

Compal confidential

Schematics Document

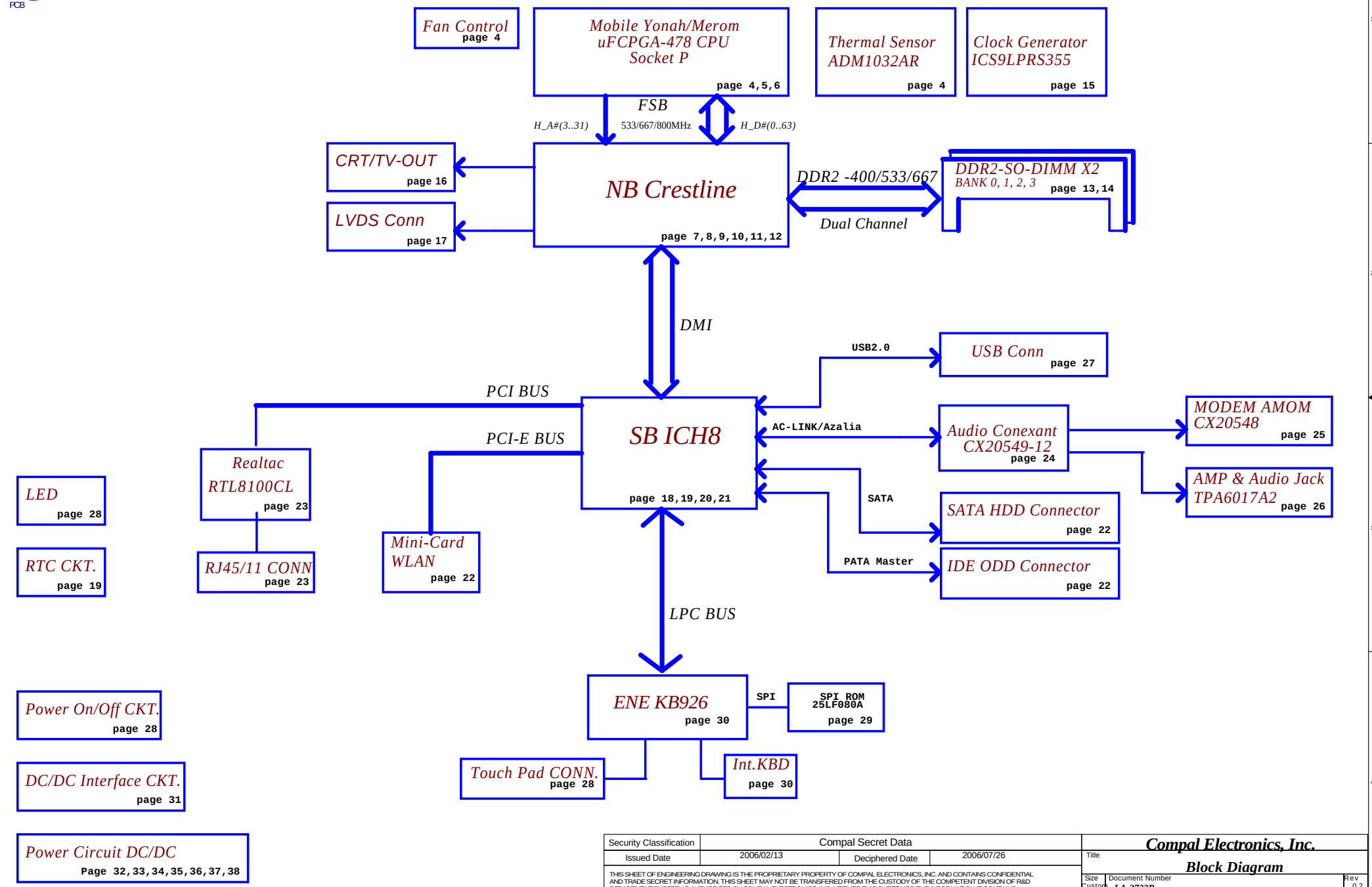
Mobile Merom uFCPGA with Satna Rosa Platform

2007-01-08
REV:0.1

Security Classification		Compal Secret Data		Title	
Issued Date	2006/02/13	Deciphered Date	2006/07/26	Cover Sheet	
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-3732P
Date: Wednesday, March 14, 2007				Sheet	1 of 40
				Rev	0.2

Spartan 1.0 (Merom +Crestline+ICH8)

ZZZ1
PCB



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/02/13	Deciphered Date	2006/07/26	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Custom	LA-3732P
				Date	Wednesday, March 14, 2007
				Sheet	2 of 40
				Rev	0.2

Voltage Rails

power plane State	+B	+5VALW +3VALW	+1.8V	+5VS +3VS +1.5VS +1.25VS +0.9V +VCCP +CPU_CORE
S0	0	0	0	0
S1	0	0	0	0
S3	0	0	0	X
S5 S4/AC	0	0	X	X
S5 S4/ Battery only	0	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

Symbol Note :

 : means Digital Ground

 : means Analog Ground

@ : means just reserve , no build
DEBUG@ : means just reserve for debug.

External PCI Devices

DEVICE	IDSEL #	REQ/GNT #	PIRQ
LAN	AD22	0	A

I2C / SMBUS ADDRESSING

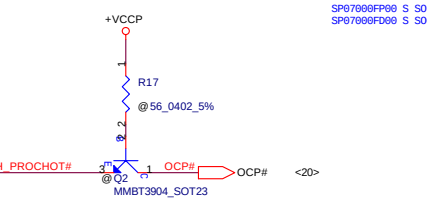
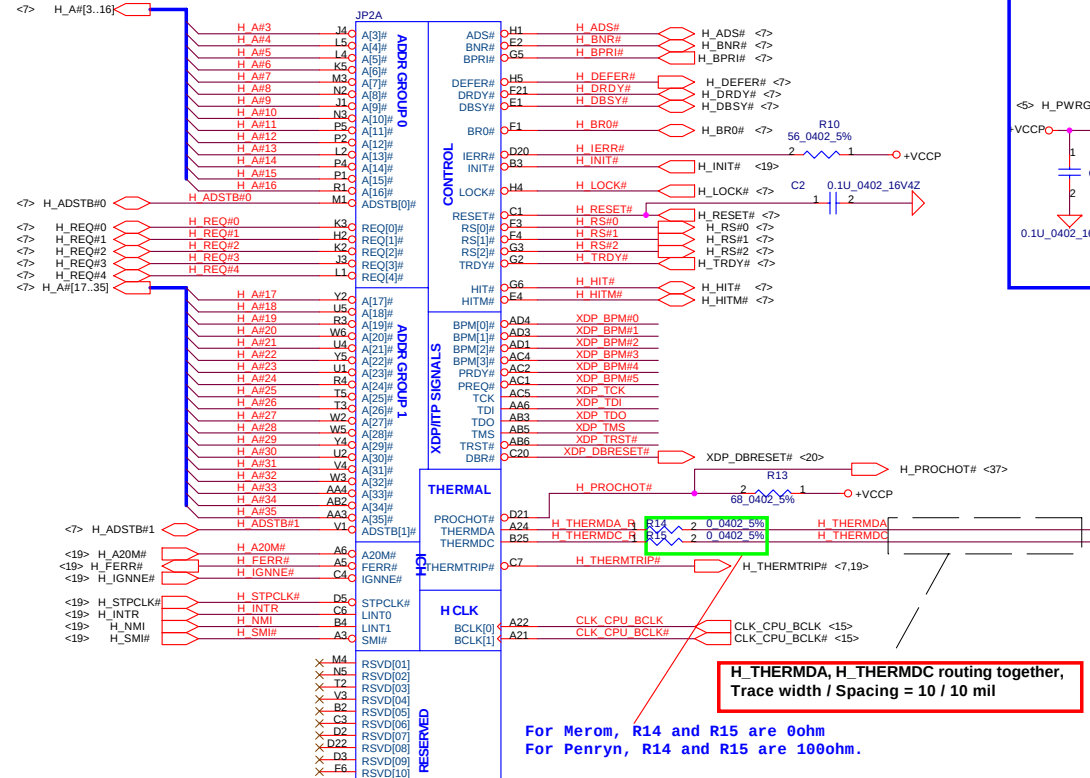
DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	1 0 1 0 0 0 0 0
DDR SO-DIMM 1	A4	1 0 1 0 0 1 0 0
CLOCK GENERATOR (EXT.)	D2	1 1 0 1 0 0 1 0

SMBUS Control Table

	SOURCE	INVERTER	BATT	SERIAL EEPROM	THERMAL SENSOR (CPU) ADM1032	SODIMM	CLK CHIP	MINI CARD	LCD
SMB_EC_CK1 SMB_EC_DA1	KB925	X	V	V	X	X	X	X	X
SMB_EC_CK2 SMB_EC_DA2	KB925	X	X	X	V	X	X	X	X
SMB_CK_CLK1 SMB_CK_DAT1	ICH8	X	X	X	X	V	V	V	X
LCD_CLK LCD_DAT	Crestline	X	X	X	X	X	X	X	V

BOM: 43XXXXXX

Jump-Short: PJP?

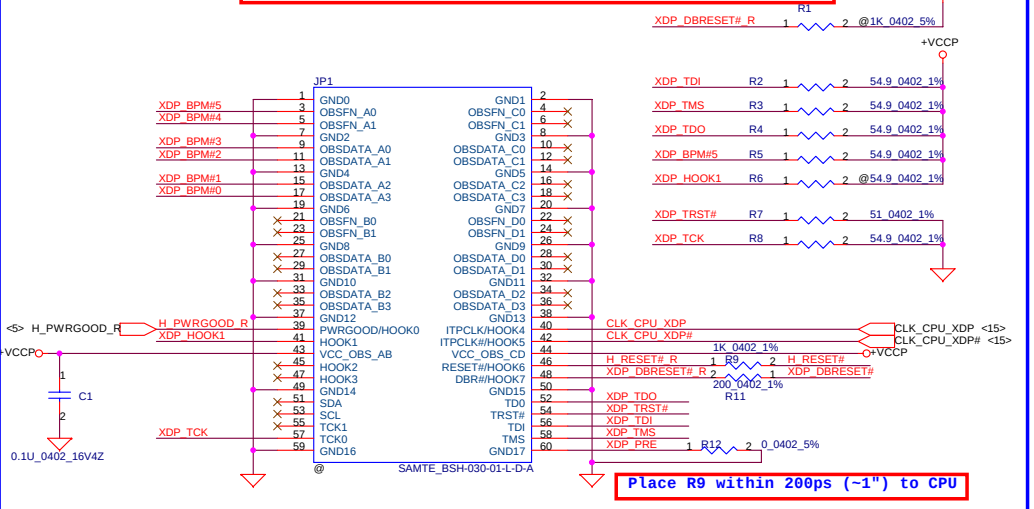


For Merom, R14 and R15 are 0ohm
For Penryn, R14 and R15 are 100ohm.

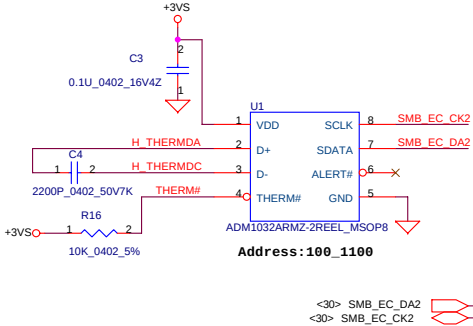
H_THERMDA, H_THERMDC routing together,
Trace width / Spacing = 10 / 10 mil

XDP Connector

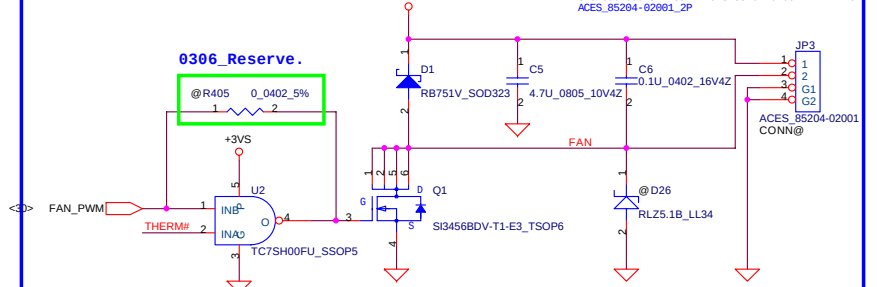
Layout note: Change R7 to 649 ohm if using XTP to ITP adapter



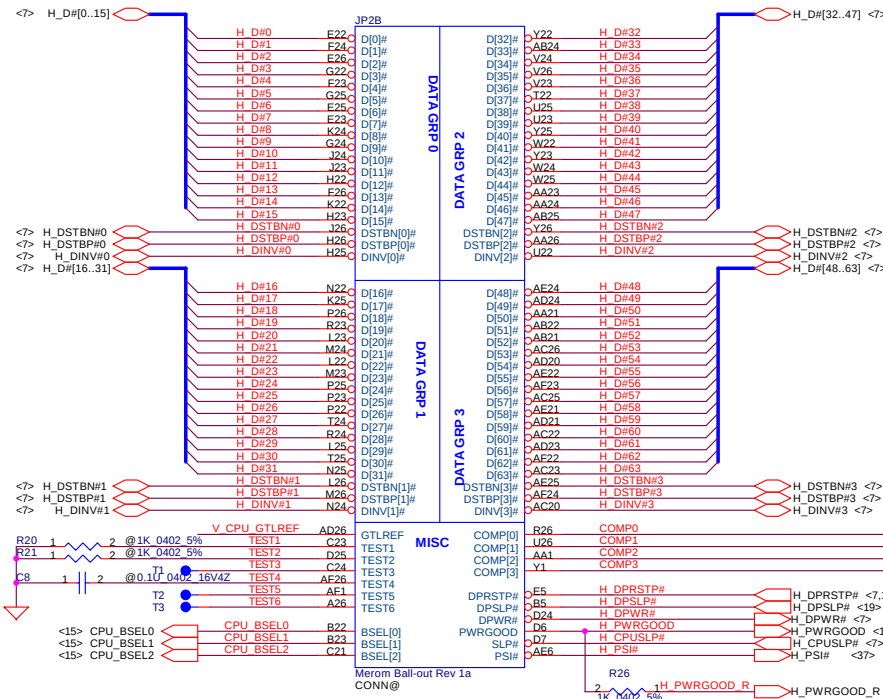
Thermal Sensor ADM1032ARMZ



PWM Fan Control circuit



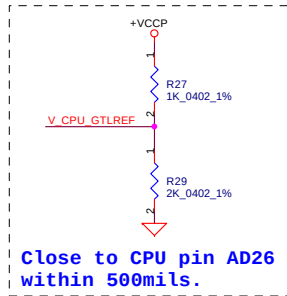
Security Classification	Compal Secret Data		Title	
Issued Date	2006/02/13	Deciphered Date	2006/03/10	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Merom(1/3)-AGTL+/XDP
Date	Wednesday, March 14, 2007	Sheet	4 of 40	Rev 0.2



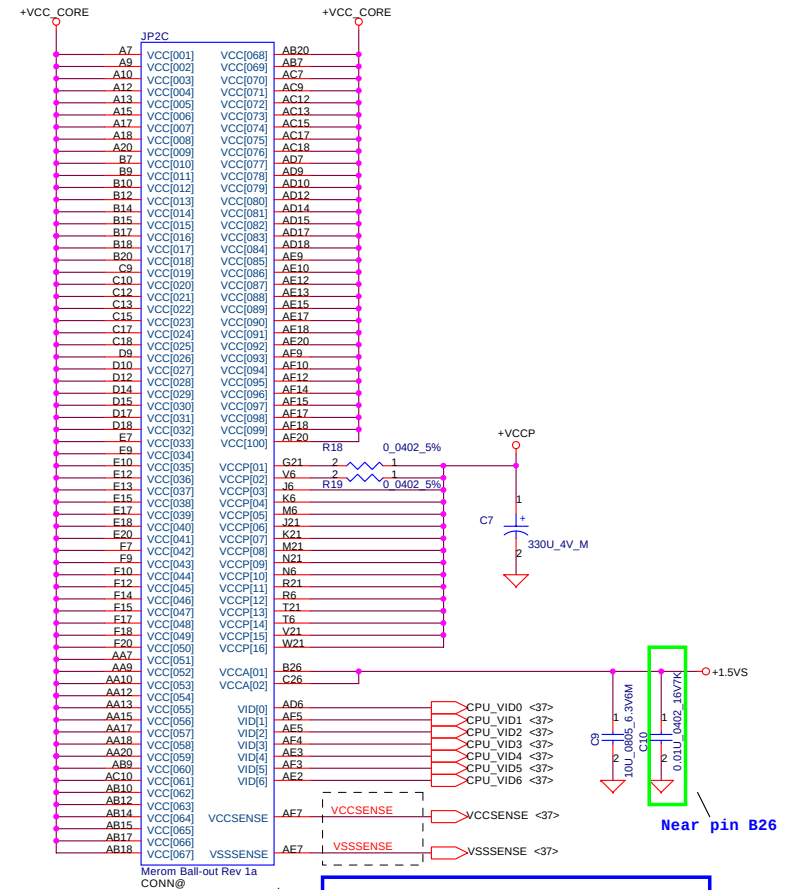
Layout note: Route TEST3 & TEST5 traces on ground referenced layer to the TPs

CPU_BSEL	CPU_BSEL2	CPU_BSEL1	CPU_BSEL0
166	0	1	1
200	0	1	0

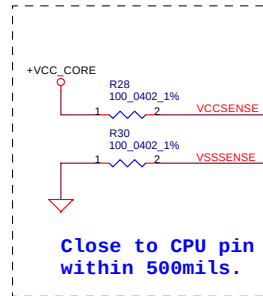
Resistor placed within 0.5" of CPU pin. Trace should be at least 25 mils away from any other toggling signal. COMP[0,2] trace width is 18 mils. COMP[1,3] trace width is 4 mils.



