

# Compal confidential

## JBK00 LA-4091P Schematics Document

Mobile AMD S1G2 CPU with ATI  
RS780M & SB700 core logic

2007-10-30

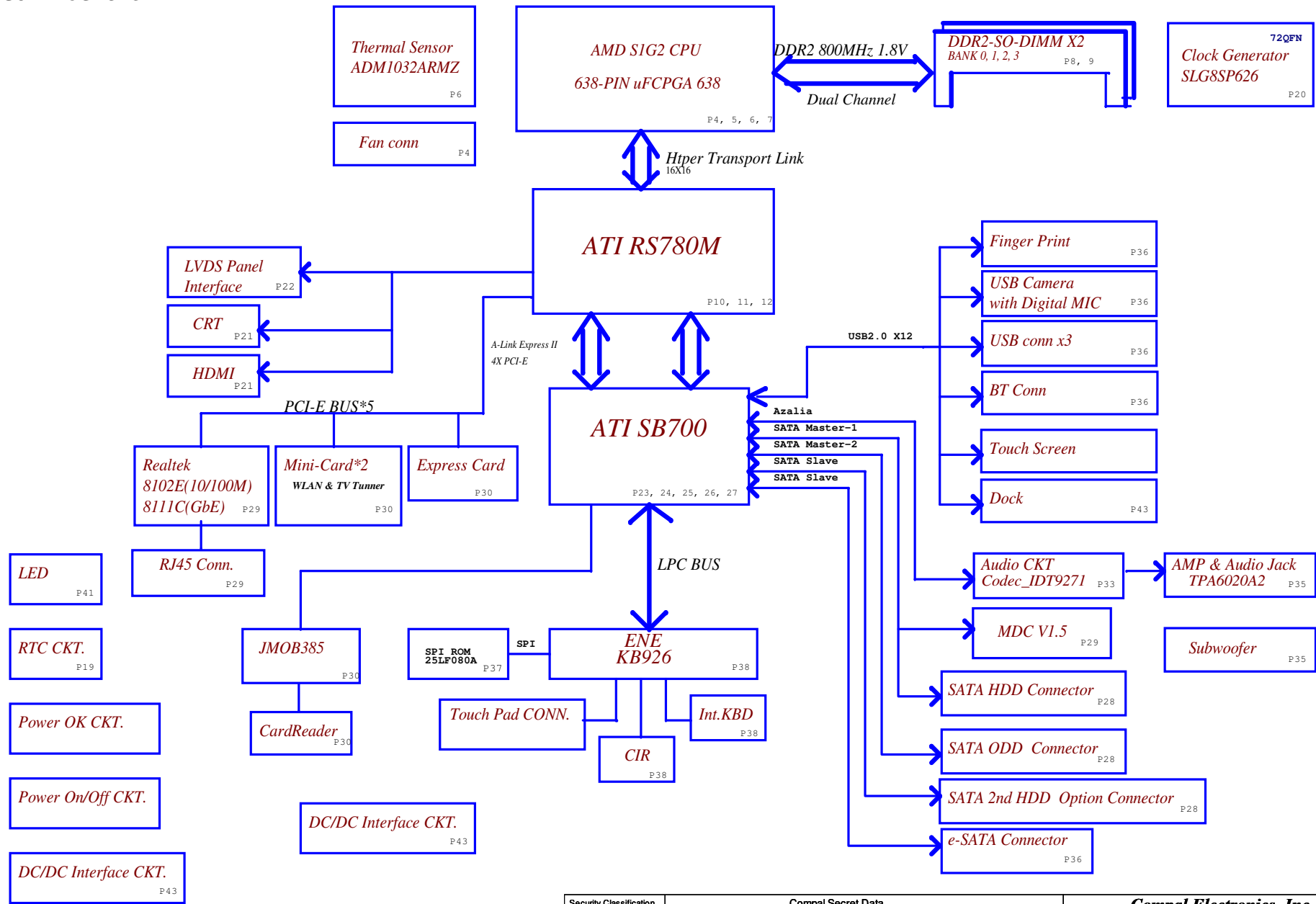
REV: 0.2

機 密	等 級	硬體二部	
		產出人員	
		產出日期	
		解密日期	

Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Cover Sheet	
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	LA-4091P
				Date:	Thursday, November 08, 2007
				Sheet	1 of 53
				Rev	0.1

Compal  
confidential

Consumer AMD UMA 17"



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number
				LA-4091P	Rev 0.1
				Date: Thursday, November 08, 2007	Sheet 2 of 53

## Voltage Rails

○ MEANS ON    X MEANS OFF

power plane State	+B +3VL	+5VALW +3VALW +1.2VALW	+1.8V +0.9V	+5VS +3VS +2.5VS +1.8VS +1.5VS +1.1VS +VGA_CORE +1.2V_HT +CPU_CORE_NB +CPU_CORE_0 +CPU_CORE_1
S0	○	○	○	○
S1	○	○	○	○
S3	○	○	○	X
S5 S4/AC	○	○	X	X
S5 S4/ Battery only	○	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

## Symbol Note :

 : means Digital Ground

 : means Analog Ground

@ : means just reserve , no build  
DEBUG@ : means just reserve for debug.

 Layout Notes

UMA@ : means for RS780M.

## I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	10100000
DDR SO-DIMM 1	A4	10100100
CLOCK GENERATOR (EXT.)	D2	11010010
ACCELEROMETER	3A	00111010

SMBUS Control Table

	SOURCE	INVERTER	BATT	SERIAL EEPROM	THERMAL SENSOR CPU & ADM1032	SODIMM 1 / 11	CLK CHIP	MINI_CARD Slot 2	LCD	HDMI	G-Sensor
SMB_EC_CK1	KB926	X	V	V	X	X	X	X	X	X	X
SMB_EC_DA1	KB926	X	X	X	V	X	X	X	X	X	X
SMB_EC_CK2	KB926	X	X	X	V	X	X	X	X	X	X
SMB_EC_DA2	KB926	X	X	X	V	X	X	X	X	X	X
I2C_CLK	RS780M	X	X	X	X	X	X	X	V	X	X
I2C_DATA	RS780M	X	X	X	X	X	X	X	V	X	X
DDC_CLK0	RS780M	X	X	X	X	X	X	X	X	V	X
DDC_DATA0	RS780M	X	X	X	X	X	X	X	X	V	X
DDC_CLK1	RS780M	X	X	X	X	X	X	X	X	X	X
DDC_DATA1	RS780M	X	X	X	X	X	X	X	X	X	X
SCL0	SB700	X	X	X	X	V	V	X	X	X	V
SDA0	SB700	X	X	X	X	X	X	V	X	X	X
SCL1	SB700	X	X	X	X	X	X	V	X	X	X
SDA1	SB700	X	X	X	X	X	X	V	X	X	X
SCL2	SB700	X	X	X	X	X	X	X	X	X	X
SDA2	SB700	X	X	X	X	X	X	X	X	X	X
SCL3	SB700	X	X	X	X	X	X	X	X	X	X
SDA3	SB700	X	X	X	X	X	X	X	X	X	X

## EC SM Bus1 address

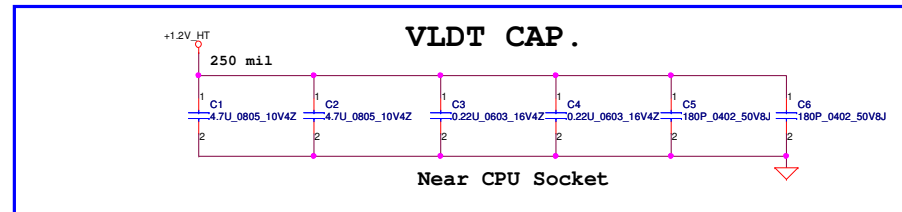
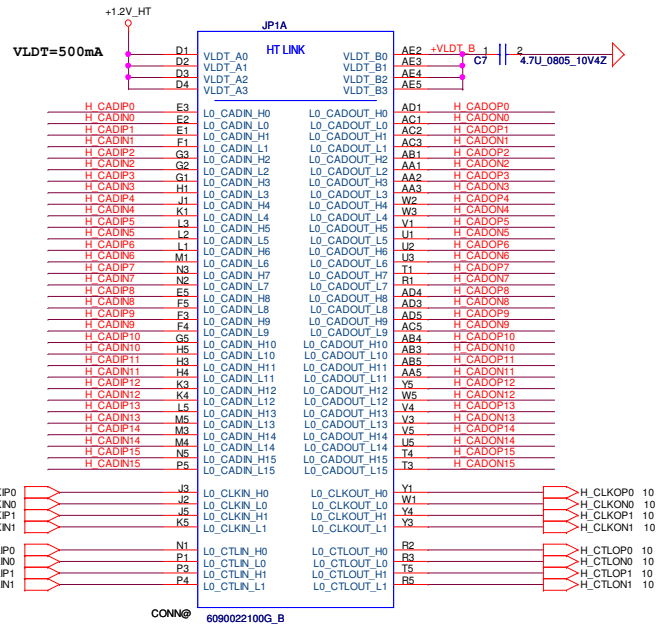
Device	HEX	Address
Smart Battery	16H	0001 011X b
24C16	A0H	1010 000X b
CPU SIC interface	98H	1001 100X b

## EC SM Bus2 address

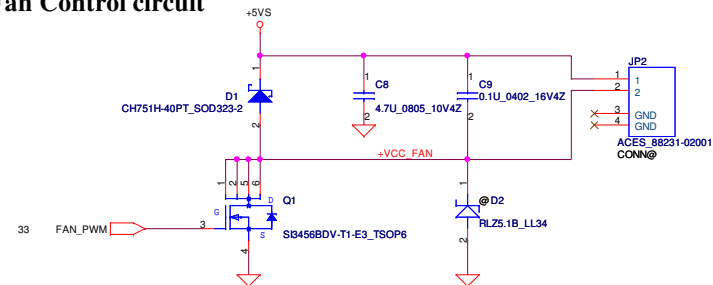
Device	HEX	Address
AD1032-2 CPU	9AH	1001 101X b

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Title	Notes List	
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
				Custom	LA-4091P	0.1
				Date:	Thursday, November 08, 2007	Sheet 3 of 53

10 H\_CADIP[0..15] H\_CADIP[0..15] 10  
10 H\_CADIN[0..15] H\_CADIN[0..15] 10

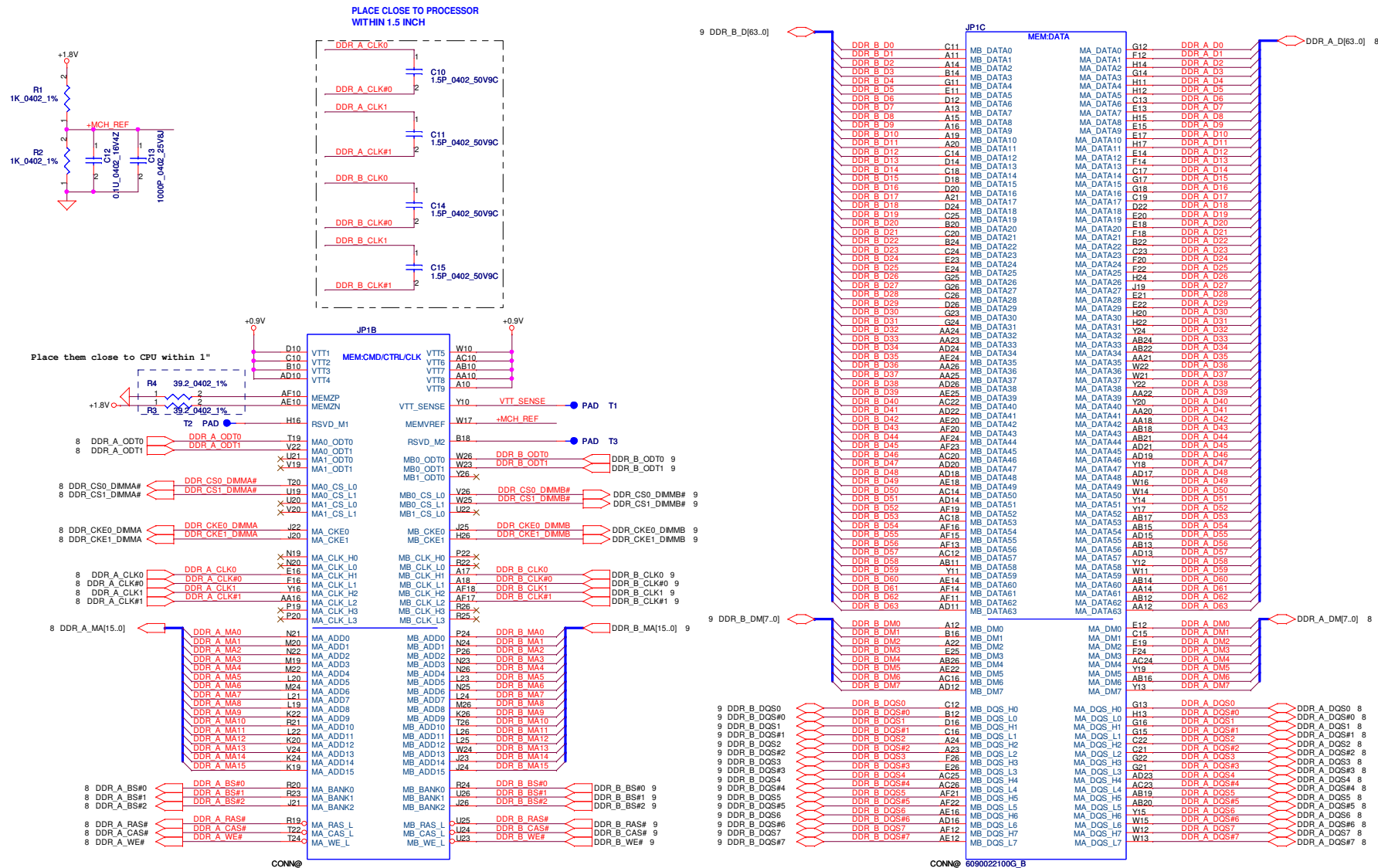


## PWM Fan Control circuit

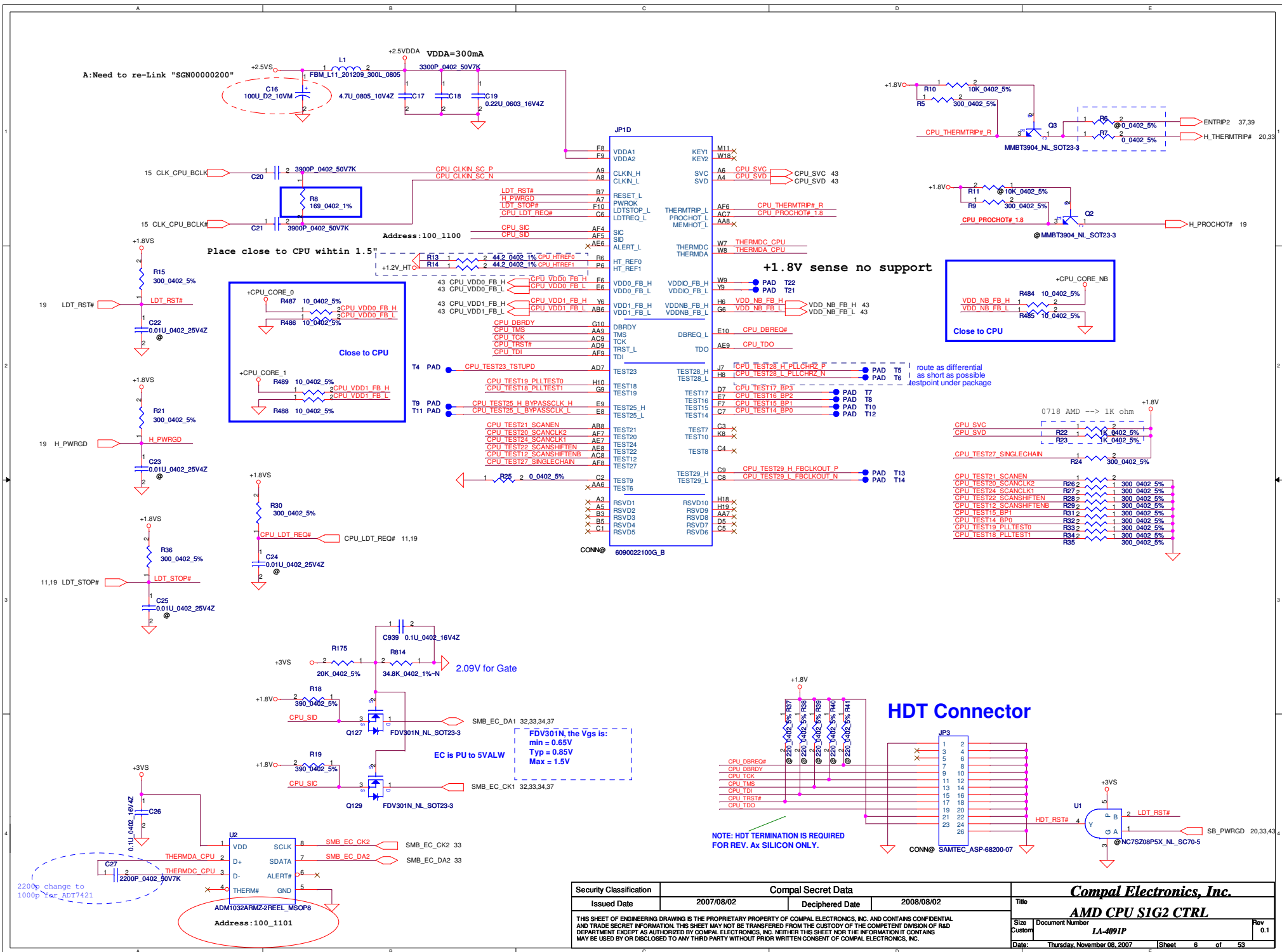


Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number LA-4091P
				Date: Thursday, November 08, 2007	Sheet 4 of 53

