

Compal Confidential
HCW50 Schematics Document
AMD/Sempron/ATI RX485/SB460 W/s M52/54/56P

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

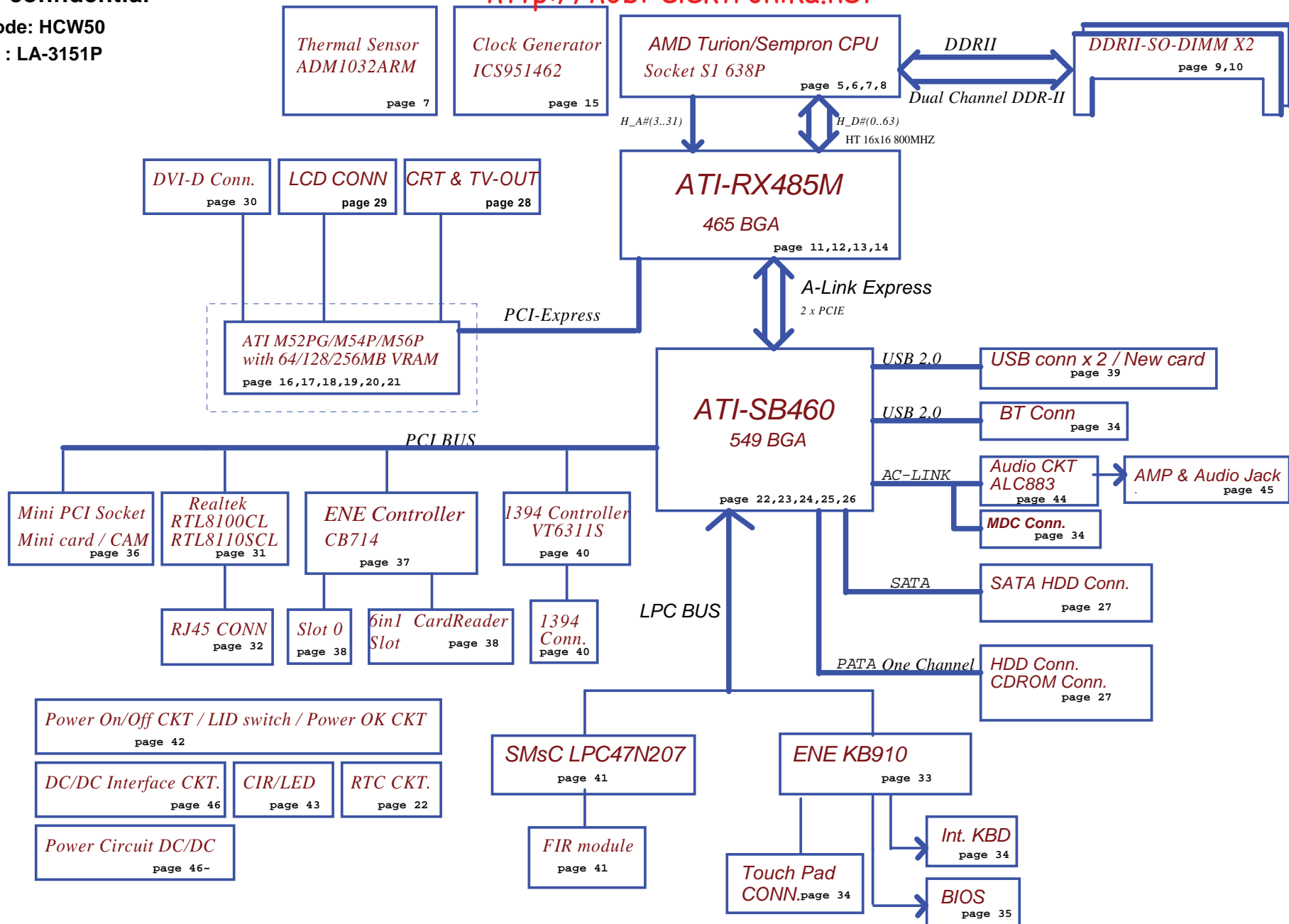
Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		SCHEMATIC, M/B LA-3151P	
2005/05/09		2006/03/08		Document Number	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Size		Rev	
		Custom		B	
		Date:		Sheet	
		星期四, 三月 09, 2006		1 of 55	

Compal confidential

Project Code: HCW50

File Name : LA-3151P

<http://hobi-elektronika.net>



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 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-PCI(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	

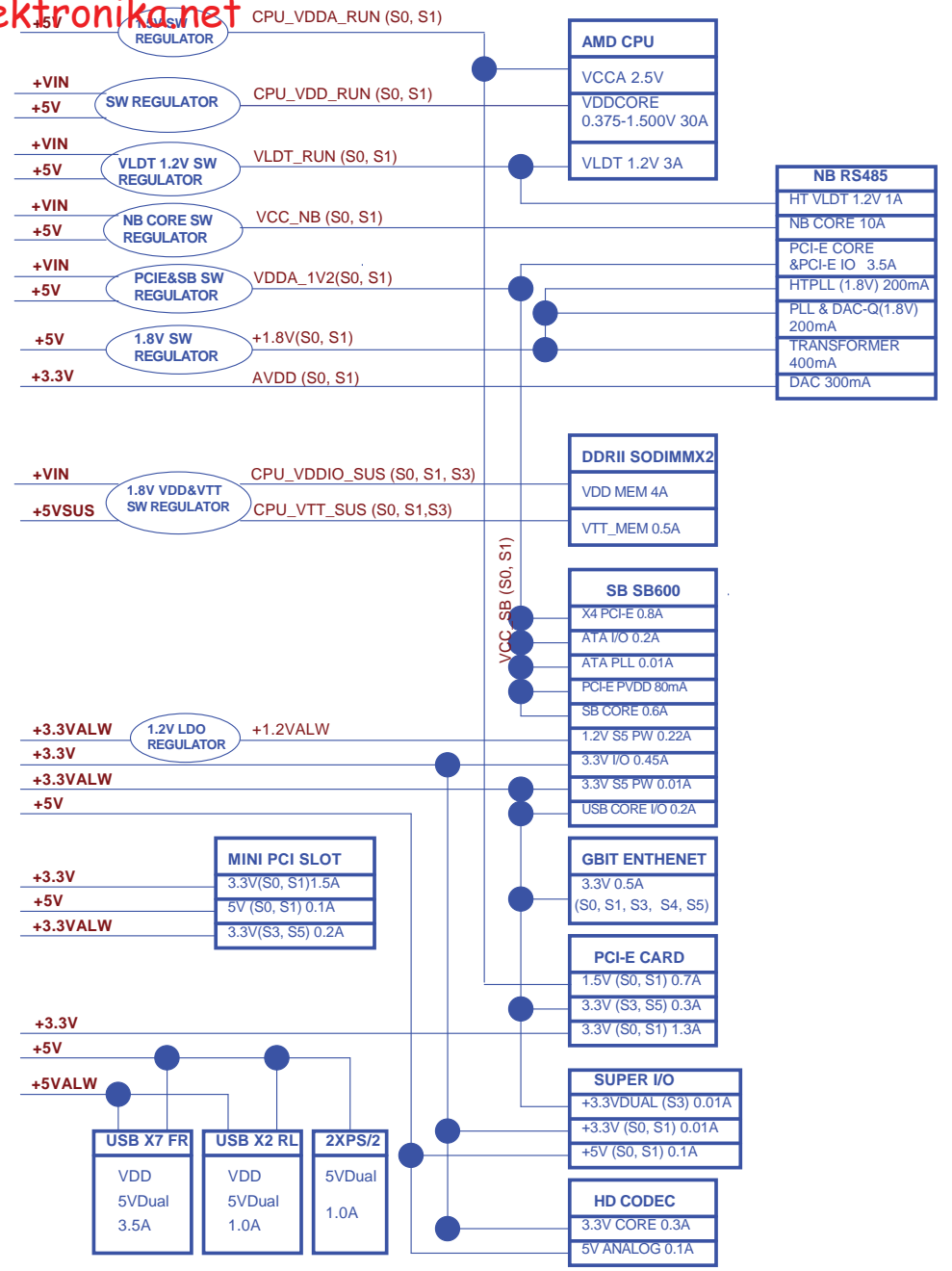
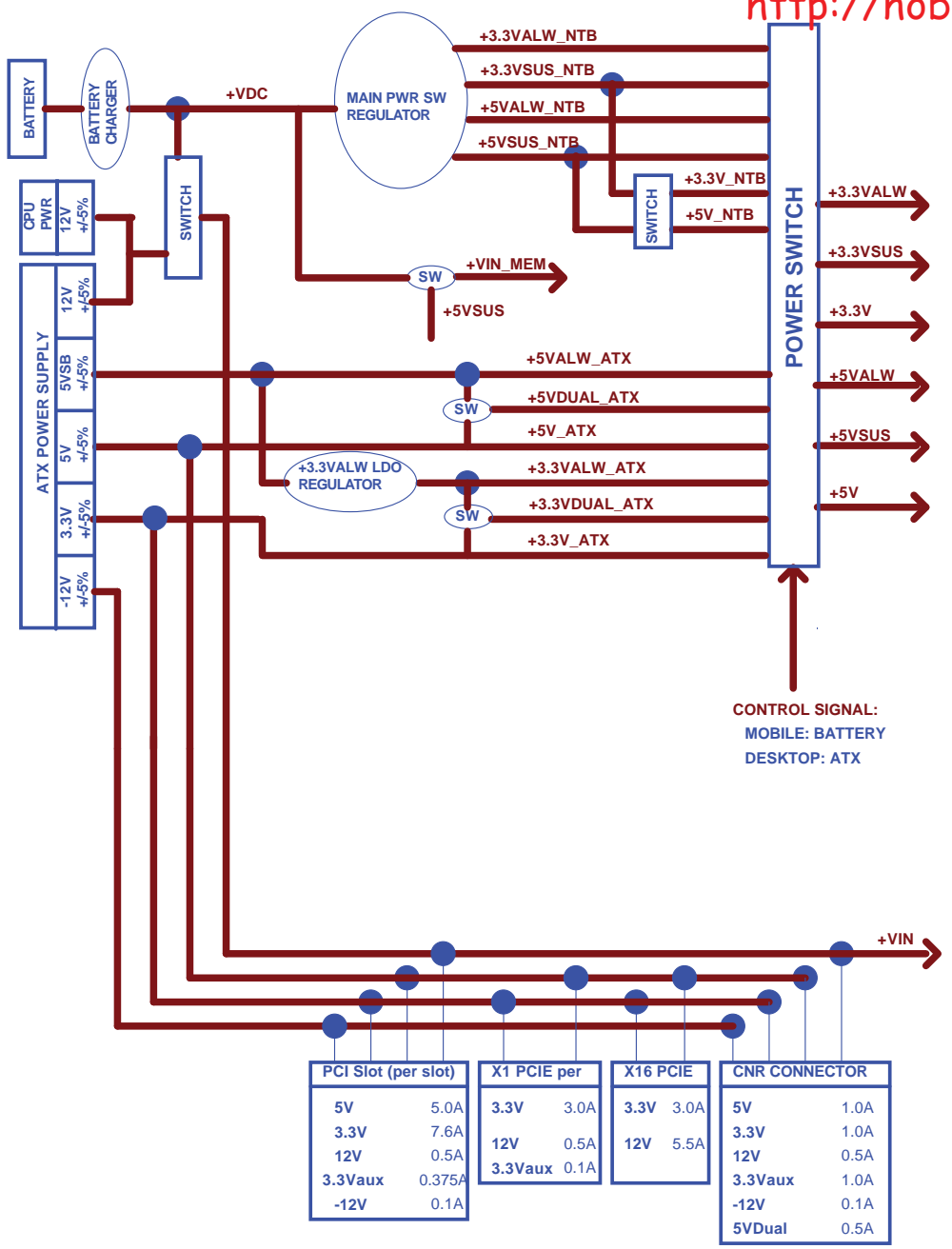
SKU ID Table

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

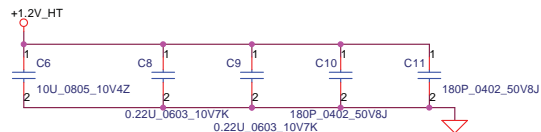
BTO Option Table

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 Custom	Document Number 401412
Date: 星期四, 三月 09, 2006				Sheet	3 of 55



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



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. Title SCHEMATIC, M/B LA-3151P	
Issued Date	2005/10/11	Deciphered Date	2006/10/11	Size Custom	Document Number 401412
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	
				Date: 星期四, 三月 09, 2006 Sheet 5 of 55	

2.5VS

L1

FBM-L11-321611-260-LMT_1206

+VDDA 25V

50mil width(600mA)

C22

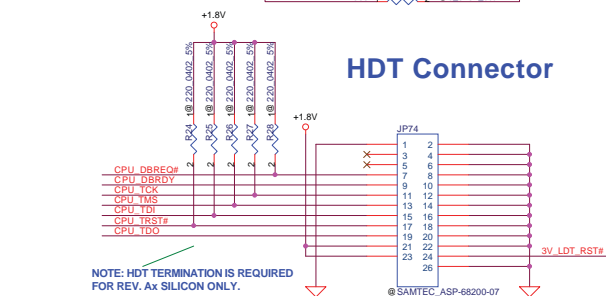
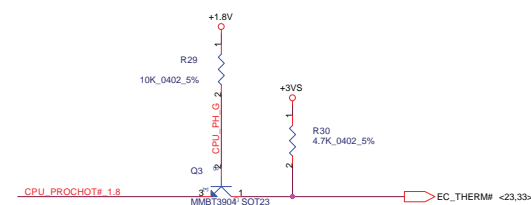
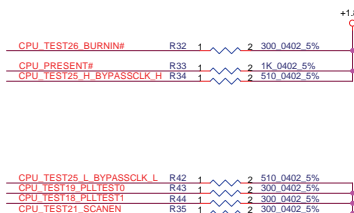
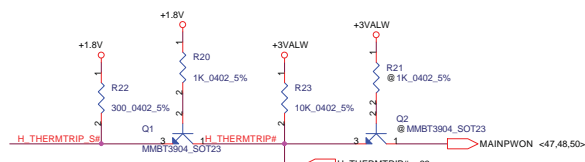
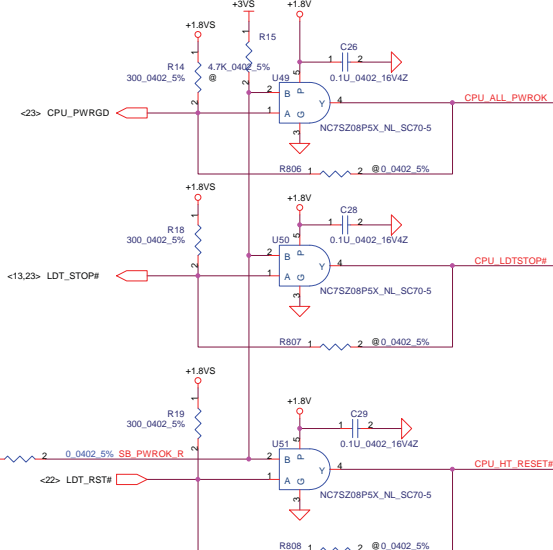
4.7uF 0805_10V4Z

C23

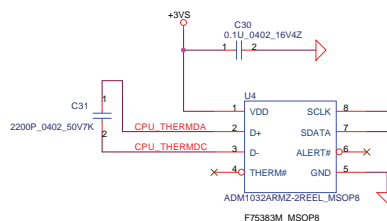
0.22uF 0603_10V7K

C24

3300pF_0402_50V7K

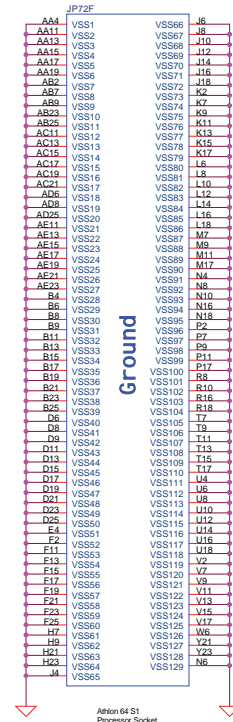
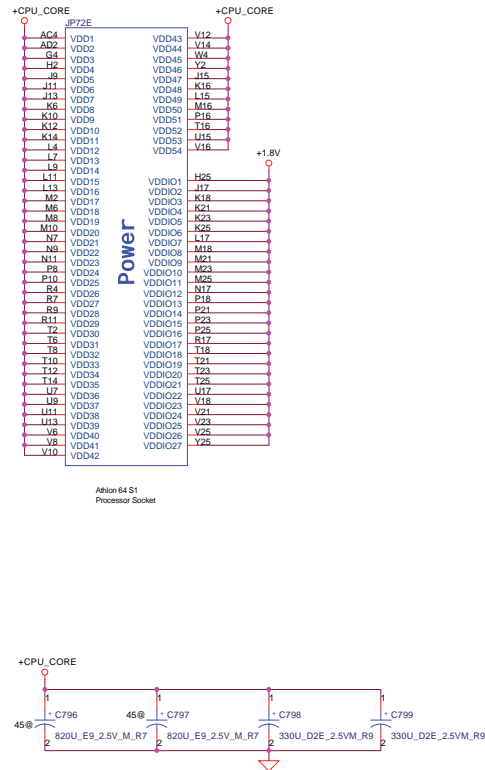


NOTE: HDT TERMINATION IS REQUIRED FOR REV. Ax SILICON ONLY.

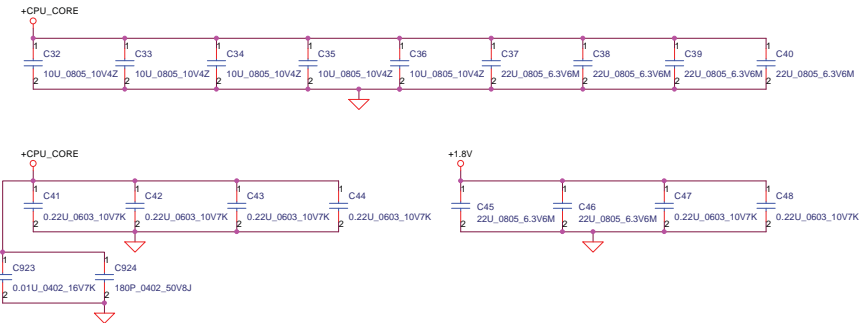


SMBus Address: 1001110X (b)

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 OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev B
				C	401412	
				Date:	年 月 日	Sheet 7 of 55

