

Compal Confidential

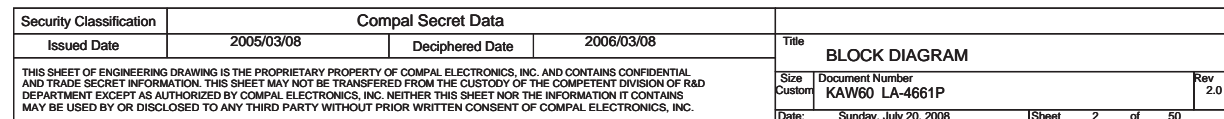
KAW60 Schematics Document

AMD AM2 / RS690MC / SB600

2008 / 07 / 25 Rev:0.2 FOR PVT

Security Classification		Compal Secret Data			
Issued Date		2005/05/09	Deciphered Date		2006/03/08
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	
				Cover Sheet	
				Size Custom	Document Number KAW60 LA-4661P
				Date	Friday, July 25, 2008
				Sheet	1 of 50
				Rev	2.0

File Name : LA-4661P



Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit.	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+0.9V	0.9V switched power rail for DDR terminator	ON	ON	OFF
+1.2V_HT	1.2V switched power rail	ON	OFF	OFF
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8VALW	1.8V always on power rail	ON	ON	ON*
+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*
+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
+VSB	VSB 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	IDSEL#	REQ#/GNT#	Interrupts
--------	--------	-----------	------------

EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	ADM1032	1001 100X b
EEPROM(24C16/02)	1010 000X b		
(24C04)	1011 000X b		

SB600 SM Bus address

Device	Address
Clock Generator (ICS951462)	1101 001Xb
DDR DIMM0	1001 000Xb
DDR 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	
1	
2	
3	
4	
5	
6	
7	

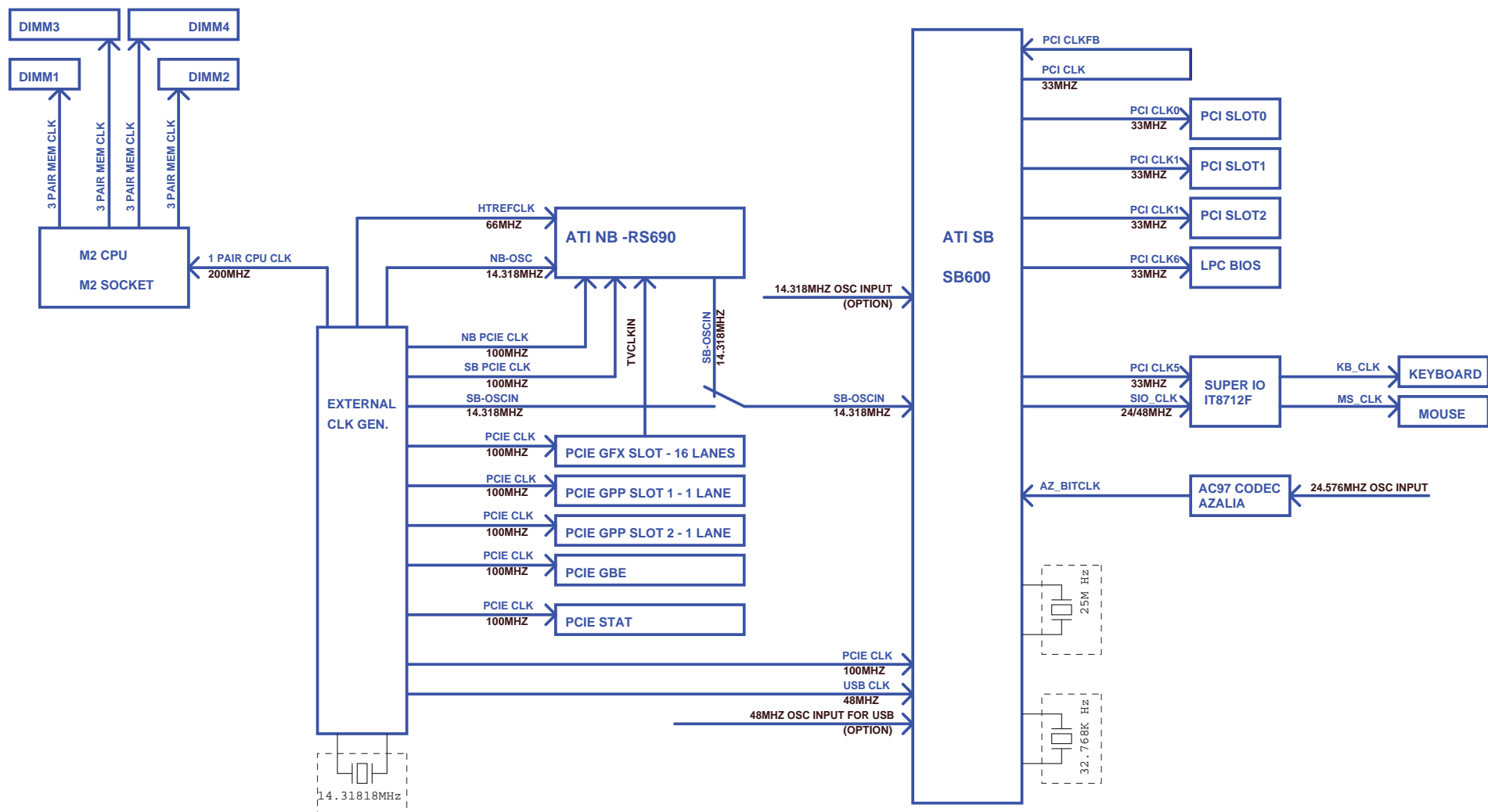
SKU ID Table

SKU ID	SKU
0	
1	
2	
3	
4	
5	
6	
7	

BTO Option Table

[illegible]

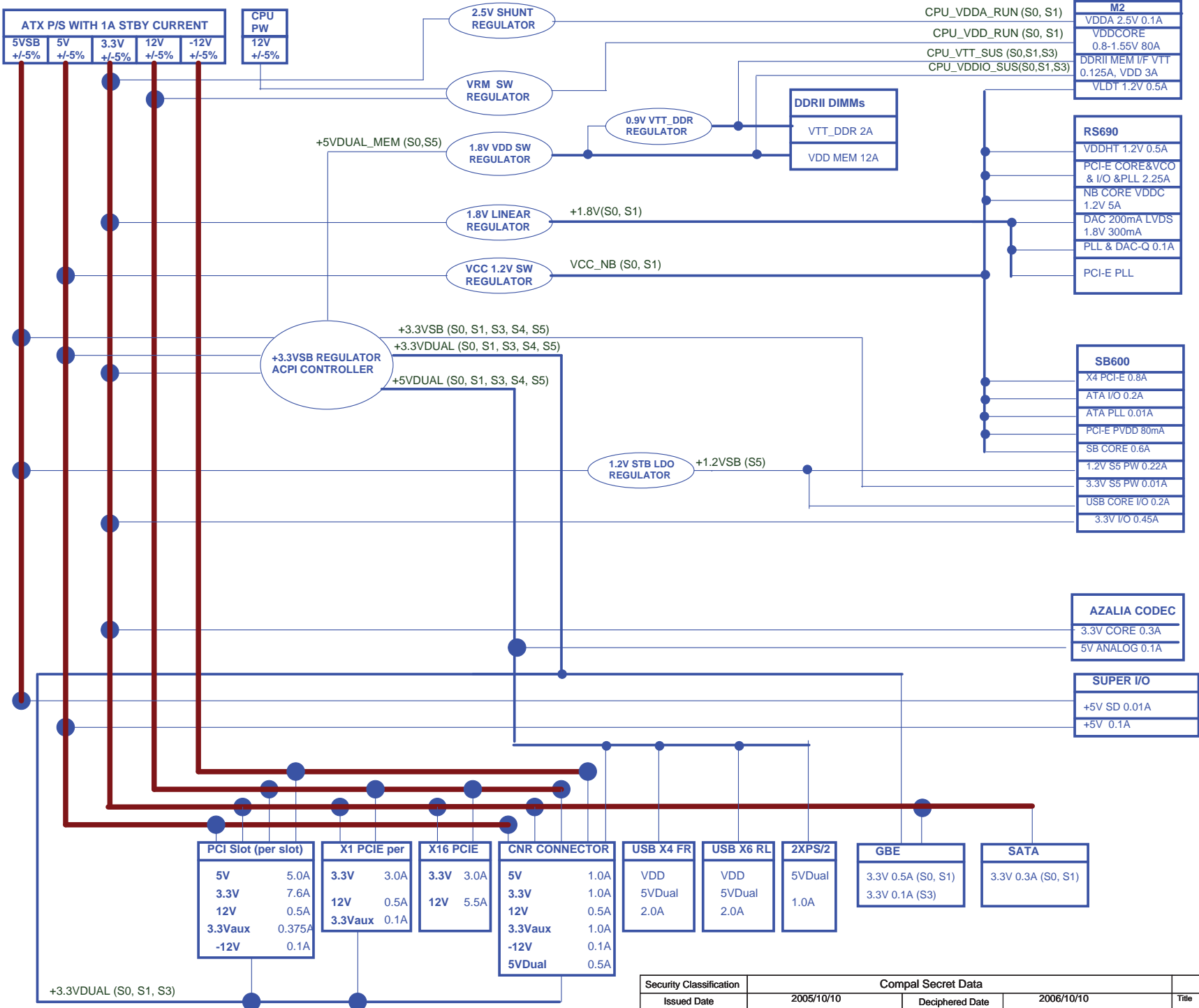
Security Classification		Compal Secret Data		Title TABLE OF CONTENTS	
Issued Date	2005/03/08	Deciphered Date	2006/03/08		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 HCW51 LA-3121P	Rev 2.
Date: Thursday, July 24, 2009 1:58pm				Sheet 2 of 60	



Security Classification	Compal Secret Data			Title
Issued Date	2005/10/10	Deciphered Date	2006/10/10	CLOCK DISTRIBUTION
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 KAW60 LA-4661P
				Rev 2.0
				Date: Tuesday, June 17, 2008
				Sheet 4 of 50

ATX P/S WITH 1A STBY CURRENT				
5VSB +/-5%	5V +/-5%	3.3V +/-5%	12V +/-5%	-12V +/-5%

CPU PW
12V +/-5%



Security Classification		Compal Secret Data		Title	
Issued Date	2005/10/10	Deciphered Date	2006/10/10	POWER DELIVERY CHART	
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 KAW60 LA-4661P
				Date: Tuesday, June 17, 2008	Rev 2.0
				Sheet 5	of 50

VLDT_Ax AND VLDT_Bx ARE CONNECTED TO THE LDT_RUN POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE. IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE

[illegible]

NEAR HT POWER PINS THAT ARE NOT CONNECTED DIRECTLY
TO DOWNSTREAM HT DEVICE, BUT CONNECTED INTERNALLY
TO OTHER HT POWER PINS
PLACE CLOSE TO VLDT0 POWER PINS

28 EN_DFAN1

+VCC_FAN1

R733 0.0402_5%

C760 0.010U_0402_16V7K

U1

VEN GND

VIN GND

VO GND

VSET GND

API5605_SOP8L

C47 10U_0805_10V4Z

+5VS

PVT

FAN1

+VCC_FAN1

C83 10U_0805_10V4Z

D4 BAS16_SOT23-3

PVT

C90 1000P_0402_50V7K

+3VS

R34 10K_0402_5%

FAN_SPEED1

C32 1000P_0402_50V7K

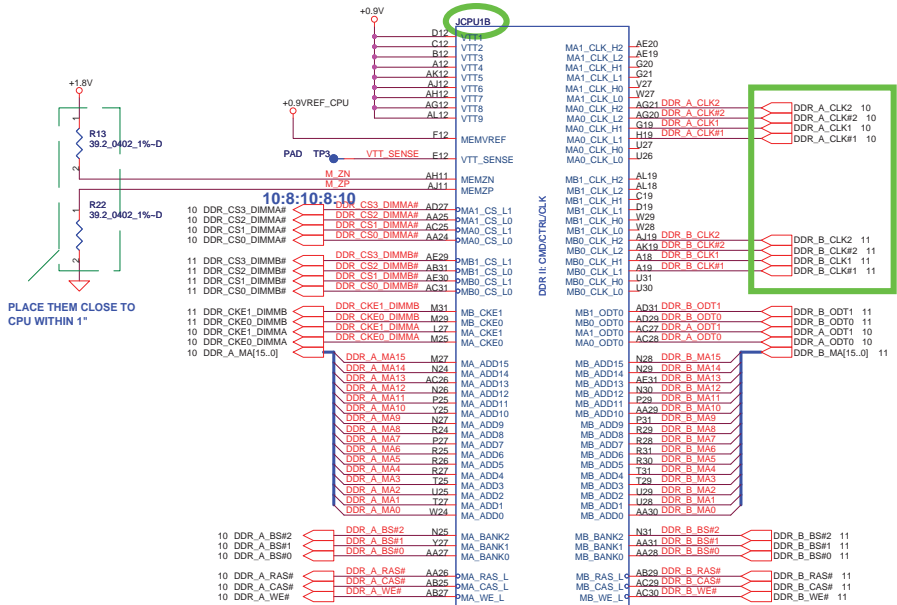
JP20

ACES_85205-03001

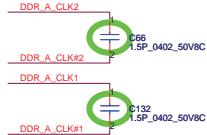
CONN

Security Classification		Compal Secret Data					
Issued Date	2005/10/11	Deciphered Date	2006/10/11	Title AMD CPU HT I/F			
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 KAW60 LA-4661P		Rev 2.0
				Date: Tuesday, July 29, 2008	Sheet 6	of 50	

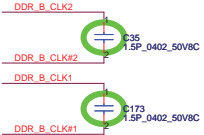
VDD VTT SUS CPU IS CONNECTED TO THE VDD VTT SUS POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE. IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE



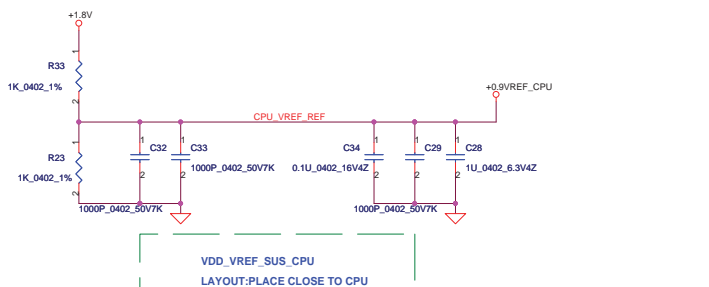
PLACE THEM CLOSE TO
CPU WITHIN 1"



