

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

ST145AU

AMD DANUBE PLATFORM

SI Build

2009/11/29

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

DRAWER	EE	DATE	POWER	DATE
DESIGN				
CHECK				
RESPONSIBLE				
SIZE = 3		VER :		
FILE NAME : XXXX-XXXXXX-XX				
P/N	XXXXXXXXXXXX			
		6	7	8

INVENTEC

TITLEST145a-UMAProject Name

SIZEA3CODECSDOC. NUMBERModel NoREVX01

SHEET1OF51

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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)
 15- CLK GEN-RTM880N
 16- CPU-1
 17- CPU-2
 18- CPU-3
 19- CPU-4
 20- FAN & THERMAL IC
 21- RS880M-1
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24- RS880M-4
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 34- NOTE
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 36- HDMI
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 38- Keyboard CONN & Indicate LED
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 40- SATA HDD & SATA ODD CONN
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 42- ESATA CONN & USB Board CONN
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 51- USB BOARD & BUTTON BOARD
 52- HDD Board & ODD Board

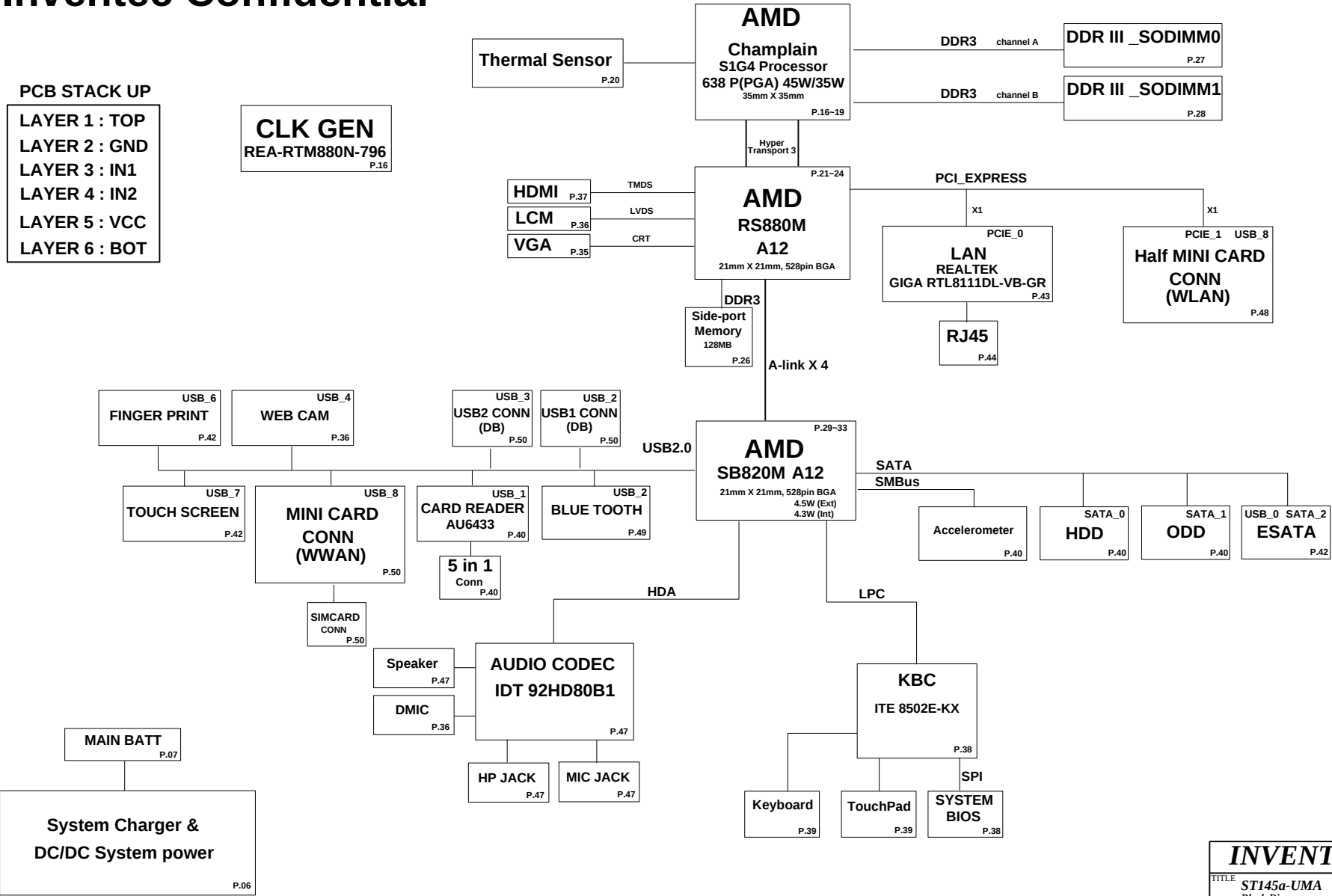
INVENTEC

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

CHANGE by ALAN W 27-Jul-2009

8

Inventec Confidential



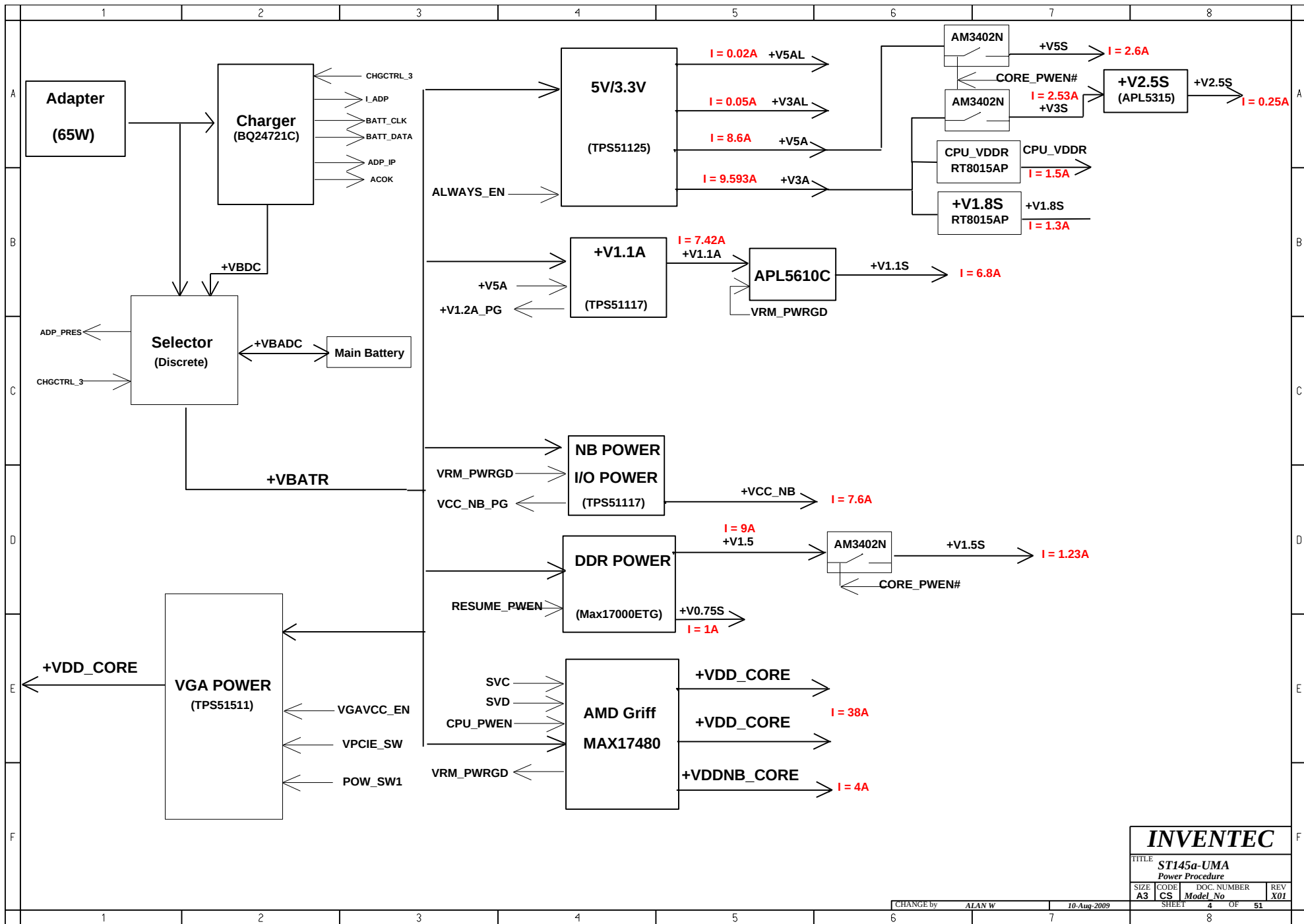
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TITLE
ST145a-UMA
Block Diagram

SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
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CHANGE by ALAN W 29-Nov-2009

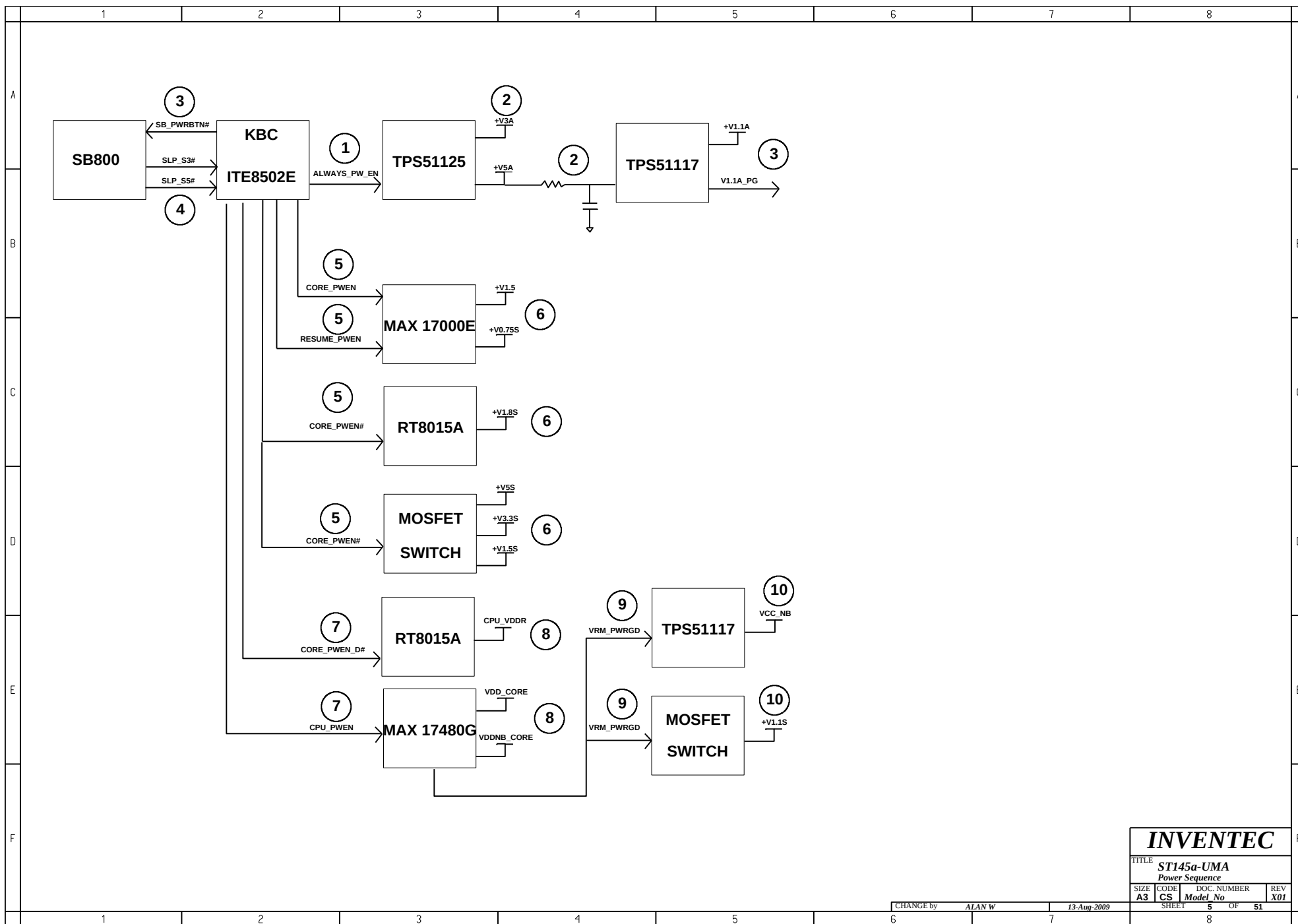
SHEET 3 OF 51



INVENTEC

TITLE			
ST145a-UMA			
Power Procedure			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		4	OF 51

CHANGE by ALAN W 10-Aug-2009



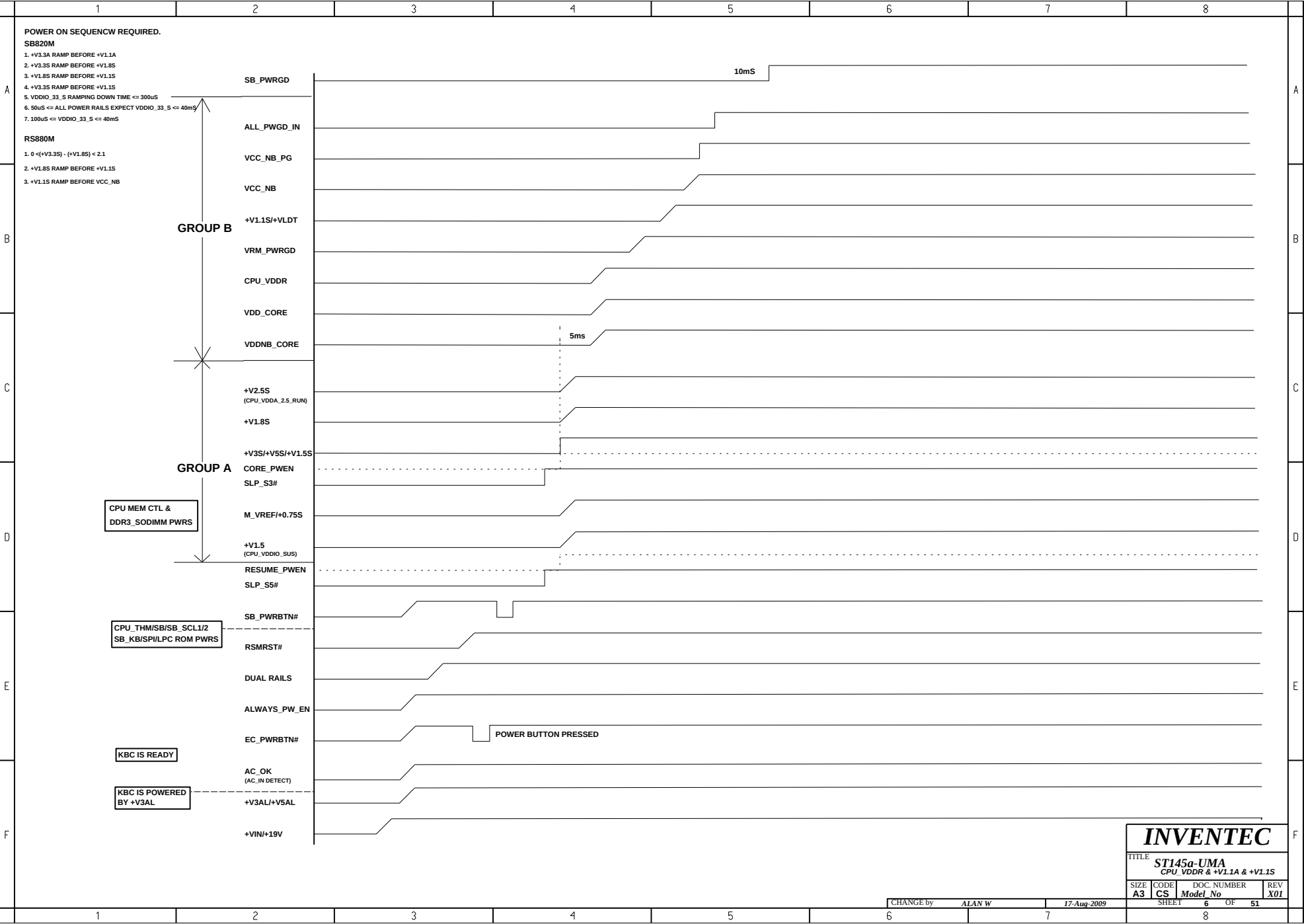
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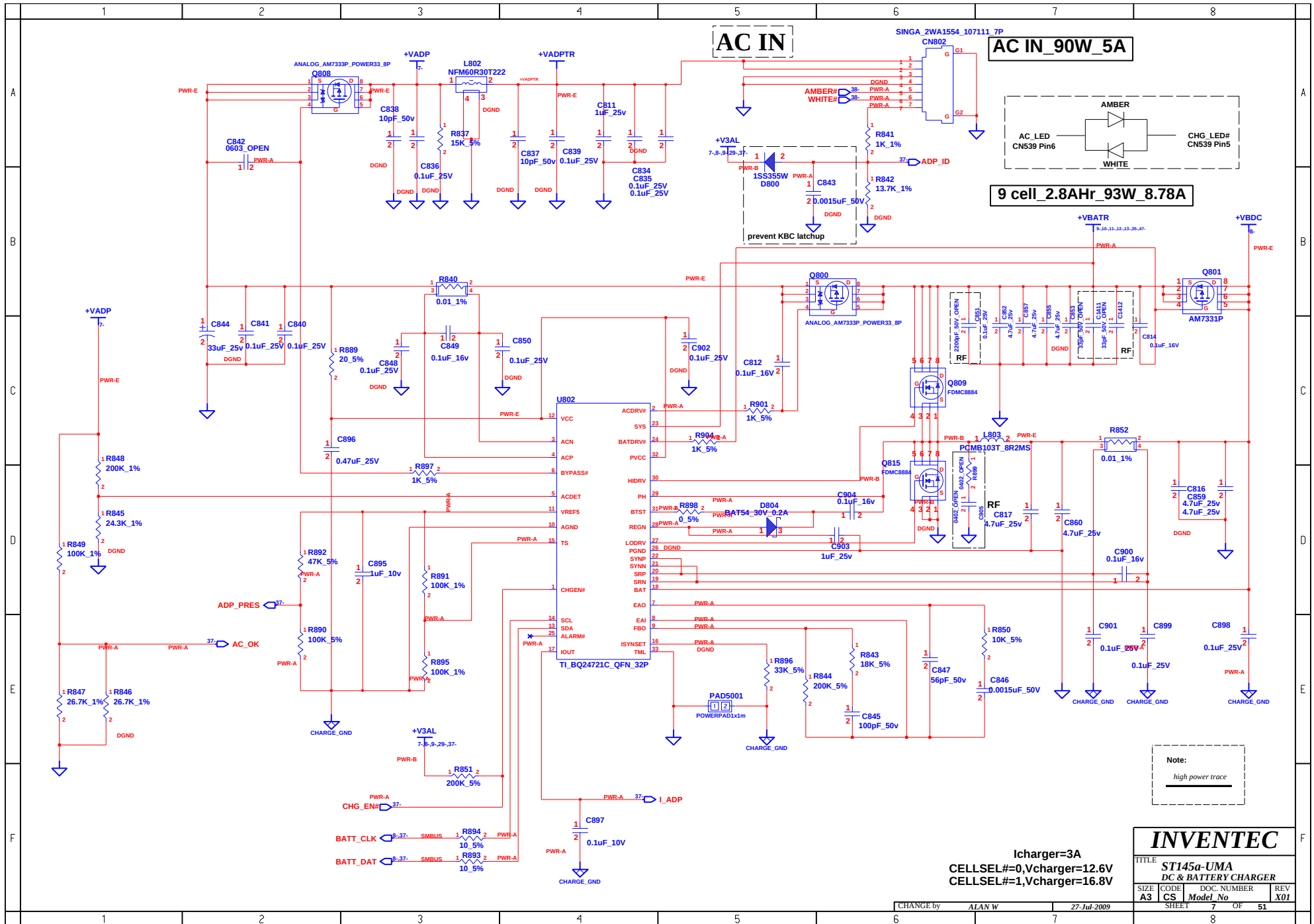
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ST145a-UMA
Power Sequence