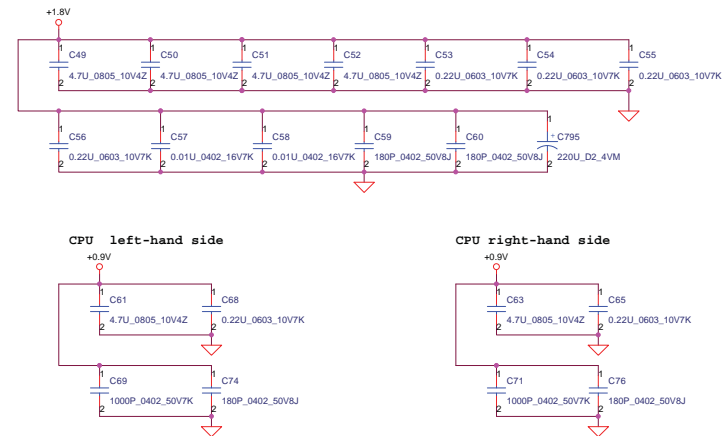


BOTTOMSIDE DECOUPLING

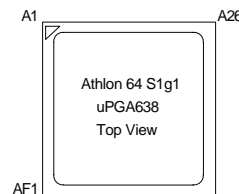


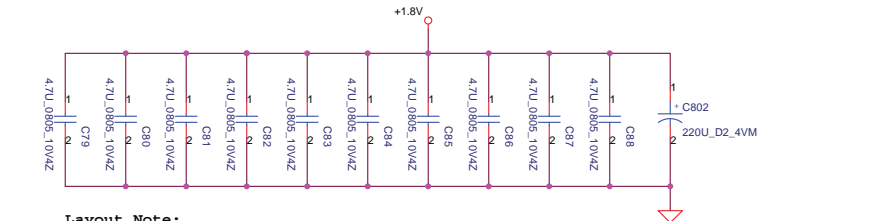
DECOUPLING BETWEEN PROCESSOR AND DIMMs

PLACE CLOSE TO PROCESSOR AS POSSIBLE



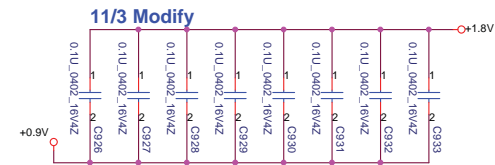
PROCESSOR POWER AND GROUND



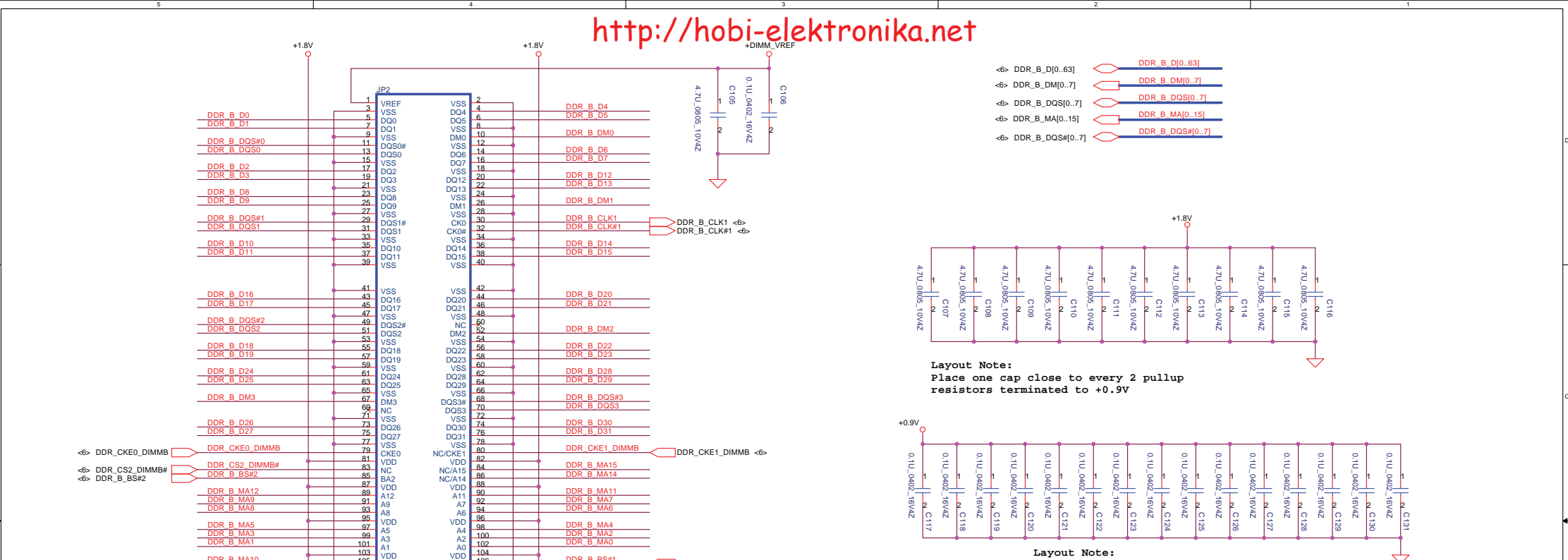
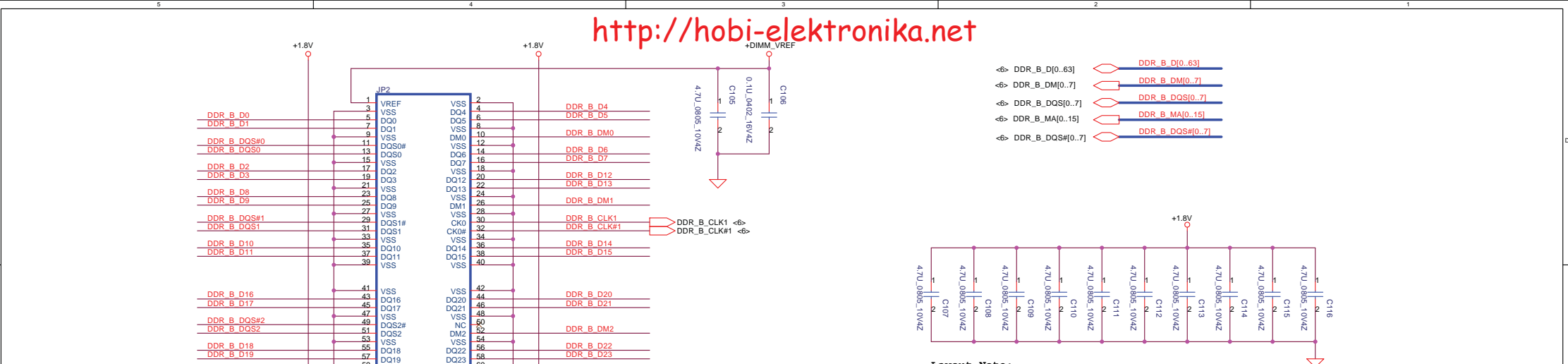
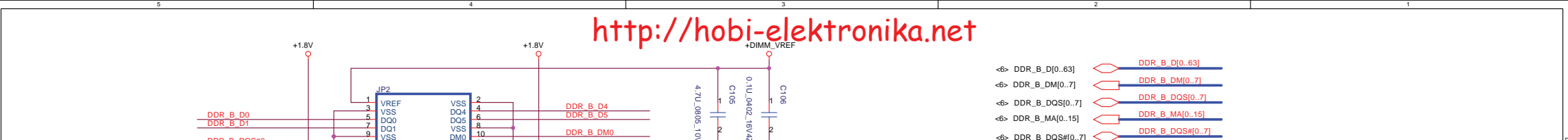
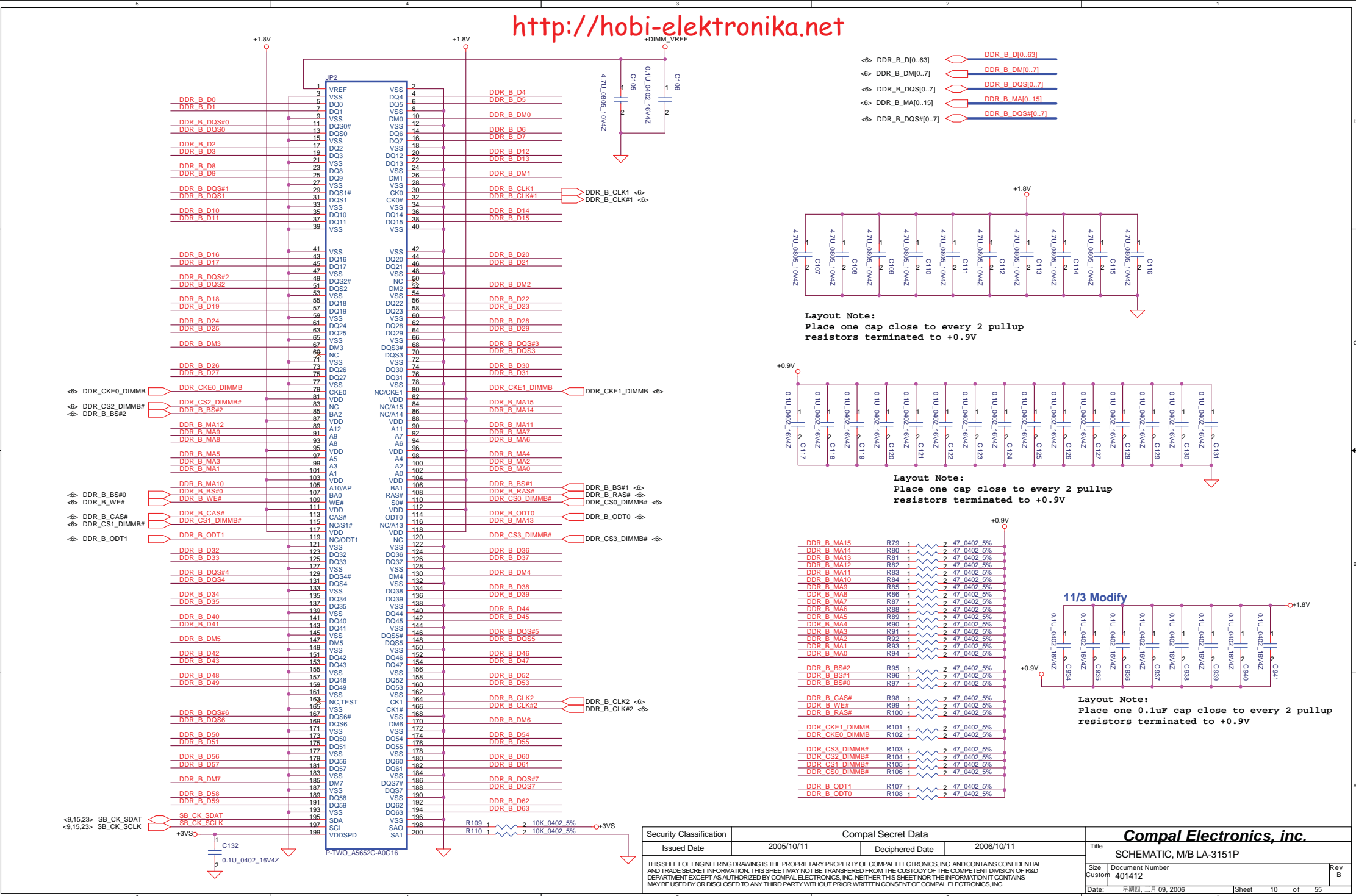
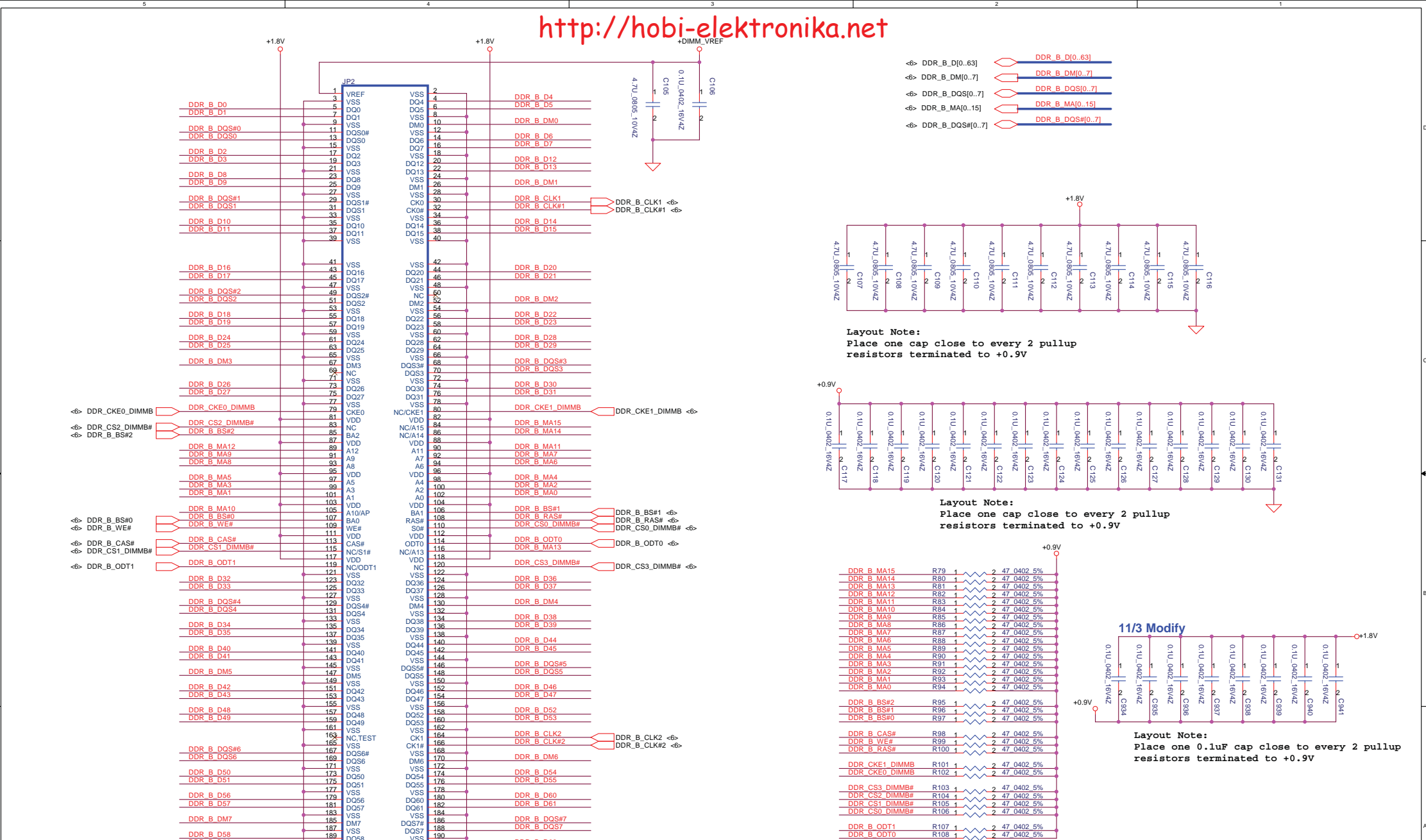


Layout Note:

					+0.0V
DDR A MA15	R47	1	~	2	47 0402 5%
DDR A MA14	R48	1	~	2	47 0402 5%
DDR A MA13	R49	1	~	2	47 0402 5%
DDR A MA12	R50	1	~	2	47 0402 5%
DDR A MA11	R51	1	~	2	47 0402 5%
DDR A MA10	R52	1	~	2	47 0402 5%
DDR A MA9	R53	1	~	2	47 0402 5%
DDR A MA8	R54	1	~	2	47 0402 5%
DDR A MA7	R55	1	~	2	47 0402 5%
DDR A MA6	R56	1	~	2	47 0402 5%
DDR A MA5	R57	1	~	2	47 0402 5%
DDR A MA4	R58	1	~	2	47 0402 5%
DDR A MA3	R59	1	~	2	47 0402 5%
DDR A MA2	R60	1	~	2	47 0402 5%
DDR A MA1	R61	1	~	2	47 0402 5%
DDR A MA0	R62	1	~	2	47 0402 5%
DDR A BS#2	R63	1	~	2	47 0402 5%
DDR A BS#1	R64	1	~	2	47 0402 5%
DDR A BS#0	R65	1	~	2	47 0402 5%
DDR A CS#0	R66	1	~	2	47 0402 5%
DDR A WE#	R67	1	~	2	47 0402 5%
DDR A RS#	R68	1	~	2	47 0402 5%
DDR CKE1 DIMMA	R69	1	~	2	47 0402 5%
DDR CKE0 DIMMA	R70	1	~	2	47 0402 5%
DDR CS3 DIMMA#	R71	1	~	2	47 0402 5%
DDR CS2 DIMMA#	R72	1	~	2	47 0402 5%
DDR CS1 DIMMA#	R73	1	~	2	47 0402 5%
DDR CS0 DIMMA#	R74	1	~	2	47 0402 5%
DDR A OD#1	R75	1	~	2	47 0402 5%
DDR A OD#0	R76	1	~	2	47 0402 5%



Security Classification		Compal Secret Data		Compal Electronics, inc.		
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	Document Number	Rev B
					401412	

[illegible][illegible]

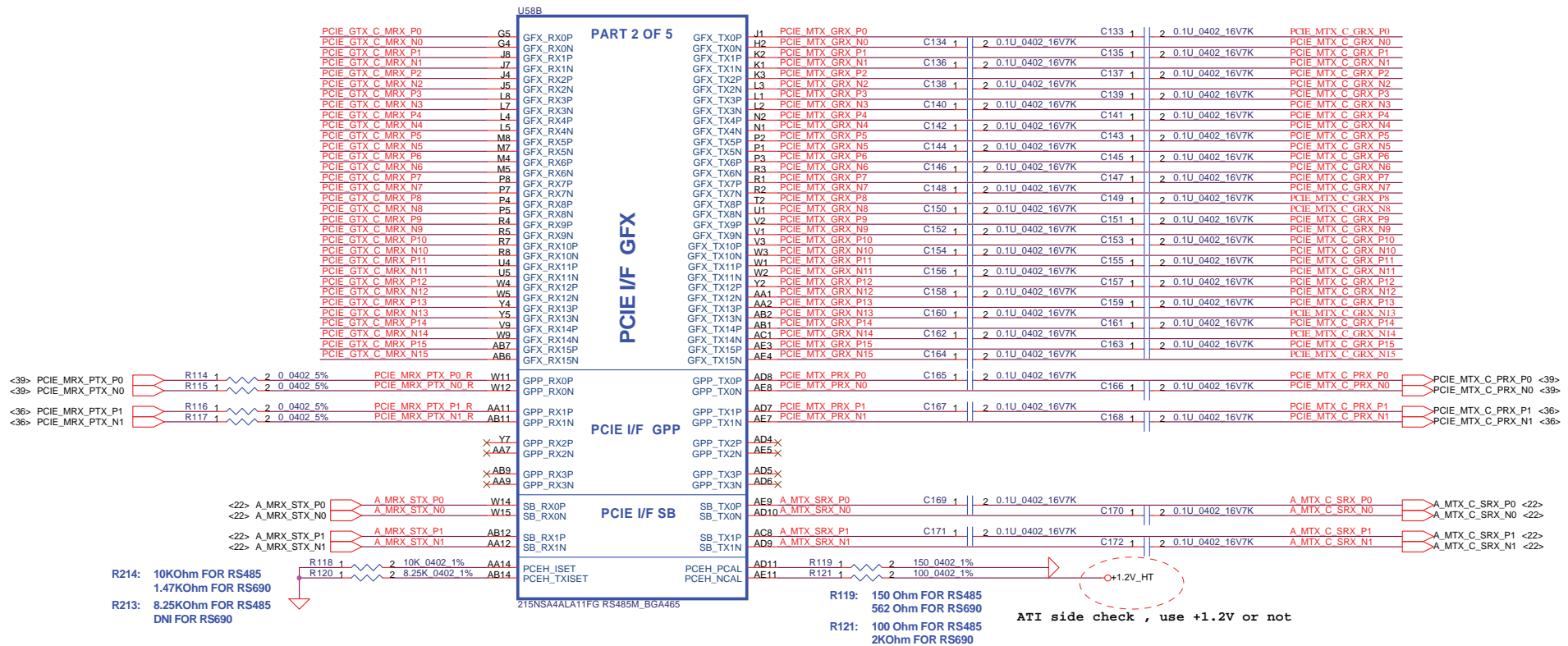
<http://hobi-elektronika.net>

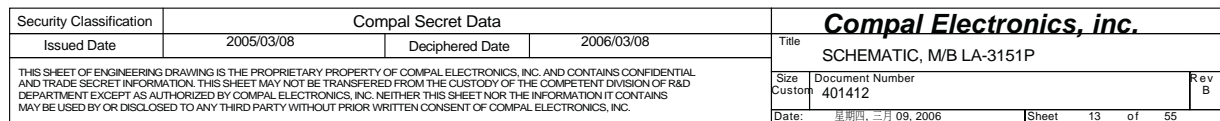


Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Compal Electronics, inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Document Number
				Custom	401412
				Date:	星期四, 三月 09, 2006
				Sheet	11 of 55
				Rev	B

<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]

