

Compal Confidential

HBL51 Schematics Document

Intel Yonah Processor with 945GM/945PM + DDRII + ICH7M

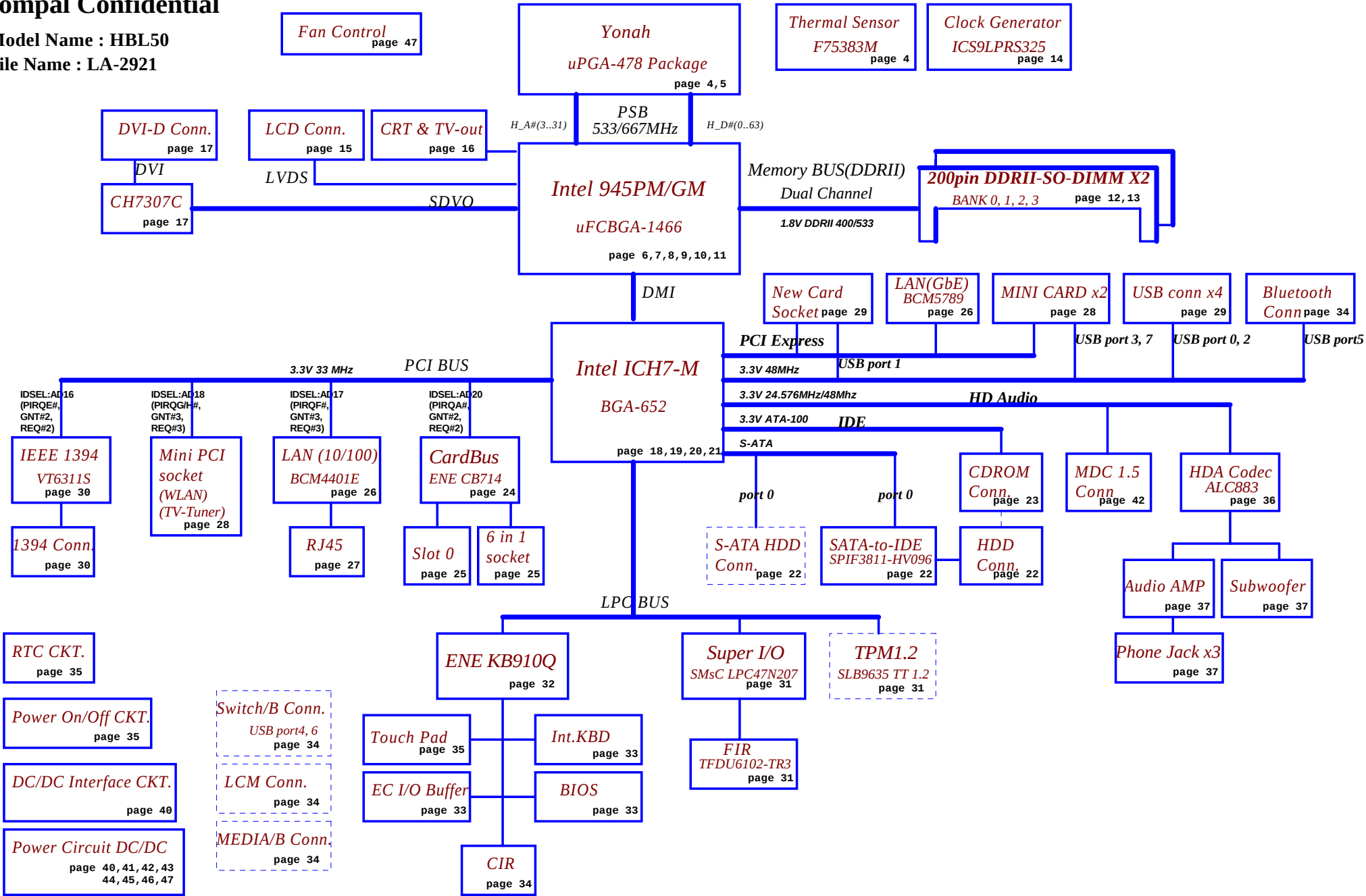
2005-11-03

REV: 0.2

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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.				Cover Page	
				Size B	Document Number HBL51 LA-3081P
				Date: Wednesday, November 09, 2005	Sheet 1 of 47

Compal Confidential

Model Name : HBL50
File Name : LA-2921



Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	NA	NA	NA
B+	AC or battery power rail for power circuit.	NA	NA	NA
+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
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8V	1.8V power rail for DDR	ON	ON	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	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
CardBus(SD)	AD20	2	PIRQA/PIRQB
1394	AD16	0	PIRQE
LAN(10/100)	AD17	3	PIRQF
Mini-PCI(WLAN/TV-Tuner)	AD18	1	PIRQG/PORQH

EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	Fintek F75383M	1001 100X b
EEPROM(24C16/02)	1010 000X b		
GMT G781-1	1001 101X b		

ICH7M SM Bus address

Device	Address
Clock Generator (ICS9LPRS325AKLFT_MLF72)	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

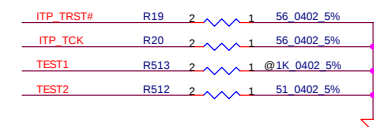
Board ID	PCB Revision
0	0.1
1	
2	
3	
4	
5	
6	
7	

SKU ID Table

SKU ID	SKU
0	
1	GM
2	
3	
4	
5	
6	
7	

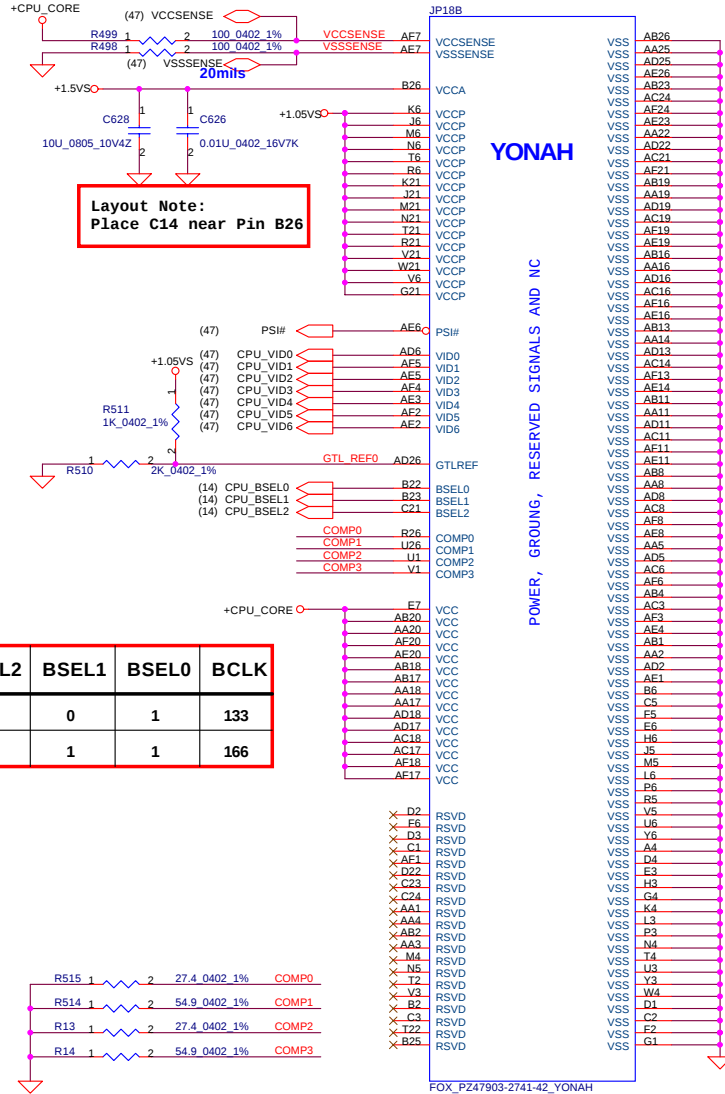
BTO Option Table

BTO Item	BOM Structure
UMA's DVI	7307@
LAN(10/100)	4401@
LAN(GIGA)	5789@
MINI CARD1	MINI1@
MINI CARD2	MINI2@
SATA-to-IDE	8040@
PATA	PATA@
GRAPEVINE	GRA@
MEDIA/B	MEDIA@
CIR	CIR@
FIR	FIR@
GENEVA	GEN@
LCM	LCM@
TVOUT	TVOUT@
1394	6311S@
CARDREADER	4IN1@
Sub-woofer	SUB@
5789&5787	8789@
4401&5789	0189@



Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title Yonah (1/2)		
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
				Custlbrn	HBL51 LA-3081P	0.2
Date:				Wednesday, November 09, 2005	Sheet	4 of 47

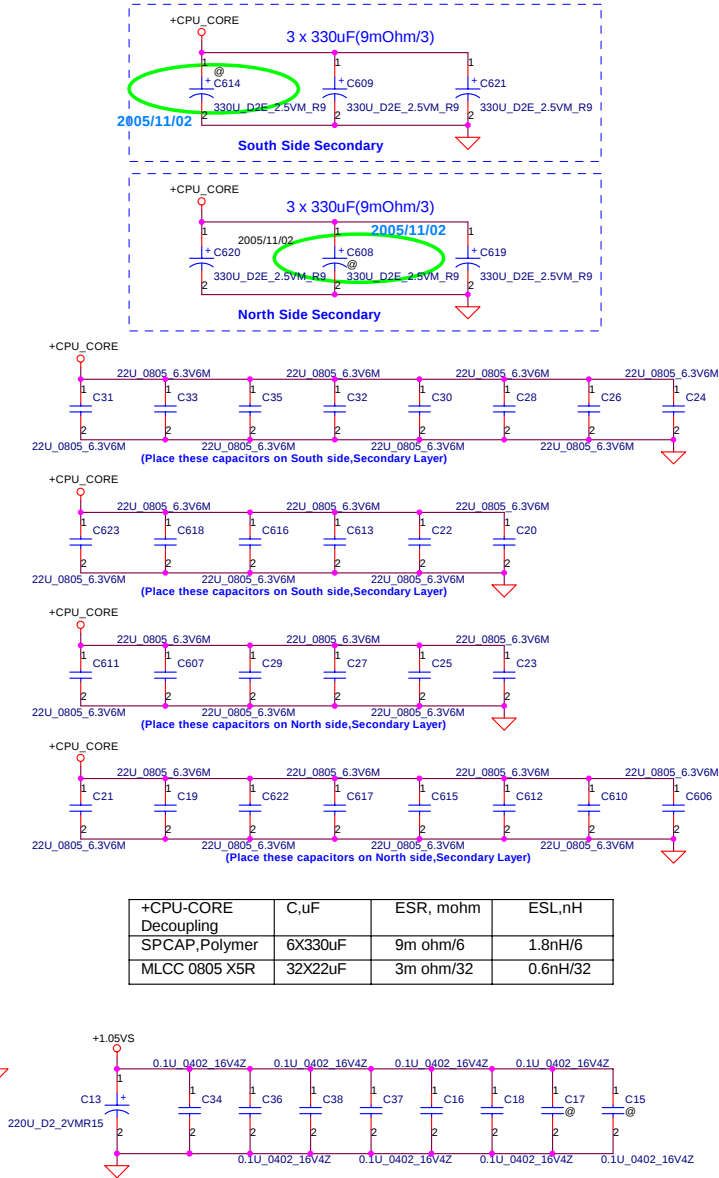
Layout Note:
Route VCCSENSE and VSSSENSE traces at 27.40hms with 50 mil spacing.
Place PU and PD within 1 inch of CPU.



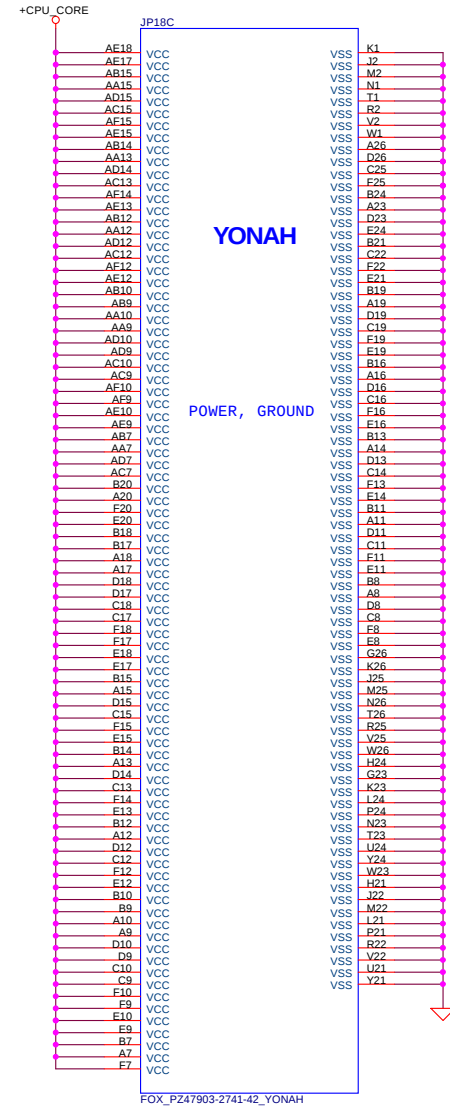
BSEL2	BSEL1	BSEL0	BCLK
0	0	1	133
0	1	1	166

TRACE CLOSELY CPU < 0.5'

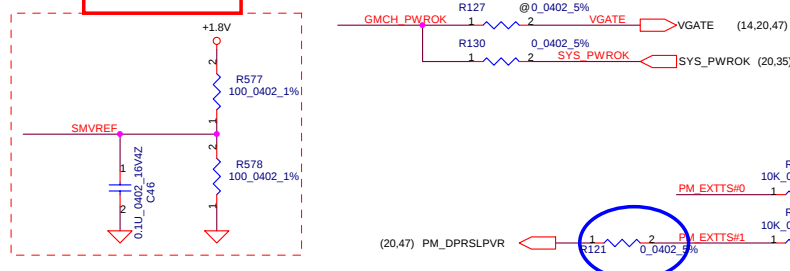
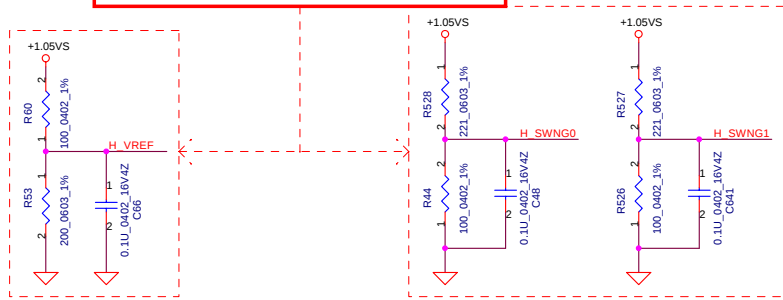
COMP0, COMP2 layout : Width 18mils and Space 25mils (27.40hms)
COMP1, COMP3 layout : Space 25mils (550hms)

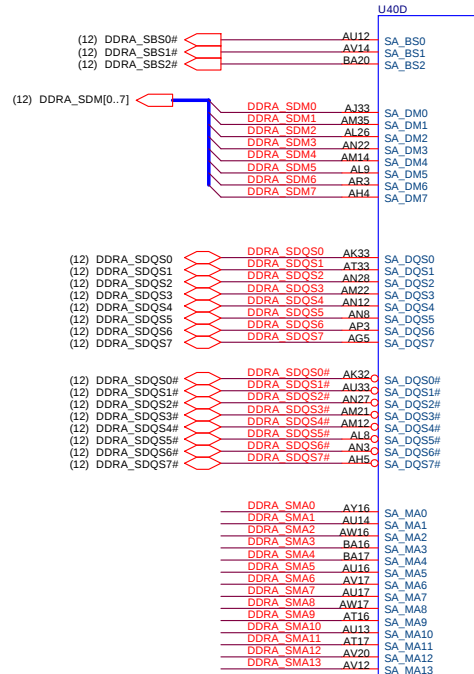


+CPU-CORE Decoupling	C,uF	ESR, mohm	ESL,nH
SPCAP, Polymer	6X330uF	9m ohm/6	1.8nH/6
MLCC 0805 X5R	32X22uF	3m ohm/32	0.6nH/32

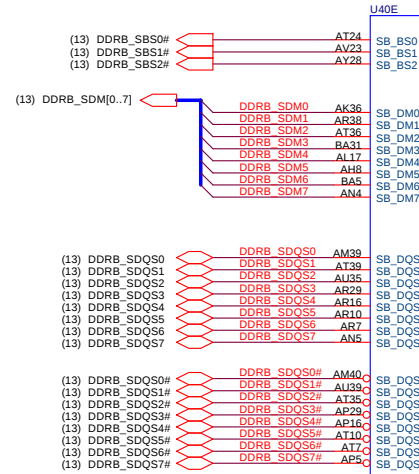
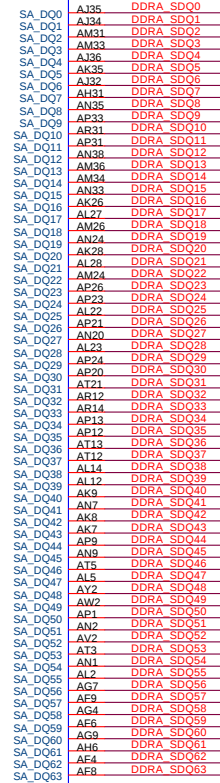


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Yonah (2/2)	
Size B	Document Number	HBL51 LA-3081P		Date	Wednesday, November 09, 2005
Sheet 5 of 47		Rev 0.2		nreyn@nortel.com	

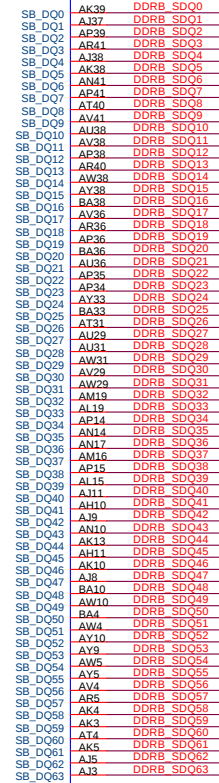




DDR SYS MEMORY A

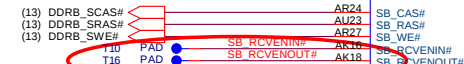


DDR SYS MEMORY B



check layout

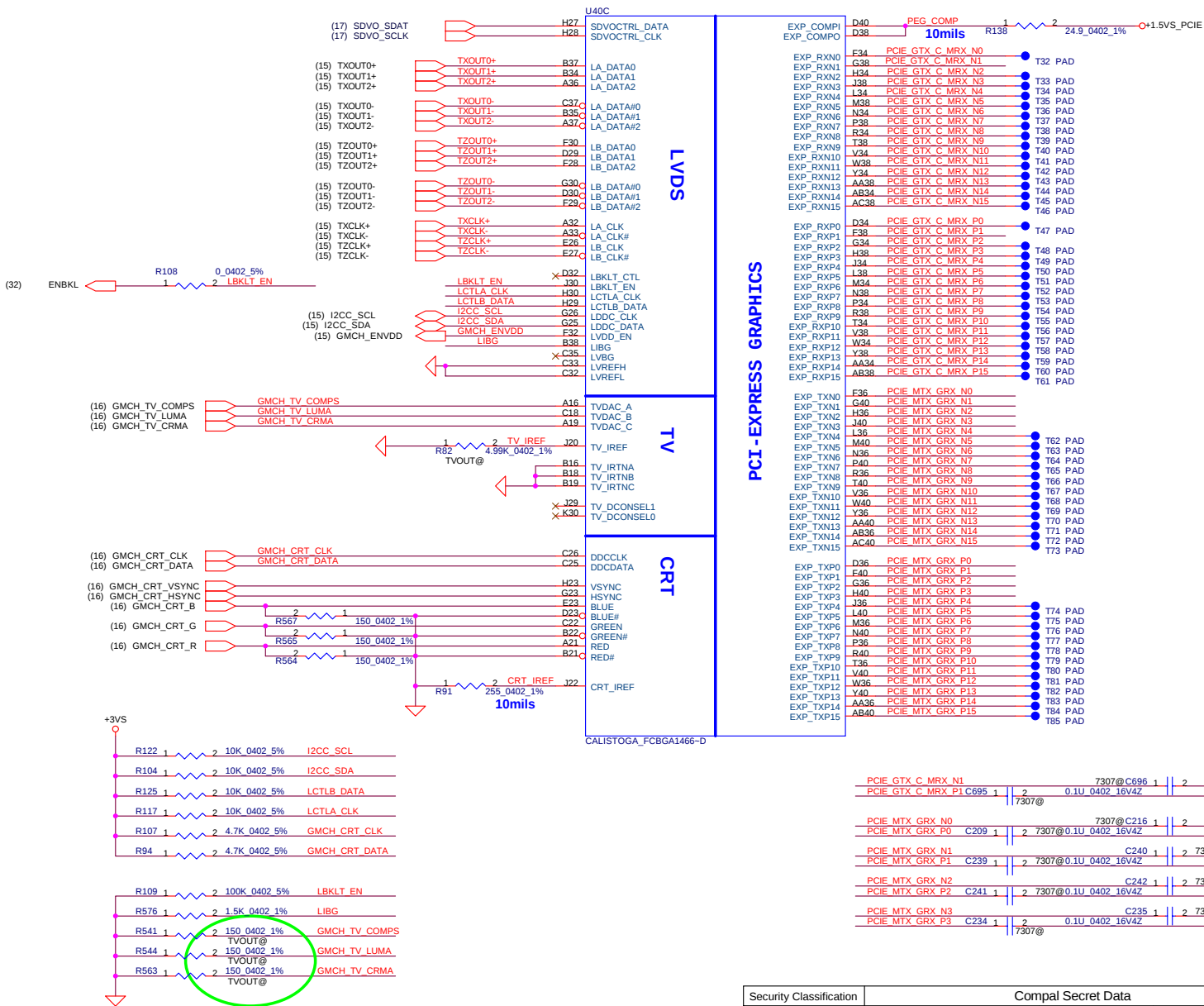
CALISTOGA_FCBGA1466-D



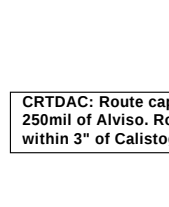
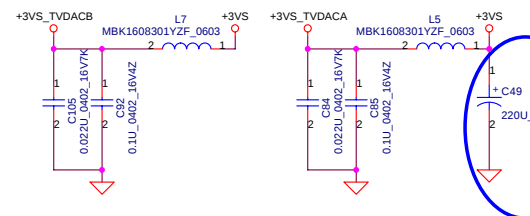
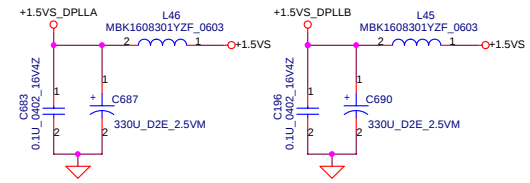
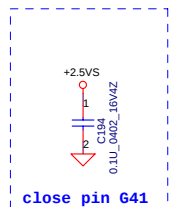
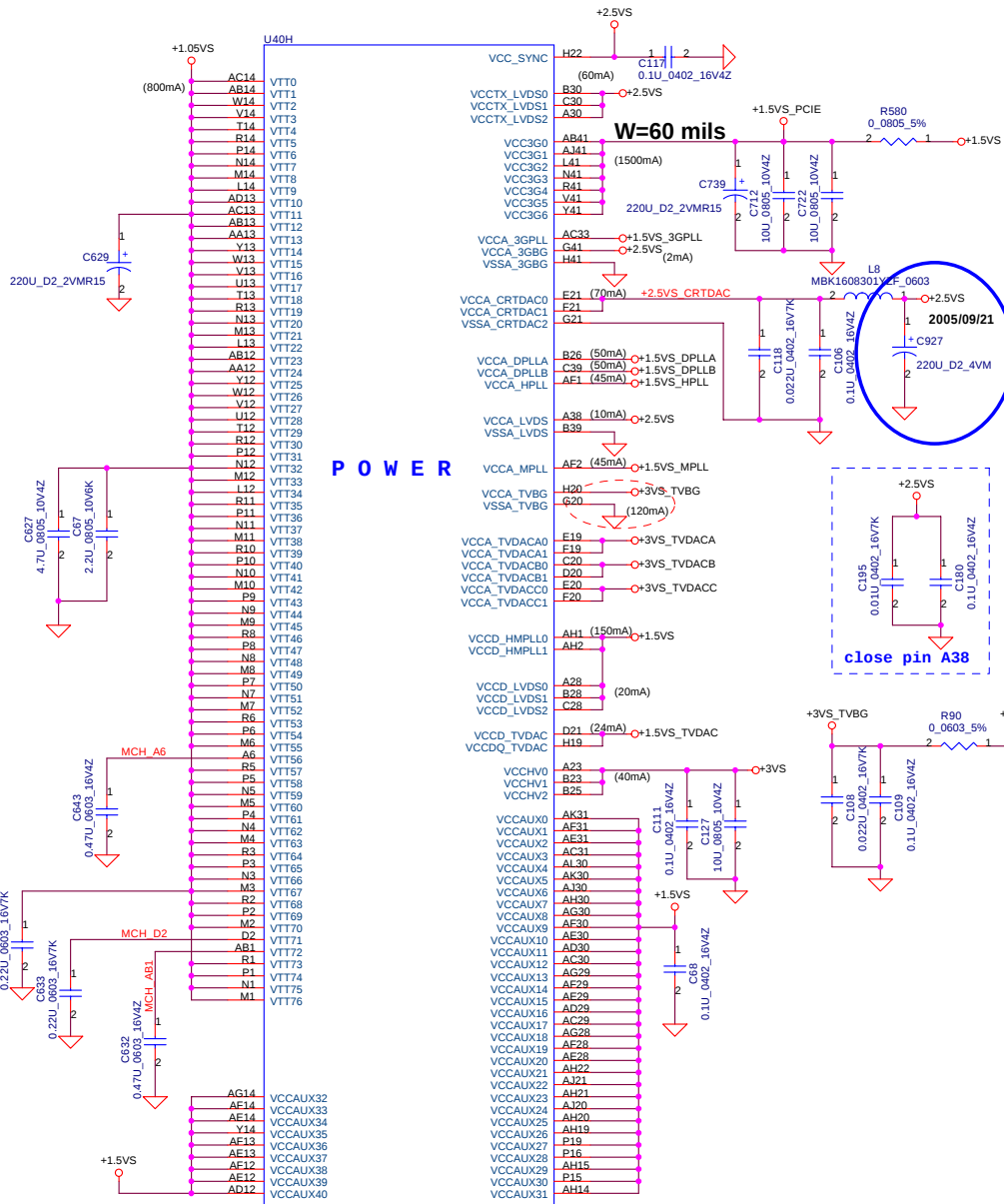
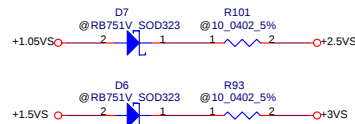
check layout

