

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

ST145AU

AMD DANUBE PLATFORM

SI - R Build

2009/12/21

U811 Hynix DDR3 6019B0647101

R1206 Install , R1186 Open

U811 Samsung DDR3 6019B0648501

R1206 Open , R1186 Install

U805 Change to 6019B0653601

CN804 Change to 6026B0184301

CN807 Change to 6026B0184301

CN808 Change to 6026B0121002

DATE	CHANGE NO	REV
1		2

	EE	DATE	POWER	DATE
DRAWER				
DESIGN				
CHECK				
RESPONSIBLE				
SIZE = 3 VER.				
FILE NAME : XXXX-XXXXXX-XX				
P/N	XXXXXXXXXXXX			

INVENTEC

TITLE

ST145a-UMA

Project Name

SIZE CODE DOC NUMBER REV

A3 CS Model No 1 OF 51

SHEET

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 02- Index
 03- Block Diagram
 04- Power Procedure
 05- NOTE
 06- DC & BATTERY CHARGER
 07- BATTERY CONN
 08- +V5A & +V3A & +V2.5S
 09- +V1.2A & +VCC_NB
 10- +VCC_CORE & +VCC_CORE_NB
 11- +V1.1S & +V1.1A & +V1.05S
 12- NOTE
 13- +V1.5 & +V1.8S
 14- POWER (SLEEP)
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 33- CRT
 34- NOTE
 35- LCM
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 37- KBC
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 39- Card reader
 40- SATA HDD & SATA ODD CONN
 41- Touch screen & FingerPrint CONN
 42- ESATA CONN & USB Board CONN
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 51- USB BOARD & BUTTON BOARD
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INVENTEC

TITLE: ST145a-UMA			
Index			
SIZE: A3	CODE: CS	DOC. NUMBER: Model No	REV: X01
SHEET: 2		OF: 51	

CHANGE by: **ALAN W** 27-Jul-2009

8

Inventec Confidential

PCB STACK UP

LAYER 1 : TOP
LAYER 2 : GND
LAYER 3 : IN1
LAYER 4 : IN2
LAYER 5 : VCC
LAYER 6 : BOT

CLK GEN
REA-RTM880N-796
P.16

Thermal Sensor
P.20

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Champlain
S1G4 Processor
638 P(PGA) 45W/35W
35mm X 35mm
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DDR III _SODIMMO
P.27

DDR3 channel B

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HDMI P.37
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CRT

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RS880M
A12
21mm X 21mm, 528pin BGA
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LAN
REALTEK
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PCIE_1 USB_8
Half MINI CARD
CONN (WLAN)
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Side-port
Memory
128MB
P.26

A-link X 4

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USB_4
WEB CAM
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USB2 CONN (DB)
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USB2.0

USB_7
TOUCH SCREEN
P.42

USB_8
MINI CARD
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USB_1
CARD READER
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USB_2
BLUE TOOTH
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AMD
SB820M A12
21mm X 21mm, 528pin BGA
4.5W (Ext)
4.3W (Int)
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SMBus

Accelerometer
P.40

SATA_0
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SATA_1
ODD
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USB_0 SATA_2
ESATA
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SIMCARD
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Speaker
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AUDIO CODEC
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HP JACK
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MIC JACK
P.47

HDA

LPC

KBC
ITE 8502E-KX
P.38

Keyboard
P.39

TouchPad
P.39

SYSTEM BIOS
P.38

SPI

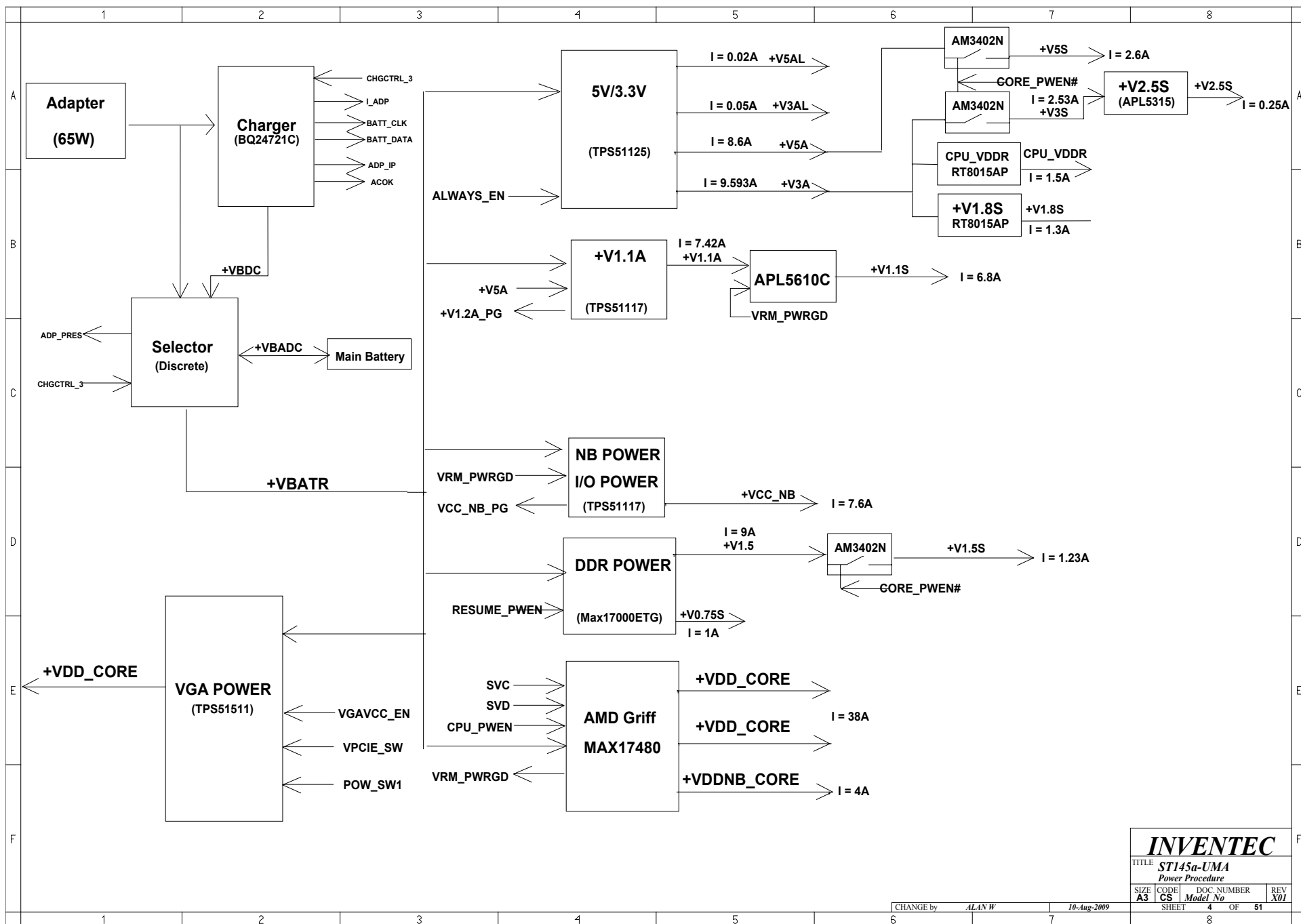
MAIN BATT
P.07

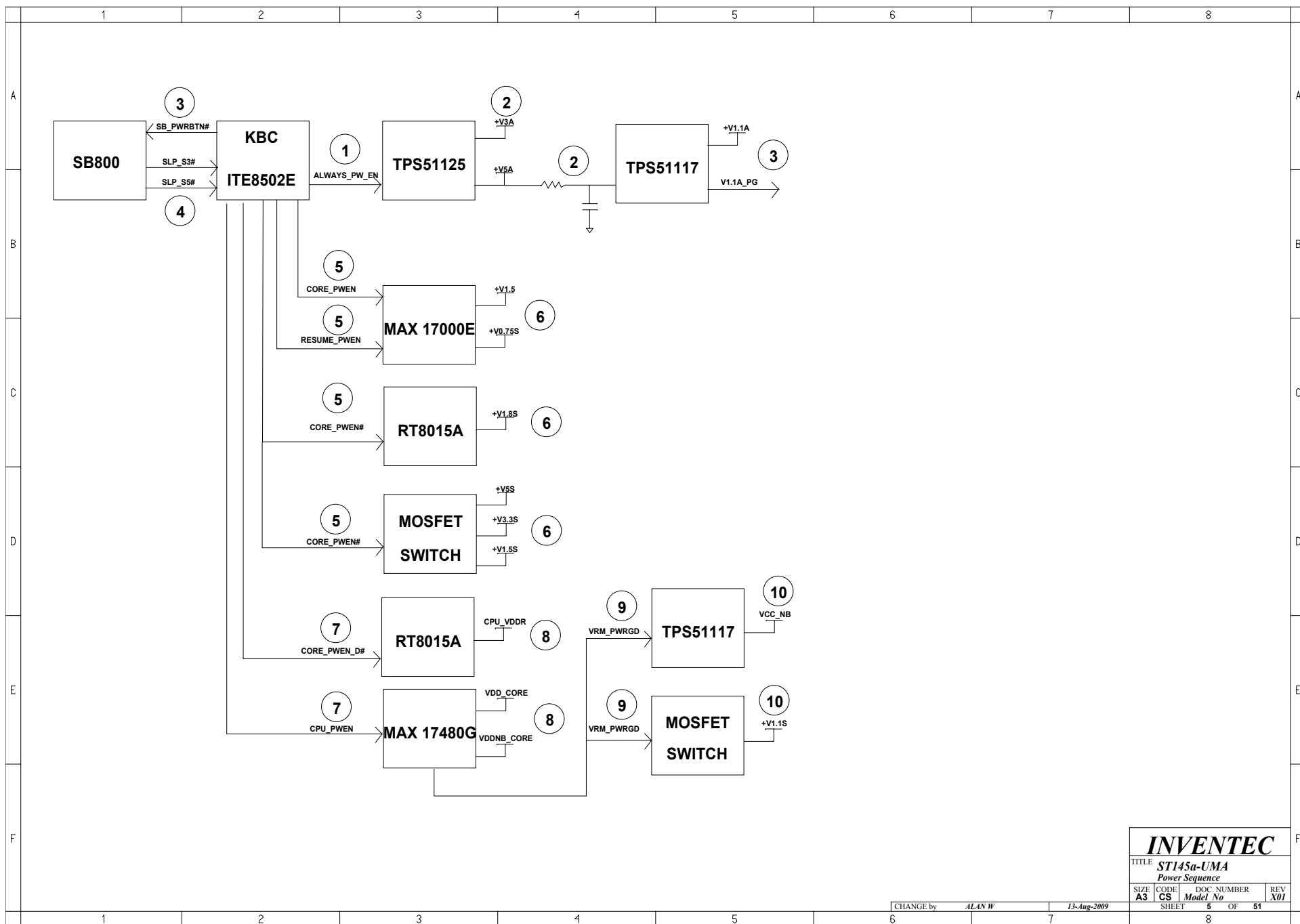
System Charger &
DC/DC System power
P.06

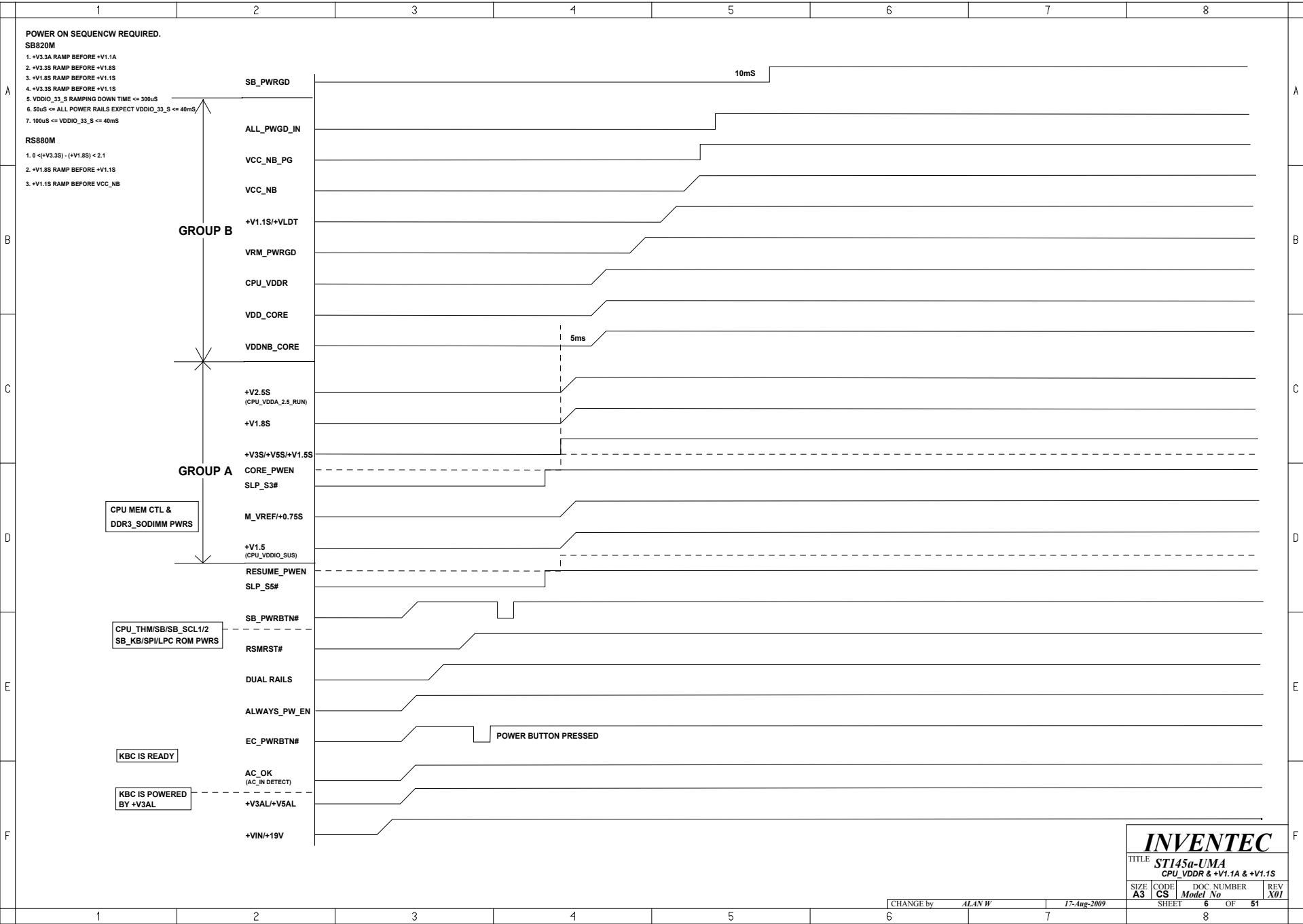
INVENTEC

TITLE **ST145a-UMA**
Block Diagram
SIZE **A3** CODE **CS** DOC NUMBER **Model No** REV **X01**
SHEET **3** OF **51**

