

Compal Confidential

KAWF0/KAWH0 M/B Schematics Document

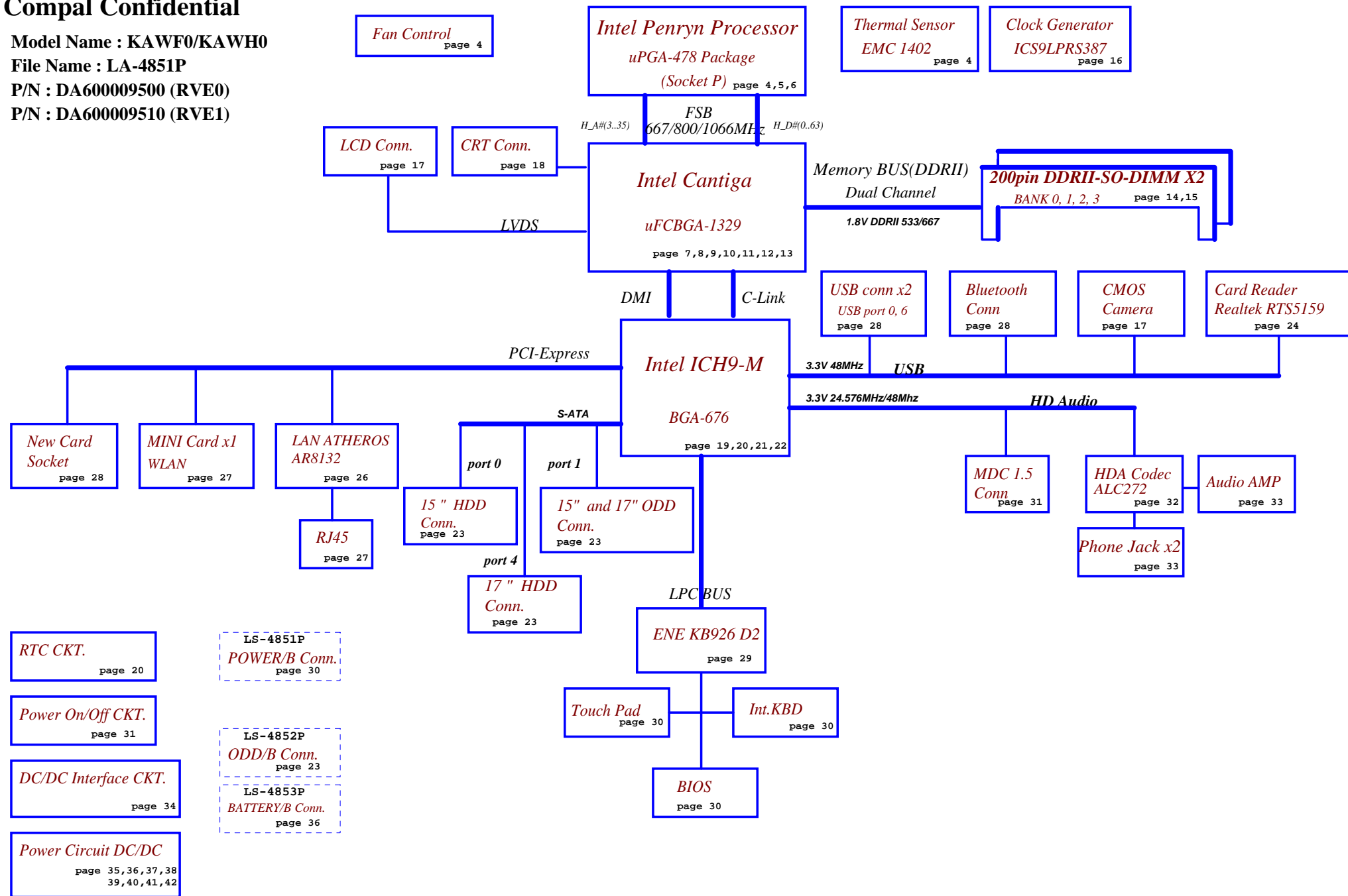
Intel Penryn Processor with Cantiga + DDRII + ICH9M

2009-01-21

REV:1.0

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
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 Custom	D
				Document Number	401636
Date: Monday, February 09, 2009				Sheet	1 of 45

Model Name : KAWF0/KAWH0
File Name : LA-4851P
P/N : DA600009500 (RVE0)
P/N : DA600009510 (RVE1)



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHMATIC, M/B A4851
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 RADECH 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.				Docu- ment Number	Rev D
				401636	
Date:		Monday, February 09, 2009		Sheet	2 of 45

Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit.	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+0.9VS	0.9V switched power rail for DDR terminator	ON	OFF	OFF
+1.05VS	1.05V switched power rail	ON	OFF	OFF
+1.5V	1.5V power rail for HDA	ON	ON	OFF
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8V	1.8V power rail for DDR	ON	ON	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V power rail for SB	ON	ON	OFF
+3V_LAN	3.3V power rail for LAN	ON	ON	ON
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+VSB	VSB always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts
--------	--------	-----------	------------

EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	ADI ADT7421	1001 100X b
EEPROM(24C16/02)	1010 000X b		
GMT G781-1	1001 101X b		

ICH9M SM Bus address

Device	Address
Clock Generator (ICS9LPRS367, SLG8SP556V)	1101 001Xb
DDR DIMM0	1001 000Xb
DDR DIMM2	1001 010Xb

STATE	SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON		HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1(Power On Suspend)		LOW	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)		LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)		LOW	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)		LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

Board ID / SKU ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra/Rc/Re	100K +/- 5%			
Board ID	Rb / Rd / Rf	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V
2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
5	100K +/- 5%	1.453 V	1.650 V	1.759 V
6	200K +/- 5%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

BOARD ID Table

Board ID	PCB Revision
0	0.1
1	0.2
2	0.3
3	1.0
4	1A
5	
6	
7	

BTO Option Table

BTO Item	BOM Structure
GM45	GM@
GL40	GL@
15"	15@
17"	17@
8114	8114@
8132	8132@

PCIE table

PCIE port1	Express Card(Reserved)
PCIE port2	Wireless Card
PCIE port3	PCIE LAN
PCIE port4	
PCIE port5	
PCIE port6	

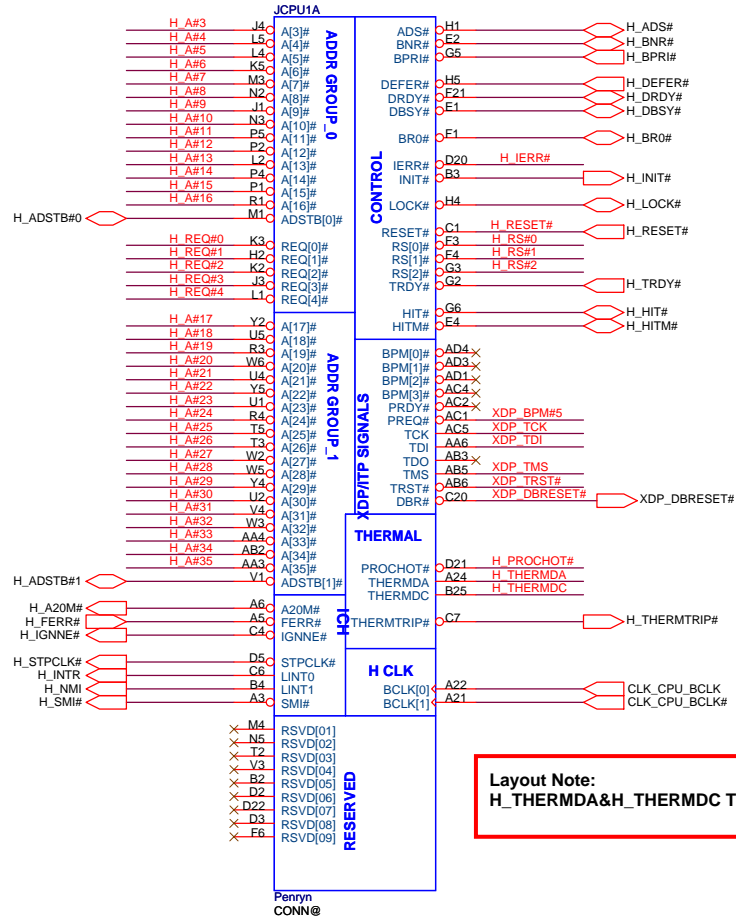
SATA table

SATA port0	HDD
SATA port1	ODD
SATA port2	
SATA port3	
SATA port4	for 17" 2nd HDD
SATA port5	

USB table

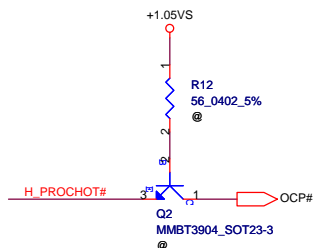
EHCI1	UHCI1	Port0	MB USB Conn.
		Port1	
	UHCI2	Port2	
		Port3	CMOS Camera
EHCI2	UHCI3	Port4	Card Reader
		Port5	New Card(Reserved)
	UHCI4	Port6	MB USB Conn.
		Port7	
	UHCI5	Port8	Blue Tooth
		Port9	
	UHCI6	Port10	Wireless Card
		Port11	

H_A#[3..35]  H_A#[3..35]
H_REQ#[0..4]  H_REQ#[0..4]
H_RS#[0..2]  H_RS#[0..2]

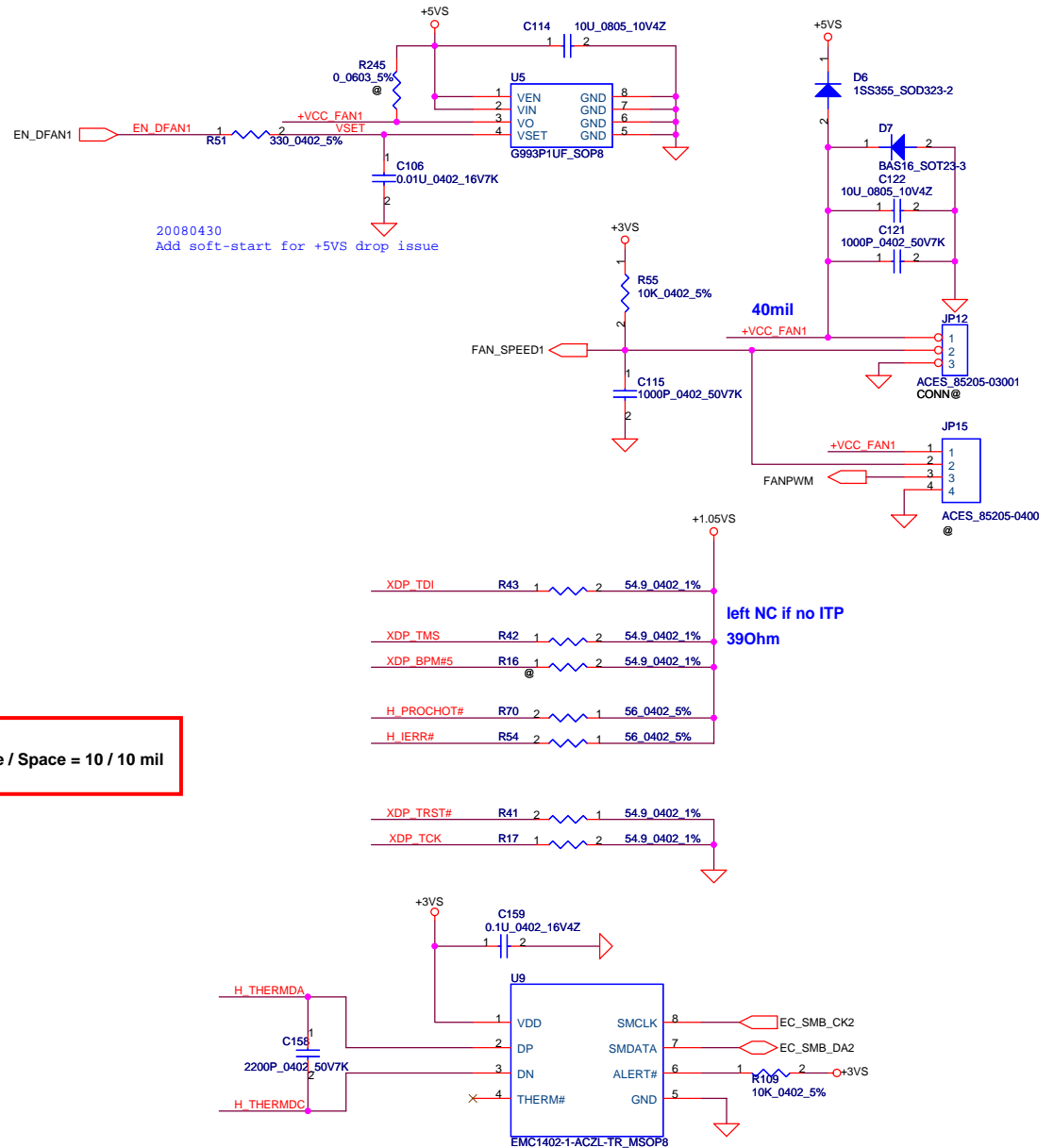


Layout Note:
H_THERMDA&H_THERMDC Trace / Space = 10 / 10 mil

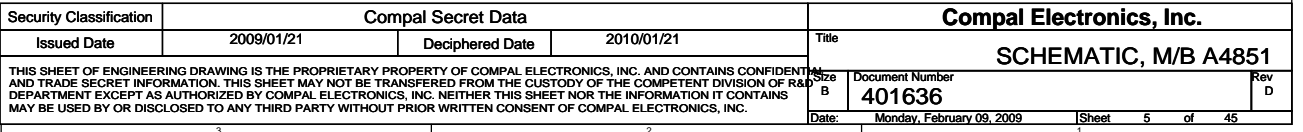
BSEL2	BSEL1	BSEL0	BCLK
0	0	0	266
0	1	0	200
0	1	1	166

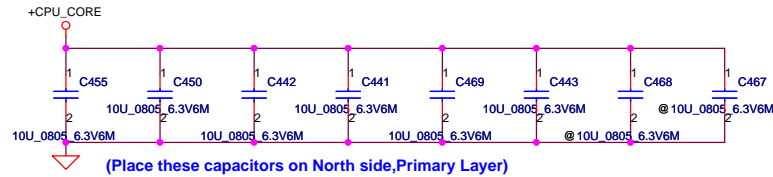
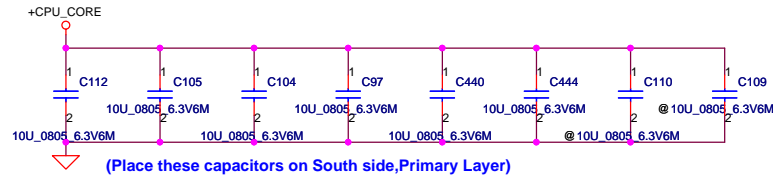
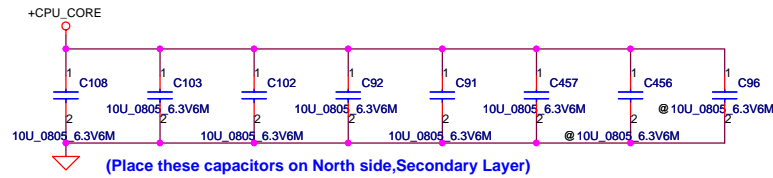
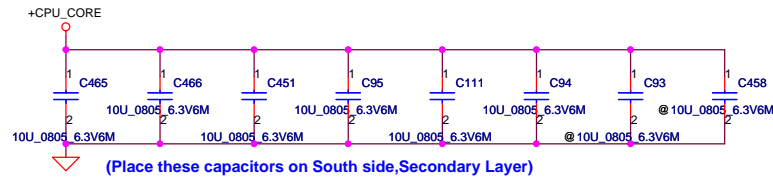
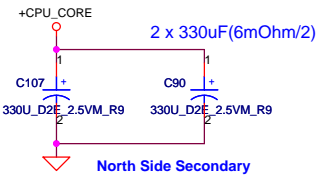
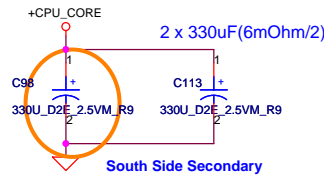
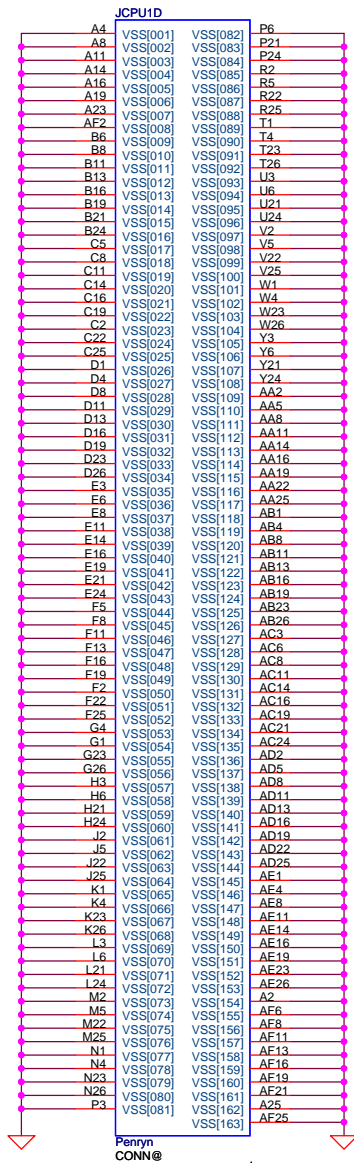


FAN1 Conn

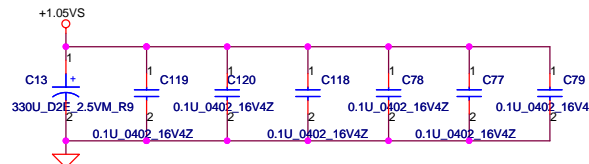


Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2009/01/21		Deciphered Date		2010/01/21		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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.						SCHEMATIC, M/B A4851					
						Size		Document Number		Rev	
						B		401636		D	
Date:						Monday, February 09, 2009		Sheet 4 of 45			