CALISTOGA_FCBGA1466-D

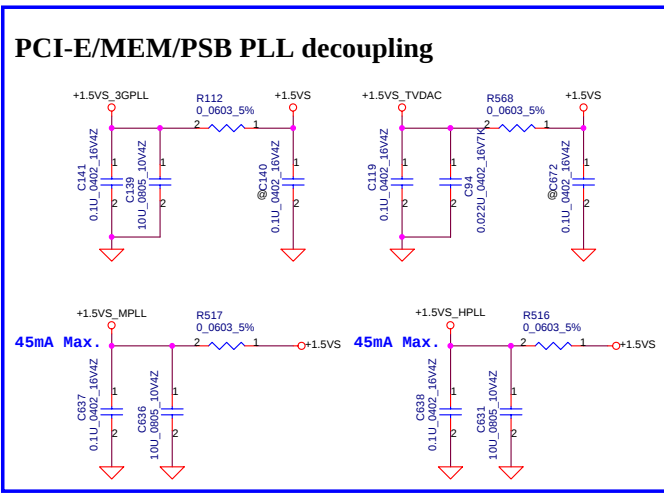
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 B	Document Number
				HBL51 LA-3081P	
				Date: Wednesday, November 09, 2005	Rev 0.2
				Calistoga (2/6)	
				HBL51 LA-3081P	
				Wednesday, November 09, 2005	
				Sheet 17 of 47	



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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 B	Document Number
				HBL51 LA-3081P	
				Date:	Wednesday, November 09, 2005
				Sheet	8 of 47
				Rev	0.2



CRTDAC: Route caps within 250mil of Alviso. Route FB within 3" of Calistoga

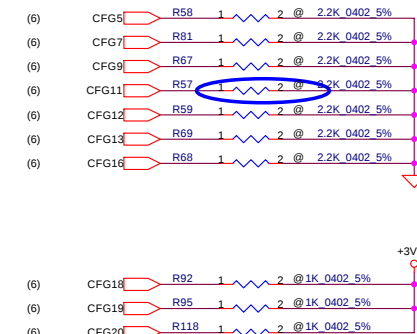
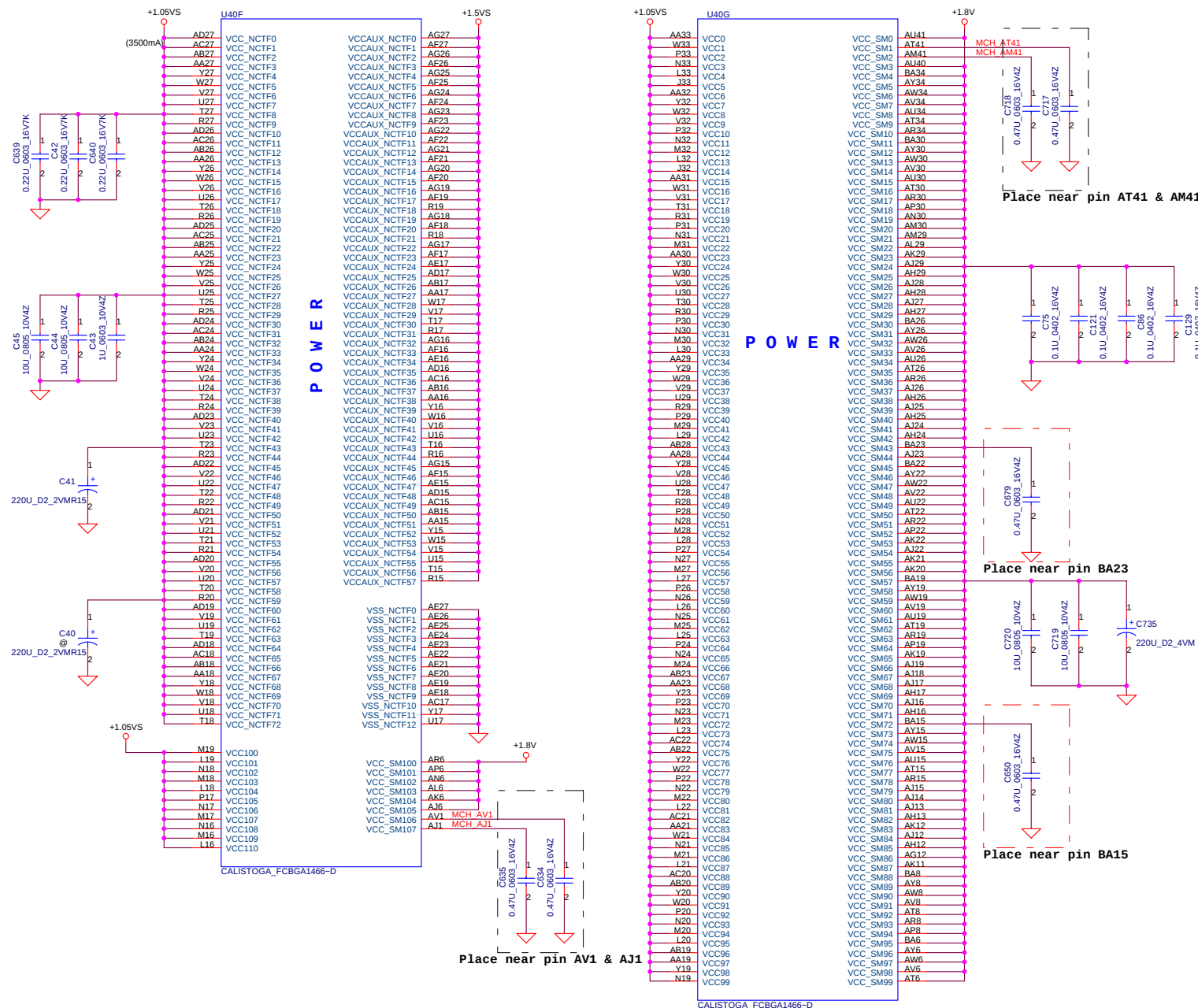


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 B	Document Number
				HBL51 LA-3081P	
				Date:	Wednesday, November 09, 2005
				Sheet	9 of 47

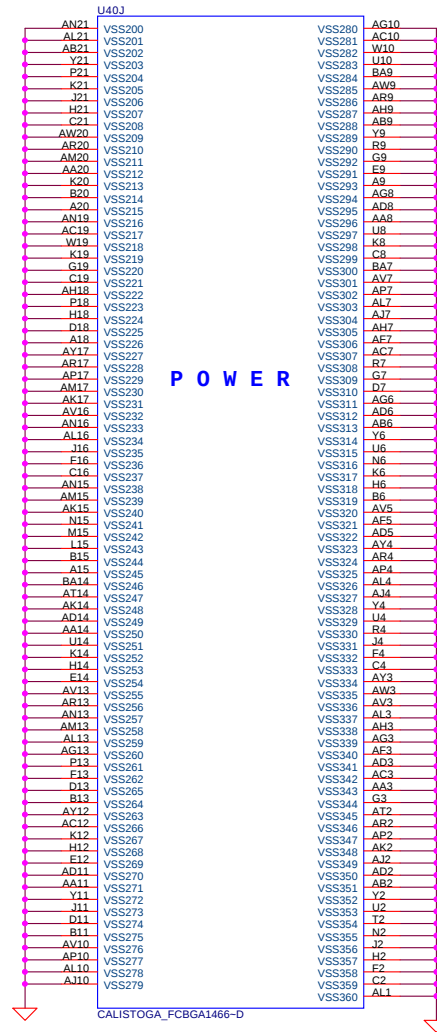
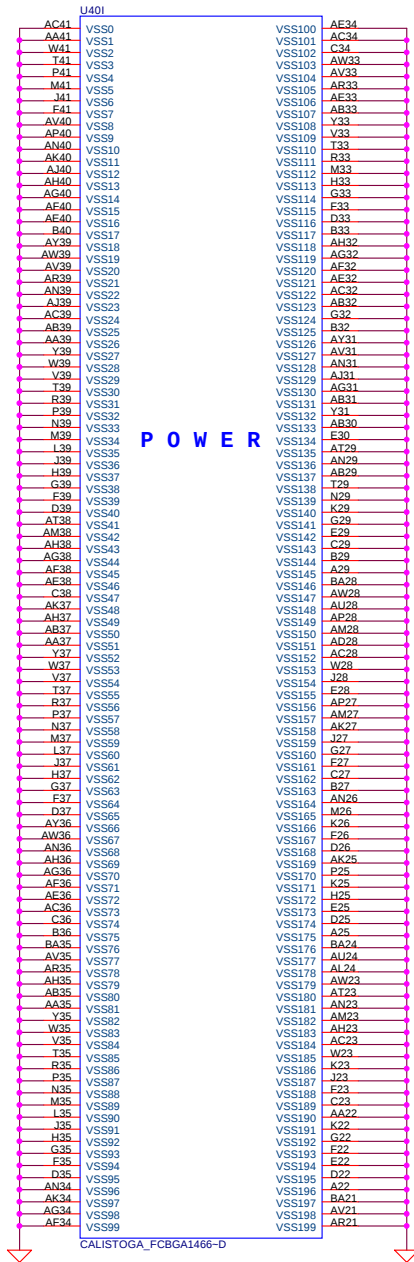
Strap Pin Table

CFG[3:17] have internal pull up
CFG[19:18] have internal pull down

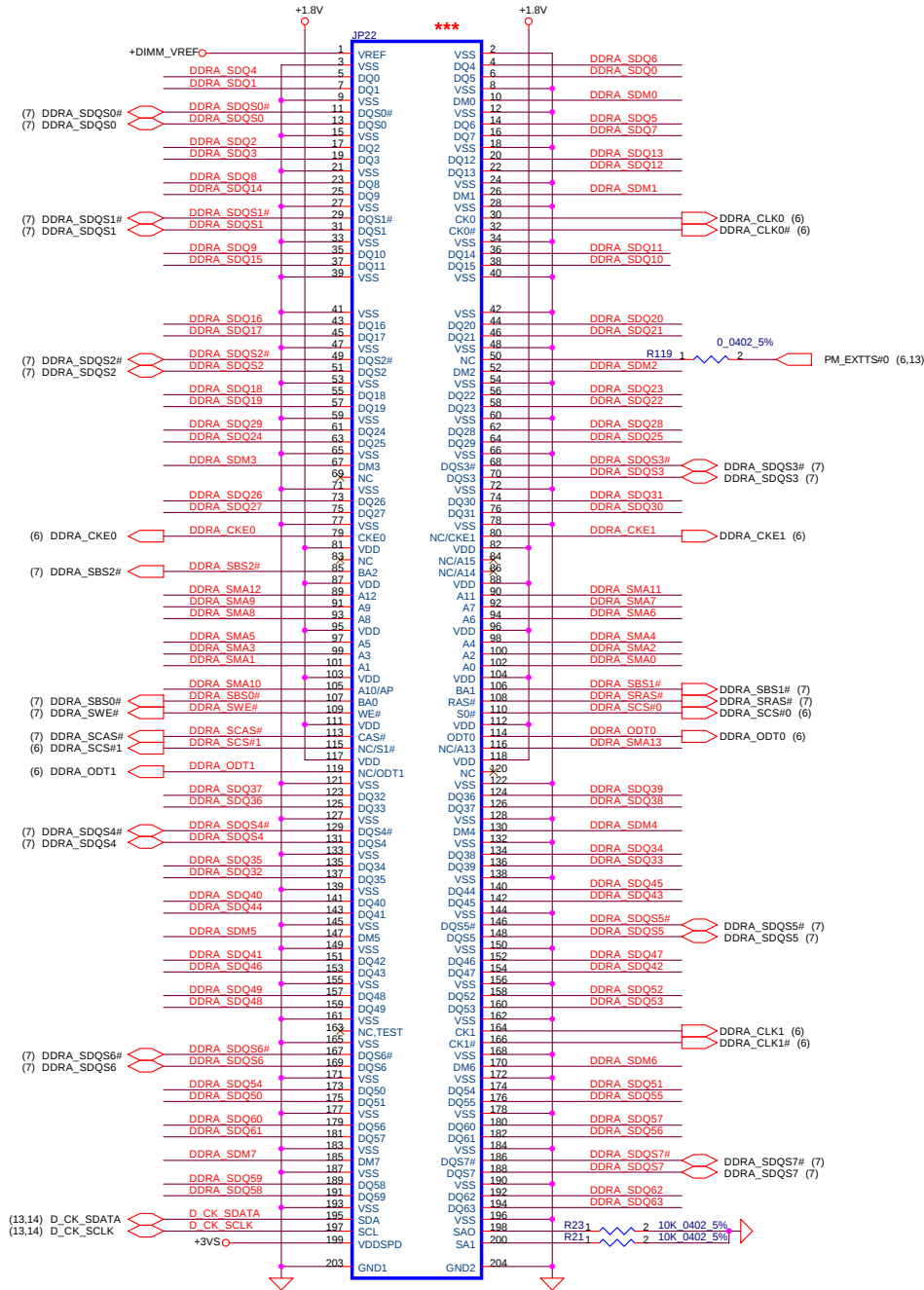
CFG[2:0]	011 = 667MT/s FSB 001 = 533MT/s FSB
CFG5	0 = DMI x 2 1 = DMI x 4 *(Default)
CFG7	0 = Reserved 1 = Mobile Yonah CPU *(Default)
CFG9	0 = Lane Reversal Enable 1 = Normal Operation *(Default)
CFG11	0 = Reserved
PSB 4X CLK Enable	1 = Calistoga *
CFG[13:12]	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation *(Default)
CFG16	0 = Dynamic ODT Disabled 1 = Dynamic ODT Enabled *(Default)
CFG18	0 = 1.95V *(Default) 1 = 1.5V
CFG19	0 = No SDVO Device Present *(Default) 1 = DMI Lane Reversal Enable
SDVO_CTRLDATA	1 = SDVO Device Present
CFG20 (PCIE/SDVO select)	0 = Only PCIE or SDVO is operational. *(Default) 1 = PCIE/SDVO are operating simu.



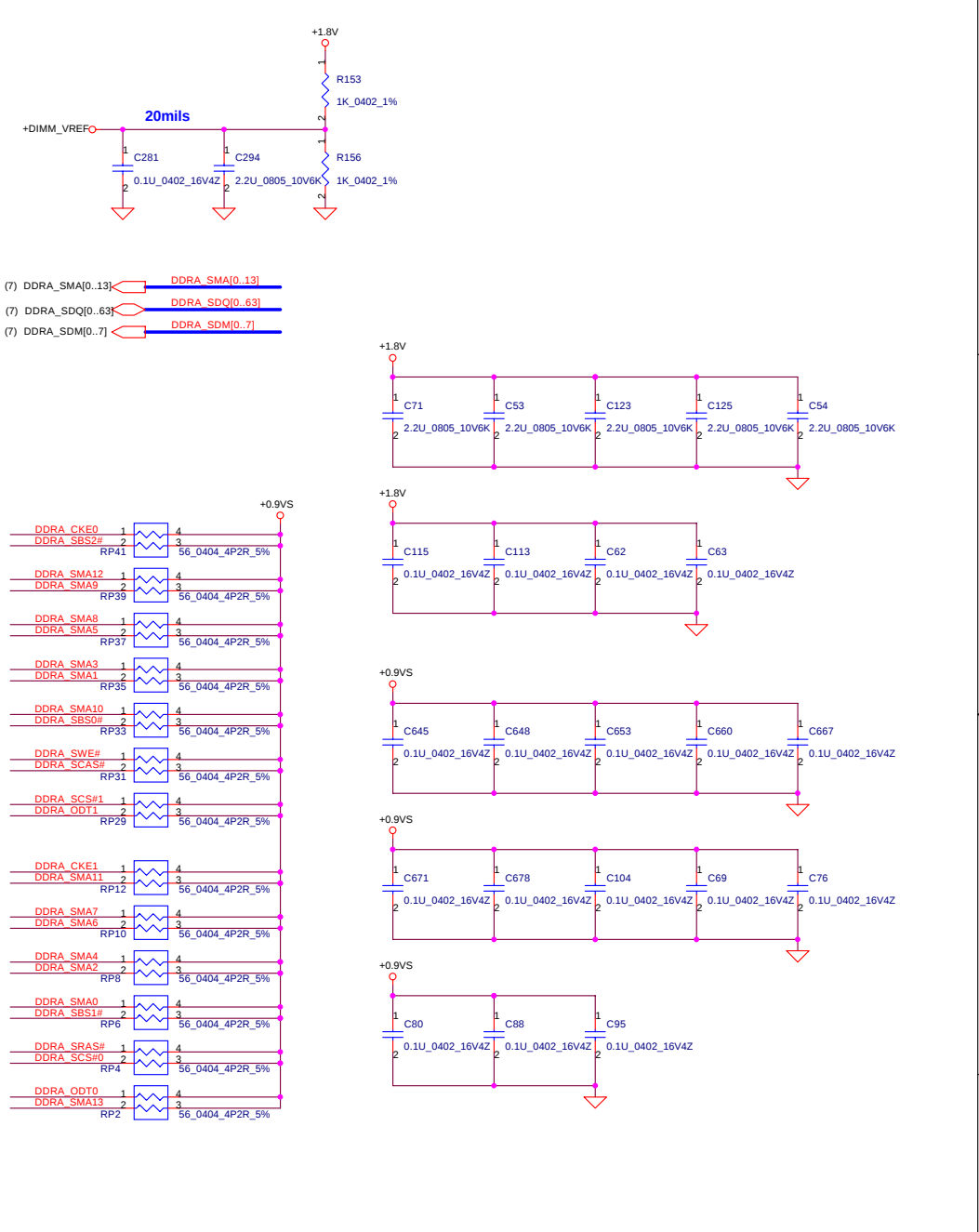
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Document Number	Rev
				B	HBL51 LA-3081P	0.2
				Date:	Wednesday, November 09, 2005	Sheet 10 of 47

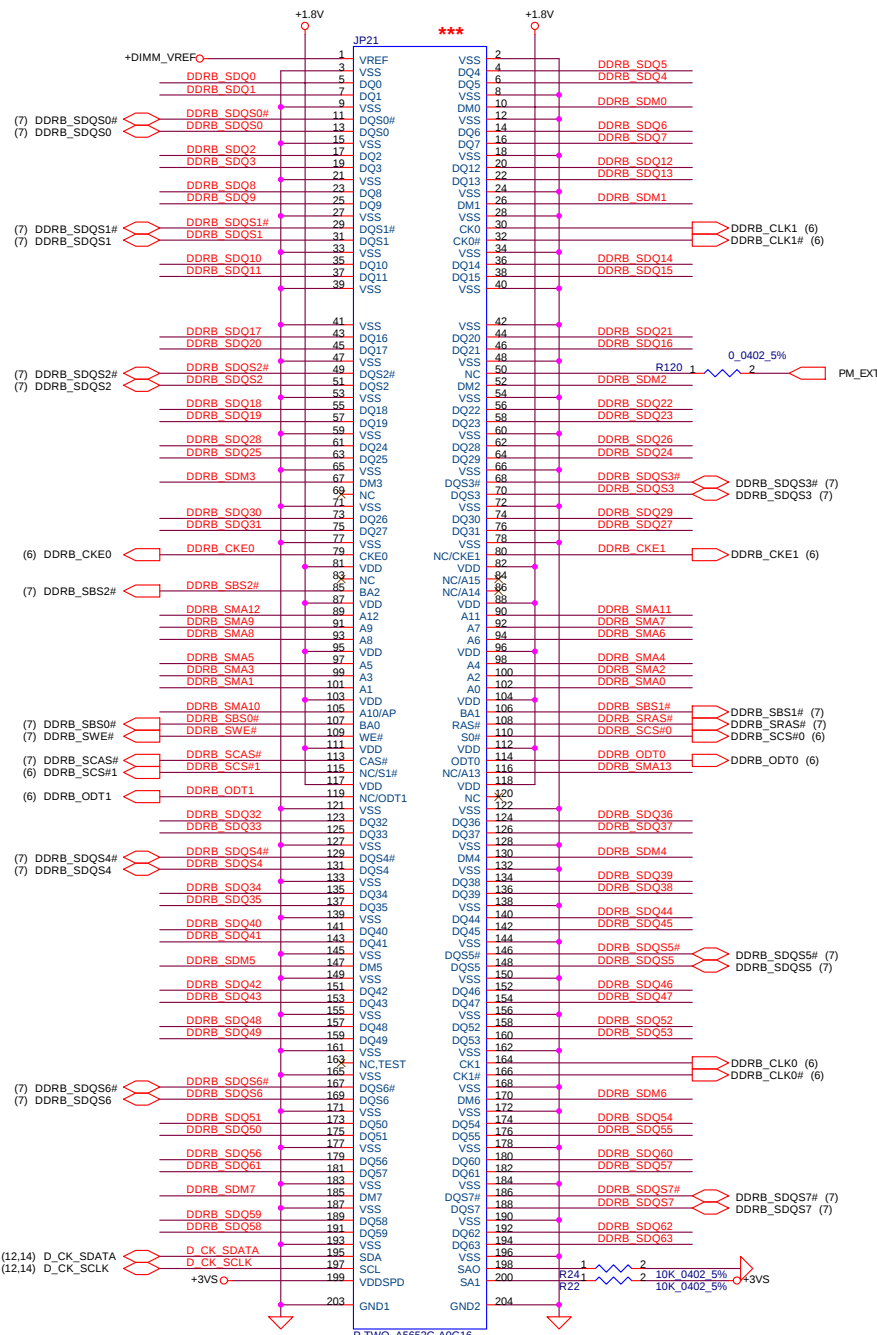


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 B	Document Number
					HBL51 LA-3081P
				Date:	Wednesday, November 09, 2005
				Sheet 11	of 47

