

Compal Confidential

HCW50 Schematics Document

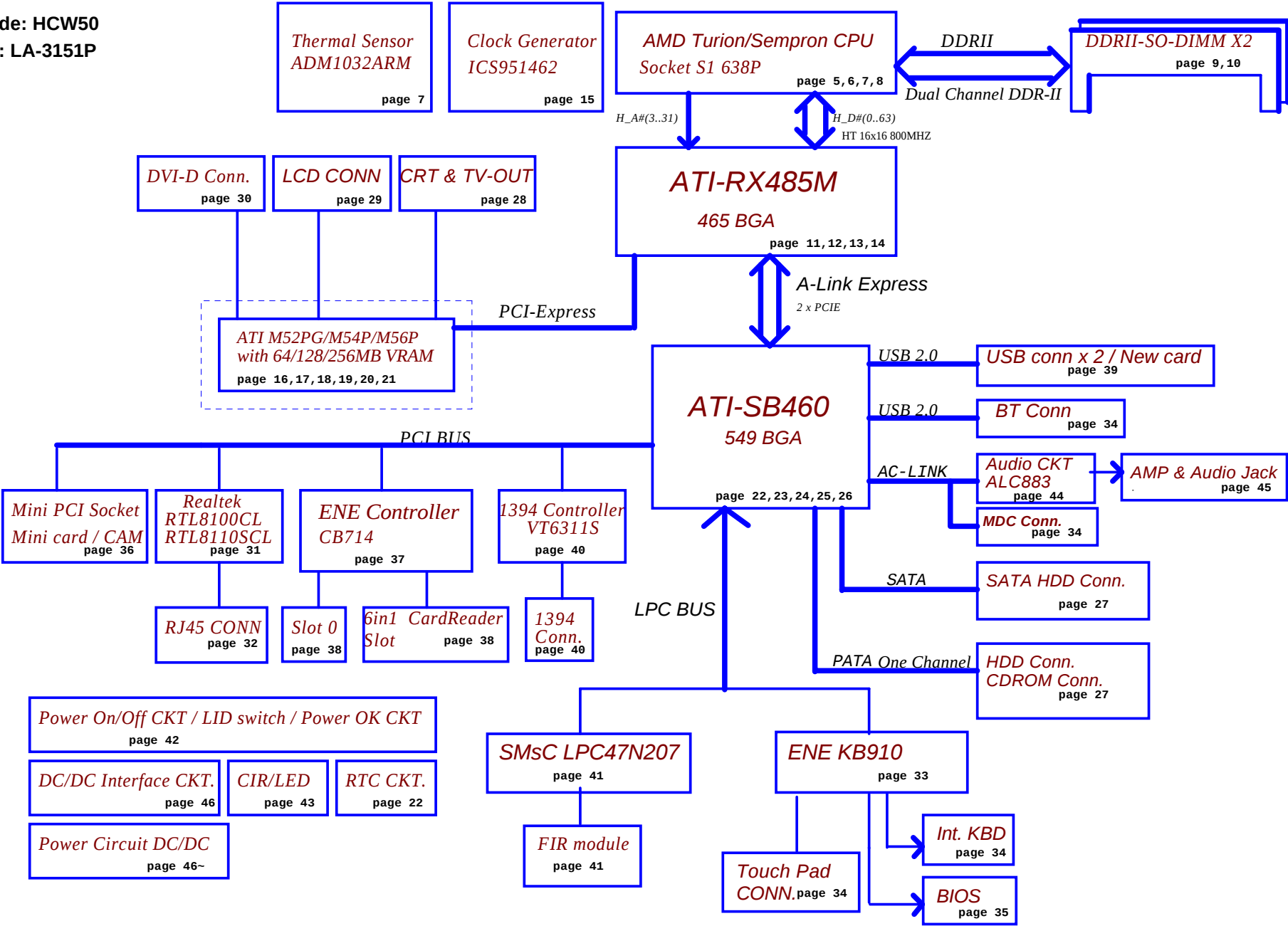
AMD/Sempron/ATI RX485/SB460 W/s M52/54/56P

2006 / 02 / 28 Rev:0.3 (For PVT)

Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		SCHEMATIC, M/B LA-3151P	
2005/05/09		2006/03/08		Size	
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	
		401412		B	
Date:		Sheet		of	
星期四, 三月 09, 2006		1		55	

Compal confidential

Project Code: HCW50
File Name : LA-3151P



Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SCHEMATIC, M/B LA-3151P	
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	401412
Date: 星期四, 三月 09, 2006				Sheet	2 of 55

Voltage Rails

Power Plane	Description	S0	S3	S5
VIN	Adapter power supply (19V)	NA	NA	NA
B+	AC or battery power rail for power circuit.	NA	NA	NA
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+0.9V	0.9V switched power rail for DDRII 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
+1.8V	1.8V power rail for DDRII	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*
+1.2VS	1.2V switched power rail for PCIE	ON	OFF	OFF
+0.9VS	0.9V switched power rail for VRAM terminator	ON	OFF	OFF
+1.8VALW	1.8V switched power rail	ON	ON	ON*
+VDD_CORE	1.0~1.2V switched power rail for VGA	ON	OFF	OFF

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
CardBus(SD)	AD20	2	PIRQE/PIRQH
1394	AD16	0	PIRQE
LAN(10/100)	AD17	3	PIRQF
Mini-PC(WLAN/TV-Tuner)	AD18	1	PIRQG/PORQH

EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	Fintek F75383M	1001 100X b
EEPROM(24C16/02)	1010 000X b		
GMT G781-1	1001 101X b		

EC SM Bus2 address

SB460 SM Bus address

Device	Address
Clock Generator (ICS9LPRS325AKLFT_MLF72)	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	0.1
1	
2	
3	
4	
5	
6	
7	

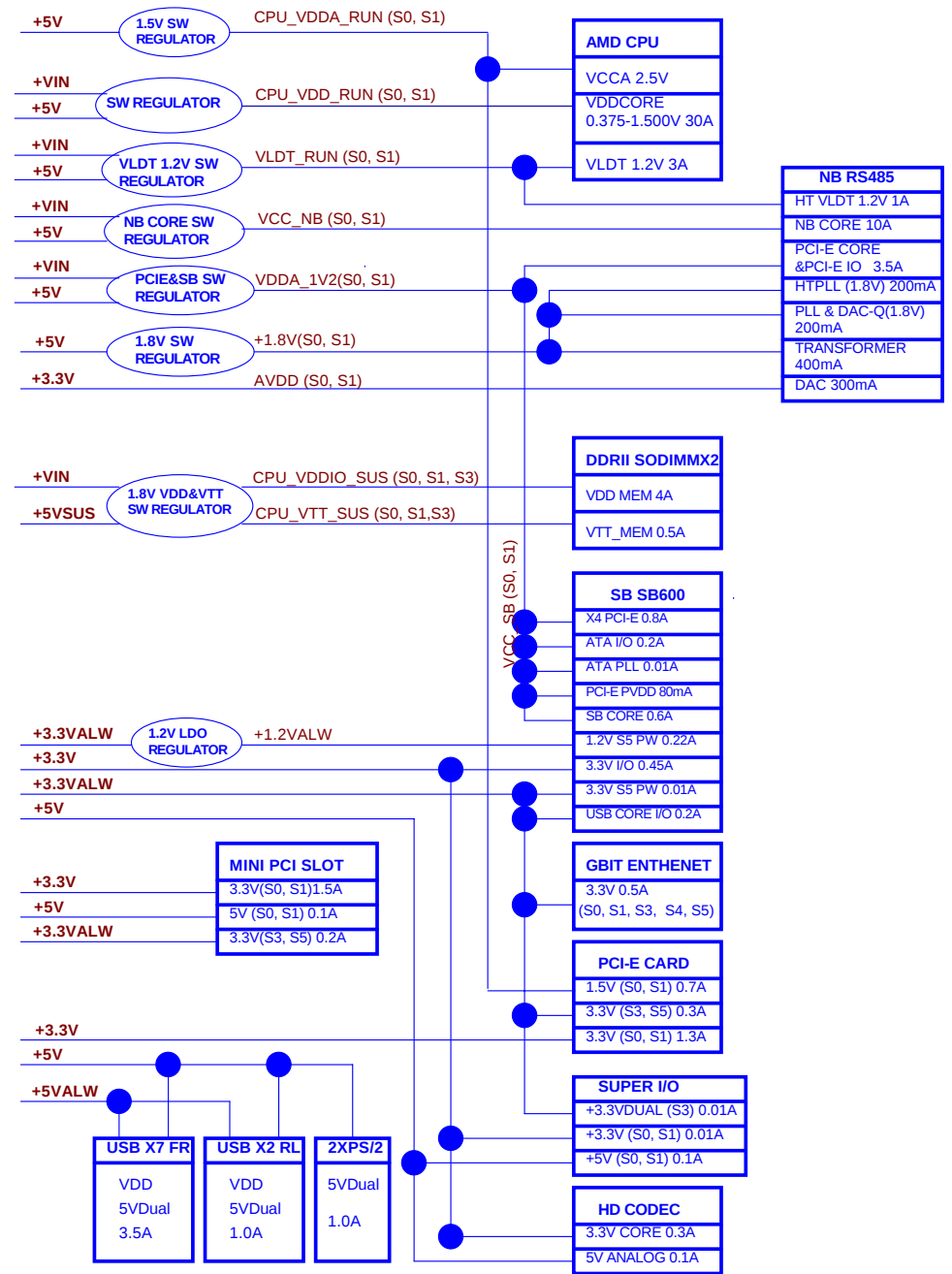
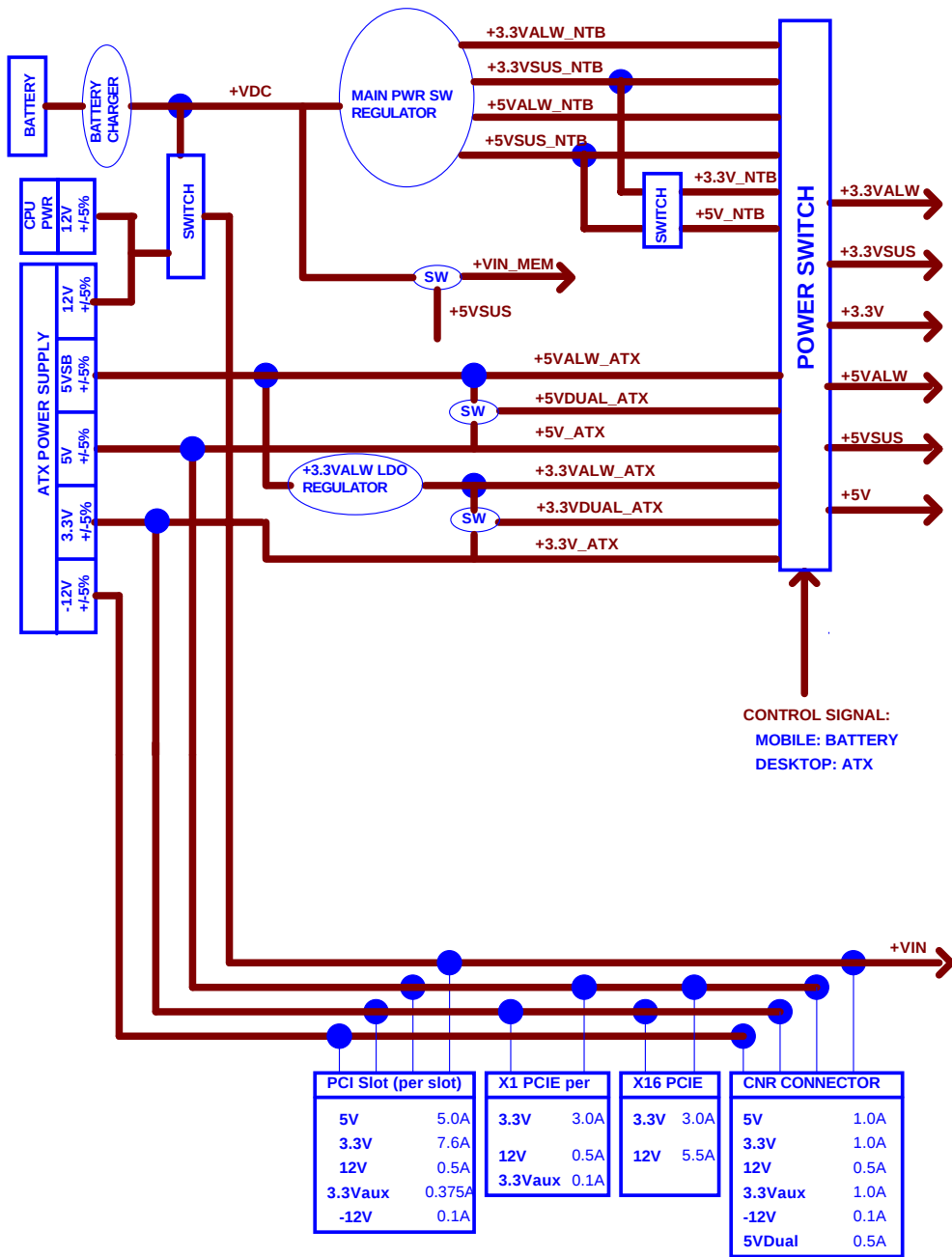
SKU ID Table

SKU ID	SKU
0	PM
1	GM
2	
3	
4	
5	
6	
7	

BTO Option Table

BTO Item	BOM Structure
VGA	
UMA	
UMA's DVI	
LAN(10/100)	
LAN(GIGA)	
MINI CARD1	
MINI CARD2	
SATA-to-IDE	
PATA	
GRAPEVINE	
G72MV Only	
G73 Only	
VRAM	
VRAM 64M	
VRAM 128M	
VRAM 256M	
MEDIA/B	
CIR	
FIR	
GENEVA	
LCM	
Sub-woofer	

Security Classification	Compal Secret Data			Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SCHEMATIC, M/B LA-3151P	
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	401412
				Date:	星期四, 三月 09, 2006
				Sheet	3 of 55
				Rev	B



<11> H_CADIP[0..15] H_CADIP[0..15]
<11> H_CADIN[0..15] H_CADIN[0..15]

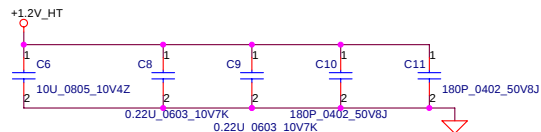
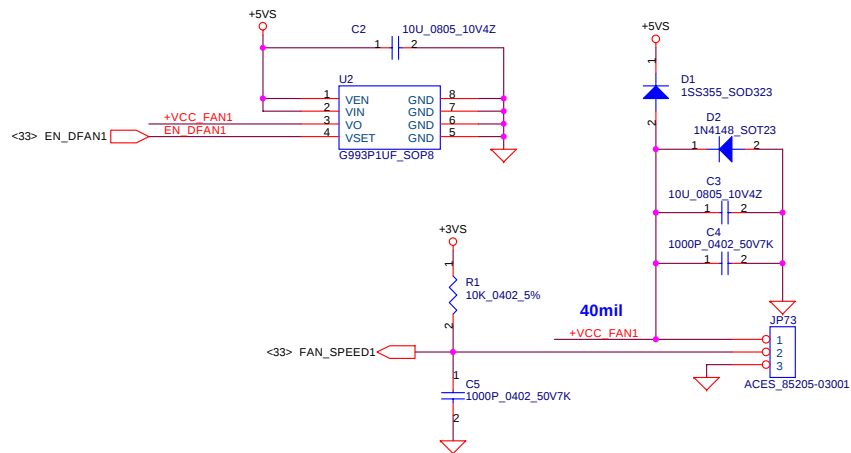
H_CADOP[0..15] H_CADON[0..15] <11>
H_CADON[0..15] H_CADON[0..15] <11>

PROCESSOR HYPERTRANSPORT INTERFACE

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



FAN1 Conn

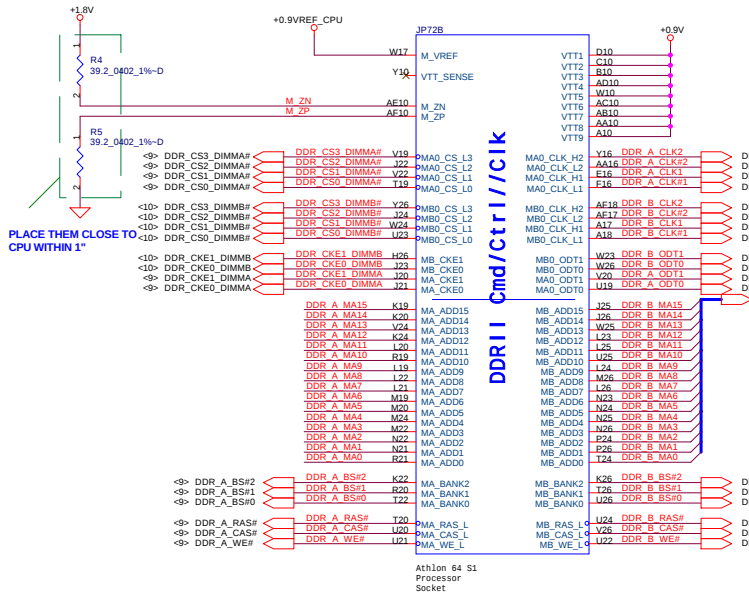


LAYOUT: Place bypass cap on topside of board

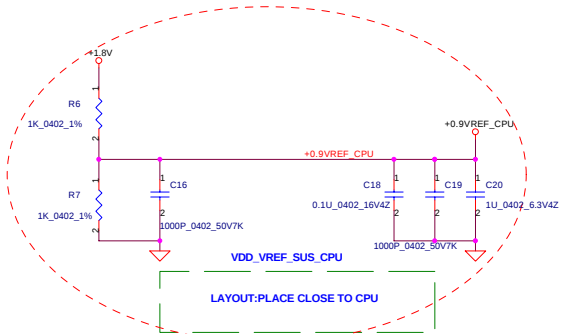
NEAR HT POWER PINS THAT ARE NOT CONNECTED DIRECTLY TO DOWNSTREAM HT DEVICE, BUT CONNECTED INTERNALLY TO OTHER HT POWER PINS
PLACE CLOSE TO VLDT0 POWER PINS

Security Classification	Compal Secret Data			Compal Electronics, inc.	
Issued Date	2005/10/11	Deciphered Date	2006/10/11	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.				SCHEMATIC, M/B LA-3151P	
Size	Document Number	Rev		B	
Custom	401412	Date:		Rev	
Date:		星期四, 三月 09, 2006		Sheet	
		1		5 of 55	

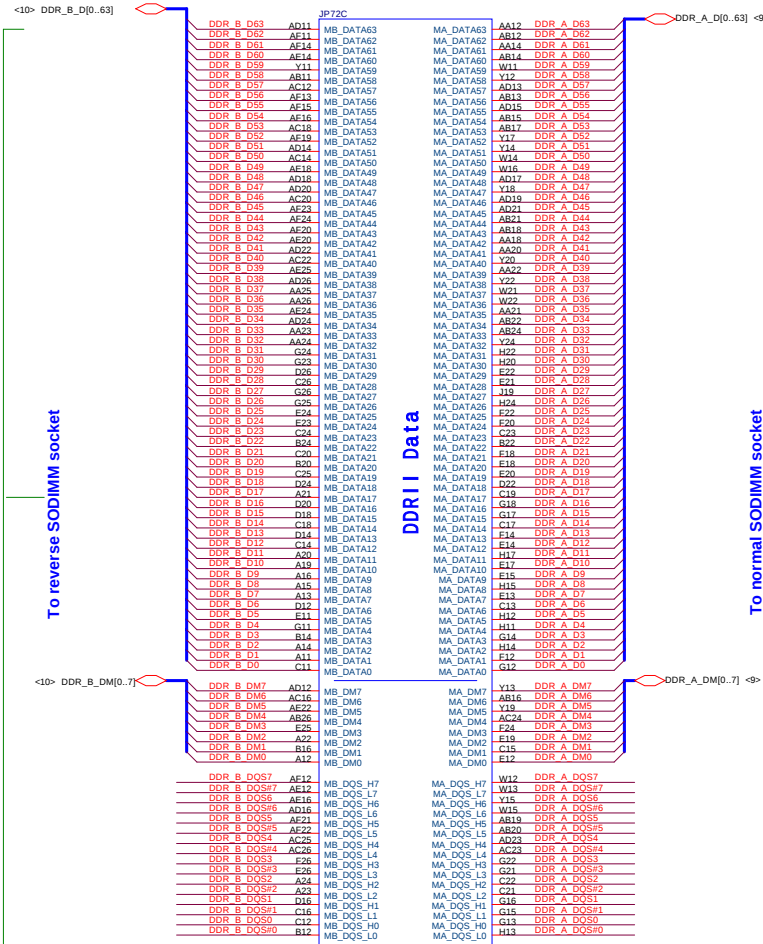
VDD, VTT, SUS, CPU, IS CONNECTED TO THE VDD, VTT, SUS POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE, IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE.



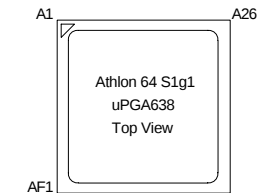
ATI check , Use +0.9V PWR , can delete or not



Processor DDR2 Memory Interface



<9> DDR_A_DQS[0..7] <9> DDR_A_DQS[0..7]
<9> DDR_A_DQS[0..7] <9> DDR_A_DQS[0..7]



ATHLON Control and Debug

LAYOUT: ROUTE VDDA TRACE APPROX.
50 mils WIDE (USE 2x25 mil TRACES TO
EXIT BALL FIELD) AND 500 mils LONG.

SB460 ONLY

place them to CPU within 1"

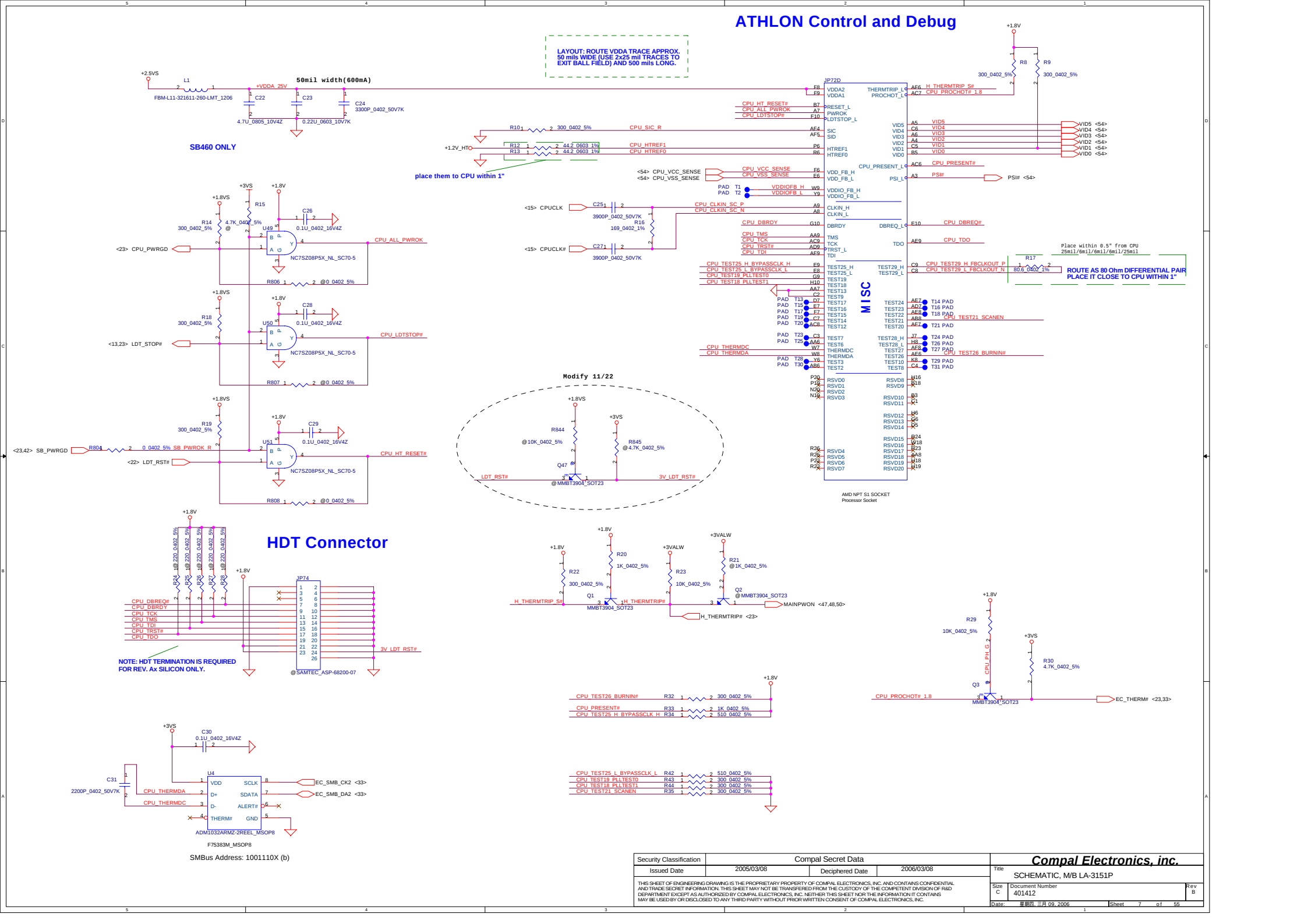
MISC

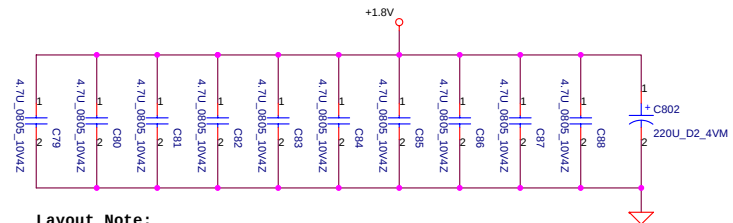
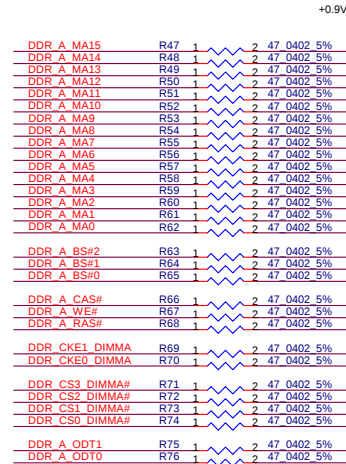
Modify 11/22

HDT Connector

NOTE: HDT TERMINATION IS REQUIRED
FOR REV. Ax SILICON ONLY.