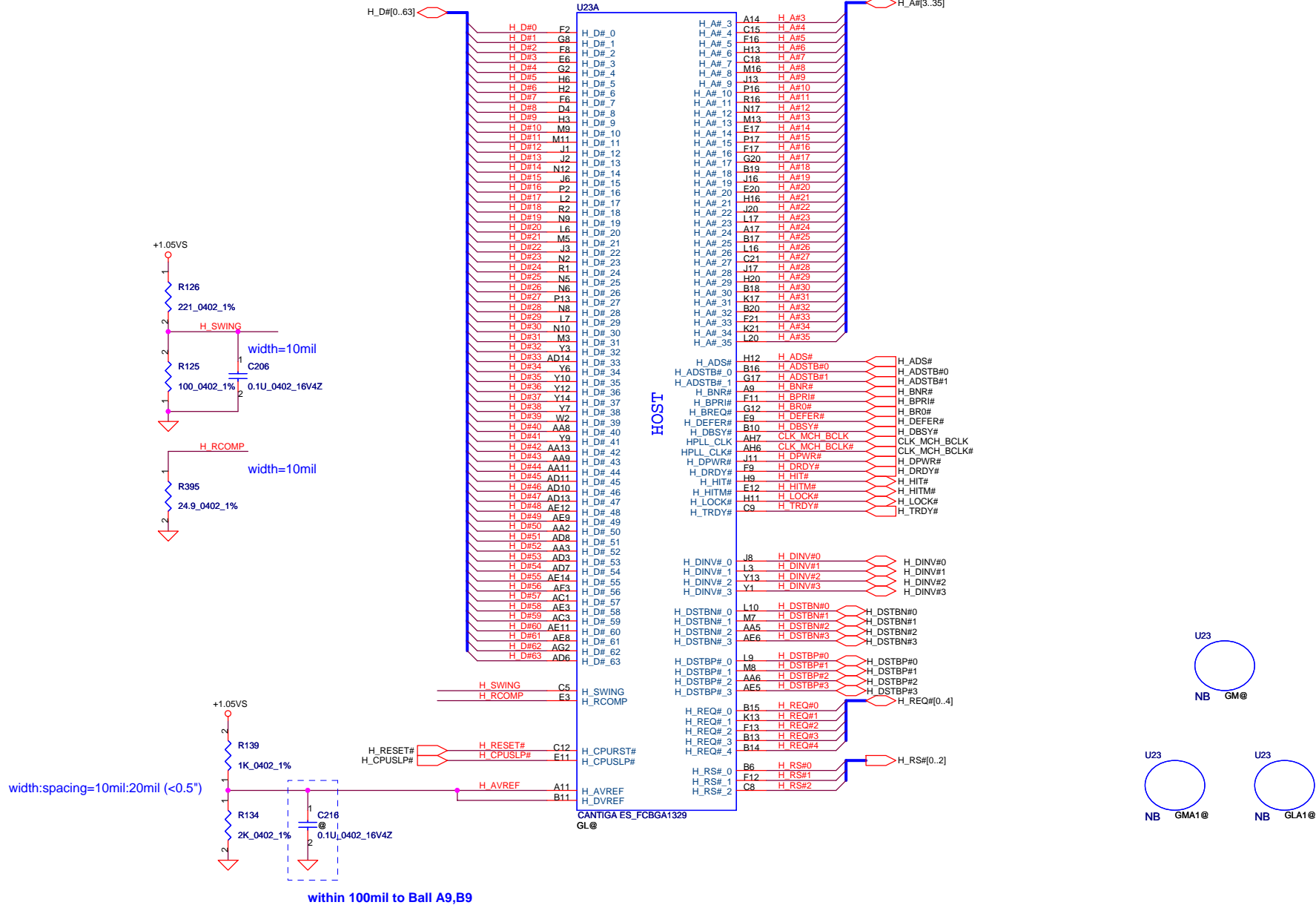




+CPU-CORE Decoupling	C,uF	ESR, mohm	ESL,nH
SPCAP,Polymer	4X330uF	6m ohm/4	1.8nH/6
MLCC 0805 X5R	32X22uF	3m ohm/32	0.6nH/32
	32X10uF	3m ohm/32	0.6nH/32

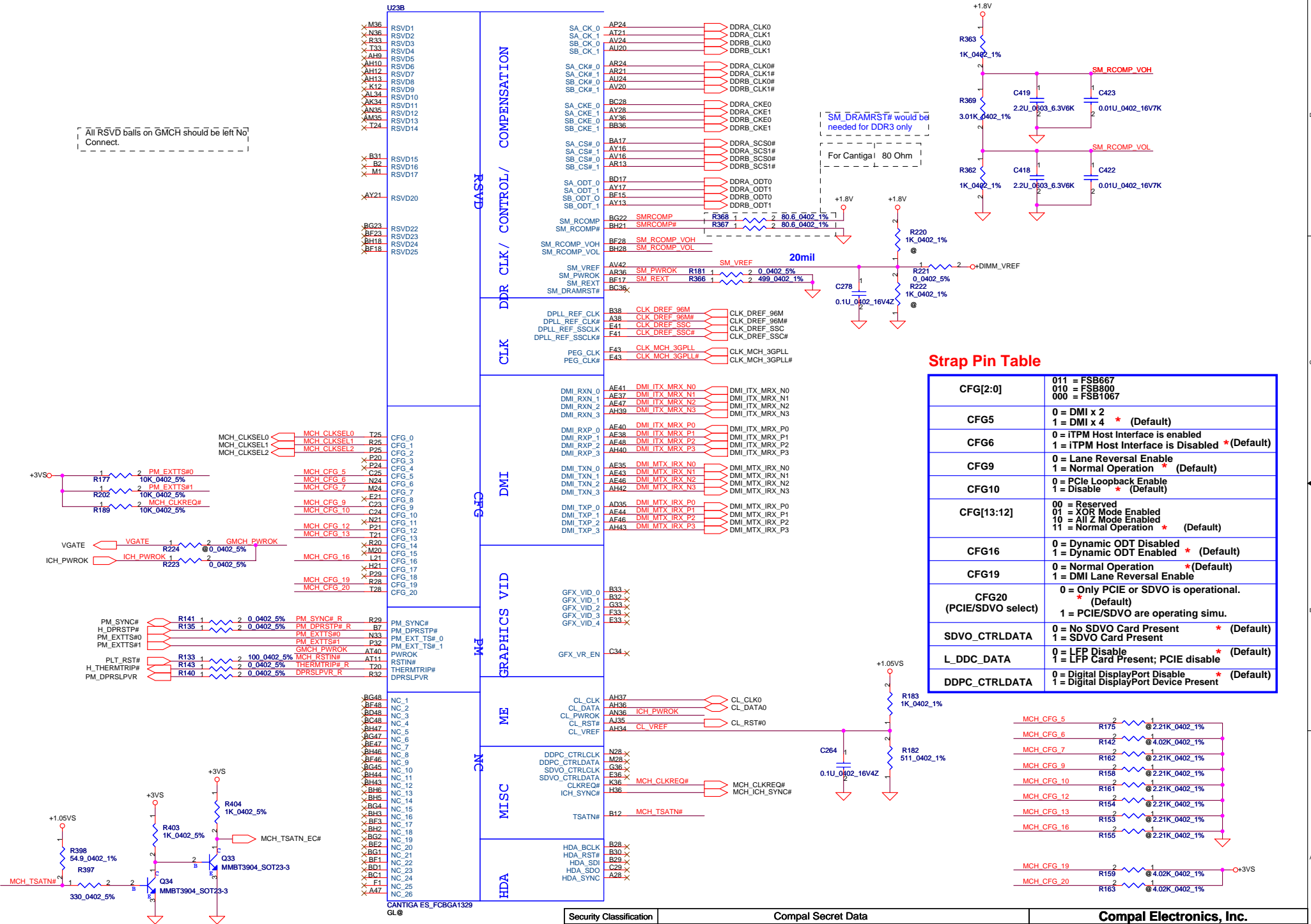


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	401636
				Date:	Monday, February 09, 2009
				Sheet	6 of 45



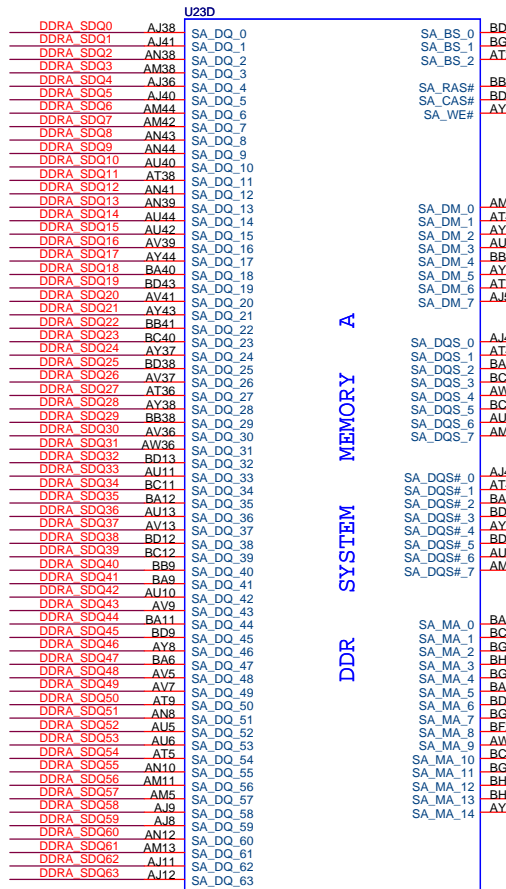
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	401636
				Date:	Monday, February 09, 2009
				Sheet	7 of 45

All RSVD balls on GMCH should be left No Connect.

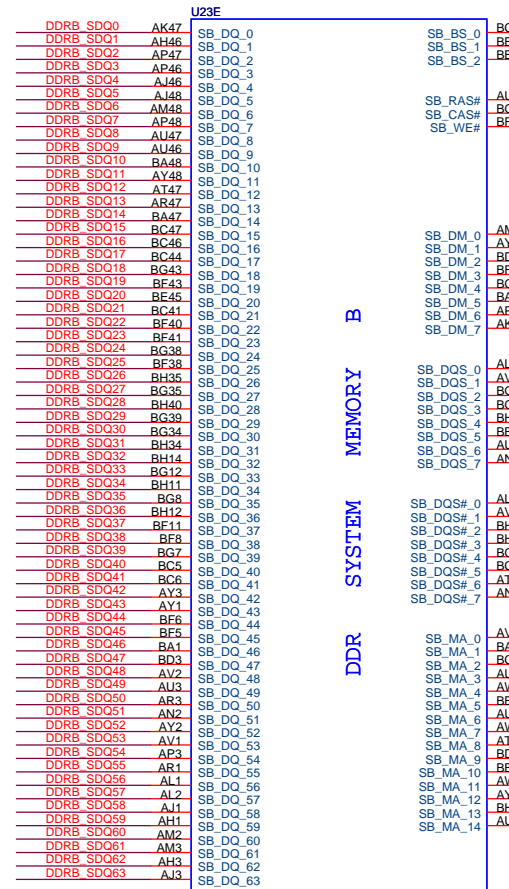


DDRA_SDQ[0..63] <== DDRA_SDQ[0..63]
DDRA_SDM[0..7] <== DDRA_SDM[0..7]
DDRA_SMA[0..14] <== DDRA_SMA[0..14]

DDRB_SDQ[0..63] <== DDRB_SDQ[0..63]
DDRB_SDM[0..7] <== DDRB_SDM[0..7]
DDRB_SMA[0..14] <== DDRB_SMA[0..14]

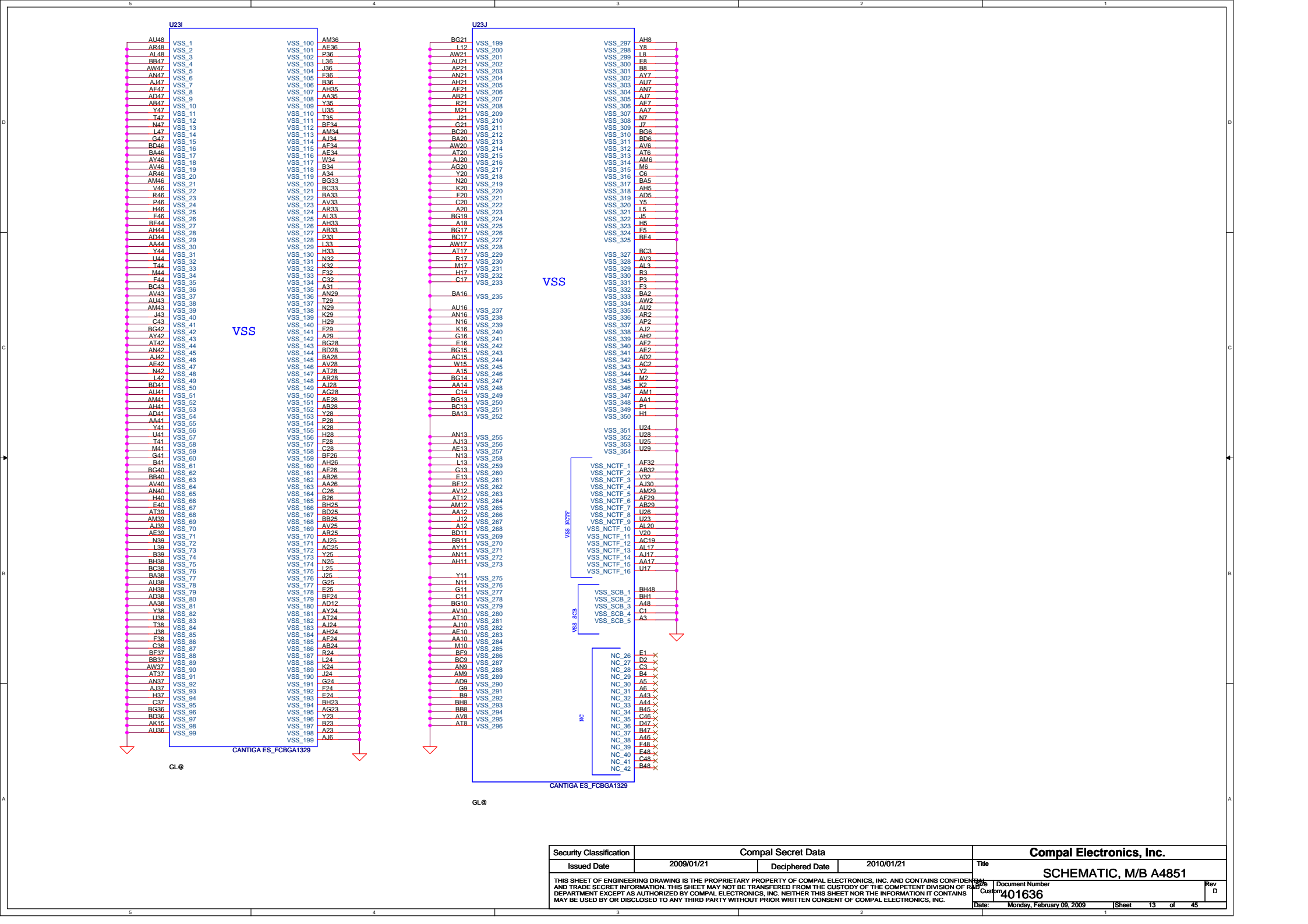


GL@ CANTIGA ES_FCBGA1329

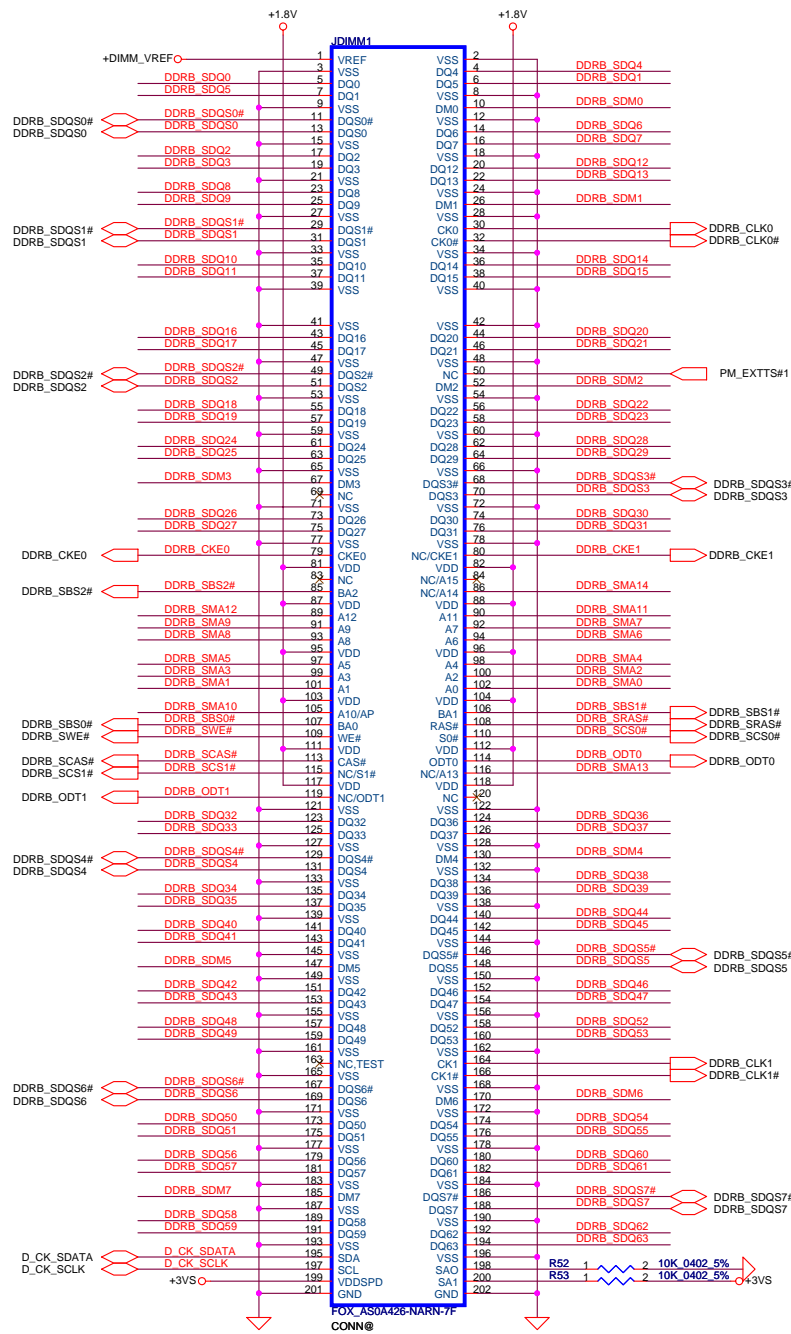


GL@ CANTIGA ES_FCBGA1329

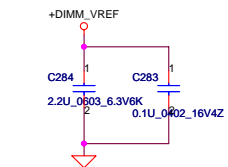
Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2009/01/21		Deciphered Date		2010/01/21		Title			
								SCHEMATIC, M/B A4851			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET 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		Rev D	
								401636			
						Date:		Monday, February 09, 2009		Sheet 9 of 45	



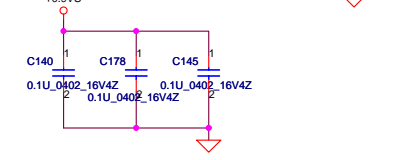
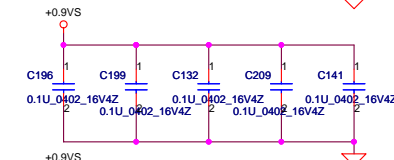
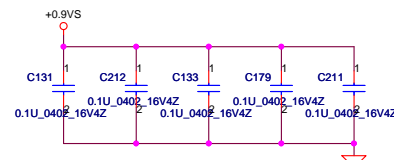
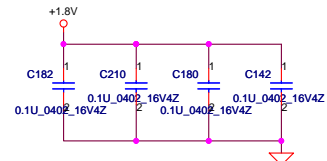
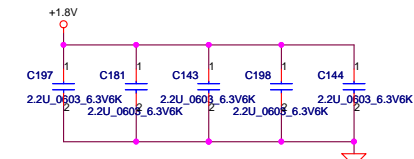
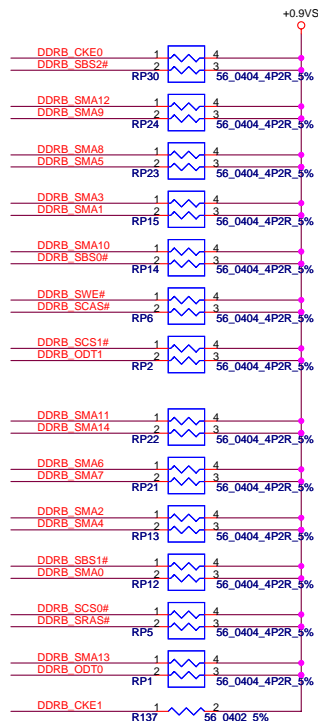
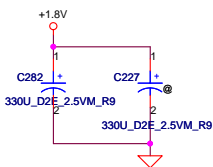




