

# Compal confidential

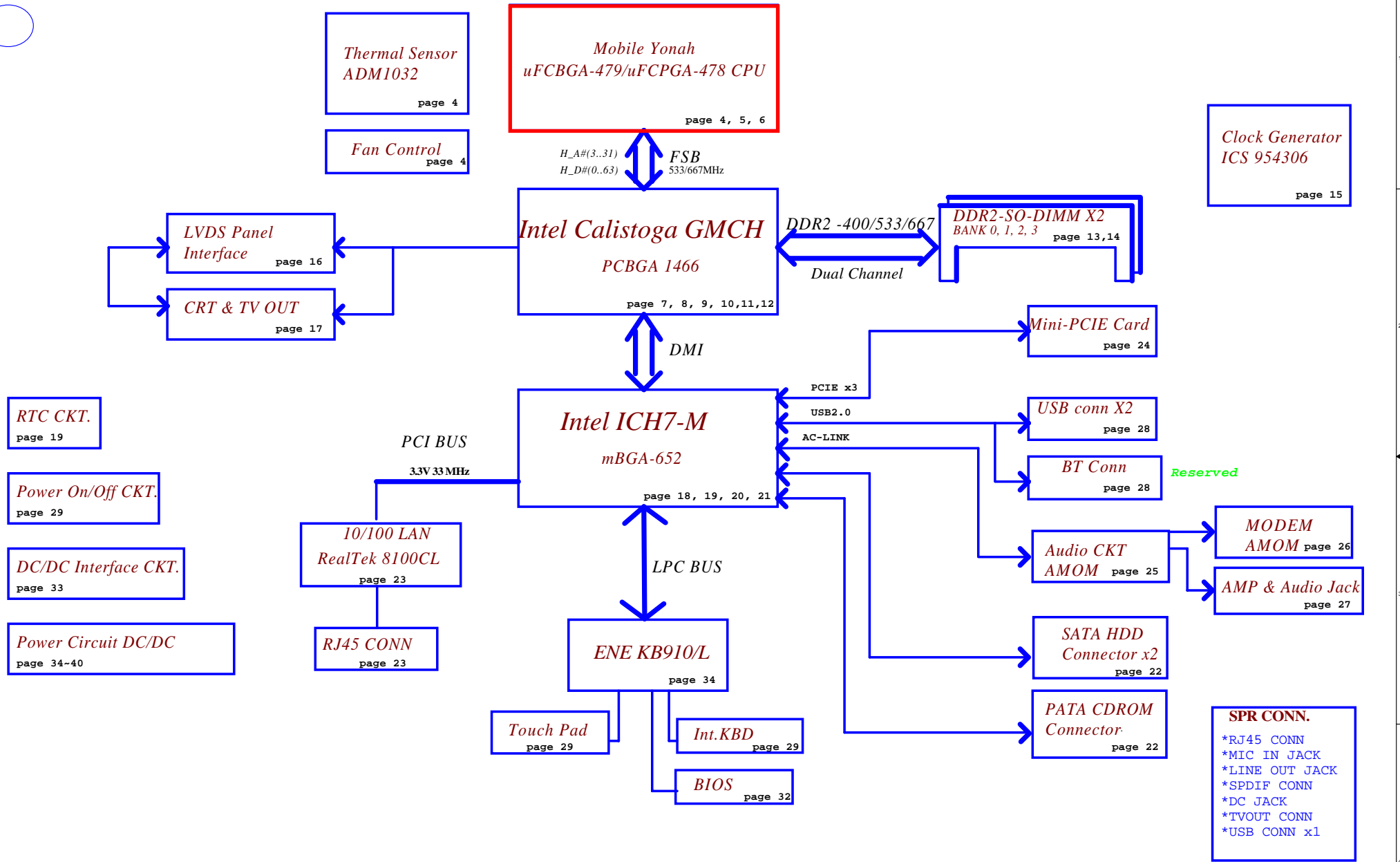
## Schematics Document

Mobile Yonah uFCPGA with Intel  
Calistoga\_GM/PM+ICH7-M core logic

2006-07-24

REV:1.0

Security Classification	Compal Secret Data			Title <b>Compal Electronics, Inc.</b>		
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Cover Sheet		
<small>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&amp;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.</small>				Size	Document Number	Rev
				Custom	LA-3342P	1.0
Date: Thursday, July 27, 2006				Sheet	1	of 40



Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	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.				Block Diagram	
Size	Document Number	Date		Rev	
Custom	LA-3342P	Thursday, July 27, 2006		1.0	
Sheet 2 of 40					

## Voltage Rails

power plane State	+B LDO3 LDO5	+5VALW +3VALW	+1.8V +5V	+5VS +3VS +2.5VS +1.5VS +0.9VS +CPU_CORE +VCCP
s0	○	○	○	○
s1	○	○	○	○
s3	○	○	○	✗
s5 s4/AC	○	○	✗	✗
s5 s4/ Battery only	○	✗	✗	✗
s5 s4/AC & Battery don't exist	✗	✗	✗	✗

○ MEANS ON  
✗ MEANS OFF

## PCI Devices

EXTERNAL	IDSEL#	REQ/GNT#	PIRQ
CARD BUS & 1394	AD22	2	C,D,E,G
RealTek 8100CL	AD24	1	A

### Load BOM check item

- 1.U31 GM/PM/GML part number
- 2.U6 ICH7 part number

BOM: 43144132L01 (GM)  
43144132L02 (GML)

### Jump-Short:

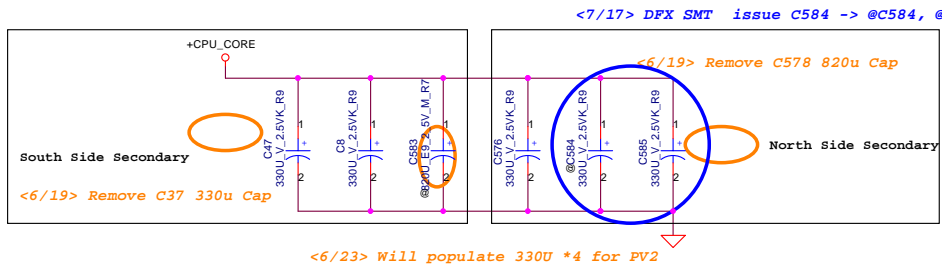
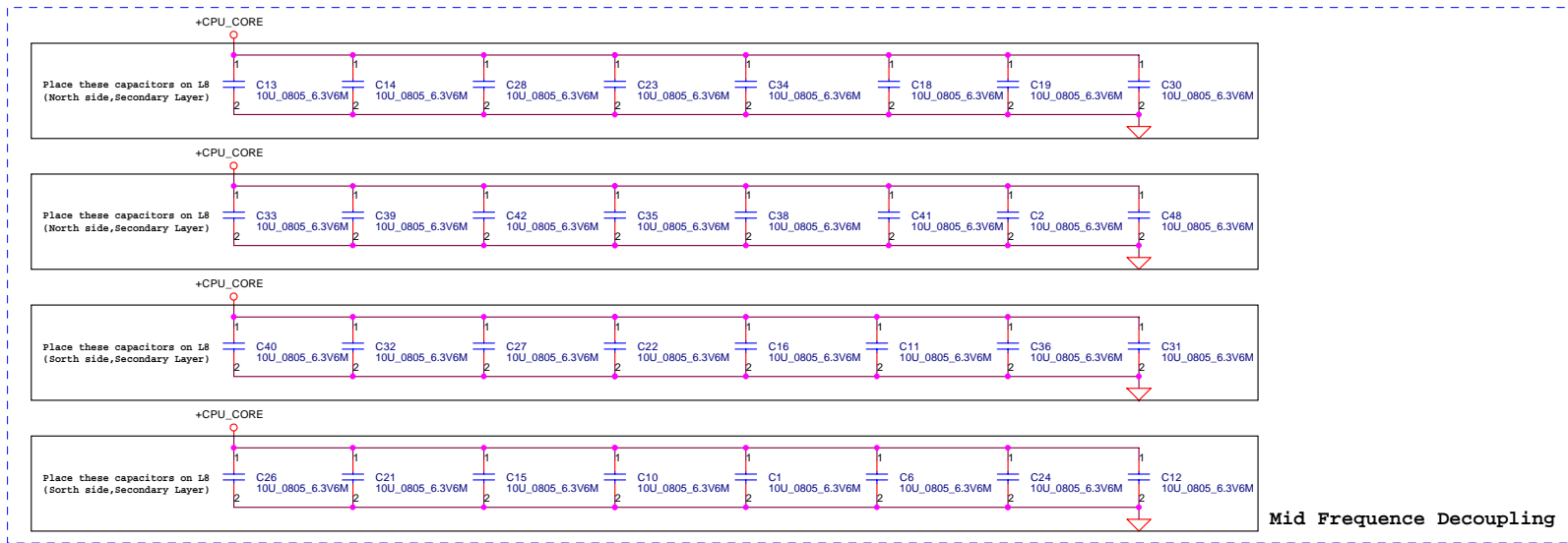
PJP4,PJP6,PJP7,PJP8,PJP10,PJP12,PJP14,PJP18,PJP19,PJP20,PJP25

MV step from PIRQE change to PIRQA for LAN poor performance.

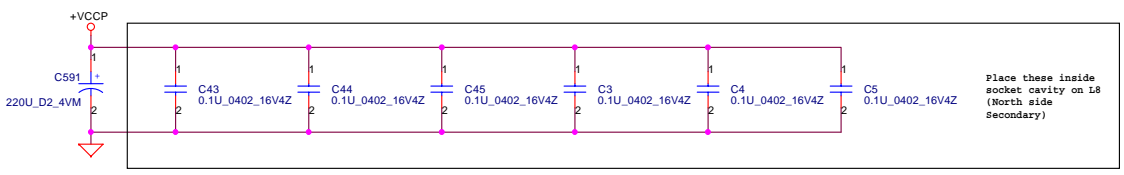
Security Classification	Compal Secret Data		Title		<b>Compal Electronics, Inc.</b>	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Notes List		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
				Customer	LA-3342P	1.0
				Date:	Thursday, July 27, 2006	Sheet 3 of 40



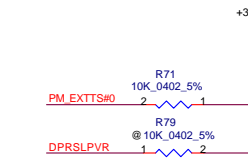
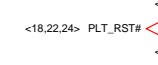
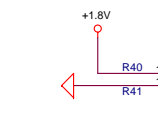
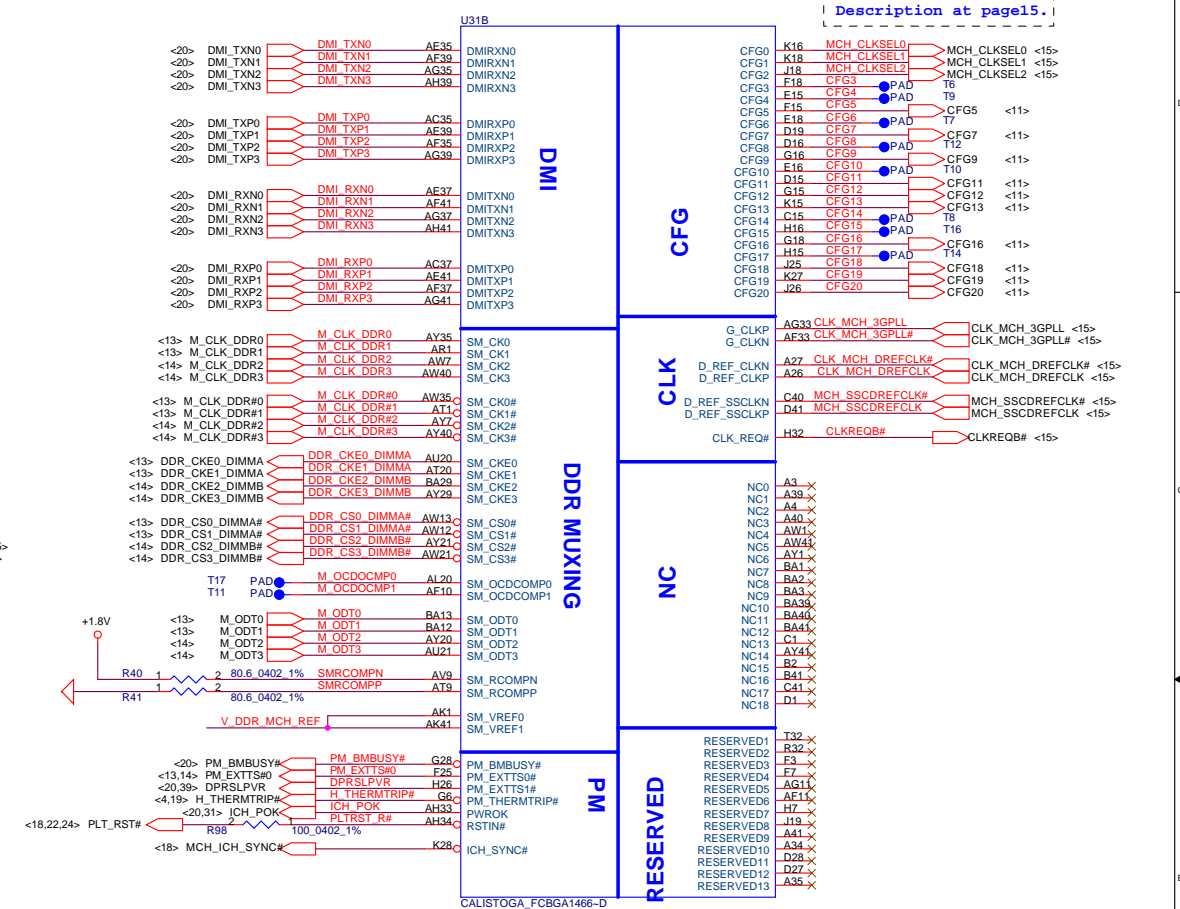
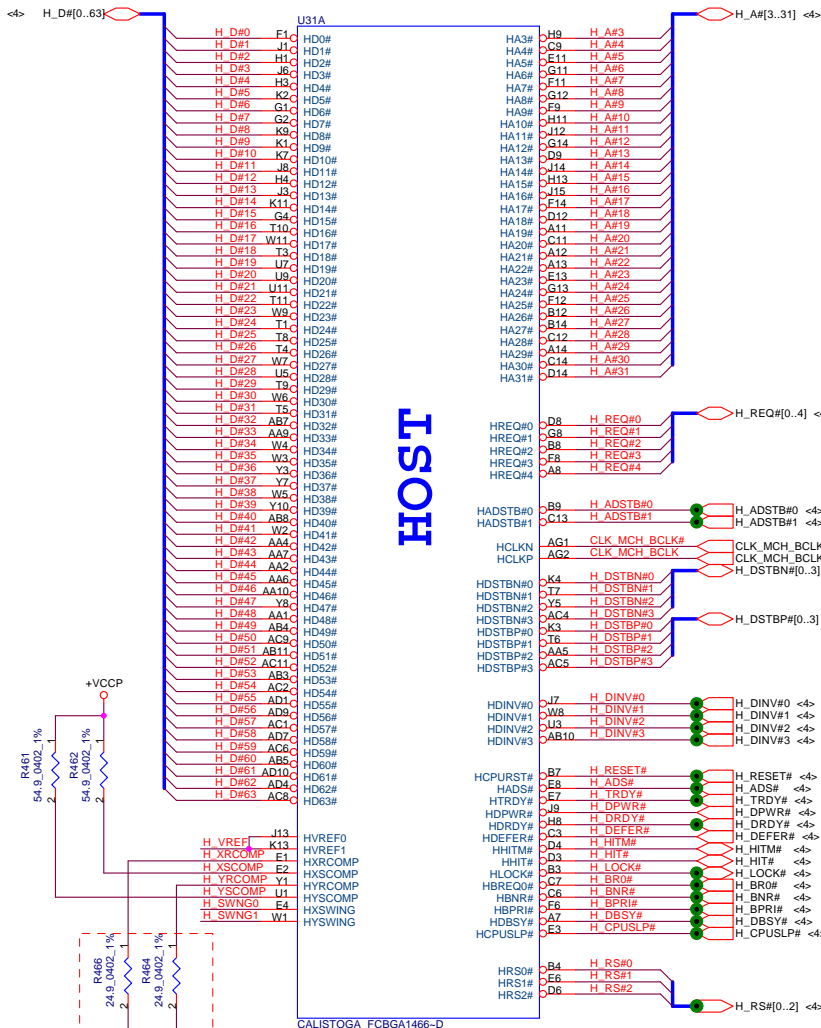




ESR <= 1.5m ohm  
Capacitor > 1980uF

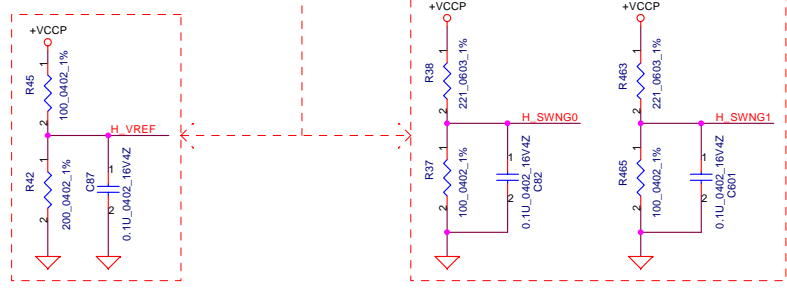


Security Classification	Compal Secret Data			Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Size	Rev
				Document Number	0.1
				LA-3342P	
				Date:	Thursday, July 27, 2006
				Sheet	6 of 40