Security Classification	Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SCHEMATIC, M/B LA-3151P
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.				Rev B
Size C	Document Number 401412	Date: 2006年 三月 09, 2006	Sheet 7 of 55	





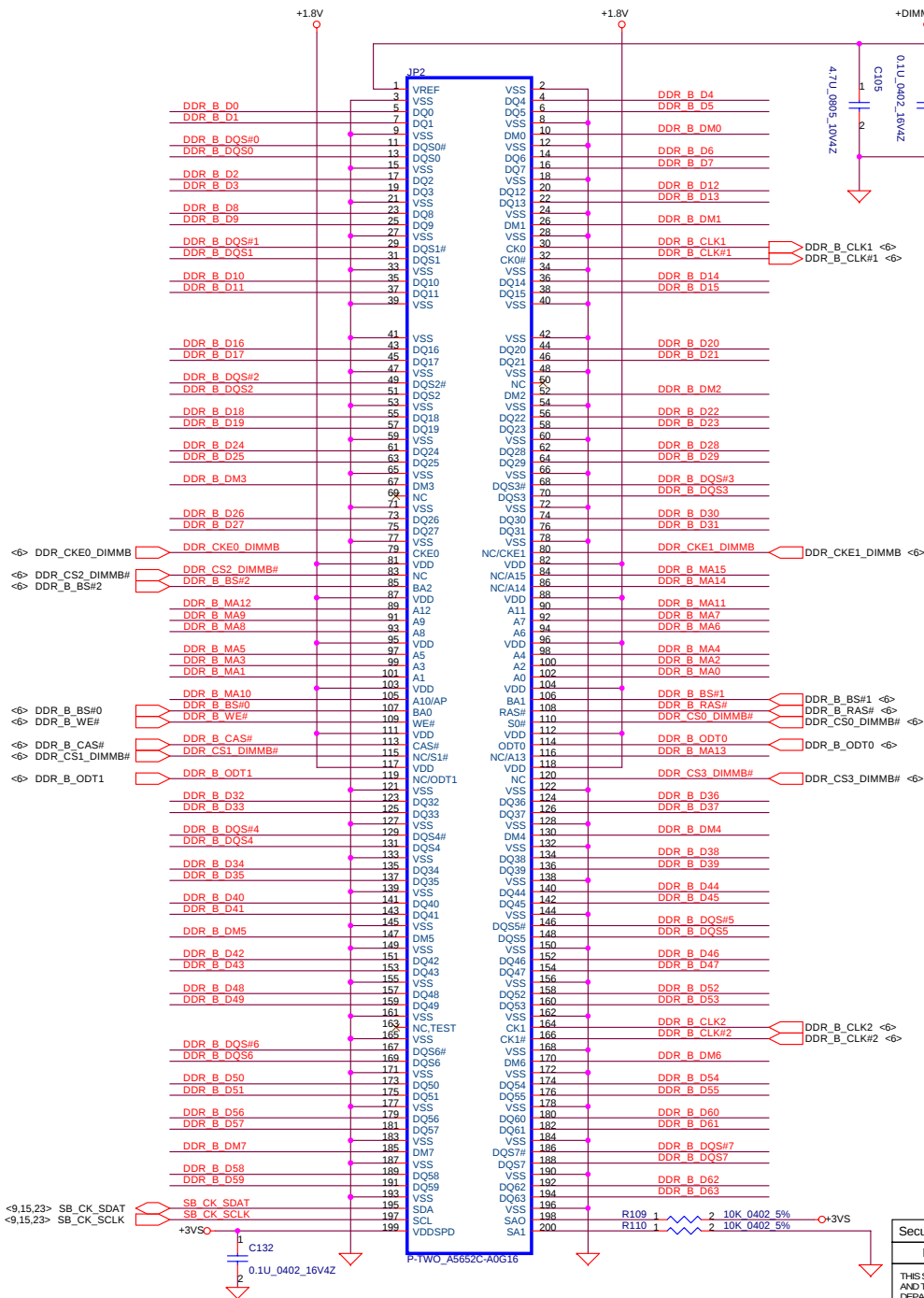
Layout Note:
Place a capacitor close to every 2 pull-up

11/3 Modify

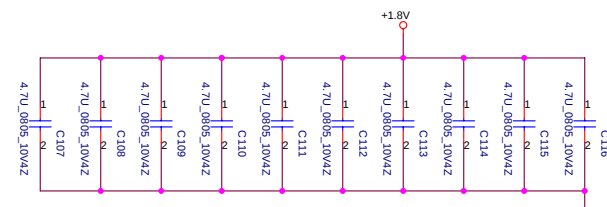
The diagram shows a 9V battery connected to a series of capacitors (C926 to C933) through 0.1uF decoupling capacitors. The capacitors are connected to a common ground line. The text "11/3 Modify" is written in blue above the capacitors.

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

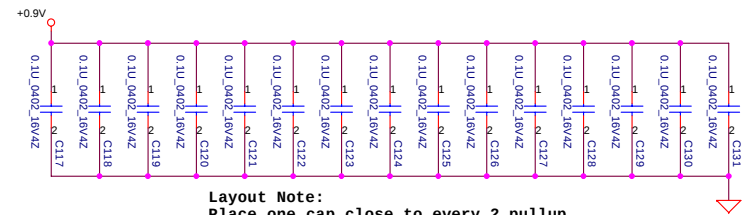
Security Classification		Compal Secret Data		Compal Electronics, inc.		
Issued Date	2005/10/11	Deciphered Date	2006/10/11	Title	SCHEMATIC, M/B LA-3151P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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
				Custody	401412	
Date:				星期五, 03 月 09, 2006	Sheet 9 of 55	



- <6> DDR_B_D[0..63] DDR_B_D[0..63]
- <6> DDR_B_DM[0..7] DDR_B_DM[0..7]
- <6> DDR_B_DQS[0..7] DDR_B_DQS[0..7]
- <6> DDR_B_MA[0..15] DDR_B_MA[0..15]
- <6> DDR_B_DQS# [0..7] DDR_B_DQS# [0..7]



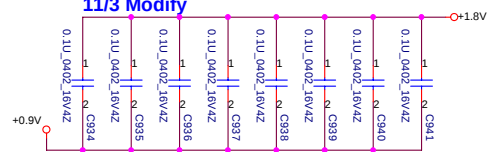
Layout Note:
Place one cap close to every 2 pullup
resistors terminated to +0.9V



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

DDR_B_MA15	R79	1	2	47	0402	5%
DDR_B_MA14	R80	1	2	47	0402	5%
DDR_B_MA13	R81	1	2	47	0402	5%
DDR_B_MA12	R82	1	2	47	0402	5%
DDR_B_MA11	R83	1	2	47	0402	5%
DDR_B_MA10	R84	1	2	47	0402	5%
DDR_B_MA9	R85	1	2	47	0402	5%
DDR_B_MA8	R86	1	2	47	0402	5%
DDR_B_MA7	R87	1	2	47	0402	5%
DDR_B_MA6	R88	1	2	47	0402	5%
DDR_B_MA5	R89	1	2	47	0402	5%
DDR_B_MA4	R90	1	2	47	0402	5%
DDR_B_MA3	R91	1	2	47	0402	5%
DDR_B_MA2	R92	1	2	47	0402	5%
DDR_B_MA1	R93	1	2	47	0402	5%
DDR_B_MA0	R94	1	2	47	0402	5%
DDR_B_BS#2	R95	1	2	47	0402	5%
DDR_B_BS#1	R96	1	2	47	0402	5%
DDR_B_BS#0	R97	1	2	47	0402	5%
DDR_B_CAS#	R98	1	2	47	0402	5%
DDR_B_WE#	R99	1	2	47	0402	5%
DDR_B_RAS#	R100	1	2	47	0402	5%
DDR_CKE1_DIMMB	R101	1	2	47	0402	5%
DDR_CKE0_DIMMB	R102	1	2	47	0402	5%
DDR_CS3_DIMMB#	R103	1	2	47	0402	5%
DDR_CS2_DIMMB#	R104	1	2	47	0402	5%
DDR_CS1_DIMMB#	R105	1	2	47	0402	5%
DDR_CS0_DIMMB#	R106	1	2	47	0402	5%
DDR_B_ODT1	R107	1	2	47	0402	5%
DDR_B_ODT0	R108	1	2	47	0402	5%

11/3 Modify



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

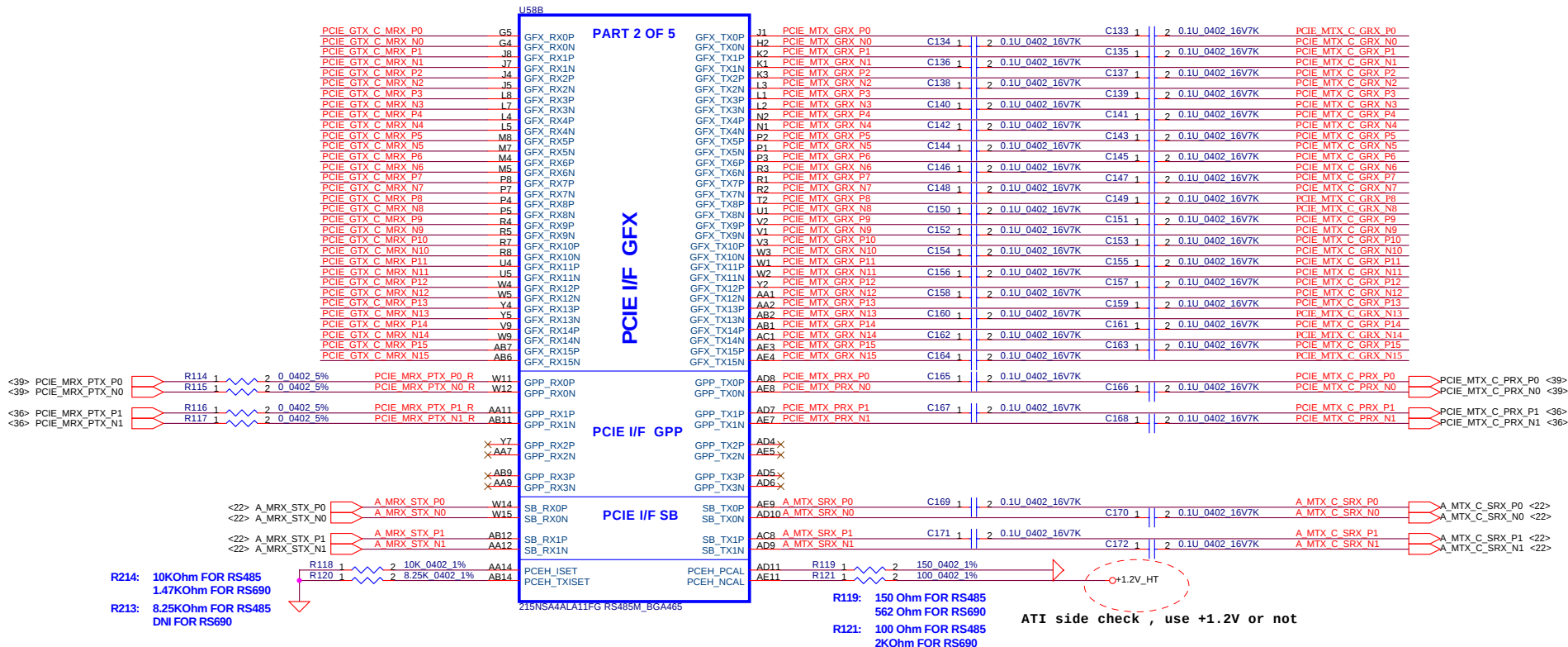
Security Classification		Compal Secret Data		Title	
Issued Date	2005/10/11	Deciphered Date	2006/10/11	SCHEMATIC, M/B LA-3151P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 401412
				Date	Rev B
				星期三, 三月 09, 2006	Sheet 10 of 55



Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SCHEMATIC, M/B LA-3151P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Document Number	B
				401412	
Date:		Sheet		of	
星期四, 三月 09, 2006		11		55	

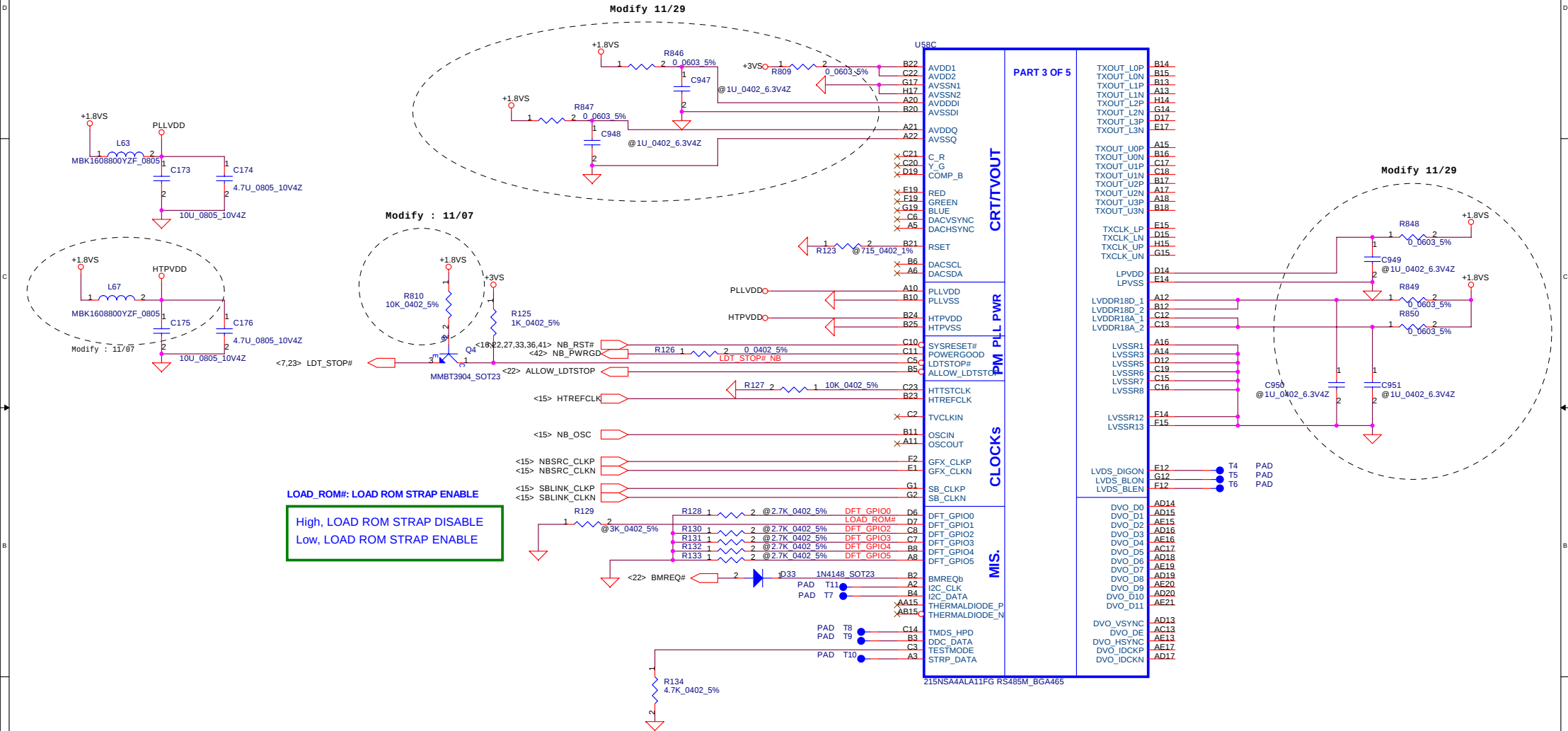
<16> PCIE GTX_C_MRX_P[0..15] PCIE GTX_C_MRX_P[0..15]
<16> PCIE GTX_C_MRX_N[0..15] PCIE GTX_C_MRX_N[0..15]

<16> PCIE_MTX_C_GRX_P[0..15] PCIE_MTX_C_GRX_P[0..15]
<16> PCIE_MTX_C_GRX_N[0..15] PCIE_MTX_C_GRX_N[0..15]



Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Compal Electronics, inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number 401412
Date: 星期四, 三月 09, 2006				Sheet	12 of 55

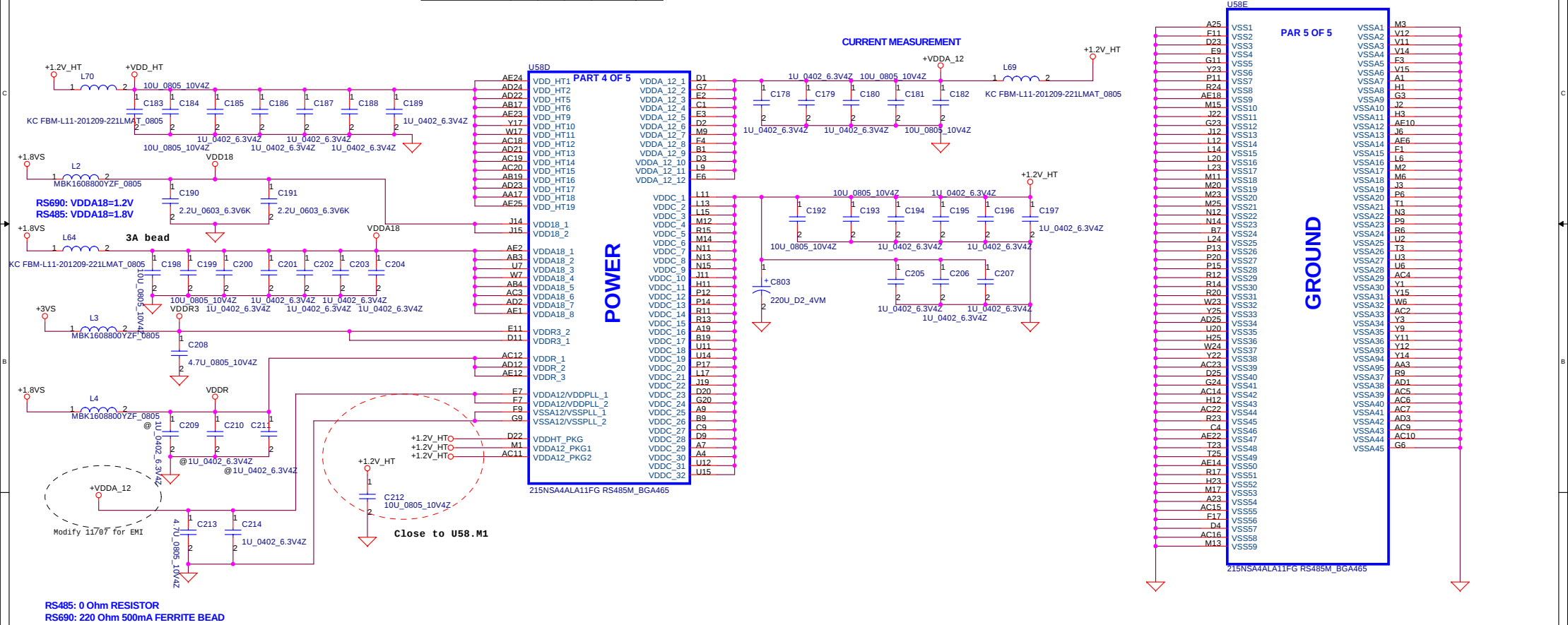
ATI check , CRT / TV/ LVDS can delete or not when I use RX485



Security Classification	Compal Secret Data			Compal Electronics, inc.		
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SCHEMATIC, M/B LA-3151P		
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	401412	B
Date: 星期四, 三月 09, 2006				Sheet 13 of 55		

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





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

Parallel Resonance Crystal

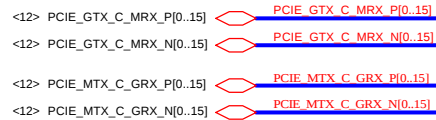
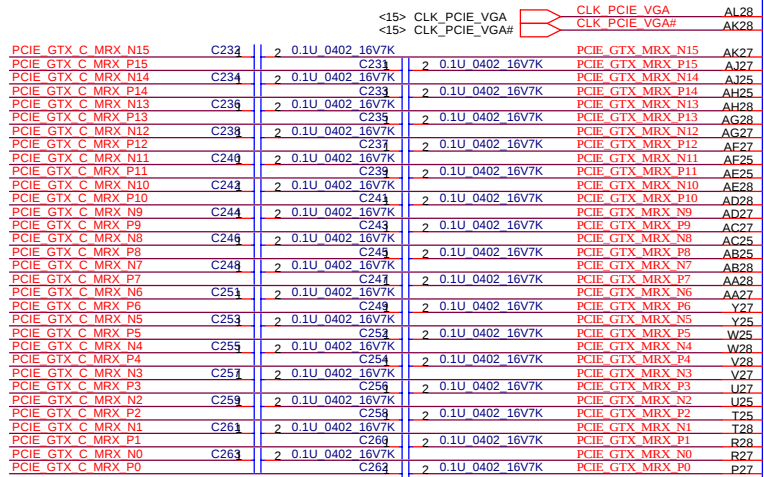
$I_{oh} = 5 * I_{ref}$
(2.32mA)
 $V_{oh} = 0.71V @ 60 ohm$

EXT CLK FREQUENCY SELECT TABLE(MHZ)

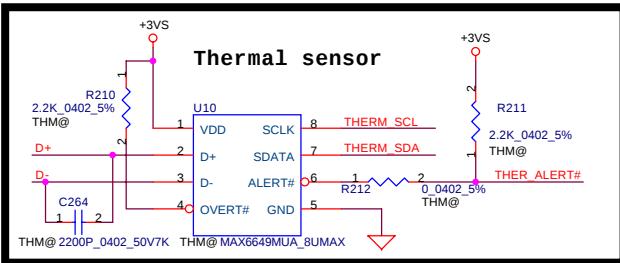
FS2	FS1	FS0	CPU	SRCCLK [2:1]	HIT	PCI	USB	COMMENT
0	0	0	Hi-Z	100.00	Hi-Z	Hi-Z	48.00	Reserved
0	0	1	X	100.00	X/3	X/6	48.00	Reserved
0	1	0	180.00	100.00	60.00	30.00	48.00	Reserved
0	1	1	220.00	100.00	36.56	73.12	48.00	Reserved
1	0	0	100.00	100.00	66.66	33.33	48.00	Reserved
1	0	1	133.33	100.00	66.66	33.33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

Security Classification		Compal Secret Data		Compal Electronics, inc.	
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.				SCHEMATIC, M/B LA-3151P	
Size	Document Number	Rev		Date	
Custom	401412	B		星期四, 三月 09, 2006	
Sheet	15	of		55	

