Compal Confidential

Couger-Brazos

PBU01 LA-6852P Schematics Document

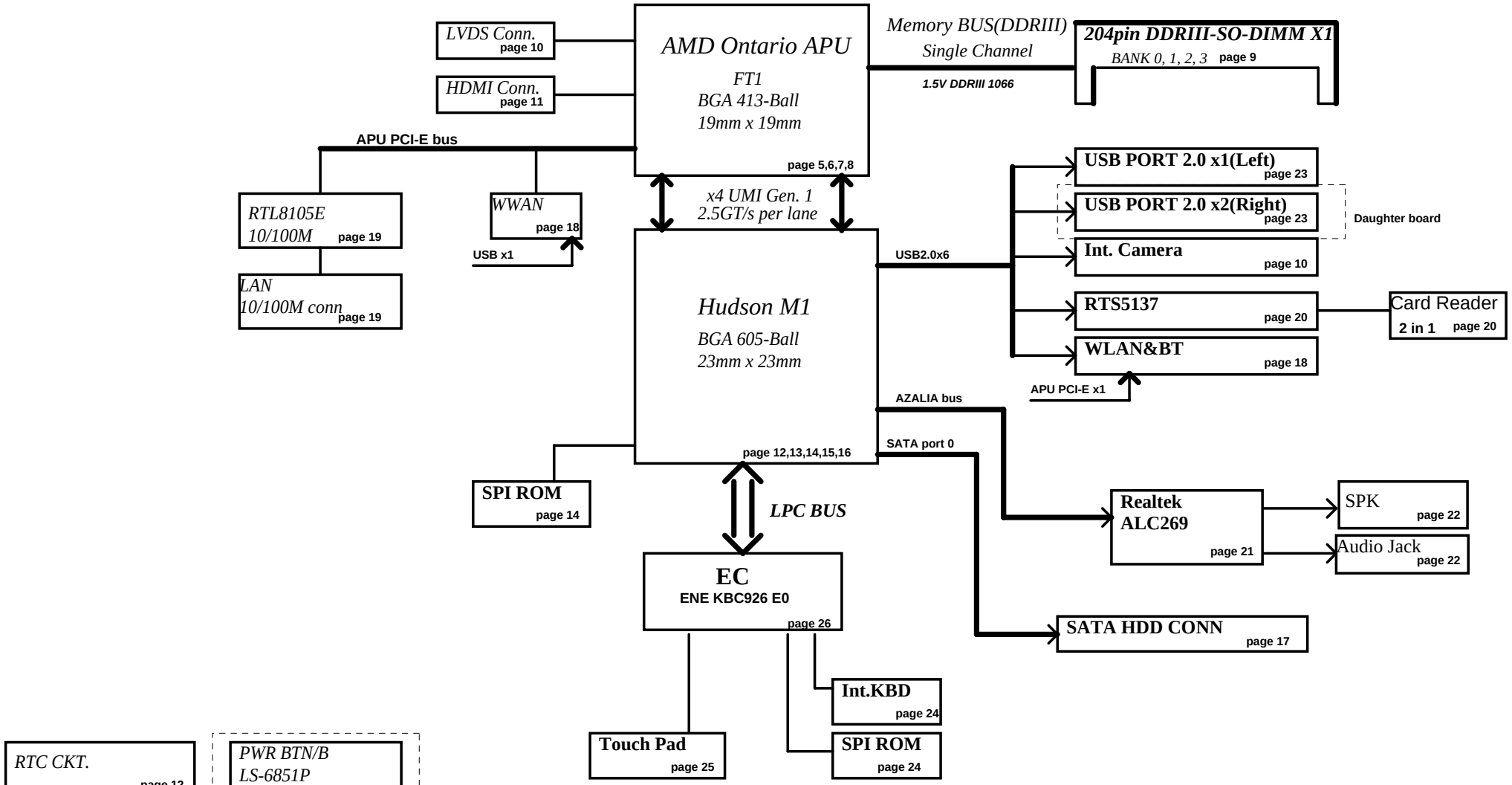
AMD APU Ontario-FT1 + FCH Hudson-M1

2012-2-20

REV:1.A

Security Classification	Compal Secret Data			Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date	2009/10/06	Title: SCHEMTIC A6852
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: 401990 / Rev: D
				Date: Monday, February 20, 2012 / Sheet 1 of 37

Compal confidential
File Name : LA-6852P



RTC CKT. page 12

Power On/Off CKT. page 25

DC/DC Interface CKT. page 27

Power Circuit DC/DC page 30 31 32 33 34 35 36 37

PWR BTN/B LS-6851P

TP&Lid switch/B LS-6852P

USB/B LS-6853P

LED/B LS-6854P

Daughter board

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2009/10/06	Title SCHEMTIC A6852

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 401990		Rev D
Date: Monday, February 20, 2012	Sheet 2 of 37		

Voltage Rails

O MEANS ON X MEANS OFF

power plane / State	B+ +3VL +5VL +RTCVCC	+5VALW +3VALW +1.1VALW	+1.5V	+5VS +3VS +1.8VS +1.5VS +1.1VS +1.0VS +0.75VS +APU_CORE +APU_VDDNB
S0	0	0	0	0
S1	0	0	0	0
S3	0	0	0	X
S5 S4/AC	0	0	X	X
S5 S4/ Battery only	0	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

Symbol Note :

: means Digital Ground : means Analog Ground

@ : means just reserve , no build

DAZ P/N

ZZ1

LA-6852P

1.2G APU P/N

U1

1.2G APU R3

1G2R3@

1.2G APU P/N

U1

1.2G APU R1

1G2R1@

1G APU P/N

U1

1G APU R1

1GR1@

BTO (Build-To-Order) Option Table

Function	Sleep&Charger		Sleep&Music			
Description	Support	No Support	Support	No Support		
BTO	CHG@	non-CHG@	ALC269@	ALC259@		

FCH SM Bus0 Address

Power	Device	HEX	Address
+3VS	DDR SO-DIMM 0	A0 H	1010 0000 b

FCH SM Bus1 Address

Power	Device	HEX	Address

EC SM Bus1 Address

Power	Device	HEX	Address
+3VL	Smart Battery	16 H	0001 011X b

EC SM Bus2 Address

Power	Device	HEX	Address

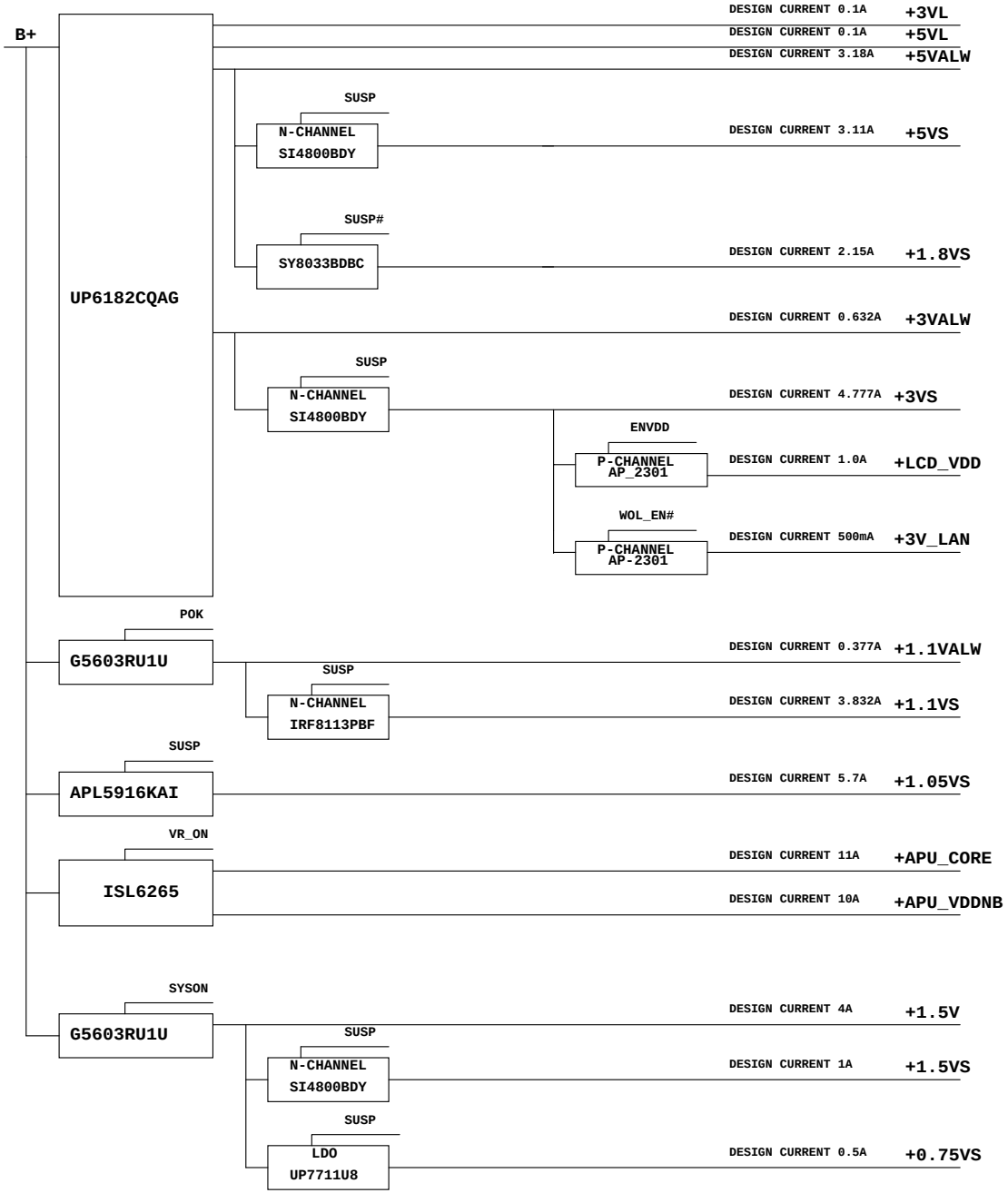
SMBUS Control Table

	SOURCE	BATT	CPU THERMAL SENSOR	SODIMM 0	CLK GEN	WLAN WWAN	LCD DDC ROM	HDMI DDC ROM	APU
EC_SMB_CK1 EC_SMB_DA1	KB926	V							
EC_SMB_CK2 EC_SMB_DA2	KB926								V
LCD_EDID_CLK LCD_EDID_DATA	APU FT1						V		
HDMICLK HDMIDAT	APU FT1							V	
FCH_SMCLK0 FCH_SMDAT0	FCH M1			V					
FCH_SMCLK1 FCH_SMDAT1	FCH M1					V			

08/05 update pin define

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2009/10/06	Title: SCHEMTIC A6852
Size: B	Document Number: 401990		Rev: D
Date: Monday, February 20, 2012	Sheet 3 of 37		

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.



Security Classification	Compal Secret Data		
Issued Date	2008/10/31	Deciphered Date	2009/10/31

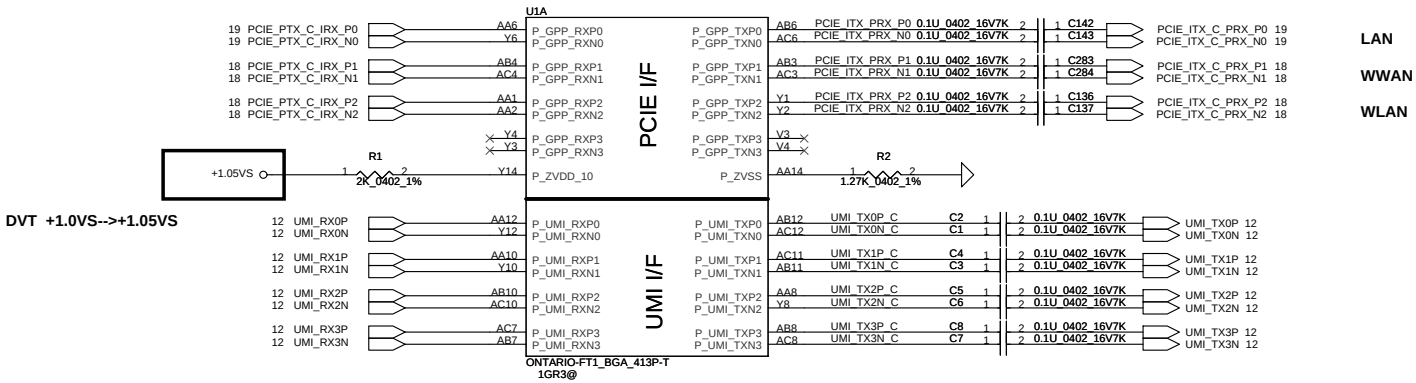
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

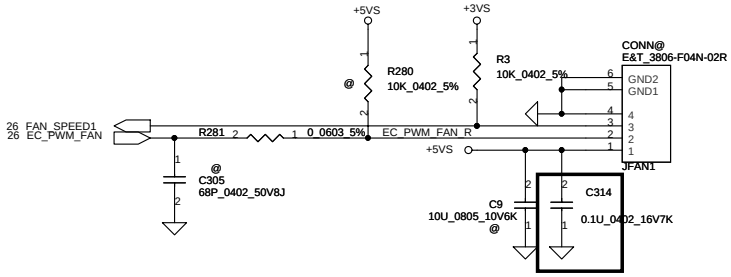
Title: **SCHEMTIC A6852**

Size | Document Number: **401990** | Rev: D

Date: Monday, February 20, 2012 | Sheet 4 of 37



DVT +1.0VS-->+1.05VS

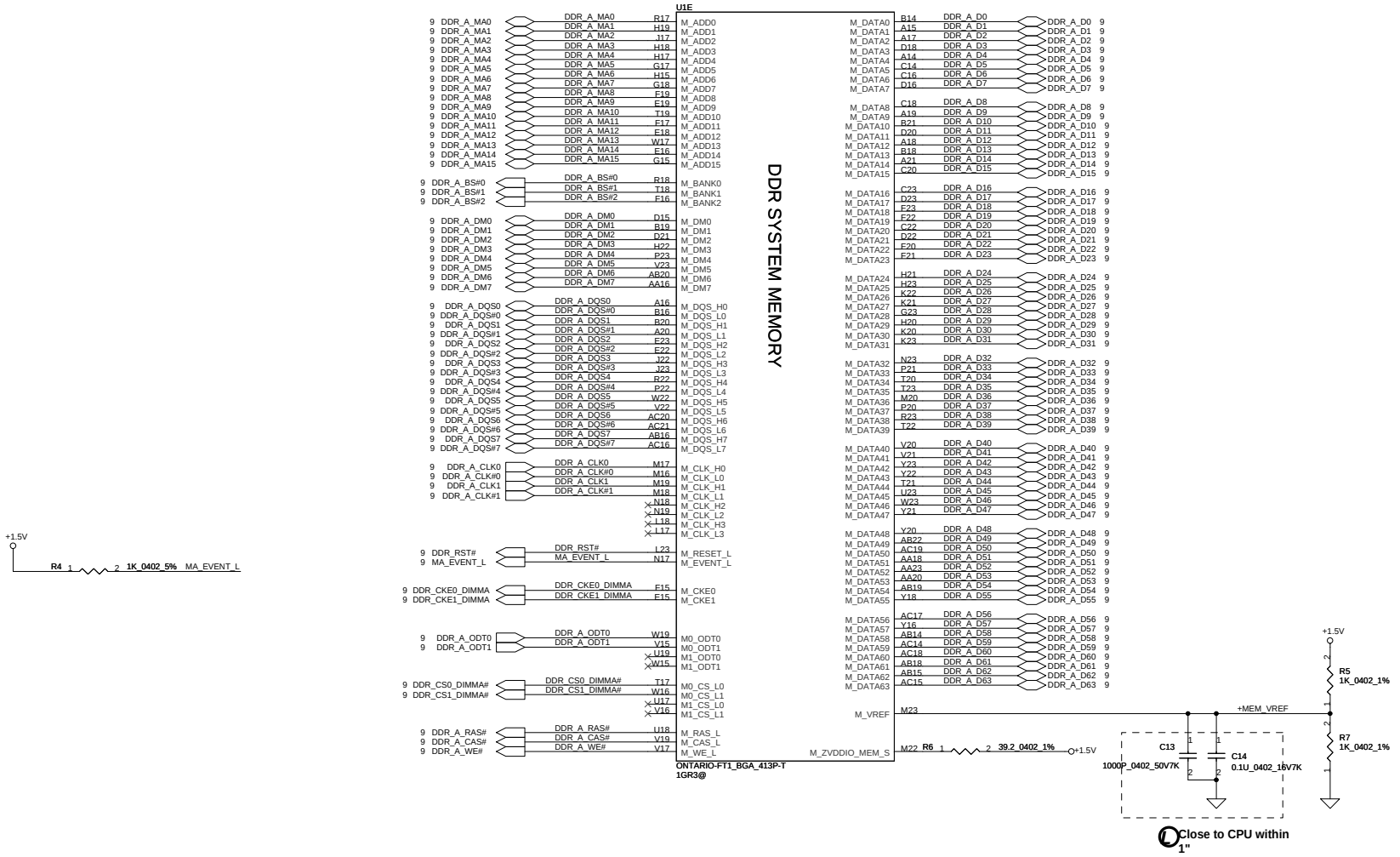


9/6 add C314 for RF

Security Classification	Compal Secret Data		
Issued Date	2008/04/14	Deciphered Date	2009/04/14

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.

