



LA-7491P  
DA60000N810

# Compal Confidential

## Brazos PCW20 LA7491 Schematics Document

AMD APU Ontario-FT1+ FCH Hudson-M1

2011-03-29

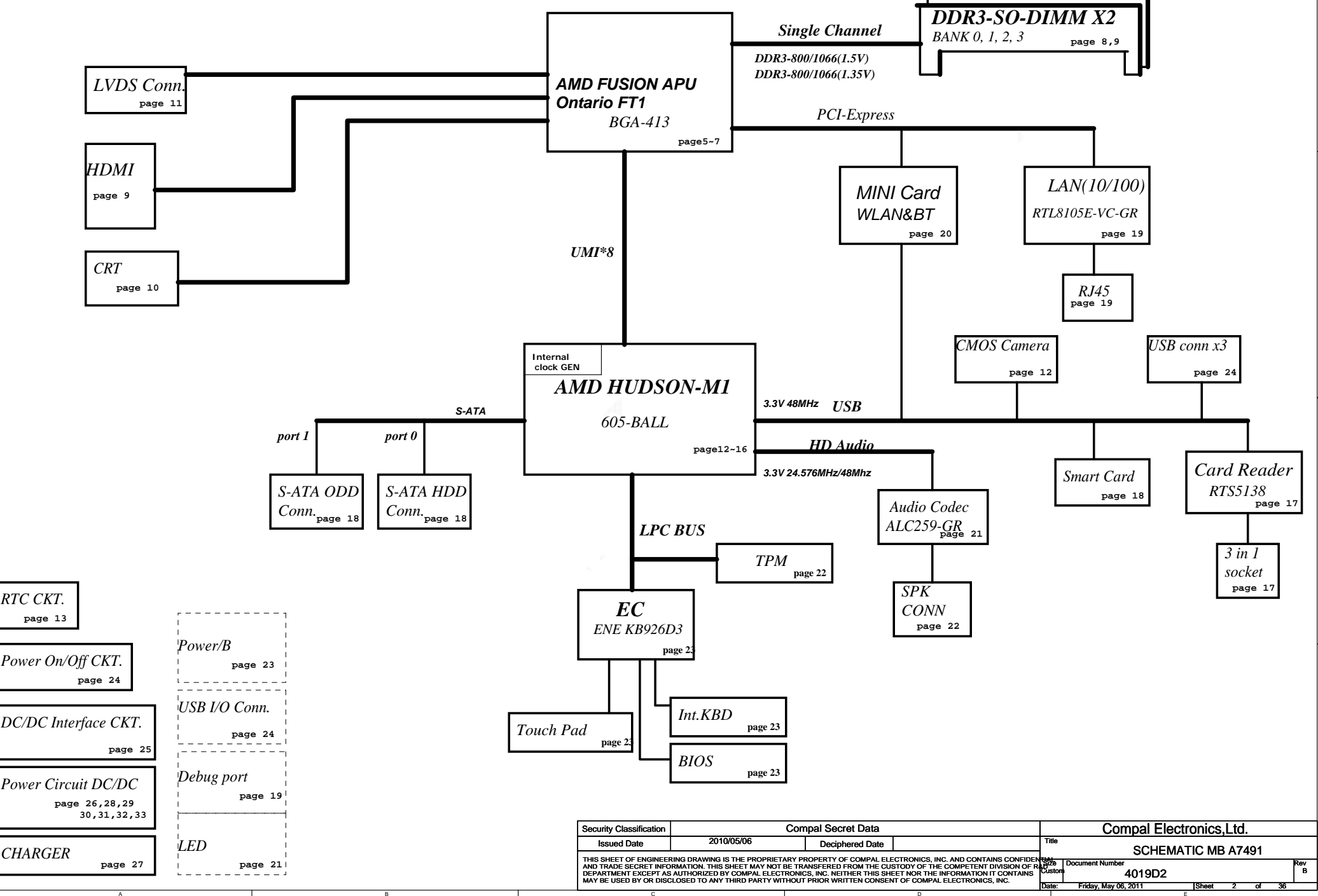
REV:1.0

Security Classification		Compal Secret Data		Compal Electronics, Ltd.	
Issued Date	2010/05/06	Deciphered Date		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.				Document Number	Rev
				4019D2	B
Date: Friday, May 06, 2011				Sheet 1 of 36	

Compal Confidential

Model Name : Brazos

File Name : LA7491



Security Classification		Compal Secret Data		Compal Electronics, Ltd.	
Issued Date	2010/05/06	Deciphered Date		Title	SCHEMATIC MB A7491
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	4019D2
				Date:	Friday, May 06, 2011
				Rev	B
				Sheet	2 of 36

DDR3 Voltage Rails

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

@	Reserve
CONN@	ME CONNECTOR
8105E@	100M LAN function
8111E@	GLAN function
REAL@	ALC259-GR
VIA@	V1802T
ROM@	not support flash ROM
FROM@	Support flash ROM

FCH SM Bus0 address

Device	HEX	Address	Device	HEX	Address
SDDIM I	A0	1010 0000	WLAN		
SDDIM II	A2	1010 0010			

EC SM Bus1 address

Device	HEX	Address	Device	HEX	Address
Smart Battery	16H	0001 011X b	APU internal thermal sensor		1001 100X b

FCH SM Bus1 address

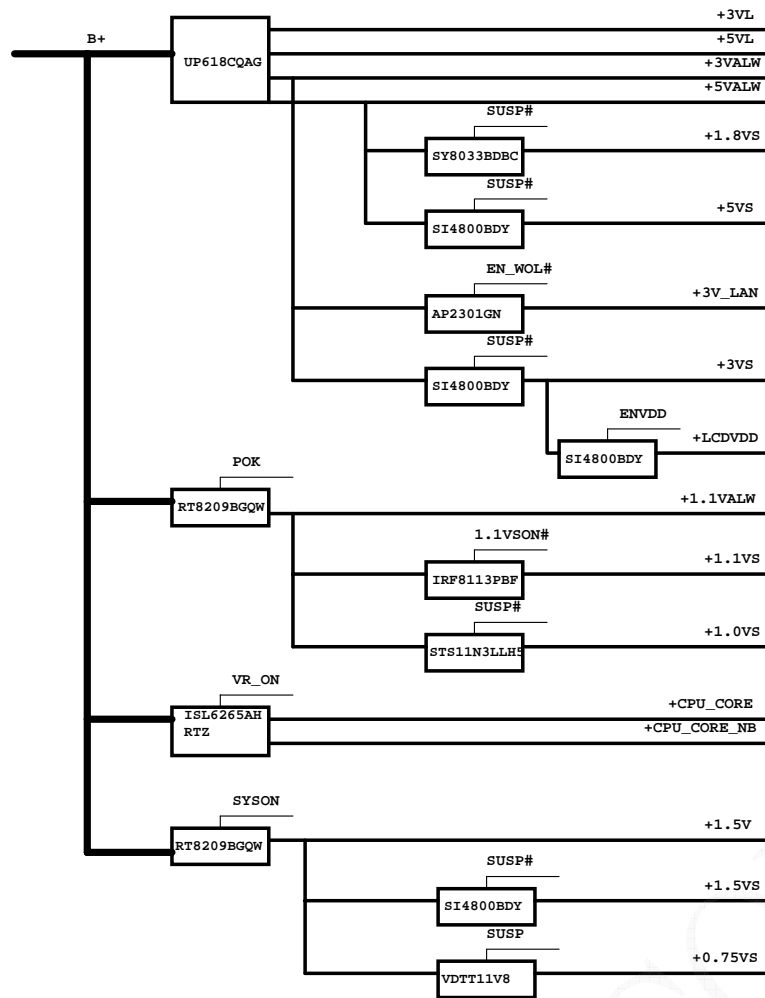
Device	HEX	Address
WLAN		

EC SM Bus2 address

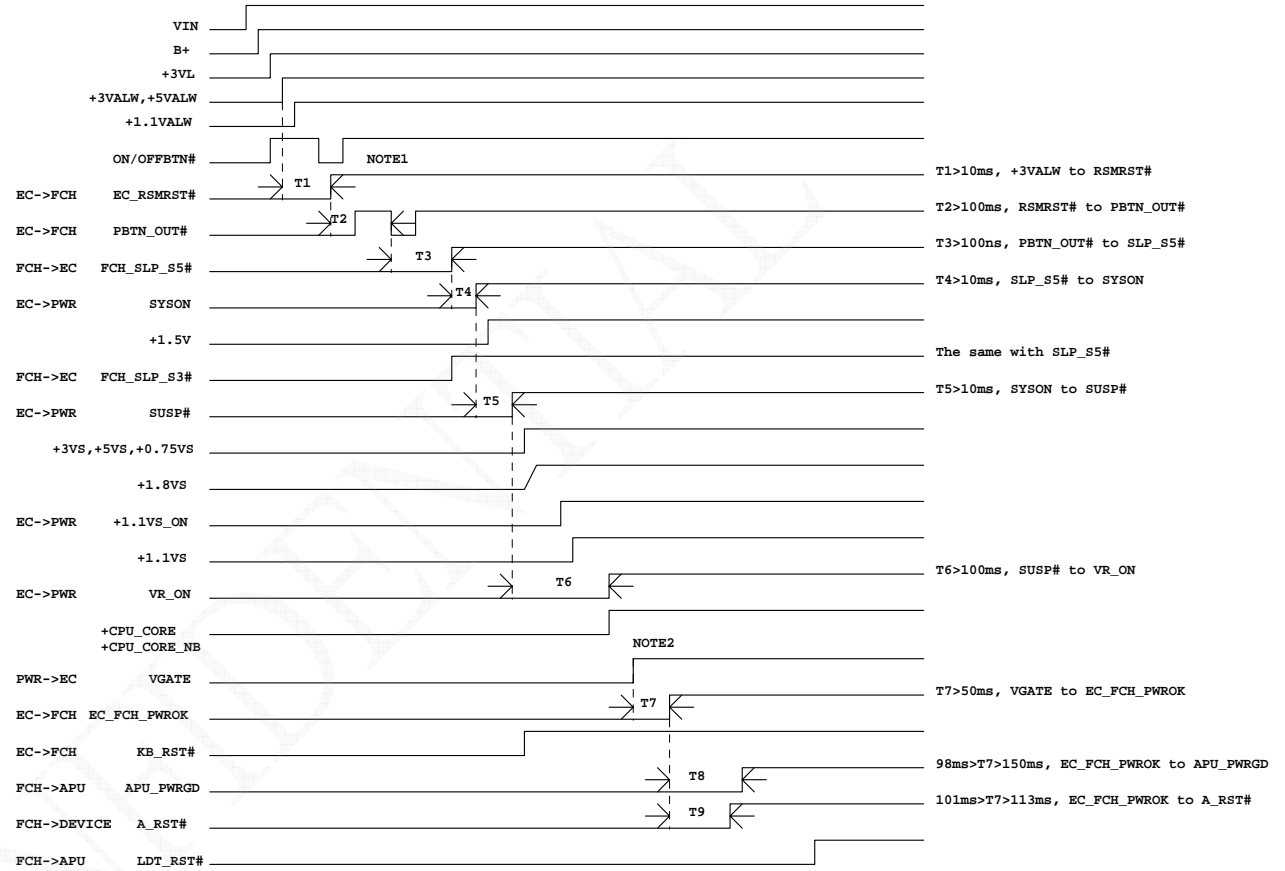
Device	HEX	Address
APU internal thermal sensor		1001 100X b

	SOURCE	POWER PLAN	HDMI	LVDS	CRT	FCH	CPU CORE	SDDIM I/II	WLAN	BATT	APU
TDP1_AUXP TDP1_AUXN	APU	+3VS	V								
LTDP0_AUXP LTDP1_AUXN	APU	+3VS		V +5VS							
DAC_SCL DAC_SDA	APU	+3VS			V +5VS						
SIC SID	APU	+3VS				V +3VALW					
SVC SVD	APU	+1.8VS					V				
SMB_FCH_CK0 SMB_FCH_DA0	FCH	+3VS						V			
SMB_FCH_CK1 SMB_FCH_DA1	FCH	+3VALW							V		
SMB_EC_CK1 SMB_EC_DA1	EC	+5VALW								V	
SMB_EC_CK2 SMB_EC_DA2	EC	+3VS									V

## POWER MAP



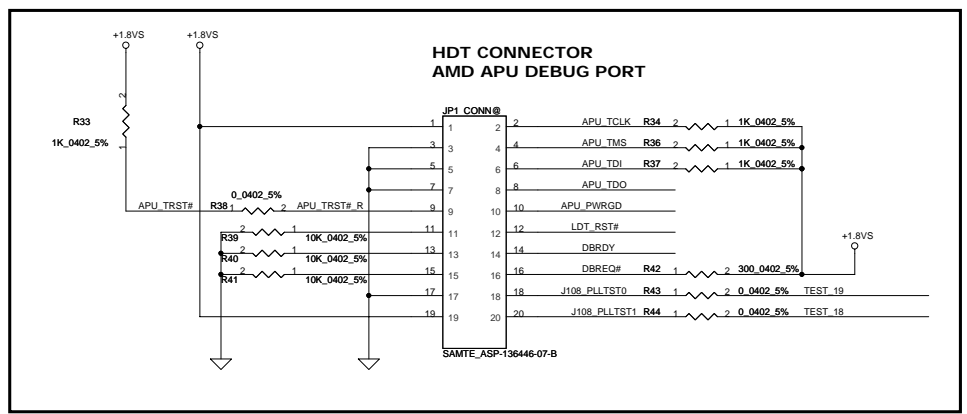
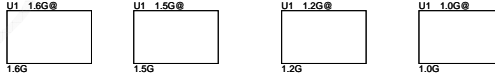
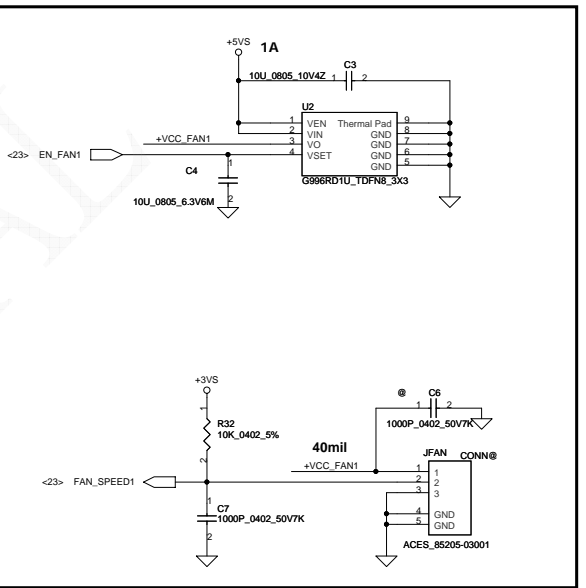
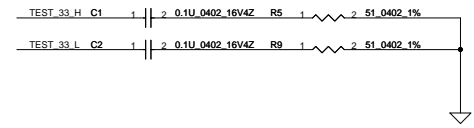
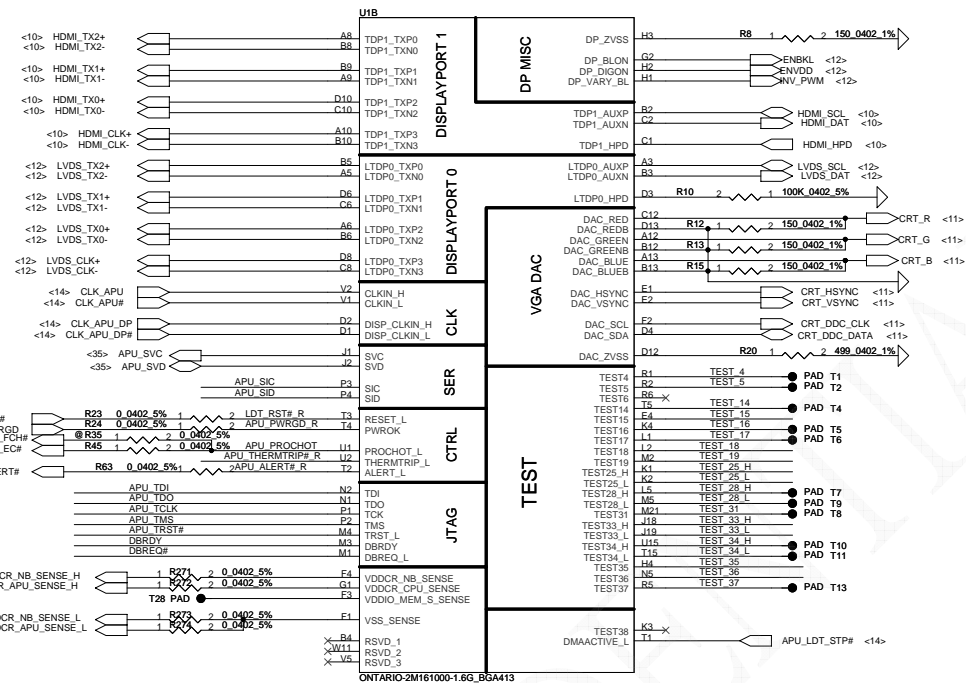
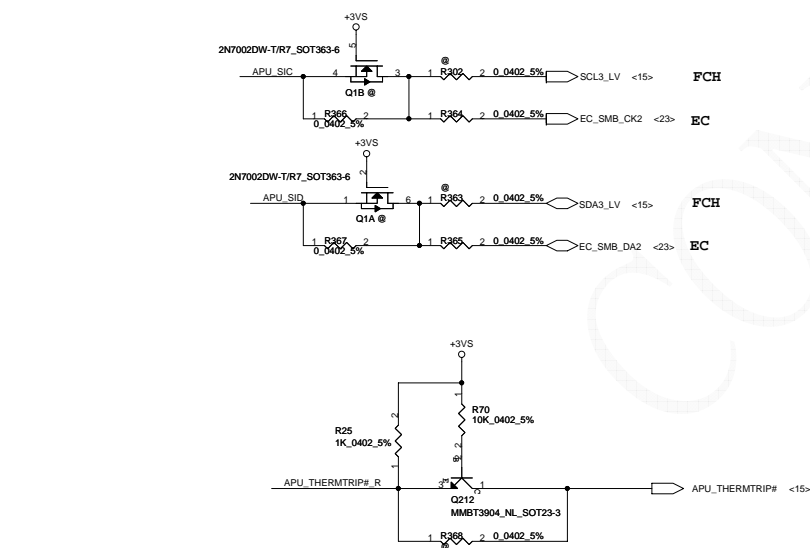
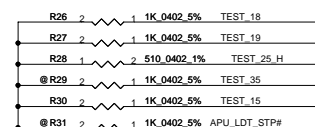
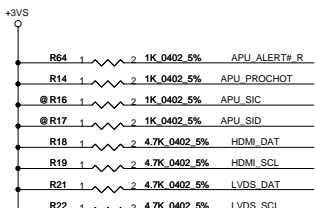
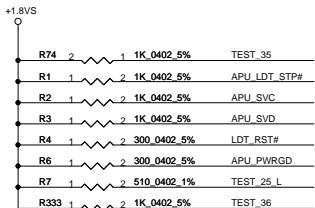
## POWER SEQUENCE

