

# Compal Confidential

## HTW00 LA-2871 Schematics Document

Intel Dothan with 915PM(GM)/910GML + DDRII + ICH6M  
(+VGA/B ATi M24C/M26P)

2005-08-22

REV: 1.0

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/08/22	Deciphered Date	2008/08/22	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.				Cover Sheet		
				Size	Document Number	Rev
					HTW00 M/B LA-2871	1.0
				Date:	Saturday, August 20, 2005	Sheet 1 of 41

Compal Confidential

Model Name : HTW00  
File Name : LA-2871



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/08/22	Deciphered Date	2008/08/22	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.				Block Diagram	
Size		Document Number		Rev	
		HTW00 M/B LA-2871		1.0	
Date:		Monday, August 22, 2005		Sheet 2 of 41	

Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	NA	NA	NA
B+	AC or battery power rail for power circuit.	NA	NA	NA
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+0.9VS	0.9V switched power rail for DDR terminator	ON	OFF	OFF
+1.05VS	1.05V switched power rail	ON	OFF	OFF
+1.5VALW	1.5V always on power rail	ON	ON	ON*
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8V	1.8V power rail for DDR	ON	ON	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V power rail	ON	ON	OFF
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+12VALW	12V always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

Note : ON\* means that this power plane is ON only with AC power available, otherwise it is OFF.

External PCI Devices

DEVICE	PCI Device ID	IDSEL #	REQ/GNT #	PIRQ
1394	D0	AD20	2	A,B,C,D
LAN	D1	AD17	3	F
CARD BUS	D4	AD20	2	A,B,C,D
5IN1	D4	AD20	2	A,B,C,D
Mini-PCI	D2	AD18	1	G,H

KB910 I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
SM1 24C16	A0H	1 0 1 0 0 0 0 X b
SM1 SMART BATTERY	16H	0 0 0 1 0 1 1 X b
SM2 ADM0132 CPU THERMAL MONITOR	98H	1 0 0 1 1 0 0 X b
SM2 GMT G781-1 VGA THERMAL MONITOR	9AH	1 0 0 1 1 0 1 X b

ICH6M SM Bus address

Device	Address
Clock Generator ( ICS 954226)	1101 001Xb
DDRII DIMM0	1001 000Xb
DDRII DIMM2	1001 010Xb

STATE	SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON		HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1(Power On Suspend)		LOW	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)		LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)		LOW	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)		LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

Board ID / SKU ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra/Rc/Re	100K +/- 5%			
Board ID	Rb / Rd / Rf	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V
2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
5	100K +/- 5%	1.453 V	1.650 V	1.759 V
6	200K +/- 5%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

BOARD ID Table

Board ID	PCB Revision
0	0.1
1	
2	
3	
4	
5	
6	
7	

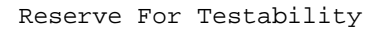
BTO Option Table

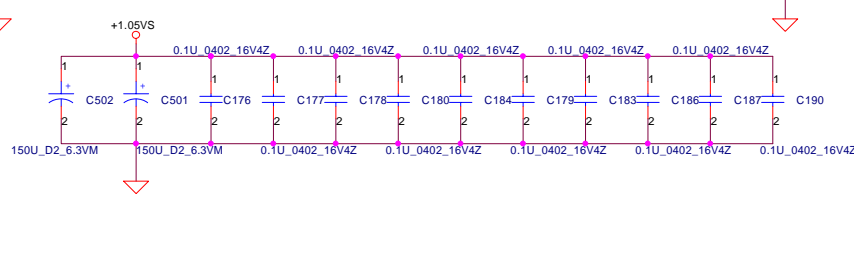
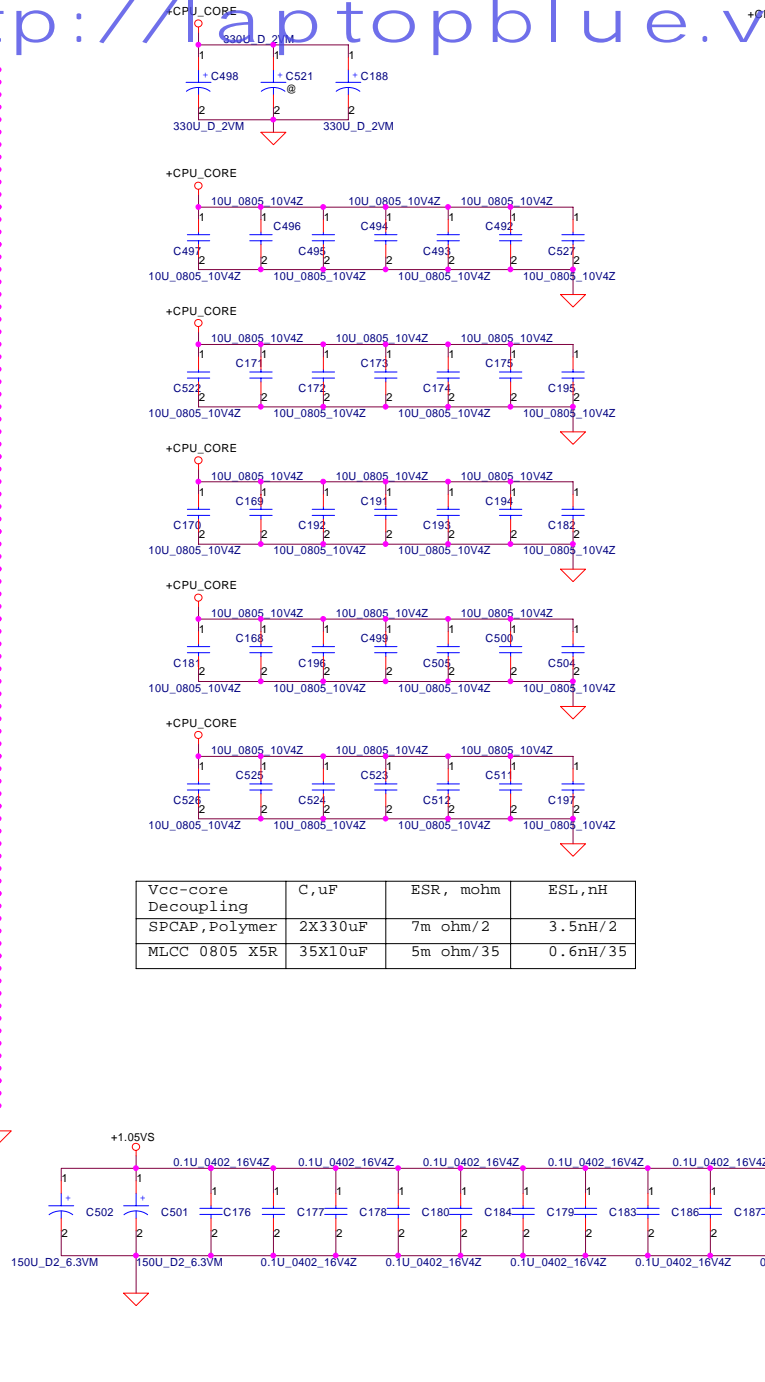
BTO Item	BOM Structure
VGA	GM@ PM@
Card Reader	5IN1@
Giga LAN	8100C@ 8110S@
New Card	NEWCARD@
IEEE1394	1394@
TV Tuner	TUNER@
INT MIC.	MIC@
KILL SW	WLAN@
CIR	CIR@
HWEQ	EQ@ NOEQ@

(TBD)

SKU ID Table

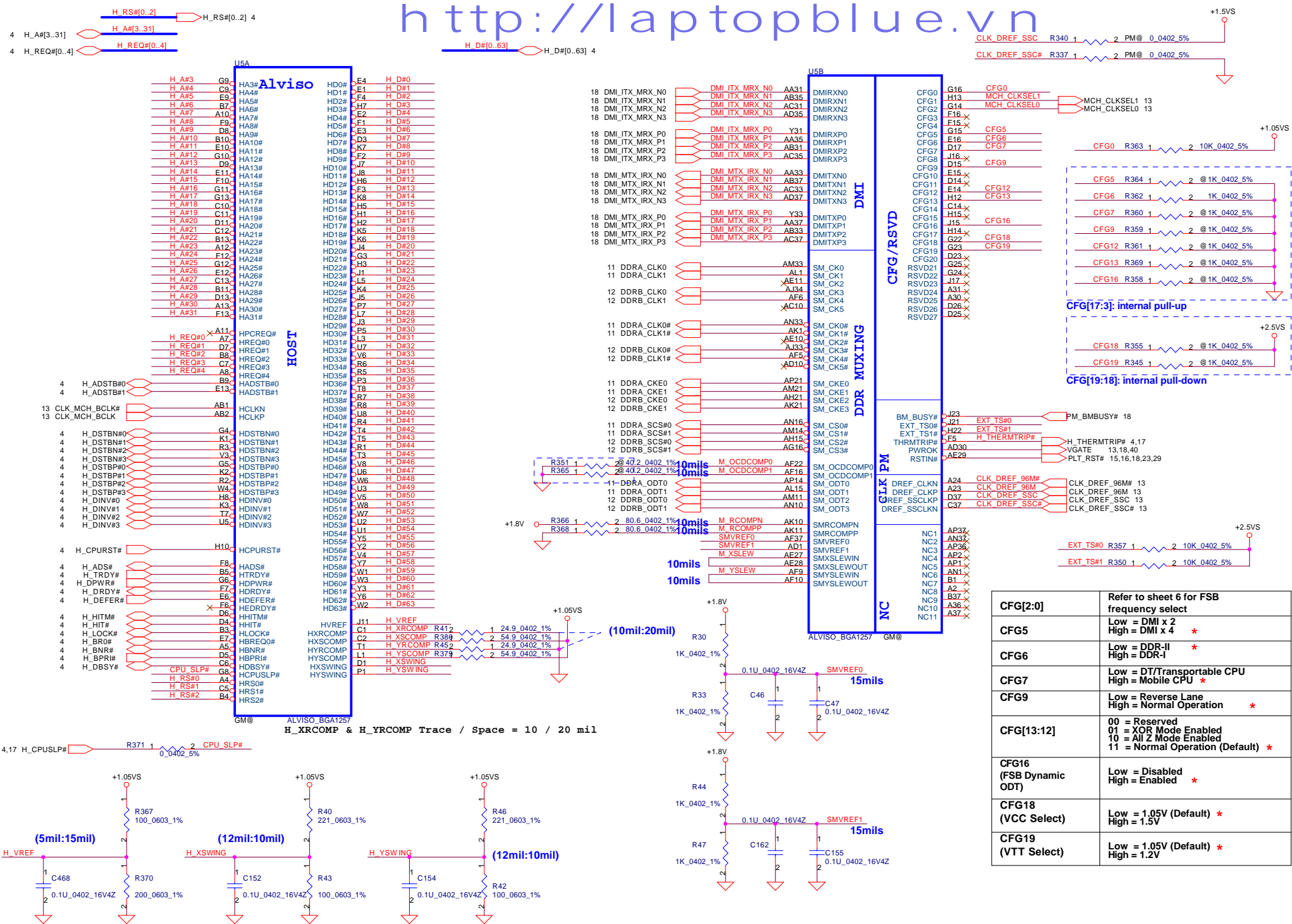
SKU ID	SKU
0	
1	
2	
3	
4	
5	
6	
7	





Security Classification		Compal Secret Data				Compal Electronics, Inc.								
Issued Date		2005/08/22		Deciphered Date		2008/08/22		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.								Dothan(2/2)						
								Size	Document Number				Rev	
								HTW00 MB LA-2871						1.0
Date:		Saturday, August 20, 2005			Sheet		5		of	41				

<http://laptopblue.vn>



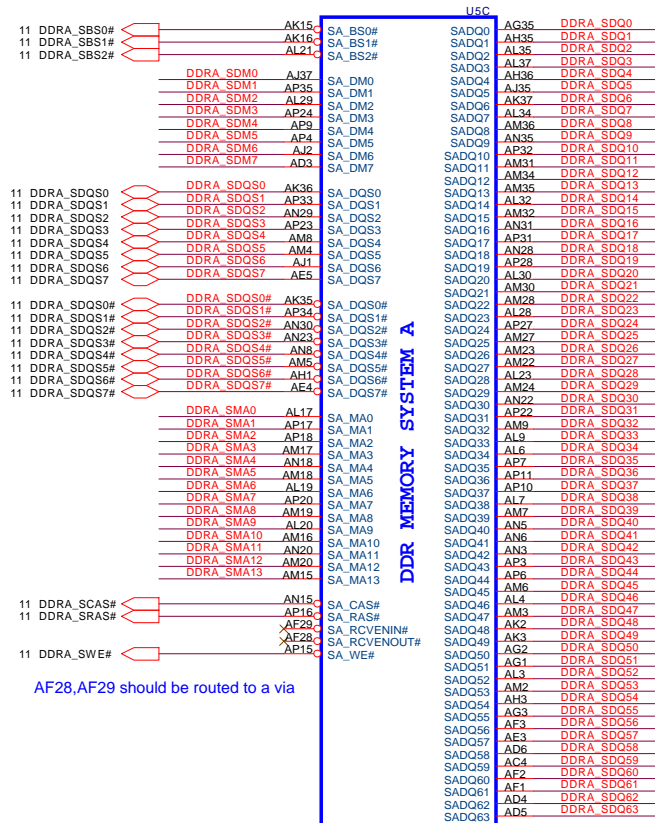
CFG[2:0]	Refer to sheet 6 for FSB frequency select
CFG5	Low = DMI x 2 High = DMI x 4 *
CFG6	Low = DDR-II High = DDR-I *
CFG7	Low = DT/Transportable CPU High = Mobile CPU *
CFG9	Low = Reverse Lane High = Normal Operation *
CFG[13:12]	00 = Reserved 01 = XOR Mode Enabled 10 = Ali Z Mode Enabled 11 = Normal Operation (Default) *
CFG16 (FSB Dynamic ODT)	Low = Disabled High = Enabled *
CFG18 (VCC Select)	Low = 1.05V (Default) * High = 1.5V
CFG19 (VTT Select)	Low = 1.05V (Default) * High = 1.2V

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title Alviso HOST(1/5)		
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
					HTW00 M/B LA-2871	1.0
Date: Saturday, August 20, 2005				Sheet	6	of 41

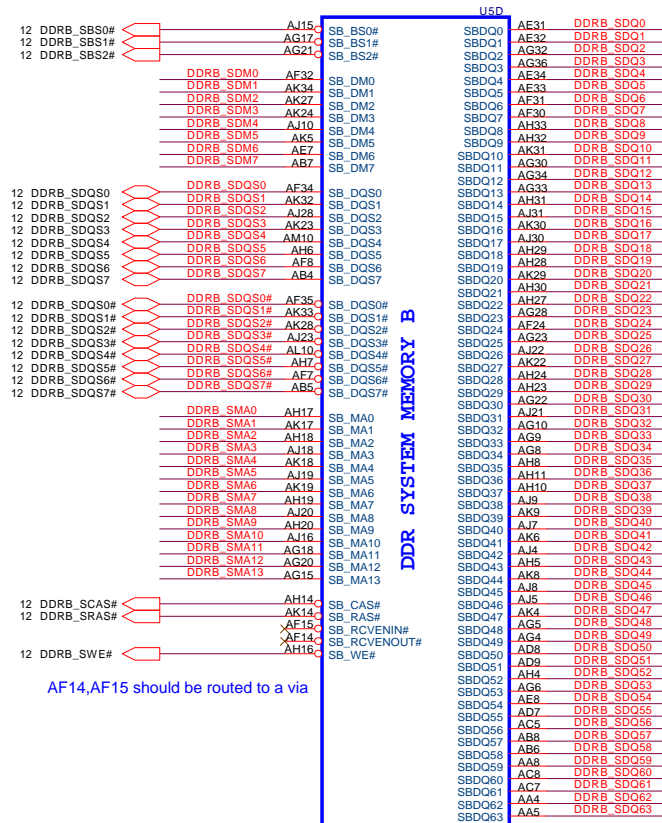


11 DDRA\_SDQ[0..63] → DDRA\_SDQ[0..63]  
11 DDRA\_SDM[0..7] → DDRA\_SDM[0..7]  
11 DDRA\_SMA[0..13] → DDRA\_SMA[0..13]

12 DDRB\_SDQ[0..63] → DDRB\_SDQ[0..63]  
12 DDRB\_SDM[0..7] → DDRB\_SDM[0..7]  
12 DDRB\_SMA[0..13] → DDRB\_SMA[0..13]



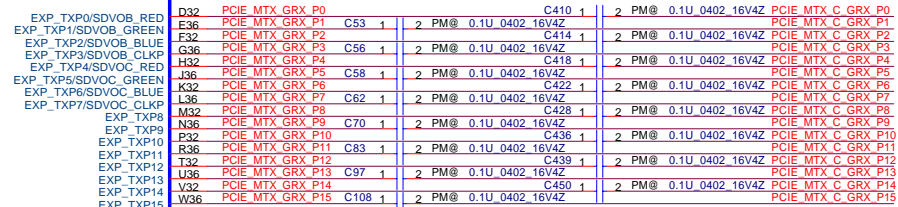
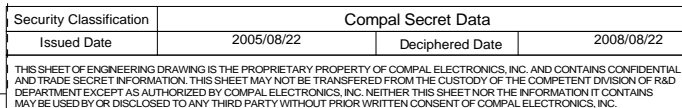
DDR MEMORY SYSTEM A