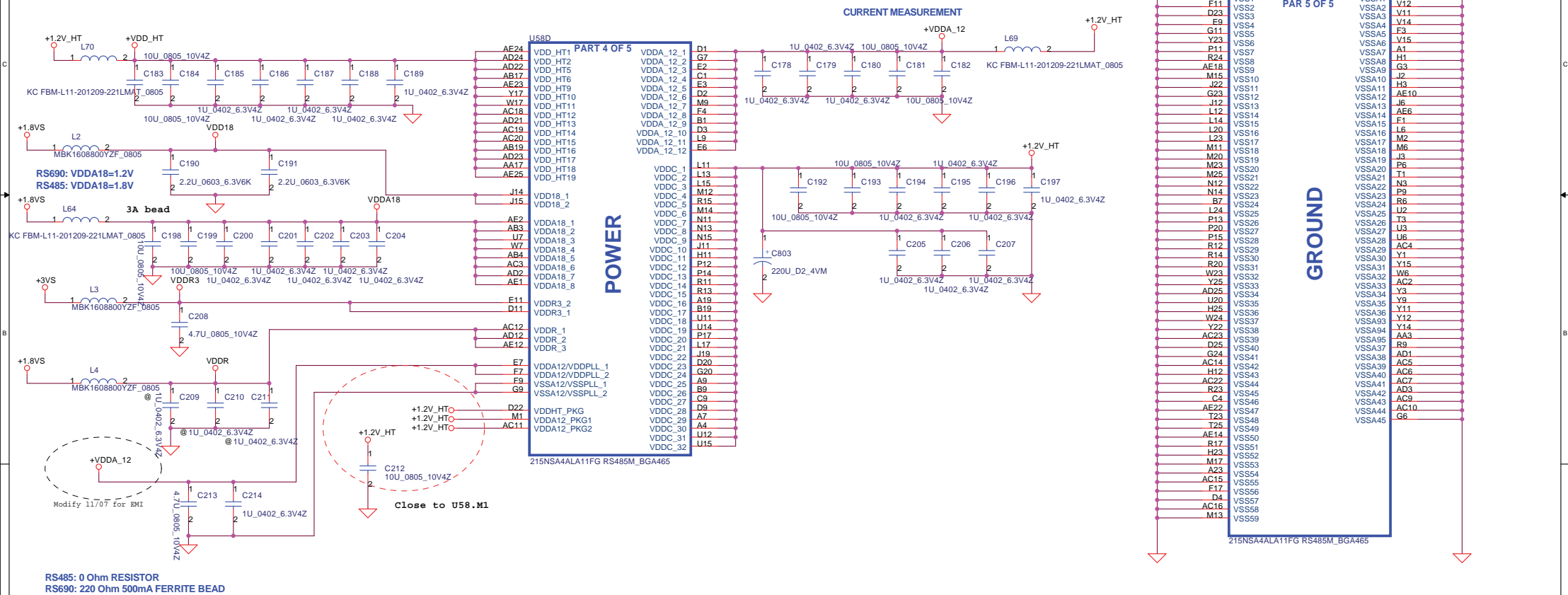
<16> PCIE_MTX_C_GRX_P[0..15] PCIE MTX C GRX P[0..15]
<16> PCIE_MTX_C_GRX_N[0..15] PCIE MTX C GRX N[0..15]





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
HTPVD	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



RS485: 0 Ohm RESISTOR
RS690: 220 Ohm 500mA FERRITE BEAD

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



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	Document Number	Rev B
				Custom	401412	

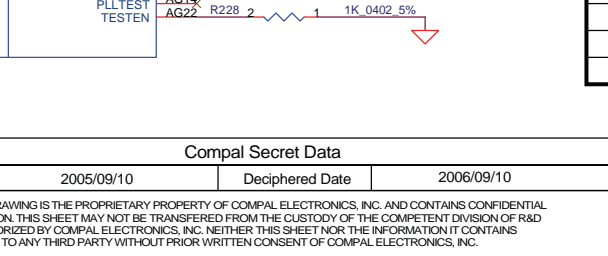
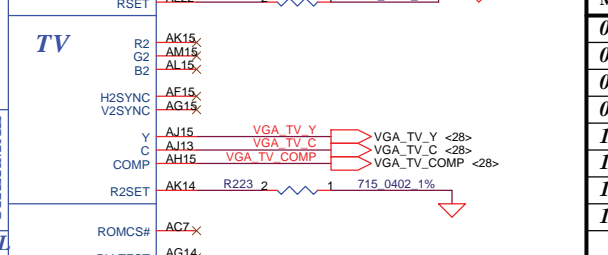
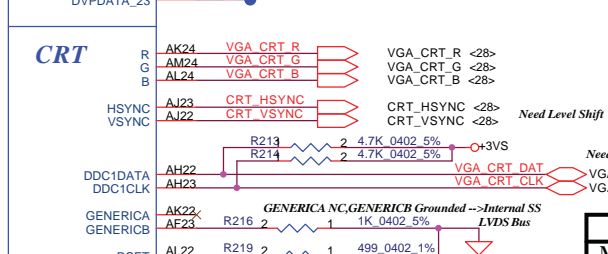
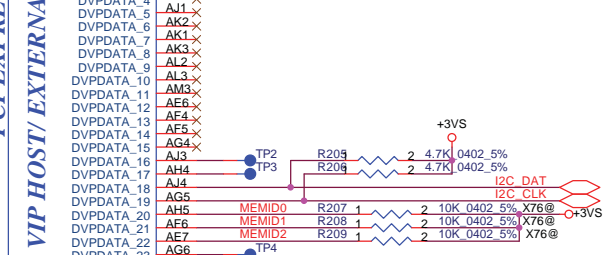
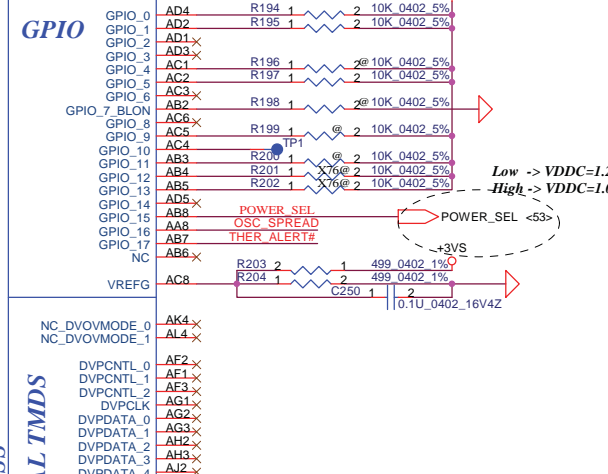
PCIE Lane Reversal

http://hobi-elektronika.net

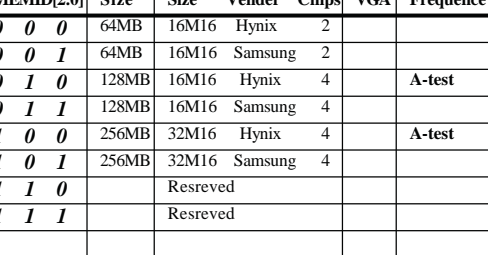
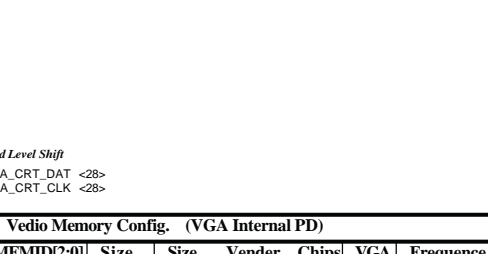
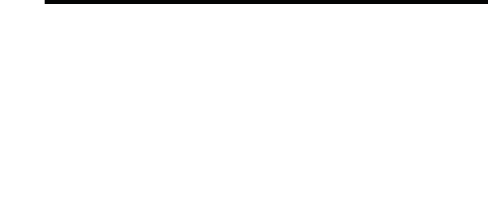
Straps: (Internal pull down)

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

PCIE GTX C MRX N15	C234	2 0.1U 0402 16V7K	PCIE GTX MRX N15	AK27
PCIE GTX C MRX P15	C234	2 0.1U 0402 16V7K	PCIE GTX MRX P15	AK27
PCIE GTX C MRX N14	C234	2 0.1U 0402 16V7K	PCIE GTX MRX N14	AK27
PCIE GTX C MRX P14	C234	2 0.1U 0402 16V7K	PCIE GTX MRX P14	AK27
PCIE GTX C MRX N13	C234	2 0.1U 0402 16V7K	PCIE GTX MRX N13	AK27
PCIE GTX C MRX P13	C234	2 0.1U 0402 16V7K	PCIE GTX MRX P13	AK27
PCIE GTX C MRX N12	C234	2 0.1U 0402 16V7K	PCIE GTX MRX N12	AK27
PCIE GTX C MRX P12	C234	2 0.1U 0402 16V7K	PCIE GTX MRX P12	AK27
PCIE GTX C MRX N11	C249	2 0.1U 0402 16V7K	PCIE GTX MRX N11	AK27
PCIE GTX C MRX P11	C249	2 0.1U 0402 16V7K	PCIE GTX MRX P11	AK27
PCIE GTX C MRX N10	C249	2 0.1U 0402 16V7K	PCIE GTX MRX N10	AK27
PCIE GTX C MRX P10	C249	2 0.1U 0402 16V7K	PCIE GTX MRX P10	AK27
PCIE GTX C MRX N9	C244	2 0.1U 0402 16V7K	PCIE GTX MRX N9	AK27
PCIE GTX C MRX P9	C244	2 0.1U 0402 16V7K	PCIE GTX MRX P9	AK27
PCIE GTX C MRX N8	C248	2 0.1U 0402 16V7K	PCIE GTX MRX N8	AK27
PCIE GTX C MRX P8	C248	2 0.1U 0402 16V7K	PCIE GTX MRX P8	AK27
PCIE GTX C MRX N7	C248	2 0.1U 0402 16V7K	PCIE GTX MRX N7	AK27
PCIE GTX C MRX P7	C248	2 0.1U 0402 16V7K	PCIE GTX MRX P7	AK27
PCIE GTX C MRX N6	C251	2 0.1U 0402 16V7K	PCIE GTX MRX N6	AK27
PCIE GTX C MRX P6	C251	2 0.1U 0402 16V7K	PCIE GTX MRX P6	AK27
PCIE GTX C MRX N5	C253	2 0.1U 0402 16V7K	PCIE GTX MRX N5	AK27
PCIE GTX C MRX P5	C253	2 0.1U 0402 16V7K	PCIE GTX MRX P5	AK27
PCIE GTX C MRX N4	C255	2 0.1U 0402 16V7K	PCIE GTX MRX N4	AK27
PCIE GTX C MRX P4	C255	2 0.1U 0402 16V7K	PCIE GTX MRX P4	AK27
PCIE GTX C MRX N3	C257	2 0.1U 0402 16V7K	PCIE GTX MRX N3	AK27
PCIE GTX C MRX P3	C257	2 0.1U 0402 16V7K	PCIE GTX MRX P3	AK27
PCIE GTX C MRX N2	C259	2 0.1U 0402 16V7K	PCIE GTX MRX N2	AK27
PCIE GTX C MRX P2	C259	2 0.1U 0402 16V7K	PCIE GTX MRX P2	AK27
PCIE GTX C MRX N1	C261	2 0.1U 0402 16V7K	PCIE GTX MRX N1	AK27
PCIE GTX C MRX P1	C261	2 0.1U 0402 16V7K	PCIE GTX MRX P1	AK27
PCIE GTX C MRX N0	C263	2 0.1U 0402 16V7K	PCIE GTX MRX N0	AK27
PCIE GTX C MRX P0	C263	2 0.1U 0402 16V7K	PCIE GTX MRX P0	AK27



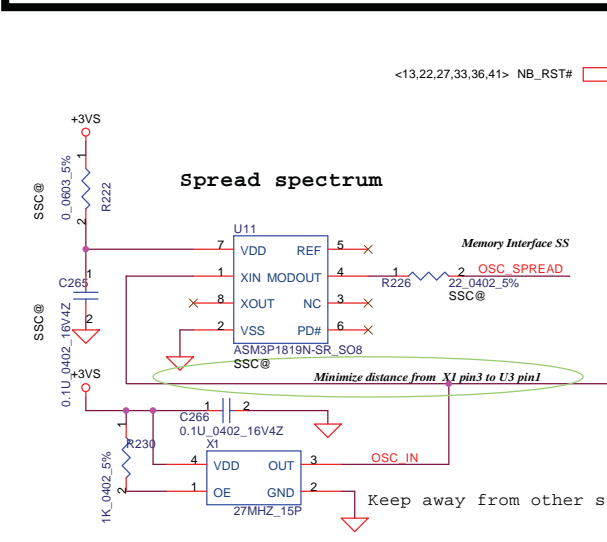
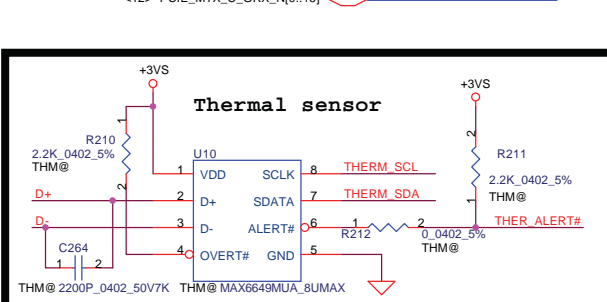
Transmitter power saving enable	GPIO[0]	0: 50% TX output swing 1: Full TX output swing
Transmitter de-emphasis enable	GPIO[1]	0: TX de-emphasis disable 1: TX de-emphasis enable
Debug Access	GPIO[4]	0: OFF Pad must be available 1: ON
PLL_IBIAS_RD	GPIO[6,5]	Default : 01
ROM ID Config	GPIO[9, 13:11]	000X: 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



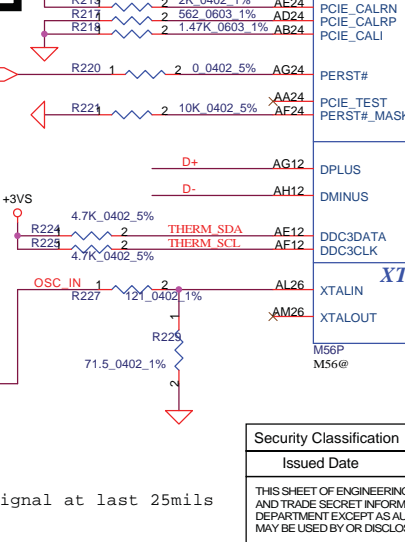
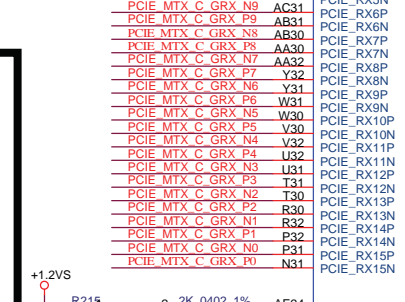
MEMID[2:0]	Size	Size	Vender	Chips	VGA	Frequency
0 0 0	64MB	16M16	Hynix	2		
0 0 1	64MB	16M16	Samsung	2		
0 1 0	128MB	16M16	Hynix	4		A-test
0 1 1	128MB	16M16	Samsung	4		A-test
1 0 0	256MB	32M16	Hynix	4		A-test
1 0 1	256MB	32M16	Samsung	4		A-test
1 1 0			Resreved			
1 1 1			Resreved			

<12> PCIE_GTX_C_MRX_P[0..15] <12> PCIE_GTX_C_MRX_N[0..15]

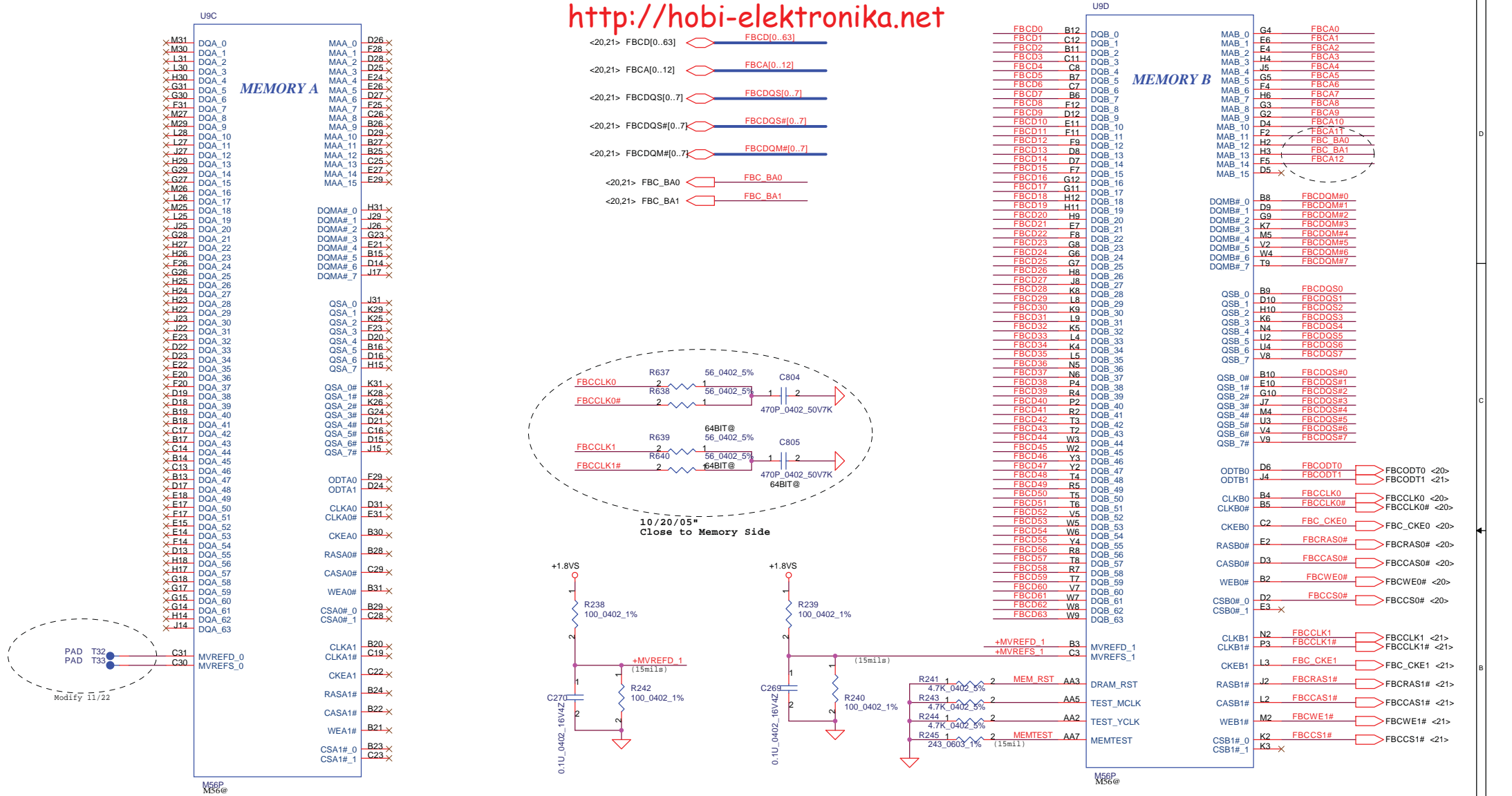
<12> PCIE_MTX_C_GRX_P[0..15] <12> PCIE_MTX_C_GRX_N[0..15]



<13,22,27,33,36,41> NB_RST#



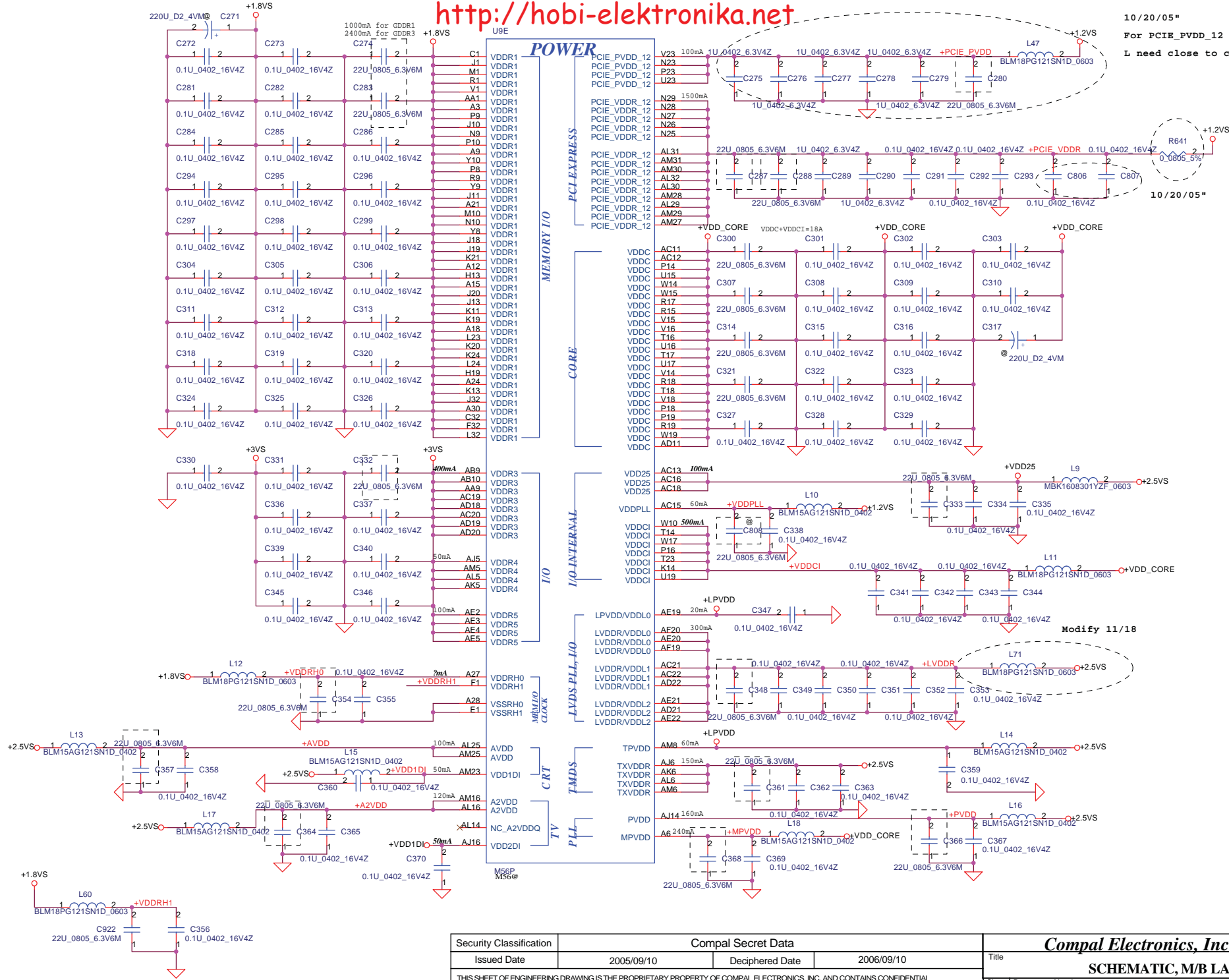
Security Classification	Compal Secret Data	Title
Issued Date	2005/09/10	Deciphered Date
2006/09/10		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		SCHEMATIC, M/B LA-3151P
Date:	2006/09/10	Sheet 16 of 55



