Compal confidential

Schematics Document

Calypso 13.3"

Mobile AMD S1G2 CPU with ATI RS780M(NB) & SB700(SB) core logic

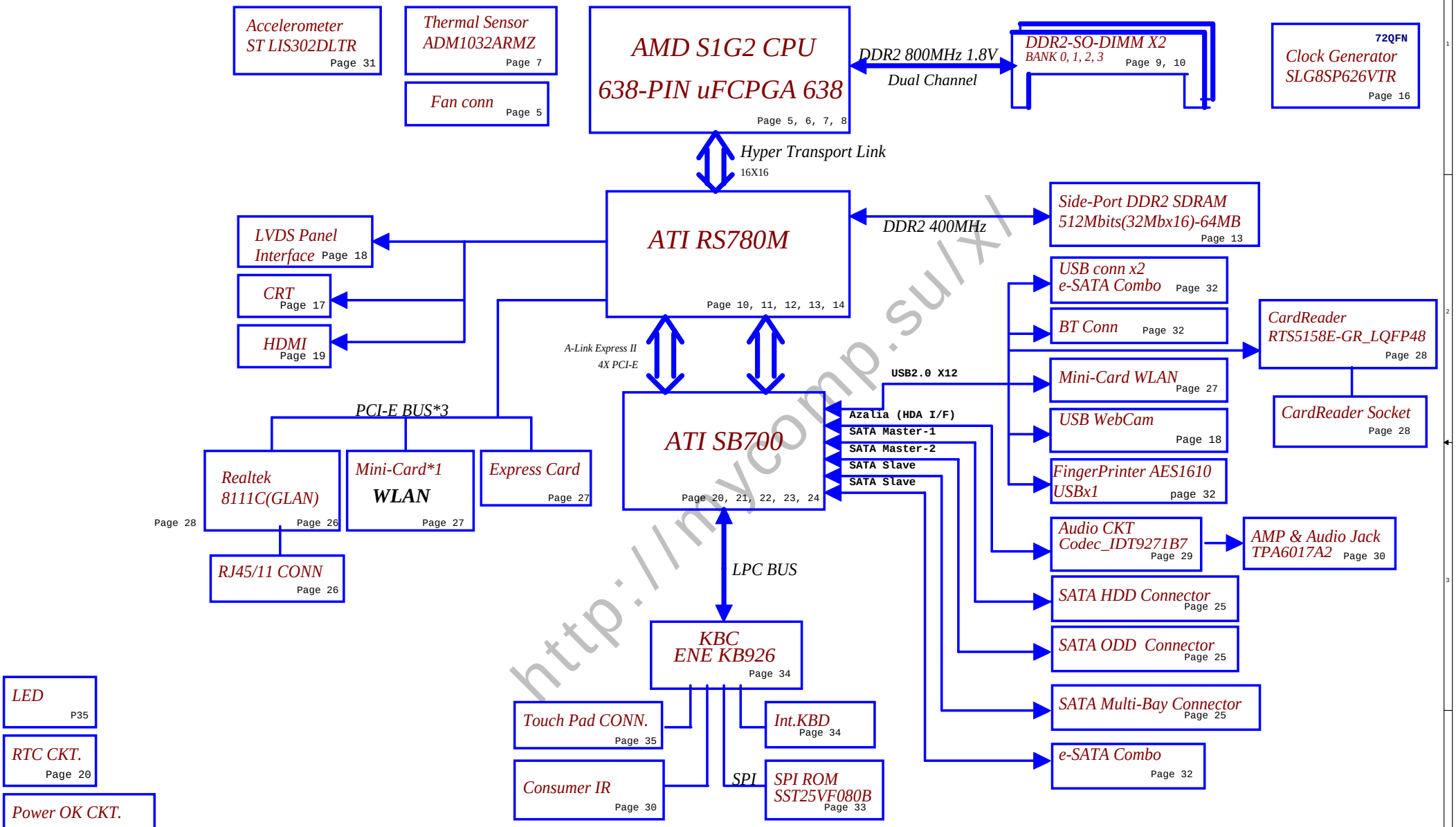
2008-09-04

LA-4481P REV:0.4

Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: Cover Sheet			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 1 of 46		

Consumer AMD 13.3" UMA - Sally



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: Block Diagram			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 2 of 46		

Voltage Rails

O MEANS ON X MEANS OFF

State \ power plane	+B	+5VALW +3VALW	+1.8V	+5VS +3VS +1.5VS +0.9V +VCCP +CPU_CORE +VGA_CORE +2.5VS +1.8VS +1.2VS +0.9VGA
S0	O	O	O	O
S1	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

I2C / SMBUS ADDRESSING

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

EC SM Bus1 address

Device	HEX	Address
Smart Battery	16H	0001 011X b
24C16	A0H	1010 000X b

EC SM Bus2 address

Device	HEX	Address
CPU	98H	1001 100X b
ADI1032-2 CPU	9AH	1001 101X b

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.
Please see VGA@ as no install. No support RX780M.

11/14 update

: Question Area Mark.(Wait check)

USB assignment:

USB-0 Right side
USB-1 Right side
USB-2 Left side(with ESATA)
USB-3 Dock
USB-4 Camera
USB-5 WLAN
USB-6 Bluetooth
USB-7 Finger Printer
USB-8 MiniCard(WWAN/TV)
USB-9 Express card
USB-10 X
USB-11 X

PCIe assignment:

PCIe-1 TV tuner/WWAN/Robeson
PCIe-2 X
PCIe-3 WLAN
PCIe-4 New Card
PCIe-5 Card reader
PCIe-6 GLAN (Marvell)

SMBUS Control Table

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

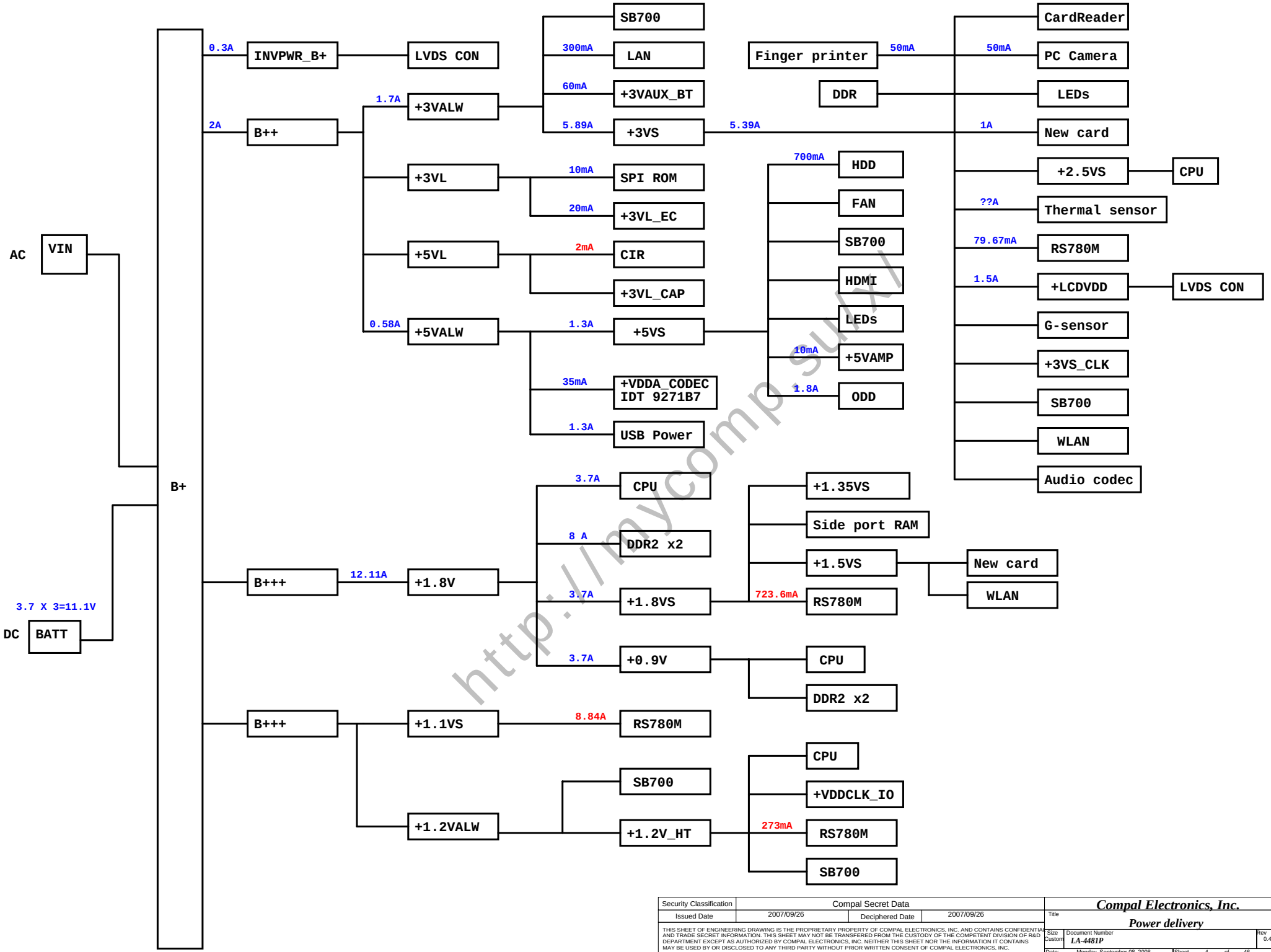
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.

Title: Notes List

Size: Custom | Document Number: LA-4481P | Rev: 0.4

Date: Monday, September 08, 2008 | Sheet 3 of 46



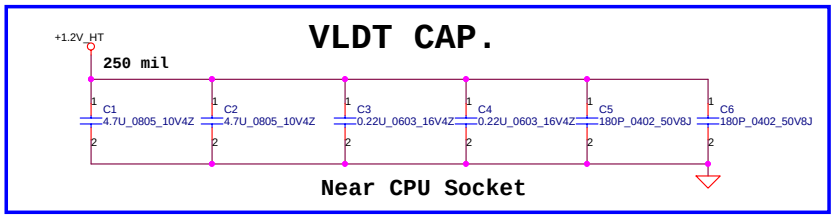
Security Classification	Compal Secret Data		
Issued Date	2007/09/26	Deciphered Date	2007/09/26

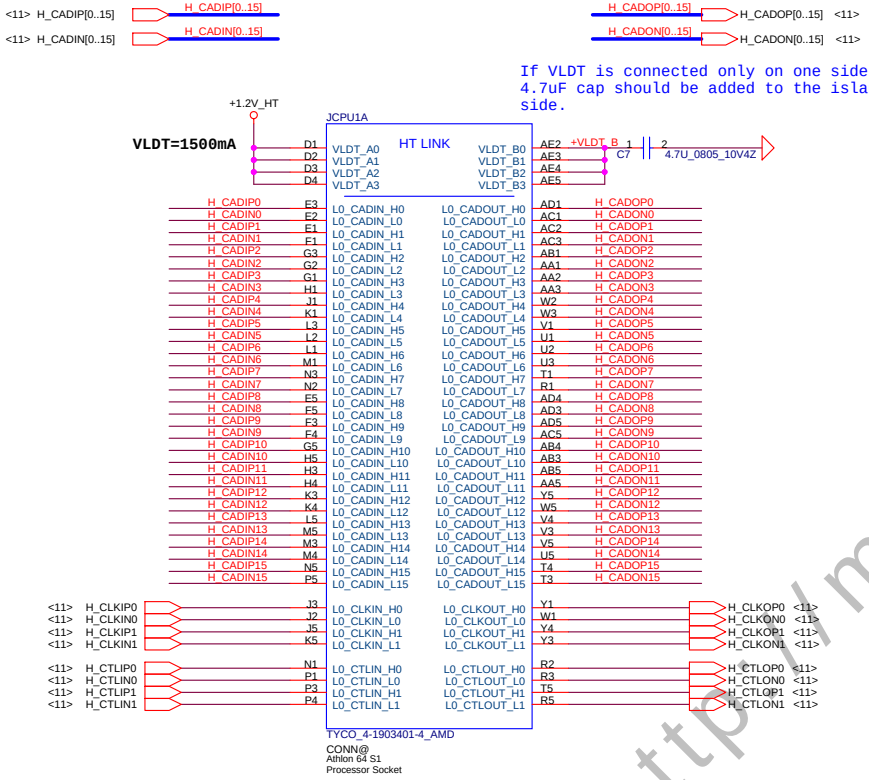
Compal Electronics, Inc.

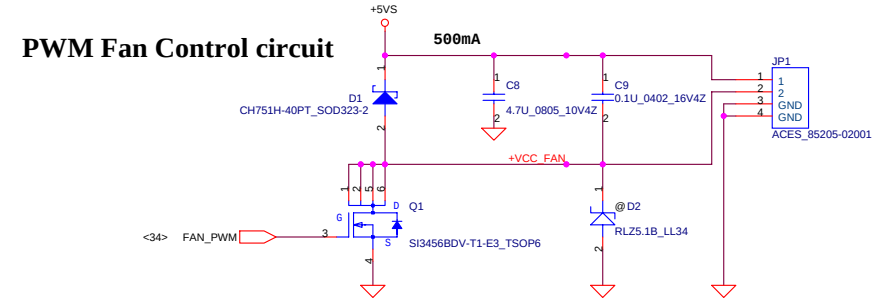
Title: Power delivery

Size	Document Number	Rev
Custom	LA-4481P	0.4

Date: Monday, September 08, 2008 Sheet 4 of 46







Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.

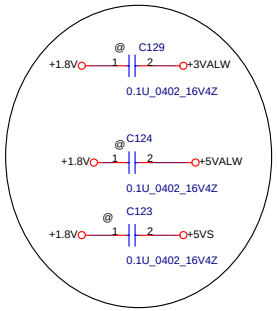
Title: AMD CPU S1G2 HT I/F

Size	Document Number	Rev
Custom	LA-4481P	0.4

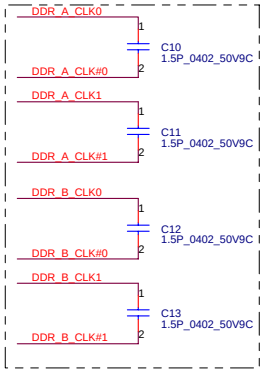
Date: Monday, September 08, 2008 Sheet 5 of 46

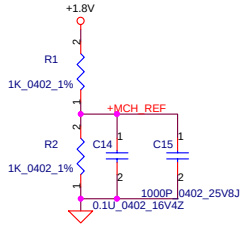
Processor DDR2 Memory Interface

0801 add Cap for EMI request



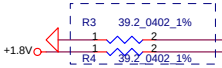
PLACE CLOSE TO PROCESSOR WITHIN 1.5 INCH

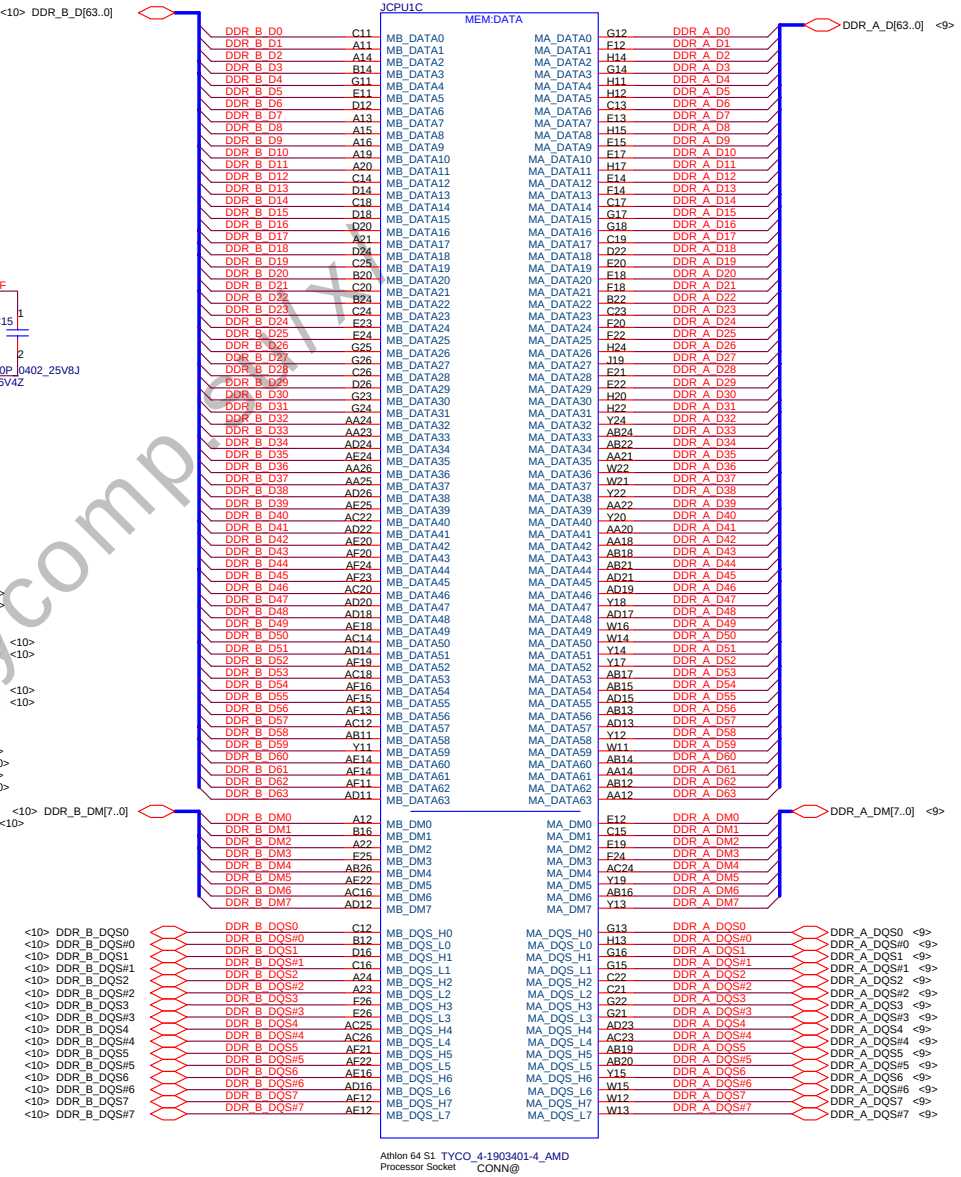




750mA

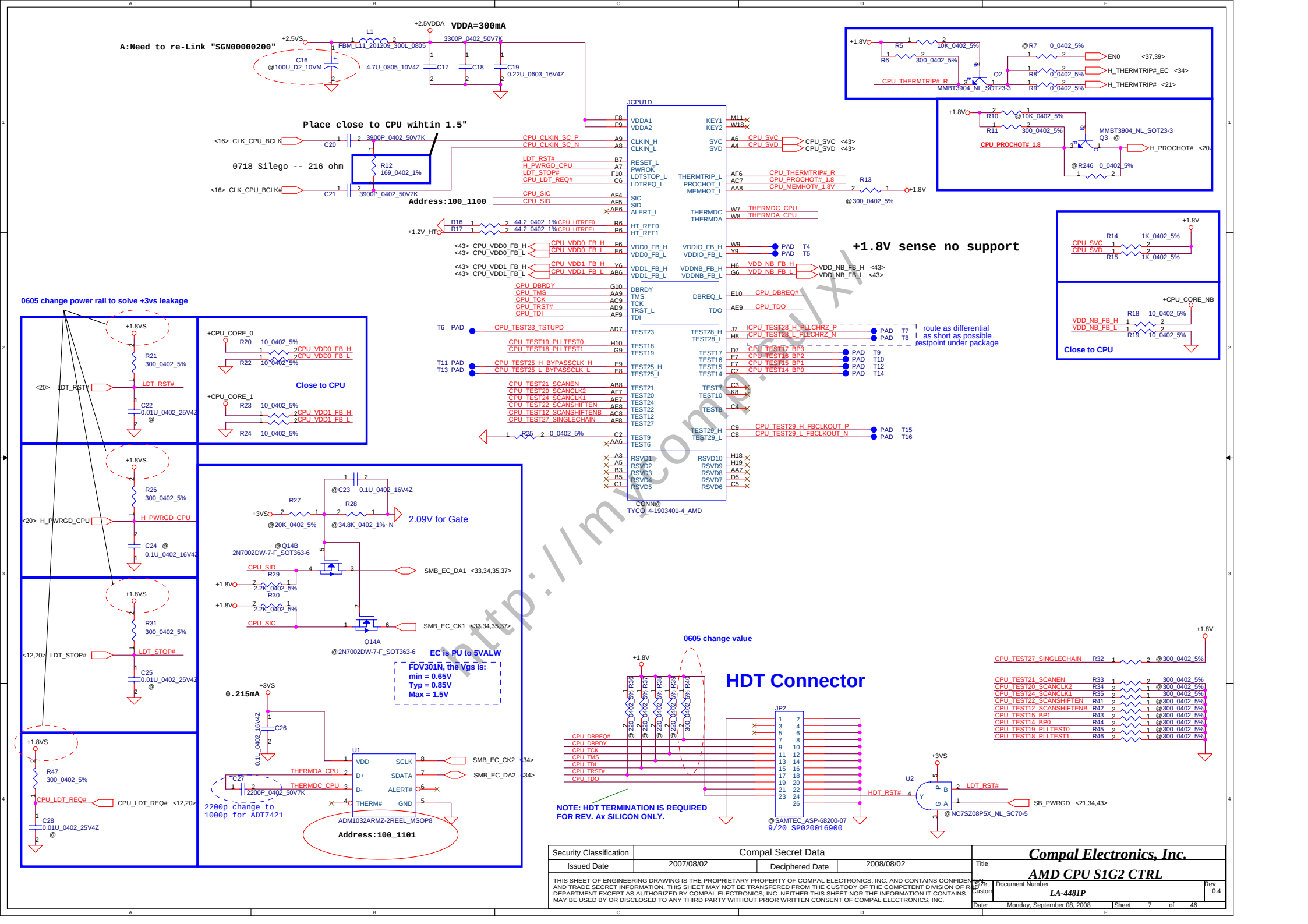
Place them close to CPU within 1"





Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

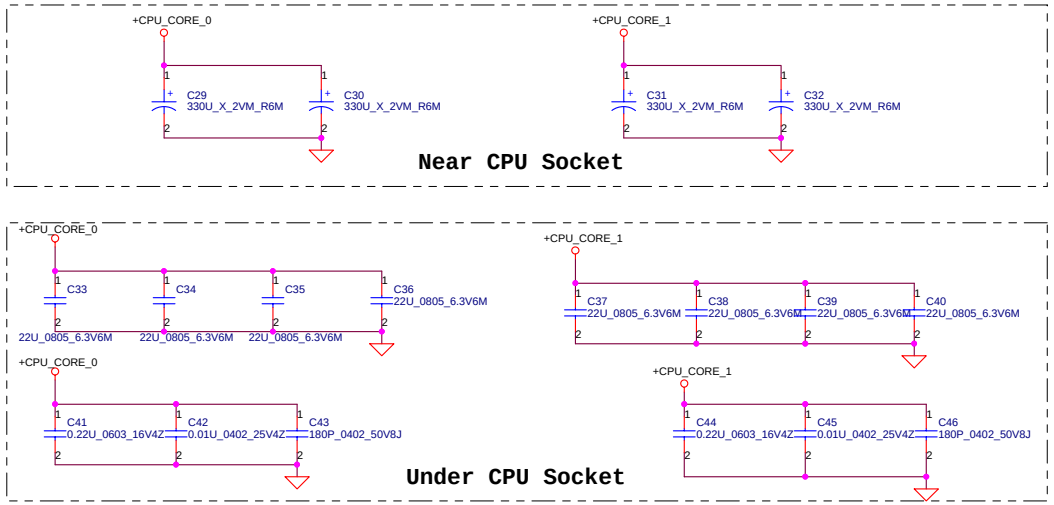
Compal Electronics, Inc.	
Title	AMD CPU S1G2 DDRII I/F
Size: Custom	Document Number: LA-4481P
Rev	0.4
Date: Monday, September 08, 2008	Sheet 6 of 46

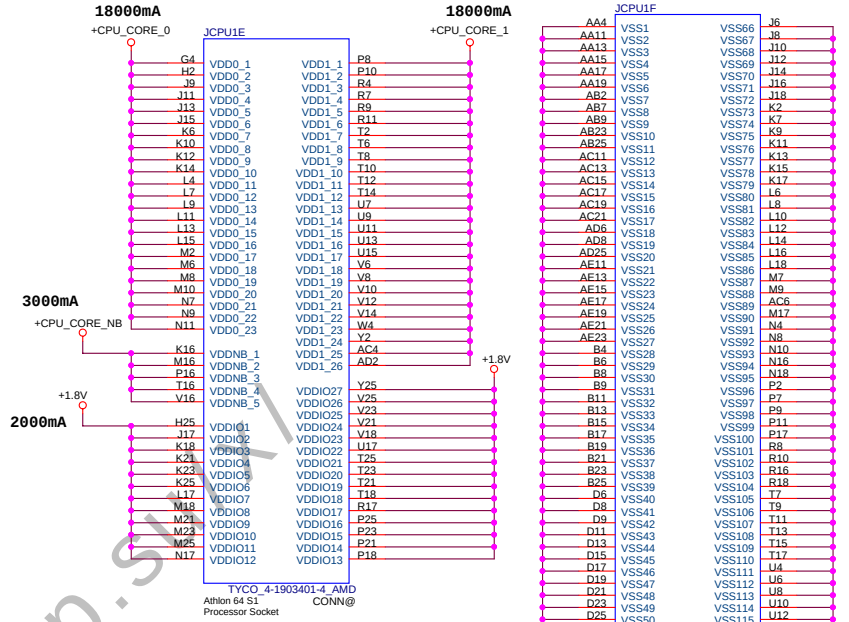


Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

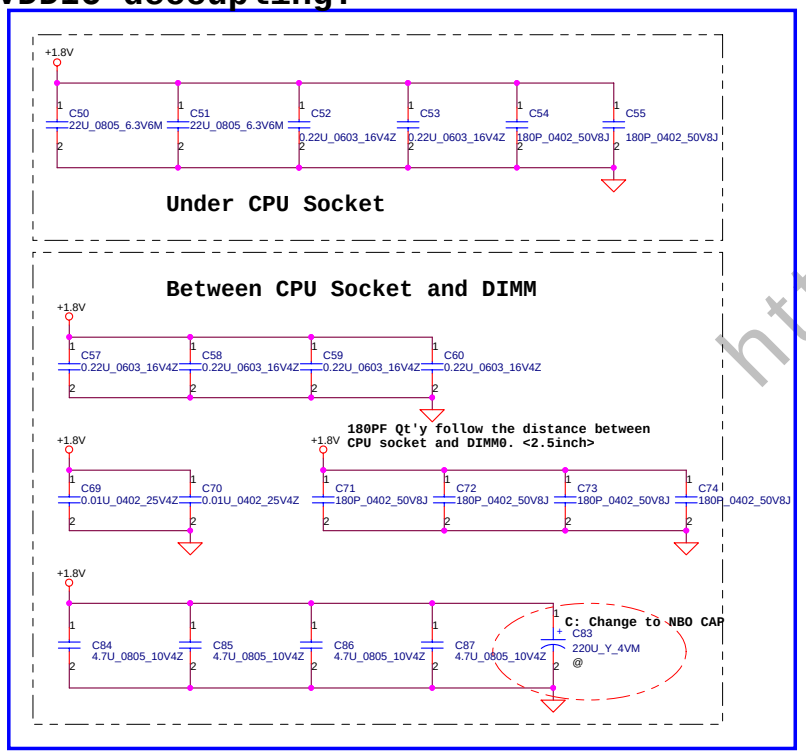
Compal Electronics, Inc.			
Title: AMD CPU S1G2 CTRL			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 7 of 46		

VDD(+CPU_CORE) decoupling.

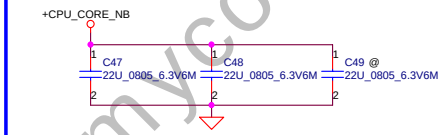




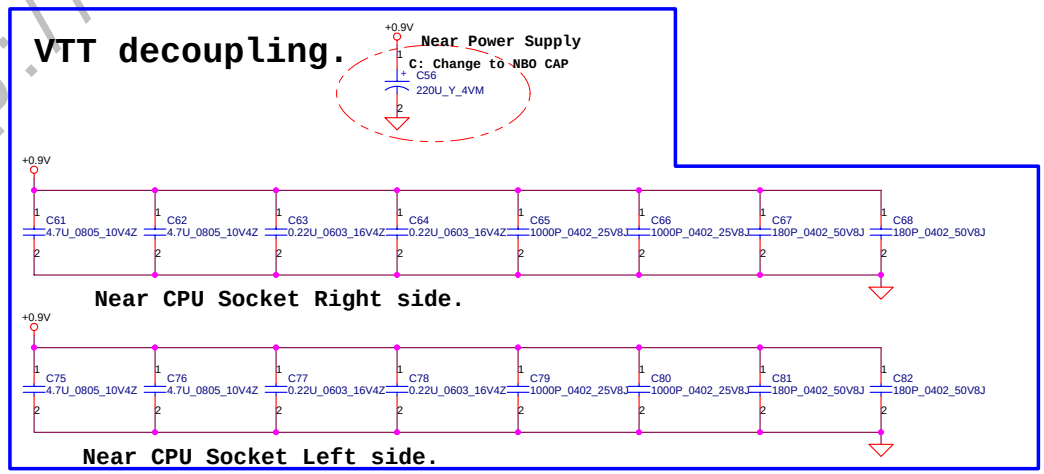
VDDIO decoupling.



+CPU_CORE_NB decoupling.

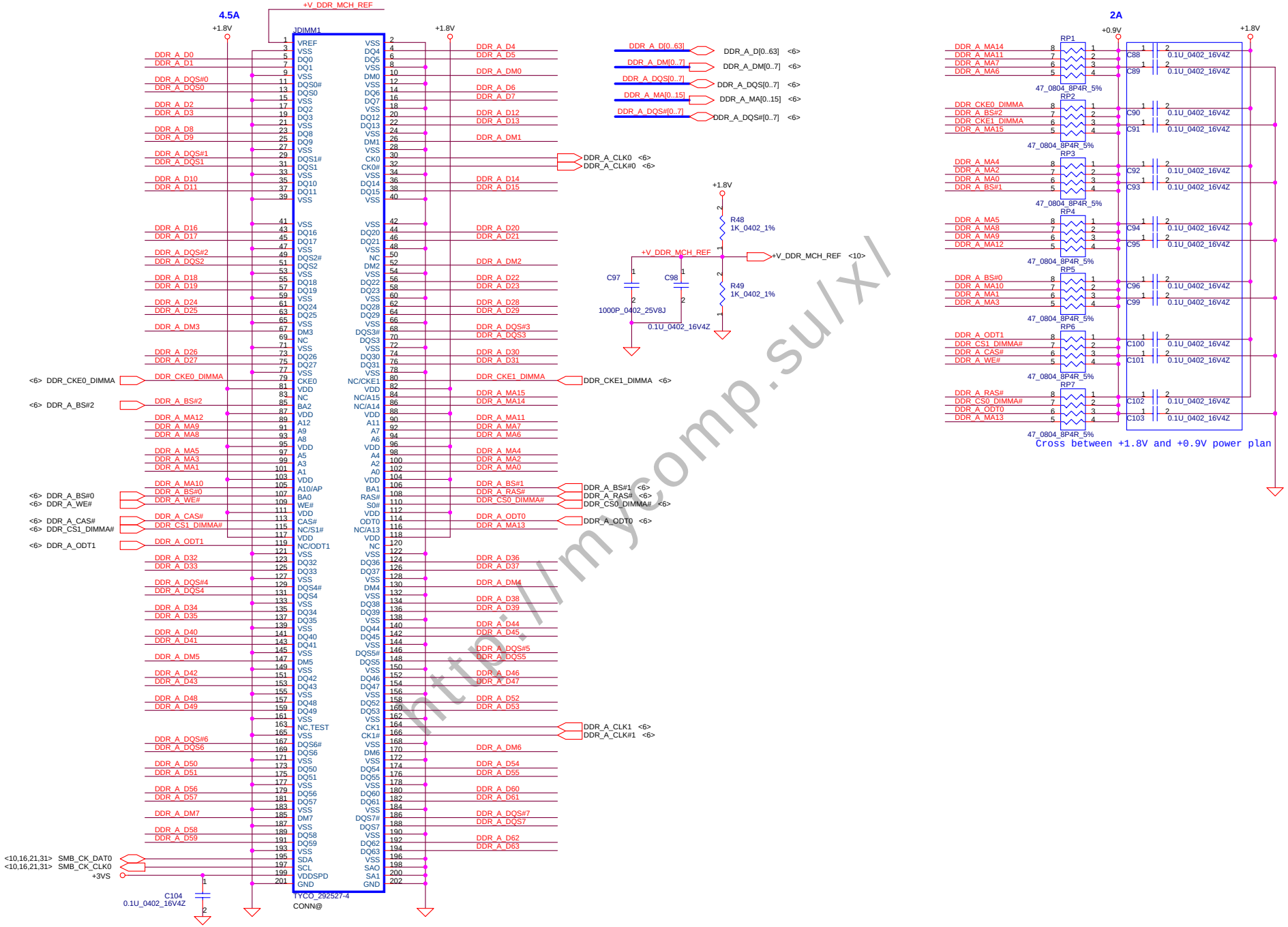


VTT decoupling.



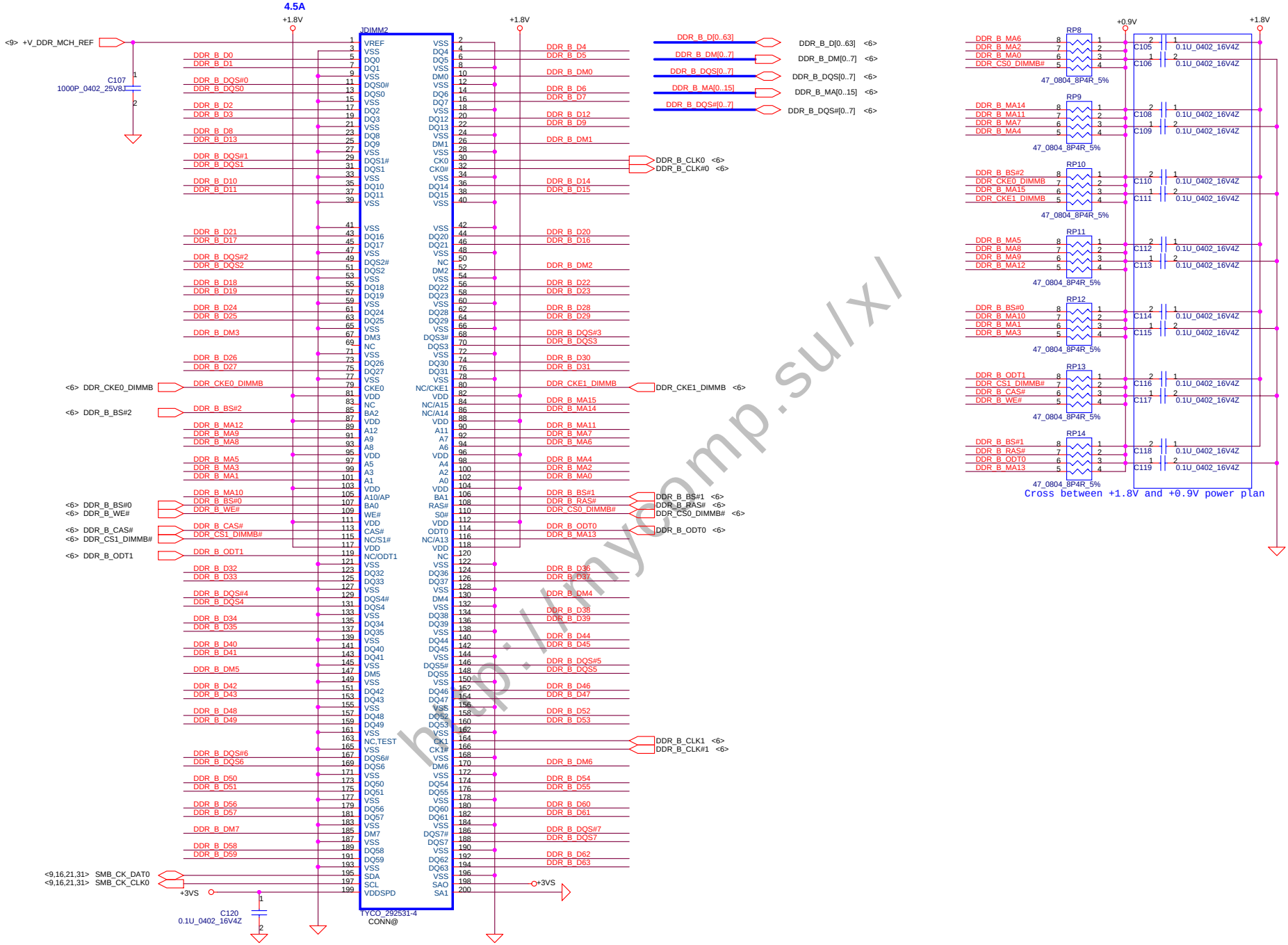
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.	
Title	AMD CPU S1G2 PWR & GND
Size: Custom	Document Number: LA-4481P
Rev	0.4
Date: Monday, September 08, 2008	Sheet 8 of 46



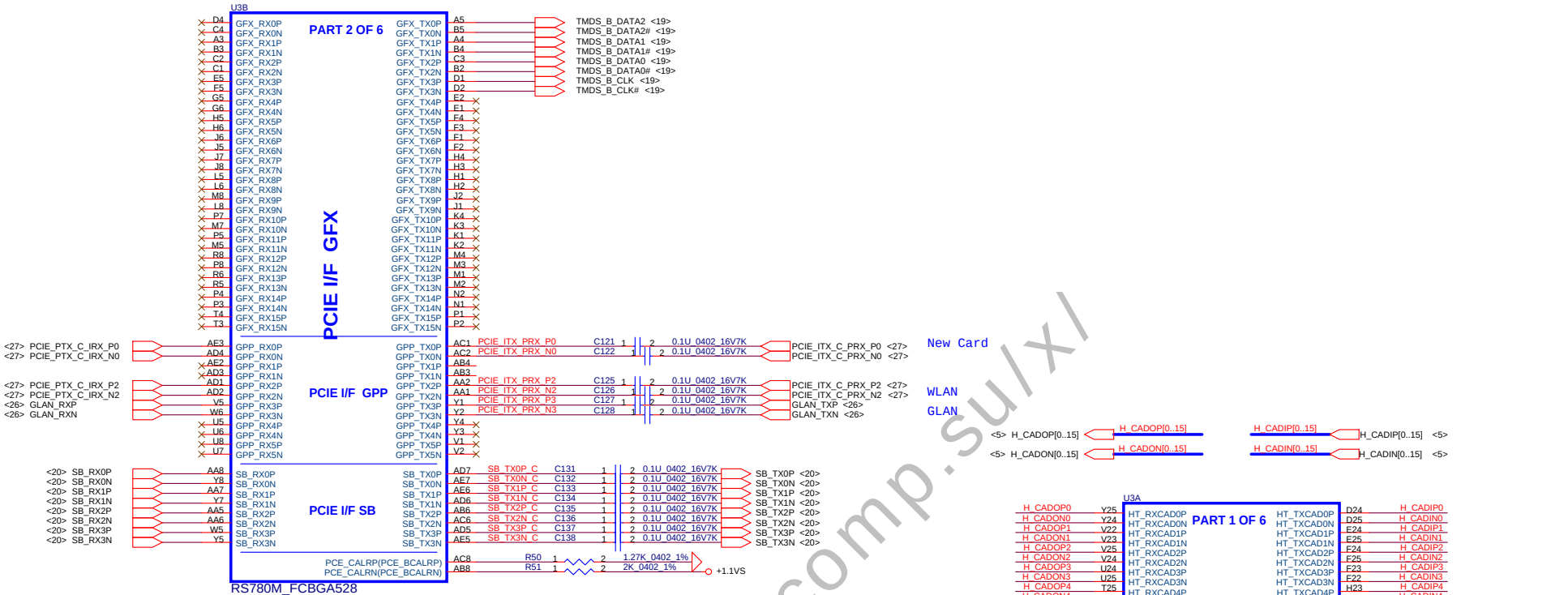
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: DDRII SO-DIMM 0			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 9 of 46		



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: DDRII SO-DIMM 1			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 10 of 46		



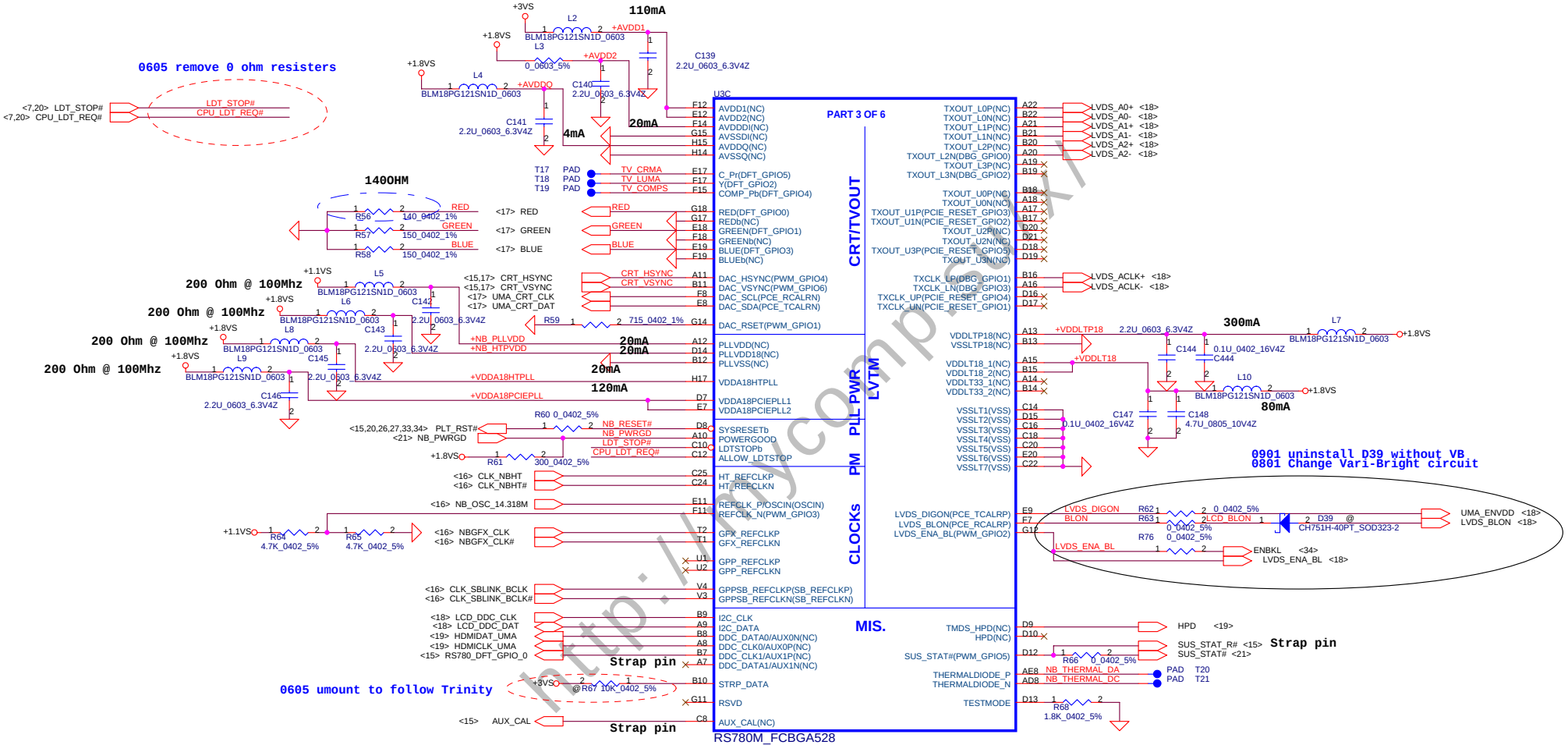
RS780M Display Port Support (muxed on GFX)