Compal Electronics, Inc.			
Title: SCHEMTIC A6852			
Size: Custom	Document Number: 401990		Rev: D
Date: Monday, February 20, 2012	Sheet 5 of 37		



Security Classification	Compal Secret Data		
Issued Date	2010/02/10	Deciphered Date	2011/02/10

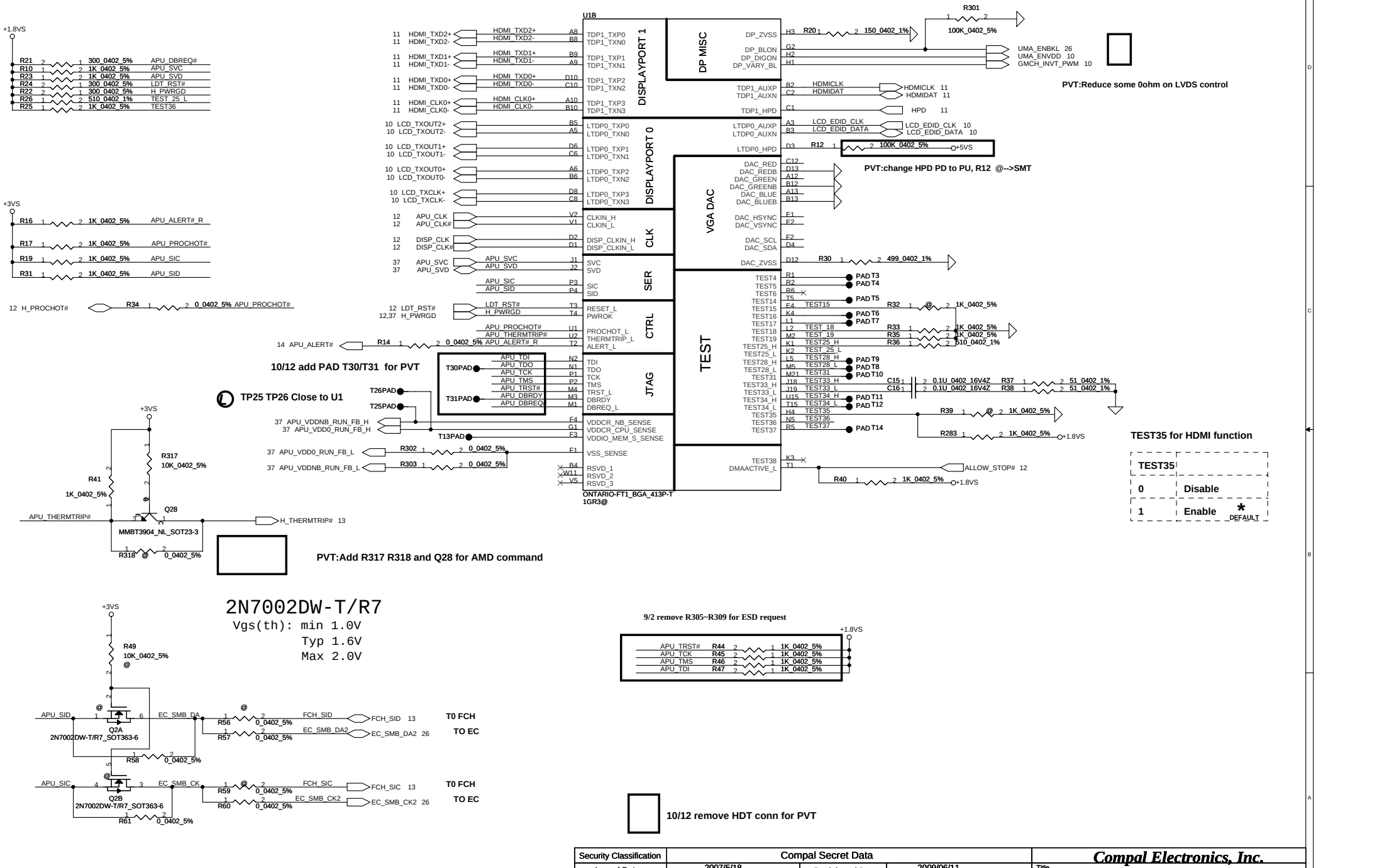
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: **SCHEMTIC A6852**

Size	Document Number	Rev
Custom	401990	D

Date: Monday, February 20, 2012 | Sheet 6 of 37



Security Classification	Compal Secret Data		
Issued Date	2007/5/18	Deciphered Date	2009/06/11

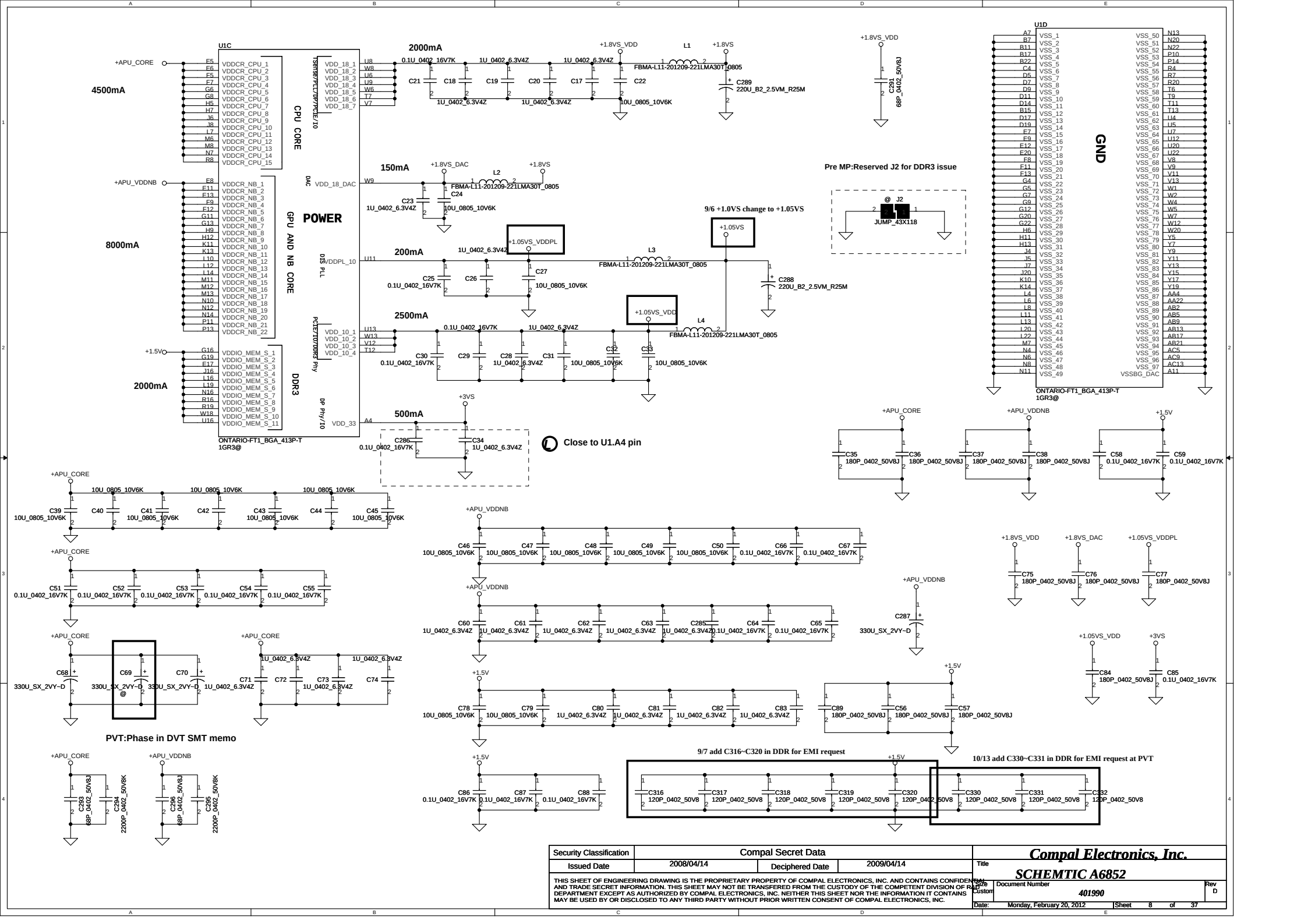
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: **SCHEMTIC A6852**

Size	Document Number	Rev
Custom	401990	D

Date: Monday, February 20, 2012 | Sheet 7 of 37



Security Classification	Compal Secret Data		
Issued Date	2008/04/14	Deciphered Date	2009/04/14

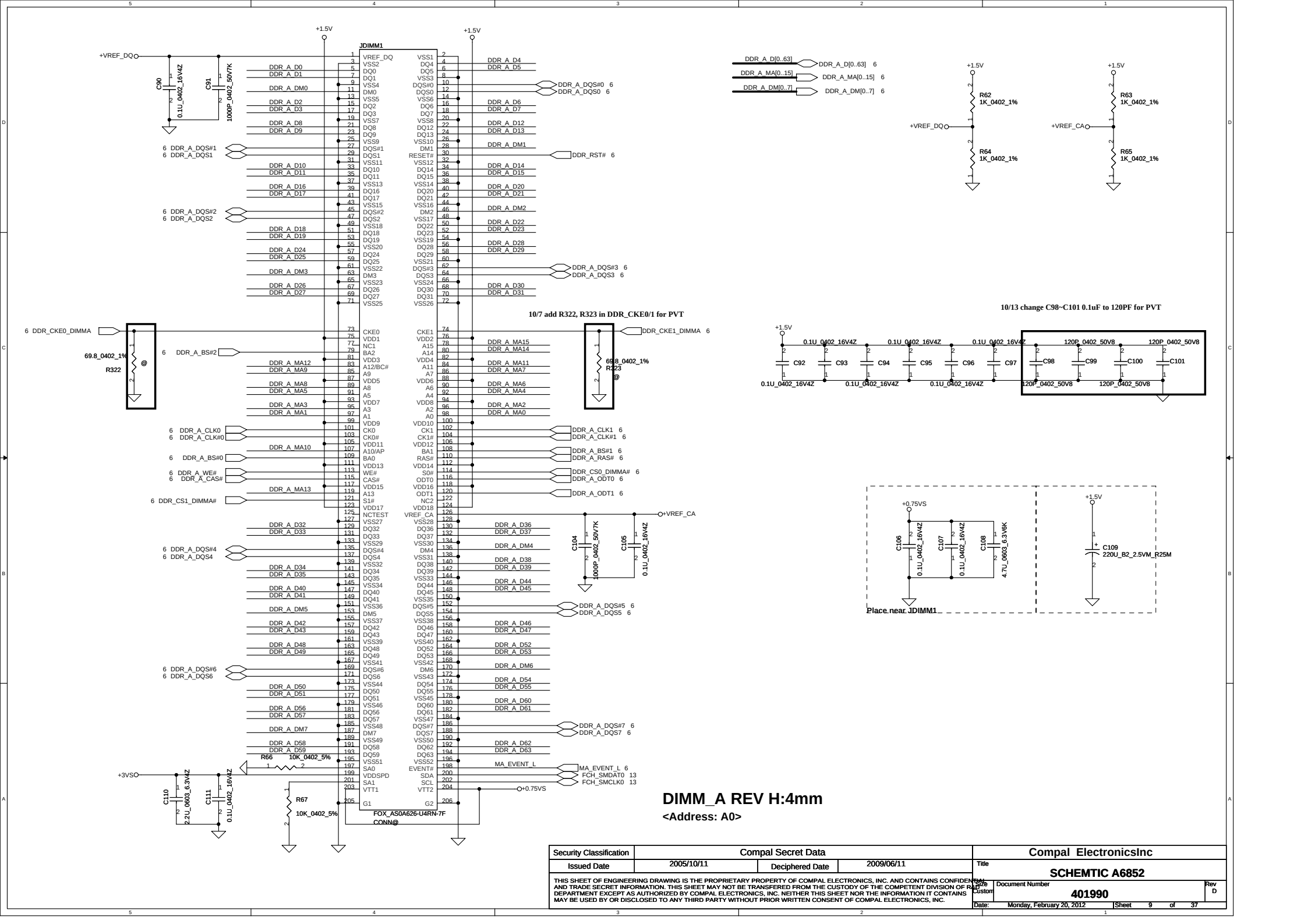
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: **SCHEMTIC A6852**

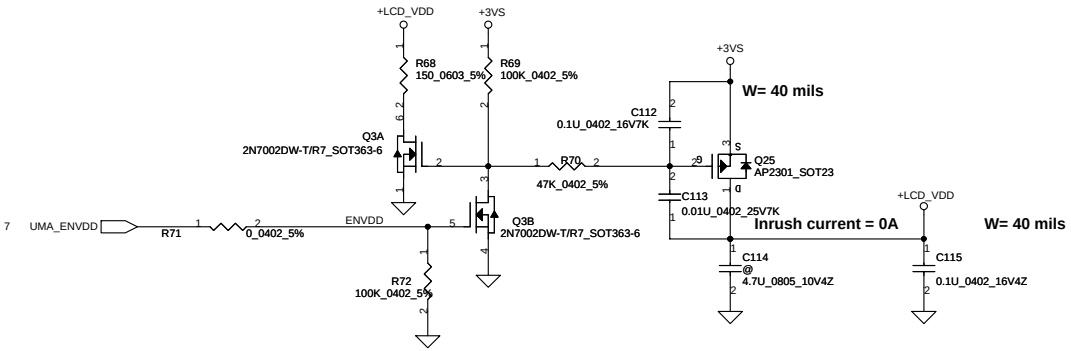
Size	Document Number	Rev
Custom	401990	D

Date: Monday, February 20, 2012 | Sheet 8 of 37

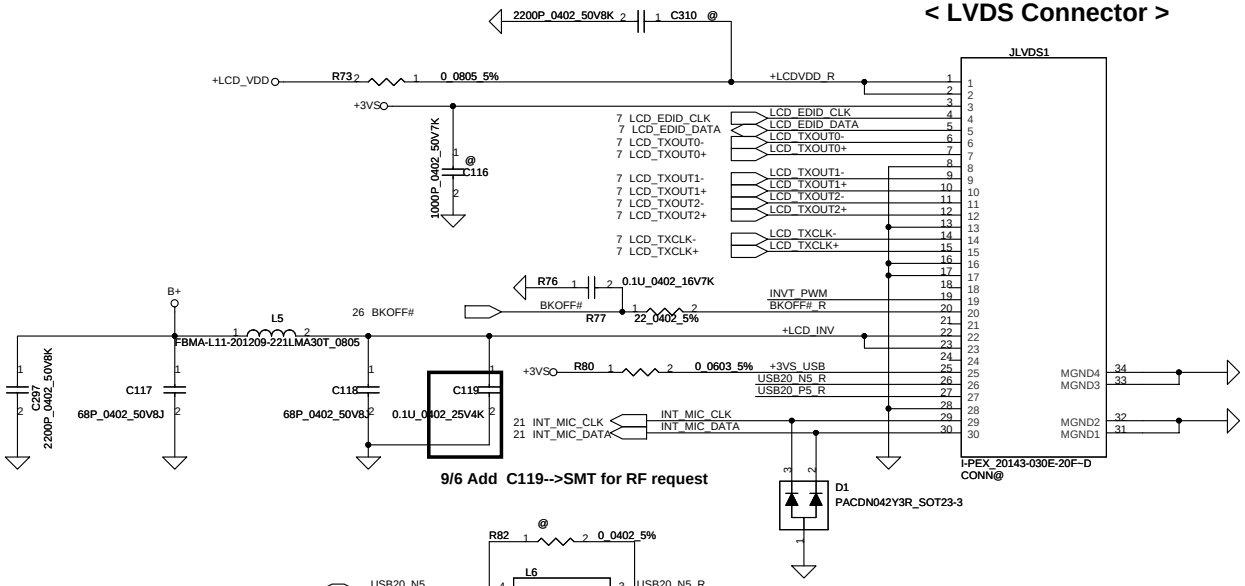


Security Classification	Compal Secret Data		Compal ElectronicsInc
Issued Date	2005/10/11	Deciphered Date 2009/06/11	Title SCHEMTIC A6852
Size Custom	Document Number 401990		Rev D
Date: Monday, February 20, 2012	Sheet 9 of 37		

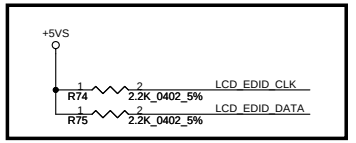
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