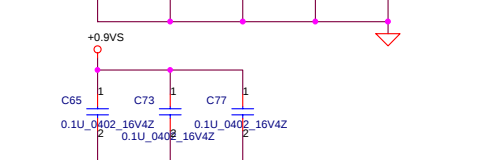
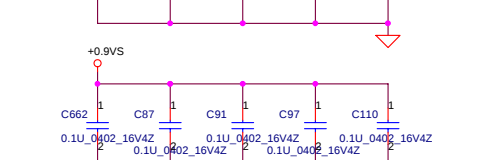
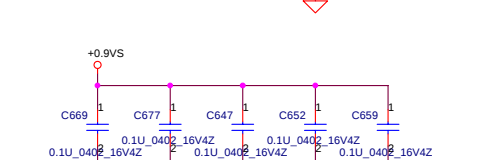
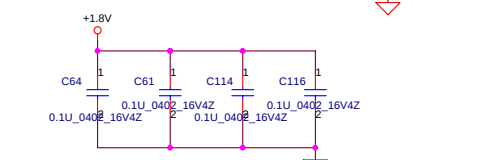
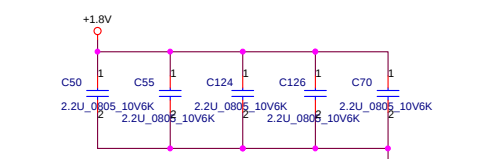
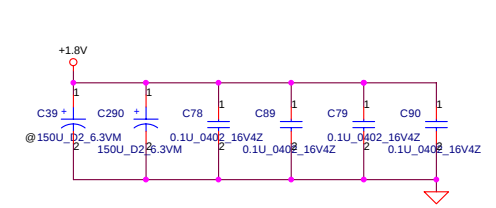
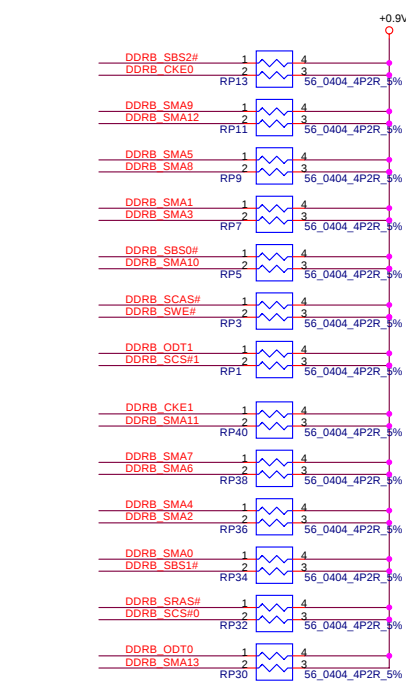
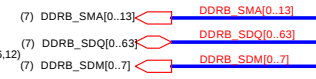
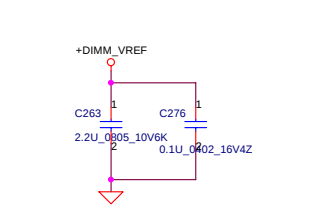


DIMM0 STD H:9.2mm (BOT)





DIMM1 STD H:5.2mm (BOT)



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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.				DDR II-SODIMM1	
Size B	Document Number	HBL51 LA-3081P		Rev 0.2	
Date: Wednesday, November 09, 2005		Sheet 13 of 47		xilinx@hotmail.com	

FSLC CLKSEL2	FSLB CLKSEL1	FSLA CLKSEL0	CPU MHz	SRC MHz	PCI MHz
0	0	1	133	100	33.3
0	1	1	166	100	33.3

Table : ICS9LPR325

	0	1
**SEL_PCI5/REF1	CLKREQ3#	33.3MHz PCICLK5
**SEL_PCI6/PCICLK1	CLKREQ5#	33.3MHz PCICLK6
**SEL_24M/PCICLK2	TESTMODE	24MHz Output
**SEL_48M/PCICLK3	CLKREQ7#	48MHz 1 Output
ITP_EN/PCICLK_F0	SRC pair	CPU_ITP pair

**SEL_24M/PCICLK2=0=TESTMODE
**SEL_PCI6/PCICLK1=0=CLKREQ5#

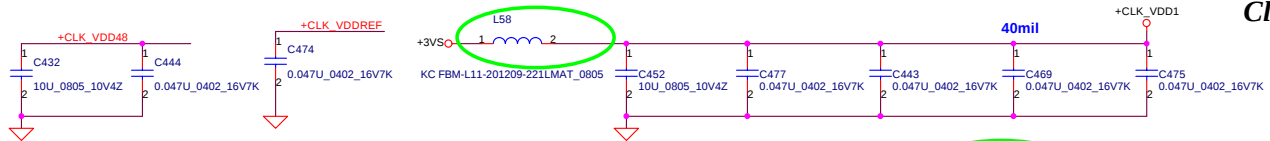
+3VS
**SEL_PCI5=1=PCICLK5
CLK REF
R712 10K_0402_5%
CLK PCIO
R619 10K_0402_5%
ITP_EN/PCICLK_F0=0=SRC pair

CLK PC14
R713 10K_0402_5%
08/29 add

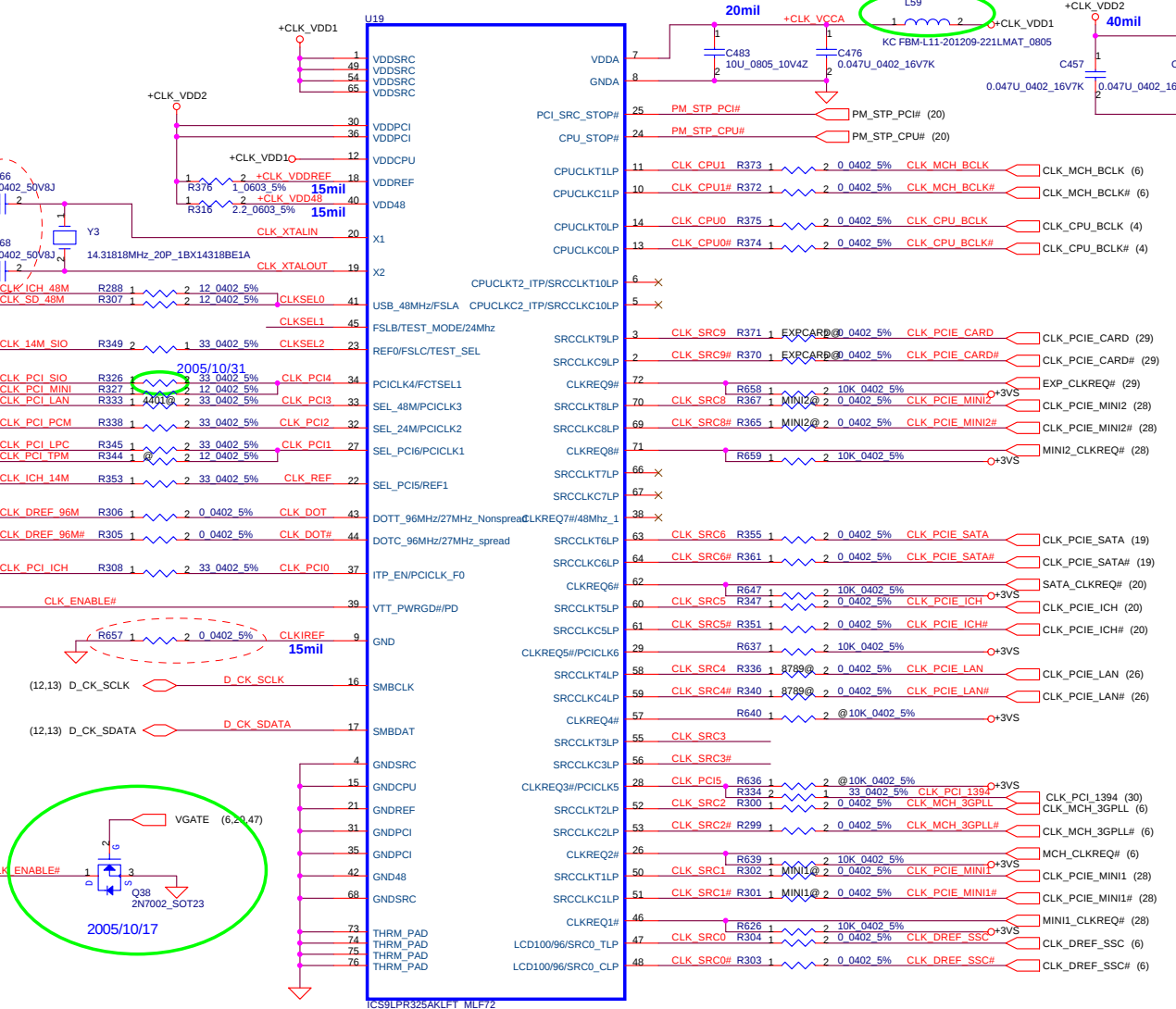
+3VS
CLK ENABLE#
R620 10K_0402_5%
2005/10/17

+3VS
D CK SDATA
Q15 2N7002_SOT23
R387 4.7K_0402_5%
+3VS
D CK SCLK
Q14 2N7002_SOT23
R386 4.7K_0402_5%
+3VS

+1.05VS
CLKSEL0
R621 8.2K_0402_5%
R622 1K_0402_5%
MCH_CLKSEL0 (6)
CPU_BSEL0 (5)
R616 1K_0402_5%
R615 0_0402_5%



Clock Generator

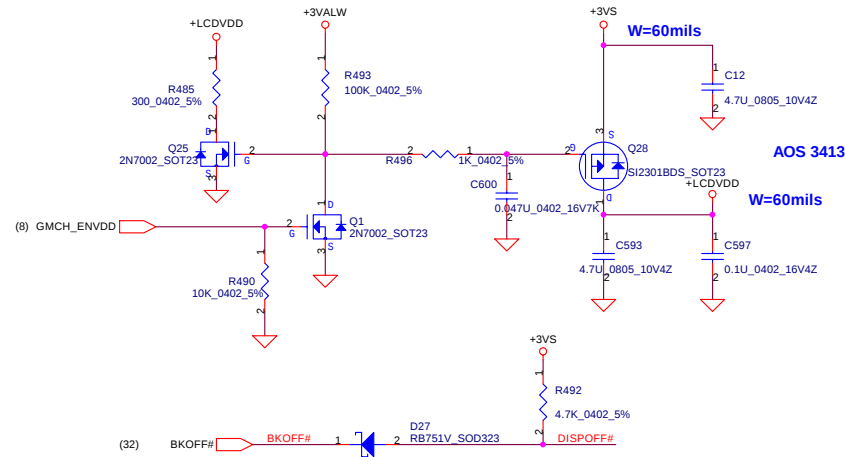


CLK MCH BCLK
R383 @49.9_0402_1%
CLK MCH BCLK#
R382 @49.9_0402_1%
CLK CPU BCLK
R385 @49.9_0402_1%
CLK CPU BCLK#
R384 @49.9_0402_1%
CLK PCIE MINI2
R366 @49.9_0402_1%
CLK PCIE MINI2#
R364 @49.9_0402_1%
CLK PCIE ICh
R346 @49.9_0402_1%
CLK PCIE ICh#
R350 @49.9_0402_1%
CLK PCIE MINI1
R283 @49.9_0402_1%
CLK PCIE MINI1#
R282 @49.9_0402_1%
CLK PCIE SATA
R354 @49.9_0402_1%
CLK PCIE SATA#
R360 @49.9_0402_1%
CLK DREF SSC
R285 @49.9_0402_1%
CLK DREF SSC#
R284 @49.9_0402_1%
CLK DREF 96M
R287 @49.9_0402_1%
CLK PCIE CARD
R286 @49.9_0402_1%
CLK PCIE CARD#
R301 @49.9_0402_1%
CLK MCH 3GPLL
R380 @49.9_0402_1%
CLK MCH 3GPLL#
R291 @49.9_0402_1%
CLK PCIE LAN
R280 @49.9_0402_1%
CLK PCIE LAN#
R335 @49.9_0402_1%
R339 @49.9_0402_1%

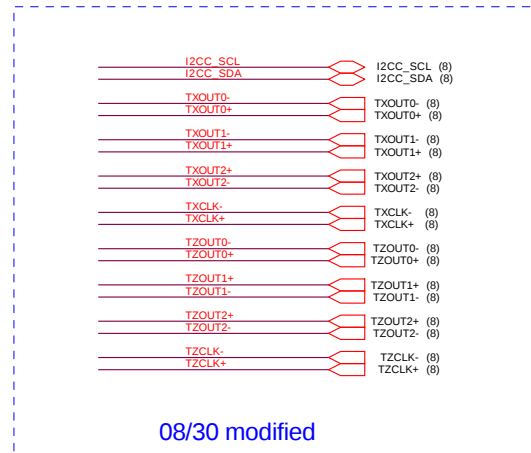
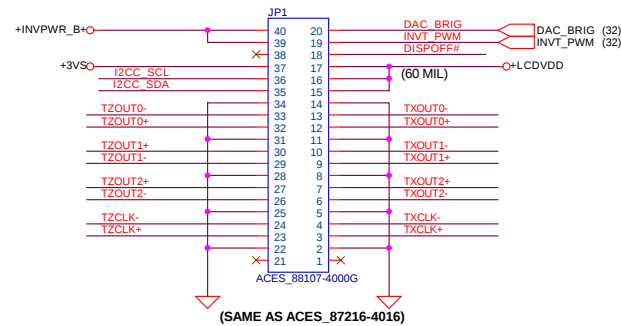
Security Classification	Compal Secret Data	
Issued Date	2005/06/20	Deciphered Date
		2006/06/20
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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, Inc.			
Clock Generator			
Title	Size	Document Number	Rev
	B	HBL51 LA-3081P	0.2
Date:	Thursday, November 10, 2005	Sheet	14 of 47

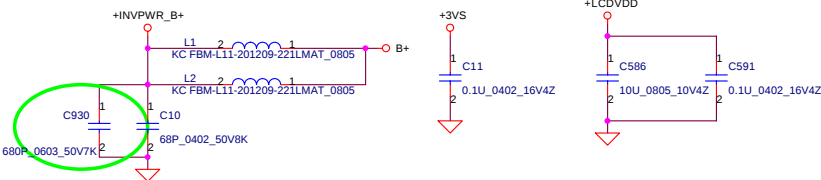
LCD POWER CIRCUIT



LCD/PANEL BD. Conn.

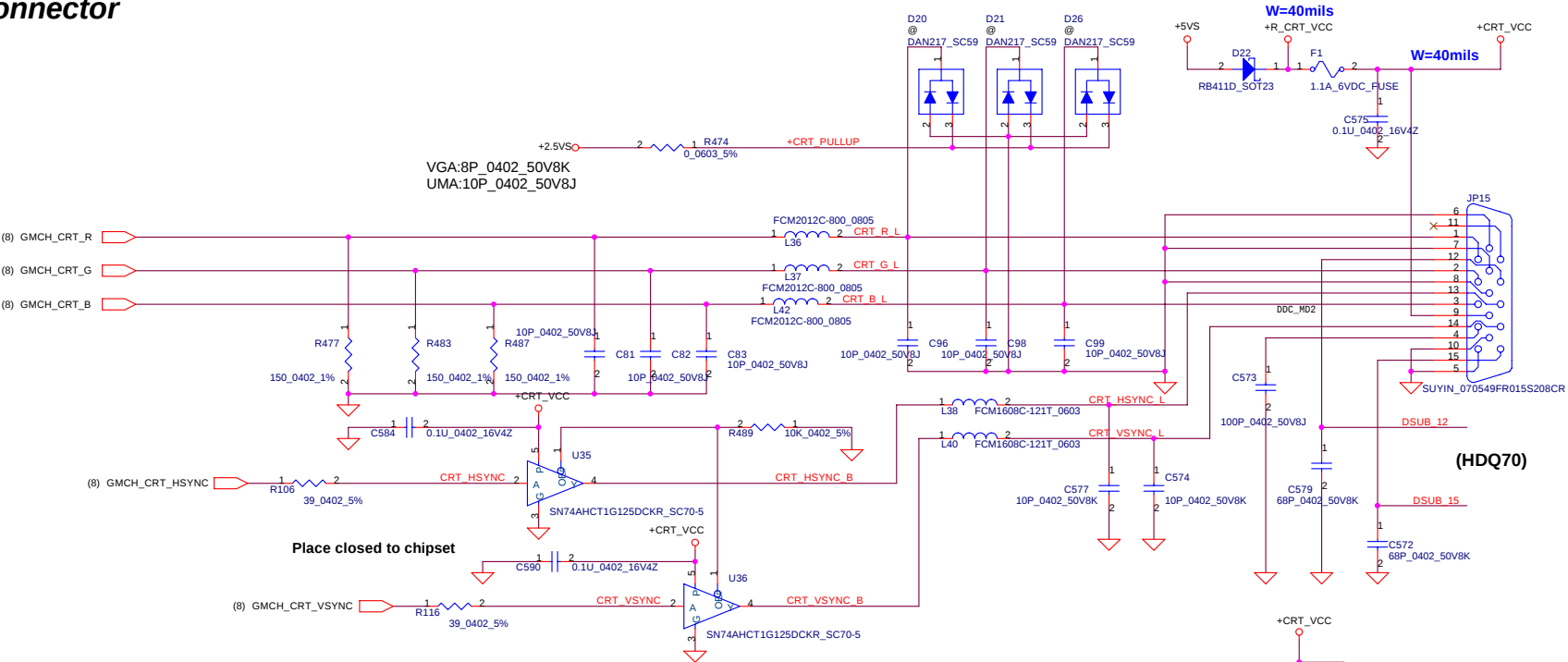


08/30 modified

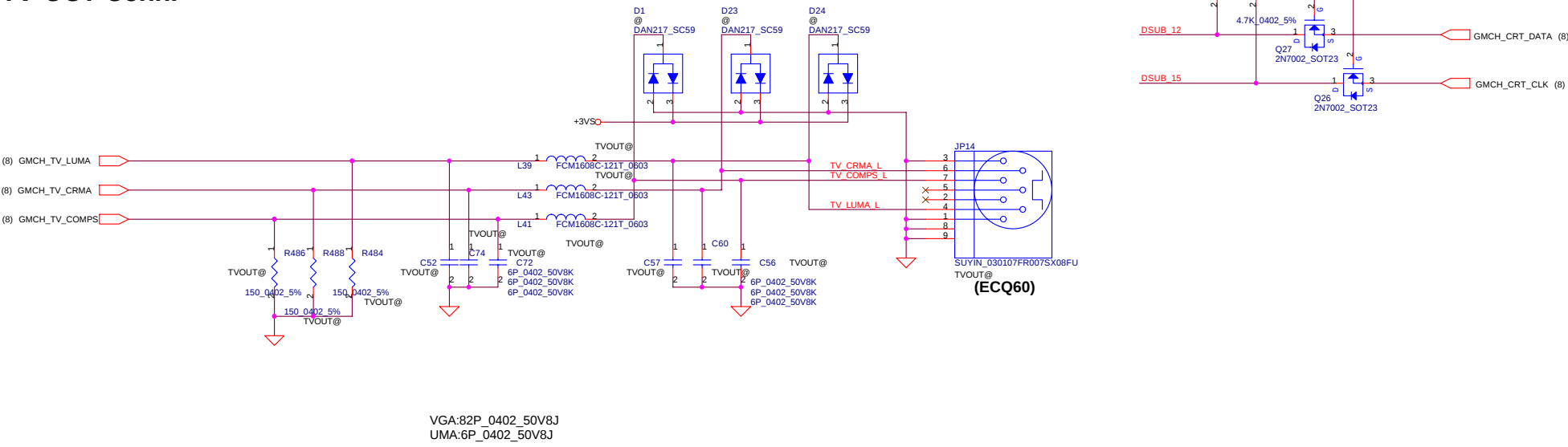


Security Classification		Compal Secret Data				Compal Electronics, Inc.									
Issued Date		2005/06/20		Deciphered Date		2006/06/20		Title							
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.								LCD Connector							
								Size B	Document Number						Rev
									HBL51 LA-3081P						0.2
								Date:	Wednesday, November 09, 2005			Sheet	15	of	47

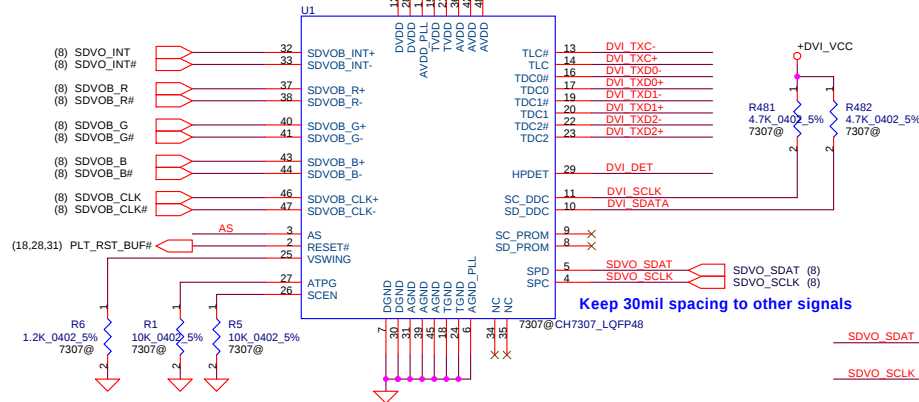
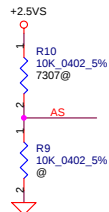
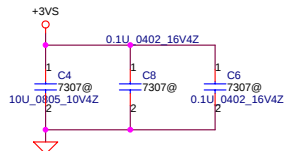
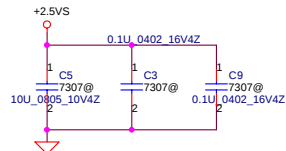
CRT Connector



TV-OUT Conn.