Close to CPU pin AD26 within 500mils.

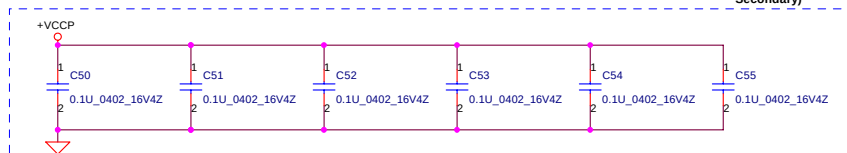
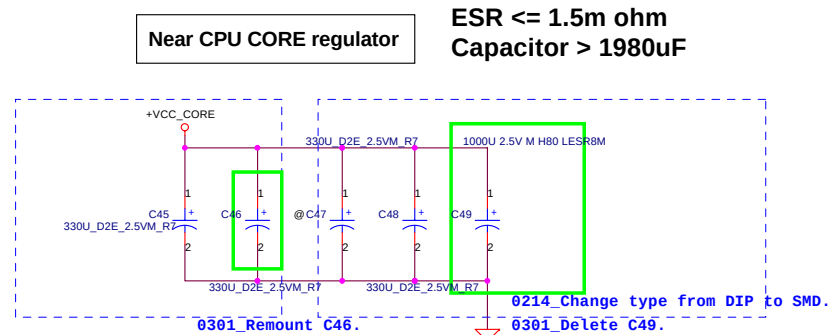
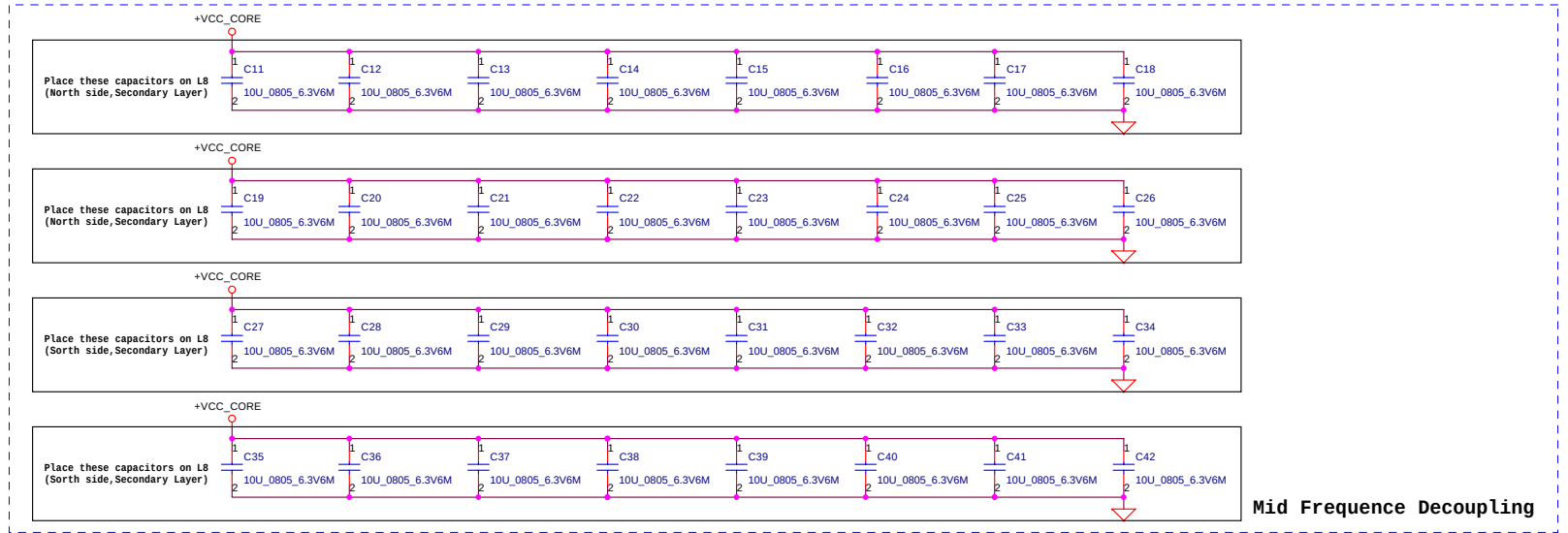
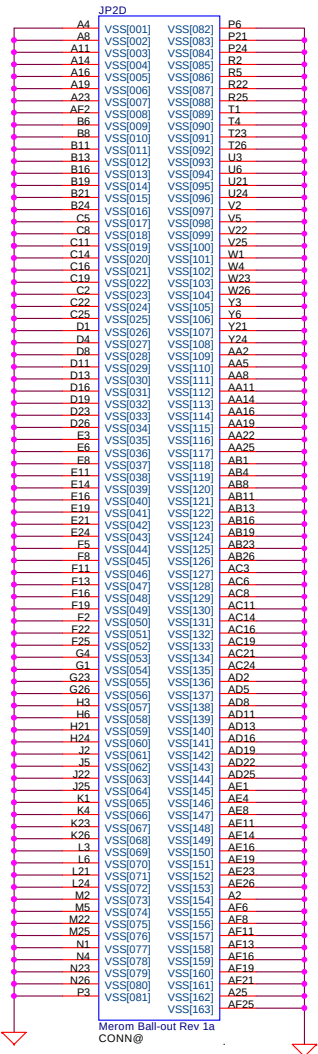


Length match within 25 mils. The trace width/space/other is 20/7/25.

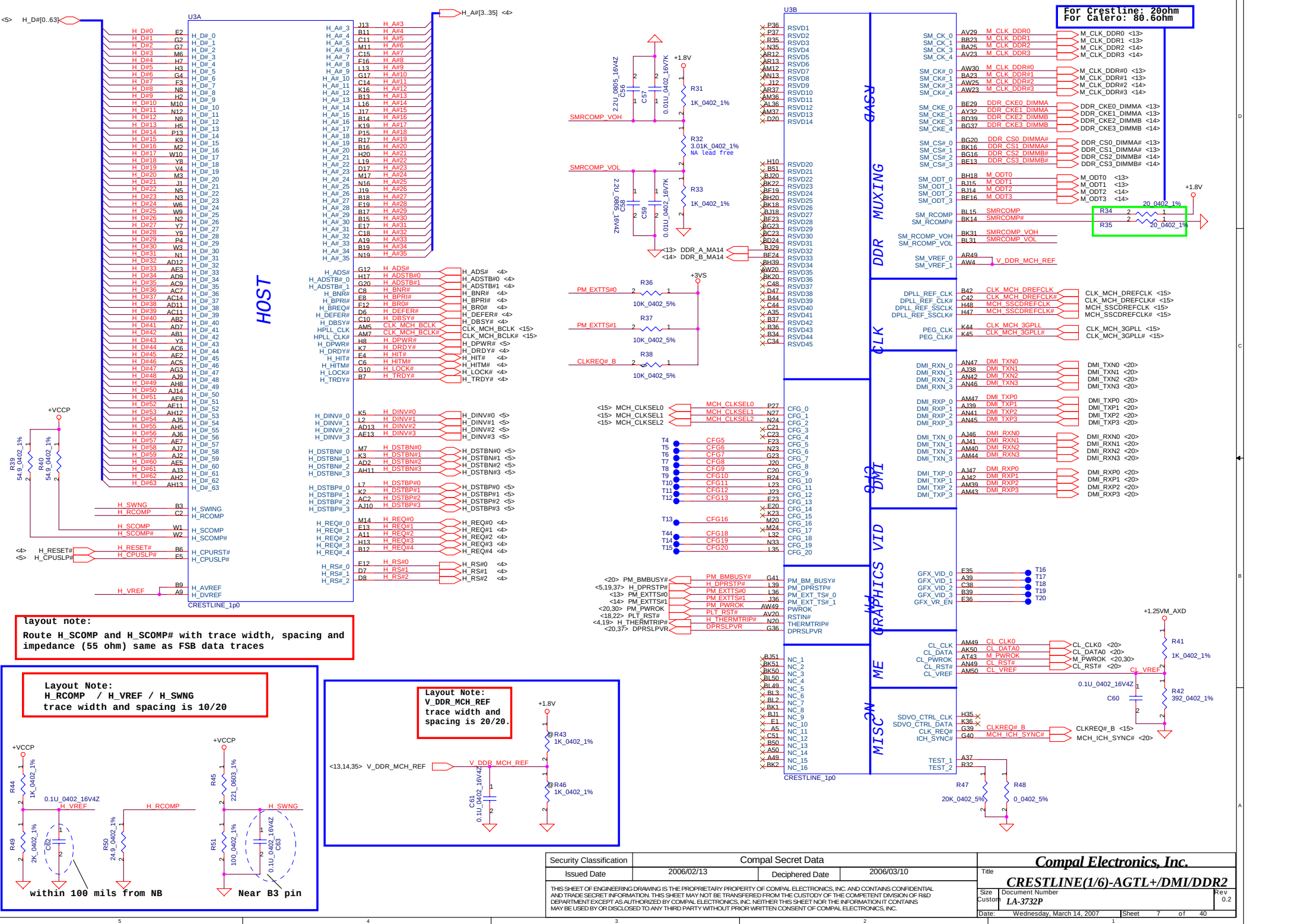


Close to CPU pin within 500mils.

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2006/02/13	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 COMPETITIVE 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.				Merom(2/3)-AGTL+PWR		
				Size	Document Number	Rev
				Custom	LA-3732P	0.2
Date:				Wednesday, March 14, 2007	Sheet	5 of 40



Security Classification		Compal Secret Data		Title	
Issued Date	2006/02/13	Deciphered Date	2006/03/10	Merom(3/3)-GND&Bypass	
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-3732P
				Date	Wednesday, March 14, 2007
				Sheet	6 of 40
				Rev	0.2

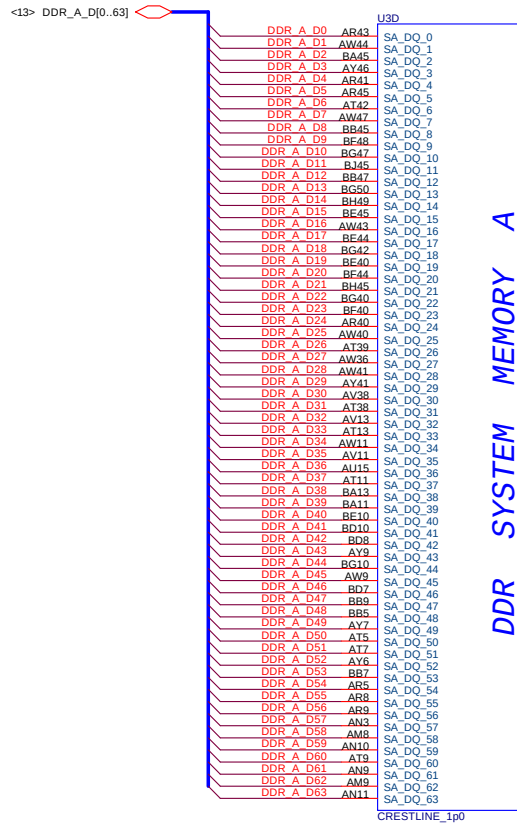


layout note:
Route H_SCOMP and H_SCOMP# with trace width, spacing and impedance (55 ohm) same as FSB data traces

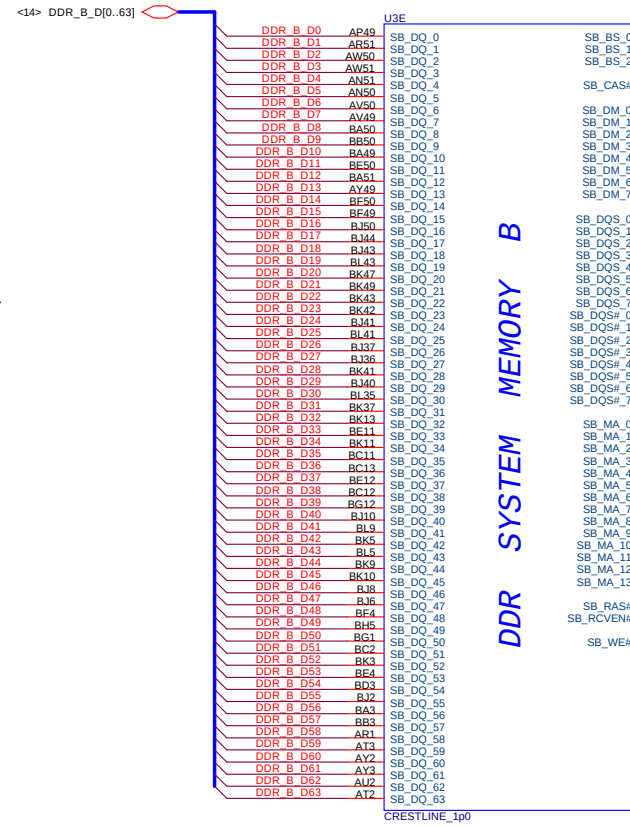
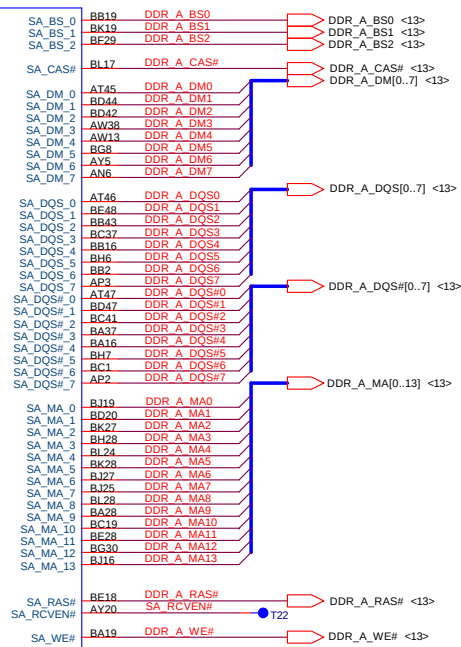
Layout Note:
H_RCOMP / H_VREF / H_SWNG
trace width and spacing is 10/20

Layout Note:
V_DDR_MCH_REF
trace width and spacing is 20/20.