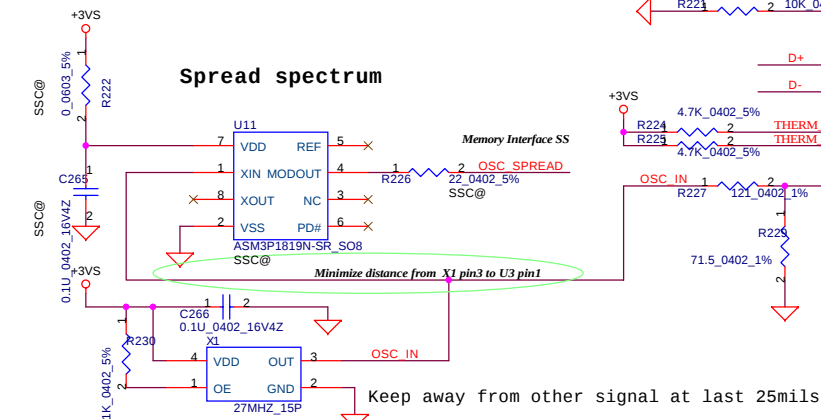
PCIE Lane Reversal



Thermal sensor



Spread spectrum



U9A

GPIO

PCIEXPRESS

CRT

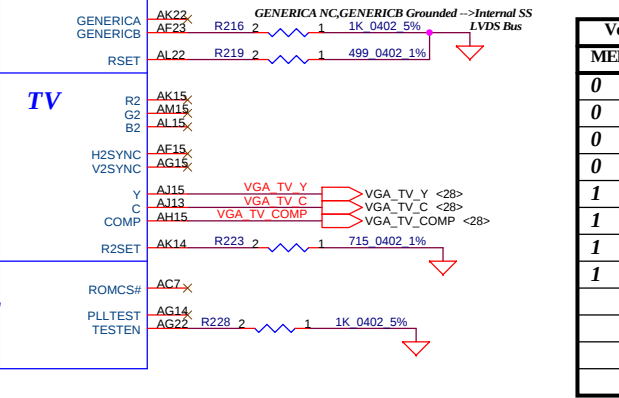
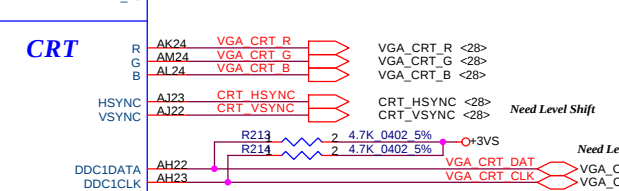
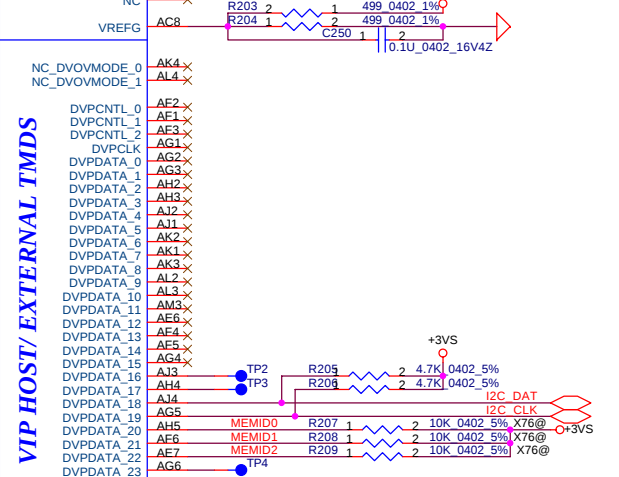
TV

THERMAL

XTAL

Straps: (Internal pull down)

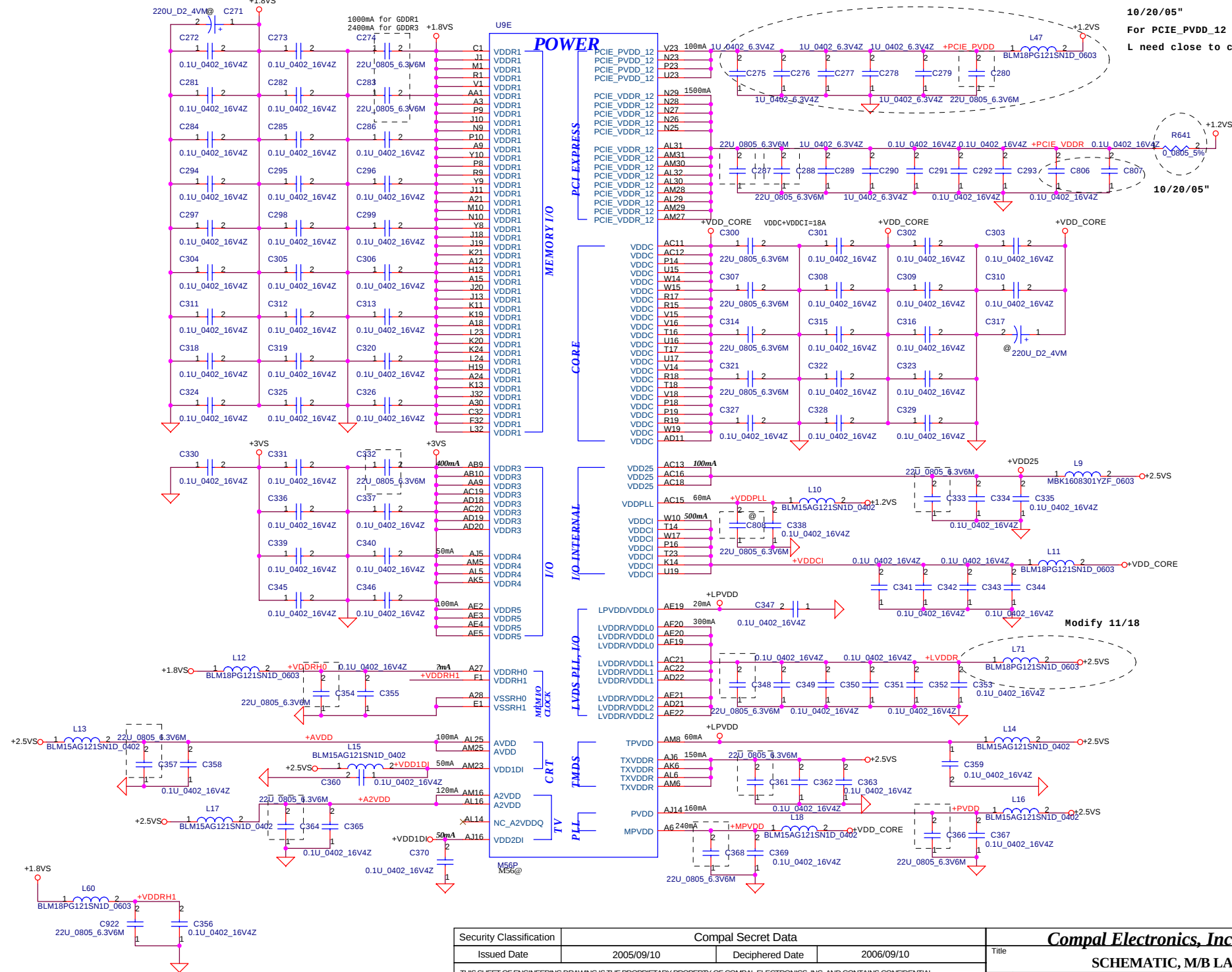
Transmitter power saving enable	GPIO[0]	0: 50% TX output swing 1: Full TX output swing
Transmitter de-emphasis enable	GPIO[1]	0: TX de-emphasis disable 1: TX de-emphasis enable
Debug Access	GPIO[4]	0: OFF Pad must be available 1: ON
PLL_IBIAS_RD	GPIO[6,5]	Default : 01
ROM ID Config	GPIO[9, 13:11]	000X: No ROM AP_SIZE=00 128M share 001X: No ROMMemory AP_SIZE=01 256M share 010X: No ROMMemory AP_SIZE=10 64M share 011X: No ROMMemory AP_SIZE=11 Reserved



Vedio Memory Config. (VGA Internal PD)						
MEMID[2:0]	Size	Size	Vender	Chips	VGA	Frequency
0 0 0	64MB	16M16	Hynix	2		
0 0 1	64MB	16M16	Samsung	2		
0 1 0	128MB	16M16	Hynix	4		A-test
0 1 1	128MB	16M16	Samsung	4		A-test
1 0 0	256MB	32M16	Hynix	4		A-test
1 0 1	256MB	32M16	Samsung	4		A-test
1 1 0			Resreved			
1 1 1			Resreved			

TBD

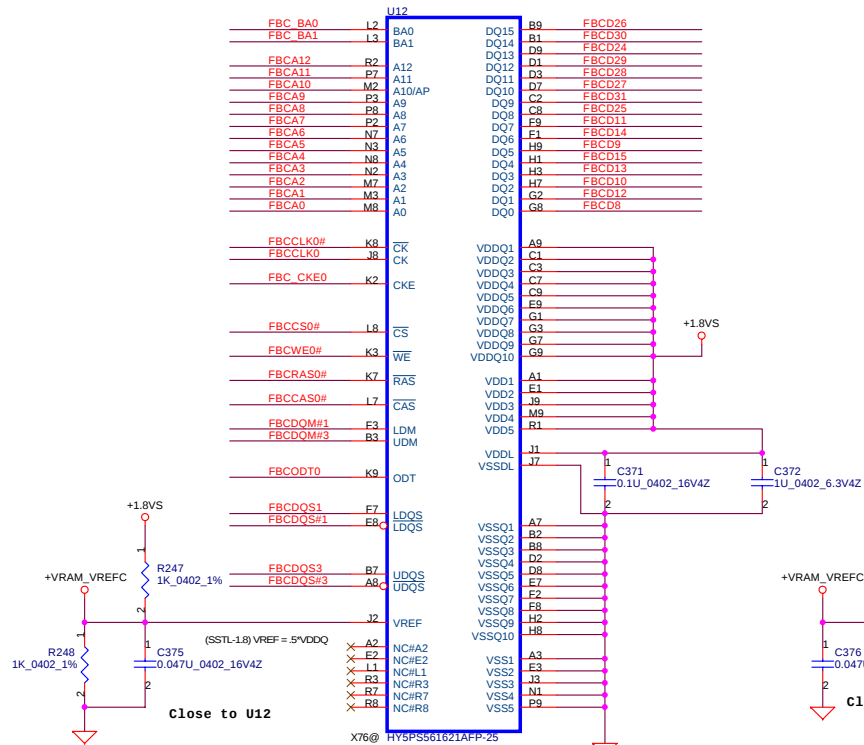
Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2005/09/10		Deciphered Date		2006/09/10		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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.								SCHEMATIC, M/B LA-3151P			
Size		Document Number		Custom		401412		Rev B			
Date:		星期三, 三月 09, 2006		Sheet		16		of 55			



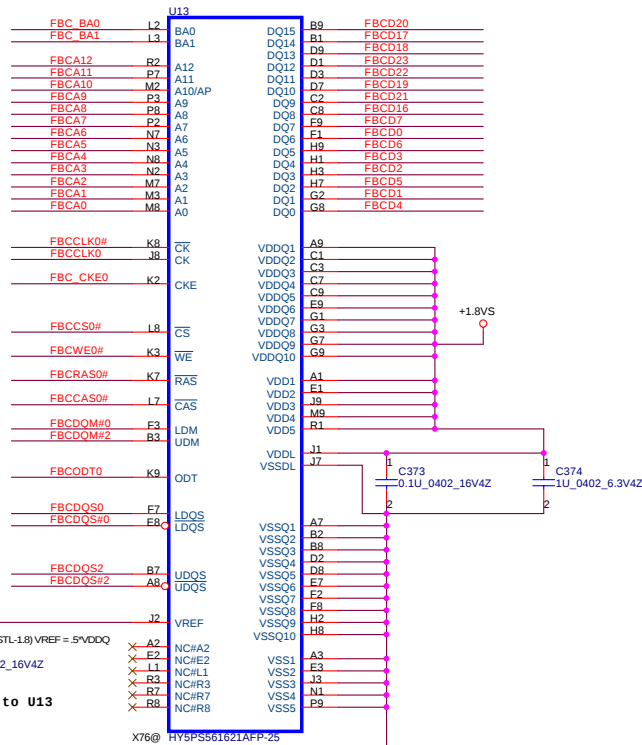
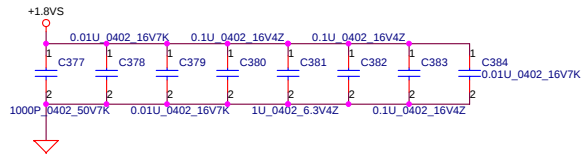
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/09/10	Deciphered Date	2006/09/10	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				SCHEMATIC, M/B LA-3151P	
Size	Document Number	Rev		B	
Custom	401412				
Date:	星期三, 三月 09, 2006	Sheet	19	of	55

11/03/05' SWAP NET
11/04/05' SWAP NET
11/08/05' SWAP NET

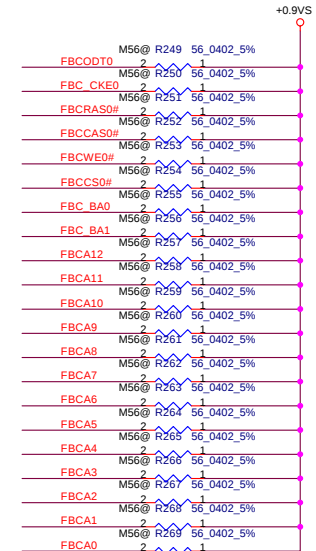
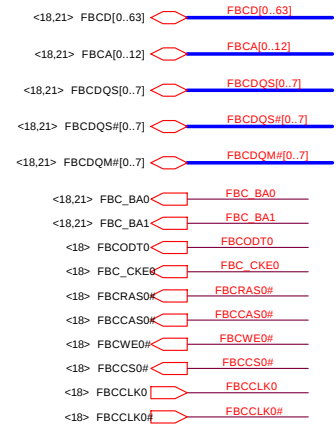
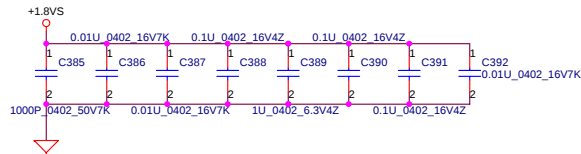
11/03/05' SWAP NET



DDR2 BGA MEMORY

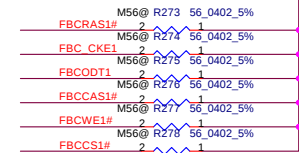
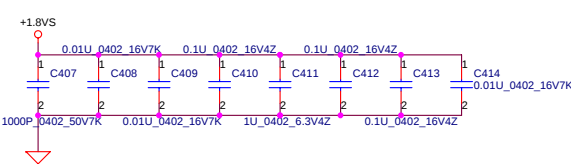
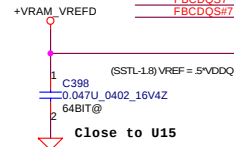
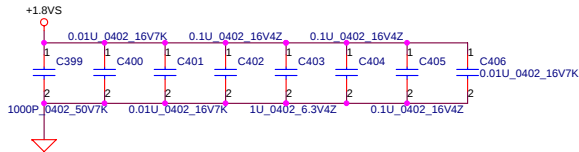
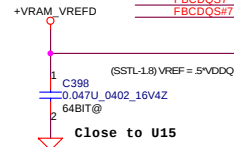
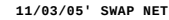


DDR2 BGA MEMORY

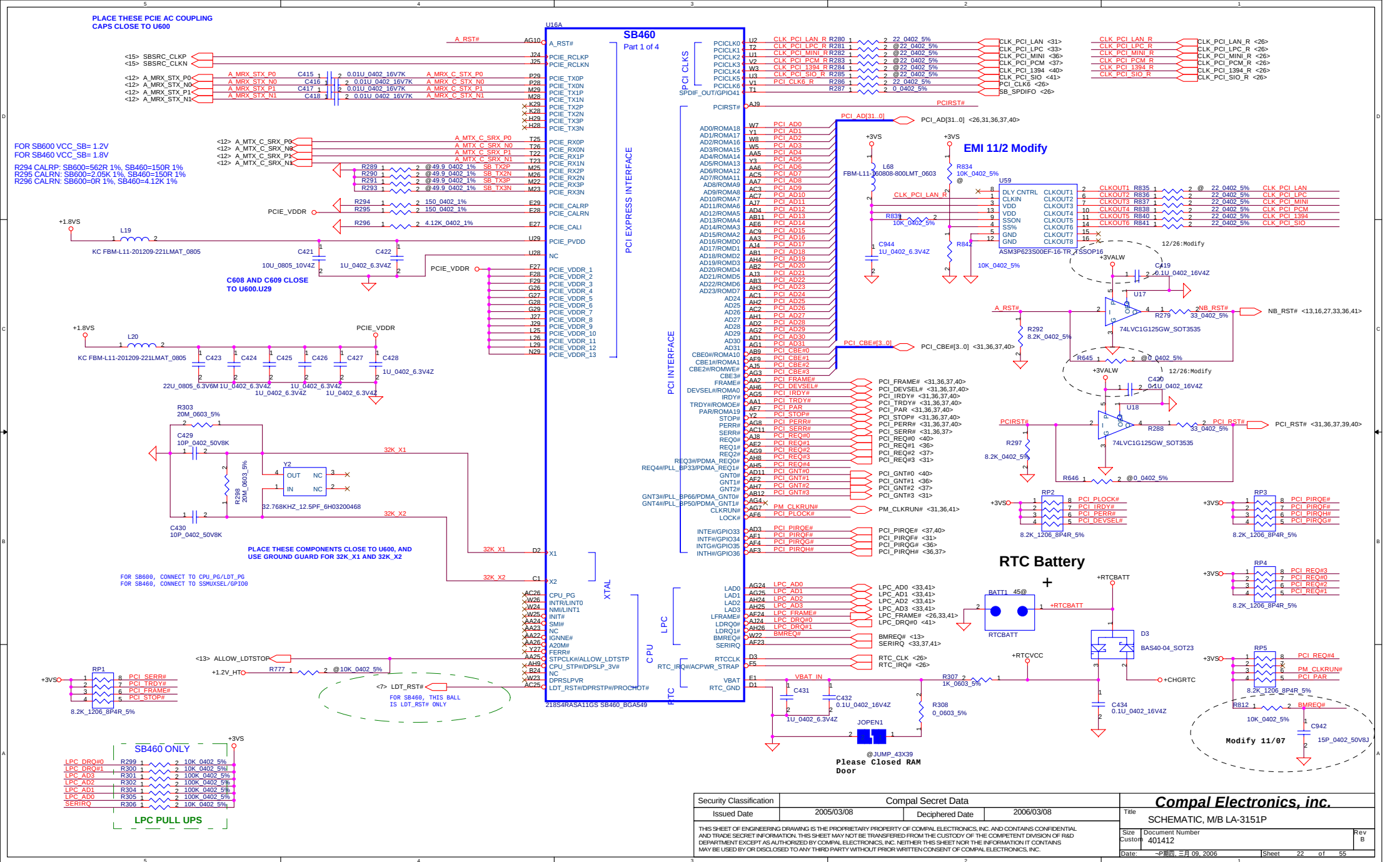


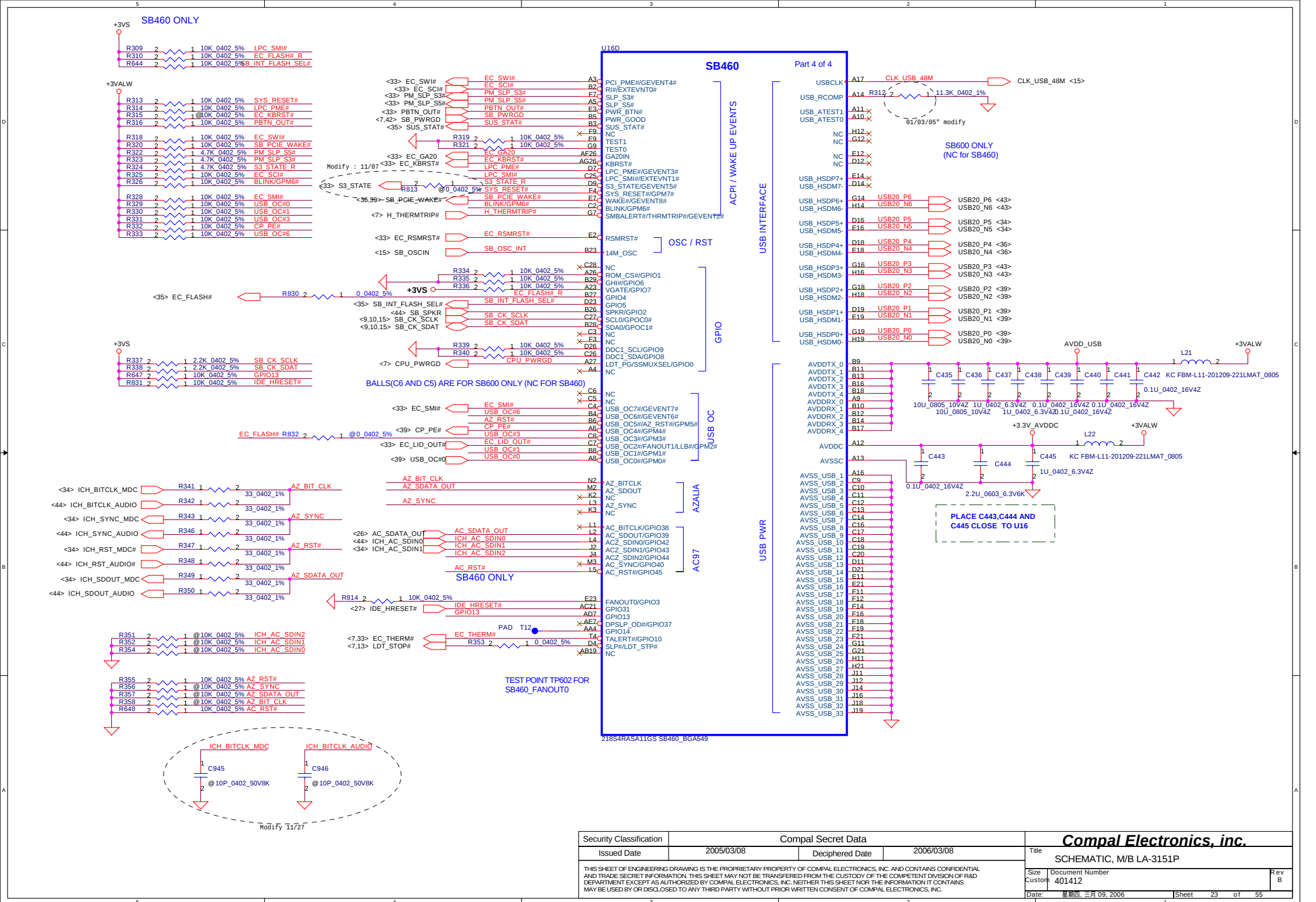
M56 Only

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.				SCHEMATIC, M/B LA-3151P	
Size		Document Number		Rev	
Custom		401412		B	
Date		星期四, 三月 09, 2006		Sheet	
		1		20 of 55	

