

1	2	3	4	5	6	7	8
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KRUG WS BUILD

2010/04/23

DATE	CHANGE NO.	REV
2009-Nov-9	2009-ECO-032592	B
2009-Nov-2	2009-ECO-032092	B
2009-Oct-30	2009-ECO-031907	B
2009-Oct-27	2009-ECO-031470	B
2009-Sep-28	2009-ECO-029889	A
2009-Sep-24	2009-ECO-029545	A
2009-Sep-22	2009-ECO-029379	A
2009-Sep-19	2009-ECO-029157	A
2009-Sep-9	2009-ECO-028358	A
2009-Sep-1	2009-ECO-027740	A

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DRAWER	EE	DATE	POWER	DATE	INVENTEC TITLE KRUG			
DESIGN								
CHECK								
RESPONSIBLE								
SIZE	3		VER	A02	SIZE	CODE	DOC. NUMBER	REV
FILE NAME					A3	CS	Model No	X01
P/N	6050A.2296601				SHEET	1 OF 106		

F

F

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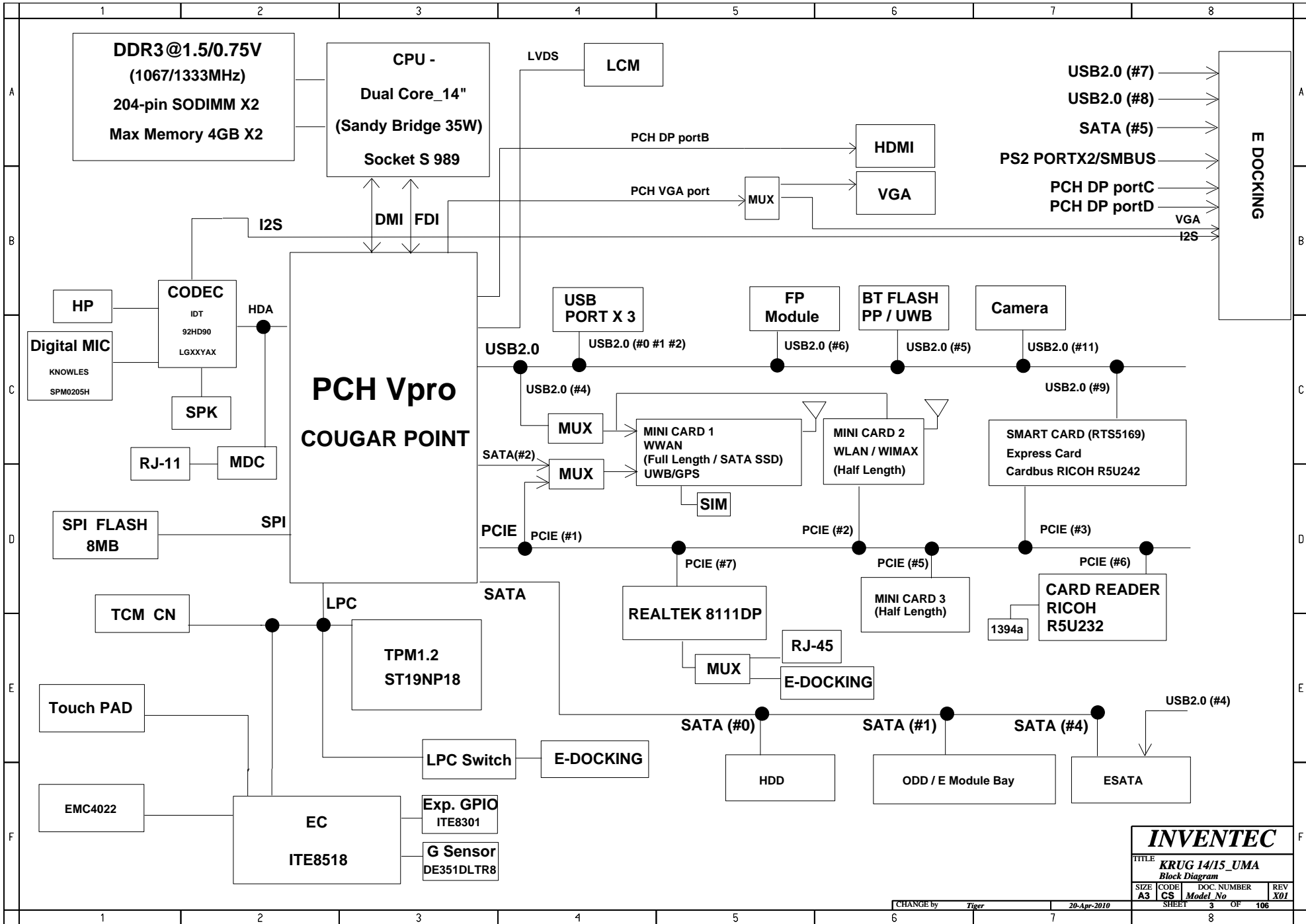
<p>PAGE</p> <p>1. Cover Page</p> <p>2. Index</p> <p>3. 14 / 15 Block Diagram</p> <p>4. 13 inch Block Diagram</p> <p>5. 14 Discrete Block Diagram</p> <p>6. SMB Diagram</p> <p>7. Power Block Diagram</p> <p>8. Power on Sequence</p> <p>9. UMA Power Charger</p> <p>10.UMA Power AC IN</p> <p>11.UMA Power Battery</p> <p>12.UMA Power +3A/+5A</p> <p>13.UMA Power +V1.5/+V0.75S</p> <p>14.UMA Power VCCP/+V1.05_LAN_M</p> <p>15.UMA Power +V0.85S/+V1.8S</p> <p>16.UMA VGFX_CORE</p> <p>17.UMA Power VCORE</p> <p>18.UMA Power +V3S/+V5S/+V1.5S</p> <p>19.UMA Power</p> <p>20.UMA Power</p> <p>21.CPU 1</p> <p>22.CPU 2</p> <p>23.CPU 3 DRAM</p> <p>24.CPU 4 POWER</p> <p>25.CPU 5 POWER</p> <p>26.CPU 6 GND</p> <p>27.ITP CONN</p> <p>28.FAN & THERMAL</p> <p>29.DDR3 DIMM0</p> <p>30.DDR3 DIMM1</p>	<p>PAGE</p> <p>31.PCH 1</p> <p>32.PCH 2</p> <p>33.PCH 3</p> <p>34.PCH 4</p> <p>35.PCH 5</p> <p>36.PCH 6</p> <p>37.PCH 7 POWER</p> <p>38.PCH 8 POWER</p> <p>39.PCH 9 GND</p> <p>40.CAMERA & MUX</p> <p>41.SATA HDD & ODD</p> <p>42.USB & ESATA</p> <p>43.USB Conn</p> <p>44.Blue Tooth</p> <p>45.ITE8518</p> <p>46.ITE8301</p> <p>47.AUDIO CODEC</p> <p>48.MDC/Speaker/Jack</p> <p>49.LAN RTL8111DP</p> <p>50.RJ45/Transformer</p> <p>51.WLAN</p> <p>52.WWAN</p> <p>53.FLASH PP</p> <p>54.SIM CARD</p> <p>55.G SENSOR</p> <p>56.TPM</p> <p>57.TCM</p> <p>58.Finger Print</p>	<p>PAGE</p> <p>59. CRT CONN</p> <p>60. LCM CONN</p> <p>61. HDMI</p> <p>62. LED</p> <p>63. CARD READER RTS5138</p> <p>64. CARD READER R5U232</p> <p>65. KB / CAP SENSOR / FP CONN</p> <p>66. Power Button / RF switch / Hall Sensor</p> <p>67. E DOCKING/LAN MUX/VGA MUX</p> <p>68-73. ATI PARK</p> <p>74-75. VRAM</p> <p>76. RTS5169</p> <p>77. EXPRESS CARD</p> <p>78. R5U242</p> <p>79. PCMCIA</p> <p>80-91 Discrete POWER (UMA OPEN)</p> <p>92. ITE8502</p> <p>93. ITE8709</p> <p>94. HDMI Repeater</p> <p>95. EC 5055</p> <p>96. SIO 5048</p> <p>97. KRUG 14 /15 UMA Block Diagram</p> <p>98. KRUG 13 UMA Block Diagram</p> <p>99. KRUG 14 Discrete Block Diagram</p> <p>100-103. Power</p> <p>104. CODEC ALC269Q-VB5</p> <p>105.USB HUB</p>
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106.GENERAL IO_ECE1099

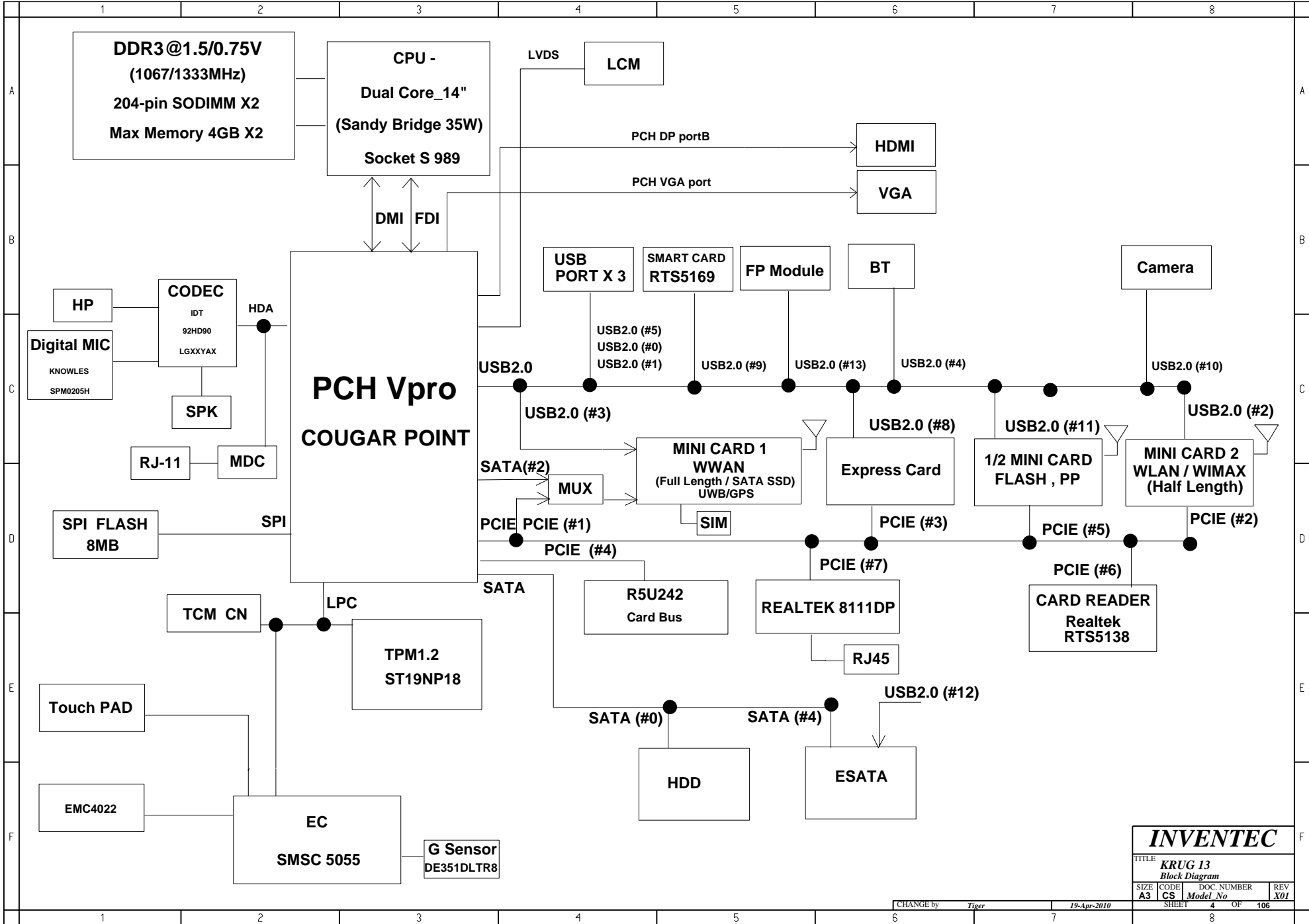
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SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
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CHANGE by *Tiger* 22-Apr-2010



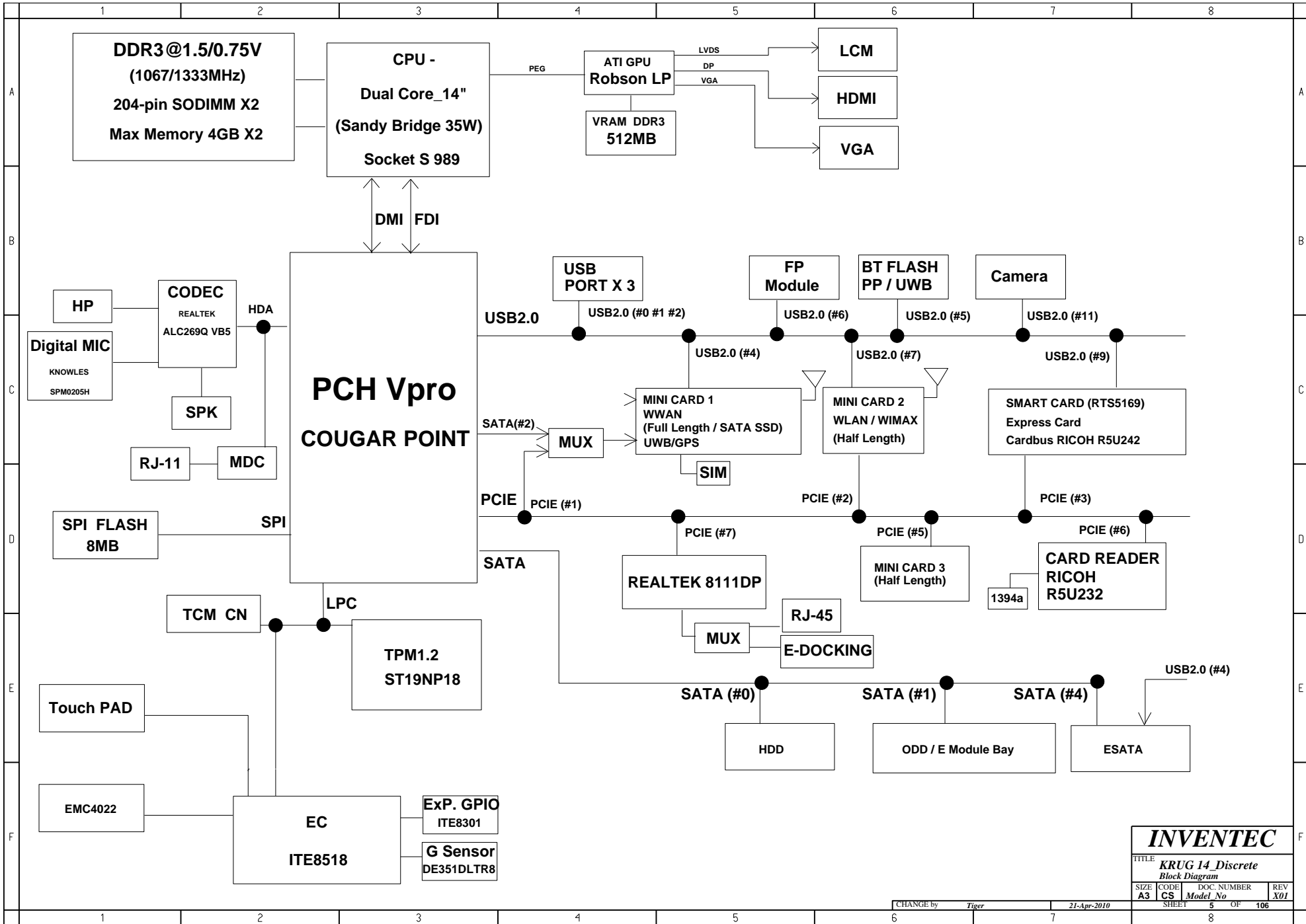
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A3	CS	Model No	X01
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SHEET		3	OF 106



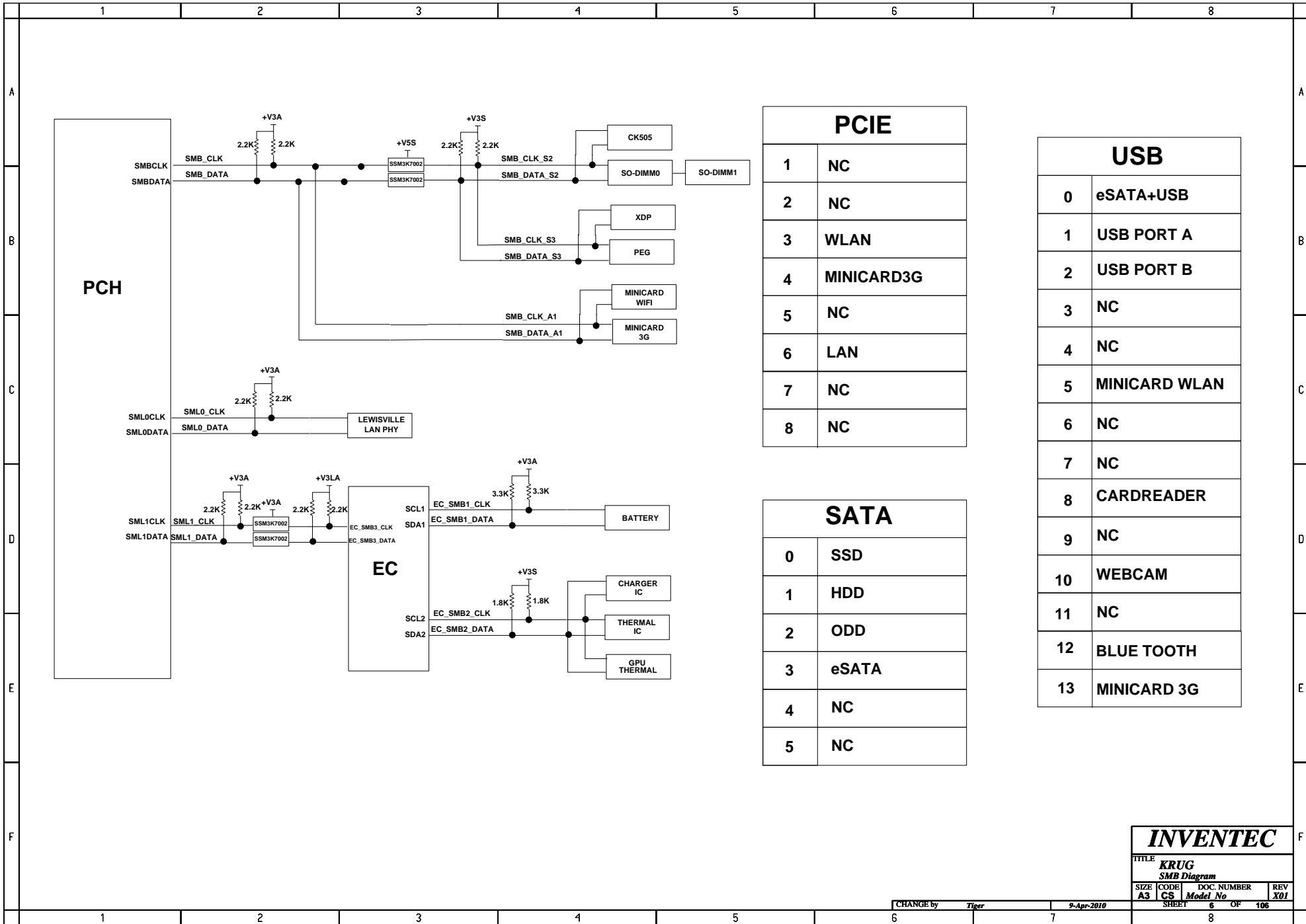
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KRUG 13			
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SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET			OF
4			106

CHANGE by Tiger 19-Apr-2010



INVENTEC			
TITLE KRUG 14 Discrete			
Block Diagram			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
CHANGE by Tiger		21-Apr-2010	
SHEET 5		OF 106	



PCIE

1	NC
2	NC
3	WLAN
4	MINICARD3G
5	NC
6	LAN
7	NC
8	NC

USB

0	eSATA+USB
1	USB PORT A
2	USB PORT B
3	NC
4	NC
5	MINICARD WLAN
6	NC
7	NC
8	CARDREADER
9	NC
10	WEBCAM
11	NC
12	BLUE TOOTH
13	MINICARD 3G

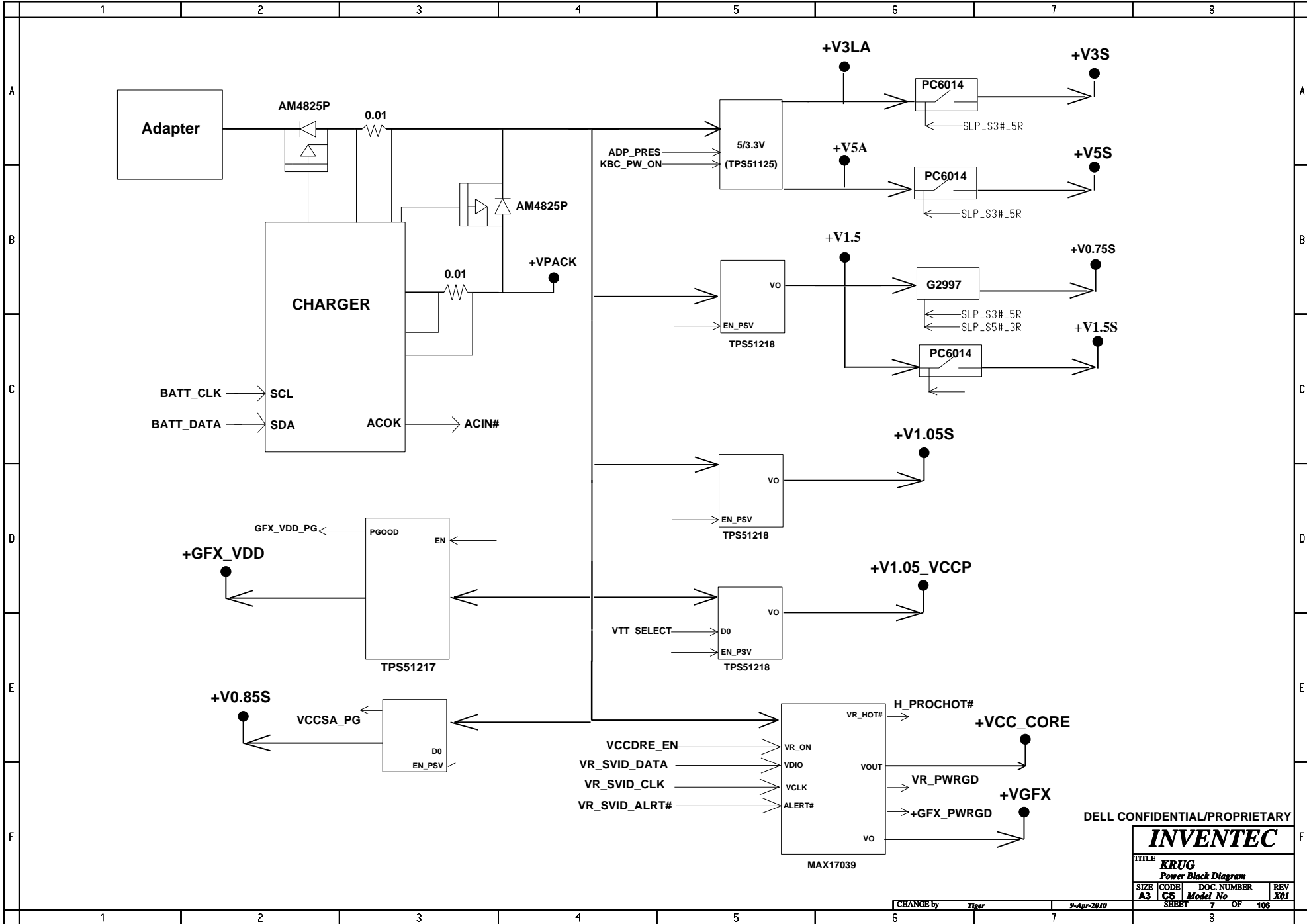
SATA

0	SSD
1	HDD
2	ODD
3	eSATA
4	NC
5	NC

INVENTEC

TITLE			
KRUG			
<i>SMB Diagram</i>			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		6	OF 106

CHANGE by *Tiger* 9-Apr-2010

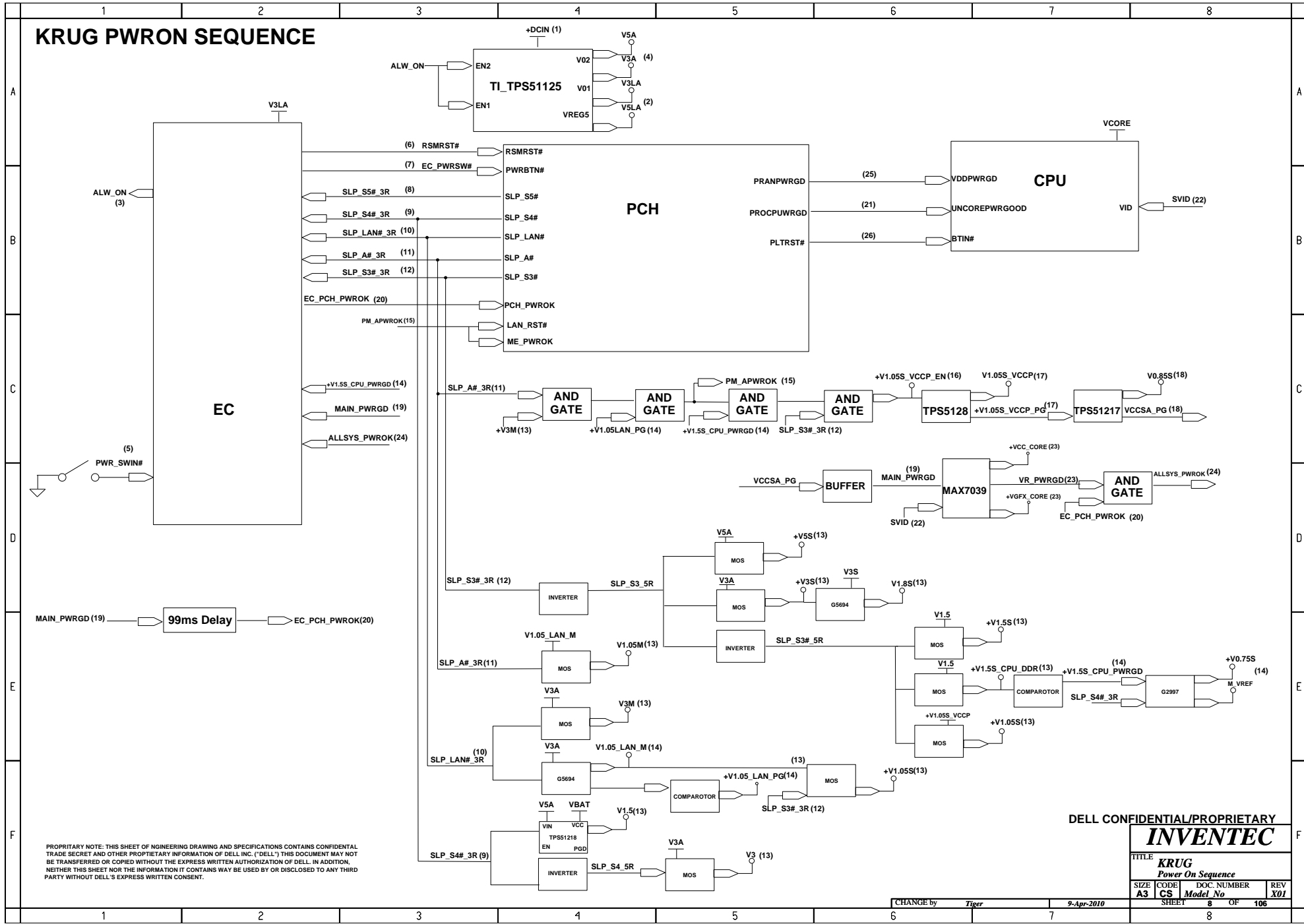


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INVENTEC			
TITLE KRUG			
Power Block Diagram			
SIZE A3	CODE CS	DOC. NUMBER 7	REV X01
SHEET		OF 106	

CHANGE by *Tifer* 9-Apr-2010

KRUG PWRON SEQUENCE



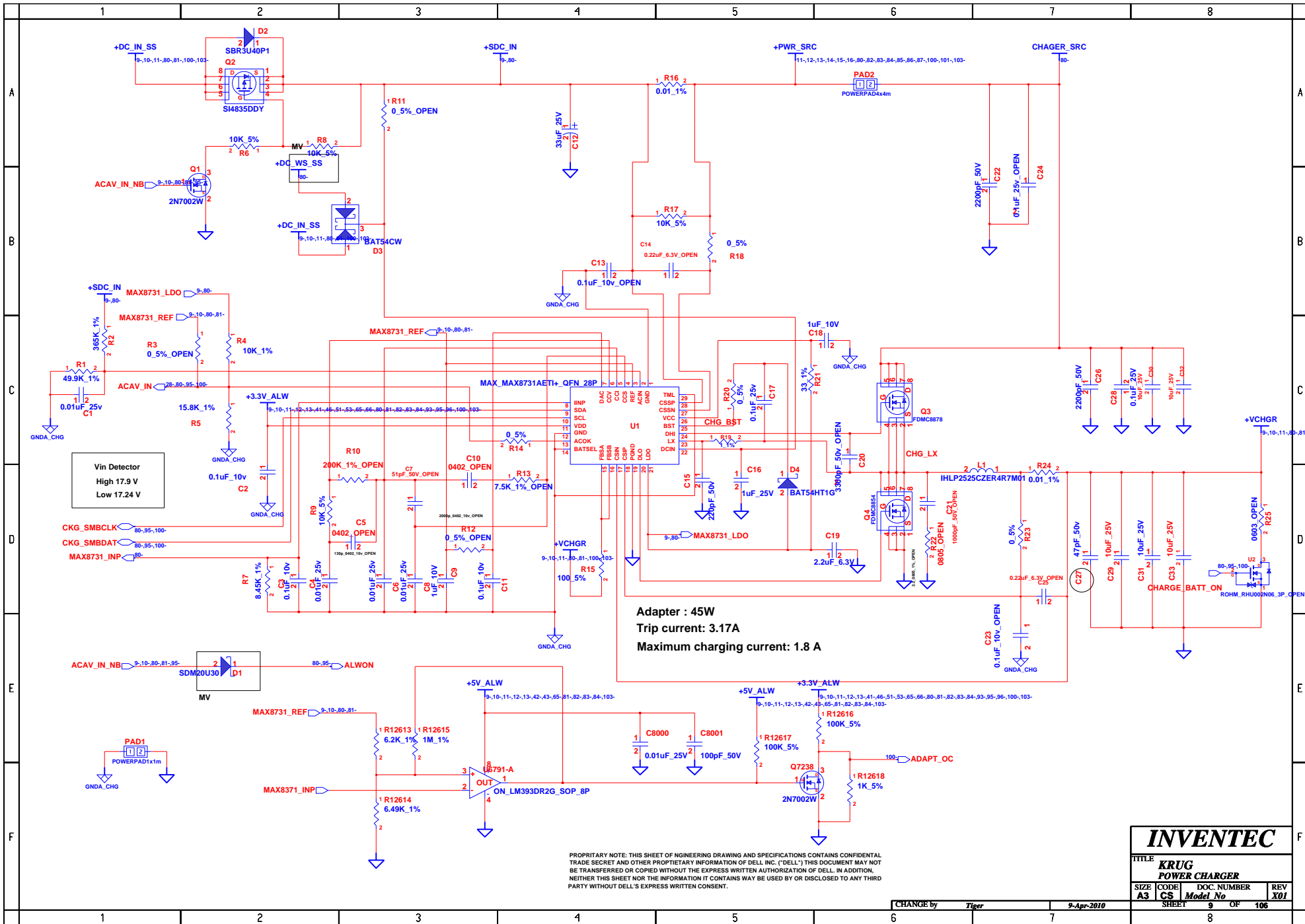
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TITLE			
KRUG			
Power On Sequence			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
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CHANGE by *Tiger* 9-Apr-2010



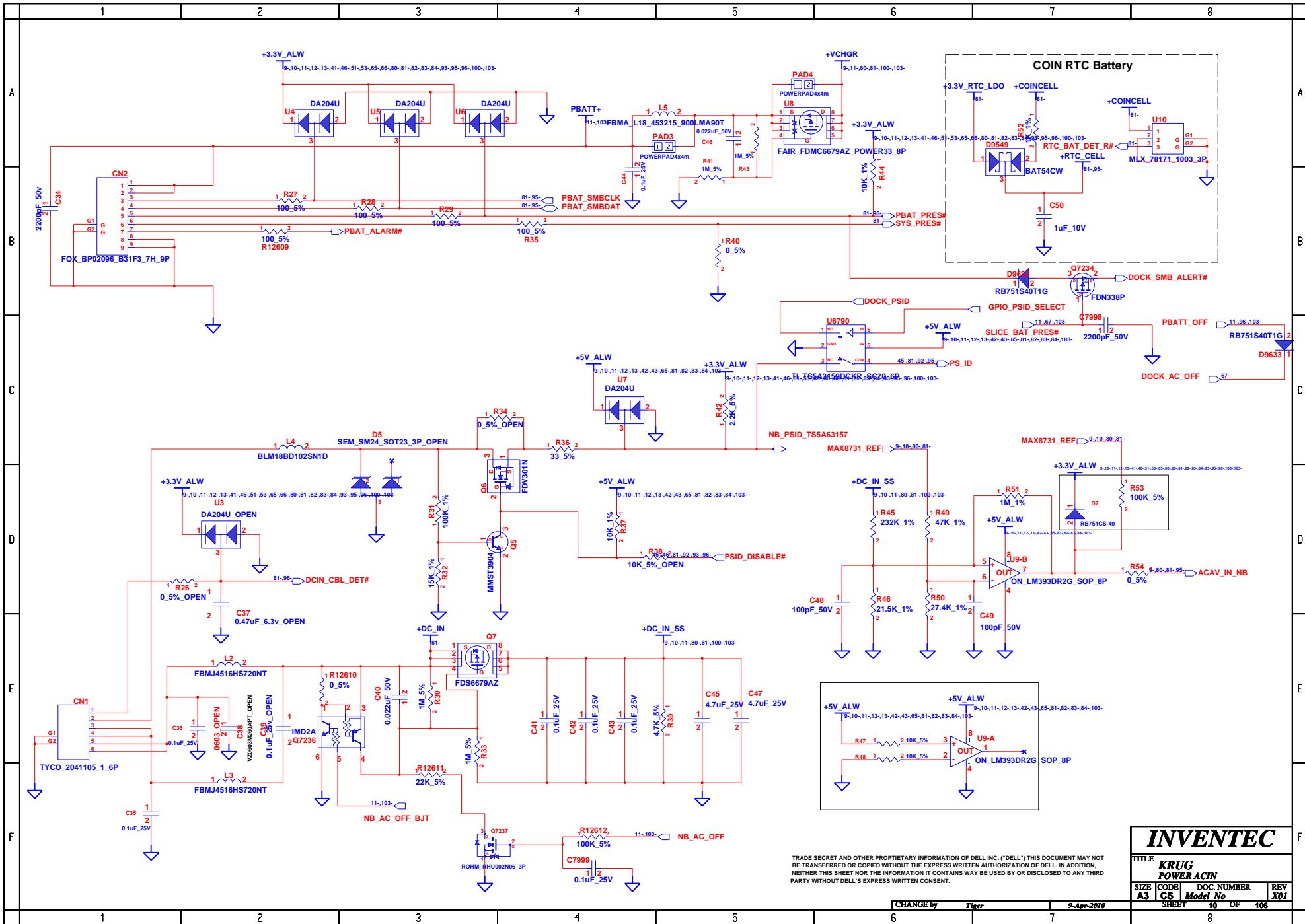
Adapter : 45W
 Trip current: 3.17A
 Maximum charging current: 1.8 A

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TITLE			
KRUG POWER CHARGER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
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CHANGE by *Tiker* 9-Apr-2010

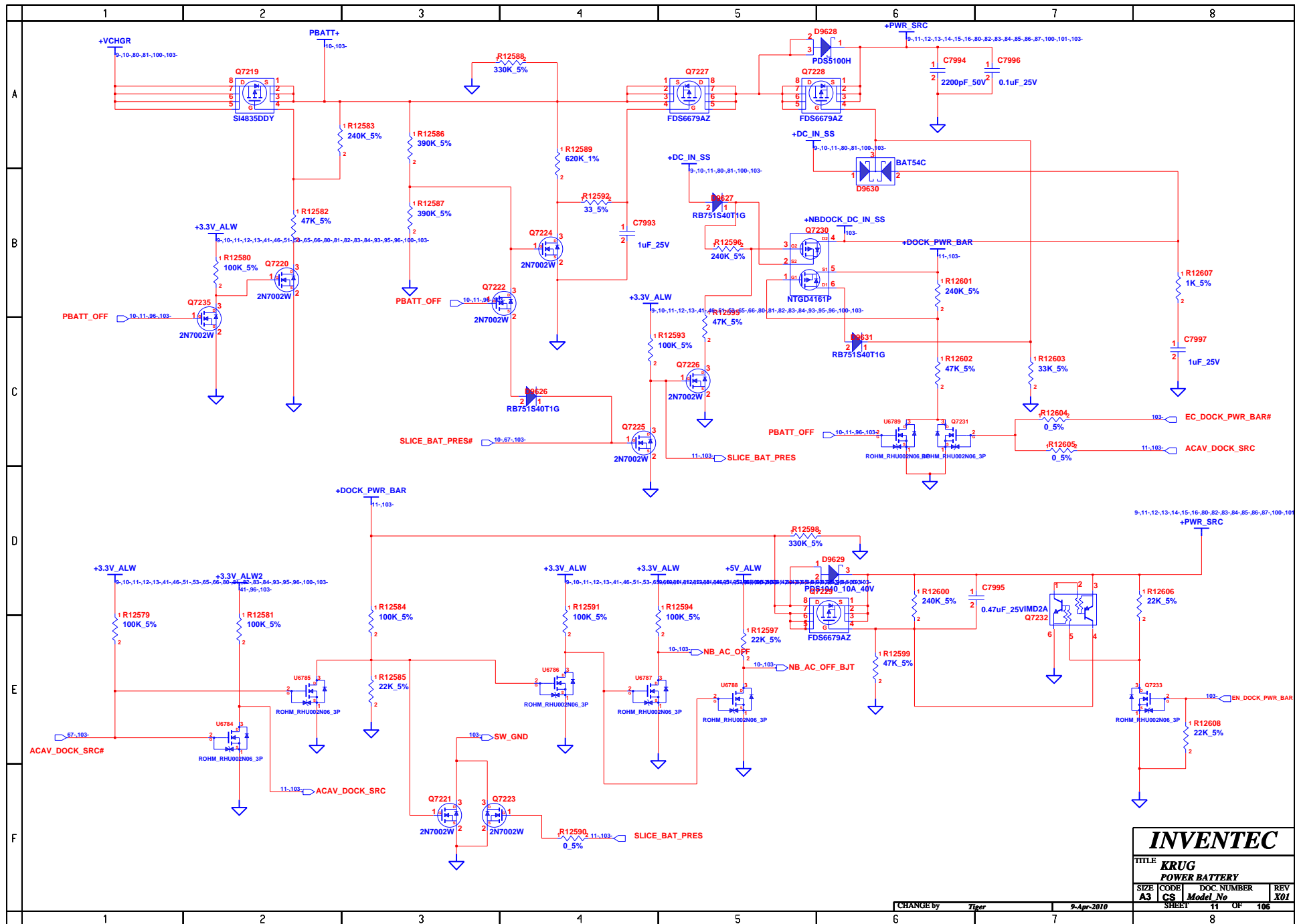


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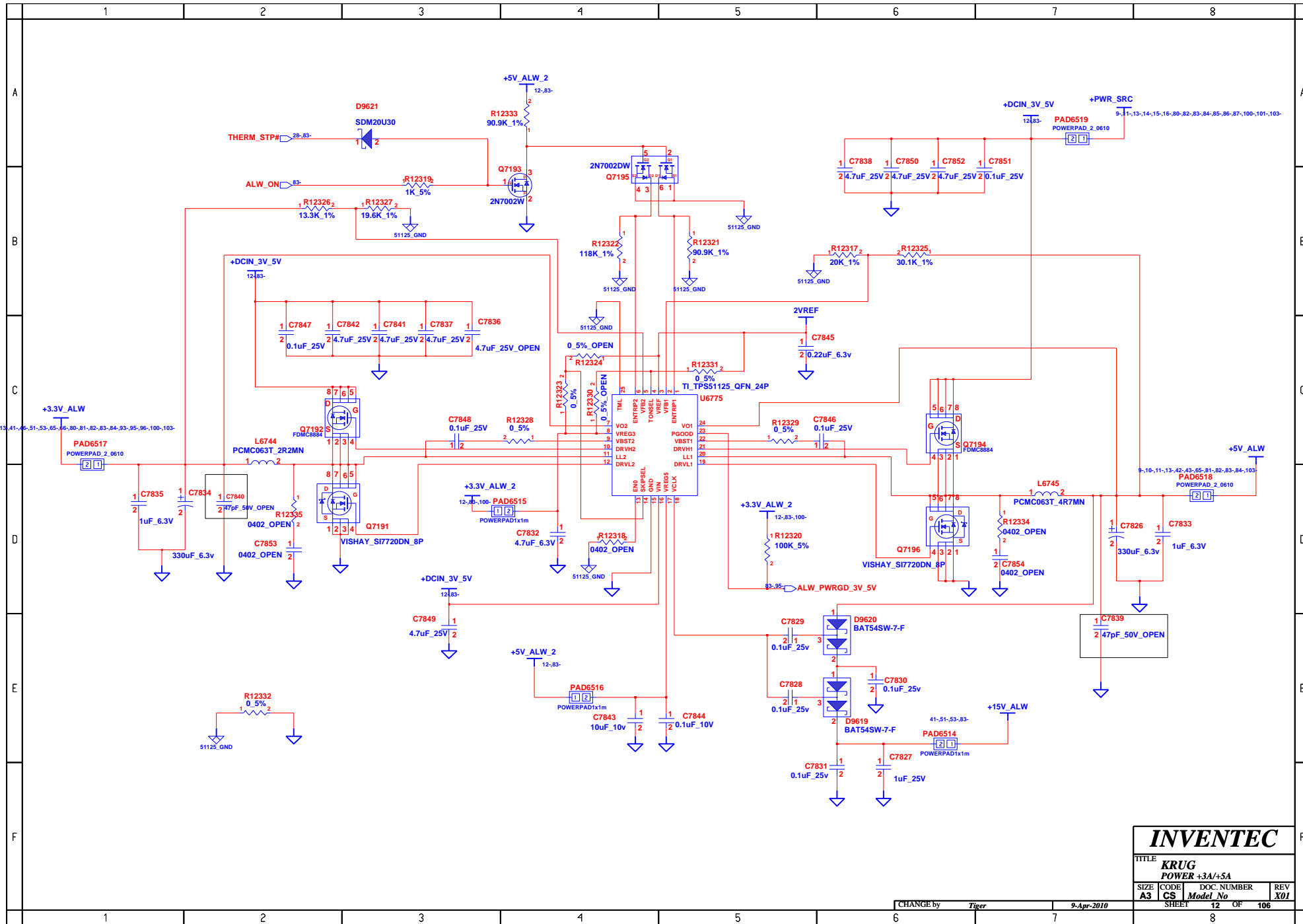
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A3	CS	Model No	X01	
SHEET		10	OF 106	

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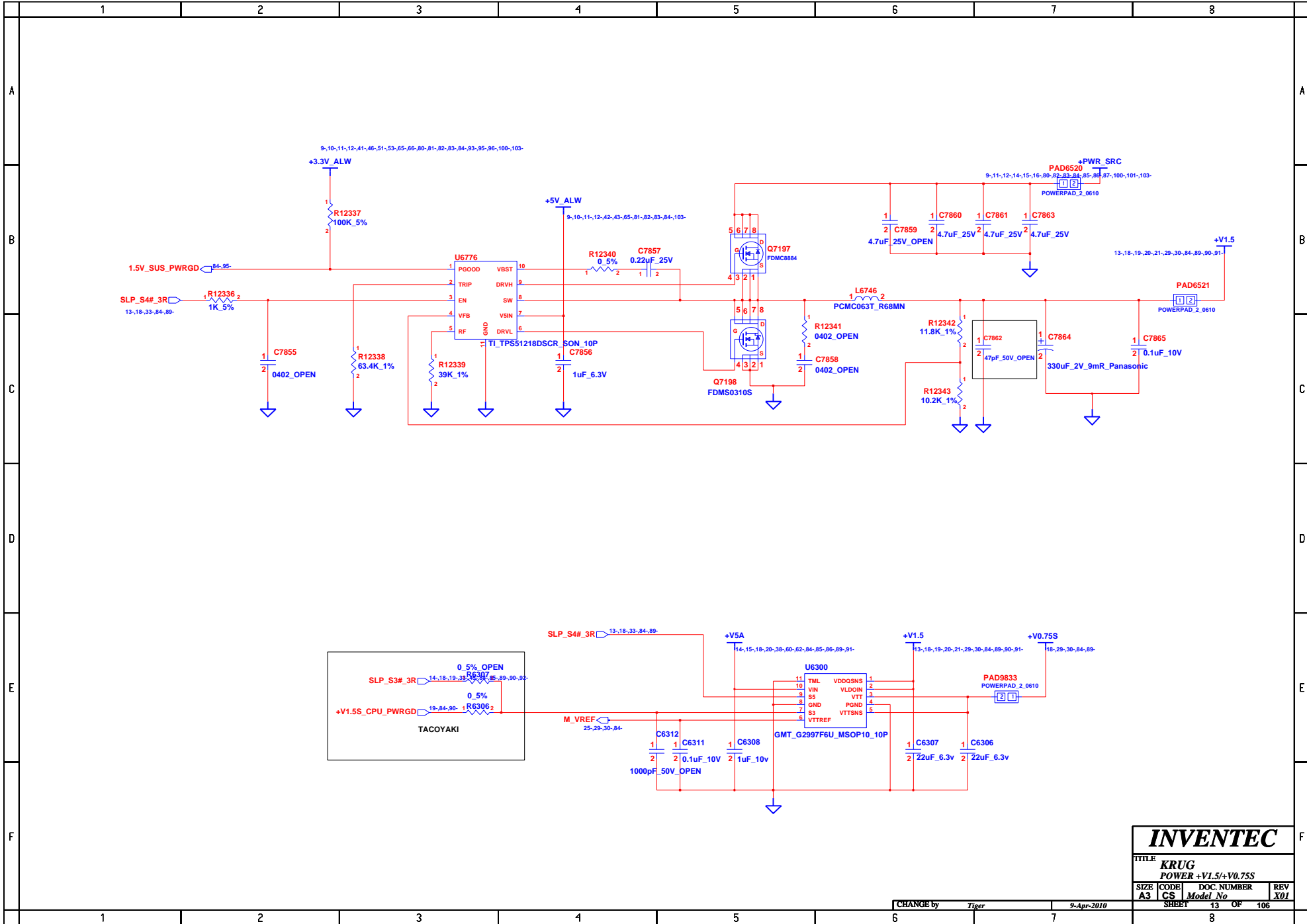


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SHEET 11		OF 106		

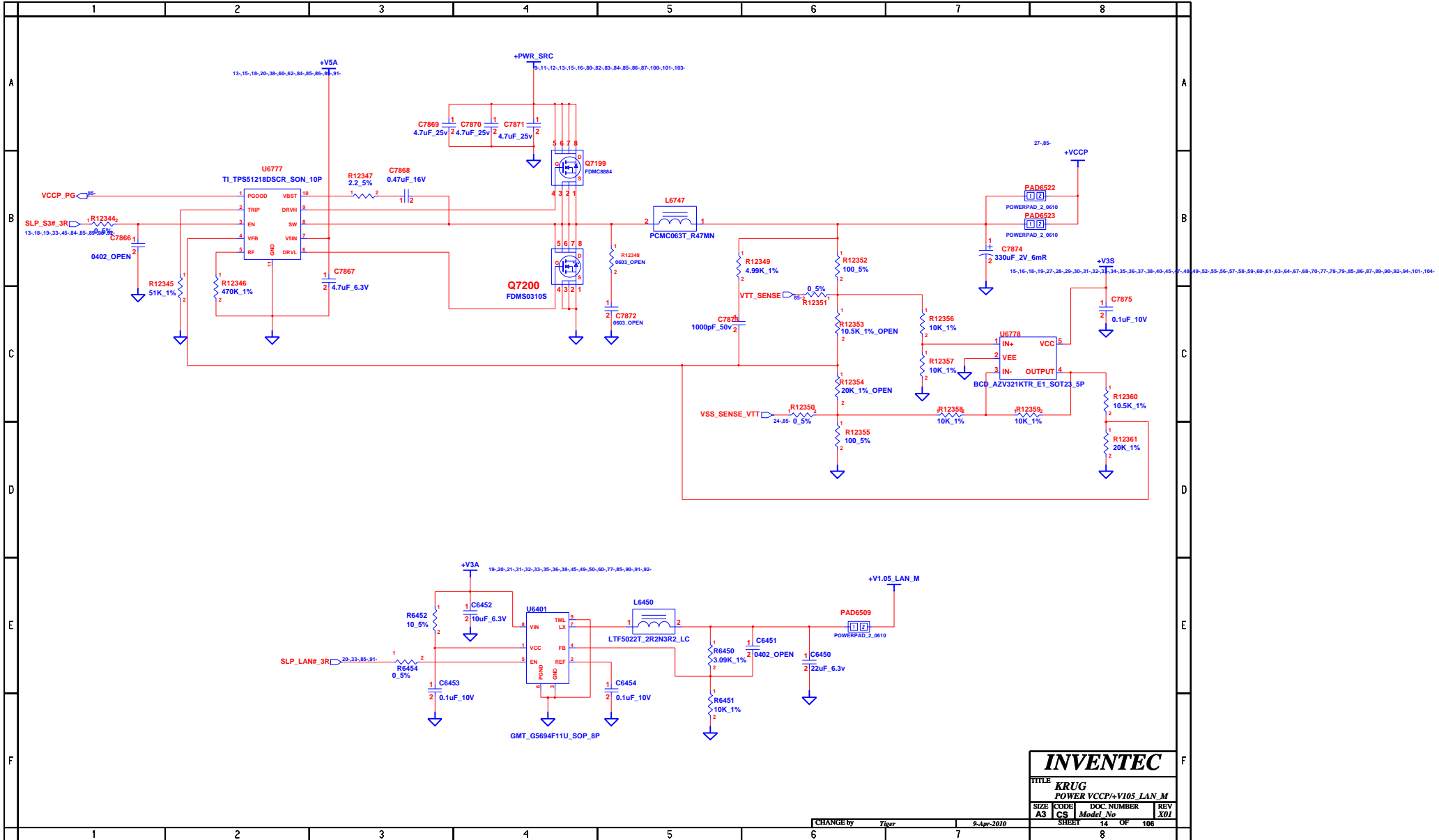
CHANGE by Tiger 9-Apr-2010



INVENTEC			
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POWER +3A/+5A			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
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INVENTEC				
TITLE KRUG				
POWER +V1.5/+V0.75S				
SIZE	CODE	DOC NUMBER	REV	
A3	CS	Model No	X01	
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SHEET		13	OF	106