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

NEED CHECK R68 & R69 WITH AMD

Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

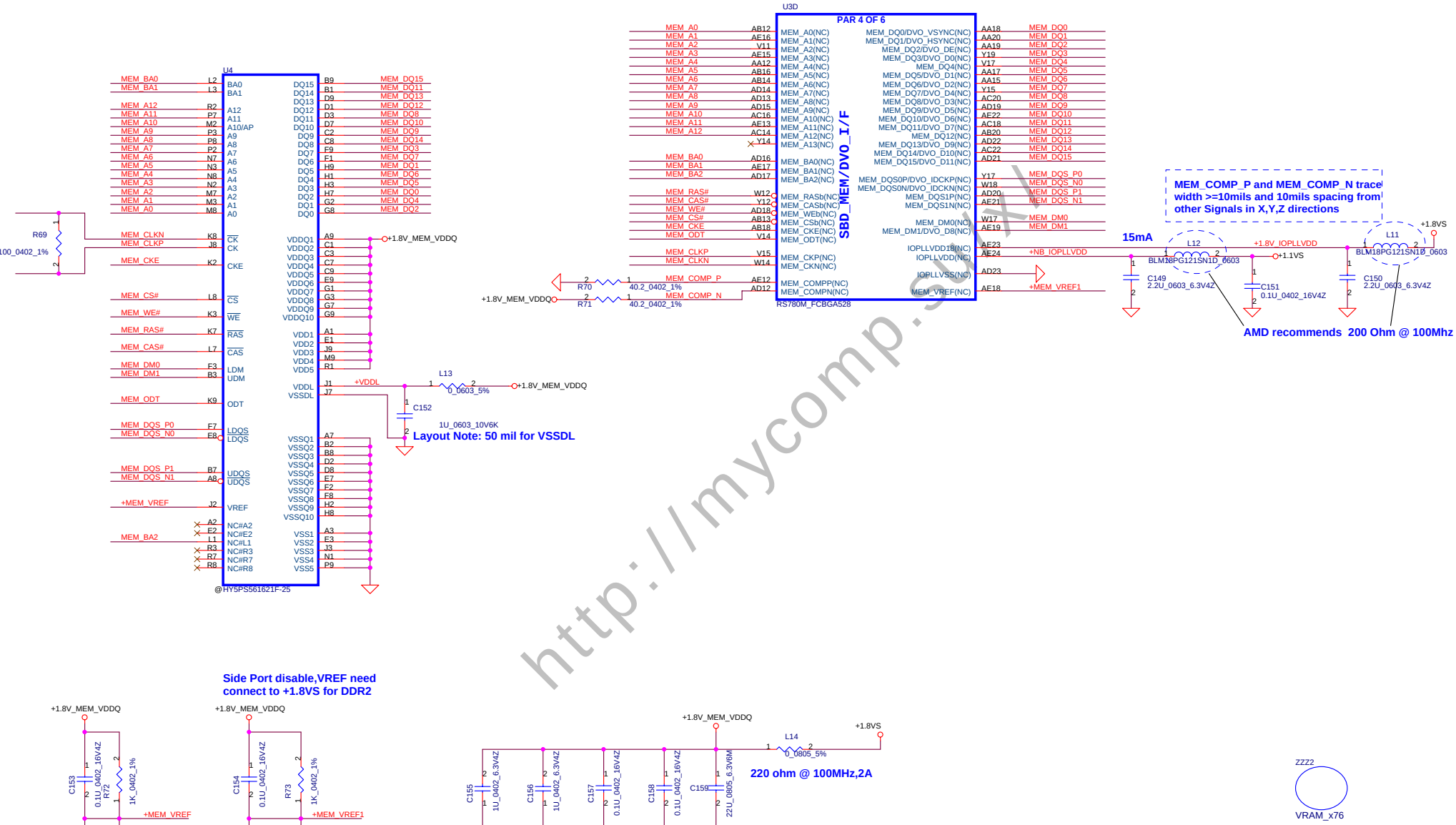
Compal Electronics, Inc.			
Title: RS780-HT/PCIE			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 11 of 46		



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: RS780 VEDIO/CLK GEN			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 12 of 46		

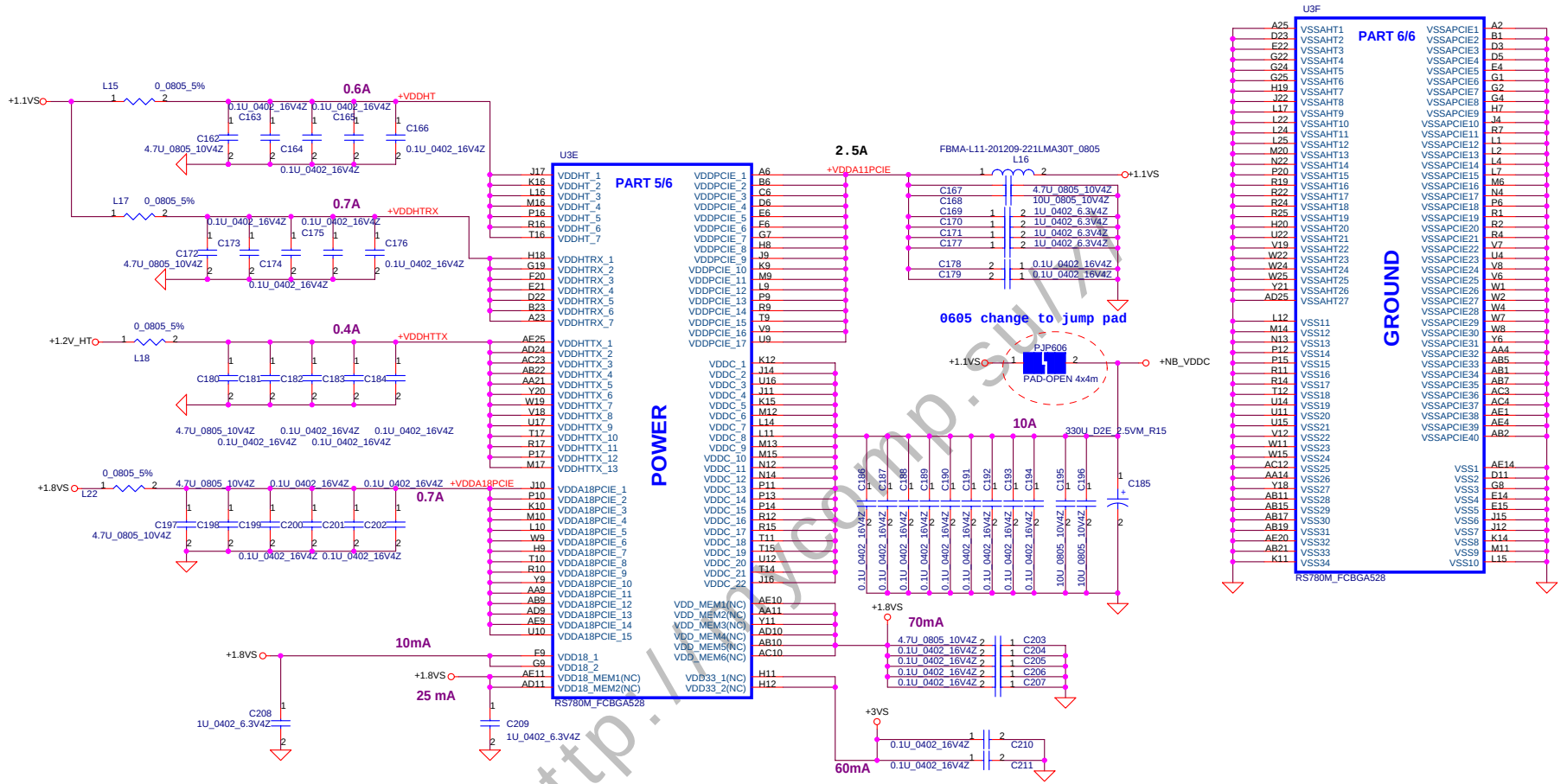
Side-Port DDR2 SDRAM
512Mbits(32Mbx16)-64MB



Side Port disable,VREF need connect to +1.8VS for DDR2

Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

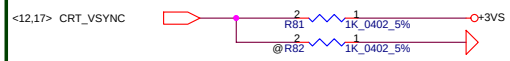
Compal Electronics, Inc.			
Title: RS780 Side-Port DDR2 SDRAM			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 13 of 46		



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

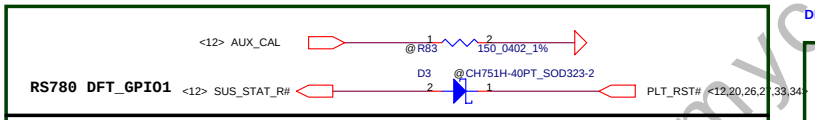
Compal Electronics, Inc.			
Title: RS780 PWR/GND			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 14 of 46		

RS780 DFT_GPIO5 mux at CRT_VSYNC pull low to 3K



DFT_GPIO5:STRAP_DEBUG_BUS_GPIO_ENABLEb

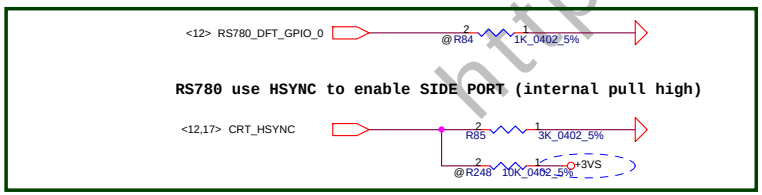
```
Enables the Test Debug Bus using GPIO.
1 : Disable (RS740)  Disable (RX780, RS780)
0 : Enable (Rs740)  Enable (RX780, RS780)
PIN: RS740-->RS780_AUX_CAL; RX780-->NB_TV_C; RS780--> VSYNC#
```



RX780 DFT_GPIO1 mux at GREEN(Ball E18) and change pull low form 150 to 3K.

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
```



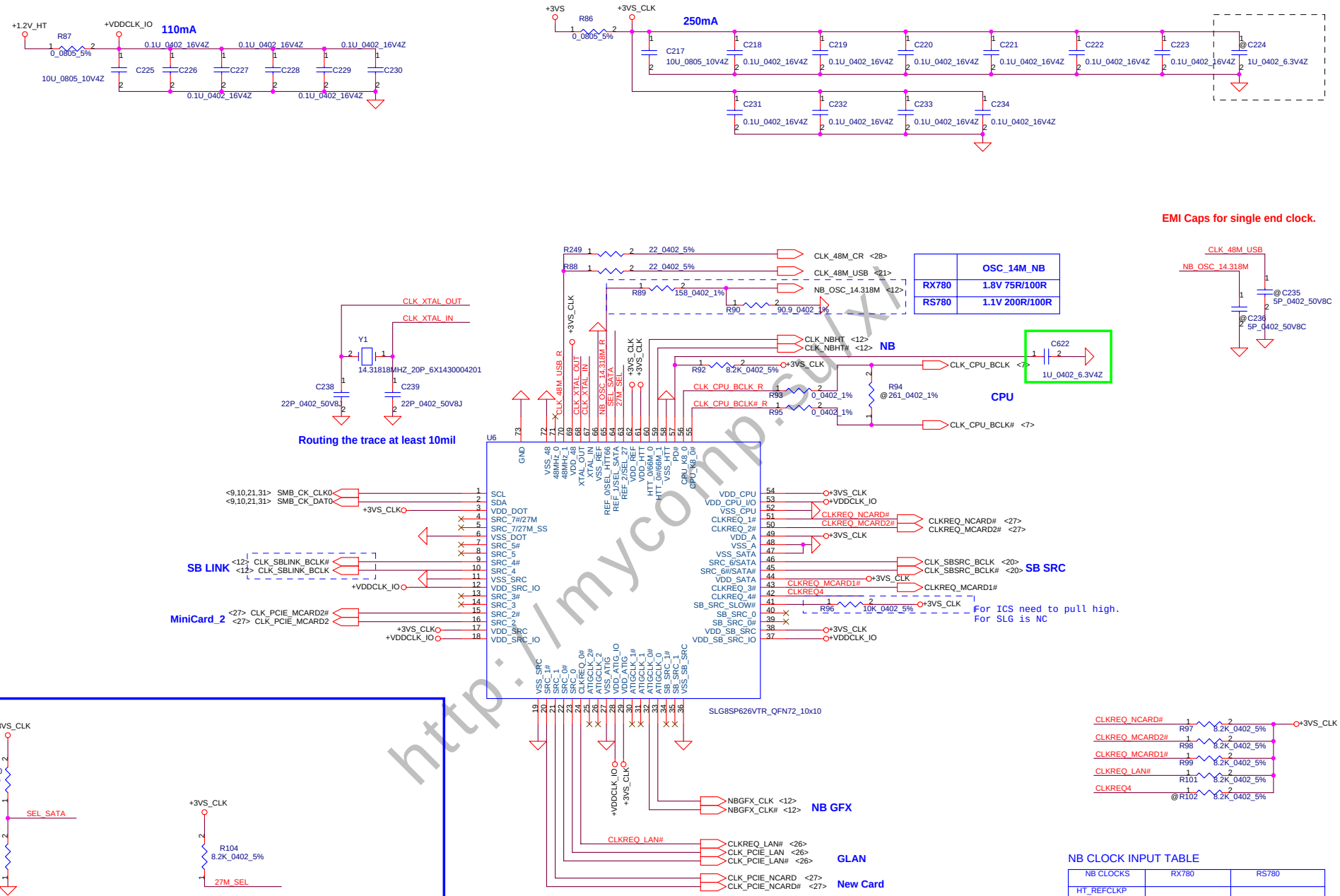
DFT_GPIO0: STRAP_DEBUG_BUS_PCIE_ENABLEb

```
RX780: Enables the Test Debug Bus using PCIE bus
1 : Disable ( Can still be enabled using nbcfg register access )
0 : Enable

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


Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: RS780 STRAPS			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 15 of 46		



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

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(IN/OUT)*

Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

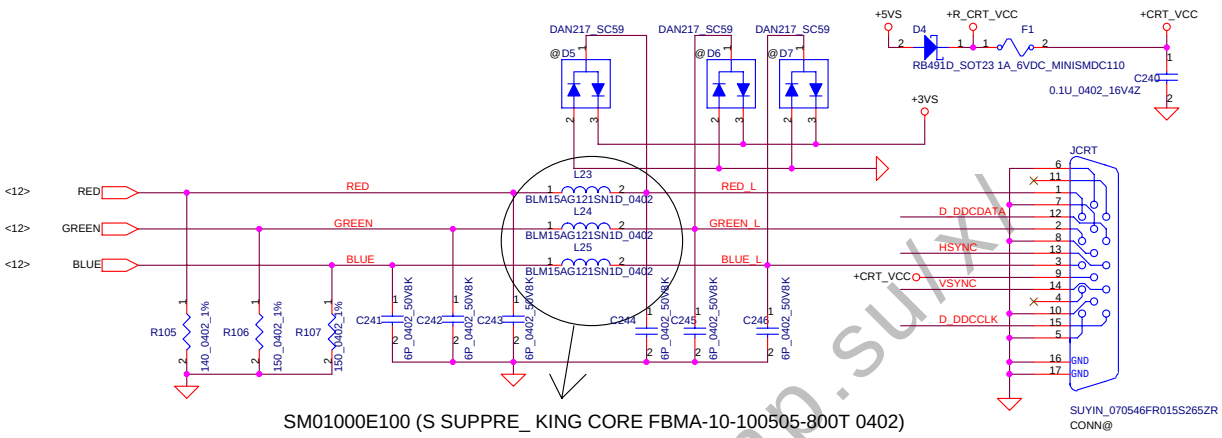
Compal Electronics, Inc.

Title: Clock generator

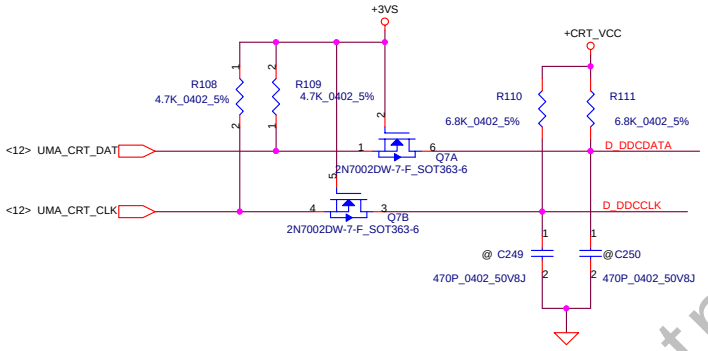
Size	Document Number	Rev
Custom	LA-4481P	0.4

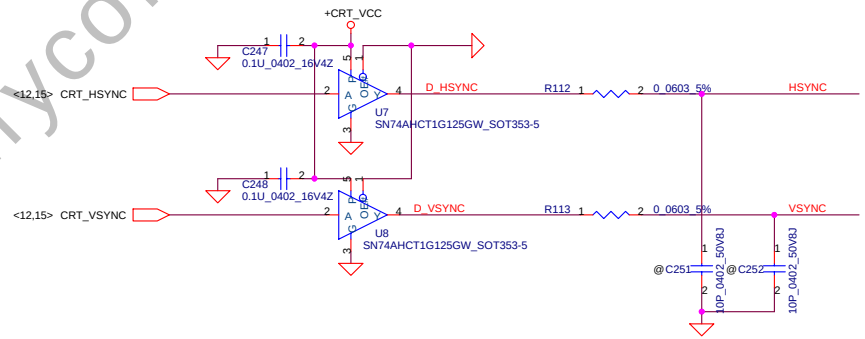
Date: Monday, September 08, 2008 Sheet 16 of 46

CRT CONNECTOR



SM01000E100 (S SUPPRE_ KING CORE FBMA-10-100505-800T 0402)

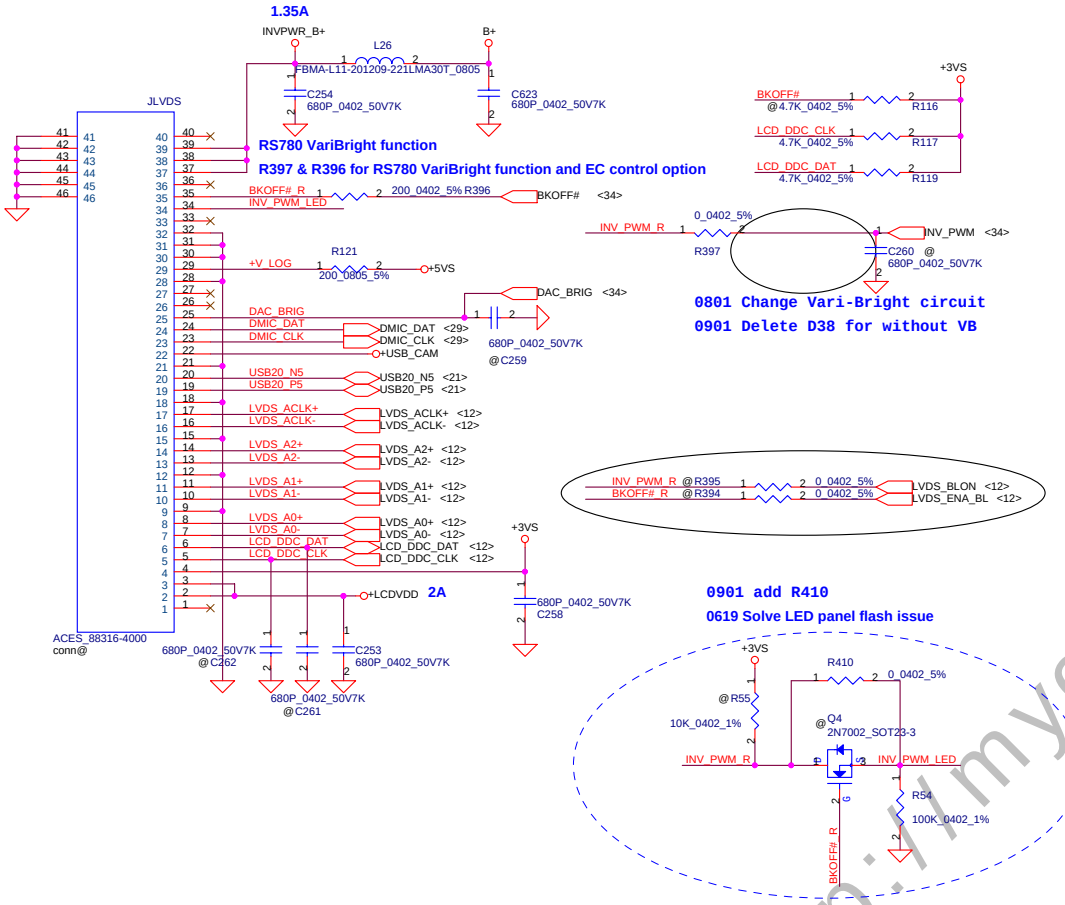




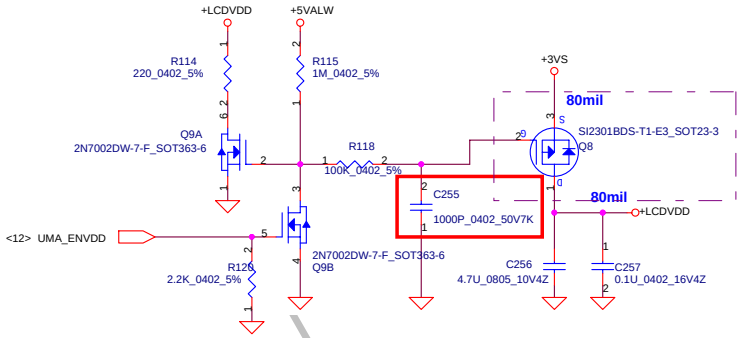
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: CRT Connector			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 17 of 46		