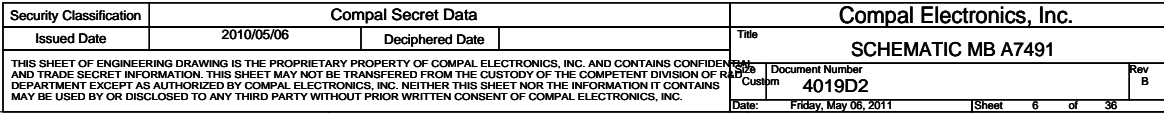


NOTE1: RSMRST# rise time(10% to 90%)<50ms  
fail time<1ms

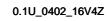
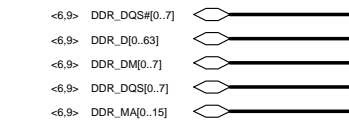
NOTE2: EC\_FCH\_PWROK rise time(10% to 90%)<50ms  
fail time<1ms

Security Classification		Compal Secret Data		Compal Electronics,Ltd.	
Issued Date	2010/05/06	Deciphered Date		Title	SCHEMATIC MB A7491
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	4019D2
				Date	Friday, May 06, 2011
				Sheet	4 of 36









Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2010/05/06	Deciphered Date	2010/02/04	Title	SCHEMATIC MB A7491	
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 RAJAPALACE DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	4019D2	B
				Date:	Friday, May 06, 2011	Sheet 8 of 36



<6.8> DDR\_DQS#[0..7]

<6.8> DDR\_D[0..63]

<6.8> DDR\_DM[0..7]

<6.8> DDR\_DQS[0..7]

<6.8> DDR\_MA[0..15]

Layout Note:  
Place near JP3

Layout Note: Place these 4 Caps near Command  
and Control signals of DIMMA

change two 100U to one 220U  
06/21

Layout Note:  
Place near JP3.203 & JP3.204

	SA0	SA1
Compal common design	0	1
ADM CRB	1	0

Need close to JDDR2  
@ C288  
33P\_0402\_50V8J

<6.8> DDR\_CKE0

<6.8> DDR\_BS2

<6.8> DDR\_B\_CLK0

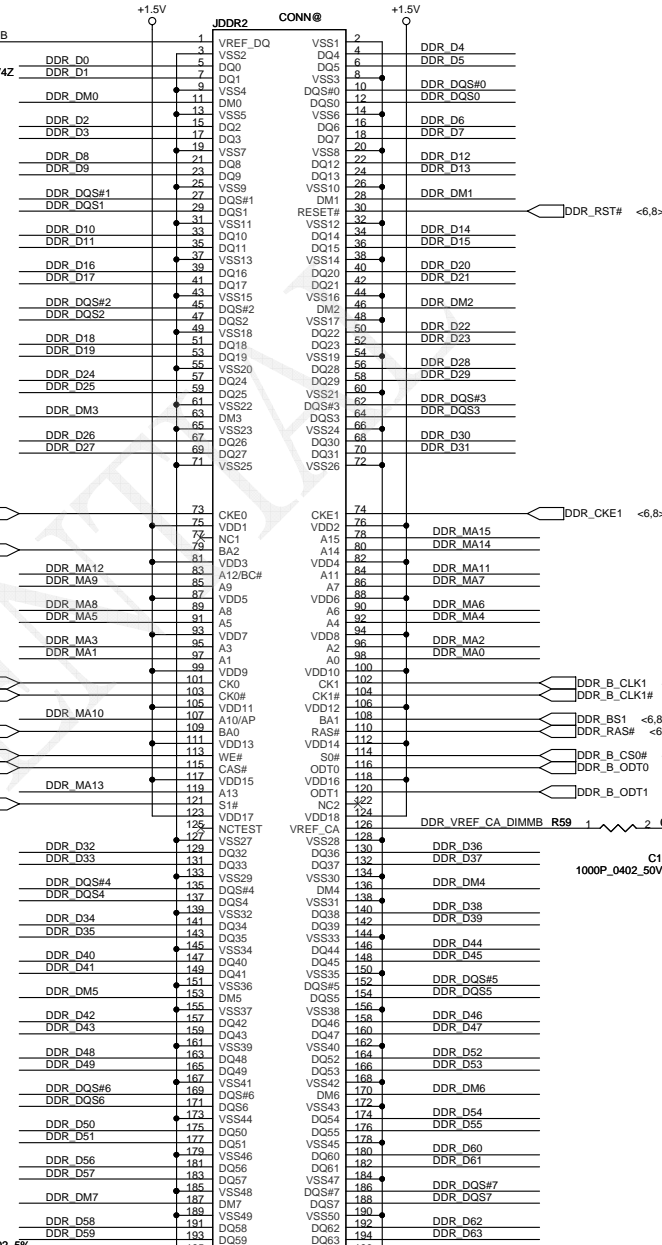
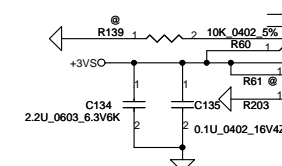
<6.8> DDR\_B\_CLK0#

<6.8> DDR\_BS0

<6.8> DDR\_WE#

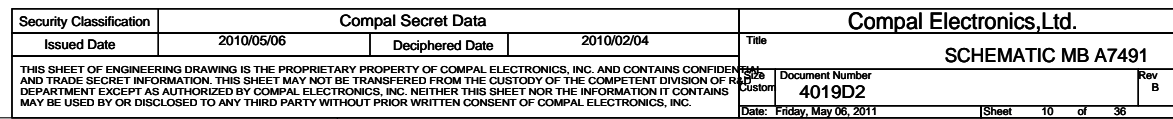
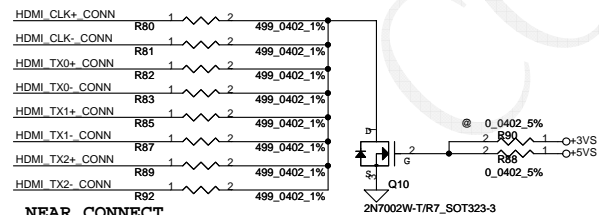
<6.8> DDR\_CAS#