DDR SYSTEM MEMORY B

GM@ ALVISO\_BGA1257

GM@ ALVISO\_BGA1257



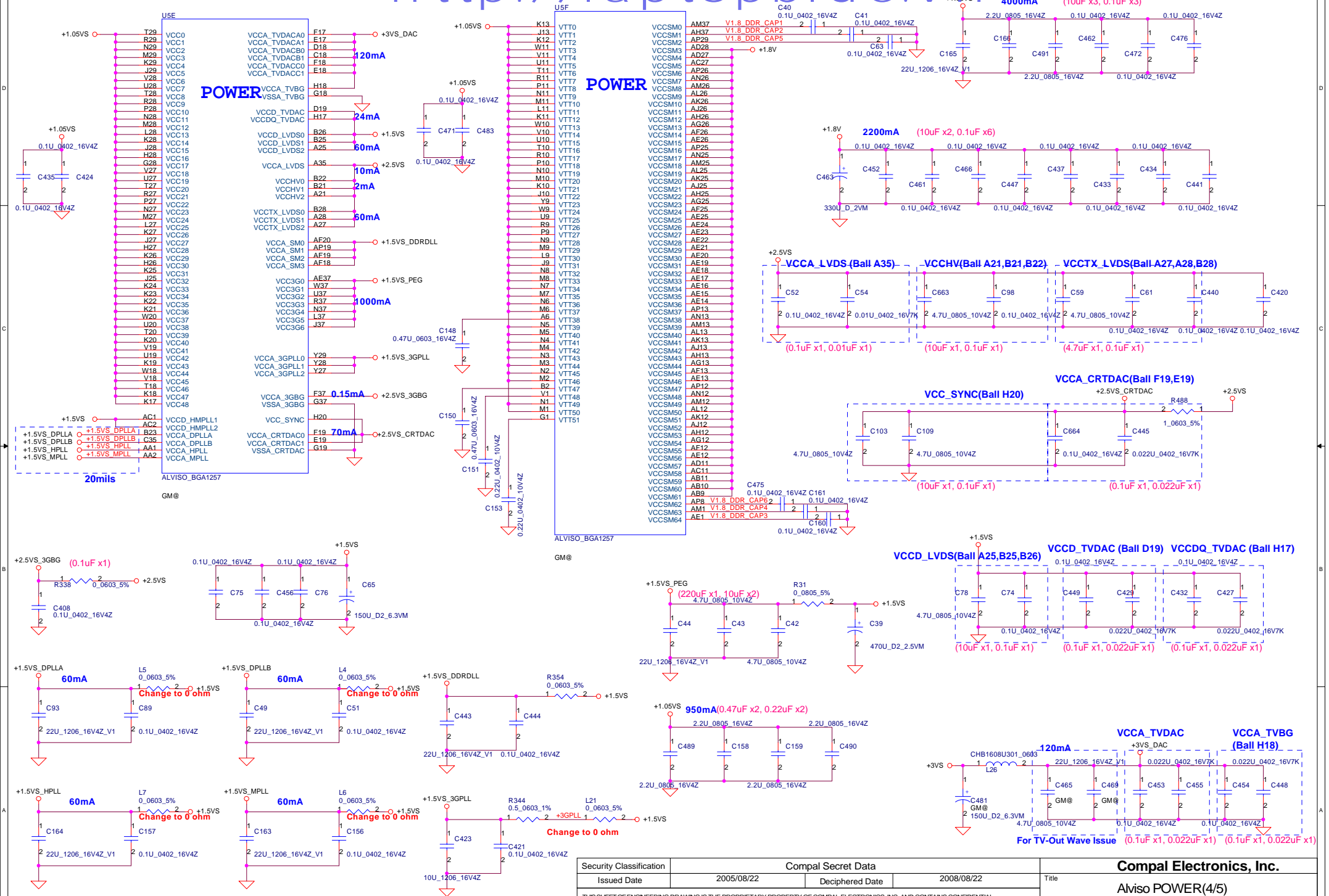
Alviso PCI-E(3/5)

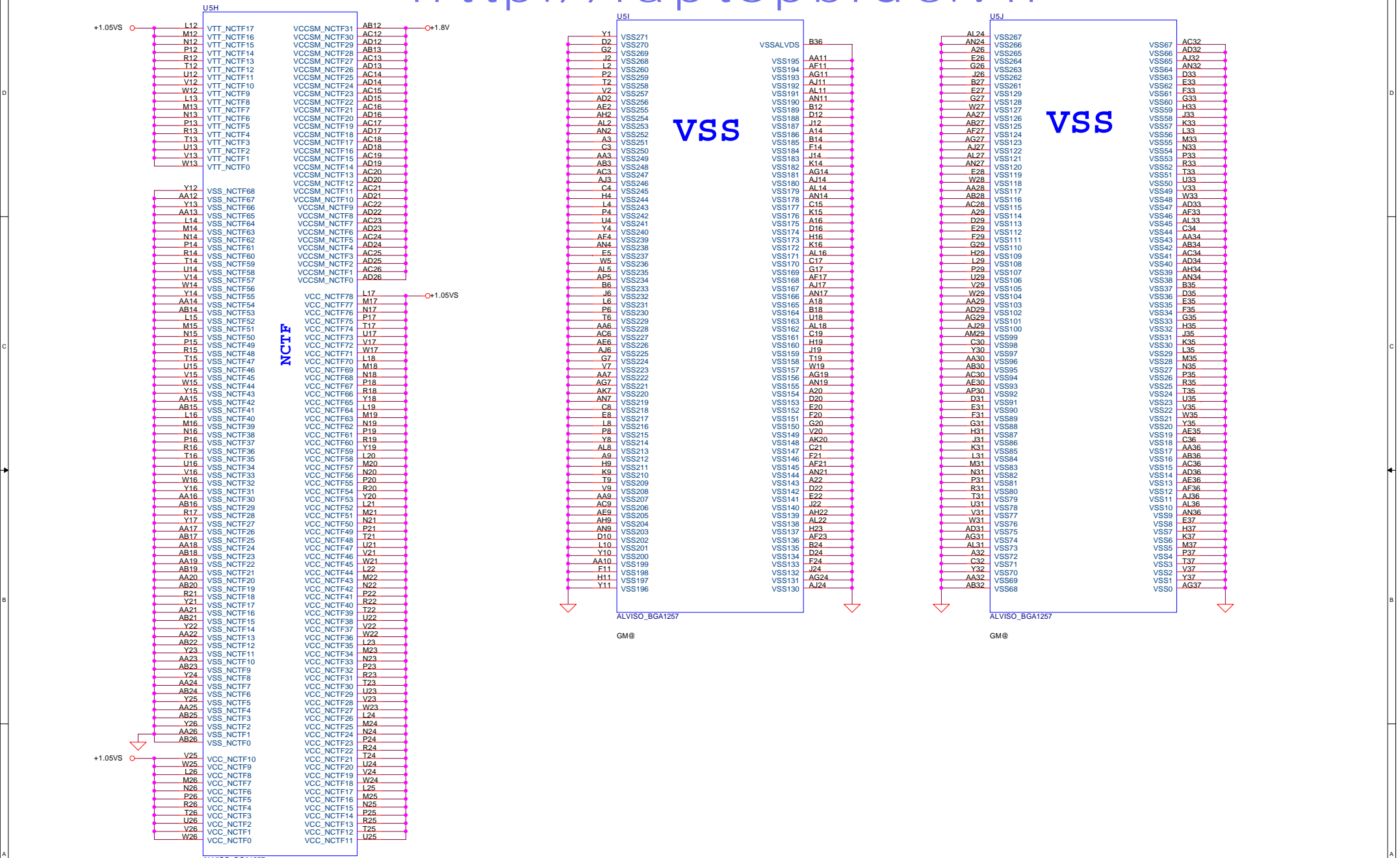
HTW00 M/B LA-2871

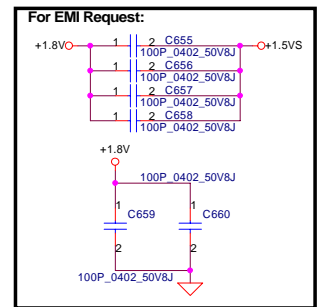
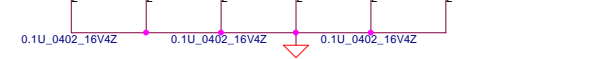
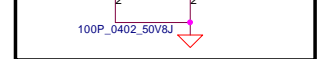
Rev	1.0
-----	-----

Date: Saturday, August 20, 2005 Sheet 8 of 41

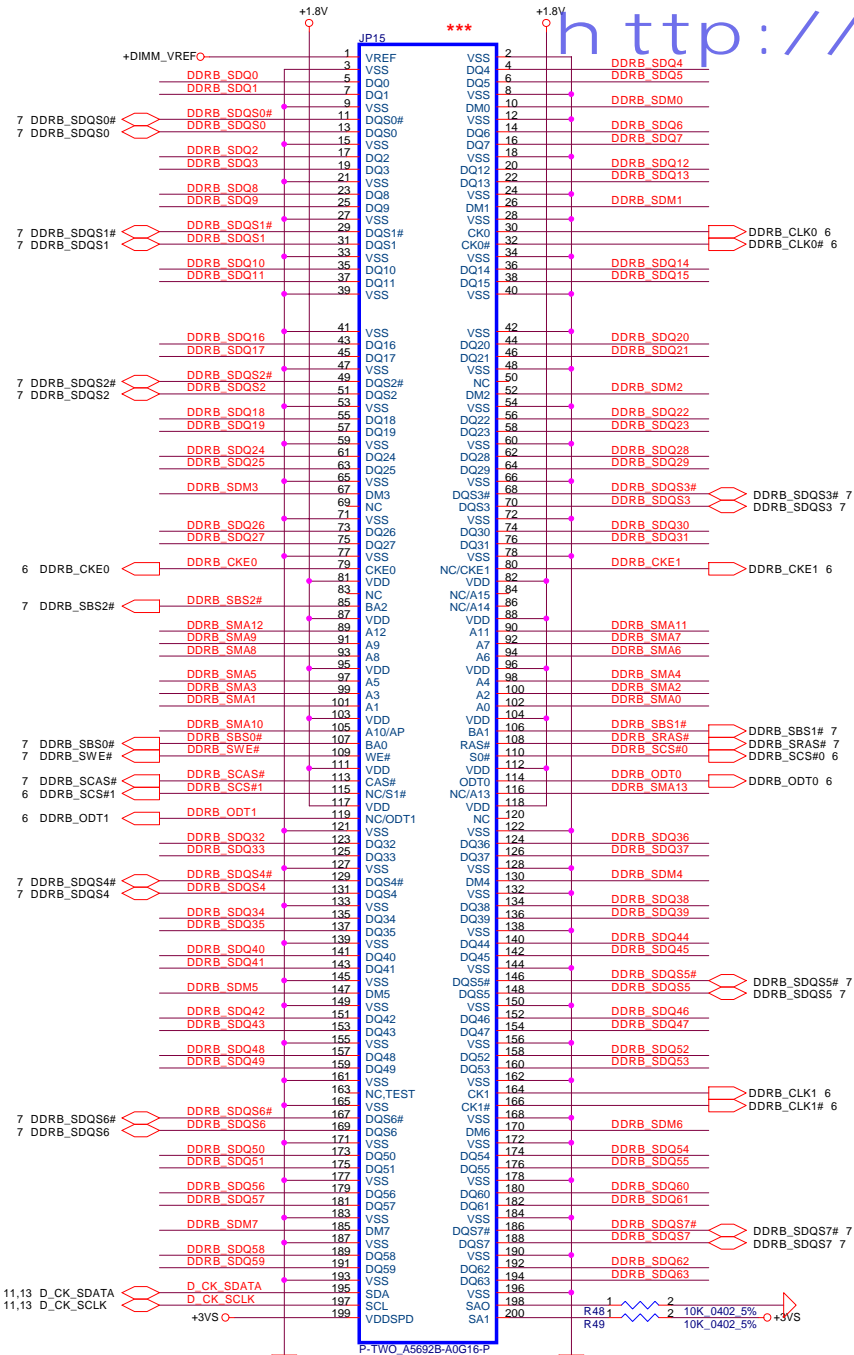




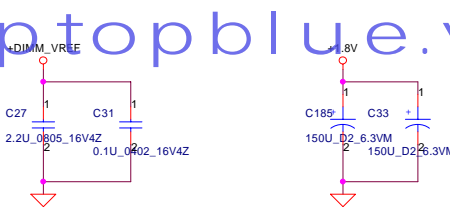




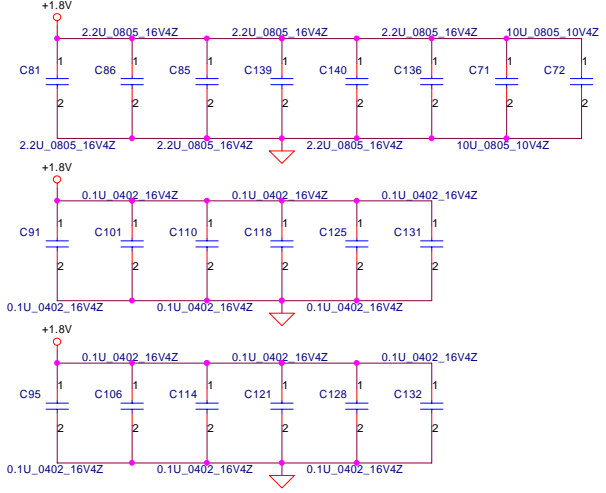
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	DDRII-SODIMM SLOT0	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
					HTW00 M/B LA-2871	1.0
				Date:	Saturday, August 20, 2005	Sheet 11 of 41



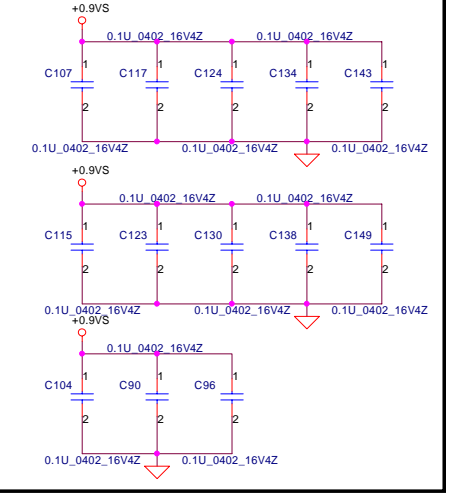
DIMM1 STD H:9.2mm (BOT)



Layout note : Place one 0.1u cap close to every DDR-SODIMM pin  
one 2.2u cap close to every 2 0.1u cap

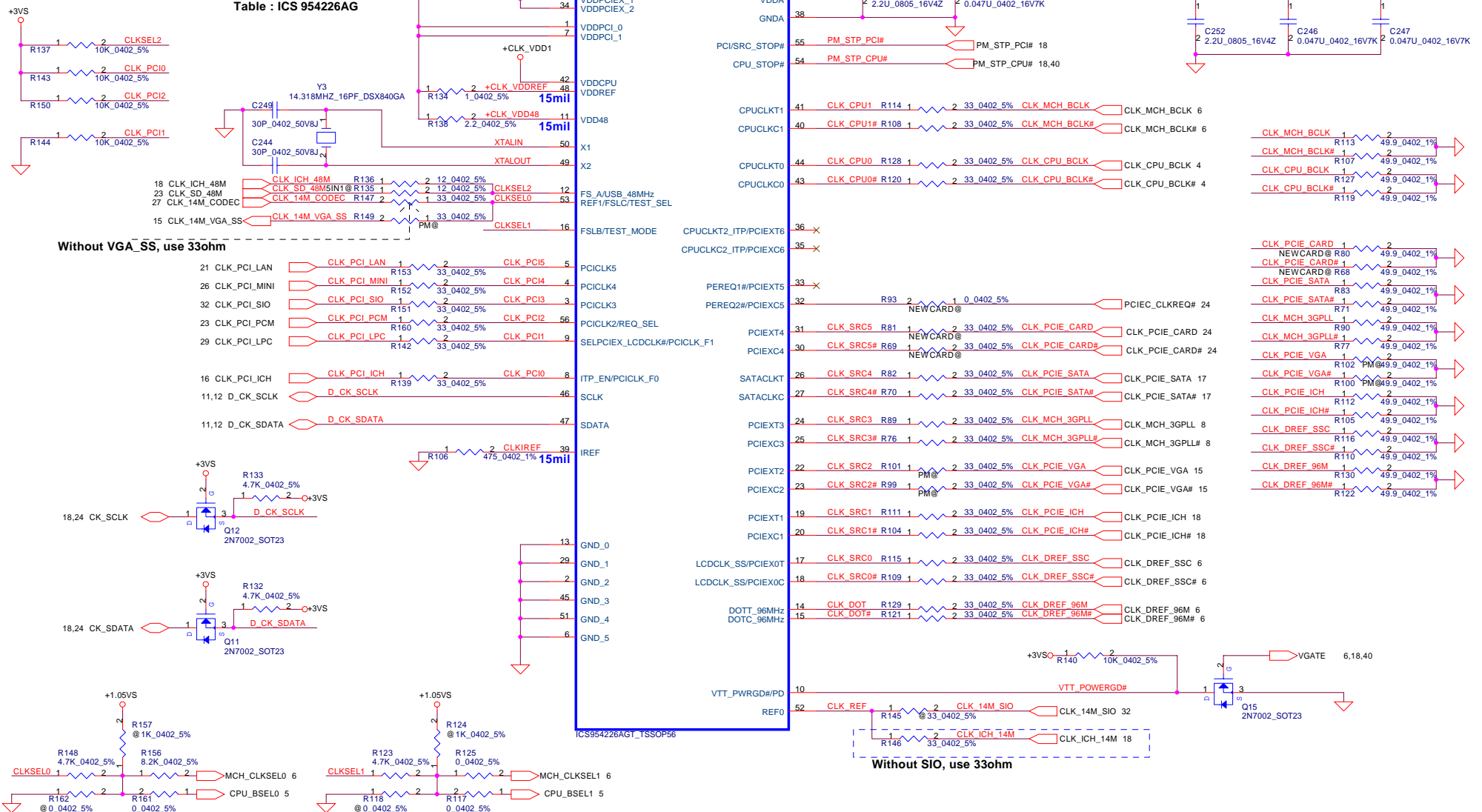


Layout note :  
Place one cap close to every 2 pull up resistors termination to +0.9VS



