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INVENTEC

TITLE *TT1.0*

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02

CHANGE by *Jimmy song* 2-Mar-2007

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Inventec Confidential

AMD
Turion / Sempron
638 OuPGA

DDR2 Interface
DDR2 Interface

DDR II _SODIMM0
DDR II _SODIMM1

ATi
RS690T
FCBGA

PCIE3
PCIE x1 Docking (FF)

NIC
Giga-bit LAN (FF)
BCM 5787M
10/100 LAN (DF)
BCM 5906M

RJ45
RJ45 Docking (FF)

ATi
SB600
549 FCBGA

PCIE0
MINI CARD
WLAN

ANT_L
ANT_R

MINI CARD
WWAN

ANT_L
ANT_R

USB3
3.3V, PCI_Interface, 33MHz

Cardbus
R5C803

SPI
BIOS

SMBus
Accelero Meter
(FF)

Cardbus Smart Card Slot
1394 CONN
(FF)

3.3V, LPC_Interface, 33MHz

TPM
V1.2
(FF)

Super I/O
47N217
(FF)

KBC
SMSC 1070
(128P)
(FF)

Parallel Port Docking (FF)
Serial Port Docking (FF)

PS/2 Port Docking (FF)
Internal Keyboard (FF)

Hyper Transport

A-link

A-link

SATA
HDD

PATA
Fixed ODD

TV Docking (FF)
TV (FF)

LCM (FF)

CRT Docking (FF)
CRT (FF)

CLK GEN
ICS951418

Thermal Sensor

USB0 CONN A

USB1 Bluetooth

USB2 CONN B

USB4 Finger Print (FF)

USB5 Docking (FF)

USB6 Docking (FF)

USB7 DB CONN C (FF)

USB9 DB CONN D (FF)

5 in 1 Slot (FF)
USB8 Flash media
SMSC USB2228 (FF)

Docking connector (FF)

MAIN BATT
TRAVEL BATT

System Charger & DC/DC System power

MDC
Modem Module V1.5

RJ11
RJ11 Docking (FF)

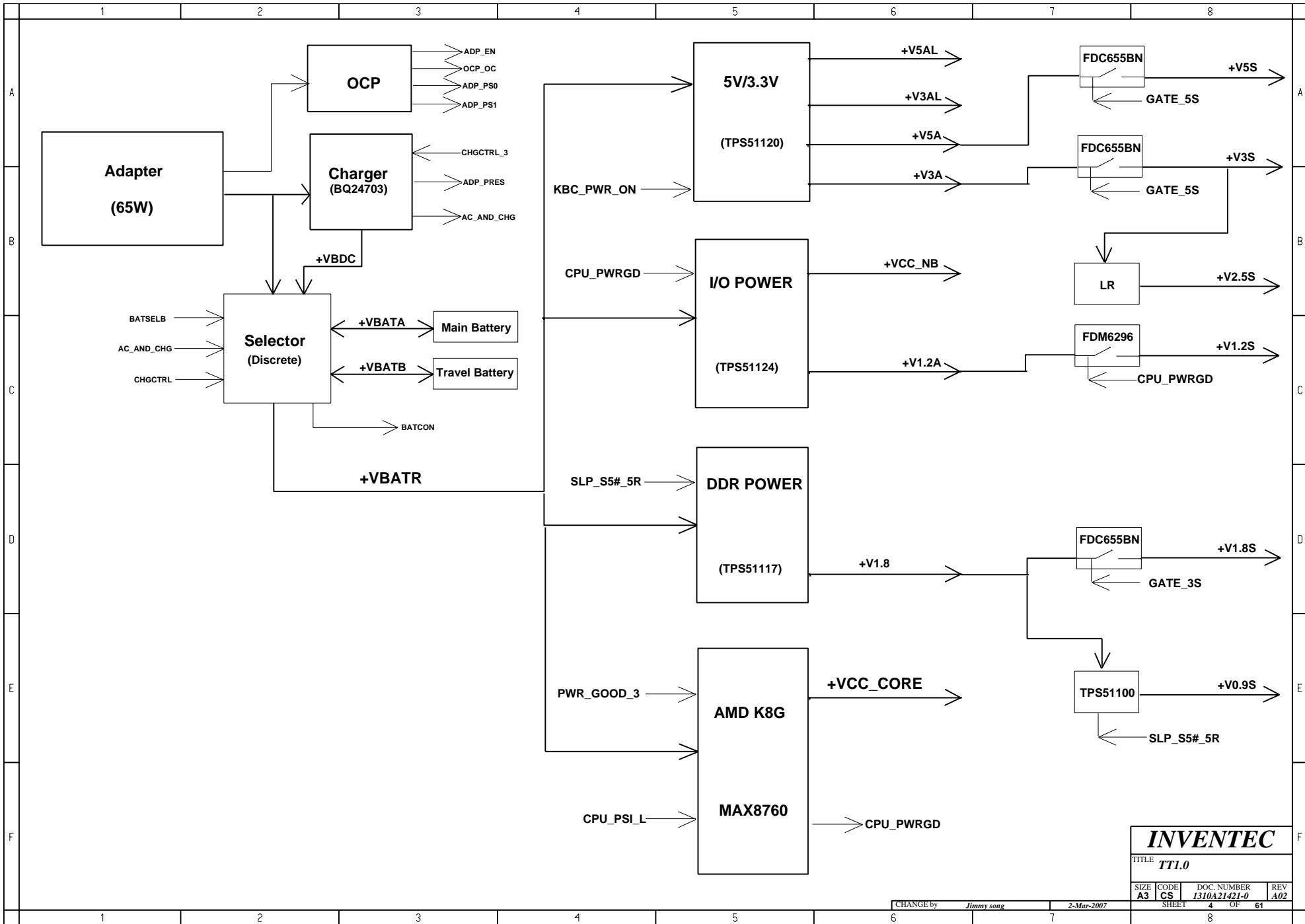
Audio
AD_1981HD

Line In Docking (FF)
Line Out Docking (FF)
MIC In
Head Phone

DF: De-Featured
FF: Full-Featured

INVENTEC

TITLE			
TT1.0			
Block Diagram			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by			SHEET
Jimmy song			3 OF 61
2-Mar-2007			8



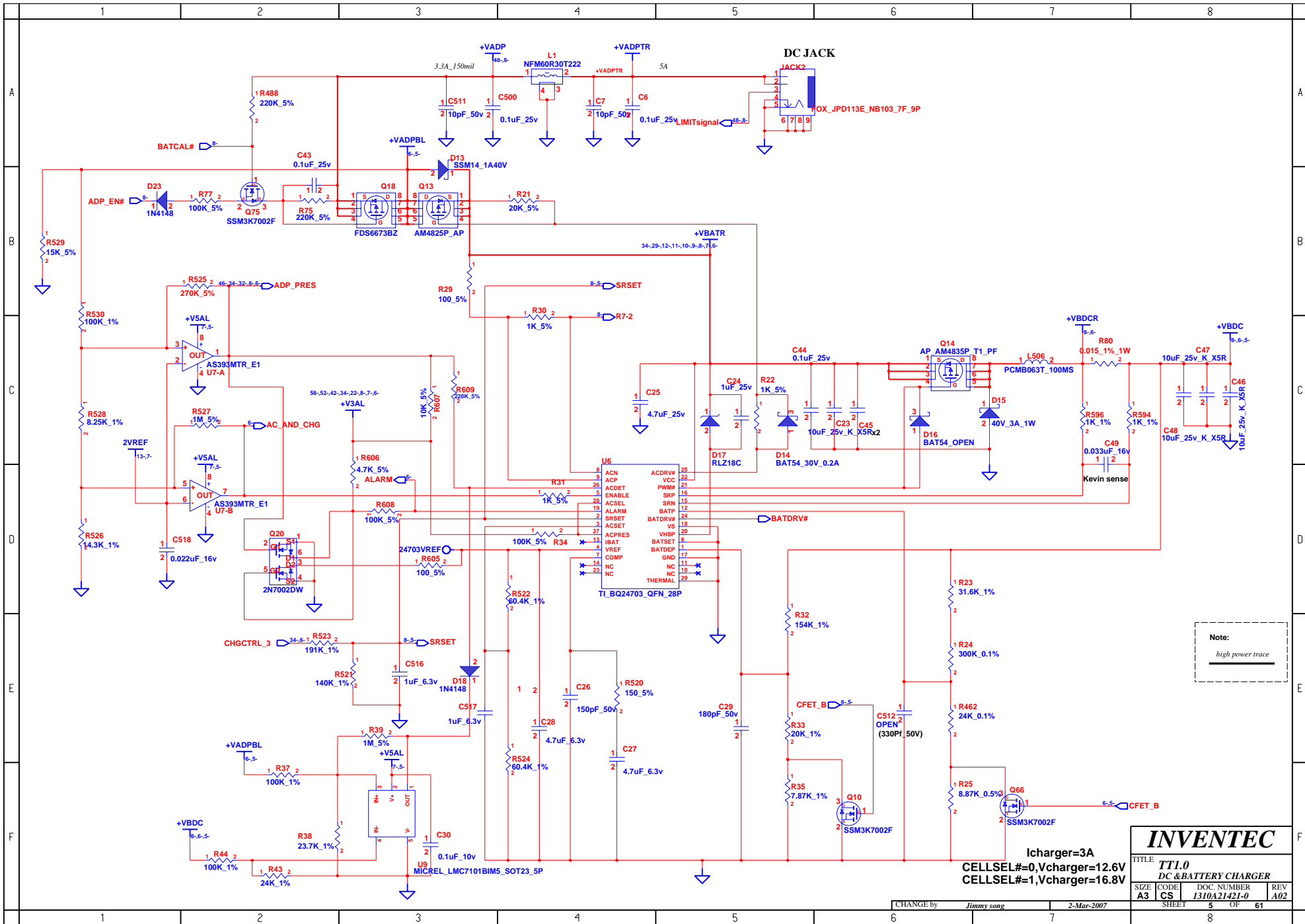
INVENTEC

TITLE *TT1.0*

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02

CHANGE by *Jimmy song* 2-Mar-2007

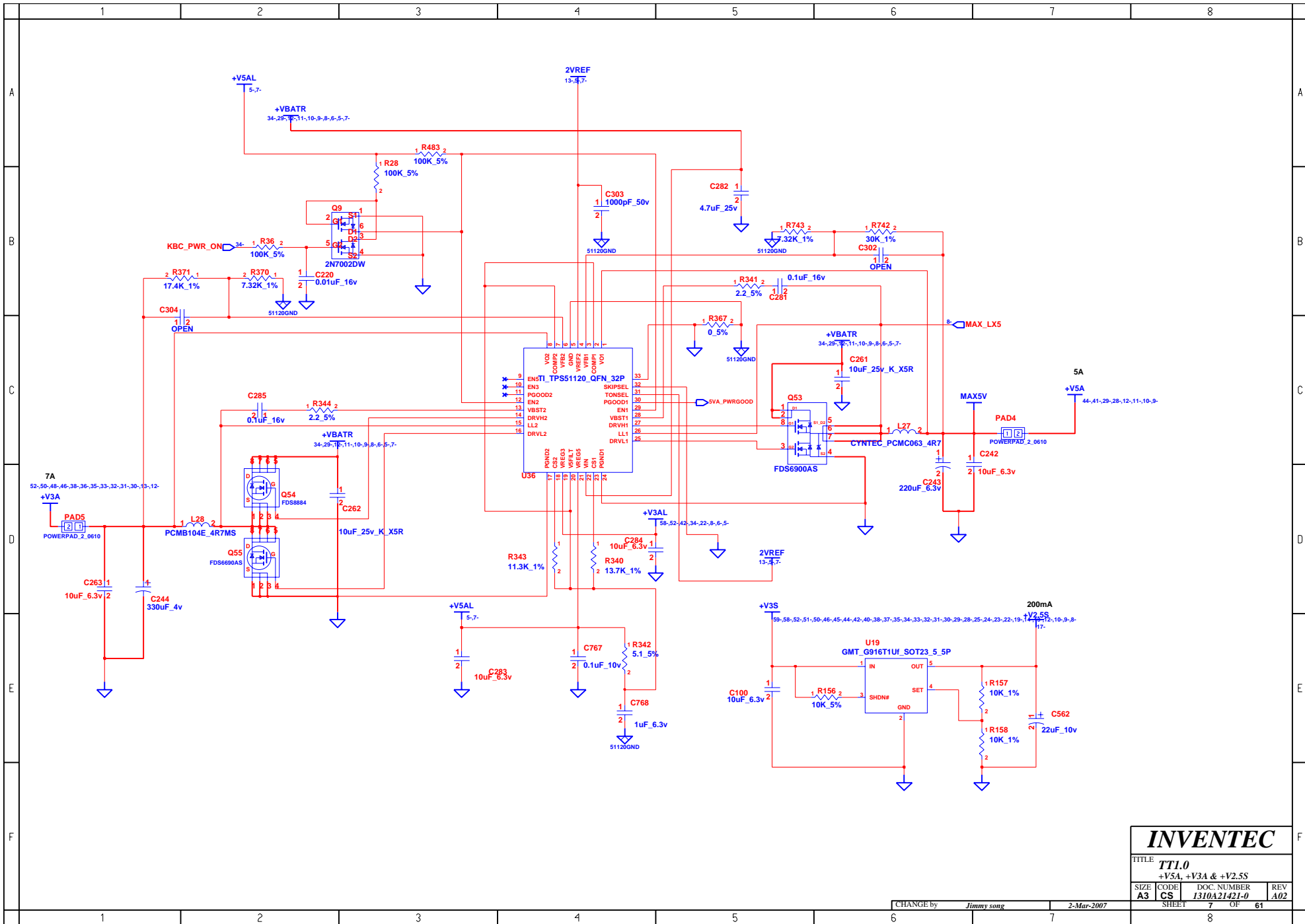
SHEET 4 OF 61



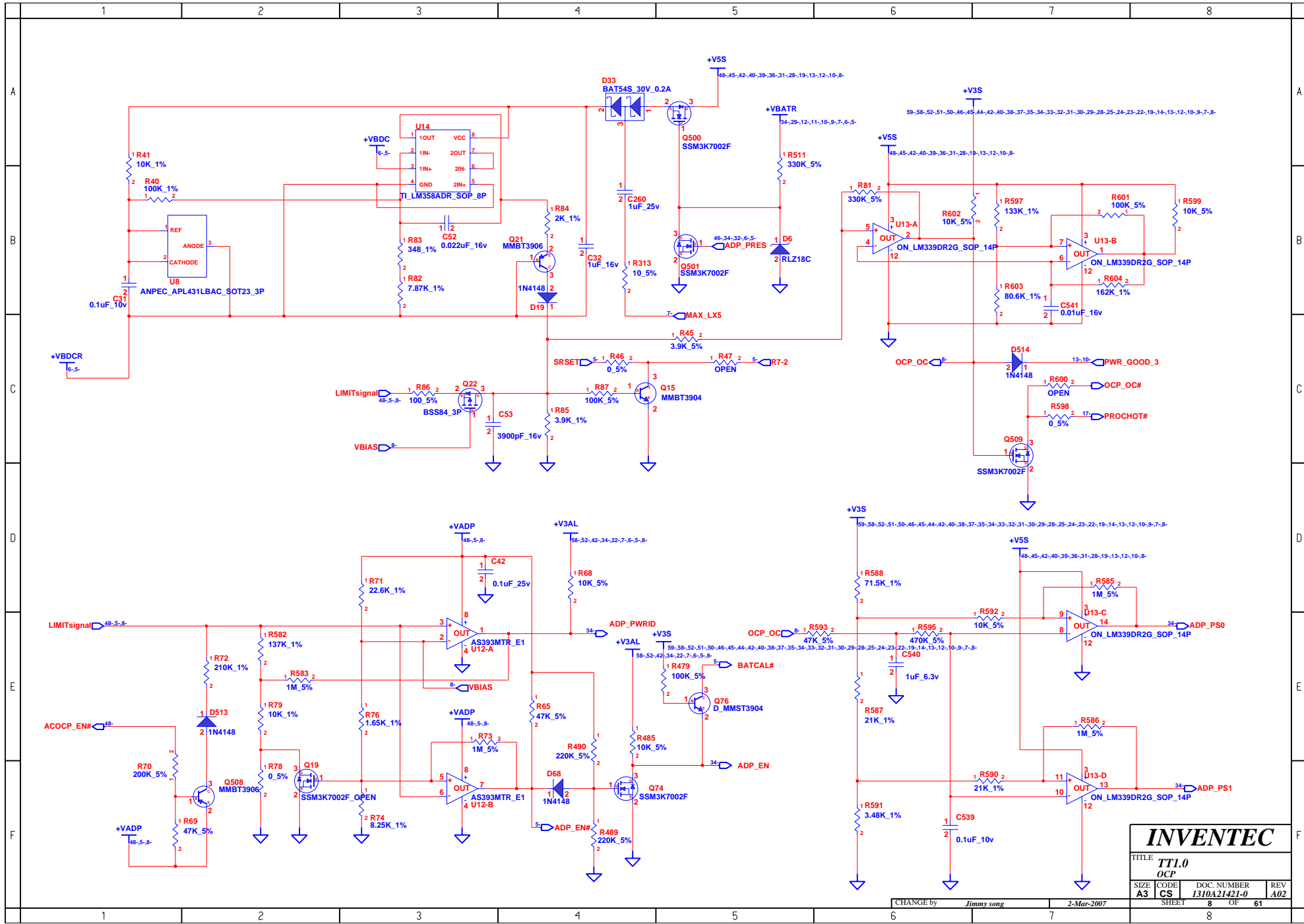
Note:
high power trace

Icharger=3A
CELLSEL#=0,Vcharger=12.6V
CELLSEL#=1,Vcharger=16.8V

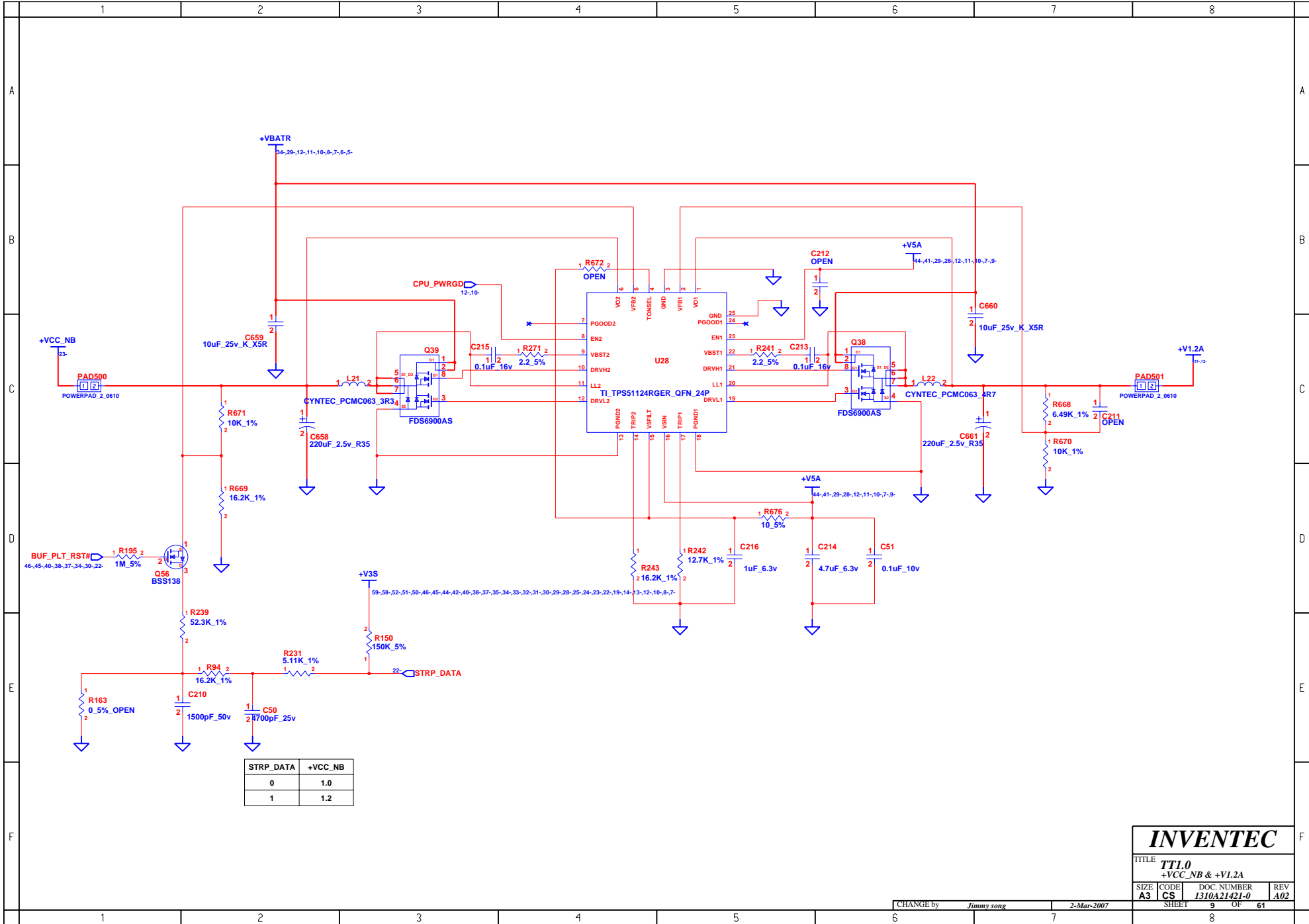
INVENTEC			
TITLE TT1.0			
DC & BATTERY CHARGER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A21421-0	A02
SHEET		OF	
5		61	



INVENTEC			
TITLE TTI.0			
+V5A, +V3A & +V2.5S			
SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 7		OF 61	



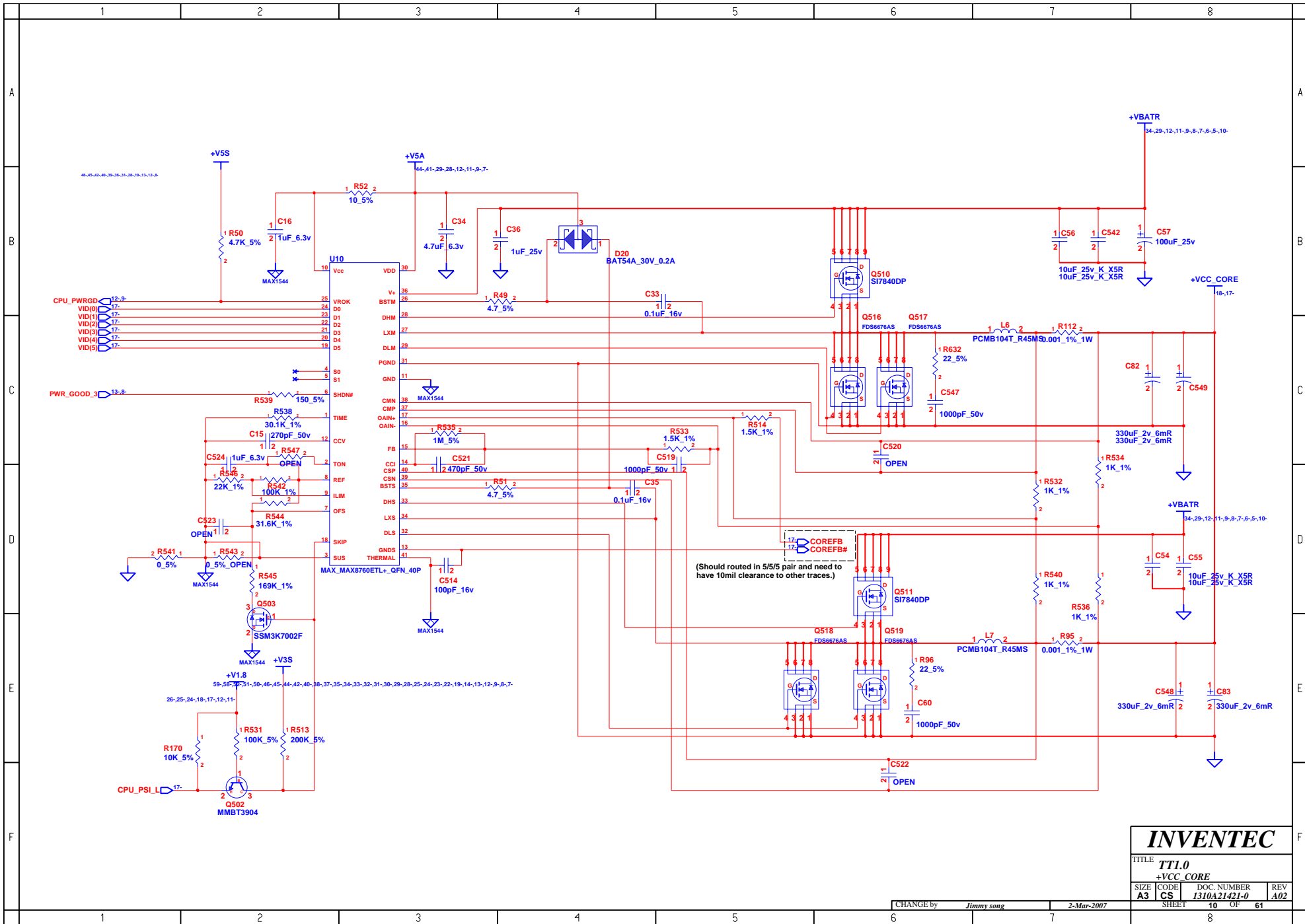
INVENTEC			
TITLE TI1.0			
OCV			
SIZE A3	CODE CS	DOC NUMBER 1310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 8		OF 81	