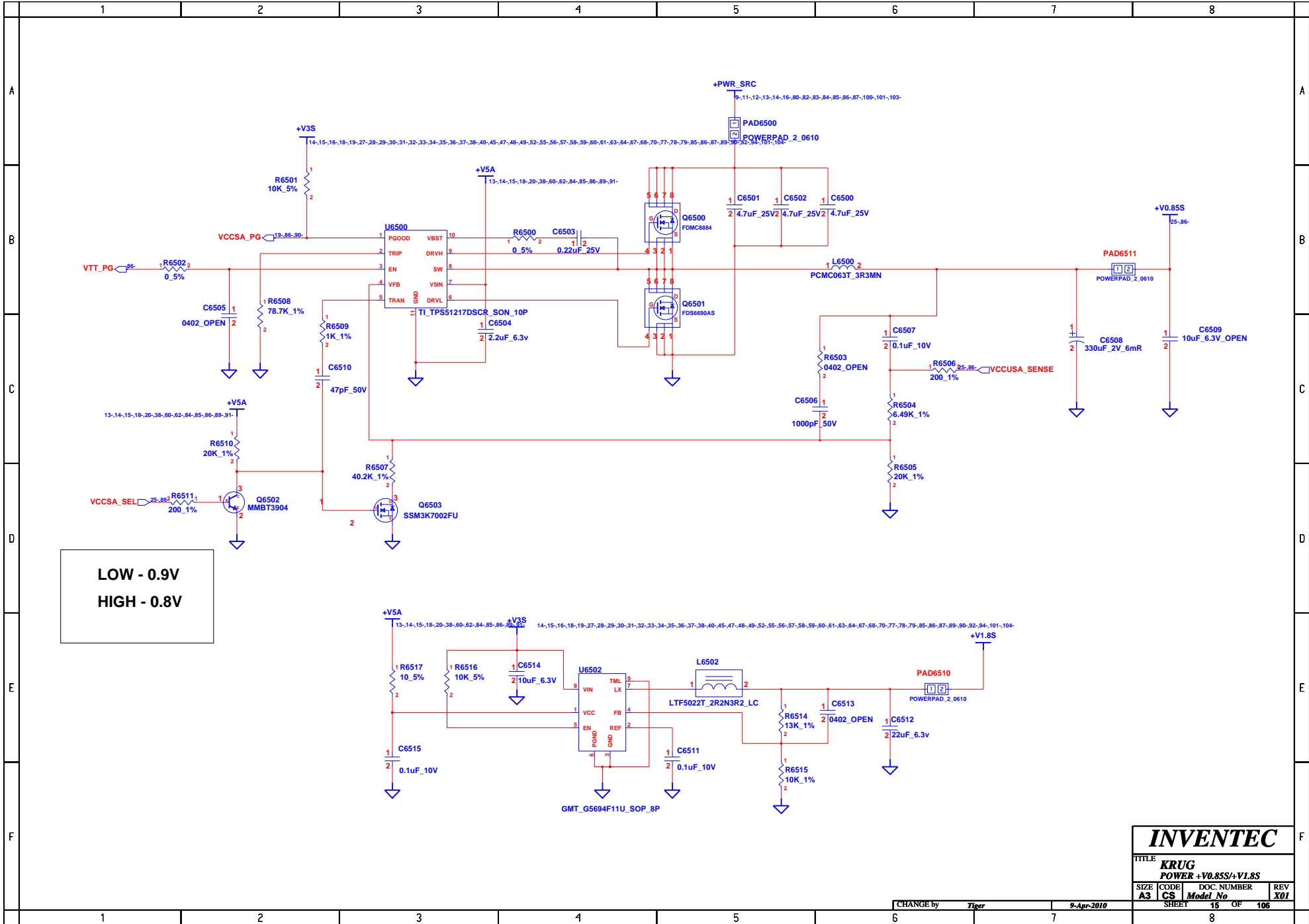


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A3	CS	Model_No	X01

CHANGE by Tiger 9-Apr-2010

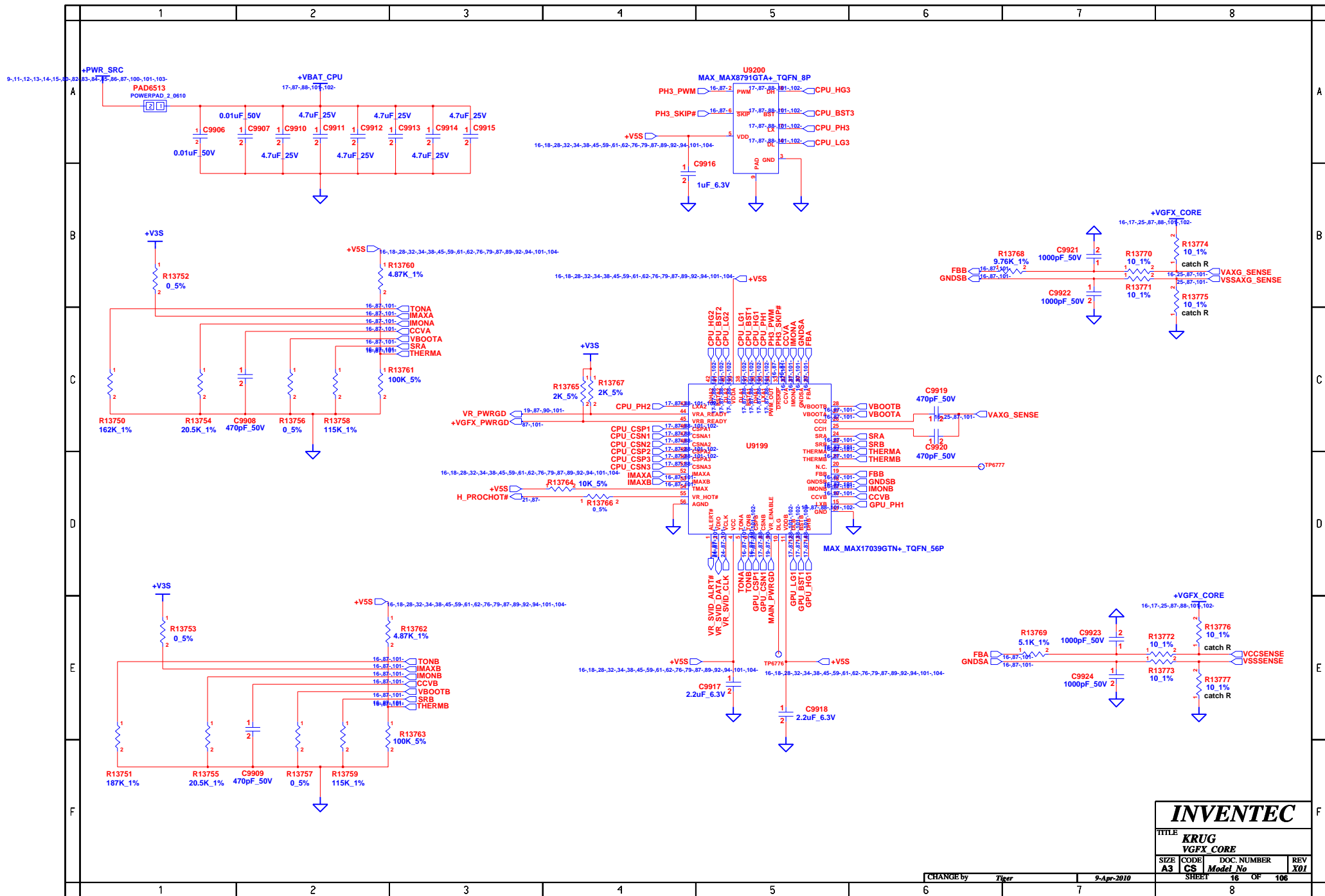
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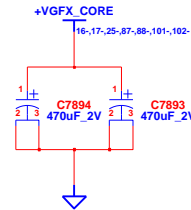
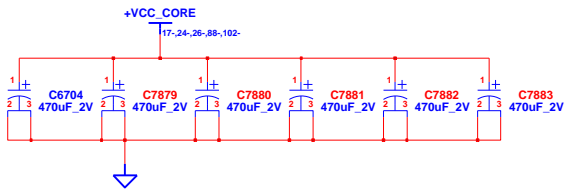
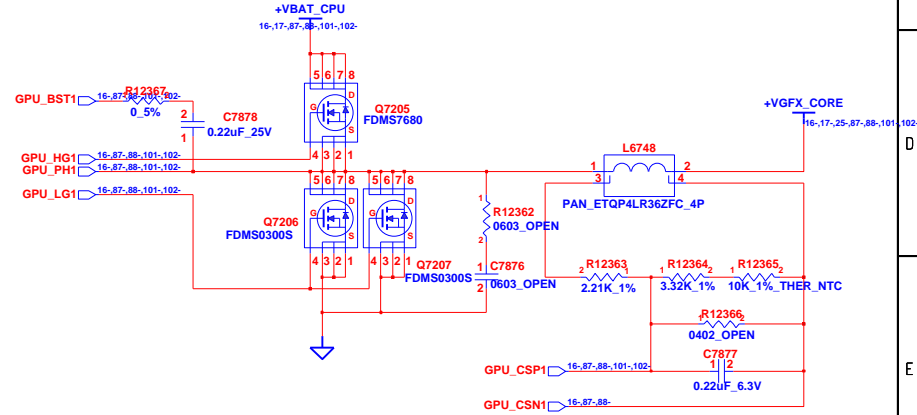
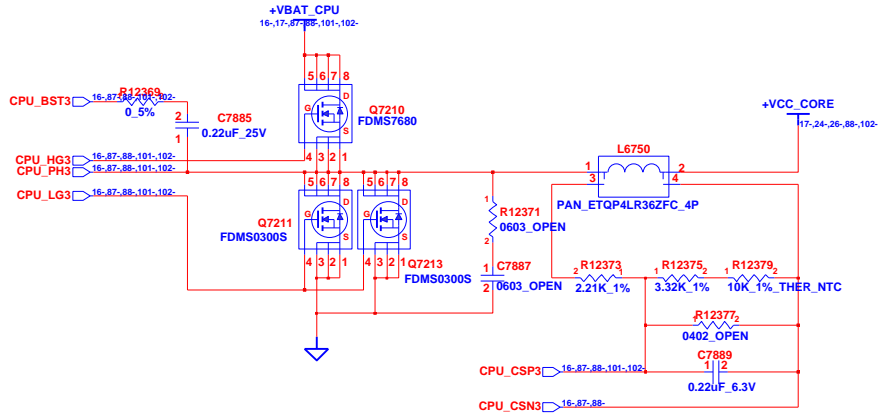
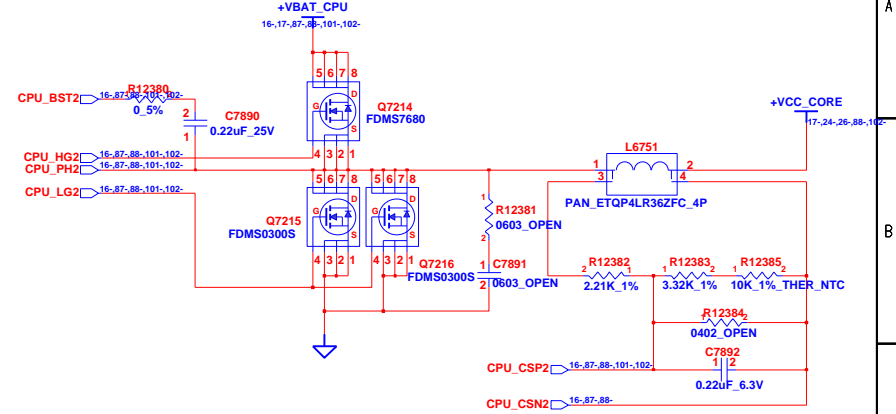
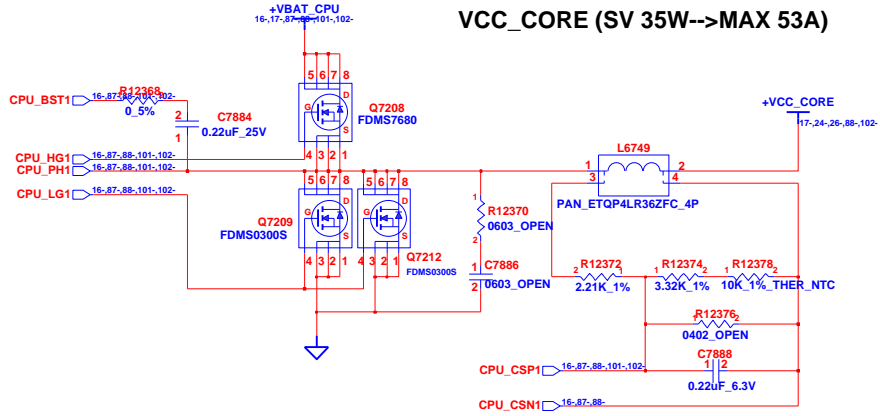
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A3	CS	Model No	X01
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CHANGE by *Tifer* 9-Apr-2010



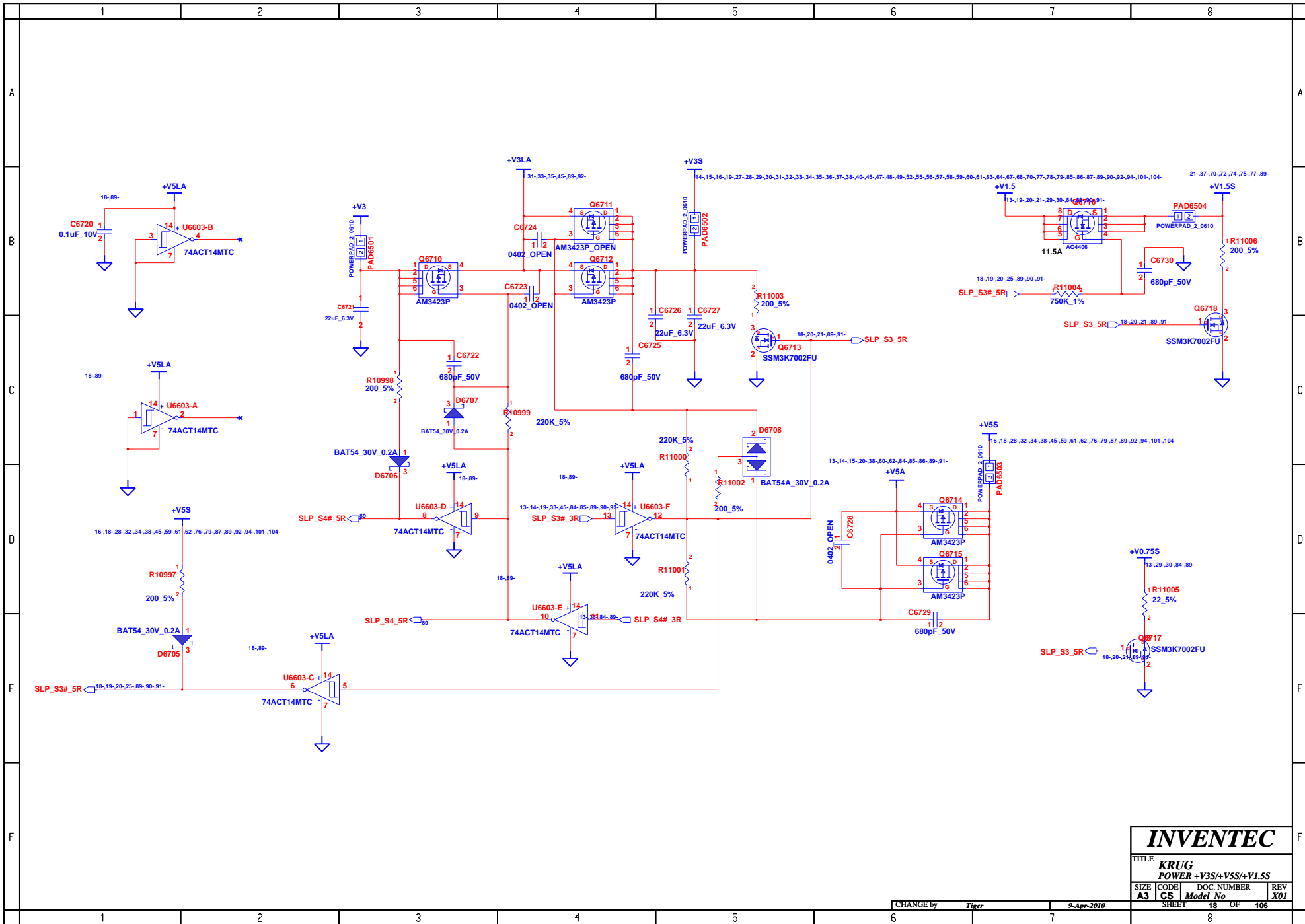
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A3	CS	Model No	X01	
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VCC_CORE (SV 35W-->MAX 53A)

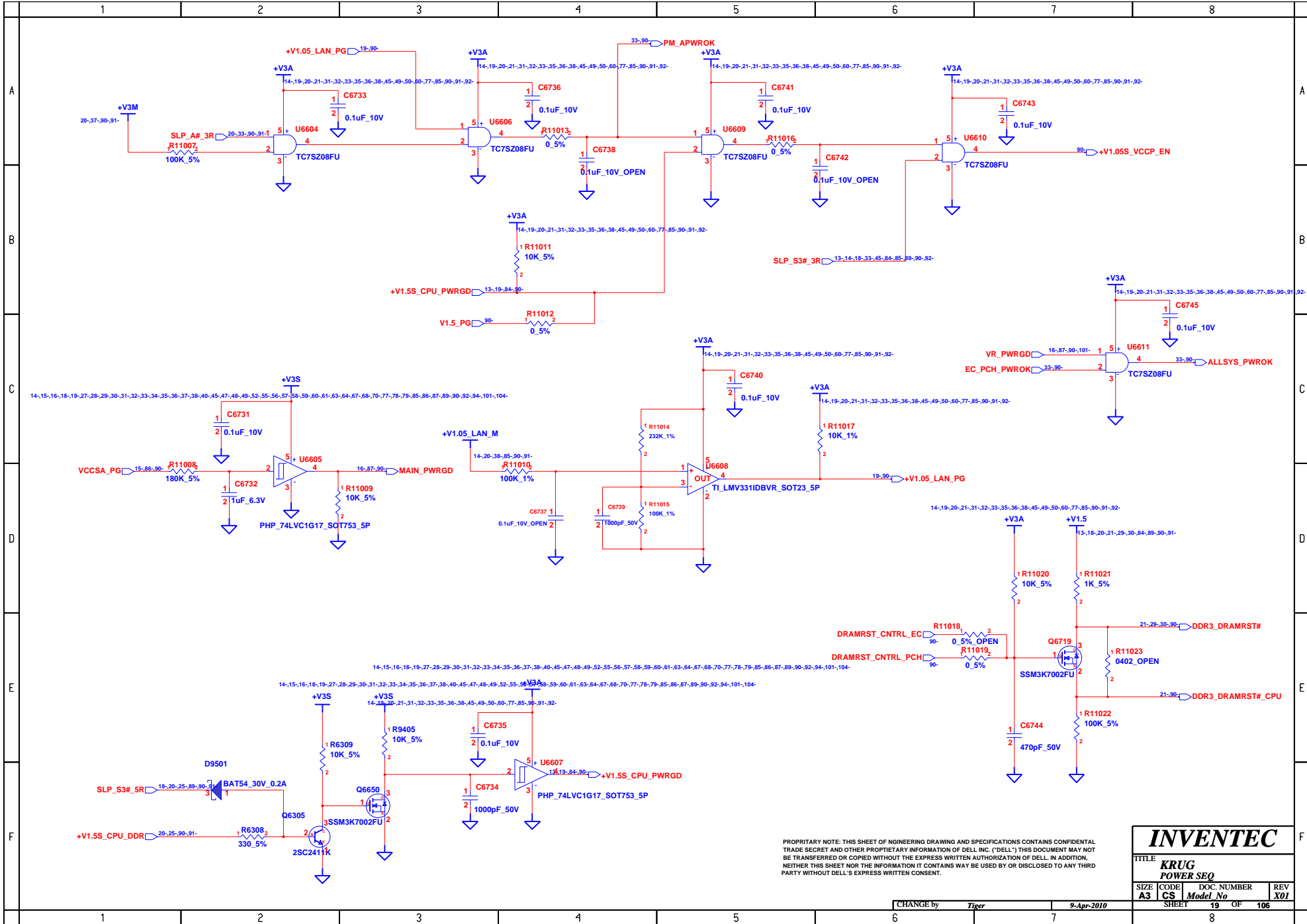


INVENTEC			
TITLE KRUG POWER VCORE			
SIZE A3	CODE CS	DOC NUMBER <i>Model No</i>	REV X01
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CHANGE by *Tiker* 9-Apr-2010



INVENTEC				
TITLE KRUG				
POWER +V3S/+V5S/+V1.5S				
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CHANGE by <i>Tiker</i>		9-Apr-2010		SHEET 18 OF 106

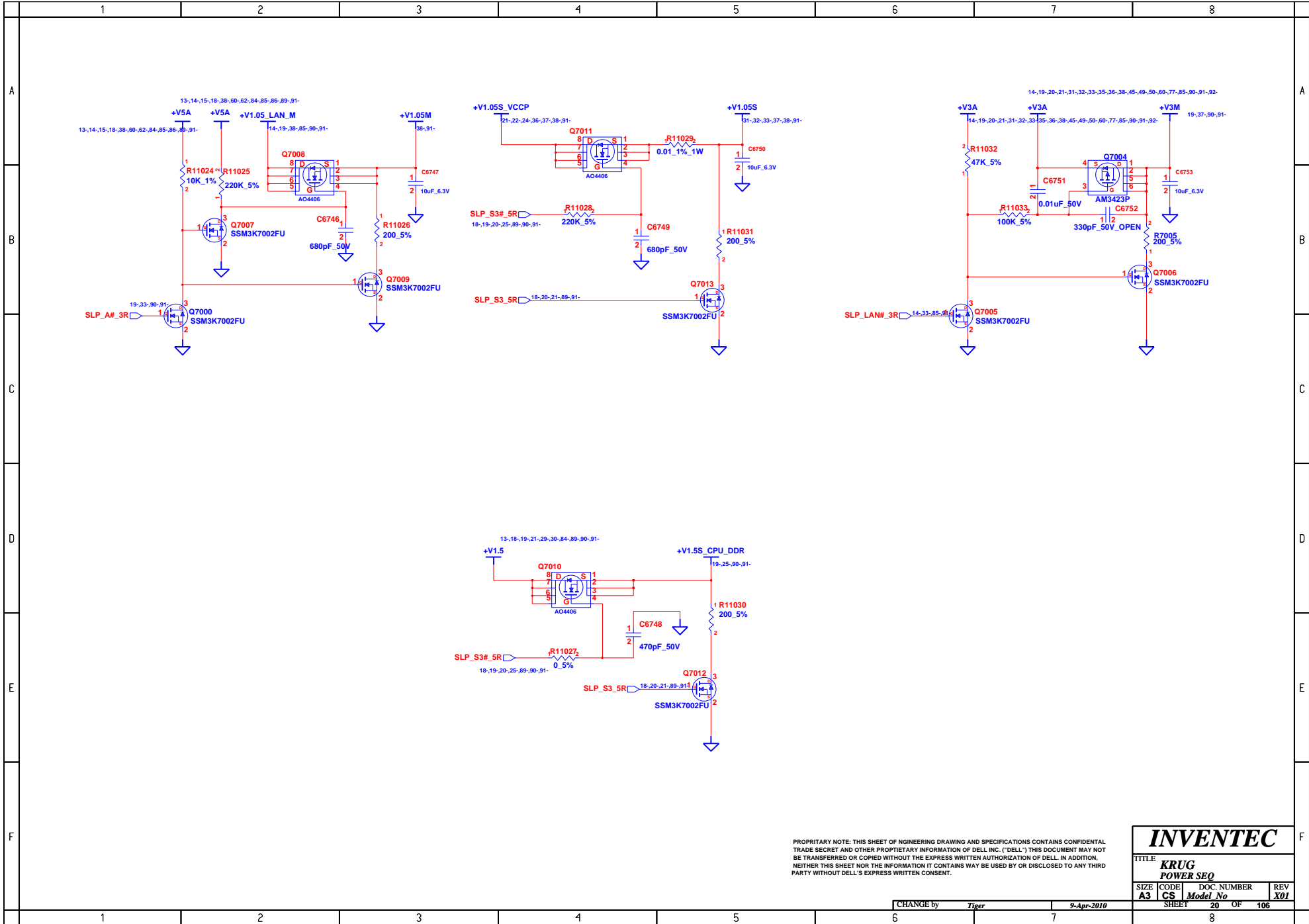


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TITLE			
KRUG POWER SEQ			
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A3	CS	Model No	X01
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19			106

CHANGE by *Tiger* 9-Apr-2010

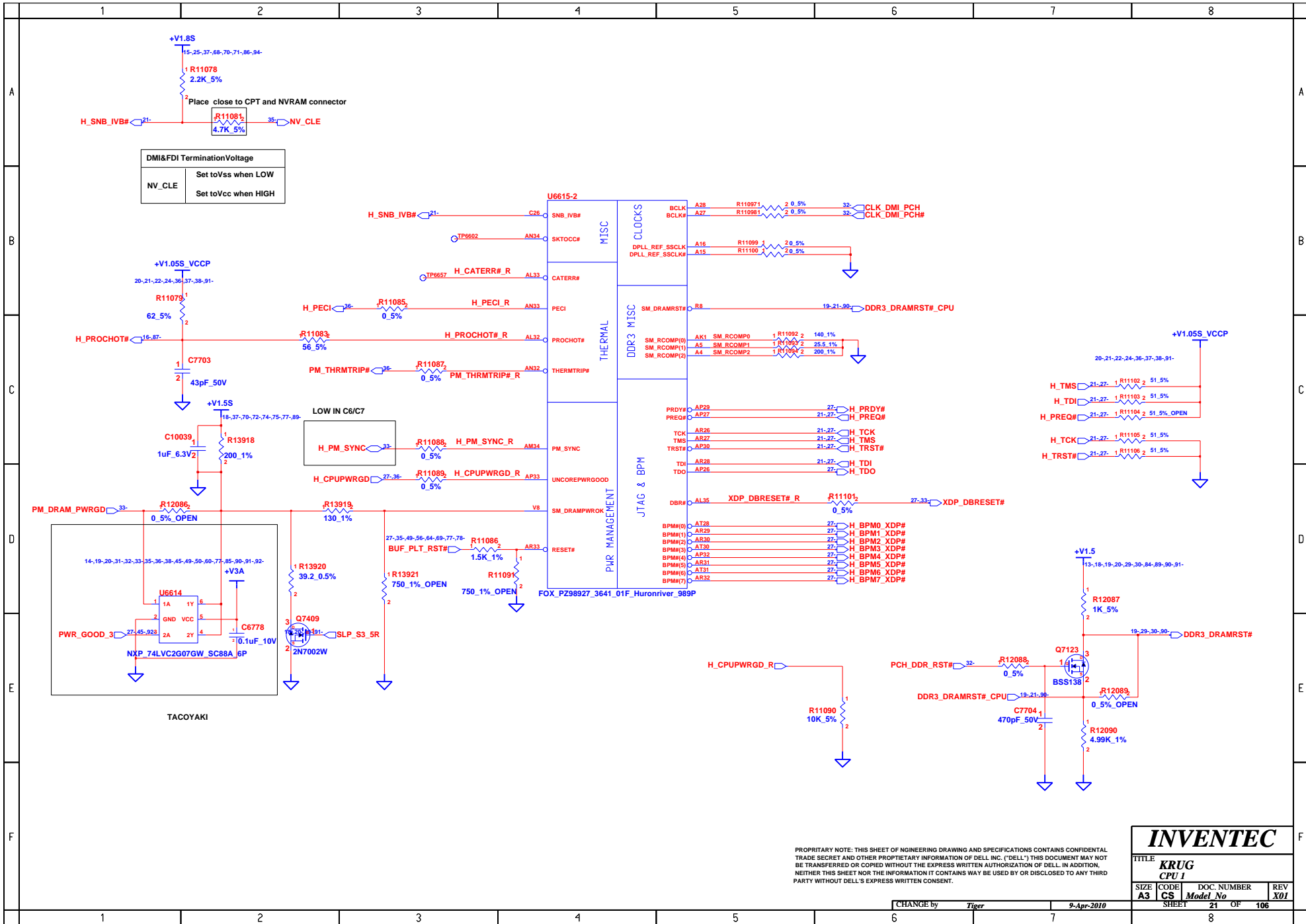


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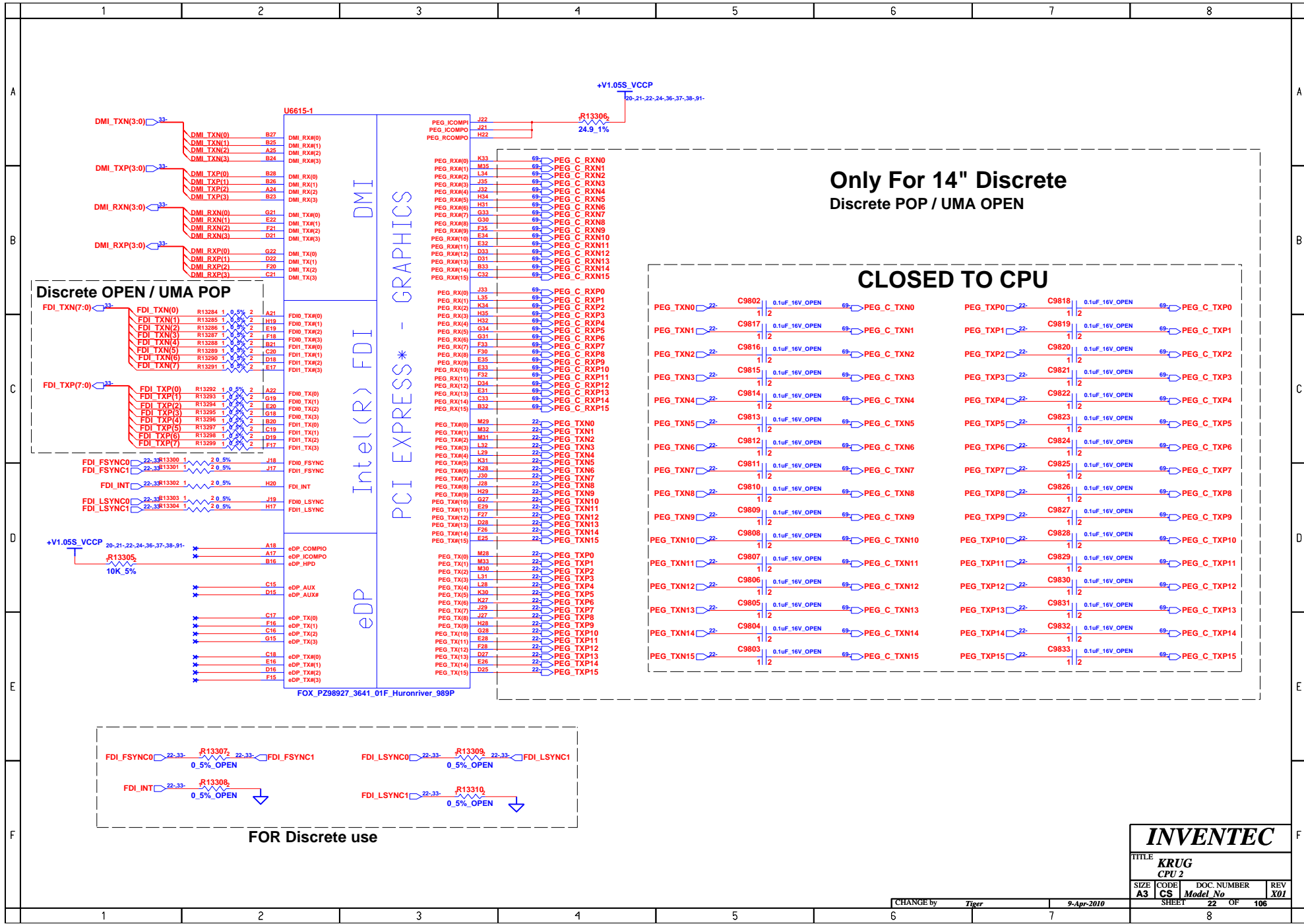
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A3	CS	Model No	X01
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CHANGE by *Tiger* 9-Apr-2010



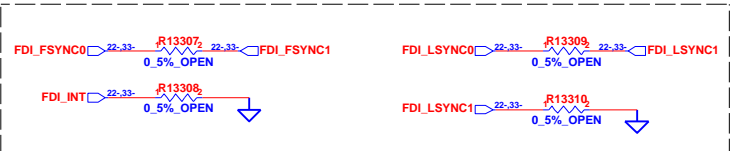
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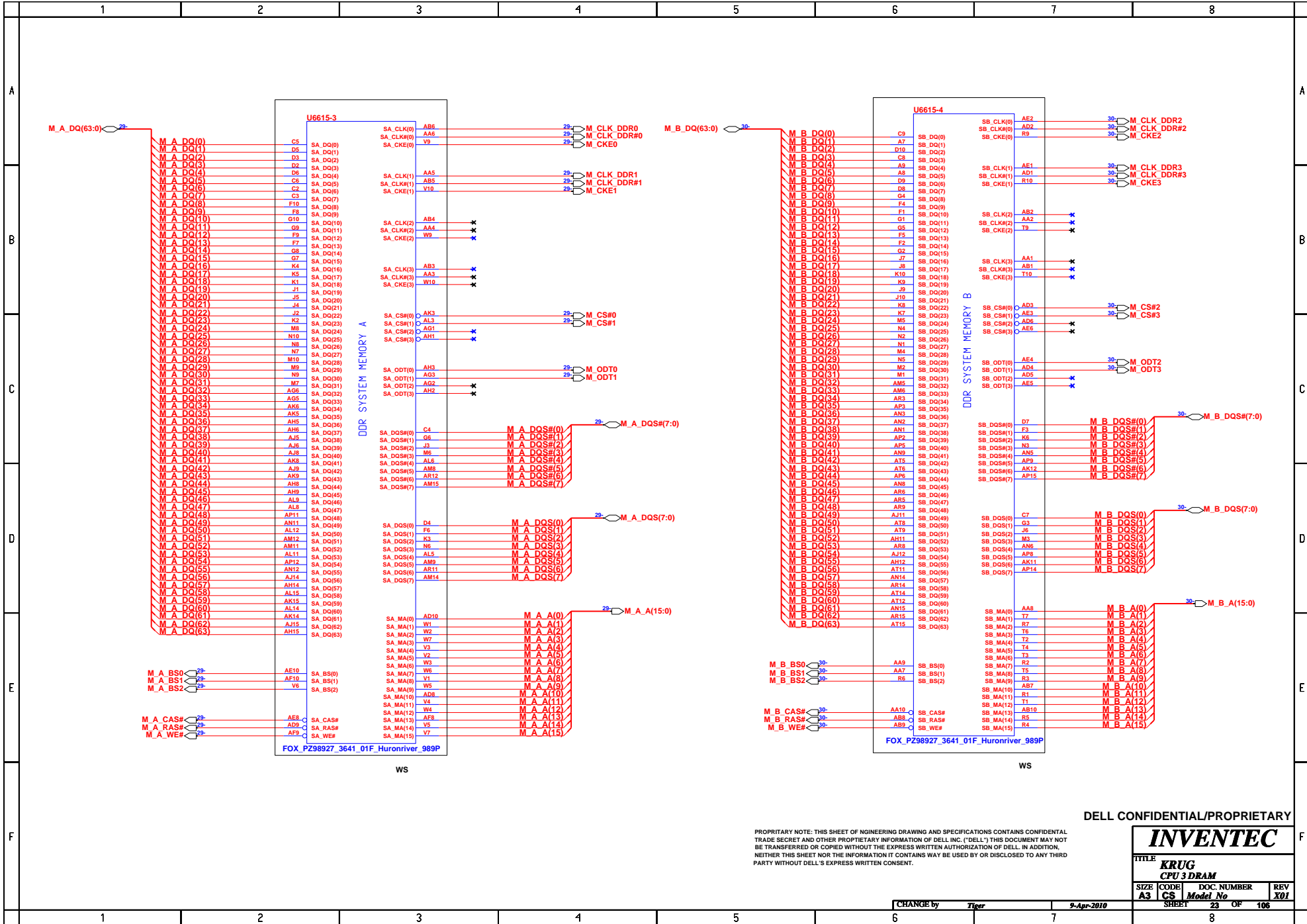
Only For 14" Discrete
Discrete POP / UMA OPEN

CLOSED TO CPU



FOR Discrete use

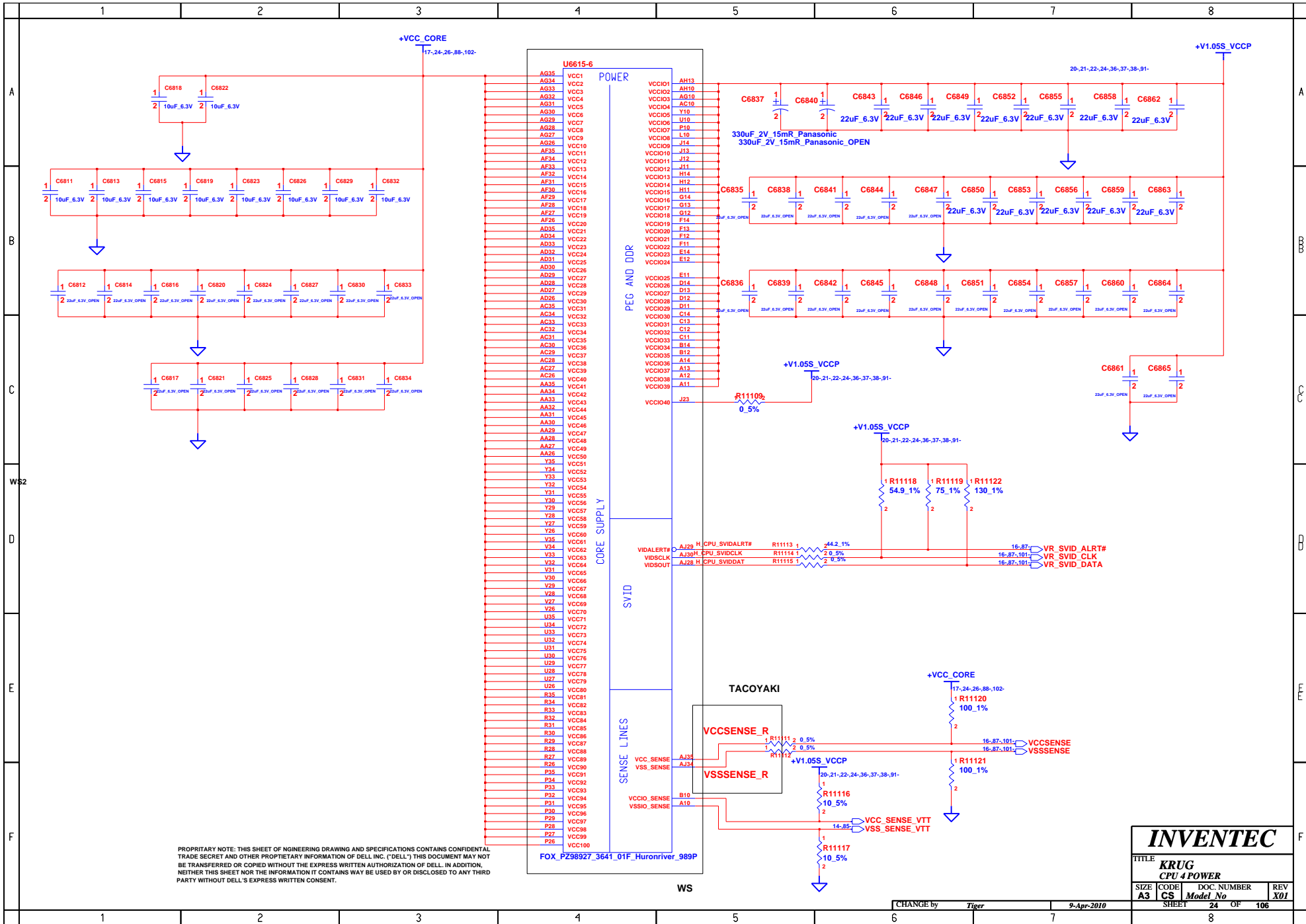
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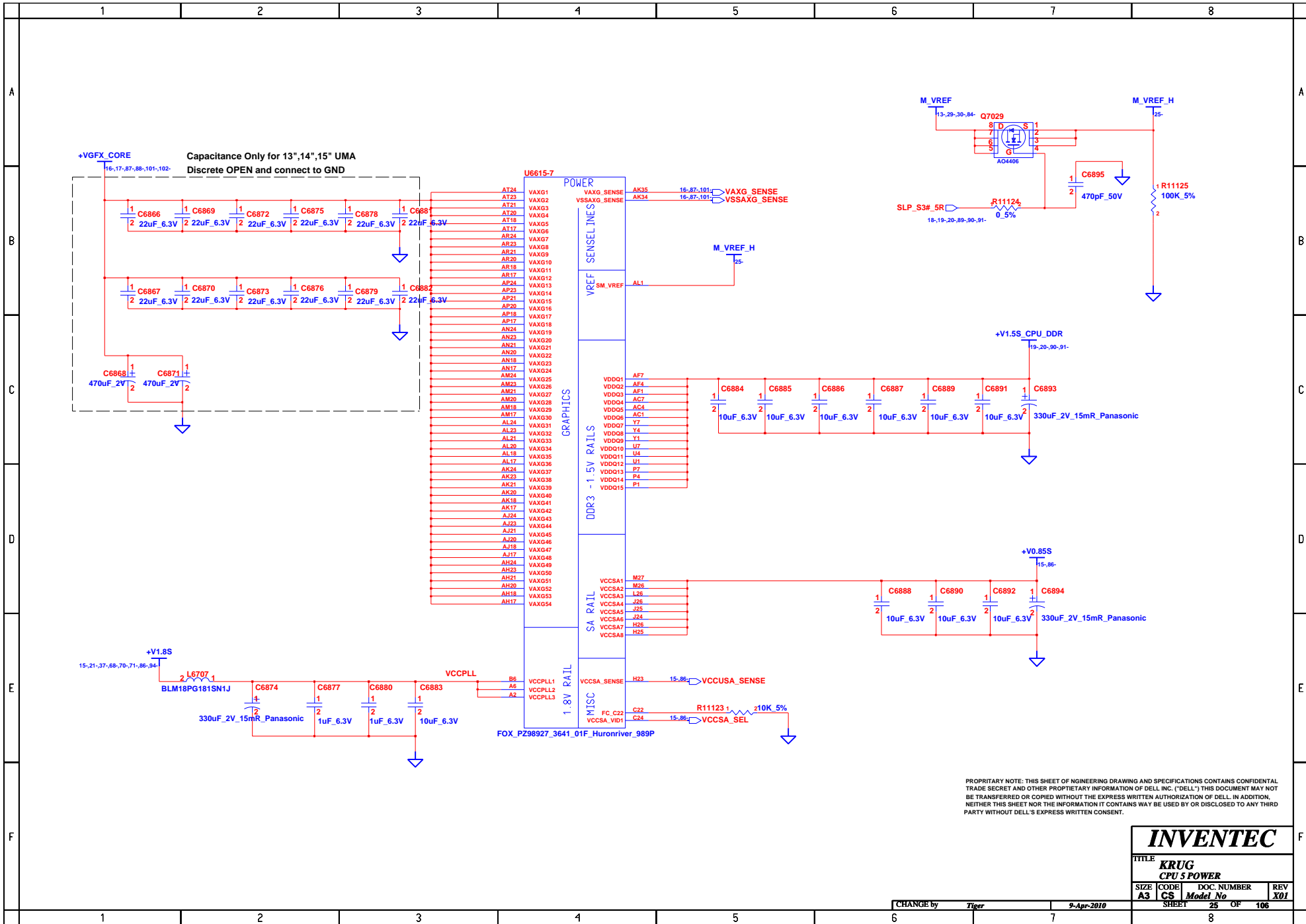
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INVENTEC			
TITLE KRUG CPU 4 POWER			
SIZE A3	CODE CS	DOC NUMBER <i>Model No</i>	REV X01
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CHANGE by *Tiker* 9-Apr-2010

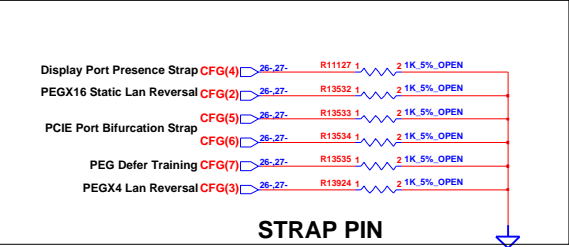
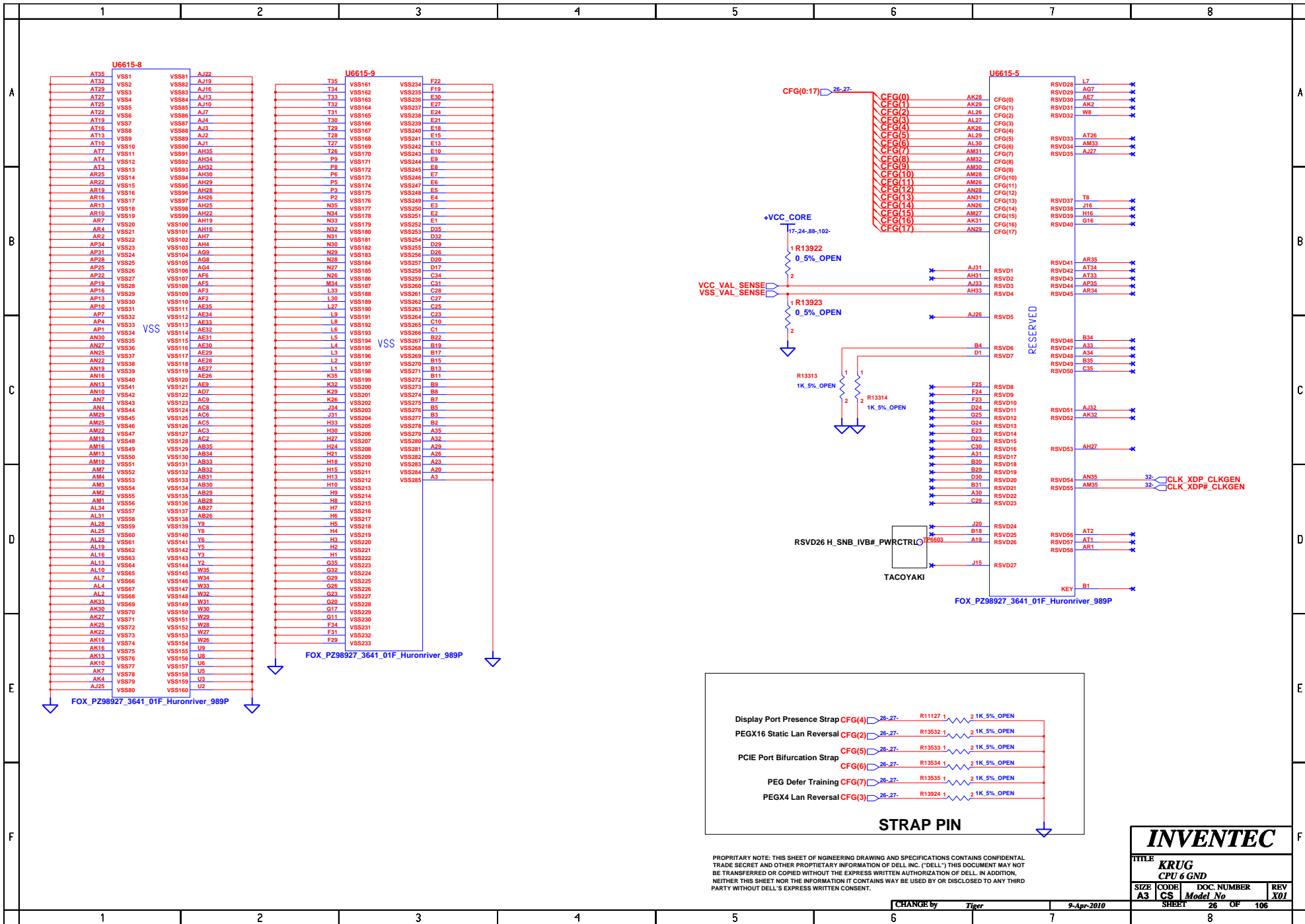


