

# Compal Confidential

## Schematics Document

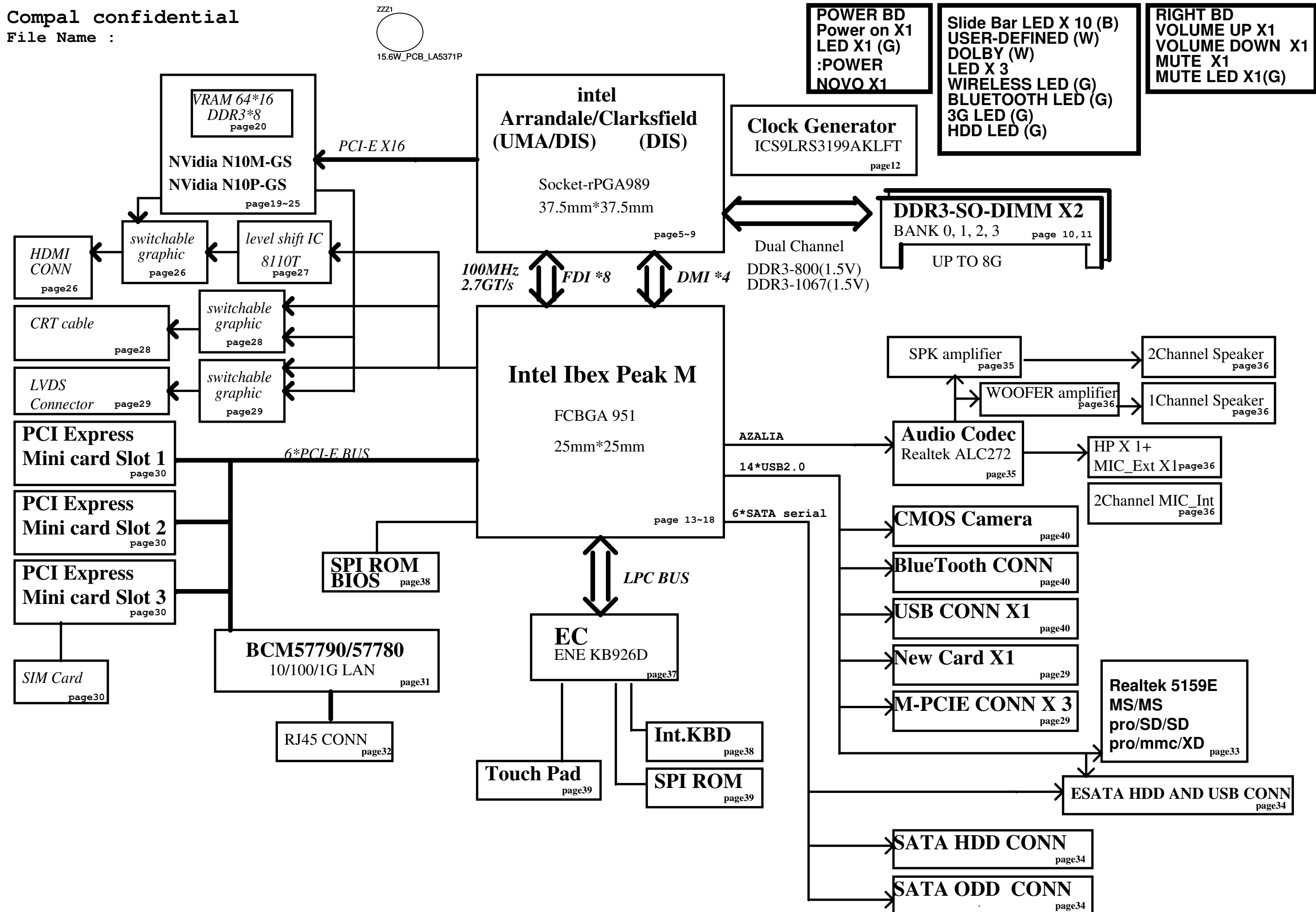
### Arrandale/Clarksville

#### with Intel IBEX PEAK-M core logic

# NIWBA

REV: 0.1

Security Classification	Compal Secret Data		<i>Compal Electronics, Ltd.</i>	
Issued Date	2008/03/25	Deciphered Date	2008/04/	
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>			Title	<b>Cover Sheet</b>
			Size Custom	Document Number
			Date: Tuesday, March 24, 2009	Sheet 1 of 52



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/03/24	Deciphered Date	2008/04/	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number
				NIWBA_LA5371P	
				Date:	Tuesday, March 24, 2009
				Sheet	2 of 52
				Rev	0.1

**MB Block Diagram**  
 Rev 0.1  
 Tuesday, March 24, 2009

# DDR3 Voltage Rails

power plane	+B	+5VALW	+1.5V	+5VS
				+3VS
State		+3VALW		+1.5VS
				+VCCP
				+CPU_CORE
				+VGA_CORE
				+1.8VS
				+0.75VS
				+1.05VS
S0	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

# SMBUS Control Table

	SOURCE	RAM M2	BATT	KE926	SODIMM	CLK CHIP	WLAN WWAN	N10x Thermal Sensor	N10x	Cap sensor board	NEW CARD	PCH
SMB_EC_CK1	KB926	X	V	X	X	X	X	X	X	X	X	X
SMB_EC_DA1	+3VALW		+3VALW									
SMB_EC_CK2	KB926	X	X	X	X	X	X	X	X	X	X	V
SMB_EC_DA2	+3VALW											+3VALW
SMBCLK	PCH	V	X	X	V	V	X	X	X	X	V	X
SMBDATA	+3VALW	+3VALW			+3VS	+3VS					+3VS	
SML0CLK	PCH	X	X	X	X	X	X	X	X	X	X	X
SML0DATA	+3VALW											
SML1CLK	PCH	X	X	V	X	X	X	V	X	V	X	X
SML1DATA	+3VALW			+3VALW				+3VS		+3VS		

# I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	10100000
DDR SO-DIMM 1	A4	10100100
CLOCK GENERATOR (EXT.)	D2	11010010

# @ FUNCTION

EVT		NON-USE	
45@	(45 BOM)		
GIGA@	(GIGA LAN)	100@	(100 LAN)
NO TVSW@	(NON TV POWER SW)	TVSW@	(TV POWER SW)
ARRAY@	(ARRAY MIC)	MONO@	(MONO MIC)
S512@	FOR X76 BOM		
H512@	FOR X76 BOM		
S1024@	FOR X76 BOM		
H1024@	FOR X76 BOM		
X76@	(X76 BOM)		
M1@	(DDR M1 MODE)		
3G@	(3G MODE)		
10M@	FOR 10M CHIP		
10P@	FOR 10P CHIP		
UMA@	FOR Auberndale		
DIS@	FOR Auberndale/Clarksfield		
VGA@	FOR NVIDIA PART		

PORT	DEVICE
1	NEW CARD
2	WLAN
3	LAN
4	3G
5	
6	TV TUNNER
7	
8	

PORT	DEVICE
0	LEFT SIDE
1	RIGHT SIDE
2	CMOS
3	
4	RIGHT SIDE
5	CARD READER
6	
7	
8	WIRELESS
9	TV TUNNER
10	NEW CARD
11	BT
12	
13	3G

## VGA and DDR3 Voltage Rails (N10x GPIO)

GPIO	I/O	ACTIVE	Function Description
GPIO0	N/A	N/A	
GPIO1	IN	-	Hot plug detect for IFP link C
GPIO2	OUT	H	Panel Back-Light brightness(PWM capable)
GPIO3	OUT	H	Panel Power Enable
GPIO4	OUT	H	Panel Back-Light On/Off (PWM)
GPIO5	OUT	-	GPU VID0
GPIO6	OUT	-	GPU VID1
GPIO7	OUT	-	GPU VID2
GPIO8	I/O	L	Thermal Catastrophic Overtemp
GPIO9	OUT	L	Thermal Alert
GPIO10	OUT		Memory VREF switch
GPIO11	I/O	L	SLI raster sync
GPIO12	IN	-	AC power detect pin
GPIO13	OUT	-	MEM_VID or Power supply control
GPIO14	OUT	-	Power supply control
GPIO15	IN	-	Hot plug detect for IFP Link E
GPIO16	OUT	-	Programmable Fan Control
GPIO17	IN	-	
GPIO18	IN	-	
GPIO19	IN	-	Hot plug detect for IFP Link D
GPIO20	IN	-	
GPIO21	IN	-	Hot plug detect for IFP link F
GPIO22	IN	-	SLI swap ready signal
GPIO23	I/O		

GPIO6	GPIO5	N10M-GS	N10P-GS
GPU_VID1	GPU_VID0	VGA_CORE	P-State
0	0	0.8V	12
0	1	0.85V	12
1	1	0.9V	0, 10

## Performance Mode P0 TDP at Tj = 102 C\* (DDR3)

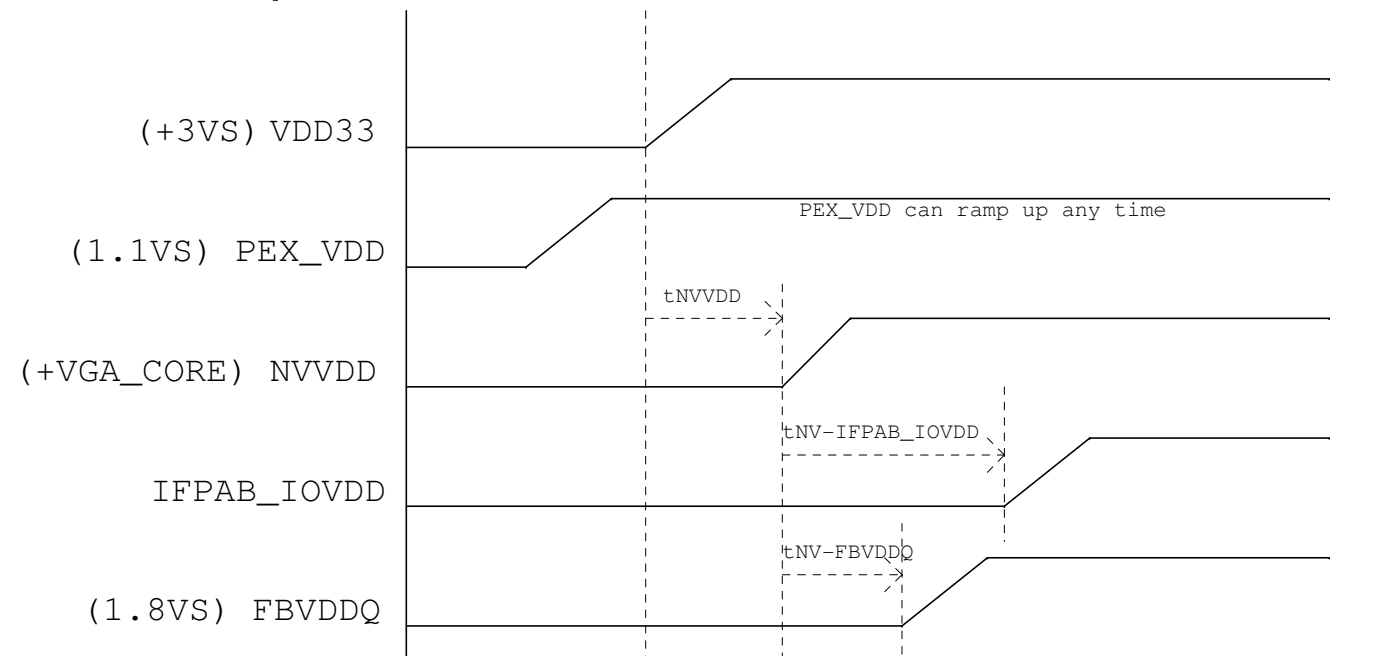
Products	GPU (4)	Mem (1,5)	NVCLK /MCLK	NVVDD			FBVDD (1.5V)		FBVDDQ (GPU+Mem) (1.5V)		PCI Express (1.05V) (6)		I/O and PLLVDD (1.8V)		I/O and PLLVDD (1.05V)		Other (3.3V)	
	(W)	(W)	(MHz)	(V)	(A)	(W)	(A)	(W)	(A)	(W)	(mA)	(W)	(mA)	(W)	(mA)	(W)	(mA)	(W)
N10P-GS 128bit 1024MB DDR3	21.07	6.67	TBD	TBD	18.25	17.34	2.06	3.09	4.09	6.14	850	0.89	75	0.14	63	0.07	55	0.18
N10P-GE 128bit 1024MB DDR3	20.97	6.73	TBD	TBD	19.17	17.25	2.03	3.05	4.09	6.14	840	0.88	75	0.14	63	0.07	55	0.18
N10P-LP 128bit 1024MB DDR3	15.48	6.44	TBD	TBD	13.95	11.86	1.90	2.85	3.99	5.99	810	0.85	75	0.14	63	0.07	55	0.18

## Performance Mode P0 TDP at Tj = 102 C\* (DDR3)

Products	GPU (4)	Mem (1,5)	NVCLK /MCLK	NVVDD			FBVDD (1.5V)		FBVDDQ (GPU+Mem) (1.5V)		PCI Express (1.05V) (6)		I/O and PLLVDD (1.8V)		I/O and PLLVDD (1.05V)		Other (3.3V)	
	(W)	(W)	(MHz)	(V)	(A)	(W)	(A)	(W)	(A)	(W)	(mA)	(W)	(mA)	(W)	(mA)	(W)	(mA)	(W)
N10M-GE 64bit 512MB DDR3	13.36	2.93	TBD	TBD	11.89	10.70	0.66	0.99	2.16	3.24	792	0.83	75	0.14	63	0.07	100	0.33
N10M-GS 64bit 512MB DDR3	14.29	3.10	TBD	TBD	11.53	11.53	0.70	1.05	2.28	3.42	817	0.86	75	0.14	63	0.07	100	0.33
N10M-LP 64bit 512MB DDR3	8.28	2.91	TBD	TBD	6.60	5.61	0.62	0.93	2.20	3.3	782	0.82	75	0.14	63	0.07	100	0.33

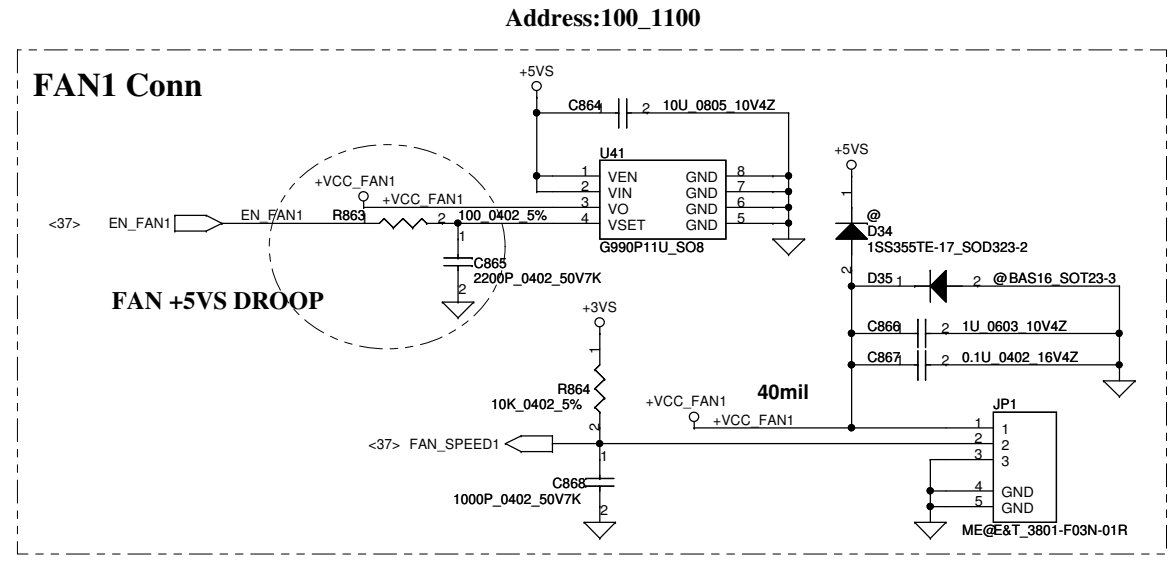
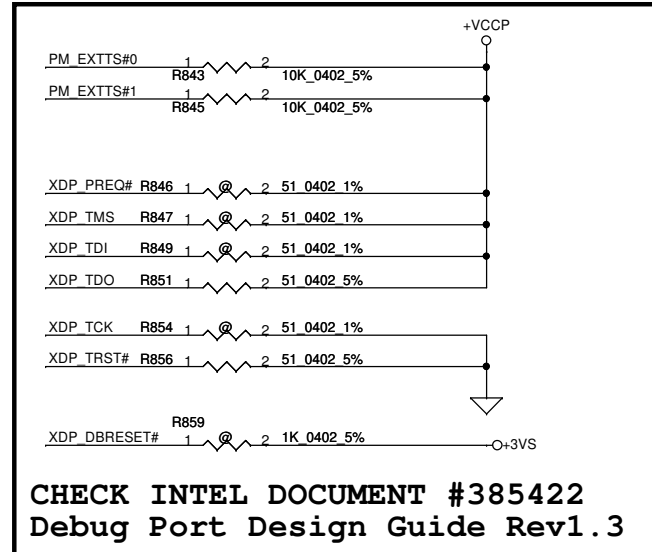
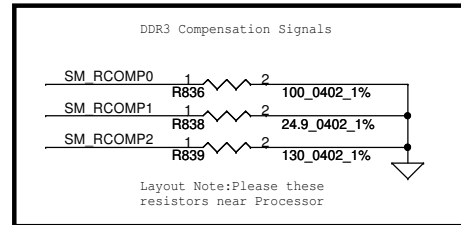
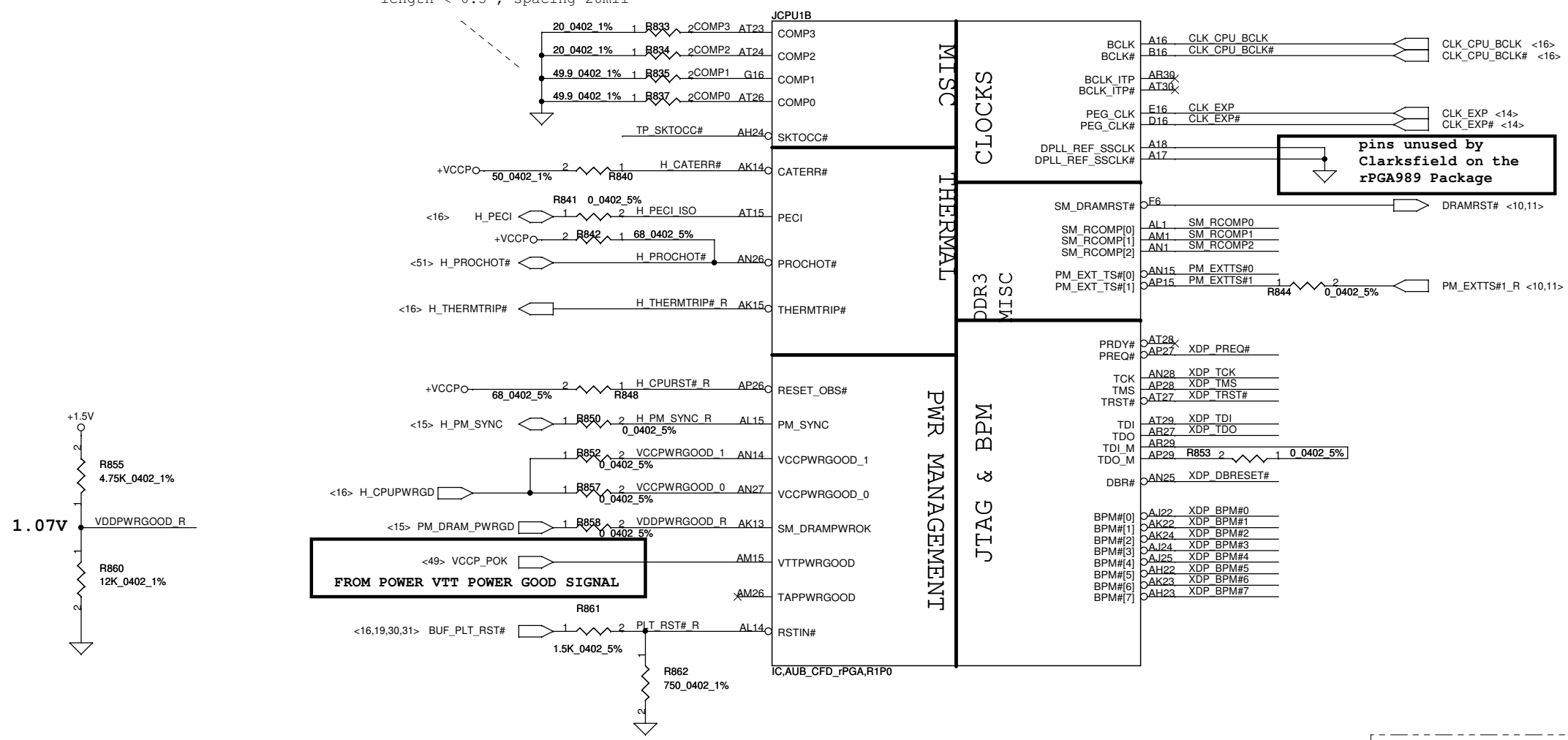
## Power Sequence

The ramp time for any rail must be more than 40us



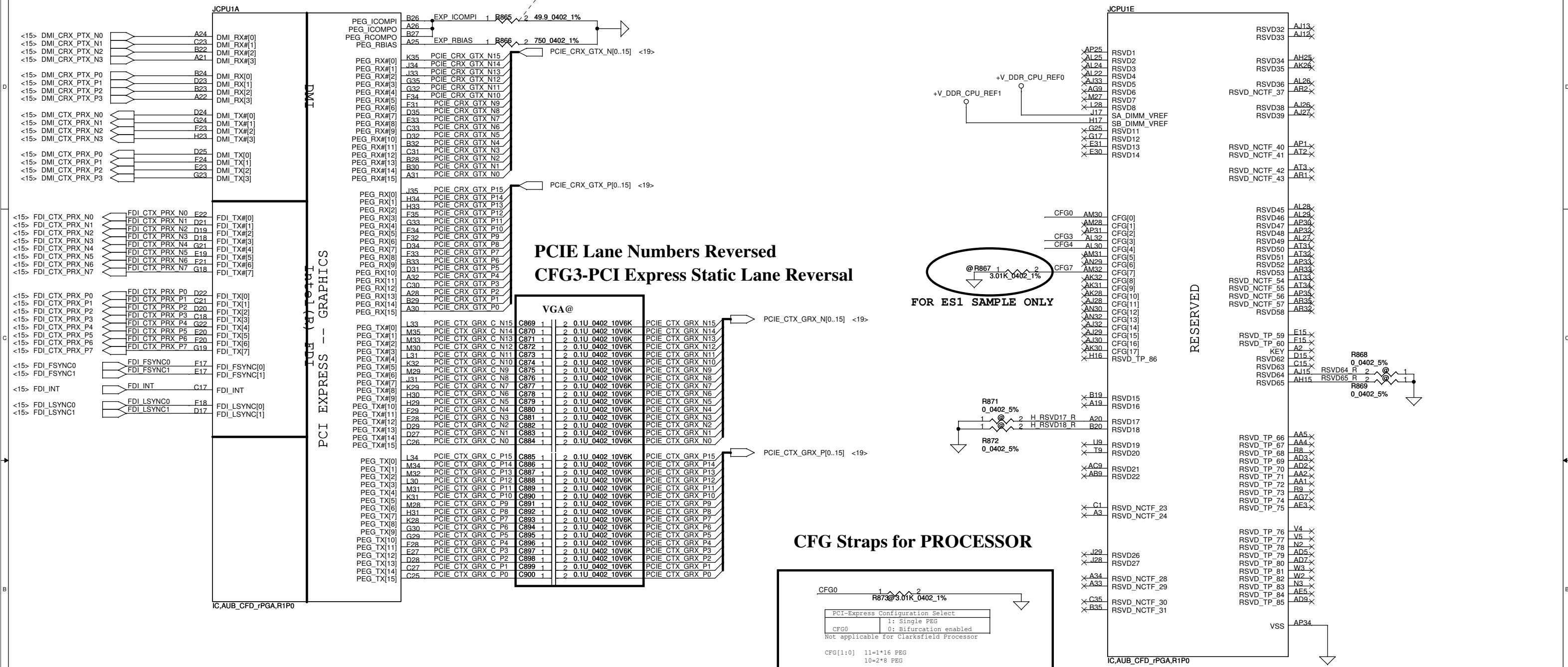
Security Classification	Compal Secret Data			<b>Compal Electronics, Inc.</b> <b>VGA Notes List</b>			
Issued Date	2009/03/16	Deciphered Date	2010/03/15				
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>				Size	Document Number	Rev	
				B	KIWB1/B2_LA4602P	0.1	
				Date:	Tuesday, March 24, 2009	Sheet	4 of 52

Layout rule : 10mil width trace  
length < 0.5", spacing 20mil



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>Clarksfield(1/5)-Thermal/XDP</b> Document Number <b>NIWBA_LA5371P</b> Date: Tuesday, March 24, 2009 Sheet 5 of 52
Size	Custom	Rev	0.2	

Layout rule : trace length < 0.5"

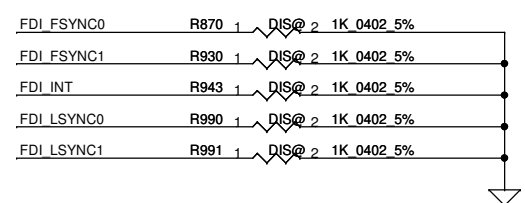
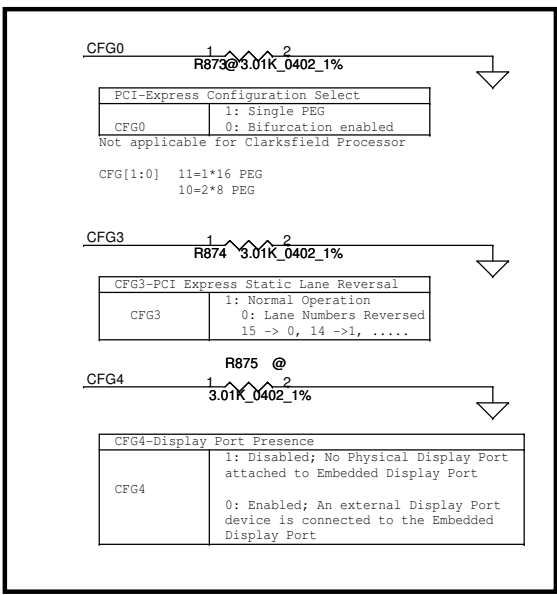


### PCIE Lane Numbers Reversed CFG3-PCI Express Static Lane Reversal

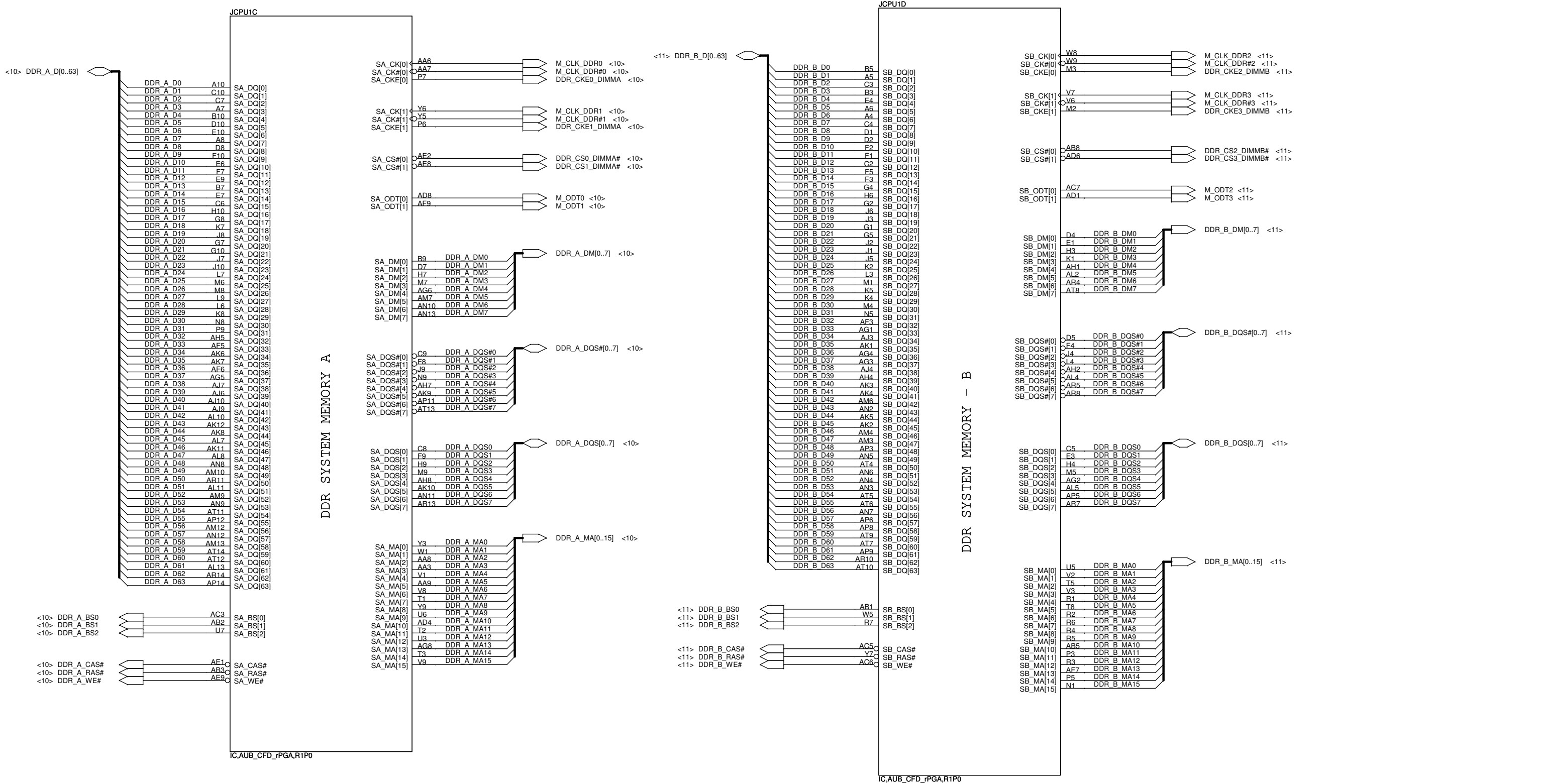
FOR ES1 SAMPLE ONLY

VGA@		PCIE_CTX_GRX_N[0..15] <19>		PCIE_CTX_GRX_P[0..15] <19>	
L33	PCIE CTX GRX C N15	C869	1	2	0.1U 0402 10V6K
M35	PCIE CTX GRX C N14	C870	1	2	0.1U 0402 10V6K
M33	PCIE CTX GRX C N13	C871	1	2	0.1U 0402 10V6K
M30	PCIE CTX GRX C N12	C872	1	2	0.1U 0402 10V6K
L31	PCIE CTX GRX C N11	C873	1	2	0.1U 0402 10V6K
M29	PCIE CTX GRX C N10	C874	1	2	0.1U 0402 10V6K
K32	PCIE CTX GRX C N9	C875	1	2	0.1U 0402 10V6K
J31	PCIE CTX GRX C N8	C876	1	2	0.1U 0402 10V6K
K29	PCIE CTX GRX C N7	C877	1	2	0.1U 0402 10V6K
H30	PCIE CTX GRX C N6	C878	1	2	0.1U 0402 10V6K
H29	PCIE CTX GRX C N5	C879	1	2	0.1U 0402 10V6K
F29	PCIE CTX GRX C N4	C880	1	2	0.1U 0402 10V6K
F28	PCIE CTX GRX C N3	C881	1	2	0.1U 0402 10V6K
D29	PCIE CTX GRX C N2	C882	1	2	0.1U 0402 10V6K
D27	PCIE CTX GRX C N1	C883	1	2	0.1U 0402 10V6K
C26	PCIE CTX GRX C N0	C884	1	2	0.1U 0402 10V6K
L34	PCIE CTX GRX C P15	C885	1	2	0.1U 0402 10V6K
M34	PCIE CTX GRX C P14	C886	1	2	0.1U 0402 10V6K
M32	PCIE CTX GRX C P13	C887	1	2	0.1U 0402 10V6K
L30	PCIE CTX GRX C P12	C888	1	2	0.1U 0402 10V6K
M31	PCIE CTX GRX C P11	C889	1	2	0.1U 0402 10V6K
K31	PCIE CTX GRX C P10	C890	1	2	0.1U 0402 10V6K
M28	PCIE CTX GRX C P9	C891	1	2	0.1U 0402 10V6K
H31	PCIE CTX GRX C P8	C892	1	2	0.1U 0402 10V6K
K28	PCIE CTX GRX C P7	C893	1	2	0.1U 0402 10V6K
G30	PCIE CTX GRX C P6	C894	1	2	0.1U 0402 10V6K
G29	PCIE CTX GRX C P5	C895	1	2	0.1U 0402 10V6K
G28	PCIE CTX GRX C P4	C896	1	2	0.1U 0402 10V6K
E27	PCIE CTX GRX C P3	C897	1	2	0.1U 0402 10V6K
D28	PCIE CTX GRX C P2	C898	1	2	0.1U 0402 10V6K
C27	PCIE CTX GRX C P1	C899	1	2	0.1U 0402 10V6K
C25	PCIE CTX GRX C P0	C900	1	2	0.1U 0402 10V6K

### CFG Straps for PROCESSOR



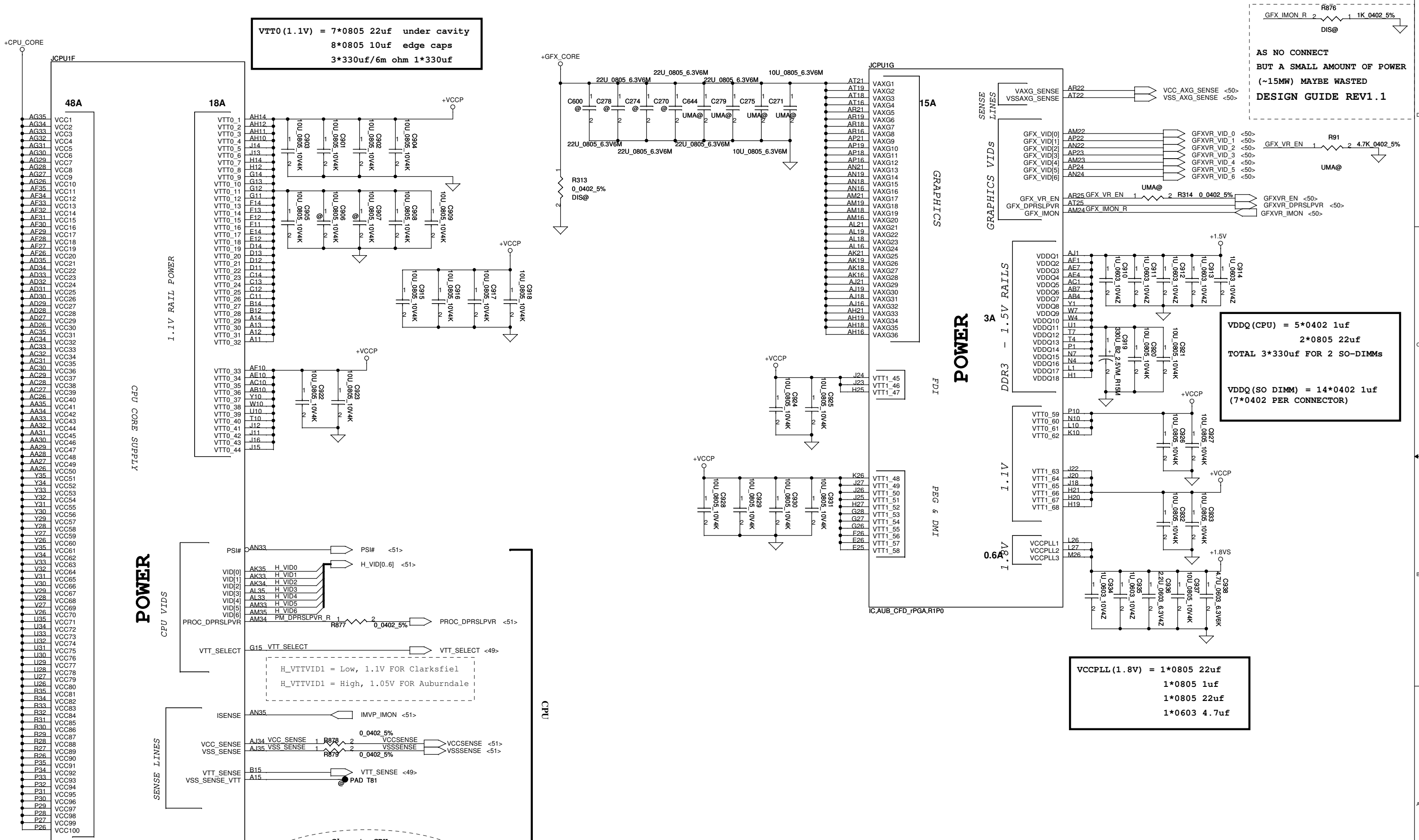
Security Classification	Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Clarksfiel(2/5)-DMI/PEG/FDI
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom Document Number <b>NIWBA_LA537IP</b> Rev 0.2
Date:	Tuesday, March 24, 2009	Sheet	6	of 52



IC,AUB\_CFD\_rPGA,R1P0

IC,AUB\_CFD\_rPGA,R1P0

Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>Clarksfiel(3/5)-DDR III</b> Size Custom Document Number <b>NIWBA_LA5371P</b> Rev 0.2	
Date: Tuesday, March 24, 2009				Sheet 7 of 52	



AS NO CONNECT  
BUT A SMALL AMOUNT OF POWER  
(~15MW) MAYBE WASTED  
DESIGN GUIDE REV1.1

VTT0(1.1V) = 7\*0805 22uf under cavity  
8\*0805 10uf edge caps  
3\*330uf/6m ohm 1\*330uf

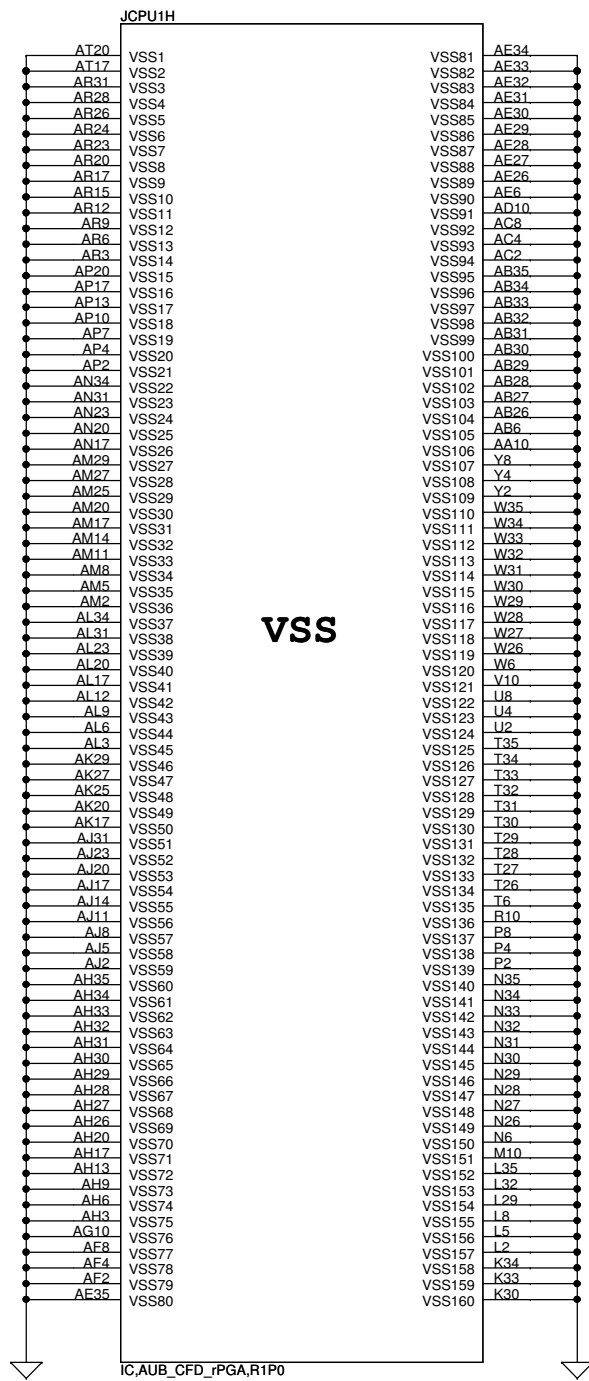
VDDQ (CPU) = 5\*0402 1uf  
2\*0805 22uf  
TOTAL 3\*330uf FOR 2 SO-DIMMs

VDDQ (SO DIMM) = 14\*0402 1uf  
(7\*0402 PER CONNECTOR)

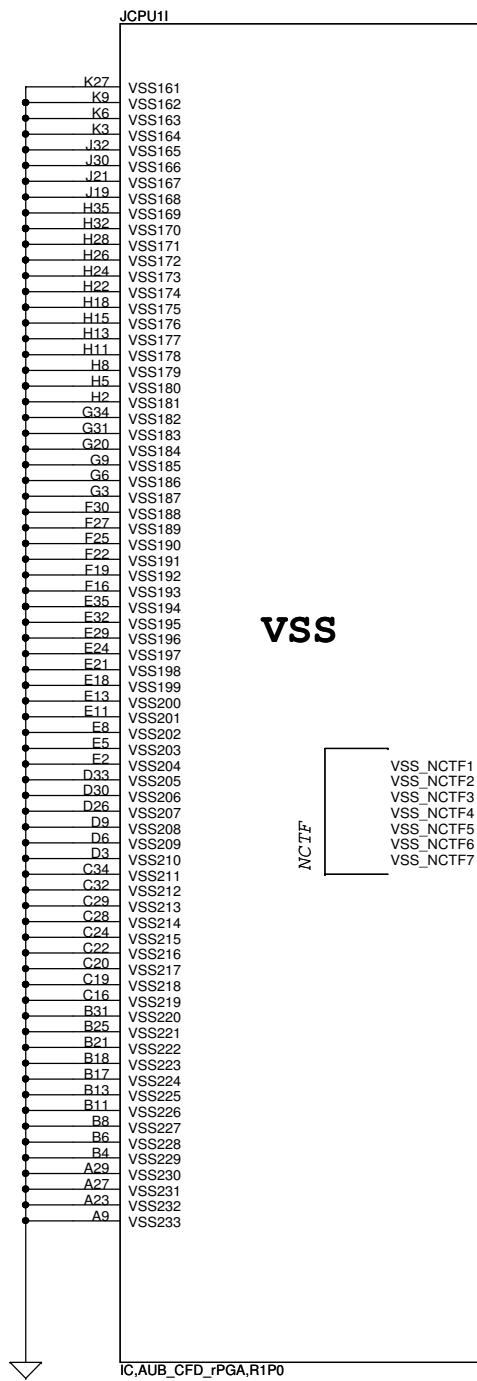
VCCPLL(1.8V) = 1\*0805 22uf  
1\*0805 1uf  
1\*0805 22uf  
1\*0603 4.7uf

Security Classification	Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Clarksfiel(4/5)-PWR
Size Custom	Document Number	Rev		
	NIWBA_LA5371P	0.2		
Date:	Tuesday, March 24, 2009	Sheet	8 of 52	



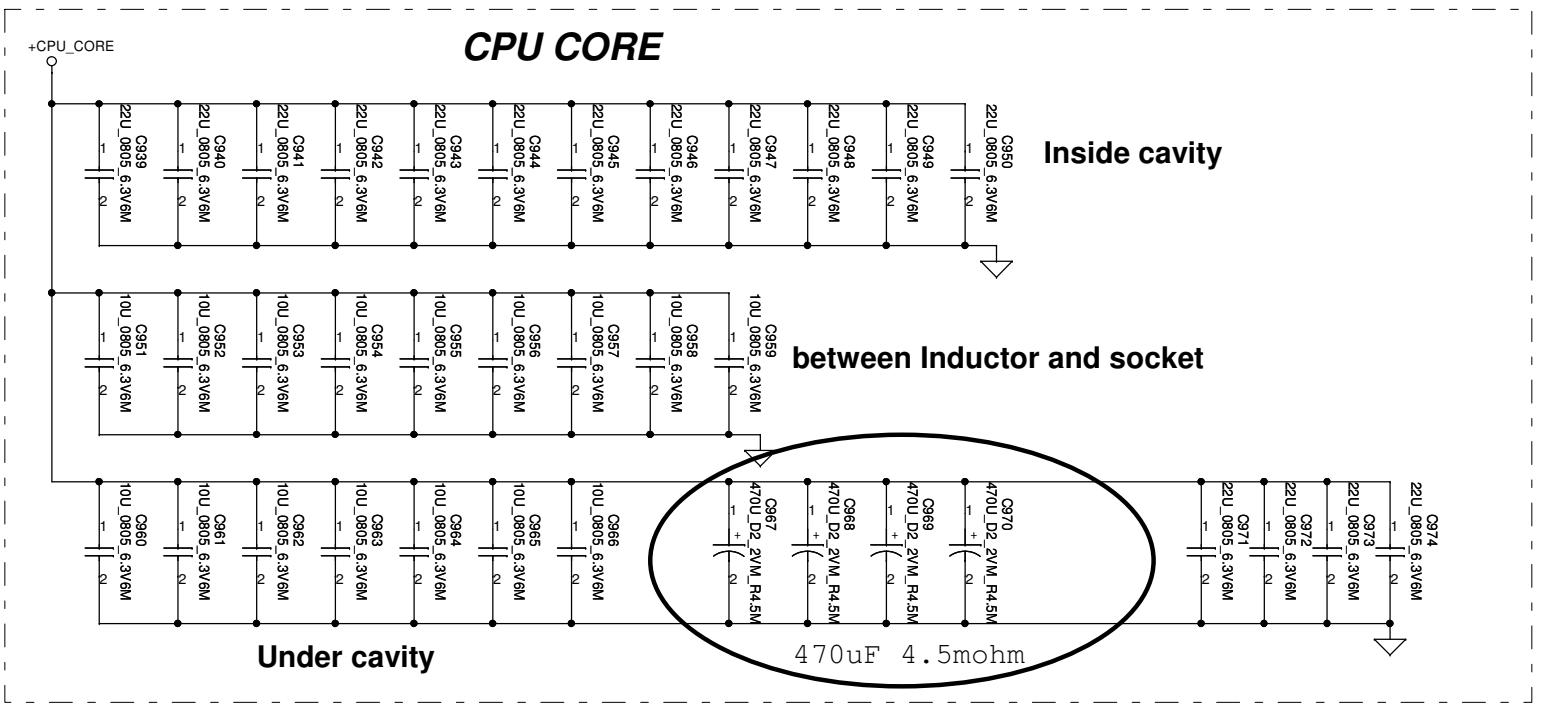
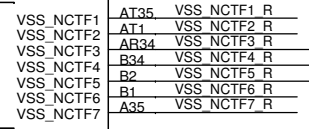