INVENTEC

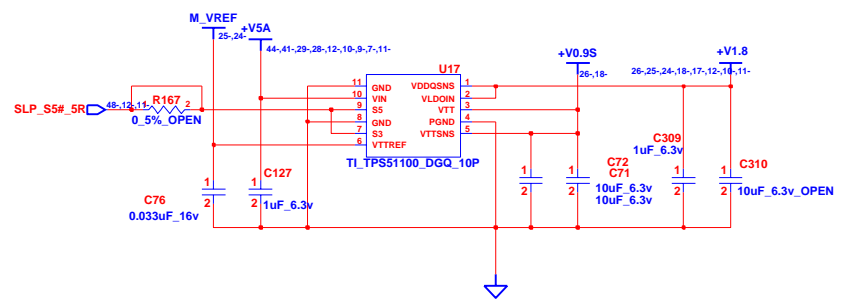
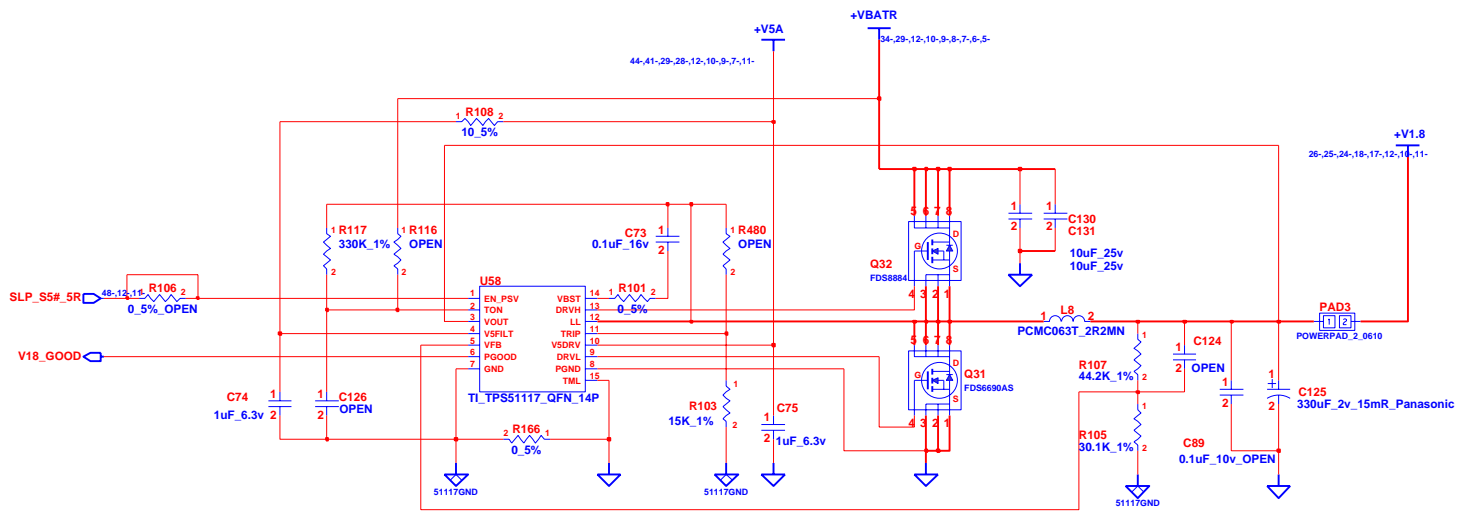
TITLE TTI.0 +VCC_NB & +V1.2A		
SIZE A3	CODE CS	DOC. NUMBER I310A21421-0
SHEET 9		REV A02

CHANGE by *Jimmy song* 2-Mar-2007



INVENTEC

TITLE			
TTL0			
+VCC CORE			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A21421-0	A02

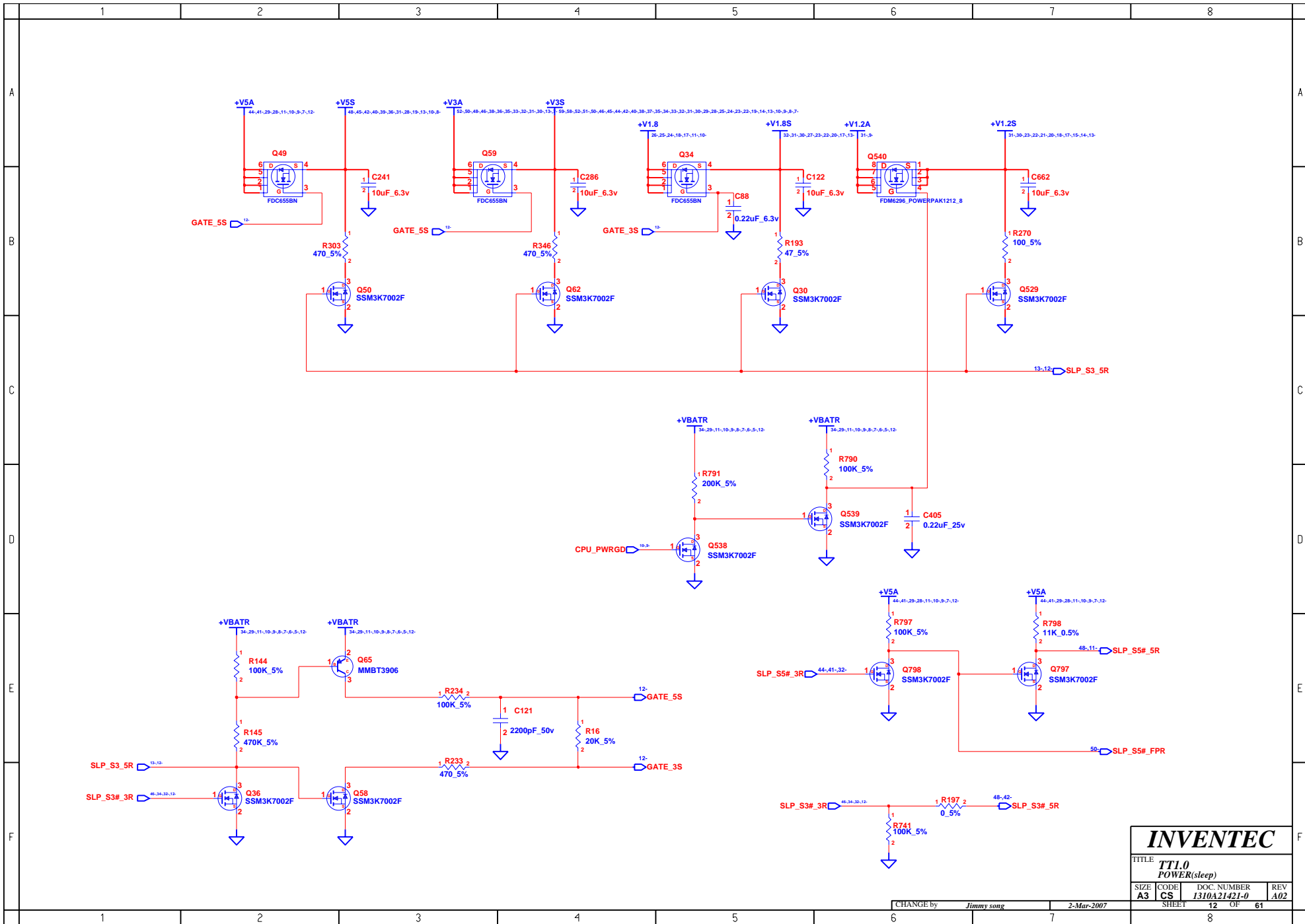


NOTE: DDR2 REGULATOR

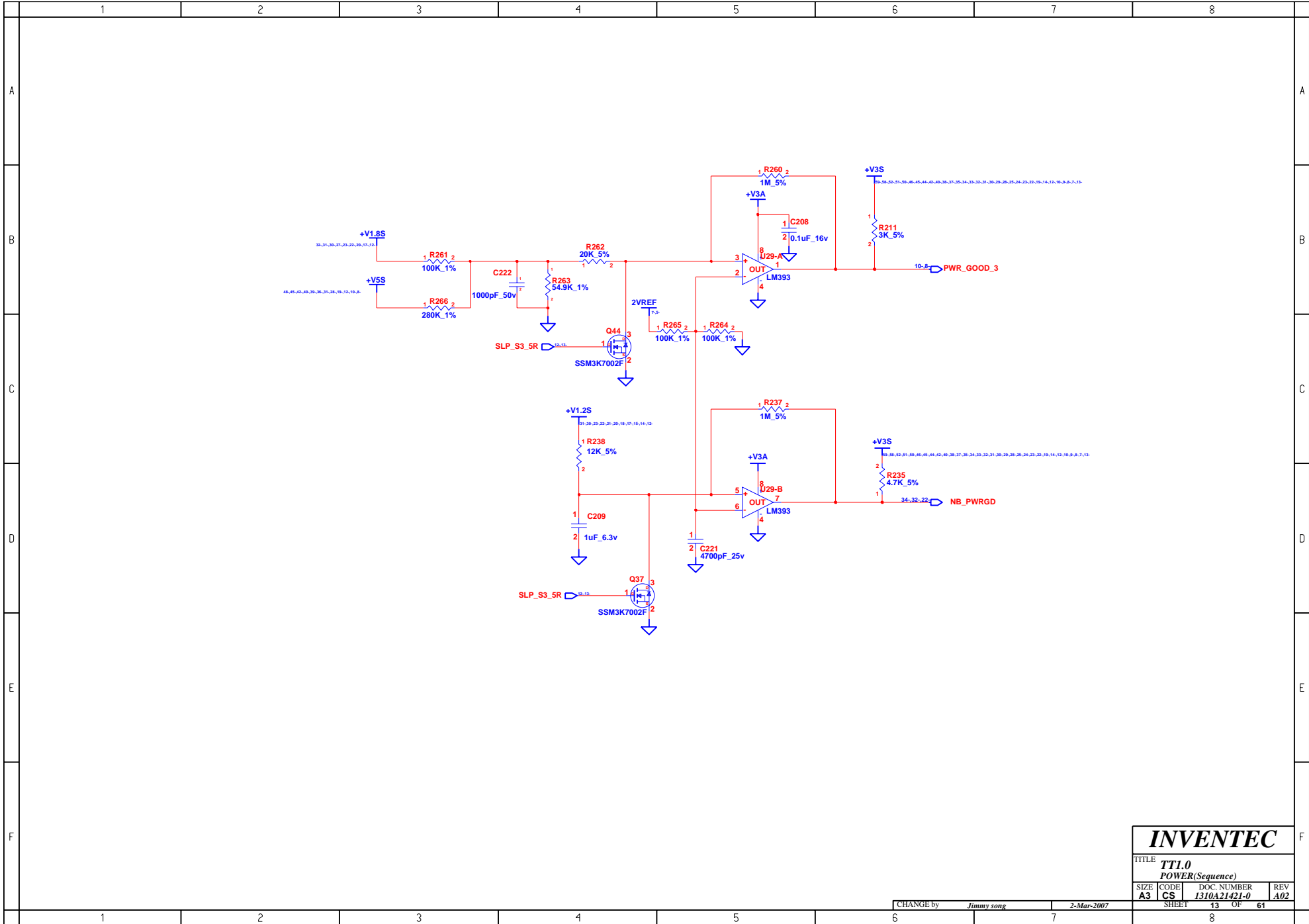
INVENTEC

TITLE			
TTL0			
DDR2 POWER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A21421-0	A02
CHANGE by		SHEET	
Jimmy song		11 OF 61	

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INVENTEC			
TITLE TTL0 POWER(sleep)			
SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 12		OF 61	



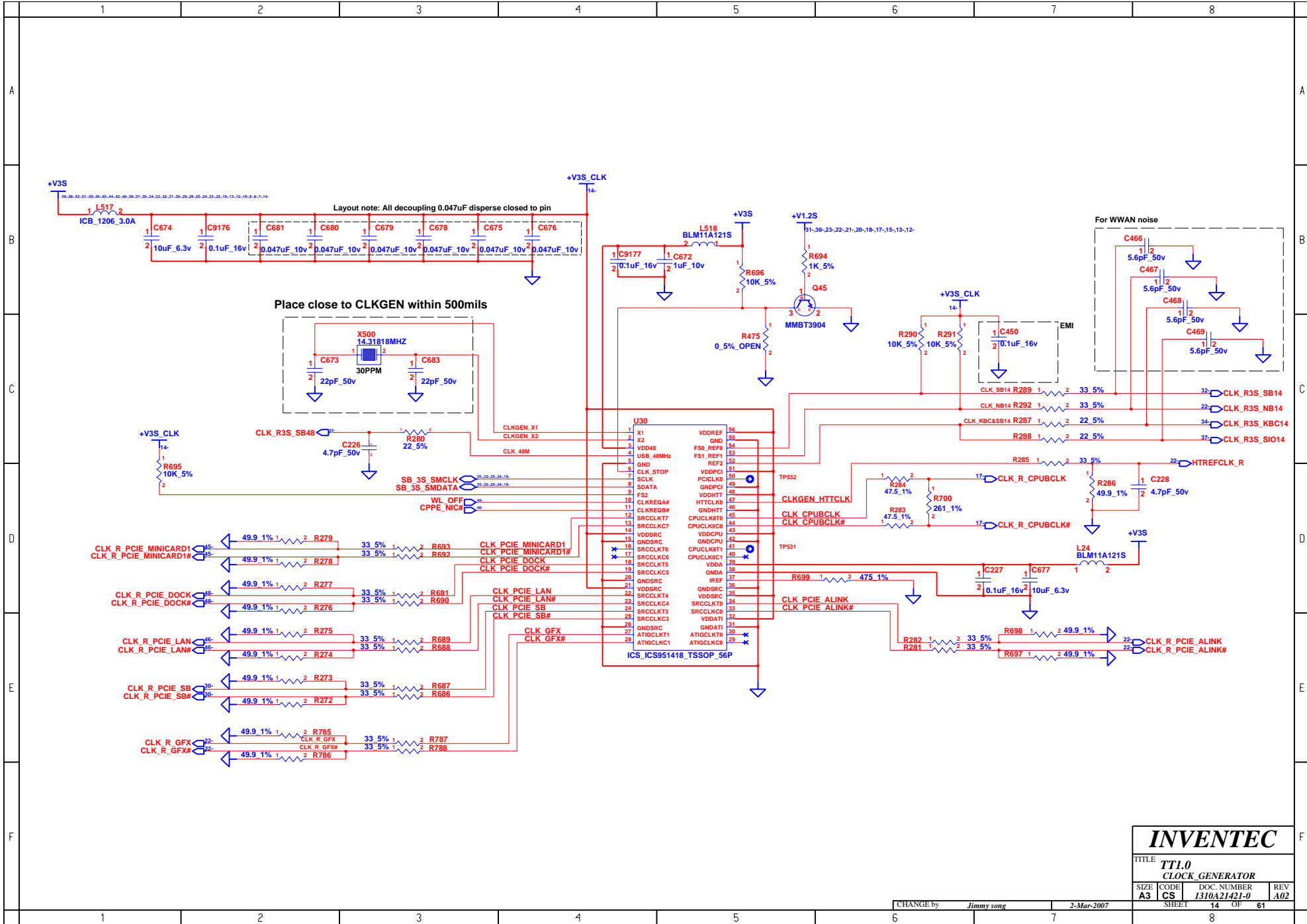
INVENTEC

TITLE **TTI.0**
POWER(Sequence)

SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
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CHANGE by *Jimmy song* 2-Mar-2007

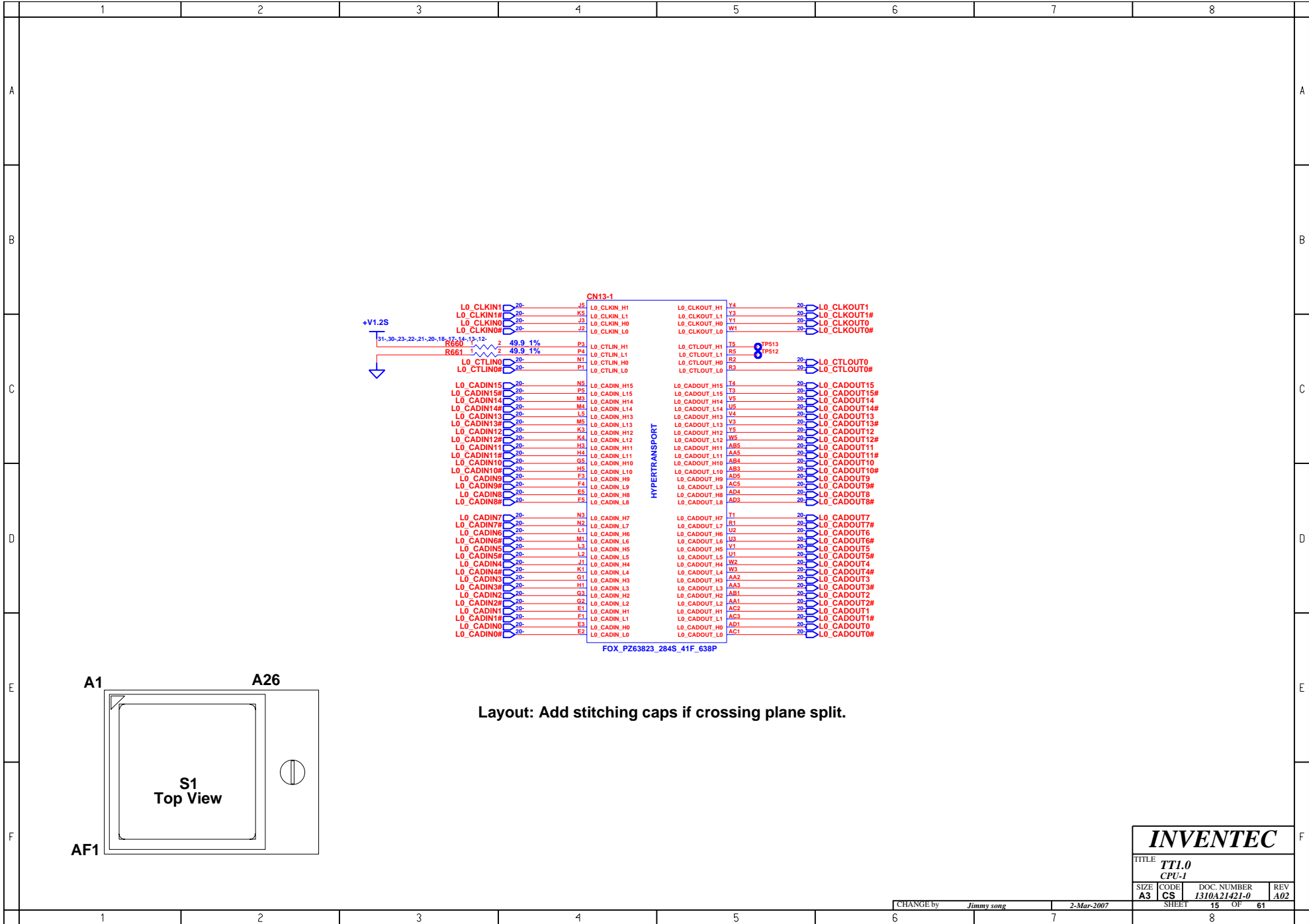
SHEET 13 OF 61



INVENTEC

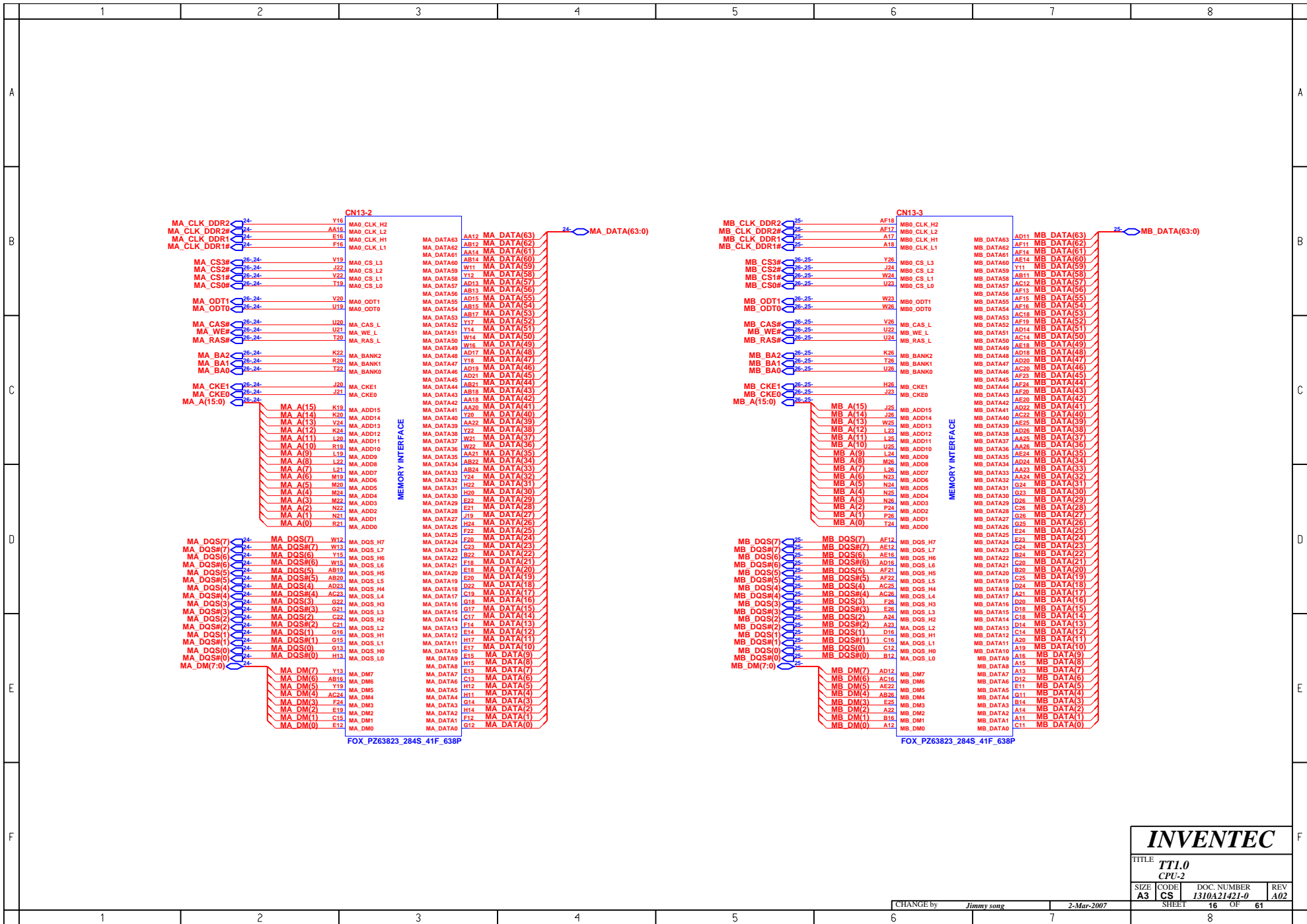
TITLE			
TT1.0			
CLOCK GENERATOR			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A21421-0	A02
CHANGE by		SHEET	
Jimmy song		14 OF 61	

2-Mar-2007

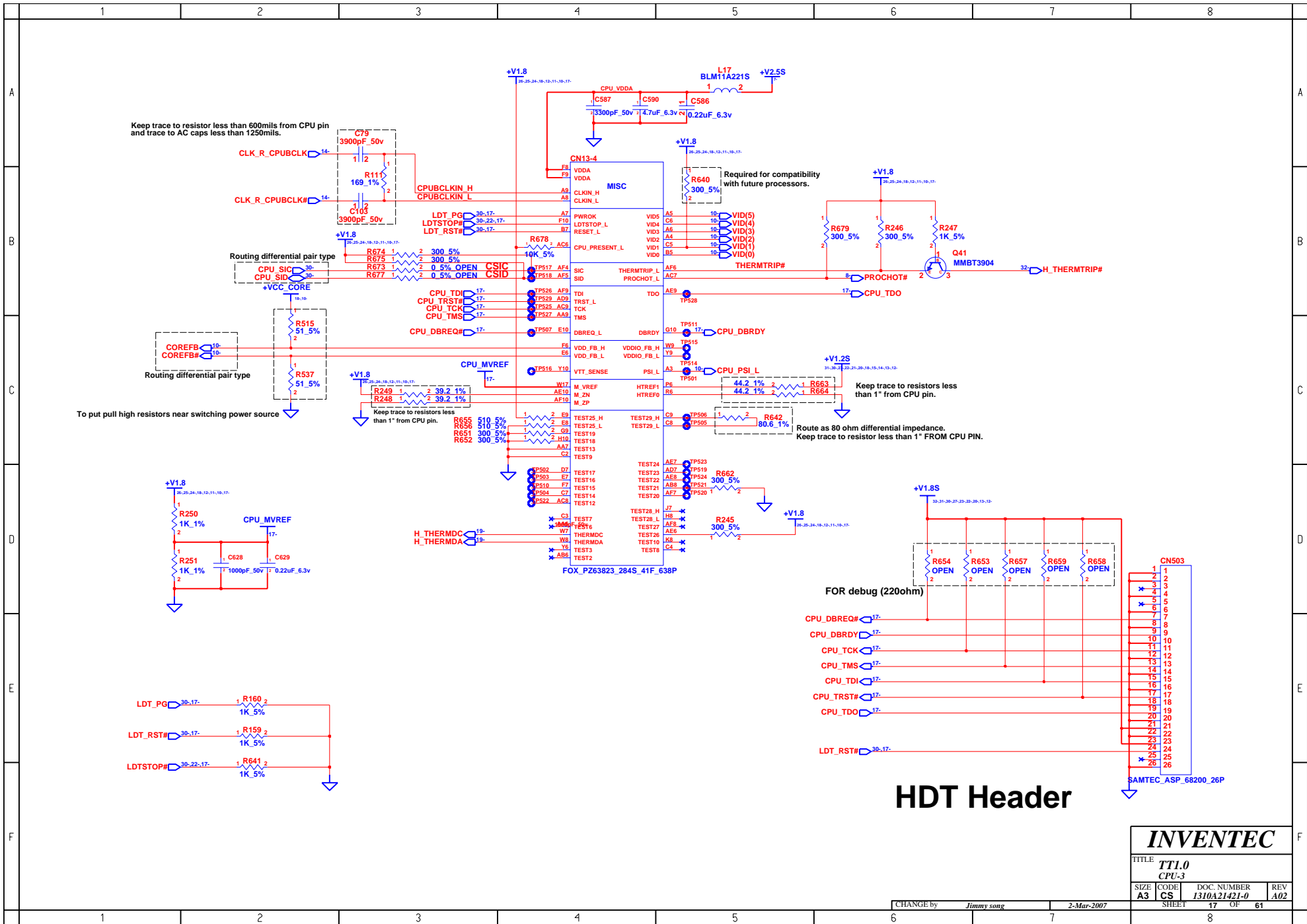


Layout: Add stitching caps if crossing plane split.