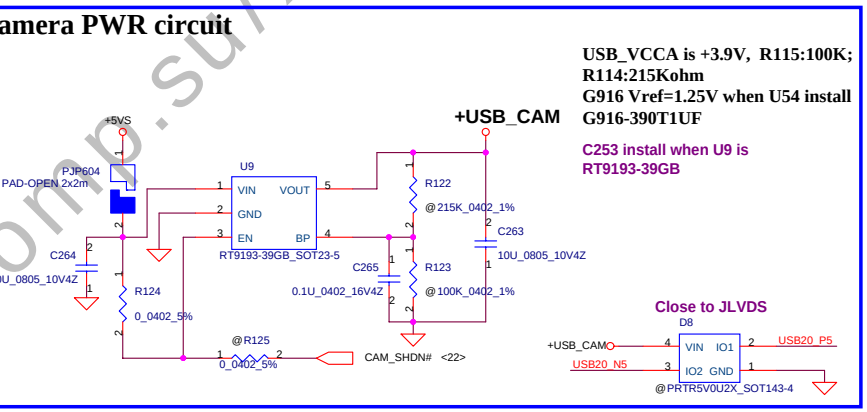
LVDS CONN



LVDS PWR circuit

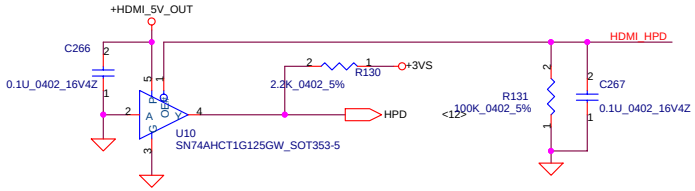


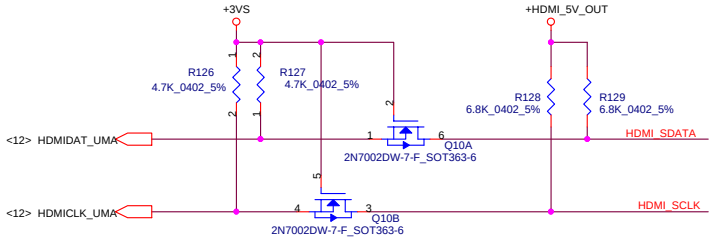
Camera PWR circuit

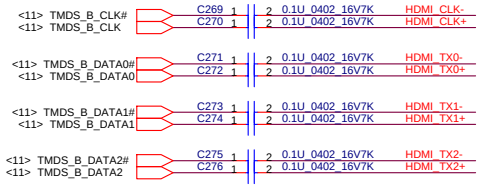


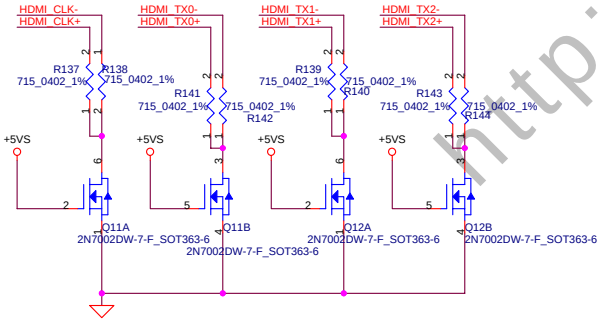
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

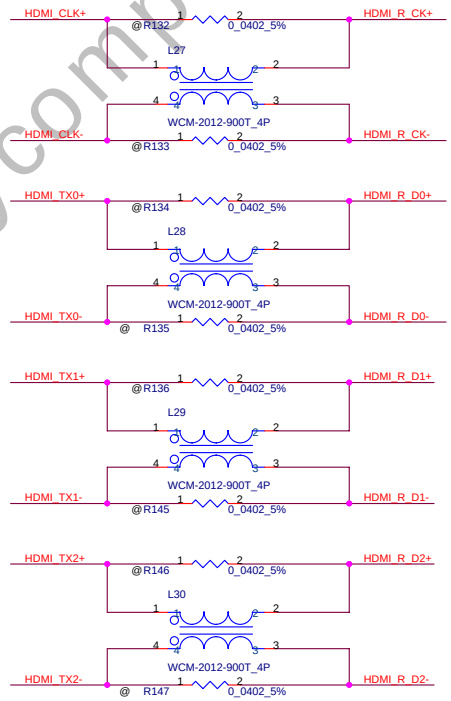
Title	*Compal Electronics, Inc.*		
	LCD CONN. / WebCam		
Size: Custom	Document Number: *LA-4481P*		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 18 of 46		

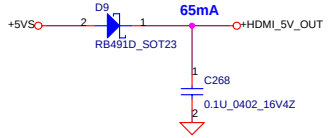


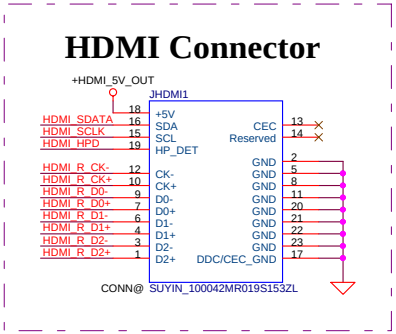












Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: HDMI			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 19 of 46		

Check AMD need pull low or not

STRAP PIN

SB700
Part 1 of 5

U11A

R148 @8.2K_0402_5%

NB_RST# R

A_RST# N2

PCIE_TX0P V23
PCIE_TX0N V22
PCIE_TX1P V24
PCIE_TX1N V25
PCIE_TX2P U25
PCIE_TX2N U24
PCIE_TX3P T23
PCIE_TX3N T22

PCIE_RX0P U22
PCIE_RX0N U21
PCIE_RX1P U19
PCIE_RX1N V19
PCIE_RX2P R20
PCIE_RX2N R21
PCIE_RX3P R18
PCIE_RX3N R17

PCIE_CALRP T25
PCIE_CALRN T24

PCIE_PVDD P24
PCIE_PVSS P25

PCI EXPRESS INTERFACE

<11> SB_RX0P C277 SB_RX0P_C
<11> SB_RX0N C278 SB_RX0N_C
<11> SB_RX1P C279 SB_RX1P_C
<11> SB_RX1N C280 SB_RX1N_C
<11> SB_RX2P C281 SB_RX2P_C
<11> SB_RX2N C282 SB_RX2N_C
<11> SB_RX3P C283 SB_RX3P_C
<11> SB_RX3N C284 SB_RX3N_C
0.1U_0402_16V7K

<11> SB_TX0P
<11> SB_TX0N
<11> SB_TX1P
<11> SB_TX1N
<11> SB_TX2P
<11> SB_TX2N
<11> SB_TX3P
<11> SB_TX3N

R151 562_0402_1%
R152 2.05K_0402_1%

+PCIE_VDDR
+1.2V_HT
L31 BLM18PG121SN1D_0603
+SB_PCIEVDD
C285 10U_0805_10V4Z
C286 1U_0402_6.3V4Z
Close to SB

PCI CLKS

PCICLK0 P4
PCICLK1 P3
PCICLK2 P1
PCICLK3 P2
PCICLK4 T4
PCICLK5/GPIO41 T3

CLK_PCI_SIO_R R150 22_0402_5%
PCI_CLK3 <24>
PCI_CLK4 <24>
PCI_CLK5 <24>
PCICLK2 <24>

STRAP PIN

PCIRST# N1

PCI INTERFACE

AD0 U2
AD1 P7
AD2 V4
AD3 T1
AD4 V3
AD5 U1
AD6 V1
AD7 V2
AD8 T2
AD9 W1
AD10 T9
AD11 R6
AD12 R7
AD13 R5
AD14 U8
AD15 U5
AD16 Y7
AD17 W8
AD18 V9
AD19 Y8
AD20 AA8
AD21 Y4
AD22 Y3
AD23 Y2
AD24 AA2
AD25 AB4
AD26 AA1
AD27 AB3
AD28 AB2
AC1
AC2
AD1
W2
U7
AA7
Y1
AA6
W5
AA5
Y5
U6
W6
W4
V7
AC3
AD4
AB7
AE6
AB6
AD2
AE4
AD5
AC6
AE5
AD6
V5
AD3
AC4
AE2
AE3

PCI_AD23 PCI_AD24 PCI_AD25 PCI_AD26 PCI_AD27 PCI_AD28
PCI_AD23 <24> PCI_AD24 <24> PCI_AD25 <24> PCI_AD26 <24> PCI_AD27 <24> PCI_AD28 <24>

PCI_SERR# <34>

PAD T22
PAD T23
PAD T24

PCI_PIRQH# R156 0_0402_5%
ACCEL_INT <31>

<16> CLK_SBSRC_BCLK N25
<16> CLK_SBSRC_BCLK# N24
PCIE_RCLKP/NB_LNK_CLKP
PCIE_RCLKN/NB_LNK_CLKN

K23 NB_DISP_CLKP
K22 NB_DISP_CLKN
M24 NB_HT_CLKP
M25 NB_HT_CLKN
P17 CPU_HT_CLKP
M18 CPU_HT_CLKN
M23 SLT_GFX_CLKP
M22 SLT_GFX_CLKN
J19 GPP_CLK0P
J18 GPP_CLK0N
L20 GPP_CLK1P
L19 GPP_CLK1N
M19 GPP_CLK2P
M20 GPP_CLK2N
N22 GPP_CLK3P
P22 GPP_CLK3N
L18 25M_48M_66M_OSC
J21 25M_X1
J20 25M_X2

CLOCK GENERATOR

C287 @ 0.1U_0402_16V4Z
+3VALW
U12
NB_RST# R
PLT_RST#
PLT_RST# <12,15,26,27,33,34>
@NC7SZ08P5X_NL_SC70-5
R153 33_0402_5%

@R154 20M_0402_5%
C288 18P_0402_50V8J
C289 18P_0402_50V8J
R155 20M_0603_5%
SB_32KHI
SB_32KHO
32.768KHZ_12.5PF_9H03200413
Y2
Close to SB

SB_32KHI A3 X1
SB_32KHO B3 X2
RTC XTAL

LPC

LPCCLK0 G22 CLK_PCI_EC_R R157 22_0402_5% CLK_PCI_EC
CLK_PCI_EC <24,34>
LPCCLK1 E22 LPCCLK1 <24>
LAD0 H24 LPC_AD0 <33,34>
LAD1 H23 LPC_AD1 <33,34>
LAD2 J25 LPC_AD2 <33,34>
LAD3 J24 LPC_AD3 <33,34>
LFRAME# H25 LPC_FRAME# <33,34>
LDRQ0# H22 PAD T25
LDRQ1#/GNT5#/GPIO68 AB8 LPC_DRQ# <33>
BMREQ#/REQ5#/GPIO65 AD7
SERIRQ V15 SIRQ <33,34>

STRAP PIN
EC & Debug

LPCCLK1 R416 33_0402_5% CLK_PCI_SIO <33>

ZZZ1
PCB-MB

<7,12> CPU_LDT_REQ# CPU_LDT_REQ# F23
<7> H_PROCHOT# H_PROCHOT# F24
H_PWRGD_SB F22
<7,12> LDT_STOP# LDT_STOP# G25
<7> LDT_RST# LDT_RST# G24

ALLOW_LDTSTP
PROCHOT#
LDT_PG
LDT_STP#
LDT_RST#

CPU

RTCCLK C3 RTC_CLK <24>
INTRUDER_ALERT# C2
VBAT B2 +SB_VBAT

STRAP PIN

+3VS R159 10K_0402_5% H_PROCHOT#

+SB_VBAT
+RTCVCC_R
+RTCVCC
+3VL
+RTCBATT
R161 120_0402_5%
R162 120_0402_5%
W=20mils
D10 DAN202U_SC70
R163 1K_0402_5%
+RTCBATT_R
JBATT1 CONN@ ACES_85205-02001
C290 1U_0402_6.3V4Z
C291 0.1U_0402_16V4Z
J1 @ JUMP_43X39

<7> H_PWRGD_CPU R160 0_0402_5% H_PWRGD_SB
<43> H_PWRGD R403 0_0402_5%

9/20 SA00001S510 S IC 218S7EALA11FG SB700 BGA 528P SB 0FH
218S7EALA11FG_BGA528_SB700
9/20 SP020008T00

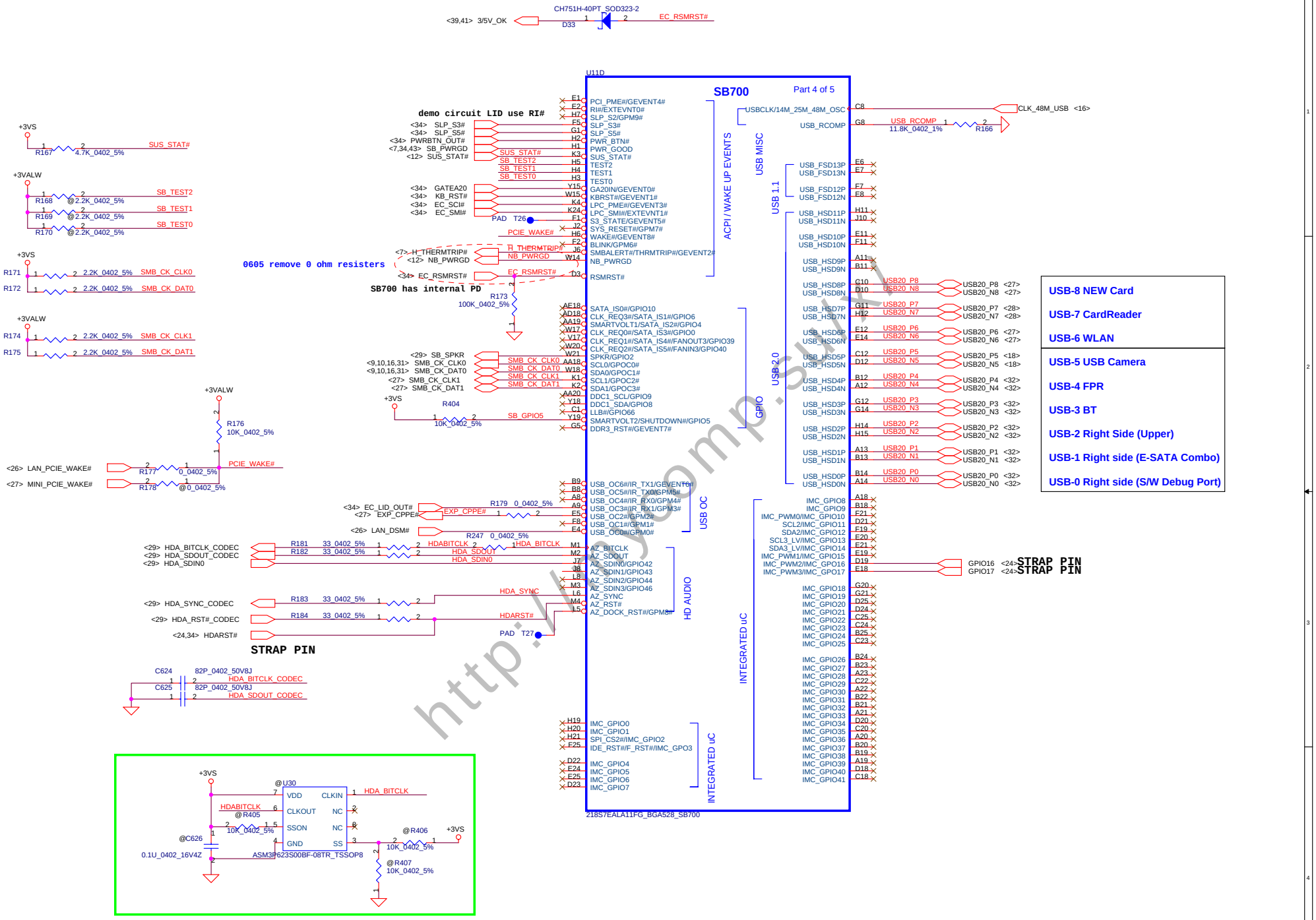
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.

Title: SB700-PCIE/PCI/ACPI/LPC/RTC

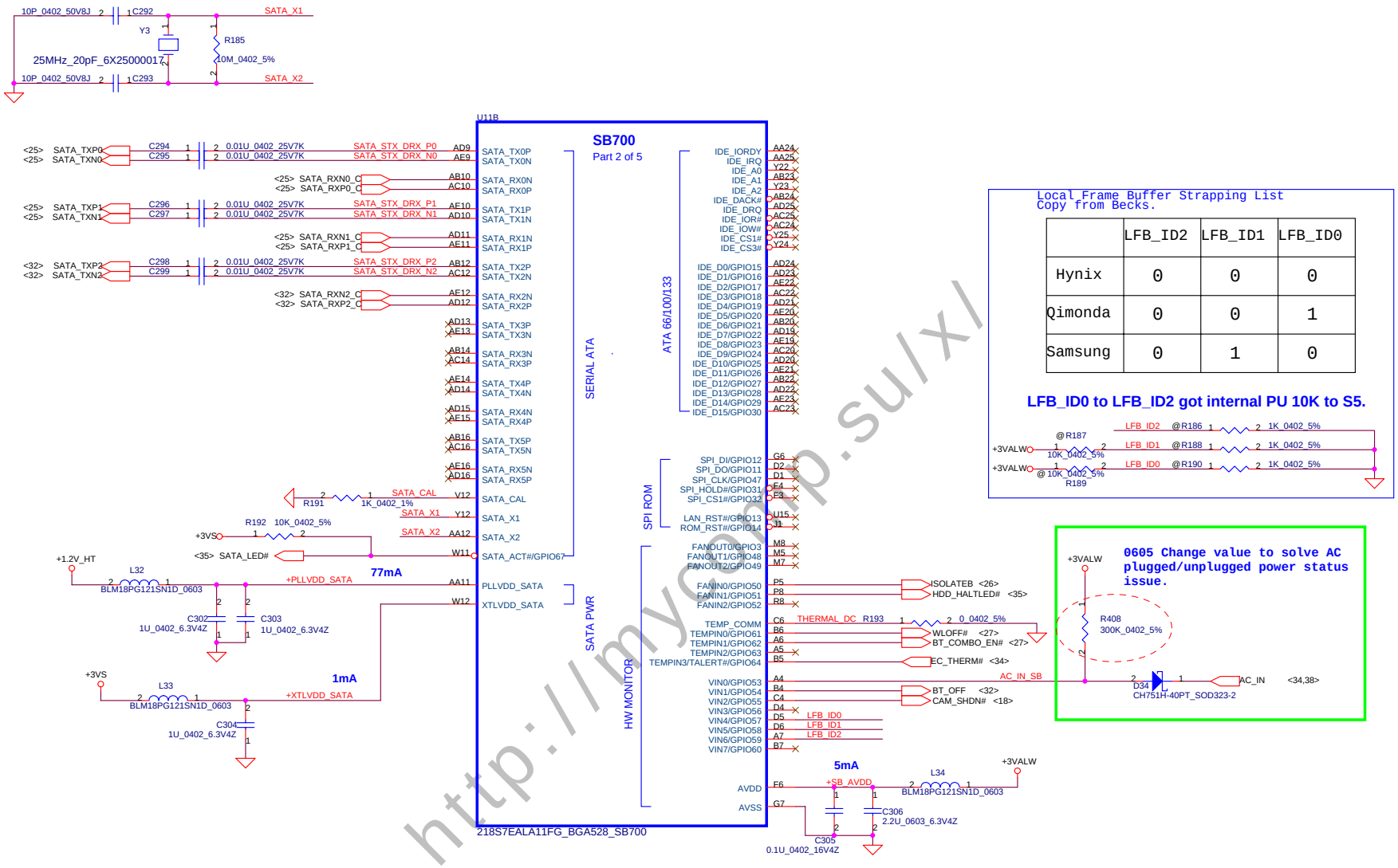
Size	Document Number	Rev
Custom	LA-4481P	0.4

Date: Monday, September 08, 2008 Sheet 20 of 46



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

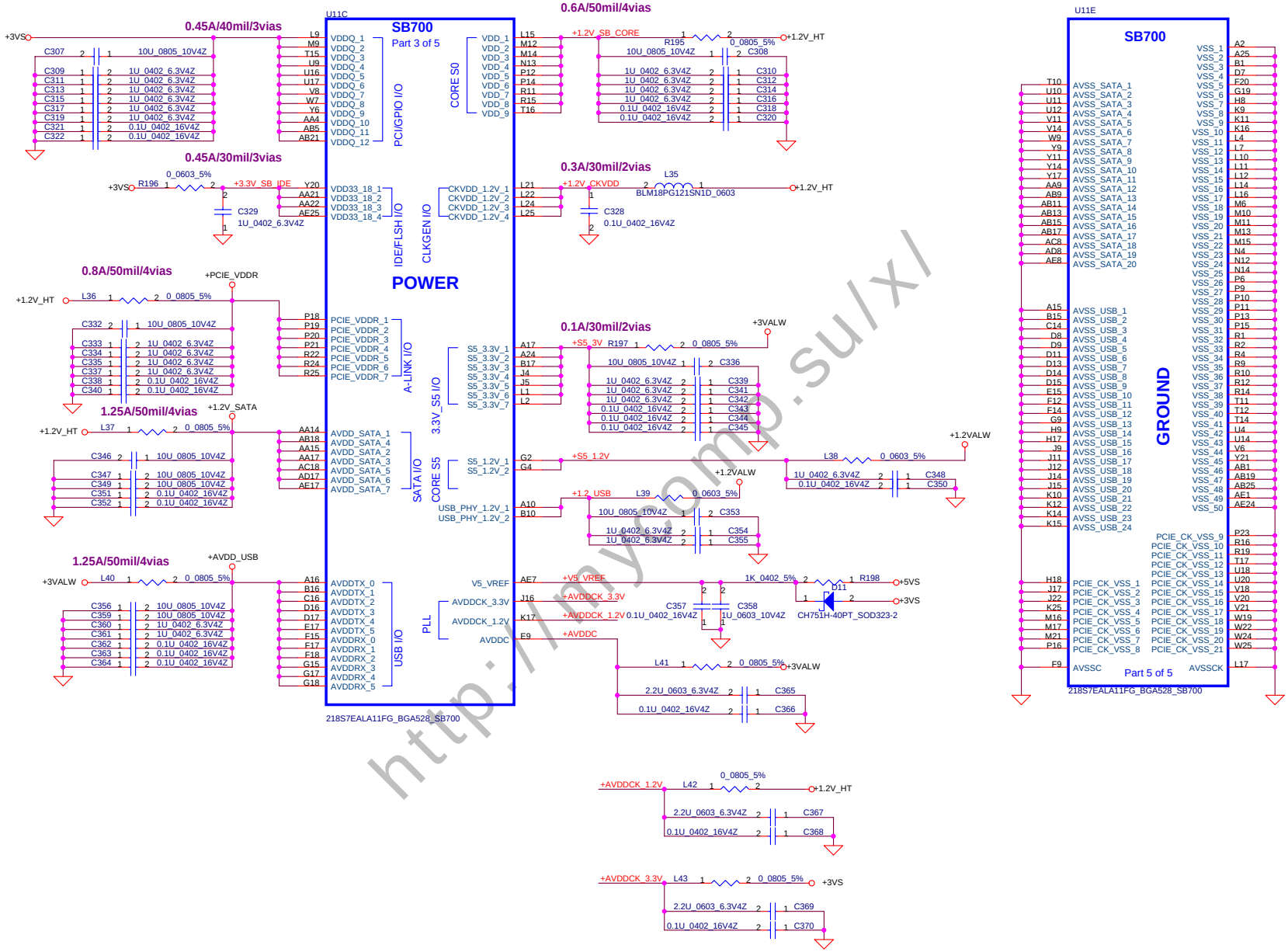
Compal Electronics, Inc.	
Title	SB700 USB/AC97
Size: Custom	Document Number: LA-4481P
Rev	0.4
Date: Monday, September 08, 2008	Sheet 21 of 46