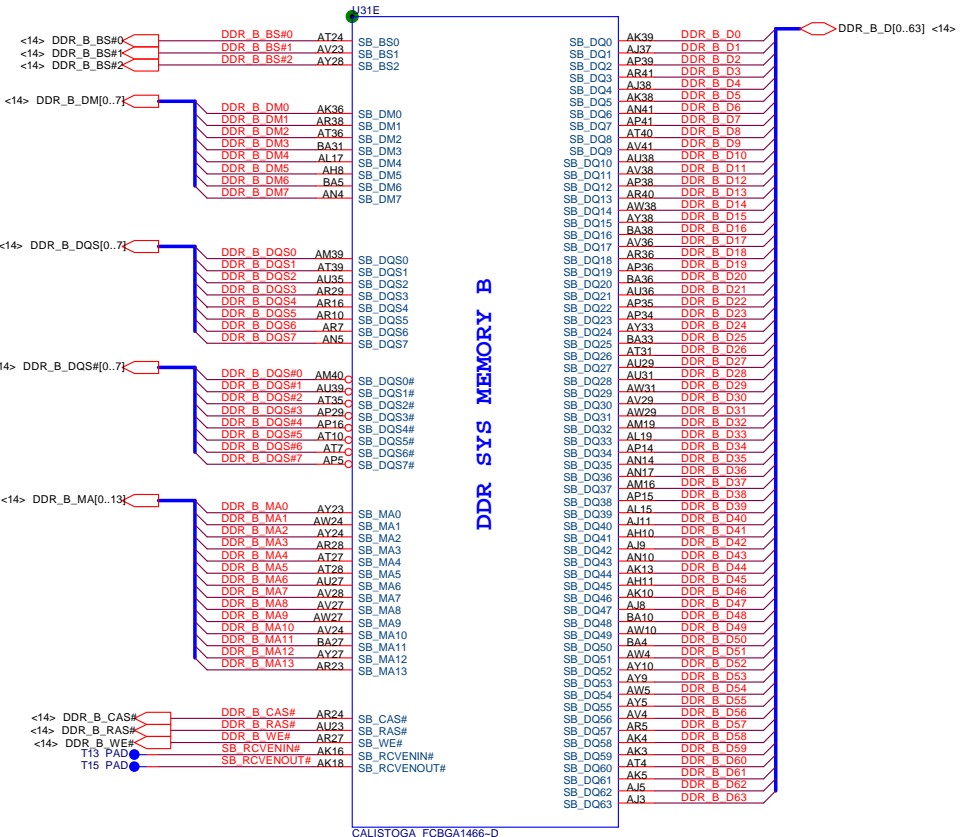
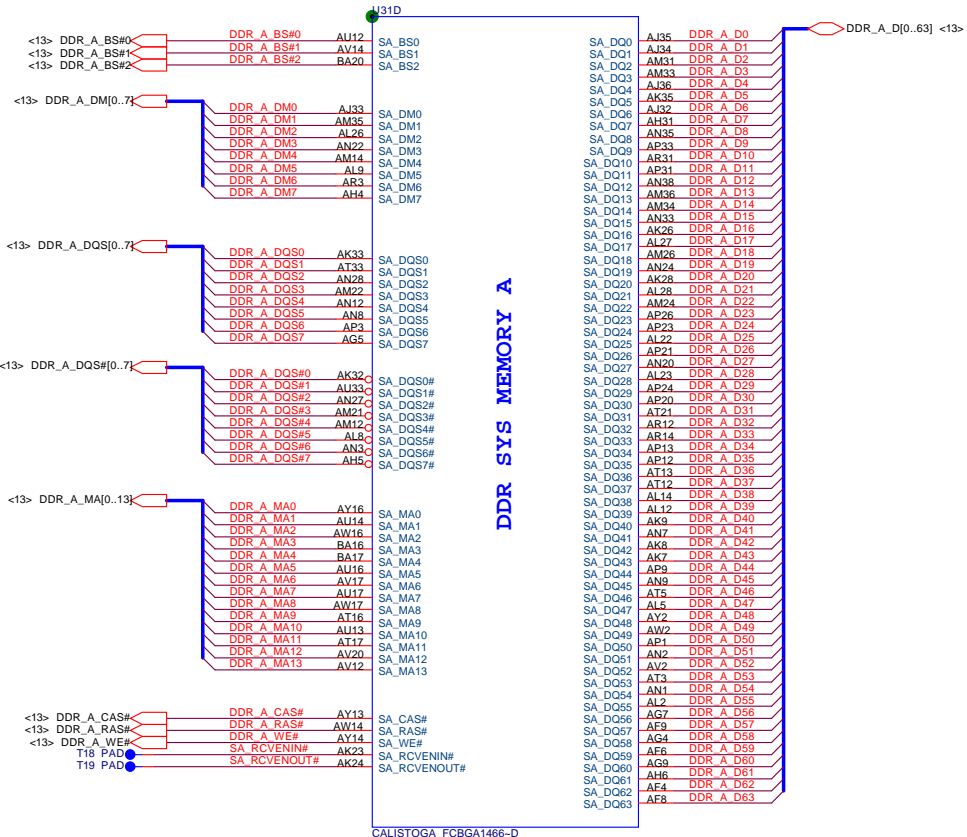


**Layout Note:**  
H\_XRCOMP / H\_YRCOMP / H\_VREF / H\_SWNG0 / H\_SWNG1 trace width and spacing is 10/20.

**Layout Note:**  
V\_DDR\_MCH\_REF trace width and spacing is 20/20.

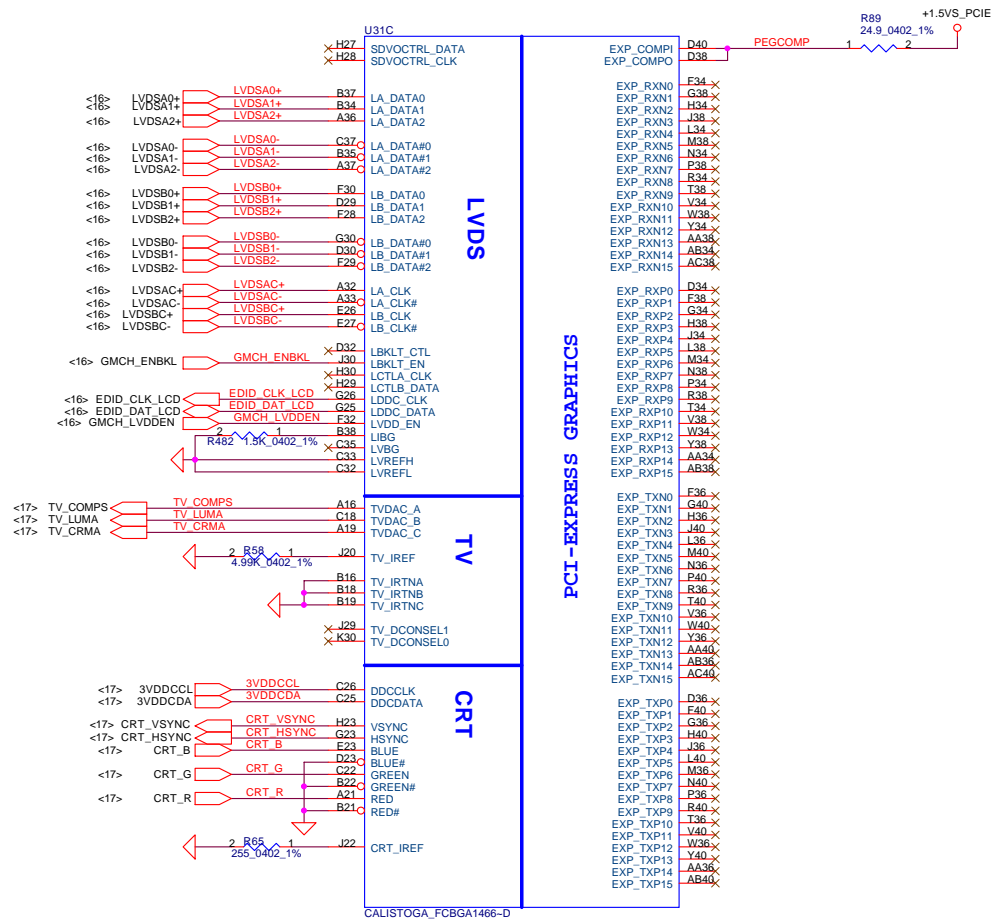


Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Compal Electronics, Inc.	
				Calistoga (1/6)	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. IT SHALL NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Size	Document Number	Rev	
		Custom	LA-3342P	0.1	
Date:	Thursday, July 27, 2006	Sheet	7	of	40



Security Classification	Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Compal Electronics, Inc.
				Calistoga (2/6)
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				
Size	Document Number	Rev		
Custom	LA-3342P	0.1		
Date:	Thursday, July 27, 2006	Sheet	8	of 40





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

Title		<b>Compal Electronics, Inc.</b>
		<b>Calistoga (3/6)</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.

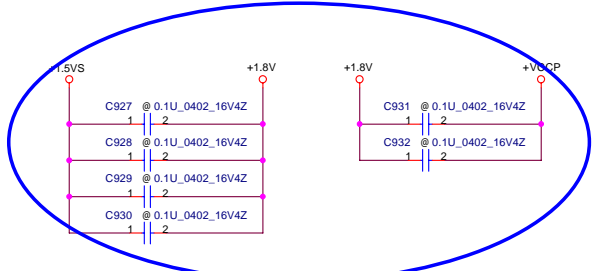
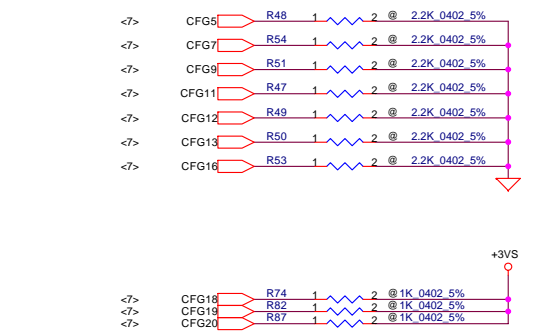
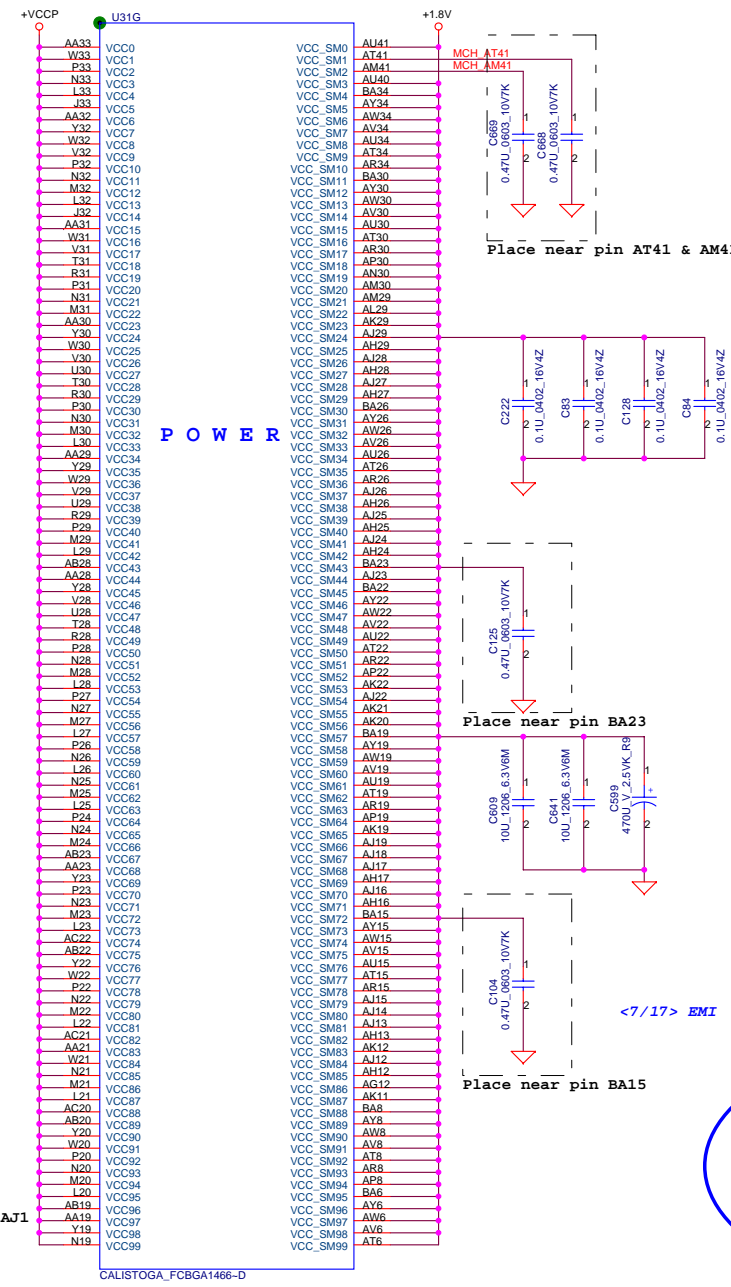
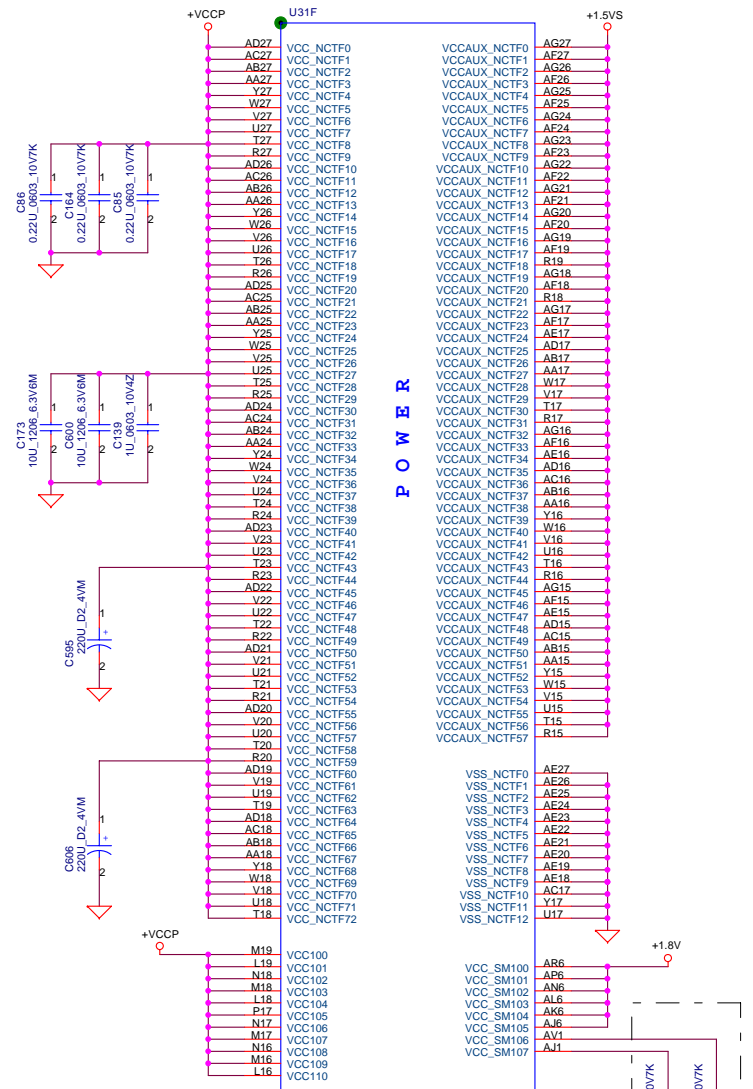
Size	Document Number	Rev
Custom	LA-3342P	0.1
Date:	Thursday, July 27, 2006	Sheet 9 of 40

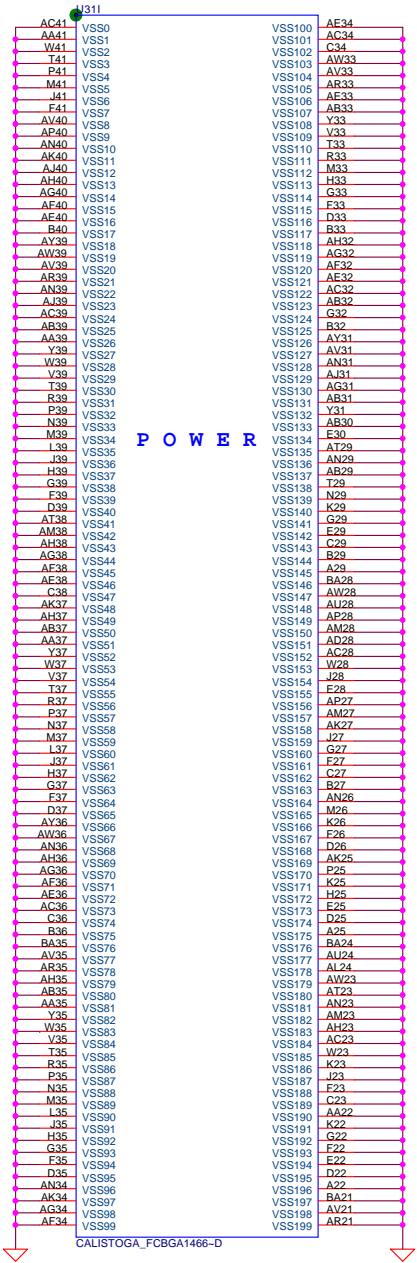


## Strap Pin Table

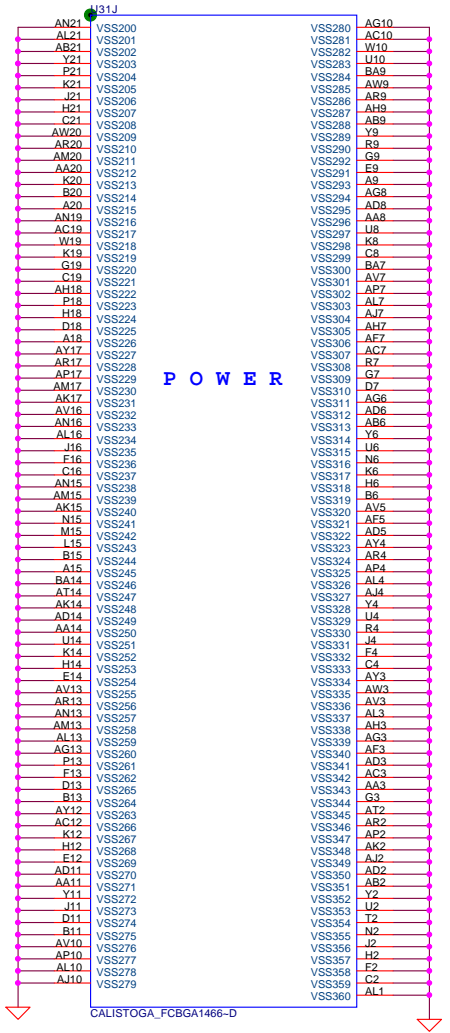
CFG[3:17] have internal pull up  
CFG[19:18] have internal pull down

CFG[2:0]	011 = 667MT/s FSB 001 = 533MT/s FSB
CFG5	0 = DMI x 2 1 = DMI x 4 *(Default)
CFG7	0 = Reserved 1 = Mobile Yonah CPU *(Default)
CFG9	0 = Lane Reversal Enable 1 = Normal Operation (Default)*
CFG6	0 = Reserved
PSB 4X CLK Enable	1 = Calistoga *
CFG[13:12]	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation *(Default)
CFG16	0 = Dynamic ODT Disabled 1 = Dynamic ODT Enabled *(Default)
CFG10 CFG18	10 = 1.05V *(Default) 01 = 1.5V
CFG19	0 = Normal Operation *(Default) 1 = DMI Lane Reversal Enable
SDVO_CTRLDATA	0 = No SDVO Device Present *(Default) 1 = SDVO Device Present
CFG20 (PCIe/SDVO select)	0 = Only PCIe or SDVO is operational. *(Default) 1 = PCIe/SDVO are operating simu.