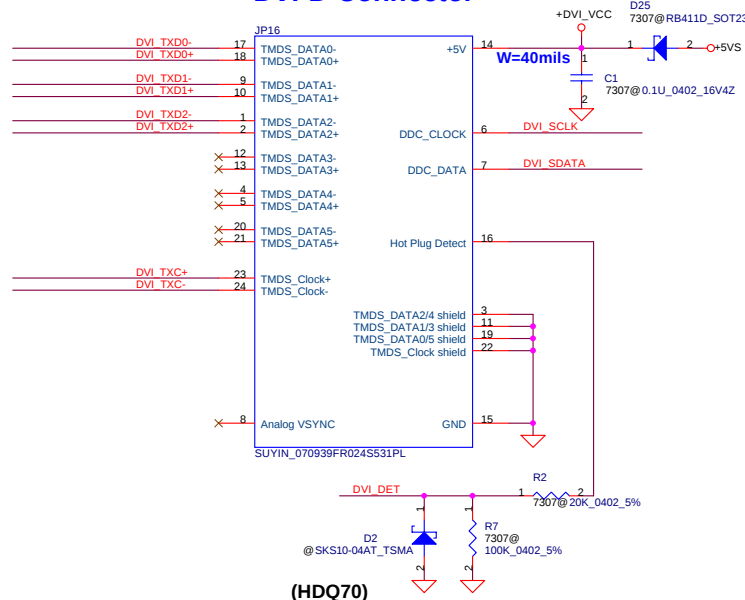
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 B	Document Number
				HBL51 LA-3081P	
				Date:	Monday, November 14, 2005
				Sheet	16 of 47
				Rev	0.2



BOM structure	DVI from SDVO
7307@	Stuff
@	No_Stuff

Keep 30mil spacing to other signals

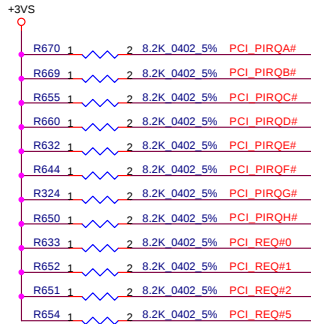
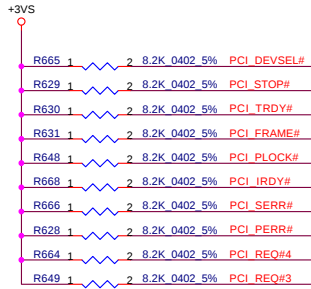
DVI-D Connector



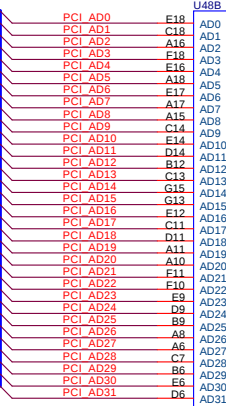
(HDQ70)

Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				Deciphered Date				Title			
2005/06/20				2006/06/20				CH7307 & DVI-D Connector			
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			
								HBL51 LA-3081P			
								Date: Wednesday, November 09, 2005			
								Sheet 17 of 47			

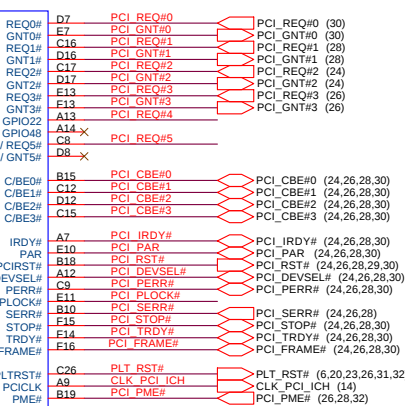
ICH7M(B-0) (QK17) [ES3] : SA00000JK30



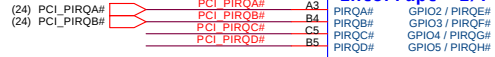
(24,26,28,30) PCI_AD[0..31]



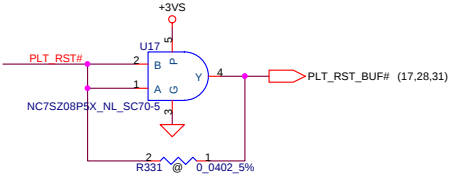
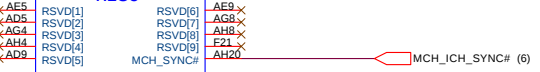
PCI



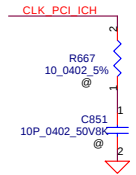
Interrupt I/F



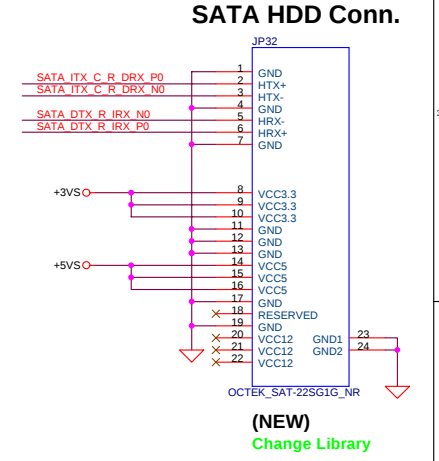
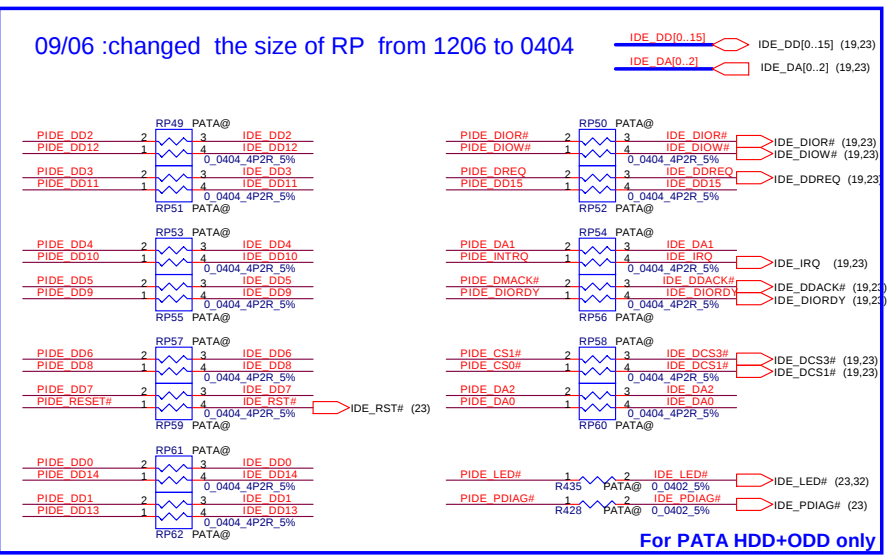
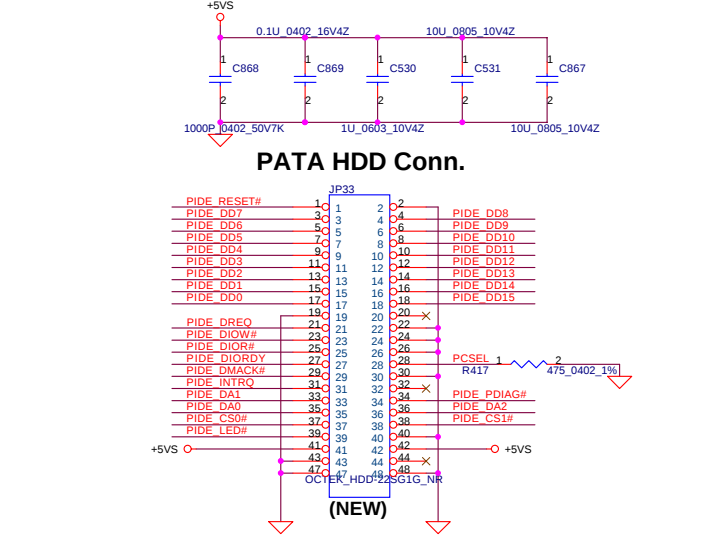
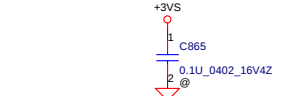
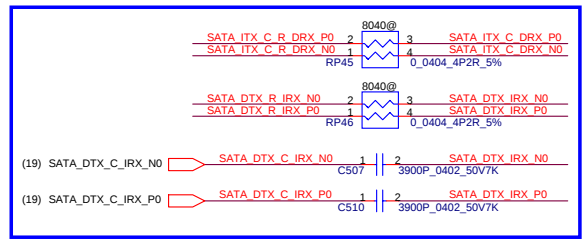
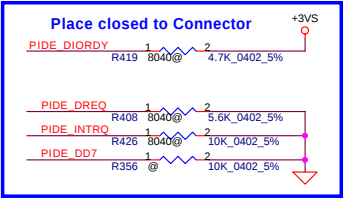
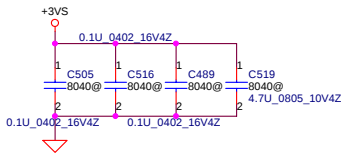
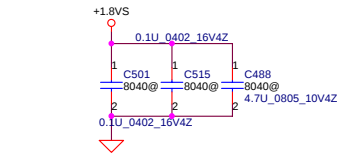
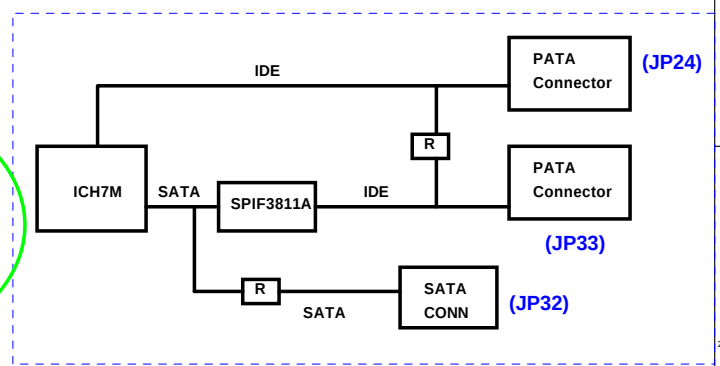
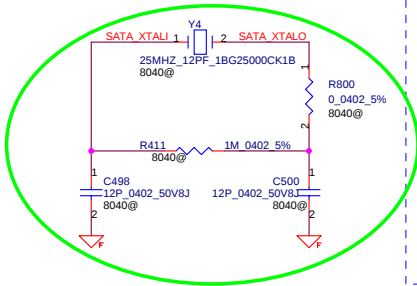
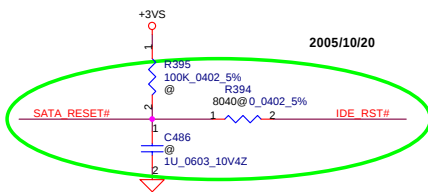
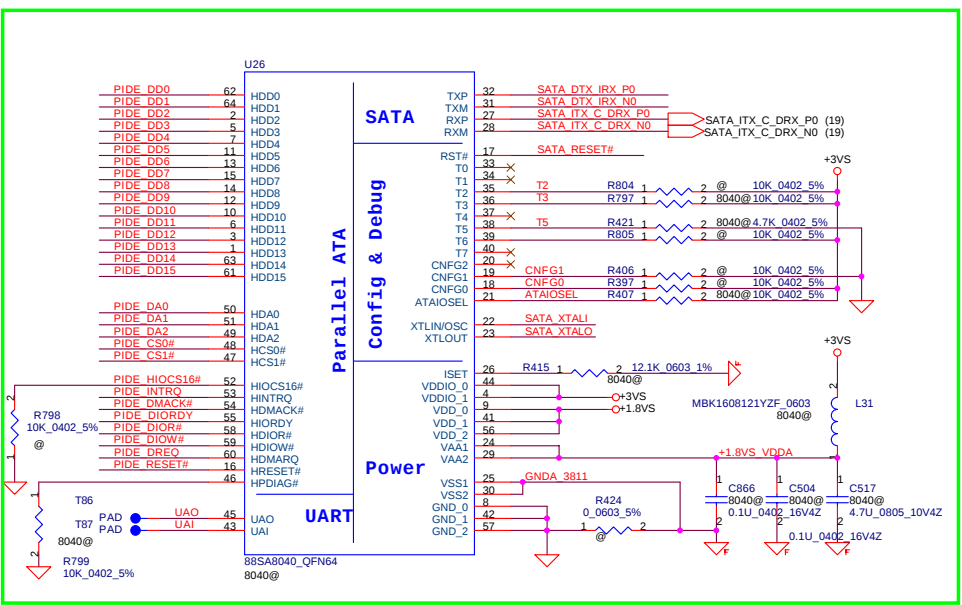
MISC



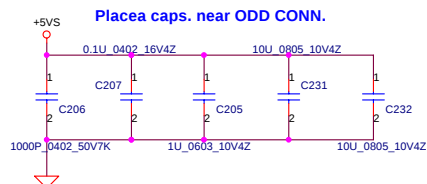
Place closely pin A9



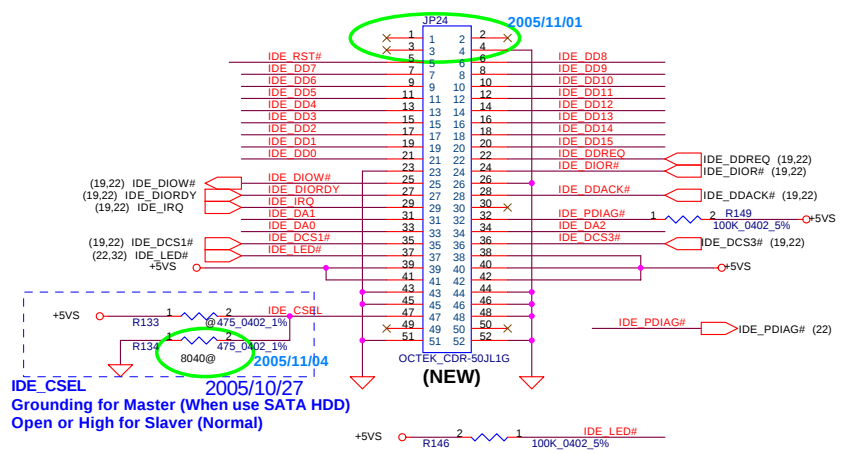
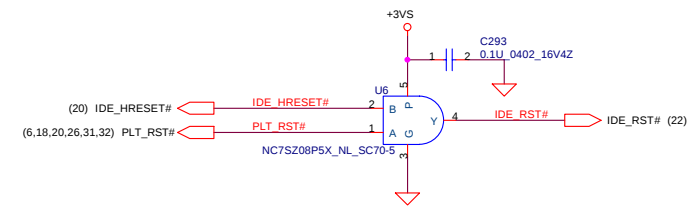
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Document Number
					HBL51 LA-3081P
				Date:	Wednesday, November 09, 2005
				Sheet	18 of 47
				Rev	0.2



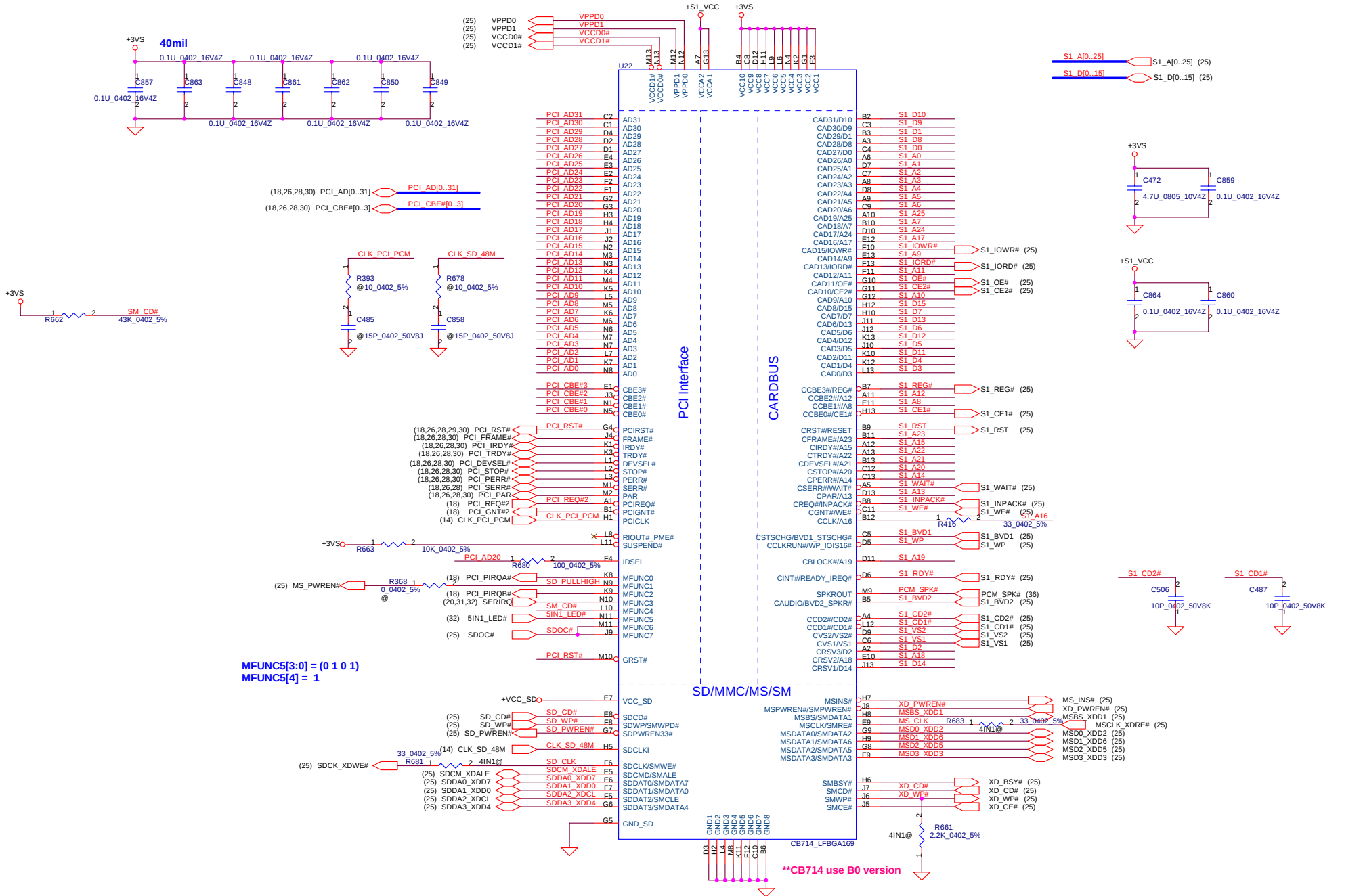
Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date		2005/06/20	Deciphered Date	2006/06/20	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.					ULI M5285		
					Size B	Document Number	Rev 0.2
					HBL51 LA-3081P		
					Date:	Wednesday, November 09, 2005	Sheet 22 of 47



(19,22) IDE_DD[0..15] $\rightarrow$ IDE_DD[0..15]
 (19,22) IDE_DA[0..2] $\rightarrow$ IDE_DA[0..2]

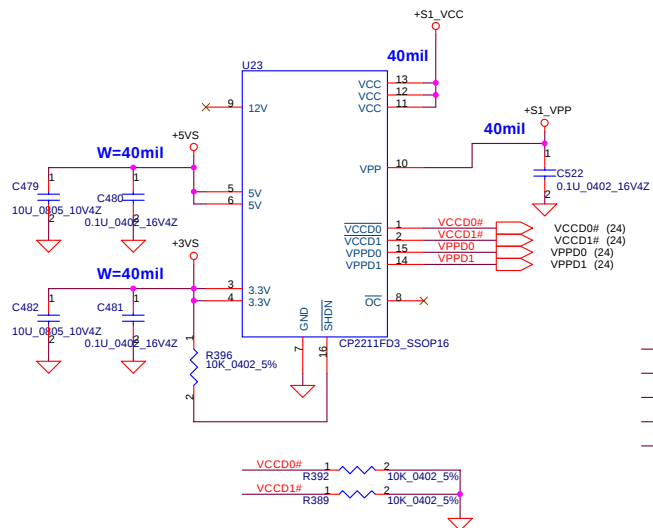


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	
				HBL51 LA-3081P	
				Date:	Wednesday, November 09, 2005
				Sheet	23 of 47

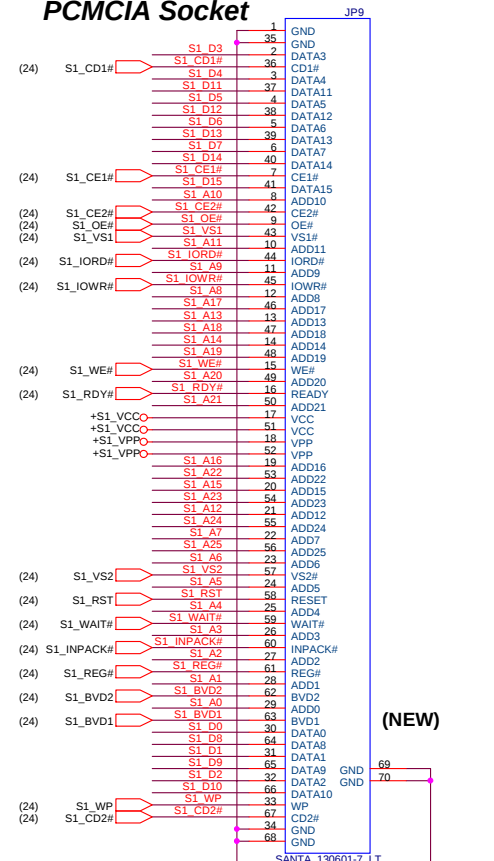
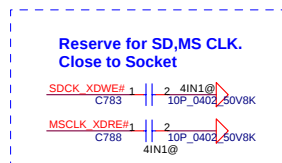
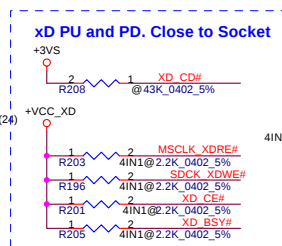
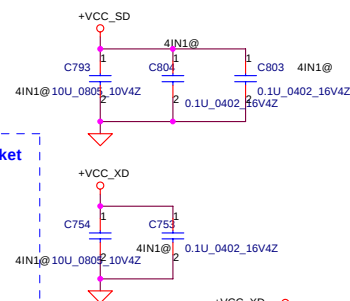
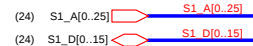
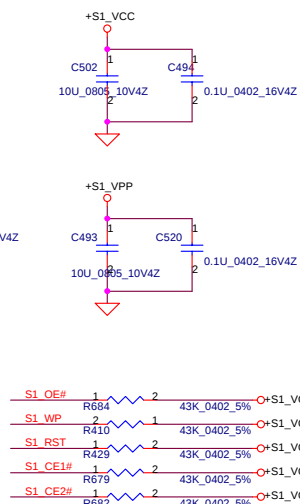
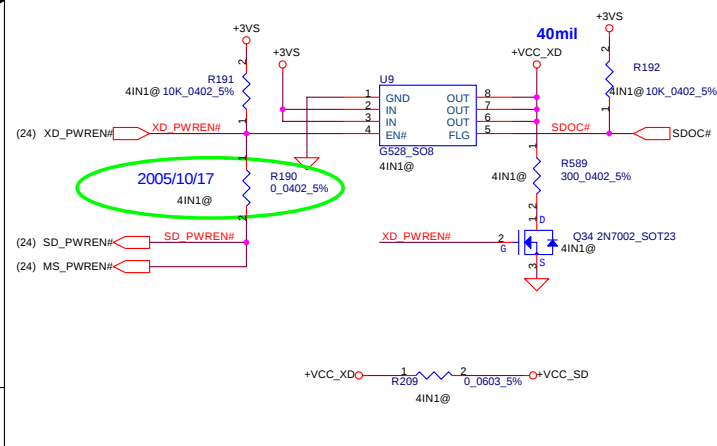


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Cardbus Controller CB714	
				Size	Rev
				B	0.2
				Date:	Wednesday, November 09, 2005
				Sheet	24 of 47

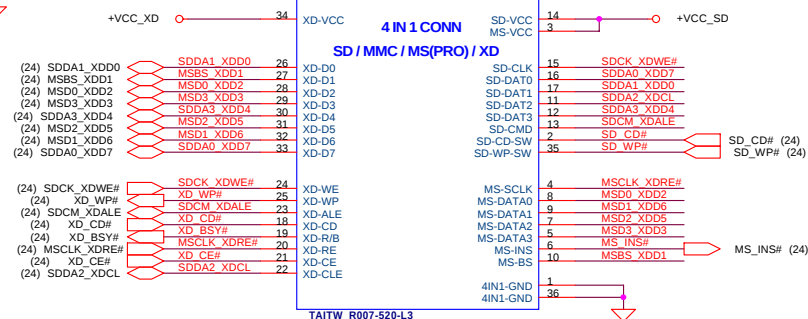
PCMCIA Power Control



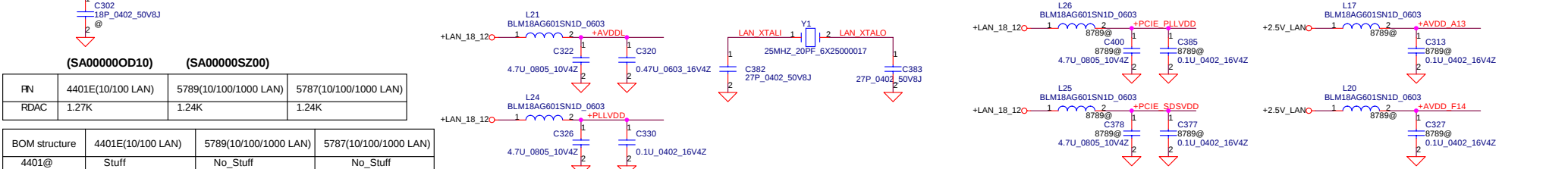
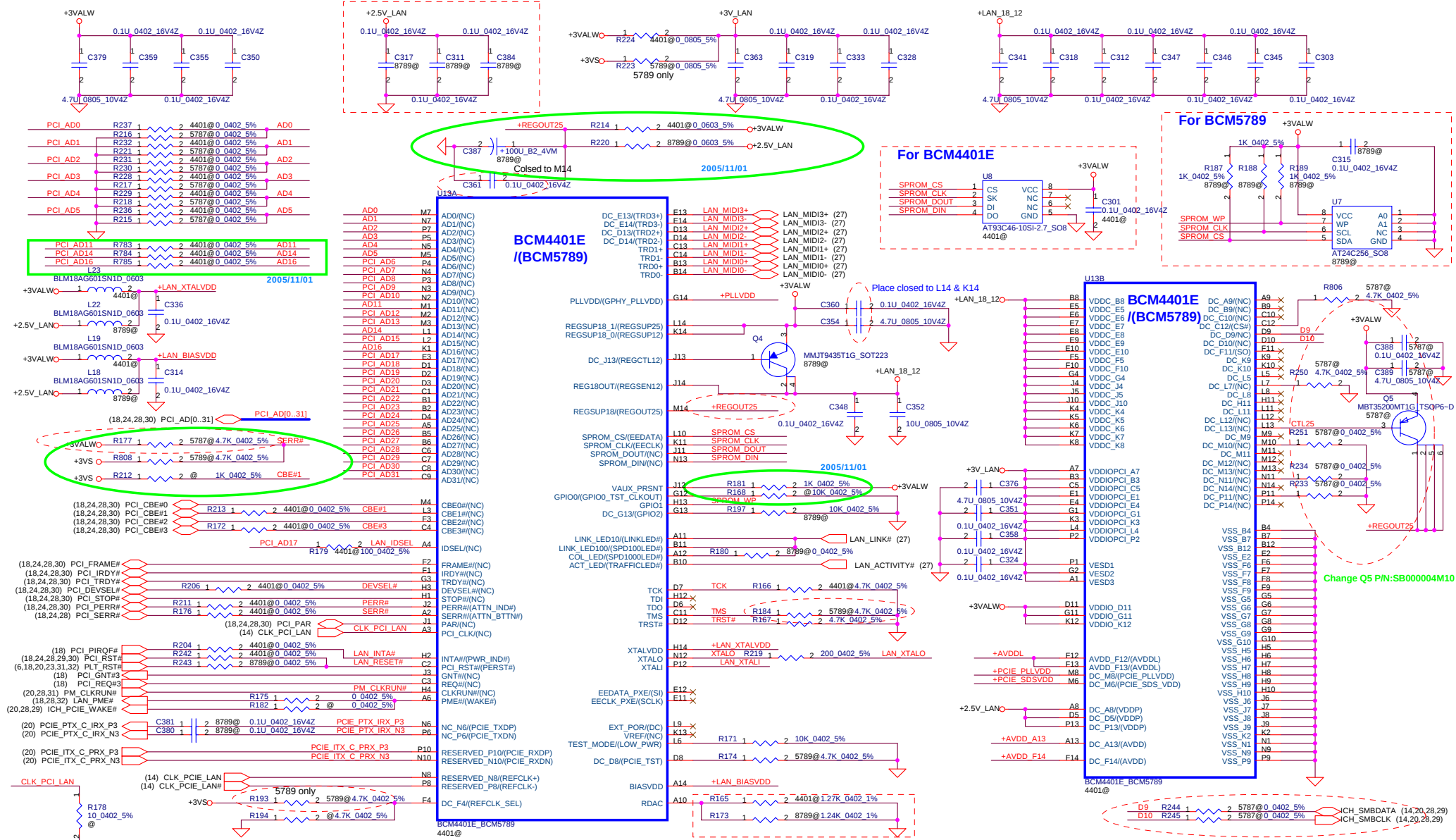
SD/MS Power Control
XD Power Control