	LFB_ID2	LFB_ID1	LFB_ID0
Hynix	0	0	0
Qimonda	0	0	1
Samsung	0	1	0

Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: SB700 SATA/IDE/SPI			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 22 of 46		



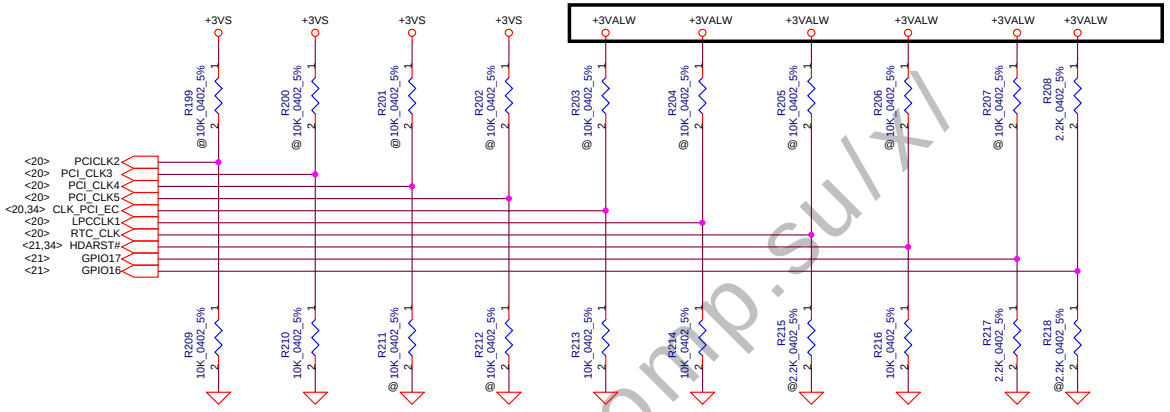
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: SB700 PWR/GND			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 23 of 46		

REQUIRED STRAPS

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

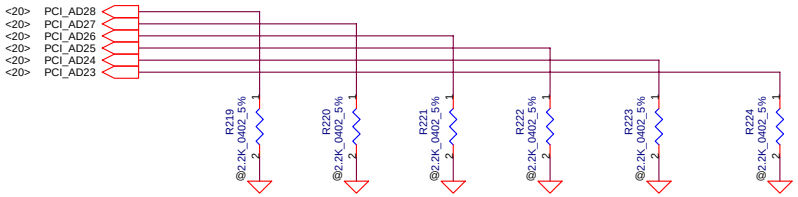
	PCI_CLK2	PCI_CLK3	PCI_CLK4	PCI_CLK5	AZ_RST_CD#	LPC_CLK1	RTC_CLK	LPC_CLK0	GP17 GP16
PULL HIGH	BOOTFAIL TIMER ENABLED	USE DEBUG STRAPS	RESERVED	RESERVED	ENABLE PCI MEM BOOT	CLKGEN ENABLED	INTERNAL RTC DEFAULT	EC ENABLED	Internal pull up H,H = Reserved H,L = SPI ROM
PULL LOW	BOOTFAIL TIMER DISABLED DEFAULT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



DEBUG STRAPS

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

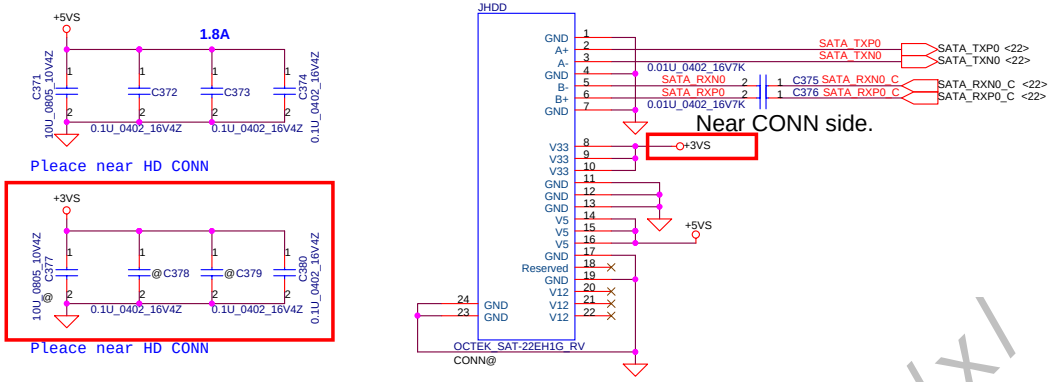
	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	RESERVED
PULL LOW	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	

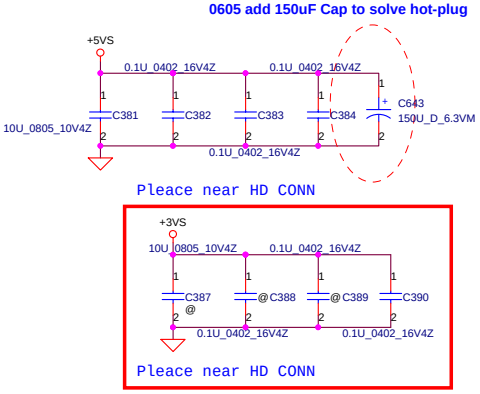


Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

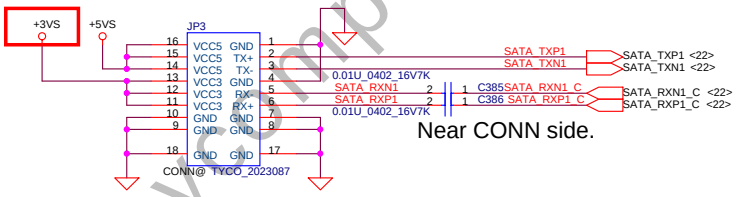
Compal Electronics, Inc.			
Title: SB700 STRAPS			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 24 of 46		

HDD Connector



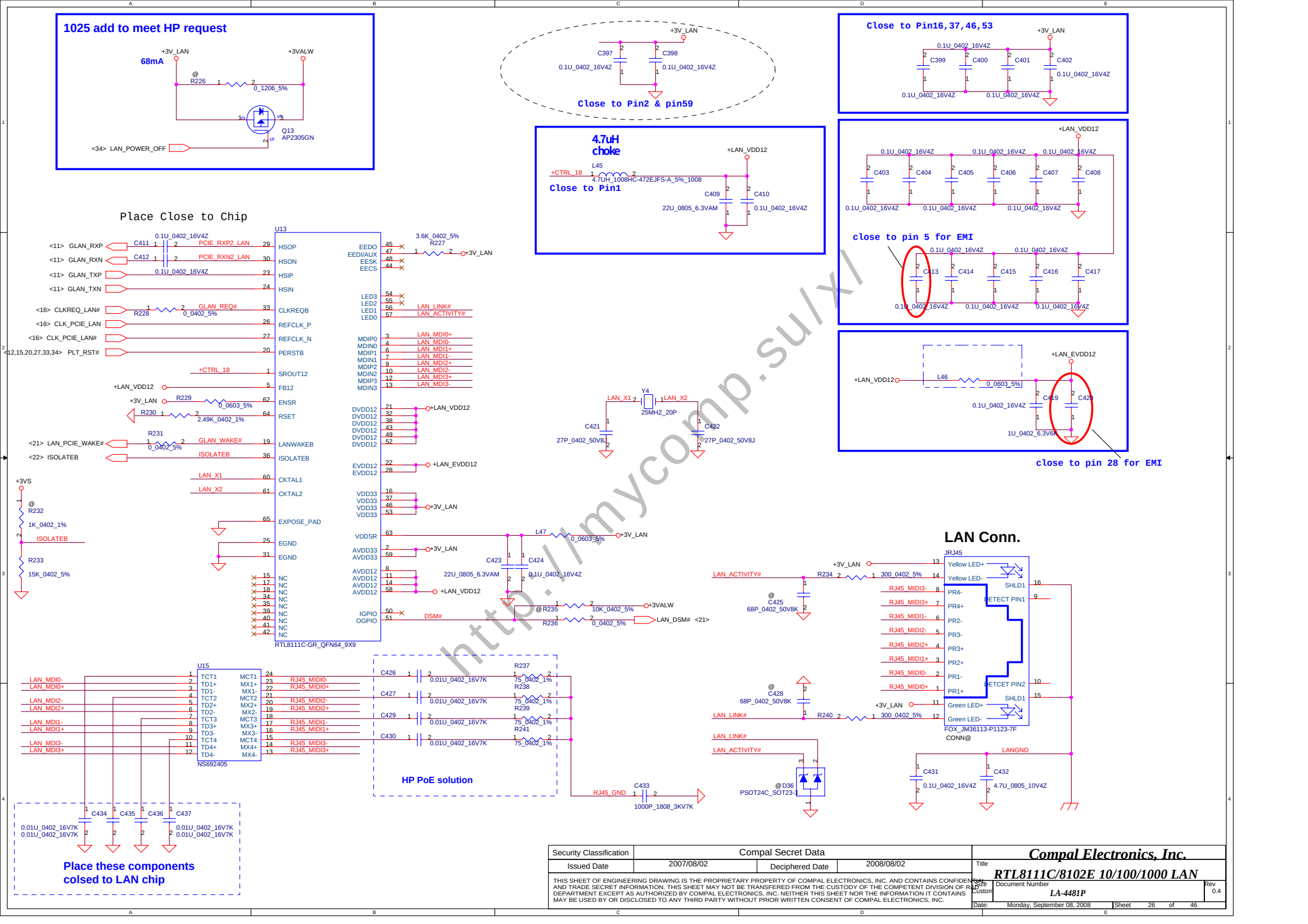


Multi-Bay Connector-option



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: HDD/CDROM			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 25 of 46		



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

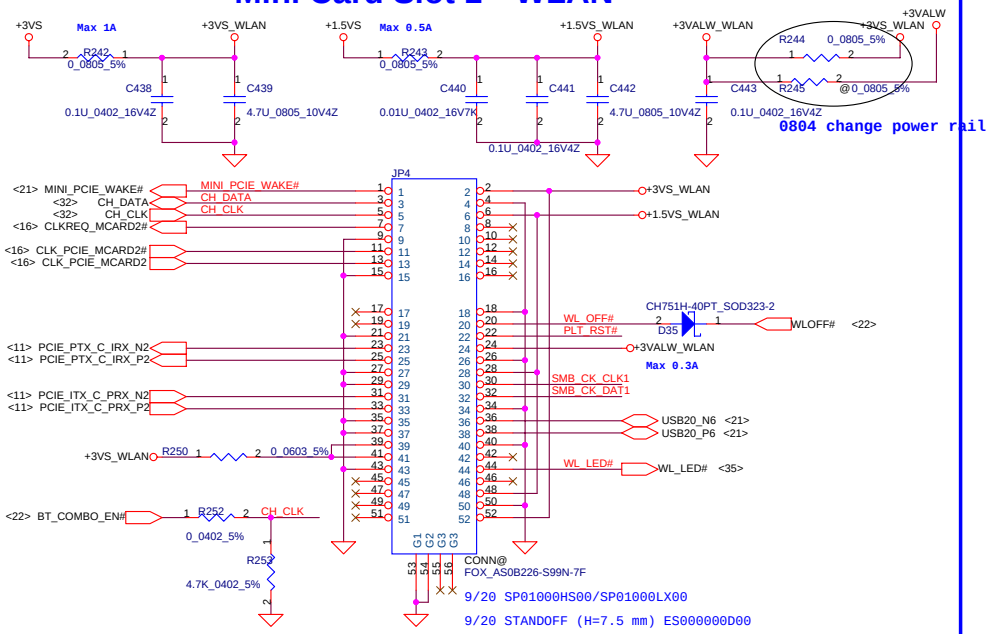
Compal Electronics, Inc.

Title: RTL8111C/8102E 10/100/1000 LAN

Size	Document Number	Rev
Custom	LA-4481P	0.4

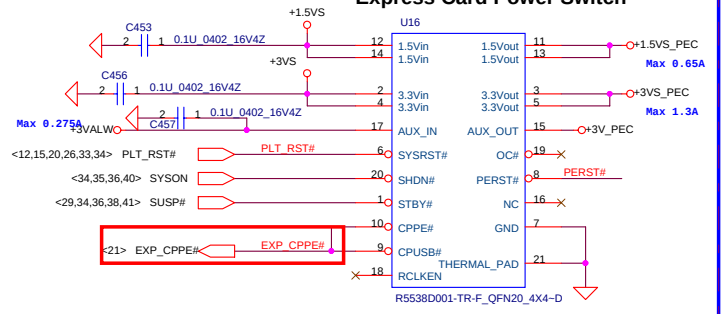
Date: Monday, September 08, 2008 Sheet 26 of 46

Mini Card Slot 1---WLAN



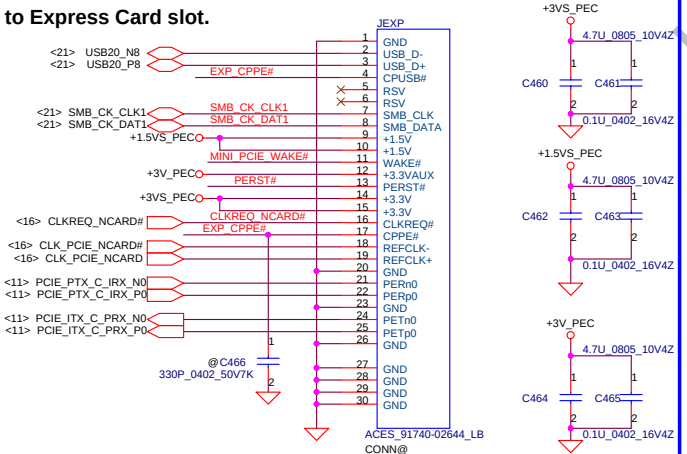
New Card

Express Card Power Switch



USE TI TPS2231MRGPR

Near to Express Card slot.



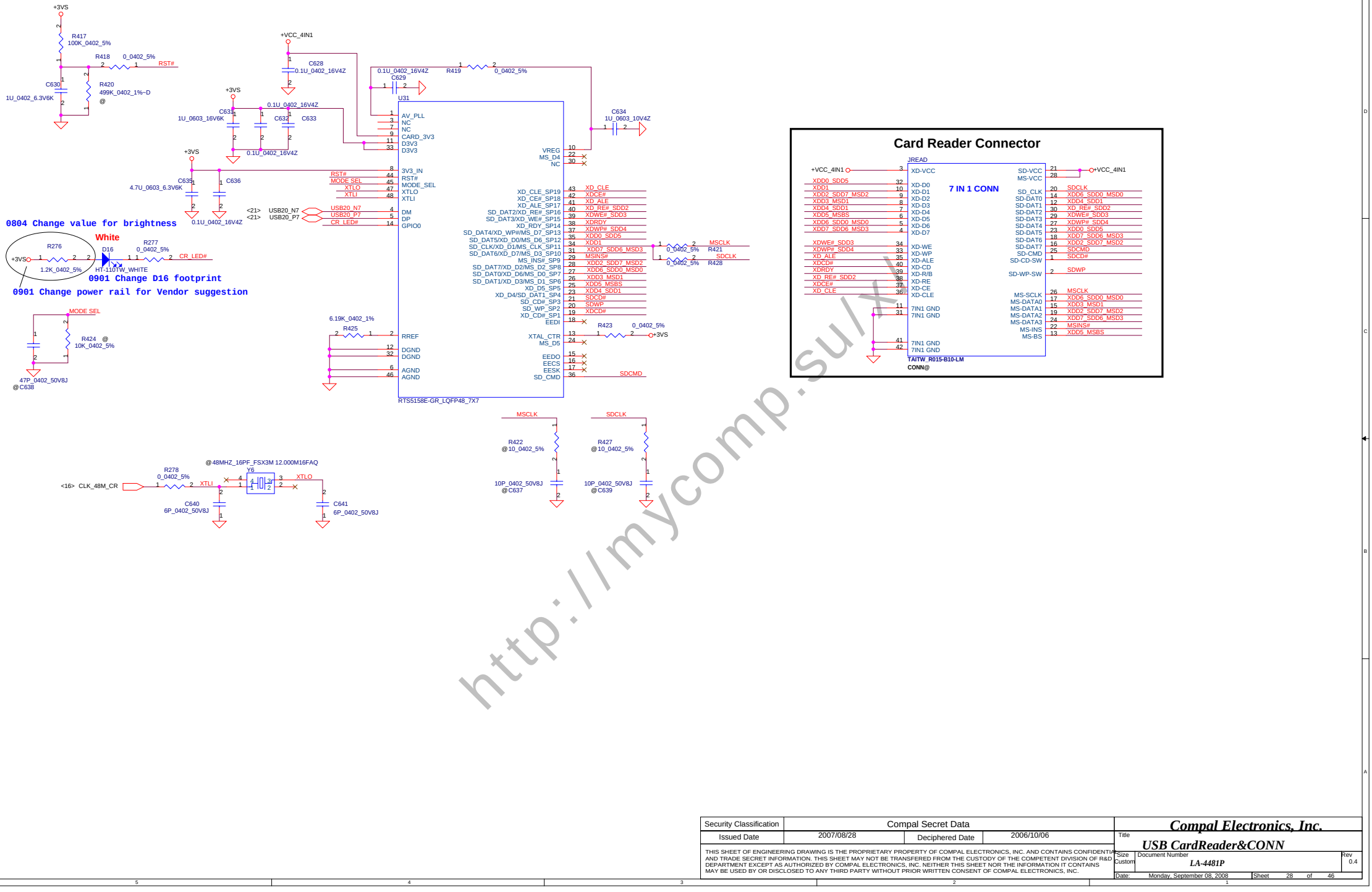
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.

Title: **WLAN/TV tuner/Express Card**

Size	Document Number	Rev
Custom	LA-4481P	0.4

Date: Monday, September 08, 2008 Sheet 27 of 46



Security Classification	Compal Secret Data		
Issued Date	2007/08/28	Deciphered Date	2006/10/06

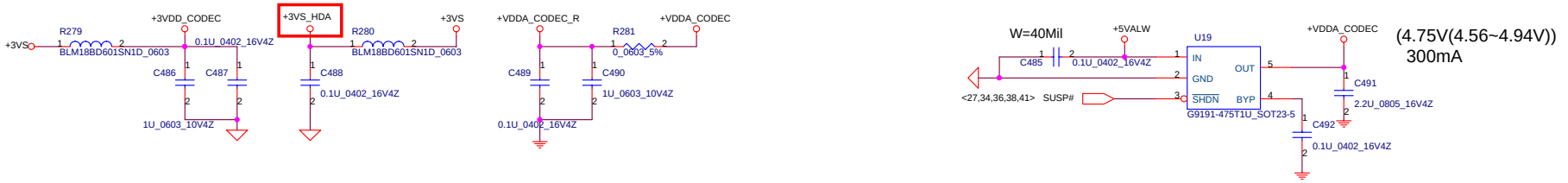
Compal Electronics, Inc.

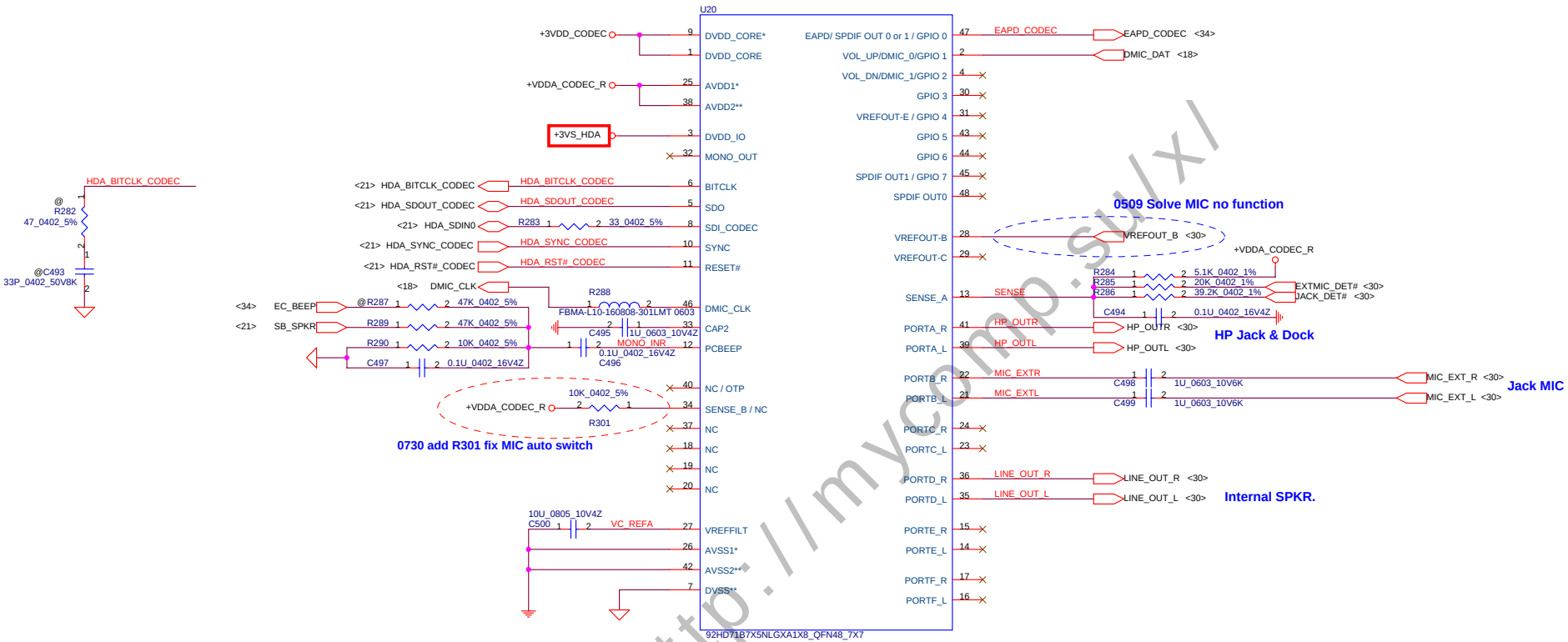
Title: **USB CardReader&CONN**

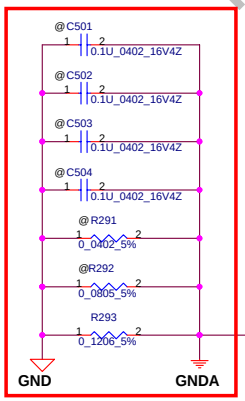
Size	Document Number	Rev
Custom	LA-4481P	0.4

Date: Monday, September 08, 2008 Sheet 28 of 46

CODEC POWER





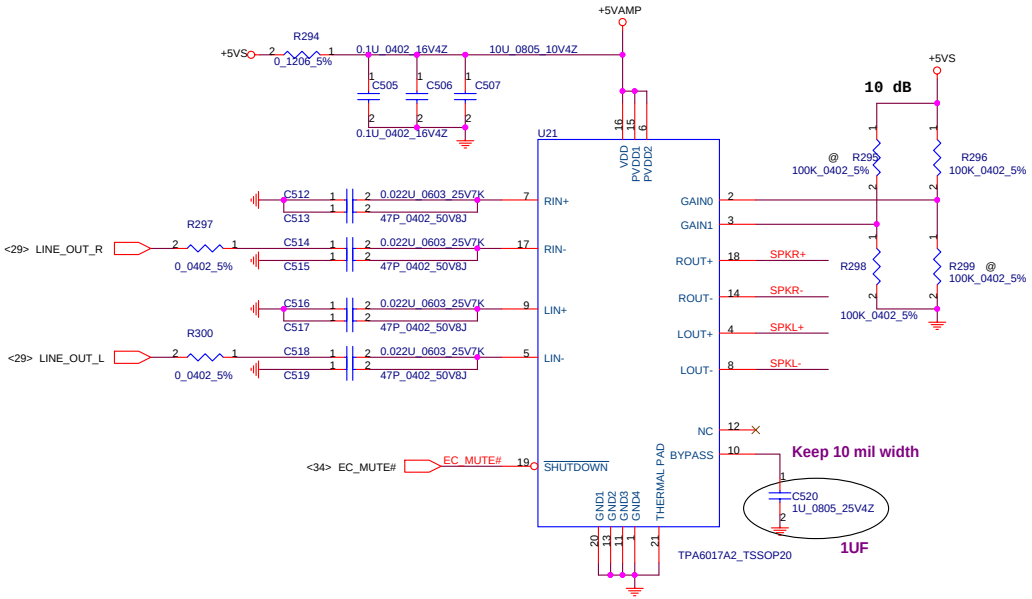


Use an 80mil to connection or place a 1206 resistor under CODEC with double vias.