SIZE CODE DOC. NUMBER REV
A3 CS Model No **X01**

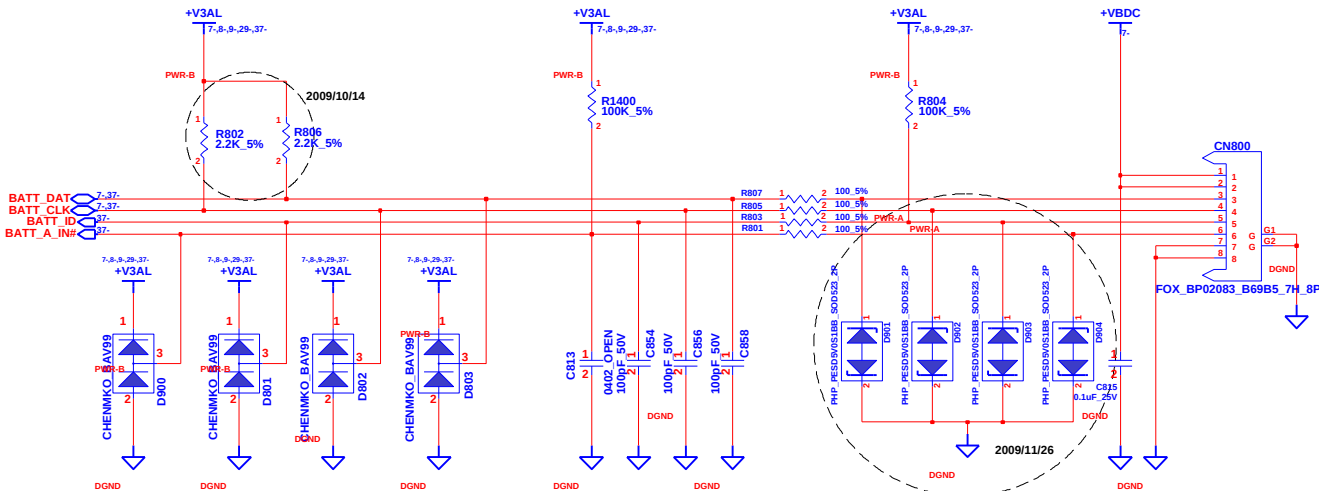
CHANGE by ALAN W 13-Aug-2009

SHEET 5 OF 51





9cell 2.8Ahr 93W 8.78A



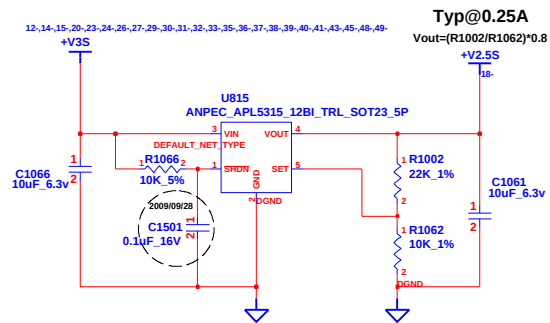
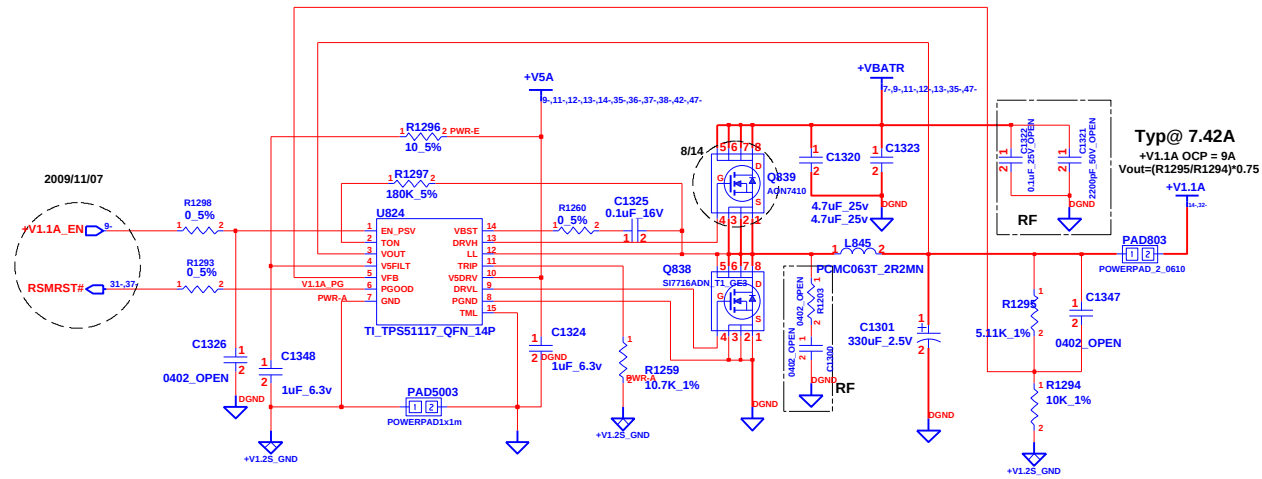
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TITLE	ST145a-UMA BATTERY CONN
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SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
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CHANGE by	ALAN W	27-Jul-2009
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SHEET **8** OF **51**
8



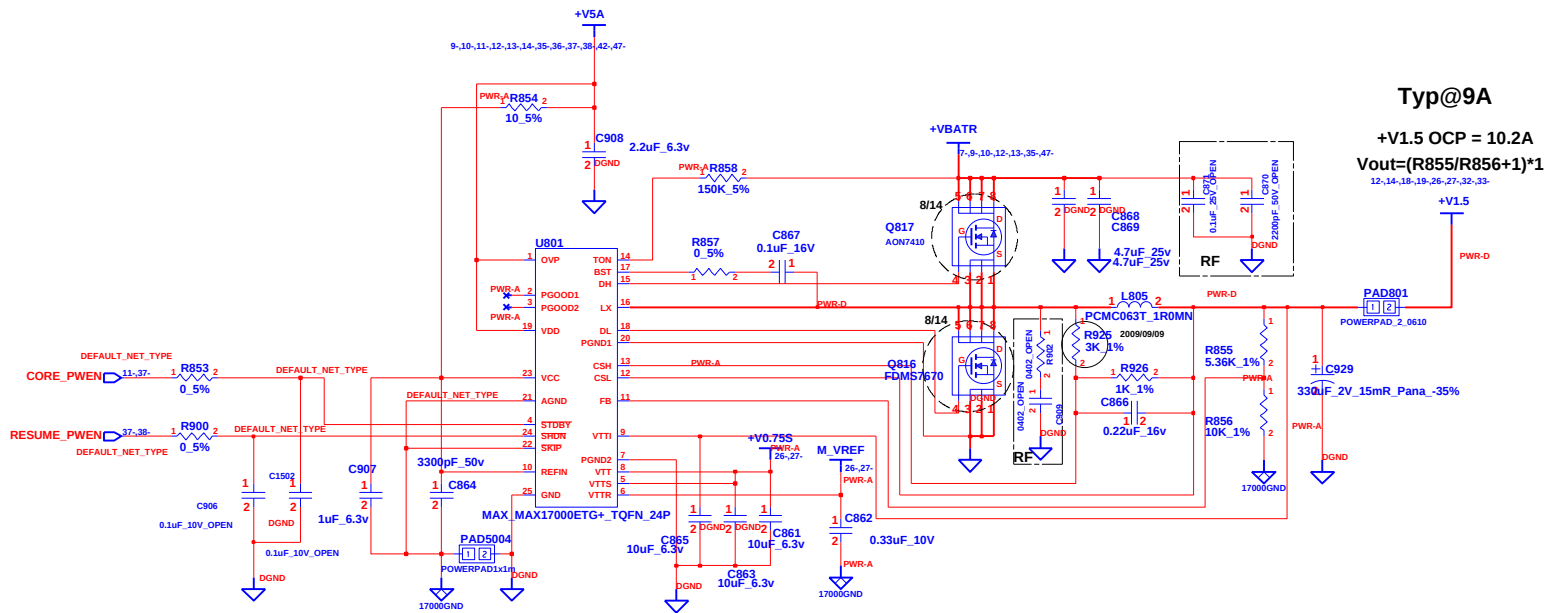
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TITLE
ST145a-UMA
+V1.2A & VCC_NB

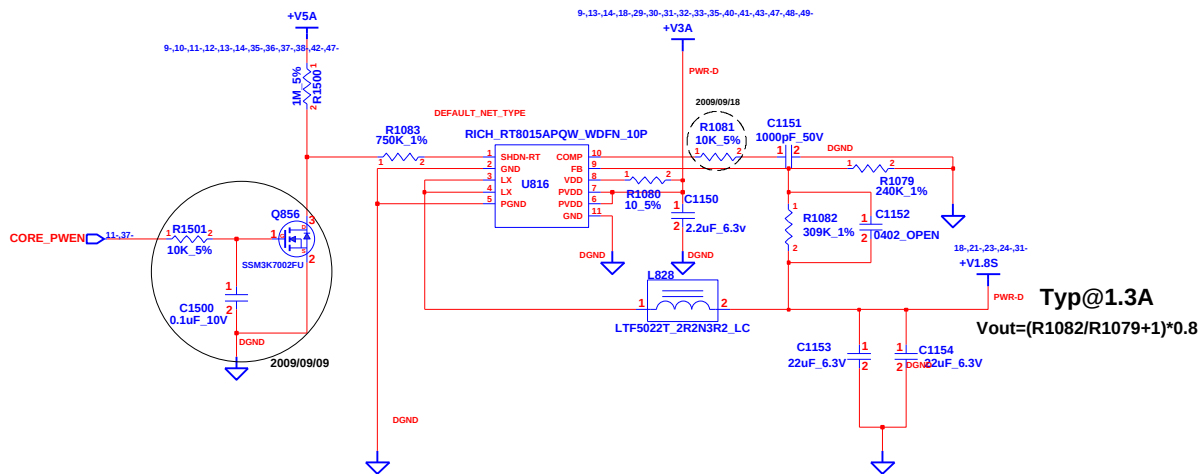
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A3	CS	Model No	X01

CHANGE by ALAN W 27-Jul-2009

SHEET 10 OF 51



NOTE: DDR3 REGULATOR

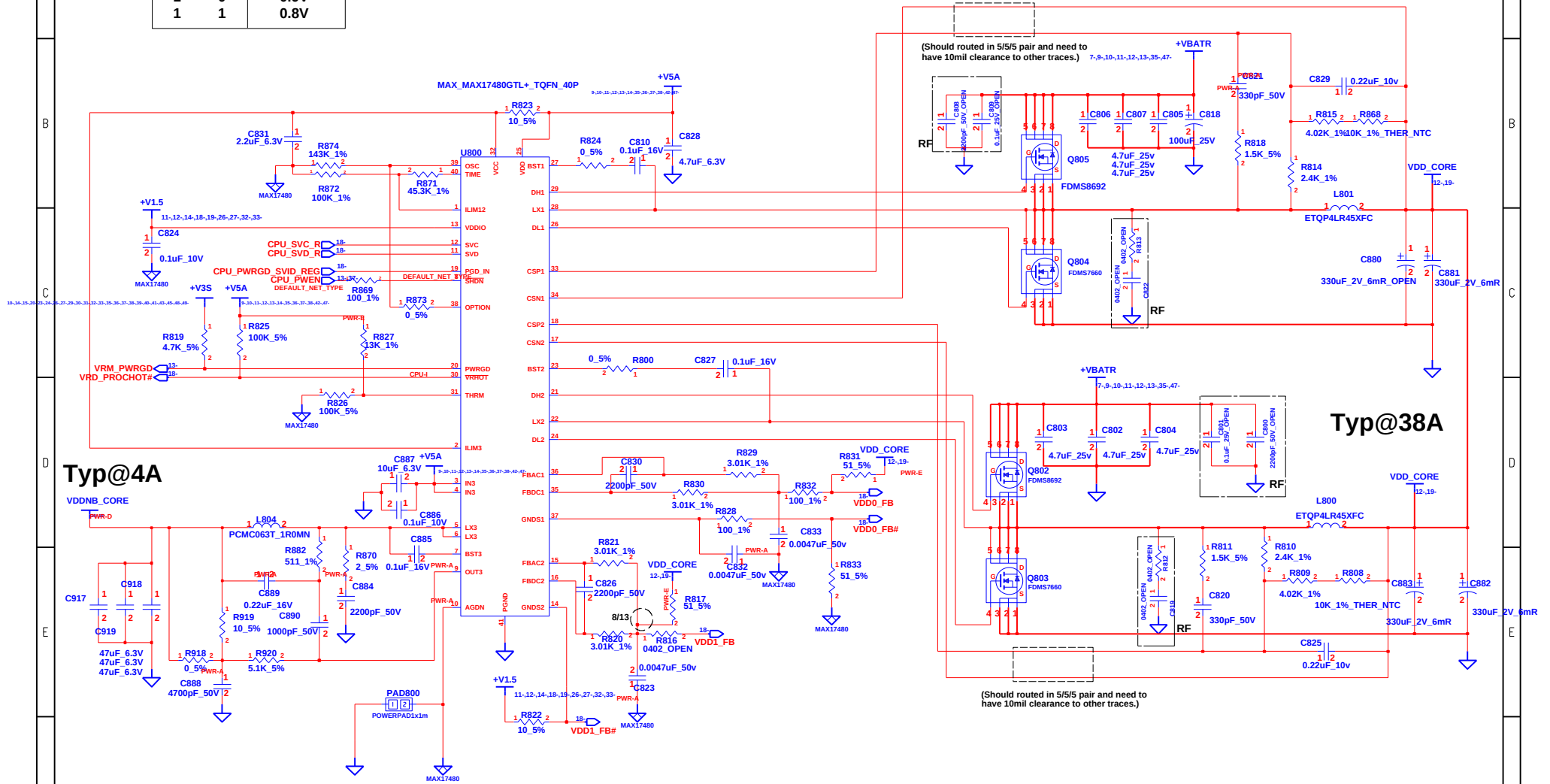


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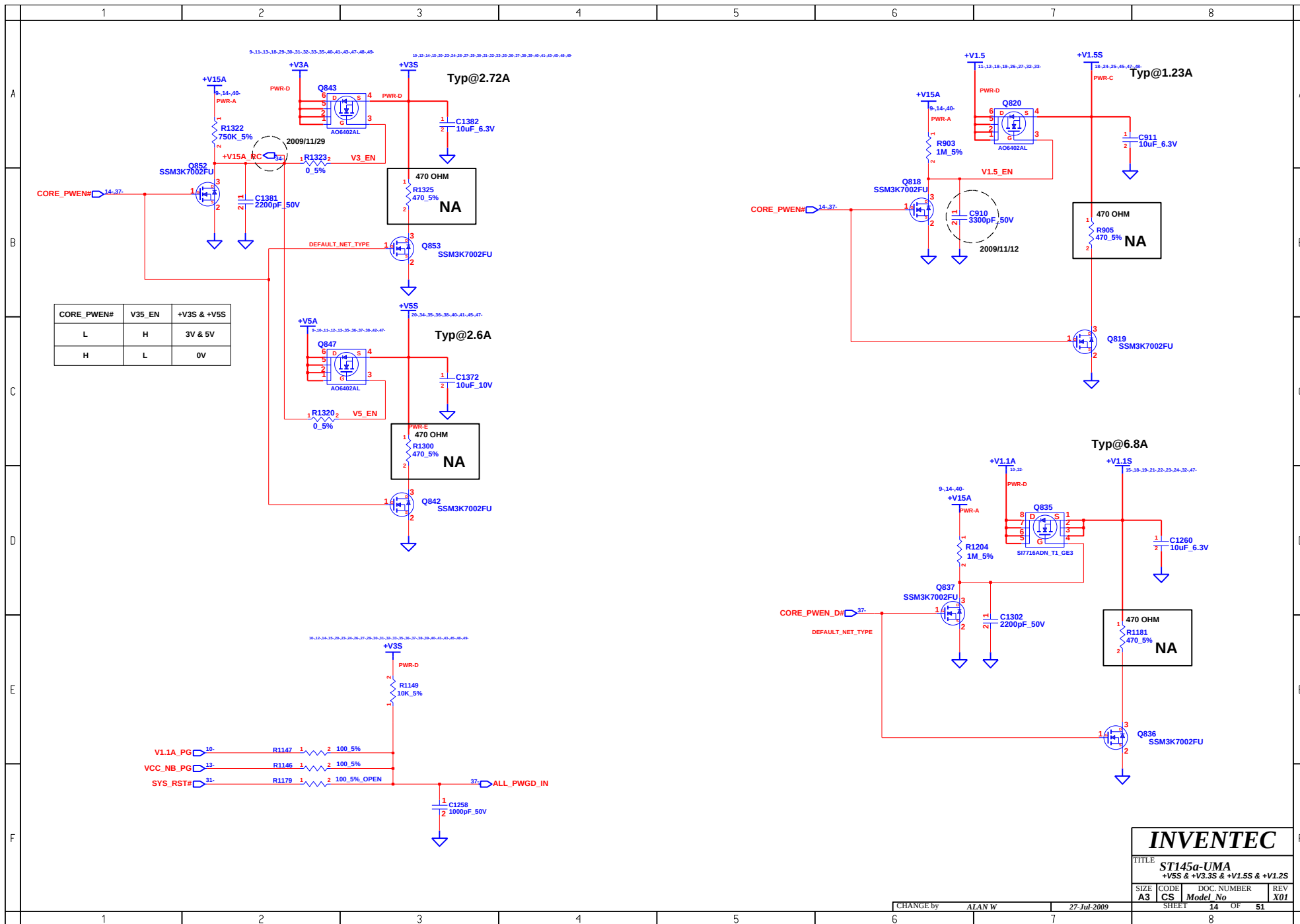
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ST145a-UMA			
DDR3 POWER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		11	OF 51