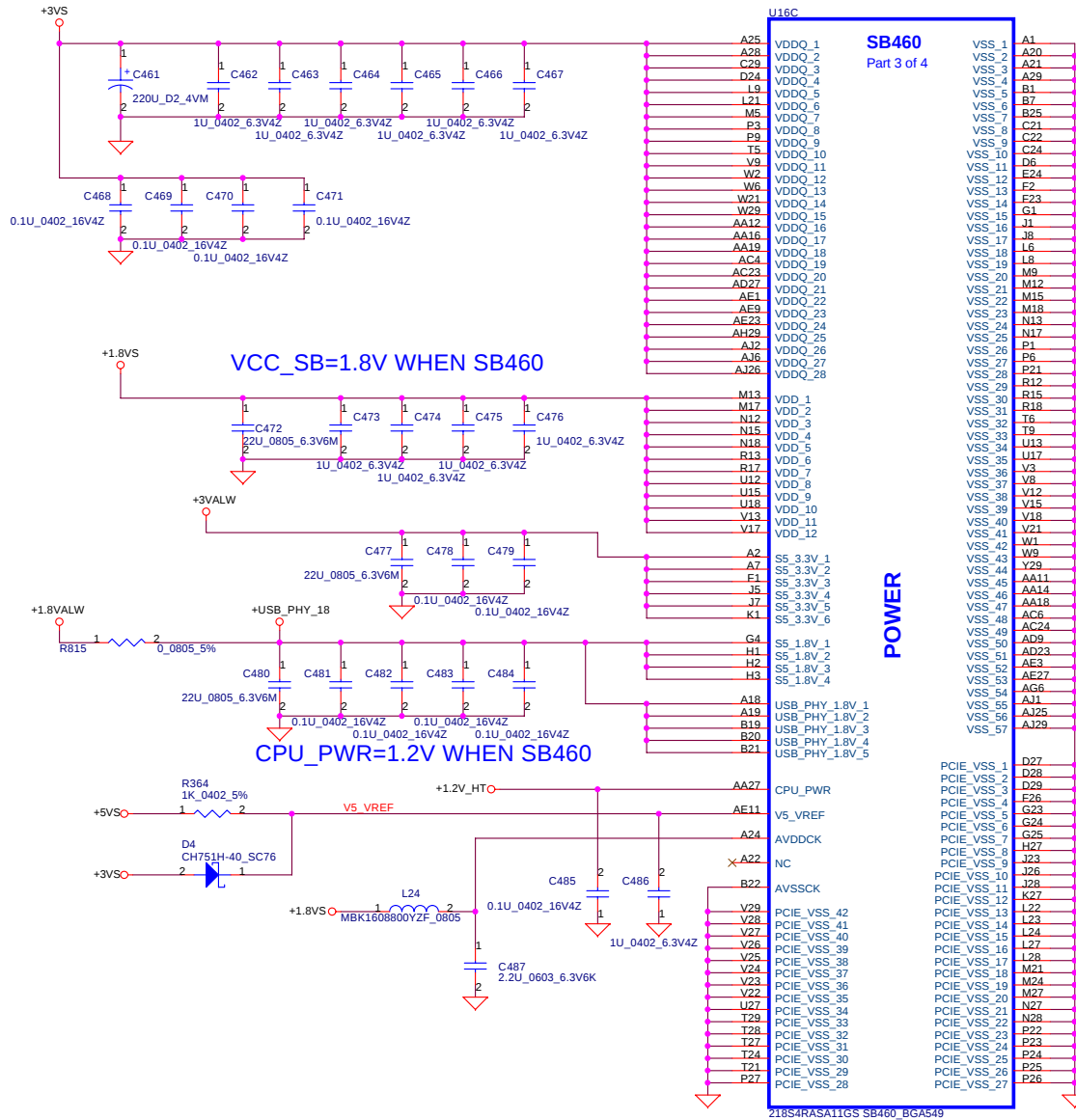


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	SCHEMATIC, M/B LA-3151P
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev B
				Document Number	
Date:		星期三, 三月 09, 2006		Sheet	21 of 55





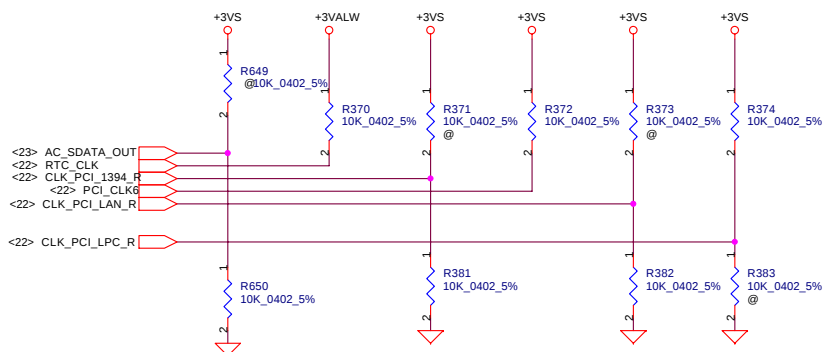
Security Classification		Compal Secret Data		Compal Electronics, inc.		
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				SCHEMATIC, M/B LA-3151P		
				Size	Document Number	Rev
				Custom	401412	B
				Date:	星期四, 三月 09, 2006	Sheet 23 of 55



Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SCHEMATIC, M/B LA-3151P	
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 401412
Date: 星期四, 三月 09, 2006				Sheet	25 of 55

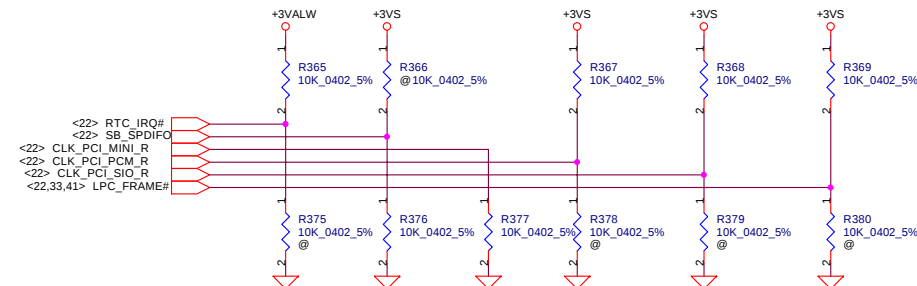
REQUIRED STRAPS

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: R365 PU RESISTOR FOR
RTC_IRQ# IS REQUIRED FOR SB460
TO KEEP THE INPUT FROM FLOATING.

SB460 ONLY



PULL	SB600					SB460	
	AC_SDATA_OUT	RTC_CLK	PCI_CLK4 CLK_PCI_1394	PCI_CLK6	PCI_CLK0 CLK_PCI_LAN	PCI_CLK1 CLK_PCI_LPC	PCI_CLK0 CLK_PCI_LAN
	USE DEBUG STRAPS	INTERNAL RTC	USE INT. PLL48	CPU IF=K8	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	ROM TYPE: H, H = PCI ROM H, L = LPC I ROM L, H = LPC II ROM L, L = FWH ROM
	DEFAULT	DEFAULT	DEFAULT	DEFAULT	DEFAULT	DEFAULT	DEFAULT
PULL LOW	IGNORE DEBUG STRAPS	EXTERNAL RTC	USE EXT. 48MHZ	CPU IF=P4	NOTE: FOR SB460, PCI_CLK[8:7] ARE CONNECTED TO SUBSTRATE BALLS PCI_CLK[1:0]		
	DEFAULT		DEFAULT				

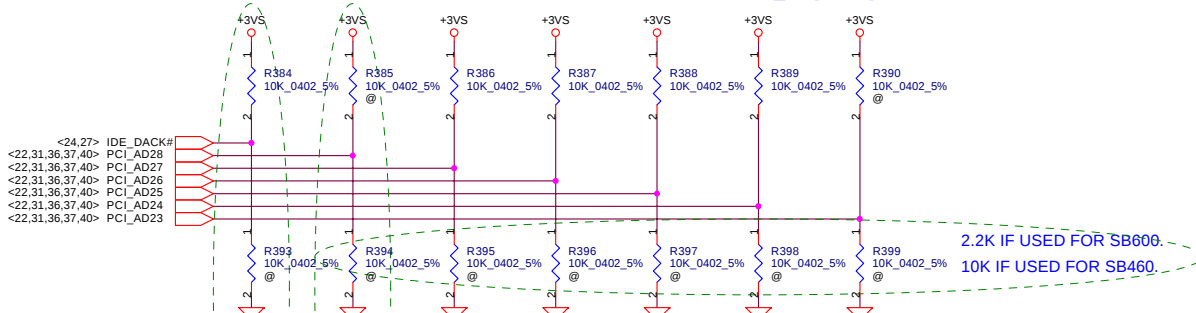
PULL	ACPWRON	SPDIF_OUT	PCI_CLK2	PCI_CLK3	PCI_CLK5	LFRAME#
	RTC_IRQ#	SB_SPDIFO	CLK_PCI_MINI	CLK_PCI_PCM	CLK_PCI_SIO	LPC_FRAME#
HIGH	MANUAL PWR ON	SIO 24MHZ	XTAL MODE NOT SUPPORTED	USB PHY POWERDOWN DISABLE	PCIE_CM_SET LOW	ENABLE THERMTRIP#
LOW	AUTO PWR ON	DEFAULT	48MHZ OSC MODE	USB PHY POWERDOWN ENABLE	PCIE_CM_SET HIGH	DISABLE THERMTRIP#



OVERLAP COMMON PADS WHERE
POSSIBLE FOR DUAL-OP RESISTORS.

DEBUG STRAPS

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



2.2K IF USED FOR SB600.
10K IF USED FOR SB460.

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

SB460 ONLY

SB600 ONLY

Security Classification		Compal Secret Data		Compal Electronics, inc.	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SCHEMATIC, M/B LA-3151P	
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 401412
Date: 星期四, 三月 09, 2006				Sheet 26	of 55

<24> IDE_D[0..15] IDE_D[0..15]

<24> IDE_A[0..2] IDE_A[0..2]

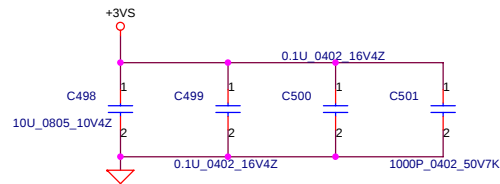
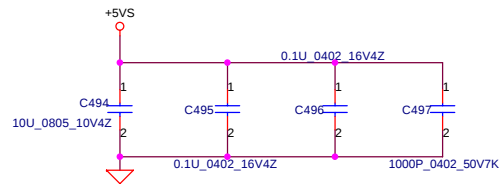
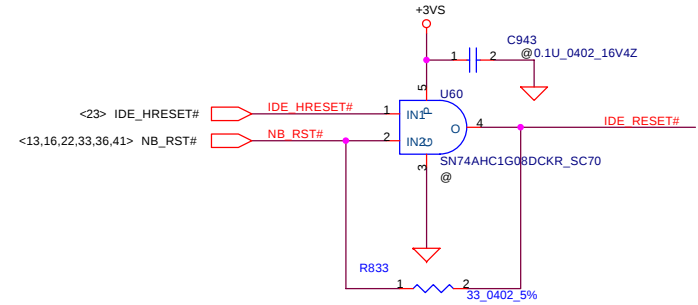


Diagram illustrating the SATA connector pinout for the OTEK SAT-22S61G-1R. The connector is a 22-pin SATA connector, with pins 1 through 7 on the left and pins 8 through 22 on the right.

Pin 1: SATA STX_C DRX P0

Pin 2: SATA STX_C DRX N0

Pin 3: SATA DTX_C SRX N0

Pin 4: SATA DTX_C SRX P0

Pin 5: GND

Pin 6: HTX+

Pin 7: HTX-

Pin 8: VCC3.3

Pin 9: VCC3.3

Pin 10: VCC3.3

Pin 11: GND

Pin 12: GND

Pin 13: GND

Pin 14: VCC5

Pin 15: VCC5

Pin 16: VCC5

Pin 17: GND

Pin 18: GND

Pin 19: RESERVED

Pin 20: GND

Pin 21: VCC12

Pin 22: VCC12

Power Connections:

- +3VS (R816):** Connected to pins 1, 2, 3, and 4.
- +5VS (R817):** Connected to pins 1, 2, 3, and 4.

Modify 11/07 for EMI

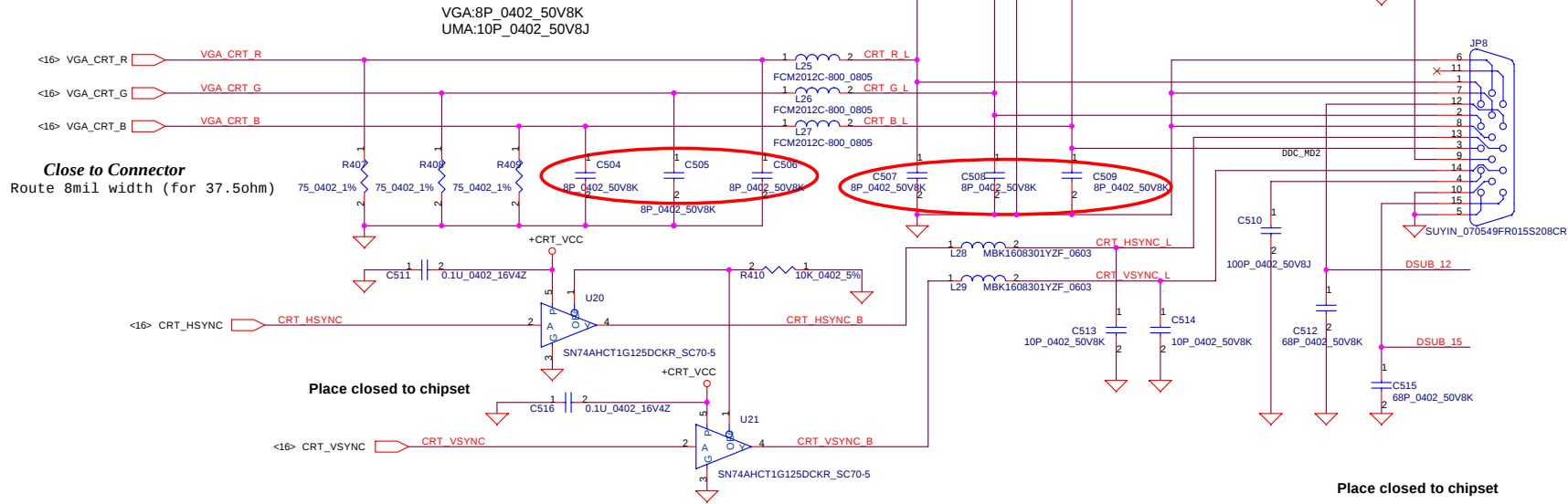
SATA@ OTEK SAT-22S61G-1R (NEW)

[illegible]

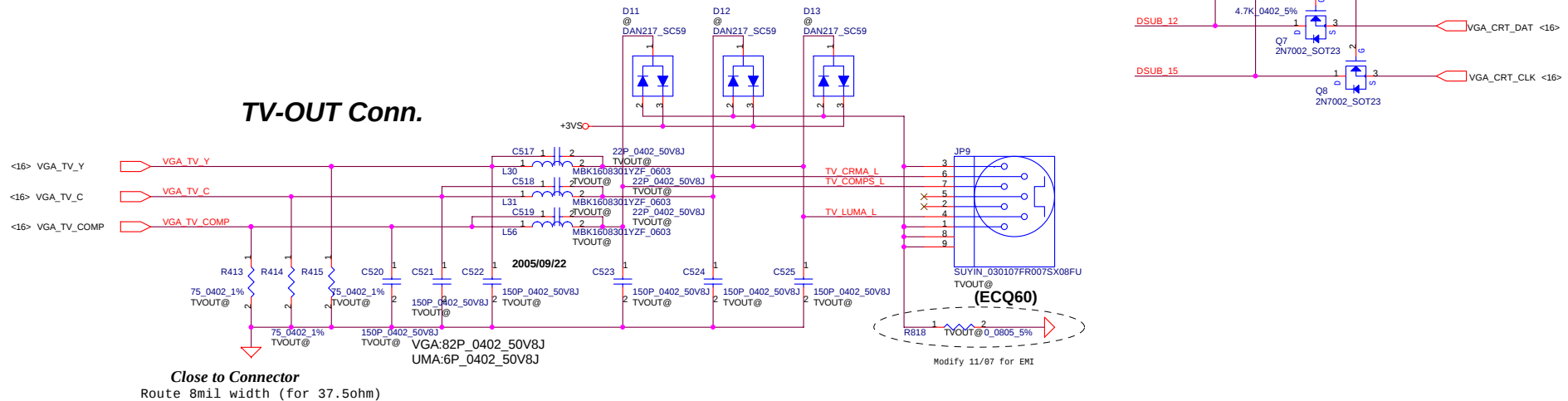
Compal Electronics, Inc.			
Title			
SCHEMATIC, M/B LA-3151P			
Size	Document Number		Rev
	401412		B
Date:	星期四, 三月 09, 2006		Sheet 27 of 55

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.

CRT Connector

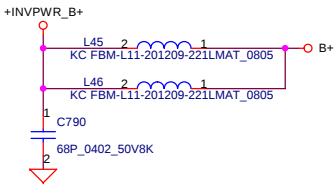
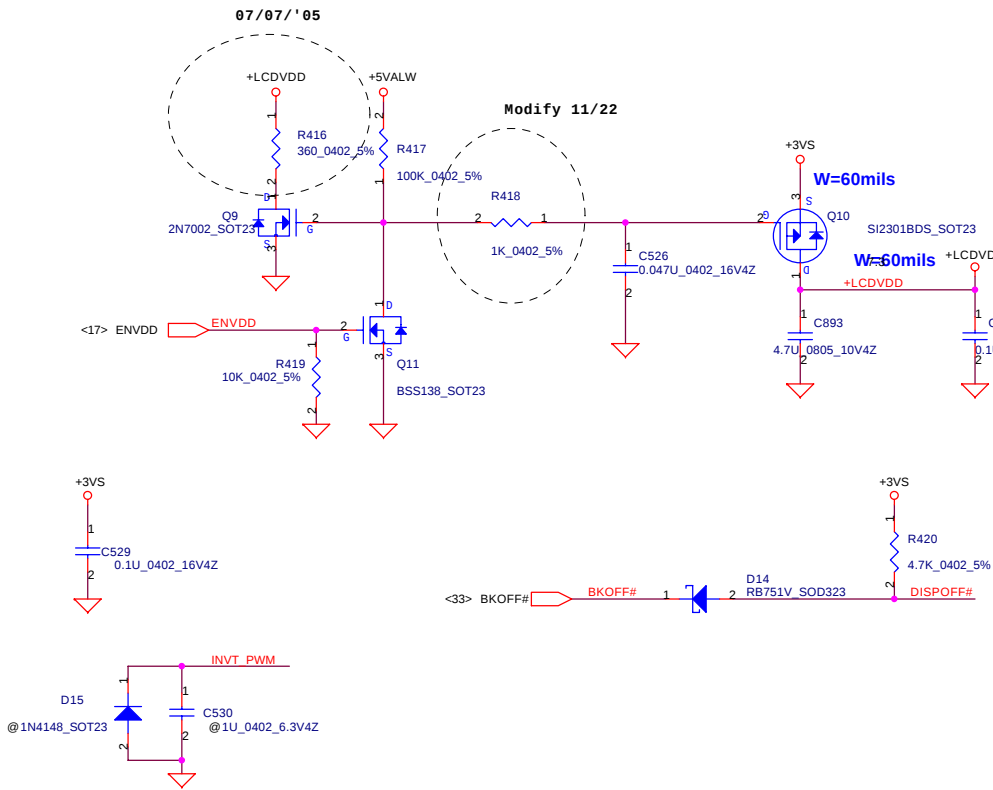


TV-OUT Conn.

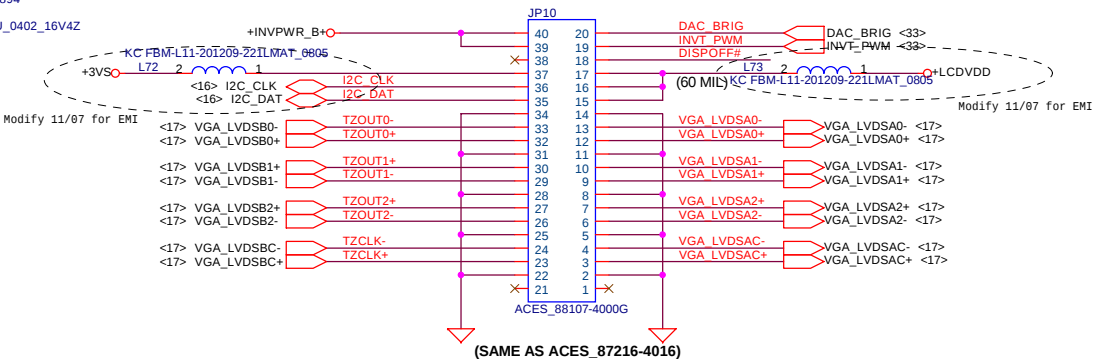


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
				401412	
				Date	Rev B
				星期四, 三月 09, 2006	Sheet 28 of 55

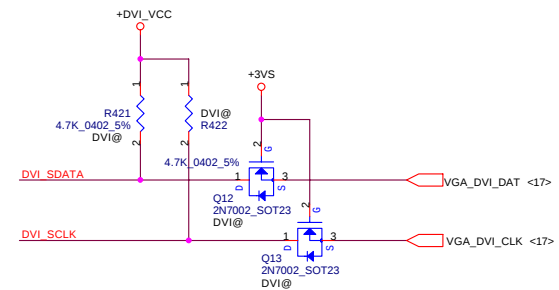
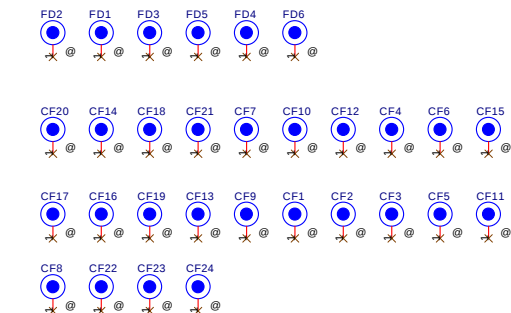
LCD POWER CIRCUIT



LCD/PANEL BD. Conn.

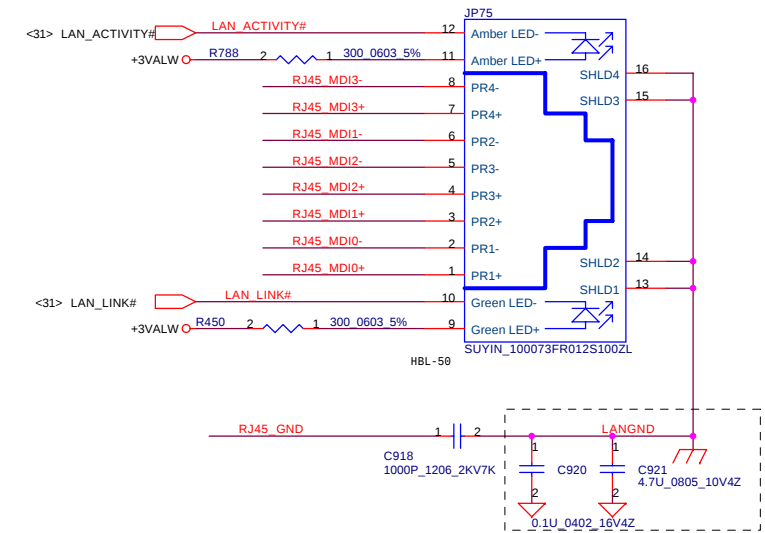
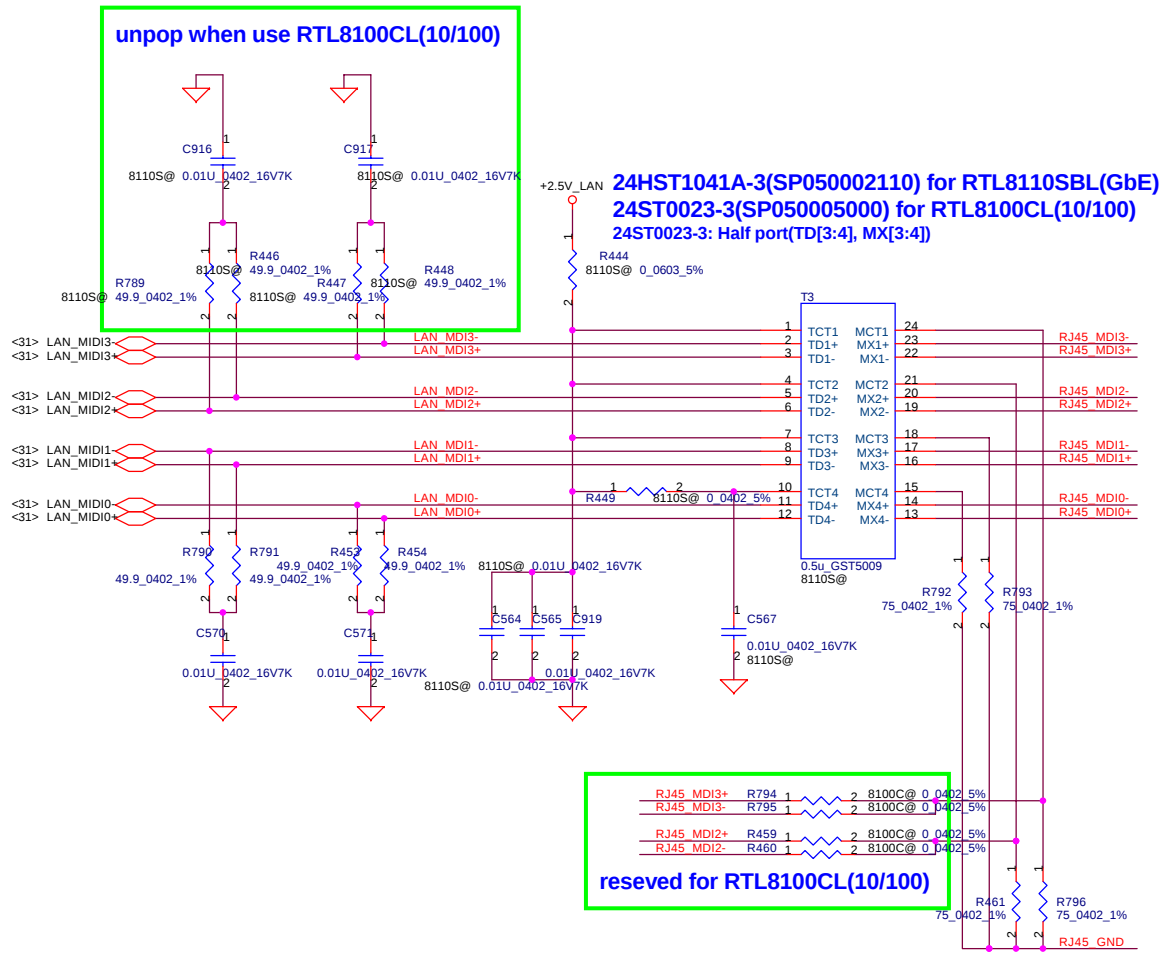