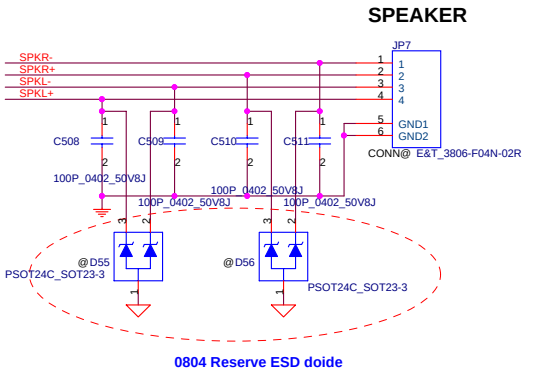
SENSE A		SENSE B	
Port	Resistor	Port	Resistor
A	39.2K	E	39.2K
B	20K	F	20K
C	10K	G	10K
D	5.11K	H	5.11K

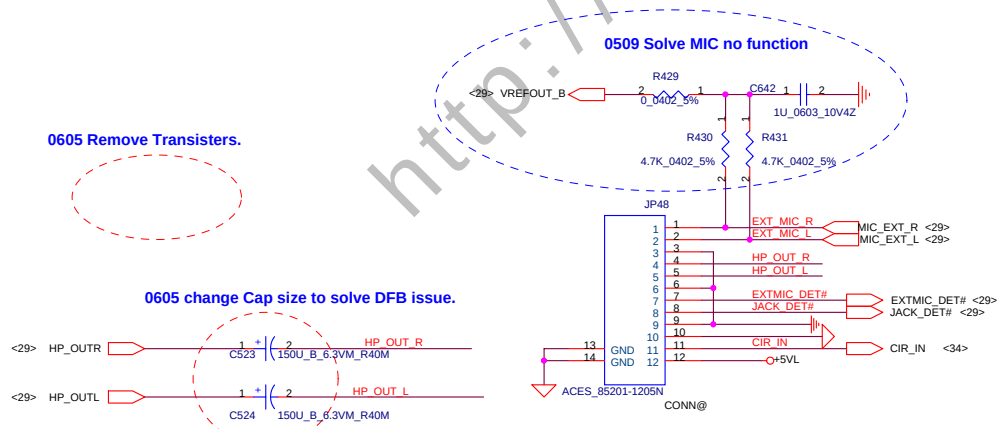
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: Audio Codec-IDT9271B7			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 29 of 46		



GAIN0	GAIN1	Av(inv)
0	0	6dB
0	1	10dB
1	0	15.6dB
1	1	21.6dB

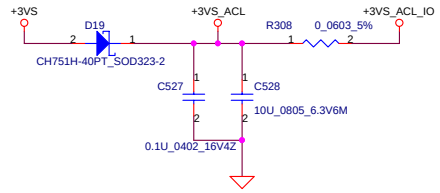


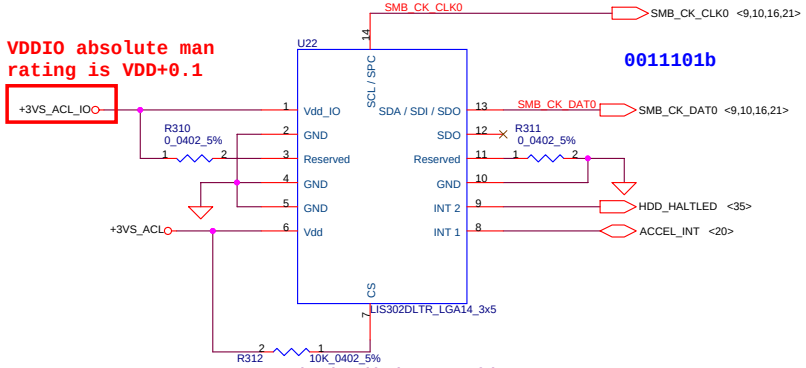


Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: AMP & Audio Jack			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 30 of 46		

ACCELEROMETER

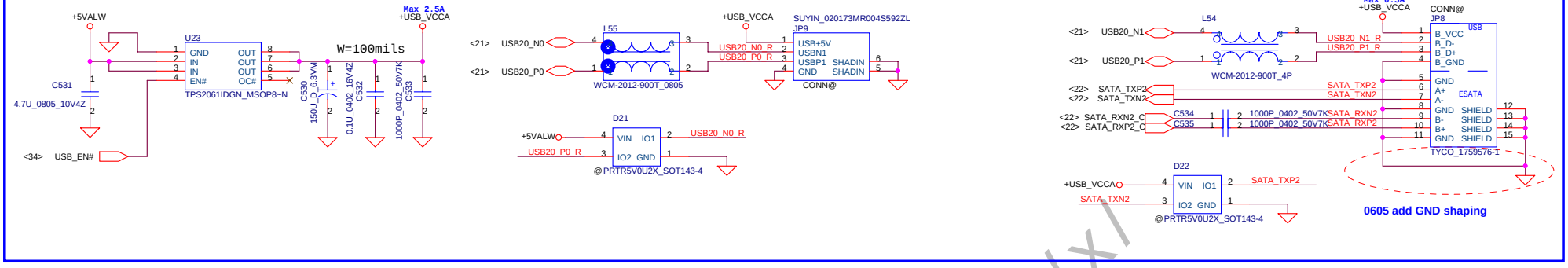




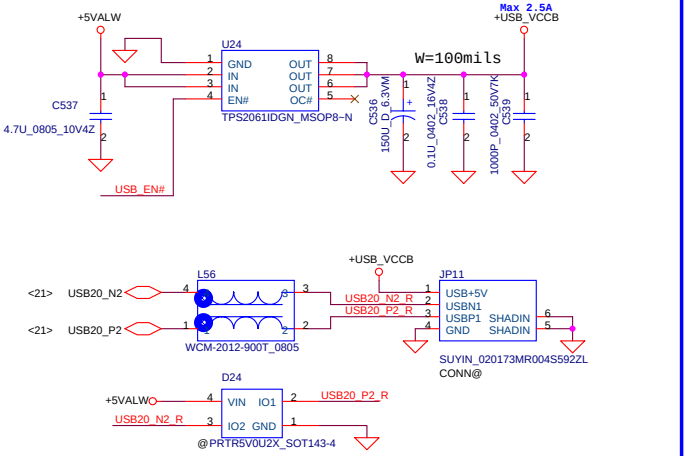
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: Accelerometer			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 31 of 46		

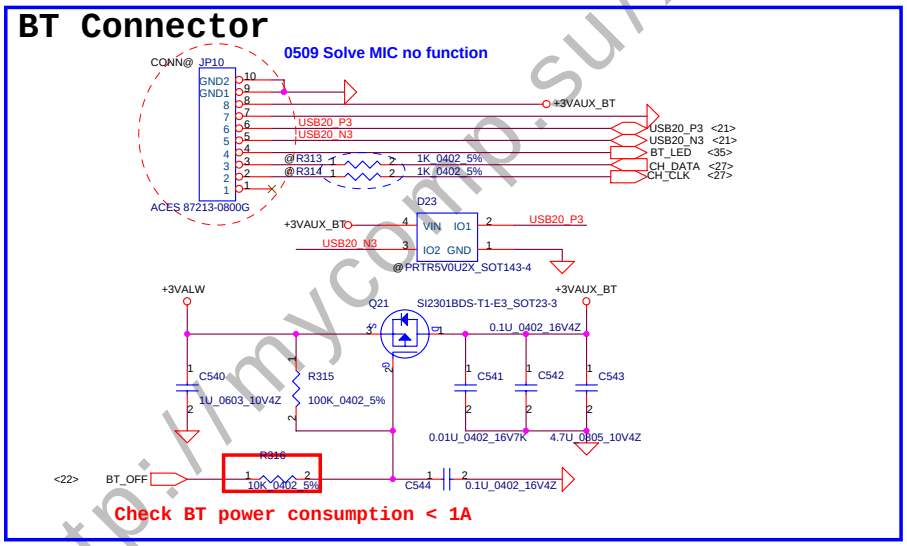
E-SATA Combo & USB-1



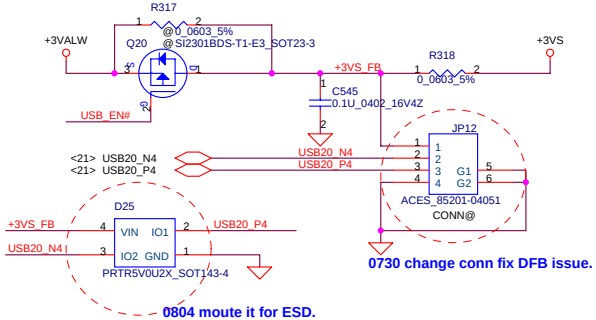
USB-3



BT Connector

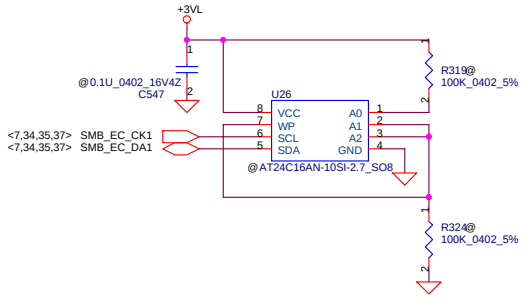


Finger printer

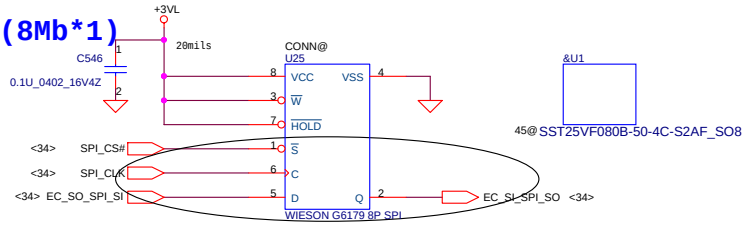


Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

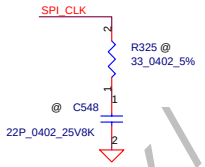
Compal Electronics, Inc.			
Title: USB, BT, eSATA,FPR			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 32 of 46		



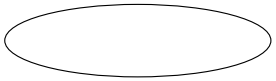
SPI Flash (8Mb*1)



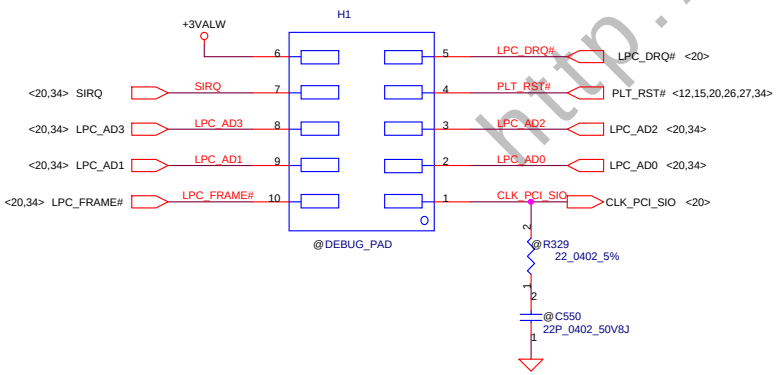
0605 remove 0 ohm resisters



0605 Remove LPC debug connector

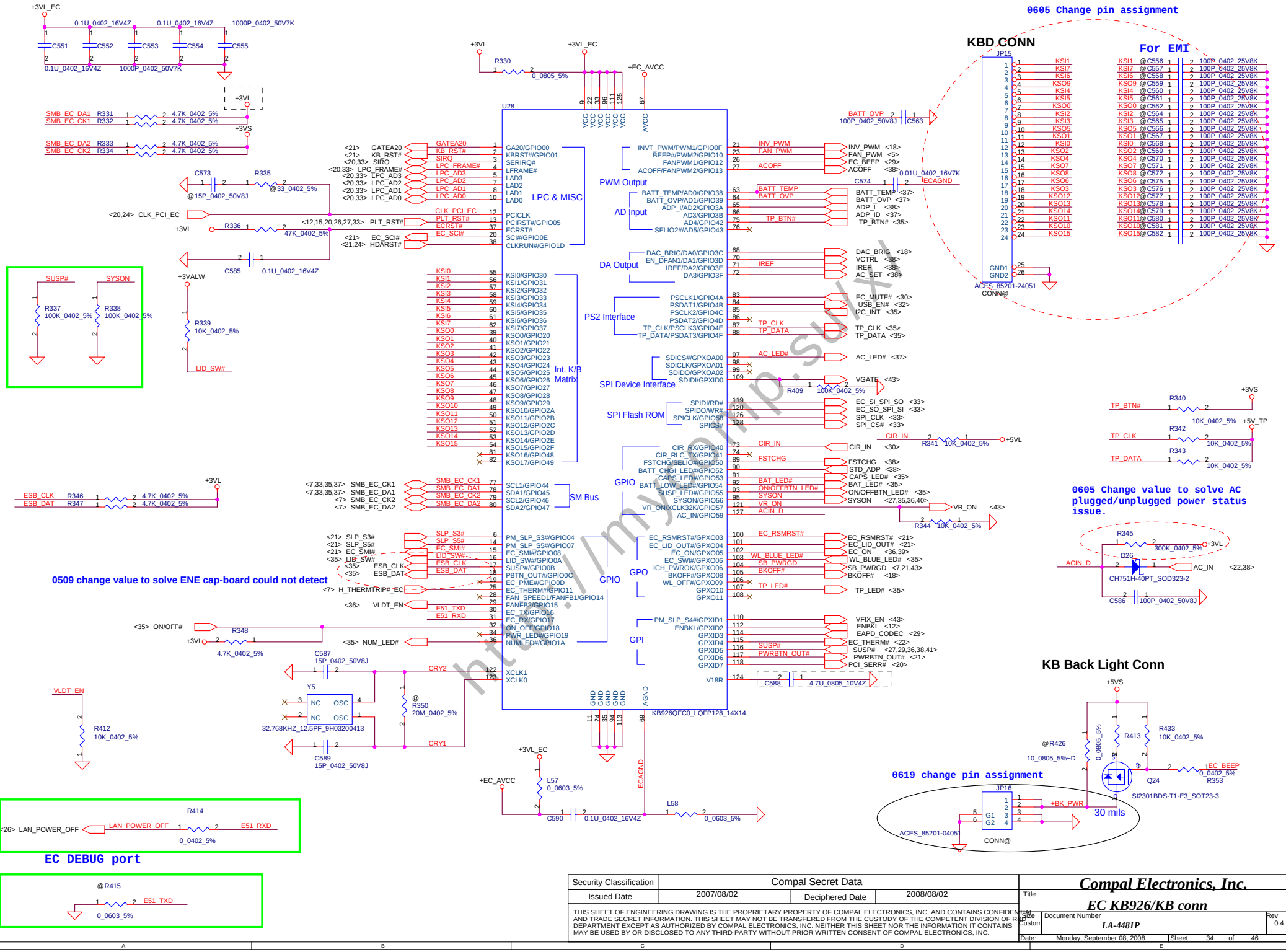


LPC Debug Port



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

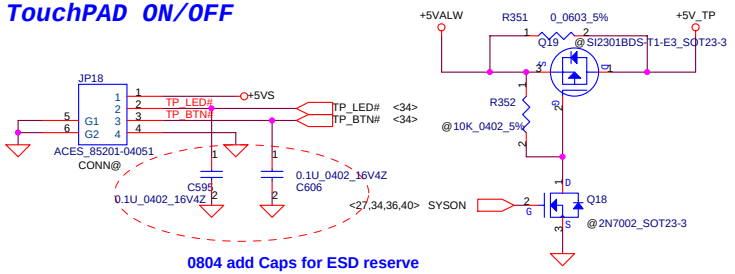
Compal Electronics, Inc.			
Title: BIOS ROM/Debug Tool			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 33 of 46		



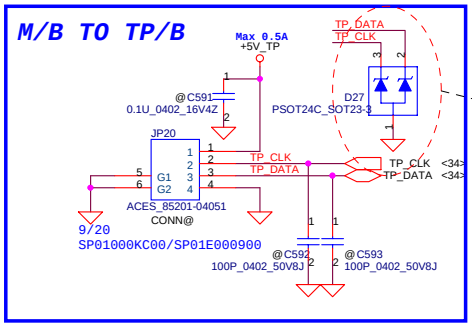
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.	
Title	EC KB926/KB conn
Size: Custom	Document Number: LA-4481P
Rev	0.4
Date: Monday, September 08, 2008	Sheet 34 of 46

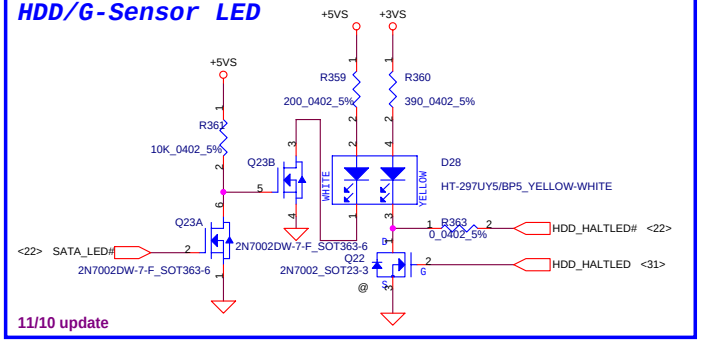
TouchPAD ON/OFF



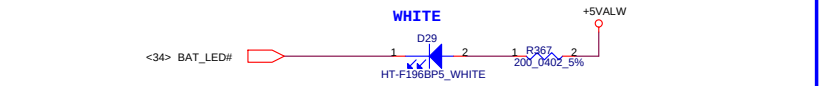
M/B TO TP/B



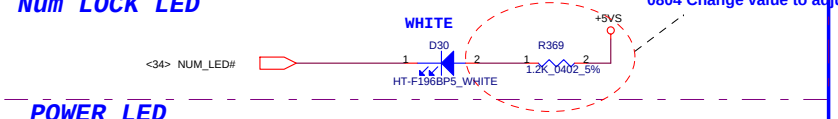
HDD/G-Sensor LED



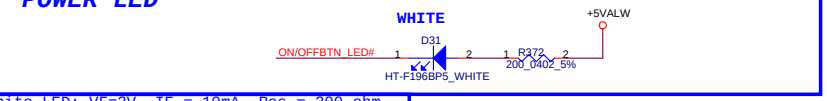
Battery Charge LED



Num LOCK LED

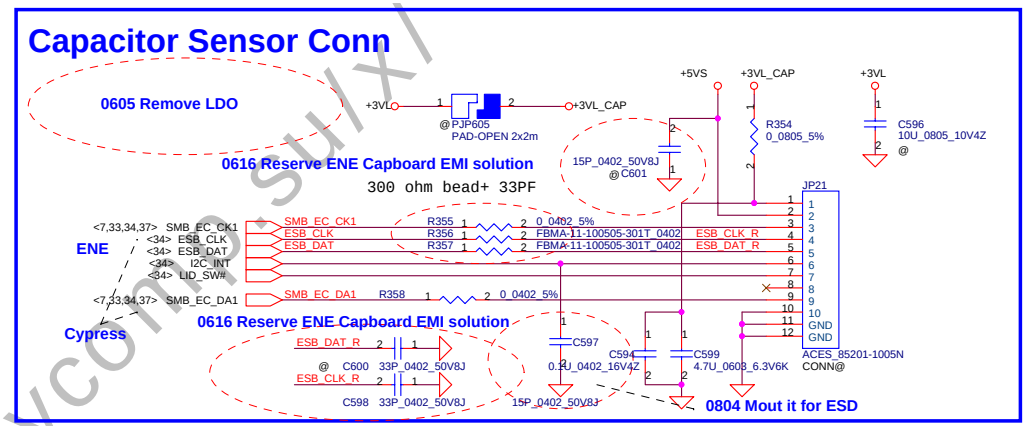


POWER LED

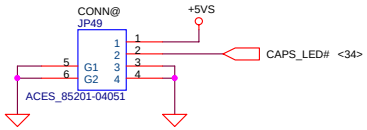


White LED: VF=3V, IF = 10mA, Res = 200 ohm
Amber LED: VF=1.8V, IF = 8mA, Res = 390 ohm