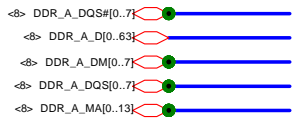


CALISTOGA\_FCBGA1466-D

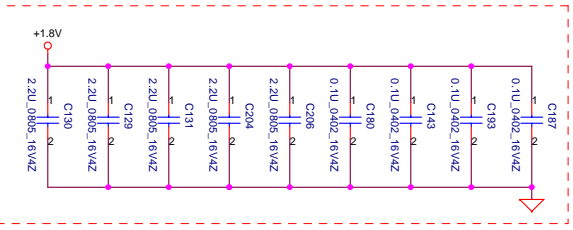


CALISTOGA\_FCBGA1466-D

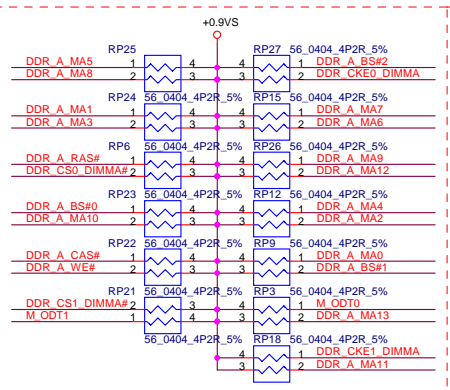
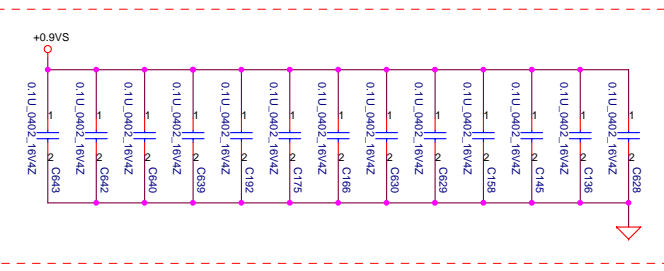
Security Classification	Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	<b>Compal Electronics, Inc.</b>
				<b>Calistoga (6/6)</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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	Date		Rev
Custom	LA-3342P	Thursday, July 27, 2006		0.1
Sheet 12 of 40				



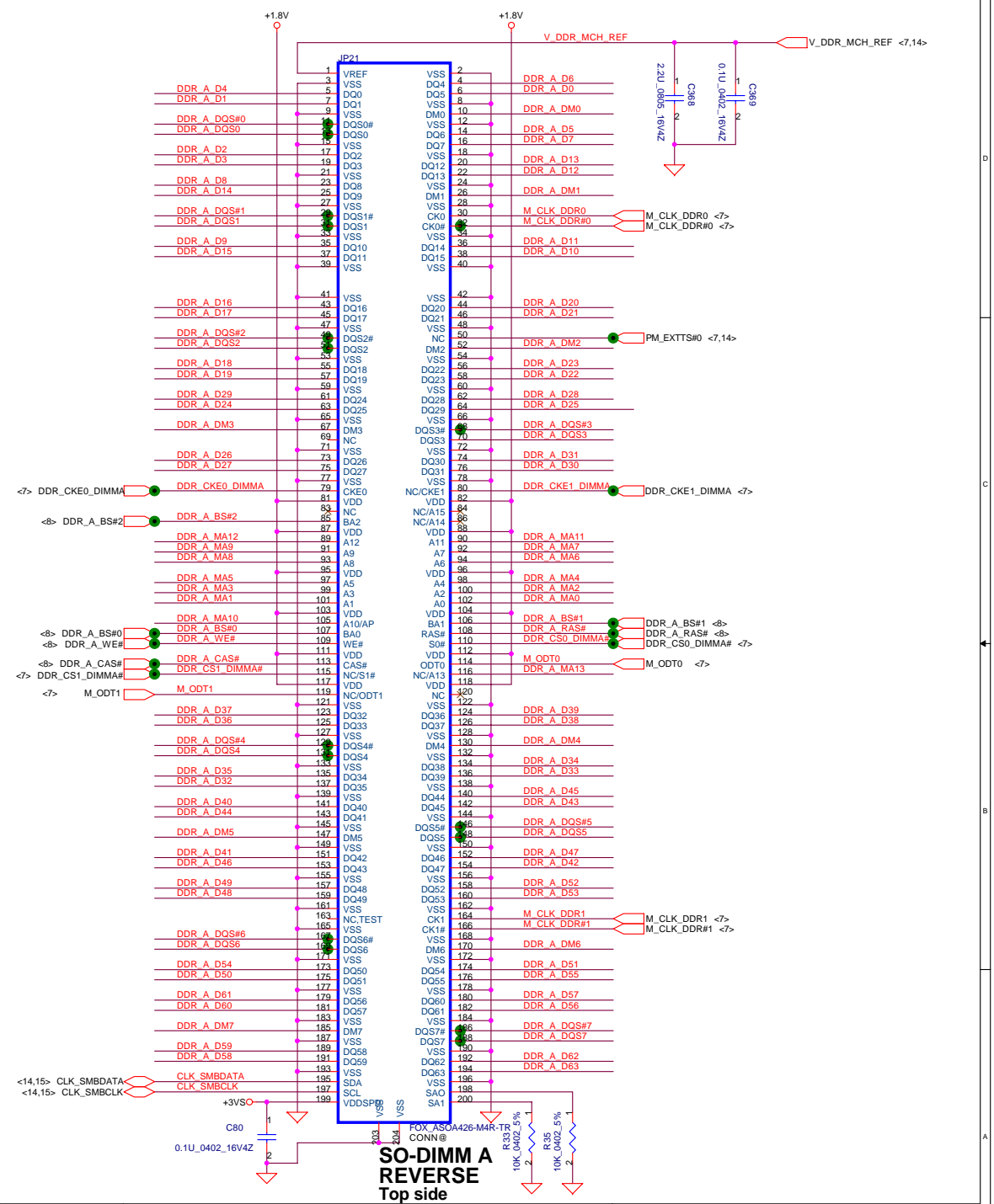
**Layout Note:**  
Place near JP41



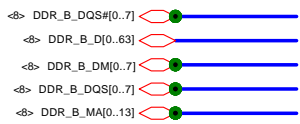
**Layout Note:**  
Place one cap close to every 2 pullup resistors terminated to +0.9VS



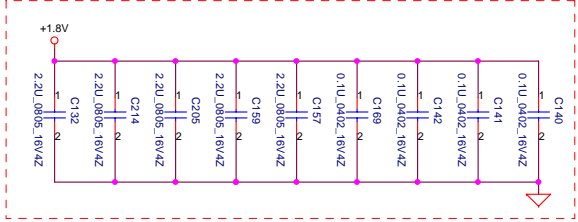
**Layout Note:**  
Place these resistor closely JP41, all trace length Max=1.5"



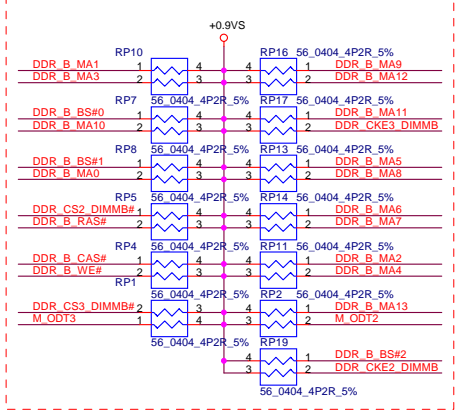
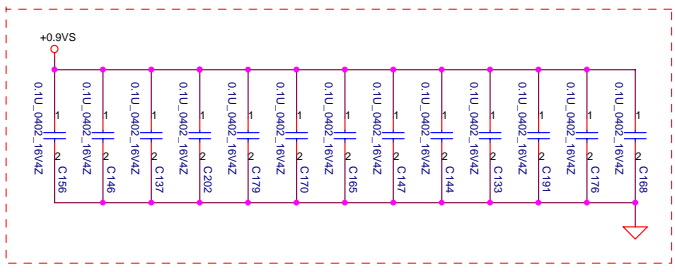
Security Classification	Compal Secret Data		Title	<b>Compal Electronics, Inc.</b>	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	<b>DDRII-SODIMM SLOT1</b>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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	Date:	Thursday, July 27, 2006	Sheet 13 of 40
Custom	<b>LA-3342P</b>	0.1			



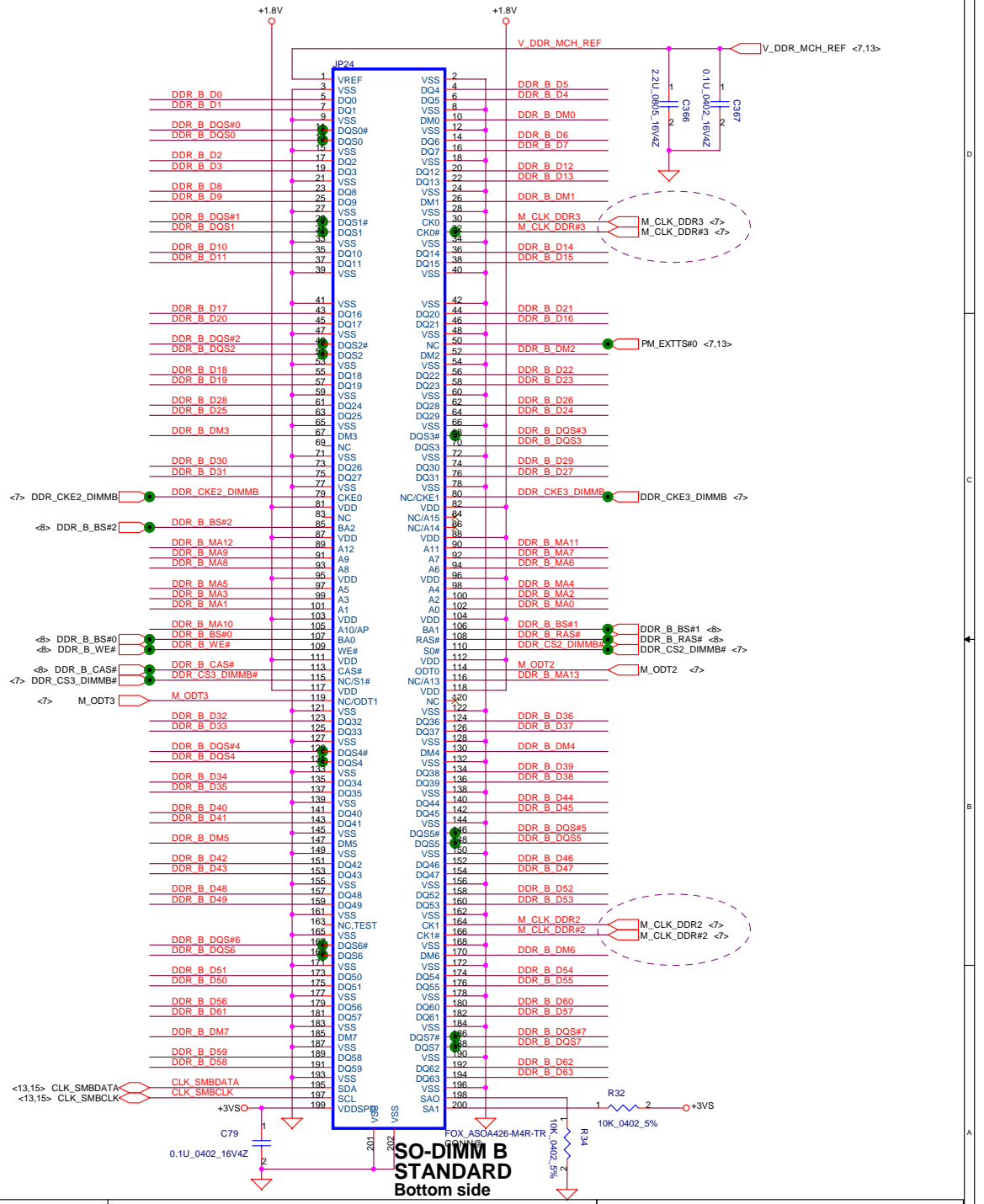
**Layout Note:**  
Place near JP42



**Layout Note:**  
Place one cap close to every 2 pullup resistors terminated to +0.9VS



**Layout Note:**  
Place these resistor closely JP42, all trace length Max=1.5"



Security Classification		Compal Secret Data	
Issued Date	2005/03/10	Deciphered Date	2006/03/10
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			

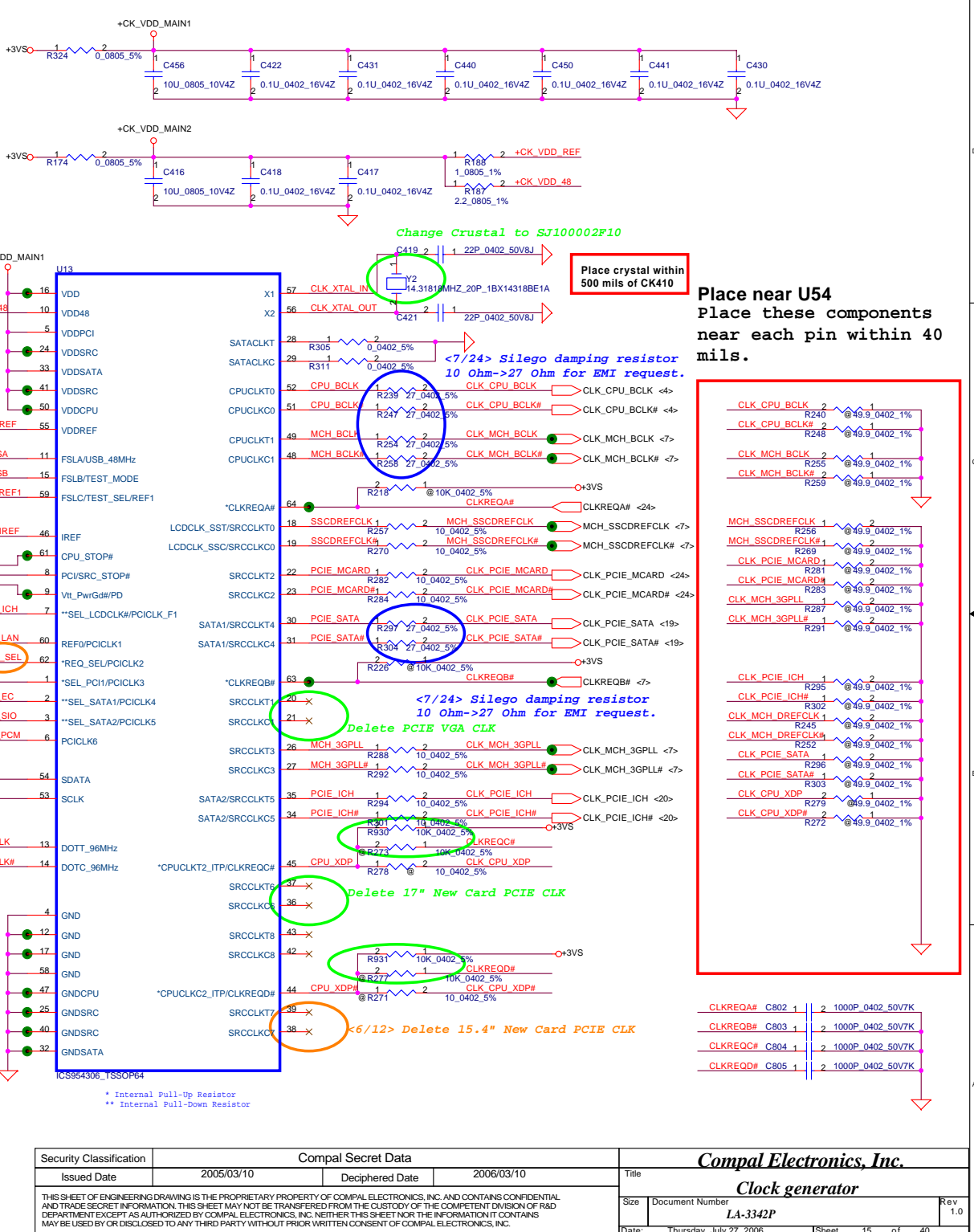
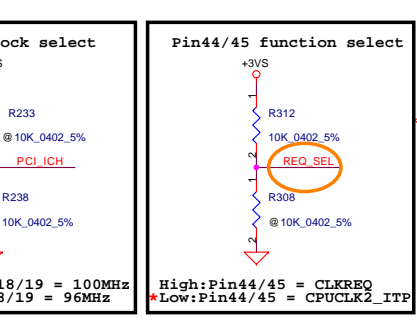
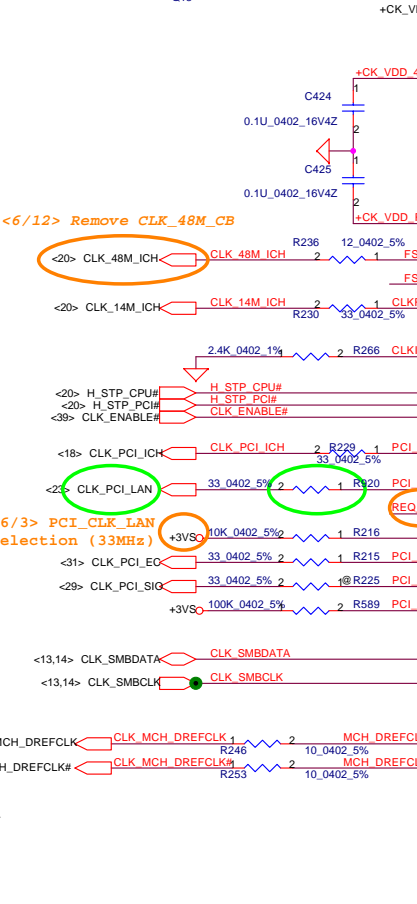
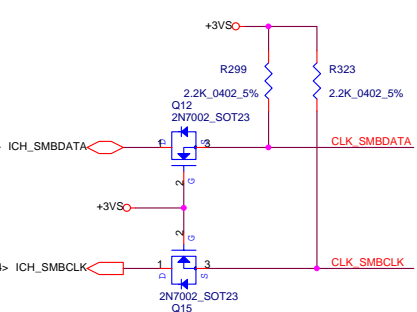
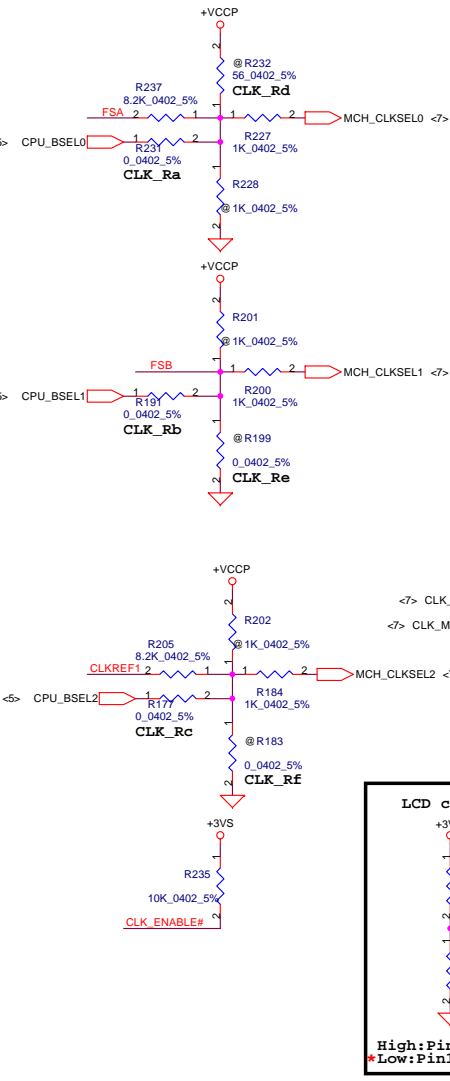
Title			
<b>Compal Electronics, Inc.</b>			
<b>DDRII-SODIMM SLOT2</b>			
Size	Document Number	Rev	
	LA-3342P	0.1	
Date:	Thursday, July 27, 2006	Sheet	14 of 40