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INVENTEC

TITLE			
KRUG			
CPU 5 POWER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
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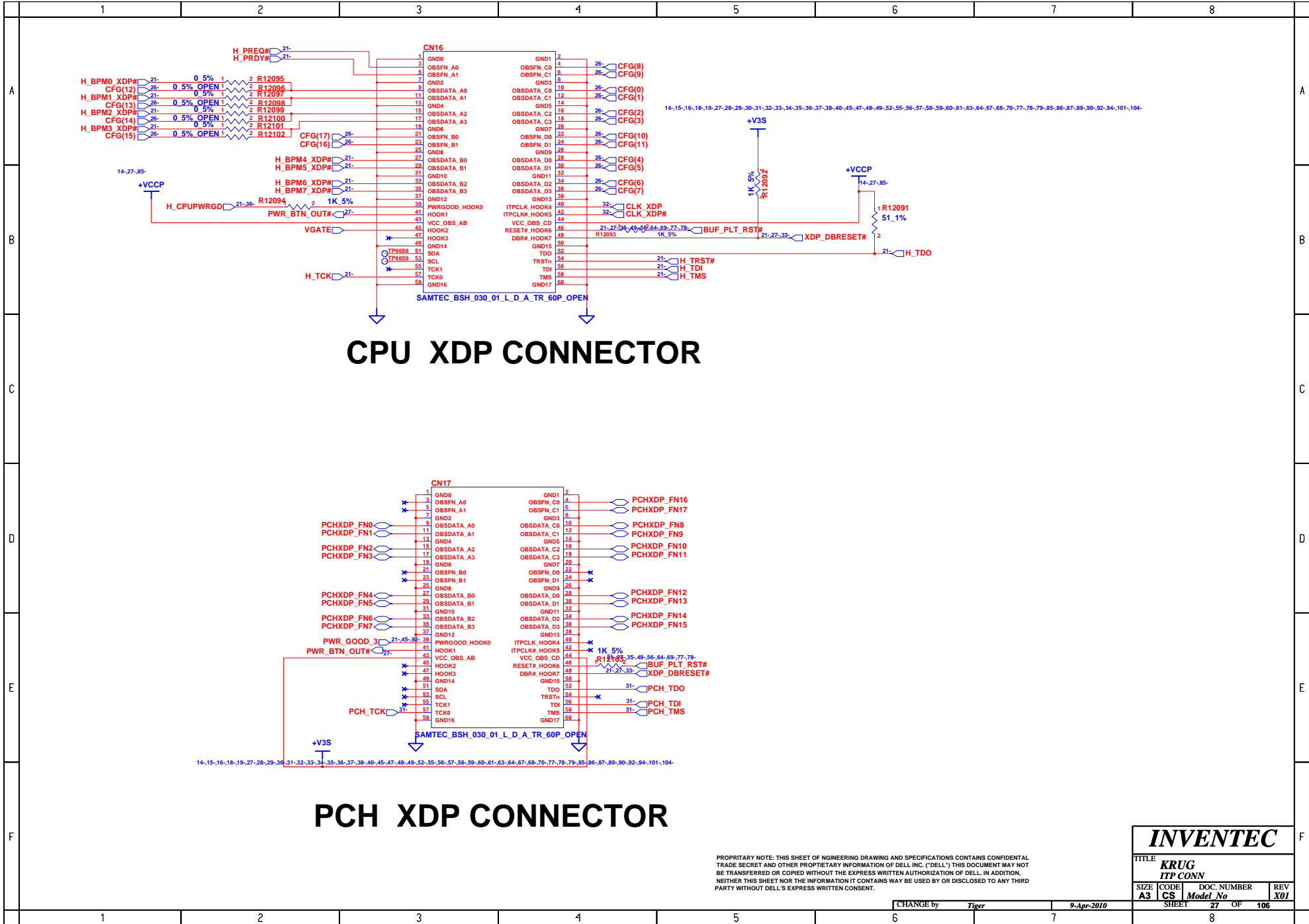
CHANGE by *Tifer* 9-Apr-2010



INVENTEC			
TITLE KRUG CPU 6 GND			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
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CHANGE by *Tiper* 9-Apr-2010



CPU XDP CONNECTOR

PCH XDP CONNECTOR

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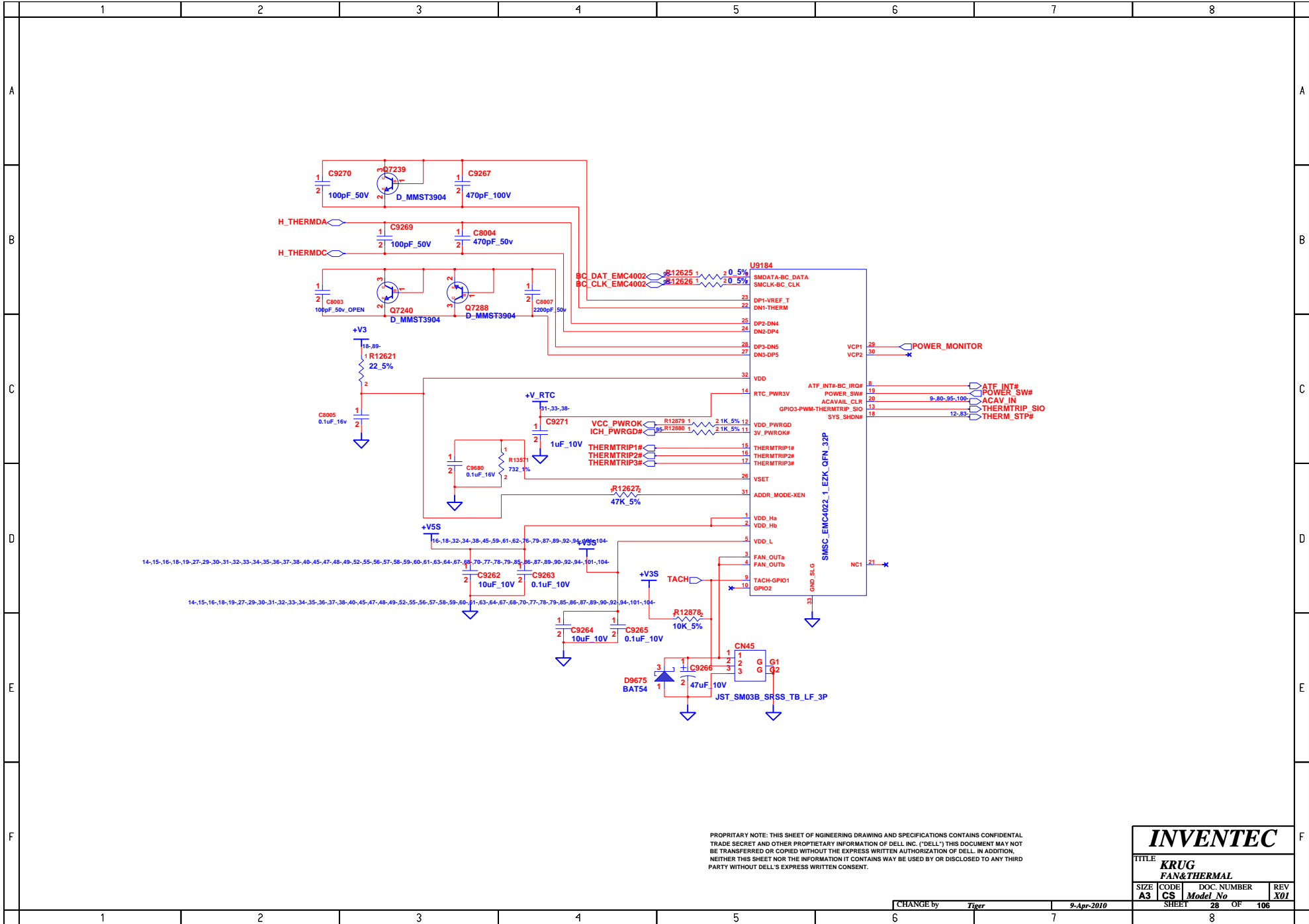
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TITLE **KRUG ITP CONN**

SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
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CHANGE by *Tiger* 9-Apr-2010

SHEET 27 OF 106



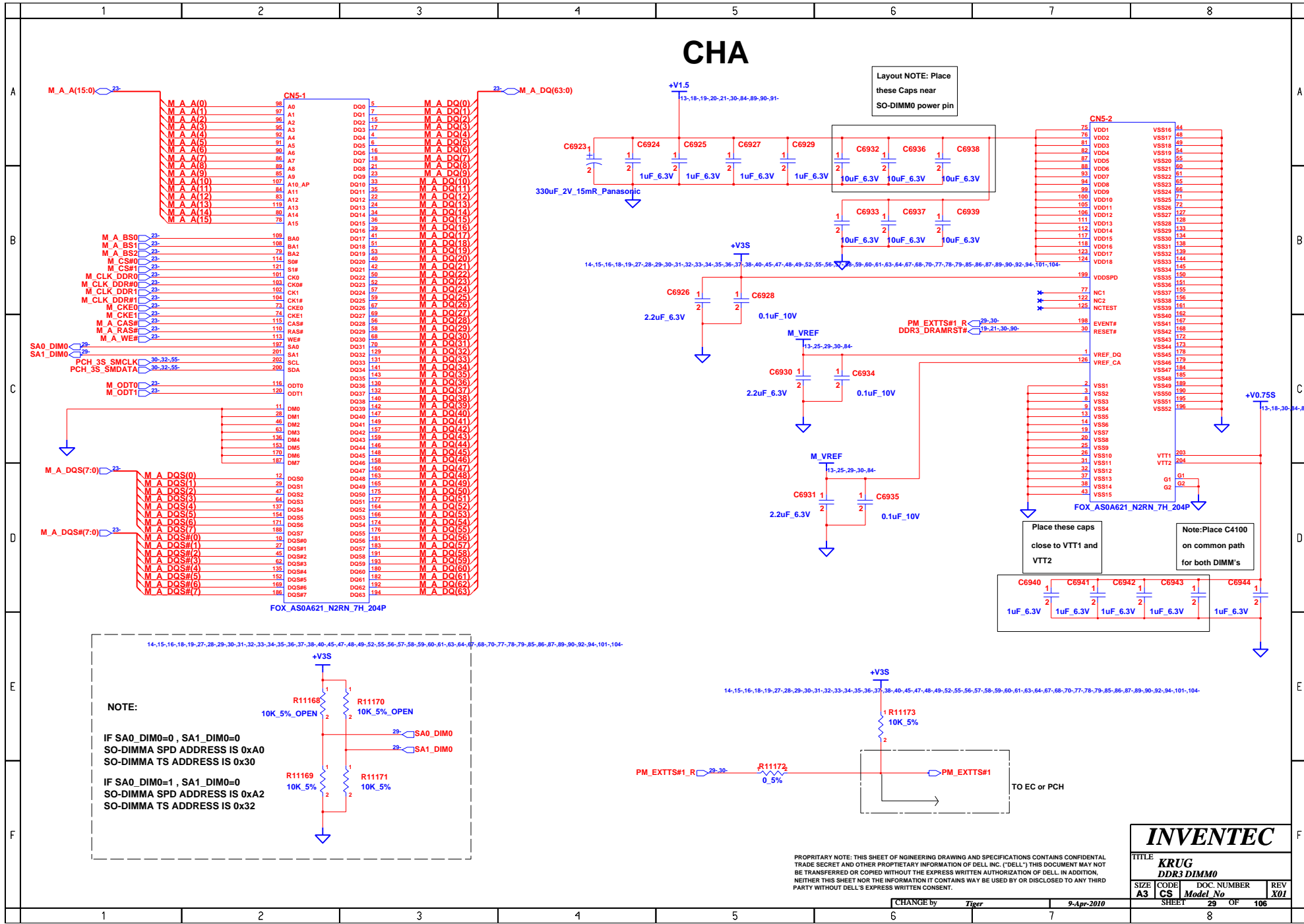
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INVENTEC

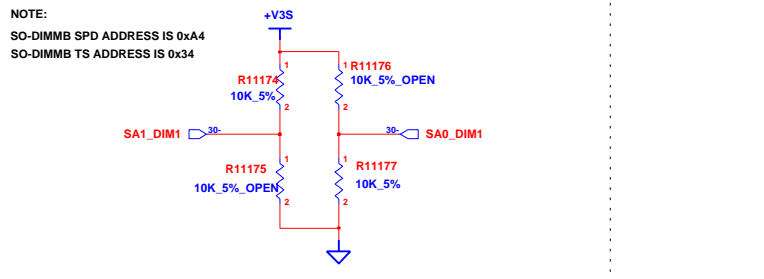
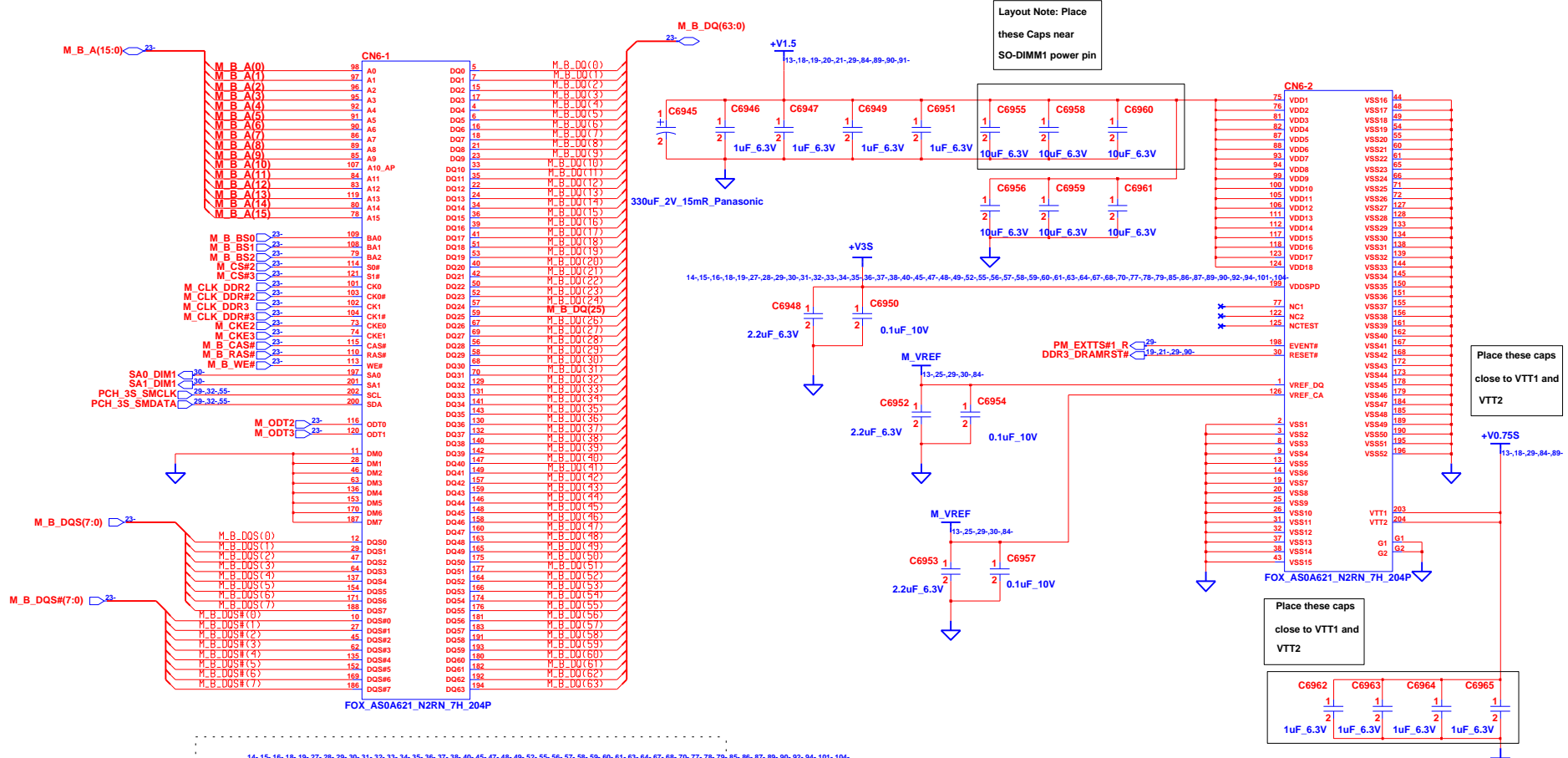
TITLE			
KRUG FAN&THERMAL			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		28 OF	106

CHANGE by *Tiger* 9-Apr-2010

CHA



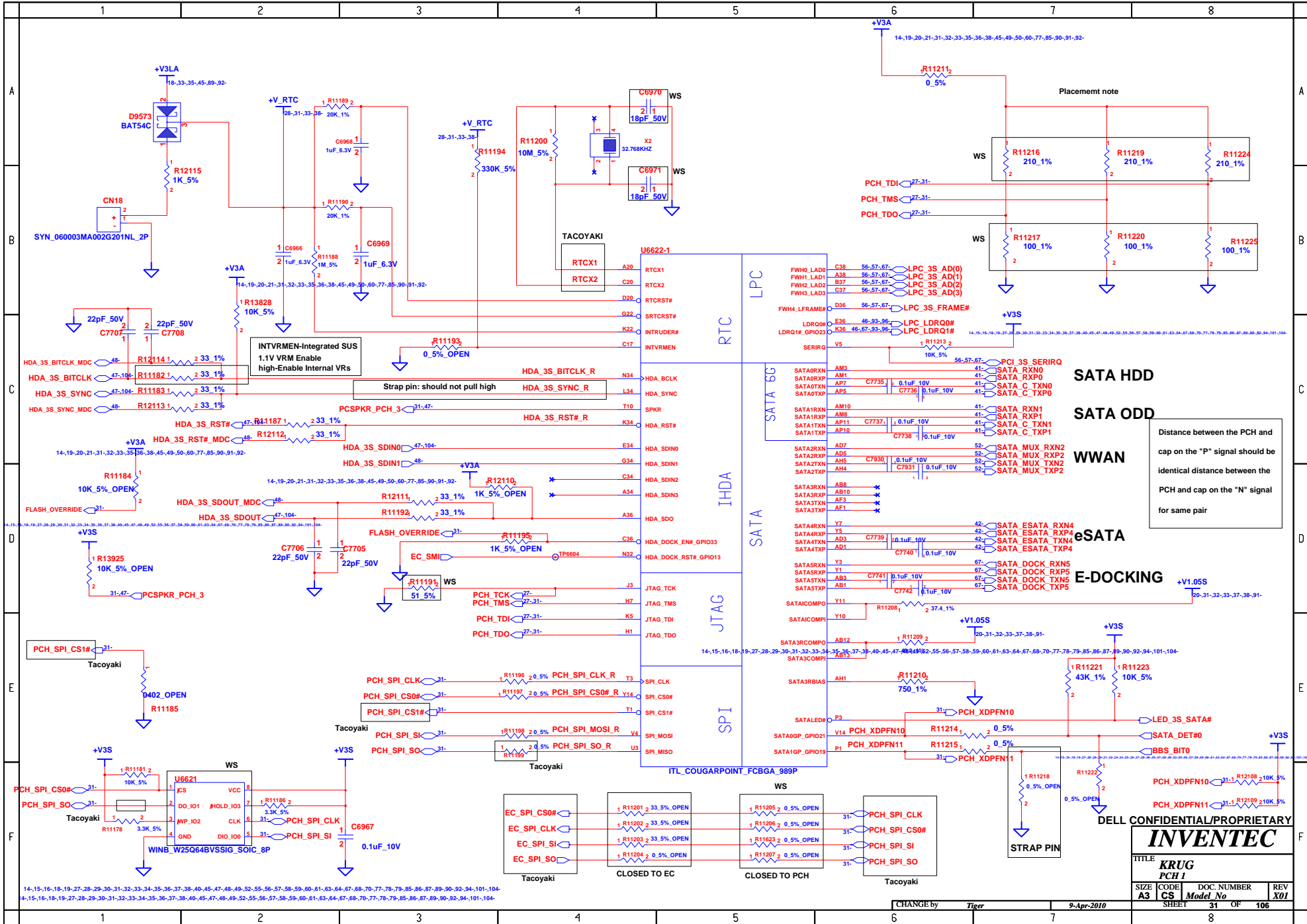
CHB



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INVENTEC			
TITLE KRUG DDR3 DIMM1			
SIZE A3	CODE CS	DOC NUMBER <i>Model No</i>	REV X01
SHEET		30 OF	106

CHANGE by *Tiker* 9-Apr-2010



SATA HDD
SATA ODD
WWAN
E-DOCKING

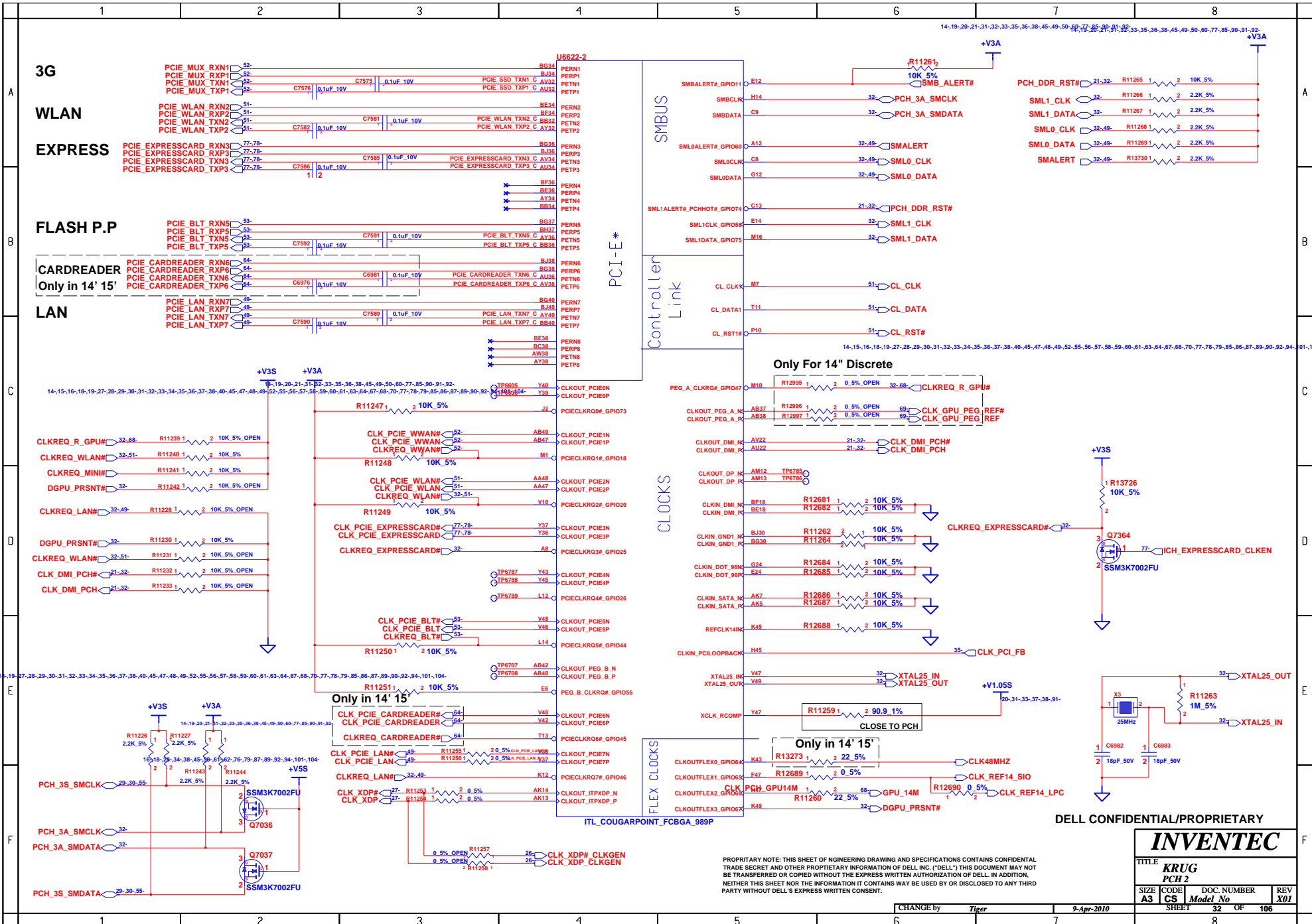
Distance between the PCH and cap on the "P" signal should be identical distance between the PCH and cap on the "N" signal for same pair

DELL CONFIDENTIAL/PROPRIETARY

INVENTEC

TITLE
KRUG
PCH 1

SIZE A3	CODE CS	DOC NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET 31		OF 106	

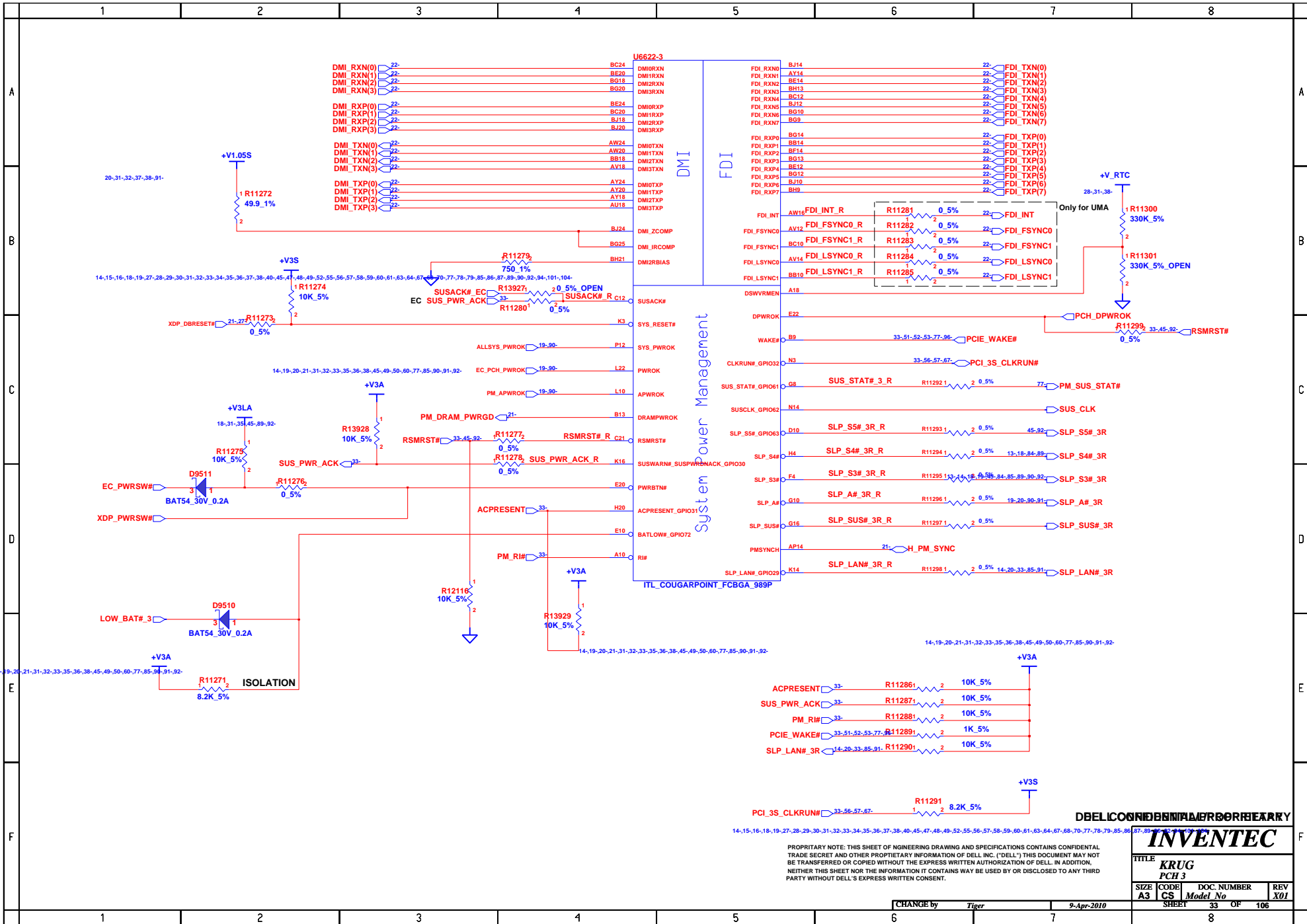


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INVENTEC

TITLE	KRUG PCH 2			REV	X01
SIZE	A3	CODE	CS	DOC. NUMBER	Model No
SHEET	32	OF	106		



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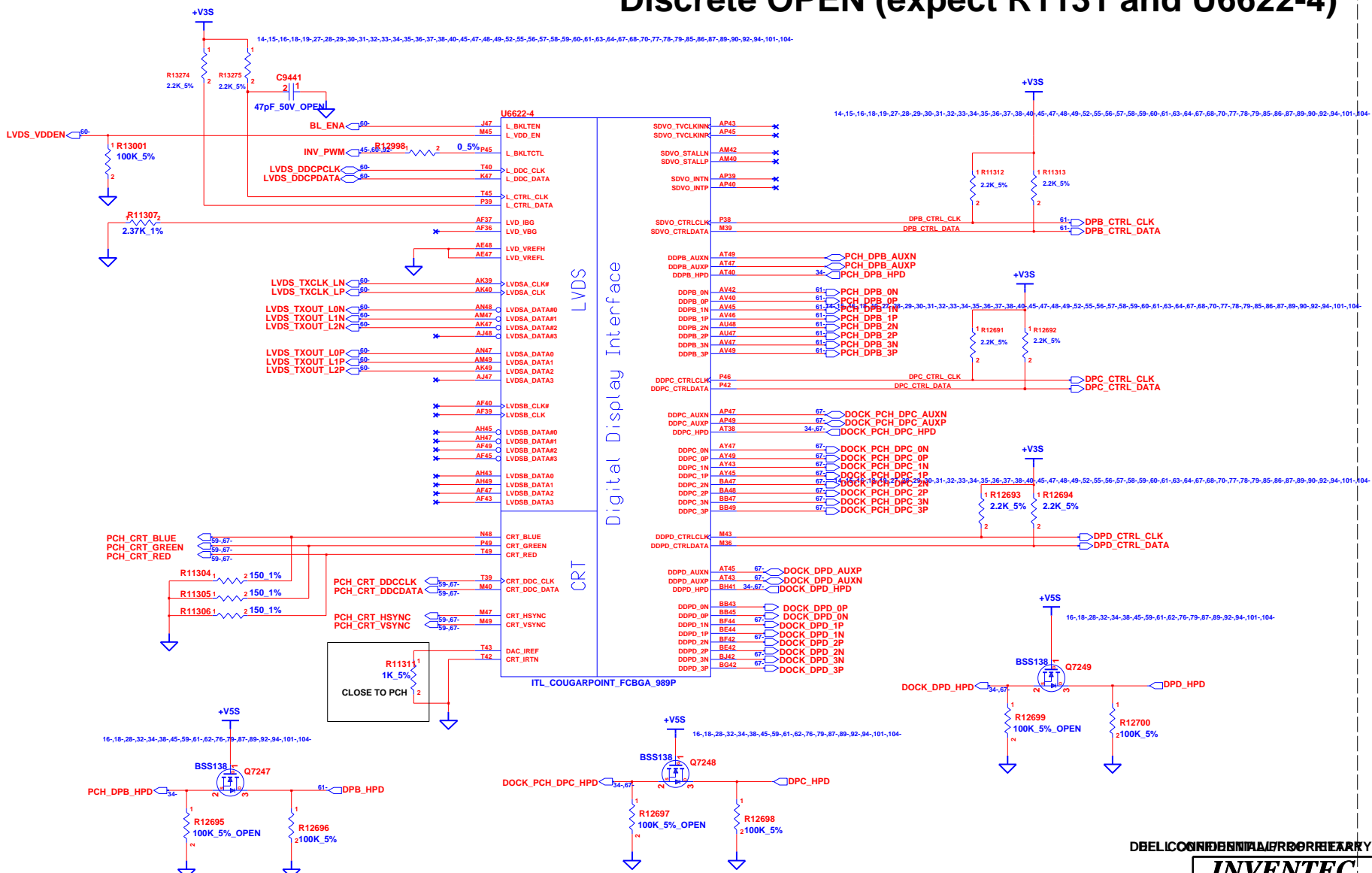
DELL CONFIDENTIAL PROPRIETARY

INVENTEC

TITLE			
KRUG			
PCH 3			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		33 OF	106

CHANGE by Tiker 9-Apr-2010

Discrete OPEN (expect R1131 and U6622-4)



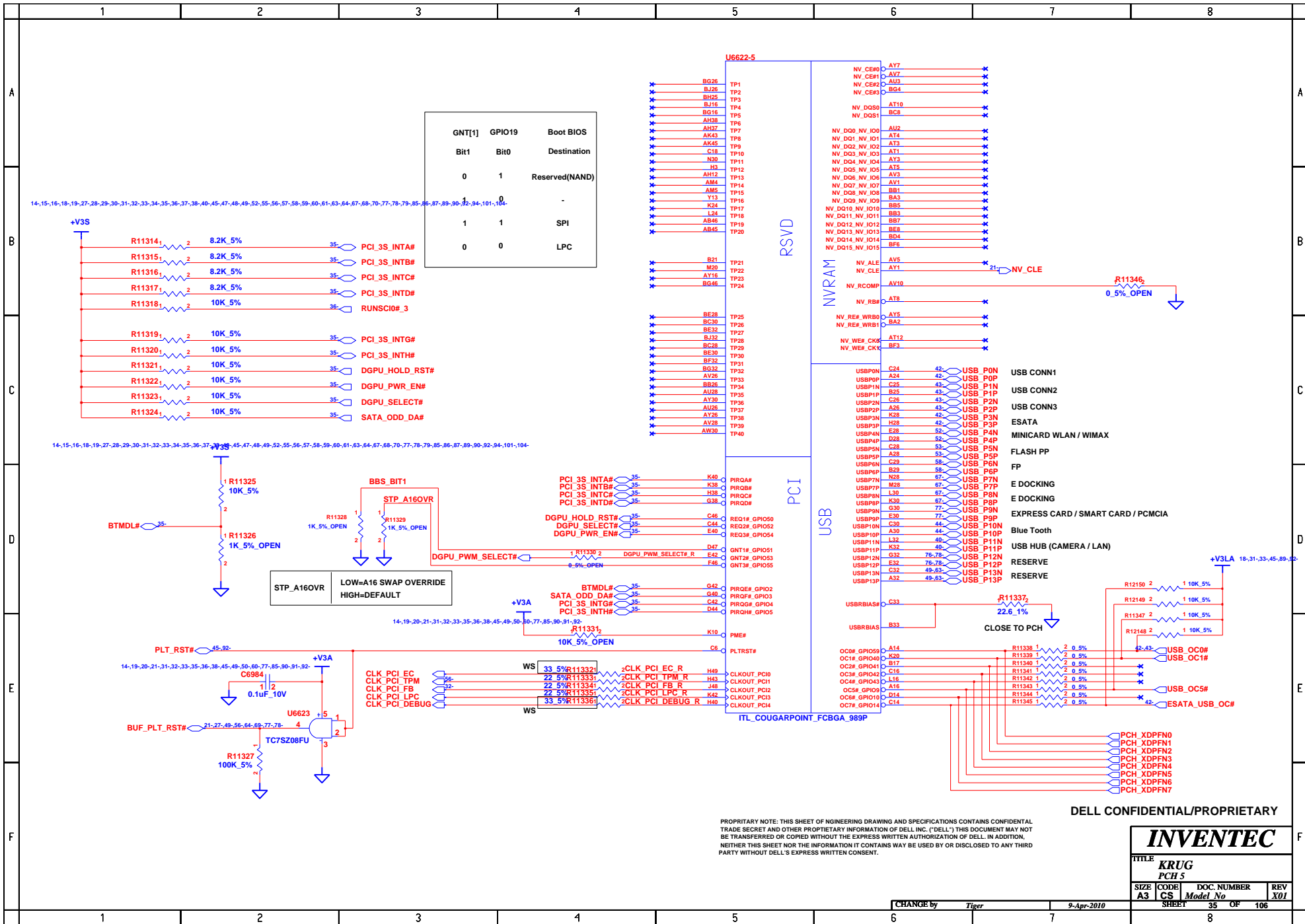
DBELICONDBENIAMBROREHARY

INVENTEC

TITLE			
KRUG			
PCH 4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		34	OF 106

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CHANGE by *Tiger* 9-Apr-2010



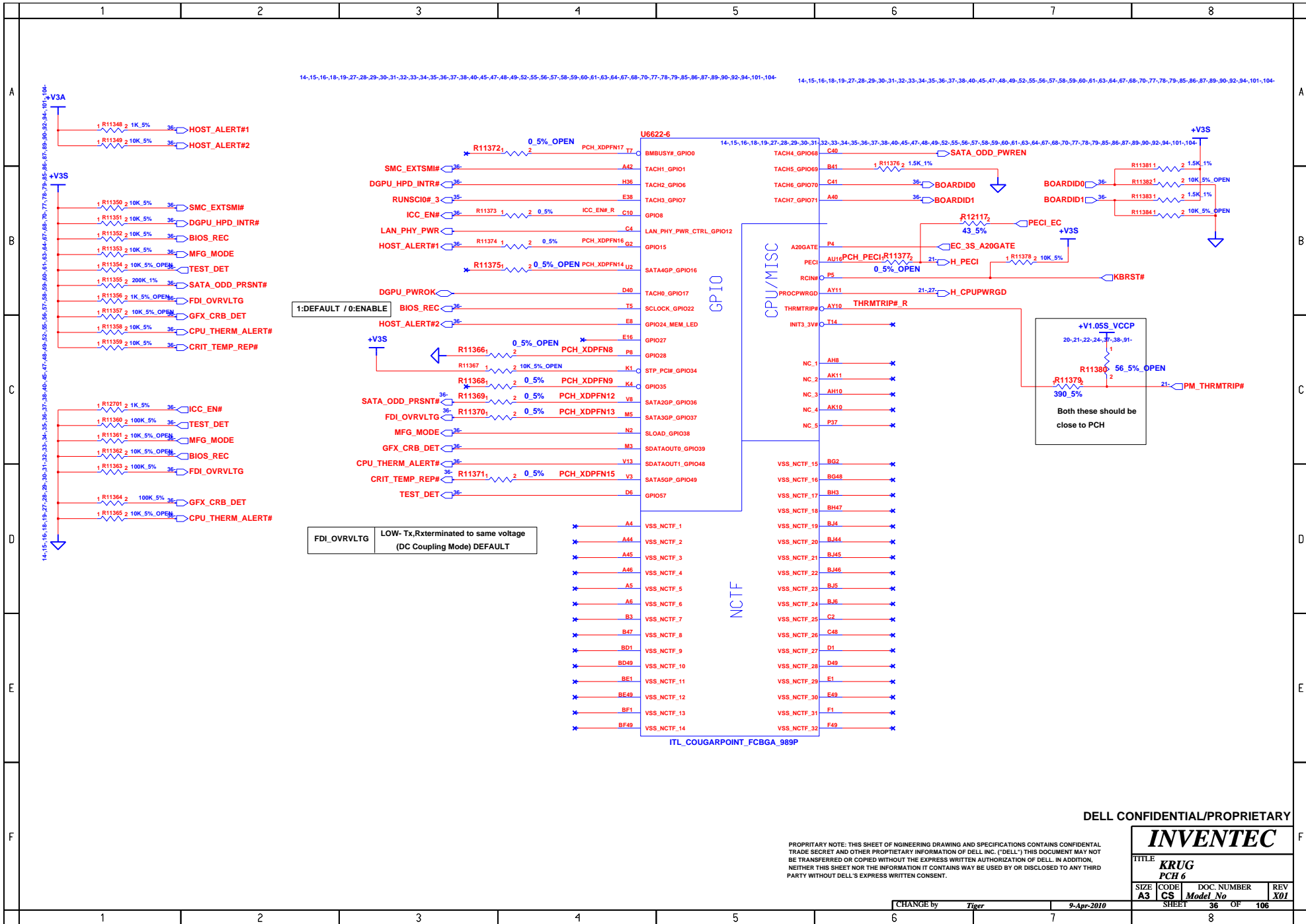
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INVENTEC

TITLE KRUG PCH 5				
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01	

CHANGE by	Tiger	9-Apr-2010	35	OF	106
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FDI_OVRVLTG LOW-Tx,Rx terminated to same voltage (DC Coupling Mode) DEFAULT

Both these should be close to PCH

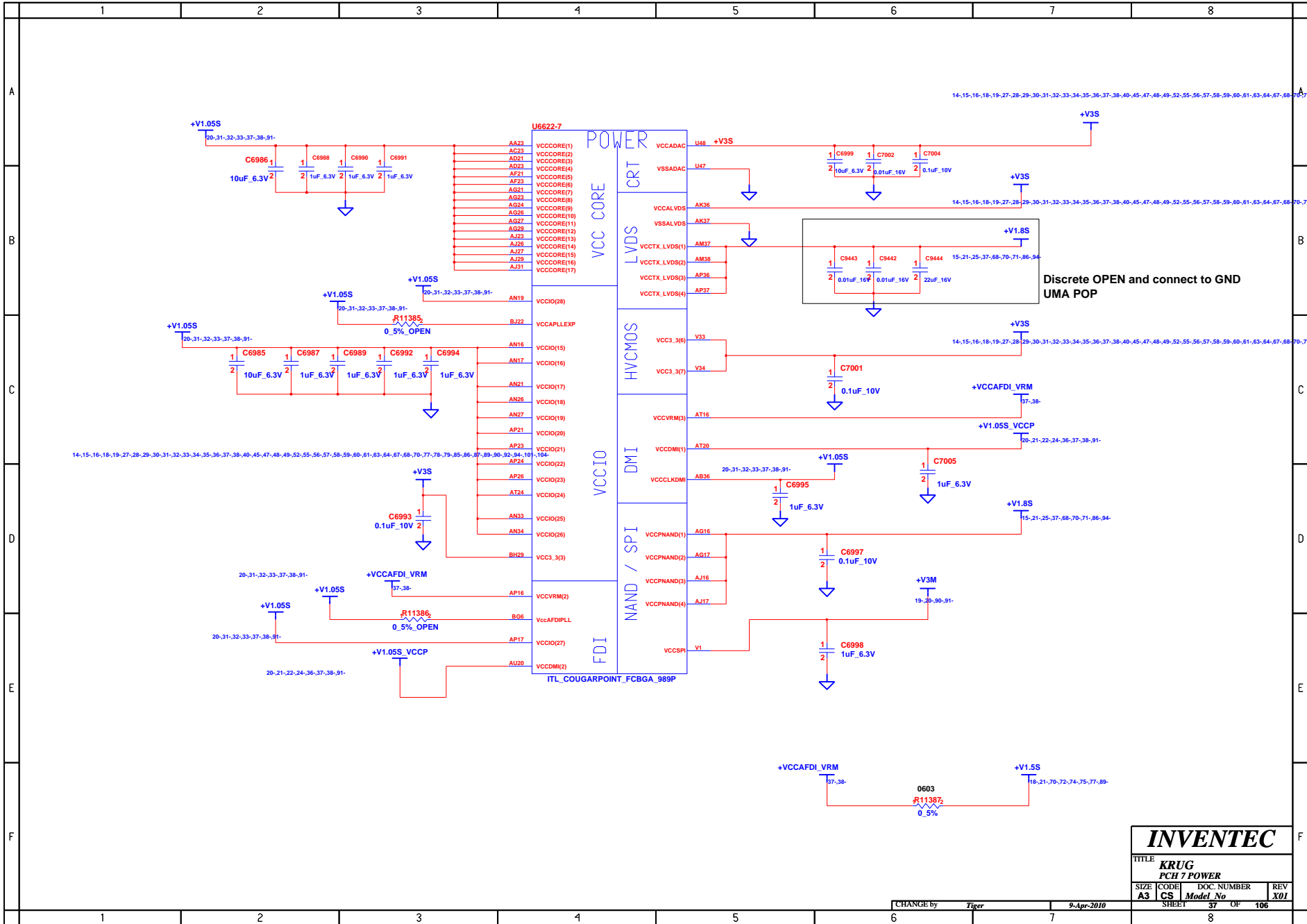
DELL CONFIDENTIAL/PROPRIETARY

INVENTEC

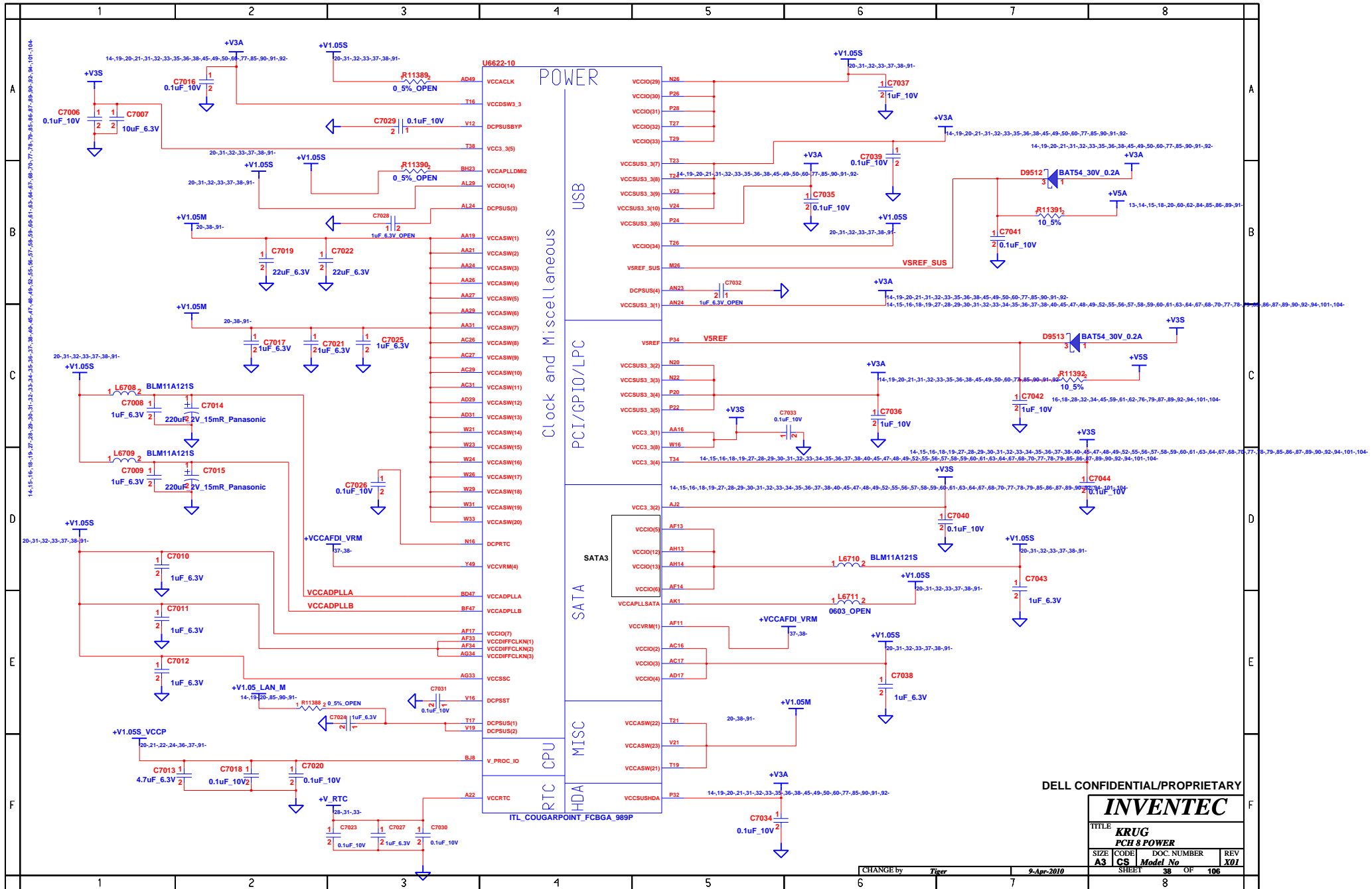
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TITLE KRUG PCH 6			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
SHEET		36 OF	106

CHANGE by *Tiker* 9-Apr-2010



INVENTEC			
TITLE KRUG			
PCH 7 POWER			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
CHANGE by Tiger		9-Apr-2010	
SHEET 37		OF 106	