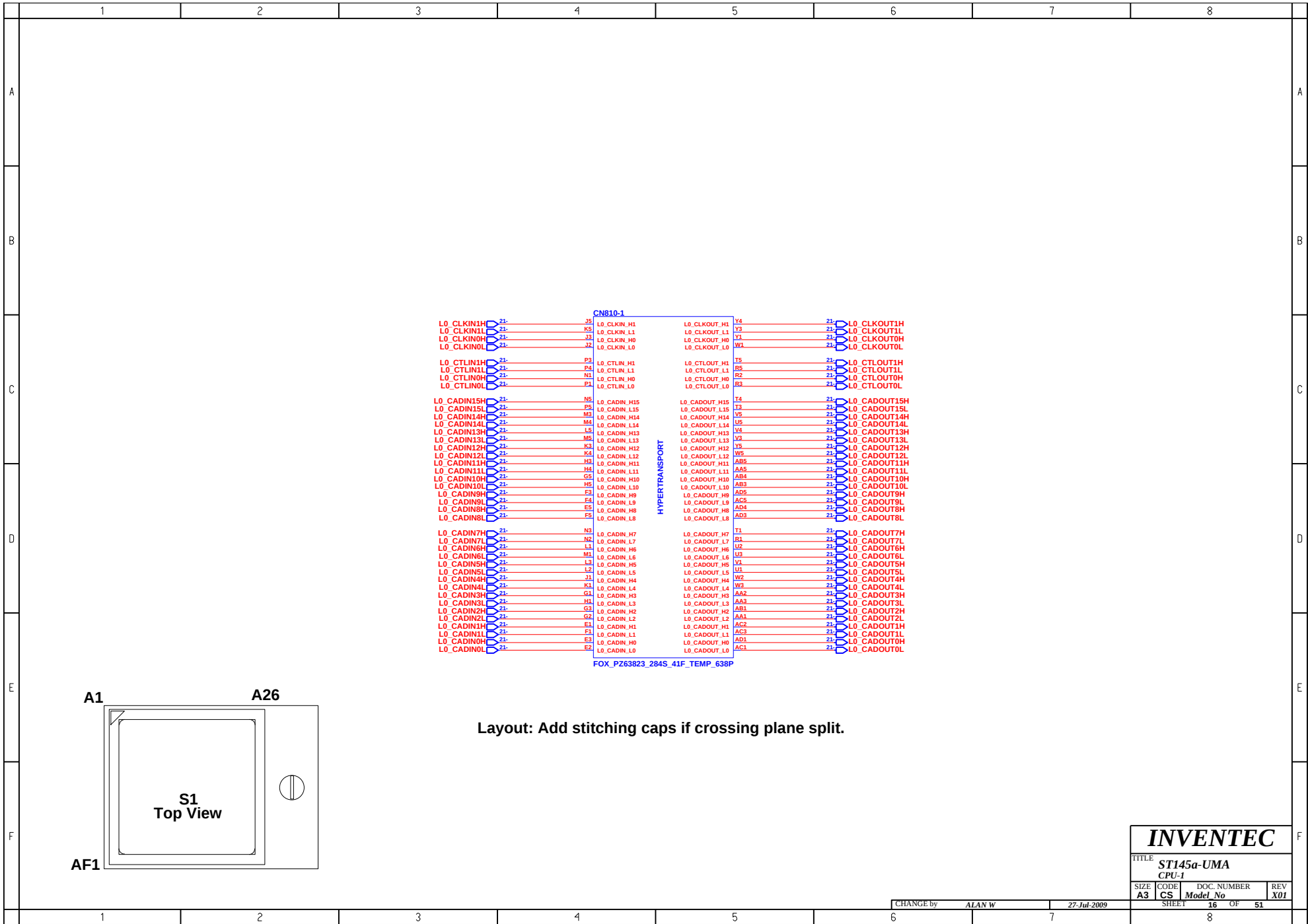
CHANGE by ALAN W 27-Jul-2009

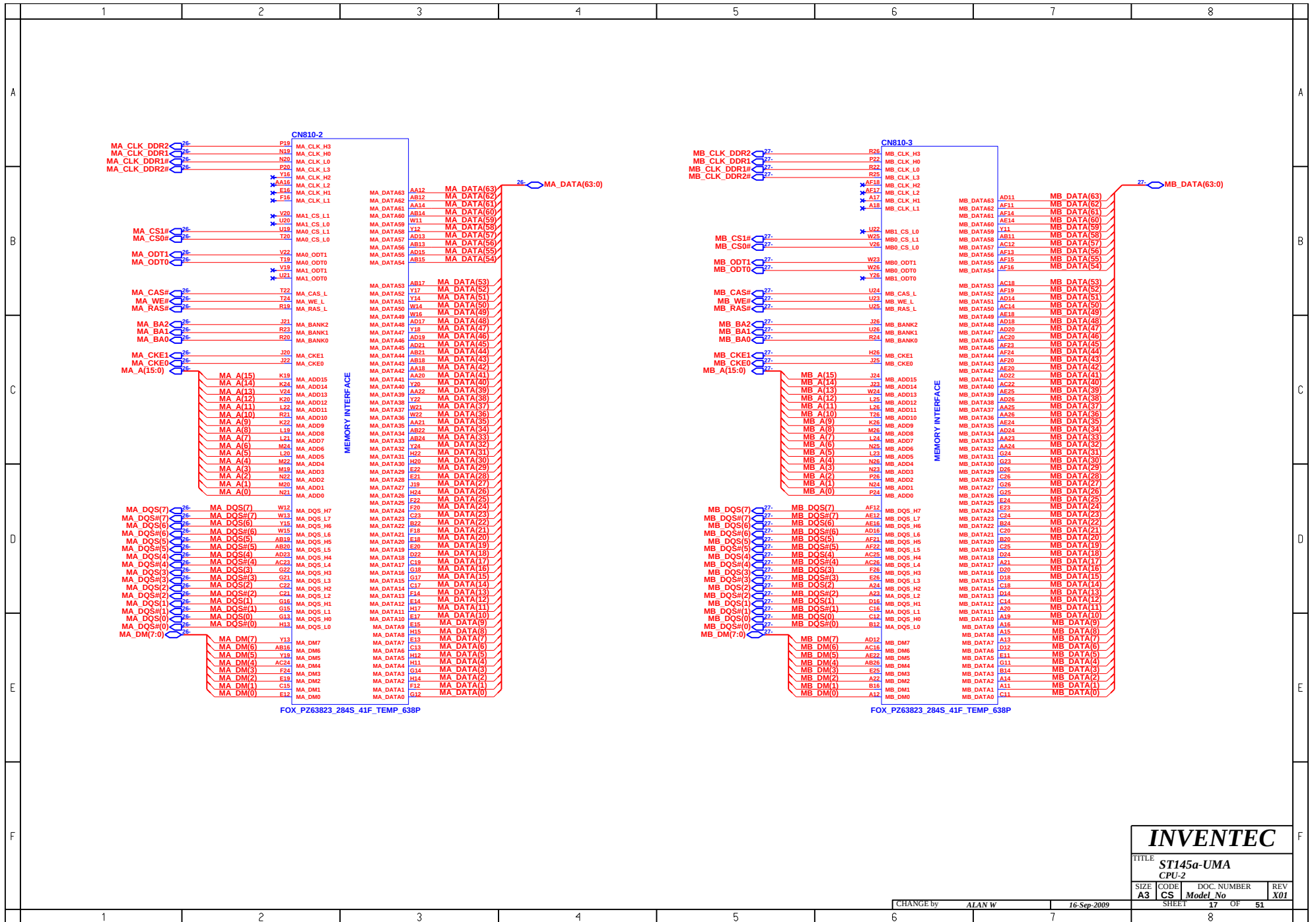
SVC	SVD	VDD_CORE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V



INVENTEC			
TITLE ST145a-UMA +VCC_CORE & +VCC_CORE_NB			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET 12		OF 51	







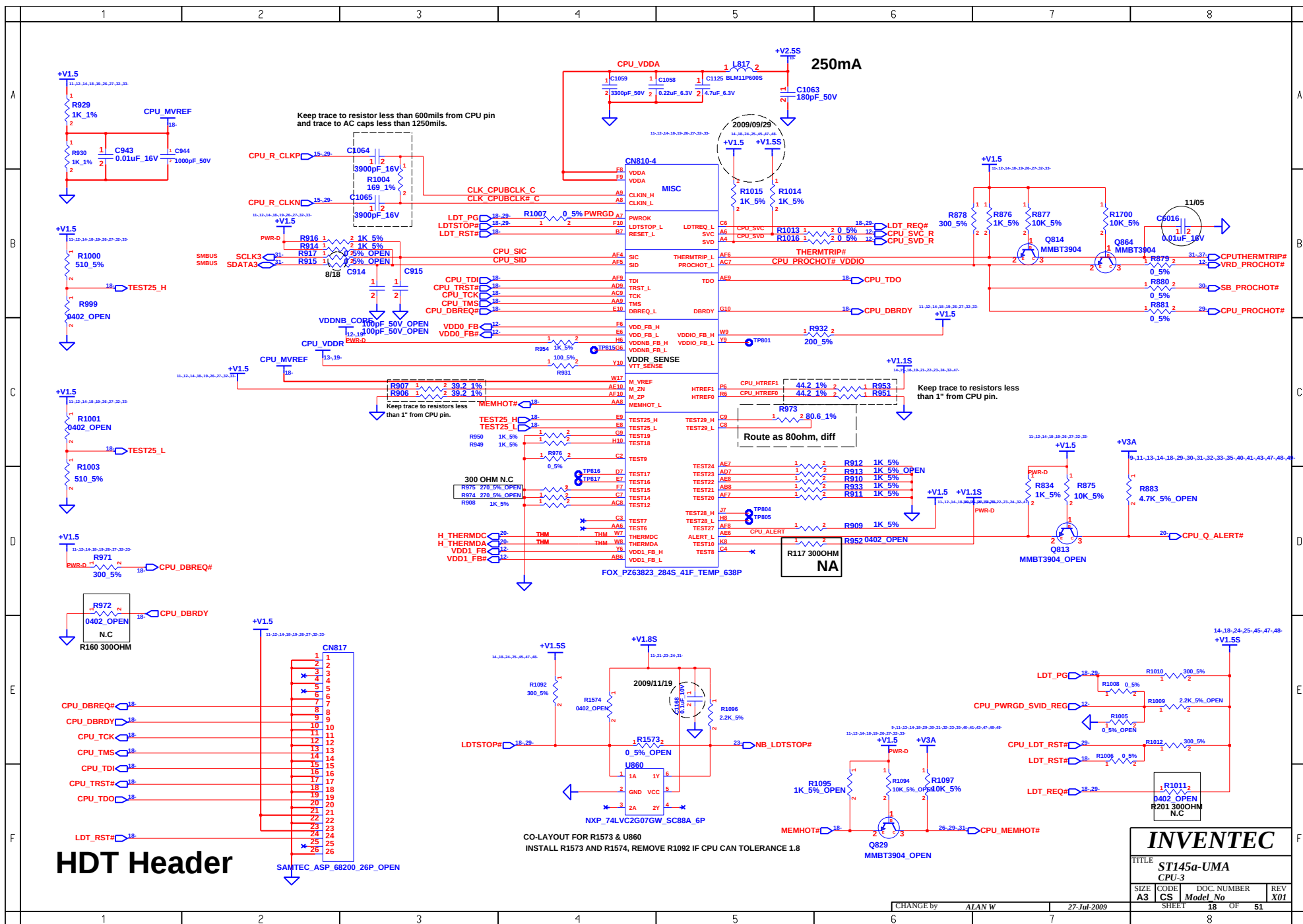
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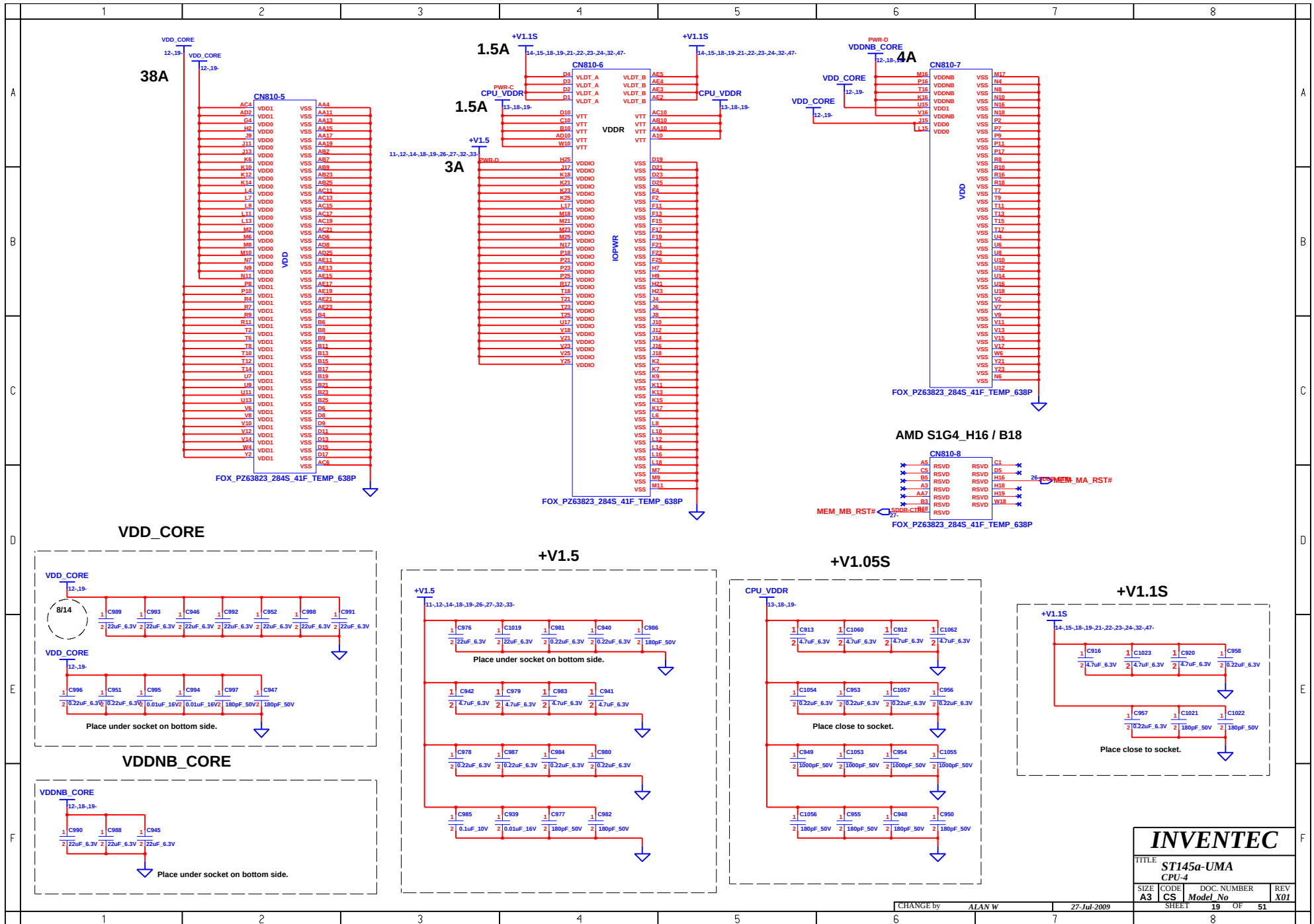
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ST145a-UMA
CPU-2