PLACE CLOSE TO PROCESSOR
WITHIN 1.2 INCH

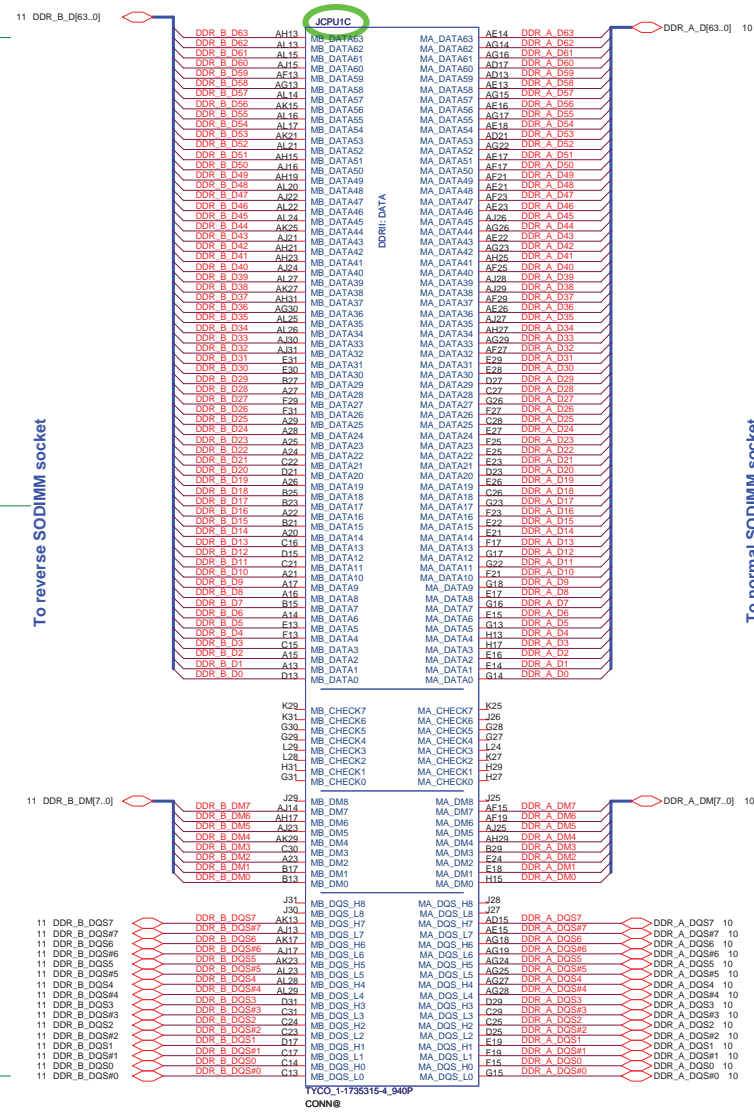


**PLACE CLOSE TO PROCESSOR
WITHIN 1.2 INCH**



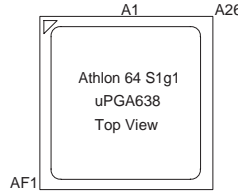
VDD_VREF_SUS_CPU
LAYOUT:PLACE CLOSE TO CPU

Processor DDR2 Memory Interface



To reverse SODIMM socket

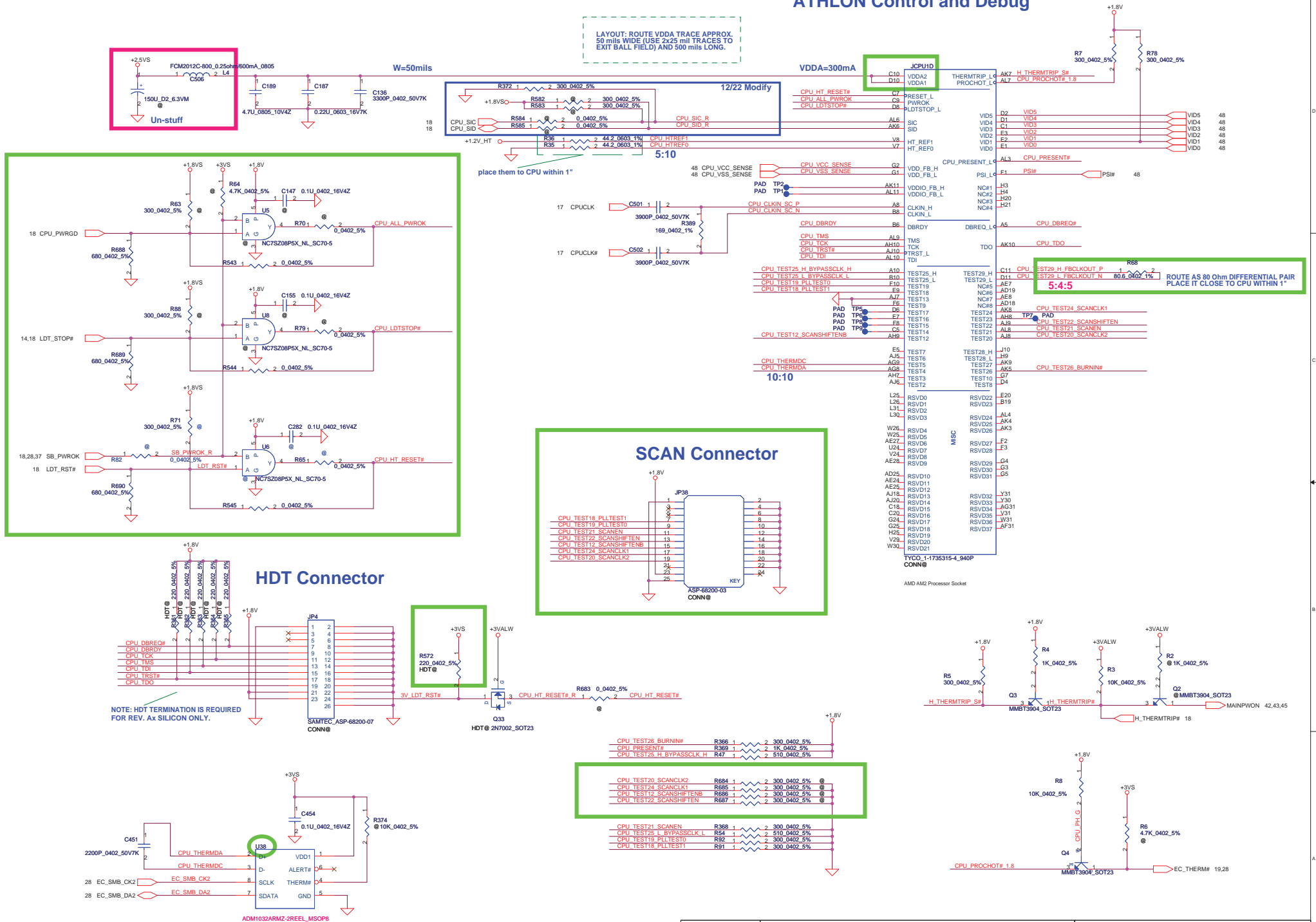
To normal SODIMM socket



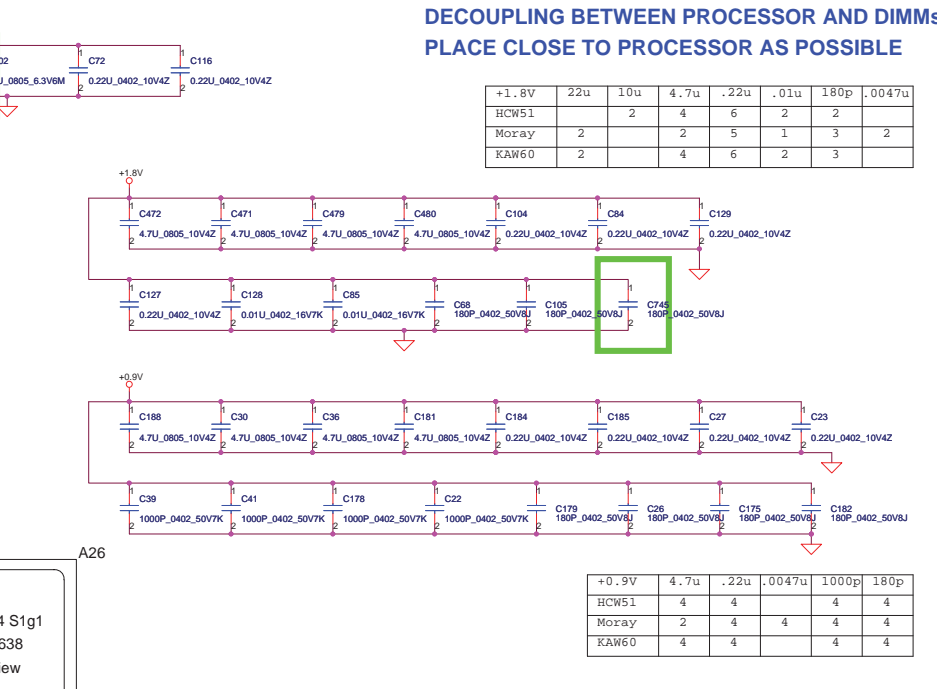
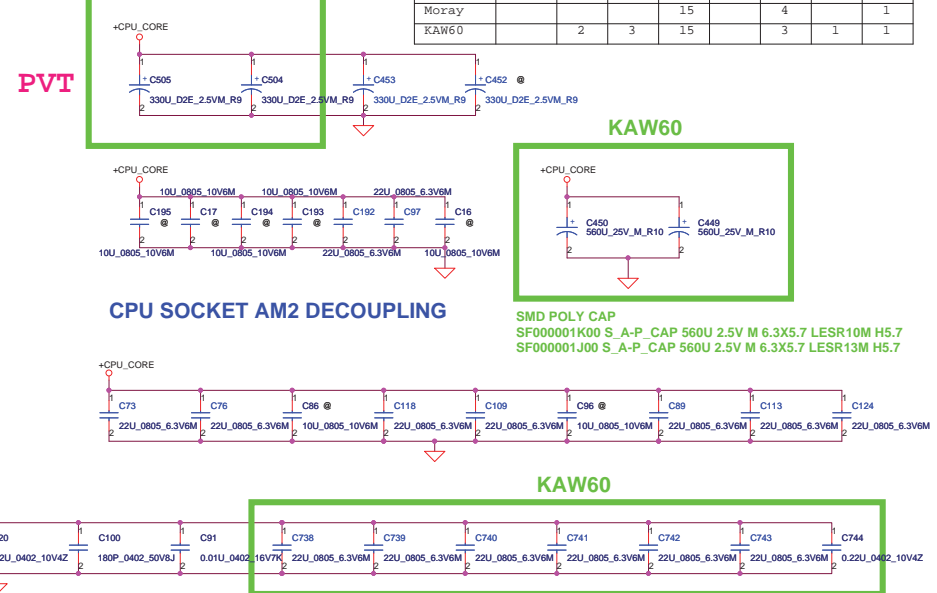
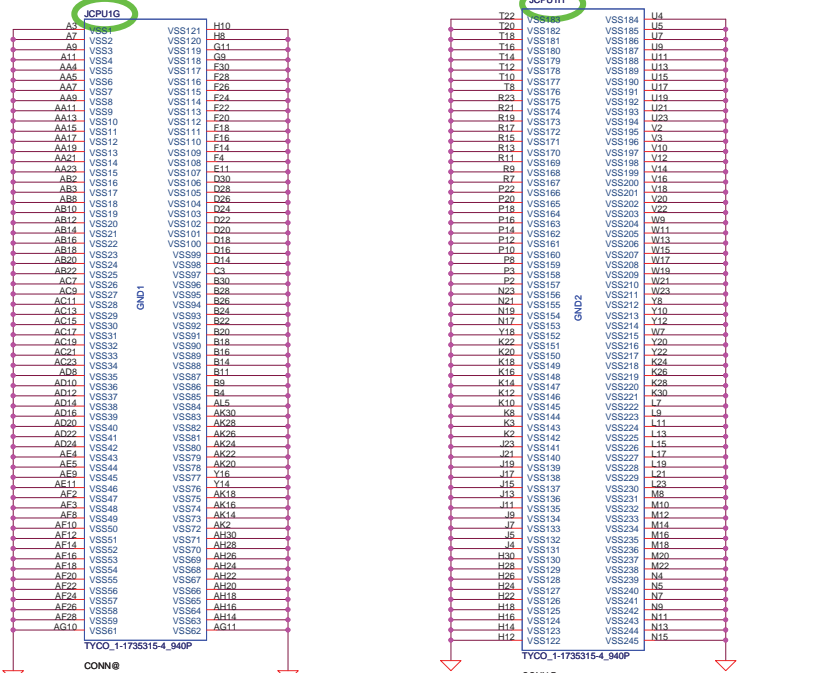
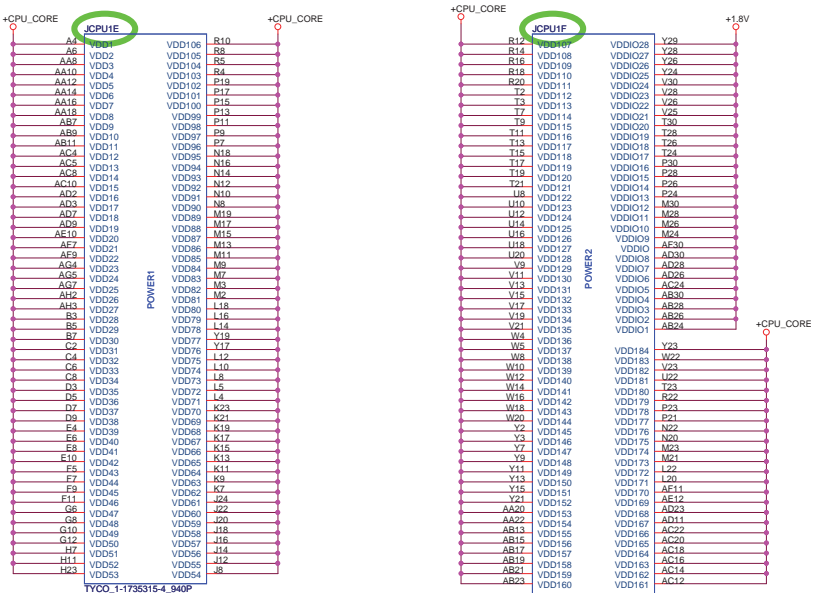
Athlon 64 S1g1
uPGA638
Top View

Security Classification	Compal Secret Data				
Issued Date	2005/10/11	Deciphered Date	2006/10/11	Title	AMD CPU DDRII MEMORY I/F
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 COMPACT 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
					KAW60 LA-4661P
				Date:	Friday, July 25, 2008
				Sheet	7 of 50

ATHLON Control and Debug

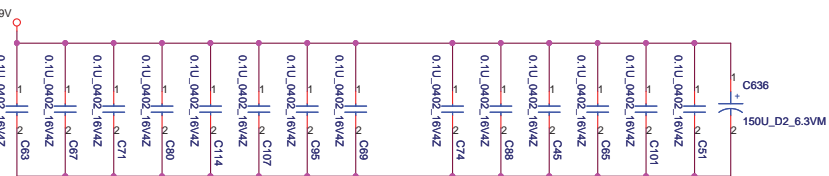
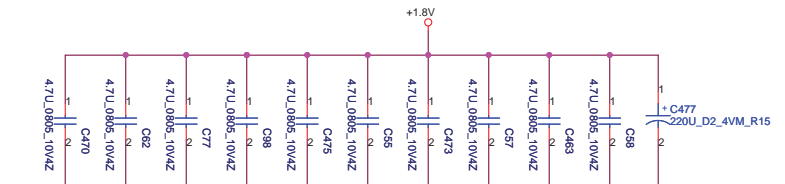
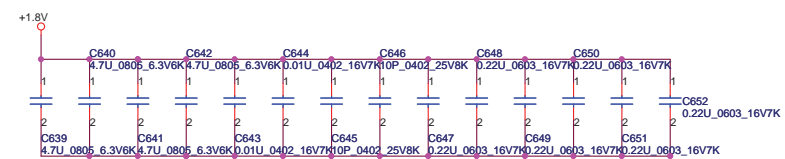
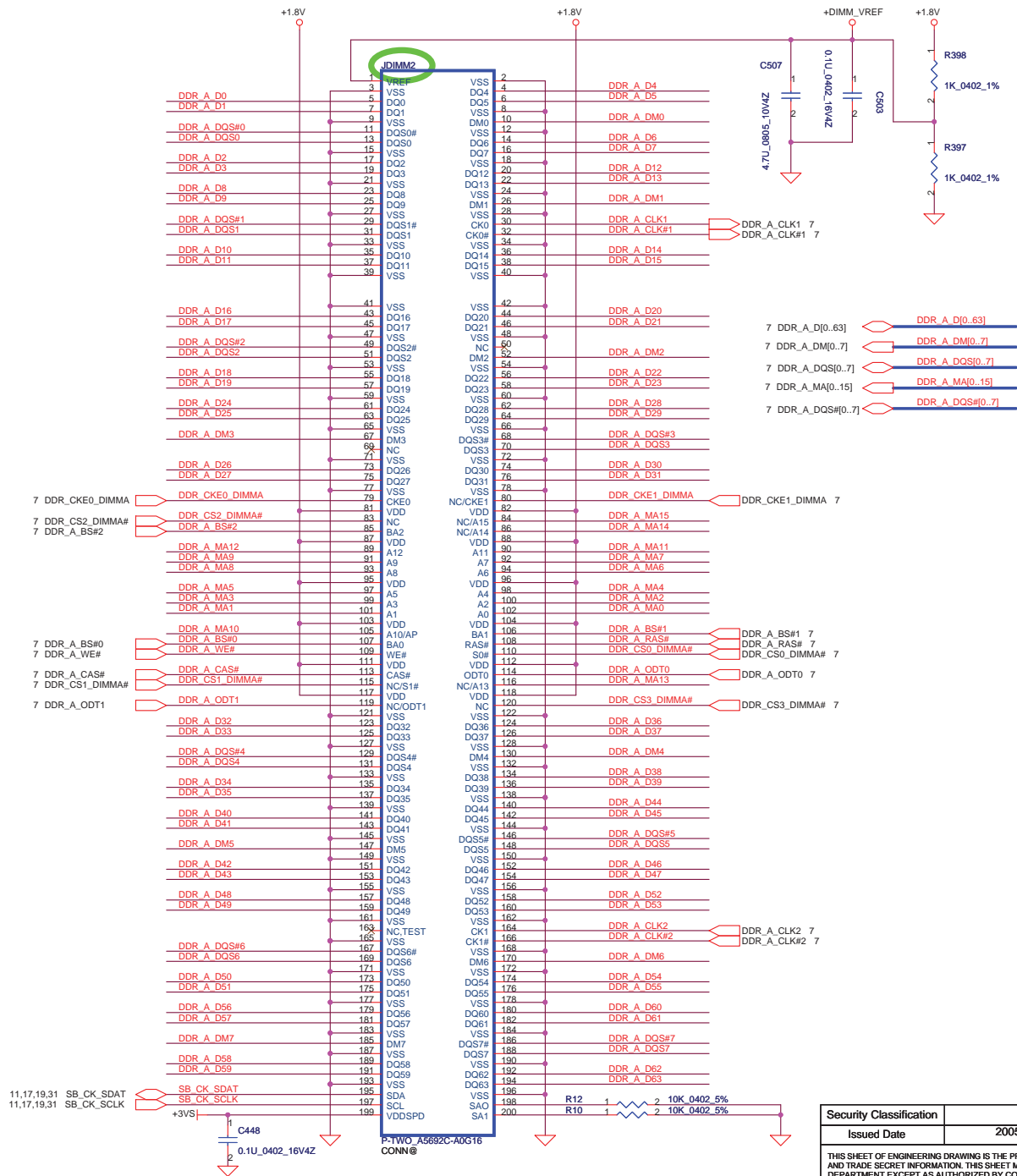


Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	AMD CPU CTRL & DEBUG	
THIS SHEET OF ENGINEERING DRAWINGS IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF ROAD 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 C	Document Number KAW60 LA-4661P
				Date: Friday, July 25, 2008	Rev 2.0
				Sheet 8	of 50

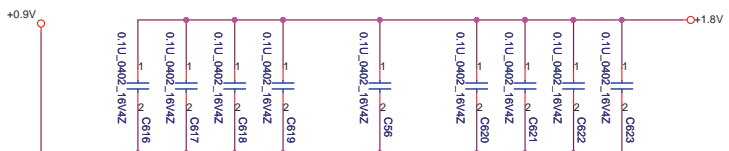
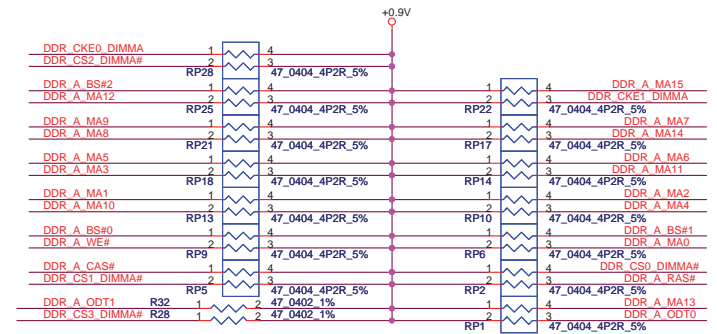


PROCESSOR POWER AND GROUND

Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	AMD CPU PWR & GND	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size C	Document Number KAW60 LA-4661P
				Date: Tuesday, July 28, 2008	Rev 2.0

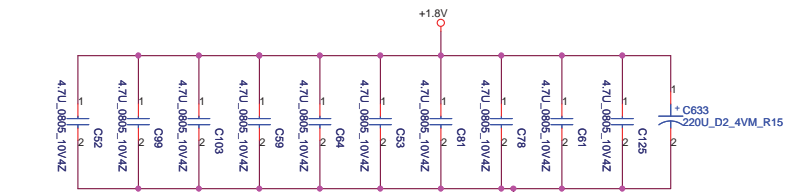
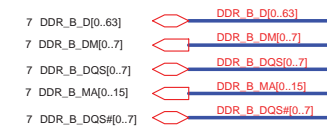
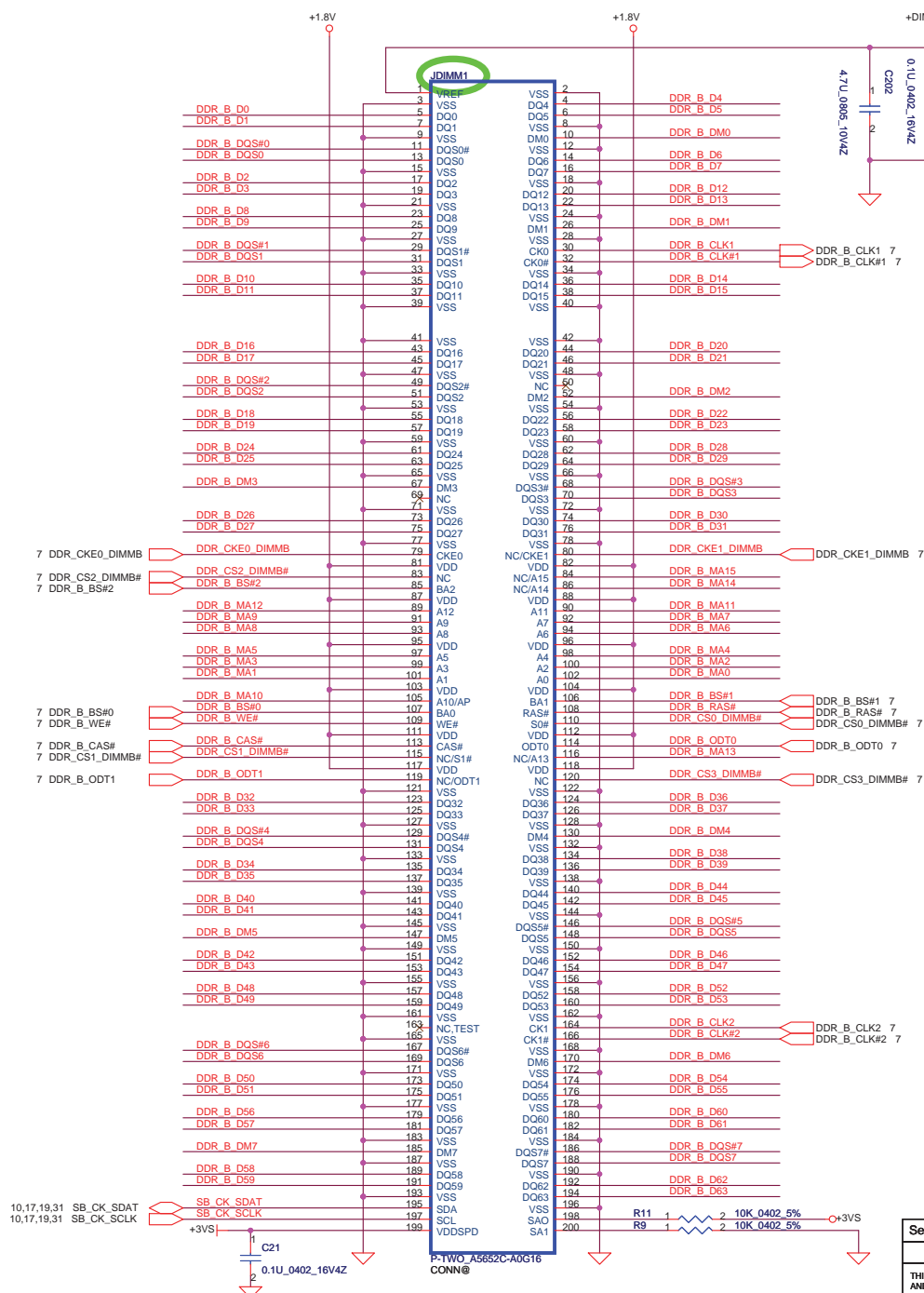