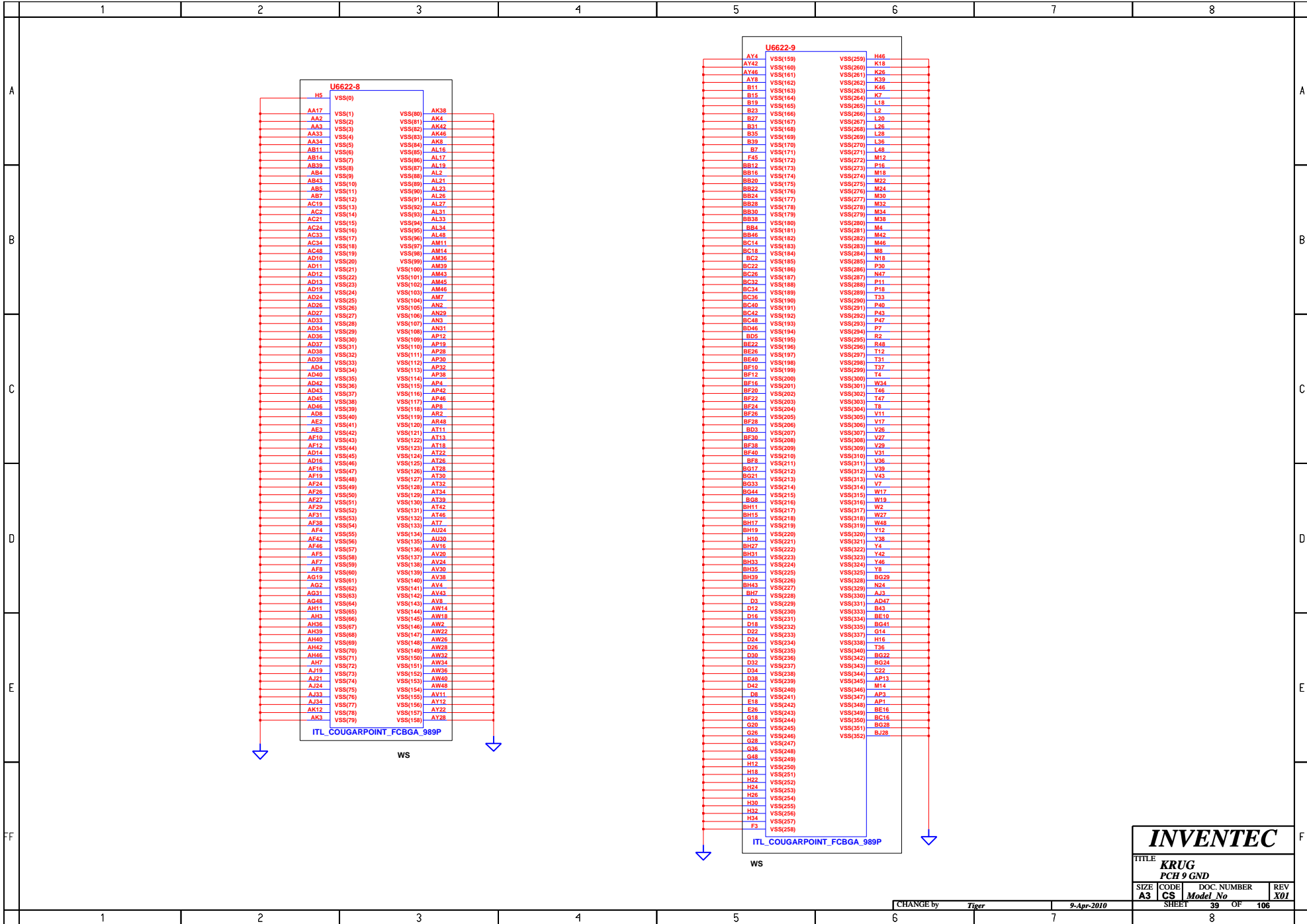


DELL CONFIDENTIAL/PROPRIETARY

INVENTEC

TITLE KRUG				
PCH 8 POWER				
SIZE	CODE	DOC. NUMBER	REV	
A3	CS	Model No	X01	
SHEET		38	OF	106

CHANGE by Tiger 9-Apr-2010

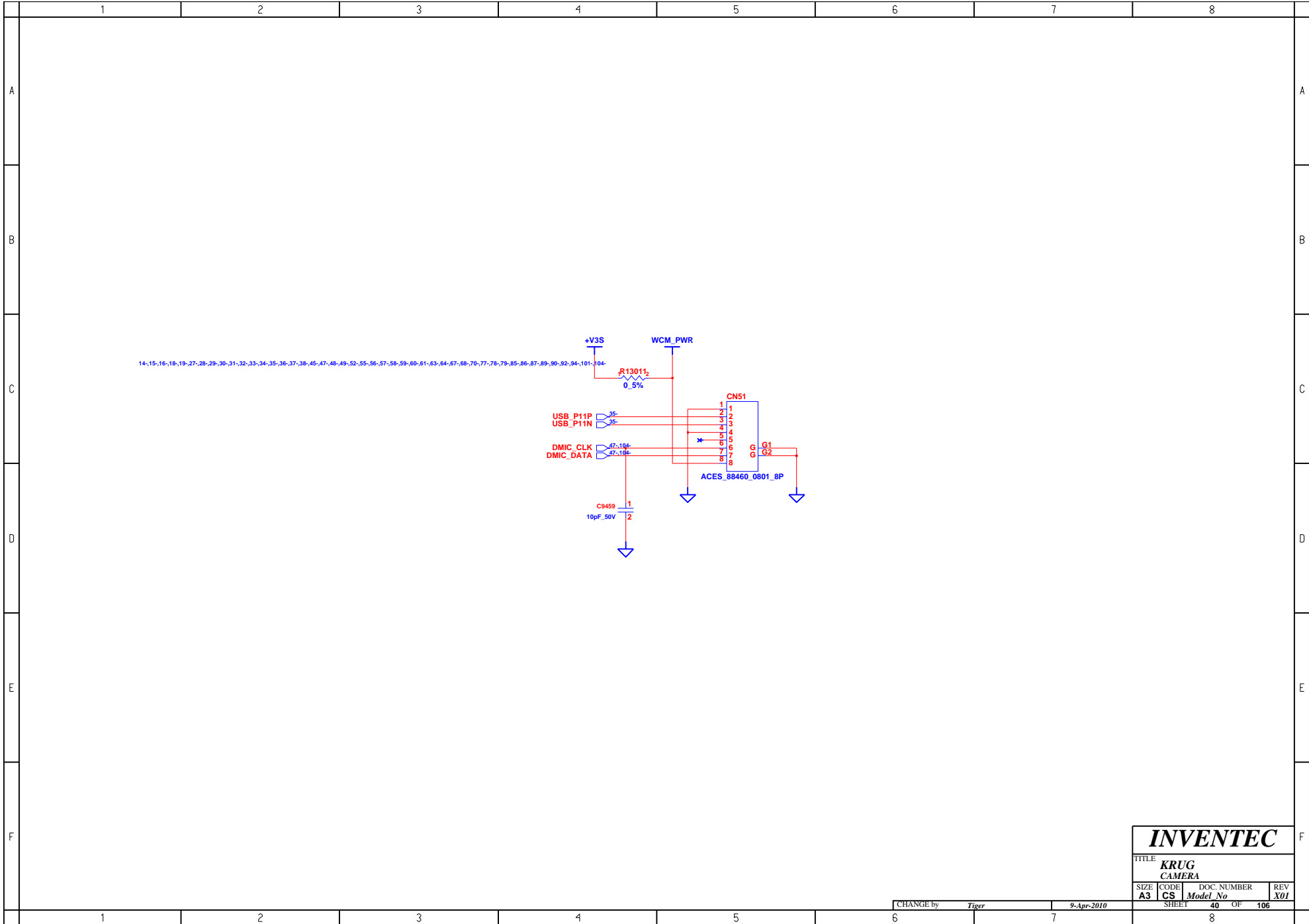


INVENTEC

TITLE **KRUG
PCH 9 GND**

SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET 39		OF 106	

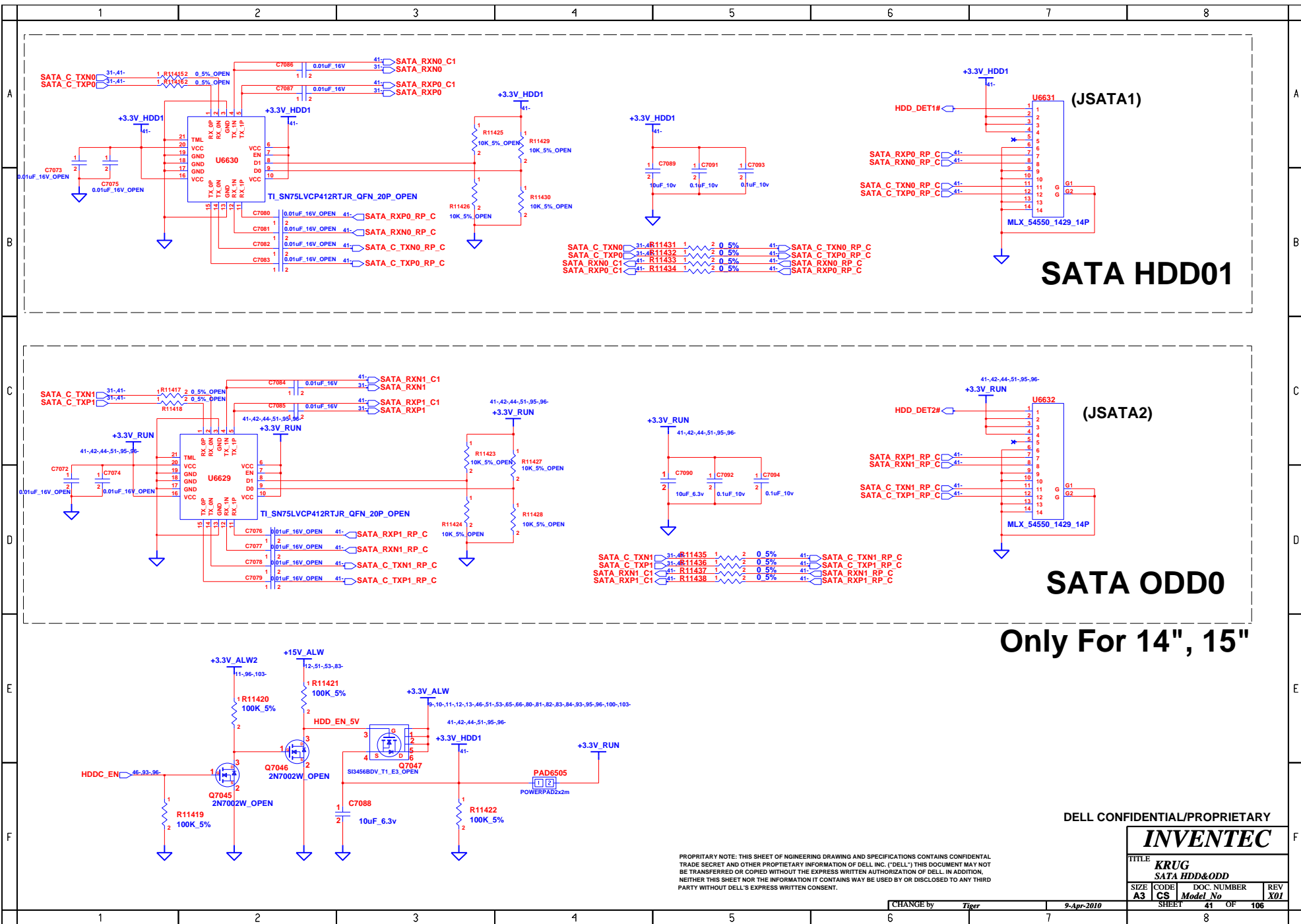
CHANGE by *Tiker* 9-Apr-2010



INVENTEC

TITLE			
KRUG CAMERA			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		40	OF 106

CHANGE by Tiger 9-Apr-2010



SATA HDD01

SATA ODD0

Only For 14", 15"

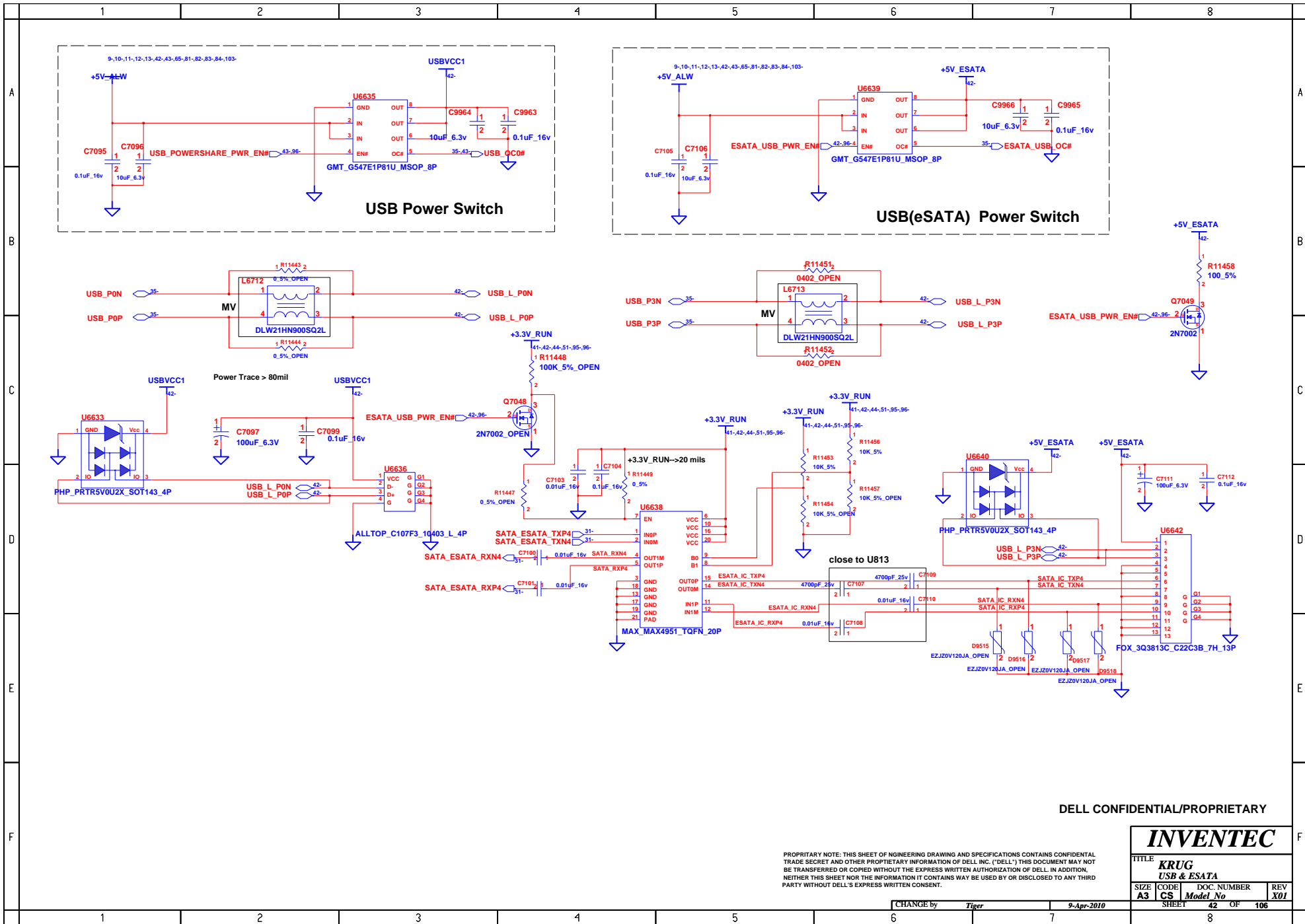
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INVENTEC

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TITLE				
KRUG				
SATA HDD&ODD				
SIZE	CODE	DOC. NUMBER	REV	
A3	CS	Model No	X01	
SHEET			41	OF 106

CHANGE by *Tiker* 9-Apr-2010

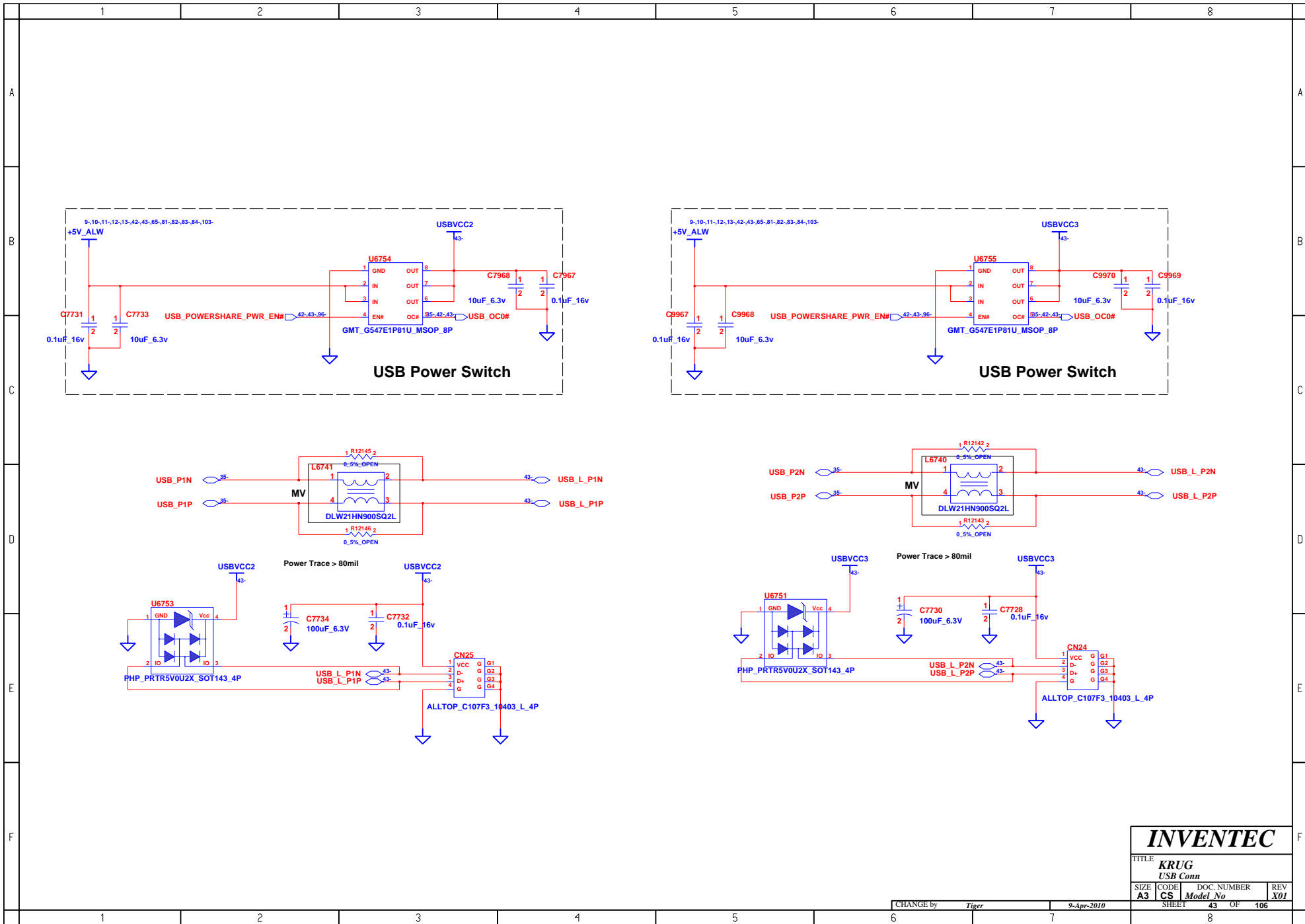


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INVENTEC

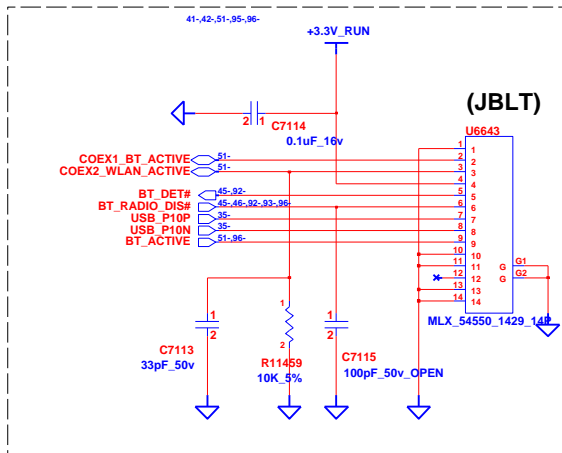
TITLE USB & ESATA			
SIZE A3	CODE CS	DOC NUMBER <i>Model No</i>	REV X01
SHEET 42		OF 106	

CHANGE by *Tiger* 9-Apr-2010



INVENTEC			
TITLE KRUG USB Conn			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET 43		OF 106	

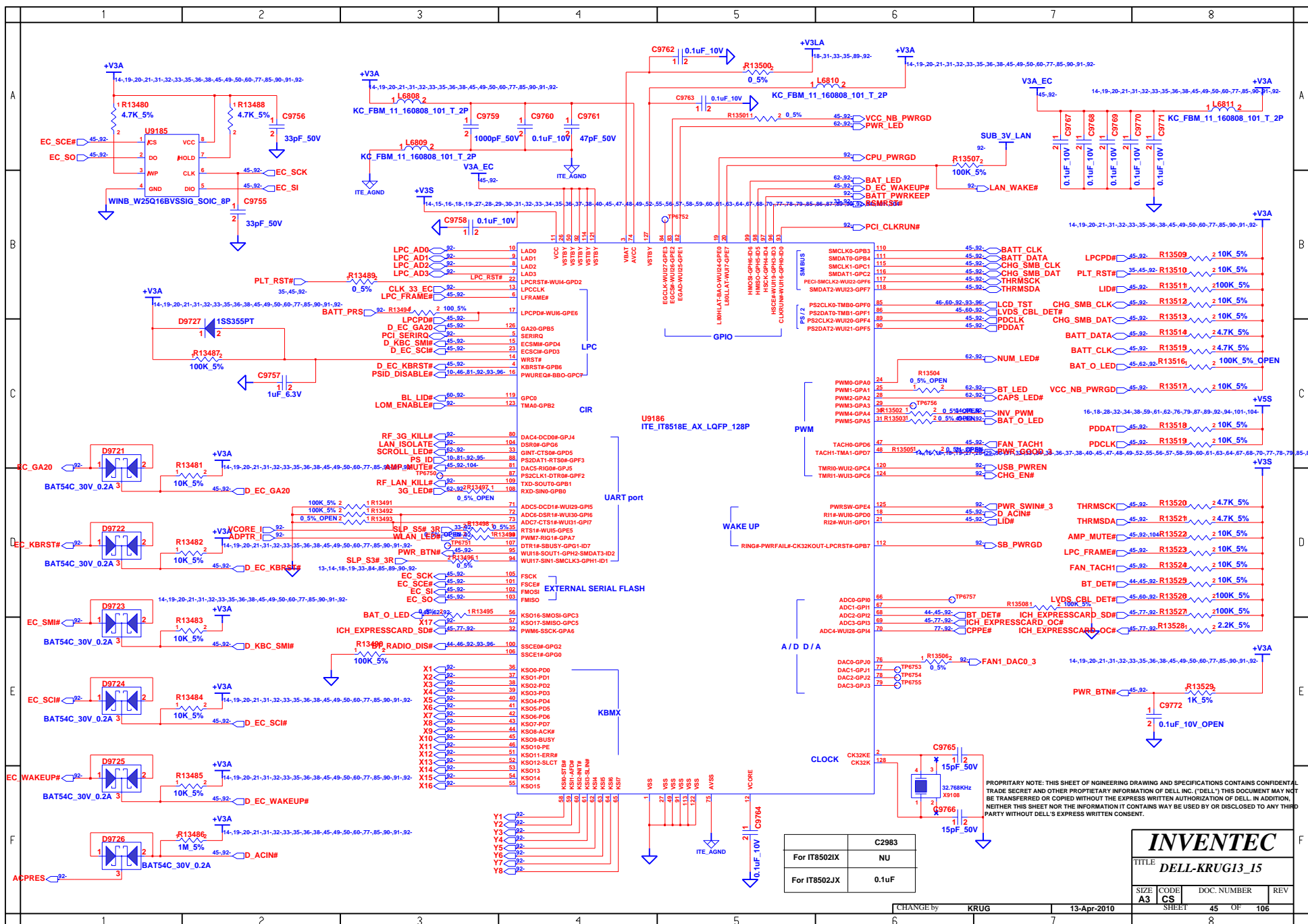
BlueTooth



INVENTEC

TITLE			
KRUG			
BT			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		44 OF	106

CHANGE by Tiger 9-Apr-2010

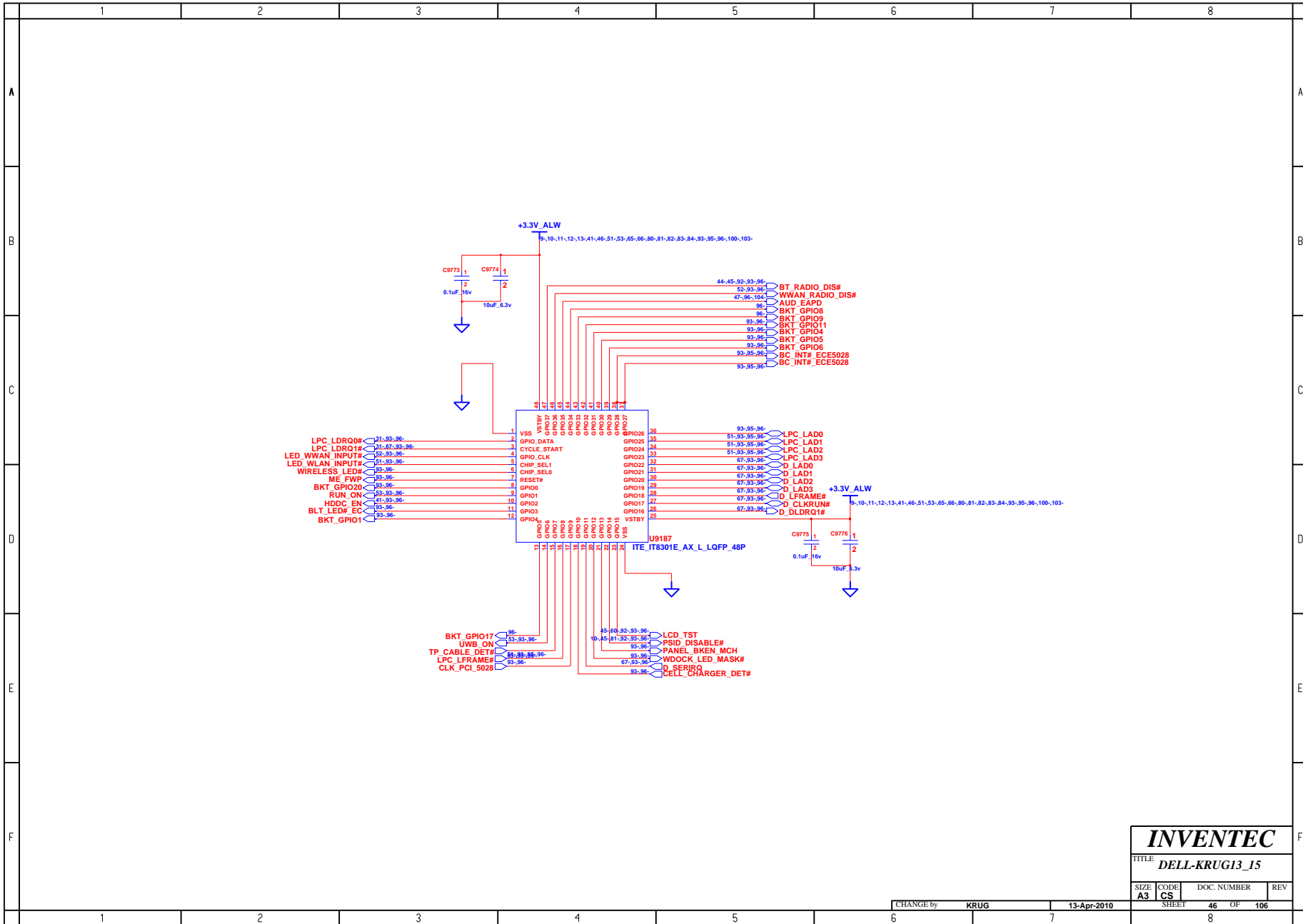


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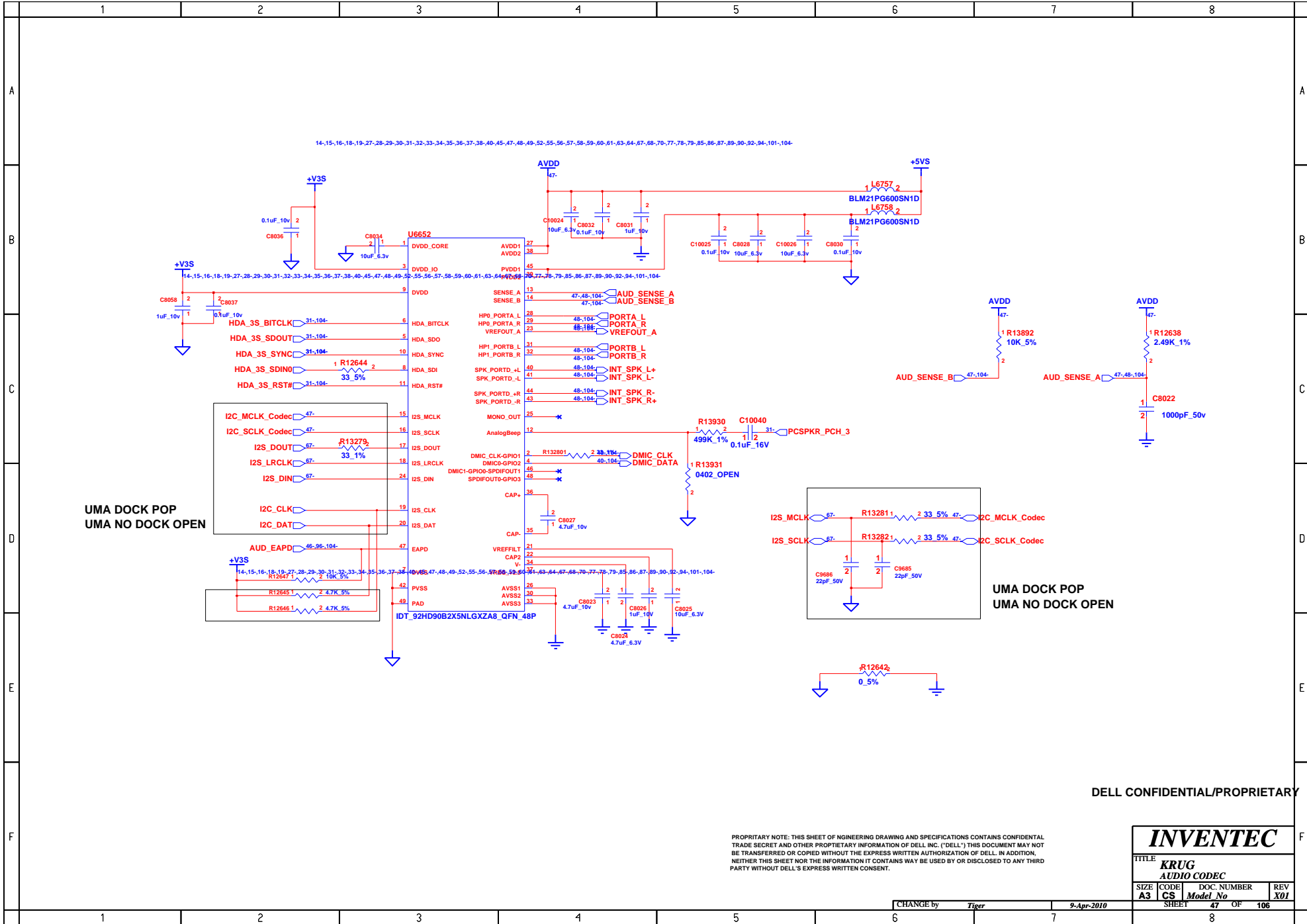
For IT8502IX	NU
For IT8502JX	0.1uF

INVENTEC
DELL-KRUG13_15

TITLE	DELL-KRUG13_15		
SIZE	CODE	DOC. NUMBER	REV
A3	CS		



INVENTEC			
TITLE DELL-KRUG13_15			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		
CHANGE by KRUG		13-Apr-2010	SHEET 46 OF 106
		7	8



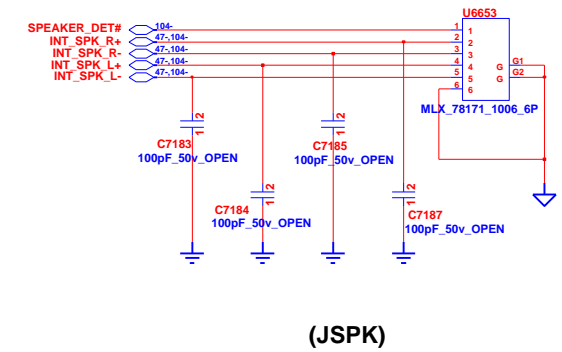
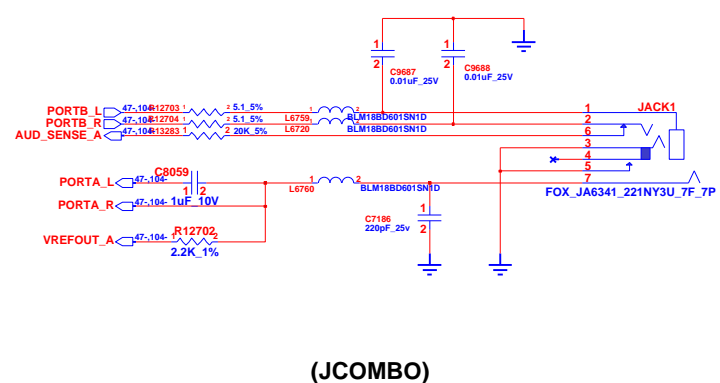
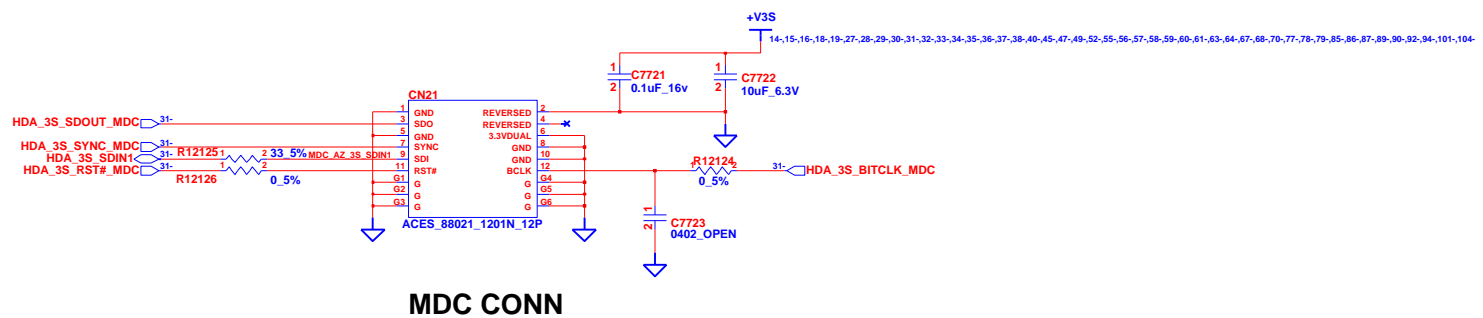
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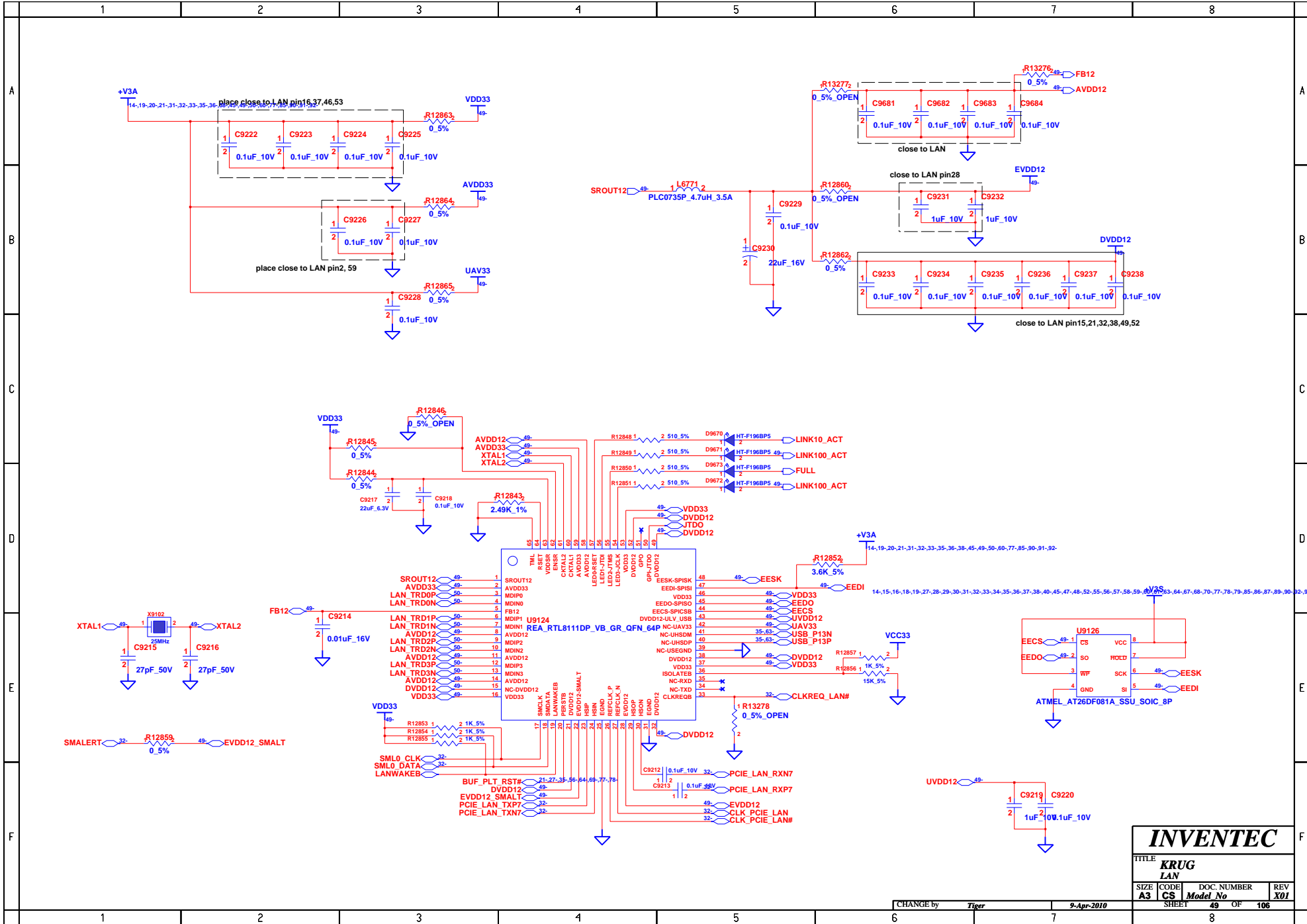
INVENTEC

TITLE			
KRUG AUDIO CODEC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		47	OF 106

CHANGE by *Tiker* 9-Apr-2010

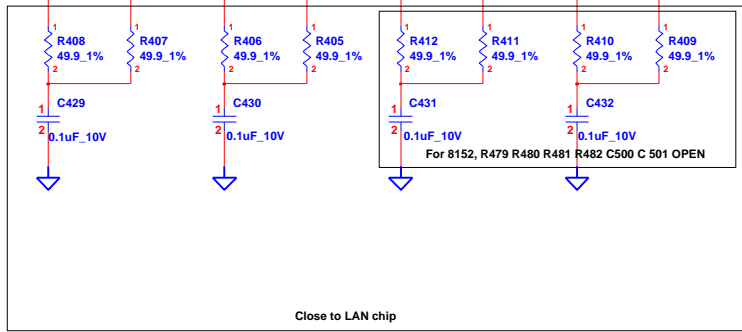
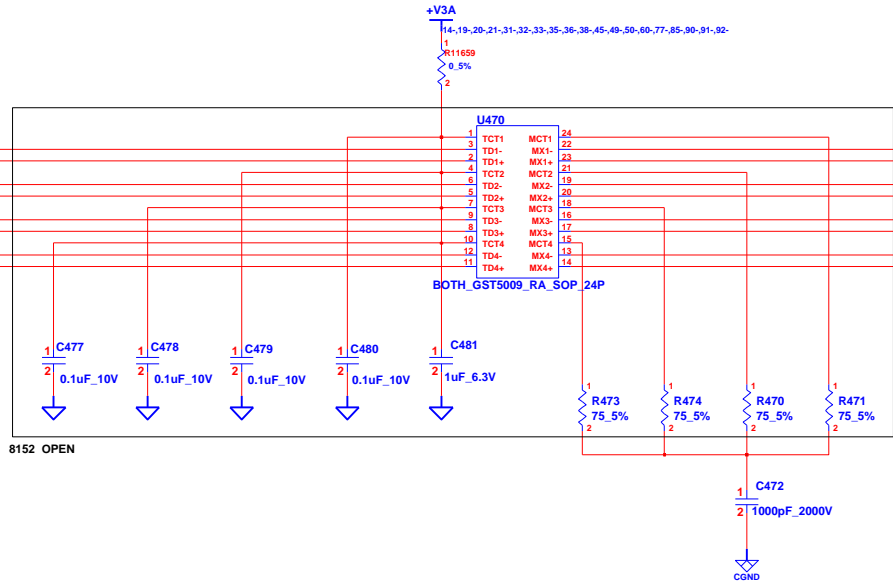
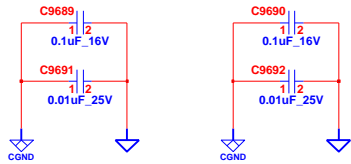
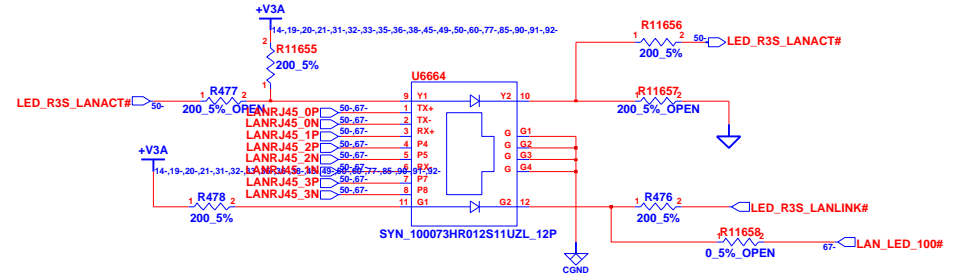


INVENTEC			
TITLE KRUG			
MDC/Spaker/Combo JACK			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET		48	OF 106
		8	

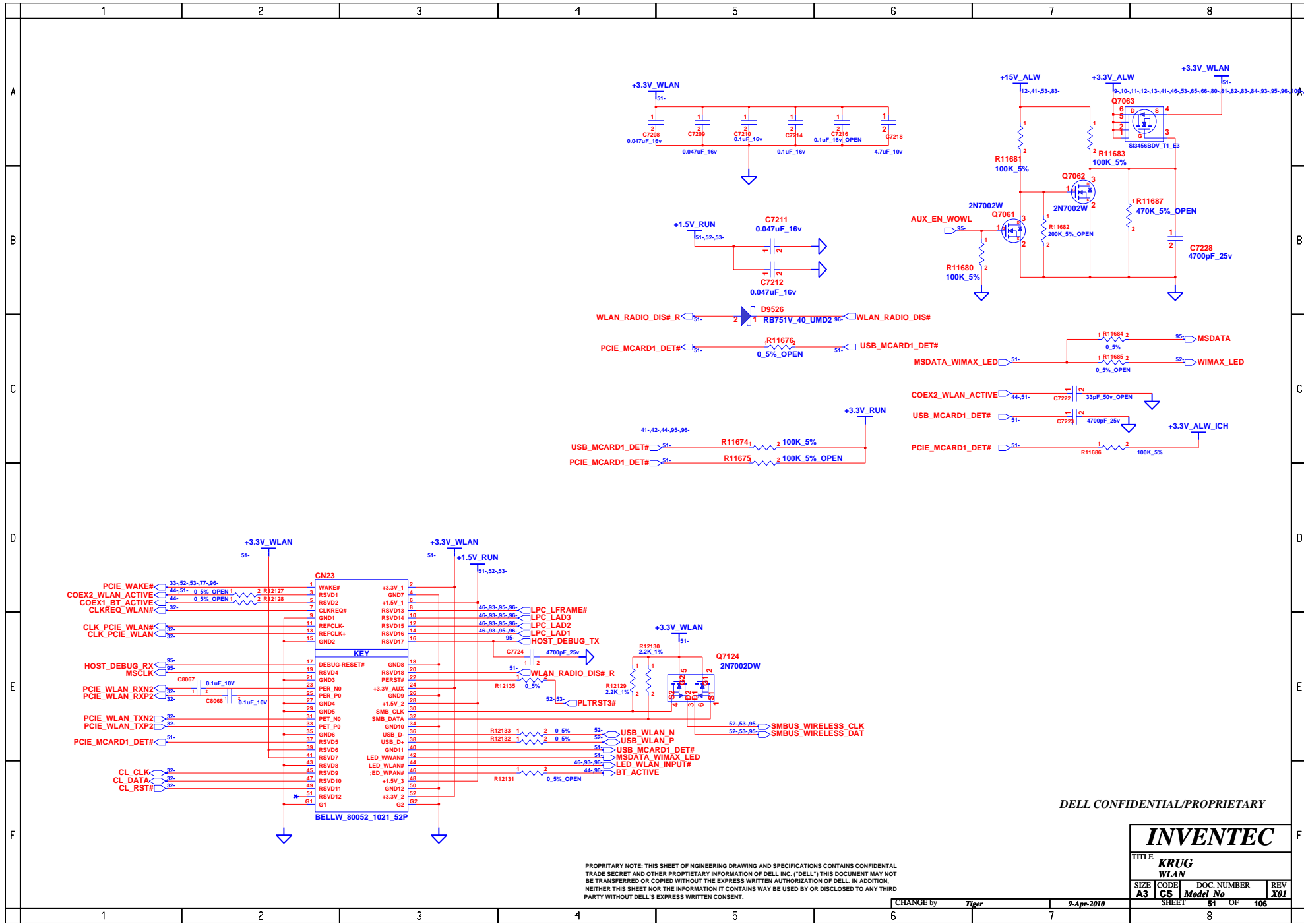


INVENTEC			
TITLE KRUG			
LAN			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiker</i>		9-Apr-2010	
SHEET 49		OF 106	

**Docking OPEN
No Docking POP**



INVENTEC			
TITLE KRUG RJ45/TRANSFORMER			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET		50 OF	106



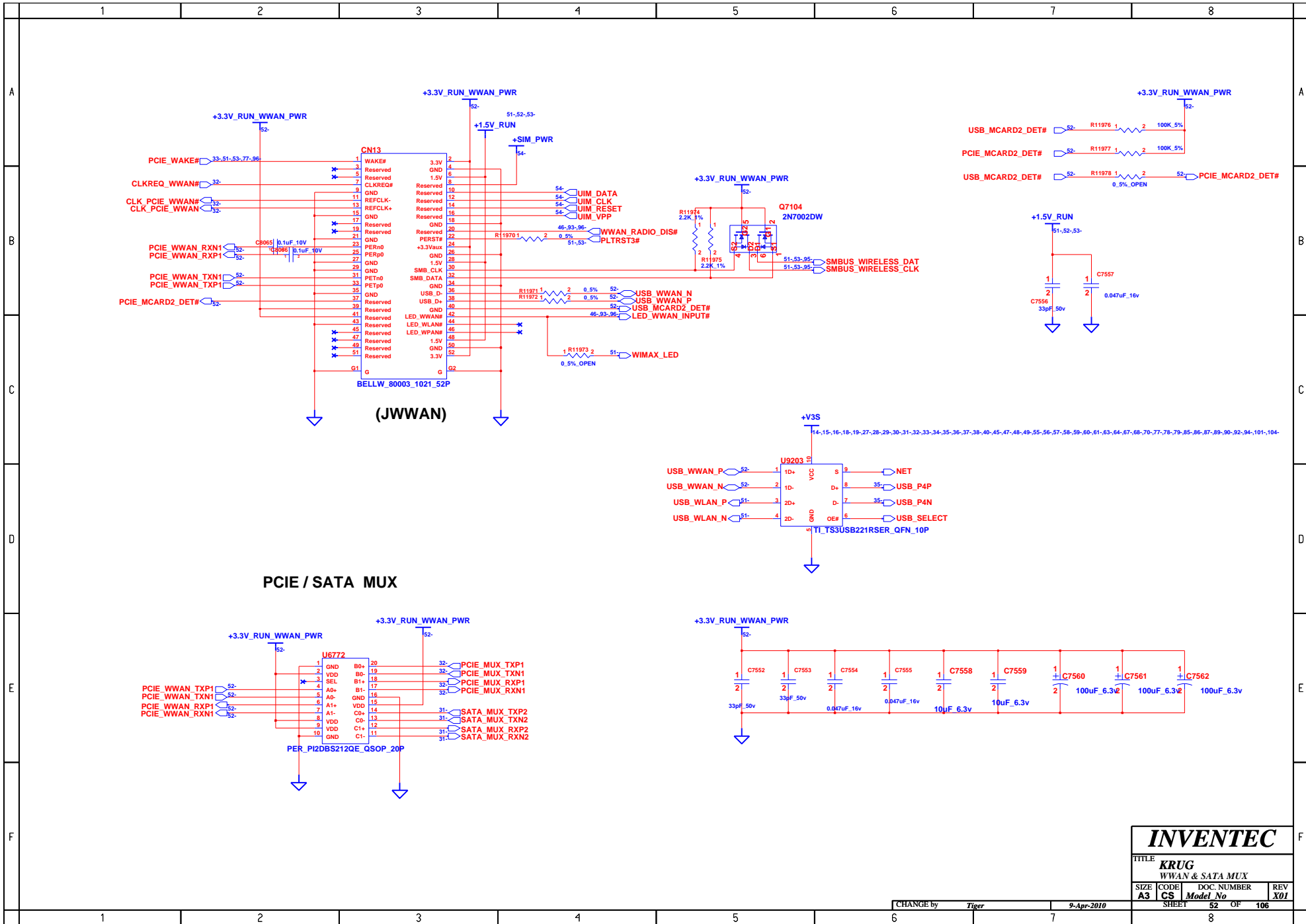
DELL CONFIDENTIAL/PROPRIETARY

INVENTEC

TITLE			
KRUG			
WLAN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		51	OF 106

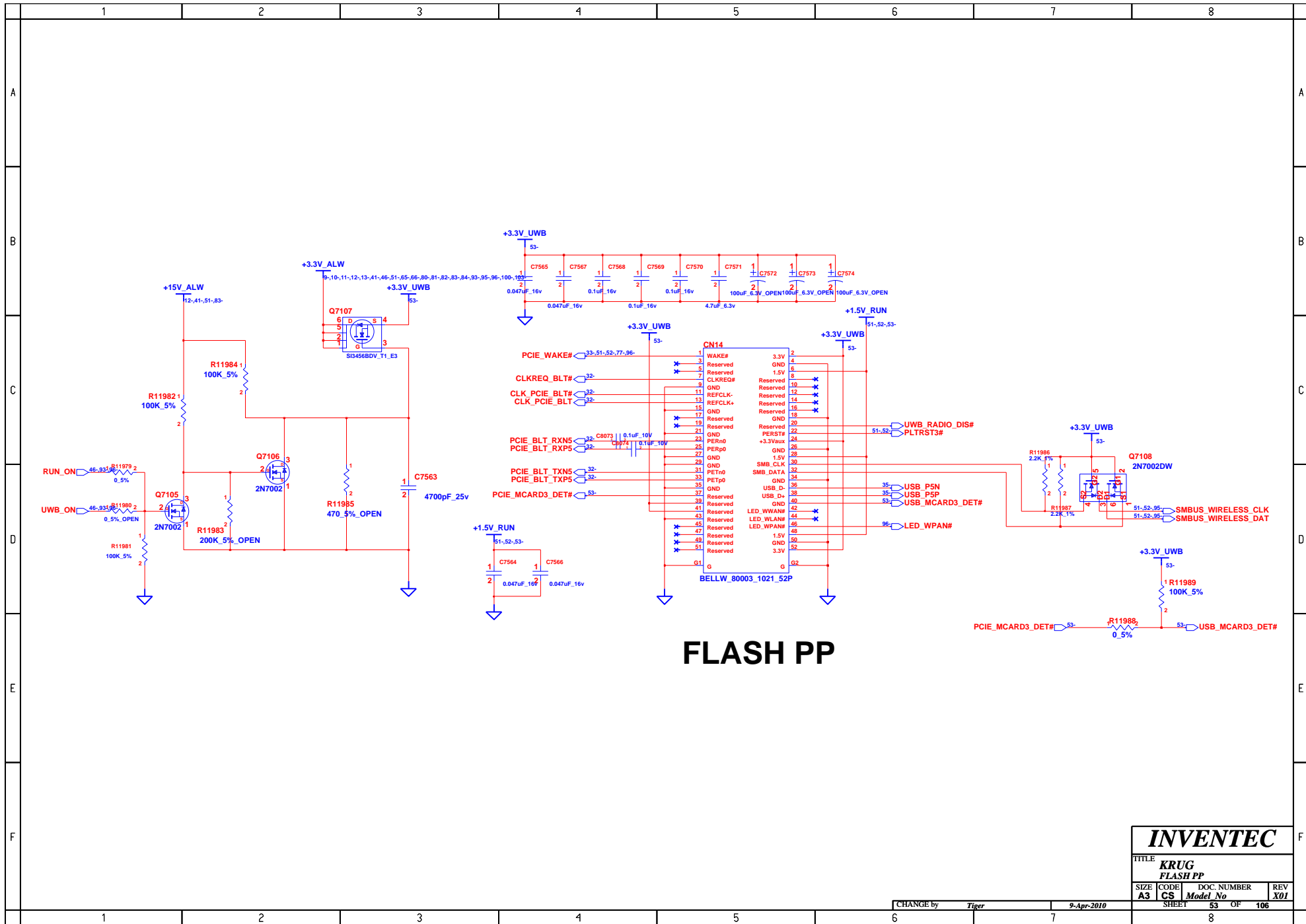
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CHANGE by *Tiger* 9-Apr-2010