FSC	FSB	FSA	CPU MHz	SRC MHz	PCI MHz
1	0	1	100	100	33.3
0	0	1	133	100	33.3
0	1	1	166	100	33.3
0	1	0	200	100	33.3

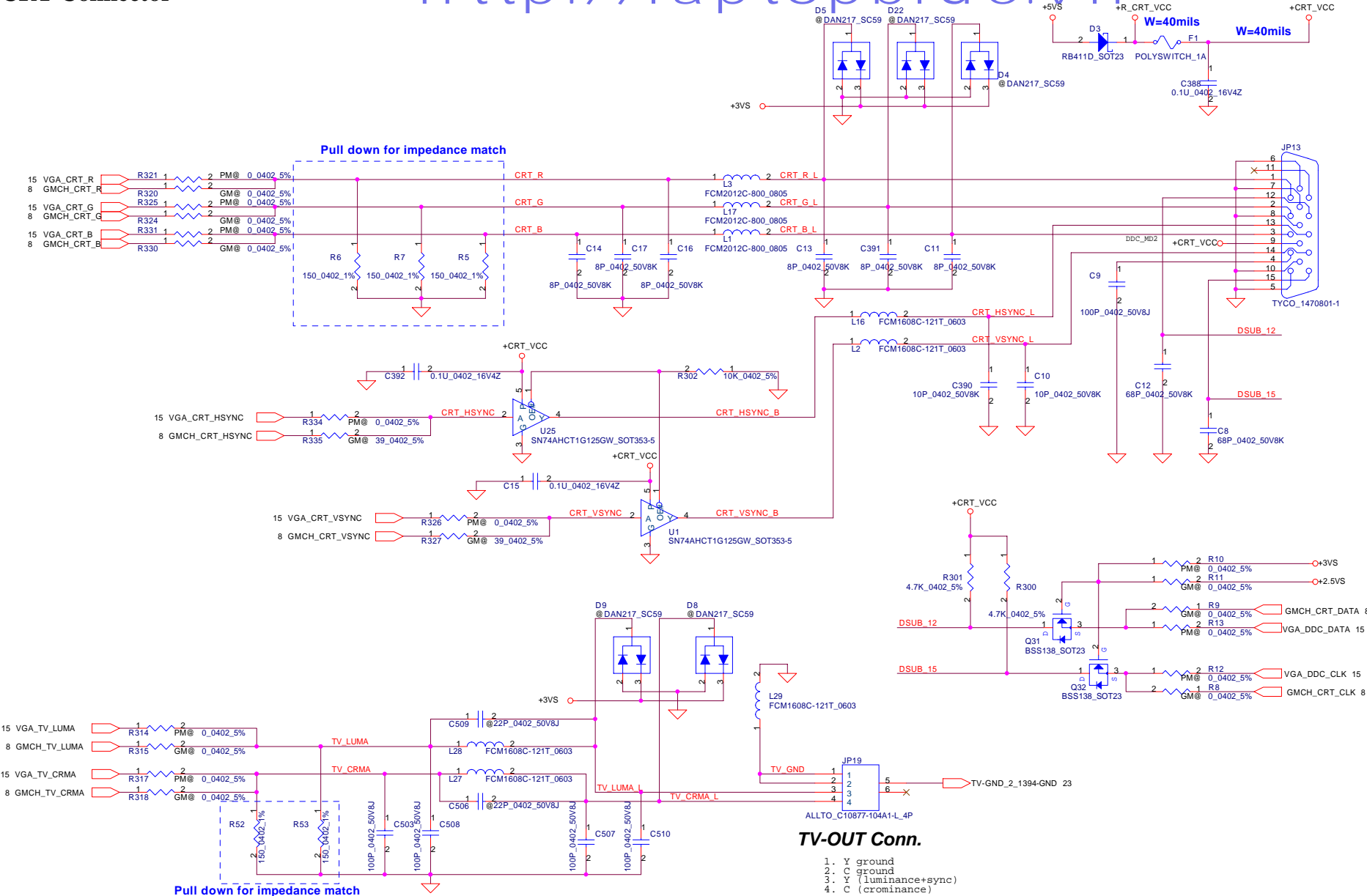
Table : ICS 954226AG





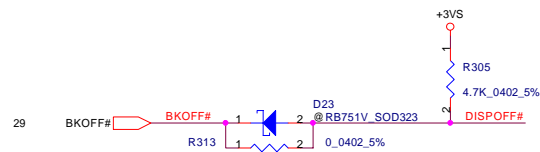
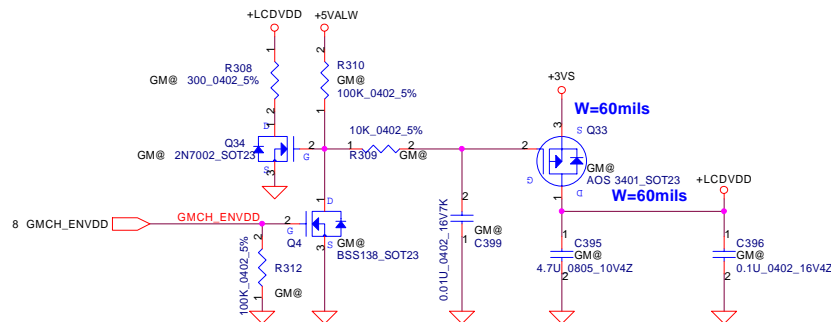
CRT Connector

http://laptopblue.vn

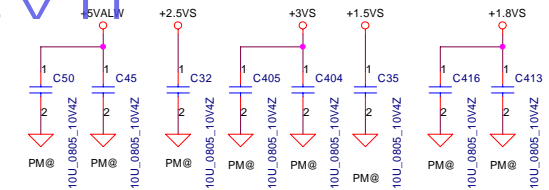
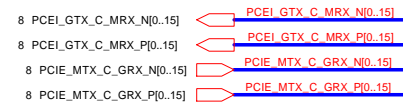
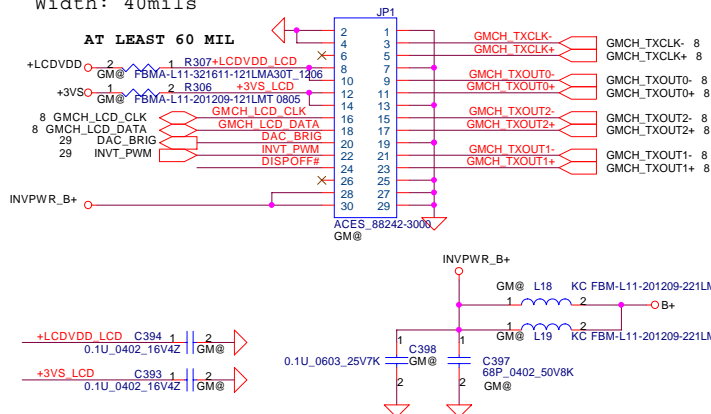




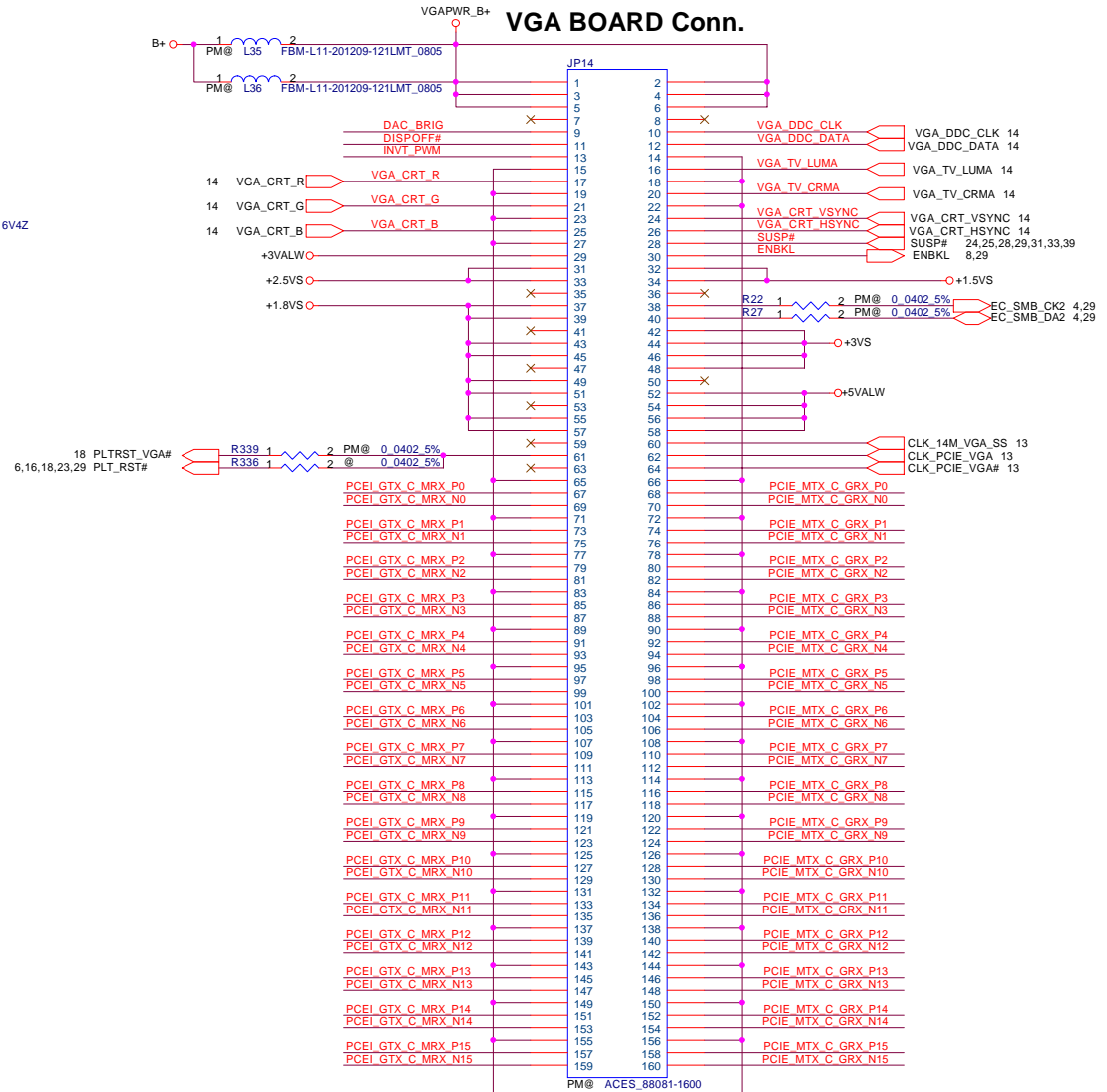
## LCD POWER CIRCUIT



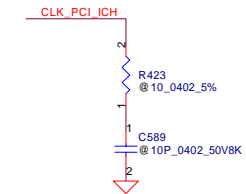
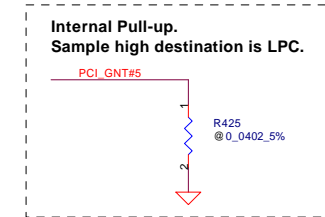
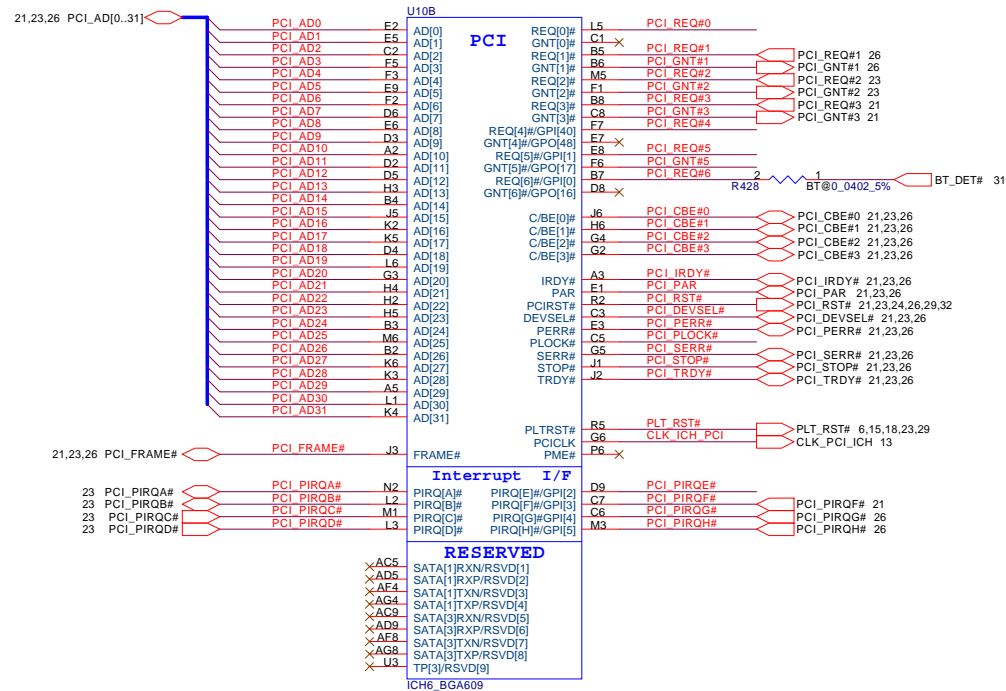
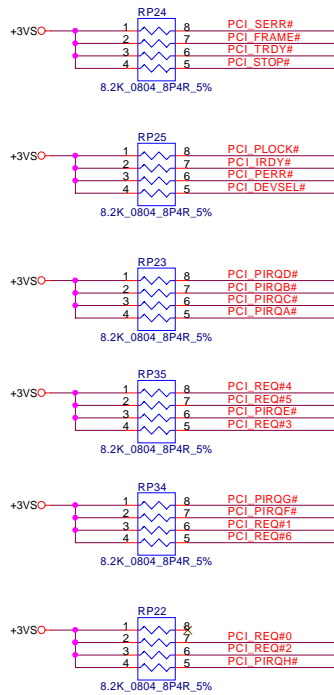
Width: 40mils