<6.8> DDR\_B\_CS#

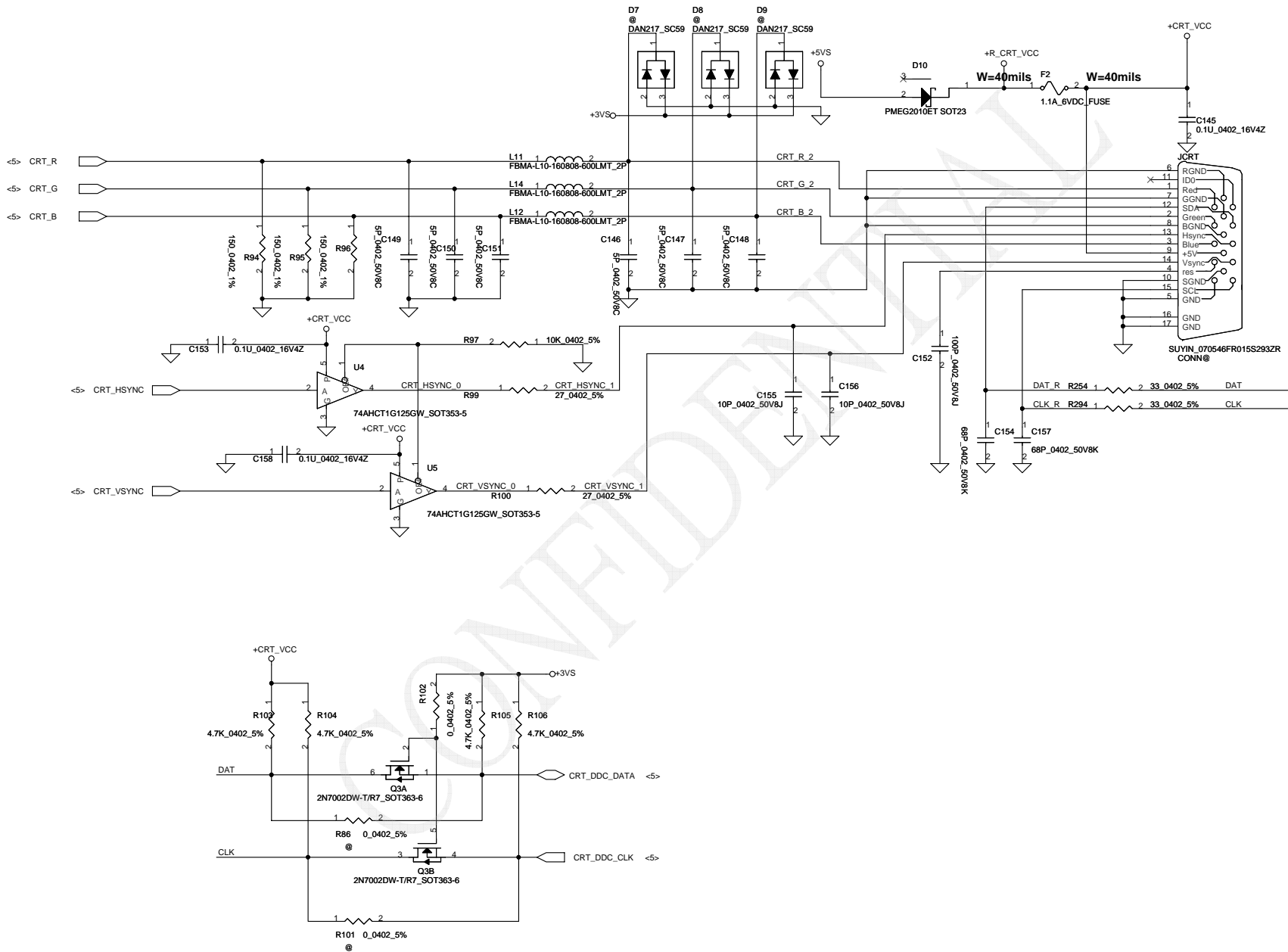


DDR3 SO-DIMM B  
REV Type

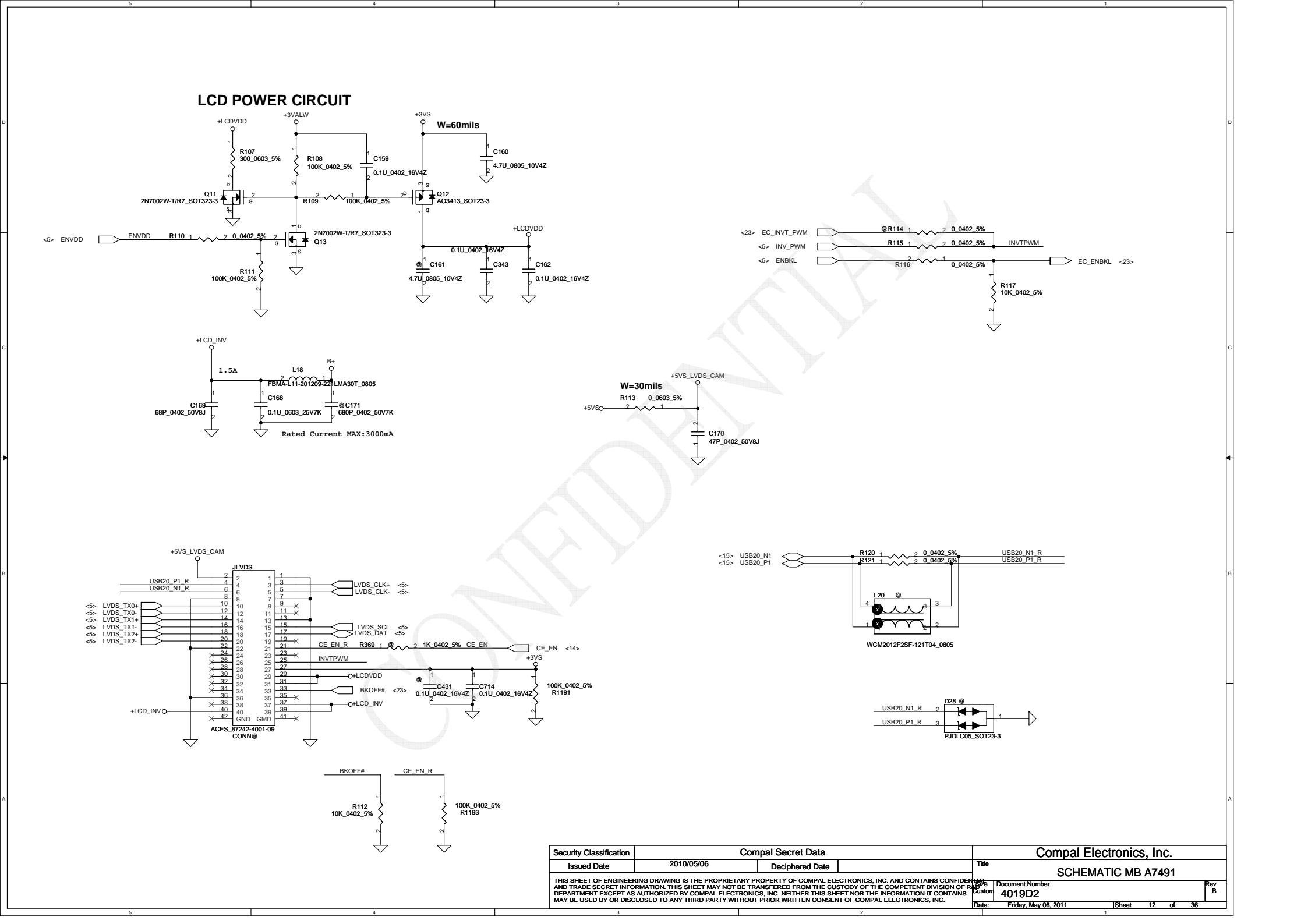
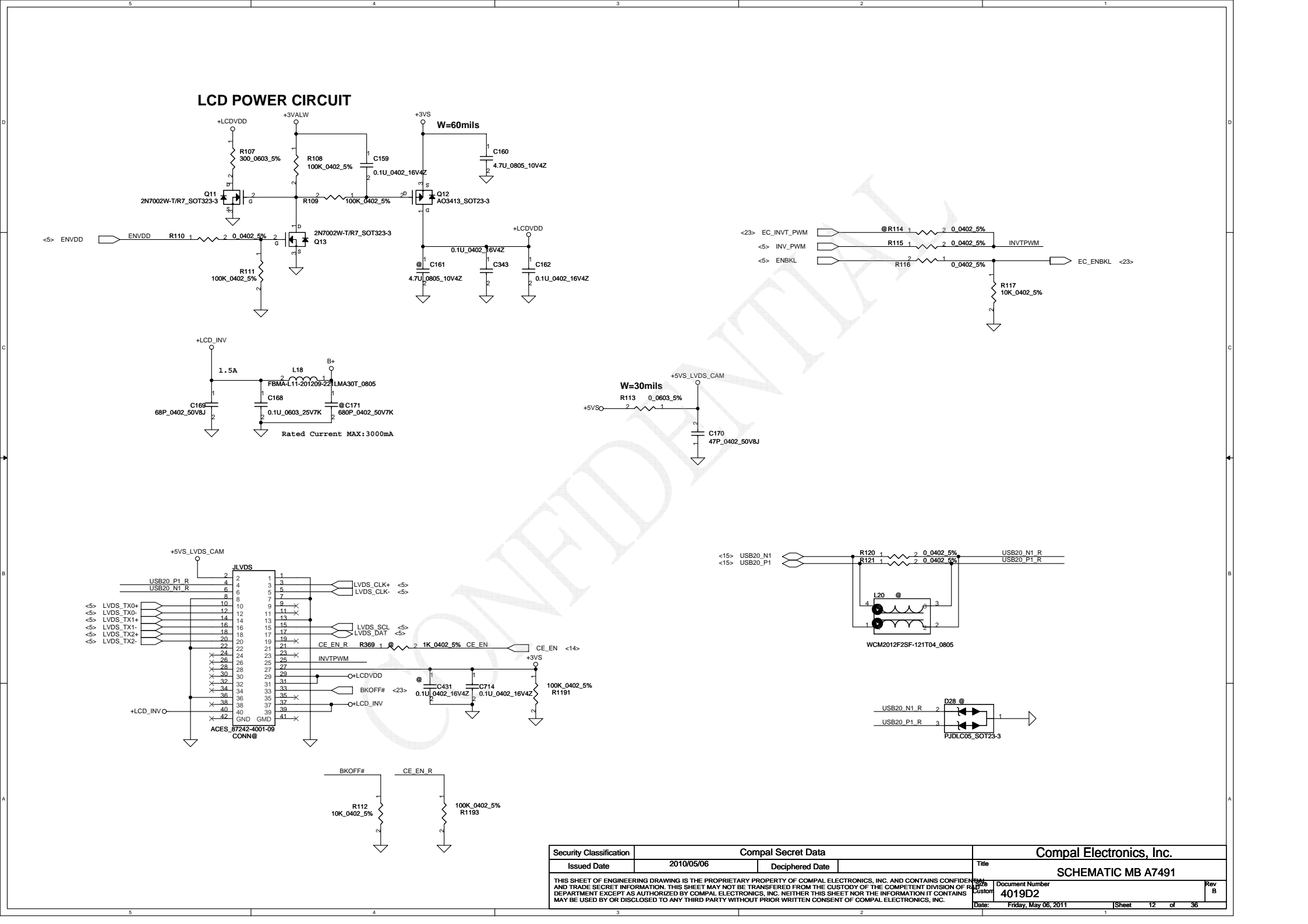
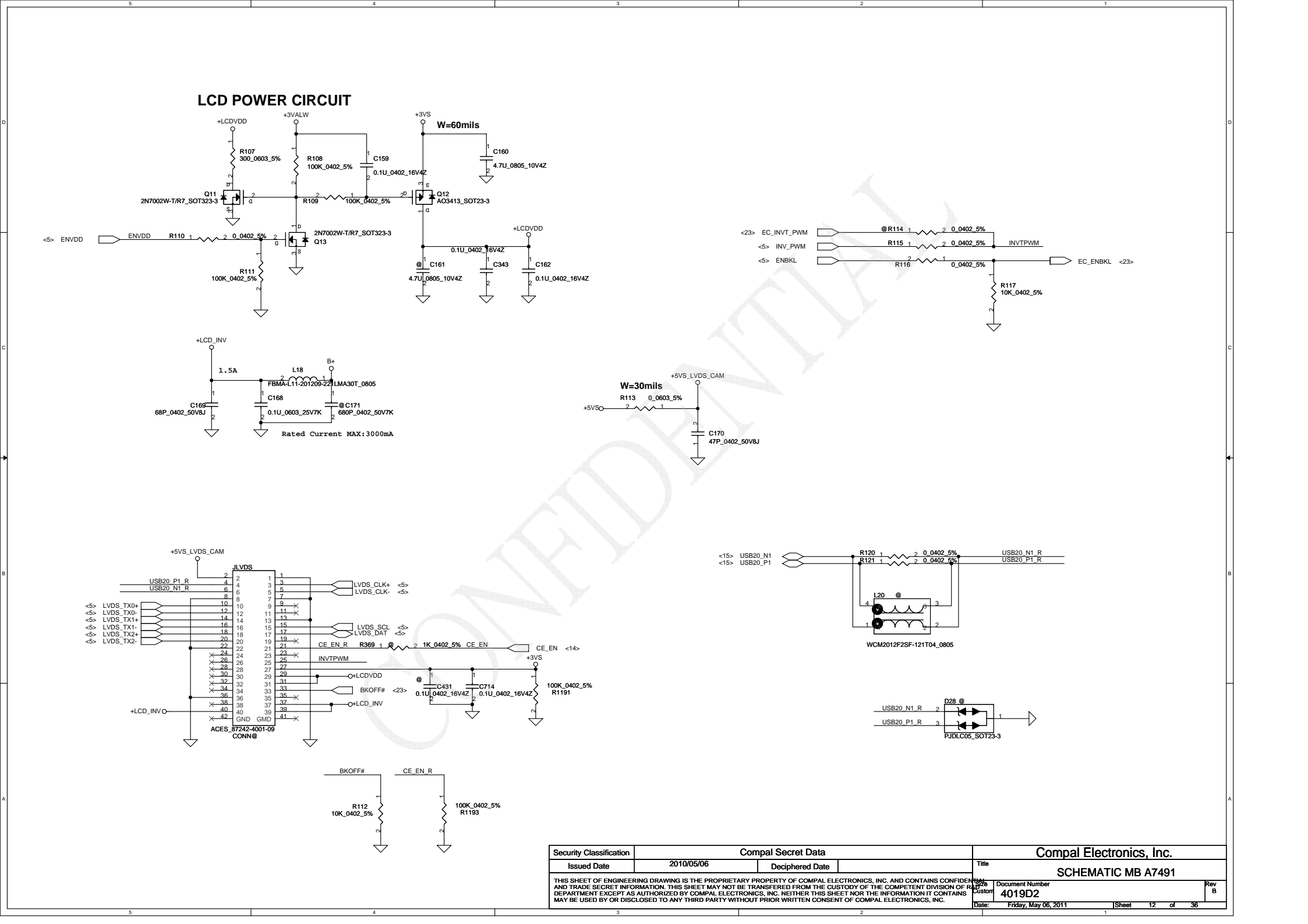
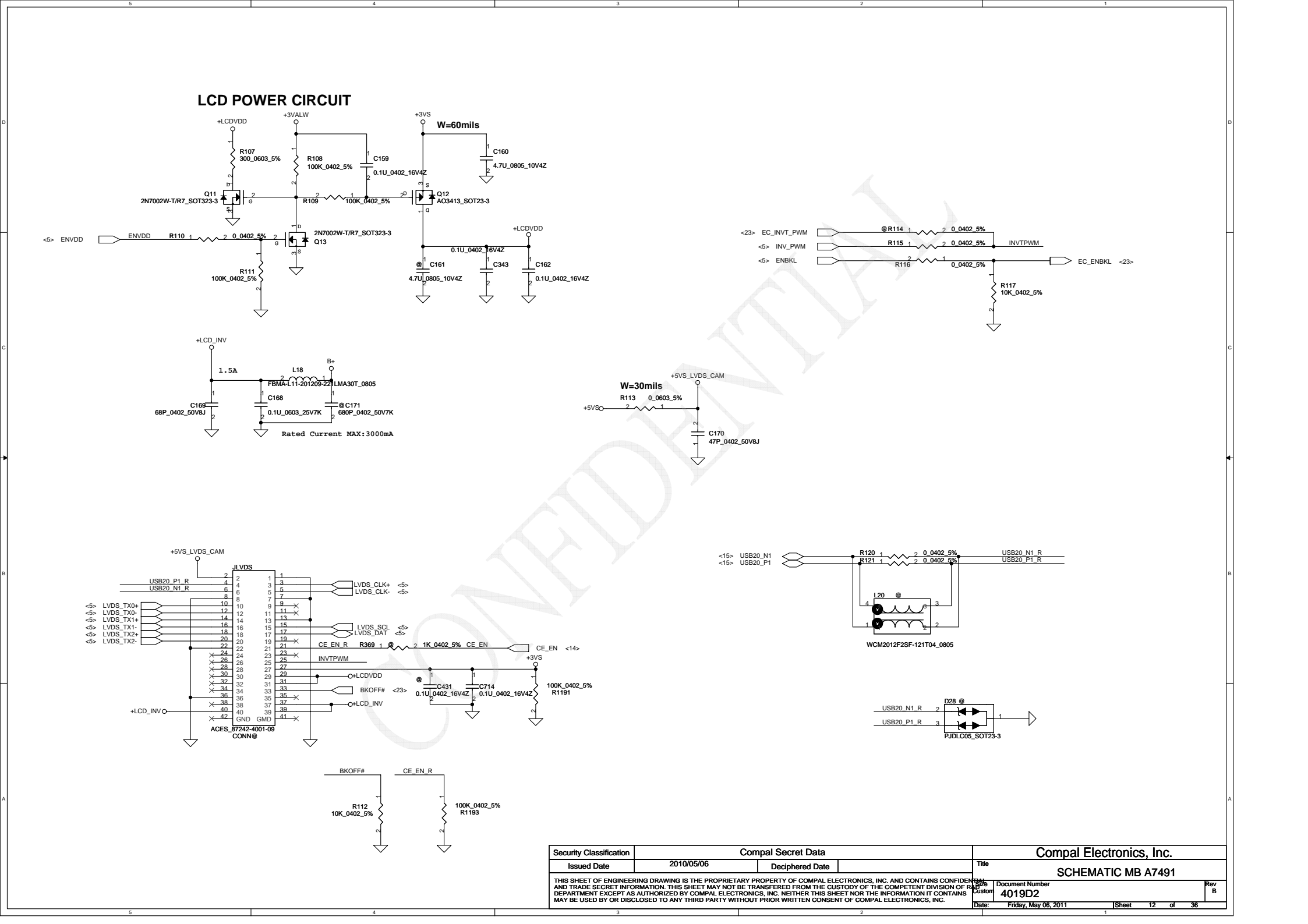
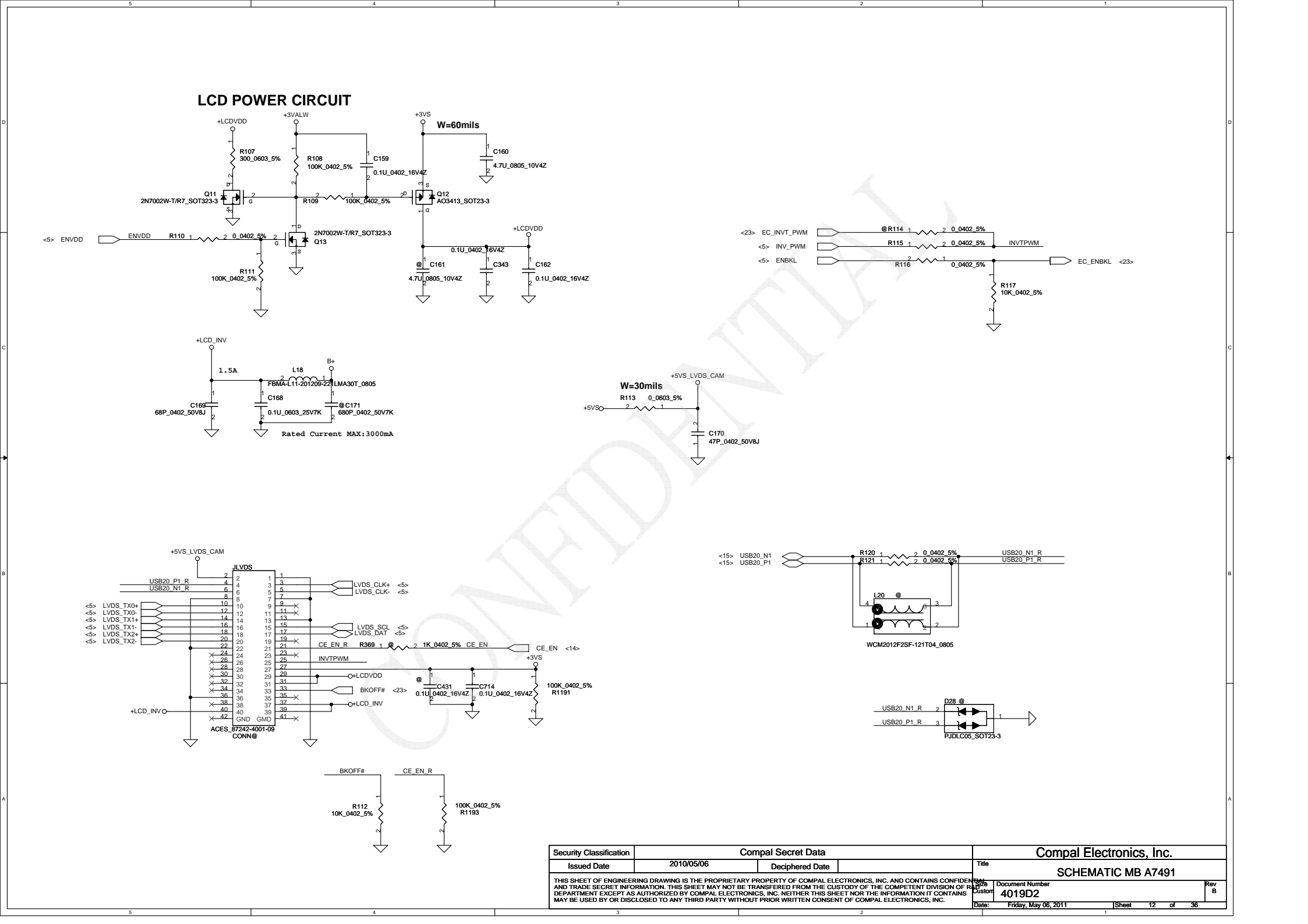
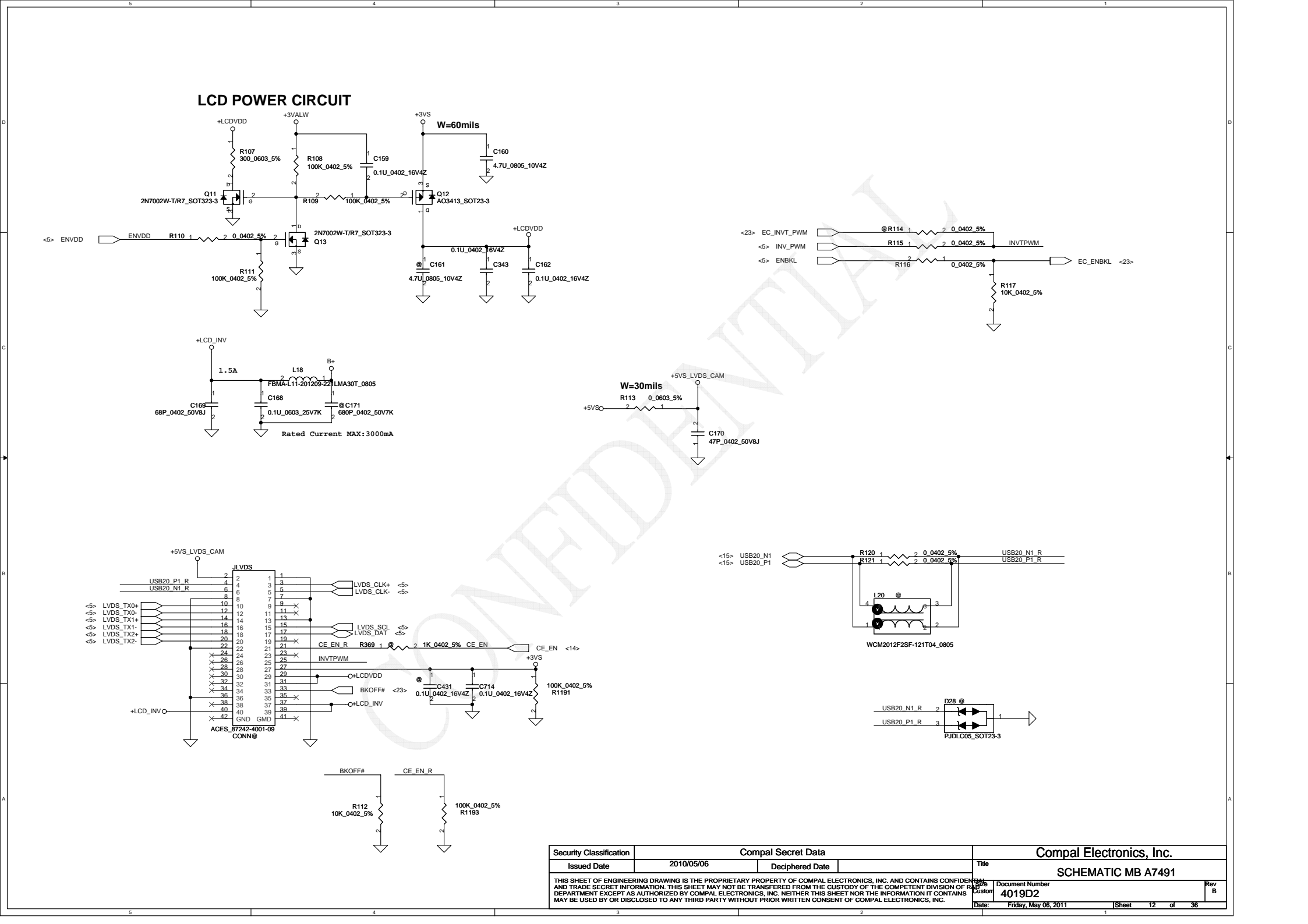
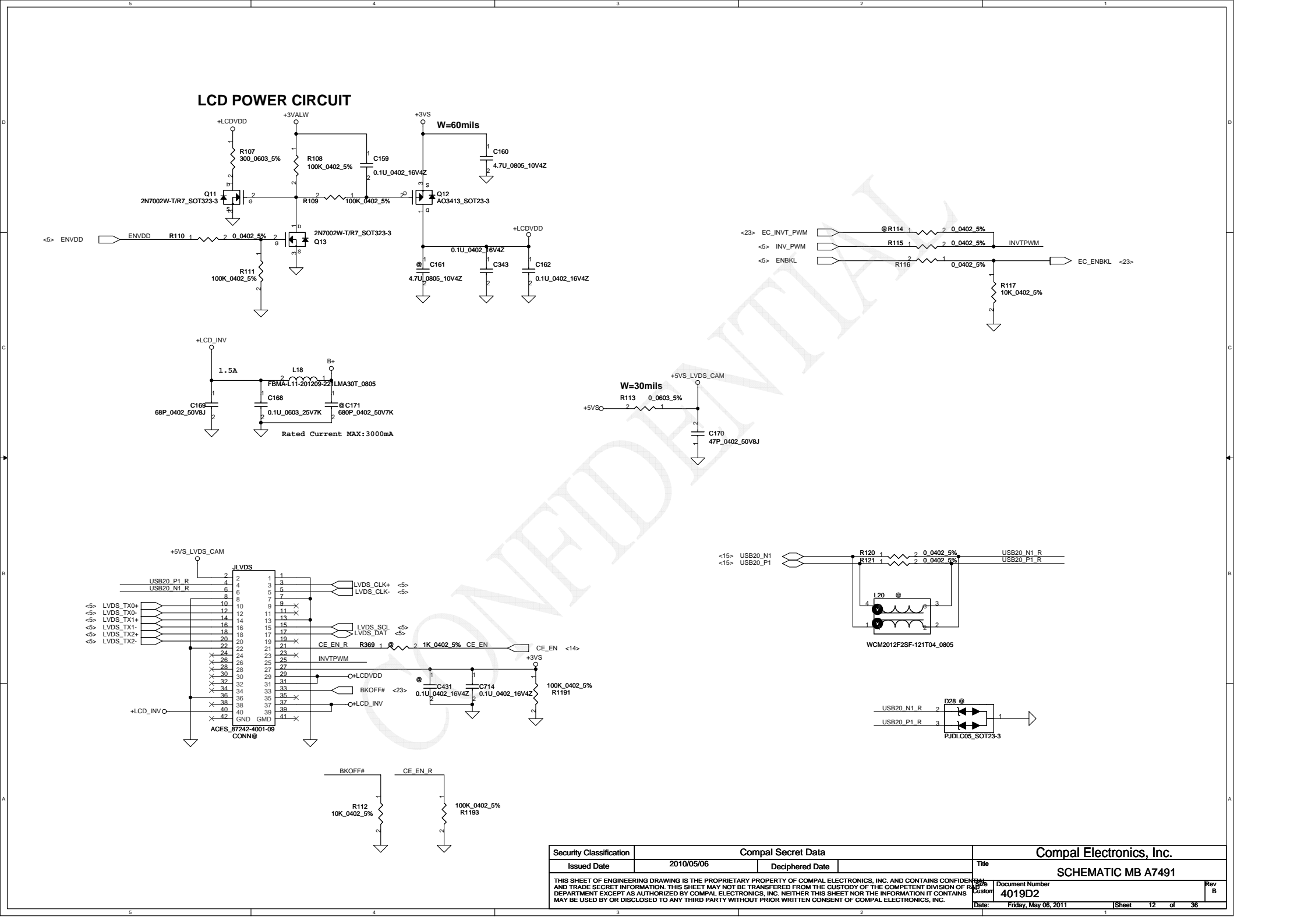
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2010/05/06	Deciphered Date		Title	SCHEMATIC MB A7491	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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	4019D2	Rev B
				Date:	Friday, May 06, 2011	Sheet 9 of 36