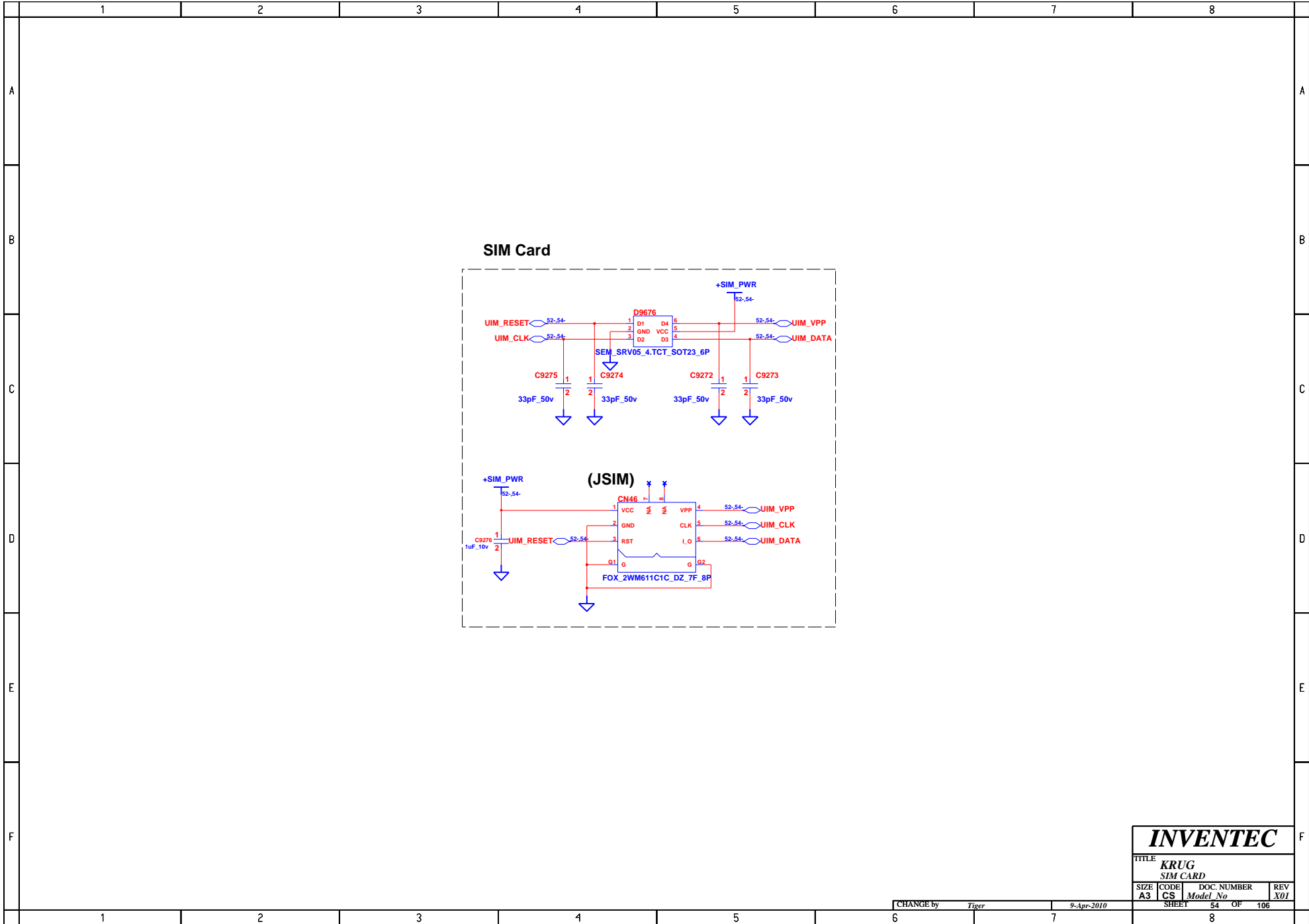


PCIE / SATA MUX

INVENTEC			
TITLE KRUG			
WWAN & SATA MUX			
SIZE A3	CODE CS	DOC NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET		52 OF 106	
1		8	



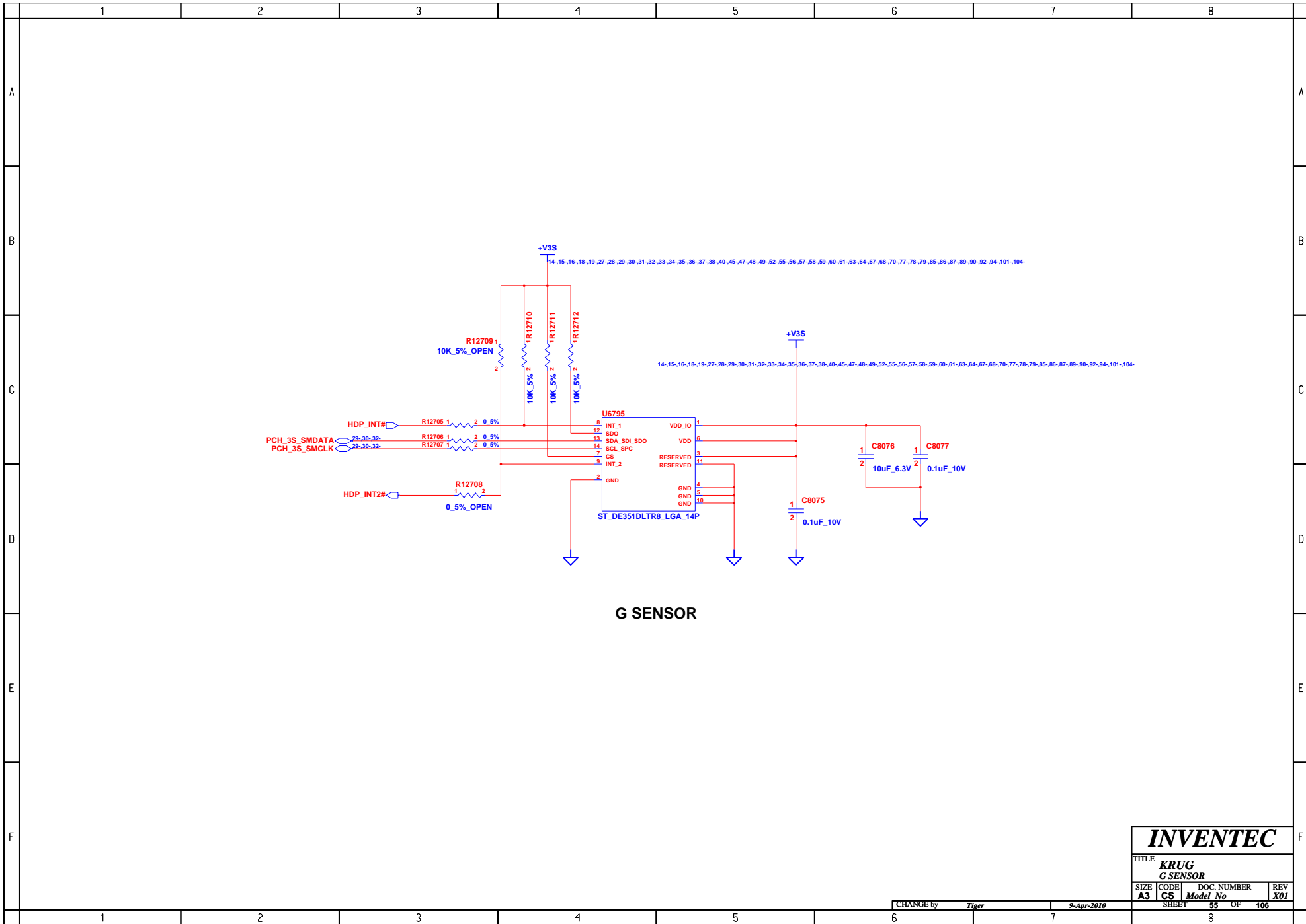
INVENTEC			
TITLE KRUG FLASH PP			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET 53 OF 106			



INVENTEC

TITLE			
KRUG			
SIM CARD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		54 OF	106
8			

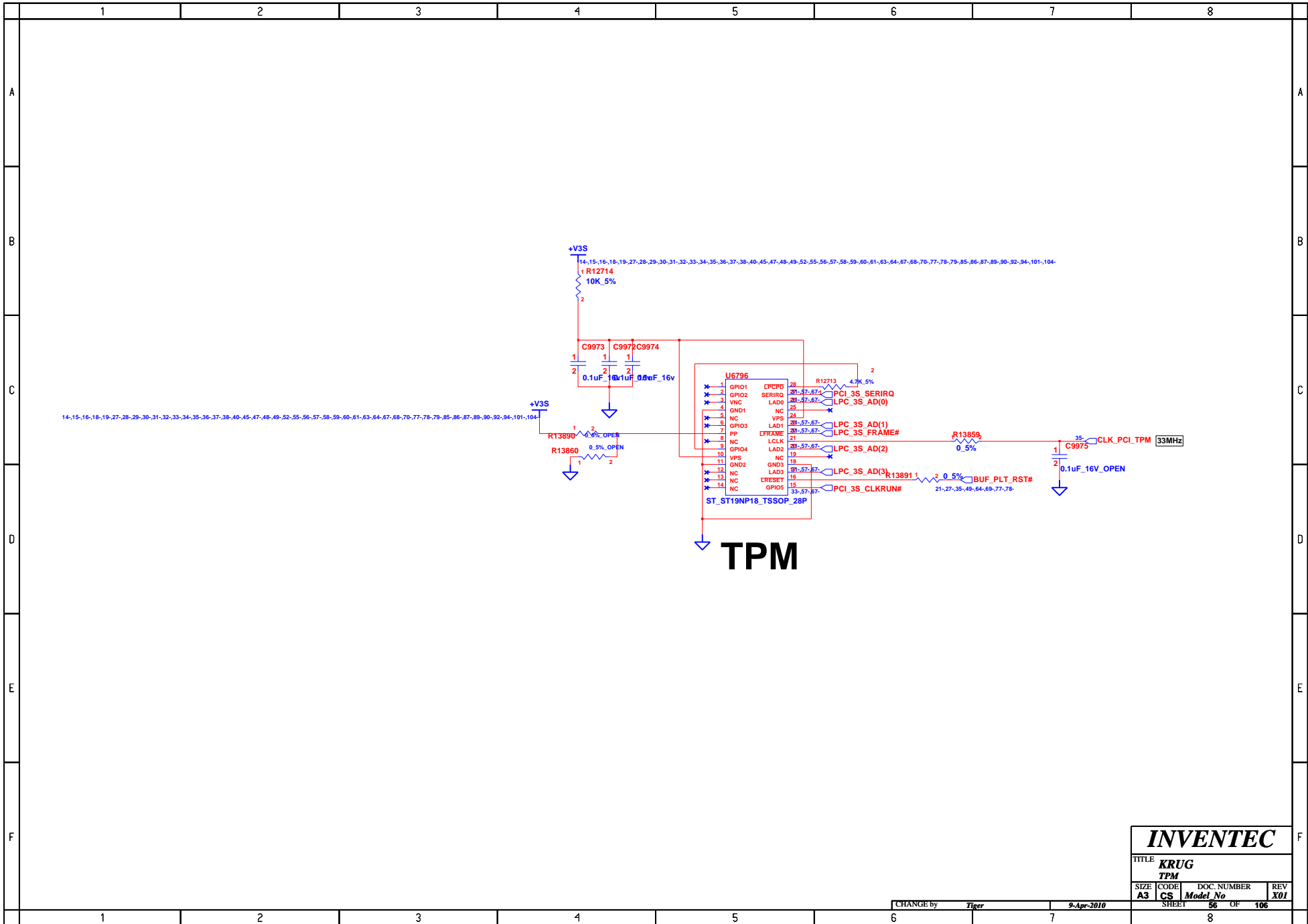
CHANGE by Tiger 9-Apr-2010

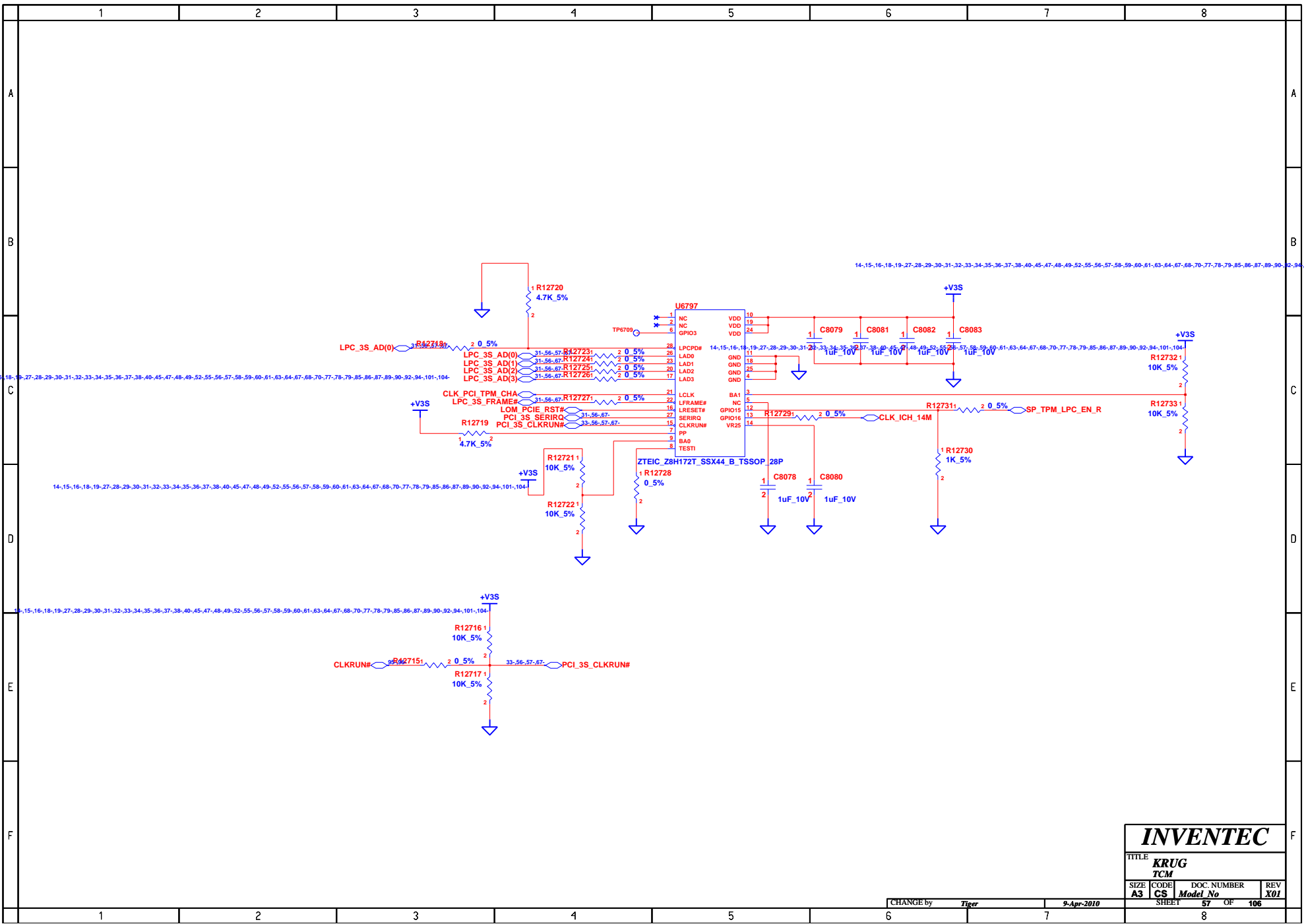


INVENTEC

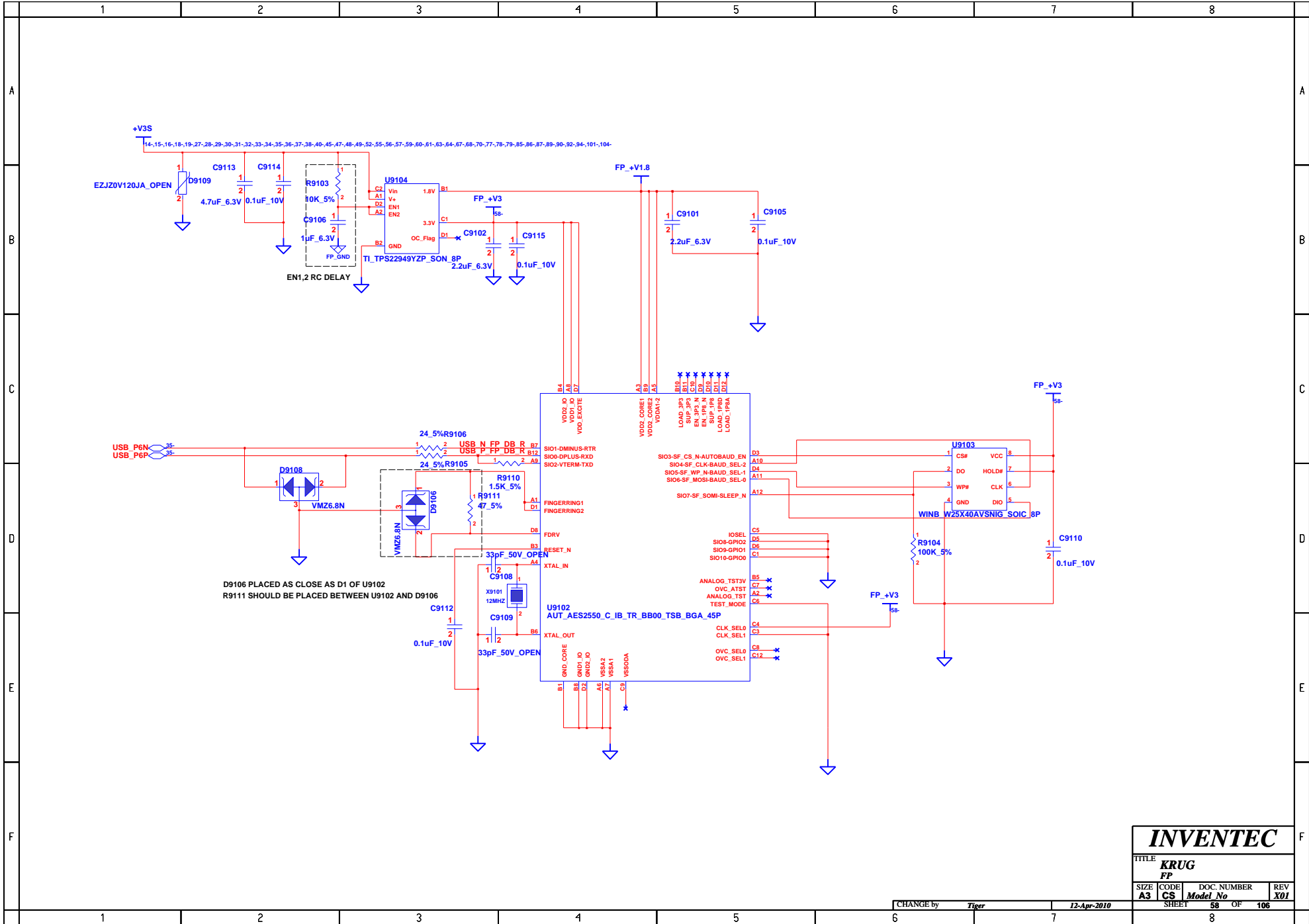
TITLE			
KRUG			
G SENSOR			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		55 OF	106

CHANGE by *Tiger* 9-Apr-2010





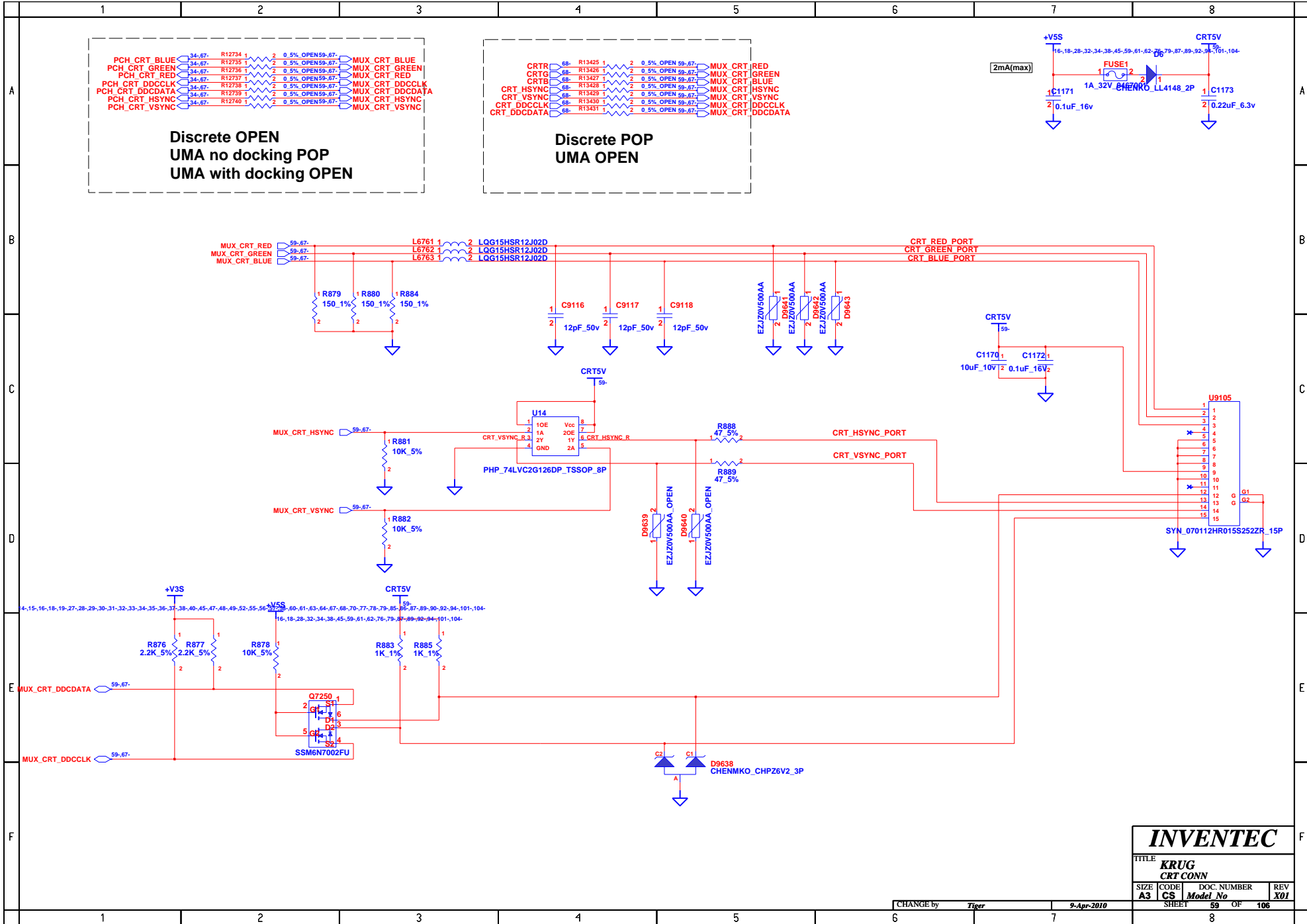
INVENTEC			
TITLE KRUG TCM			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET		57 OF 106	
		8	



INVENTEC

TITLE			
KRUG			
FP			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		58 OF	106

CHANGE by *Tiger* 12-Apr-2010

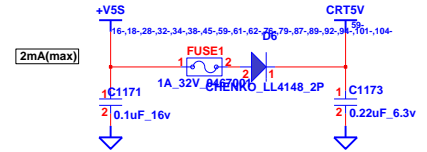


PCH CRT BLUE 34-67- R12734 1 2 0.5% OPEN 59-67- MUX CRT BLUE
 PCH CRT GREEN 34-67- R12736 1 2 0.5% OPEN 59-67- MUX CRT GREEN
 PCH CRT RED 34-67- R12737 1 2 0.5% OPEN 59-67- MUX CRT RED
 PCH CRT DDCCLK 34-67- R12738 1 2 0.5% OPEN 59-67- MUX CRT DDCCLK
 PCH CRT HSYNC 34-67- R12740 1 2 0.5% OPEN 59-67- MUX CRT HSYNC
 PCH CRT VSYNC 34-67- R12740 1 2 0.5% OPEN 59-67- MUX CRT VSYNC

**Discrete OPEN
 UMA no docking POP
 UMA with docking OPEN**

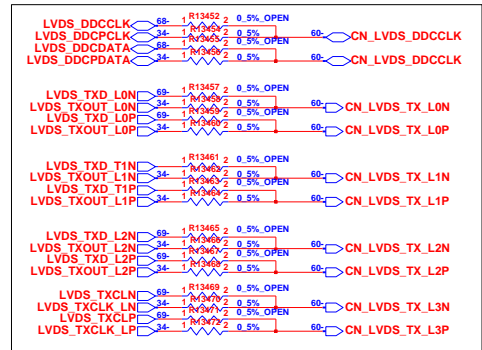
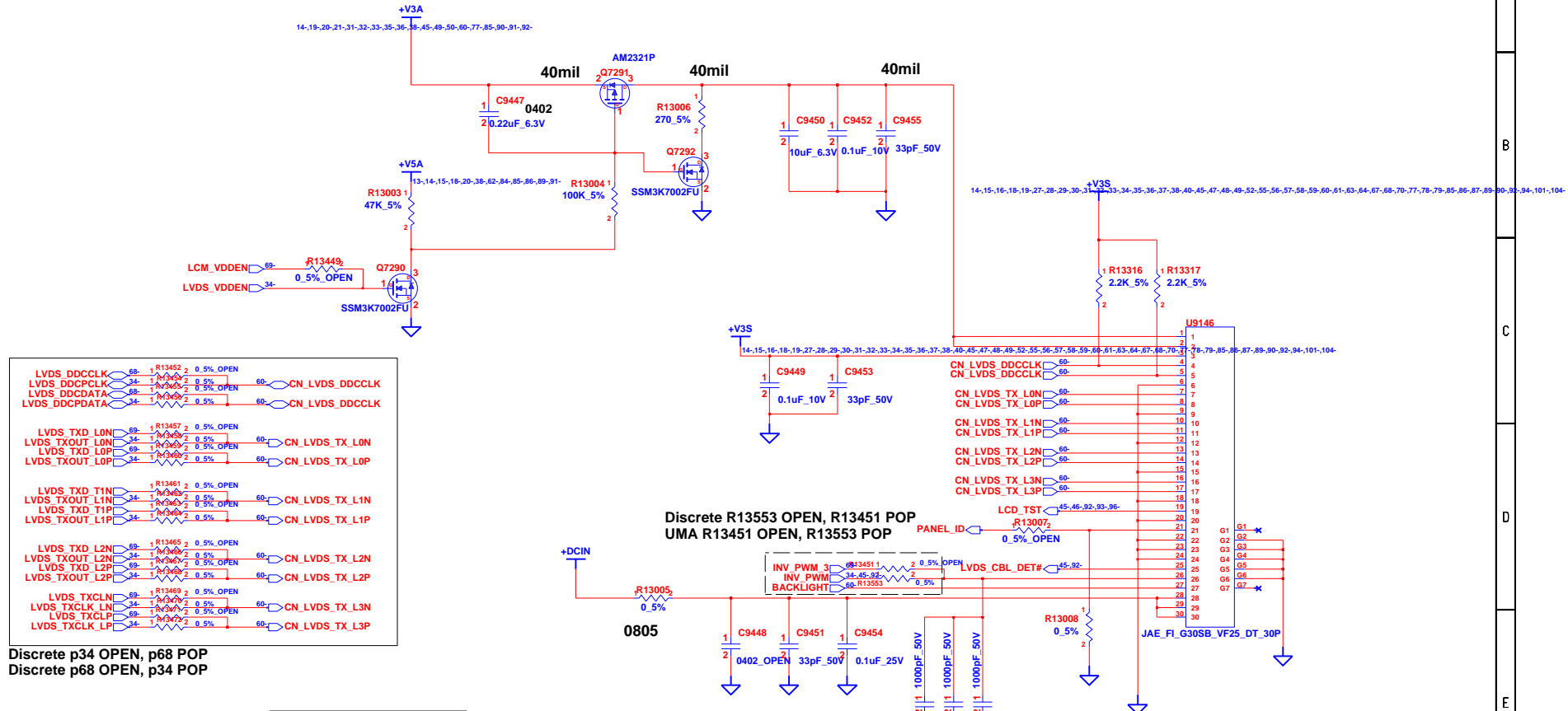
CRTR 68- R13425 1 2 0.5% OPEN 59-67- MUX CRT RED
 CRTG 68- R13426 1 2 0.5% OPEN 59-67- MUX CRT GREEN
 CRTB 68- R13427 1 2 0.5% OPEN 59-67- MUX CRT BLUE
 CRT_HSYNC 68- R13428 1 2 0.5% OPEN 59-67- MUX CRT HSYNC
 CRT_VSYNC 68- R13429 1 2 0.5% OPEN 59-67- MUX CRT VSYNC
 CRT_DDCCLK 68- R13430 1 2 0.5% OPEN 59-67- MUX CRT DDCCLK
 CRT_DDCDATA 68- R13431 1 2 0.5% OPEN 59-67- MUX CRT DDCDATA

**Discrete POP
 UMA OPEN**



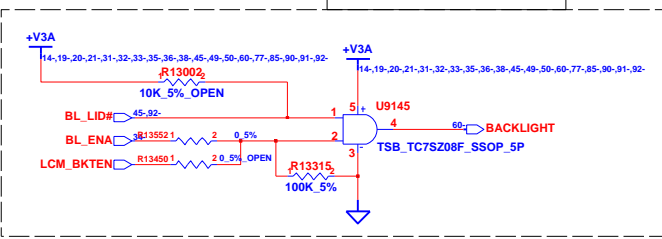
INVENTEC			
TITLE KRUG CRT CONN			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiker</i>		9-Apr-2010	SHEET 59 OF 106

LVDS Interface



Discrete p34 OPEN, p68 POP
Discrete p68 OPEN, p34 POP

LCD brightness control

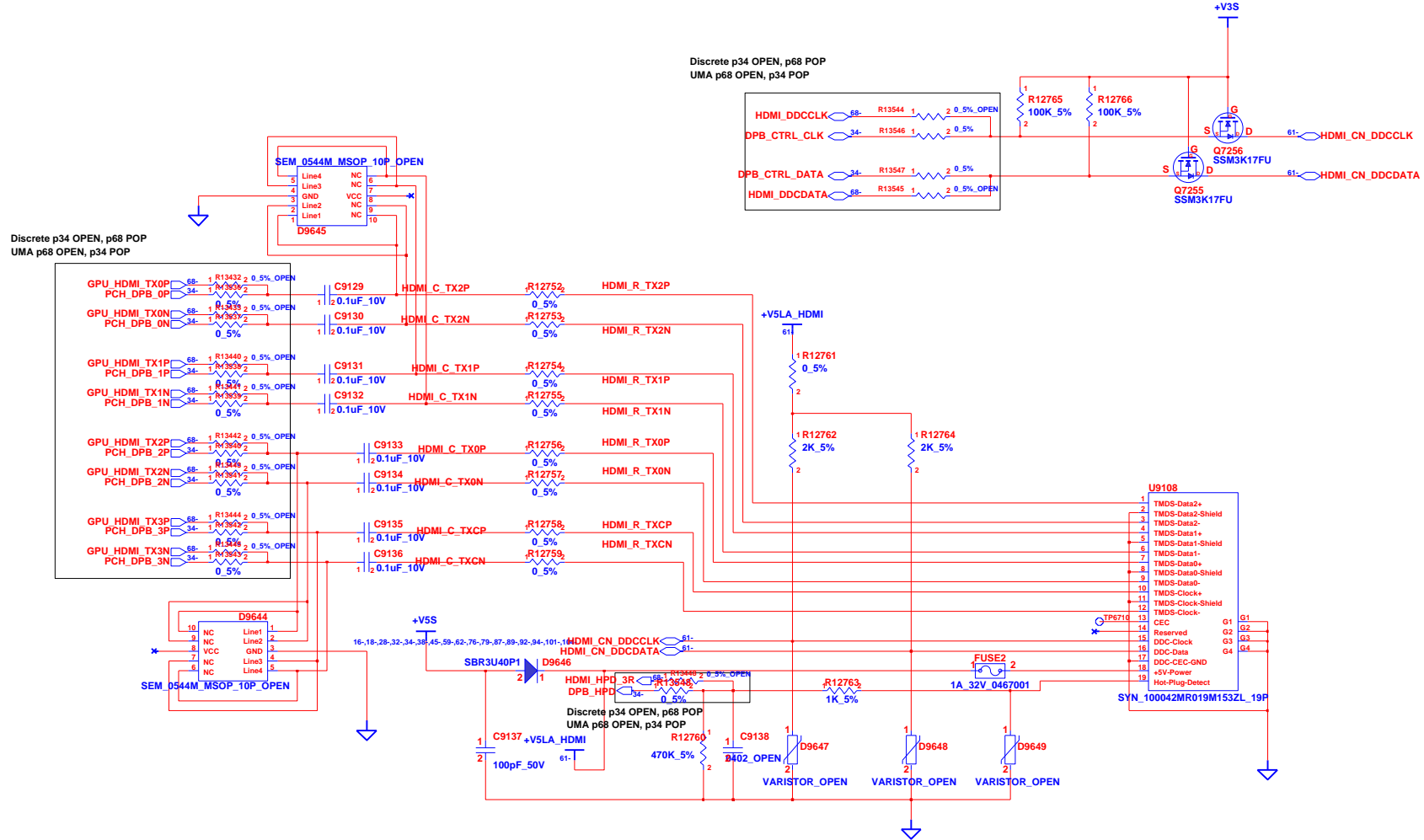


Discrete R13552 OPEN, R13450 POP
UMA R13450 OPEN, R13552 POP

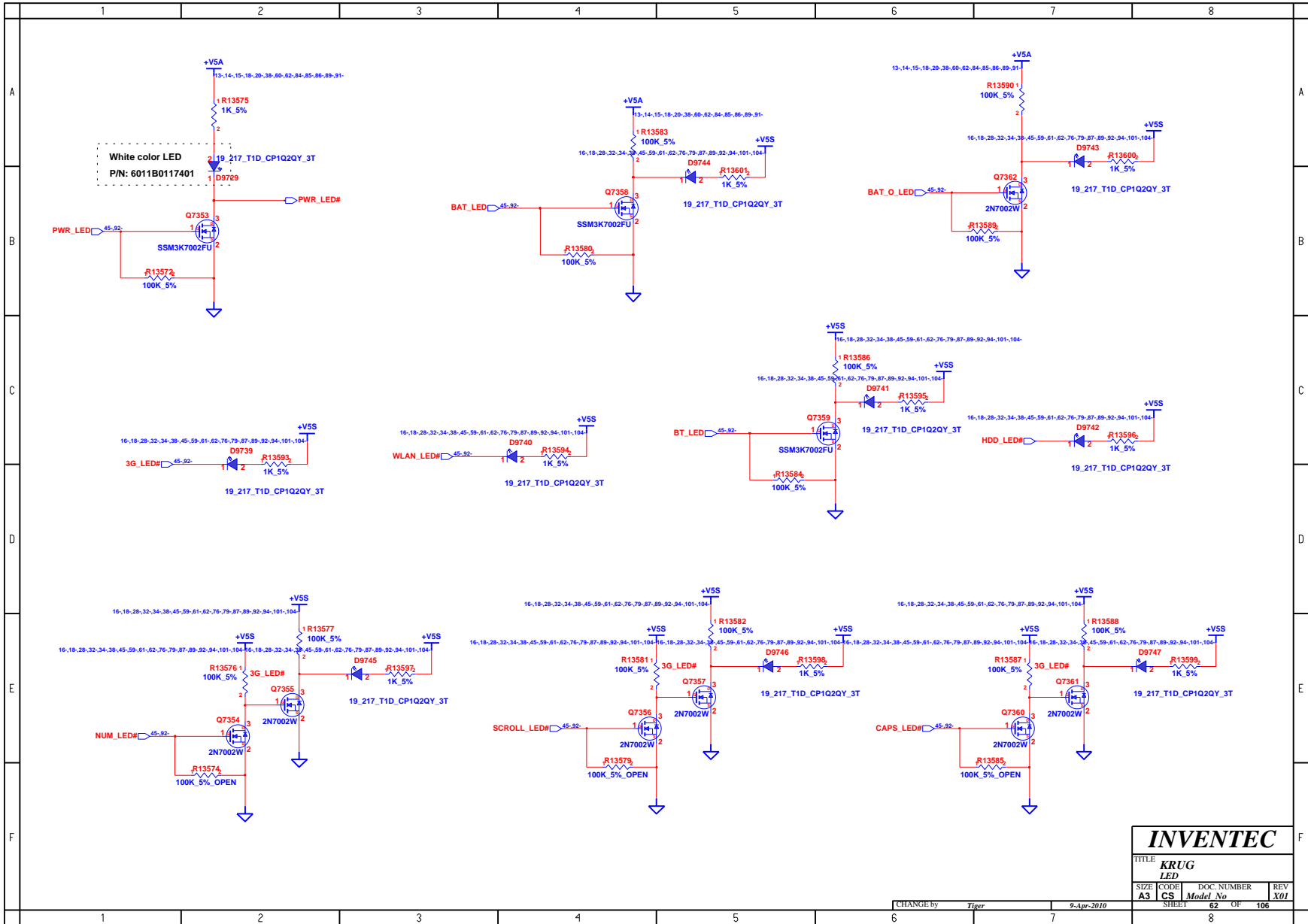
INVENTEC			
TITLE KRUG LVDS CONN			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
SHEET		60 OF	106

CHANGE by Tiger 9-Apr-2010

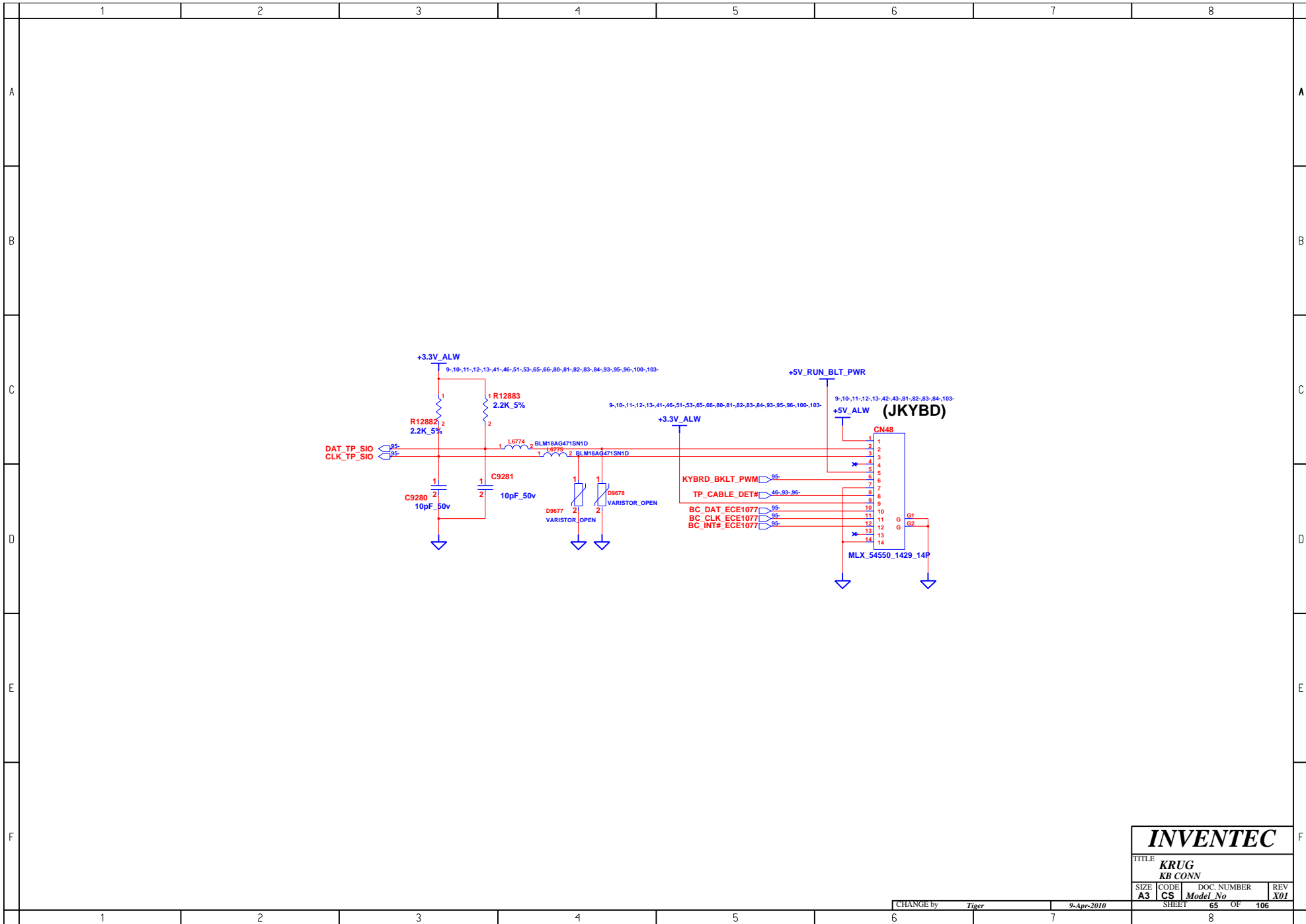
14,15,16,18,19,27,28,29,30,31,32,33,34,35,36,37,38,40,45,47,48,49,52,55,56,57,58,59,60,63,64,67,68,70,77,78,79,85,86,87,89,90,92,94,101,104



INVENTEC				
TITLE KRUG HDMI				
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01	
CHANGE by <i>Tiger</i>		9-Apr-2010		
SHEET 61 OF 106			8	



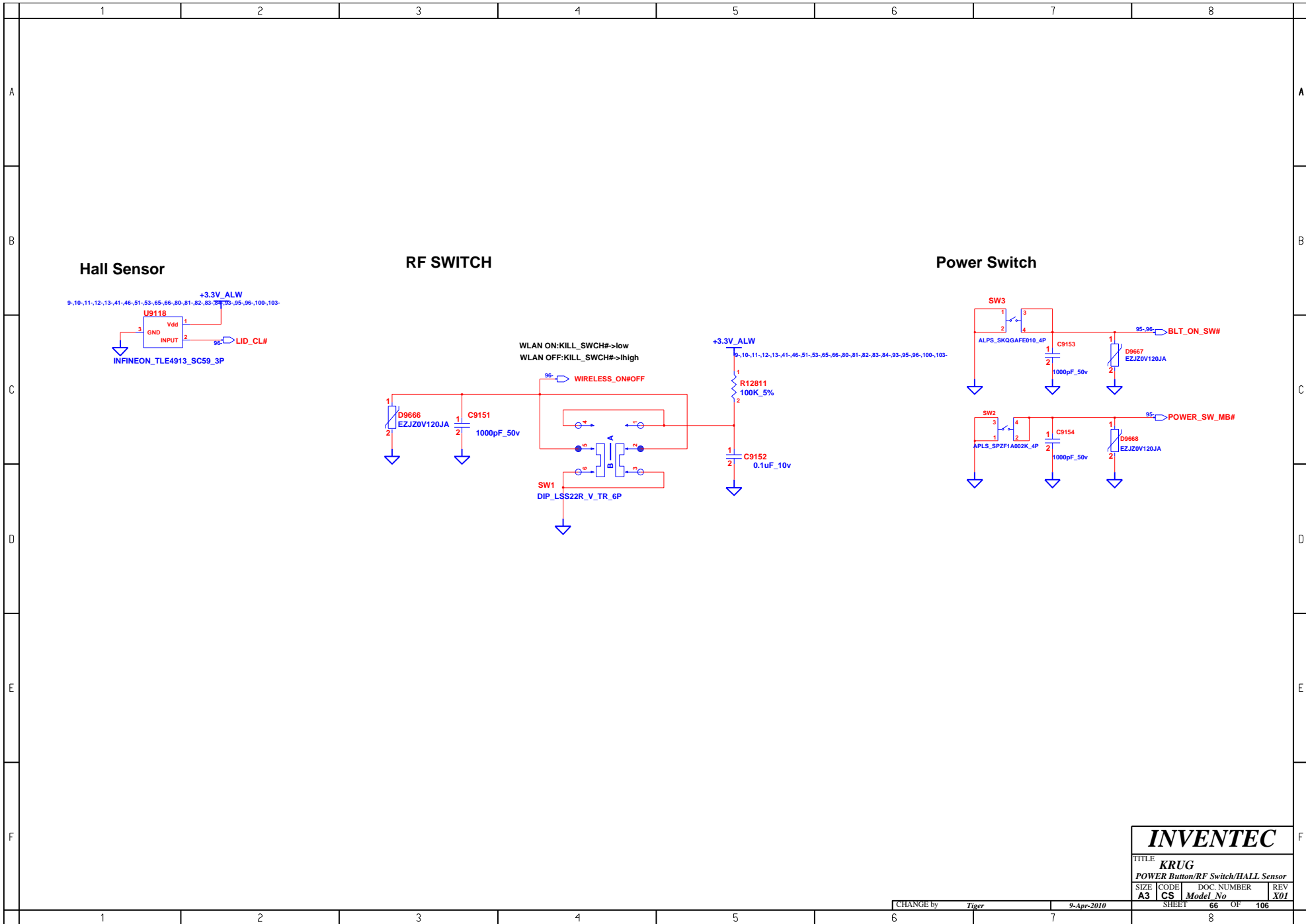
INVENTEC			
TITLE KRUG			
LED			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET 62		OF 106	

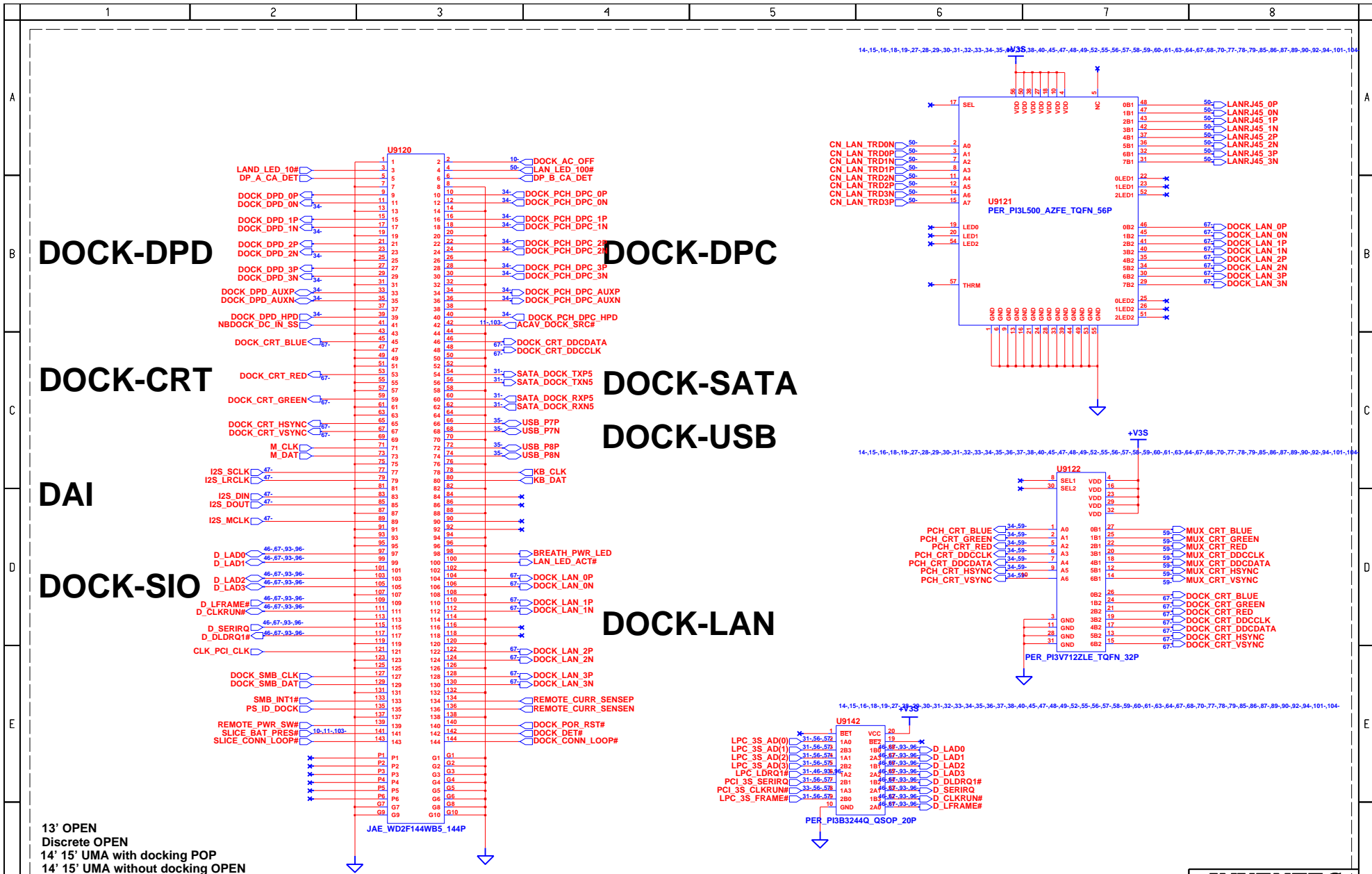


INVENTEC

TITLE			
KRUG			
KB CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		65	OF 106

CHANGE by Tiger 9-Apr-2010





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INVENTEC

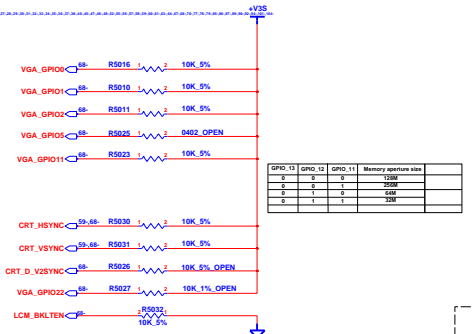
TITLE				
KRUG				
E-DOCKING				
SIZE	CODE	DOC NUMBER	REV	
A3	CS	Model No	67	X01
SHEET		OF 106		

