

ZZZ1
LA5972P_LS5971P_LS5083P

ZZZ3
LA5972P
DAZ@

ZZZ4
LS5971P
DAZ@

ZZZ5
LS5083P
DAZ@

Compal Confidential

NAWA2 Schematics Document

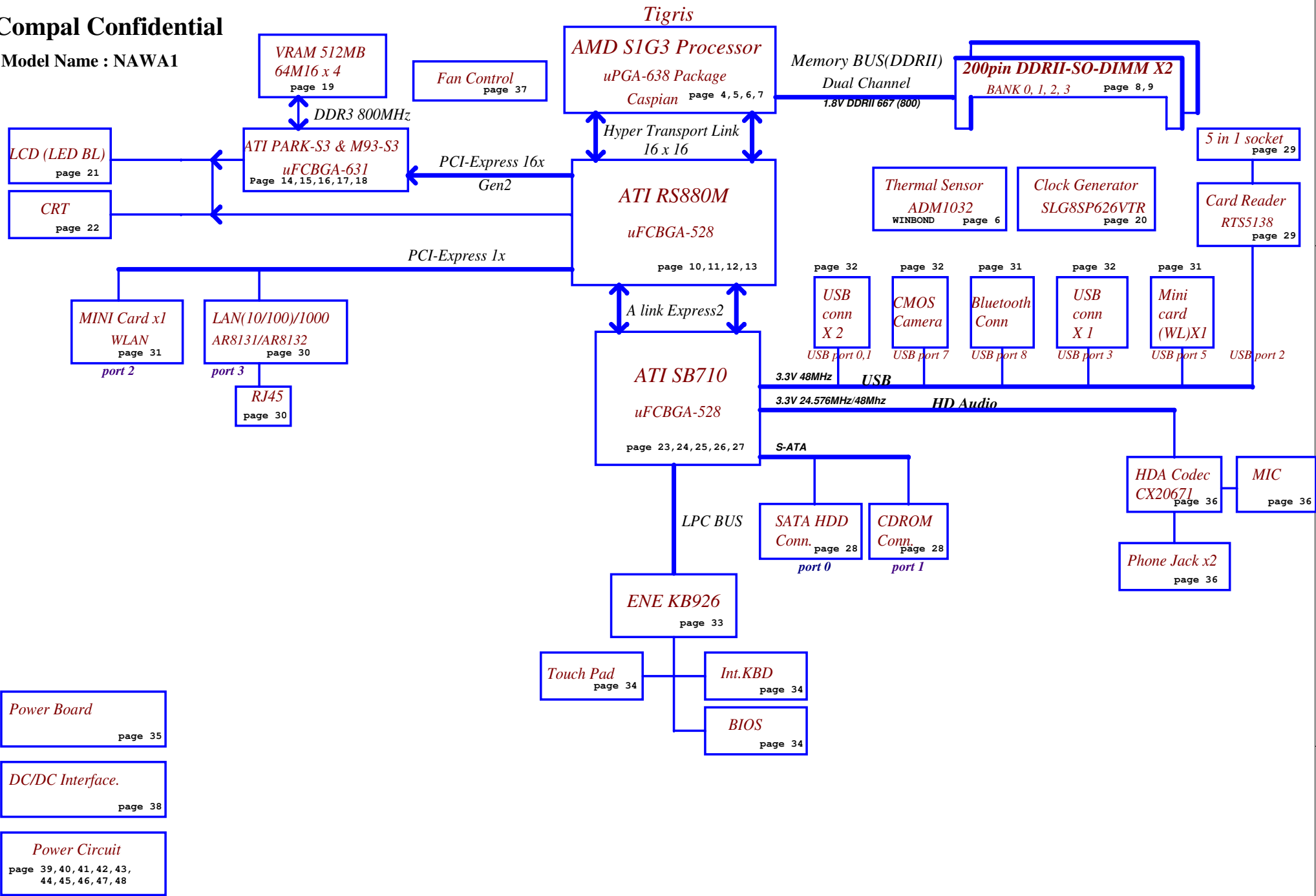
AMD Tigris: Caspian Processor with RS880M/SB710/Park-S3 & M93-S3

2009-11-26

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Cover Page		
				Size B	Document Number LA-5972P	Rev 1.0
				Date: Thursday, December 10, 2009		Sheet 1 of 49

Compal Confidential

Model Name : NAWA1



Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit.	N/A	N/A	N/A
+CPU_CORE_0	Core voltage for CPU (0.7-1.2V)	ON	OFF	OFF
+CPU_CORE_1	Core voltage for CPU (0.7-1.2V)	ON	OFF	OFF
+CPU_CORE_NB	Voltage for On-die Northbridge of CPU(0.8-1.1V)	ON	OFF	OFF
+0.9V	0.9V switched power rail for DDR terminator	ON	ON	OFF
+1.1VS	1.1V switched power rail for NB VDDC & VGA	ON	OFF	OFF
+1.2V_HT	1.2V switched power rail	ON	OFF	OFF
+VGA_CORE	0.95-1.2V switched power rail	ON	OFF	OFF
+1.5VS	1.5V power rail for PCIE Card	ON	OFF	OFF
+1.8V	1.8V power rail for CPU VDDIO and DDR	ON	ON	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+2.5VS	2.5V for CPU_VDDA	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V_LAN	3.3V power rail for LAN	ON	ON	ON
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+VSB	VSB always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

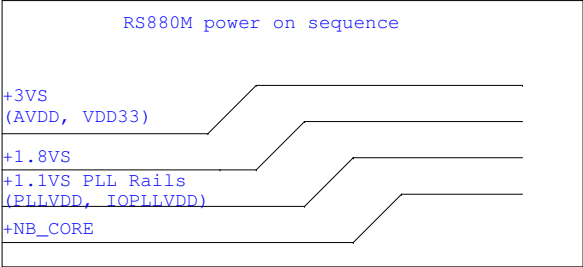
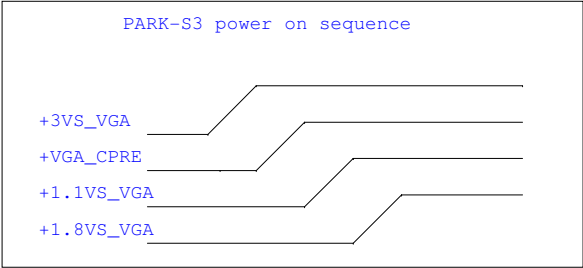
Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

BTO Option Table

BTO Item	BOM Structure
Discrete	VGA@
PARK	PARK@
M93	M93@
HDT debug	HDT@
UMA	UMA@
Wireless LAN	WLAN@
Blue Tooth	BT@
Camera	CMOS@
New Card	New Card@
VRAM	X76@
UNPON	@

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

NAWA1_UMA : UMA@/WLAN@/BT@/CMOS@/NEW_CARD@
NAWA1_DIS : VGA@/M93@/WLAN@/BT@/NEW_CARD@/CMOS@/X76@



External PCI Devices

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

EC SM Bus1 address

Device	Address	HEX	Device	Address	HEX
Smart Battery	0001 011X b	16H	ADI ADM1032 (CPU)	1001 100X b	98H
			GMT G781-1 (GPU)	1001 101X b	9AH
			SB-Temp Sensor		9CH

EC SM Bus2 address

SB710
SM Bus 0 address

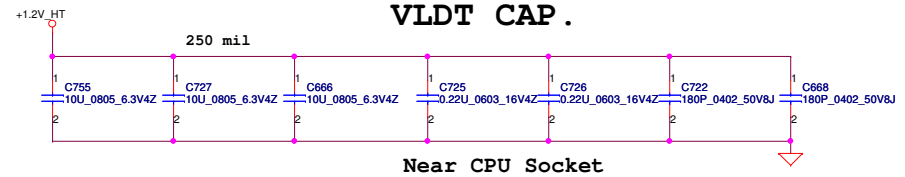
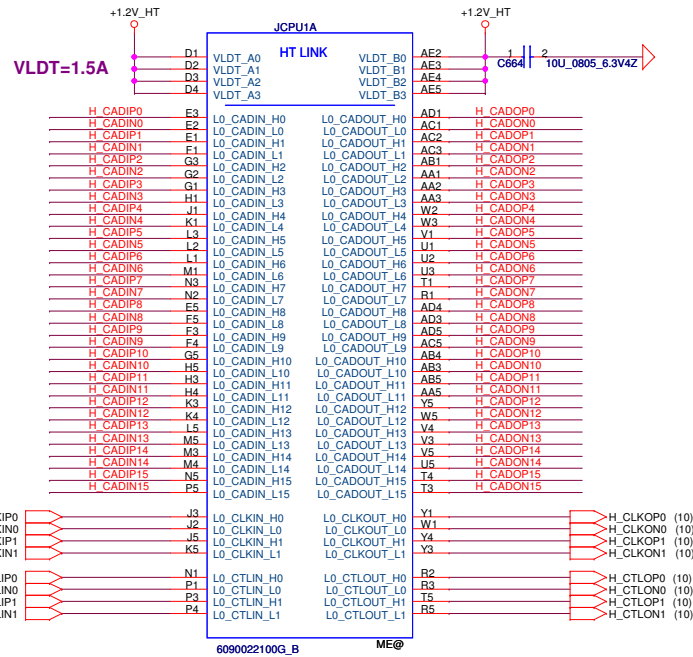
Device	Address	HEX	Device	Address
Clock Generator (SILEGO SLG8SP626)	1101 001Xb	D2	New card	
DDR DIMM1	1001 000Xb	90		
DDR DIMM2	1001 010Xb	94		
Mini card				

SB710
SM Bus 1 address

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Notes List		
				Size B	Document Number LA-5972P	Rev 1.0
				Date:	Thursday, December 10, 2009	Sheet 3 of 49

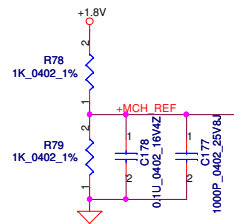
(10) H_CADIP[0..15] H_CADIP[0..15]
(10) H_CADIN[0..15] H_CADIN[0..15]

H_CADOP[0..15] H_CADOP[0..15] (10)
H_CADON[0..15] H_CADON[0..15] (10)

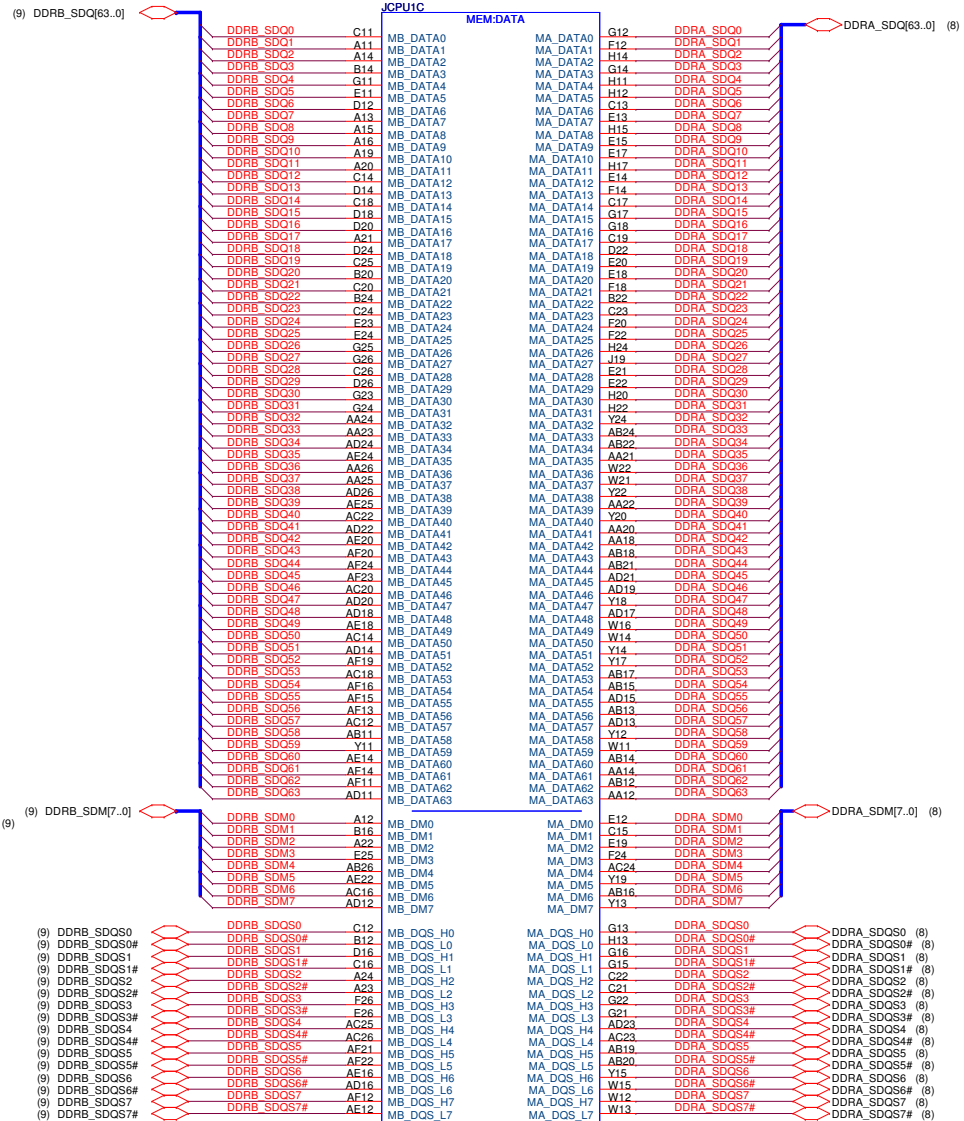
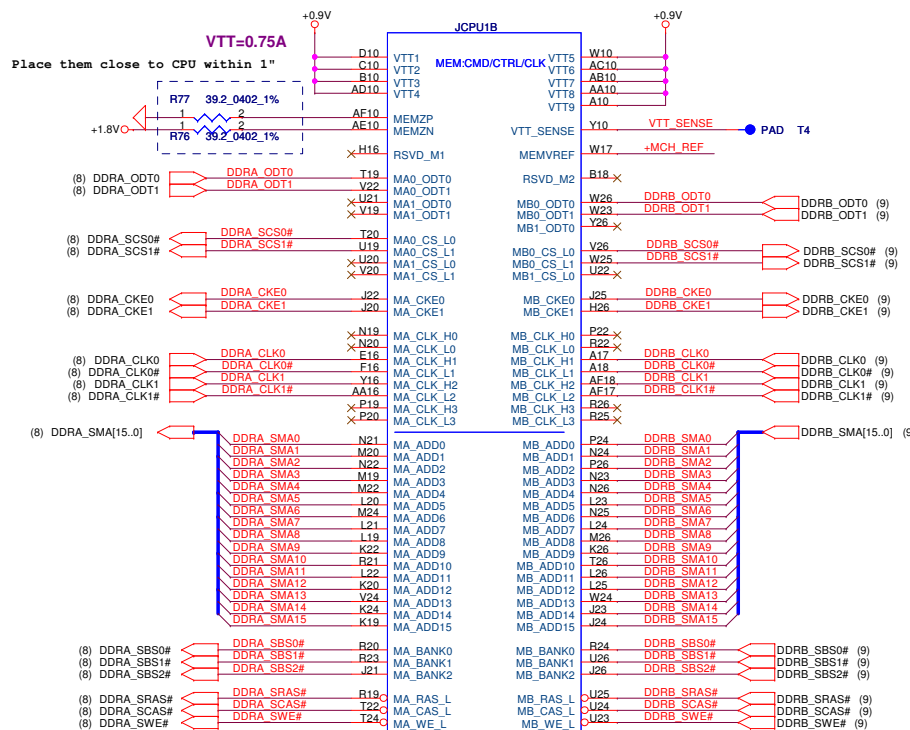
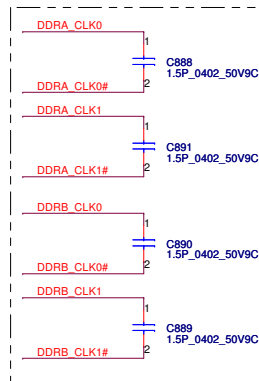


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				AMD CPU S1G3 HT I/F		
				Size	Document Number	Rev
				Custom	LA-5972P	1.0
				Date:	Thursday, December 10, 2009	Sheet 4 of 49

Processor DDR2 Memory Interface

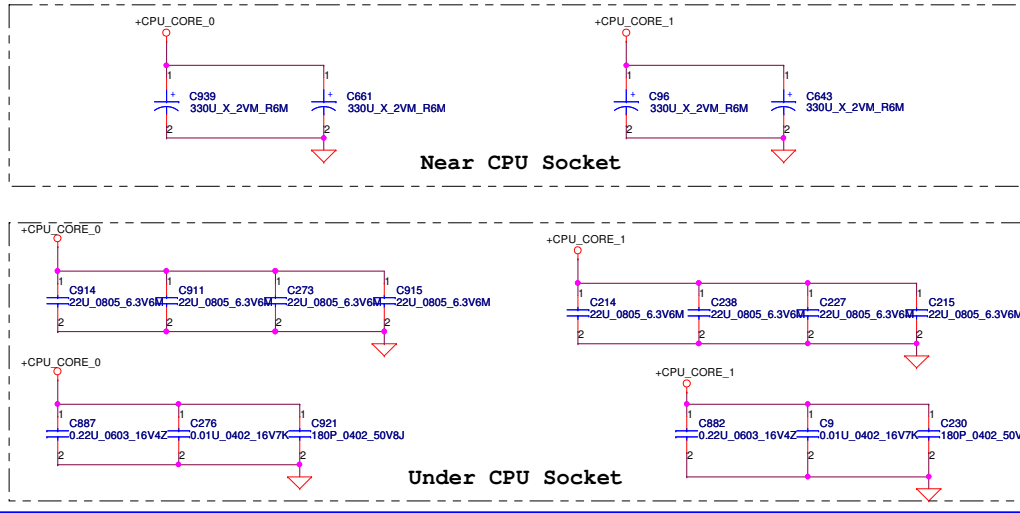


PLACE CLOSE TO PROCESSOR
WITHIN 1.2 INCH

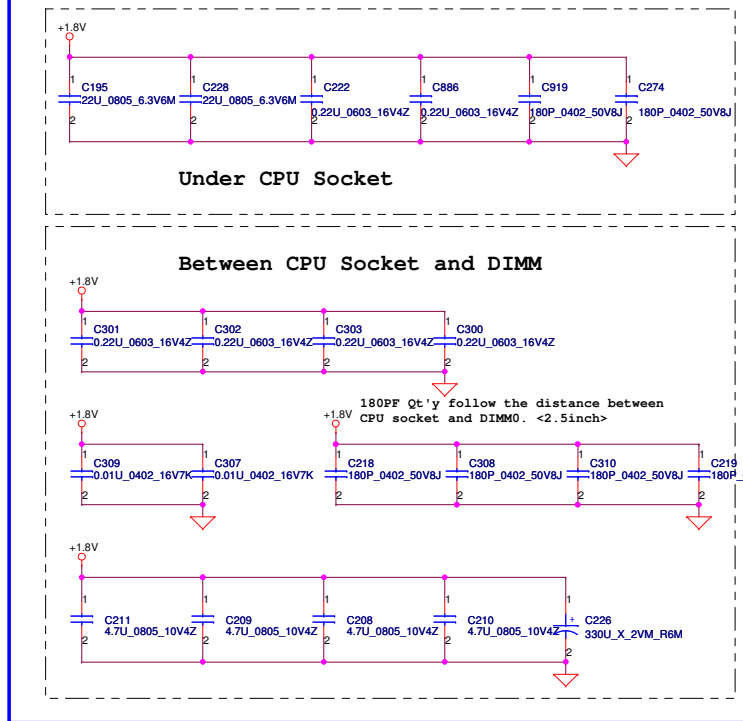


Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2008/10/06				Title			
Deciphered Date				2009/10/06				AMD CPU S1G3 DDRII I/F			
This sheet of engineering drawing is the proprietary property of Compal Electronics, Inc. and contains confidential information. It is not to be distributed outside the company without the written consent 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			
				LA-5972P				Date			
				Thursday, December 10, 2009				Sheet 5 of 49			

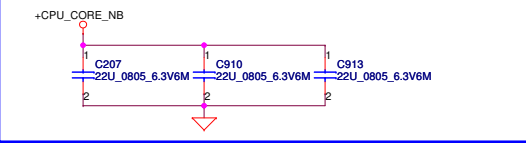
VDD (+CPU_CORE) decoupling.



