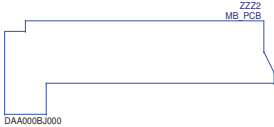


MODEL NAME : Celtic  
PCB NO : LA-D312P  
BOM P/N :



	R1	R3	R3	R3	R3
CPN	DAA000BJ000	DAA000BJ000	DAA000BJ000	DAA000BJ000	DAA000BJ000

www.forums-fastunlock.com

# Dell/Compal Confidential

## Schematic Document

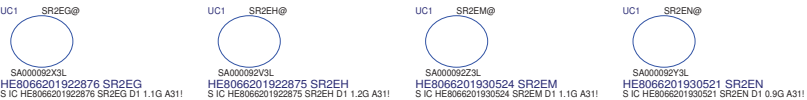
### Celtic (Skylake Y)

2015-12-10  
Rev: 1.0

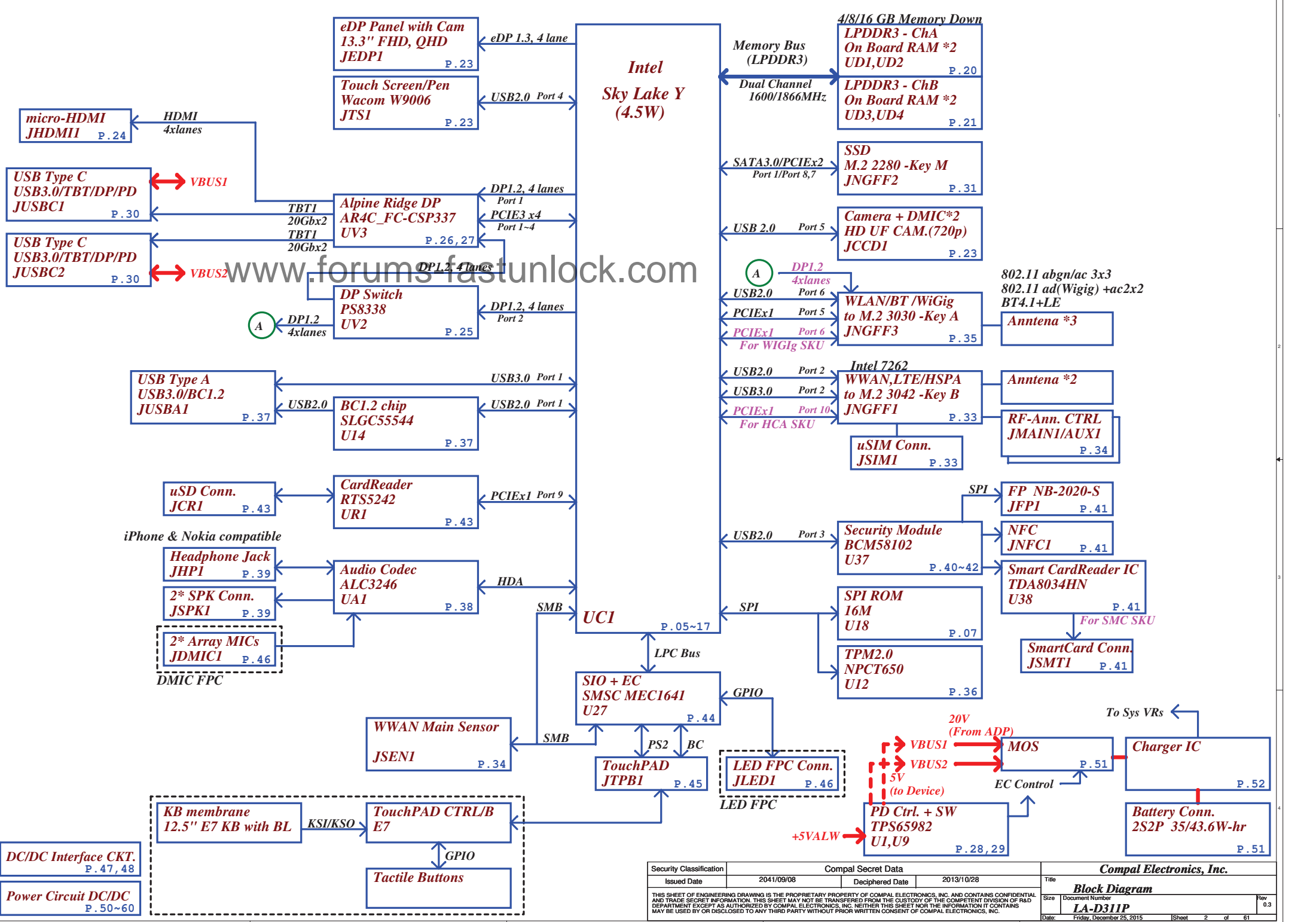
AR Option

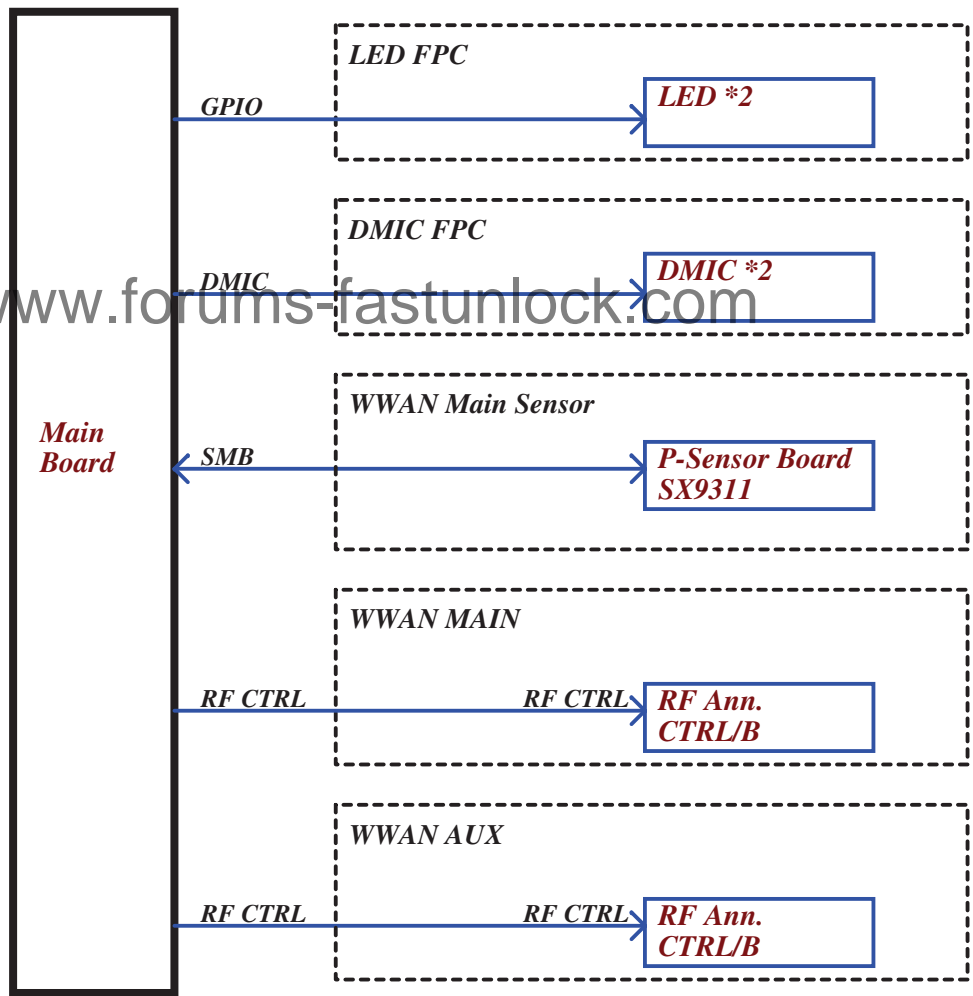


CPU Option



Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	Cover Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date:	Friday, December 25, 2015
				Sheet	1 of 61
				Rev	0.3





Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Document Number	0.3
				Date:	Friday, December 25, 2015
				Sheet	3 of 61

POWER STATES

State \ Signal	SLP S3#	SLP S4#	SLP S5#	SLP A#	ALWAYS PLANE	M PLANE	SUS PLANE	RUN PLANE	CLOCKS
S0 (Full ON) / M0	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON
S3 (Suspend to RAM) / M3	LOW	HIGH	HIGH	HIGH	ON	ON	ON	OFF	OFF
S4 (Suspend to DISK) / M3	LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF	OFF
S5 (SOFT OFF) / M3	LOW	LOW	LOW	HIGH	ON	ON	OFF	OFF	OFF
S3 (Suspend to RAM) / M-OFF	LOW	HIGH	HIGH	LOW	ON	OFF	ON	OFF	OFF
S4 (Suspend to DISK) / M-OFF	LOW	LOW	HIGH	LOW	ON	OFF	OFF	OFF	OFF
S5 (SOFT OFF) / M-OFF	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF	OFF

PM TABLE

State \ Power plane	+3VALW_DSW +3VALW +3VALW +1.8VALW +3VLP	+3V PRIM +1.8V PRIM +1.0V PRIM +1.0VA_GATE +0.95V PRIM	+1.2V DDR +3.3V CV2 +1.8V MEM +1.0V_VCCST	+1.5VS +3VS +1.8VS +1.0V_VCCSTG +0.85VS_VCCIO +0.6VS_VTT +VCC_SA +VCC_GT +VCC_CORE
S0	ON	ON	ON	ON
S3 / AC	ON	ON	ON	OFF
DS3	ON	OFF	ON	OFF
S5 S4/AC	ON	OFF	OFF	OFF
S5 S4/AC doesn't exist	OFF	OFF	OFF	OFF

SMBUS Control Table

	SOURCE	BATT	Charger	XDP	USH	PD Controller -1	PD Controller -2	GPIO Expander	P-sensor
PCH_SML0CLK PCH_SML0DATA	PCH								
PCH_SML1CLK PCH_SML1DATA	PCH								
MEM_SMBCLK MEM_SMBDATA	PCH			V					
EC_SMB00_CLK EC_SMB00_DAT	MEC1641								
EC_SMB01_CLK EC_SMB01_DAT	MEC1641				V				V
EC_SMB03_CLK EC_SMB03_DAT	MEC1641	V							
EC_SMB04_CLK EC_SMB04_DAT	MEC1641		V						
EC_SMB05_CLK EC_SMB05_DAT	MEC1641					V			
EC_SMB07_CLK EC_SMB07_DAT	MEC1641						V		

Board ID Table

Vcc	3.3V +/- 5%			
Board ID	R	C	PCB Revision	REV
0	240K +/- 5%	4700p	0.1	EVT1.0
1	130K +/- 5%	4700p	0.2	DVT1.0/DVT1.1
2	62K +/- 5%	4700p	0.3	DVT2.0/PreMP
3	33K +/- 5%	4700p		
4	8.2K +/- 5%	4700p		
5	4.3K +/- 5%	4700p		
6	2K +/- 5%	4700p		
7	NC			

SOC DDI Port Mapping	DDI PORT#	DESTINATION
	B	Alpine Ridge
	C	DP MUX

SOC PCIE Port Mapping	PCI EXPRESS	DESTINATION
	Lane 1	Alpine Ridge
	Lane 2	
	Lane 3	
	Lane 4	NGFF (WLAN)
	Lane 5	
	Lane 6	
	Lane 7	NGFF (SSD)
	Lane 8/ SATA 1	
	Lane 9	Cardreader
	Lane 10	HCA

Lane reversal

CLK	DIFFERENTIAL	DESTINATION
	CLKOUT_PCIE1	TBT
	CLKOUT_PCIE2	NGFF (WiGig) or (HCA)
	CLKOUT_PCIE3	Cardreader
	CLKOUT_PCIE4	NGFF (SSD)
	CLKOUT_PCIE5	NGFF (WLAN)

USB 3.0 PORT#	DESTINATION
1	Type A(Debug)
2	WWAN
3	
4	

USB 2.0 PORT#	DESTINATION
1	Type A(Debug)
5	WWAN
7	USH
3	Touch
9	CAM
2	BT

FLEX CLOCKS	DESTINATION
CLKOUT_LPC_0	EC LPC
CLKOUT_LPC_1	Debug

Layer No.	Name	Er	Material	Thickness (Material SPEC.) Unit : mil	Thickness (Actuality) Unit : mil
			SolderMask	sm	0.50000
1	Top		Copper foil	0.33oz+plating	1.20000
			Prepreg	1086	2.65000
2	IN1(GND)		Copper foil	0.33oz+plating	1.10000
			Prepreg	106	1.80000
3	GND/PWR		Copper foil	0.33oz+plating	1.10000
			Prepreg	1080	2.56000
4	IN2		Copper foil	0.5oz	0.60000
			Core	3mil	3.00000
5	GND/PWR		Copper foil	0.5oz	0.60000
			Prepreg	106	1.63000
6	GND/PWR		Copper foil	0.5oz	0.60000
			Core	3mil	3.00000
7	IN3		Copper foil	0.5oz	0.60000
			Prepreg	1080	2.56000
8	GND/PWR		Copper foil	0.33oz+plating	1.10000
			Prepreg	106	1.80000
9	IN4(GND)		Copper foil	0.33oz+plating	1.10000
			Prepreg	1086	2.65000
10	Bottom		Copper foil	0.33oz+plating	1.20000
			SolderMask	sm	0.50000
Overall Thickness (0.8mm ± 10%)					31.85000
					0.80899

Link

Symbol Note :

@ : means de-pop

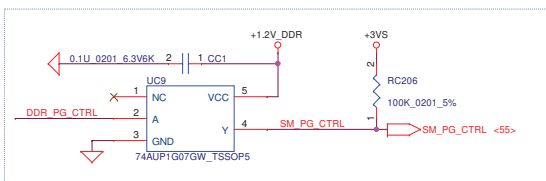
⬇ : means Digital Ground

⬇ : means Analog Ground

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2041/09/08	Deciphered Date	2013/10/28		Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Notes List		
				Size	Document Number	Rev
				LA-D311P		0.3
				Date: Friday, December 25, 2015		Sheet 4 of 61



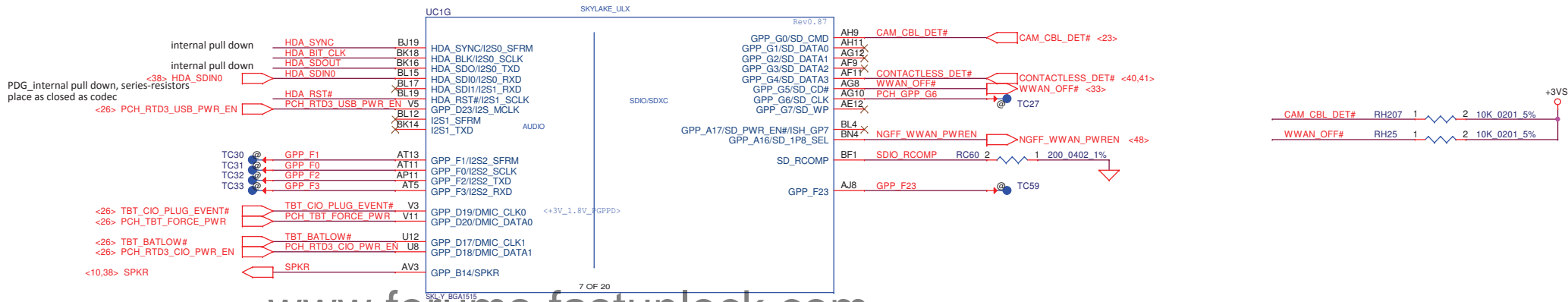
## Non-Interleave Memory



Security Classification	Compal Secret Data			<b>Compal Electronics, Inc.</b>			
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	<b>SKL Y(2/13) DDRIII</b>		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev	0.3
				<b>LA-D311P</b>			
Date: Friday, December 25, 2015				Sheet	6	of	61

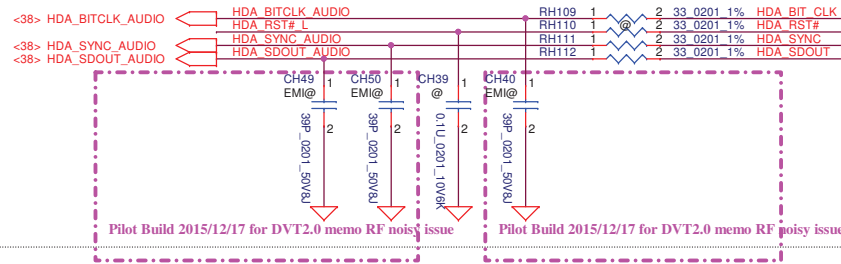




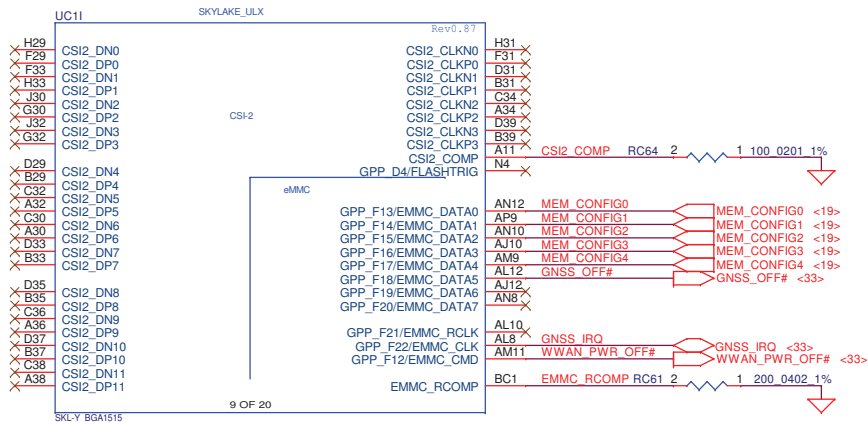
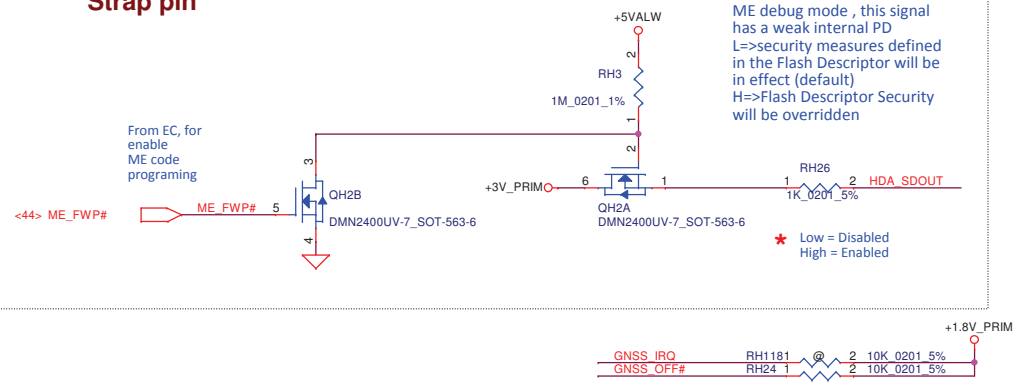


www.forums-fastunlock.com

#### HDA for AUDIO

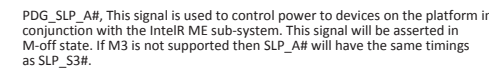


#### Strap pin



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	SKL Y(4/13) HDA,EMMC,SDIO
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date	Friday, December 25, 2015
				Sheet	8 of 61







TBT

WLAN

WiGig

NGFF SSD

Cardreader

HCA

UC1H

SKYLAKE\_ULX

Rev0.87

SSIC / USB3

USB2

PCIe/USB3/SATA

8 OF 20

SKL-Y\_BGA1515

USB Type A (Debug)

WWAN

USB Type A (Debug)

WWAN

Security IC

Touch

CAM

BT

closed MCP 1000 mils

XDP\_PRDY# TC1  
XDP\_PREQ# TC54

closed MCP 2000 mils

TBTA\_USB\_OC0# TC50  
TBTB\_USB\_OC1# TC51  
USB\_OC2# TC52  
USB\_OC3# TC53

GPP\_E0 RH123 1 2 0 0201 5% PEDET

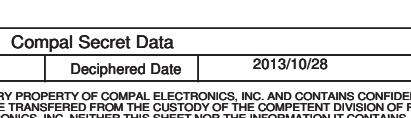
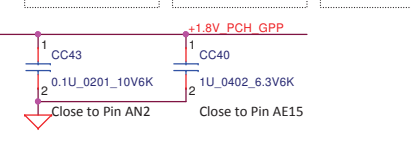
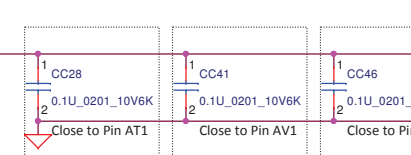
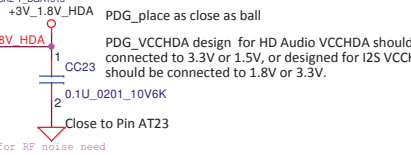
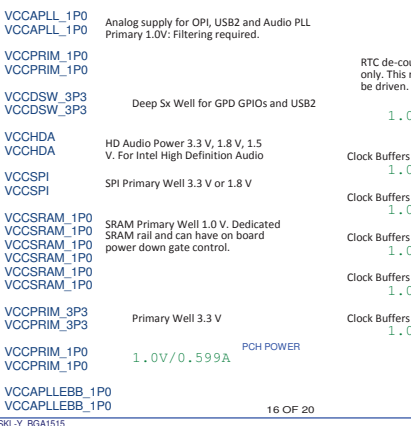
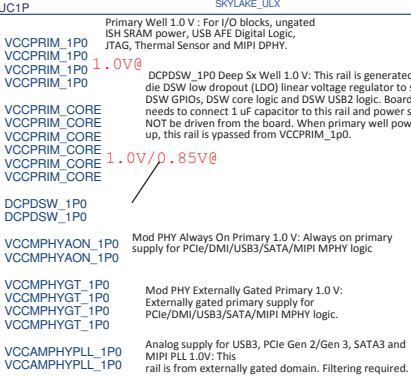
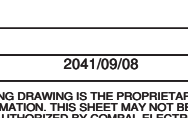
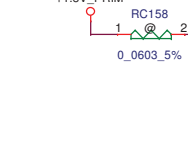
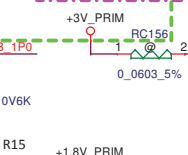
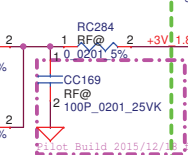
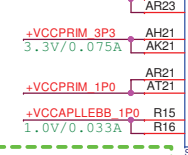
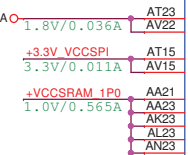
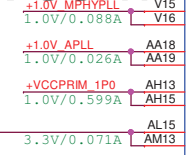
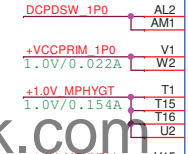
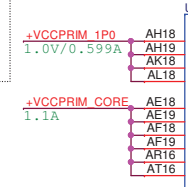
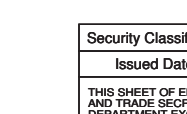
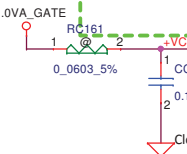
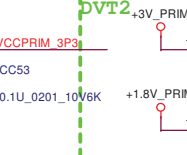
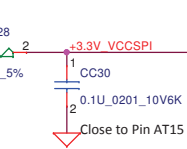
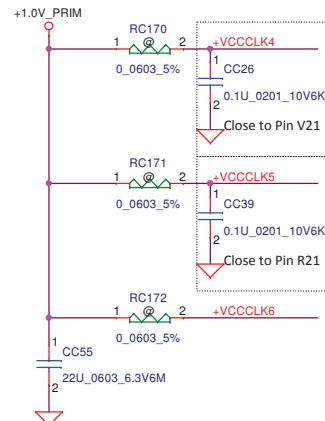
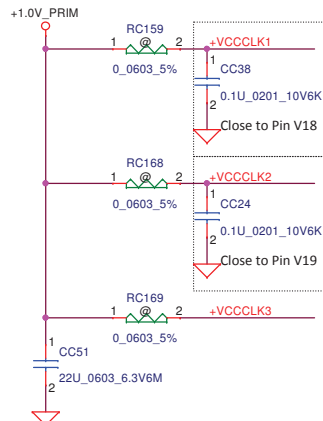
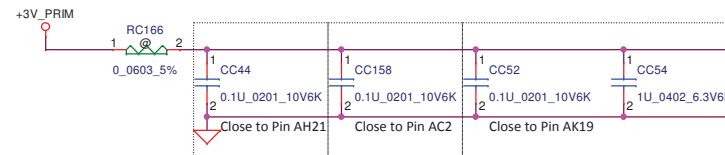
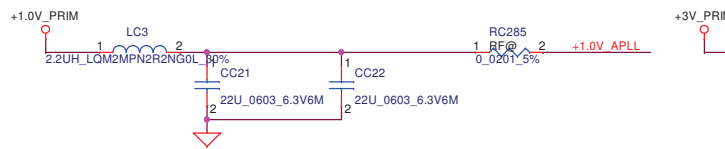
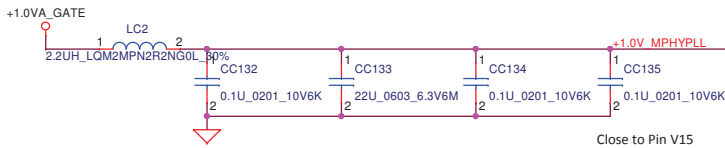
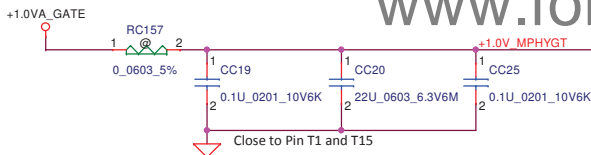
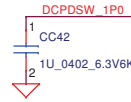
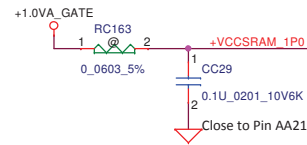
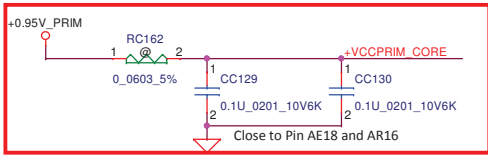
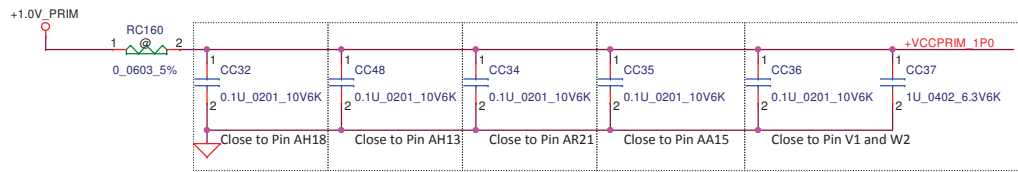
USB\_ID RH153 1 2 1K 0201 5%  
USB2\_VBUSSENSE RH154 1 2 1K 0201 5%