Security Classification		Compal Secret Data		Compal Electronics, inc.	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Title SCHEMATIC, M/B LA-3151P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 401412
				Date	Rev
				2006/03/08	B
				Sheet	29 of 55

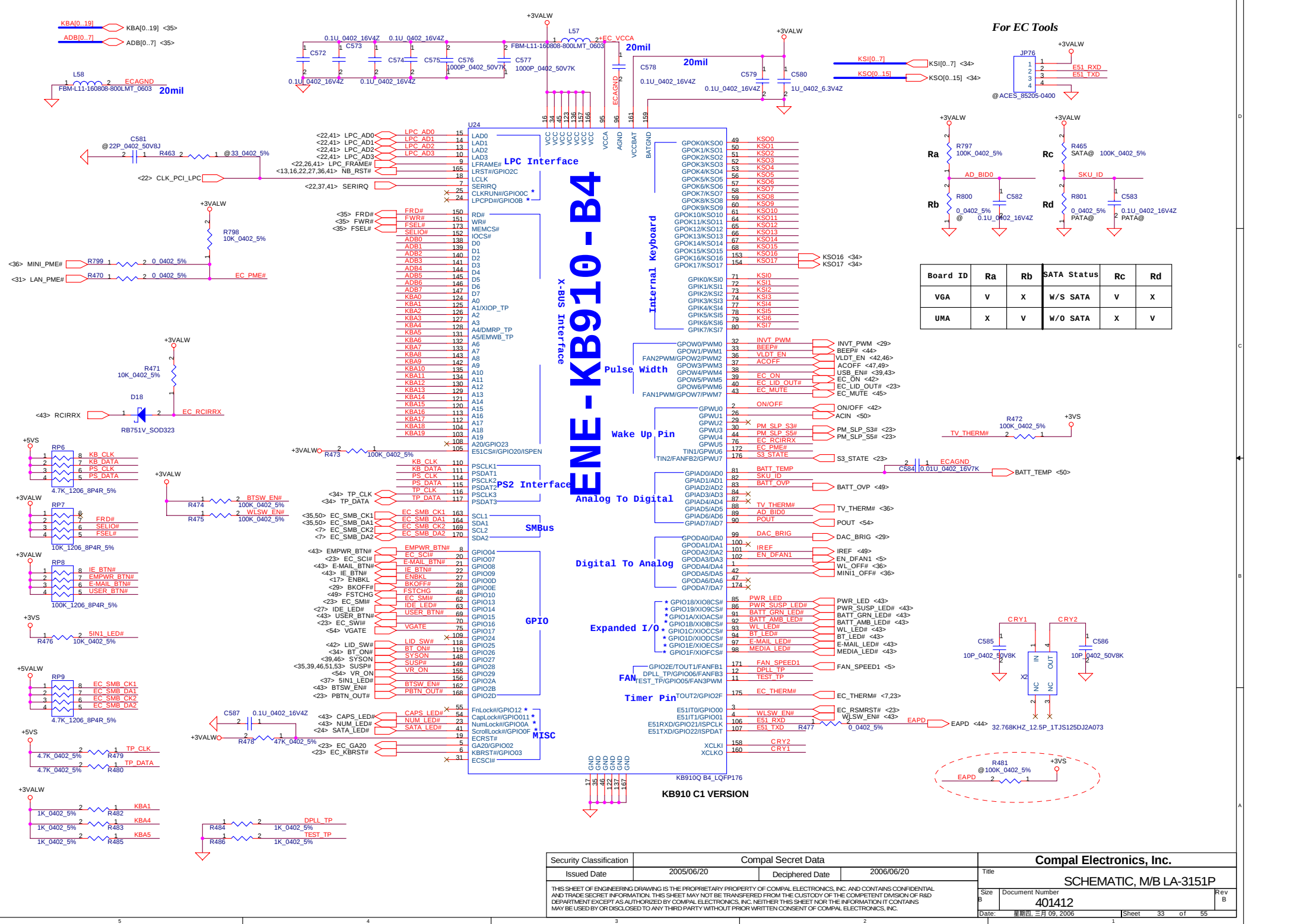


Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				SCHEMATIC, M/B LA-3151P		
				Size B	Document Number	Rev B
				401412		
Date:		星期四, 三月 09, 2006		Sheet	30 of 55	

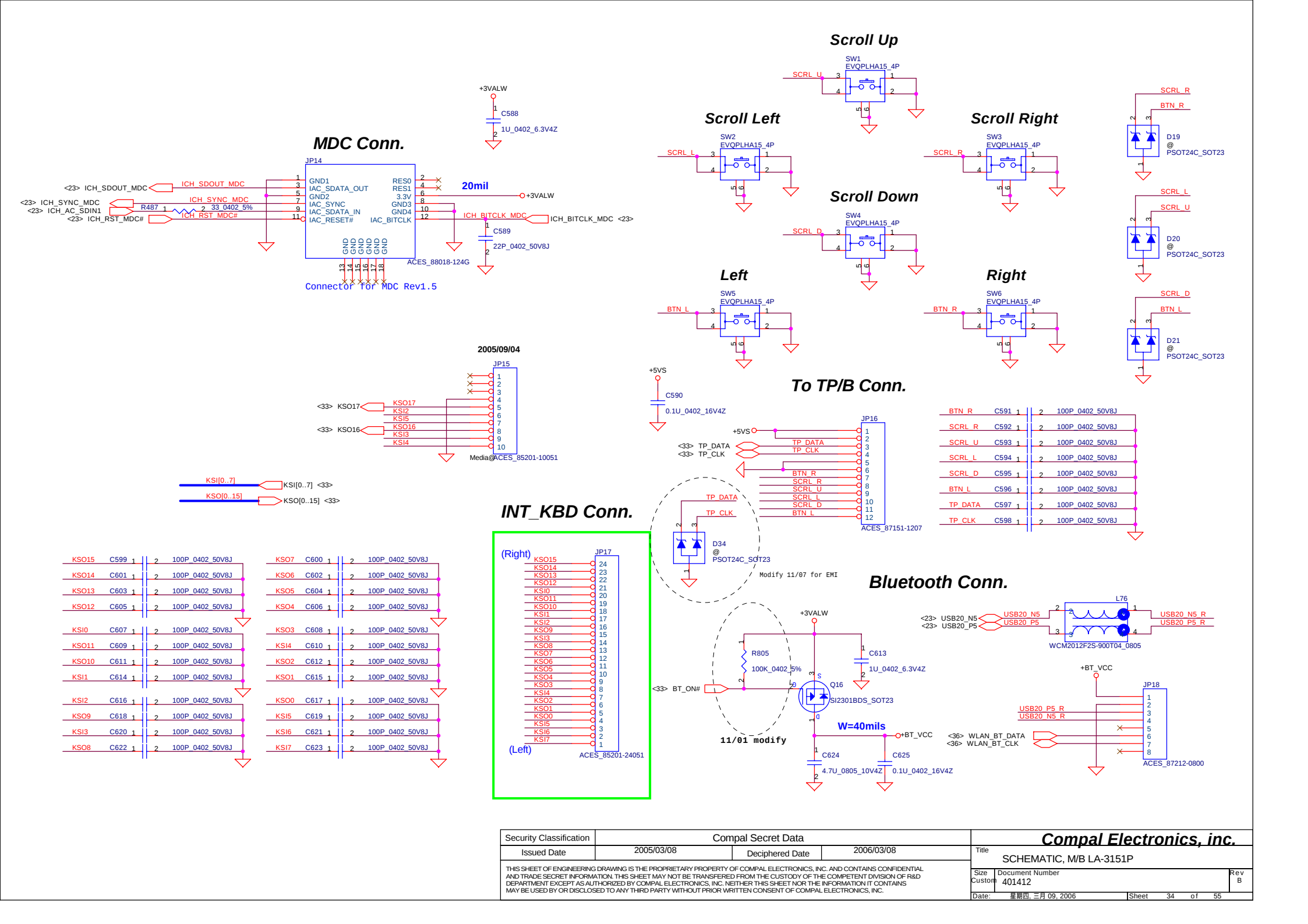
LAN RTL8110SBL/RTL8100CL



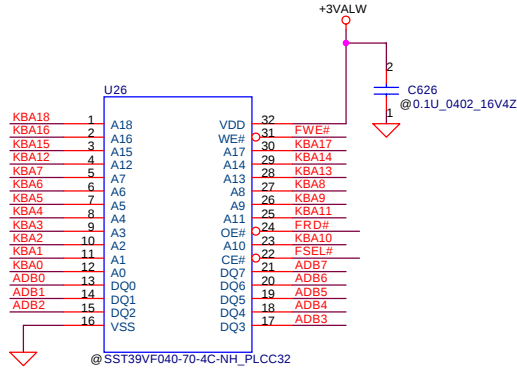
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/07/29	Deciphered Date	2006/07/29	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				SCHEMATIC, M/B LA-3151P	
Size	B	Document Number	401412	Date:	Rev B
Date:		Sheet		32 of 55	



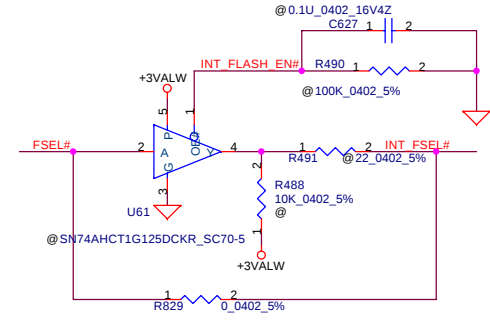
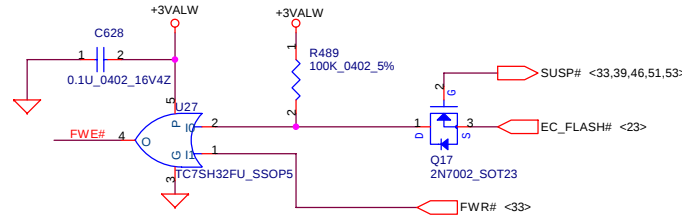
Security Classification		Compal Secret Data		Title	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED 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	401412
				Date	Rev B
				星期四, 三月 09, 2006	33 of 55



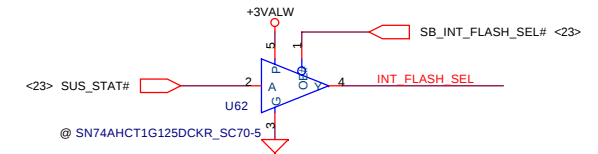
<33> KBA[0..19] KBA[0..19]
<33> ADB[0..7] ADB[0..7]



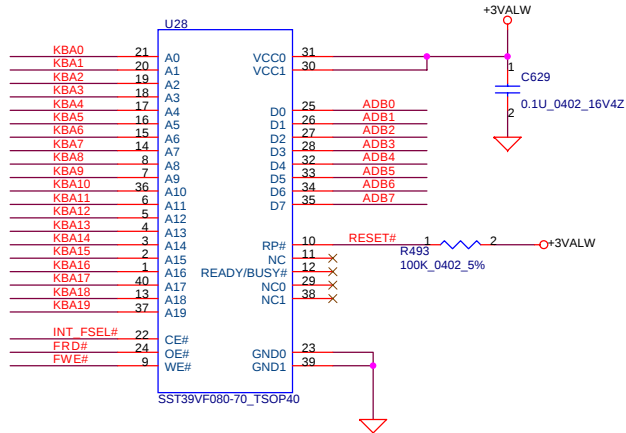
(CL55)



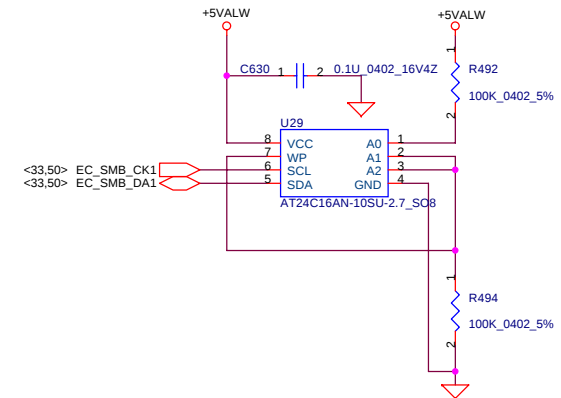
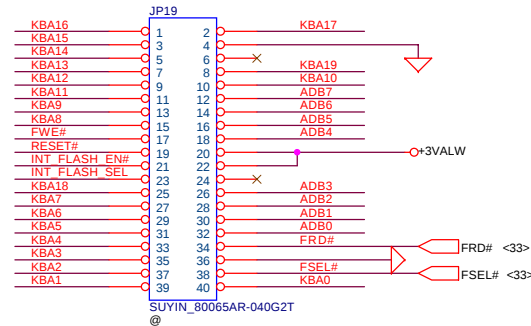
FOR DEBUG ONLY



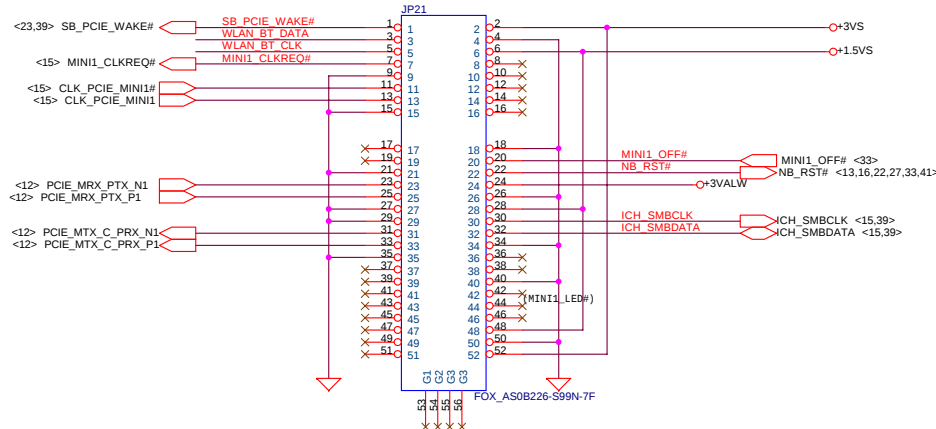
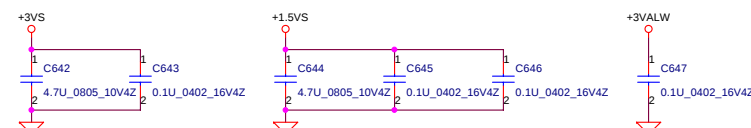
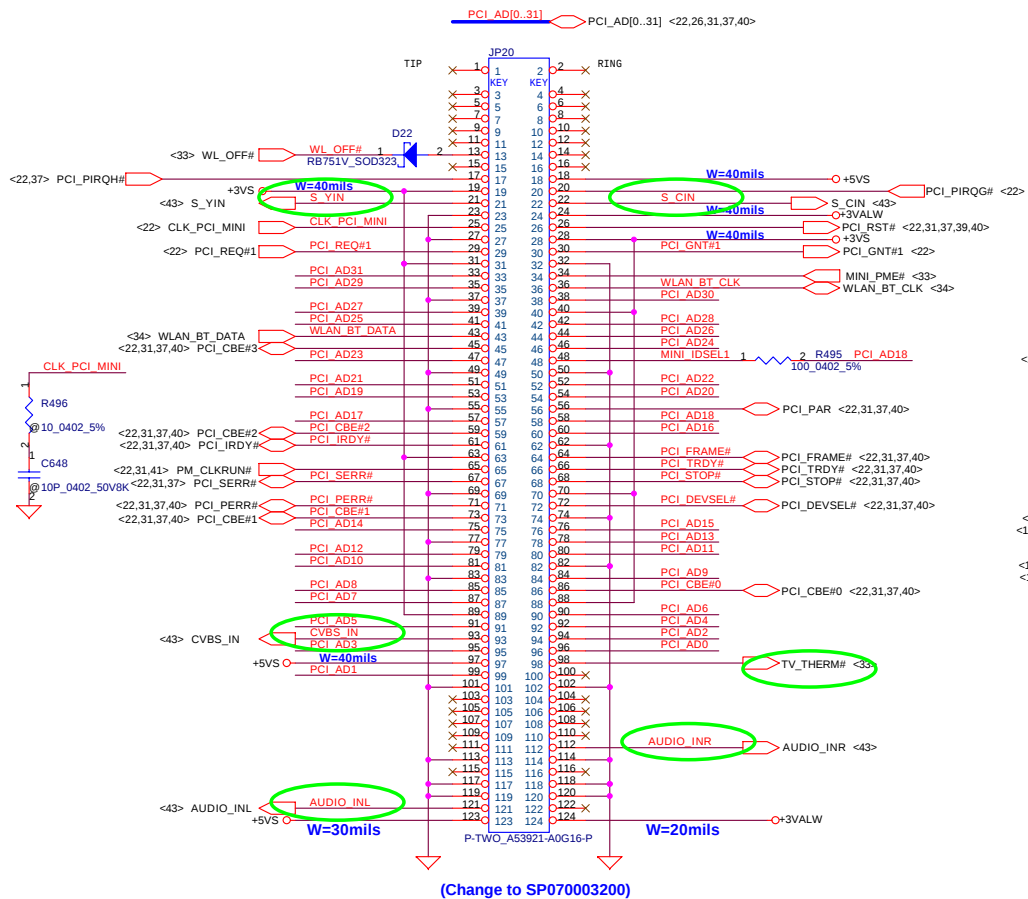
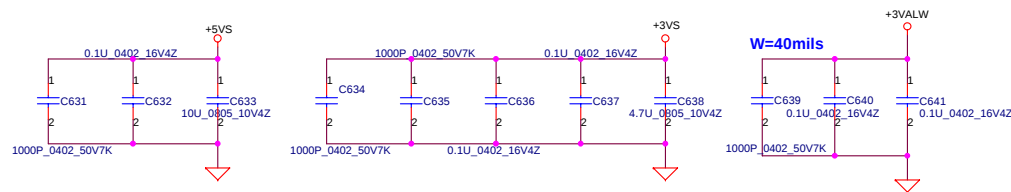
1MB Flash ROM



1MB Flash ROM



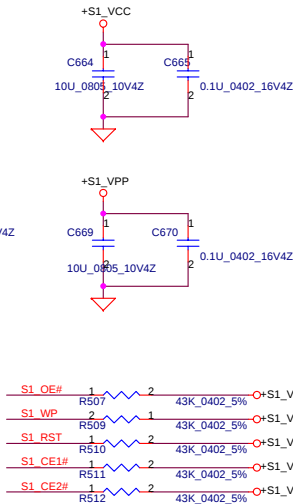
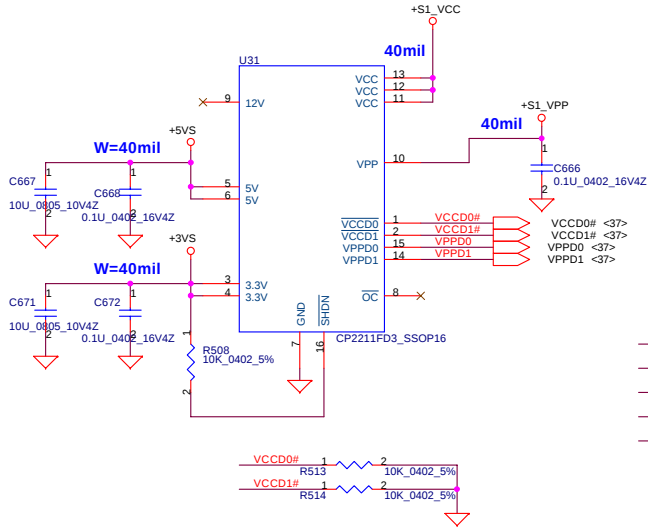
Security Classification	Compal Secret Data			
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF 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.				SCHEMATIC, M/B LA-3151P
Size	Document Number			Rev
Custom	401412			B
Date:	星期四, 三月 09, 2006	Sheet	35 of 55	



Mini Card Power Rating			
Power	Primary Power (mA)		Auxiliary Power (mA)
	Peak	Normal	Normal
+3VS	1000	750	
+3VALW	330	250	250 (wake enable)
+1.5VS	500	375	5 (Not wake enable)

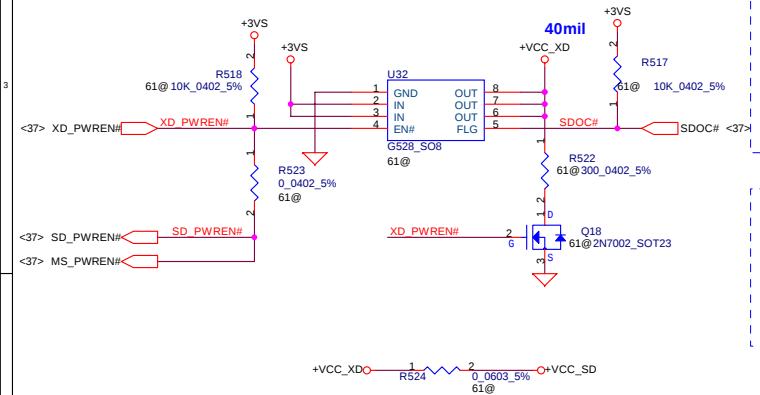
Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2005/06/20		Deciphered Date		2006/06/20		Title			
								SCHEMATIC, M/B LA-3151P			
Size		Document Number		Date		Rev					
B		401412		2006/02/20		B					
		Date		Sheet		36		of 55			