INVENTEC			
TITLE TTL0 CPU-1			
SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET		15	OF 61



INVENTEC			
TITLE TTI.0 CPU-2			
SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
CHANGE by Jimmy song		2-Mar-2007	
SHEET 16		OF 61	



HDT Header

INVENTEC

TITLE
TTI.0
CPU-3

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02

CHANGE by Jimmy song 2-Mar-2007

SHEET	OF
17	61

1

2

3

4

5

6

7

8

A

A

B

B

C

C

D

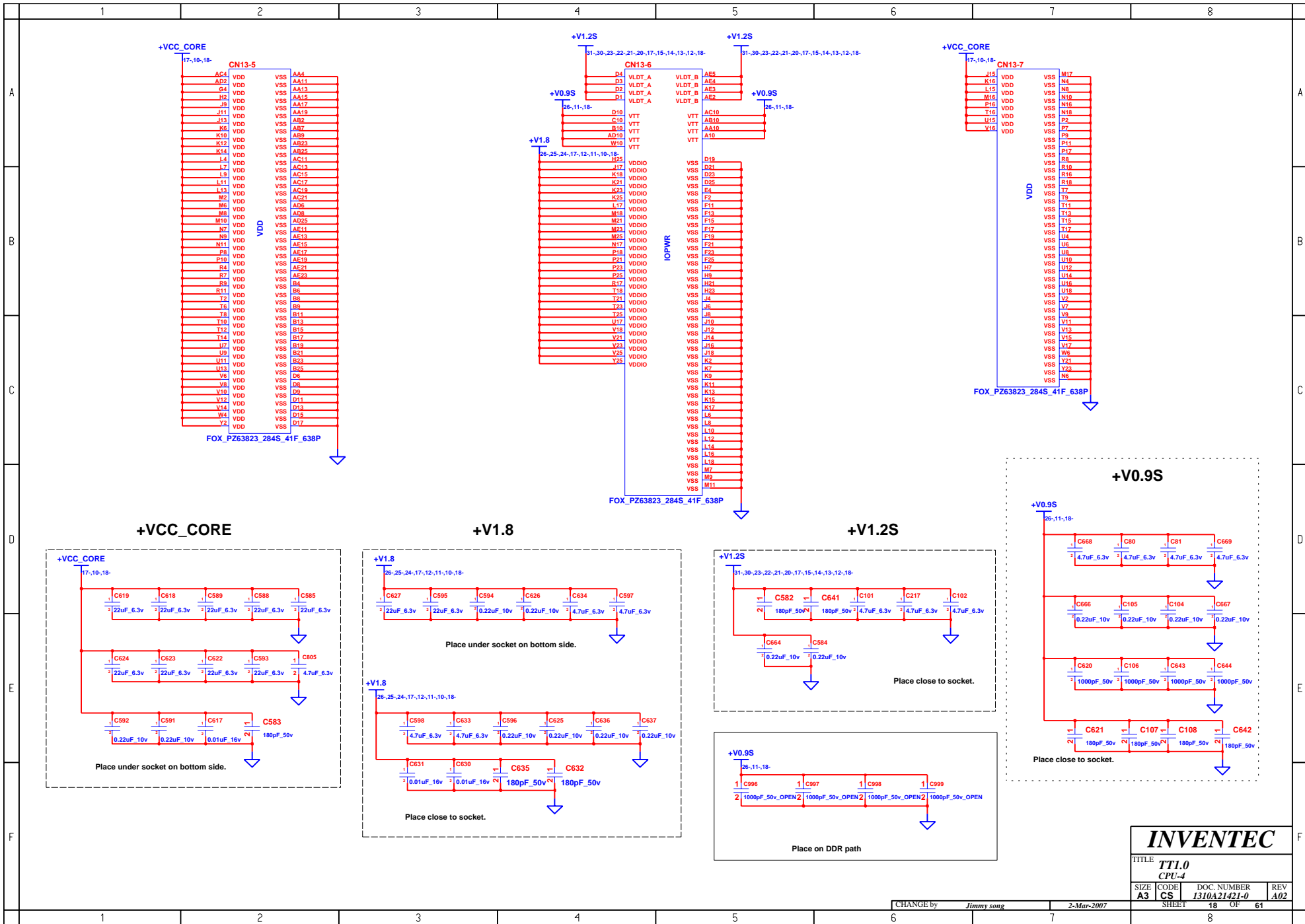
D

E

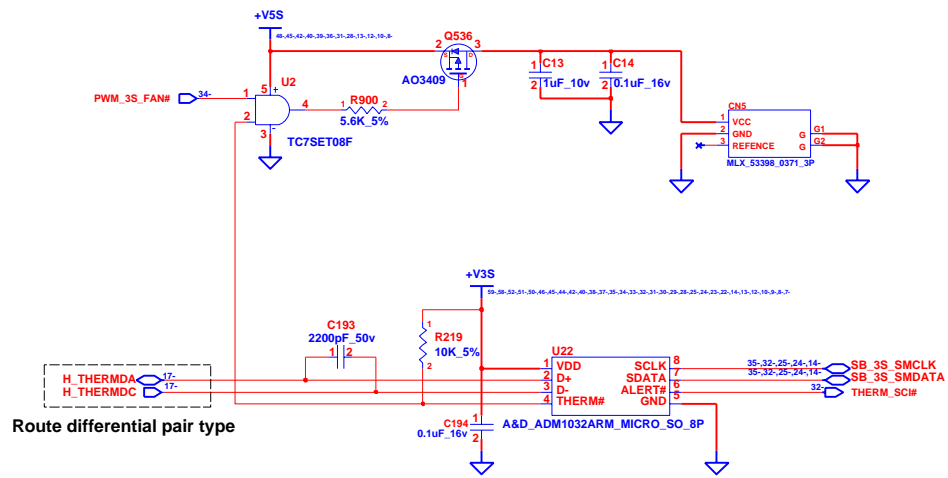
E

F

F



INVENTEC			
TITLE TTL0 CPU-4			
SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 18		OF 61	



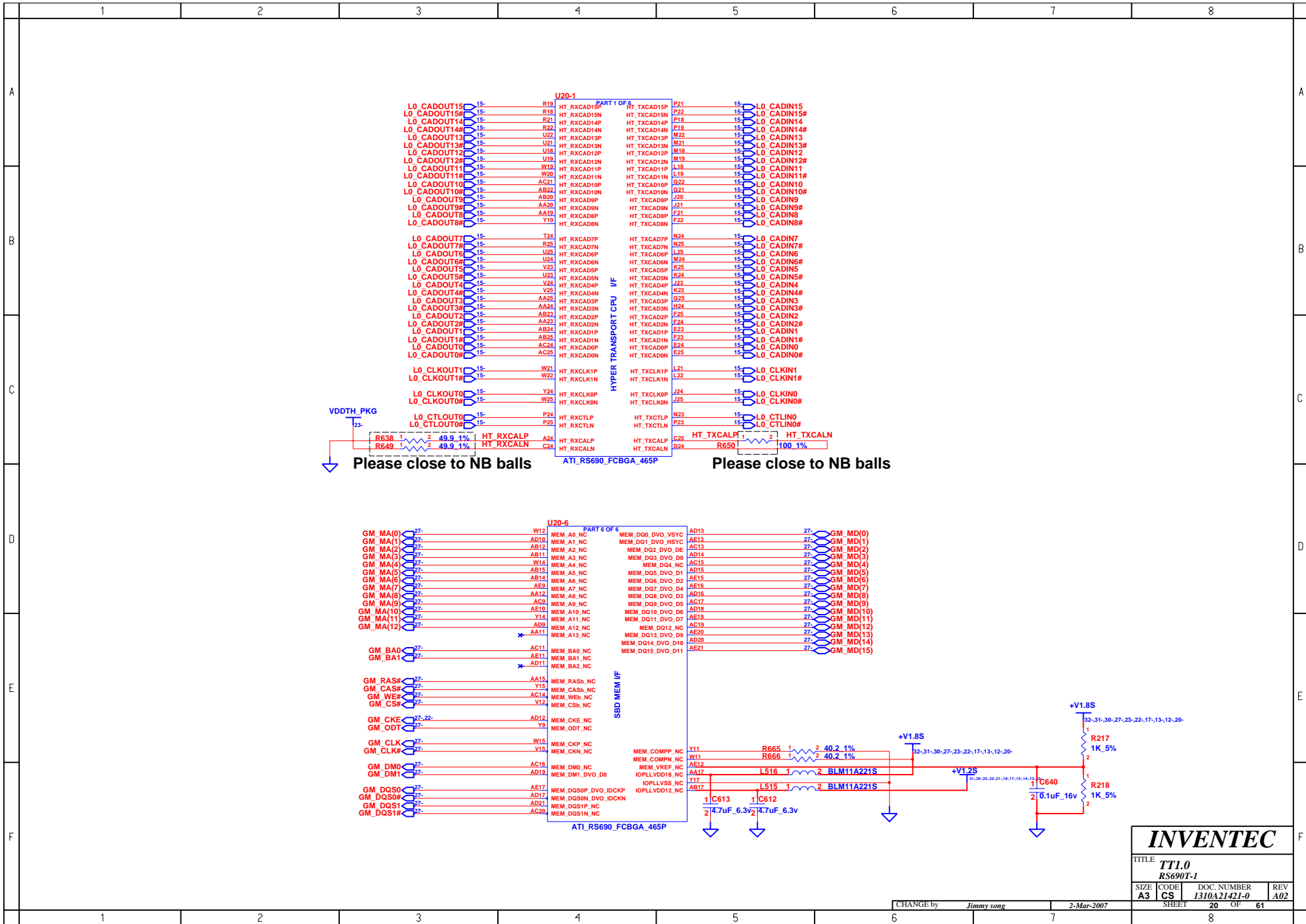
LAYOUT Note: Put the thermal sensor close to CPU.

INVENTEC

TITLE			TT1.0		
THERMAL&FAN CONTROLLER					
SIZE	CODE	DOC. NUMBER	REV		
A3	CS	1310A21421-0	A02		

CHANGE by Jimmy song 2-Mar-2007

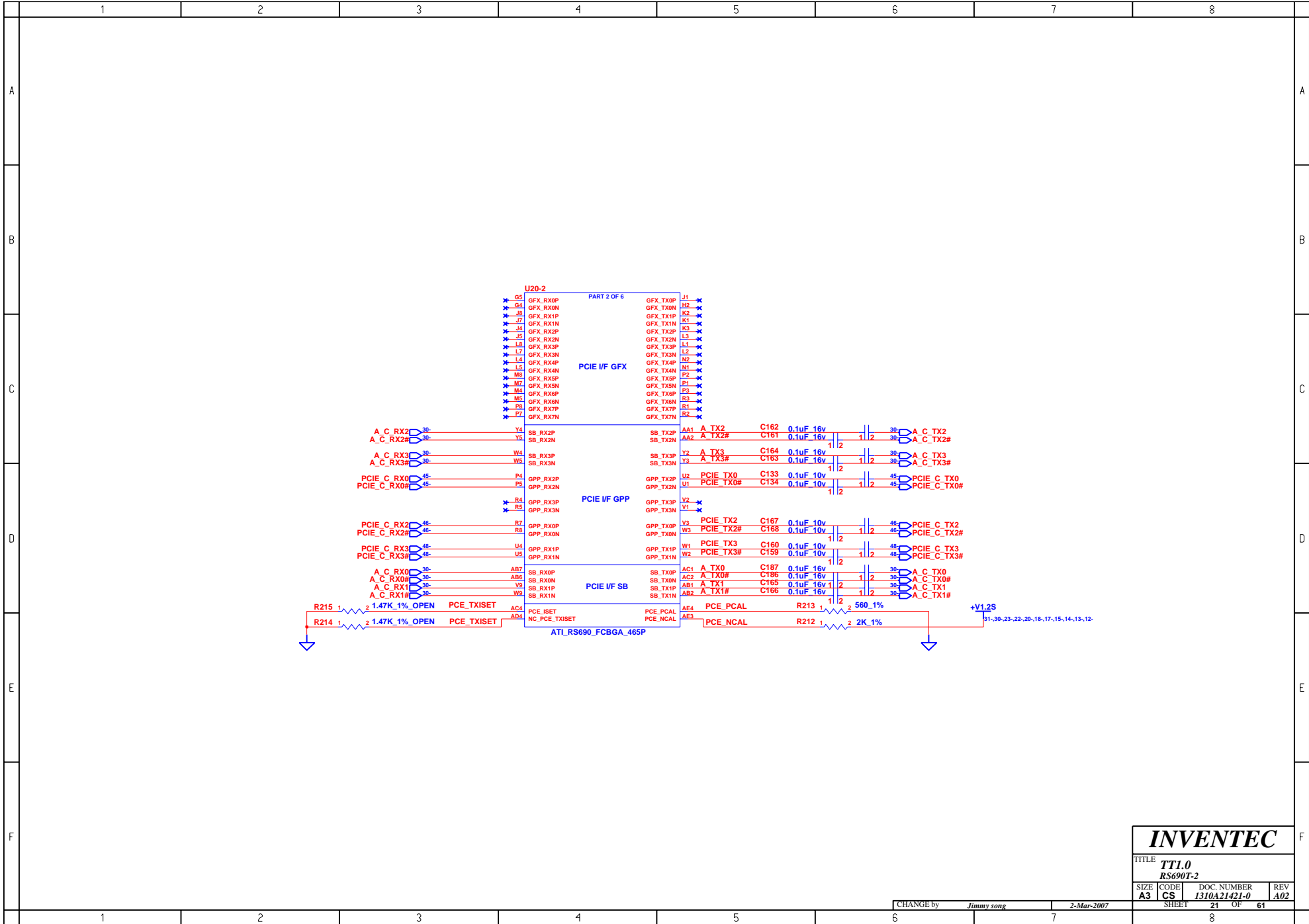
SHEET 19 OF 61



Please close to NB balls

Please close to NB balls

INVENTEC			
TITLE TT1.0 RS690T-1			
SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 20		OF 61	

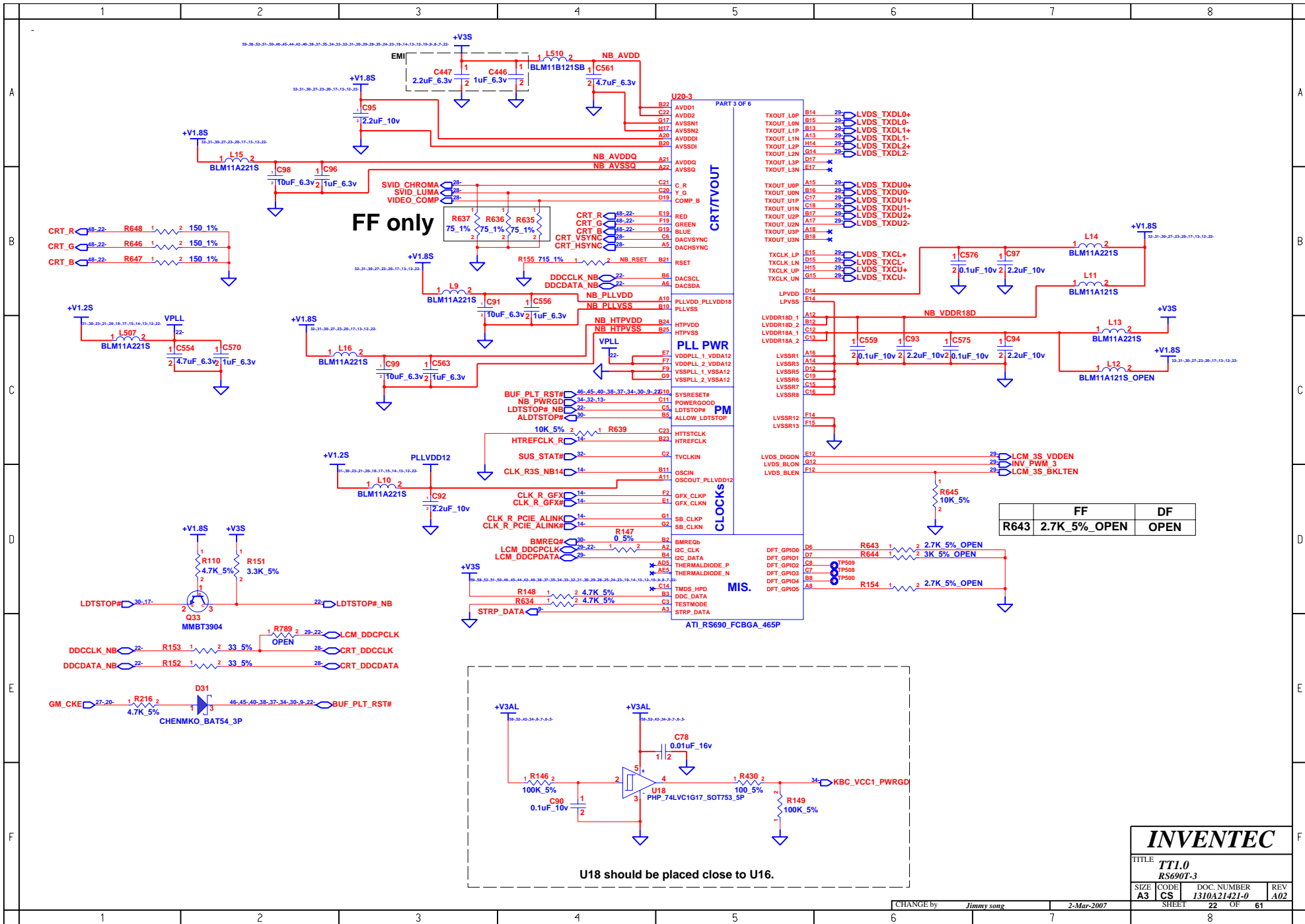


INVENTEC

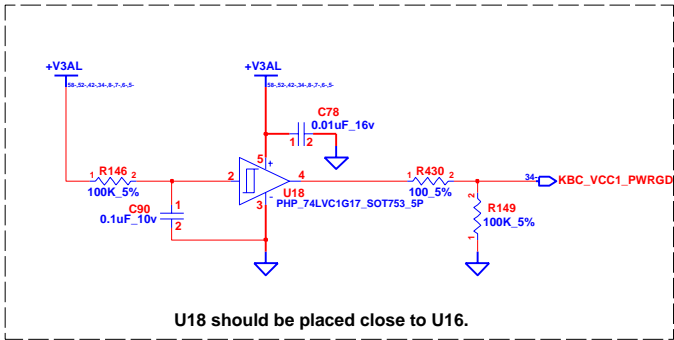
TITLE
TTL0
RS690T-2

SIZE CODE DOC. NUMBER REV
A3 CS 1310A21421-0 A02

CHANGE by Jimmy song 2-Mar-2007 SHEET 21 OF 61

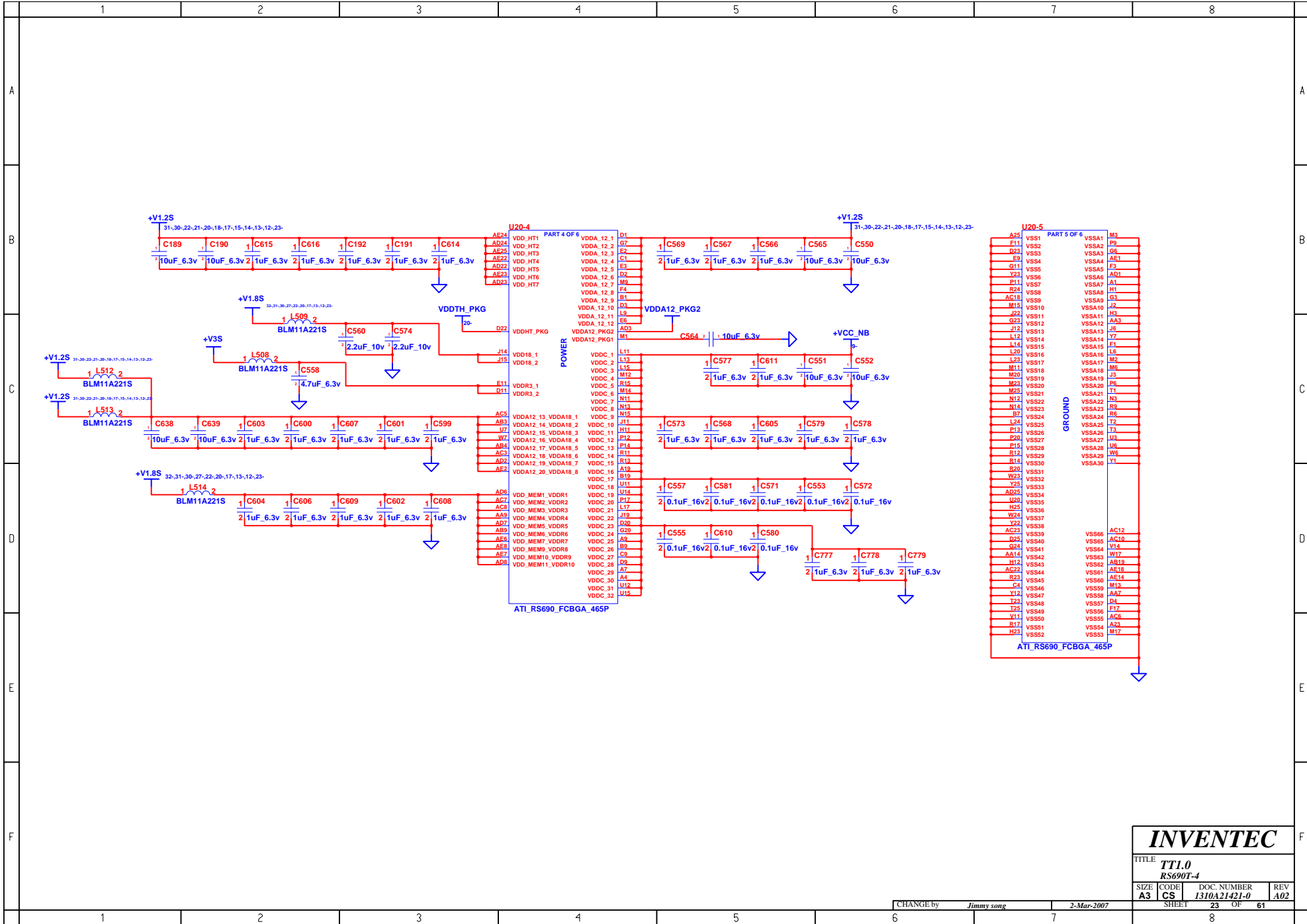


	FF	DF
R643	2.7K 5% OPEN	OPEN

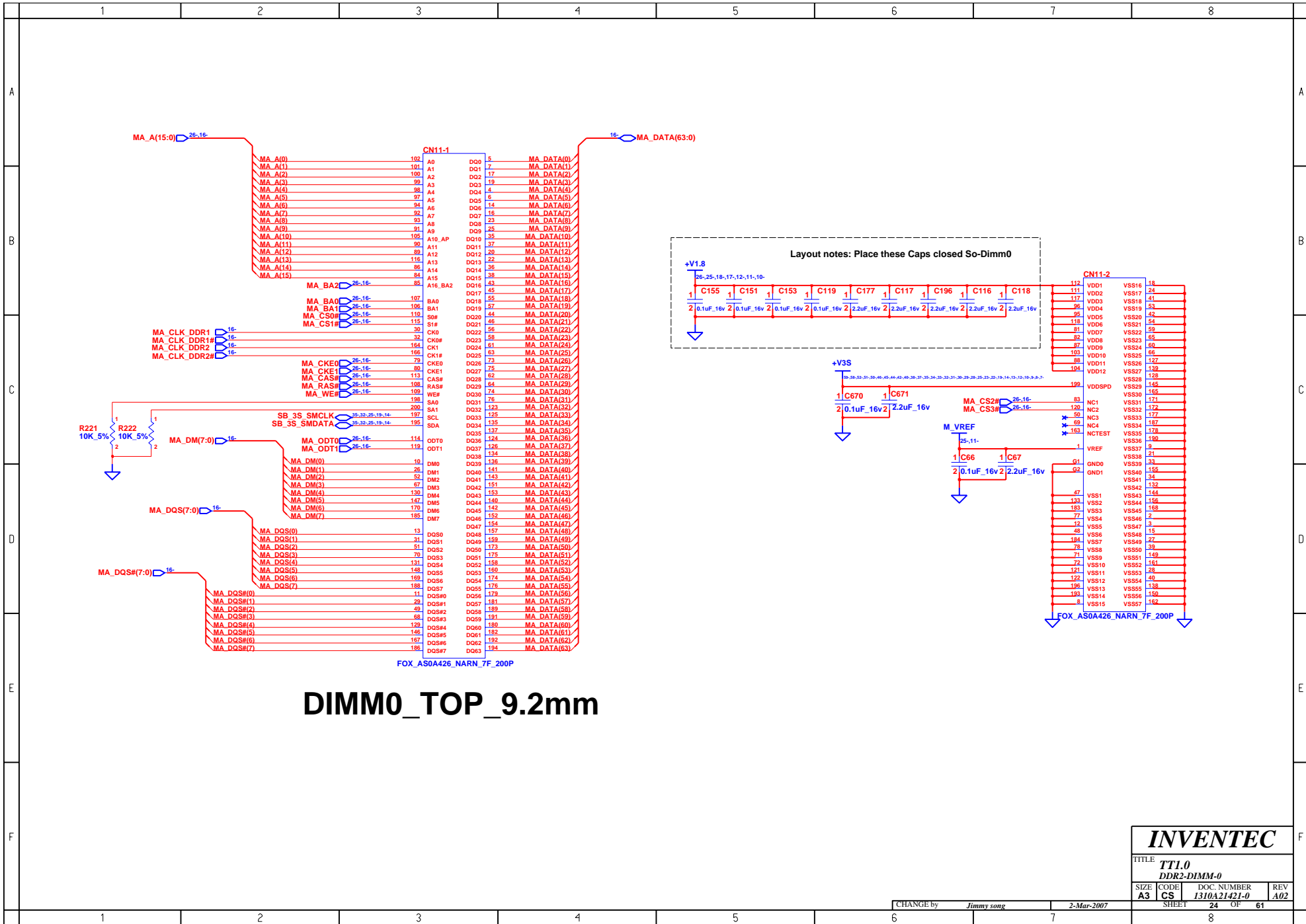


INVENTEC

TITLE TT1.0 RS690T-3			
SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
SHEET 22		OF 61	