FSLC	FSLB	FSLA	CPU	SRC	PCI
CLKSEL2	CLKSEL1	CLKSEL0	MHz	MHz	MHz
0	0	1	133	100	33.3
0	1	1	166	100	33.3

Table : ICS954306

**FSB Frequency Set:**

CPU Driven	Stuff	CLK_Ra	CLK_Rb	CLK_Rc
	<b>*(Default)</b>	No Stuff	CLK_Rd	CLK_Re
533MHz	Stuff	CLK_Rd	CLK_Re	CLK_Rf
	No Stuff	CLK_Ra	CLK_Rb	CLK_Rc
667MHz	Stuff	CLK_Rd	CLK_Re	CLK_Rf
	No Stuff	CLK_Ra	CLK_Rb	CLK_Rc

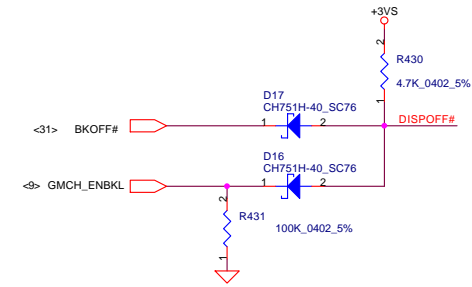
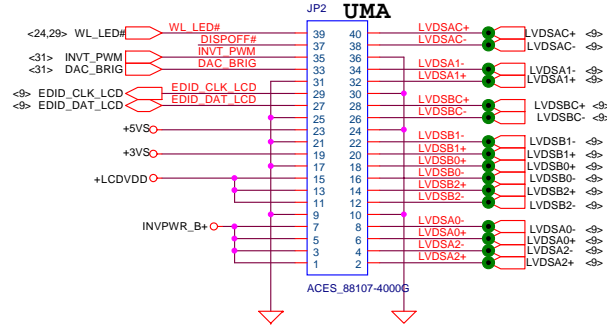
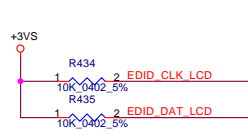


Security Classification	Compal Secret Data	
Issued Date	2005/03/10	Deciphered Date
		2006/03/10

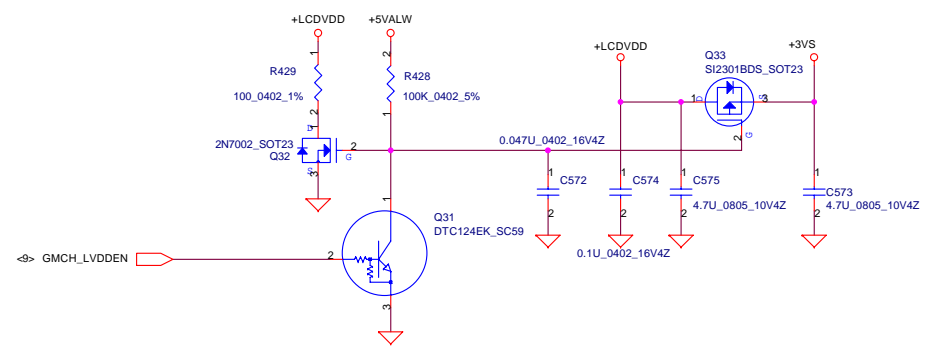
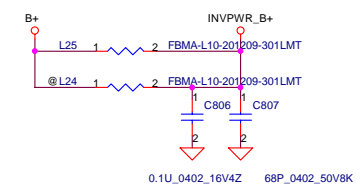
Title		
Compal Electronics, Inc.		
Clock generator		
Size	Document Number	Rev
	LA-3342P	1.0
Date:	Thursday, July 27, 2006	Sheet 15 of 40

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 WITHOUT 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.

### LCD Panel & inverter Connector

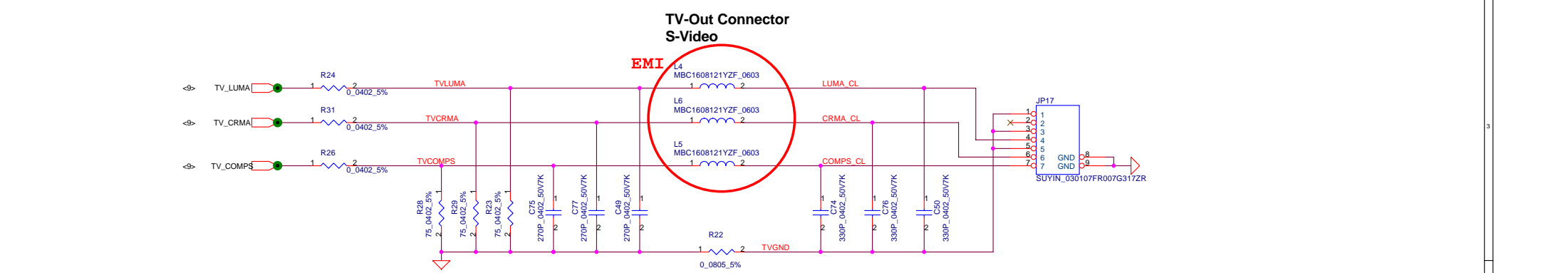
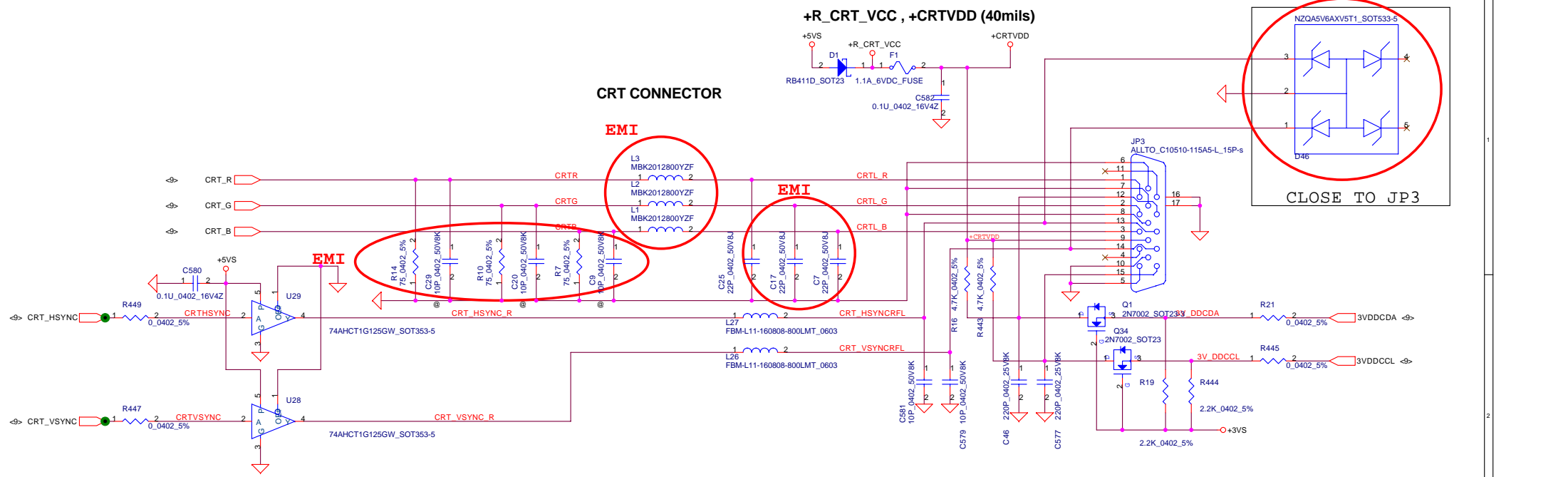


Delete 17" LVDS Conn JP1



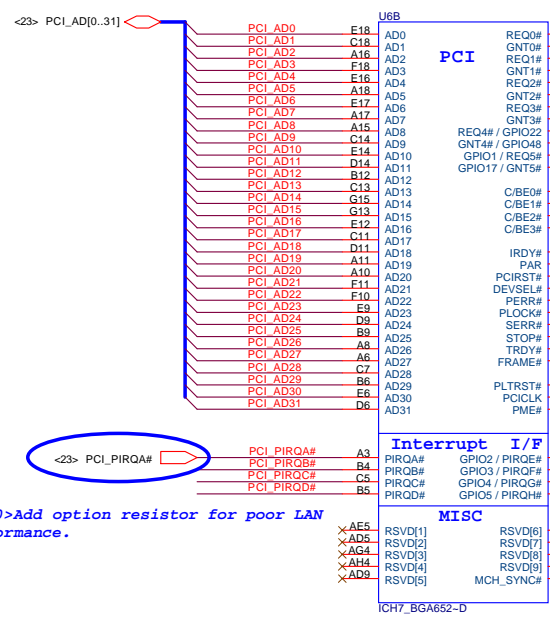
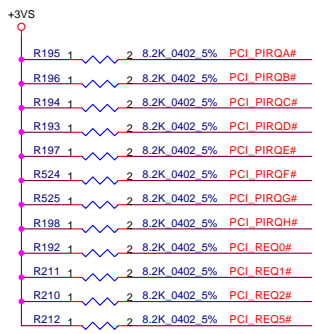
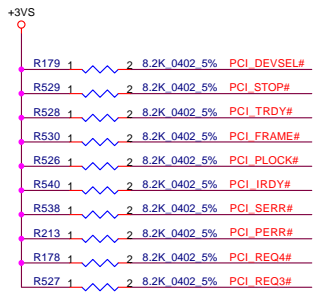
Security Classification	Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Size Custom Date:
				Document Number <b>LA-3342P</b> Thursday, July 27, 2006
				Rev 0.1 Sheet 16 of 40



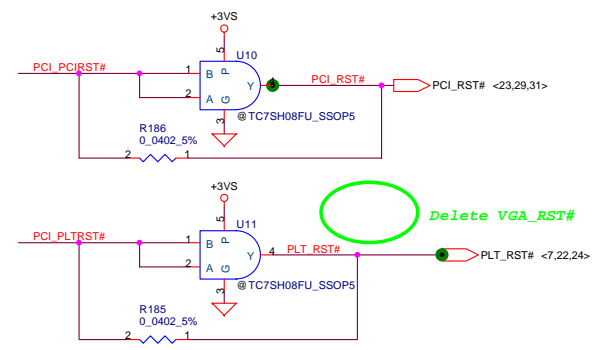


Security Classification	Compal Secret Data		
Issued Date	2005/03/10	Deciphered Date	2006/03/10
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			

Title			<b>Compal Electronics, Inc.</b>
Document Number			<b>CRT &amp; TVout Connector</b>
Size	Document Number	Rev	0.1
Custom	<b>LA-3342P</b>	Date:	Thursday, July 27, 2006
Date:		Sheet	17 of 40

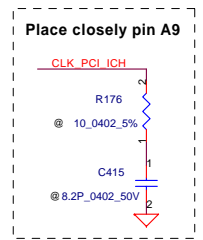
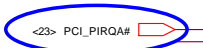


<7/20>Add option resistor for poor LAN performance.



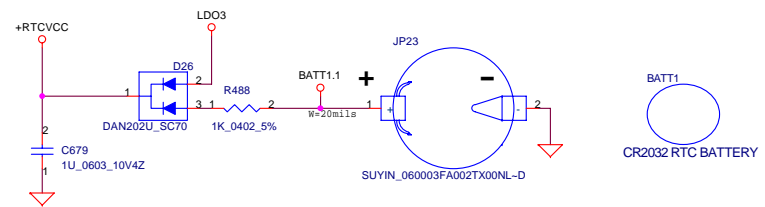
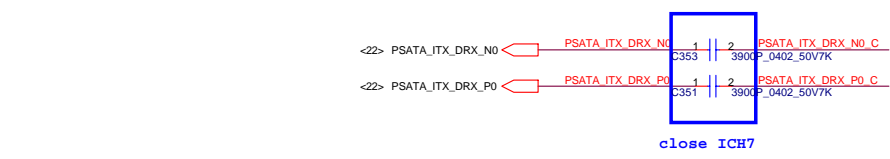
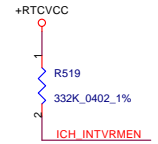
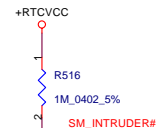
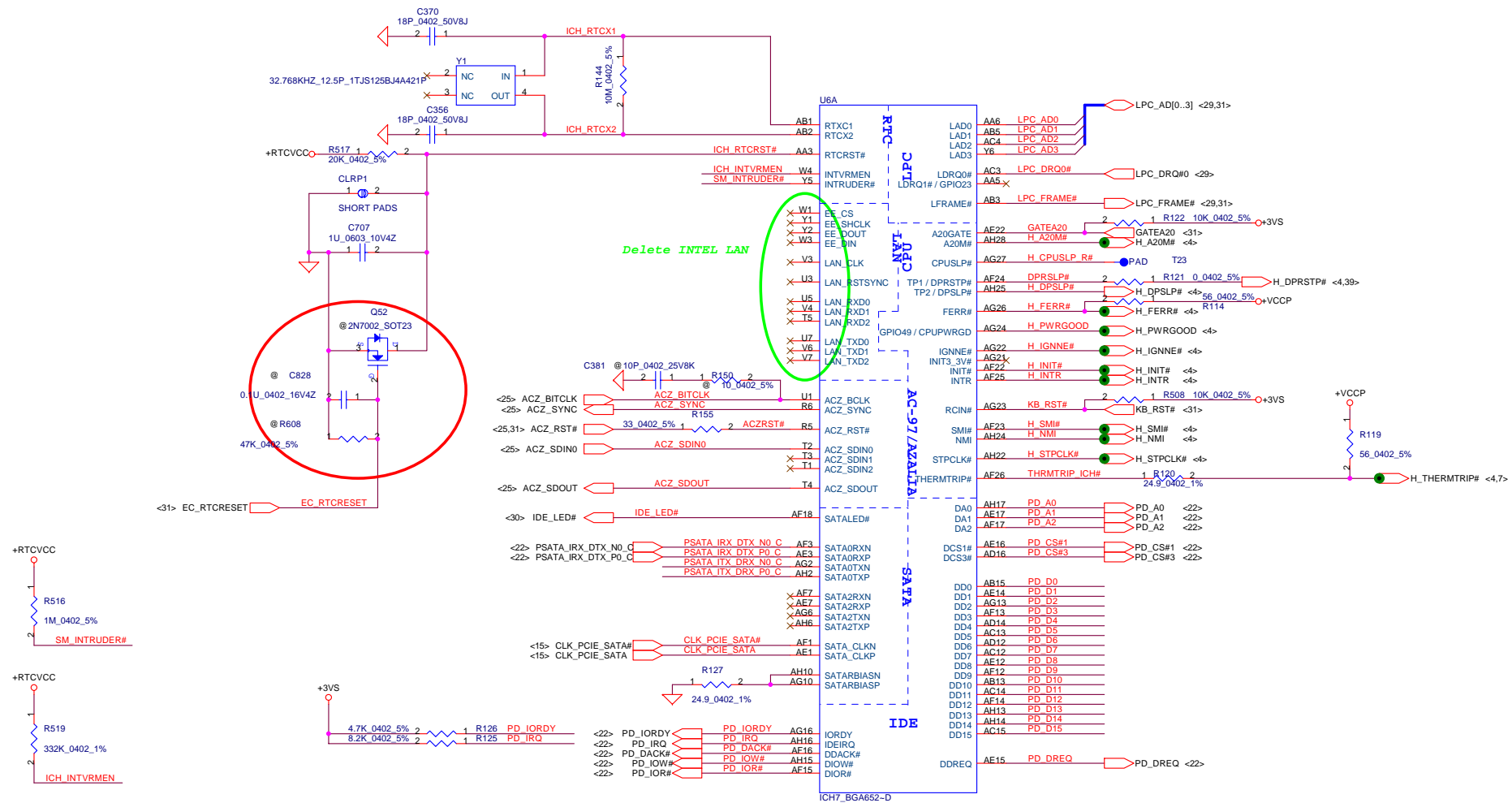
Delete VGA\_RST#

<7/20>Add option resistor for poor LAN performance.



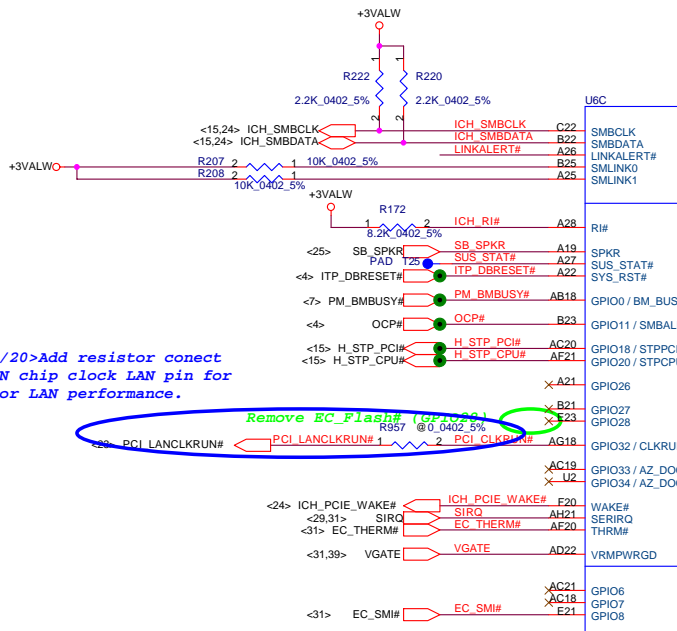
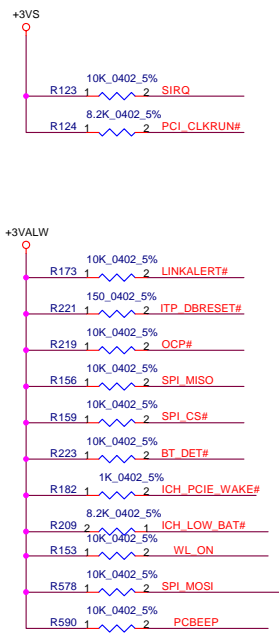
Place closely pin A9

Security Classification	Compal Secret Data		Title	<b>Compal Electronics, Inc.</b>	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	<b>ICH7-M(1/4)</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-3342P</b>	0.1
			Date:	Thursday, July 27, 2006	Sheet 18 of 40



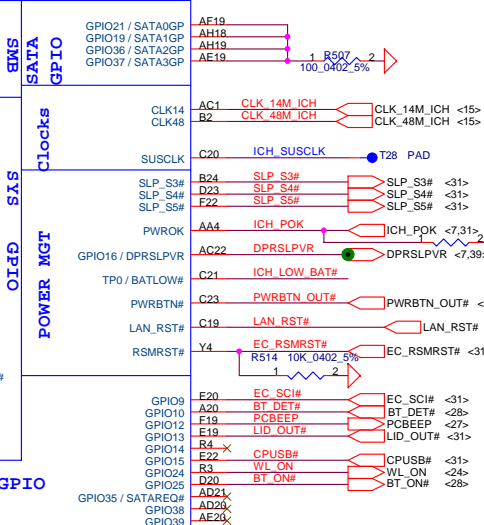
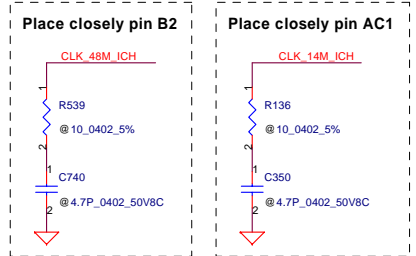
Security Classification	Compal Secret Data	
Issued Date	2005/03/10	Deciphered Date
		2006/03/10
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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.		