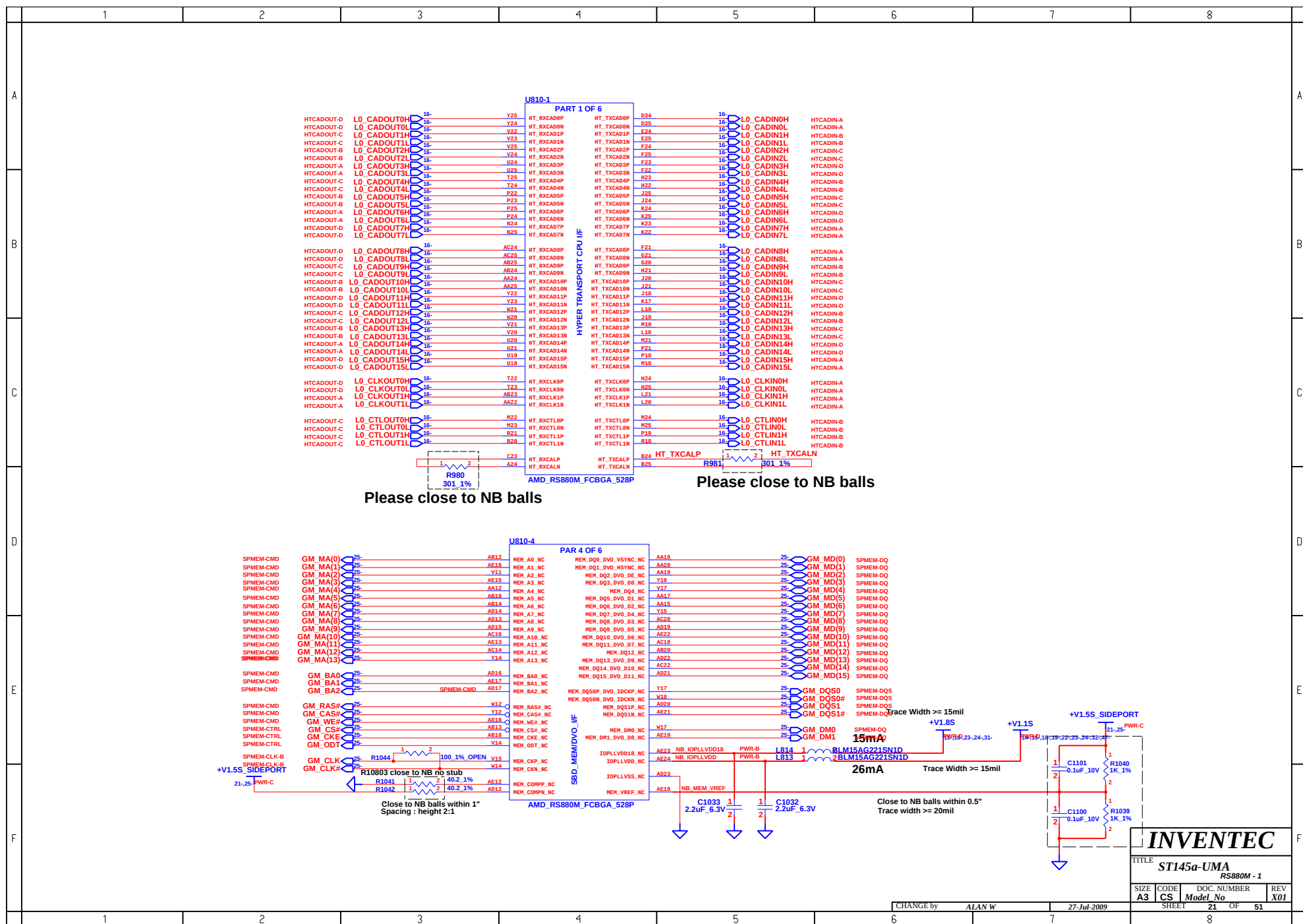
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A3	CS	Model No	X01

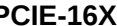
CHANGE by ALAN W 16-Sep-2009

17 OF 51

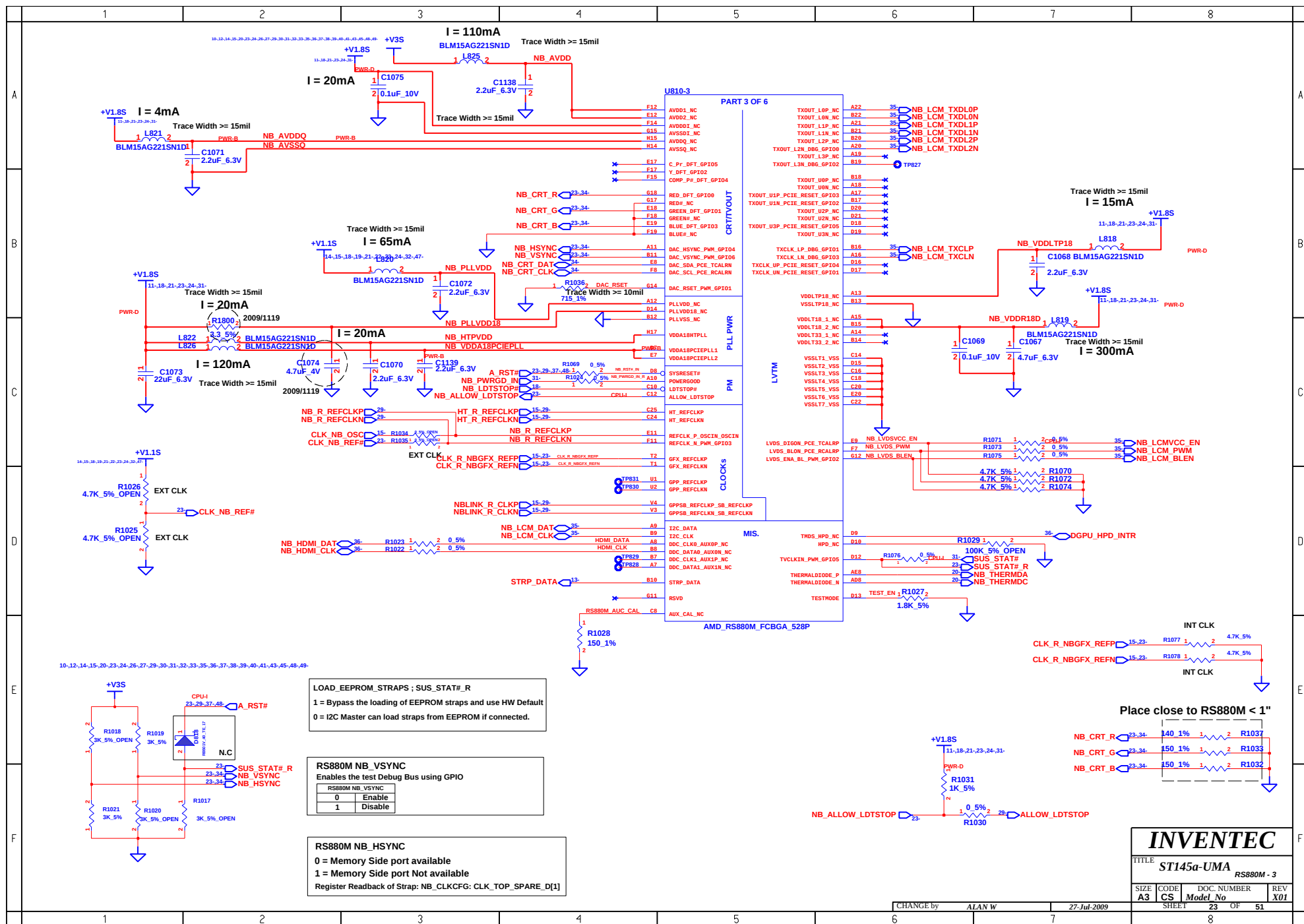


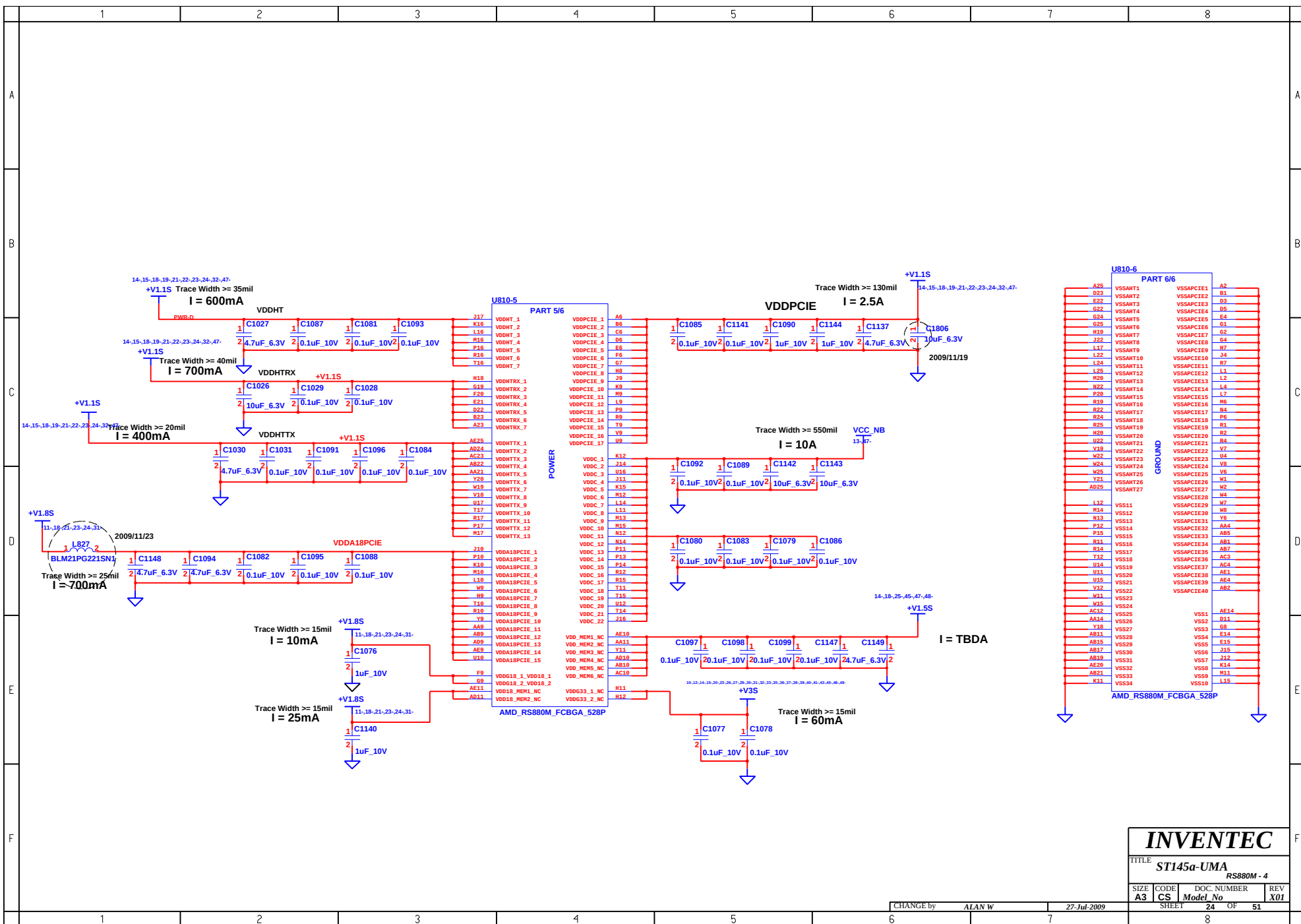




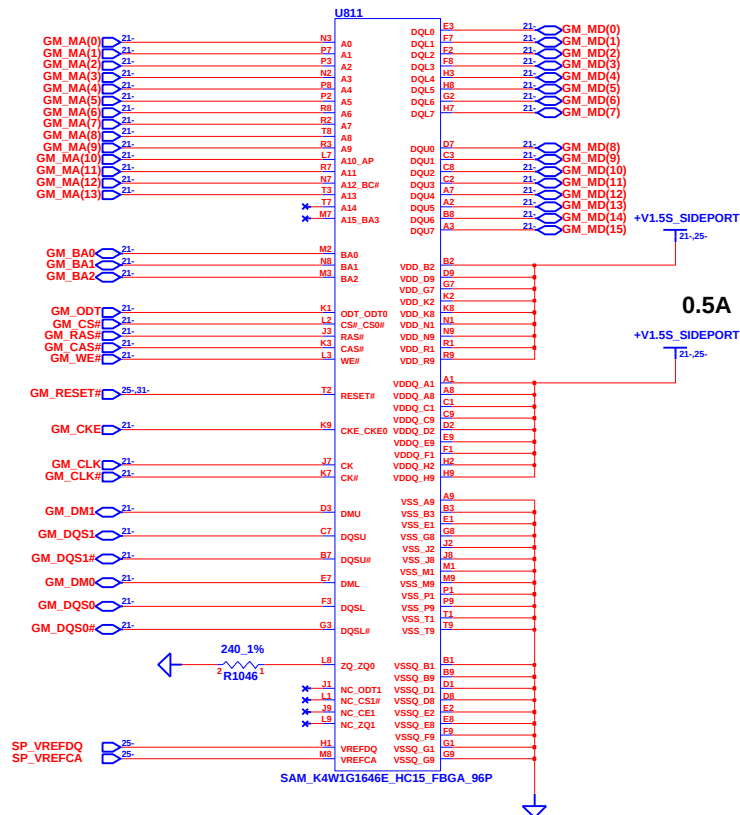


CHANGE by	ALAN W	27-Jul-2009
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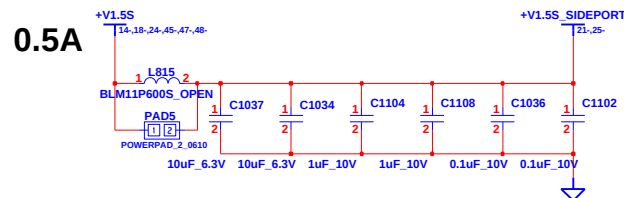
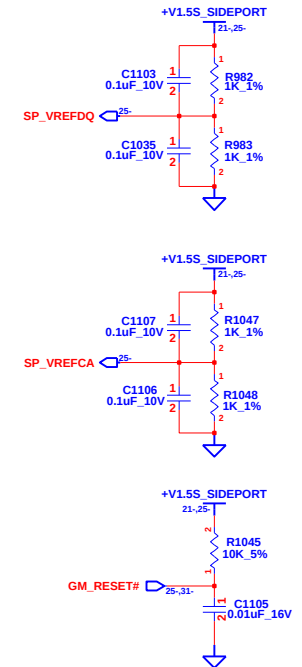
SIDE-PORT DDR III



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

R1206

R1186



INVENTEC

TITLE			
ST145a-UMA			
SIDE-PORT			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model_No	X01
SHEET		OF	
25		51	

CHANGE by ALAN W 27-Jul-2009

SO-DIMM0

Layout NOTE: Place these Caps near SO-DIMM0 power pin

Note: IF SA0_DIM0=0, SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0xA0
SO-DIMMA TS ADDRESS IS 0x30

IF SA0_DIM0=1, SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0xA2
SO-DIMMA TS ADDRESS IS 0x32

INVENTEC
TITLE: ST145a-UMA DDR3 DIMM0
SIZE A3 CODE CS DOC. NUMBER REV X01
SHEET 26 OF 51

**Note:Place C4100
on common path
for both DIMM's**

Place these caps
close to VTT1 and
VTT2

NOTE:

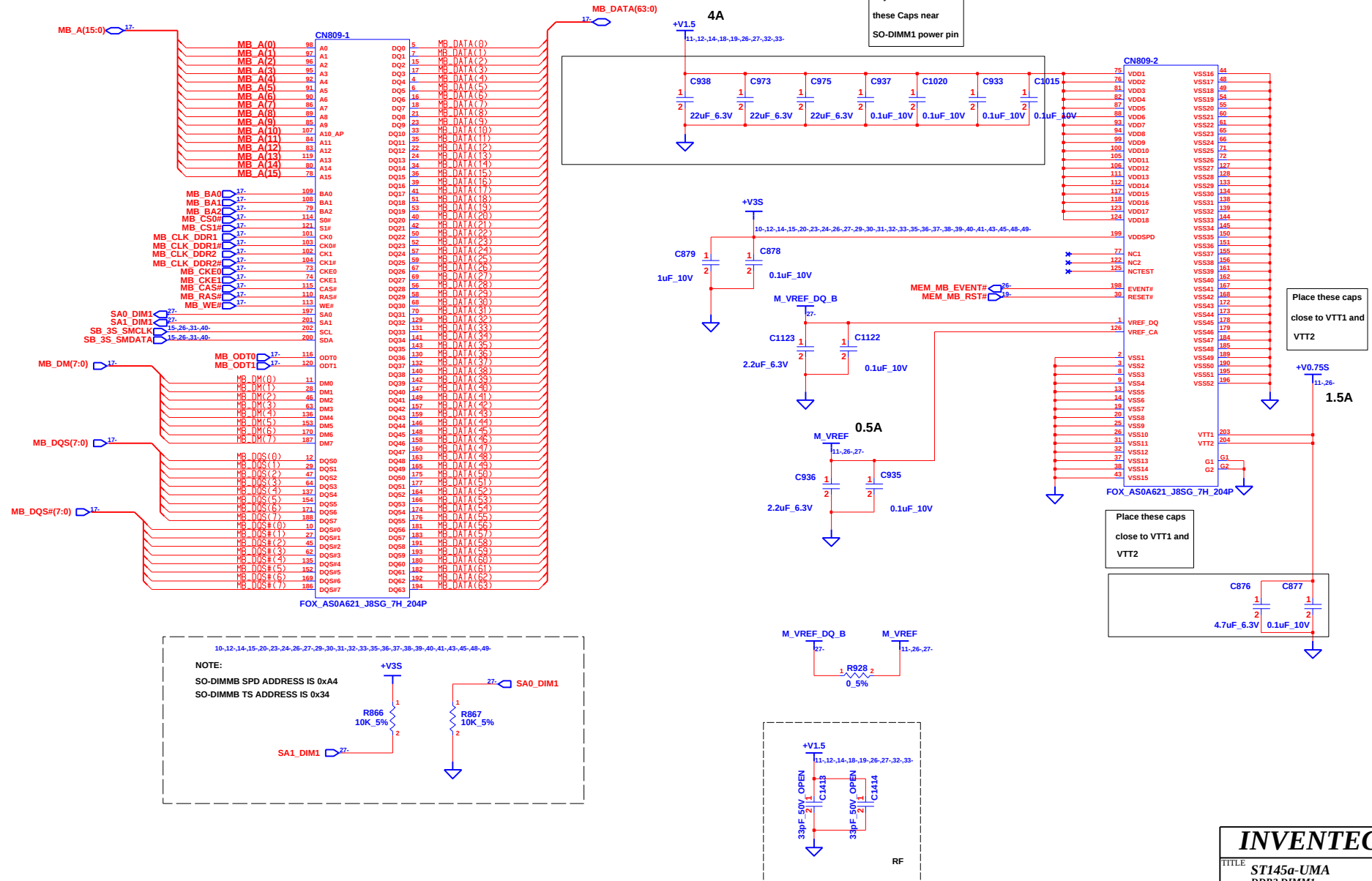
IF SA0_DIM0=0 , SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0xA0
SO-DIMMA TS ADDRESS IS 0x30

IF SA0_DIM0=1, SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0xA2
SO-DIMMA TS ADDRESS IS 0x32

The diagram illustrates the SPD address decoder circuit. It features two 10K 5% resistors, R865 and R863, connected to a common node. R865 is connected to a 26-pin header labeled SA0_DIM0 SDDR-CTRL. R863 is connected to a 26-pin header labeled SA1_DIM0 SDDR-CTRL. The common node is connected to a 26-pin header labeled SA0_DIM0 SDDR-CTRL. The circuit is powered by a 5V supply through a 10K 5% resistor R864.