Layout Note:
Place one cap close to every 2 pullup
resistors terminated to +0.9V



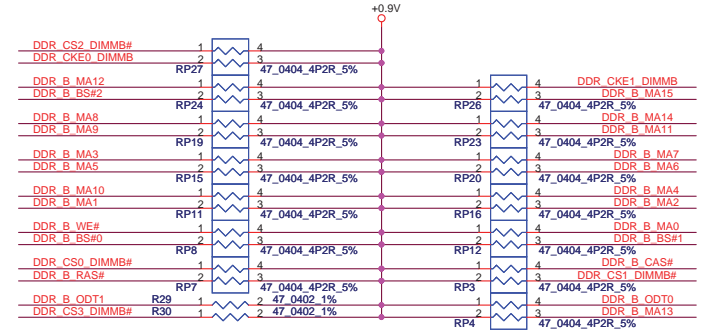
Layout Note:
Place one 0.1uF cap close to every 2 pullup
resistors terminated to +0.9V

Security Classification		Compal Secret Data		Title	
Issued Date	2005/10/11	Deciphered Date	2006/10/11	Size	DDR2 SO-DIMM I
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				KAW60 LA-4661P	2.0
				Date: Friday, July 25, 2008	Sheet 10 of 50



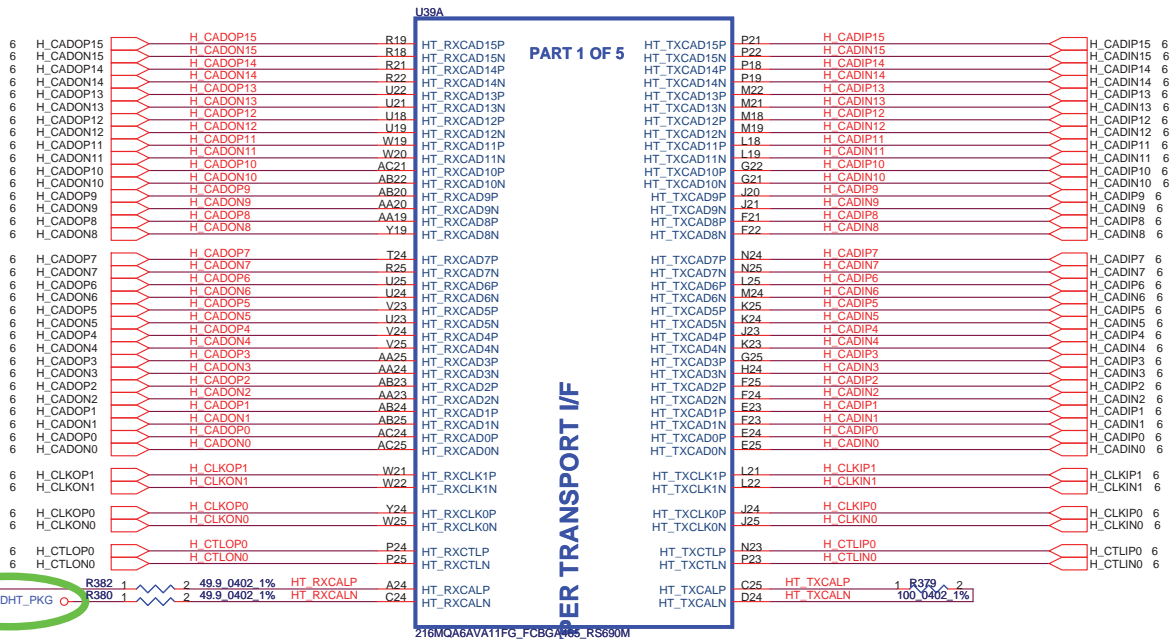
The schematic diagram illustrates the input stage of a 741 op-amp. It features a differential pair of NPN transistors, Q10 and Q11, whose emitters are tied together and connected to a common emitter resistor, Q8, which leads to a -15V supply. The bases of Q10 and Q11 are biased by a voltage divider consisting of transistors Q12 and Q13, connected to a +15V supply. The collector of Q10 is connected to a load resistor, Q9, which also leads to a +15V supply. The output of the stage is taken from the collector of Q11.

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

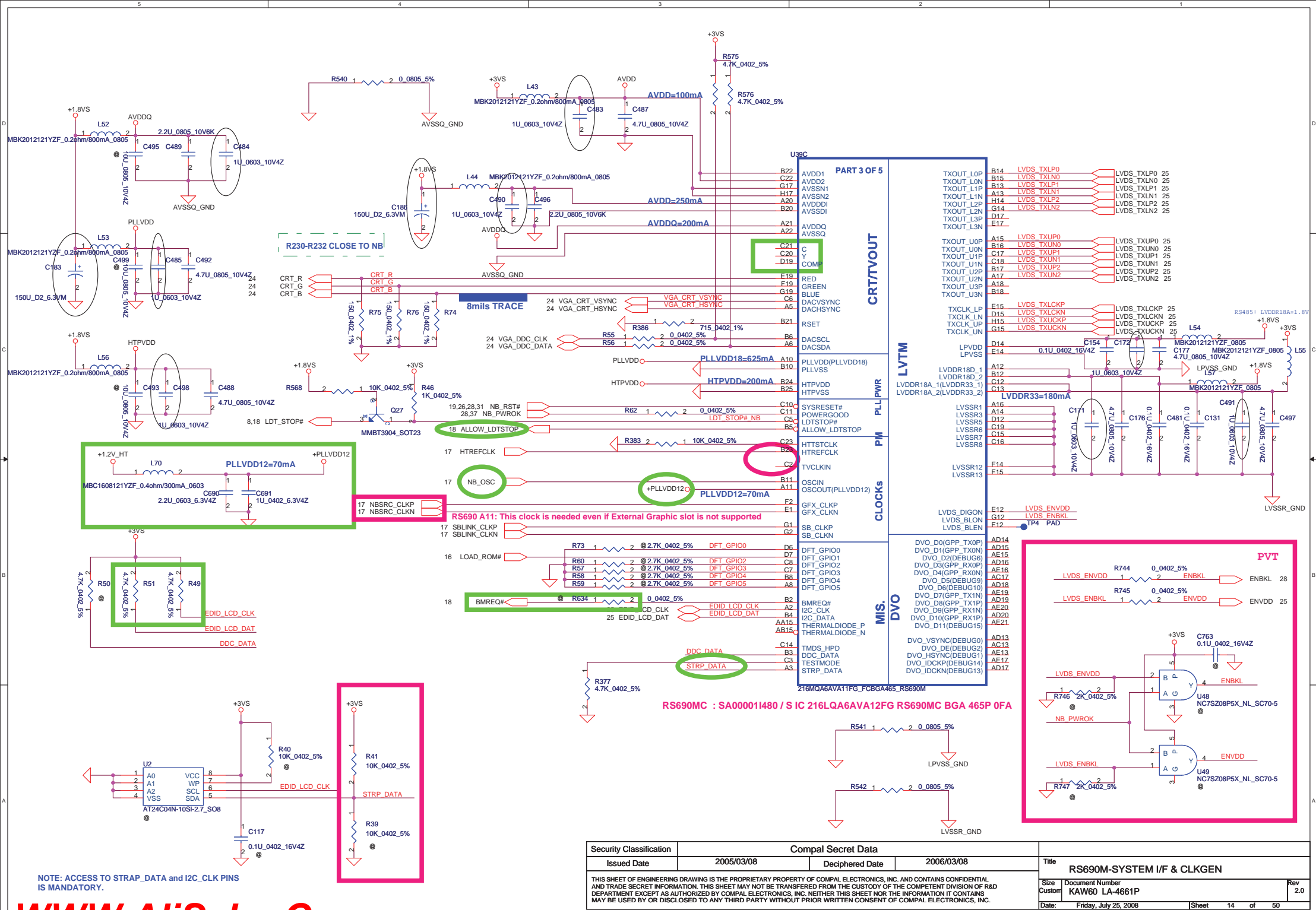


Layout Note:
Place one 0.1uF cap close to every 2 pullup
resistors terminated to +0.9V

Security Classification	Compal Secret Data			Title DDR2 SO-DIMM II	
Issued Date	2005/10/11	Deciphered Date	2006/10/11		
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 KAW600 LA-4661P
				Date:	Friday, July 25, 2008
				Sheet	11 of 50
				Rev	2.0

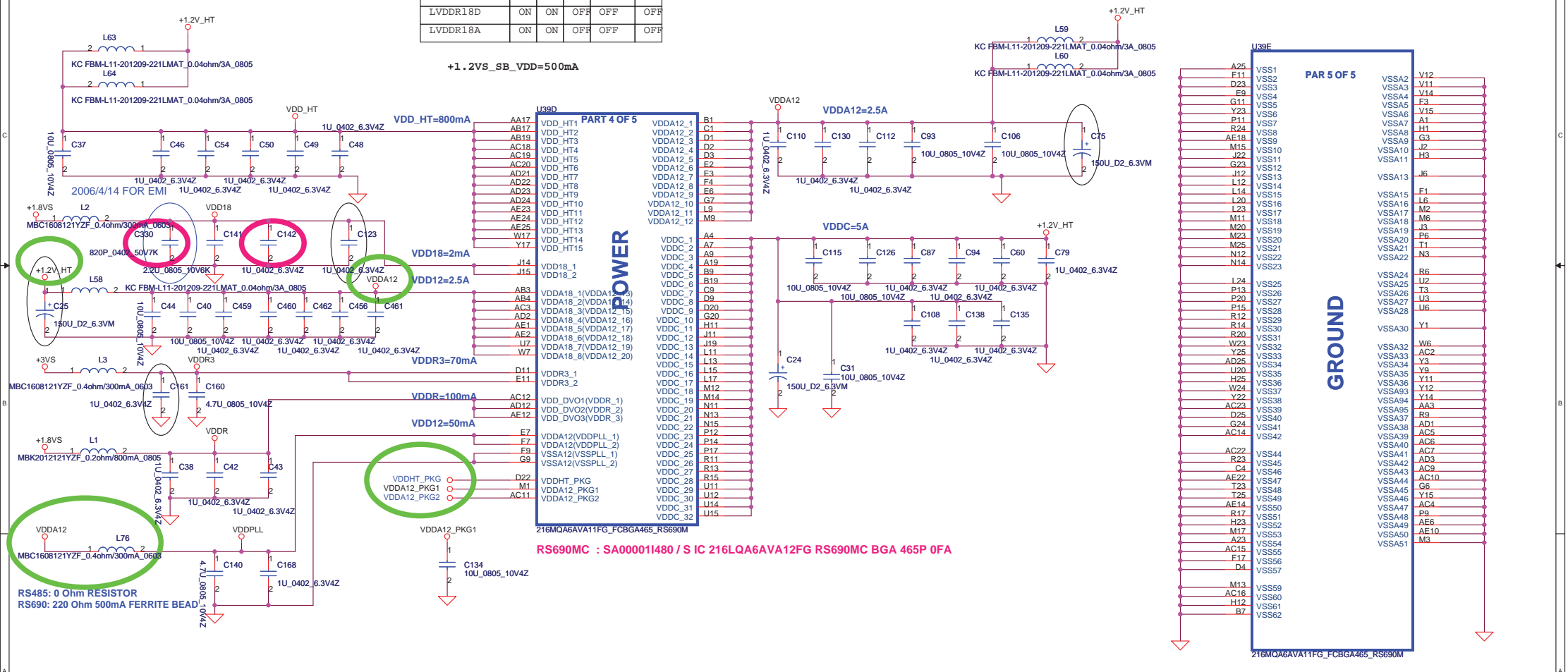


Security Classification		Compal Secret Data									
Issued Date		2005/03/08		Deciphered Date		2006/03/08		Title			
								RS690MC-HT LINK0 I/F			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	KAW60 LA-4661P		2.0



NB RS485 POWER STATES

Power Signal	S0	S1	S3	S4/S5	G3
VDDHT	ON	ON	OFF	OFF	OFF
VDDR	ON	ON	OFF	OFF	OFF
VDD18	ON	ON	OFF	OFF	OFF
VDDC	ON	ON	OFF	OFF	OFF
VDDA18	ON	ON	OFF	OFF	OFF
VDDA12	ON	ON	OFF	OFF	OFF
AVDD	ON	ON	OFF	OFF	OFF
AVDDDI	ON	ON	OFF	OFF	OFF
PLLVD	ON	ON	OFF	OFF	OFF
HTPVDD	ON	ON	OFF	OFF	OFF
VDDR3	ON	ON	OFF	OFF	OFF
LPVDD	ON	ON	OFF	OFF	OFF
LVDDR18D	ON	ON	OFF	OFF	OFF
LVDDR18A	ON	ON	OFF	OFF	OFF

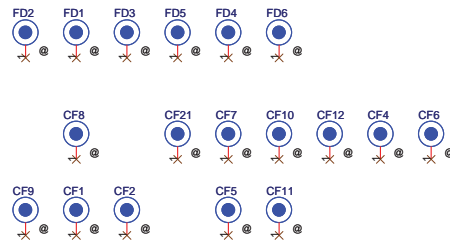
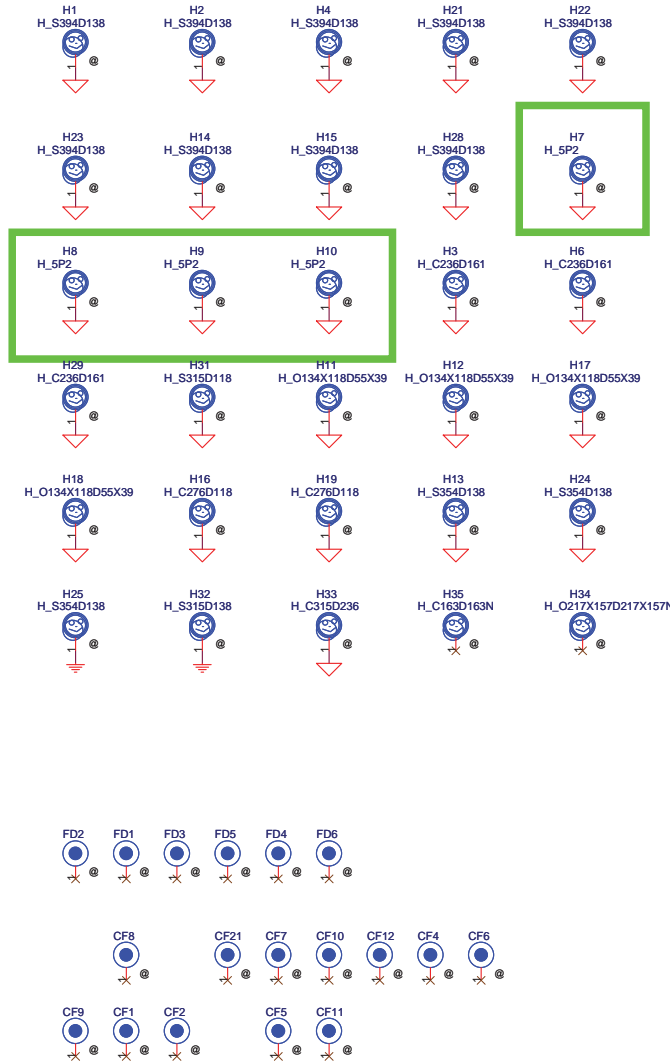
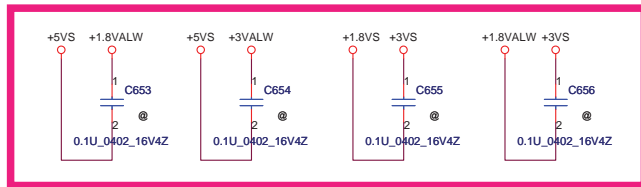


Security Classification		Compal Secret Data		Title	
Issued Date	2005/10/10	Deciphered Date	2006/10/10	RS690MC-POWER	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Rev 2.0
Date: Thursday, July 10, 2008				Sheet 15 of 50	