VSS



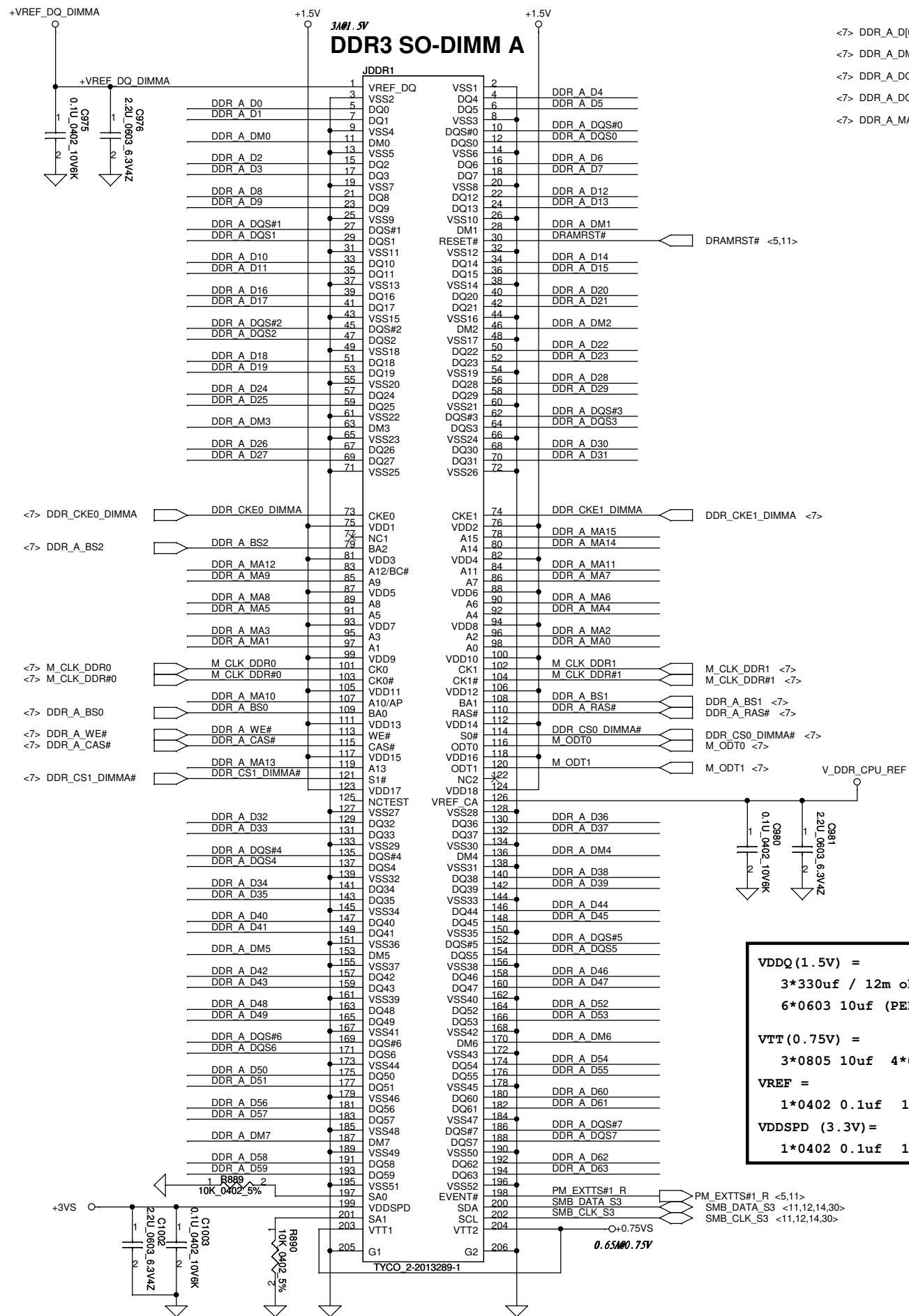
VSS

NCTF

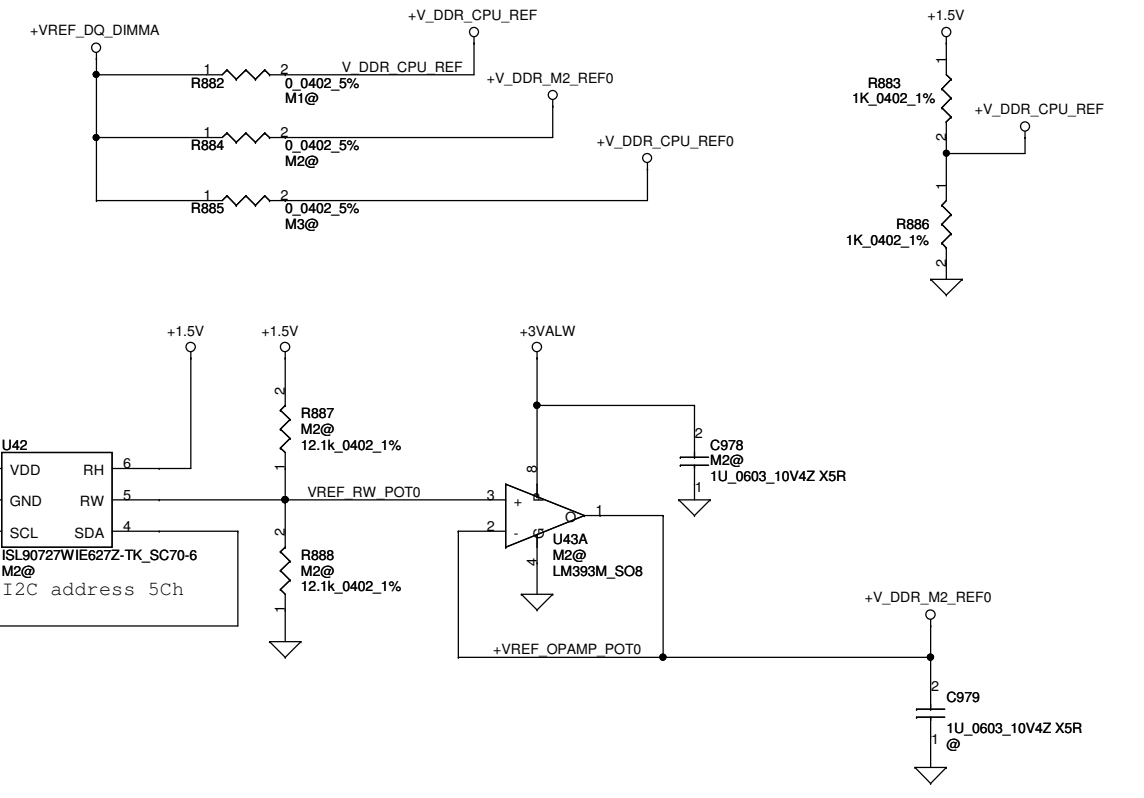


+CPU\_CORE = 12\*0805 22uf INSIDE CAVITY  
 7\*0805 10uf UNDER CAVITY AND 9\*0805 10uf BETWEEN INDUCTOR AND SOCKET ON TOP LAYER  
 4\*470uf/4m ohm 2\*470uf

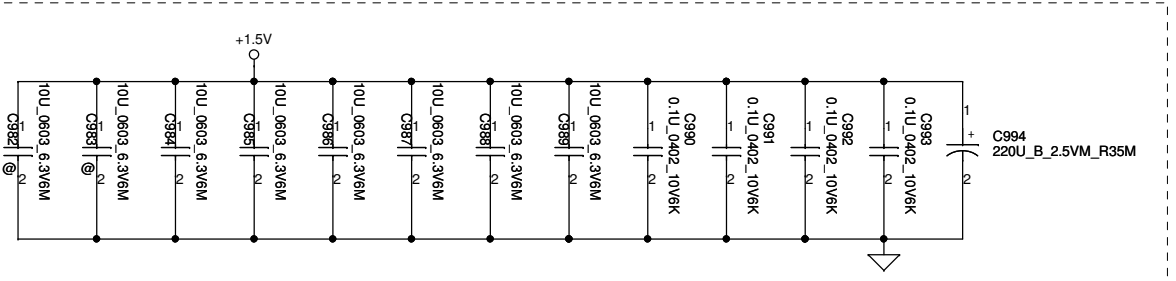
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Title
				<b>Clarksfiel(5/5)-GND/Bypass</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom Document Number <b>NIWBA_LA5371P</b> Date: Tuesday, March 24, 2009
				Rev 0.2 Sheet 9 of 52



- <7> DDR\_A\_D[0..63]
- <7> DDR\_A\_DM[0..7]
- <7> DDR\_A\_DQS[0..7]
- <7> DDR\_A\_DQS#[0..7]
- <7> DDR\_A\_MA[0..15]



**Layout Note:**  
Place near DIMM

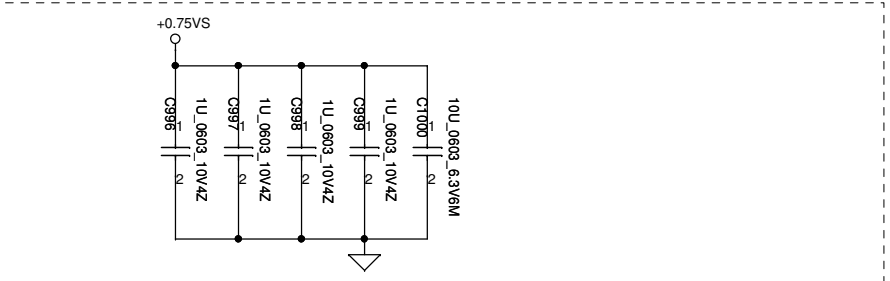


**VDDQ (1.5V) =**  
 3\*330uF / 12m ohm (TOTAL FOR 2 SO-DIMMs)  
 6\*0603 10uF (PER CONNECTOR)

**VTT (0.75V) =**  
 3\*0805 10uF 4\*0402 1uF

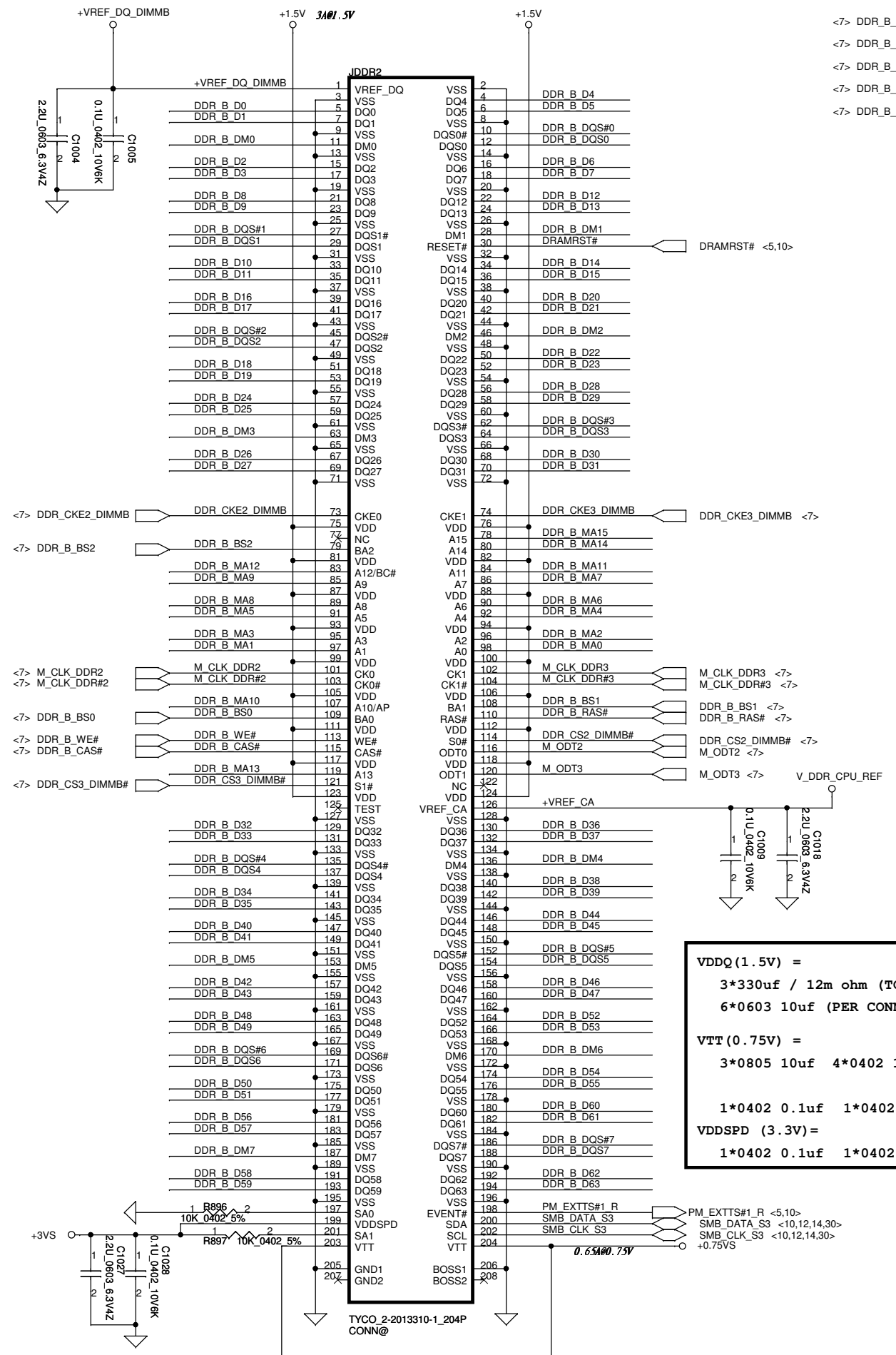
**VREF =**  
 1\*0402 0.1uF 1\*0402 2.2uF

**VDDSPD (3.3V) =**  
 1\*0402 0.1uF 1\*0402 2.2uF



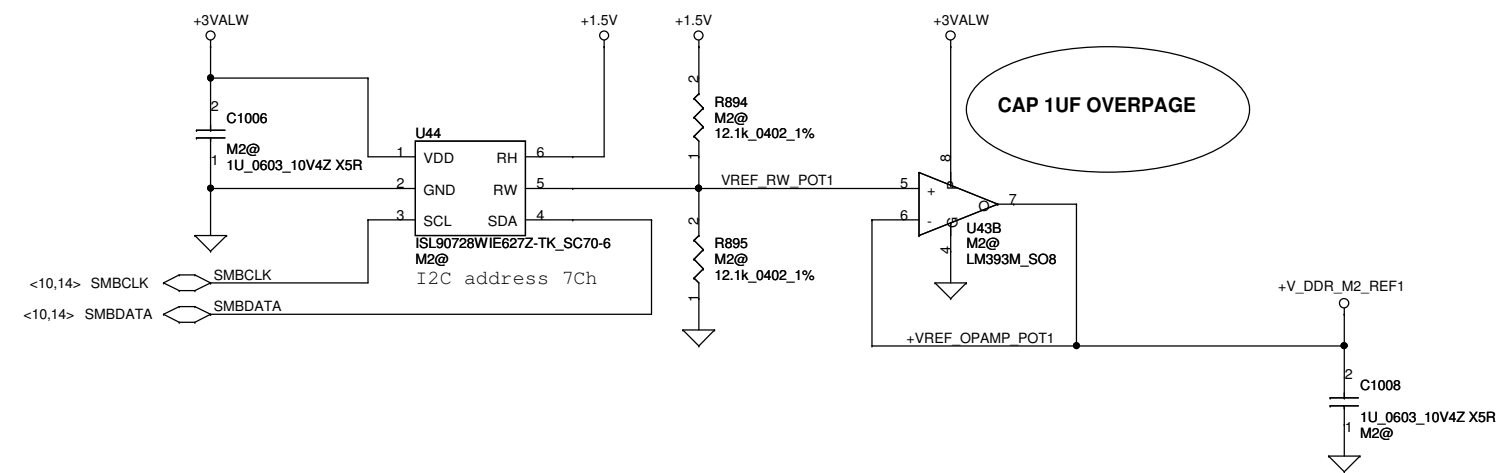
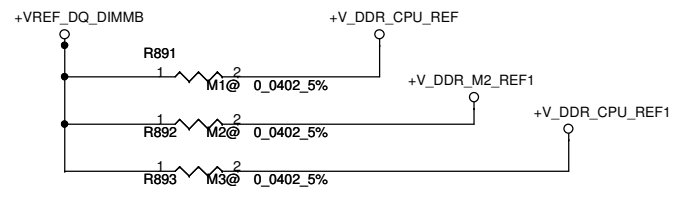
**TOP SLOT**

Security Classification		Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	
				NIWBA_LA5371P	
				Date:	Tuesday, March 24, 2009
				Sheet	10 of 52

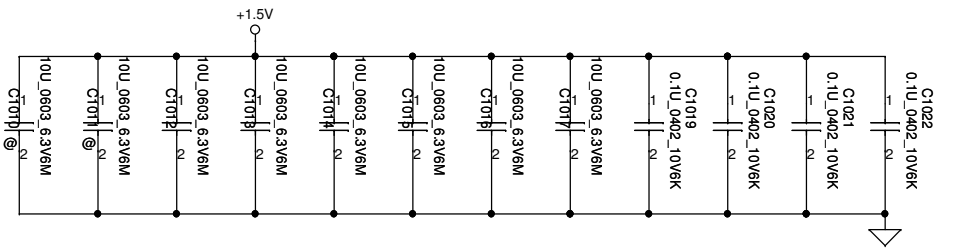


**BOT SLOT**

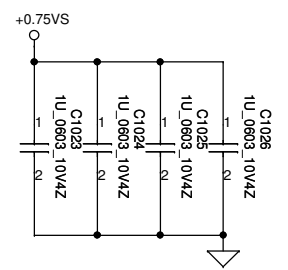
- <7> DDR\_B\_DQS#[0..7]
- <7> DDR\_B\_D[0..63]
- <7> DDR\_B\_DM[0..7]
- <7> DDR\_B\_DQS#0..7
- <7> DDR\_B\_MA[0..15]



**Layout Note:**  
Place near DIMM



**Layout Note:**  
Place near DIMM



**VDDQ (1.5V) =**  
 $3 \times 330\text{uf} / 12\text{m ohm (TOTAL FOR 2 SO-DIMMs)}$   
 $6 \times 0603 10\text{uf (PER CONNECTOR)}$

**VTT (0.75V) =**  
 $3 \times 0805 10\text{uf} \quad 4 \times 0402 1\text{uf}$

**VDDSPD (3.3V) =**  
 $1 \times 0402 0.1\text{uf} \quad 1 \times 0402 2.2\text{uf}$   
 $1 \times 0402 0.1\text{uf} \quad 1 \times 0402 2.2\text{uf}$

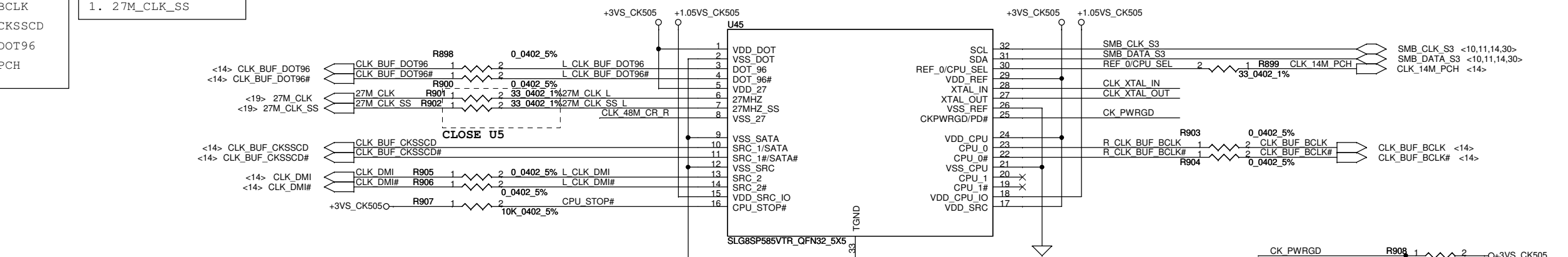
Security Classification		Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Title	
				DDR3-SODIMM SLOT2	
Size	Document Number	Rev			
	NIWBA_LA5371P	0.2			
Date:	Tuesday, March 24, 2009	Sheet	11	of 52	

**CLK GEN TO PCH**

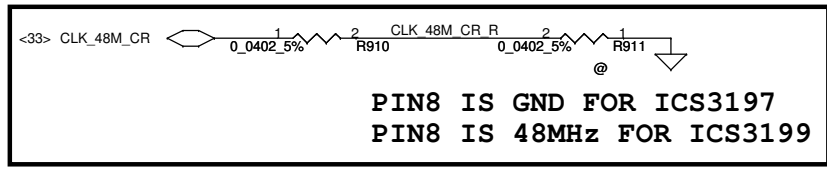
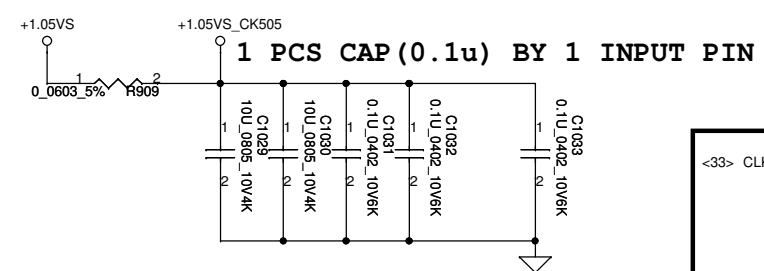
1. CLK\_DMI
2. CLK\_BUF\_BCLK
3. CLK\_BUF\_CKSSCD
4. CLK\_BUF\_DOT96
5. CLK\_14M\_PCH

**CLK GEN TO VGA**

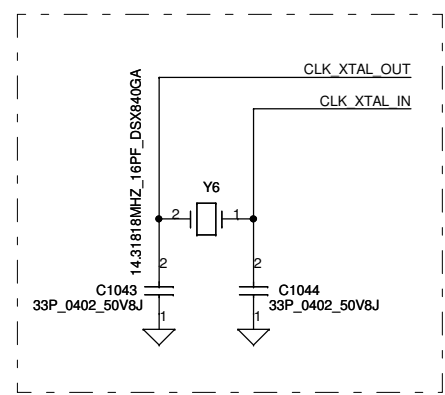
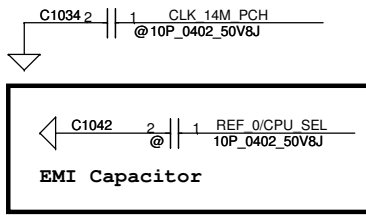
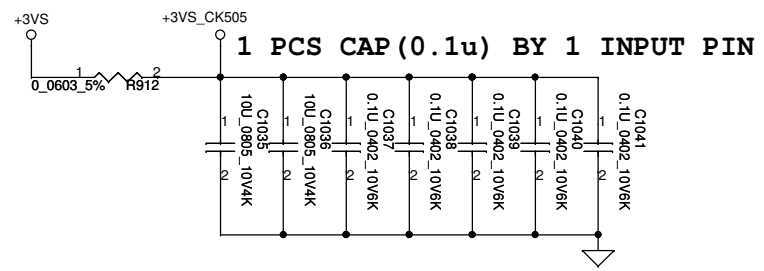
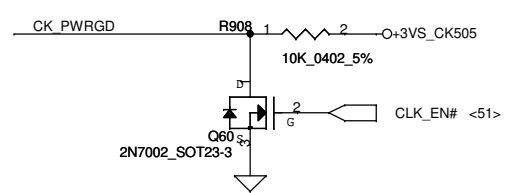
1. 27M\_CLK
1. 27M\_CLK\_SS



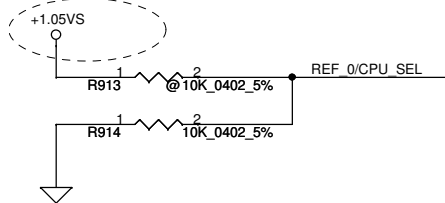
**S IC ICS9LRS3199AKLFT MLF 32P CLK GEN (SA000030P00)**



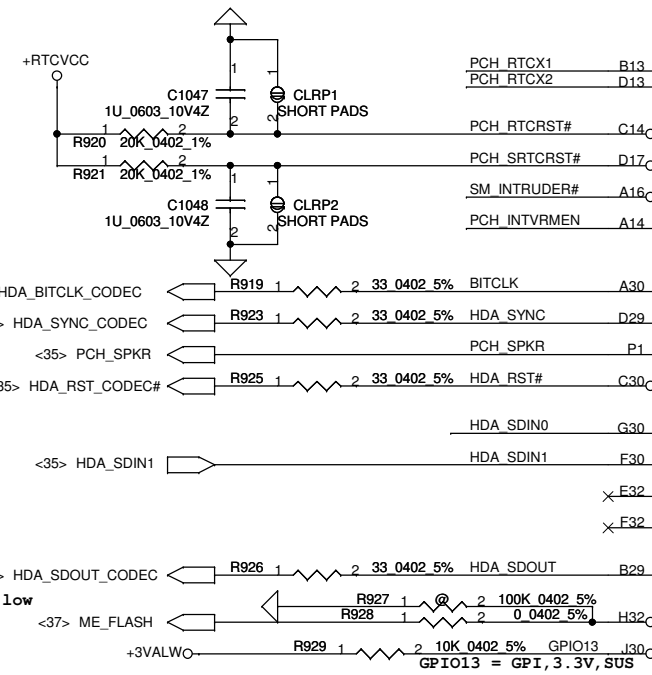
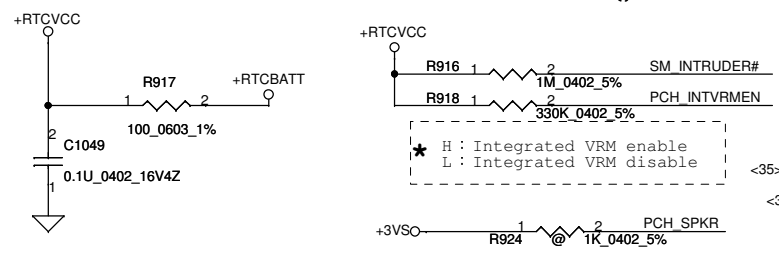
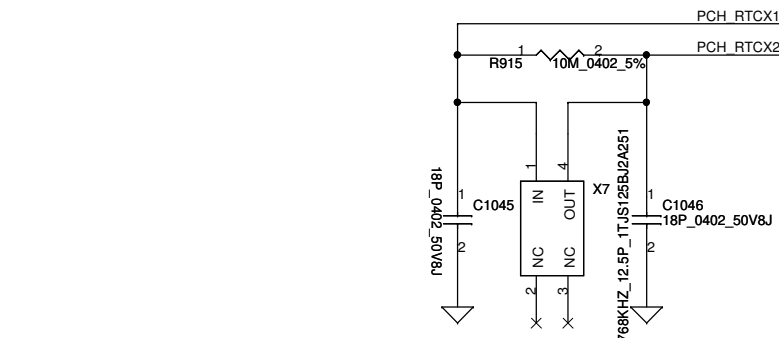
**PIN8 IS GND FOR ICS3197  
PIN8 IS 48MHz FOR ICS3199**



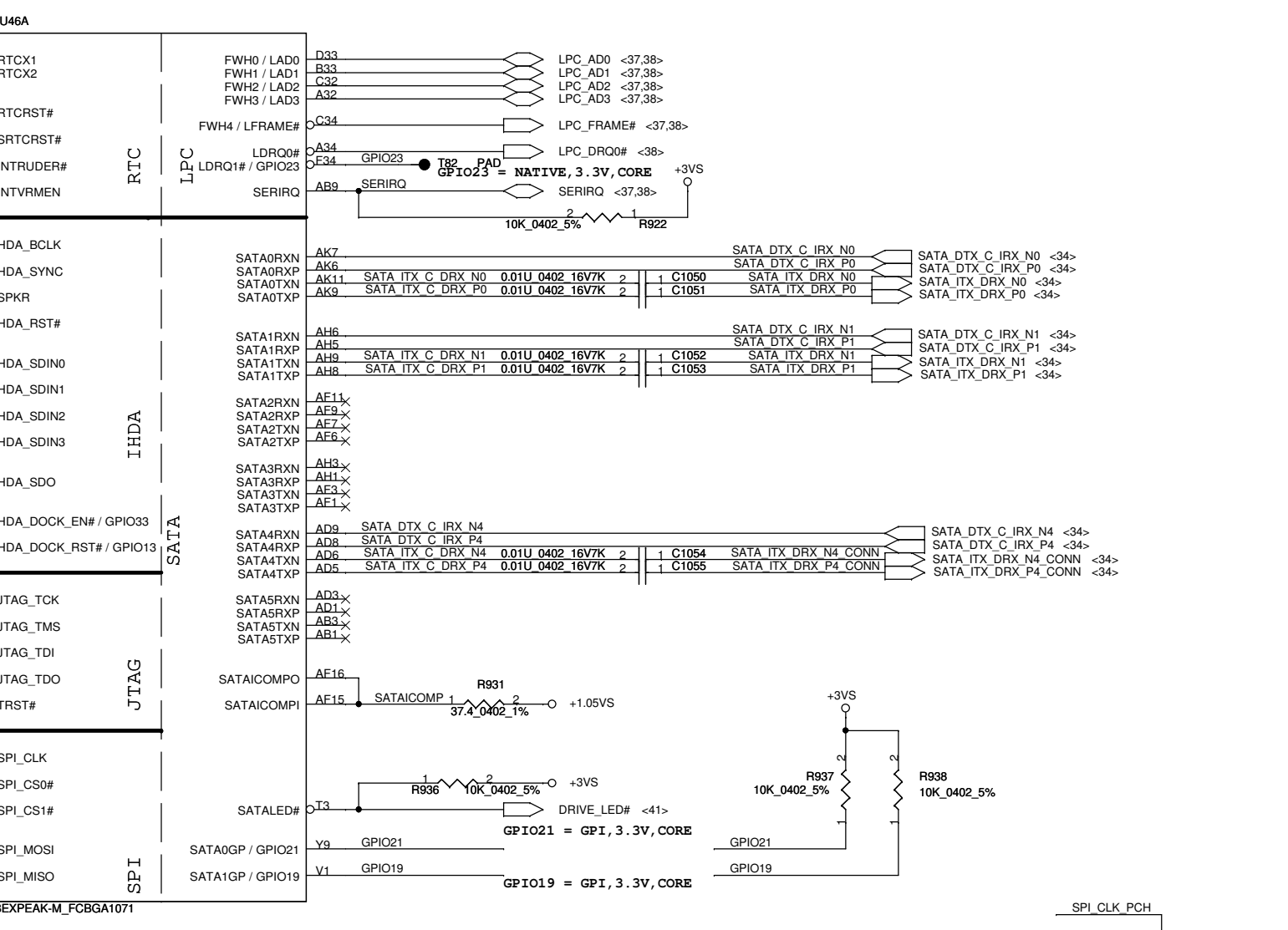
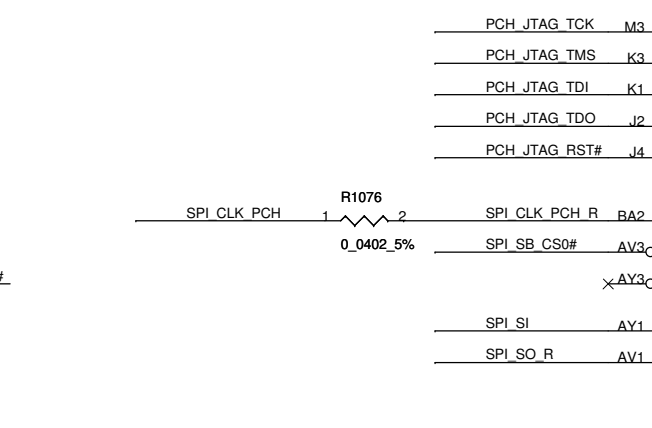
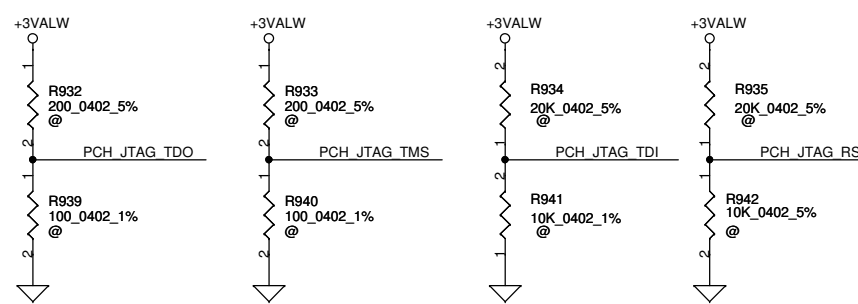
PIN 30	CPU_0	CPU_1
0 (Default)	133MHz	133MHz
1	100MHz	100MHz



Security Classification	Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>CLOCK GENERATOR</b>
Issued Date	2008/10/31	Deciphered Date	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Title Size Document Number NIWBA_LA5371P Date: Tuesday, March 24, 2009 Sheet 12 of 52

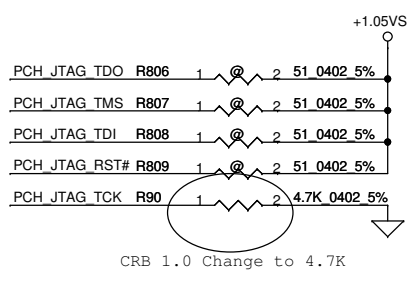


GPIO33 = GPO, internal pull-up, should not be pulled low  
flash ME core of strap pin pull down

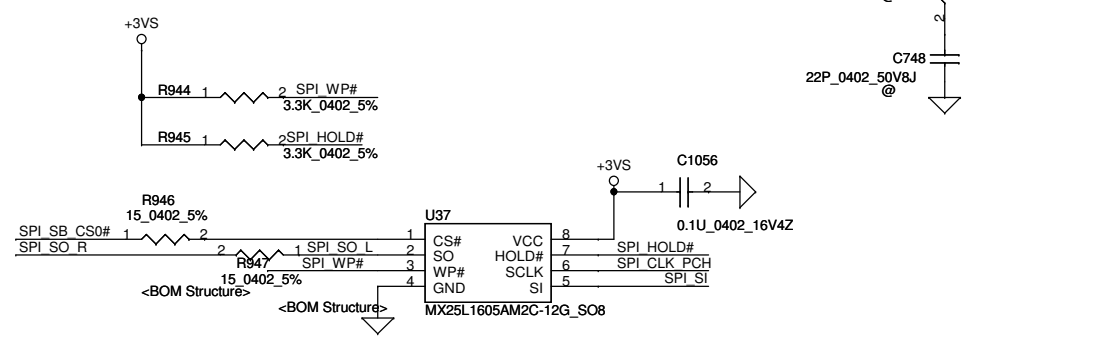


PCH Pin	RefDes	PCH JTAG Enable		PCH JTAG Disable	
		ES1	ES2	ES1	ES2
PCH_JTAG_TDO	R104	No Install	200ohm	No Install	No Install
	R108	No Install	100ohm	No Install	No Install
PCH_JTAG_TMS	R105	200ohm	200ohm	No Install	No Install
	R109	100ohm	100ohm	No Install	No Install
PCH_JTAG_TDI	R106	200ohm	200ohm	20Kohm	No Install
	R110	100ohm	100ohm	10Kohm	No Install
PCH_JTAG_TCK	R97	51ohm	51ohm	51ohm	51ohm
	R107	20Kohm	20Kohm	No Install	No Install
PCH_JTAG_RST#	R110	10Kohm	10Kohm	No Install	No Install

FOR EVT

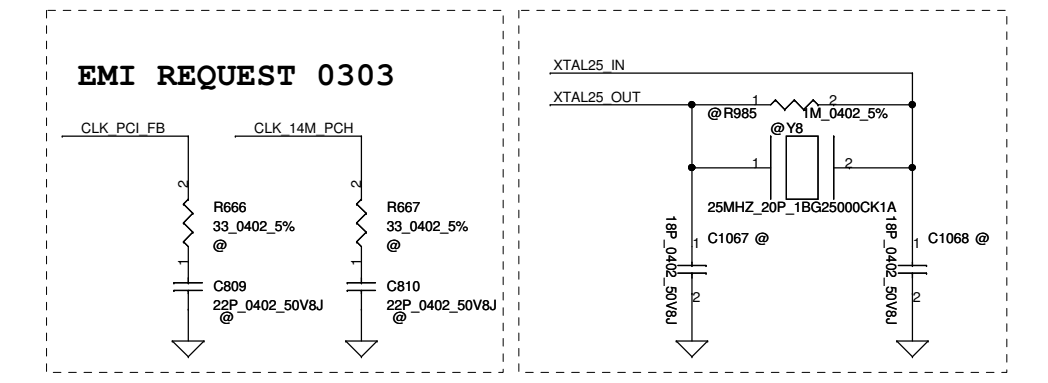
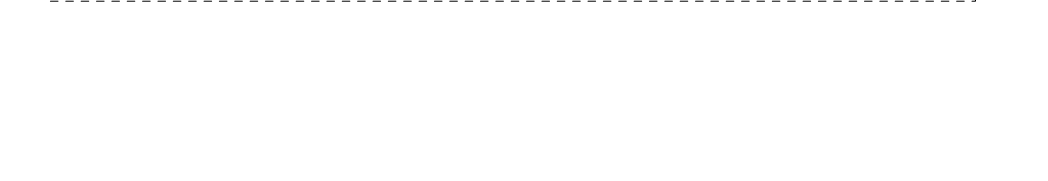
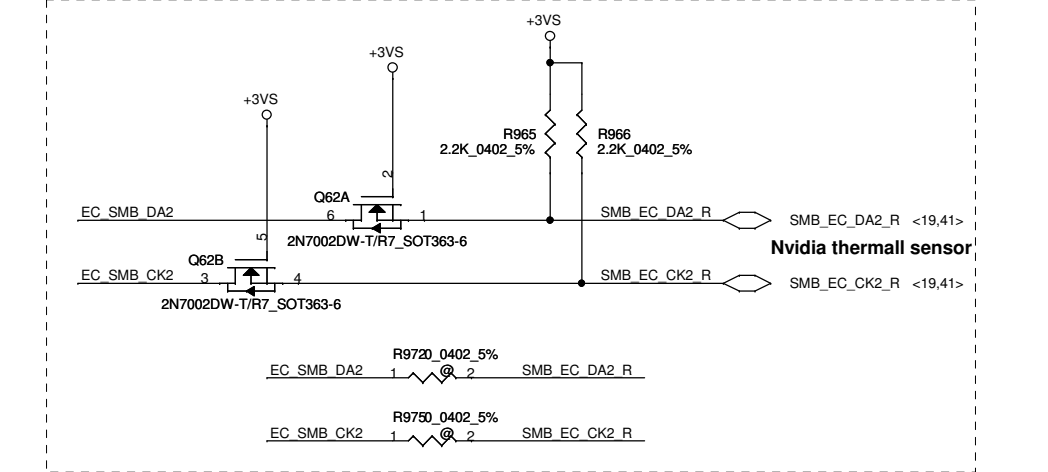
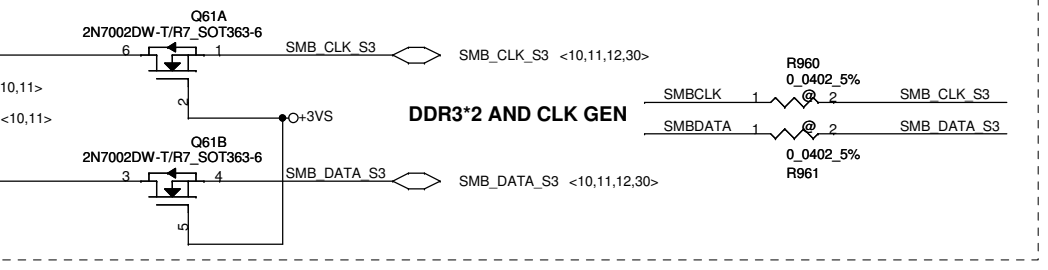
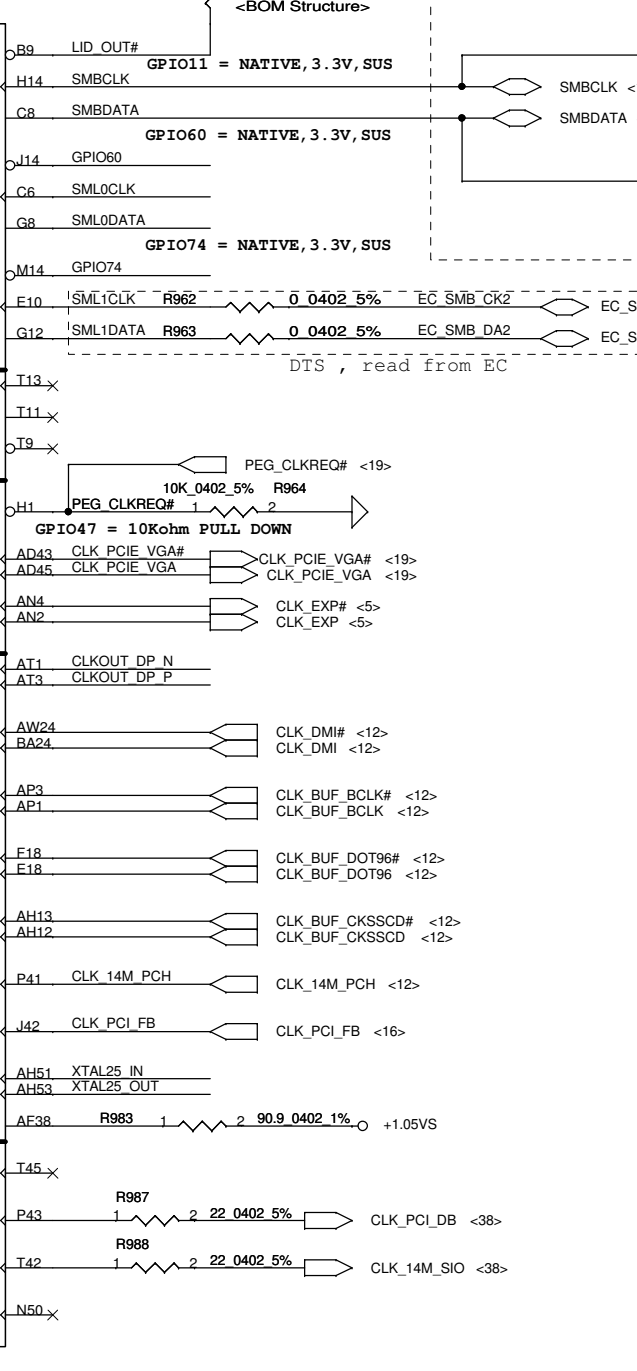
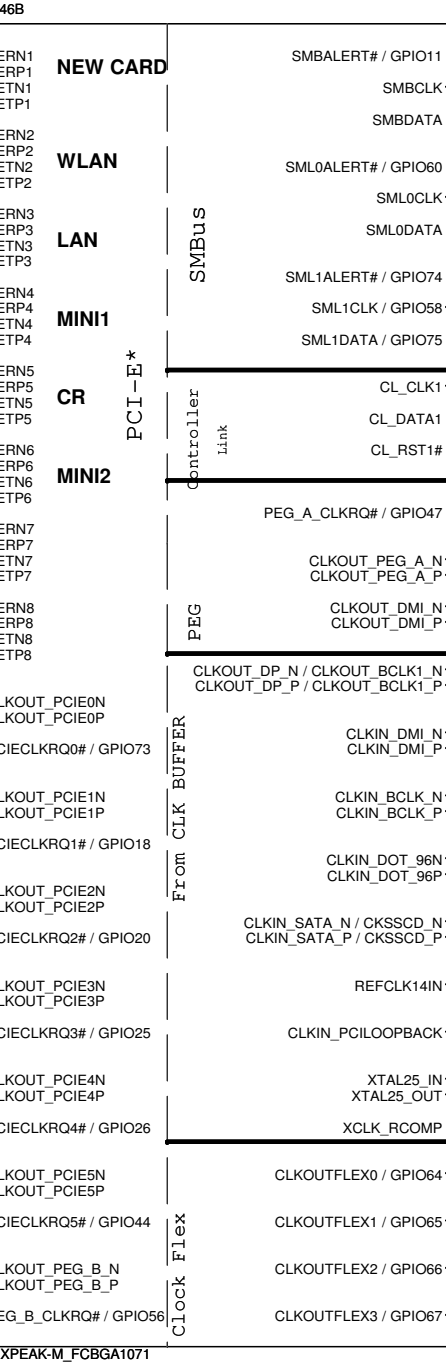
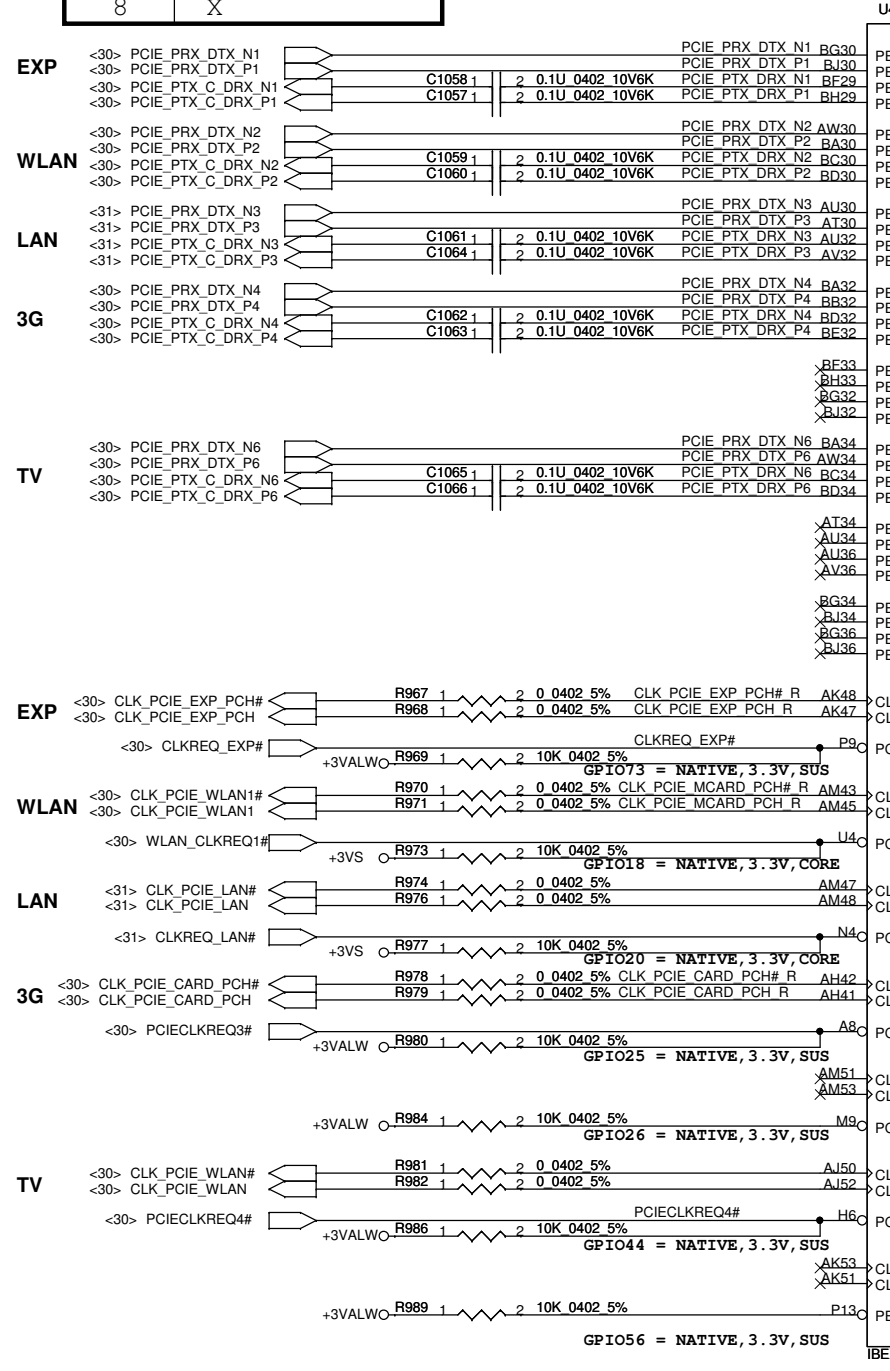