GDDR2

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	
Custom		401412		B	
Date:		星期 三月 09, 2006		Sheet 18 of 55	

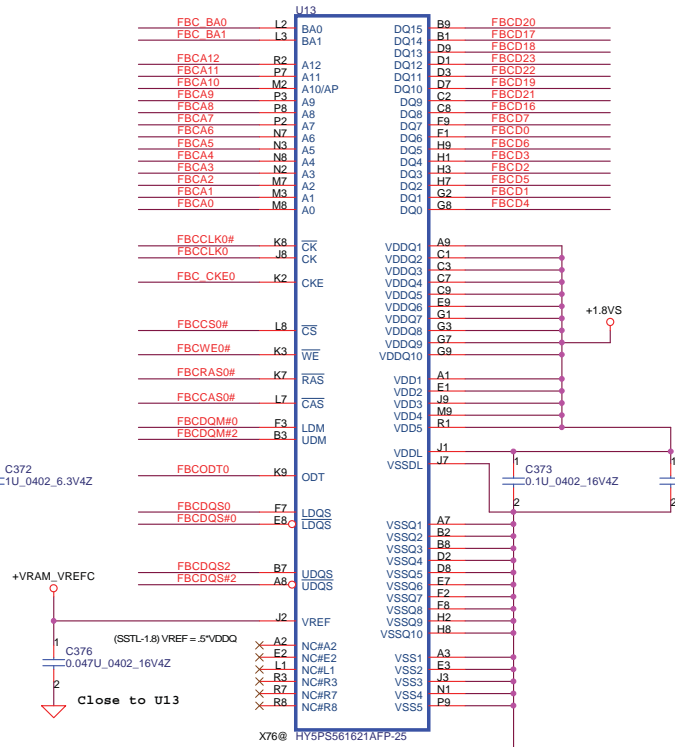
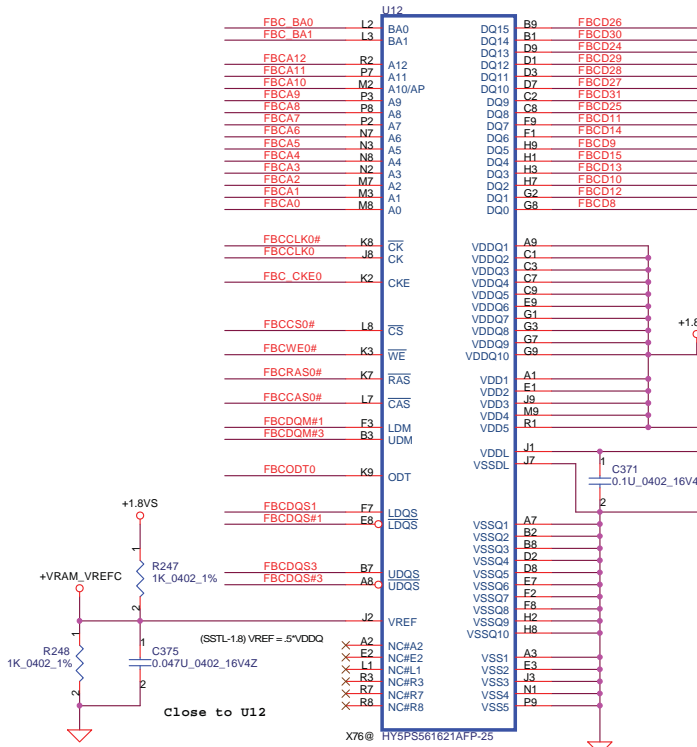
10/20/05"
For PCIE_PVDD_12 only
L need close to chip



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	
Custom		401412		B	
Date:		星期 三月 09, 2006		Sheet 19 of 55	

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

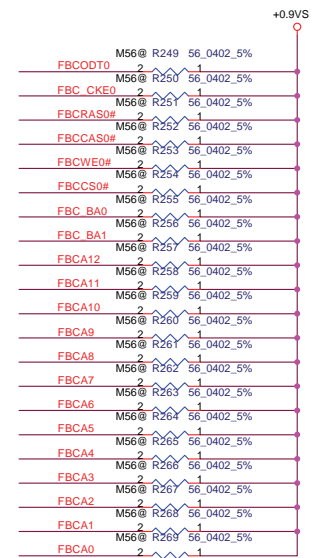
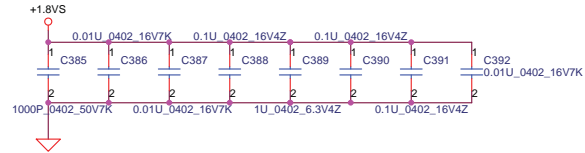
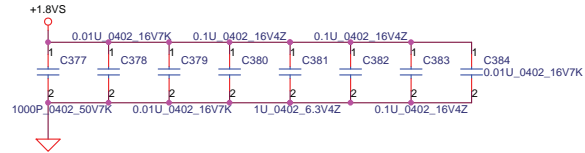
11/03/05' SWAP NET



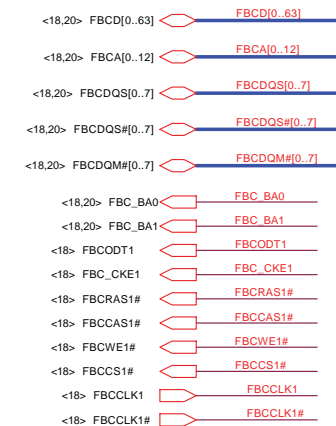
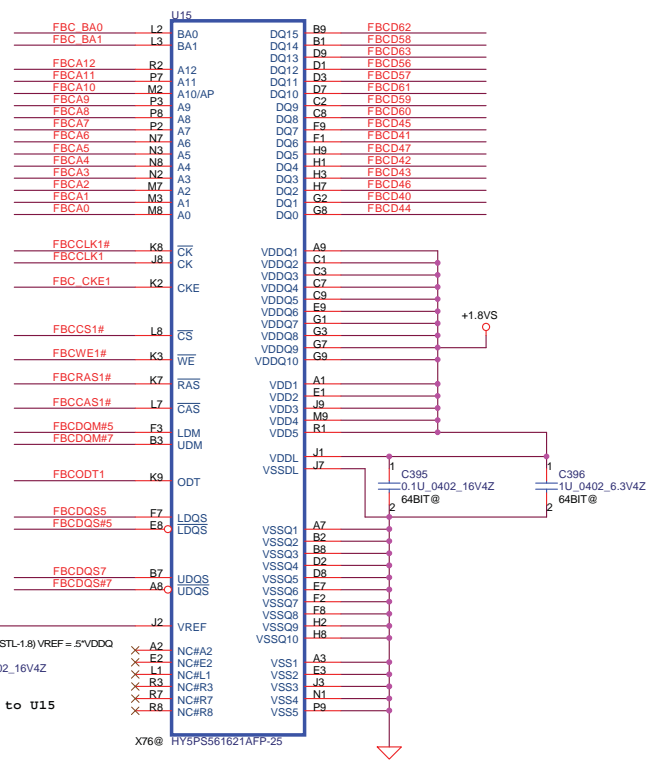
- <18,21> FB CD[0..63] FBCD[0..63]
- <18,21> FB CA[0..12] FB CA[0..12]
- <18,21> FB CDQS[0..7] FBCDQS[0..7]
- <18,21> FB CDQS# [0..7] FBCDQS# [0..7]
- <18,21> FB CDQM# [0..7] FBCDQM# [0..7]
- <18,21> FB C BA0 FBC BA0
- <18,21> FB C BA1 FBC BA1
- <18> FB C ODT0 FBC ODT0
- <18> FB C KE0 FBC KE0
- <18> FB C RAS0# FBCRAS0#
- <18> FB C CAS0# FBCCAS0#
- <18> FB C WE0# FBCWE0#
- <18> FB C CS0# FBCCS0#
- <18> FB C CLK0 FBCCLK0
- <18> FB C CLK0# FBCCLK0#

DDR2 BGA MEMORY

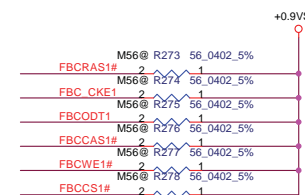
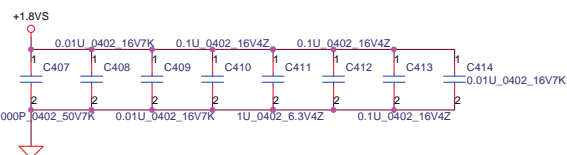
DDR2 BGA MEMORY



M56 Only

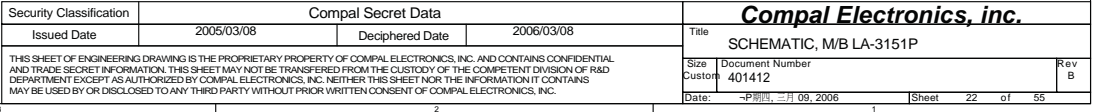


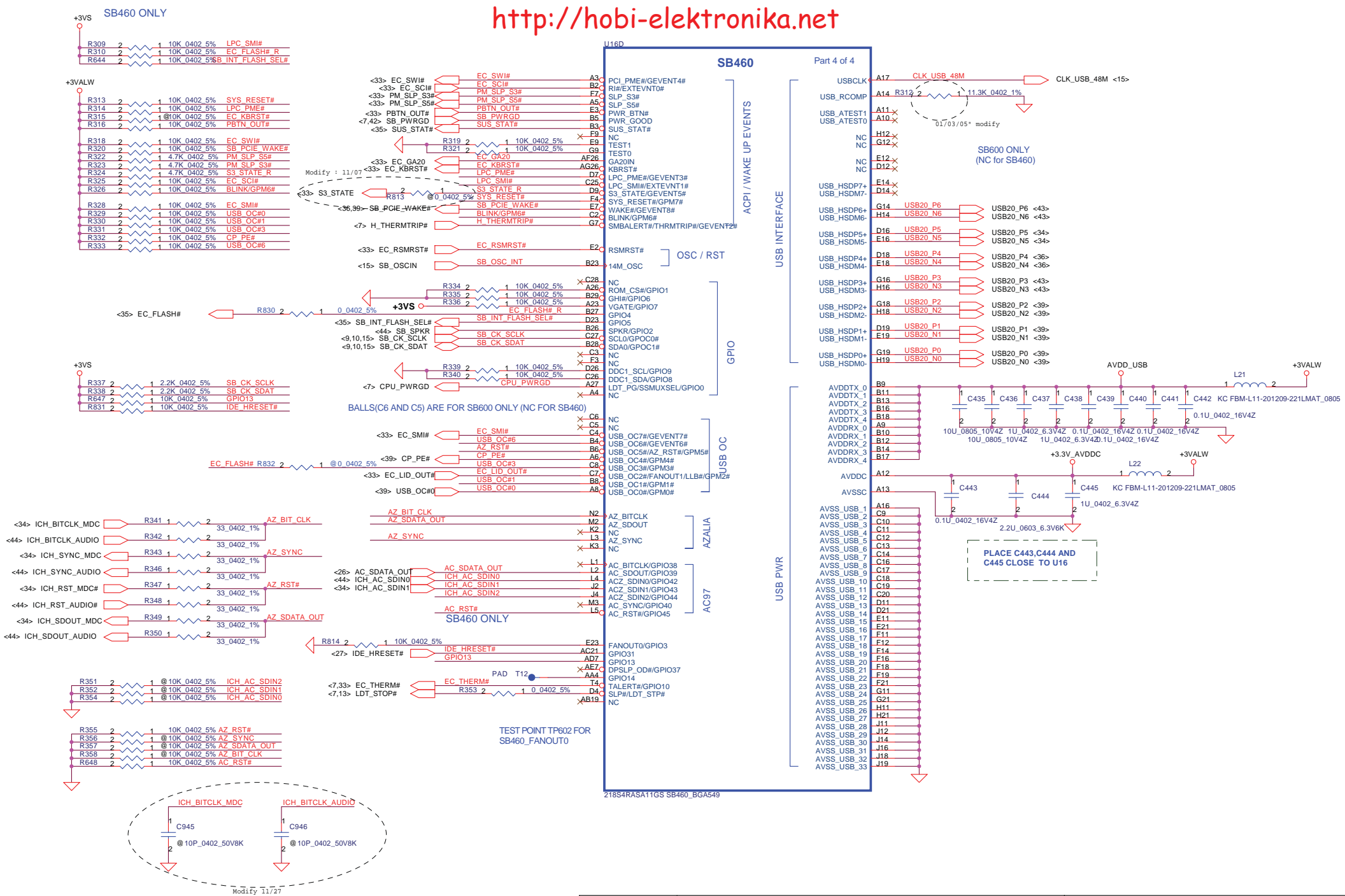
DDR2 BGA MEMORY



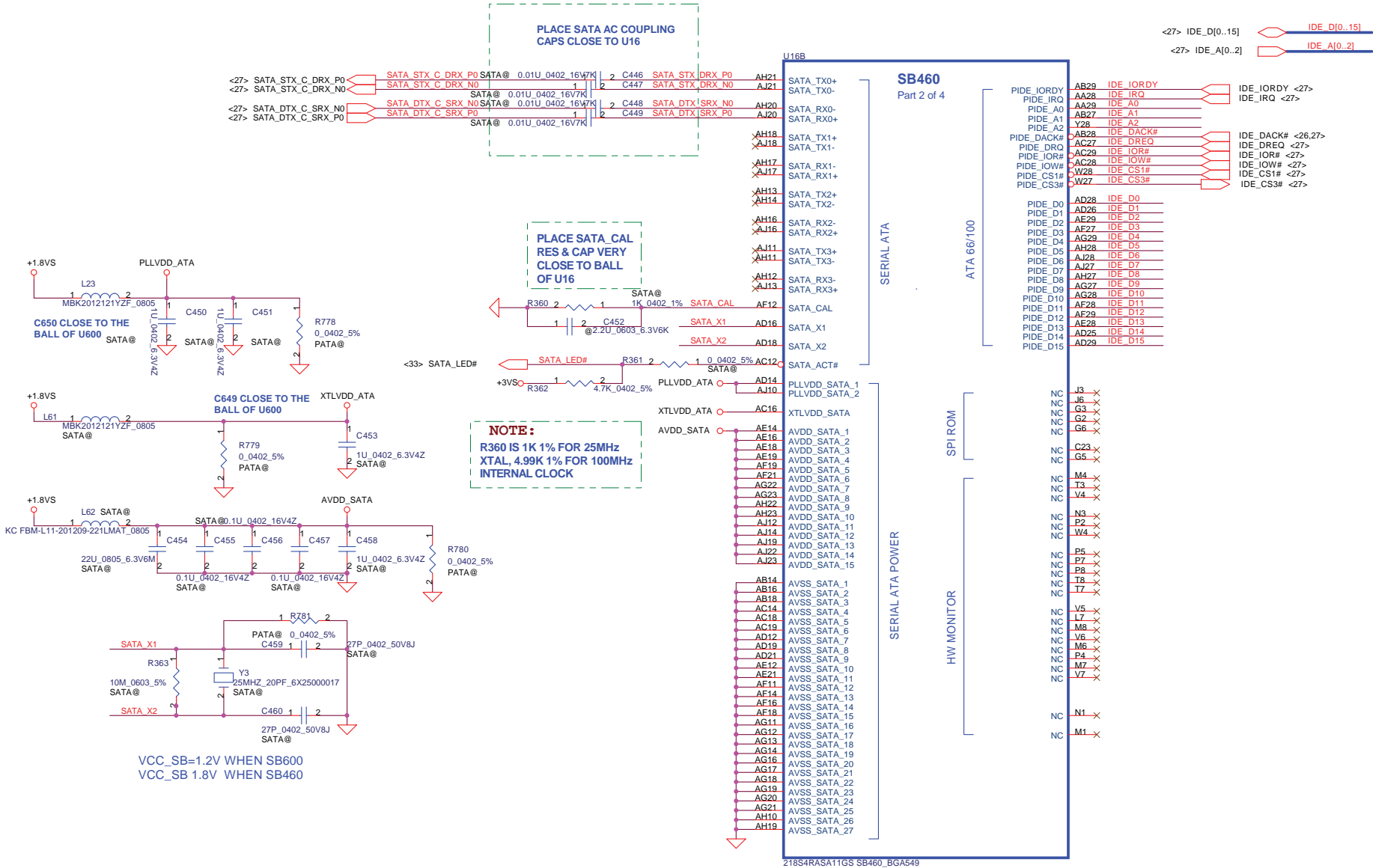
M56 Only

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 OR R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Custom	B
				401412	
Date	星期三, 三月 09, 2006		Sheet	21	of 55

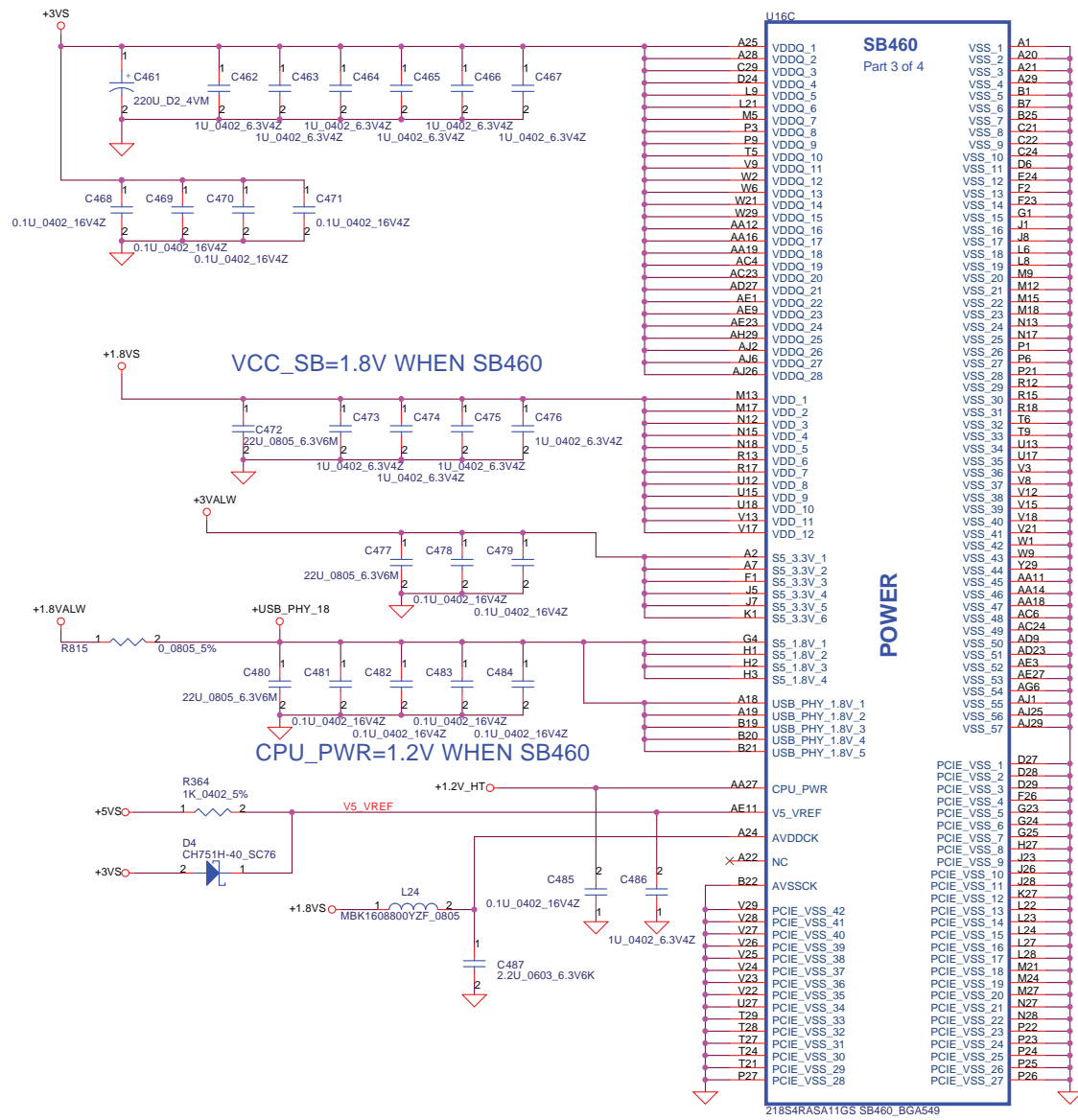




Security Classification		Compal Secret Data		Compal Electronics, inc.	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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