PCMCIA Power Control

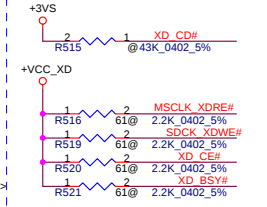


SD/MS Power Control

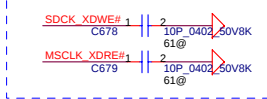
XD Power Control



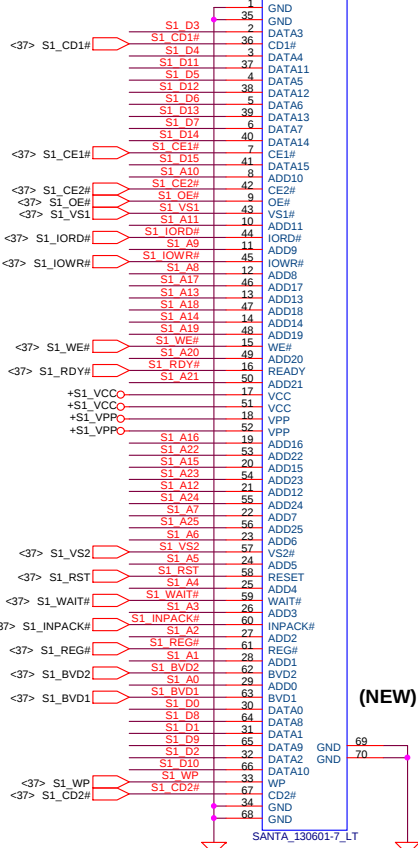
xD PU and PD. Close to Socket



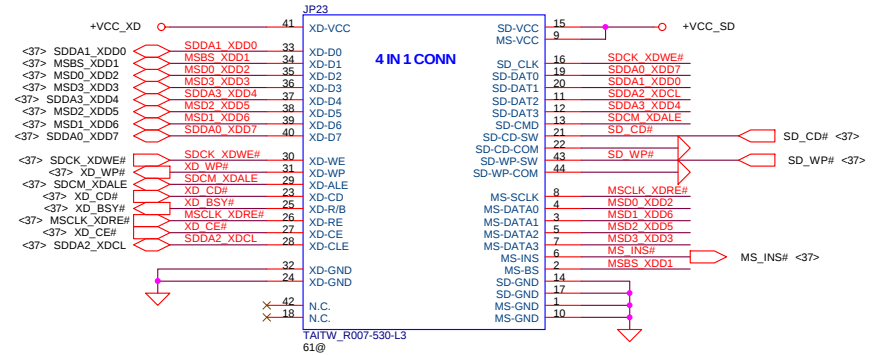
Reserve for SD,MS CLK. Close to Socket



PCMCIA Socket

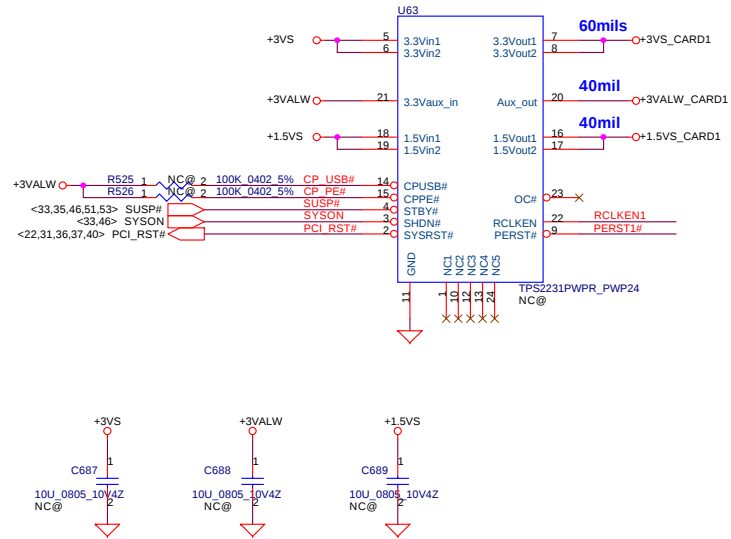


4 IN 1 Socket (HDQ70)

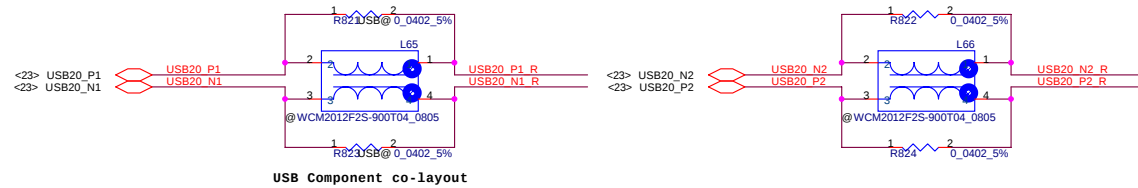
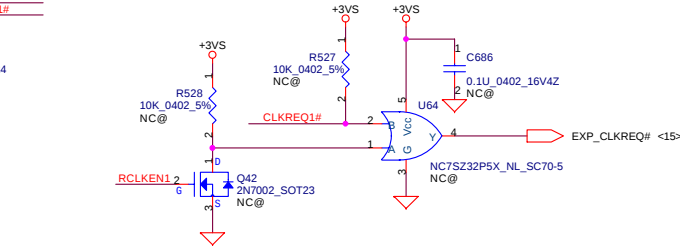
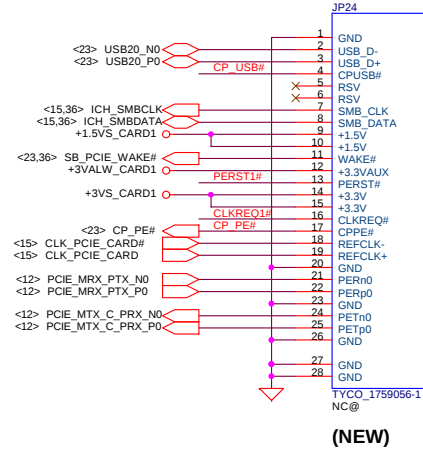


Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2005/06/20				Title			
				Deciphered Date				2006/06/20			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.								SCHEMATIC, M/B LA-3151P			
Size B				Document Number				401412			
Date				星期四, 三月 09, 2006				Sheet 38 of 55			

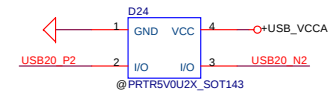
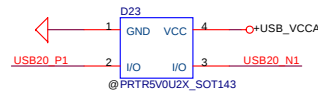
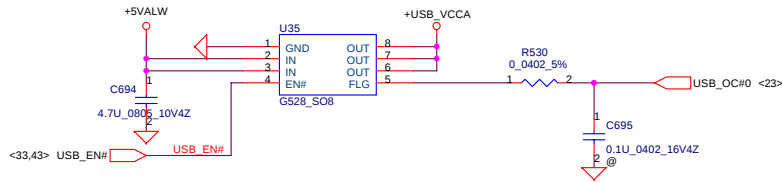
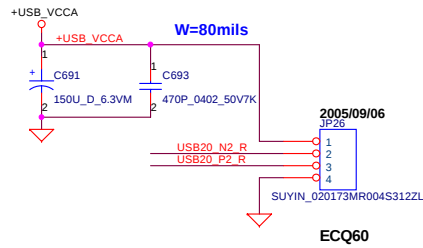
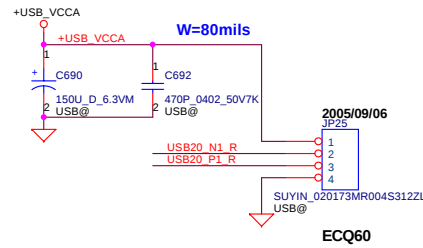
New Card Power Switch



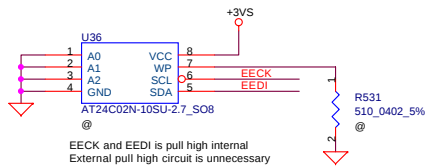
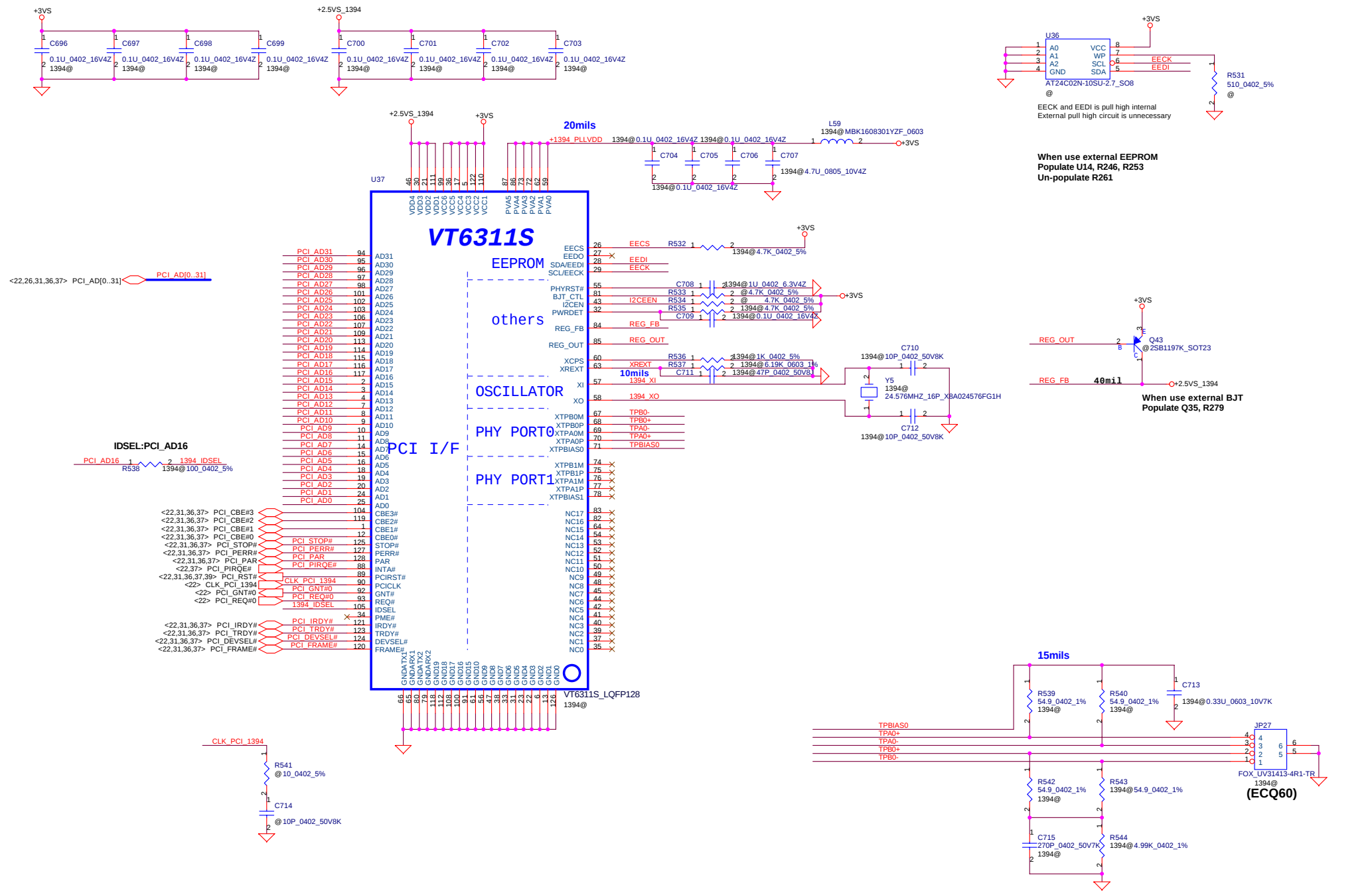
New Card Socket (Left)



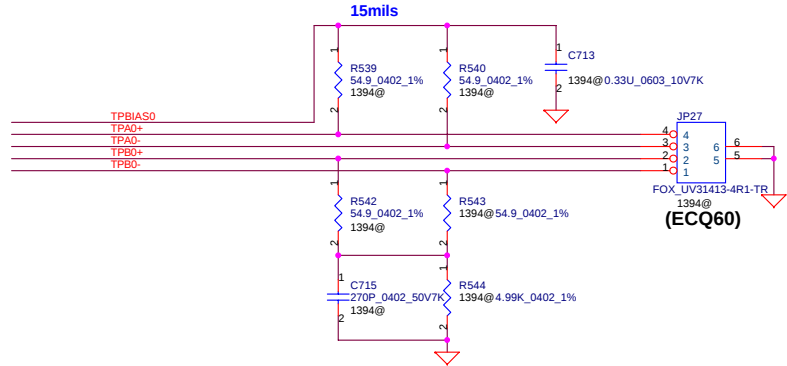
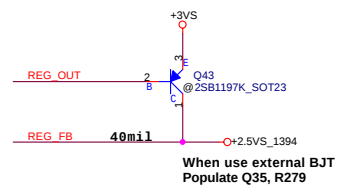
USB CONN. 1 & 2



Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2005/06/20				Deciphered Date			
2005/09/06				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.				SCHEMATIC, M/B LA-3151P				Size B			
Date				2005/09/06				Document Number			
2005/09/06				401412				Rev B			
Date				2005/09/06				Sheet 39 of 55			

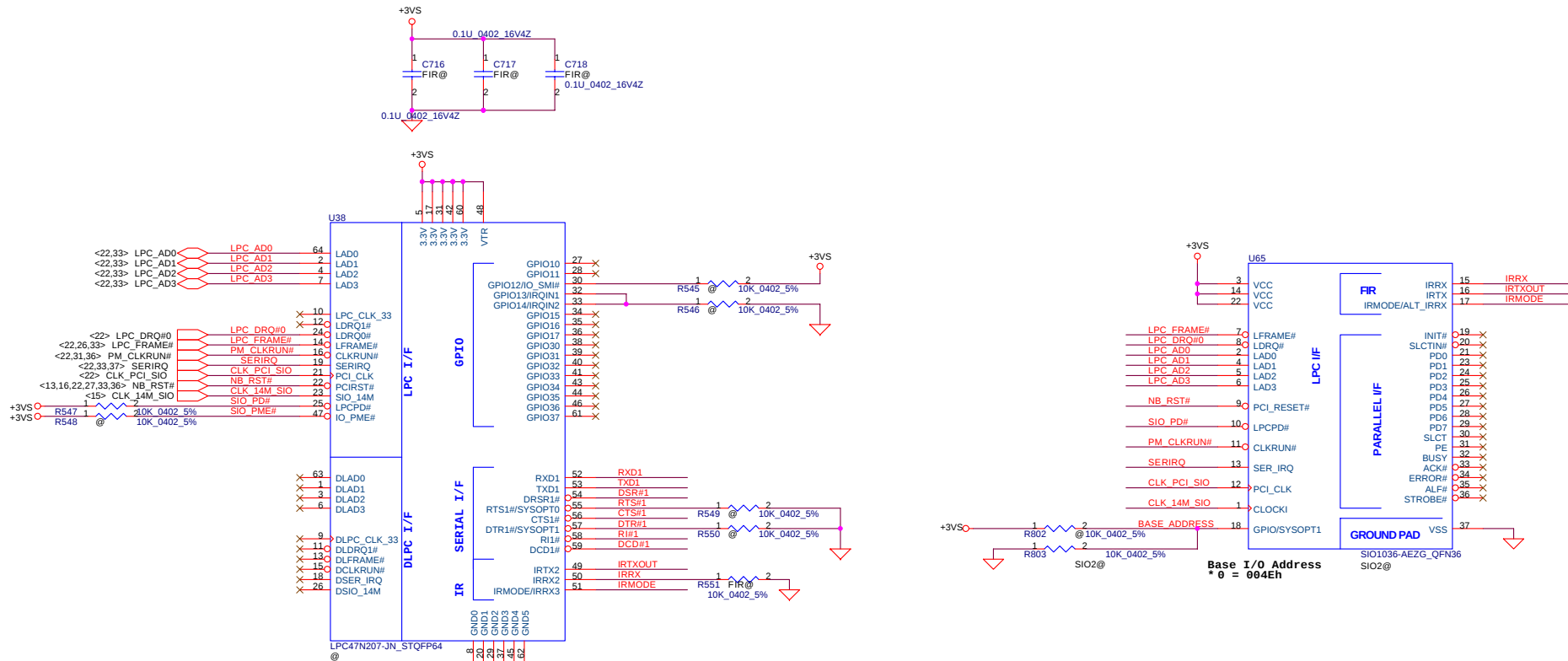


When use external EEPROM
Populate U14, R246, R253
Un-populate R261

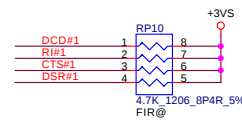
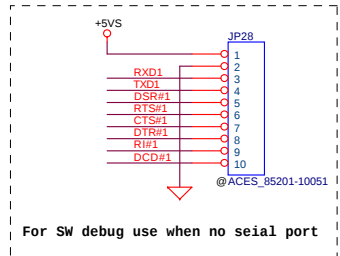


Security Classification		Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2005/06/20		Deciphered Date		2006/06/20		Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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.		SCHEMATIC, M/B LA-3151P							
		Size Custom		Document Number 401412				Rev B	
		Date:		星期四, 三月 09, 2006				Sheet 40 of 55	

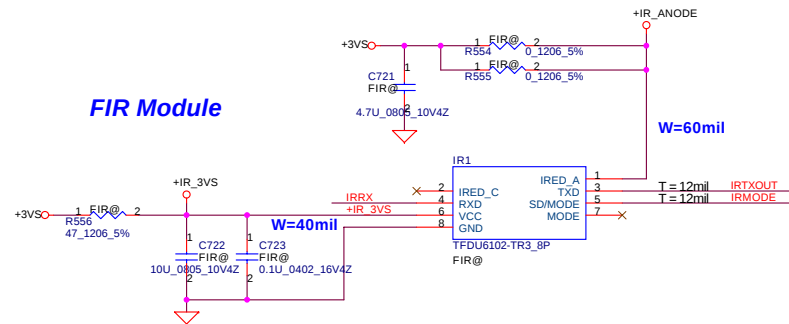
SUPER I/O SMSc LPC47N207



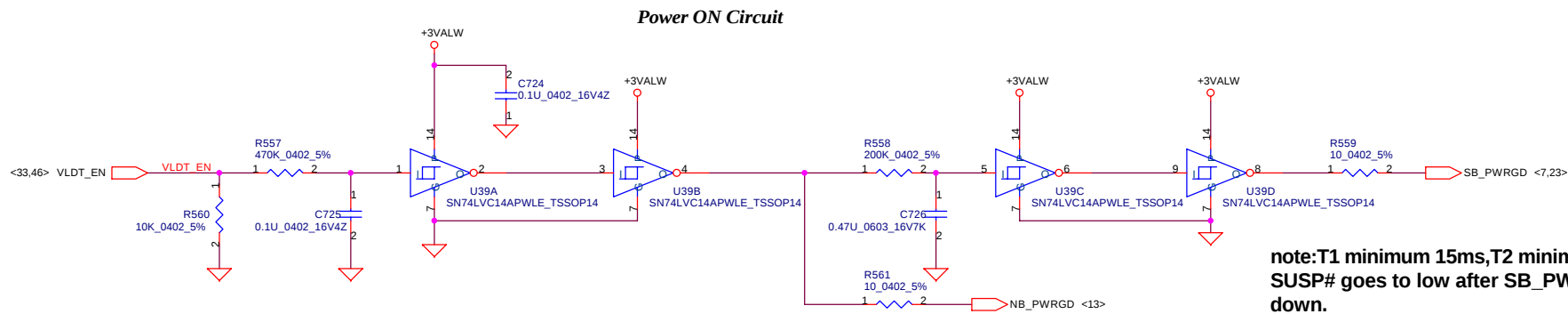
Place on the BOT side(near MINIPCI conn.)



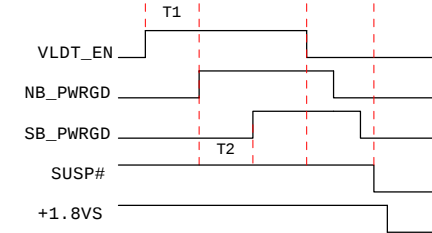
FIR Module



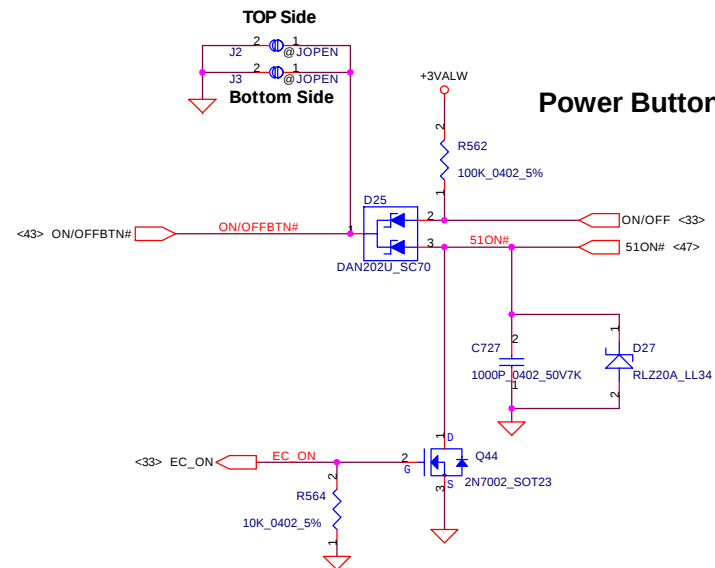
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				SCHEMATIC, M/B LA-3151P		
Size	Document Number	Rev			Date	
B	401412	B			星期三, 三月 09, 2006	
Sheet		41	of	55		



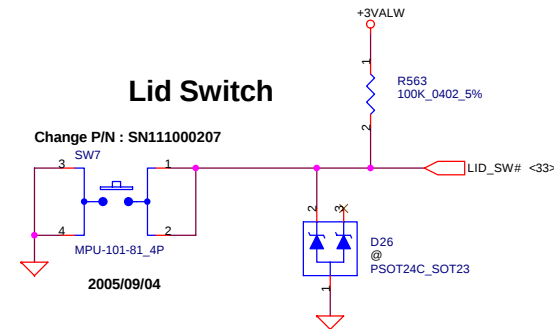
note:T1 minimum 15ms,T2 minimum 33ms/maximum 500ms,
SUSP# goes to low after SB_PWRGD goes to low for power down.



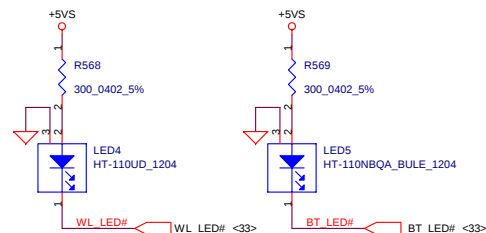
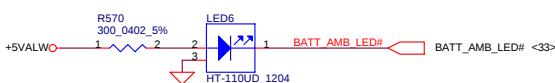
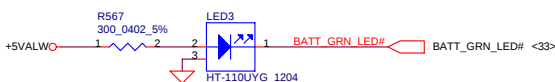
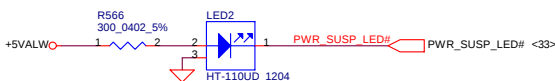
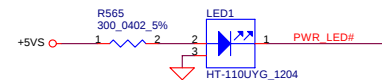
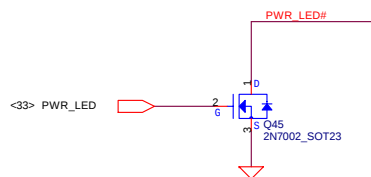
ON/OFF switch



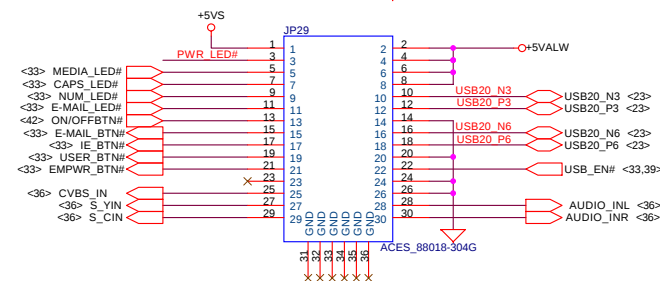
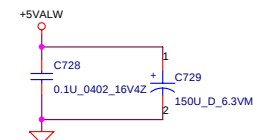
Lid Switch



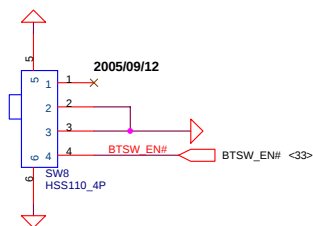
Security Classification		Compal Secret Data		Compal Electronics, inc.	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Title	SCHEMATIC, M/B LA-3151P
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 401412
				Date: 星期四, 三月 09, 2006	Sheet 42 of 55



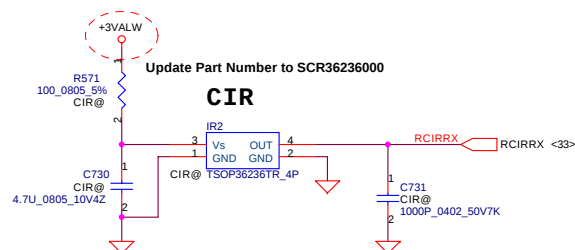
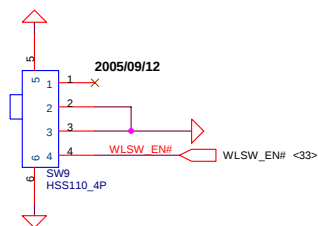
To LED/B Conn.