<b>Compal Electronics, Inc.</b>	
<b>ICH7-M(2/4)</b>	
Title	Document Number
Custom	LA-3342P
Date	Thursday, July 27, 2006
Sheet	19 of 40
Rev	0.1



<7/20> Add resistor connect LAN chip clock LAN pin for poor LAN performance.

Remove EC Flash# (C31220) @ 0.0402 5%  
 Remove EC Flash# (C31220) @ 0.0402 5%  
 Remove EC Flash# (C31220) @ 0.0402 5%

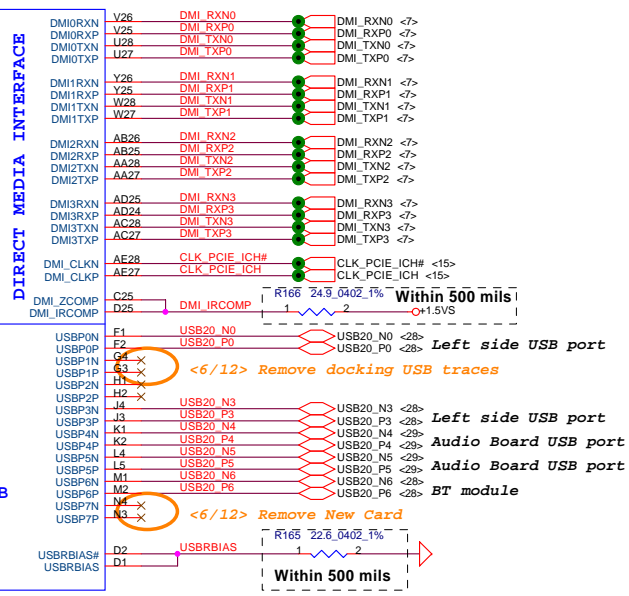
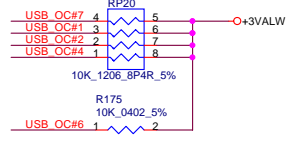
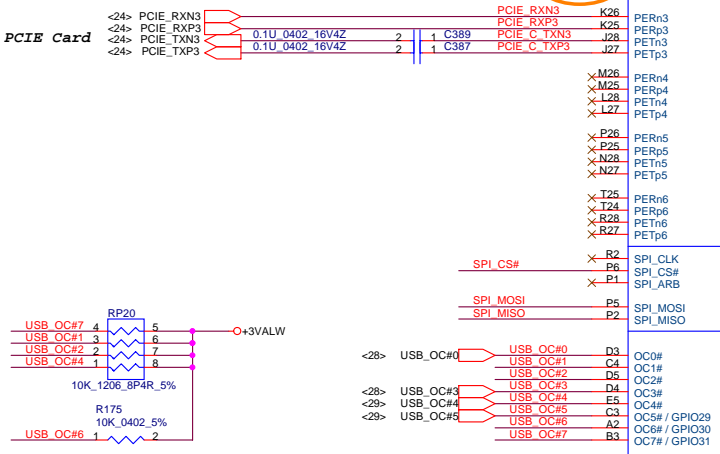


Need update symbol

Delete 17" New Card PCIE traces

<6/20> Remove New Card trace

To mini PCIE Card



Within 500 mils

Left side USB port

<6/12> Remove docking USB traces

Left side USB port

Audio Board USB port

Audio Board USB port

BT module

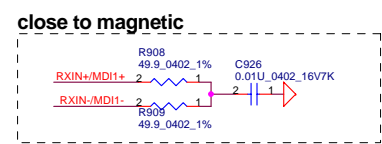
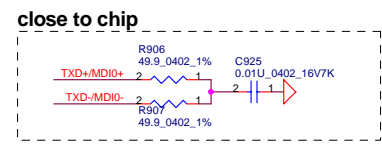
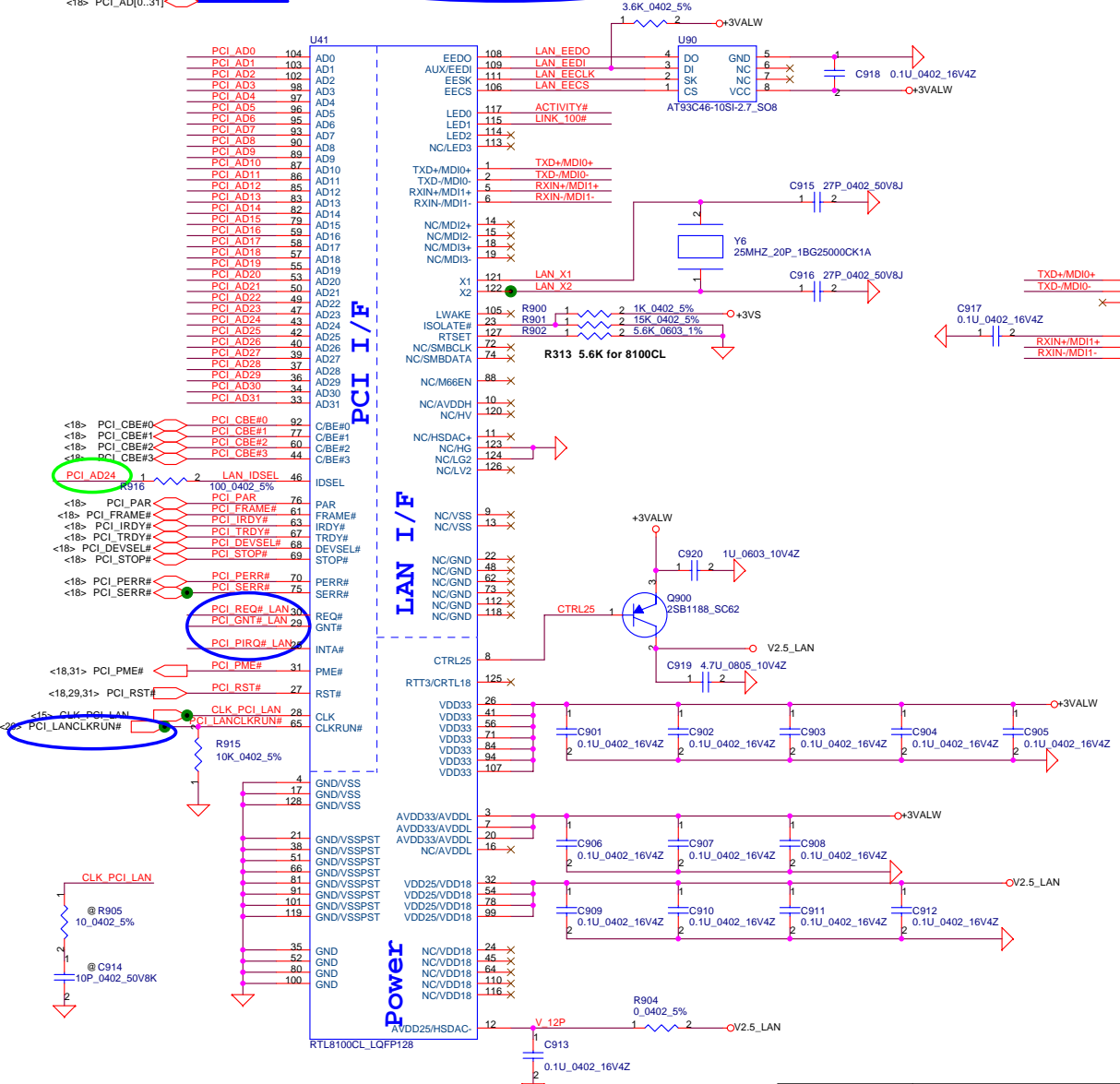
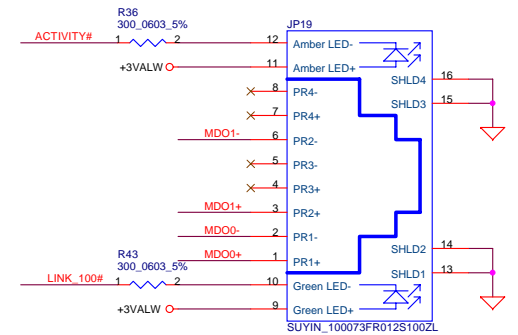
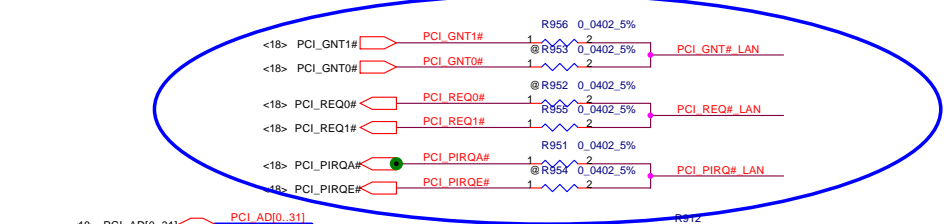
<6/12> Remove New Card

Within 500 mils

Security Classification	Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	ICH7-M(3/4)
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:	Thursday, July 27, 2006	Sheet 20 of 40
Custom	LA-3342P	Rev	1.0	

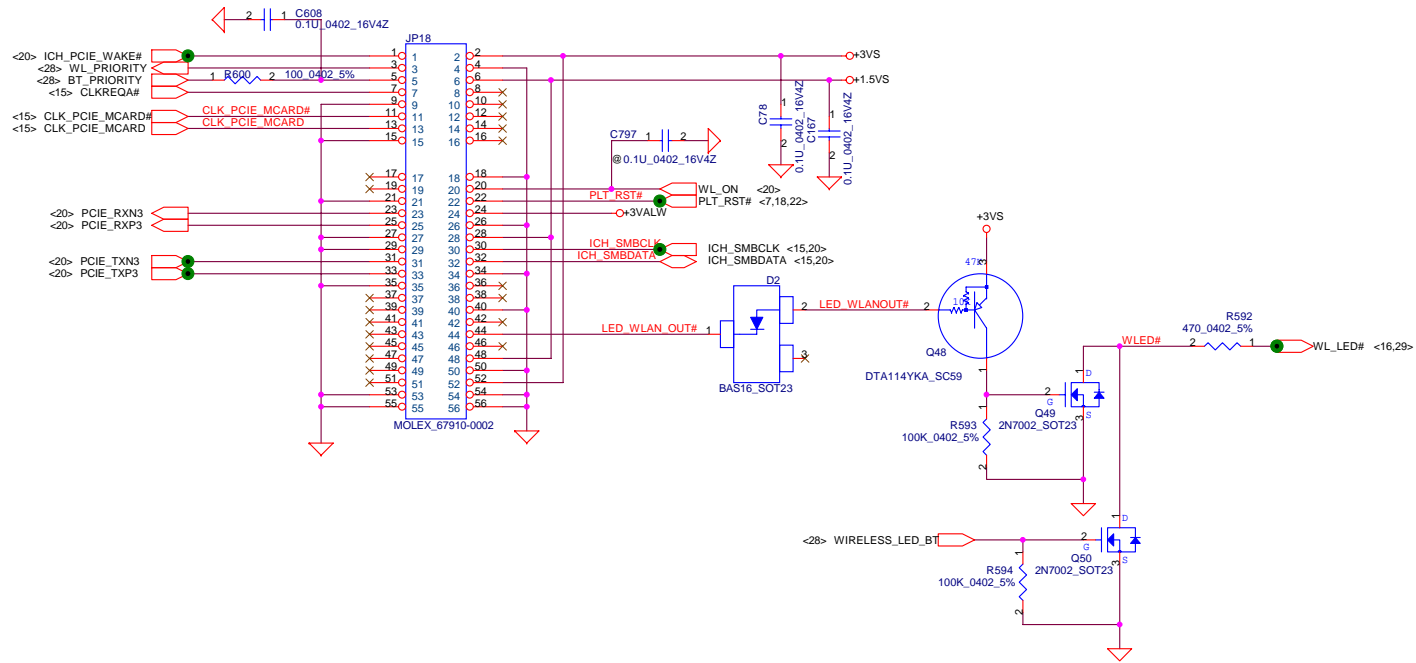






Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/01	Deciphered Date	2005/04/06	LAN-8100CL	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE 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
Custom	Document Number	LA-3342P		1.0	
Date:	Thursday, July 27, 2006	Sheet	23	of	40

# Mini-Express Card(Slot 1-WLAN)

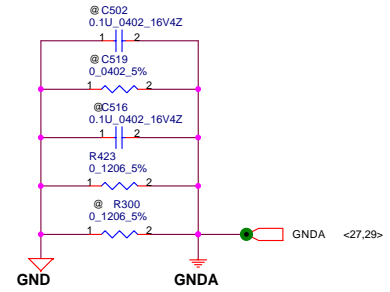


Security Classification	Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Mini Card
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom
				Document Number LA-3342P
				Rev 0.1
Date: Thursday, July 27, 2006				Sheet 24 of 40



<6/12> Remove PCM\_SPK

**For Layout:**  
Place decoupling caps near the power pins of SmartAMC device.



Delete CD traces

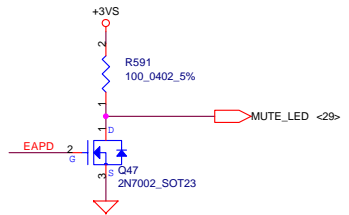
<6/12> Remove Docking line out

<6/12> Remove Docking MIC

<6/12> Remove JACK\_DET from Docking

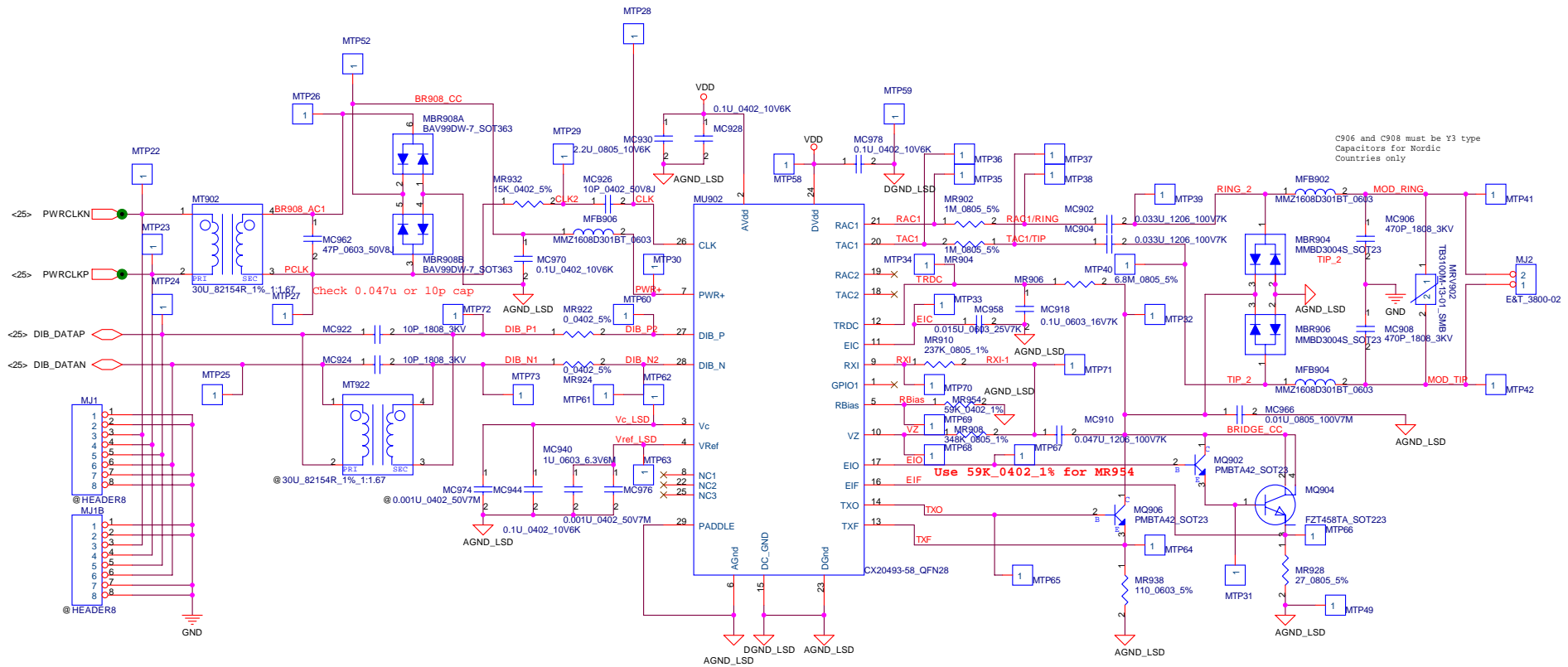
HP_DET#	JACK_DET#	PORT-A	PORT-B	EQ
0	0	ON	OFF	Disable
0	NC	ON	OFF	Disable
NC	0	OFF	ON	Disable
NC	NC	ON	OFF	Enable

MIC_DET	PORT-C	PORT-F
0	ON	OFF
NC	OFF	ON

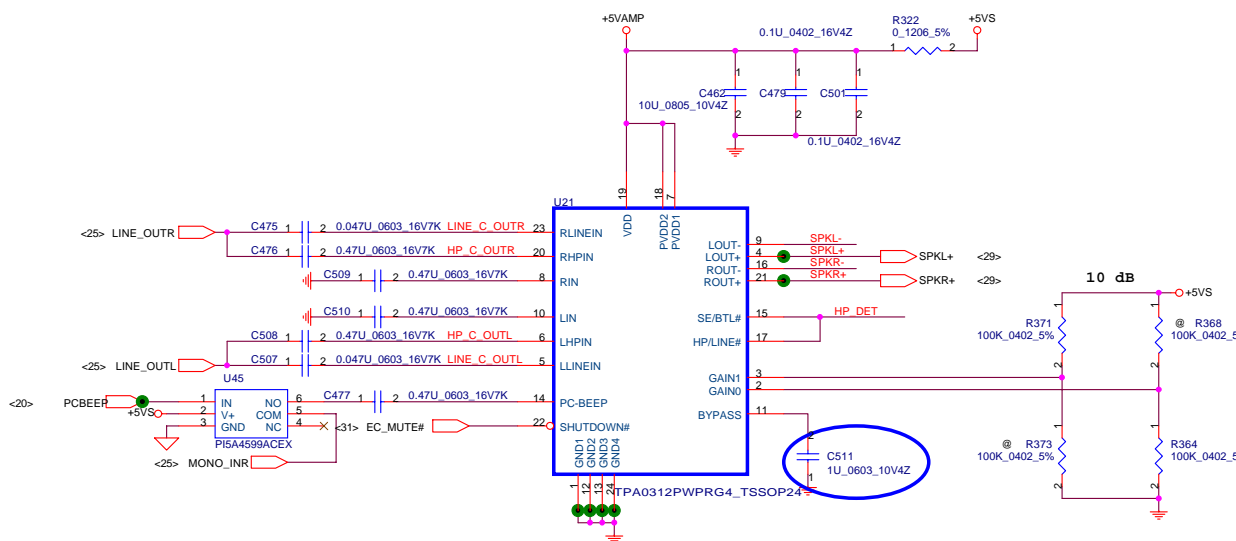


Security Classification	Compal Secret Data	
Issued Date	2005/03/10	Deciphered Date 2006/03/10
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		