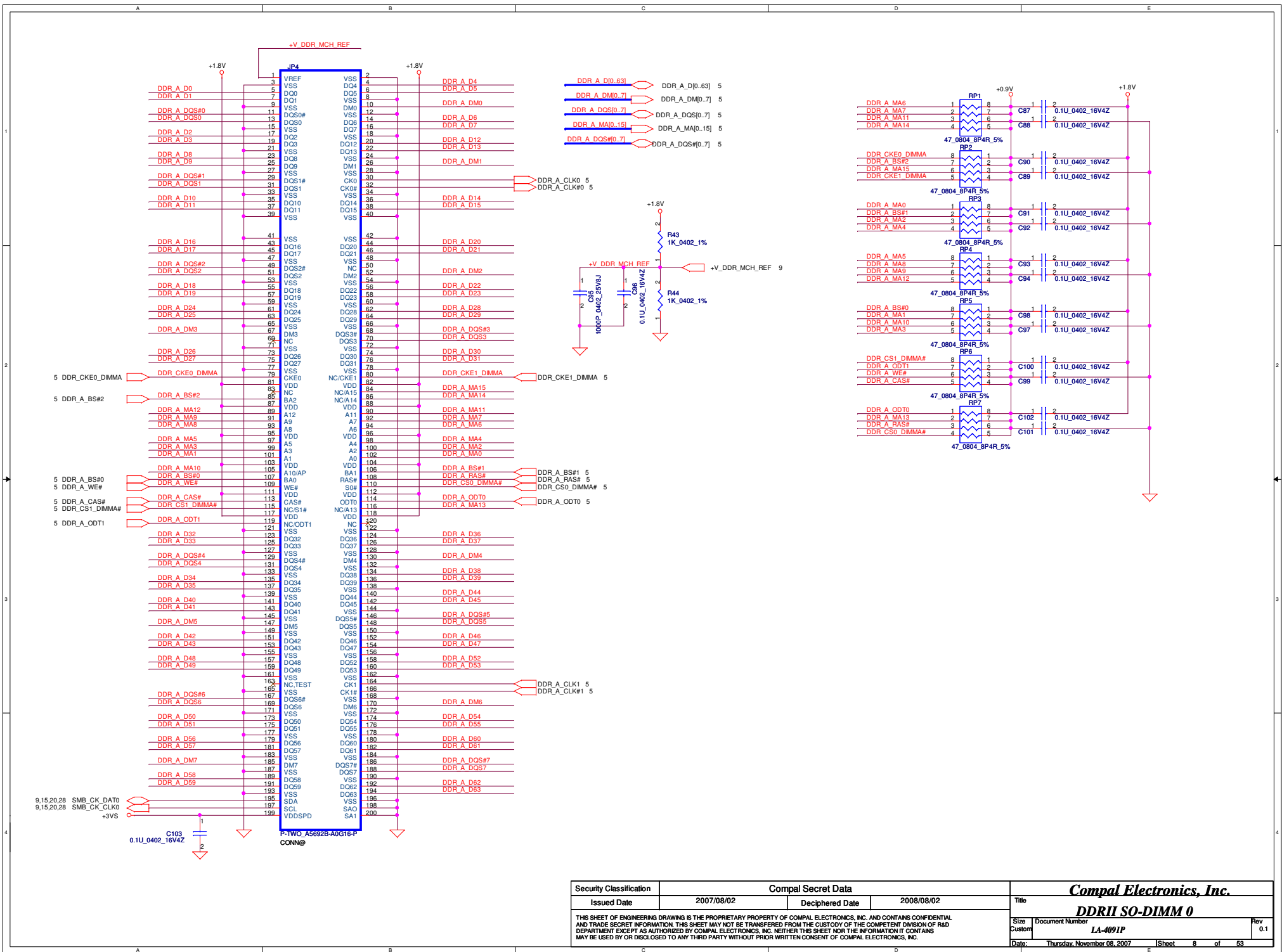
# Processor DDR2 Memory Interface



Security Classification				Compal Secret Data							
Issued Date		2007/08/02		Deciphered Date		2008/08/02					
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 COMPLETE 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				AMD CPU S1G2 DDR2 I/F							
Size				Document Number							
Custom				LA-4091P							
Date				Thursday, November 08, 2007							
Sheet				5 of 53							



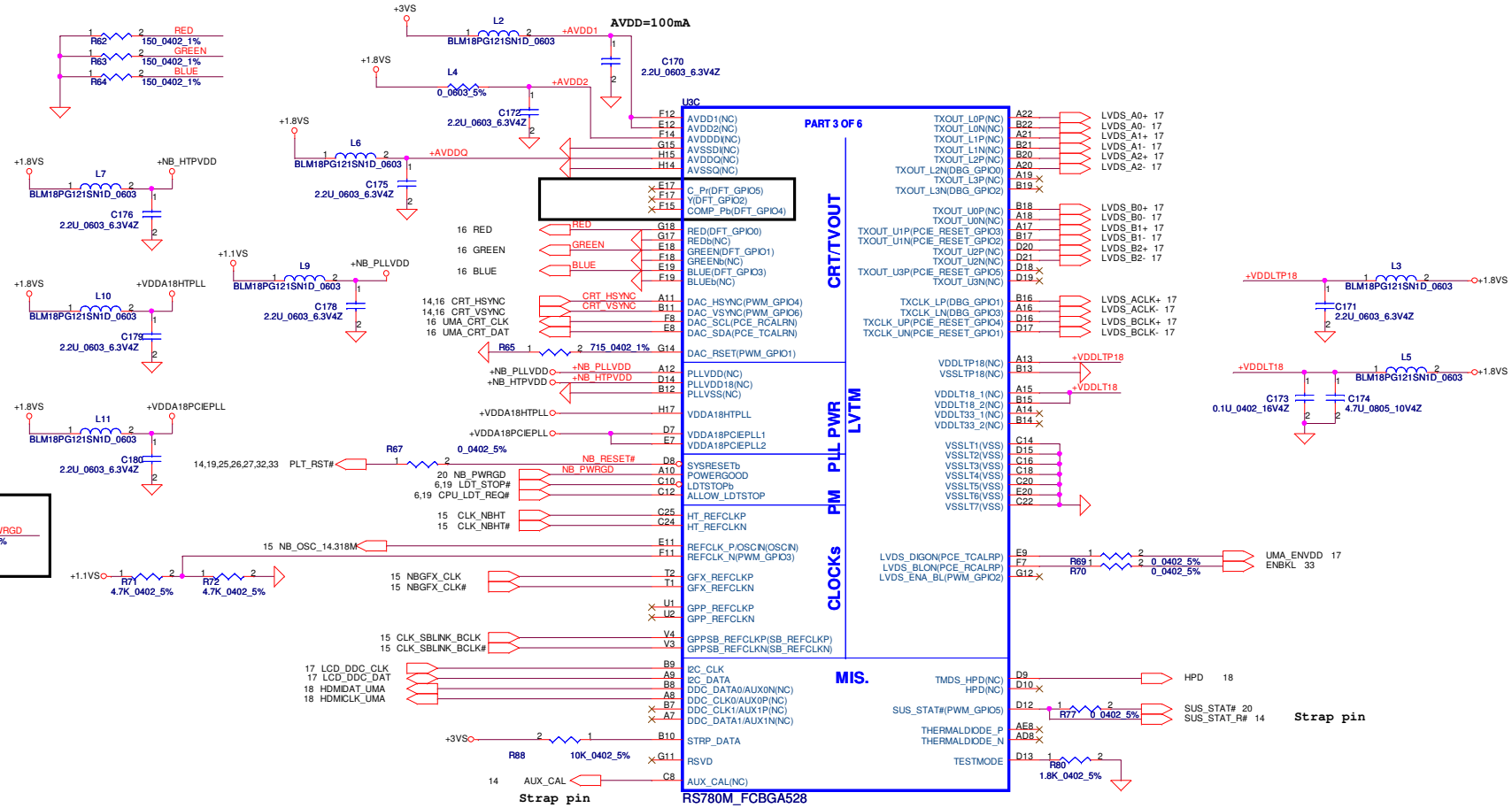




Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	DDR II SO-DIMM 0	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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	0.1
				Document Number	LA-4091P
				Date	Thursday, November 08, 2007
				Sheet	8 of 53



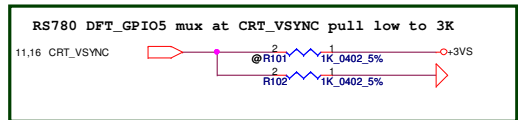




Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	RS780 VEDIO/CLK GEN	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	0.1
				Date	Thursday, November 08, 2007
				Sheet	11 of 53







**DFT\_GPIO5:STRAP\_DEBUG\_BUS\_GPIO\_ENABLEb**

Enables the Test Debug Bus using GPIO.

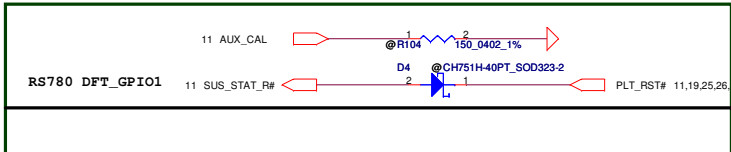
1 : Enable (RX780, RS780)  
0 : Disable (RX780, RS780)  
PIN: RS740-->RS780\_AUX\_CAL; RX780-->NB\_TV\_C; RS780--> VSYNC#

RS780 use register to control PCI-E configure

**DFT\_GPIO[4:2]: STRAP\_PCIE\_GPP\_CFG[2:0]**

These pin straps are used to configure PCI-E GPP mode.

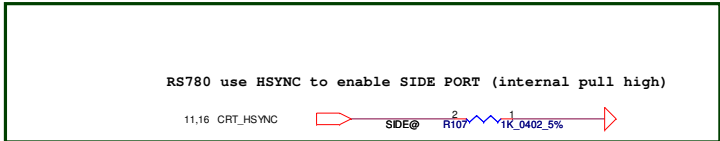
000 : 00001  
001 : 00010  
010 : 01011  
011 : 00100  
100 : 01010  
101 : 01100  
111 : 01011



**DFT\_GPIO1: LOAD\_EEPROM\_STRAPS**

Selects Loading of STRAPS from EPROM

1 : Bypass the loading of EEPROM straps and use Hardware Default Values  
0 : I2C Master can load strap values from EEPROM if connected, or use default values if not connected  
RS740/RX780: DFT\_GPIO1 RS780:SUS\_STAT



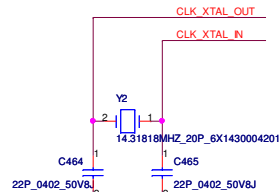
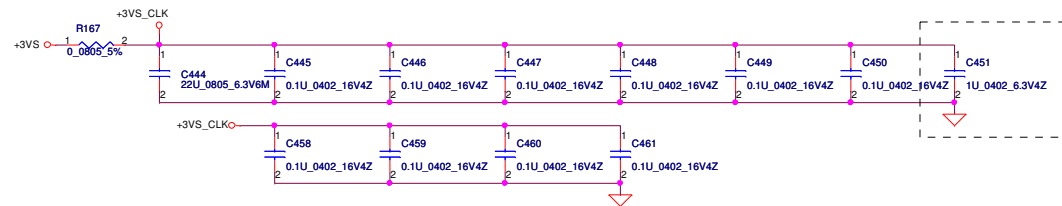
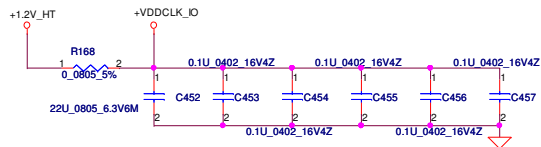
**DFT\_GPIO0: STRAP\_DEBUG\_BUS\_PCIE\_ENABLEb**

RX780: Enables the Test Debug Bus using PCIE bus

1 : Disable ( Can still be enabled using nbcfg register access )  
0 : Enable

RS780: Enables Side port memory ( RS780 use HSYNC#)

1. Disable (RS780)  
0 : Enable (RS780)

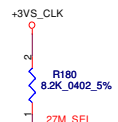
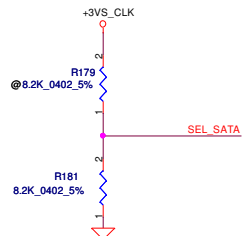