### SPI ROM on ME

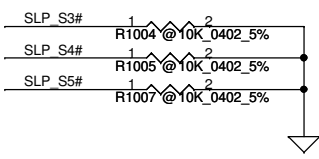
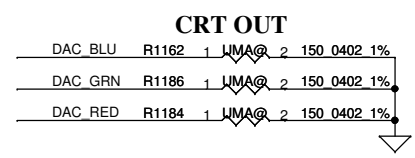
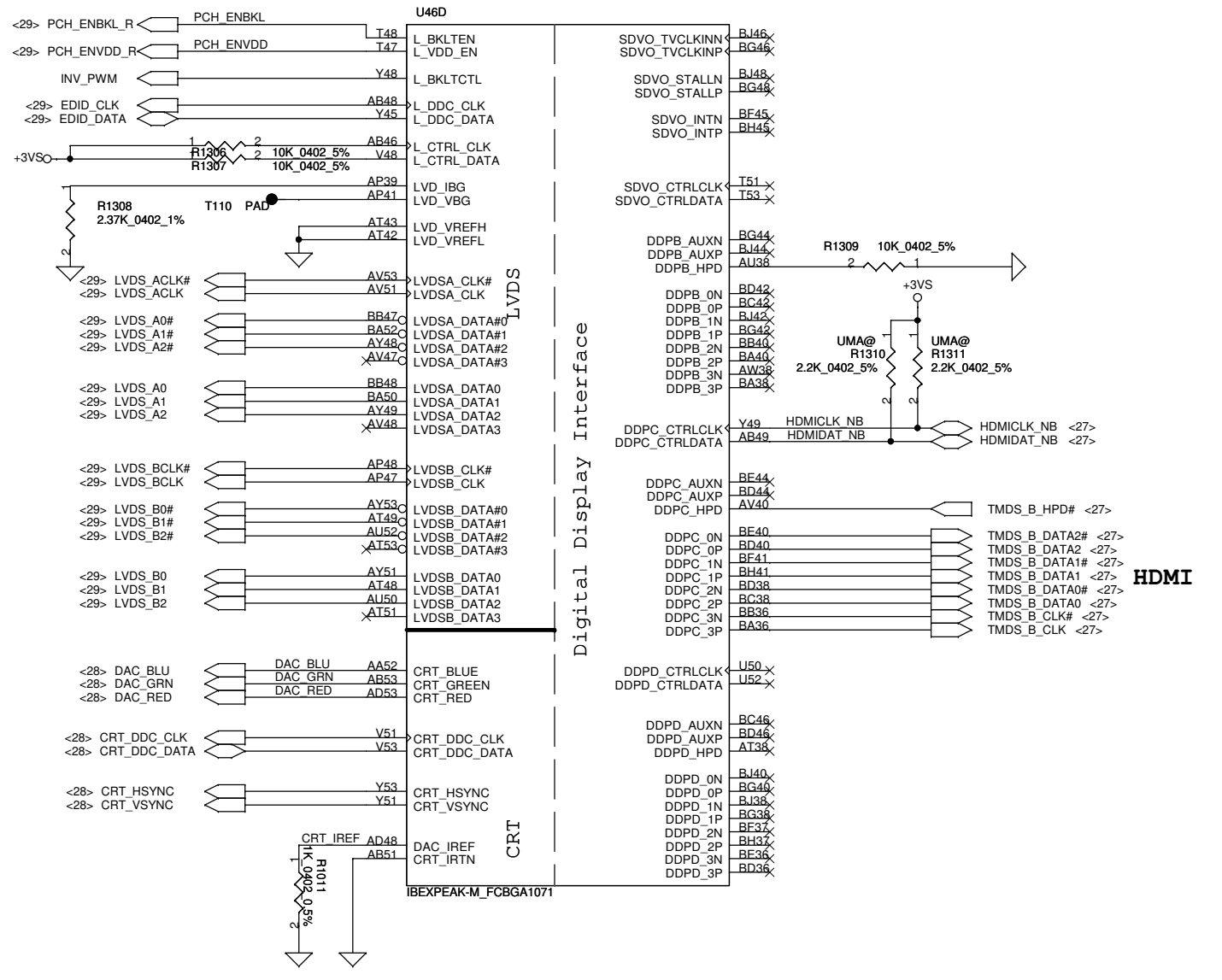
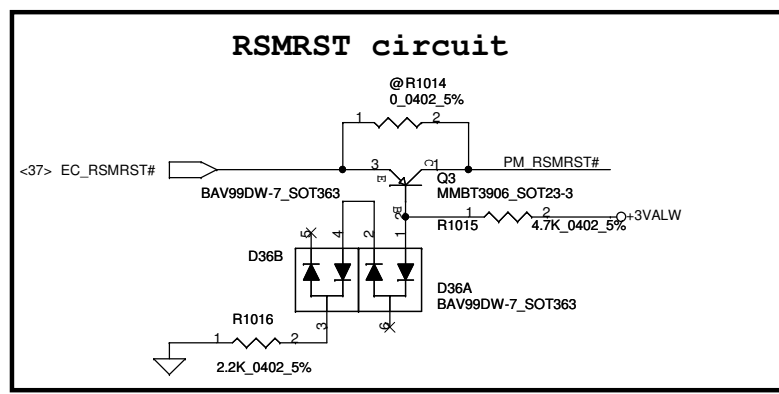
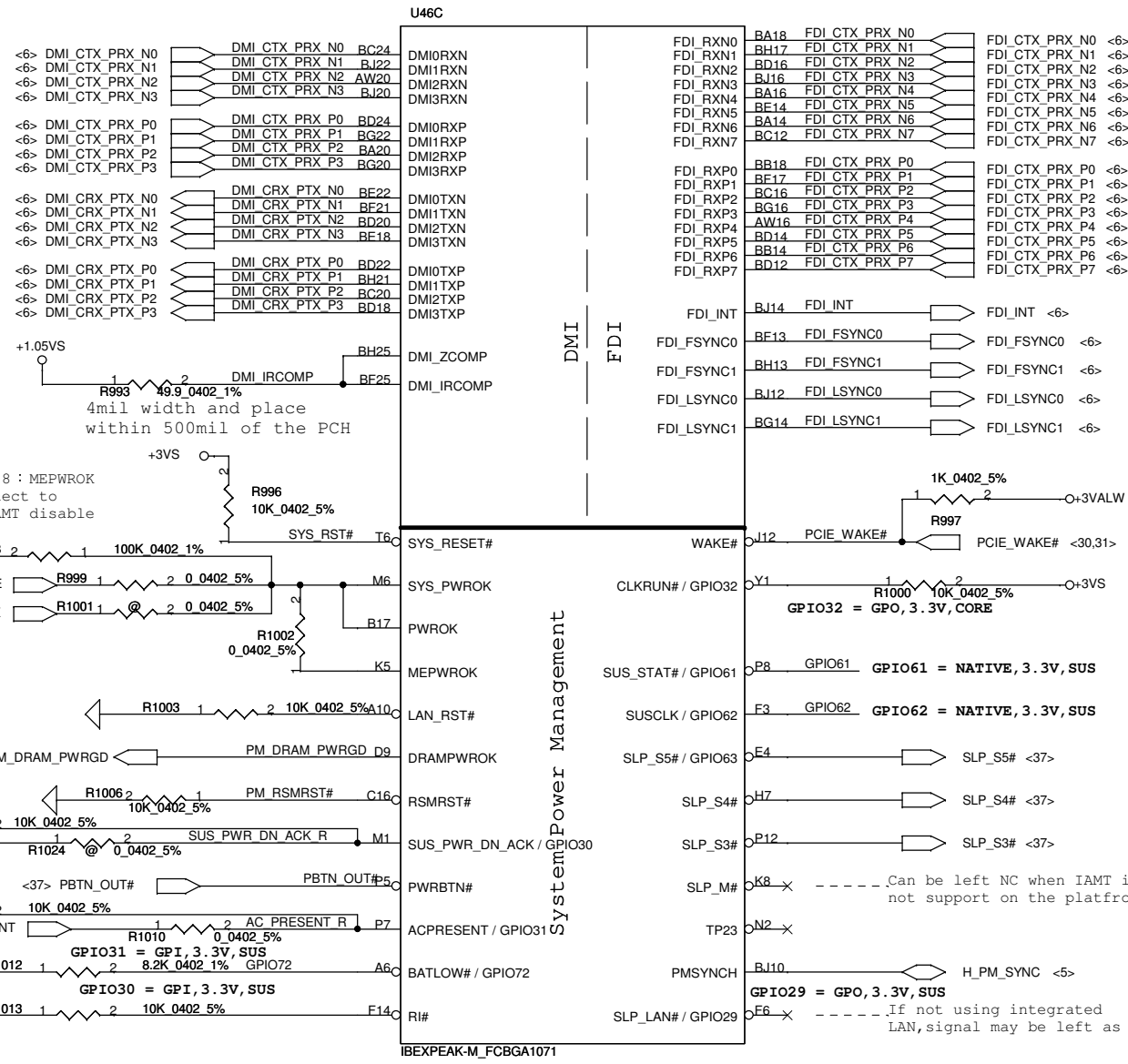


Security Classification	Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	IBEX-M(1/6)-HDA/JTAG/SATA
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size: Custom Document Number: NIWBA_LA5371P Rev: 0.2 Date: Tuesday, March 24, 2009 Sheet: 13 of 52

PCI-E PORT LIST	
PORT	DEVICE
1	NEW CARD
2	WLAN
3	LAN
4	3G
5	X
6	TV TUNNER
7	X
8	X



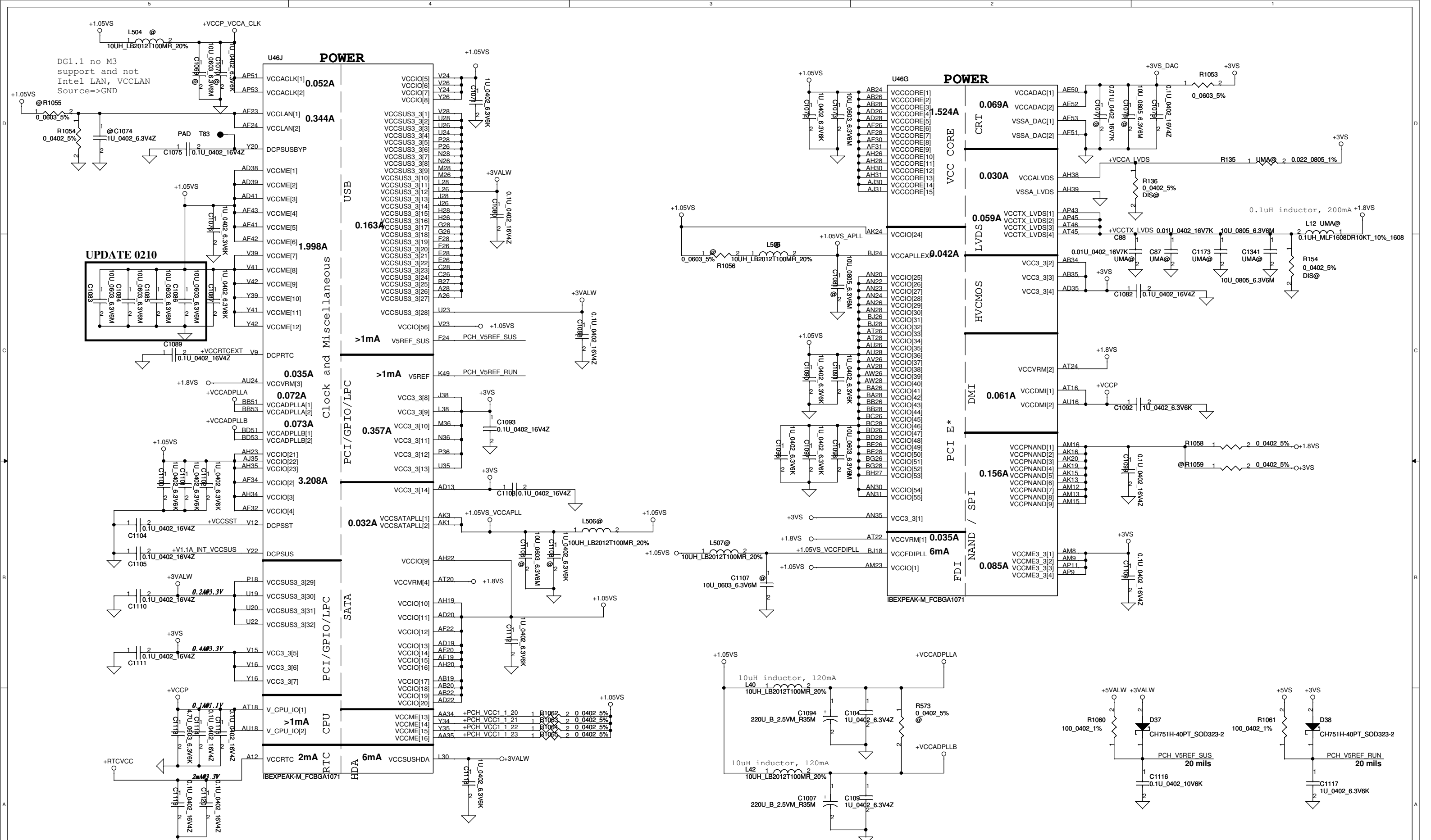
Security Classification		Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Title <b>IBEX-M(2/6)-PCI-E/SMBUS/CLK</b>	
Size	Custom	Document Number	NIWBA_LA5371P		Rev 0.2
Date:	Tuesday, March 24, 2009	Sheet	14	of	52



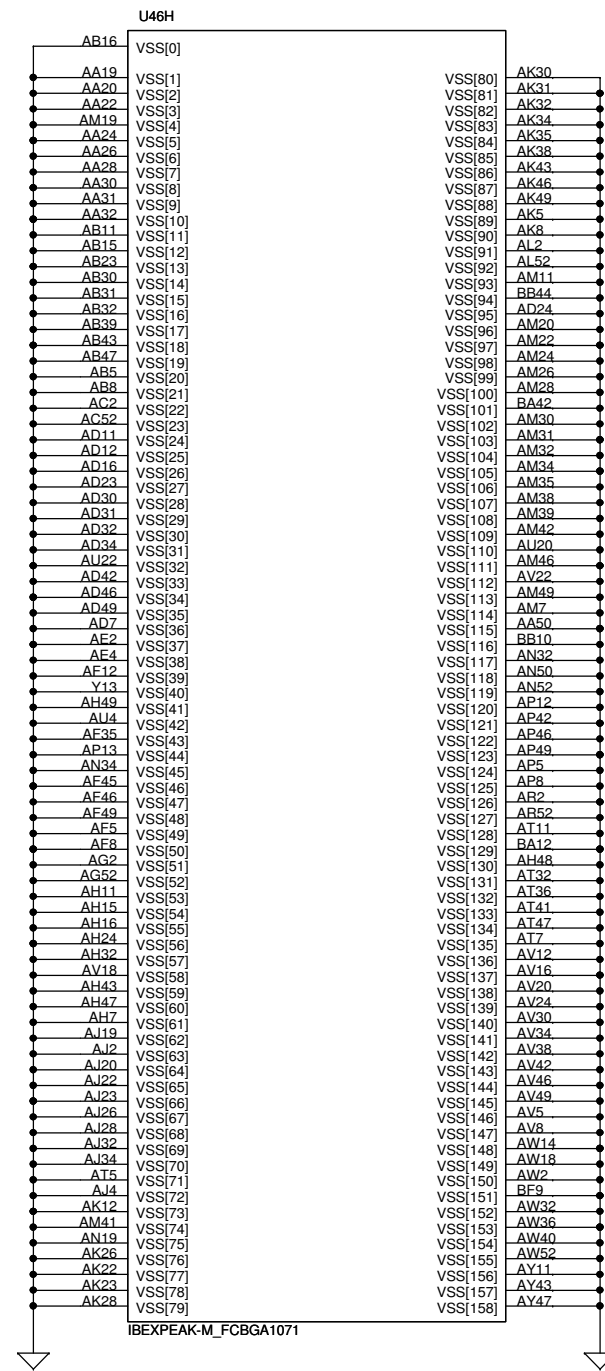
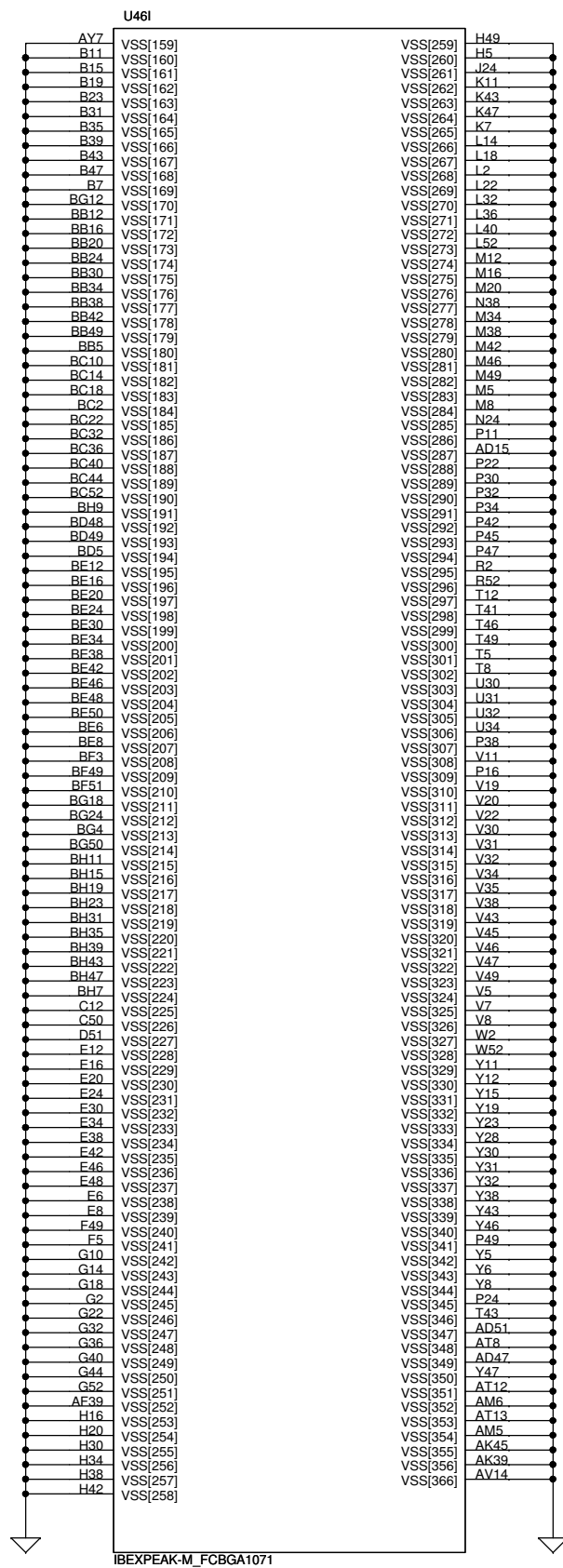
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				IBEX-M(3/6)-DMI/GPIO/LVDS	
Size	Custom	Document Number	NIWBA_LA5371P		Rev
Date:	Tuesday, March 24, 2009	Sheet	15	of	52



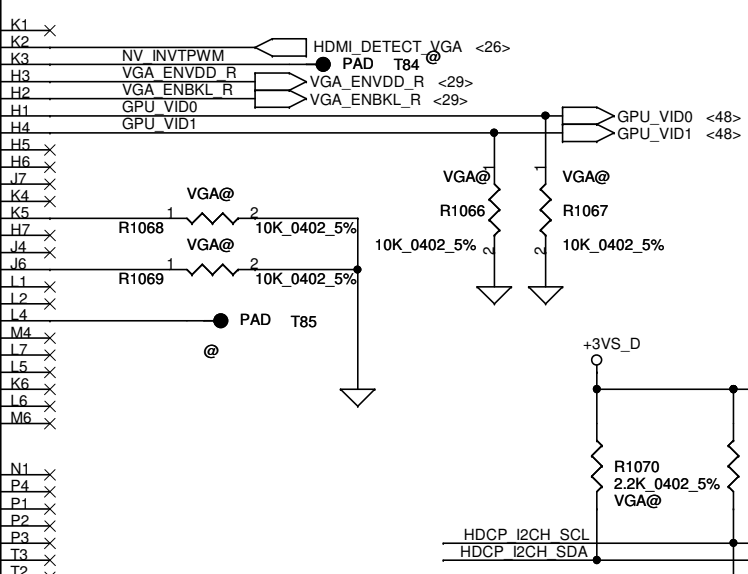
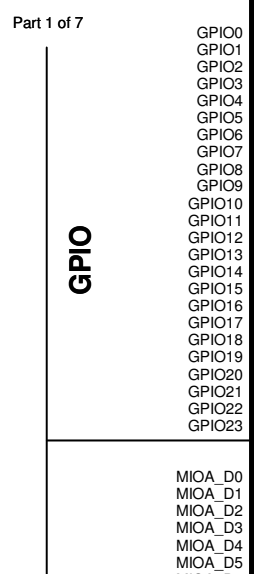
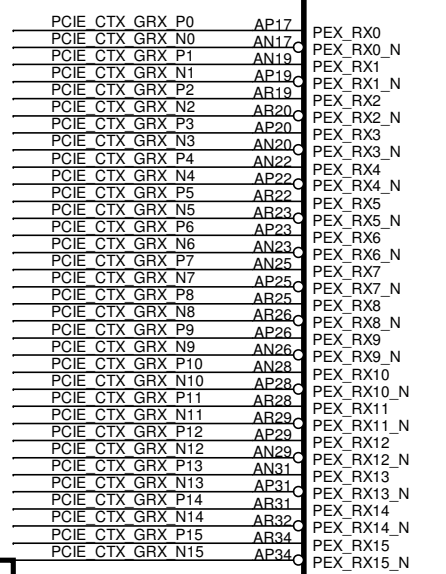
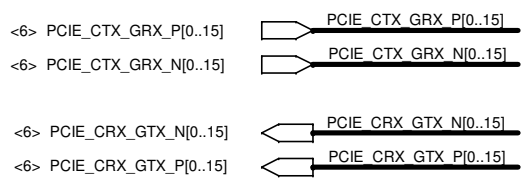




Security Classification		Compal Secret Data		Title	
Issued Date	2008/08/12	Deciphered Date	2009/08/12	IBEX-M(5/6)-PWR	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
Custom	Document Number	NIWBA_LA537IP		0.1	
Date:	Tuesday, March 24, 2009	Sheet	17	of	52

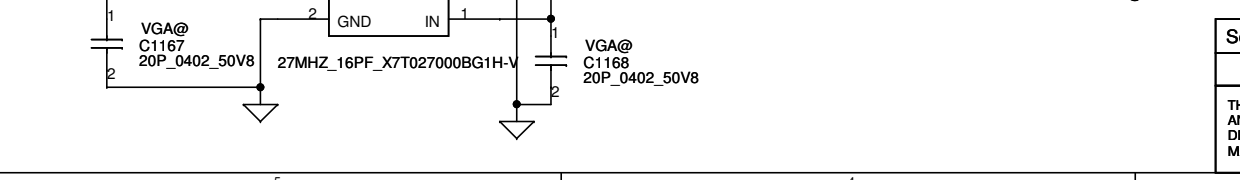
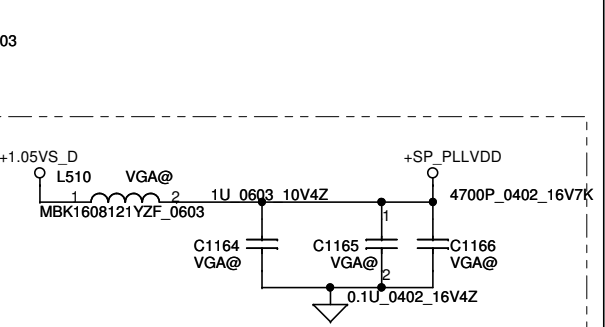
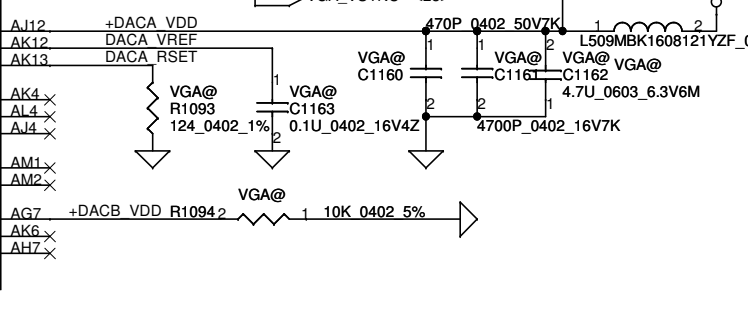
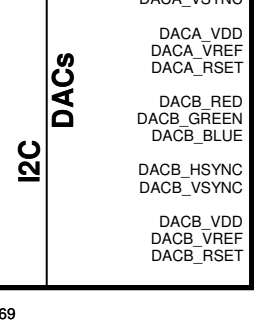
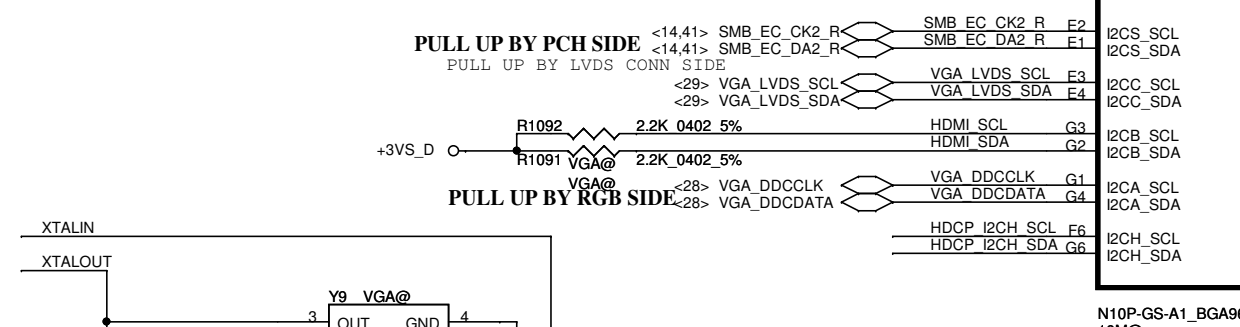
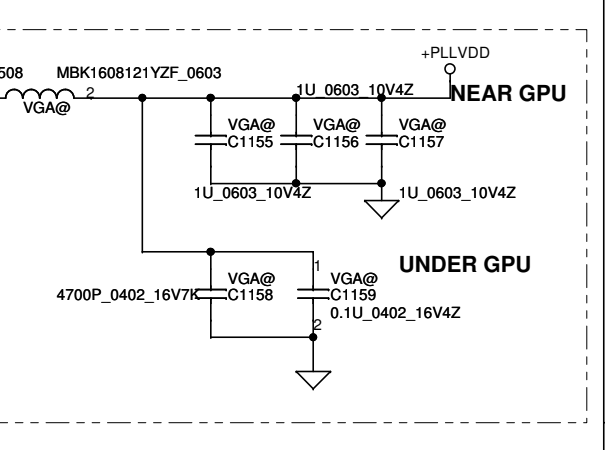
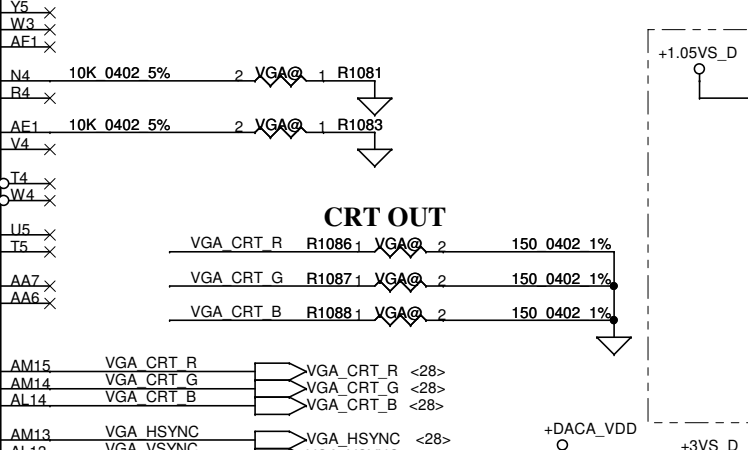
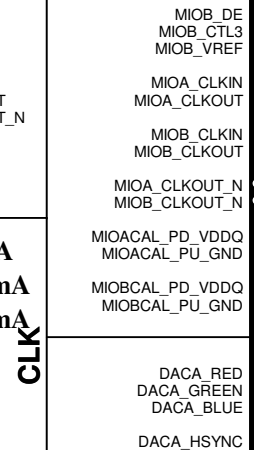
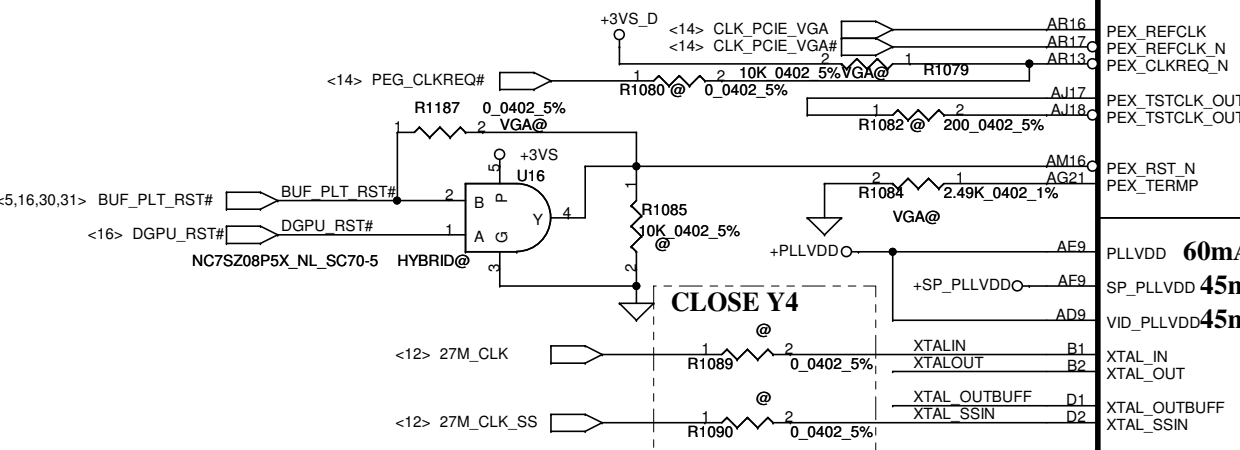
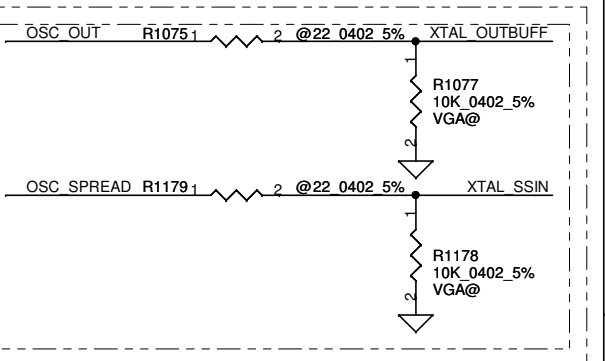
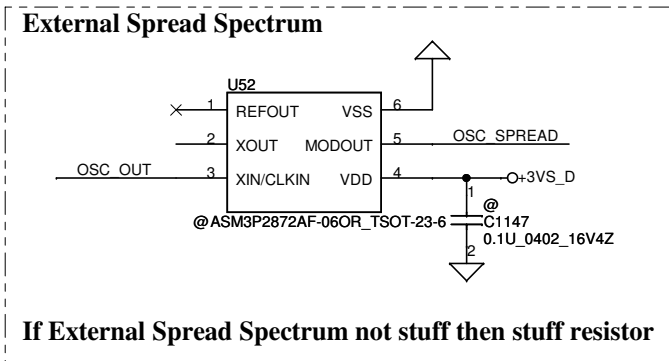
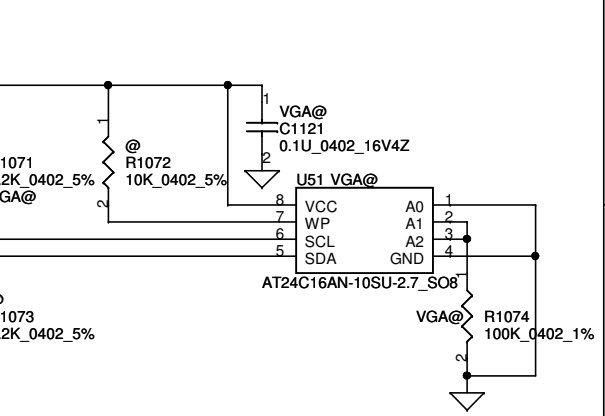
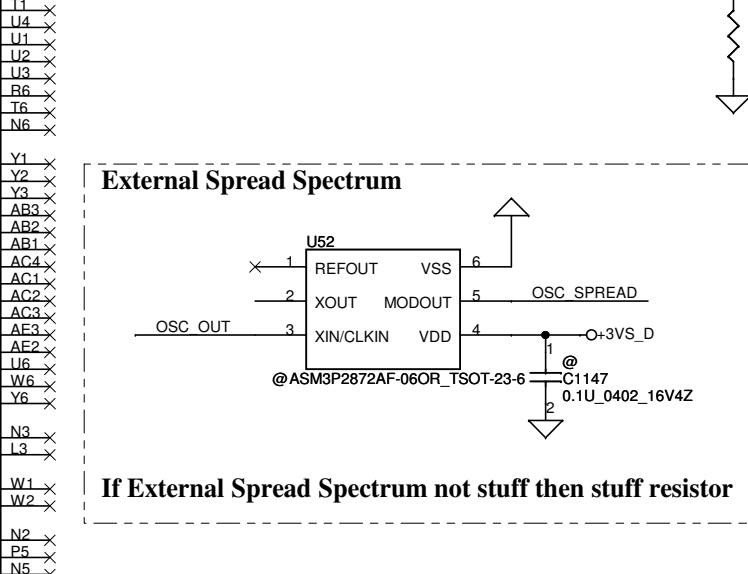
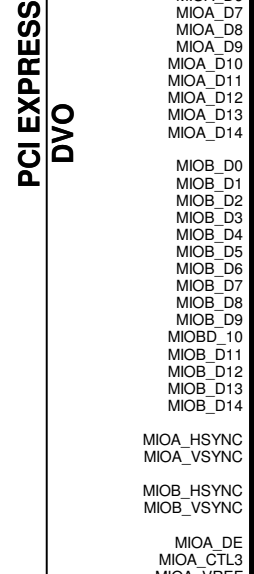
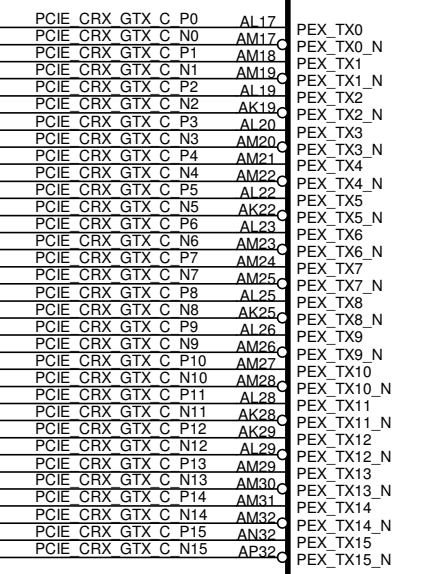


Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>IBEX-M(6/6)-GND</b>	
Issued Date	2008/10/31	Deciphered Date	2009/10/31		
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>				Title <b>IBEX-M(6/6)-GND</b>	Rev 0.2
Date: Tuesday, March 24, 2009		Sheet 18 of 52			



GPIO6	GPIO5	N10M-GS	N10P-GS
GPU_VID1	GPU_VID0	VGA_CORE	P-State
0	0	0.8V	12
0	1	0.85V	12
1	0	0.9V	0,10

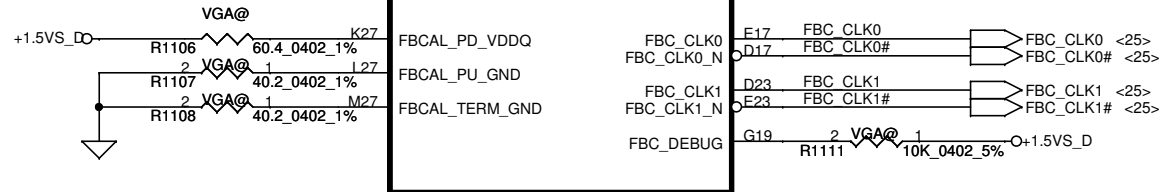
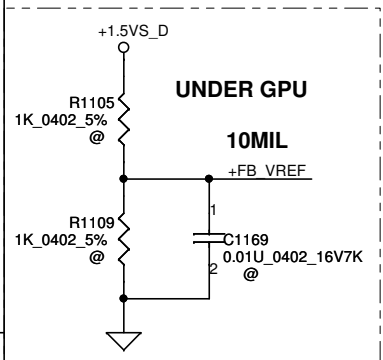
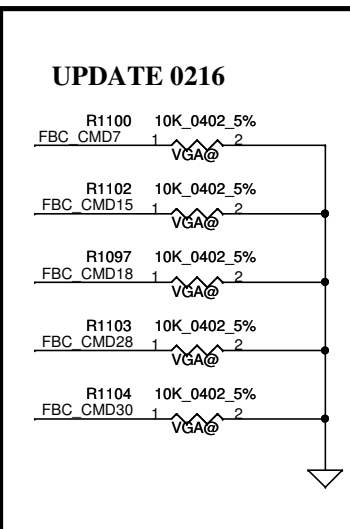
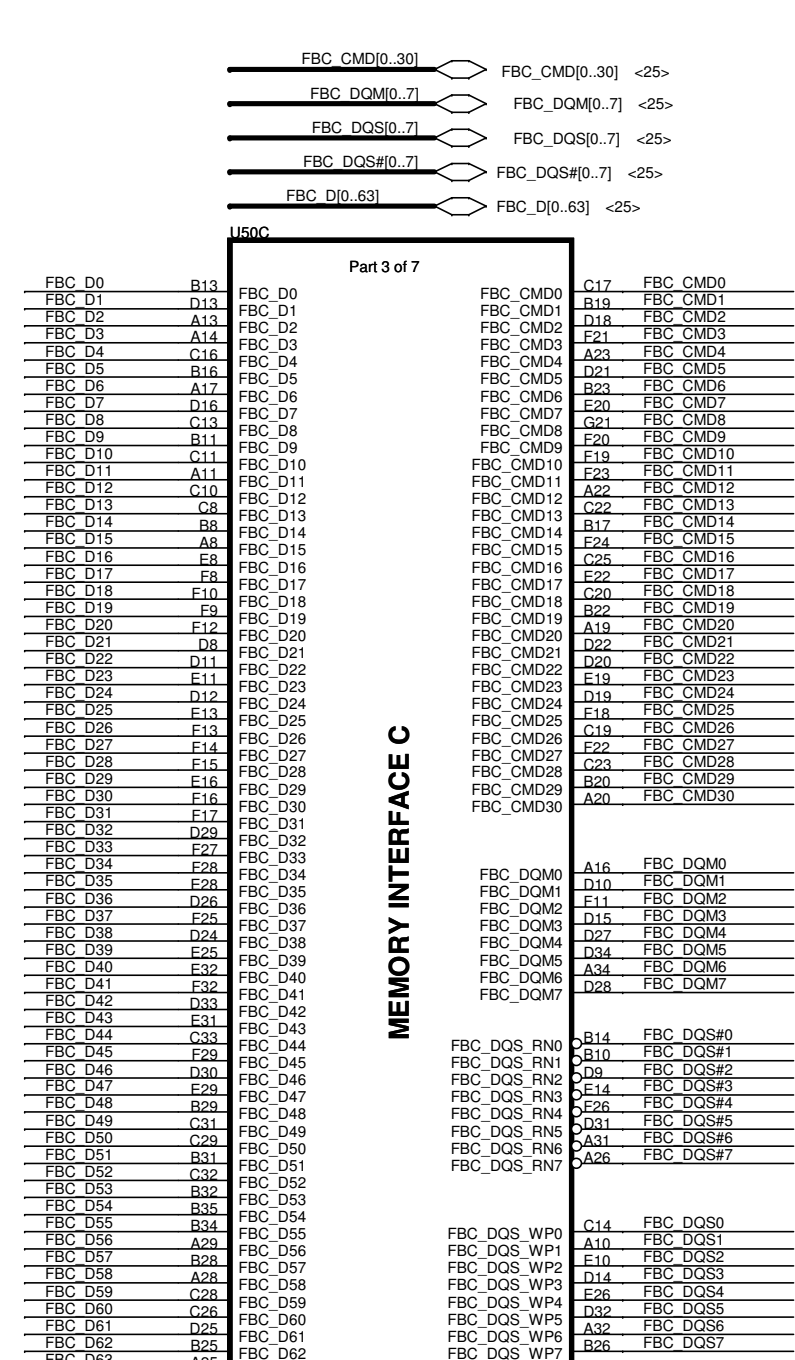
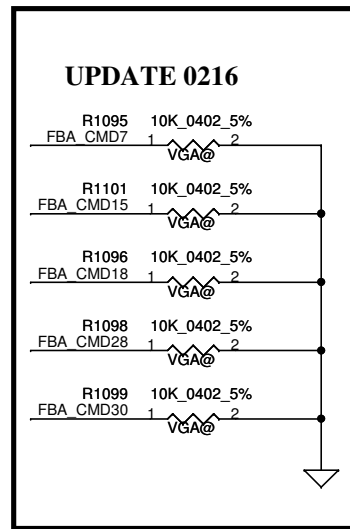
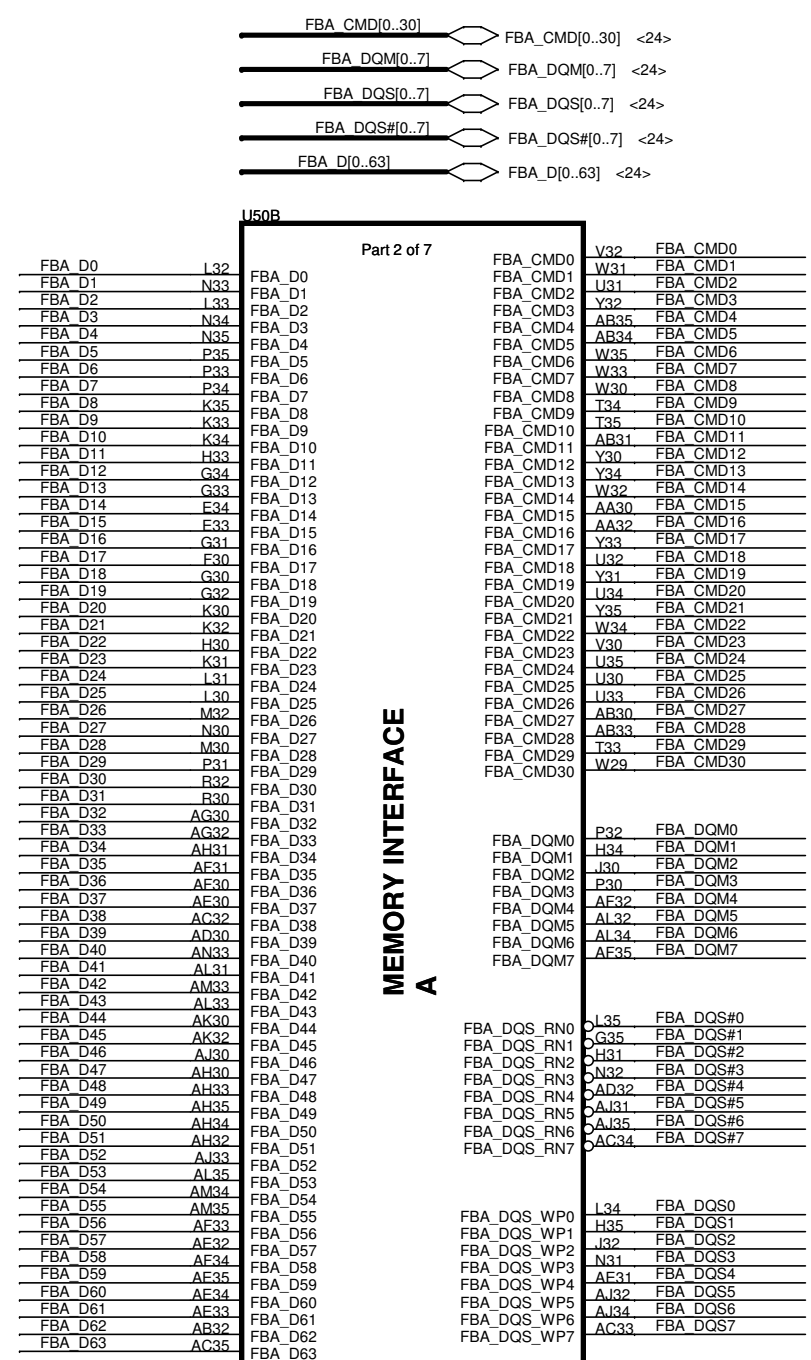
PCIE CRX GTX	PCIE CRX GTX	PCIE CRX GTX	PCIE CRX GTX
P0	P0	P0	P0
N0	N0	N0	N0
P1	P1	P1	P1
N1	N1	N1	N1
P2	P2	P2	P2
N2	N2	N2	N2
P3	P3	P3	P3
N3	N3	N3	N3
P4	P4	P4	P4
N4	N4	N4	N4
P5	P5	P5	P5
N5	N5	N5	N5
P6	P6	P6	P6
N6	N6	N6	N6
P7	P7	P7	P7
N7	N7	N7	N7
P8	P8	P8	P8
N8	N8	N8	N8
P9	P9	P9	P9
N9	N9	N9	N9
P10	P10	P10	P10
N10	N10	N10	N10
P11	P11	P11	P11
N11	N11	N11	N11
P12	P12	P12	P12
N12	N12	N12	N12
P13	P13	P13	P13
N13	N13	N13	N13
P14	P14	P14	P14
N14	N14	N14	N14
P15	P15	P15	P15
N15	N15	N15	N15