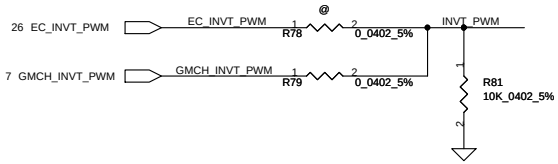


< LVDS Connector >

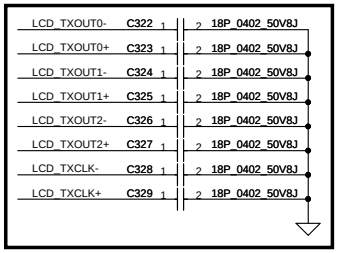


R74, R75 change to 2.2K-->for PVT
+3VS change to +5VS





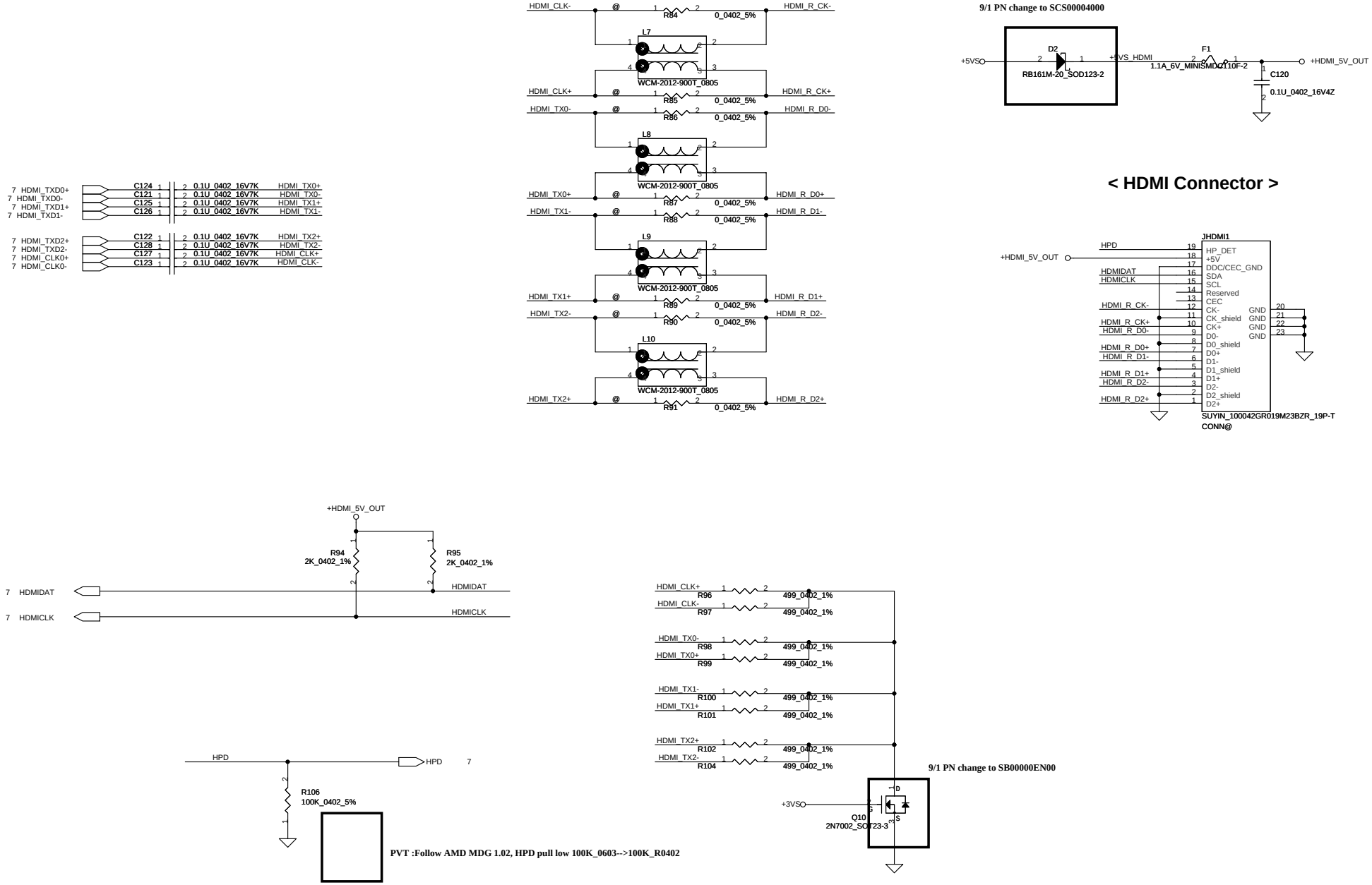
10/12 add C322--C329 for PVT RF request



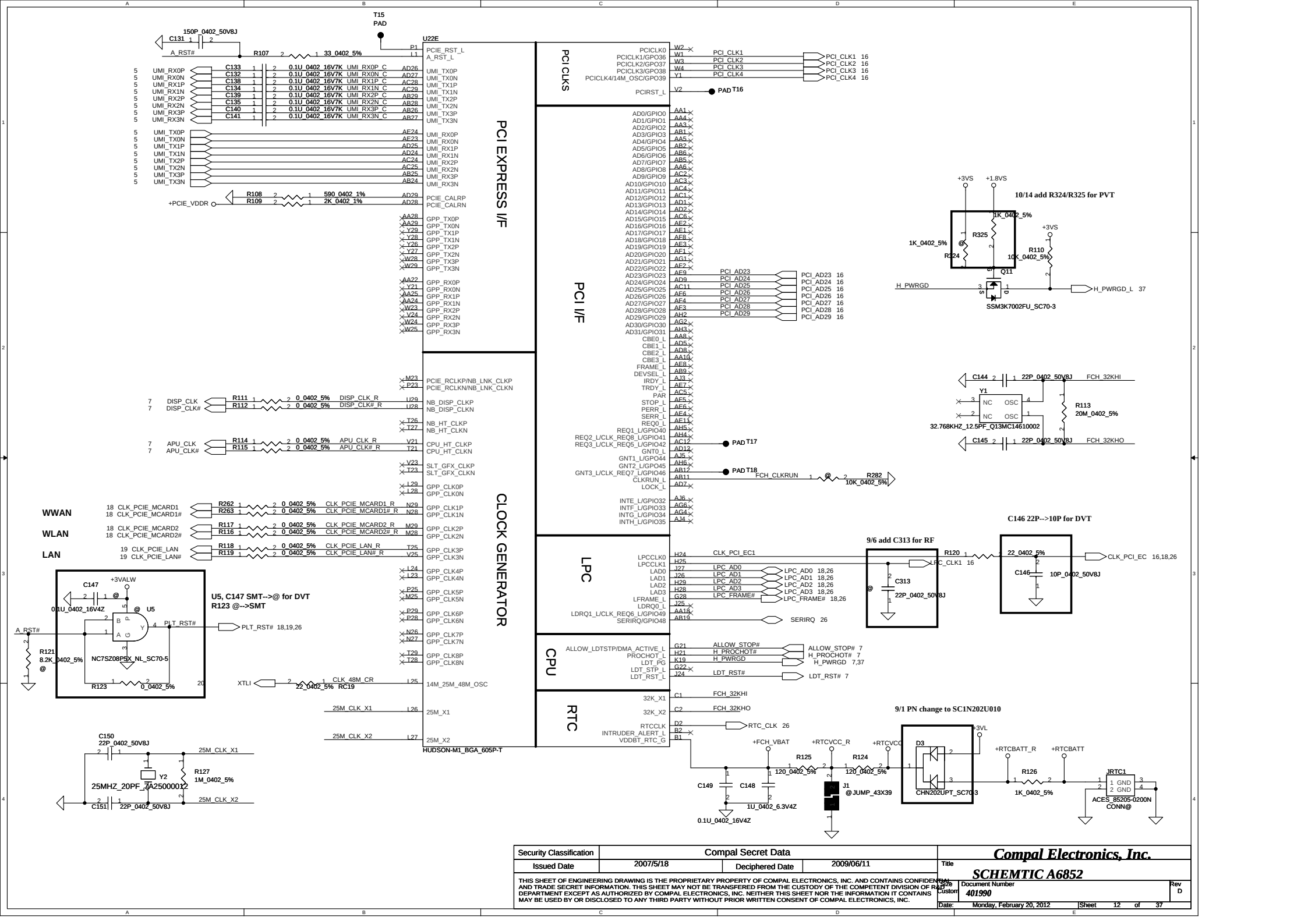
Security Classification	Compal Secret Data		
Issued Date	2008/04/14	Deciphered Date	2009/04/14

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.

Compal Electronics, Inc.	
Title	SCHEMTIC A6852
Size: Custom	Document Number: 401990
Rev	D
Date: Monday, February 20, 2012	Sheet 10 of 37



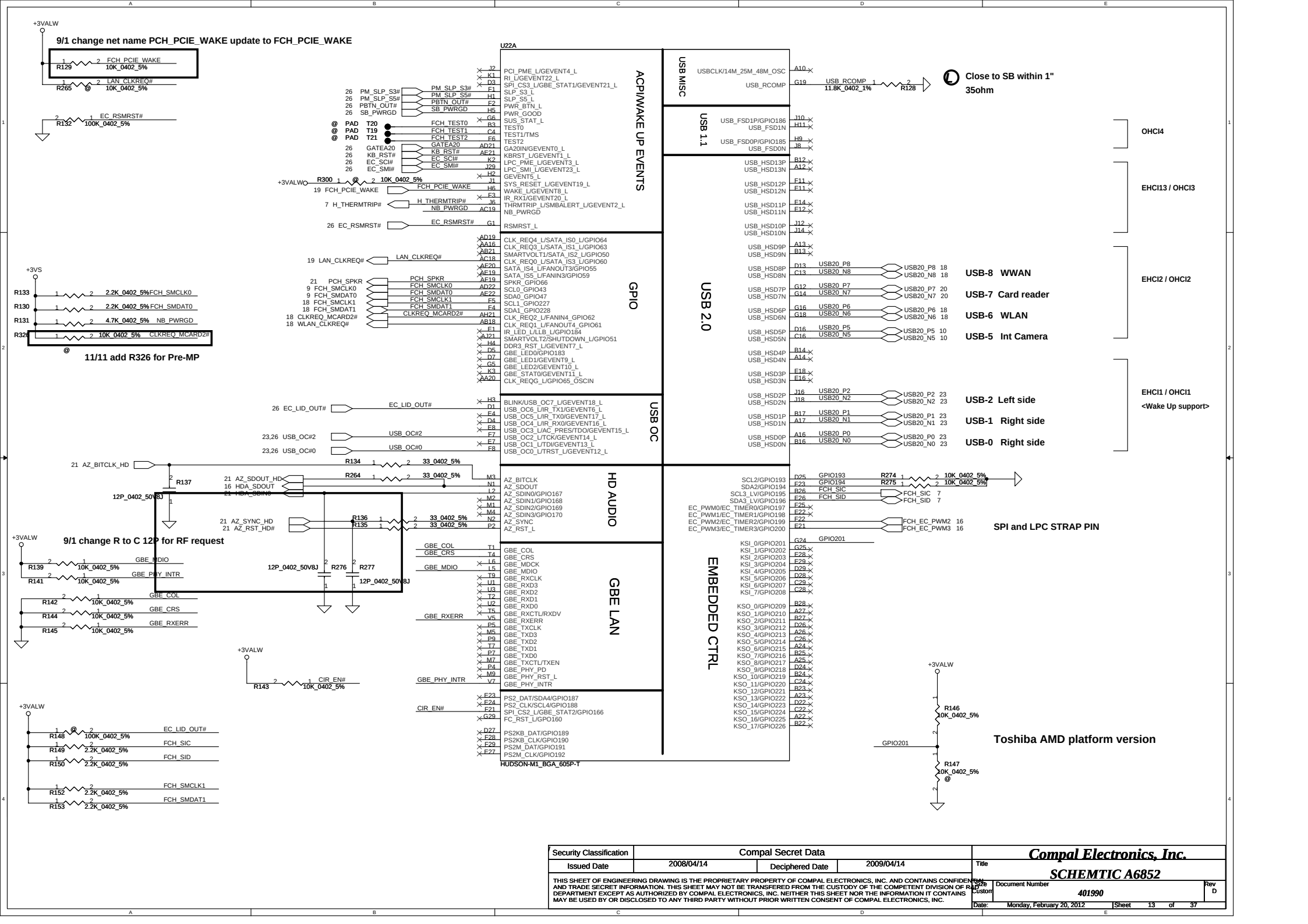
Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2010/03/12	Title SCHEMTIC A6852
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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 Custom / Document Number 401990 / Rev D
			Date: Monday, February 20, 2012 / Sheet 11 of 37



Security Classification	Compal Secret Data		
Issued Date	2007/5/18	Deciphered Date	2009/06/11

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.

Compal Electronics, Inc.	
Title	SCHEMTIC A6852
Size: Custom	Document Number: 401990
Rev	D
Date: Monday, February 20, 2012	Sheet 12 of 37



Security Classification	Compal Secret Data		
Issued Date	2008/04/14	Deciphered Date	2009/04/14

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.

Title	Compal Electronics, Inc.		
	SCHEMTIC A6852		
Size: Custom	Document Number: 401990		Rev: D
Date: Monday, February 20, 2012	Sheet 13 of 37		

HDD

17 SATA_TX0+
17 SATA_TX0-
17 SATA_RX0-
17 SATA_RX0+

U22B

SERIAL ATA

SATA_TX0+	AH9	SATA_TX0P
SATA_TX0-	AJ9	SATA_TX0N
SATA_RX0-	AJ8	SATA_RX0N
SATA_RX0+	AH8	SATA_RX0P
	AH10	SATA_TX1P
	AJ10	SATA_TX1N
	AG10	SATA_RX1N
	AF10	SATA_RX1P
	AG12	SATA_TX2P
	AF12	SATA_TX2N
	AJ12	SATA_RX2N
	AH12	SATA_RX2P
	AH14	SATA_TX3P
	AJ14	SATA_TX3N
	AG14	SATA_RX3N
	AF14	SATA_RX3P
	AG17	SATA_TX4P
	AF17	SATA_TX4N
	AJ17	SATA_RX4N
	AH17	SATA_RX4P
	AJ18	SATA_TX5P
	AH18	SATA_TX5N
	AH19	SATA_RX5N
	AJ19	SATA_RX5P

Close to FCH within 1"

+1.1VS_SATA

R155 2 1 1K_0402_1% SATA_CALRP AB14 SATA_CALRP
R154 2 1 931_0402_1% SATA_CALRN AA14 SATA_CALRN

25 HDD_LED# AD11 SATA_ACT_L/GPIO67

+3VS R157 1 2 10K_0402_5%

T27PAD SATA_X1 AD16 SATA_X1

T28PAD SATA_X2 AC16 SATA_X2

SPI ROM

SPI_SO	J5	SPI_DI/GPIO164
SPI_SI	E2	SPI_DO/GPIO163
SPI_CLK_FCH	K4	SPI_CLK/GPIO162
SPI_SB_CS0#	K9	SPI_CS1_L/GPIO165
	G2	ROM_RST_L/GPIO161

HUDSON-M1_BGA_605P-T

GPIOD

FC_CLK	AH28
FC_FBCLKOUT	AG28
FC_FBCLKIN	AF26
FC_OE_L/GPIOD145	AF28
FC_AVD_L/GPIOD146	AG29
FC_WE_L/GPIOD148	AG26
FC_CE1_L/GPIOD149	AF27
FC_CE2_L/GPIOD150	AF29
FC_INT1/GPIOD144	AE29
FC_INT2/GPIOD147	AH27
FC_ADQ0/GPIOD128	AJ27
FC_ADQ1/GPIOD129	AJ26
FC_ADQ2/GPIOD130	AH25
FC_ADQ3/GPIOD131	AH24
FC_ADQ4/GPIOD132	AG23
FC_ADQ5/GPIOD133	AH23
FC_ADQ6/GPIOD134	AJ22
FC_ADQ7/GPIOD135	AG21
FC_ADQ8/GPIOD136	AF21
FC_ADQ9/GPIOD137	AH22
FC_ADQ10/GPIOD138	AJ23
FC_ADQ11/GPIOD139	AF23
FC_ADQ12/GPIOD140	AJ24
FC_ADQ13/GPIOD141	AJ25
FC_ADQ14/GPIOD142	AG25
FC_ADQ15/GPIOD143	AH26

HW MONITOR

9/6 net name GPIO32 BT_PWR# change to GPIO54 BT_OFF#
net name GPIO33 3G_OFF# change to GPIO58 WWAN_OFF#

FANOUT0/GPIO52	W5		
FANOUT1/GPIO53	W6		
FANOUT2/GPIO54	Y9	BT_OFF#	BT_OFF# 18
FANIN0/GPIO56	W7		
FANIN1/GPIO57	V9		
FANIN2/GPIO58	W8		WWAN_OFF# 18
TEMPIN0/GPIO171	B6	TEMPIN0	R266 1 2 10K_0402_5%
TEMPIN1/GPIO172	A6	TEMPIN1	R267 1 2 10K_0402_5%
TEMPIN2/GPIO173	A5	TEMPIN2	R268 1 2 10K_0402_5%
TEMPIN3/TALERT_L/GPIO174	B5		APU_ALERT# 7
TEMP_COMM	C7		
VIN0/GPIO175	A3	ACIN_SB	
VIN1/GPIO176	B4	GPIO176	R269 1 2 10K_0402_5%
VIN2/GPIO177	A4	GPIO177	R270 1 2 10K_0402_5%
VIN3/GPIO178	C5	SLP_CHG_M3	
VIN4/GPIO179	A7	GPIO179	R271 1 2 10K_0402_5%
VIN5/GPIO180	B7	SLP_CHG_M4	
VIN6/GBE_STAT3/GPIO181	B8	GPIO181	R272 1 2 10K_0402_5%
VIN7/GBE_LED3/GPIO182	A8	GPIO182	R273 1 2 10K_0402_5%
NC1	G27		
NC2	Y2		