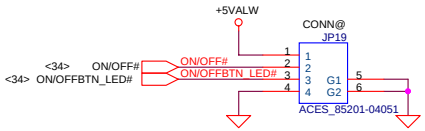
Capacitor Sensor Conn



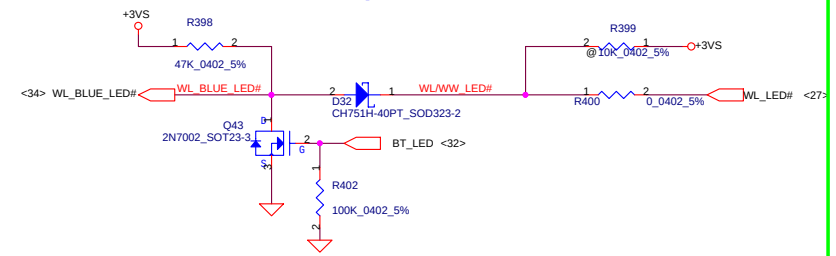
Capa-Lock Conn



ON/OFF Button Connector



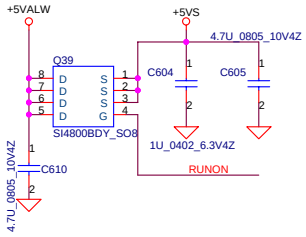
WLAN and BT LED inform pin to KBC



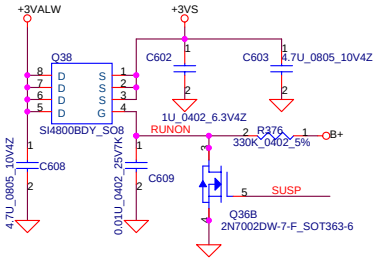
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

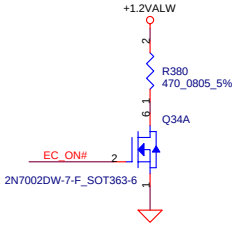
Compal Electronics, Inc.			
Title: TP,MDC,ON/OFF,S/W,LED,Reed			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 35 of 46		

+5VALW TO +5VS

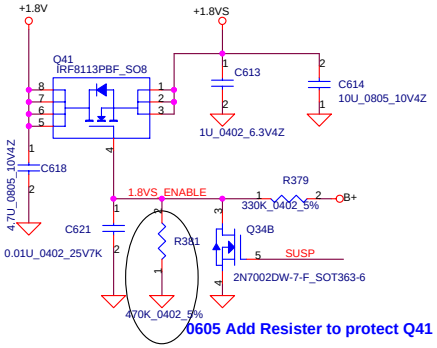


+3VALW TO +3VS

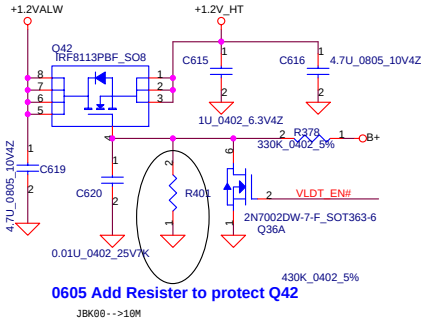


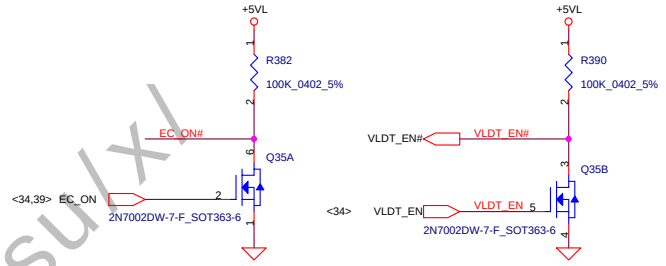


+1.8V TO +1.8VS



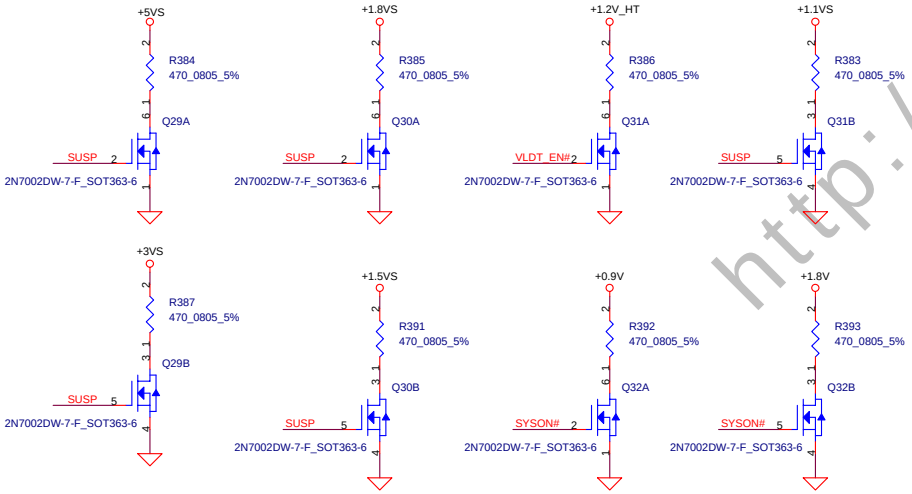
+1.2VALW TO +1.2V_HT

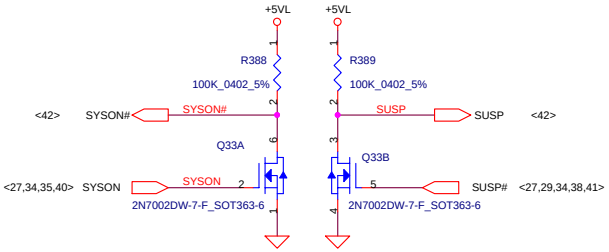


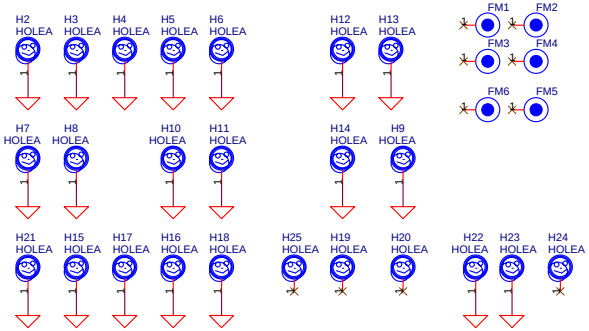


Discharge circuit

JBK00-->750K

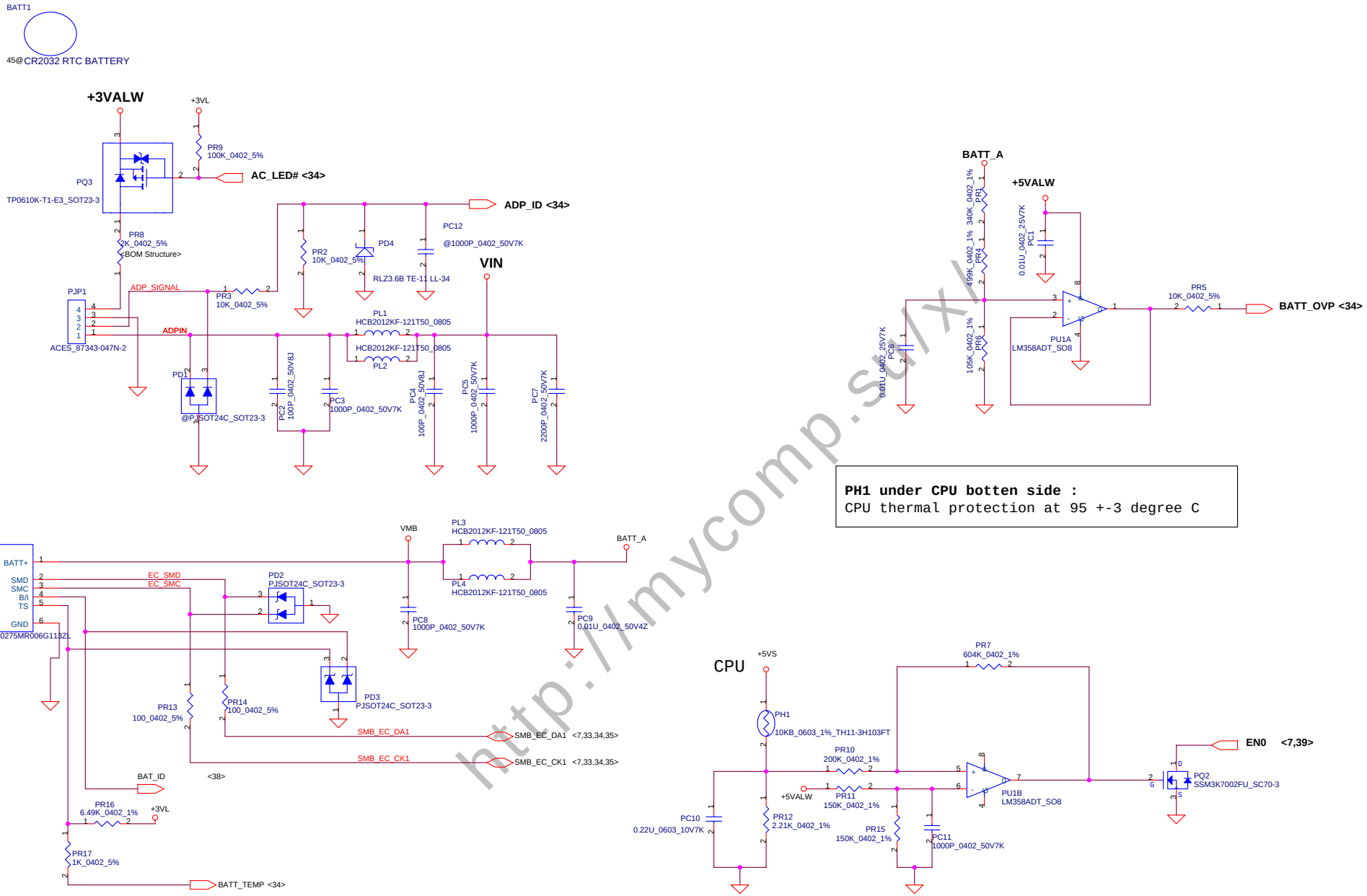






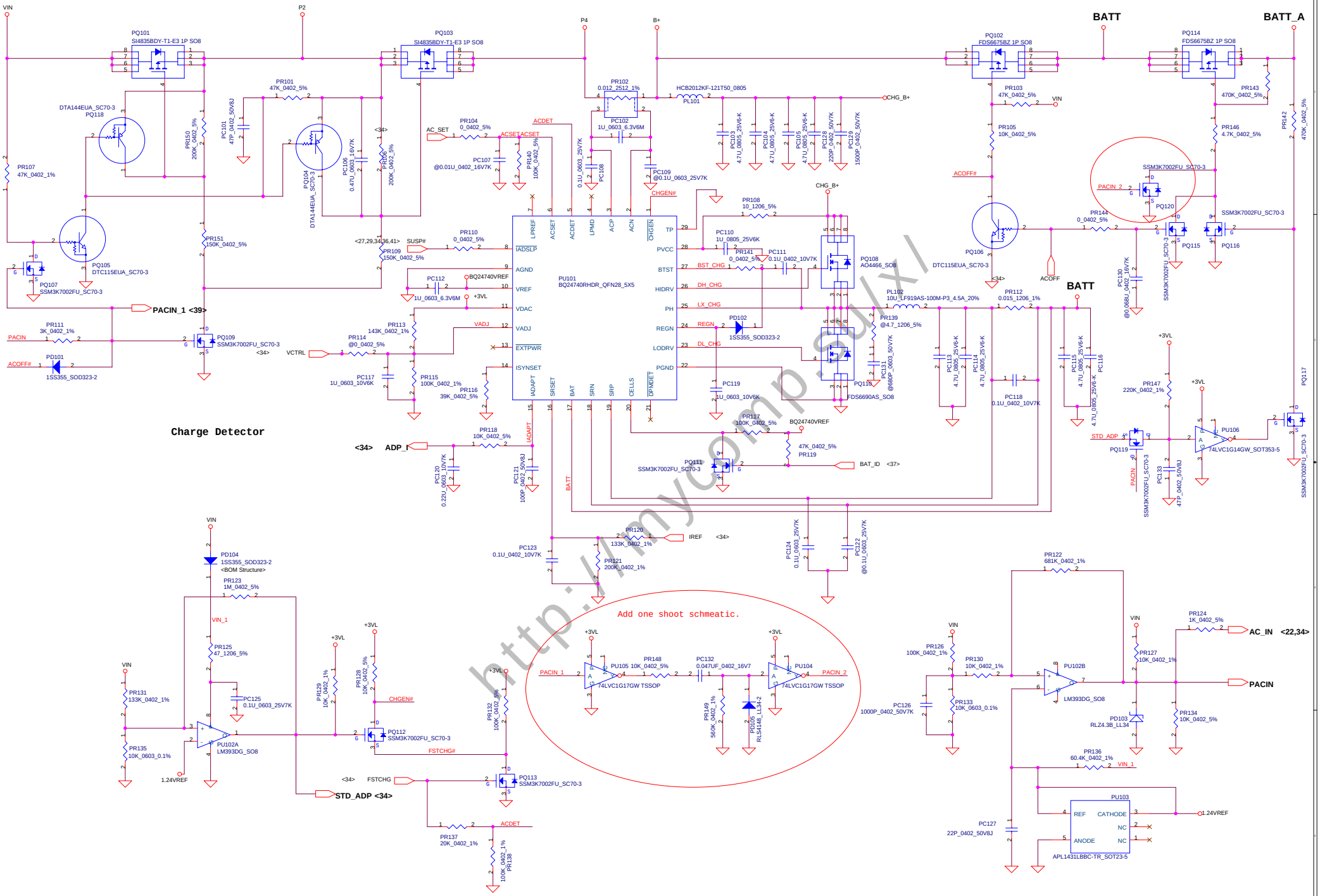
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: DC/DC Circuits			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 36 of 46		



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.	
Title	DC Connector/CPU_OTP
Size: Custom	Document Number: LA-4481P
Rev	0.4
Date: Monday, September 08, 2008	Sheet 37 of 46



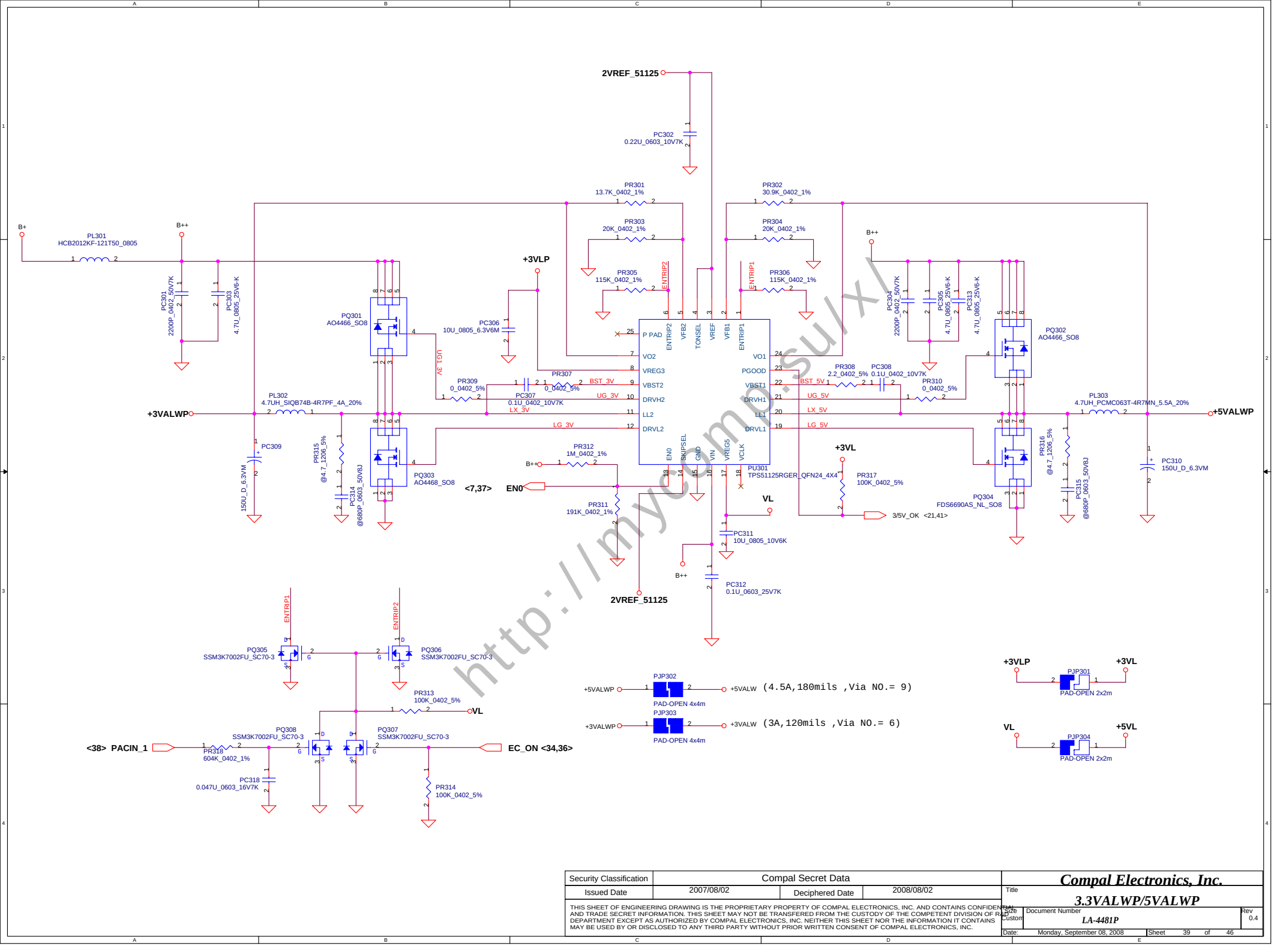
Security Classification	Compal Secret Data		
Issued Date	2007/05/29	Deciphered Date	2008/05/29

Compal Electronics, Inc.

Title: **Charger**

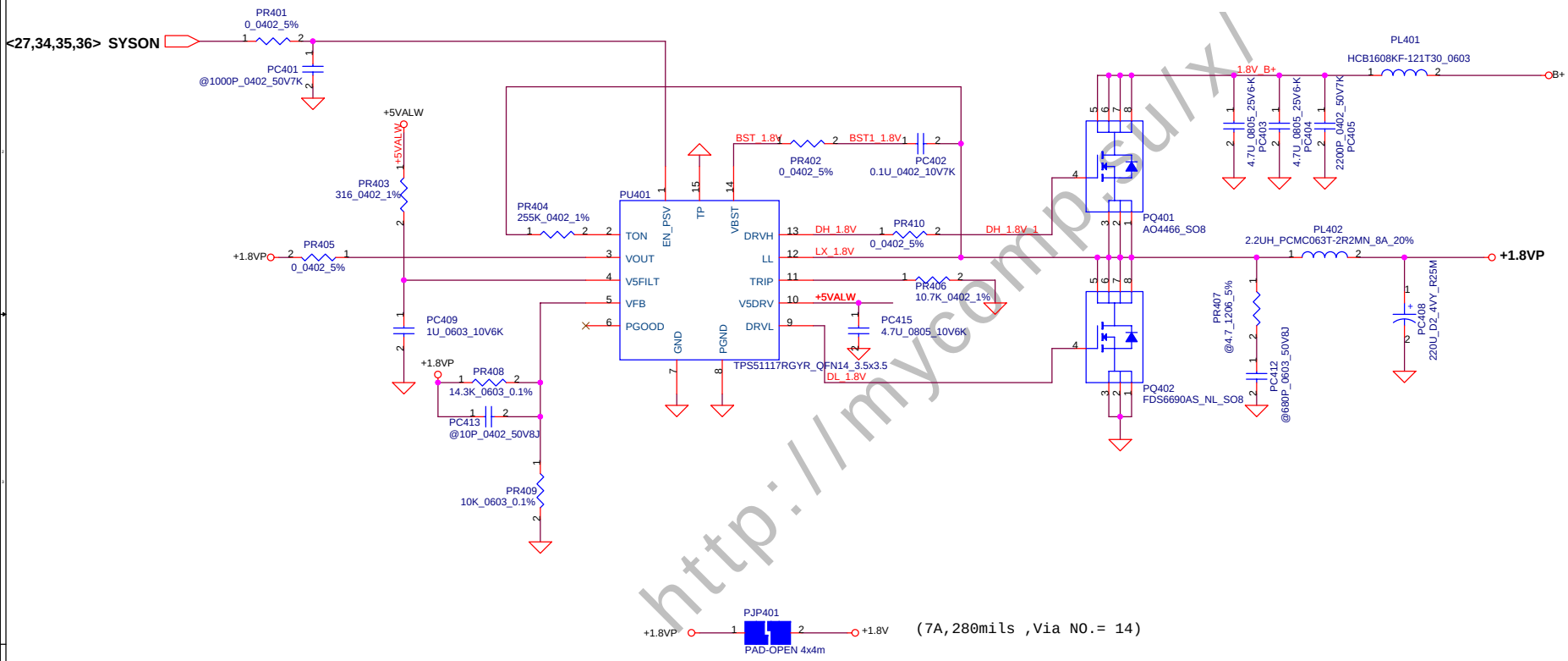
Size	Document Number	Rev
	LA-4481P	0.4

Date:	Sheet	of
Monday, September 08, 2008	38	46



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title	3.3VALWP/5VALWP		
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 39 of 46		