Security Classification	Compal Secret Data	
Issued Date	2008/03/25	Deciphered Date
		2008/04/

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

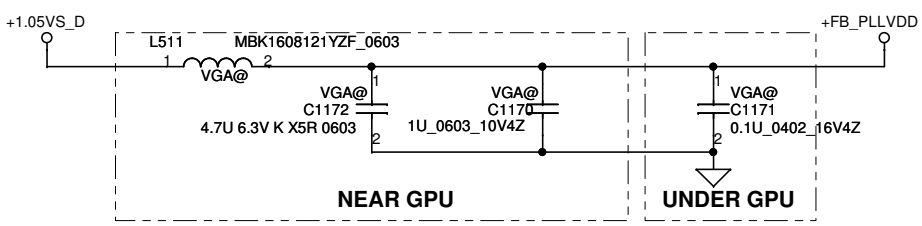
Compal Electronics, Ltd.	
Title	N10x-GS PCIE, LVDS, GPIO, CLK
Size	Document Number
Custom	NIWBA_LA5371P
Date	Tuesday, March 24, 2009
Sheet	19 of 52



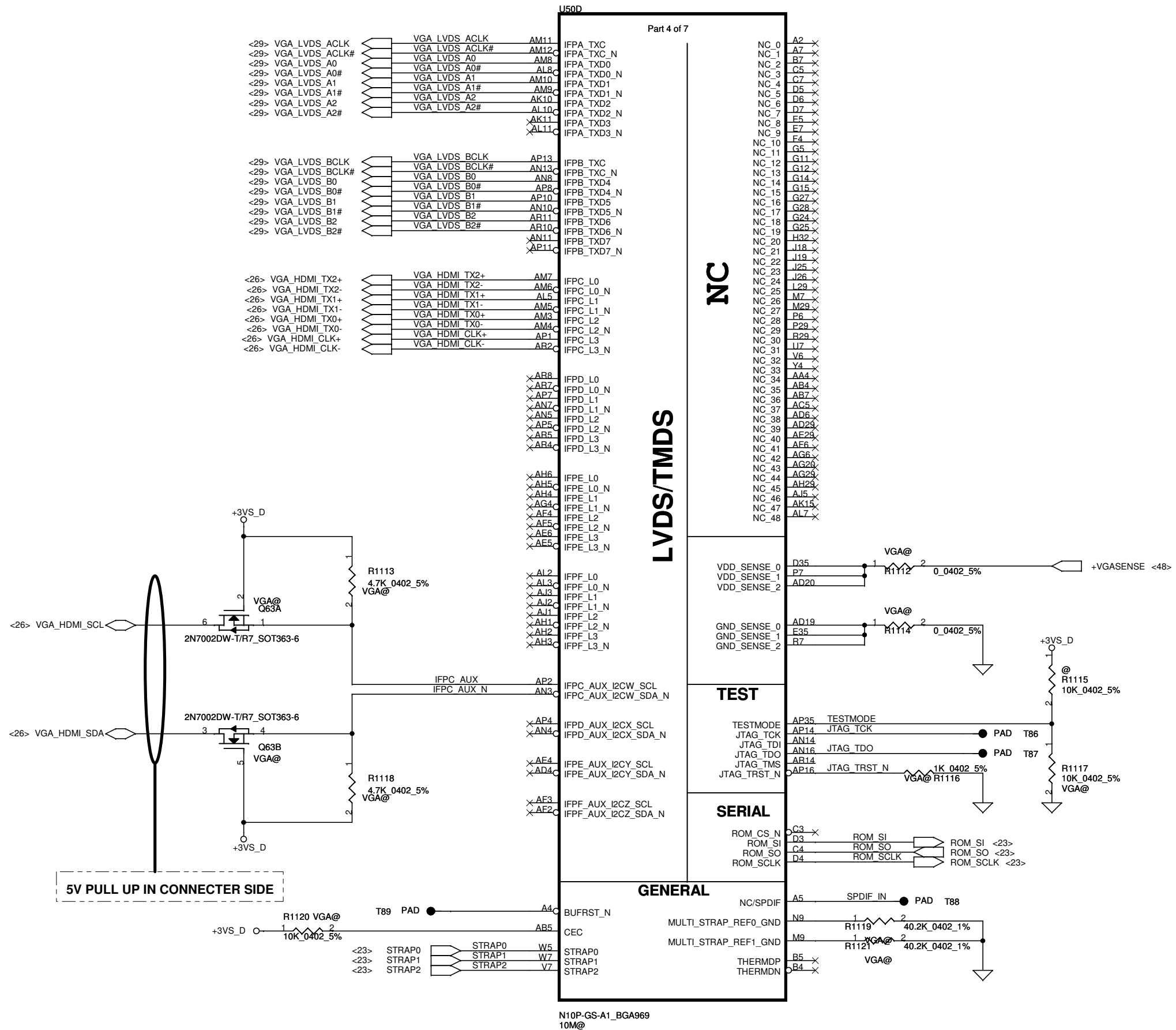
Place Components Close to BGA

Memory/PKG	FBVDDQ	FBCAL_PU_GND	FBCAL_PD_VDDQ	FBCAL_TERM_GND
DDR3	+1.5VS	40.2 ohm	60.4 ohm	40.2 ohm
GDDR3	+1.8VS	40.2 ohm	60.4 ohm	40.2 ohm

Must be used 1% resistor for driver calibration

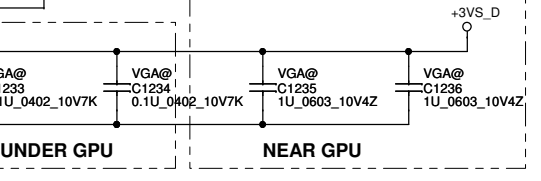
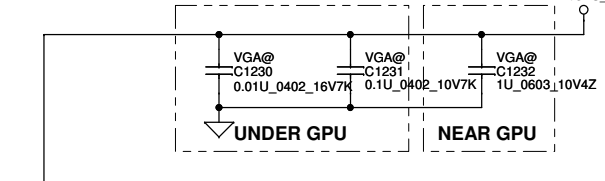
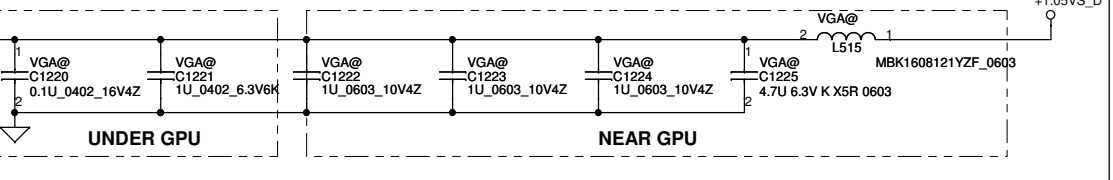
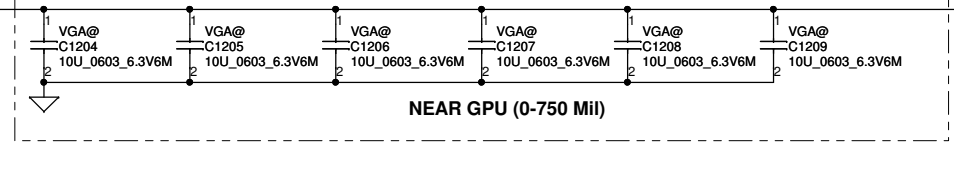
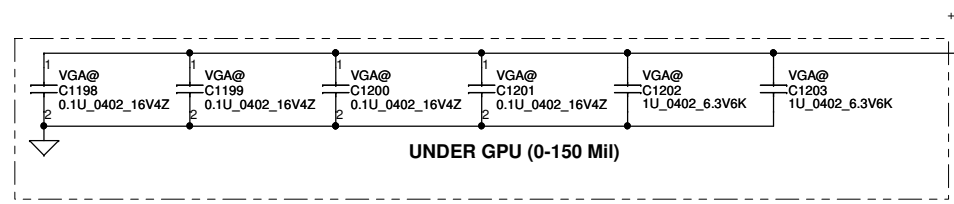
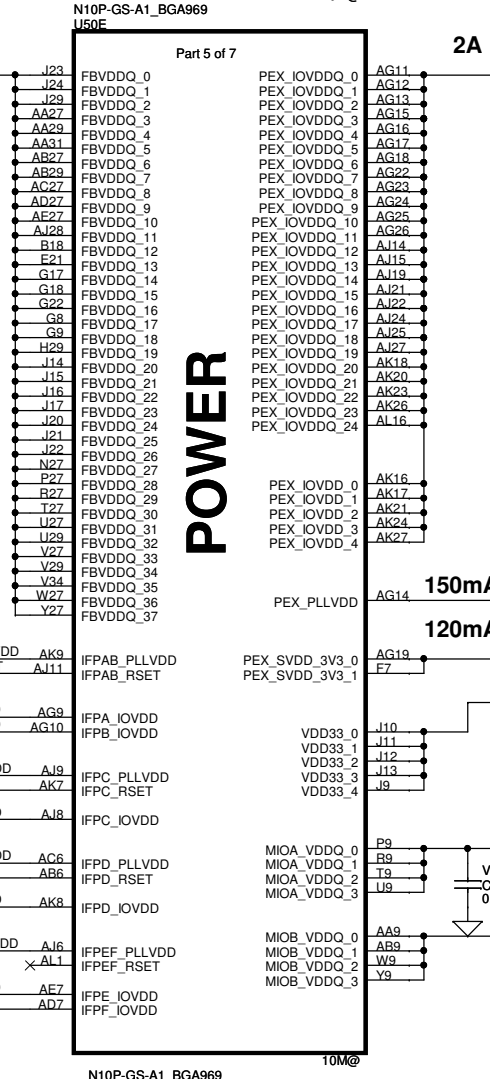
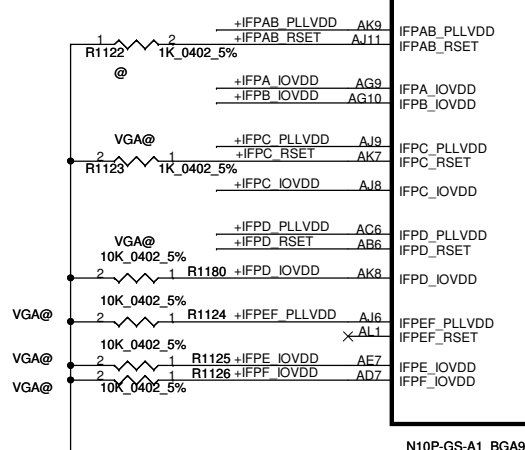
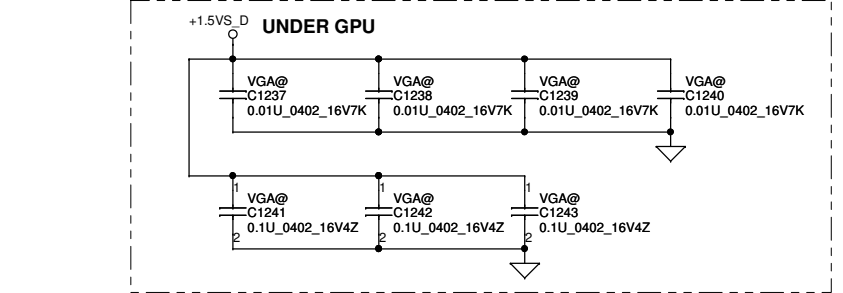
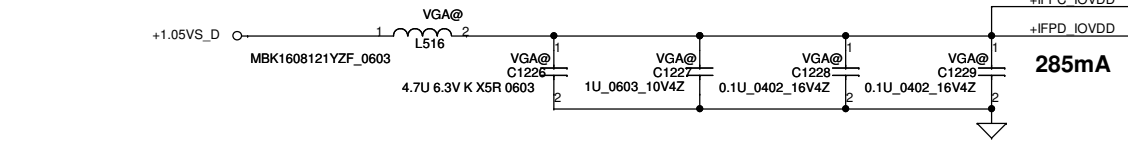
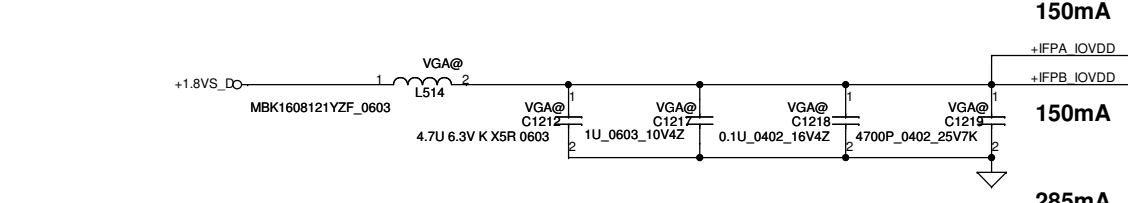
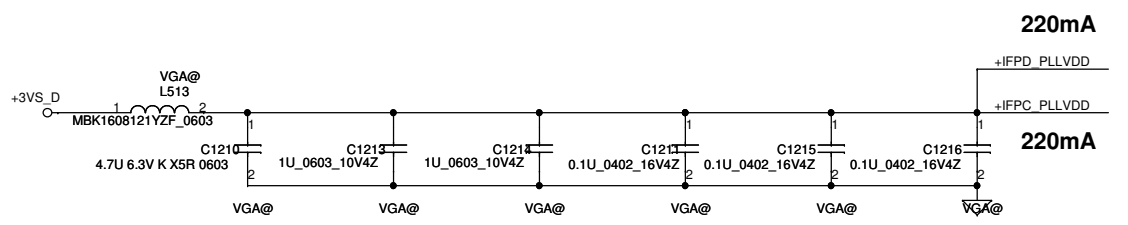
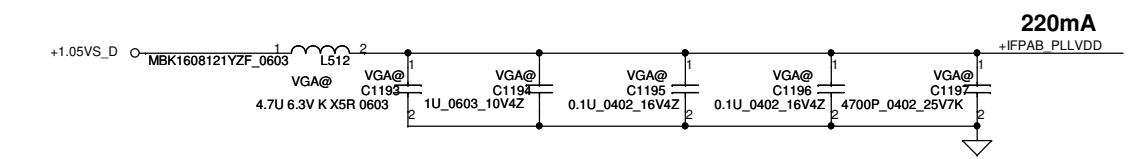
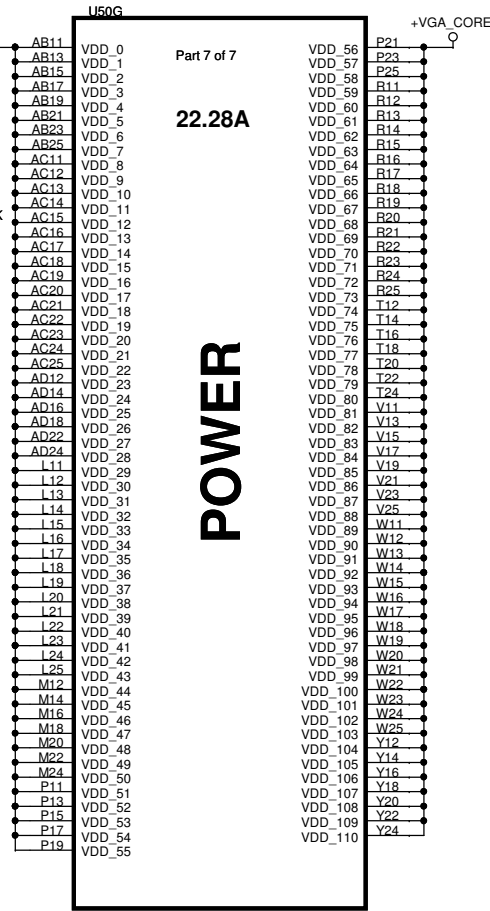
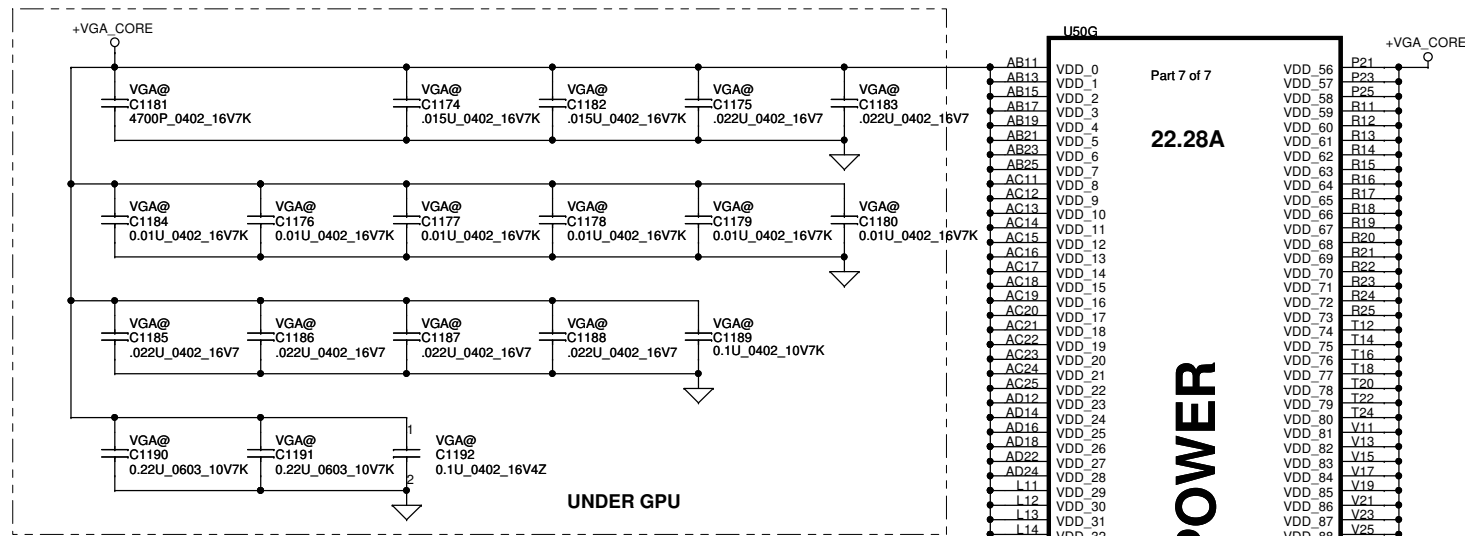


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>N10x-GS Memory</b> Size: Custom Document Number: NIWBA_LA5371P Date: Tuesday, March 24, 2009 Sheet 20 of 52

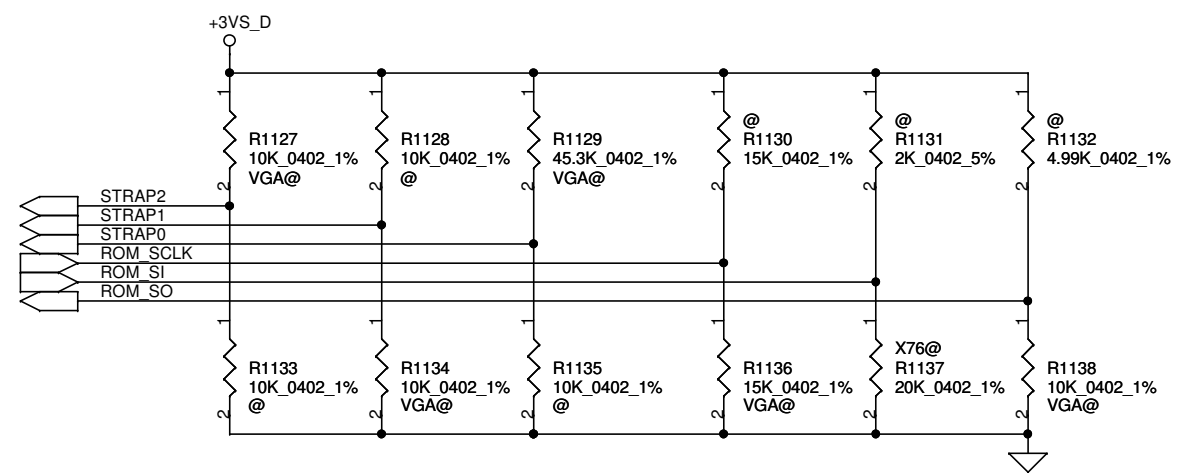
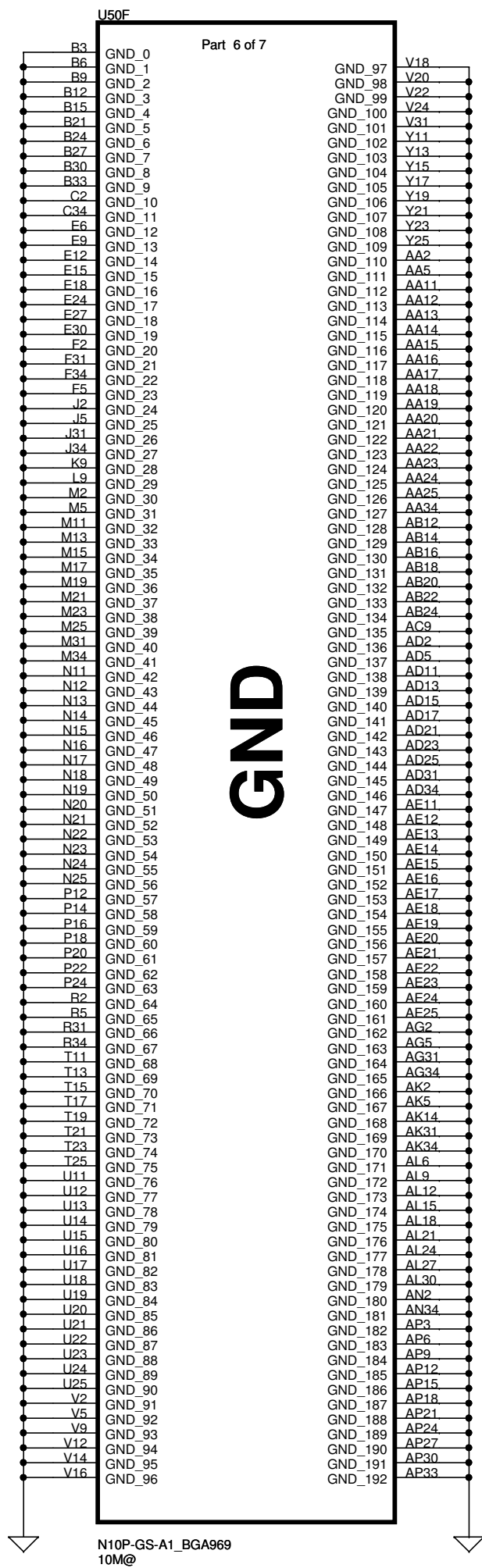


N10P-GS-A1\_BGA969  
10M@

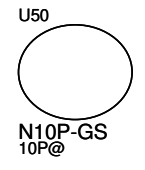
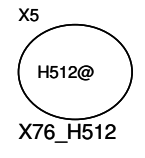
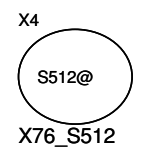
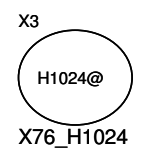
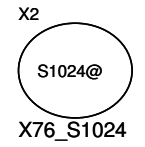
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				N10P/N10M LVDS, HDMI
Size	Custom	Document Number	NIWBA_LA5371P	
Date:	Tuesday, March 24, 2009	Sheet	21	of 52



Security Classification	Compal Secret Data		Title <b>NIWBA_LA5371P</b>
Issued Date	2007/10/15	Deciphered Date	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Rev 0.1
Date:	Tuesday, March 24, 2009	Sheet	22 of 52



<21> STRAP2  
 <21> STRAP1  
 <21> STRAP0  
 <21> ROM\_SCLK  
 <21> ROM\_SI  
 <21> ROM\_SO



### GB1 Family GPU Strap Options

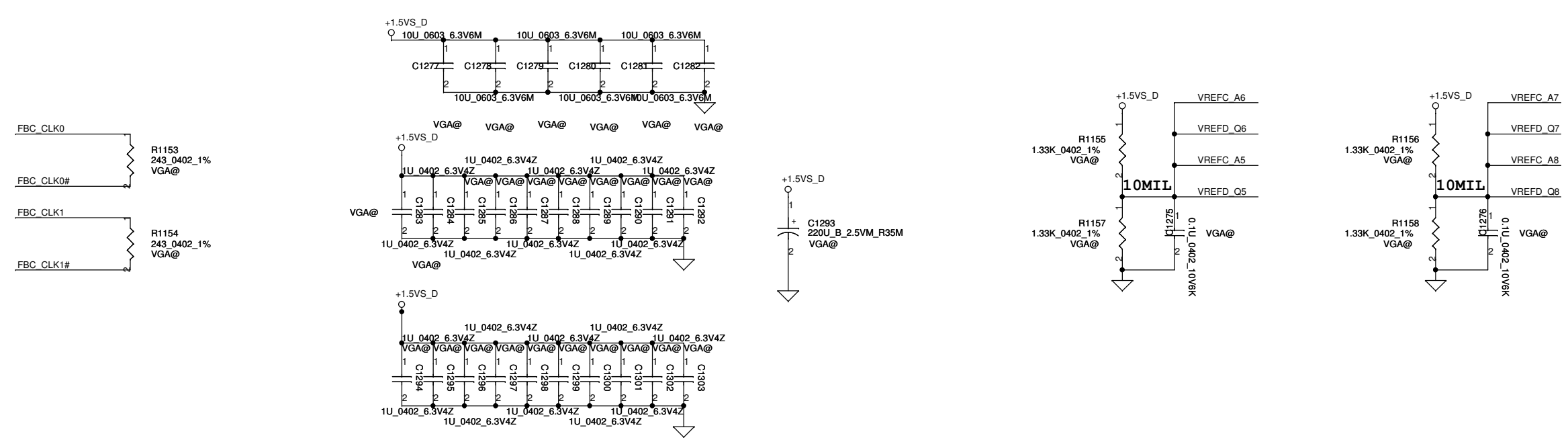
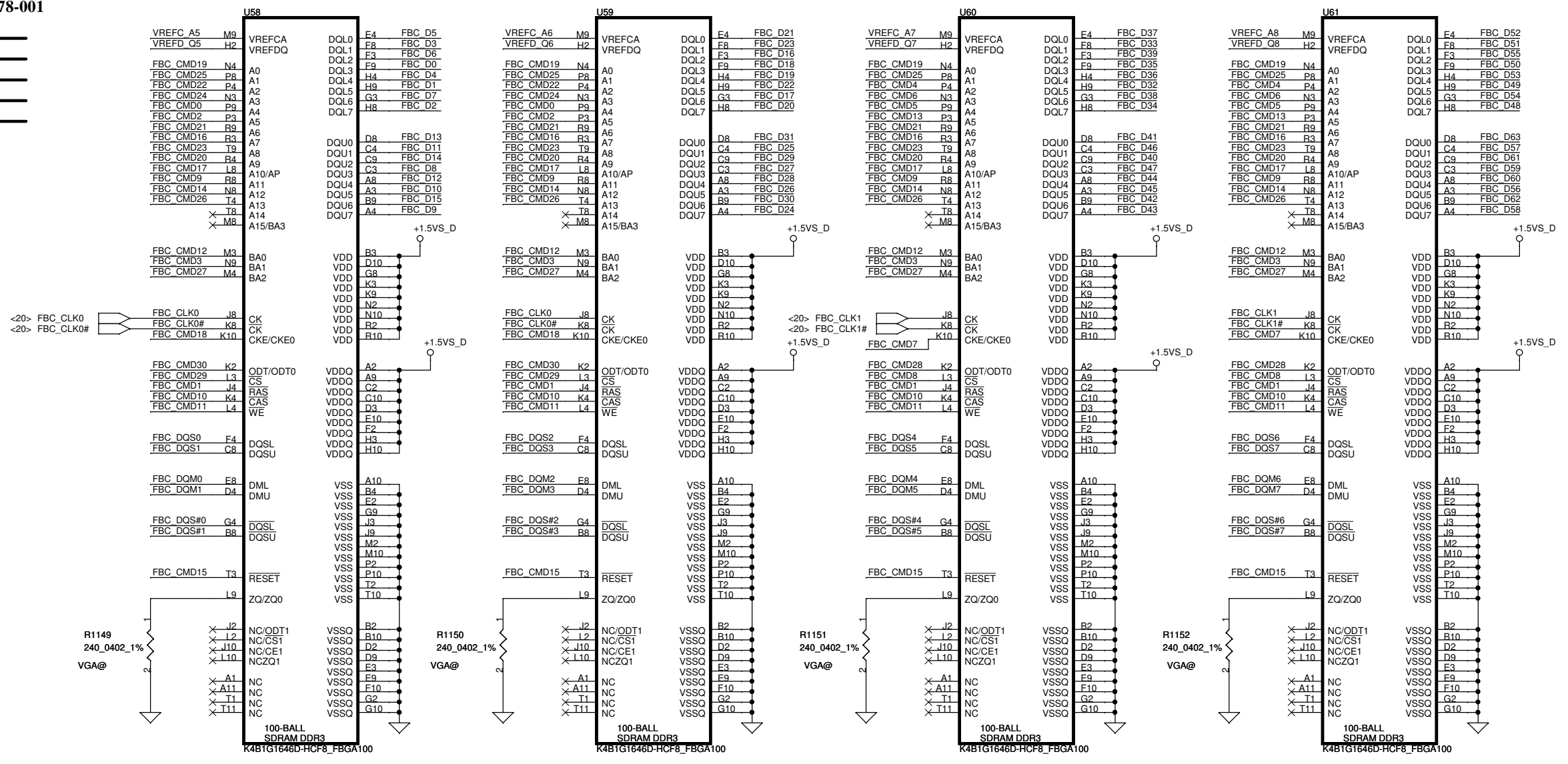
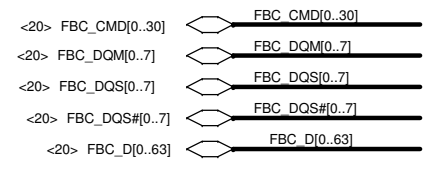
GPU	FB Memory	GPU DEVID RAM_CFG GPU DEVID					
		ROM_SO	ROM_SCLK	ROM_SI	STRAP2	STRAP1	STRAP0
N10P-GS (0xA34)	Samsung 64Mx16	PD 10K	PD 15K	PD 20K	PU 10K	PD 10K	PU 45K
	Hynix 64Mx16	PD 10K	PD 15K	PD 15K	PU 10K	PD 10K	PU 45K
N10M-GS (0xA74)	Samsung 64Mx16	PD 10K	PD 15K	PD 20K	PU 10K	PD 10K	PU 45K
	Hynix 64Mx16	PD 10K	PD 15K	PD 15K	PU 10K	PD 10K	PU 45K

Security Classification	Compal Secret Data			<b>Compal Electronics, Ltd.</b>	
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title <b>N10x-GS GND &amp; STRAP</b>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number <b>NIWBA_LA5371P</b>
				Date: Tuesday, March 24, 2009	Rev 0.1
				Sheet 23 of 52	



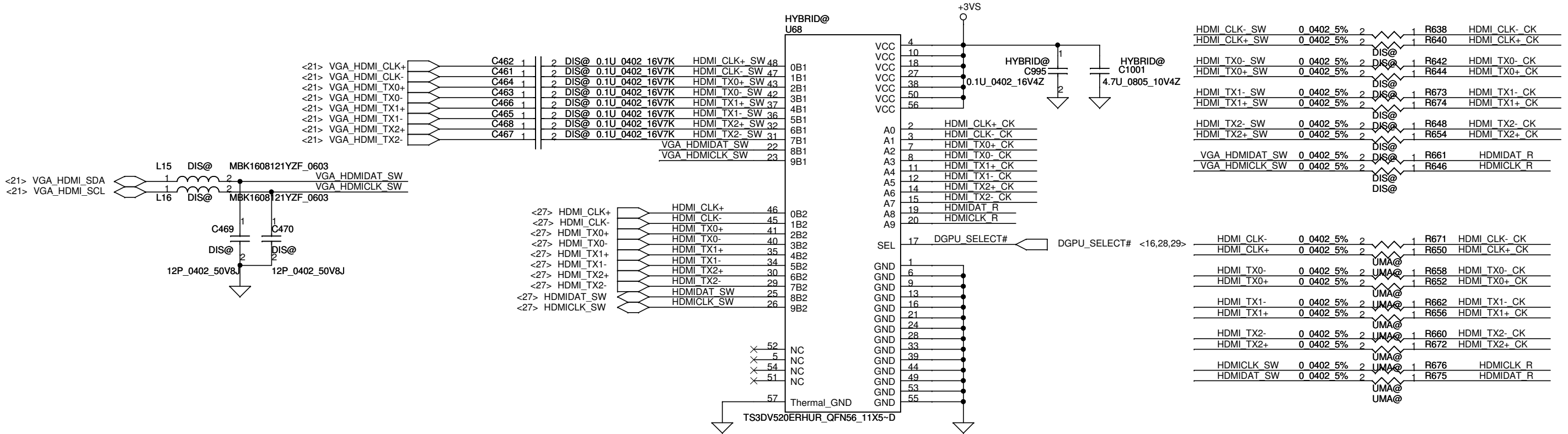


**N10x 40nm DDR3 MAPPING**  
**NVIDIA DOCUMENT FOR DA-3978-001**

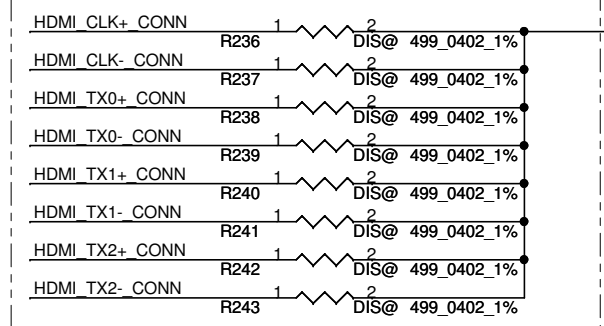


Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>VRAM DDRA</b> NIWBA_LA5371P	
Issued Date	2007/10/15	Deciphered Date	2008/10/15		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Title Size Custom	Document Number Rev 0.1
Date: Tuesday, March 24, 2009				Sheet	25 of 52

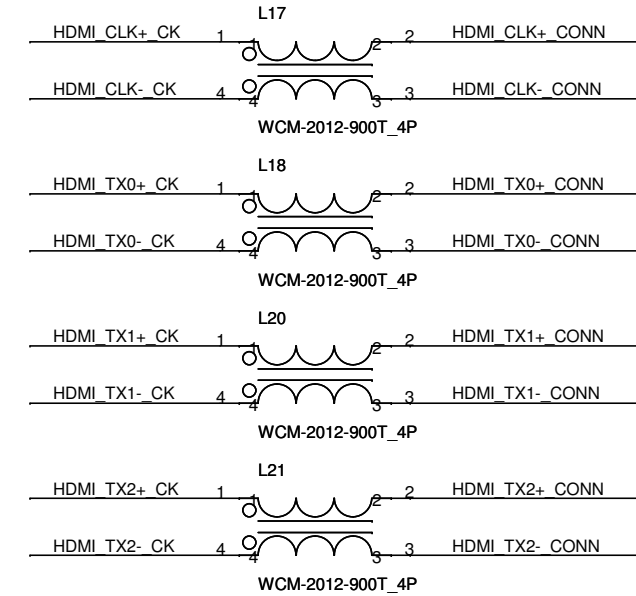
# HDMI switch1



## TMDS pull down (500ohm) resistors G9x only



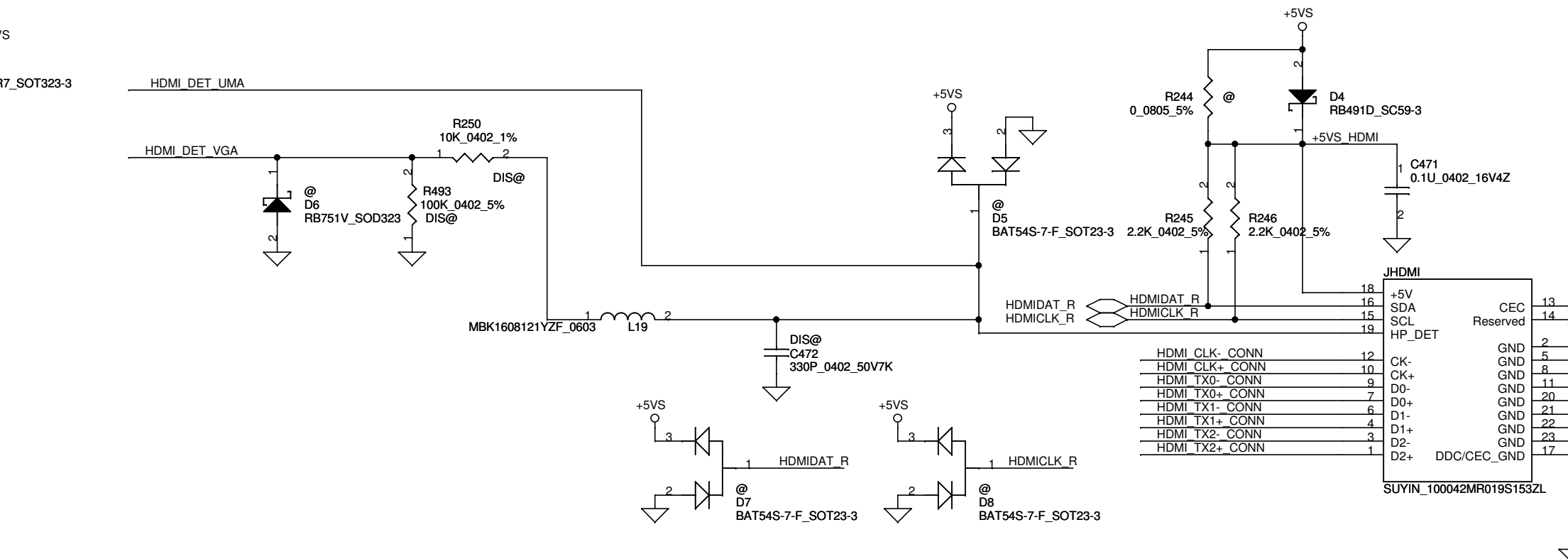
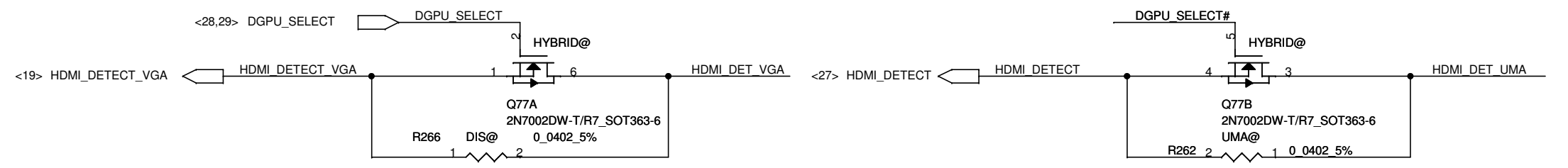
## NEAR CONNECT



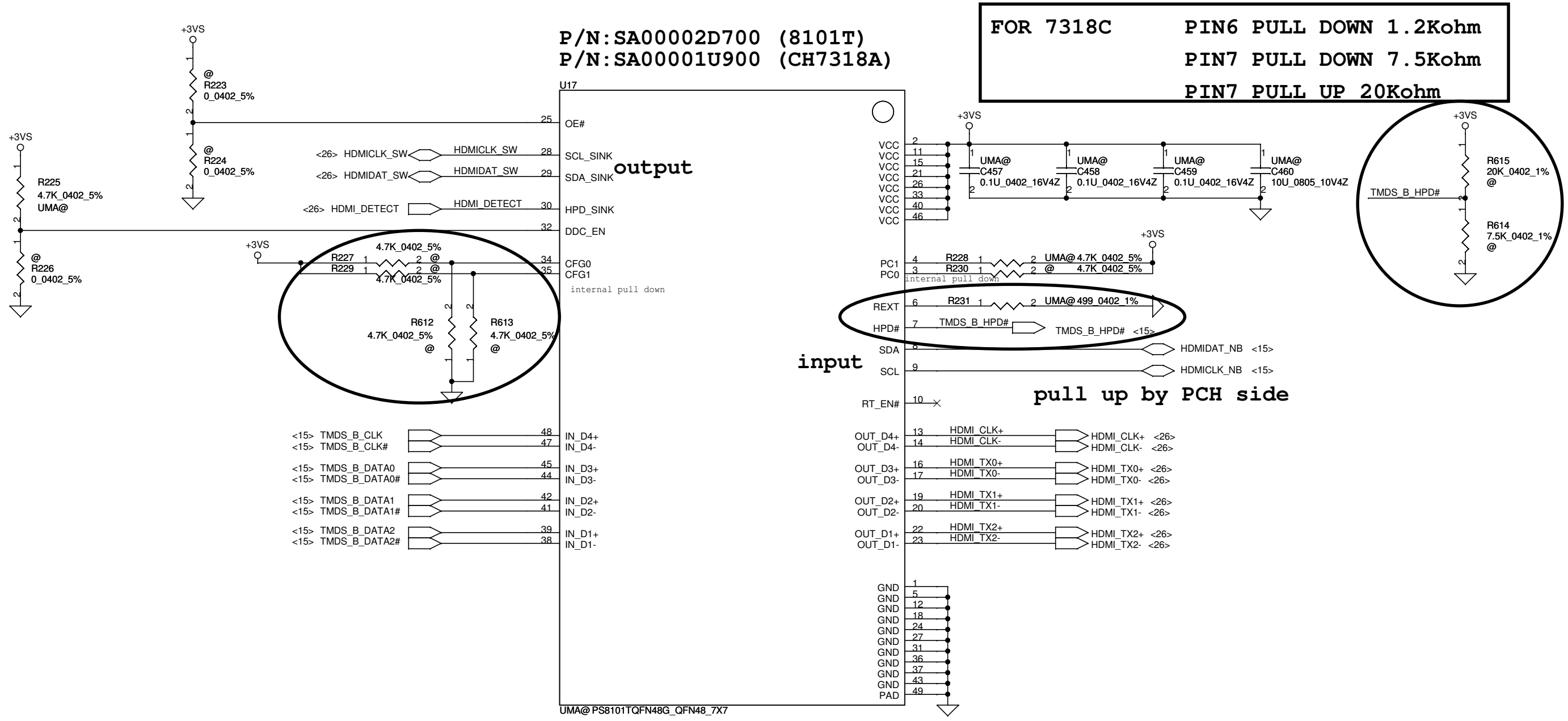
HDMI_CLK+_CONN	R236	1	2	DIS@	499_0402_1%
HDMI_CLK-_CONN	R237	1	2	DIS@	499_0402_1%
HDMI_TX0+_CONN	R238	1	2	DIS@	499_0402_1%
HDMI_TX0-_CONN	R239	1	2	DIS@	499_0402_1%
HDMI_TX1+_CONN	R240	1	2	DIS@	499_0402_1%
HDMI_TX1-_CONN	R241	1	2	DIS@	499_0402_1%
HDMI_TX2+_CONN	R242	1	2	DIS@	499_0402_1%
HDMI_TX2-_CONN	R243	1	2	DIS@	499_0402_1%