+3V\_PRIM  
TBTA\_USB\_OC0# RH122 1 2 10K 0201 5%  
USB\_OC2# RH123 1 2 10K 0201 5%  
USB\_OC3# RH124 1 2 10K 0201 5%  
TBTB\_USB\_OC1# RH125 1 2 10K 0201 5%  
PEDET RH155 1 2 10K 0201 5%

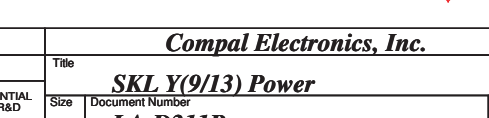
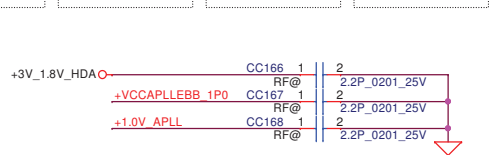
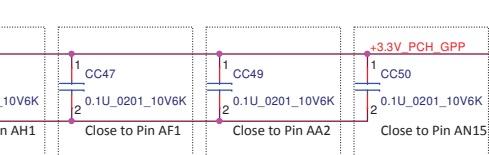
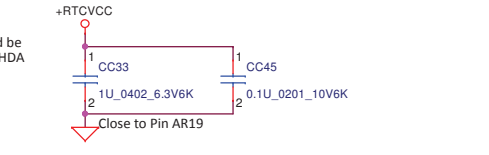
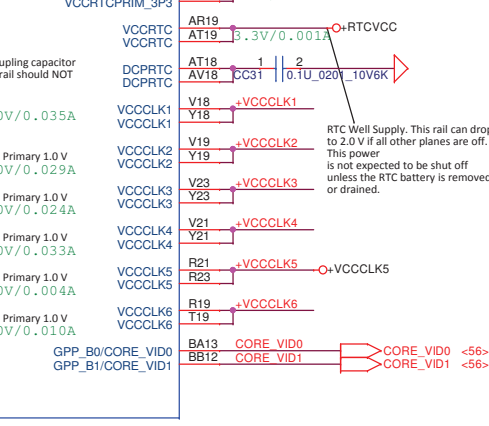
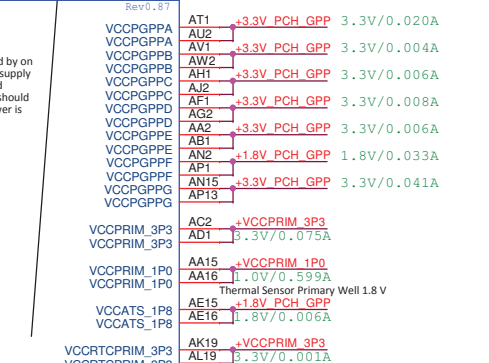
+3VS  
PCH\_GPP\_E8 RH135 1 2 10K 0201 5%  
PCH\_GPIOA7 RC90 1 2 10K 0201 5%

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	SKL Y(7/13) PCIe,USB
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date	LA-D311P
				Sheet	11 of 61
				Rev	0.3



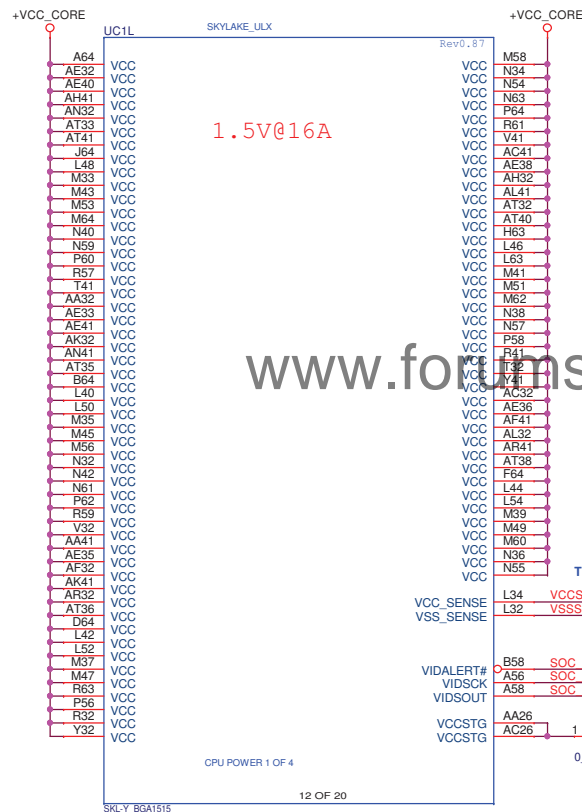


RTC Logic Primary Well 3.3 V. This power supplies the RTC internal VRM. It will be off during Deep Sx mode.

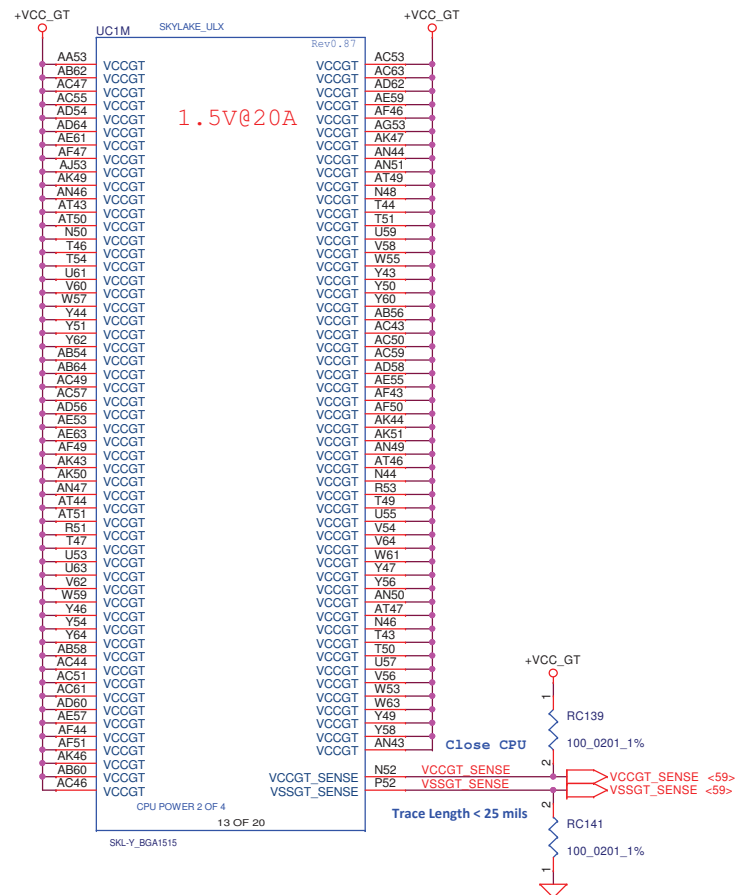


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	SKL Y(9/13) Power
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date	Friday, December 25, 2015
				Sheet	13 of 61
				Rev	0.3

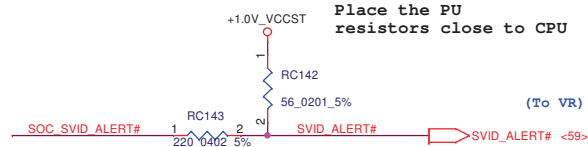




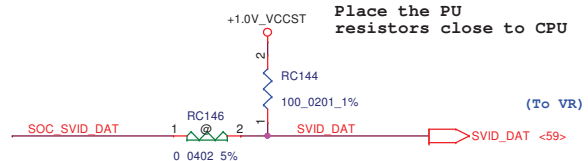
www.forums-fastunlock.com



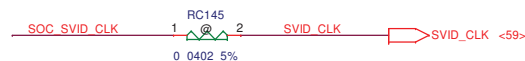
## SVID ALERT



## SVID DATA



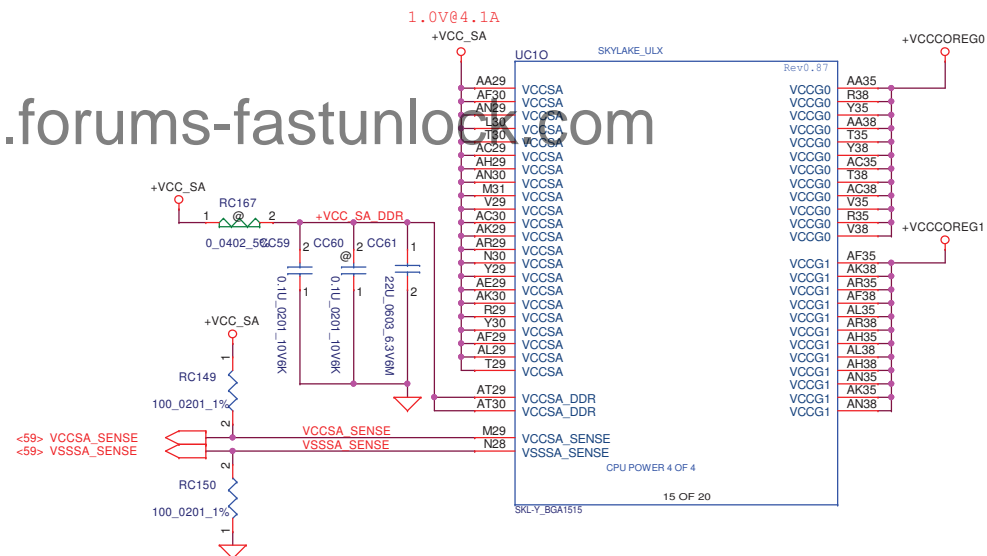
## SVID CLK



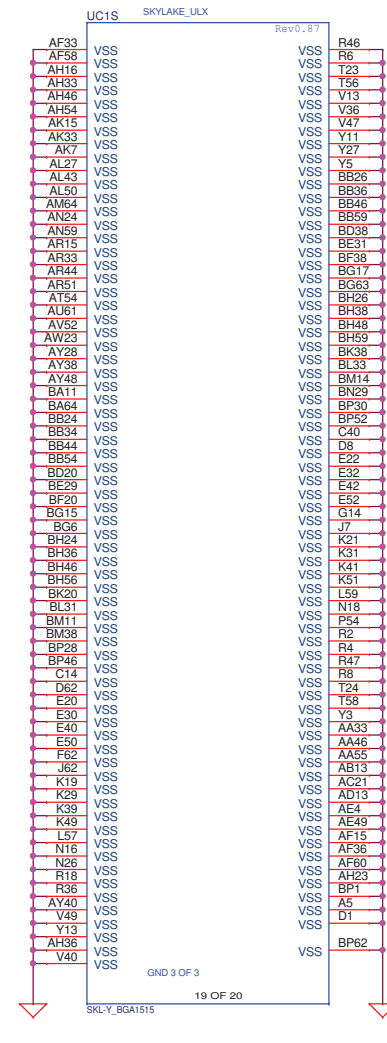
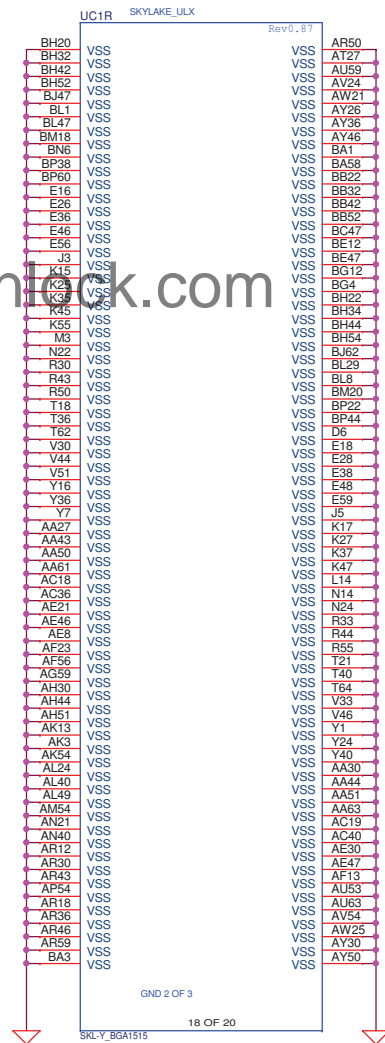
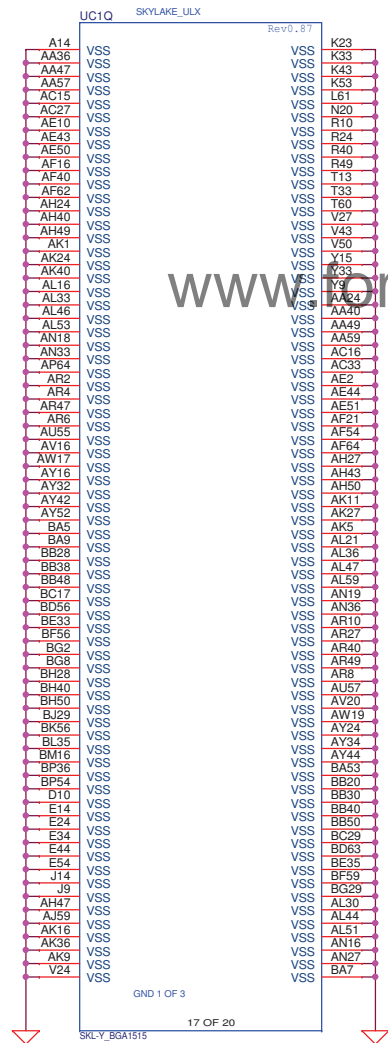
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	
				Document Number	
				LA-D311P	
				Date	
				Friday, December 25, 2015	
				Sheet	
				14 of 61	
				Rev	
				0.3	



www.forums-fastunlock.com

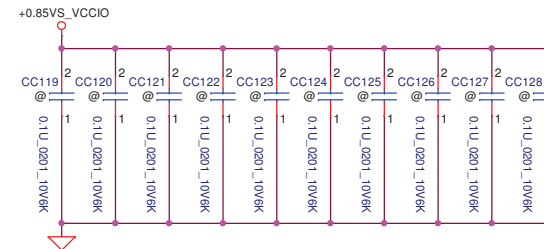
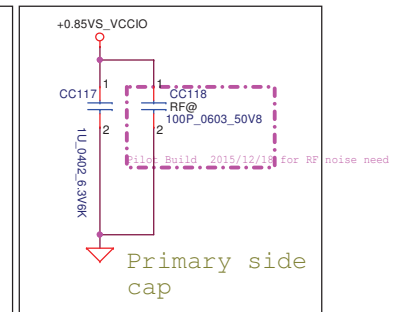
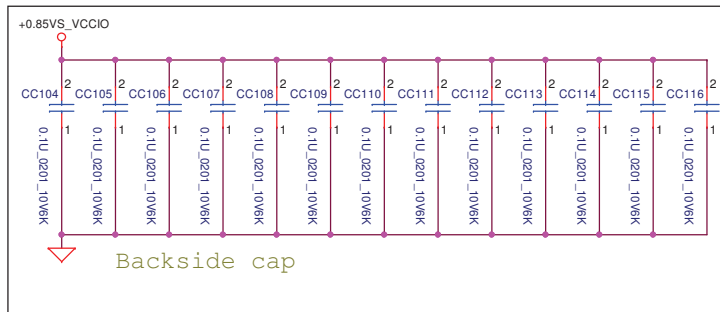
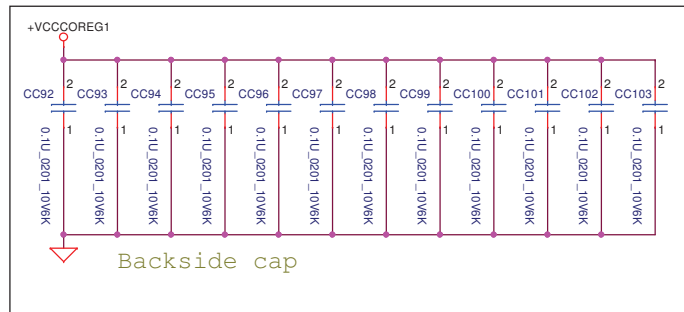
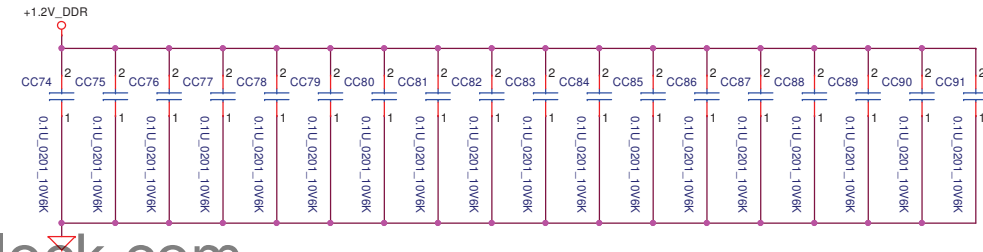
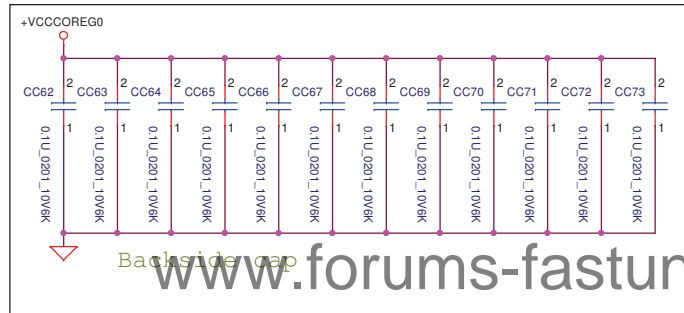


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				SKL Y(11/13) Power	
Size		Document Number			Rev
Date:		Friday, December 25, 2015			0.3
Sheet		15		of 61	



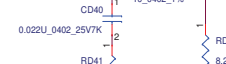
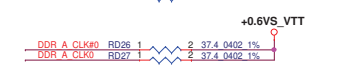
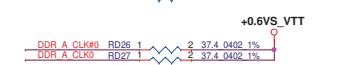
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	SKL Y(12/13) GND
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date:	Friday, December 25, 2015
				Sheet	16 of 61
				Rev	0.3





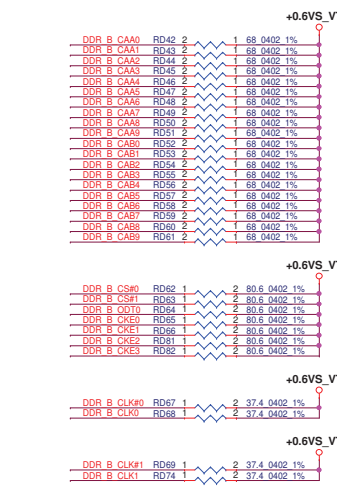
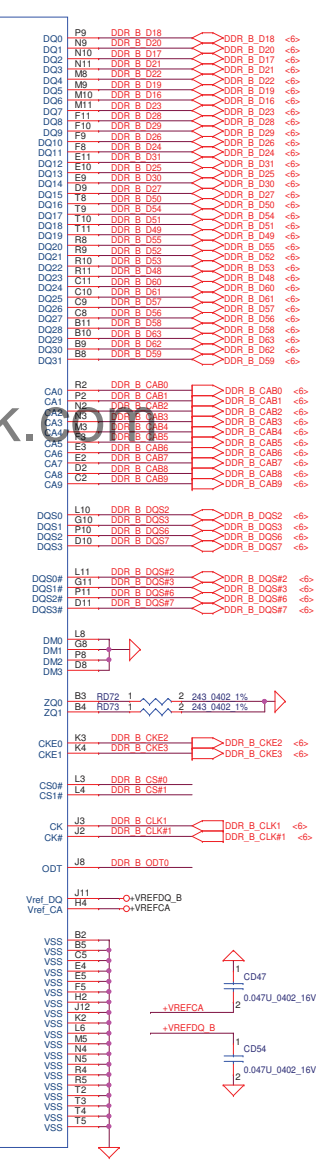
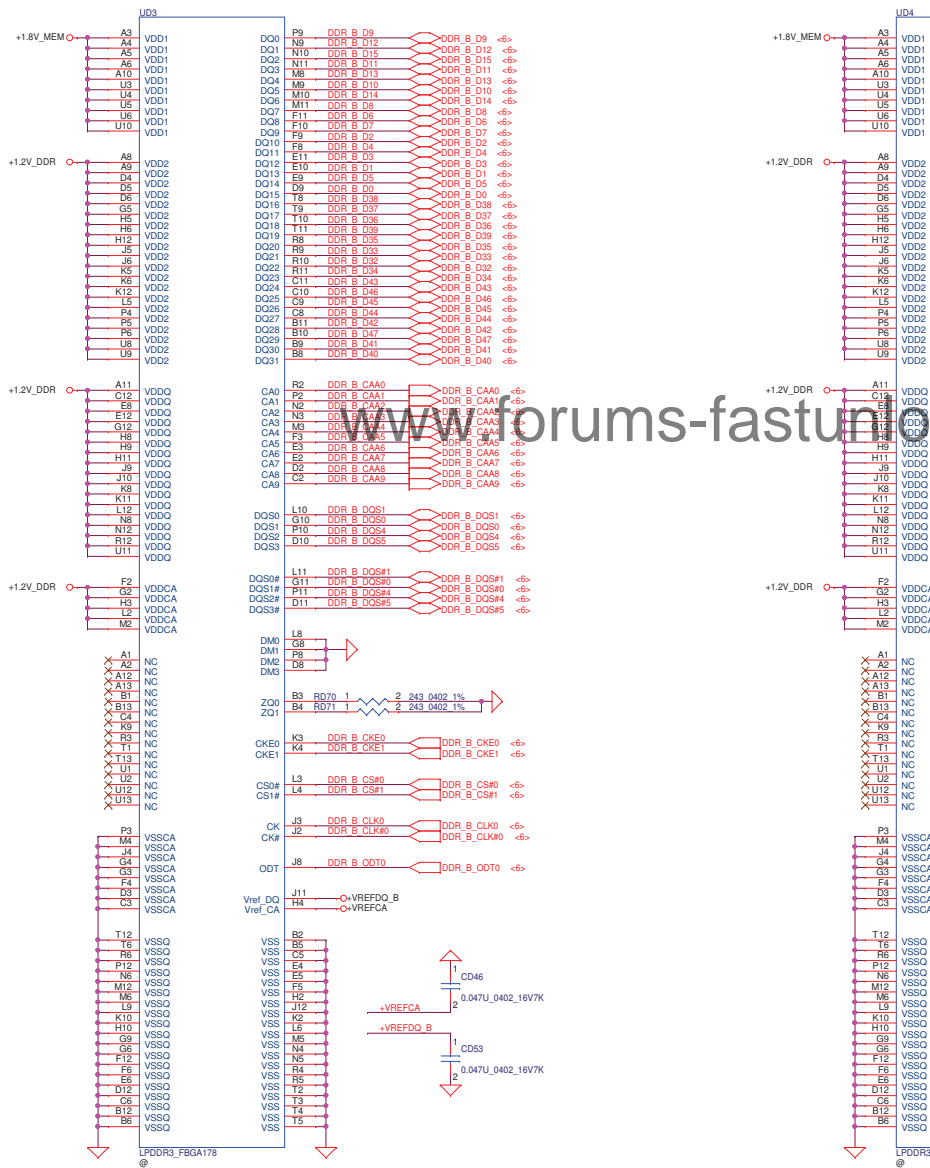
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	SKL Y-PROCESSOR DECOUPLING
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date:	Friday, December 25, 2015
				Sheet	18 of 61
				Rev	0.3
				LA-D311P	