INVENTEC			
TITLE ATTI.0 RS690T-4			
SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
CHANGE by Jimmy song		2-Mar-2007	
SHEET 23		OF 61	



DIMM0_TOP_9.2mm

INVENTEC

TITLE TTI.0
 DDR2-DIMM-0

SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
CHANGE by Jimmy song		2-Mar-2007	
SHEET 24		OF 61	

A

B

C

D

E

F

A

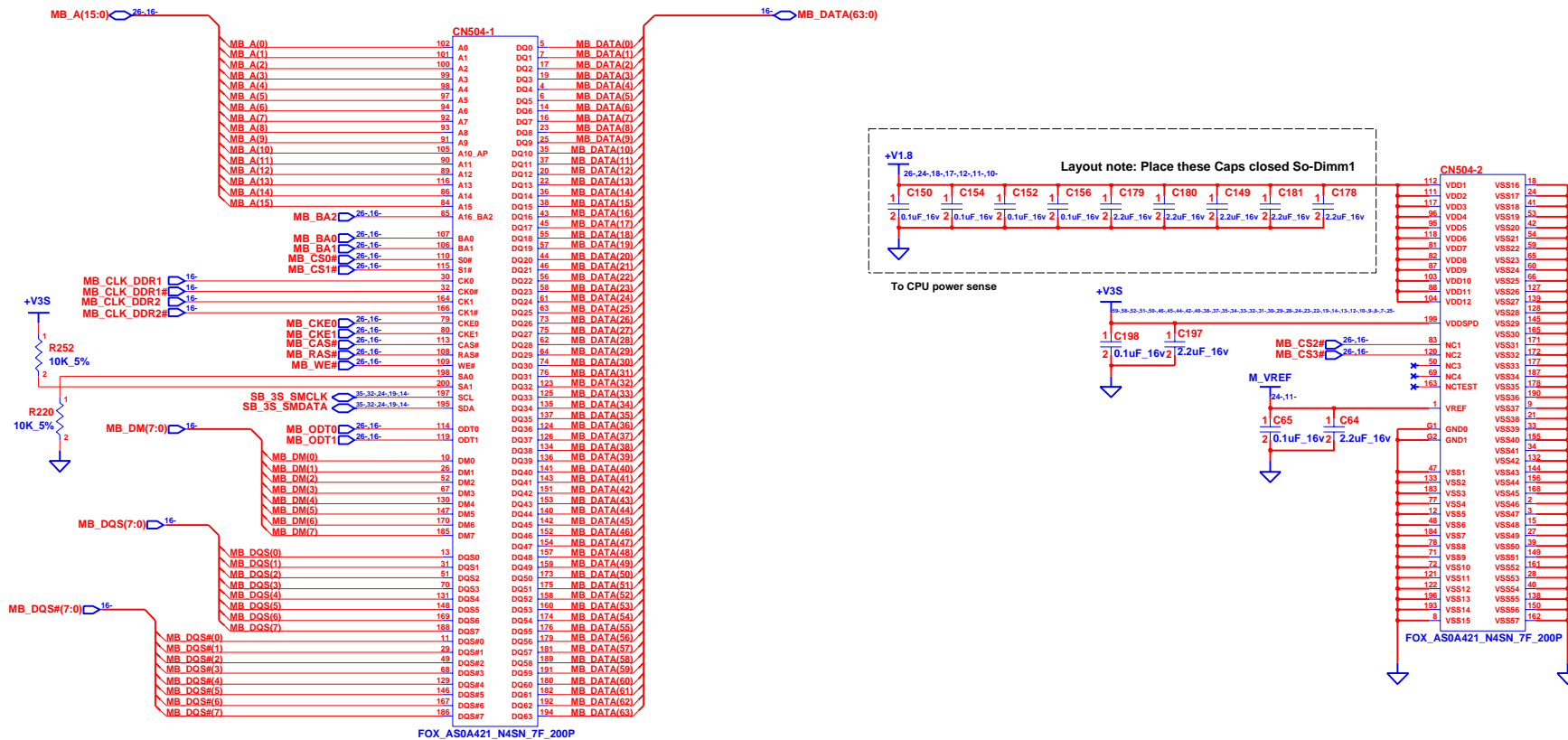
B

C

D

E

F



DIMM1_BTM_4.0mm

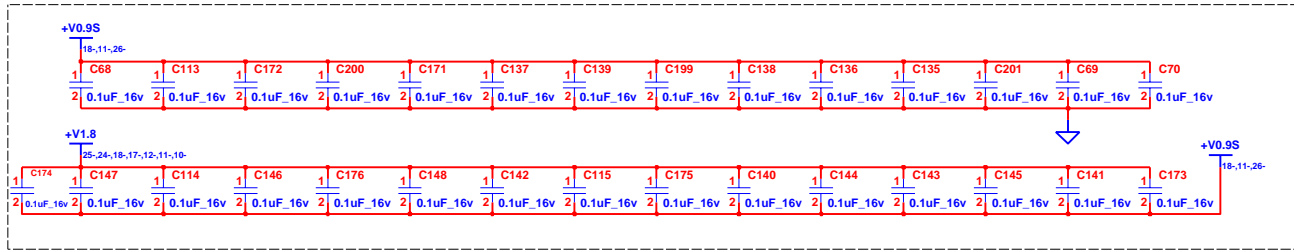
INVENTEC

TITLE
TT1.0
DDR2-DIMM-1

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02

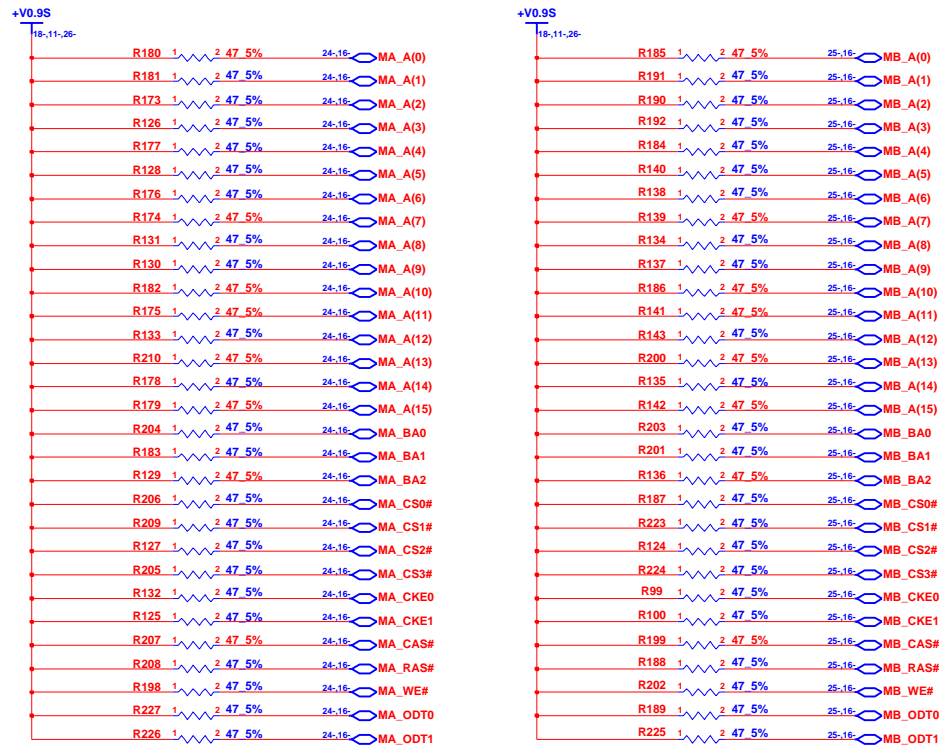
CHANGE by Jimmy song 2-Mar-2007

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To CPU power sense

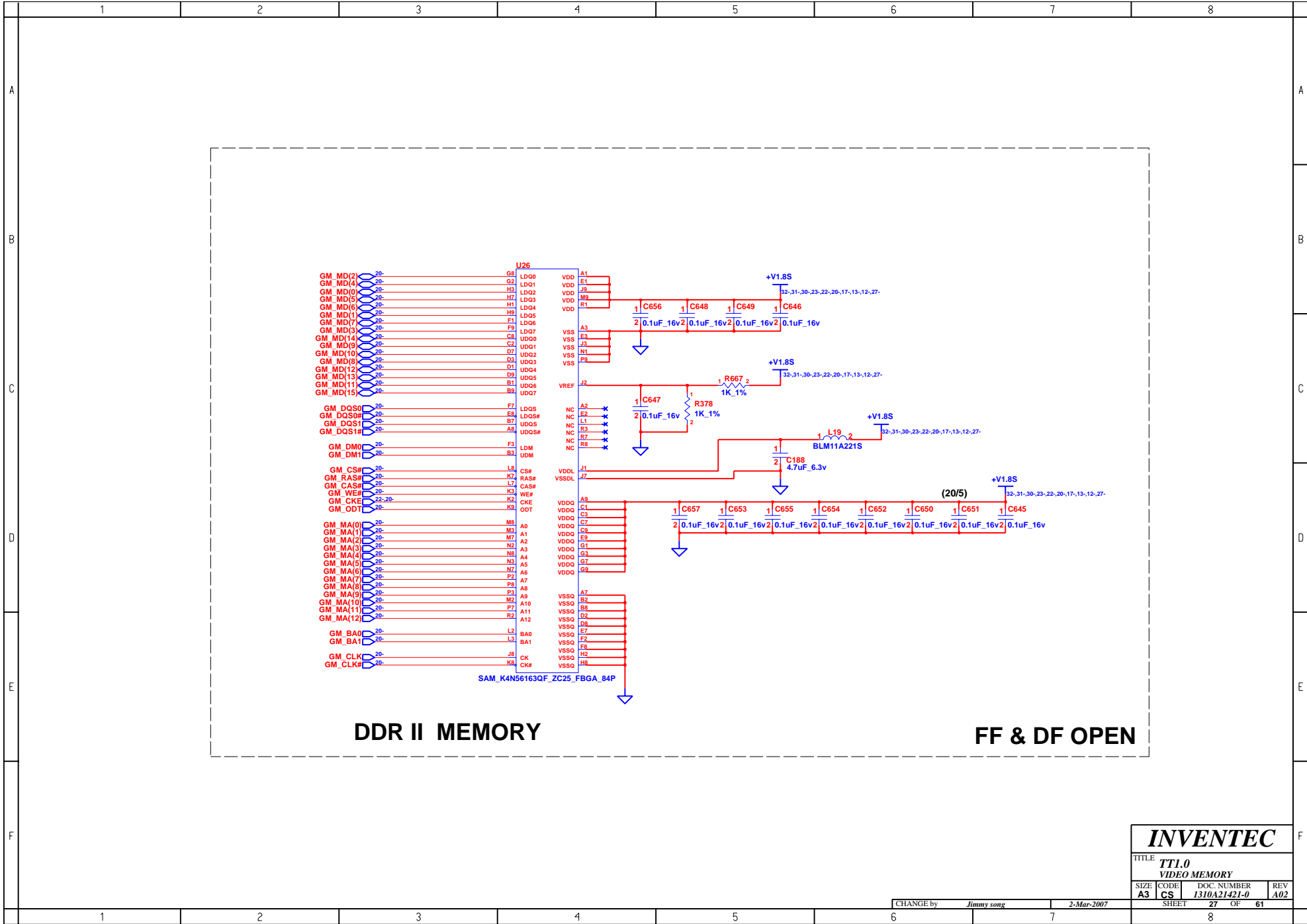
Place CAPs close to DIMM



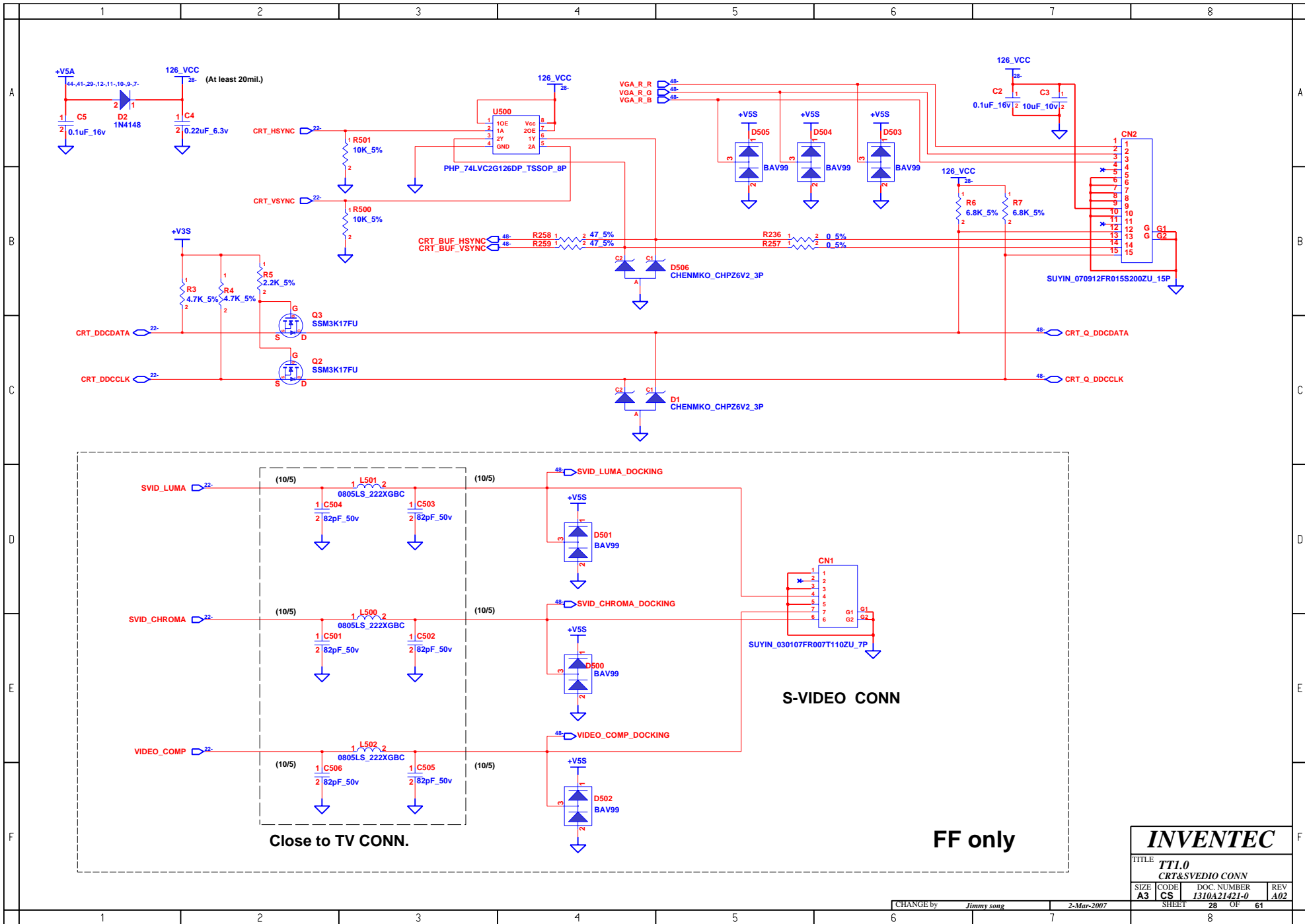
INVENTEC

TITLE			
TTL0			
DDR2-DAMPING			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A21421-0	A02
SHEET		OF	
26		61	

CHANGE by Jimmy song 2-Mar-2007

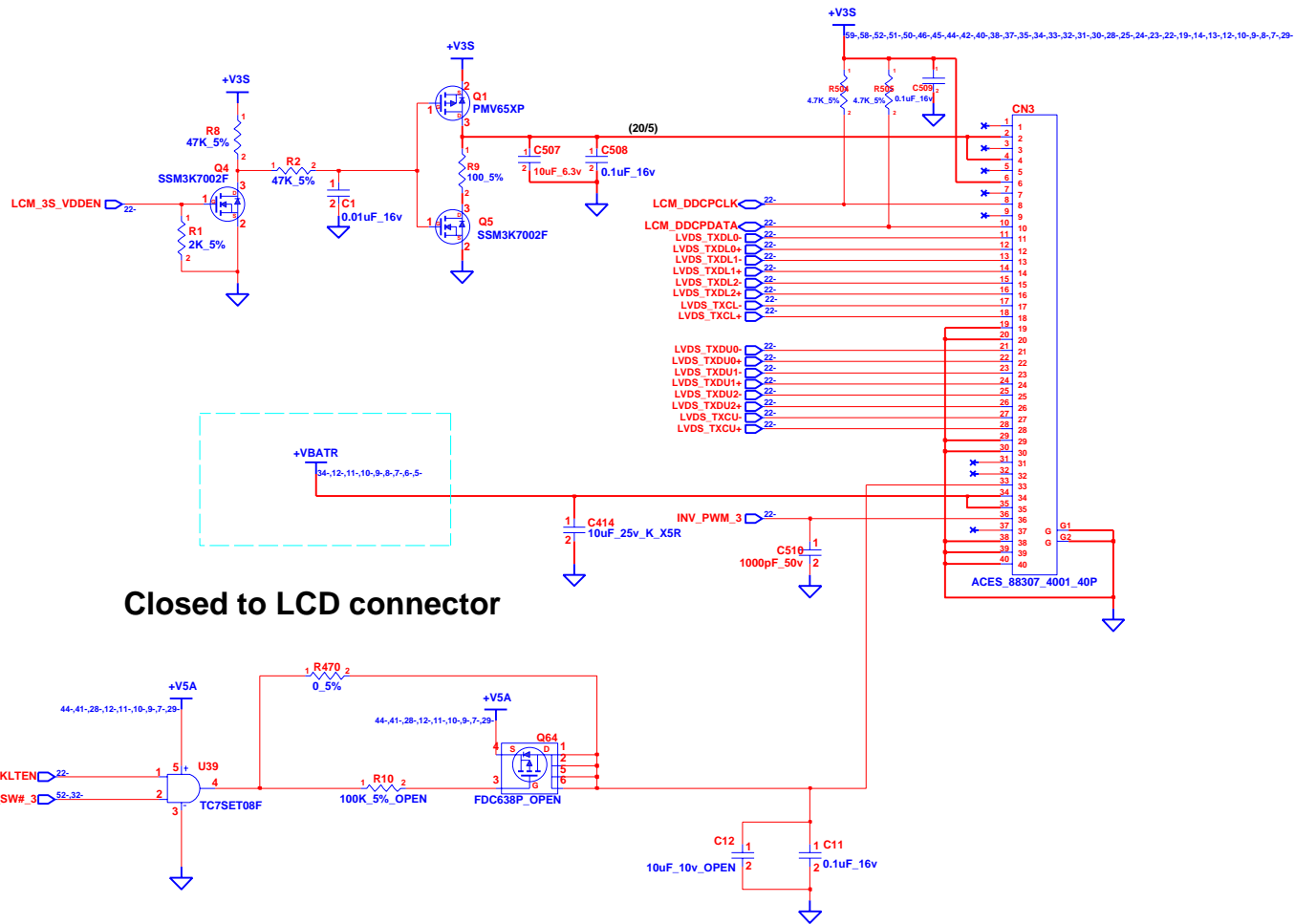


INVENTEC			
TITLE TT1.0			
VIDEO MEMORY			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 27		OF 61	



INVENTEC

TITLE			
TT1.0			
CRT&SVEDIO CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02

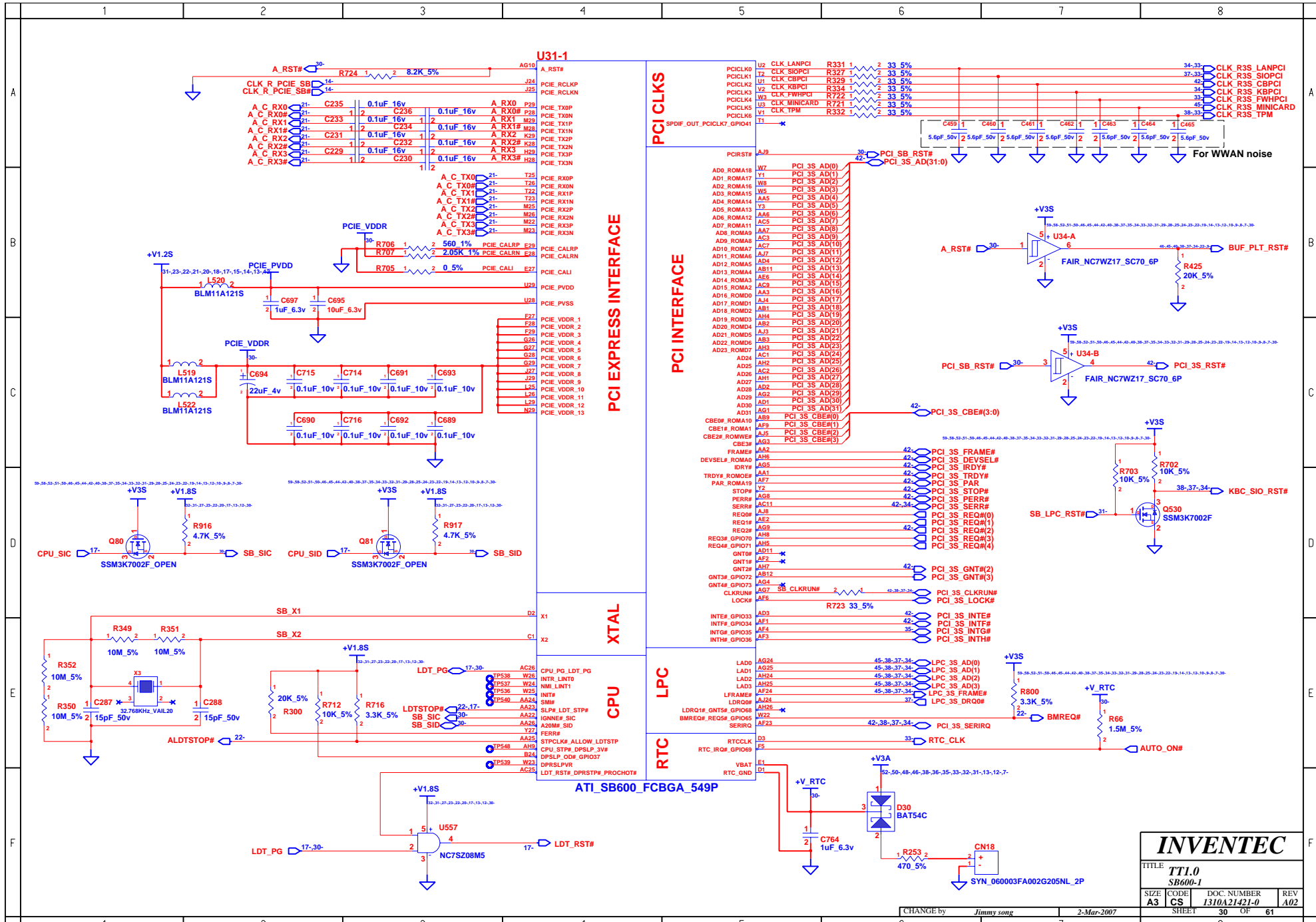


Closed to LCD connector

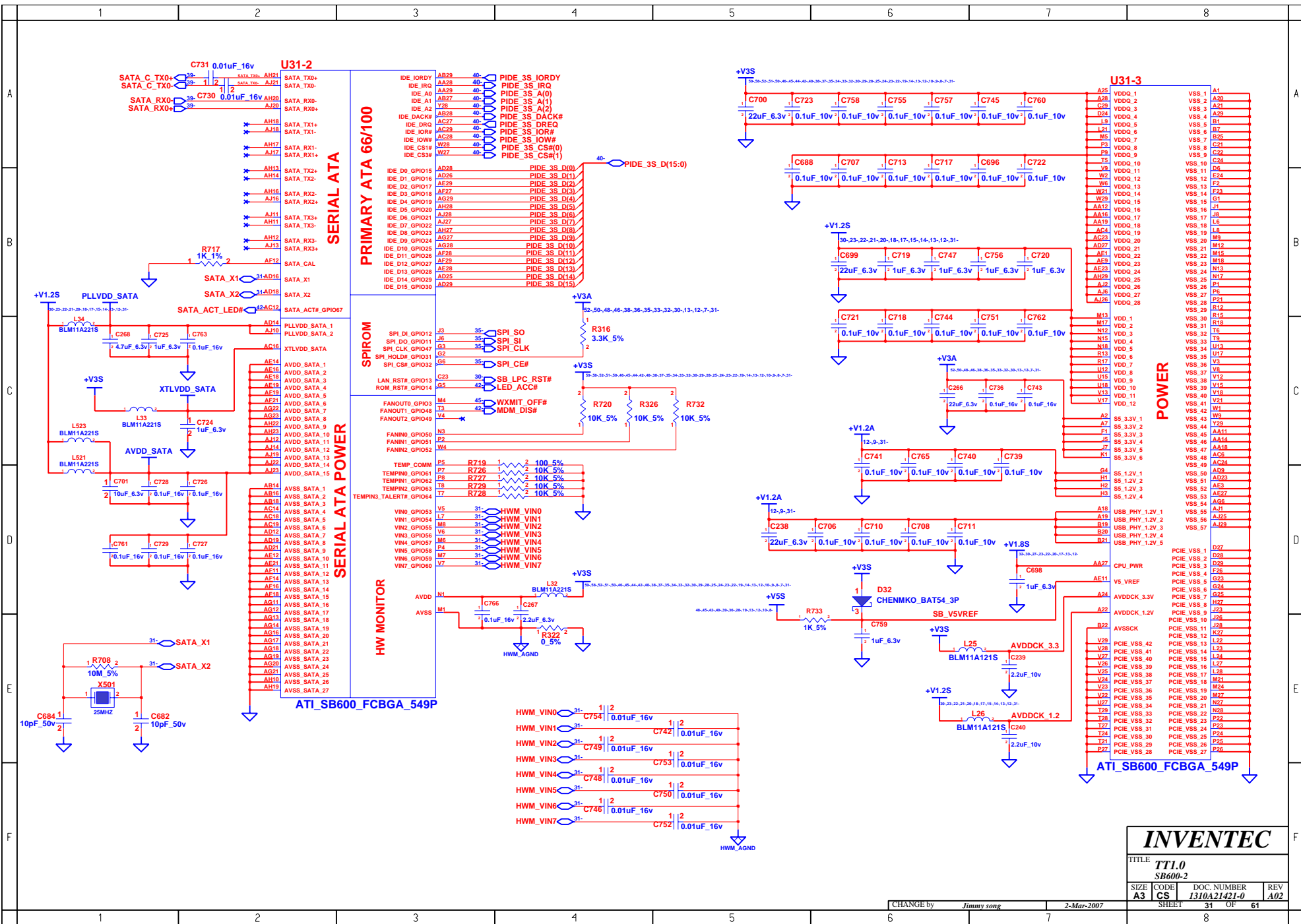
INVENTEC

TITLE			
TTL0			
LCD CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by		SHEET	OF
Jimmy song		29	61