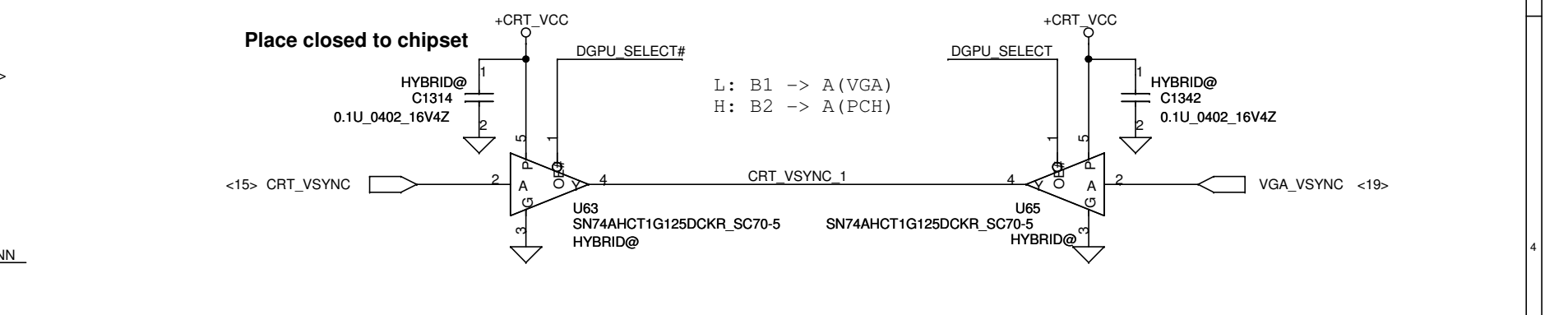
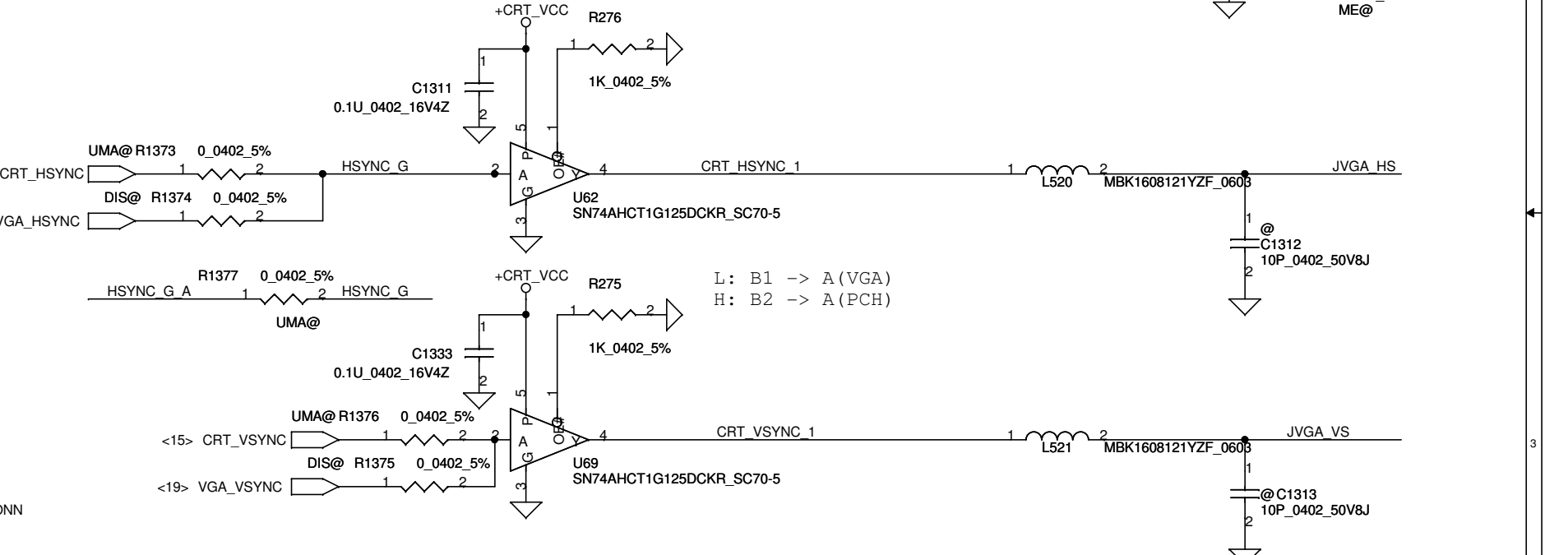
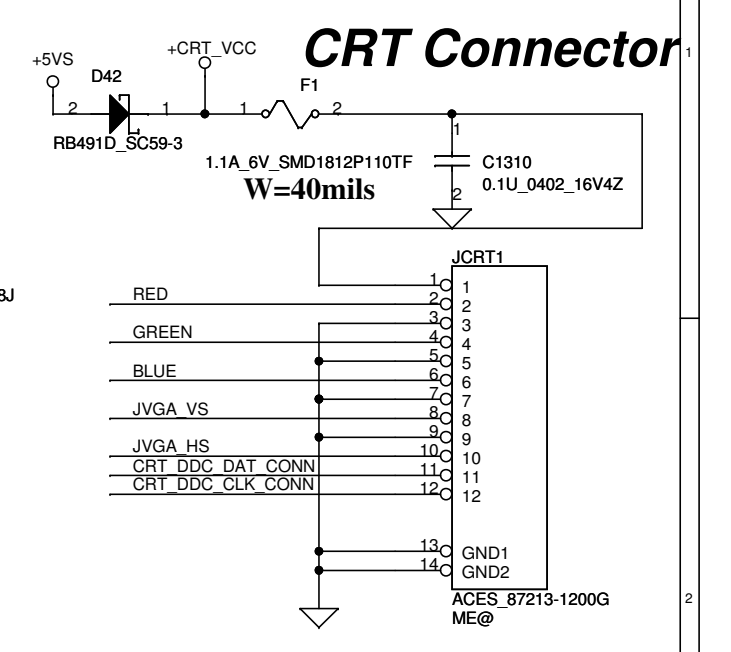
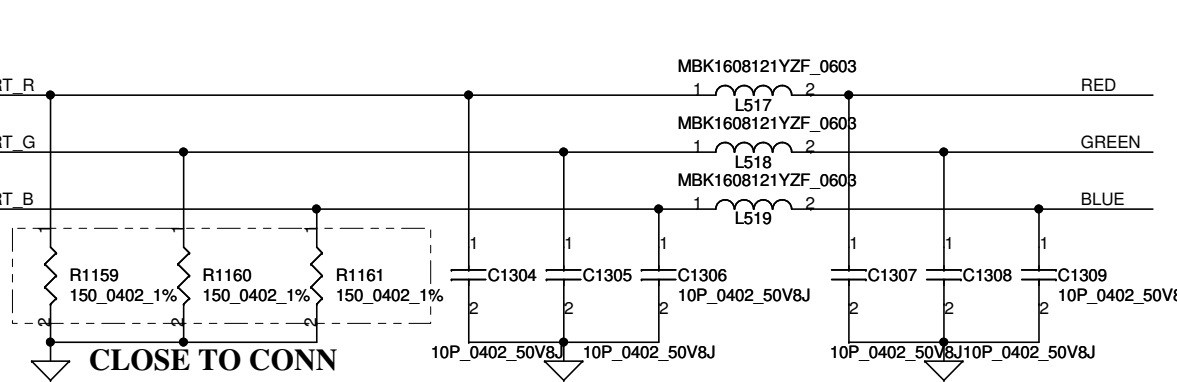
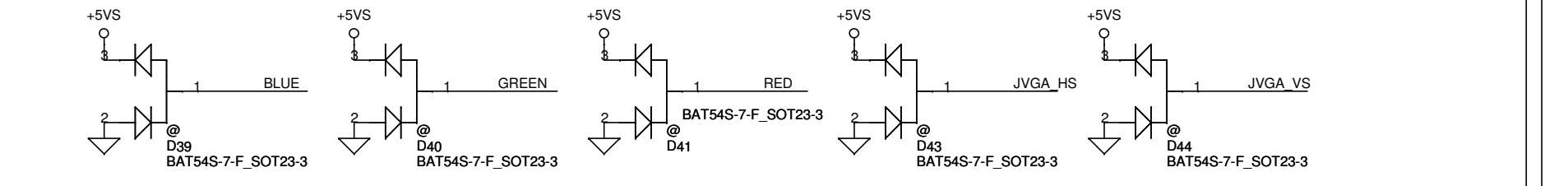
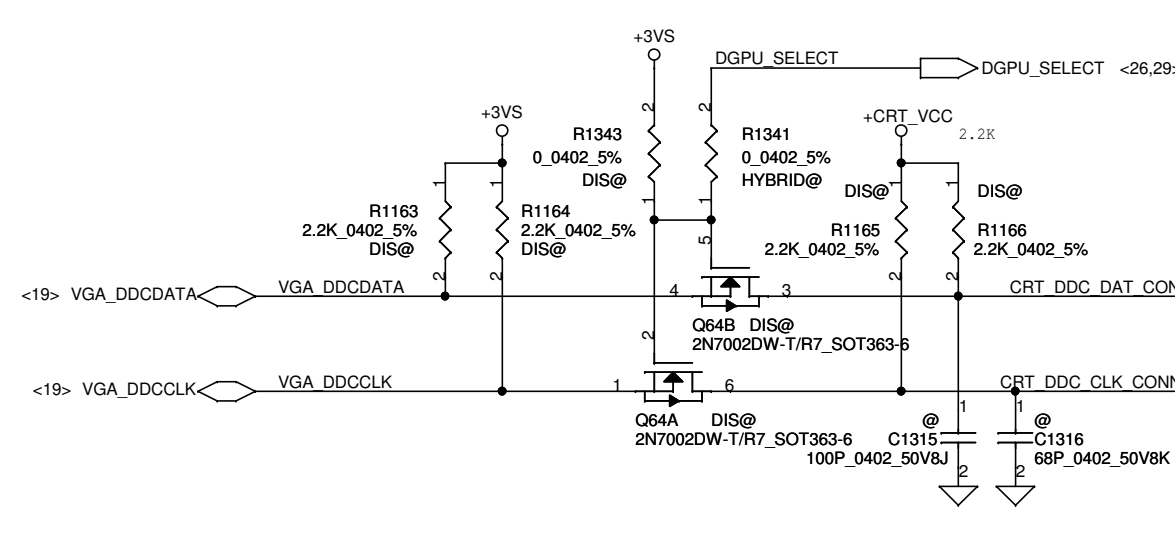
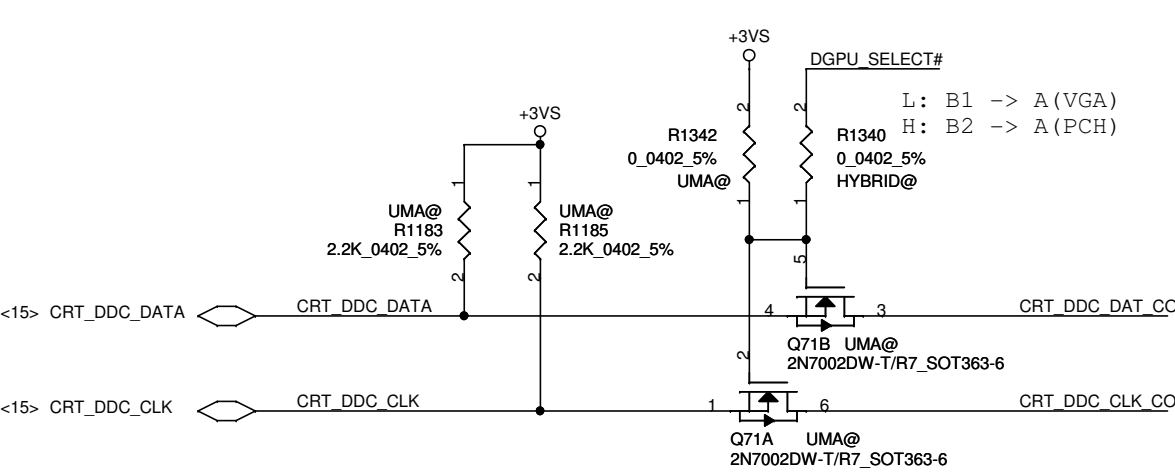
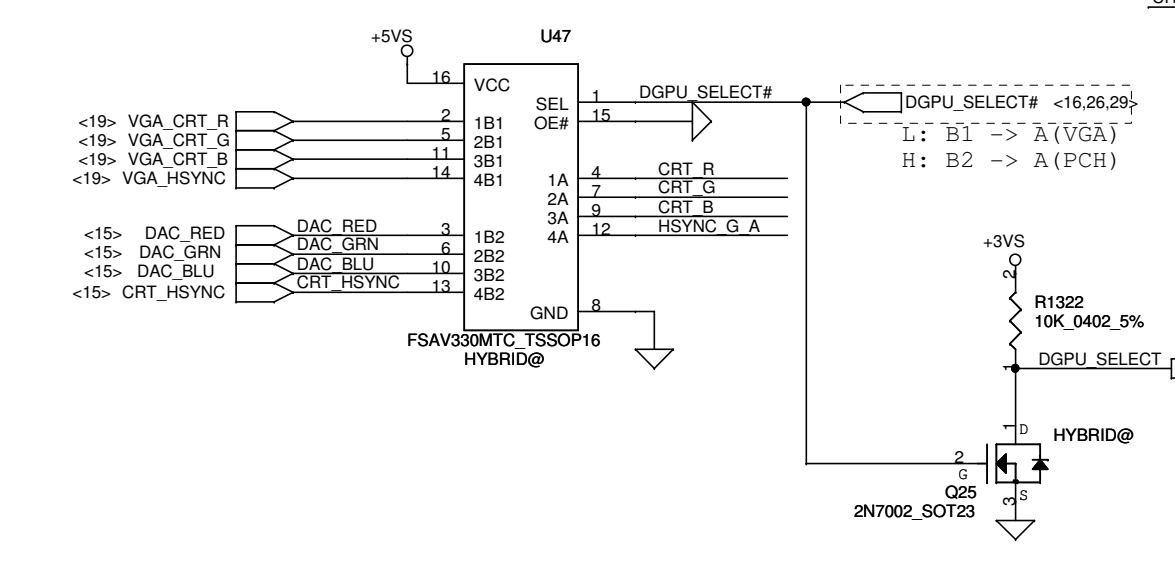
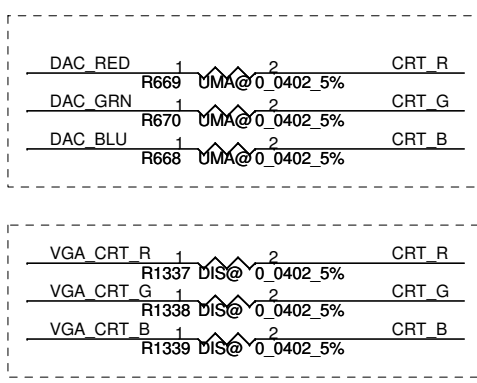
HDMI_CLK+_CK	R251	1	2	@	0_0402_5%	HDMI_CLK+_CONN
HDMI_CLK-_CK	R252	1	2	@	0_0402_5%	HDMI_CLK-_CONN
HDMI_TX0+_CK	R253	1	2	@	0_0402_5%	HDMI_TX0+_CONN
HDMI_TX0-_CK	R254	1	2	@	0_0402_5%	HDMI_TX0-_CONN
HDMI_TX1+_CK	R255	1	2	@	0_0402_5%	HDMI_TX1+_CONN
HDMI_TX1-_CK	R256	1	2	@	0_0402_5%	HDMI_TX1-_CONN
HDMI_TX2+_CK	R257	1	2	@	0_0402_5%	HDMI_TX2+_CONN
HDMI_TX2-_CK	R258	1	2	@	0_0402_5%	HDMI_TX2-_CONN



Security Classification	Compal Secret Data		Compal Electronics, Ltd.	
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Level Shifter_PS8101T
Size	Custom	Document Number	KIWB1/B2_LA4601P	Rev
Date	Tuesday, March 24, 2009	Sheet	26 of 52	0.1

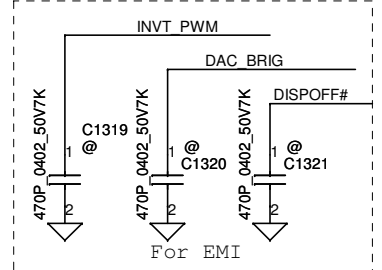
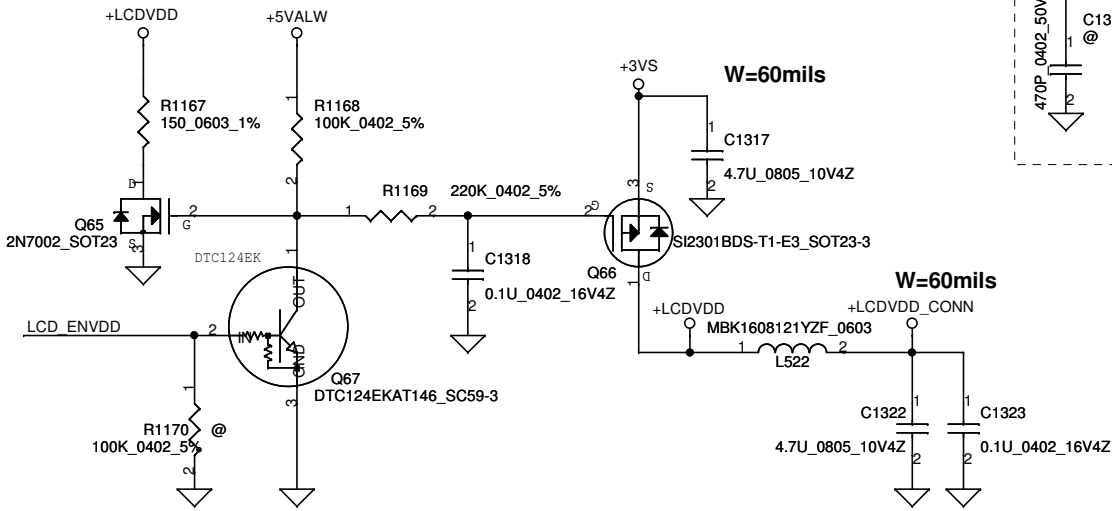


Security Classification	Compal Secret Data		<b>Compal Electronics, Ltd.</b>	
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title <b>Level Shifter_PS8101T</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom
				Document Number <b>KIWB1/B2_LA4601P</b>
Date: Tuesday, March 24, 2009			Sheet 27 of 52	

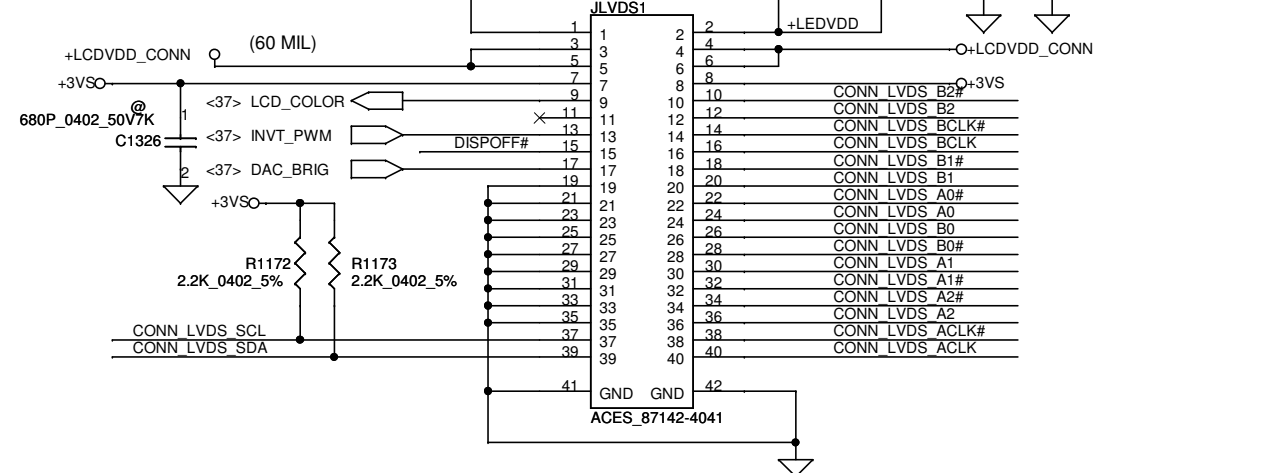


Security Classification	Compal Secret Data		Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	<b>Compal Electronics, Inc.</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>CRT &amp; TV-OUT Connector</b>
				Size Custom
Date:	Tuesday, March 24, 2009	Sheet	28 of 52	

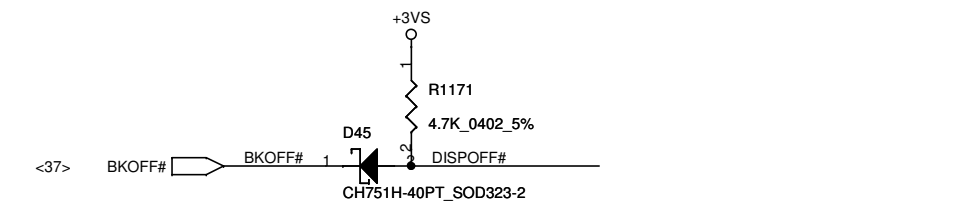
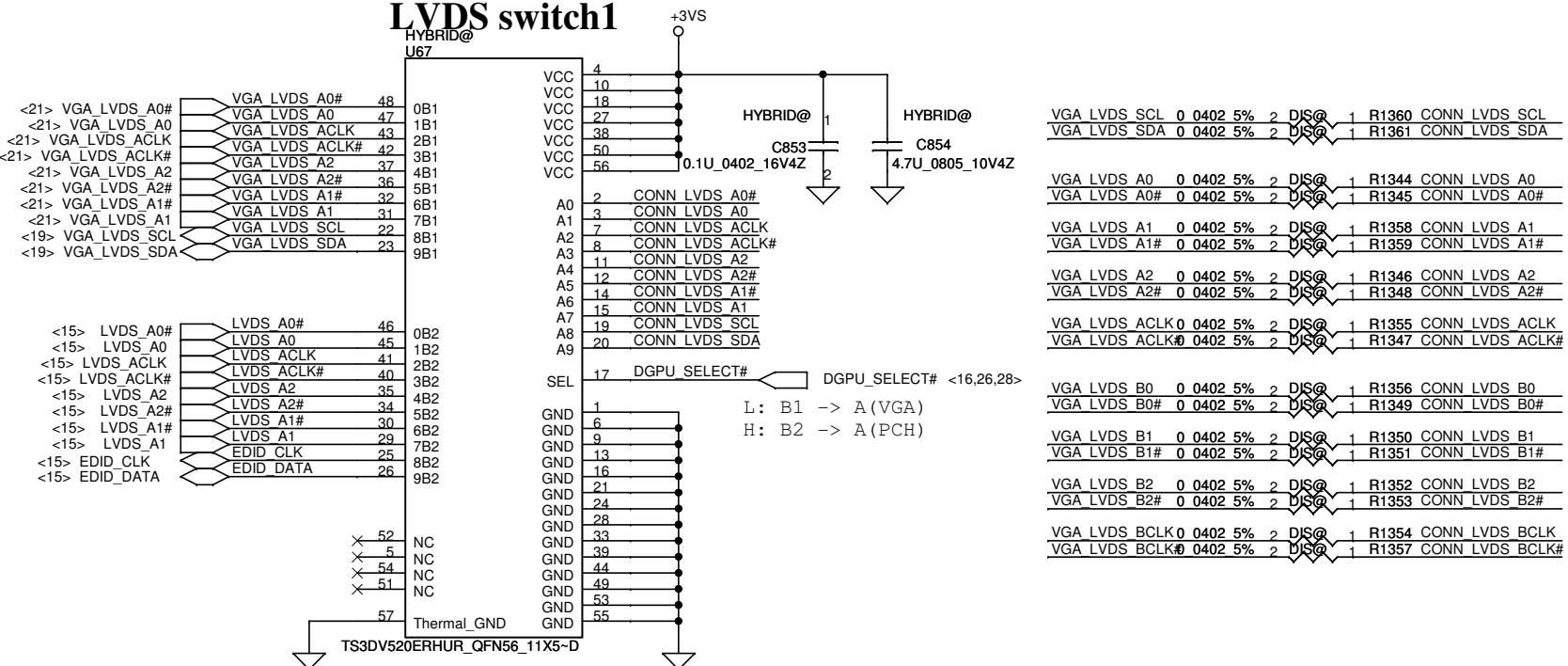
# LCD POWER CIRCUIT



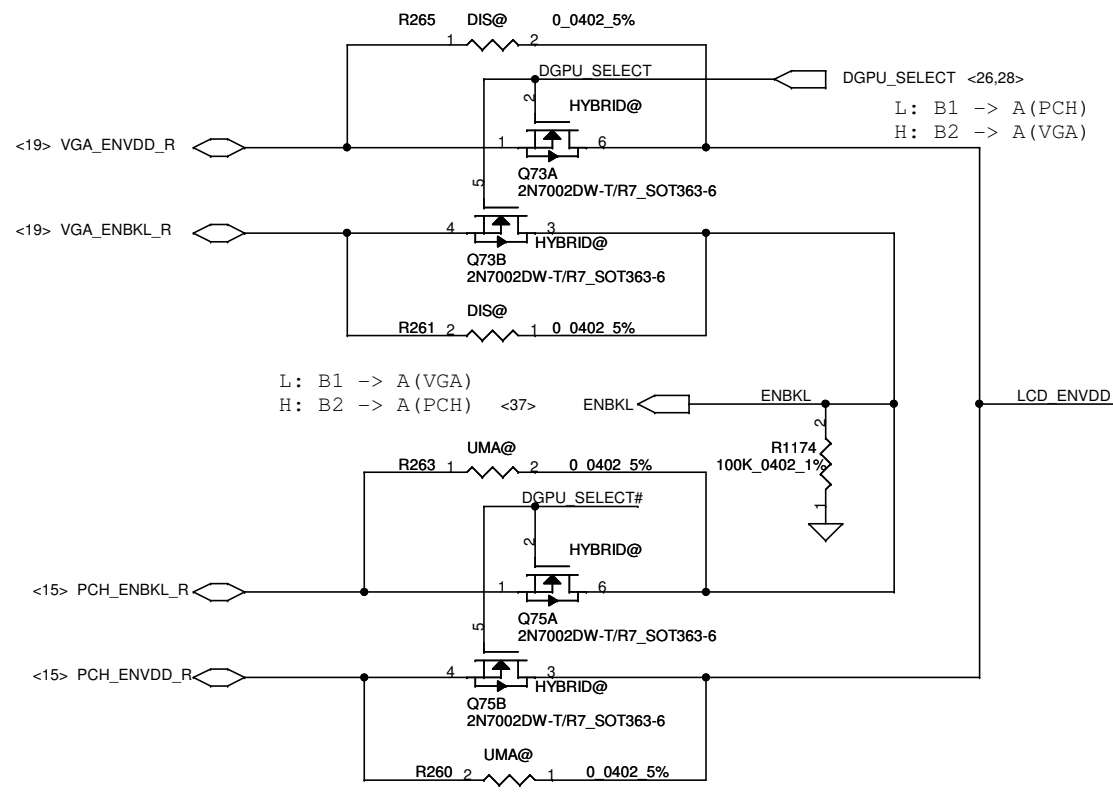
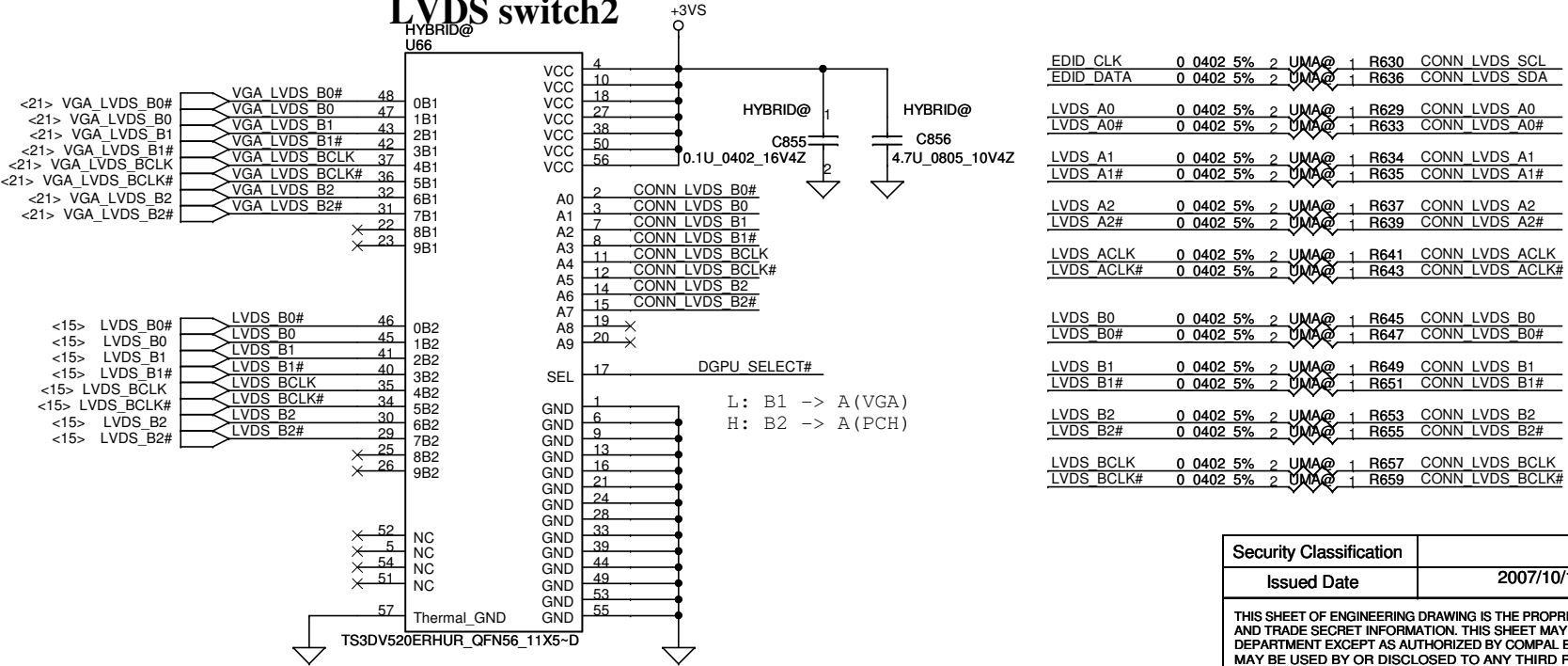
# VGA LCD/PANEL BD. Conn.



# LVDS switch1



# LVDS switch2

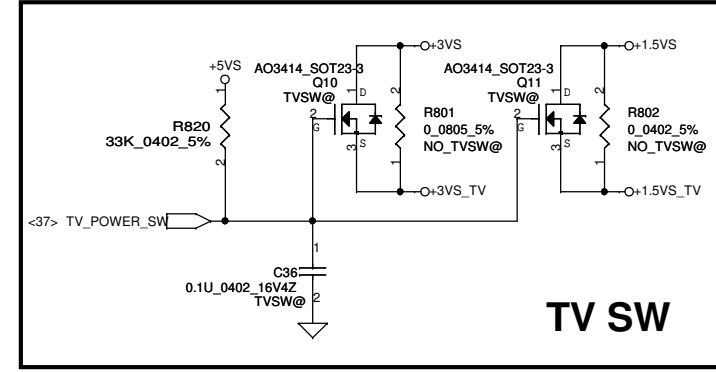
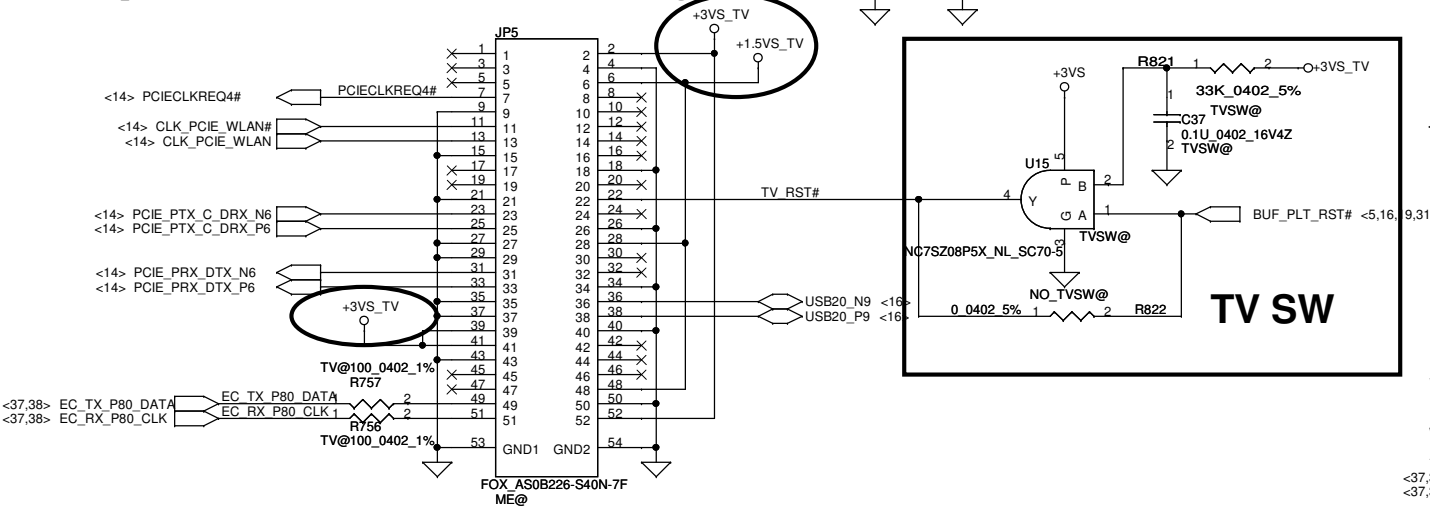


Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>LVDS &amp; DVI Connector</b> Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size B	Document Number
				NIWBA_LA5371P Rev 0.1	
				Date: Tuesday, March 24, 2009	Sheet 29 of 52

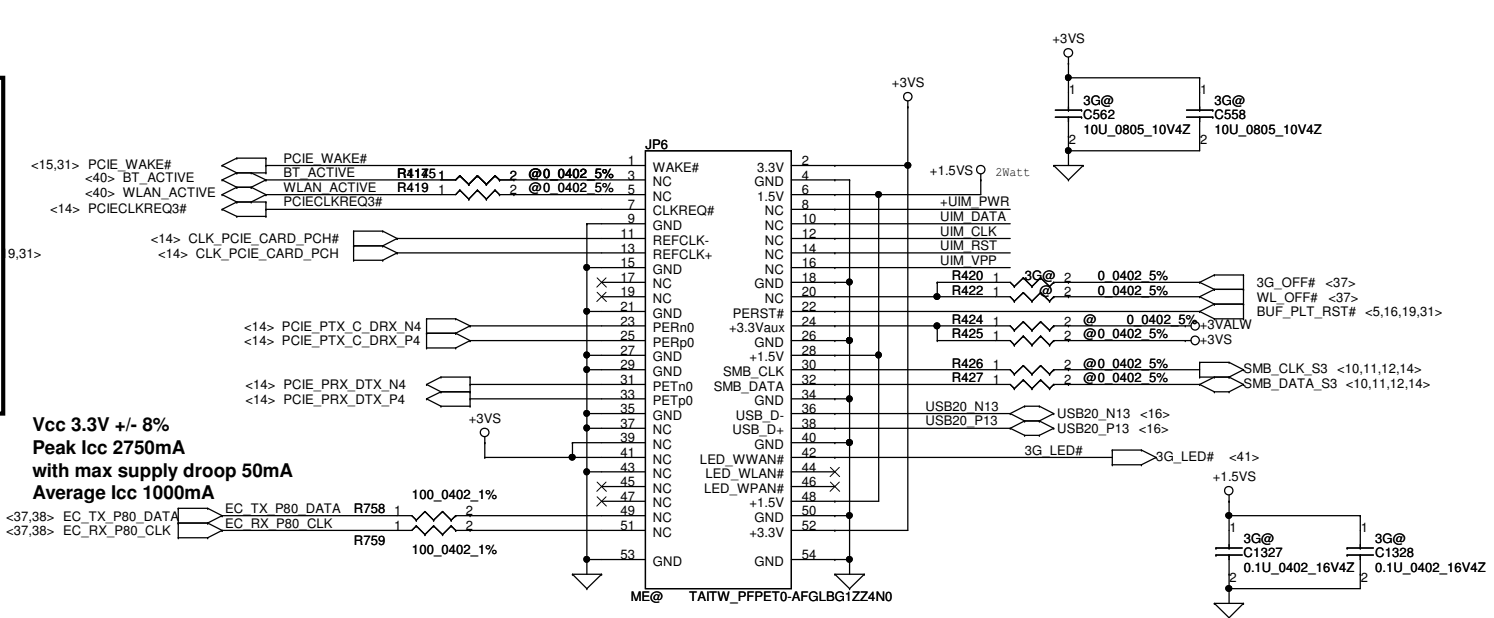
# Mini-Express Card for 3G Or TV Tuner

## Mini-Express Card for WLAN

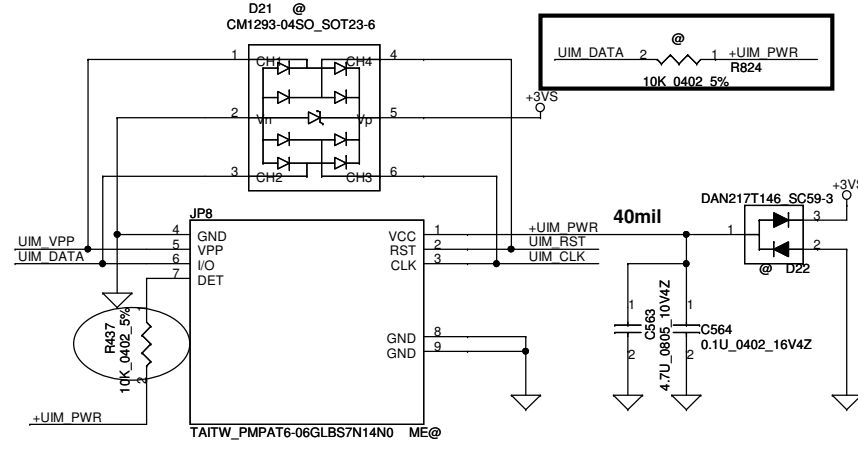
### Mini-Express Card(Slot 1-TV TUNNER) 4.0mm high



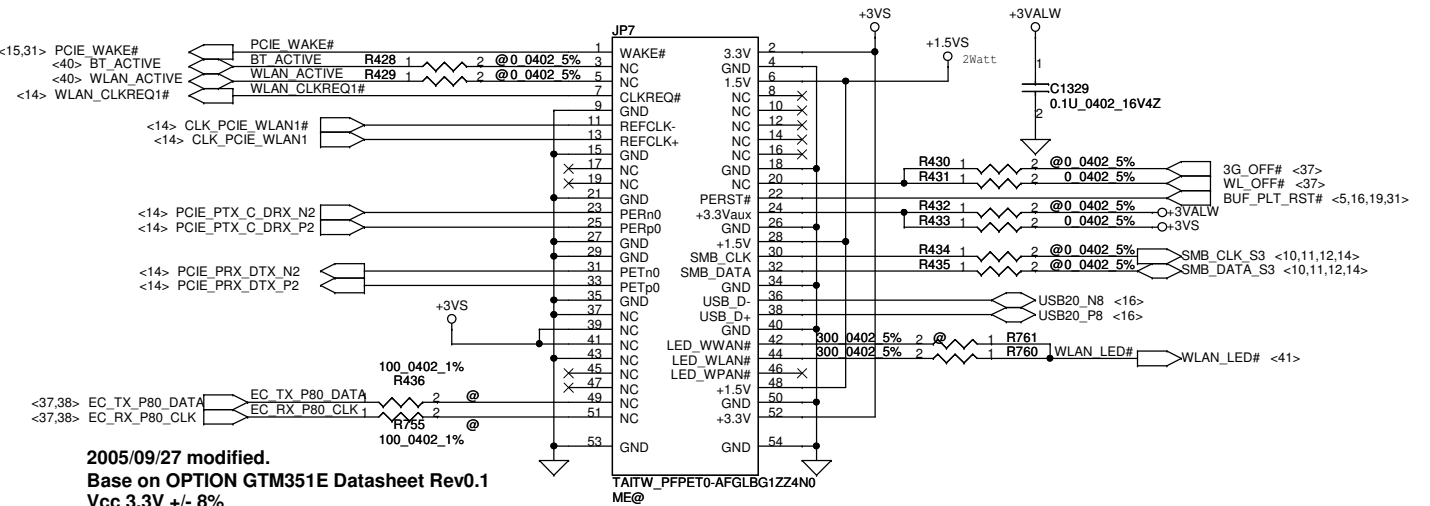
### Mini-Express Card(Slot 3-WWAN 3G) 5.6mm high



Vcc 3.3V +/- 8%  
Peak Icc 2750mA  
with max supply droop 50mA  
Average Icc 1000mA

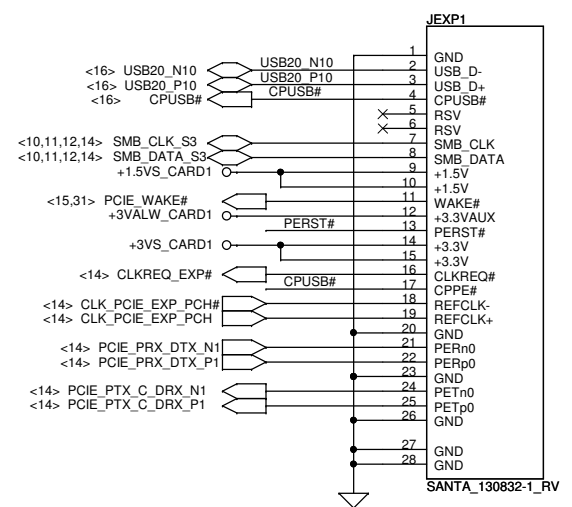


### Mini-Express Card(Slot 2-WIRELESS) 5.6mm high

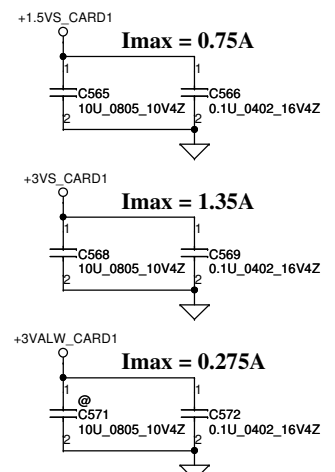
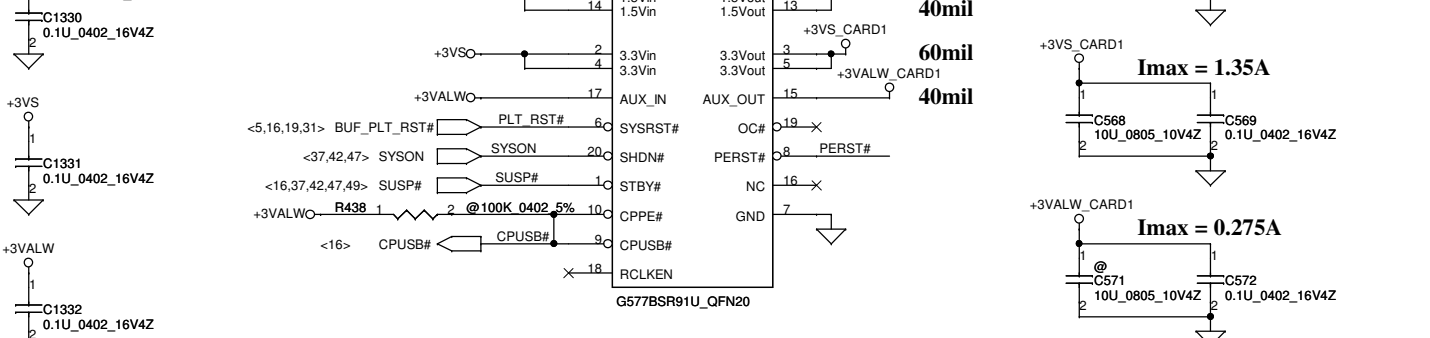


2005/09/27 modified.  
Base on OPTION GTM351E Datasheet Rev0.1  
Vcc 3.3V +/- 8%  
Peak Icc 2750mA  
with max supply droop 50mA  
Average Icc 1000mA

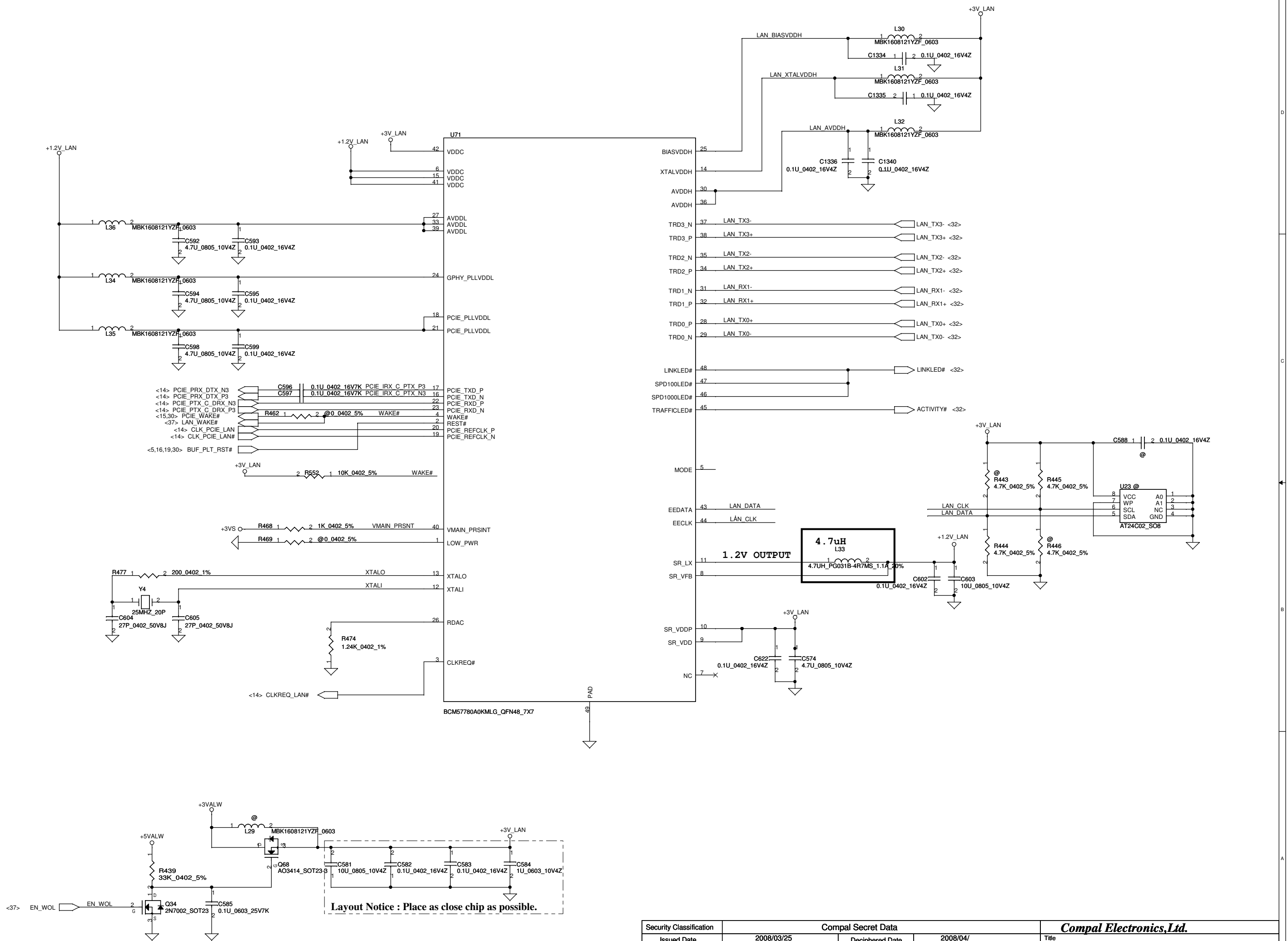
### New Card 34mm Socket (Left/TOP)