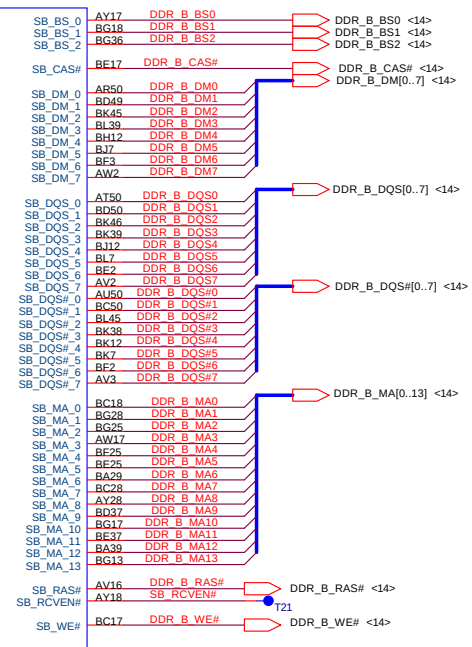
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2006/02/13	Deciphered Date	2006/03/10	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				CRESTLINE(1/6)-AGTL+DMI/DDR2		
				Size	Document Number	Rev
				LA-3732P		0.2
Date:	Wednesday, March 14, 2007	Sheet	7	of	40	



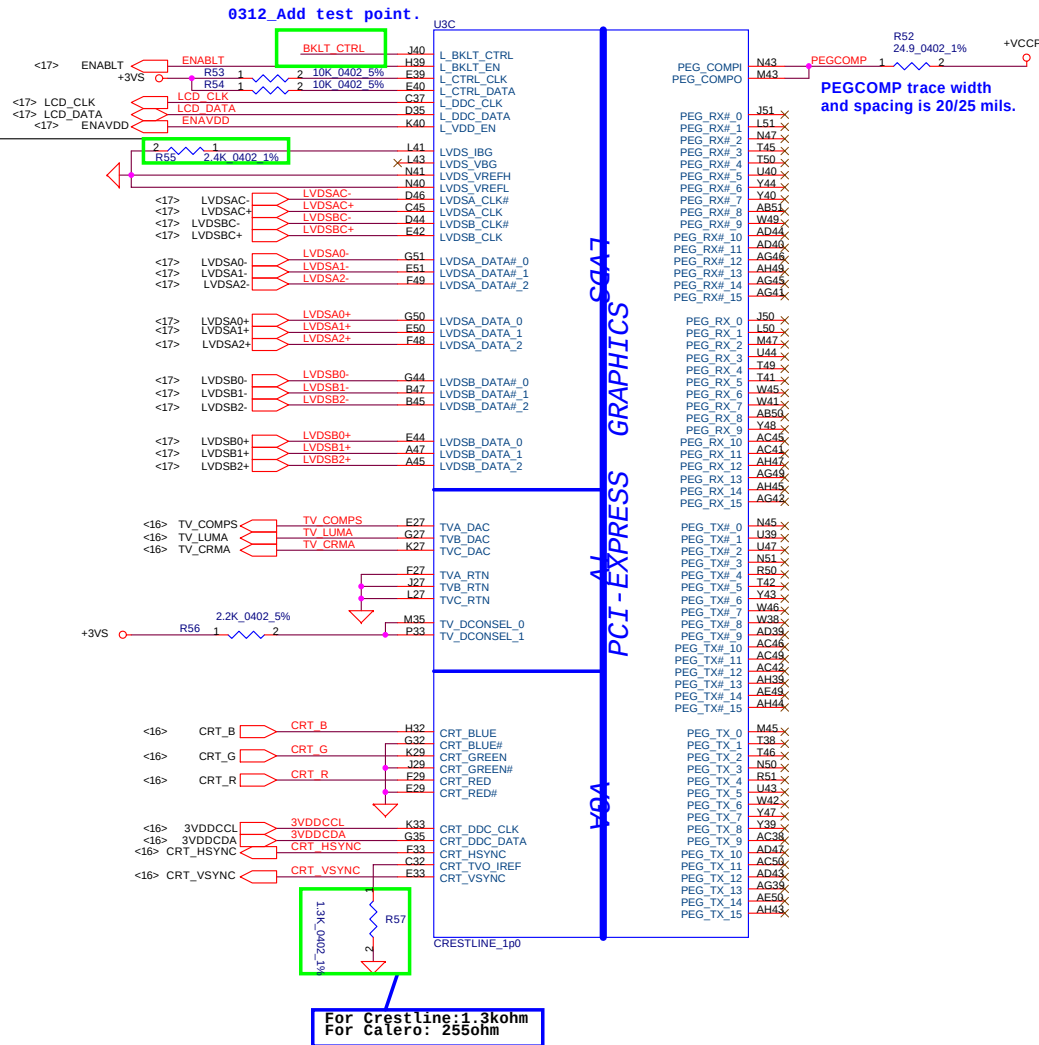
DDR SYSTEM MEMORY A



DDR SYSTEM MEMORY B



For Crestline: 2.4kohm
For Calero: 1.5kohm

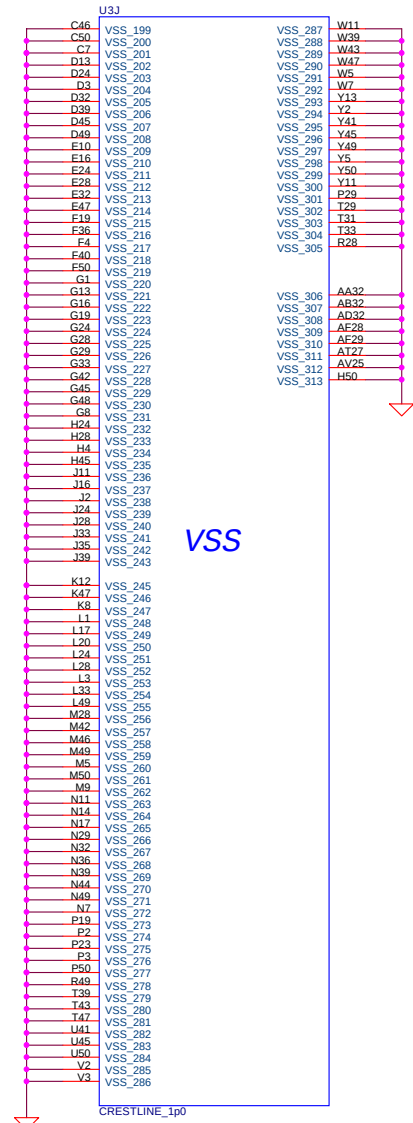
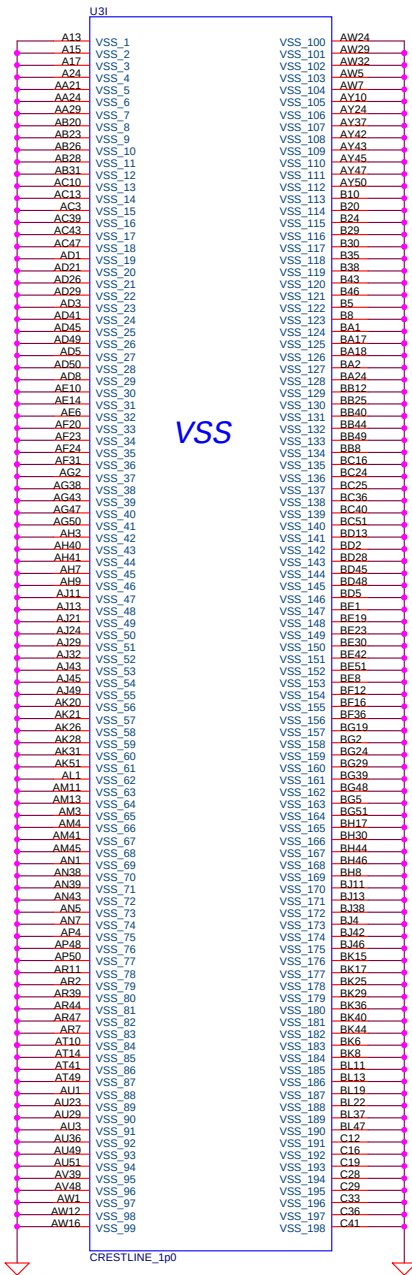


Strap Pin Table

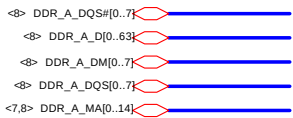
CFG[2:0] FSB Freq select	010 = FSB 800MHz 011 = FSB 667MHz Others = Reserved
CFG5 (DMI select)	0 = DMI x 2 1 = DMI x 4 *
CFG6	Reserved
CFG7 (CPU Strap)	0 = Reserved 1 = Mobile CPU *
CFG8 (Low power PCIE)	0 = Normal mode 1 = Low Power mode *
CFG9 (PCIE Graphics Lane Reversal)	0 = Reverse Lane 1 = Normal Operation *
CFG[11:10]	Reserved
CFG[13:12] (XOR/ALLZ)	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation (Default) *
CFG[15:14]	Reserved
CFG16 (FSB Dynamic ODT)	0 = Disabled 1 = Enabled *
CFG[18:17]	Reserved
SDVO_CTRLDATA	0 = No SDVO Device Present * 1 = SDVO Device Present
CFG19 (DMI Lane Reversal)	0 = Normal Operation (Lane number in Order) * 1 = Reverse Lane
CFG20 (PCIE/SDVO concurrent)	0 = Only PCIE or SDVO is operational. * 1 = PCIE/SDVO are operating simu.

CFG[17:3] have internal pull up

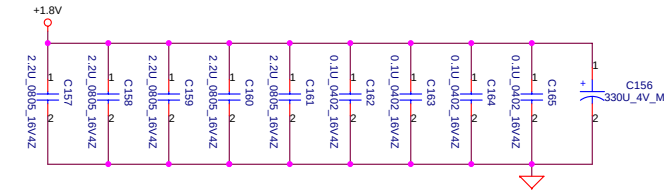
CFG[19:18] have internal pull down



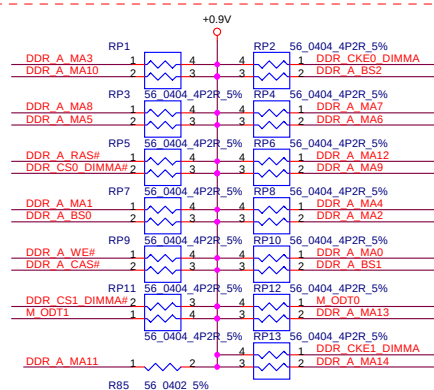
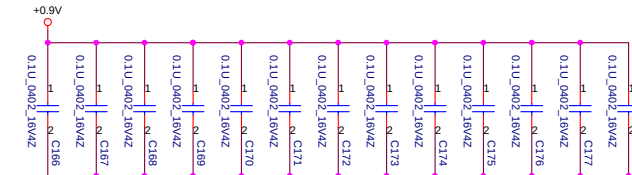
Security Classification		Compal Secret Data		Compal Electronics, Inc.				
Issued Date		2006/02/13	Deciphered Date	2006/03/10	Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE 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.					CRESTLINE((6/6)-PWR/GND			
					Size	Document Number		Rev
					Custom	LA-3732P		0.2
					Date:	Wednesday, March 14, 2007	Sheet	12 of 40



Layout Note:
Place near JP34



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



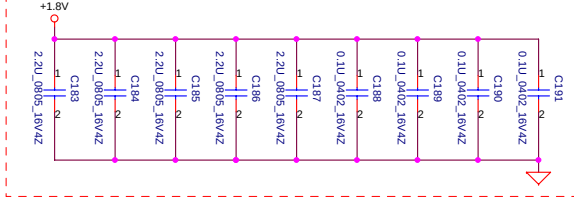
Layout Note:
Place these resistor
closely JP34, all
trace length Max=1.5"



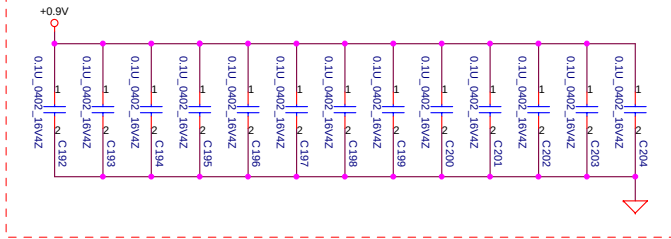
Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date		2006/02/13	Deciphered Date	2006/03/10	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.					DDR II-SODIMM SLOT1		
					Size	Document Number	Rev
					Custom	LA-3732P	0.2
Date:		Wednesday, March 14, 2007		Sheet	13 of 40		

<> DDR_B_DQS#[0..7] <> DDR_B_D[0..63] DDR_B_DM[0..7] <> DDR_B_DQS[0..7] <7,8> DDR_B_MA[0..14]

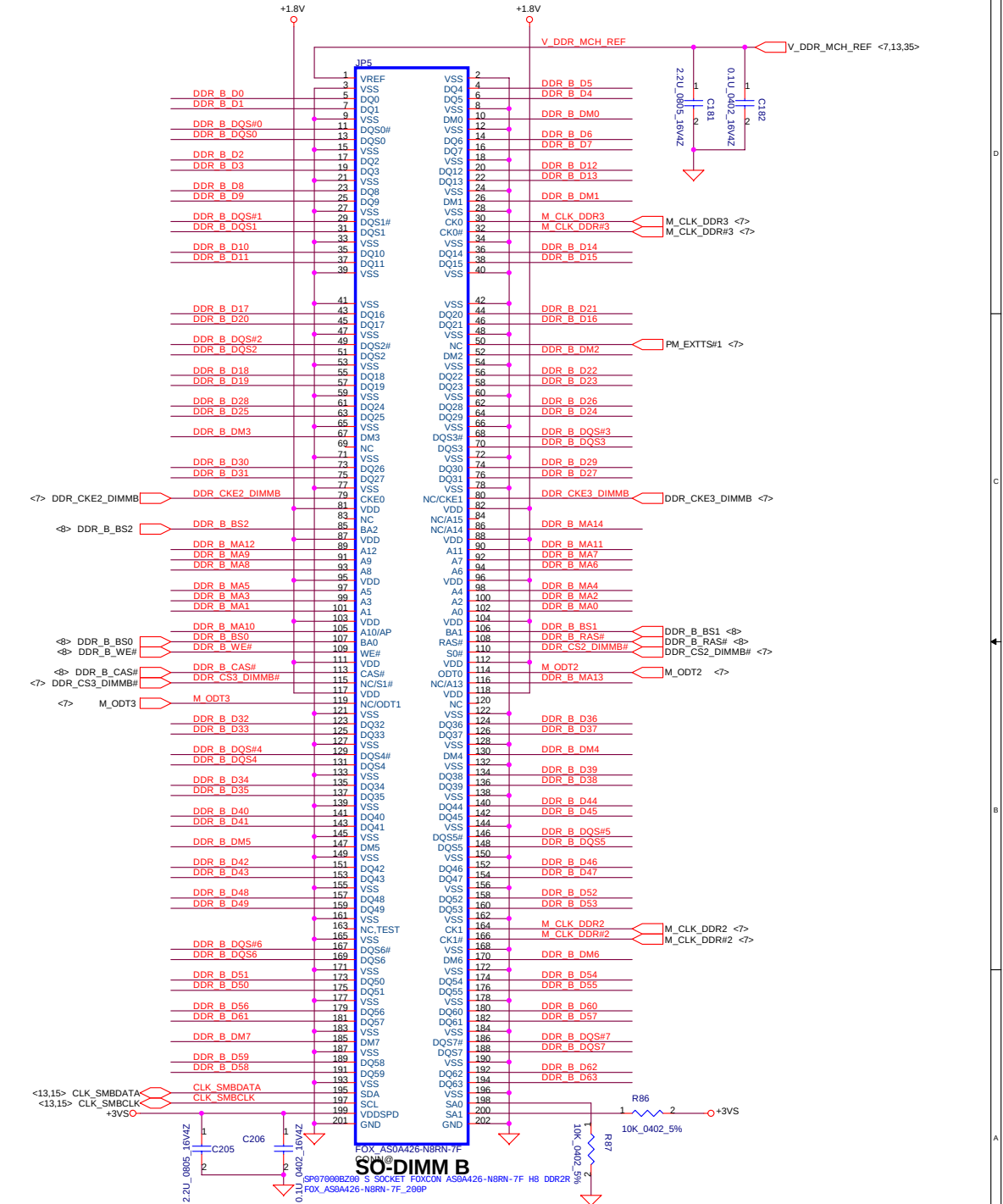
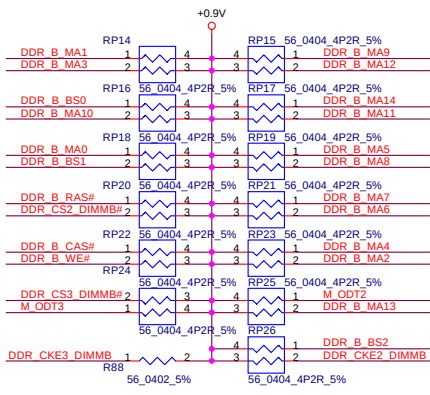
Layout Note:
Place near JP10



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



Layout Note:
Place these resistor
closely JP10,all
trace length Max=1.5"

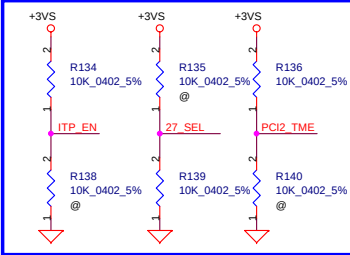
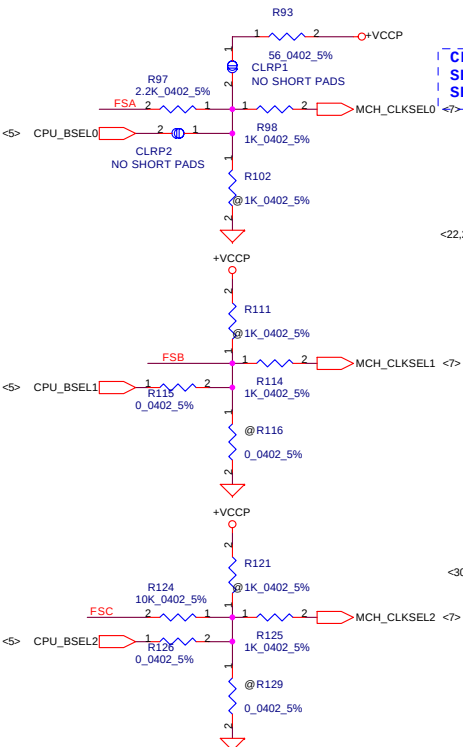


Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date		2006/02/13	Deciphered Date	2006/03/10		Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				DDRII-SODIMM SLOT2			
				Size	Document Number		Rev
				LA-3732P			0.2
				Date:	Wednesday, March 14, 2007		Sheet

FSLC CLKSEL2	FSLB CLKSEL1	FSLA CLKSEL0	CPU MHz	SRC MHz	PCI MHz
0	0	1	133	100	33.3
0	1	0	200	100	33.3
0	1	1	166	100	33.3

FSB Frequency Selet:

CPU Driven	Stuff	R1107	R1135	R1083
* (Default)	No Stuff	R1074	R1086	R1098
		R1113	R1128	R1139
667MHz	Stuff	R1086	R1139	R1135
	No Stuff	R1083	R1107	R1128
		R1113	R1098	
800MHz	Stuff	R1135	R1139	
	No Stuff	R1083	R1086	R1098
		R1107	R1113	

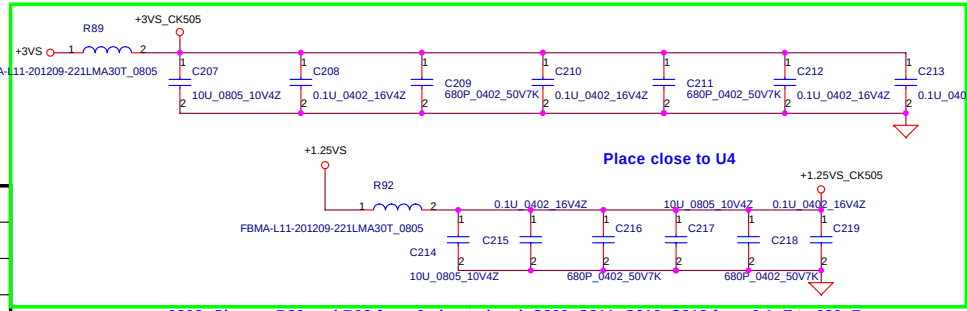


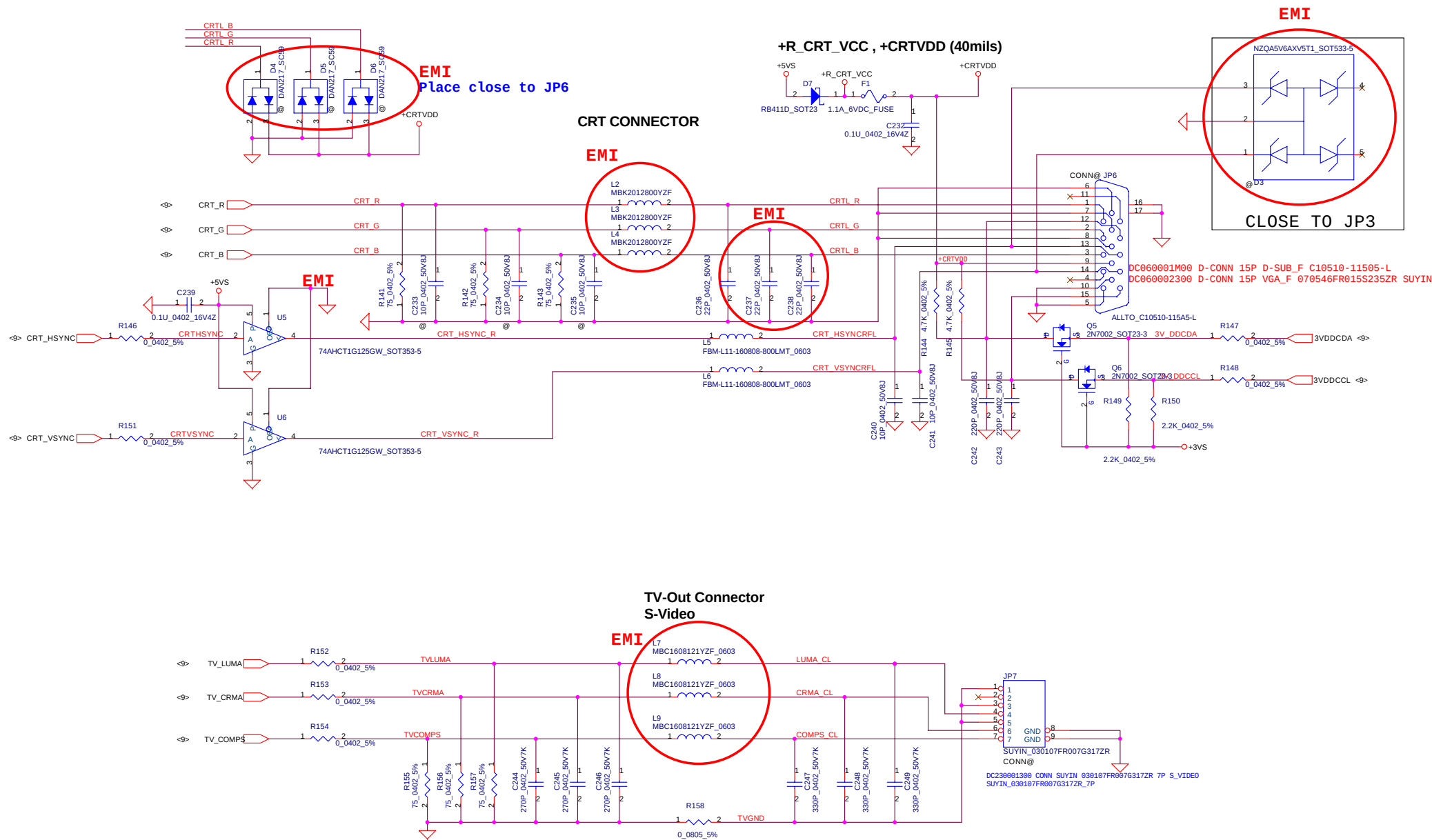
For ITP_EN, 0 =SRC8/SRC8#; 1 = ITP/ITP#
For 27_SEL, 0 = Enable DOT96 & SRC1,
1 = Enable SRC0 & 27MHz
For PCI2_EN, 0 = Overclocking of CPU and SRC Allowed
1 = Overclocking of CPU and SRC NOT allowed

CLRP4,CLRP5 for 667/800 FSB select
SHORT CLRP5, NO SHORT CLRP4 -- CPU option
SHORT CLRP4, NO SHORT CLRP5 -- FSB 667

0301_Change R105 from 22 ohm to 0 ohm.
0312_Change R106, 107, 109 from 22 to 33 ohm.

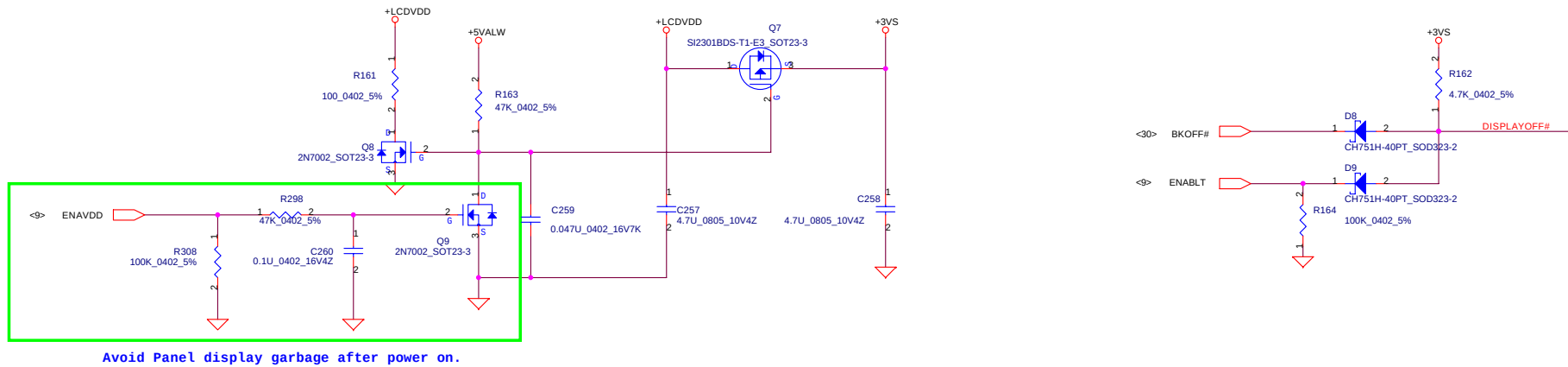
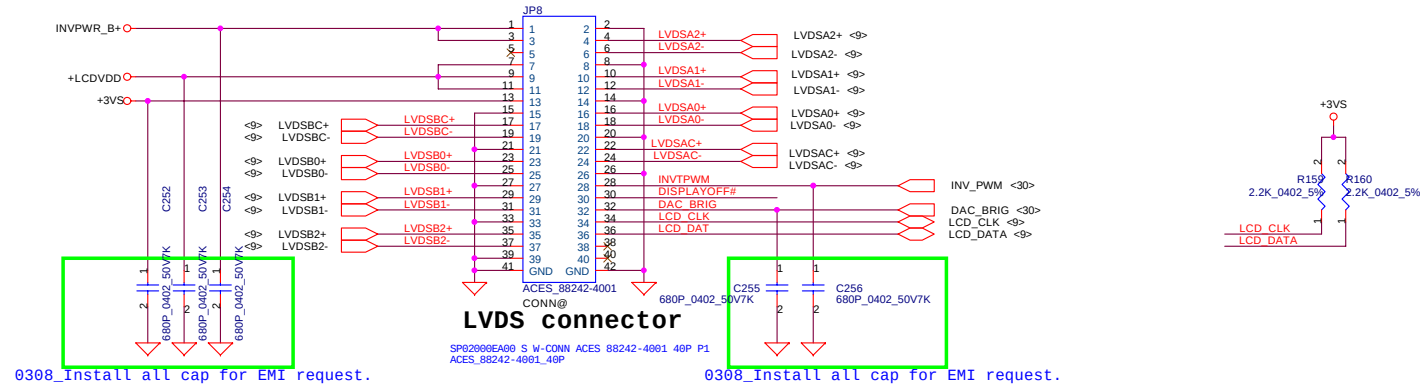
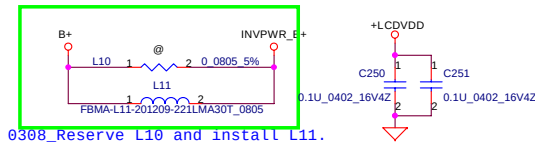
Routing the trace at
least 10mil



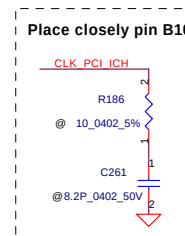
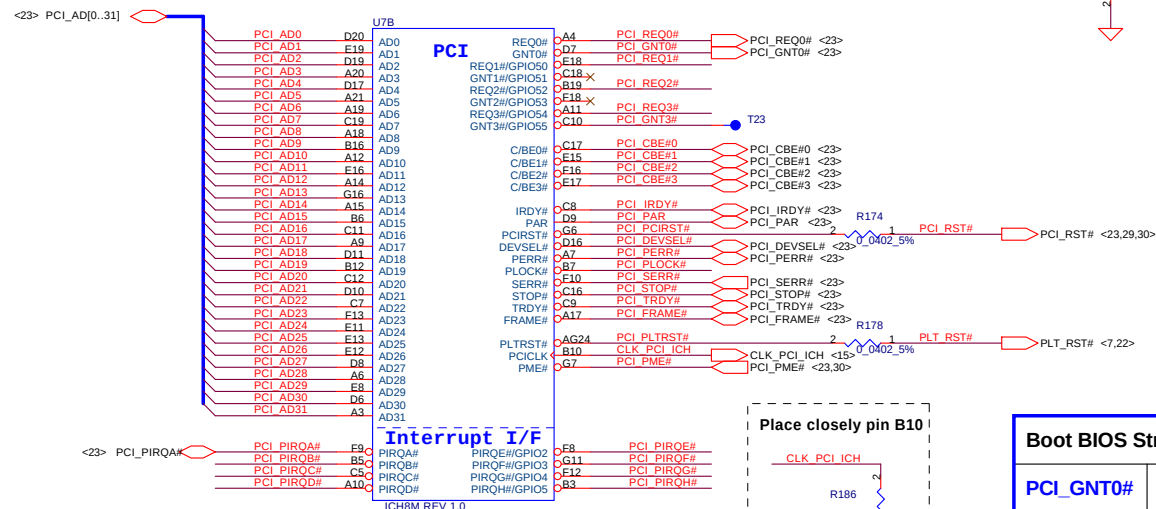
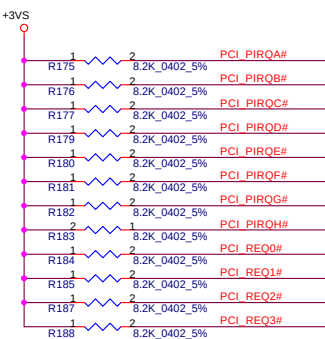
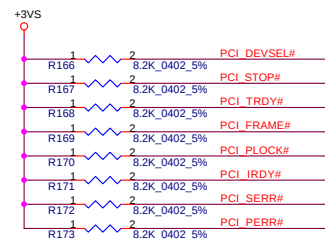


Security Classification				Compal Secret Data				Title			
Issued Date				2006/02/13				Deciphered Date			
								2006/07/26			

LVDS CONN

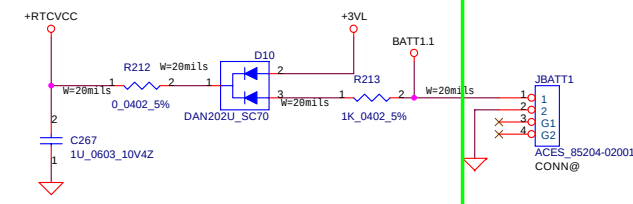
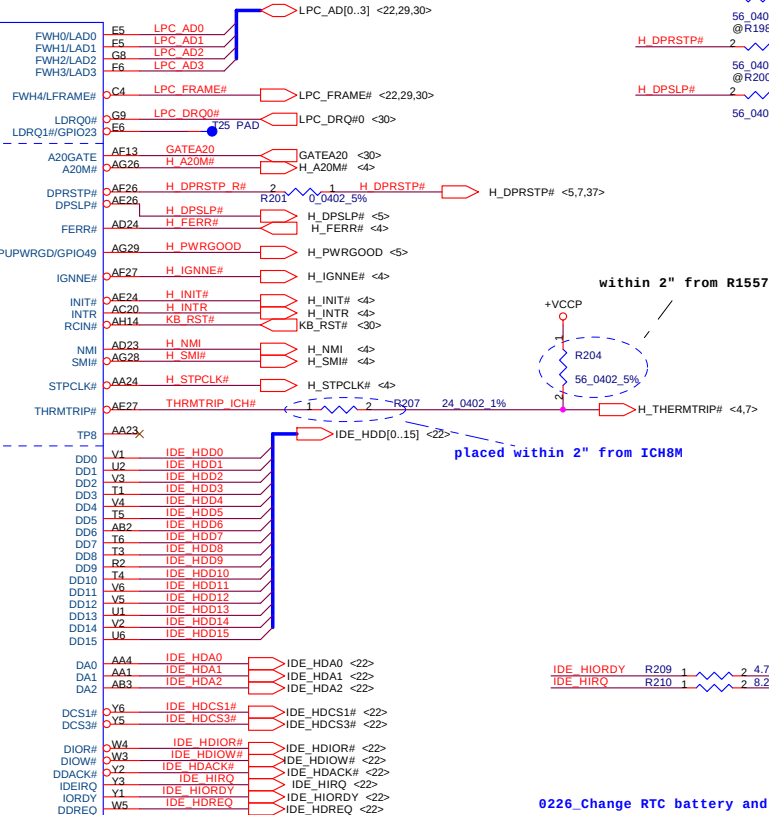
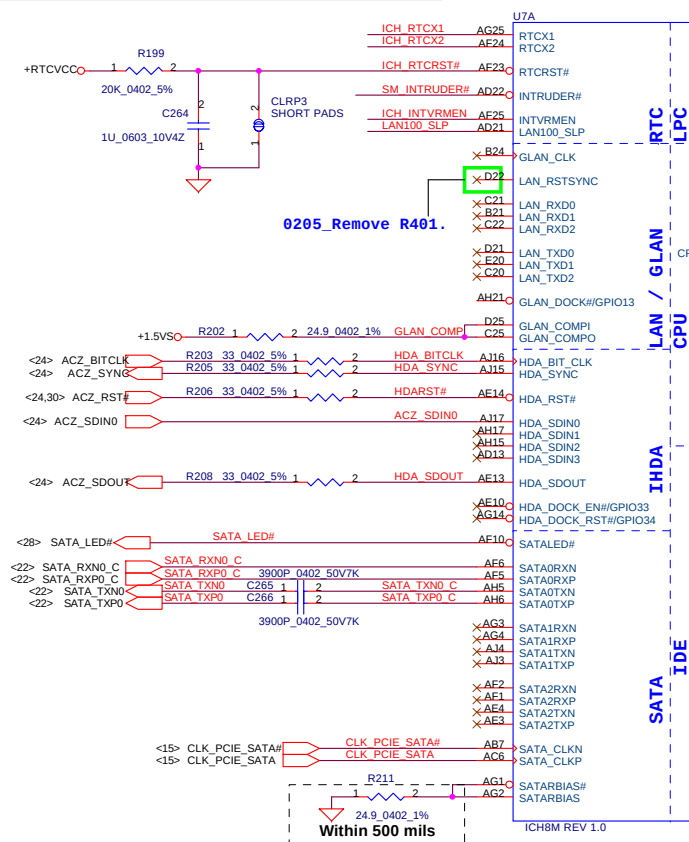
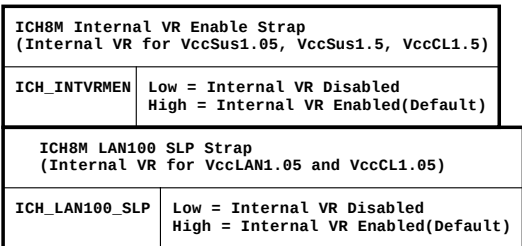


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/02/13	Deciphered Date	2006/07/26	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
					LA-3732P
				Date	Wednesday, March 14, 2007
				Sheet	17 of 40
				Rev	0.2
				LCD CONN.	