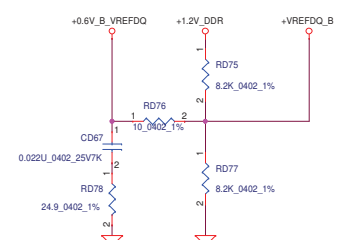
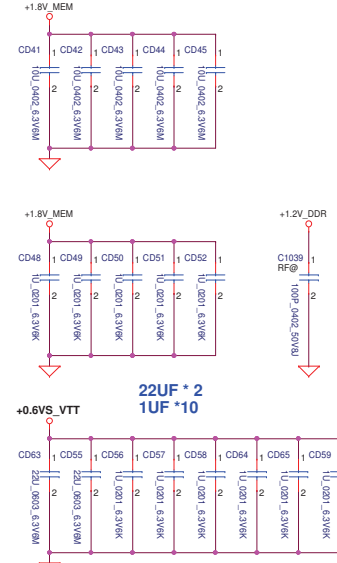


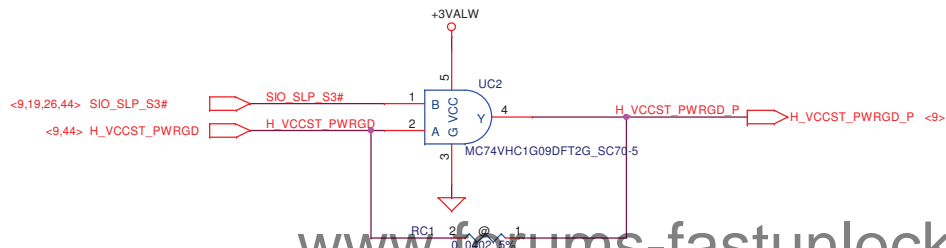
Security Classification		Compal Secret Data		<i>Compal Electronics, Inc.</i>	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	<i>LPDDRIII Channel A</i>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
					<i>LA-D311P</i>
Date:				Friday, December 25, 2015	Sheet 20 of 61





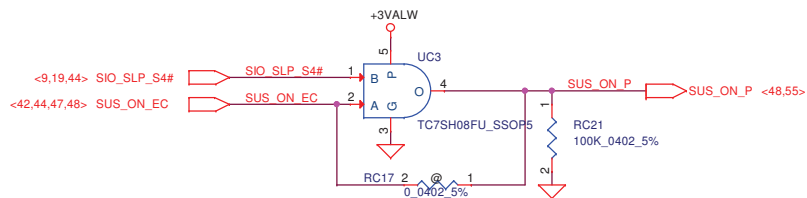
Follow CRB 544250  
CA - 68 ohm  
CS/CKE/ODT - 80.6 ohm  
CLK - 37.4 ohm



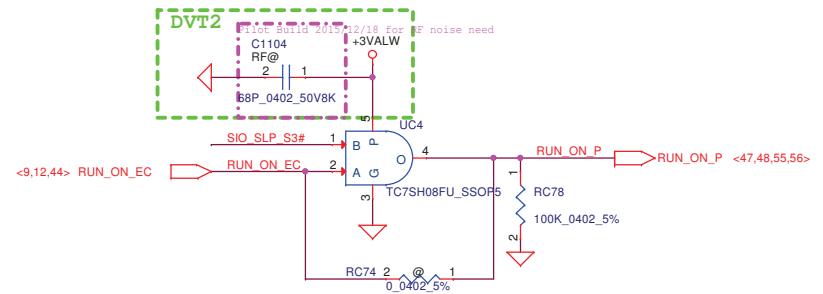


Change CPU VCCST\_PWRGD enable from EC & PCH

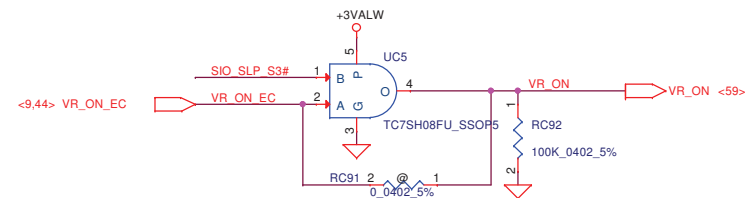
H\_VCCST\_PWRGD (3.3V), H\_VCCST\_PWRGD\_P (1.0V)  
If need to mount RC1, need to add level shift.



Change VCCST & 1.2\_VR power enable from EC & PCH

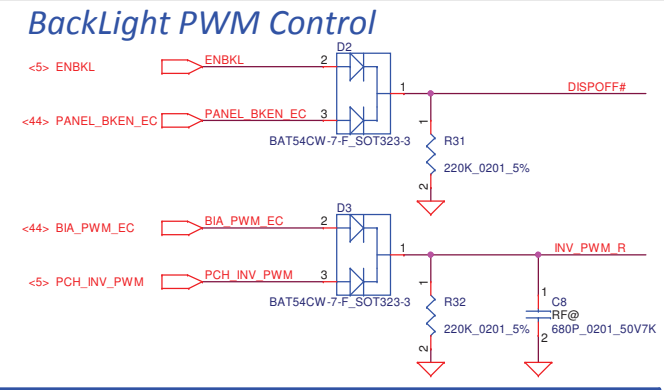
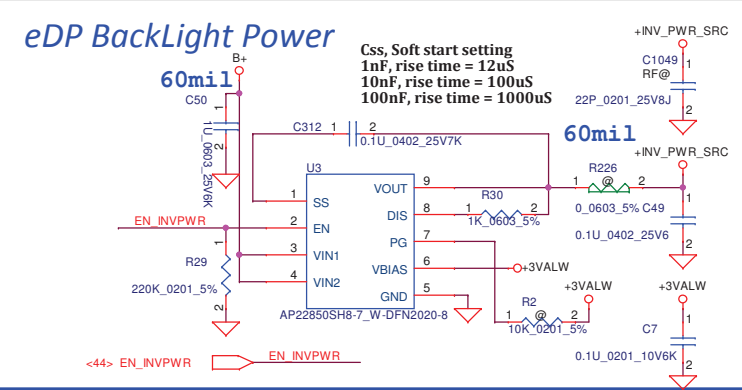
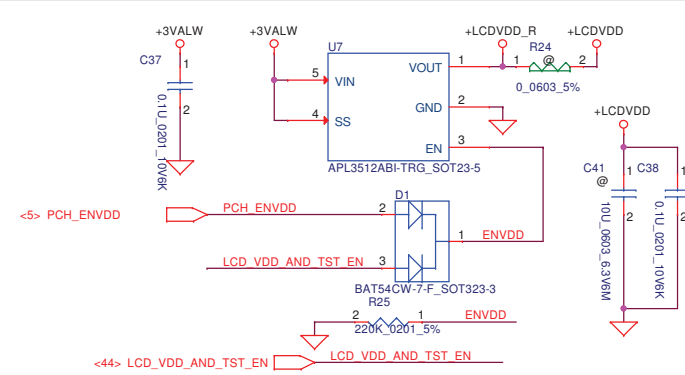


Change VCCIO & VCCSTG power enable from EC & PCH



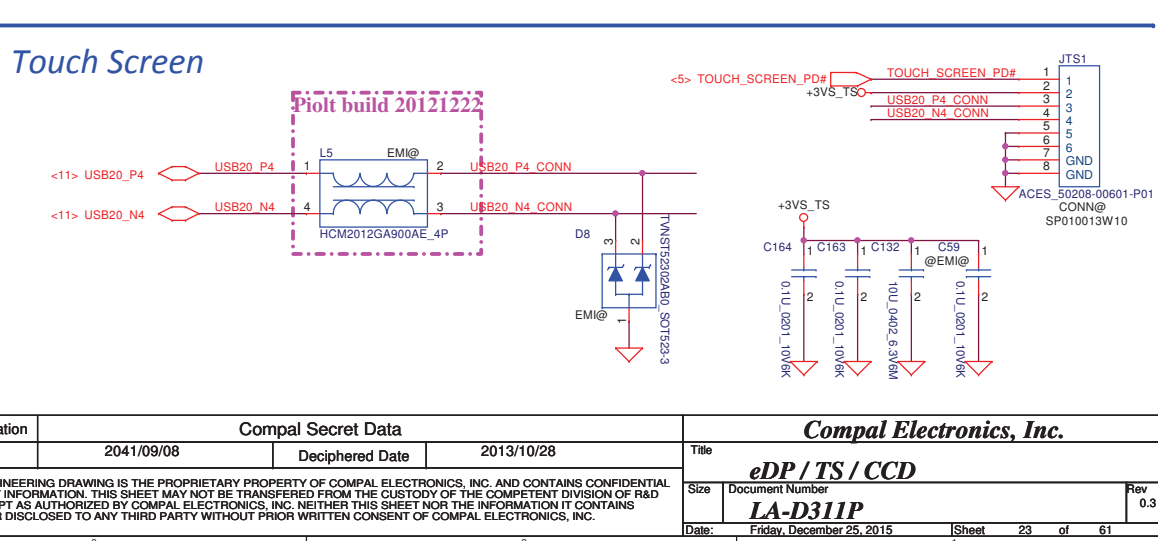
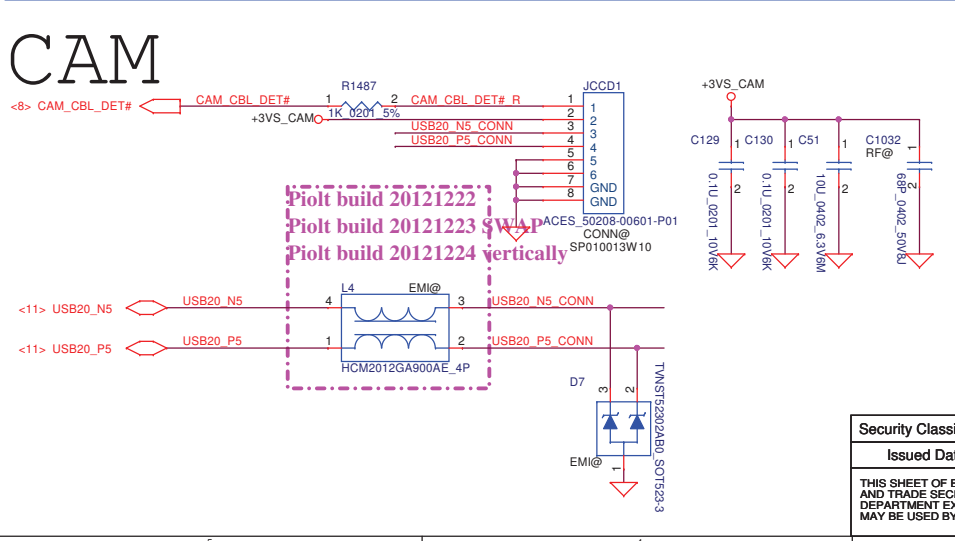
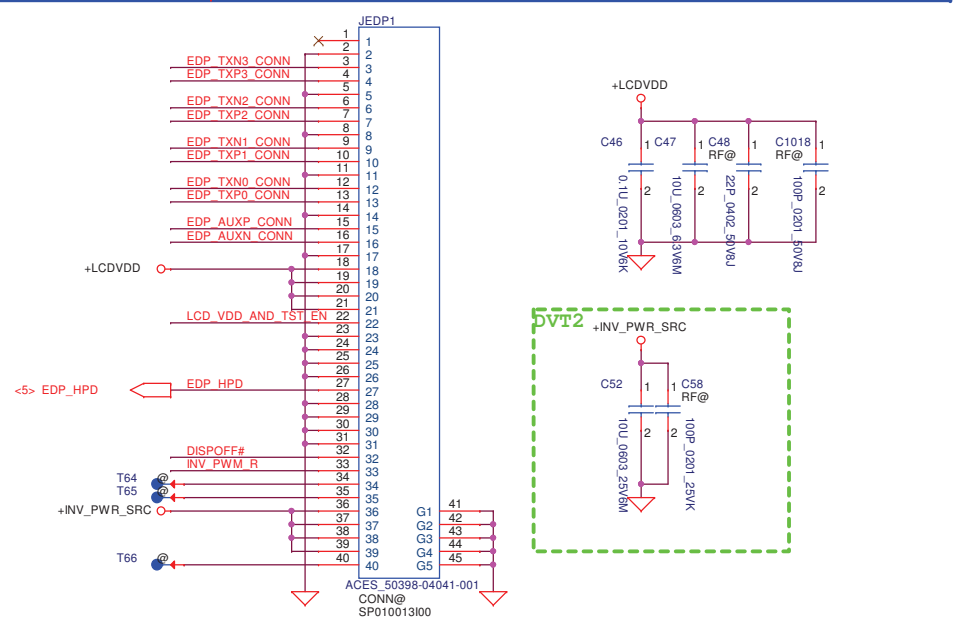
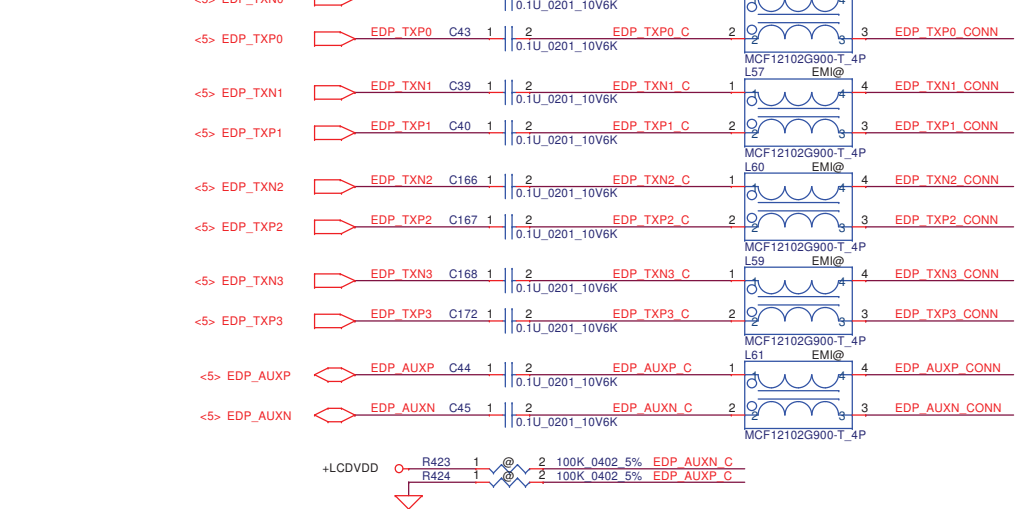
Change VCORE power enable from EC & PCH

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Sequence Logic	
Size		Document Number			Rev
Date:		Friday, December 25, 2015			0.3
Sheet		22			of 61



# eDP Conn

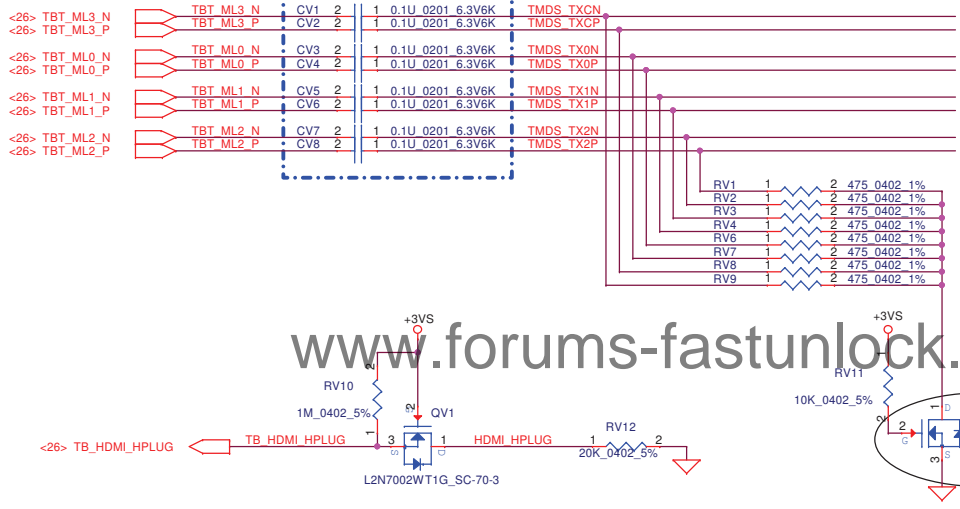
www.forums-fastunlock.com



Security Classification		Compal Secret Data		Title	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	eDP / TS / CCD	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date	Friday, December 25, 2015
				Sheet	23 of 61

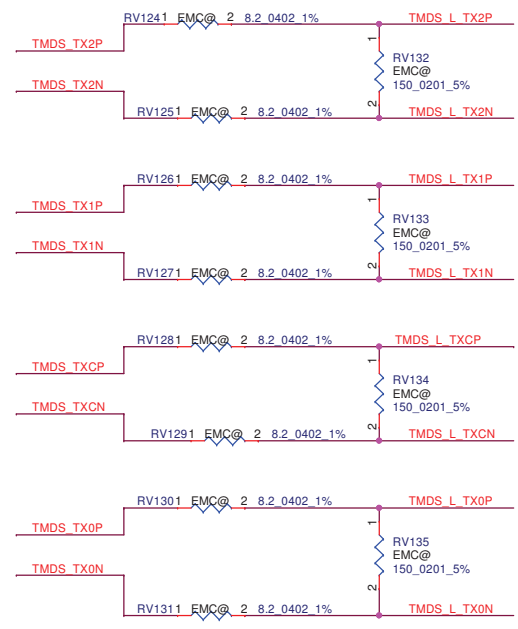
HDMI Active Level Shift (ALS type)

1014: Steg change to 0201 package.

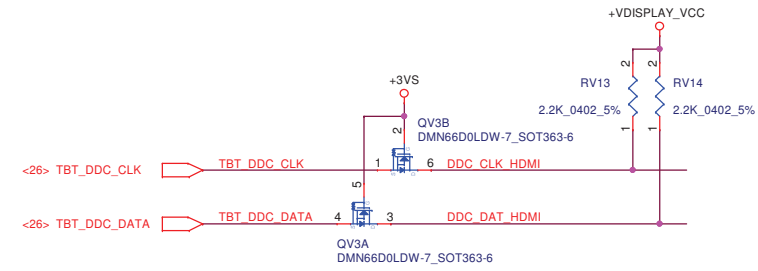


Place close to JHDMI1

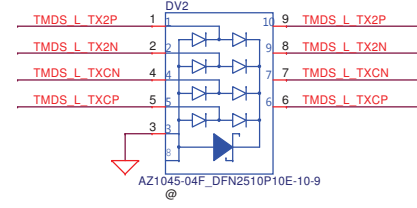
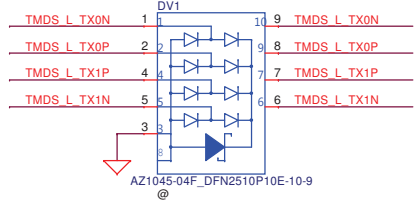
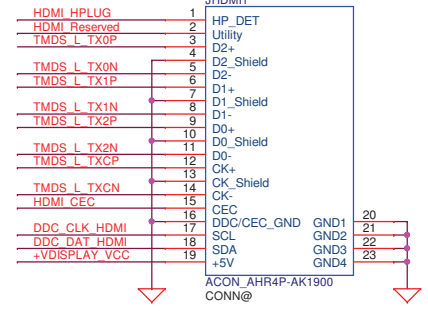
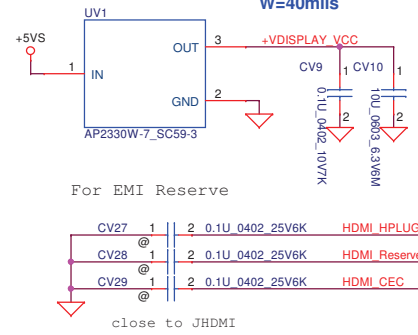
For EMI



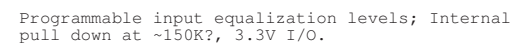
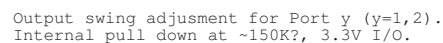
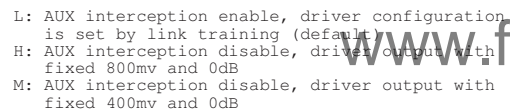
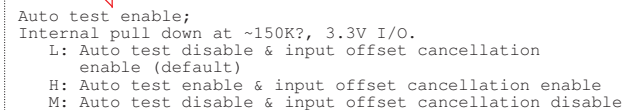
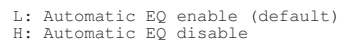
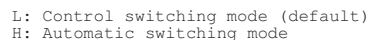
HDMI DDC



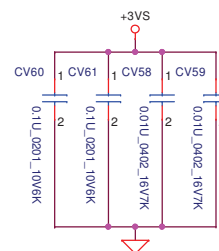
HDMI conn



Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		HDMI	
2041/09/08		2013/10/28		LA-D311P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Date:		Rev	
Friday, December 25, 2015		Sheet		0.3	
24		of		61	



L: default, LEQ, compensate channel loss up to 11.5dB @ HBR2  
H: HEQ, compensate channel loss up to 14.5dB @ HBR2  
M: LLEQ, compensate channel loss up to 8.5dB @ HBR2