4 IN 1 Socket
(HDQ70)



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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.				PCMCIA Socket		
				Size B	Document Number	Rev 0.2
				Date	Wednesday, November 09, 2005	Sheet 25 of 47



(SA000000D10)		(SA000000S200)	
PN	4401E(10/100 LAN)	5789(10/100/1000 LAN)	5787(10/100/1000 LAN)
RDAC	1.27K	1.24K	1.24K

BOM structure	4401E(10/100 LAN)	5789(10/100/1000 LAN)	5787(10/100/1000 LAN)
4401@	Stuff	No_Stuff	No_Stuff
5789@	No_Stuff	Stuff	No_Stuff
5787@	No_Stuff	No_Stuff	Stuff
8789@	No_Stuff	Stuff	Stuff
@	No_Stuff	No_Stuff	No_Stuff

Security Classification		Compal Secret Data	
Issued Date	2005/06/20	Deciphered Date	2006/06/20
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, Inc.		LAN BCM4401E/Jade15	
Size	Document Number	HBL51 LA-3081P	
B		Date:	Wednesday, November 09, 2005
		Sheet	26 of 47
		Rev	0.2

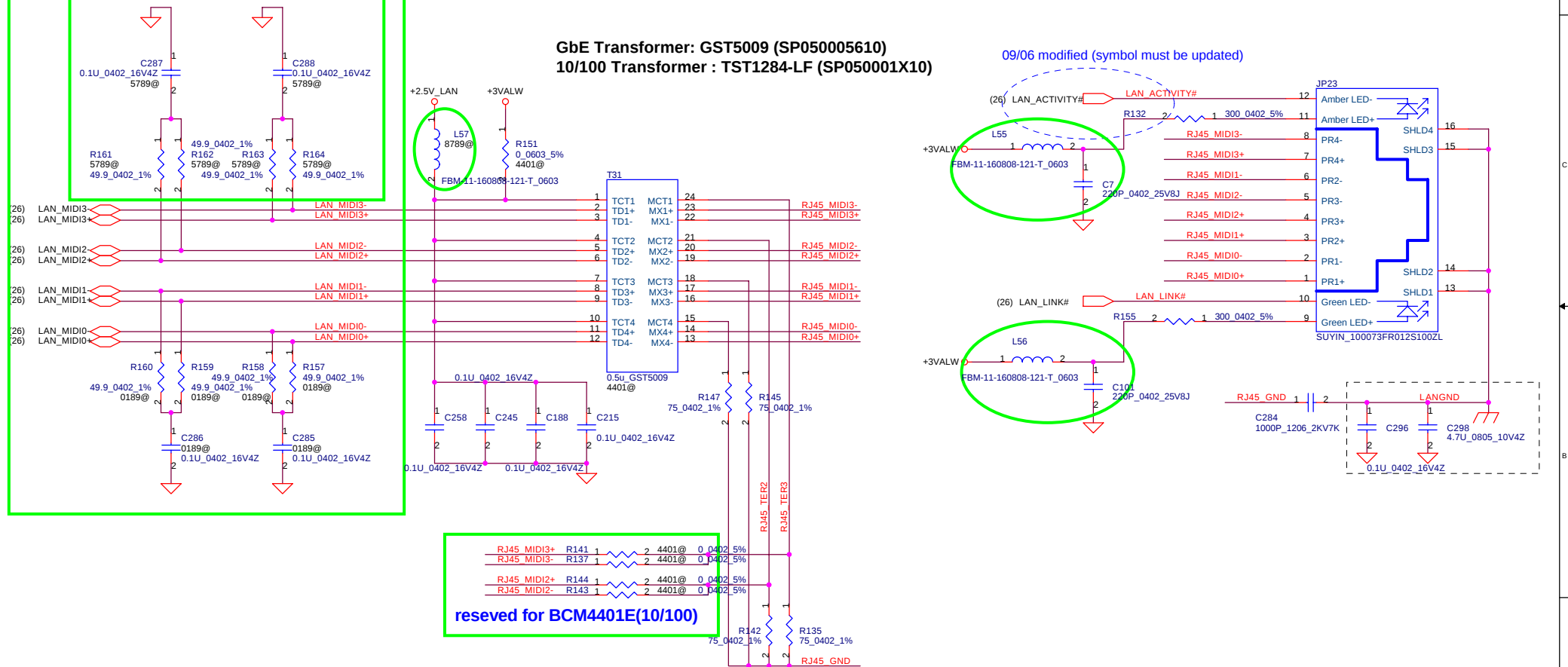
LAN BCM4401E/ BCM5789

Place these components colsed to LAN chip

unpop when use BCM4401E(10/100)

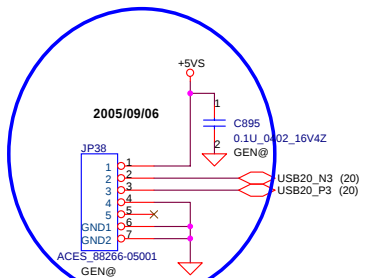
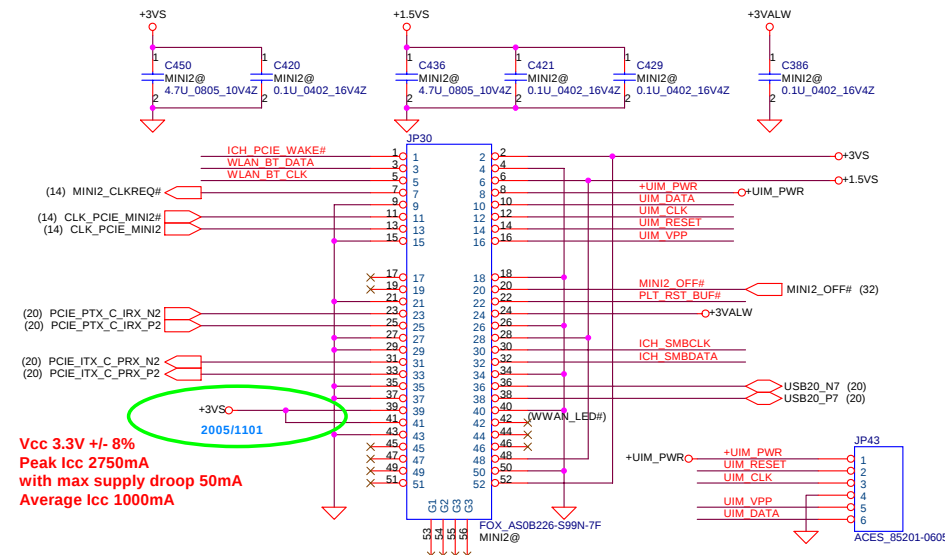
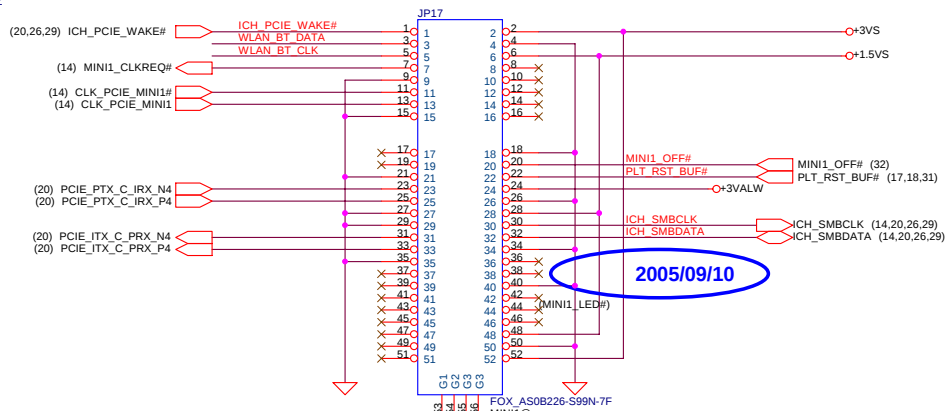
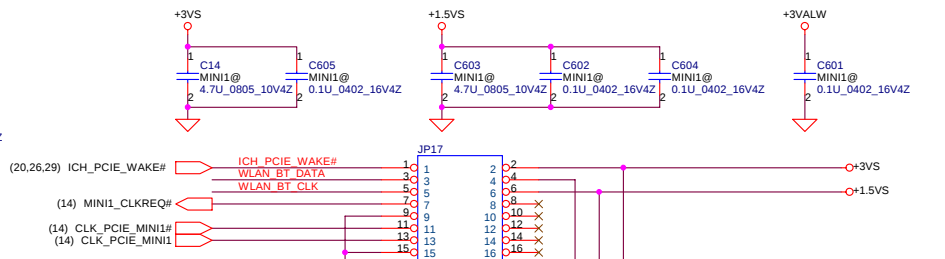
GbE Transformer: GST5009 (SP050005610)
10/100 Transformer : TST1284-LF (SP050001X10)

09/06 modified (symbol must be updated)

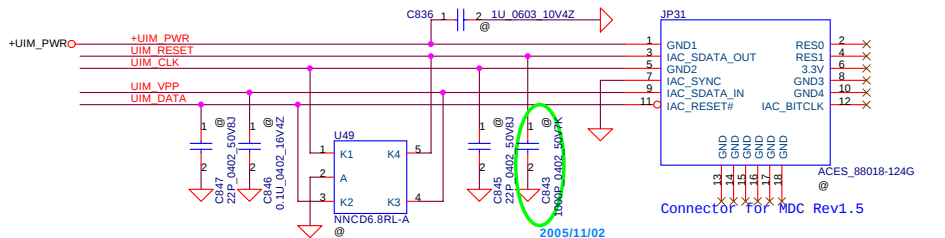


reseved for BCM4401E(10/100)

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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.				LAN Magnetic & RJ45/RJ11	
Size B	Document Number	HBL51 LA-3081P			Rev 0.2
Date:	Wednesday, November 09, 2005	Sheet	27	of 47	

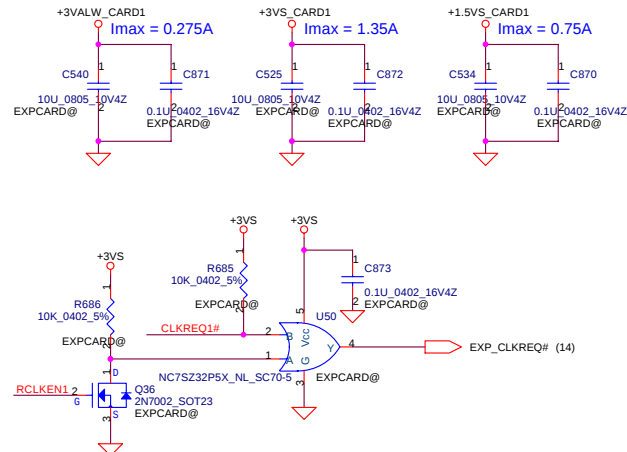
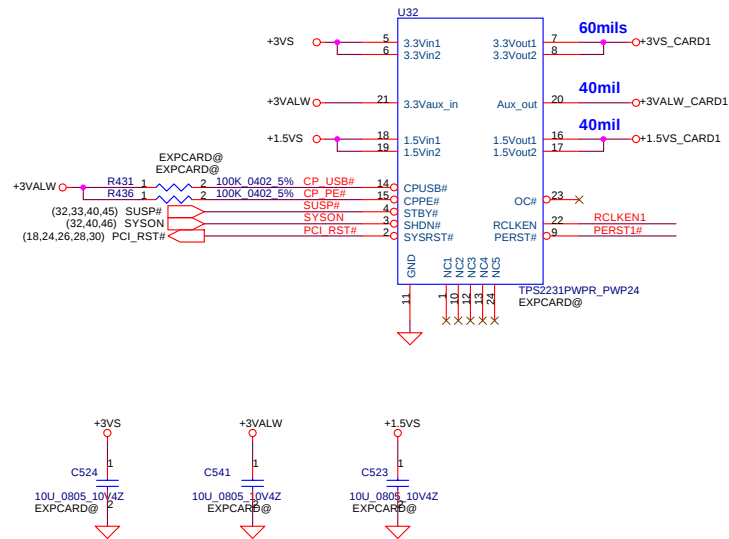


Mini Card Power Rating			
Power	Primary Power (mA)		Auxiliary Power (mA)
	Peak	Normal	Normal
+3VS	1000	750	
+3VALW	330	250	250 (wake enable)
+1.5VS	500	375	5 (Not wake enable)

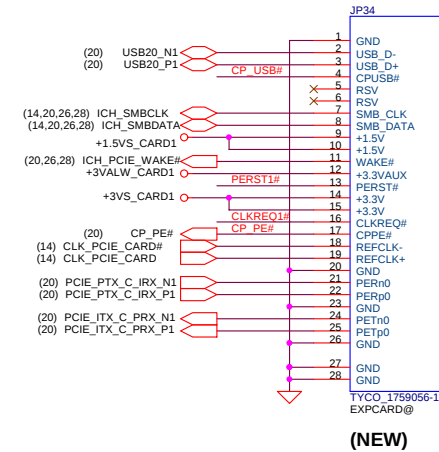


Security Classification		Compal Secret Data		Compal Electronics, Inc.				
Issued Date		2005/06/20		Deciphered Date		2006/06/20		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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				
				MINI-PCI Slot (WLAN)				
				Size	Document Number			Rev
				HBL51 LA-3081P				0.2
				Date:		Wednesday, November 09, 2005		Sheet

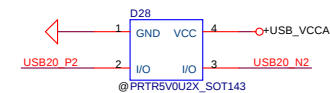
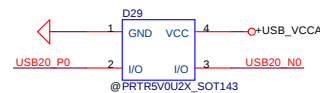
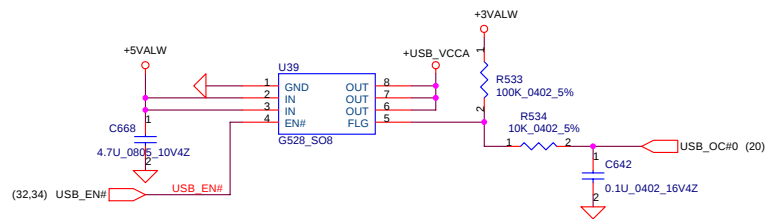
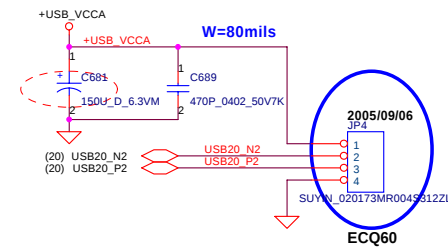
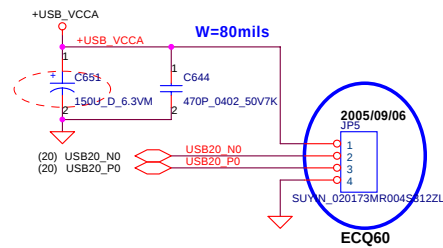
New Card Power Switch



New Card Socket (Left)



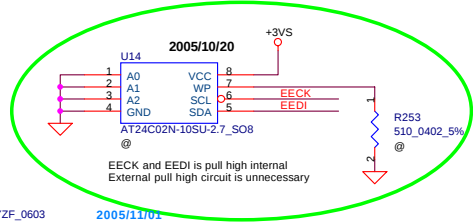
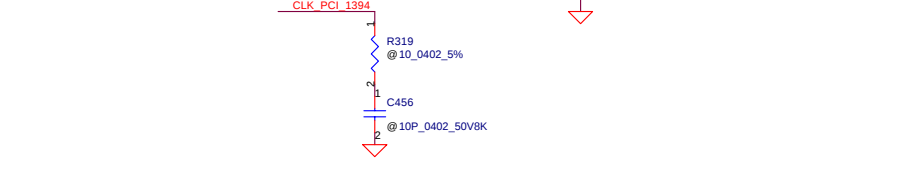
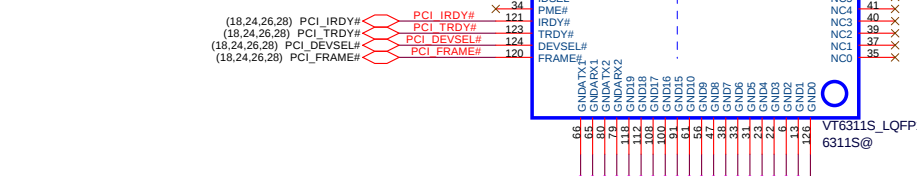
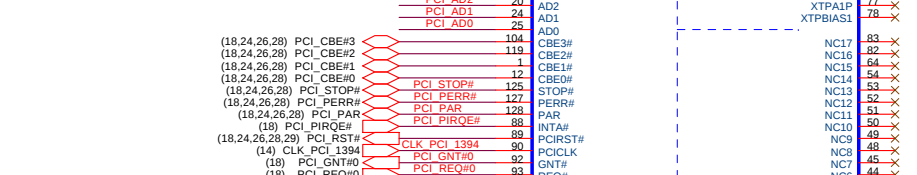
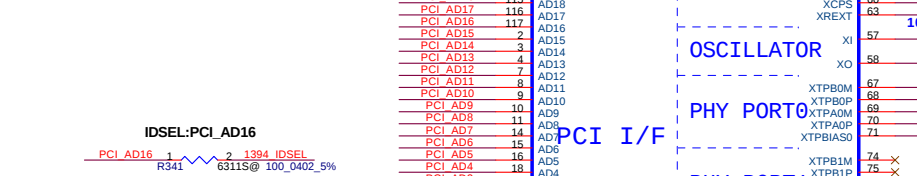
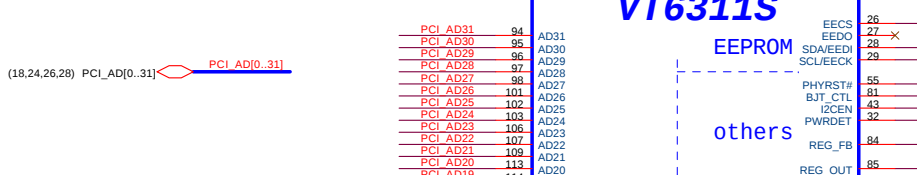
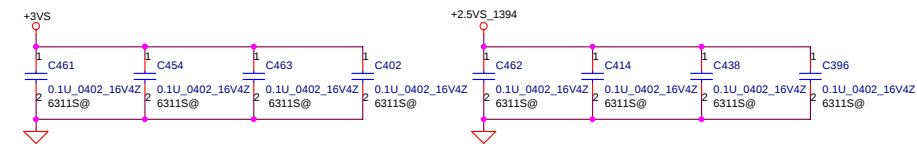
USB CONN. 1 & 2



SUYIN_020173MR004G533ZR_4P

SUYIN_020173MR004G533ZR_4P

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	NEW CARD SOCKET
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
				HBL51 LA-3081P	
				Date: Thursday, November 10, 2005	Sheet 29 of 47



When use external EEPROM
Populate U14, R246, R253
Un-populate R261

(18,24,26,28) PCI_AD[0..31]

IDSEL:PCI_AD16

(18,24,26,28) PCI_CBE#3
(18,24,26,28) PCI_CBE#2
(18,24,26,28) PCI_CBE#1
(18,24,26,28) PCI_CBE#0
(18,24,26,28) PCI_STOP#
(18,24,26,28) PCI_PERR#
(18,24,26,28) PCI_PAR#
(18) PCI_PIRQE#
(18,24,26,28,29) PCI_RST#
(14) CLK PCI_1394
(18) PCI_GNT#0
(18) PCI_REQ#0
(18,24,26,28) PCI_IRDY#
(18,24,26,28) PCI_TRDY#
(18,24,26,28) PCI_DEVSEL#
(18,24,26,28) PCI_FRAME#