SLP_CHG_M3 23
SLP_CHG_M4 23

R156 1 2 150K_0402_5% +3VALW

D4 2 1 ACIN 26,32
RB751V-40 SOD-323

+3VALW

SLP_CHG_M3 R158 1 2 100K_0402_5%
SLP_CHG_M4 R159 1 2 100K_0402_5%

SPI_CLK_FCH

@ R160 1 2 0_0402_5%

@ C154 2 1 22P_0402_50V8J

PVT:Phase in DVT SMT memo

1012 change footprint to SA00003FO00 for PVT

+3VALW +3VALW

U6

SPI_SB_CS0# 1 CS# VCC 8
SPI_SO 2 DO(IO1) HOLD#(IO3) 7
3 WP#(IO2) CLK 6
4 GND DI(IO0) 5

20mils

SPI_CLK_FCH
SPI_SI

C153 1 2 68P_0402_50V8J

W25Q16BVSSIG_SO8

Security Classification	Compal Secret Data		
Issued Date	2008/04/14	Deciphered Date	2009/04/14

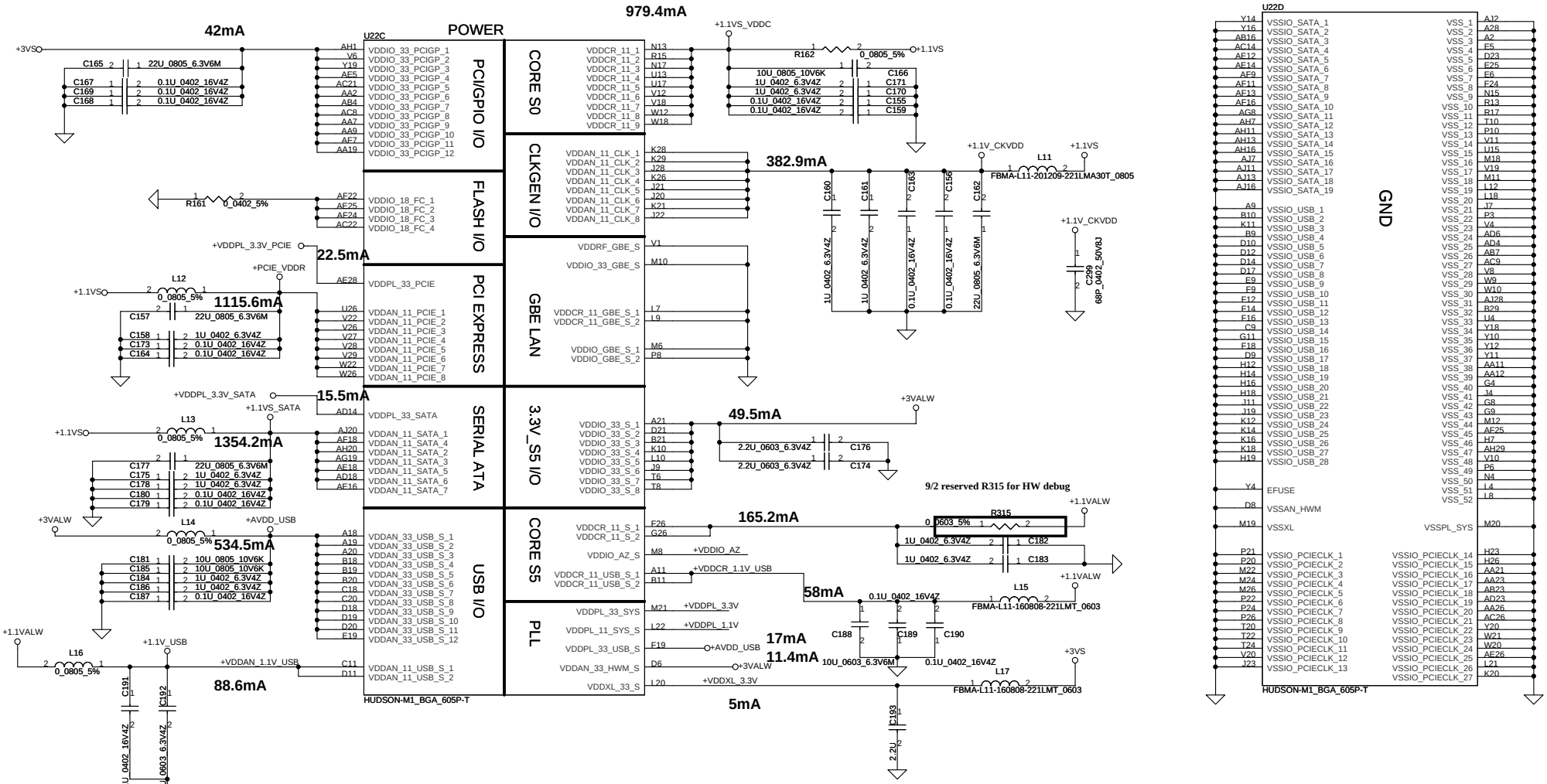
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size: Custom | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 14 of 37



Security Classification	Compal Secret Data		
Issued Date	2008/04/14	Deciphered Date	2009/04/14

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.

Compal Electronics, Inc.			
Title: SCHEMTIC A6852			
Size: Custom	Document Number: 401990		Rev: D
Date: Monday, February 20, 2012	Sheet 15 of 37		

REQUIRED STRAPS

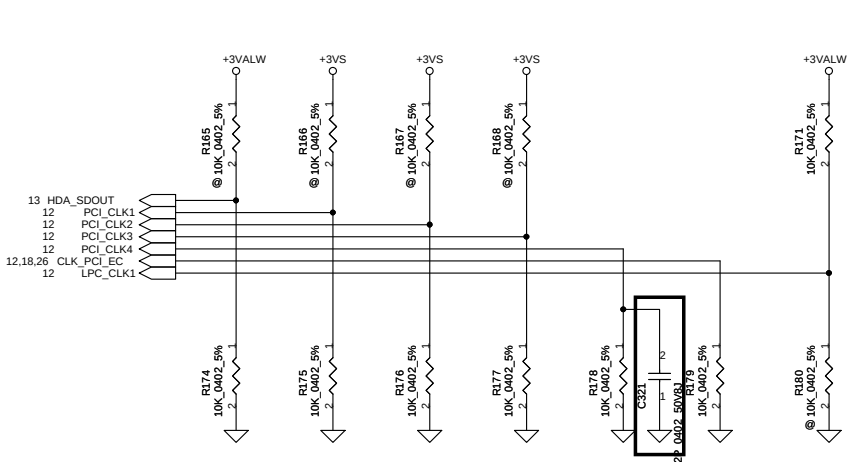
Check Internal PU/PD

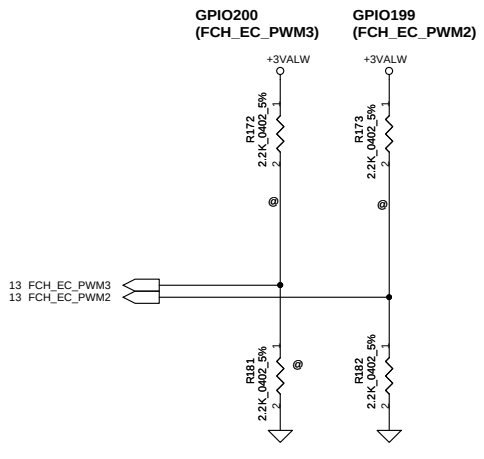
	AZ_SDOUT	PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4	CLK_PCI_EC	LPC_CLK1
PULL HIGH	LOW POWER MODE	ALLOW PCIE GEN2	WATCHDOG TIMER ENABLE	USE DEBUG STRAP	Inter CLK Gen Mode Disable	EC ENABLE	CLOCKGEN ENABLE * DEFAULT
PULL LOW	Performance MODE * DEFAULT	FORCE PCIE GEN1 * DEFAULT	WATCHDOG TIMER DISABLE * DEFAULT	IGNORE DEBUG STRAP * DEFAULT	Inter CLK Gen Mode Enable * DEFAULT	EC DISABLE * DEFAULT	CLOCKGEN DISABLE

		GPIO200 (FCH_EC_PWM3)	GPIO199 (FCH_EC_PWM2)
	Reserved	2.2k pull down	2.2k pull down
*	SPI	Not contact	2.2k pull down
	LPC	2.2k pull down	Not contact
	Reserved	Not contact	Not contact

DEFAULT

07/21 Follow AMD 47791_SCL





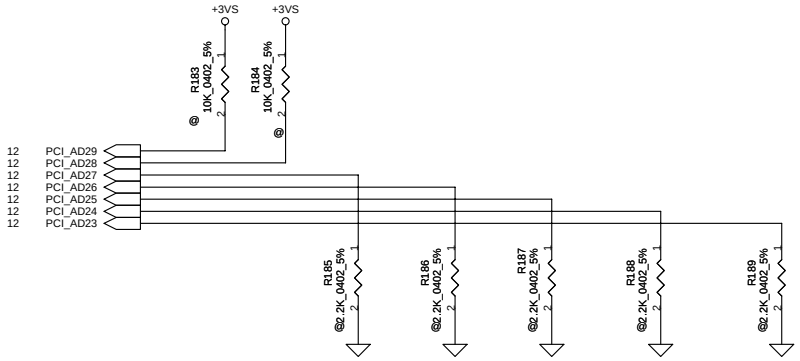
9/7 add C321 for RF request

11/18 C321 @-->SMT for RF request

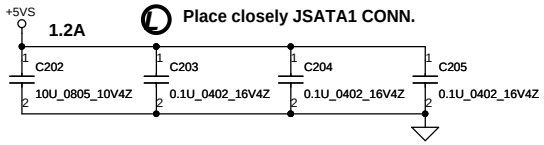
DEBUG STRAPS

M1 HAS 15K INTERNAL PU FOR PCI_AD[27:23]

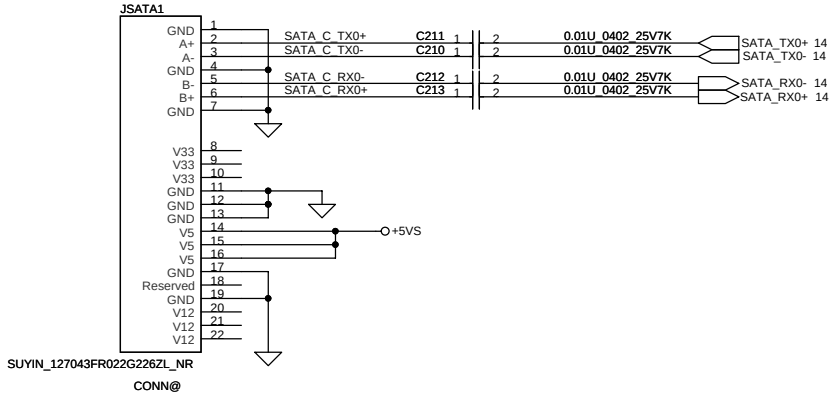
		PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH		USE PCI PLL DEFAULT	DISABLE ILA AUTORUN DEFAULT	USE FC PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	DISABLE PCI MEM BOOT DEFAULT
PULL LOW		BYPASS PCI PLL	ENABLE ILA AUTORUN	BYPASS FC PLL	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2009/10/06	Title SCHEMTIC A6852
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 Custom / Document Number 401990 / Rev D
			Date: Monday, February 20, 2012 / Sheet 16 of 37



< SATA Connector >



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2009/04/07	Deciphered Date	2012/10/21

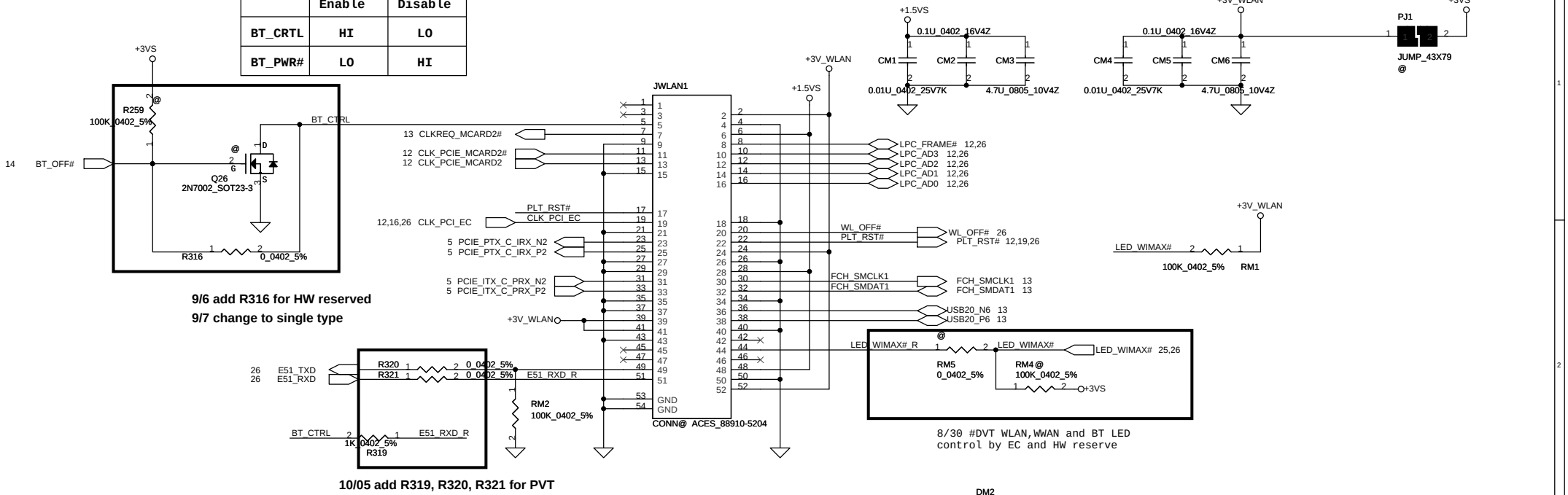
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Title	SCHEMTIC A6852		
Size: Custom	Document Number: 401990		Rev: D
Date: Monday, February 20, 2012	Sheet 17 of 37		

WLAN&BT Combo module circuits

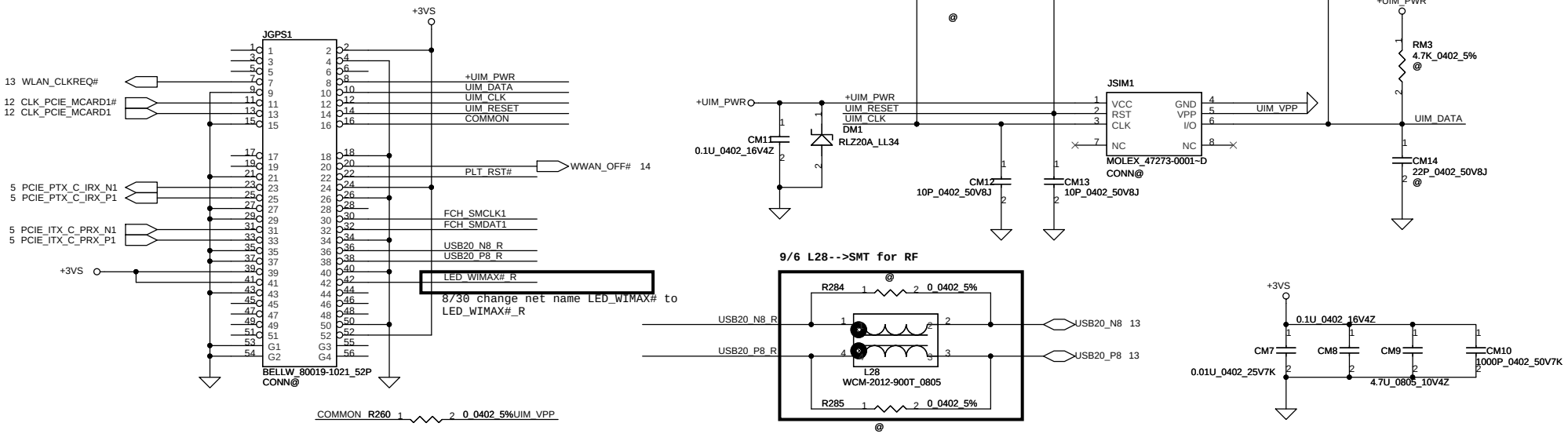
	BT on module Enable	BT on module Disable
BT_CRTL	HI	LO
BT_PWR#	LO	HI

PCIe Mini Card-WLAN(Slot 1)



10/05 add R319, R320, R321 for PVT

PCIe Mini Card-3G/WWAN (Slot 2)



Security Classification	Compal Secret Data		
Issued Date	2008/09/05	Deciphered Date	2009/09/05