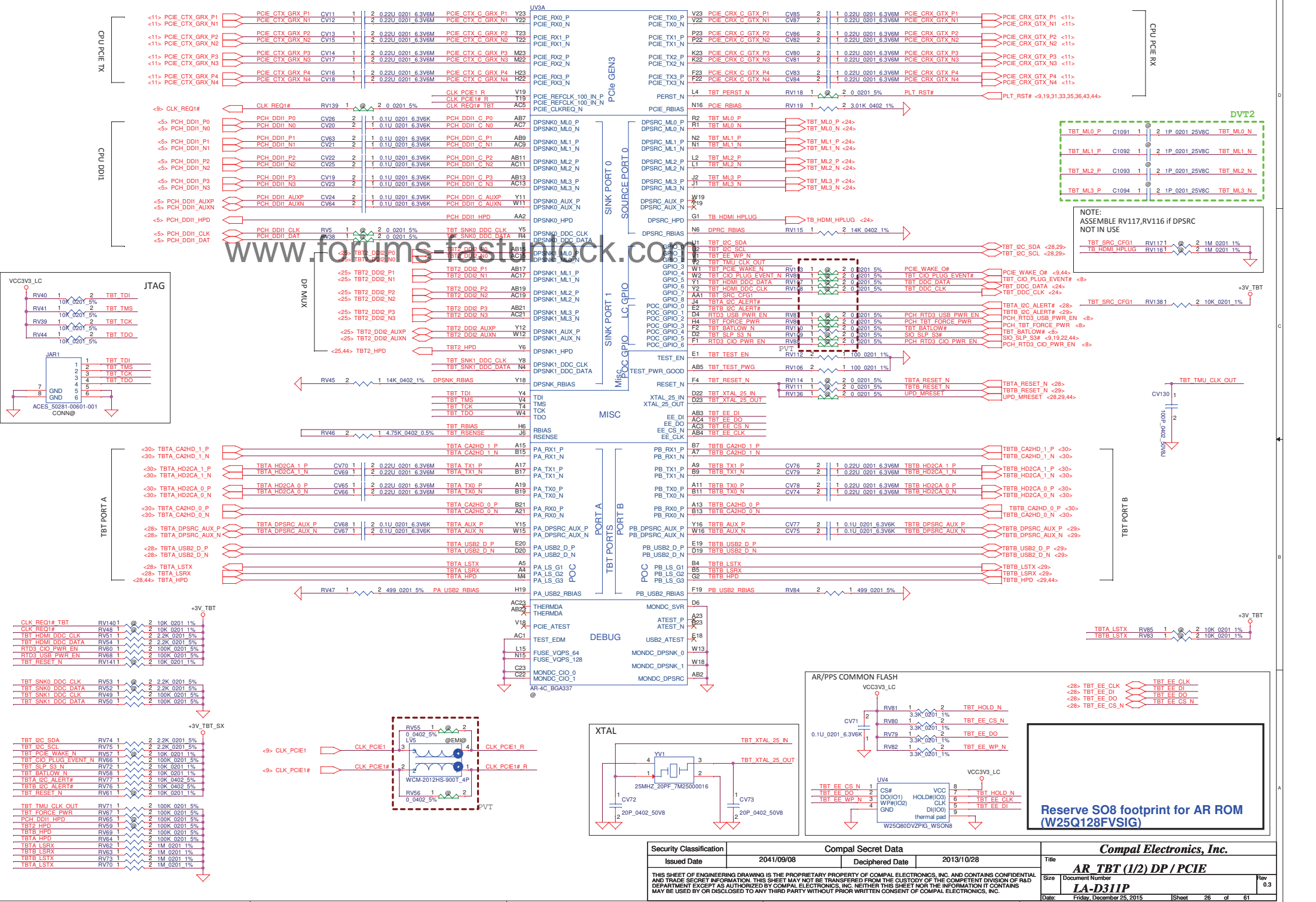
```

L: Port1 is selected or with higher priority
  (default)
H: Port2 is selected or with higher priority

```



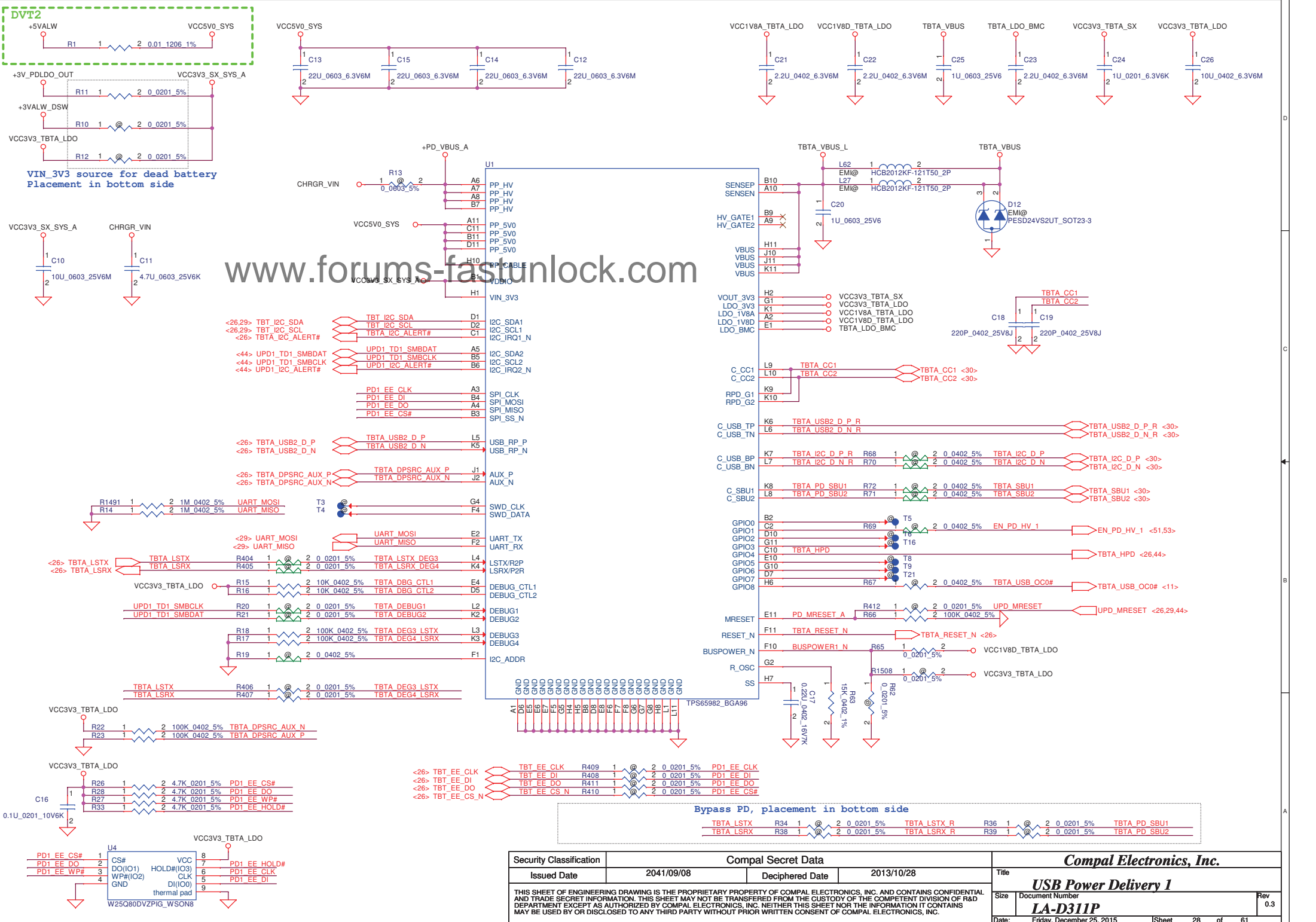
Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>		
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title <b>DP MUX</b>		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				<b>LA-D311P</b>		0.3
Date:		Friday, December 25, 2015		Sheet	25	of 61



Security Classification		Compal Secret Data	
Issued Date	2041/09/06	Deciphered Date	2013/10/28
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 TRANSMITTED 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.	
Size		AR TB1 (1/2) DP / PCIE	
Date		Friday, December 25, 2015	
Sheet		26 of 61	





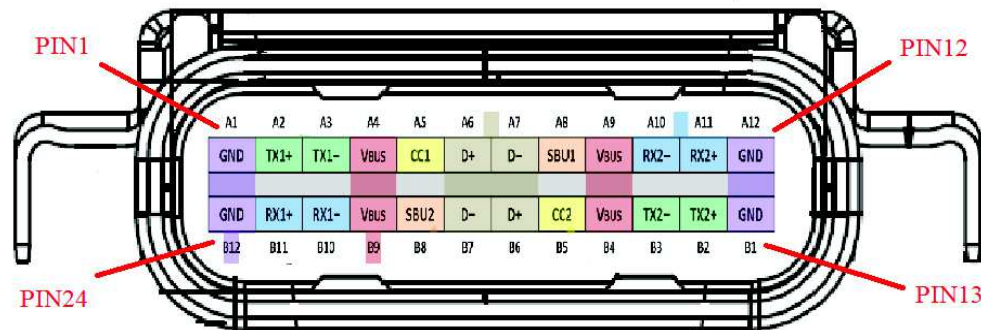
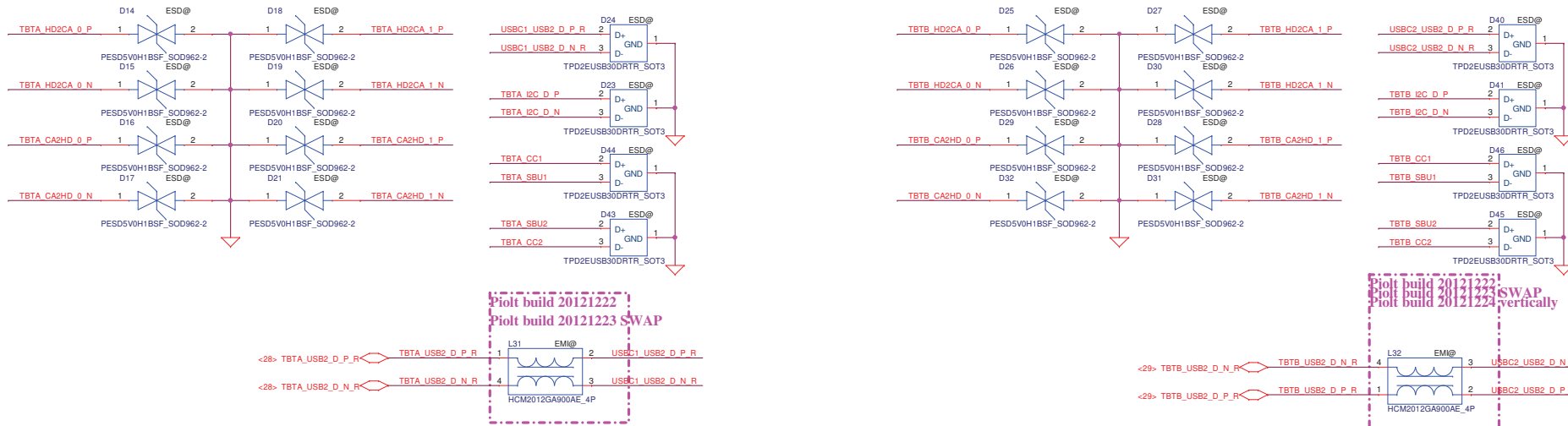
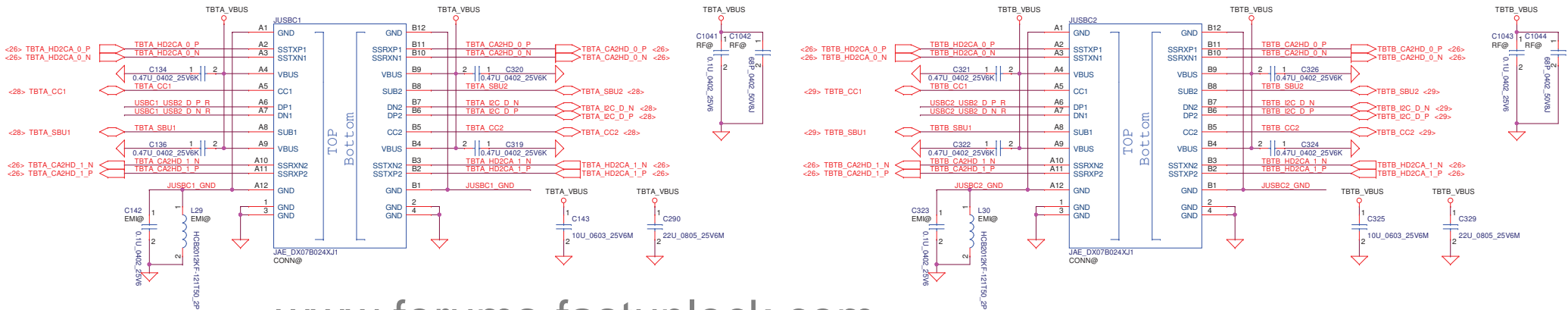


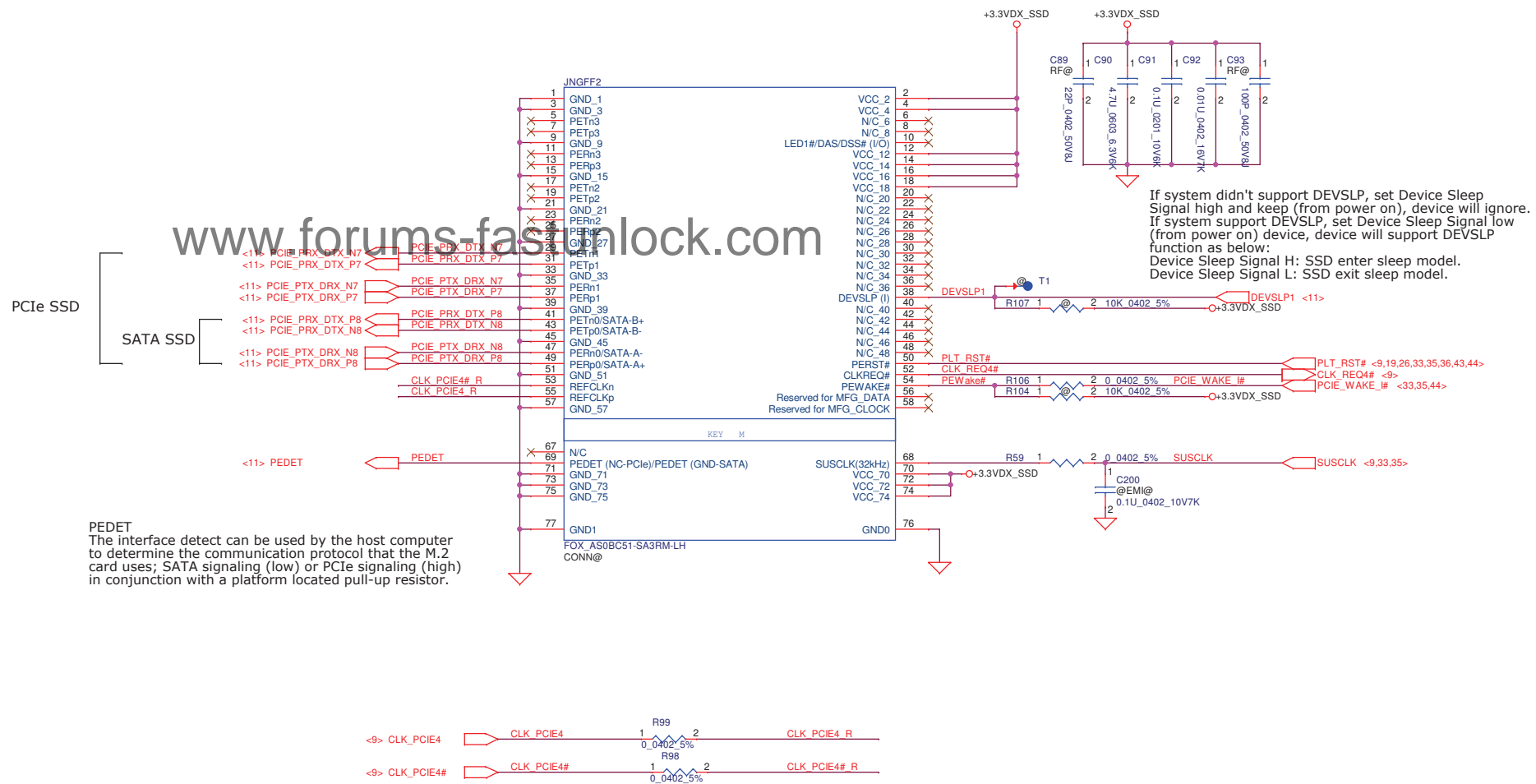
www.forums-fastunlock.com

Security Classification		Compal Secret Data		Title	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	USB Power Delivery 1	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				LA-D311P	Rev 0.3
				Date	Friday, December 25, 2015
				Sheet	28 of 61



www.forums-fastunlock.com





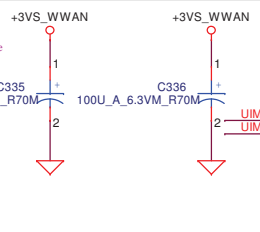
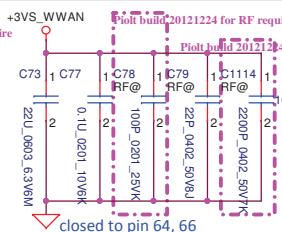
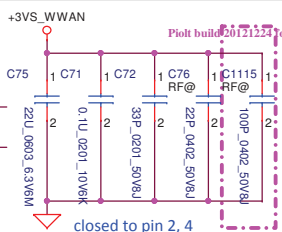
Security Classification		Compal Secret Data		Compal Electronics, Inc.				
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title				
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				SATA SSD				
				Size	Document Number			Rev
				LA-D31IP				0.3
				Date:	Friday, December 25, 2015		Sheet	31

www.forums-fastunlock.com

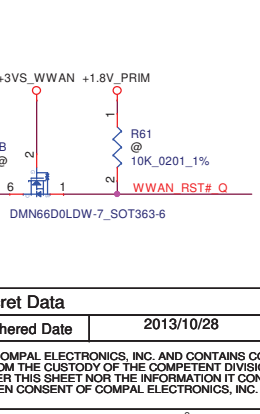
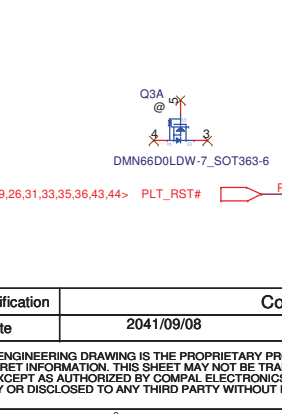
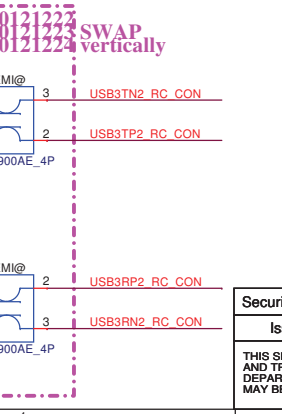
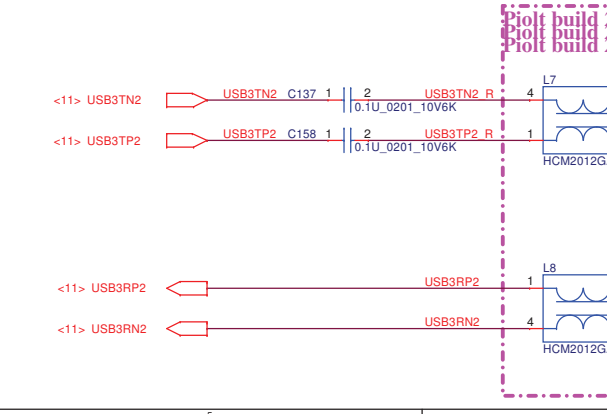
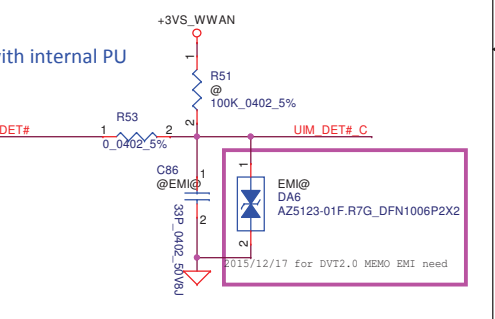
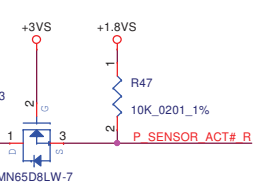
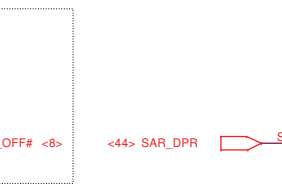
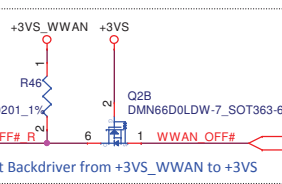
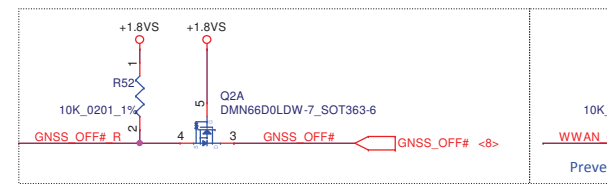
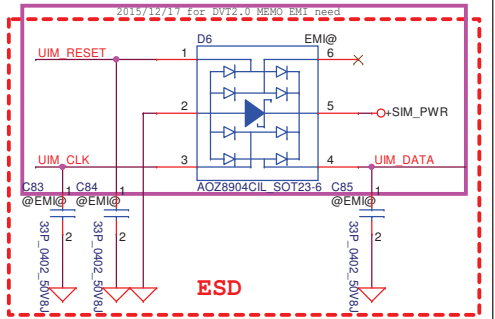
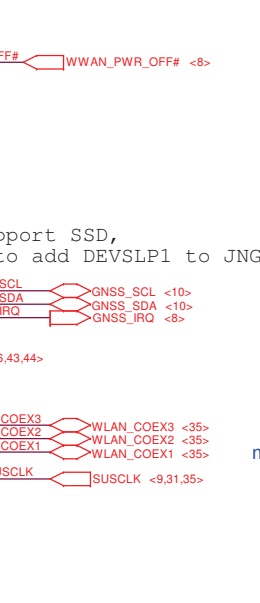
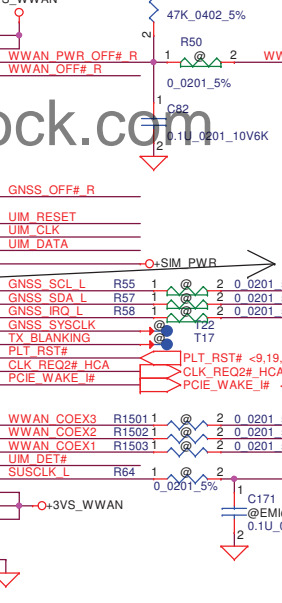
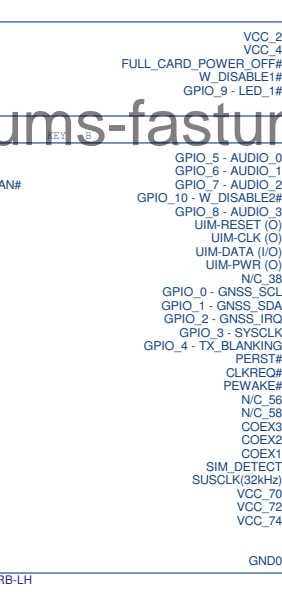
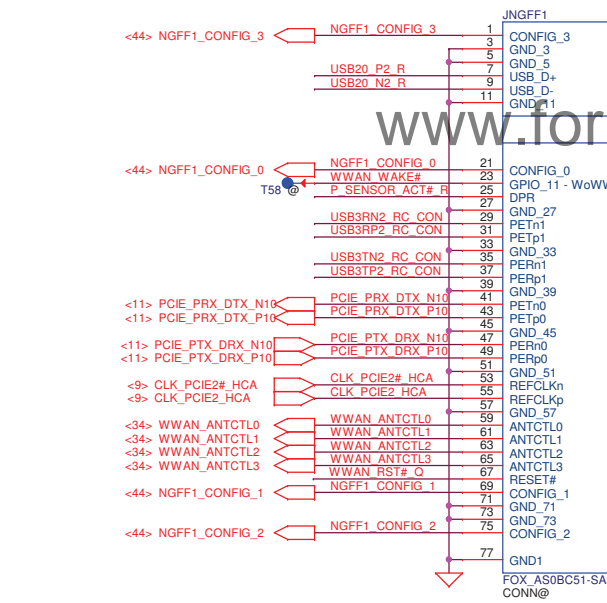
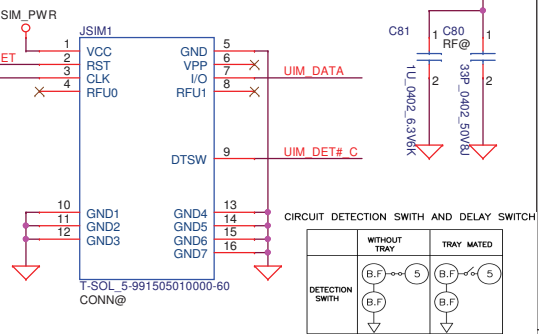
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	Reserved
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date:	Friday, December 25, 2015
				Sheet	32 of 61
				Rev	0.3
				LA-D311P	