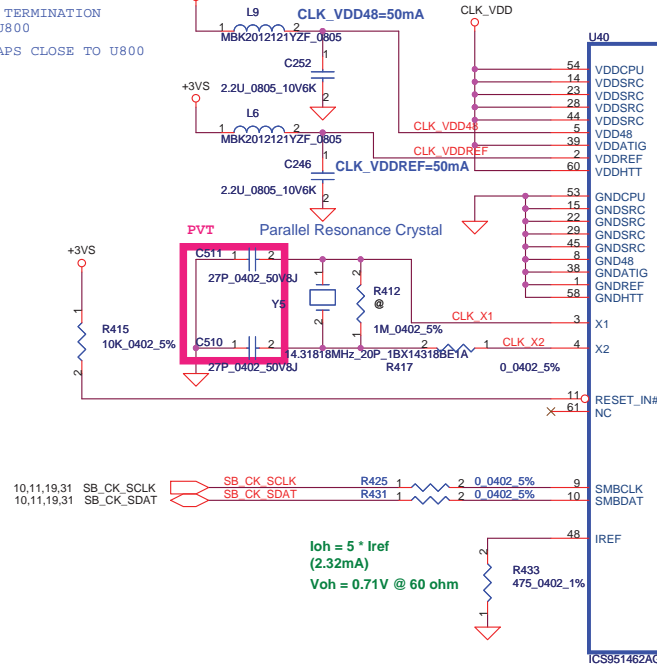
LOAD_ROM#: LOAD ROM STRAP ENABLE

High, LOAD ROM STRAP DISABLE
Low, LOAD ROM STRAP ENABLE



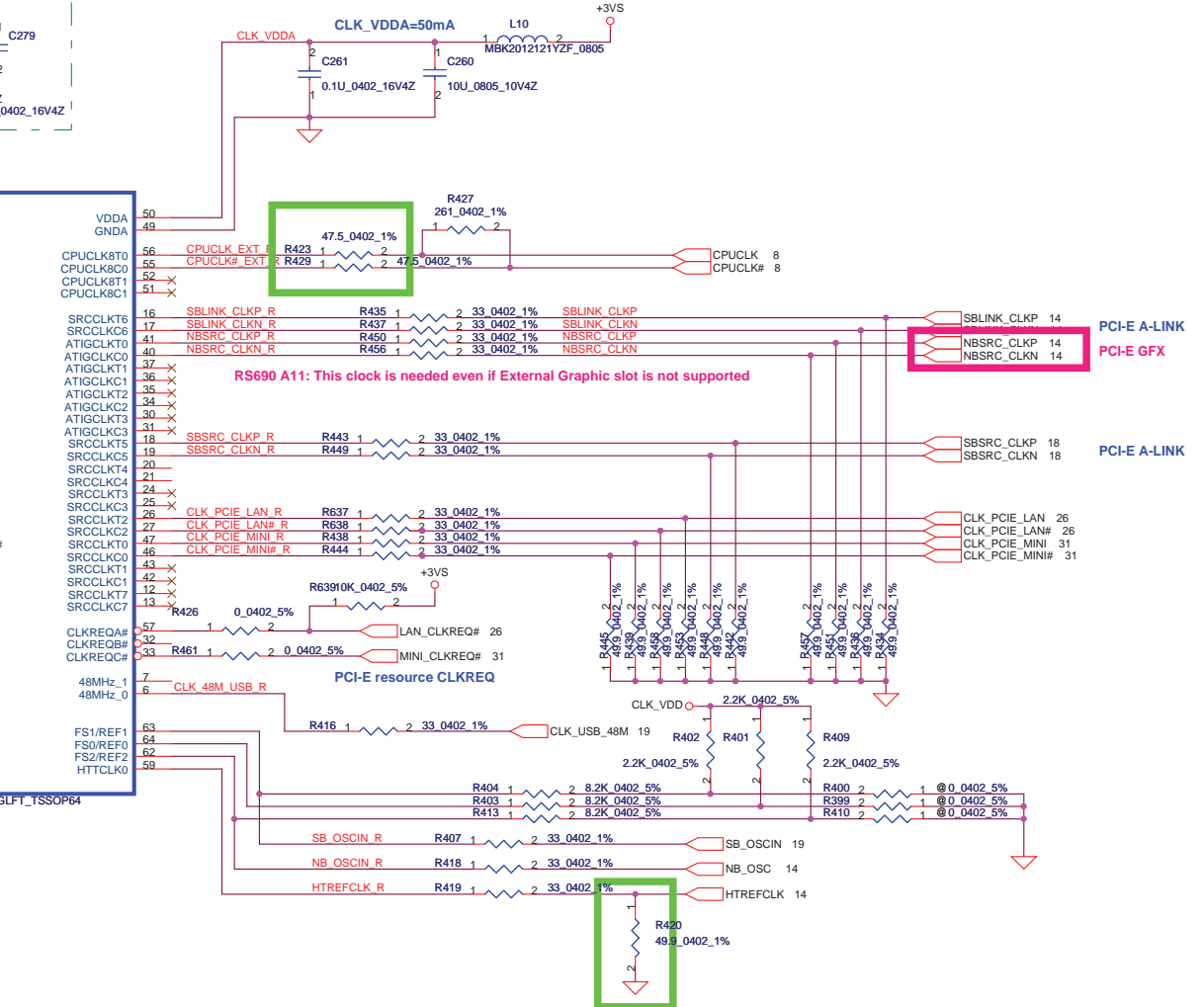
Security Classification		Compal Secret Data													
Issued Date		2005/03/08		Deciphered Date		2006/03/08		Title							
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.								RS690MC-STRAPS & SCREW							
								Size Custom	Document Number KAW60 LA-4661P						Rev 2.0
								Date: Friday, July 25, 2008				Sheet 16 of 50			

- 1- PLACE ALL SERIAL TERMINATION RESISTORS CLOSE TO U800
- 2- PUT DECOUPLING CAPS CLOSE TO U800 POWER PIN

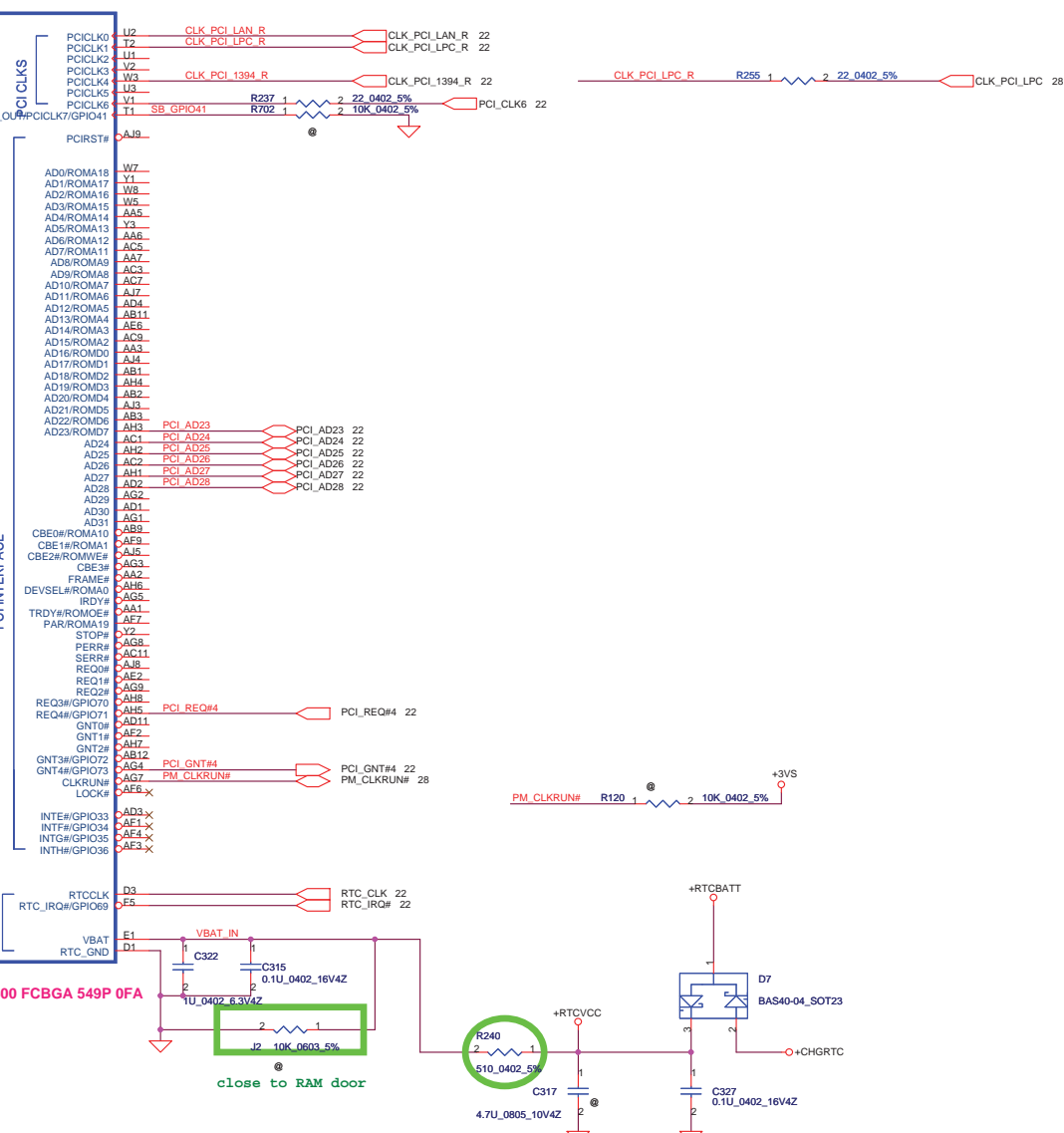
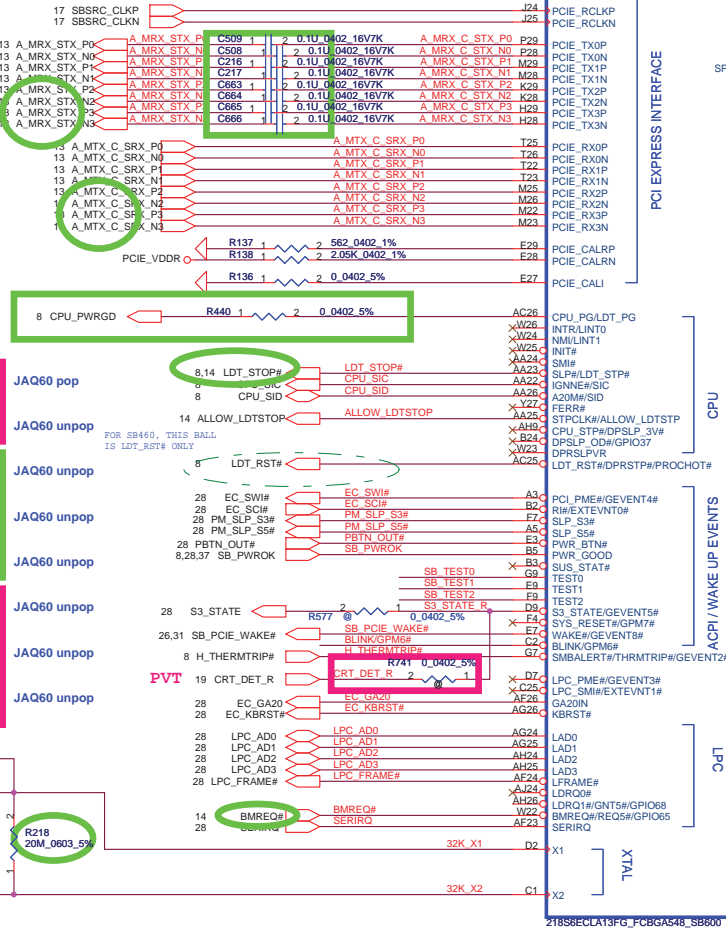
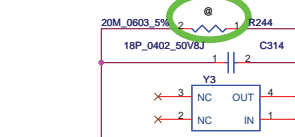
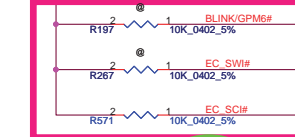
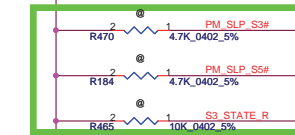
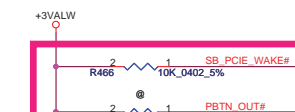
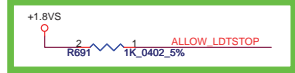
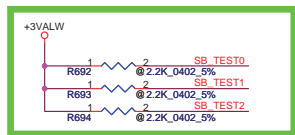


EXT CLK FREQUENCY SELECT TABLE(MHZ)

FS2	FS1	FS0	CPU	SRCCLK [2:1]	HTT	PCI	USB	COMMENT
0	0	0	Hi-Z	100.00	Hi-Z	Hi-Z	48.00	Reserved
0	0	1	X	100.00	X/3	X/6	48.00	Reserved
0	1	0	180.00	100.00	60.00	30.00	48.00	Reserved
0	1	1	220.00	100.00	36.56	73.12	48.00	Reserved
1	0	0	100.00	100.00	66.66	33.33	48.00	Reserved
1	0	1	133.33	100.00	66.66	33.33	48.00	Reserved
1	1	1	200.00	100.00	66.66	33.33	48.00	Normal ATHLON64 operation



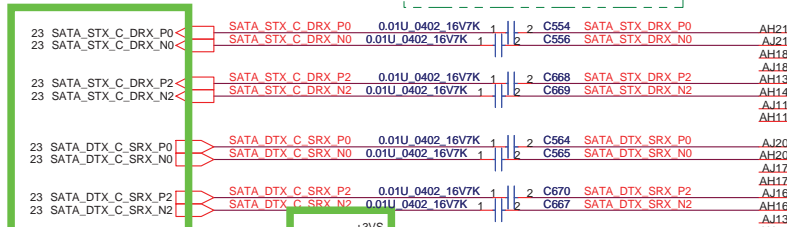
Security Classification		Compal Secret Data									
Issued Date		2005/03/08		Deciphered Date		2006/03/08		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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.						EXTERNAL CLOCK GENERATOR					
						Size	Document Number			Rev	
						Custom	KAW60 LA-4661P			2.0	
						Date:	Friday, July 25, 2008		Sheet	17 of 50	



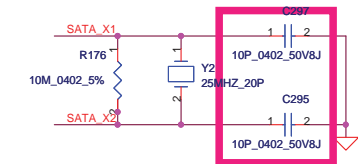
SB600 : SA00001DUD0 / S IC 218S6ECLA21FG SB600 FCBGA 549P 0FA

Security Classification		Compal Secret Data		Title
Issued Date	2005/03/08	Deciphered Date	2006/03/08	
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 RAD 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.				SB600-PCIE/CPU/LPC/ACPI
Size	Document Number	Rev		2.0
Custom	KAW60 LA-4661P			
Date:	Friday, July 25, 2008	Sheet	18	of 50

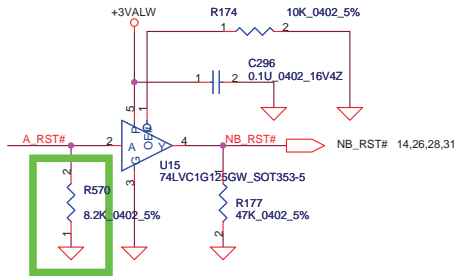
PLACE SATA AC COUPLING
CAPS CLOSE TO SB460



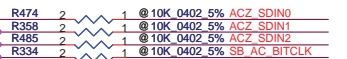
Change Y2 from SJ125POM780(KDS) as
SJ125POM200(TXC) (2006/08/31)



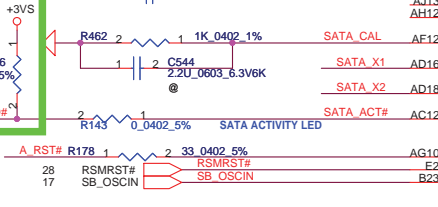
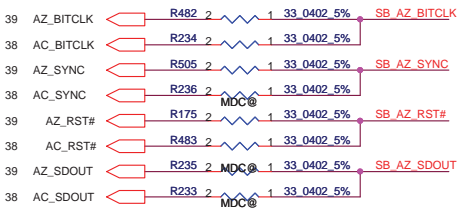
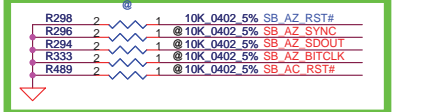
2005/12/30 Change net to +3VALW



2006/05/26 Change as SA411250200 from SA411250130



SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.



2005/12/30 Change net to +3VALW

2006/05/26 Change as SA411250200 from SA411250130

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

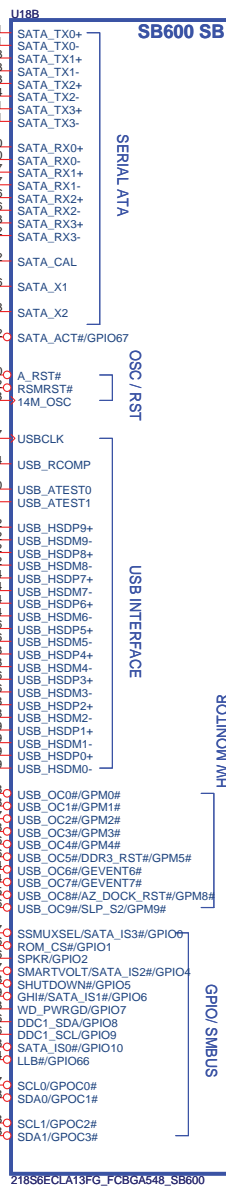
SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

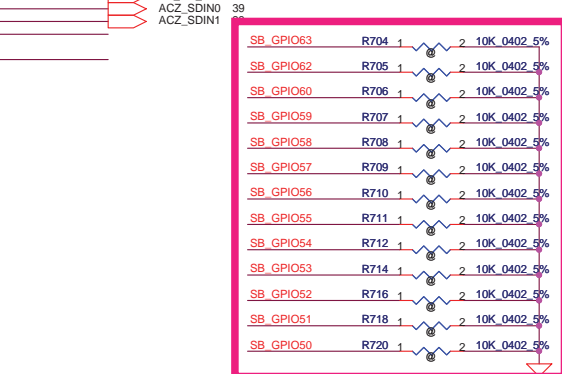
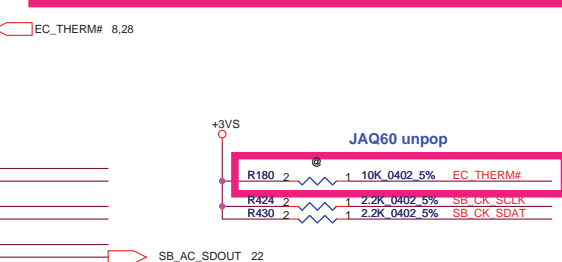
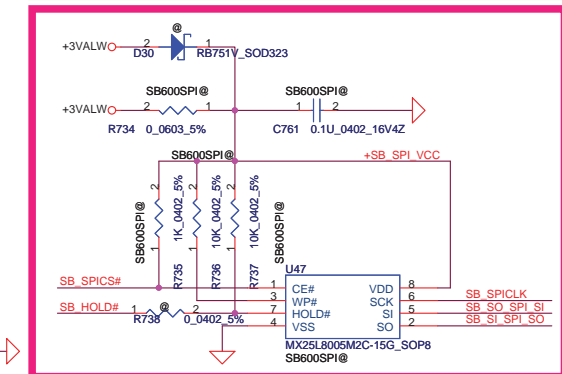
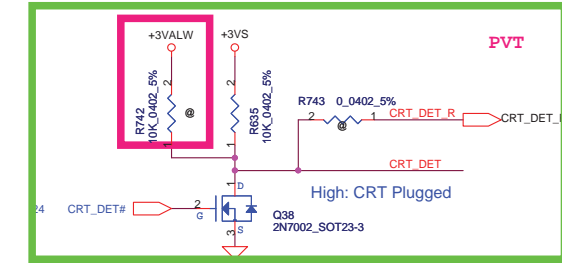
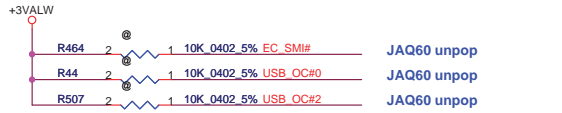
SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.

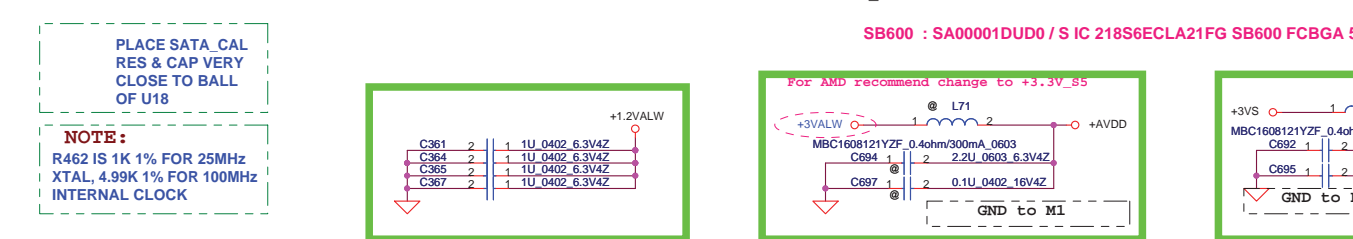
SB600 A21 and newer: Made provision for an external
10-kohm 5% pull-down resistor, not installed by default.