Routing the trace at least 10mil

PA\_RS7X0A1

SB LINK

Card reader  
MiniCard\_2

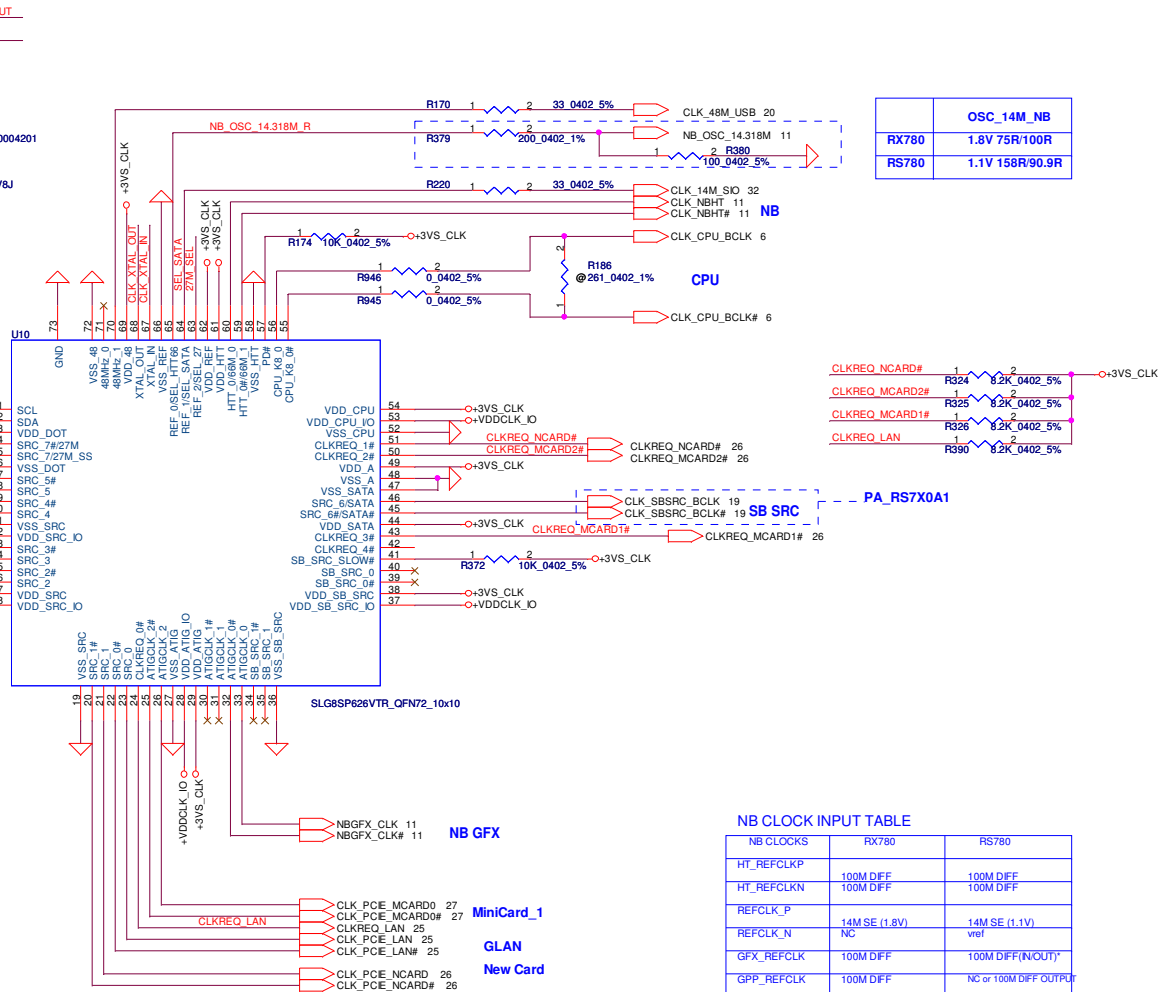


SEL_SATA	1	configure as SATA output
	0 *	configure as normal SRC(SRC_6) output
		* default

27M_SEL	1 *	configure as 27M and 27M_SS output
	0	configure as SRC_7 output
		* default

Use voltage divider resistor R379 & R380 to pull low

NB_OSC_14.318M	1	configure as single-ended 66MHz output
	0 *	configure as differential 100MHz output
		* default



		OSC_14M_NB
RX780	1.8V 75R/100R	
RS780	1.1V 158R/90.9R	



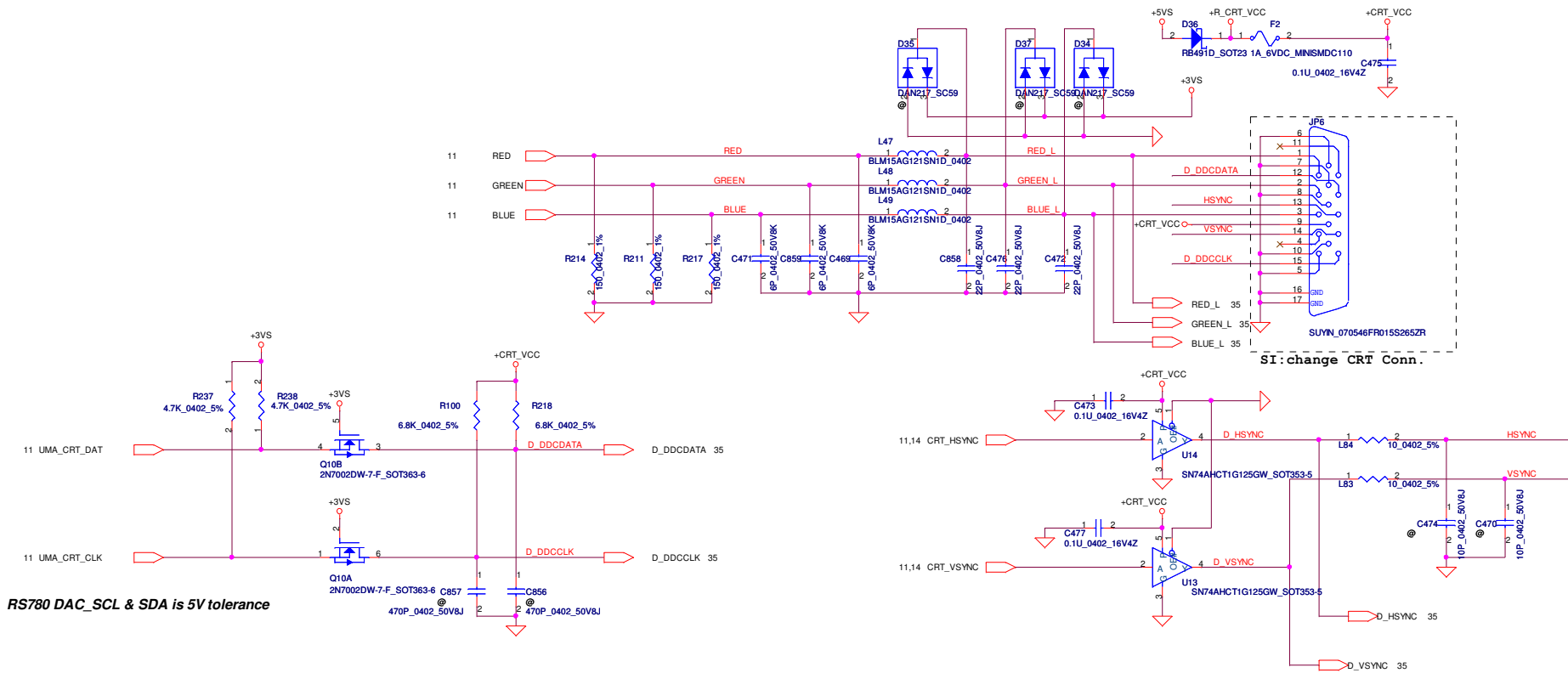
PA\_RS7X0A1

NB CLOCK INPUT TABLE

NB CLOCKS	RX780	RS780
HT_REFCLKP	100M DIFF	100M DIFF
HT_REFCLKN	100M DIFF	100M DIFF
REFCLK_P	14M SE (1.8V)	14M SE (1.1V)
REFCLK_N	NC	vref
GFX_REFCLK	100M DIFF	100M DIFF (NOUT)
GPP_REFCLK	100M DIFF	NC or 100M DIFF OUTPUT
GPPSB_REFCLK	100M DIFF	100M DIFF

Security Classification	Compal Secret Data			Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Clock generator	
Size Custom	Document Number	LA-4091P		Rev	0.1
Date	Thursday, November 08, 2007	Sheet	15	of 53	

# CRT CONNECTOR

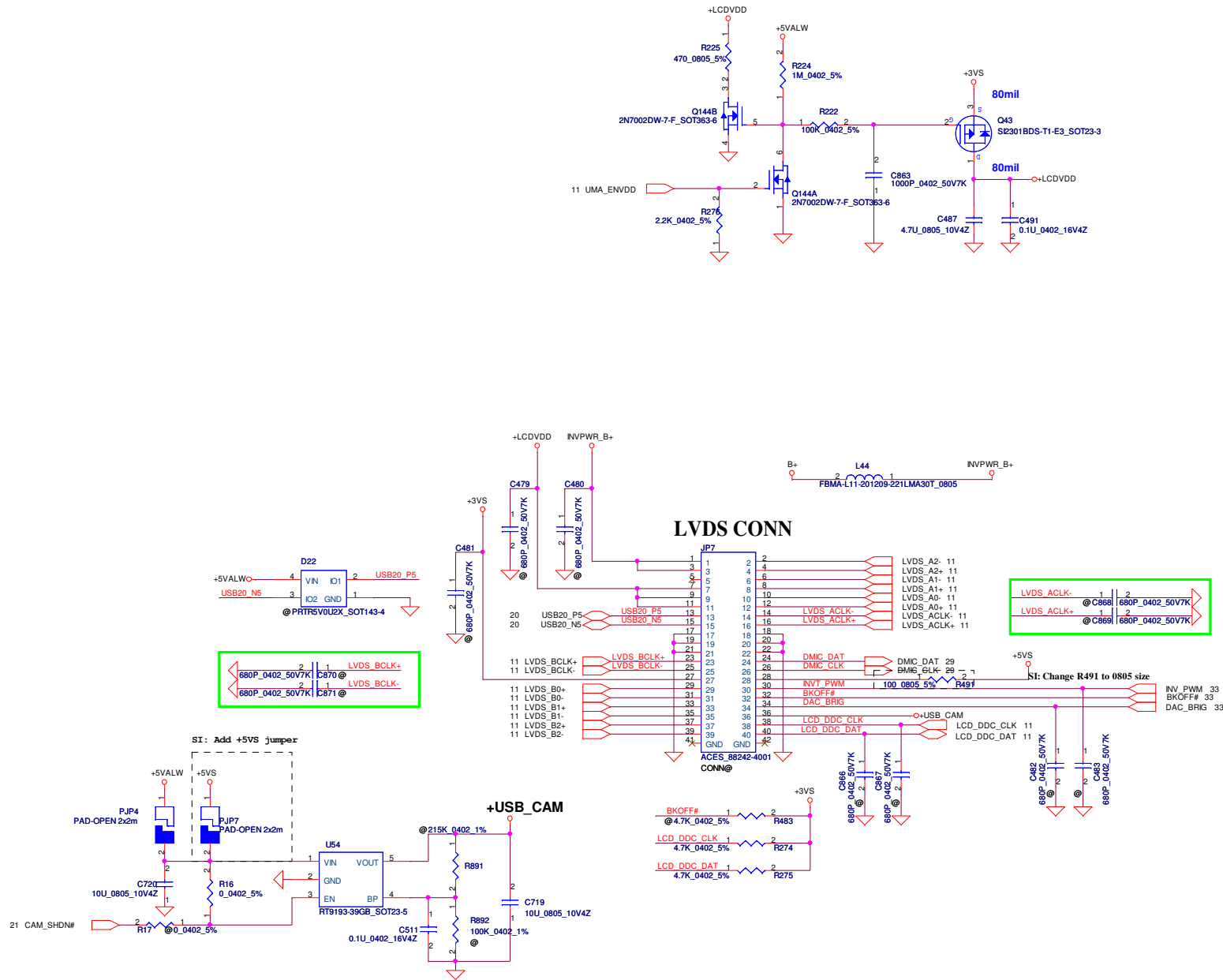


Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Size	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Custom	LA-4091P
				Date:	Thursday, November 08, 2007
				Sheet	16 of 53

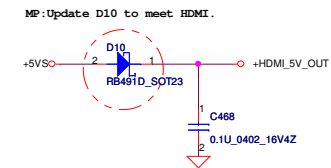
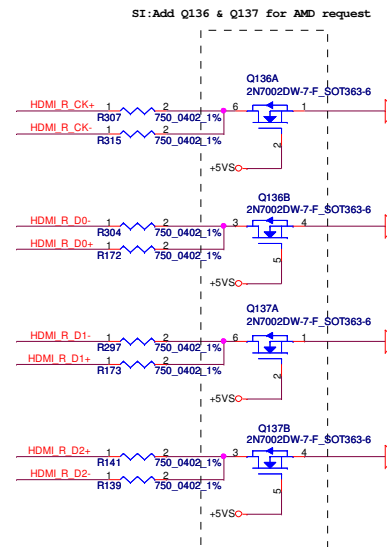
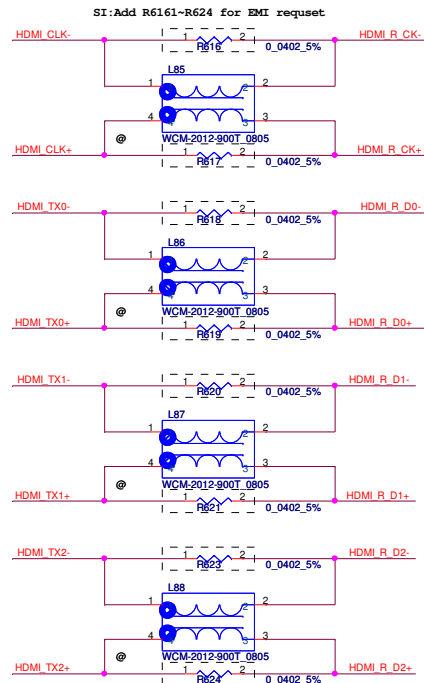
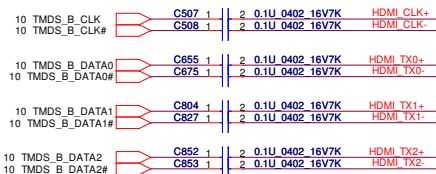
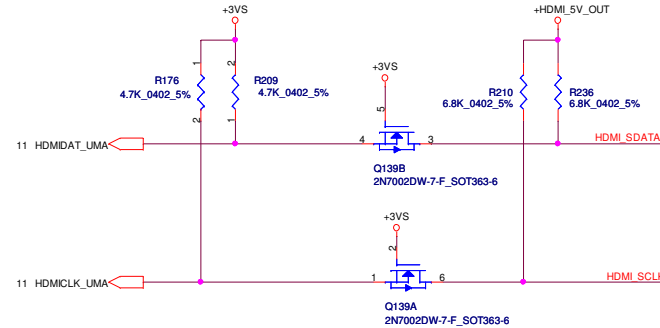
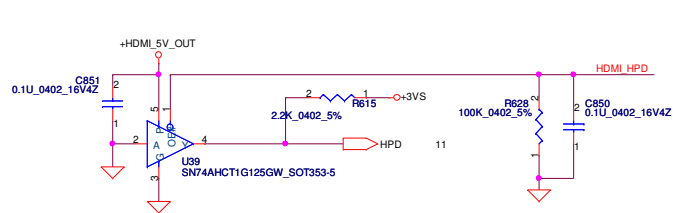
Compal Electronics, Inc.