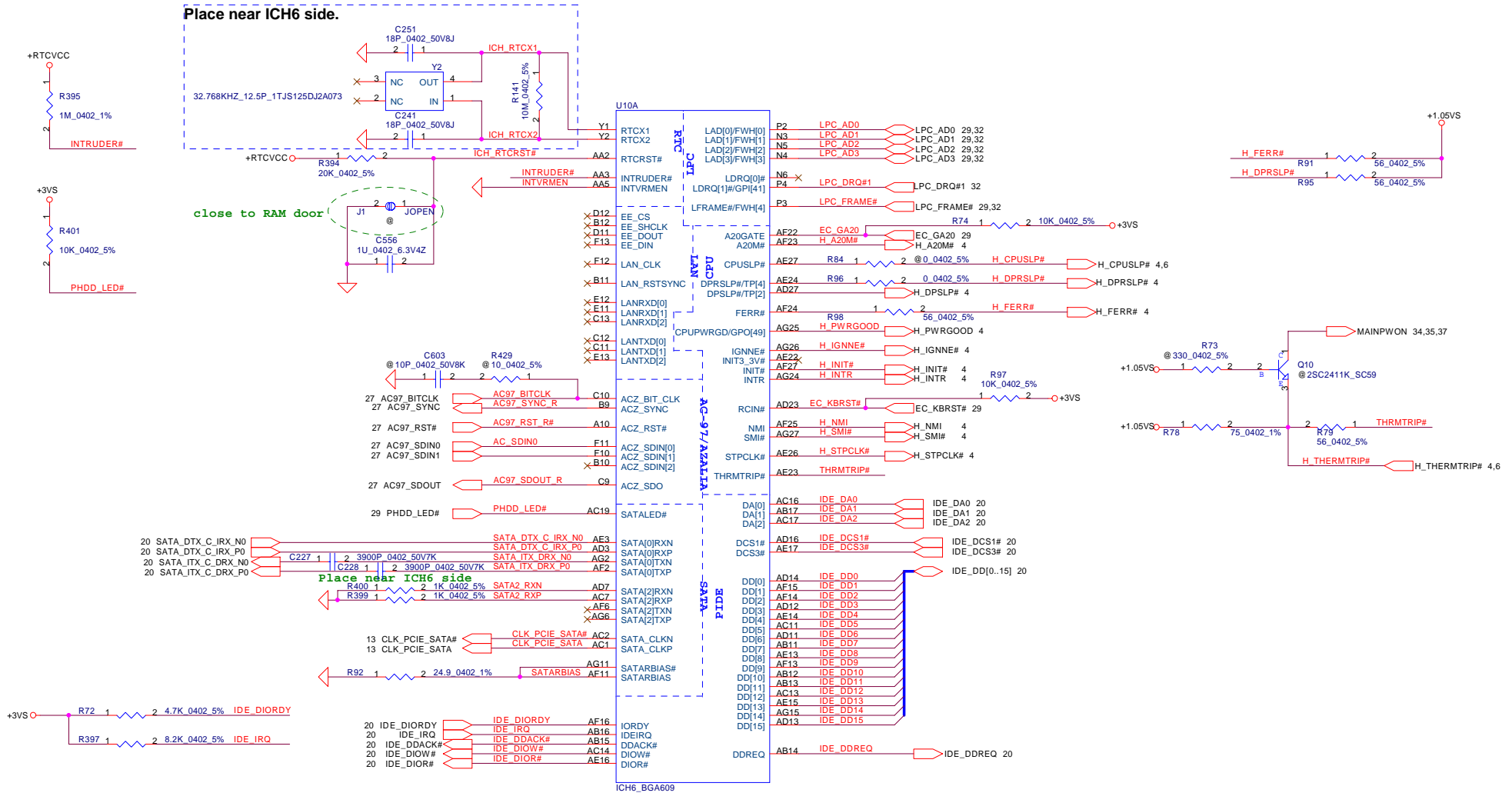
**VGA BOARD Conn.**



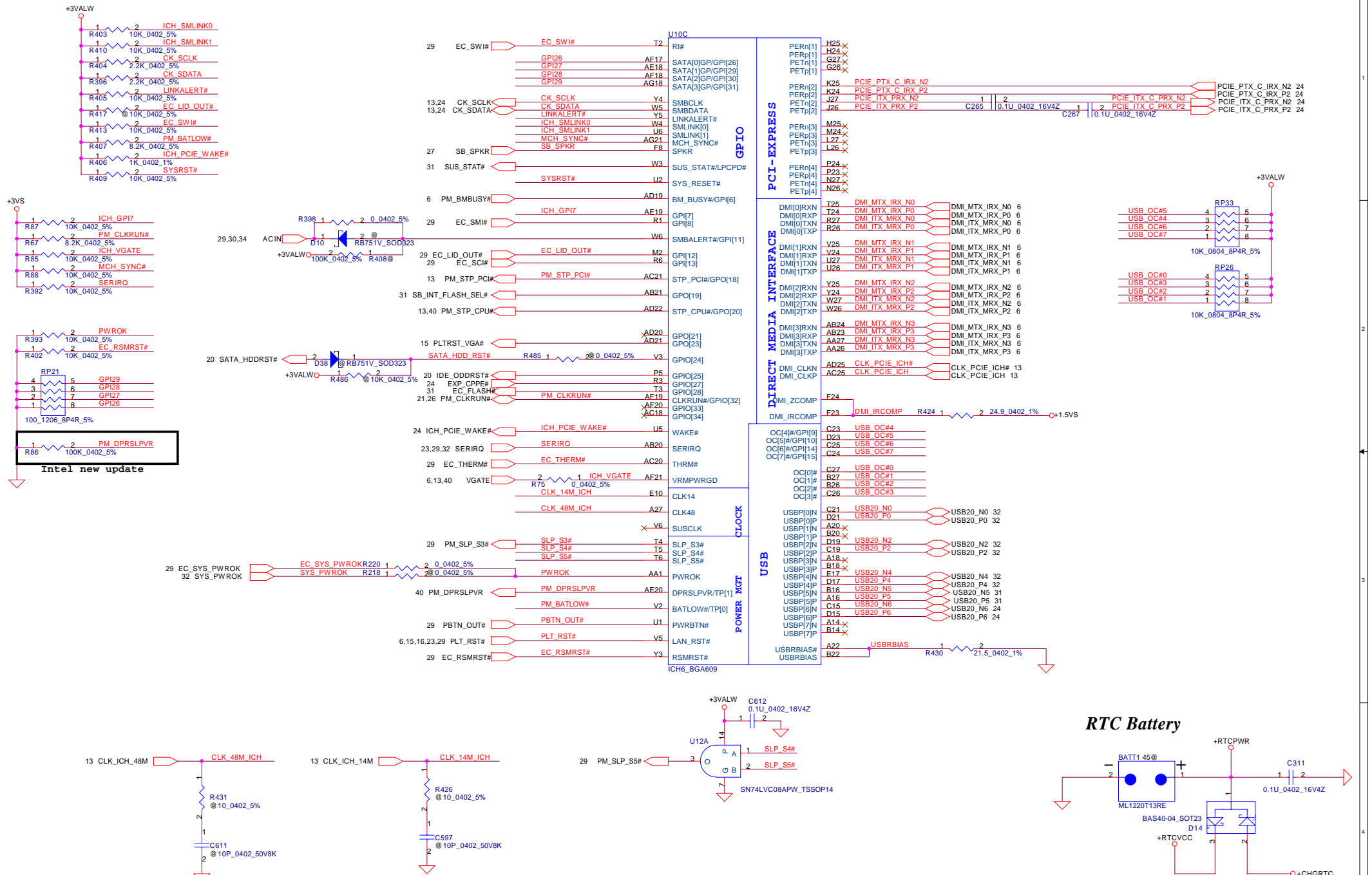
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	VGA / LCD CONN.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	Rev 1.0
				HTW00 M/B LA-2871		
				Date: Saturday, August 20, 2005	Sheet	15 of 41



**ICH6-M**  
(R3:SA828010890)  
(R1:SA8280108B0)

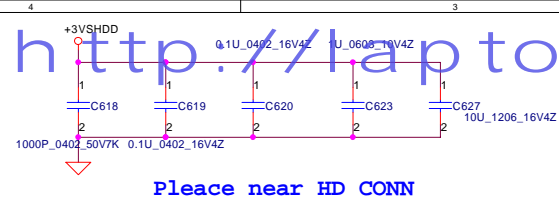


<http://laptopblue.vn>



Security Classification		Compal Secret Data		Compal Electronics, Inc.				
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title ICH6(3/4)_USB,PM,LAN,GPIO				
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 1.0		
				HTW00 MB LA-2871				
				Date:	Saturday, August 20, 2005	Sheet 18	of 41	

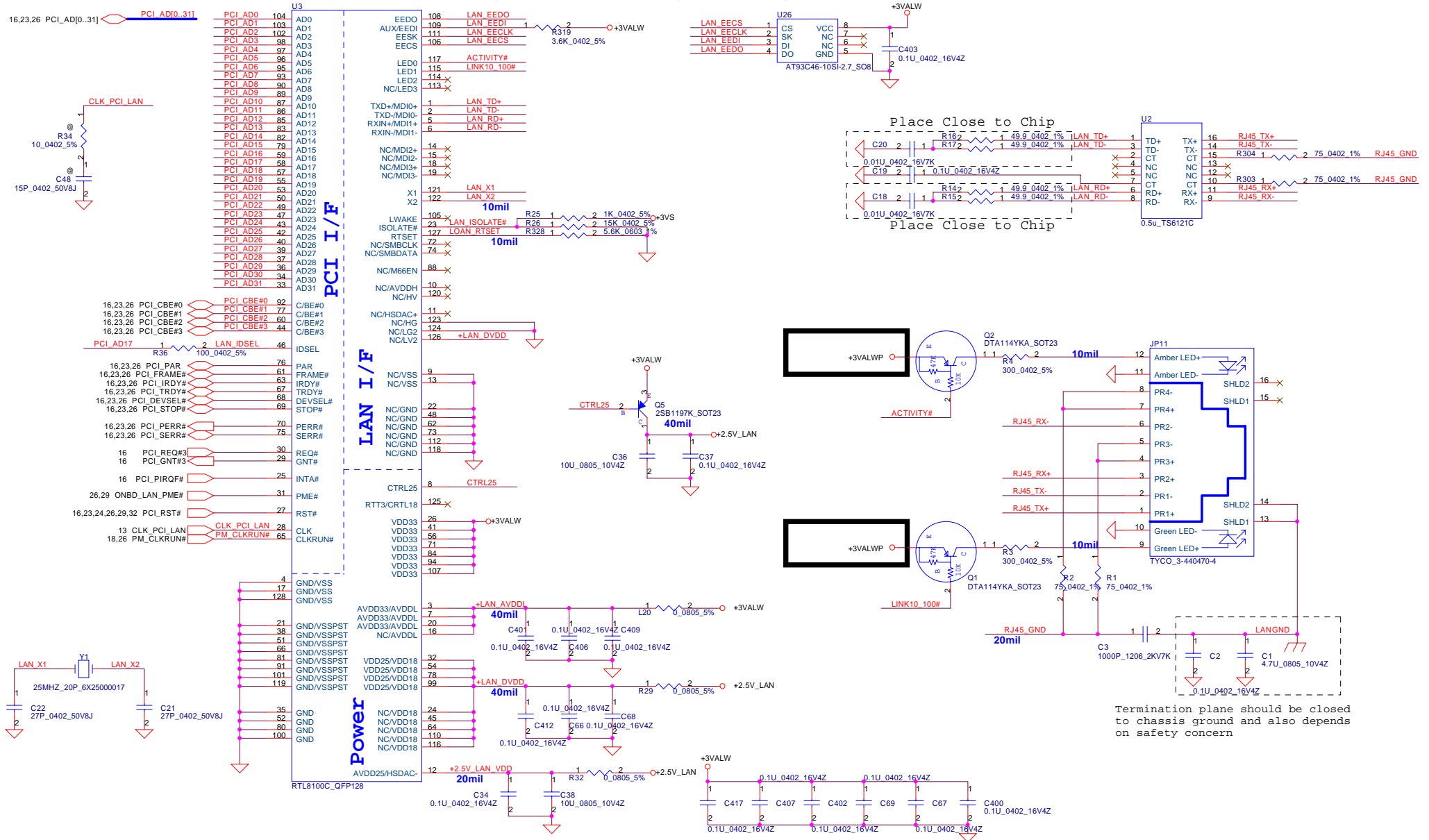


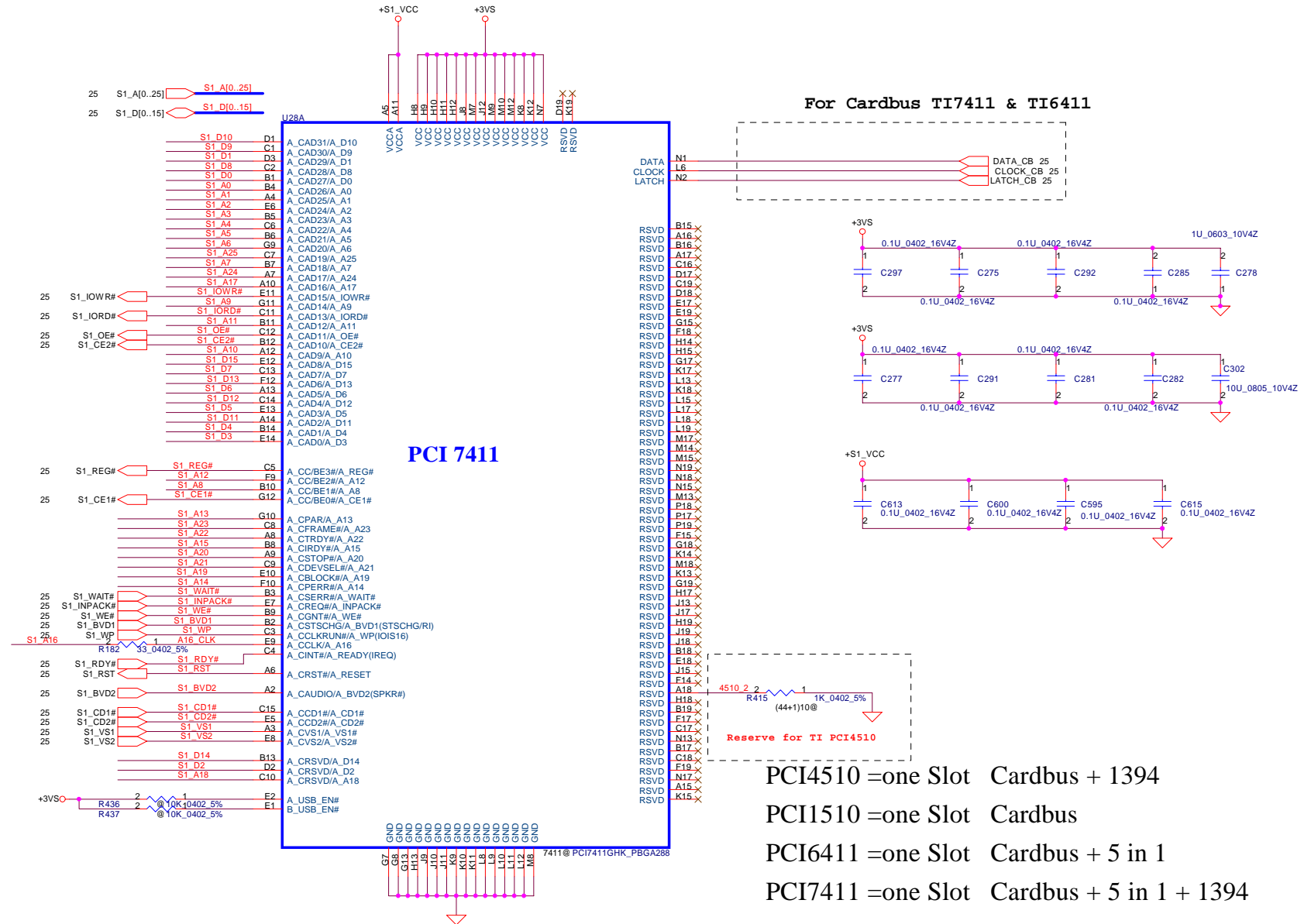


The diagram shows a 5V regulator circuit. A +5VS source is connected to the input of a 5V regulator. The regulator's output is connected to a load. A 0.1uF capacitor (C199) is connected between the input and ground. A 10uF capacitor (C200) is connected between the output and ground. The ground is connected to a common ground symbol.

Security Classification		Compal Secret Data		<div> <div>Compal Electronics, Inc.</div> </div>			
Issued Date	2005/08/22	Deciphered Date	2008/08/22	<div> <div>SATA/PATA-HDD, PATA ODD Connector</div> </div>			
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	
					HTW00 M/B LA-2871	1.0	
				Date:	Saturday, August 20, 2005	Sheet	20 of 41

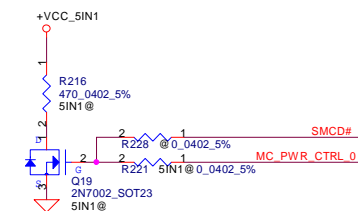
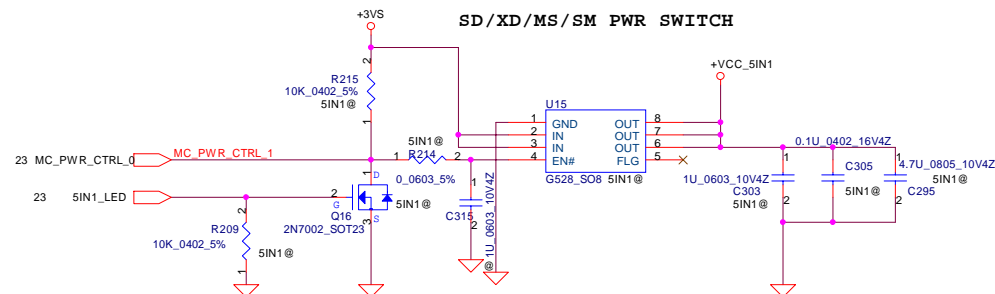
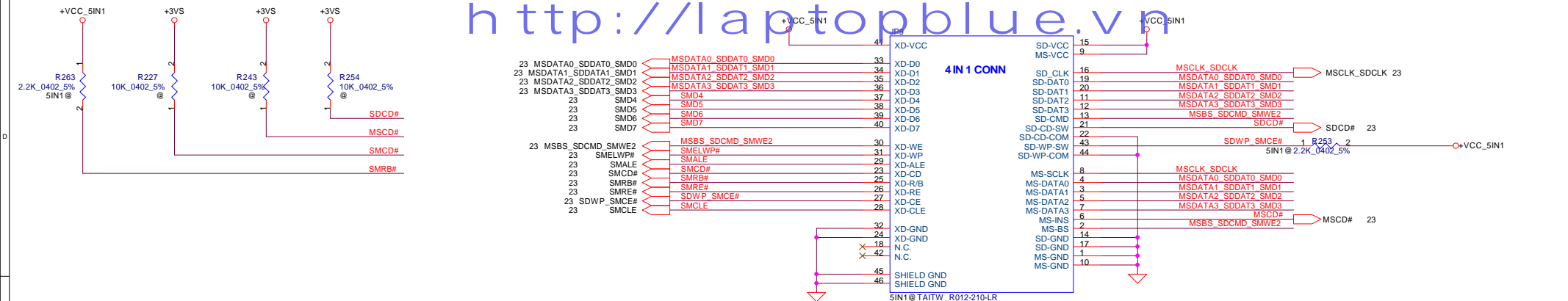




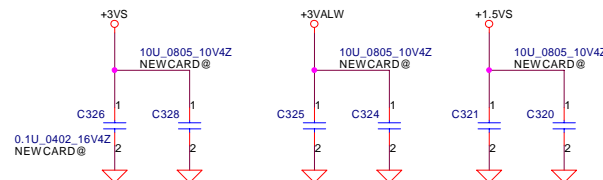
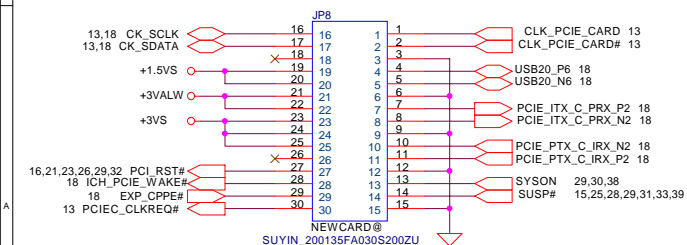




http://laptopblue.vn



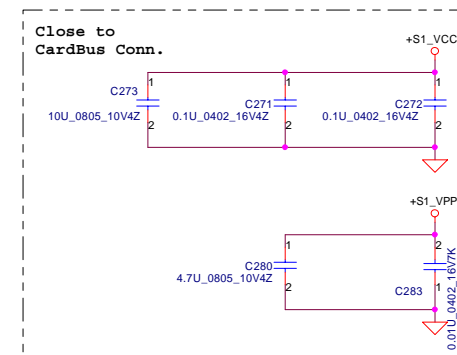
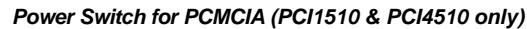
## New Card Connector