CRT Connector



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/05/06	Deciphered Date		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.				Document Number	Rev B
				4019D2	
				Date: Friday, May 06, 2011	Sheet 11 of 36

[illegible]

**LCD POWER CIRCUIT**

W=60mils

W=30mils

Rated Current MAX:3000mA

Security Classification: Compal Secret Data

Issued Date: 2010/05/06

Deciphered Date:

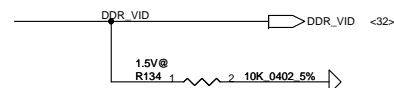
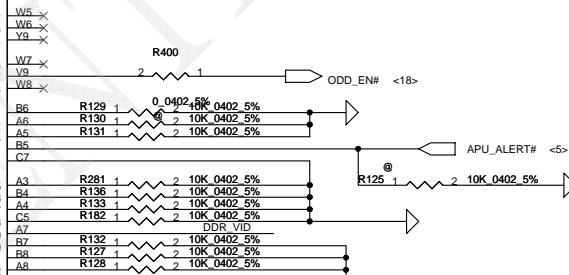
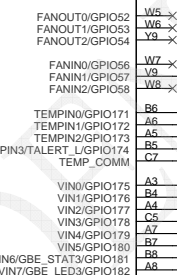
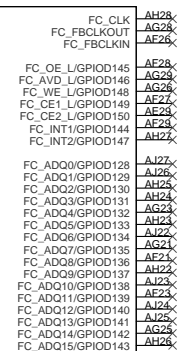
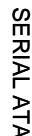
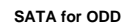
Title: SCHEMATIC MB A7491

Document Number: 4019D2

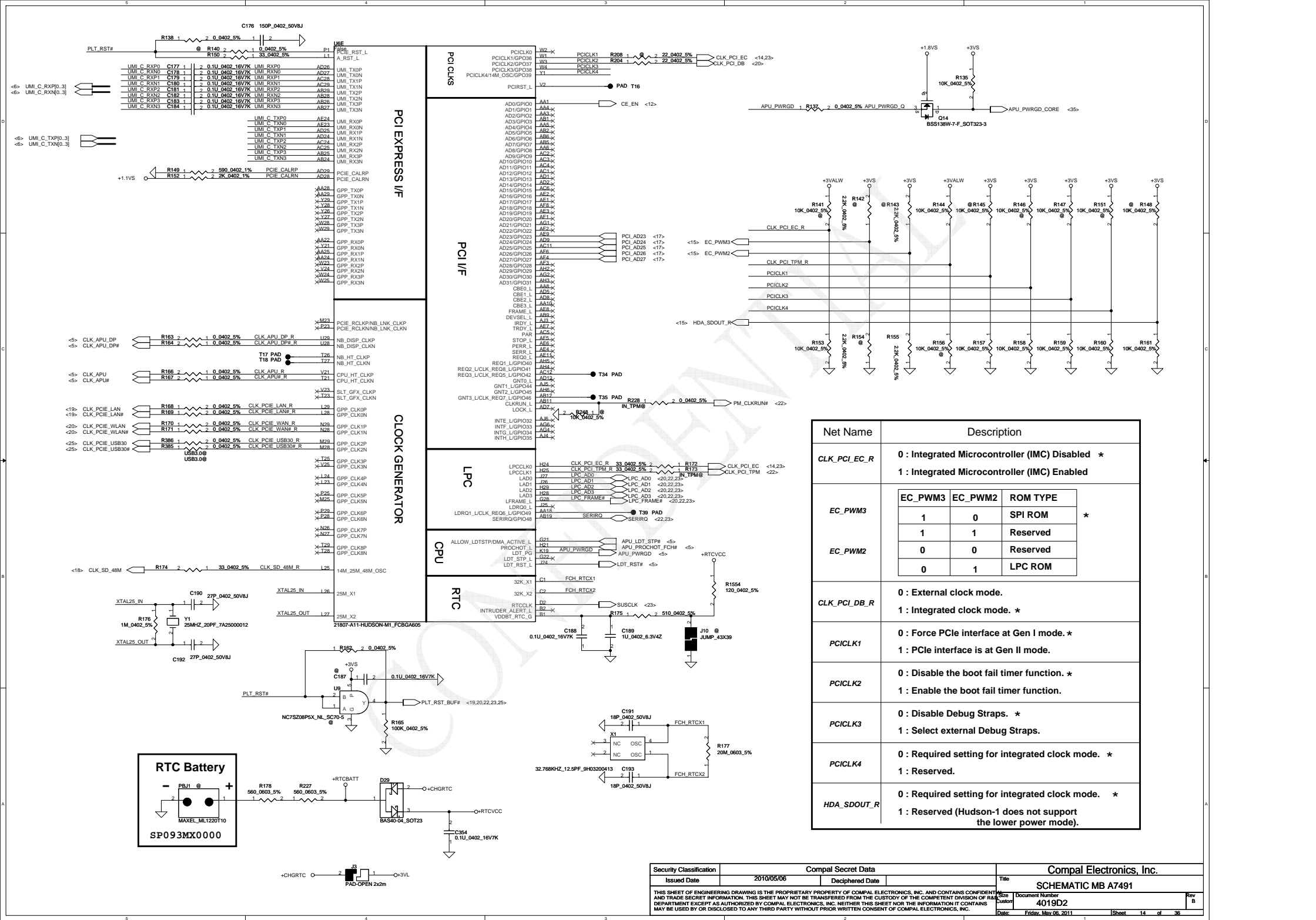
Date: Friday, May 06, 2011

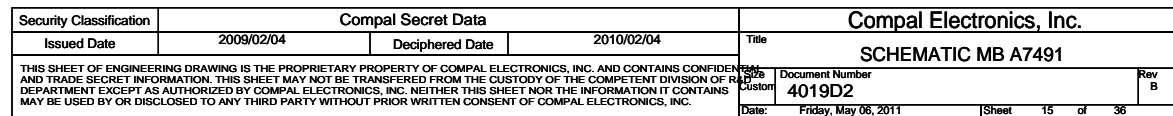
Sheet 12 of 36

Rev B



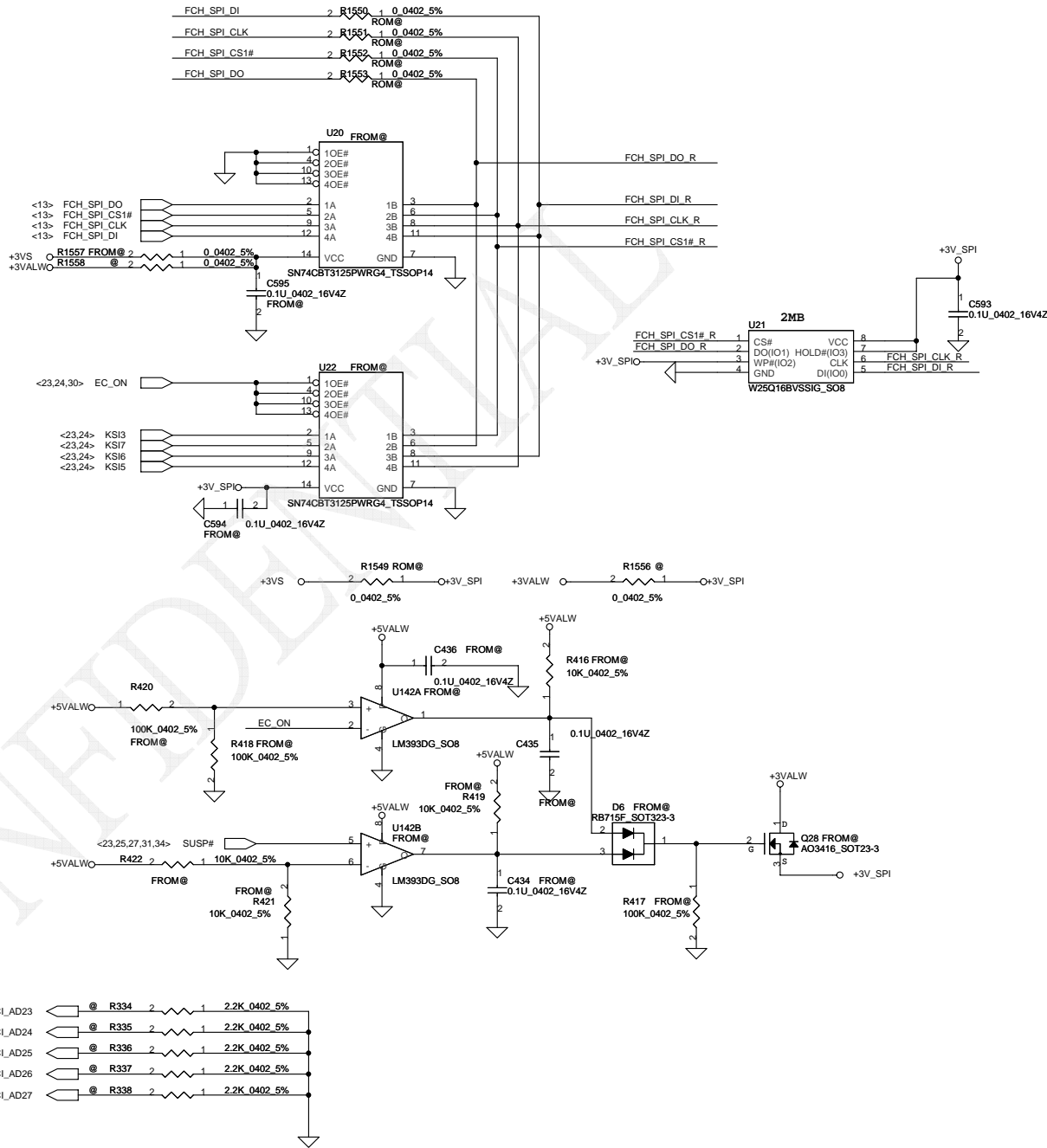
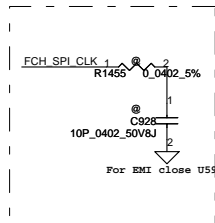
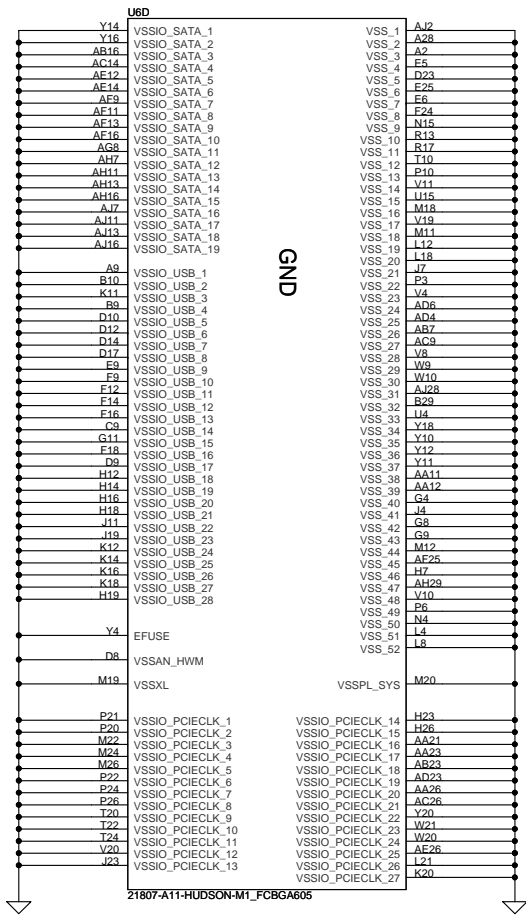
DDR_VID	DDR voltage
0	+1.5V
1	+1.35V







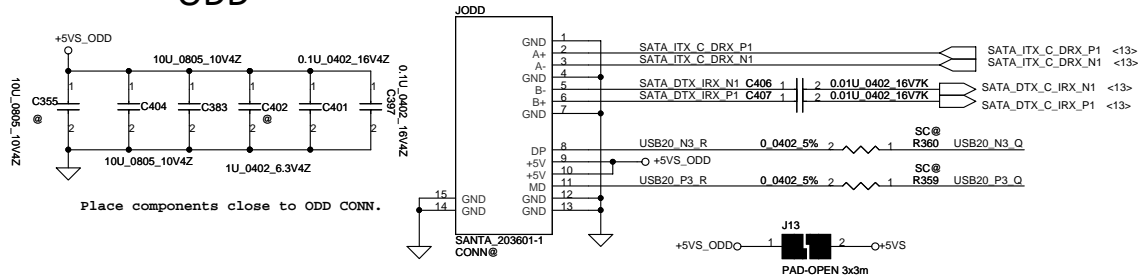




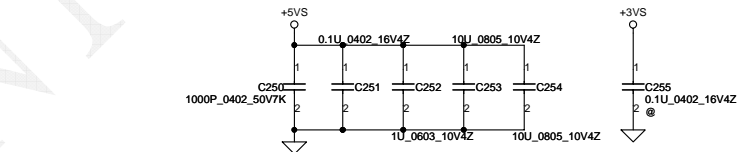
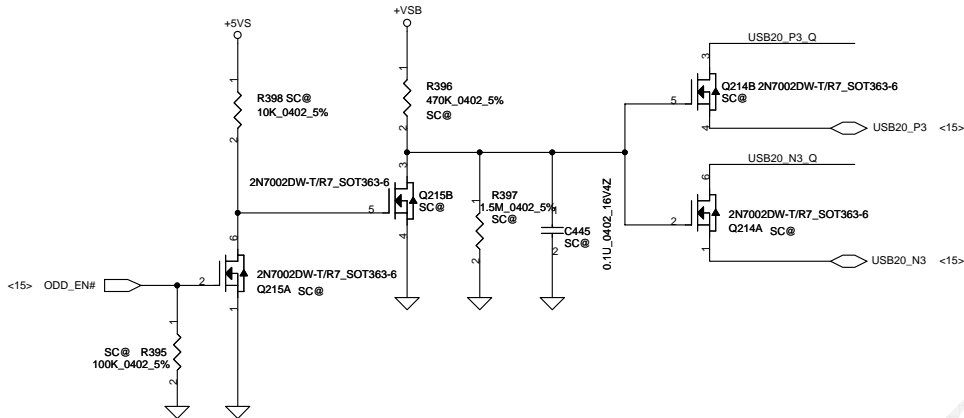
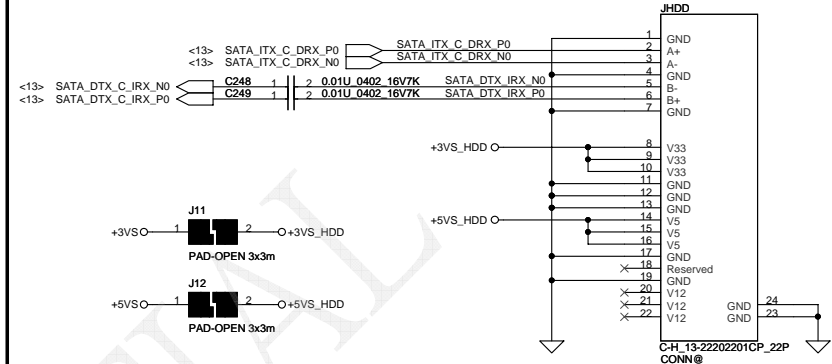
Net Name	Description
PCI_AD27	0 : Bypass internal PLL clock 1 : Use internal PLL-generated PLL CLK *
PCI_AD26	0 : ILA auto run enable 1 : ILA auto run disable *
PCI_AD25	0 : Bypass internal FC Clk 1 : Use internal PLL FC Clk * NEED CHECK
PCI_AD24	0 : Getting the value from I2C EPROM 1 : Disable I2C ROM * NEED CHECK
PCI_AD23	0 : Reserved 1 : Required setting (use ROMTYPE straps to determine the ROM type) *

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/02/04	Deciphered Date	2010/02/04	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.				Document Number
				4019D2
				Rev B
				Date: Friday, May 06, 2011
				Sheet 17 of 36