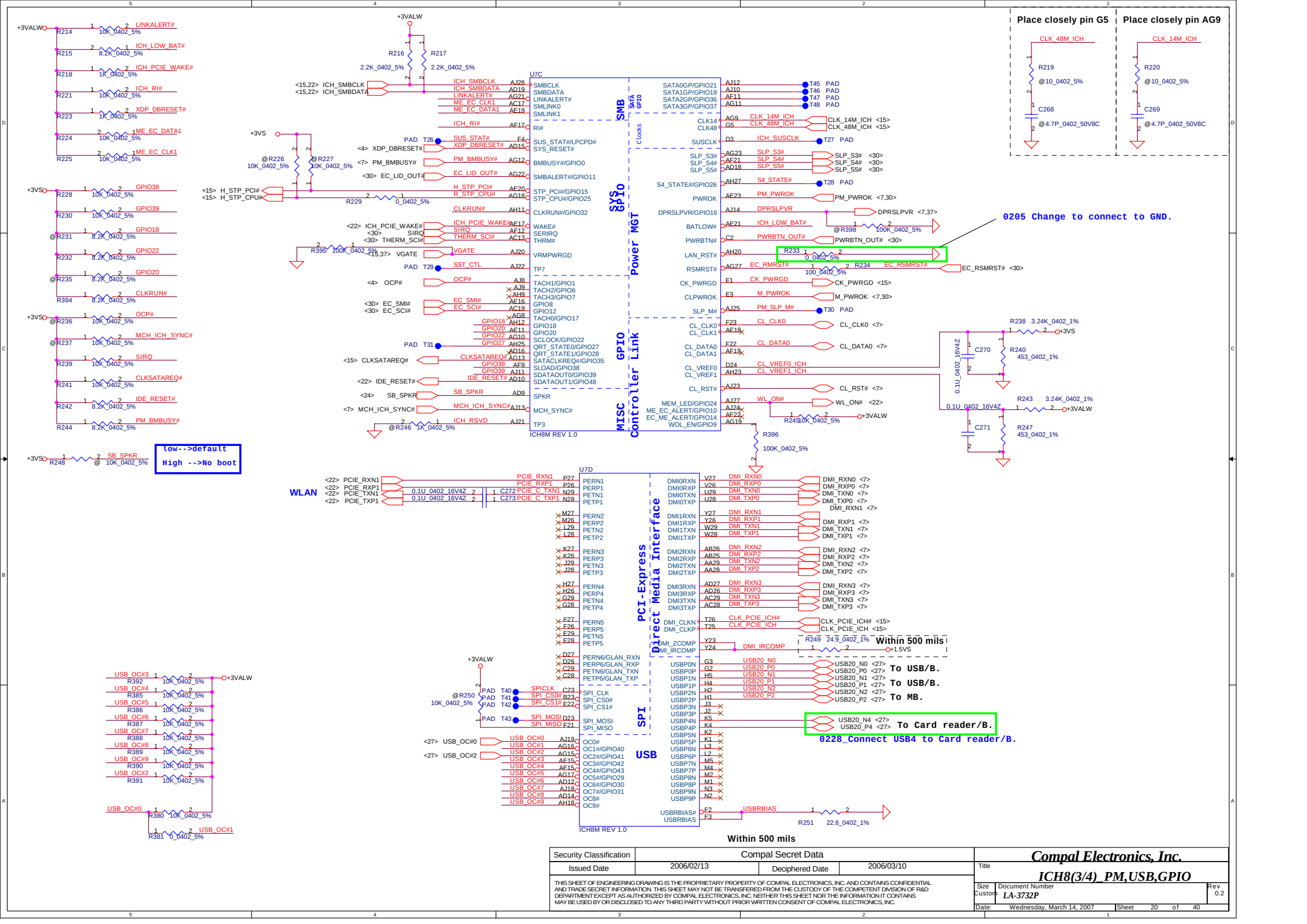


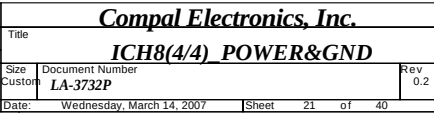
Boot BIOS Strap		
PCI_GNT0#	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC *

A16 swap override Strap	
PCI_GNT3#	*Low= A16 swap override Enable High= Default



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2006/02/13	Deciphered Date	2006/03/10	Title	ICH8(2/4) LAN,HD,IDE,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 BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	LA-3732P	0.2
				Date:	Wednesday, March 14, 2007	Sheet 19 of 40

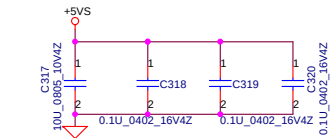




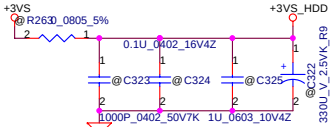
HDD Connector

CD-ROM Connector

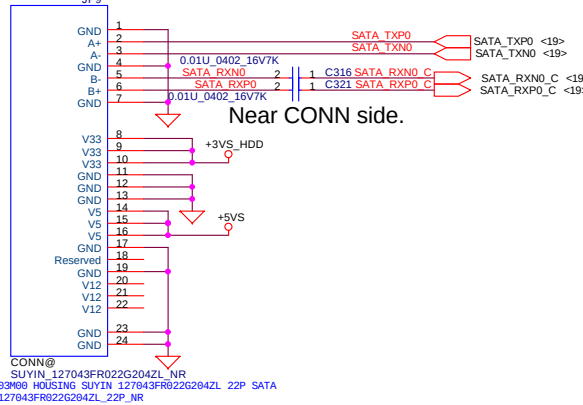
Place caps. near ODD CONN.



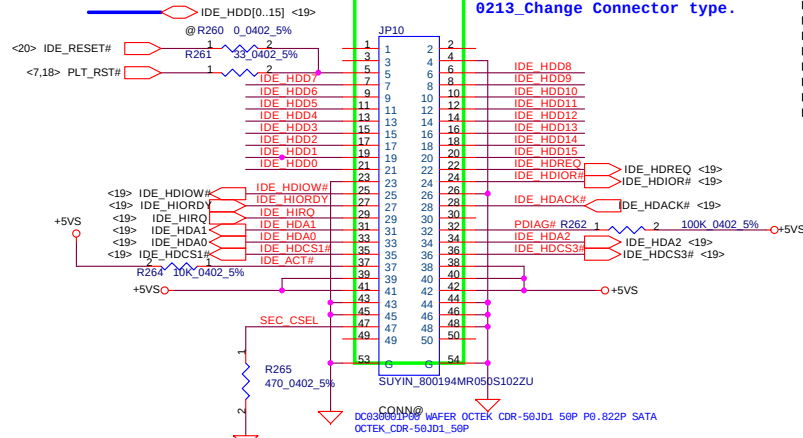
Place near HD CONN (JP23)



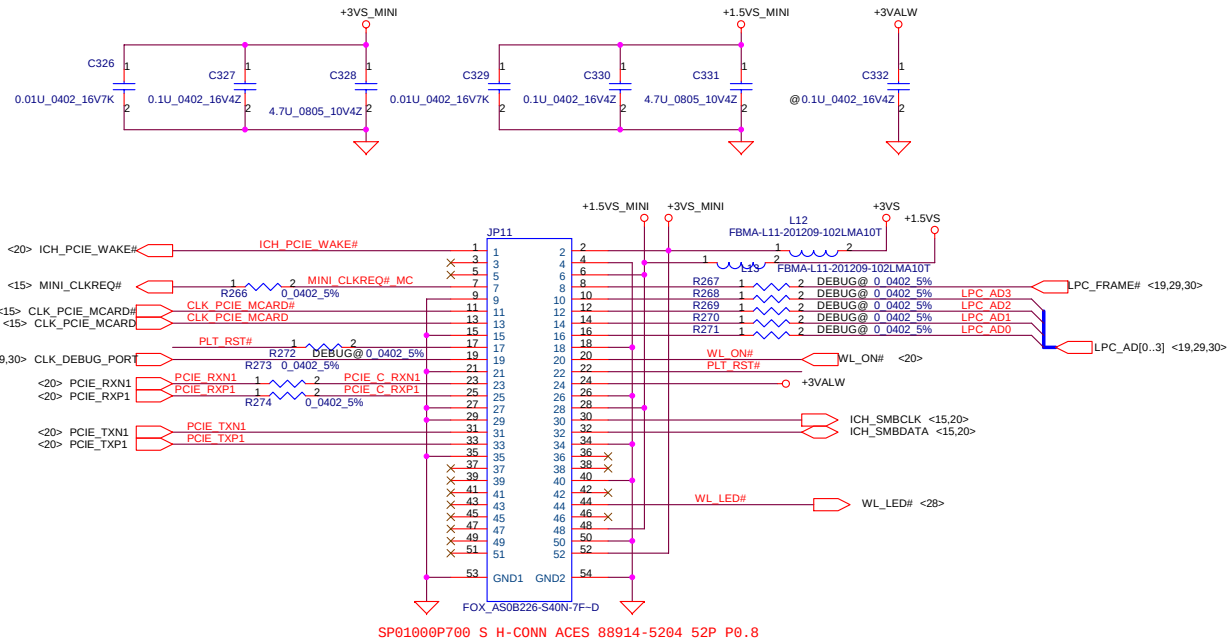
Place near HD CONN



Near CONN side.

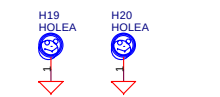


Mini-Express Card---WLAN



SP01000P700 S H-CONN ACES 88914-5204 52P P0.8

Mini Card STANDOFF



EC829000100 MINICARD_STANDOFF_8

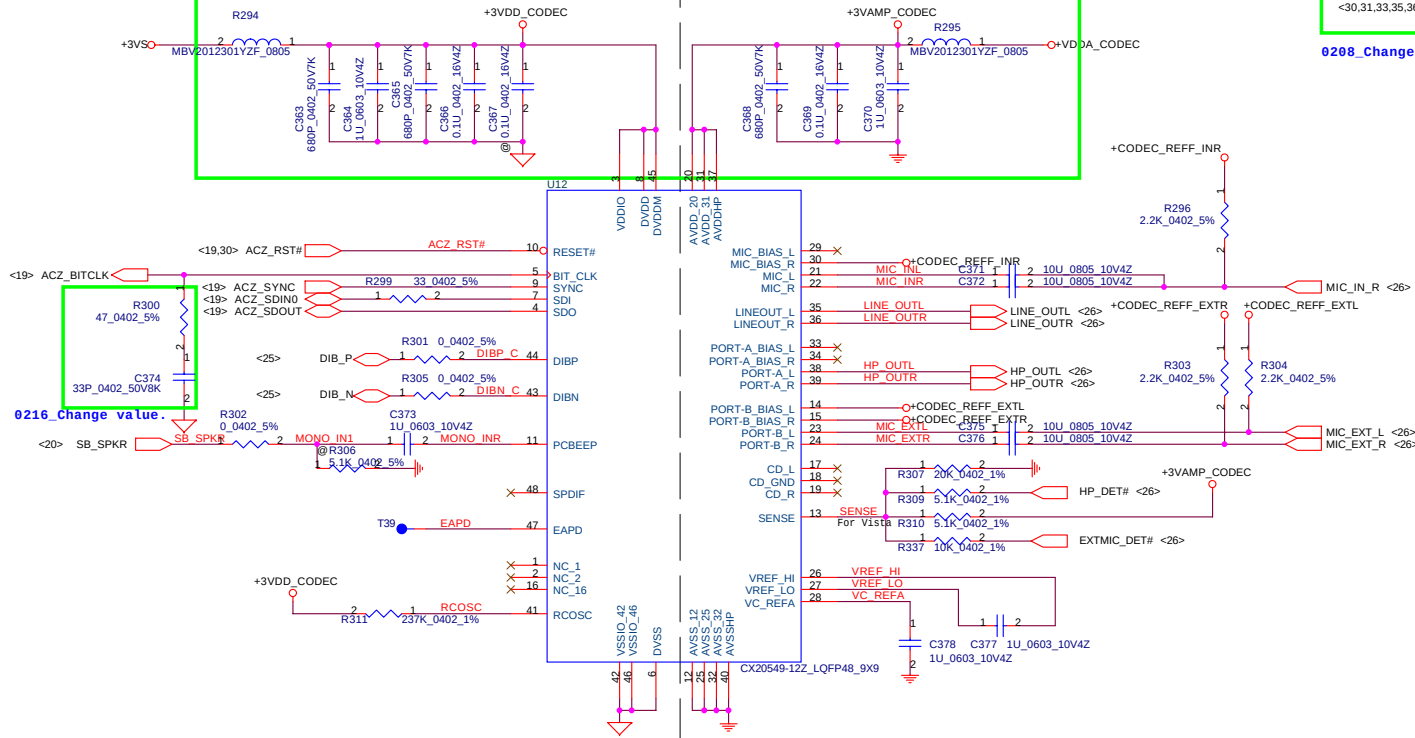
Security Classification		Compal Secret Data		Title	
Issued Date	2006/02/13	Deciphered Date	2007/08/29	HDD/ODD/Mini Card CONN.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
				LA-3732P	
				Date:	Wednesday, March 14, 2007
				Sheet	22 of 40
				Rev	0.2

AUDIO CODEC

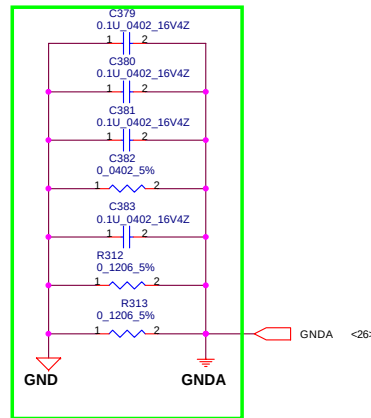
0308_Change R294 and R295 from 0 ohm to bead, C363 from 10uF to 680pF, C365 and C368 from 0.1uF to 680p

In order for the modem wake on ring feature to function, the CODEC must be powered by a rail that is not removed when the system is in standby.

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



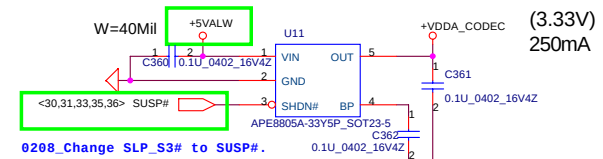
DIGITAL | ANALOG



0312_Mount C379-383, R313.