60milsImax = 1.35A  
40mil Imax = 0.275A  
40mil Imax = 0.75A

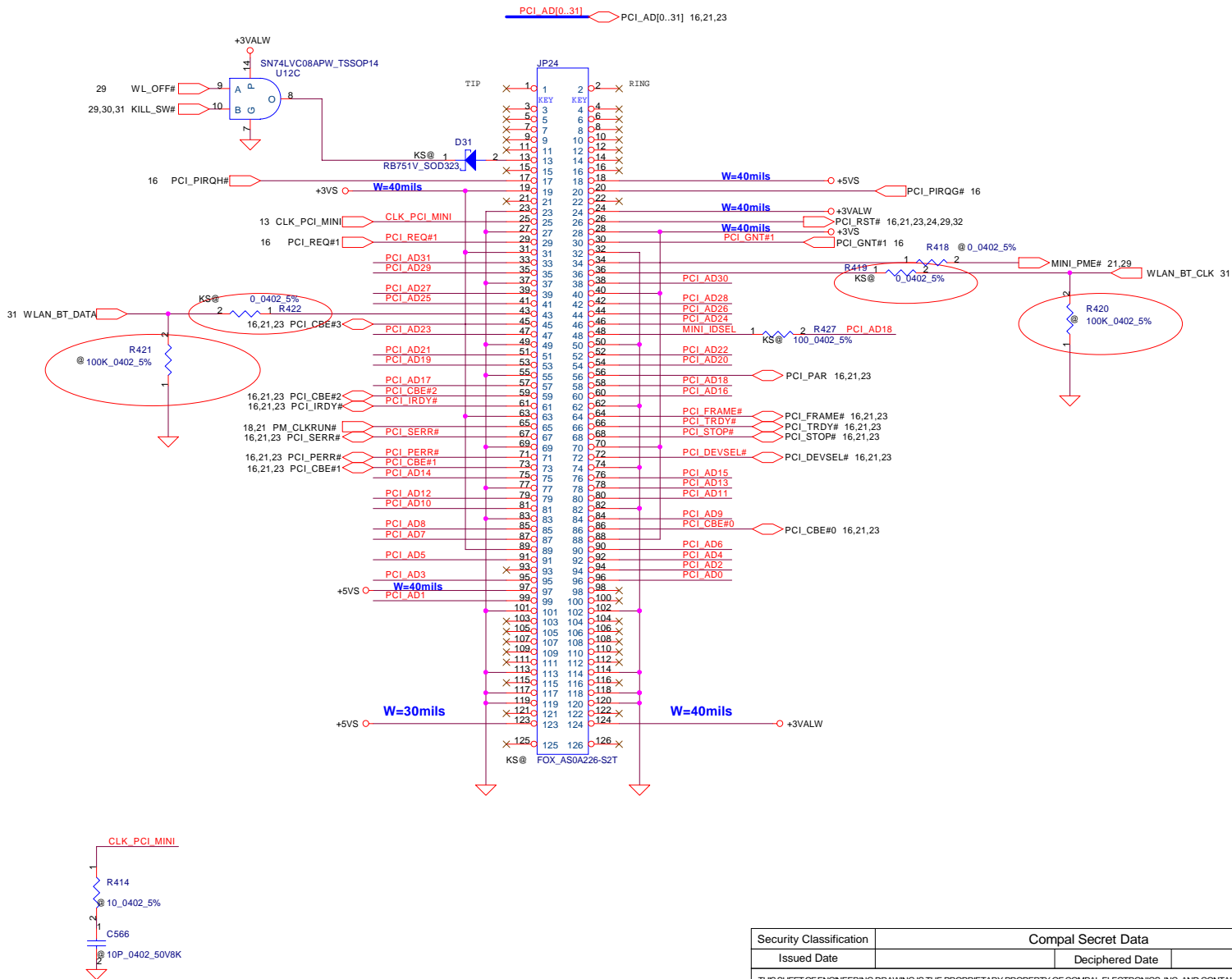
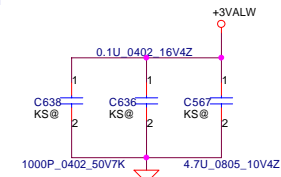
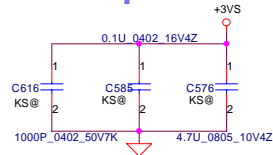
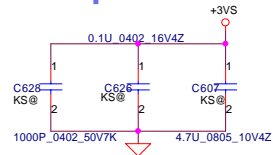
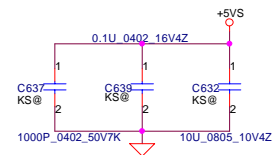
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				5in1 Socket&NewCard/B Conn	
Size		Document Number		Rev	
Custom		HTW00 M/B LA-2871		1.0	
Date:		Saturday, August 20, 2005		Sheet 24 of 41	

### Power Switch for PCMCIA (PCI7411 & PCI6411 only)

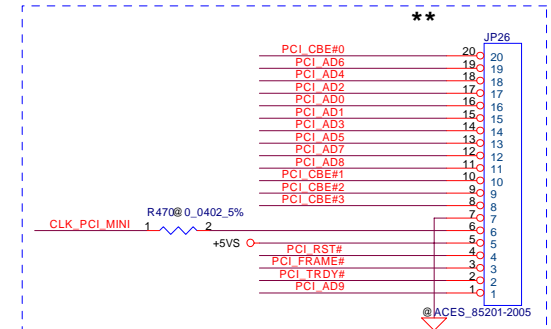


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	Cardbus Socket
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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	1.0
				Document Number HTW00 M/B LA-2871	
Date:	Saturday, August 20, 2005	Sheet	25	of	41

<http://laptopblue.vn>



### Port 80 Debug Card Connector

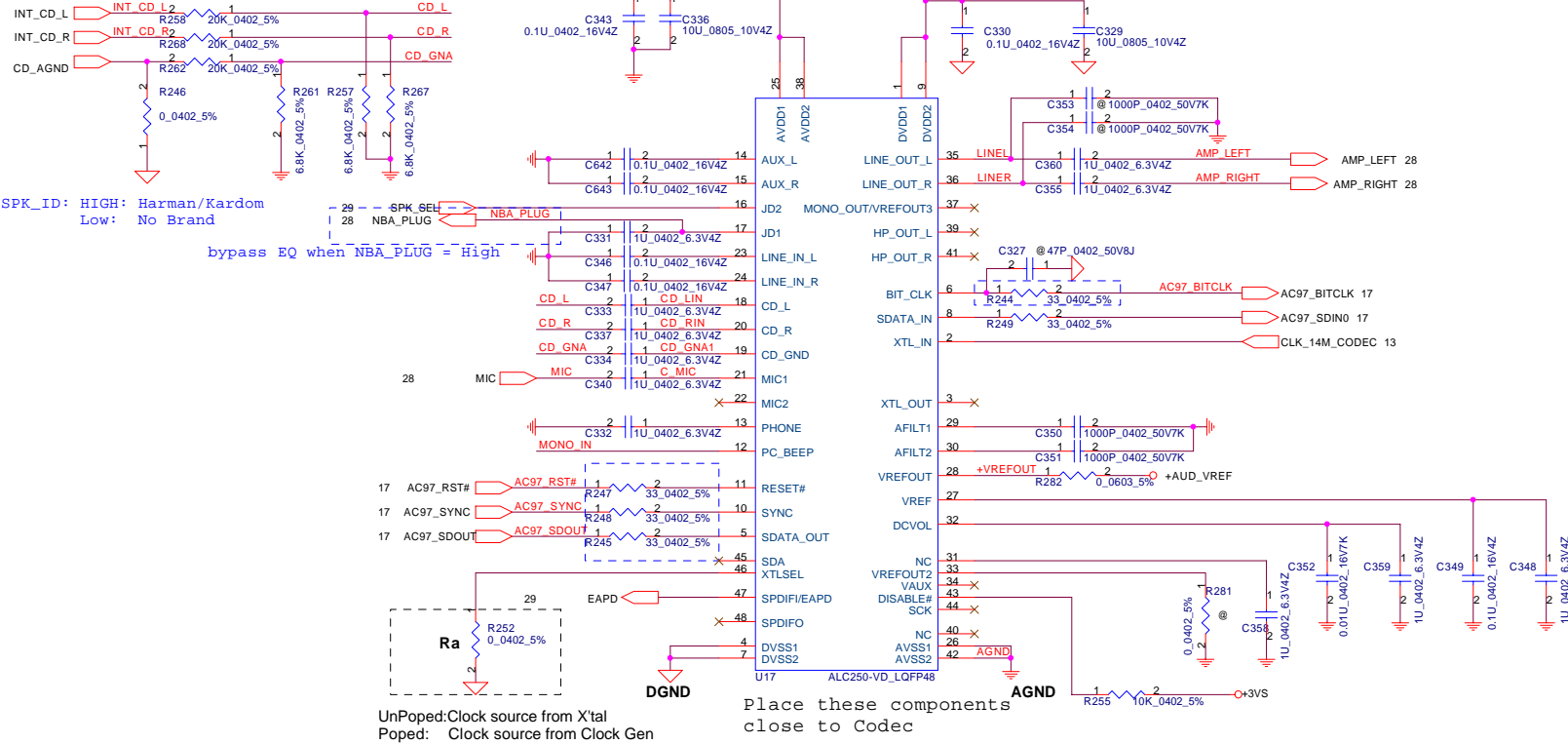


**Place under MiniPCI Socket**

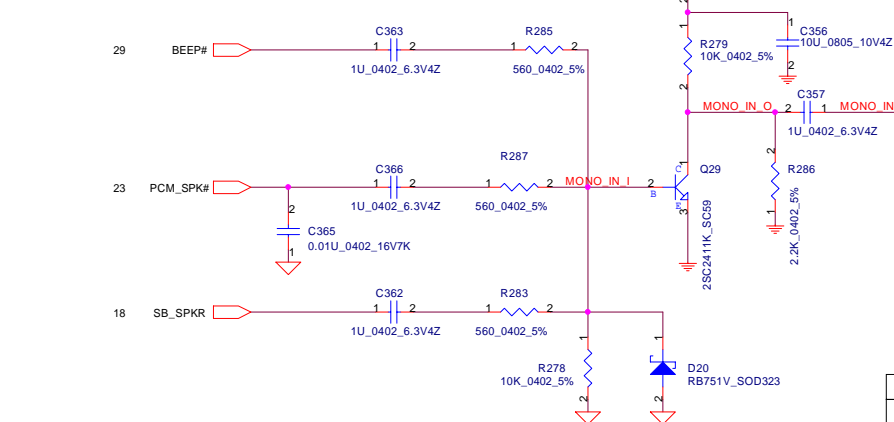
Security Classification		Compal Secret Data		<div>Compal Electronics, Inc.</div> <div>Mini PCI Slot</div>			
Issued Date		Deciphered Date		<div>Title</div> <div>Size    Document Number</div> <div> <div>HTW00 M/B LA-2871</div> <div> <div>Date: Saturday, August 20, 2005</div> <div>Sheet 26 of 41</div> </div> </div>			
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.				<div>Rev 1.0</div>			



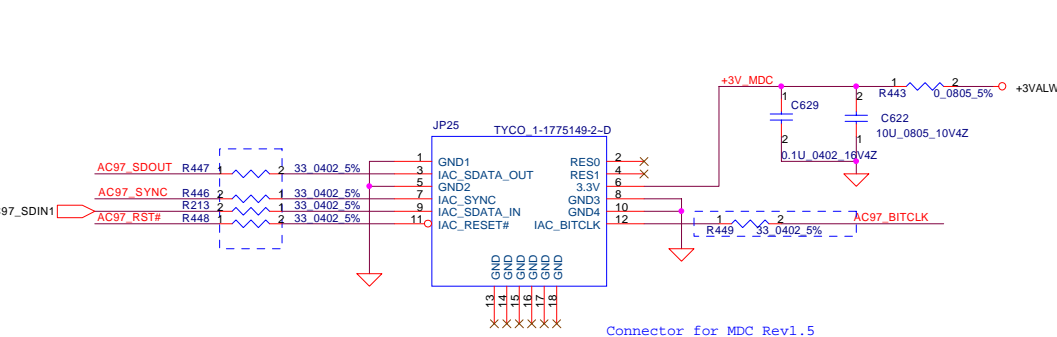
AC97 Codec



System Sound

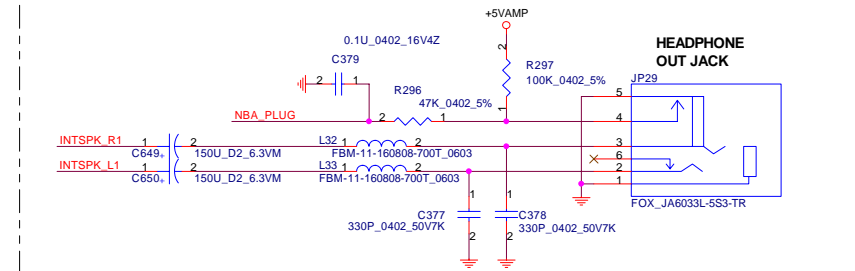
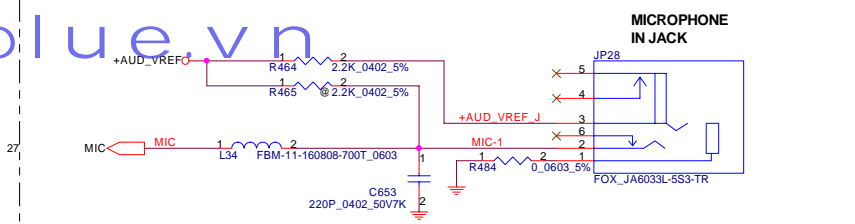
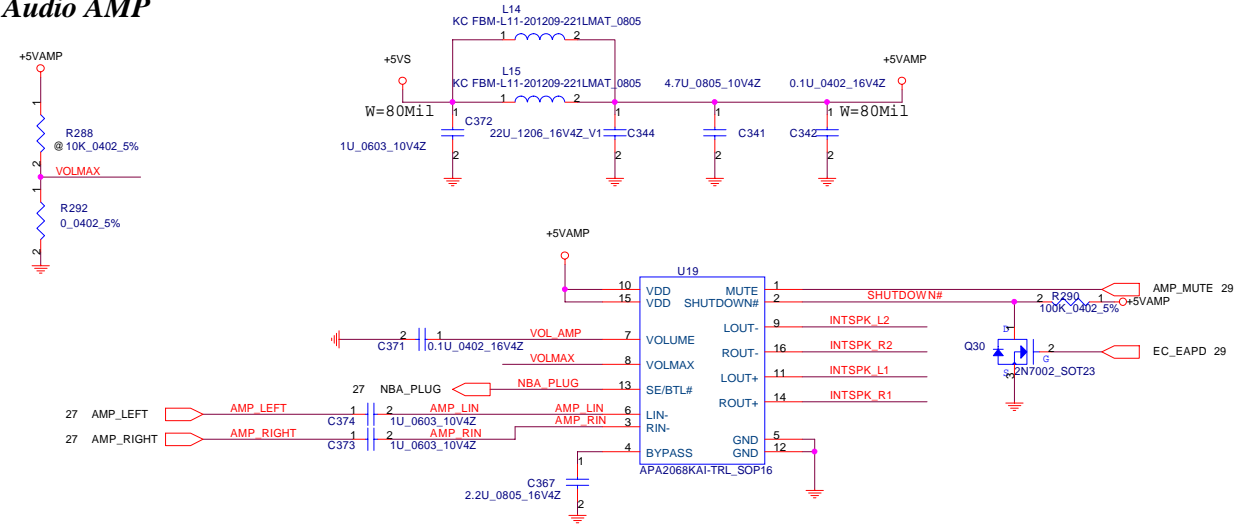


MDC Connector

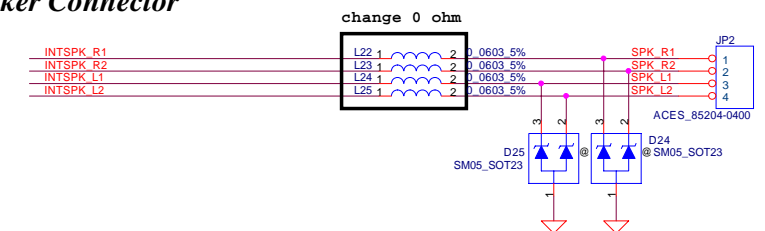


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 OR THE DESIGN OR CONSTRUCTION THEREOF SHALL BE REPRODUCED, COPIED, OR IN ANY MANNER DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				AC97 Codec, ALC250&MDC	
Size	Document Number	HTW00 M/B LA-2871		Rev 1.0	
Date: Saturday, August 20, 2005		Sheet 27 of 41			