2-Mar-2007



INVENTEC			
TITLE TT1.0 SB600-1			
SIZE A3	CODE CS	DOC. NUMBER 1310A2142-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 30		OF 61	



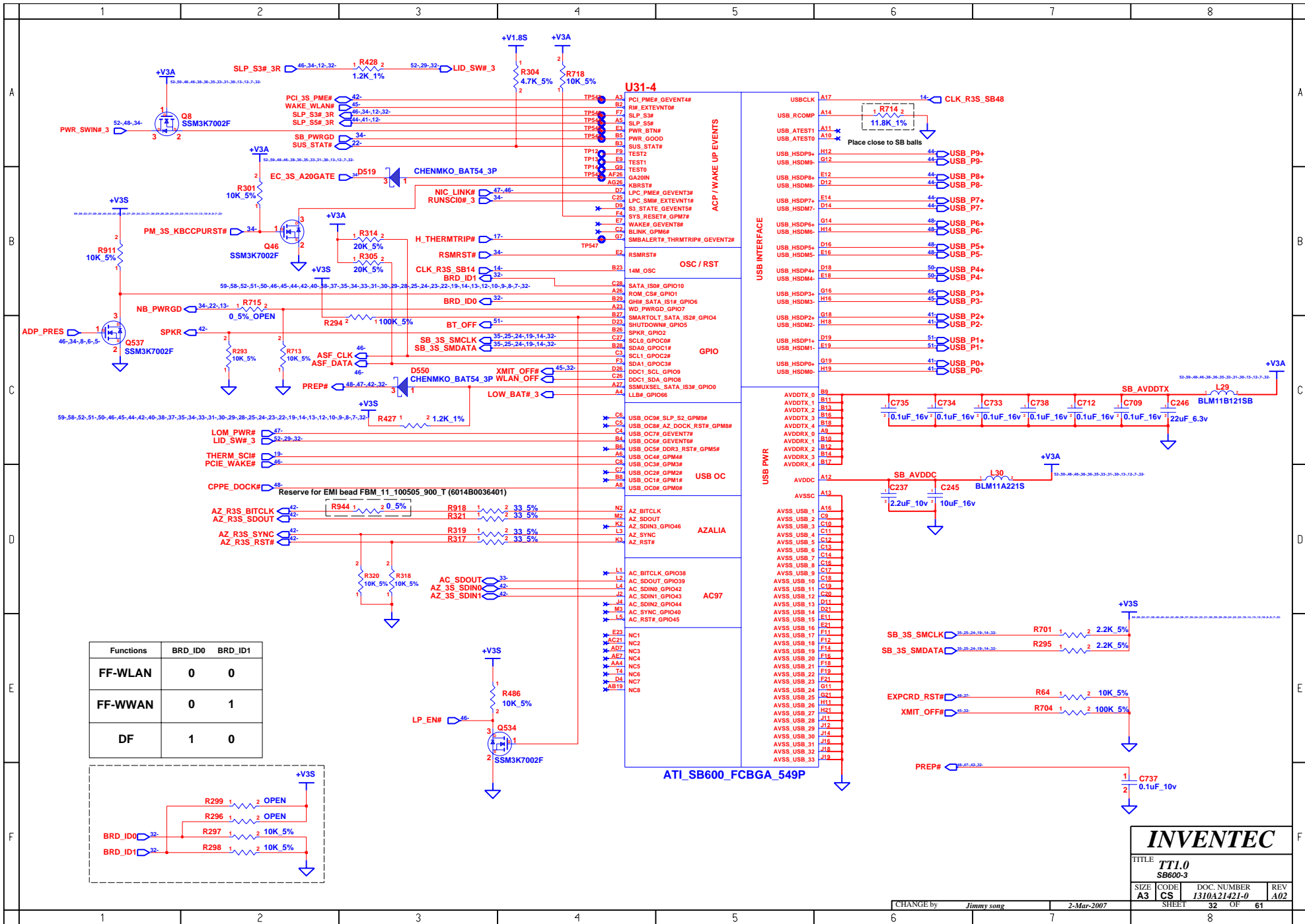
INVENTEC

TITLE
TI1.0 SB600-2

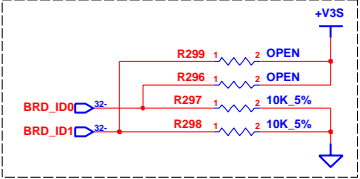
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A21421-0	A02

CHANGE by *Jimmy song* 2-Mar-2007

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Functions	BRD_ID0	BRD_ID1
FF-WLAN	0	0
FF-WWAN	0	1
DF	1	0



INVENTEC

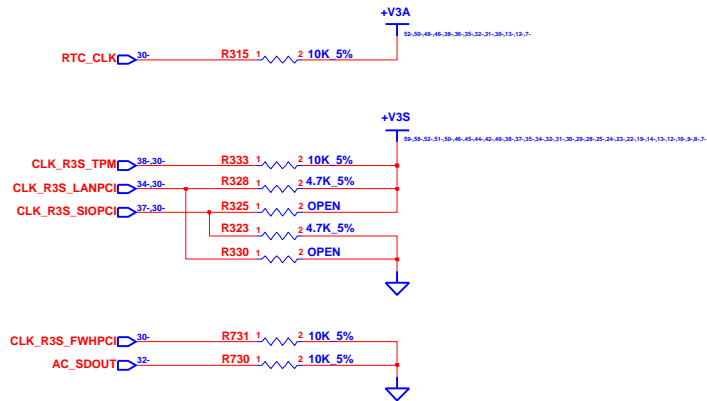
TITLE **TT1.0 SB600-3**

SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
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CHANGE by *Jimmy song* 2-Mar-2007 SHEET 32 OF 61

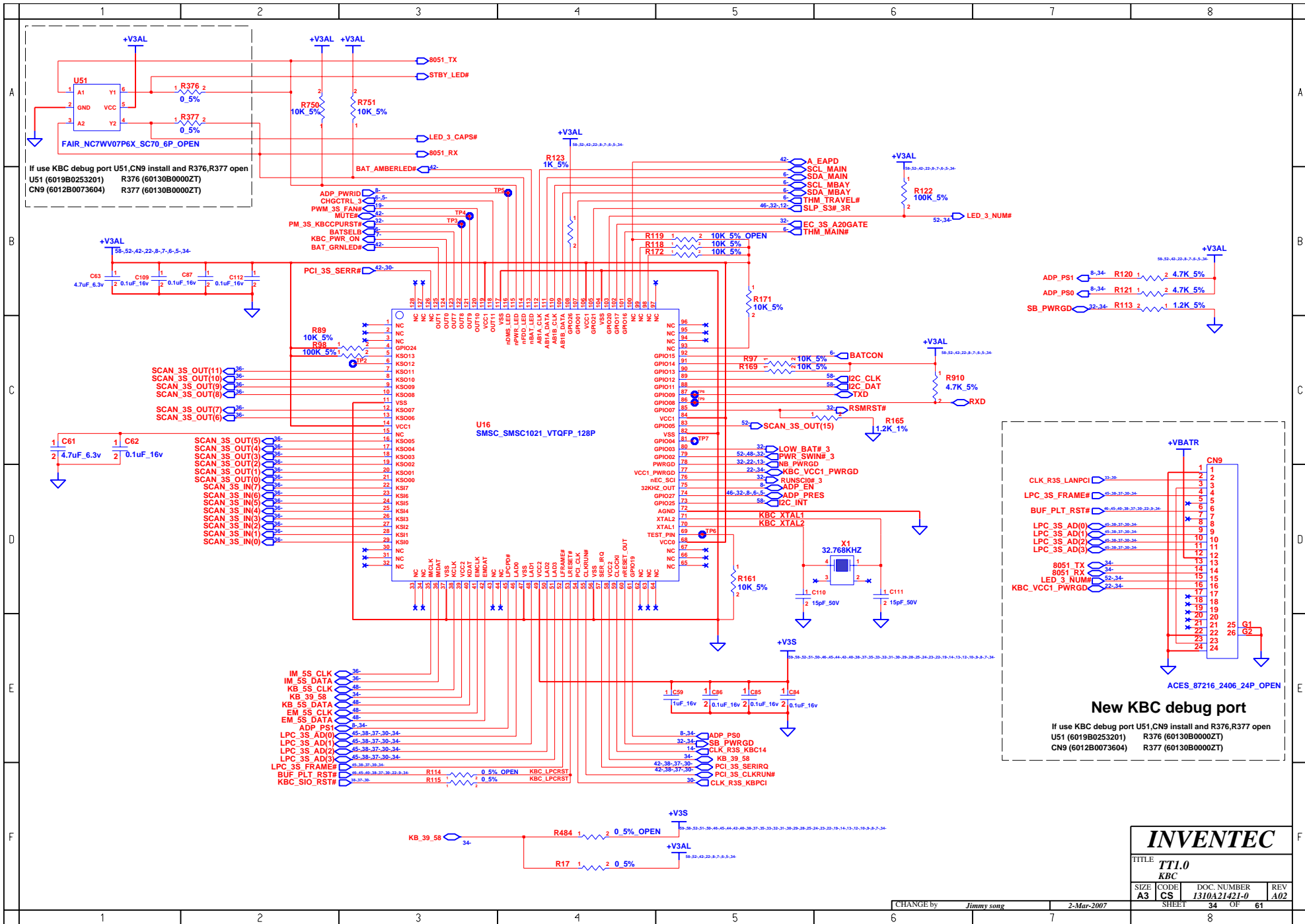
Required Straps:

	AC_SDOUT	RTC_CLK	CLK_R3S_FWHPCI	PCI_CLK6	PCI_CLK0 PCI_CLK1
PULL HIGH	USE DEBUG STRAPS	INTERNAL RTC	USE INT. PLL48	CPU K8	HH: PCI ROM HL: SPI ROM
PULL LOW	IGNORE DEBUG STRAPS	EXTERNAL RTC	USE EXT. 48M CLK	CPU P4	LH: LPC ROM LL: FWH ROM



INVENTEC

TITLE <i>TT1.0</i>			
SB600-4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	SHEET 33 OF 61



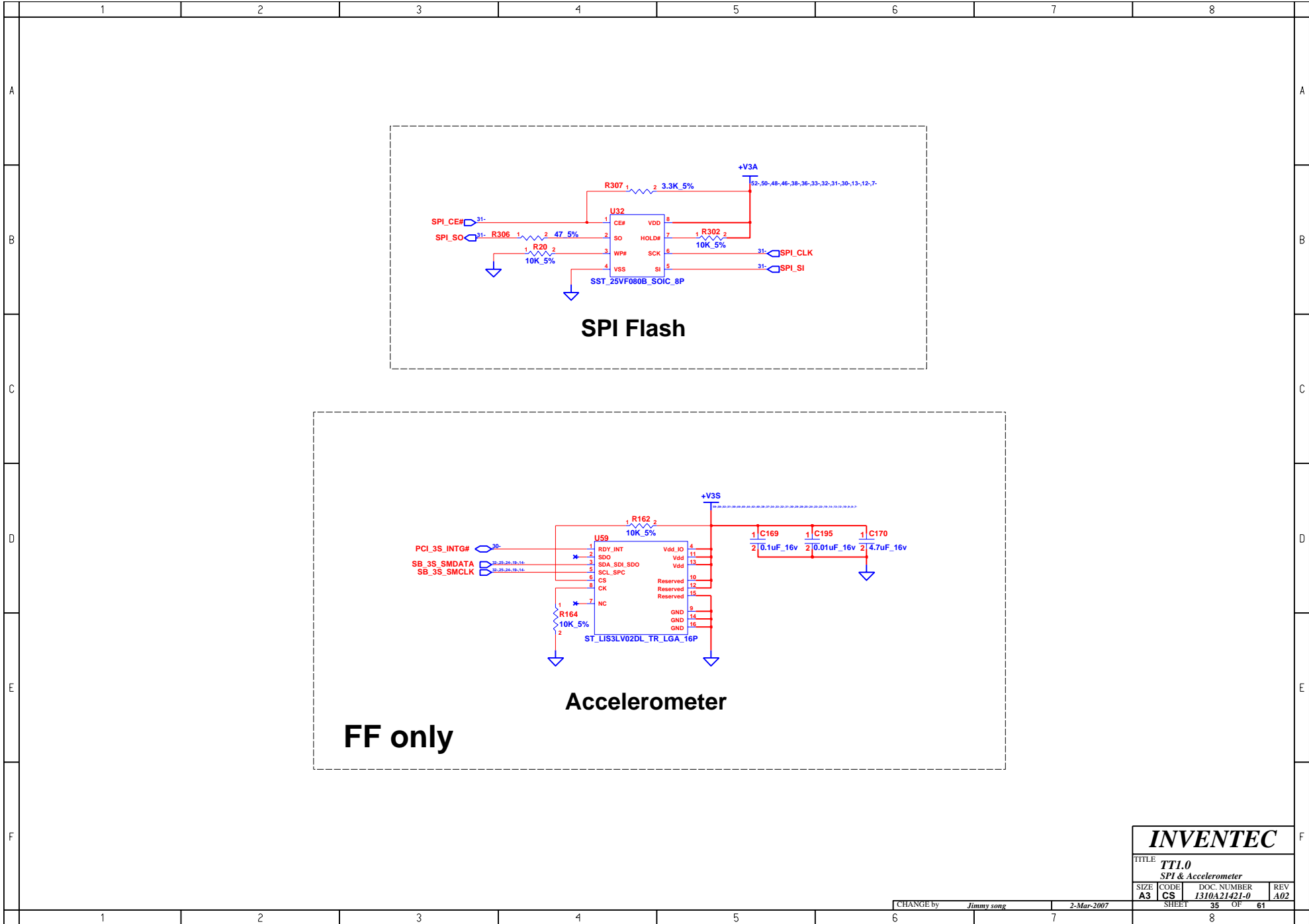
If use KBC debug port U51,C99 install and R376,R377 open
 U51 (6019B0253201) R376 (60130B0000ZT)
 C99 (6012B0073604) R377 (60130B0000ZT)

New KBC debug port

If use KBC debug port U51,C99 install and R376,R377 open
 U51 (6019B0253201) R376 (60130B0000ZT)
 C99 (6012B0073604) R377 (60130B0000ZT)

INVENTEC

TITLE			
TTI.0			
KBC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
SHEET		OF	
34		61	



INVENTEC

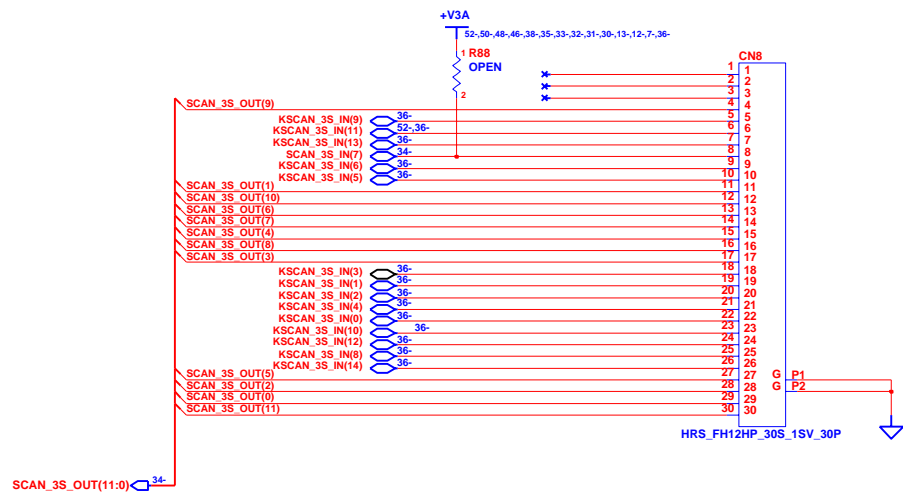
TITLE *TTL.0*
SPI & Accelerometer

SIZE A3	CODE CS	DOC. NUMBER <i>1310A21421-0</i>	REV A02
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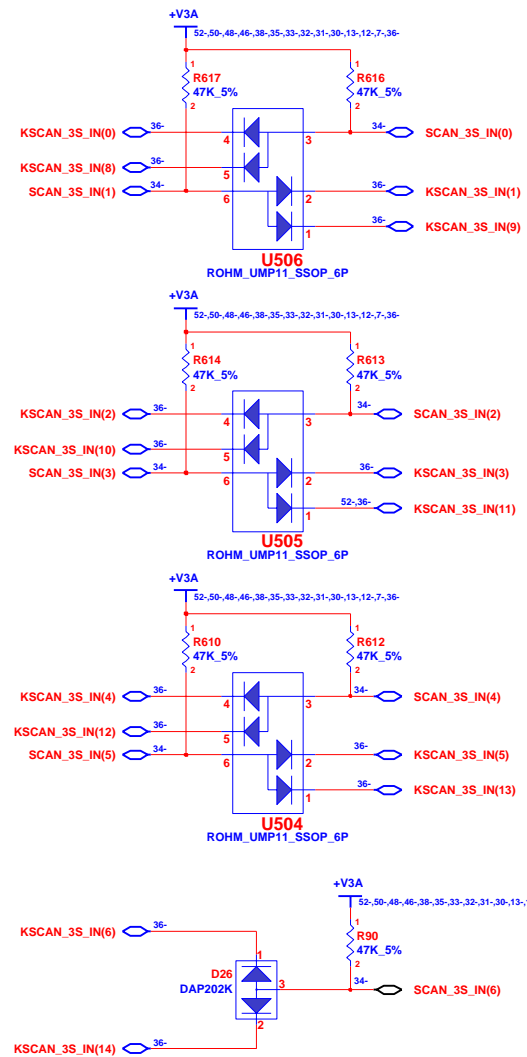
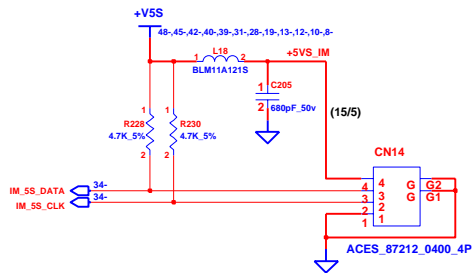
CHANGE by *Jimmy song* 2-Mar-2007