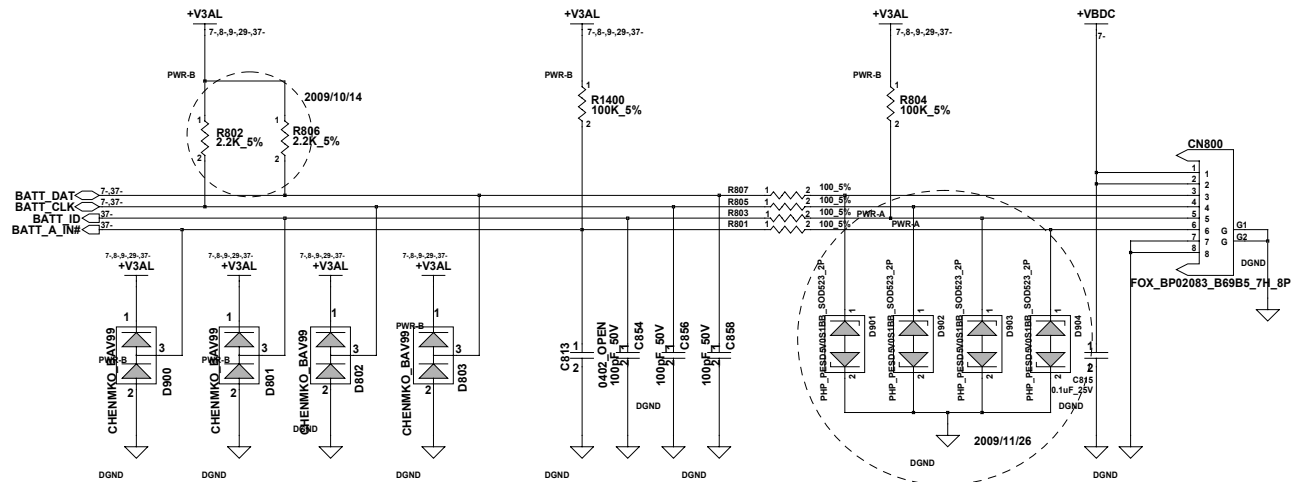
CHANGE by **ALAN W** 29-Nov-2009







9cell_2.8AHr_93W_8.78A



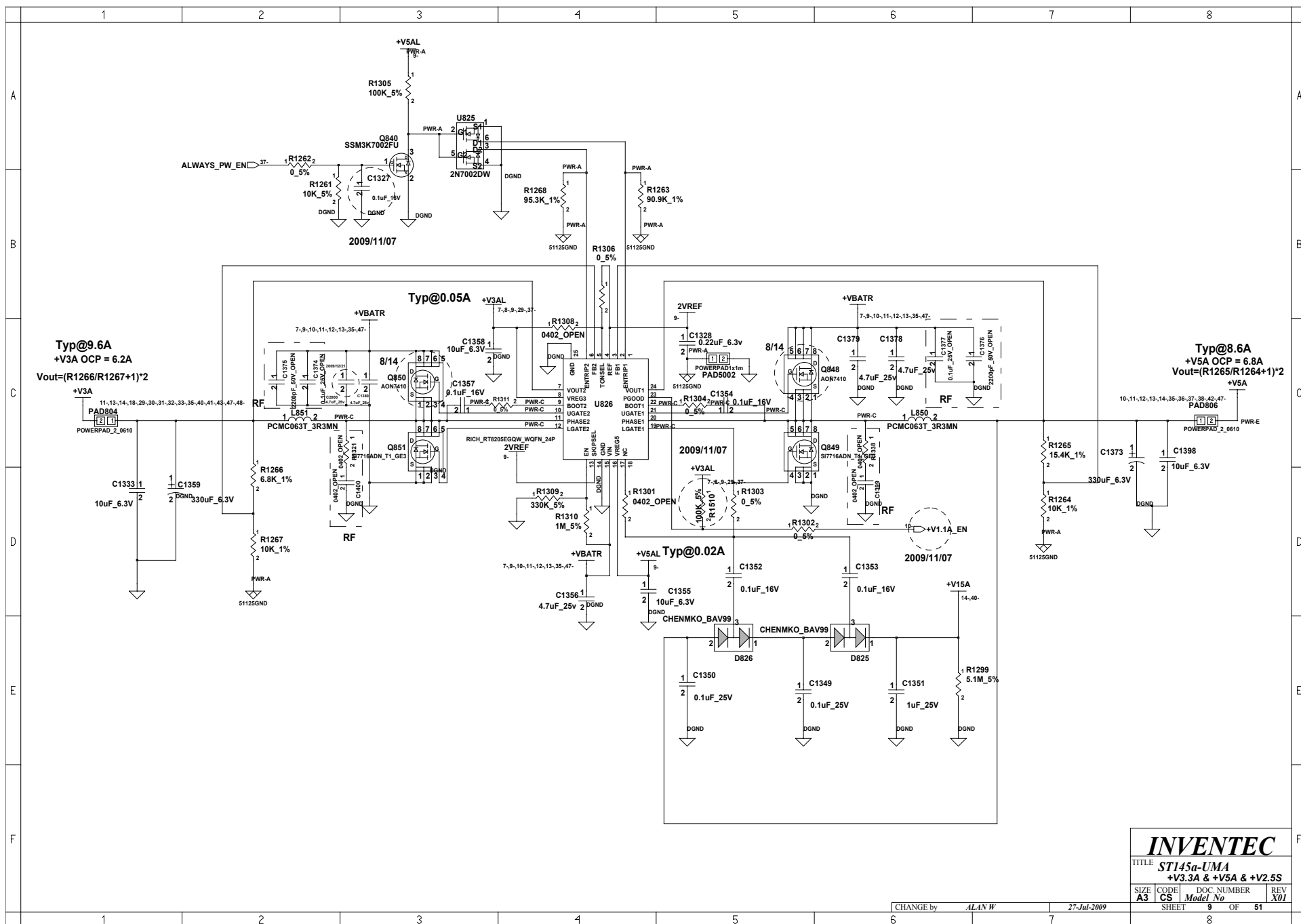
INVENTEC

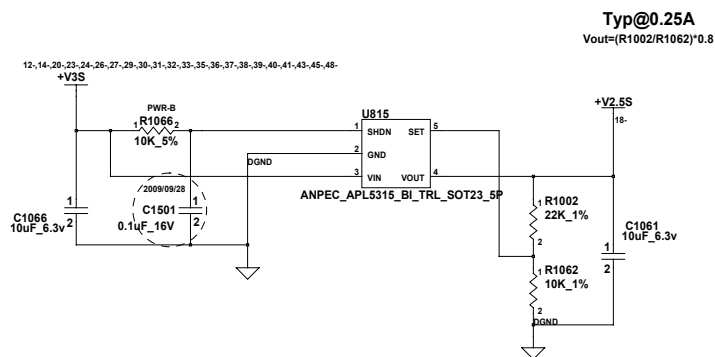
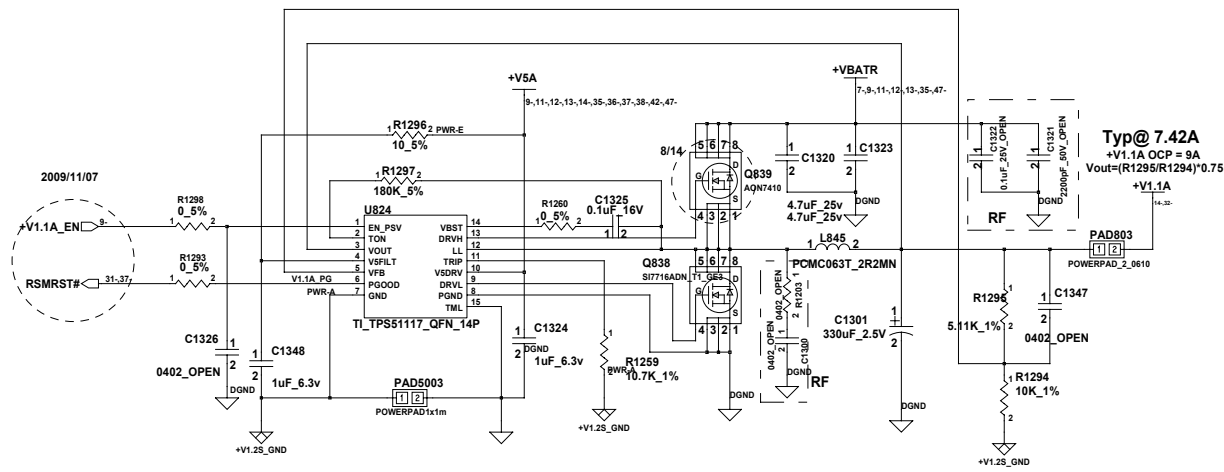
TITLE **ST145a-UMA**
BATTERY CONN

SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
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CHANGE by **ALAN W** 27-Jul-2009

SHEET **8** OF **51**



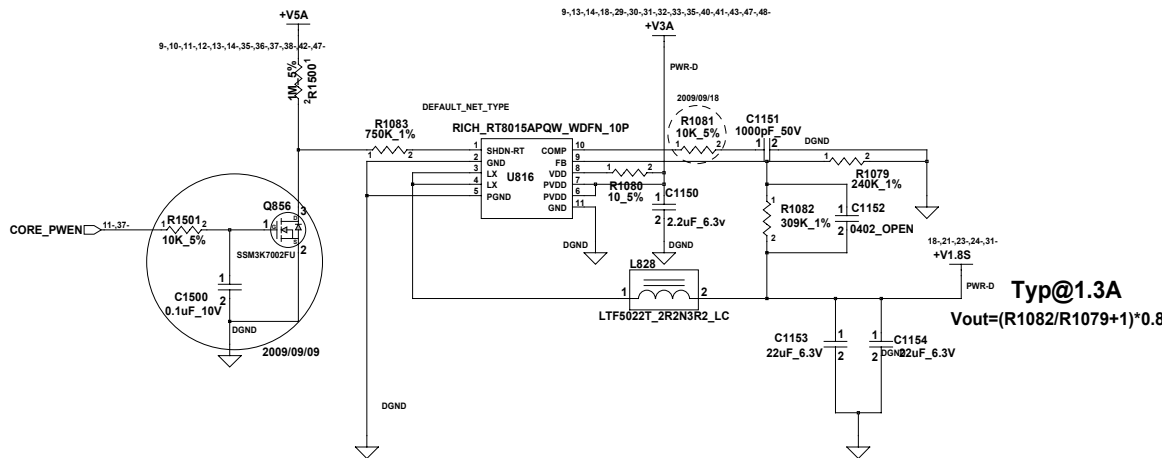
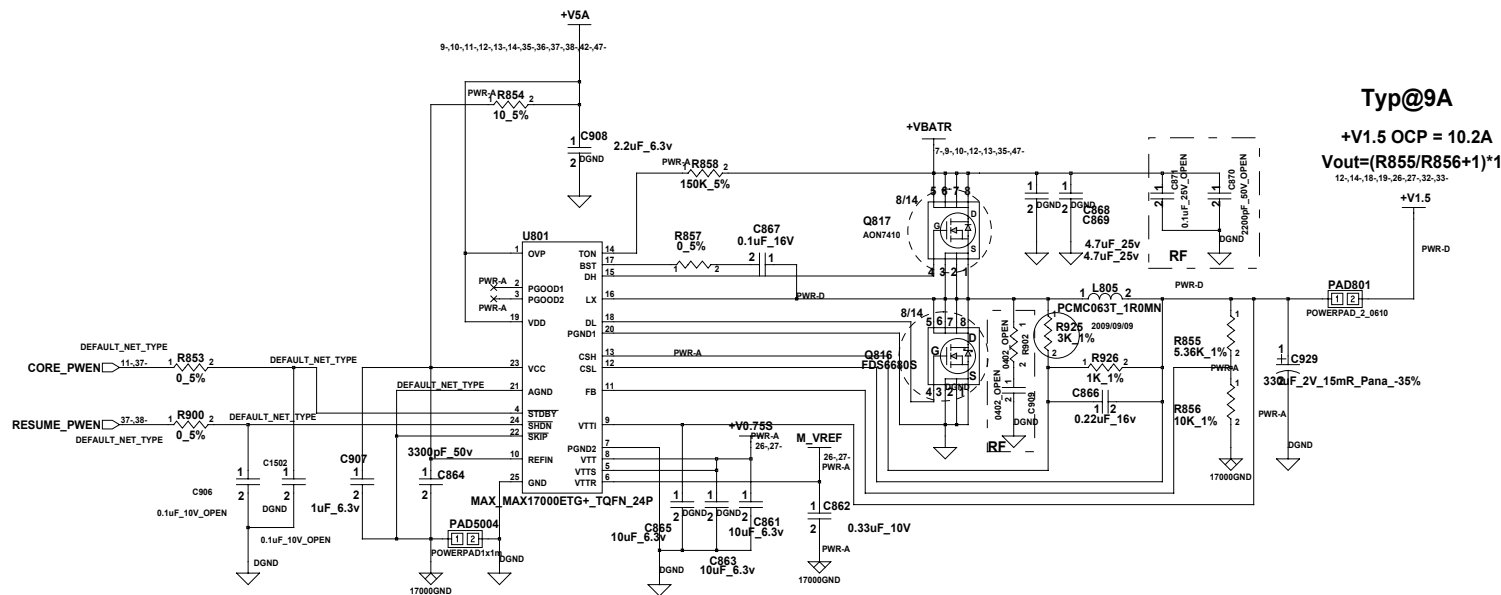


INVENTEC

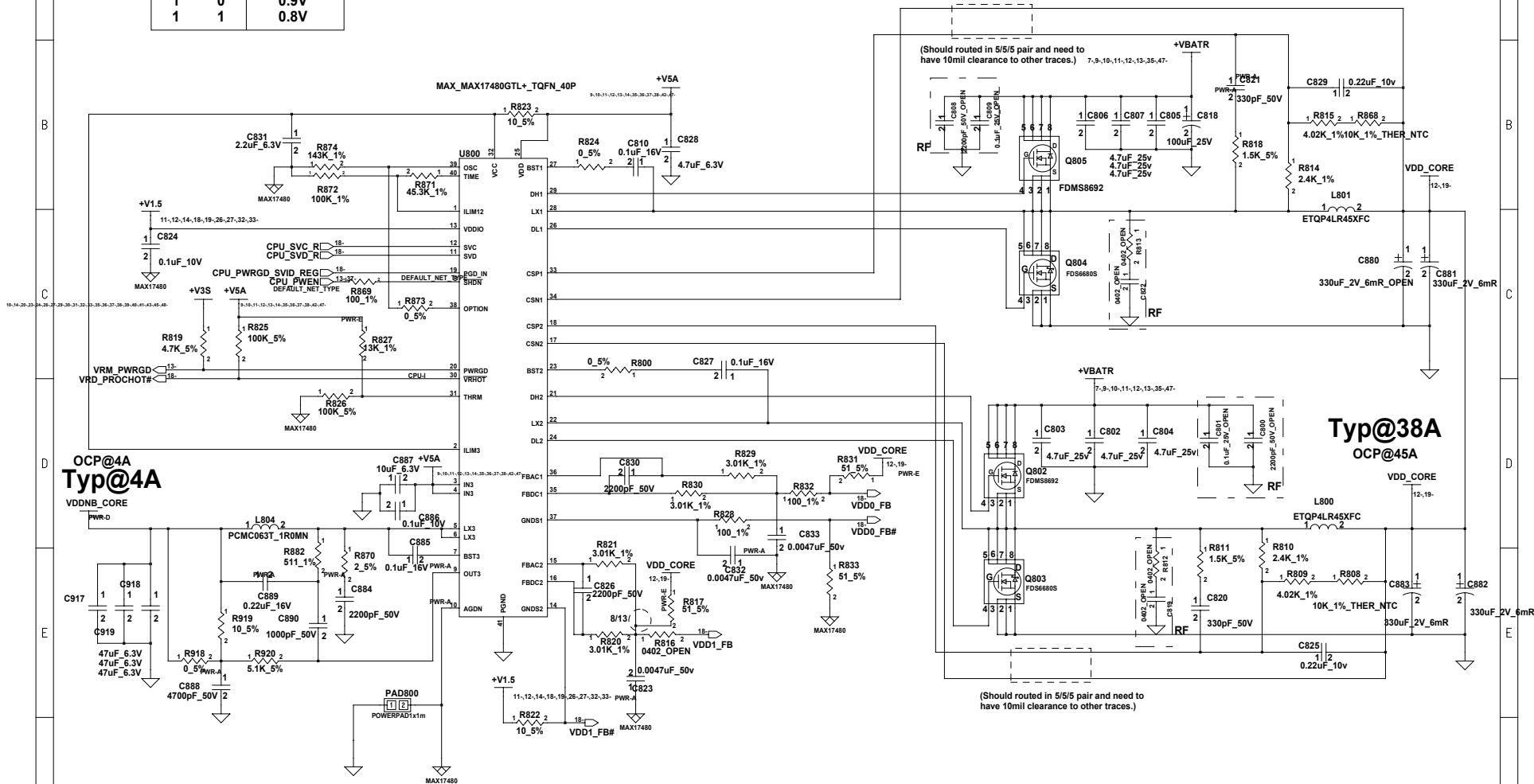
TITLE			
ST145a-UMA			
+V1.2A & VCC_NB			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		10	OF 51