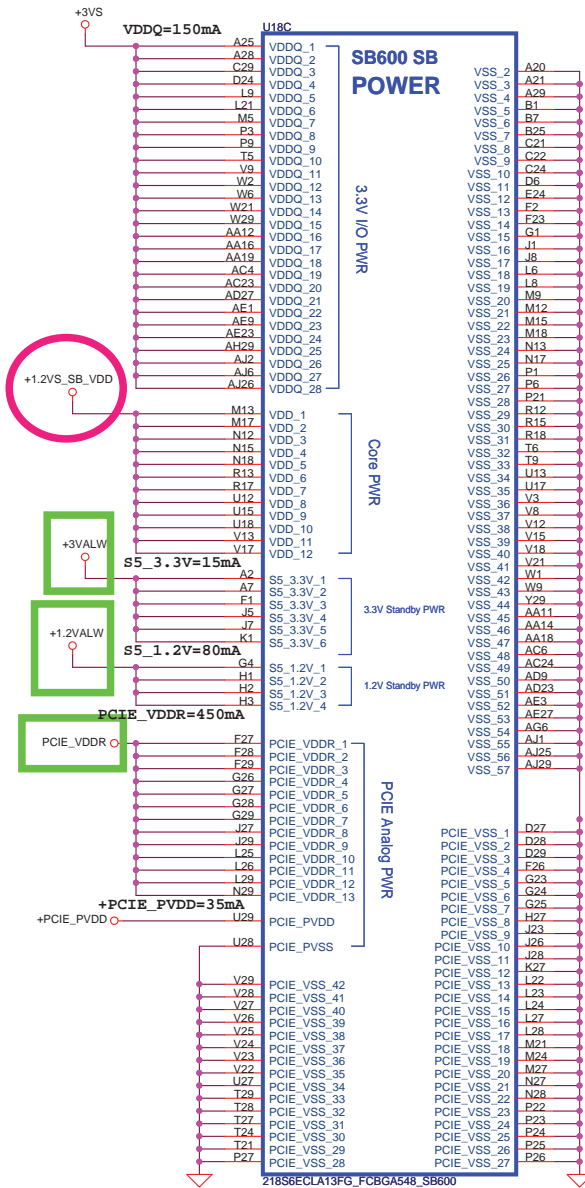
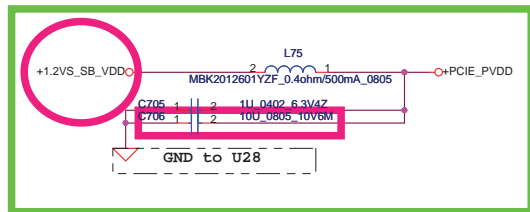
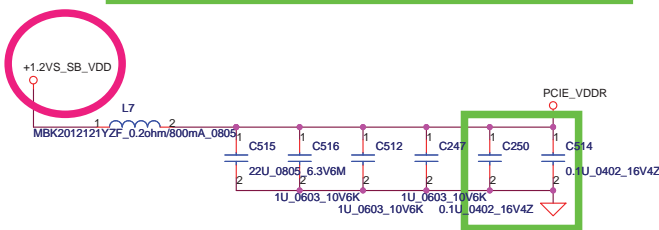
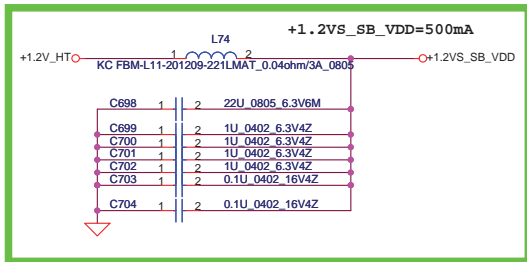
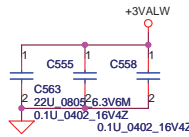
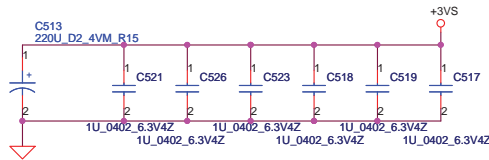
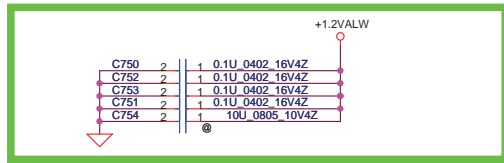
SB600 : SA00001DUD0 / S IC 21856ECLA21FG SB600 FCBGA 549P 0FA



Security Classification		Compal Secret Data	
Issued Date	2005/03/08	Deciphered Date	2006/03/08
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.			
SB600-SATA/GPIO/USB/AUDIO			
Size	Document Number	Rev	
Custord	KAW60 LA-4661P	2.0	
Date:	Friday, July 25, 2008	Sheet	19 of 50



WWW.AliSaler.Com

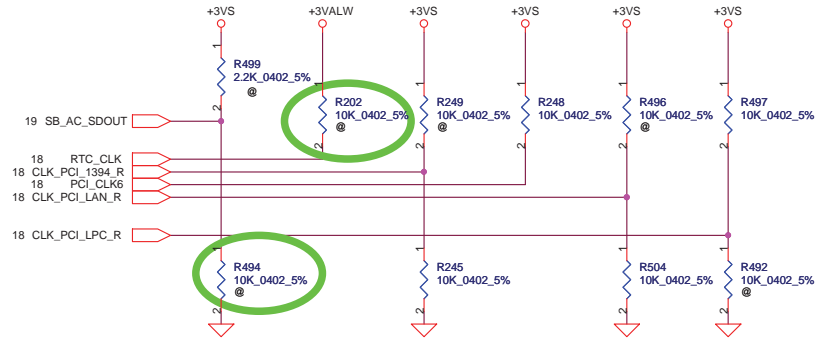


SB600 : SA00001DUD0 / S IC 218S6ECLA21FG SB600 FCBGA 549P 0FA

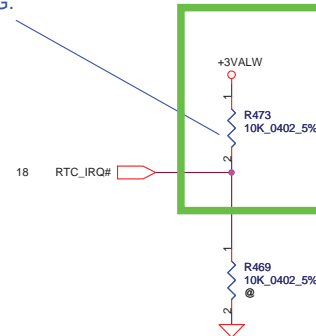
Security Classification		Compal Secret Data											
Issued Date		2005/03/08		Deciphered Date		2006/03/08		Title					
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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.								SB600-PWR & GND II					
								Size	Document Number			Rev	
								Custorm	KAW60 LA-4661P			2.0	
								Date:	Thursday, July 24, 2008		Sheet 21 of 50		

REQUIRED STRAPS

SB600 HAS 15K INTERNAL PD FOR AC_SDATA_OUT,
15K PU FOR RTC_CLK, EXTERNAL PU/PD IS
NOT REQUIRED; FOR SB460, EXTERNAL PU/PD ARE
REQUIRED



NOTE: R473 PU RESISTOR FOR
RTC_IRQ# IS REQUIRED FOR SB600
TO KEEP THE INPUT FROM FLOATING.



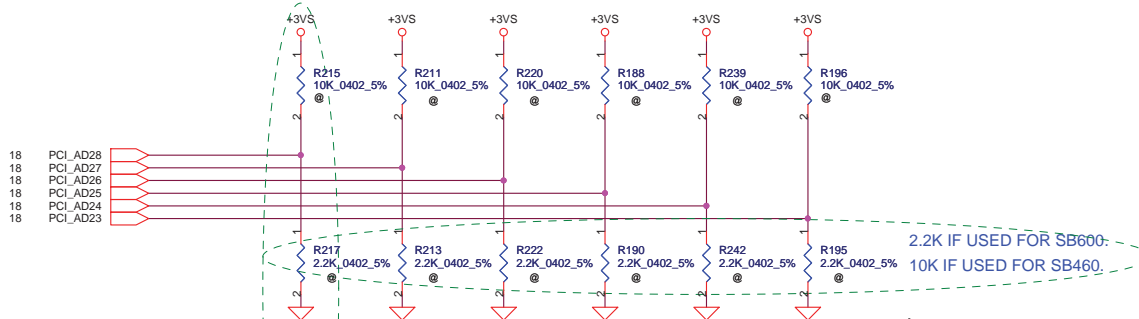
SB460 ONLY

	ACPWON	SPDIF_OUT	PCI_MINI_R	PCI_PCM_R	PCI_SIO_R	LFRAME#
PULL HIGH	MANUAL PWR ON DEFAULT	SIO 24MHz	XTAL MODE NOT SUPPORTED	USB PHY POWERDOWN DISABLE DEFAULT	PCIE_CM_SET LOW DEFAULT	ENABLE THERMTRIP# DEFAULT
PULL LOW	AUTO PWR ON	SIO 48MHz DEFAULT	48MHZ OSC MODE DEFAULT	USB PHY POWERDOWN ENABLE	PCIE_CM_SET HIGH	DISABLE THERMTRIP#

	AC_SDATA_OUT	RTC_CLK	PCI_1394_R	PCI_CLK6	SB600 PCI_LAN_R PCI_LPC_R	SB460 PCI_LAN_R PCI_LPC_R
PULL HIGH	USE DEBUG STRAPS	INTERNAL RTC DEFAULT	USE INT. PLL48	CPU IF=K8 DEFAULT	ROM TYPE: H, H = PCI ROM H, L = SPI ROM L, H = LPC ROM L, L = FWH ROM	ROM TYPE: H, H = PCI ROM H, L = LPC I ROM L, H = LPC II ROM L, L = FWH ROM DEFAULT
PULL LOW	IGNORE DEBUG STRAPS DEFAULT	EXTERNAL RTC	USE EXT. 48MHZ DEFAULT	CPU IF=P4	NOTE: FOR SB460, PCICLK[8:7] ARE CONNECTED TO SUBSTRATE BALLS PCICLK[1:0]	

DEBUG STRAPS

SB600 HAS 15K INTERNAL PU FOR PCI_AD[28:23]

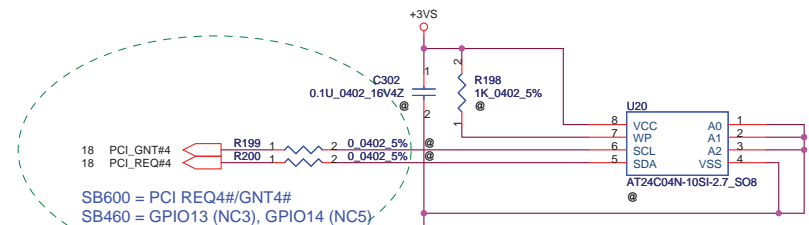


	IDE_DACK#	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	BOOTFAILTIMER DISABLED DEFAULT
PULL LOW	USE SHORT RESET	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	BOOTFAILTIMER ENABLED

SB600 ONLY

NOTE: FOR
SB460,
PCI_AD23 IS
RESERVED

OVERLAP COMMON PADS WHERE
POSSIBLE FOR DUAL-OP RESISTORS.

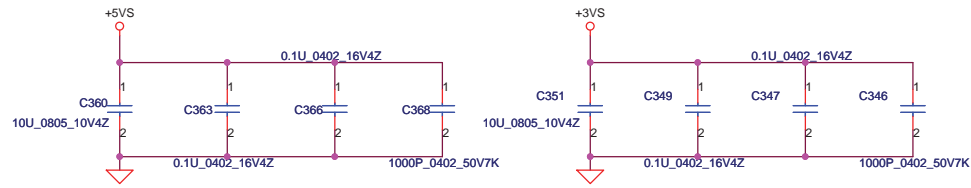


SB PCIE EEPROM STRAPS

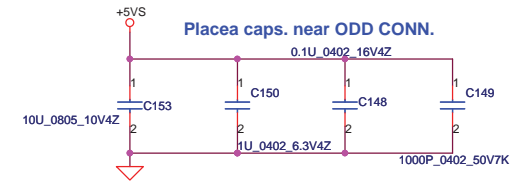
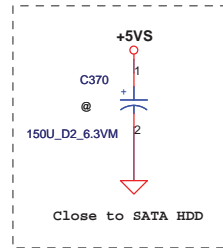
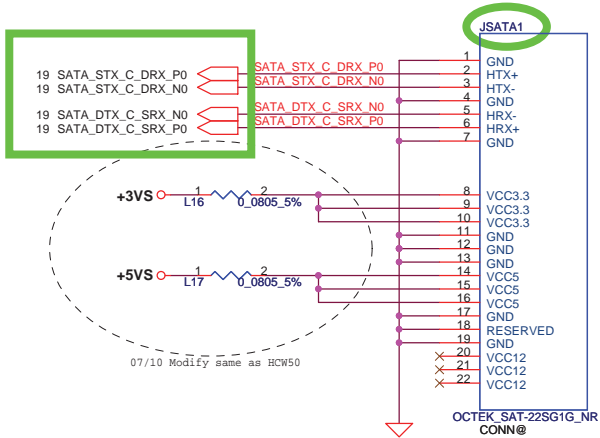
SB460 ONLY

SB600 ONLY

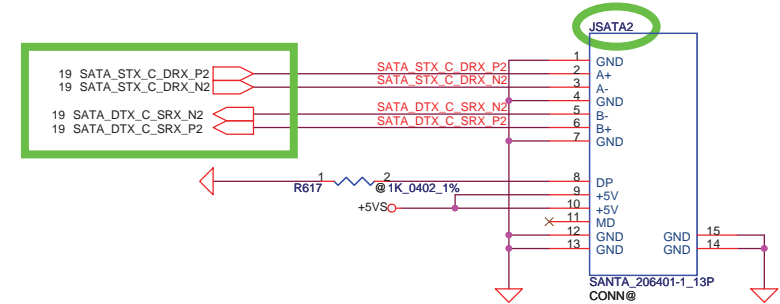
Security Classification	Compal Secret Data			Title
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SB600-STRAPS
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE 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:	Friday, July 25, 2008	Sheet	22 of 50	Rev 2.0



SATA HDD CONN

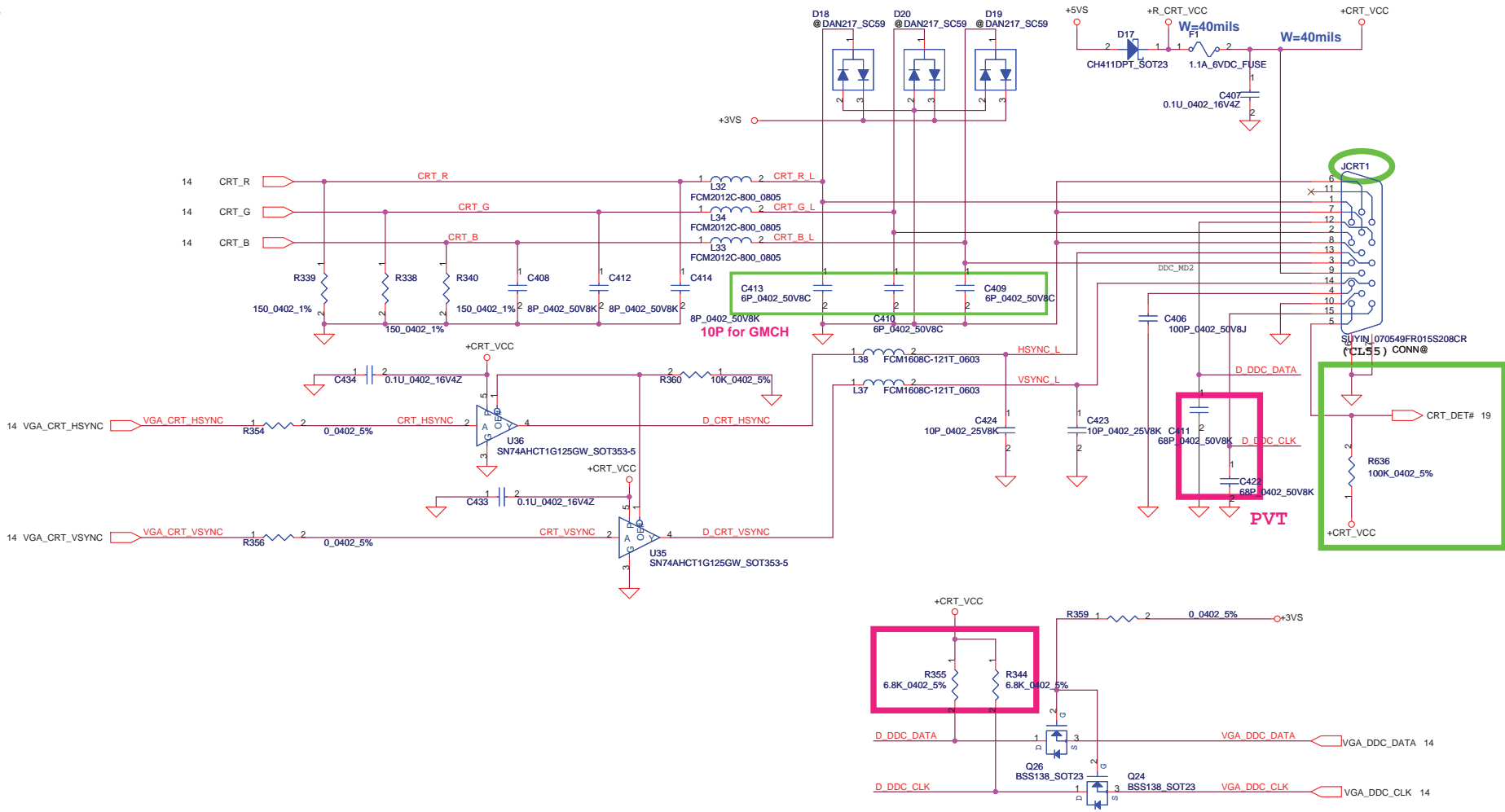


SATA ODD CONN



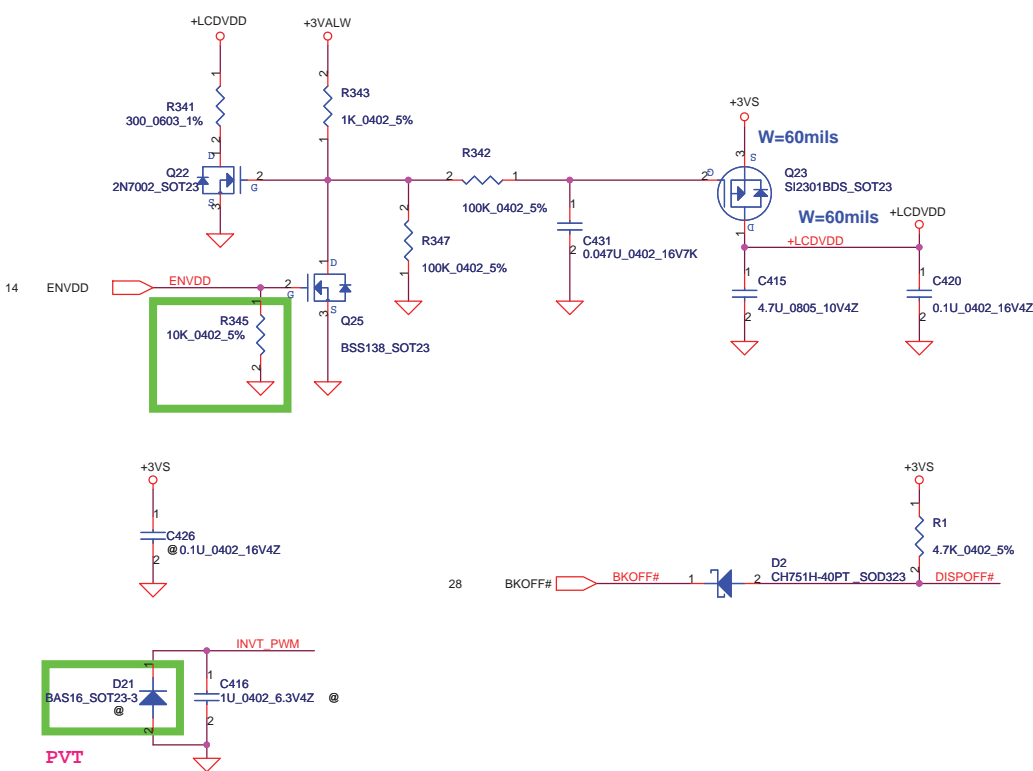
Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	HDD/CDROM	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE 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 B	Document Number KAW60 LA-4661P
				Date: Friday, July 25, 2008	Rev 2.0
				Sheet 23	of 50

CRT Connector

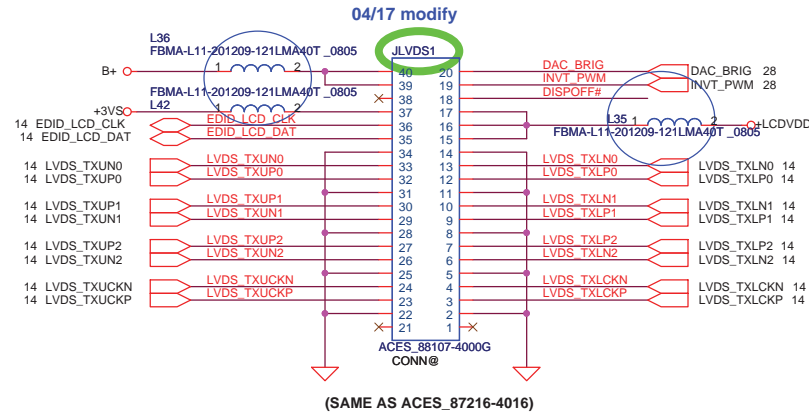


Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	CRT Conn.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE 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 Custom	Document Number KAW60 LA-4661P
				Date:	Tuesday, July 29, 2008
				Sheet	24 of 50
				Rev	2.0

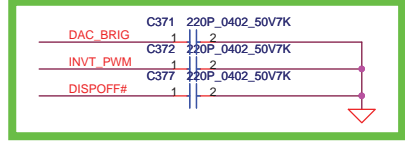
LCD POWER CIRCUIT



LCD/PANEL CONN.

