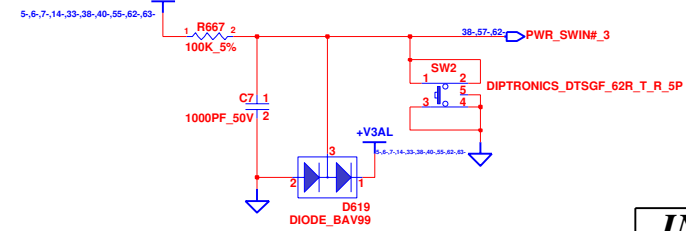
BATTERY-CHARGE LED



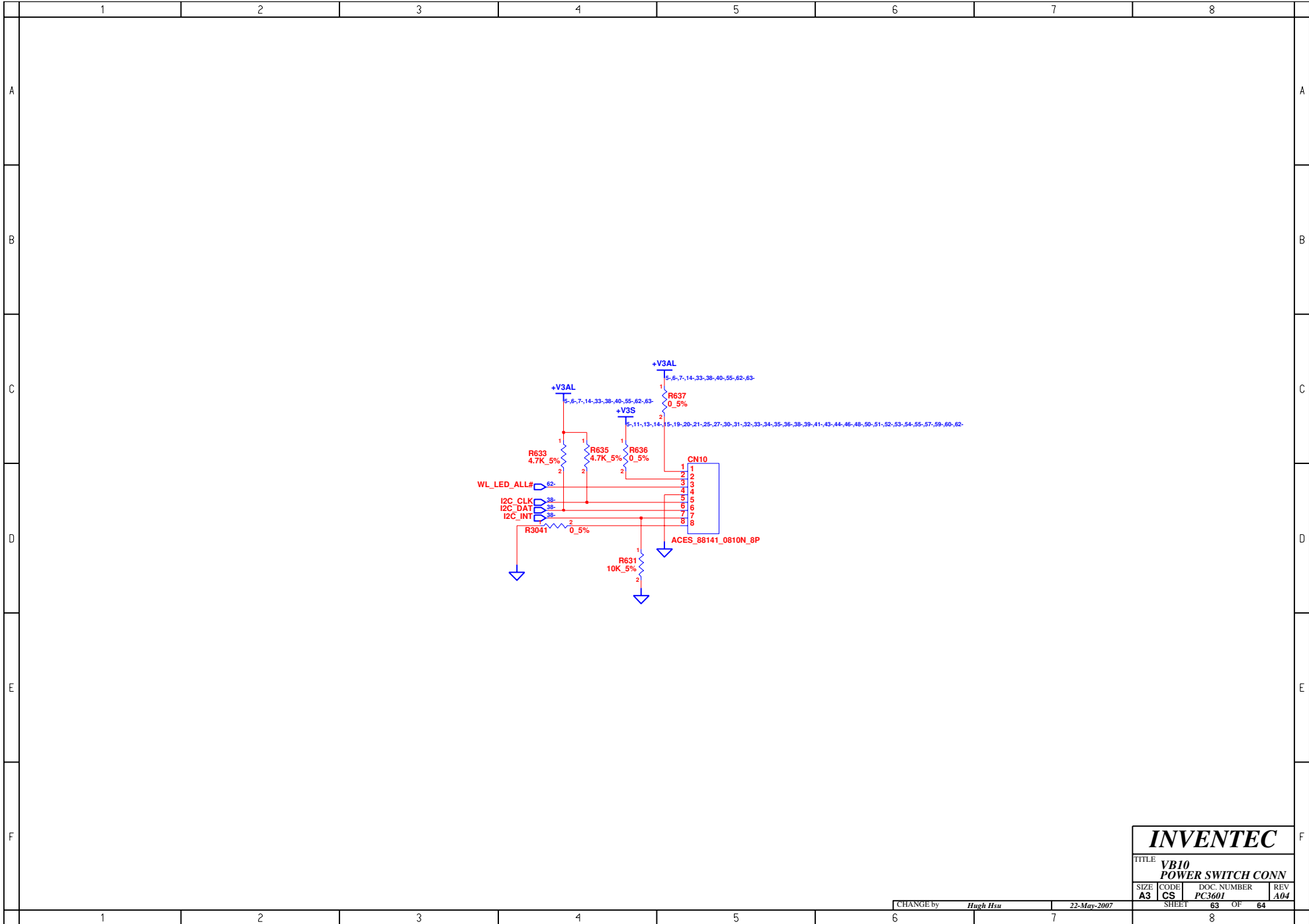
POWER / STANDBY LED



POWER SWITCH



INVENTEC			
TITLE VB10 LID SWITCH & LED			
SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
CHANGE by <i>Hugh Hsu</i>		22-May-2007	
SHEET 62		OF 64	