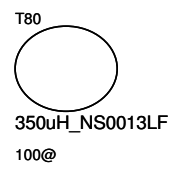
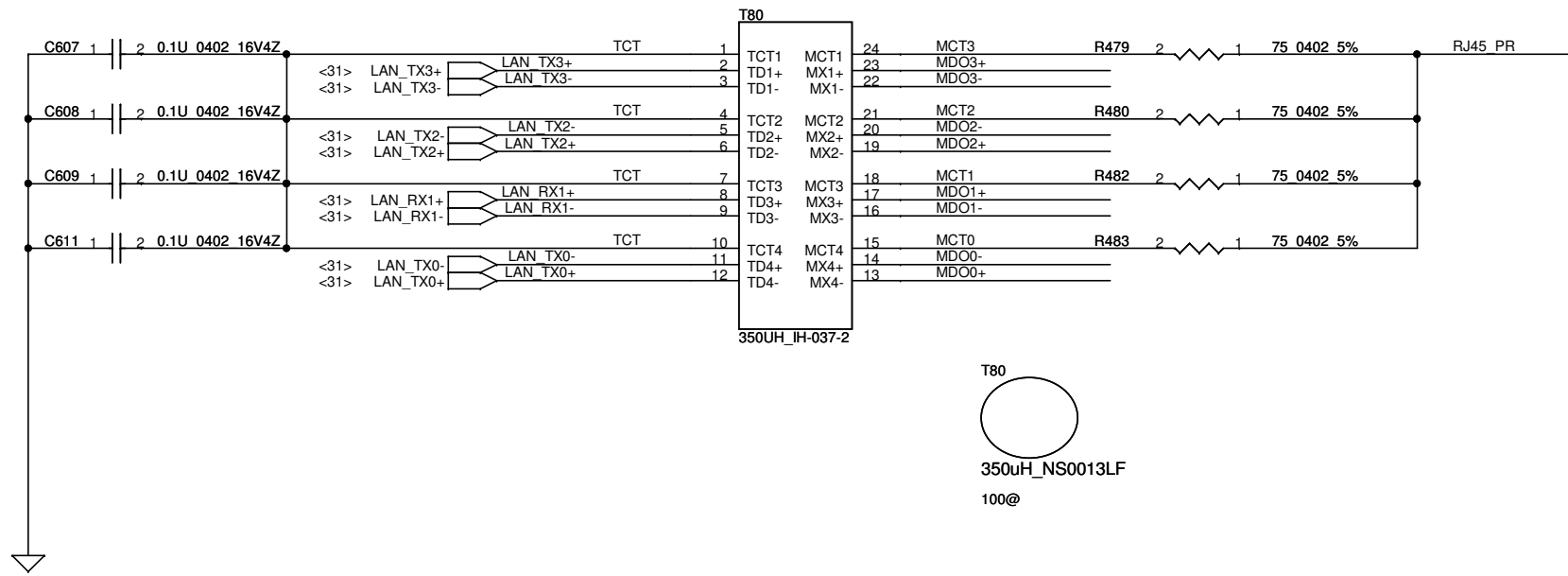
### Express Card Power Switch



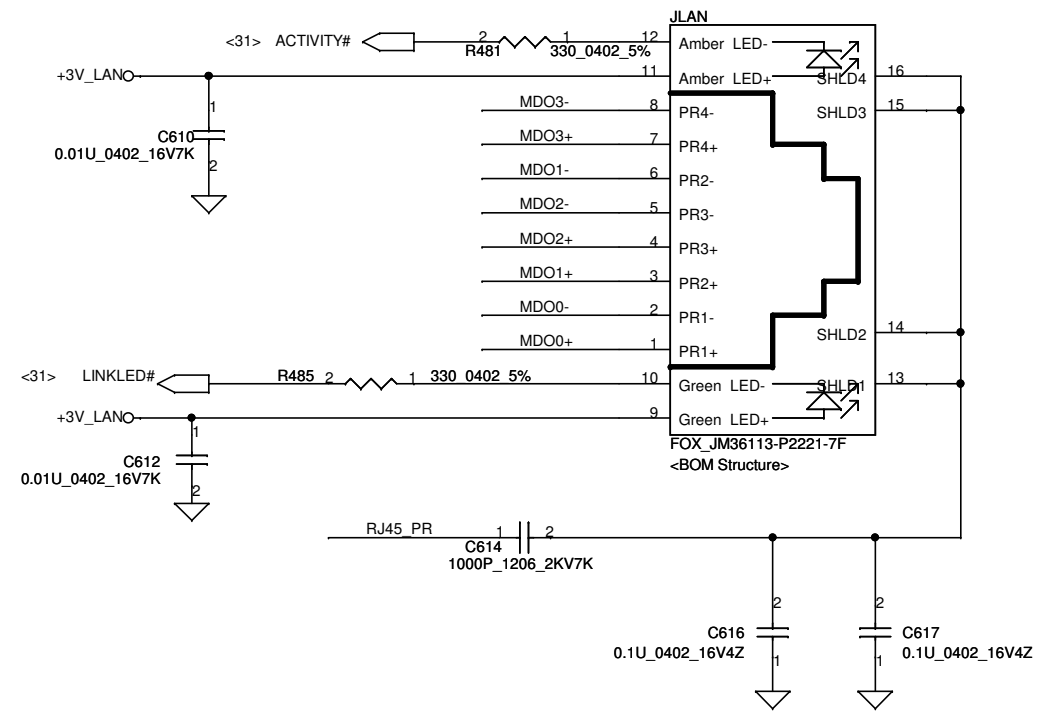
Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.
Issued Date	2007/10/15	Deciphered Date		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				
Size	Document Number	Rev		Date
	NIWBA_LA5371P	9.1		
Date: Tuesday, March 24, 2009			Sheet	30 of 52



Security Classification	Compal Secret Data		<b>Compal Electronics, Ltd.</b>	
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number
				<b>NIWBA_LA5371P</b>
				Rev 0.1
Date: Tuesday, March 24, 2009				Sheet 31 of 52



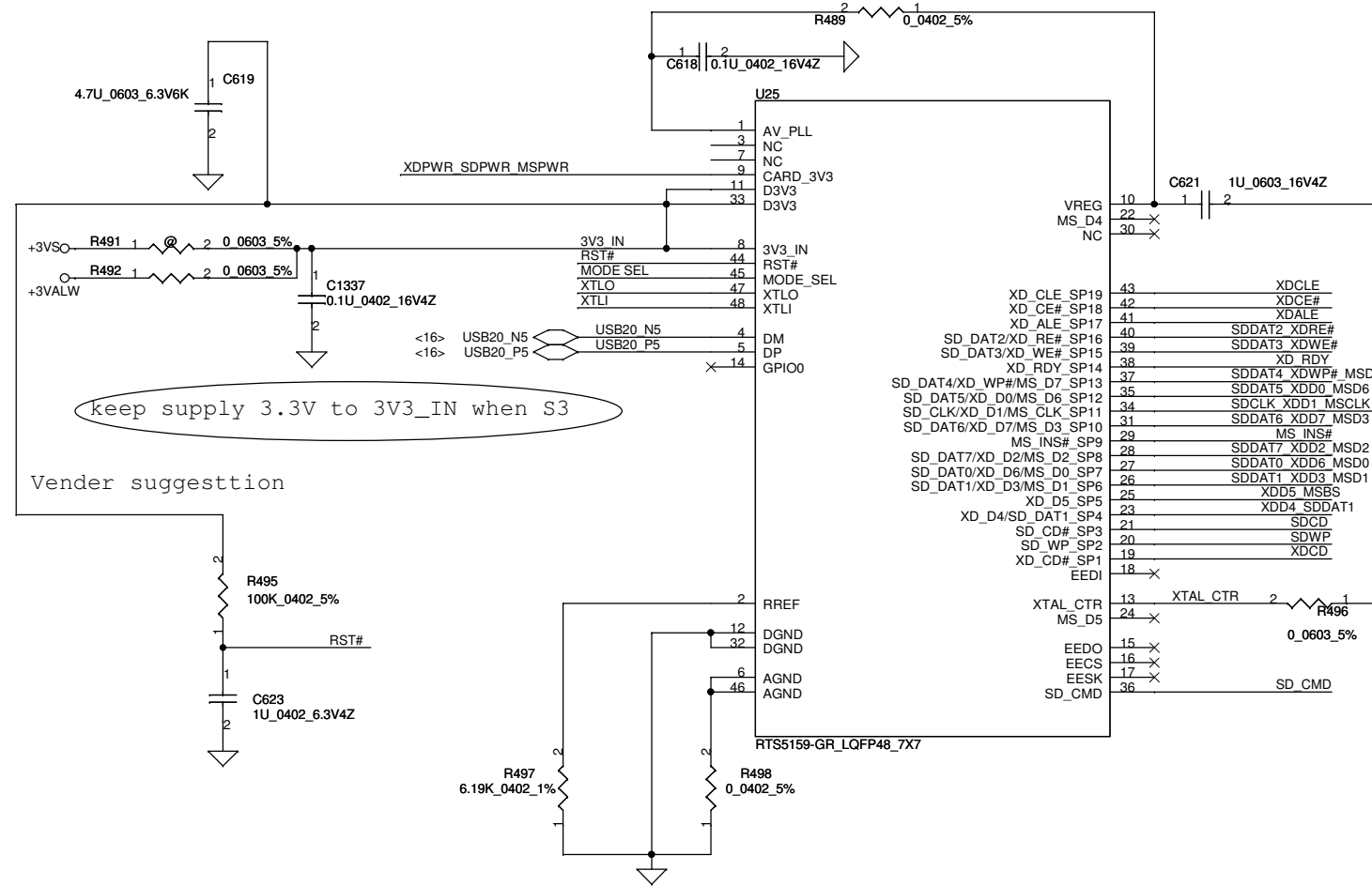
**RJ11+RJ45 CONN**



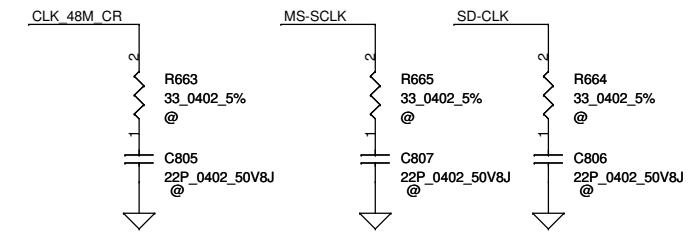
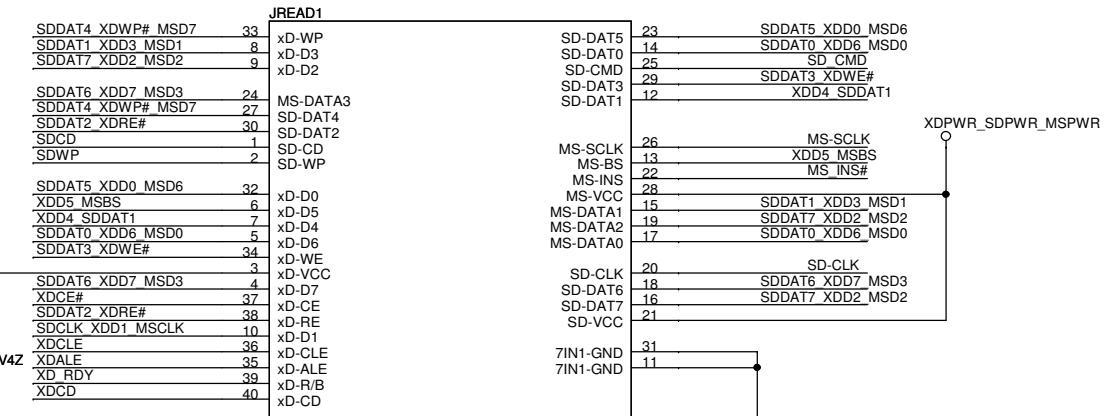
Security Classification	Compal Secret Data		Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	<b>Compal Electronics, Inc.</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>LAN CONTROLLER</b>
				Size Custom
Date: Tuesday, March 24, 2009			Sheet	32 of 52



0513 : CARD\_3V3 旁路電阻 100K change to 4.7u CAP==>預留  
 0521 : change C79 form 4.7u to 0.1u, add R47 100K ohm,  
 change C526 form 1u to 4.7u

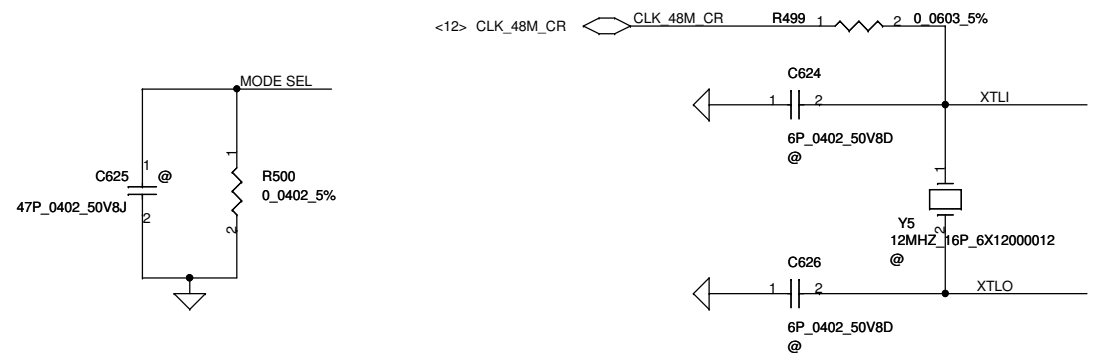


pin 13 (XTAL CTL)	CLOCK SOURCE	REMARK
FLOATING	12MHZ CRYSTAL INPUT	
PULL HIGH	CLOCK GENERATOR'S 48MHZ INPUT	INPUT TO PIN48

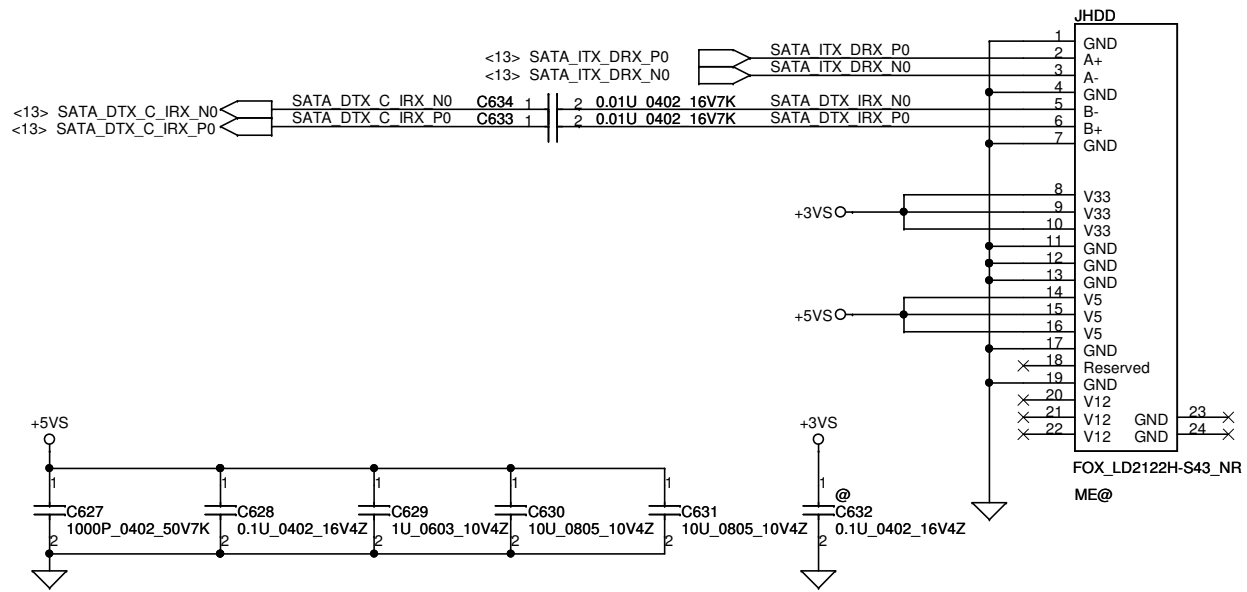


MSCLK and SDCLK 該二電阻是預留給EMI solution使用, (但請靠近RTS5158E側).

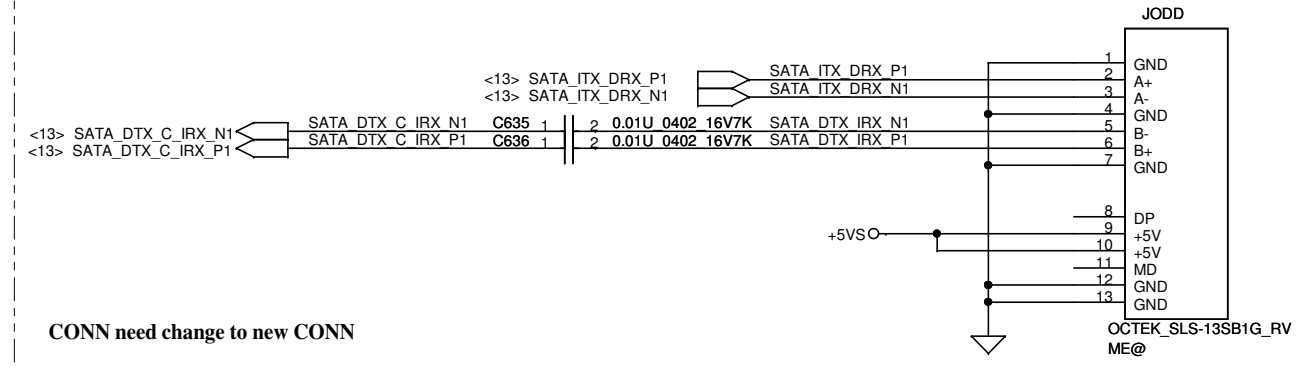
將SD\_DAT1 連接到RTS5158E的pin23



### SATA HDD Conn.

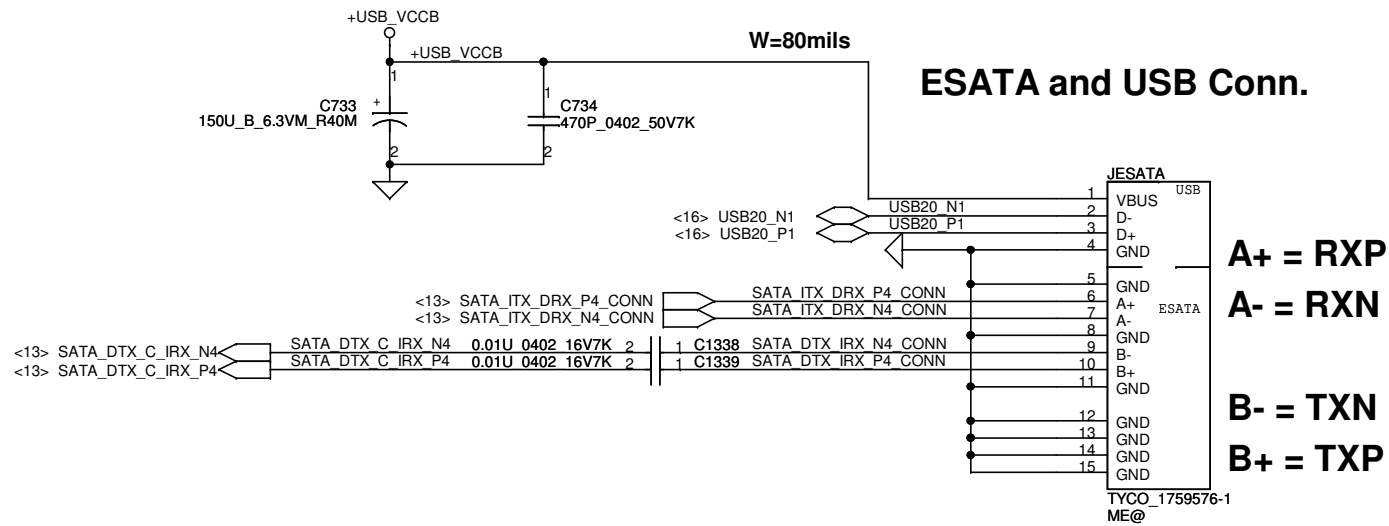


### SATA ODD Conn.

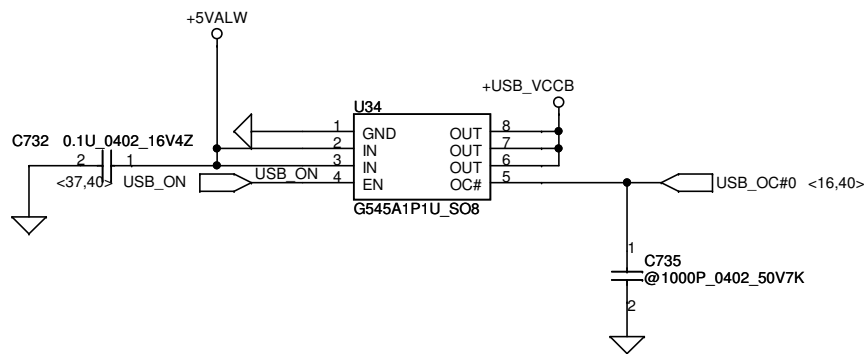


CONN need change to new CONN

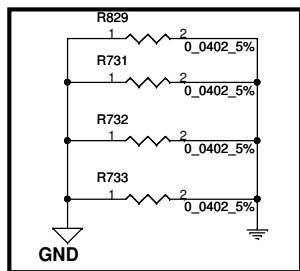
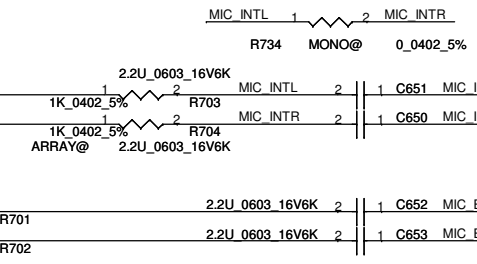
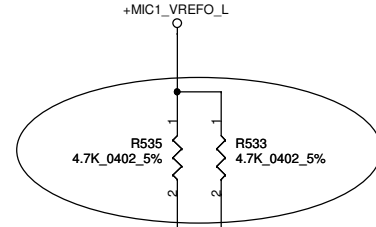
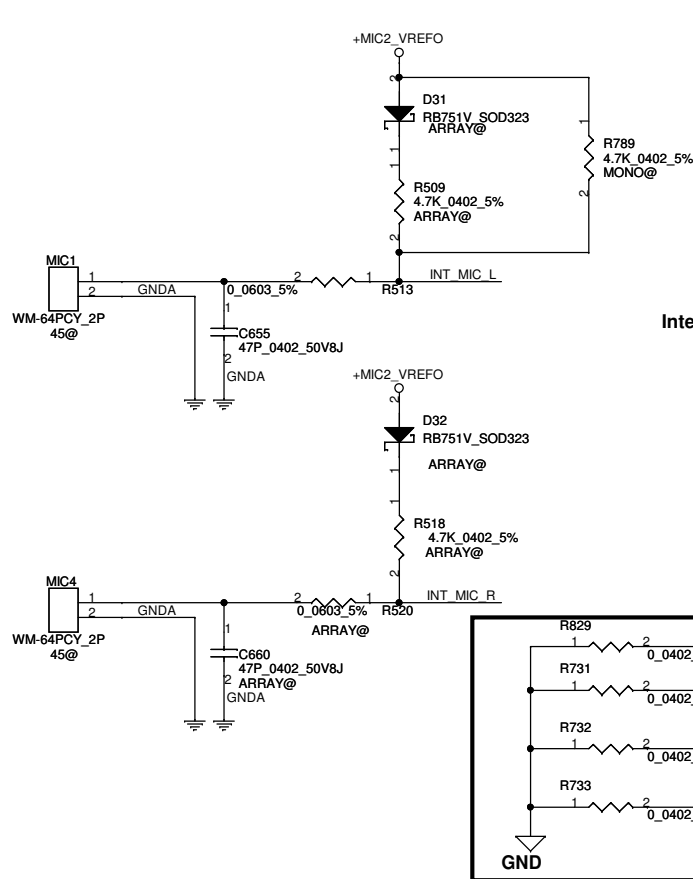
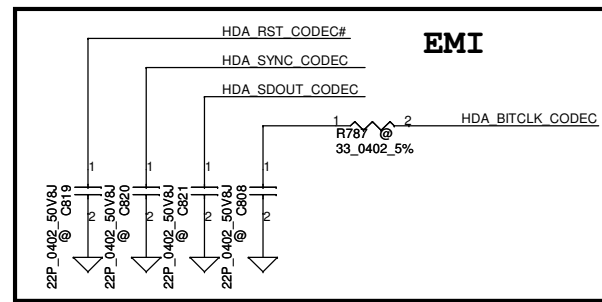
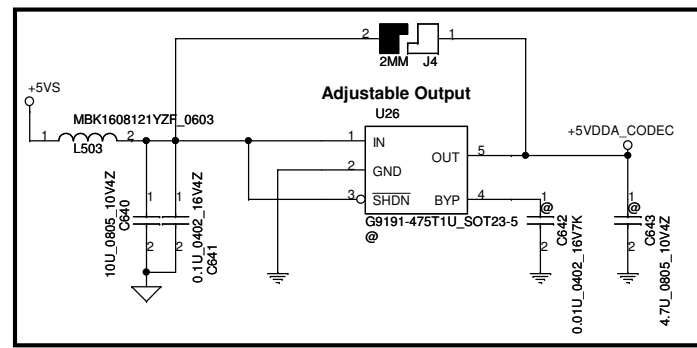
### ESATA and USB Conn.



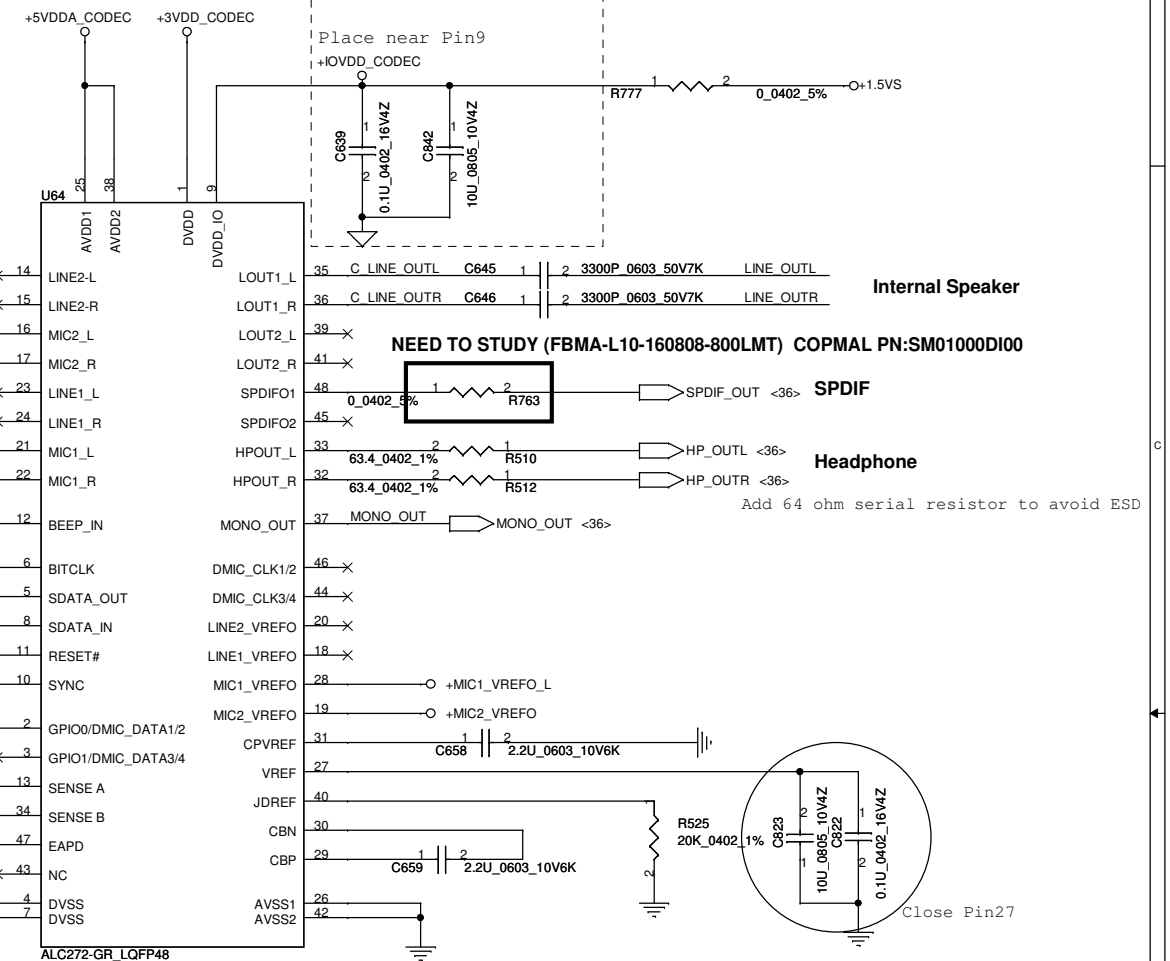
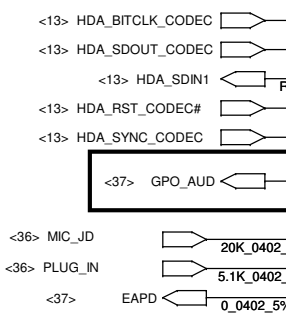
A+ = RXP  
A- = RXN  
B- = TXN  
B+ = TXP



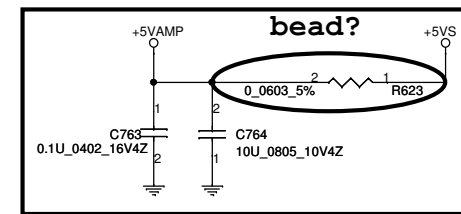
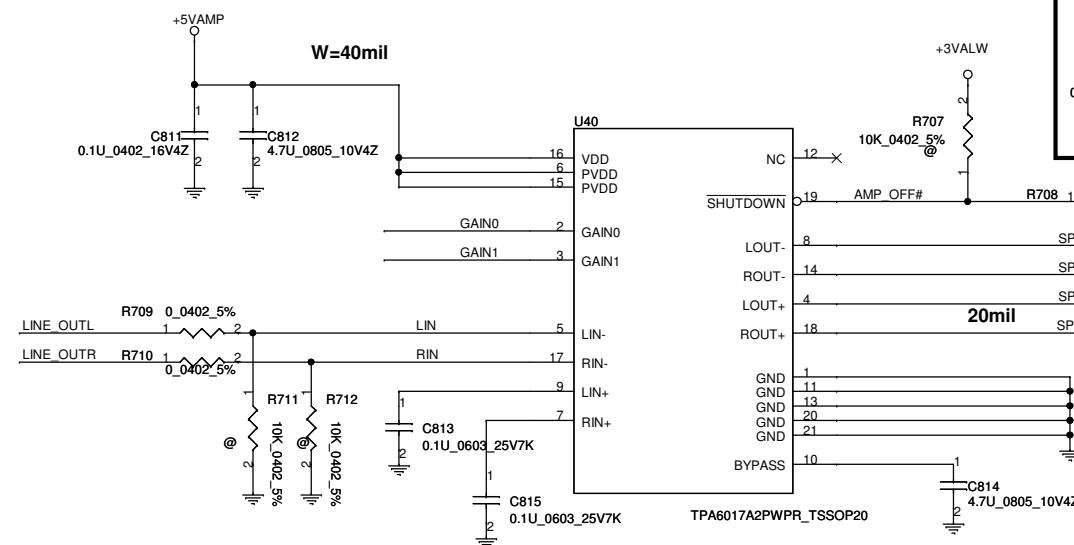
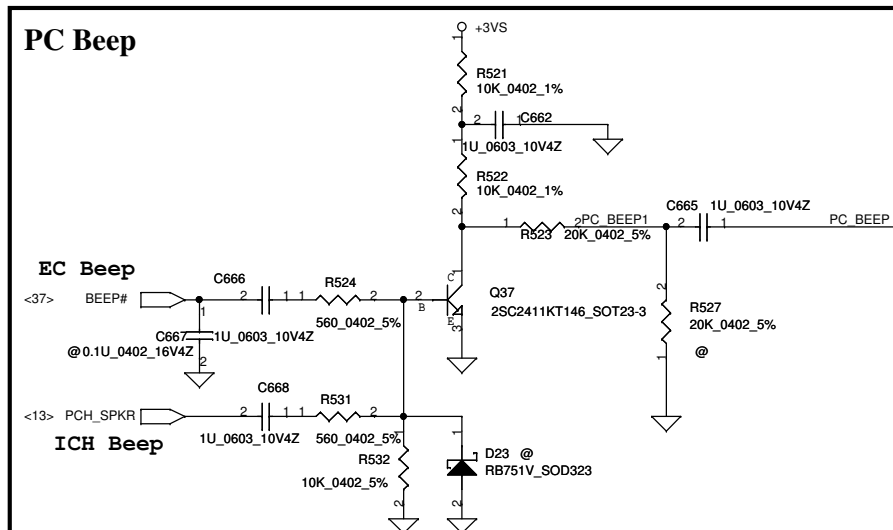
Security Classification	Compal Secret Data		Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	<b>Compal Electronics, Inc.</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>HDD &amp; ODD Connector</b>
				Size B
Date:	Tuesday, March 24, 2009	Sheet	34 of 52	



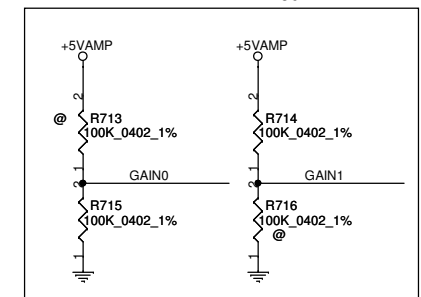
MIC Sense  
R516 place near pin13  
Capless HP Sense  
R517 place near pin34



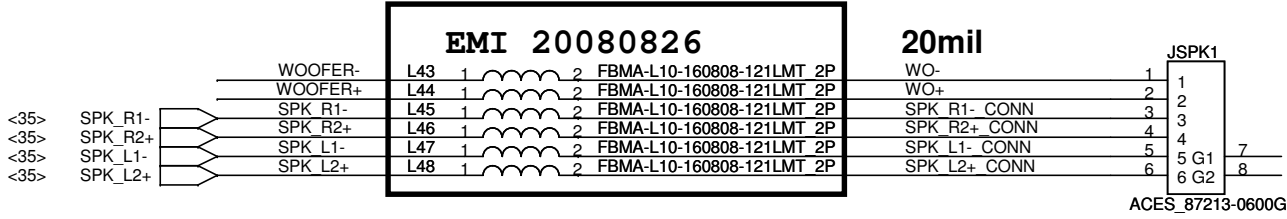
Pin Assignment	Location	Function
LINE-OUT (Pin35/36)	Internal	Int Speaker
Capless HP-OUT (Pin32/33)	External	Headphone out
LINE1 (Pin23/24)	External	Line in
MIC1 (Pin21/22)	External	Mic in
MONO-OUT (Pin37)	Internal	Internal Subwoofer
MIC2 (Pin16/17)	Internal	Internal Mic



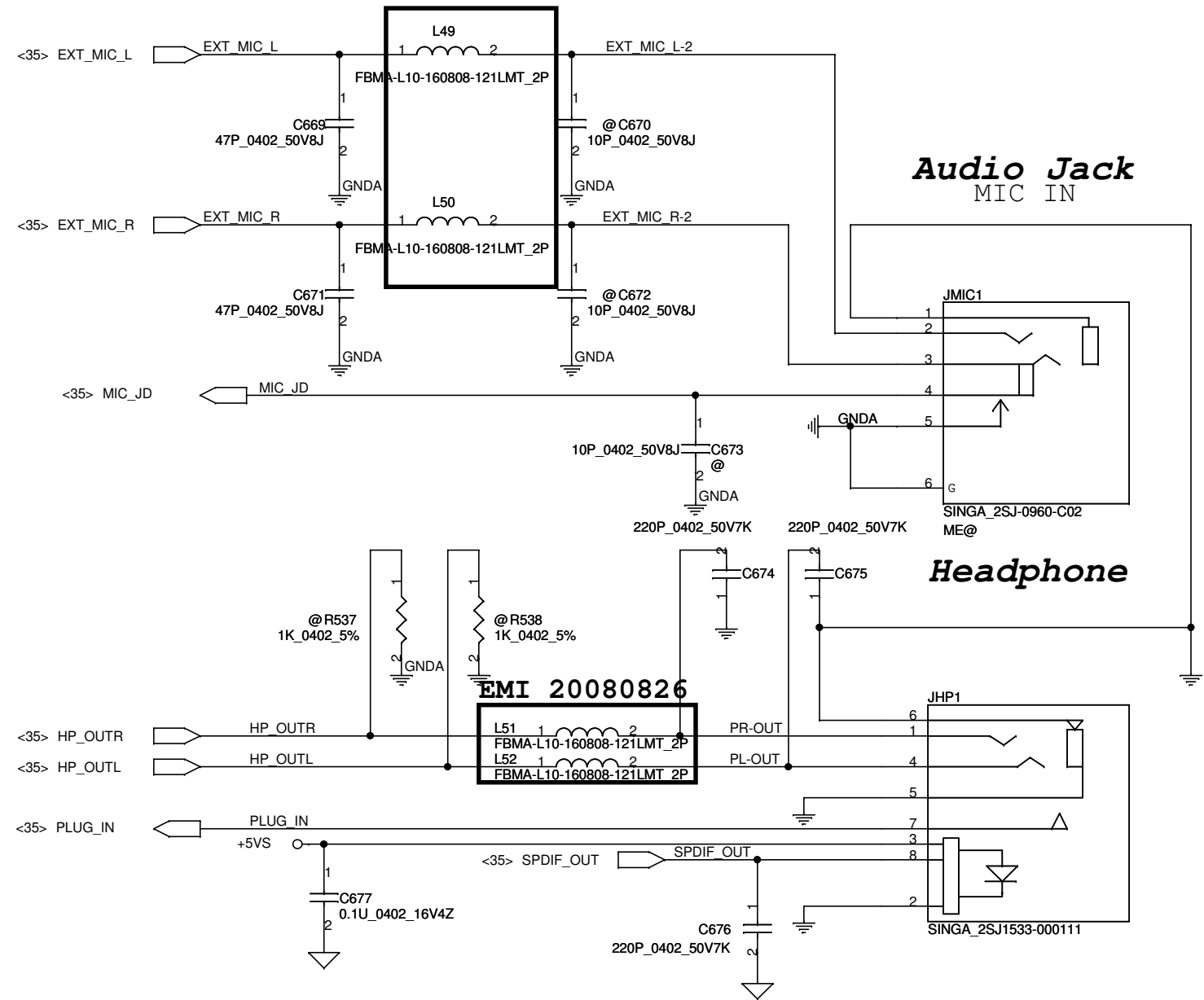
GAIN0	GAIN1	Gain
0	0	6dB
0	1	10dB
1	0	15.6dB
1	1	21.6dB



**SubWoofer Conn.  
Speaker Connector**

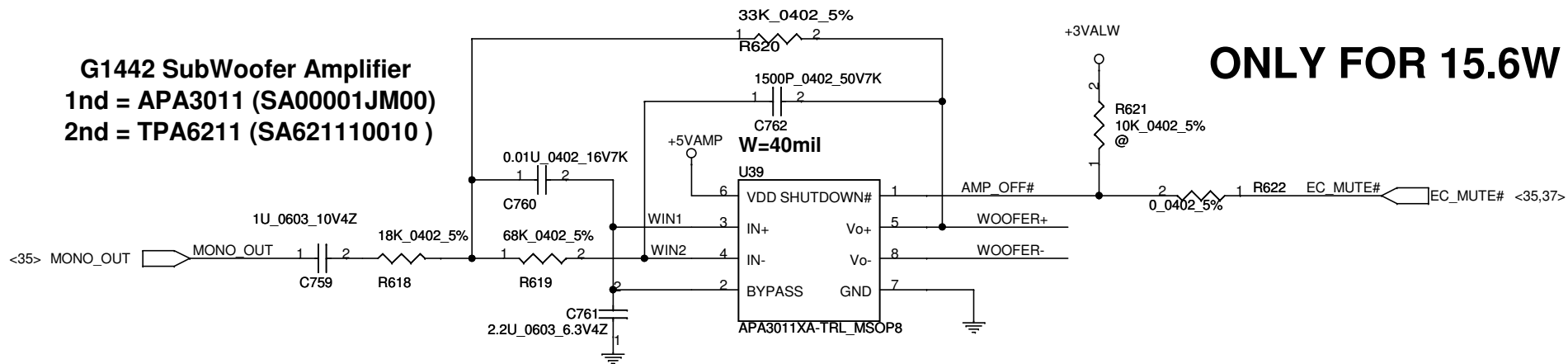


**Audio Jack  
EMI 20080826**

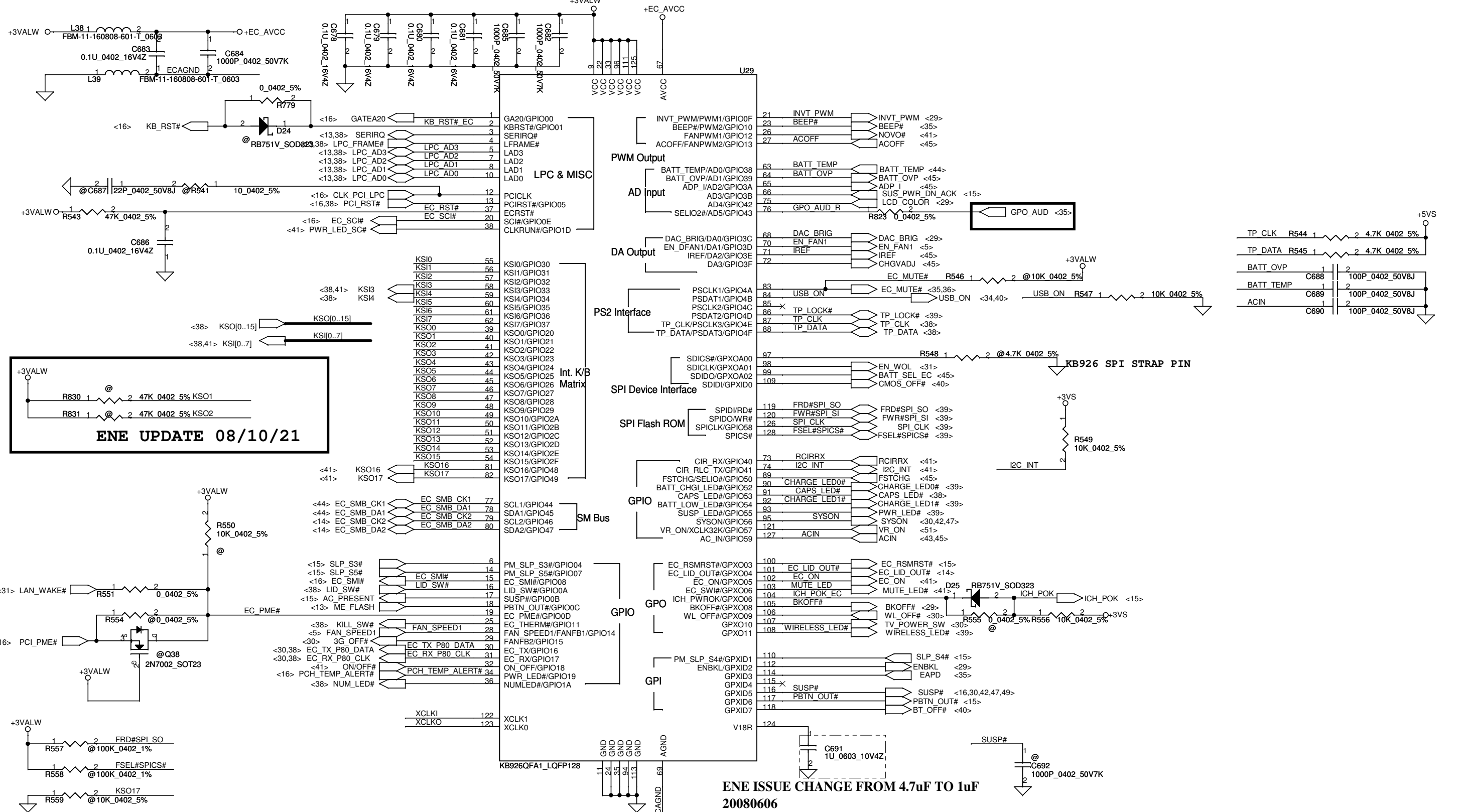


**G1442 SubWoofer Amplifier  
1nd = APA3011 (SA00001JM00)  
2nd = TPA6211 (SA621110010)**

**ONLY FOR 15.6W**



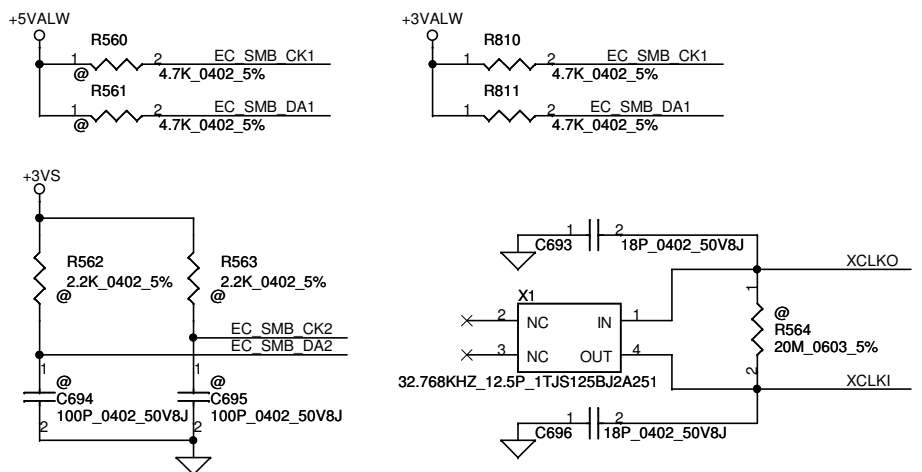
Security Classification	Compal Secret Data		<b>Compal Electronics, Ltd.</b> Title <b>AMP, Audio speaker CONN</b>
Issued Date	2008/03/25	Deciphered Date	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Size Custom Document Number <b>KIWB1/B2_LA4601P</b> Rev 0.1
Date:	Tuesday, March 24, 2009	Sheet	36 of 52