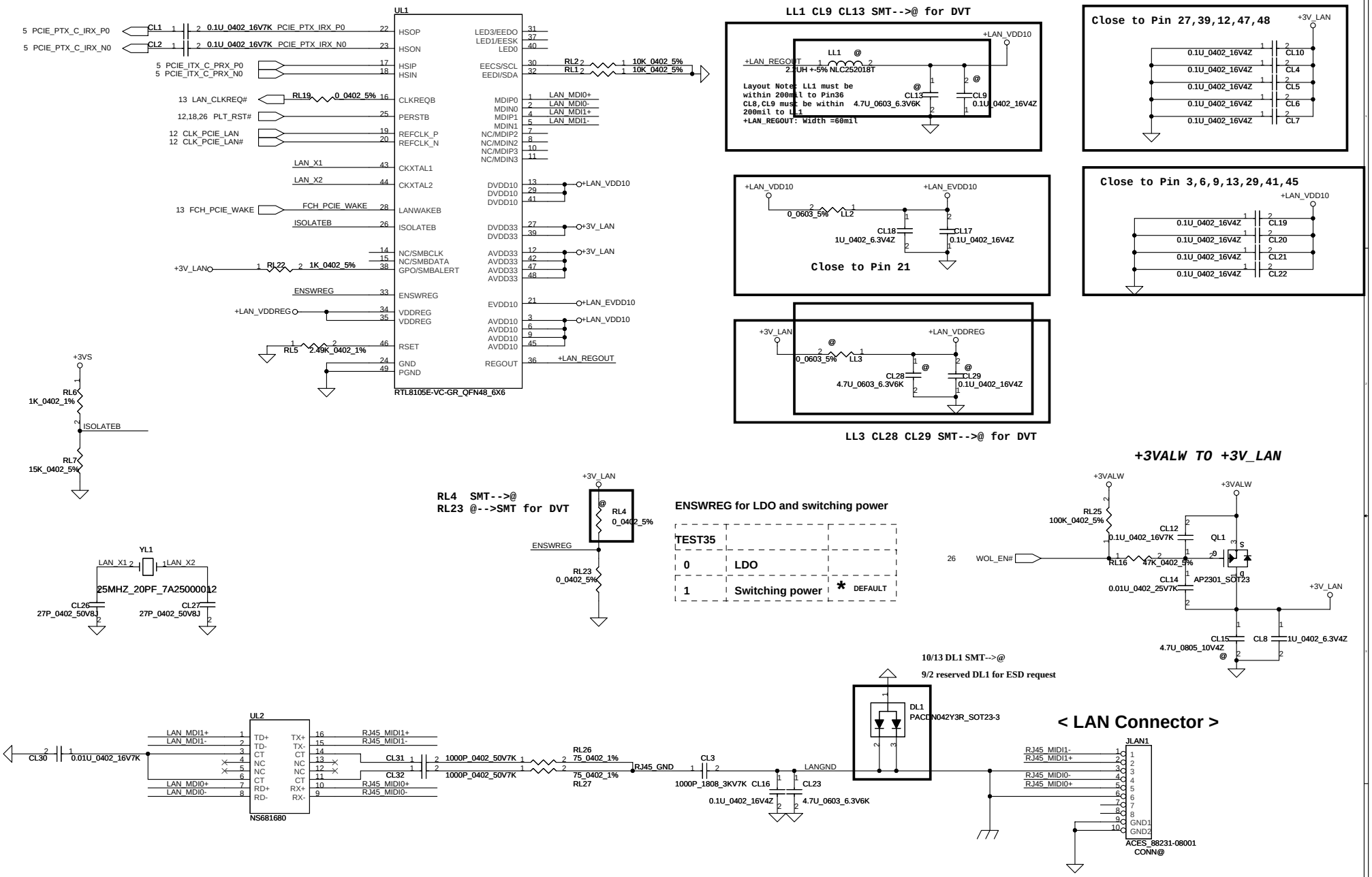
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 18 of 37



Security Classification	Compal Secret Data		
Issued Date	2010/01/22	Deciphered Date	2011/01/22

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.

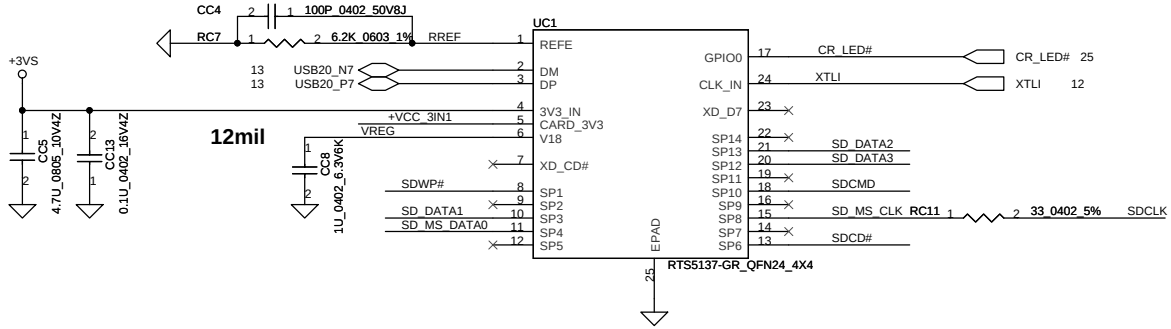
Compal Electronics, Inc.

Title: SCHEMTIC A6852

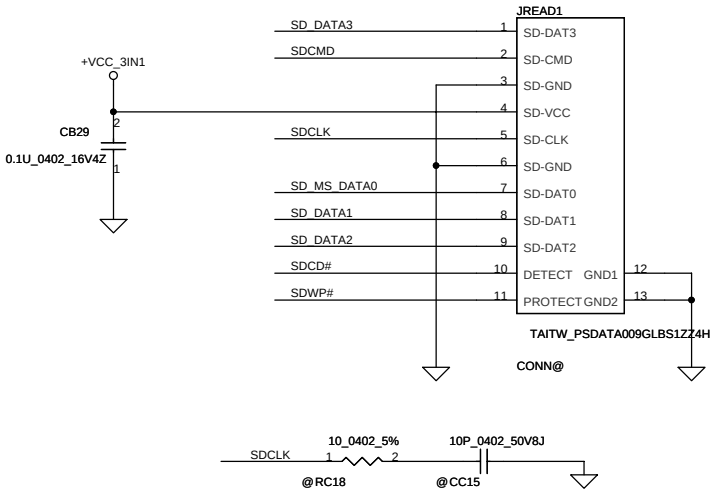
Size: C (Custom) | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 19 of 37

	XD_CD#		
SP1	XD_RDY	SD_WP	MS_CLK
SP2	XD_RE#		MS_INS#
SP3	XD_CE#	SD_D1	
SP4	XD_CLE	SD_D0	MS_D7
SP5	XD_ALE	SD_D7	MS_D3
SP6	XD_WE#	SD_CD#	
SP7	XD_WP	SD_D6	MS_D6
SP8	XD_D0	SD_CLK	MS_D2
SP9	XD_D1	SD_D5	MS_D0
SP10	XD_D2	SD_CMD	
SP11	XD_D3	SD_D4	MS_D4
SP12	XD_D4	SD_D3	MS_D1
SP13	XD_D5	SD_D2	MS_D5
SP14	XD_D6		MS_BS
	XD_D7		



< 2 in 1 Card Reader >



Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

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.

Compal Electronics, Inc.

Title: **SCHEMTIC A6852**

Size: Custom | Document Number: **401990** | Rev: D

Date: Monday, February 20, 2012 | Sheet 20 of 37

11/16 +5V_Codec change to +5VALW for pre-MP

place close to chip

600 mA

+PVDD1

+PVDD2

+5VALW

+3VS_DVDD

+3VS

35 mA

68 mA

+AVDD

UA1

Ext. Mic/LINE IN

For EMI

DGND

AGND

place close to chip

for EMI request

EC control EC_MUTE# behavior: High-state / low-state

11/17 CA28 change to C438 for intel common design

11/17 change to 0603 type for RF request

11/16 Delete RA53/RA54 for pre-MP

Speaker Connector

placement near Audio Codec

Beep sound

EC Beep

PCI Beep

RA12 10K-->4.7K (SD028470180) for DVT
CA18 0.1u-->100P (SE071101J80)

9/7 RA44-->SMT for EC request

Sense Pin	Impedance	Codec Signals	Function
SENSE A	39.2K	PORT-I (PIN 32, 33)	Headphone out
	20K	PORT-B (PIN 21, 22)	Ext. MIC
	10K	PORT-C (PIN 23, 24)	
	5.1K	(PIN 48)	

place close to chip

Security Classification	Compal Secret Data		
Issued Date	2010/04/28	Deciphered Date	2011/04/28

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.

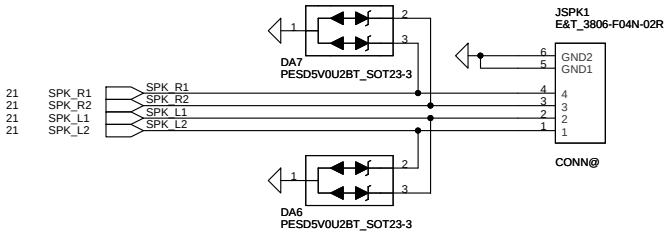
Compal Electronics, Inc.

Title: SCHEMTIC A6852

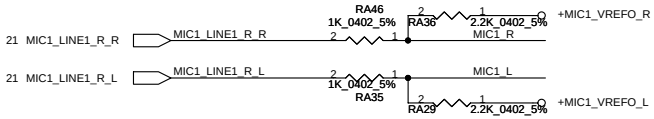
Size: Custom | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 21 of 37

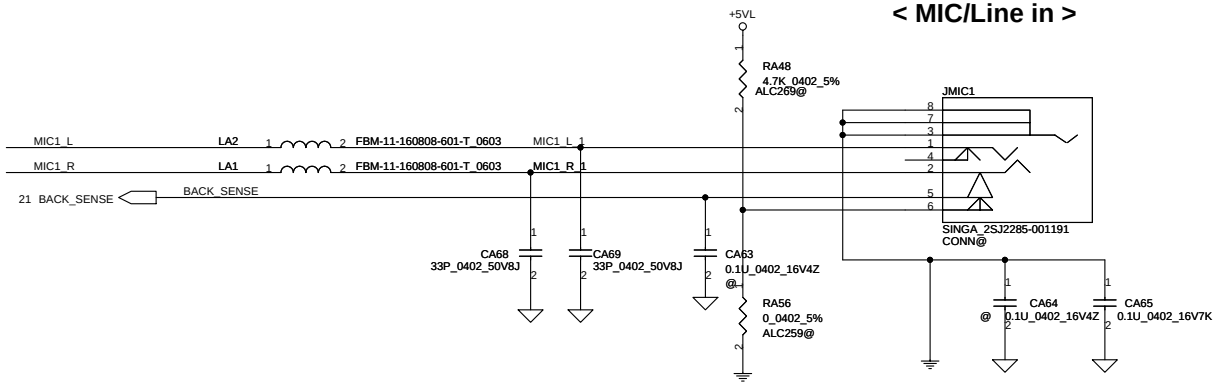
< SPK connector >



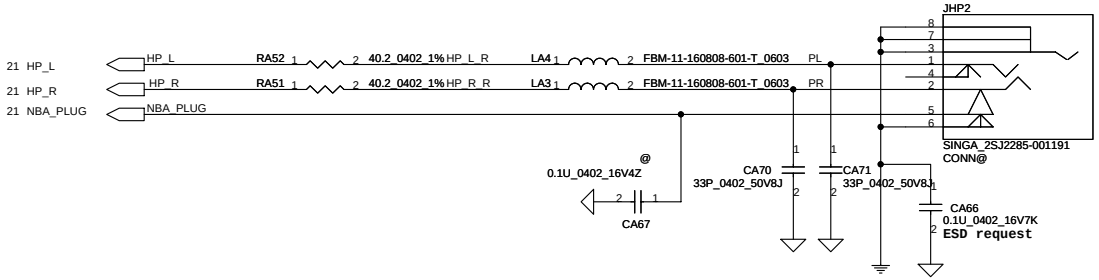
Ext.MIC/LINE IN JACK



< MIC/Line in >



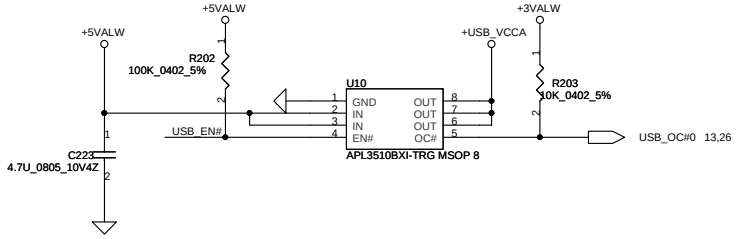
< Head phone >



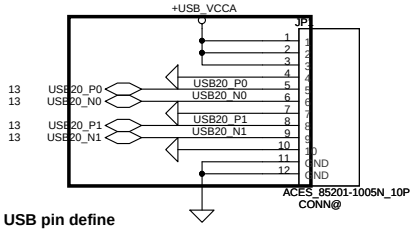
Security Classification	Compal Secret Data		
Issued Date	2009/04/07	Deciphered Date	2012/10/21

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.

Compal Electronics, Inc.			
Title	SCHEMTIC A6852		
Size	Document Number 401990		Rev D
Date: Monday, February 20, 2012	Sheet 22 of 37		

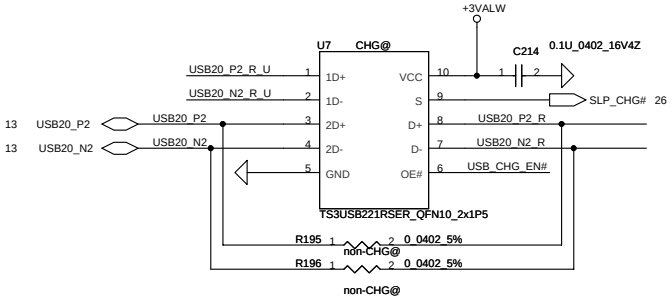


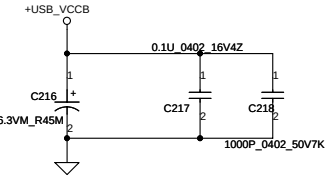
< USB connector >

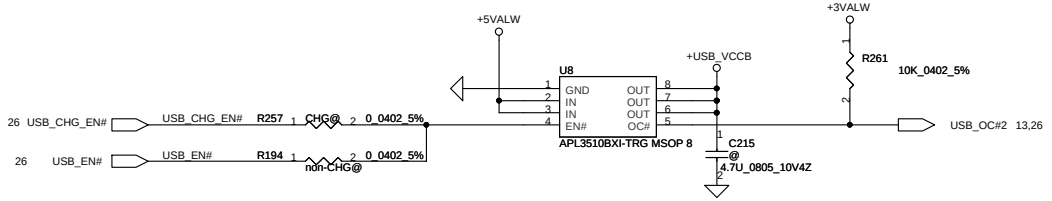


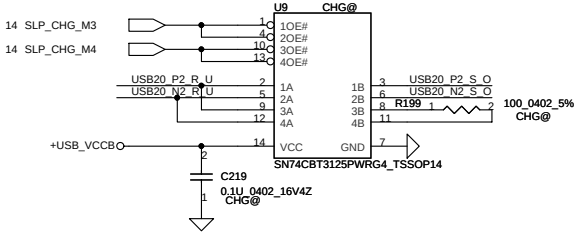
8/27 add GND pin in USB pin define

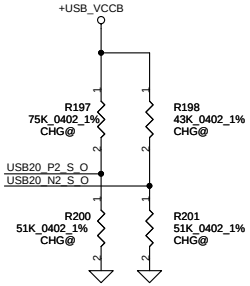
USB Sleep and charge

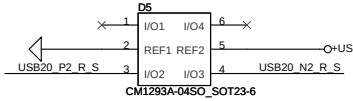




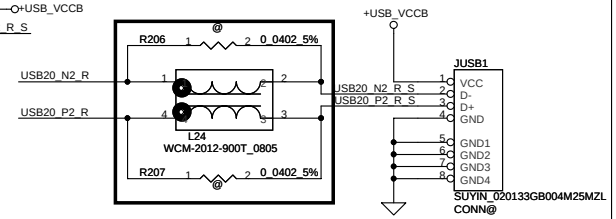








< USB connector >



10/13 R206/R207 SMT-->@ L24 @-->SMT

	SLP_CHG_M3	SLP_CHG_M4
Mode 3	HIGH	LOW
Mode 4	LOW	HIGH

SLP_CHG	FUNCTION
LOW	D=1D
HIGH	D=2D

Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

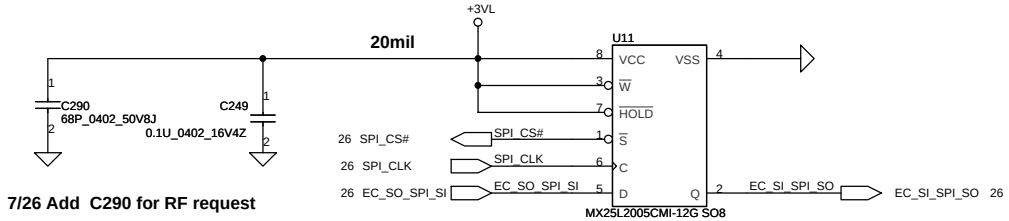
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.			
Title: SCHEMTIC A6852			
Size: B	Document Number: 401990		Rev: D
Date: Monday, February 20, 2012	Sheet 23 of 37		

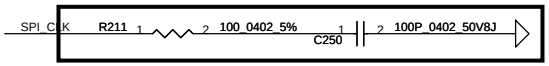
*Option 1:SPI Flash (2MB*1) for EC*

*Option 2:SPI Flash (256KB*1) for EC*
*SPI Flash (2MB*1) for SB (set up strap pin)*