INVENTEC			
TITLE ST145a-UMA DDR3 DIMM0			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
SHEET		26	OF 51
8			

SO-DIMM1



INVENTEC

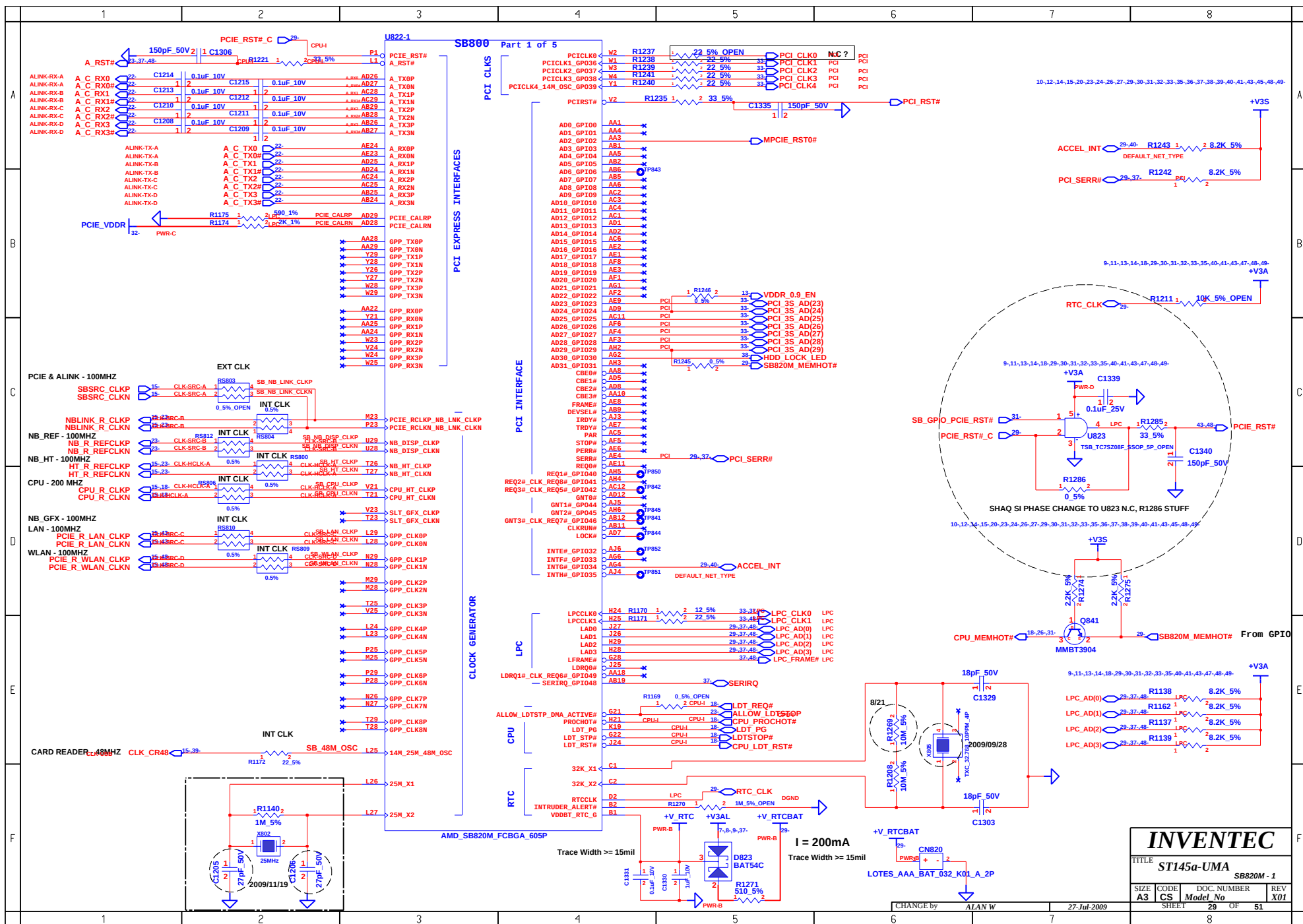
TITLE			
ST145a-UMA			
DDR3 DIMM1			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		27	OF 51

CHANGE by ALAN W 27-Jul-2009

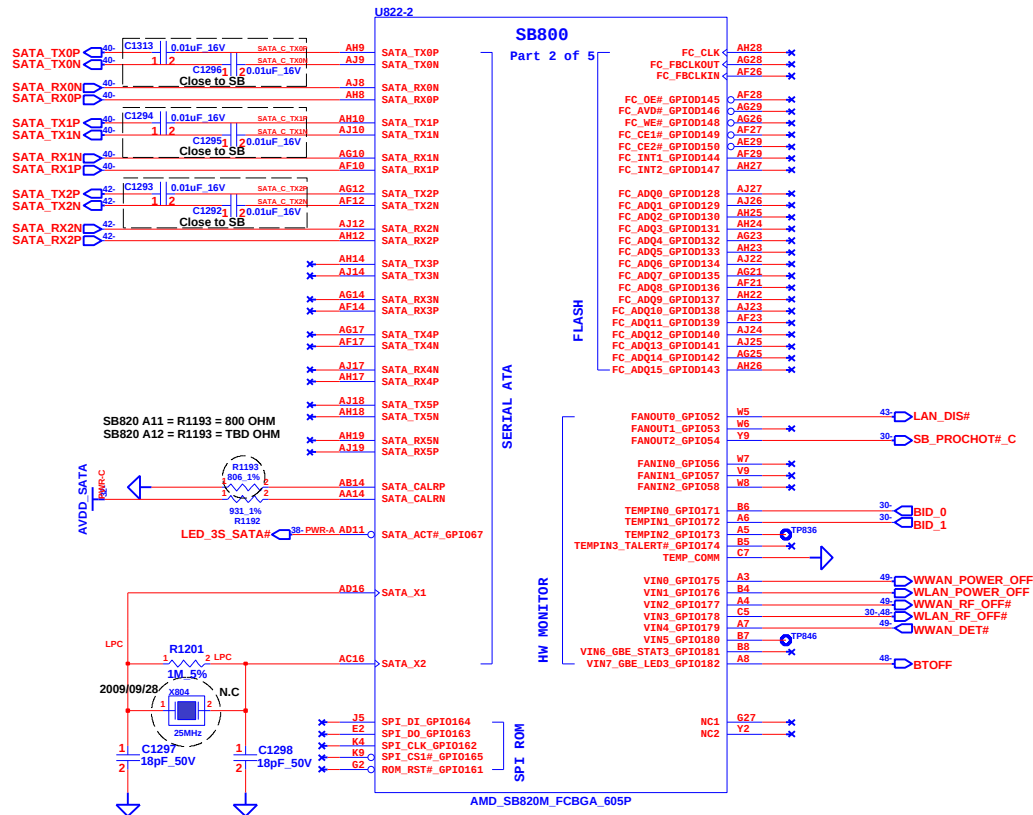
8

	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
						CHANGE by ALAN W		20-Aug-2009	
1	2	3	4	5	6	7	8		

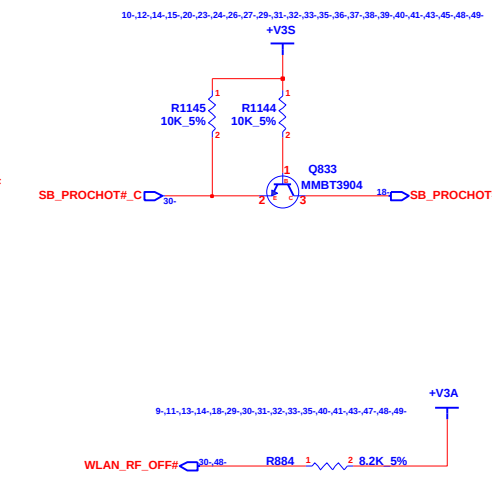
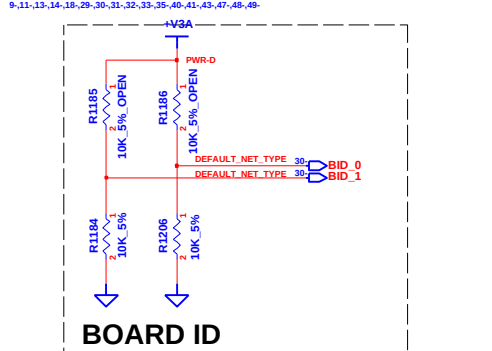
INVENTEC			
TITLE ST145a-UMA DDR3 DAMPING			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET		28	OF 51



SATA_0 --- HDD
SATA_1--- ODD
SATA_2--- ESATA



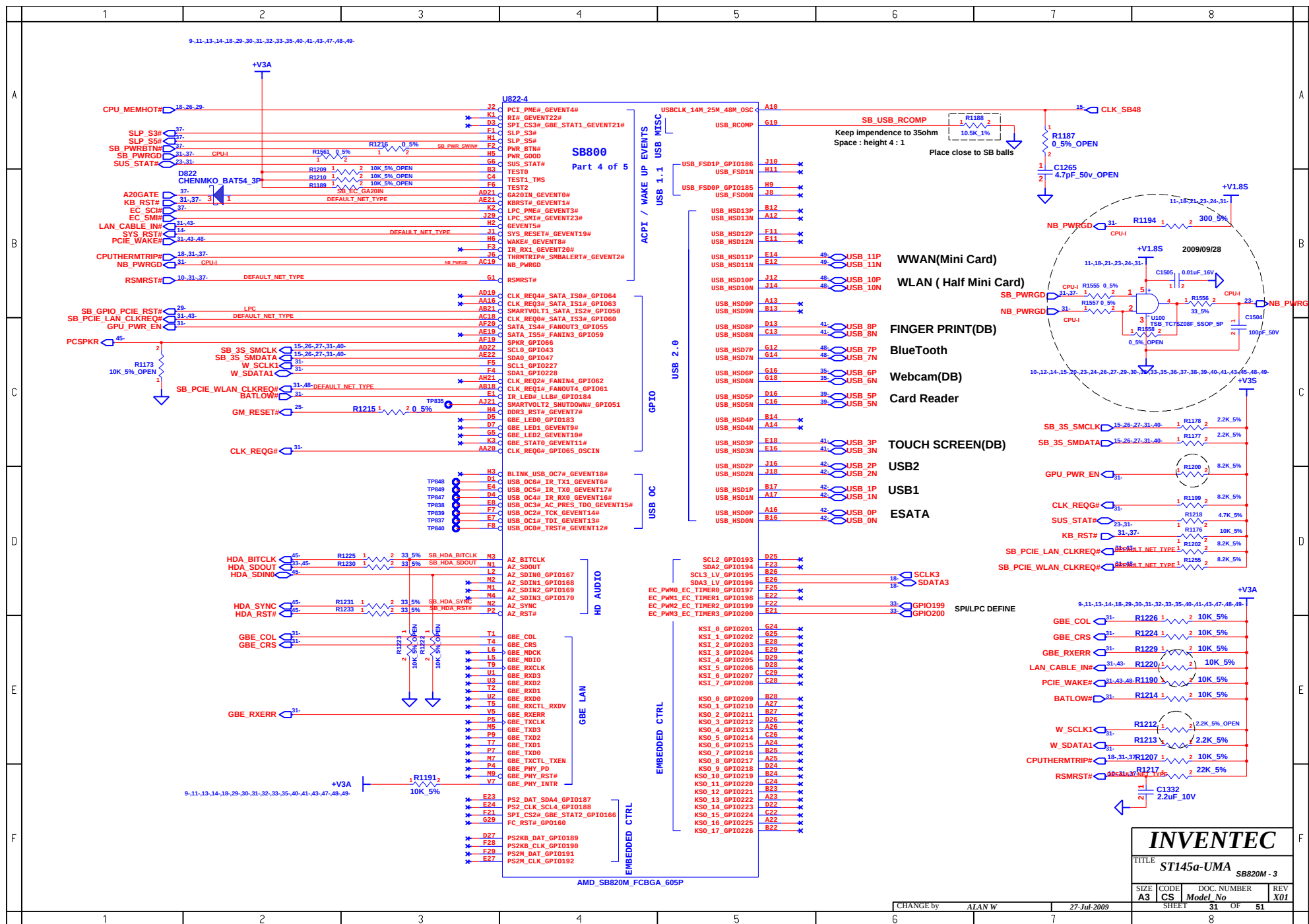
	BID_1	BID_0
HYNIX	0	0
SAMSUNG	0	1
QIMONDA	1	0

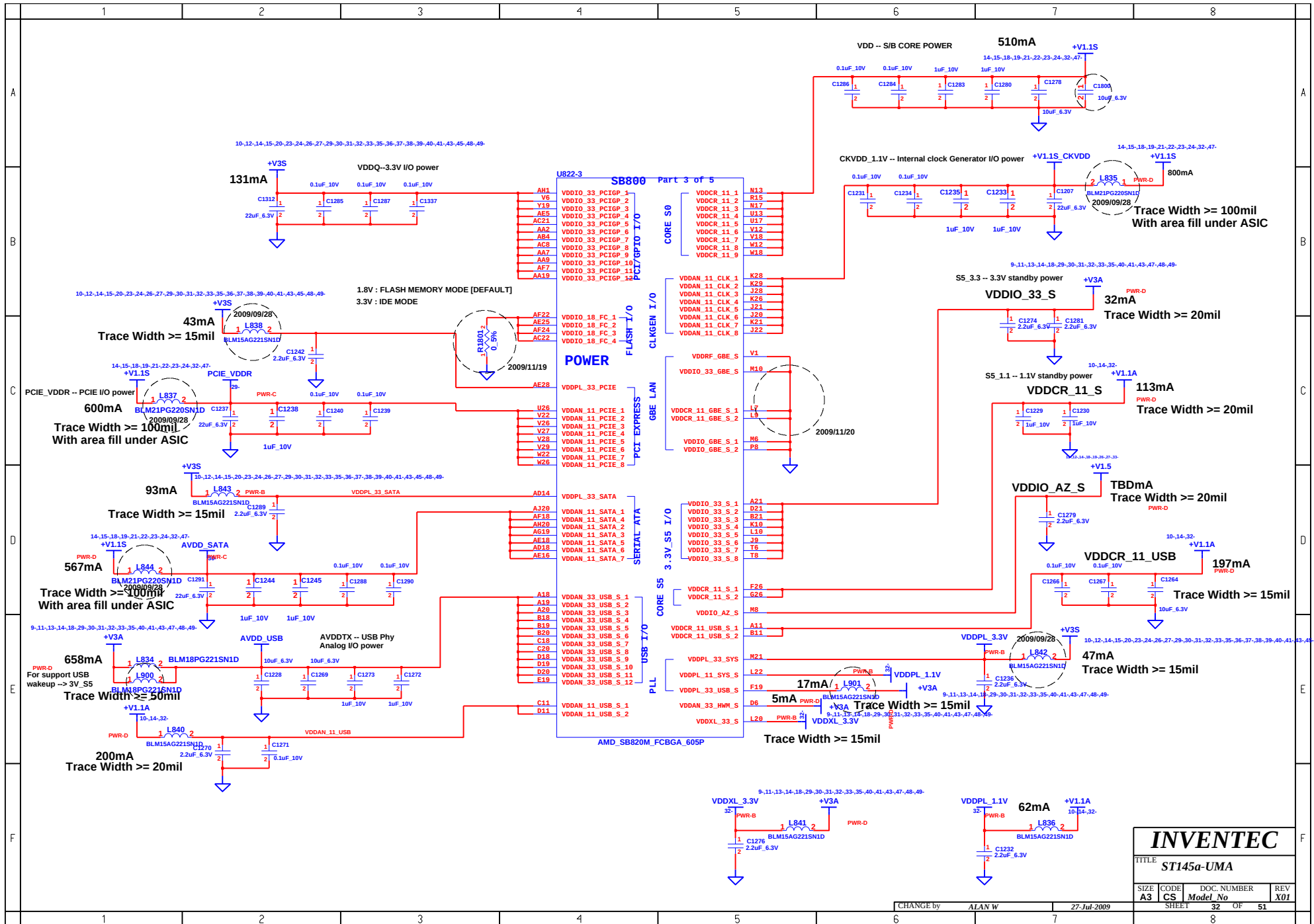


INVENTEC

TITLE			
ST145a-UMA			
SB820M-2			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		30	OF 51