CRT Connector

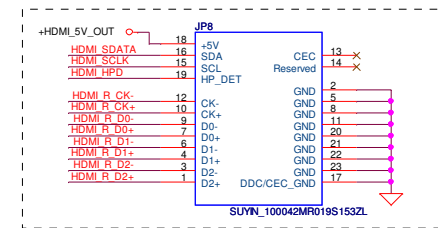
Rev 0.1



Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	LCD CONN.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Rev 0.1
				Document Number LA-4091P	
				Date: Thursday, November 08, 2007	Sheet 17 of 53



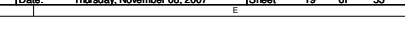
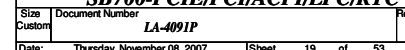
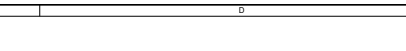
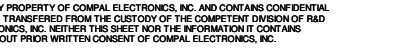
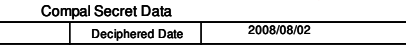
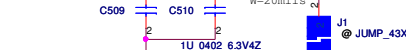
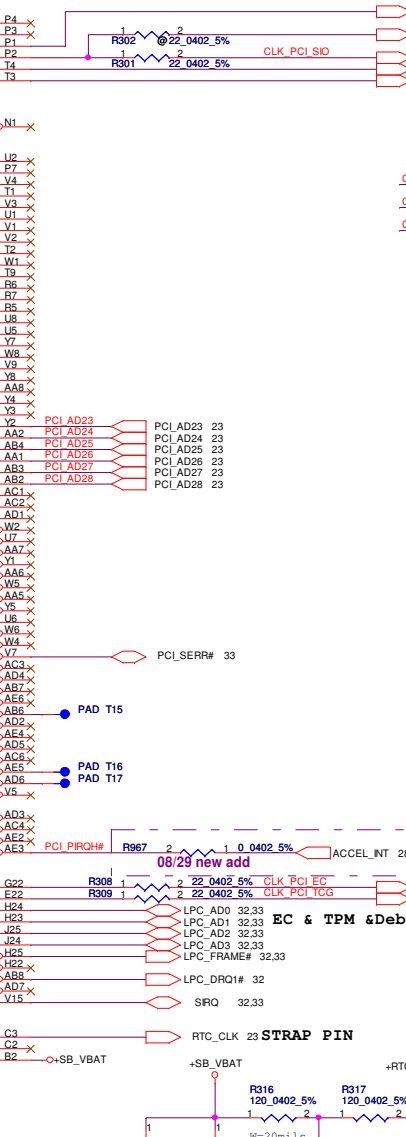
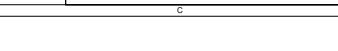
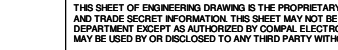
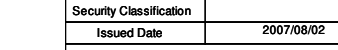
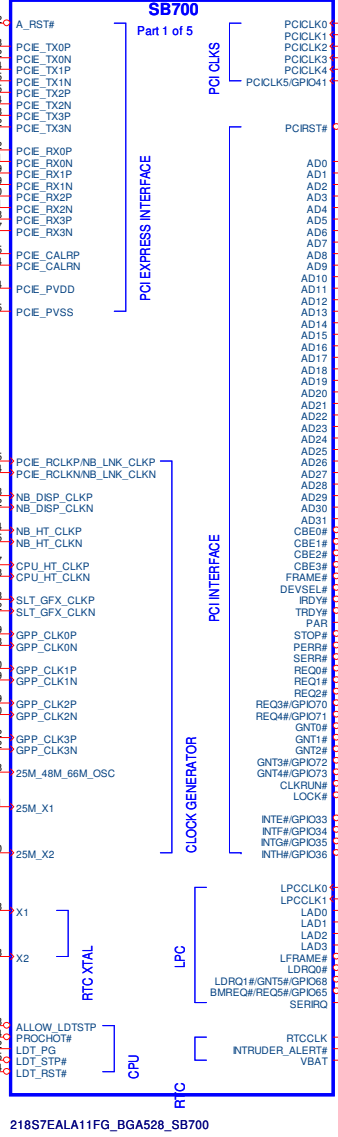
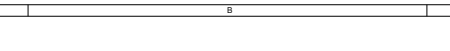
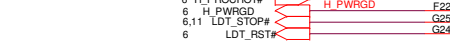
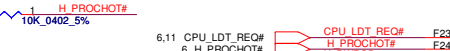
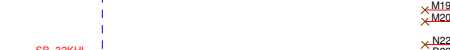
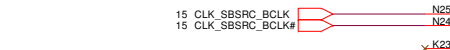
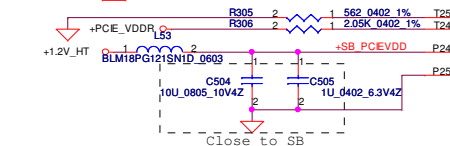
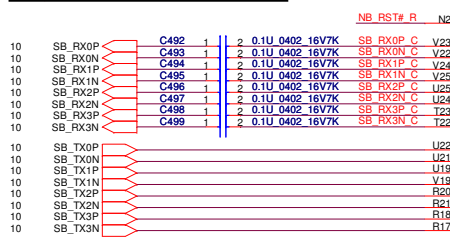
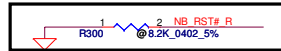
## HDMI Connector



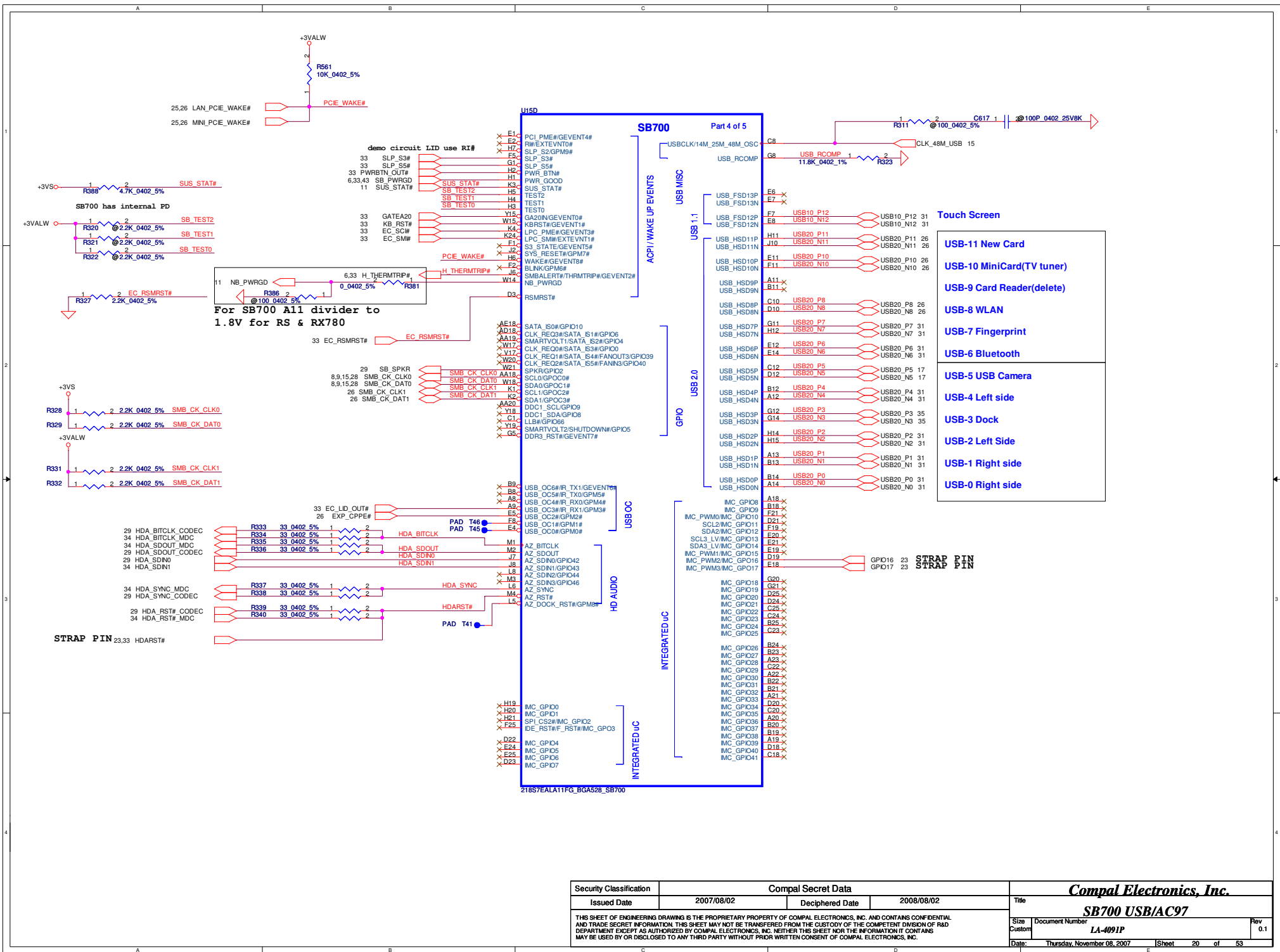
SI: Update HDMI footprint

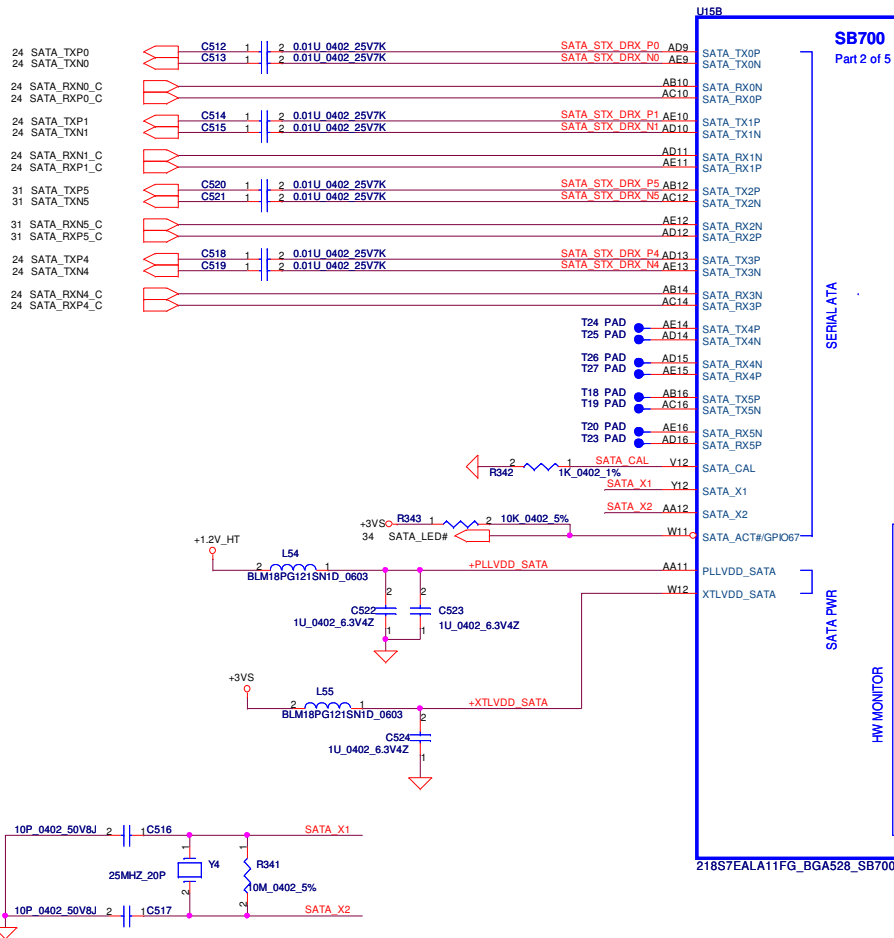
Security Classification				Compal Secret Data			Title				
Issued Date		2007/08/02		Deciphered Date		2008/08/02		HDMI			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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			
				Custom		LA-4091P		0.1			
				Date:		Thursday, November 08, 2007		Sheet 18 of 53			

Check AMD need pull low or not

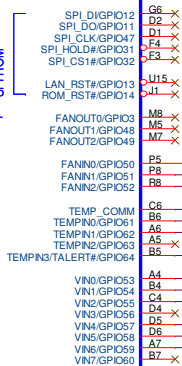
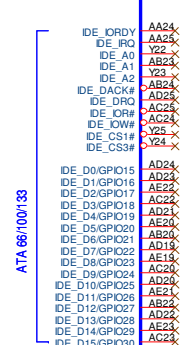


Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF PAD 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	LA-4091P
				Date	Thursday, November 08, 2007
				Sheet	19 of 53





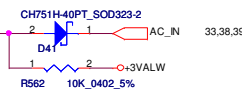
# **SB700** Part 2 of 5



## Local Frame Buffer Strapping List Copy from Becks.

	LFB_ID2	LFB_ID1	LFB_ID0
Hynix32M*16	1	1	0
Samsung32M*16	1	0	1

LFB\_ID0 to LFB\_ID2 got internal PU 10K to S5.



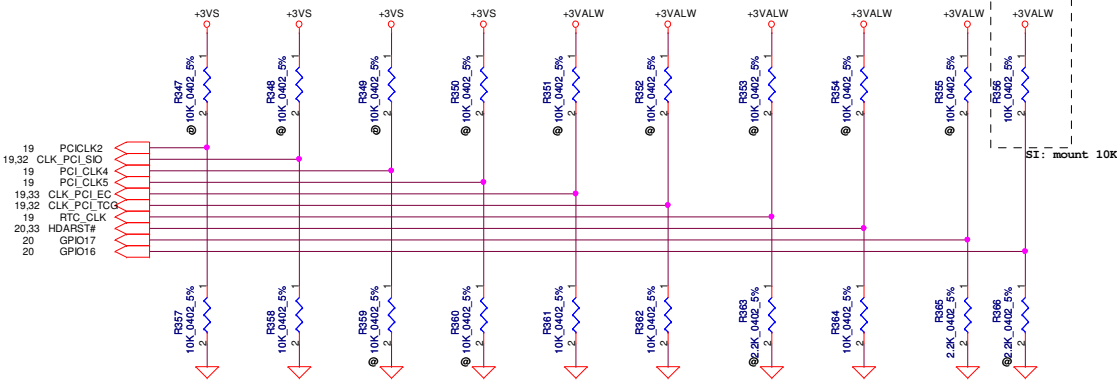
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				SB700 SATA/IDE/SPI	
				Size	Rev
				Custom	0.1
Date: Thursday, November 08, 2007				Sheet	21 of 53



REQUIRED STRAPS

NOTE: SB700 HAS INTERNAL 15K PULL UP RESISTOR FOR RTC\_CLK

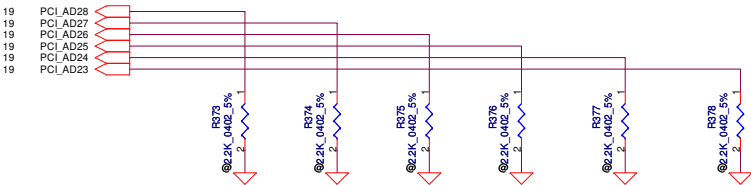
	PCI_CLK2	PCI_CLK3	PCI_CLK4	PCI_CLK5	LPC_CLK0	LPC_CLK1	RTC_CLK	AZ_RST_CD#	GP17	GP16
PULL HIGH	BOOTFAIL TIMER ENABLED	USE DEBUG STRAPS	RESERVED	RESERVED	ENABLE PCI MEM BOOT	CLKGEN ENABLED	INTERNAL RTC  DEFAULT	EC ENABLED	Internal pull up H,H = Reserved  H,L = SPI ROM  L,H = LPC ROM (Default) L,L = FWH ROM	
PULL LOW	BOOTFAIL TIMER DISABLED DEFAULT	IGNORE DEBUG STRAPS DEFAULT			DISABLE PCI MEM BOOT DEFAULT	CLKGEN DISABLED DEFAULT	EXT. RTC (PD on X1, apply 32KHz to RTC_CLK)	EC DISABLED DEFAULT		



DEBUG STRAPS

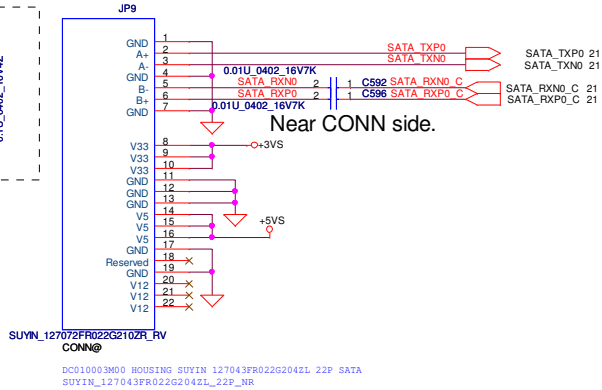
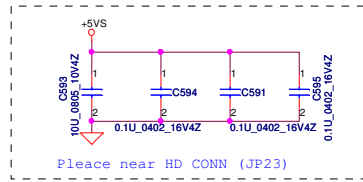
SB700 HAS 15K INTERNAL PU FOR PCI\_AD[28:23]

	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	RESERVED
PULL LOW	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	

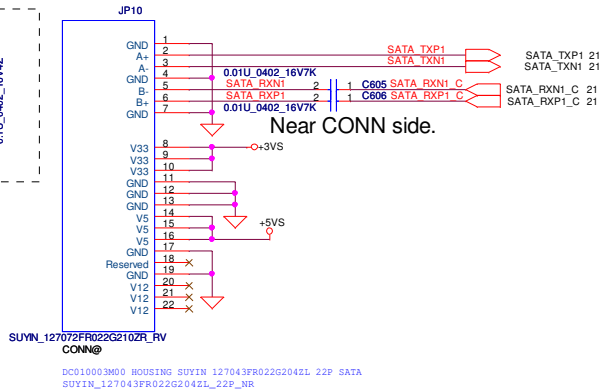
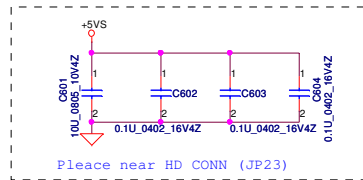


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number LA-4091P
				Date: Thursday, November 08, 2007	Rev 0.1
				Sheet 23 of 53	