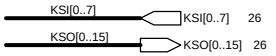
SPI Socket: SP07000F500 & SP07000H900
2MB P/N:Winbond SA00003FO00 S IC FL 16M W25Q16BVSSIG SOIC 8P
256KB P/N:MXIC SA00003GK00 S IC FL 2M MX25L2005CMI-12G SOP 8P



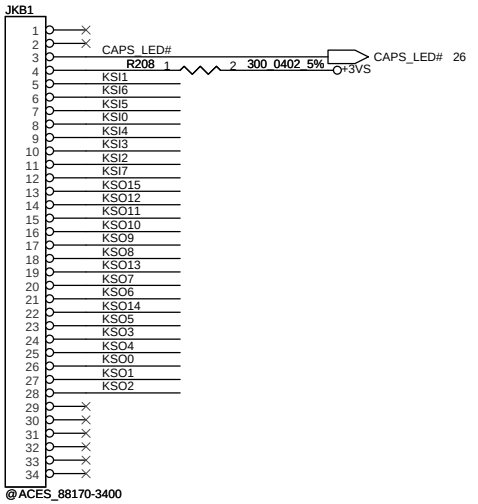
7/26 Add C290 for RF request

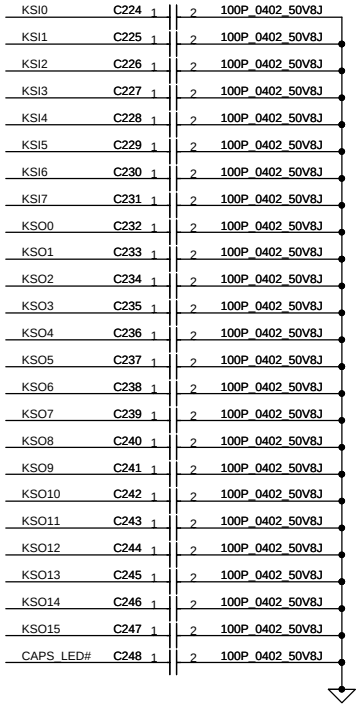


9/6 Add R211, C250-->SMT for RF request

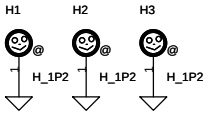


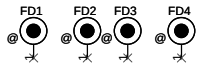
< Key board connector >



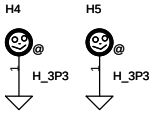


CPU Screw hole

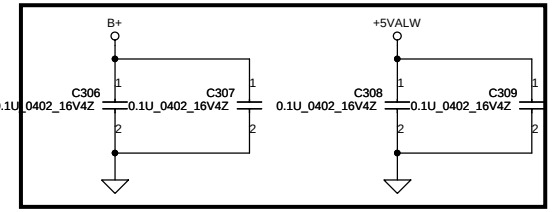




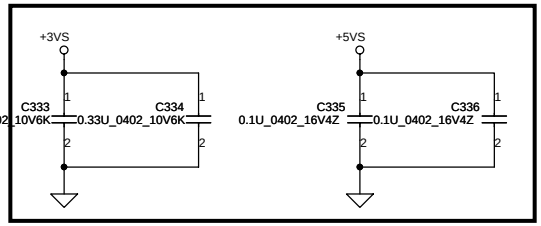
Stand off



EMI request cap

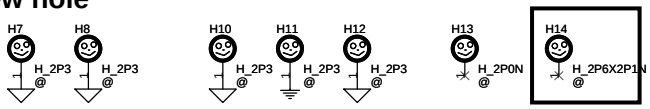


11/12 add C306~C309 @-->SMT for RF at Pre-MP phase



10/14 add C333~C336 for EMI at PVT phase
11/17 C333/C334 0.1uF change to 0.33uF for Pre-MP

Screw hole



10/07 remove H9, add H14 for PVT

Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

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.

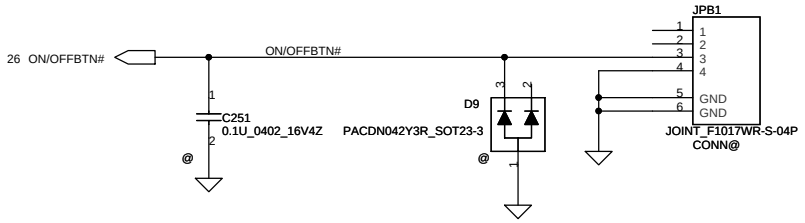
Compal Electronics, Inc.

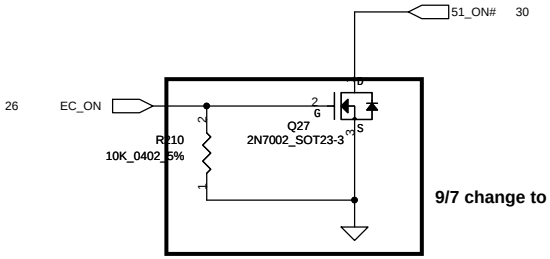
Title: **SCHEMTIC A6852**

Size	Document Number	Rev
B	401990	D

Date: Monday, February 20, 2012 Sheet 24 of 37

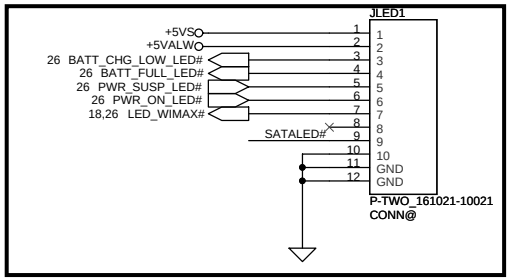
< PWR BTN connector >



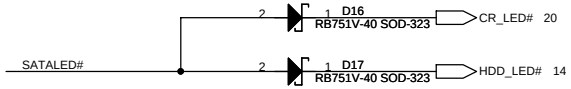


9/7 change to single type

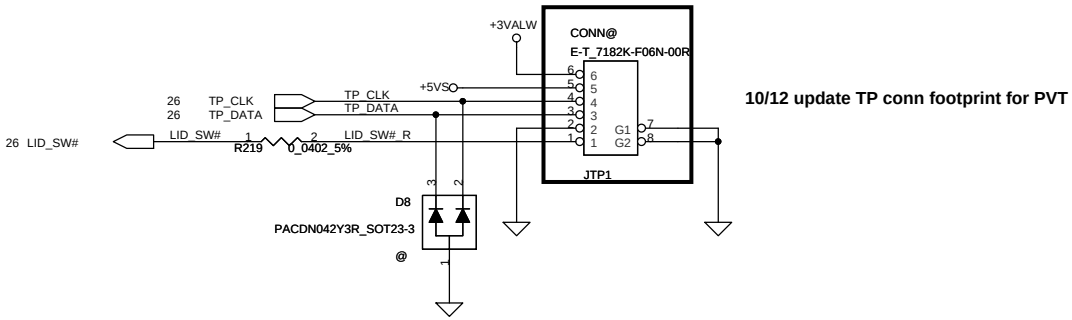
<LED connector >



10/13 update LEDconn footprint for PVT



< T/P and Lid connector >

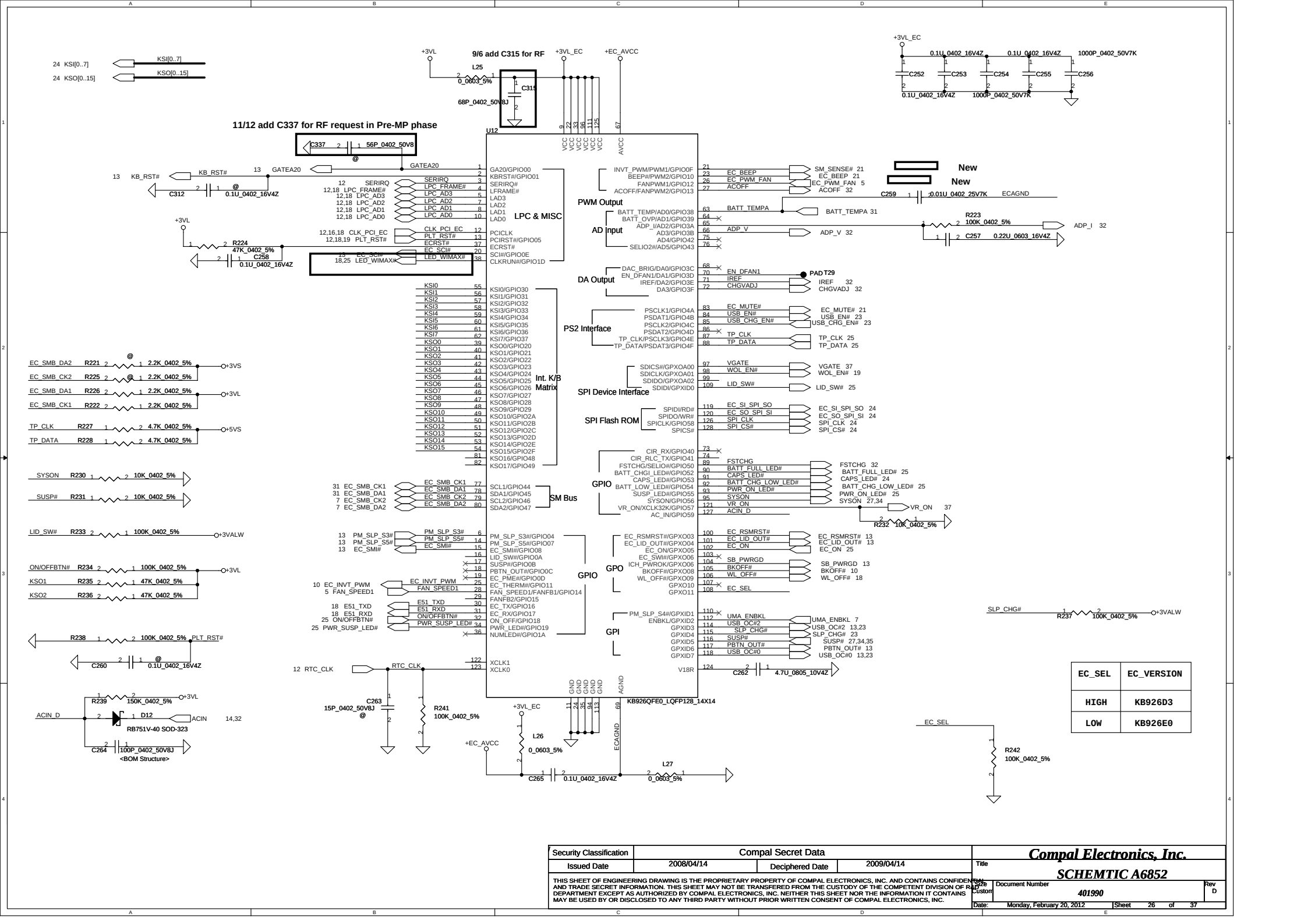


10/12 update TP conn footprint for PVT

Security Classification	Compal Secret Data		
Issued Date	2008/03/25	Deciphered Date	2008/04/

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.

Compal Electronics,Ltd.			
Title	SCHEMTIC A6852		
Size: Custom	Document Number: 401990		Rev: D
Date: Monday, February 20, 2012	Sheet 25 of 37		



Security Classification	Compal Secret Data		
Issued Date	2008/04/14	Deciphered Date	2009/04/14

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.

Compal Electronics, Inc.

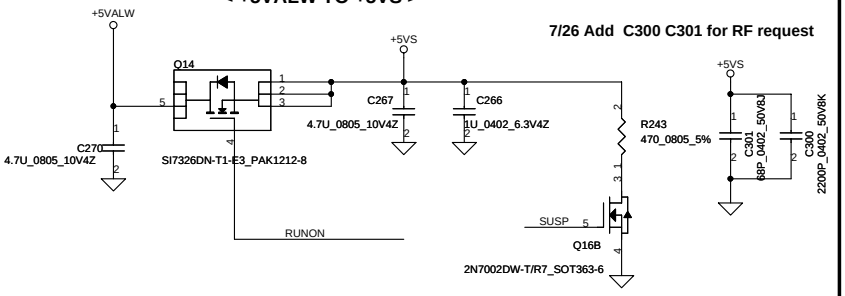
Title: **SCHEMTIC A6852**

Size: Custom | Document Number: **401990** | Rev: D

Date: Monday, February 20, 2012 | Sheet 26 of 37

< +5VALW TO +5VS >

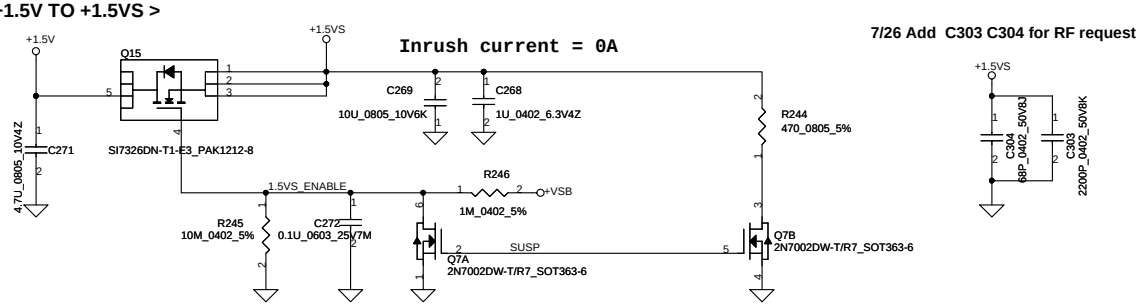
7/26 Add C300 C301 for RF request



< +1.5V TO +1.5VS >

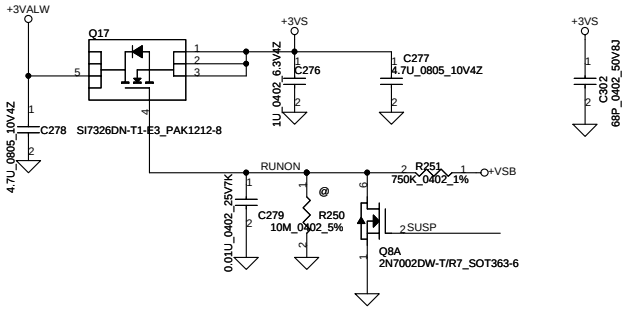
Inrush current = 0A

7/26 Add C303 C304 for RF request

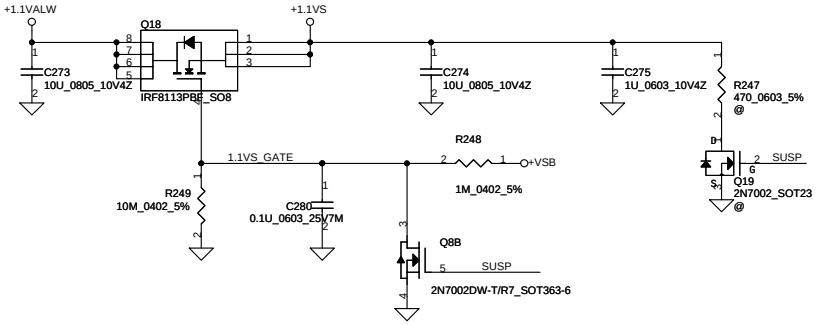


< +3VALW TO +3VS >

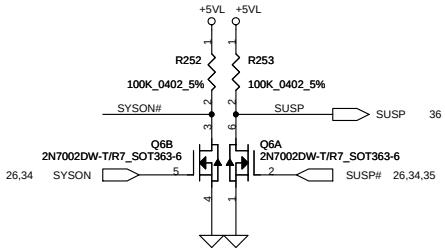
7/26 Add C302 for RF request



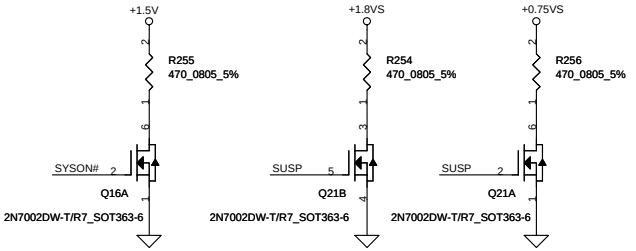
< +1.1VALW TO +1.1VS >



< Inversion of SYSON, SUSP#, VLDT_EN, EC_ON >



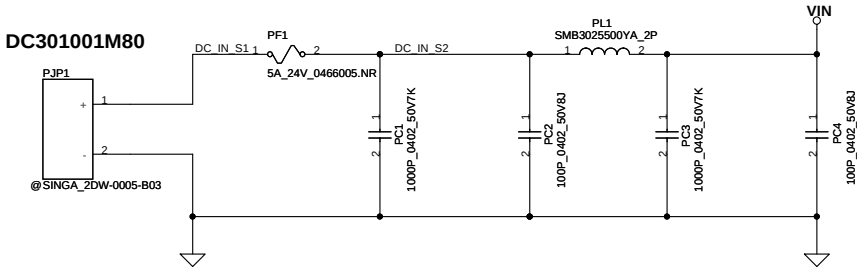
< Discharge circuit >

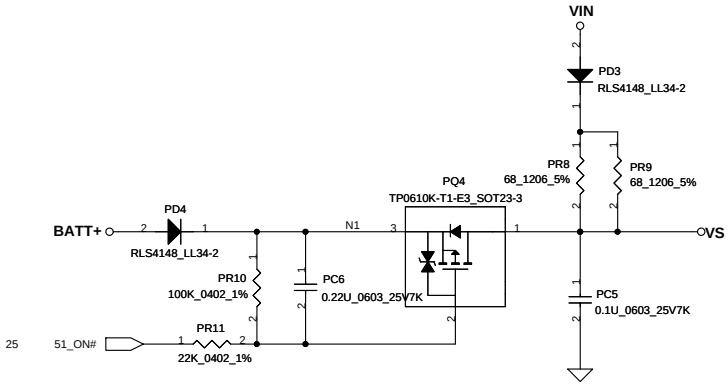


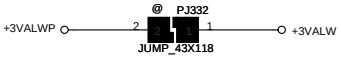
Security Classification	Compal Secret Data		
Issued Date	2008/04/14	Deciphered Date	2009/04/14

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.