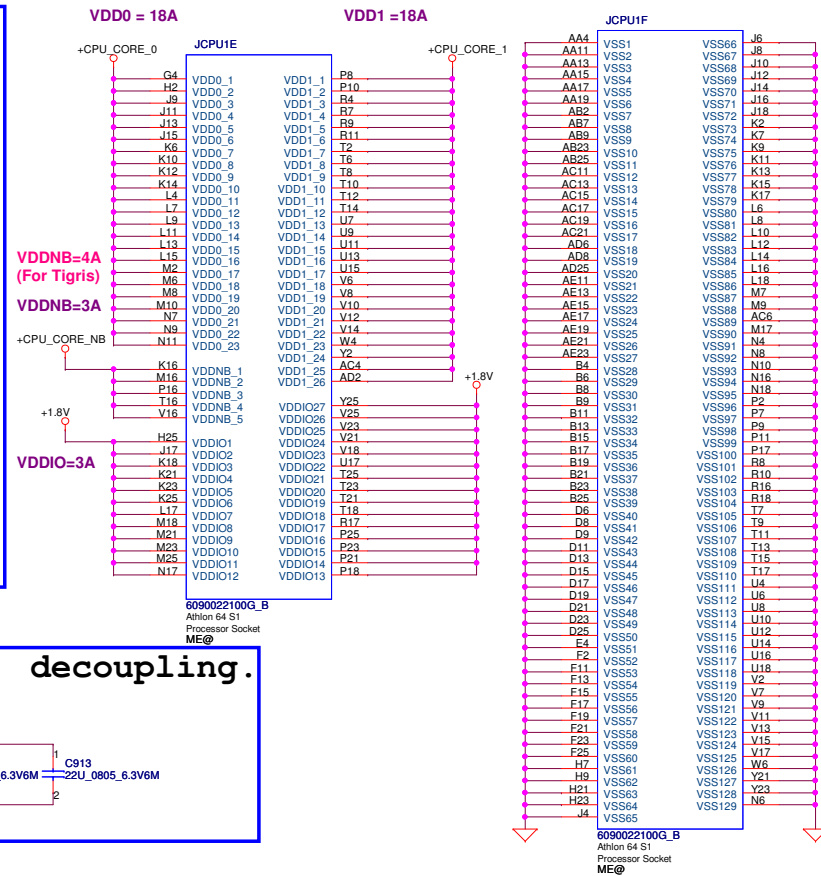
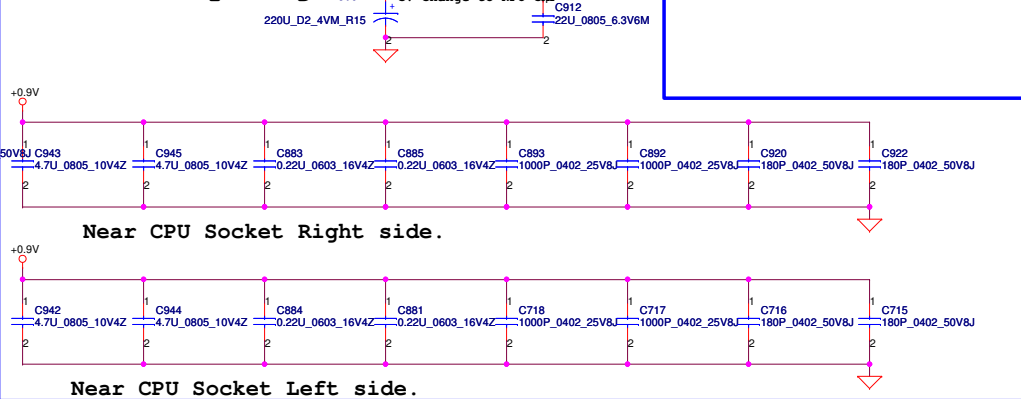
VDDIO decoupling.



+CPU_CORE_NB decoupling.



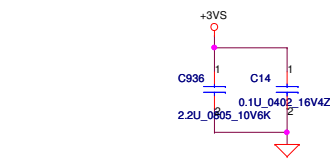
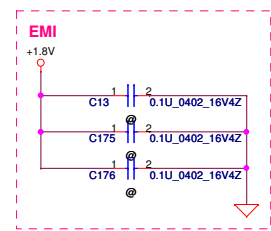
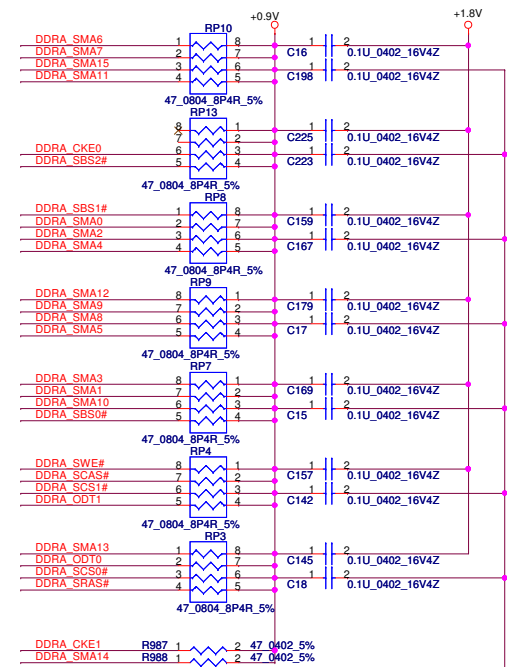
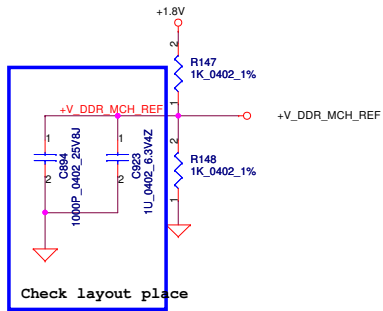
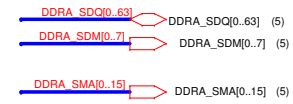
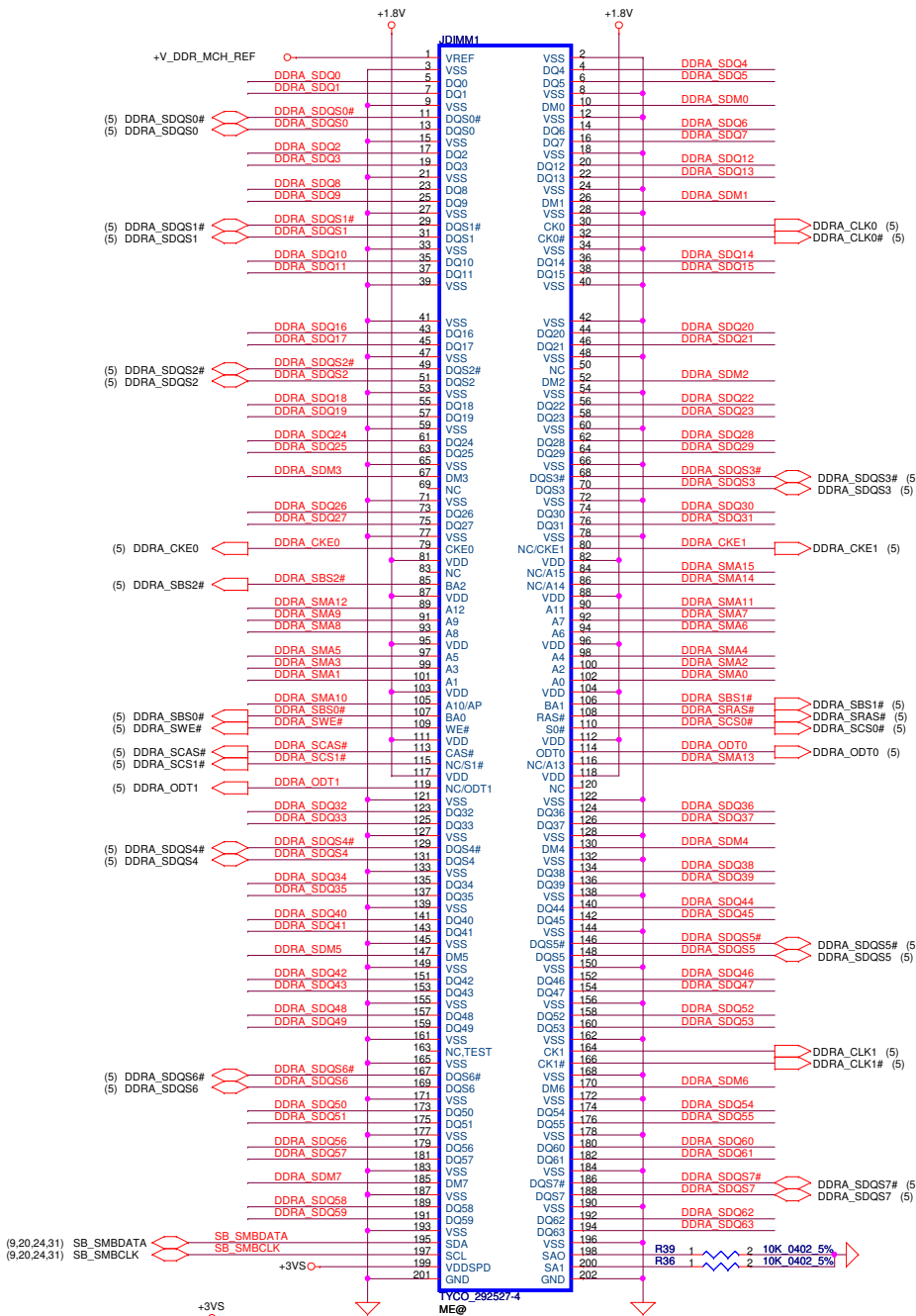
VTT decoupling.



Security Classification		Compal Secret Data		Title	
Issued Date	2008/10/06	Deciphered Date	2009/10/06	AMD CPU S1G3 PWR & GND	
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 1.0
				Date: Thursday, December 10, 2009	Sheet 7 of 49

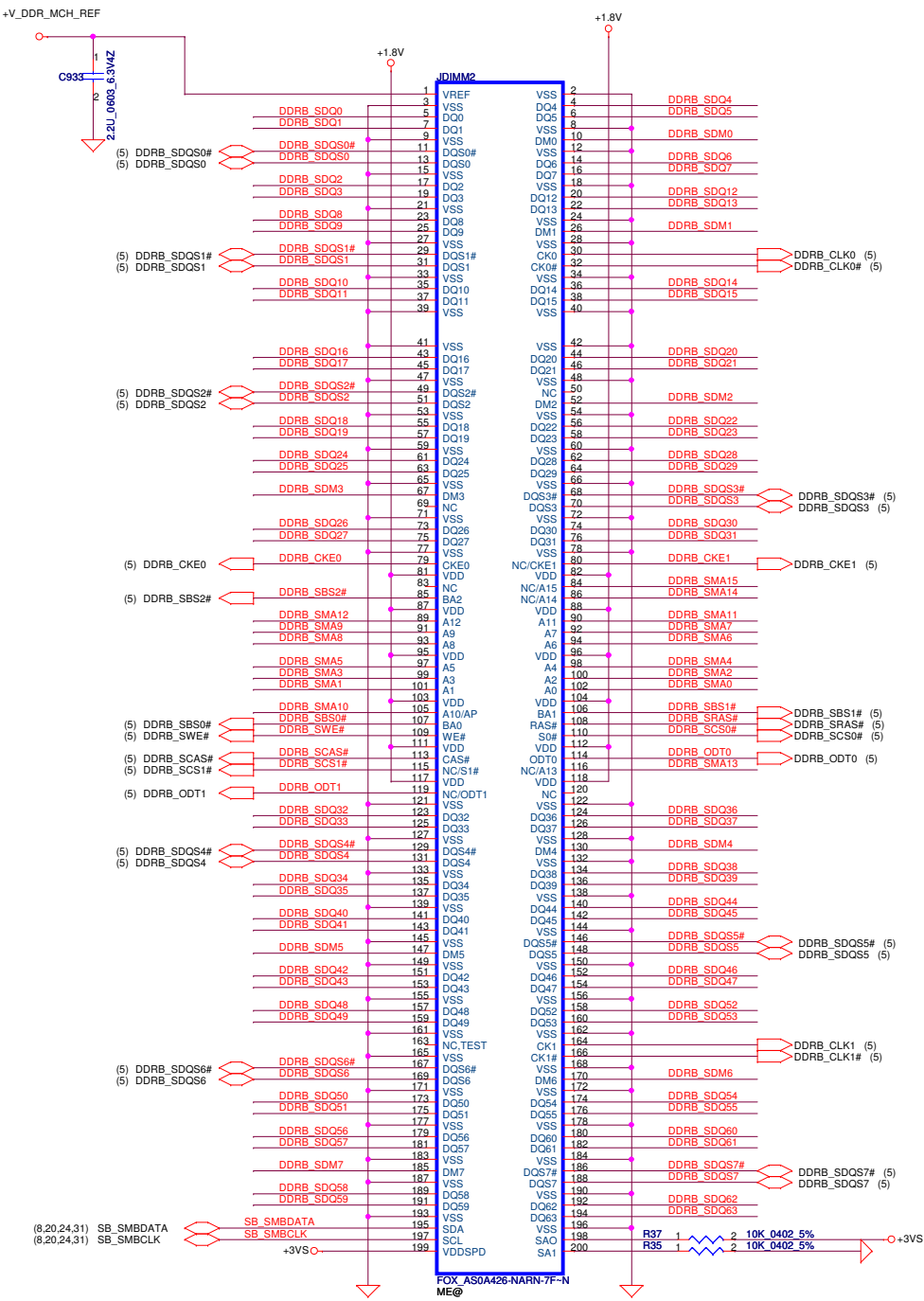
Compal Electronics, Inc.

LA-5972P

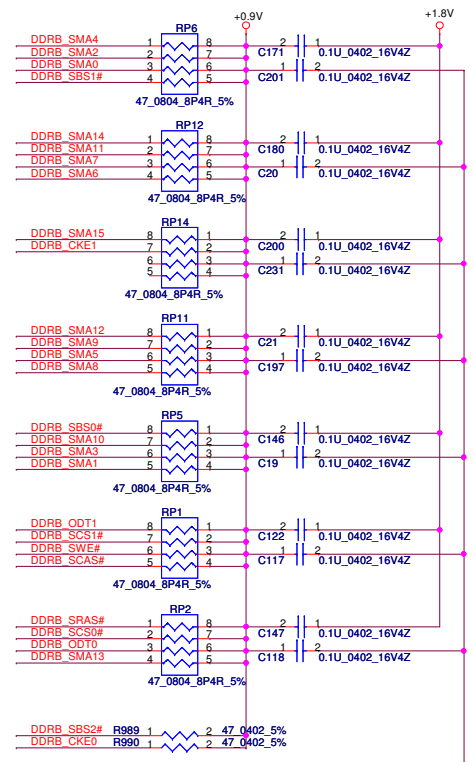


DDIMM1 REV H:5.2mm (BOT)

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				DDRII SO-DIMM 1	
Size		Document Number		Rev	
Custom		LA-5972P		1.0	
Date		Thursday, December 10, 2009		Sheet 8 of 49	

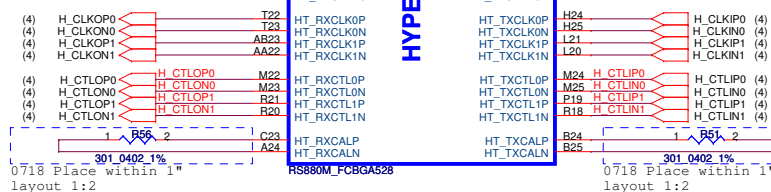
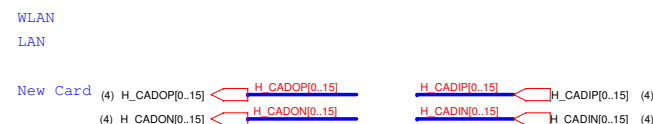
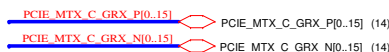


DDRBD_SQDQ[0..63] (5)
DDRBD_SDM[0..7] (5)
DDRBD_SMA[0..15] (5)



DIMM2 REV H:9.2mm (BOT)

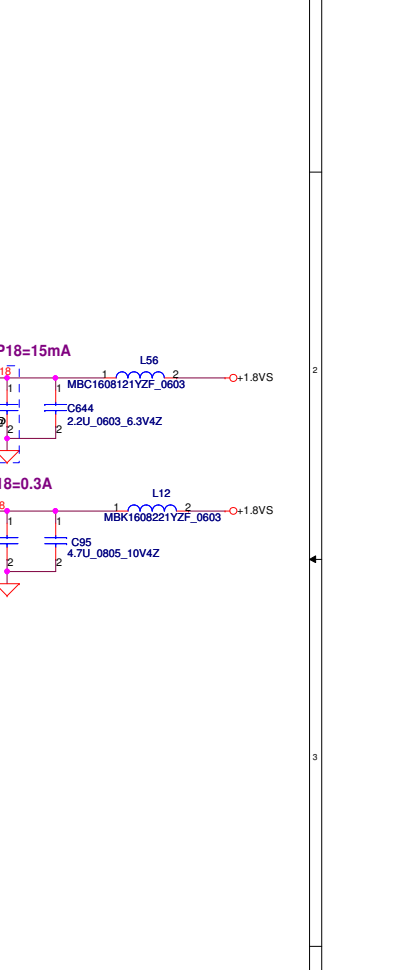
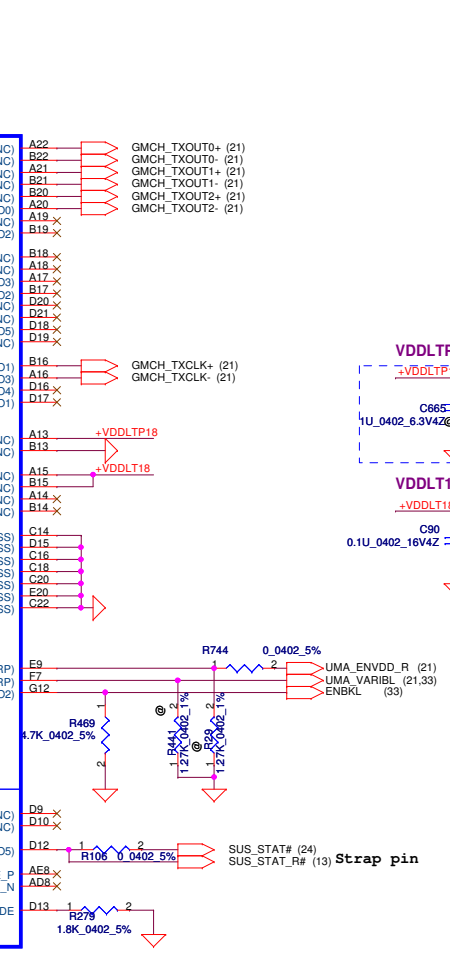
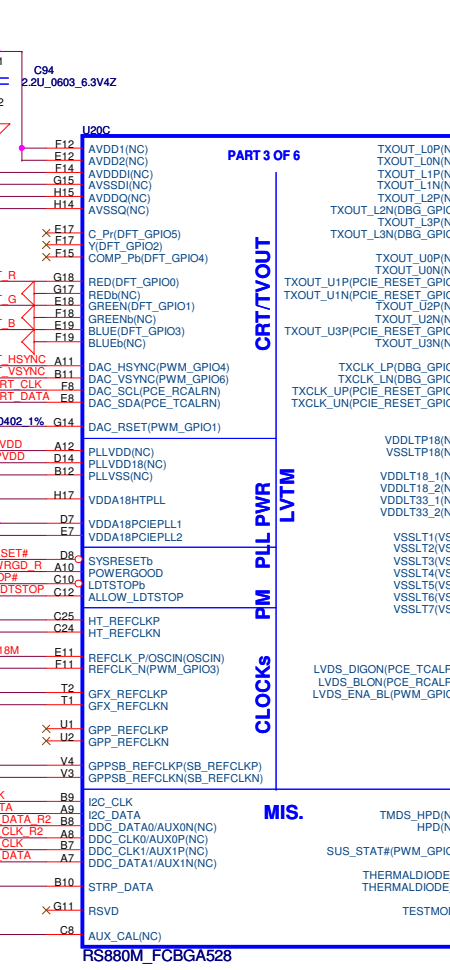
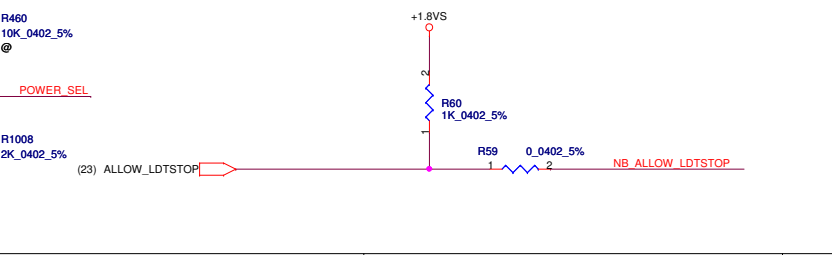
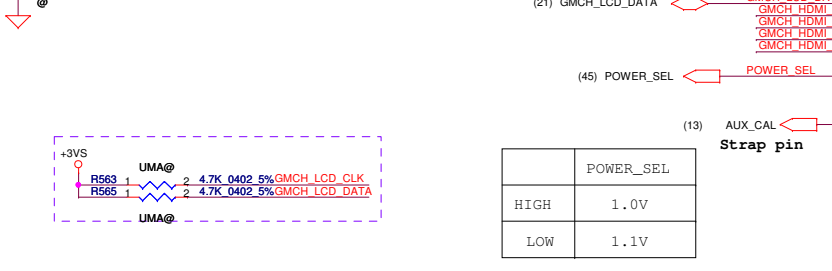
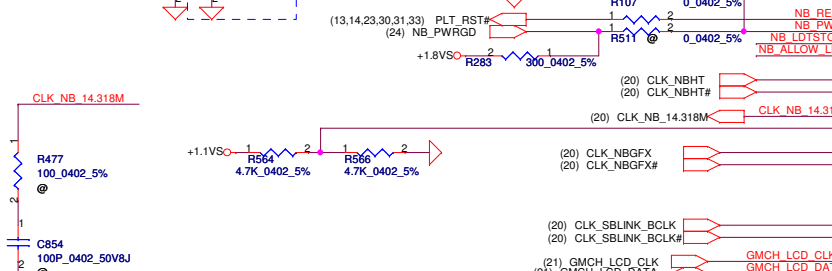
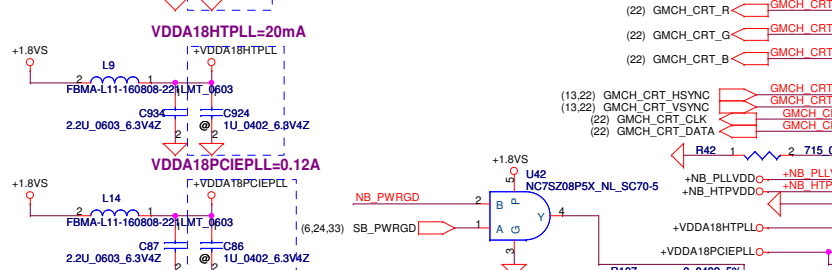
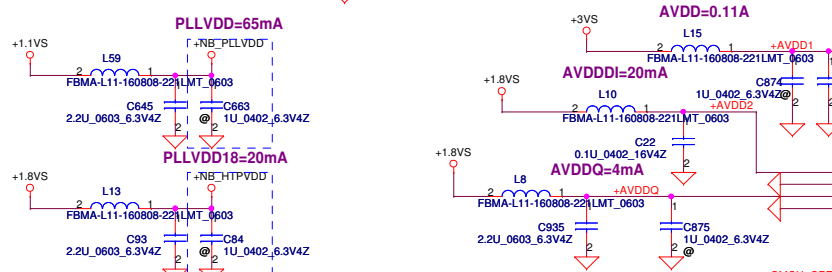
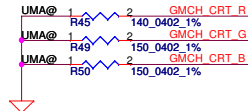
Security Classification		Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2008/10/06		Deciphered Date		2009/10/06		Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						DDRII SO-DIMM 2			
						Size	Document Number	Rev	
						Custom	LA-5972P	1.0	
						Date: Thursday, December 10, 2009			