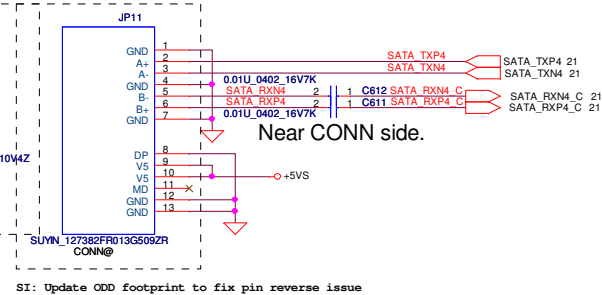
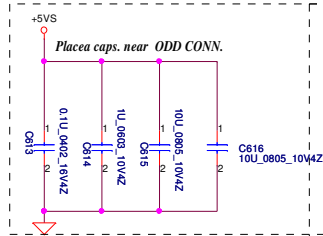
## HDD Connector



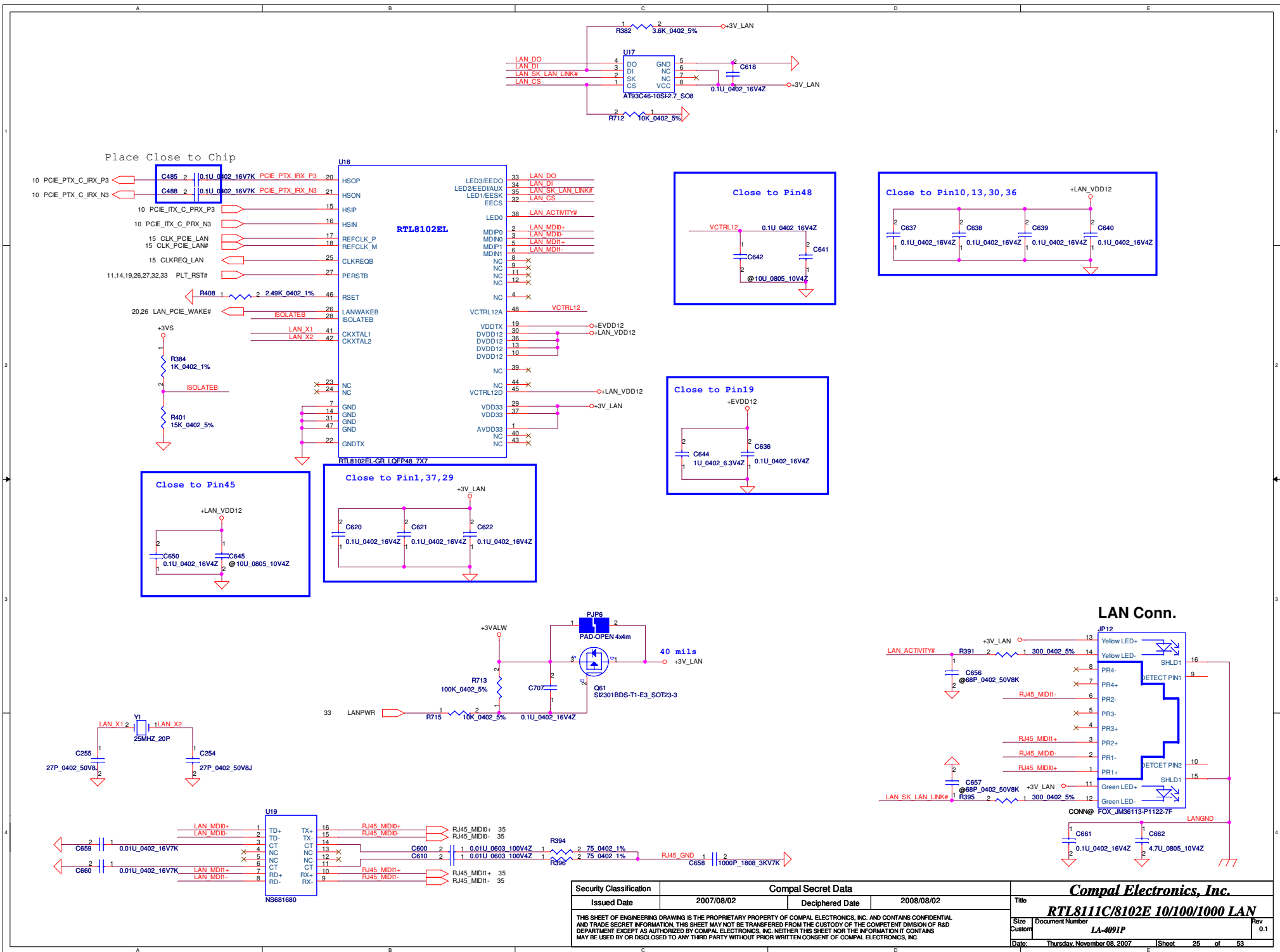
## 2nd HDD Connector-option



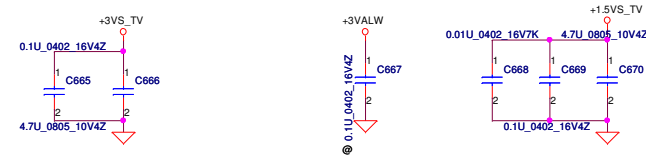
## CD-ROM Connector



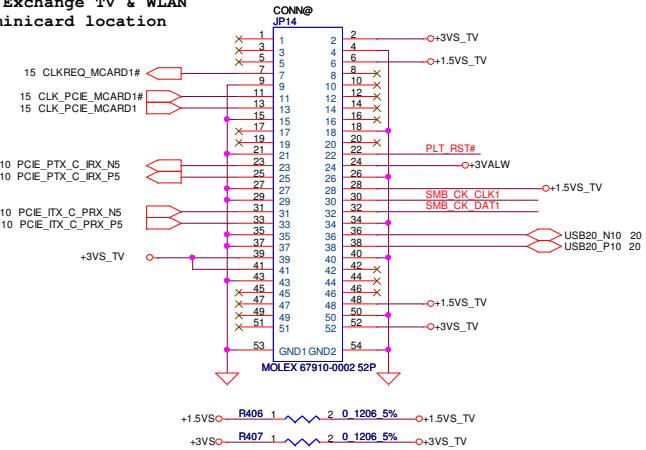
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Title	HDD/CDROM
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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 LA-4091P
				Date	Thursday, November 08, 2007
				Sheet	24 of 53



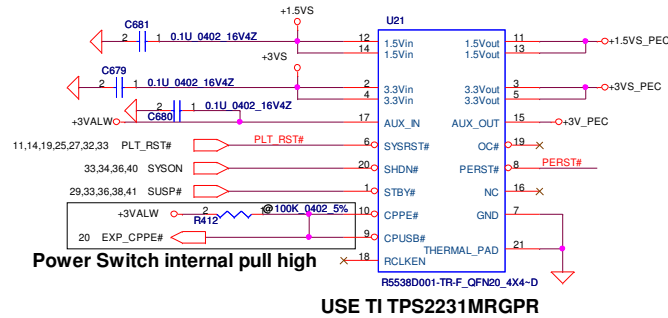
# Mini Card---TV tuner



SI: Exchange TV & WLAN  
minicard location

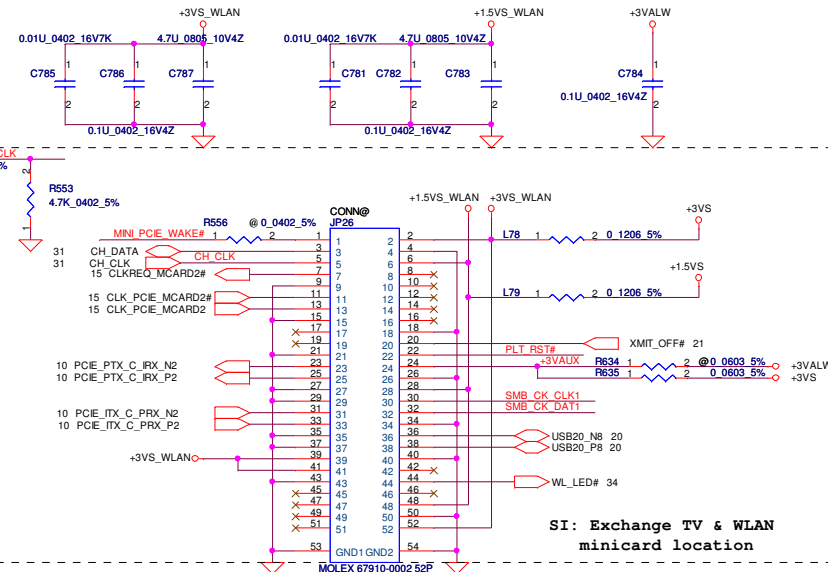


# New Card

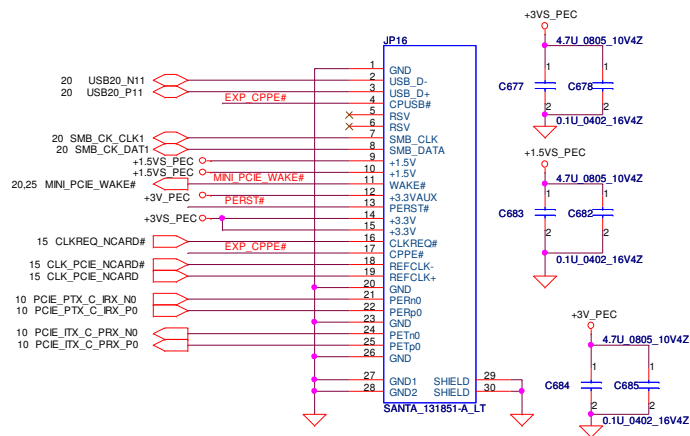


USE TI TPS2231MRGPR

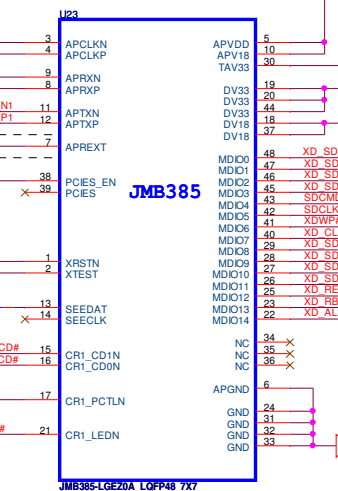
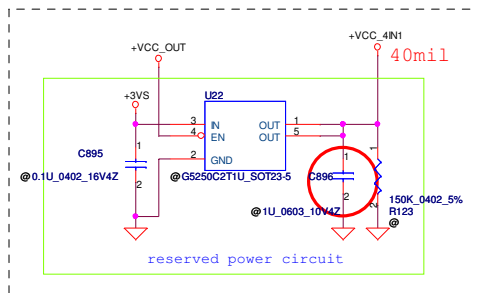
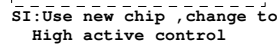
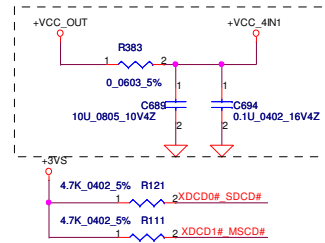
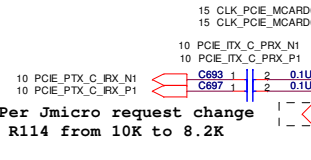
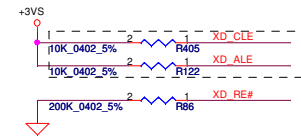
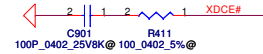
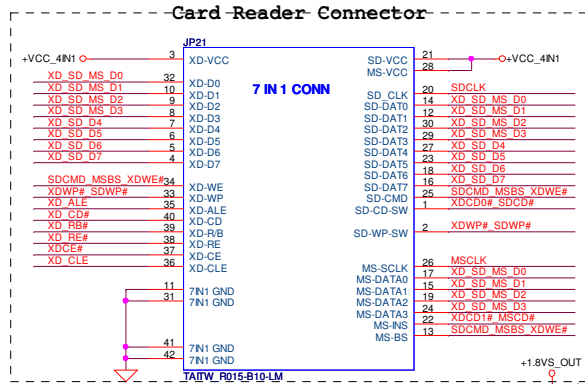
# Mini-Express Card---WLAN



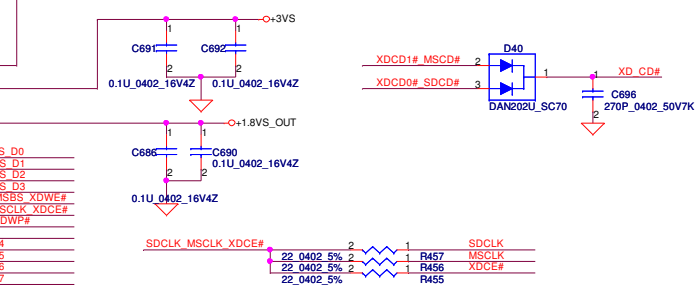
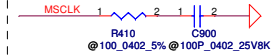
Near to Express Card slot.



Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Mini-Card/Mini-PCI/Express Card	
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	LA-4091P
				Date	Thursday, November 08, 2007
				Sheet	26 of 53

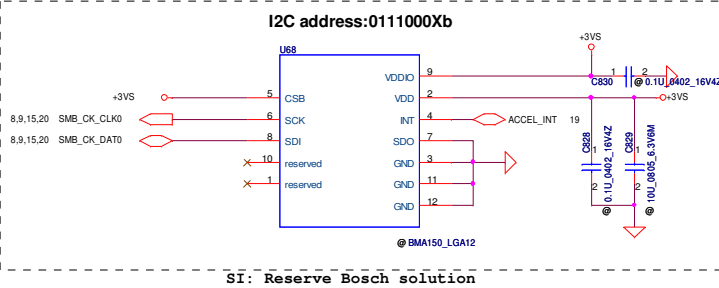
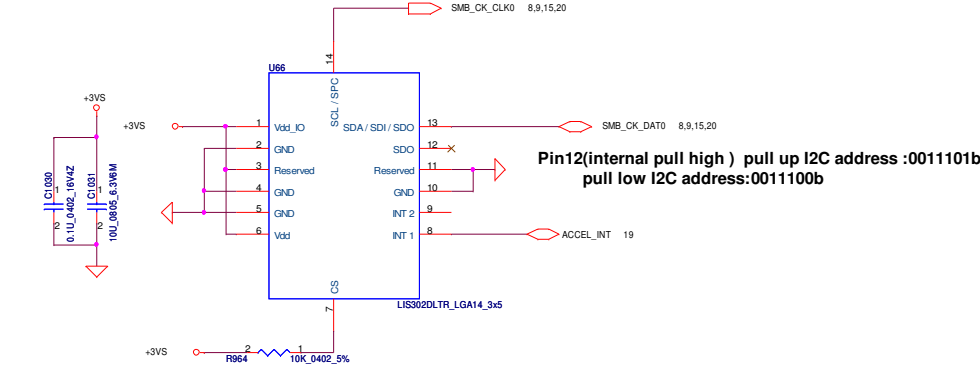


SI:Use build in Regulator  
Chip unmount R387



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.