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Keyboard CONN



Touch Pad CONN



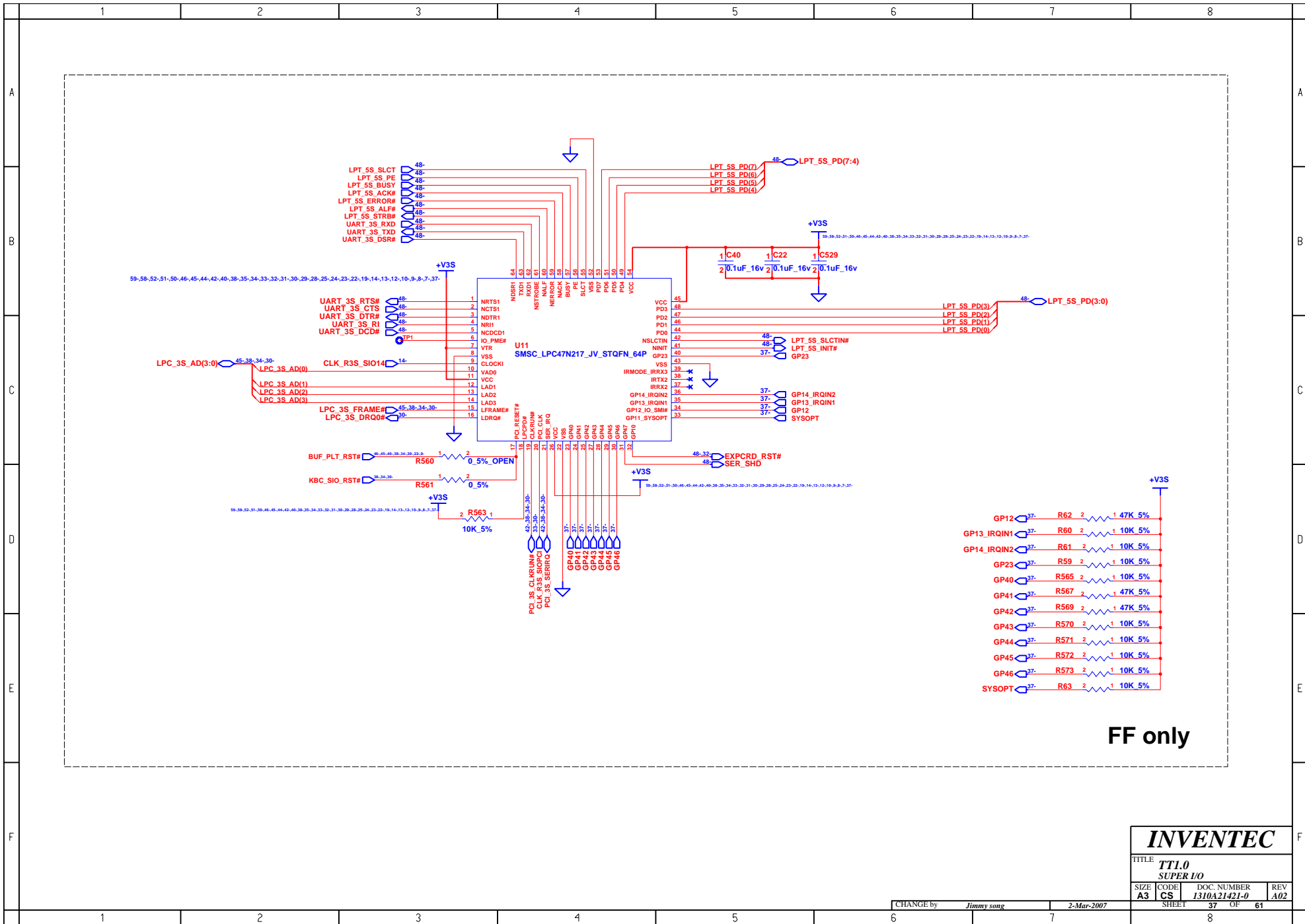
INVENTEC

TITLE
TTL0
INT.KBC/POINT DEVICES

SIZE CODE DOC. NUMBER REV
A3 CS 1310A21421-0 A02

CHANGE by Jimmy song 2-Mar-2007

SHEET 36 OF 61

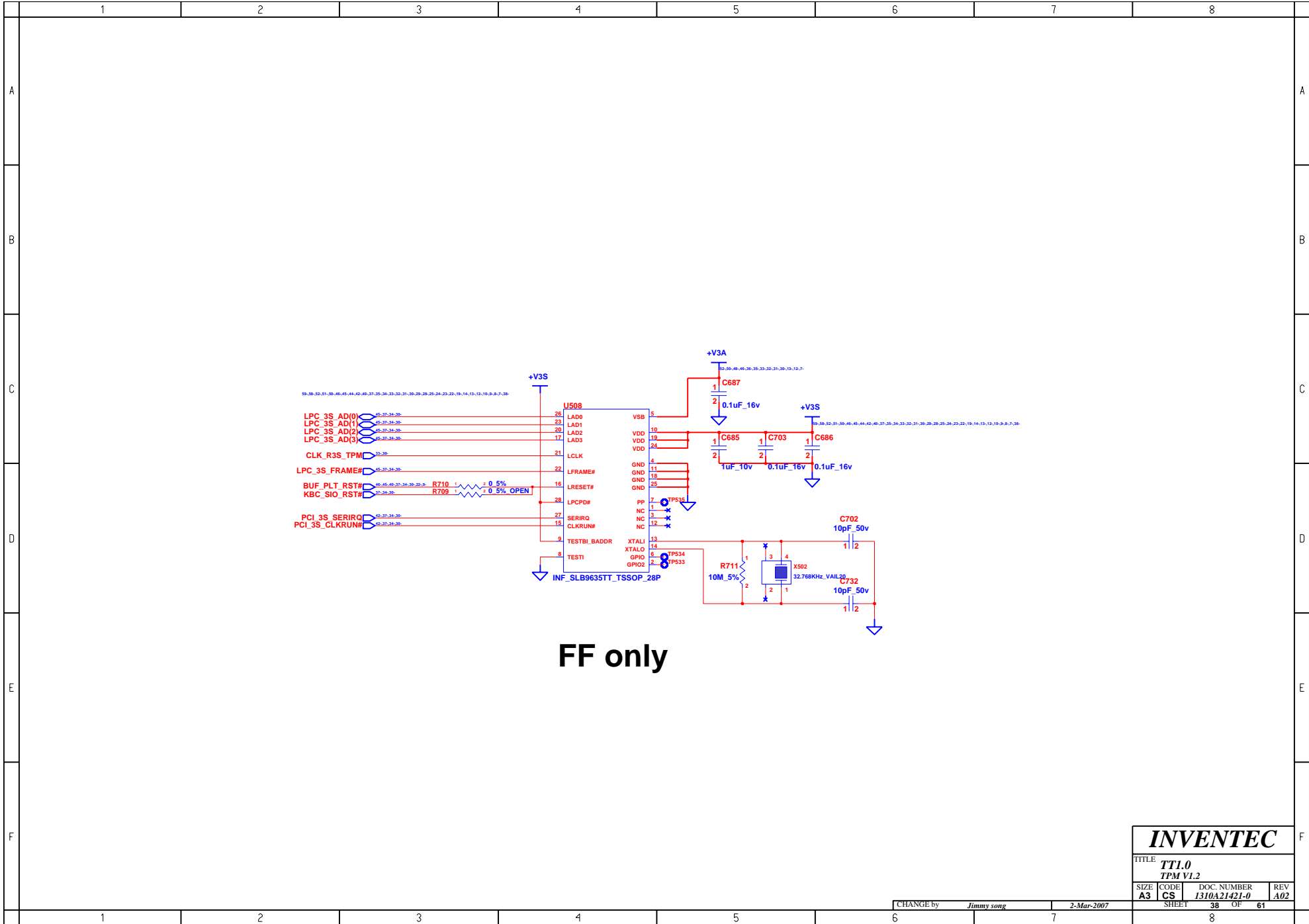


INVENTEC

TITLE
**TT1.0
SUPER I/O**

SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
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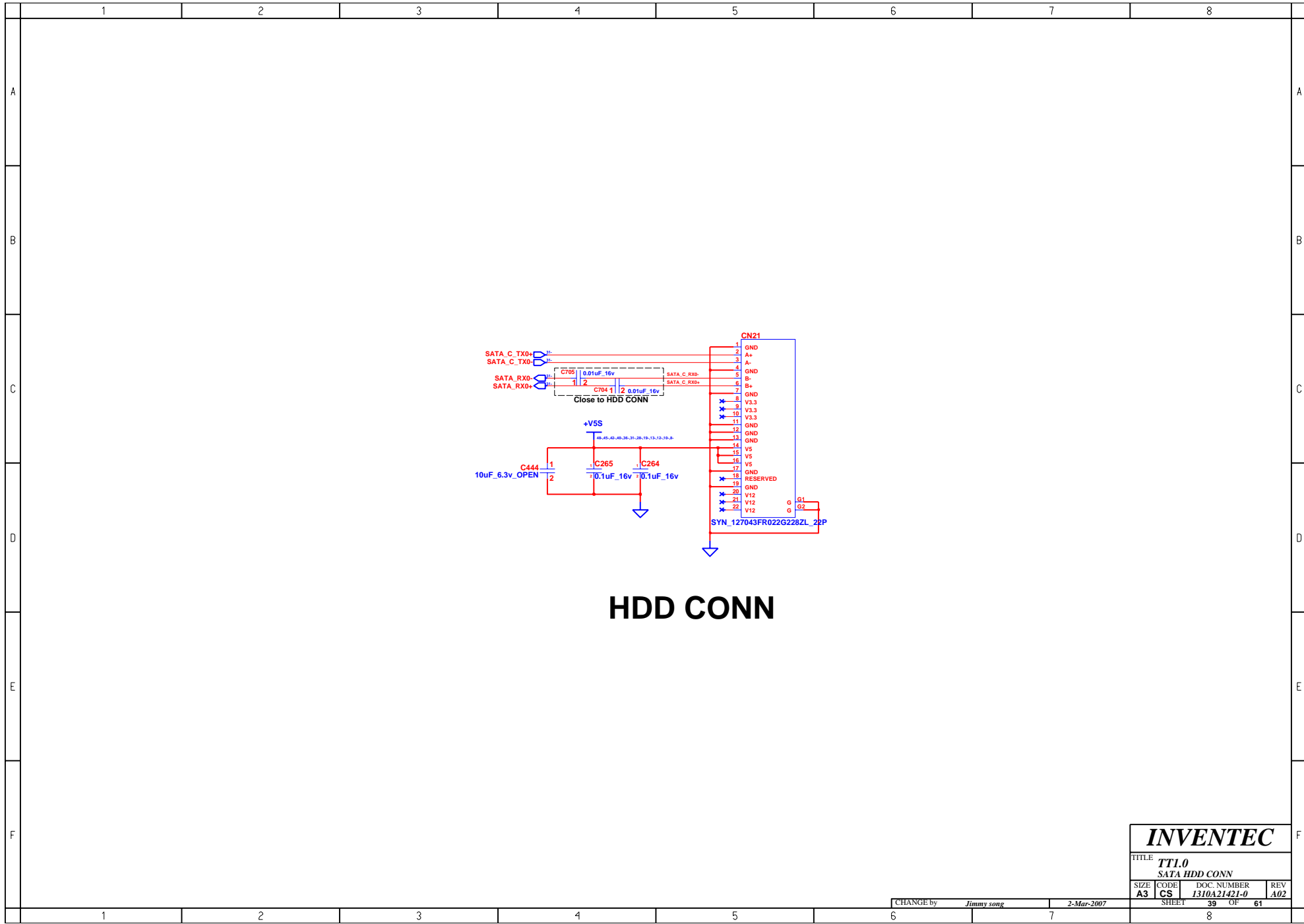
CHANGE by *Jimmy song* 2-Mar-2007



INVENTEC

TITLE
TT1.0
TPM V1.2

SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
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HDD CONN

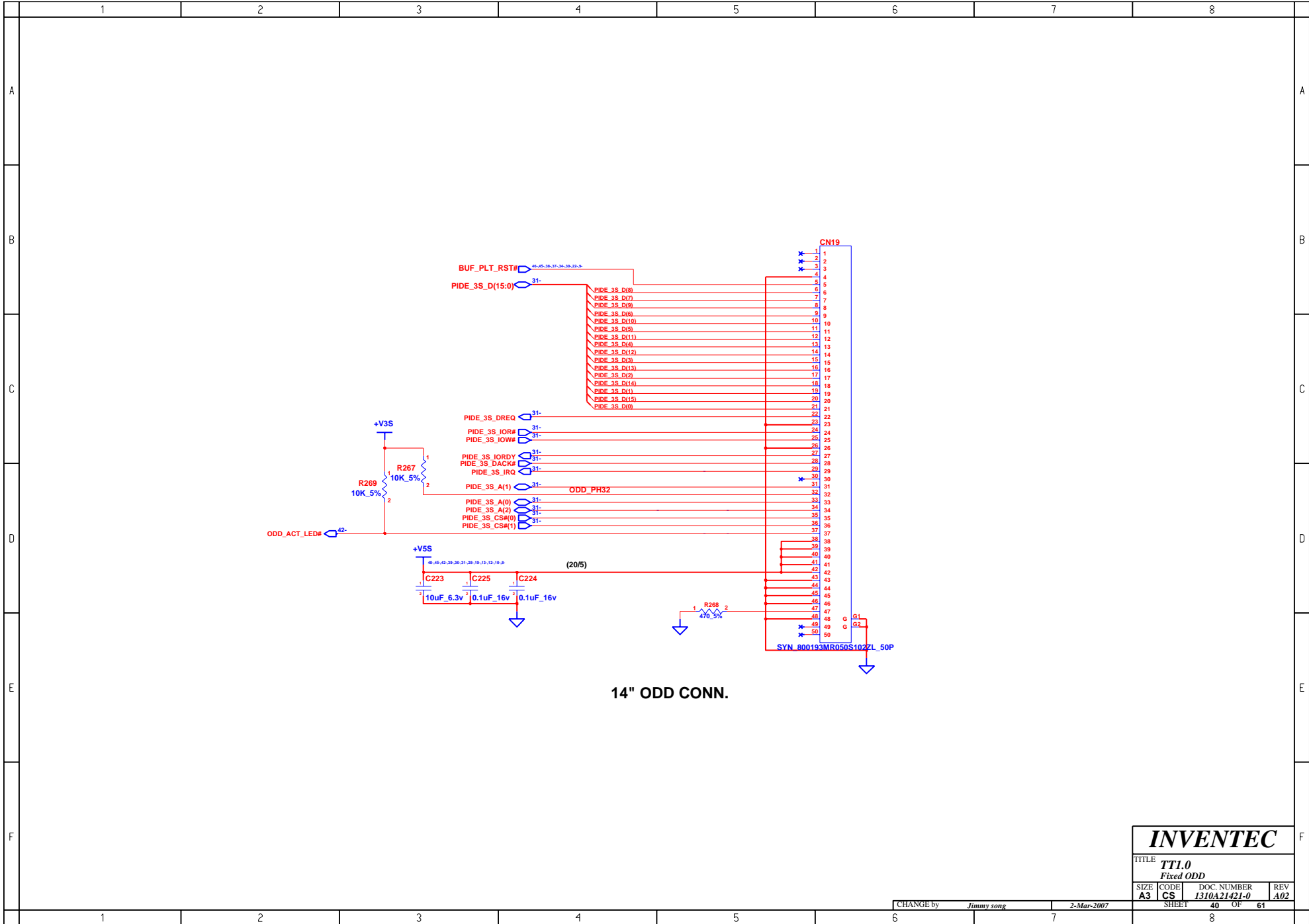
INVENTEC

TITLE *TTL.0*
SATA HDD CONN

SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
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CHANGE by *Jimmy song* 2-Mar-2007

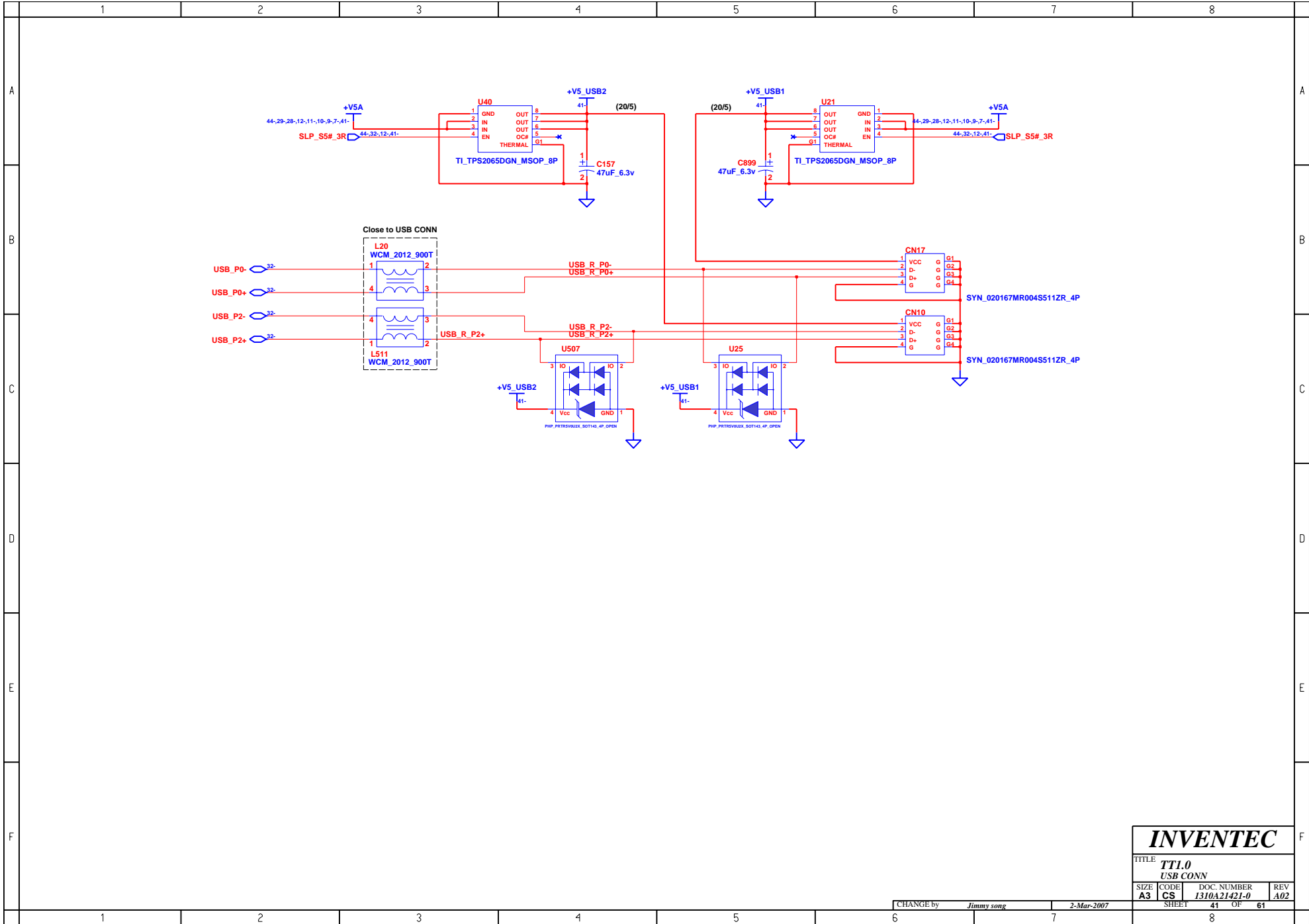
SHEET 39 OF 61



14" ODD CONN.

INVENTEC

TITLE <i>TTL0</i> <i>Fixed ODD</i>			
SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	SHEET 40 OF 61

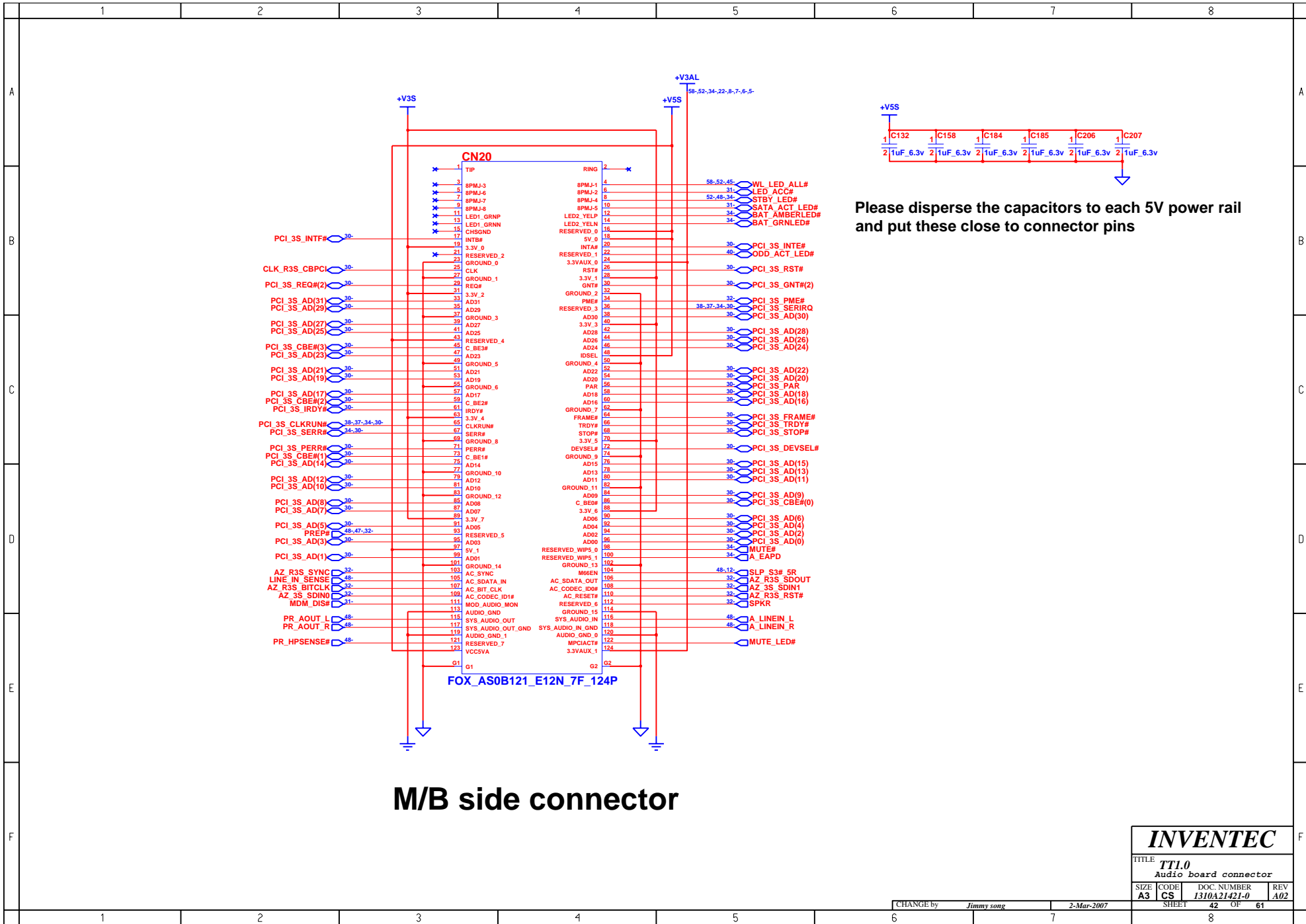


INVENTEC

TITLE			
TTL.0			
USB CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02

CHANGE by Jimmy song 2-Mar-2007

SHEET 41 OF 61



INVENTEC

TITLE **TT1.0**
Audio board connector

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02

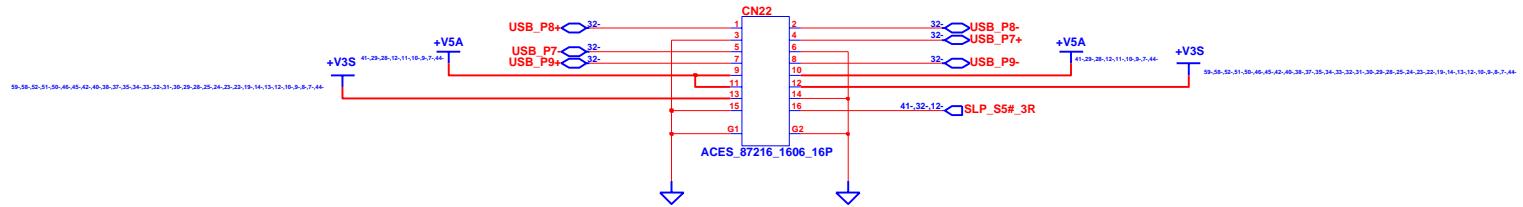
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INVENTEC

TITLE			
<i>TT1.0</i>			
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SIZE	CODE	DOC. NUMBER	REV
A3	CS	<i>1310A21421-0</i>	<i>A02</i>

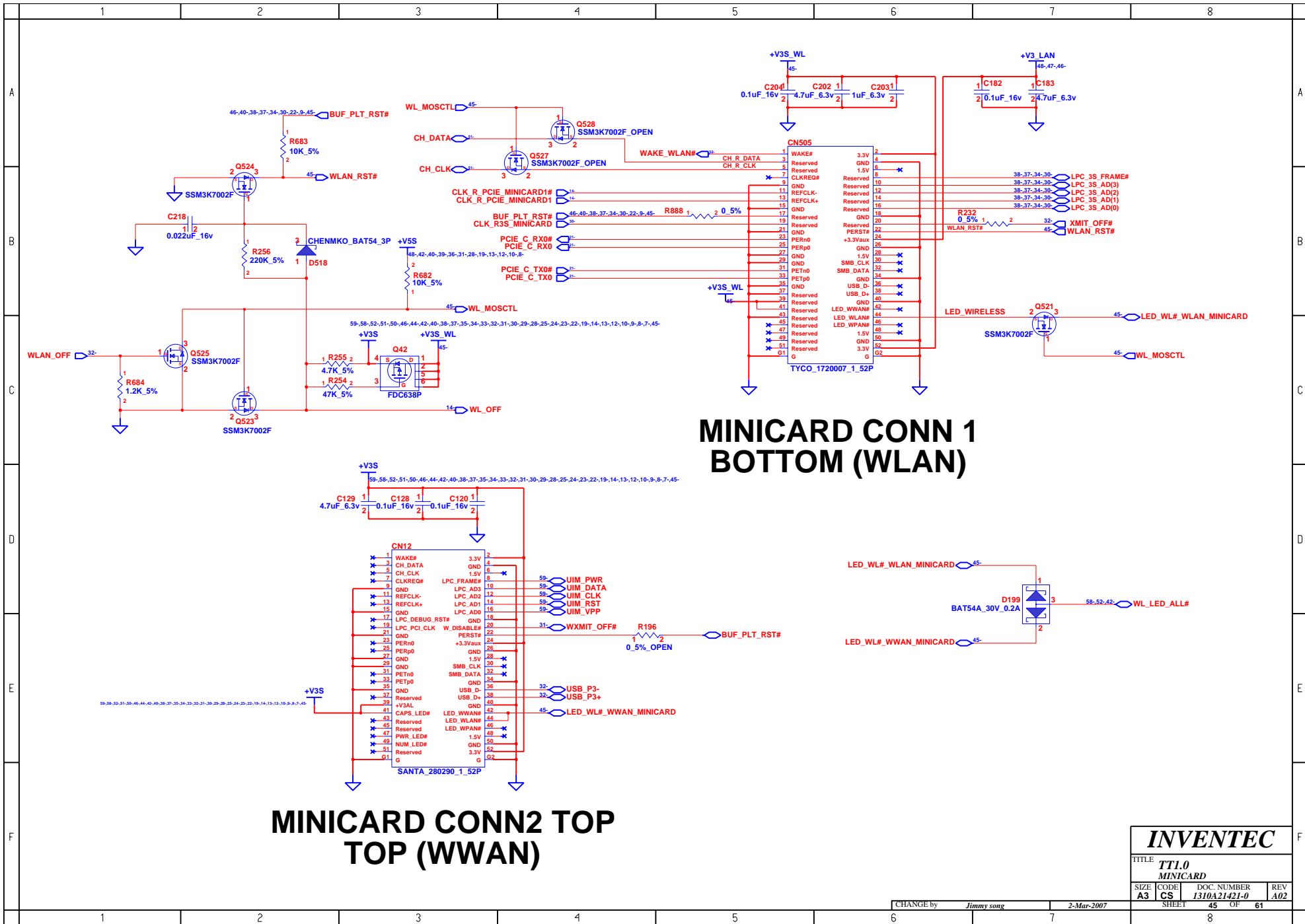
CHANGE by *Jimmy song* 2-Mar-2007

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M/B side connector

INVENTEC			
TITLE TT1.0			
5 in 1 connector			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 44		OF 61	



MINICARD CONN 1 BOTTOM (WLAN)

MINICARD CONN2 TOP TOP (WWAN)