CODEC POWER

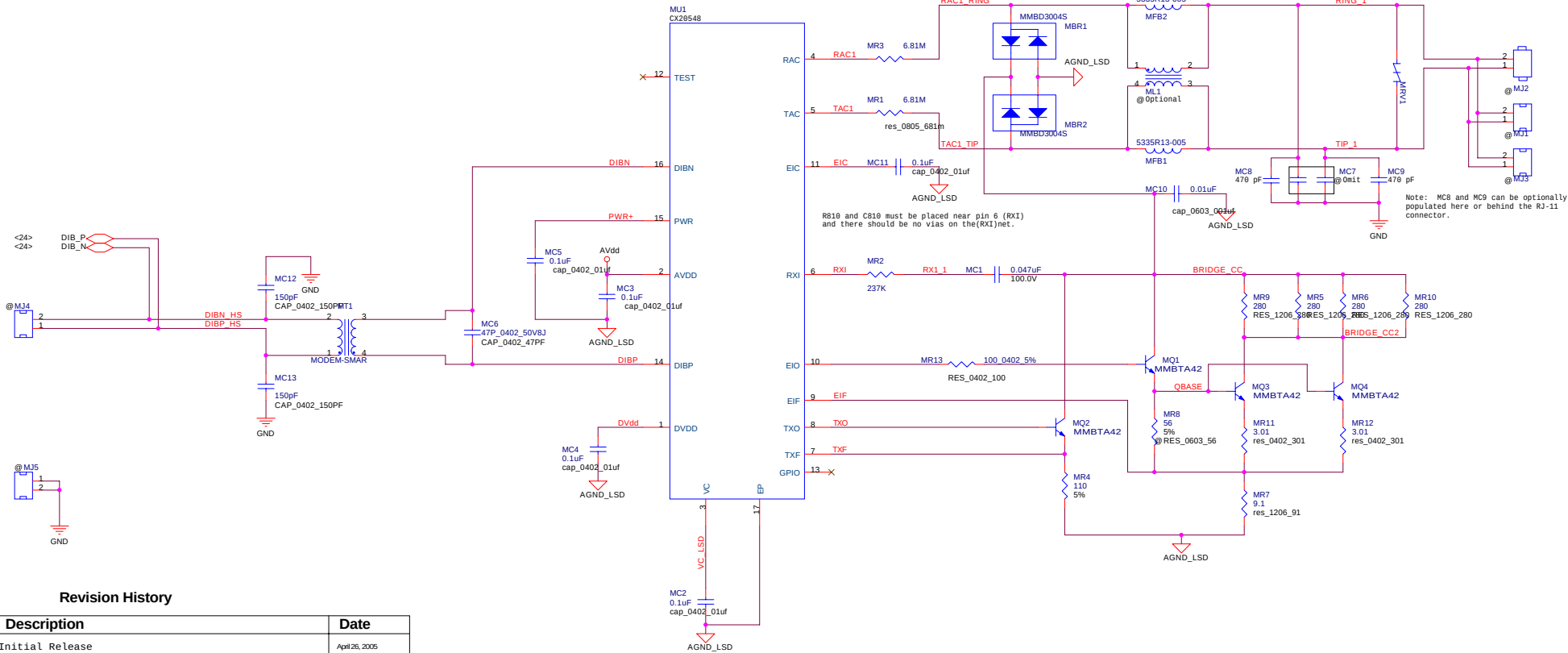
0212_Change to +5VALW.



0208_Change SLP_S3# to SUSP#.

HP_DET#	MIC_DET	LINEOUT	PORT-A <Earphone OUT>	MIC	EQ
0 (LOW)	0 (LOW)	OFF	ON	ON	Disable
0 (LOW)	NC	OFF	ON	OFF	Disable
NC	0 (LOW)	ON	OFF	ON	Enable
NC	NC	ON	OFF	OFF	Enable

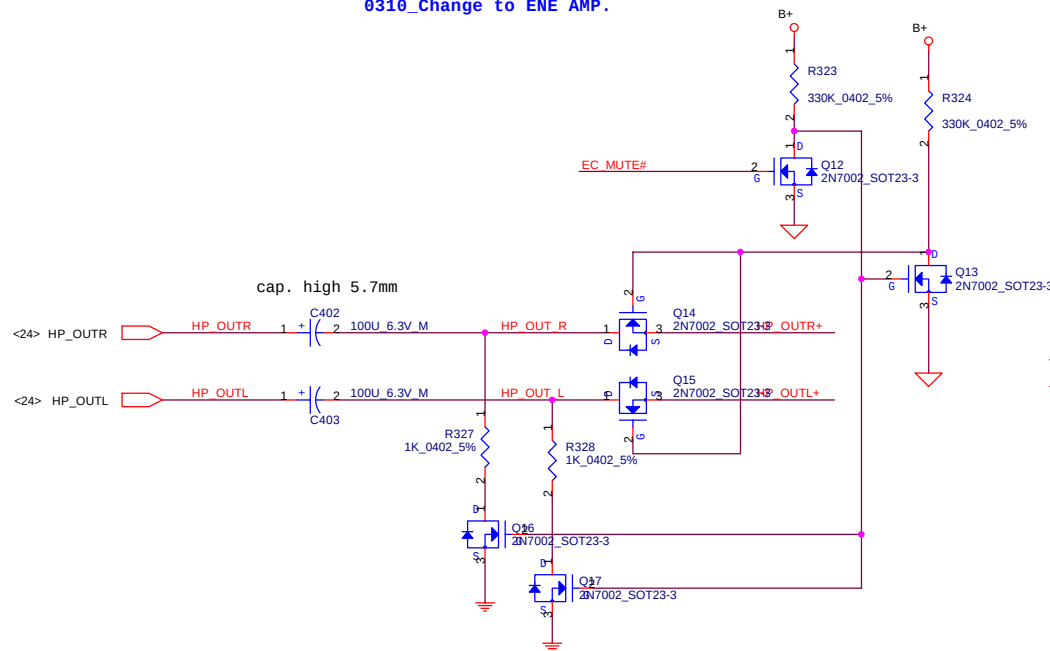
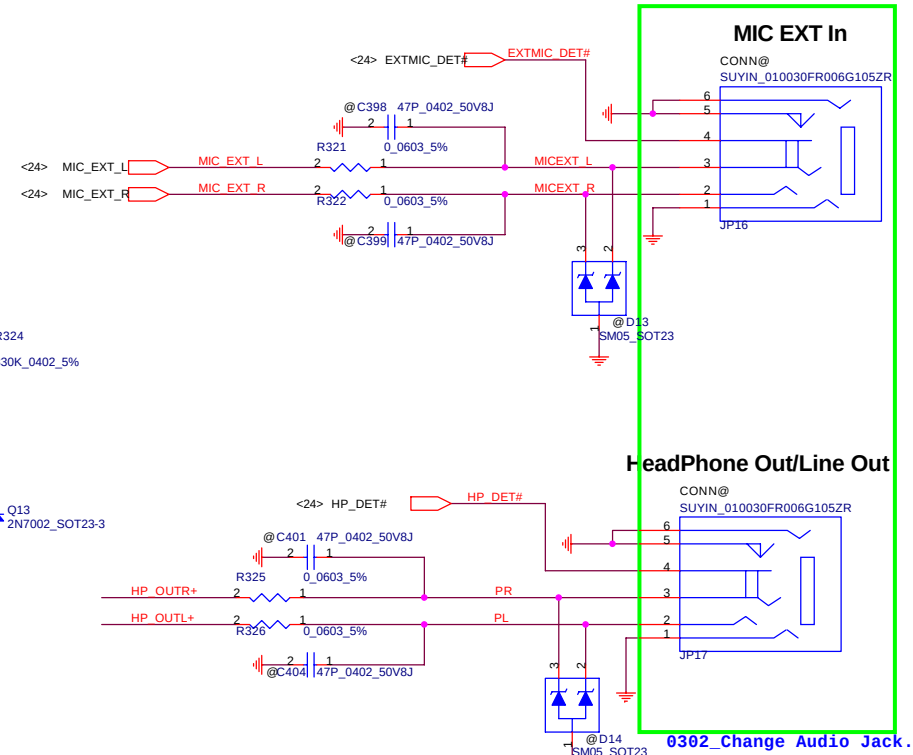
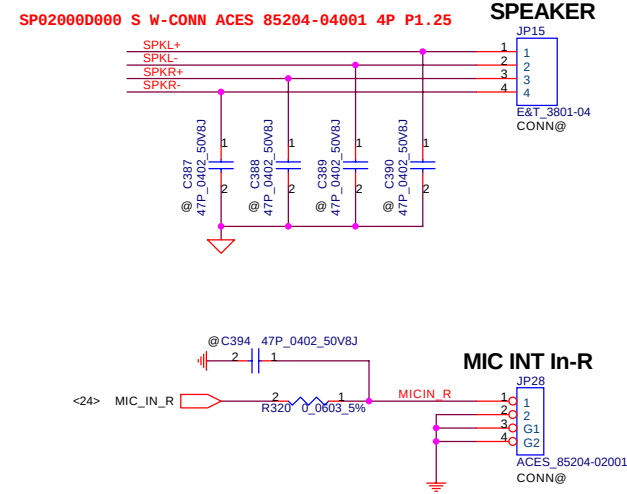
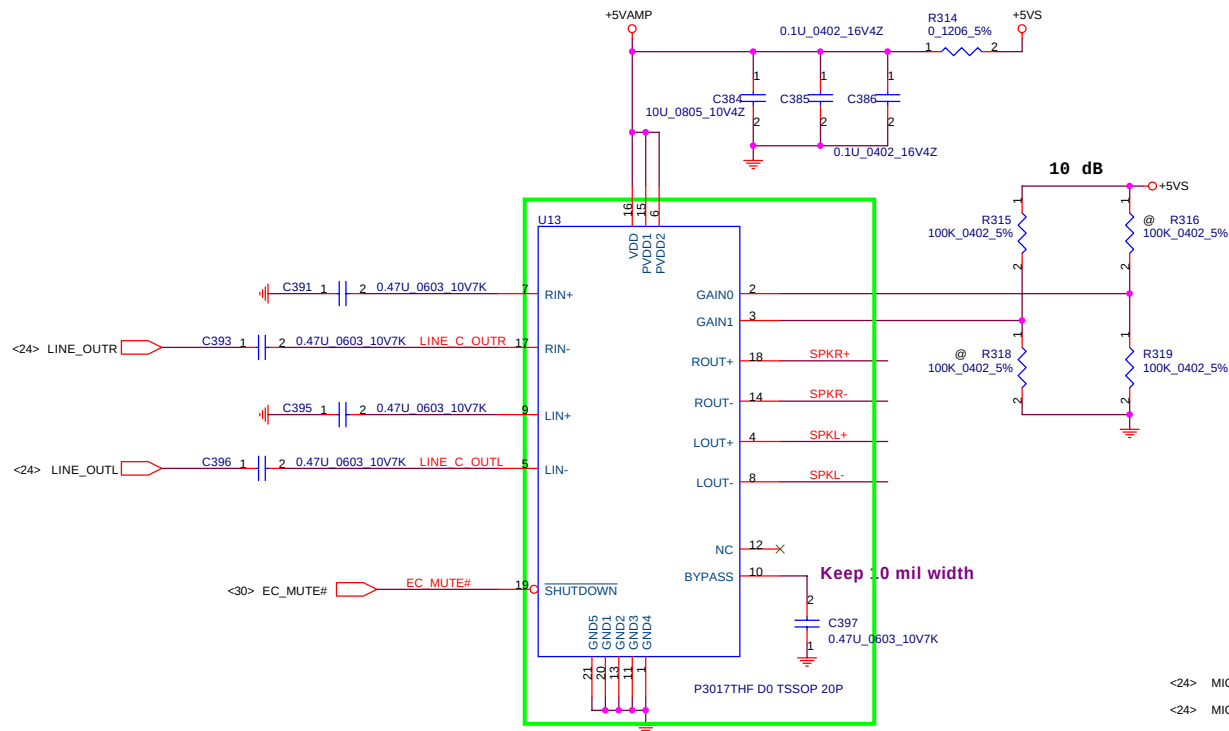
Security Classification	Compal Secret Data			Title	
Issued Date	2006/02/13	Deciphered Date	2006/03/10	AMOM_codec	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE 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-3732P
				Date	Wednesday, March 14, 2007
				Sheet	24 of 40



Revision History

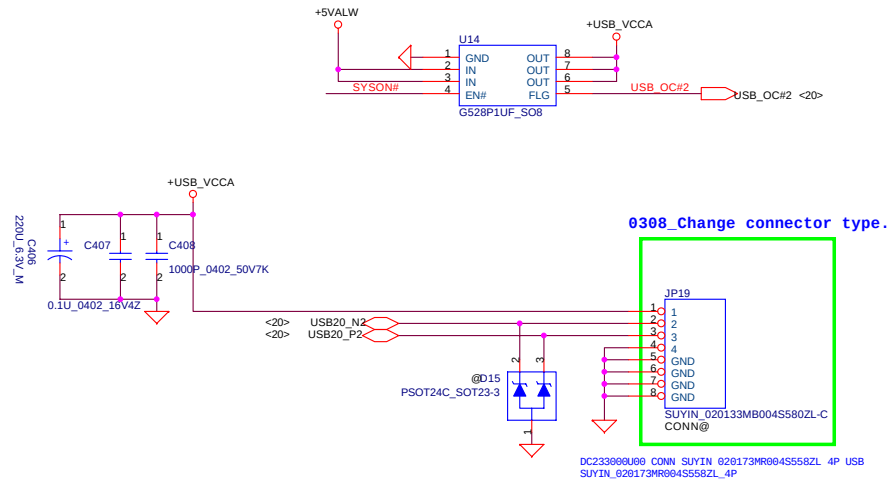
REV	Description	Date
0	Initial Release	April 26, 2005
1	No changes to schematic. PCB updated to -003. Updated footprints and corrected via spacing errors.	August 18, 2005
2	Changed MC8 and MC9 pads. No schematic changes. PCB updated to -005.	November 3, 2005
3	Added MR11 and MR12. PCB updated to -007.	November 18, 2005
4	Added MR13. PCB updated to -009.	January 3, 2006
4.01	AVL update only.	April 20, 2006

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2006/02/13	Deciphered Date	2007/07/26	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.		AMOM-CX20548		Size	Document Number
				LA-3732P	Rev 0.2
				Date:	Wednesday, March 14, 2007
				Sheet	25 of 40

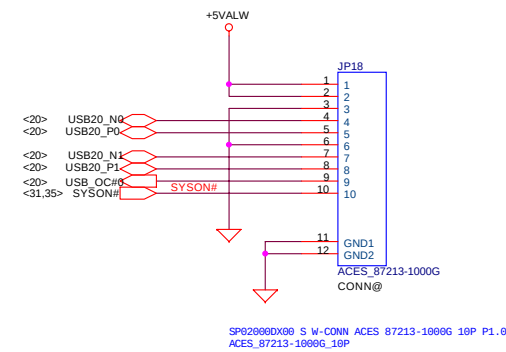
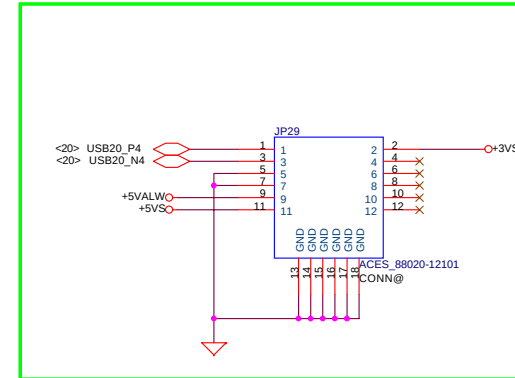


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/02/13	Deciphered Date	2007/08/29	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				LA-3732P	
				Date	Wednesday, March 14, 2007
				Sheet	26 of 40
				Rev	0.2

USB Port

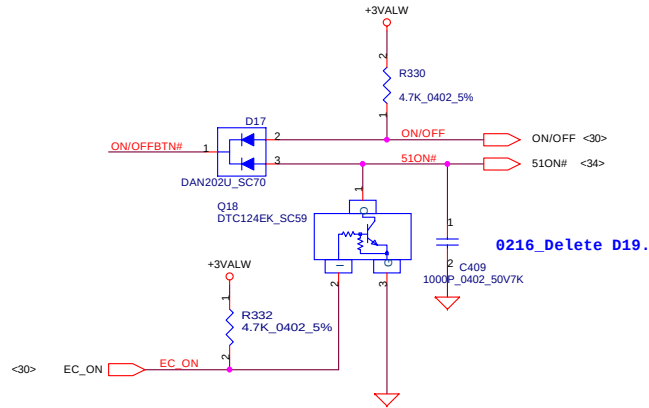


0228_Add JP29 for USB card reader.