Title		Compal Electronics, Inc.	
Size	Document Number	LA-3342P	Rev 0.1
Date:	Thursday, July 27, 2006	Sheet 25 of 40	

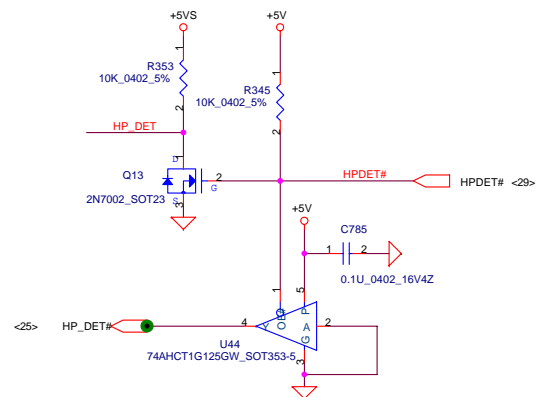
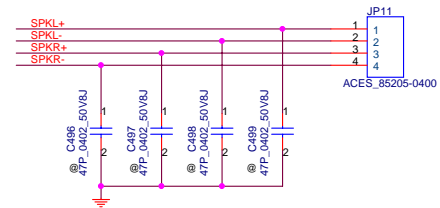


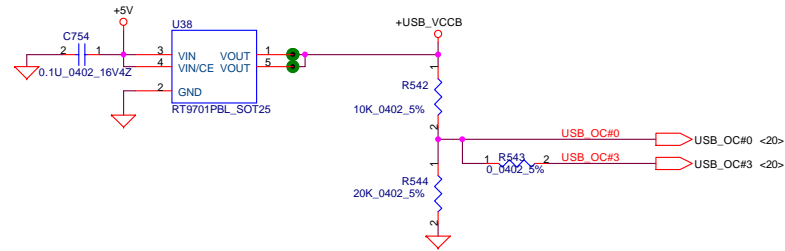
Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Title <b>AMOM modem</b>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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
				Custom	LA-3342P
Date:	Thursday, July 27, 2006	Sheet	26 of 40		



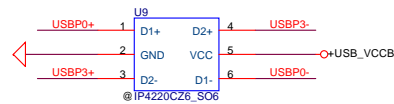
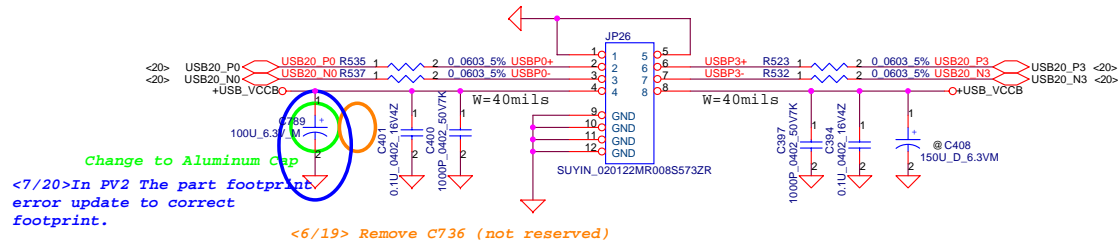
### HEADPHONE OUT/LINE OUT

Gain Settings			
GAIN0	GAIN1	SE/BTL#	Av (inv)
0	0	0	6 dB
0	1	0	* 10 dB
1	0	0	15.6 dB
1	1	0	21.6 dB
X	X	1	4.1 dB

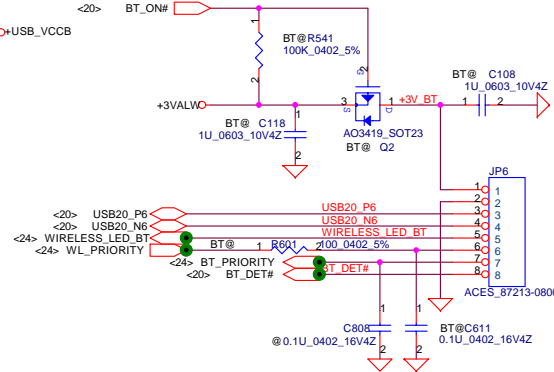




**USB CONNECTOR (Left side)**

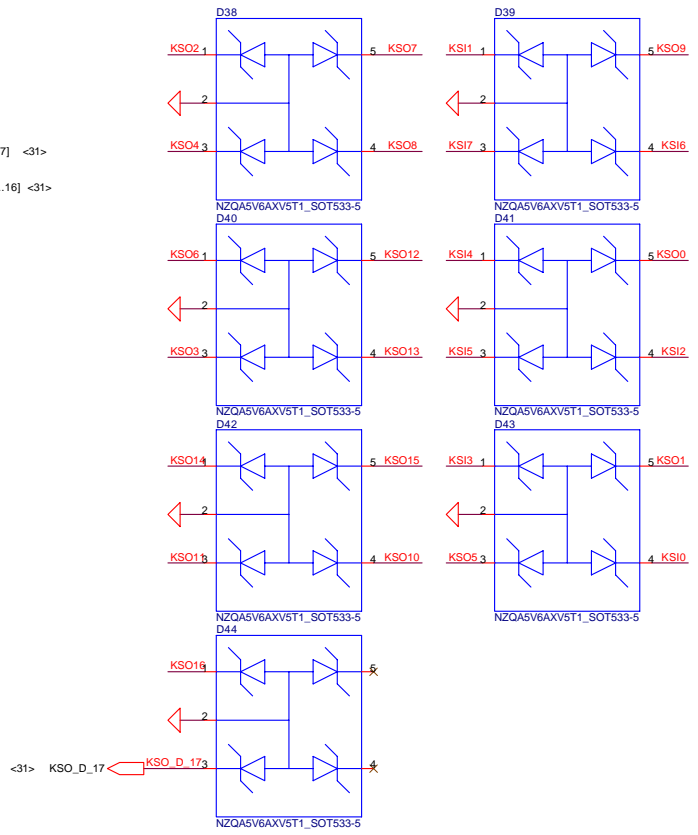
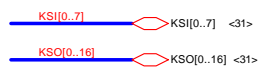


**BT CONNECTOR**

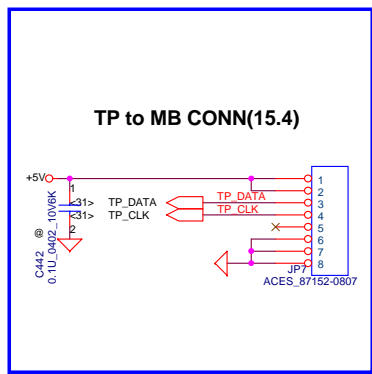
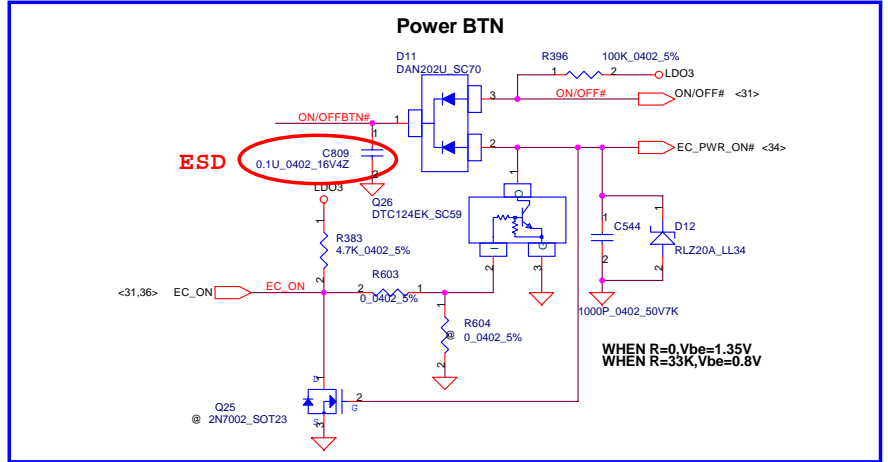
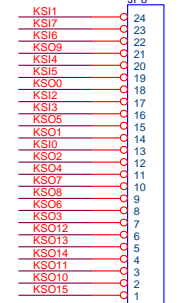


Reserve Bluetooth

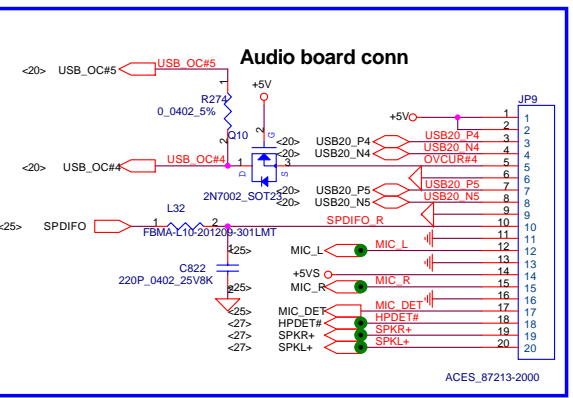
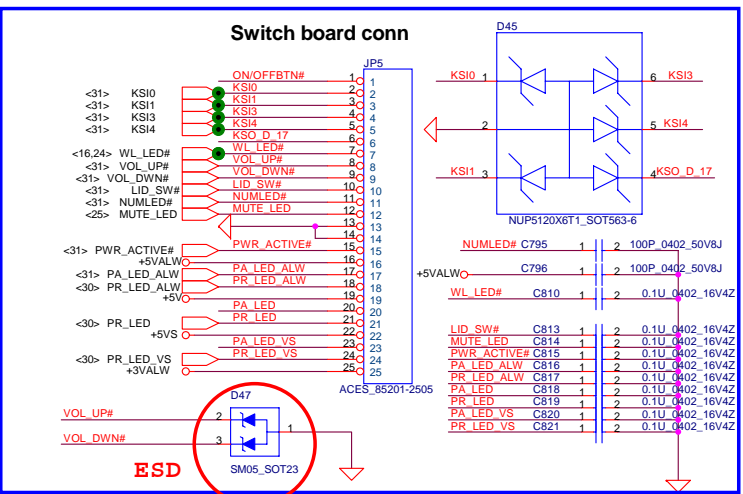
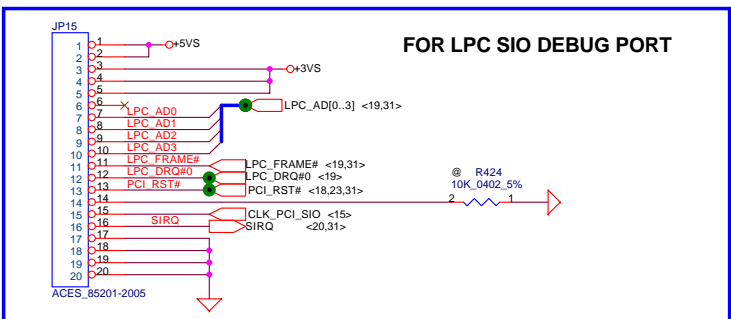
Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE 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.				Bluetooth & USB CONN.	
				Size	Document Number
Customer	LA-3342P	Date:	Thursday, July 27, 2006	Sheet	28 of 40



**15.4 (TYPE "C" KB)**



<6/21> Remove CIR



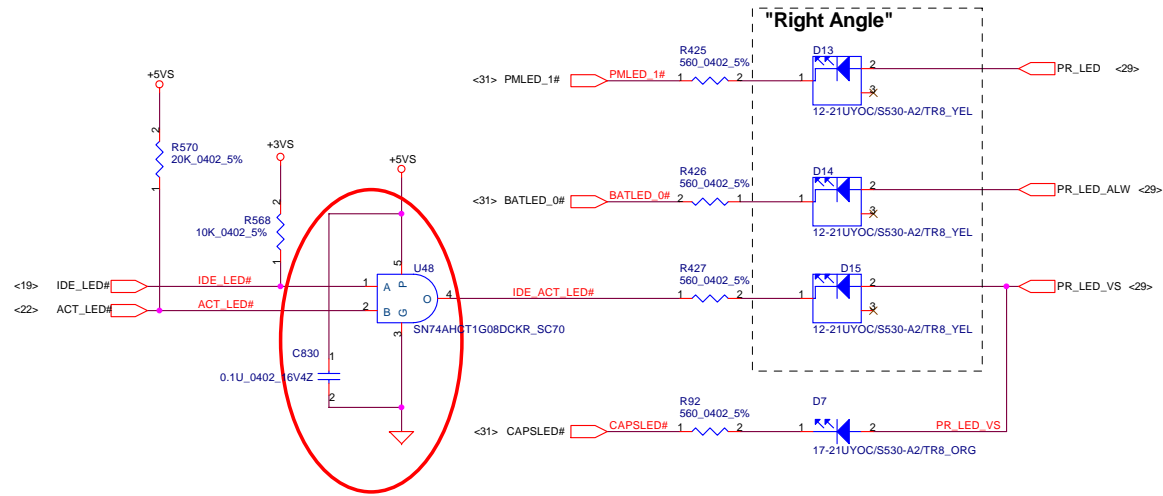
Security Classification	Compal Secret Data	
Issued Date	2005/03/10	Deciphered Date
		2006/03/10

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

Title		<b>Compal Electronics, Inc.</b>	
		<b>KBD,ON/OFF,TP,LED/B,DEBUG</b>	
Size	Document Number	Rev	
Custom	<b>LA-3342P</b>	0.1	
Date:	Thursday, July 27, 2006	Sheet	29 of 40

For PR

FOR POWER BUTTON BACKLIGHT SYSTEM POWER



Security Classification	Compal Secret Data			Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	INDICATE LED	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Custom	0.1
				Date:	Thursday, July 27, 2006
				Sheet	30 of 40

Compal Electronics, Inc.

INDICATE LED

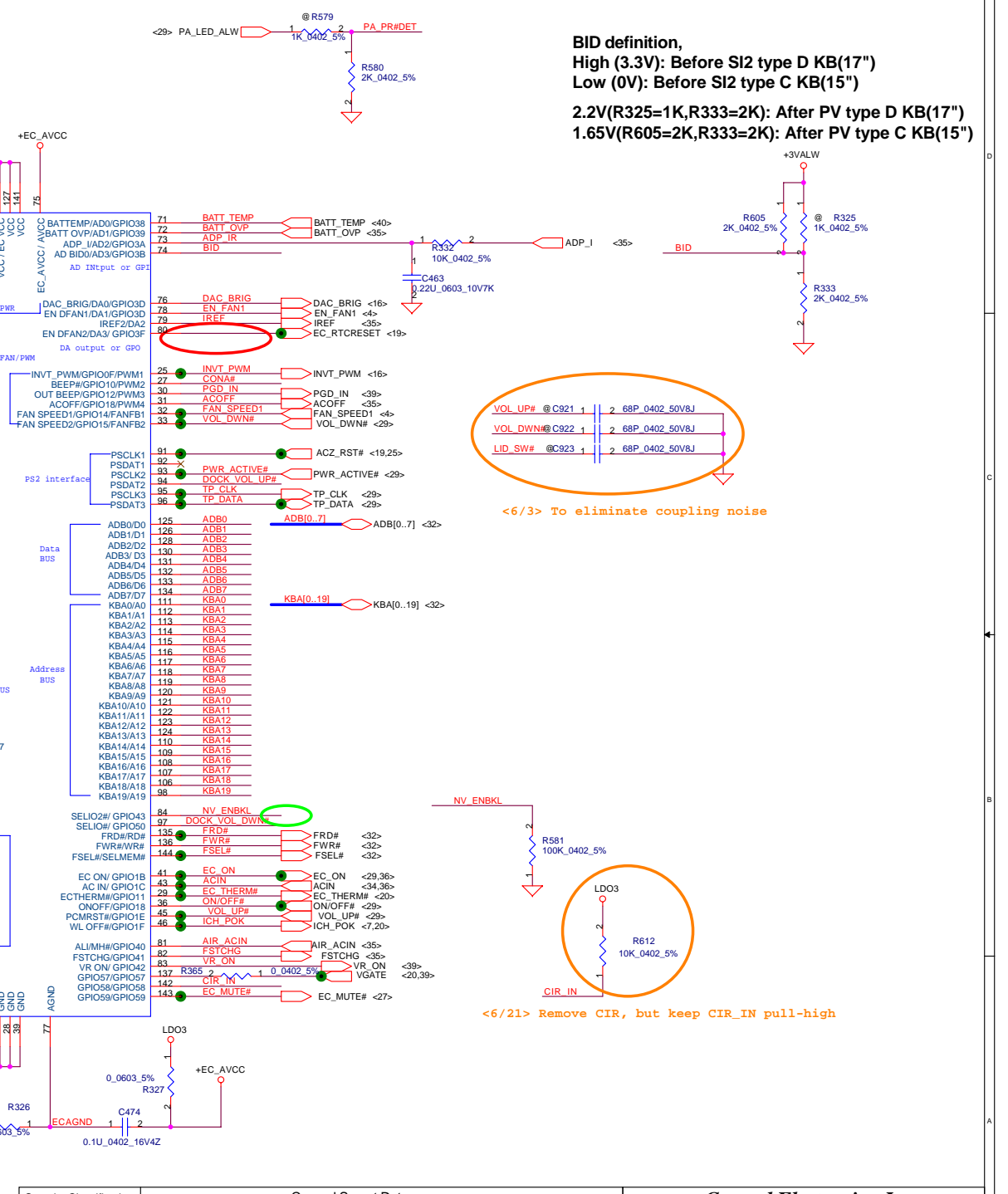
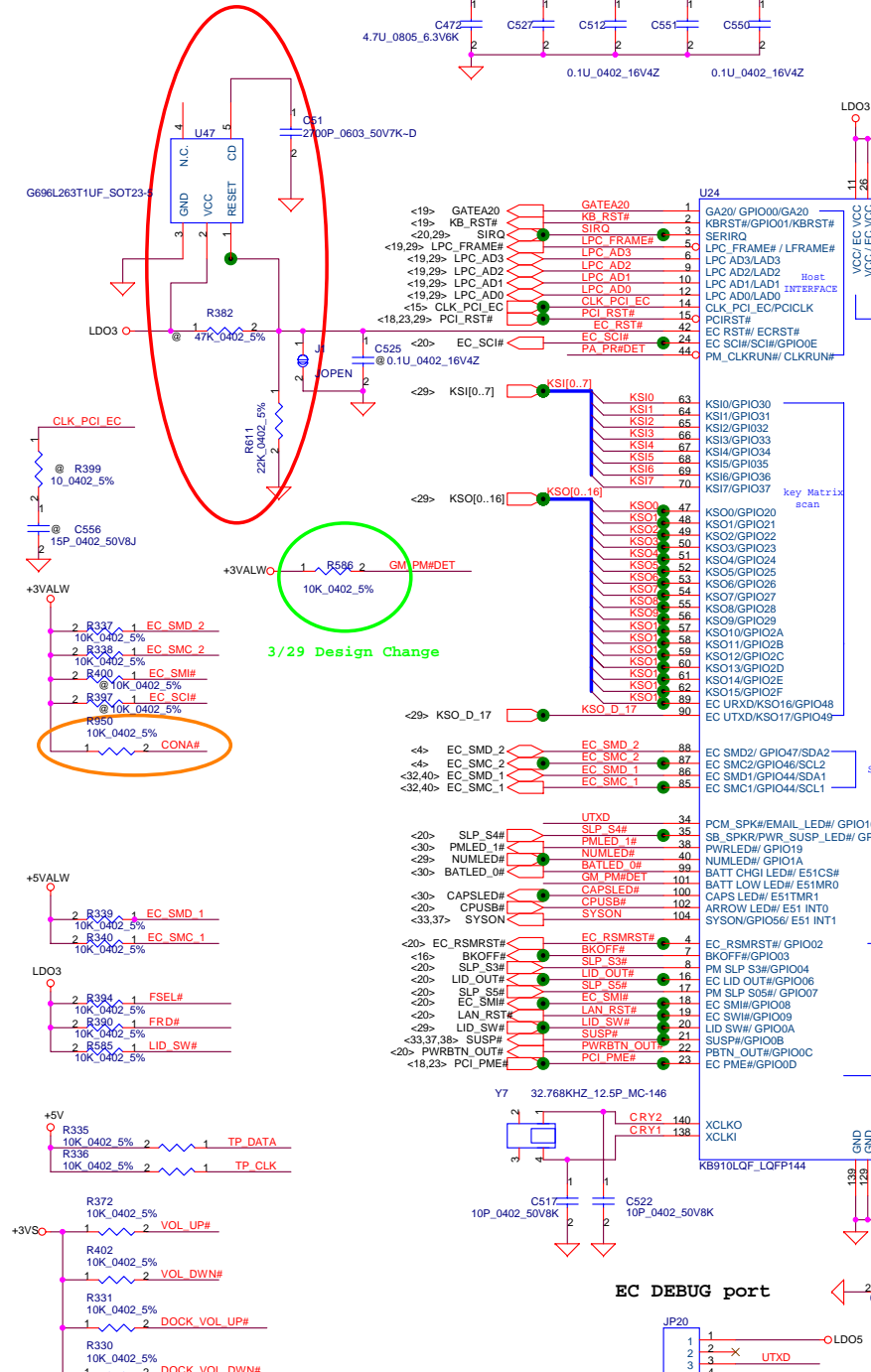
Document Number  
LA-3342P