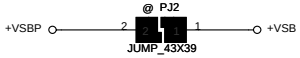
Compal Electronics, Inc.	
Title	SCHEMTIC A6852
Size: Custom	Document Number: 401990
Rev	D
Date: Monday, February 20, 2012	Sheet 27 of 37





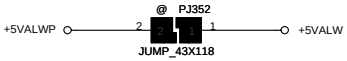


(5A,200mils ,Via NO.= 10)
OCP=8.6A



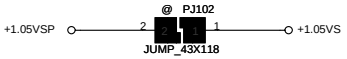
(120mA,20mils ,Via NO.= 1)

(10A,600mils ,Via NO.= 10)
OCP=A

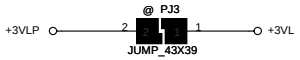


(5A,200mils ,Via NO.= 10)
OCP=7.9A

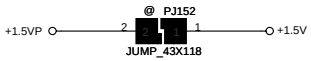
(2.15A,100mils ,Via NO.= 5)
OCP=A



(5.7A,240mils ,Via NO.= 12)
OCP=A

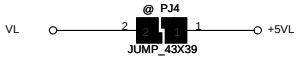


(100mA,20mils ,Via NO.= 1)



(5A,200mils ,Via NO.= 10)
OCP=A

(0.5A,20mils ,Via NO.= 1)



(100mA,20mils ,Via NO.= 1)

(10A,400mils ,Via NO.= 20)
OCP=A

ACIN

Precharge detector	Min.	typ.	Max
H-->L	14.42V	14.74V	15.23V
L-->H	15.39V	15.88V	16.39V

Security Classification	Compal Secret Data		
Issued Date	2009/11/13	Deciphered Date	2009/04/28

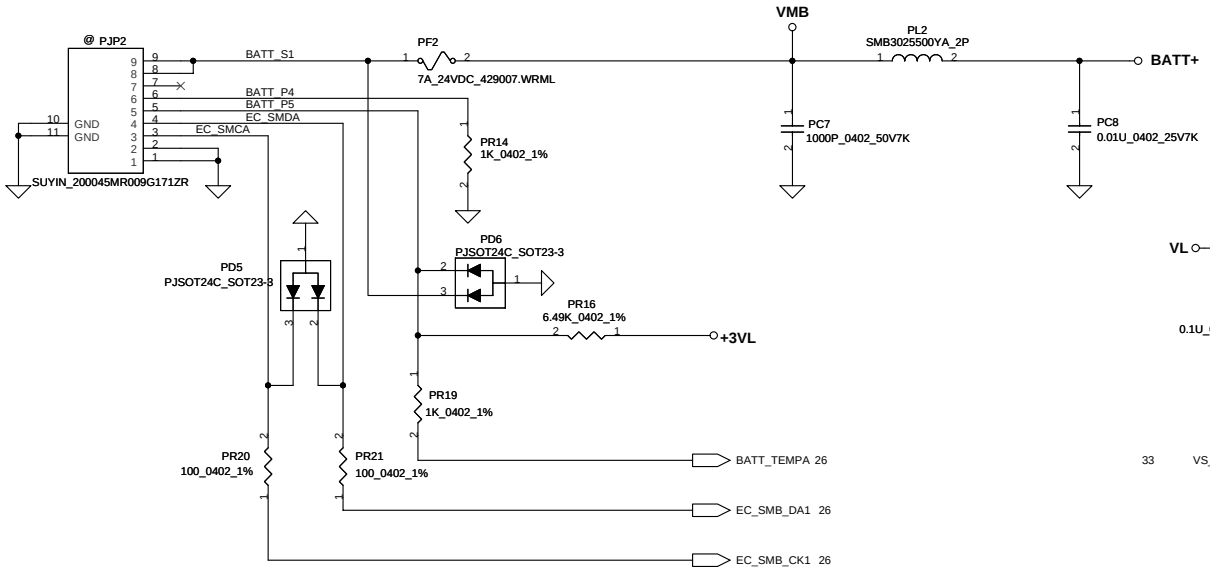
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

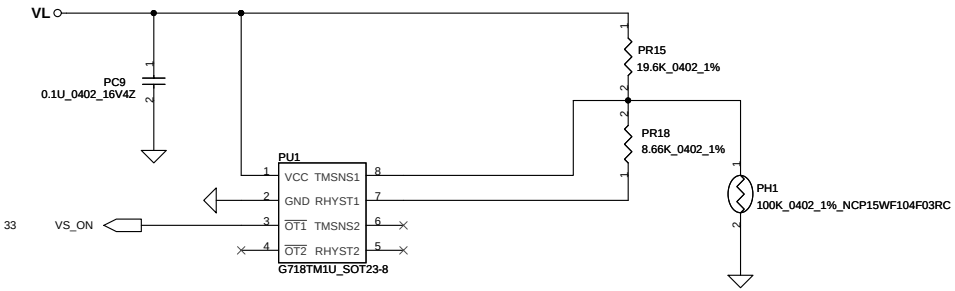
Title: SCHEMTIC A6852

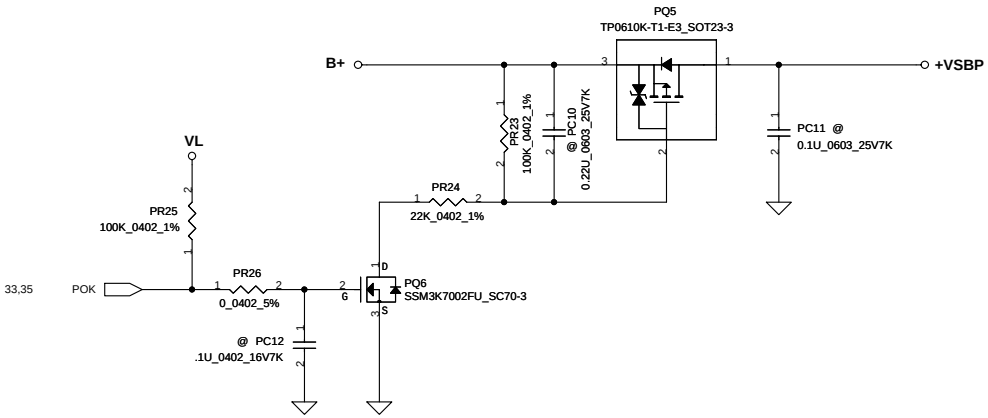
Size: A4 | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 28 of 37



PH1 under CPU botten side :
CPU thermal protection at 95 degree C
Recovery at 56 degree C





Security Classification	Compal Secret Data		
Issued Date	2009/11/13	Deciphered Date	2009/04/28

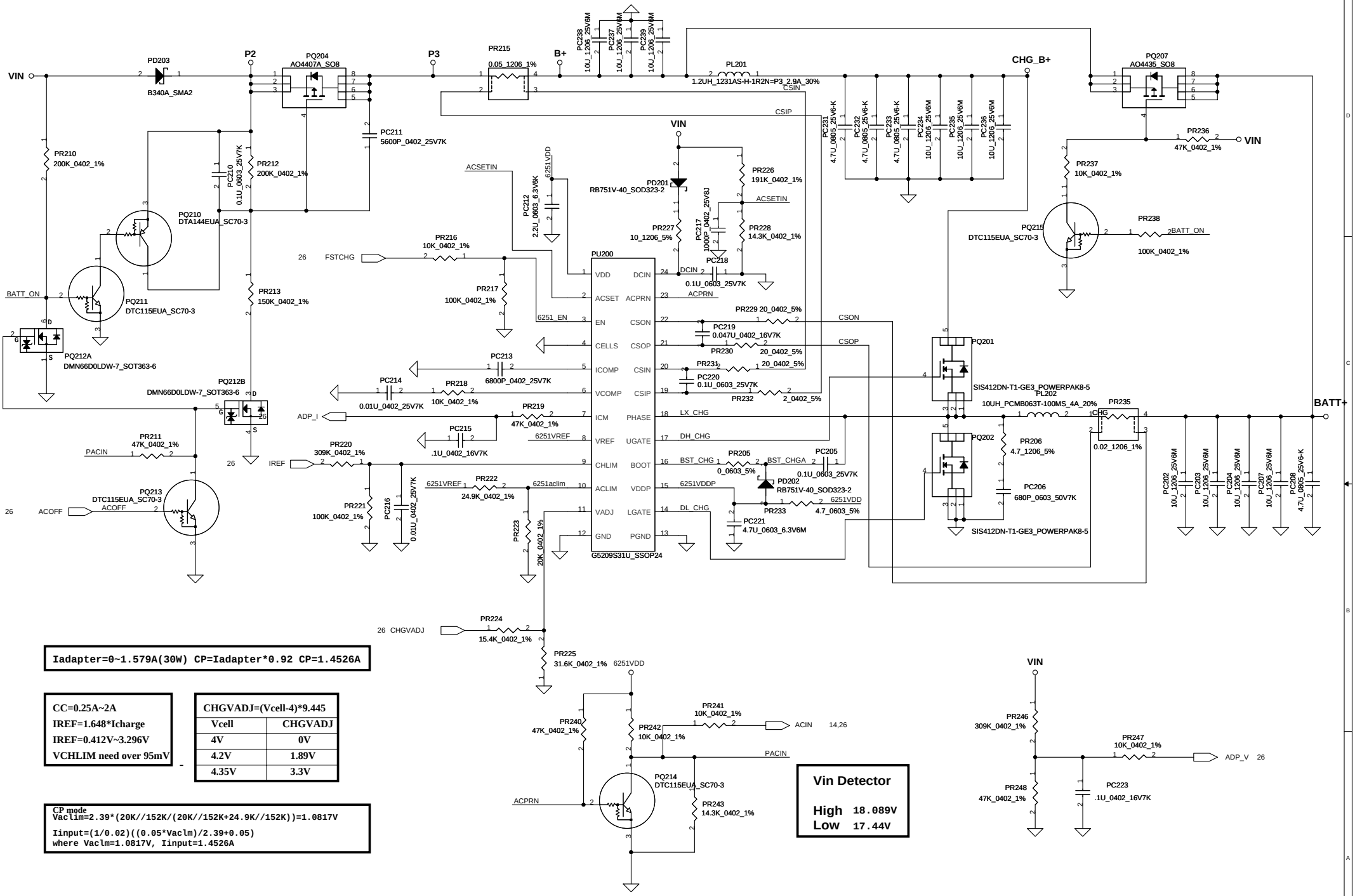
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 29 of 37



Iadapter=0~1.579A(30W) CP=Iadapter*0.92 CP=1.4526A

CC=0.25A~2A
IREF=1.648*Icharge
IREF=0.412V~3.296V
VCHLIM need over 95mV

CHGVADJ=(Vcell-4)*9.445

Vcell	CHGVADJ
4V	0V
4.2V	1.89V
4.35V	3.3V

CP mode
Vaclim=2.39*(20K//152K/(20K//152K+24.9K//152K))=1.0817V

Iinput=(1/0.02)((0.05*Vaclm)/2.39+0.05)
where Vaclm=1.0817V, Iinput=1.4526A

Vin Detector

High	18.089V
Low	17.44V

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.

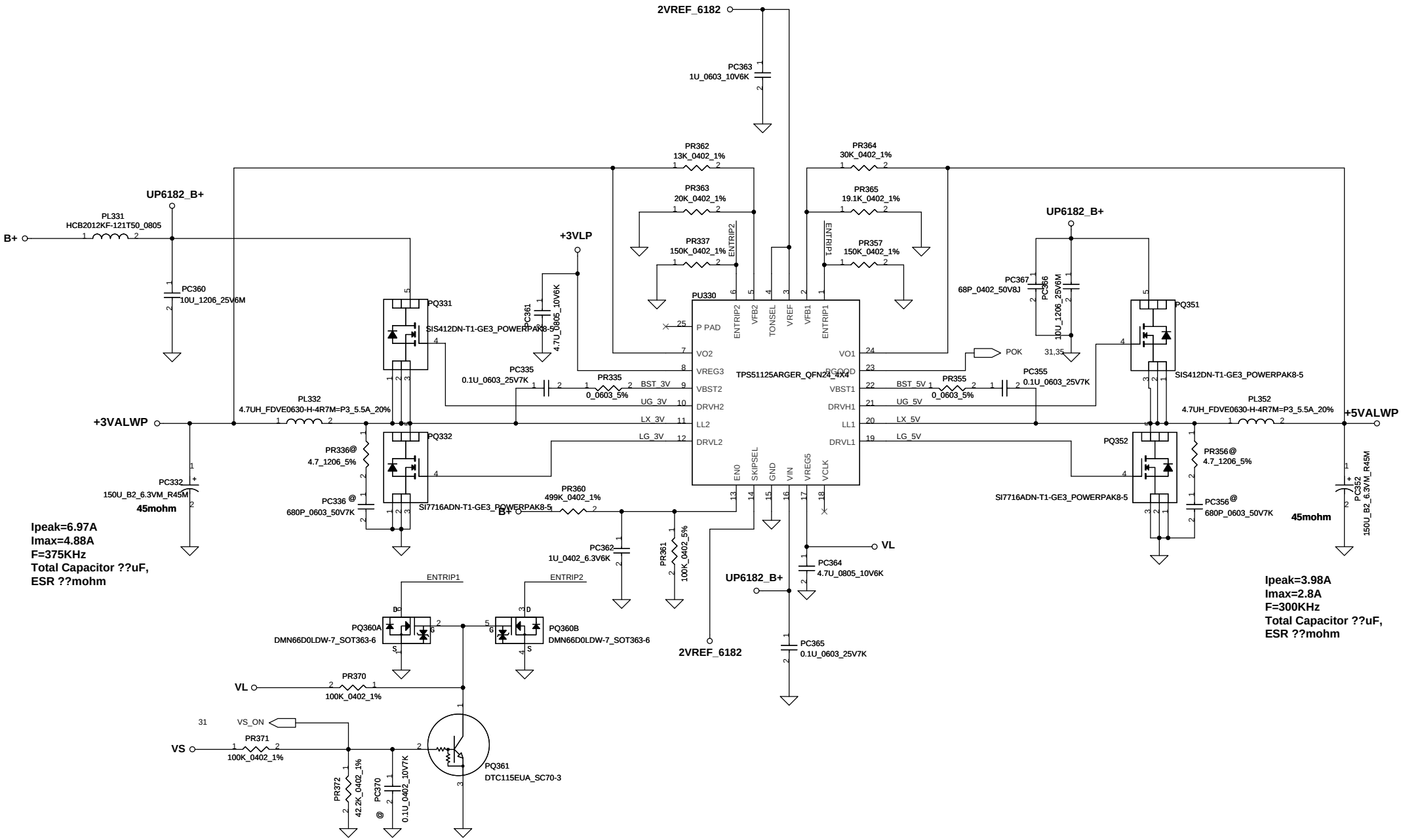
Security Classification	Compal Secret Data		
Issued Date	2010/01/25	Deciphered Date	2009/04/28

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 30 of 37



Security Classification	Compal Secret Data		
Issued Date	2009/11/13	Deciphered Date	2009/04/28