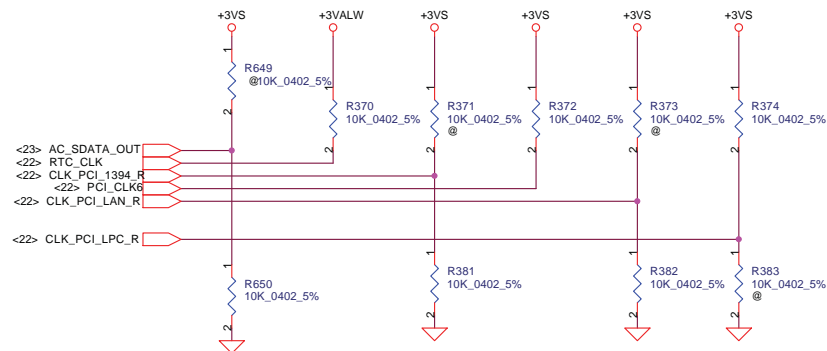
Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	SCHEMATIC, M/B LA-3151P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Document Number
				Custom	401412
Date: 星期四, 三月 09, 2006				Sheet	24 of 55
				Rev	B



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 B
				Document Number	
				401412	
				Date	Rev B
				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

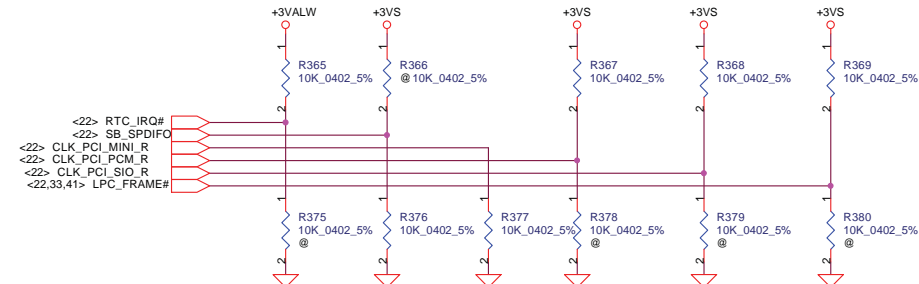


	SB600				SB460			
	AC_SDATA_OUT	RTC_CLK	PCI_CLK4 CLK_PCI_1394	PCI_CLK6	PCI_CLK0 CLK_PCI_LAN	PCI_CLK1 CLK_PCI_LPC	PCI_CLK0 CLK_PCI_LAN	PCI_CLK1 CLK_PCI_LPC
PULL HIGH	USE DEBUG STRAPS	INTERNAL RTC DEFAULT	USE INT. PLL48	CPU IF=K8 DEFAULT	ROM TYPE: H, H = PCI ROM H, L = SPI ROM L, H = LPC ROM L, L = FWH ROM	DEFAULT	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, PCI_CLK[8:7] ARE CONNECTED TO SUBSTRATE BALLS PCI_CLK[1:0]			

<http://hobi-elektronika.net>

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

SB460 ONLY



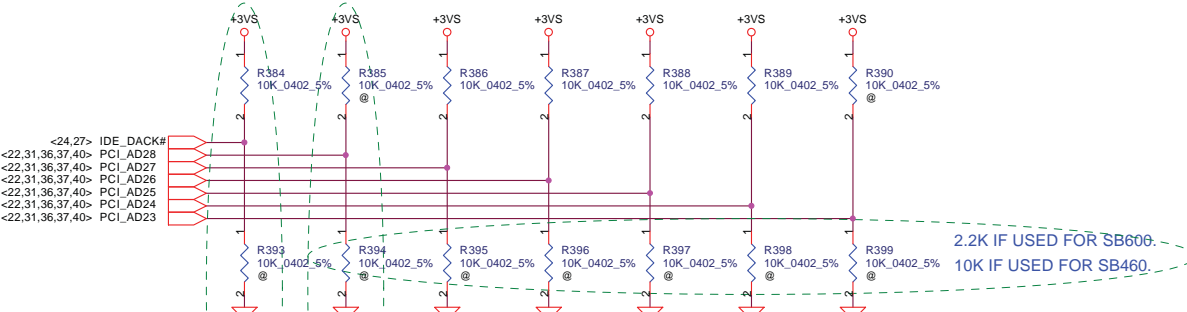
	ACPWRON	SPDIF_OUT	PCI_CLK2	PCI_CLK3	PCI_CLK5	LFRAME#
	RTC_IRQ#	SB_SPDIFO	CLK_PCI_MINI	CLK_PCI_PCM	CLK_PCI_SIO	LPC_FRAME#
PULL HIGH	MANUAL PWR ON DEFAULT	SIO 24MHz	XTAL MODE NOT SUPPORTED	USB PHY POWERDOWN DISABLE DEFAULT	PCIE_CM_SET LOW DEFAULT	ENABLE THERMTRIP# DEFAULT
PULL LOW	AUTO PWR ON	SIO 48MHz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



OVERLAP COMMON PADS WHERE
POSSIBLE FOR DUAL-OP RESISTORS.

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
PULL LOW	USE SHORT RESET	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	BOOTFAILTIMER ENABLED

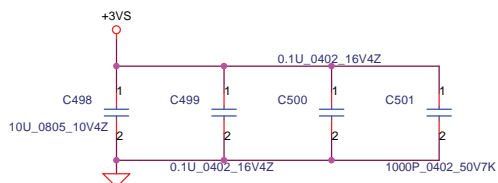
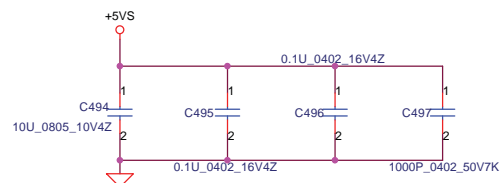
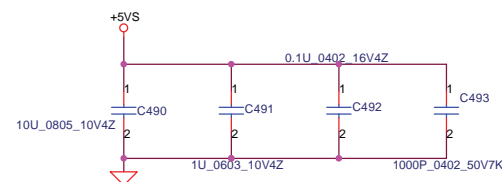
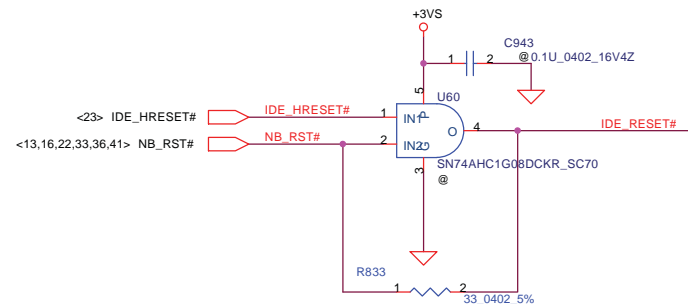
SB600 ONLY

NOTE: FOR
SB460,
PCI_AD23 IS
RESERVED

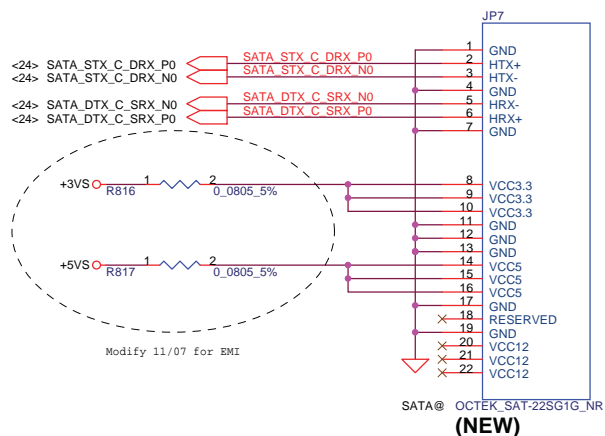
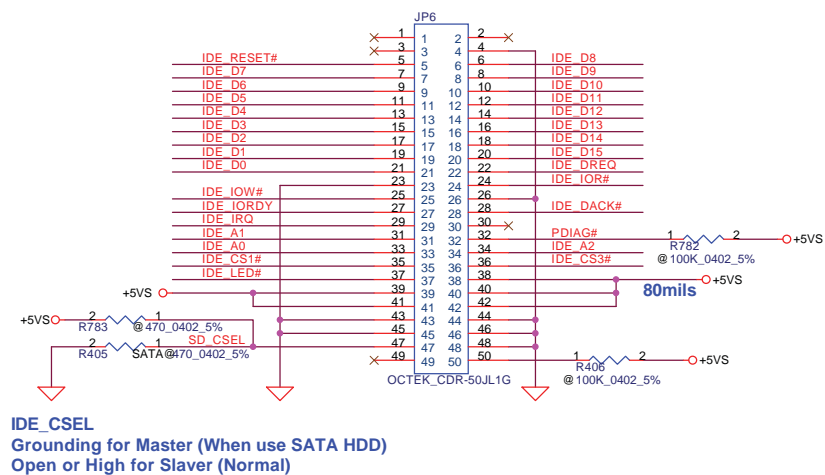
SB460 ONLY

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

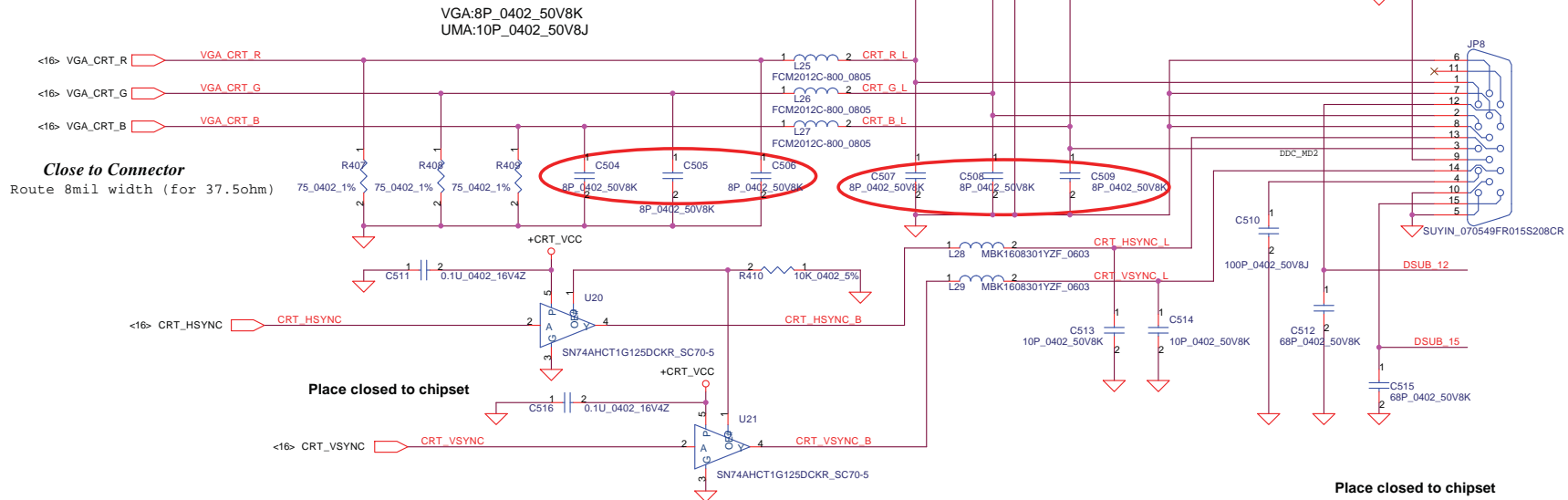


SATA HDD Conn.

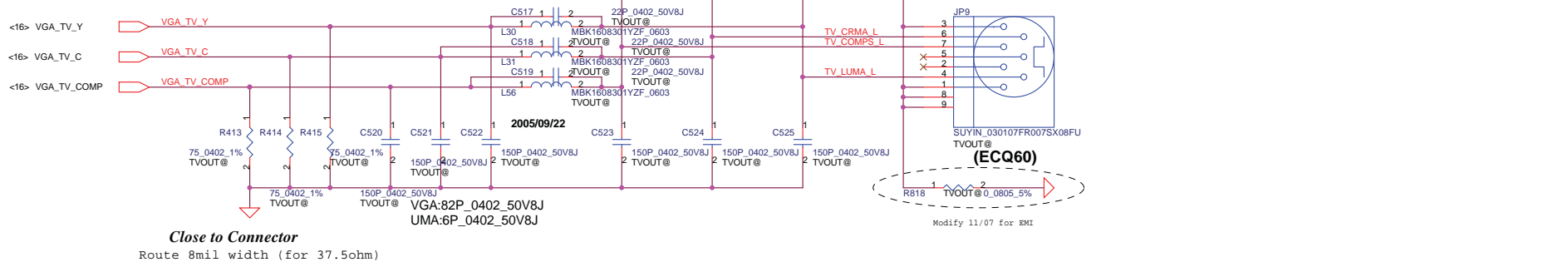
**CDROM CONN**

IDE_CSEL
Grounding for Master (When use SATA HDD)
Open or High for Slaver (Normal)

CRT Connector

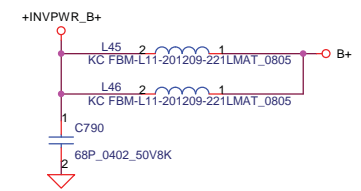
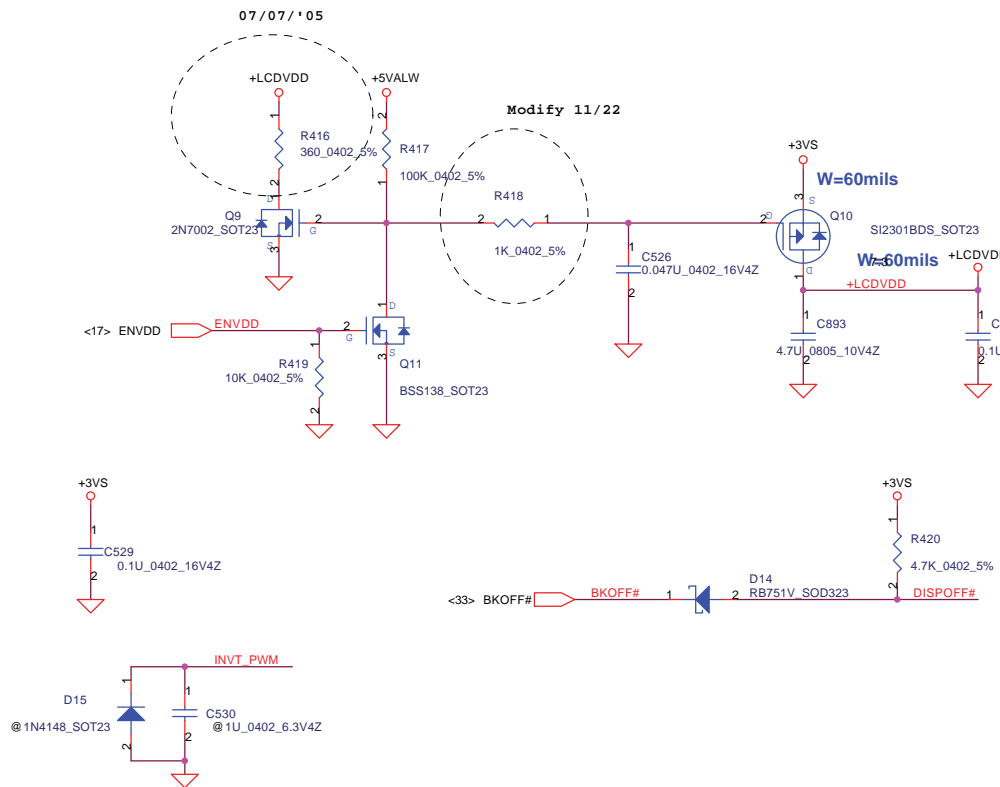


TV-OUT Conn.

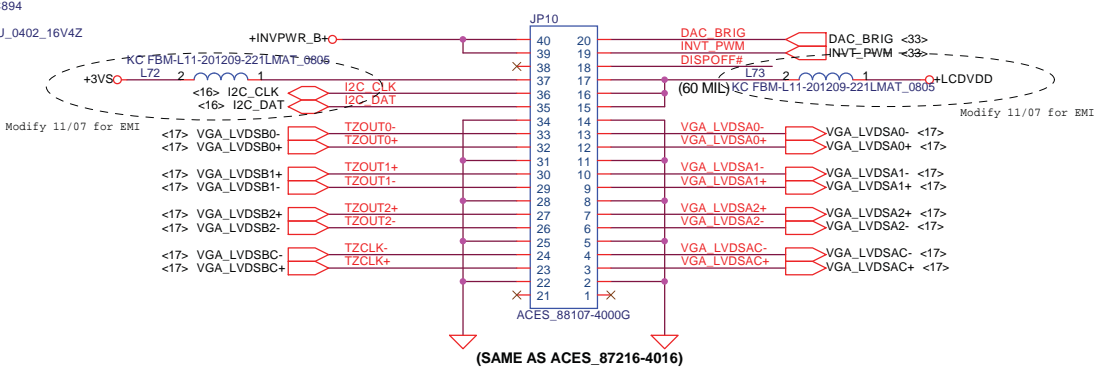


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED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

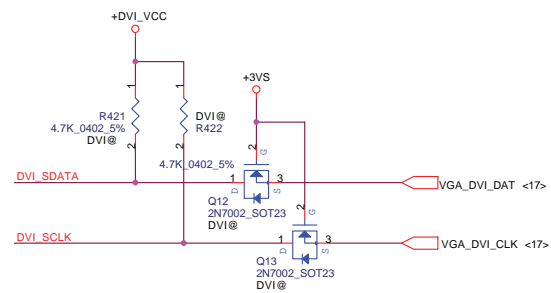
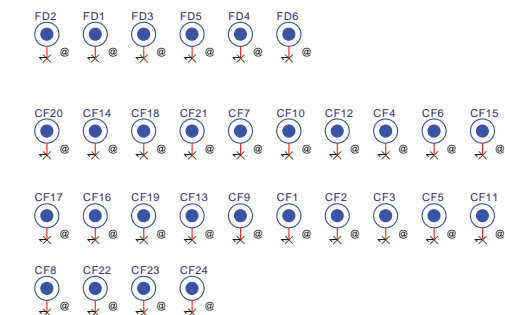
LCD POWER CIRCUIT



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		Document Number		Rev B	
										401412			
								Date:		星期四, 三月 09, 2006		Sheet 29 of 55	