DIMM1 REV H:9.2mm (BOT)



DDR_B_SMA[0..14] → DDRB_SMA[0..14]
 DDRB_SQ[0..63] → DDRB_SQ[0..63]
 DDRB_SDM[0..7] → DDRB_SDM[0..7]



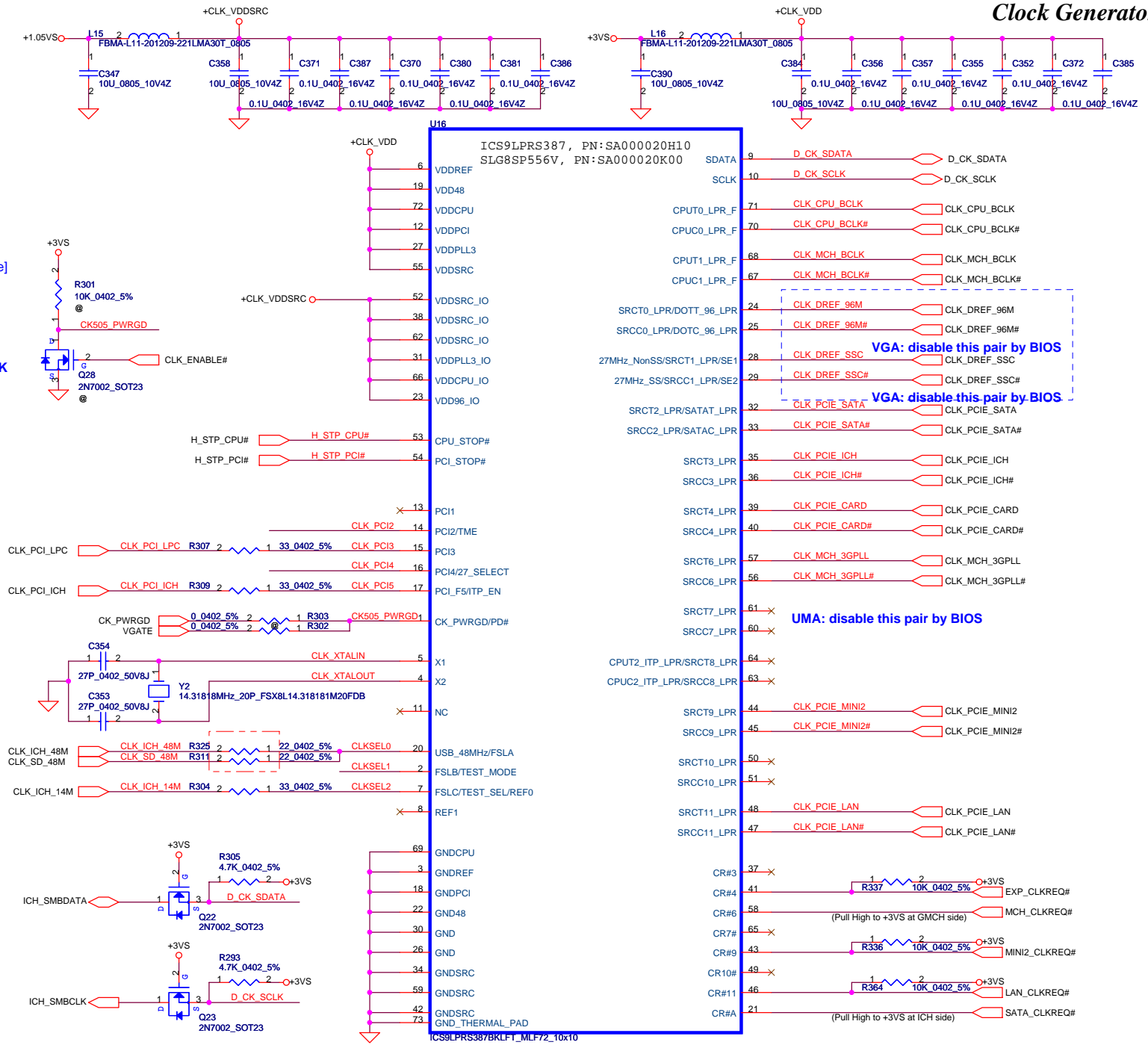
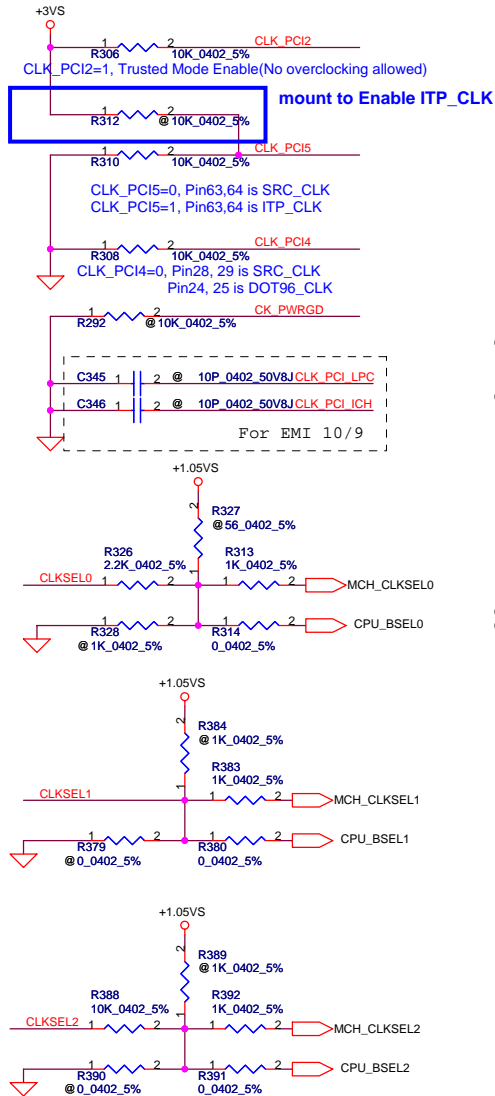
Security Classification		Compal Secret Data				Compal Electronics, Inc.							
Issued Date		2009/01/21		Deciphered Date		2010/01/21		Title					
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.								SCHEMATIC, M/B A4851					
								Rev B		Document Number		Rev D	
								Date		401636			
Monday, February 09, 2009				Sheet		15		of 45					

FSLC	FSLB	FSLA	CPU	SRC	PCI
CLKSEL2	CLKSEL1	CLKSEL0	MHz	MHz	MHz
0	0	0	266	100	33.3
0	1	0	200	100	33.3
0	1	1	166	100	33.3

Table : ICS9LPRS387

CLK_REQ#	Control	Free-Run
CR#_10(WLAN)	PCIEX10	PCIEX0
CR#_6(MCH)	PCIEX6	PCIEX1
CR#_4(NEW CARD)	PCIEX4	
CR#_9(MINI CARDII)	PCIEX9	

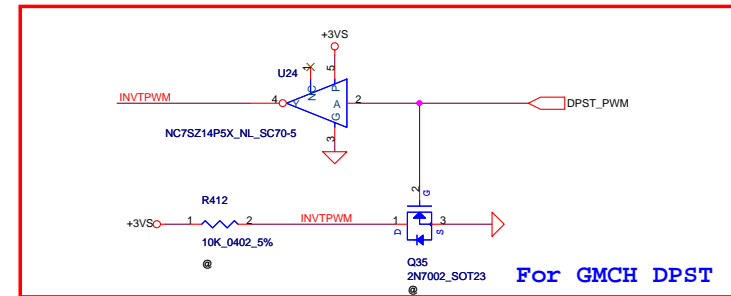
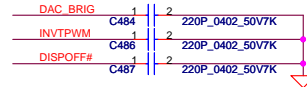
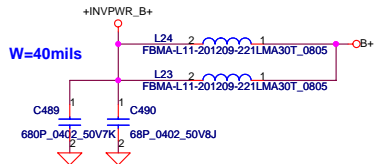
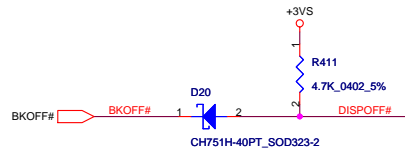
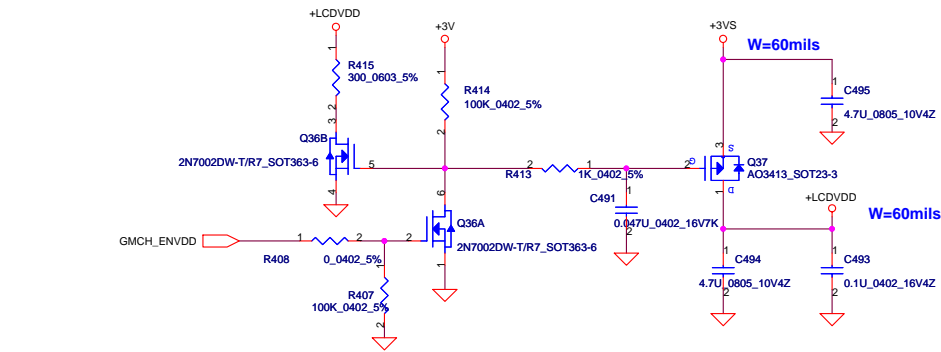
SRC7(VGA_CLK): Discrete VGA[Enable] UMA[Disable]



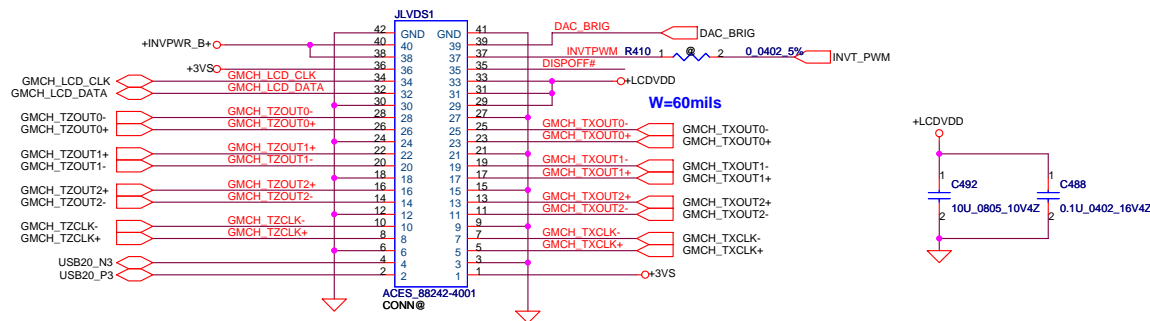
Clock Generator

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	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	Rev D
				401636	
				Date	Monday, February 09, 2009
				Sheet	16 of 45

LCD POWER CIRCUIT

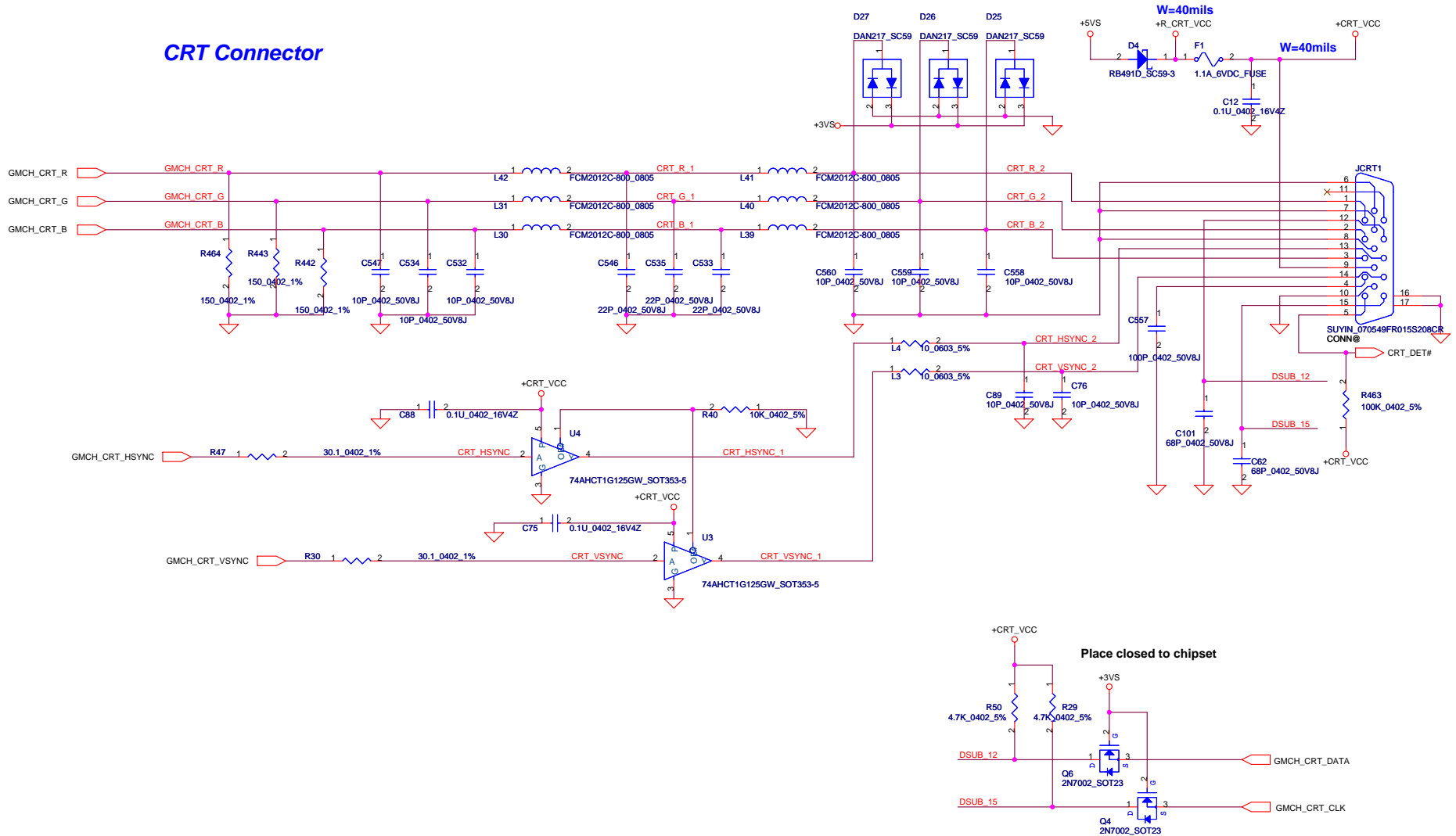


LCD/PANEL BD. Conn.

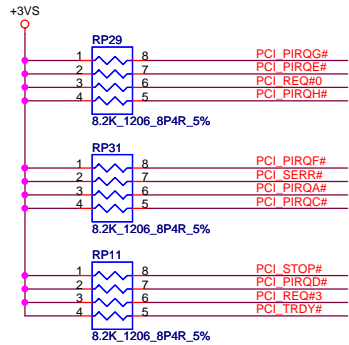
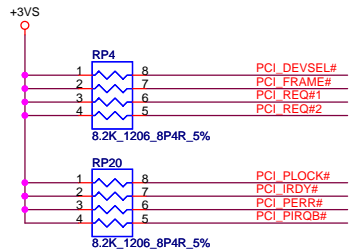


Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2009/01/21				Title			
				Deciphered Date				SCHEMATIC, M/B A4851			
				2010/01/21				Document Number			
								401636			
								Date: Monday, February 08, 2009			
								Sheet 17 of 45			

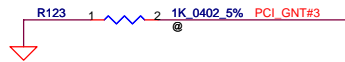
CRT Connector



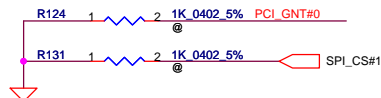
Security Classification		Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2009/01/21		Deciphered Date		2010/01/21		Title	
								SCHEMATIC, M/B A4851	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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		Rev D	
						401636			
Date: Monday, February 09, 2009						Sheet 18 of 45			



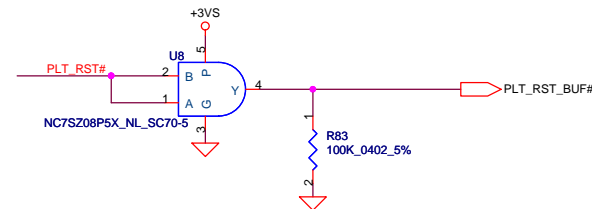
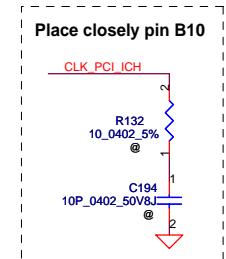
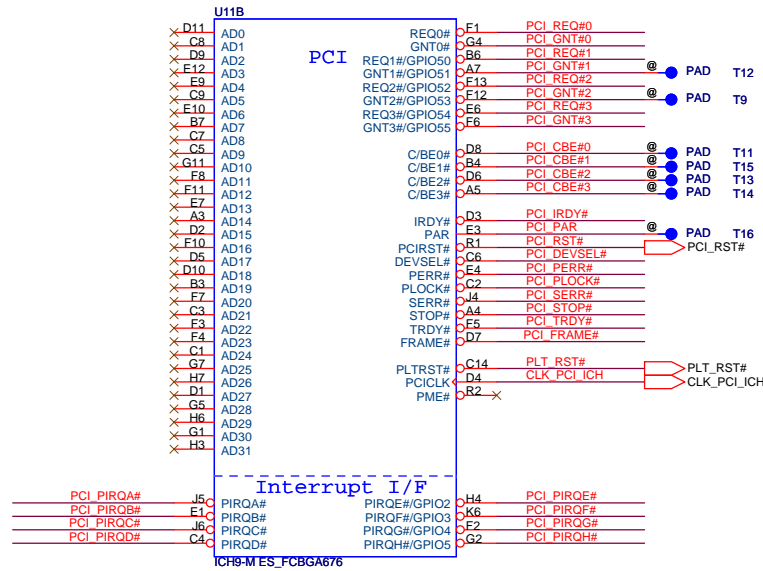
A16 Swap Override Strap	
PCI_GNT#3	Low= A16 swap override Enable High= Default*