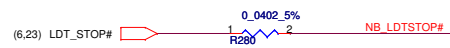
DP0	GFX_TX0, TX1, TX2 and TX3 AUX0 and HPD0
DP1	GFX_TX4, TX5, TX6 and TX7 AUX1 and HPD1

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title	RS880-HT/PCIE	
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-5972P	1.0
				Date:	Thursday, December 10, 2009	Sheet 10 of 49

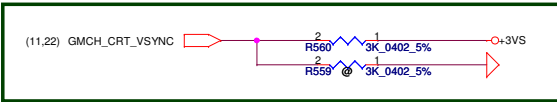
For RS780M A13
RED: Connected to GND through two separate 140ohm 1% resistor



	POWER_SEL
HIGH	1.0V
LOW	1.1V

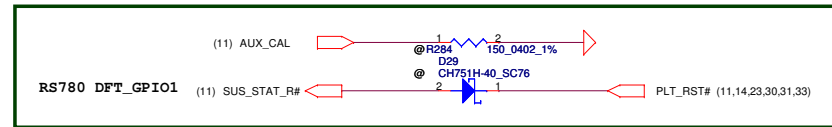


Security Classification	Compal Secret Data	Deciphered Data	2009/10/06	Title
Issued Date	2008/10/06	Deciphered Date	2009/10/06	RS880 VEDIO/CLK GEN
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED TO 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-5972P Date Thursday, December 10, 2009 Sheet 11 of 49 Rev 1.0



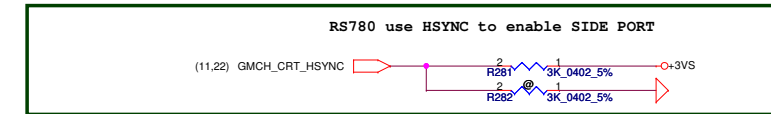
DFT_GPIO5:STRAP_DEBUG_BUS_GPIO_ENABLEDb

Enables the Test Debug Bus using GPIO. (VSYNC)
1 : Disable (RS880M)
0 : Enable (RS880M)



DFT_GPIO1:LOAD_EEPROM_STRAPS

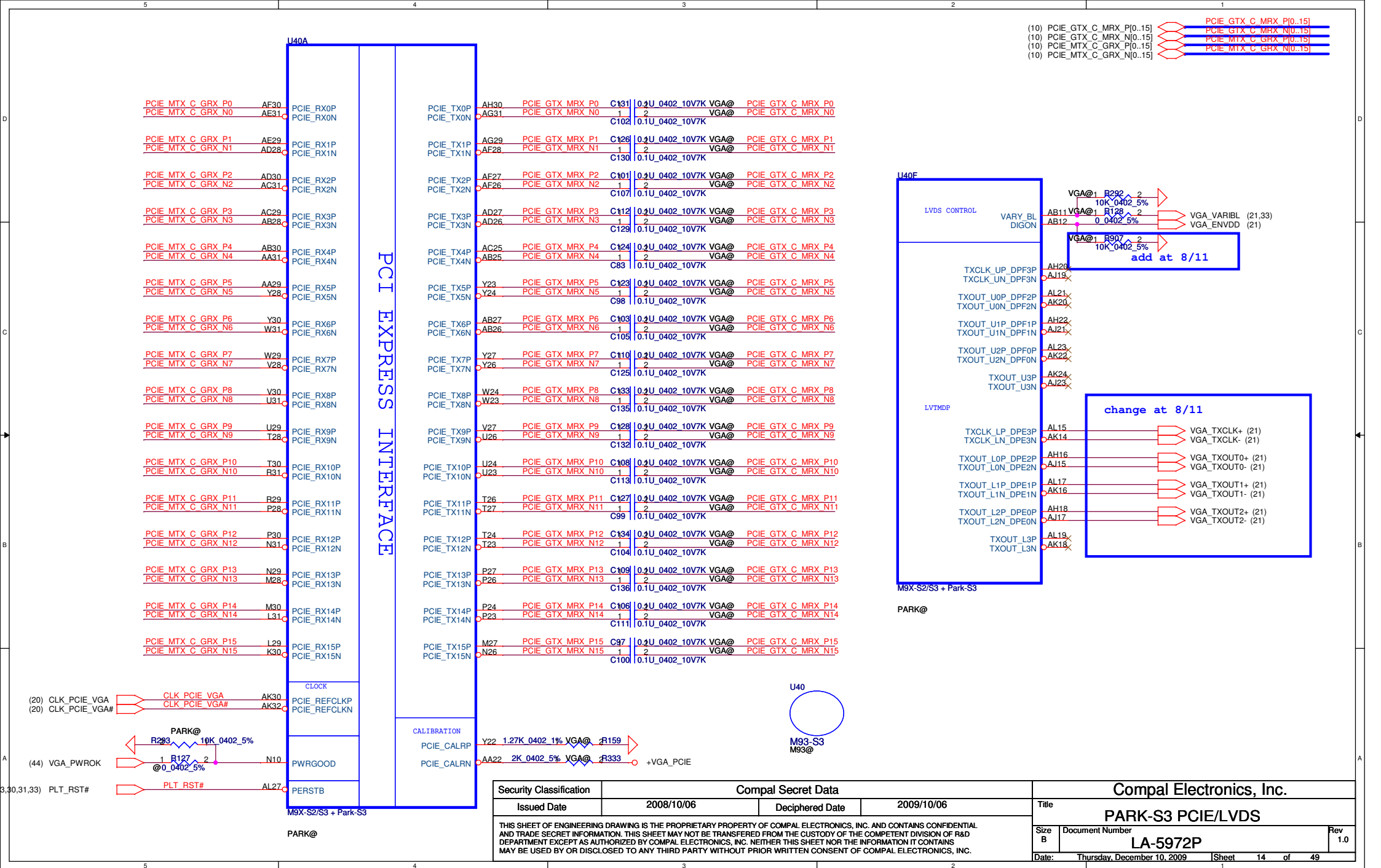
Selects Loading of STRAPS from EPROM
1 : Bypass the loading of EEPROM straps and use Hardware Default Values
0 : I2C Master can load strap values from EEPROM if connected, or use default values if not connected
RS740/RX780: DFT_GPIO1 RS780:SUS_STAT

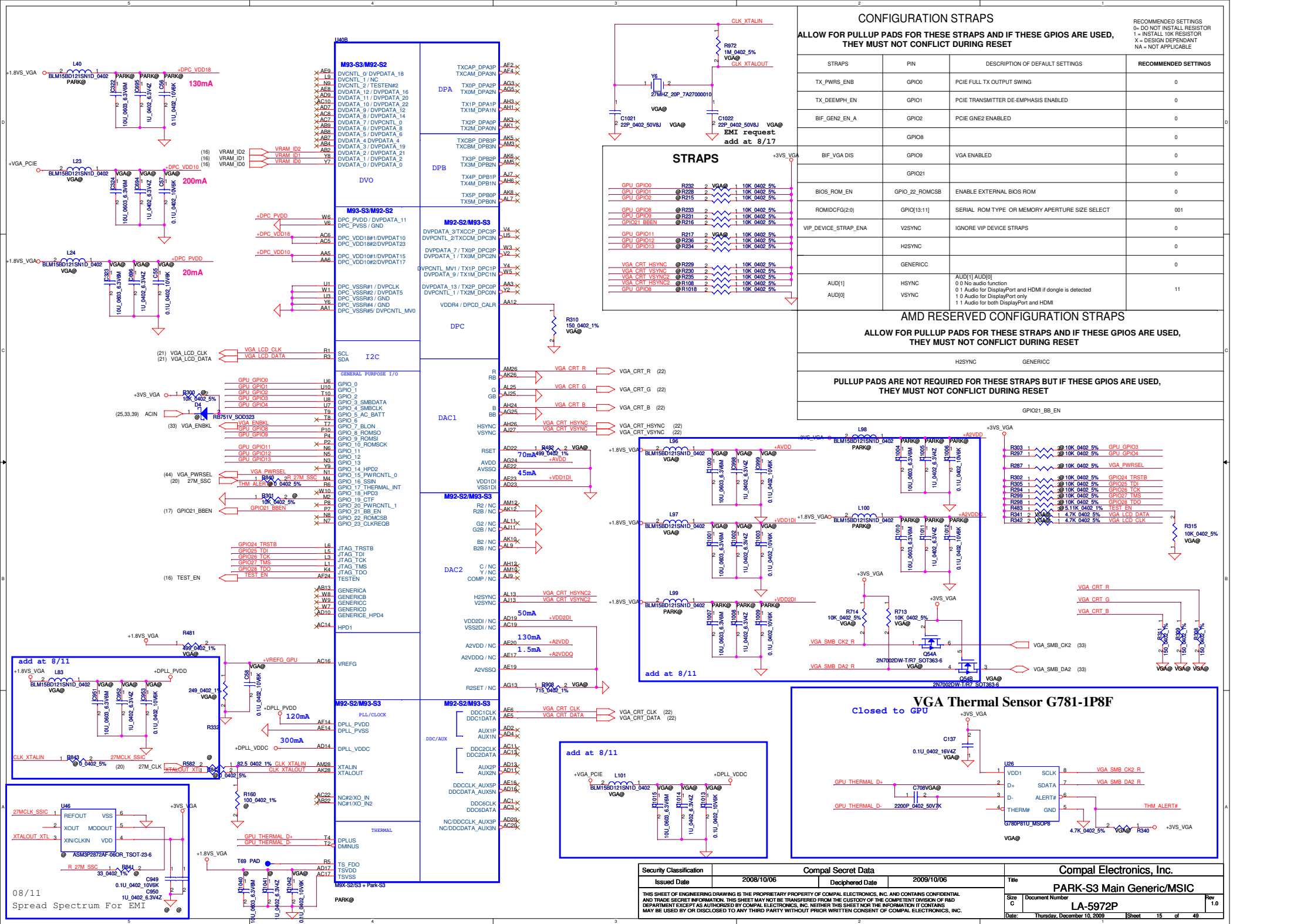


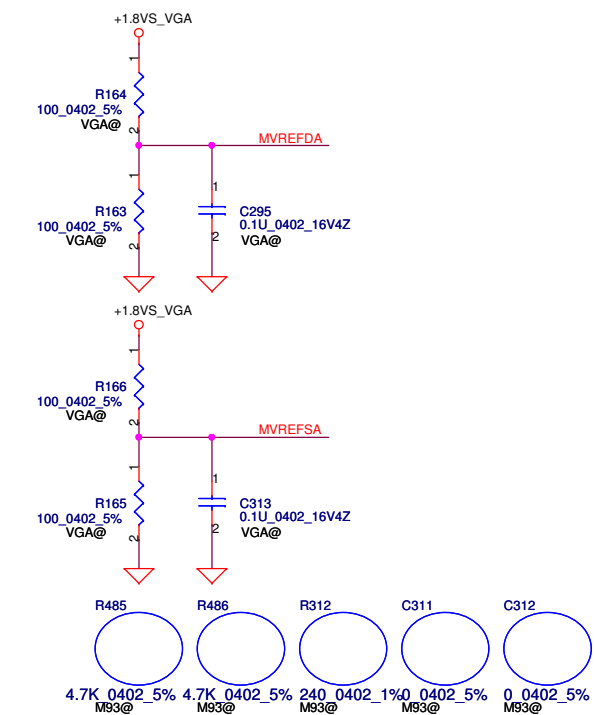
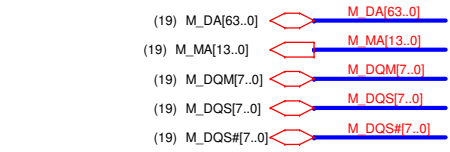
RS780 use HSYNC to enable SIDE PORT

RS740/RS780: Enables Side port memory (RS780 use HSYNC#)
0 : Enable (RS880M)
1 : Disable(RS880M)

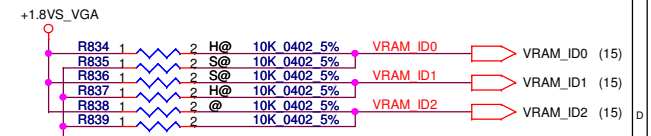
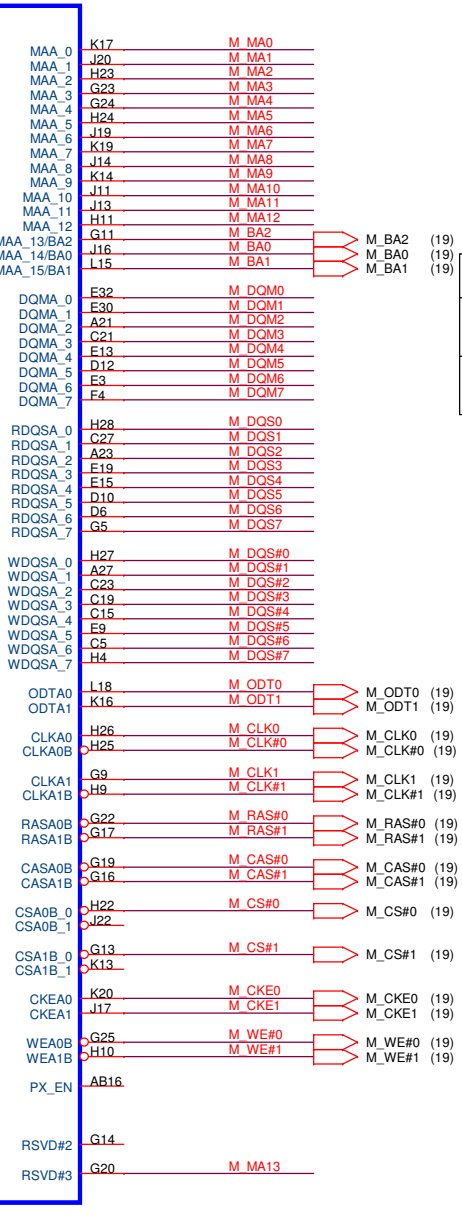
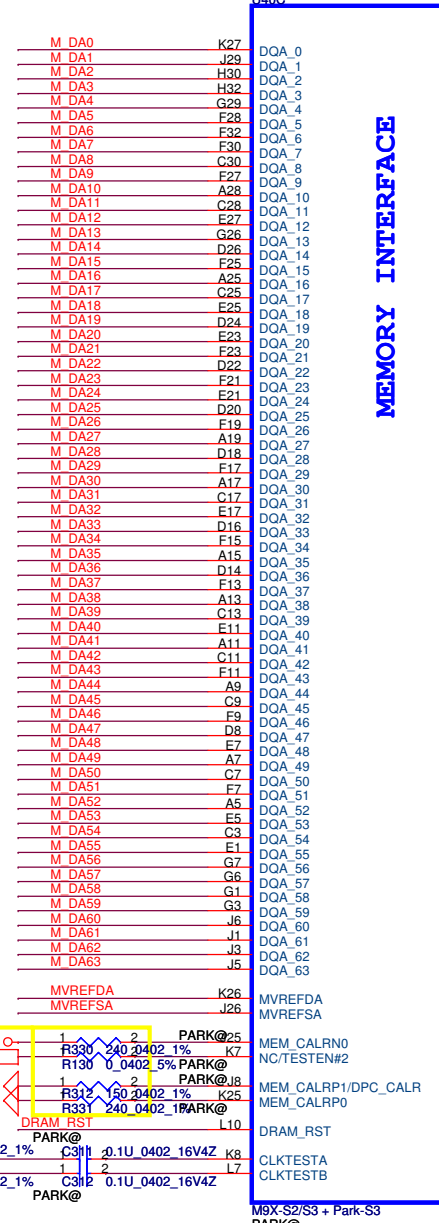
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Custom	LA-5972P
				Date	Thursday, December 10, 2009
				Sheet	13 of 49
				Rev	1.0





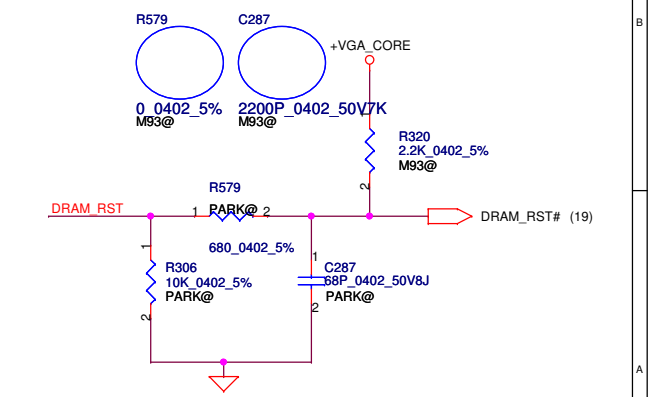


	M93-S3	PARK-S3
R330	NC	240
R130	NC	0/short
R312	240	150
R331	NC	240
	M93-S3	PARK-S3
R485	4.7K	51.1
R486	4.7K	51.1
C311	0/short	0.1uF
C312	0/short	0.1uF