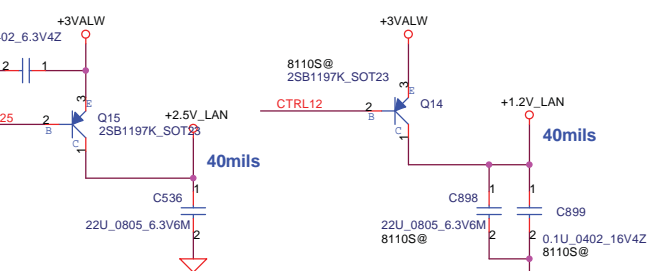
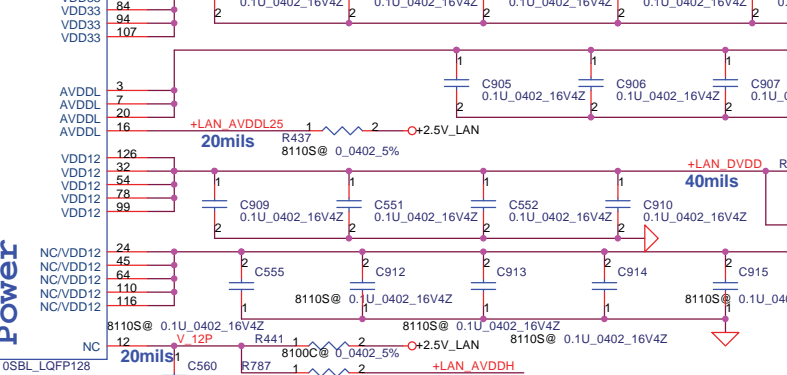
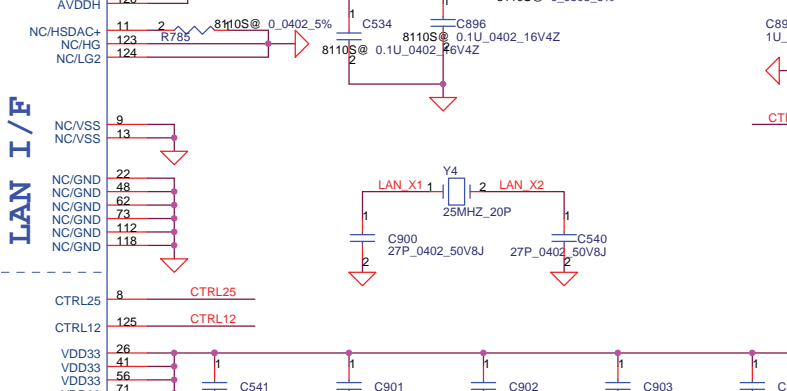
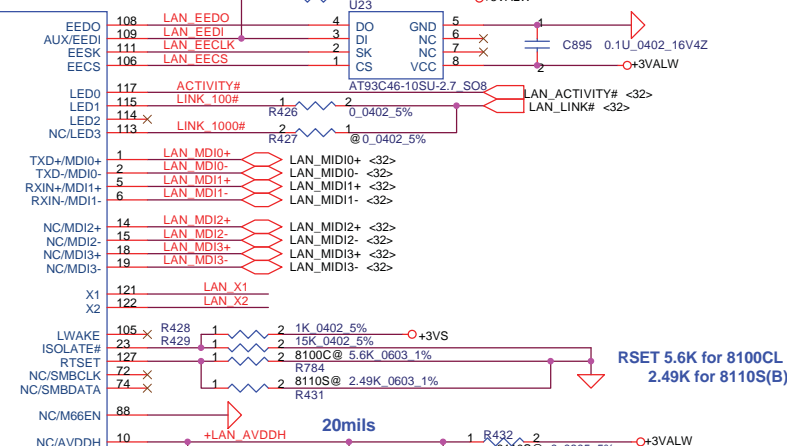
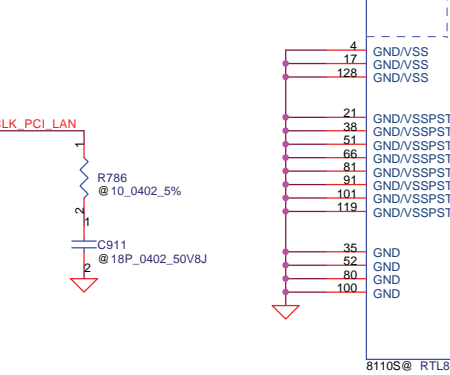
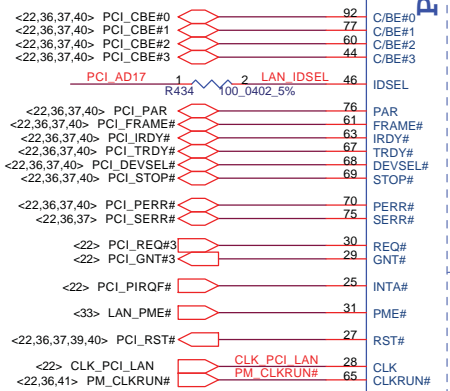
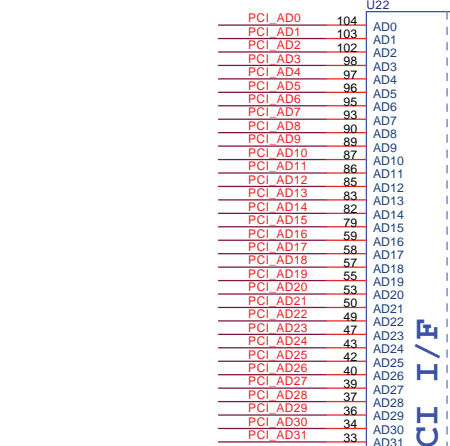


Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	

<22,26,36,37,40> PCI_AD[0..31] PCI_AD[0..31]

FN	8100CL(10/100 LAN)	8110SBL(10/100/1000 LAN)
RSET	5.6K	2.49K

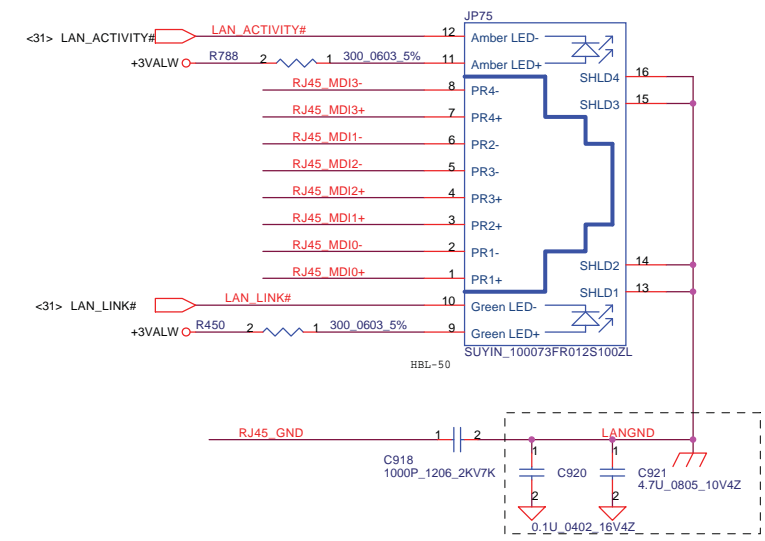
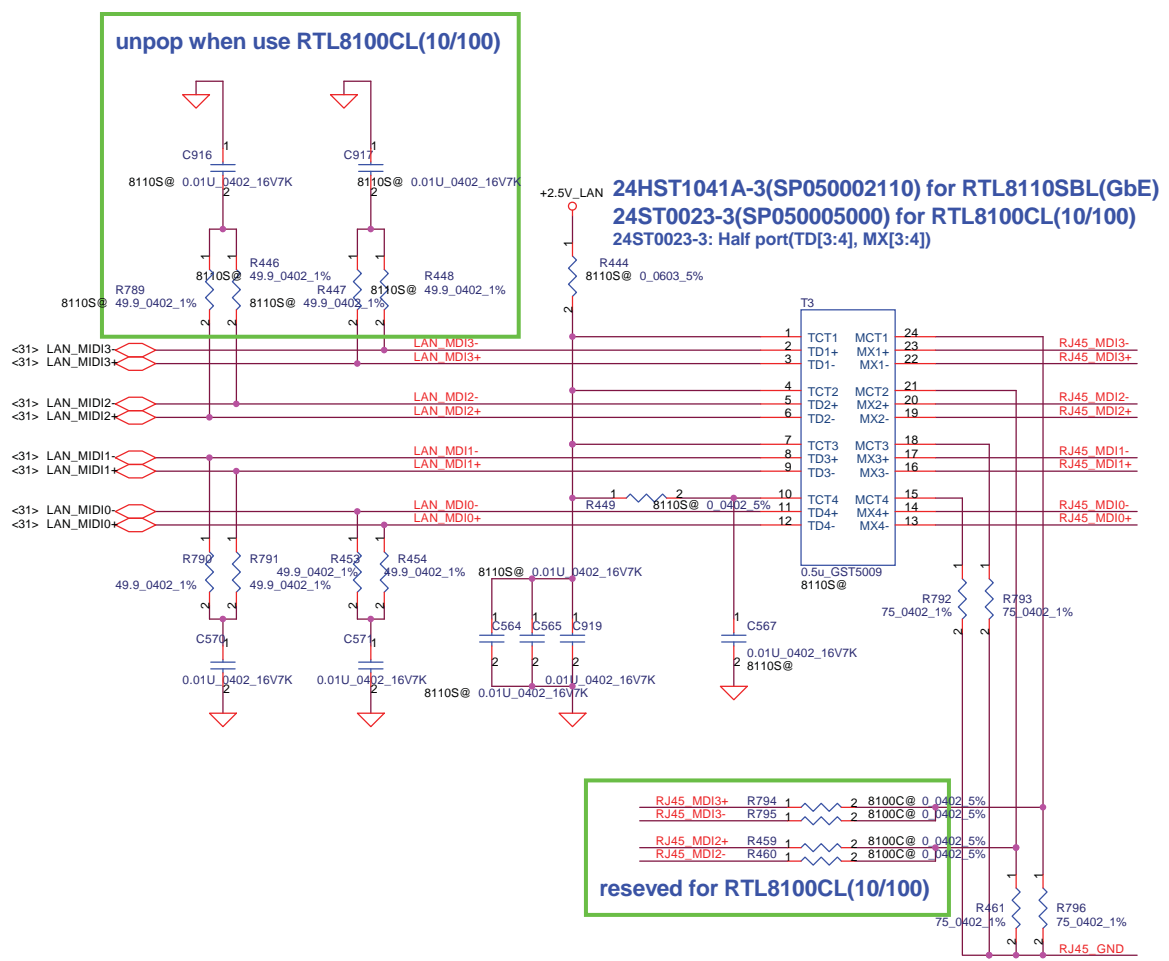
BOM structure	8100CL(10/100 LAN)	8110SBL(10/100/1000 LAN)
8100C@	Stuff	No_Stuff
8110S@	No_Stuff	Stuff
@	No_Stuff	No_Stuff



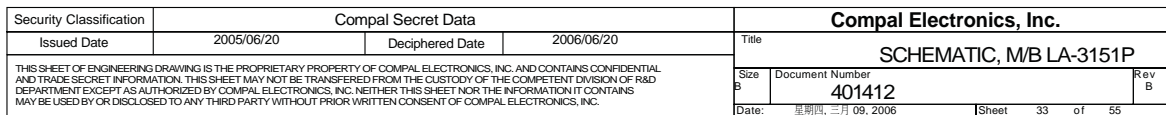
RTL8110SBL change to Ver.D

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	Document Number	401412		Rev	B
Date:	星期四, 三月 09, 2006	Sheet	31	of	55

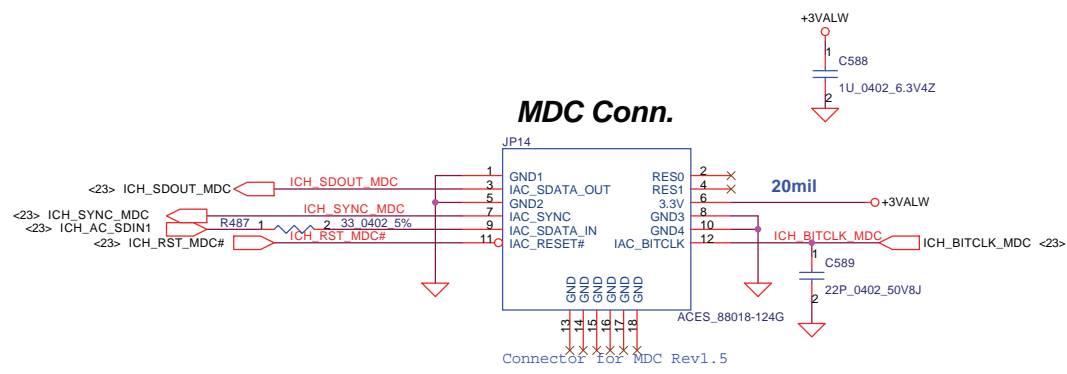
LAN RTL8110SBL/RTL8100CL



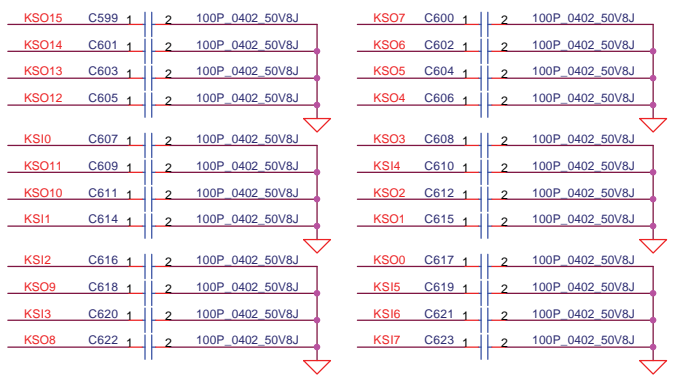
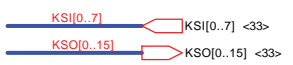
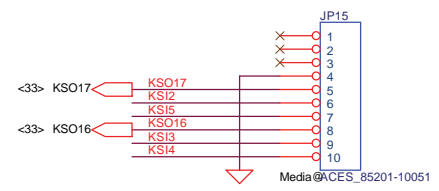
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/07/29	Deciphered Date	2006/07/29	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
Date: 星期四, 三月 09, 2006		Sheet 32 of 55		B	



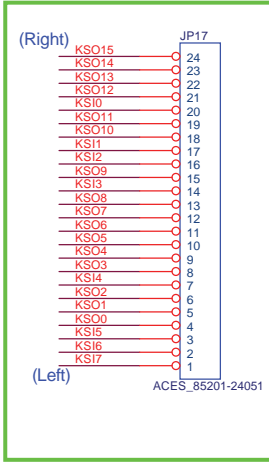
MDC Conn.



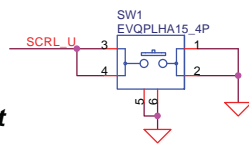
2005/09/04



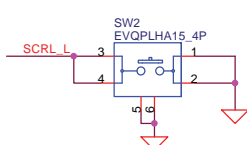
INT_KBD Conn.



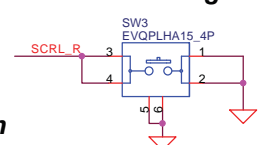
Scroll Up



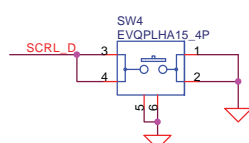
Scroll Left



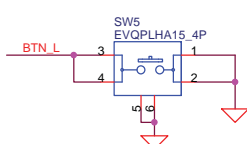
Scroll Right



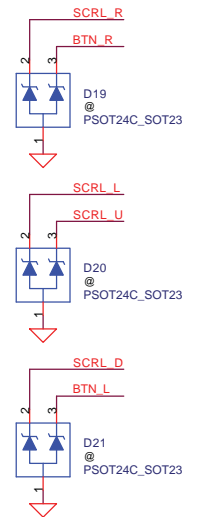
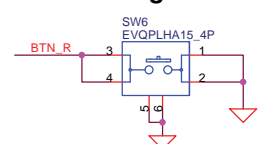
Scroll Down



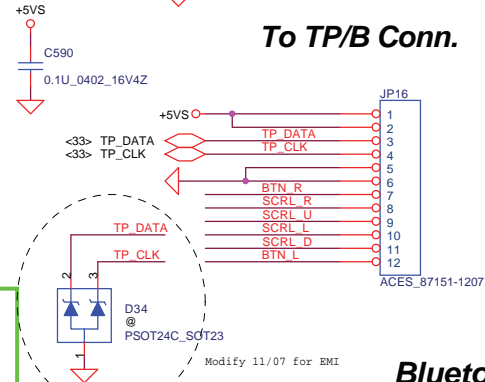
Left



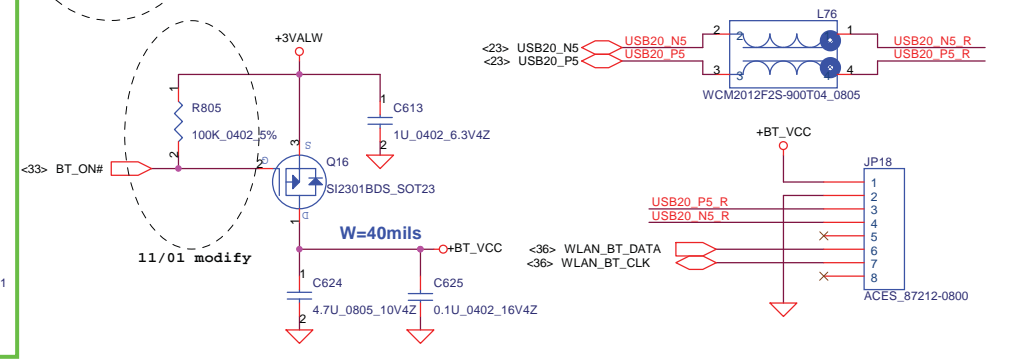
Right



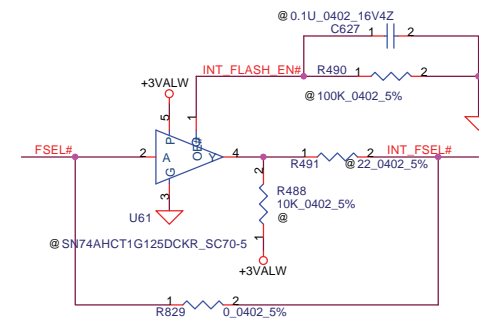
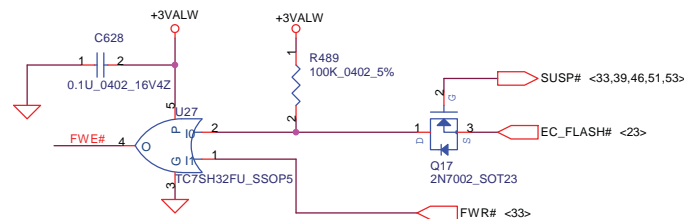
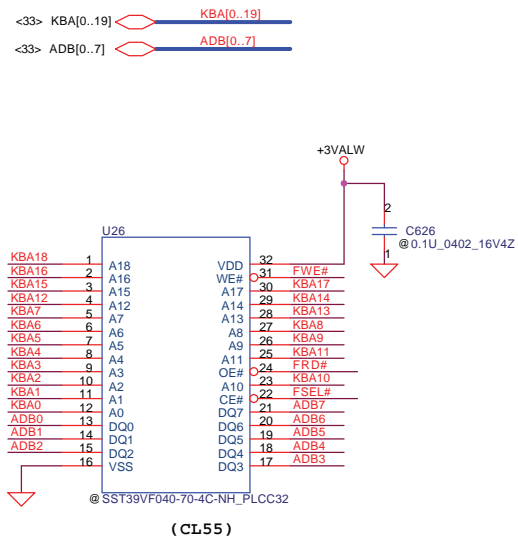
To TP/B Conn.



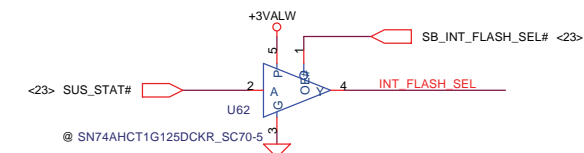
Bluetooth Conn.