CHANGE by ALAN W 27-Jul-2009

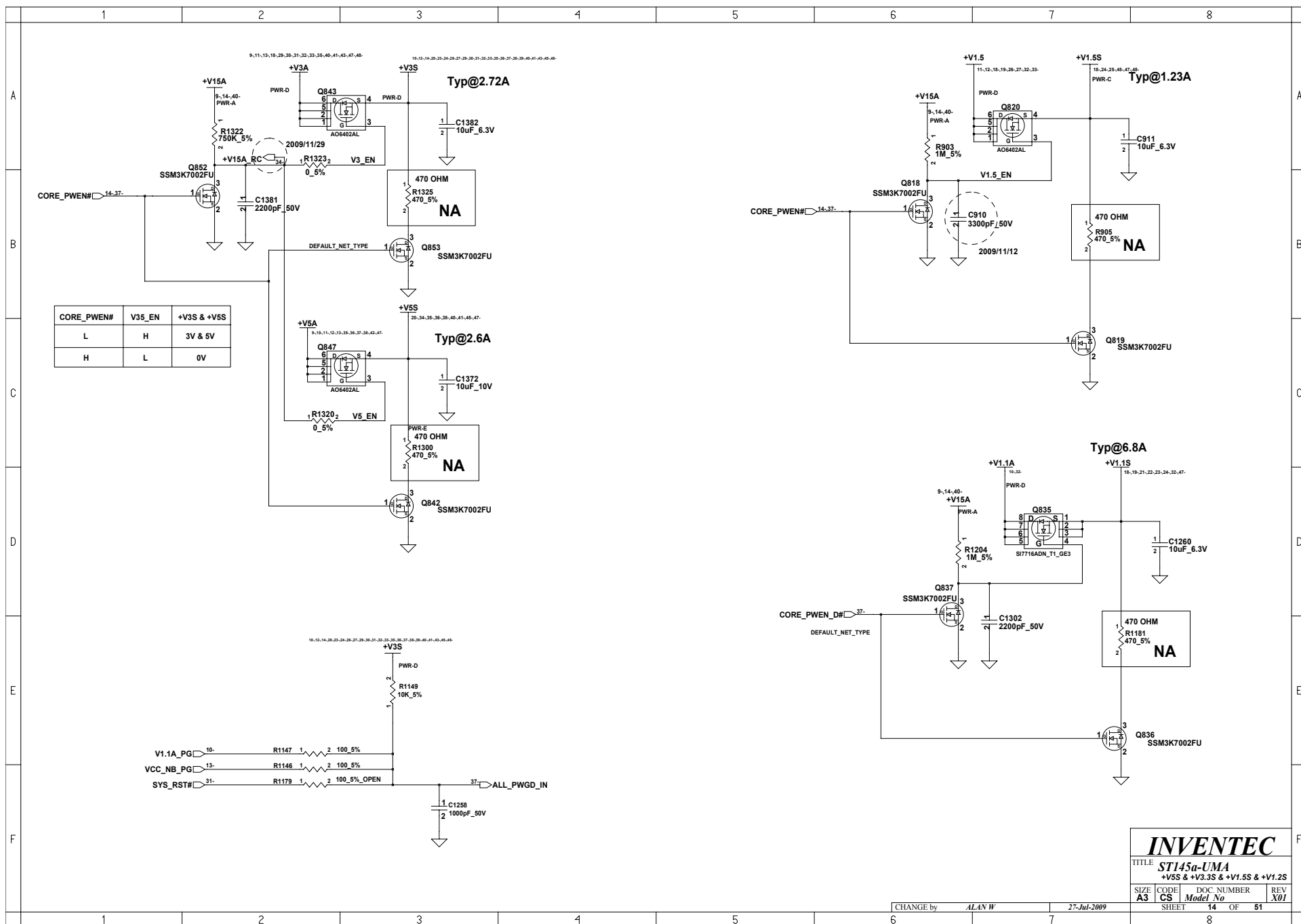
8



SVC	SVD	VDD_CORE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V



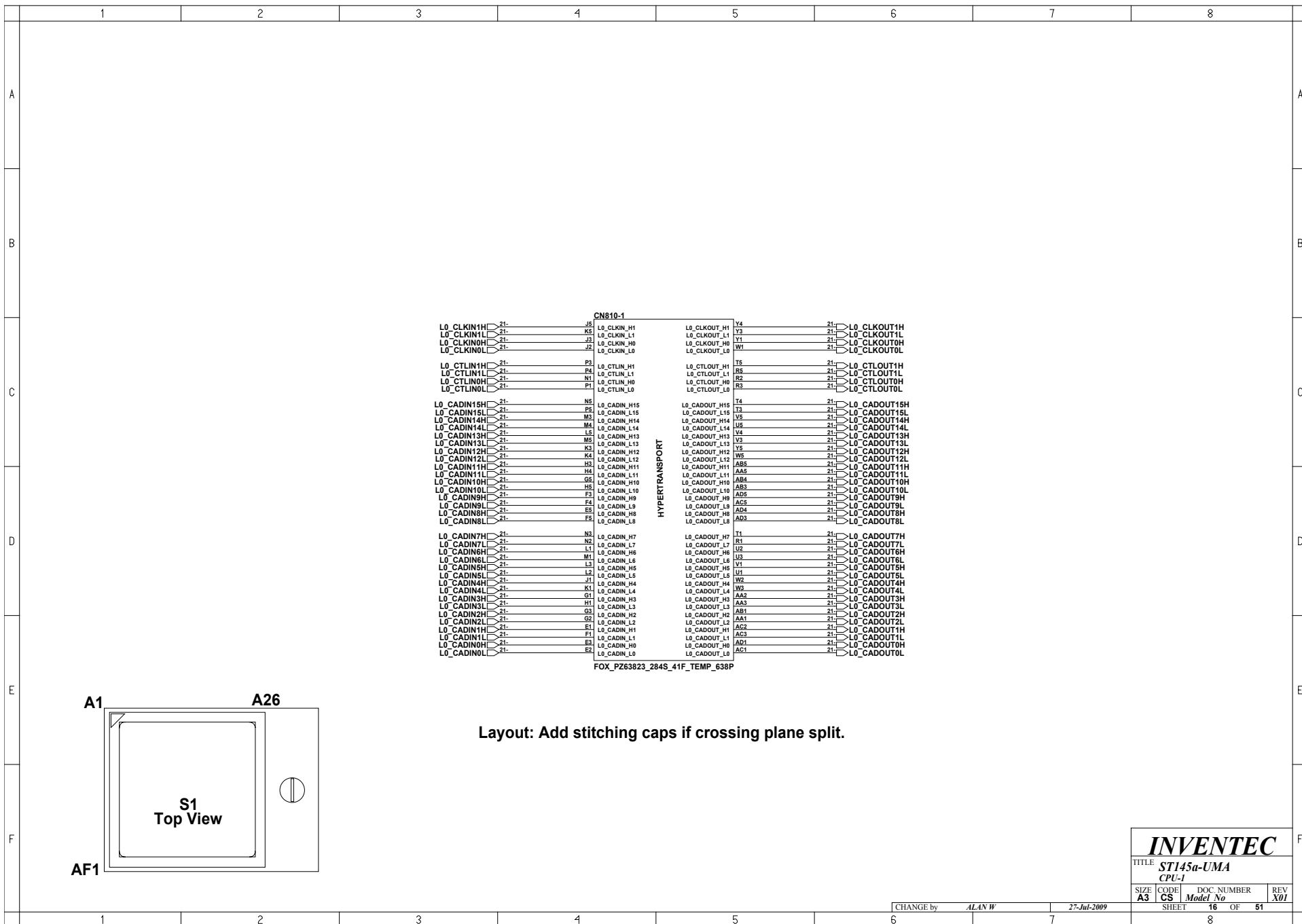
INVENTEC			
TITLE	ST145a-UMA +VCC CORE & +VCC CORE NB		
SIZE	CODE	DOC NUMBER	REV
A3	CS	Model No	X01
CHANGE by		27-Jul-2009	SHEET 12 OF 51

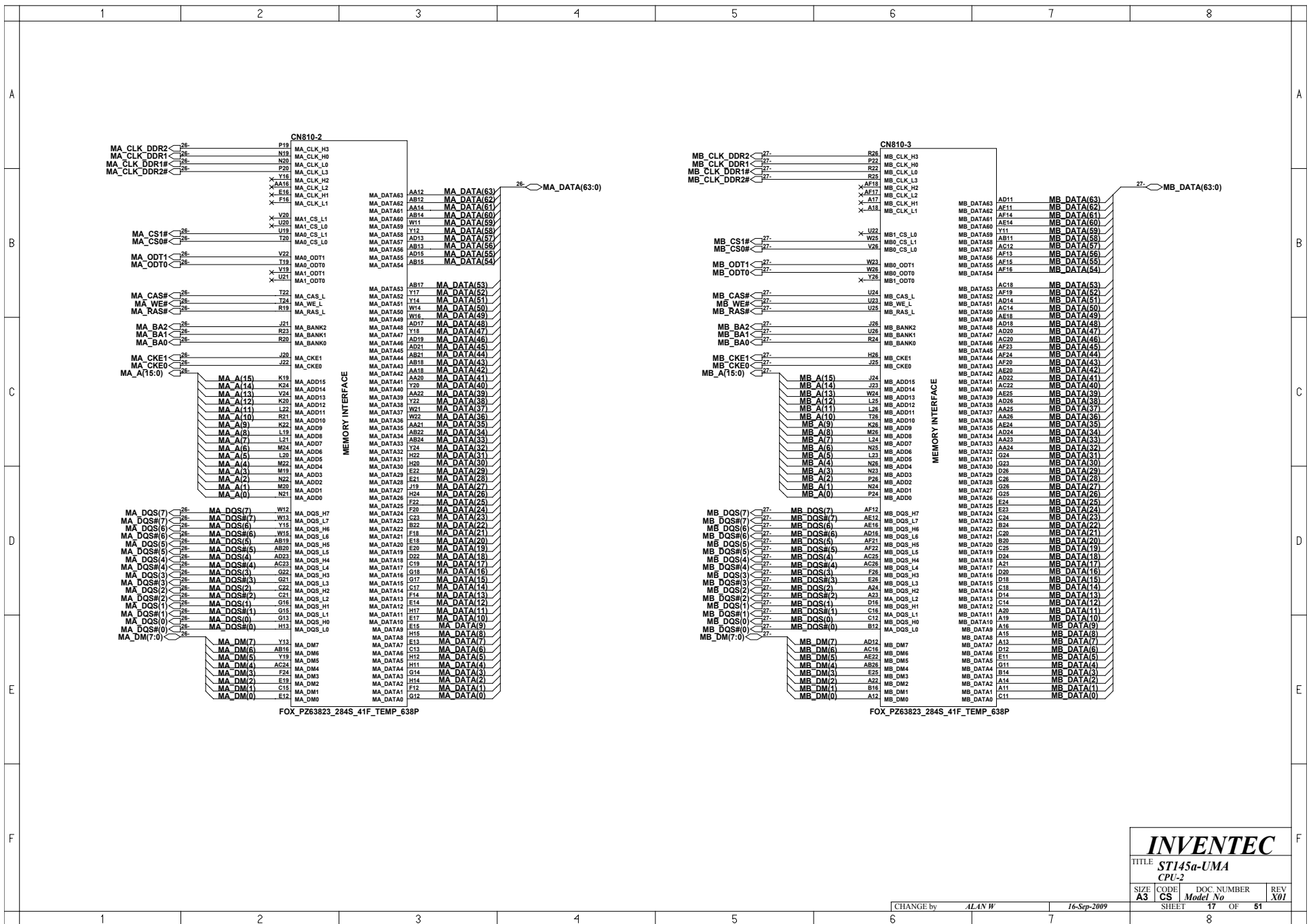


	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
	1	2	3	4	5	6	7	8	

INVENTEC			
TITLE: <i>ST145a-UMA</i>			
CLK GEN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		15	OF 51
		8	