Rev  
0.1

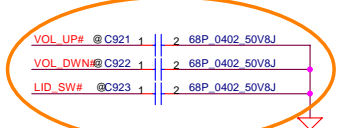
Date: Thursday, July 27, 2006

Sheet 30 of 40

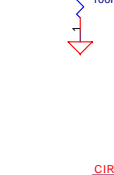
$Cd(uF)=T(ms) / 1685$   
 $Cd=2700PF \rightarrow T=3.6ms$



**BID definition,**  
**High (3.3V): Before SI2 type D KB(17")**  
**Low (0V): Before SI2 type C KB(15")**  
**2.2V(R325=1K,R333=2K): After PV type D KB(17")**  
**1.65V(R605=2K,R333=2K): After PV type C KB(15")**

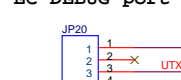


<6/3> To eliminate coupling noise





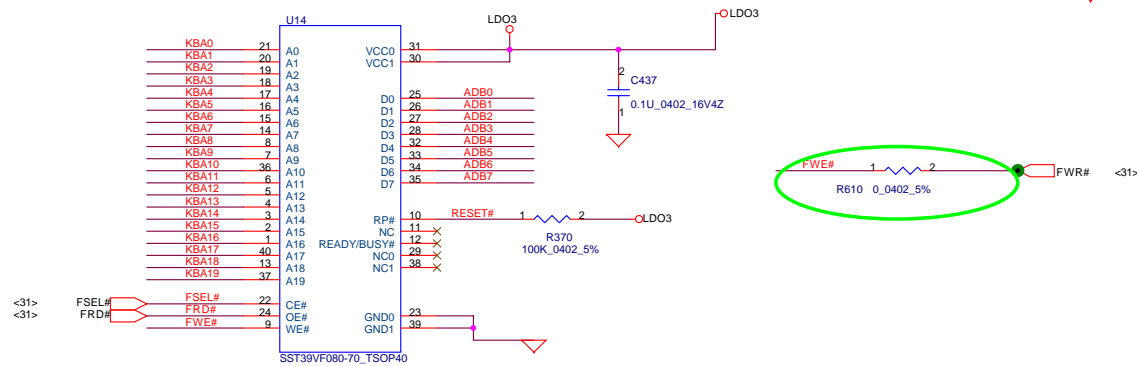
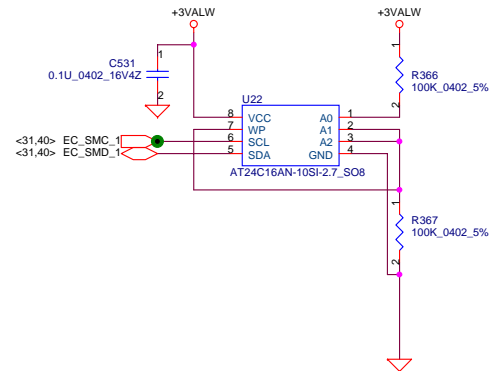
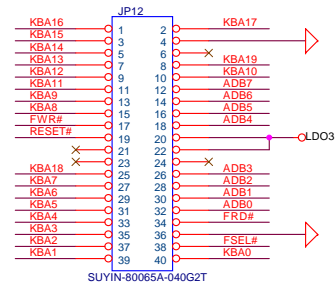
<6/21> Remove CIR, but keep CIR\_IN pull-high

**EC DEBUG port**



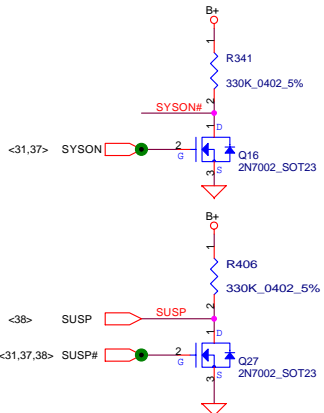
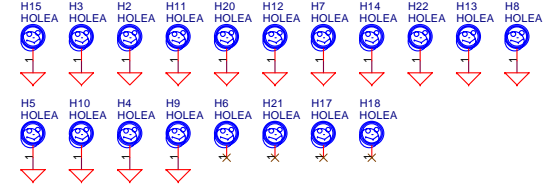
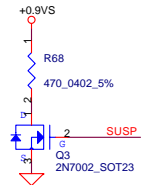
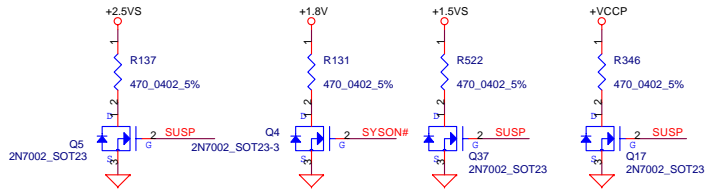
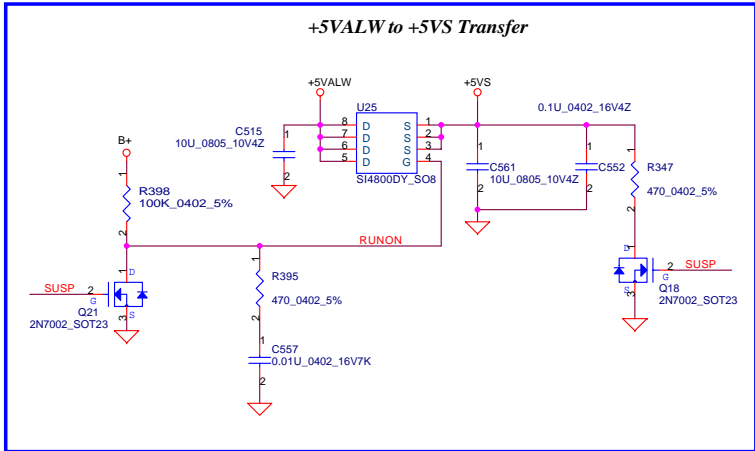
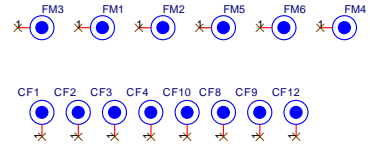
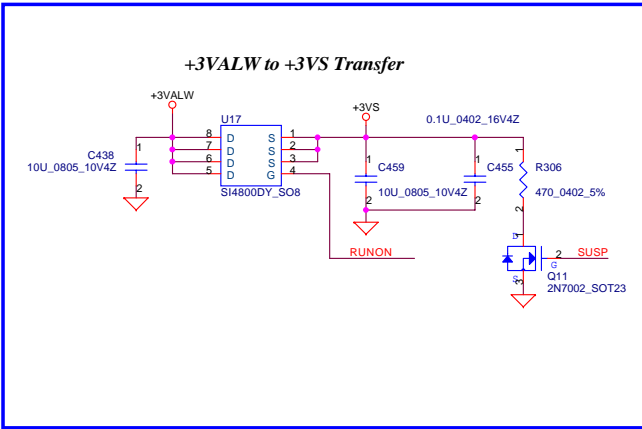
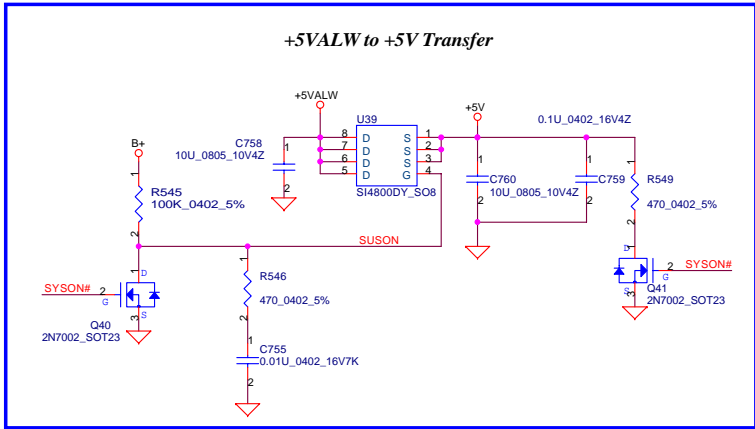
Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	EC KB910L(LPC)	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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 OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				LA-3342P	Rev 0.1
Date: Thursday, July 27, 2006				Sheet 31	of 40

<31> ADB[0..7]  ADB[0..7]  
 <31> KBA[0..19]  KBA[0..19]



Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	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.				BIOS & EC I/O Port	
Size	Document Number	Date:		Rev	0.1
Custom	LA-3342P	Thursday, July 27, 2006		Sheet	32 of 40

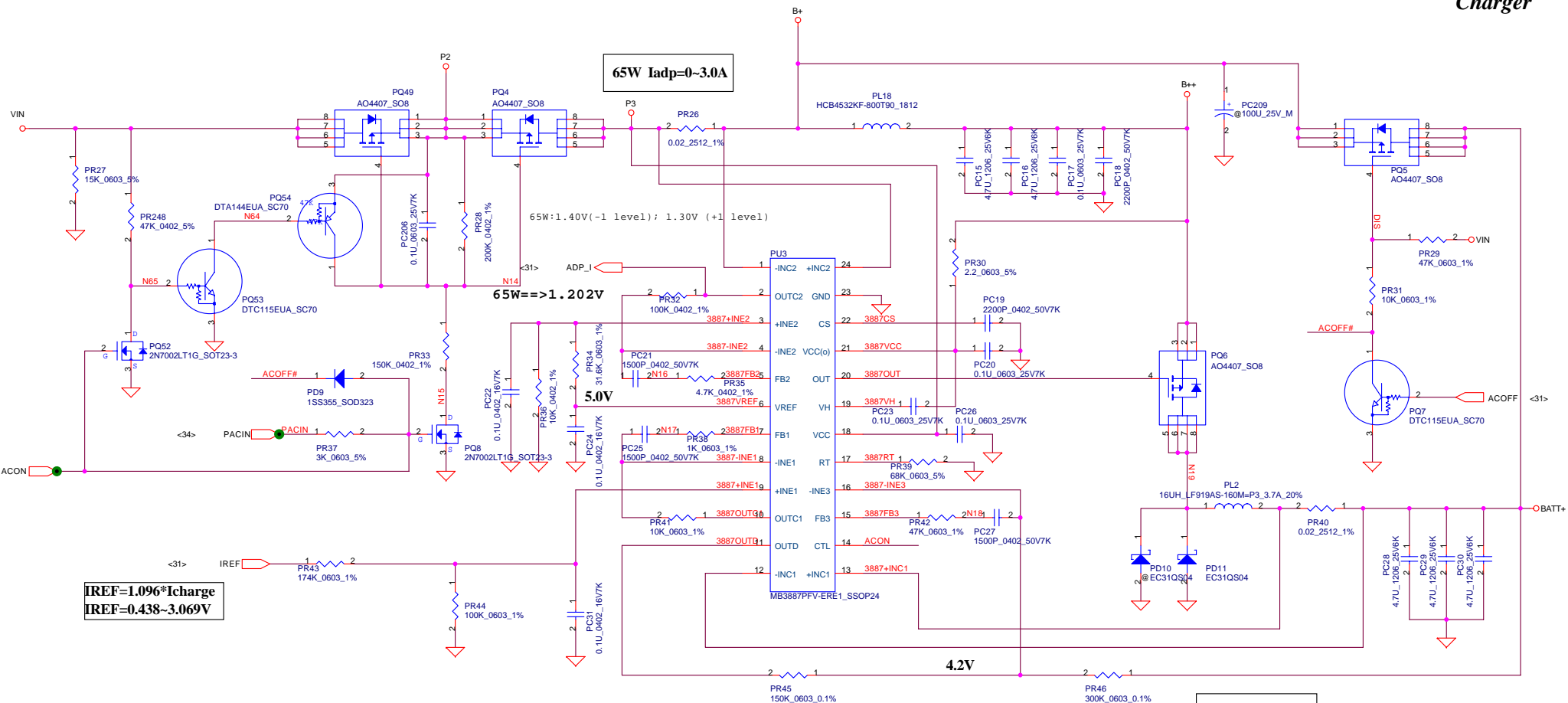




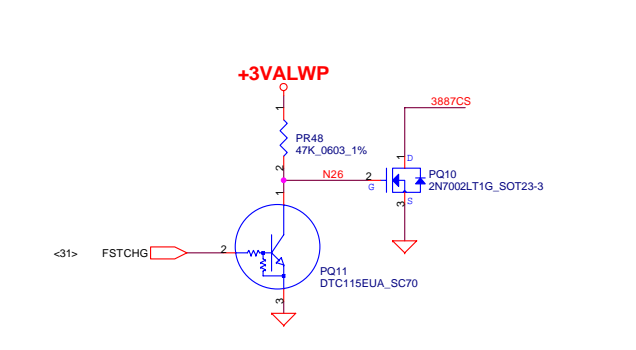
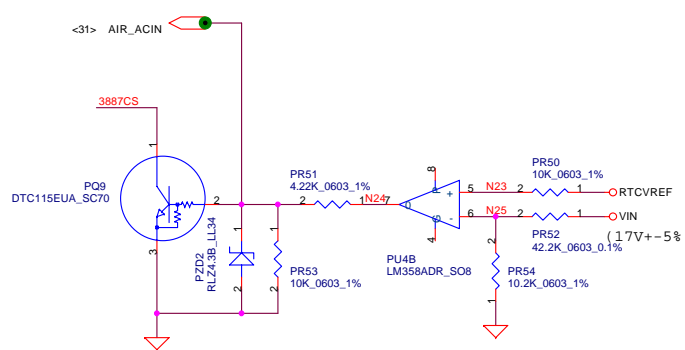
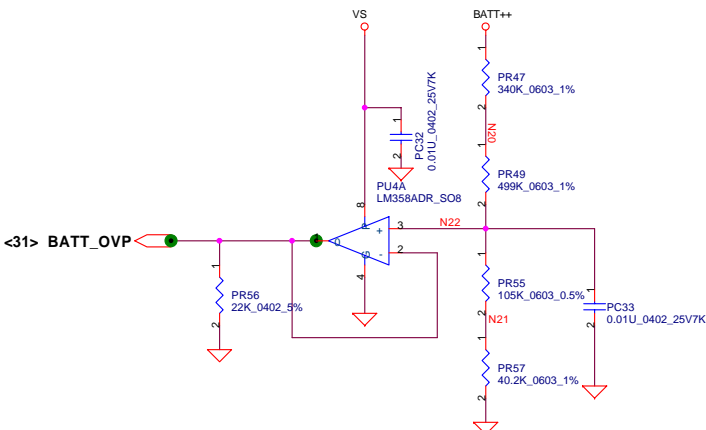
Security Classification	Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2005/03/10	Deciphered Date	2006/03/10	Title <b>DC/DC Circuit</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 <b>LA-3342P</b>
Date: Thursday, July 27, 2006			Sheet 33 of 40	Rev 0.1