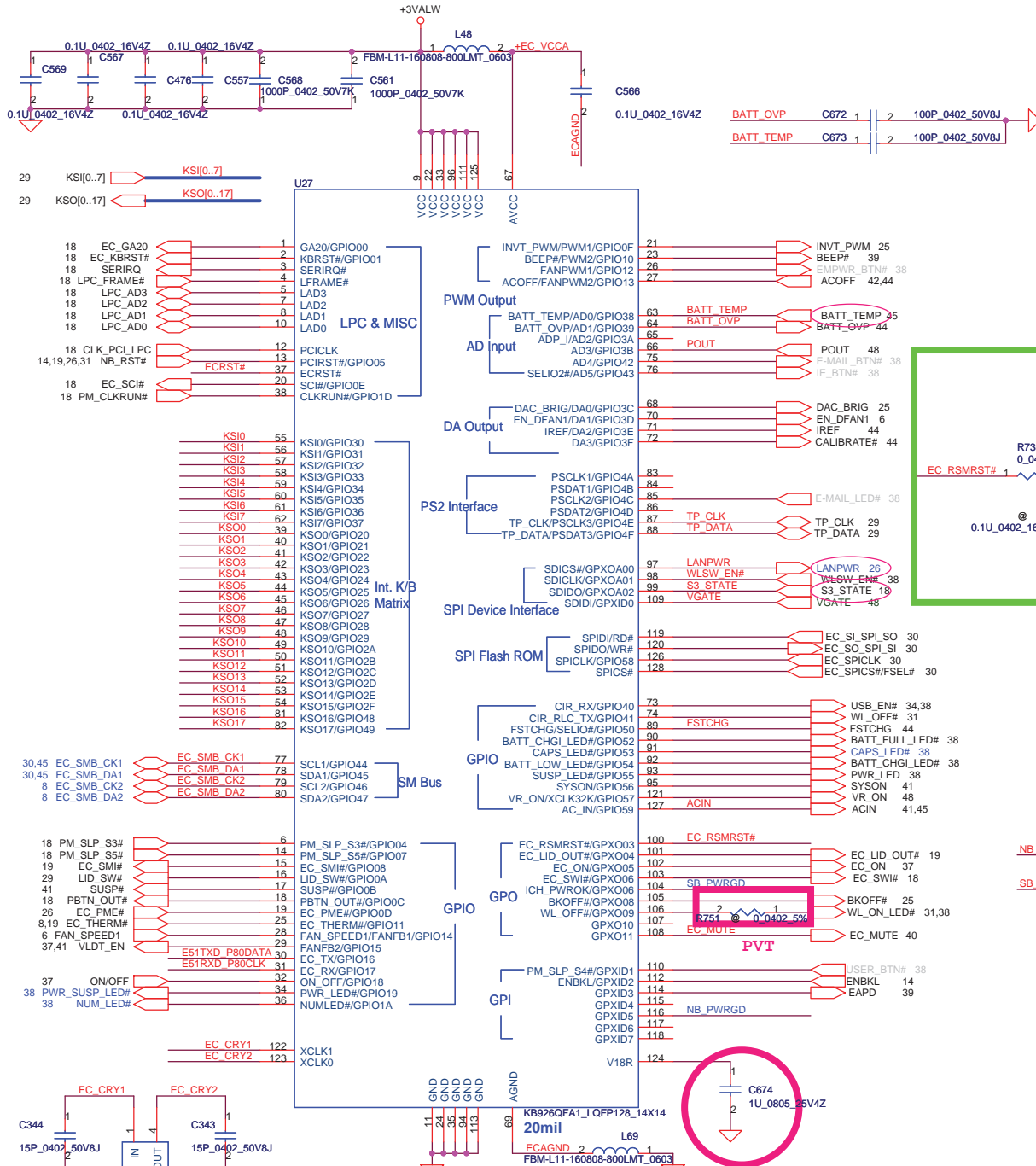
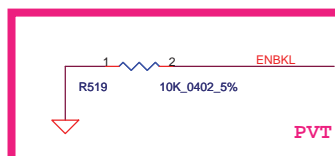
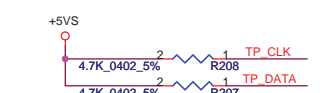
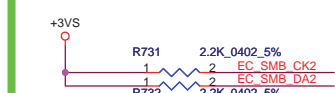
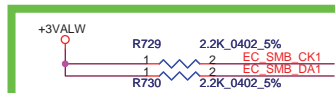
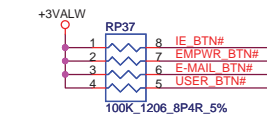
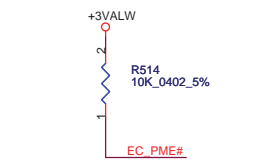
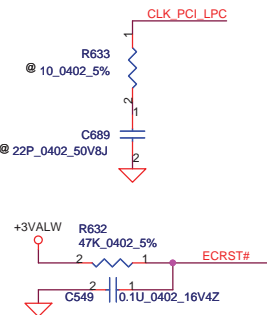


EMI



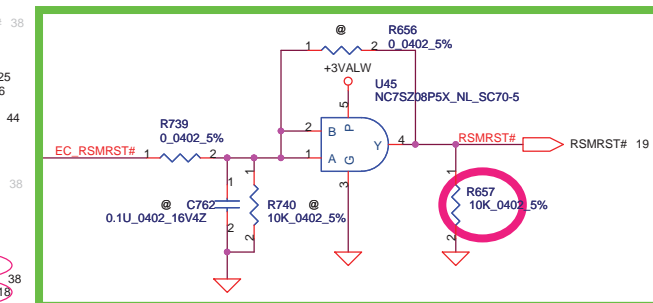
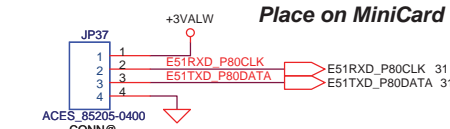
Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	LCD Conn.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE 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 BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number KAW60 LA-4661P
				Date: Friday, July 25, 2008	Rev 2.0
				Sheet 25 of 50	

5		4		3		2		1	
D									
C									
B									
A									



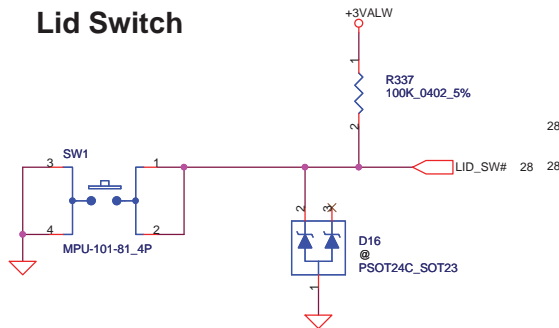
For EC Tools

Place on MiniCard

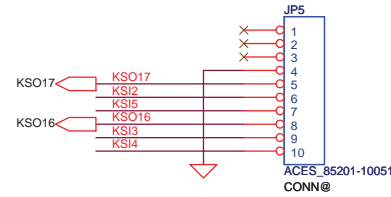


Security Classification		Compal Secret Data		Title	
Issued Date	2007/5/18	Deciphered Date	2008/5/18	ENE-KB926	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY 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
				KAW60 LA-4661P	0.2
				Date:	Friday, July 25, 2008
				Sheet	28 of 50

Lid Switch

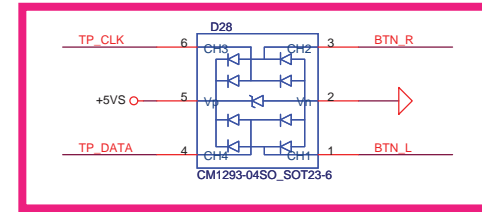


W/O media board (LS2921P)

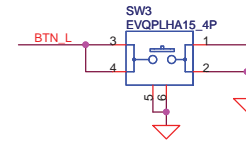


	KSO16	KSO17
KSI2	PLAY	VOL_UP
KSI3	STOP	VOL_DOWN
KSI4	NEXT	ARCADE_TV
KSI5	REV	

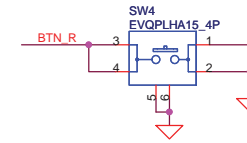
PVT



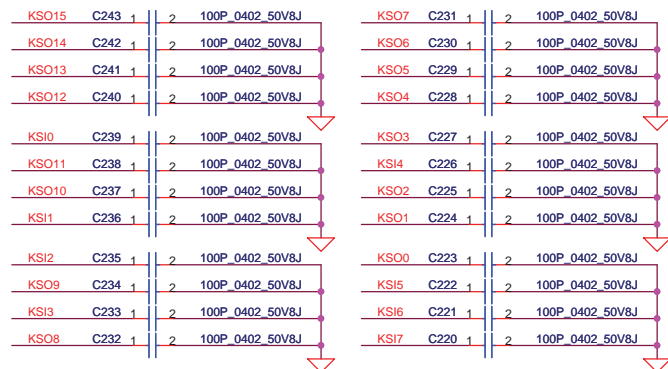
Left



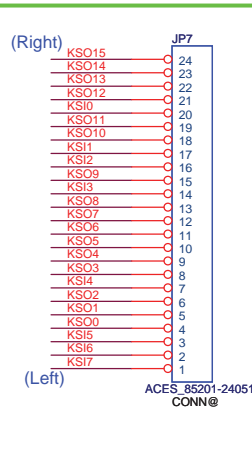
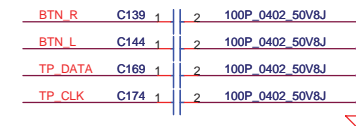
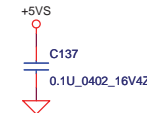
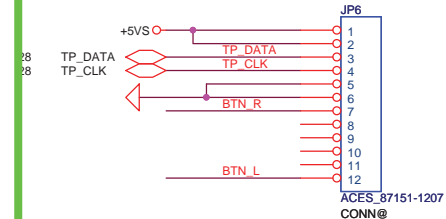
Right



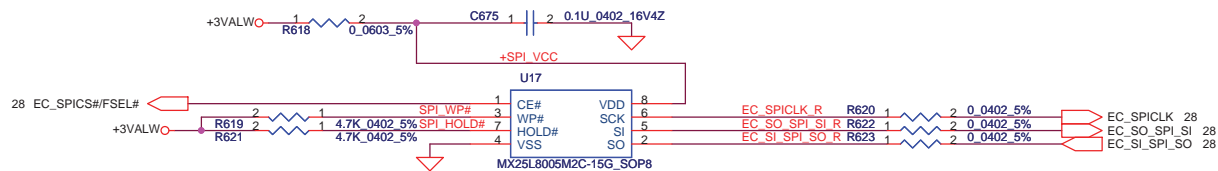
INT_KBD Conn.



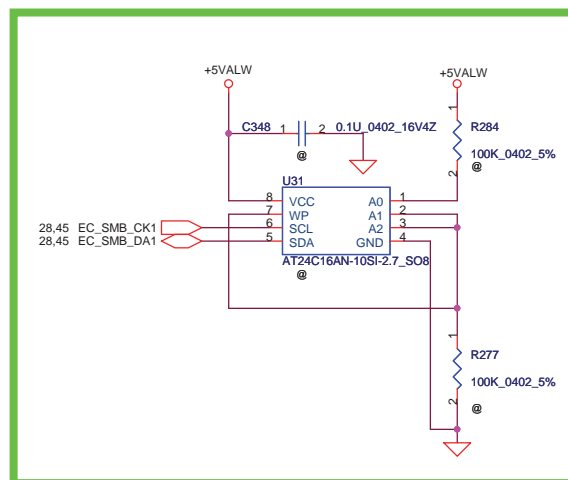
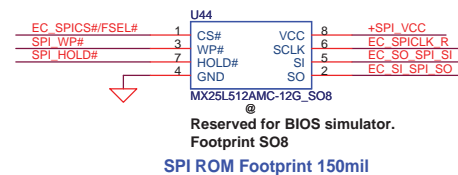
To TP/B Conn.



Security Classification	Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	LID / KB / TP / BTN
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 KAW60 LA-4661P
				Rev 2.0
Date: Friday, July 25, 2008		Sheet 29 of 50		



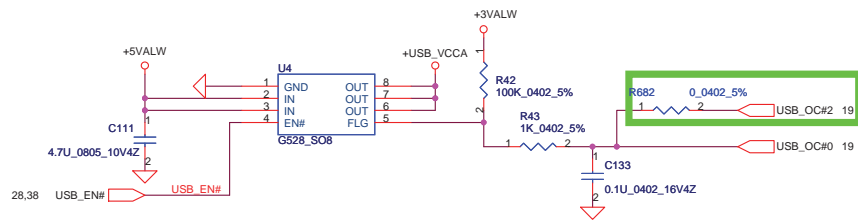
SA00000XT00 : S IC FL 8M MX25L8005M2C-15G SOP 8P
 ENE suggestion SPI Frequency over 66MHz
 SST: 50MHz
 MXIC: 70MHz
 ST: 40MHz



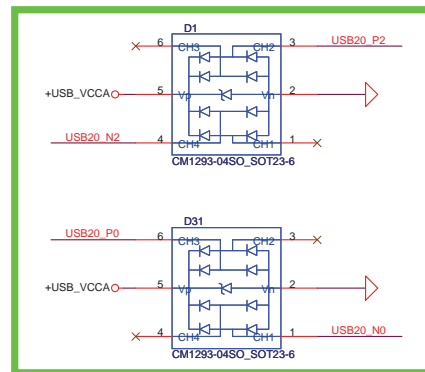
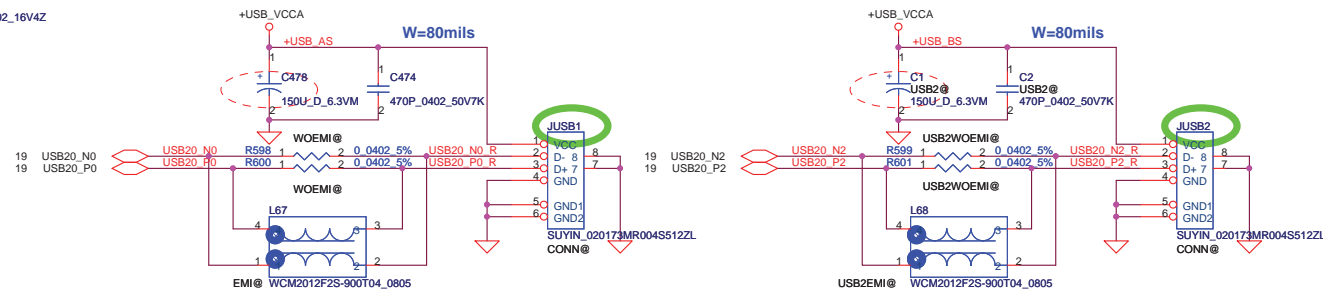
Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	BIOS	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY 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 KAW60 LA-4661P
				Date: Friday, July 25, 2008	Rev 2.0
				Sheet 30 of 50	

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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 B	Document Number KAW60 LA-4661P
				Date: Tuesday, June 17, 2008	Rev 2.0
				Sheet 32 of 50	

A		B		C		D		E	
1									
2									
3									
4									



USB CONN. 1 & 2



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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
				B	KAW60 LA-4661P
				Date:	Friday, July 25, 2008
				Sheet	34 of 50
				Rev	2.0

A		B		C		D		E	
1									
2									
3									
4									

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	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 B	Document Number KAW60 LA-4661P
				Date: Tuesday, June 17, 2008	Rev 2.0
				Sheet 36 of 50	

Power ON Circuit

28,41 VLDT_EN

R106 10K_0402_5%

R100 47K_0402_1%

C203 1U_0603_10V4Z

D5 BAS16_SOT23-3 @

PVT

U10A SN74LVC14APWR_TSSOP14

+3V POWER

R111 10K_0402_5%

R112 100K_0402_1%

U10B SN74LVC14APWR_TSSOP14

+3V POWER

C204 1U_0805_25V4Z

U10C SN74LVC14APWR_TSSOP14

+3VALW

U10D SN74LVC14APWR_TSSOP14

+3VALW

R109 10_0402_5%

U10E SN74LVC14APWR_TSSOP14

+3V POWER

U10F SN74LVC14APWR_TSSOP14

R104 10_0402_5%

R105 100K_0402_5%

R108 10_0402_5%

SB_PWROK 8,18,28

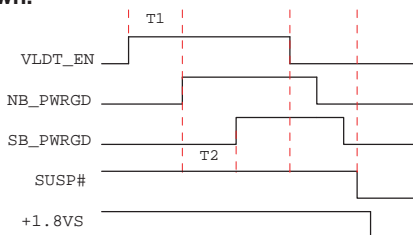
NB_PWROK 14,28

2006/02/22 Change R100 to 47K

note:T1 minimum 15ms,T2 minimum 33ms/maximum 500m
SUSP# goes to low after SB_PWRGD goes to low for po
down.