CHANGE by	Tiker	9-Apr-2010
-----------	-------	------------

PARK XT-S3 P/N = 6019B0730201
M92 XTX-S2 P/N = 6019B0678502

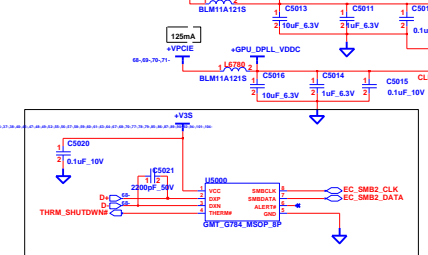
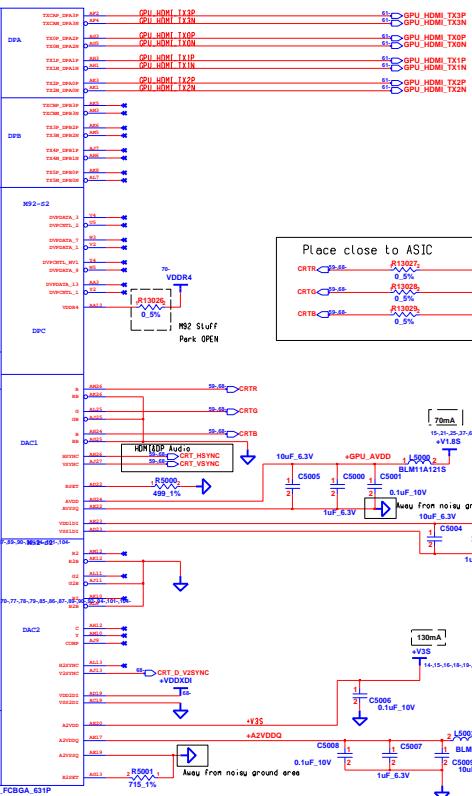
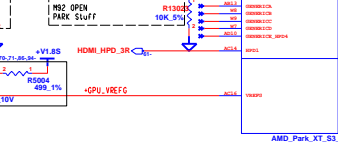
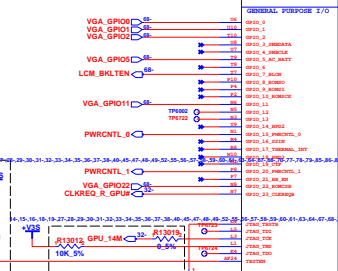
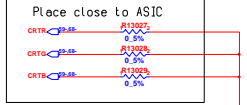
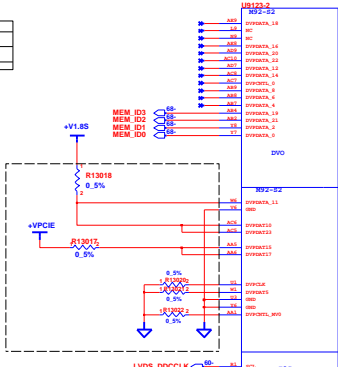


MEM_ID3-5	VRAM Vendor & Size
MEM_ID3	Hynix 64MB16 (256MB)
MEM_ID4	Hynix 64MB16 (256MB)
MEM_ID5	Samsung 64MB16 (256MB)
MEM_ID6	Samsung 64MB16 (256MB)
MEM_ID7	Samsung 128MB16 (1GB)
MEM_ID8	Hynix 128MB16 (1GB)
MEM_ID9	Samsung 128MB16 (1GB)
MEM_ID10	Samsung 128MB16 (1GB)
MEM_ID11	Samsung 128MB16 (1GB)
MEM_ID12	Samsung 128MB16 (1GB)



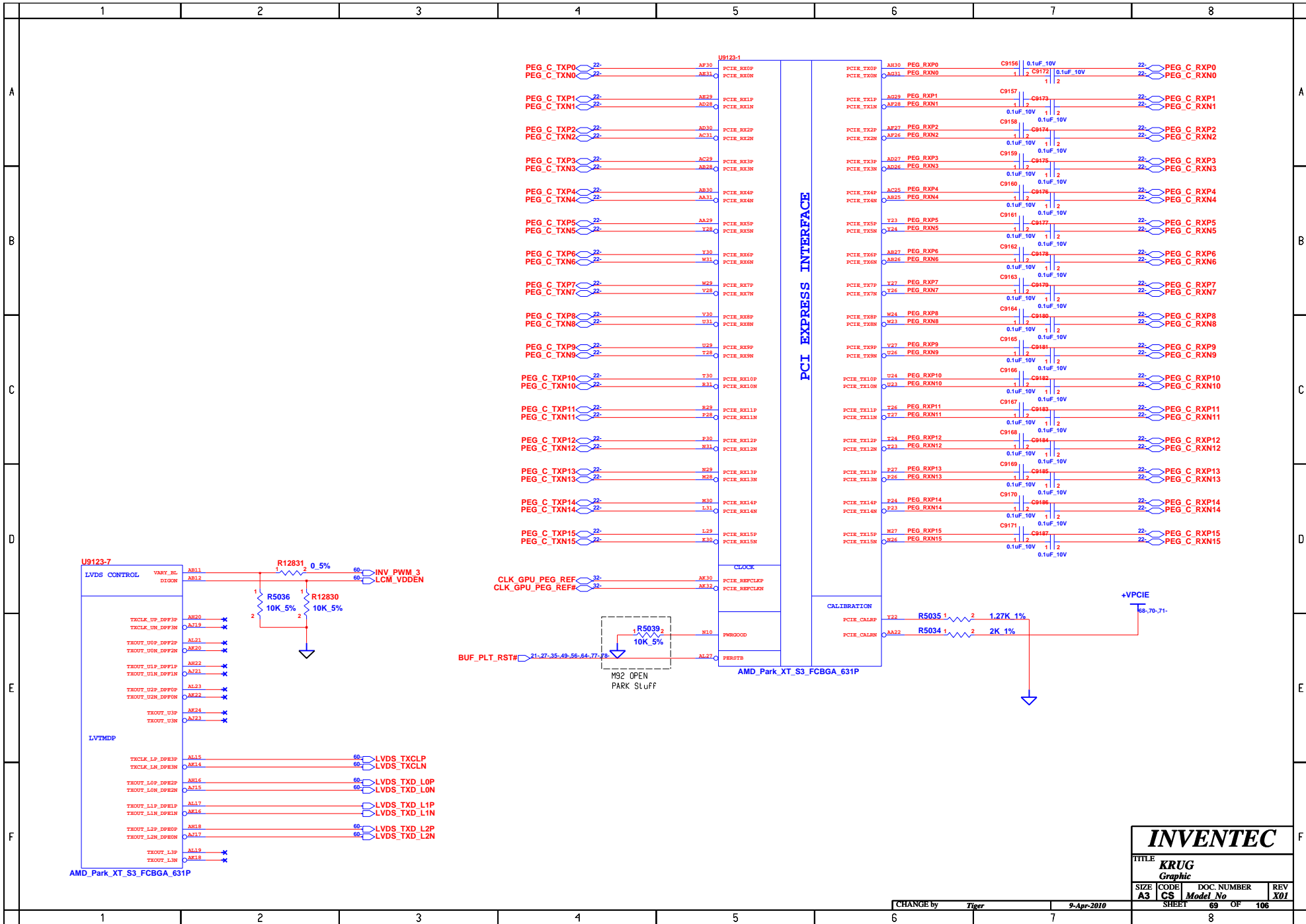
GPIO_12	GPIO_11	Memory aperture size
0	0	256M
0	0	512M
0	1	1GB
0	1	2GB

Pin Base Straps			
GPIO_0	Transmitter Power Saving Enable	0 : 50% Tx output swing (default) 1 : Full Tx output swing	
GPIO_1	PCIe transmitter De-emphasis	0 : De-emphasis disabled (default) 1 : De-emphasis enabled	
GPIO_2	GEN1GEN2 enable	0 : GEN1 (default) 1 : GEN2	
GPIO_8	GPIO_9	Must be low during reset	
GPIO_21	GPIO_21	Left unconnected	
GPIO_29	VGA Disable	0 : Enable (default) 1 : Disable	
GPIO_1[11:13] Memory aperture size			
GPIO_12	GPIO_12	GPIO_11	Memory aperture size
0	0	0	256M
0	0	1	512M
0	1	1	1GB
0	1	1	2GB
GPIO_22 Enable external BIOS ROM device			
GPIO_22	GPIO_22	0 : Disable (default) 1 : Enable	
HSYNCR[1] VSYNCR[0] Audio[1:0]			
HSYNCR[1]	Audio[1]	00 : No audio function	
VSYNCR[0]	Audio[0]	01 : Audio for DP and HDMI if dongle is detected 10 : Audio for DP 11 : Audio for DP and HDMI	

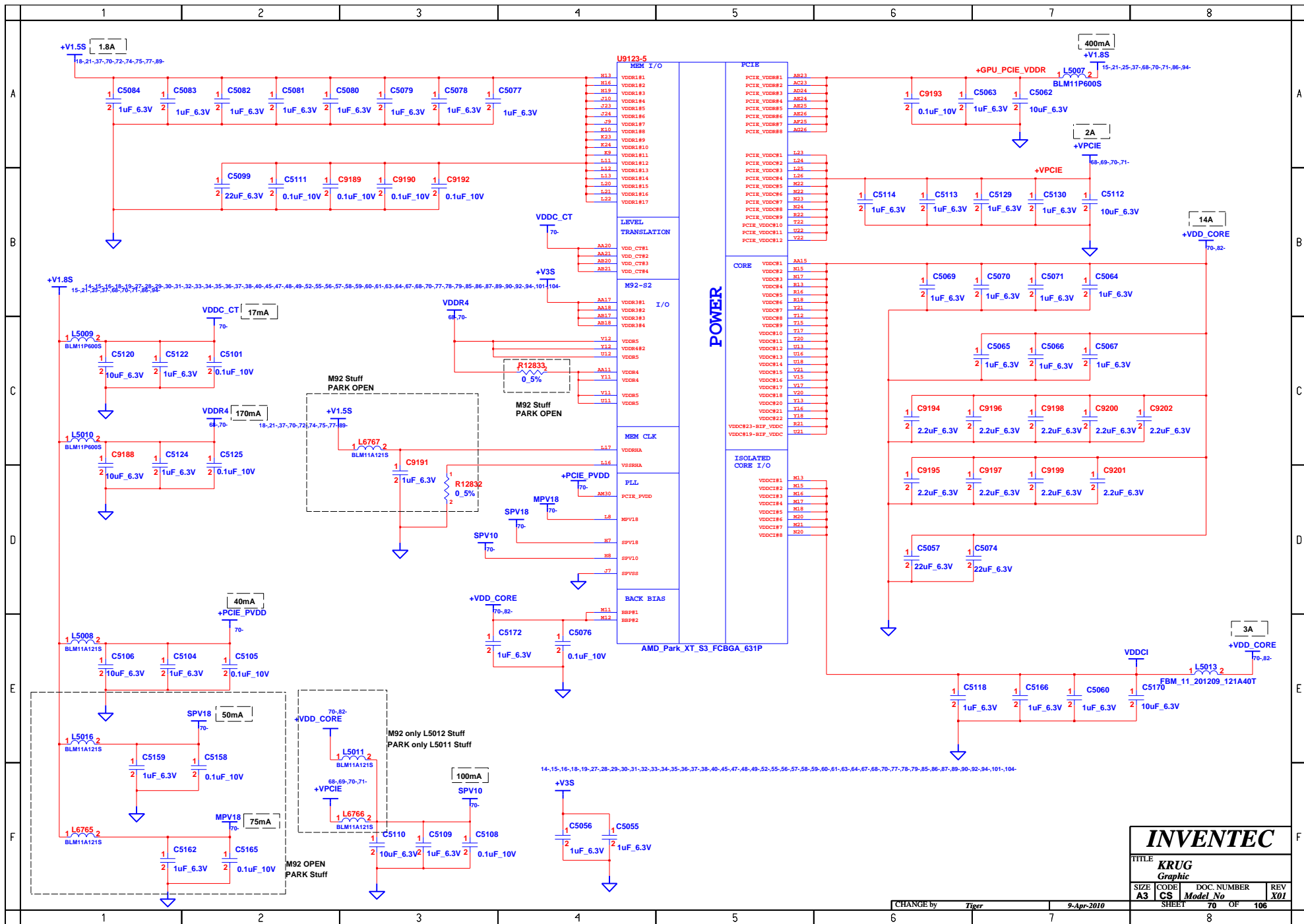


Engineer Tiger	COMPANY NAME	
Drawn by Tiger	Address City	
R&D CHK	TITLE KrUG	Size D
DOC CTRL CHK	Graphic	
MFG CTRL CHK		
QA CHK	REV X01	Drawing Number
		Sheet 68 of 106

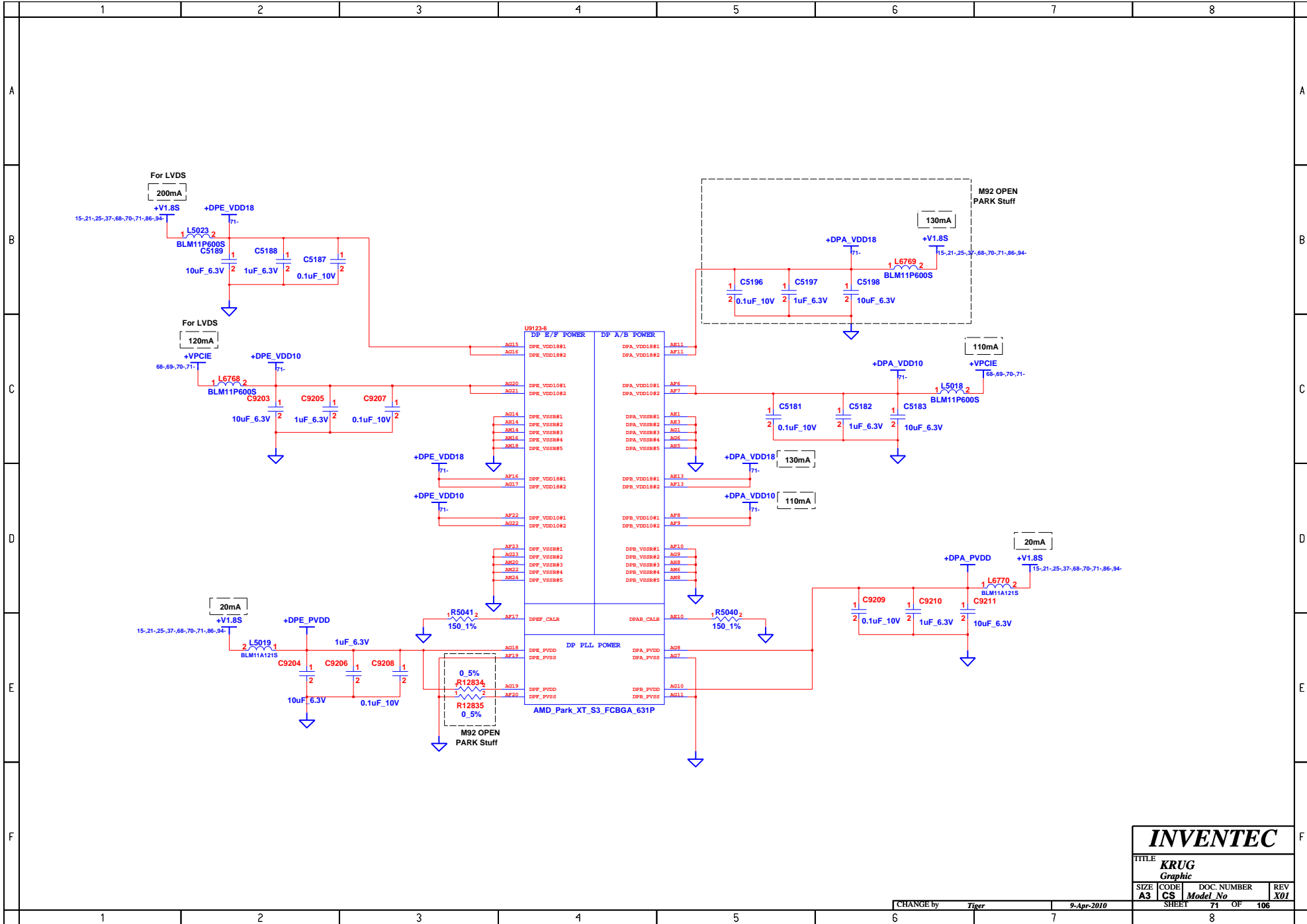
Changed by KRUG	Date Changed 9-Apr-2010	Time 2:09:08 am
--------------------	----------------------------	--------------------



INVENTEC			
TITLE KRUG Graphic			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiker</i>		9-Apr-2010	
SHEET		69 OF 106	
1		8	

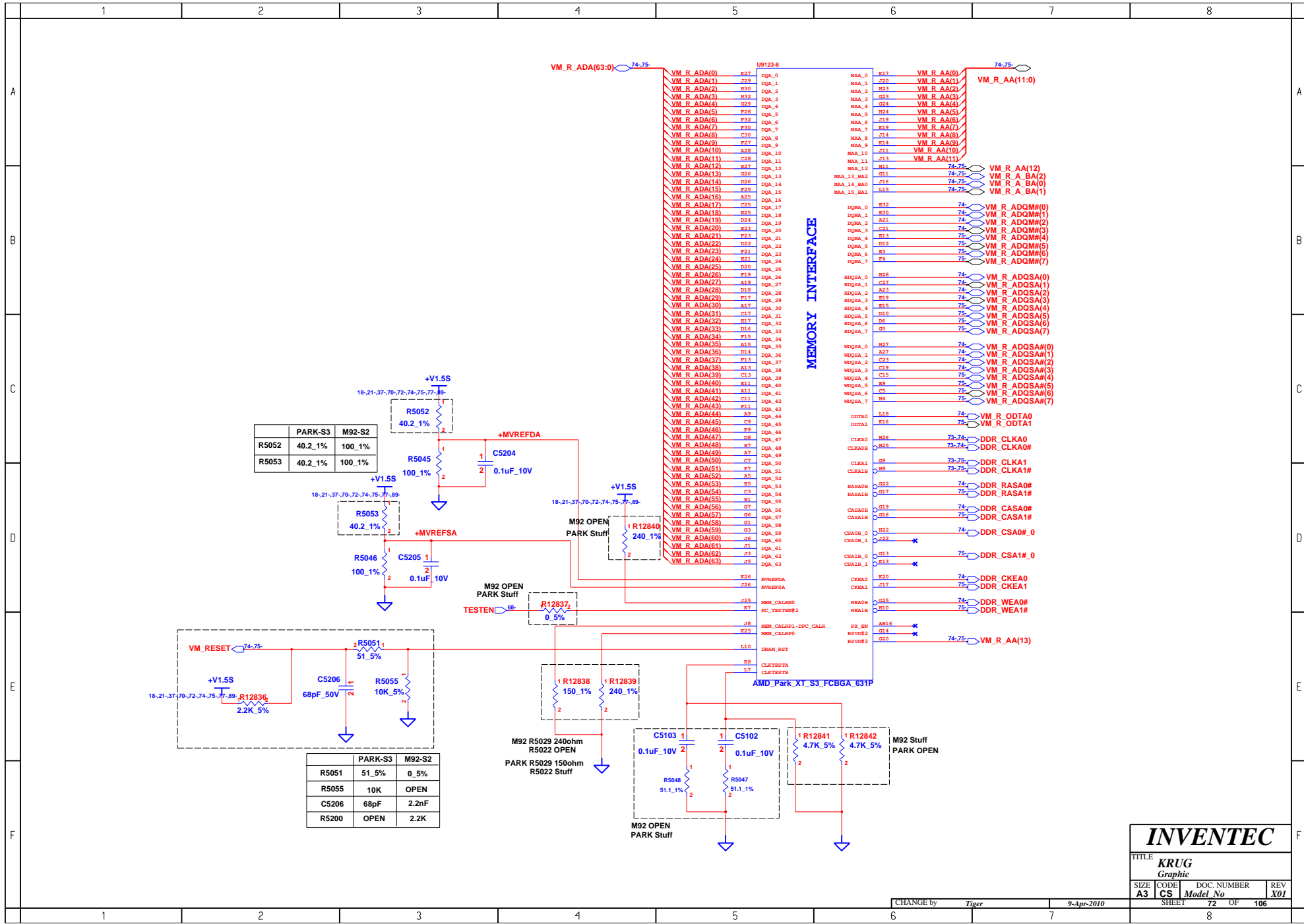


INVENTEC				
TITLE KRUG Graphic				
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01	
CHANGE by <i>Tiger</i>		9-Apr-2010		SHEET 70 OF 106



INVENTEC			
TITLE KRUG Graphic			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET 71		OF 106	

CHANGE by *Tiker* 9-Apr-2010



	PARK-S3	M92-S2
R5052	40.2_1%	100_1%
R5053	40.2_1%	100_1%

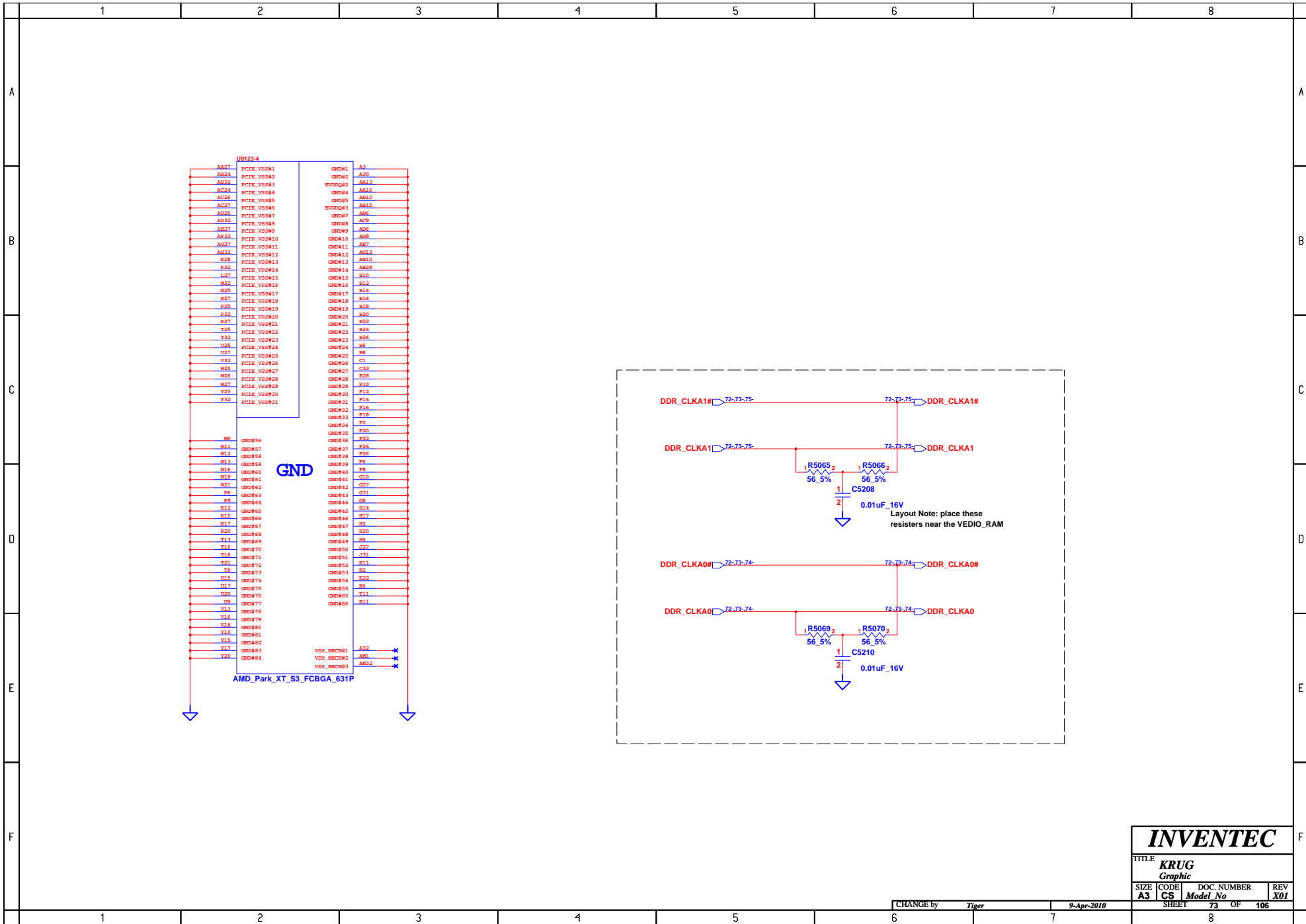
	PARK-S3	M92-S2
R5051	51_5%	0_5%
R5055	10K	OPEN
C5206	68pF	2.2nF
R5200	OPEN	2.2K

	PARK-S3	M92-S2
R5051	51_5%	0_5%
R5055	10K	OPEN
C5206	68pF	2.2nF
R5200	OPEN	2.2K

INVENTEC

TITLE
KRUG
Graphic

SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
CHANGE by Tiger		9-Apr-2010	
SHEET 72		OF 106	

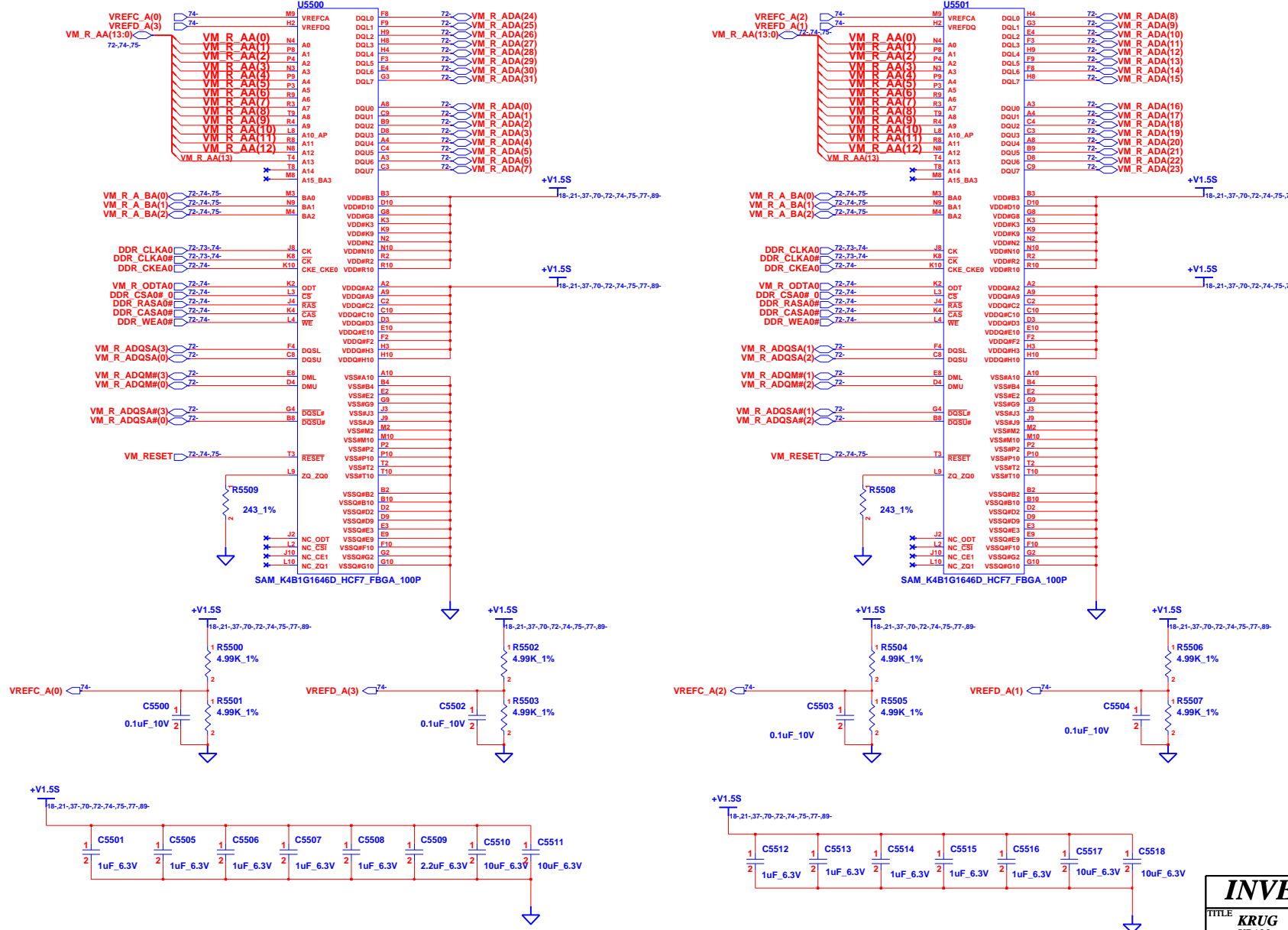


INVENTEC

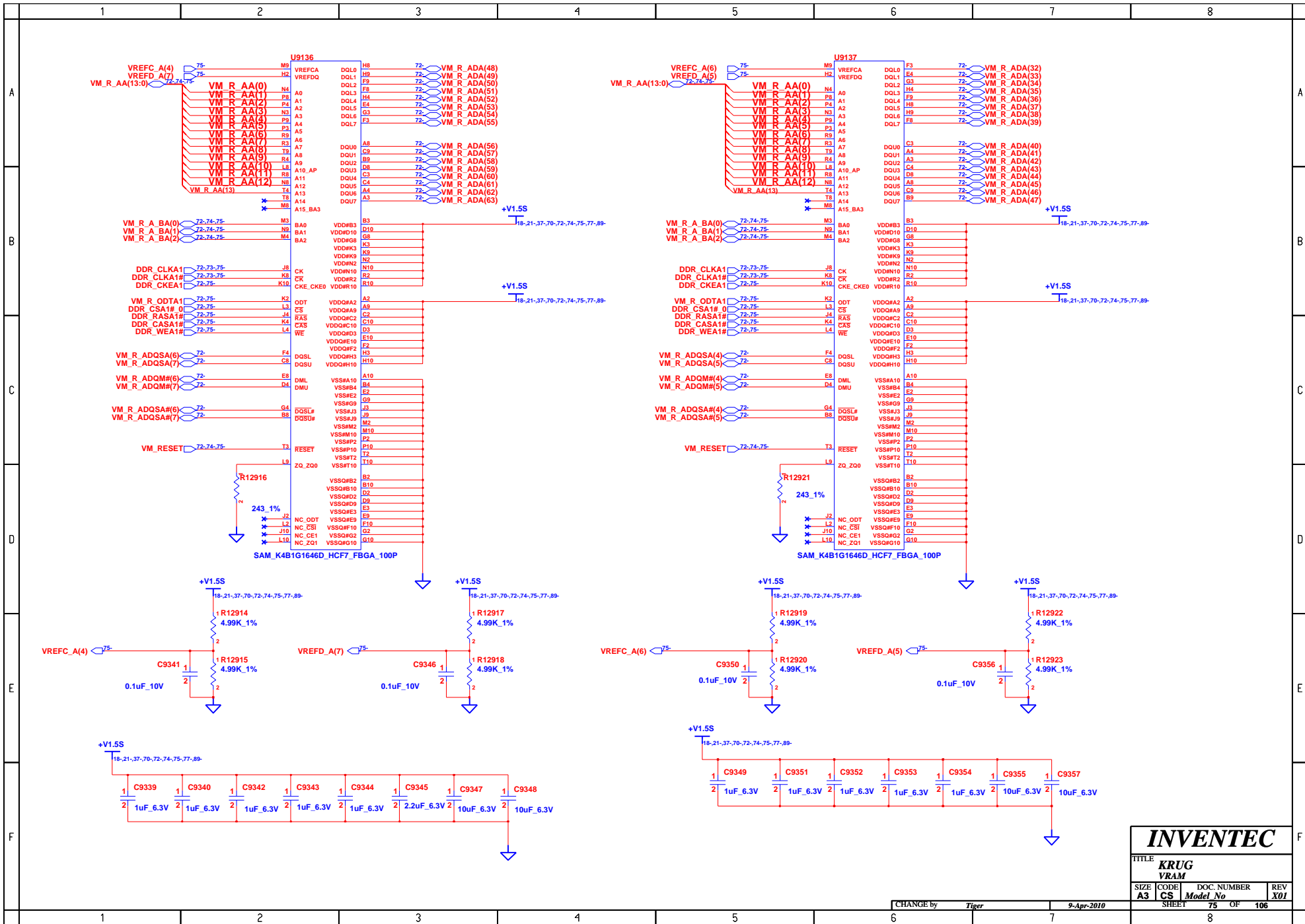
TITLE			
KRUG			
Graphic			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		73 OF	106

CHANGE by Tiker 9-Apr-2010

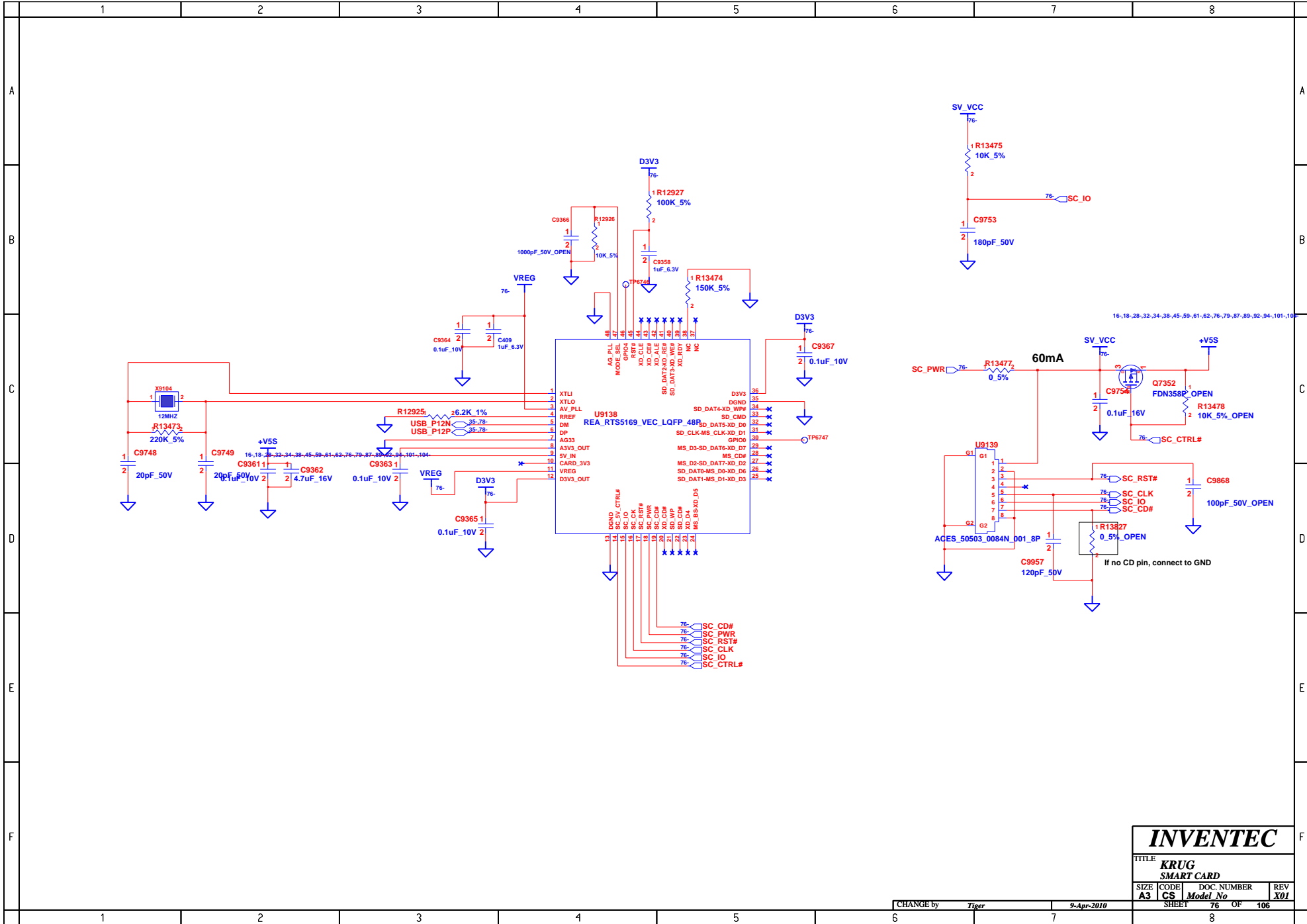
PARK Use channel A



INVENTEC			
TITLE KRUG VRAM			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
CHANGE by Tiger		9-Apr-2010	
SHEET 74		OF 106	



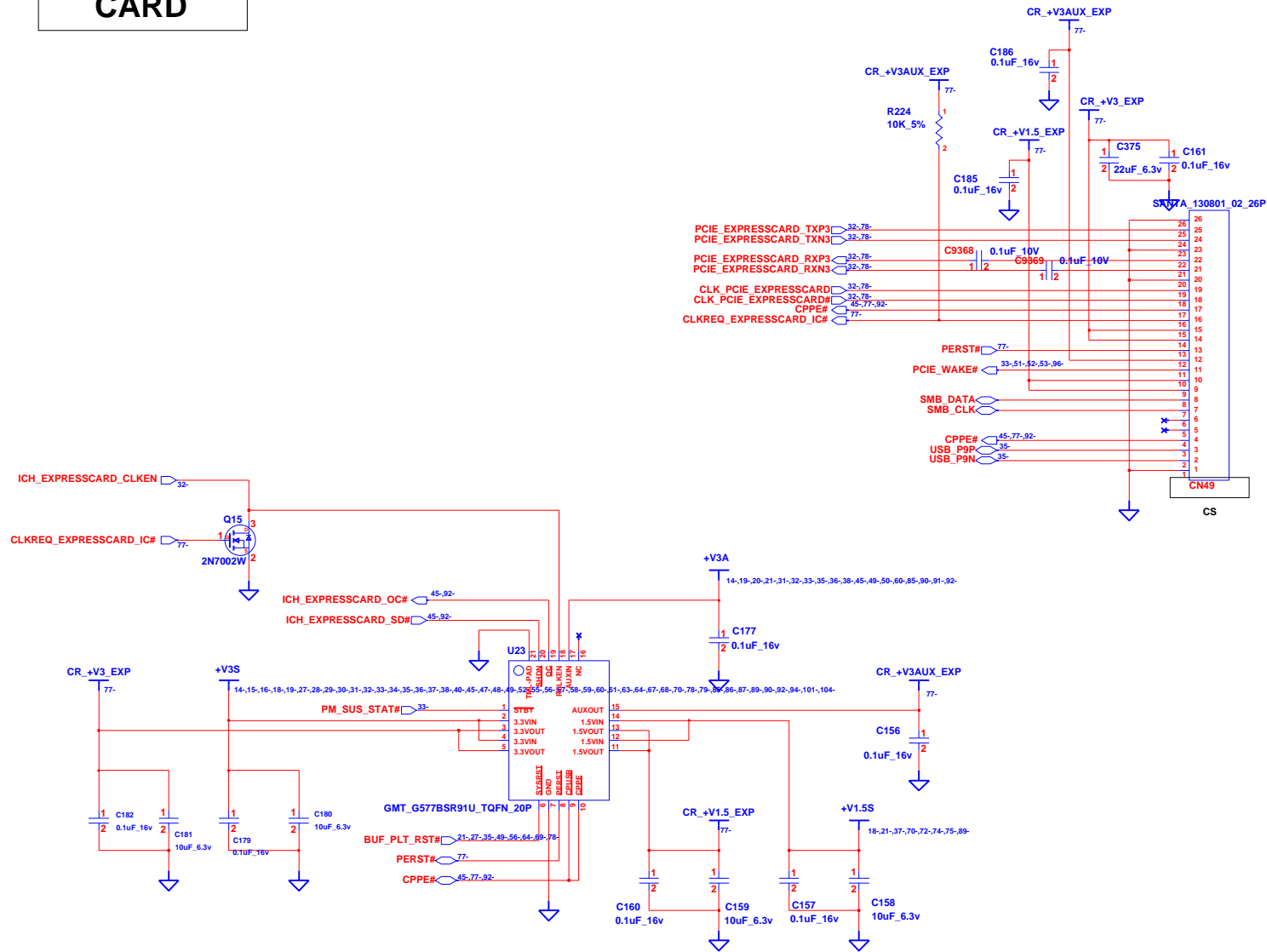
INVENTEC			
TITLE KRUG VRAM			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiker</i>		9-Apr-2010	
SHEET 75		OF 106	



INVENTEC

TITLE			
KRUG			
SMART CARD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01

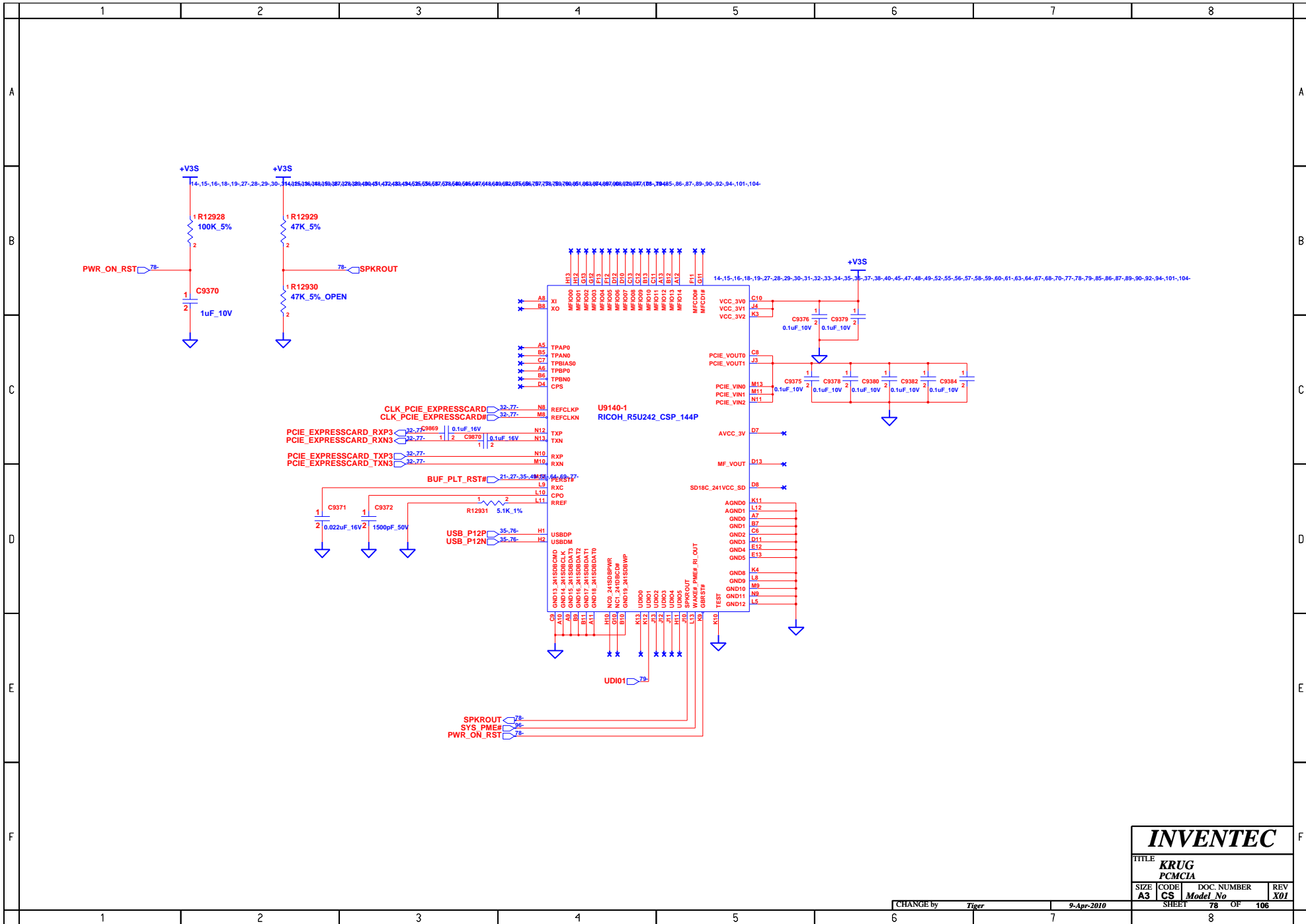
EXPRESS CARD



INVENTEC

TITLE			
KRUG			
Express Card			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		77	OF 106

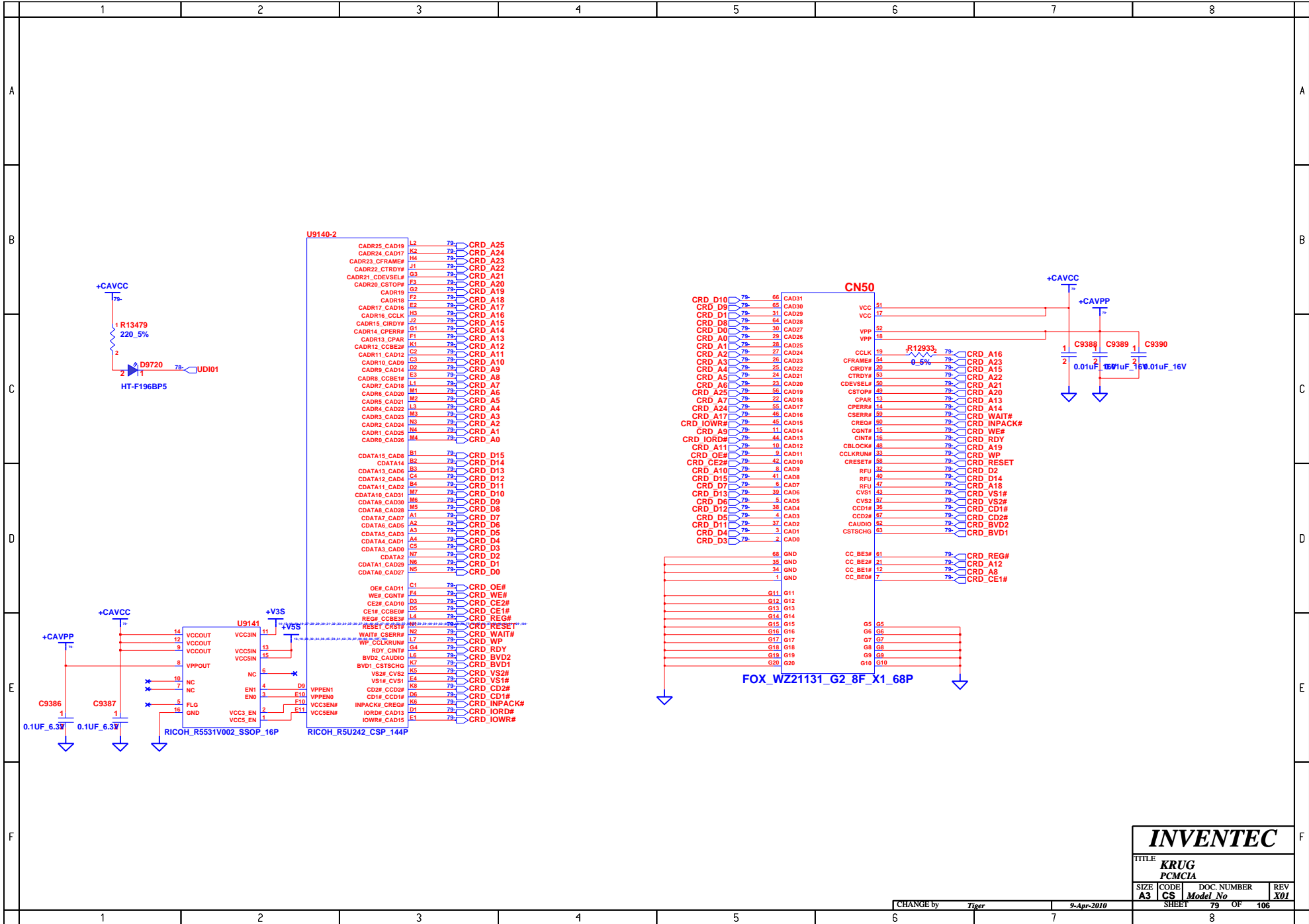
CHANGE by Tiker 9-Apr-2010



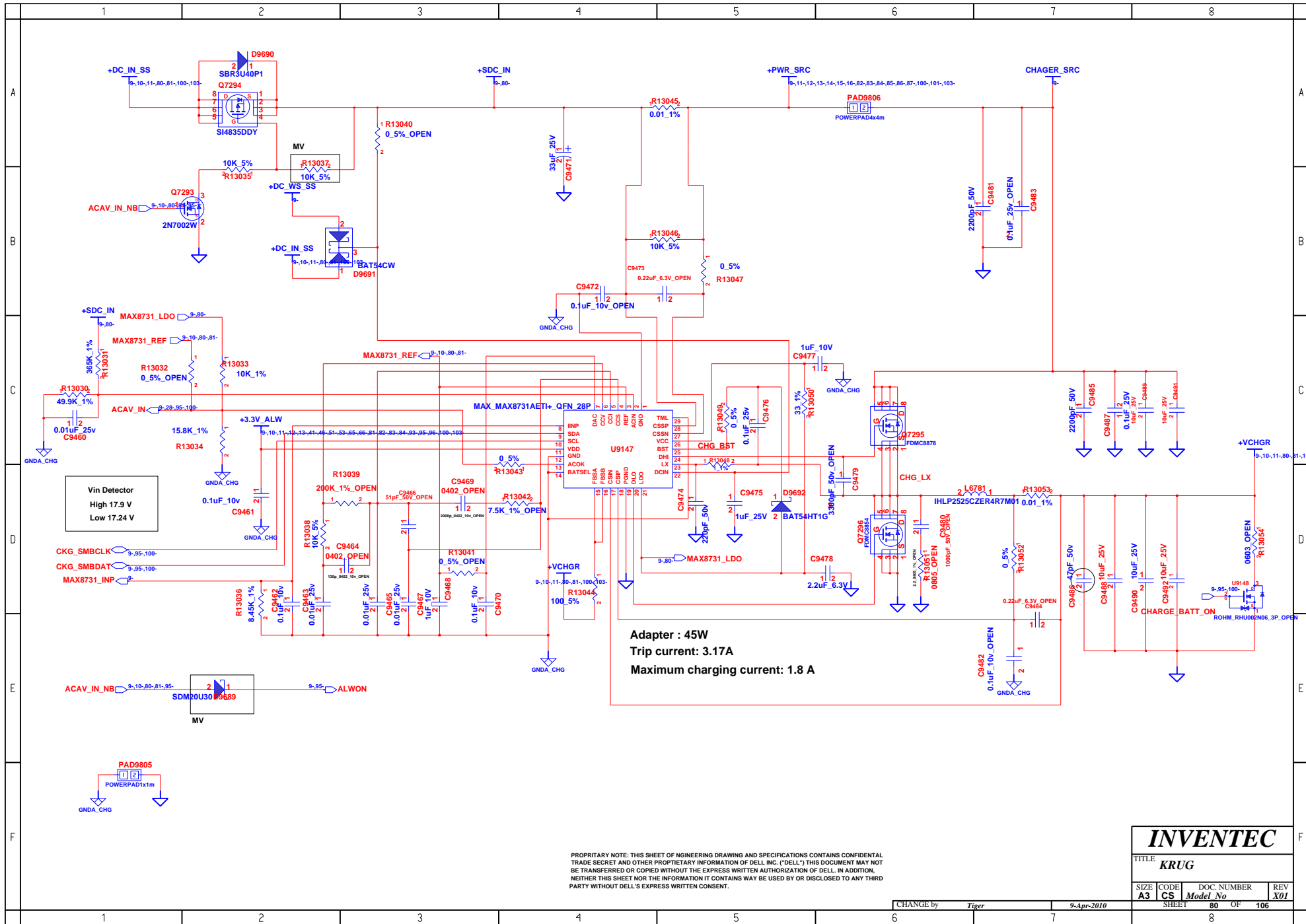
INVENTEC

TITLE			
KRUG			
PCMCIA			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		78	OF 106