# ODD

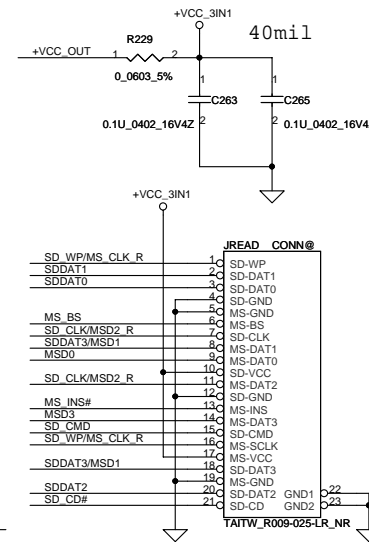
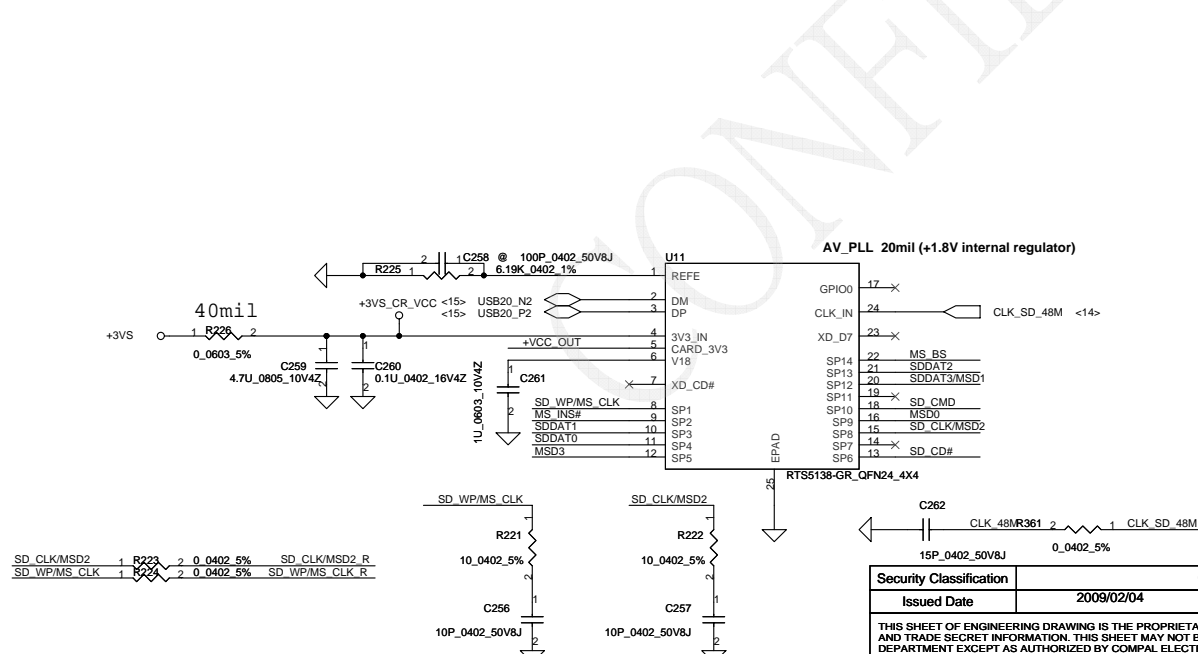


# HDD



## SD,MMC,MS multi-function pin define

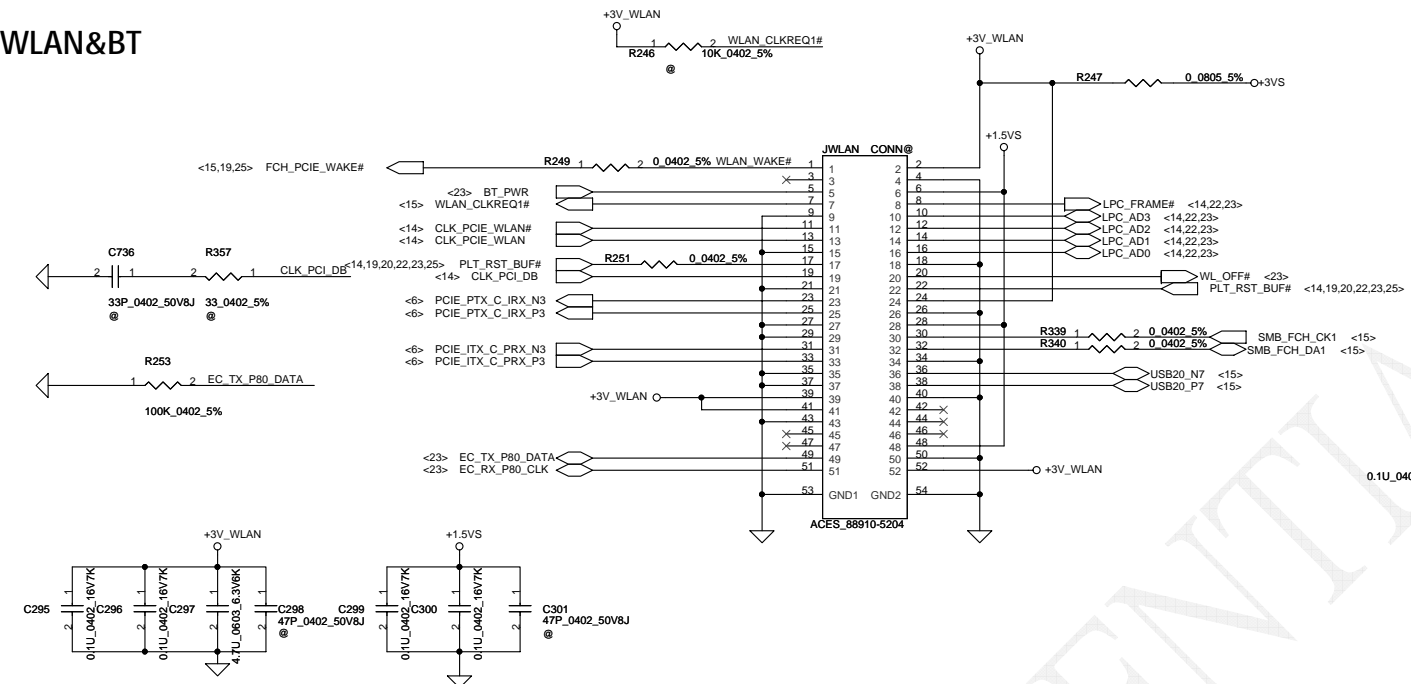
MDIO PIN Name	SD Card PIN Name	MMC Card PIN Name	MS Card PIN Name
SP1	SP1		SP1
SP2			
SP3			
SP4			
SP5			
SP6			
SP7			
SP8			
SP9			
SP10			
SP11			
SP12			
SP13			
SP14			
SP15			
SP16			
SP17			
SP18			
SP19			



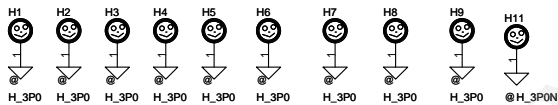
Security Classification		Compal Secret Data		Title	
Issued Date	2009/02/04	Deciphered Date	2010/02/04	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				SCHEMATIC MB A7491	
				Document Number	Rev B
				4019D2	
				Date: Friday, May 06, 2011	Sheet 18 of 36



WLAN&BT



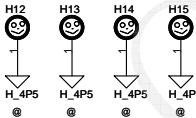
Screw Hole



NPTH



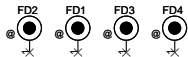
CPU



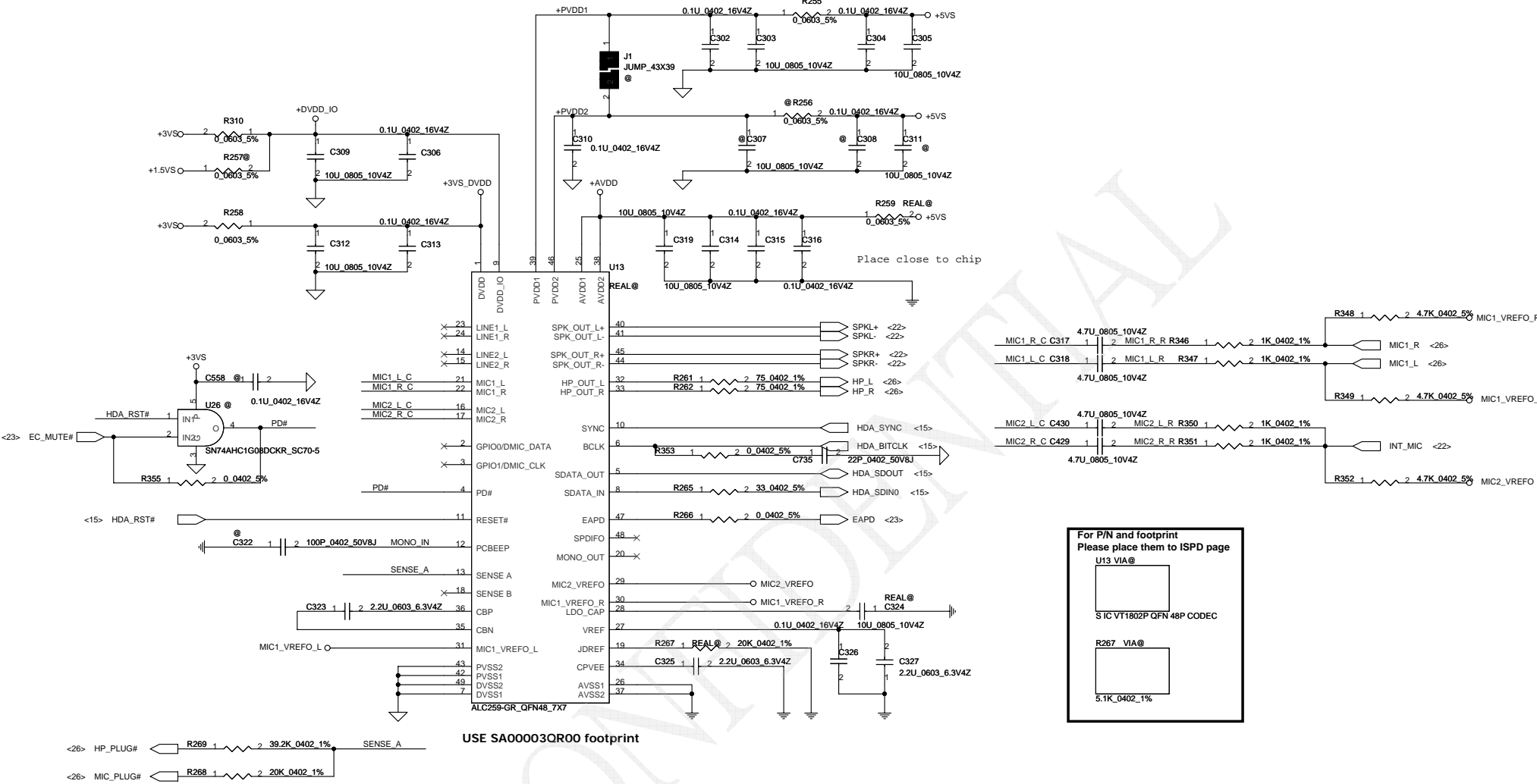
JWLAN

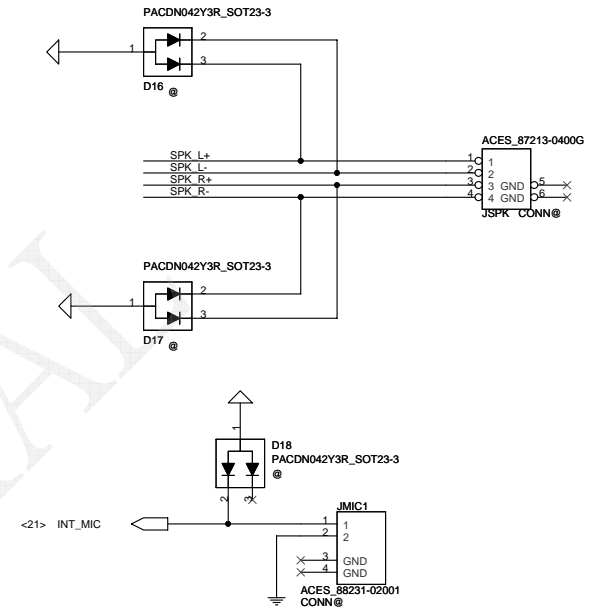
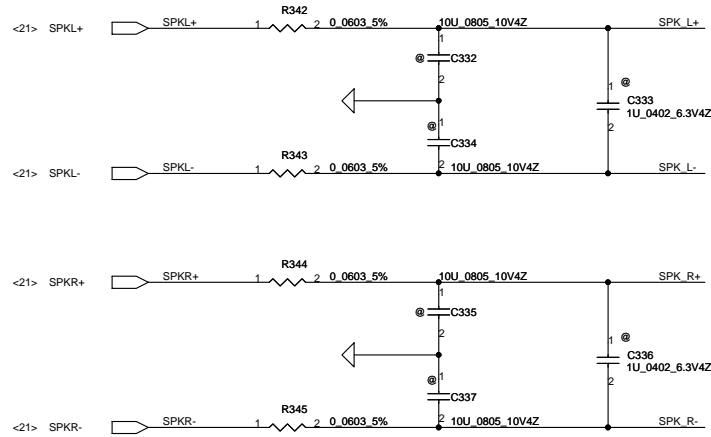


PCB Fedical Mark PAD

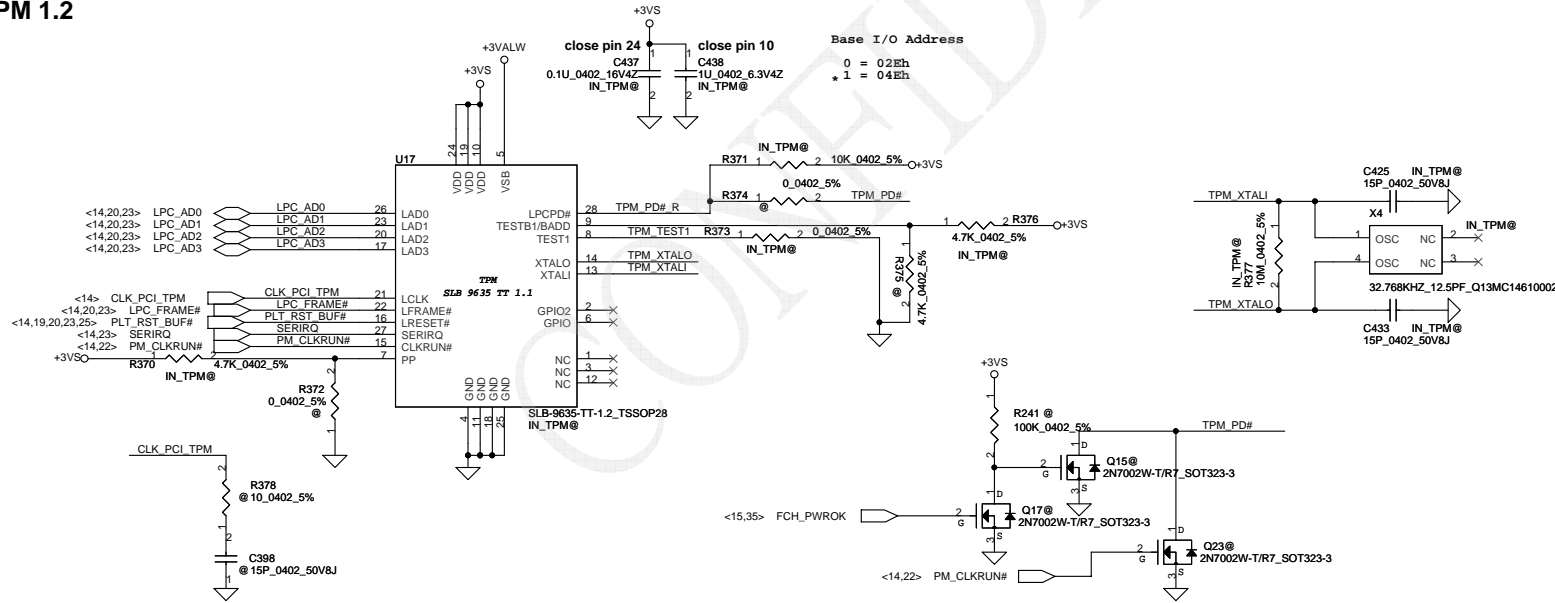


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/02/04	Deciphered Date	2010/02/04	Title	SCHEMATIC MB A7491
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	4019D2
				Rev	B
				Date:	Sheet 20 of 36