2006/02/22 Change R100 to 47K

**note:T1 minimum 15ms,T2 minimum 33ms/maximum 500ms,
SUSP# goes to low after SB_PWRGD goes to low for power
down.**



TOP Side

3V_ALW

R281
100K_0402_5%

J3
10K_0603_5%

Bottom Side

J4
10K_0603_5%

R290
10K_0402_5%
<BOM Structure>

Q17
2N7002_SOT23

C358
1000P_0402_50V7K

D11
RLZ20A_LL34

ON/OFFBTN#

ON/OFF 28

51ON# 42

EC_ON 28

38 ON/OFFBTN#

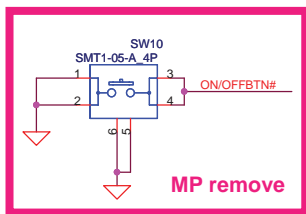
D10
CHN202UPT_SC70

D

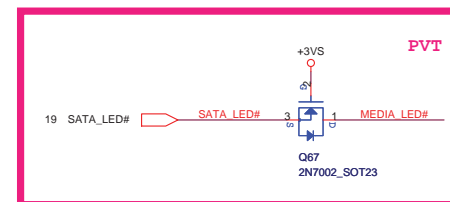
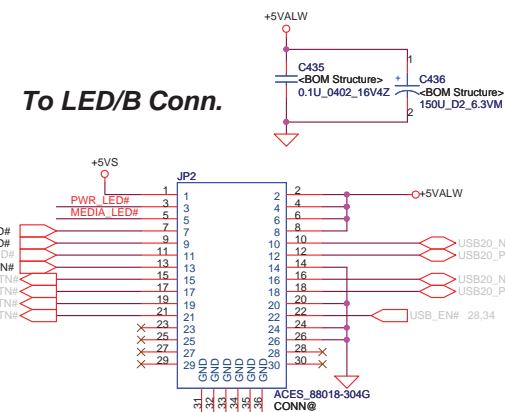
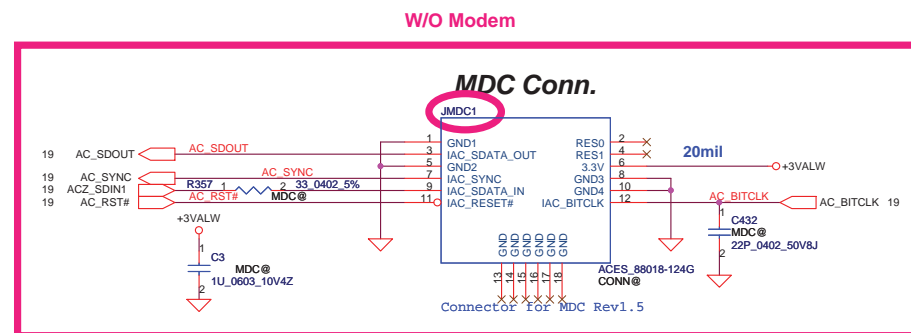
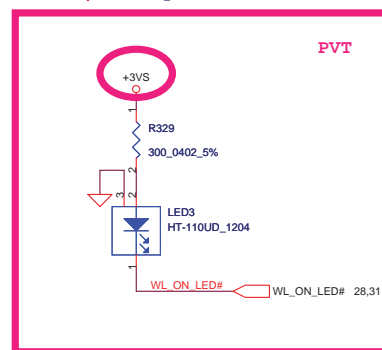
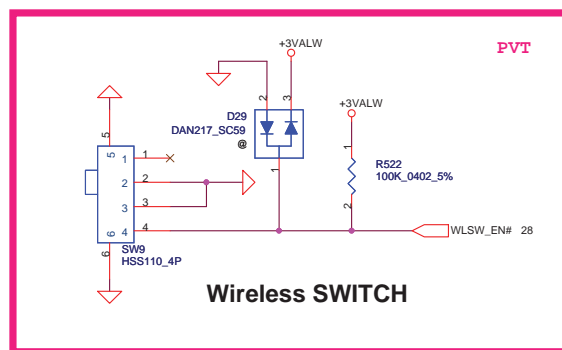
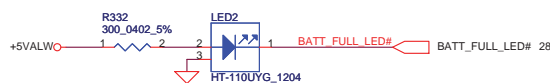
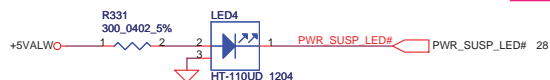
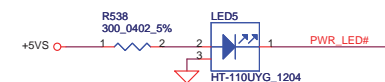
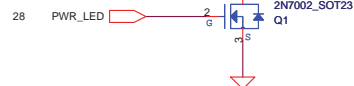
G

S

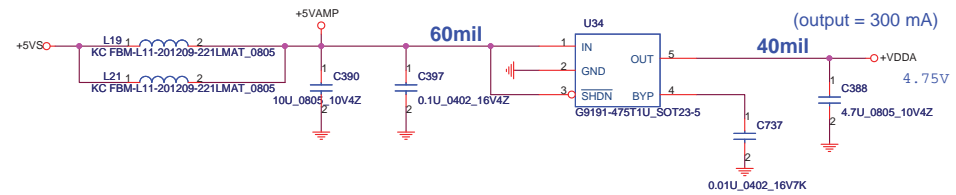
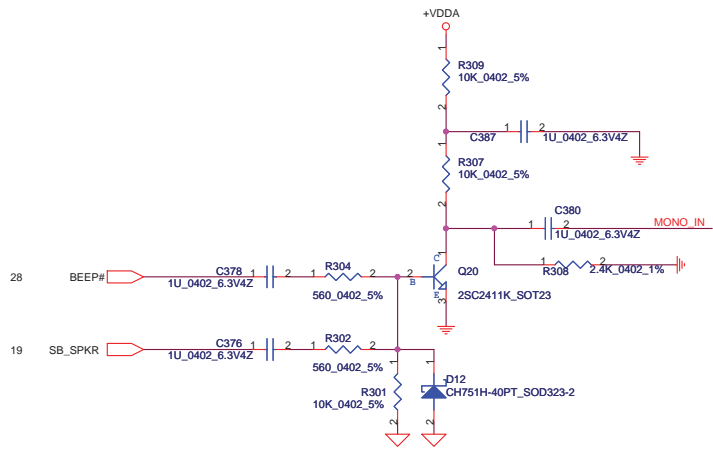
move



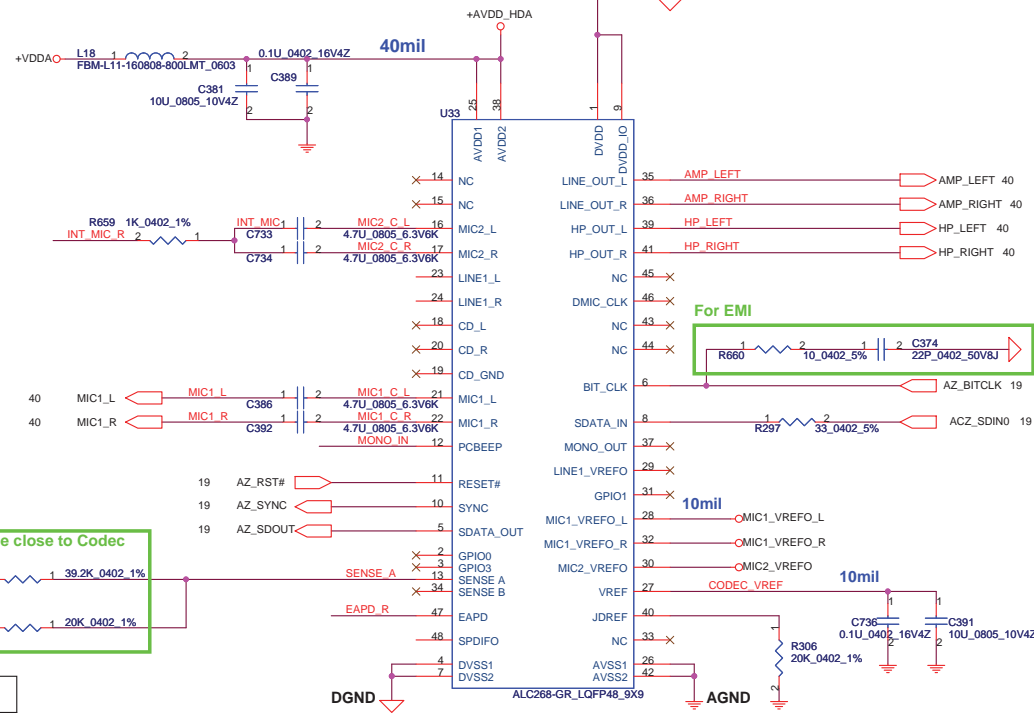
Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	PWR_OK/ PWR BTN	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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	KAW60 LA-4661P
					Rev 2.0
Date:		Friday, July 25, 2008		Sheet	37 of 50



Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	MDC / 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 B	Document Number	Rev 2	
					KAW60 LA-4661P		
Date:	Friday, July 25, 2008	Sheet	38	of	50		

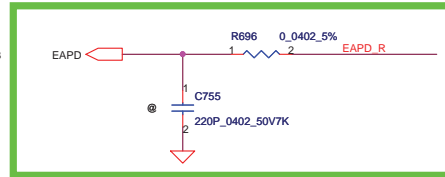


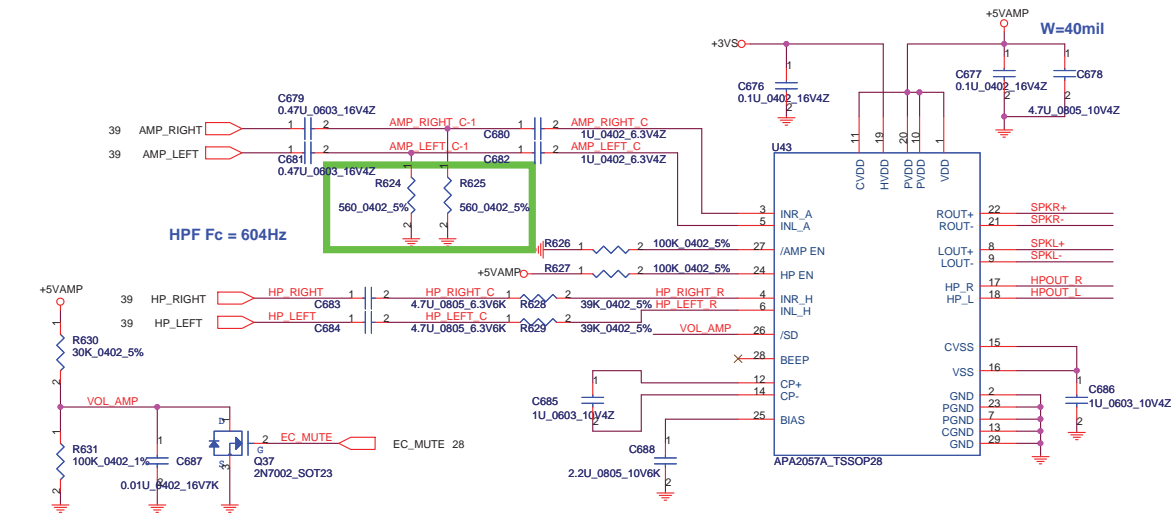
HD Audio Codec



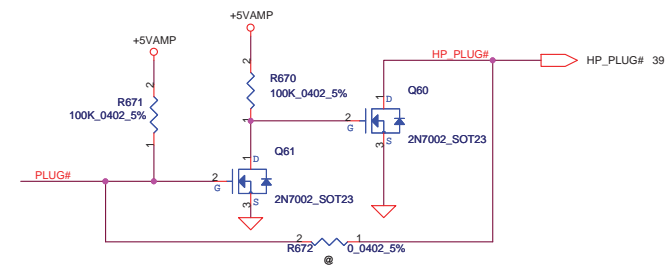
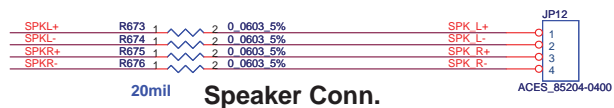
Place close to Codec

For EMI request



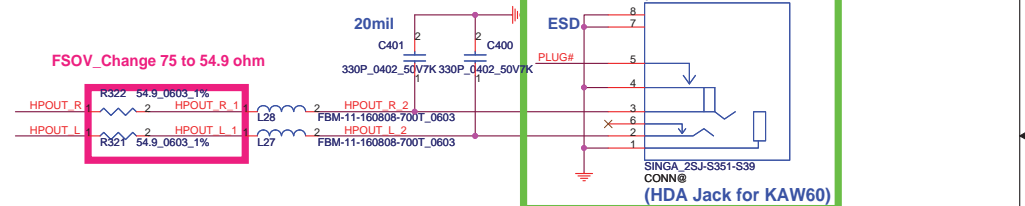


Gain= 14dB



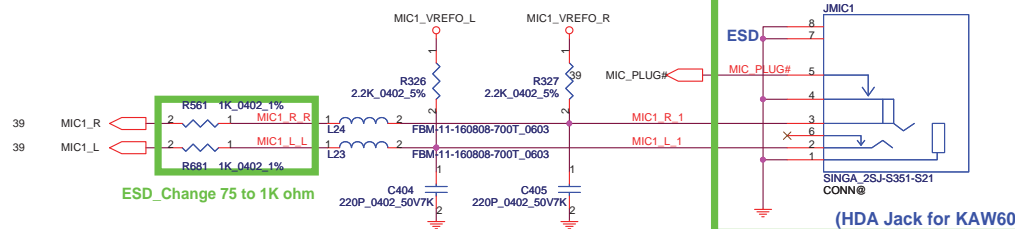
TOP/R

LINE Out / HP Out JACK



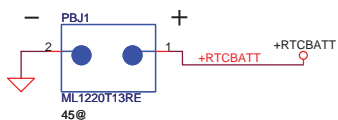
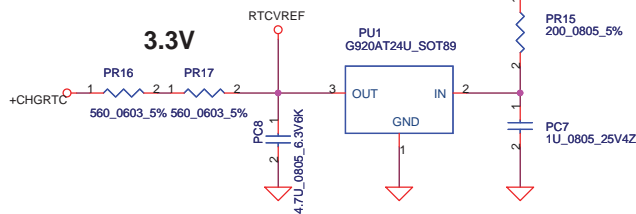
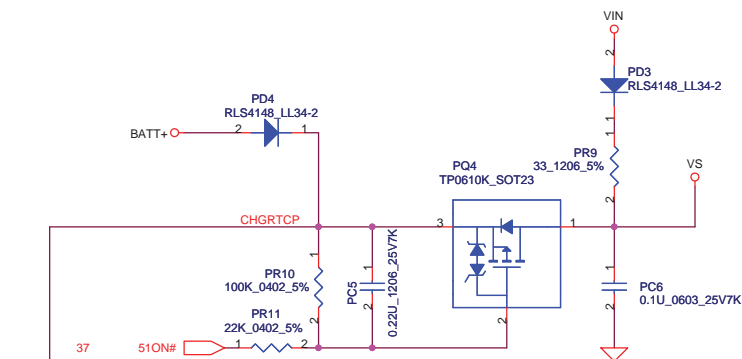
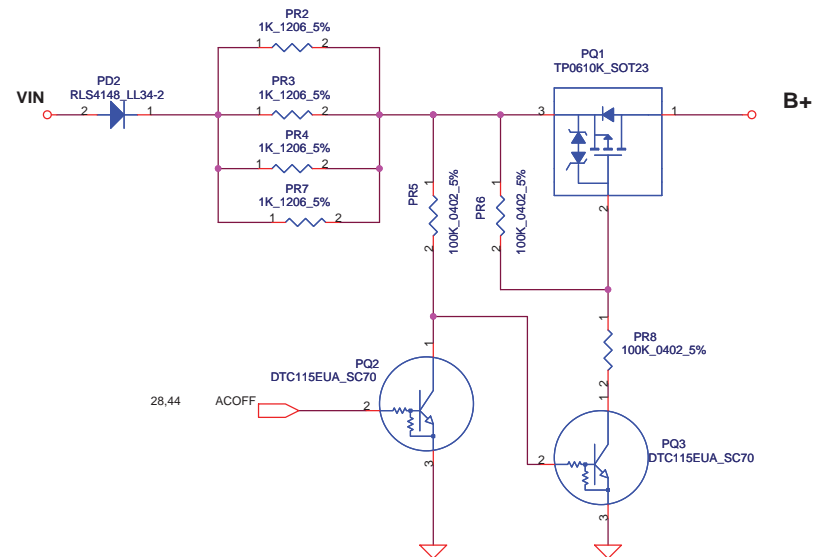
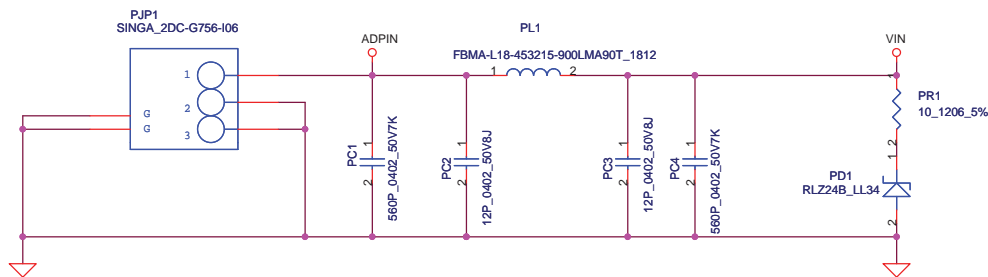
TOP/L

MIC JACK



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/09/20	Deciphered Date	2008/09/20	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 B	Document Number
				KAW60 LA-4661P	
				Date: Friday, July 25, 2008	Rev 0.1
				Sheet 40 of 50	

Security Classification		Compal Secret Data				
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Title 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	Rev
				B	KAW60 LA-4661P	2.0
				Date:	Friday, July 25, 2008	Sheet 41 of 50

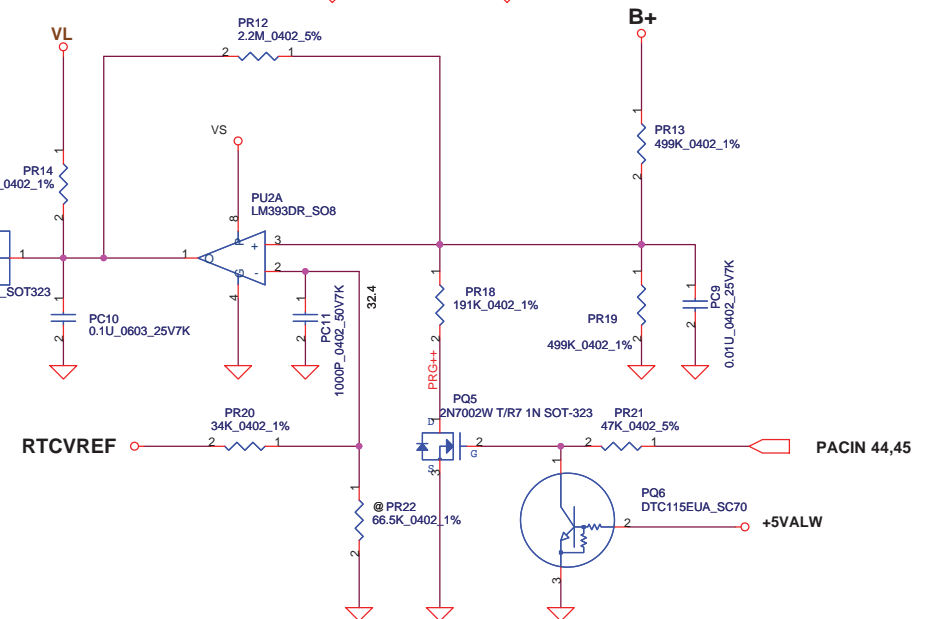


ACIN

Precharge detector			
	Min.	typ.	Max.
H-->L	14.589V	14.84V	15.243V
L-->H	15.562V	15.97V	16.388V