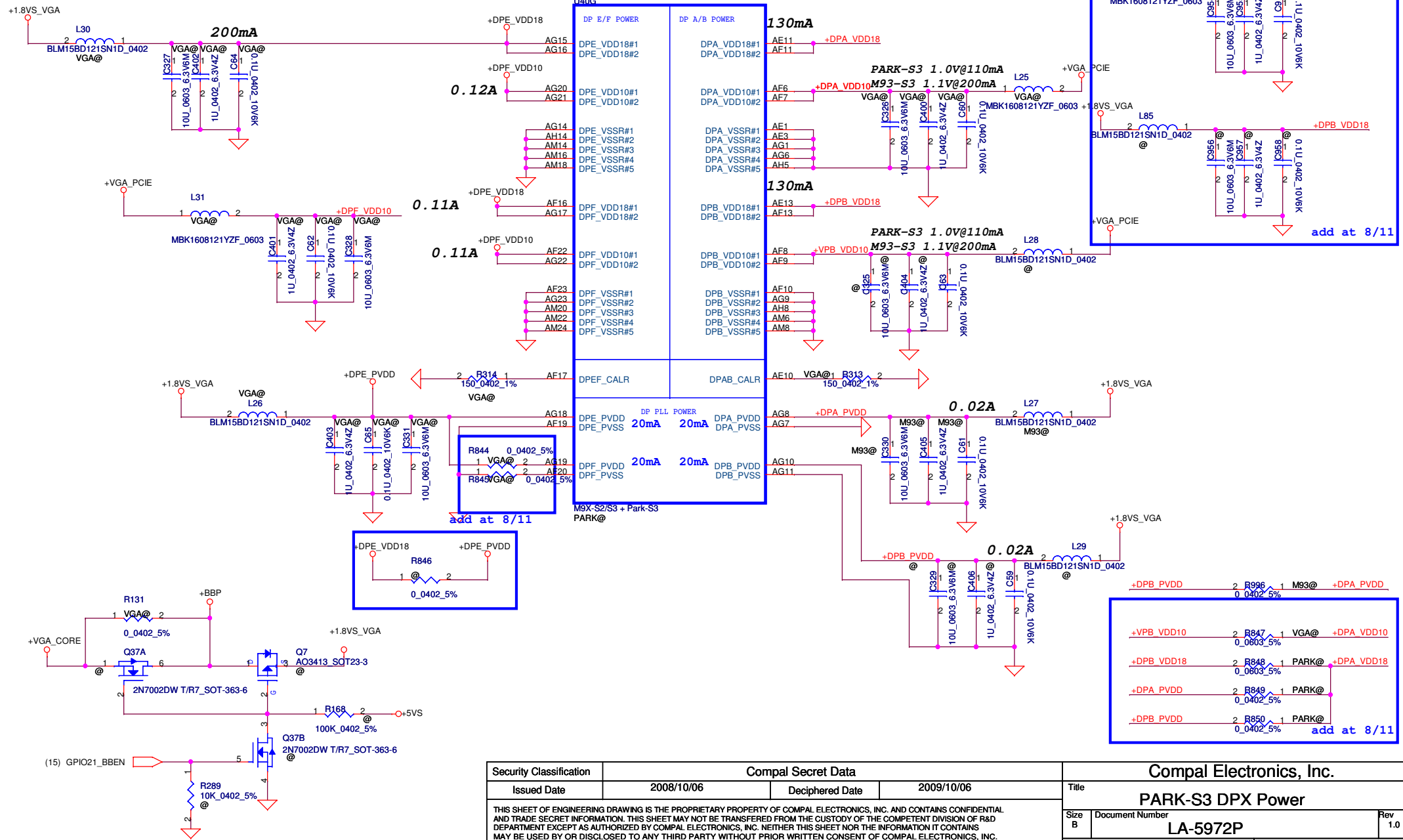
Vendor	VRAM_ID0	VRAM_ID1	VRAM_ID2
Hynix H5TQ1G63BFR-12C	1	0	0
Samsung K4W1G1646E-HC12	0	1	0

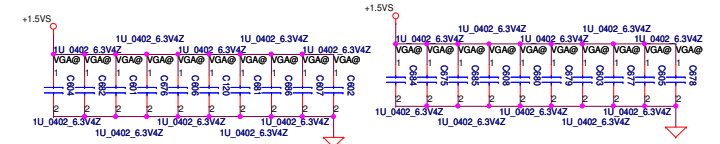
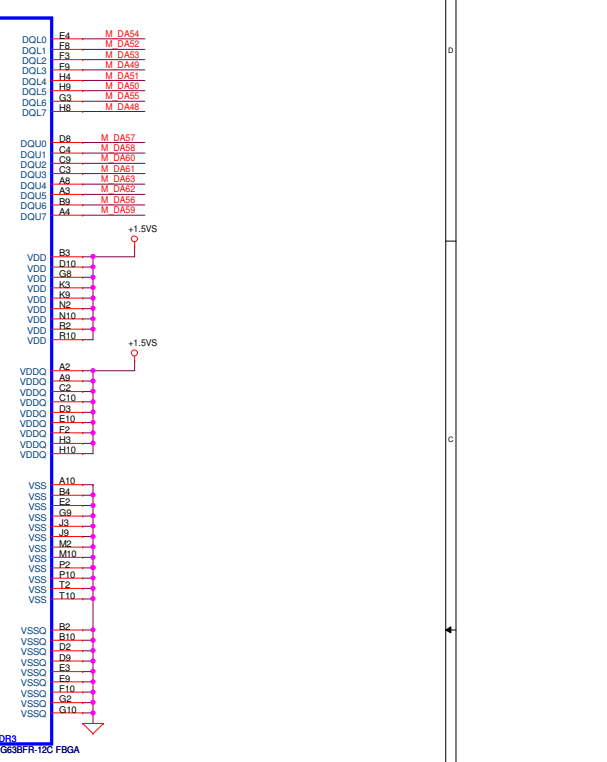
	M93-S3	PARK-S3
R306	NA	10K
R579	0/short	680
R320	2.2K	NA
C287	2.2nF	68pF



Security Classification	Compal Secret Data	Compal Electronics, Inc.	
Issued Date	2008/10/06	PARK-S3 MEM Interface	
Deciphered Date	2009/10/06	LA-5972P	
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.		Date:	Thursday, December 10, 2009
		Sheet	16 of 49

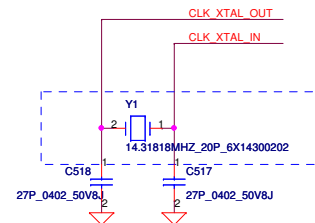
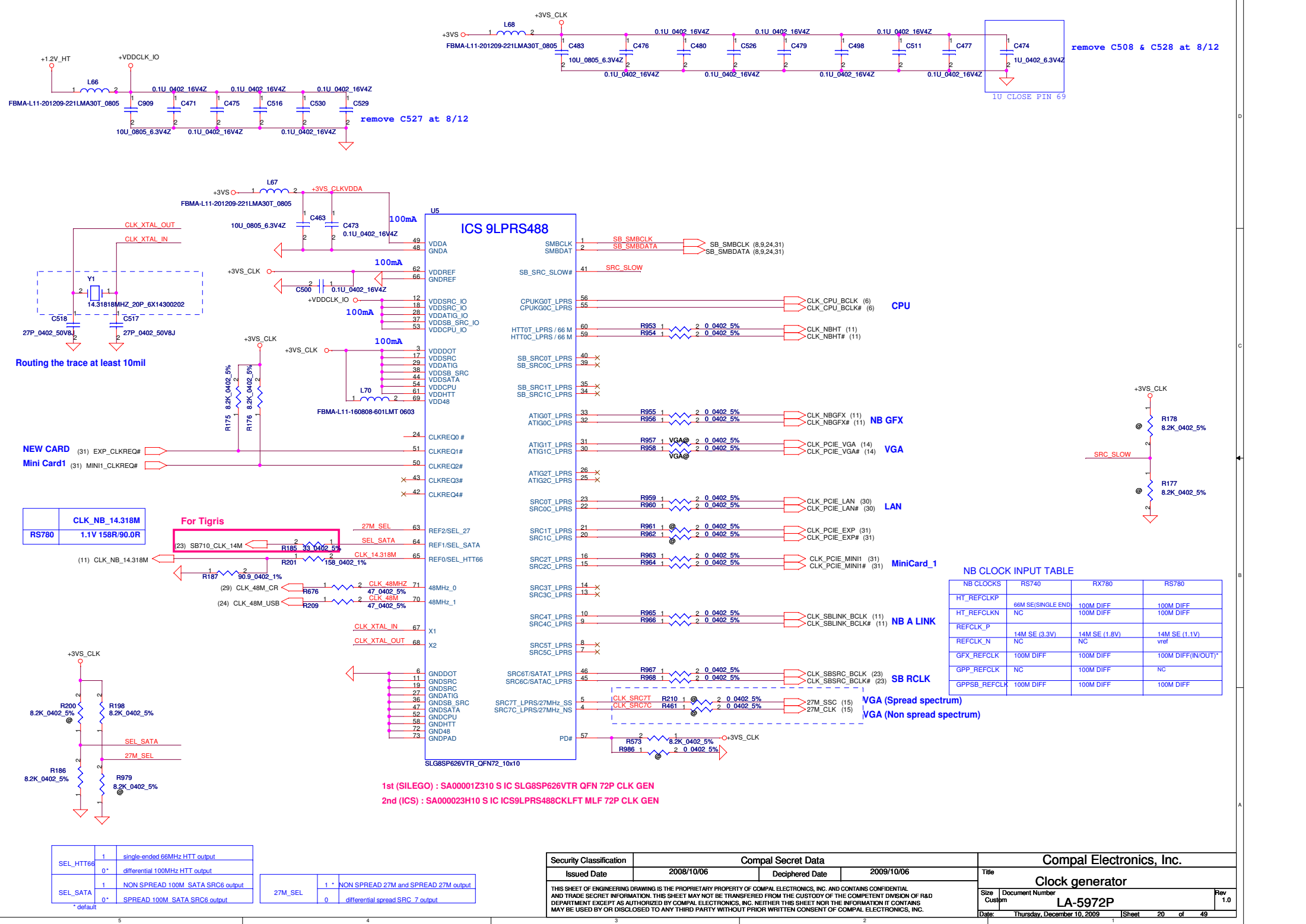
DPE_VDD10	Park-S3: TMDS/DP=110mA@1.0V : LVDS=120mA@1.0V
DPF_VDD10	M9X-S2/S3: TMDS/DP=170mA@1.1V LVDS=100mA@1.1V





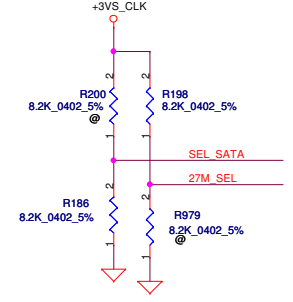
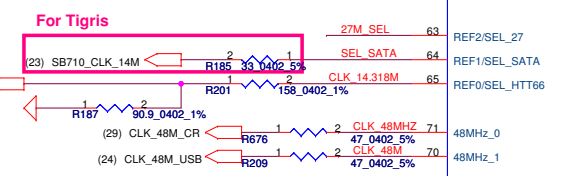
LA-5972P

Date: Thursday, December 10, 2009 Sheet 19 of 49



NEW CARD
Mini Card1

	CLK_NB_14.318M
RS780	1.1V 158R/90.0R



SEL_HTT66	-1	single-ended 66MHz HTT output
	0*	differential 100MHz HTT output
SEL_SATA	-1	NON SPREAD 100M. SATA SRC6 output
	0*	SPREAD 100M. SATA SRC6 output

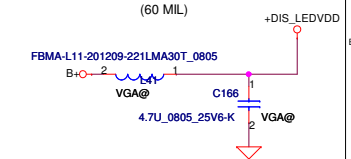
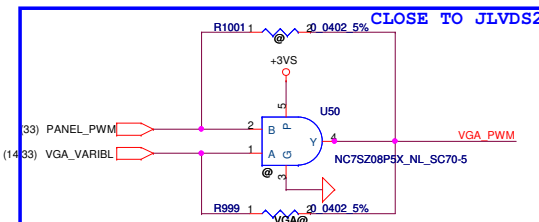
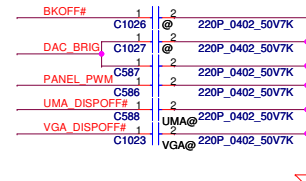
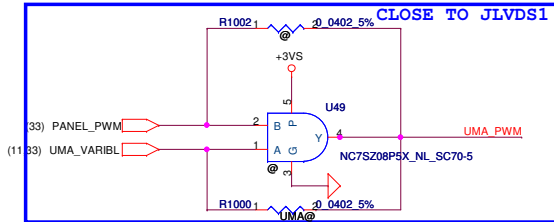
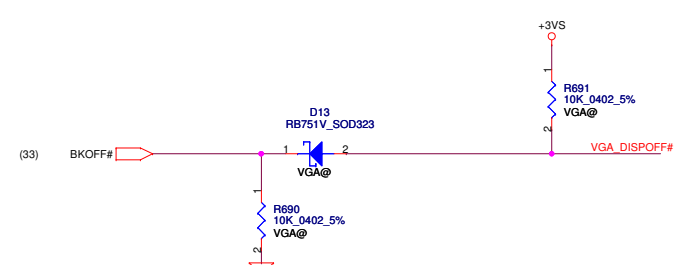
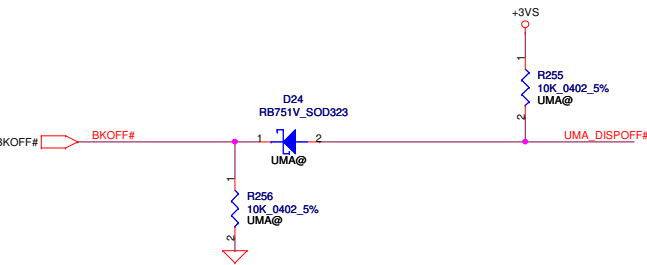
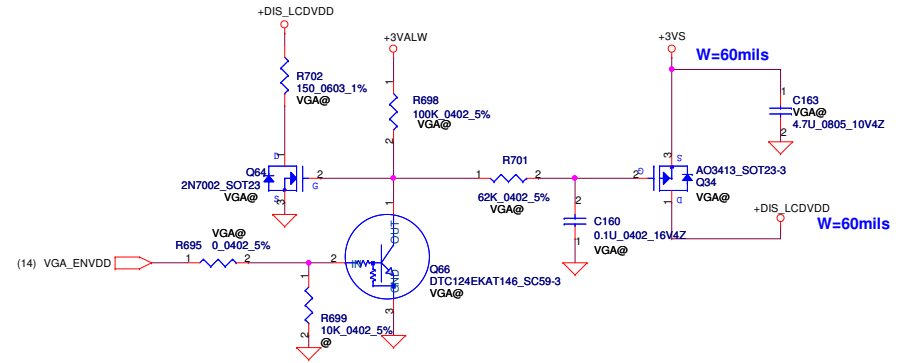
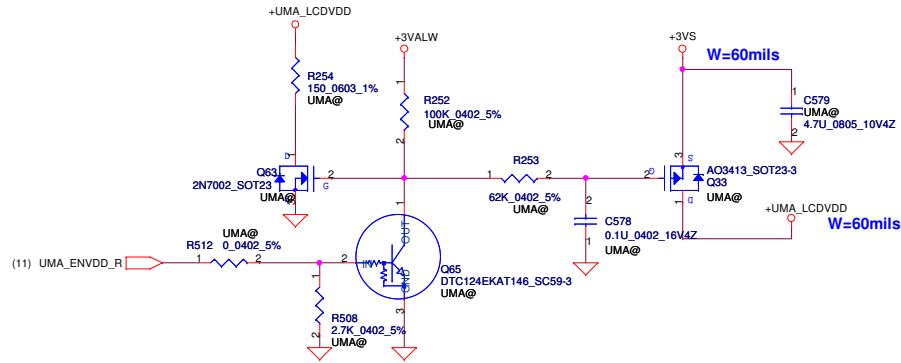
* default

27M_SEL	1 *	NON SPREAD 27M and SPREAD 27M output
	0	differential spread SRC 7 output

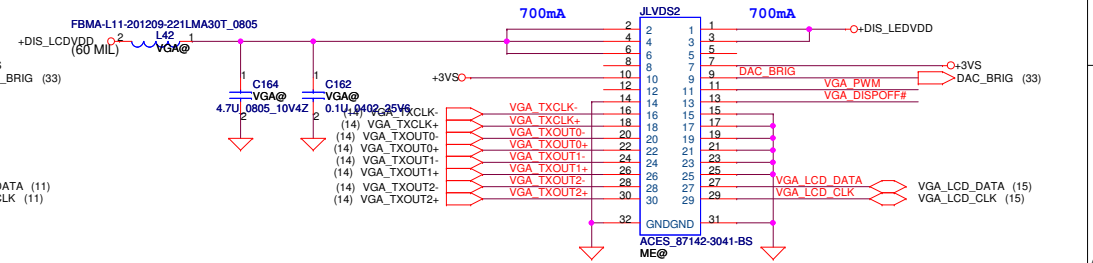
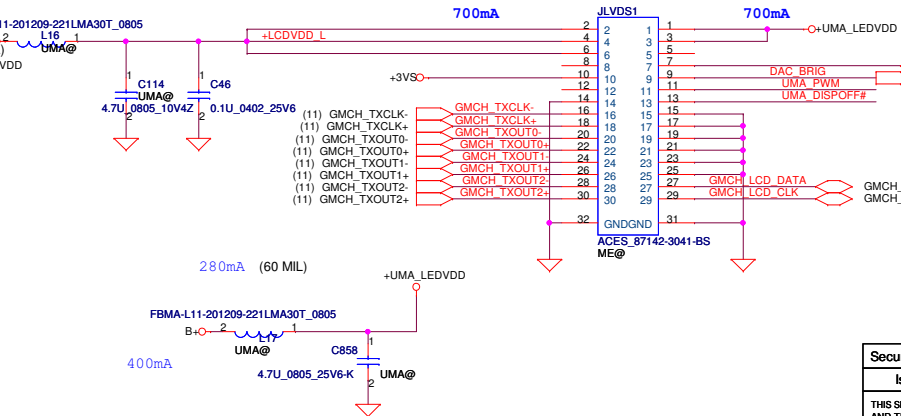
1st (SILEGO) : SA00001Z310 S IC SLG8SP626VTR QFN 72P CLK GEN
2nd (ICS) : SA000023H10 S IC ICS9LPRS488CLKLT MLF 72P CLK GEN

Security Classification	Compal Secret Data	Compal Electronics, Inc.	
Issued Date	2008/10/06	Deciphered Date	2009/10/06
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 Clock generator	
		Size Custom	Document Number LA-5972P
		Date Thursday, December 10, 2009	Rev 1.0
		Sheet 20	of 49

LCD POWER CIRCUIT

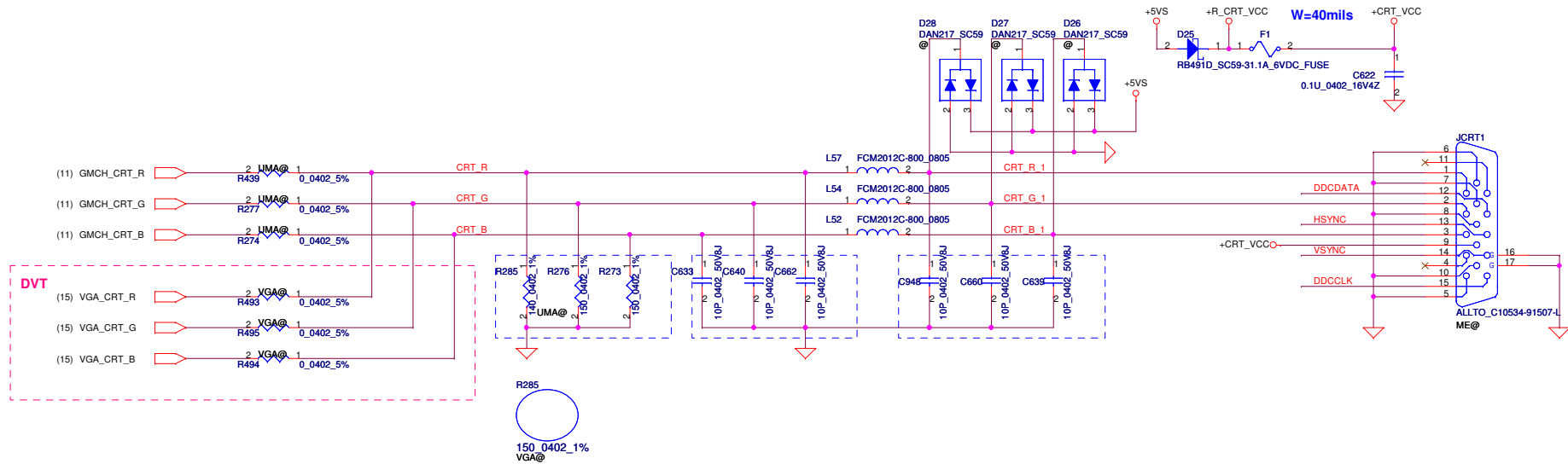


LCD/PANEL BD. Conn.