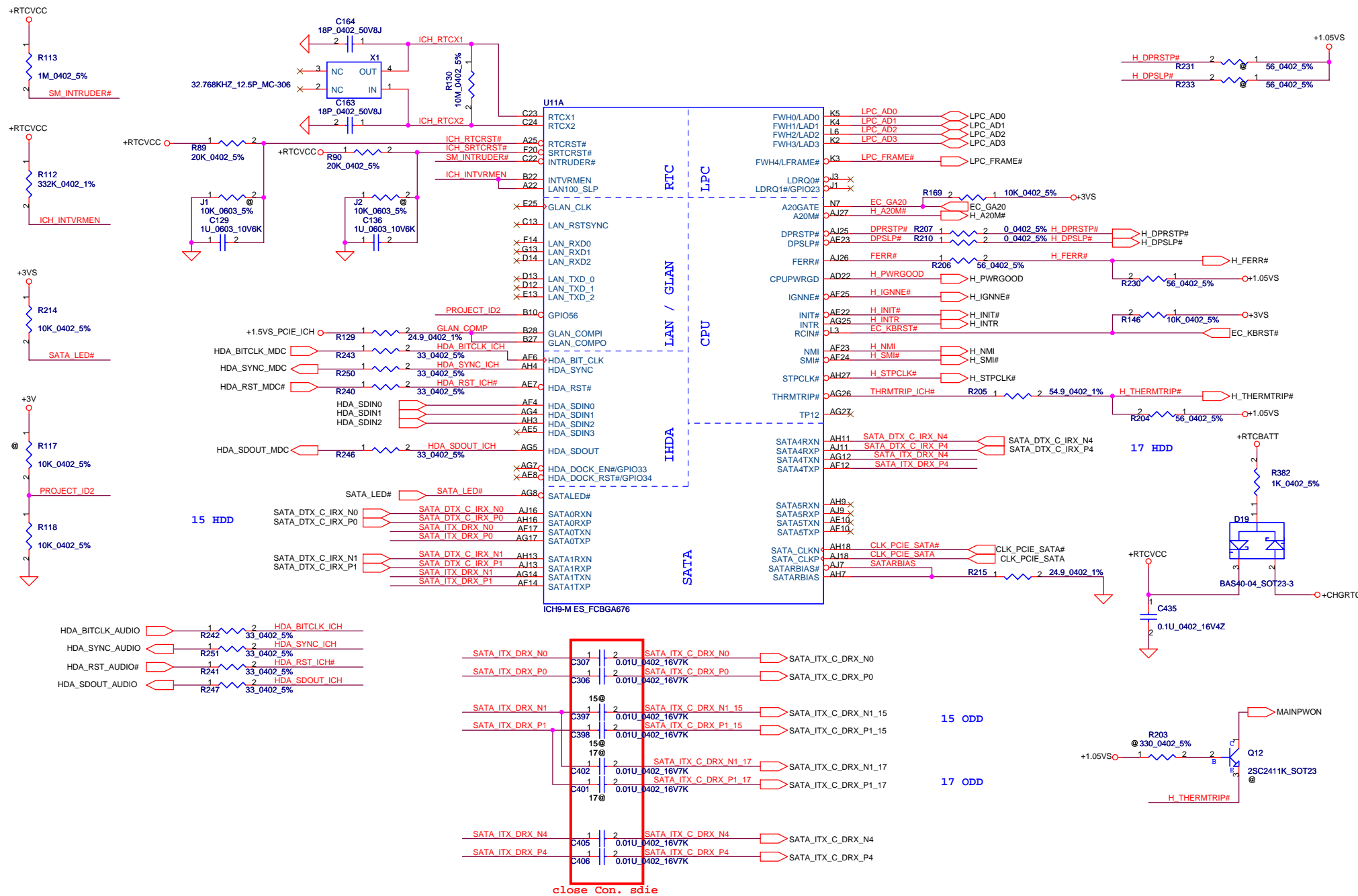
Boot BIOS Strap		
PCI_GNT#0	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC*



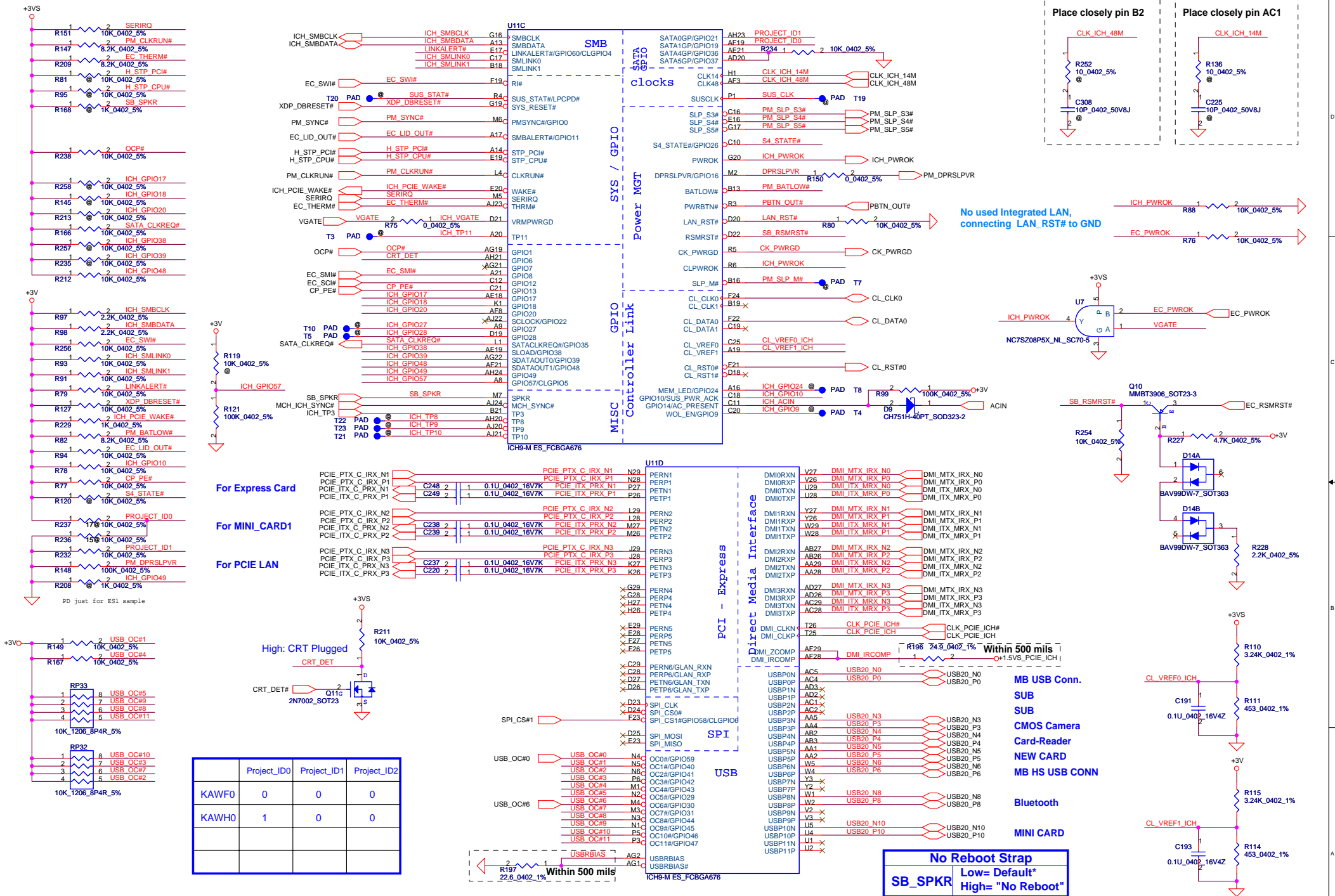
DMI for ESI-compatible operation	
PCI_GNT#1	Low= DMI for ESI-compatible operation High= Default* (Internal pull-up)



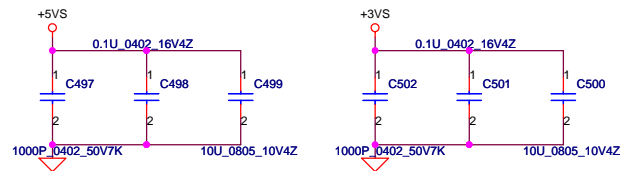
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	401636
				Date	Monday, February 09, 2009
				Sheet	19 of 45



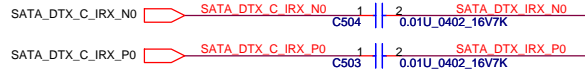
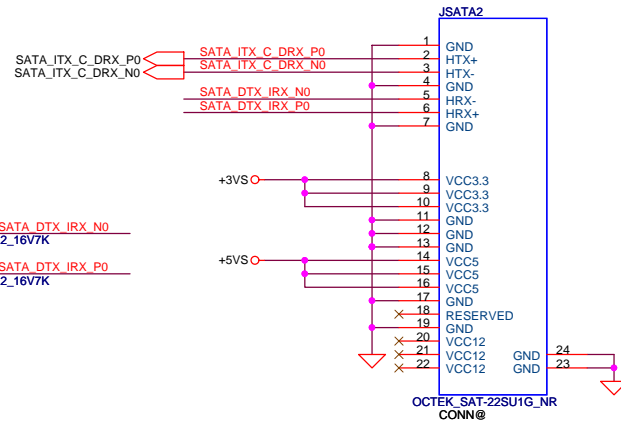
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Rev D
				401636	
Date: Monday, February 09, 2009				Sheet	20 of 45



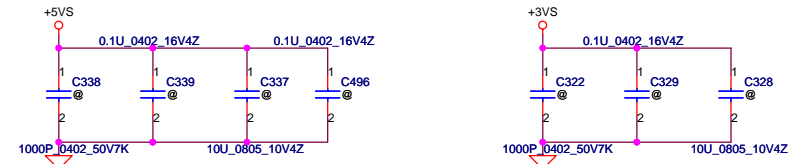
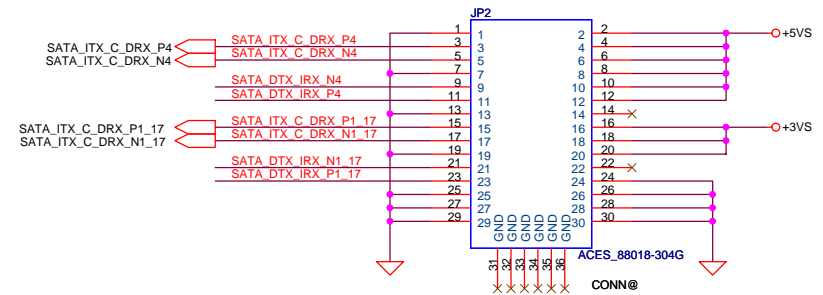
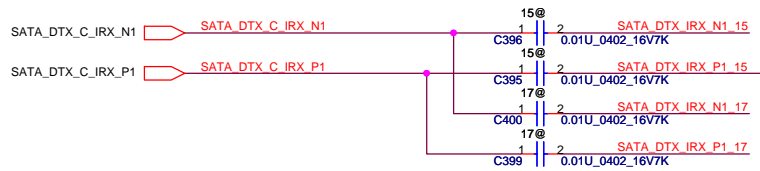
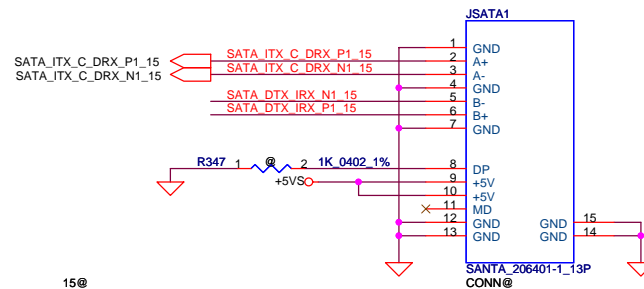




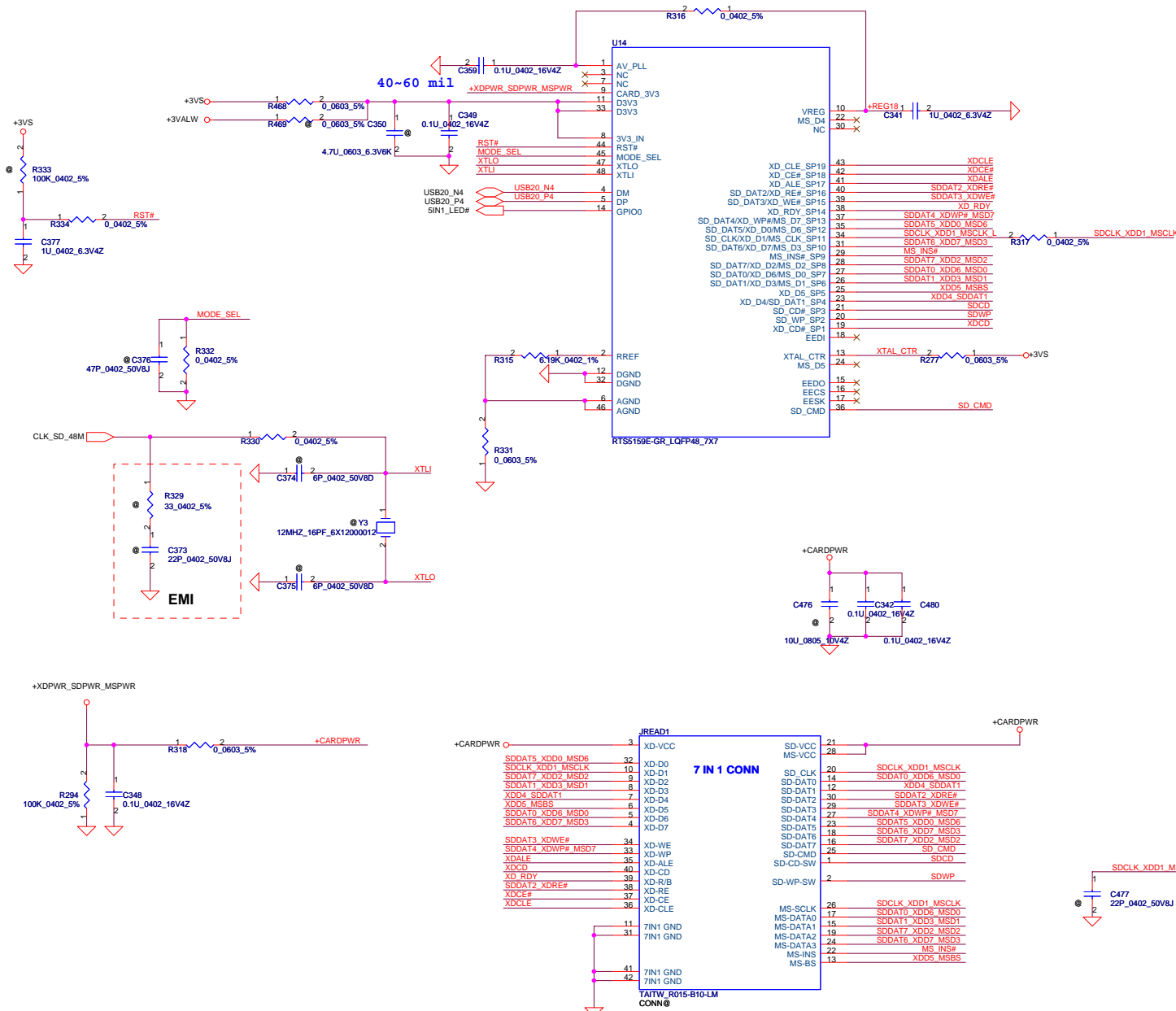
SATA HDD Conn.



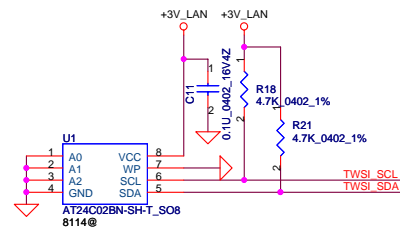
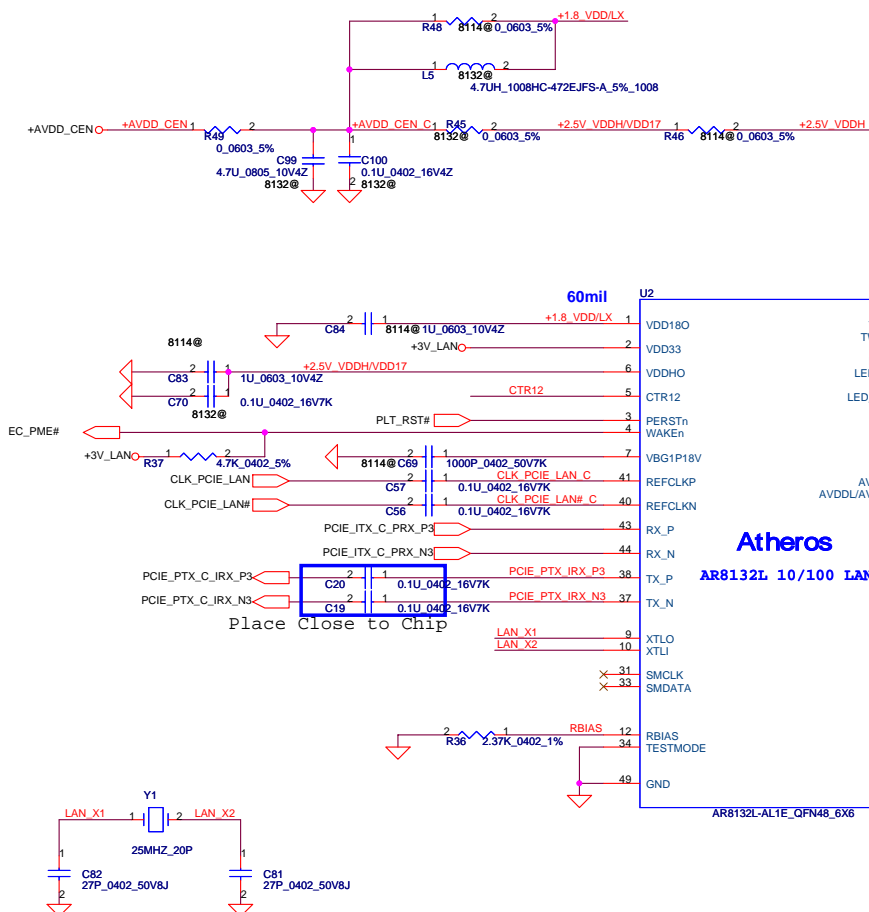
SATA ODD Conn.