**ENE UPDATE 08/10/21**

**ENE ISSUE CHANGE FROM 4.7uF TO 1uF 20080606**

needed to update to D3 version  
SA00001J580



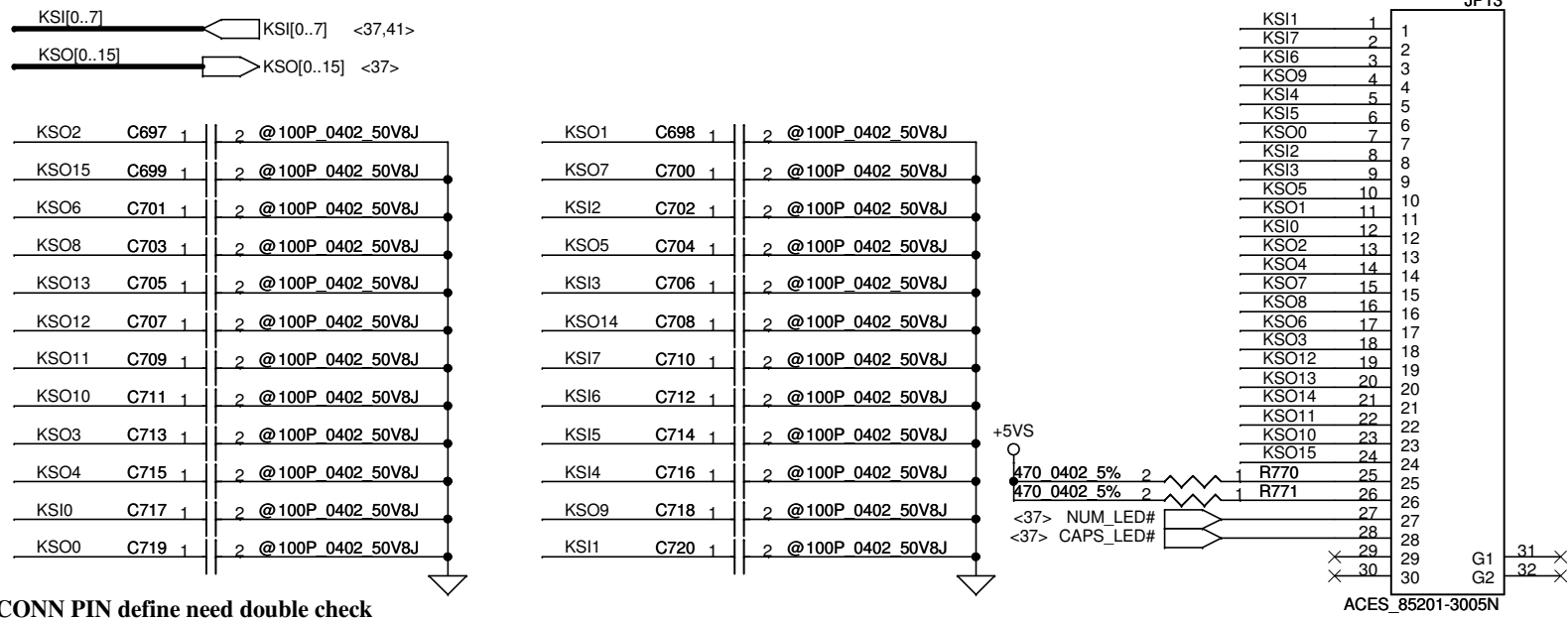
Security Classification	Compal Secret Data		Title <b>BIOS &amp; EC I/O Port</b>
Issued Date	2007/10/15	Deciphered Date	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			
Size Custom	Document Number <b>NIWBA_LA5371P</b>	Rev 0.1	
Date:	Tuesday, March 24, 2009	Sheet	37 of 52

**Compal Electronics, Inc.**

**BIOS & EC I/O Port**

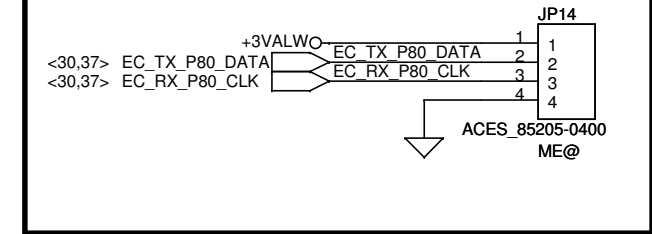
Rev 0.1  
Date: Tuesday, March 24, 2009 Sheet 37 of 52

### INT\_KBD Conn.

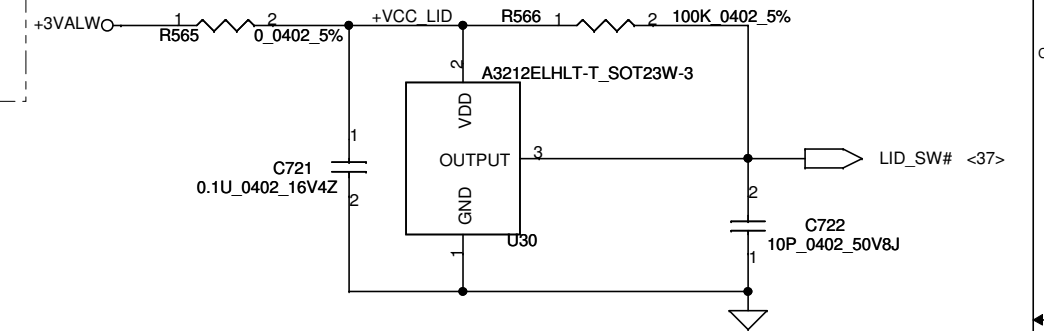


CONN PIN define need double check

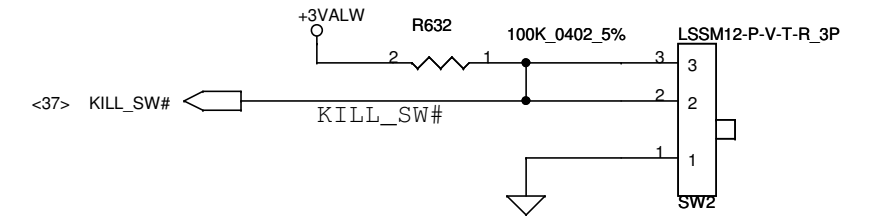
### EC DEBUG PORT



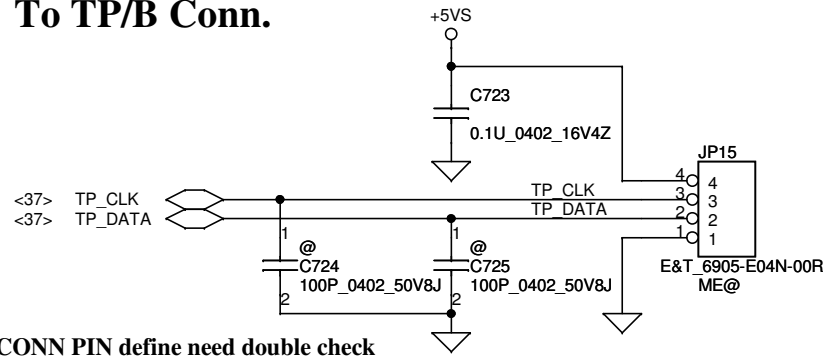
### Lid Switch



### Kill Switch

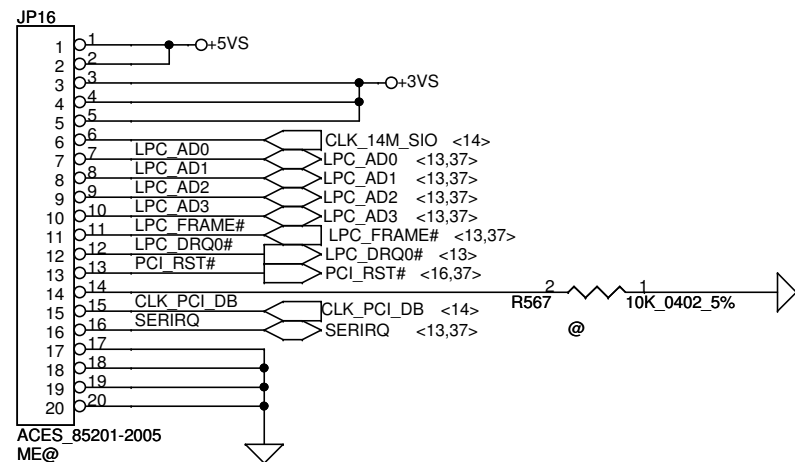


### To TP/B Conn.



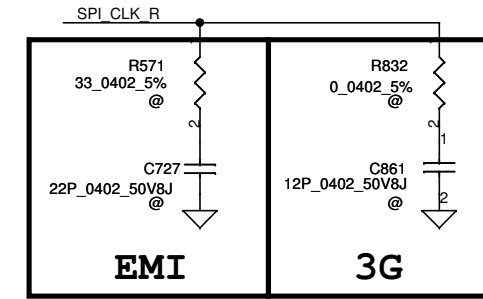
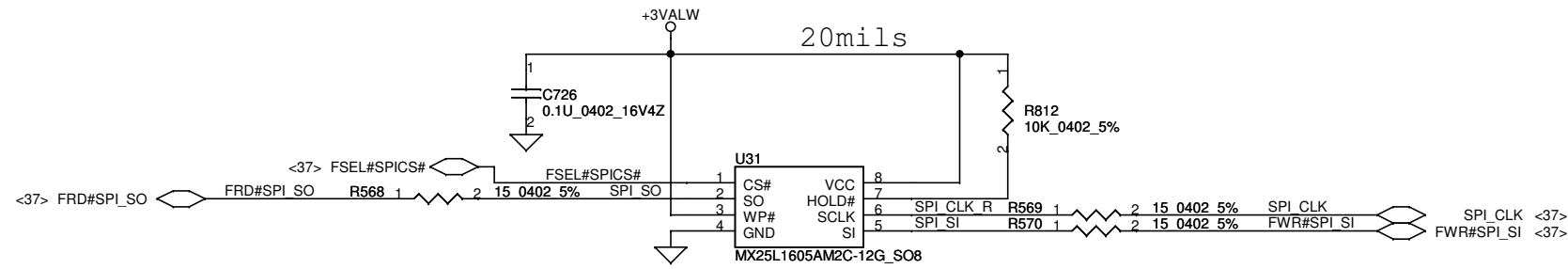
CONN PIN define need double check

### FOR LPC SIO DEBUG PORT



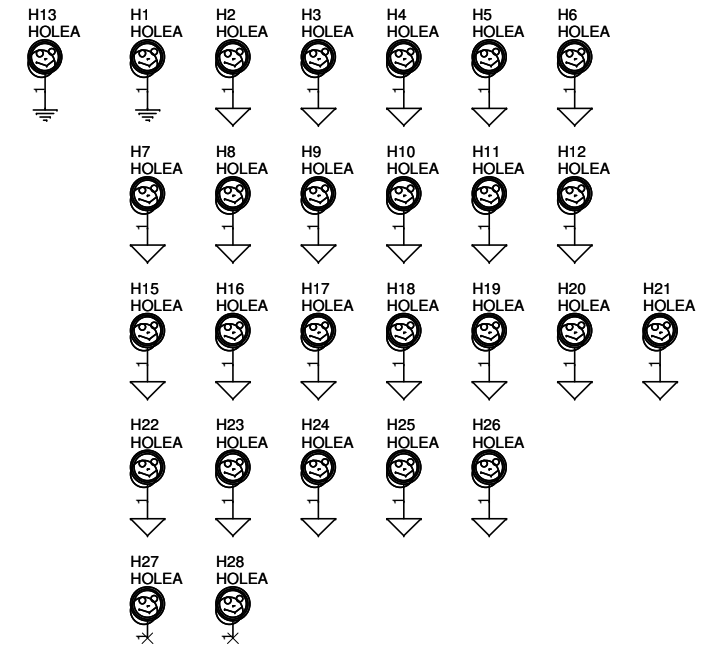
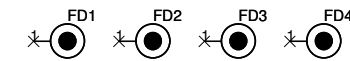
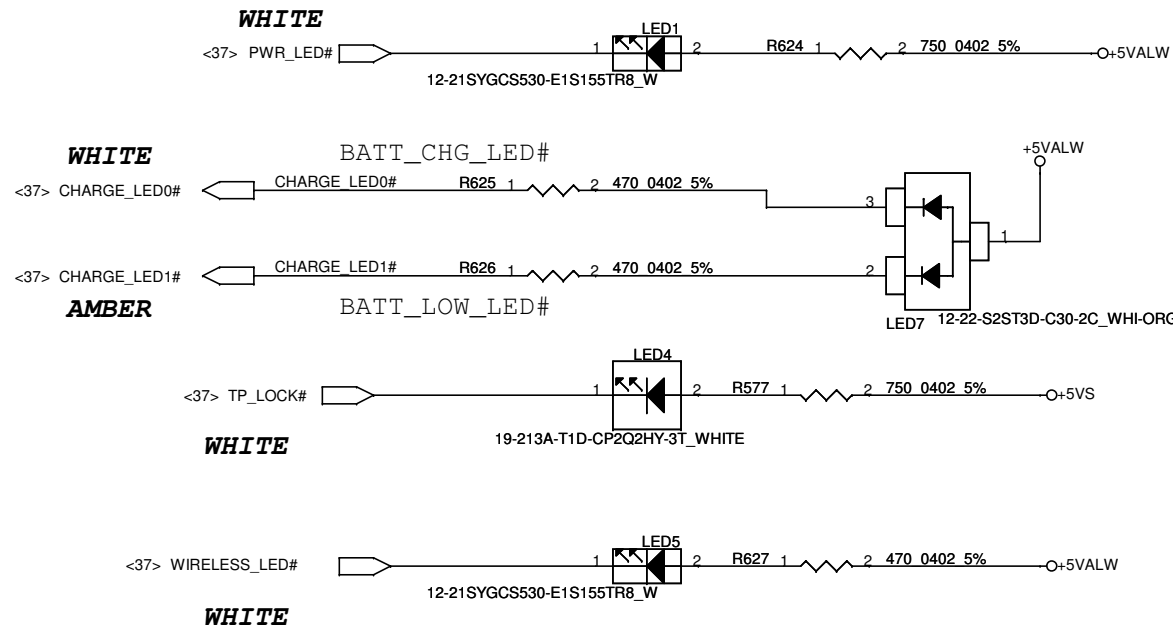
Security Classification	Compal Secret Data		Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	<b>Compal Electronics, Inc.</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>KB /SW /LPC Debug Conn.</b>
				Size
	B	<b>KIWB1/B2_LA4601P</b>	0.1	
Date:	Tuesday, March 24, 2009	Sheet	38 of 52	

# FOR EC 16M SPI ROM

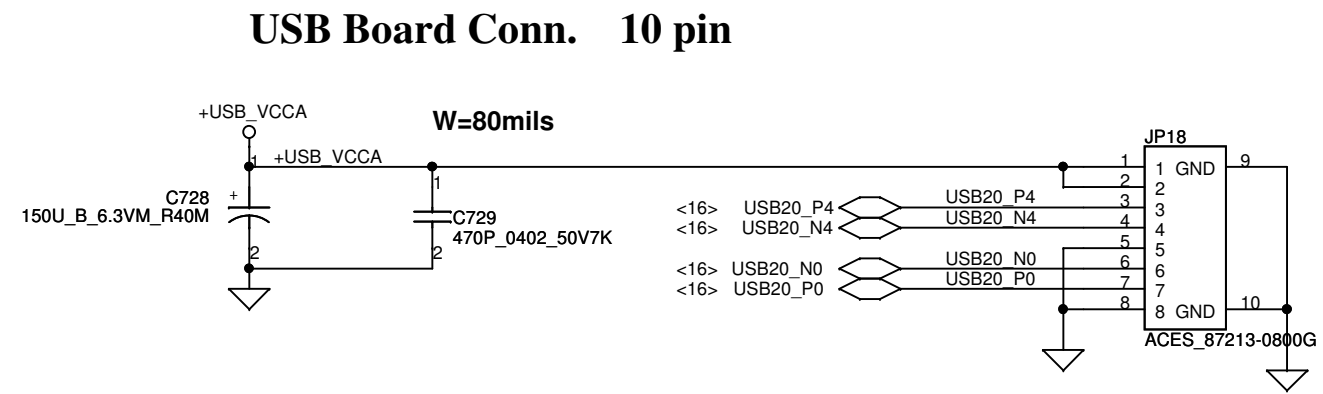
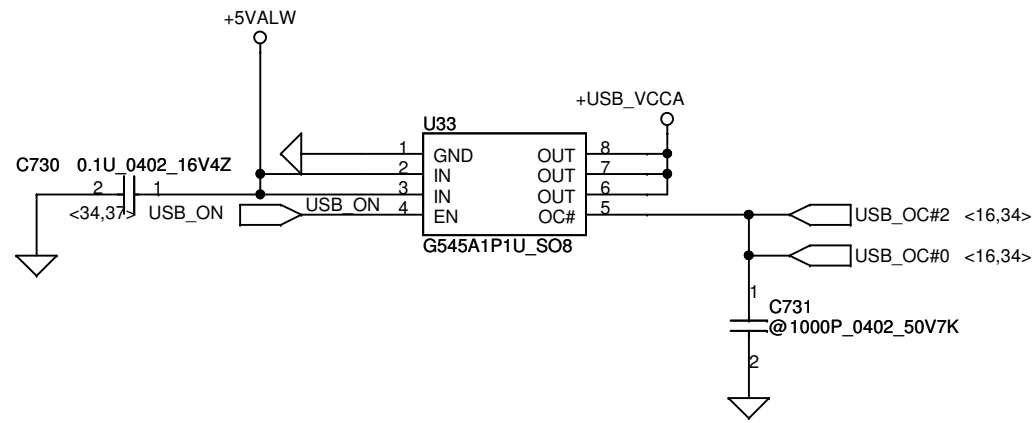


## LED

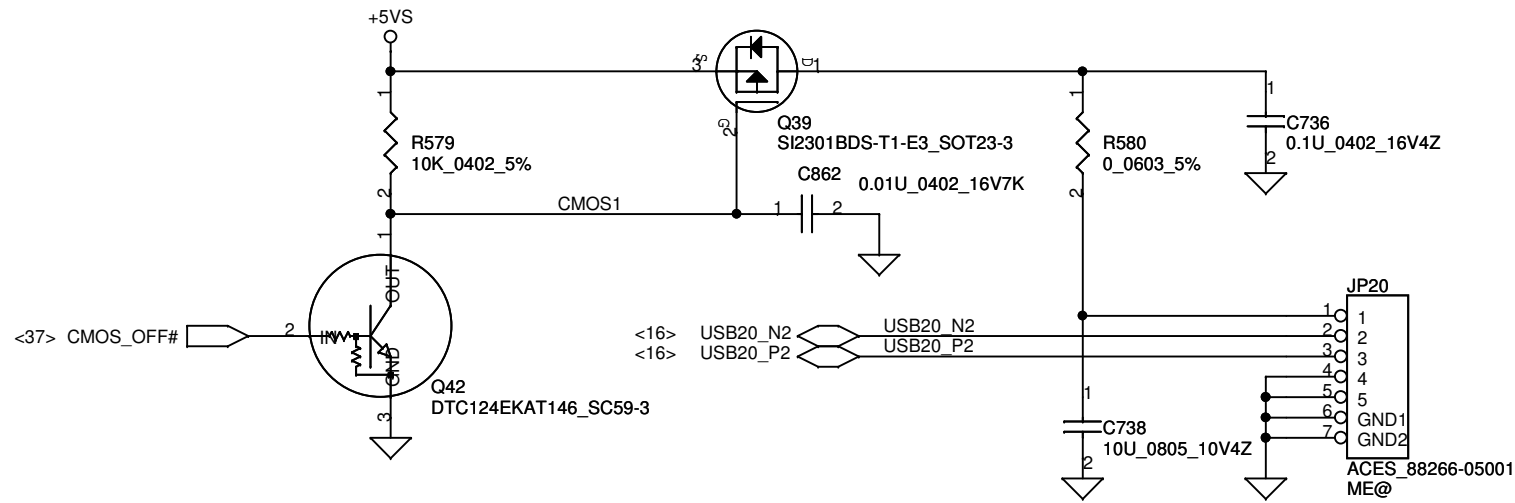
SC500005B00, If=5mA, Vf=2.7V~3.15V, R=460~390ohm



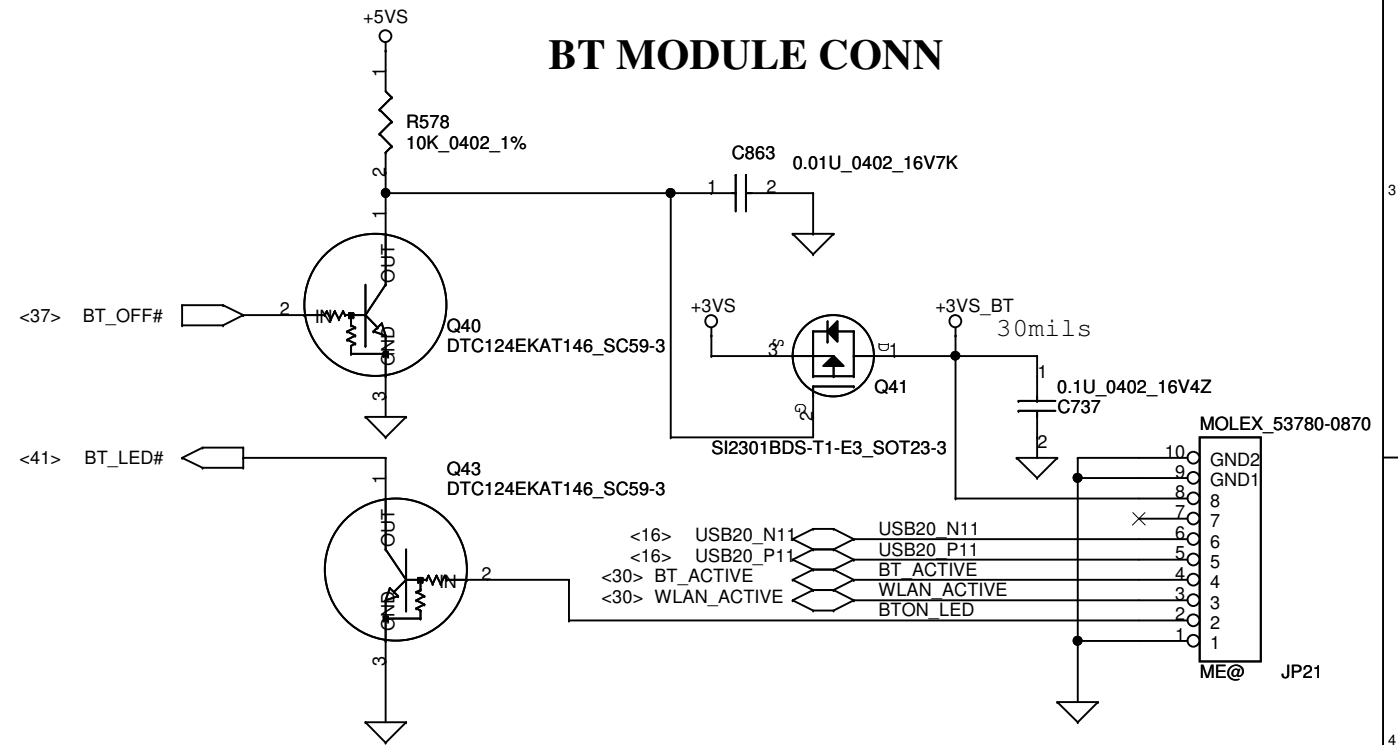
Security Classification	Compal Secret Data		Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	LED/EC SPI ROM
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size B
				Document Number NIWBA_LA5371P
Date: Tuesday, March 24, 2009		Sheet 39 of 52		



### CMOS Camera Conn

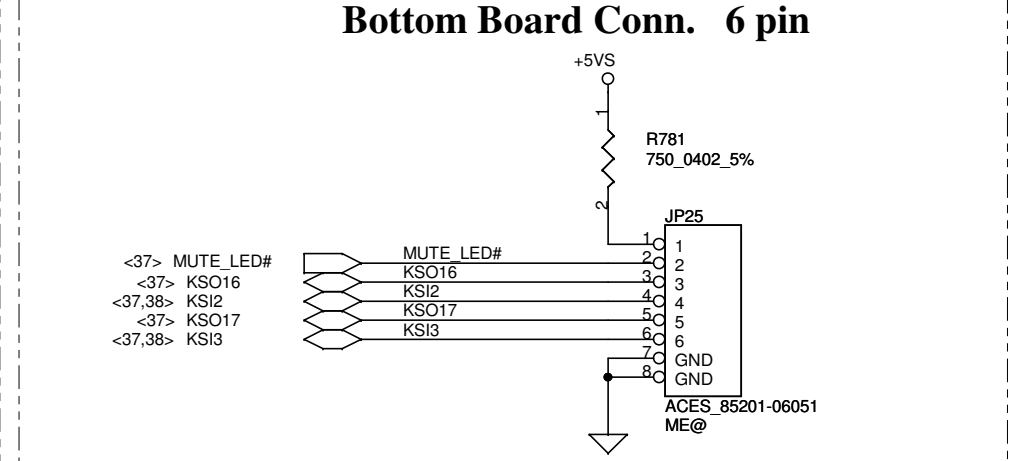
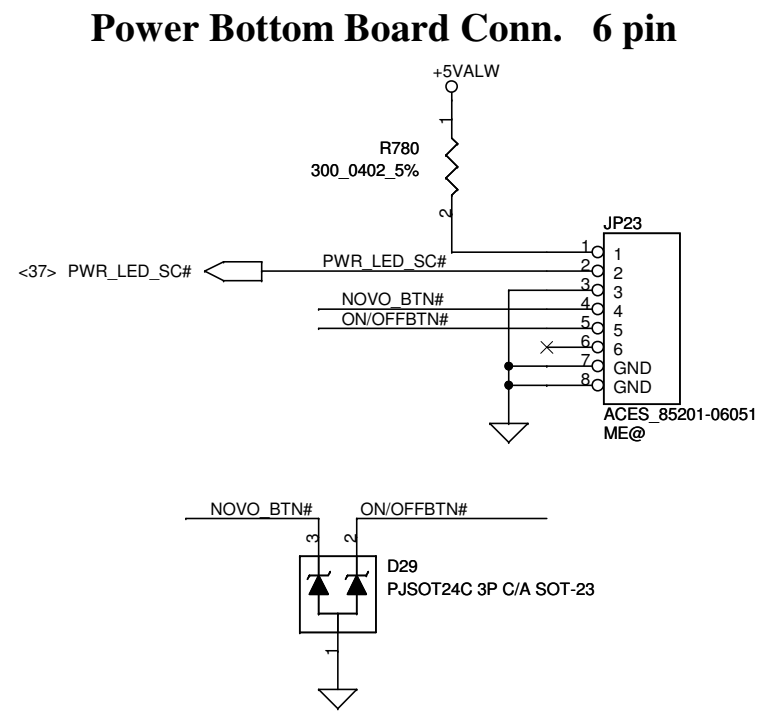
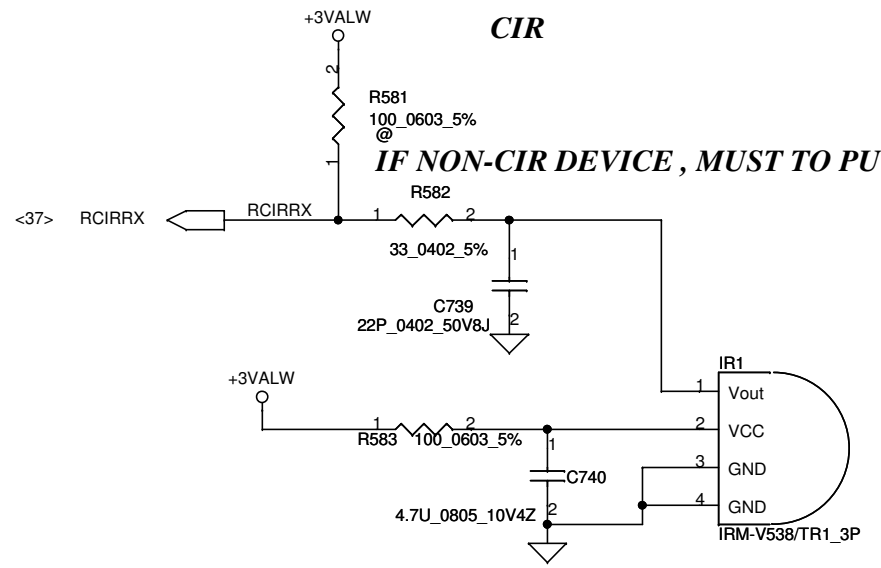


### BT MODULE CONN

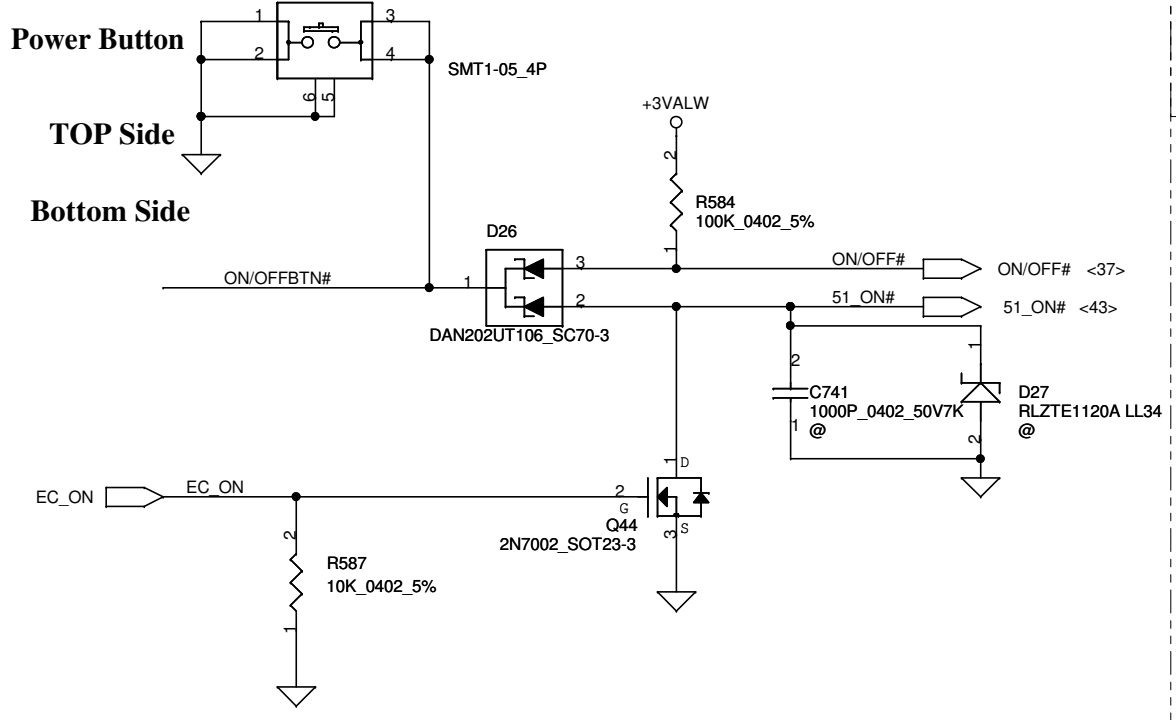


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/08/18	Deciphered Date	2007/8/18	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Power OK, Reset and RTC Circuit, TP
Size Custom		Document Number		Rev
		NIWBA_LA5371P		0.1
Date:	Tuesday, March 24, 2009	Sheet	40 of 52	



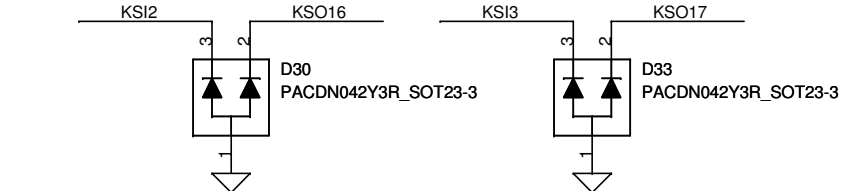


**ON/OFF switch**



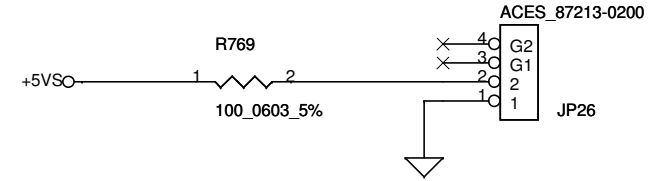
**EMI REQUEST 1ST = SCA00000E00**  
**2ST = SCA00000R00**

**EMI REQUEST 1ST = SCA00000G00**  
**2ST = SCA00000T00**

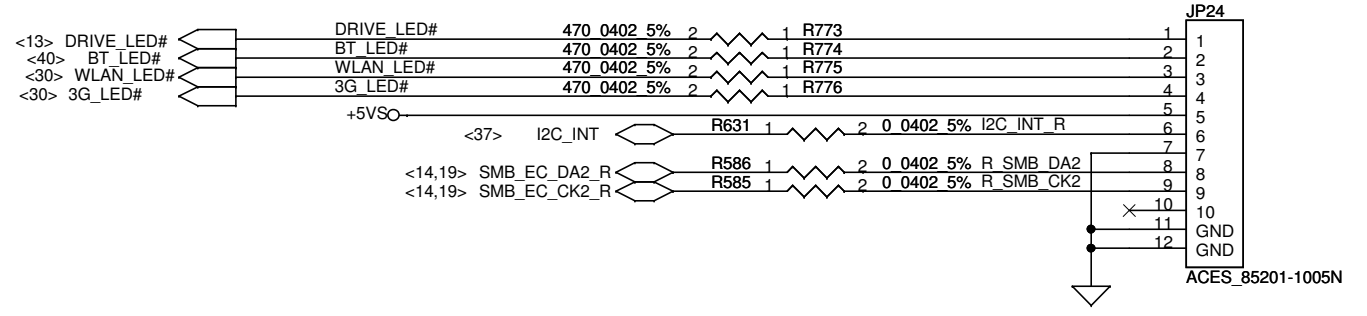
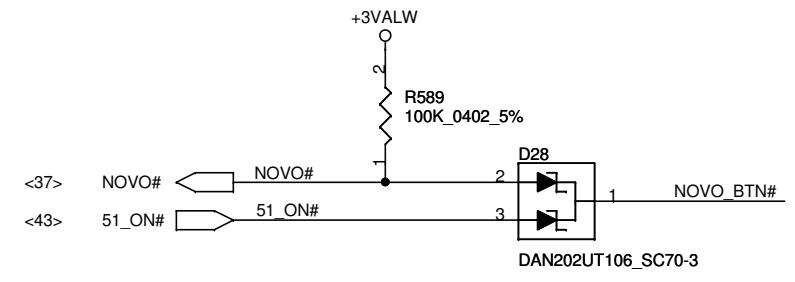


BTN FUNCTION	KEY MATRIX	
	IN	OUT
<b>MUTE BTN</b>	KSO17	KSI3
<b>DOWN</b>	KSO17	KSI2
<b>UP</b>	KSO16	KSI2

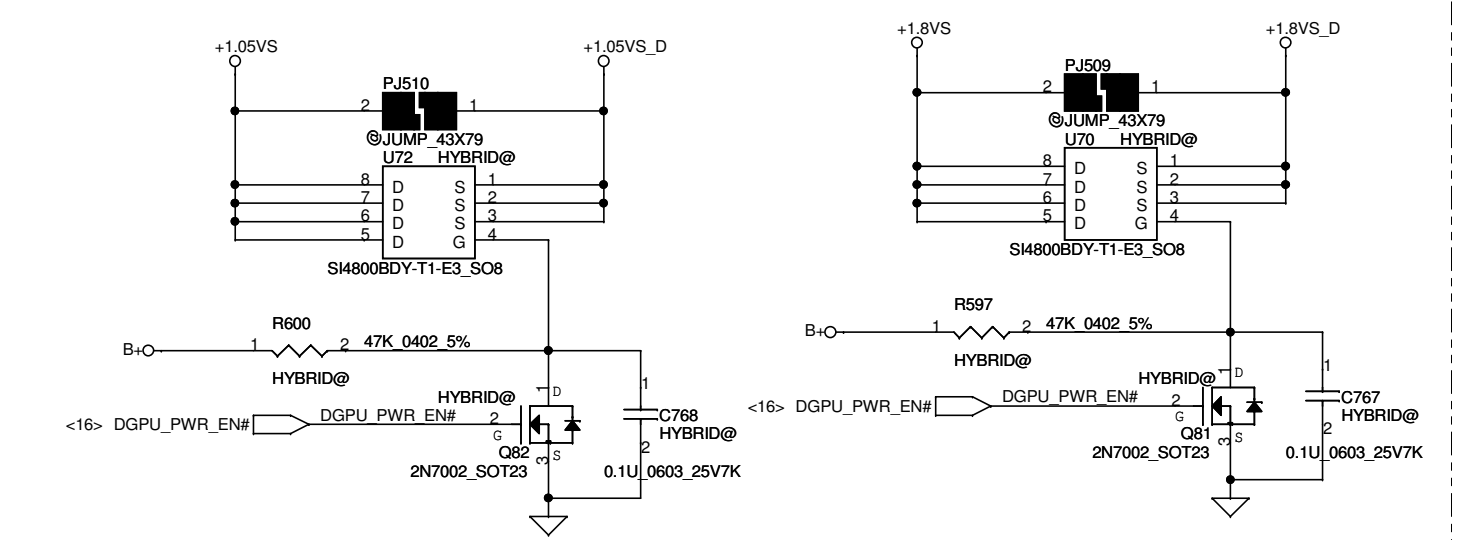
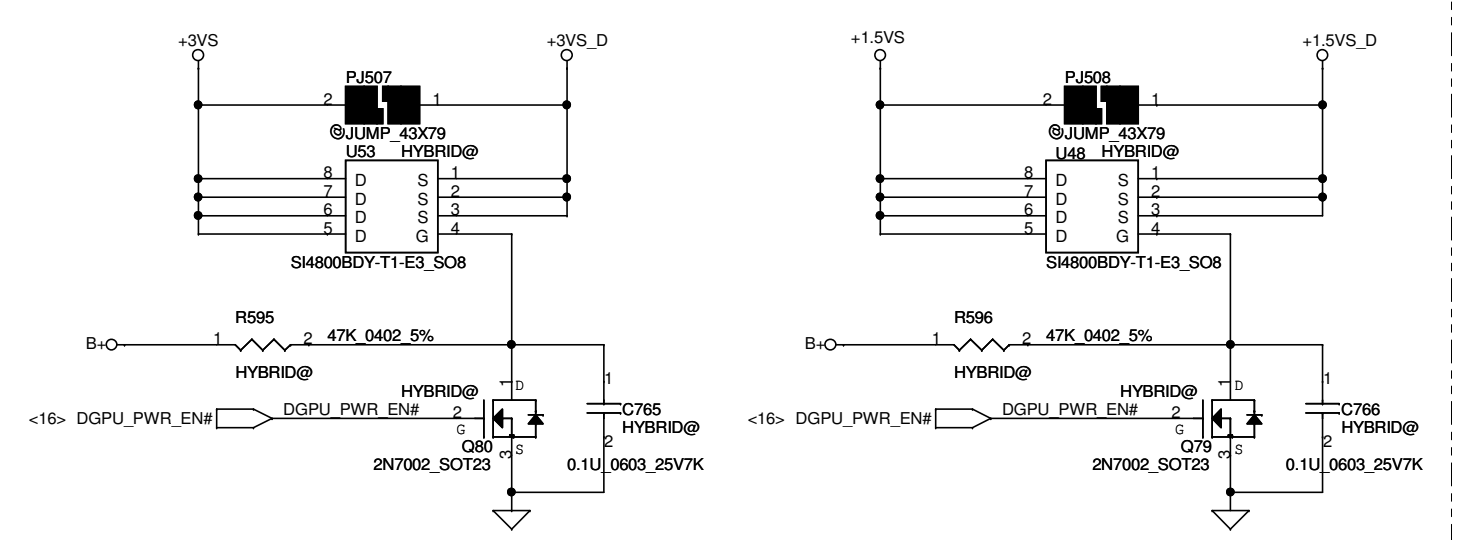
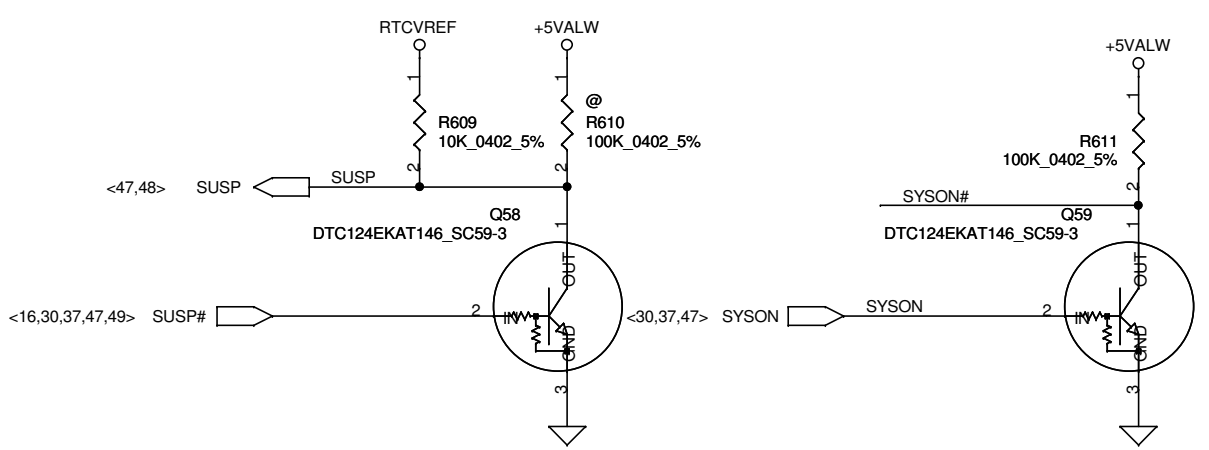
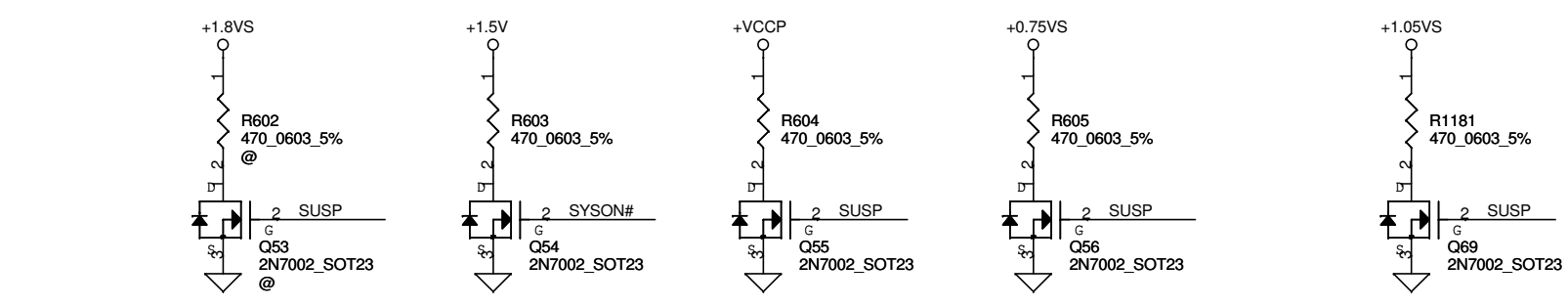
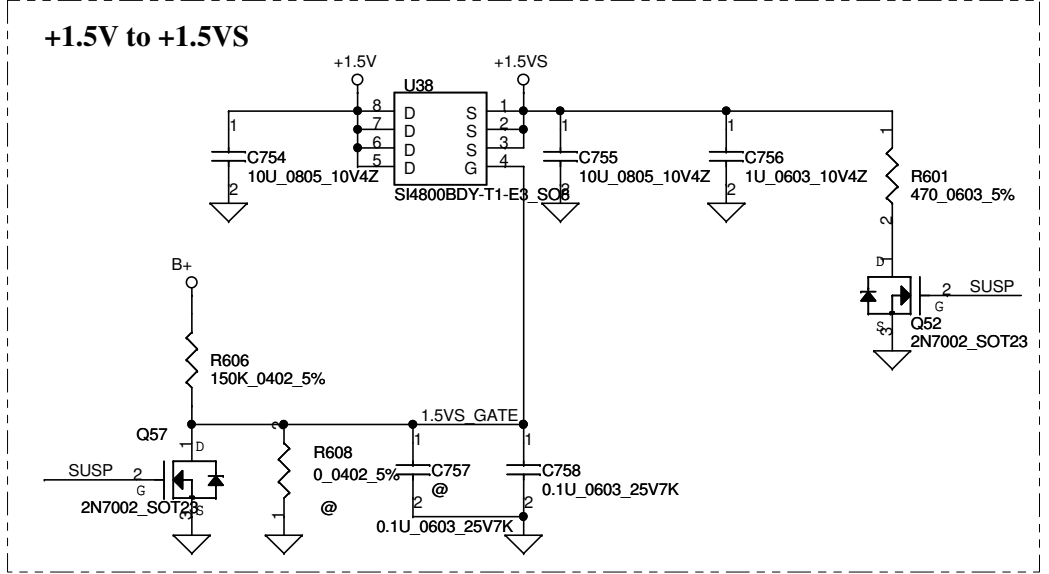
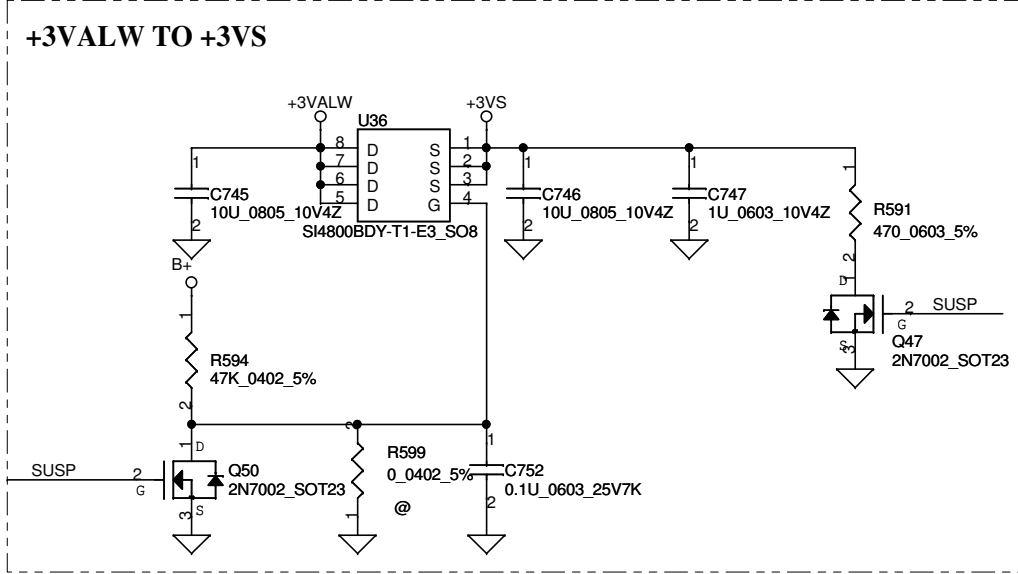
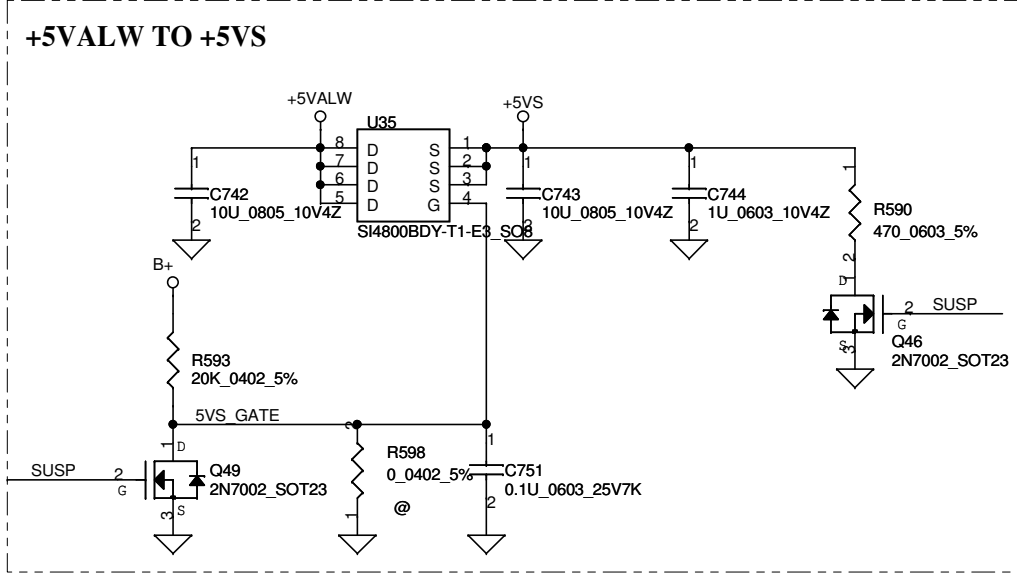
**IDEAPAD BOARD 2PIN**