# Piolt build 20121222 Piolt build 20121223 SWAP



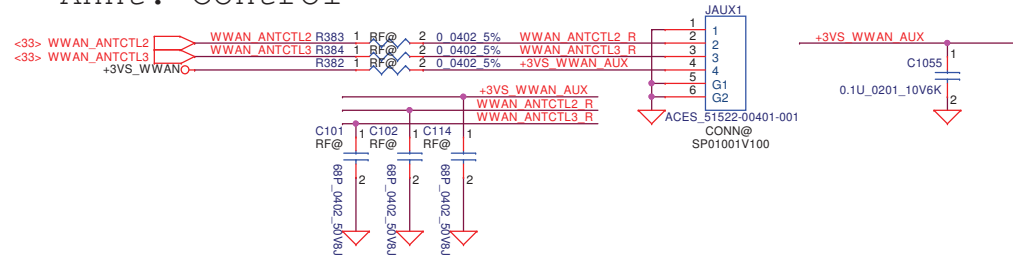
## uSIM Card



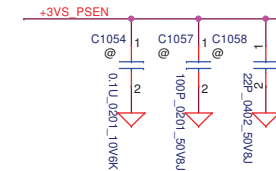
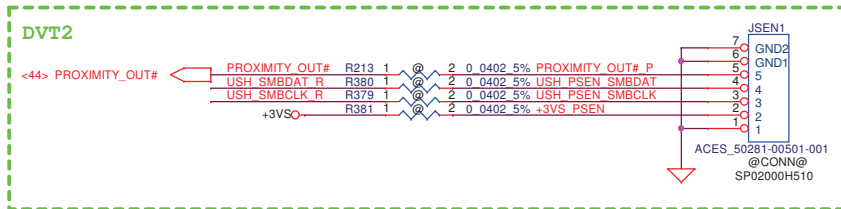
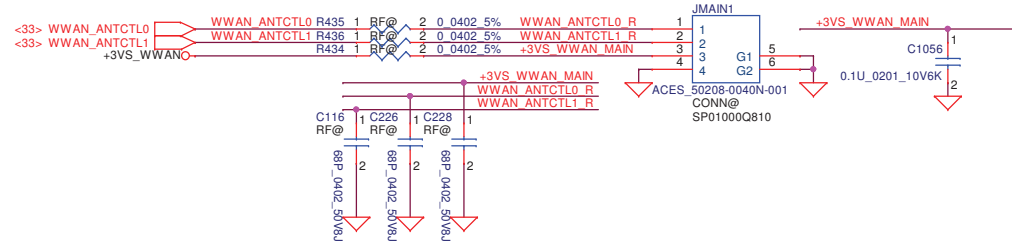
Pin	Port Config_0	Port Config_1	Port Config_2	Port Config_3
GNSS_SCL	GNSS_SCL	GNSS_SCL	SIM_DET2	IPC_0
GNSS_SDA	GNSS_SDA	GNSS_SDA	UIM_DATA2	IPC_1
GNSS_IRQ	GNSS_IRQ	GNSS_IRQ	UIM_CLK2	IPC_2
GNSS_IHQ	GNSS_IHQ	GNSS_IHQ	UIM_RST2	IPC_3
TX_BLANKING	GNSS_1	GNSS_1	UIM_PWR2	IPC_4
AUDIO_0	AUDIO_0	AUDIO_0	RPU	AUDIO_0
AUDIO_1	AUDIO_1	AUDIO_1	RPU	AUDIO_1
AUDIO_2	AUDIO_2	AUDIO_2	RPU	IPC_5/AUDIO_2
AUDIO_3	AUDIO_3	AUDIO_3	RPU	IPC_6/AUDIO_3
LED_1#	W_DISABLE2	W_DISABLE2	W_DISABLE2	HSIC_STROBE
W_DISABLE2	W_DISABLE2	W_DISABLE2	W_DISABLE2	HSIC_DATA
WAKE_ON_WWAN#	WAKE_ON_WWAN#	WAKE_ON_WWAN#	WAKE_ON_WWAN#	

Security Classification	Compal Secret Data		Title	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P33-WWAN
Size	Document Number	LA-D311P	Rev	0.3
Date	Friday, December 25, 2015	Sheet	33	of 61

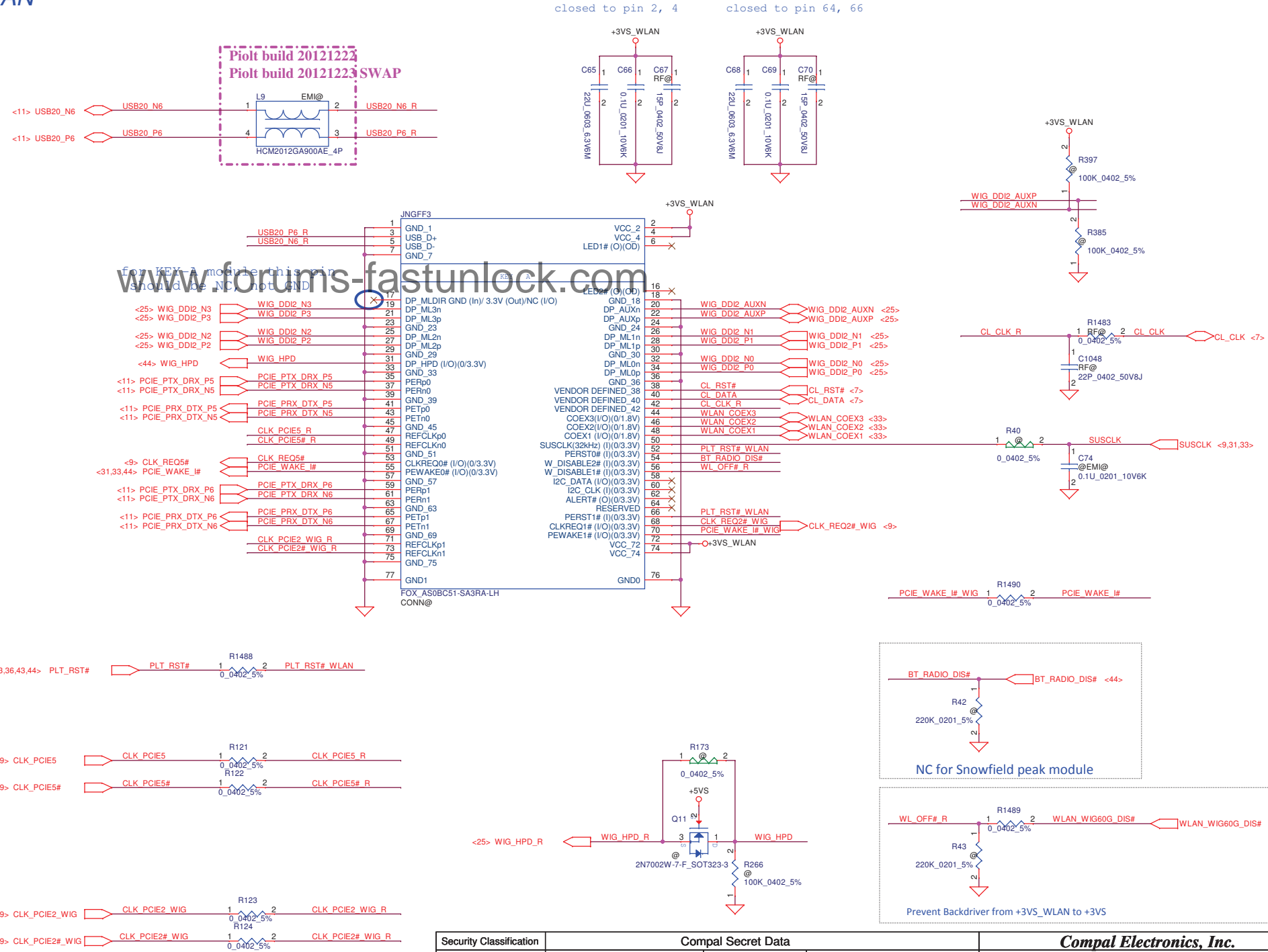
## Annt. Control



www.forums-fastunlock.com



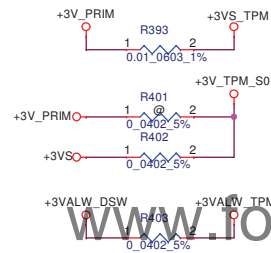
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				RF Conn.	
Size	Document Number	Rev			0.3
Date:	Friday, December 25, 2015	Sheet	34	of	61



Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2041/09/08		Deciphered Date		2013/10/28		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. IT IS THE PROPERTY OF THE CUSTOMER. THE CUSTOMER IS NOT TO DISCLOSE THIS INFORMATION TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						WLAN / BT					
						Size		Document Number		Rev	
						LA-D311P				0.3	
						Date:		Friday, December 25, 2015		Sheet	
										35 of 61	

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.

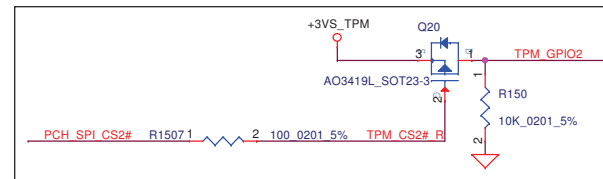
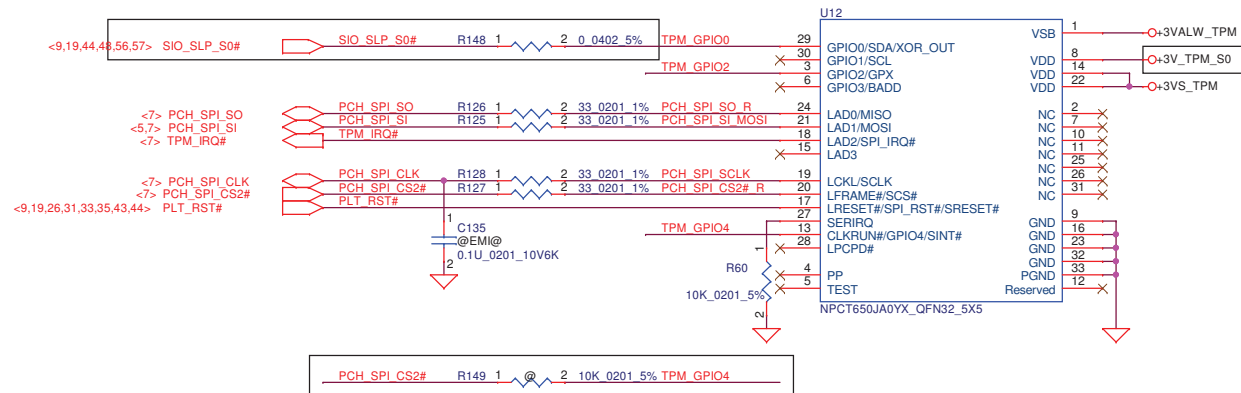
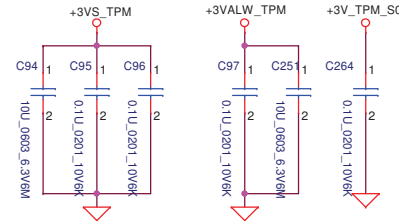
# TPM



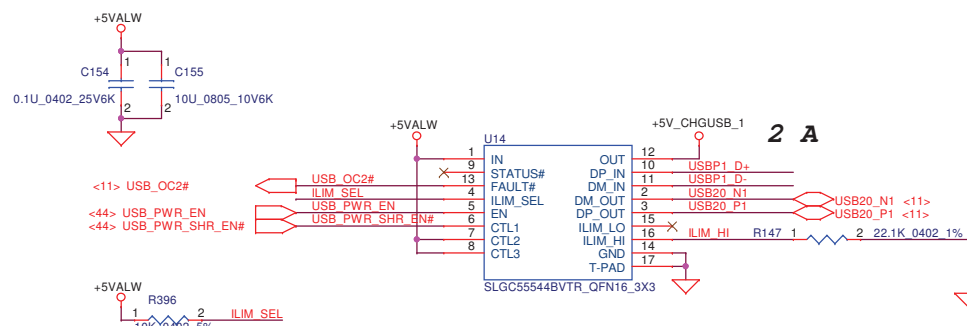
NOTE:  
Place 0.1 uF capacitors as close as possible to the device power pins

1.GPIO0 : connect to SLP\_S0#  
2.GPIO2 : connect to inverted SPI\_CS2# via a P-MOS  
3.GPIO4 : connect to CS2# through a 10K pull-up resistor (just reserved)  
4.GPIO1 and connect pin to S0# power rail (+3VS or +3V\_RUN)

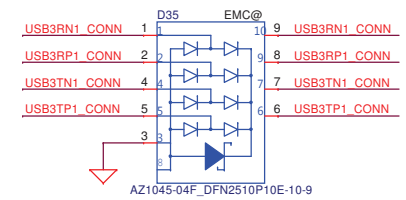
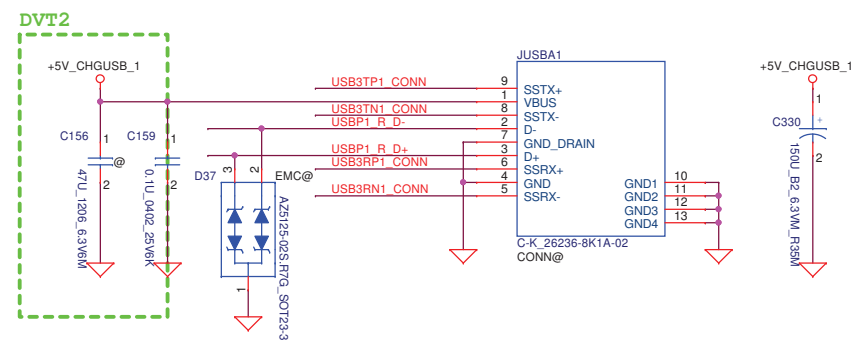
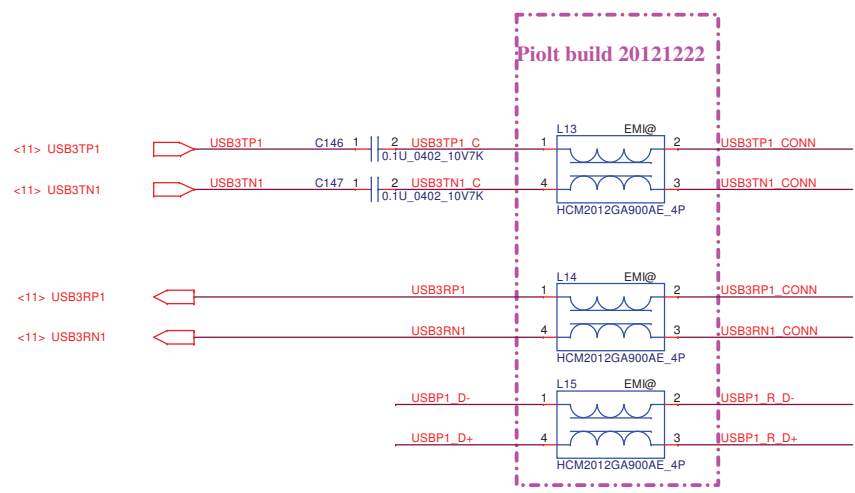
NOTE:  
Follow the SPI topology layout guidelines in the relevant Intel Platform Design Guide



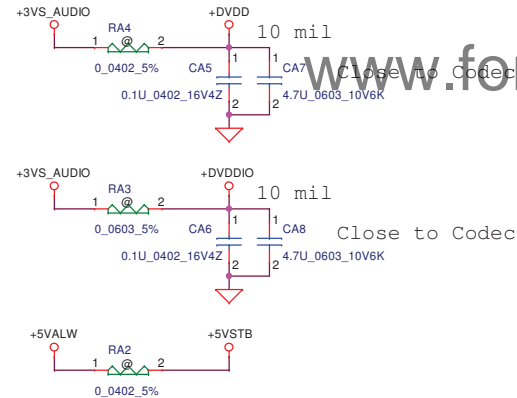
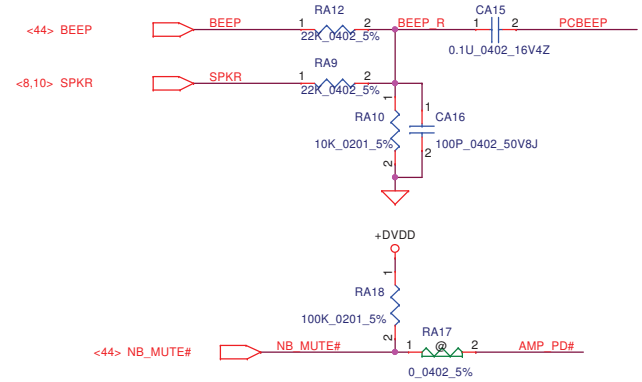
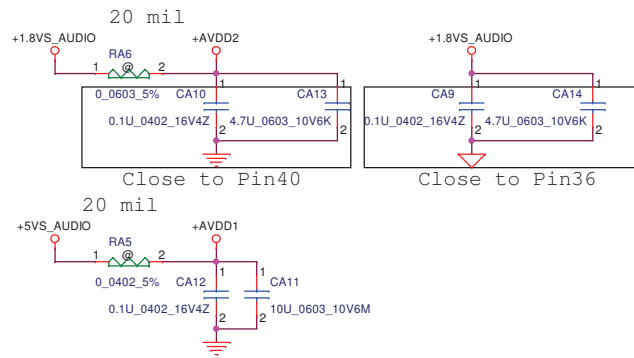
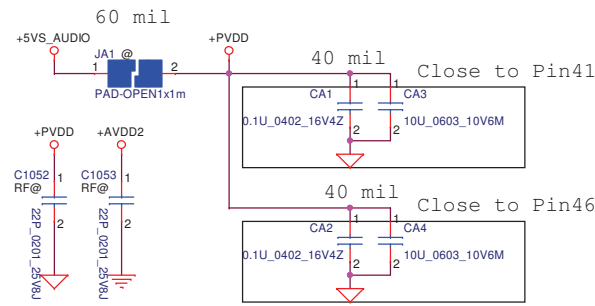
Security Classification		Compal Secret Data		Title	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	TPM	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				LA-D311P	
				Date:	Friday, December 25, 2015
				Sheet	36 of 61
				Rev	0.3



www.forums-fastunlock.com



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	USB3.0 Type A
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date	Friday, December 25, 2015
				Sheet	37 of 61
				Rev	0.3



www.forums-fastunlock.com

<8> HDA\_SYNC\_AUDIO  
<8> HDA\_BITCLK\_AUDIO  
<8> HDA\_SDOUT\_AUDIO  
<8> HDA\_SDIN0

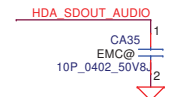
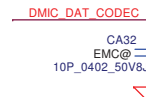
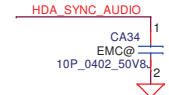
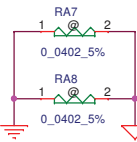
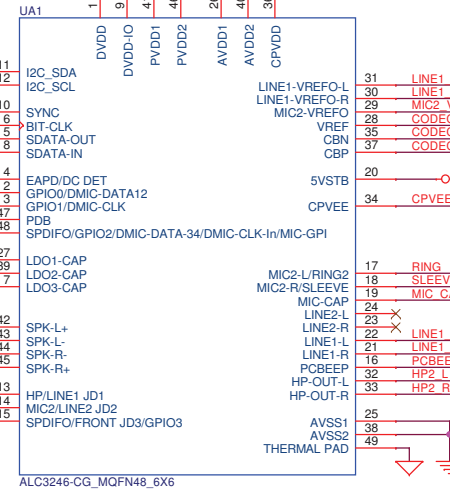
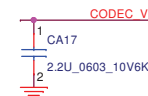
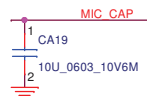
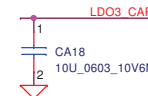
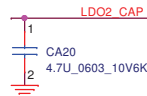
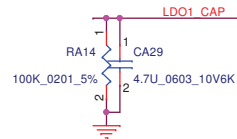
HDA\_SYNC\_AUDIO  
HDA\_BITCLK\_AUDIO  
HDA\_SDOUT\_AUDIO  
HDA\_SDIN0

<46> DMIC\_DAT\_CODECD  
<46> DMIC\_CLK\_CODECD

DMIC\_DAT\_CODECD  
DMIC\_CLK\_CODECD

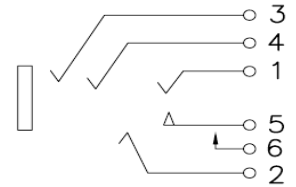
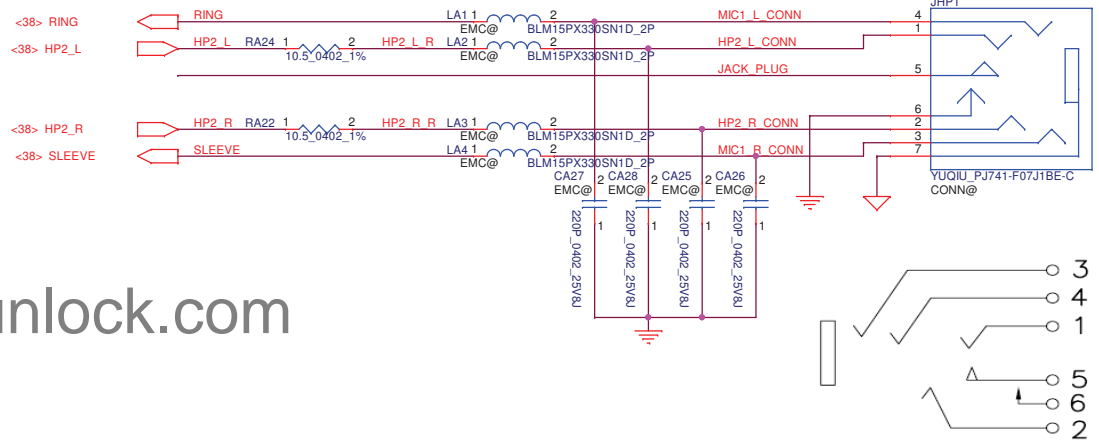
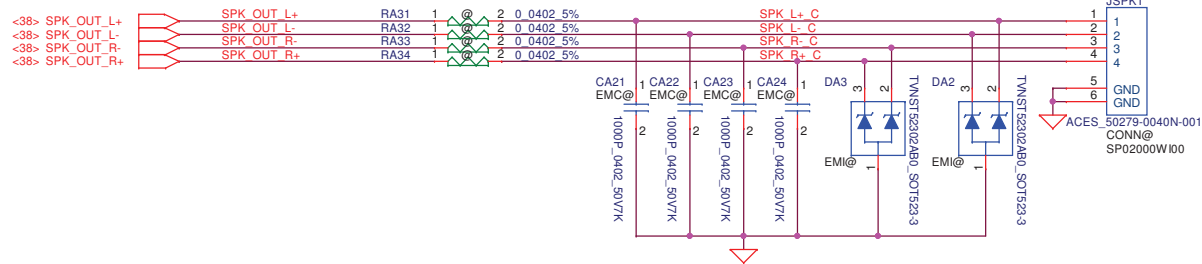
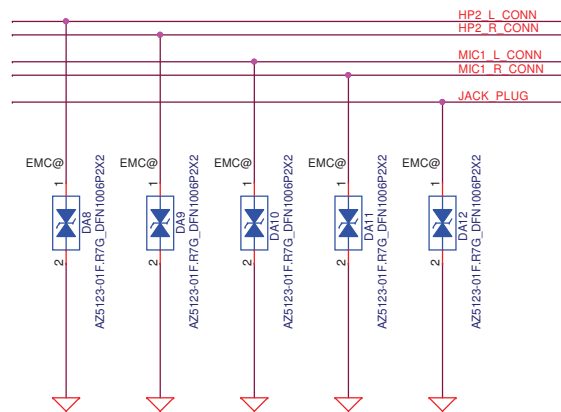
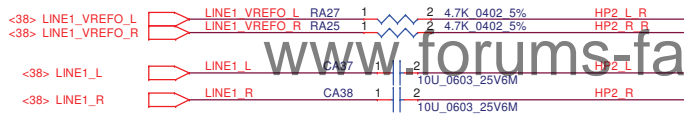
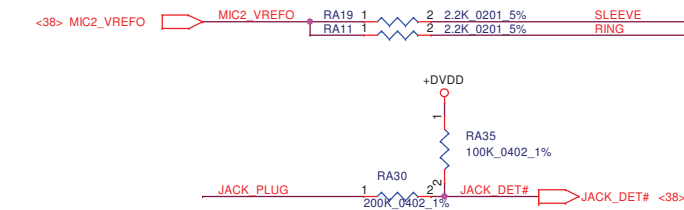
<39> SPK\_OUT\_L+  
<39> SPK\_OUT\_L-  
<39> SPK\_OUT\_R+  
<39> SPK\_OUT\_R-  
<39> JACK\_DET#