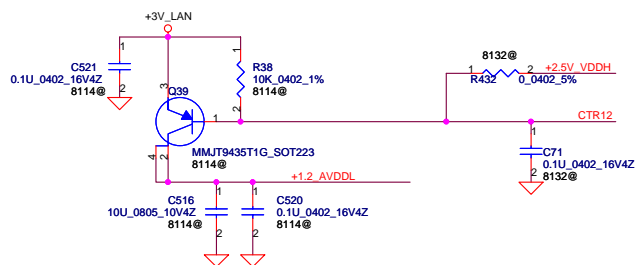
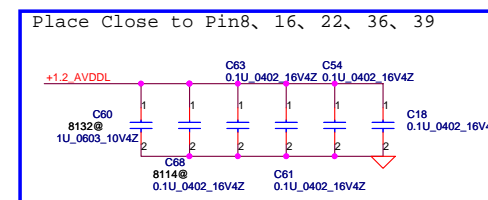
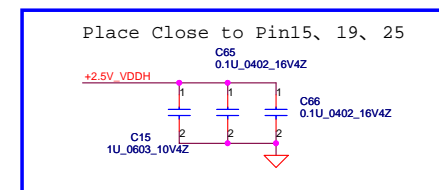
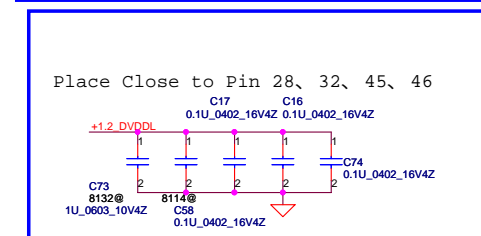
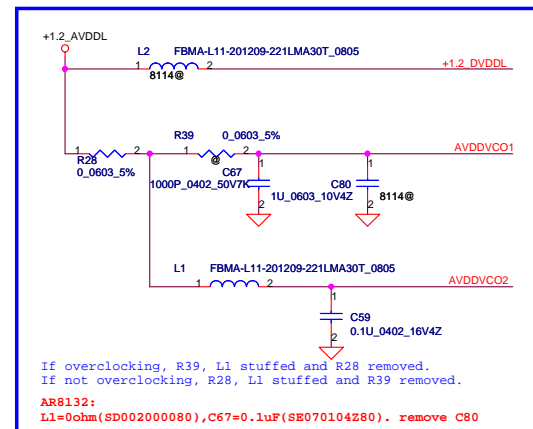
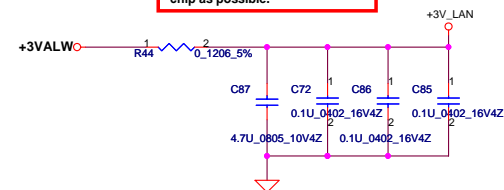
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	401636
				Date	Monday, February 09, 2009
				Sheet	23 of 45



WWW.AliSaler.Com

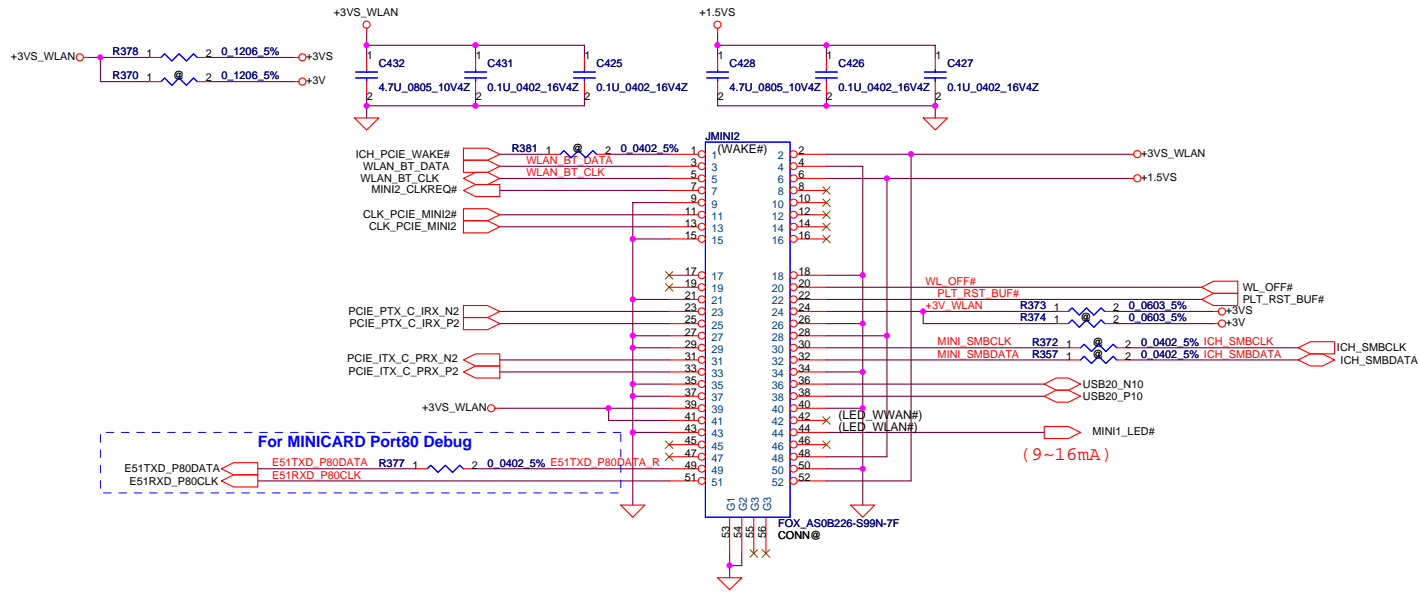


Layout Notice : Place as close chip as possible.

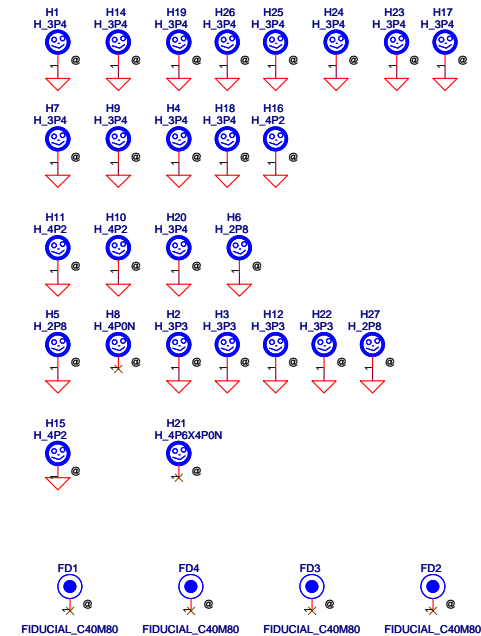


Security Classification		Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2009/01/21		Deciphered Date		2010/01/21		Title	
								SCHEMATIC, M/B A4851	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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.									
Doc Number		401636						Rev D	
Date:		Monday, February 09, 2009				Sheet 25 of 45			

For Wireless LAN

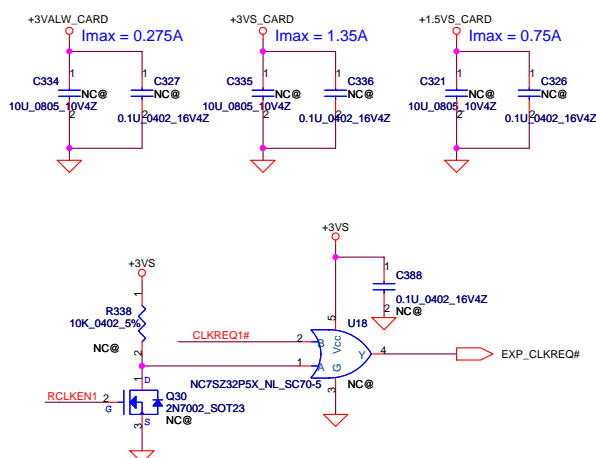
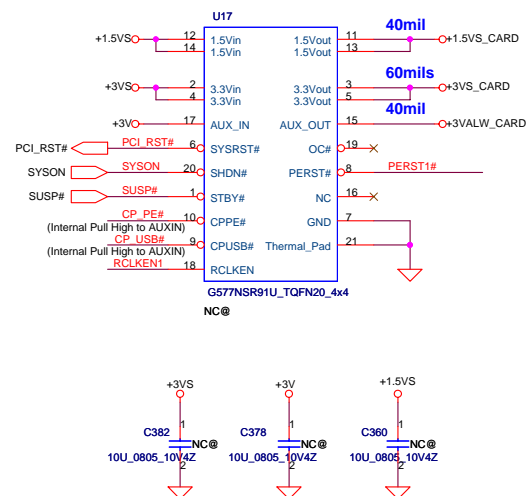


Mini Card Power Rating			
Power	Primary Power (mA)		Auxiliary Power (mA)
	Peak	Normal	Normal
+3VS	1000	750	
+3V	330	250	250 (wake enable)
+1.5VS	500	375	5 (Not wake enable)

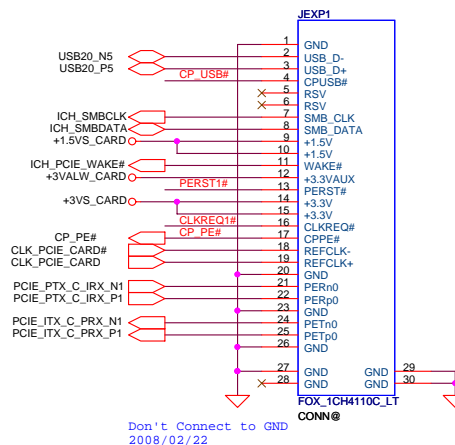


Security Classification		Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2009/01/21		Deciphered Date		2010/01/21		Title	
								SCHEMATIC, M/B A4851	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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		Rev D	
						401636			
						Date		Monday, February 09, 2009	
						Sheet		27 of 45	

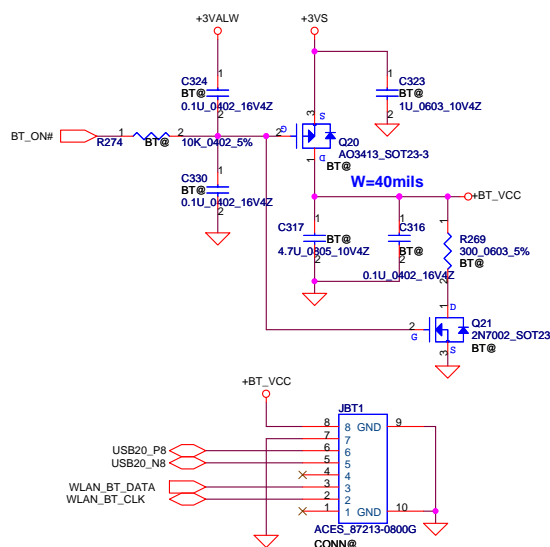
New Card Power Switch



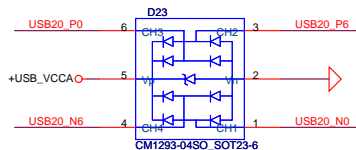
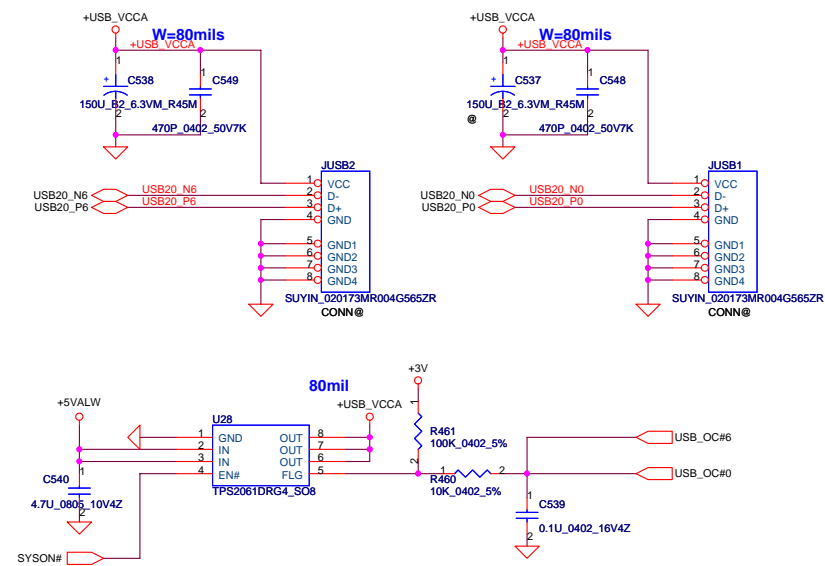
New Card Socket (Left/TOP)



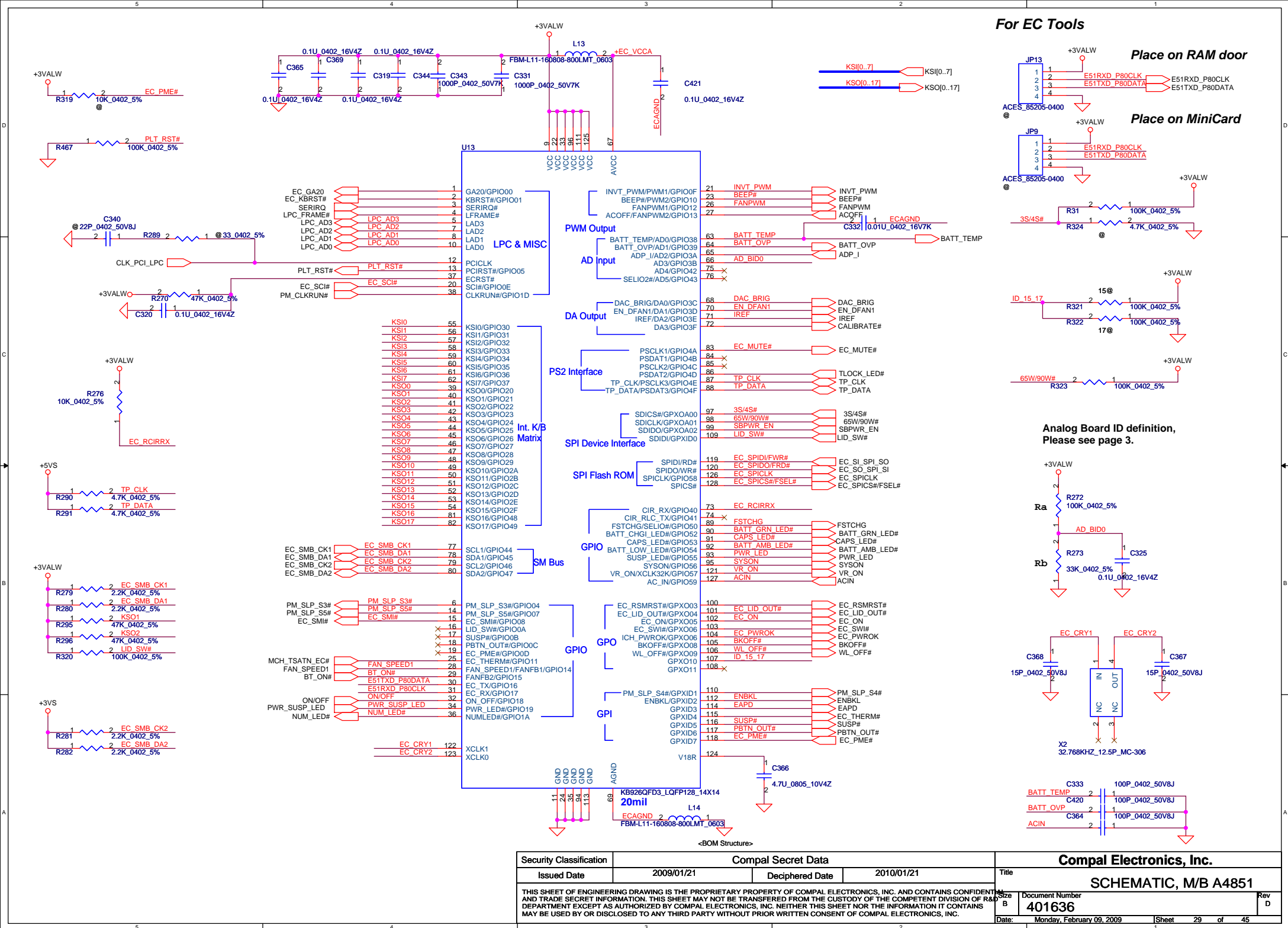
Bluetooth Conn.

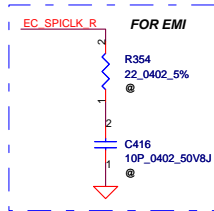
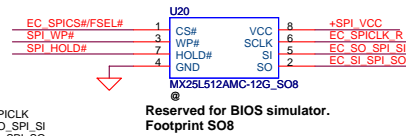
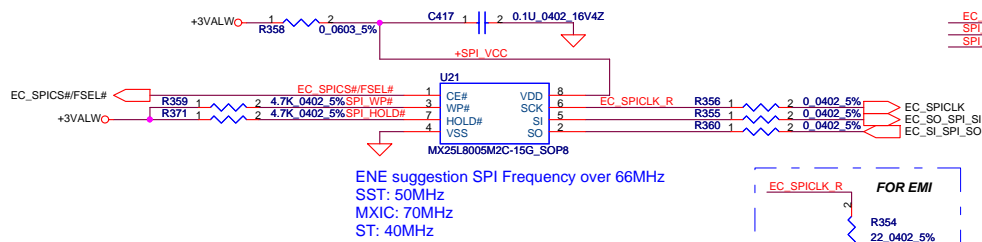


USB CONN.

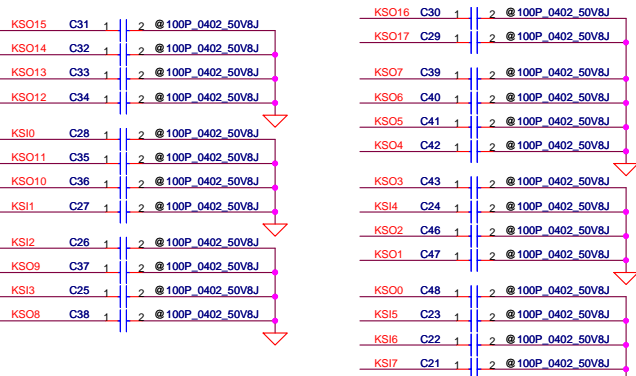
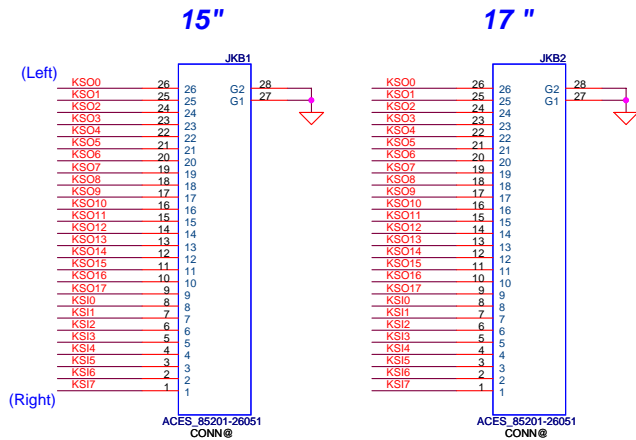
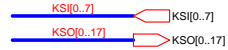


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHMATIC, M/B A4851
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				Doc No	401636
				Doc Date	Monday, February 09, 2009
				Sheet	28 of 45

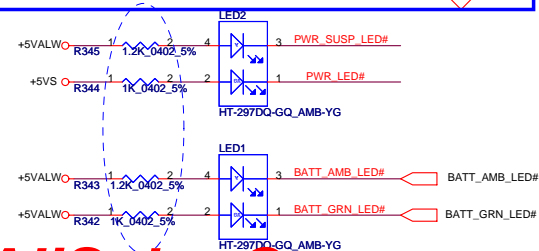




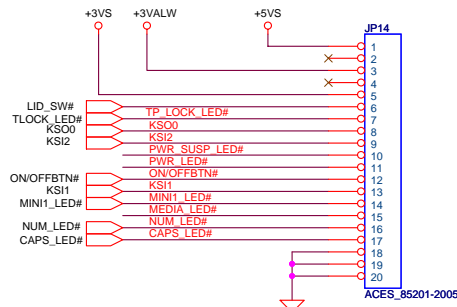
INT_KBD Conn.