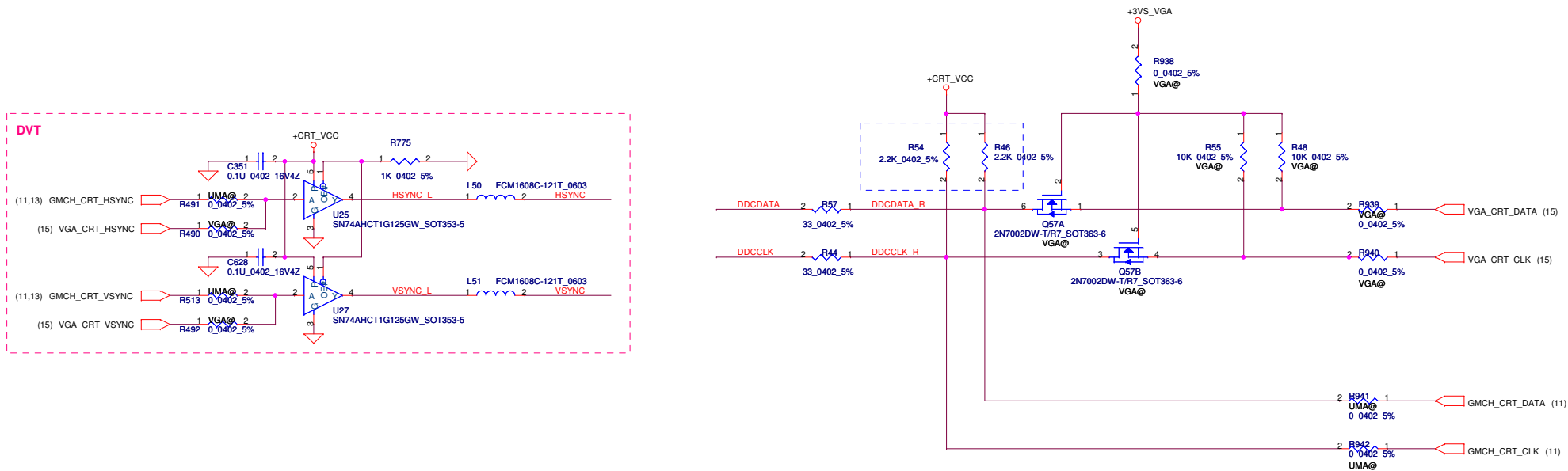


Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2008/10/06				Title			
				Deciphered Date				LVDS Connector			
				2009/10/06				LA-5972P			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL 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 1.0			
				Date: Thursday, December 10, 2009				Sheet 21 of 49			

CRT CONNECTOR



Place closed to chipset



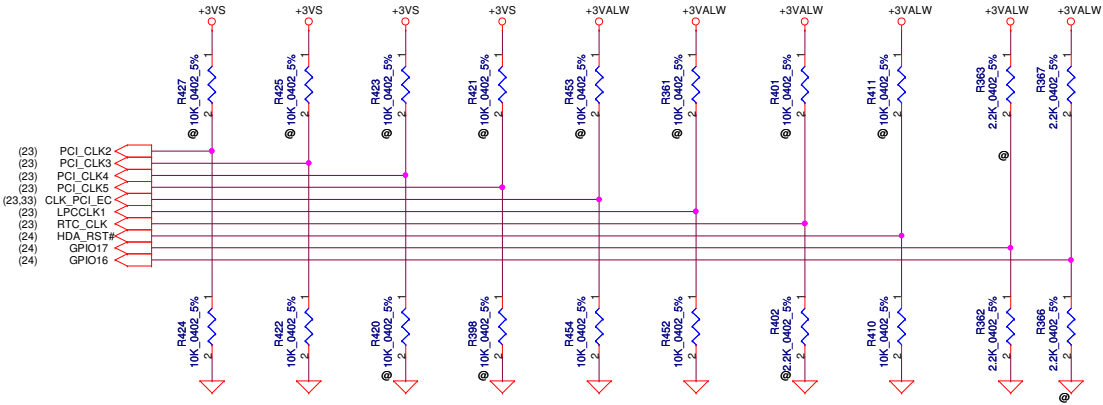
Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2008/10/06				Deciphered Date			
				2009/10/06				Title			
								CRT Connector			
								LA-5972P			
								Rev 1.0			
								Date: Thursday, December 10, 2009			
								Sheet 22 of 49			

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.

REQUIRED STRAPS

NOTE: SB700 HAS INTERNAL 15K PULL UP RESISTOR FOR RTC_CLK

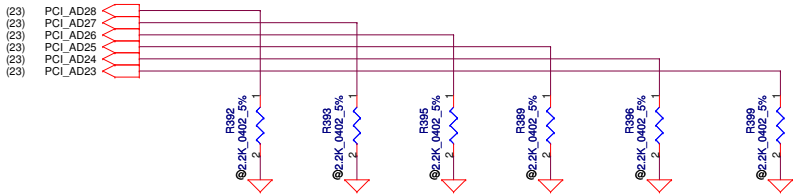
	PCI_CLK2	PCI_CLK3	PCI_CLK4	PCI_CLK5	LPC_CLK0 CLK_PCI_EC	LPC_CLK1	RTC_CLK	AZ_RST_CD#	GP17	GP16
PULL HIGH	BOOTFAIL TIMER ENABLED	USE DEBUG STRAPS	RESERVED	RESERVED	ENABLE PCI MEM BOOT	CLKGEN ENABLED	INTERNAL RTC DEFAULT	EC ENABLED	Internal pull up H,H = Reserved H,L = SPI ROM	
PULL LOW	BOOTFAIL TIMER DISABLED 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		L,H = LPC ROM (Default L,NC) L,L = FWH ROM



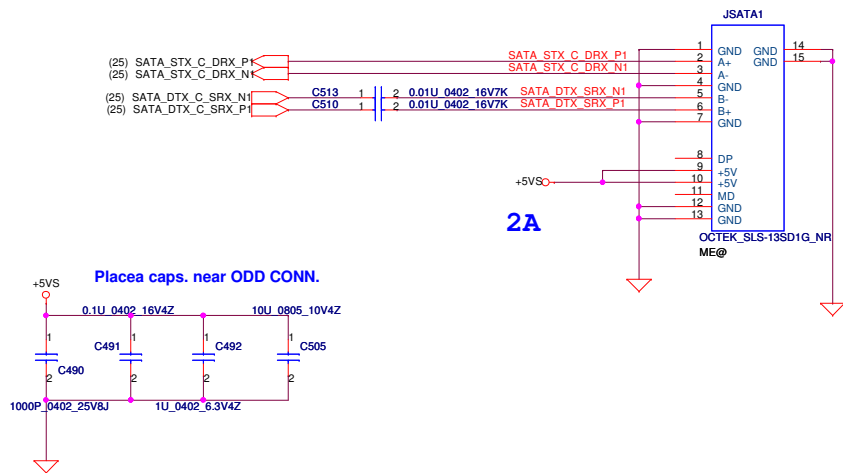
DEBUG STRAPS

SB700 HAS 15K INTERNAL PU FOR PCI_AD[28:23]

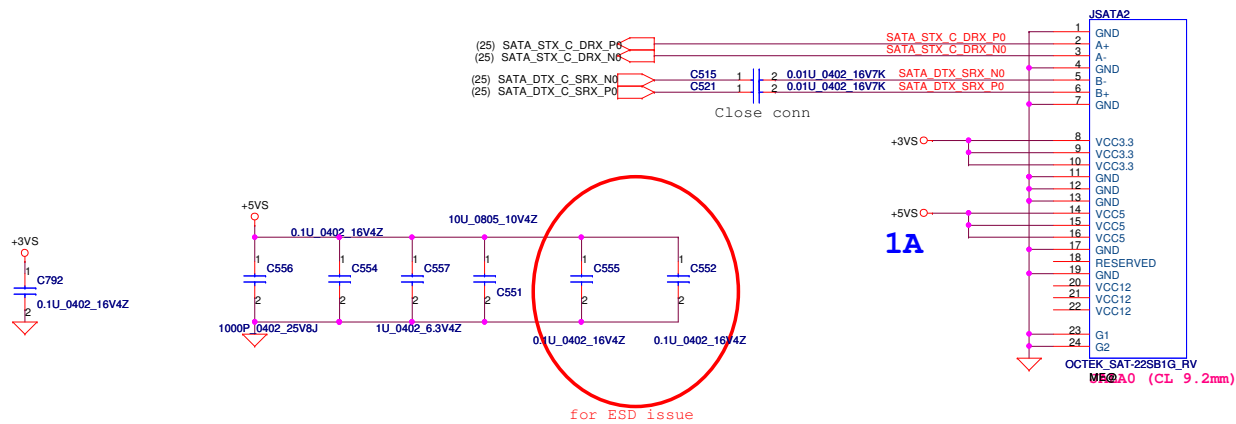
	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	RESERVED
PULL LOW	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	



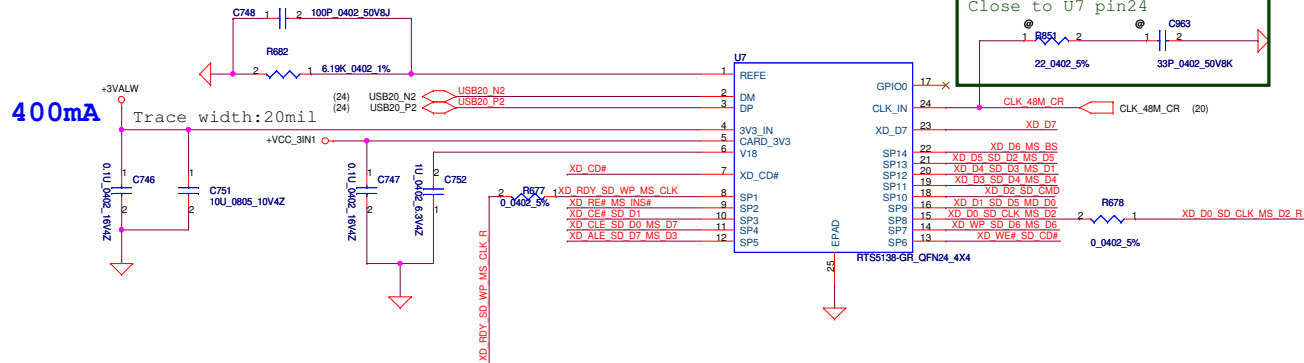
SATA ODD Conn.



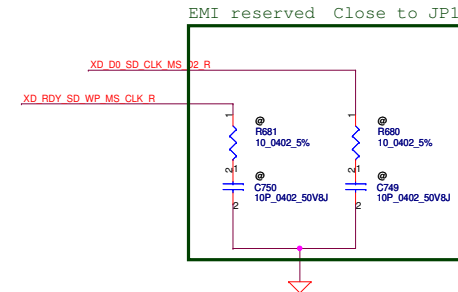
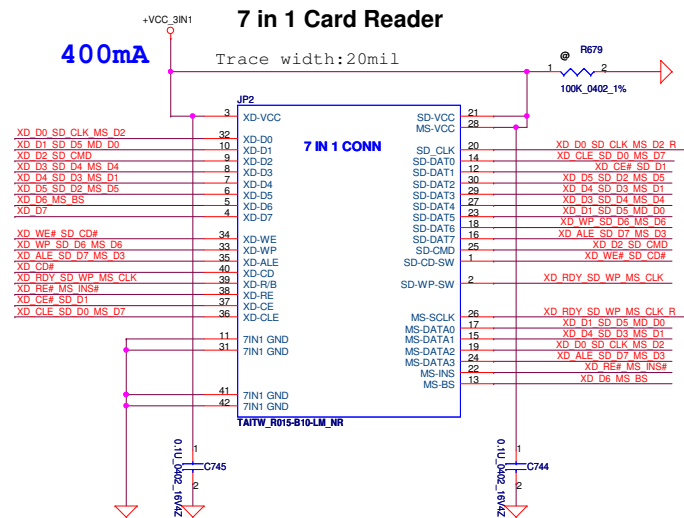
SATA HDD Conn.



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title	HDD & ODD 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	Rev
				B	1.0
				Document Number LA-5972P	
Date: Thursday, December 10, 2009				Sheet	28 of 49

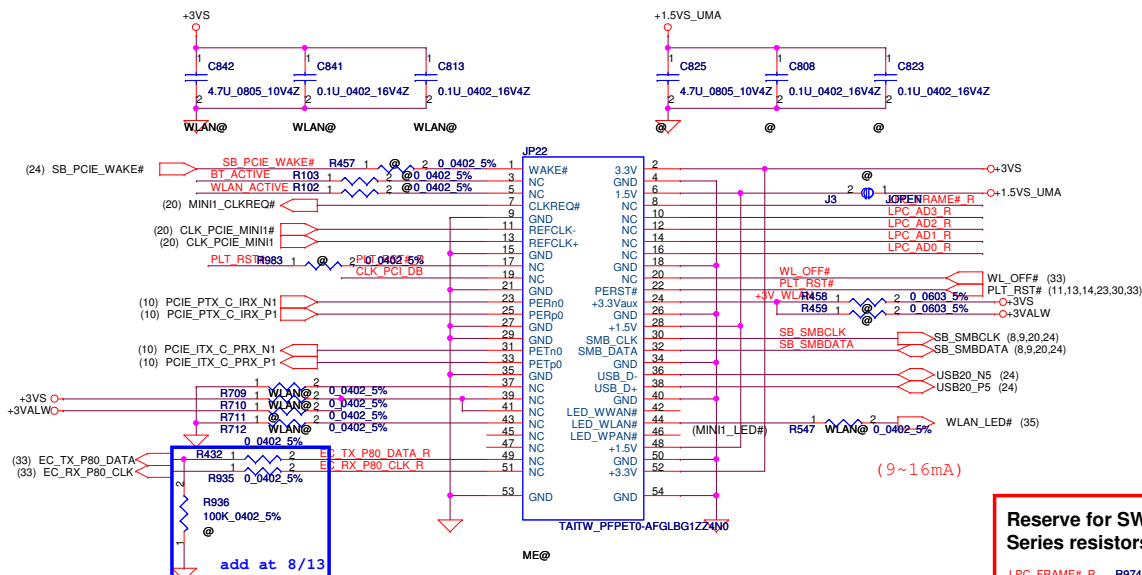


Card reader(XD/SD/MMC/MS/MS-Pro HD SD)

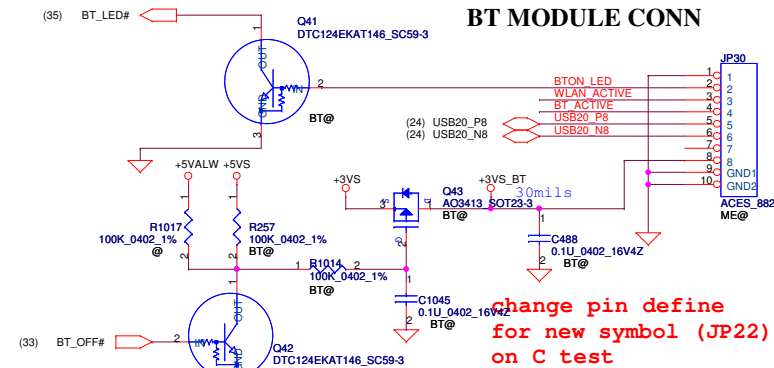


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title	RTS5138 Card Reader
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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-5972P
				Date	Thursday, December 10, 2009
				Sheet	29 of 49
				Rev	1.0

For Wireless LAN



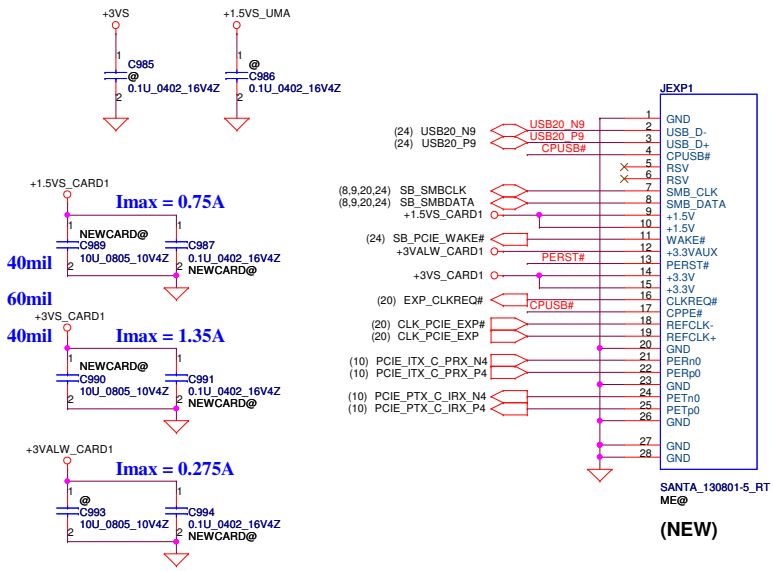
Mini Card Power Rating			
Power	Primary Power (mA)		Auxiliary Power (mA)
	Peak	Normal	Normal
+3VS	1000	750	
+3V	330	250	250 (wake enable)
+1.5VS	500	375	5 (Not wake enable)



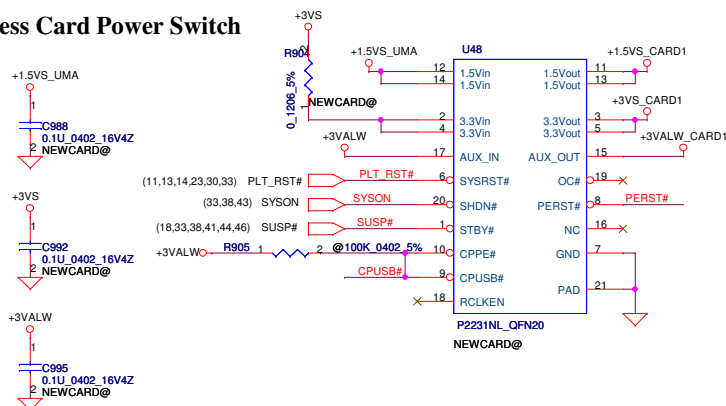
Reserve for SW mini-pcie debug card.
Series resistors closed to KBC side.