CHANGE by *ALAN W* 21-Dec-2009





FOX_P263823_284S_41F_TEMP_638P

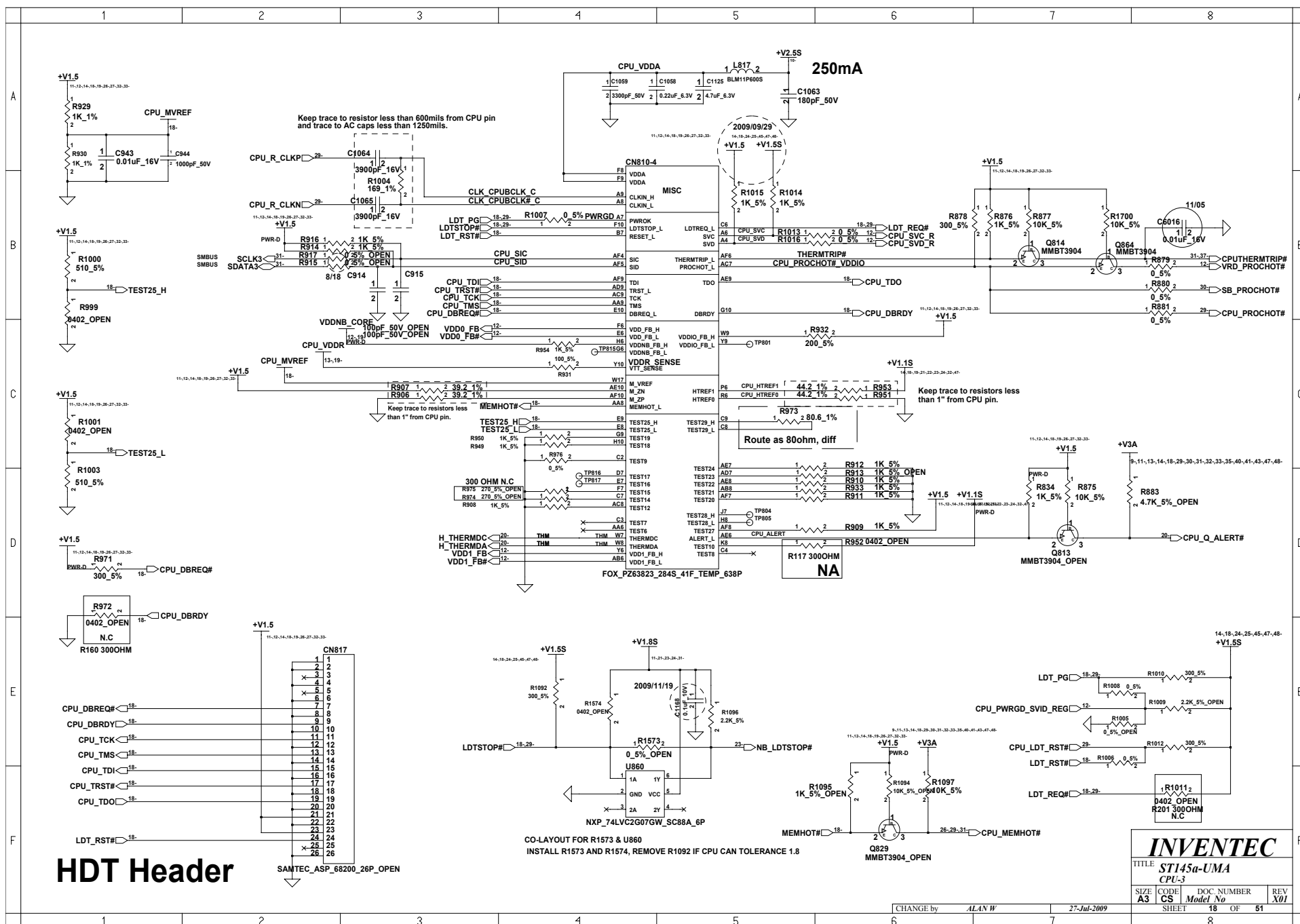
FOX_P263823_284S_41F_TEMP_638P

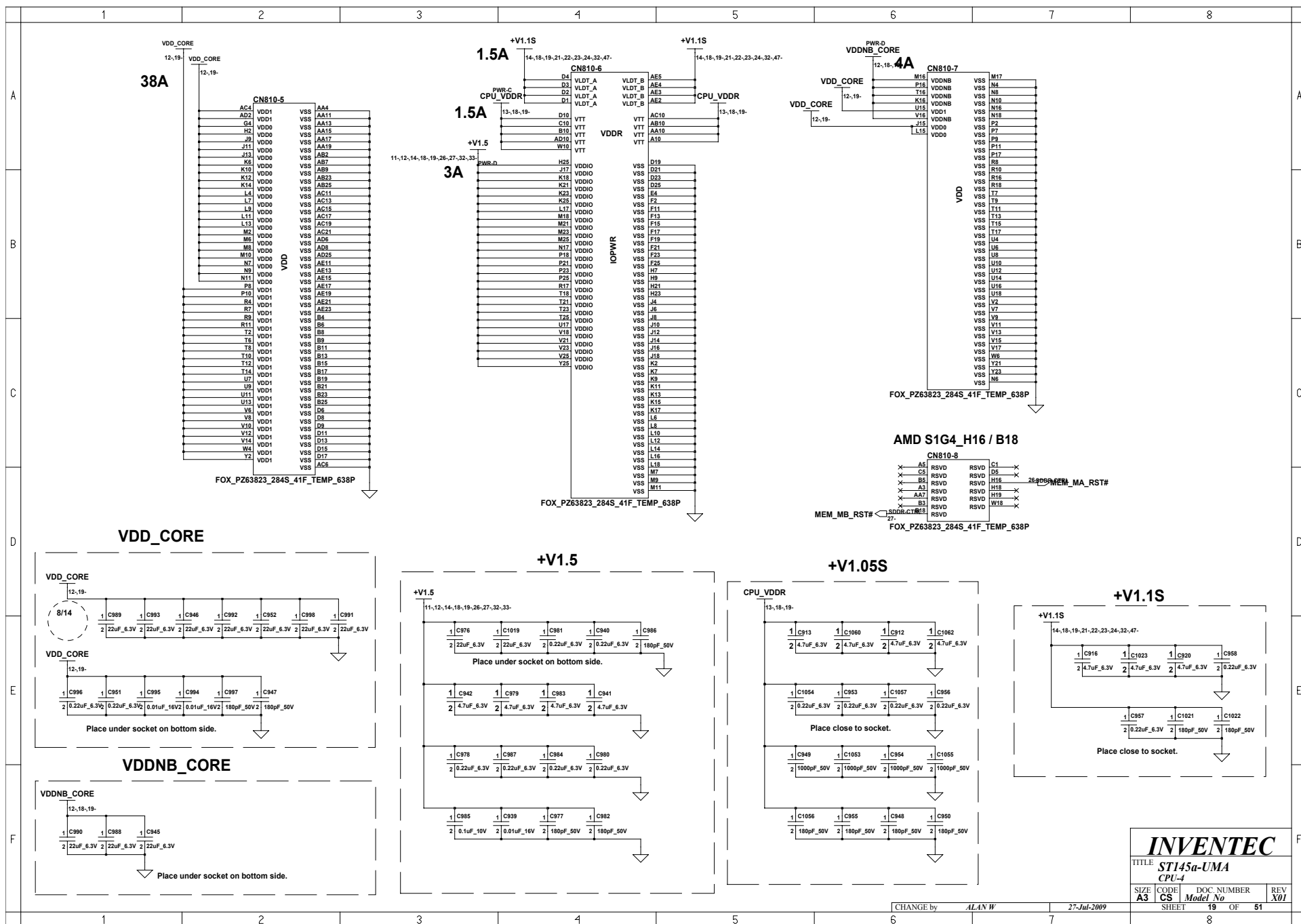
INVENTEC

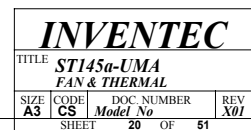
TITLE **ST145a-UMA**
CPU-2

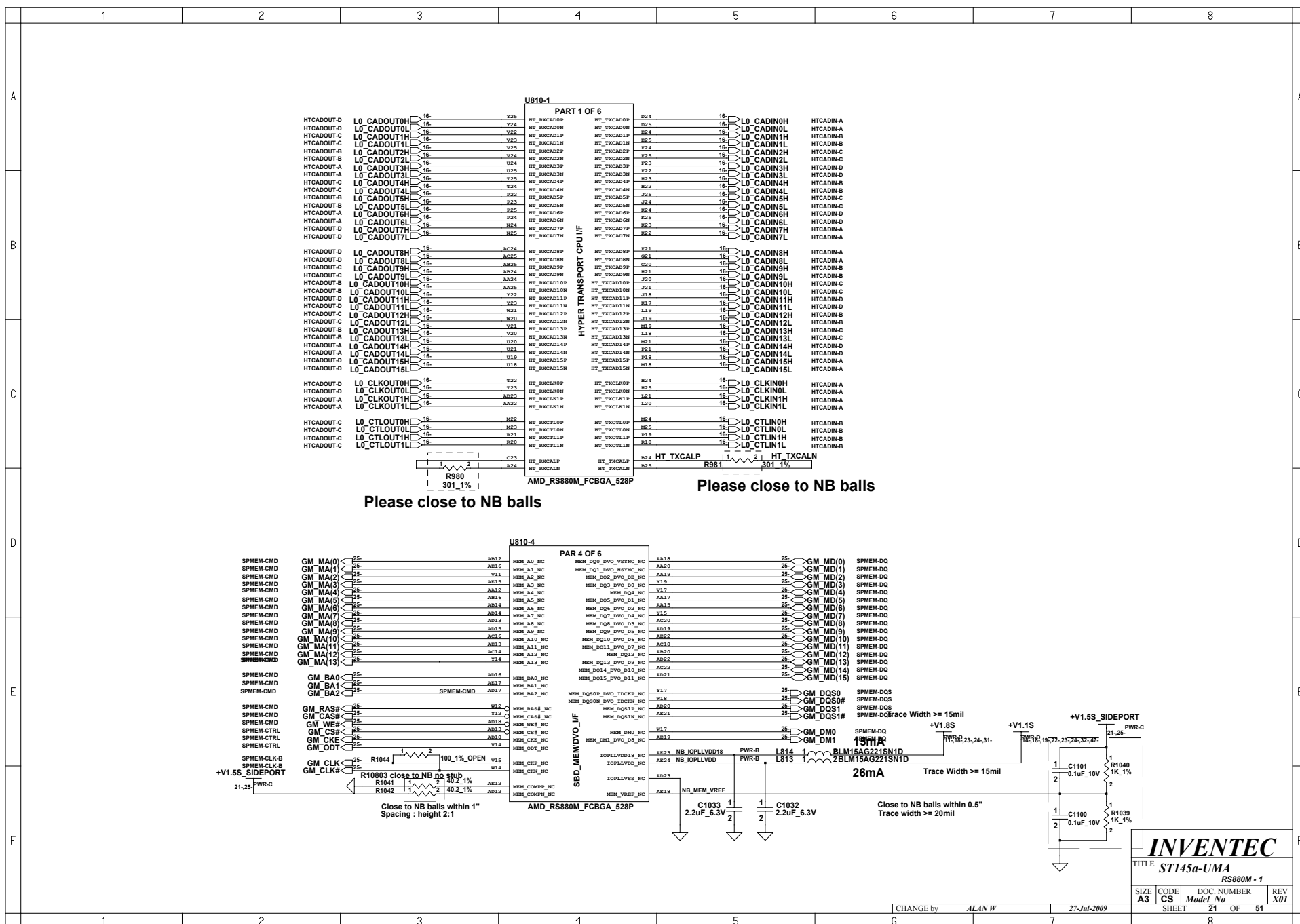
SIZE A3 CODE CS DOC NUMBER Model No REV X01
SHEET 17 OF 51