CLK PCI_1394

R319 @10_0402_5%

C456 @10P_0402_50V8K

R319 @10_0402_5%

C456 @10P_0402_50V8K

R319 @10_0402_5%

C456 @10P_0402_50V8K

R319 @10_0402_5%

C456 @10P_0402_50V8K

VT6311S

EEPROM

others

OSCILLATOR

PHY PORT0

PHY PORT1

PCI I/F

VT6311S_LQFP128

6311S@

20mils

10mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

15mils

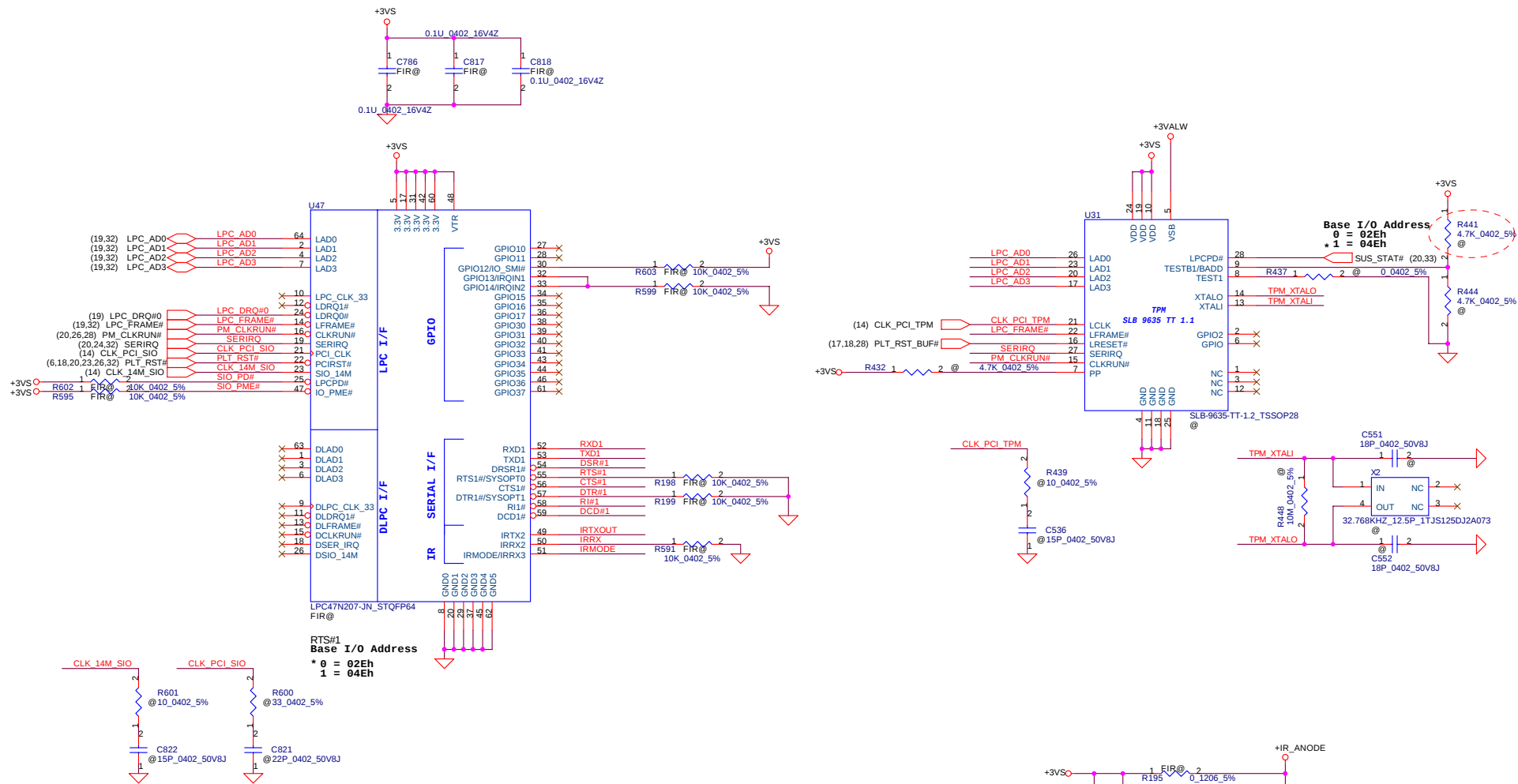
15mils

15mils

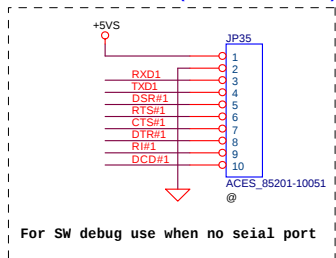
15mils

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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 B	Document Number
				HBL51 LA-3081P	
				Date:	Wednesday, November 09, 2005
				Sheet	30 of 47
				Rev	0.2

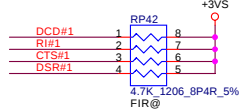
SUPER I/O SMsC LPC47N207



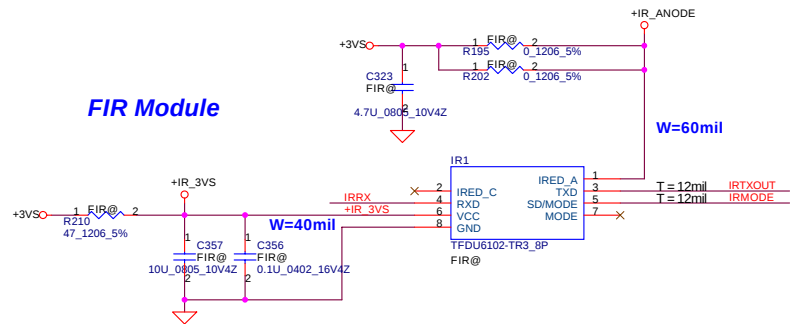
Place on the BOT side(near MINIPCI conn.)



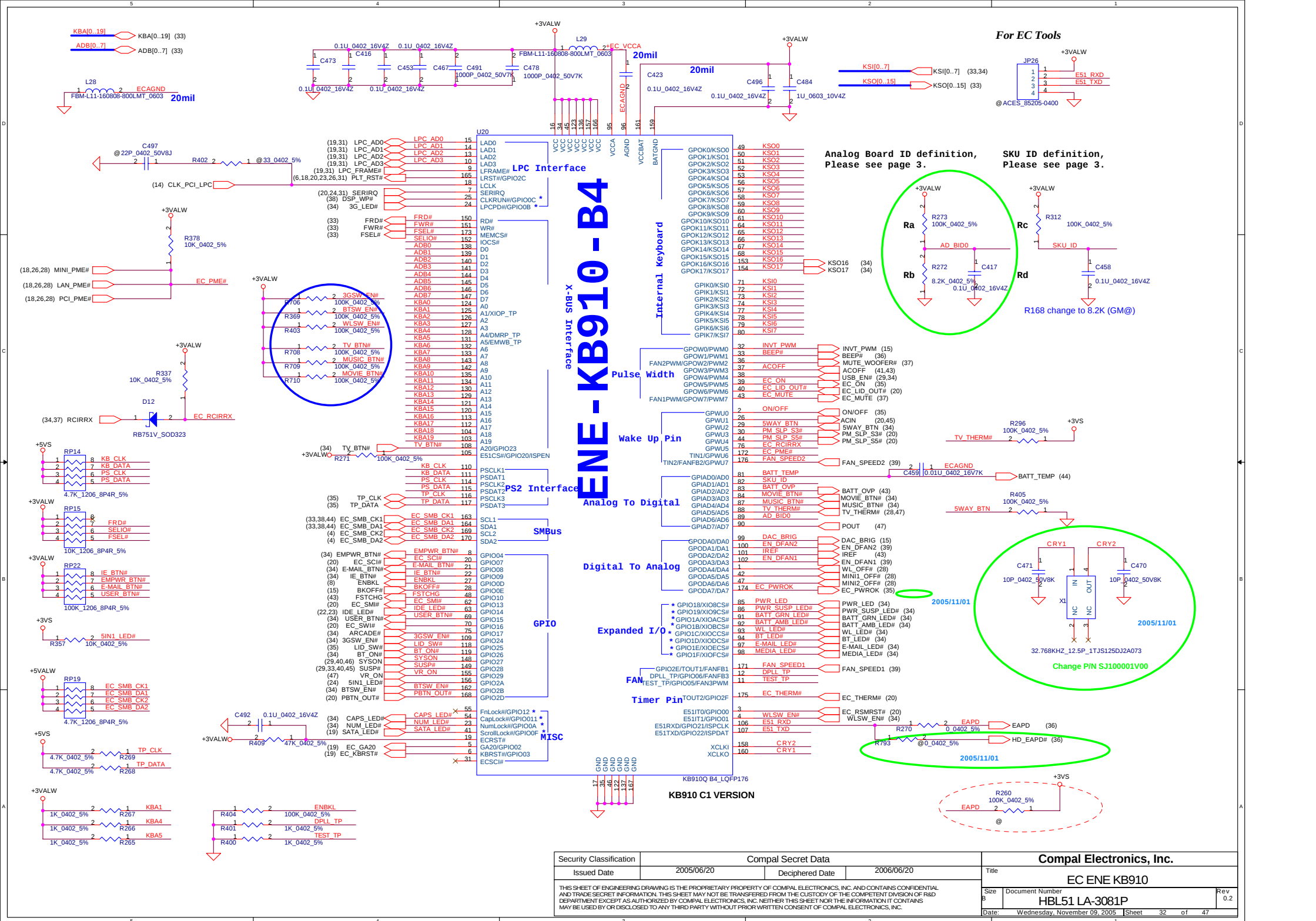
For SW debug use when no seial port

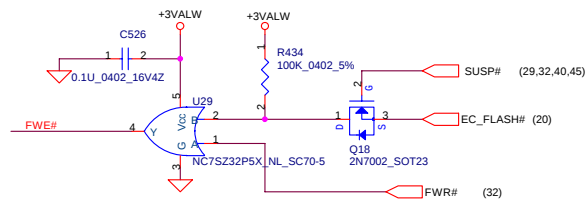


FIR Module

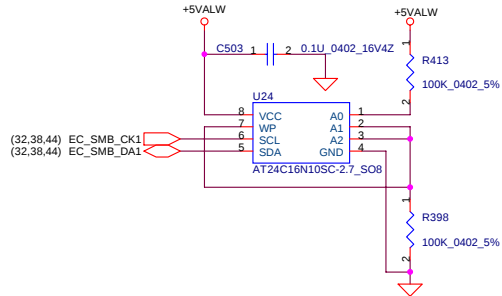


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	SIO1036 & FIR	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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	
				B	HBL51 LA-3081P	
				Rev	0.2	
Date: Wednesday, November 09, 2005				Sheet	47	of 47

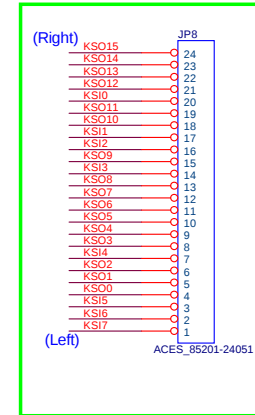
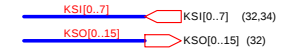




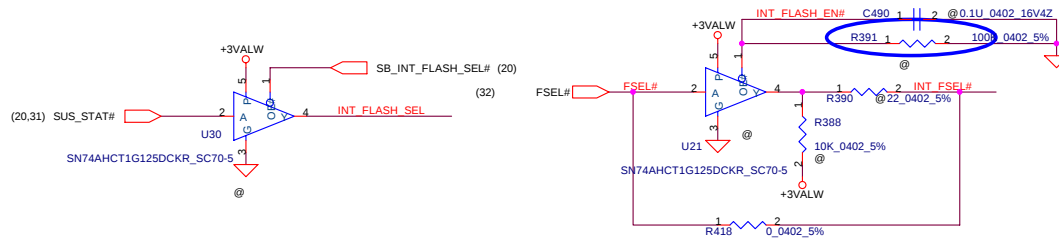
Check PCB Footprint



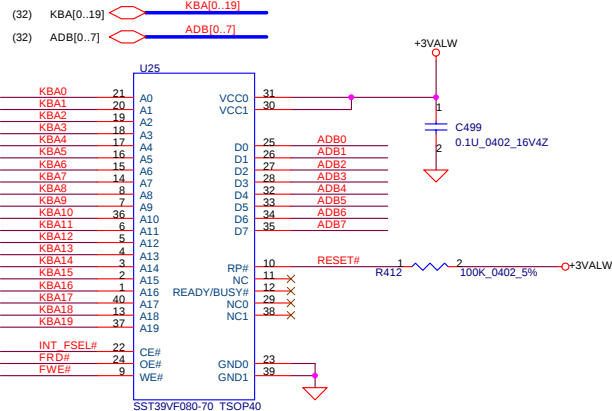
INT_KBD Conn.



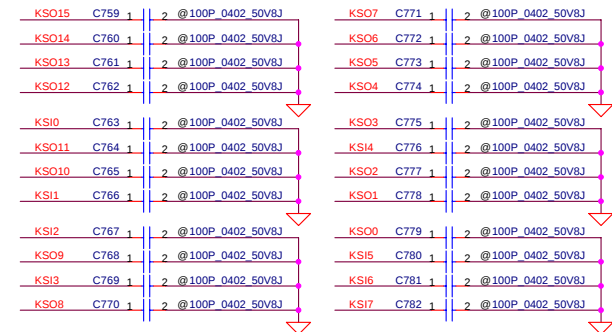
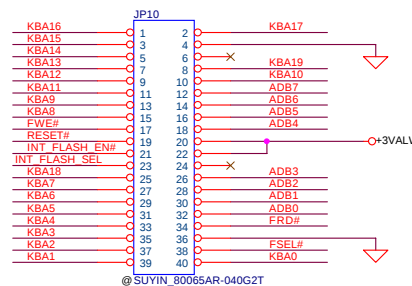
2005/11/03



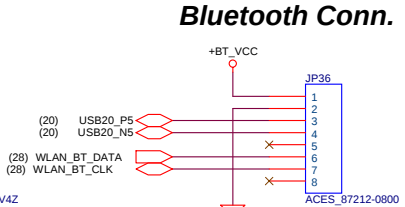
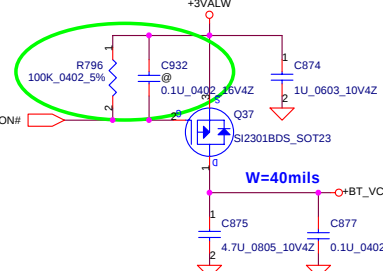
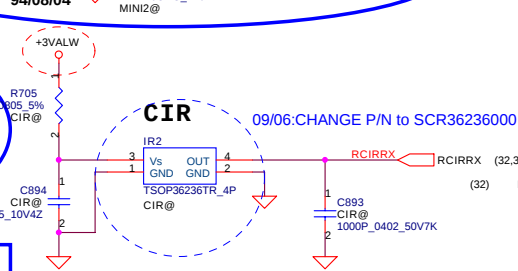
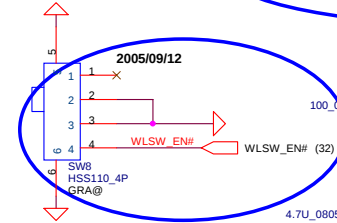
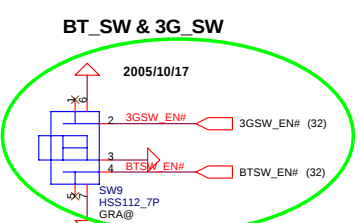
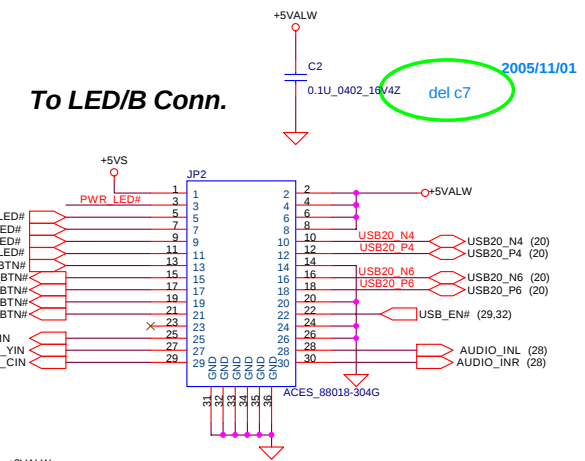
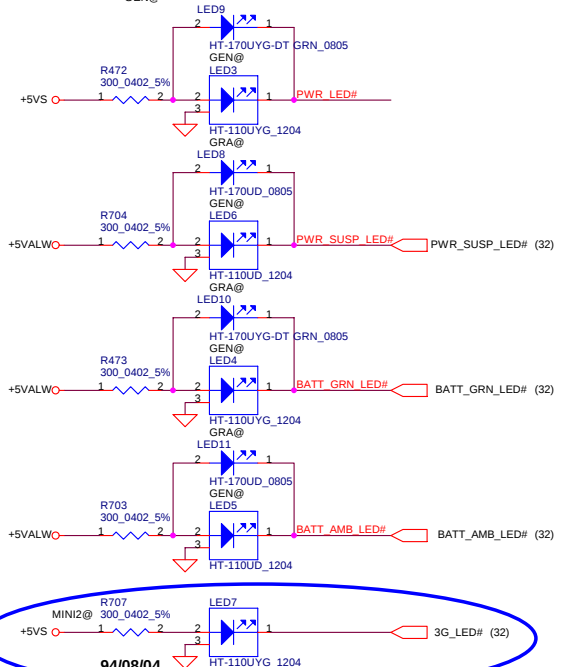
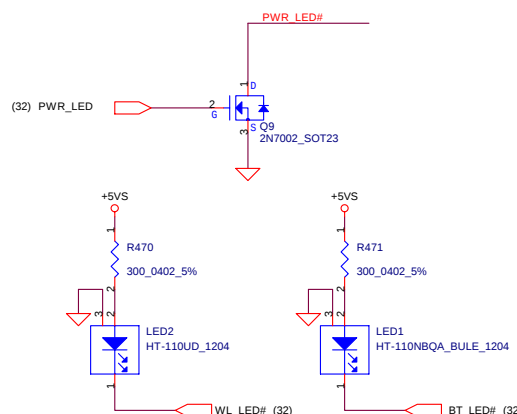
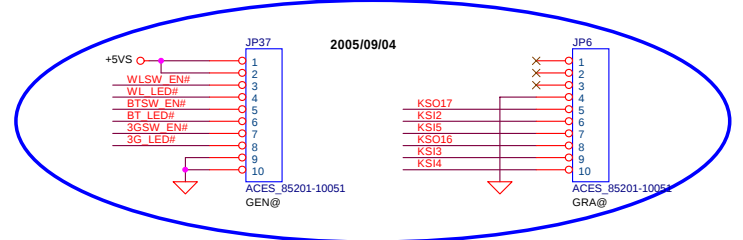
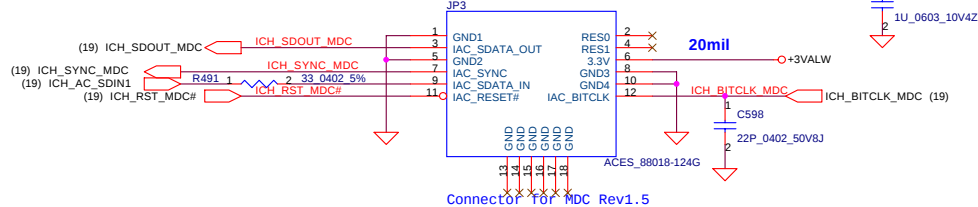
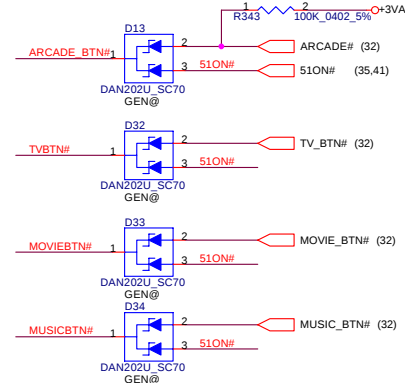
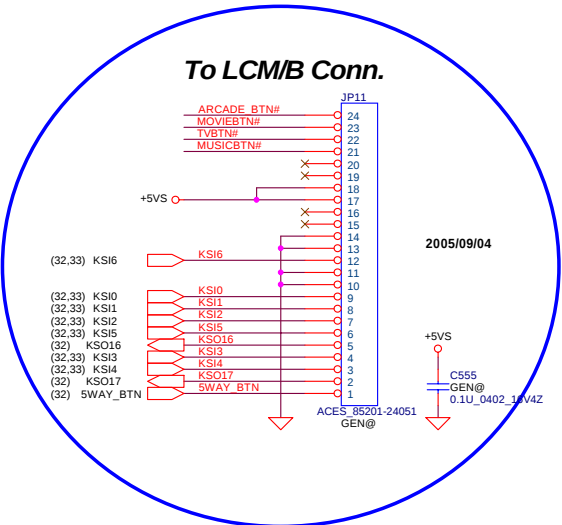
1MB Flash ROM



1MB ROM Socket



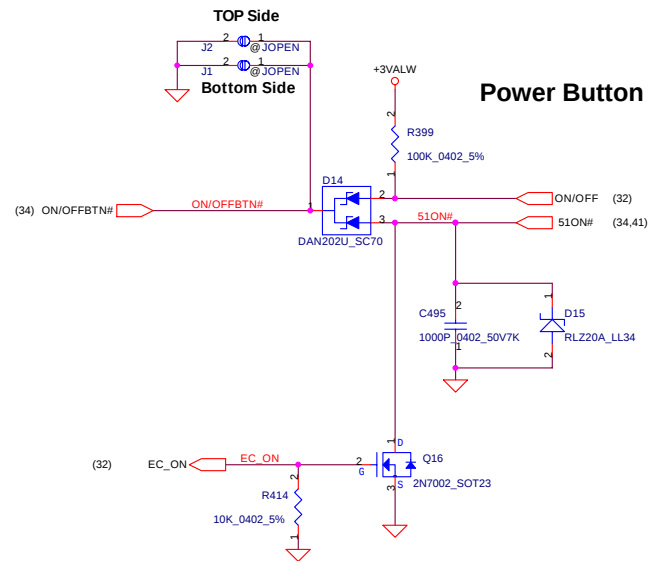
Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2005/06/20				Title			
				Deciphered Date				BIOS, I/O Port & K/B Connector			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET 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			
								HBL51 LA-3081P			
								Rev			
								0.2			
								Date			
								Wednesday, November 09, 2005			
								Sheet			
								47			



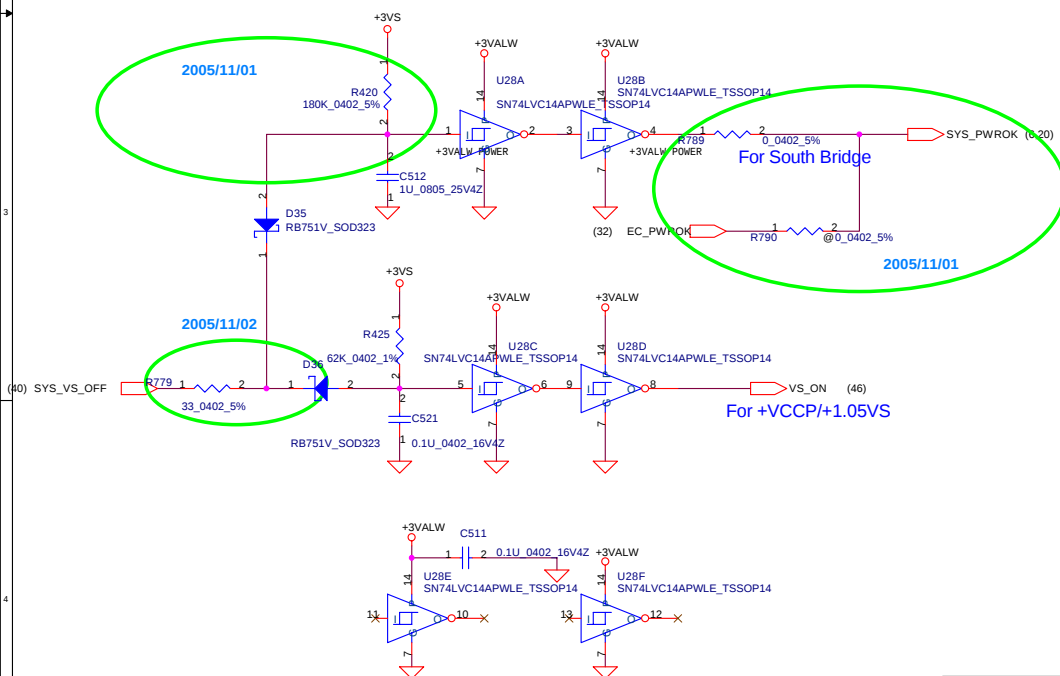
Geneva			Grapevine		
	KSO16	KSO17		KSO16	KSO17
KSI0	VOL_UP	LEFT			
KSI1	RIGHT	VOL_DOWN			
KSI2	PLAY	ENTER			
KSI3	STOP				
KSI4	NEXT				
KSI5	REV				
KSI6		RECORD			

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	LCM / MDC / BT / CIR / LED
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
				HBL51 LA-3081P	
				Date	Wednesday, November 09, 2005
				Sheet	34 of 47