SPK\_OUT\_L+  
SPK\_OUT\_L-  
SPK\_OUT\_R+  
SPK\_OUT\_R-  
JACK\_DET#



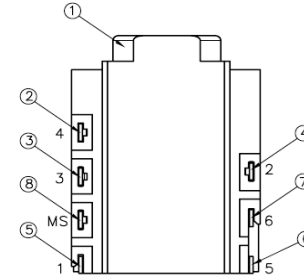
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	Audio Codec3246
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date	Friday, December 25, 2015
				Sheet	38 of 61
				Rev	0.3



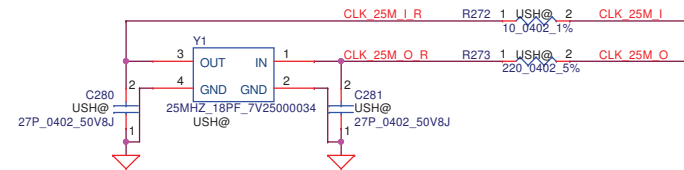
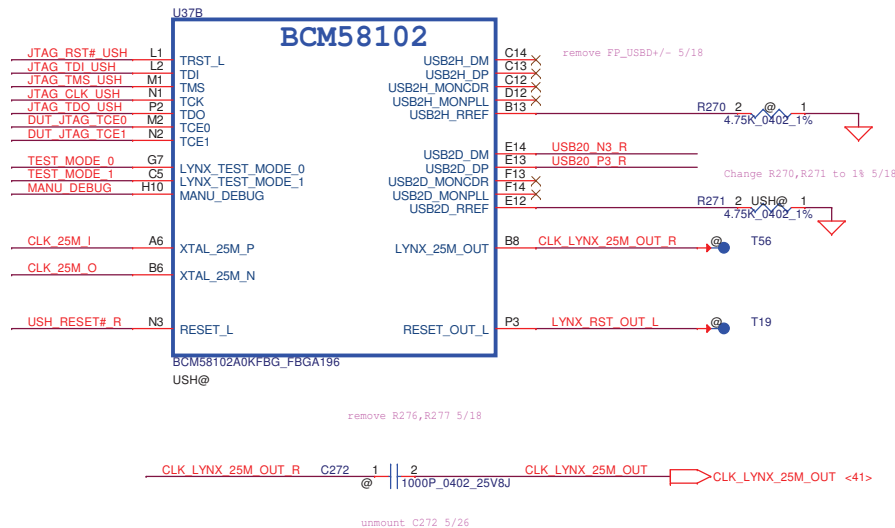
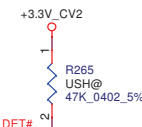
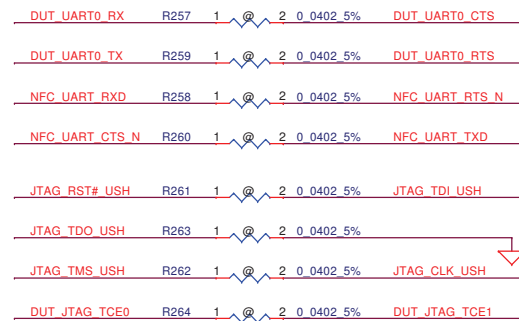


## SCHEMATIC

NO.	PART NAME	TER'NO.
10	SEPARATOR	
9	MYLAR	
8	SHIELD	
7	BREAK TERMINAL	6
6	TRANSFER TERMINAL	5
5	TIP TERMINAL	1
4	RING B TERMINAL	2
3	RING A TERMINAL	3
2	EARTH TERMINAL	4
1	HOUSING	

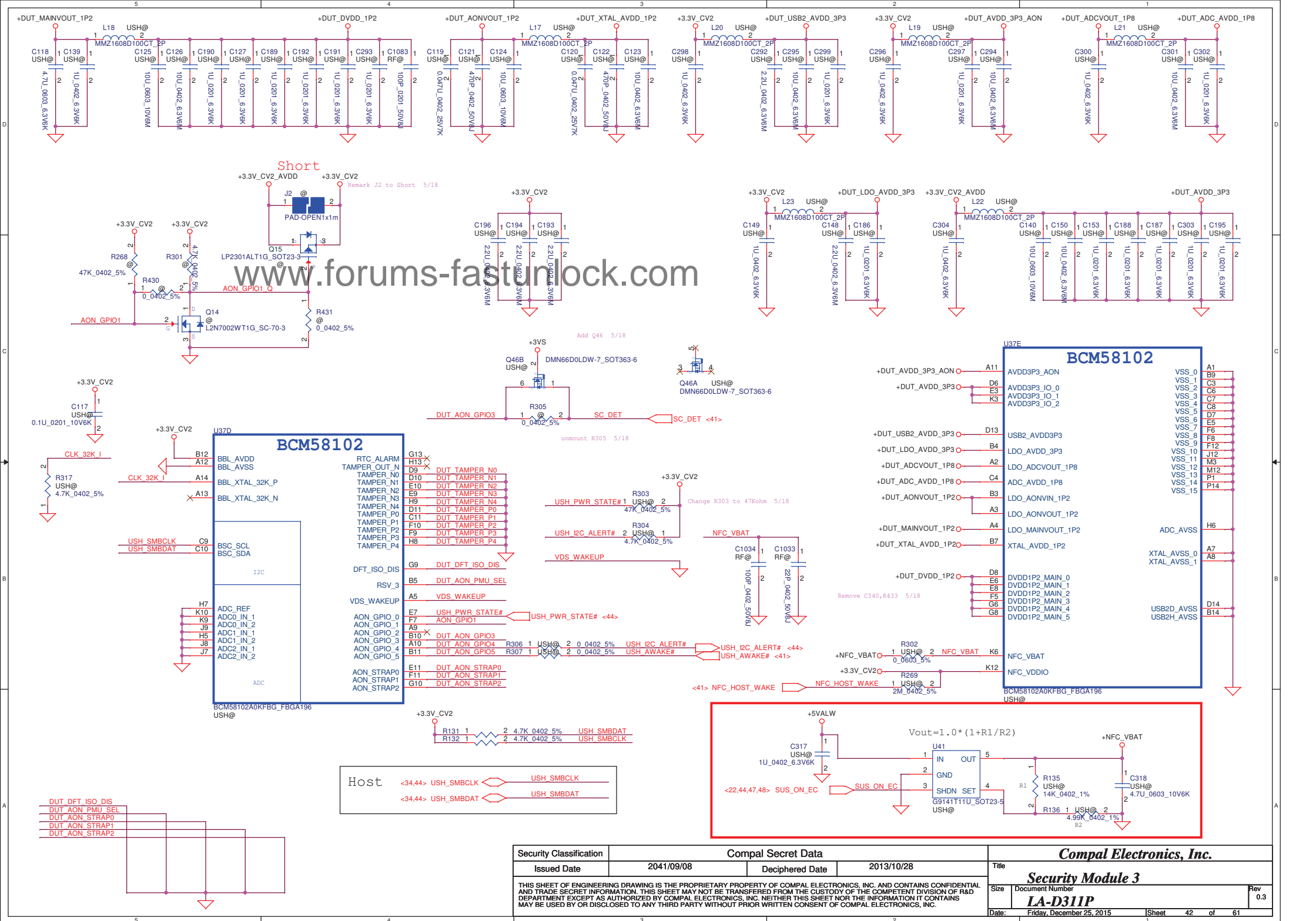


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Audio Jack/SPK	
Size	Document Number	LA-D311P		Rev	0.3
Date:	Friday, December 25, 2015	Sheet	39	of	61

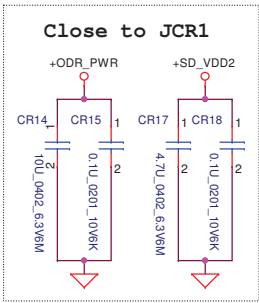
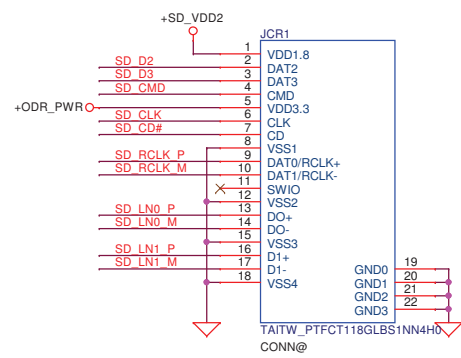
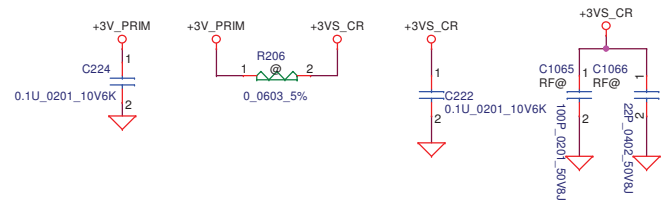


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

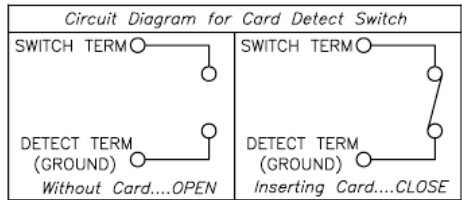
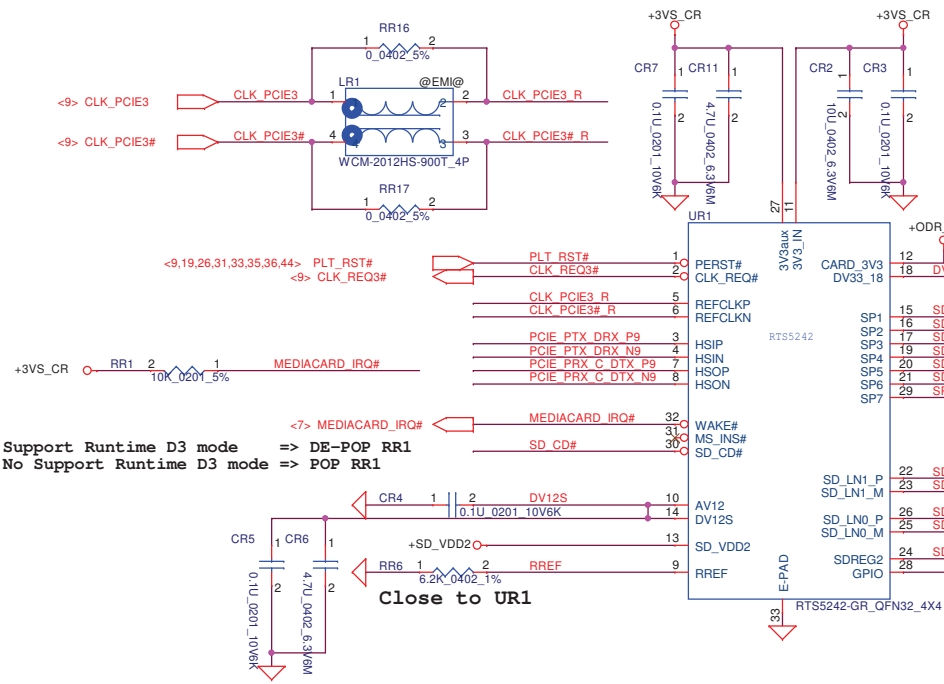




Card Reader

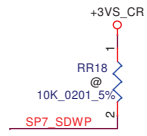
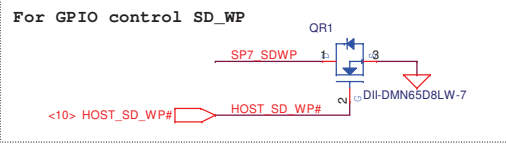


www.forums-fastunlock.com



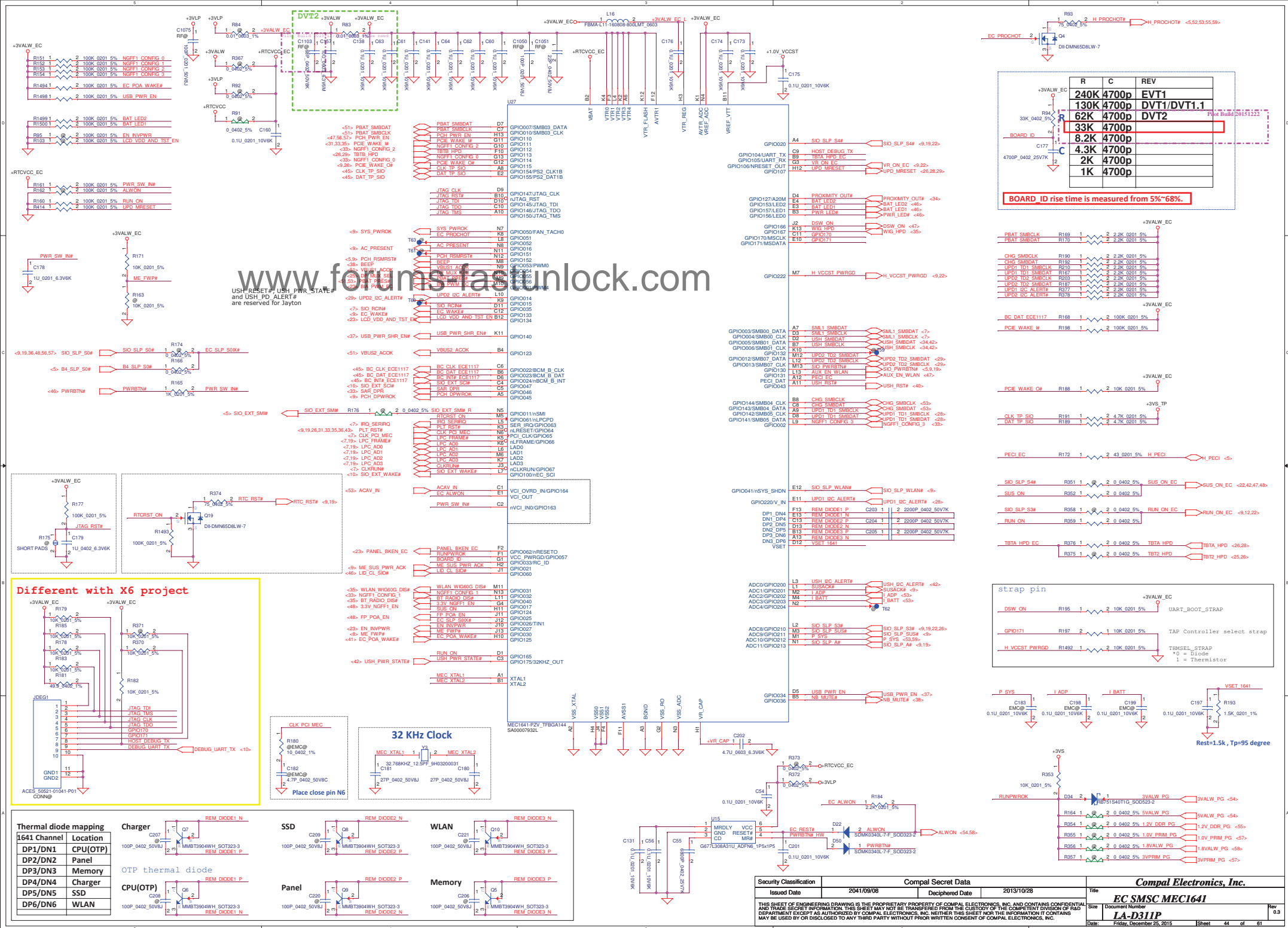
- 1) Placing the RTS5242 chip and flash card socket locate to suit trace routing for SI / EMI / ESD.
- 2) Keep bulk and de-coupling capacitors as close as possible to the RTS5242 chip and flash card socket.
  - Bulk capacitor for Card\_3V3 place closed to flash card socket.
  - Bulk capacitor for 3V3\_IN / 3V3aux / DV12S place closed to RTS5242 chip.
- 3) Keep damping resistor (ex, for SD CLK / MS CLK) as close as possible to the RTS5242 chip.
- 4) Keep these capacitors for SD card / MS card signals as close as possible to flash card socket.

If GPIO not use for LED function, must be pull-high (Layout guide)



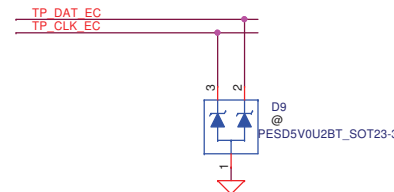
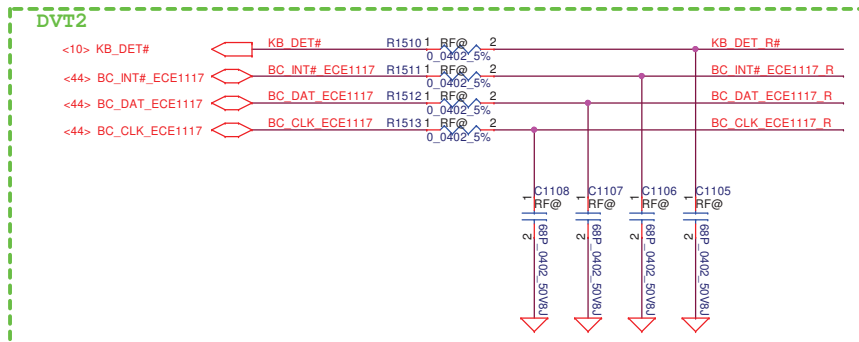
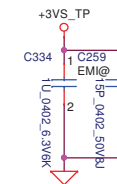
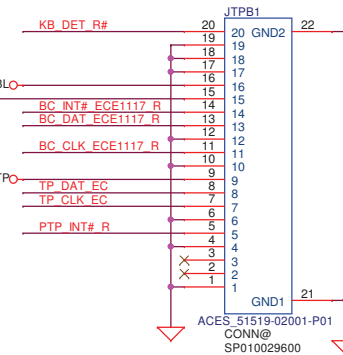
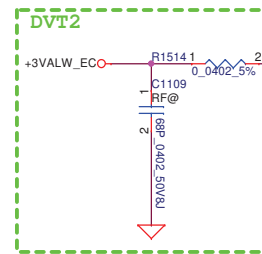
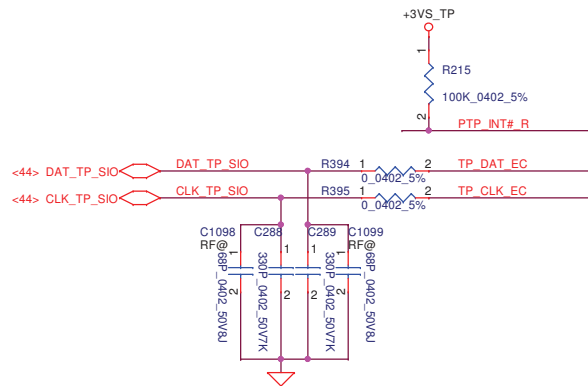
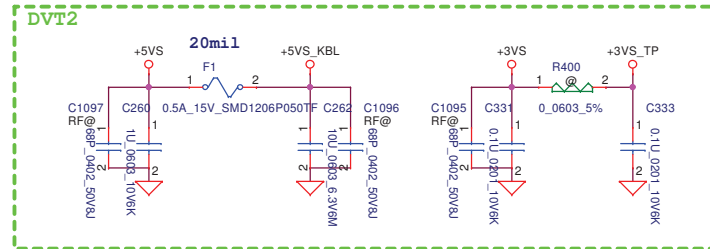
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Card Reader - RT5242	
Size		Document Number		Rev	
Date		Friday, December 25, 2015		Sheet 43 of 61	



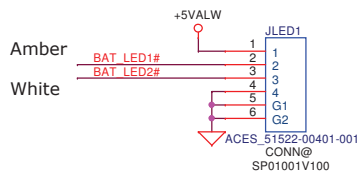




www.forums-fastunlock.com



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	TouchPAD
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date:	Friday, December 25, 2015
				Sheet	45 of 61
				Rev	0.3

[illegible]

**LID SW**

U20  
TCS20DLR SOT-23-3

VDD 1  
GND 2  
VOUT 3

+3VALW

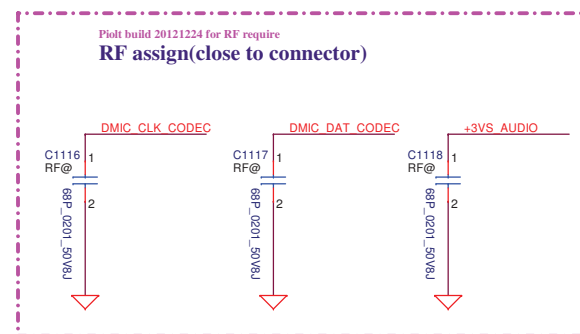
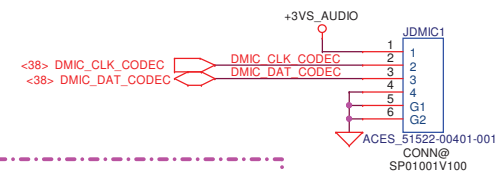
C161  
0.1U\_0201\_10V6K