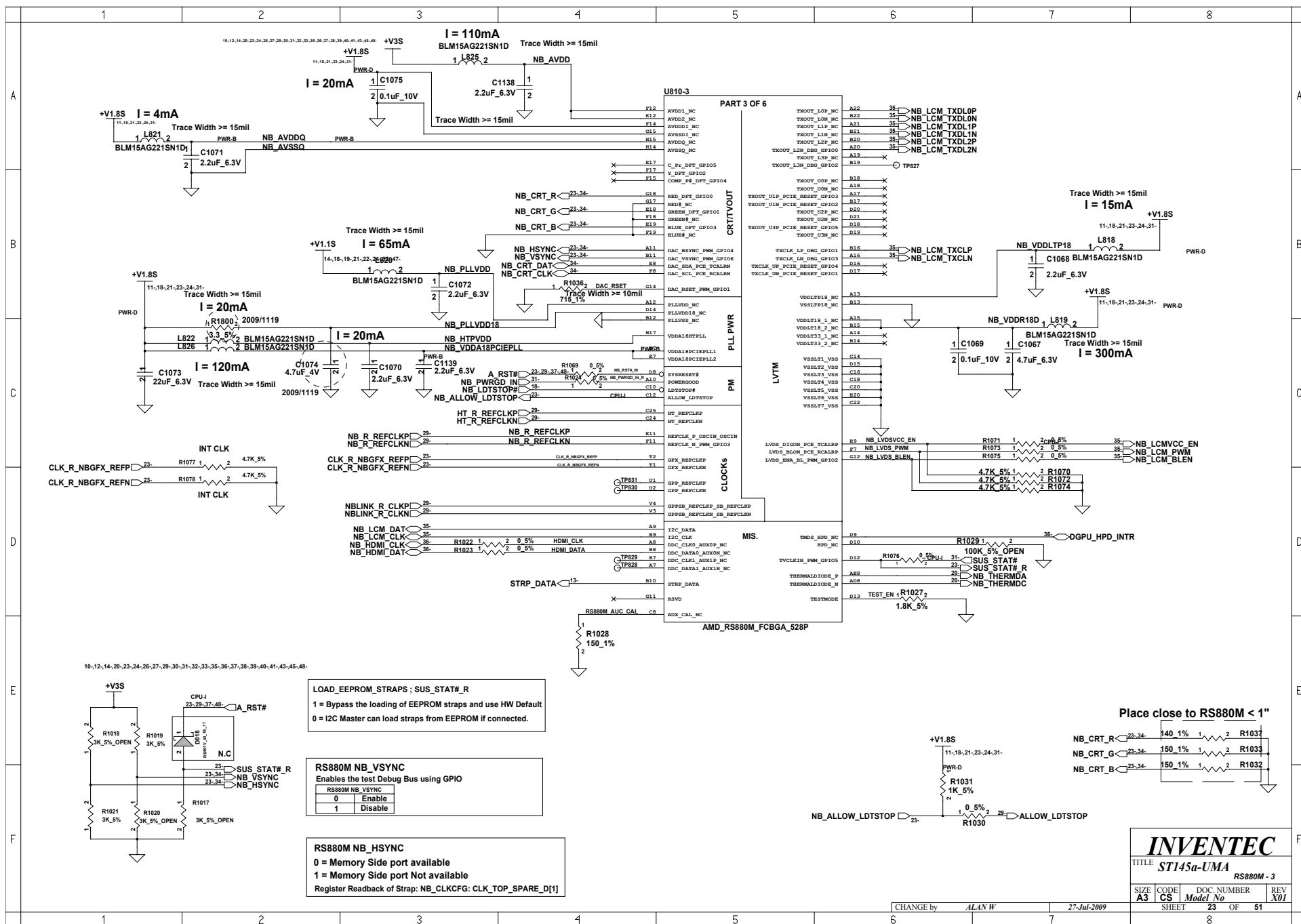
CHANGE by ALAN W 16-Sep-2009







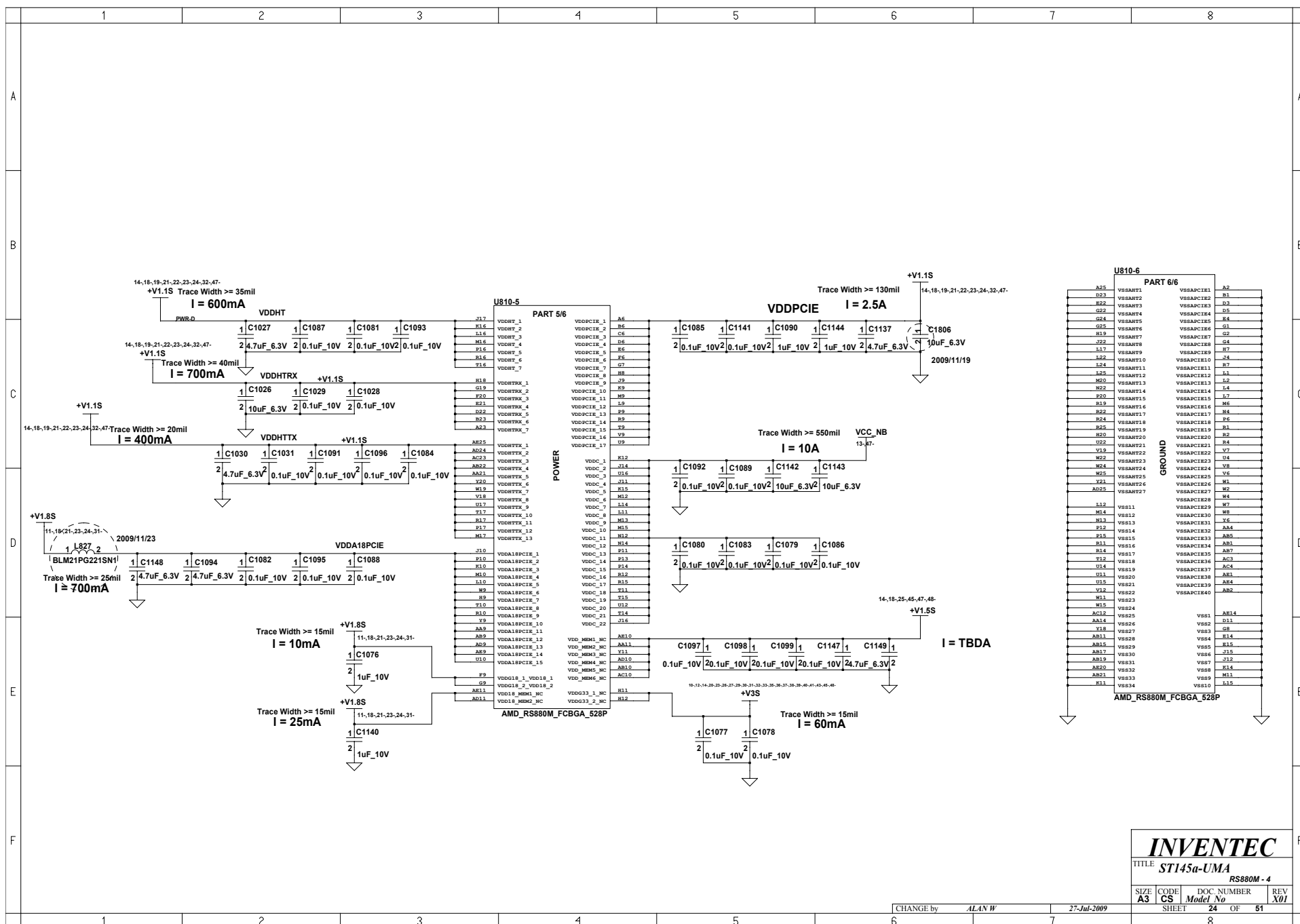




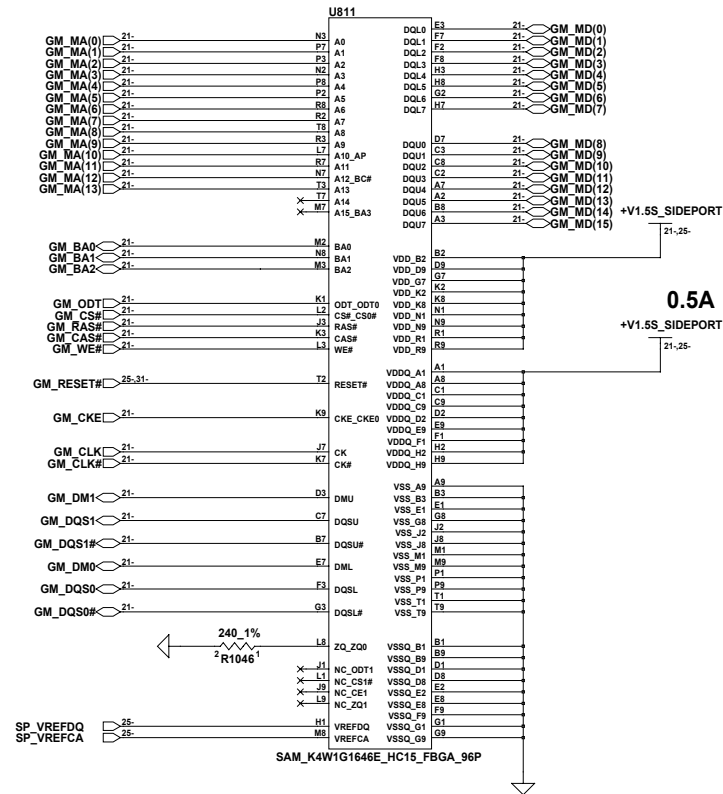
Place close to RS880M < 1"

INVENTEC			
TITLE	ST145a-UMA	RS880M - 3	
SIZE	A3	CODE	DOC NUMBER
CS	Model No	REV	X01
SHEET	23	OF	51
8			

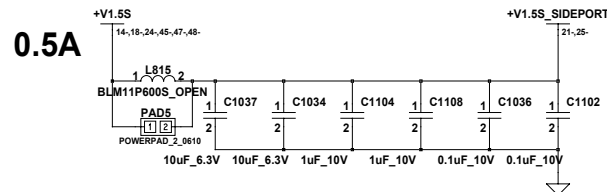
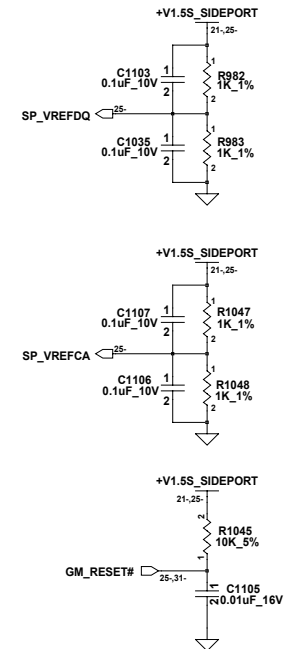
CHANGE by ALAN W 27-Jul-2009



SIDE-PORT DDR III



SIDE PORT MEMORY DDR3 800MHz		
HYNIX	6019B0647101	R1206
SAMSUNG	6019B0648501	R1186



INVENTEC			
TITLE: ST145a-UMA			
SIDE-PORT			
SIZE: A3	CODE: CS	DOC. NUMBER: Model No	REV: X01
SHEET: 25		OF: 51	
8			

CHANGE by: ALAN W 27-Jul-2009

TITLE			
ST145a-UMA DDR3 DIMM0			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		26	OF 51

[illegible]

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

NOTE:
SO-DIMMB SPD ADDRESS IS 0xA
SO-DIMMB TS ADDRESS IS 0x34

INVENTEC

TITLE	<i>ST145a-UMA</i> <i>DDR3 DIMMI</i>		

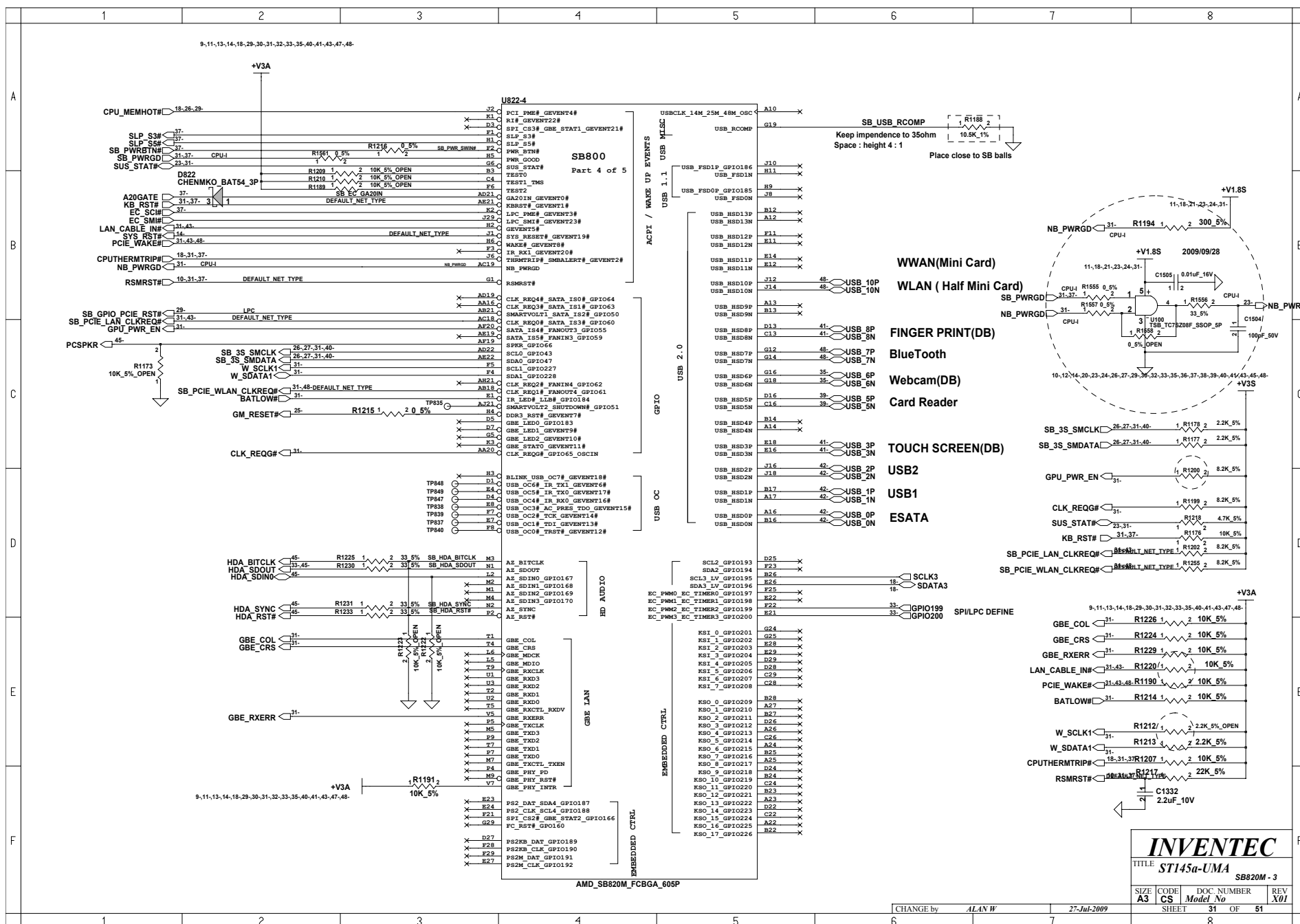
CHANGE by	ALAN W	27-Jul-2009
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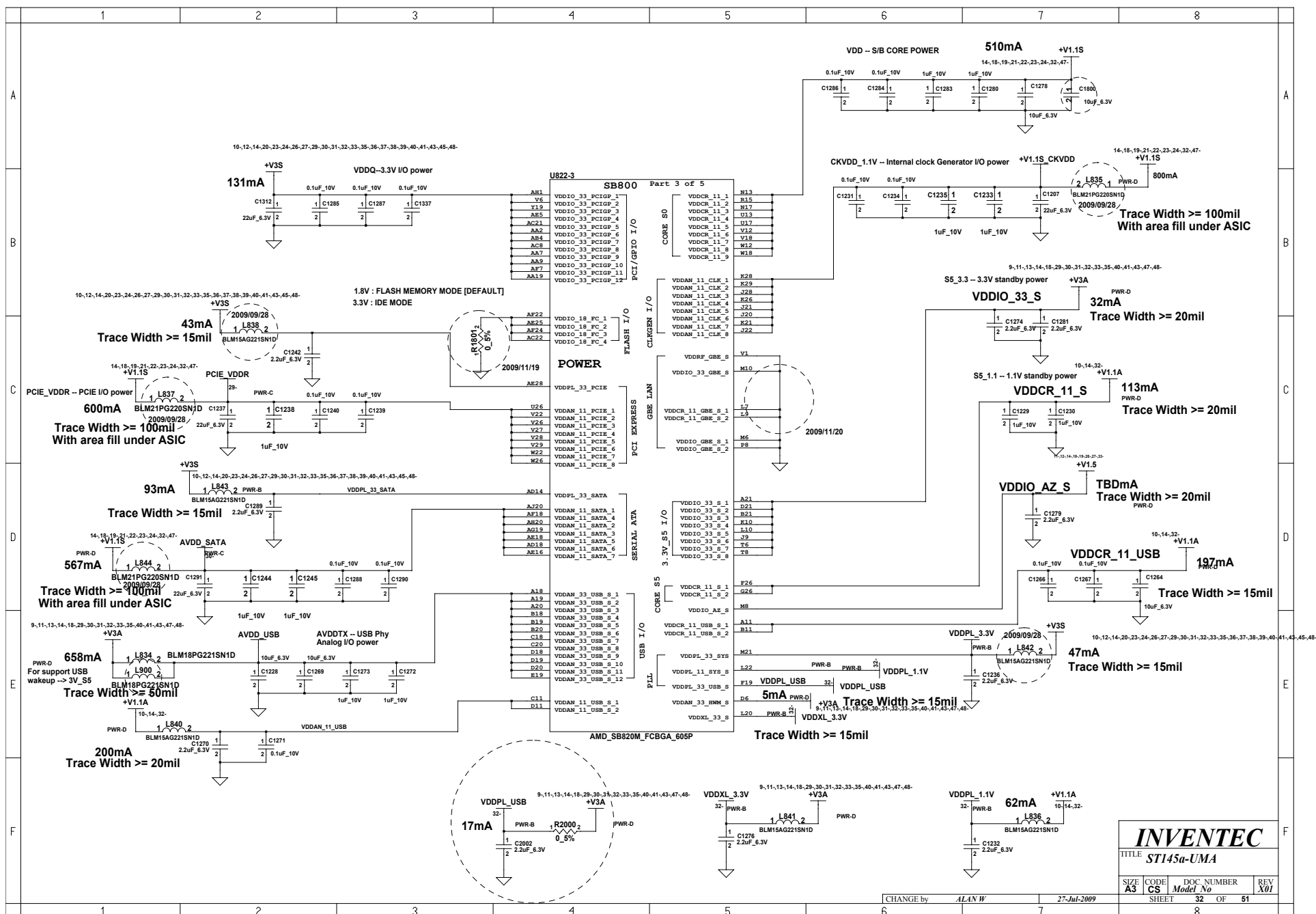
CS	Model No		
SHEET	27	OF	51

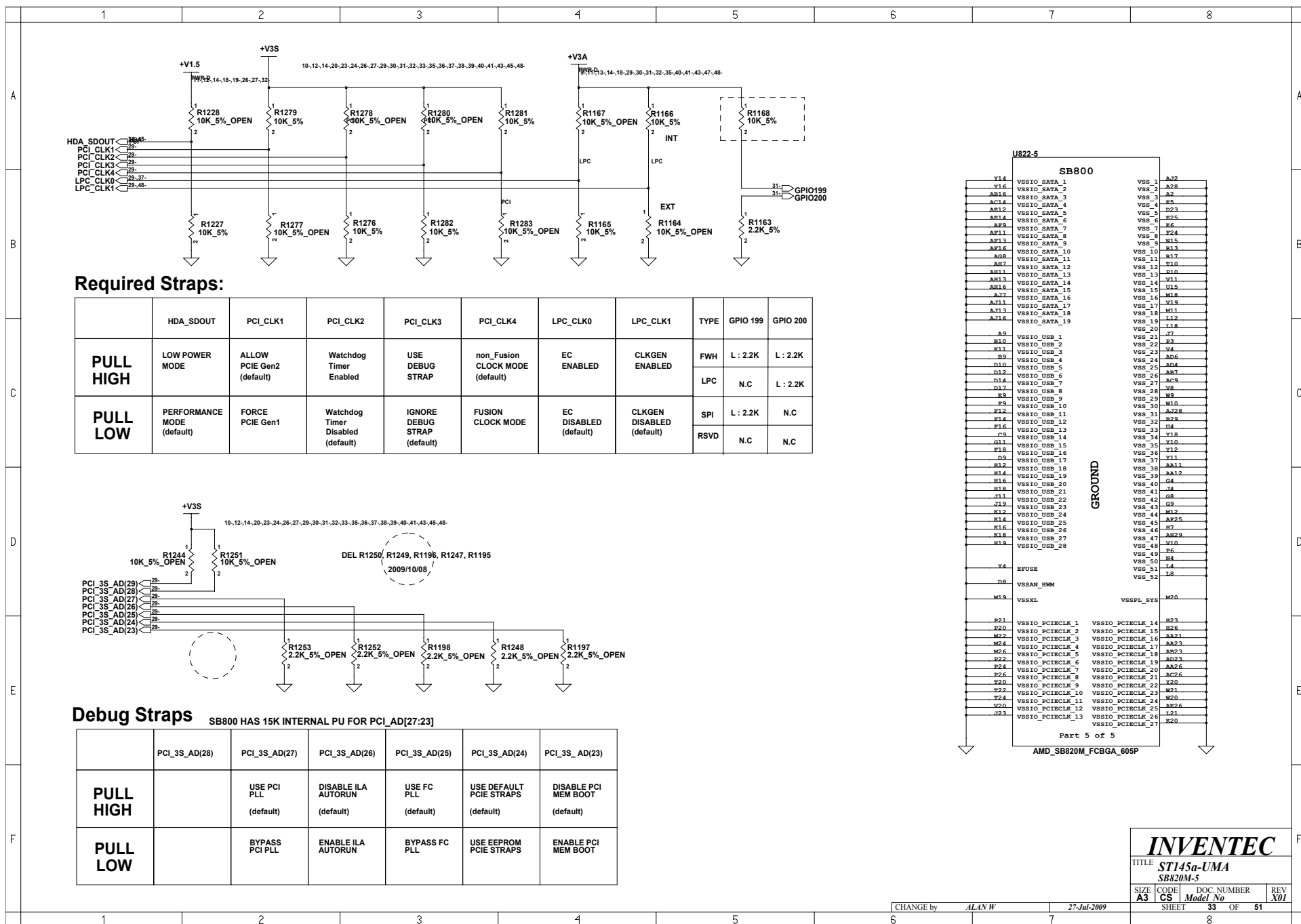
	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
	1	2	3	4	5	6	7	8	