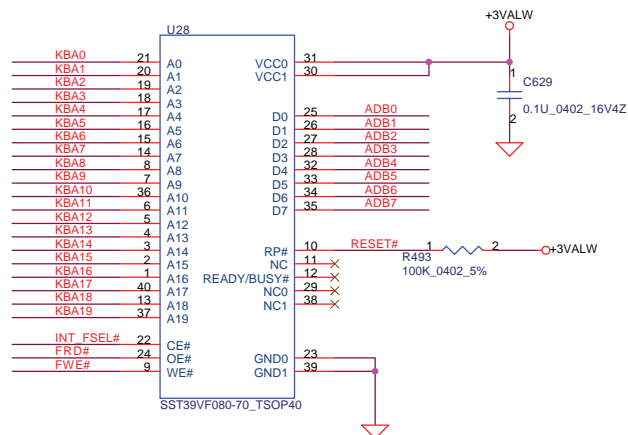
Security Classification		Compal Secret Data		Compal Electronics, inc.		
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Title SCHEMATIC, M/B LA-3151P		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 Document Number		Rev B
				Custom 401412		
				Date: 星期四, 三月 09, 2006		Sheet 34 of 55



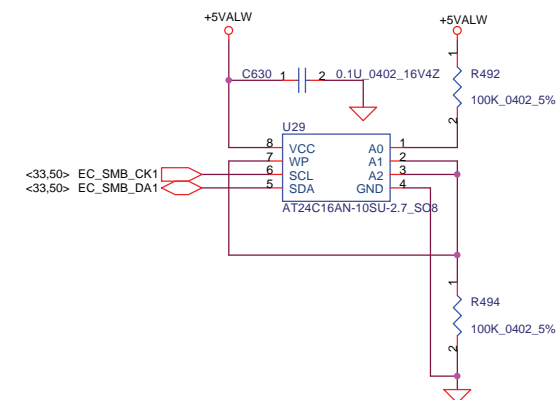
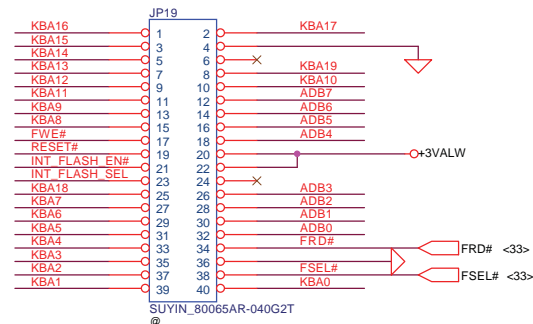
FOR DEBUG ONLY



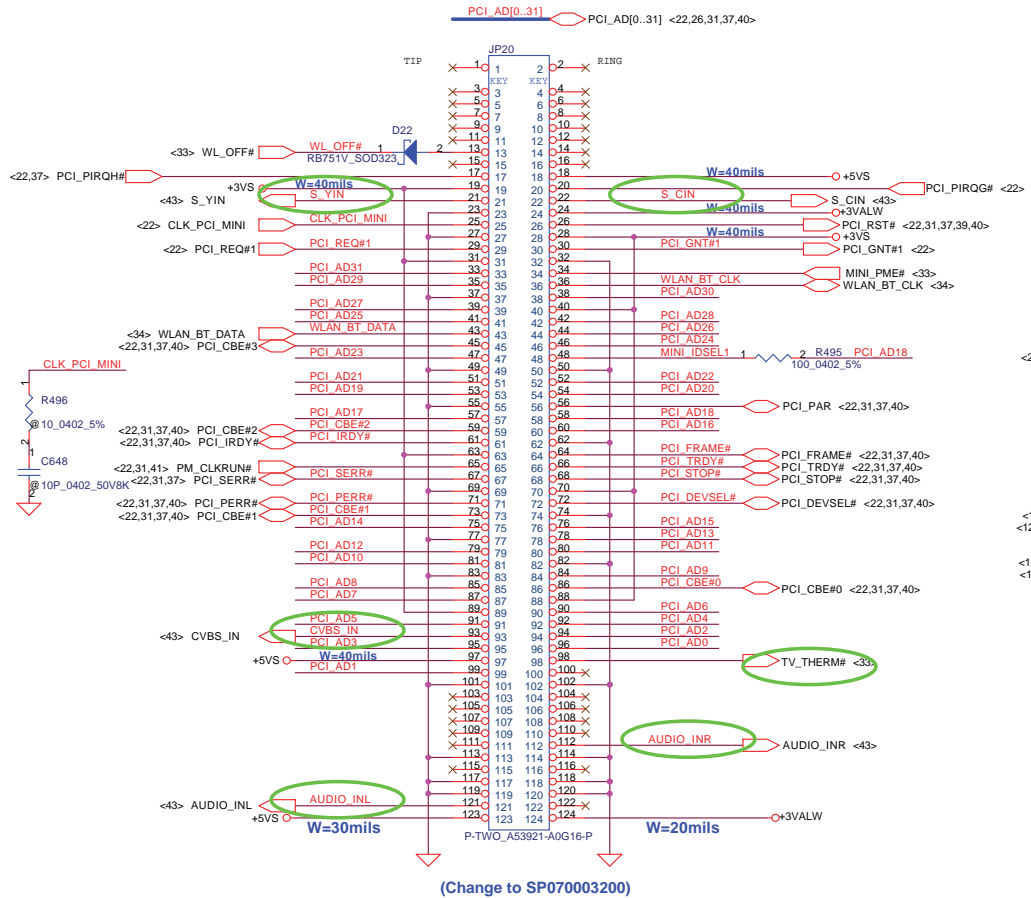
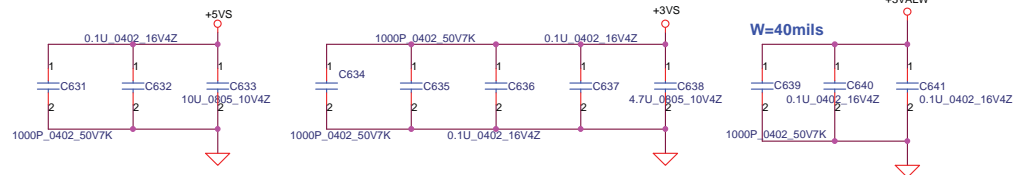
1MB Flash ROM



1MB Flash ROM

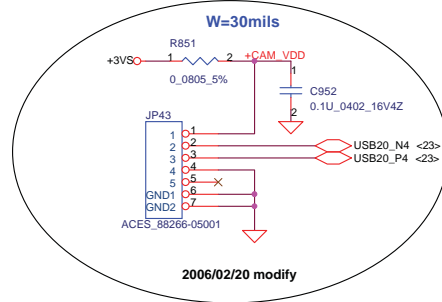
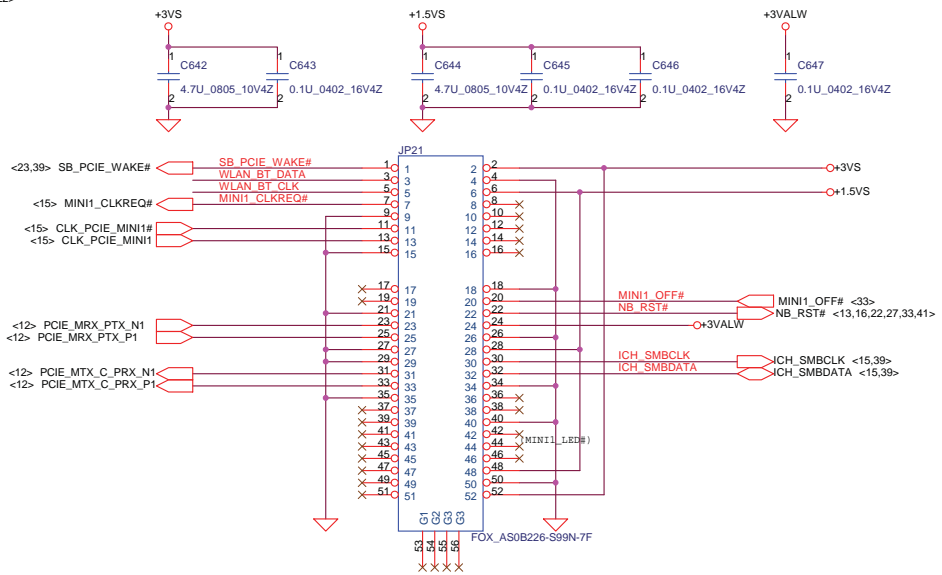


Security Classification	Compal Secret Data			Title SCHEMATIC, M/B LA-3151P				
Issued Date	2005/03/08	Deciphered Date	2006/03/08					
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE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



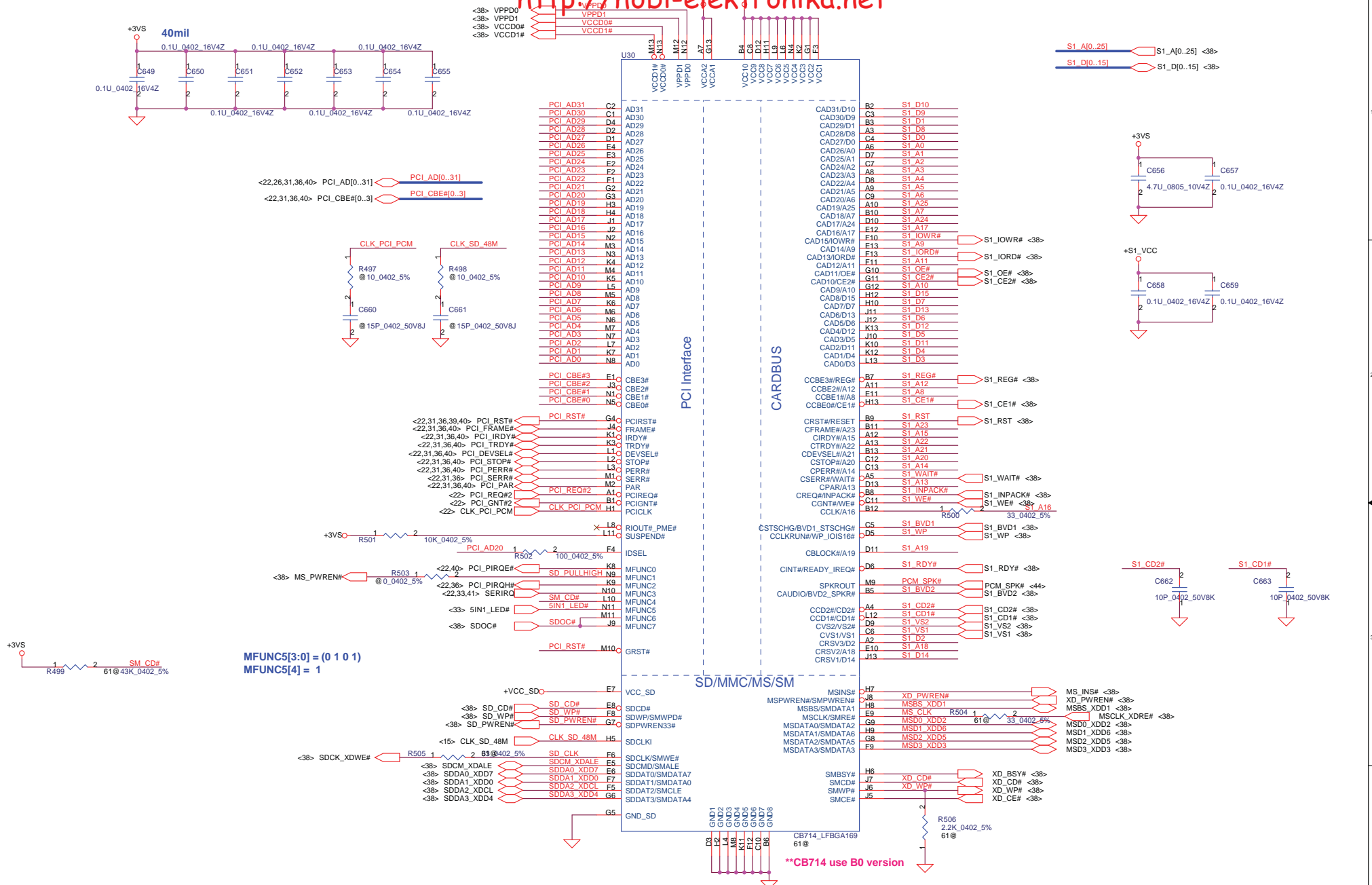
(Change to SP070003200)

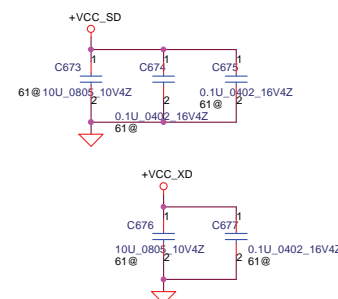
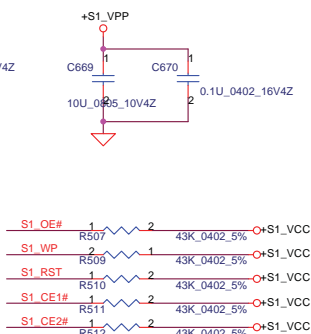
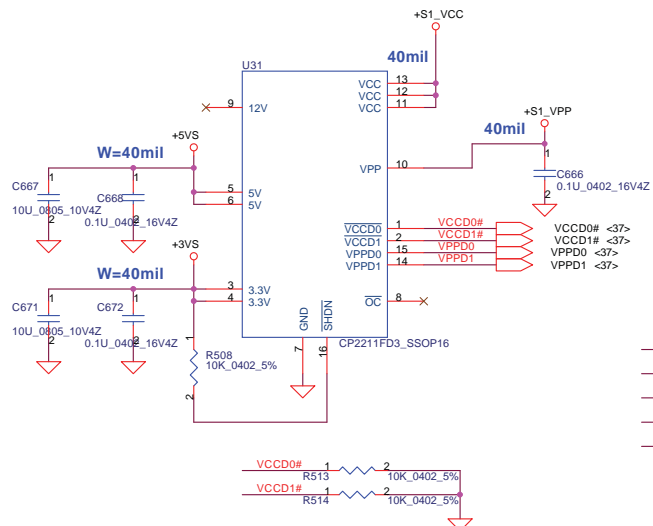
Mini Card Power Rating			
Power	Primary Power (mA)		Auxiliary Power (mA)
	Peak	Normal	Normal
+3VS	1000	750	
+3VALW	330	250	250 (wake enable)
+1.5VS	500	375	5 (Not wake enable)



2006/02/20 modify

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	SCHMATIC, 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	Rev B
				Sheet 36 of 55	





xD PU and PD. Close to Socket

+3VS

R515 43K XD_CD# @ 43K_0402_5%

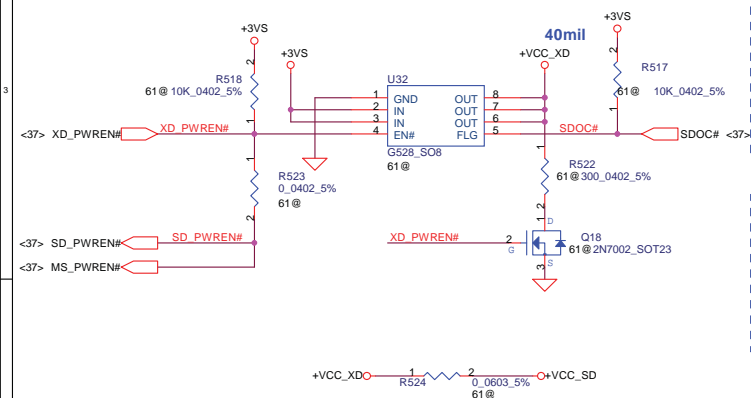
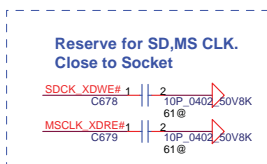
+VCC_XD

R516 2.2K 0402_5% MSLCLK_XDRE#

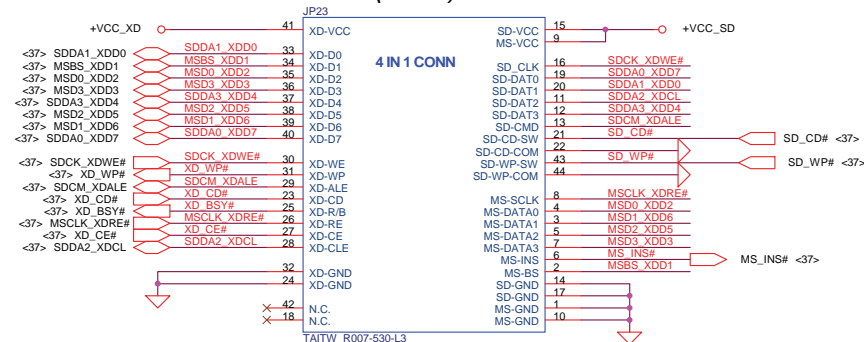
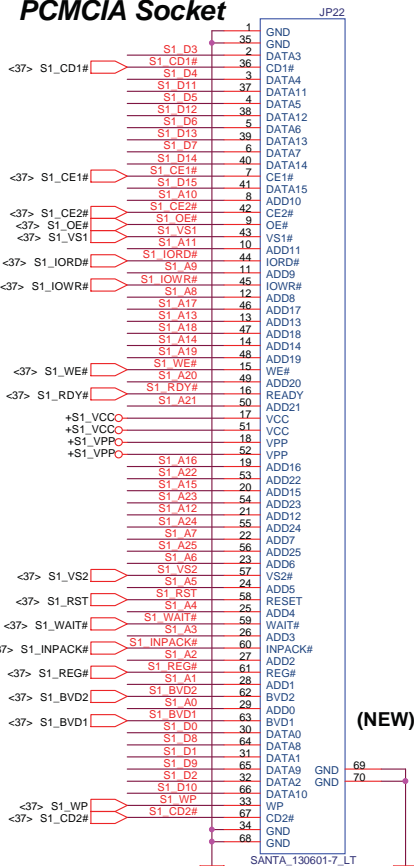
R519 2.2K 0402_5% XD_CS#

R520 2.2K 0402_5% XD_CD#

R521 2.2K 0402_5% XD_CS#

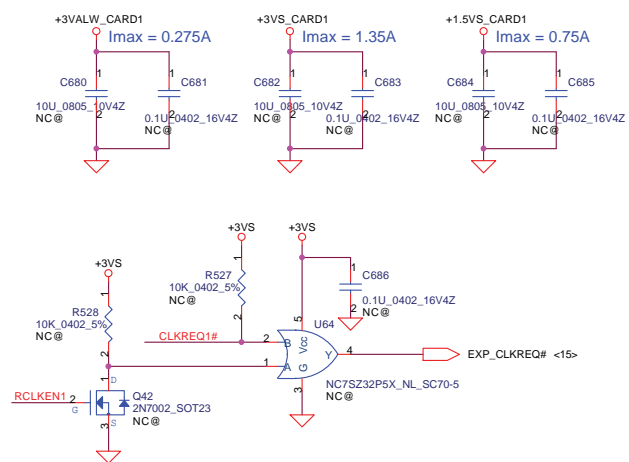
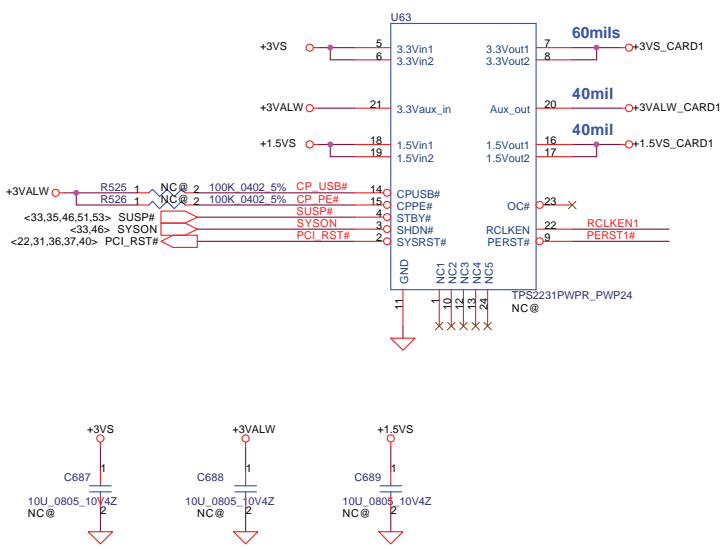


4 IN 1 Socket (HDQ70)

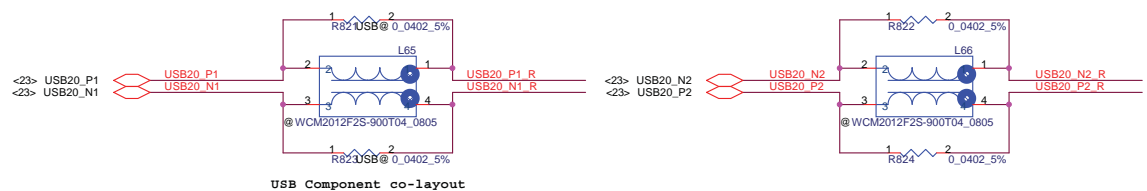
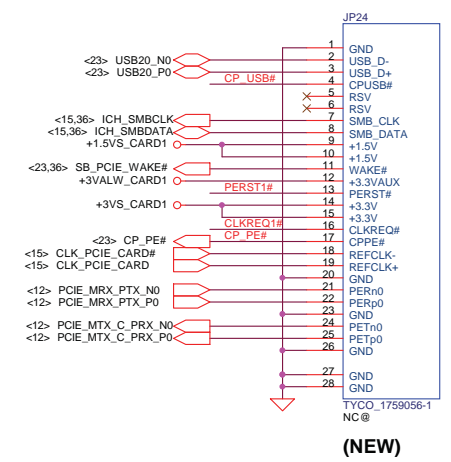