+3VALW

R130  
47K\_0201\_5%

C162  
10P\_0402\_50V8J

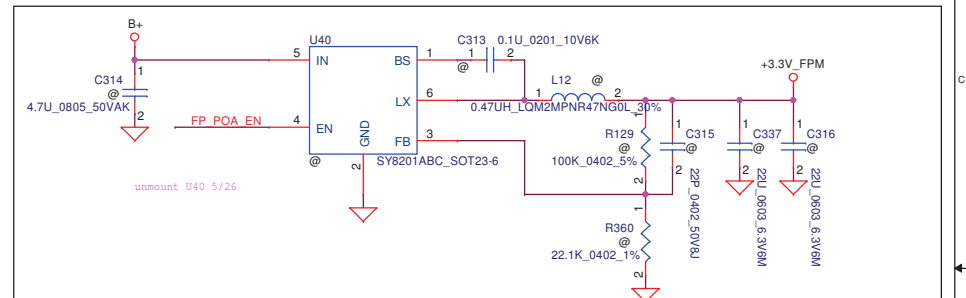
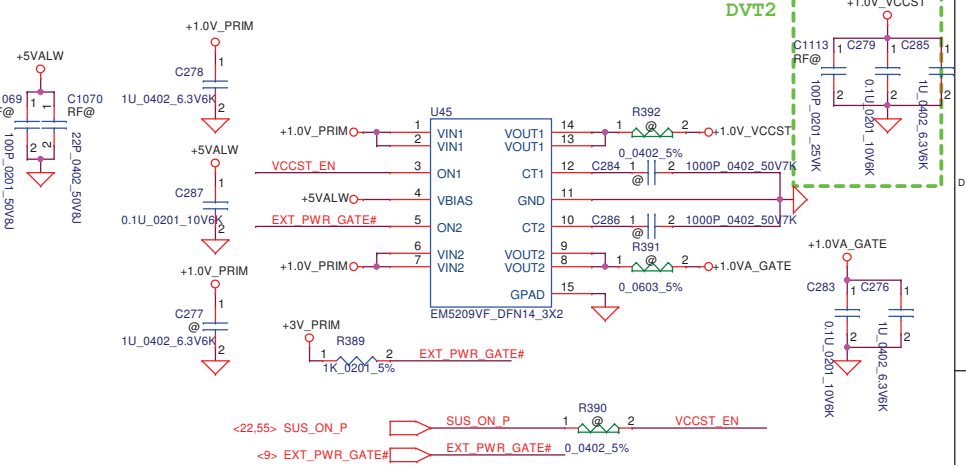
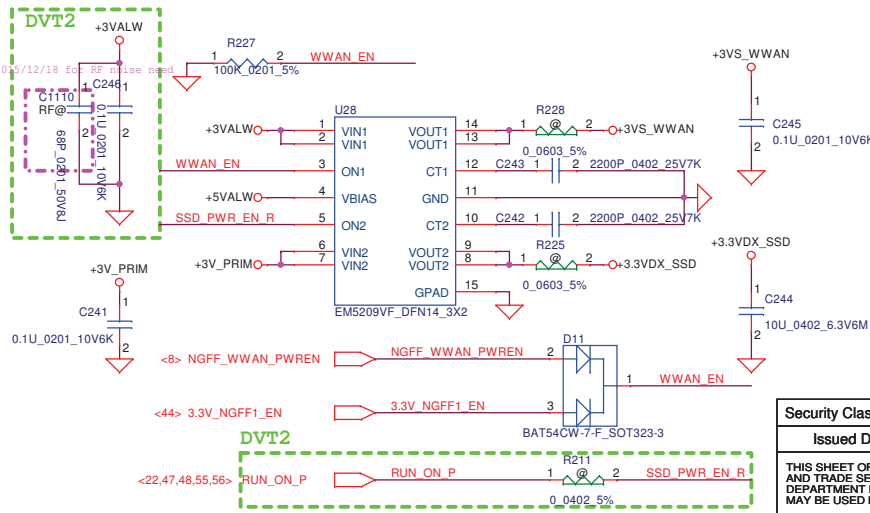
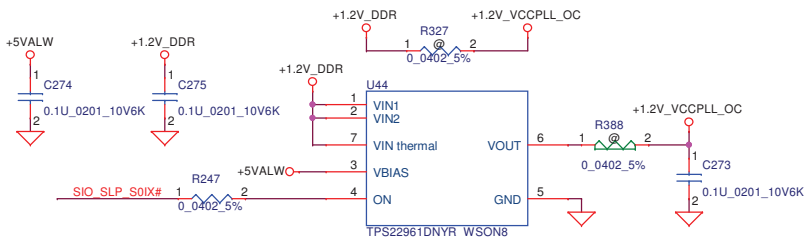
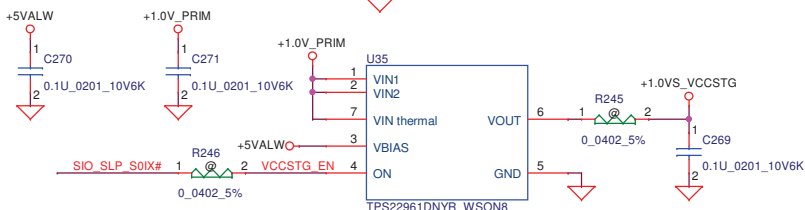
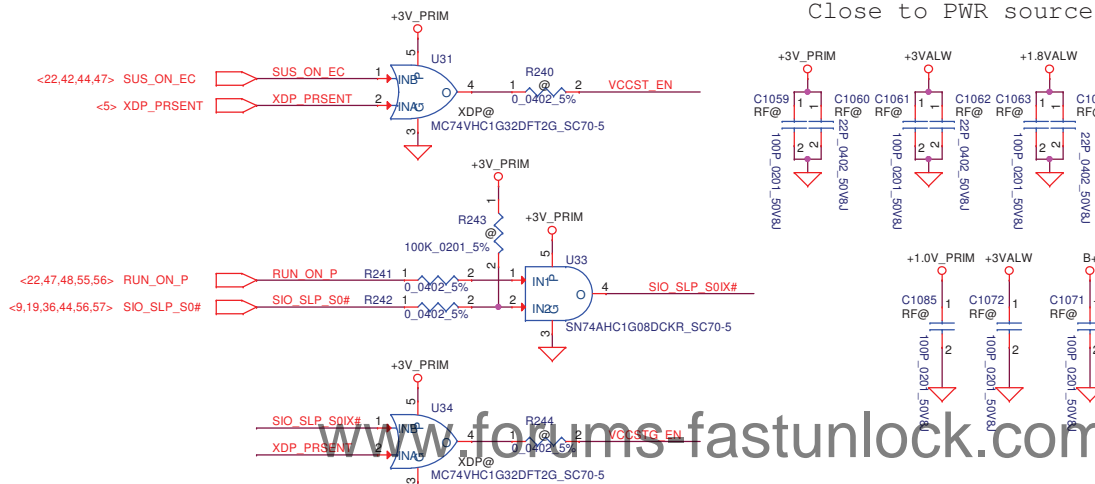
LID\_CL\_SIO# <44>

[illegible]

Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>LED/LID SW/SCREWH</b>	
Issued Date	2041/09/08	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Document Number	0.3
				<b>LA-D311P</b> Friday, December 25, 2015 Sheet 46 of 61	



# Close to PWR source

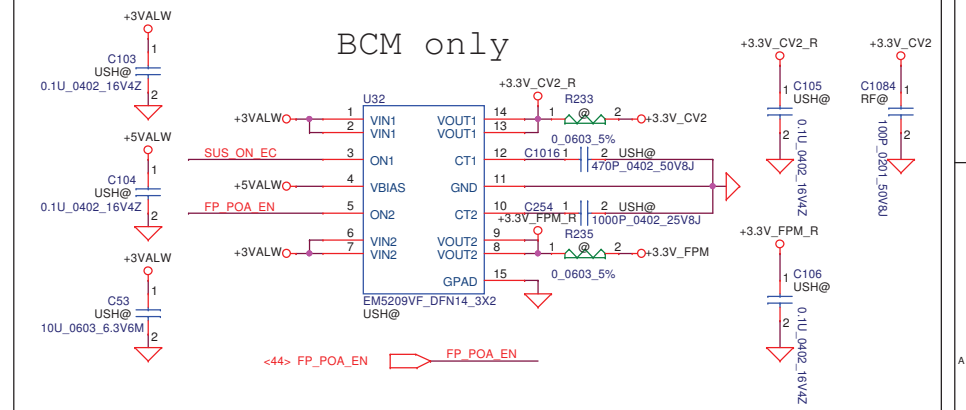


PM Table (POA Enabled)

Power plane	+3VALW_EC (MEC1641)	+3.3V_FPM	+3.3V_CV2
S0- FPM	ON	ON	ON
S0- FPM Sleep mode	ON	ON	ON
S0- FPM Capture mode	ON	ON	ON
S3- FPM Detect mode	ON	ON	ON
S4/S5- FPM Detect mode	ON in AC OFF in DC	ON	OFF

PM Table (POA Disabled)

Power plane	+3VALW_EC (MEC1641)	+3.3V_FPM	+3.3V_CV2
S0- FPM	ON	ON	ON
S0- FPM Sleep mode	ON	ON	ON
S0- FPM Capture mode	ON	ON	ON
S3- FPM Detect mode	ON	OFF	ON
S4/S5- FPM Detect mode	ON in AC OFF in DC	OFF	OFF



## Security Classification

Issued Date

2041/09/08

## Compal Secret Data

Deciphered Date

2013/10/28

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 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.

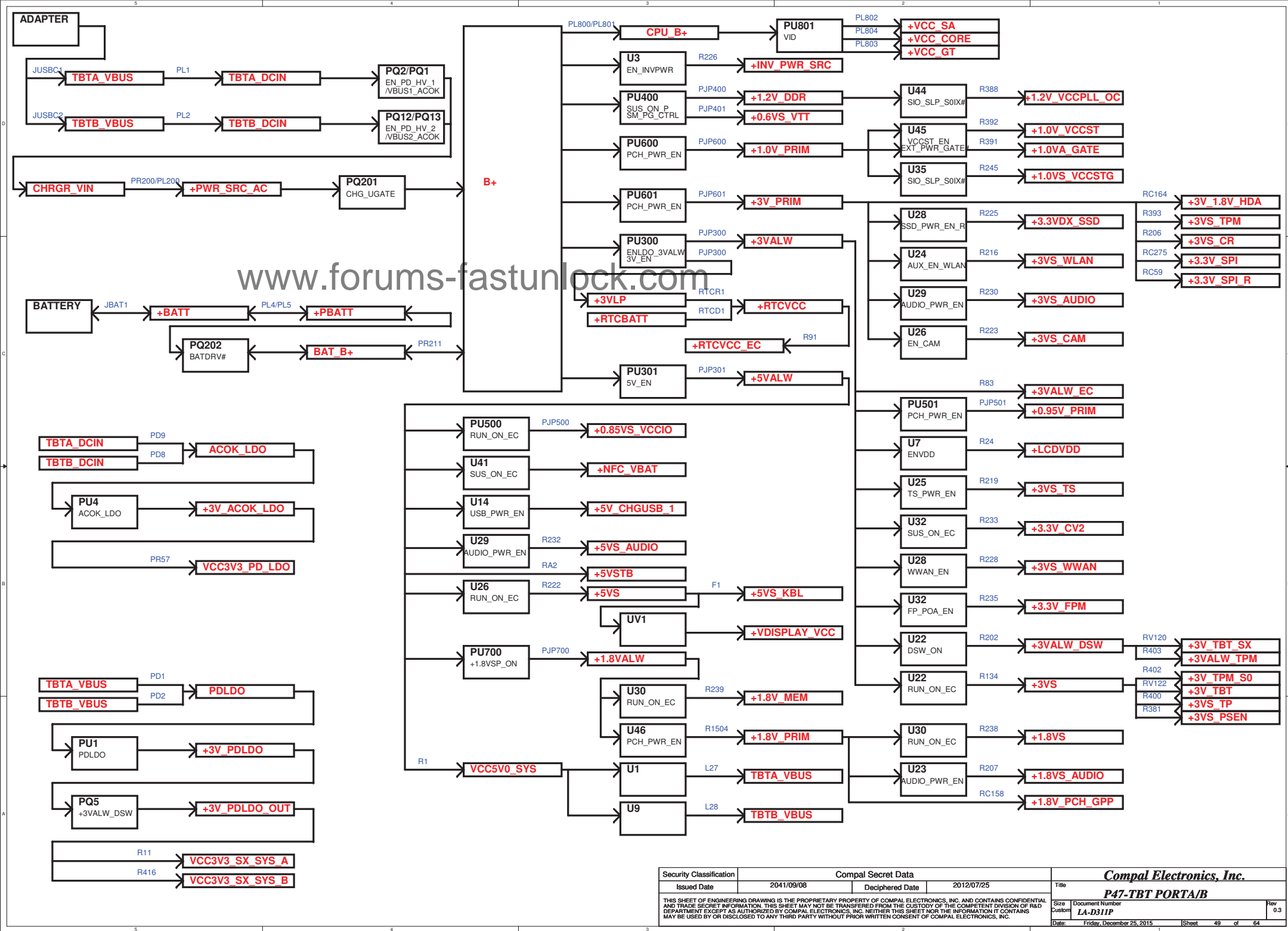
## Compal Electronics, Inc.

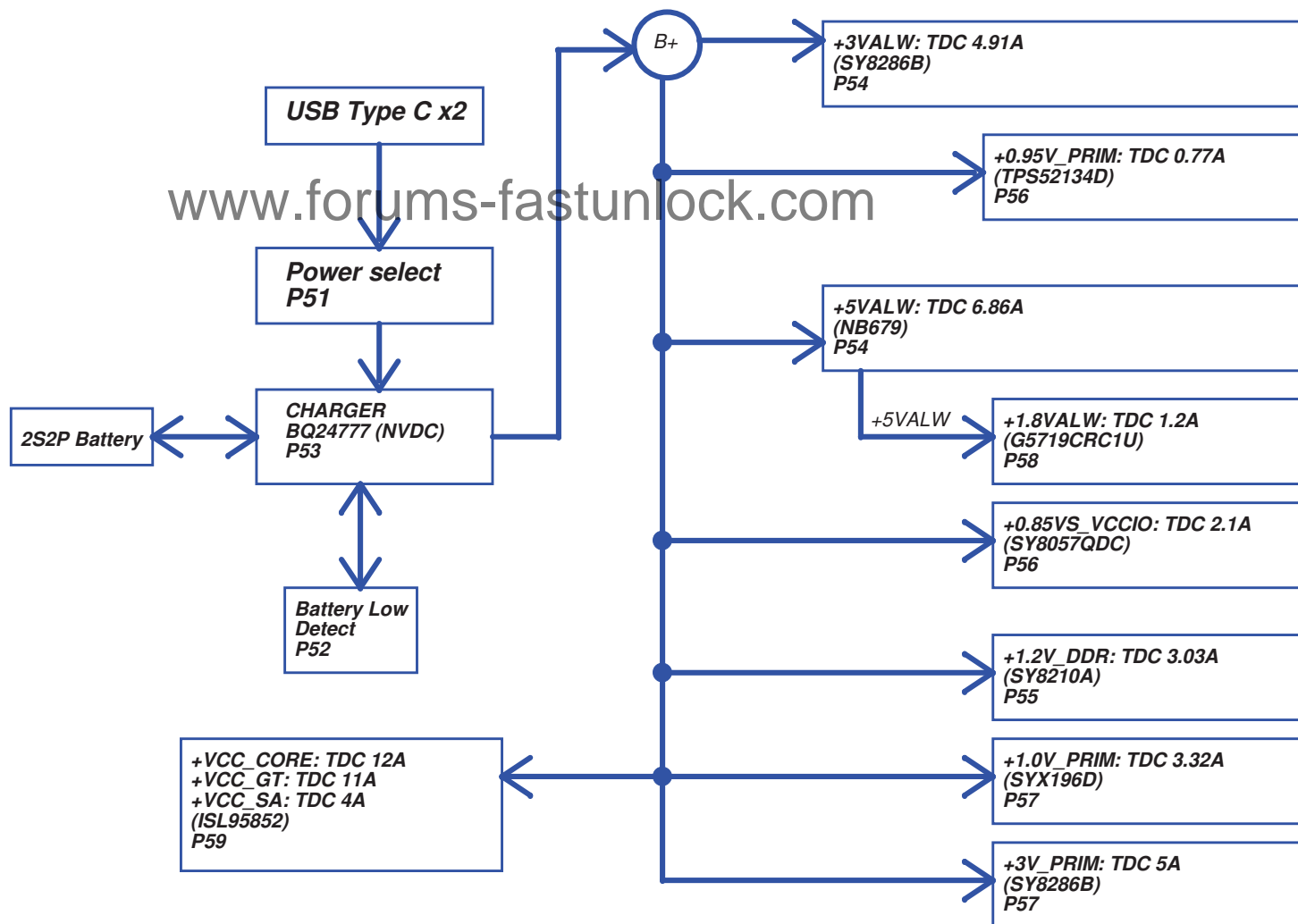
Title

DC/DC Interface 2

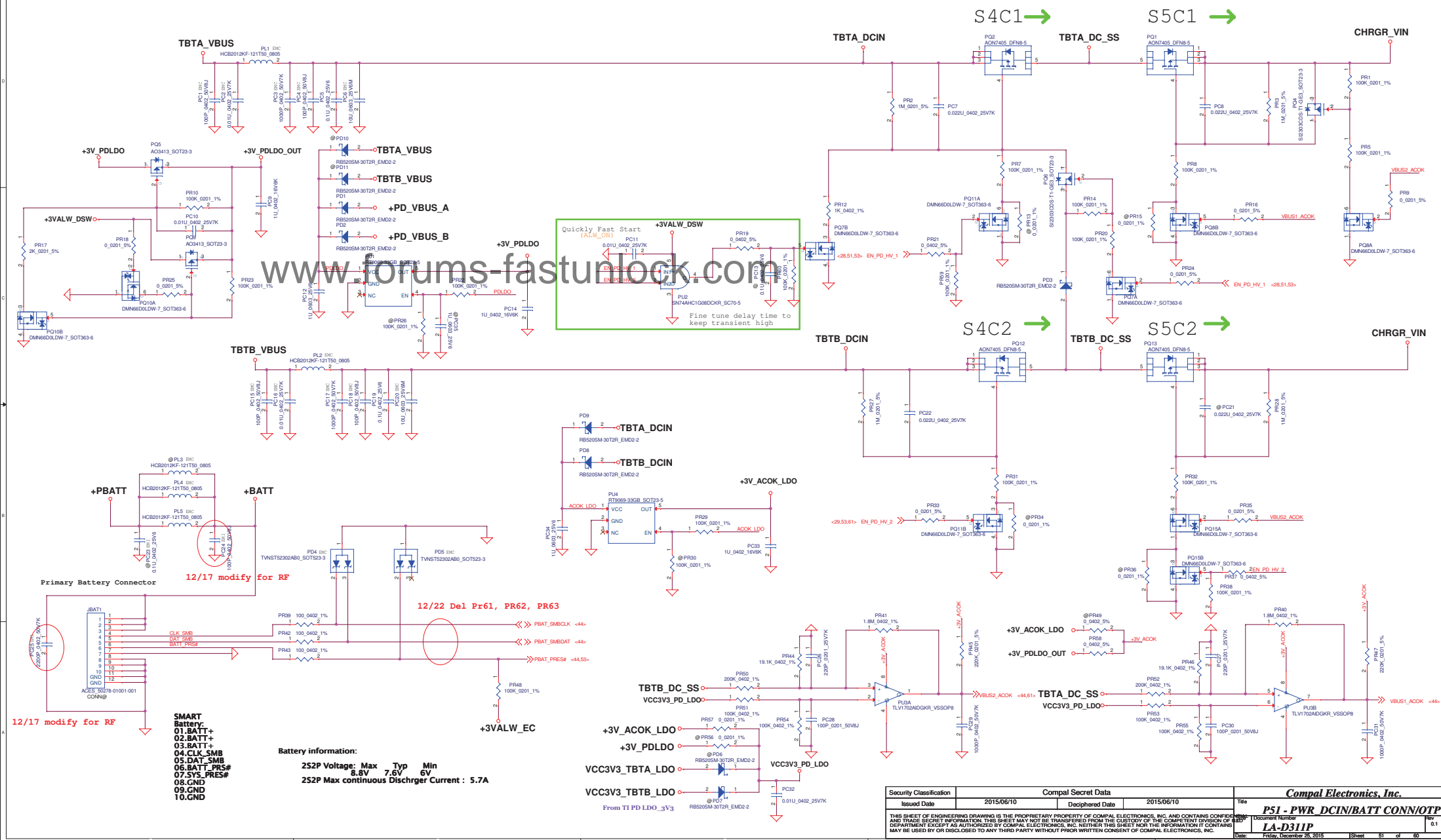
Size Document Number LA-D311P

Date: Friday, December 25, 2015 Sheet 48 of 61





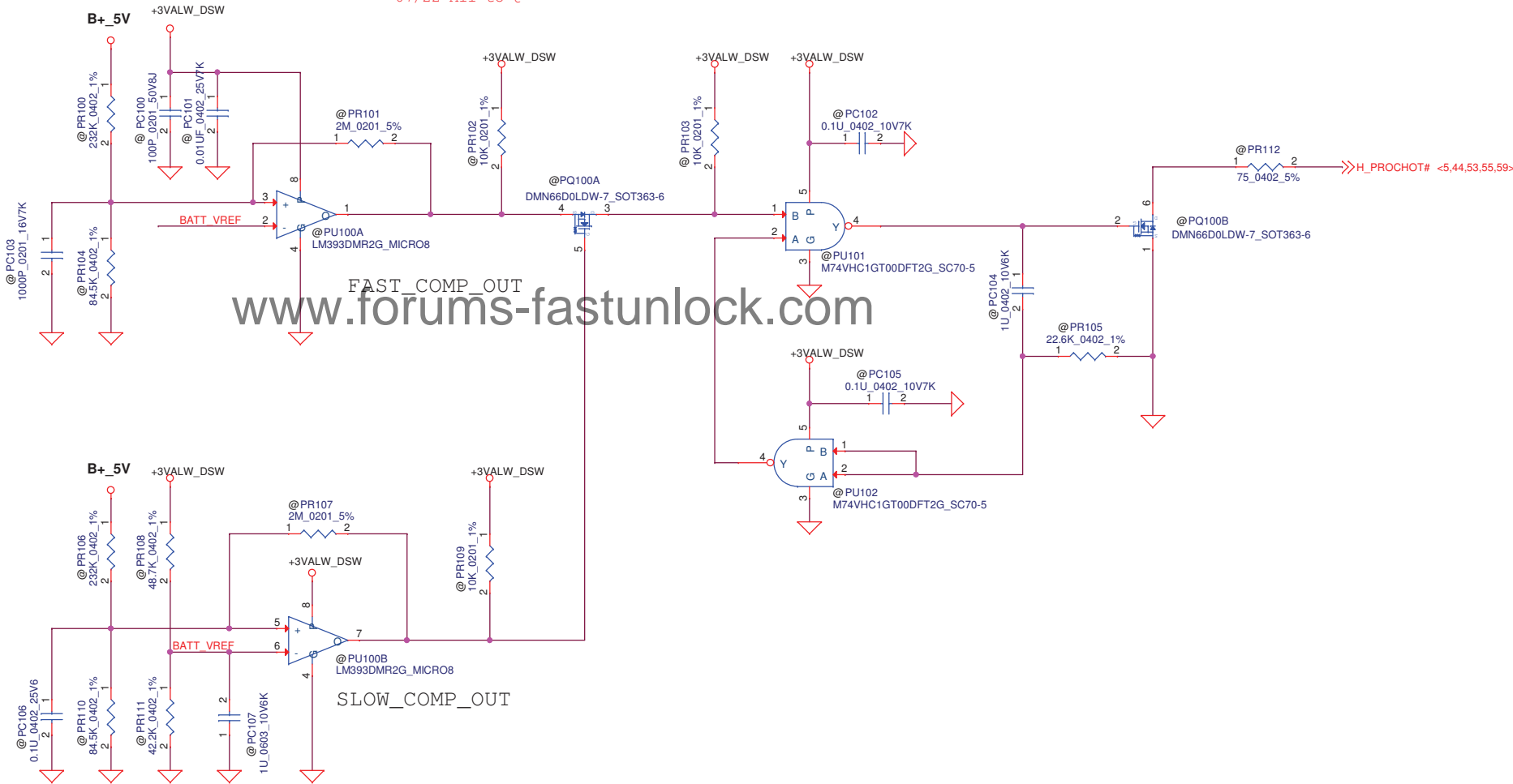




Security Classification	Compul Secret Data		<i>Compul Electronics, Inc.</i> <b>PS1 - PWR DCIN/BATT CONN/OTOP</b>	
Issued Date	2015/06/10	Deciphered Date	2015/06/10	Title <b>LA-D311P</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPUL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPUL ELECTRONICS, INC. WITHOUT BEING AUTHORIZED BY COMPUL ELECTRONICS, INC. NOR THE INFORMATION ON THIS DRAWING MAY BE USED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPUL ELECTRONICS, INC.			Date: <b>19-03-2015</b> Sheet <b>91</b> of <b>100</b>	

BATT low voltage detect

07/22 All to @



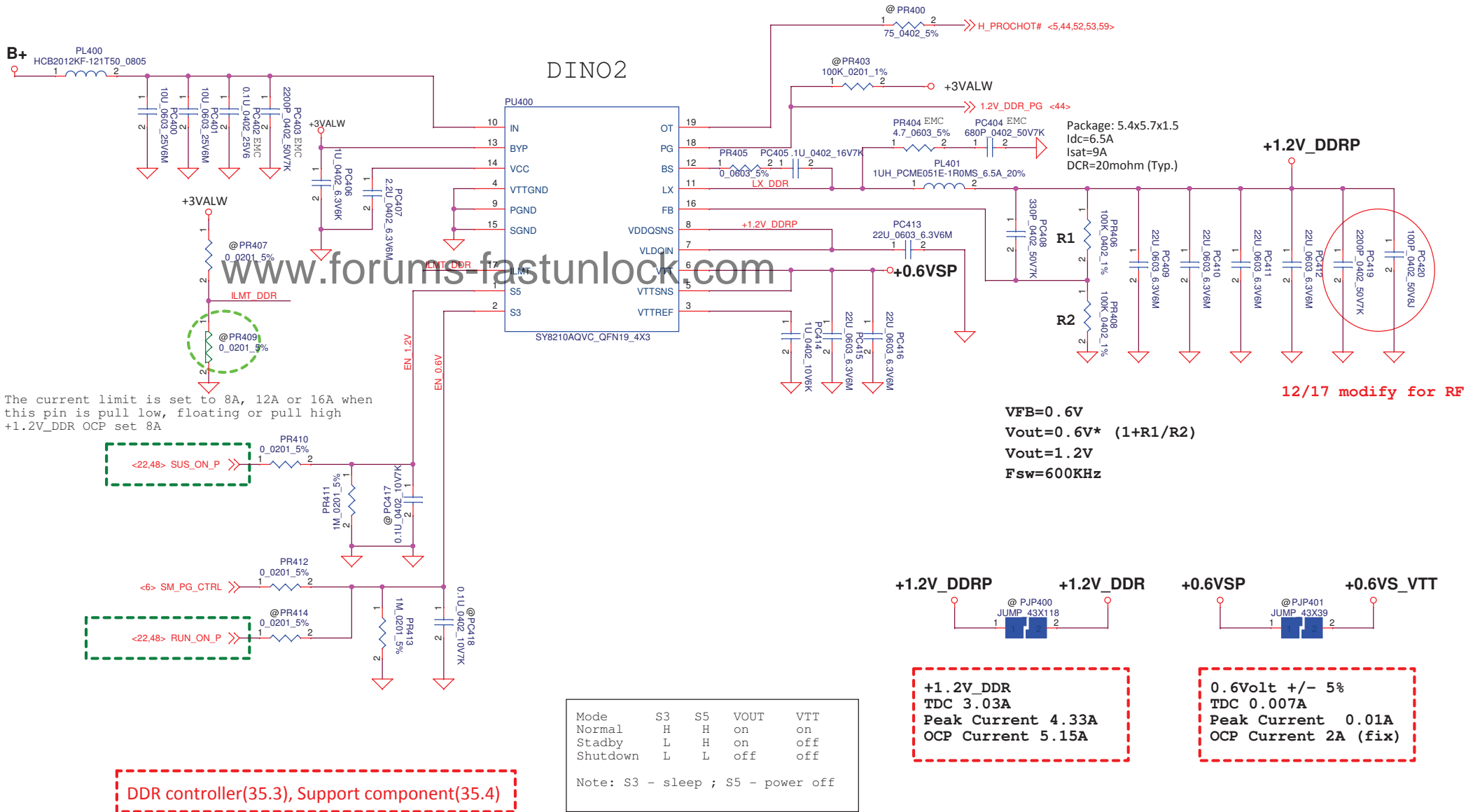
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2015/06/10	Deciphered Date	2015/06/10	Title	P52 - PWR DIS BAT PROCHOT#
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	LA-D311P
				Rev	0.1
				Date:	Friday, December 25, 2015
				Sheet	52 of 60