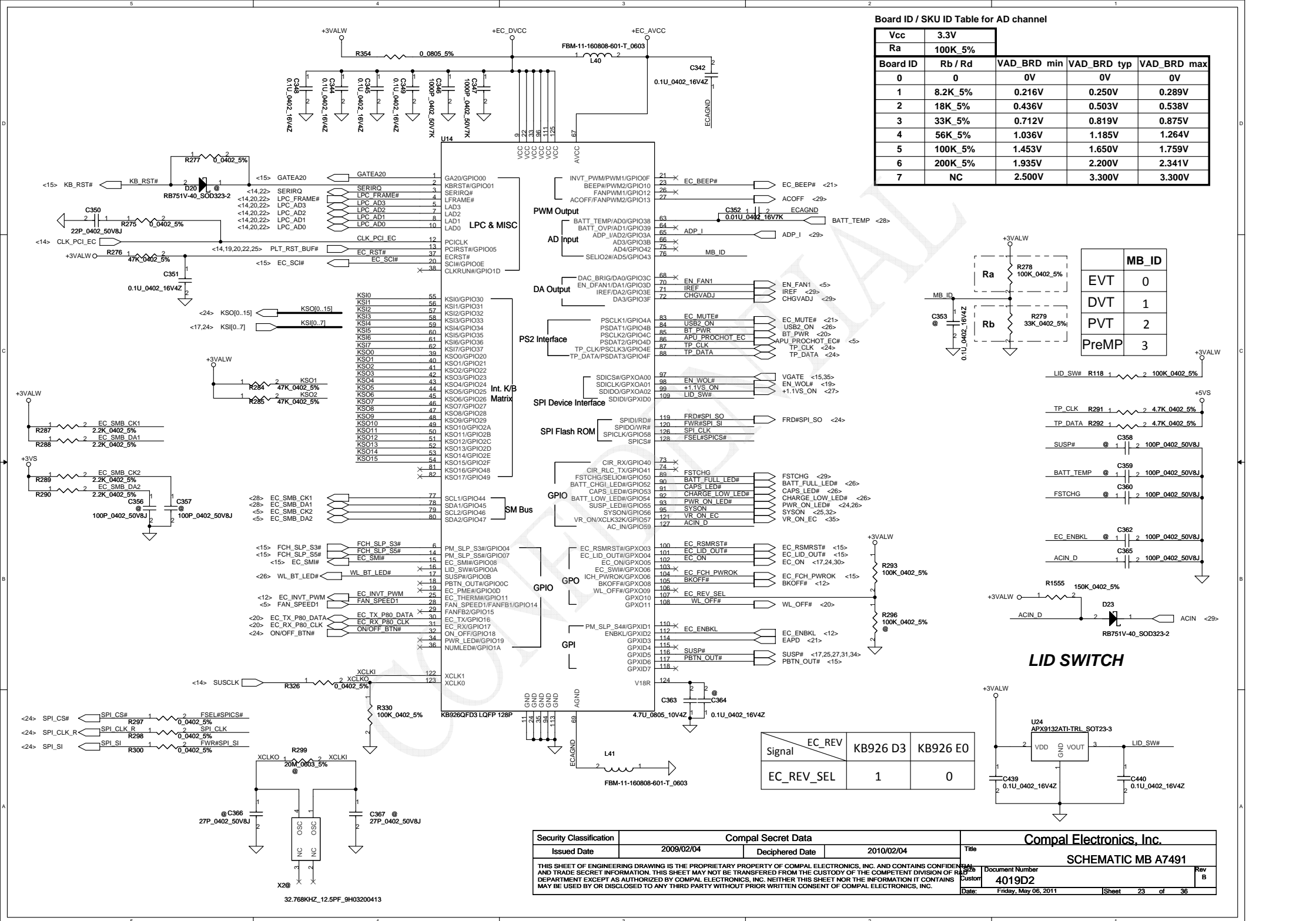




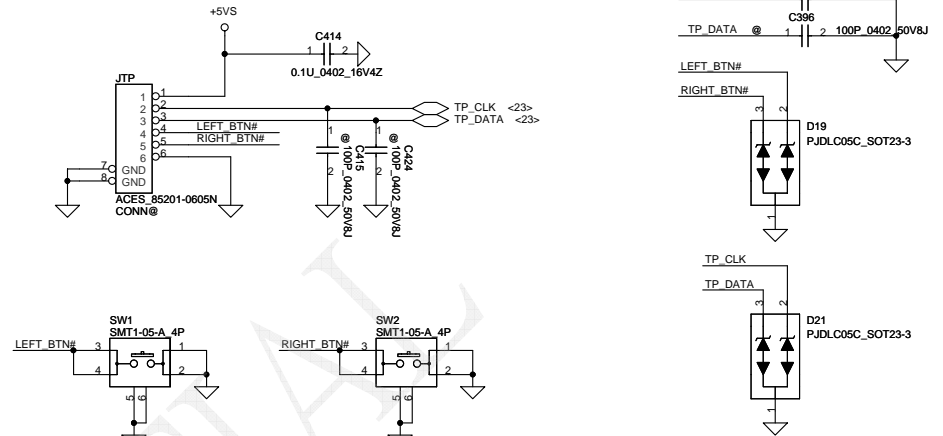
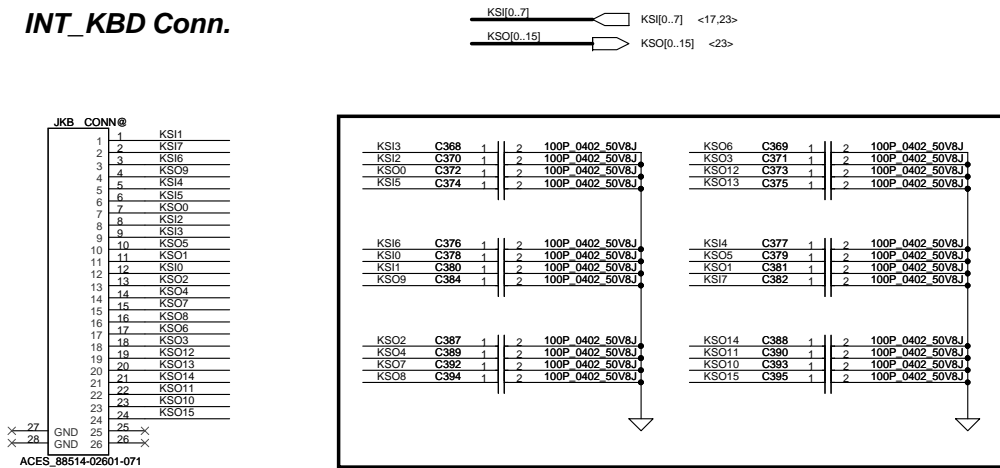
## TPM 1.2



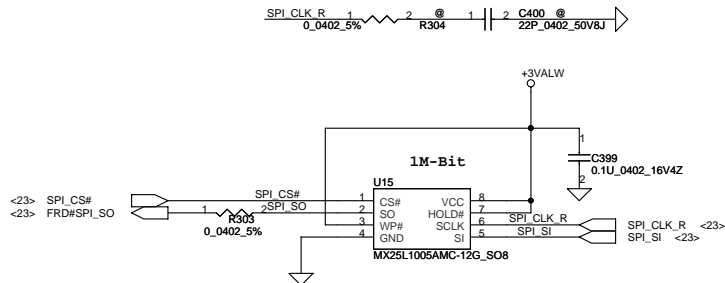
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/05/06	Deciphered Date		Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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.				Document Number	Rev B
				4019D2	
				Date: Friday, May 06, 2011	Sheet 22 of 36



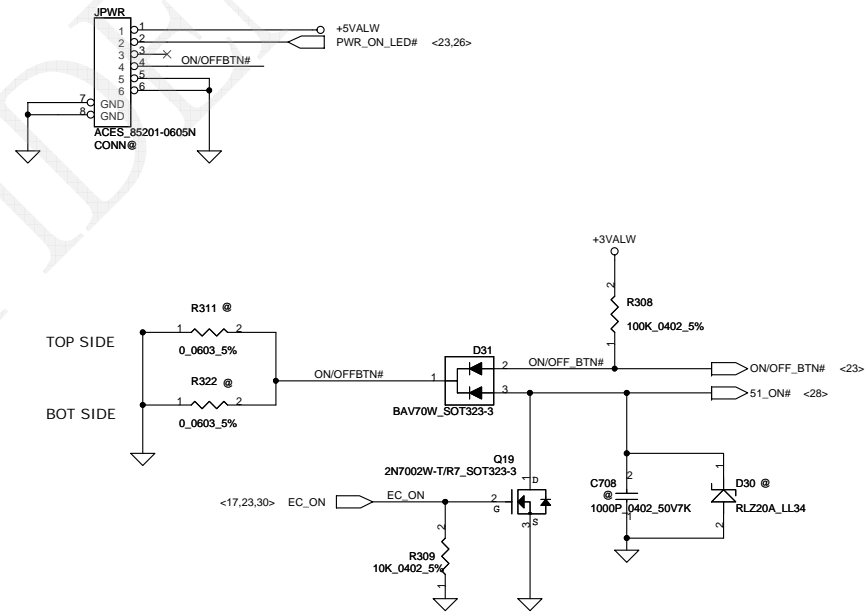
# INT\_KBD Conn.



## EC ROM



## Power BTN Board Conn

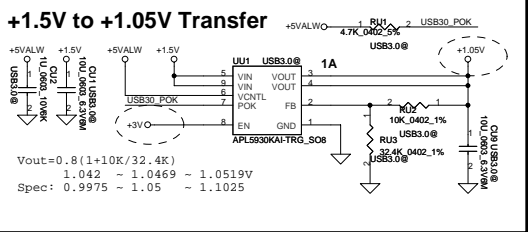
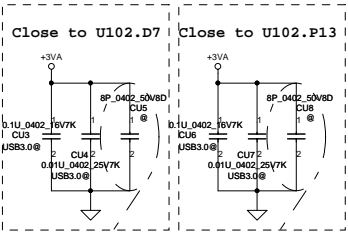
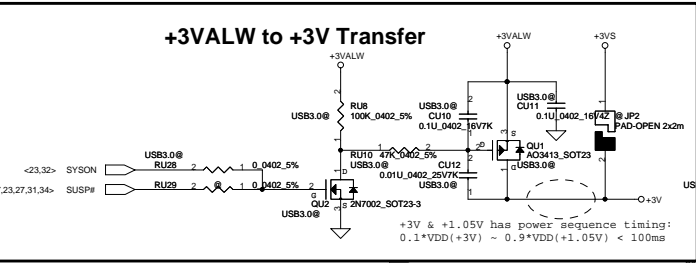


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/02/04	Deciphered Date	2010/02/04	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Document Number	Rev B
				4019D2	
Date: Friday, May 06, 2011				Sheet	24 of 36

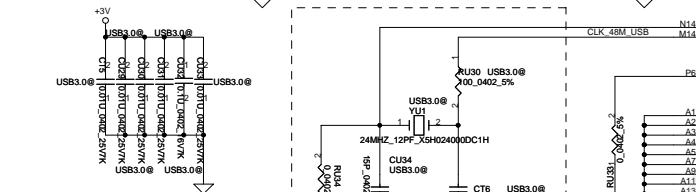
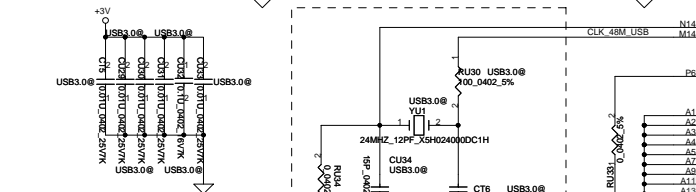
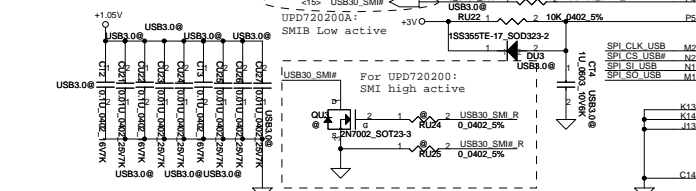
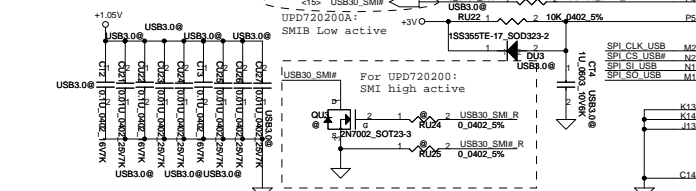
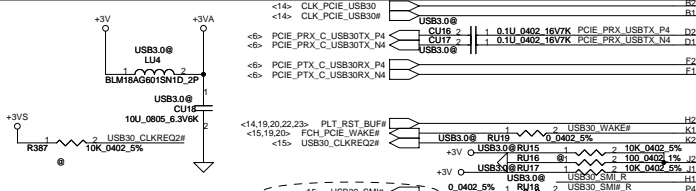
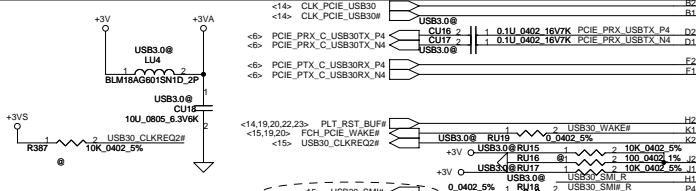


### +1.5V to +1.05V Transfer

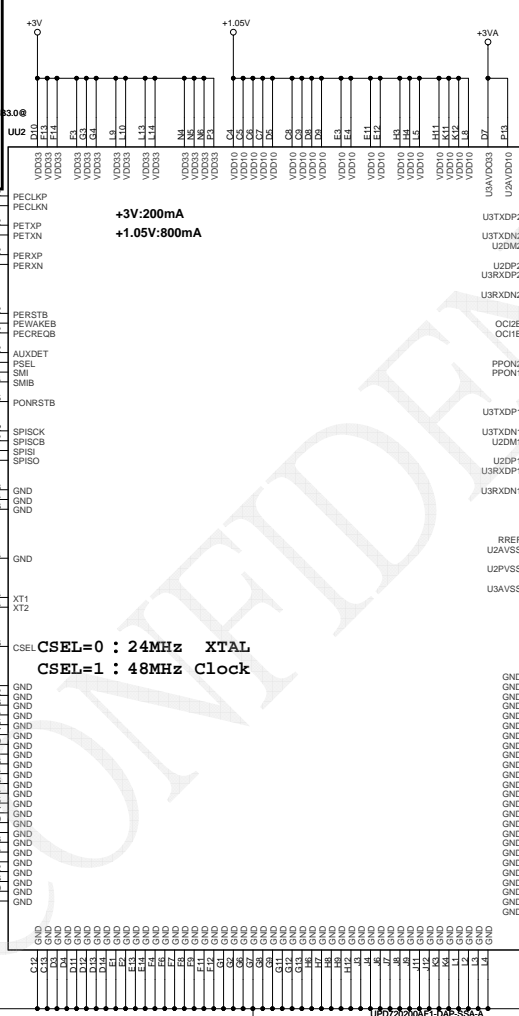
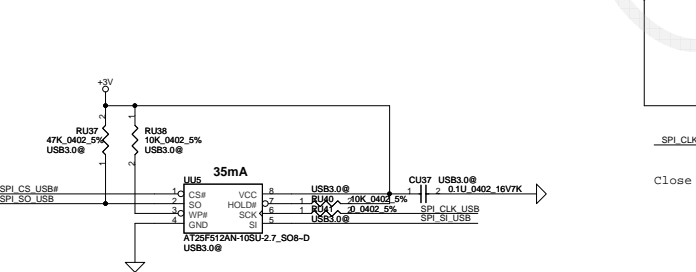
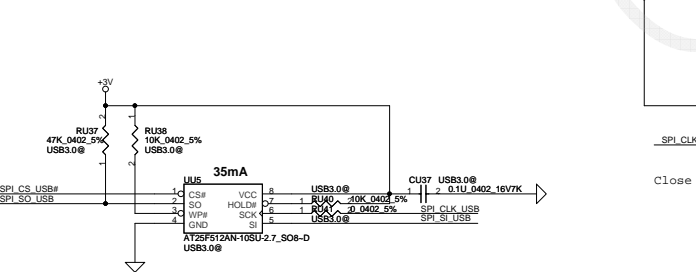
$V_{out} = 0.8(1 + 10k/32.4k)$   
 $1.042 \sim 1.0469 \sim 1.0519V$   
 Spec:  $0.9975 \sim 1.05 \sim 1.025$

[illegible]

Follow Vendor recommend.

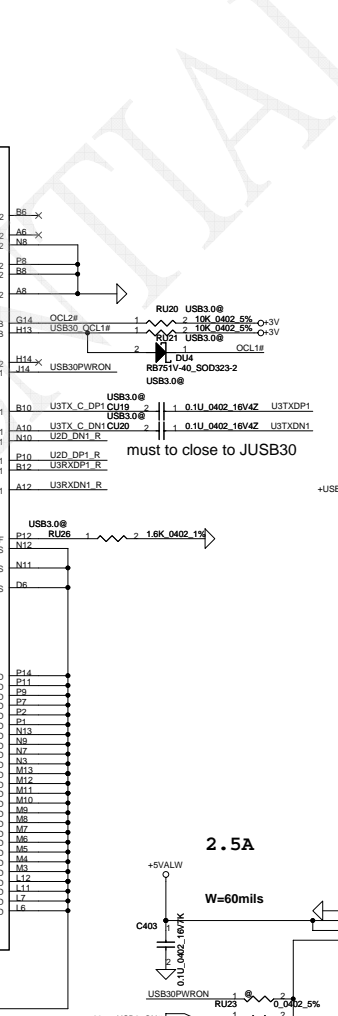
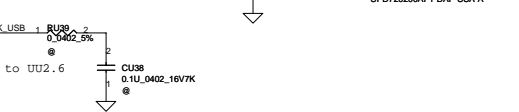
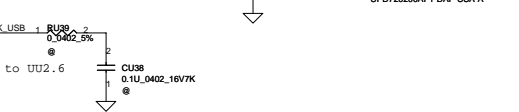


Place as close as possible to  
UU2.N14 and UU2.M14



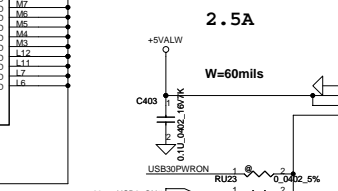
PECLKP	+3V:200mA	U3AXDP
PECLKN		U2AXDP
PETXP		U3TXDP
PETXN	+1.05V:800mA	U3TXDN
		U2DM