CHANGE by ALAN W 27-Jul-2009





INVENTEC

TITLE
ST145a-UMA

SIZE CODE DOC. NUMBER REV
A3 CS Model No X01

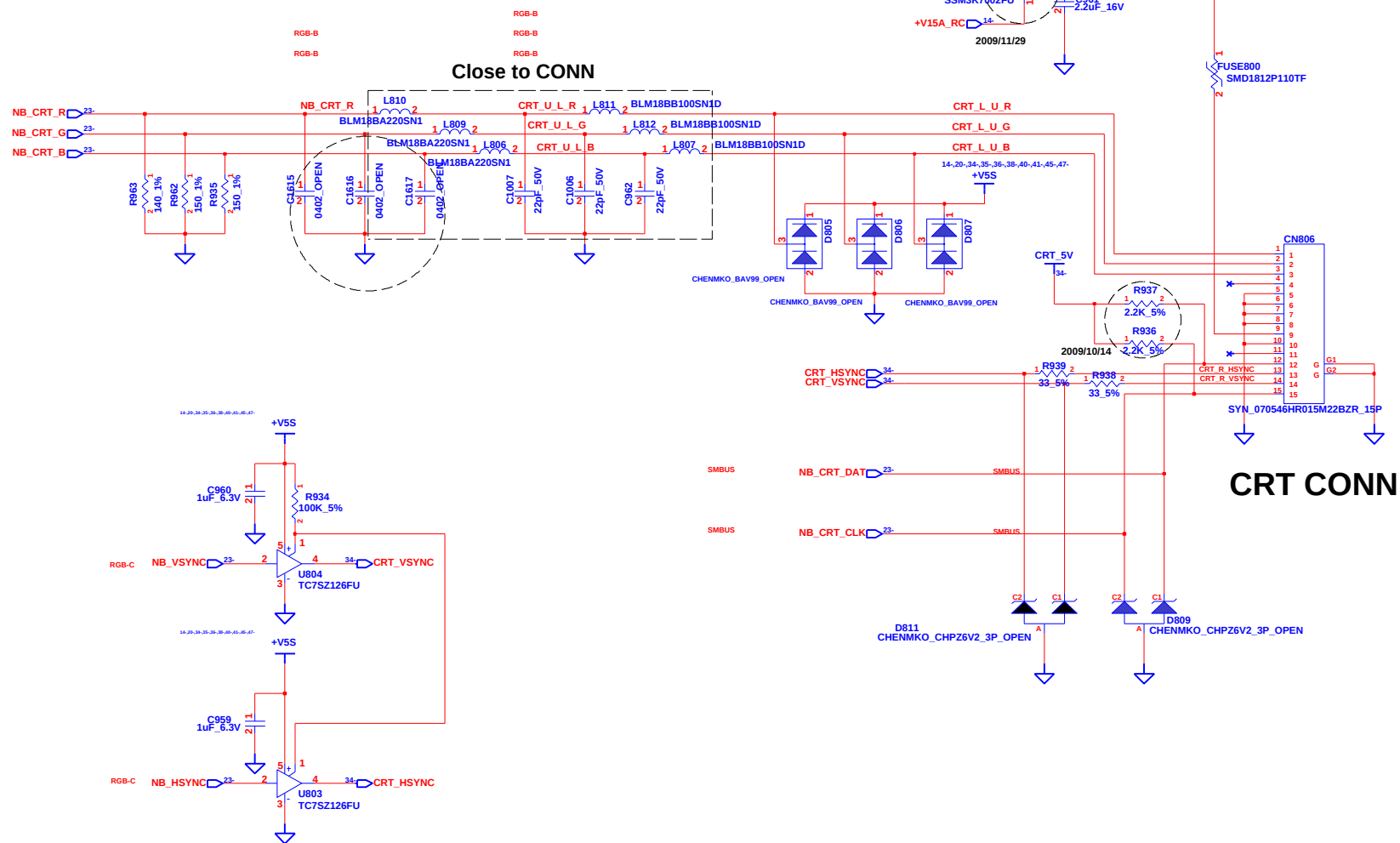
SHEET 32 OF 51

CHANGE by ALAN W

27-Jul-2009

PE_GPIO2	S1	S2
L	ON	OFF
H	OFF	ON

Circuit : Fixed
2009/06/30

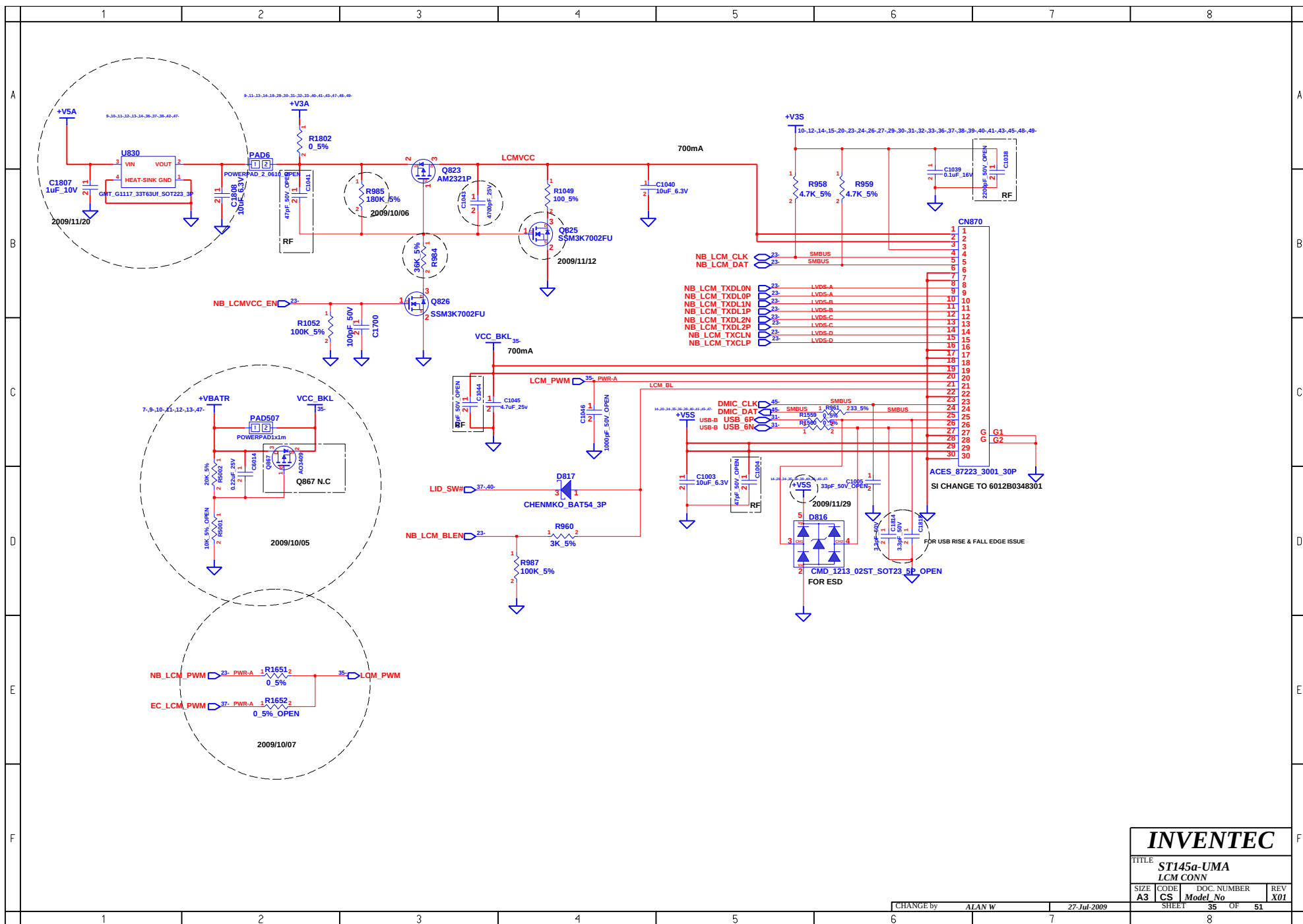


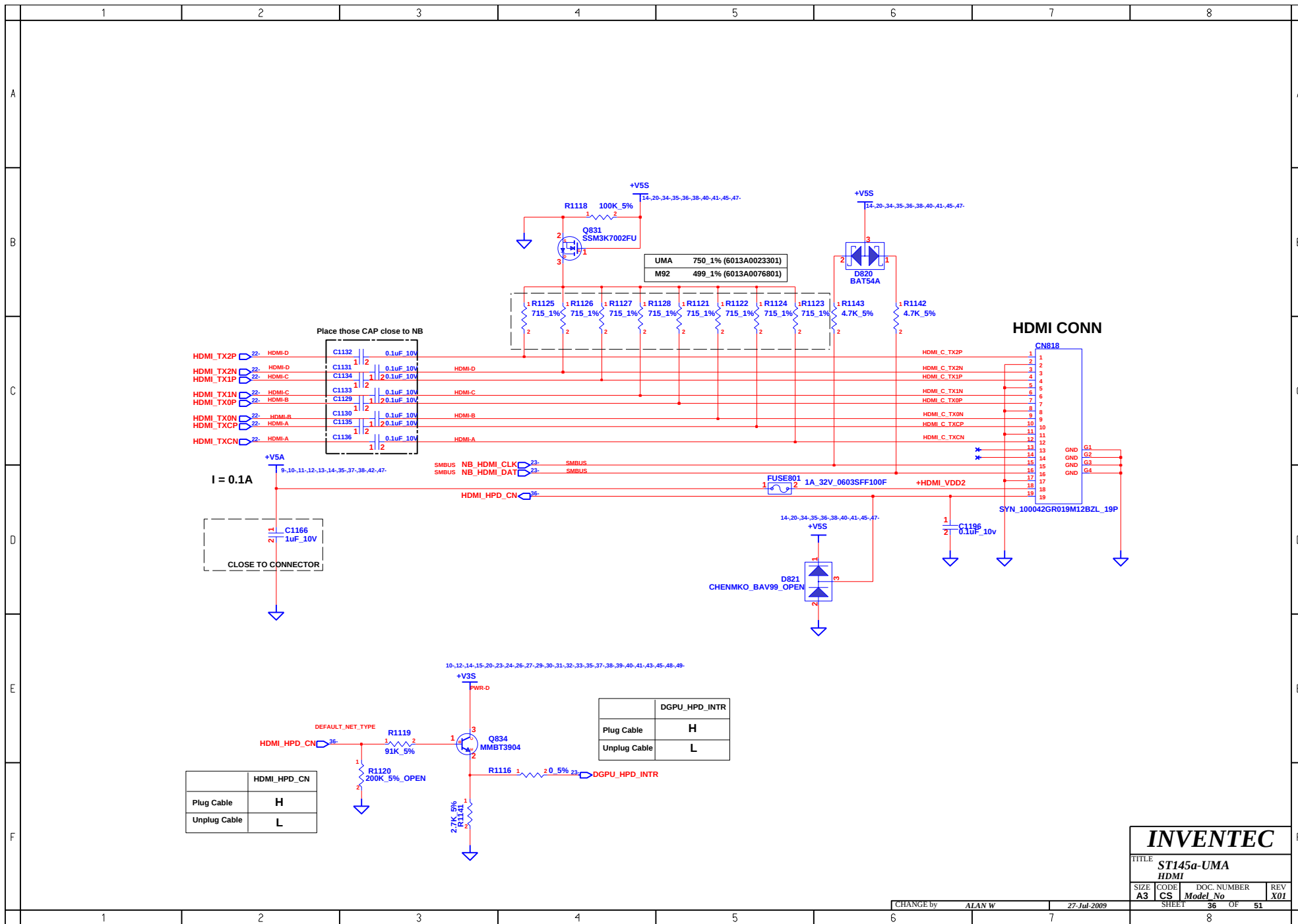
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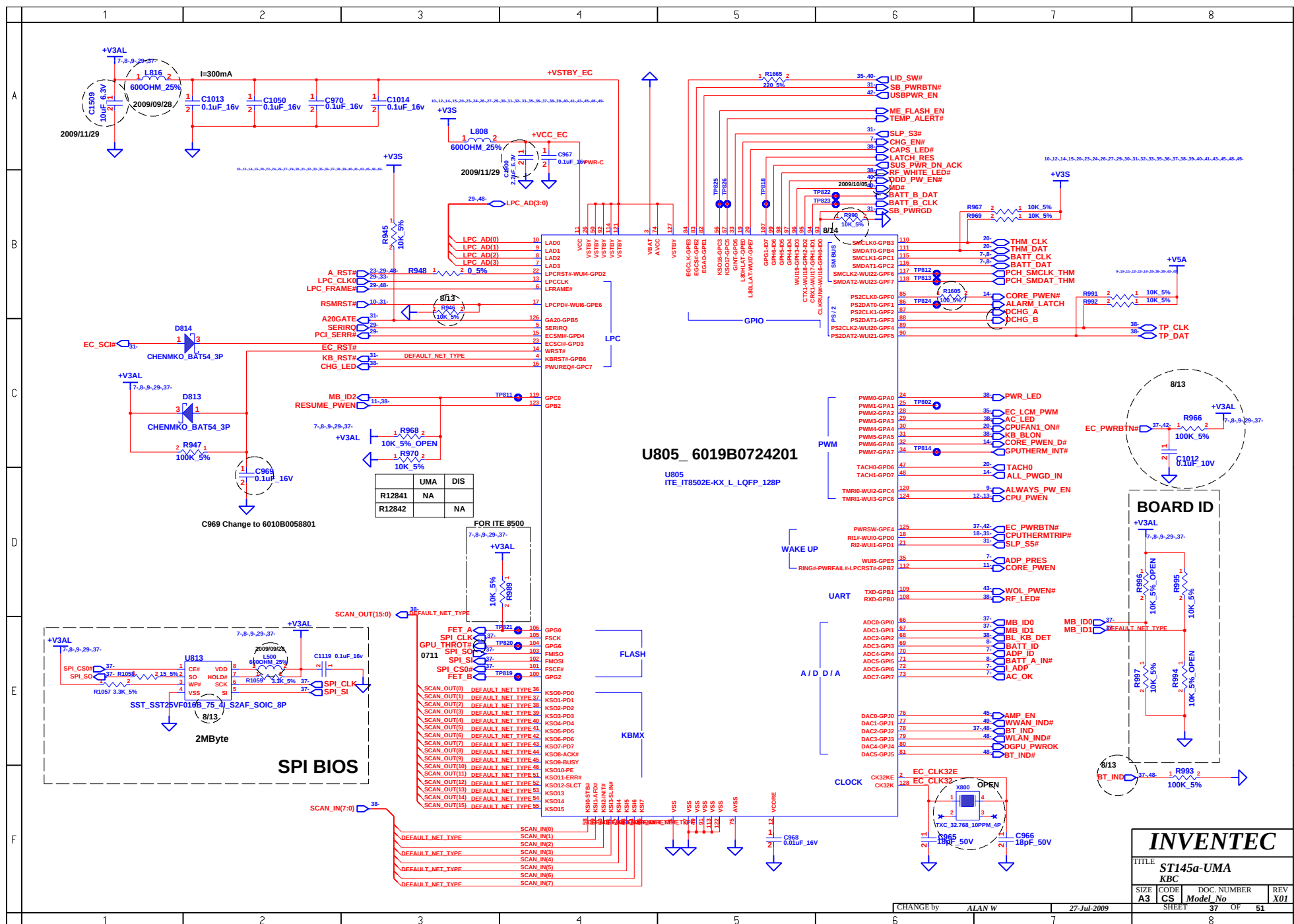
TITLE			
ST145a-UMA			
CRT			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		34	OF 51