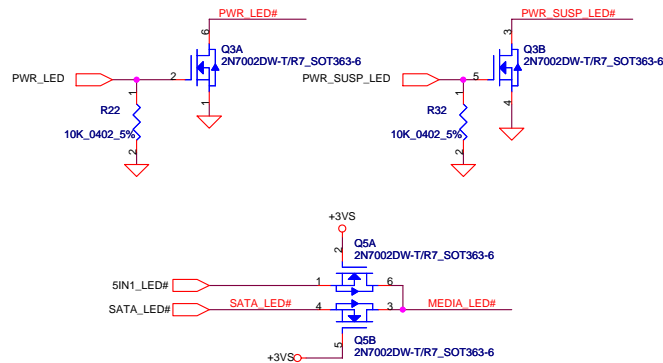
Compal Footprint



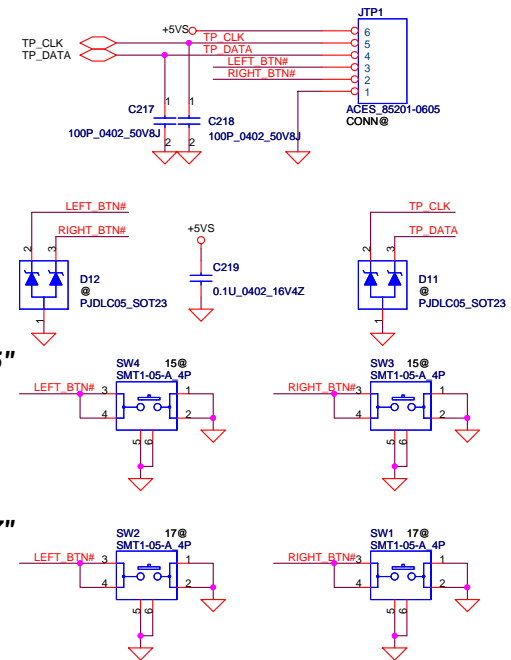
To POWER/B



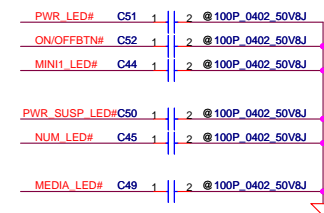
	KSO0
KSI1	WL_BTN#
KSI2	TLOCK_BTN#
KSI3	
KSI4	
KSI5	



To TP/B Conn.

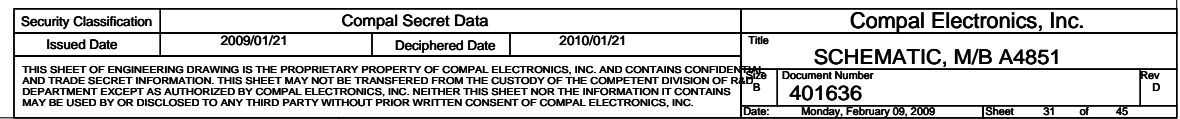


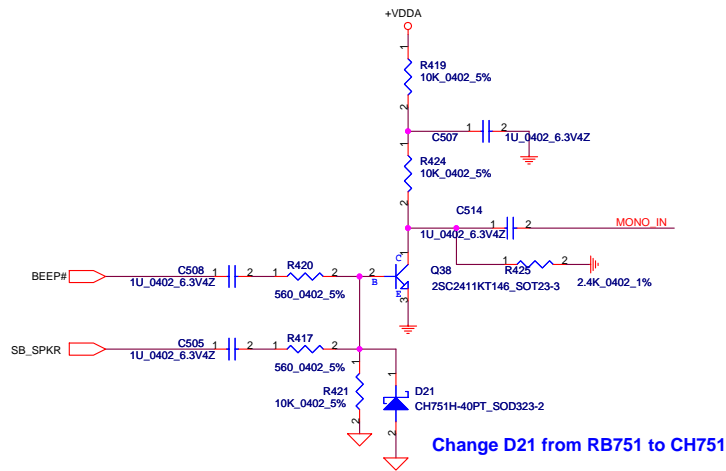
FOR EMI



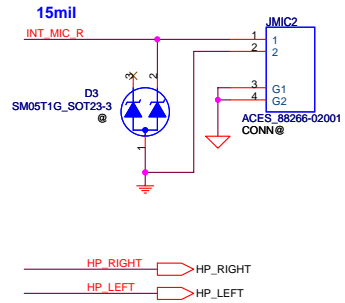
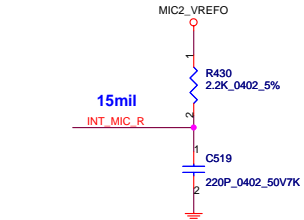
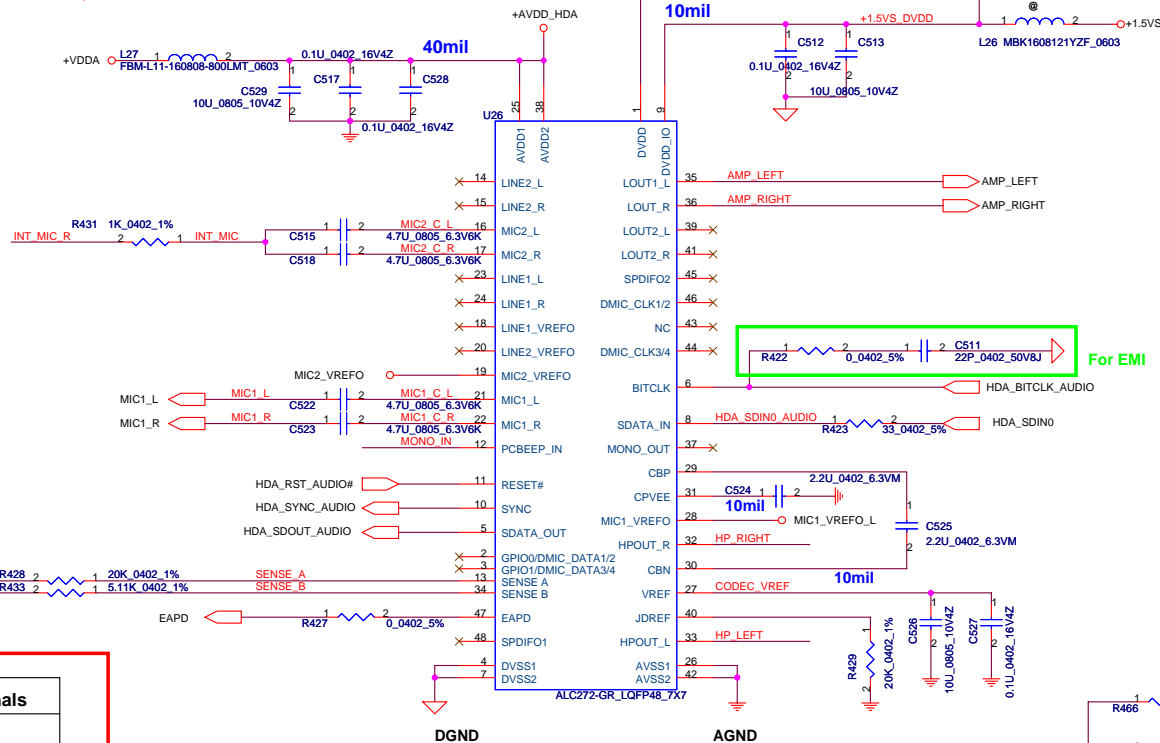
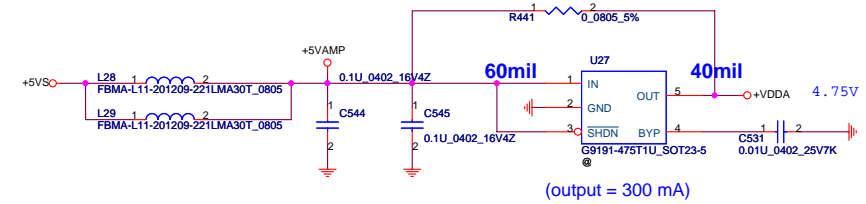
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
				401636
				Rev D
				Date: Monday, February 09, 2009
				Sheet 30 of 45

ON/OFF switch



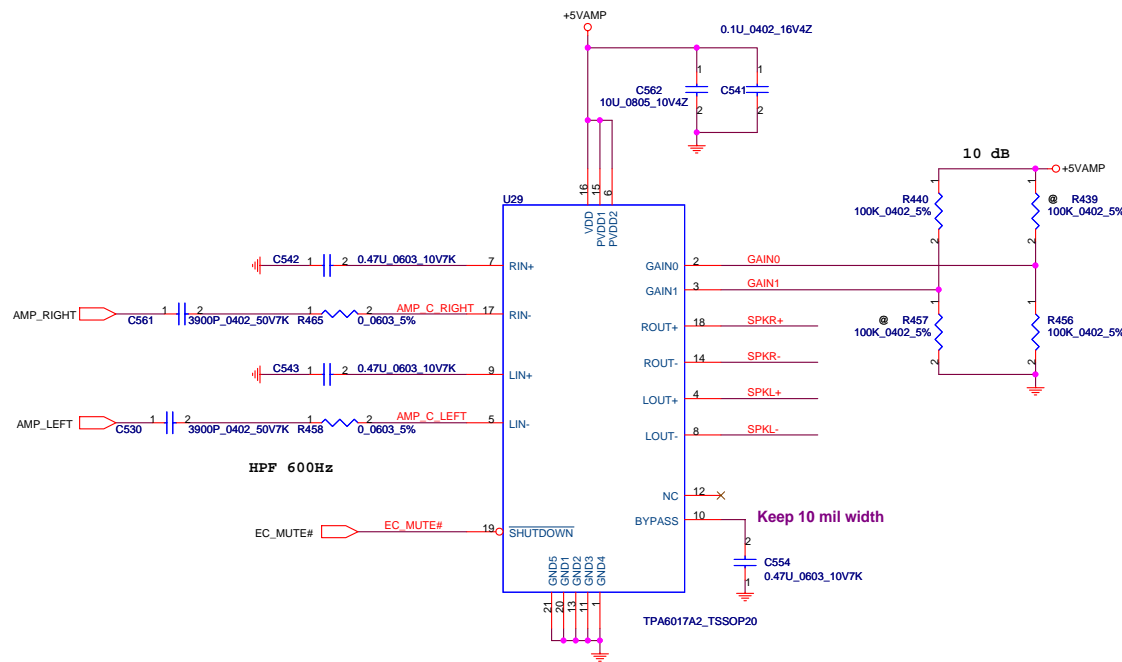


HD Audio Codec

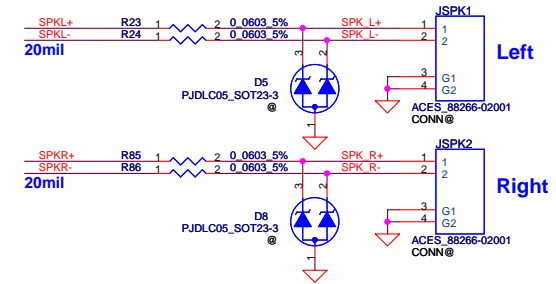


Sense Pin	Impedance	Codec Signals
SENSE A	39.2K	
	20K	PORT-B (PIN 21, 22)
	10K	
	5.1K	
SENSE B	39.2K	
	20K	
	10K	
	5.1K	PORT-H (PIN 32,33)

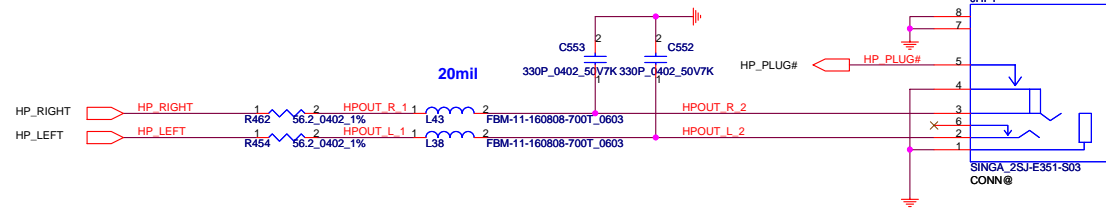
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 B	Document Number 401636	Rev D
				Date: Monday, February 09, 2009	Sheet 32	of 45



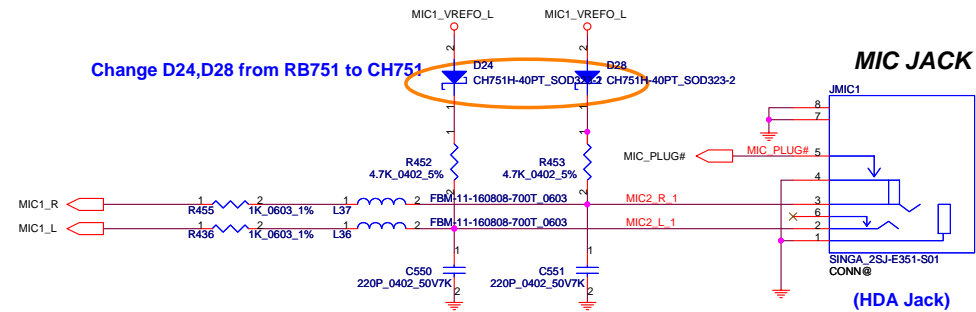
Int. Speaker Conn.



LINE Out/Headphone Out

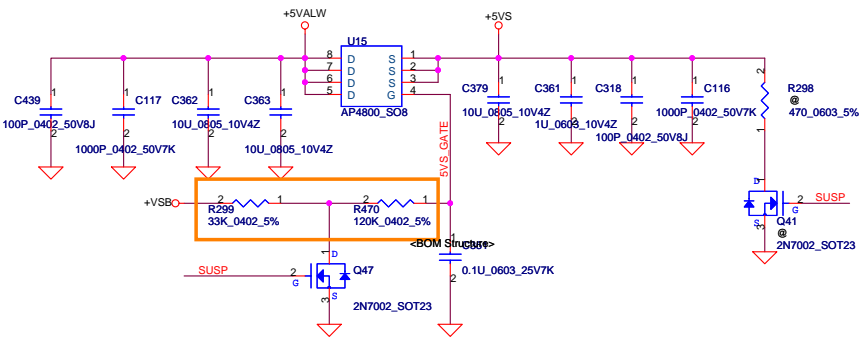


Change D24,D28 from RB751 to CH751

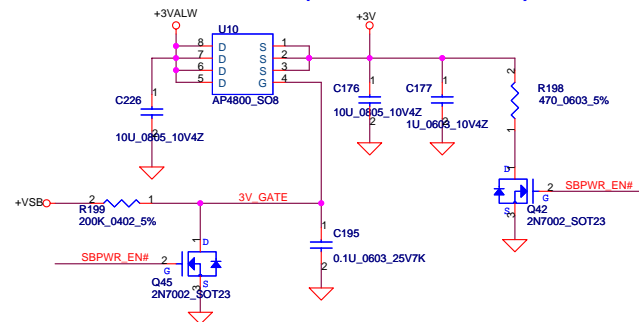


Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2009/01/21		Deciphered Date		2010/01/21		Title			
								SCHEMATIC, M/B A4851			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET 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		Rev D	
								401636			
								Date: Monday, February 09, 2009		Sheet 33 of 45	

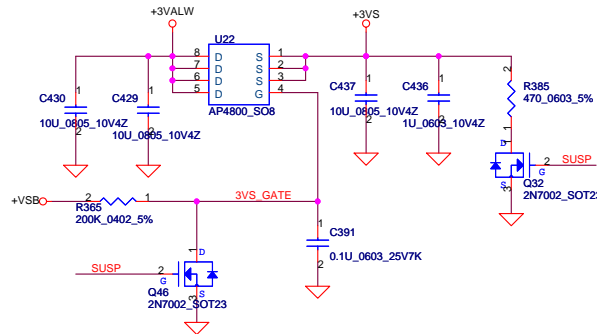
+5VALW TO +5VS



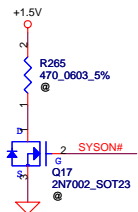
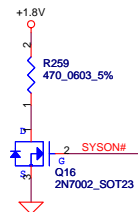
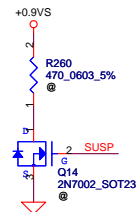
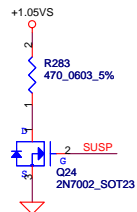
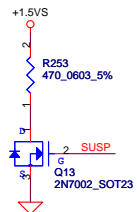
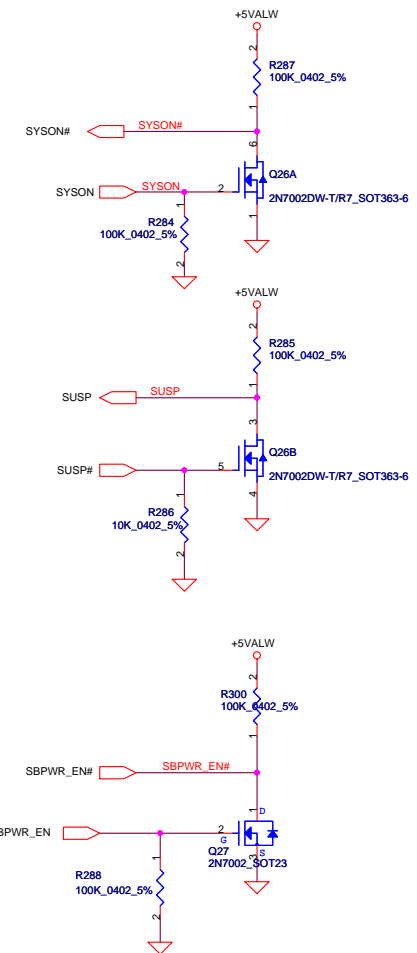
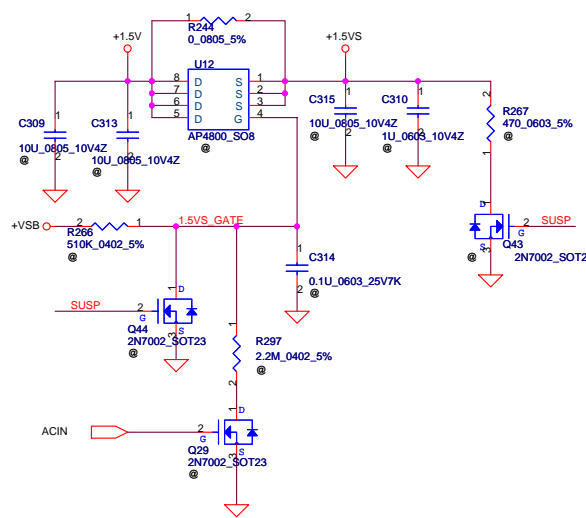
+3VALW TO +3V_SB(ICH8M AUX Power)



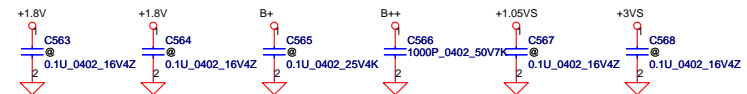
+3VALW TO +3VS



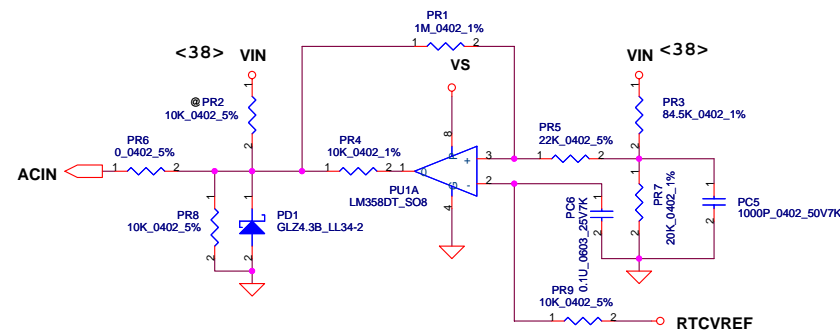
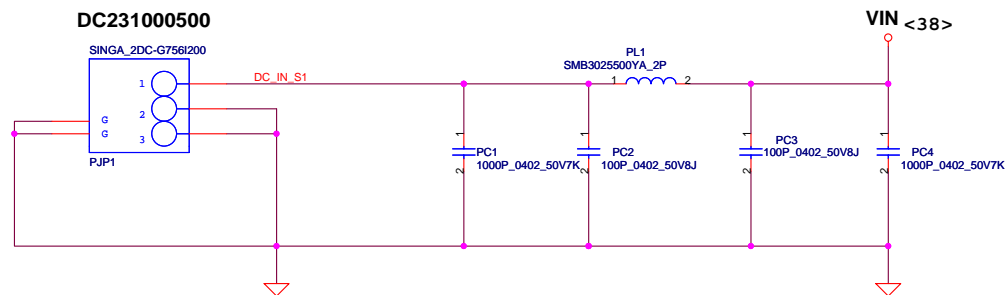
+1.5V to +1.5VS