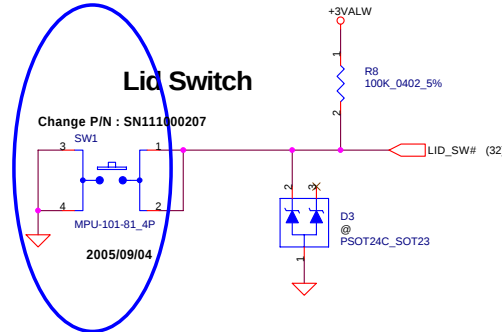
ON/OFF switch



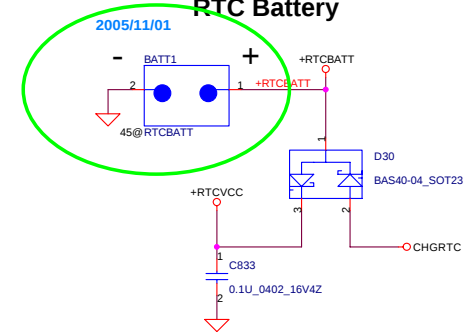
Power ON Circuit



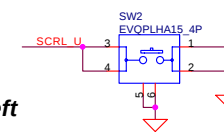
~~Lid Switch~~



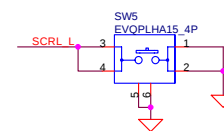
RTC Battery



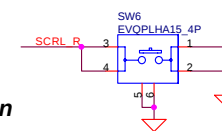
Scroll Up



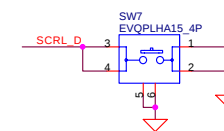
Scroll Left



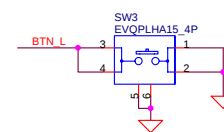
Scroll Right



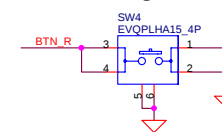
Scroll Down



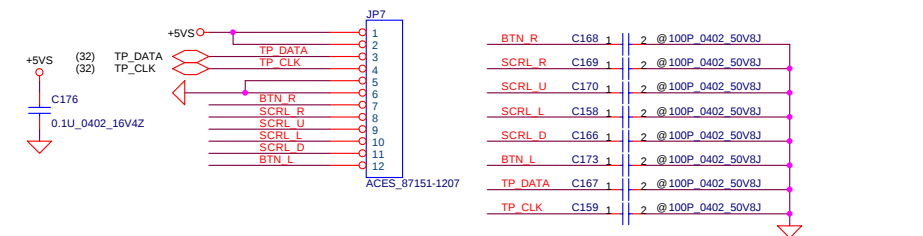
Left



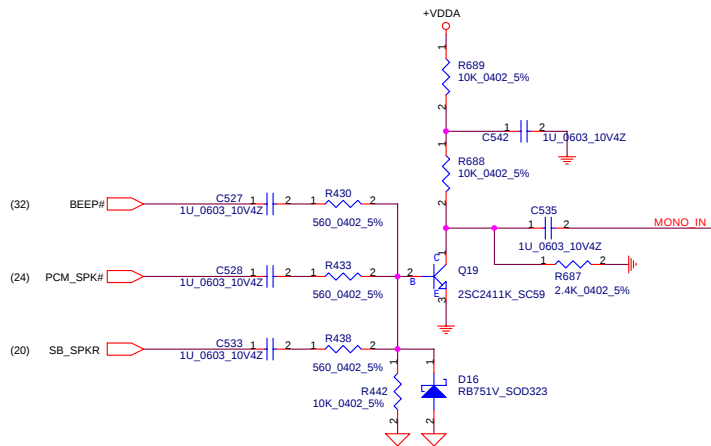
Right



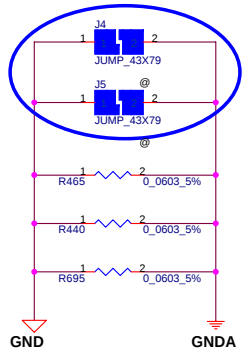
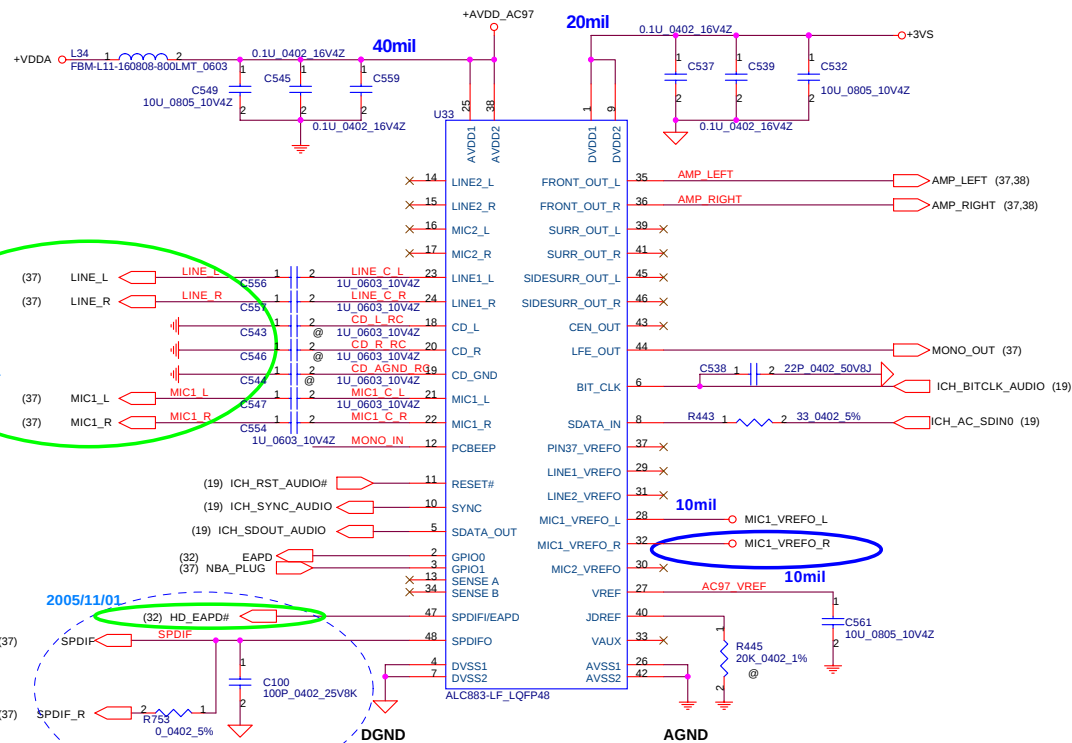
To TP/B Conn.



Security Classification		Compal Secret Data		Compal Electronics, Inc.									
Issued Date		2005/06/20		Deciphered Date		2006/06/20		Title					
								Power OK, Reset and RTC Circuit, TP					
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	
										HBL51 LA-3081P		0.2	
Date:				Wednesday, November 09, 2005				Sheet 35 of 47					

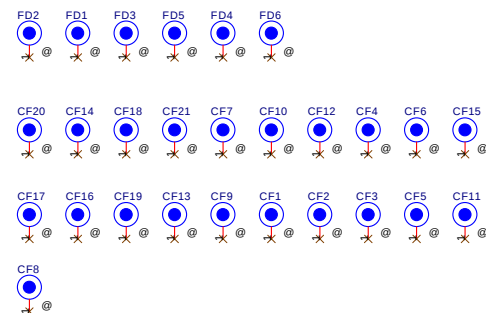
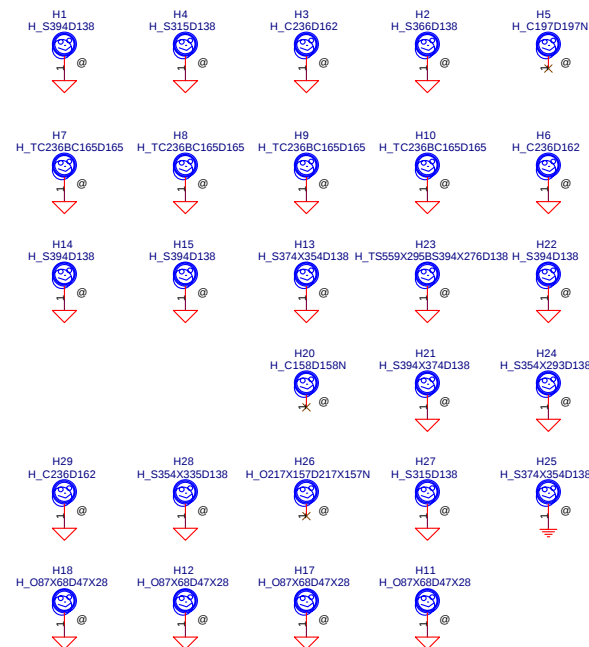


HD Audio Codec



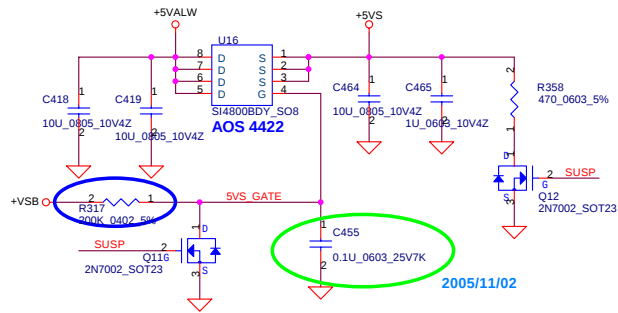
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 B	Document Number
				HBL51 LA-3081P	
				Date:	Wednesday, November 09, 2005
				Sheet	36 of 47
				Rev	0.2

The schematic diagram illustrates the fan speed control circuit. It features a 5V power supply and a 3V power supply. The 5V supply section includes a 10uF 1206 16V4Z capacitor (C338) connected to the 5V input. The 3V supply section includes a 10k 0402 5% resistor (R207) connected to the 3V input. The circuit also includes a 1000pF 0402 50V7K capacitor (C344) connected to the 5V supply, a 1000pF 0402 50V7K capacitor (C343) connected to the 3V supply, a 10uF 1206 16V4Z capacitor (C339) connected to the 5V supply, a 1N4148 SOT23 diode (D9) connected to the 5V supply, and a 1SS355 SOD323 diode (D8) connected to the 3V supply. The circuit is labeled with component values and part numbers, and includes a 40mil dimension line.

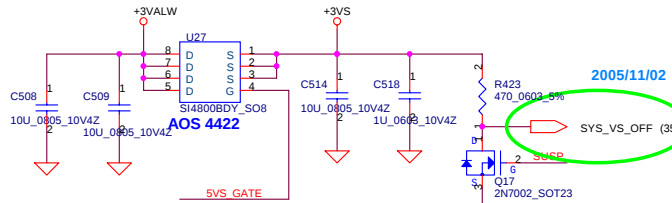


Security Classification		Compal Secret Data		Compal Electronics, Inc.					
Issued Date		2005/06/20	Deciphered Date	2006/06/20	Title				
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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.					FAN & Screw Hole				
					Size B	Document Number		Rev	
						HBL51 LA-3081P		0.2	
Date:					Wednesday, November 09, 2005	Sheet	29	of	47

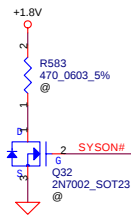
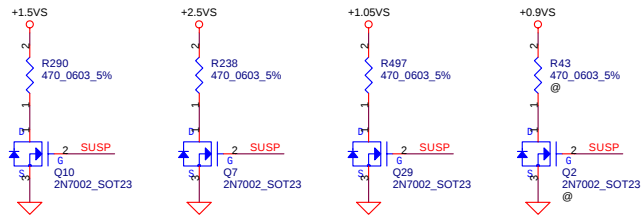
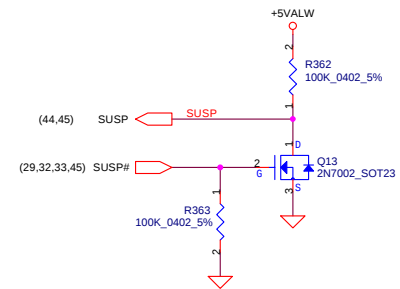
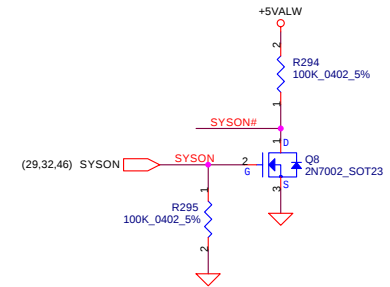
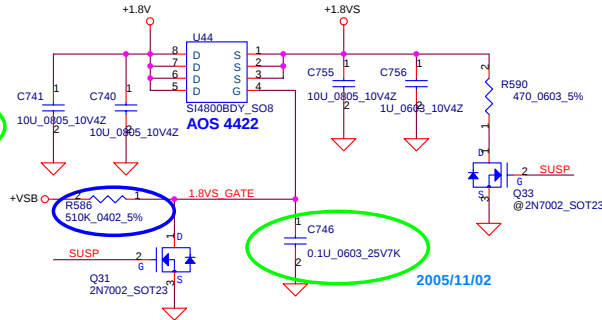
+5VALW TO +5VS



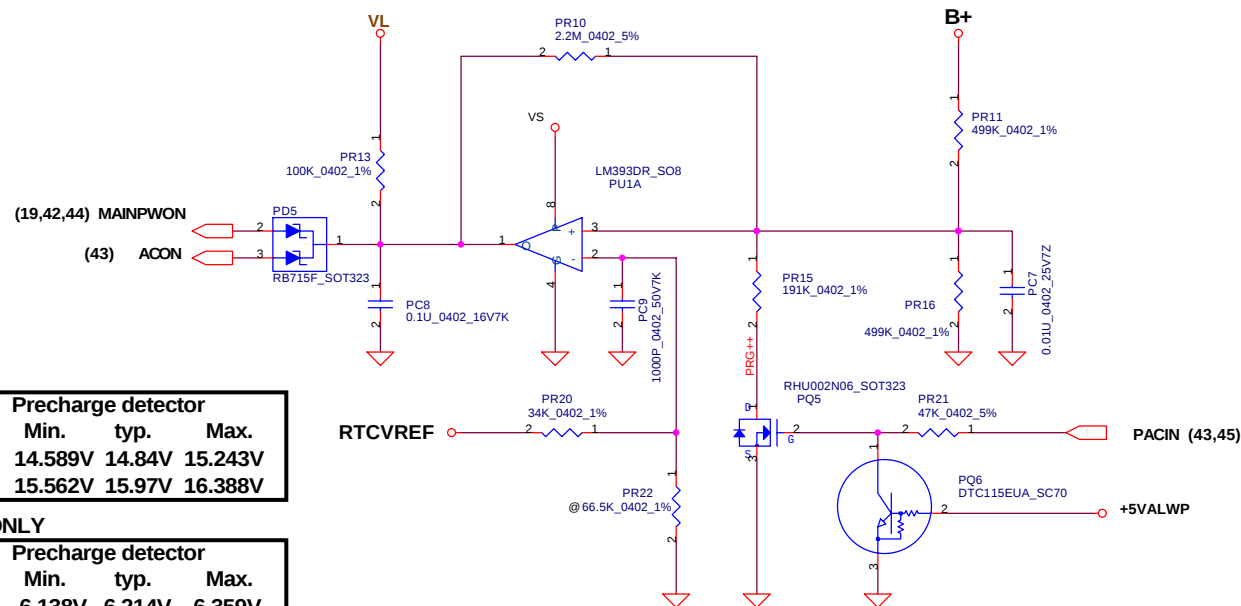
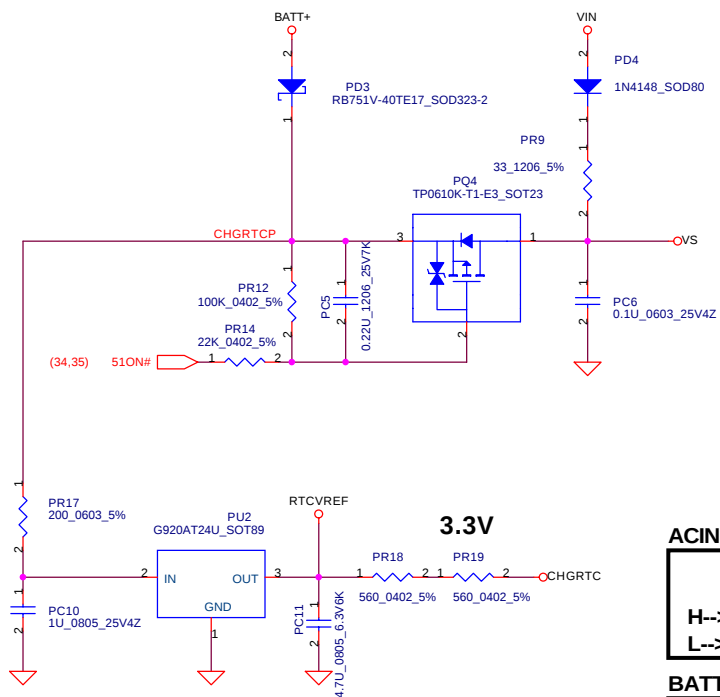
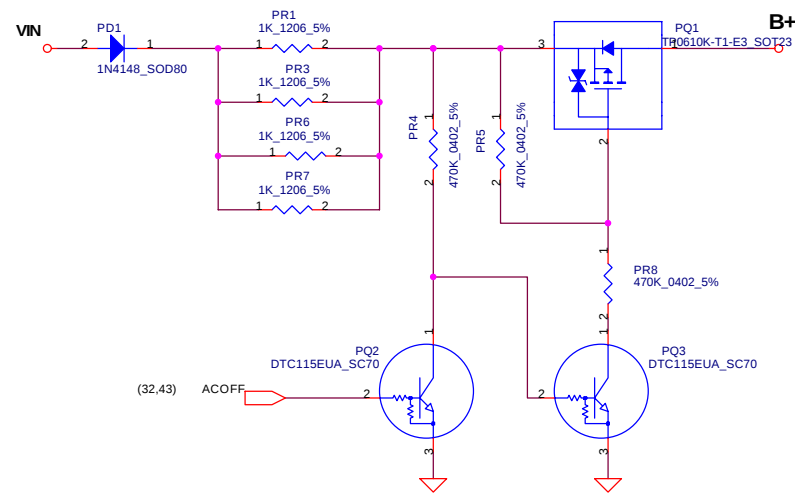
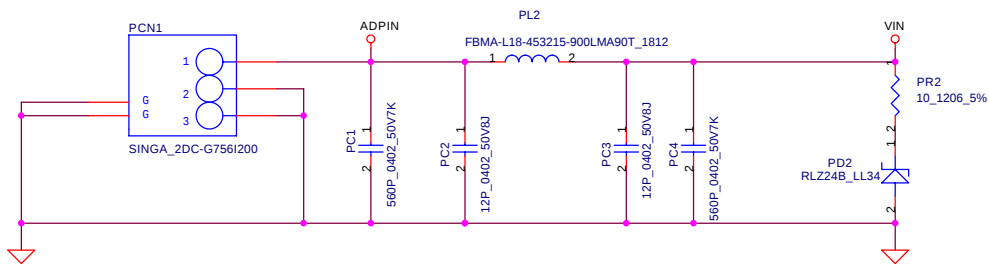
+3VALW TO +3VS



+1.8V to +1.8VS



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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 B	Document Number
				HBL51 LA-3081P	
				Date:	Wednesday, November 09, 2005
				Sheet	40 of 47



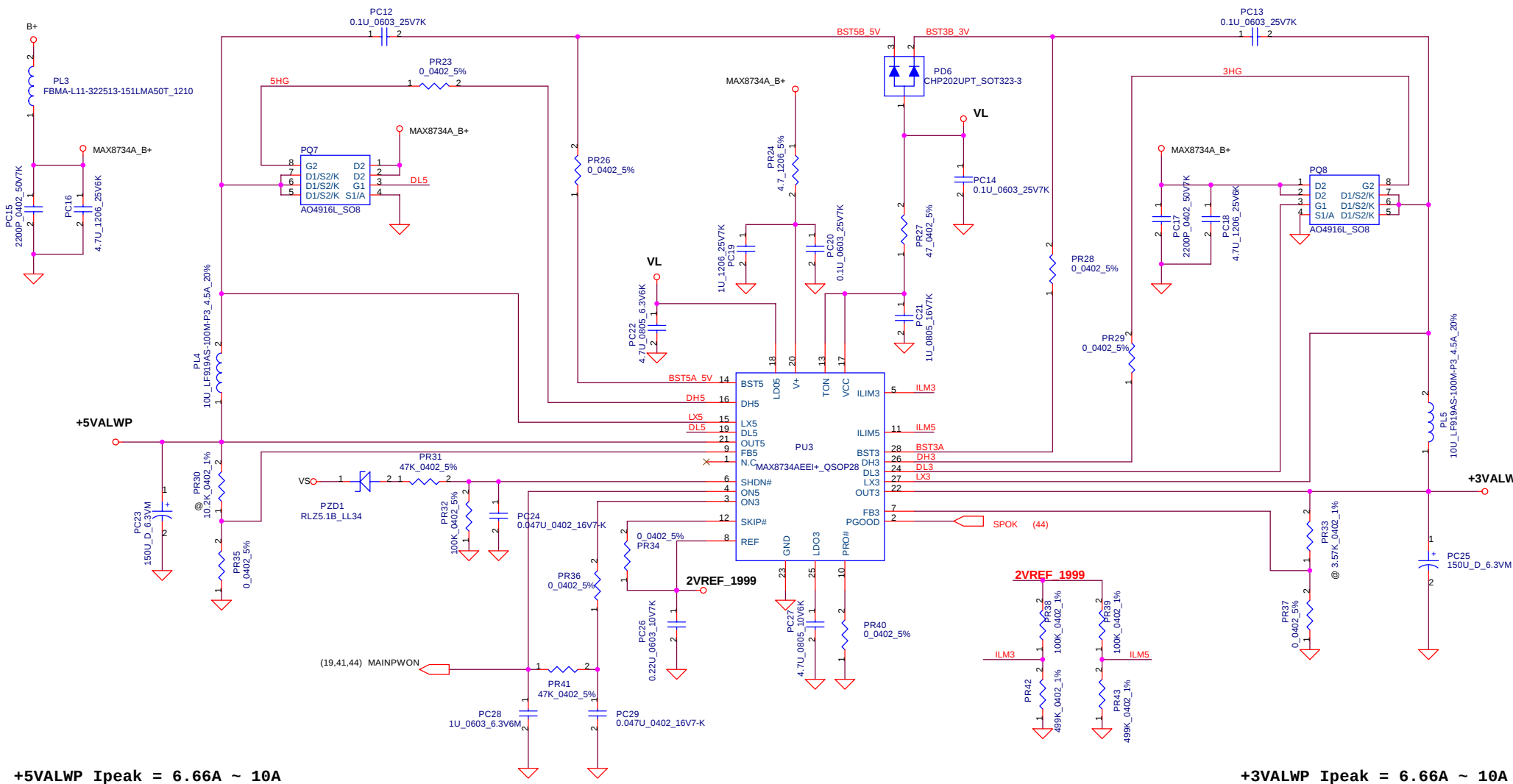
ACIN

Precharge detector			
Min.	typ.	Max.	
H-->L	14.589V	14.84V	15.243V
L-->H	15.562V	15.97V	16.388V

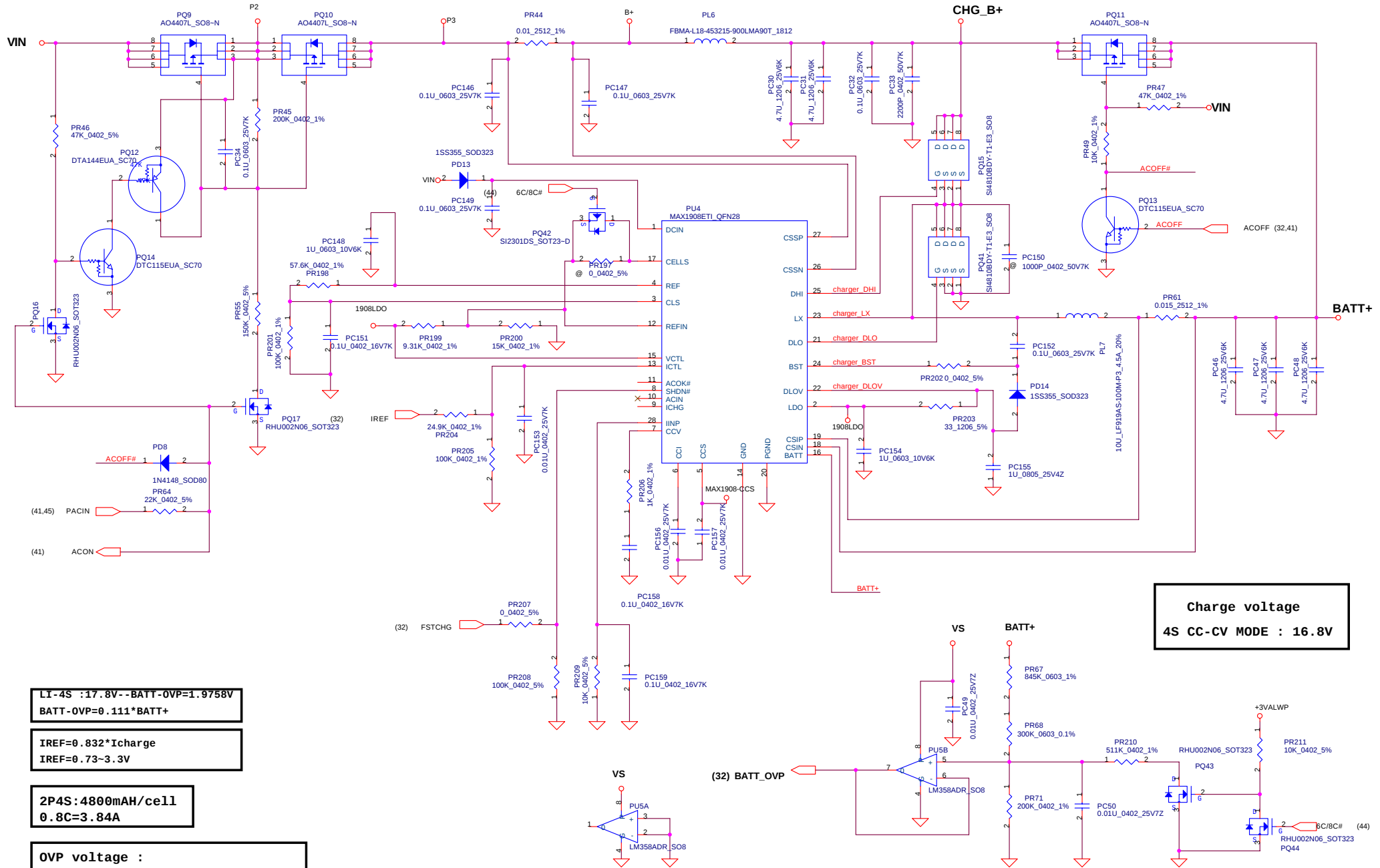
BATT ONLY

Precharge detector			
Min.	typ.	Max.	
H-->L	6.138V	6.214V	6.359V
L-->H	7.196V	7.349V	7.505V