LPC_FRAME#_R	R974	1	2	0.0402_5%	LPC_FRAME#	(23,33)
LPC_AD3_R	R975	1	2	0.0402_5%	LPC_AD3	(23,33)
LPC_AD2_R	R976	1	2	0.0402_5%	LPC_AD2	(23,33)
LPC_AD1_R	R977	1	2	0.0402_5%	LPC_AD1	(23,33)
LPC_AD0_R	R978	1	2	0.0402_5%	LPC_AD0	(23,33)
CLK_PCI_DB	R978	1	2	0.0402_5%	CLK_PCI_DB	(23)

add at 8/11



Express Card Power Switch

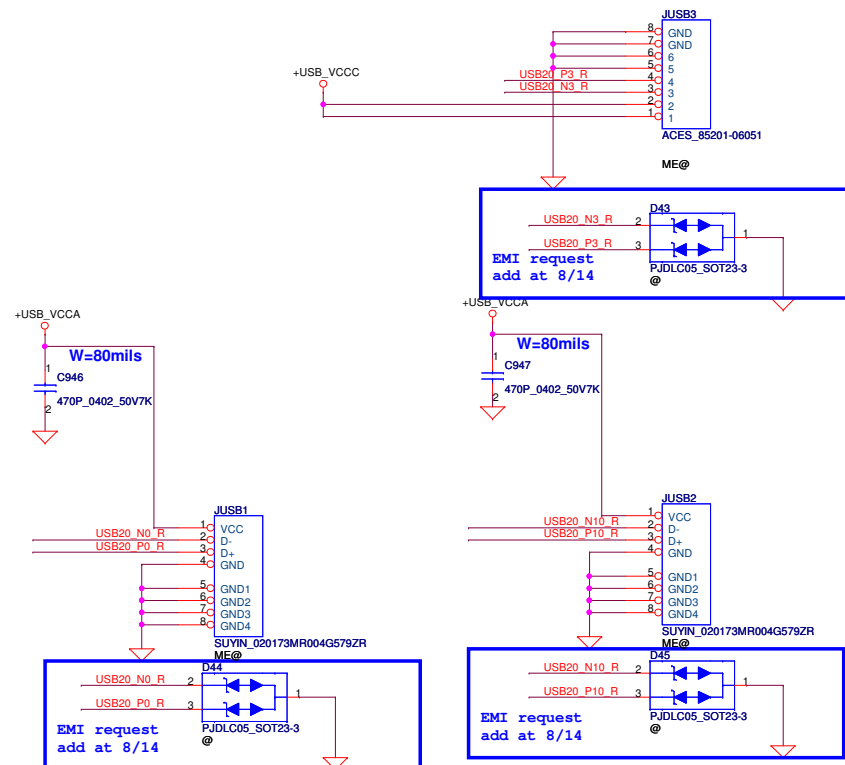
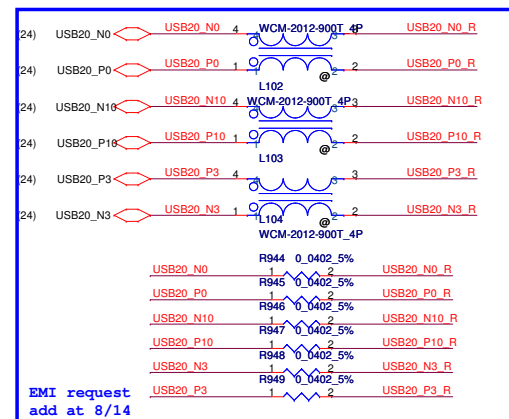


Security Classification		Compal Secret Data		Title	
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				MINI CARD/BT/ NEW CARD	
Size B	Document Number	LA-5972P		Rev	1.0
Date:	Thursday, December 10, 2009	Sheet	31	of	49

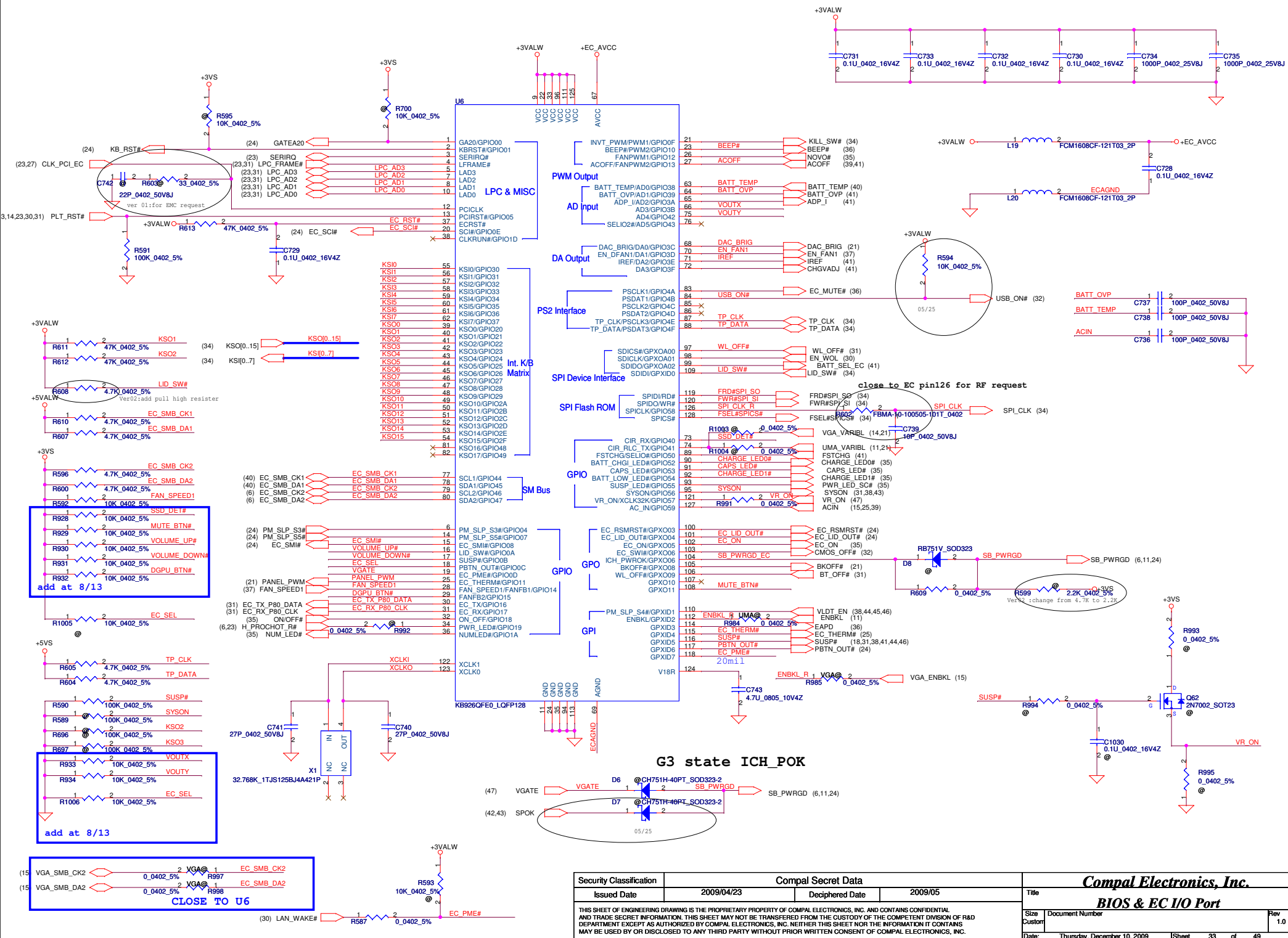
CMOS Camera Conn

The schematic diagram illustrates the CMOS camera connection circuit. Key components and their values are as follows:

- Power Supply:** +5V
- MOSFET:** Q48, AO3413, SOT23-3, CMOS@
- Diode:** Q49, DTC124EKAT146_SC59-3
- Resistors:**
 - R258: 100K_0402_5% CMOS@
 - R1015: 100K_0402_5% CMOS@
 - C1047: 0.1U_0402_16V4Z
- Capacitors:**
 - C550: 0.1U_0402_16V4Z CMOS@
 - C553: 10U_0805_10V4Z CMOS@
- Connectors:**
 - JP31: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
 - USB20_N7, USB20_P7
- Current:** 150mA

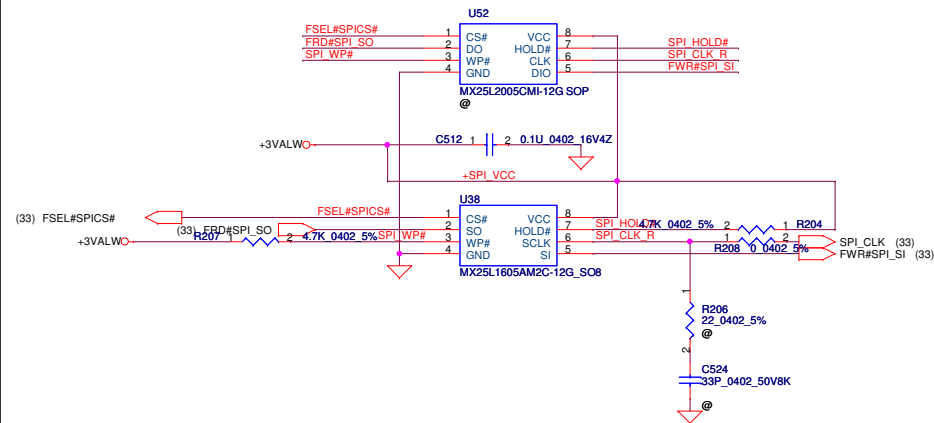


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title	BlueTooth / Int USB x2 /eSATA	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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	LA-5972P	
				Date	Thursday, December 10, 2009	
				Sheet	32	of 49

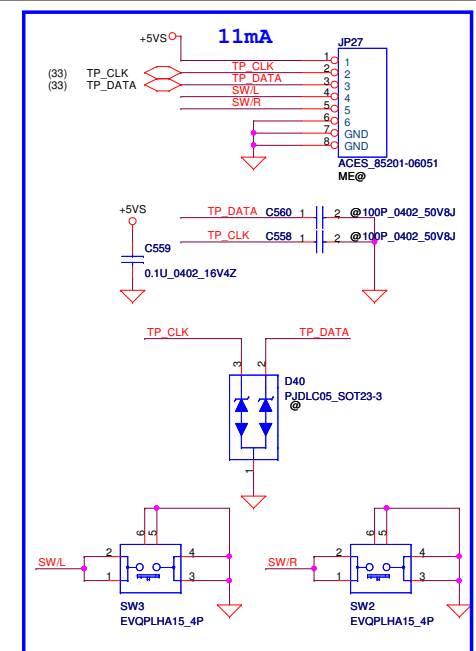
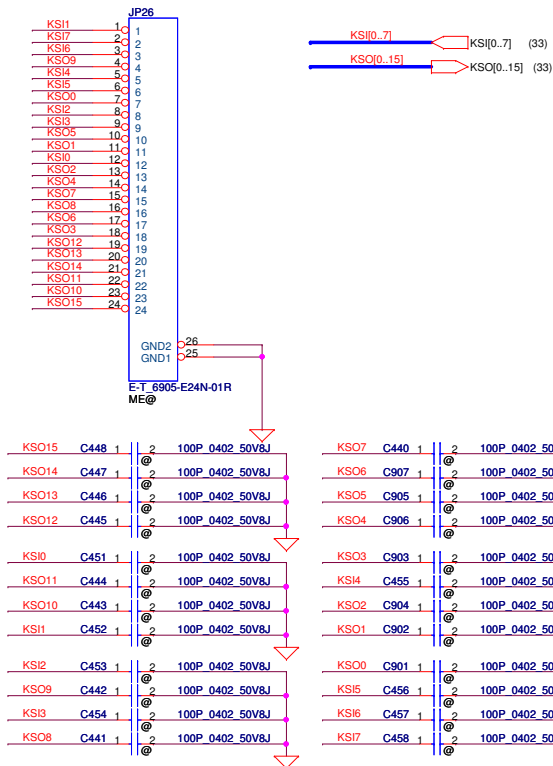


Security Classification		Compal Secret Data		Compal Electronics, Inc. BIOS & EC I/O Port	
Issued Date	2009/04/23	Deciphered Date	2009/05		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Title	
				Size	Document Number
				Custom	Rev 1.0
Date:	Thursday, December 10, 2009	Sheet	33	of	49

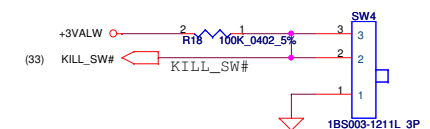
BIOS(SYS / EC / VGA)



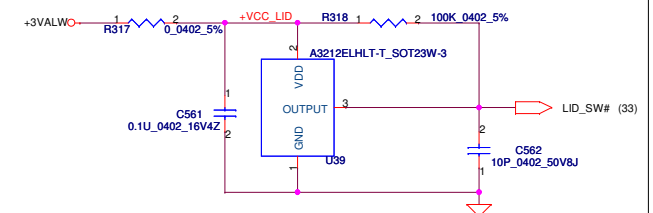
INT_KBD Conn.



Kill Switch



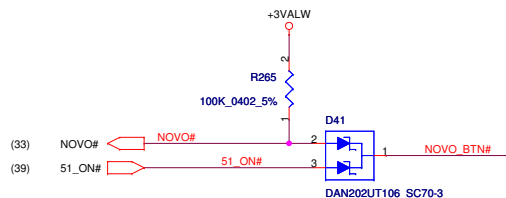
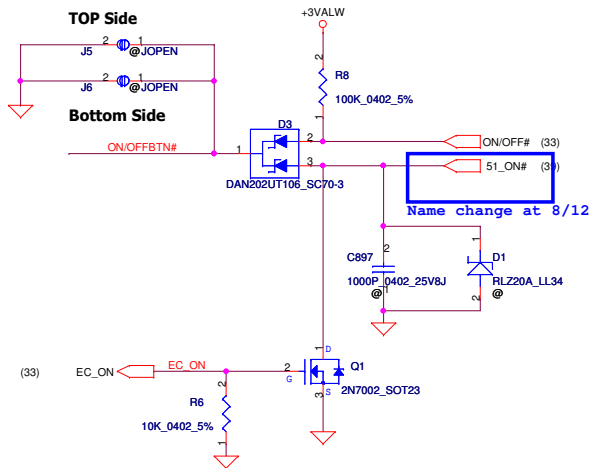
Lid Switch



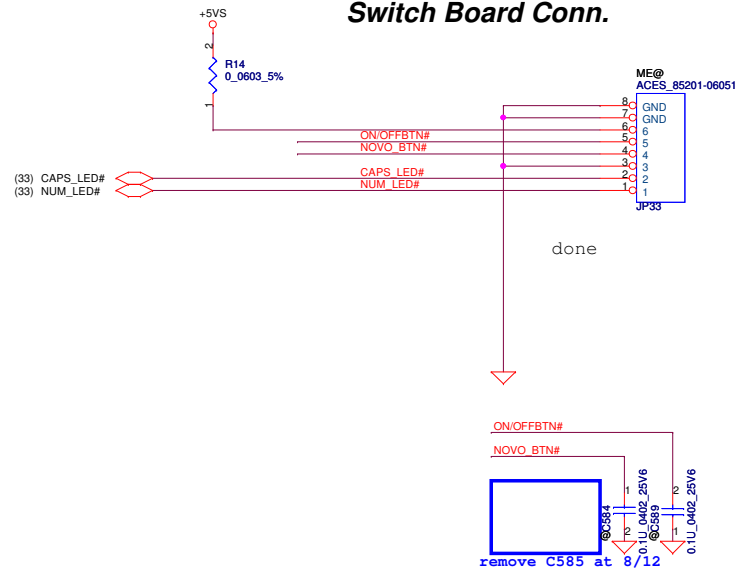
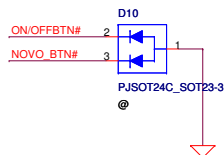
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size B	Document Number	Rev 1.0
				LA-5972P		
				Date:	Thursday, December 10, 2009	Sheet 34 of 49

Power Button

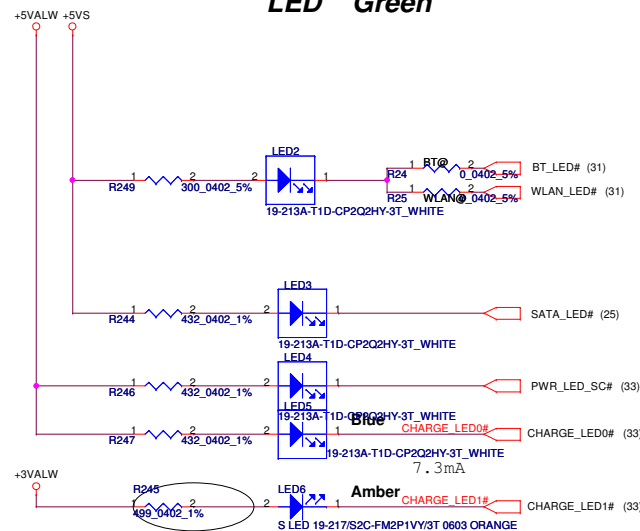
ON/OFF switch



Switch Board Conn.

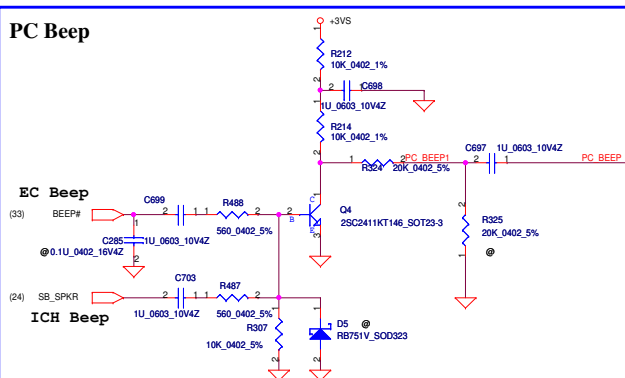
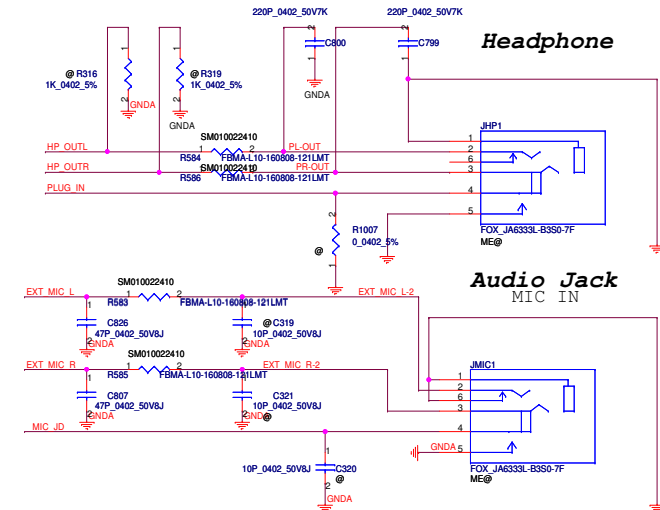
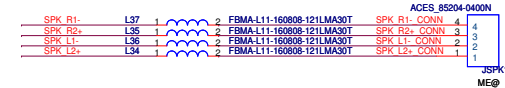
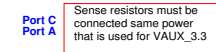
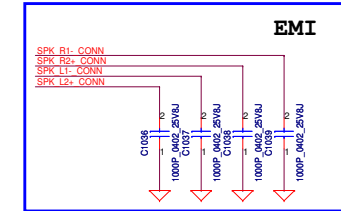
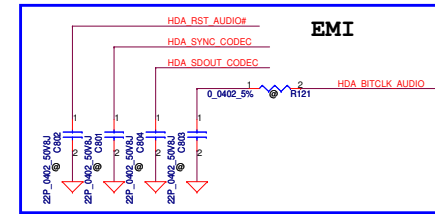


LED Green



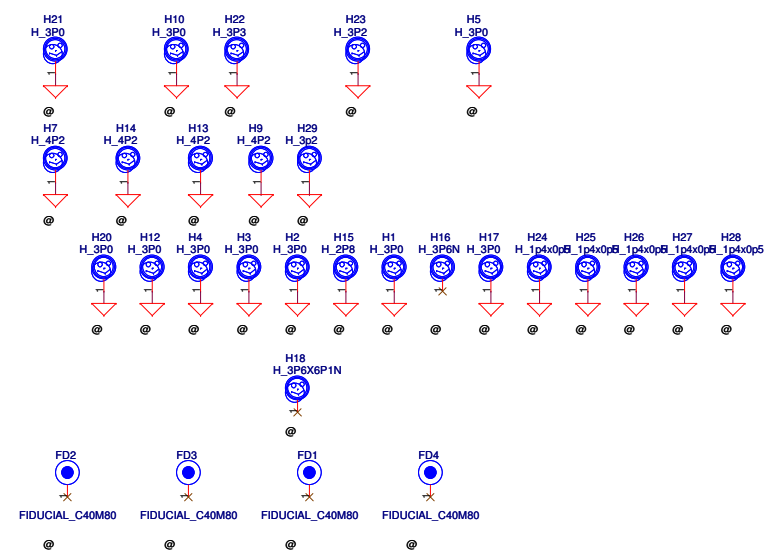
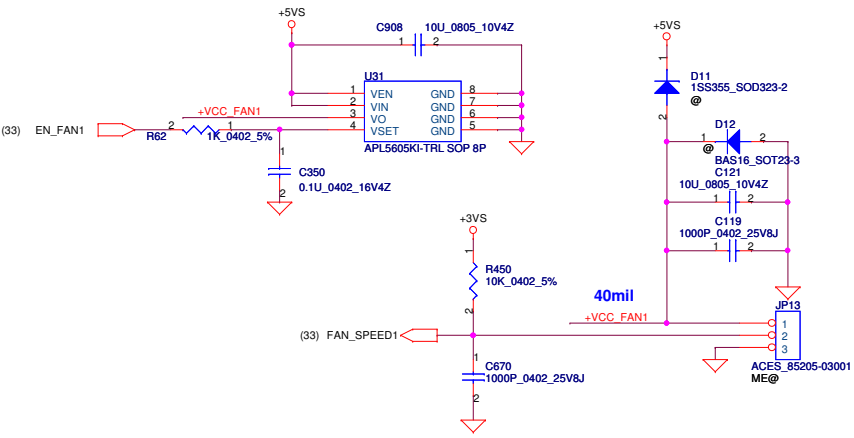
Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				Deciphered Date				Title			
2008/10/06				2009/10/06				Power BTN/LED			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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			
								LA-5972P			
								Rev 1.0			
								Date: Thursday, December 10, 2009			
								Sheet 35 of 49			

CX20671
High Definition Audio Codec SoC
With Integrated Class-D Stereo
Amplifier.
An integrated 5 V to 3.3 V Low-dropout
voltage regulator (LDO).
An integrated 3.3 V to 1.8V Low-dropout
voltage regulator (LDO).