INVENTEC			
TITLE: ST145a-UMA			
DDR3 DAMPING			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET		28	OF 51

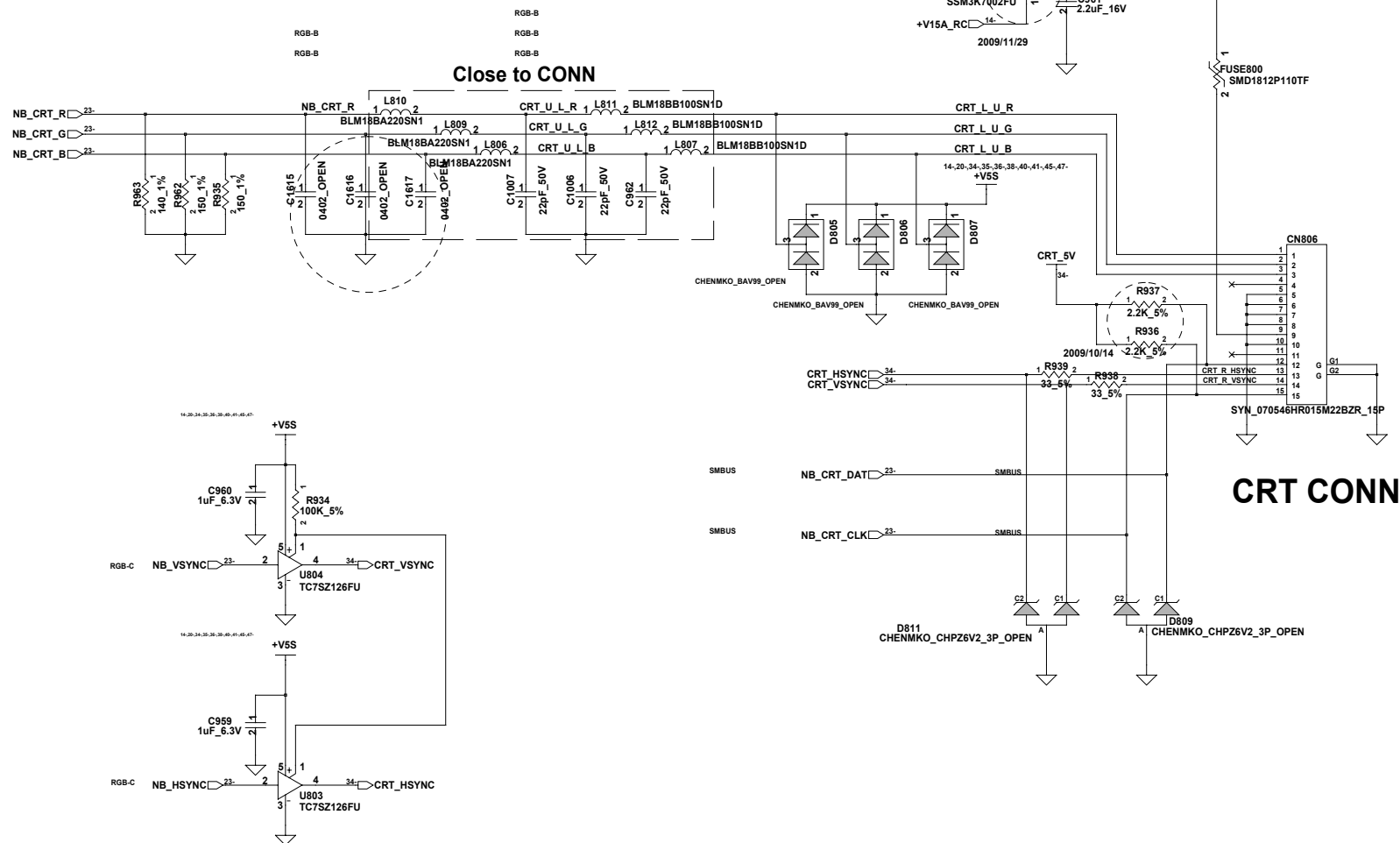
CHANGE by *ALAN W* 20-Aug-2009







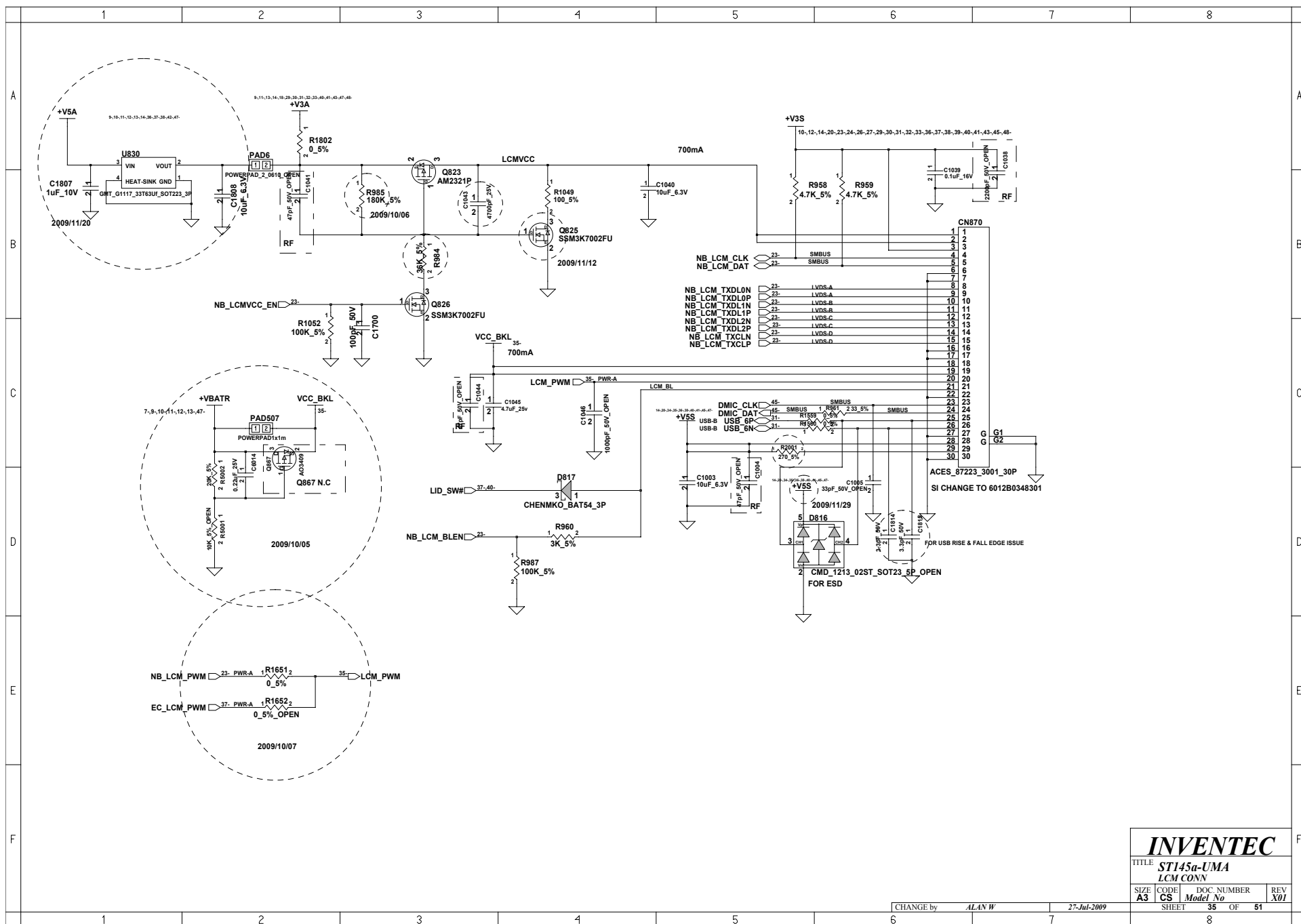
PE_GPIO2	S1	S2
L	ON	OFF
H	OFF	ON

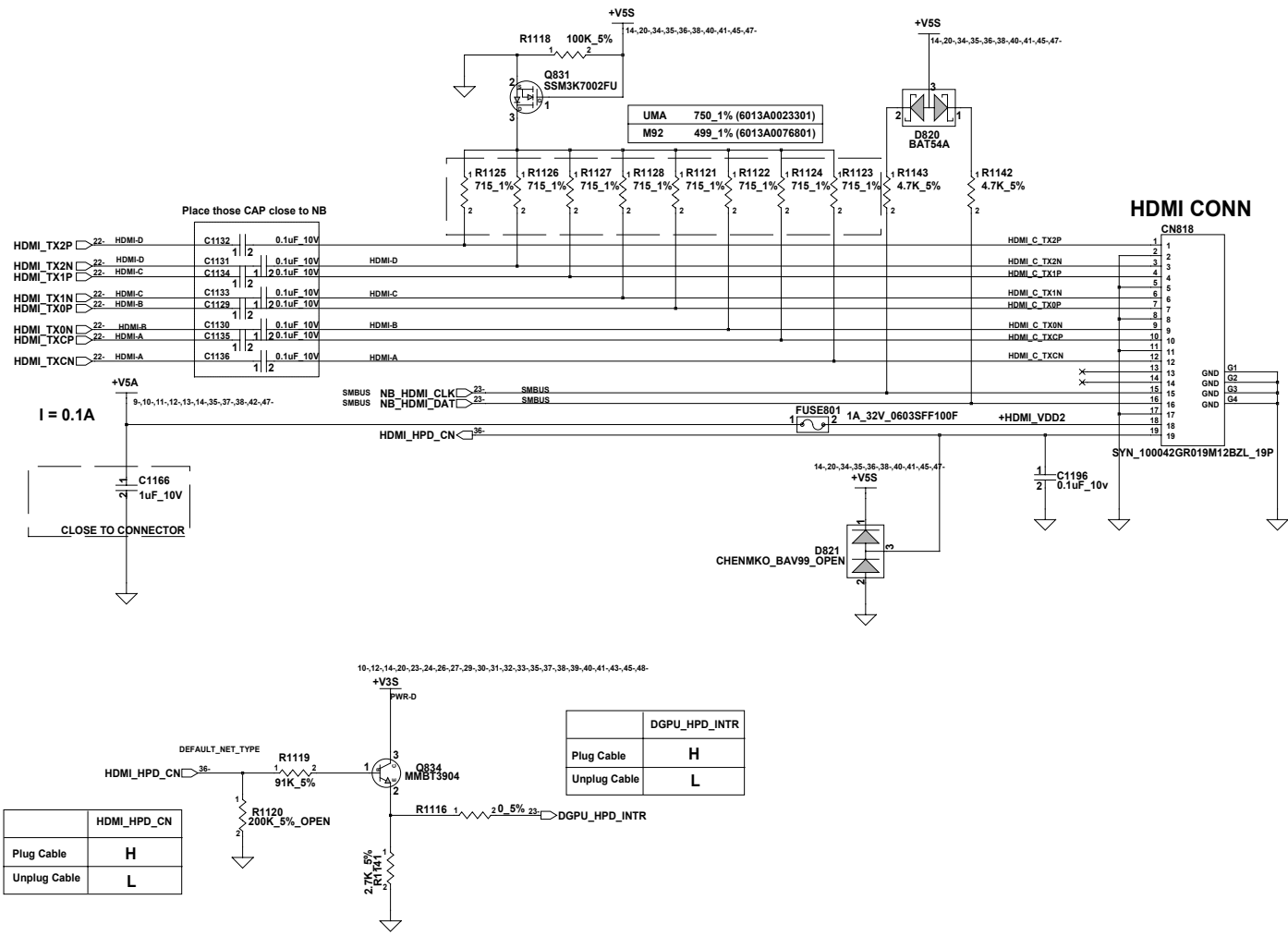


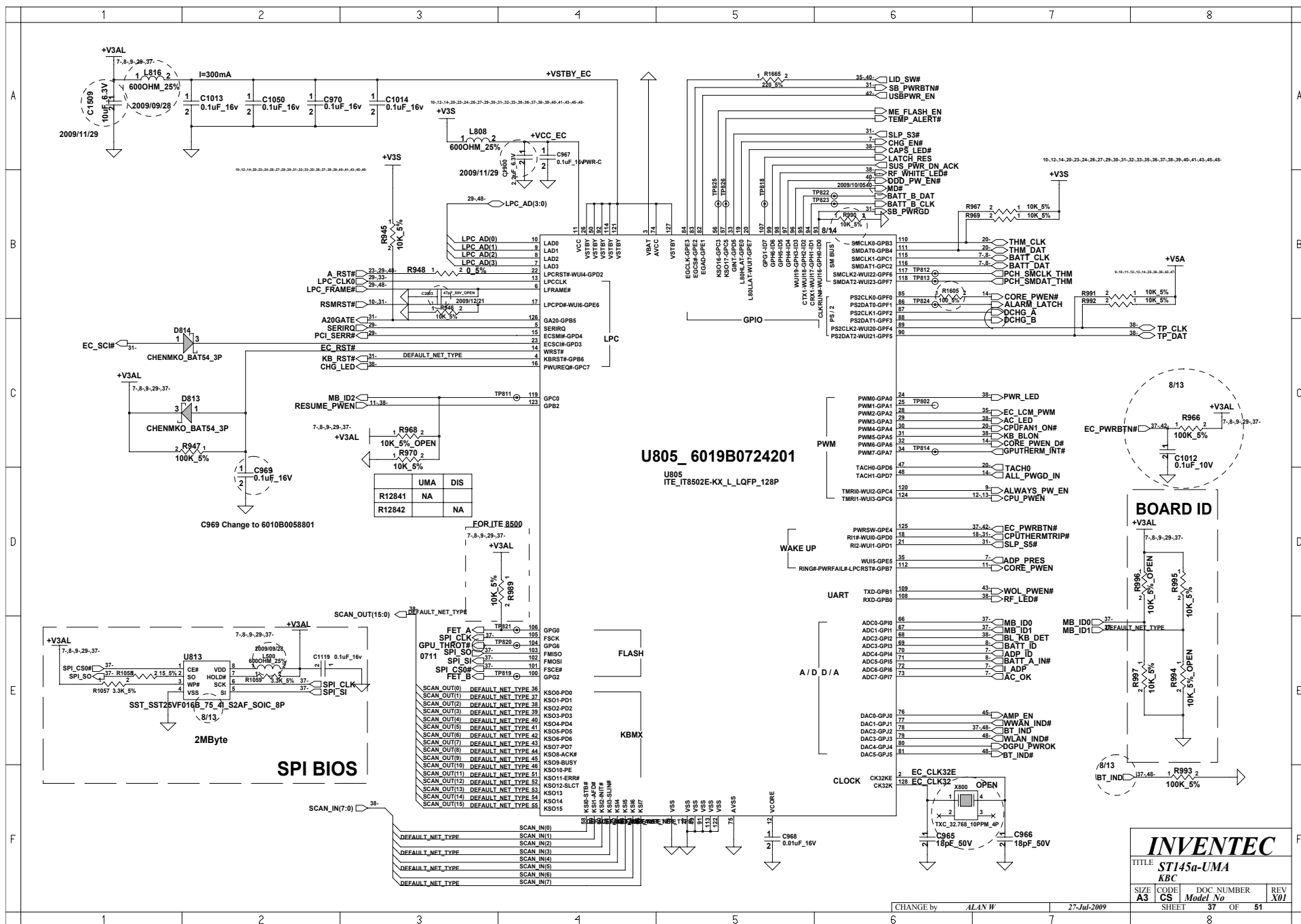
Circuit : Fixed
2009/06/30

CRT CONN

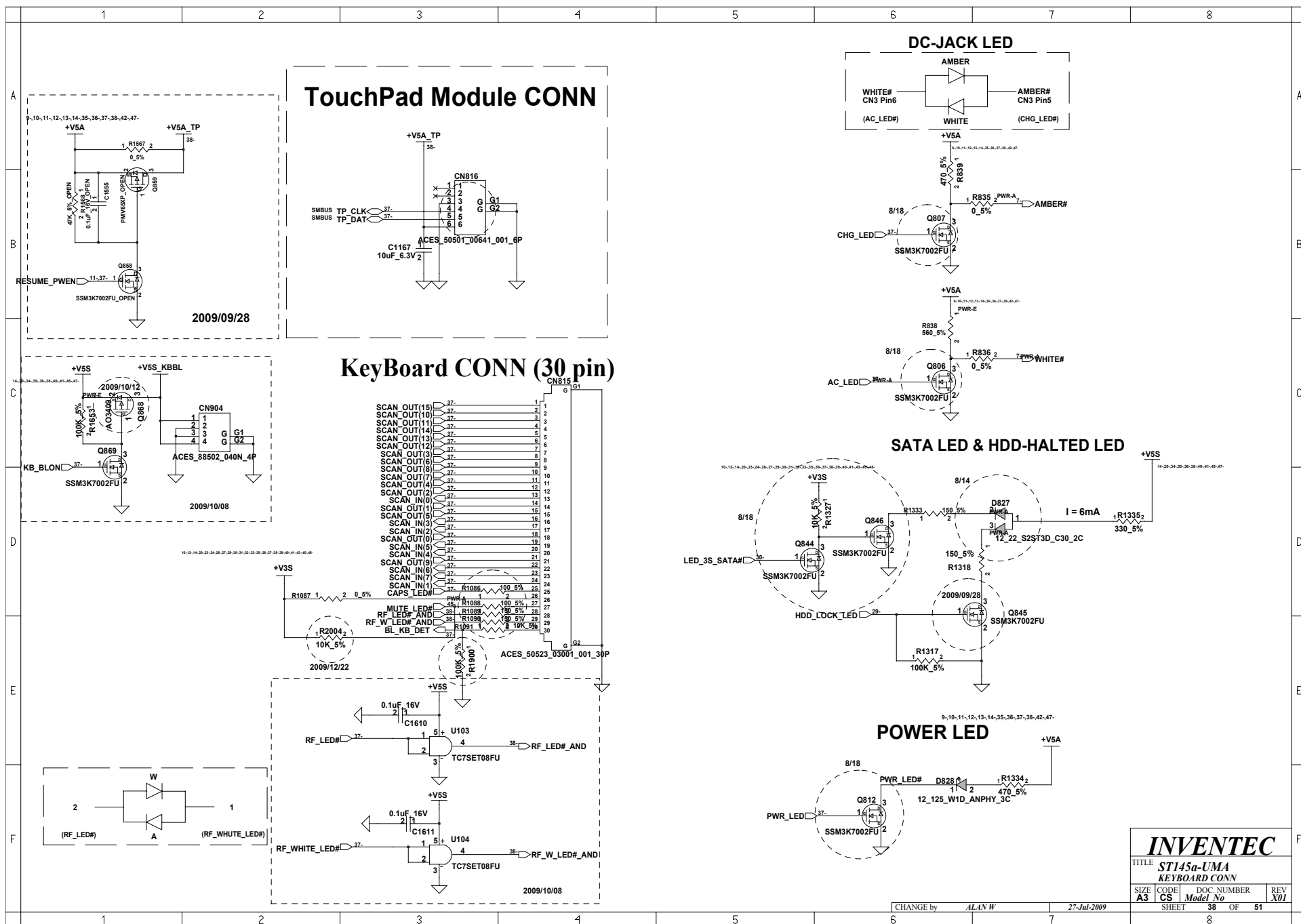
INVENTEC			
TITLE ST145a-UMA			
CRT			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
CHANGE by ALAN W		27-Jul-2009	
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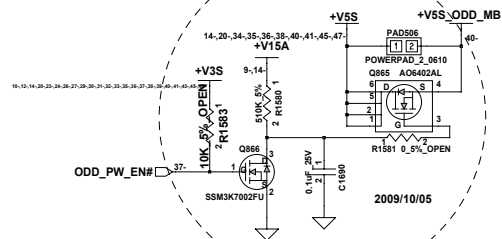




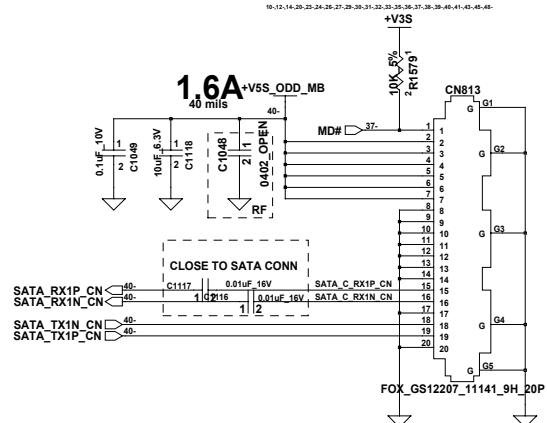


CHANGE by ALAN W 27-Jul-2009

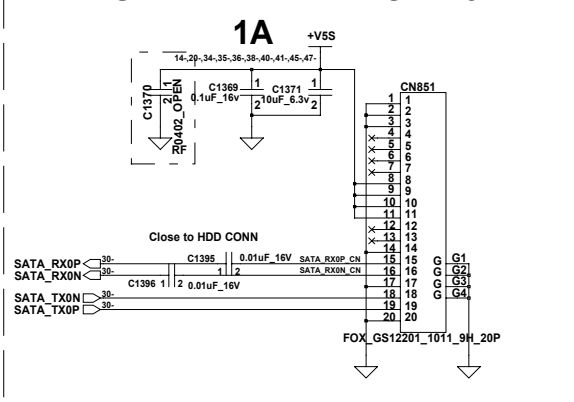