Charger controller(40.1), Support component(40.2)



Security Classification	Compal Secret Data		Title	
Issued Date	2015/06/10	Deciphered Date	2015/06/10	Title <b>P53-PWR Charger BQ24777</b> Document Number <b>LA-D311P</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION THAT MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF 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.			Rev 0.1	
Date			Friday, December 25, 2015	Sheet 53 of 60

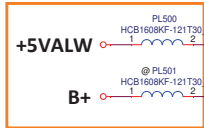




Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2015/06/10	Deciphered Date	2015/06/10	Title	P55 - PWR +1.2V_DDR/0.6VS	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
					LA-D311P	0.1
				Date:	Friday, December 25, 2015	Sheet 55 of 60

SY8057 Rmode = 200k				
LP	VID1	VID0	Vout(V)	
0	X	X	0.000	
1	0	0	0.850	
1	0	1	0.875	
1	1	0	0.950	
1	1	1	0.975	

+3V\_PRIM



B+



VID0\_VCCIO

VID1\_VCCIO

VID2\_VCCIO

VID3\_VCCIO

VID4\_VCCIO

VID5\_VCCIO

VID6\_VCCIO

VID7\_VCCIO

VID8\_VCCIO

VID9\_VCCIO

VID10\_VCCIO

VID11\_VCCIO

VID12\_VCCIO

VID13\_VCCIO

VID14\_VCCIO

VID15\_VCCIO

VID16\_VCCIO

VID17\_VCCIO

VID18\_VCCIO

VID19\_VCCIO

VID20\_VCCIO

VID21\_VCCIO

VID22\_VCCIO

VID23\_VCCIO

VID24\_VCCIO

VID25\_VCCIO

VID26\_VCCIO

VID27\_VCCIO

VID28\_VCCIO

VID29\_VCCIO

VID30\_VCCIO

VID31\_VCCIO

VID32\_VCCIO

VID33\_VCCIO

VID34\_VCCIO

VID35\_VCCIO

VID36\_VCCIO

VID37\_VCCIO

VID38\_VCCIO

VID39\_VCCIO

VID40\_VCCIO

VID41\_VCCIO

VID42\_VCCIO

VID43\_VCCIO

VID44\_VCCIO

VID45\_VCCIO

VID46\_VCCIO

VID47\_VCCIO

VID48\_VCCIO

VID49\_VCCIO

VID50\_VCCIO

VID51\_VCCIO

VID52\_VCCIO

VID53\_VCCIO

VID54\_VCCIO

VID55\_VCCIO

VID56\_VCCIO

VID57\_VCCIO

VID58\_VCCIO

VID59\_VCCIO

VID60\_VCCIO

VID61\_VCCIO

VID62\_VCCIO

VID63\_VCCIO

VID64\_VCCIO

VID65\_VCCIO

VID66\_VCCIO

VID67\_VCCIO

VID68\_VCCIO

VID69\_VCCIO

VID70\_VCCIO

VID71\_VCCIO

VID72\_VCCIO

VID73\_VCCIO

VID74\_VCCIO

VID75\_VCCIO

VID76\_VCCIO

VID77\_VCCIO

VID78\_VCCIO

VID79\_VCCIO

VID80\_VCCIO

VID81\_VCCIO

VID82\_VCCIO

VID83\_VCCIO

VID84\_VCCIO

VID85\_VCCIO

VID86\_VCCIO

VID87\_VCCIO

VID88\_VCCIO

VID89\_VCCIO

VID90\_VCCIO

VID91\_VCCIO

VID92\_VCCIO

VID93\_VCCIO

VID94\_VCCIO

VID95\_VCCIO

VID96\_VCCIO

VID97\_VCCIO

VID98\_VCCIO

VID99\_VCCIO

VID100\_VCCIO

VID101\_VCCIO

VID102\_VCCIO

VID103\_VCCIO

VID104\_VCCIO

VID105\_VCCIO

VID106\_VCCIO

VID107\_VCCIO

VID108\_VCCIO

VID109\_VCCIO

VID110\_VCCIO

VID111\_VCCIO

VID112\_VCCIO

VID113\_VCCIO

VID114\_VCCIO

VID115\_VCCIO

VID116\_VCCIO

VID117\_VCCIO

VID118\_VCCIO

VID119\_VCCIO

VID120\_VCCIO

VID121\_VCCIO

VID122\_VCCIO

VID123\_VCCIO

VID124\_VCCIO

VID125\_VCCIO

VID126\_VCCIO

VID127\_VCCIO

VID128\_VCCIO

VID129\_VCCIO

VID130\_VCCIO

VID131\_VCCIO

VID132\_VCCIO

VID133\_VCCIO

VID134\_VCCIO

VID135\_VCCIO

VID136\_VCCIO

VID137\_VCCIO

VID138\_VCCIO

VID139\_VCCIO

VID140\_VCCIO

VID141\_VCCIO

VID142\_VCCIO

VID143\_VCCIO

VID144\_VCCIO

VID145\_VCCIO

VID146\_VCCIO

VID147\_VCCIO

VID148\_VCCIO

VID149\_VCCIO

VID150\_VCCIO

VID151\_VCCIO

VID152\_VCCIO

VID153\_VCCIO

VID154\_VCCIO

VID155\_VCCIO

VID156\_VCCIO

VID157\_VCCIO

VID158\_VCCIO

VID159\_VCCIO

VID160\_VCCIO

VID161\_VCCIO

VID162\_VCCIO

VID163\_VCCIO

VID164\_VCCIO

VID165\_VCCIO

VID166\_VCCIO

VID167\_VCCIO

VID168\_VCCIO

VID169\_VCCIO

VID170\_VCCIO

VID171\_VCCIO

VID172\_VCCIO

VID173\_VCCIO

VID174\_VCCIO

VID175\_VCCIO

VID176\_VCCIO

VID177\_VCCIO

VID178\_VCCIO

VID179\_VCCIO

VID180\_VCCIO

VID181\_VCCIO

VID182\_VCCIO

VID183\_VCCIO

VID184\_VCCIO

VID185\_VCCIO

VID186\_VCCIO

VID187\_VCCIO

VID188\_VCCIO

VID189\_VCCIO

VID190\_VCCIO

VID191\_VCCIO

VID192\_VCCIO

VID193\_VCCIO

VID194\_VCCIO

VID195\_VCCIO

VID196\_VCCIO

VID197\_VCCIO

VID198\_VCCIO

VID199\_VCCIO

VID200\_VCCIO

VID201\_VCCIO

VID202\_VCCIO

VID203\_VCCIO

VID204\_VCCIO

VID205\_VCCIO

VID206\_VCCIO

VID207\_VCCIO

VID208\_VCCIO

VID209\_VCCIO

VID210\_VCCIO

VID211\_VCCIO

VID212\_VCCIO

VID213\_VCCIO

VID214\_VCCIO

VID215\_VCCIO

VID216\_VCCIO

VID217\_VCCIO

VID218\_VCCIO

VID219\_VCCIO

VID220\_VCCIO

VID221\_VCCIO

VID222\_VCCIO

VID223\_VCCIO

VID224\_VCCIO

VID225\_VCCIO

VID226\_VCCIO

VID227\_VCCIO

VID228\_VCCIO

VID229\_VCCIO

VID230\_VCCIO

VID231\_VCCIO

VID232\_VCCIO

VID233\_VCCIO

VID234\_VCCIO

VID235\_VCCIO

VID236\_VCCIO

VID237\_VCCIO

VID238\_VCCIO

VID239\_VCCIO

VID240\_VCCIO

VID241\_VCCIO

VID242\_VCCIO

VID243\_VCCIO

VID244\_VCCIO

VID245\_VCCIO

VID246\_VCCIO

VID247\_VCCIO

VID248\_VCCIO

VID249\_VCCIO

VID250\_VCCIO

VID251\_VCCIO

VID252\_VCCIO

VID253\_VCCIO

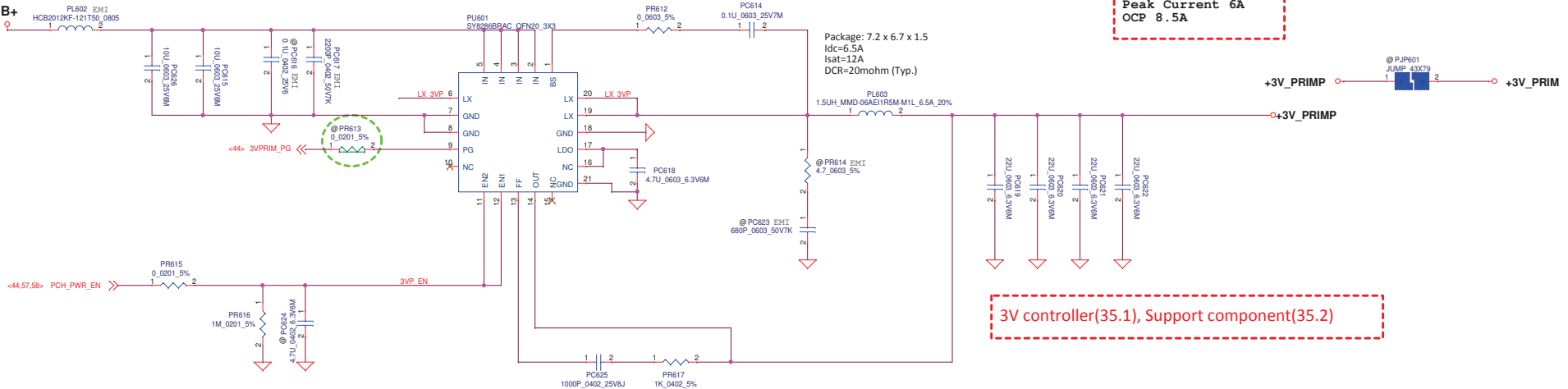
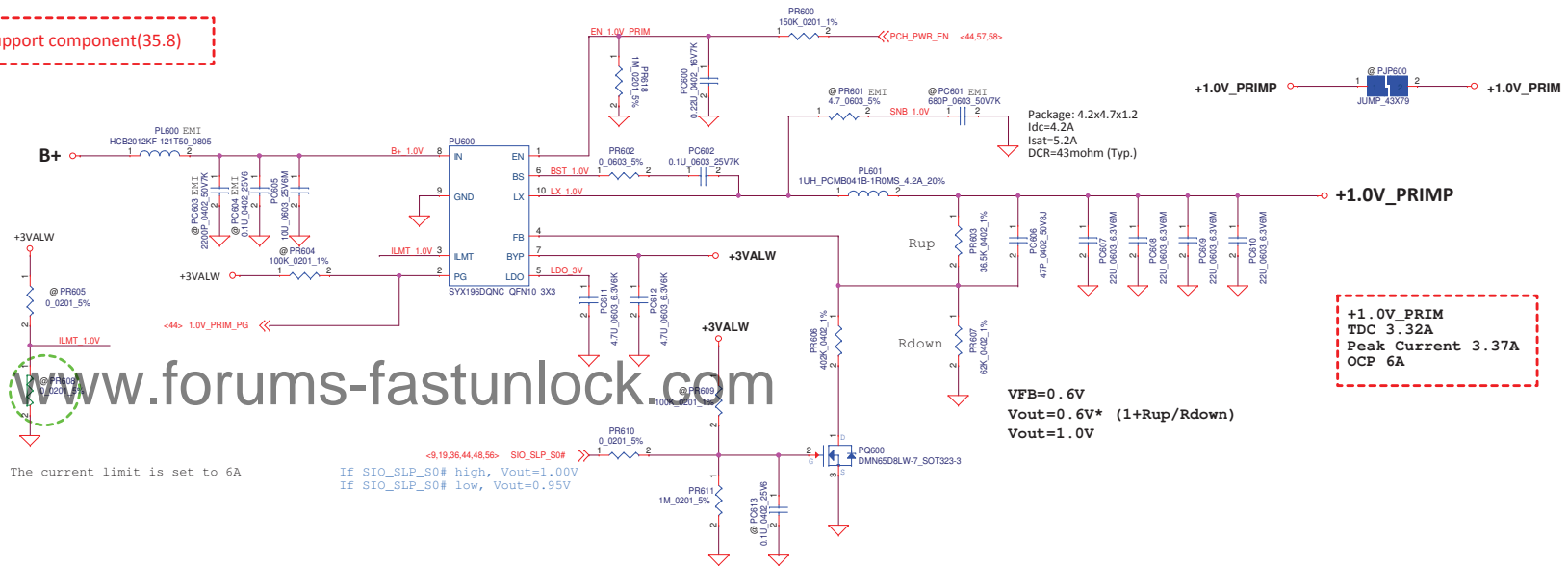
VID254\_VCCIO

VID255\_VCCIO

VID2



+1.0V\_PRIM controller(35.7), Support component(35.8)

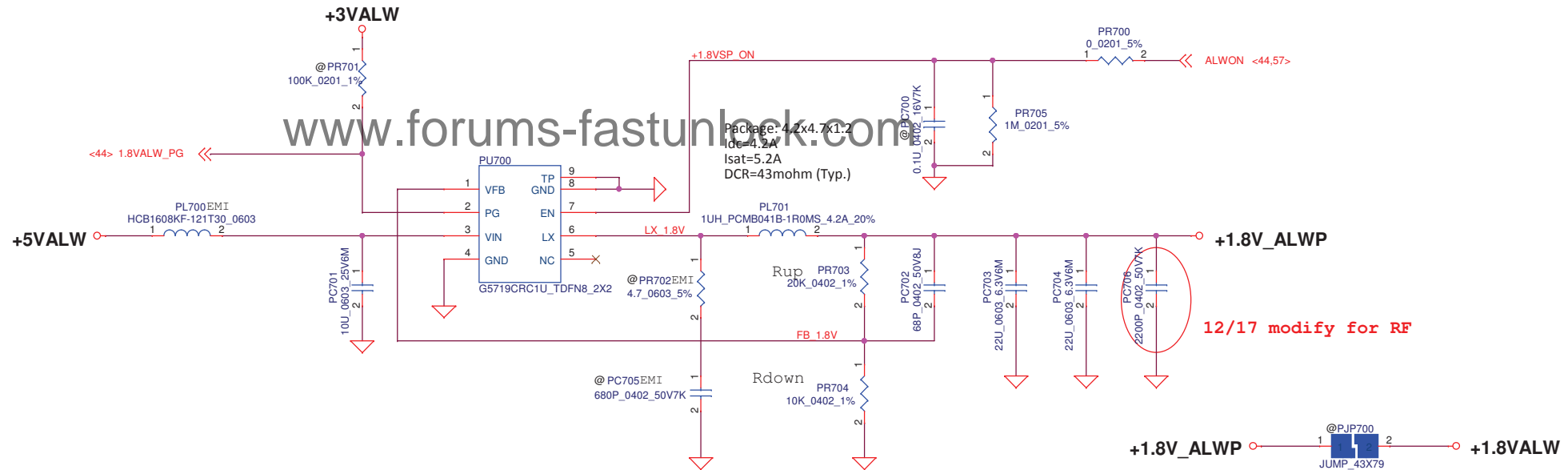


+3V\_PRIM  
TDC 5A  
Peak Current 6A  
OCP 8.5A

3V controller(35.1), Support component(35.2)

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2015/06/10	Deciphered Date	2015/06/10	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P57 - PWR +1.0V PRIM/+3V PRIMP
				Size Document Number
				LA-D311P
				Rev 0.1
				Date: Friday, December 25, 2015 Sheet 57 of 60

1.8V controller(35.15), Support component(35.16)

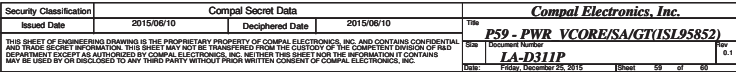


$$V_{out} = 0.6V * (1 + R_{up}/R_{down})$$

+1.8V\_ALW  
TDC 1.2A  
Peak Current 1.67A  
OCP 2.04A

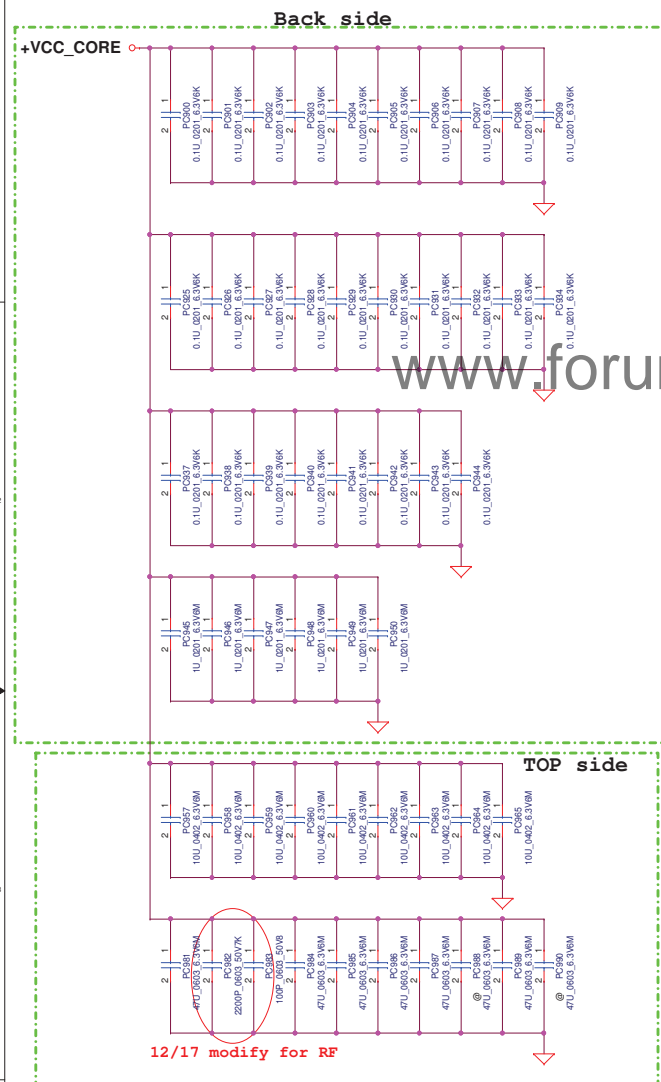
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2015/06/10	Deciphered Date	2015/06/10	Title	P58 - PWR +1.8V_ALW(SY8003)
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date	Friday, December 25, 2015
				Sheet	58 of 60
				Rev	0.1

VCORE/GT/SA controller(36.1), Drivers(36.2), Support component(36.3)



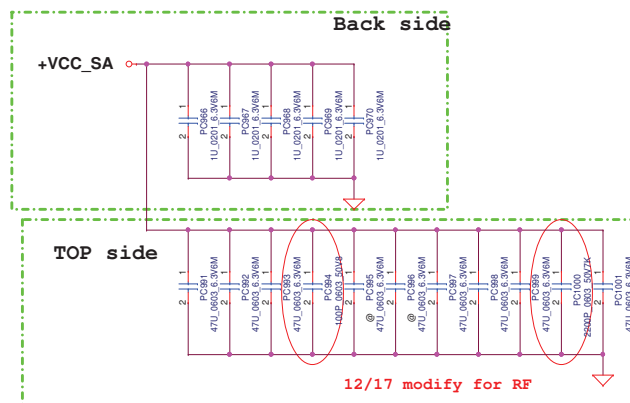
VCC\_GT  
0.1U\_0201 \* 15 pcs +1U\_0201\*6 pcs+1U\_0402\*4pcs+10U\_0402\*2pcs+47U\_0603\*13pcs

VCC\_CORE  
0.1U\_0201 \* 28 pcs +1U\_0201\*6 pcs+10U\_0402\*9pcs+47U\_0603\*10pcs

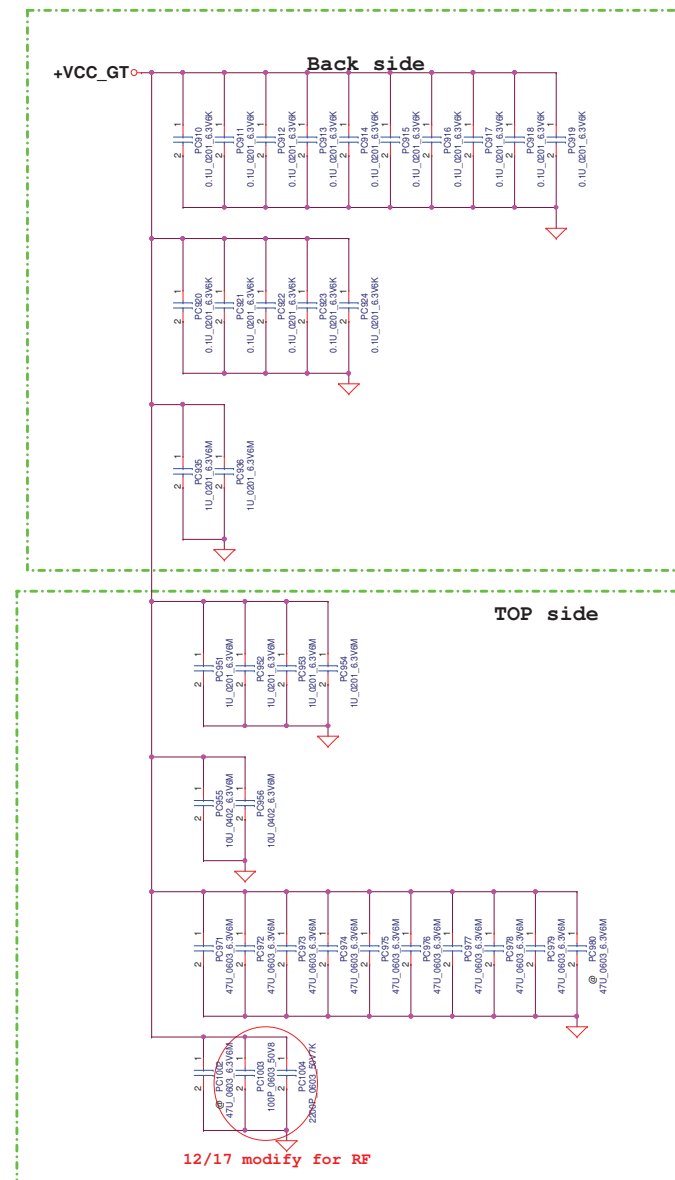


VCC\_CORE output cap (36.4)

VCC\_SA  
1U\_0201 \* 5 pcs +47U\_0603\*11 pcs



VCC\_SA output cap (36.6)



VCC\_GT output cap (36.5)