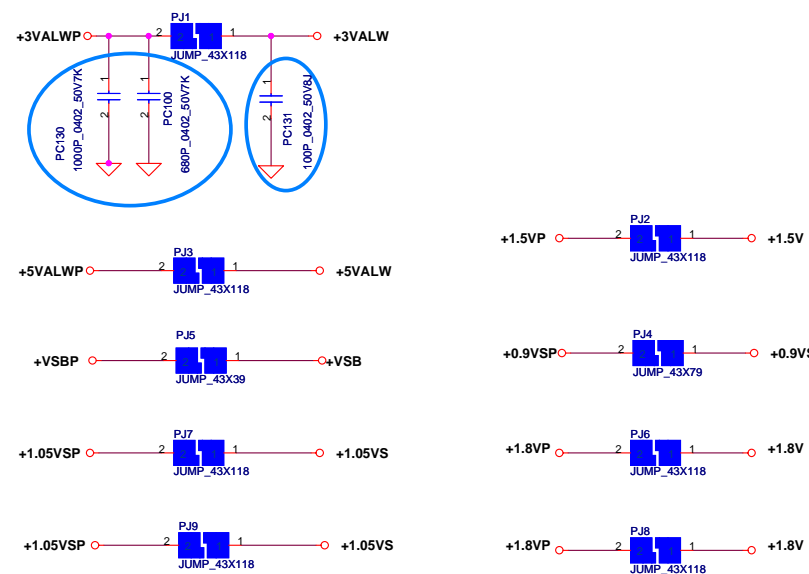
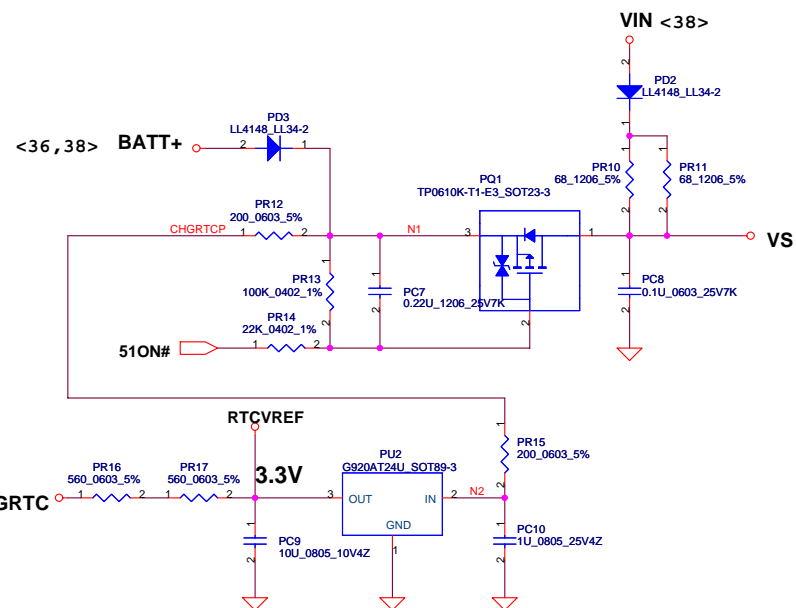
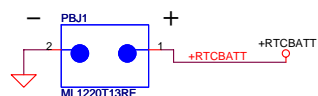
Reserve for EMI request



Security Classification		Compal Secret Data				Compal Electronics, Inc.							
Issued Date		2009/01/21		Deciphered Date		2010/01/21		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 TO ANY OTHER DIVISION OR 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.								SCHEMATIC, M/B A4851					
								Document Number		401636		Rev D	
								Date		Monday, February 09, 2009		Sheet 34 of 45	

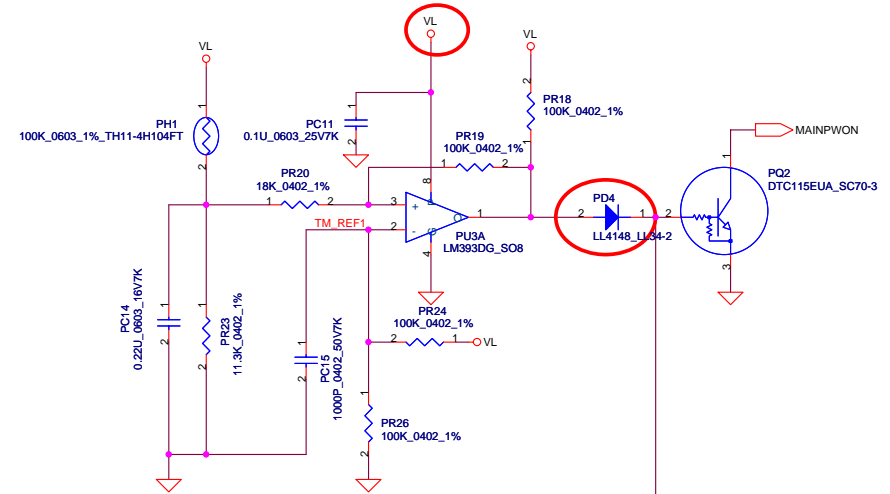


Vin Dectector			
	Min.	Typ	Max.
H-->L	16.976V	17.525V	17.728V
L-->H	17.430V	17.901V	18.384V

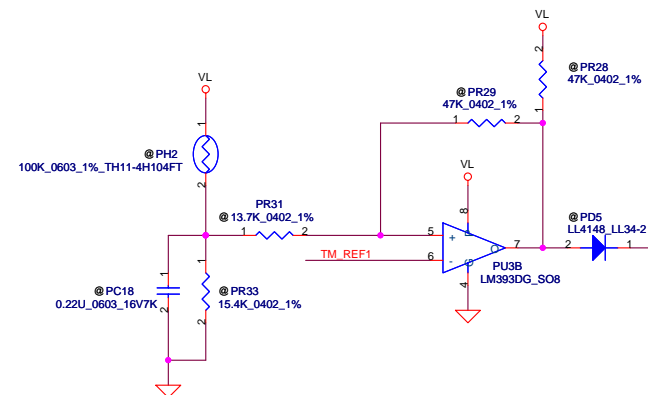


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	401636
				Date	Monday, February 09, 2009
				Sheet	35 of 45

PH1 under CPU botten side :
CPU thermal protection at 90 degree C
Recovery at 70 degree C

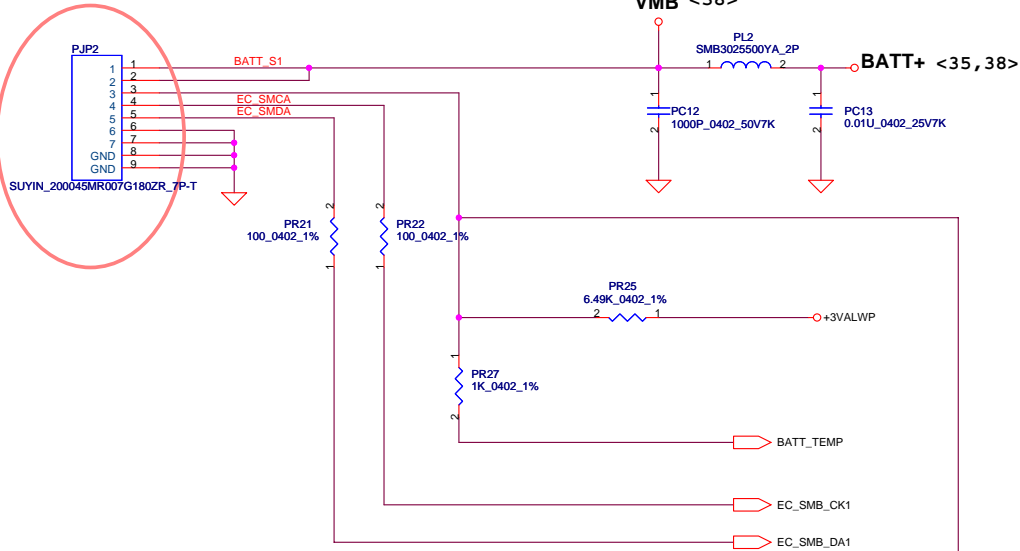


PH2 near main Battery CONN :
BAT. thermal protection at 90 degree C
Recovery at 70 degree C

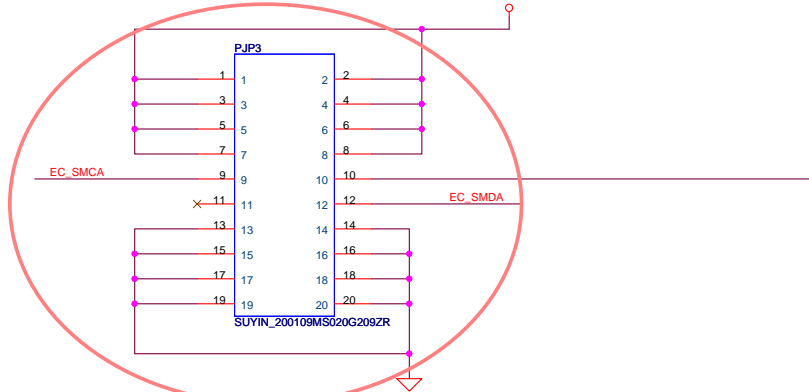


VMB <38>

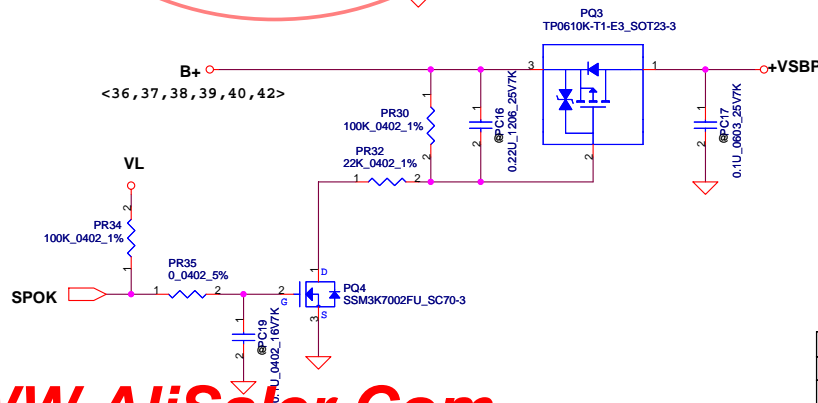
BATT+ <35,38>



VMB <38>



B+ <36, 37, 38, 39, 40, 42>



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
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	401636
				Date	Monday, February 09, 2009
				Sheet	36 of 45

The schematic diagram illustrates the internal circuitry of the ISL6237 power management IC. It features several key sections:

- Input Stages:** Includes B+ and B++ inputs with associated capacitors (PC128, PC129) and resistors (PR36, PR37).
- Feedback and Control:** Shows feedback loops for VREF2 and VREF1, with components like PC36, PC37, and PC38.
- Output Stages:** Details the +3VALWP and +5VALWP outputs, including MOSFET drivers (PQ5, PQ7, PQ8, PQ9), diodes (PD6, PD7), and output capacitors (PC30, PC31, PC32, PC33, PC34, PC35).
- Protection and Monitoring:** Includes current limit comparators (ILM1, ILM2) and thermal shutdown logic (TSD).

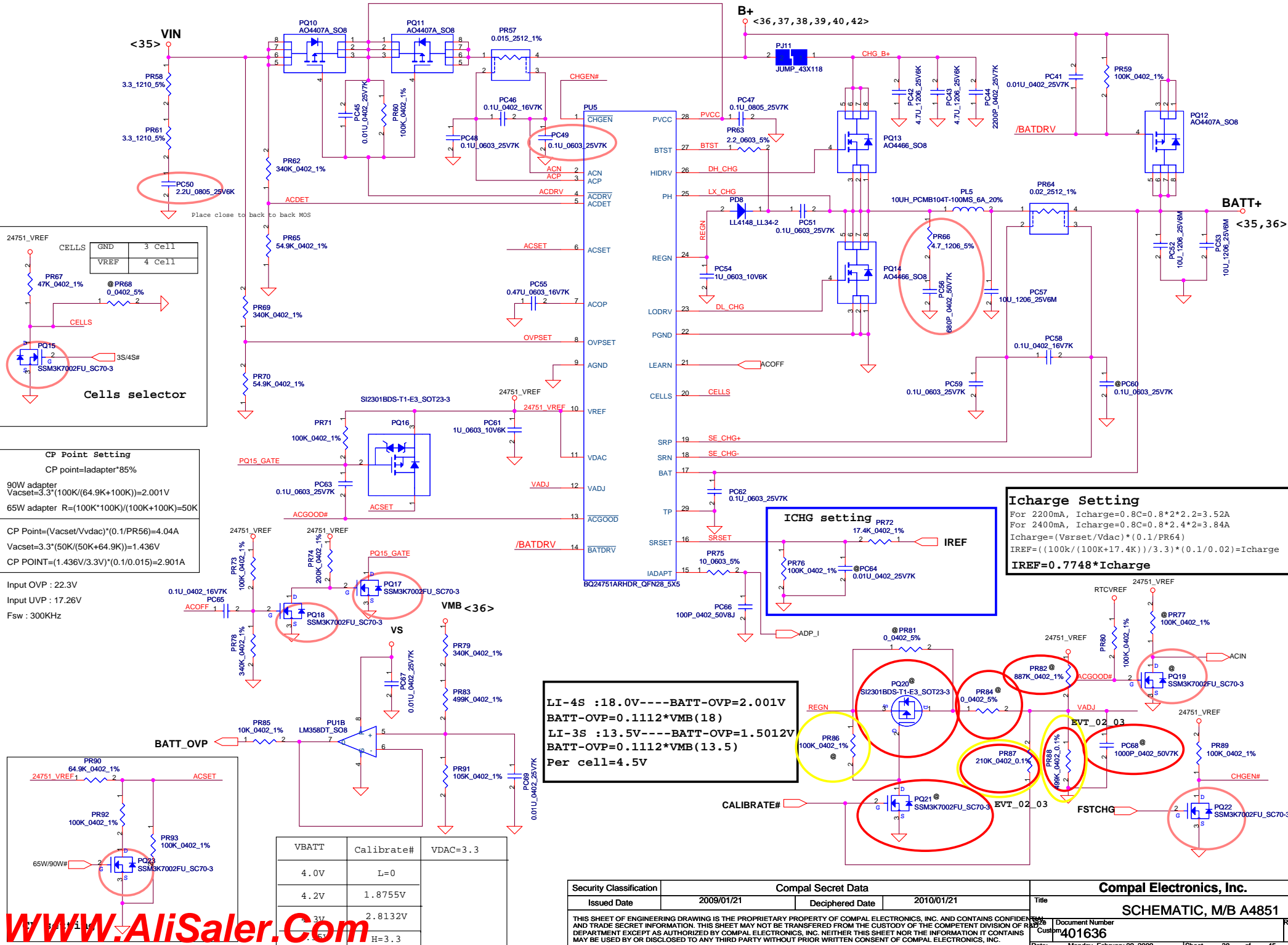
Key parameters and calculations provided in the diagram include:

- +3VALWP:** $I_{peak}=5.01A$; $I_{max}=0.7 \cdot I_{peak}=3.507A$; $R_{DS(on)}=18m\Omega$; $R_{DS(on)}=15m\Omega$ (typical); $V_{limit}=(5E-06 \cdot 330K)/10=165mV$; $I_{limit}=165mV/18m \sim 165mV/15m = 9.167A \sim 11A$; $I_{ocp}=I_{limit}+\Delta I/2 = 9.621A \sim 11.454A$; $\Delta I=0.9089A$ (Freq=300KHz).
- +5VALWP:** $I_{peak}=6.97A$; $I_{max}=0.7 \cdot I_{peak}=4.879A$; $R_{DS(on)}=18m\Omega$; $R_{DS(on)}=15m\Omega$ (typical); $V_{limit}=(5E-06 \cdot 330K)/10=165mV$; $I_{limit}=165mV/18m \sim 165mV/15m = 9.167A \sim 11A$; $I_{ocp}=I_{limit}+\Delta I/2 = 9.627A \sim 11.460A$; $\Delta I=0.921A$ (Freq=400KHz).

Security Classification		Compal Secret Data		Title	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	SCHEMATIC, M/B A4851	

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. ANY UNAUTHORIZED DISCLOSURE OR REPRODUCTION IS STRICTLY PROHIBITED.