BT_SW

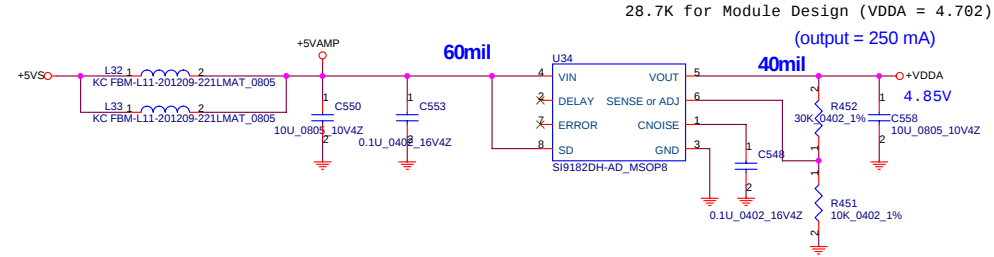
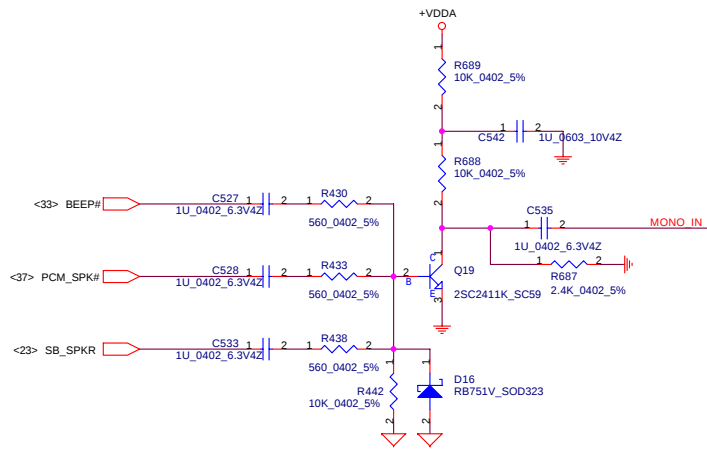


WL_SW

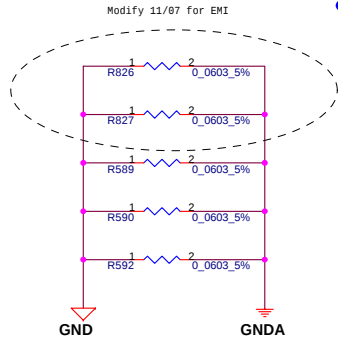
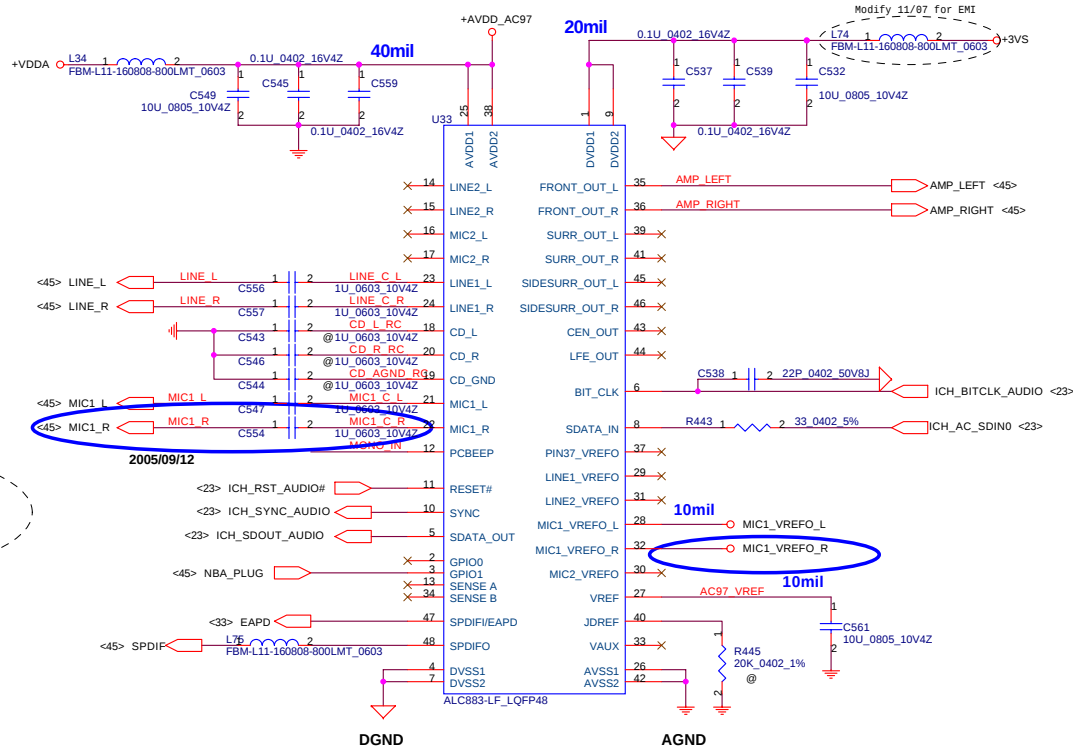


Geneva			Grapevine		
	KSO16	KSO17		KSO16	KSO17
KSI0	VOL_UP	LEFT			
KSI1	RIGHT	VOL_DOWN			
KSI2	PLAY	ENTER	KSI2	PLAY	
KSI3	STOP		KSI3	STOP	VOL_UP
KSI4	NEXT		KSI4	NEXT	VOL_DOWN
KSI5	REV		KSI5	REV	ARCADE_TV
KSI6		RECORD			

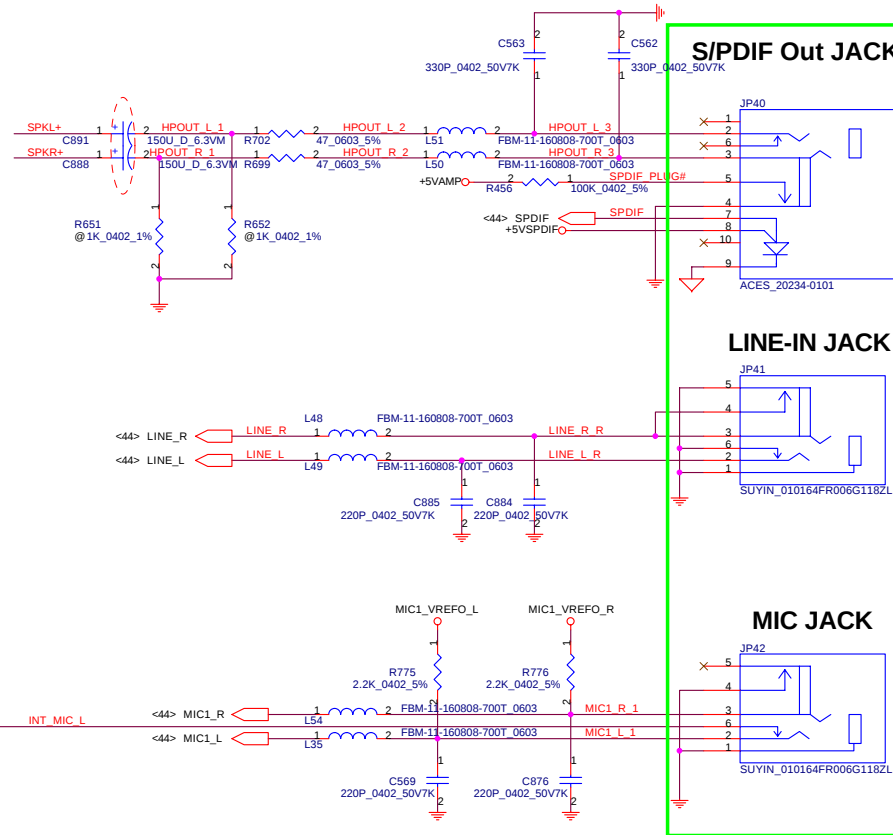
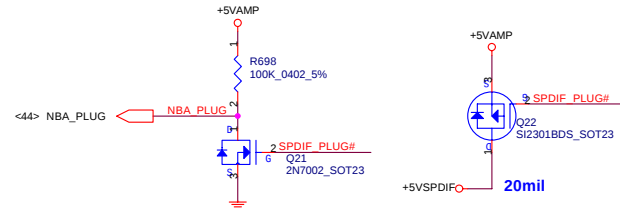
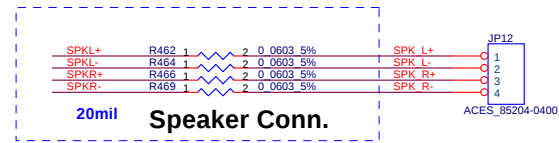
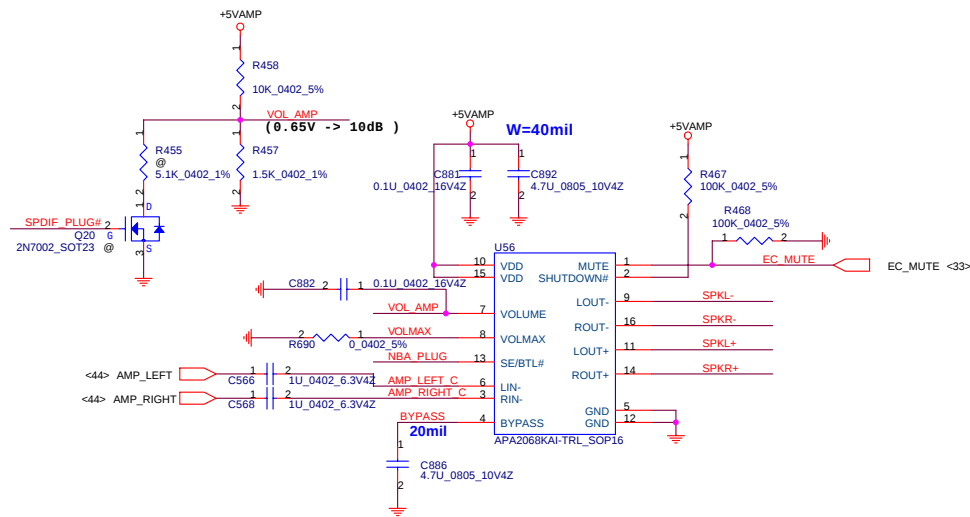
Security Classification		Compal Secret Data		Compal Electronics, Inc.					
Issued Date		2005/06/20		Deciphered Date		2006/06/20			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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					
				SCHEMATIC, M/B LA-3151P					
				Size	Document Number		Rev		
					401412		B		
				Date:	星期四, 三月 09, 2006		Sheet	43	of 55



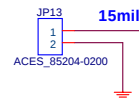
HD Audio Codec



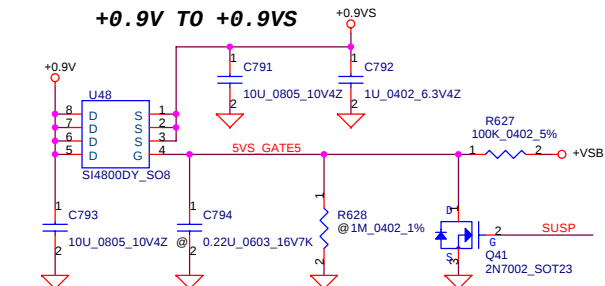
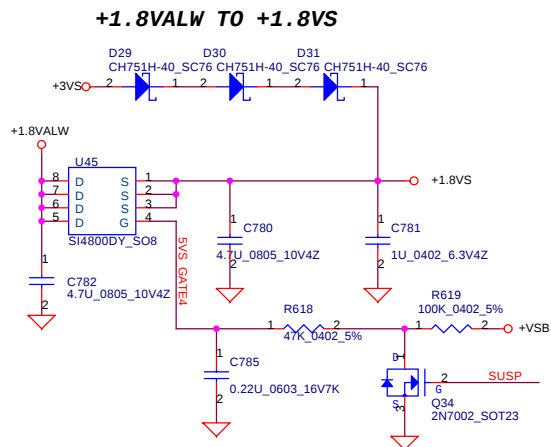
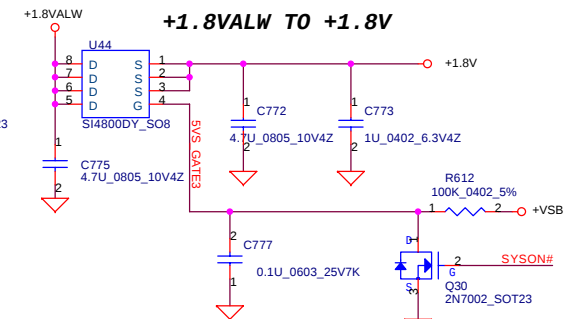
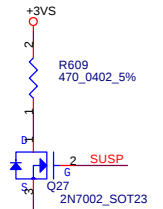
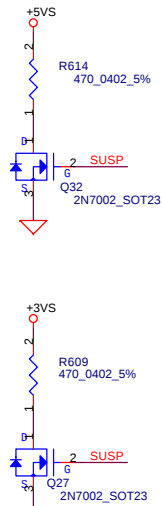
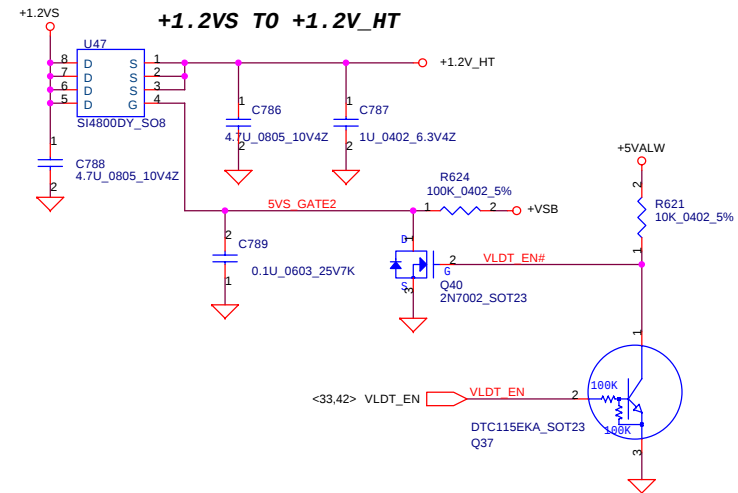
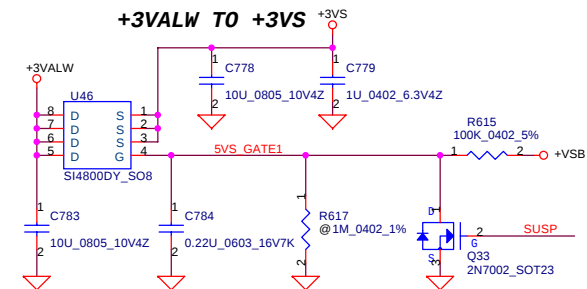
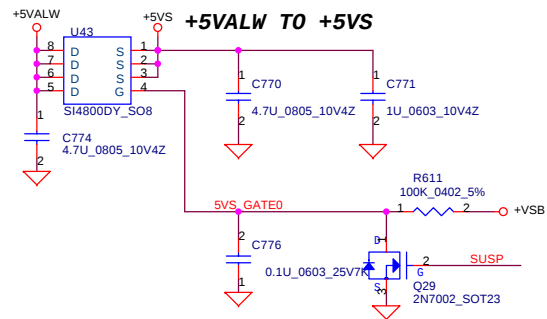
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				SCHEMATIC, M/B LA-3151P	
Size		Document Number	Rev	Date	
Custom		401412	B	星期四, 三月 09, 2006	
Sheet		44	of	55	



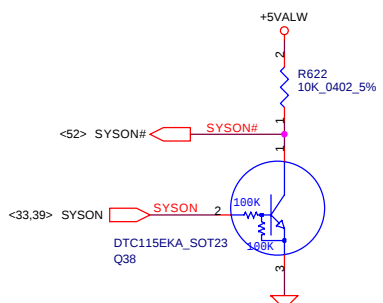
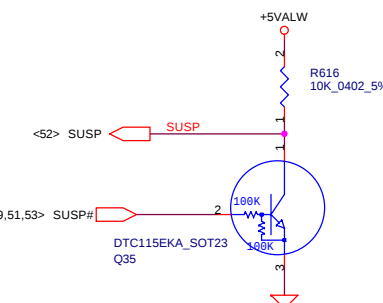
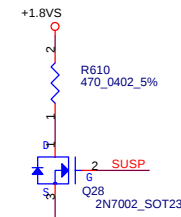
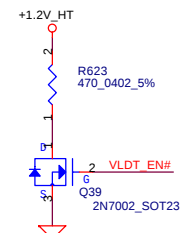
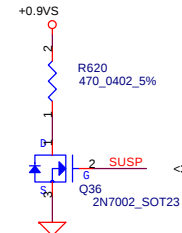
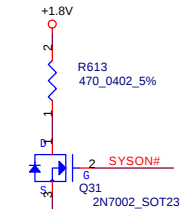
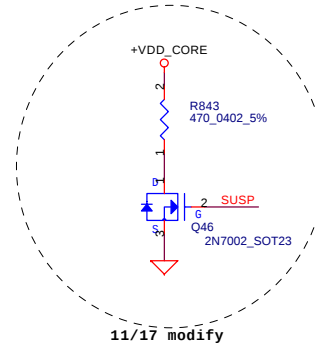
Int MIC Conn.



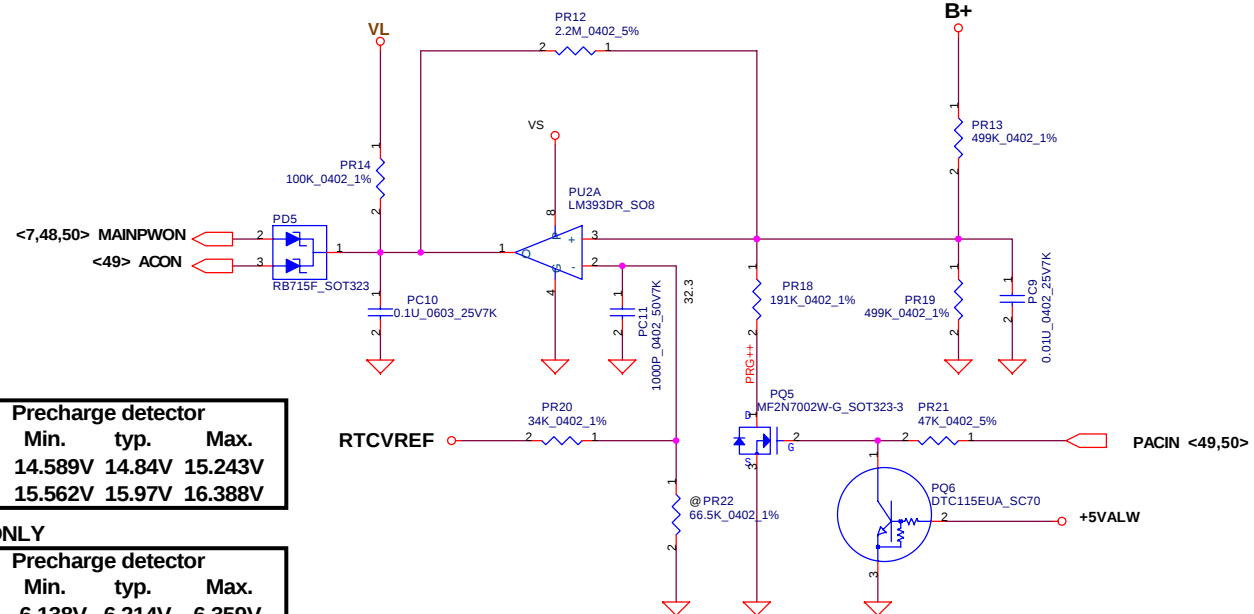
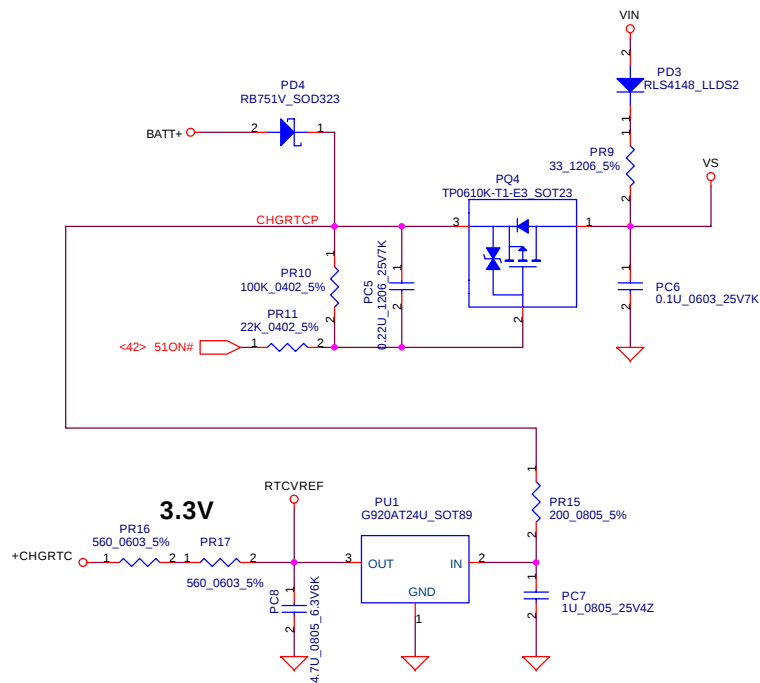
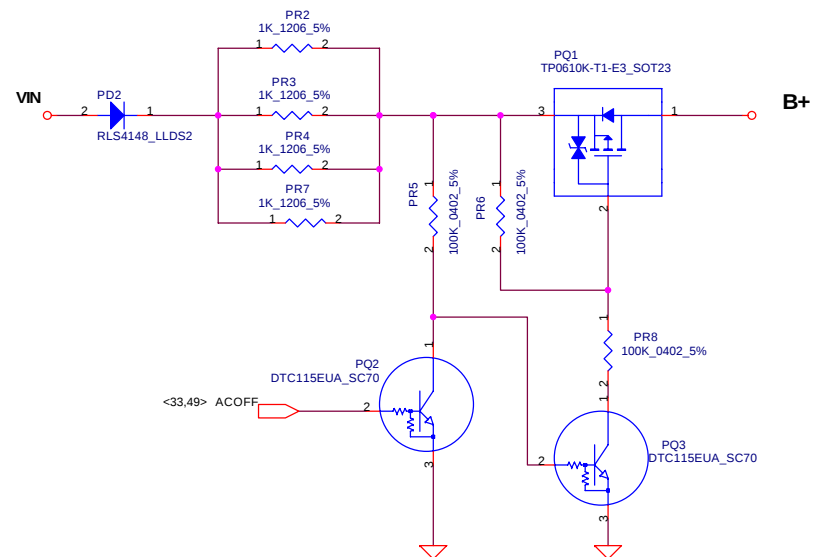
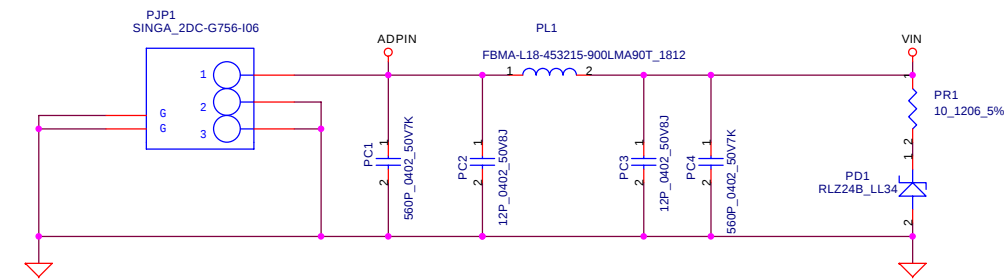
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
				Custom	401412
				Date	Rev B
				星期四, 三月 09, 2006	Sheet 45 of 55



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.			