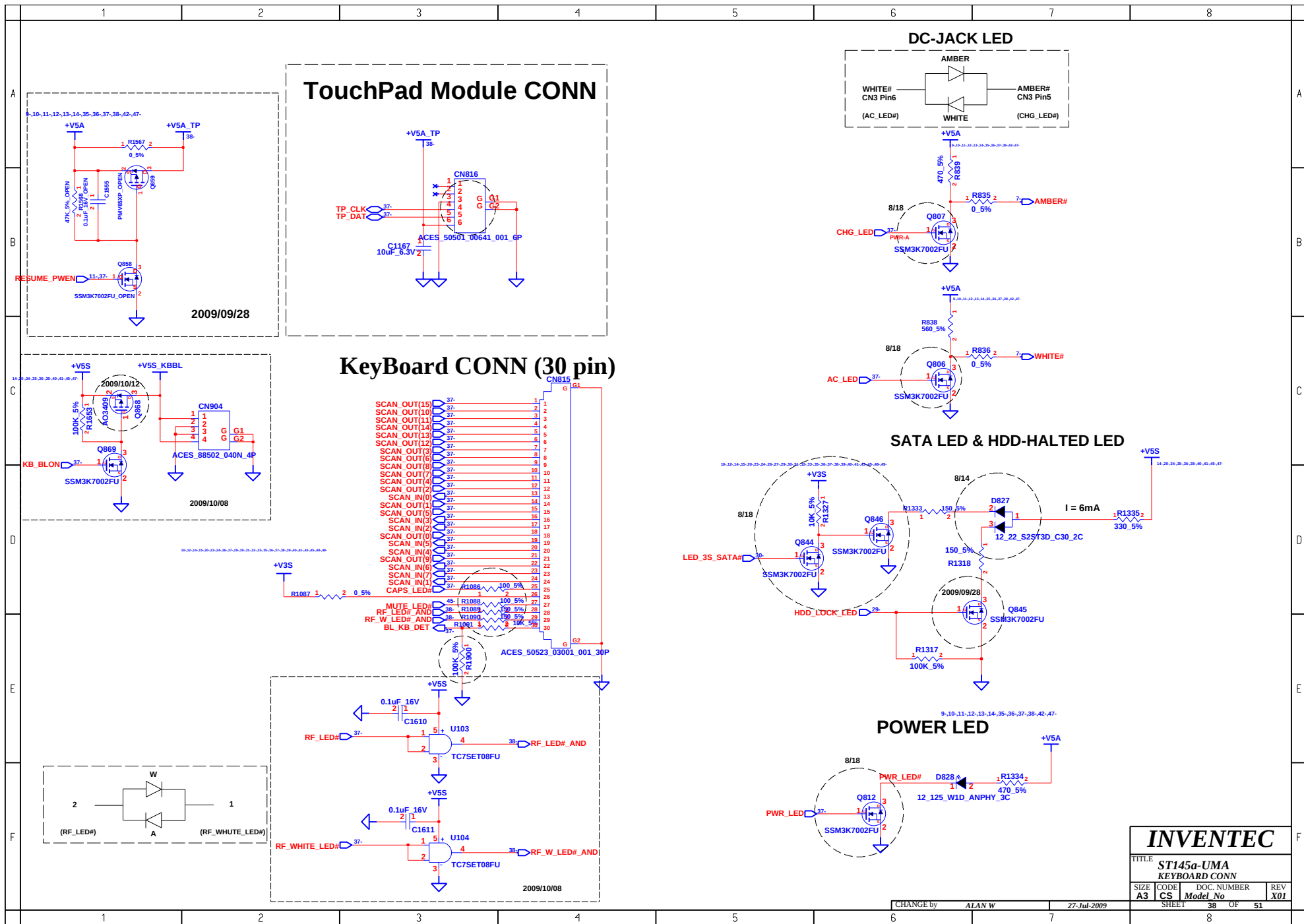
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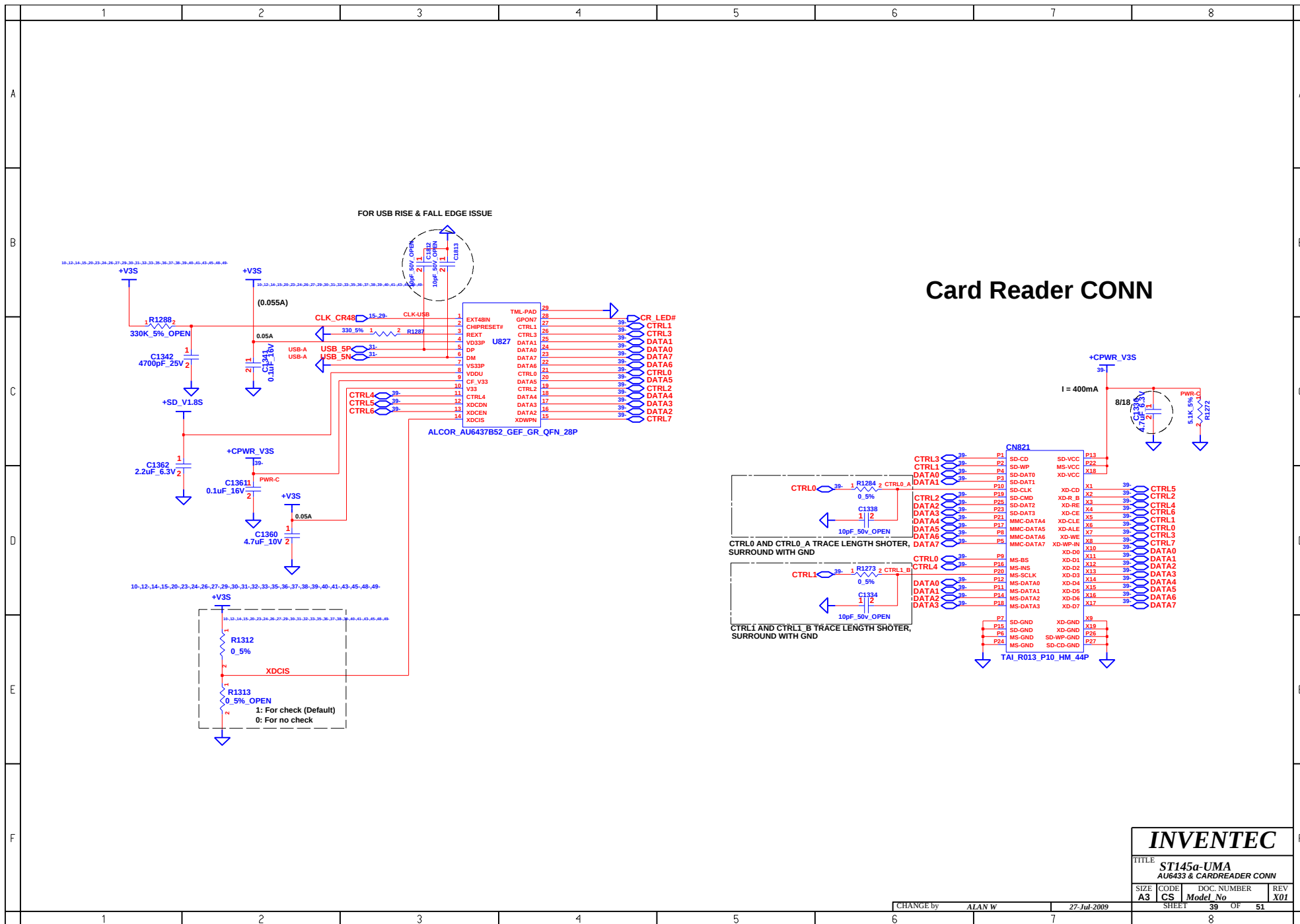
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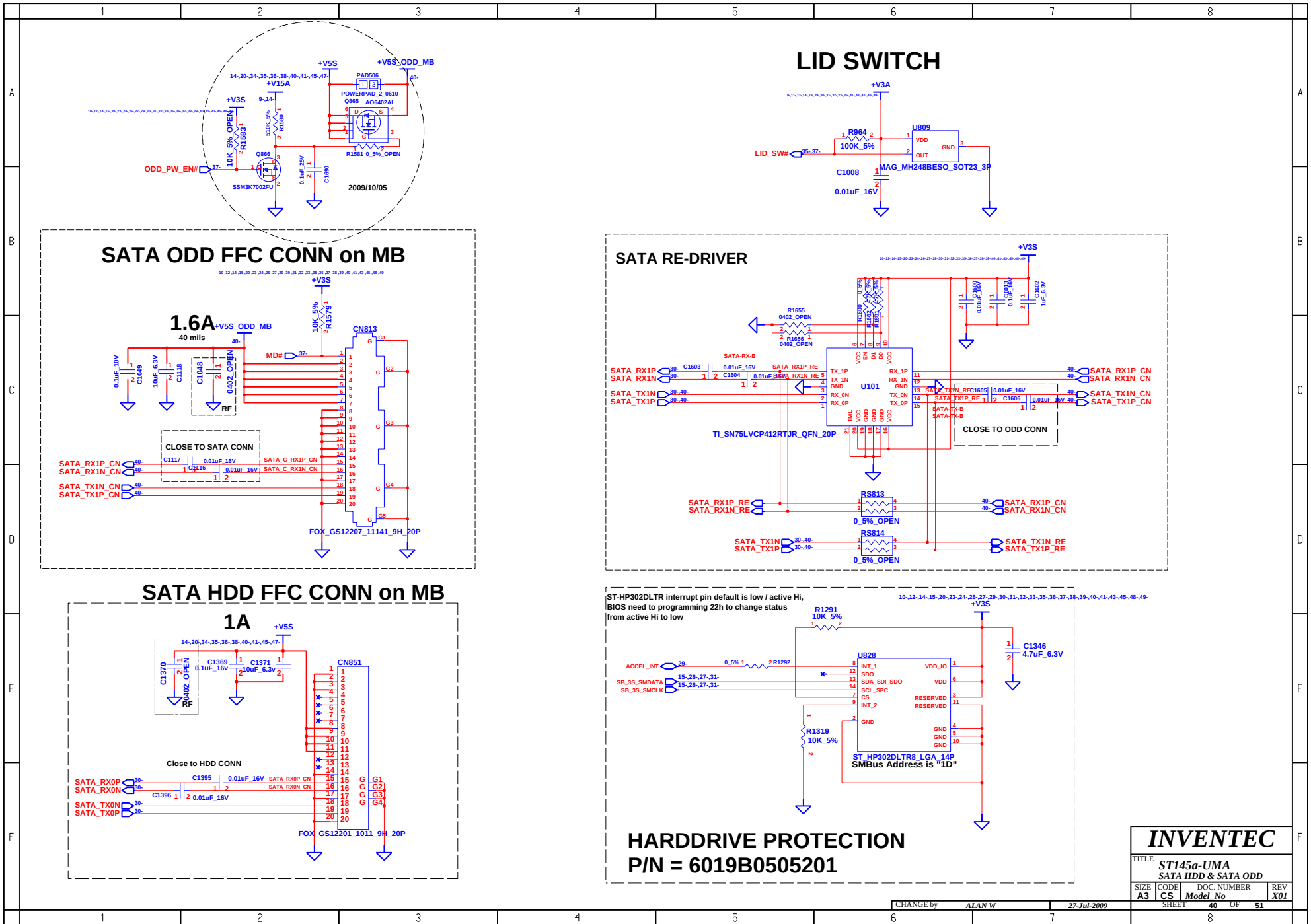






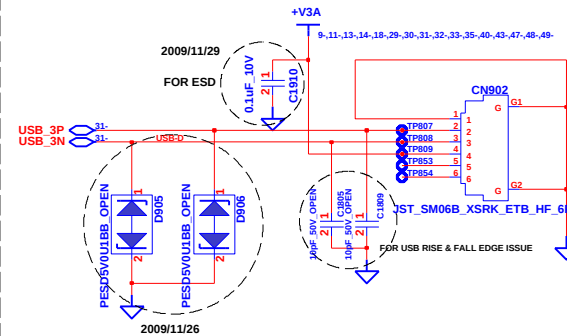




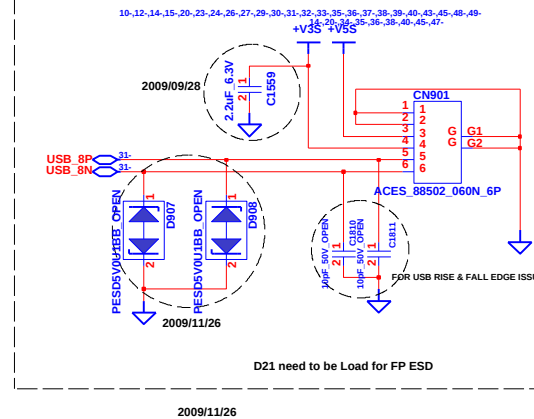


OPTION PART

TOUCH SCREEN



FingerPrint

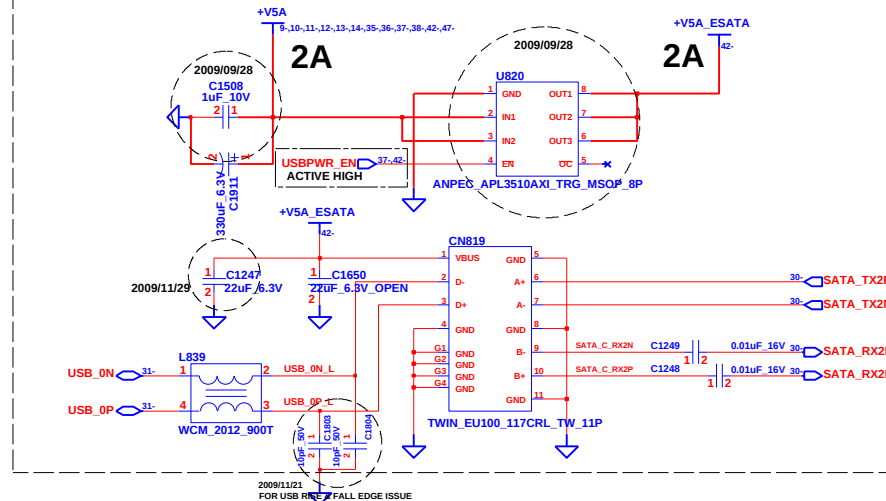


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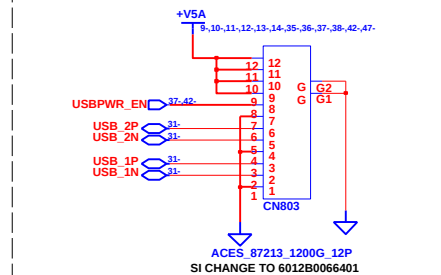
TITLE			
ST145a-UMA			
TOUXH SCREEN & FINGERPRINT			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		41	OF 51

CHANGE by ALAN W 27-Jul-2009

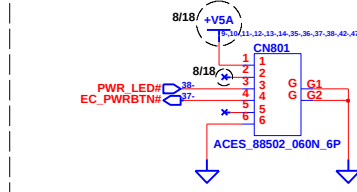
ESATA CONN (without Re-Driver chip)



USB BOARD Cable on MB



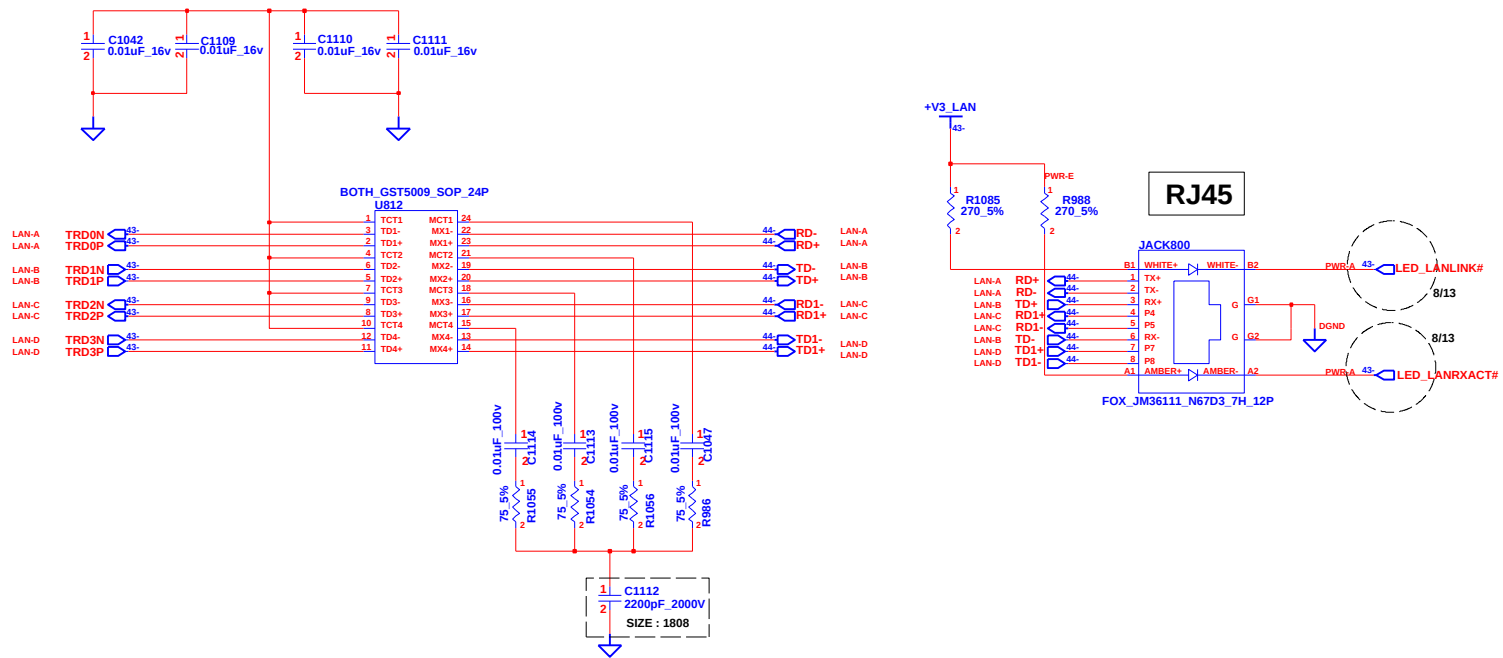
PBN Cable CN on MB



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

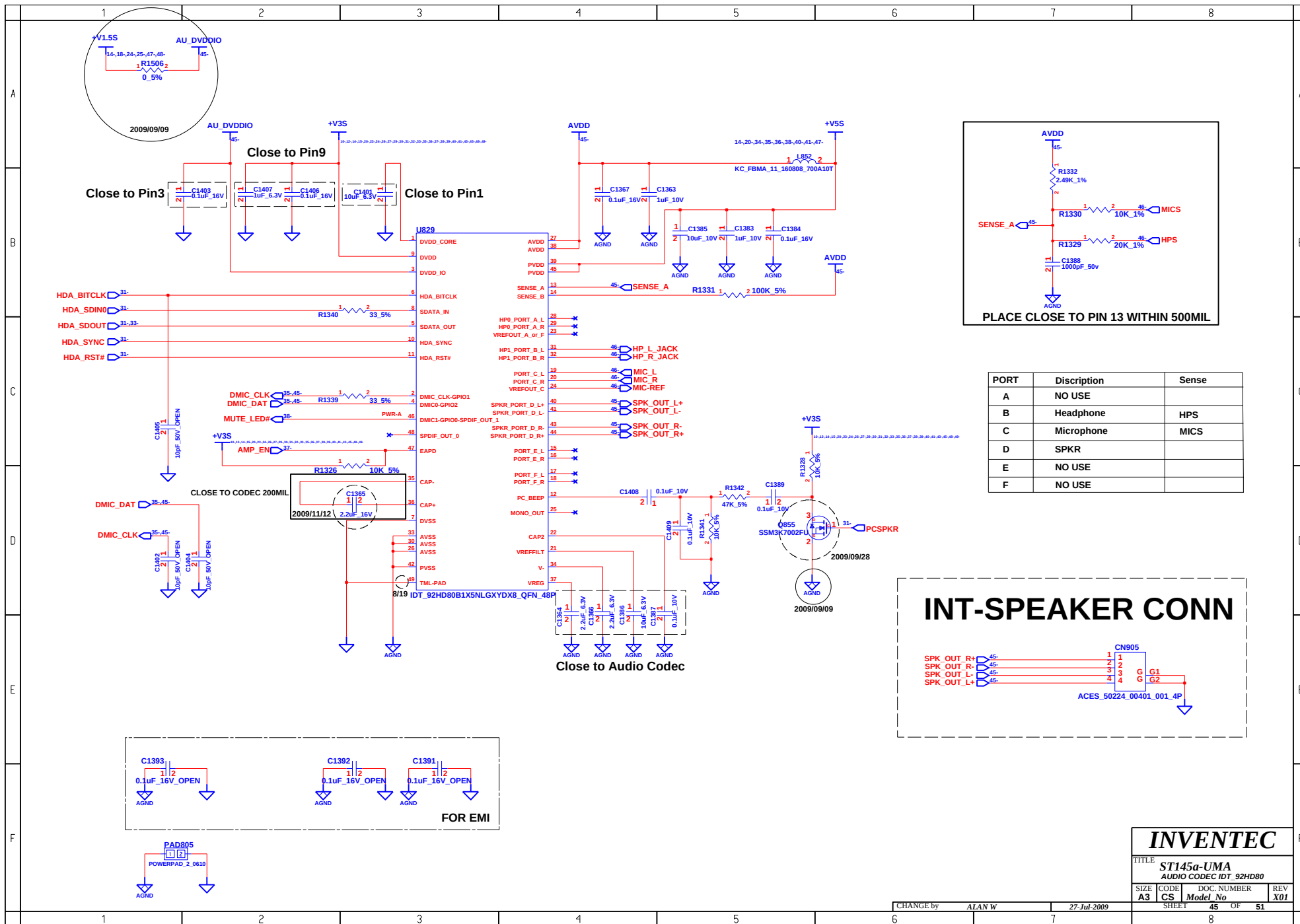


LAYOUT NOTE : Place termination resistors and caps as close to LAN controller as possible