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHMATIC, M/B A4851
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 D
				Document Number	
				401636	
				Date: Monday, February 09, 2009	Sheet 37 of 45



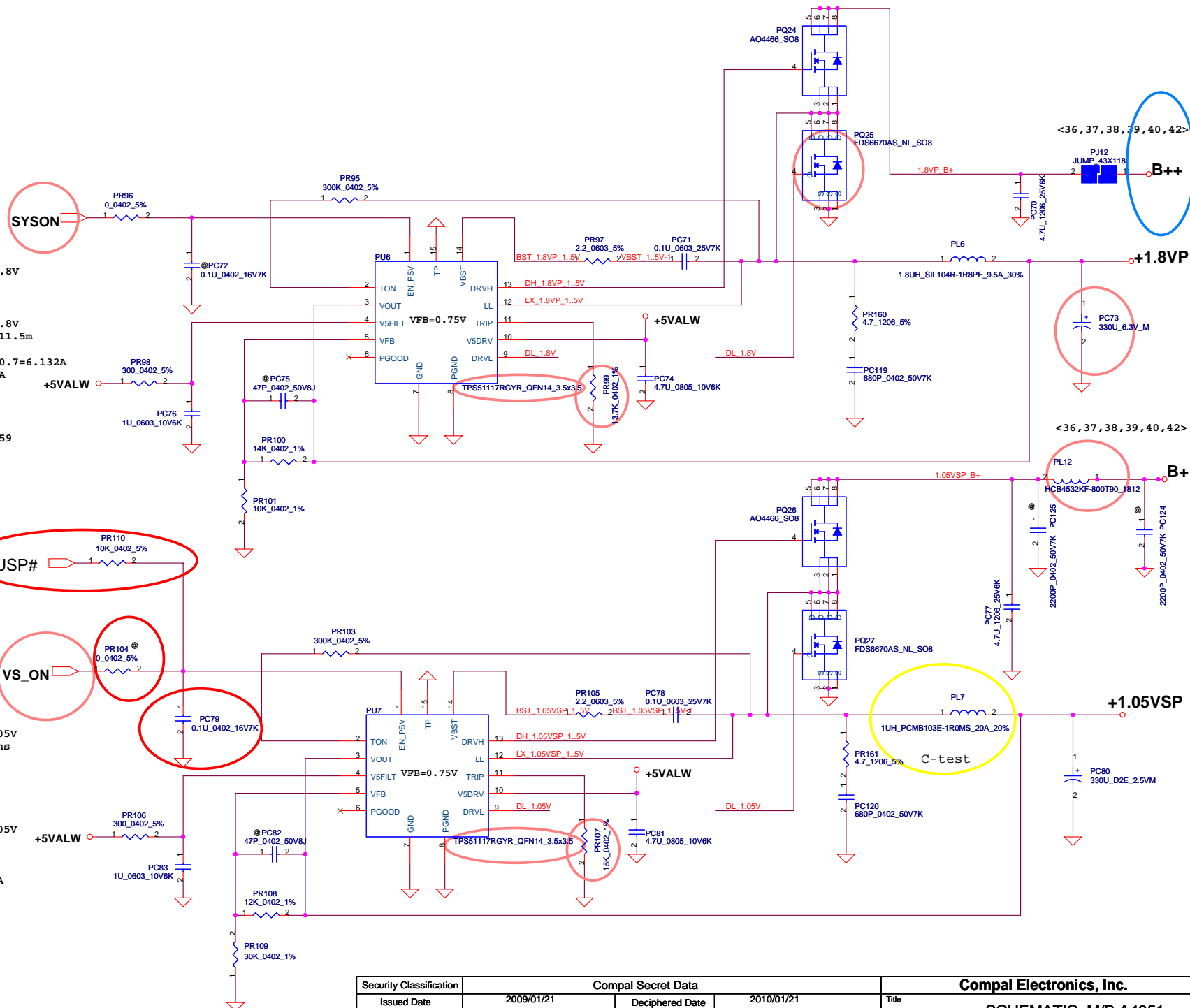
VFB=0.75V
 $V_o = VFB * (1 + PR100 / PR101) = 0.75 * (1 + 14K / 10K) = 1.8V$
 $F_{sw} = 262KHz$ (by Calculation Tool)

<V_o=1.8V> VFB=0.75V
 $V_o = VFB * (1 + PR100 / PR101) = 0.75 * (1 + 14K / 10K) = 1.8V$
 $F_{sw} = 262KHz$ Cout ESR=15m ohm R_{dson}(max)=11.5m
R_{dson}(min)=9m
I_{peak}=8.76A (by power budget), I_{max}=I_{peak}*0.7=6.132A
 $\Delta I = ((19 - 1.8) * (1.8 / 19)) / (L * F_{sw}) = 3.455A$
 $\Rightarrow 1/2 \Delta I = 1.7275A$
 $V_{trip} = R_{trip} * I_{0uA} = 13.7K * 10uA = 0.137V$
 $I_{ocpmin} = V_{trip} / R_{dsonmax} * 1.3 + 1.7275 = 10.8914A$
 $I_{ocpmax} = (0.137 / (0.009 * 1.1)) + 1.7275A = 15.5659$
 $I_{ocp} = 10.8914 - 15.5659A$

note: Reference AO4712&TPS51117 spec

VFB=0.75V
 $V_o = VFB * (1 + PR108 / PR109) = 0.75 * (1 + 12K / 30K) = 1.05V$
 $T_{on} = 19 * e^{-12 * 143000} / ((2/3) * V_o + 100mV / 19) + 50ns$
 $= 2.645e-7$ us
 $\Rightarrow V_o / V_{in} = D = T_{on} / T_s \Rightarrow T_s = 3.35us$
 $F_{sw} = 261KHz$ (by calculation tool)

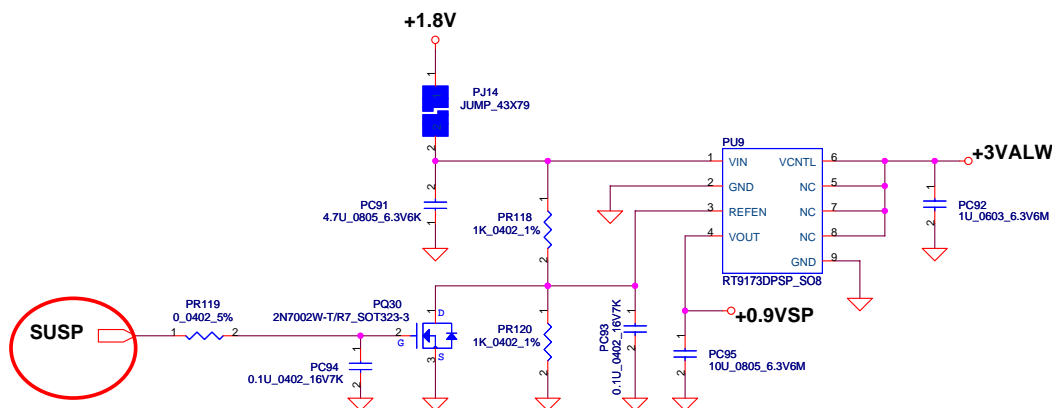
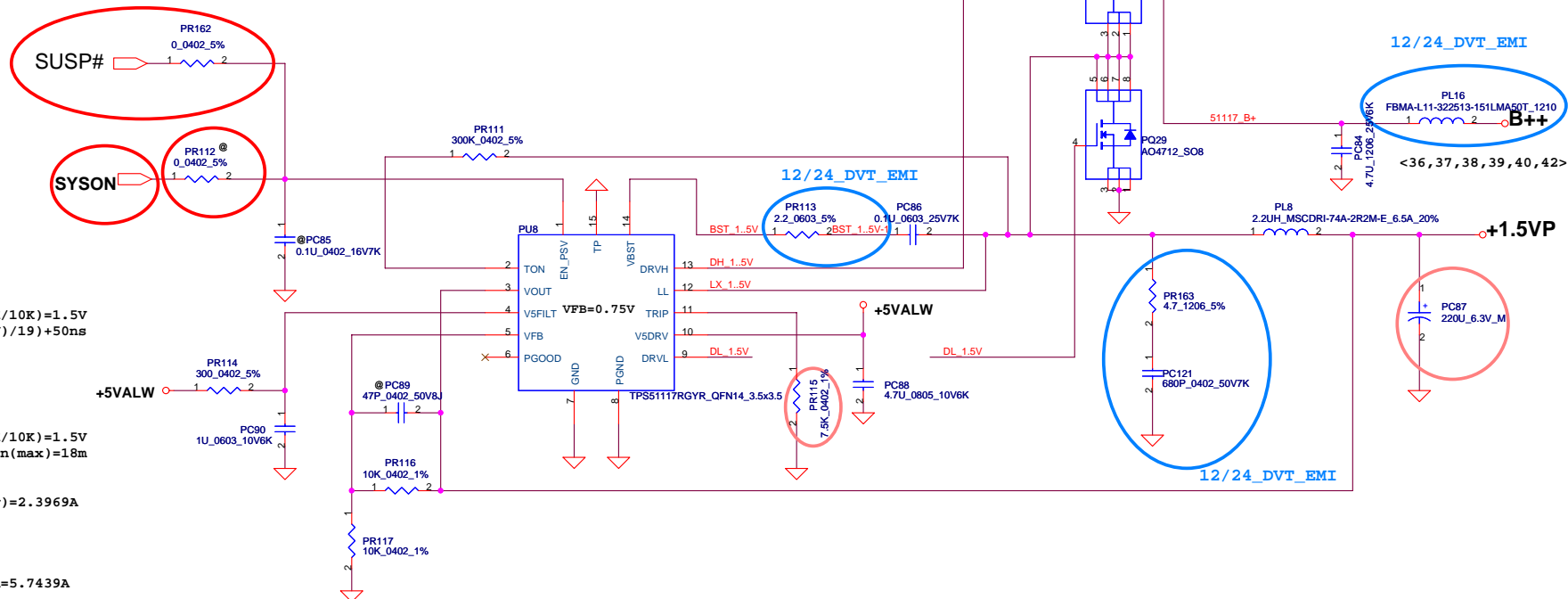
<V_o=1.05V> VFB=0.75V
 $V_o = VFB * (1 + PR108 / PR109) = 0.75 * (1 + 12K / 30K) = 1.05V$
 $F_{sw} = 261KHz$ Cout ESR=15m ohm
R_{dson}(max.)=11.5m R_{dson}(min)=9m
I_{peak}=9A, I_{max}=I_{peak}*0.7=6.3A
 $\Delta I = ((19 - 1.05) * (1.05 / 19)) / (L * F_{sw}) = 2.11A$
 $\Rightarrow 1/2 \Delta I = 1.055A$
 $V_{trip} = R_{trip} * I_{0uA} = 15K * 10uA = 0.15V$
 $I_{ocpmin} = V_{trip} / R_{dsonmax} * 1.3 + 1.055 = 11.0892A$
 $I_{ocpmax} = (0.15 / (0.009 * 1.1)) + 1.055A = 16.2073A$
 $I_{ocp} = 11.0892A - 16.2073A$



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
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	401636
				Date	Monday, February 09, 2009
				Sheet	39 of 45

VFB=0.75V
 $V_o = VFB * (1 + PR116 / PR117) = 0.75 * (1 + 10K / 10K) = 1.5V$
 $Ton = 19 * e^{-12 * 143000 * ((2/3) * V_o + 100mV) / 19} + 50ns$
 $= 2.645e-7 \text{ us}$
 $=> V_o / Vin = D = Ton / Ts \Rightarrow Ts = 3.35us$
 $Fsw = 262KHz$

<V_o=1.5V> VFB=0.75V
 $V_o = VFB * (1 + PR116 / PR117) = 0.75 * (1 + 10K / 10K) = 1.5V$
 $Fsw = 262KHz$ Cout ESR=15m ohm Rdson(max)=18m
Rdson(min)=15m
Ipeak=3.51A, Imax=2.457A
 $\Delta I = ((19 - 1.5) * (1.5 / 19)) / (L * Fsw) = 2.3969A$
 $\Rightarrow 1 / 2 \Delta I = 1.198A$
 $V_{trip} = R_{trip} * I_{peak} = 7.5K * 10uA = 0.075V$
 $I_{ocpmin} = V_{trip} / R_{dsonmax} * 1.2 + 1.198$
 $= 0.075 / (0.018 * 1.3) + 1.198 = 4.4035A$
 $I_{ocpmax} = (0.075 / (0.015 * 1.1)) + 1.198A = 5.7439A$
 $I_{ocp} = 4.4035A \sim 5.7439A$



Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	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	Rev D
				401636	
				Date	Monday, February 09, 2009
				Sheet	40 of 45

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

Page 1 of 3 of PWR

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1		Add PC57 :10U_1206_25V_6M	0.1	38	Add PC57 :10U_1206_25V_6M	20080902	EVT
2		Add snubber for EMI	0.1	42	Add snubber for EMI	20080915	EVT
3		Shift PC99 from +cpu_B+ to B+	0.1	42	Shift PC99 from +cpu_B+ to B+	20080915	EVT
4		Add PJ15 to B+	0.1	39	Add PJ15 to B+	20080915	EVT
5		PR135 and PR140 change to 0_0603_5%	0.1	42	PR135 and PR140 change to 0_0603_5%	20080915	EVT
6	Charger feedback trace too long	ADD PC49	0.2	38	ADD PC49	20081124	DVT
7	Power sequence error	+1.5VP: enable pin change from SUSP# to SYSON +0.9VSP: enable pin change from SUSP# to SUSP	0.2	40	+1.5VP: enable pin change from SUSP# to SYSON +0.9VSP: enable pin change from SUSP# to SUSP	20081124	DVT
8	Load line over spec	PR131: change to 5.76K_0402_1%	0.2	42	PR131: change to 5.76K_0402_1%	20081124	DVT
9	3D hang	Charger PR63:change to 2.2_0603_5% PR66:Add 4.7_1206_5% PC56:Add 680P_0402_50V7K	0.2	38	Charger PR63:change to 2.2_0603_5% PR66:Add 4.7_1206_5% PC56:Add 680P_0402_50V7K	20081124	DVT
10	3D hang	+1.8VP PR97:change to 2.2_0603_5% PR160:Add 4.7_1206_5% PC119:Add 680P_0402_50V7K	0.2	39	+1.8VP PR97:change to 2.2_0603_5% PR160:Add 4.7_1206_5% PC119:Add 680P_0402_50V7K	20081124	DVT
11	3D hang	+1.05VSP PR105:change to 2.2_0603_5% PR161:Add 4.7_1206_5% PC120:Add 680P_0402_50V7K Add bead between B+ and 1.05VSP_B+	0.2	39	+1.05VSP PR105:change to 2.2_0603_5% PR161:Add 4.7_1206_5% PC120:Add 680P_0402_50V7K Add bead between B+ and 1.05VSP_B+	20081124	DVT
12	EMI solution	+5VALW/+3VALW PR37: Add 4.7_1206_5% PR41: Add 4.7_1206_5% PC33: Add 680P_0402_50V7K PC34: Add 680P_0402_50V7K PR38: change to 2.2_0603_5% PR39: change to 2.2_0603_5%	0.2	37	+5VALW/+3VALW PR37: Add 4.7_1206_5% PR41: Add 4.7_1206_5% PC33: Add 680P_0402_50V7K PC34: Add 680P_0402_50V7K PR38: change to 2.2_0603_5% PR39: change to 2.2_0603_5%	20081124	DVT
13	EMI solution	+CPU CORE PR158: Add 4.7_1206_5% PR159: Add 4.7_1206_5% PC117: Add 680P_0402_50V7K PC118: Add 680P_0402_50V7K PR135: change to 2.2_0603_5% PR140: change to 2.2_0603_5%	0.2	42	+CPU CORE PR158: Add 4.7_1206_5% PR159: Add 4.7_1206_5% PC117: Add 680P_0402_50V7K PC118: Add 680P_0402_50V7K PR135: change to 2.2_0603_5% PR140: change to 2.2_0603_5%	20081124	DVT
16	EMI solution	+CPU CORE PC122: Reserve 2200P_0402_50V7K on B+	0.2	42	+CPU CORE PC122: Reserve 2200P_0402_50V7K on B+	20081124	DVT
17	EMI solution	+1.05VSP PR105 : change to 2.2_0603_5% PL12 : Add HCB4532KF-800T90_1812 PC124: Reserve 2200P_0402_50V7K on B+ PC125: Reserve 2200P_0402_50V7K on B+	0.2	39	+1.05VSP PR105 : change to 2.2_0603_5% PL12 : Add HCB4532KF-800T90_1812 PC124: Reserve 2200P_0402_50V7K on B+ PC125: Reserve 2200P_0402_50V7K on B+	20081124	DVT

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	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 THE 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	
				401636	
				Date:	Monday, February 09, 2009
				Sheet	42 of 45

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase	
18	Battery & HW solution	Charger PQ20:Reserve(@)SI2301BDS-T1-E3_SOT23-3 PQ21:Reserve(@)SSM3K7002FU_SC70-3 PR82:Reserve(@)887K_0402_1% PR84:Reserve(@)0_0402_5% PC68:Reserve(@)1000P_0402_50V7K PR87:change to 210K_0402_1% PR88:change to 499K_0402_1% +1.05VSP PR104: Reserve(@)0_0402_5% PR110: change to 10K_0402_5% PR79 : Add 0.1U_0402_16V7K +1.5VP PR112: Reserve(@) 0_0402_5%	0.2		Charger PQ20:Reserve(@)SI2301BDS-T1-E3_SOT23-3 PQ21:Reserve(@)SSM3K7002FU_SC70-3 PR82:Reserve(@)887K_0402_1% PR84:Reserve(@)0_0402_5% PC68:Reserve(@)1000P_0402_50V7K PR87:change to 210K_0402_1% PR88:change to 499K_0402_1%	20081124	DVT	
				38				
				39				
				40	+1.05VSP PR104: Reserve(@)0_0402_5% PR110: change to 10K_0402_5% PR79 : Add 0.1U_0402_16V7K +1.5VP PR112: Reserve(@) 0_0402_5%			
19	EMI soultion	+3VALWP/+3VALW PC100: 680P_0402_50V7K PC130: 1000P_0402_50V_7K PC131: 1000P_0402_50V_8J +1.5VP ADD PR113: 2.2_0603_5% ADD PR163: 4.7_1206_5% ADD PC121: 680P_0402_50V7K ADD PL16 :FBMA-L11-322513-151LMA50T_1210	0.3		+3VALWP/+3VALW PC100: 680P_0402_50V7K PC130: 1000P_0402_50V_7K PC131: 1000P_0402_50V_8J	20081224	PVT	
				35				
				40	+1.5VP ADD PR113: 2.2_0603_5% ADD PR163: 4.7_1206_5% ADD PC121: 680P_0402_50V7K ADD PL16 :FBMA-L11-322513-151LMA50T_1210			
20	POWER Solution	+3VALWP/+5VALWP RT8206- Fix output 5V for HW no HDMI	0.3	37	+3VALWP/+5VALWP PR42: Reserve 61.9K_0402_1%	20090111	PVT	
					COMPAL ELECTRONICS			
					Title SCHEMATIC, M/B A4851			
					Size			Document Number 401636
					Date: Monday, February 09, 2009	Sheet 43 of 45	Rev D	

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
21	EMI solution	Reduce the Noise	0.3	37	Add PL 13 (HCB4532KF-800T90_1812) Add PL 14 (FBMA-L11-322513-151LMA50T_1210) Add PL 15 (FBMA-L11-322513-151LMA50T_1210) Add PC126 (100P_0402_50V8J) Add PC128 (100P_0402_50V8J) Add PC129 (1000P_0402_50V7K)	20090112	PVT
22	Battery solution	Adjust battery voltage	0.3	38	Reserve PR86 (100K_0402_1%)	20090112	PVT
23	Saturation current	1.8u choke saturation current too small	0.3	39	change PL7 to 1UH_PCMB103E-1R0MS_20A_20%	20090113	PVT
24	GP BOM	Tolerance: K:+-10% ; J:+-5%	0.4	42	Change PC106 to 33P_0402_50V8J Change PC108 to 33P_0402_50V8J Change PC110 to 33P_0402_50V8J Change PC114 to 33P_0402_50V8J	20090123	PVT
<div>COMPAL ELECTRONICS</div> <div>Title</div> <div>SCHEMATIC, M/B A4851</div> <div> <div>Size A</div> <div>Document Number</div> <div>401636</div> <div>Rev D</div> </div> <div>Date: Monday, February 09, 2009</div> <div>Sheet 44 of 45</div>							

- 11/11
- 1. Page 17;Un-POP R412,Q35
 - 2. Page 32;Un-POP R340,POP R339
 - 3. Page 32;Un-POP D3
 - 4. Change C13,C269,C282,C482 P/N to SGA1933D10 (ESR From 15 to 9 ohm)
 - 5. DEL HDMI Schematic (del HDMI@/NHDMI@)

- 11/19
- 1. Change C538,C539 to B size 150U
 - 2. POP D11,D12,D29 and change P/N to SCA00000A00

- 11/24
- 1.Add LAN_CLKREQ# on CLK Gen and AR8132

- 11/25
- 1.Add C563~C568 for EMI request
 - 2.Add L44 for EMI request
 - 3.Add +3VS and +3V for SB HDA bus
 - 4.Add 0 ohm resistor for Audio DVDD_IO bus
 - 5.Add 0 ohm between +1.5V and +1.5VS
 - 6.Add 3VS_GATE schematic on +3VALW to +3VS
 - 7.remove c318 and D16
 - 8.add R400 and C439 for soft-off
 - 9.add R244 to connect +1.5v to +1.5vs

- 11/25
- 1. Change R325,R311 Form 11ohm to 22 ohm
 - 2. Change D21,D24,D28 from RB751 to CH751
 - 3. Reserve C485,C282

- 12/18
- 1. Change R299 to 47K,ADD R470 (100K)

- 1/20
- 1. Change R299 to 22K and R470 to 120K
 - 2. Add R570 (150U) in pgae 23
 - 3.change board ID R273 to 33K

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/21	Deciphered Date	2010/01/21	Title	SCHEMATIC, M/B A4851
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 401636
Date: Monday, February 09, 2009		Sheet 45 of 45		Rev D	