# Charger

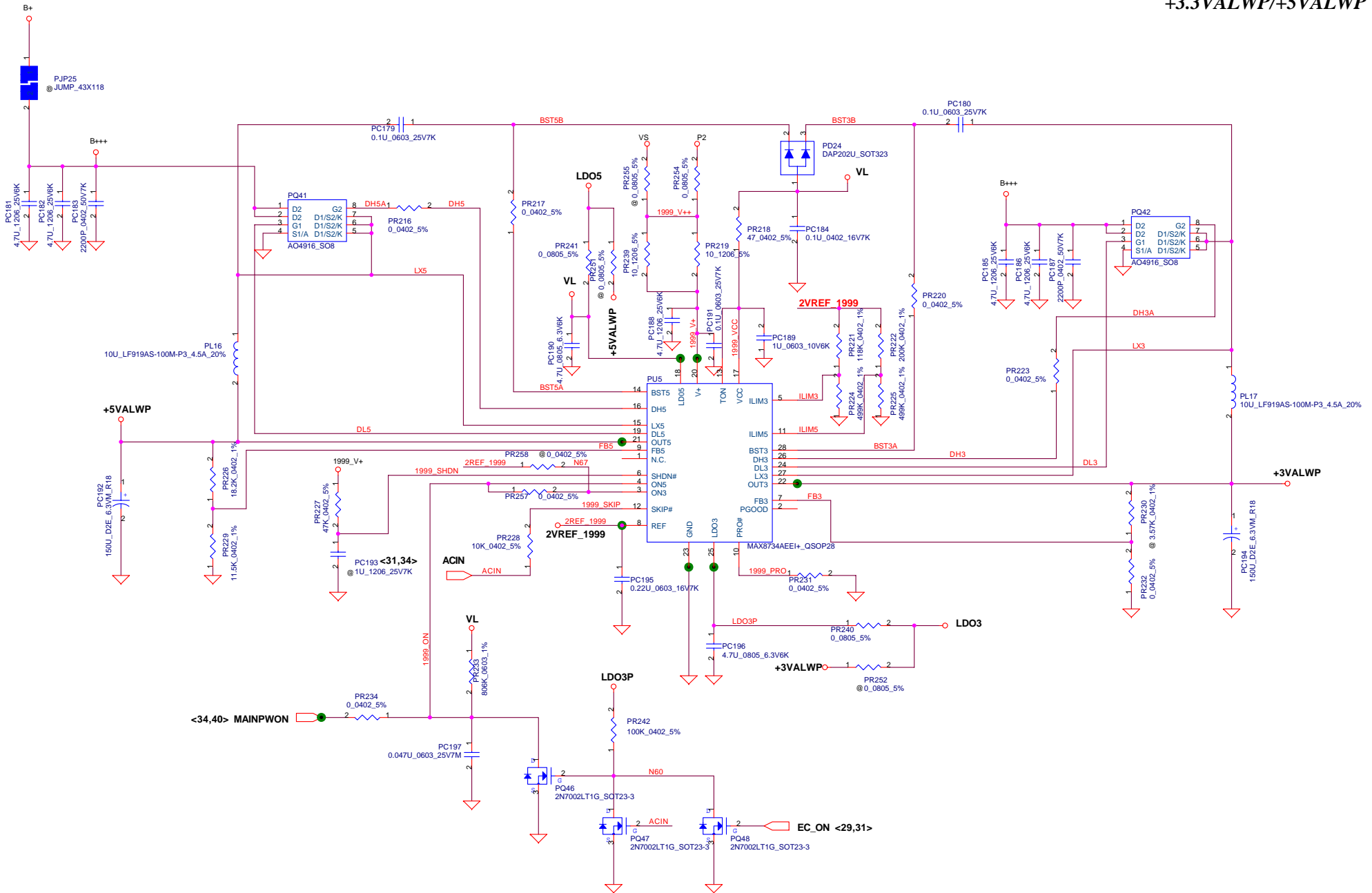


**3S2P/3S4P : 13.5V--> BATT\_OVP = 2.0V**  
**(BAT\_OVP=0.14753 \*BATT+)**



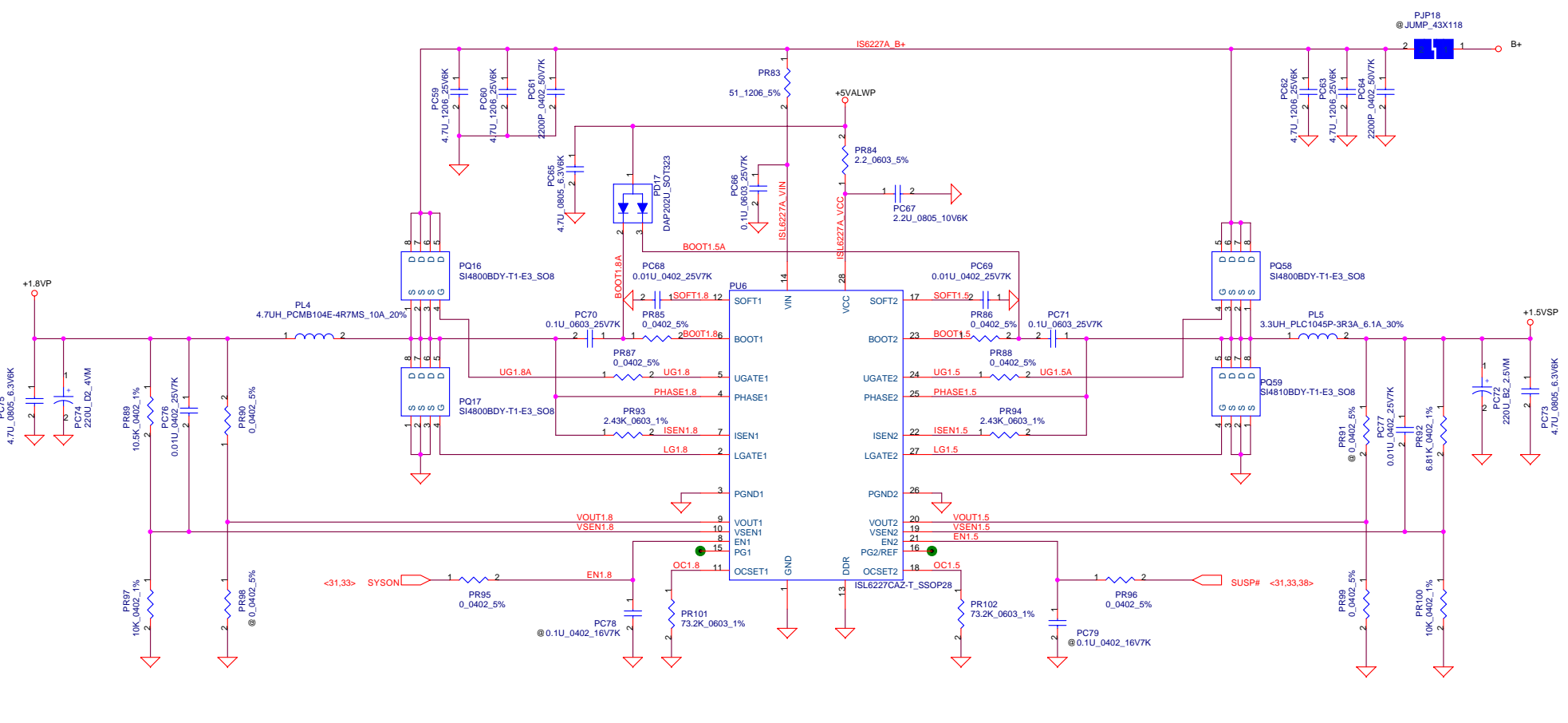
Security Classification	Compal Secret Data		Title
Issued Date	2006/04/03	Deciphered Date	2007/04/03
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE 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.			<b>Charger</b> Size   Document Number Custom   Date: Thursday, July 27, 2006   Sheet 35 of 40

# +3.3VALWP/+5VALWP

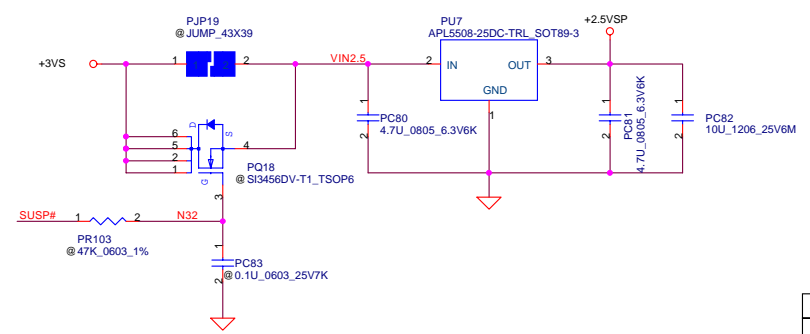


Security Classification	Compal Secret Data			Title	+ 3VALWP / + 5VALWP	
Issued Date	2006/04/03	Deciphered Date	2007/04/03	Size	Document Number	Rev
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Date:	Thursday, July 27, 2006	Sheet 36 of 40

**+2.5VSP/+1.8VP/+1.5VSP**

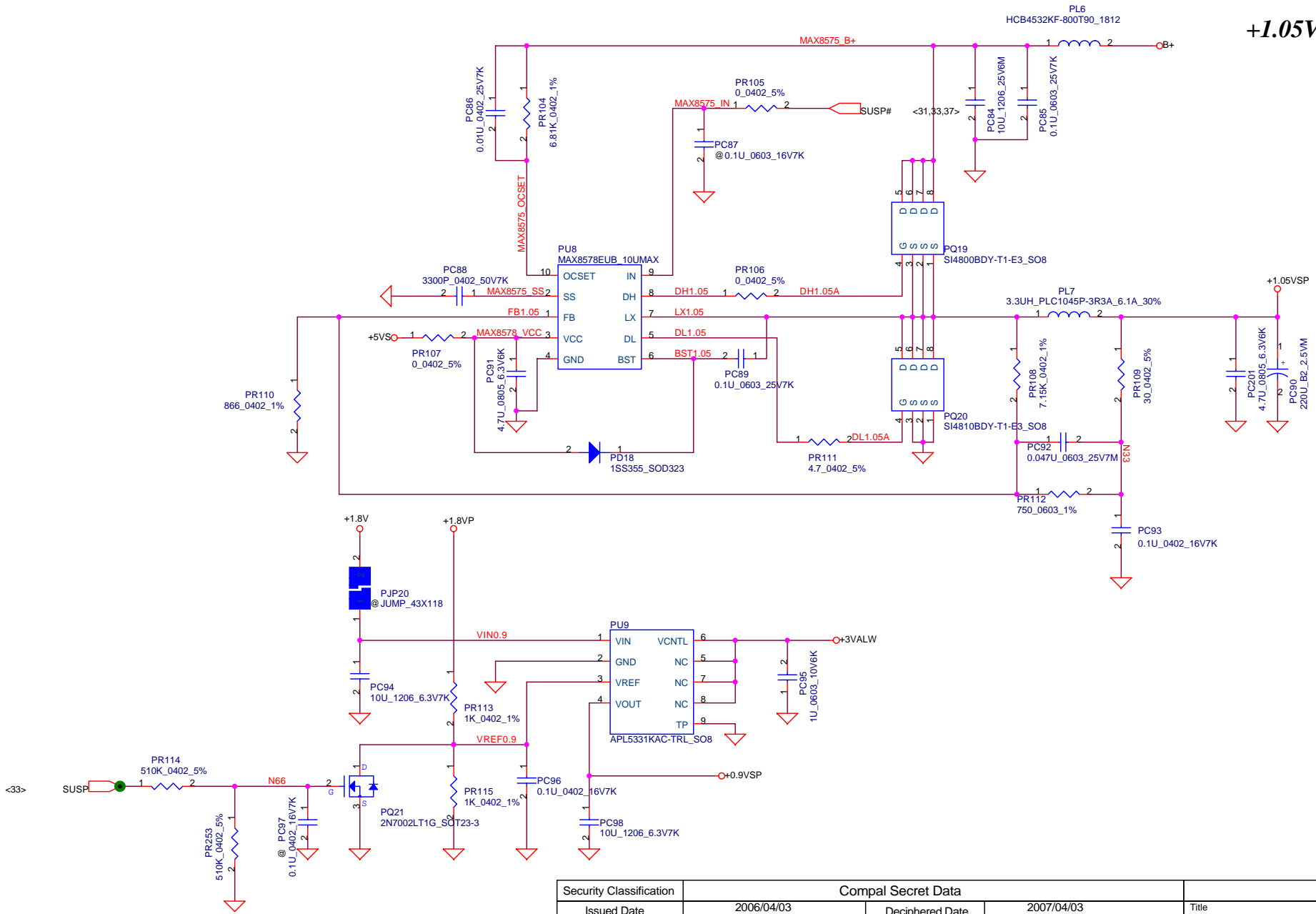


(400mA, 40mils, Via NO. = 1)



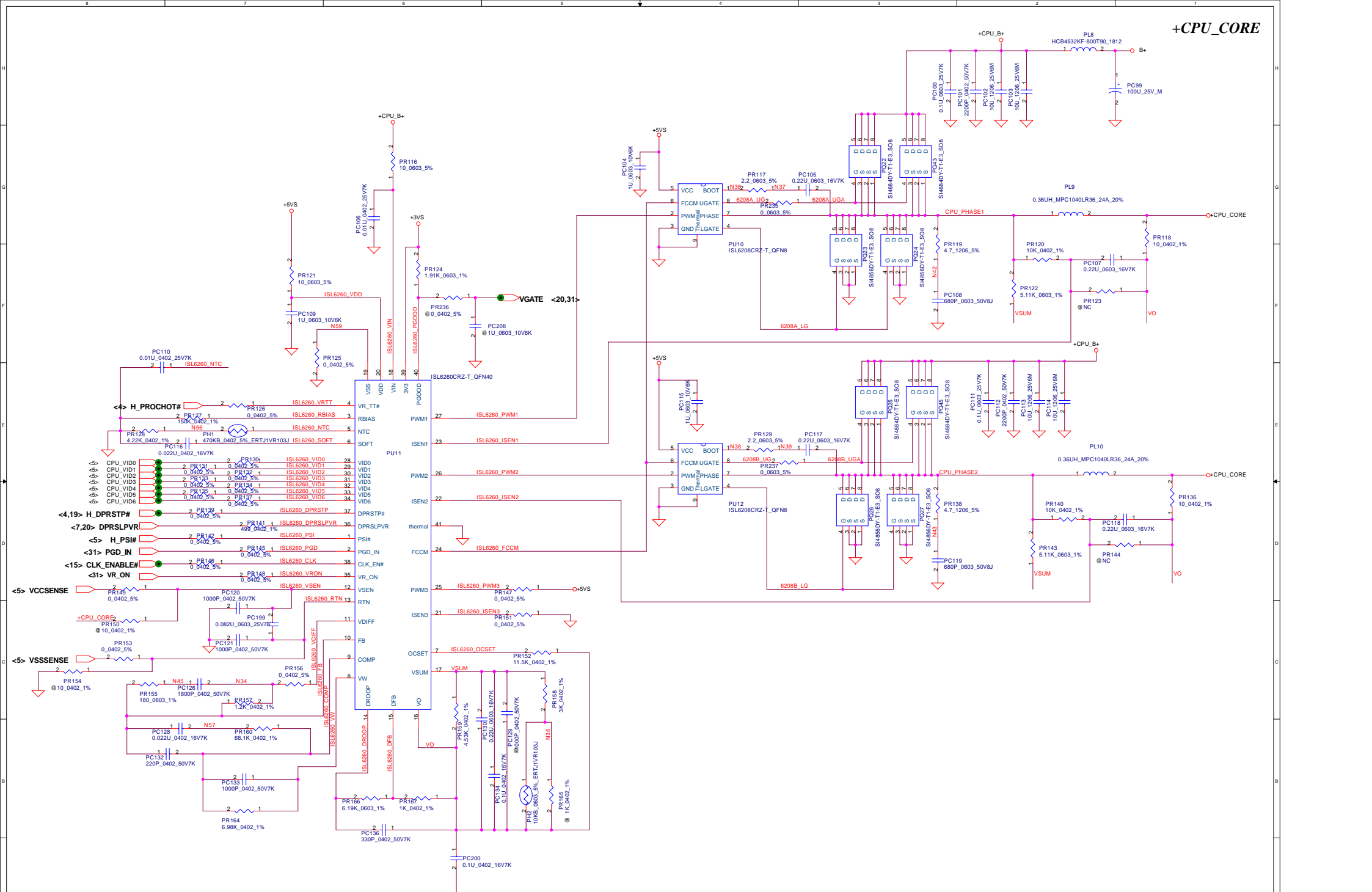
Security Classification	Compal Secret Data		Title
Issued Date	2006/04/03	Deciphered Date	2007/04/03
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE 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.			+2.5VSP/+1.8VP/+1.5VSP Size: _____ Document Number: _____ Rev: _____
Date:	Thursday, July 27, 2006	Sheet	37 of 40

# +1.05V\_VCCPP/+0.9VSP



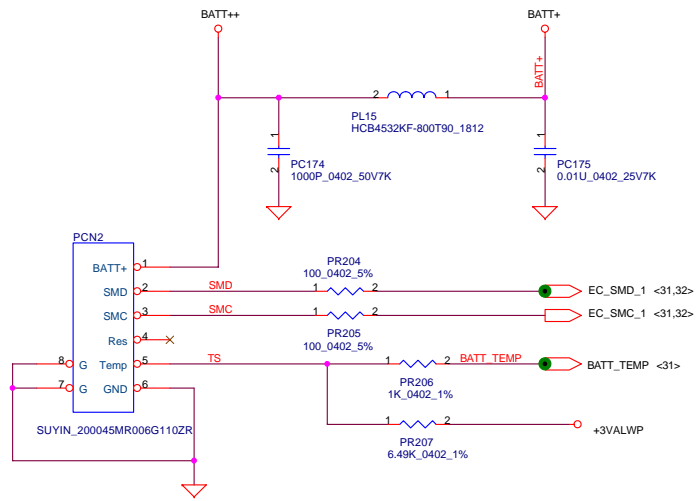
Security Classification	Compal Secret Data	
Issued Date	2006/04/03	Deciphered Date
		2007/04/03
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		

Title		Rev
+1.05V_VCCPP/+0.9VSP		
Size	Document Number	
Date:	Thursday, July 27, 2006	Sheet 38 of 40



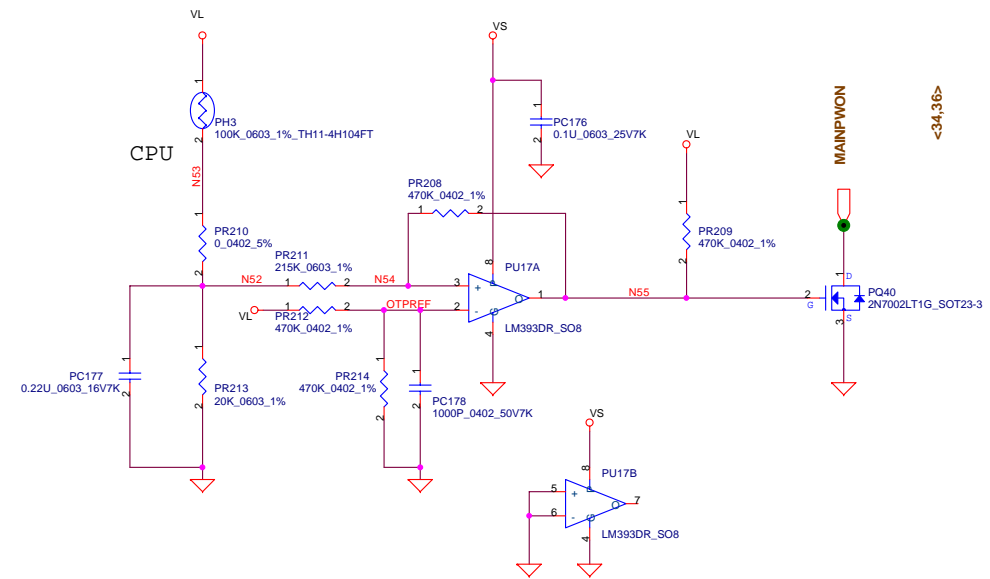
Security Classification	Compal Secret Data		Title
Issued Date	2006/04/03	Deciphered Date	2007/04/03
THIS SHEET OF ENGINEERING DRAWINGS IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF 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	
Date:	Thursday, July 27, 2006	Sheet	39 of 40

# Battery Connect/OTP



**PJPB1 battery connector**  
**SMART Battery:**  
 1. BATT+  
 2. SMD  
 3. SMC  
 4. Res  
 5. Temp  
 6. GND

**PH1 under CPU bottom side :**  
 CPU thermal protection at 90 +-3 degree C  
 Recovery at 50 +-3 degree C



Security Classification		Compal Secret Data		Title	
Issued Date	2006/04/03	Deciphered Date	2007/04/03	Battery Connect/OTP	
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	Thursday, July 27, 2006
				Sheet	40 of 40