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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 B	Document Number
				HBL50 LA-2921P	
				Date:	Wednesday, November 09, 2005
				Sheet	41 of 47
				Rev	0.2



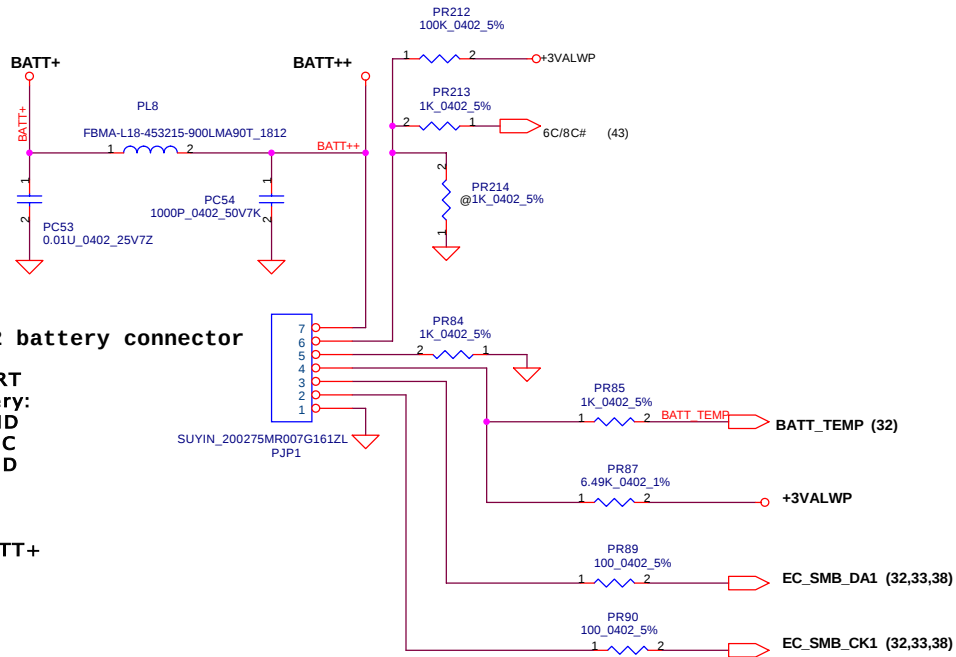
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Document Number
				Custom	HBL50 LA-2921P
				Rev	0.2
				Date:	Wednesday, November 09, 2005
				Sheet	42 of 47

I_{adp}=0~4.74A(90W)

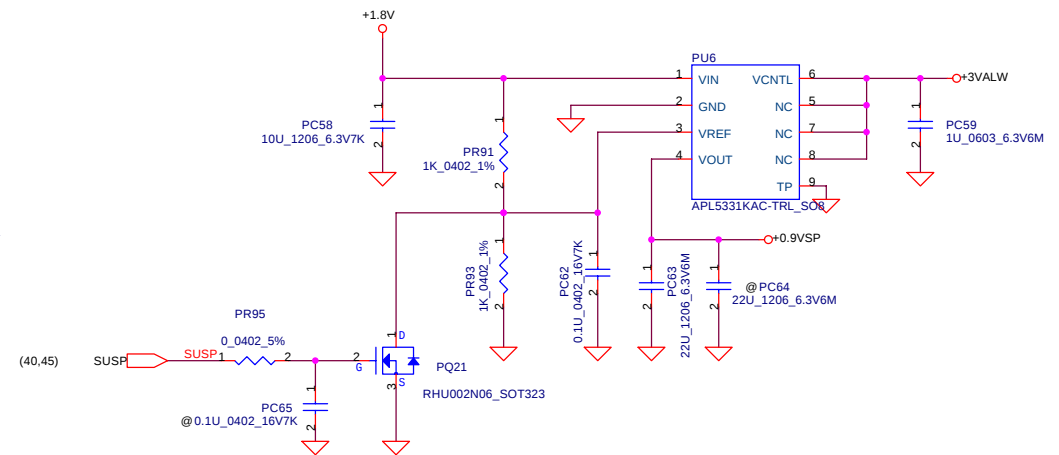
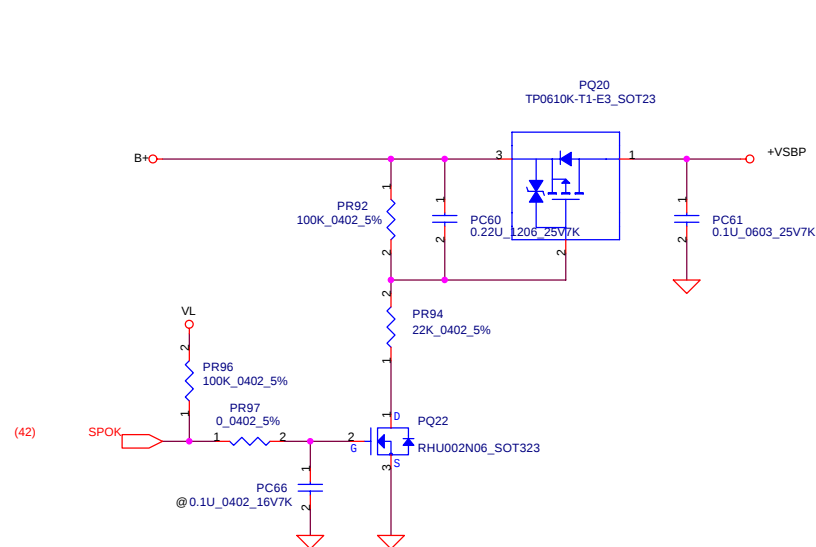
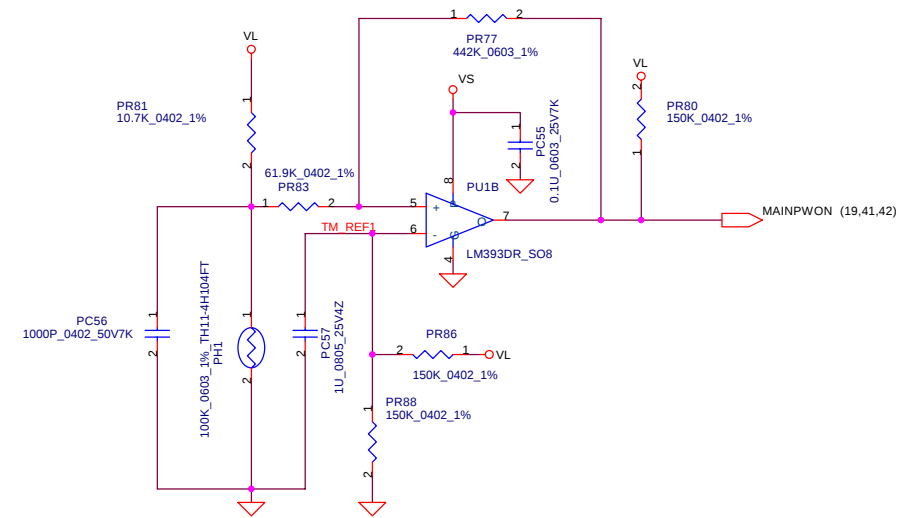
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	Charger
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE 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
				HBL50 LA-2921P	
				Date	Wednesday, November 09, 2005
				Sheet	43 of 47
				Rev	0.2

PJP2 battery connector

SMART Battery:
 1.GND
 2.SMC
 3.SMD
 4.TS
 5.B/I
 6.ID
 7.BATT+

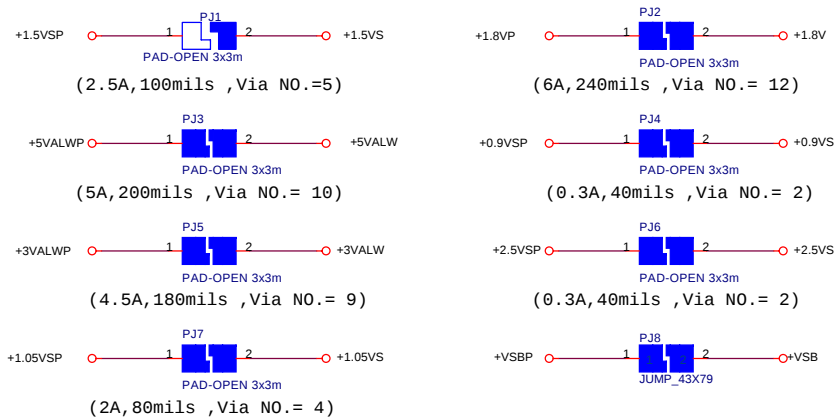


PH1 under CPU botten side :
 CPU thermal protection at 80 degree C
 Recovery at 44(45) degree C

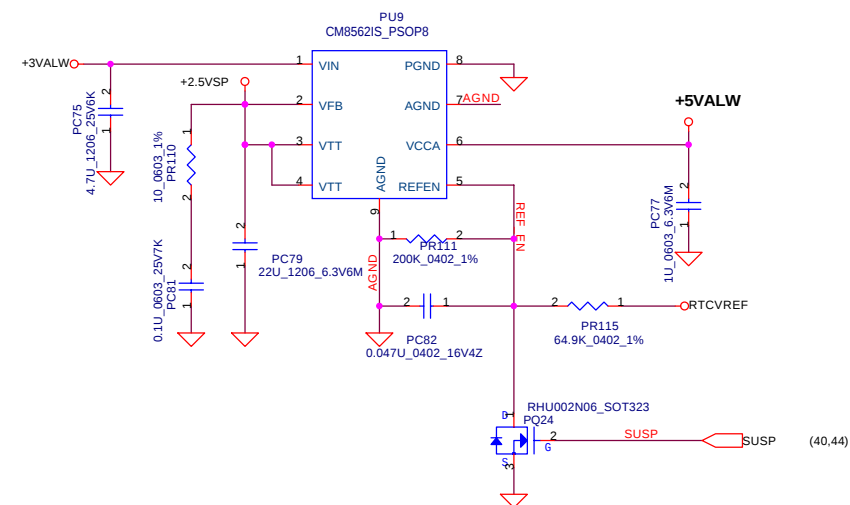
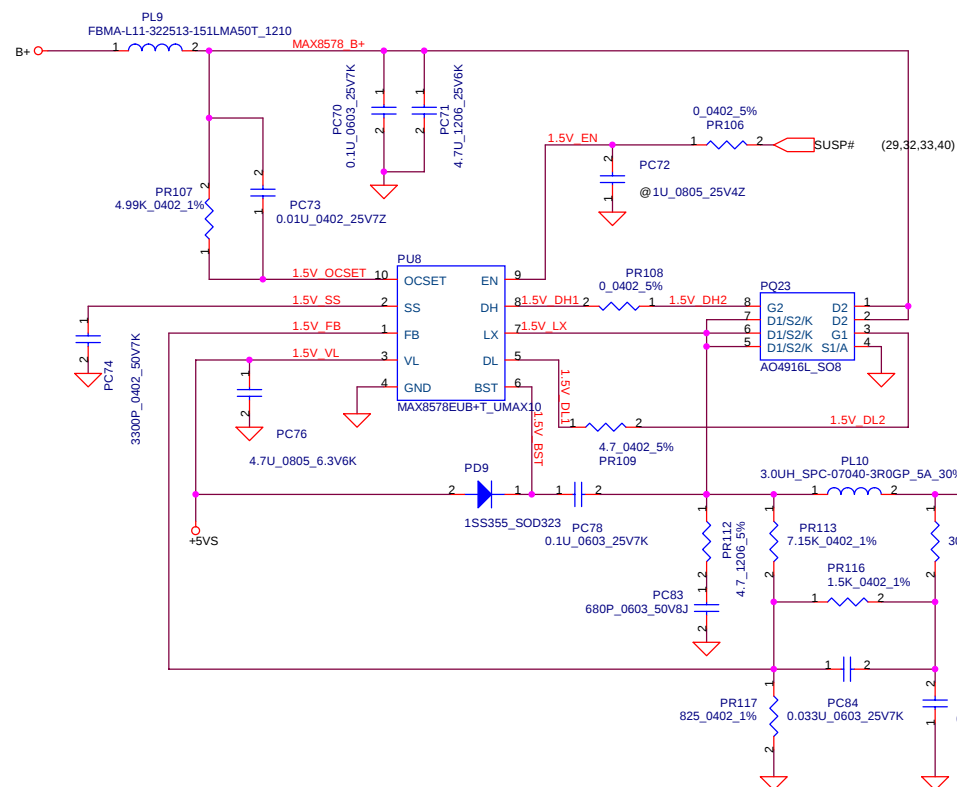
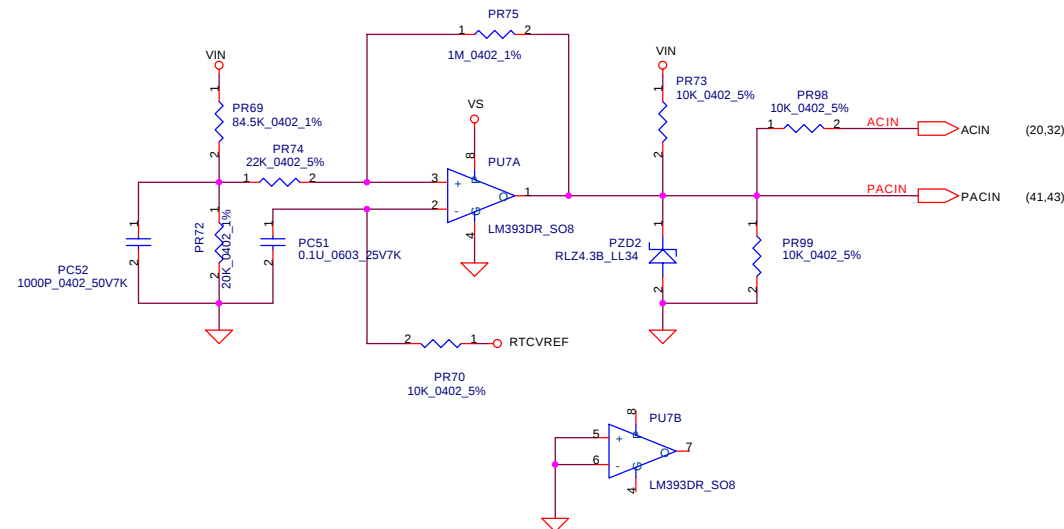


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 B	Document Number
				HBL50 LA-2921P	
				Date:	Wednesday, November 09, 2005
				Sheet	44 of 47
				Rev	0.2

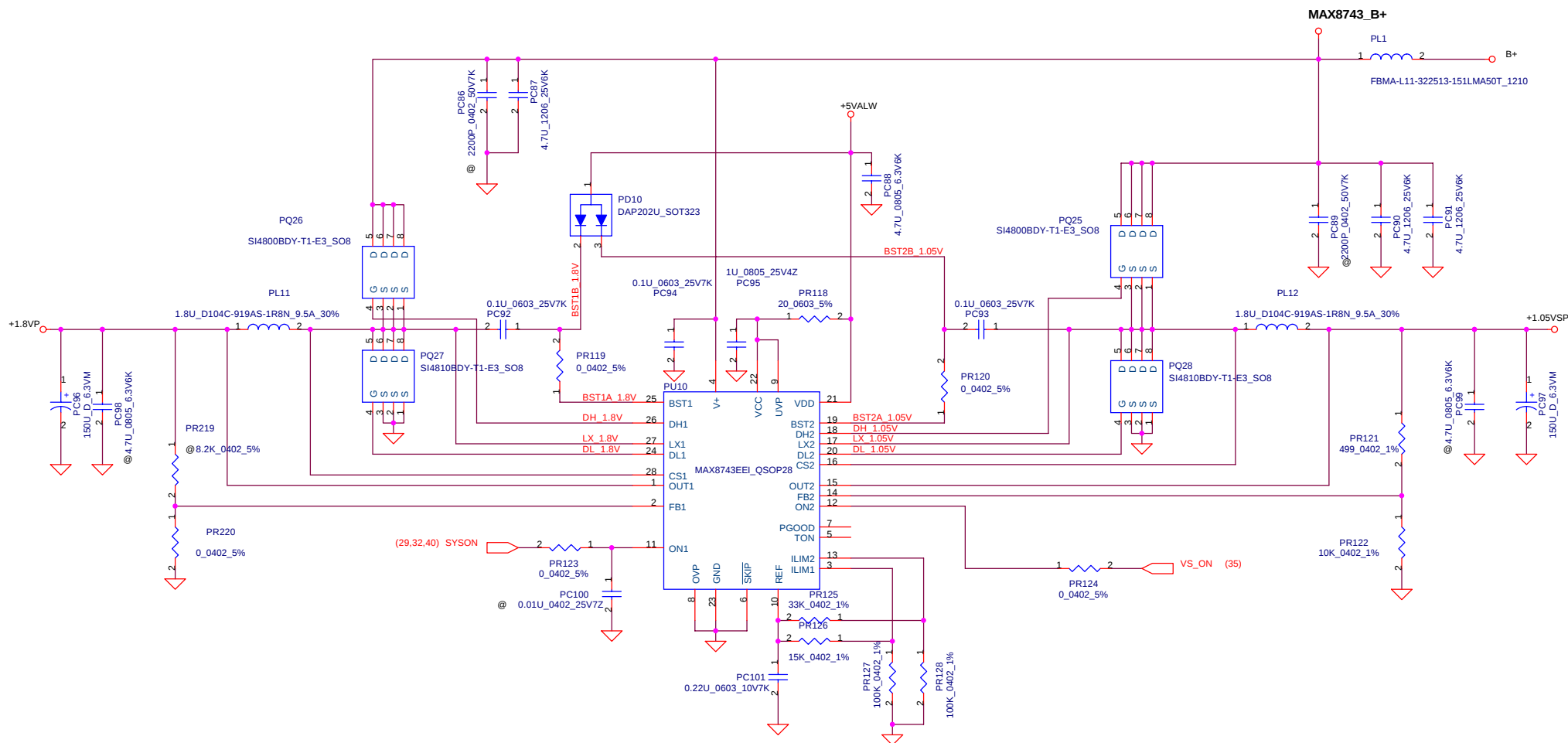
AC Adapter Detector



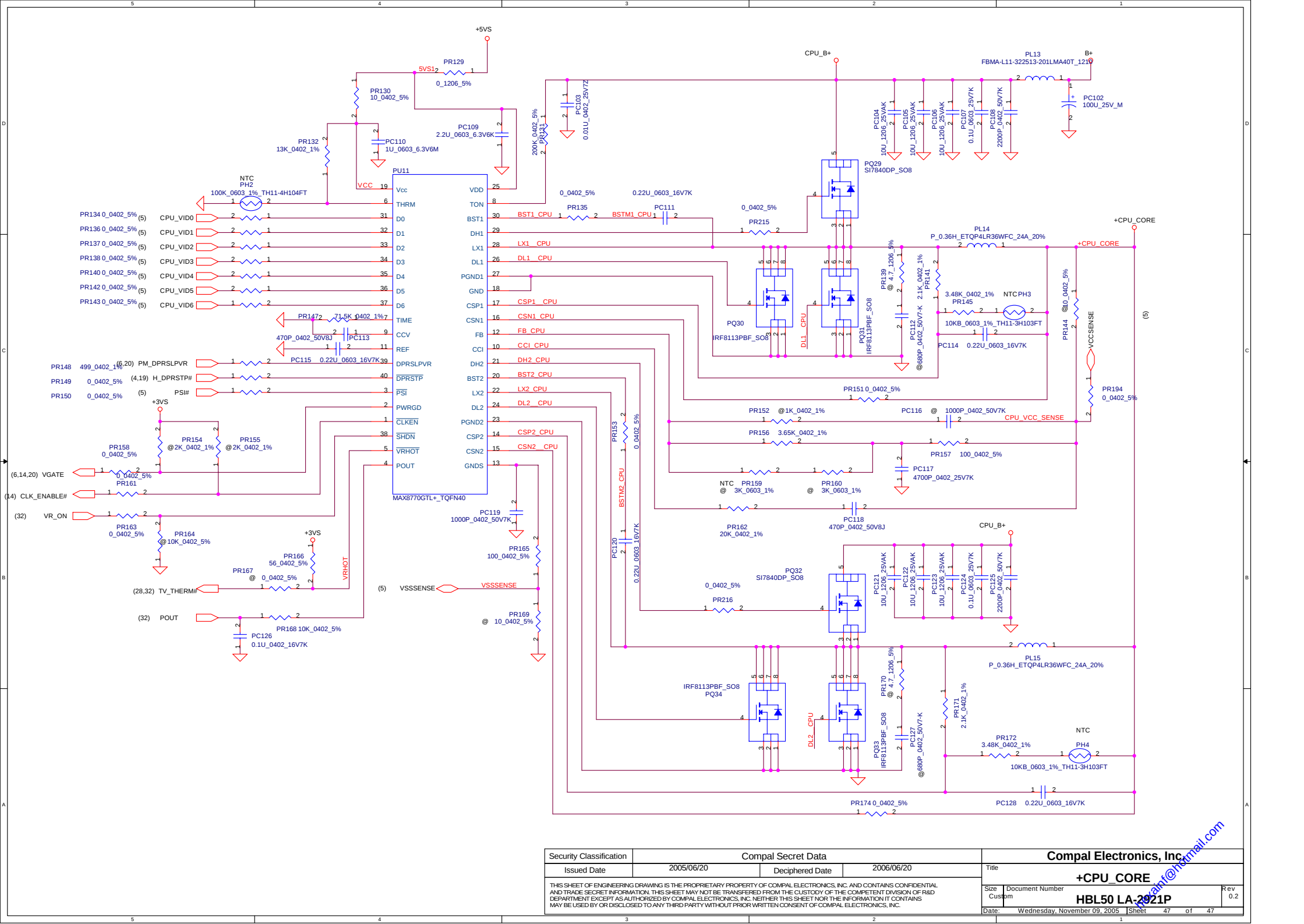
Vin Detector 17.90V/17.24V



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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.				+1.5VSP/RTCVREF	
Size B	Document Number	HBL50 LA-2921P		Rev	0.2
Date:	Wednesday, November 09, 2005	Sheet	45	of	47



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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.				+1.05VSP/+1.8VP	
Size	B	Document Number	HBL50 LA-2921P		Rev
Date:	Wednesday, November 09, 2005	Sheet	46	of	47
1		2		3	



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		Deciphered Date		+CPU CORE	
2005/06/20		2006/06/20		HBL50 LA-2921P	
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		0.2	
Date:		Wednesday, November 09, 2005		Sheet 47 of 47	