ACCELEROMETER



Security Classification	Compal Secret Data			Title	
Issued Date	2006/08/04	Deciphered Date	2006/10/06	R5C833 1394	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Rev 0.1
				Date: Thursday, November 06, 2007	Sheet 28 of 53

## ALW



## Work & Dock

30 Jack MIC

### Internal MIC

**Internal SPKR.**

5 DOCK MIC

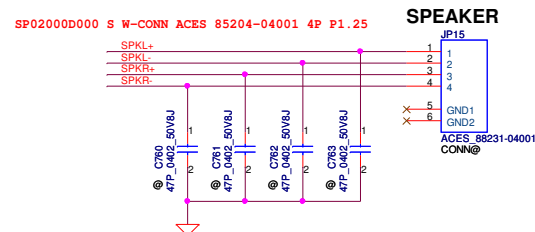
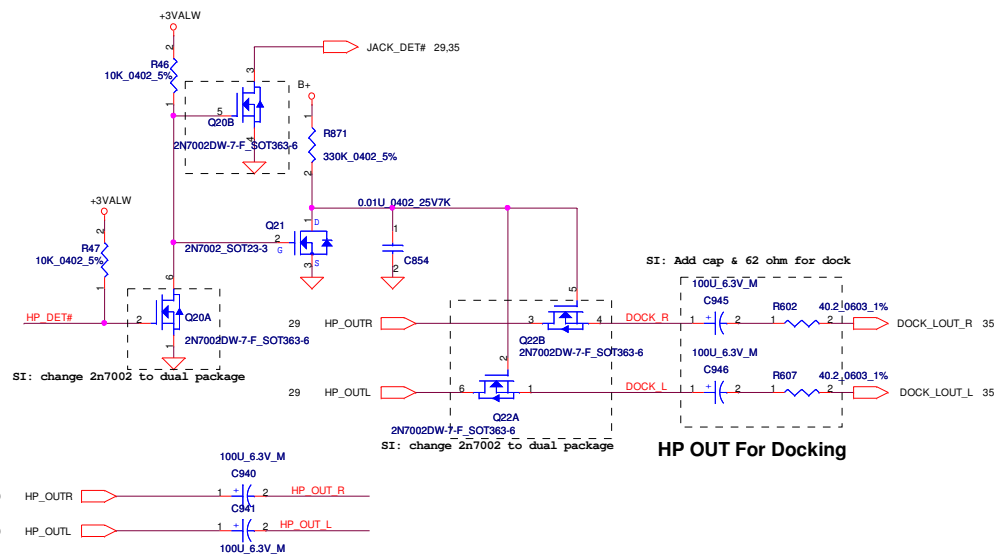
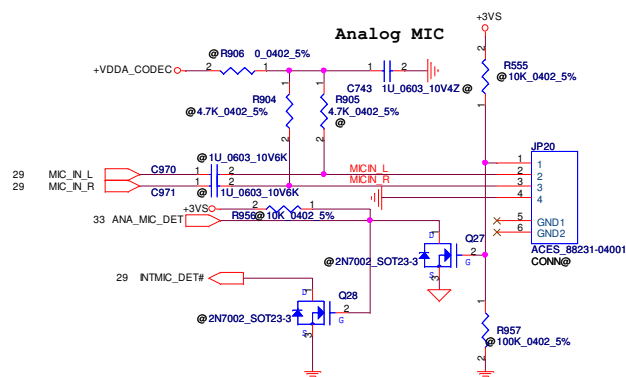
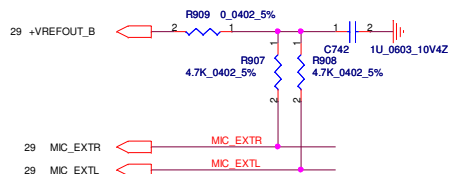
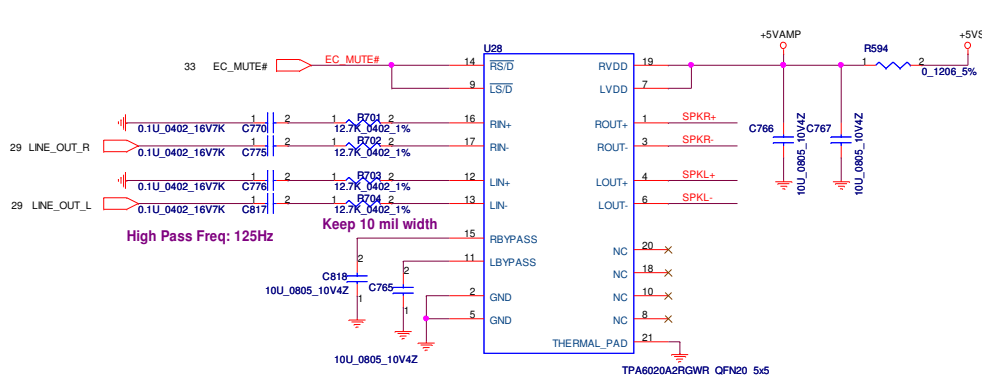
1/10\*Vin  
need close to Codec

**Compal Electronics, Inc.**

**Audio Codec-IDT9271B7**

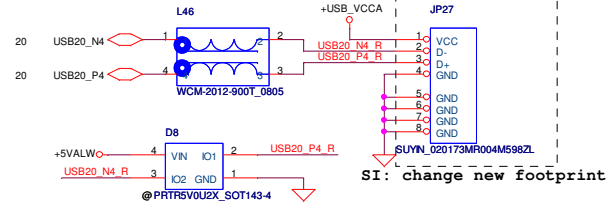
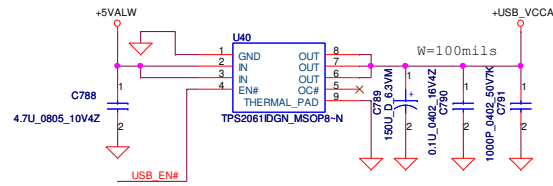
Size Custom	Document Number <b>LA-4091P</b>	Rev 0.1
Date: Thursday, November 08, 2007	Sheet 29 of 53	

Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02
<p>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 RAD 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.</p>			

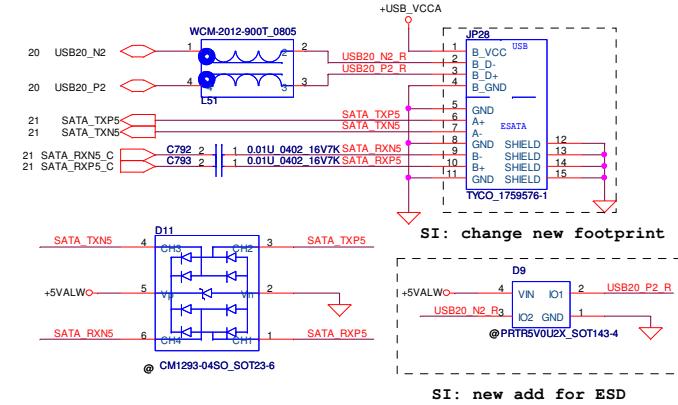


Security Classification				Compal Secret Data			Compal Electronics, Inc.		
Issued Date		2007/08/02		Deciphered Date		2008/08/02		Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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.				AMP & Audio Jack				Rev	
Size		Document Number		LA-4091P		0.1		Date	
Custom		Thursday, November 08, 2007		Sheet		30		of 53	

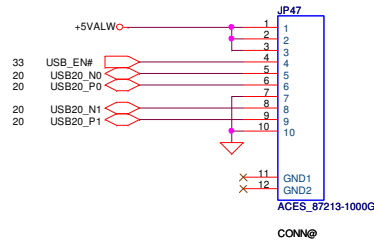
## Left side USB CONNECTOR 0



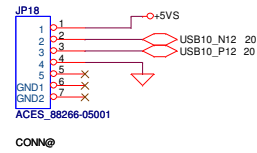
## Left side ESATA/USB combination Connector



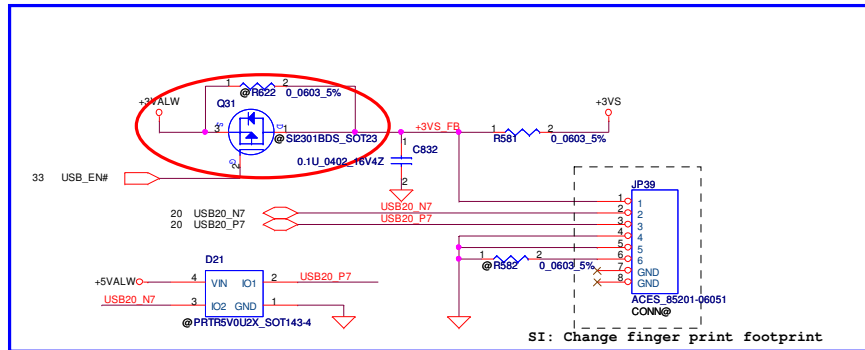
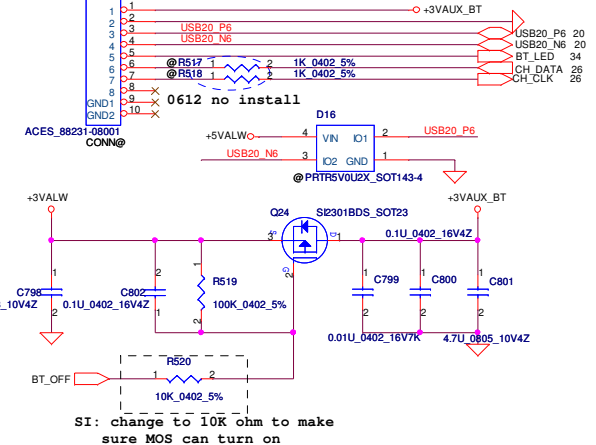
## USB Board Conn



## Touch screen



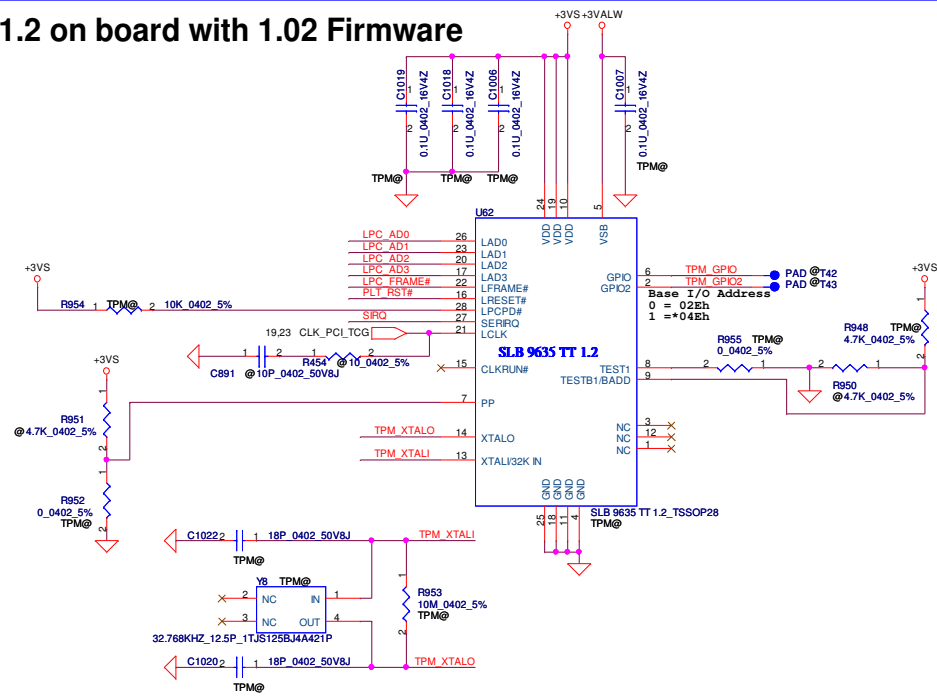
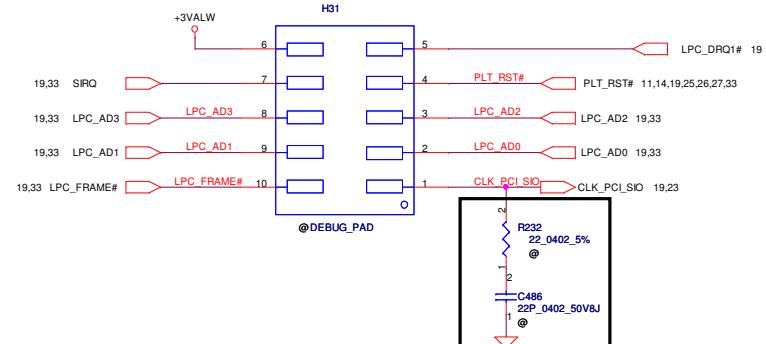
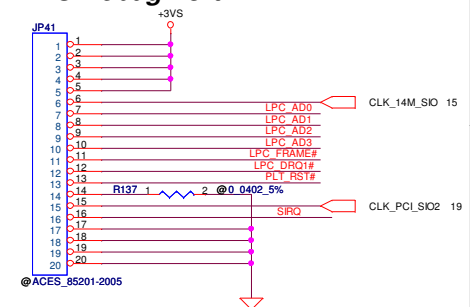
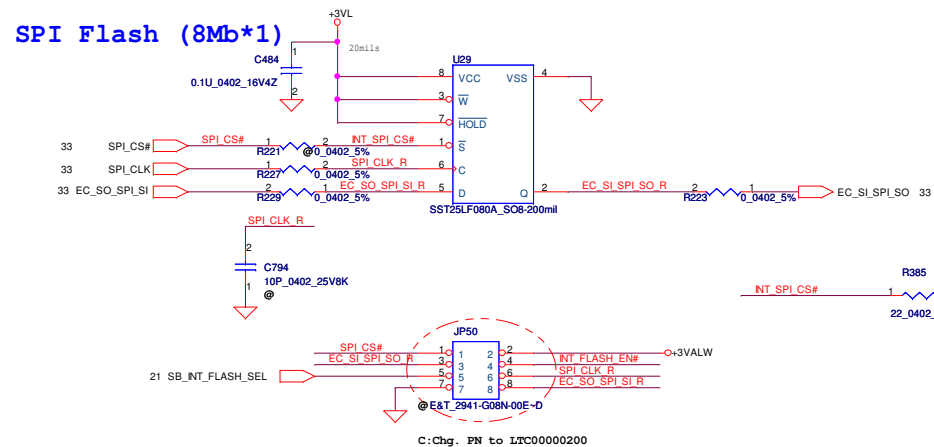
## BT Connector



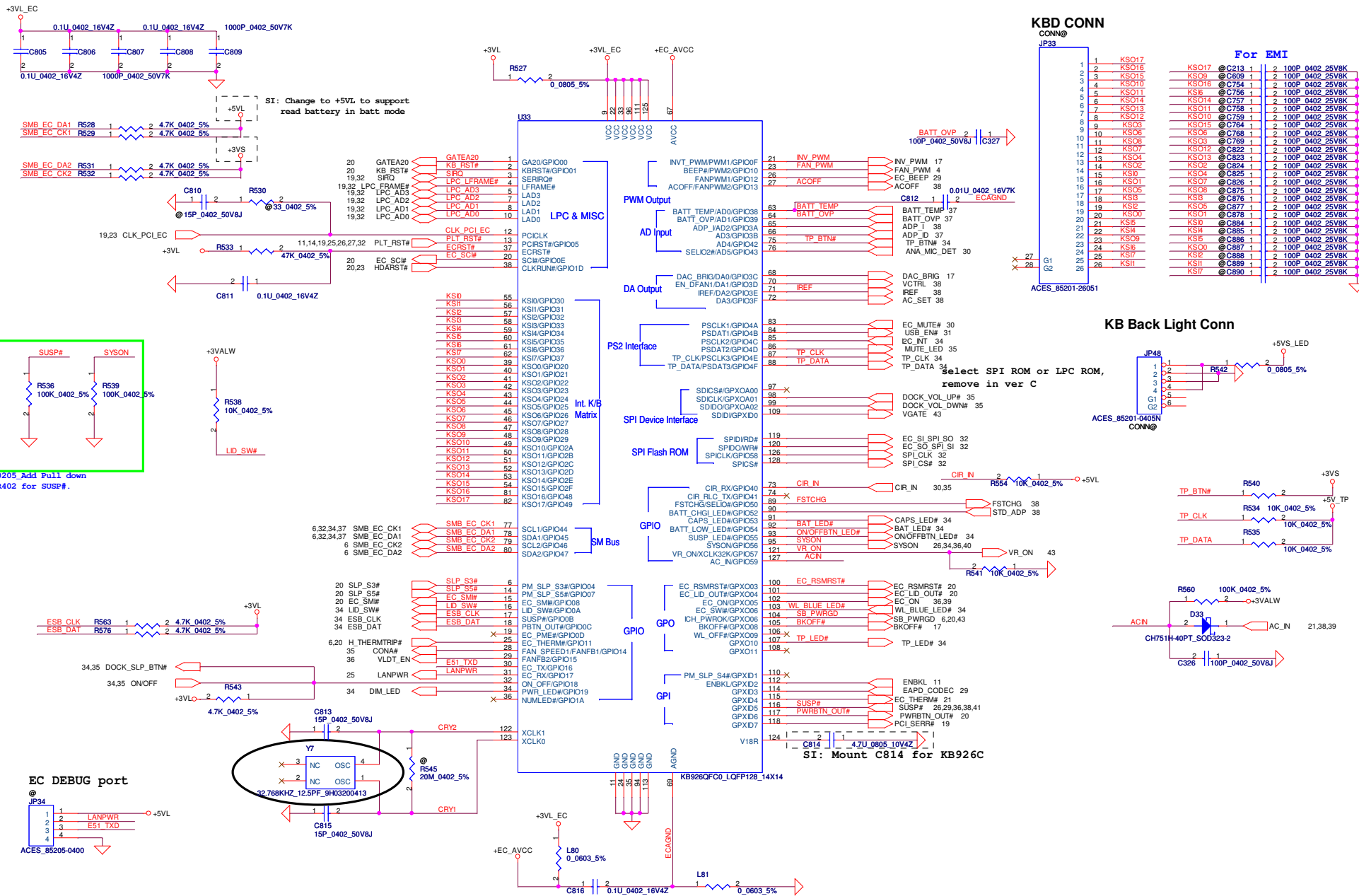
Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Size	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				LA-4091P	Rev 0.1
Date: Thursday, November 08, 2007				Sheet 31	of 53

Compal Electronics, Inc.