CHANGE by Tiker 9-Apr-2010



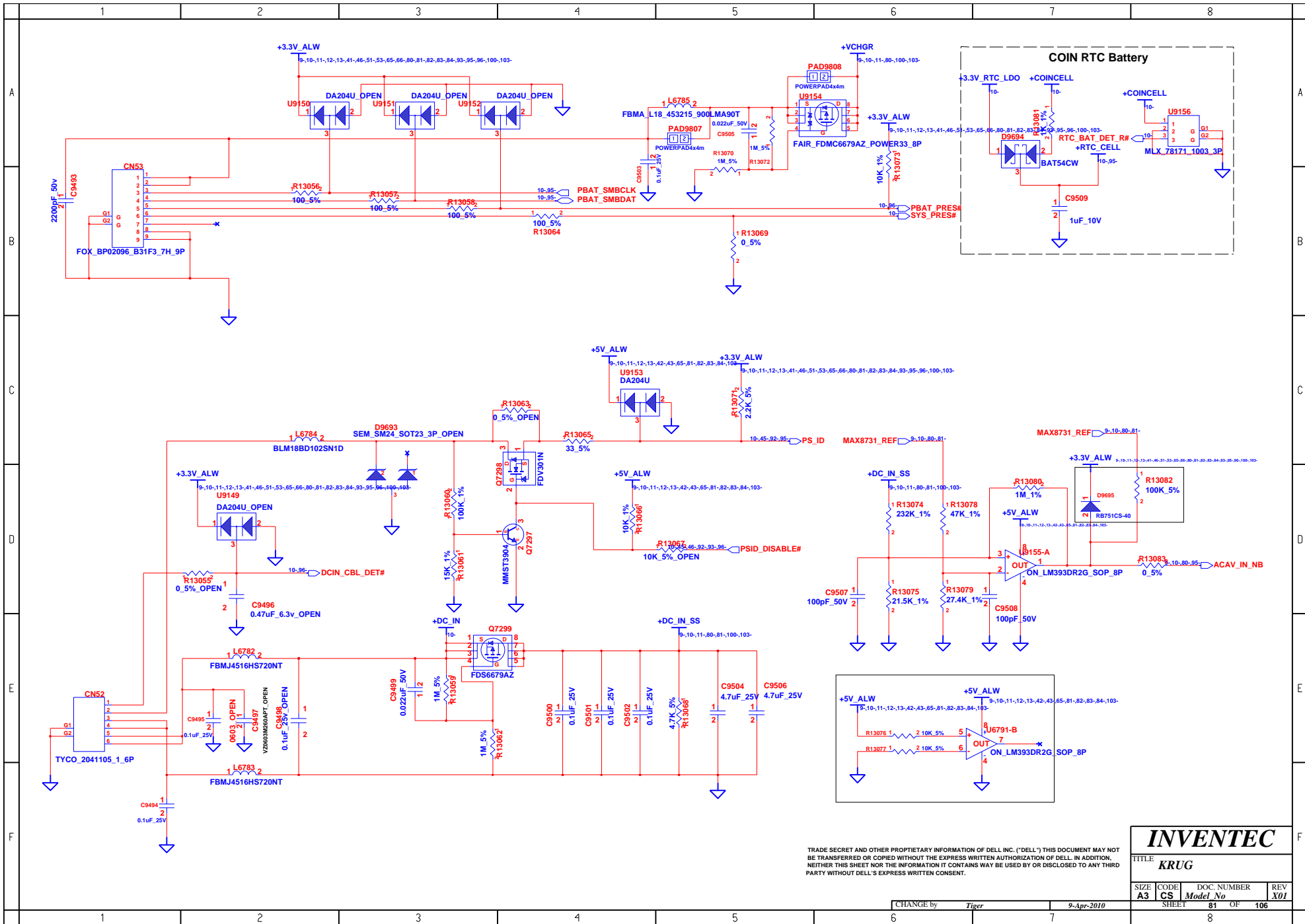
INVENTEC			
TITLE KRUG PCMCIA			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
CHANGE by Tiger		9-Apr-2010	SHEET 79 OF 106



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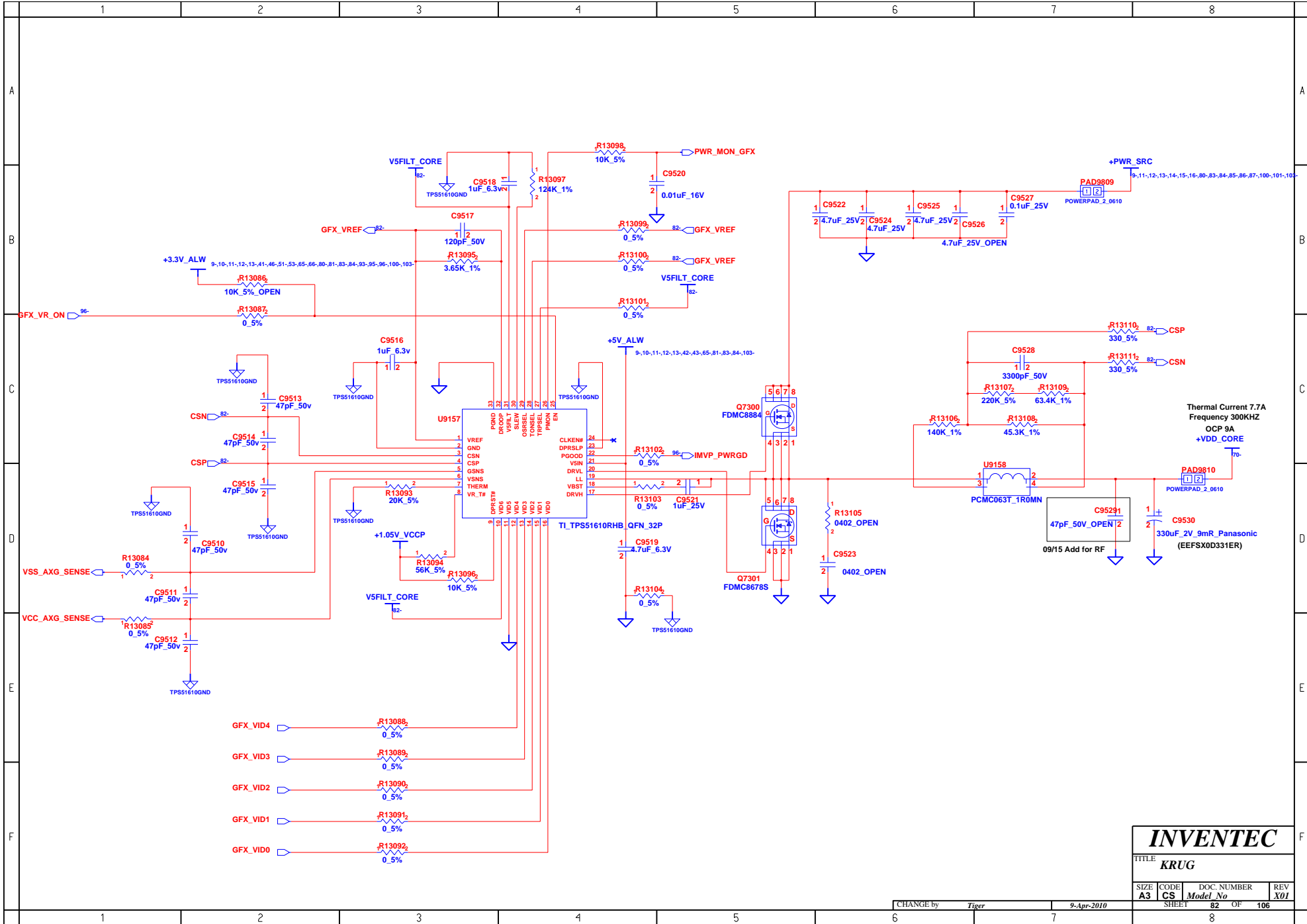
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TITLE KRUG			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET		80 OF	106

CHANGE by *Tiker* 9-Apr-2010



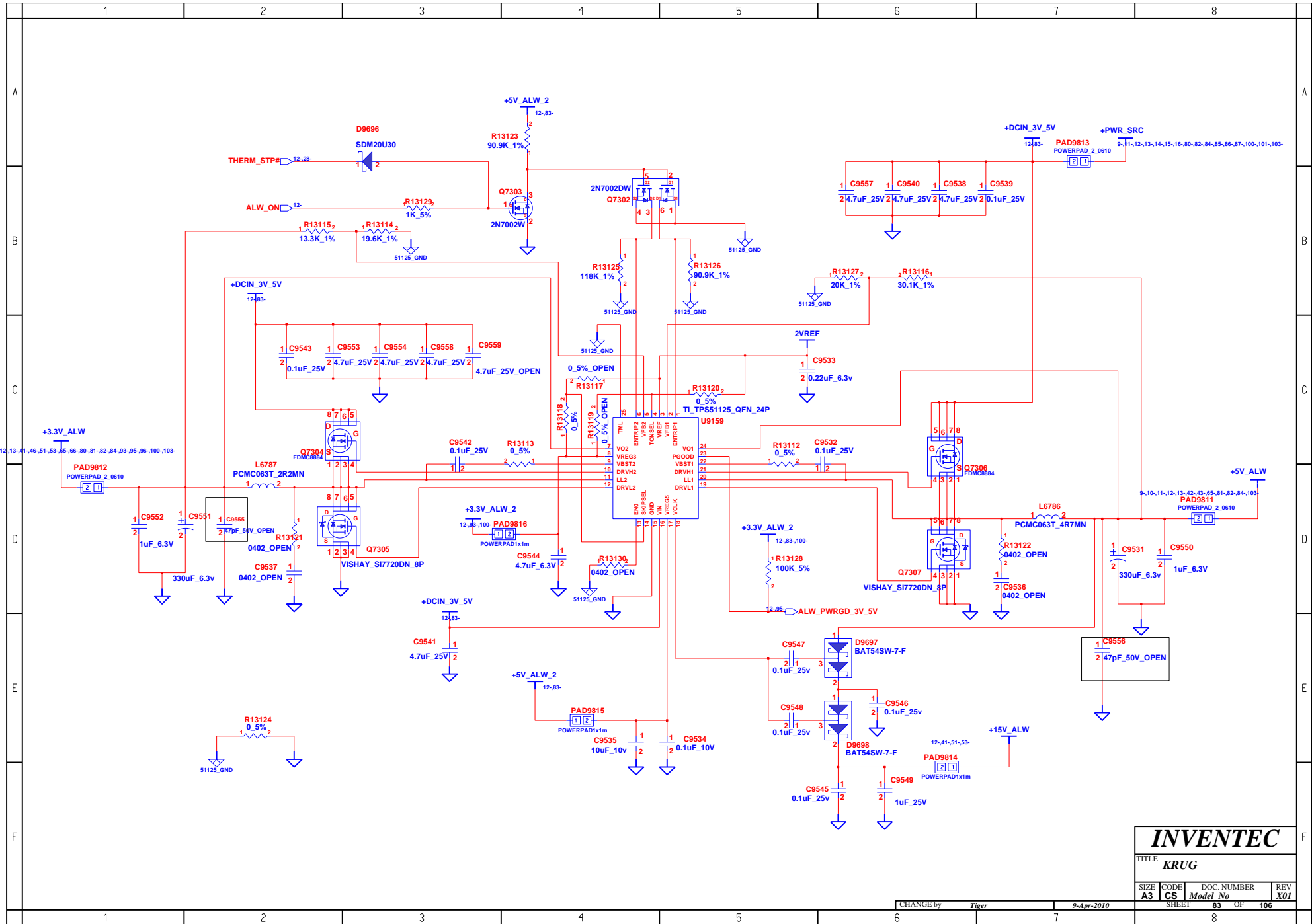
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INVENTEC				
TITLE KRUG				
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01	
CHANGE by <i>Tiger</i>		9-Apr-2010		
SHEET 81		OF 106		

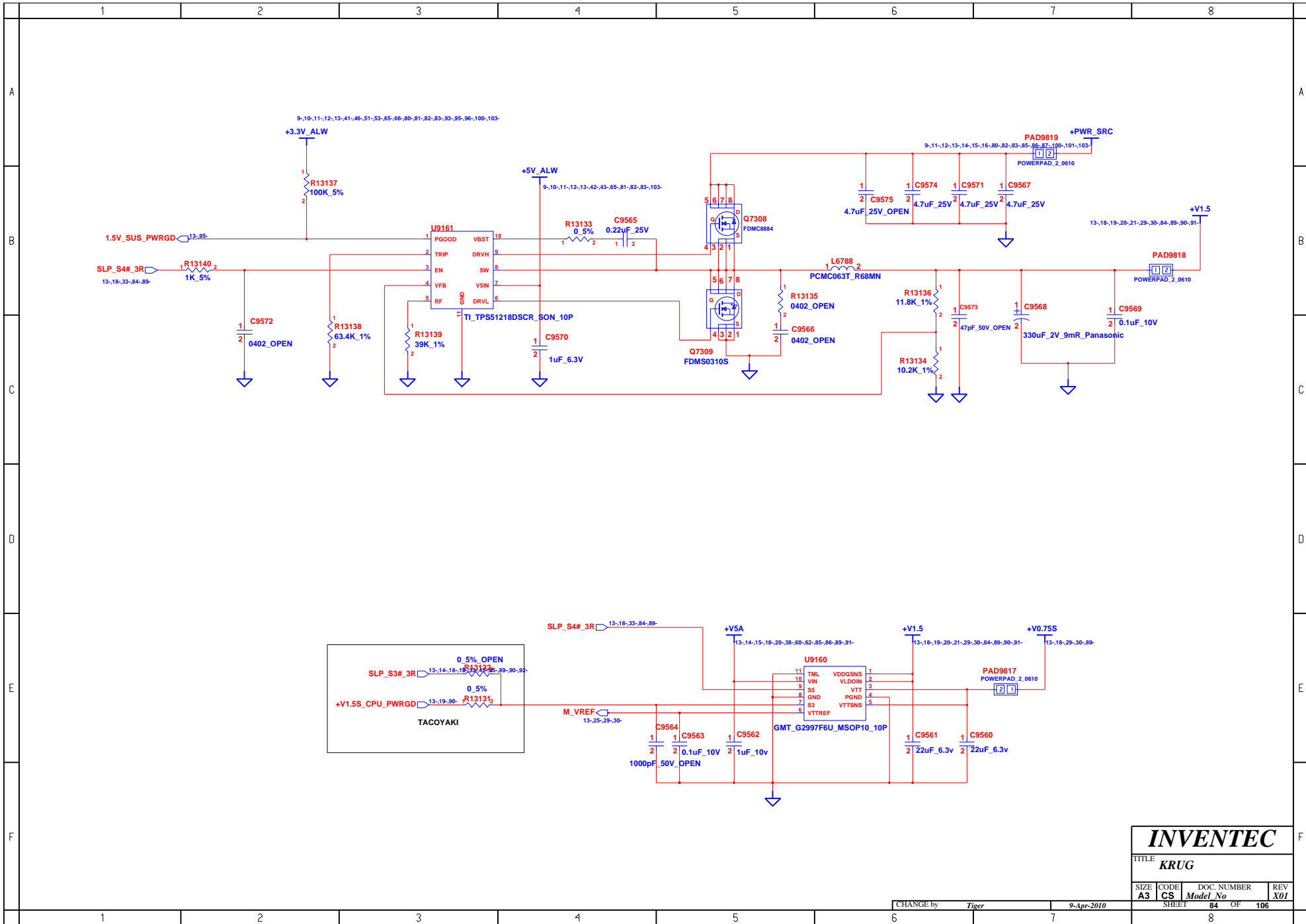


INVENTEC			
TITLE KRUG			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET		82	OF 106

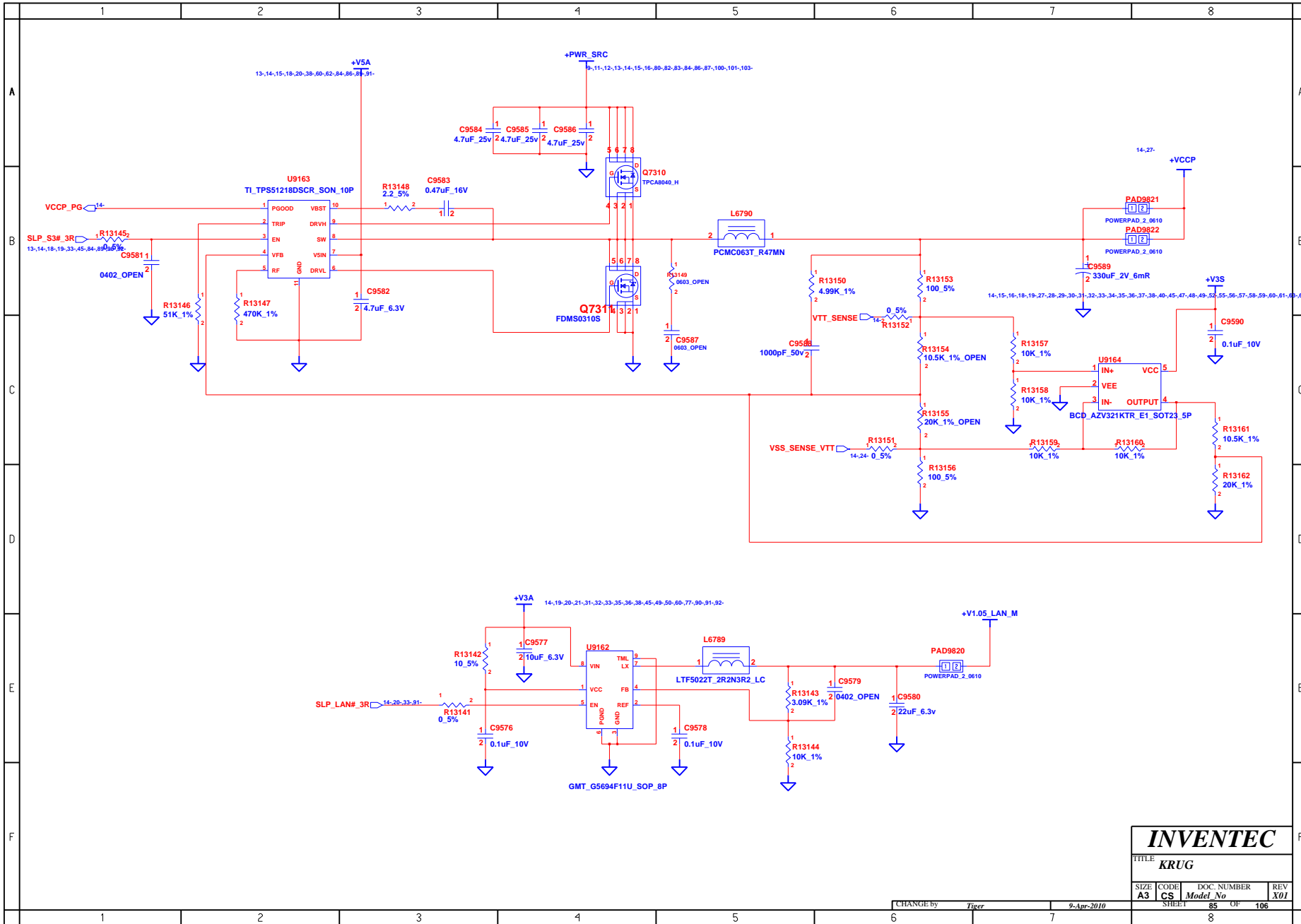
CHANGE by *Tiger* 9-Apr-2010



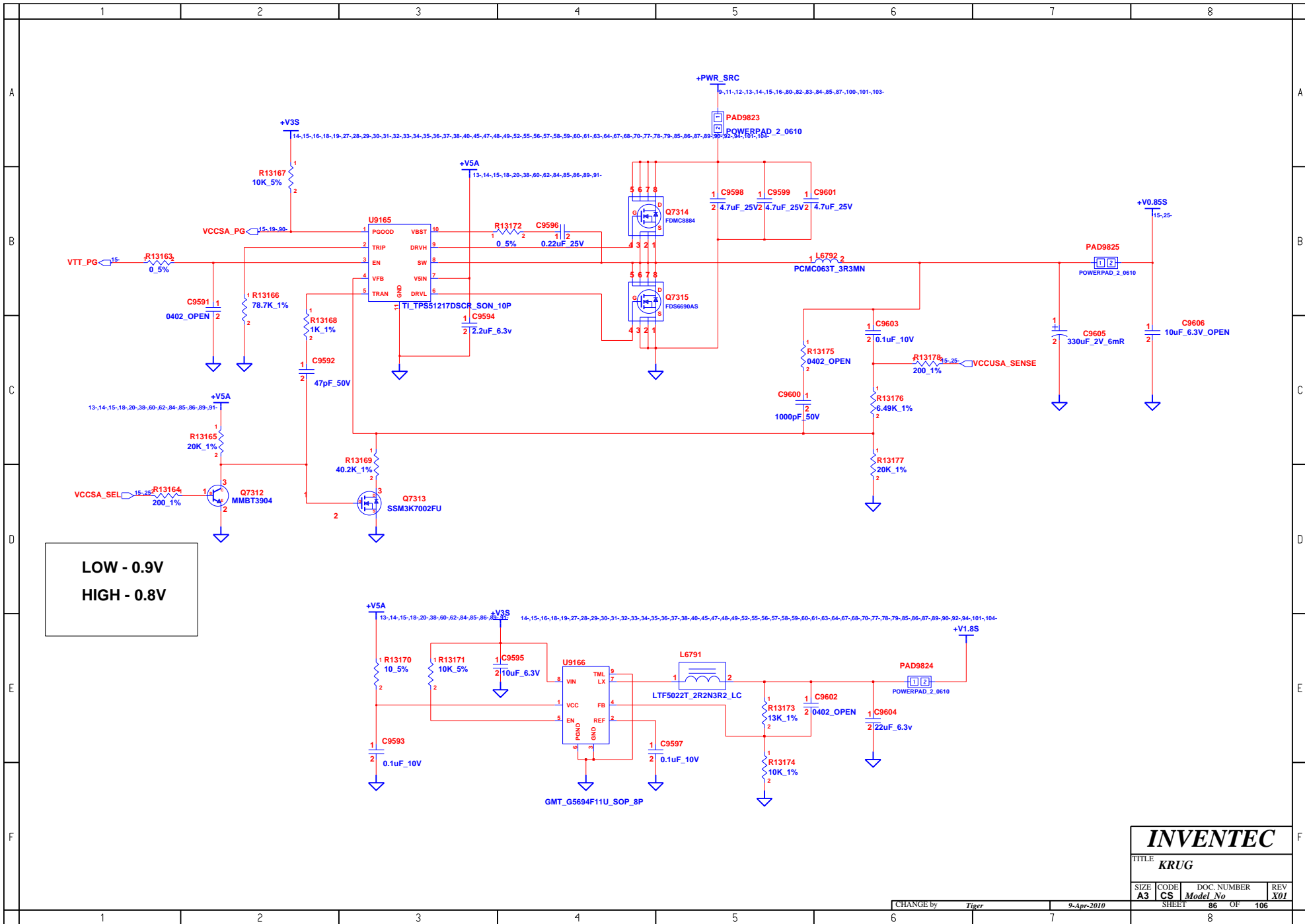
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TITLE KRUG			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET 83		OF 106	



INVENTEC			
TITLE KRUG			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET 84		OF 106	

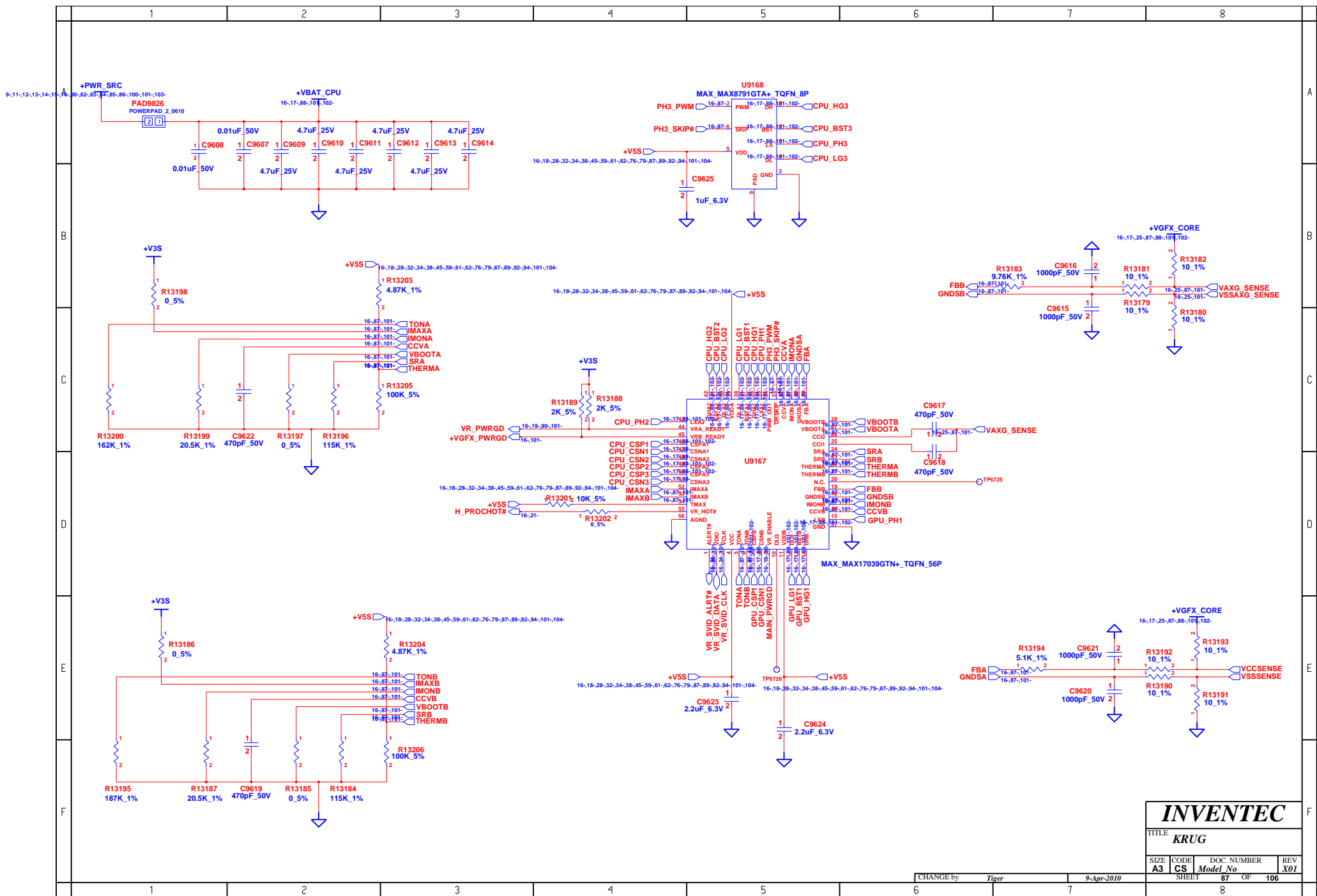


INVENTEC			
TITLE KRUG			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
CHANGE BY: Tiger		9-Apr-2010	SHEET 85 OF 106



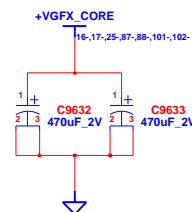
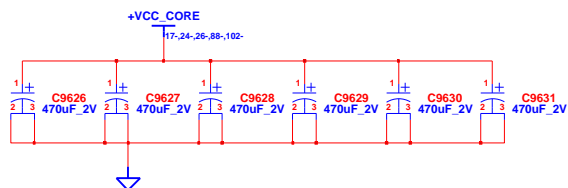
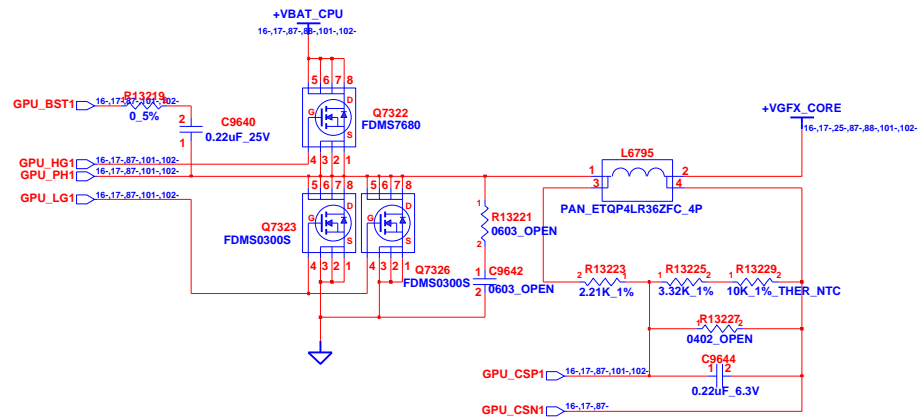
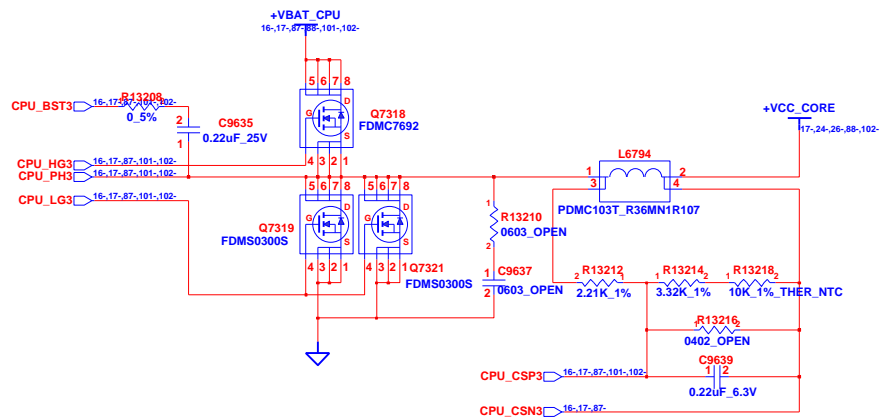
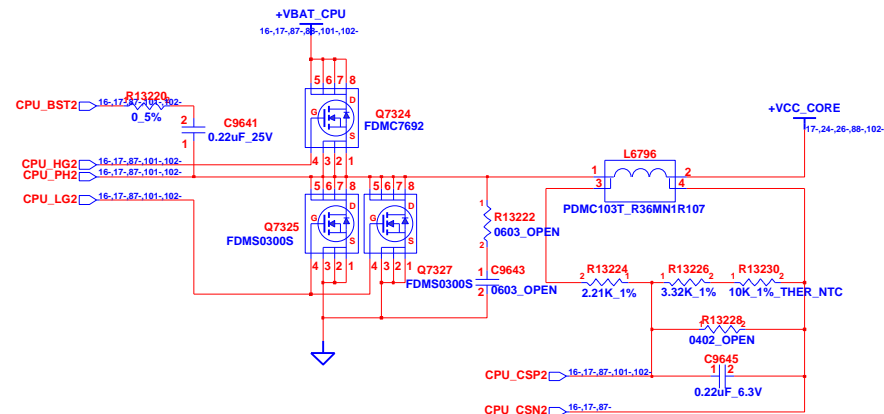
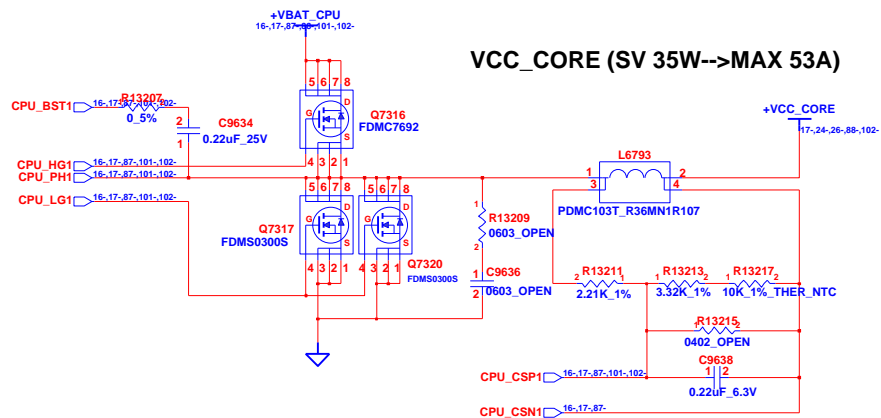
LOW - 0.9V
HIGH - 0.8V

INVENTEC			
TITLE KRUG			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET 86 OF 106		8	



INVENTEC				
TITLE KRUG				
SIZE A3	CODE CS	DOC. NUMBER Model No	REV X01	
CHANGE by <i>Tiger</i>		9-Apr-2010		
SHEET 87		OF 106		

VCC_CORE (SV 35W-->MAX 53A)

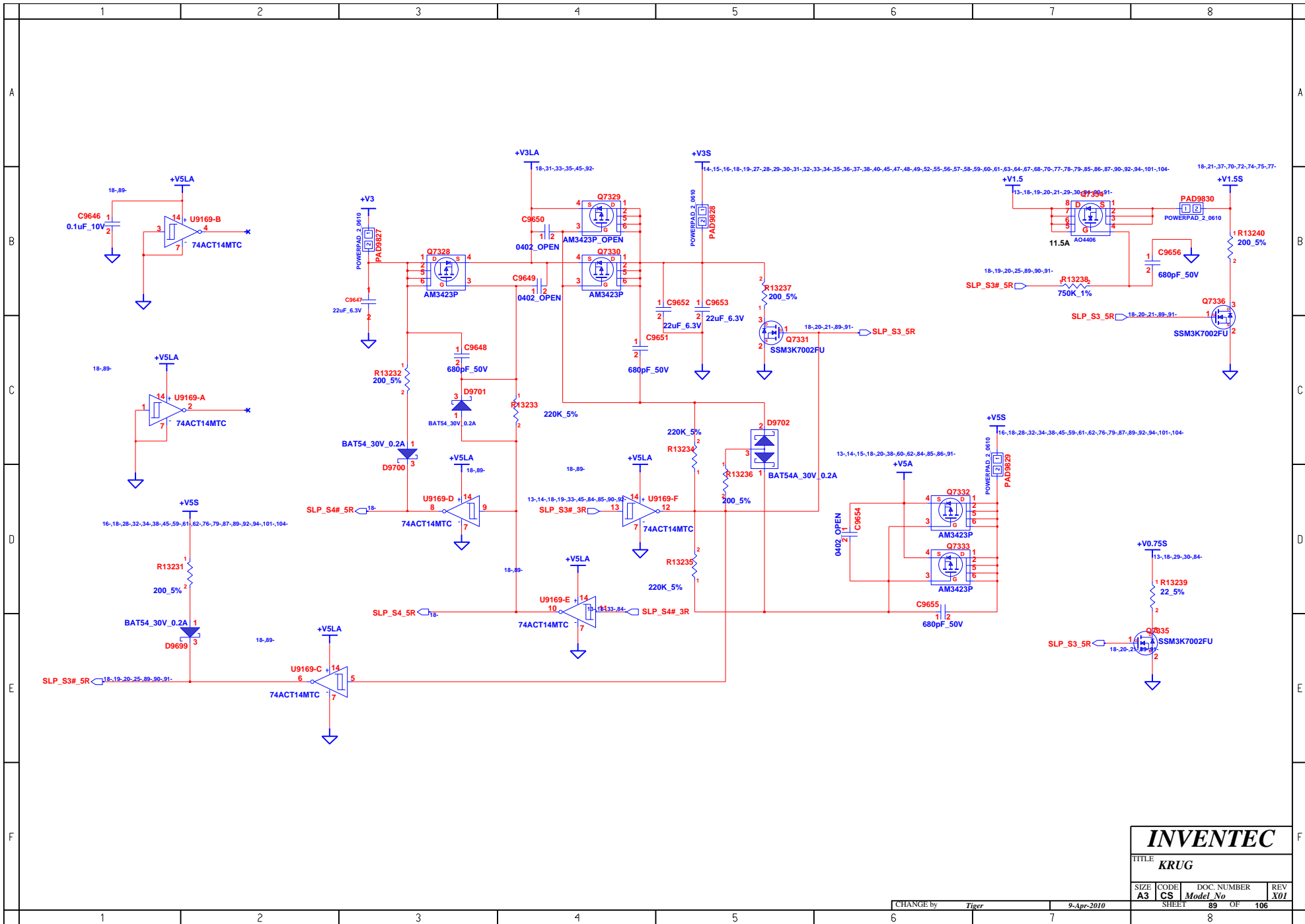


INVENTEC

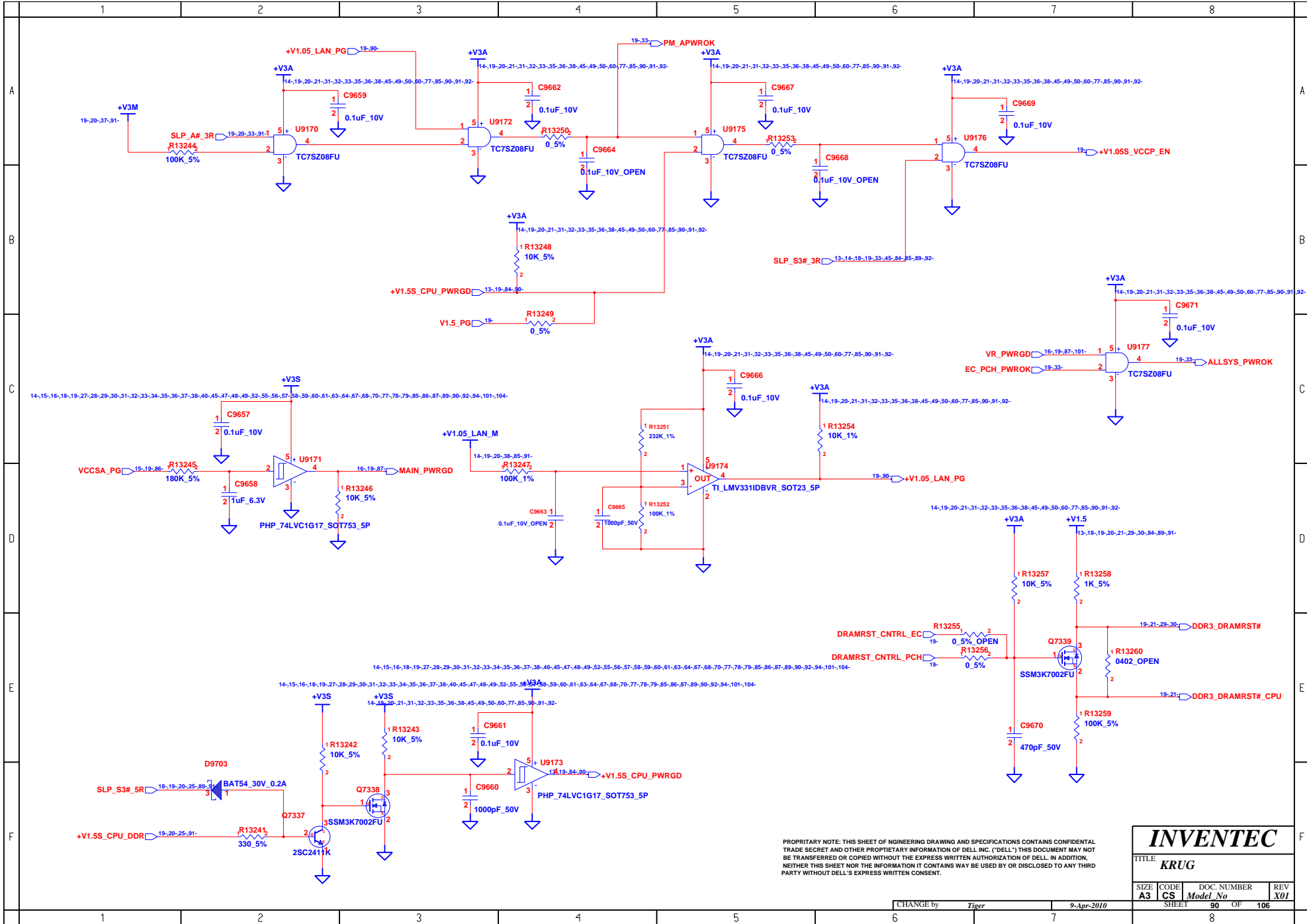
TITLE			
KRUG			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01
SHEET		OF	
88		106	

CHANGE by Tiger 9-Apr-2010

8 OF 106



INVENTEC				
TITLE KRUG				
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01	
CHANGE by <i>Tiger</i>		9-Apr-2010		
SHEET 89 OF 106				



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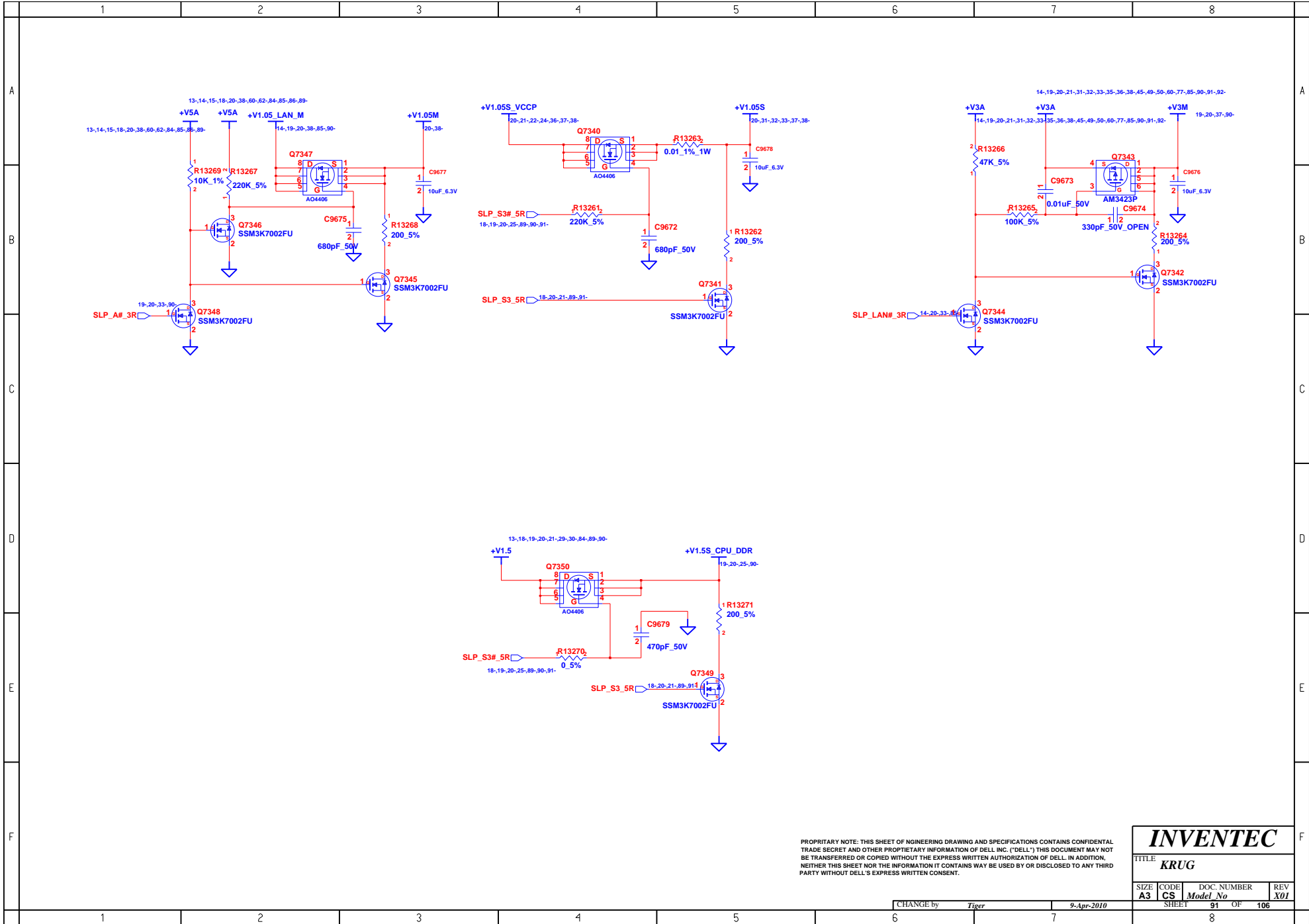
INVENTEC

TITLE
KRUG

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01

CHANGE by *Tiger* 9-Apr-2010

SHEET 90 OF 106



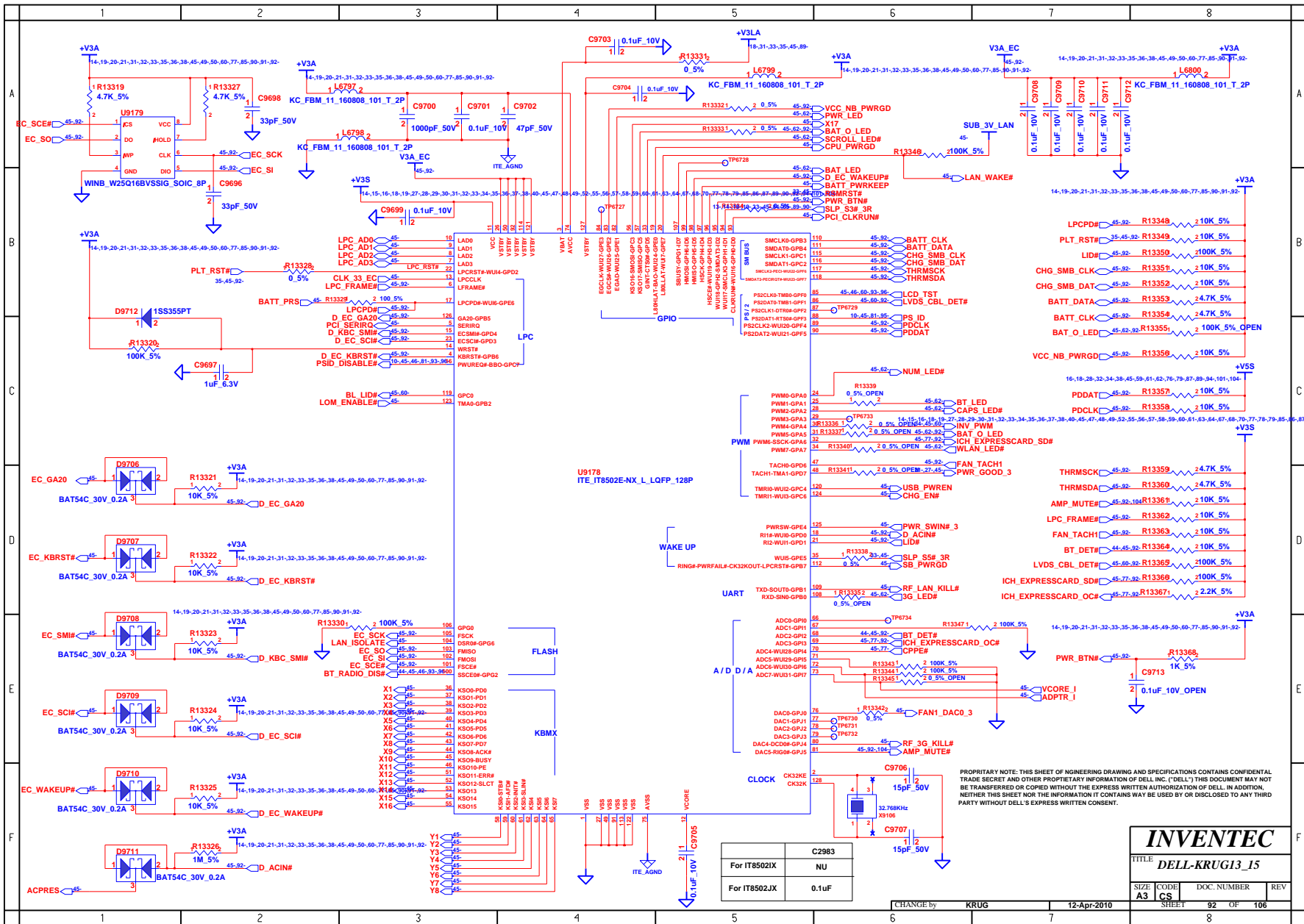
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INVENTEC

TITLE
KRUG

SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV X01
SHEET 91		OF 106	

CHANGE by *Tiger* 9-Apr-2010



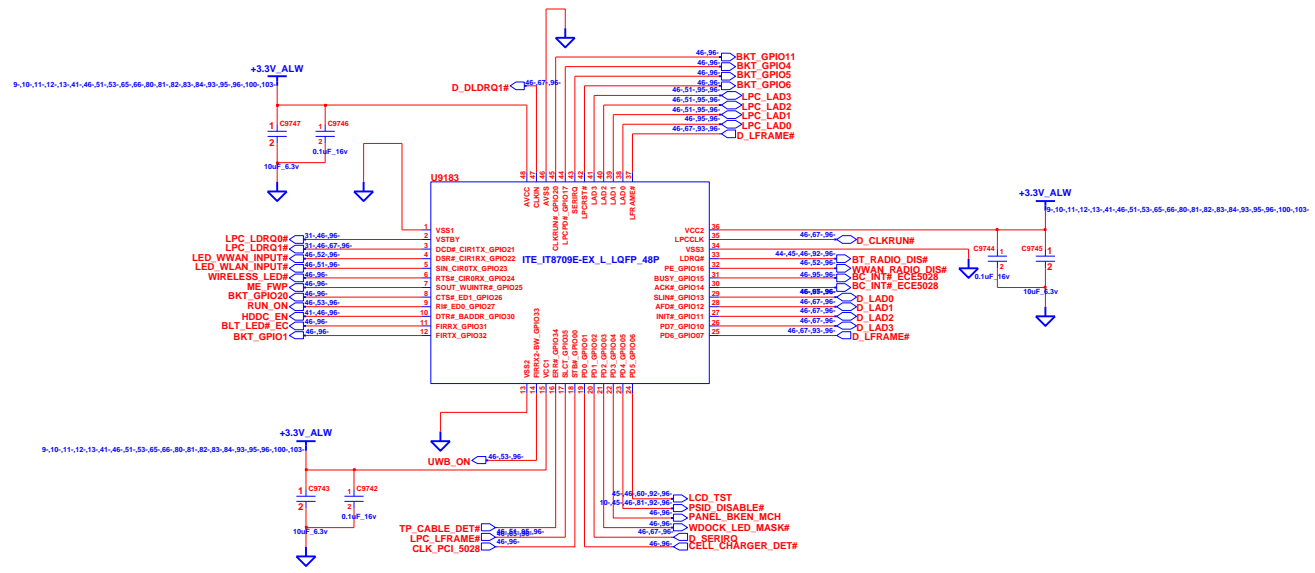
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INVENTEC			
TITLE DELL-KRUG13_15			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	92	OF 106