CSEL=0 : 24MHz XTAL  
CSEL=1 : 48MHz Clock



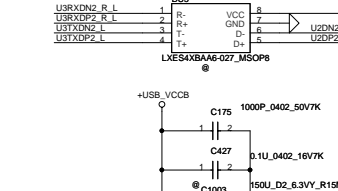
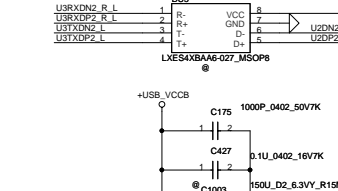
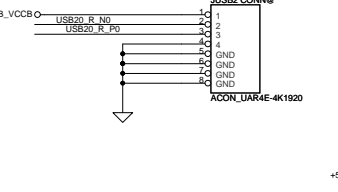
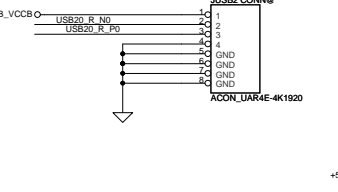
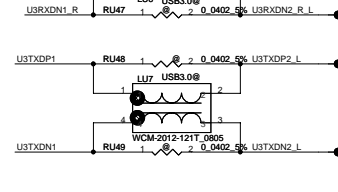
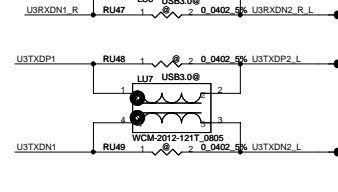
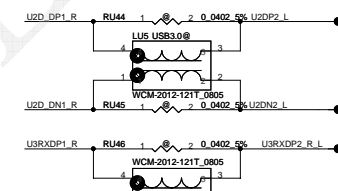
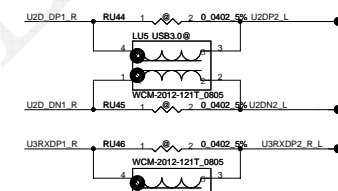
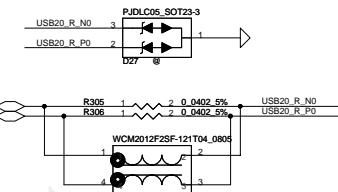
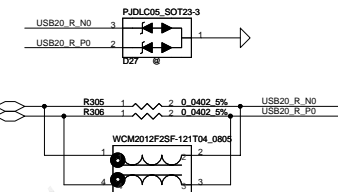
A10	U3TX_C DN1	CU20	2	1	0.1U_0402 16V4Z	U3TXDN1
N10	U2D DN1_R					
P10	U2D DP1_R					

must to close to JUSB30



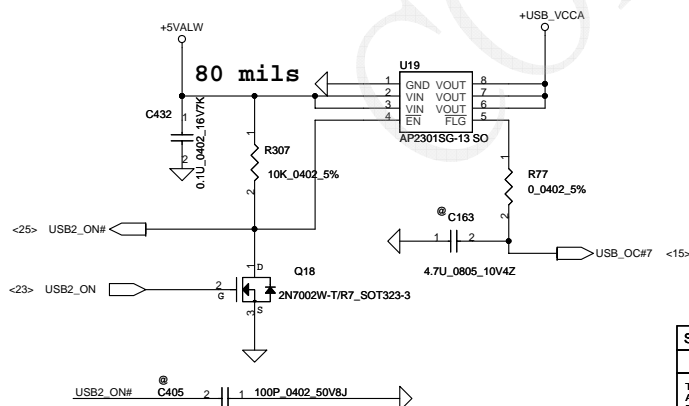
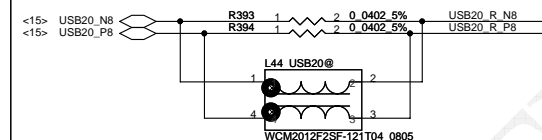
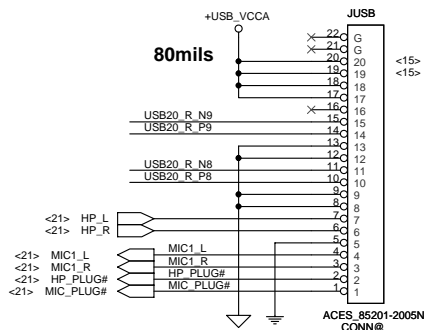
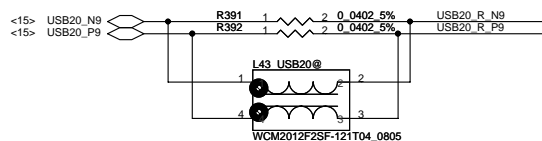
2.5A

Micrograph of a 100nm CMOS device. The image shows a cross-section of the device with labels for various layers: M3, L12, L11, and L7. A gate structure is visible, labeled with a width of W=60mils. A power supply connection is labeled +5VALW.



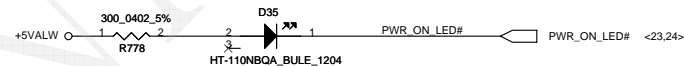
Security Classification	Compal Secret Data		Title		<b>Compal Electronics, Inc.</b>	
Issued Date	2010/05/27	Deciphered Date	2011/03/04	Size		Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED OUT 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.				SCHEMATIC MB A7491		Rev B
				4019D2		
Date: Friday, May 06, 2011				Sheet 25 of 36		

## USB/B Conn



## LEDs

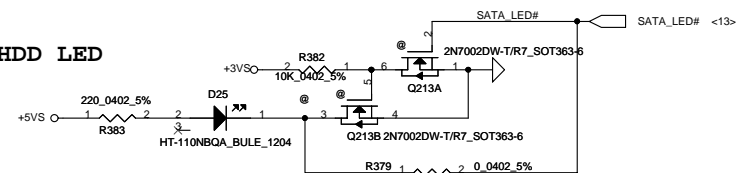
### Power on LED



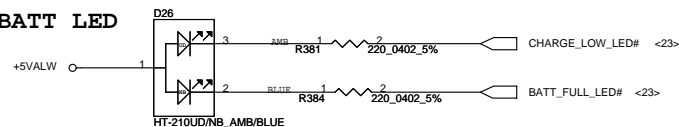
### WL&BT LED



### HDD LED



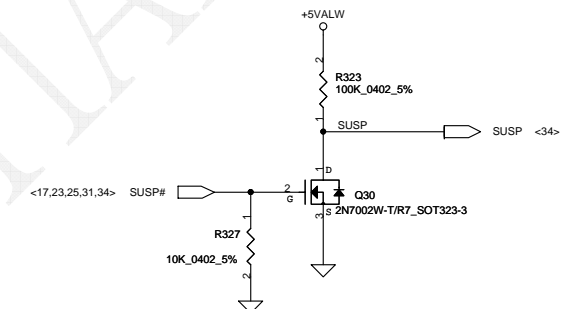
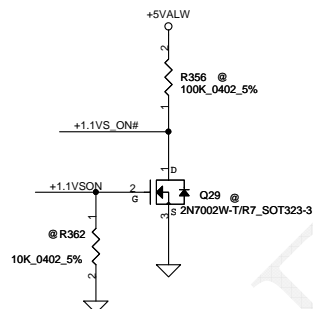
### BATT LED



### CAP LOCK LED

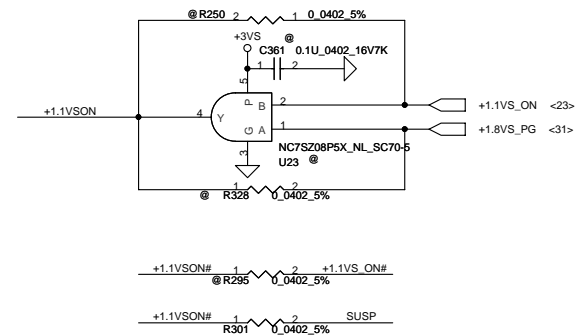


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/02/04	Deciphered Date	2010/02/04	Title	SCHEMATIC MB A7491
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	4019D2
				Date	Friday, May 06, 2011
				Sheet	26 of 36

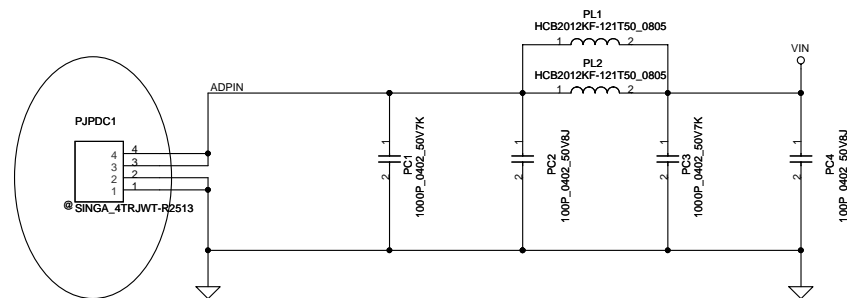
[illegible]

Three circuit diagrams are shown, each representing a different voltage source configuration for the 2N7002W-T/R7\_SOT323-3 MOSFET:

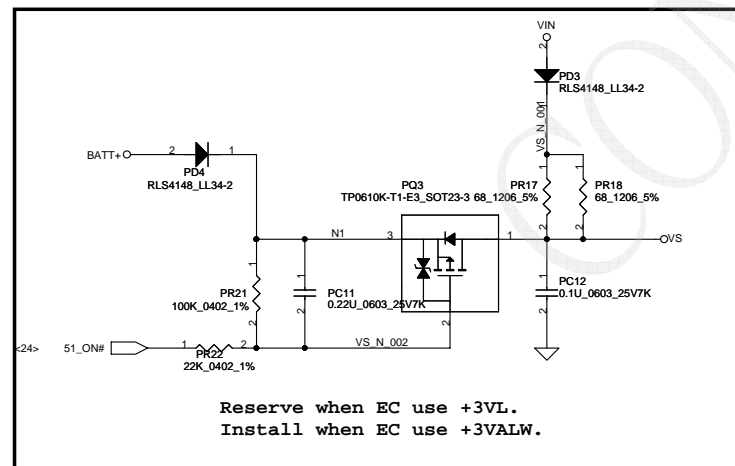
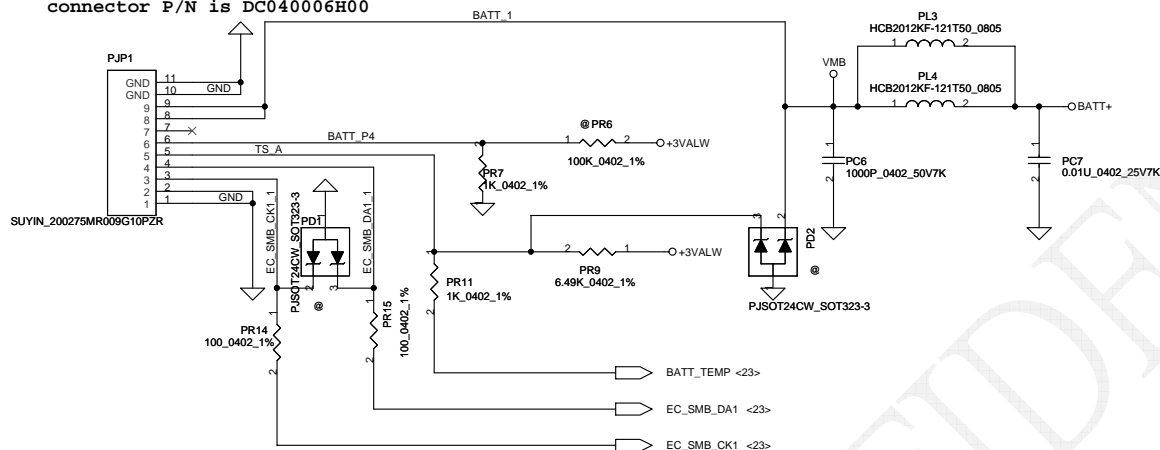
- Left Diagram (+1.0VS):** The gate of the MOSFET (Q24) is connected to a +1.0VS supply through resistor R329 (470\_0603\_5%). The source is connected to ground, and the drain is connected to a load labeled "2 SUSP".
- Middle Diagram (+0.75VS):** The gate of the MOSFET (Q26) is connected to a +0.75VS supply through resistor R331 (470\_0603\_5%). The source is connected to ground, and the drain is connected to a load labeled "2 SUSP".
- Right Diagram (+1.8VS):** The gate of the MOSFET (Q27) is connected to a +1.8VS supply through resistor R332 (470\_0603\_5%). The source is connected to ground, and the drain is connected to a load labeled "2 SUSP".



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/02/04	Deciphered Date	2010/02/04	Title	SCHEMATIC MB A7491
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.				Doc #	Rev B
				Document Number	
				Custom	4019D2
Date:		Friday, May 06, 2011		Sheet	27 of 36

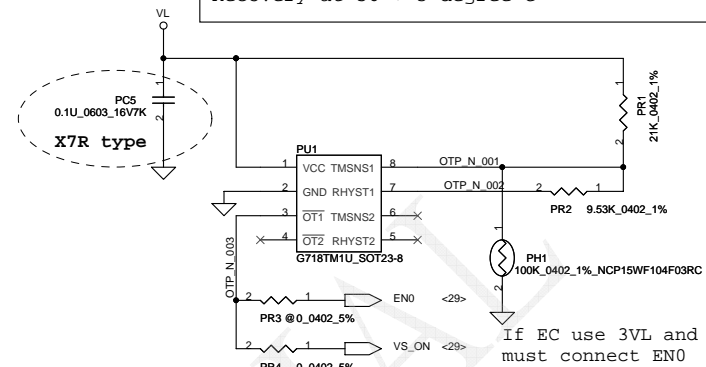


need confirm: ME give us battery  
connector P/N is DC040006H00



Reserve when EC use +3VL.  
Install when EC use +3VALW.

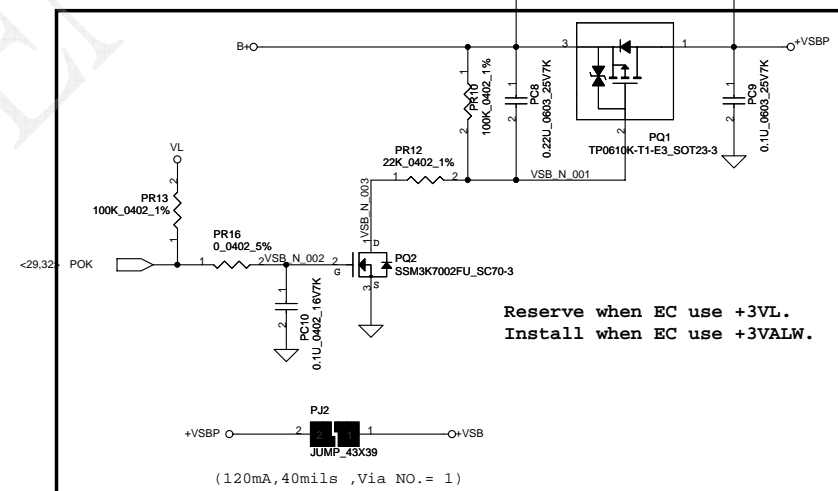
PH1 under CPU botten side :  
CPU thermal protection at 93 +-3 degree C  
Recovery at 56 +-3 degree C



If EC use 3VL and can not detect VGATE,  
must connect ENO

Install when EC use +3VL  
and SUSP was Pull high to +3VL.

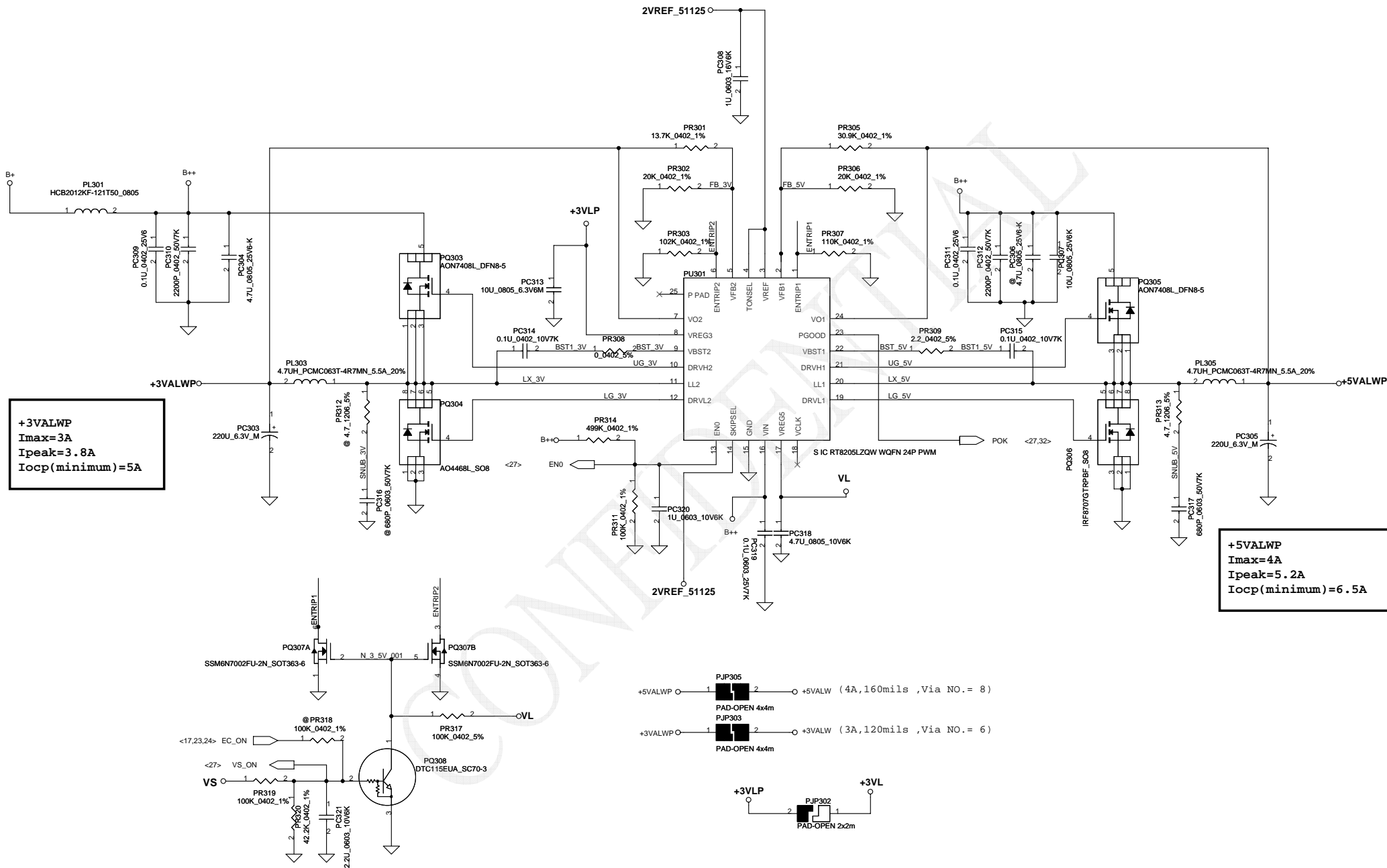
Reserve when EC use +3VALW.