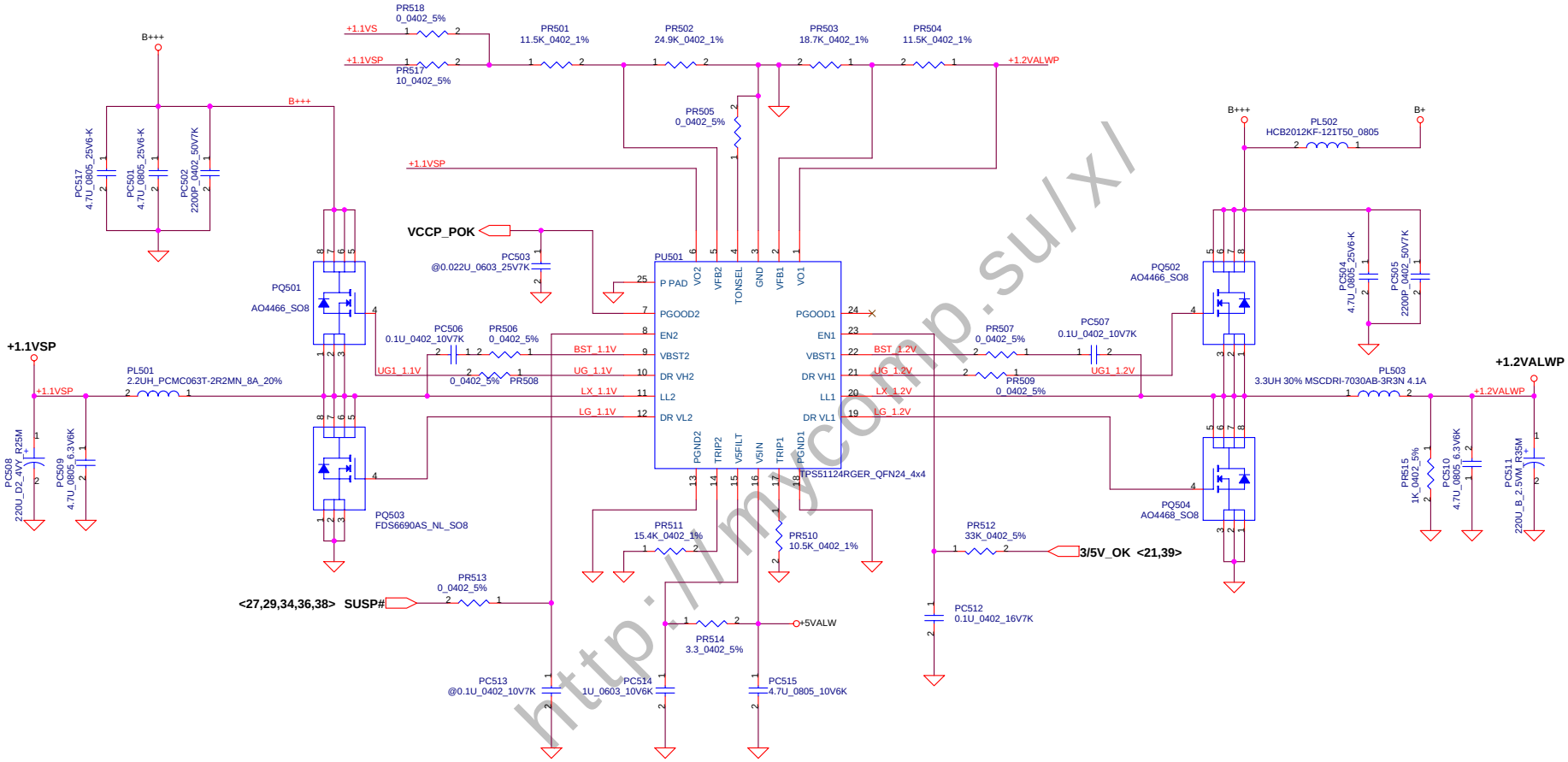
Security Classification	Compal Secret Data		
Issued Date	2007/05/29	Deciphered Date	2008/05/29

Compal Electronics, Inc.

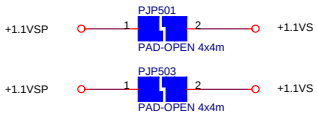
Title: **1.8VP**

Size	Document Number	Rev
	LA-4481P	0.4

Date: Monday, September 08, 2008 Sheet 40 of 46



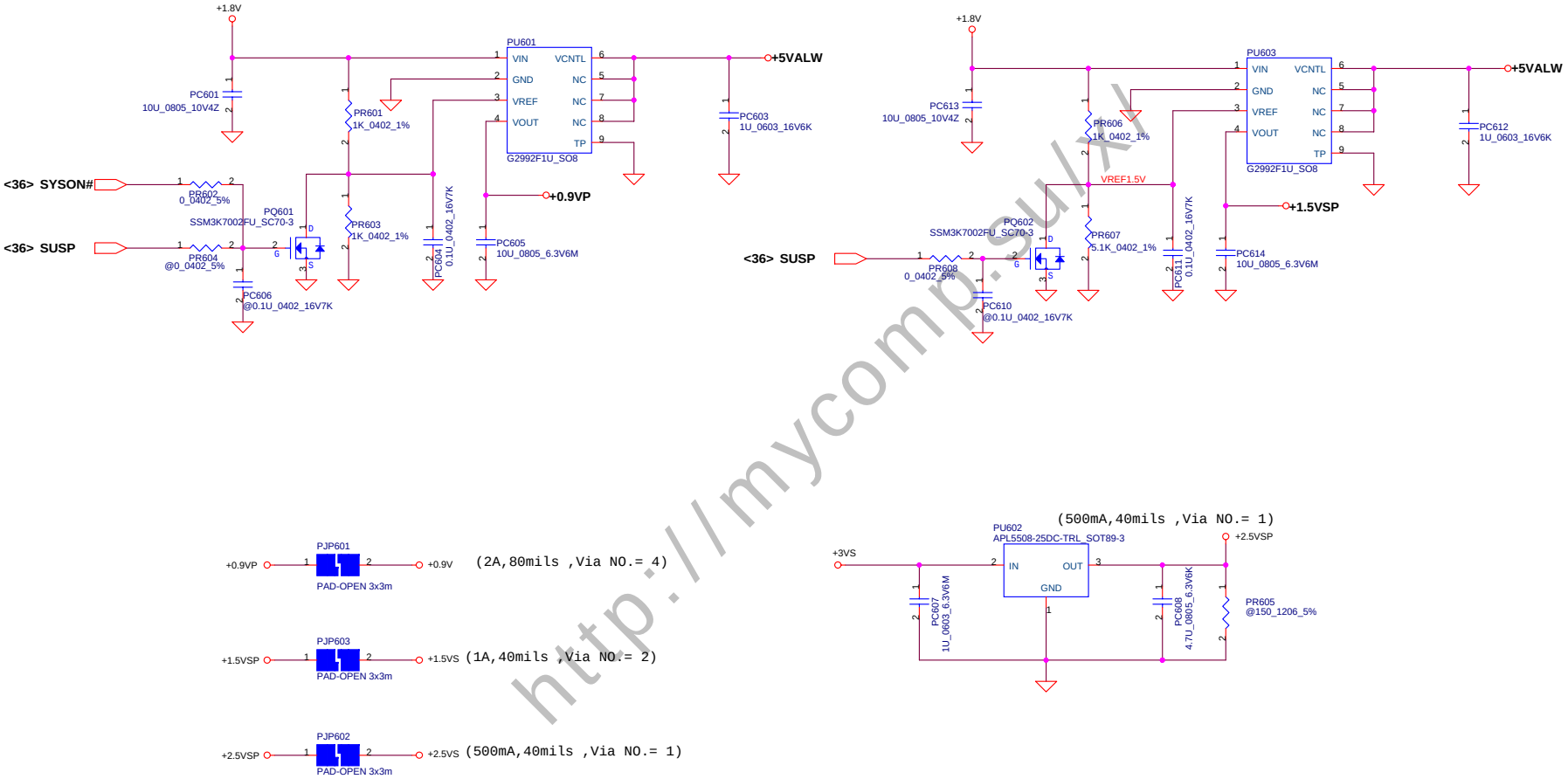
(6A,240mils ,Via NO.=12)



(4A,160mils ,Via NO.=8)

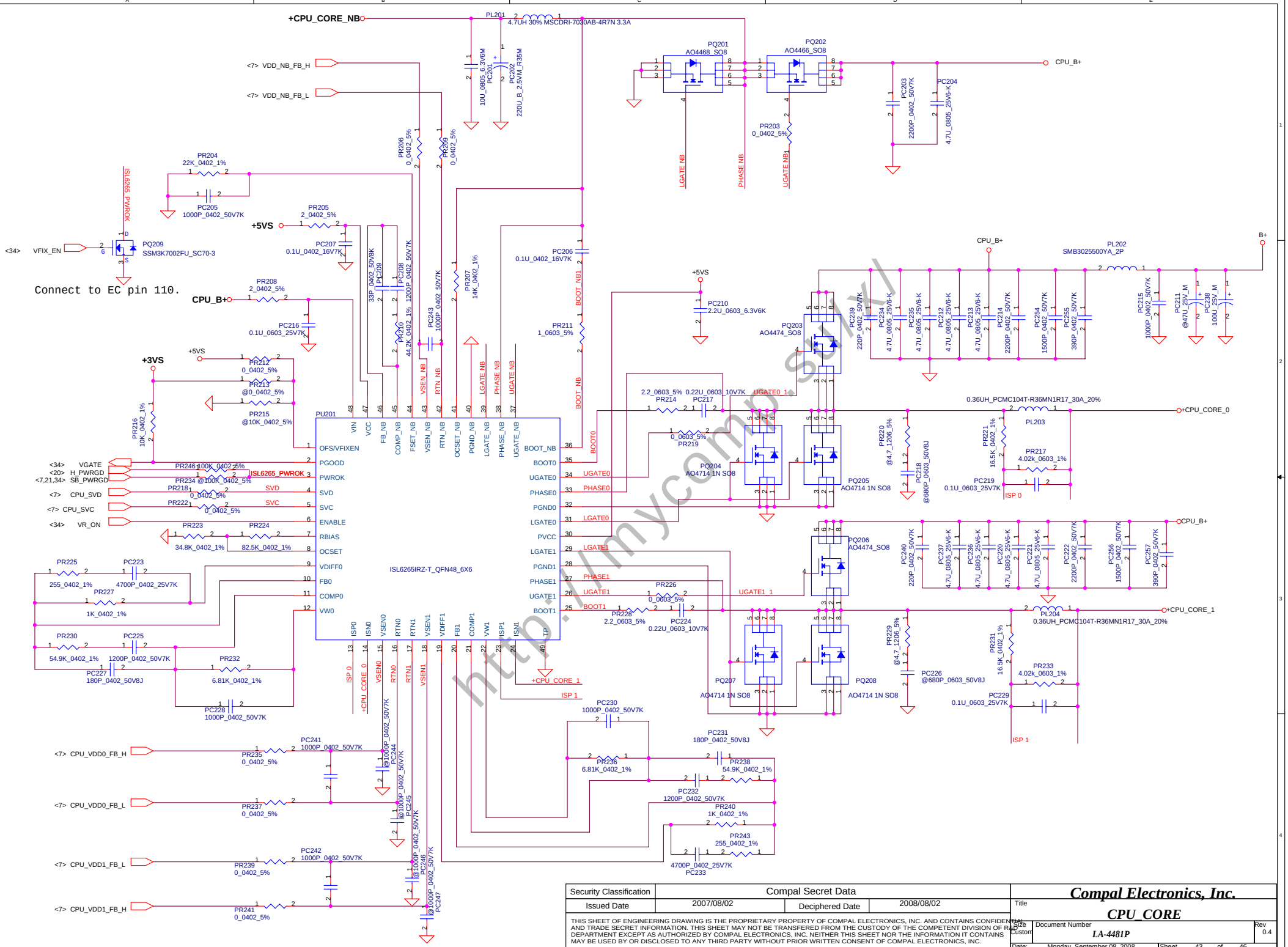
Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: 1.1VSP/1.2VALWP			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 41 of 46		



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title	0.9VSP/2.5VSP/1.5VSP		
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 42 of 46		



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2008/08/02

Compal Electronics, Inc.			
Title: CPU_CORE			
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 43 of 46		

Version Change List (P. I. R. List) for Power Circuit

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	37	DC Connector /CPU_OTP	2008/05/21	PWR	HW request	PR8 change the value from 100 to 2K.	0.2
2	38	Charger	2008/05/21	PWR	PWR request, solve inrush current.	Modify PR102 footprint and PQ101,PQ103 change from AM4835 to SI4835BDY, PQ103 change from AM4835 to FDS6675BZ, PC106 change from 0.22u to 0.47u,	0.2
3	39	3.3VALWP/5VALWP	2008/05/21	PWR	PWR request, modify OCP	PR305 change the value from 140K to 95.3K, PR306 change the value from 133K to 105K, PC318 change the value from 0.022u to 0.047u.	0.2
4	40	1.8VP	2008/05/21	PWR	PWR request, modify OCP.	PR406 change the value from 15.4K to 10.7K.	0.2
5	41	1.1VSP/1.2VALWP	2008/05/21	PWR	For PWR request, prevent leakage power and modify OCP.	Add PR515 1k_0402_5%, PR511 change the value from 18.2K to 15.4K, PR510 change the value from 17.8K to 10.5K.	0.2
6	42	CPU_CORE	2008/05/21	PWR	PWR request	Modify PC206 change the footprint from 0603 to 0402, PR207 change the value from 15.4K to 14K.	0.2
7	38	Charger	2008/06/04	PWR	HP request	Add 4 cell schematic, add net name BATT_A.	0.2
8	37	DC Connector /CPU_OTP	2008/06/12	PWR	Thermal request, prevent PH1 will OTP on TPDL.	PR12 change the value from 2.55K to 2.21K.	0.2
9	38	Charger	2008/06/18	PWR	PWR request	Add PC133 220P_0402, PR147 change the value from 100K_0402_5% to 470K_0402_1%.	0.2
10	39	3.3VALWP/5VALWP	2008/07/21	PWR	PWR request	Add PR311 191K_0402_1%, PR312 1M_0402_1%.	0.2
11	38	Charger	2008/07/28	PWR	PWR request	Add 4 cell one shoot schematic, add net name PACIN_2	0.3

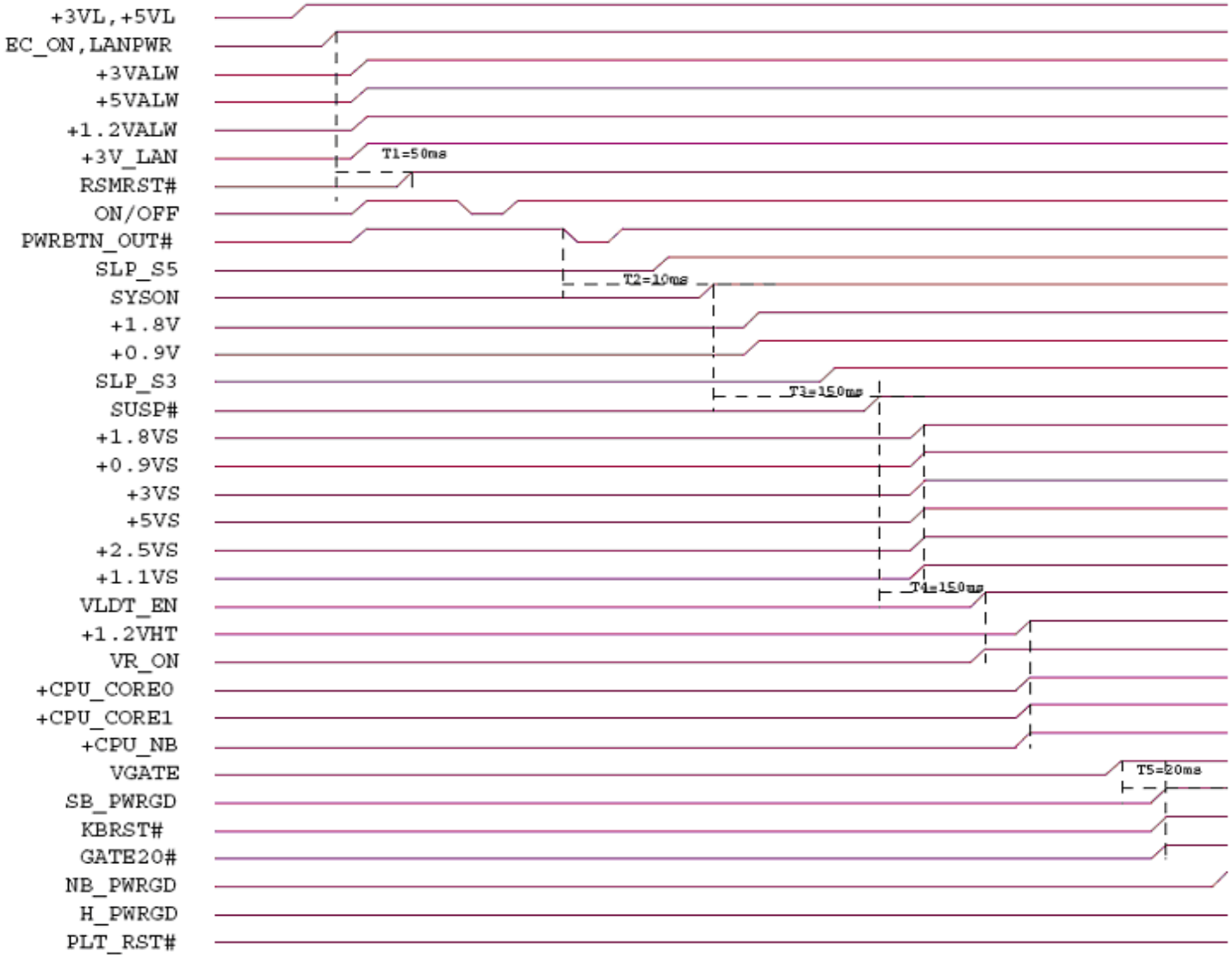
	Item	Fixed Issue and change item	PAGE	Modify List	M.B. Ver.
<2008.05.09>	1	Fix Audio MIC no function and follow Ripley schematics	30	Add R429, R430, R431, C642	0.2
	2	Fix ENE cap-board could not detect	34	Remove R410 & R411 & C627	0.2
	3	Fix BT no function and follow Ripley schematics	32	change BT pin assignment	0.2
<2008.06.05>	1	change power rail to solve +3vs leakage	07	LDT_RST# & H_PWRGD_CPU & LDT_STOP# & CPU_LDT_REQ# change power rail to +1.8VS	0.2
	2	Remove 0 ohm resisters at LDT_STOP# & CPU_LDT_REQ#	12	Remove R54 & R55 (0 ohm)	0.2
	3	Remove 0 ohm resisters at NB_PWRGD	21	Remove R164 (0 ohm)	0.2
	4	Change value to solve AC plugged/unplugged power status issue.	22	Change R408 to 300k ohm	0.2
	5	add 150uF Cap to solve hot-plug for Multi-bay ODD	25	Add C643 150uF	0.2
	6	Remove HP switch Transisters and change Cap size to solve DFB issue.	30	Change C523 & C524 size and remove Q16, Q17, Q24...	0.2
	7	Remove LPC debug connector	33	Remove JP14	0.2
	8	Remove 0 ohm resisters at SPI ROM	33	Remove R320~323 (0 ohm)	0.2
	9	add GND shaping at E-SATA	32	Add E-SATA GND shaping	0.2
	10	Change Keyboard pin assignment to follow Ripley design	34	change pin assignment (follow Ripley)	0.2
	11	Change value to solve AC plugged/unplugged power status issue.	34	change R345 to 300Kohm	0.2
	12	Add Keyboard backlight control circuit	34	add Q24, R426	0.2
	13	Remove Cap-sensor baord power LDO	35	remove U29....	0.2
	14	Add Resister to protect Q42, Q41	36	Add R381 & R401	0.2
<2008.06.16>	1	Add and reserve EMI soulution for ENE cap-board	35	Add C600, C601 and Change R356, R357 size to 300ohm bead	0.2
<2008.06.19>	1	Solve LED panel flash issue when AC IN	18	Add Q4 and R54	0.2
	2	change KB backlight connector pin assignment	34	pin1 & 2 (Power), pin3 & 4 (GND) swapped	0.2
<2008.07.30>	1	Fix external and internal MIC auto switch issue	29	add R301 and pull up +VDDA_CODEC_R	0.3
	2	change FPR connector to fix Assy DFB issue.	32	change pin count from 6 pins to 4 pins	0.3
<2008.08.01>	1	Vari-Bright design change for EC & RS780 common use	18, 12	Add D38, D39, R76	0.3
<2008.08.04>	1	Reserve Caps to protect ESD	35	Add C595, C606	0.3
	2	Change R value for LED brightness	28	Change R276 value to 1.2Kohm	0.3
	3	Fix OTS#0392705 (WLAN Slot Pin 24 is tied to different power than pins 2, 52, 39 and 41)	27	Unmount R245 and install R244	0.3
	4	Reserve ESD diode to protect SPK	30	Add D55, D56	0.3
	5	Fix FPR ESD issue	32	Install D25	0.3
	6	Reserve Cap to protect T/P ON/OFF	35	Add C595, C606	0.3
	7	0804 Change value to adjust LED brightness	35	Change R369 value to 1.2kohm	0.3
	8	Install Cap to fix ESD issue	35	Install C597	0.3
<2008.09.04>	1	Remove Varibright function	12, 18	Uninstall D39, Delete D38	0.4
	2	Fix SMT DFX issue	28	Change D16 footprint	0.4
	3	Follow Vendor suggestion to change CR_LED#	28	Change power rail from+5VS to +3vs	0.4
	4	Reserve R for protect LED panel flash control	18	Add R410	0.4
	5				0.4
	6				0.4

pin1 & 2 (Pow

Security Classification	Compal Secret Data		
Issued Date	2006/02/13	Deciphered Date	2006/03/10

Compal Electronics, Inc.			
Title	HW PIR(1)		
Size: Custom	Document Number: LA-4481P		Rev: 0.4
Date: Monday, September 08, 2008	Sheet 45 of 46		

Calypso power sequence



Security Classification	Compal Secret Data		
Issued Date	2007/08/28	Deciphered Date	2006/03/10

Compal Electronics, Inc.

Title: **Notes List**

Size	Document Number	Rev
Custom	LA-4481P	0.4

Date: Monday, September 08, 2008 | Sheet 46 of 46