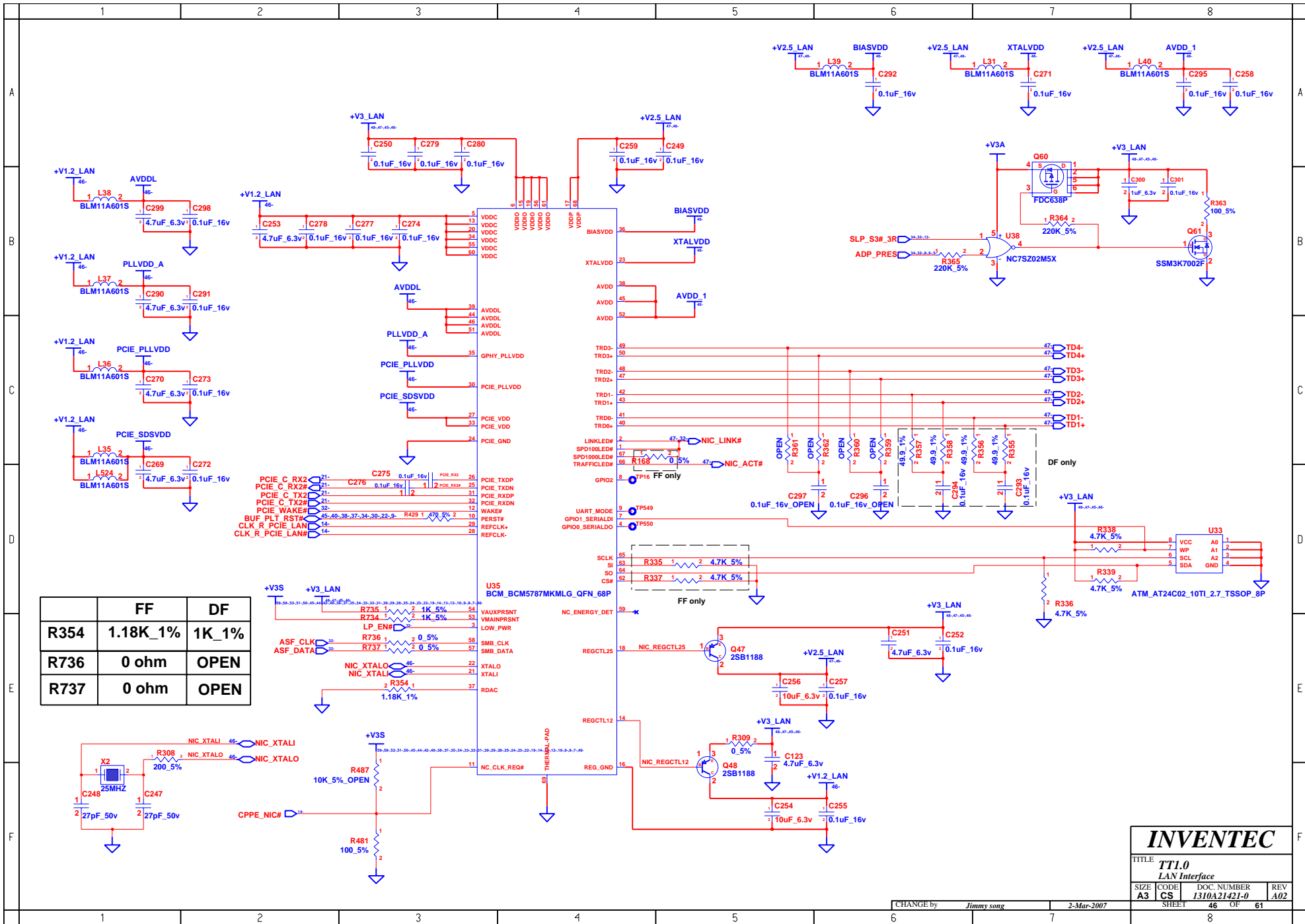
INVENTEC

TITLE
**TTL0
MINICARD**

SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
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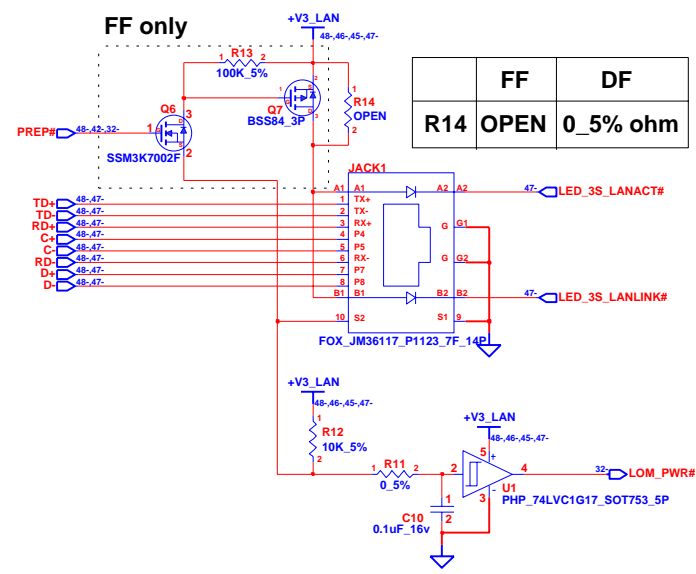
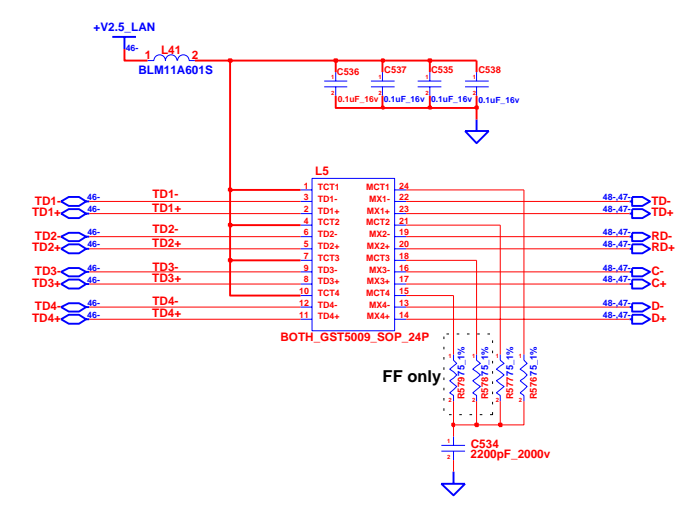
CHANGE by *Jimmy song* 2-Mar-2007

SHEET 45 OF 61

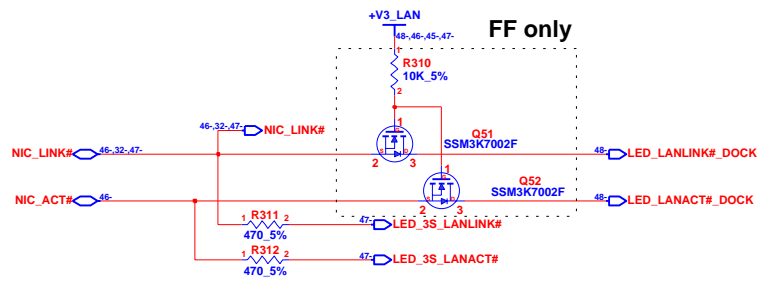


	FF	DF
R354	1.18K_1%	1K_1%
R736	0 ohm	OPEN
R737	0 ohm	OPEN

INVENTEC			
TITLE TT1.0 LAN Interface			
SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 46		OF 61	

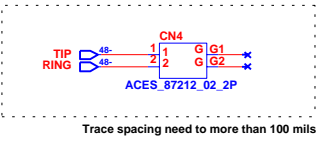
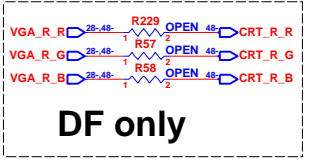
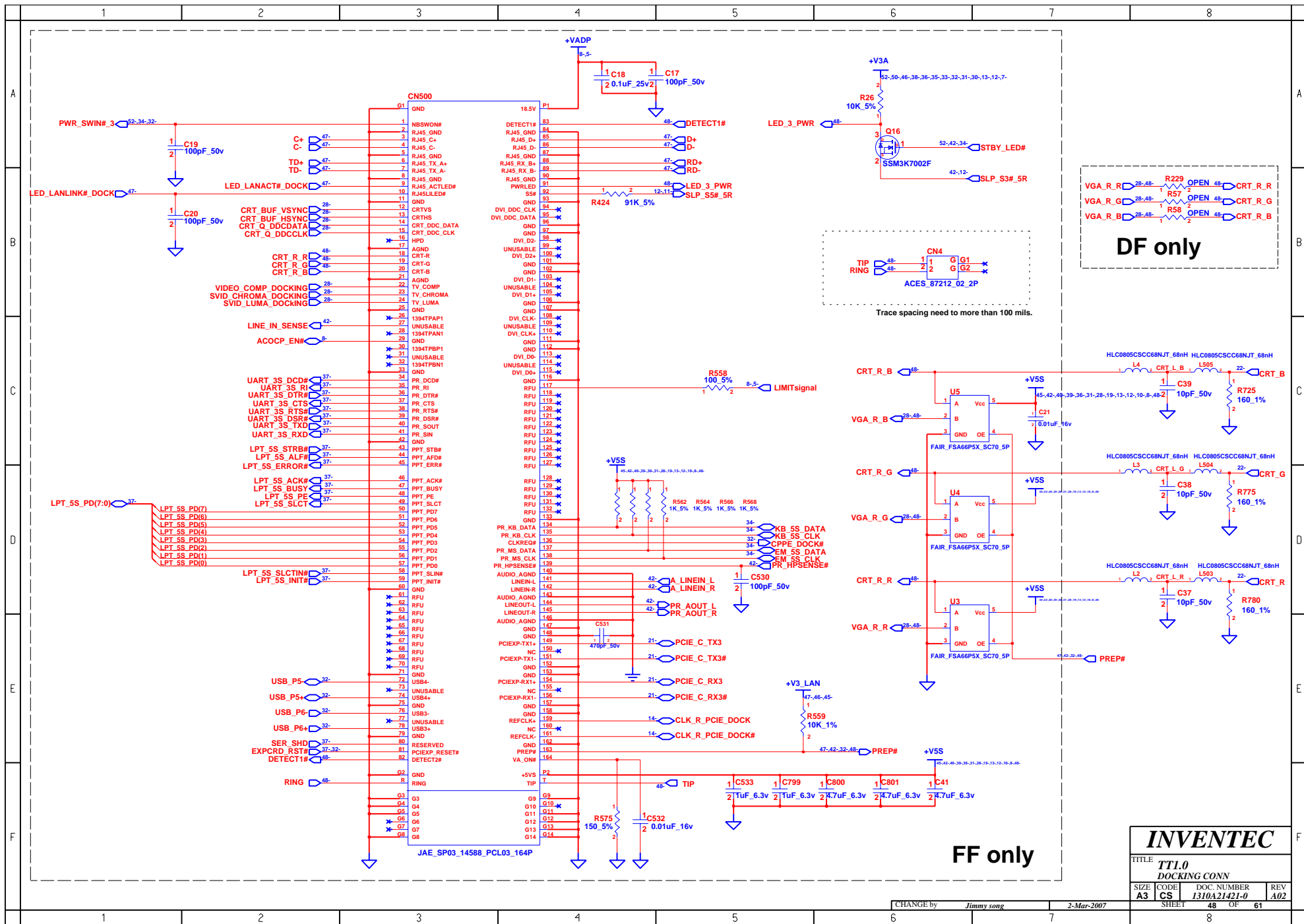


	FF	DF
R14	OPEN	0.5% ohm



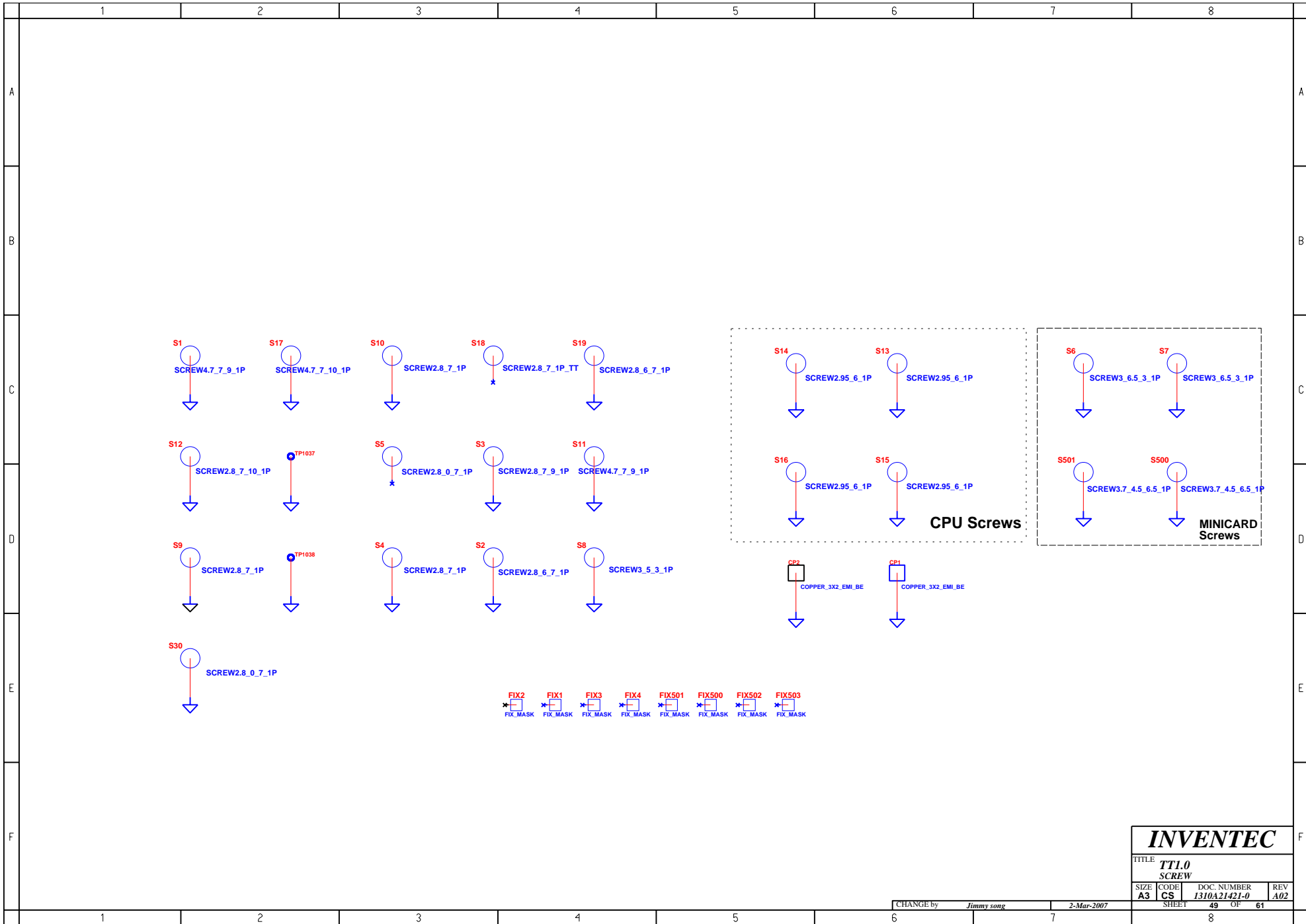
INVENTEC
 TITLE *TTL0*
LAN RJ45 CONN

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02



INVENTEC			
TITLE TT1.0 DOCKING CONN			
SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
SHEET 48		OF 61	

CHANGE by Jimmy song 2-Mar-2007



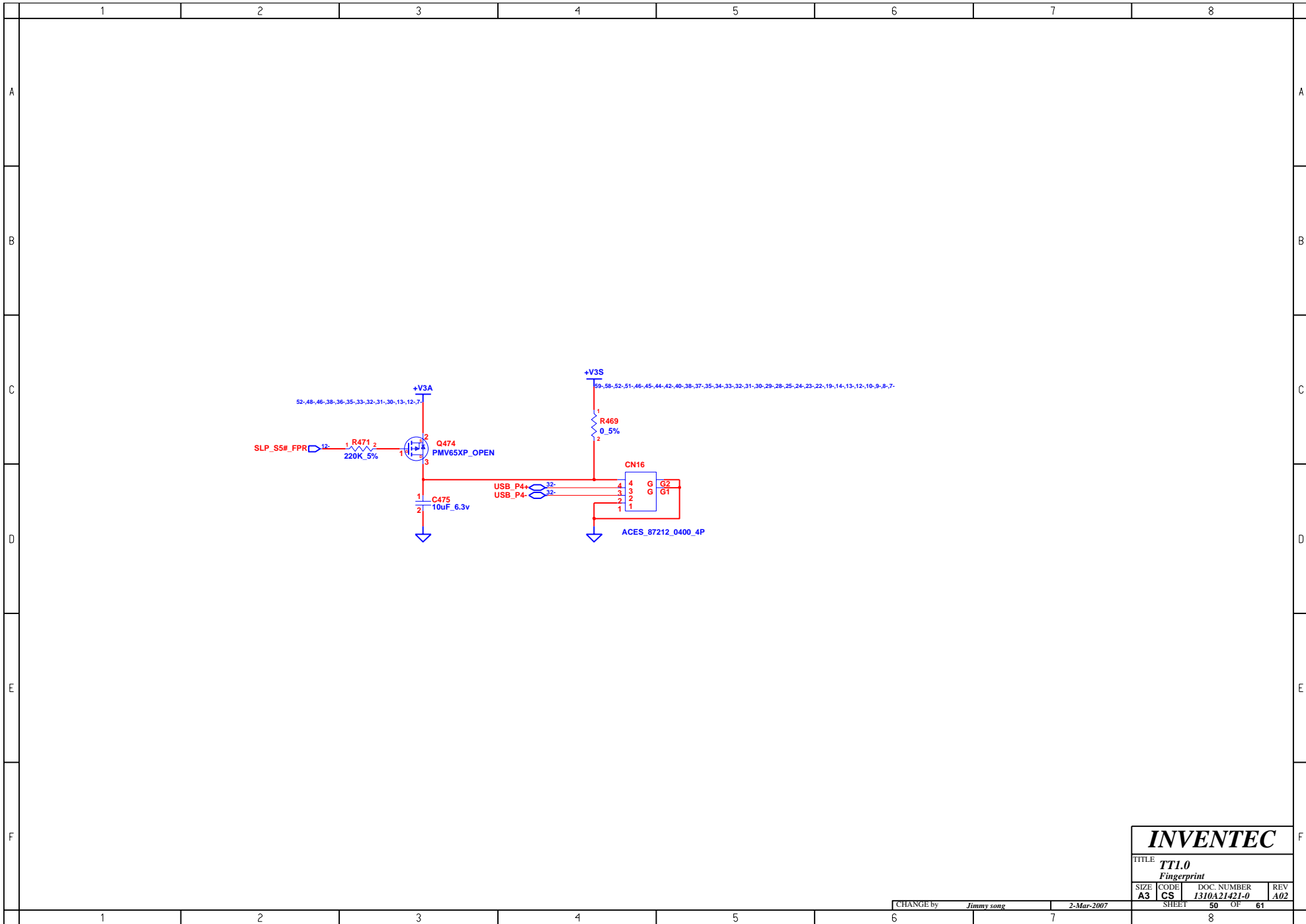
INVENTEC

TITLE
**TT1.0
 SCREW**

SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
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CHANGE by *Jimmy song* 2-Mar-2007

SHEET 49 OF 61

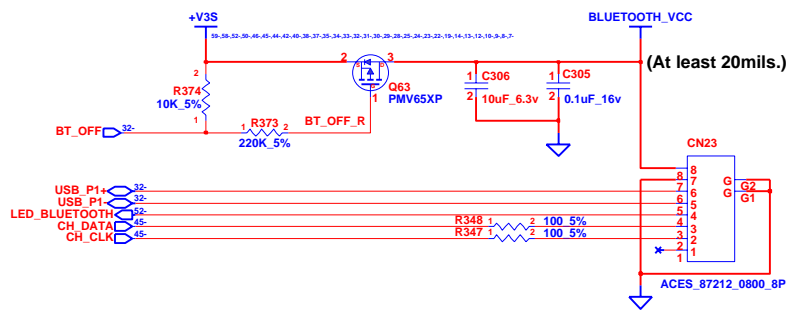


INVENTEC

TITLE			
TT1.0			
Fingerprint			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02

CHANGE by Jimmy song 2-Mar-2007

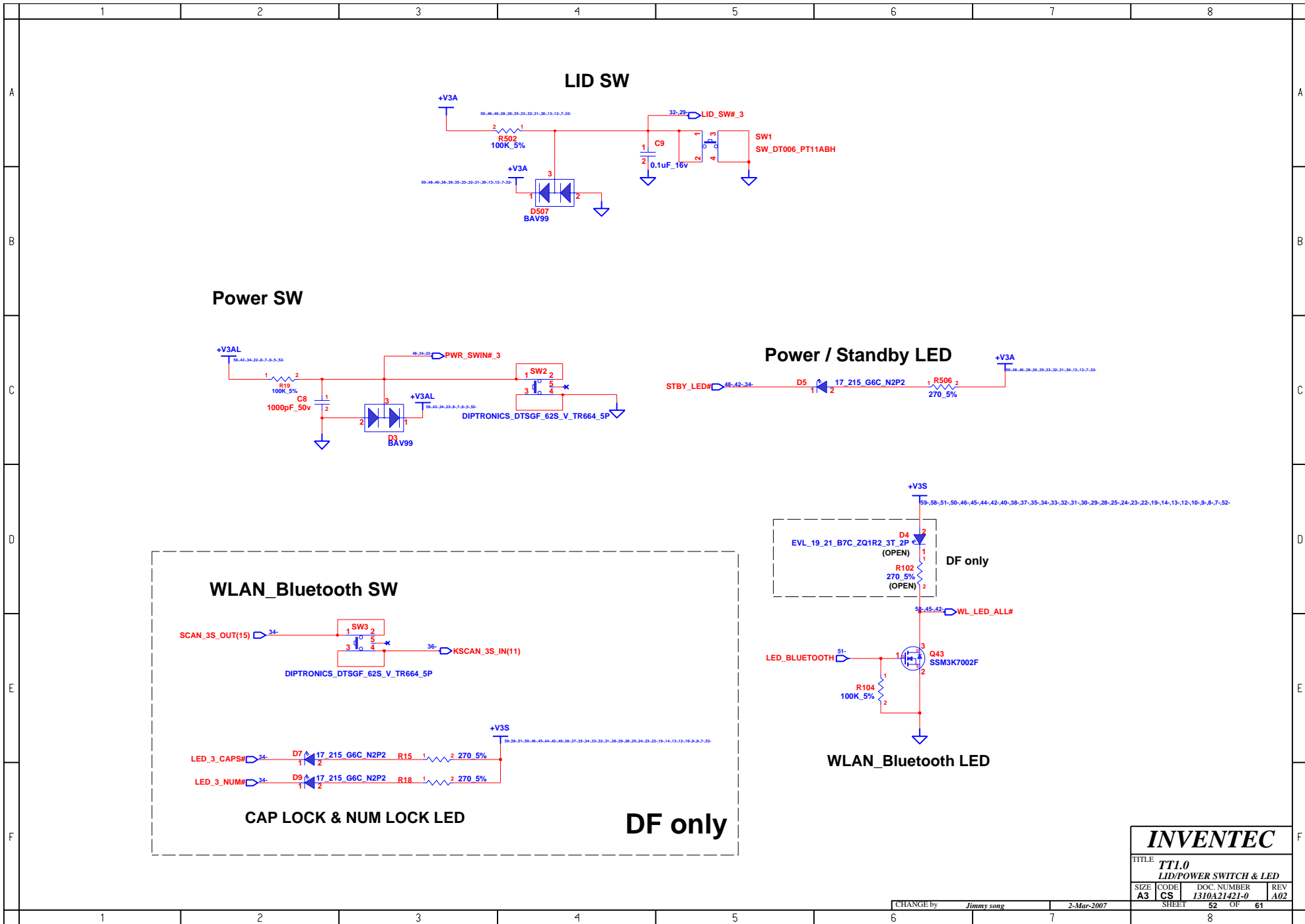
SHEET 50 OF 61



INVENTEC

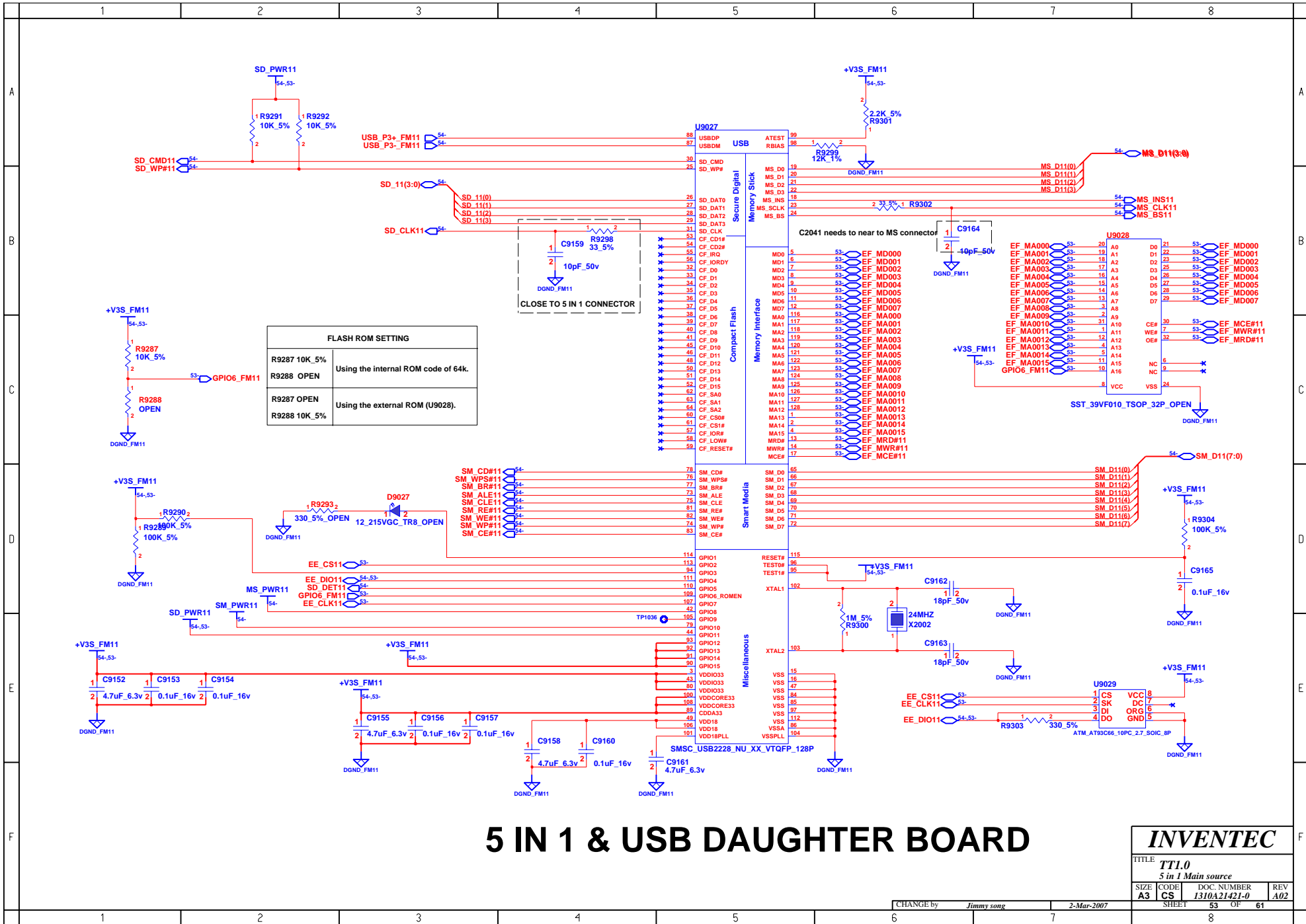
TITLE			
TT1.0			
BLUETOOTH			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
SHEET		OF	
51		61	