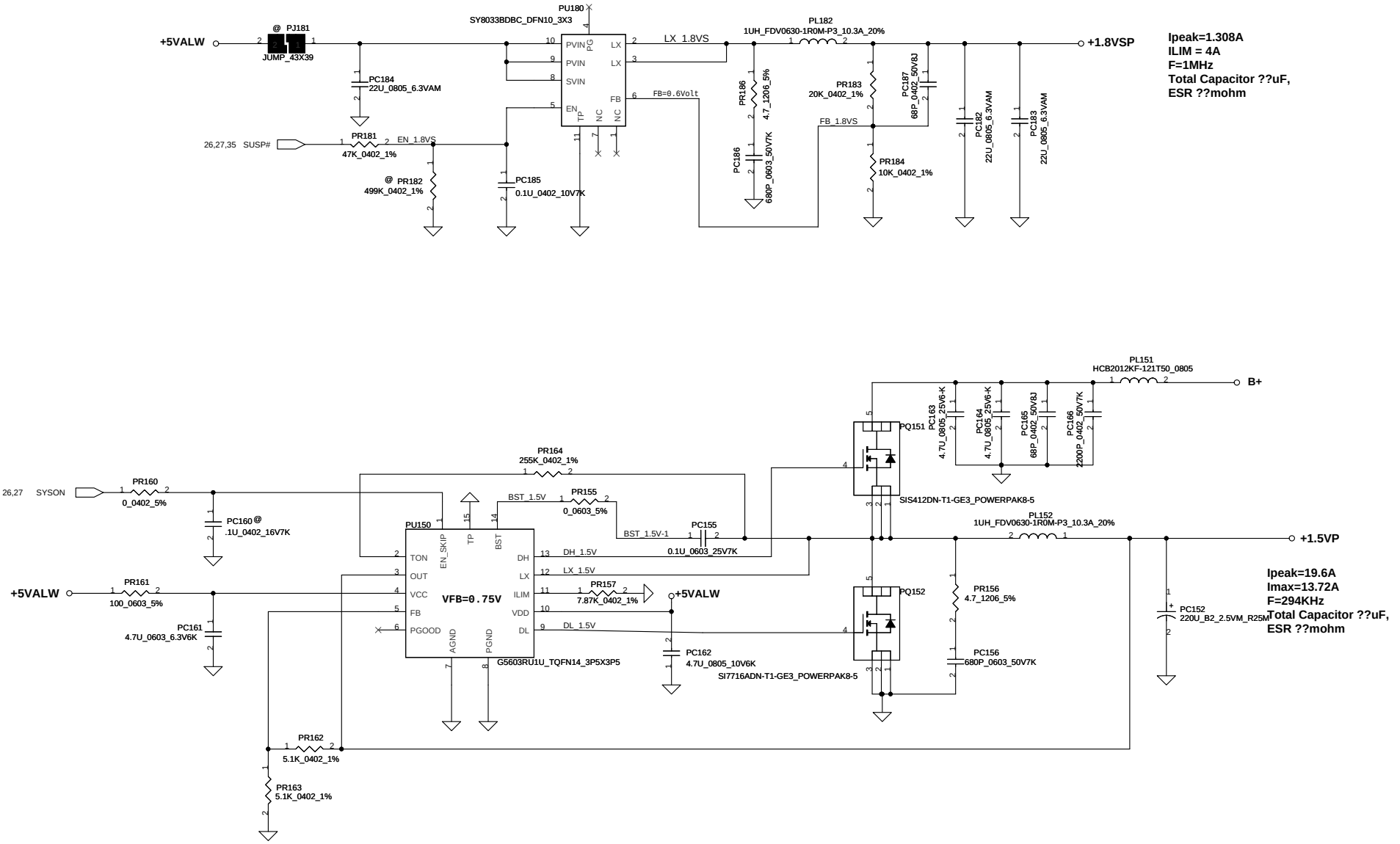
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 31 of 37



Security Classification	Compal Secret Data		
Issued Date	2010/01/25	Deciphered Date	2009/04/28

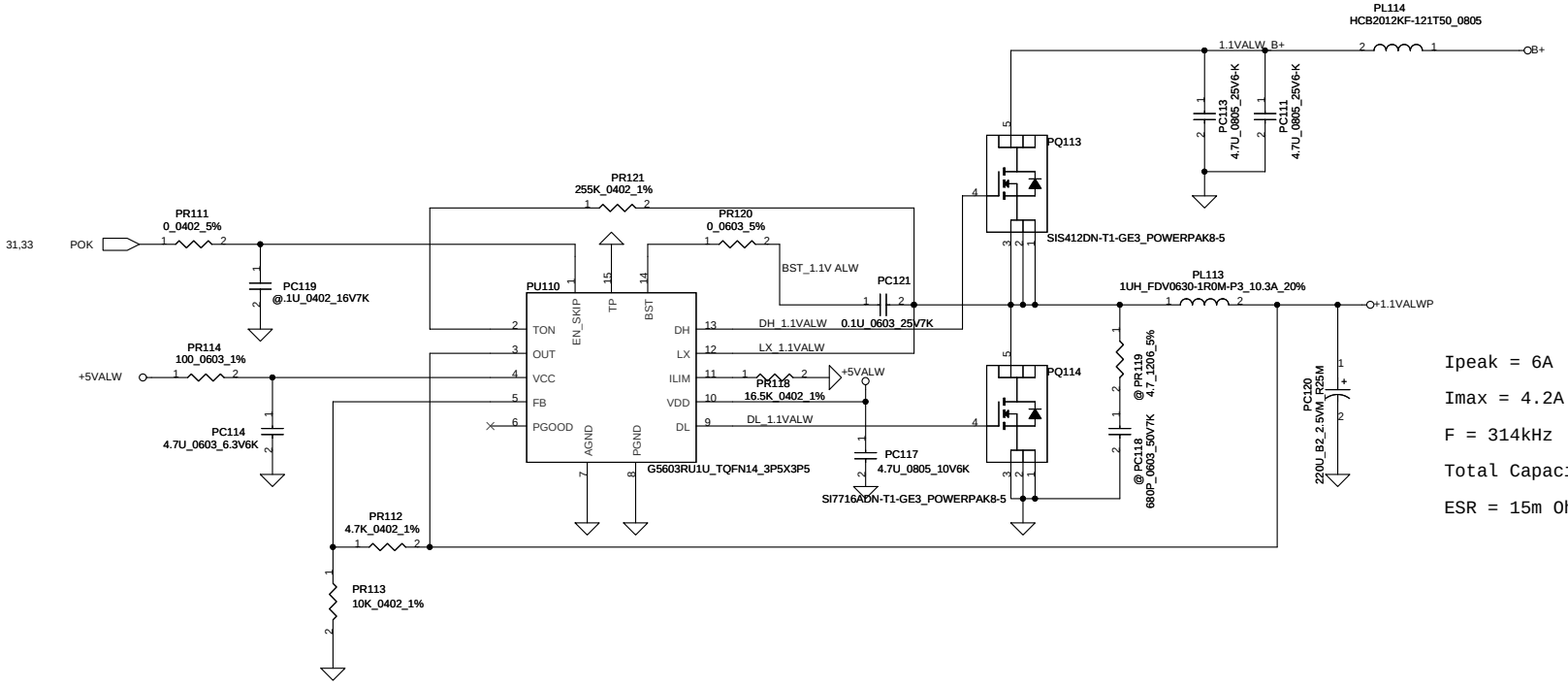
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size	Document Number	Rev
Custom	401990	D

Date: Monday, February 20, 2012 | Sheet 32 of 37



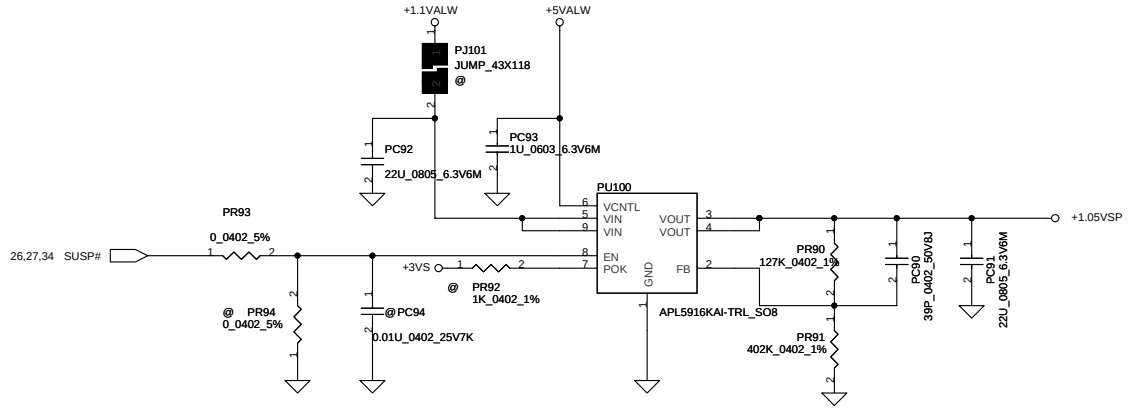
Ipeak = 6A

Imax = 4.2A

F = 314kHz

Total Capacitor = 550 uF

ESR = 15m Ohm



Security Classification	Compal Secret Data		
Issued Date	2010/01/25	Deciphered Date	2009/04/28

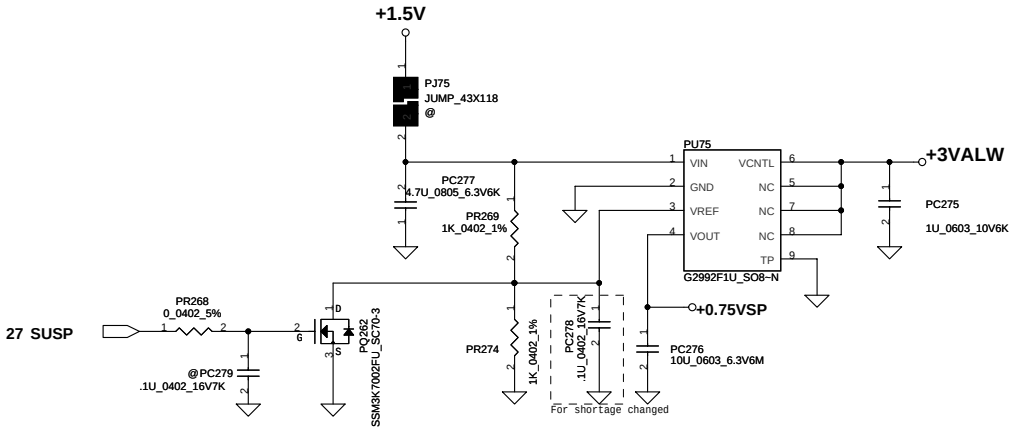
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size: Custom | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 33 of 37



Security Classification	Compal Secret Data		
Issued Date	2009/10/02	Deciphered Date	2010/10/02

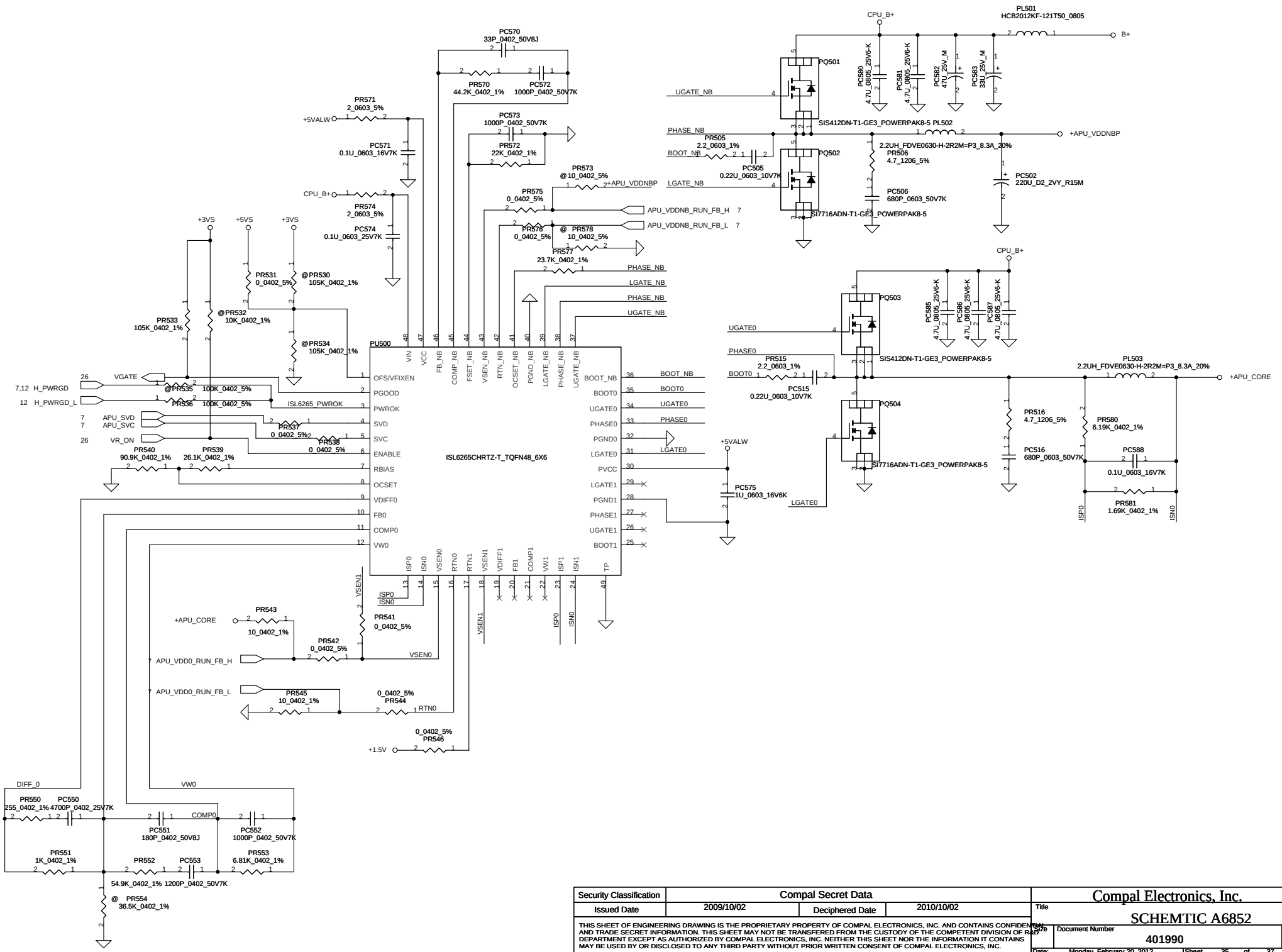
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 34 of 37



Security Classification	Compal Secret Data		
Issued Date	2009/10/02	Deciphered Date	2010/10/02

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE 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.

Compal Electronics, Inc.

Title: SCHEMTIC A6852

Size | Document Number: 401990 | Rev: D

Date: Monday, February 20, 2012 | Sheet 35 of 37

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

Page#	Title	Date	Request Owner	Issue Description	Solution Description
		2010/08/01	POWER		Release
P31	BATTERY CONN / OTP	2010/09/02	POWER	Add PD5,PD6 (For ESD)	DVT
P32	CHARGER	2010/09/02	POWER	Add PR246,PR247,PR248,PC223 (ADP_V)	DVT
P33	3VALWP/5VALWP	2010/09/02	POWER	PR337,PR357 change to 121k	DVT
P33	3VALWP/5VALWP	2010/09/02	POWER	PR365 change to 19.6k	DVT
P34	1.8VSP/1.5VP	2010/09/02	POWER	PR181 change to 150k, PC185 0.1uF	DVT
P35	1.1VALWP/1.0VSP	2010/09/02	POWER	PR91 change to 316k(For 1.05VSP)	DVT
P35	1.1VALWP/1.0VSP	2010/09/02	POWER	PC90 change to 39pF(1.05VSP)	DVT
P37	ACPU_CORE	2010/09/02	POWER	Add PR578 10_0402_5% , PR573 unpop.	DVT
P37	ACPU_CORE	2010/09/02	POWER	PR577 change to 23.7k	DVT
P37	ACPU_CORE	2010/09/02	POWER	PR539 change to 26.1k	DVT
P37	ACPU_CORE	2010/09/02	POWER	PR540 change to 90.9k	DVT
P37	ACPU_CORE	2010/09/02	POWER	PC551 change to 100pF	DVT
P37	ACPU_CORE	2010/09/02	POWER	PR546 change to 0_0402_5%	DVT
P37	ACPU_CORE	2010/09/02	POWER	PR580 change to 6.98k	DVT
P37	ACPU_CORE	2010/09/02	POWER	PR581 change to 1.87k	DVT
P32	CHARGER	2010/09/06	POWER	Add PC207,PC239 10uF (EMI)	DVT

Security Classification	Compal Secret Data		
Issued Date	2009/10/02	Deciphered Date	2010/10/02

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE 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.

Item	Reason for change	PG#	Modify List	Date	Phase
1	Update JLVDS1 footprint	P10	ME request	2009/12	EVT->DVT
2					EVT->DVT
3					EVT->DVT
4					EVT->DVT
5					EVT->DVT
6					EVT->DVT
7					EVT->DVT
8					EVT->DVT
9					EVT->DVT
10					EVT->DVT
11					EVT->DVT
12					EVT->DVT
13					EVT->DVT
14					EVT->DVT
15					EVT->DVT
16					EVT->DVT
17					EVT->DVT
18					EVT->DVT
19					EVT->DVT
20					EVT->DVT
21					EVT->DVT
22					EVT->DVT
23					EVT->DVT
24					EVT->DVT
25					EVT->DVT
26					EVT->DVT
27					EVT->DVT
28					EVT->DVT
29					EVT->DVT
30					EVT->DVT
31					EVT->DVT
32					EVT->DVT
33					EVT->DVT
34					EVT->DVT
35					EVT->DVT
36					EVT->DVT
37					EVT->DVT
38					EVT->DVT
39					EVT->DVT
40					EVT->DVT
41					EVT->DVT
42					EVT->DVT
43					EVT->DVT
44					EVT->DVT
45					EVT->DVT
46					EVT->DVT
47					EVT->DVT
49					EVT->DVT
49					EVT->DVT
50					EVT->DVT
51					EVT->DVT
52					EVT->DVT
53					EVT->DVT
54					EVT->DVT
55					EVT->DVT
56					EVT->DVT
57					EVT->DVT
58					EVT->DVT
59					EVT->DVT
60					EVT->DVT

Security Classification	Compal Secret Data		
Issued Date	2005/03/10	Deciphered Date	2006/03/10

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.

Compal Electronics, Inc.		
Title	SCHEMTIC A6852	
Size: Custom	Document Number: 401990	Rev: D
Date: Monday, February 20, 2012	Sheet 37 of 37	