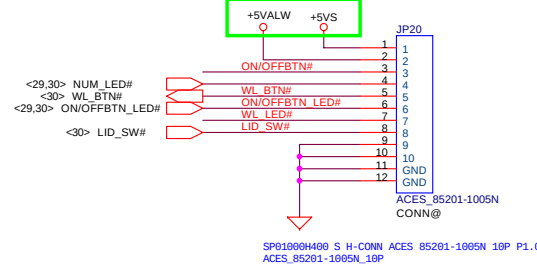
Security Classification		Compal Secret Data		Compal Electronics, Inc.					
Issued Date		2006/02/13	Deciphered Date		2006/07/26	Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.									
						Size	Document Number		Rev
							LA-3732P		0.2
Date:		Wednesday, March 14, 2007		Sheet	27	of 40			

Power ON/OFF

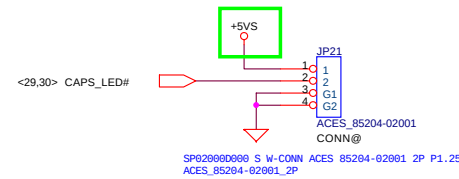


M/BtoS/B

0301_Change Voltage from 3V to 5V.



M/B to SB(Caps Lock LED)

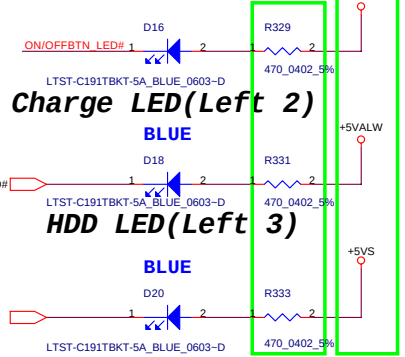


0208_Change R329, R331, R333 to 470 ohm, R334 and R339 to 820 ohm, R335 and R338 to 200 ohm.

0208_Delete reserve component (D25, SW2) for 14.1". D21, D25, D23 Footprint can not match part number.

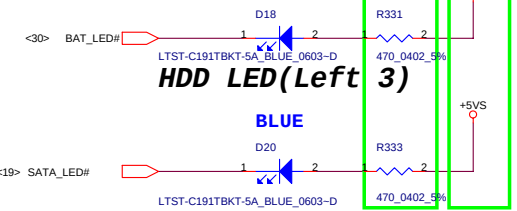
POWER LED(Left 1)

BLUE



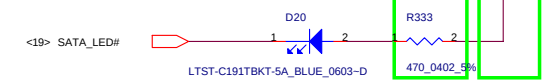
Battery Charge LED(Left 2)

BLUE



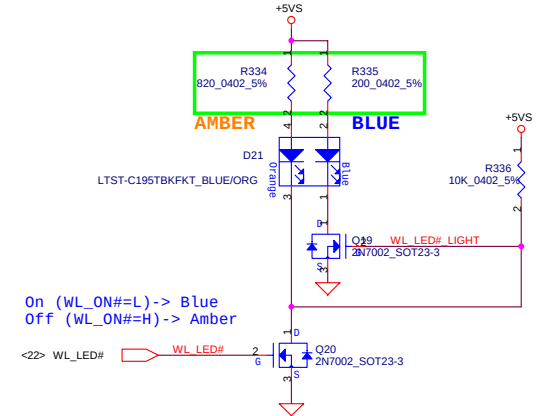
HDD LED(Left 3)

BLUE



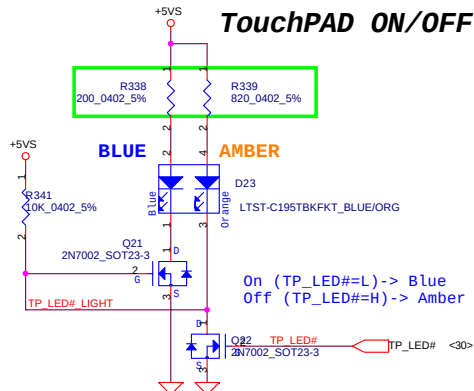
0208_Change Voltage from 3V to 5V.

Wireless ON/OFF LED(Left 4)



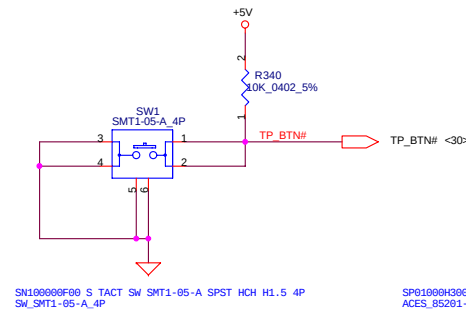
On (WL_ON#=L)-> Blue
Off (WL_ON#=H)-> Amber

TouchPAD ON/OFF LED

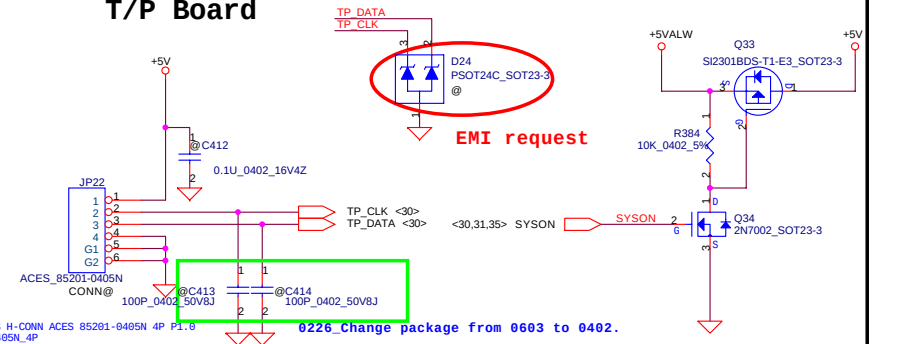


On (TP_LED#=L)-> Blue
Off (TP_LED#=H)-> Amber

TP ON/OFF



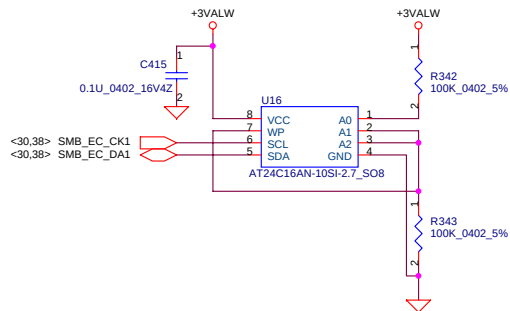
T/P Board



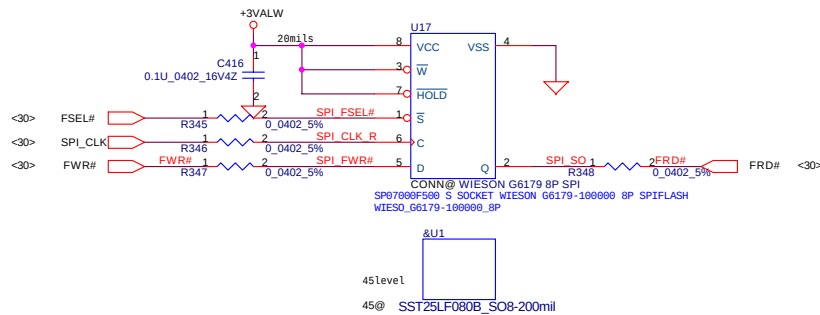
EMI request

0226_Change package from 0603 to 0402.

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2006/02/13	Deciphered Date	2006/07/26	Title	LED/SW
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
					LA-3732P
				Rev	0.2
				Date:	Wednesday, March 14, 2007
				Sheet	28 of 40

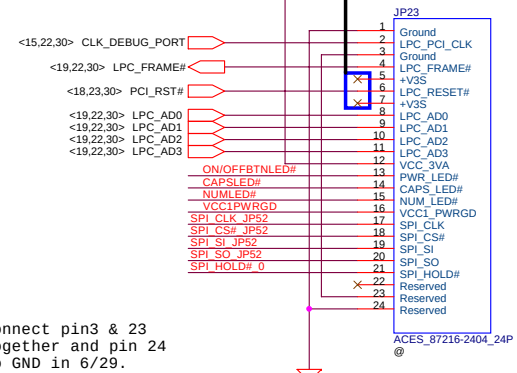


SPI ROM

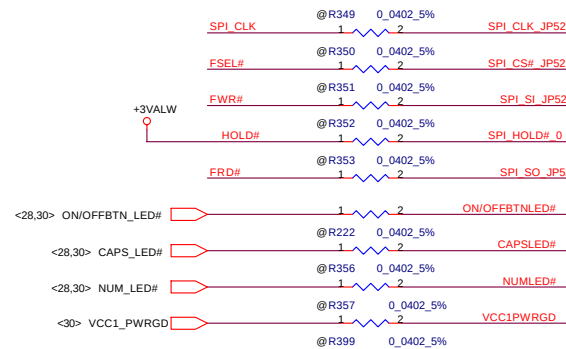


LPC Debug Port

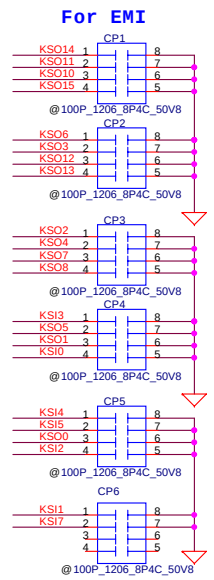
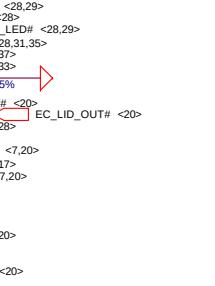
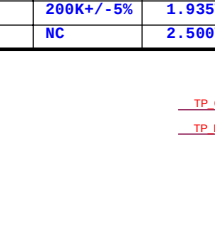
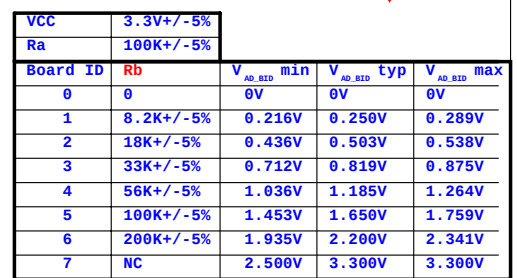
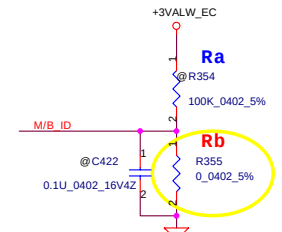
Change from +3VL to +3VS. 6/9
Removed +3VS. 6/13



Connect pin3 & 23
together and pin 24
to GND in 6/29.

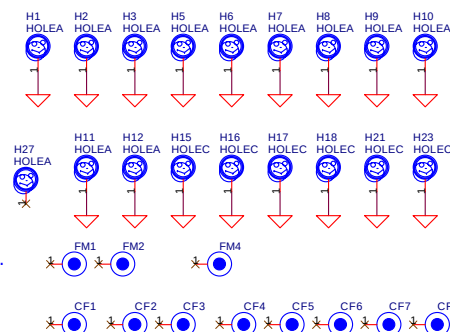
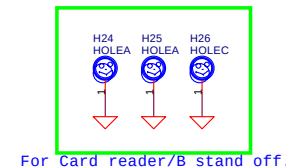
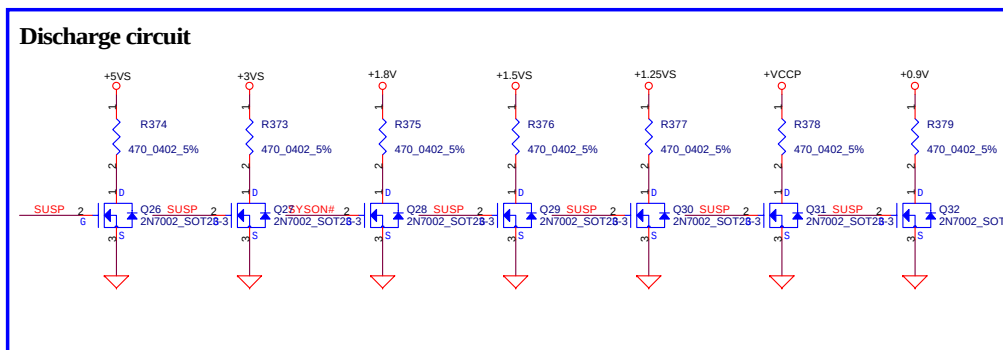
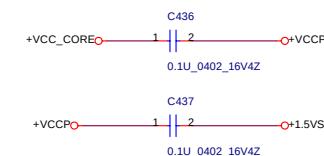
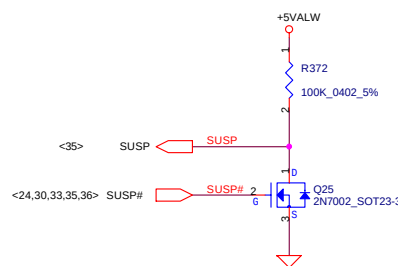
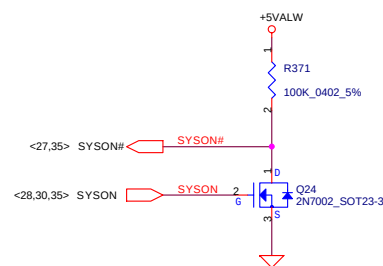
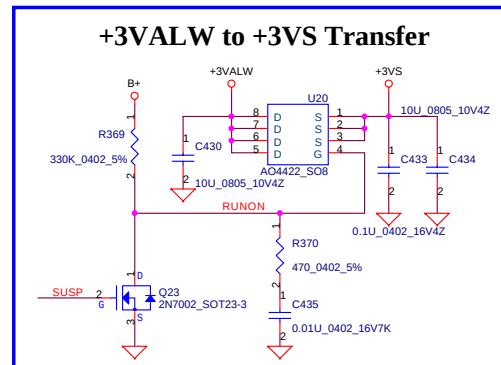
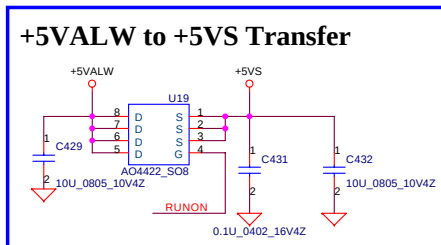


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2006/02/13	Deciphered Date	2006/07/26	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				BIOS ROM	
Size		Document Number			Rev
		LA-3732P			0.2
Date:		Wednesday, March 14, 2007	Sheet	29	of 40

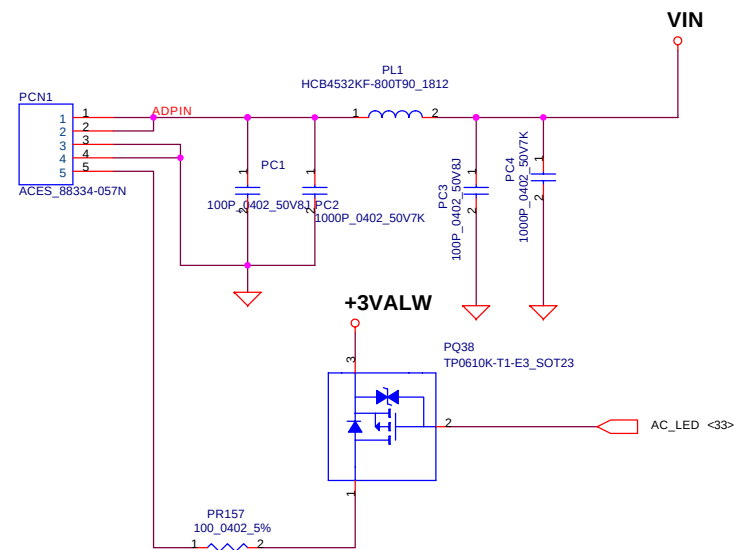


Pin configuration diagram for the ACES_B5201-2005 module. The diagram shows a 20-pin connector labeled JP24. Pins 1 and 2 are connected to +5V. Pins 3 and 4 are connected to +3V. Pins 7, 8, 9, 10, 11, 12, 13, and 14 are connected to LPC signals: CLK_14M_DEBUG, LPC_AD0, LPC_AD1, LPC_AD2, LPC_AD3, LPC_FRAME#, LPC_DRQ#0, and PCI_RST#. Pins 15 and 16 are connected to CLK_DEBUG_PORT and SIQ#. Pins 17, 18, 19, and 20 are connected to ground. A resistor R383 (10K_0402_5%) is connected between pins 14 and 15.