CHANGE by KRUG 12-Apr-2010 SHEET 92 OF 106

	C2983
For IT8502IX	NU
For IT8502JX	0.1uF

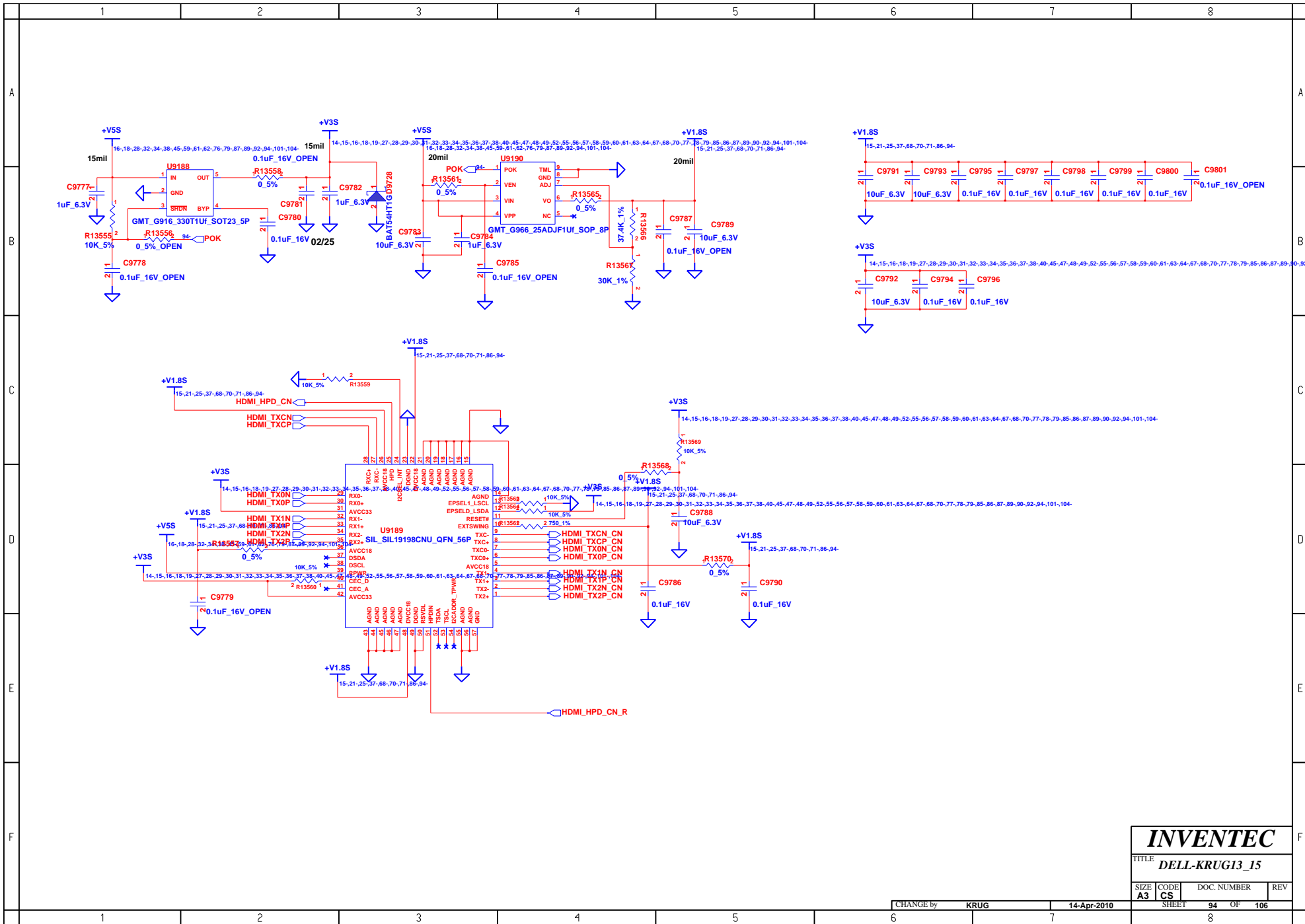
IT8709



INVENTEC

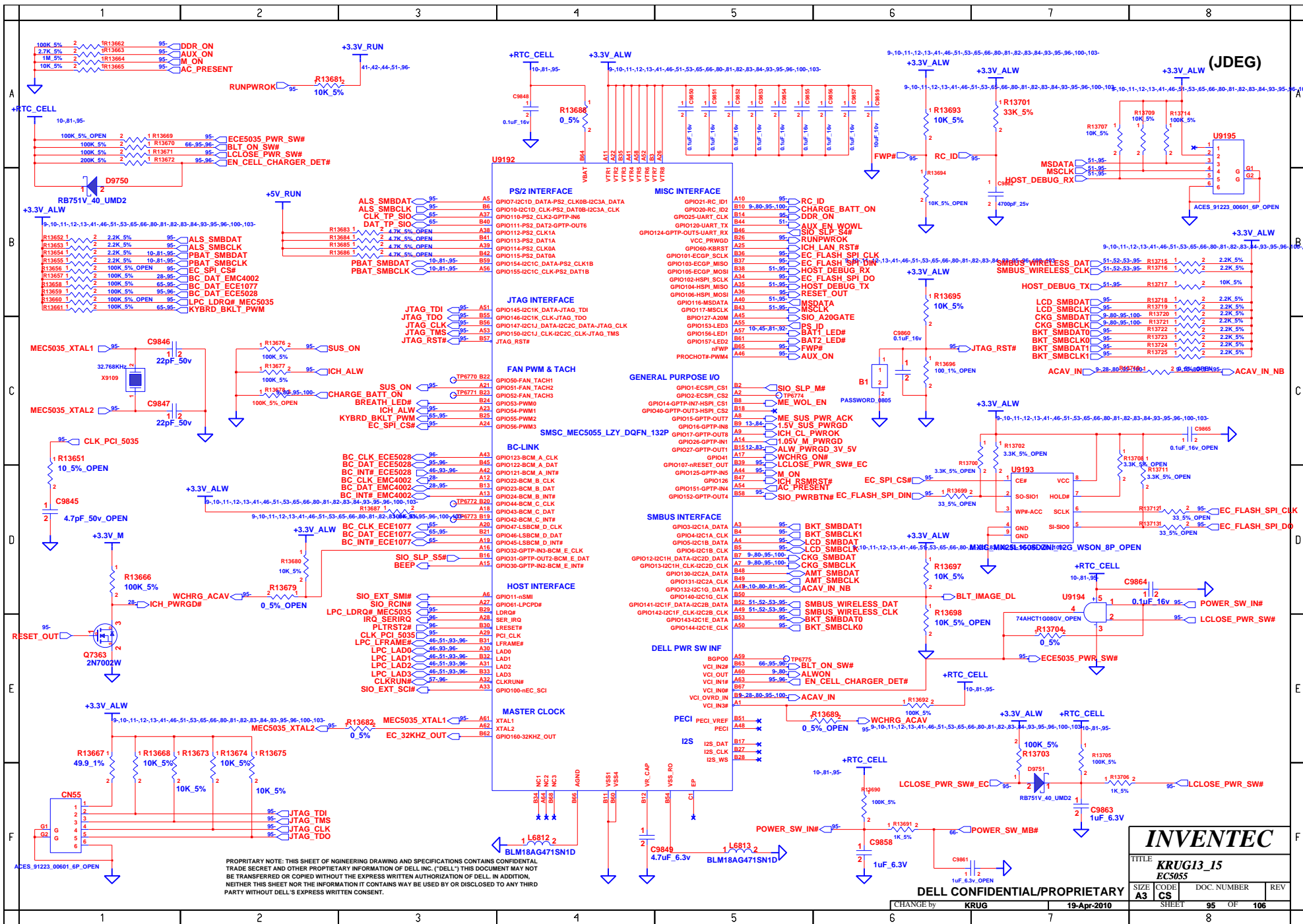
TITLE DELL-KRUG13_15

SIZE	CODS	DOC. NUMBER	REV
A3	CS		



INVENTEC			
TITLE DELL-KRUG13_I5			
SIZE A3	CODE CS	DOC. NUMBER SHEET	REV 94 OF 106

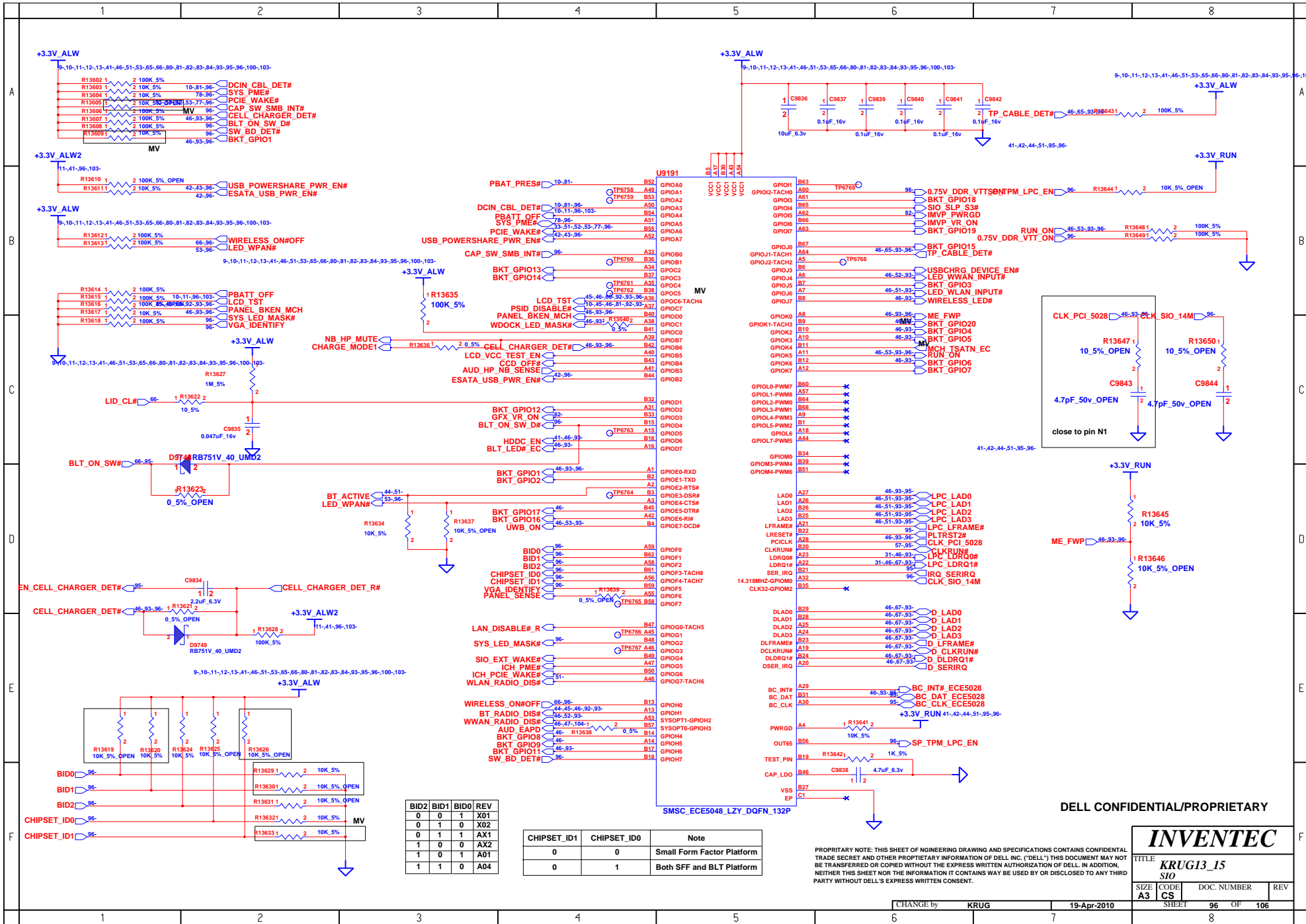
CHANGE by **KRUG** 14-Apr-2010



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INVENTEC			
TITLE KRUG13-15			
EC5055			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		
SHEET		8	OF 106

DELL CONFIDENTIAL/PROPRIETARY
 Change by: KRUG 19-Apr-2010
 19-Apr-2010



BID2	BID1	BID0	REV
0	0	0	X01
0	1	0	X02
0	1	1	AX1
1	0	0	AX2
1	0	1	A01
1	1	0	A04

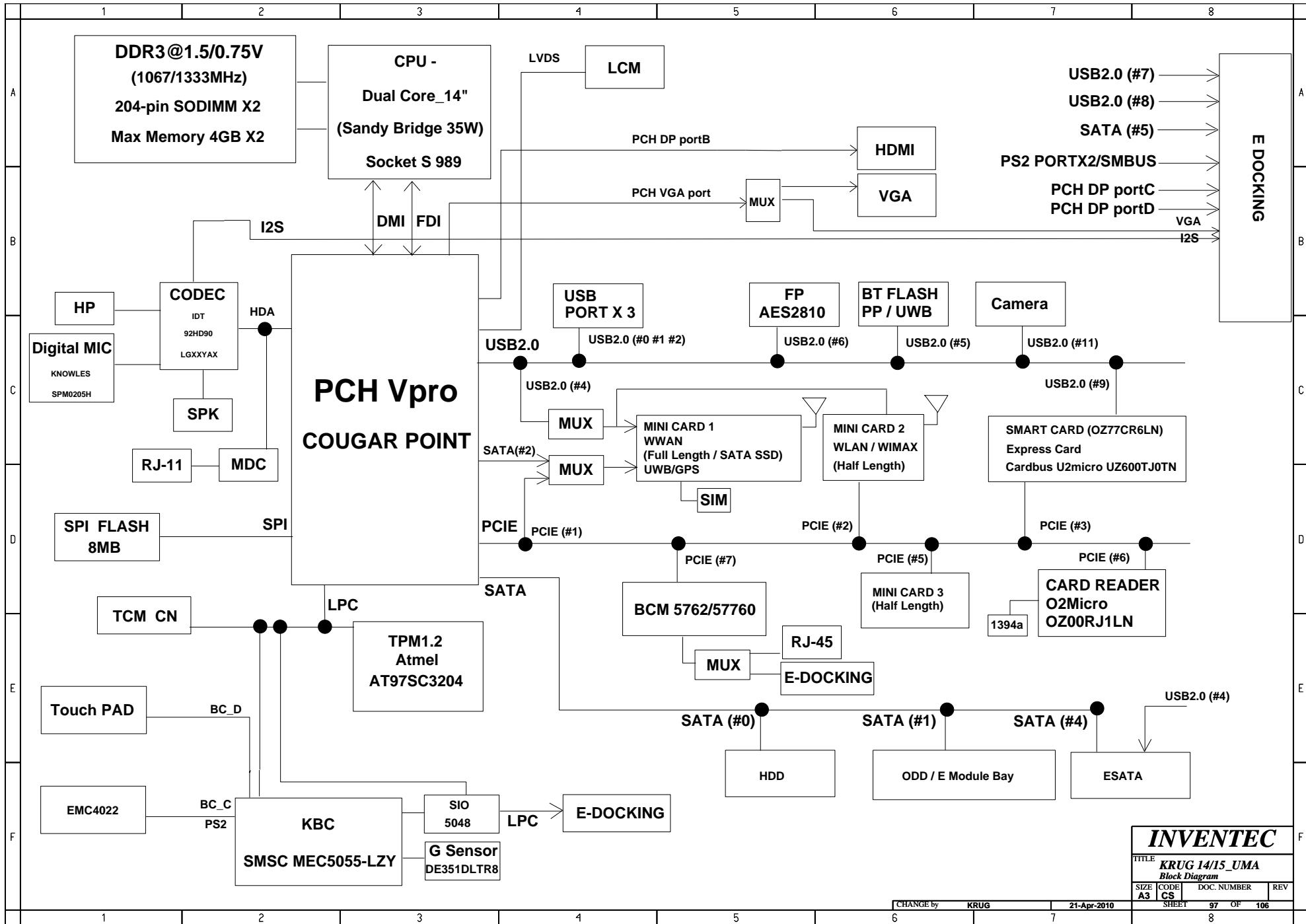
CHIPSET_ID1	CHIPSET_ID0	Note
0	0	Small Form Factor Platform
0	1	Both SFF and BLT Platform

DELL CONFIDENTIAL/PROPRIETARY

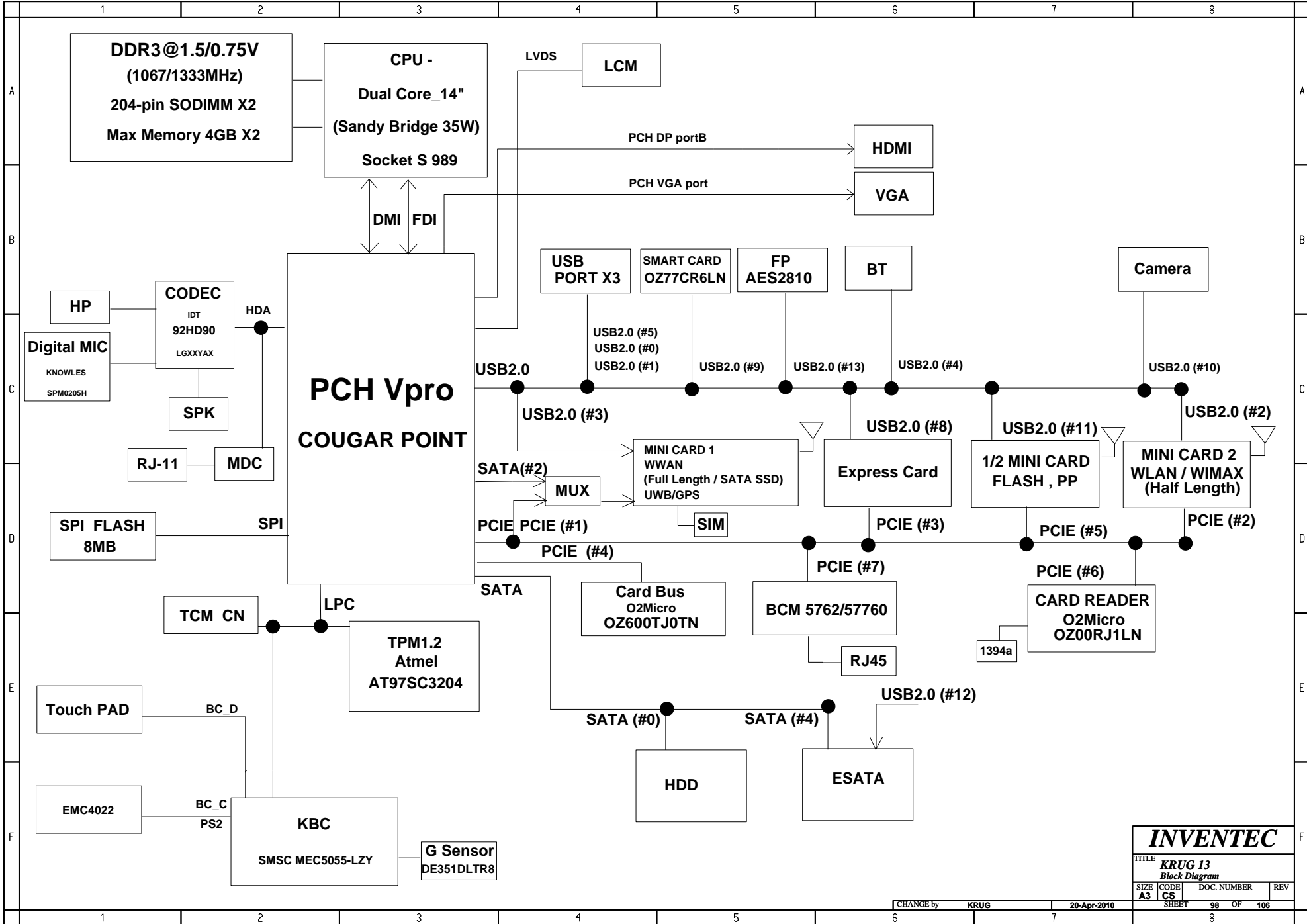
INVENTEC

TITLE: KRUG13_15			
SIO			
SIZE: A3	CODE: CS	DOC. NUMBER: 96 OF 106	REV: SHEET

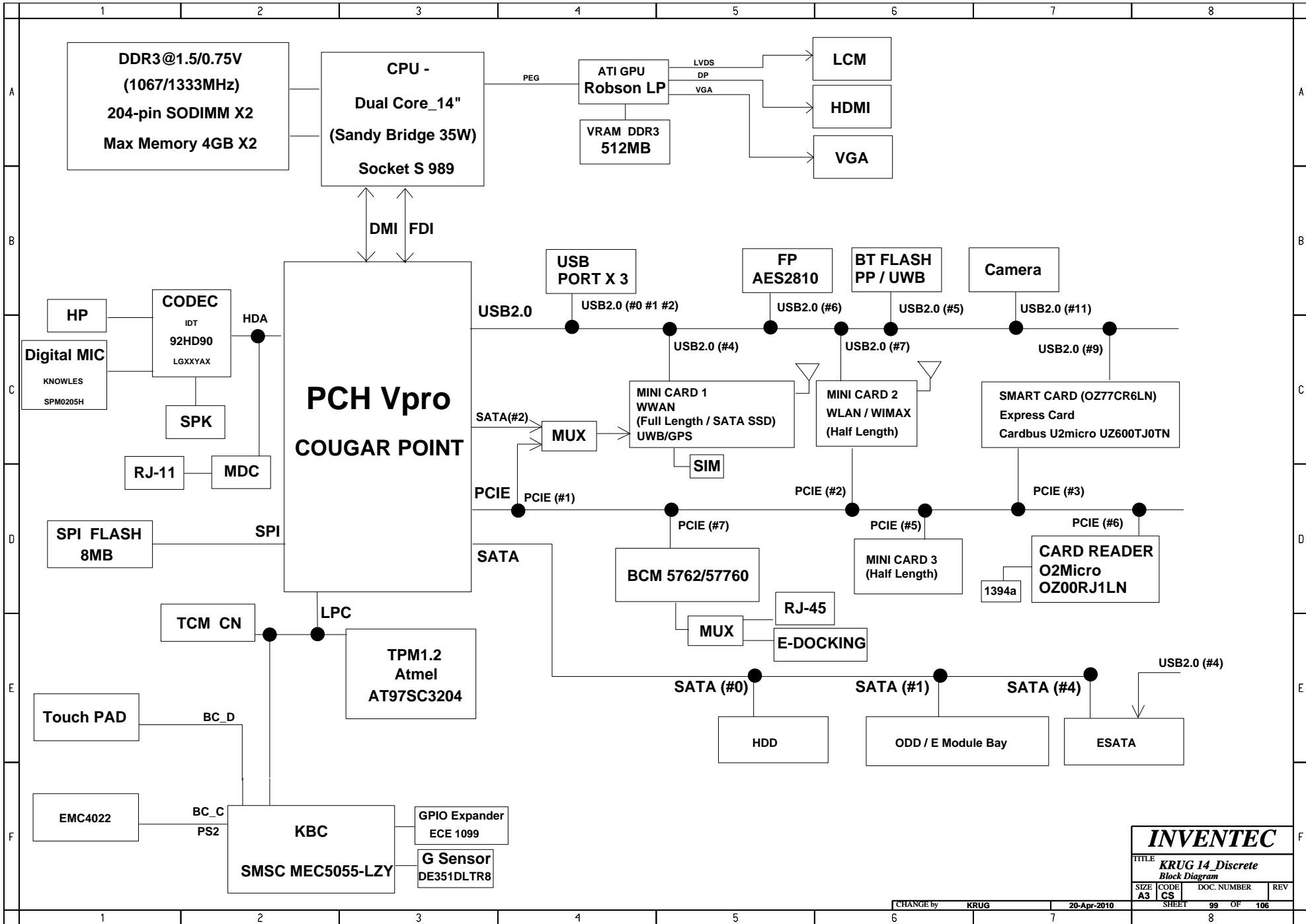
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INVENTEC			
TITLE: KRUG 14/15_UMA			
Block Diagram			
SIZE: A3	CODE: CS	DOC. NUMBER: 97	REV: 106
CHANGE by: KRUG		21-Apr-2010	
SHEET 1		OF 106	



INVENTEC			
TITLE KRUG 13			
Block Diagram			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	98	106
CHANGE by		20-Apr-2010	
SHEET		OF 106	

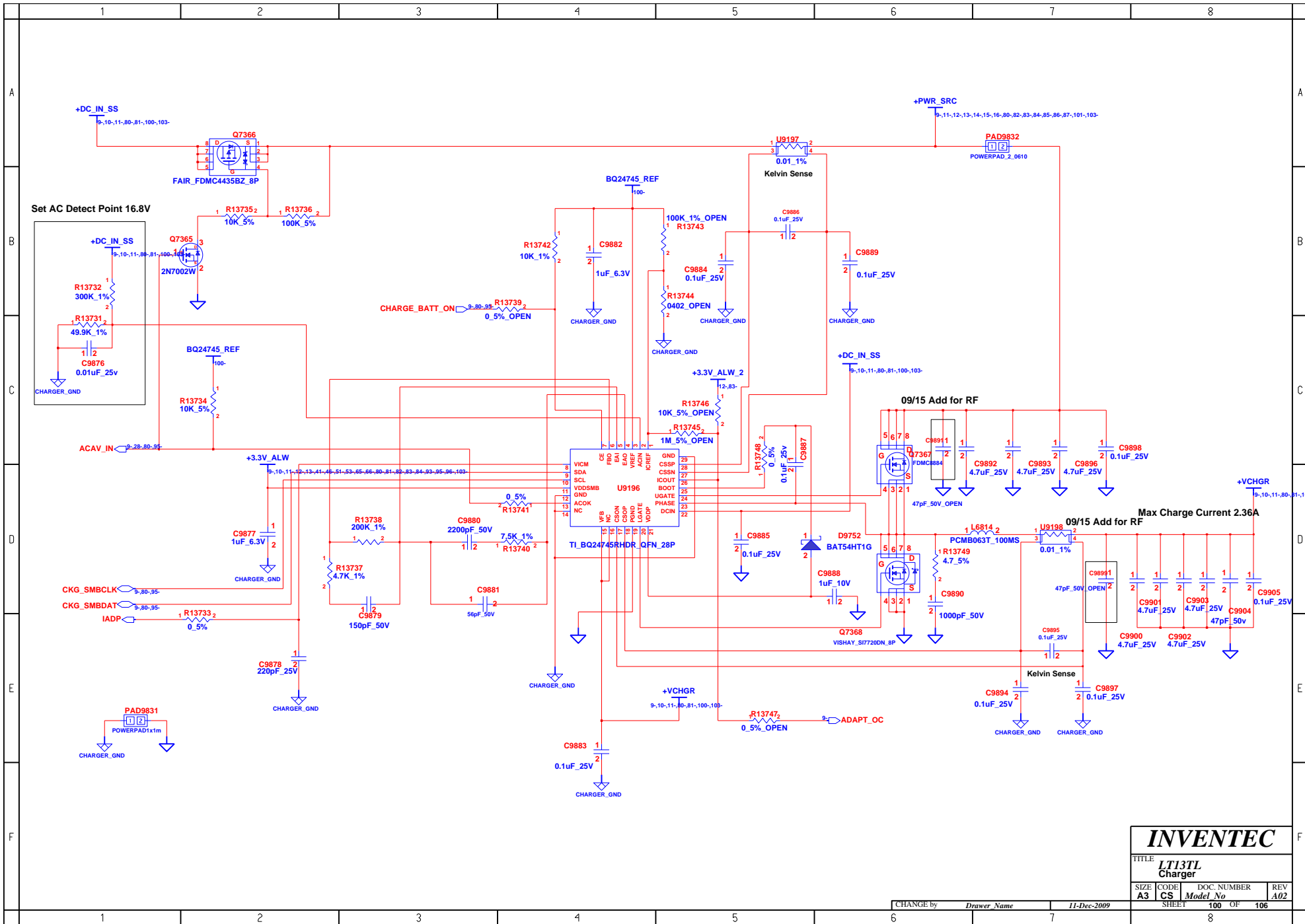


INVENTEC

TITLE **KRUG 14 Discrete Block Diagram**

SIZE	CODE	DOC. NUMBER	REV
A3	CS	99 OF 106	

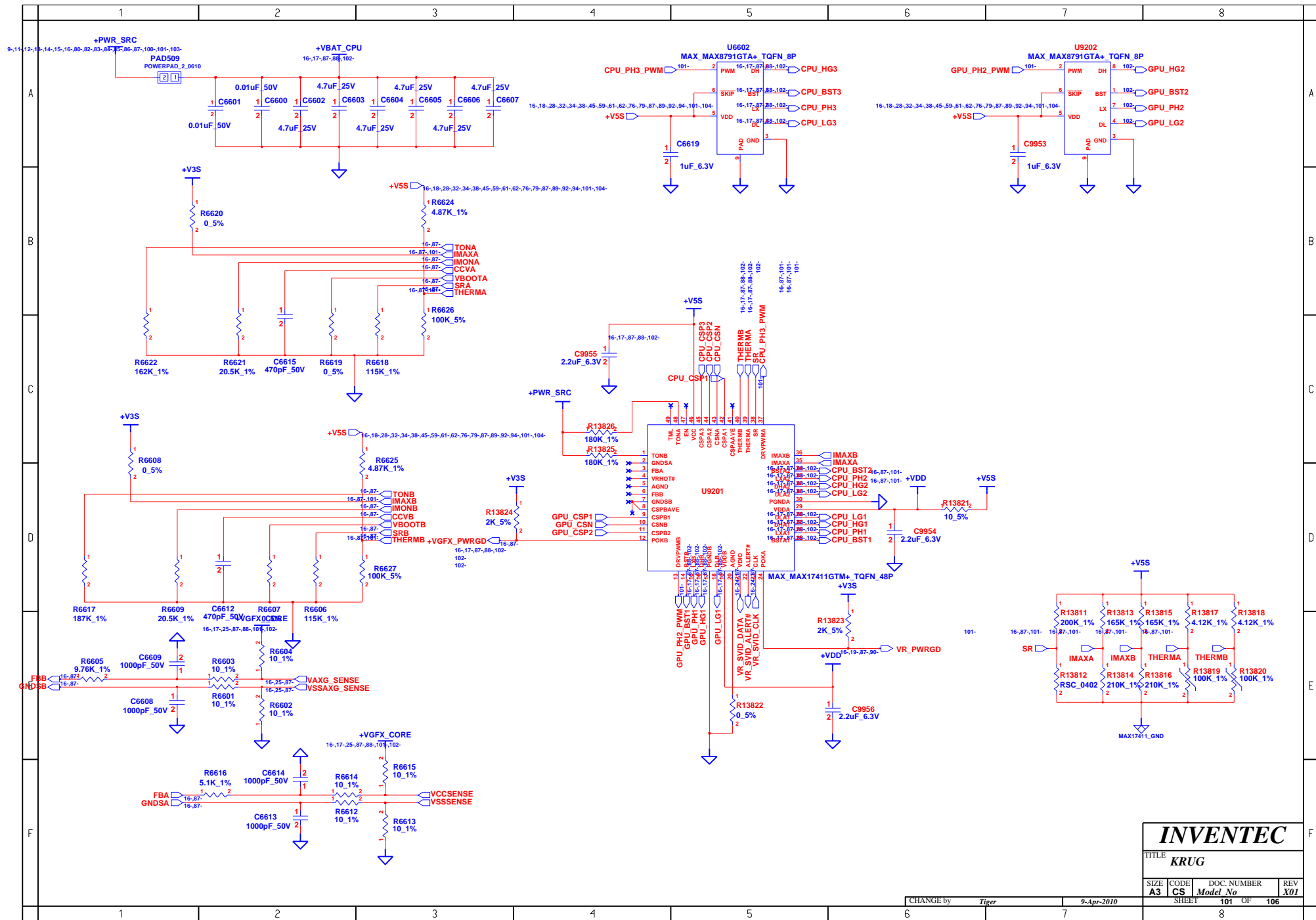
CHANGE by KRUG 20-Apr-2010



INVENTEC

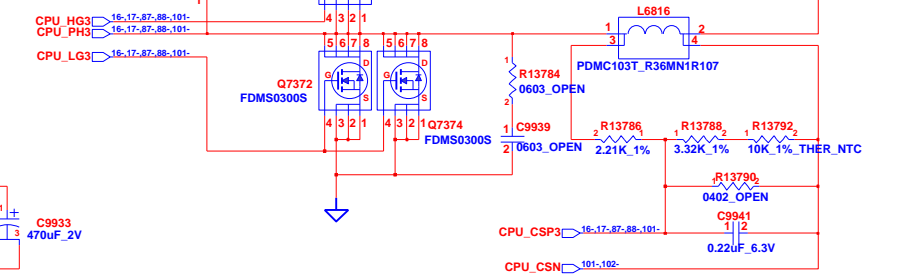
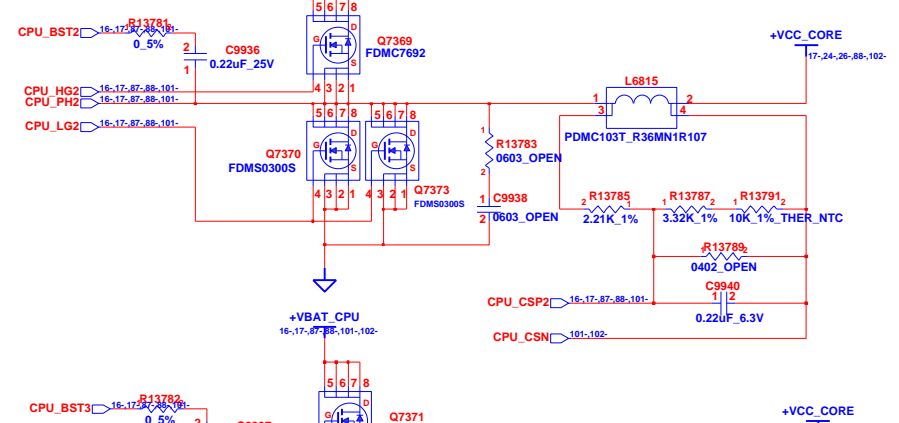
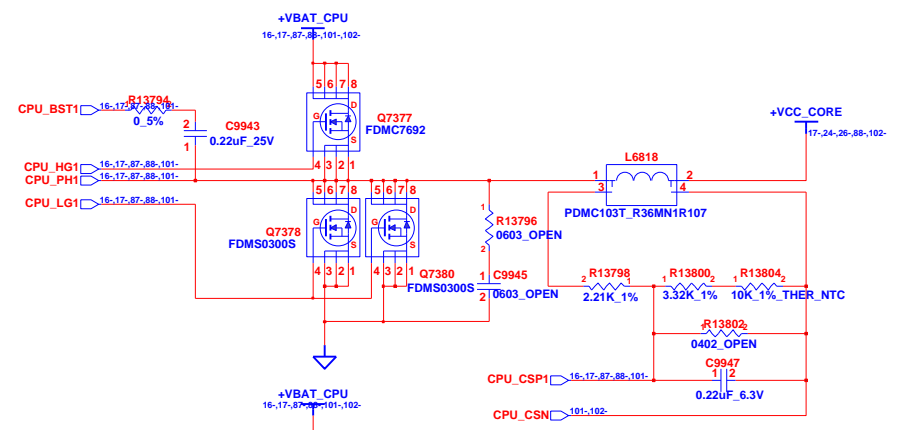
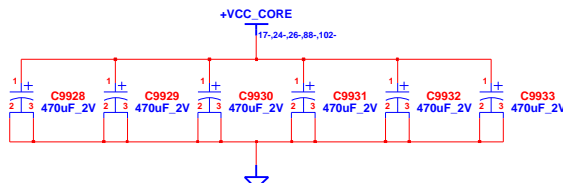
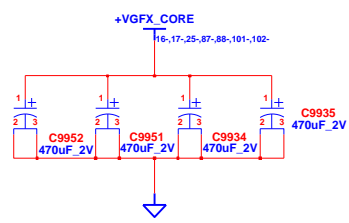
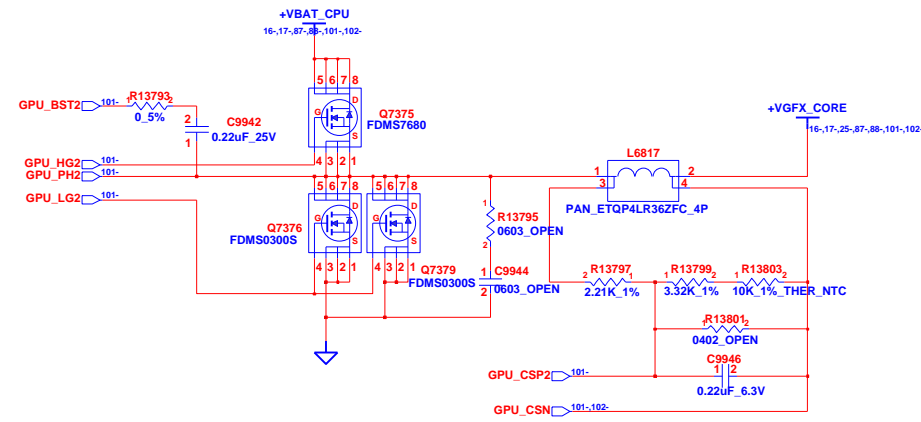
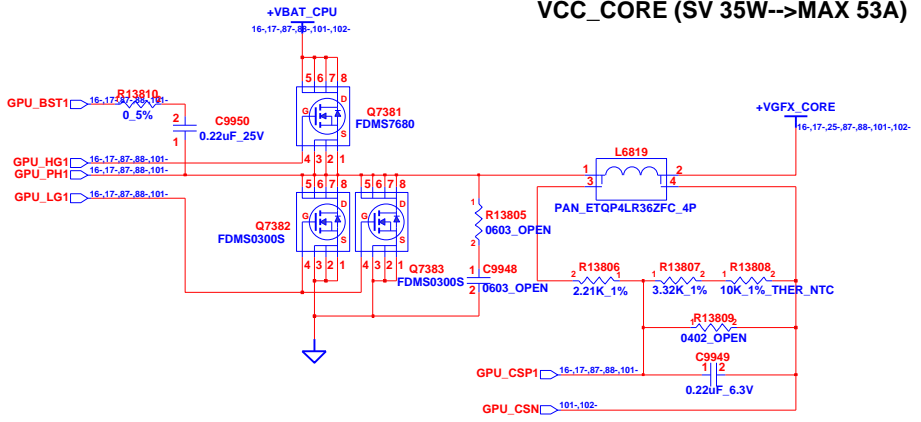
TITLE			
LT131L Charger			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	A02

CHANGE by	Drawer Name	11-Dec-2009	SHEET	100	OF	106
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INVENTEC			
TITLE KRUG			
SIZE A3	CODE CS	DOC. NUMBER <i>Model_No</i>	REV X01
CHANGE by <i>Tiger</i>		9-Apr-2010	
SHEET 101		OF 106	

VCC_CORE (SV 35W-->MAX 53A)



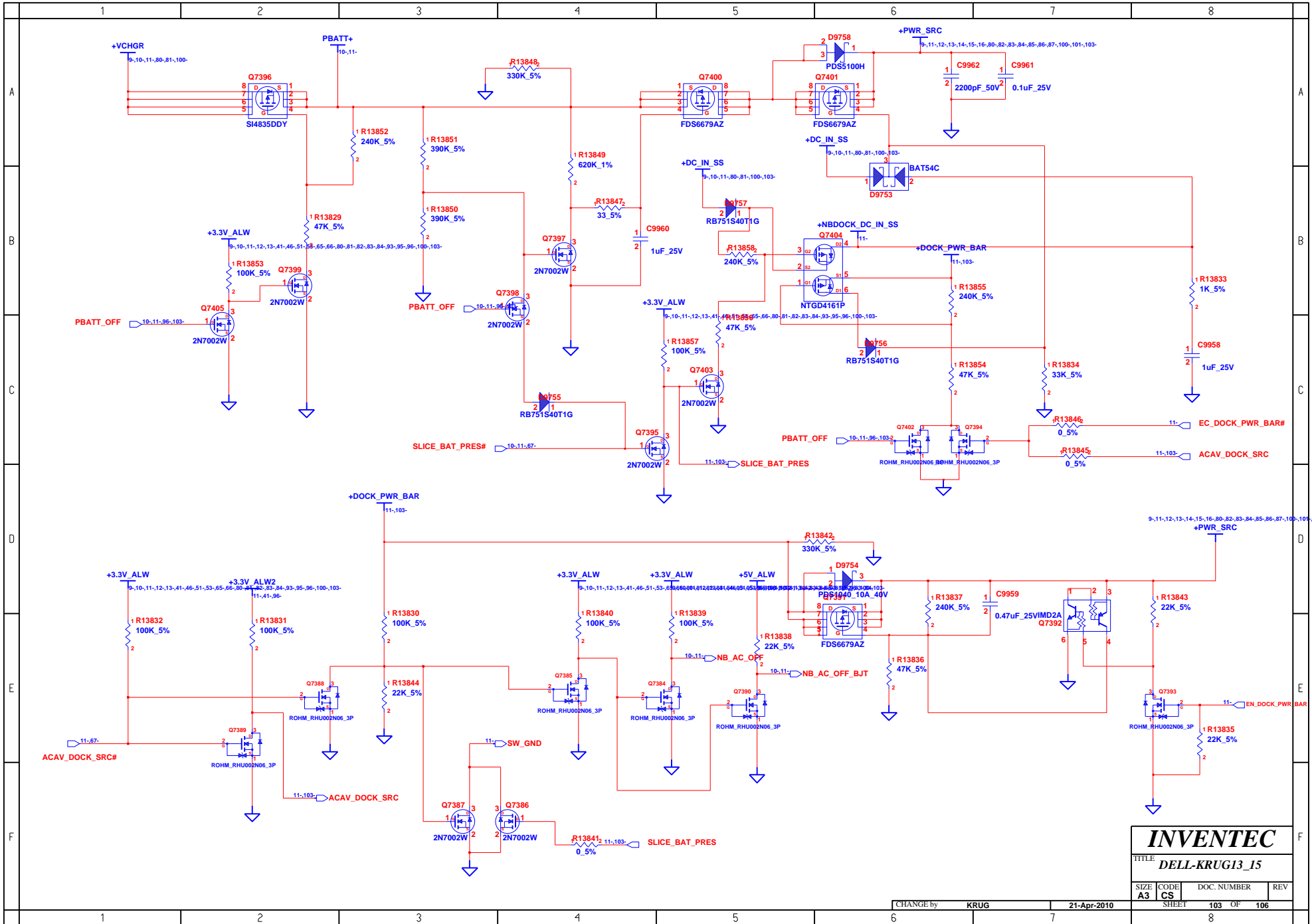
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TITLE
KRUG

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	X01

SHEET	102	OF	106
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CHANGE by *Tiger* 9-Apr-2010



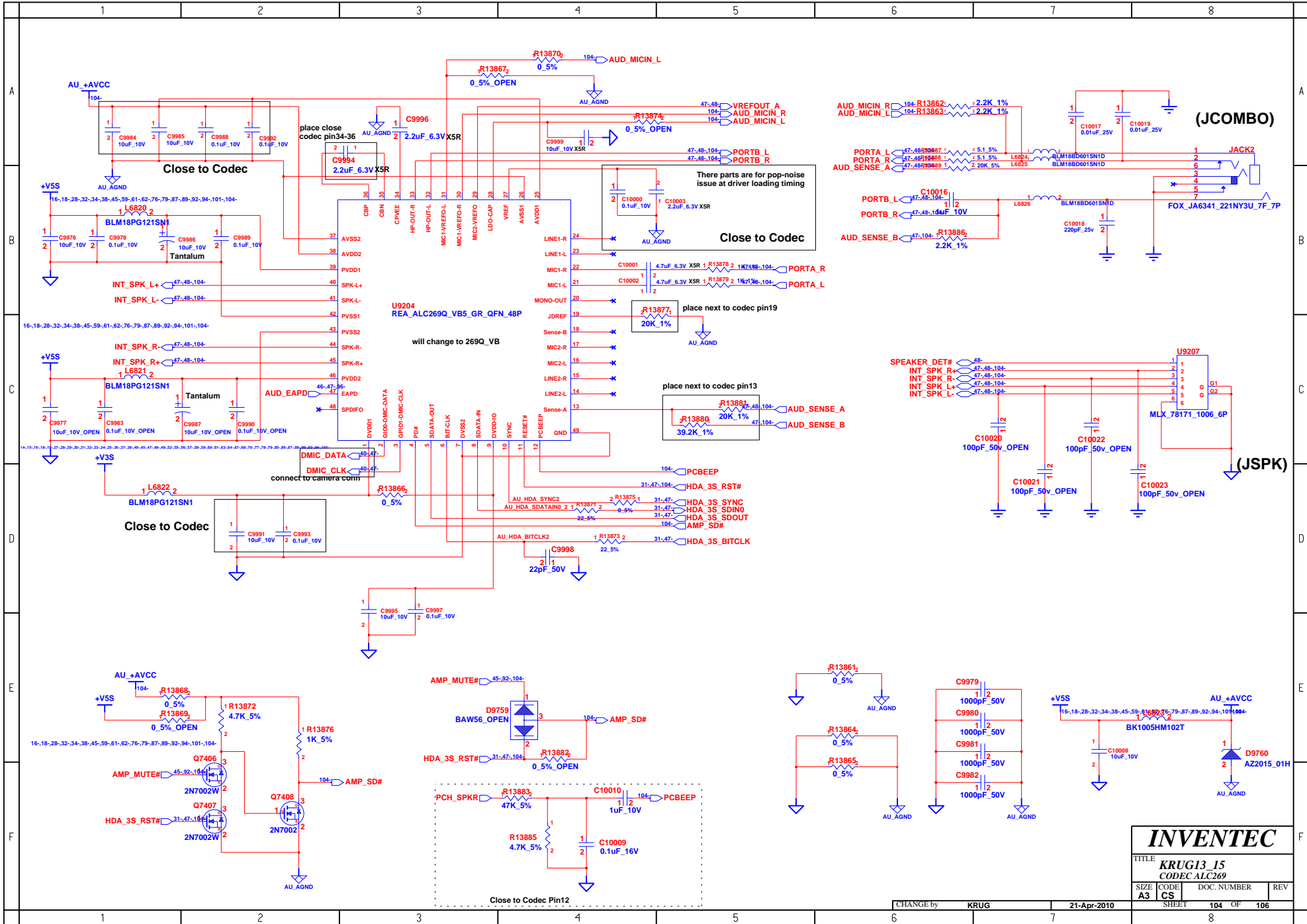
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TITLE
DELL-KRUG15

SIZE	CODE	DOC. NUMBER	REV
A3	CS		

CHANGE by KRUG 21-Apr-2010

SHEET 103 OF 106

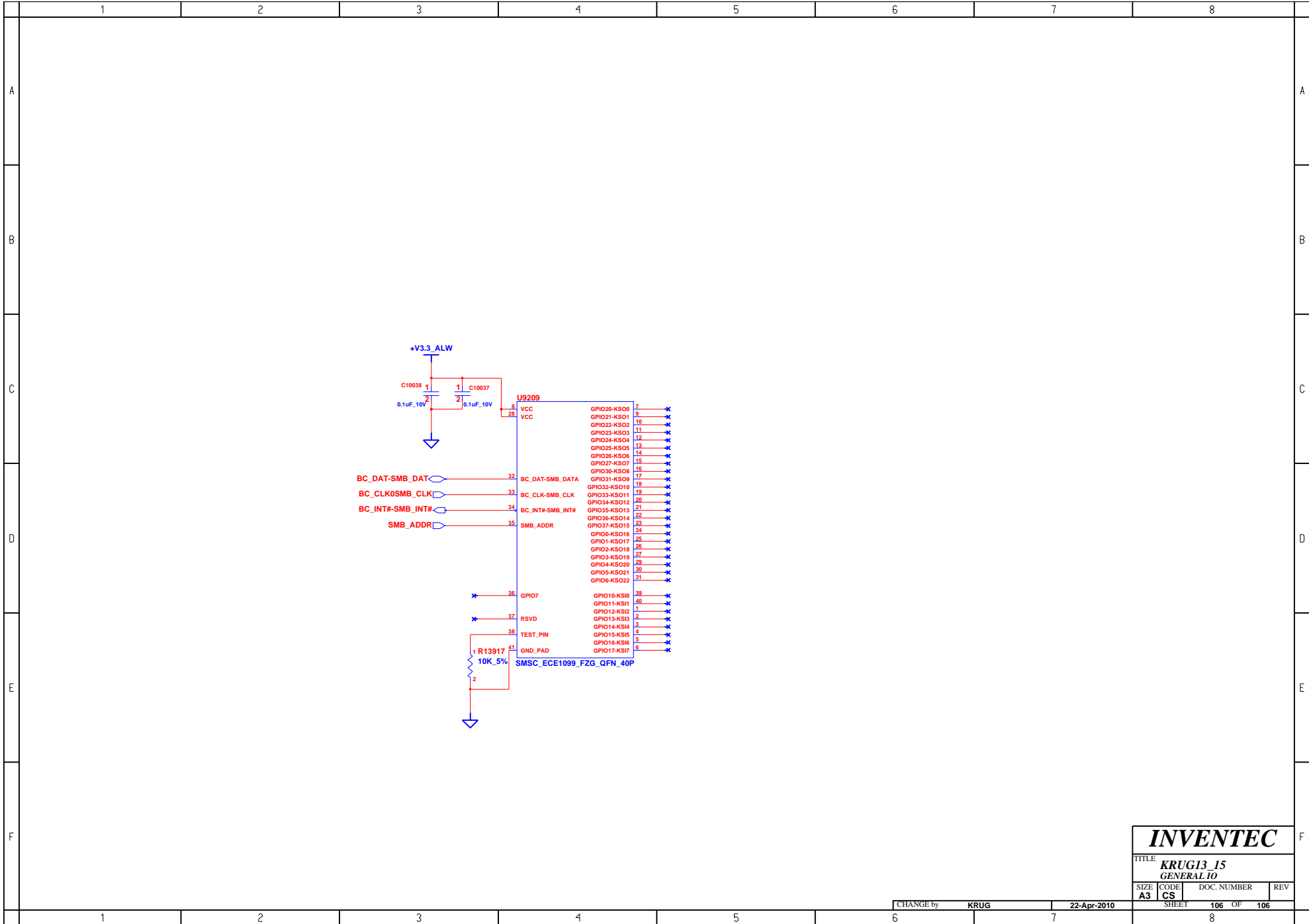


INVENTEC

TITLE
KRUG13_15
 CODEC ALC269

SIZE A3	CODE CS	DOC NUMBER	REV
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CHANGE by KRUG 21-Apr-2010



INVENTEC

TITLE
KRUG13_15
 GENERAL IO

SIZE	CODE	DOC. NUMBER	REV
A3	CS	106	106

SHEET 106 OF 106

CHANGE by KRUG 22-Apr-2010