**Slide Board Conn. 10 pin**

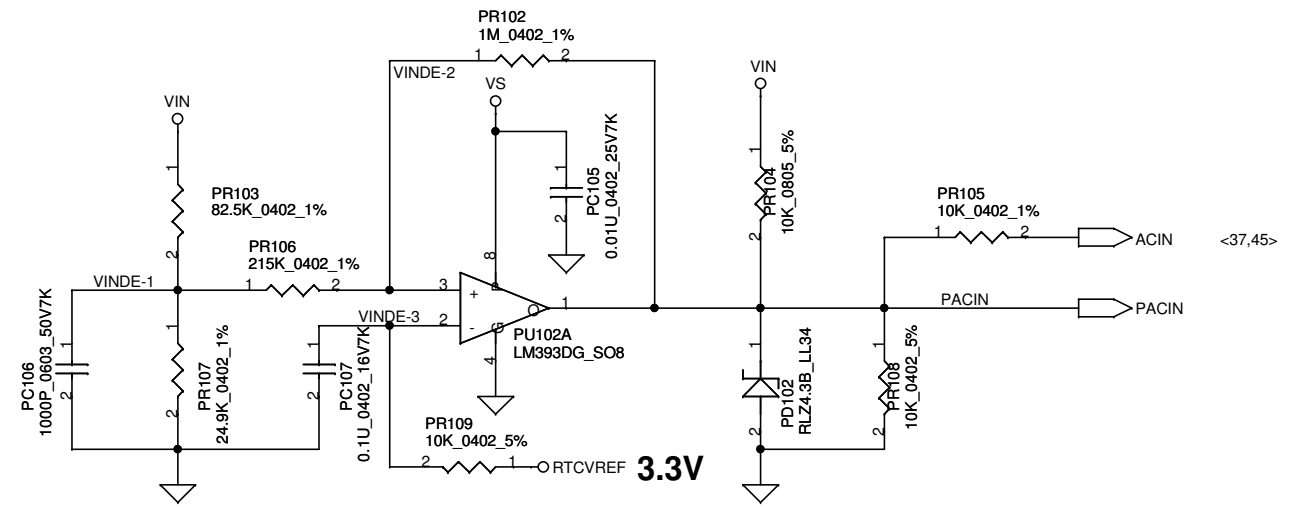
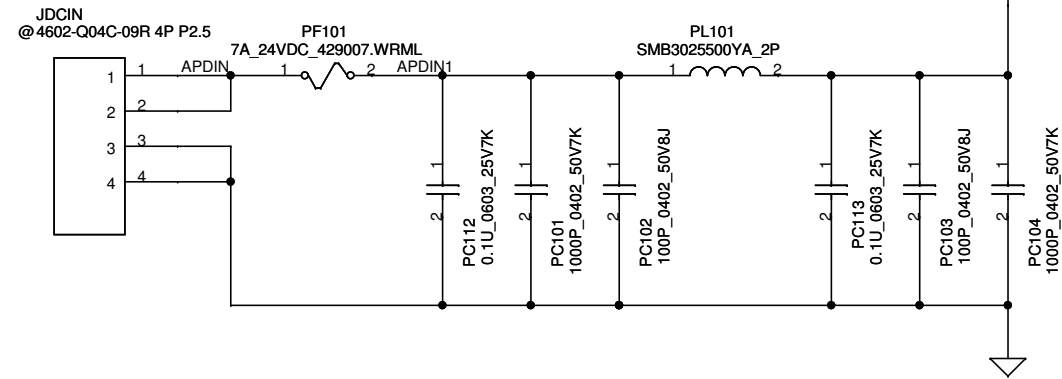


Security Classification	Compal Secret Data		<b>Compal Electronics, Ltd.</b>	
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>Audio Jack &amp; SW connector</b>
Size	Document Number	Rev		
Custom	<b>NIWBA_LA5371P</b>	0.1		
Date:	Tuesday, March 24, 2009	Sheet	41	of 52



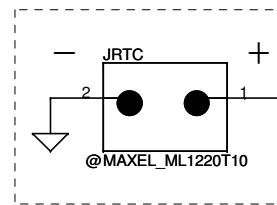
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/08/18	Deciphered Date	2007/8/18	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				DC Interface	
Size	Document Number	Rev		Date:	
Custom	NIWBA_LA5371P	0.1		Tuesday, March 24, 2009	
				Sheet	42 of 52

**DC030006J00**

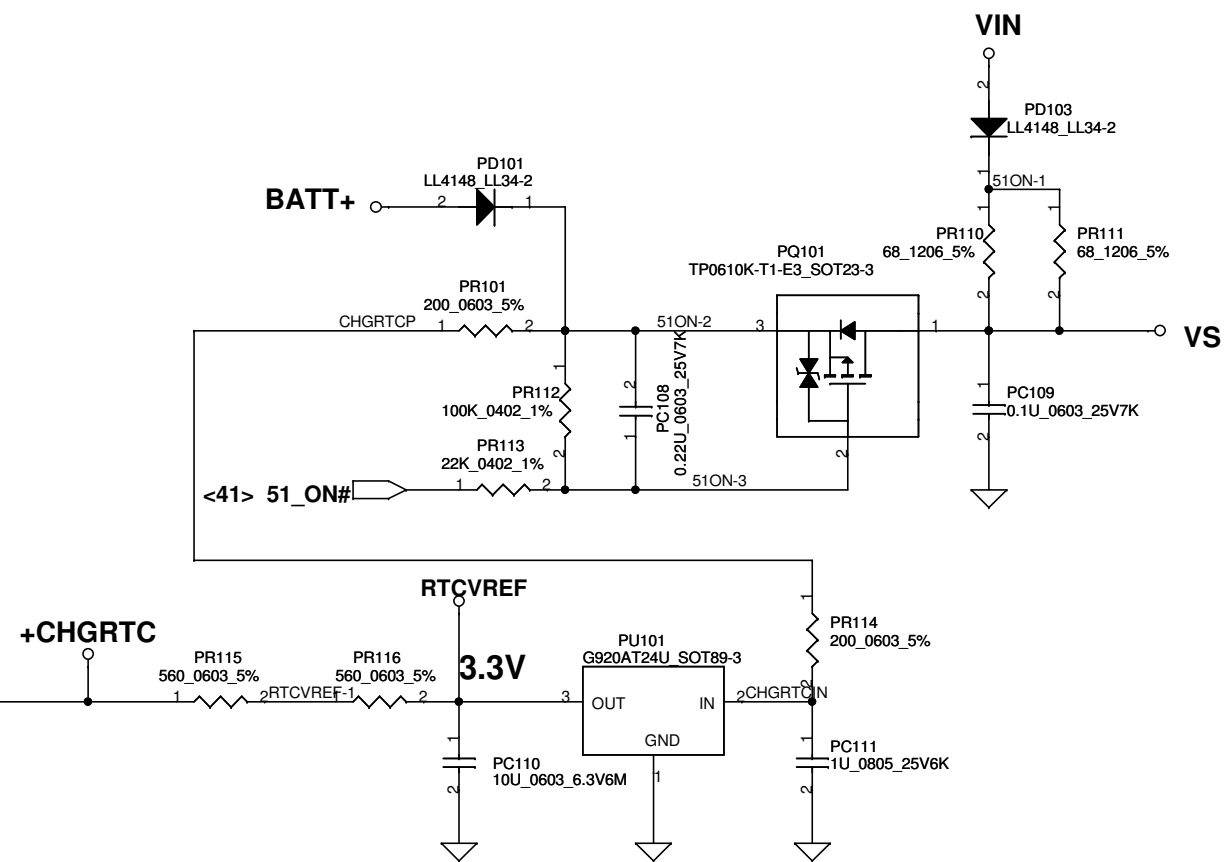


Vin Detector		
High	18.135	17.566
Low	14.866	14.063

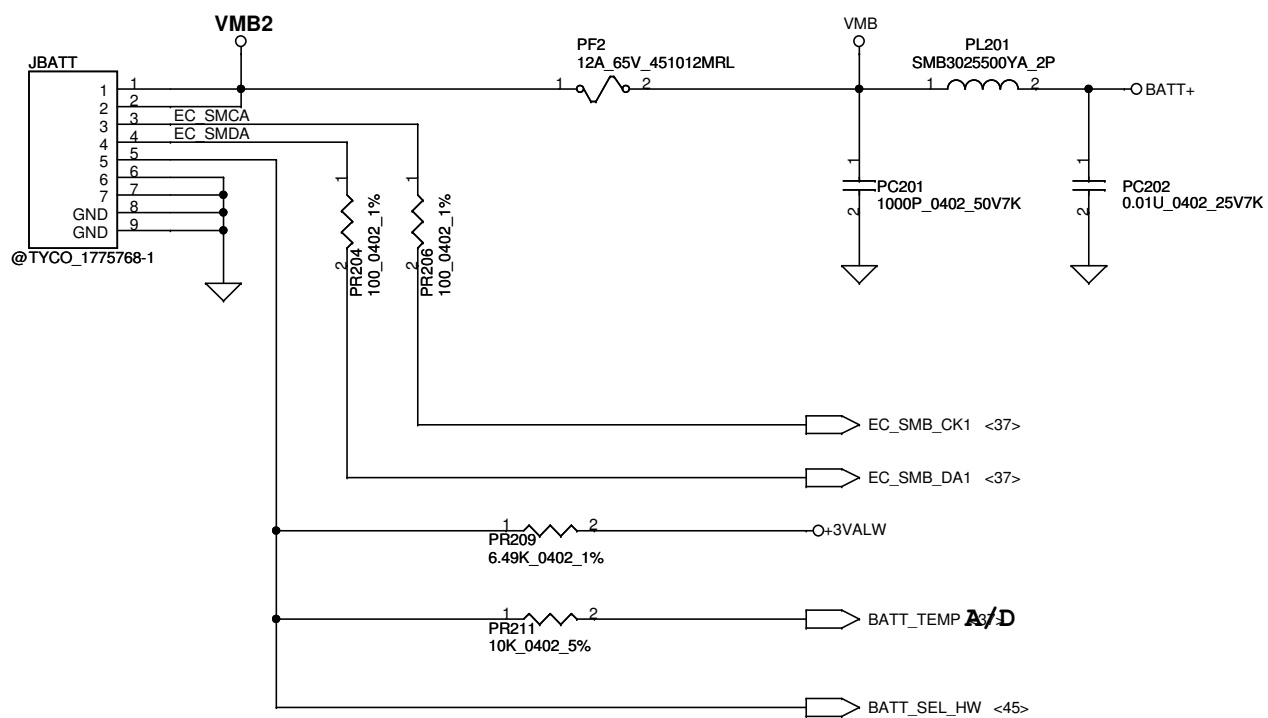
**RTC Battery**



**SP093MX0000**

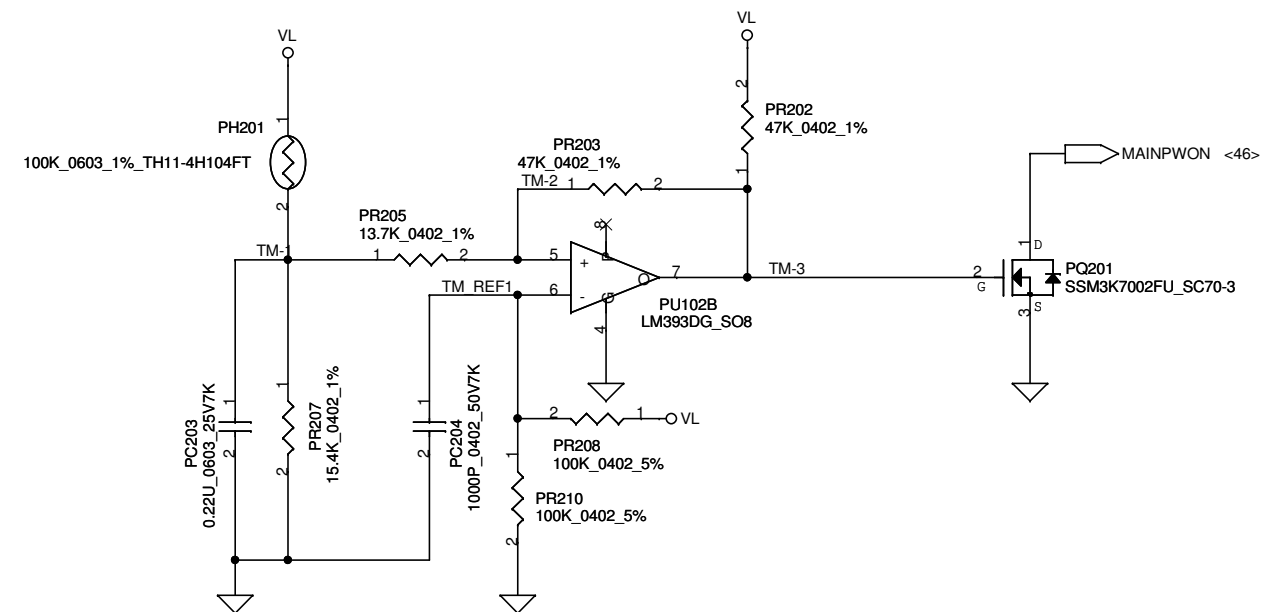


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				DCIN & DETECTOR
Date: Tuesday, March 24, 2009			Sheet 43 of 52	Rev 0.1

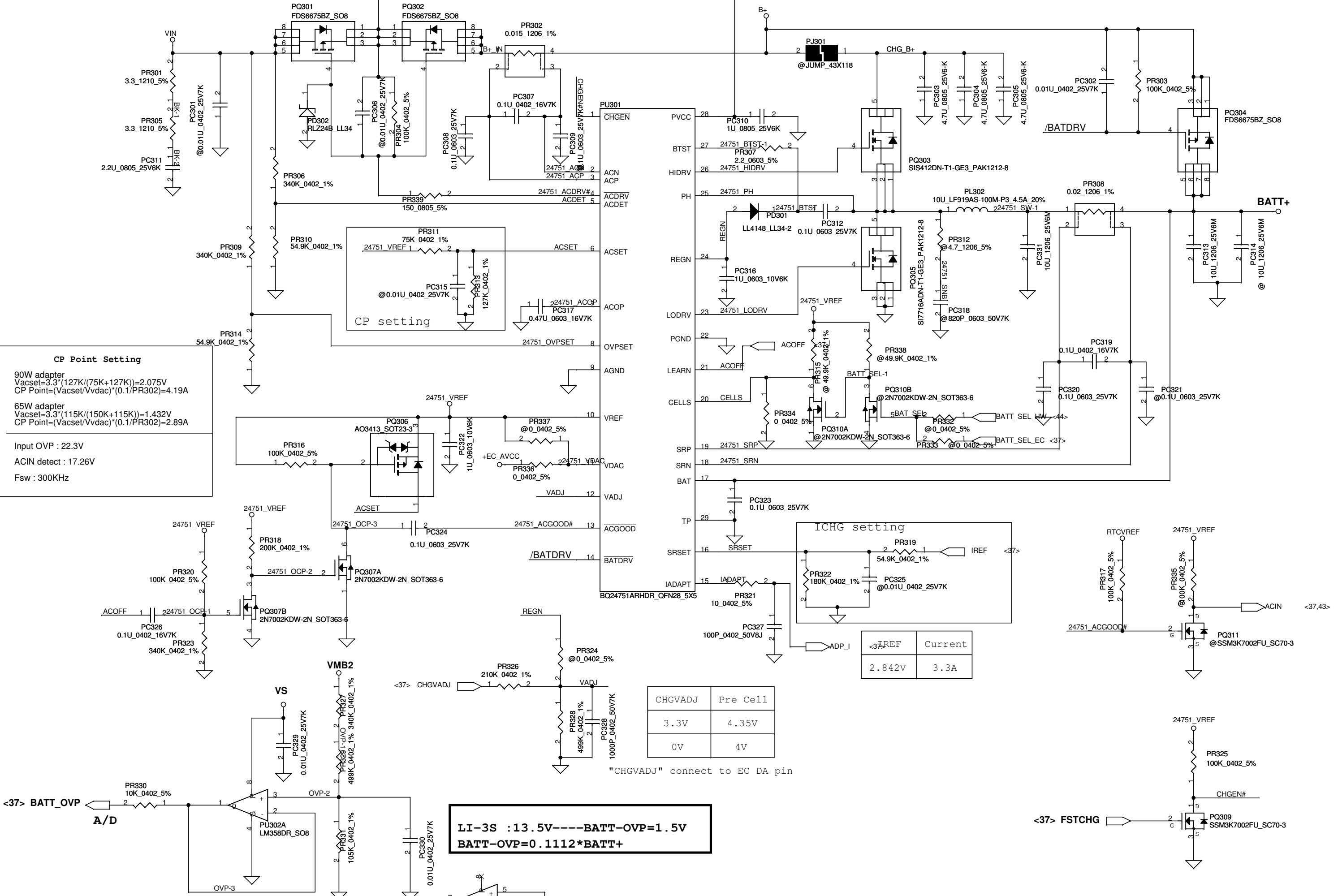


**PH1 under CPU botten side :**

CPU thermal protection at 92 degree C  
Recovery at 56 degree C



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				BATTERY CONN / OTP
Date: Tuesday, March 24, 2009			Sheet 44 of 52	Rev 0.1



**CP Point Setting**

90W adapter  
 $V_{acset} = 3.3 * (127K / (75K + 127K)) = 2.075V$   
 $CP\ Point = (V_{acset} / V_{vdac}) * (0.1 / PR302) = 4.19A$

65W adapter  
 $V_{acset} = 3.3 * (115K / (150K + 115K)) = 1.432V$   
 $CP\ Point = (V_{acset} / V_{vdac}) * (0.1 / PR302) = 2.89A$

Input OVP : 22.3V  
 ACIN detect : 17.26V  
 Fsw : 300KHz

**CP setting**

24751 VREF 1  
 75K\_0402\_1%  
 PC315 @0.01U\_0402\_25V7K  
 PR313 127K\_0402\_1%  
 24751 ACOP  
 0.47U\_0603\_16V7K  
 PC317

**ICHG setting**

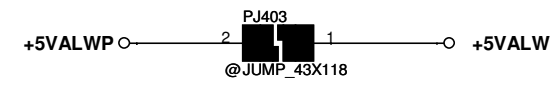
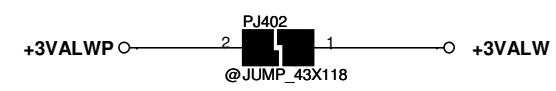
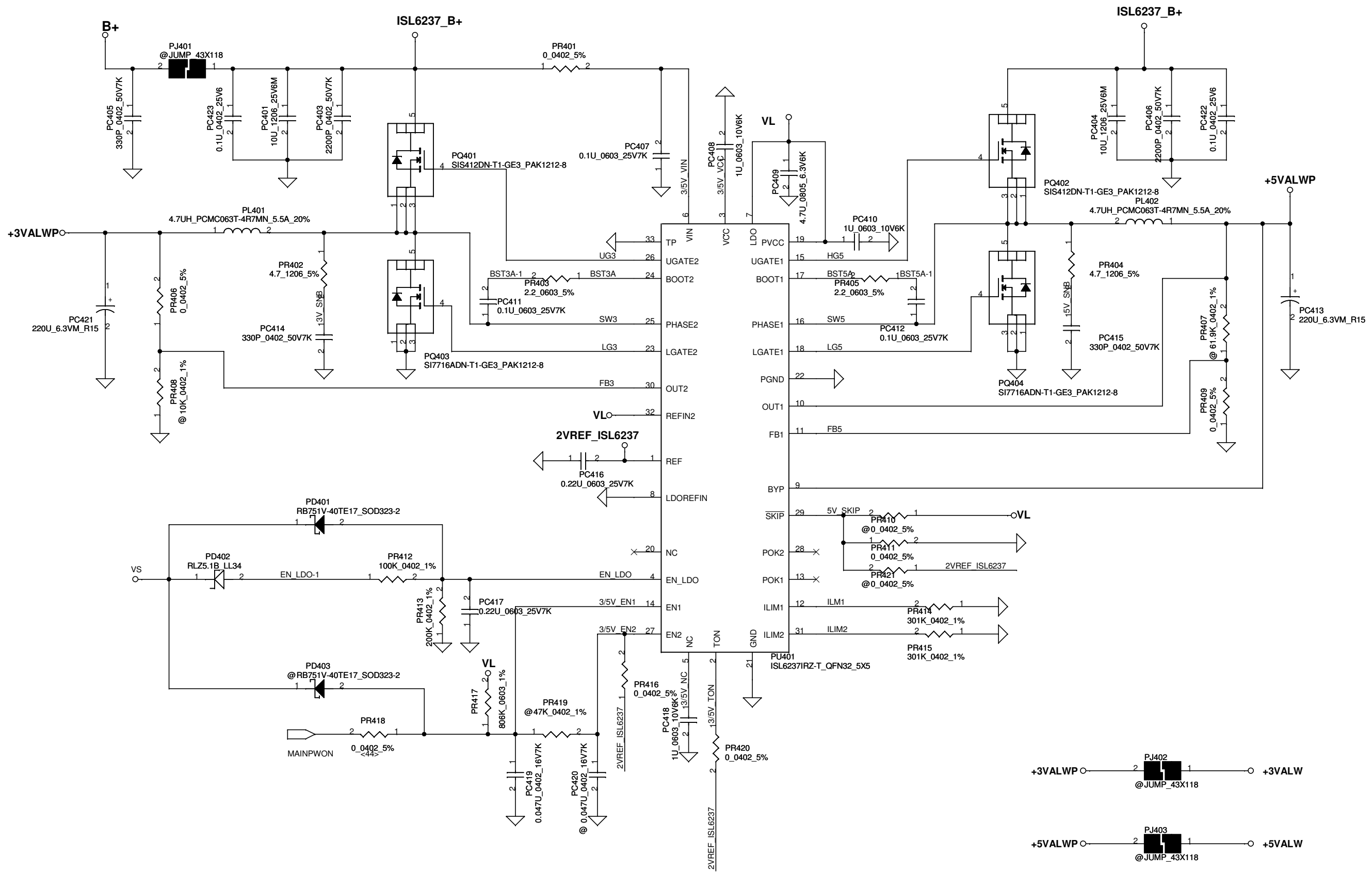
PR319 54.9K\_0402\_1%  
 PC325 @0.01U\_0402\_25V7K  
 PR322 180K\_0402\_1%

CHGVADJ	Pre Cell
3.3V	4.35V
0V	4V

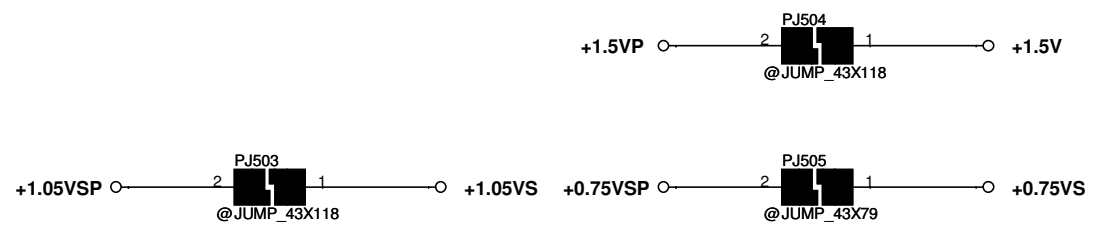
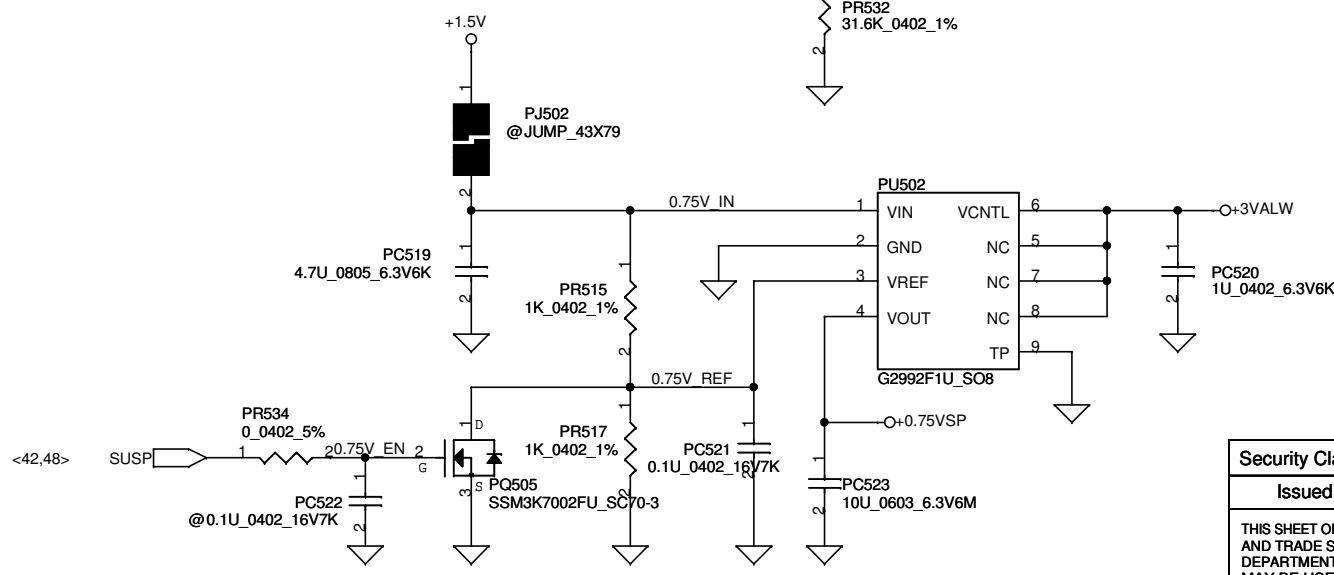
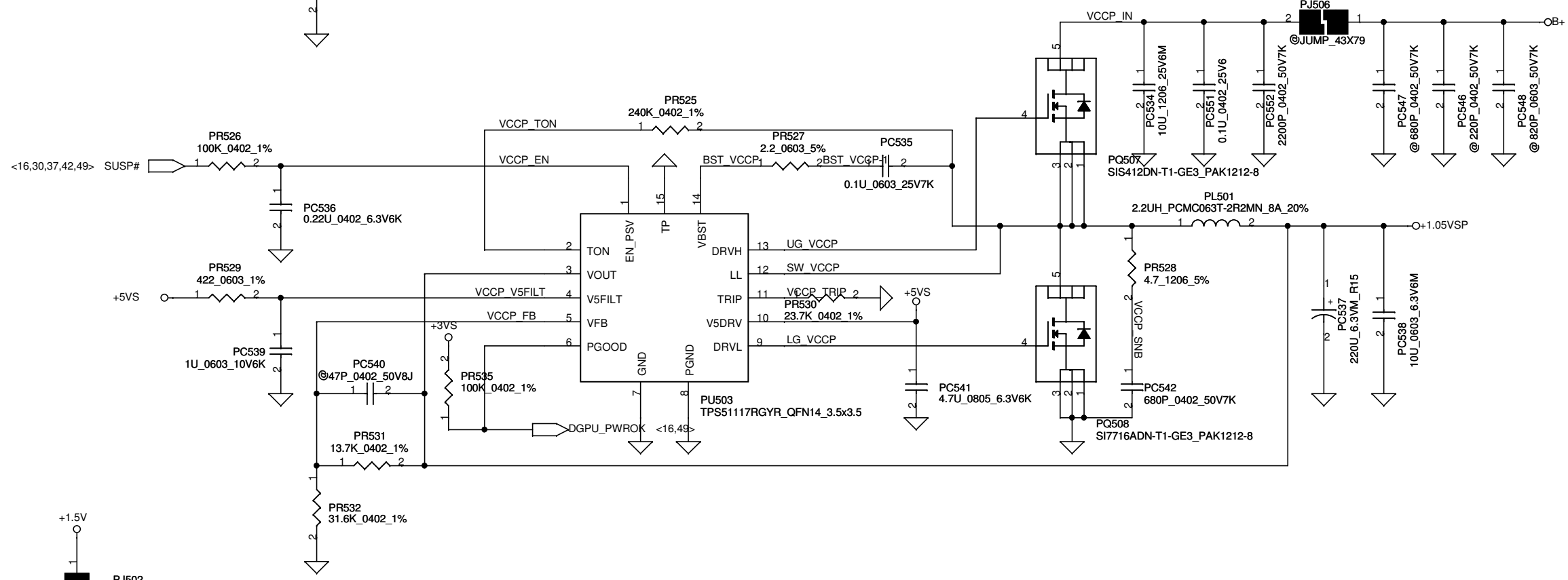
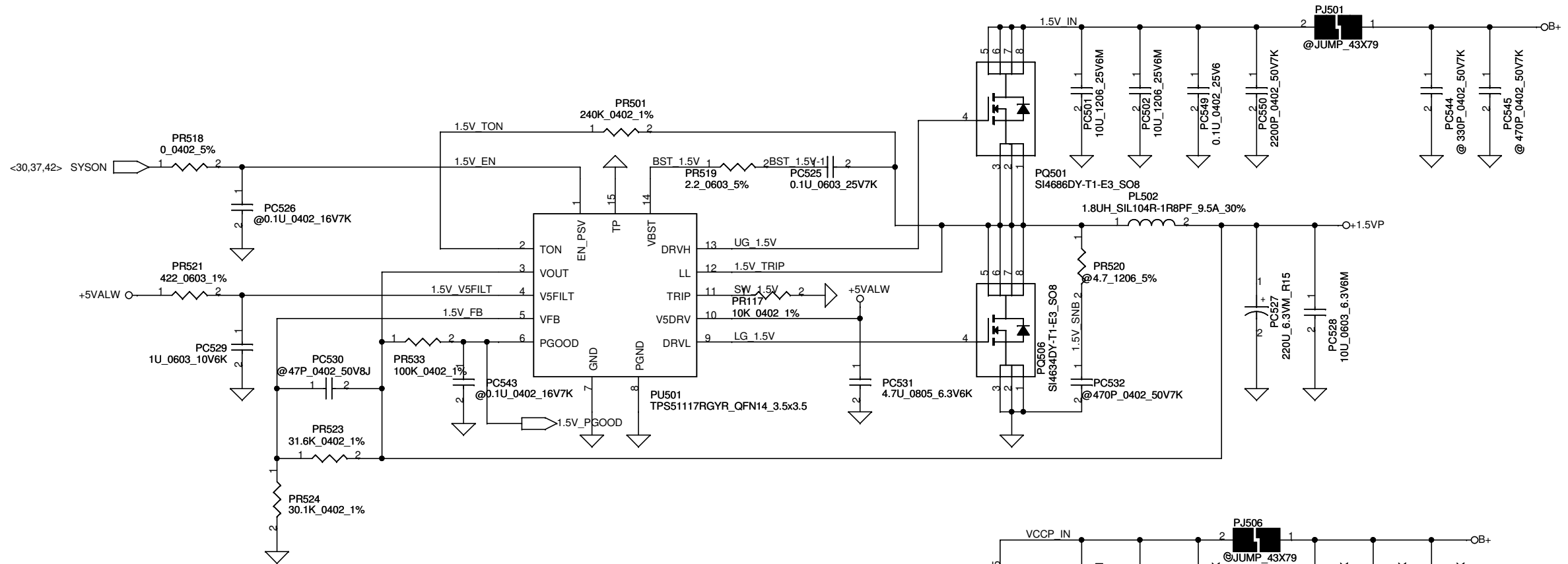
"CHGVADJ" connect to EC DA pin

**LI-3S : 13.5V ---- BATT-OVP = 1.5V**  
**BATT-OVP = 0.1112 \* BATT+**

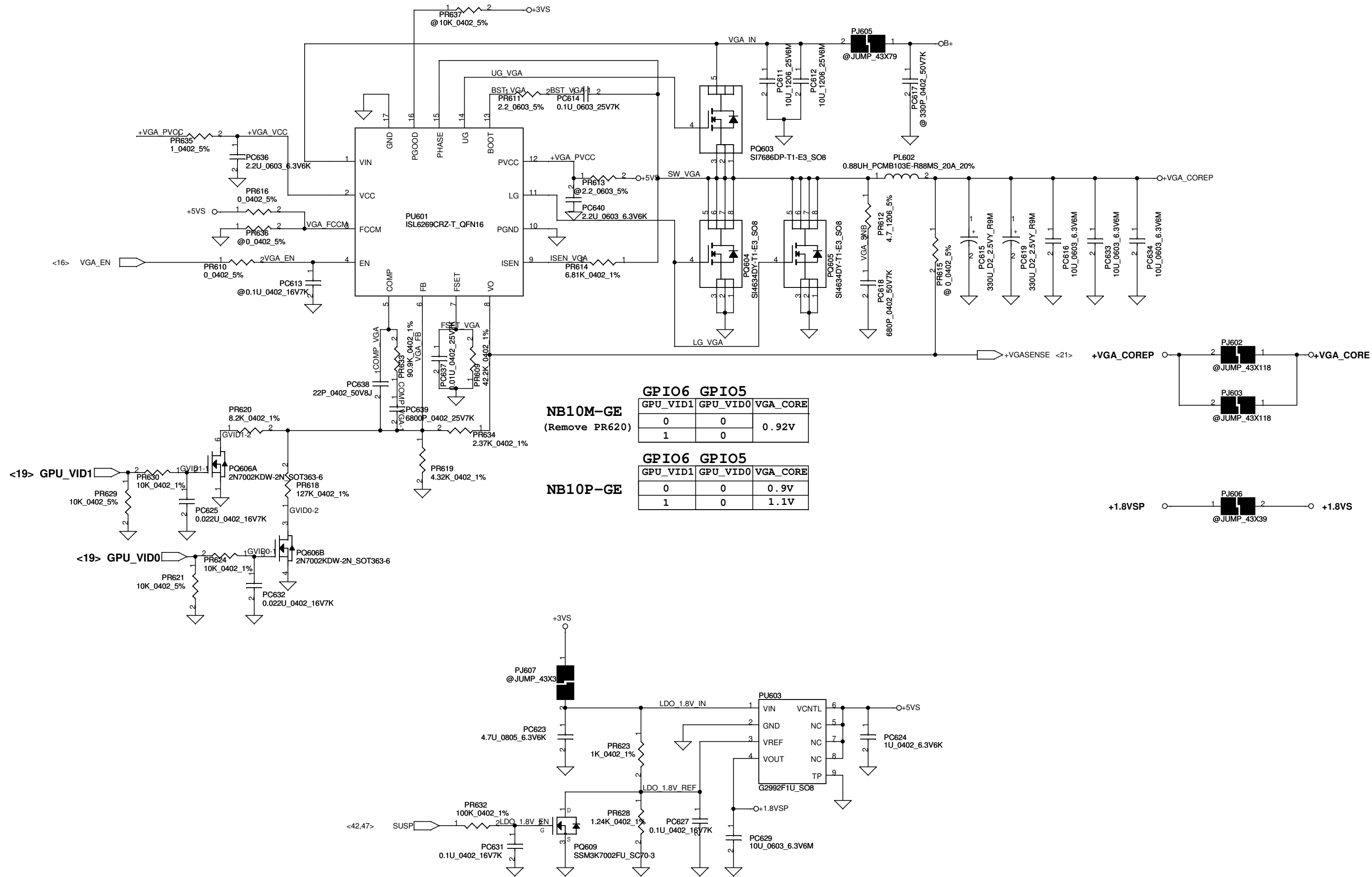
<37>REF	Current
2.842V	3.3A



Security Classification	Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title <b>3VALW/5VALW</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom
				Rev 0.1
				Date: Tuesday, March 24, 2009   Sheet 46 of 52



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				1.5V/VCCP/0.75V	
Size	Document Number			Rev	
Date:	Tuesday, March 24, 2009	Sheet	47	of	52



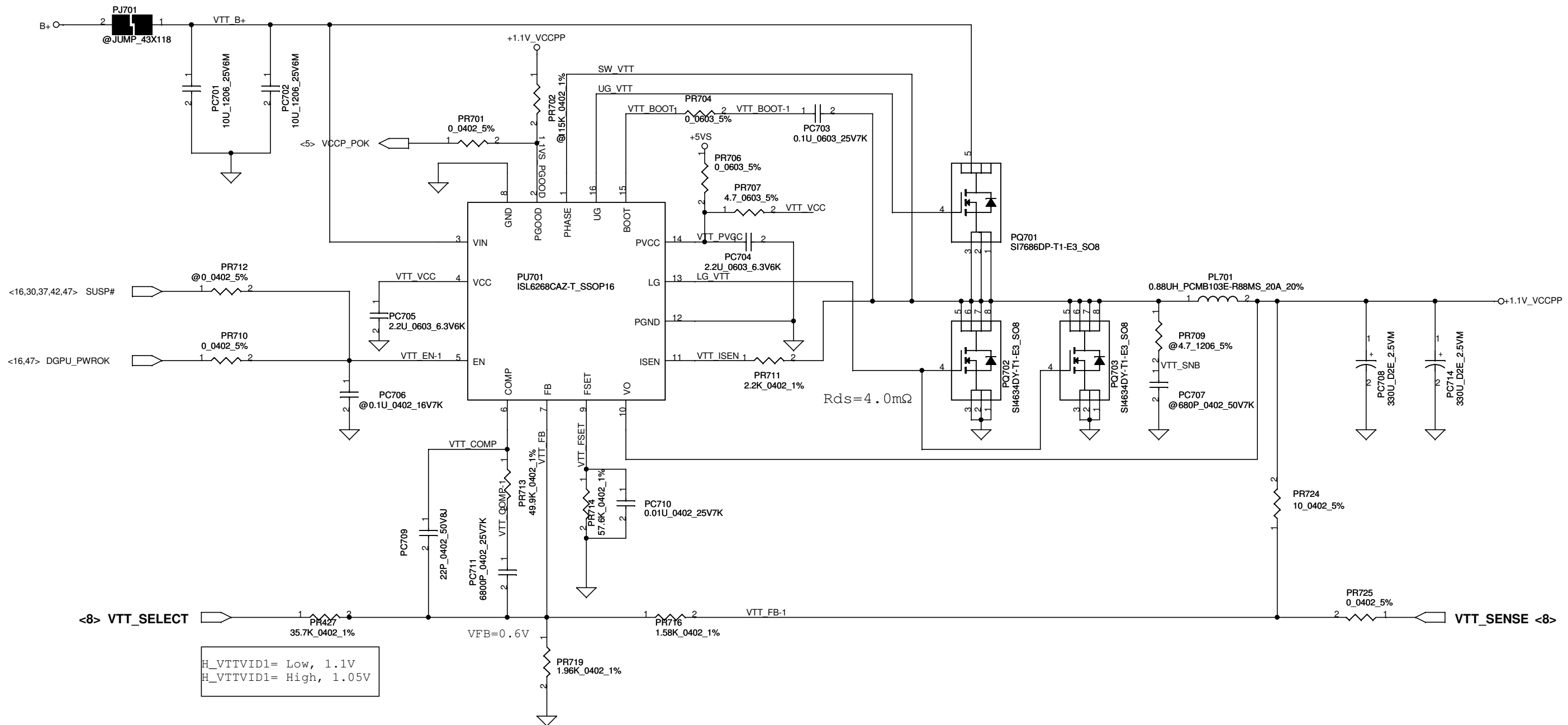
**NB10M-GE**  
(Remove PR620)

GPIO6	GPIO5	VGA_CORE
0	0	0.92V
1	0	0.92V

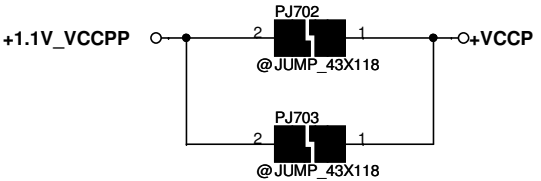
**NB10P-GE**

GPIO6	GPIO5	VGA_CORE
0	0	0.9V
1	0	1.1V

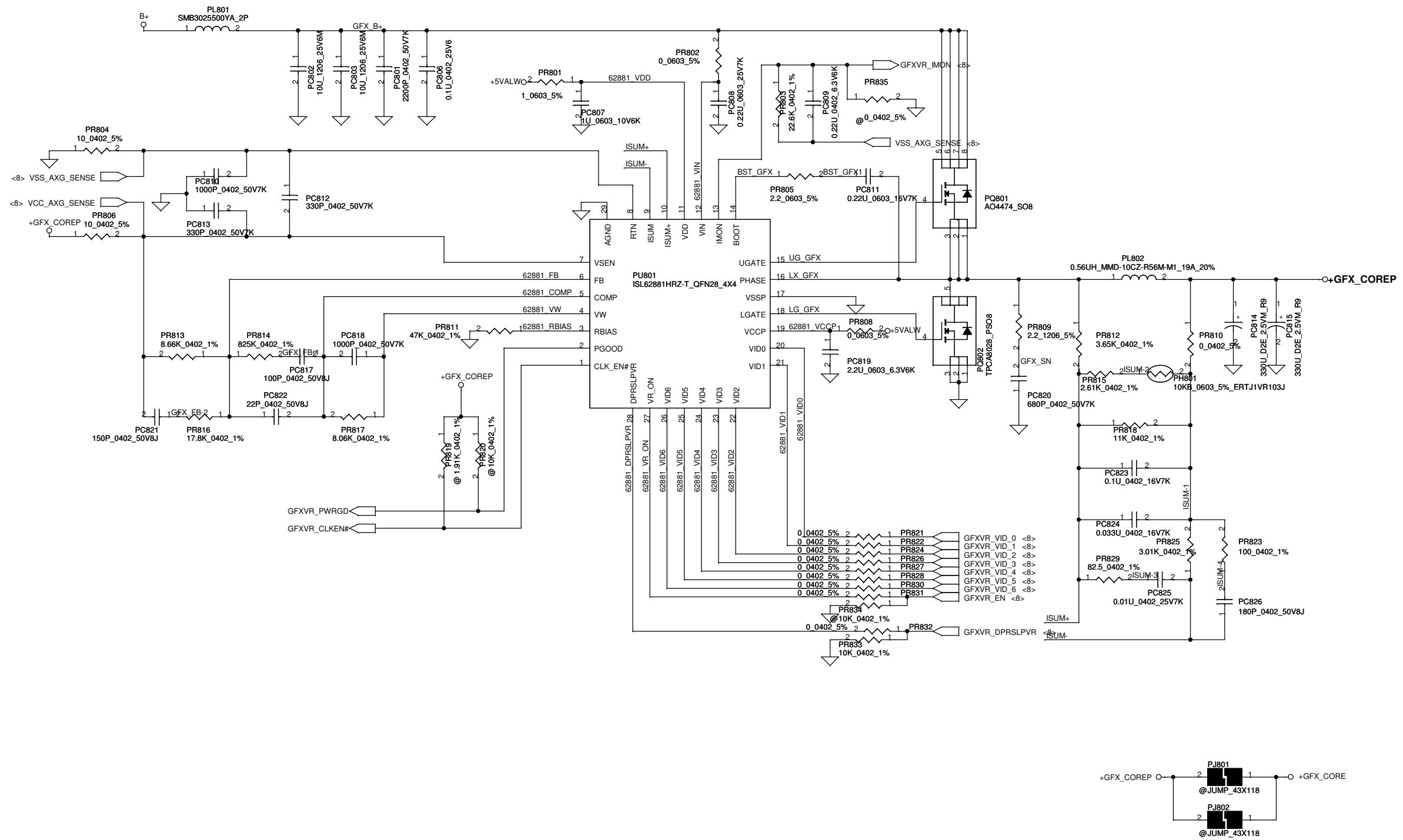




H\_VTTVID1= Low, 1.1V  
H\_VTTVID1= High, 1.05V



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>+1.1VS_VTT</b> Size Custom    Document Number    Rev 0.1
Date: Tuesday, March 24, 2009				Sheet 49 of 52



(15A,600mils ,Via NO.= 30)

Security Classification	Compal Secret Data		Title	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	GFX CORE
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev 0.1
Date:	Tuesday, March 24, 2009	Sheet	50 of 52	



*Version change list (P.I.R. List)*

Item	Reason for change	PG#	Modify List	Date	Phase
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17				20081022	

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2009/01/06	Title
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>				PIR (PWR)
				Size Custom
Date: Tuesday, March 24, 2009			Sheet 52 of 52	

[www.s-manuals.com](http://www.s-manuals.com)