Reserve when EC use +3VL.  
Install when EC use +3VALW.

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/23	Deciphered Date	2010/01/23	Title	SCHEMATIC MB A7491
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	4019D2
				Date	Friday, May 06, 2011
				Sheet	27 of 35





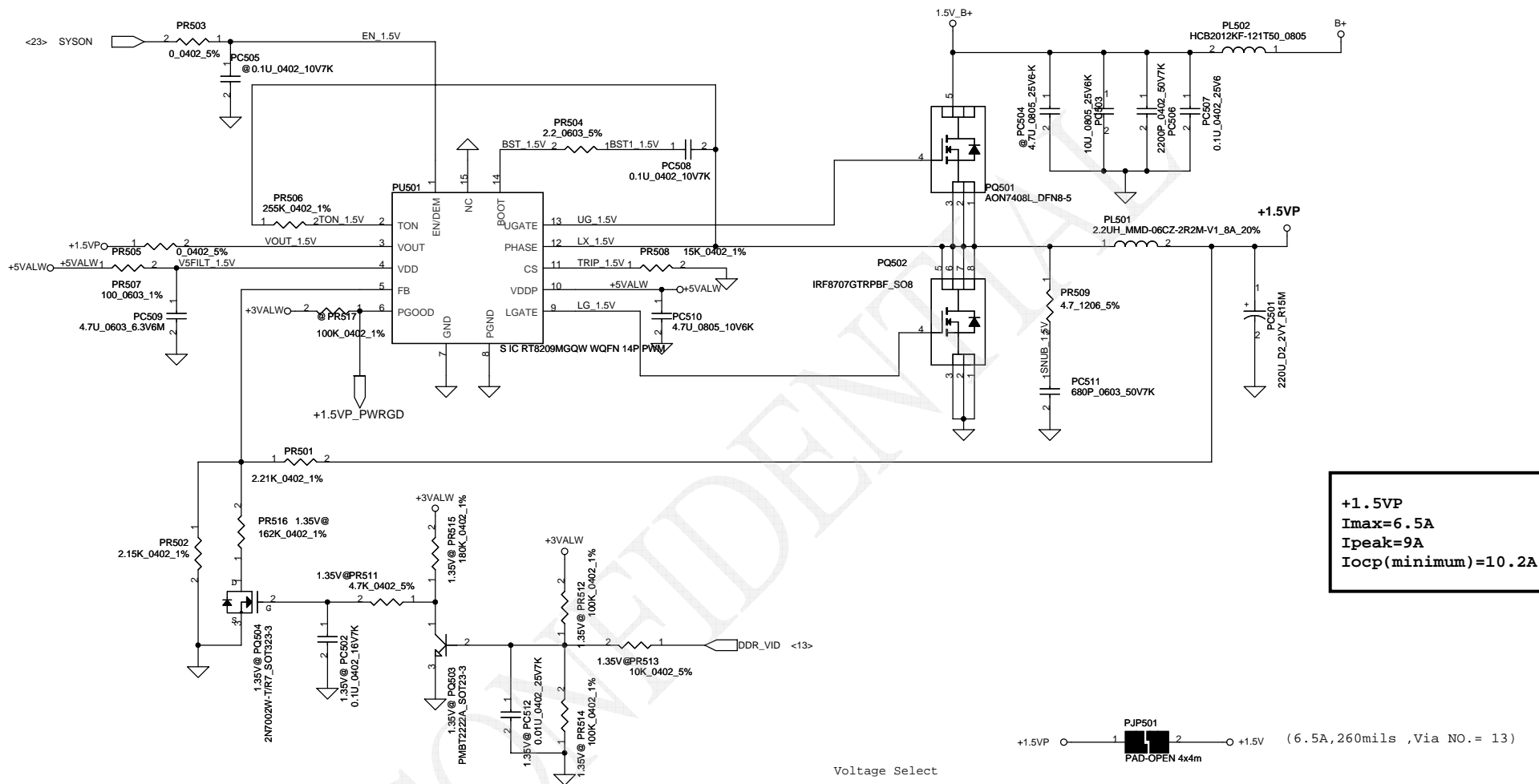
**+3VALWP**  
Imax=3A  
Ipeak=3.8A  
Iocp(minimum)=5A

**+5VALWP**  
Imax=4A  
Ipeak=5.2A  
Iocp(minimum)=6.5A

EC:+3VL, reserve PR319, install PR318, PR320 100K  
EC:+3VALW, reserve PR318, install PR319, PR320 40.2K

Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				4019D2	B
				Date: Friday, May 06, 2011	Sheet 29 of 35





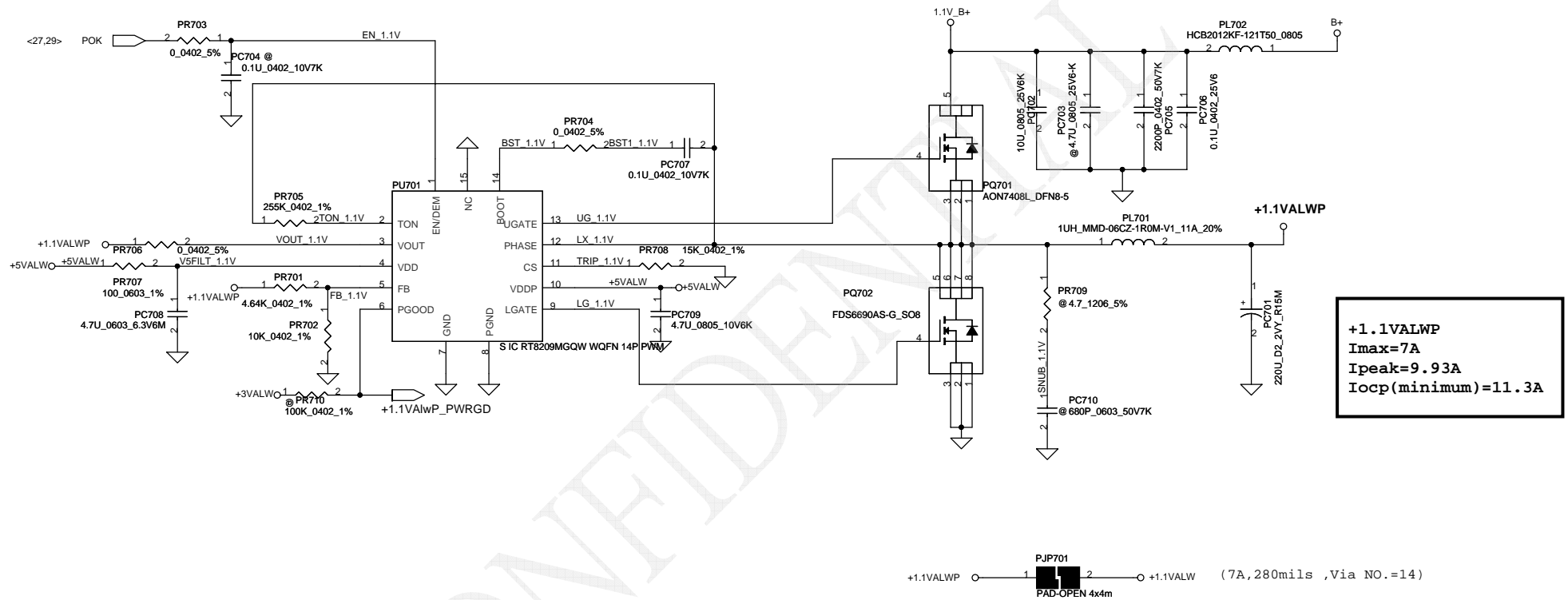
+1.5VP  
 I<sub>max</sub>=6.5A  
 I<sub>peak</sub>=9A  
 I<sub>ocp</sub>(minimum)=10.2A

Voltage Select

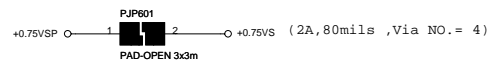
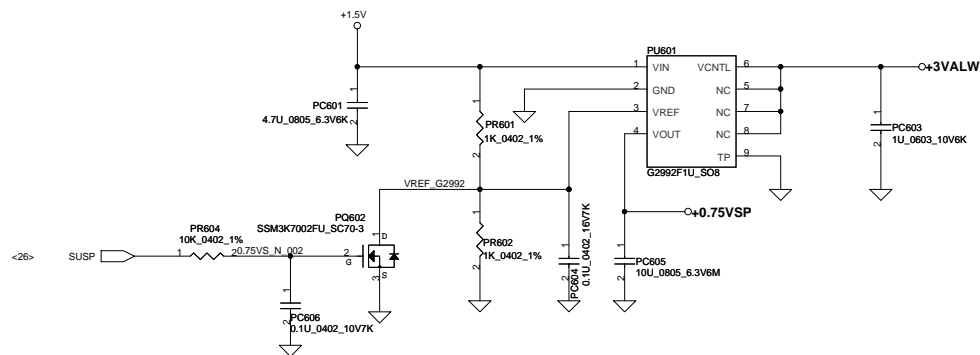
DDR_VID	DDR voltage
0	+1.5V
1	+1.35V

+1.5VP ——— 1 **PJP501** 2 ——— +1.5V (6.5A,260mils ,Via NO.= 13)  
 PAD-OPEN 4x4mm

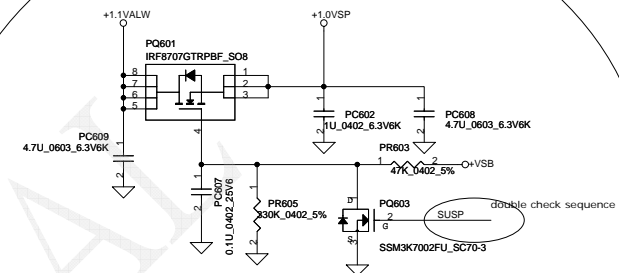




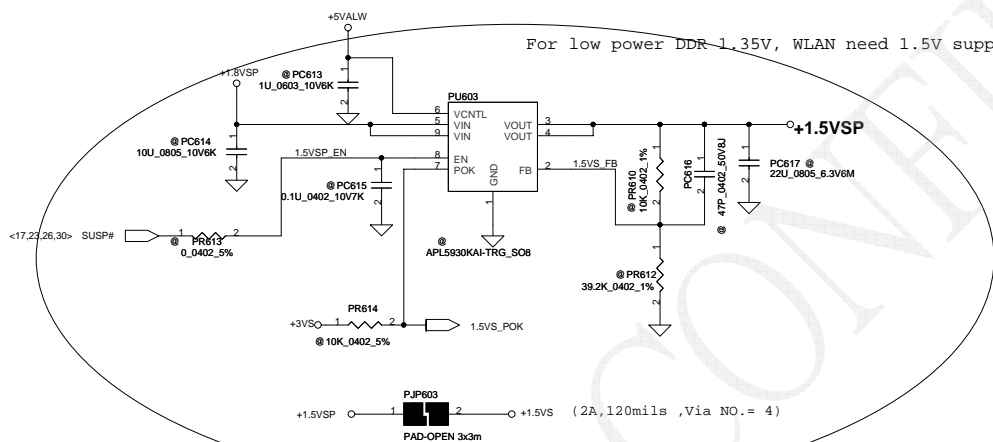
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	Title	SCHMATIC MB A7491
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	4019D2
				Date	Friday, May 06, 2011
				Sheet	32 of 35



**+1.1VALW TO +1.0VSP** Follow HW request 1.0V change to 1.05V 0824

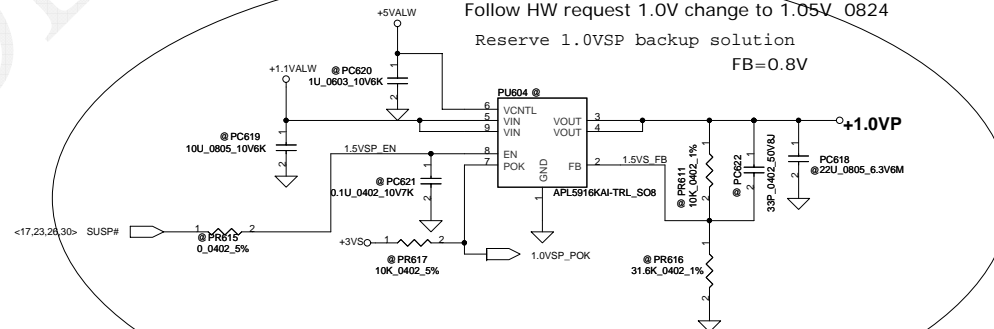


For low power DDR 1.35V, WLAN need 1.5V support

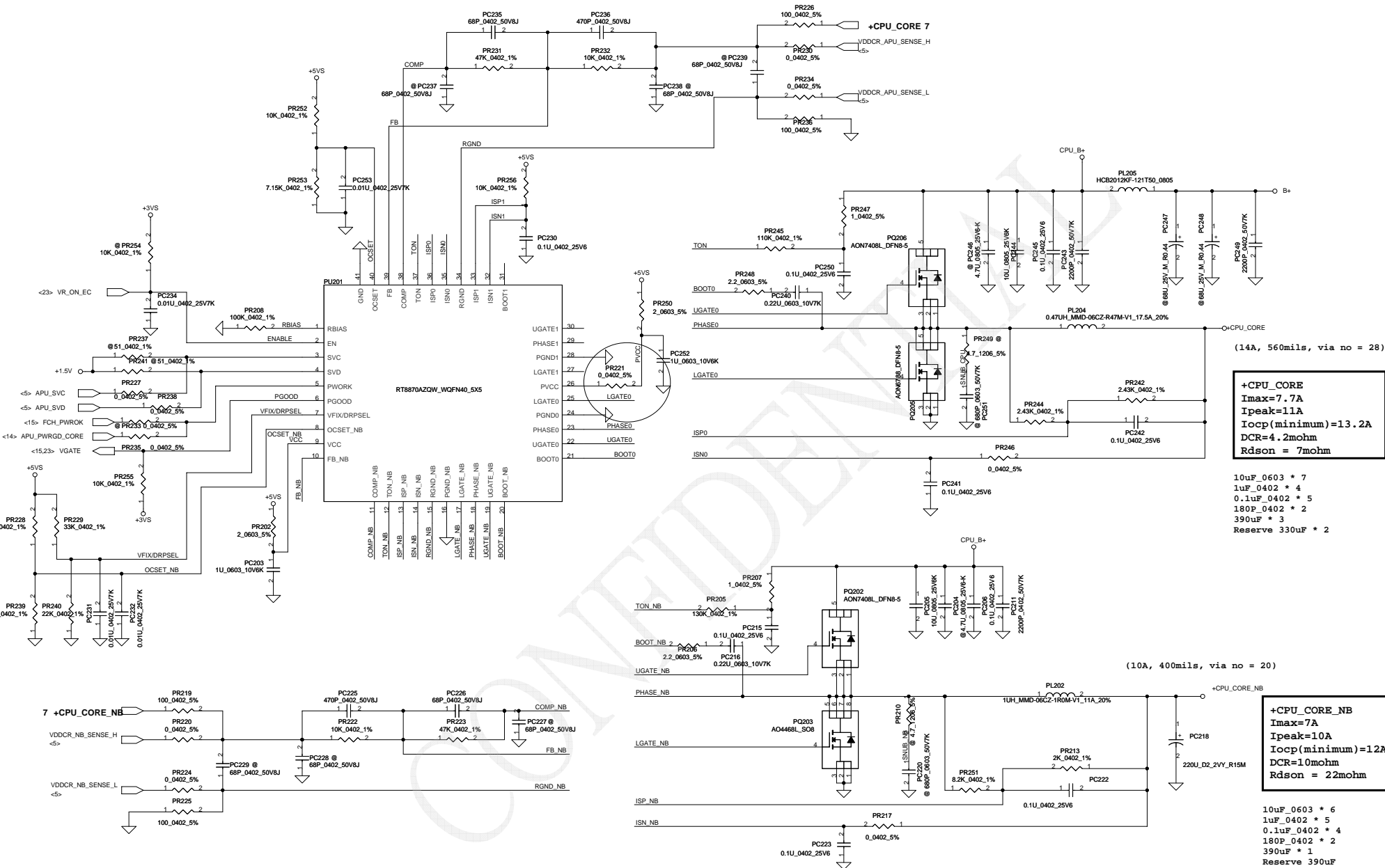


Follow HW request 1.0V change to 1.05V 0824

Reserve 1.0VSP backup solution  
FB=0.8V



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/11/23	Deciphered Date	2007/11/23	Title	SCHEMATIC MB A7491
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
				4019D2	Rev B
				Date	Friday, May 06, 2011
				Sheet	33 of 35



**+CPU\_CORE**  
Imax=7.7A  
Ipeak=11A  
Iocp(minimum)=13.2A  
DCR=4.2mohm  
Rdson = 7mohm

10uF\_0603 \* 7  
1uF\_0402 \* 4  
0.1uF\_0402 \* 5  
180P\_0402 \* 2  
390uF \* 3  
Reserve 330uF \* 2

**+CPU\_CORE\_NB**  
Imax=7A  
Ipeak=10A  
Iocp(minimum)=12A  
DCR=10mohm  
Rdson = 22mohm

10uF\_0603 \* 6  
1uF\_0402 \* 5  
0.1uF\_0402 \* 4  
180P\_0402 \* 2  
390uF \* 1  
Reserve 390uF

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

Item	Page#	Reason for change	Description	phase	modify	Rev.
1	31	Follow EMI request to add PR54, PR59, PC511 for EMI issue.	add PR54, PR59, PC511	PVT	add PR54, PR59, PC511	
2	34	Follow ME request change PQ205 for height issue	Change PQ205 from AO4726L AON6788	PVT	Change PQ205 from AO4726L AON6788	
3	28	For common desgin	Delete PC107	Pre-MP	Remove PC107	
4	28	For common desgin	PR110 from 47K change to 200K	Pre-MP	PR110 from 47K change to 200K	
5	28	For common desgin	PR112 from 10K change to 47K	Pre-MP	PR110 from 10K change to 47K	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
24						
25						

[www.s-manuals.com](http://www.s-manuals.com)