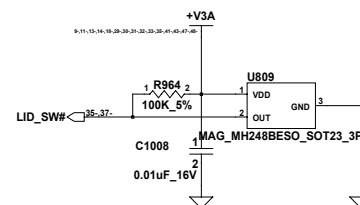
SATA ODD FFC CONN on MB



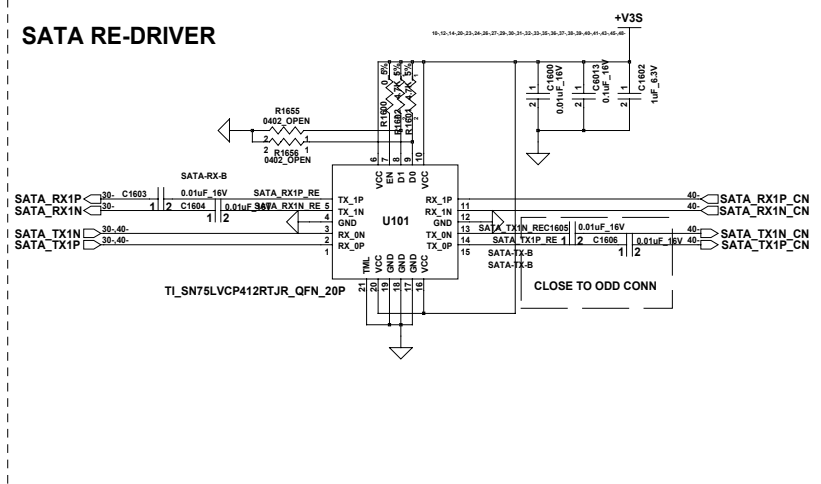
SATA HDD FFC CONN on MB



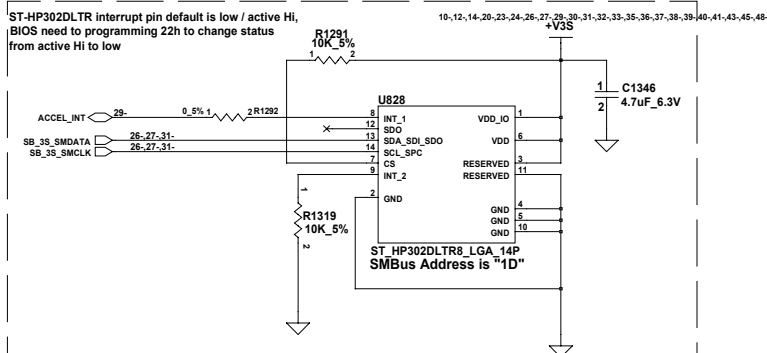
LID SWITCH



SATA RE-DRIVER



ST-HP302DLTR interrupt pin default is low / active Hi,
BIOS need to programming 22h to change status
from active Hi to low



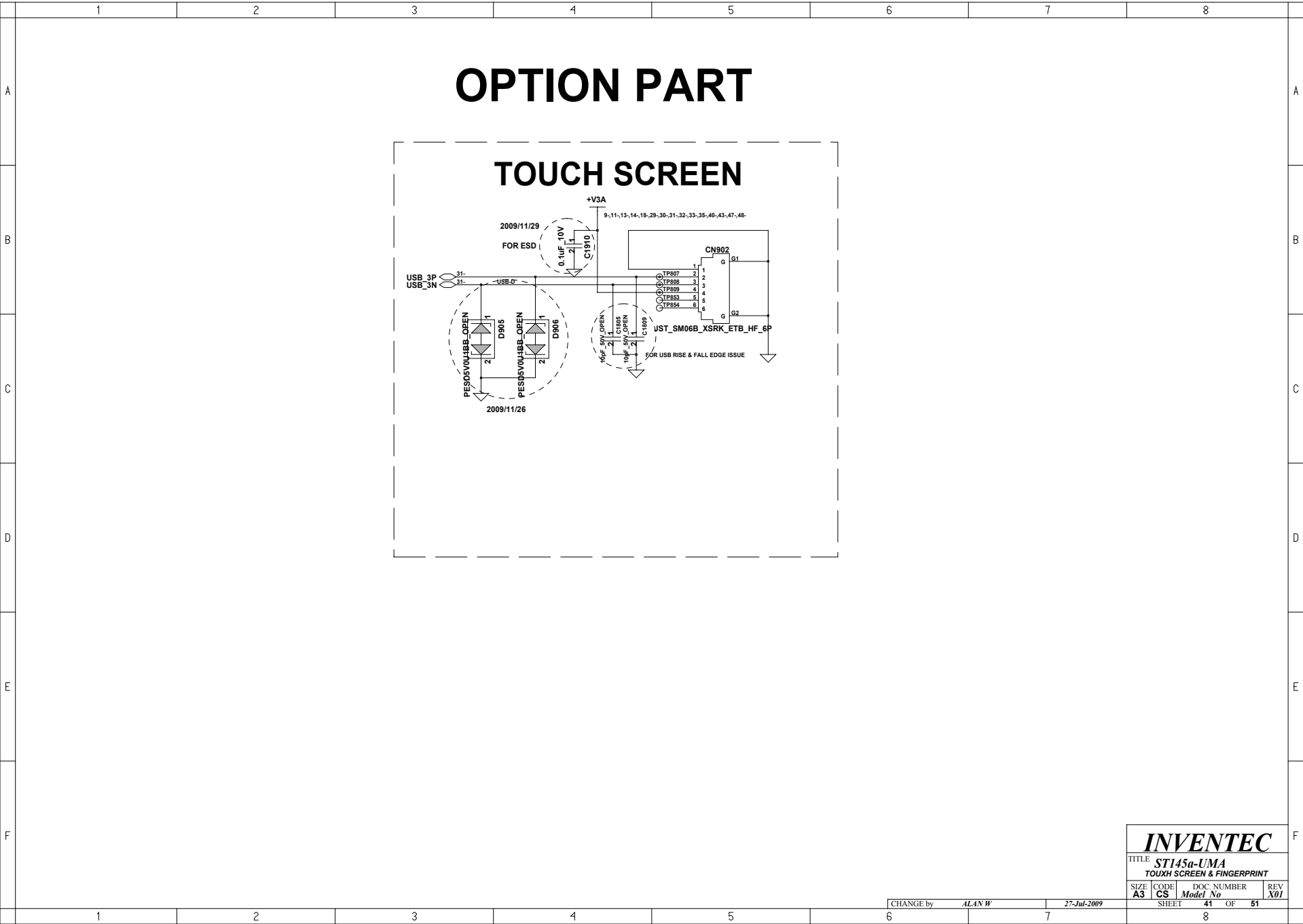
HARDDRIVE PROTECTION
P/N = 6019B0505201

INVENTEC

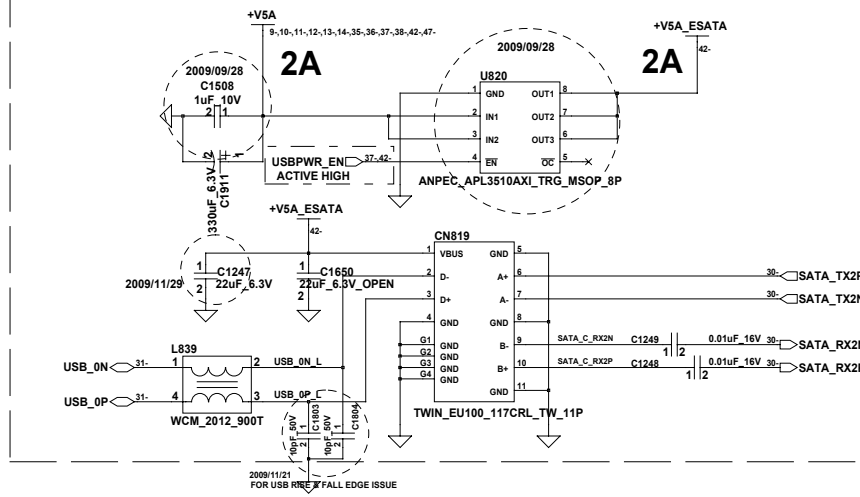
TITLE	ST145a-UMA		
	SATA HDD & SATA ODD		
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		40	OF 51

CHANGE by ALAN W 27-Jul-2009

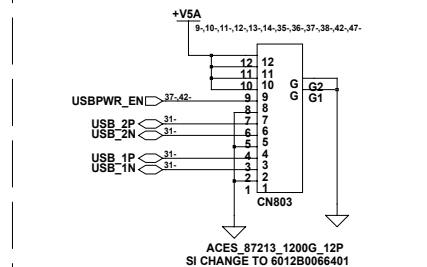
8

[illegible][illegible][illegible][illegible][illegible]

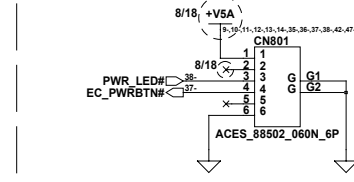
ESATA CONN (without Re-Driver chip)