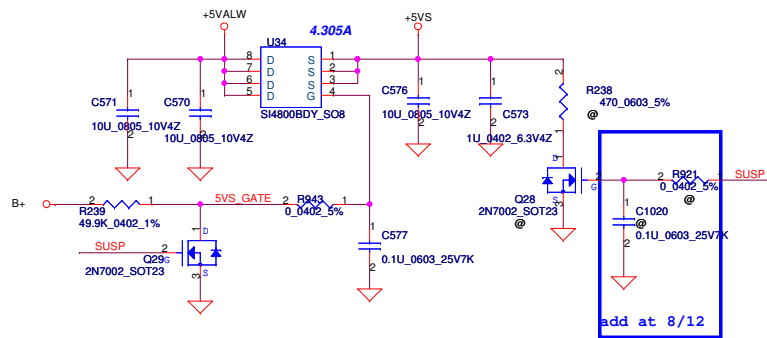
Security Classification		Compal Secret Data				Compal Electronics, Inc.				
Issued Date		2008/10/06		Deciphered Date		2009/10/06		Title		
								HD Audio Codec ALC888S-VC		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE CONFIDENTIAL DIVISION OF TRADE 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 C		Document Number				LA-5972P				Rev 1.0
Date:		Thursday, December 10, 2009				Sheet	36	of	49	

FAN1 Conn

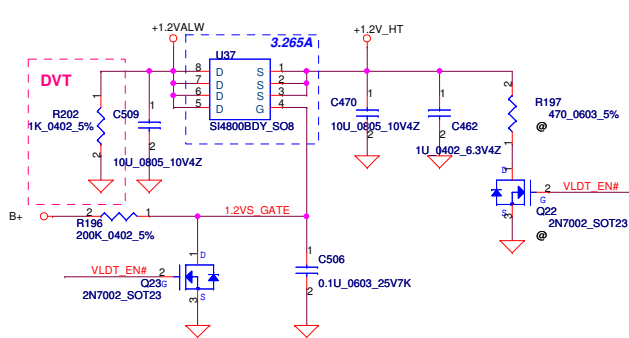


Security Classification		Compal Secret Data				Compal Electronics, Inc.							
Issued Date		2008/10/06		Deciphered Date		2009/10/06		Title					
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						FAN & Screw Hole							
						Size B	Document Number			LA-5972P		Rev 1.0	
						Date:		Thursday, December 10, 2009		Sheet	37	of	49

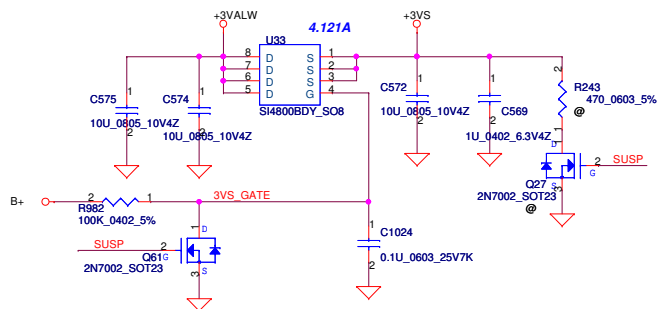
+5VALW TO +5VS



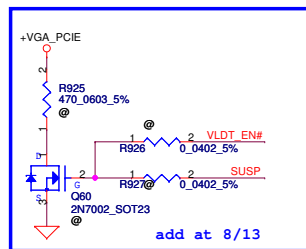
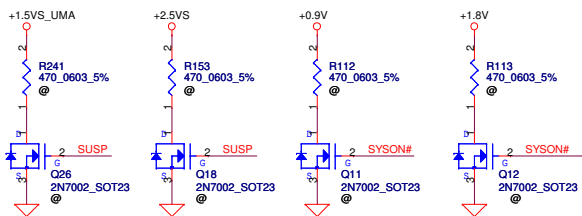
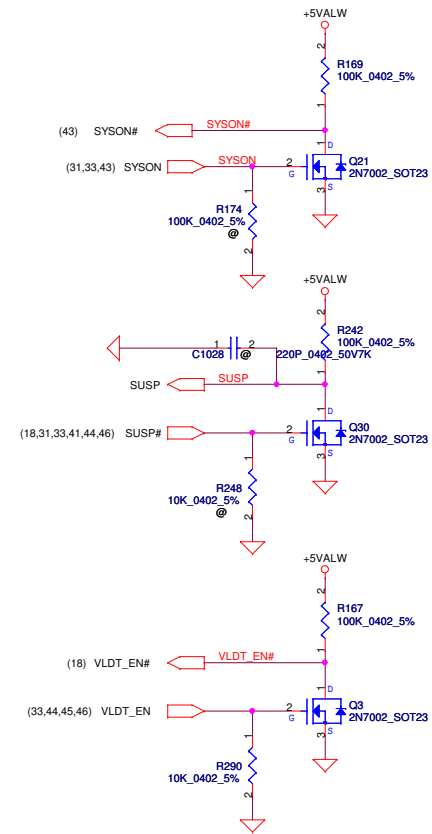
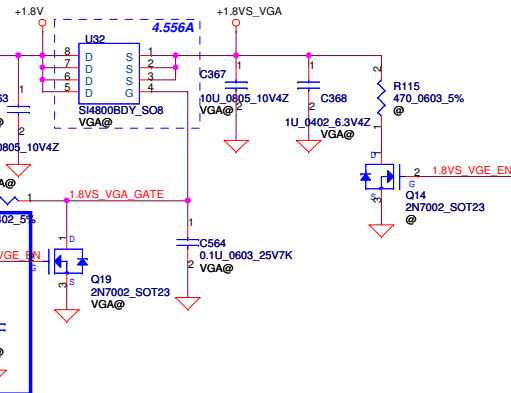
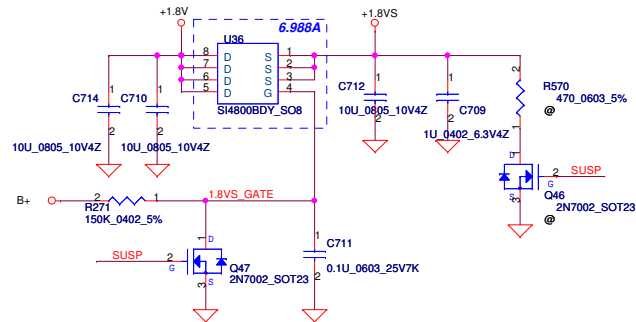
+1.2VALW TO +1.2V_HT



+3VALW TO +3VS



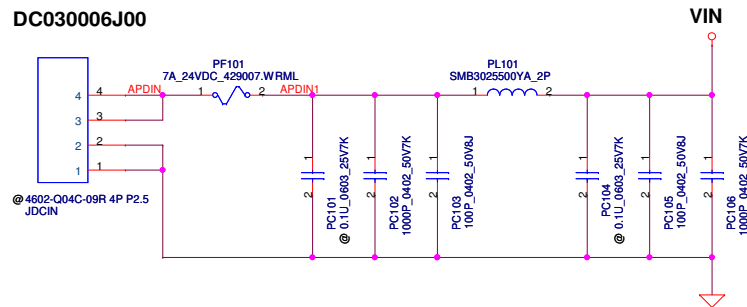
+1.8V to +1.8VS



Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2008/10/06				Deciphered Date			
2008/10/06				2009/10/06				Title			
DC Interface				LA-5972P				Rev 1.0			
Date				Thursday, December 10, 2009				Sheet 38 of 49			

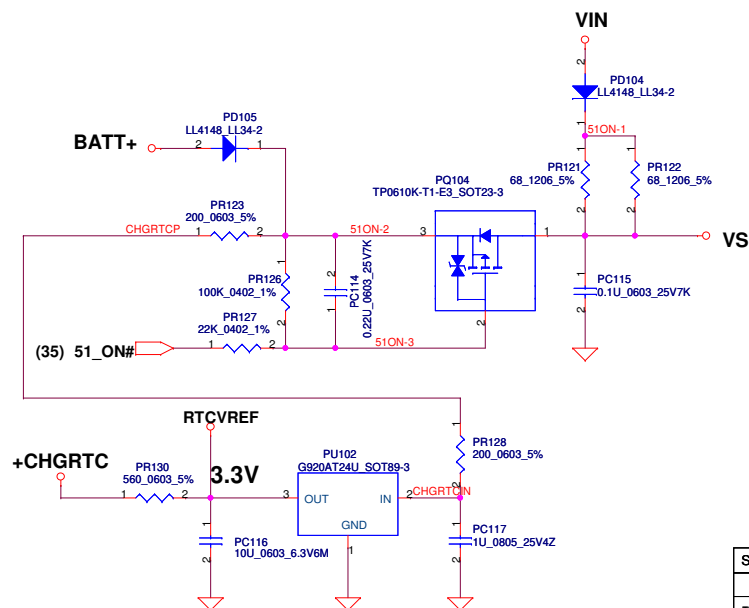
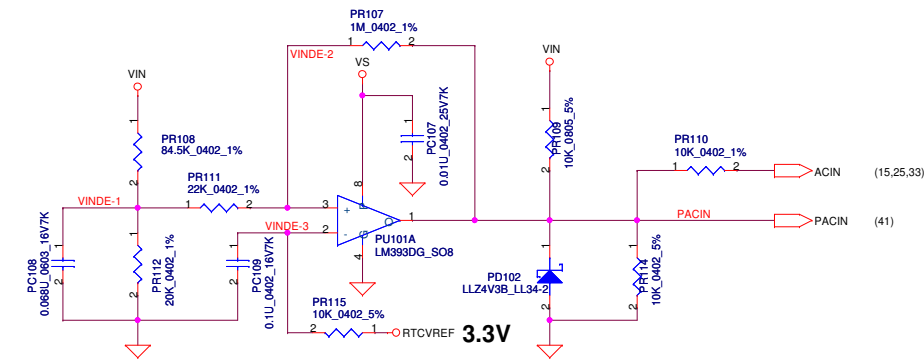
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

DC030006J00



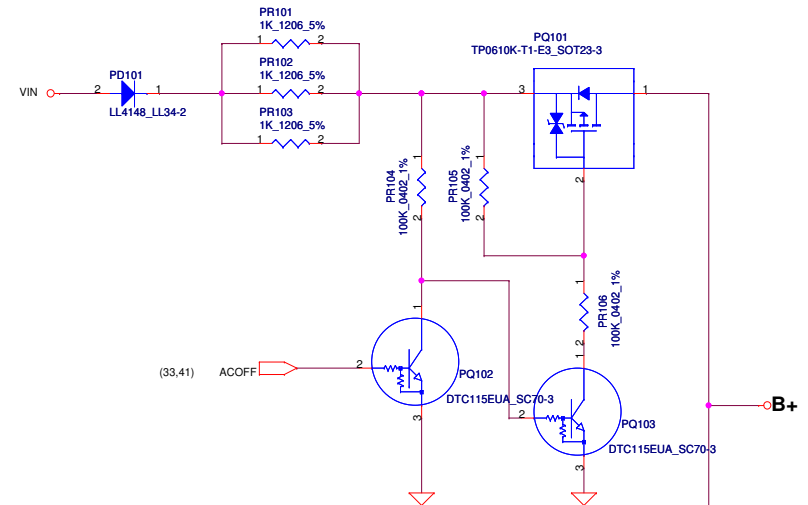
Vin Detector

	Min.	typ.	Max.
L-->H	17.430V	17.901V	18.384V
H-->L	16.976V	17.262V	17.728V



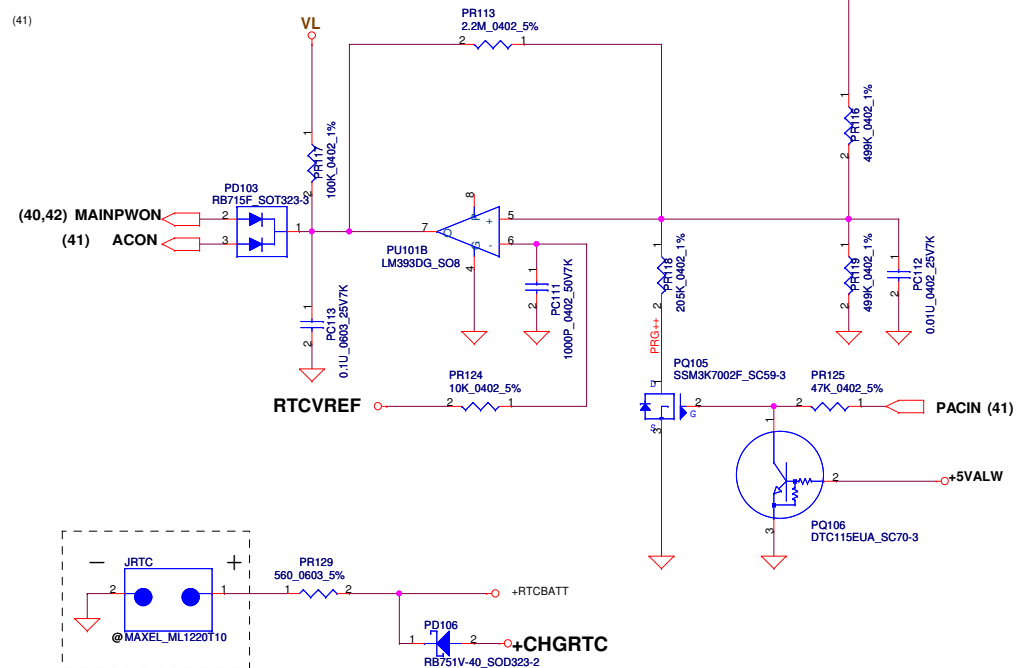
ACIN

	Min.	typ.	Max.
L-->H	14.991V	15.381V	15.782V
H-->L	13.860V	14.247V	14.621V

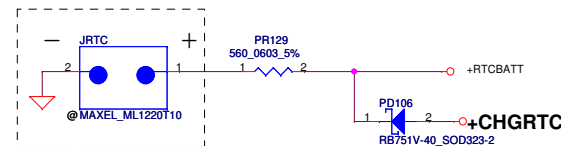


BATT ONLY

	Min.	typ.	Max.
L-->H	7.196V	7.349V	7.505V
H-->L	6.138V	6.214V	6.056V

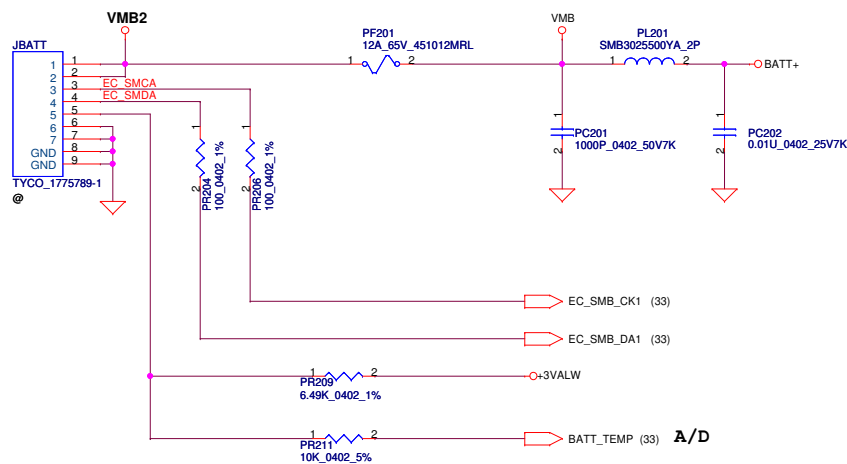


RTC Battery

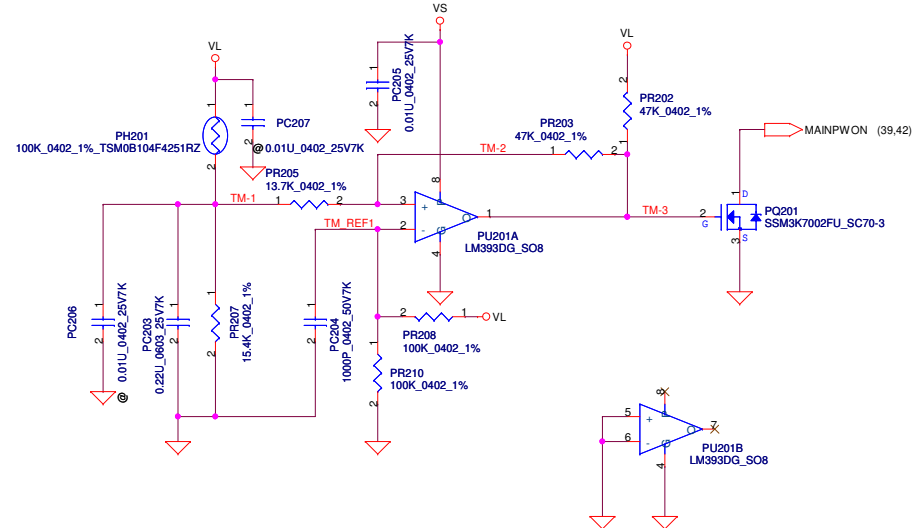


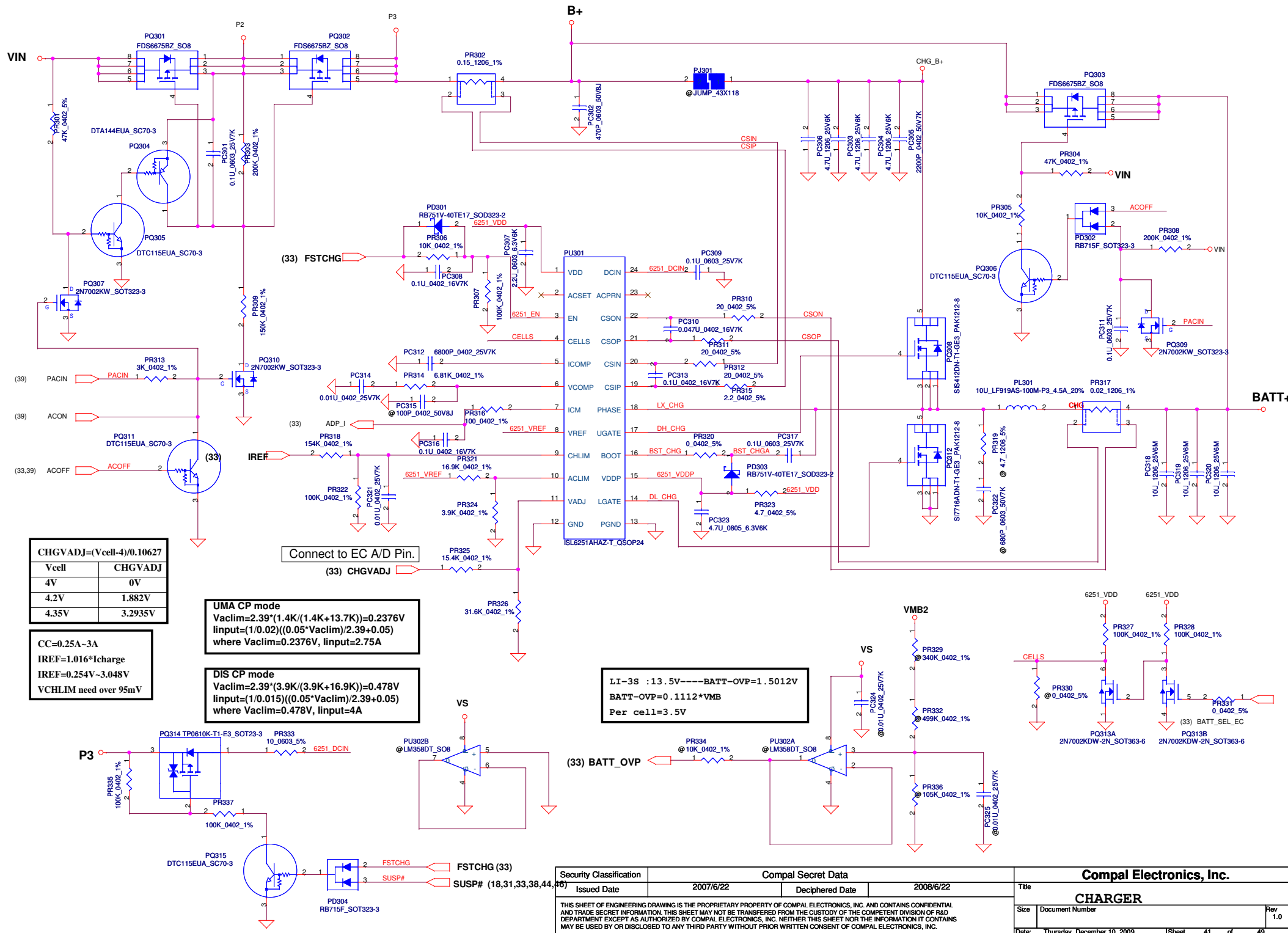
Security Classification				Compal Secret Data				Compal Electronics, Inc.		
Issued Date				2009/01/06				Title		
Deciphered Date				2010/01/06				DCIN & DETECTOR		
Size				Document Number				Rev		
Custom								1.0		
Date:				Thursday, December 10, 2009				Sheet		
				39				of 49		