BATT ONLY

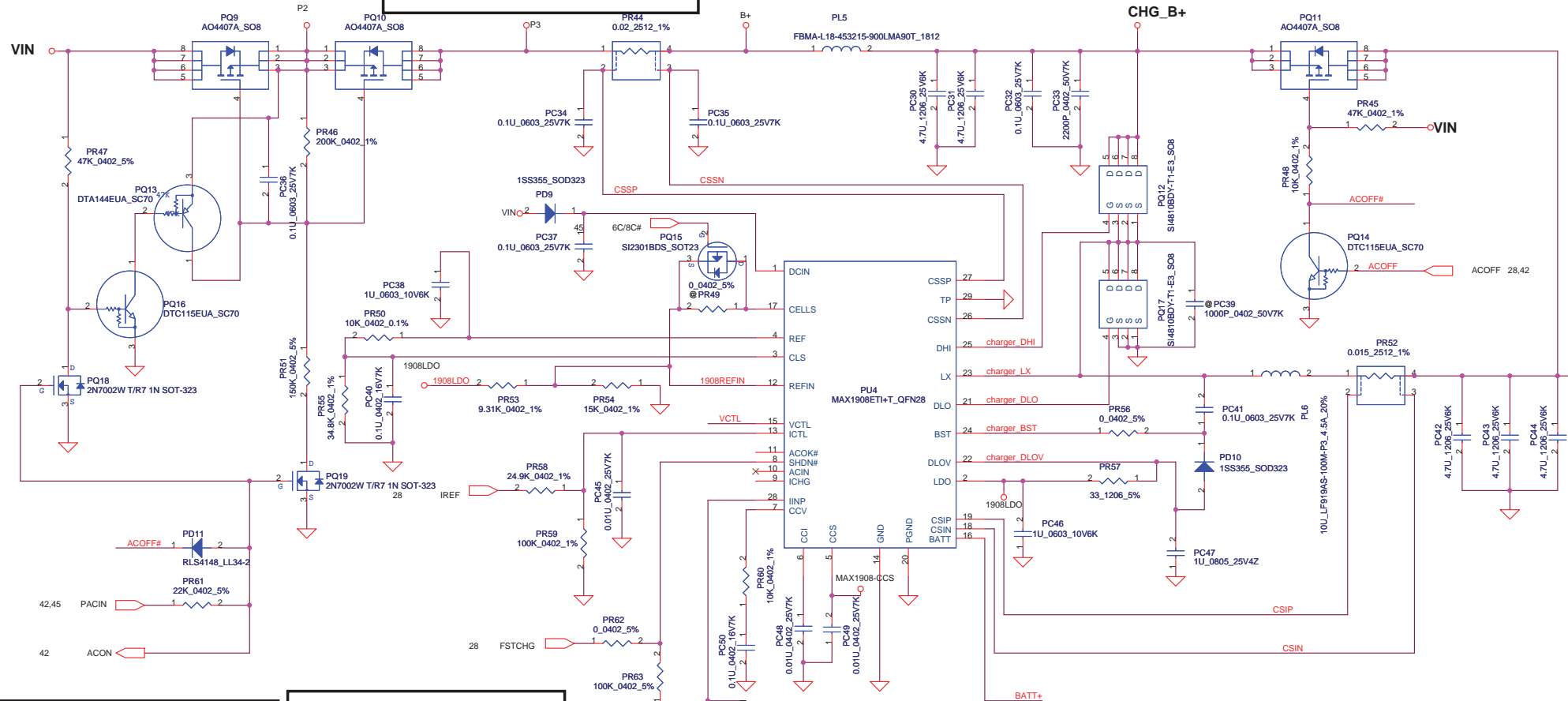
Precharge detector			
	Min.	typ.	Max.
H-->L	6.138V	6.214V	6.359V
L-->H	7.196V	7.349V	7.505V



Security Classification		Compal Secret Data				Compal Electronics, Inc.							
Issued Date		2008/06/11		Deciphered Date		2009/06/11		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.						DCIN/DECTOR							
						Size B		Document Number		KAW60		Rev 0.1	
						Date: Friday, July 25, 2008				Sheet 42 of 50			

$I_{adp} = 0 \sim 2.912A (65W)$

CP Point:

85% CP Point, $3.42A * 0.85 = 2.907A \sim 2.912A$ $I_{input} = (34.8K / 44.8K) * (75 / 20) = 2.912A$ 

Charger ADJ	Calibrate#	PR170	PR173
4.0V	L	@	@
4.1V	L	665K	221K
4.2V	H	@	@

$$V_{refin} = V_{1908LDO} * (15K / (9.31K + 15K)) = 5.4V * (15K / (9.31K + 15K)) = 3.331V$$

$$V_{vctl} = 3.331 * (221K / (221K + 665K)) = 0.83087V$$

$$V_{batt} = CELLS * (4 + (0.4 * (V_{vctl} / V_{refin}))) = 3 * (4 + (0.4 * (0.83087 / 3.331))) = 12.29V$$

$$I_{REF} = 0.832 * I_{charge}$$

$$I_{REF} = 0.73 \sim 3.3V$$

$$2P3S : 4400mA$$

$$0.8C = 3.52A$$

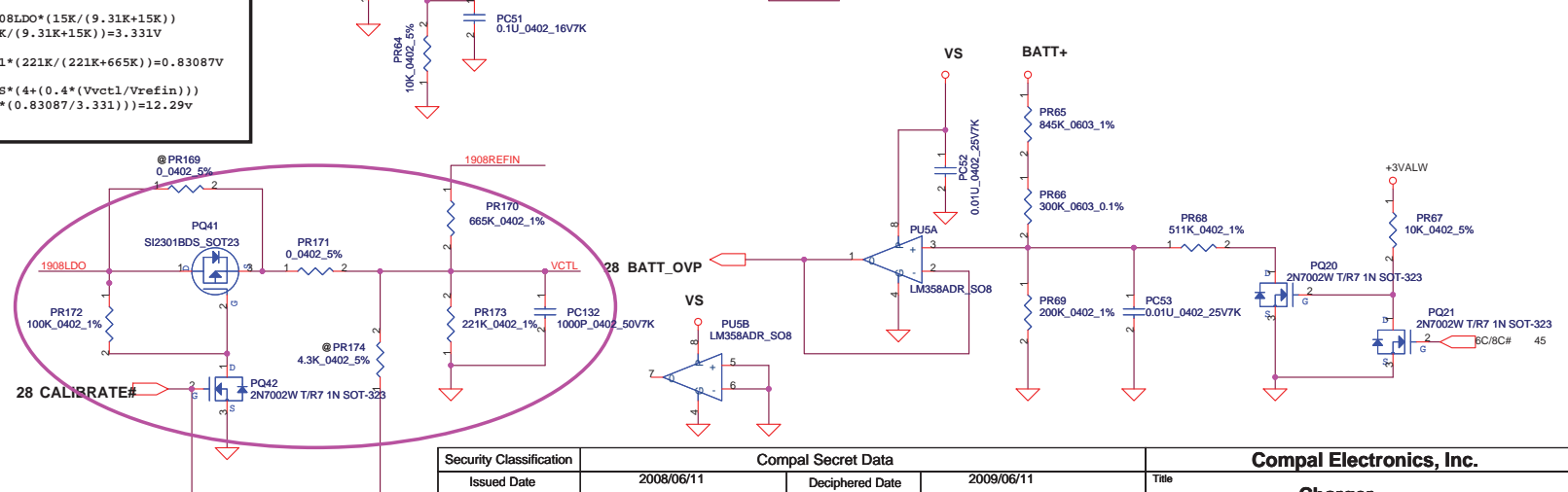
$$OVP-Voltage: LI-3SBattery Pack = 13.5V --- BATT-OVP = 2.0061V$$

$$Battery-OVP = 0.1486 * BATT+$$

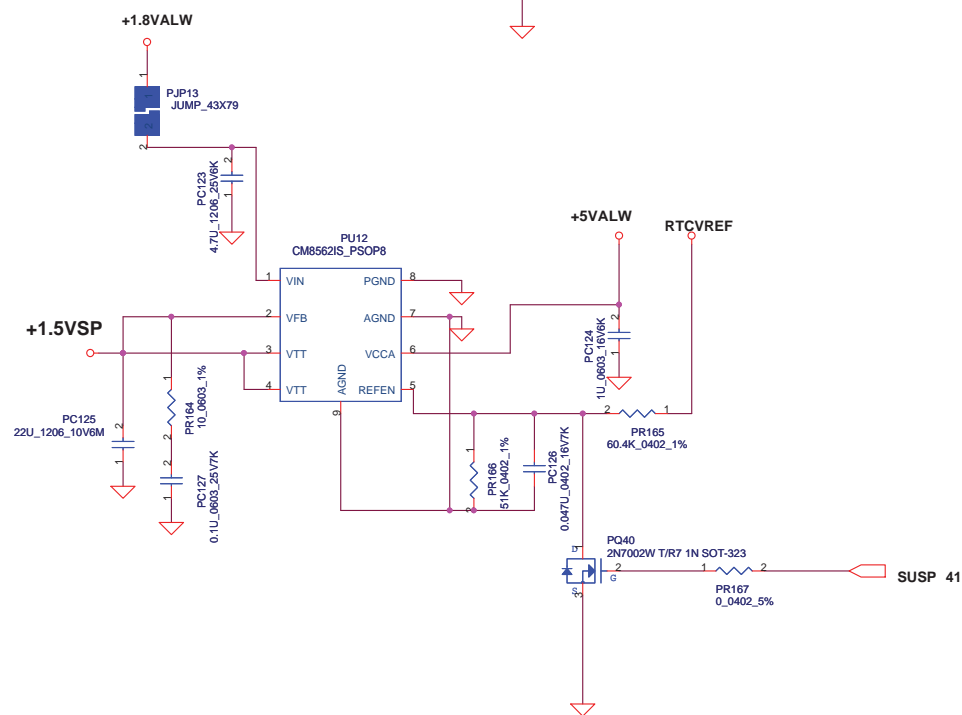
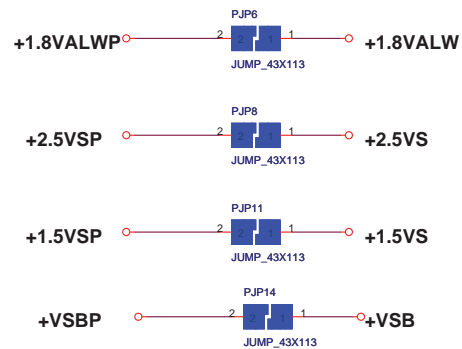
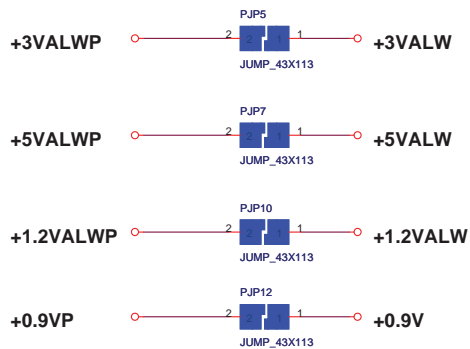
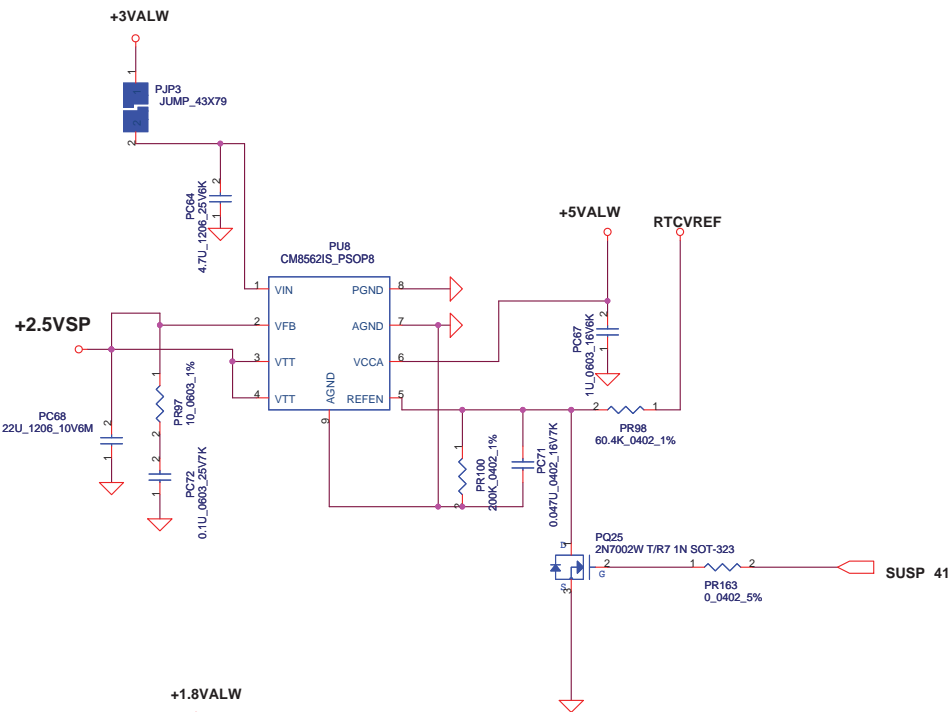
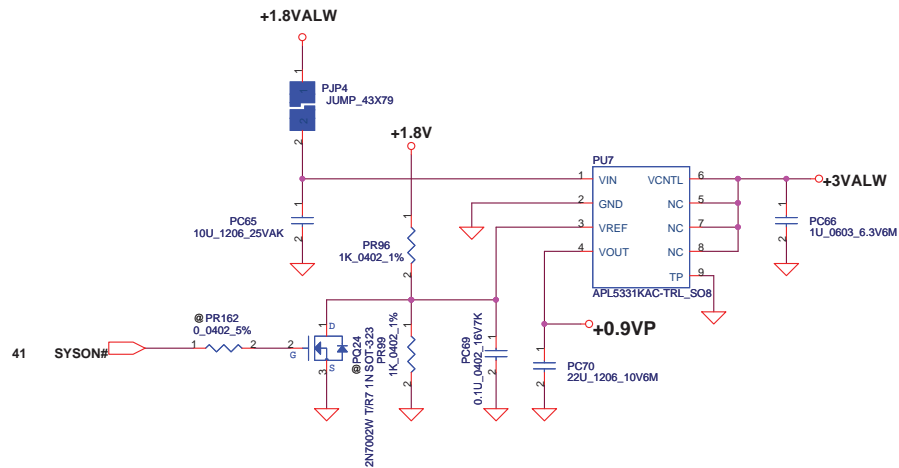
$$V_{batt} = CELLS * (4V + (0.4 * (V_{vctl} / V_{refin})))$$

$$Charge voltage$$

$$3S CC-CV MODE : 12.6V$$



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/06/11	Deciphered Date	2009/06/11	Title	Charger
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 COMPONENT 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 B	Document Number
					KAW60
				Date: Friday, July 25, 2008	Rev 0.1
				Sheet 44 of 50	



Security Classification		Compal Secret Data			Compal Electronics, Inc.						
Issued Date		2008/06/11		Deciphered Date		2009/06/11		Title			
								+0.9VSP/+1.5VSP/+2.5VSP			
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		KAW60		Rev	
										0.1	
						Date:		Friday, July 25, 2008			
						Sheet		46 of 50			

Security Classification	Compal Secret Data					
Issued Date	2008/06/11	Deciphered Date	2009/06/11	Title +CPU_CORE		
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	KAW60	0.1
				Date:	Friday, July 25, 2008	Sheet 48 of 50

Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1	material issue.	Change to currently design	0.1	44	Change PQ9, PQ10, PQ11 from SB944070000(S TR AO4407 1P SO8 W/D) to SB00000DL00(S TR S TR AO4407A 1P SO8)	08,07/22	to PVT
2	material issue.	Change to currently design	0.1	48	Change PQ31 and PQ35 from SB578400080(S TR SI7840-T1 -E3 1N SO8) to SB000008L80(S TR SI7686DP-T1-E3 1N POWERPAK SO8)	08,07/22	to PVT
3	material issue.	AO4916 will be EOL, change to AO4932	0.1	43	Change PQ7 and PQ8 from SB000002W80(S TR AO4916 2N SO8) to SB00000BG00(S TR AO4932 2N SO8)	08,07/22	to PVT
4	BOM error	BOM error	0.1	48	Change PR141 from SD014200180(S RES 1/10W 2K 0603 1%) to SD014432180(S RES 1/10W 4.32K 0603 1%)	08,07/22	to PVT
5							.
6							.
7							.
8							.
9							.
10							.
11							.
12							.
13							.
14							.
15							.
16							.
17							.
18							.

Security Classification		Compal Secret Data		Title	
Issued Date	2008/06/11	Deciphered Date	2009/06/11	PIR(PWR)	
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 KAW60
				Date: Thursday, July 24, 2008	Rev 0.1
				Sheet 49 of 50	

PHASE	PAGE	MODIFICATION LIST	PURPOSE
PVT	P.19 & 24	Update CRT_DET & CRT_DET# net name	NA
	P.18 & 19	Change CRT_DET from GPIO61 to GPIO0 & reserved R741 , R742 , R743	For ACER AP test CRT detect feature
	P.20	Remove L71 , C694 & C697	For +3Vs (1.5V) , +5Vs (0.388V) , +1.8Vs (0.154V) on S5 leakage issue
	P.28	Change R519 from 100K to 10K	For RS690MC ENBKL had unexpected 3.3V pulse before normal display & white screen flash symptom appear
	P.14	Reserved U48 , U49 , R744 , R745 , R746 , R747 , C763	For RS690MC ENBKL , ENVDD if had unexpected 3.3V pulse before normal display
	P.28 & 31	Modify WL_ON_LED# from KB926 to JMINI1 control	WL LED activity behavior controlled by wireless mini card itself
	P.38	Update SW9 Footprint & P/N	NA
	P.41	Change R586 from 100K to 10K	For Susp# had 3V level glitch when G3 to S5 (Plug AC in) & caused +5Vs /+3Vs had leakage immediately
	P.6	Change D4 as SC1BAS16000(S DIO BAS16PT SOT-23)	Sourcer recommend
	P.26	Change U11 as SA000019910(S IC EE 1K CAT93C46VI-GT3 SOIC 8P)	SA093461070 (S IC EE 1K SO-8 I AT93C46-10SI-2.7) EOL
	P.50	Change T1 as SP050001210 / S X'FORM_ NS0013LF LAN (BOTHHAND)	MHPC X'form part not for ABO , Sourcer recommend
	P.18	Delete R695,R179,R484 for SB_TEST pin	AMD reference schematic
	P.20	Reserved C764 (1u_0402)	AMD reference schematic & design guide
	P.38	Modify WL_LED power rail as +3Vs	NA
	P.28 & 38	Modify LED control of SATA drive from EC to SB (Add Q67)	EC(media_led#/pin86 , reference sata_led# from SB) control behavior abnormal
	P.17	Change C510 , C511 of 14.318MHz as 27P from 22P	NA
	P.37 & 25	Change D5 , D21 as SC1BAS16000	NA
	P.26	Add L77 , C765 , C766 , C767 & change R645 / R647 as L78 / L79 , reserved C719 , C724	EMI request
	P.31 & 34	Stuff L66 , L67 , L68 & remove R615 , R616 , R598 , R599 , R600 , R601	EMI request
	P.29	Stuff D28	ESD request
	P.6	Update net EN_DFAN1_R	NA
	P.6	Update JCPU1 PCB footprint as SOC127MM48X51-948	NA
	P.26	Add R749 , R750 (300ohm_0402)	For LAN external EEPROM program issue
	P.31	Add D32 (SCA00000A00)	ESD request
	P.28 & 31	Reserved R751 & R752	Reserved WL_LED controlled by EC (Navarrow project)
	P.24	Change C411 & C412 PN from SE081680k80 to SE071680J80	AP Code
	P.6	Change U1 as SA00001Z900 (S IC APL5605KI-TRL SOP 8P)	(SA009930010) S IC G993P1UF SOP 8P FAN LDO EOL
	P.9	Change C504 & C505 as SGA19331D10	(SGA19331D00) S POLY C 330U ESR15 , but need ESR9 (SGA19331D10)

ZZZ



PCB 06B LA-4661P REV0 M/B

LA4661MB Rev0 : DA600009Z00
LA4661MB Rev1 : DA6~
LA4661MB with Sub/B Rev1 : DAZ~

Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	PIR-HW & Option Component	
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 KAW60 LA-4661P
				Date: Tuesday, July 29, 2008	Rev 2.0
				Sheet 50 of 50	