Cover Sheet



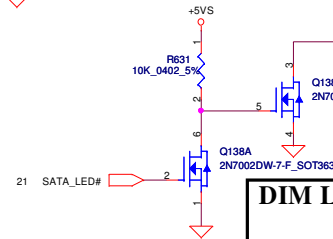
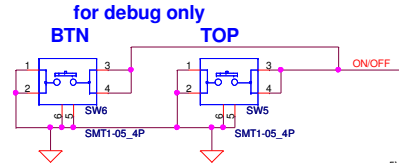
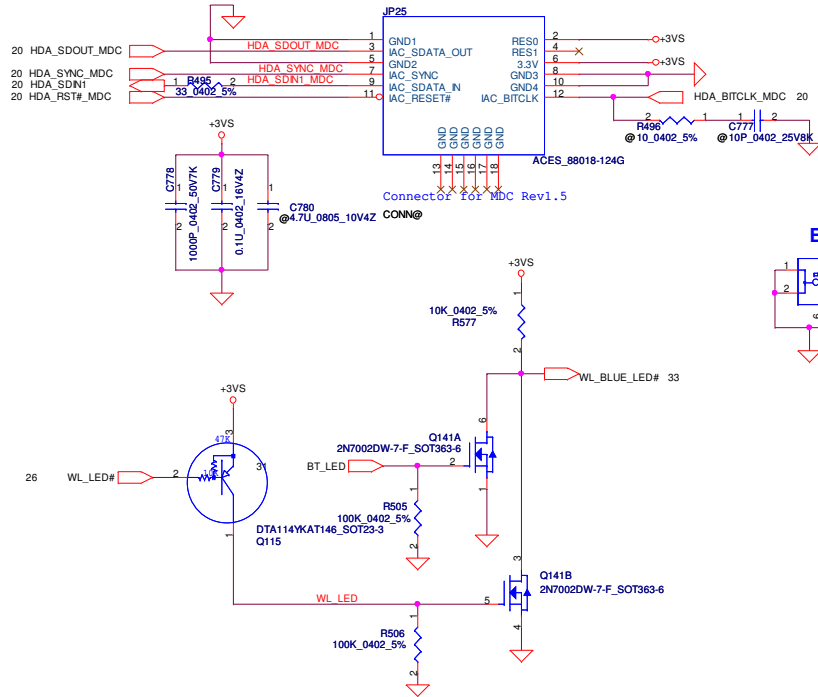
Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>TCG/BIOS ROM/PS2/LED/SW</b>	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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	Rev
				Custom	0.1
				Document Number	
				LA-4091P	
Date:				Thursday, November 08, 2007	Sheet 32 of 53



Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	EC KB926/KB conn	
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 LA-4091P
				Date: Thursday, November 08, 2007	Sheet 33 of 53

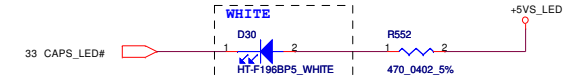
# MDC 1.5 Conn.

Change type 4/25

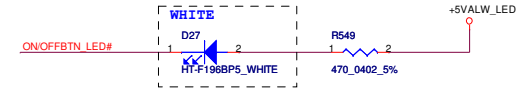


## CAPS LOCK LED

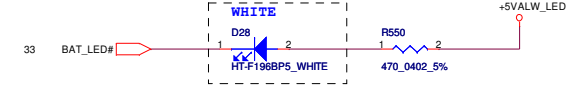
SI: Modify LED footprint



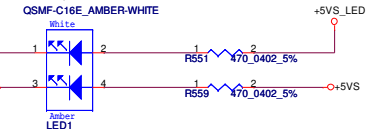
## POWER LED (Left 1)



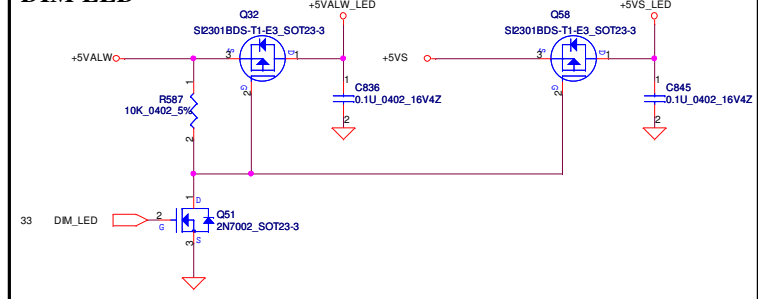
## Battery Charge LED (Left 2)



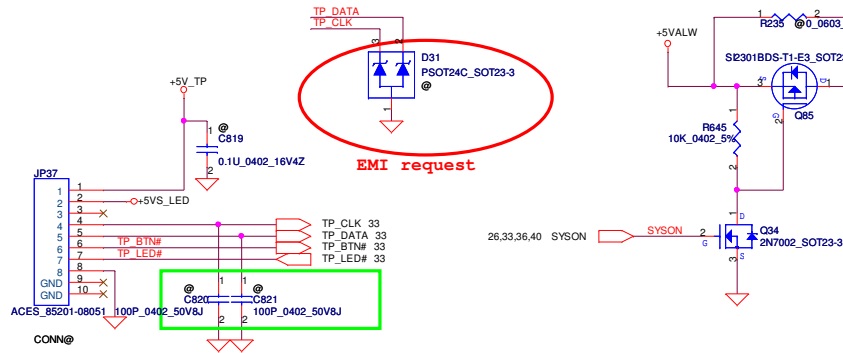
## HDD LED (Left 3)



## DIM LED

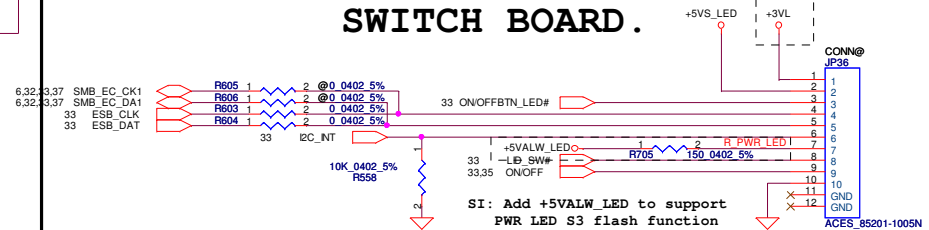


## T/P Board (Inculde T/P\_ON/OFF)



SI: Change to +3VL to support Qplay bottom boot in BATT mode

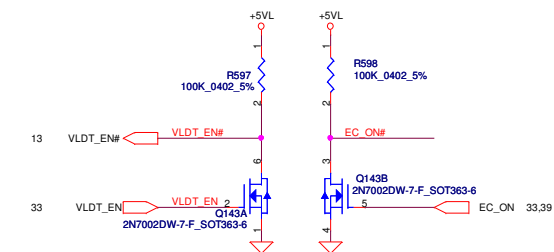
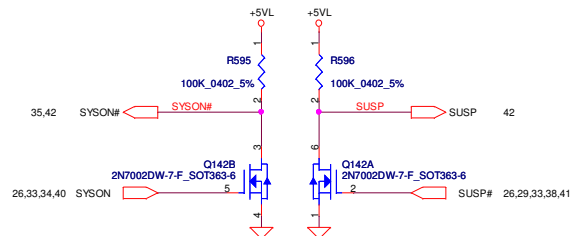
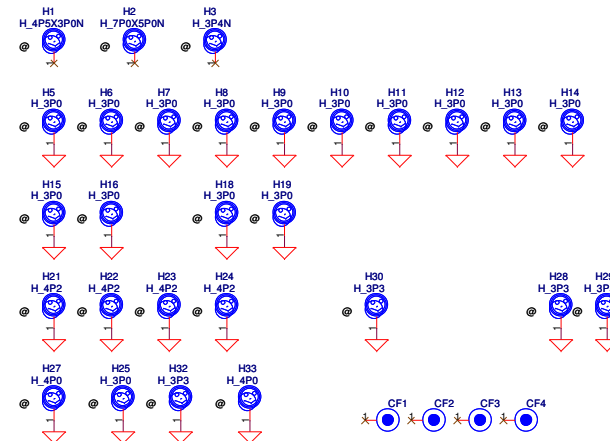
## SWITCH BOARD.



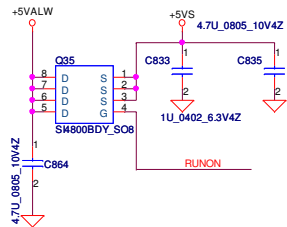
Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	MDC/KBD/ON_OFF/LID	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	0.1
				Date:	Thursday, November 08, 2007
				Sheet	34 of 53



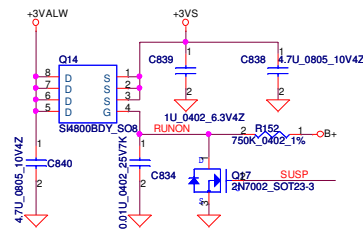
## Screw Hole



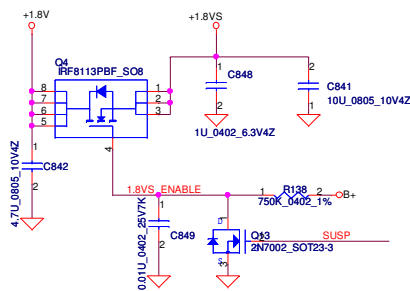
### +5VALW TO +5VS



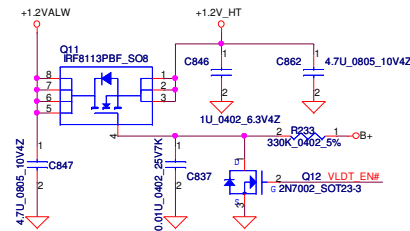
### +3VALW TO +3VS



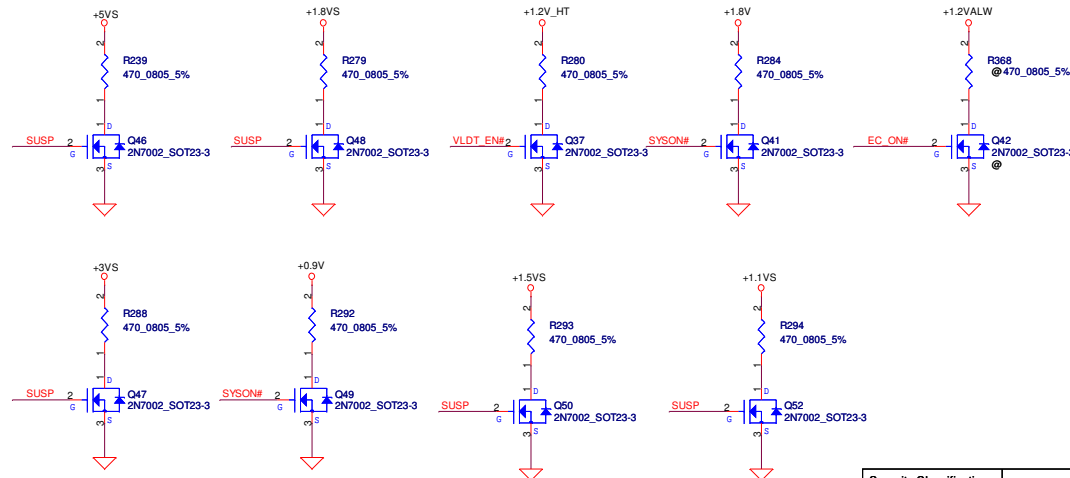
### +1.8V TO +1.8VS



### +1.2VALW TO +1.2V\_HT



## Discharge circuit

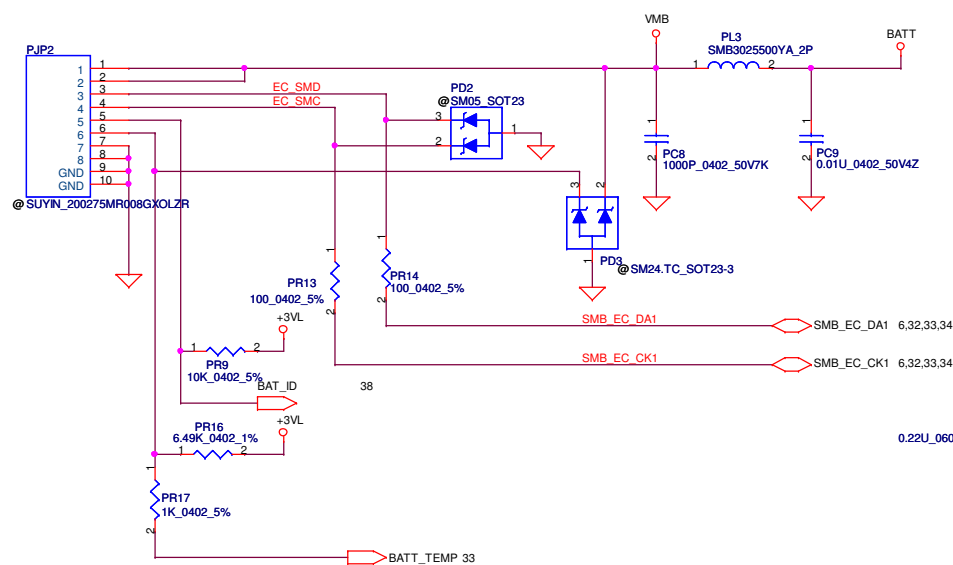
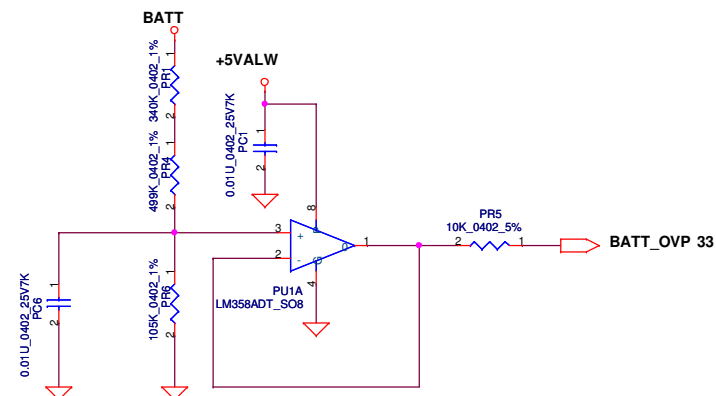
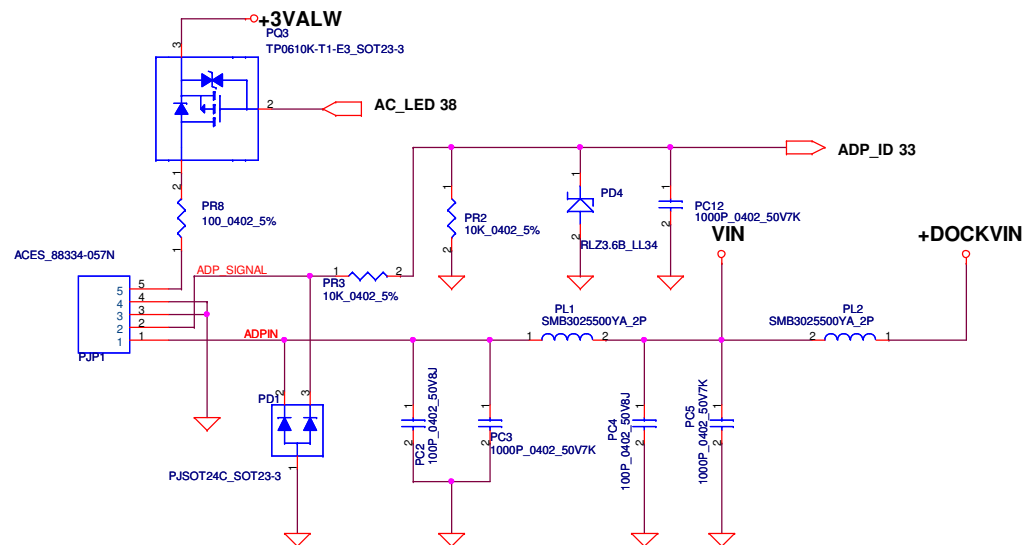


Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Size	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Custom	LA-4091P
				Date:	Thursday, November 08, 2007
				Sheet	36 of 53

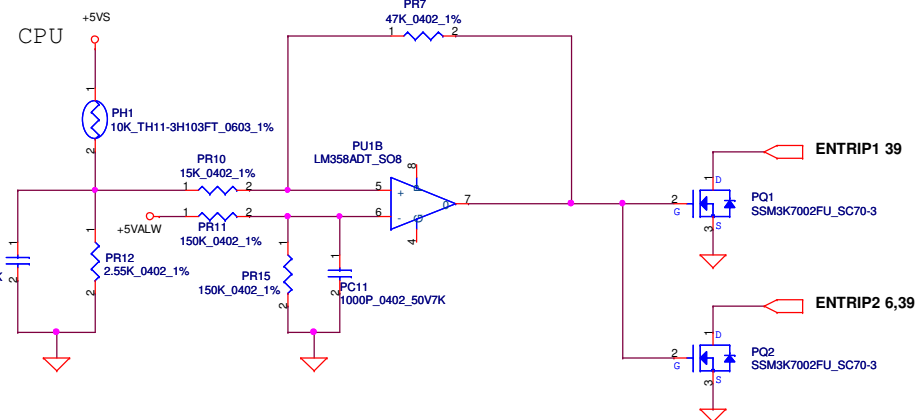
Compal Electronics, Inc.

DC/DC Circuits

Rev 0.1

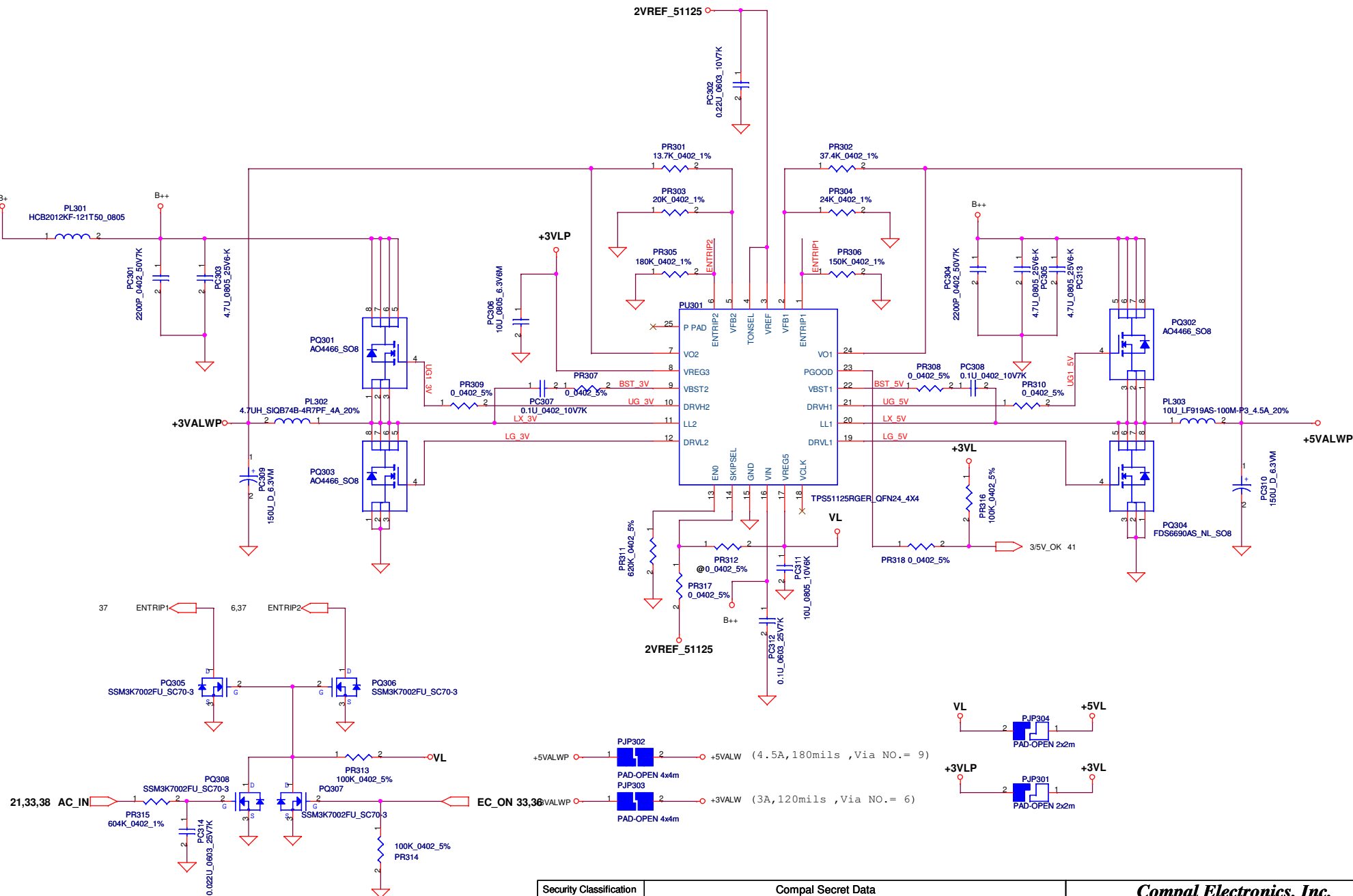


**PH1 under CPU bottom side :**  
 CPU thermal protection at 90  $\pm$  3 degree C  
 Recovery at 47  $\pm$  3 degree C

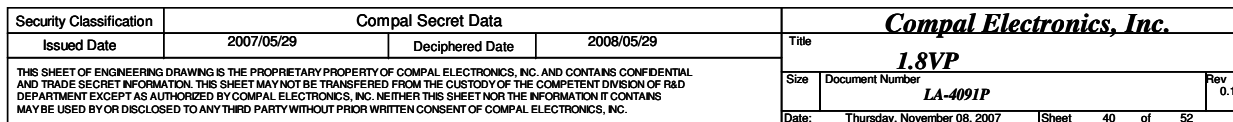


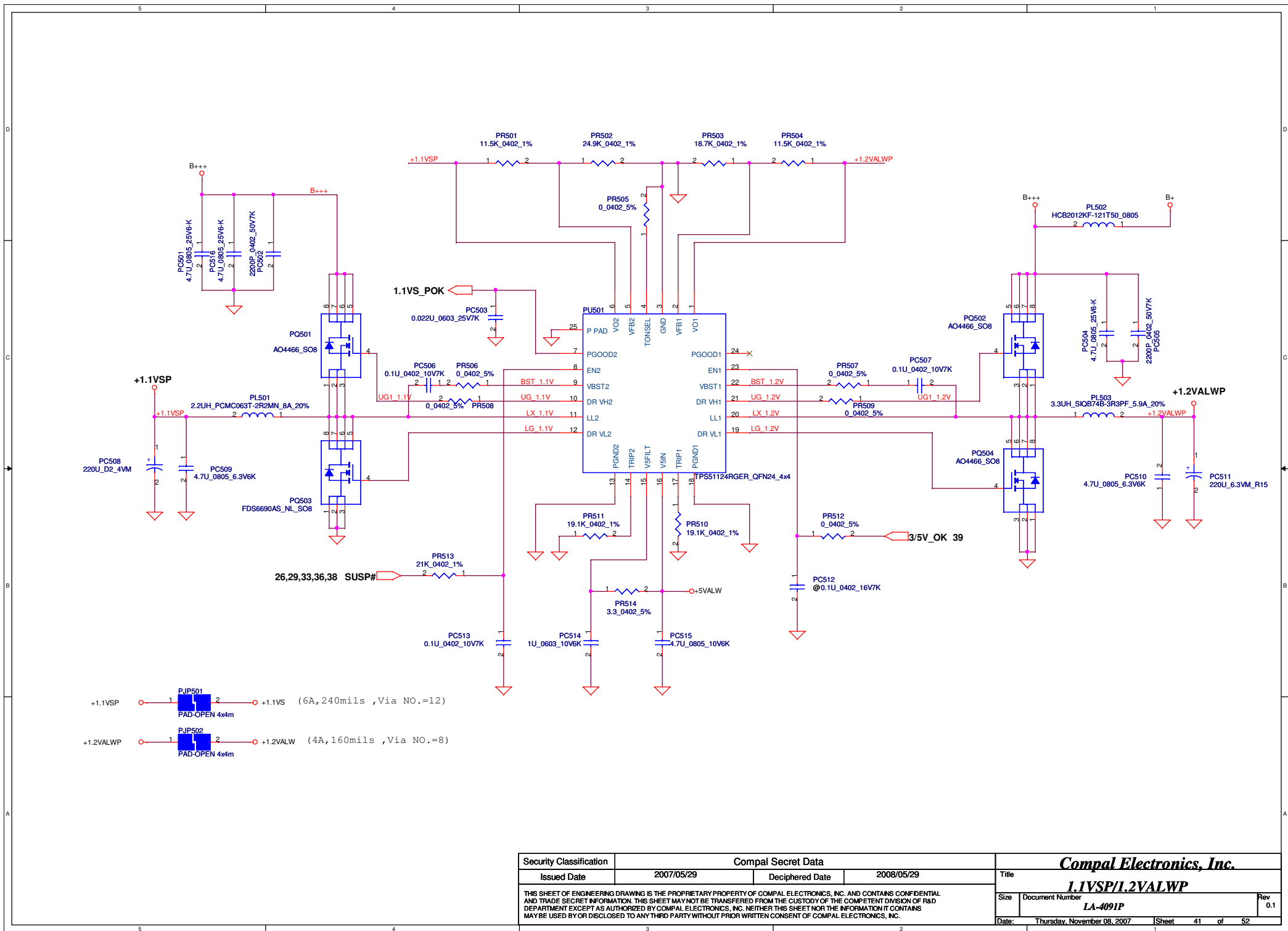
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 Connector/CPU OTP
Size	Document Number	LA-4091P	Rev	0.1
Date:	Thursday, November 08, 2007	Sheet	37	of 52



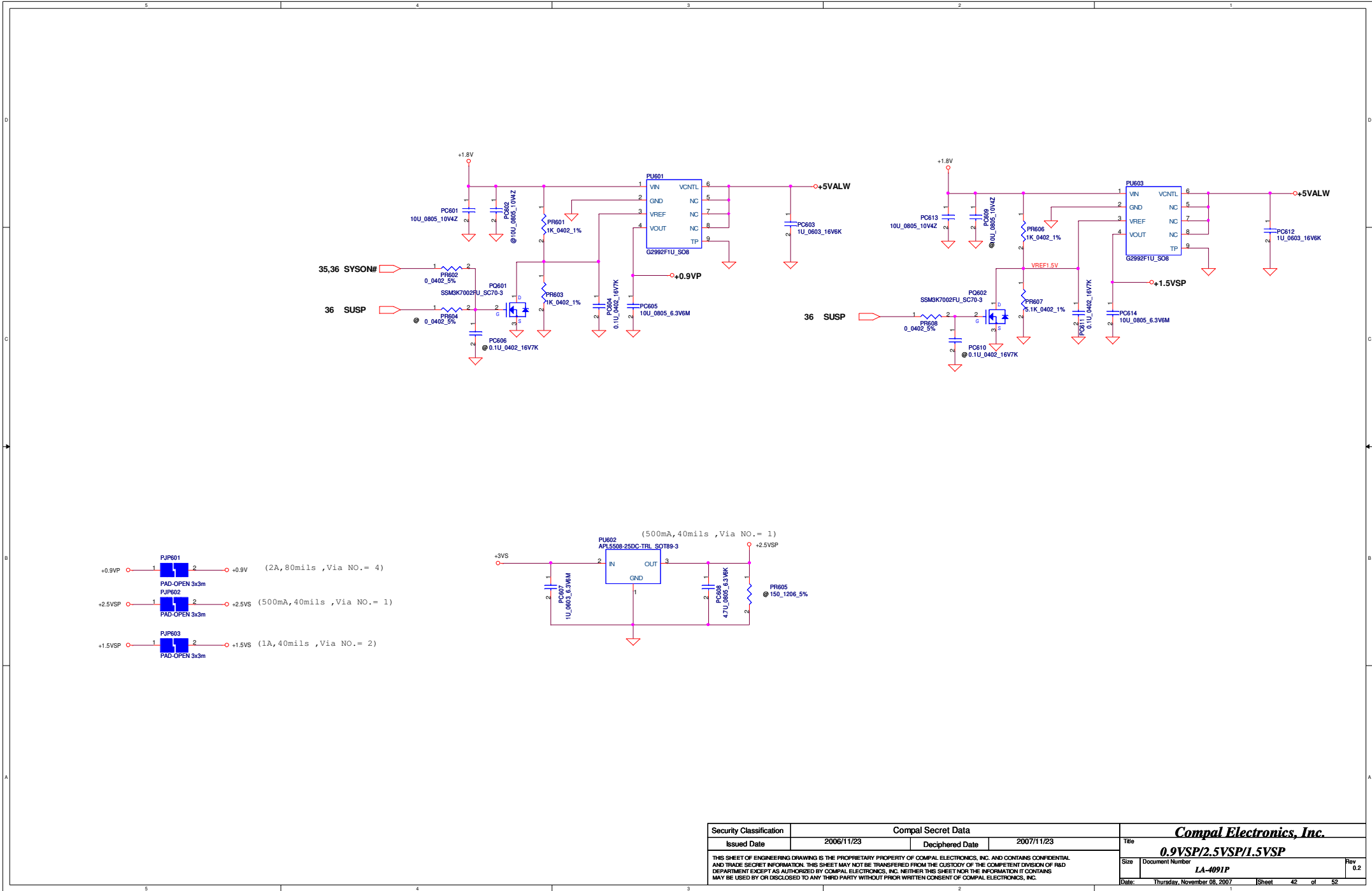


Security Classification		Compal Secret Data		Title	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	3.3VALWP/5VALWP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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
				LA-4091P	
				Date	Thursday, November 08, 2007
				Sheet	39 of 52
				Rev	0.1





Security Classification		Compal Secret Data		Title	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	1.1VSP/1.2VALWP	
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	0.1
				Date:	Thursday, November 08, 2007
				Sheet	41 of 52



Security Classification	Compal Secret Data			Title	
Issued Date	2006/11/23	Deciphered Date	2007/11/23	8.9VSP/2.5VSP/1.5VSP	
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
					LA-4091P
				Date:	Thursday, November 06, 2007
				Sheet	42 of 52
				Rev	0.2





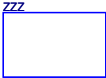
# HW4 Product Improvement Record (P.I.R.)

RTC



45@ RTC

PCB



PCB 03X LA-4091P REV0 M/B

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/5/18	Deciphered Date	2008/5/18	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PIR	
				Size	Document Number
				Date: Thursday, November 08, 2007	Rev 0.1
				Sheet 45 of 53	