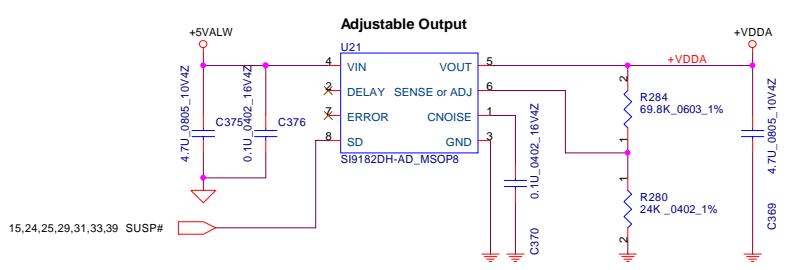
Audio AMP



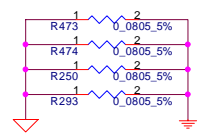
Speaker Connector



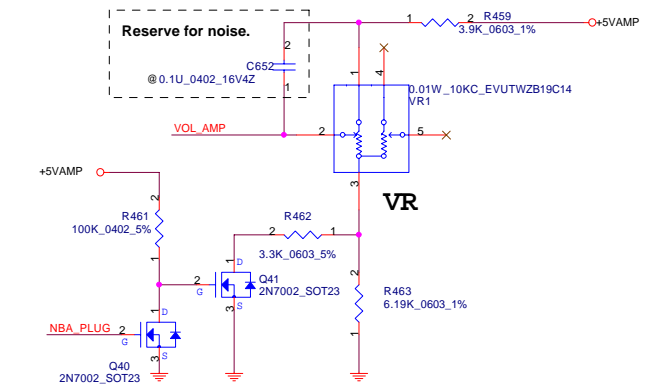
Regulator for CODEC



Moat Bridge



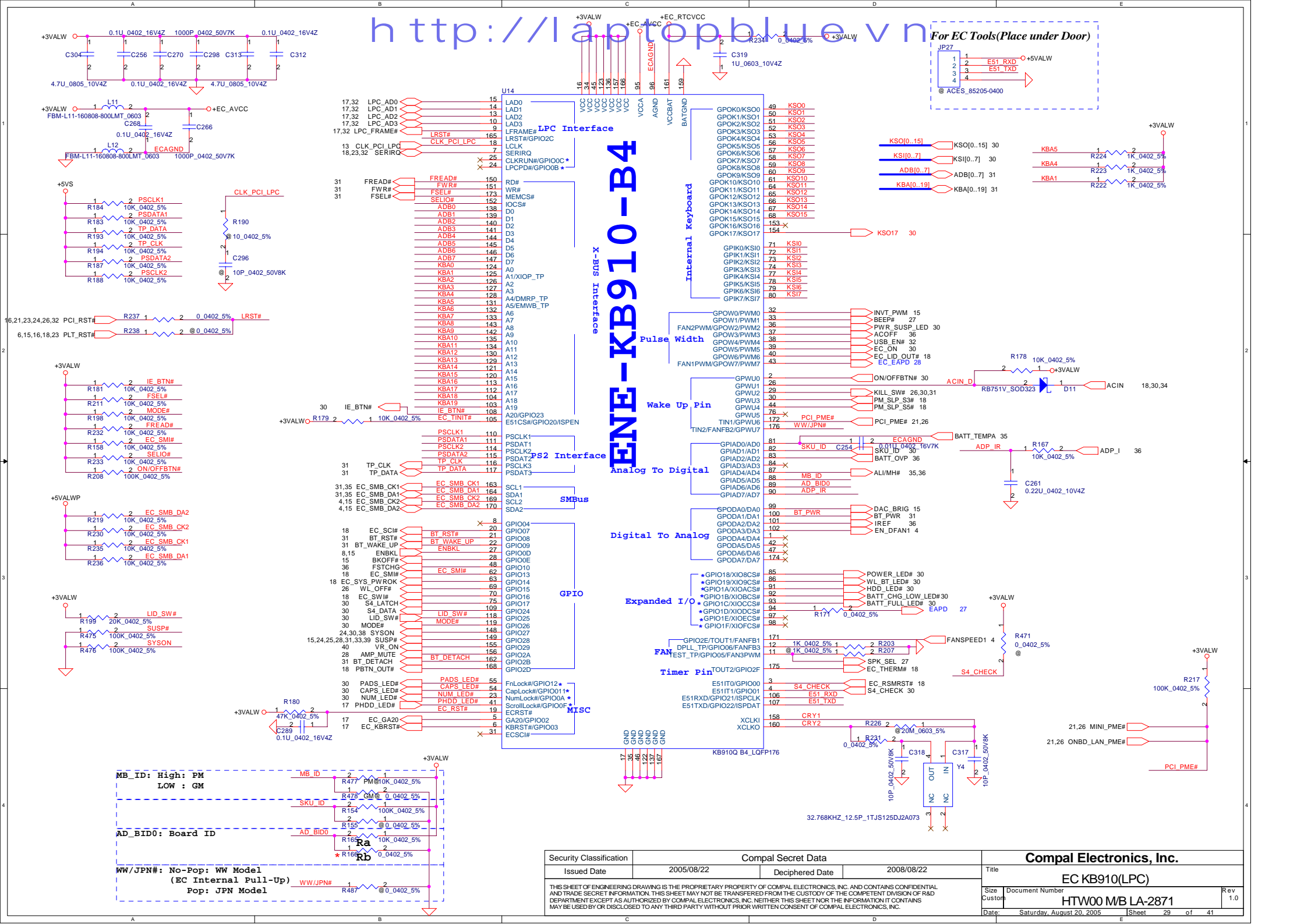
Variable Resistor



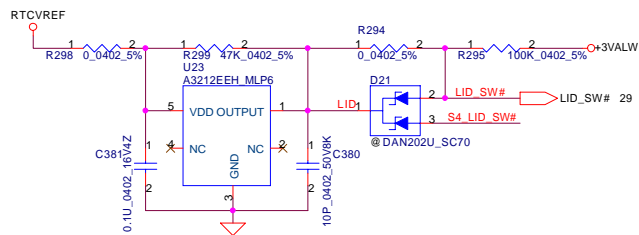
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				AMP/VR/Audio Jack	
Size	Custom	Document Number	HTW00 M/B LA-2871	Rev	
Date:		Monday, August 22, 2005		Sheet	28 of 41

http://laptopblue.vn

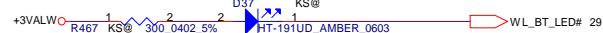
For EC Tools(Place under Door)



## Lid SW



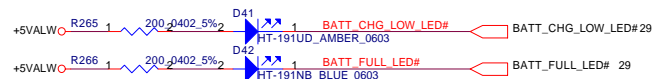
## WL&BT LED



## POWER/ON (Green Pin2,1) Suspend (Amber Pin3,4) LED



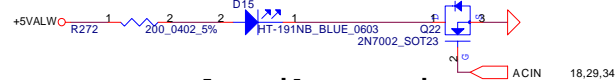
## BATTERY CHG (Green Pin2,1) BATTERY LOW (Amber Pin3,4) LED



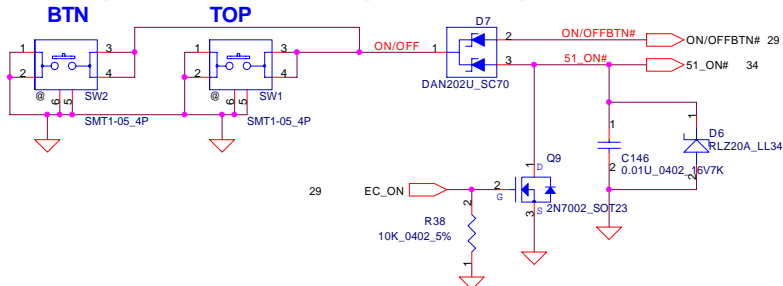
## HDD LED



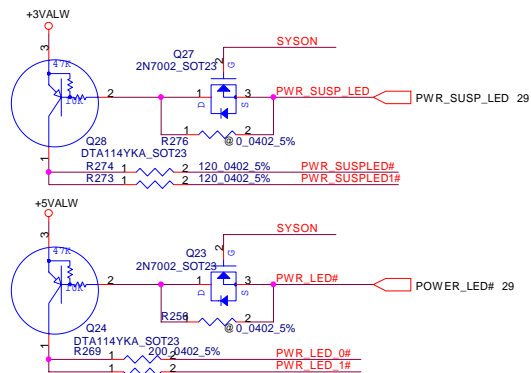
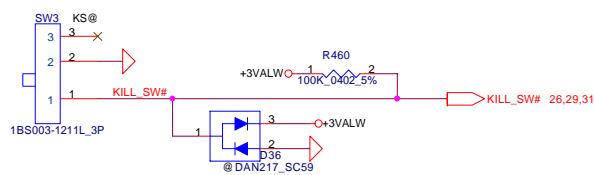
## AC IN LED



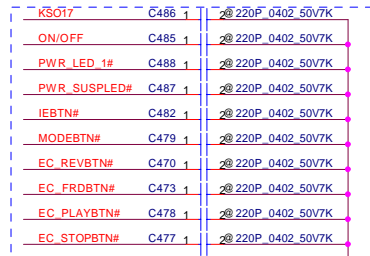
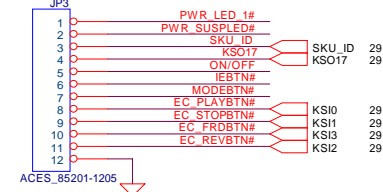
## ON/OFF BUTTON for debug only



## Kill SWITCH

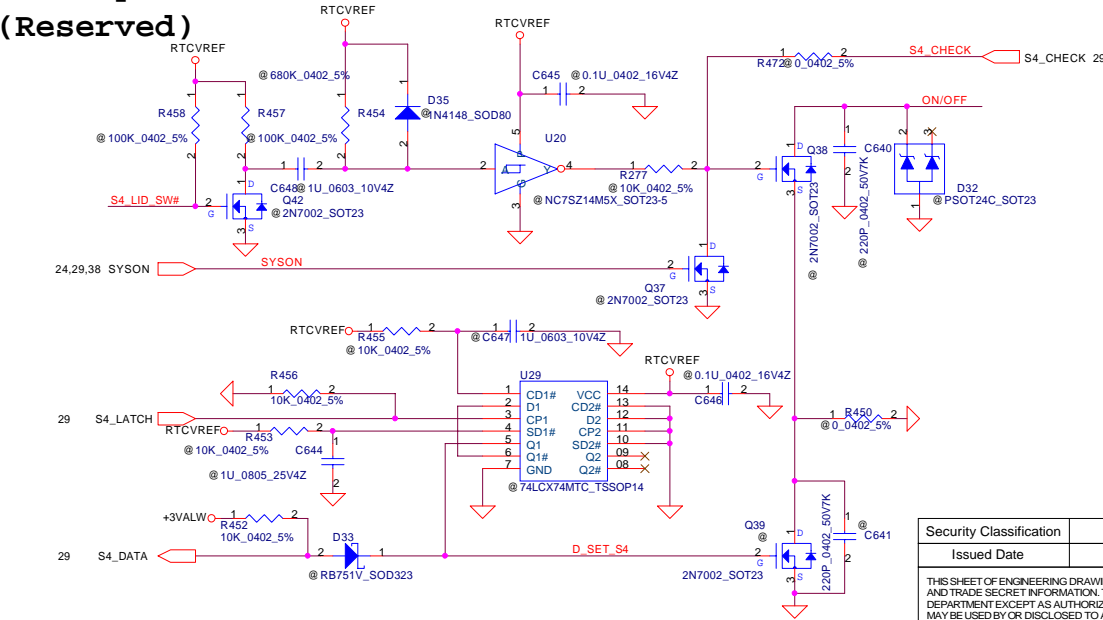


## SW/LED Connector

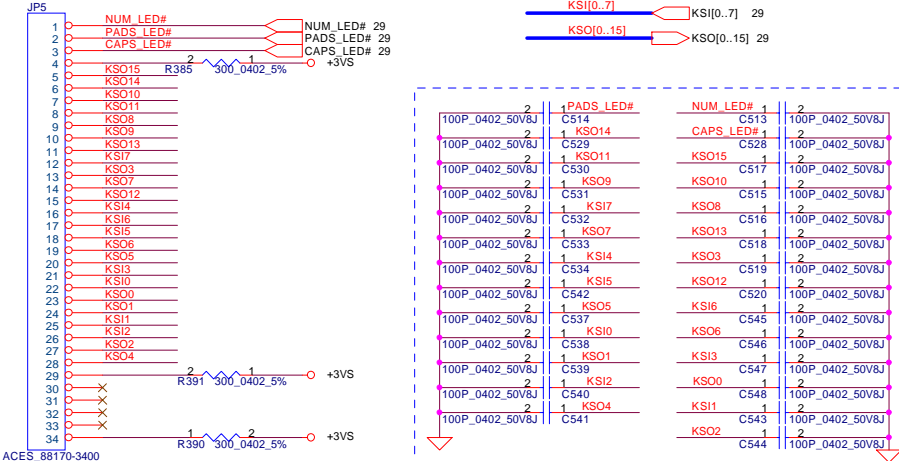


For EMI Request

## Battery mode Hibernation (Reserved)



## KEYBOARD CONN.

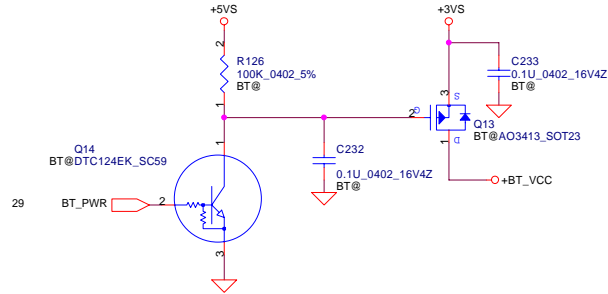
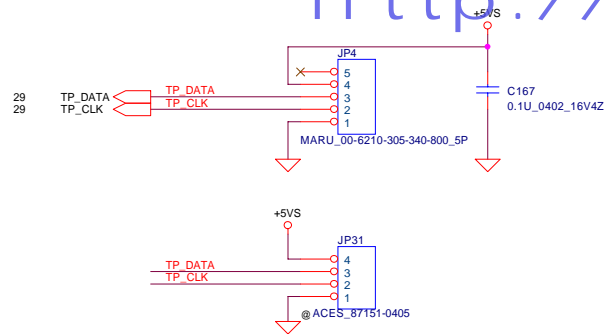


For EMI Request

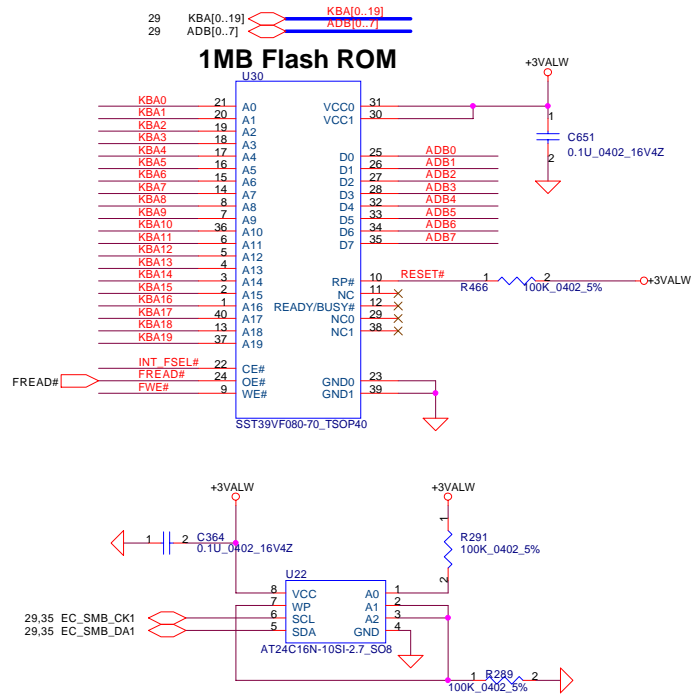
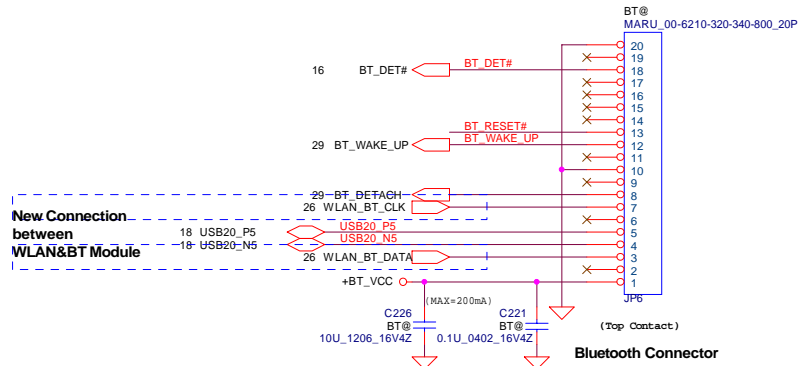
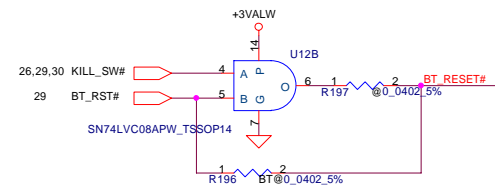
**TP CONN.**

http://laptopblue.vn

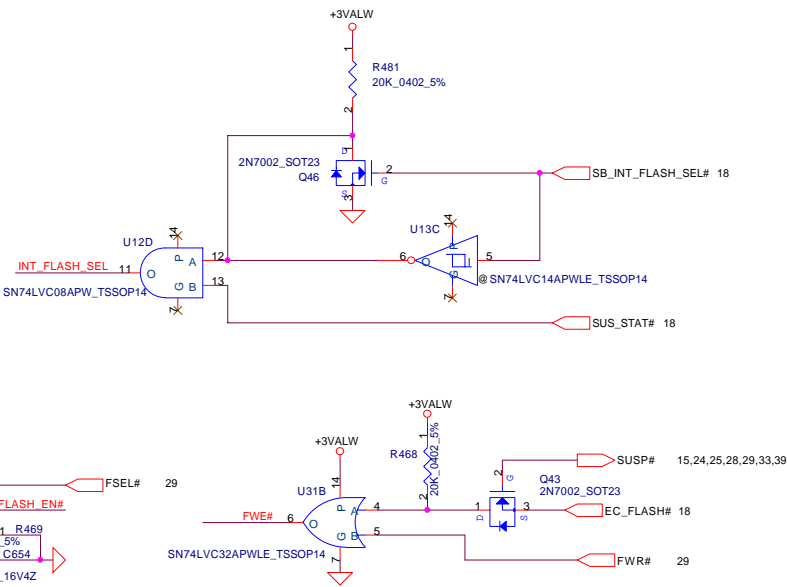
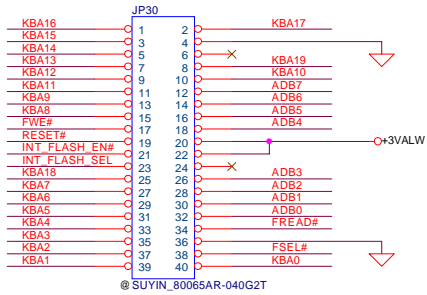
## BlueTooth Interface



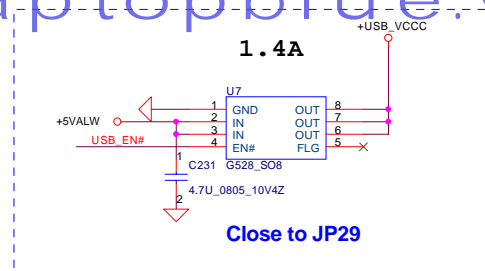
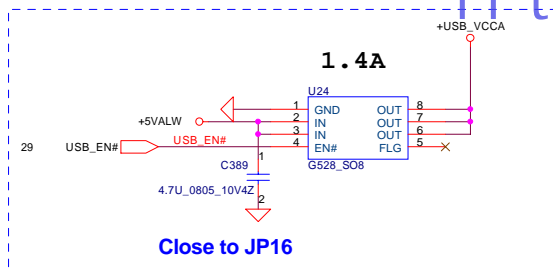
Module ID  
Indication for polarity of reset  
Reset input High Active --> Low  
Reset input Low Active --> Open



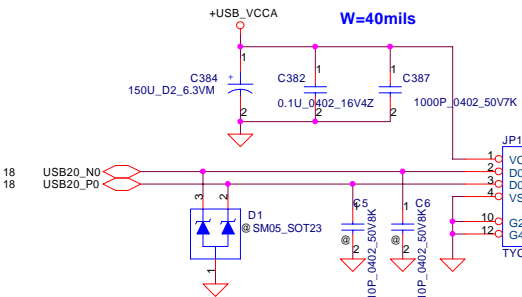
### 1MB ROM Socket



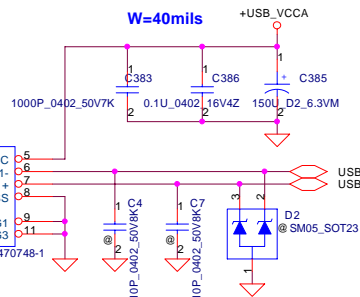
Security Classification	Compal Secret Data			Compal Electronics, Inc.			
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	1MB BIOS/ TP Conn/ BT Conn		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D RESEARCH 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	
				HTW00 M/B LA-2871		1.0	
				Date:	Monday, August 22, 2005	Sheet	31 of 41