CHANGE by Jimmy song 2-Mar-2007



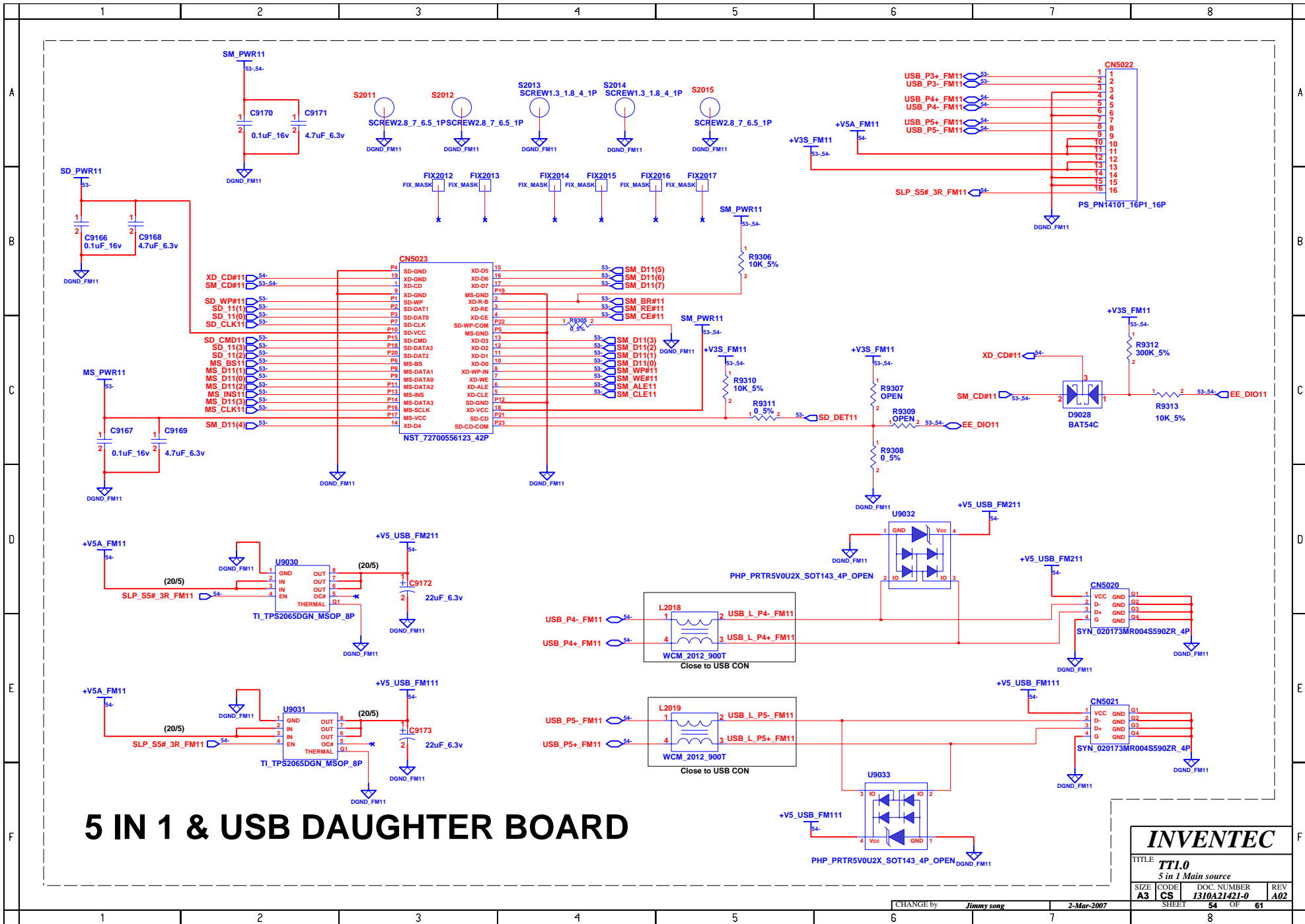
INVENTEC

TITLE			
TTL0			
LID/POWER SWITCH & LED			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A21421-0	A02



5 IN 1 & USB DAUGHTER BOARD

INVENTEC			
TITLE TT1.0			
5 in 1 Main source			
SIZE A3	CODE CS	DOC. NUMBER I310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET 53		OF 61	



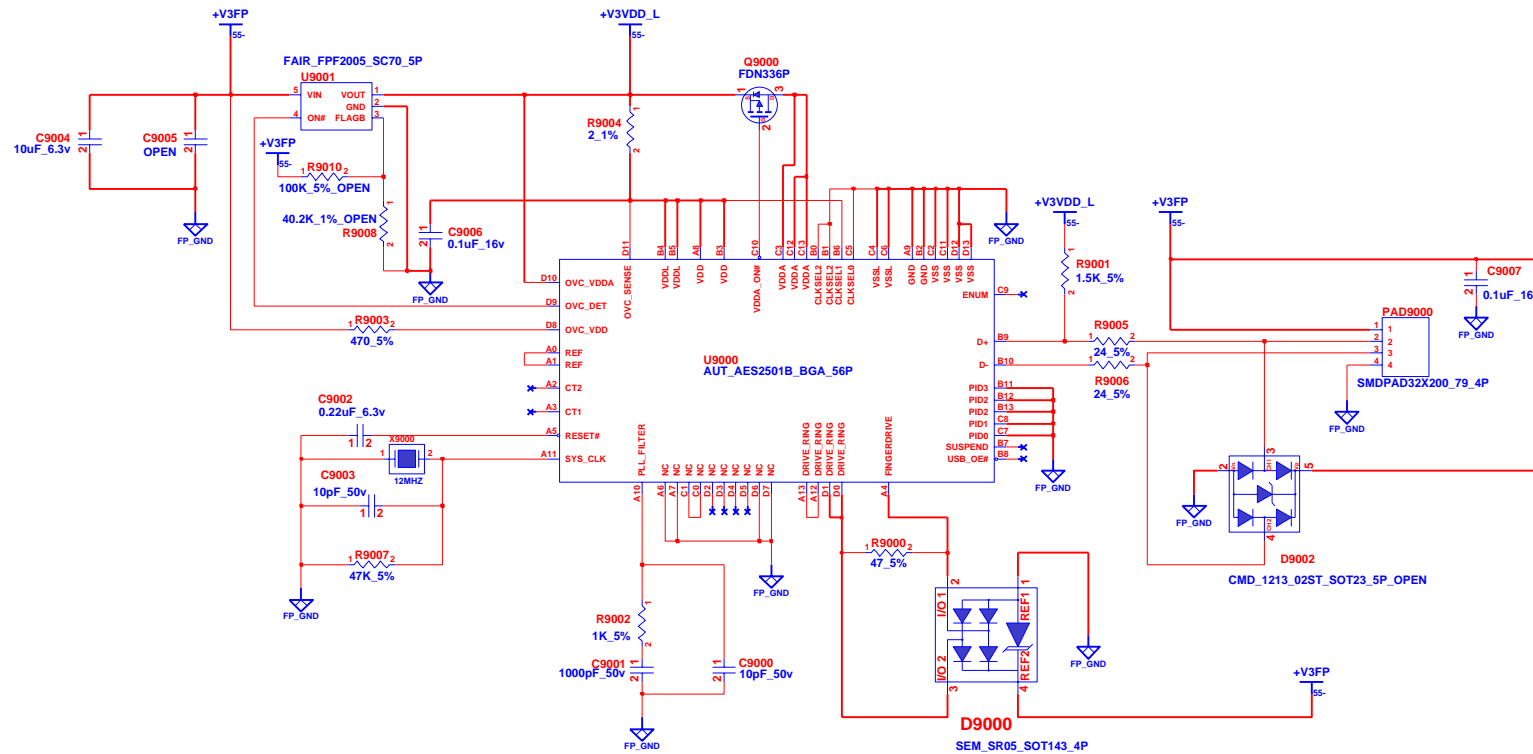
5 IN 1 & USB DAUGHTER BOARD

INVENTEC

TITLE TT1.0 5 in 1 Main source			
SIZE A3	CODE CS	DOC NUMBER I310A21421-0	REV A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	SHEET 54 OF 61

Finger Print Reader DB

(Same as DAVOS30 FPR circuit.)



INVENTEC

TITLE			
TT1.0			
Finger Print board			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by		SHEET	
Jimmy song		55 OF 61	

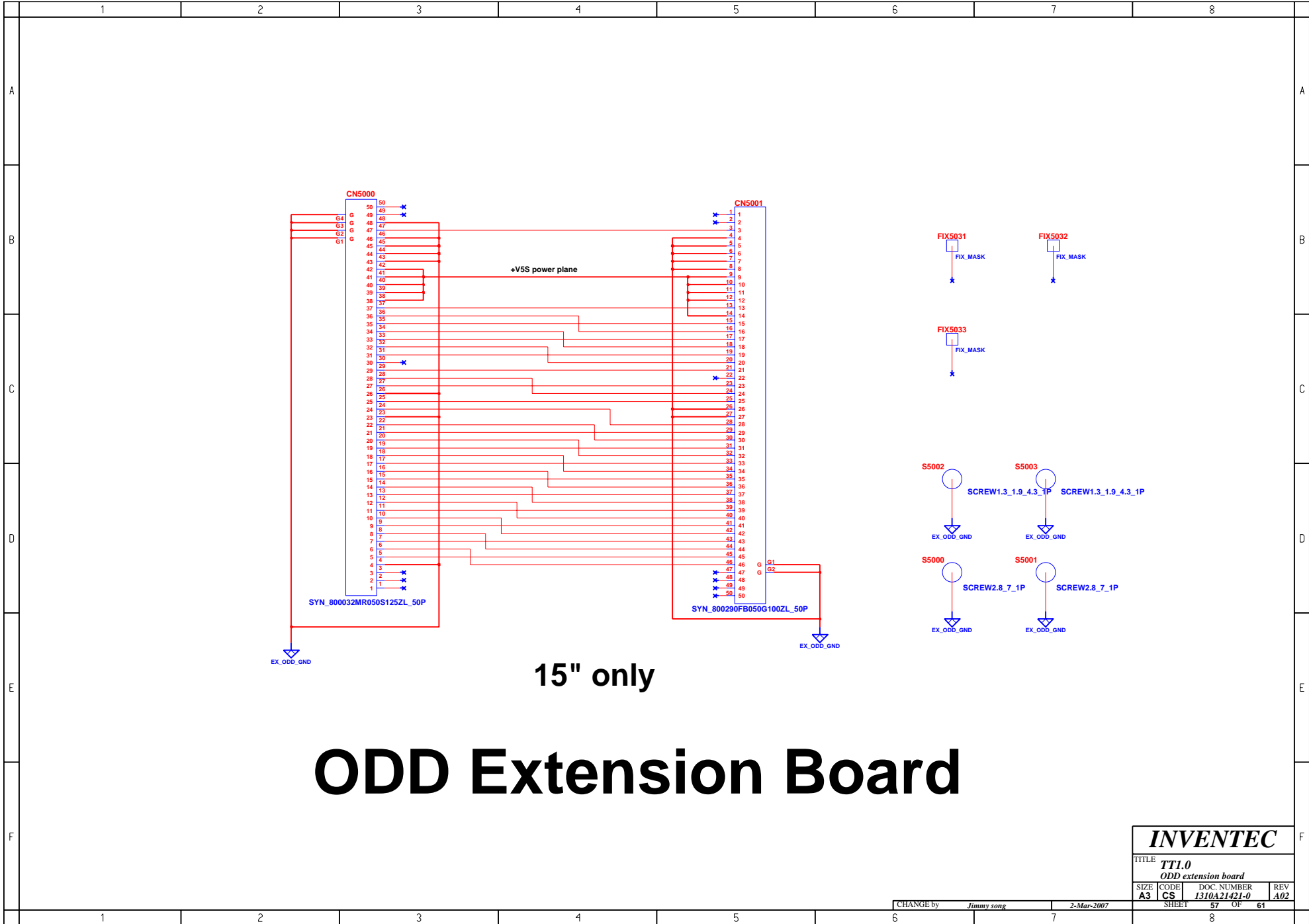
2-Mar-2007

8

BLANK

INVENTEC			
TITLE <i>TT1.0</i>			
BLANK			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
SHEET		56	OF 61

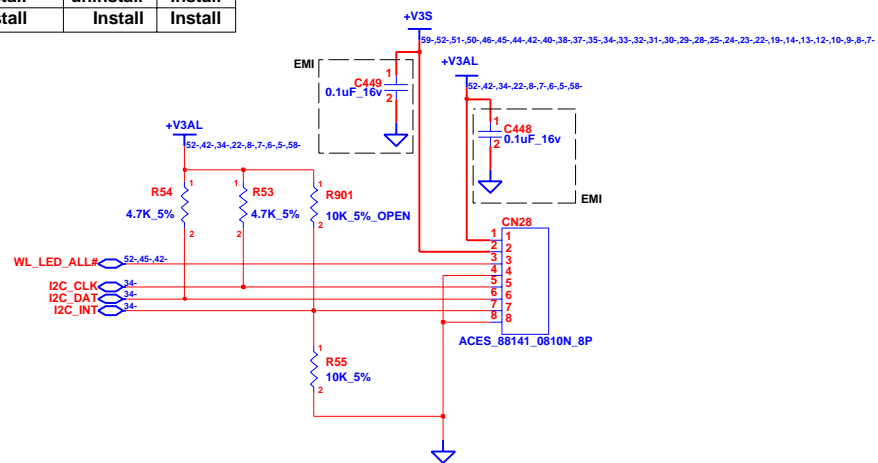
	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
	1	2	3	4	5	6	7	8	



ODD Extension Board

INVENTEC			
TITLE <i>TT1.0</i>			
ODD extension board			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	SHEET 57 OF 61

	FF+WWAN	DF	FF
CN28,C448,C449	Install	uninstall	Install
R53,R54,R55	Install	Install	Install

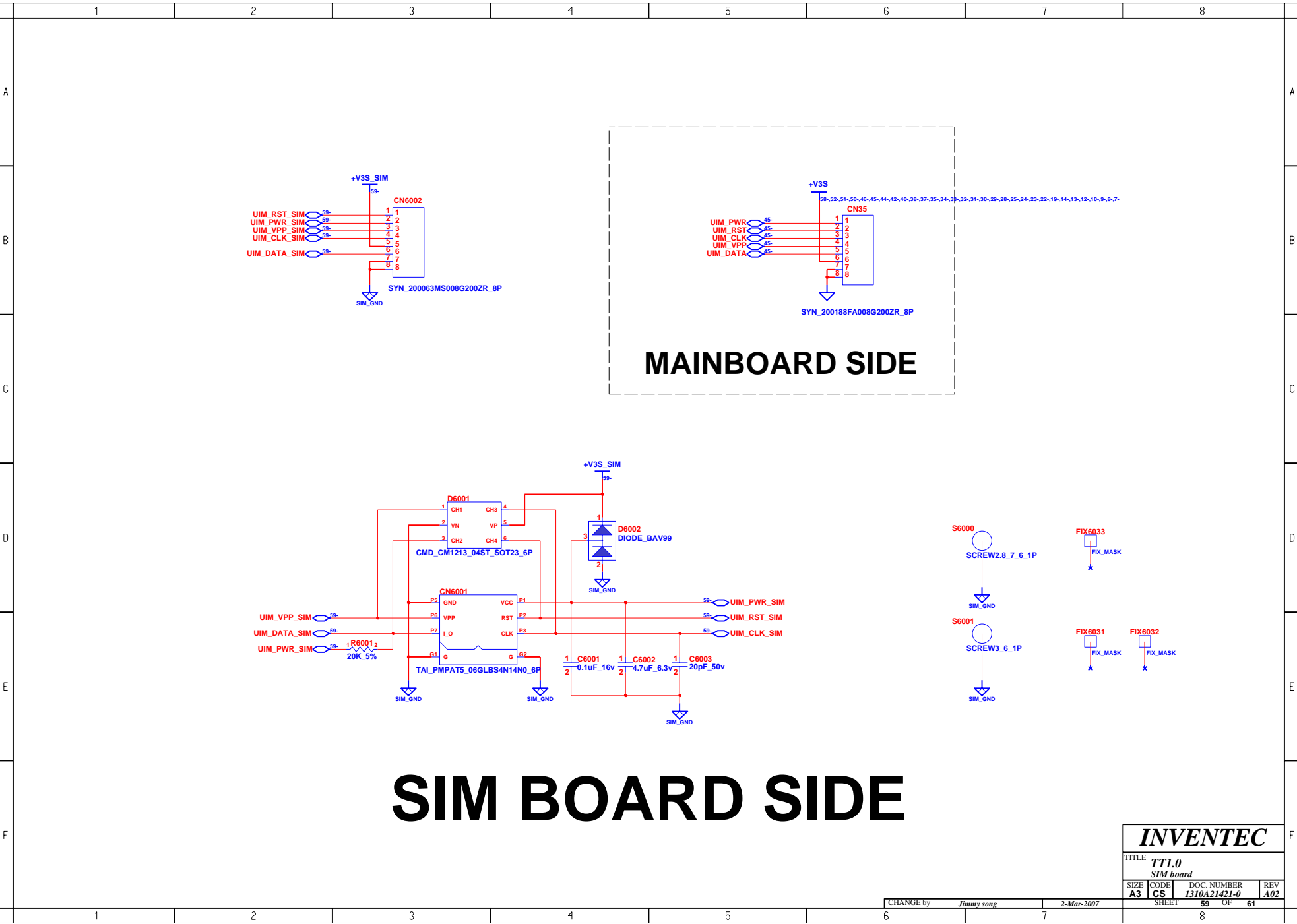


INVENTEC

TITLE <i>TTI.0</i>			
SW/B connector			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02
CHANGE by <i>Jimmy song</i>		2-Mar-2007	
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CHANGE by *Jimmy song* 2-Mar-2007

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MAINBOARD SIDE

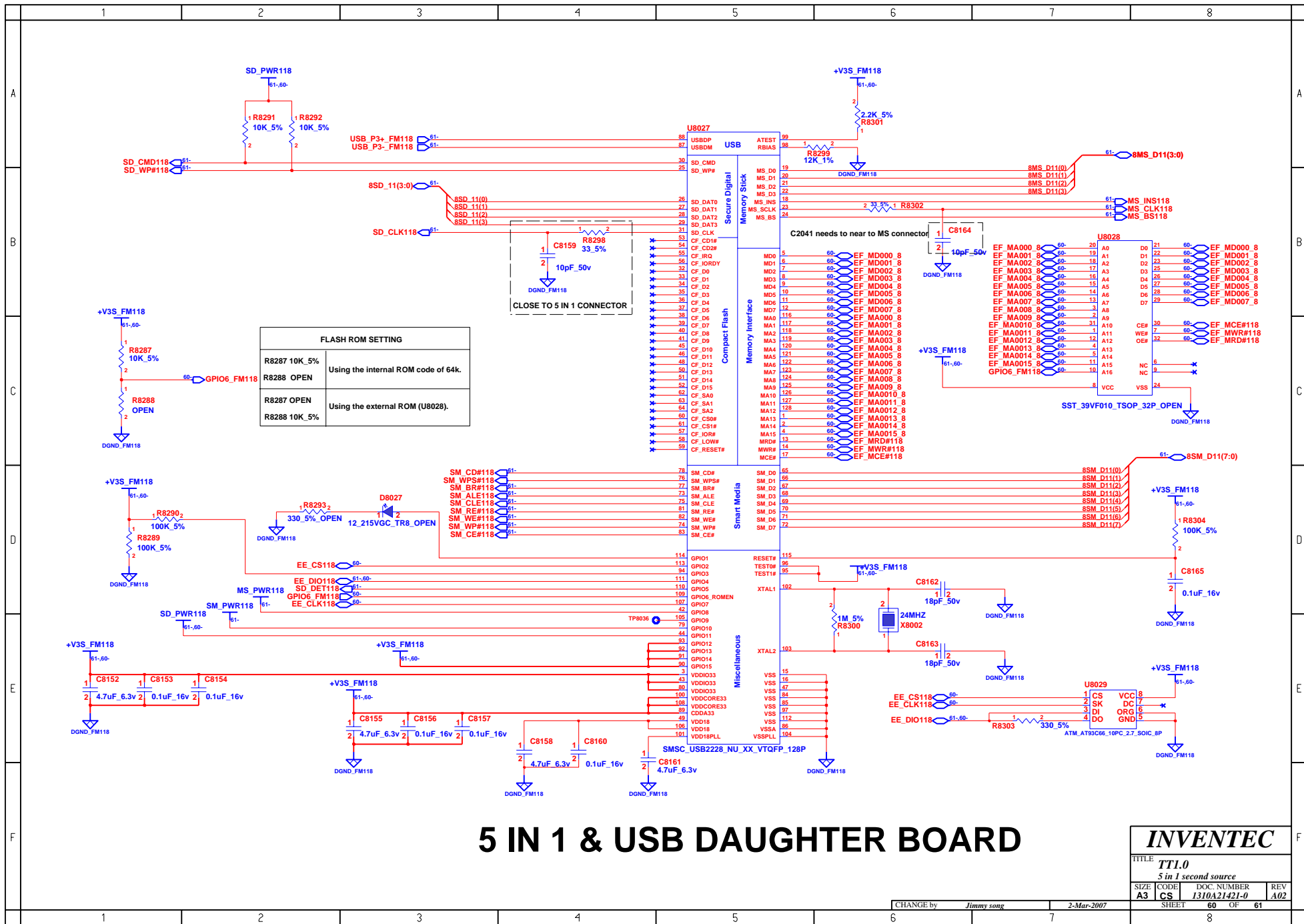
SIM BOARD SIDE

INVENTEC

TITLE
TT1.0
 SIM board

SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
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CHANGE by *Jimmy song* 2-Mar-2007 SHEET 59 OF 61



FLASH ROM SETTING	
R8287 10K_5%	Using the internal ROM code of 64k.
R8288 OPEN	Using the external ROM (U8028).
R8287 OPEN	Using the external ROM (U8028).
R8288 10K_5%	Using the external ROM (U8028).

5 IN 1 & USB DAUGHTER BOARD

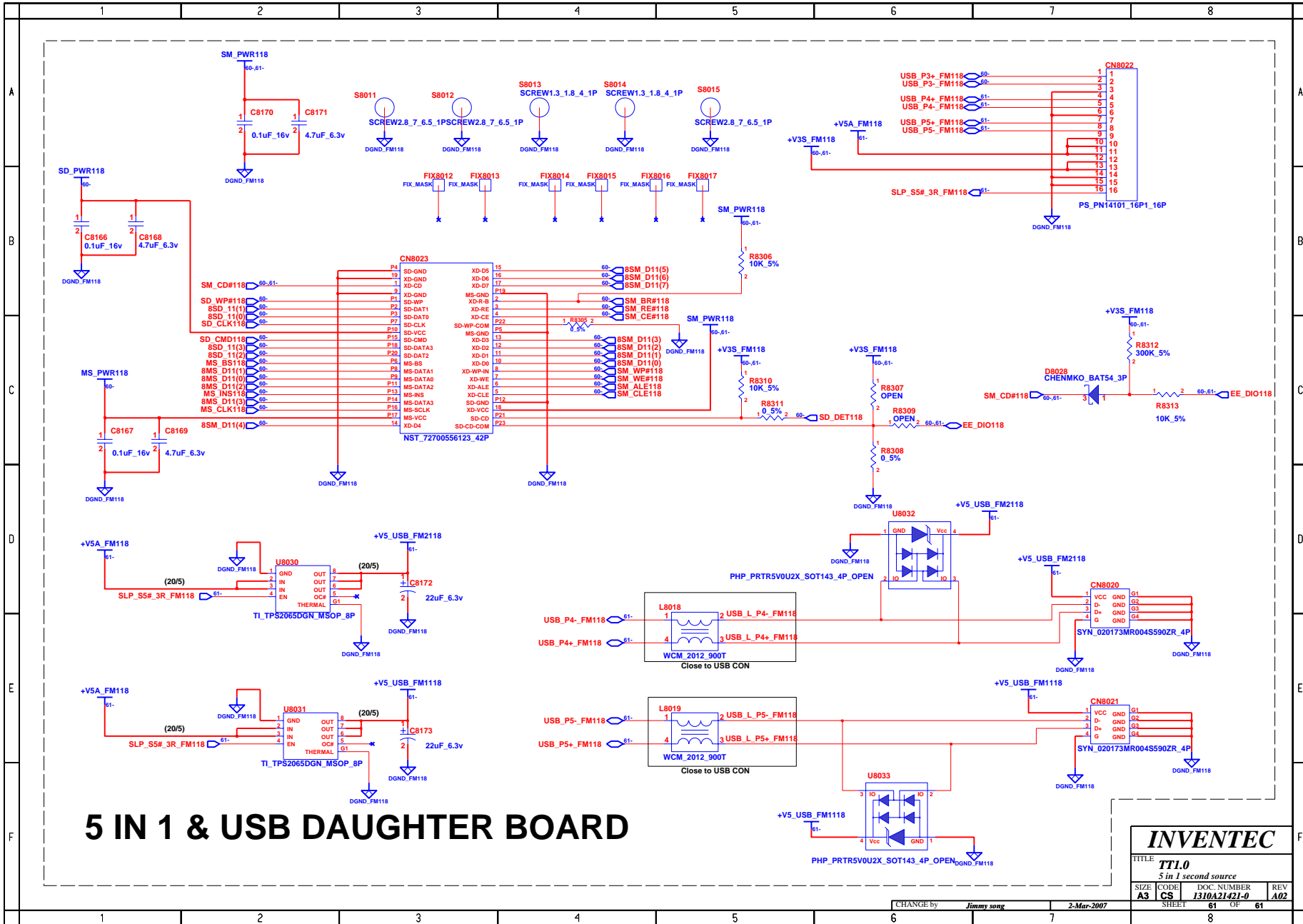
INVENTEC

TITLE
TT1.0
 5 in 1 second source

SIZE A3	CODE CS	DOC. NUMBER 1310A21421-0	REV A02
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SHEET 60 OF 61

CHANGE by Jimmy song 2-Mar-2007



5 IN 1 & USB DAUGHTER BOARD

INVENTEC

TITLE: **TT1.0**
 5 in 1 second source

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A21421-0	A02