Compal Electronics, inc.			
Title SCHEMATIC, M/B LA-3151P			
Size Custom	Document Number 401412	Rev B	
Date: 2006/03/08	Sheet 46	of 55	



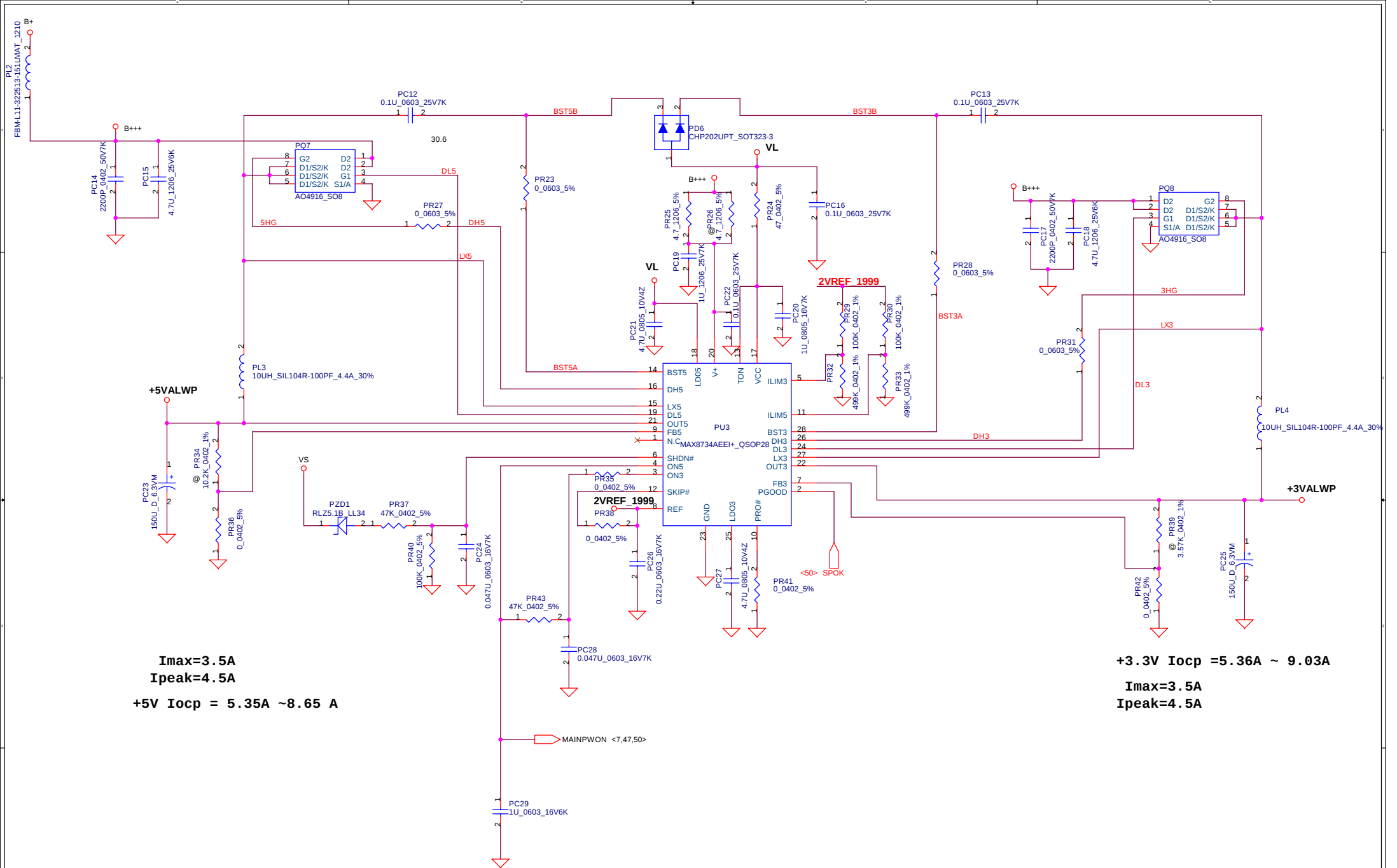
ACIN

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

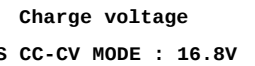
BATT ONLY

	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	2005/0926	Deciphered Date	2006/0926		Title	SCHEMATIC, M/B LA-3151P	
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 401412	Rev B
					Date:	星期四, 三月 09, 2006	Sheet 47 of 55



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/09/26	Deciphered Date	2006/09/26	Title	SCHEMATIC, M/B LA-3151P
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 401412
				Date: 星期四, 三月 09, 2006	Sheet 48 of 55


$$I_{input} = (90.0K/100.9K) * (75/15) = 4.504A$$

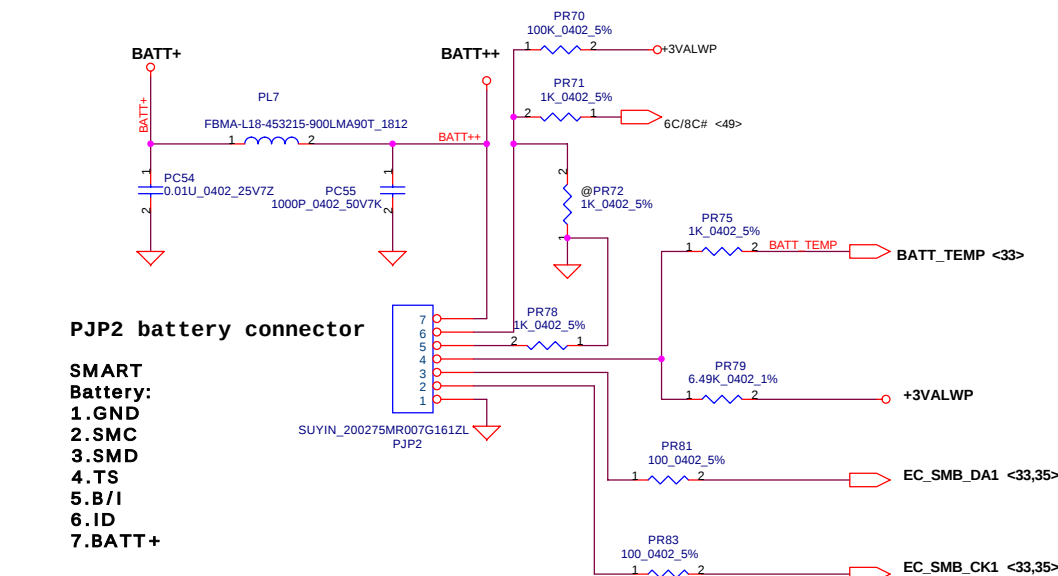
IREF=0.832*Icharge
IREF=0.73~3.3V

LI-3S :17.8V --- BATT-0VP=1.9758V
BATT-0VP=0.111*BATT+

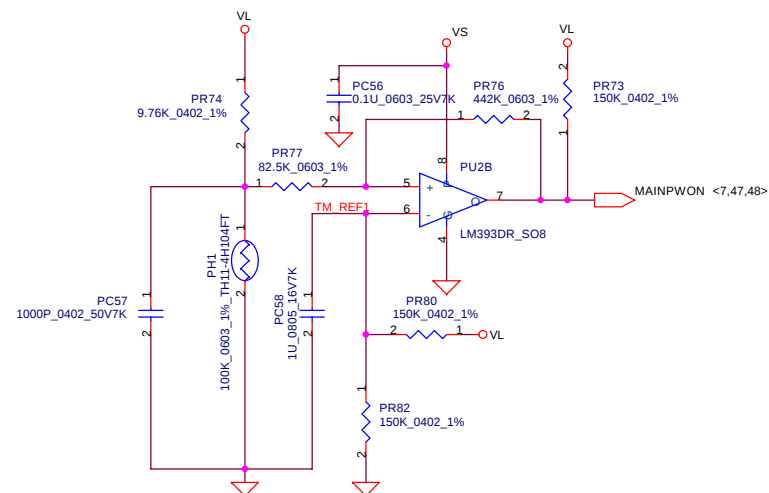
Security Classification	Compal Secret Data			Compal Electronics, Inc.			
Issued Date	2005/09/26	Deciphered Date	2006/09/26	Title		SCHEMATIC, M/B LA-3151P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RAID 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	
				Cuspm	401412	B	
				Date:	星期四, 三月 09, 2006	Sheet	49 of 55

PJP2 battery connector

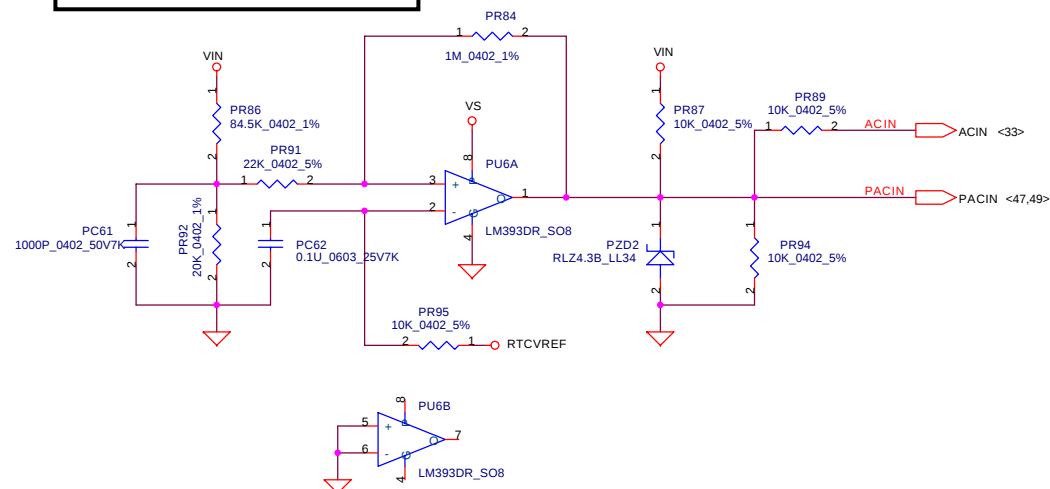
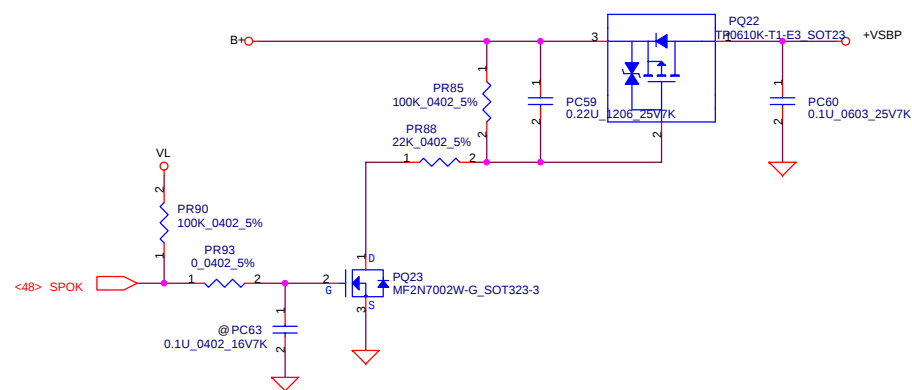
SMART Battery:
1.GND
2.SMC
3.SMD
4.TS
5.B/I
6.ID
7.BATT+



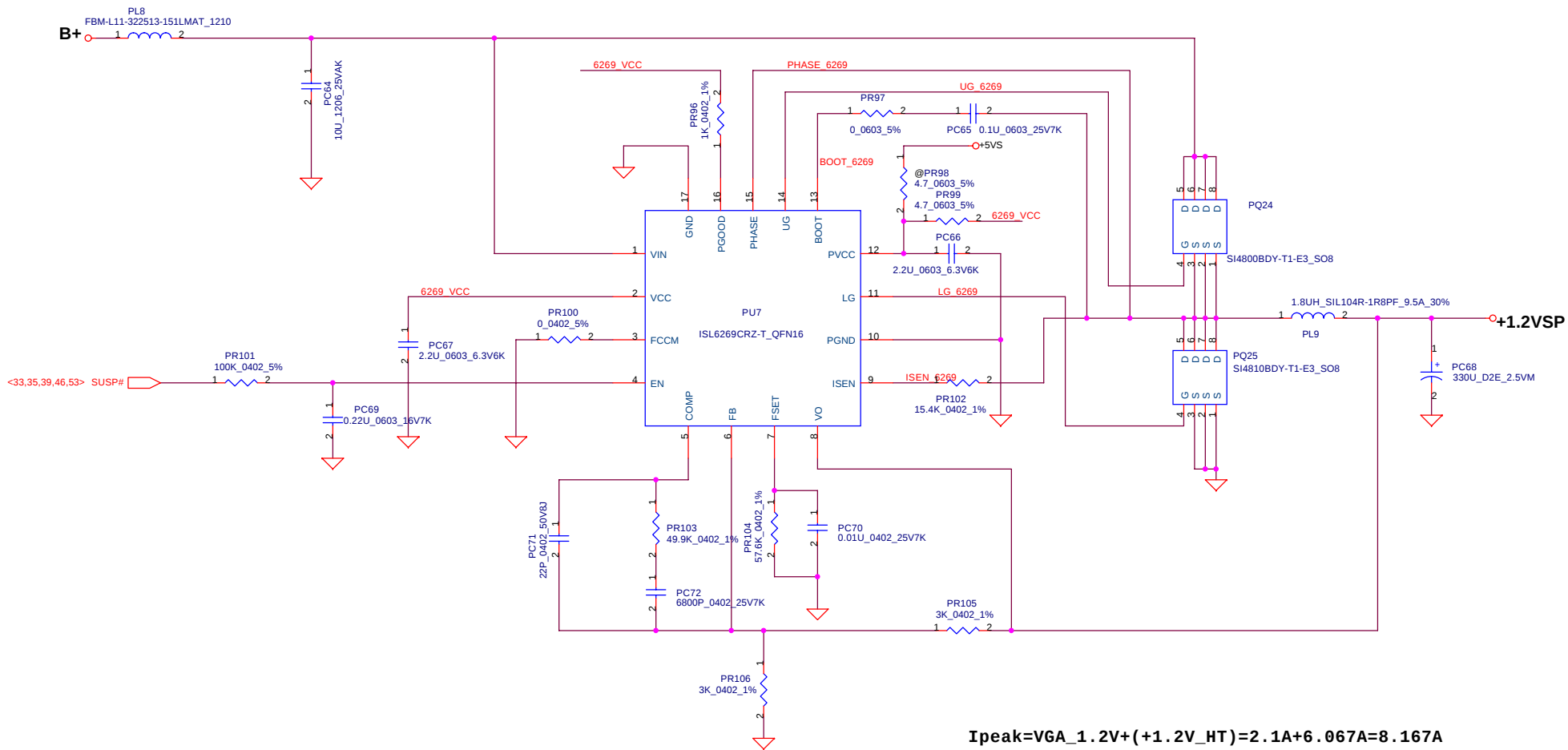
PH1 under CPU bottom side :
 CPU thermal protection at 90 degree C
 Recovery at 70 degree C



Vin Detector			
	Min.	typ.	Max.
H-->L	16.976V	17.257V	17.728V
L-->H	17.430V	17.901V	18.384V

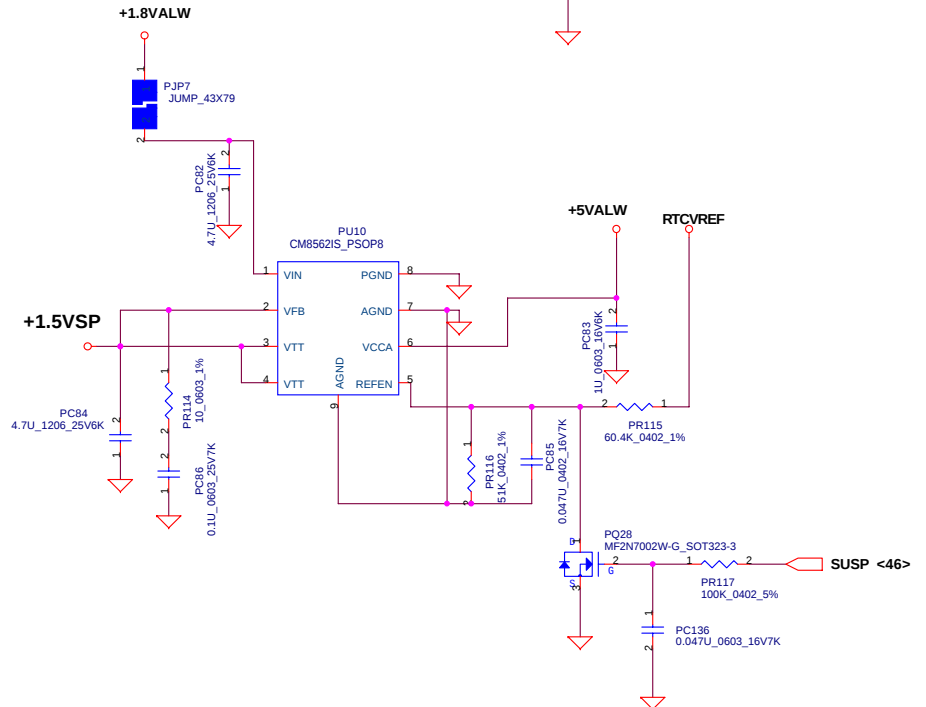
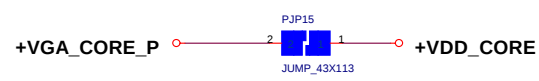
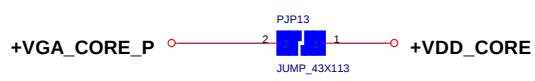
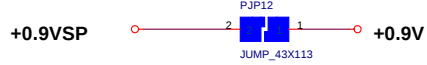
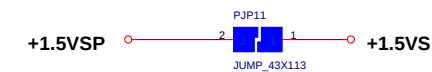
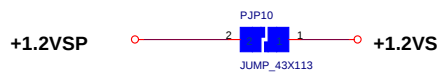
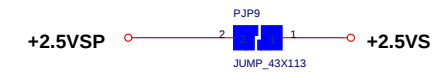
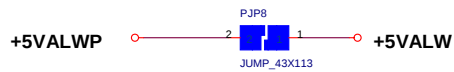
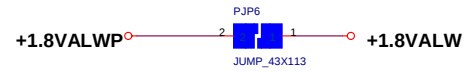
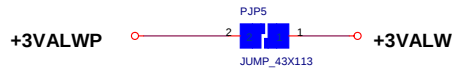
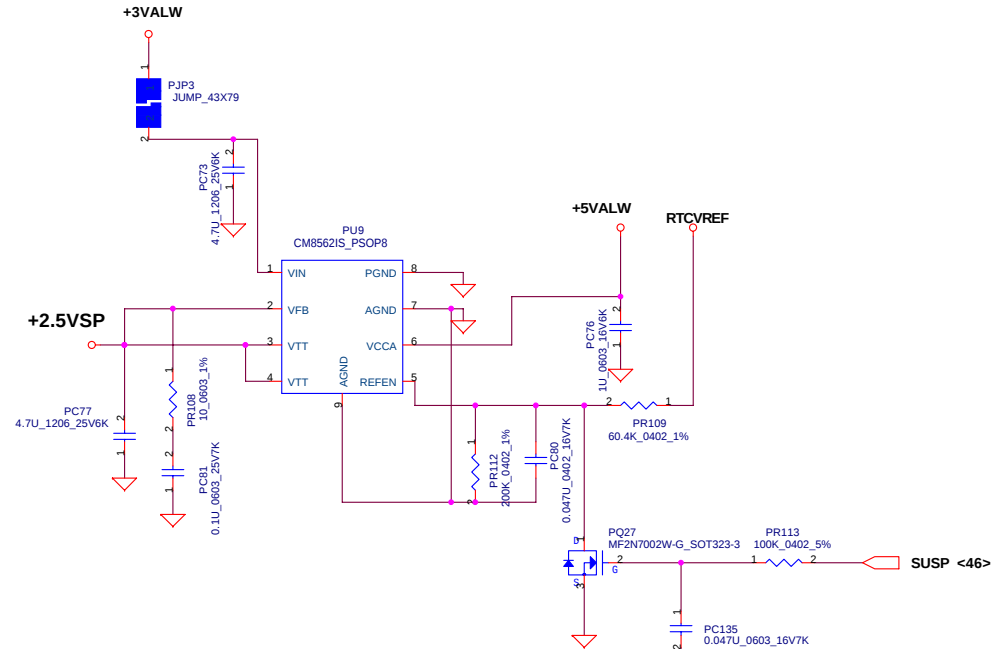
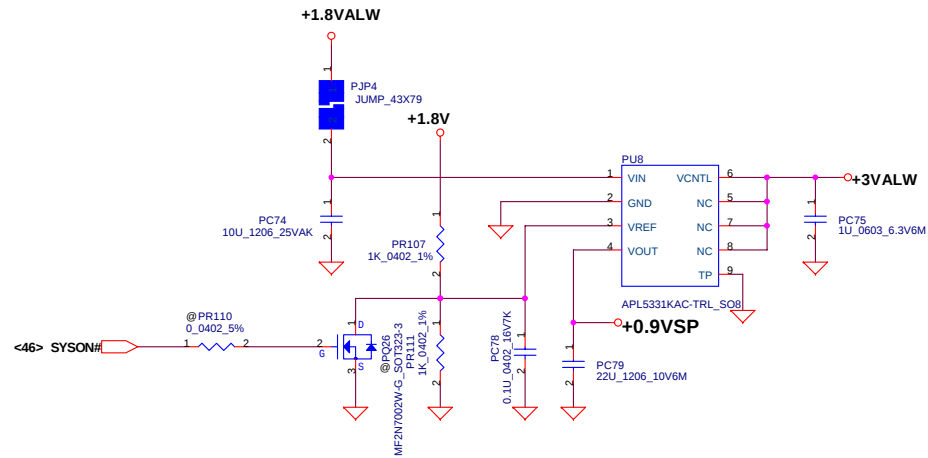


Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2005/09/26		Deciphered Date		2006/09/26		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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.						SCHEMATIC, M/B LA-3151P					
						Size		Document Number		Rev	
						Custom		401412		B	
						Date:		星期四, 三月 09, 2006		Sheet 50 of 55	

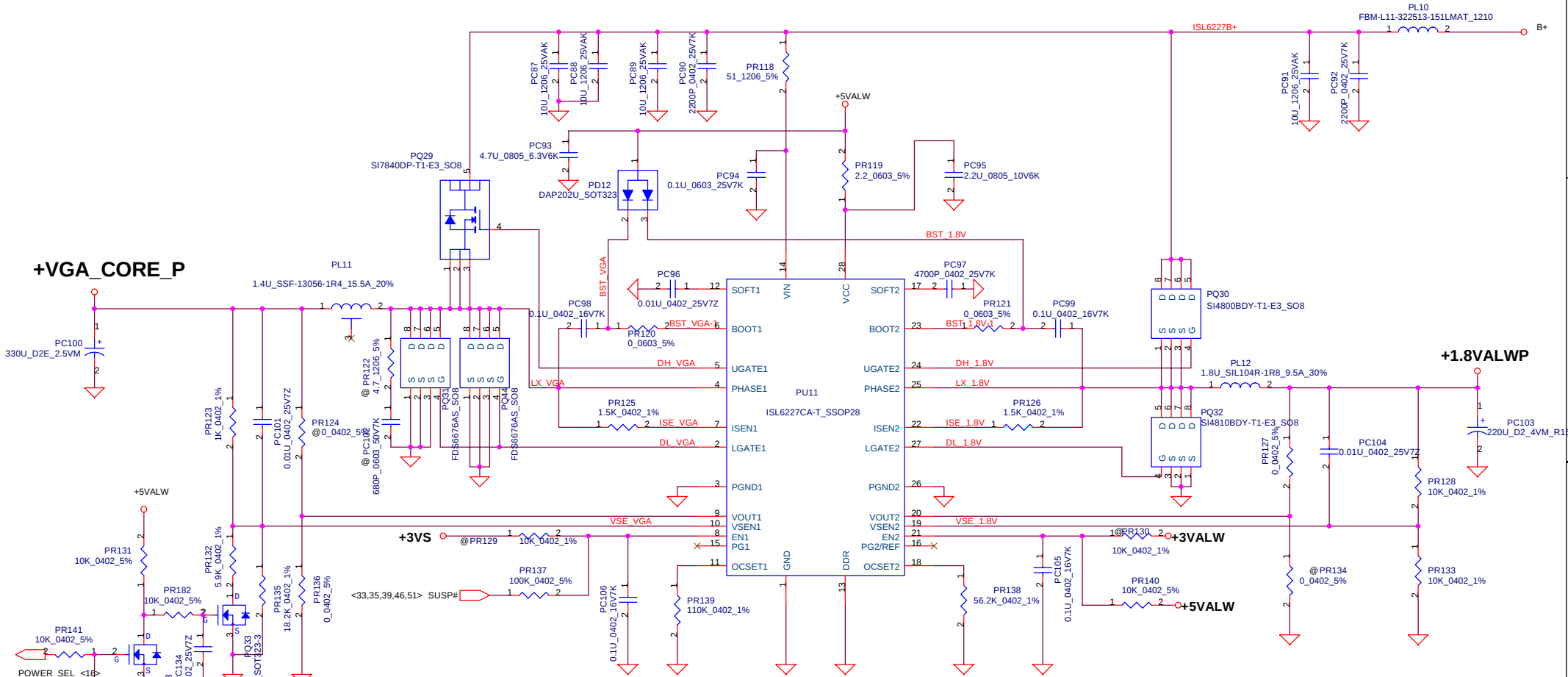


$I_{peak} = V_{GA_1.2V} + (+1.2V_{HT}) = 2.1A + 6.067A = 8.167A$
 $I_{max} = 5.7A$
 $I_{ocmin} = 9.23A$
 $I_{ocmax} = 19.23A$

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/09/26	Deciphered Date	2006/09/26	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.				SCHEMATIC, M/B LA-3151P	
Size	Document Number	Rev		B	
Custom	401412				
Date:	星期四, 三月 09, 2006	Sheet	51	of	55



Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		2005/09/26	Deciphered Date		2006/09/26	
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		
				SCHEMATIC, M/B LA-3151P		
				Size	Custom	Document Number
				401412		
				Date: 日期: 三月 09, 2006		
				Sheet	52 of 55	Rev B

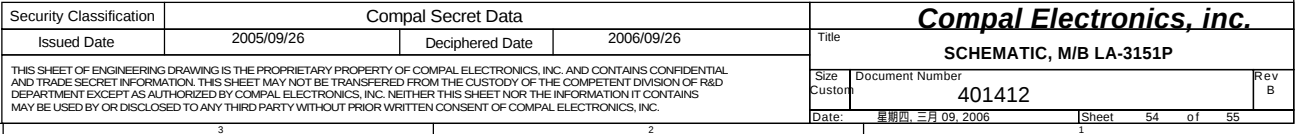


For VGA chipset type, that should be dynamic change by everytime load BOM.

M52P6	M54P	M56P
PR123=1K	PR123=1K	PR123=1K
PR135=18.2K	PR135=8.87K	PR135=18.2K
PR132=17.8K	PR132=8.87K	PR132=5.9K
L=1.000V	L=1.102V	L=1.102V
H=0.949V	H=1.001V	H=0.949V

Ipeak=8.5A
 Imax=6A
 Iocpmin=8.76A
 Iocpmax=13.46A

Ipeak=16.40A
 Imax=12.25A
 Iocpmin=22.07A
 Iocpmax=38.67A



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

Page 1 of 1
for PWR

Item	Fixed Issue	Reason for change	Rev.	PG #	Modify List	VER	Phase
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
8							
9							