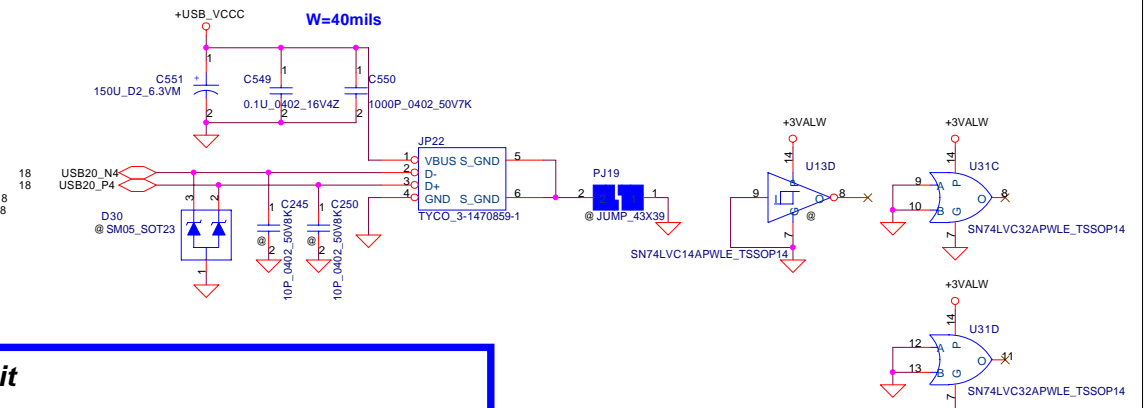
### USB CONN. 1



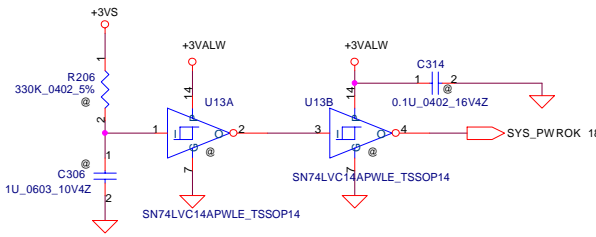
### USB CONN. 2



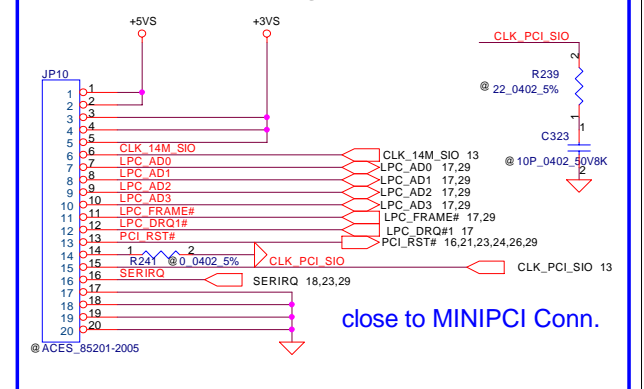
### USB CONN. 3



### Power OK Circuit



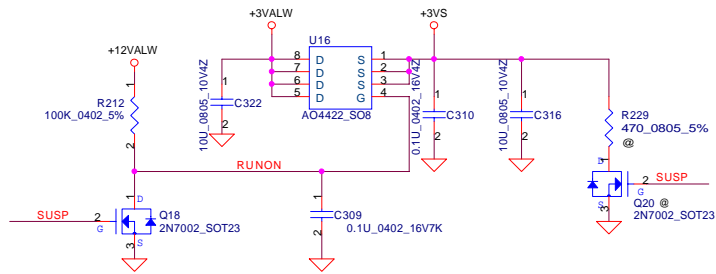
### LPC Debug Port



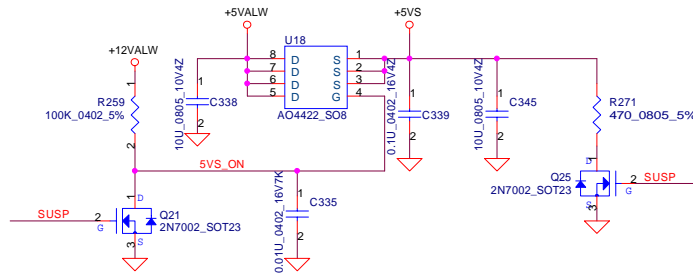
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	Screw Hole/USB/LPC Conn
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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
				Saturday, August 20, 2005	1.0
				Sheet	32 of 41



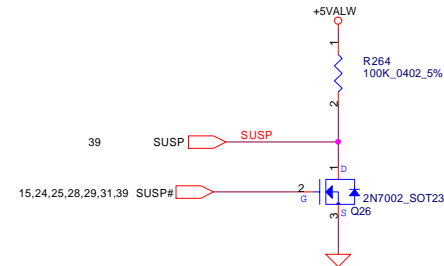
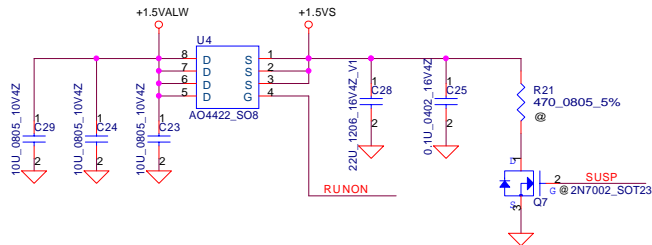
### +3VALW to +3VS Transfer



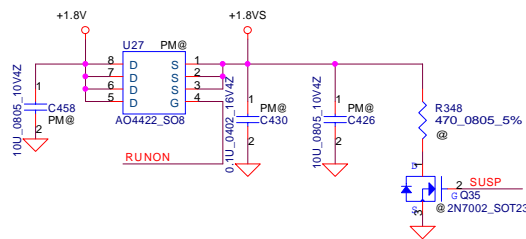
### +5VALW to +5VS Transfer



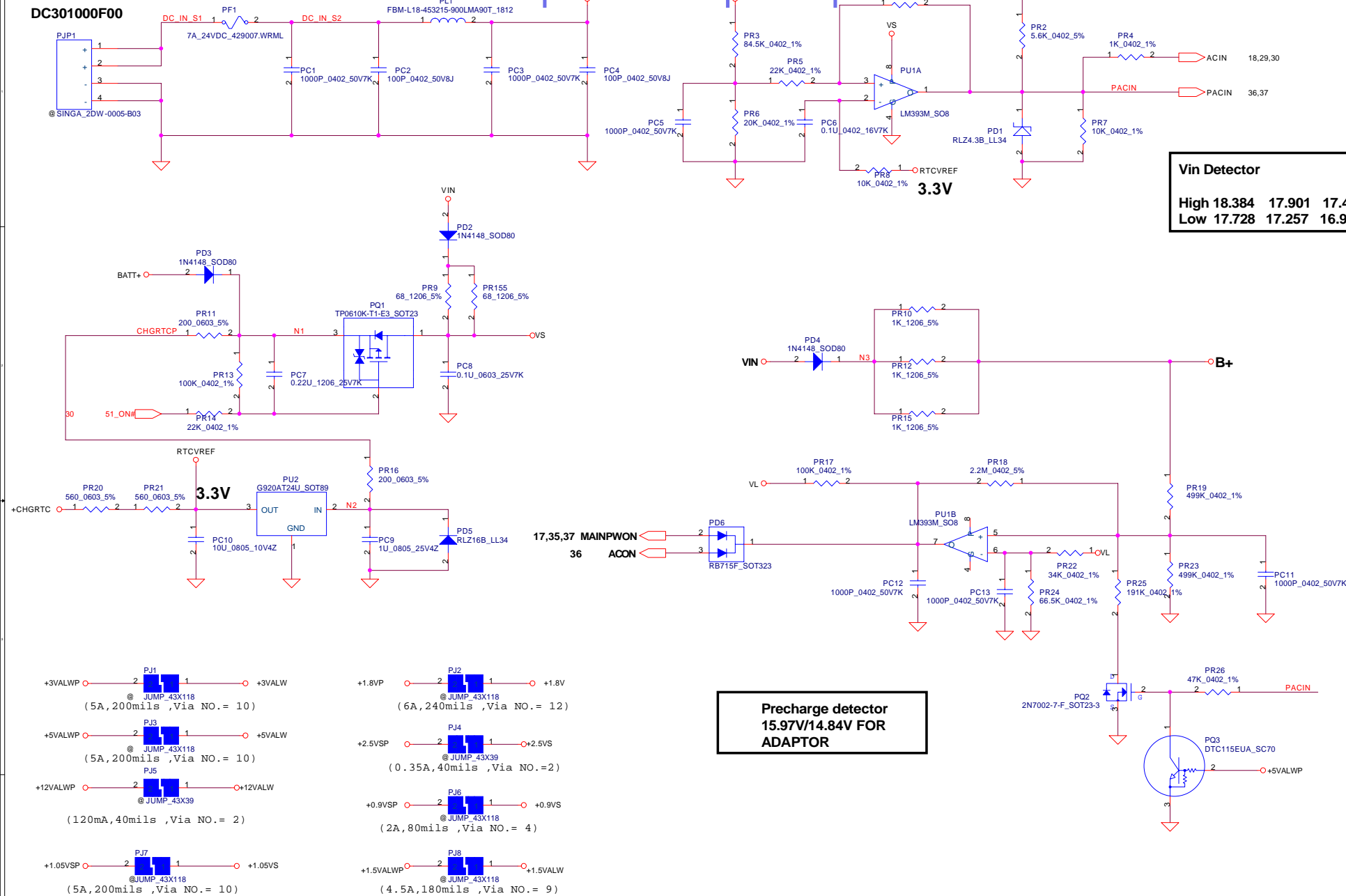
### +1.5VALW to +1.5VS Transfer



### +1.8V to +1.8VS Transfer



# DC301000F00

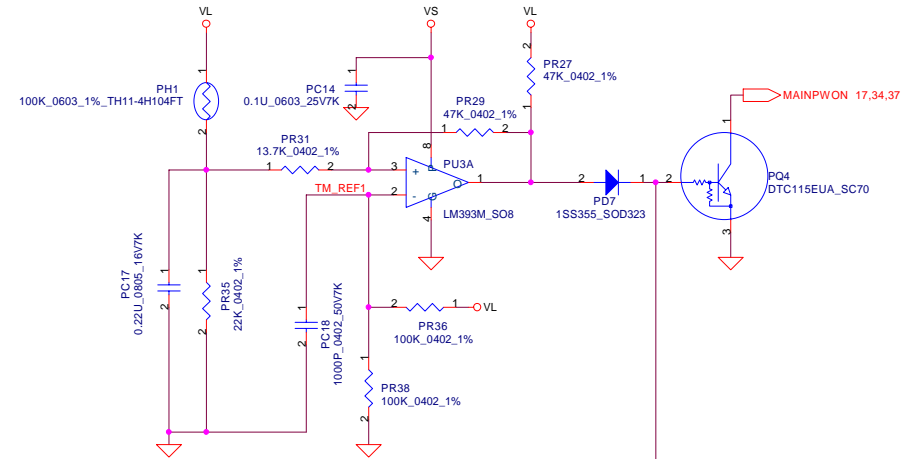
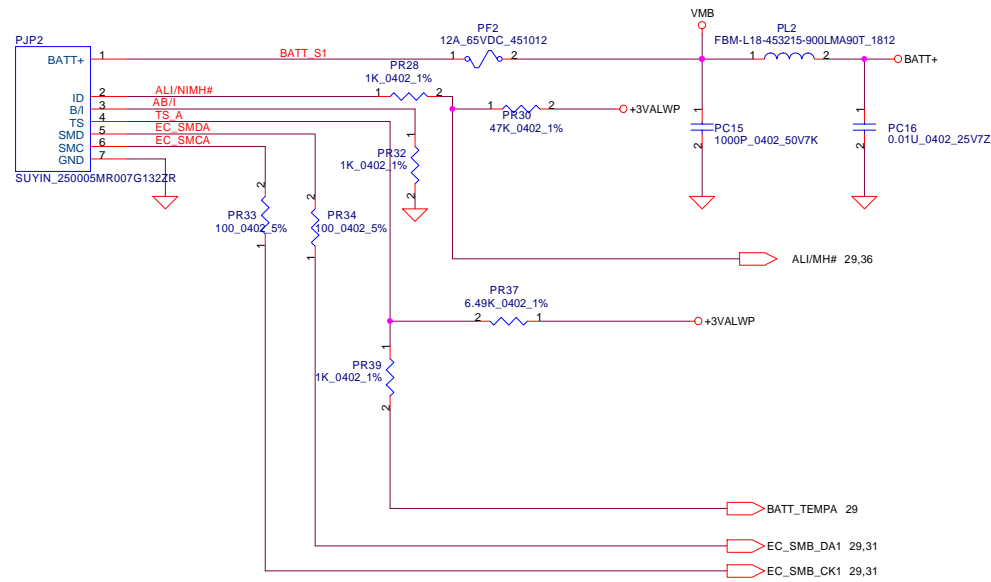


Vin Detector			
High	18.384	17.901	17.430
Low	17.728	17.257	16.976

**Precharge detector  
15.97V/14.84V FOR  
ADAPTOR**

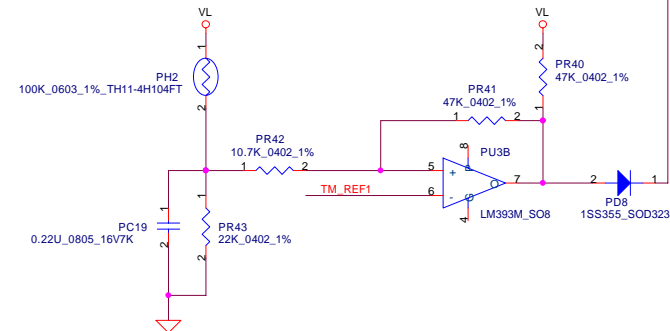
## PH1 under CPU bottom side :

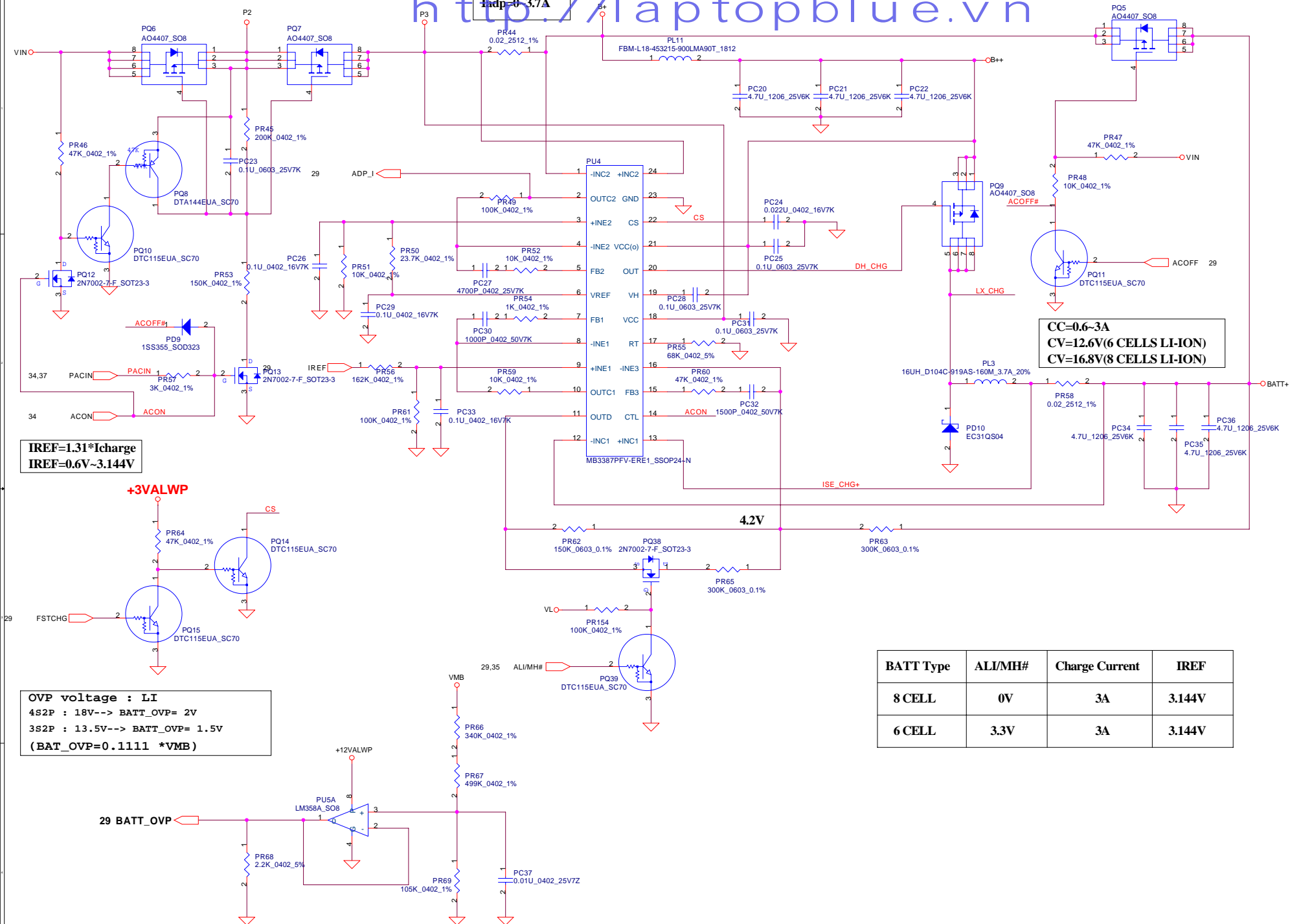
CPU thermal protection at 84 degree C  
Recovery at 45 degree C