INVENTEC

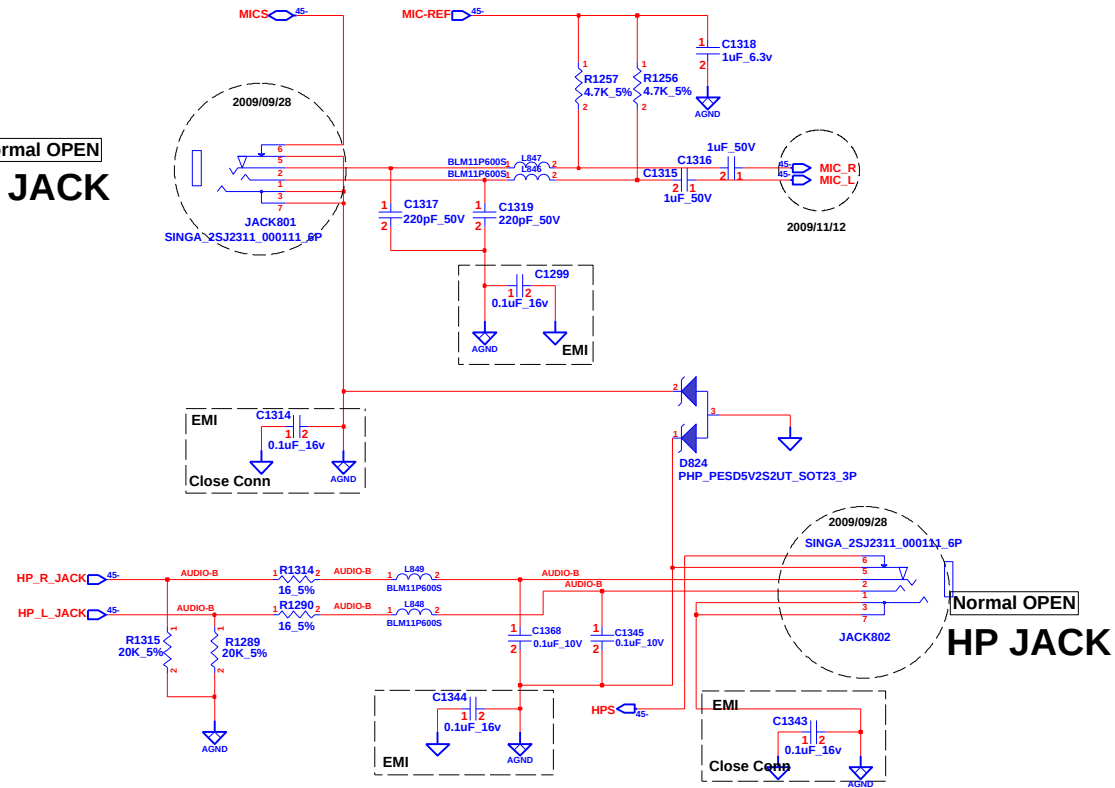
TITLE			
ST145a-UMA			
LAN & RJ45 CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		44	OF 51

CHANGE by ALAN W 27-Jul-2009



PORT	Discription	Sense
A	NO USE	
B	Headphone	HPS
C	Microphone	MICS
D	SPKR	
E	NO USE	
F	NO USE	

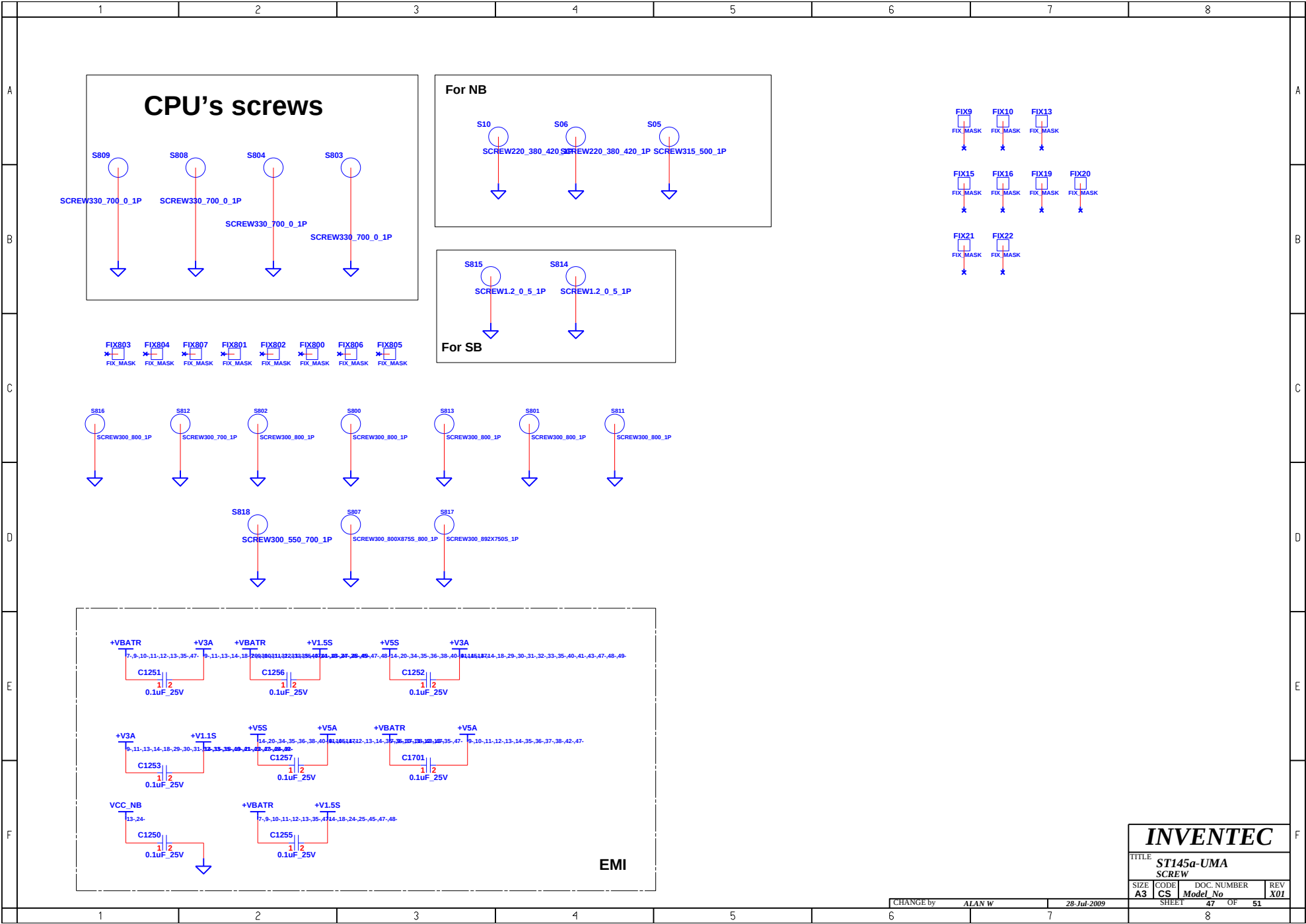
Normal OPEN
MIC JACK



INVENTEC

TITLE			
ST145a-UMA			
AUDIO JACK			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		46	OF 51

CHANGE by ALAN W 27-Jul-2009



INVENTEC

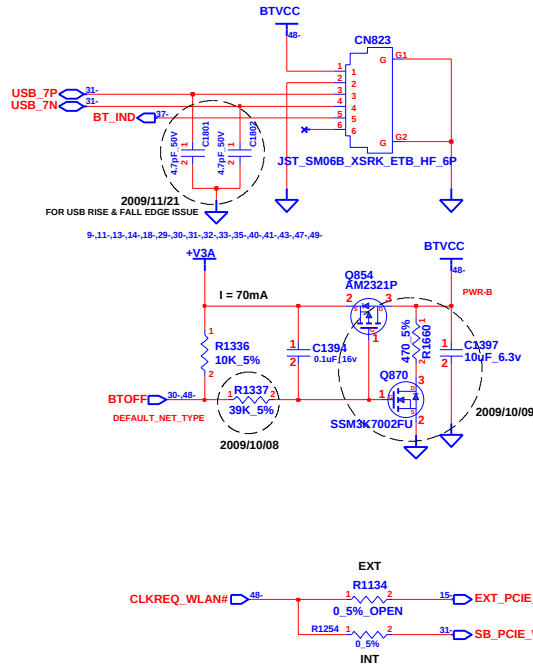
TITLE
ST145a-UMA
SCREW

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01

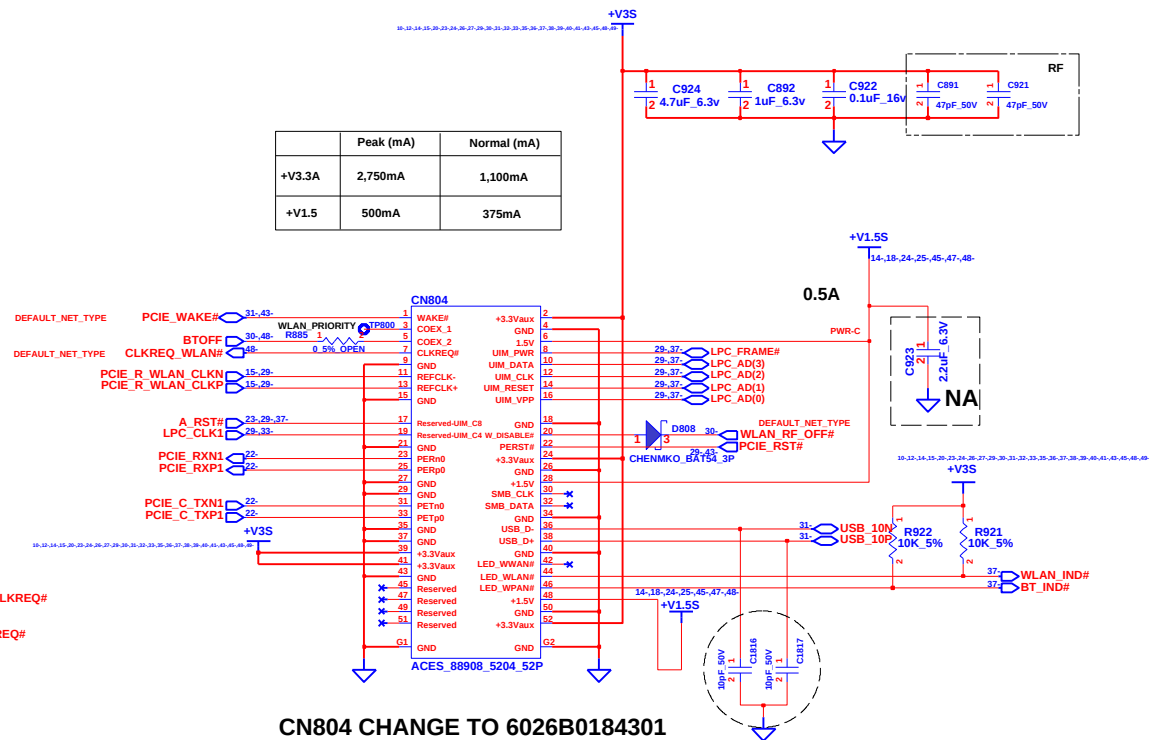
SHEET		47	OF 51
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BLUETOOTH CONN

SI CHANGE TO 6012B0341901



WLAN CONN (MINICARD)



CN804 CHANGE TO 6026B0184301

	PCH	SB800I820
WLAN_RF_OFF#	GPIO57	GPIO12
WLAN_POWER_OFF	GPIO35	GPIO176

INVENTEC

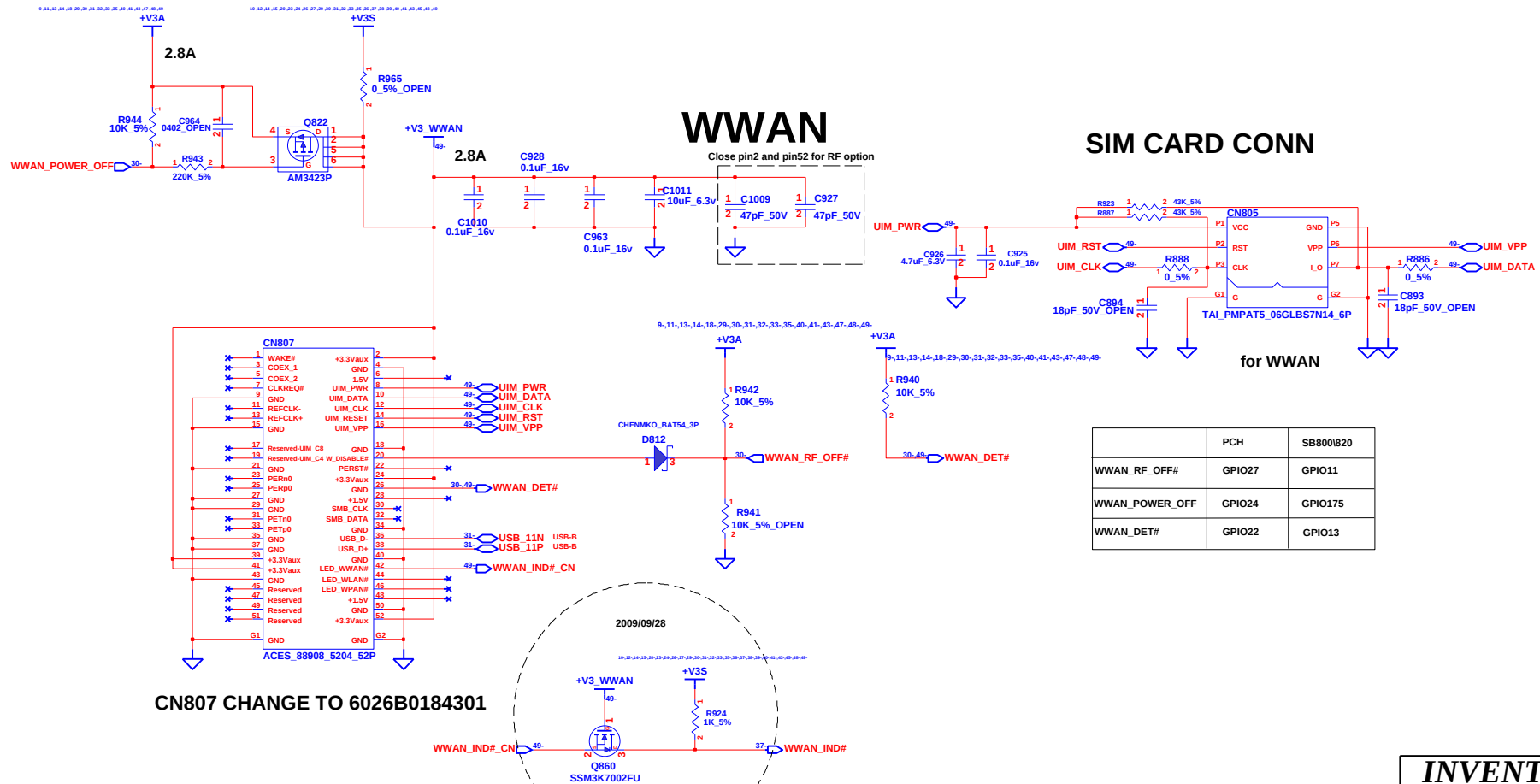
TITLE
ST145a-UMA
WLAN & BT CONN

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01

CHANGE by ALAN W 27-Jul-2009

SHEET 48 OF 51

OPTION PART



INVENTEC

TITLE
ST145a-UMA
WWAN & SIM CARD CONN

SIZE CODE DOC. NUMBER REV
A3 CS Model No 49 OF 51 X01

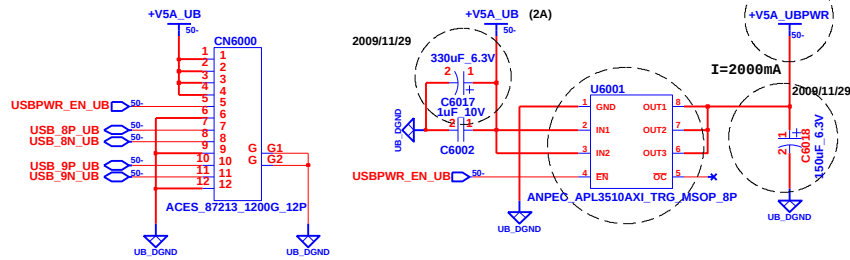
CHANGE by ALAN W 27-Jul-2009

8

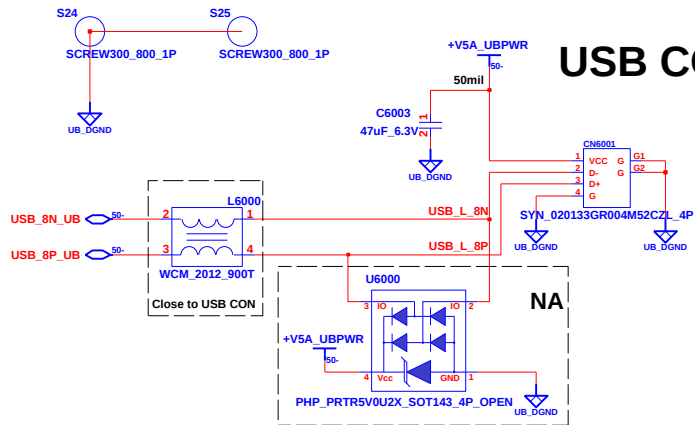
USB BOARD

USB BOARD Cable ON UB

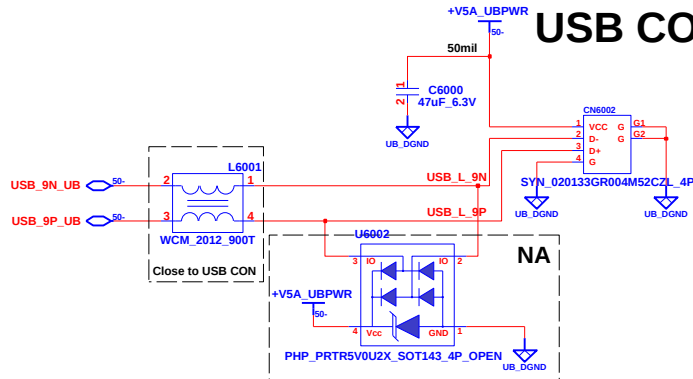
Circuit : Fixed
2009/06/29



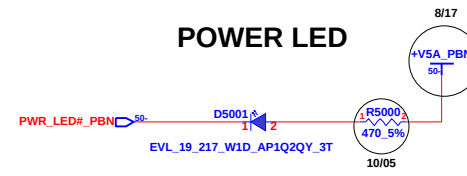
USB CONN01



USB CONN02

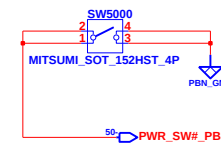


POWER LED

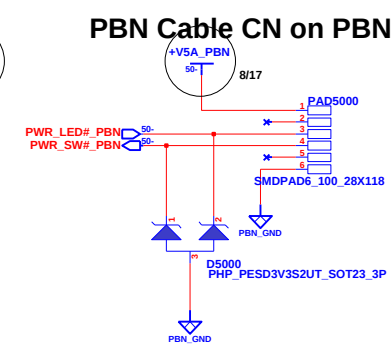


POWER BUTTON

SW1 SI USE : 6026B0154801



PBN Cable CN on PBN



Circuit : Fixed
2009/06/29

POWER BOTTOM 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