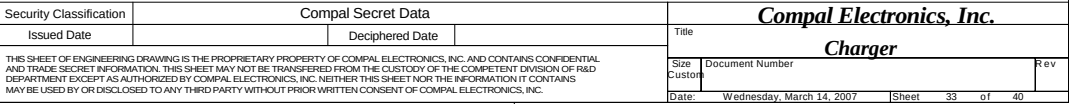
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2006/02/13	Deciphered Date	2006/07/26	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				EC KB926/KB conn		
				Size	Document Number	Rev
				LA-3732P		0.2
Date:				Wednesday, March 14, 2007	Sheet	30 of 40

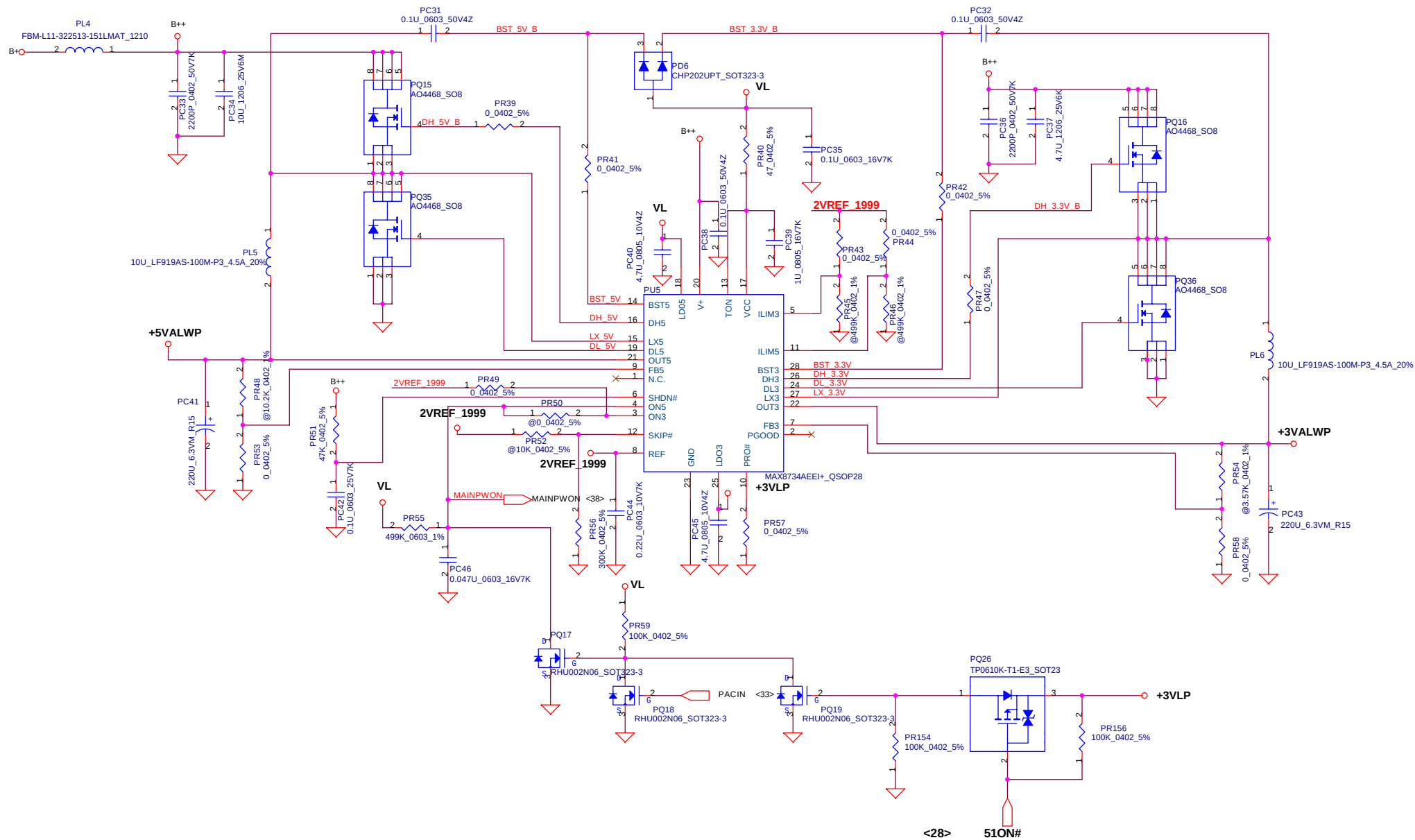


Security Classification	Compal Secret Data			Title	
Issued Date	2006/02/13	Deciphered Date	2006/07/26	DC/DC Interface	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				LA-3732P	
				Date	Wednesday, March 14, 2007
				Sheet	31 of 40
				Rev	0.2

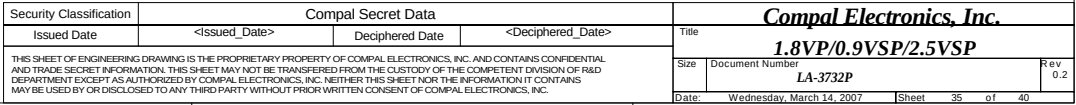


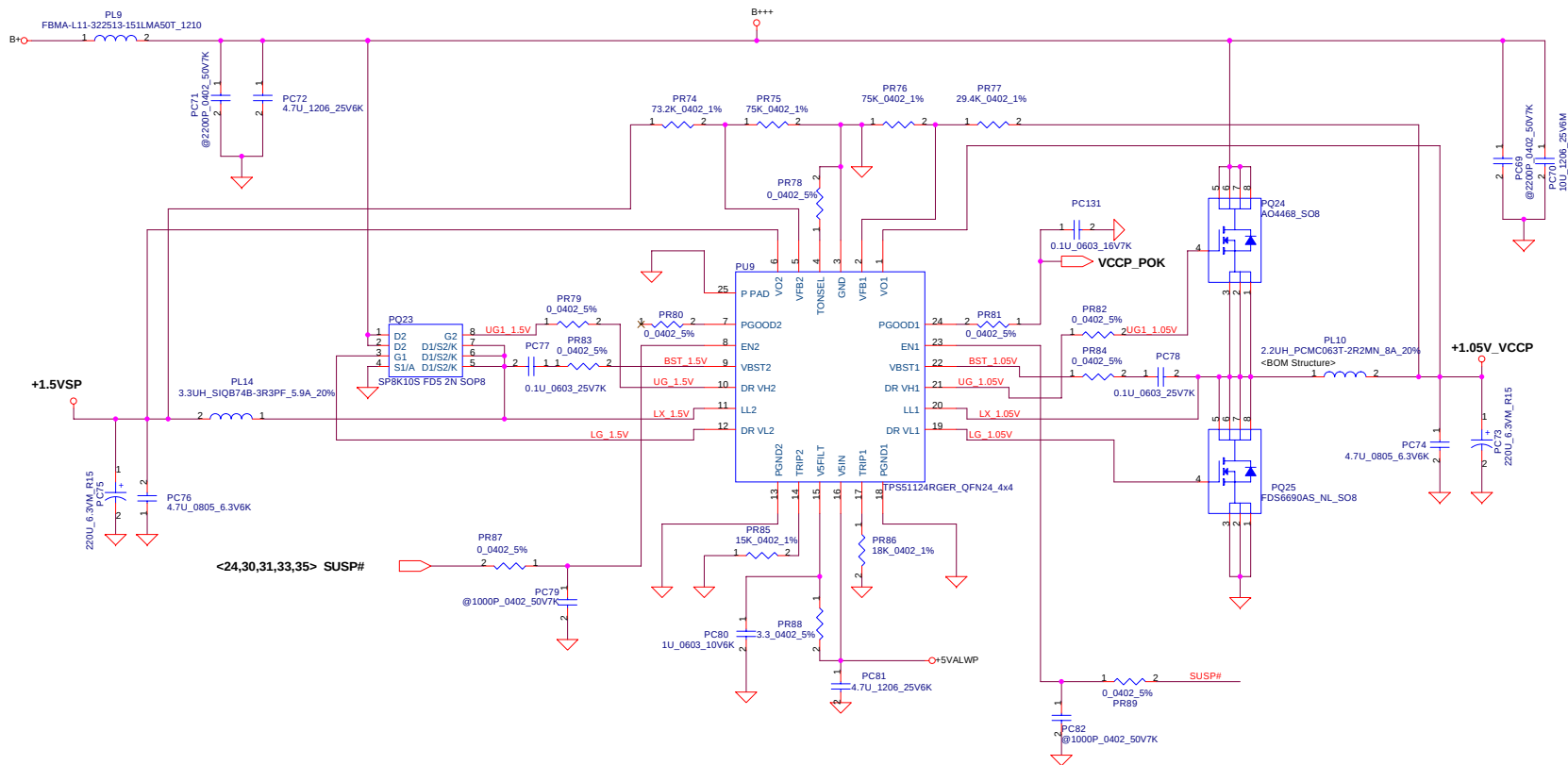
Security Classification		Compal Secret Data			
Issued Date	<Issued_Date>	Deciphered Date	<Deciphered_Date>	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				DC CONN	
				Size	Document Number
				Custom	LA-3732P
Date: Wednesday, March 14, 2007		Sheet 32 of 40		Rev	



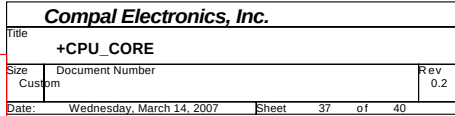


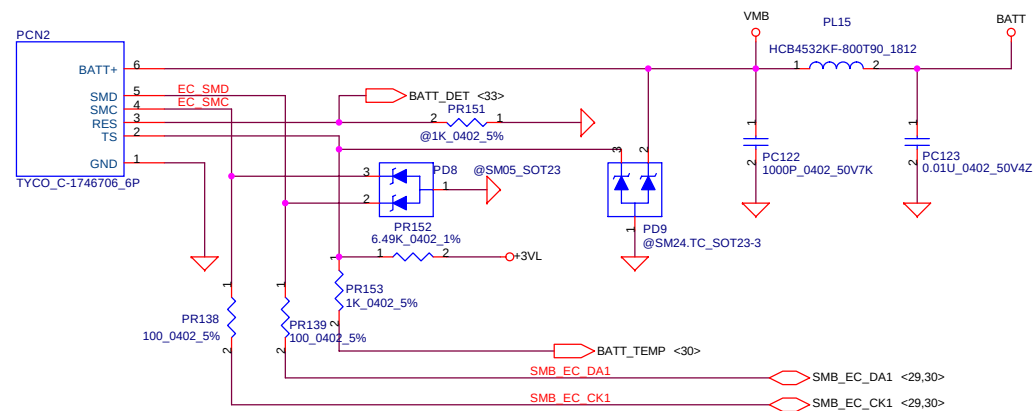
Security Classification		Compal Secret Data		Title	
Issued Date	<Issued_Date>	Deciphered Date	<Deciphered_Date>	3.3VALWP / 5VALWP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Wednesday, March 14, 2007
				Sheet	34 of 40



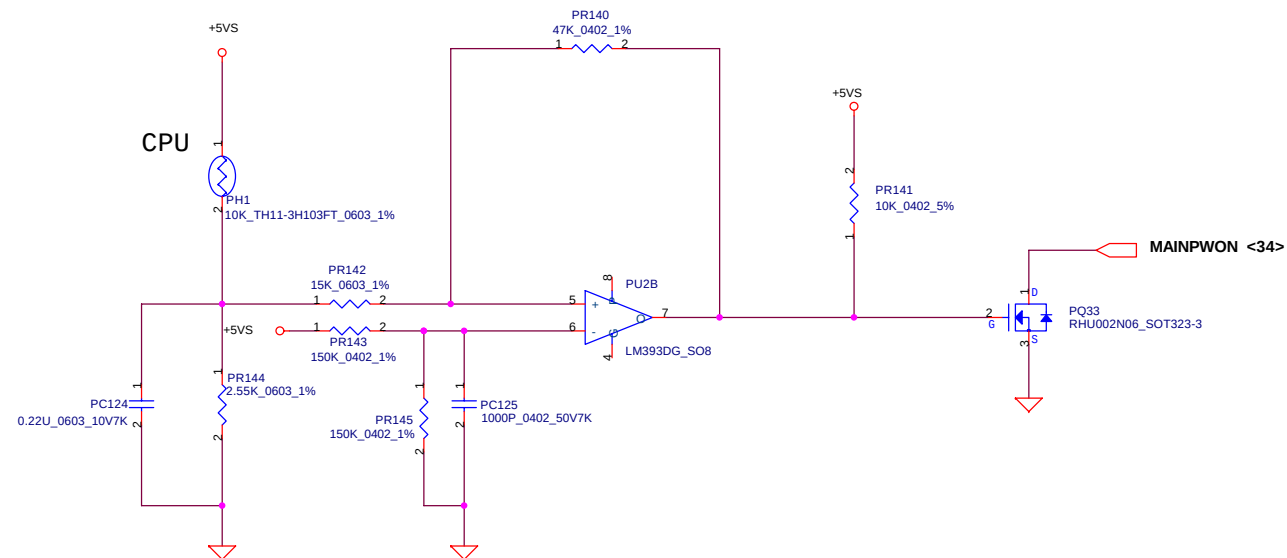


Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2006/11/23	Deciphered Date	2007/11/23	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
					LA-3732P	0.2
				Date:	Wednesday, March 14, 2007	Sheet 36 of 40





PH1 under CPU botten side :
CPU thermal protection at 90 +-3 degree C
Recovery at 47 +-3 degree C



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	<Issued_Date>	Deciphered Date	<Deciphered_Date>	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Custom	LA-3732P
				Date:	Wednesday, March 14, 2007
				Sheet	40 of 38

Security Classification		Compal Secret Data		Compal Electronics, Inc. Changed-List History-1		
Issued Date	2006/02/28	Deciphered Date	2007/02/28	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
					LA-3732P	0.2
				Date:	Wednesday, March 14, 2007	Sheet 39 of 40

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

Item	Change item	Page	Date	Phase
1	Change C117 from 220uF to 10uF.	10	2/8	DB --> SI
2	Remove R401.	19	2/5	DB --> SI
3	Change Crystal Y2 type (the same as Abita).	19	2/5	DB --> SI
4	Connect LAN_RST# from EC_RAMRST# to GND.	20	2/5	DB --> SI
5	Change ODD connector type.	22	2/13	DB --> SI
6	Change U11 power from +5VS to +5VALW.	24	2/12	DB --> SI
7	Change U11 enable signal from SLP_S3# to SUSP#.	24	2/8	DB --> SI
8	Reverse JP19 USB Connector and need to double check layout symbol.	27	2/12	DB --> SI
9	Change Power and Battery charge LED power from +3VALW to +5VALW.	28	2/8	DB --> SI
10	Change HDD LED power from +3VS to +5VS.	28	2/8	DB --> SI
11	Delete reserve component (D25 BSW2) for 14.1".	28	2/8	DB --> SI
12	Change R329, R333, R470 from 200 ohm to 470 ohm.	28	2/8	DB --> SI
13	Change R334, R339 from 200 ohm to 820 ohm.	28	2/8	DB --> SI
14	Add pull down resistor R402 (100k ohm) for SUSP#.	30	2/5	DB --> SI
15	Change C44, C49 type from DIP to SMD.	06	2/14	DB --> SI
16	Add R402 pull high resistor for LID_Sw#.	30	2/14	DB --> SI
17	Add R403 pull high resistor for WL_BTN#.	30	2/14	DB --> SI
18	Delete D19.	28	2/16	DB --> SI
19	Change R300 from 10 ohm to 47 ohm and C374 from 10pF to 33pF.	24	2/16	DB --> SI
20	Delete JP27, R317, C392.	26	2/16	DB --> SI
21	Delete R297.	24	2/16	DB --> SI
22	Change RTC battery and connector.	19	2/26	DB --> SI
23	Change C413 and 414 package from 0603 to 0402.	28	2/26	DB --> SI
24	Add JP28 for USB card reader.	27	2/28	DB --> SI
25	Change R105 from 22 ohm to 0 ohm.	15	3/1	DB --> SI
26	Delete C49 and remount C46.	06	3/1	DB --> SI
27	Change JP16 and JP17 Audio Jack.	26	3/2	DB --> SI
28	Add R405.	04	3/6	DB --> SI
29	Change USB connector (JP19) type.	27	3/8	DB --> SI

Security Classification	Compal Secret Data			Title		
Issued Date	2006/02/28	Deciphered Date	2007/02/28	Compal Electronics, Inc.		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				HW Changed-List History-1		
				Size	Document Number	Rev
					LA-3732P	0.2
Date: Wednesday, March 14, 2007				Sheet	40 of 40	