USB BOARD Cable on MB



PBN Cable CN on MB

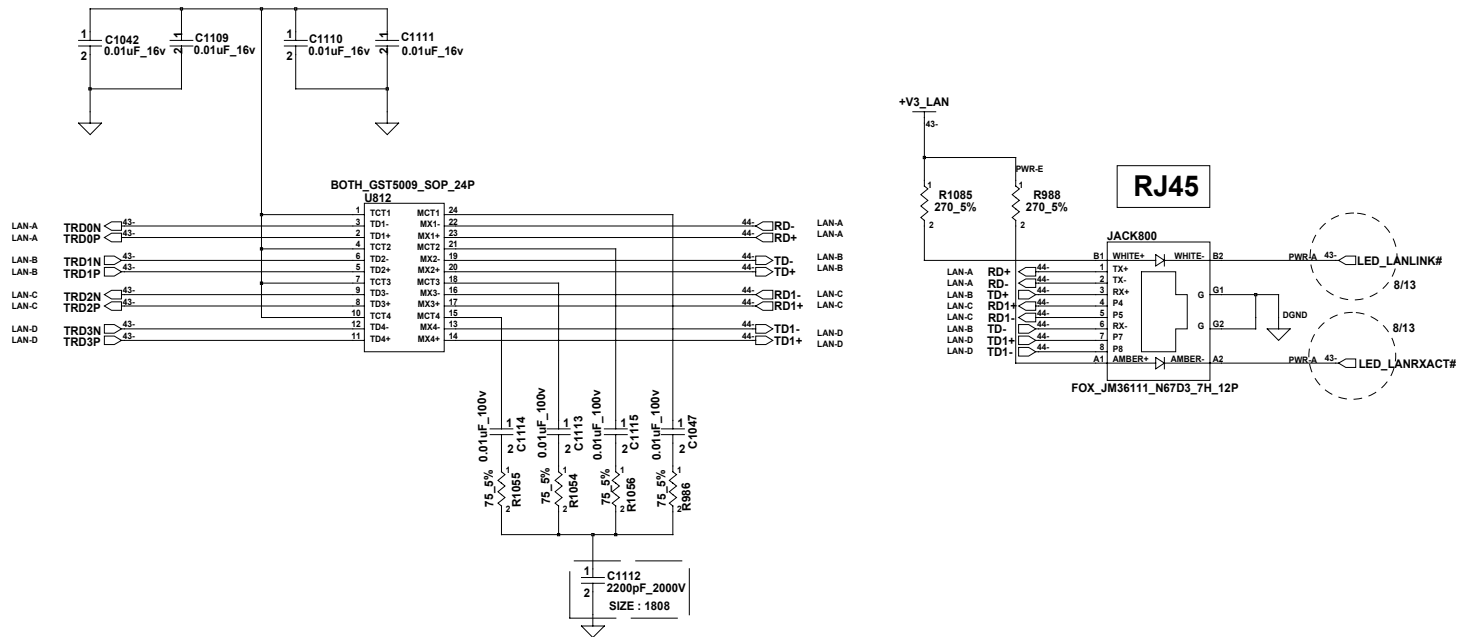


INVENTEC

TITLE			
ST145a-UMA			
ESATA & USB BOARD CABLE			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		42	OF 51

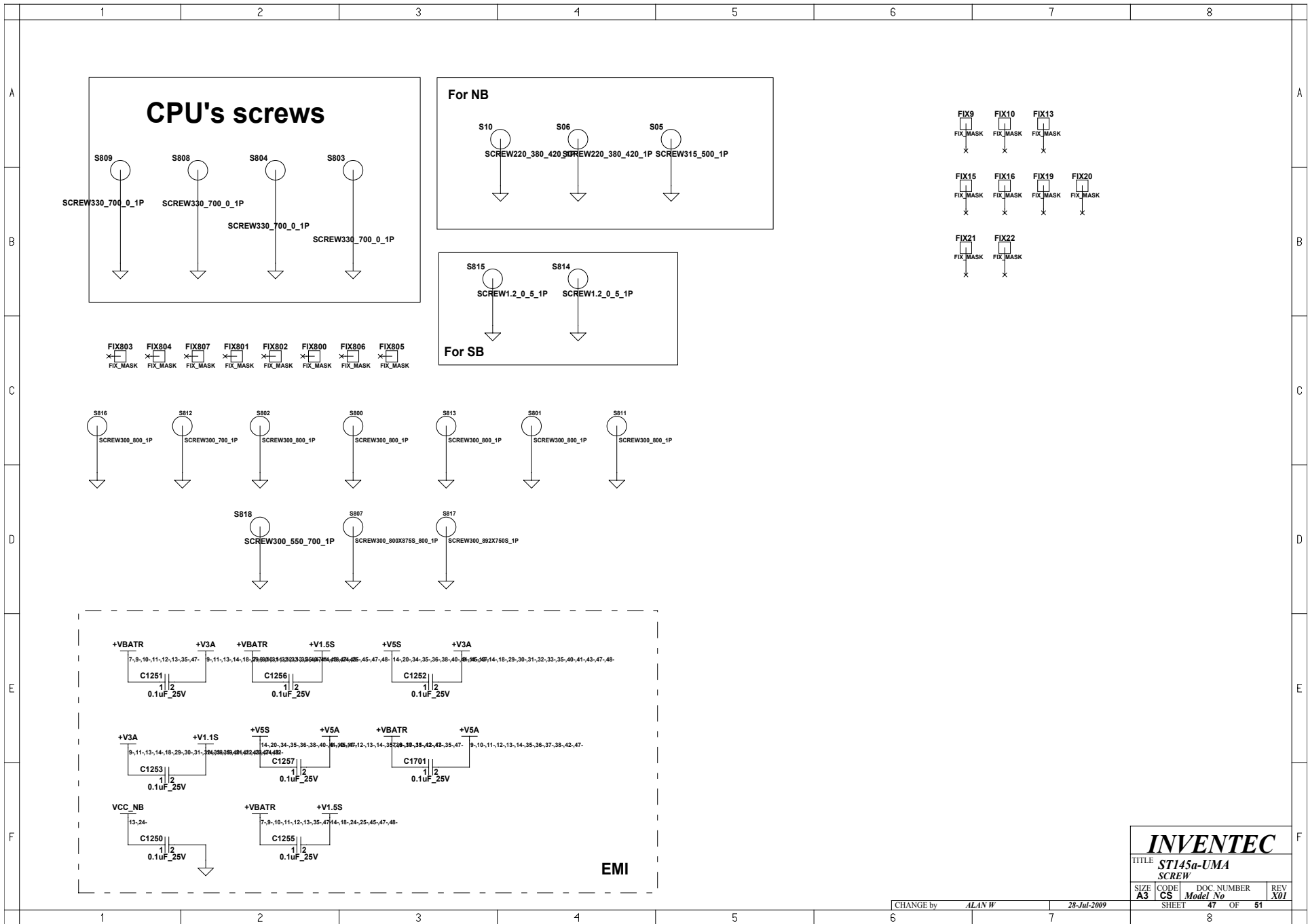
CHANGE by ALAN W 27-Jul-2009

8



LAYOUT NOTE : Place termination resistors and caps as close to LAN controller as possible

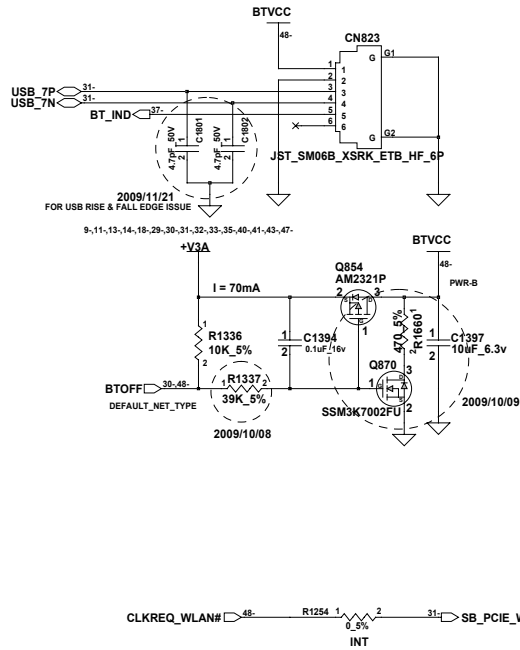
INVENTEC			
TITLE: ST145a-UMA			
LAN & RJ45 CONN			
SIZE: A3	CODE: CS	DOC. NUMBER: Model No	REV: X01
CHANGE by: ALAN W		27-Jul-2009	
SHEET: 44		OF: 51	



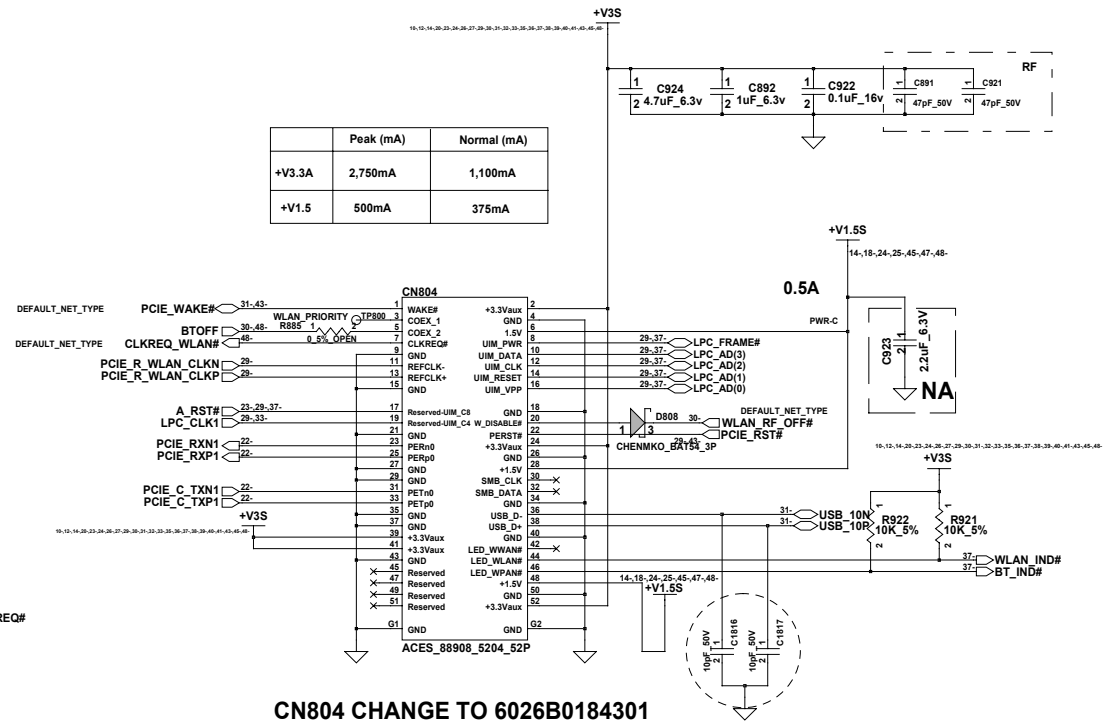
INVENTEC			
TITLE ST145a-UMA			
SCREW			
SIZE A3	CODE CS	DOC_NUMBER Model No	REV X01
SHEET		47	OF 51

BLUETOOTH CONN

SI CHANGE TO 6012B0341901



WLAN CONN (MINICARD)



CN804 CHANGE TO 6026B0184301

	PCH	SB800/820
WLAN_RF_OFF#	GPIO57	GPIO12
WLAN_POWER_OFF	GPIO35	GPIO176

INVENTEC

TITLE **ST145a-UMA**
WLAN & BT CONN

SIZE A3 CODE CS DOC NUMBER Model No REV X01

CHANGE by ALAN W 27-Jul-2009 SHEET 48 OF 51

	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

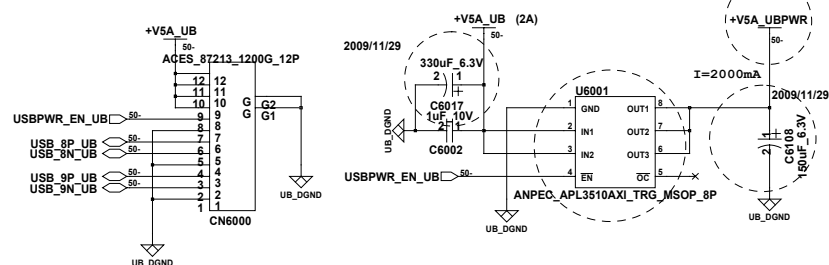
TITLE: **ST145a-UMA**
WWAN & SIM CARD CONN

SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET		49	OF 51
		8	

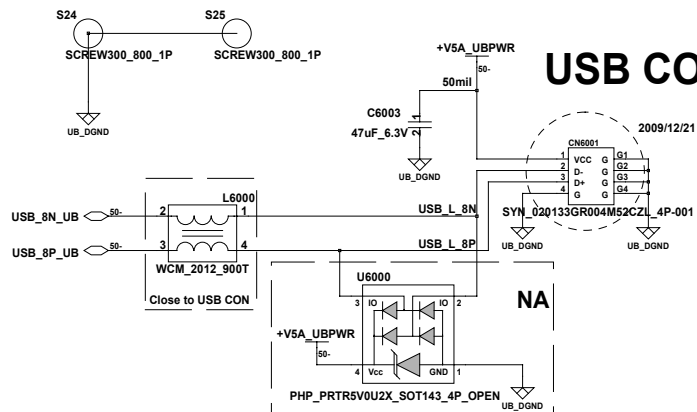
USB BOARD

USB BOARD Cable ON UB

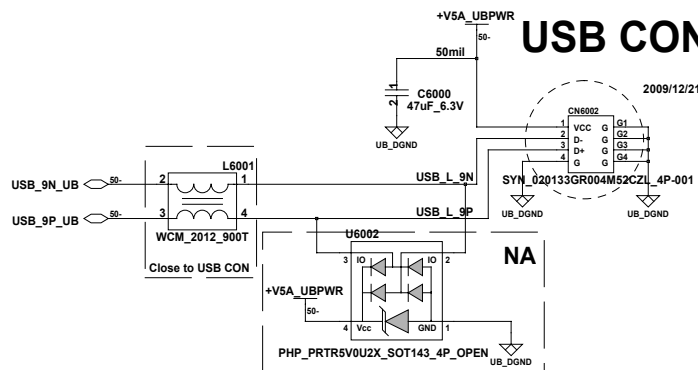
Circuit : Fixed
2009/06/29



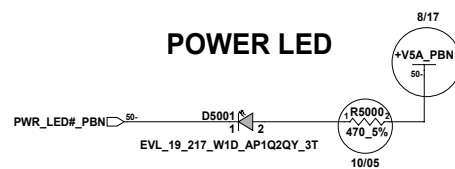
USB CONN01



USB CONN02

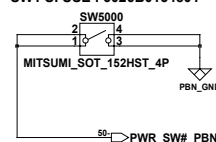


POWER LED

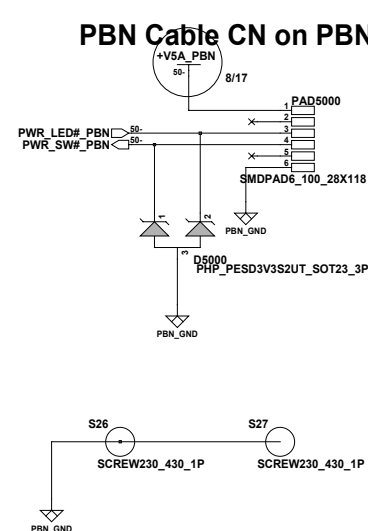


POWER BUTTON

SW1 SI USE : 6026B0154801



PBN Cable CN on PBN



Circuit : Fixed
2009/06/29

POWER BOTTON BOARD

INVENTEC

TITLE			
ST145a-UMA EXT USB CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		50 OF	51

CHANGE by	ALAN W	27-Jul-2009
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SHEET 50 OF 51

	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	

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