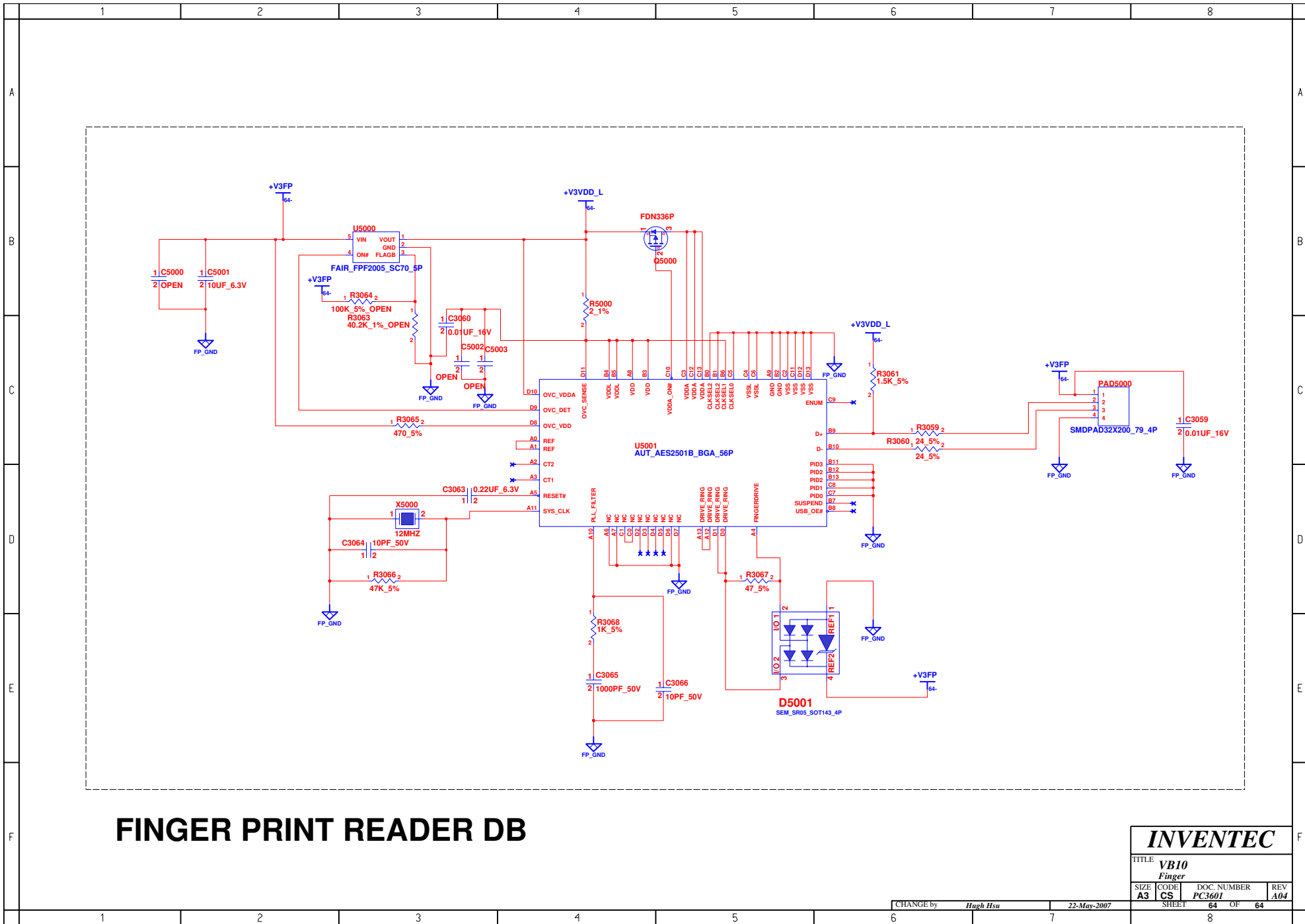
INVENTEC

TITLE **VB10
POWER SWITCH CONN**

SIZE A3	CODE CS	DOC. NUMBER PC3601	REV A04
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CHANGE by *Hugh Hsu* 22-May-2007

SHEET 63 OF 64



FINGER PRINT READER DB

INVENTEC

TITLE			
VB10			
Finger			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	PC3601	A04

CHANGE by *Hugh Hsu* 22-May-2007

SHEET 64 OF 64