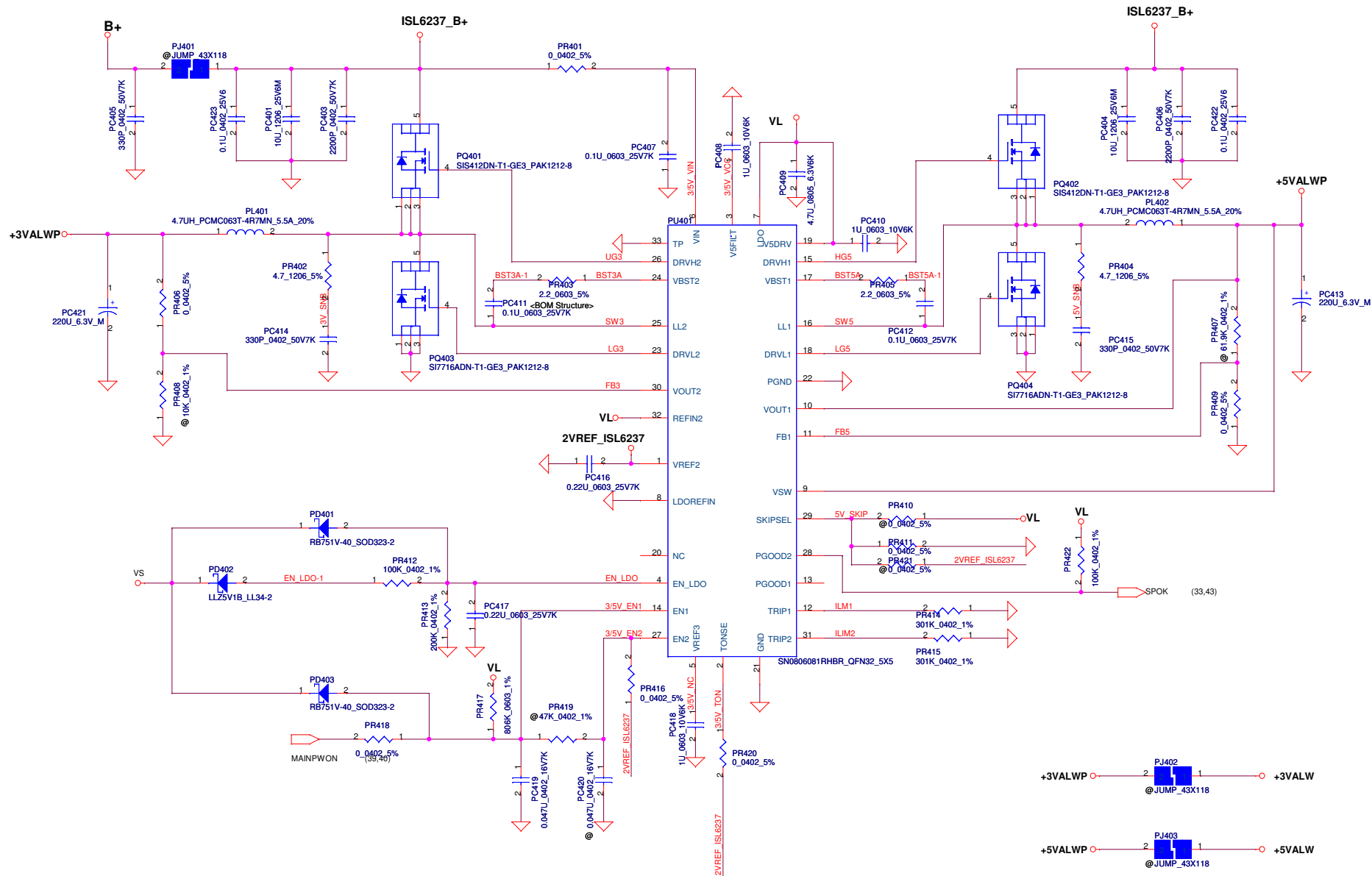
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

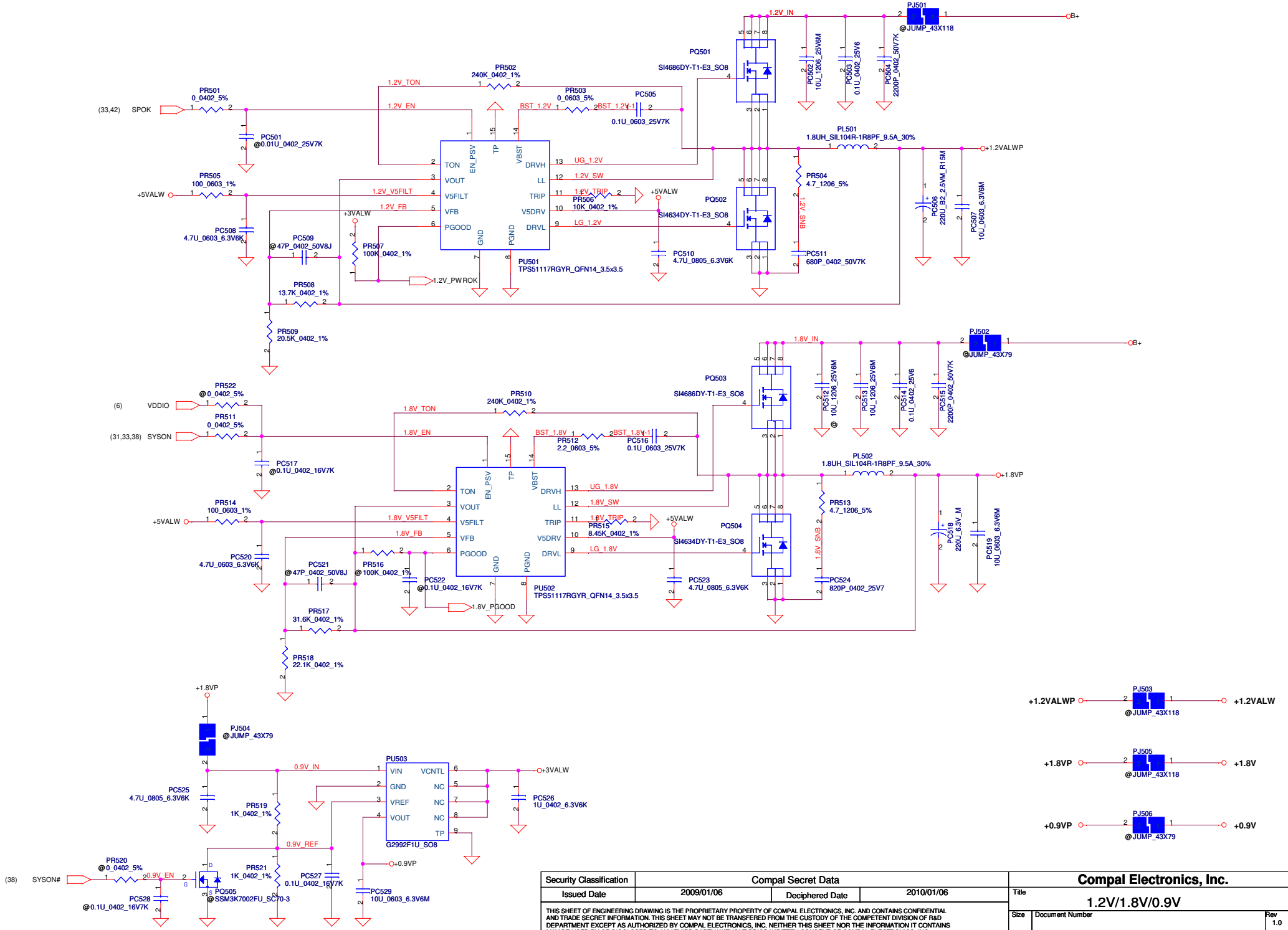


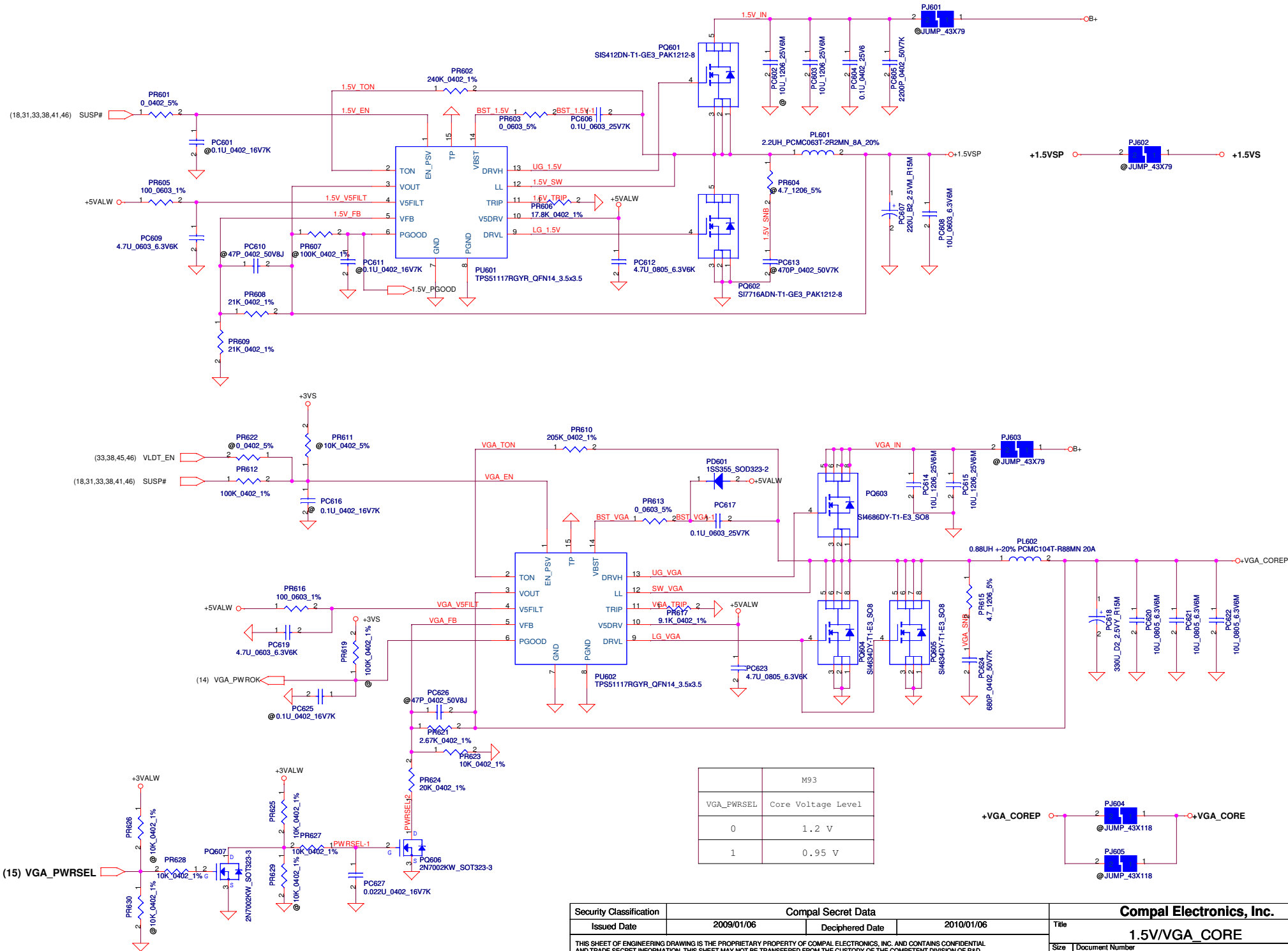
PH1 under CPU botten side :
CPU thermal protection at 92 degree C
Recovery at 56 degree C



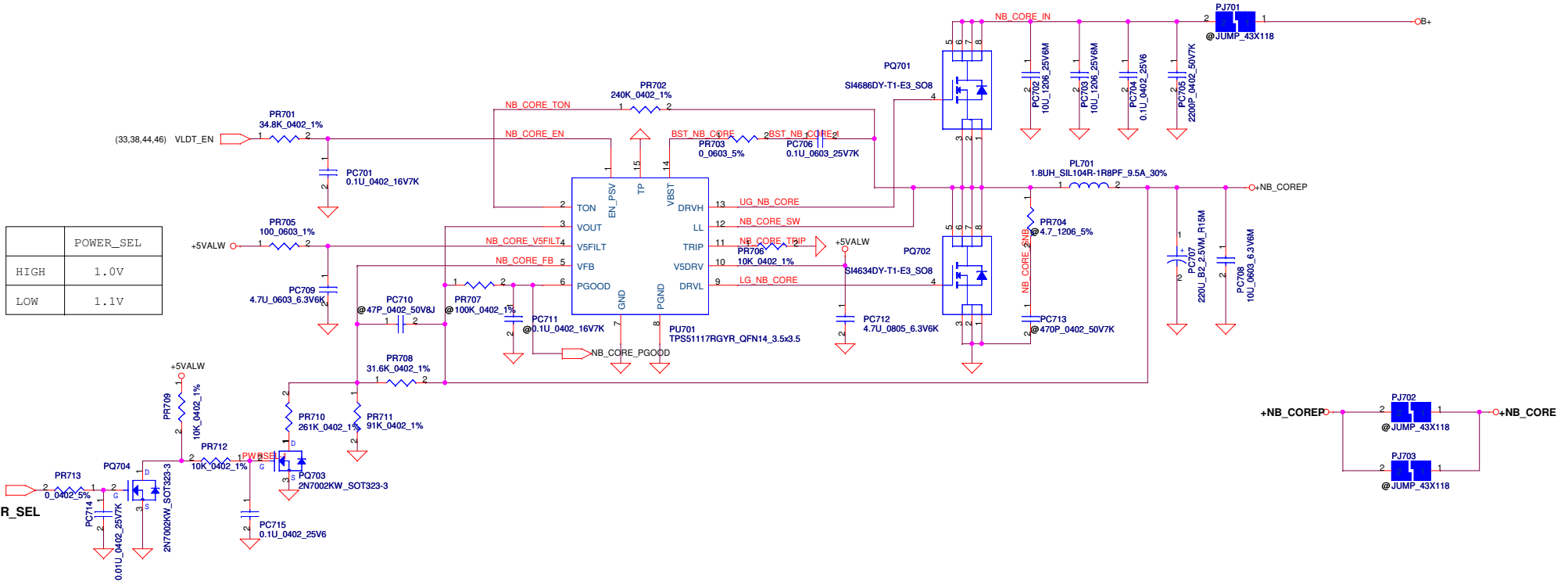




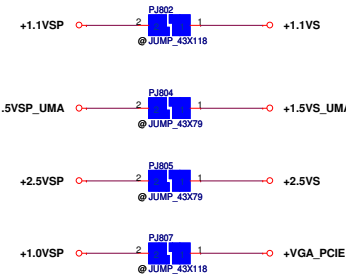
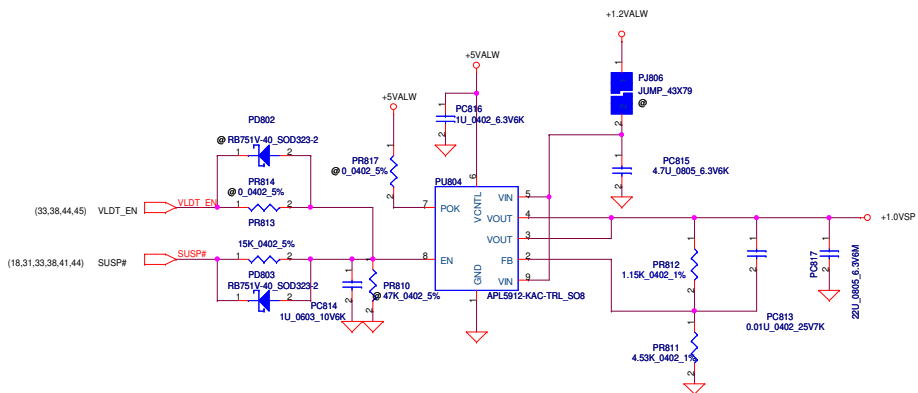
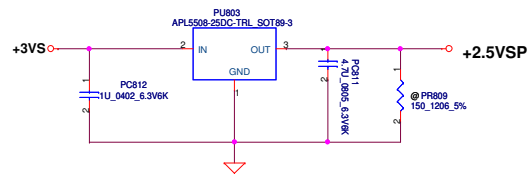
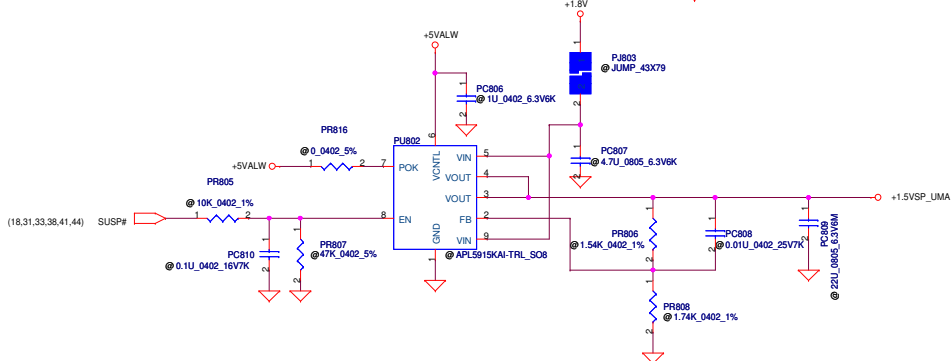
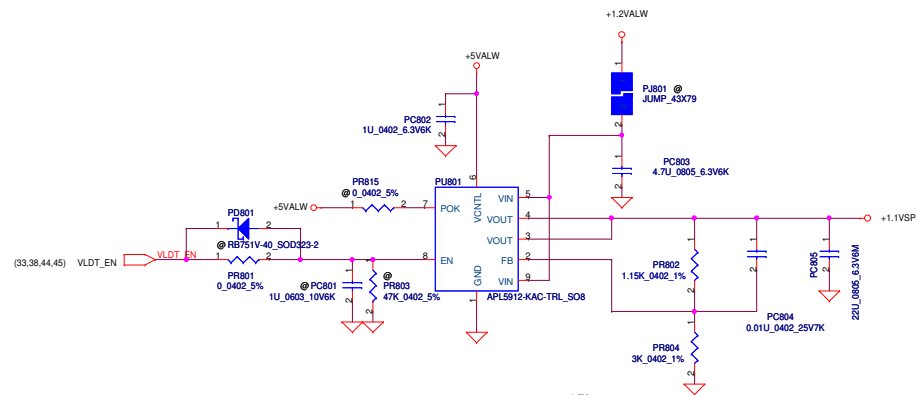




	POWER_SEL
HIGH	1.0V
LOW	1.1V



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				+NB_CORE	
Size		Document Number		Rev	
Custom				1.0	
Date:		Thursday, December 10, 2009		Sheet 45 of 49	



	Park	M93
VGA_PCIE	1.0V	1.1 V
PR811	4.53K	3K

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

Item	Reason for change	PG#	Modify List	Date	Phase
1	Adjust power sequence for VGA_PCIE by HW request	P46	PR831=15K	2009.10.27	EVT
2	Change PC108 from 1000pF to 0.068uF for issue solution	P39	PC108=0.068uF	2009.11.17	PVT
3	Add snubber R & C and modify boost resistor for 1.8VP	P43	PR512=2.2 ohm;PR513=4.7 ohm;PC524=820pF	2009.11.17	PVT
4	Adjust power sequence	P45	PR701=34.8K,PC701=0.1uF Un-pop PR520,PQ505	2009.12.03	PVT
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

- 54321
- D
- C
- B
- A
1. change component AP2301GN to AO3413
2. remove R521, R517, R520 and R518, and reserve U49 , U50, R999, R1000, R1001 and R1002 for experiment Vari-bright function.
3. U6.18 add a pull up resistor R1005 and pull down resistor R1006 for check ENE KB926 version.
4. reserve R1003 and R1004 for Vari-bright test.
5. add J8, C1034, C1035, C1036, C1037, C1038 and C1039 for EMI request.
6. Change R583, R584, R585 and R586 Bead from SM010018110 to SM010022410.
7. reserve R1007 for EMI request.
8. Change C633, C640, C662, C948, C660 and C639 to 10pF for EMI rquest.

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title HW PIR		
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 TRANSFERED 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 LA-5972P	Rev 1.0
				Date:	Thursday, December 10, 2009	Sheet 49 of 49

www.s-manuals.com