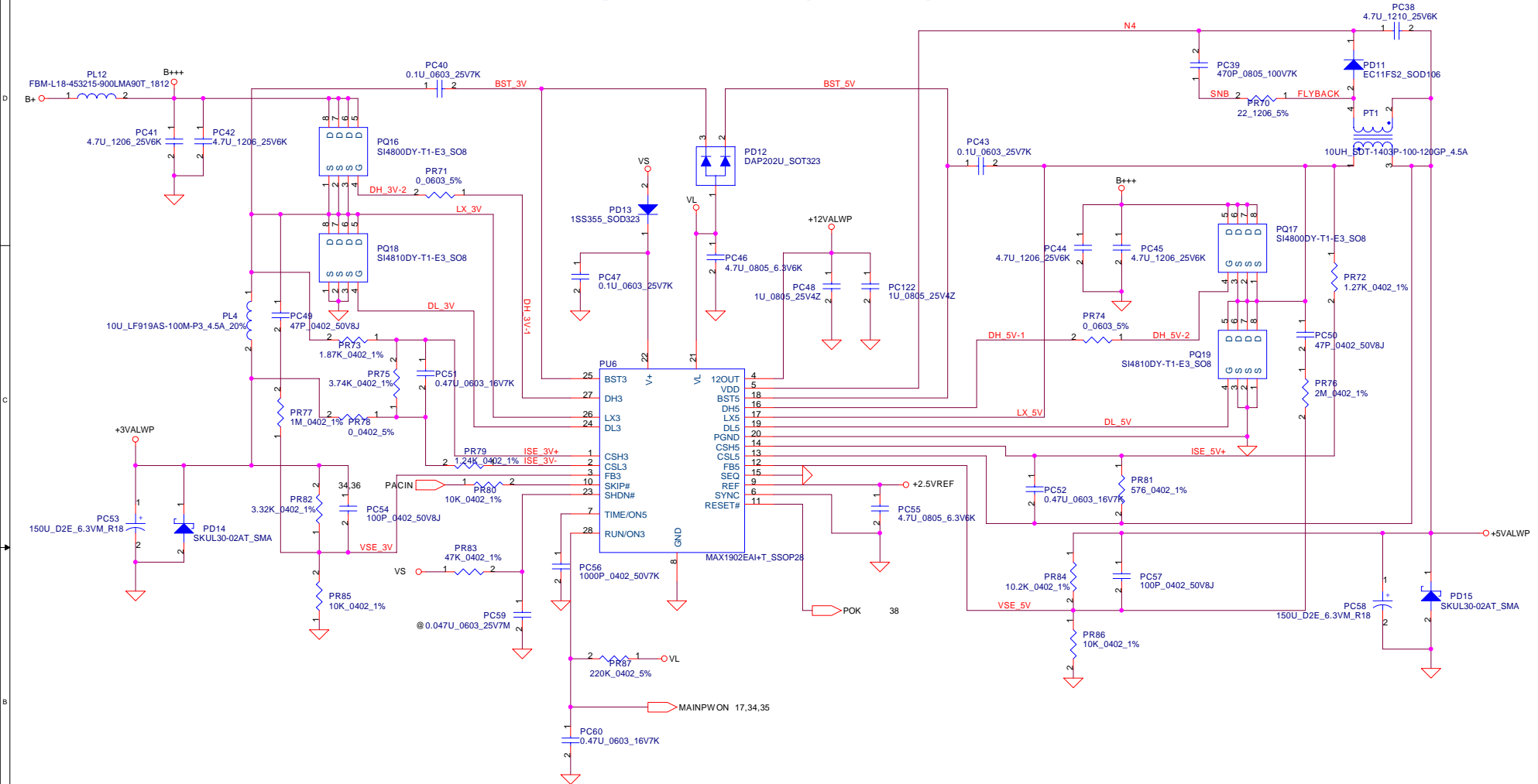
## PH2 near main Battery CONN :

BAT. thermal protection at 79 degree C  
Recovery at 45 degree C





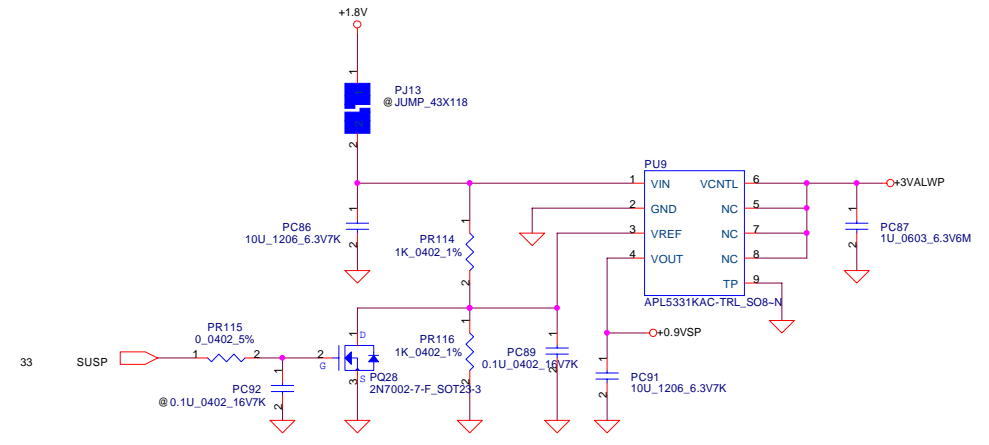
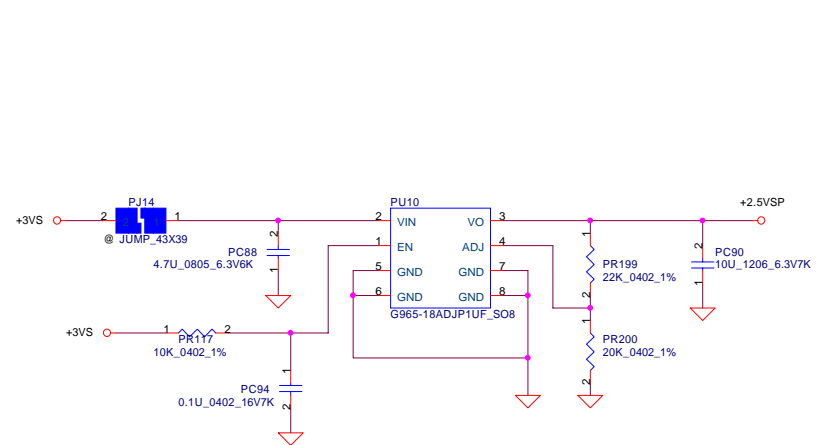
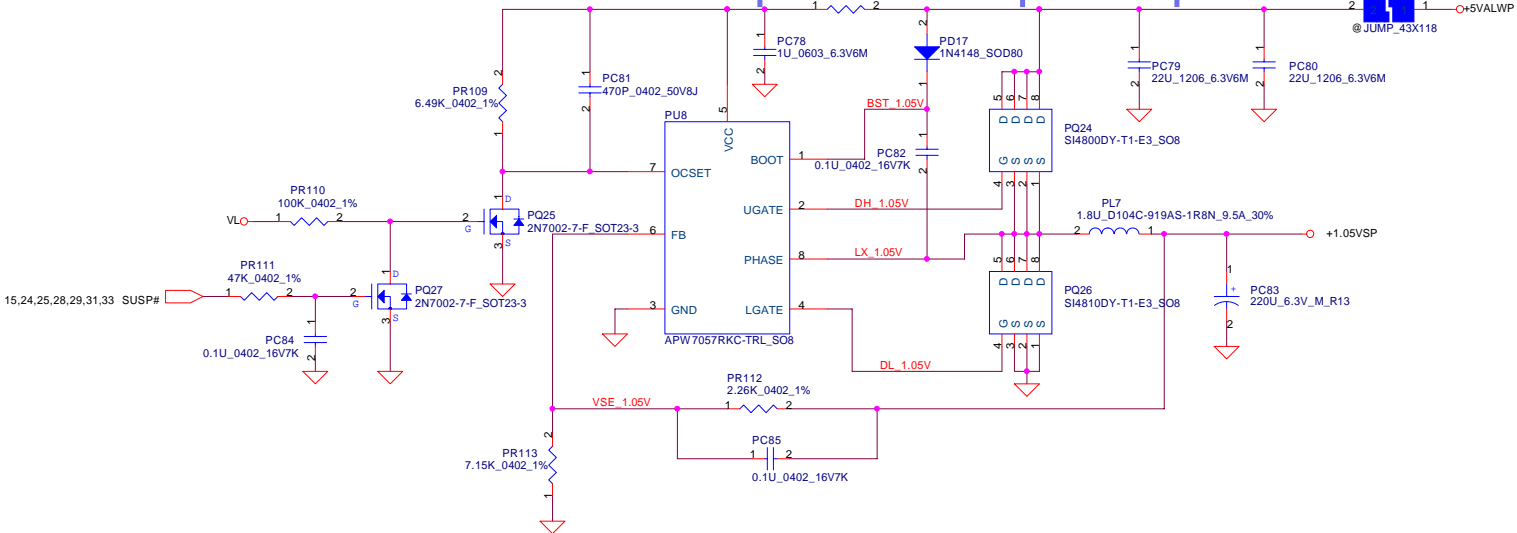
BATT Type	ALI/MH#	Charge Current	IREF
8 CELL	0V	3A	3.144V
6 CELL	3.3V	3A	3.144V

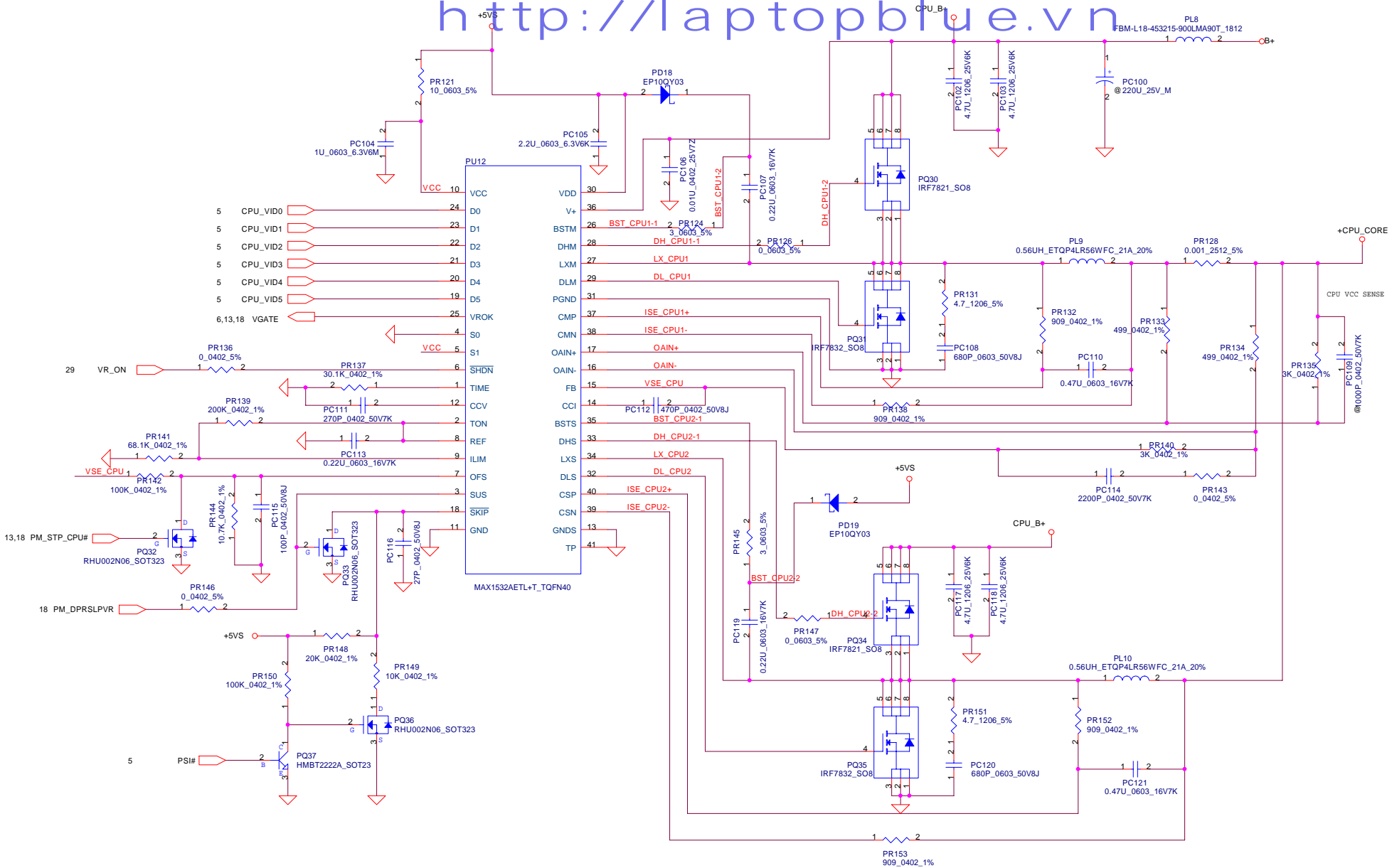


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				3V / 5V / 12V	
Size	Document Number			Sheet	Rev
				37 of 41	1.0
Date:	Saturday, August 20, 2005			Sheet	Rev
				37 of 41	1.0

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2005/08/22	Deciphered Date	2008/08/22	Title 1.8V / 1.5V		
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 1.0
				Date:	Saturday, August 20, 2005	Sheet 38 of 41







Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/08/22	Deciphered Date	2008/08/22	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.				CPU_CORE	
Size		Document Number			Rev 1.0
Date:		Saturday, August 20, 2005	Sheet	40	of 41

POWER PIR LIST

page	Reason for change	Modify list
DVT	36,37, 38,40	For EMI request to reduce the power board band
		Add bead PL11,PL12,PL13(SM010020720), add snubber 4.7ohm(SD001470B80)PR131,PR151 and 680P(SE024681J80)PC108,PC120 on CPU CORE
		Add booster resistor 3ohm(SD013300B80) PR90,PR91 on 1.8V/1.5V and PR124,PR145 on CPU CORE
PVT	47	Reduce the high frequency noise
	34	Add design margine
		Change PC38 to 4.7U_1210(SE065475K80)
		Add 68ohm(SD011680A80) PR155 and change PR9 to 68ohm
	39	Change +2.5VSP enable signal for HW request
		Change +2.5VSP enable signal to +3VS
	40	For EMI request to reduce CPU power board band
		Change PQ30,PQ34 to IRF7821(SB578210010); PQ31,PQ35 to IRF7832(SB578320010)
	40	For cost down
		del PC100 and PR122,PR123,PR125,PR127,PR129,PR130

HW PIR LIST

HTW00 LA-2871 SCHEMATIC CHANGE LIST  
REVISION CHANGE: 0.1 TO 0.2

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
1	5/30	P29	ADD PULL DOWN 100K_0402_5% R475 ON SUSP#	TO PREVENT SUSP# FLOATING
2	5/30	P29	ADD PULL DOWN 100K_0402_5% R476 ON SYSON	TO PREVENT SYSON FLOATING
3	6/14	P17	CHANGE C241,C251 FROM 18PF TO 15PF	FINE TUNE RTC TIMING
4	7/01	P30	CHANGE LED TYPE FROM SIDE VIEW TO TOP VIEW	UPDATE LED LIBRARY
5	7/01	P30	CHANGE KB CONNECTOR EMI CAPS TO MOUNT	FOR EMI REQUEST
6	7/01	P27	ADD SPK_SEL CONNECTION BETWEEN EC AND CODEC	FOR CODEC EQ SELECTION FOR SPEAKER
7	7/01	P29	ADD MB_ID R477,R478 ON PIN88	FOR EC MB IDENTIFY
8	7/01	P17	CHANGE SATA DC COUPLING CAPS CAPACITANCE TO 3.9nf	TO MEET INTEL CRB RECOMMAND VALUE
9	7/01	P30	CHANGE LED RESISTOR R265, R266, R270, R272, RESISTANCE	TO INCREASE LED BRIGHTNESS
10	7/01	P20	ADD SATA HDD POWER CONTROL CIRCUIT	TO RESERVE BACKUP SOLUTION FOR SATA HDD RESET
11	7/01	P28	ADD R484 FOR MIC JACK GROUND PIN CLEAN	TO IMPROVE MIC SOUND QUALITY
12	7/01	P28	CHANGE U21 LDO POWER SOURCE FROM +5VALW TO +5VS	FOR POWER TRACE LAYOUT IMPROVE

HTW00 LA-2871 SCHEMATIC CHANGE LIST  
REVISION CHANGE: 0.2 TO 0.3

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
1	8/6	P28	CHANGE U21 PIN 4 FROM +5VS TO +5VALW	TO PREVENT NOISE FROM HDD SPIN UP
2	8/6	P15	CHANGE R306, R307 FROM RES TO BEAD	FOR EMI REQUEST
3	8/6	P21	CHANGE U2 FROM H-50P (H=2mm) TO TS6121C (H=4mm)	FOR COST POINT OF VIEW
4	8/6	P23	CHANGE D19 LED COLOR FROM GREEN TO BLUE	CUSTOMER SPEC CHANGE
5	8/6	P09	ADD R488 0_0603 BETWEEN +2.5VS_CRTDAC TO +2.5VS	TO IMPROVE CRT VIDEO QUALITY
6	8/6	P29	ADD PULL HIGH RES R487 ON PIN176 FOR WW/JPN# SELECT	TO CONTROL M/B CONFUIRATION
7	8/6	P30	CHANGE D15,D18,D40,D42 LED COLOR FROM GREEN TO BLUE	CUSTOMER SPEC CHANGE

HTW00 LA-2871 SCHEMATIC CHANGE LIST  
REVISION CHANGE: 0.3 TO 1.0

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
1	8/22	P20	CHANGE C661,C662,Q44,Q45,Q47,Q48,R411,R479,R480,R482 ,R483 FROM MOUNT TO RESERVE	REMOVE SATA-HDD POWER RESET FUNCTION FOR SW REQUEST
2	8/22	P18 P28	CHANGE D38,R485 FROM MOUNT TO RESERVE CHANGE R459 RESISTANCE FROM 4.53K TO 3.9K CHANGE R463 RESISTANCE FROM 4.22K TO 6.19K CHANGE R462 RESISTANCE FROM 4.87K TO 3.3K	TO REDUCE HEAD PHONE GAIN SETTING
3	8/22	P31	CHANGE JP4 AND JP6 VENDOR FROM ACES TO MANUNIX	FOR CUSTOMER'S REQUEST
4	8/22	P31	RESERVE JP31	FOR TEST ABILITY

PROPRIETARY NOTE										
Security Classification		Compal Secret Data								
Issued Date		2005/08/22		Deciphered Date						
				2008/08/22						
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE 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				
						PIR				
						Size	Document Number			
		Rev 1.0								
Date:		Monday, August 22, 2005		Sheet	41 of 41					