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title	SCHEMATIC, M/B LA-3151P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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	Document Number	Rev
					401412	B
				Date:	星期四, 三月 09, 2006	Sheet 38 of 55

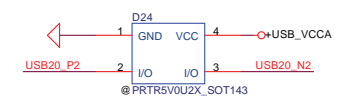
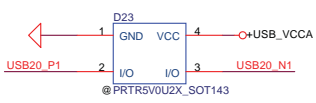
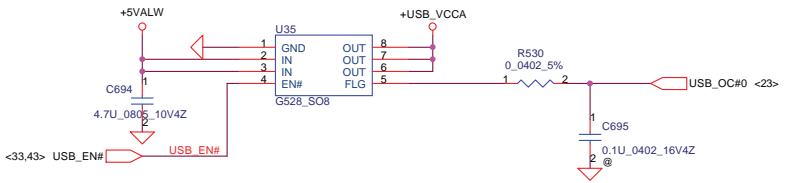
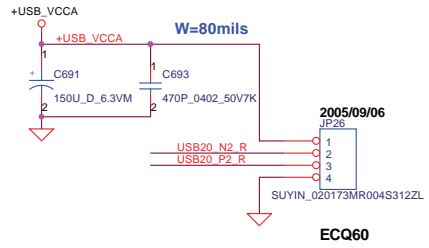
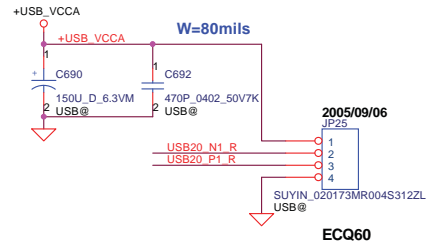
New Card Power Switch

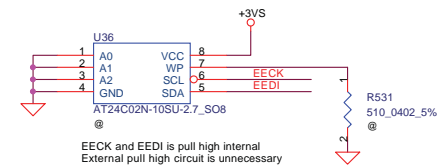
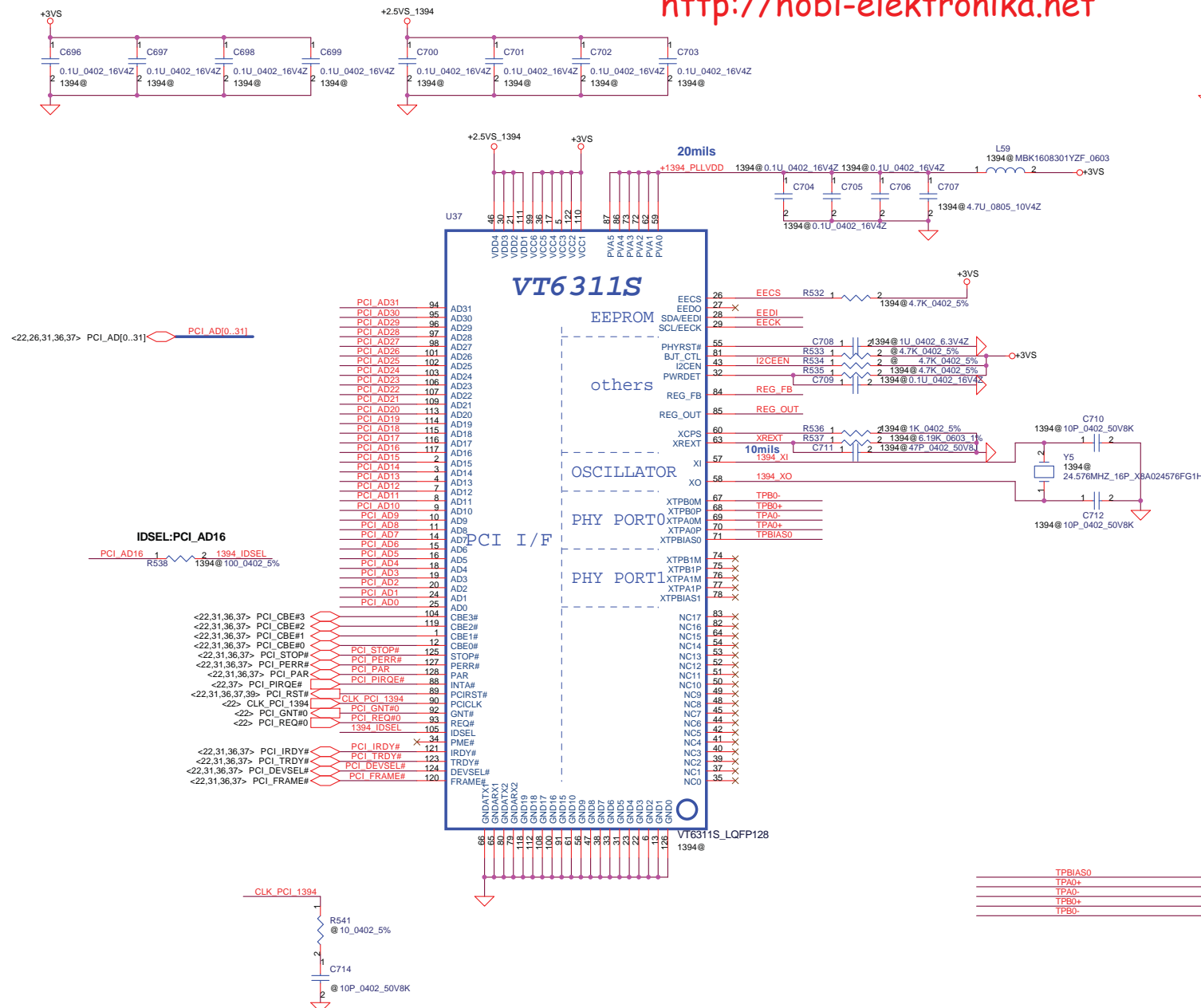


New Card Socket (Left)

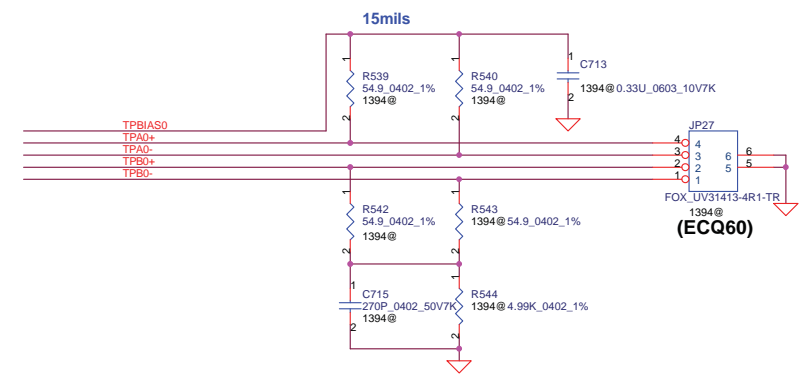
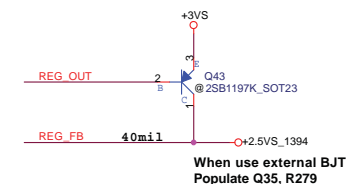


USB CONN. 1 & 2

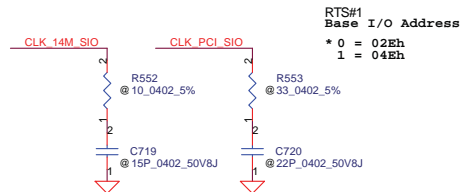
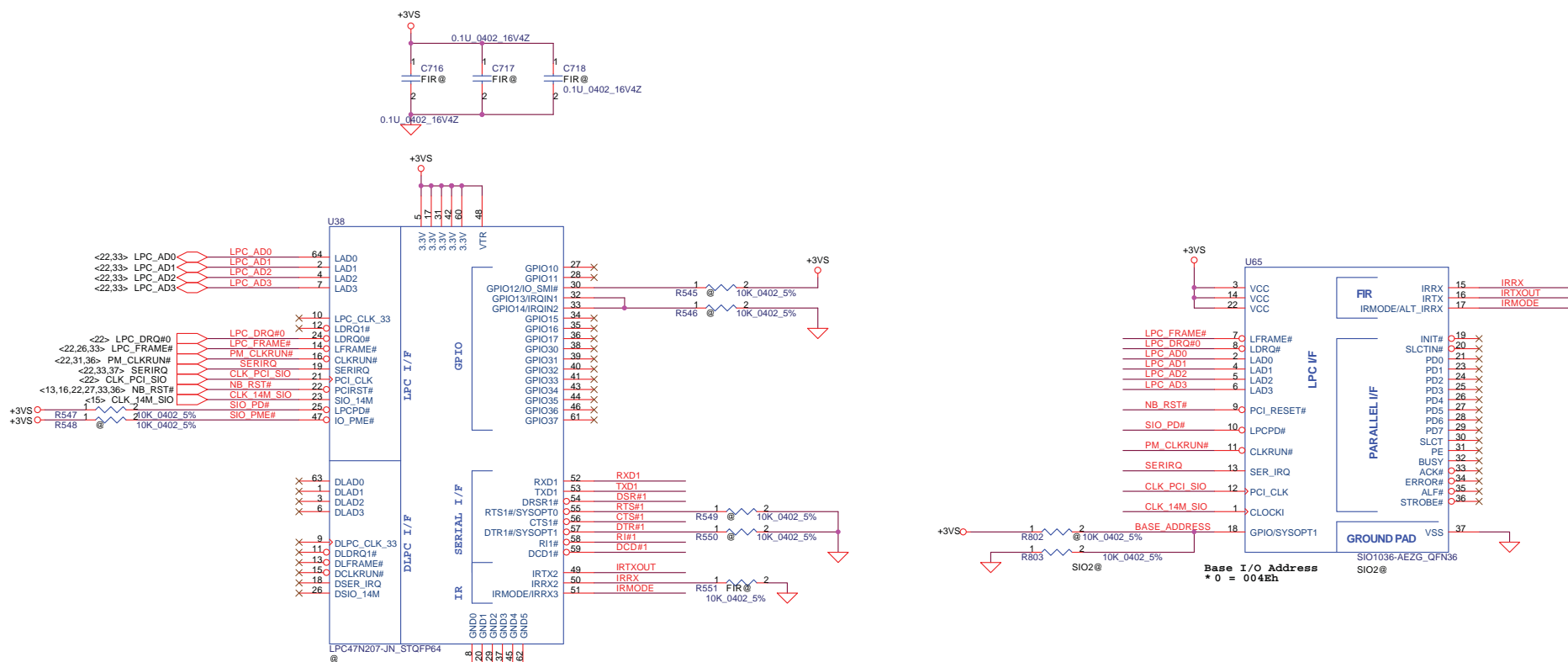




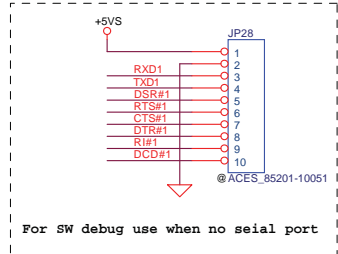
When use external EEPROM
Populate U14, R246, R253
Un-populate R261



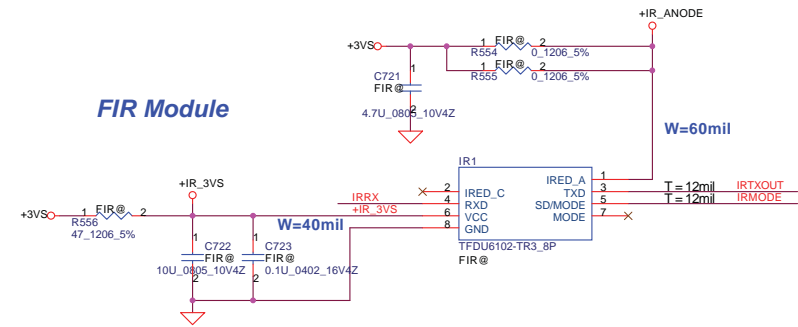
Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title SCHEMATIC, M/B LA-3151P			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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	
				Custom	401412		



Place on the BOT side(near MINIPCI conn.)

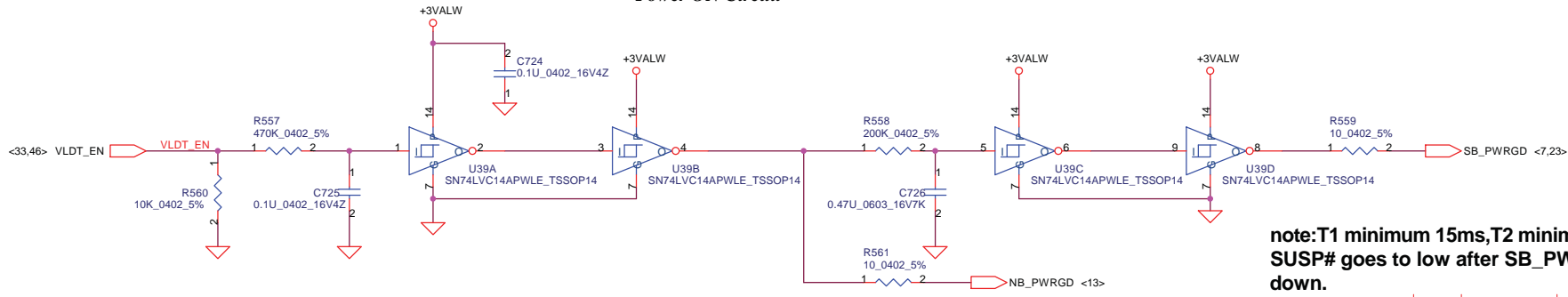


FIR Module

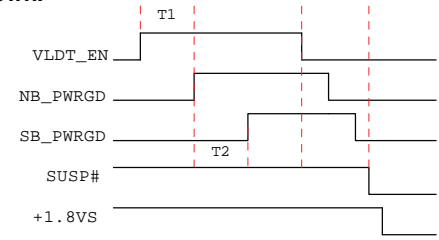


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/06/20	Deciphered Date	2006/06/20	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	B	Document Number	401412	Rev		
Date:	星期四, 三月 09, 2006	Sheet	41	of 55		

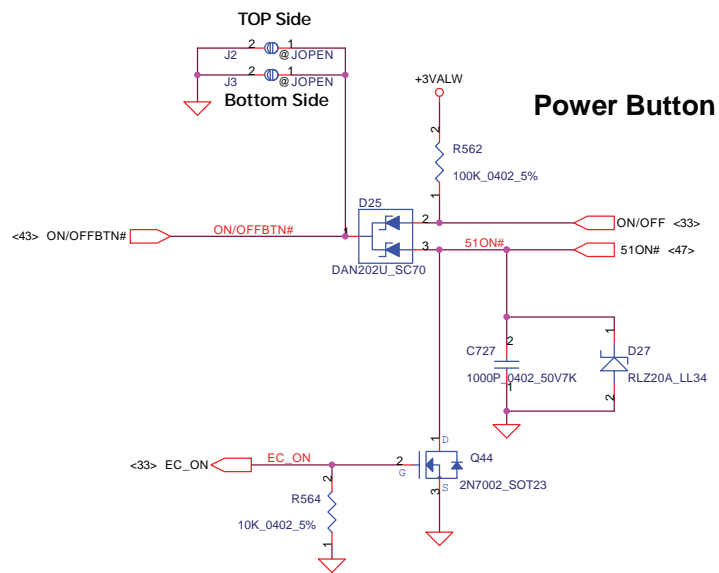
Power ON Circuit



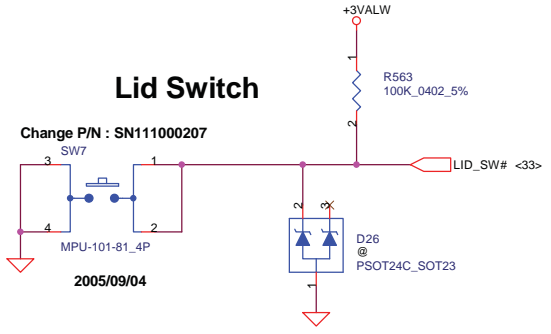
note:T1 minimum 15ms,T2 minimum 33ms/maximum 500ms,
SUSP# goes to low after SB_PWRGD goes to low for power
down.



ON/OFF switch



Power Button

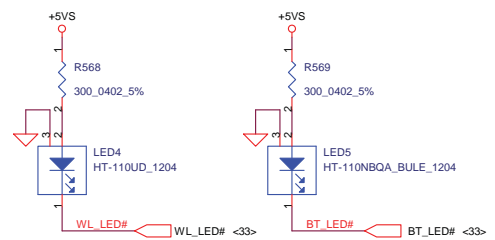
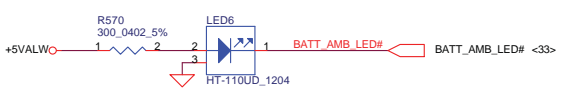
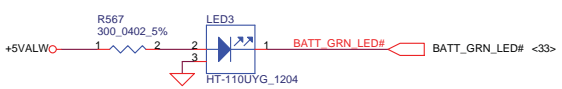
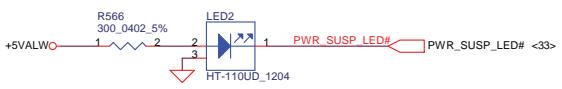
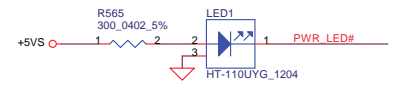
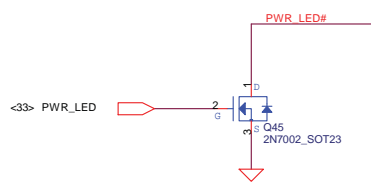


Lid Switch

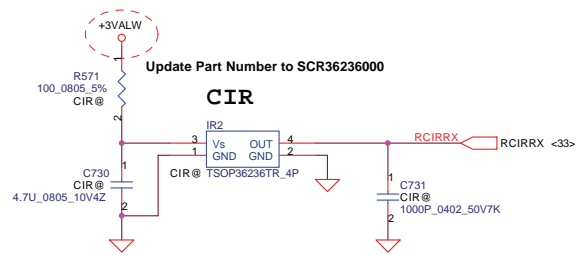
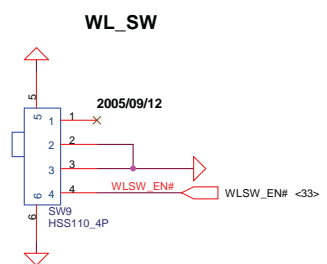
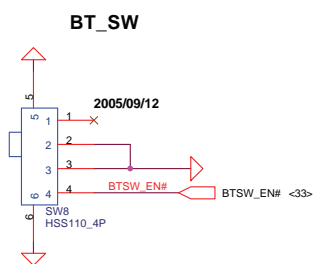
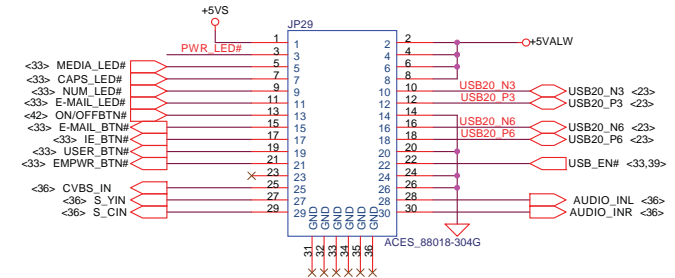
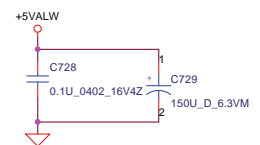
Change P/N : SN111000207

2005/09/04

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	Document Number	Rev
					B	401412	B
					Date:	星期四, 三月 09, 2006	Sheet
C			D		E		

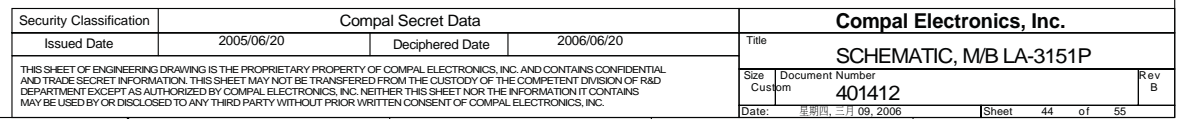
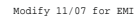


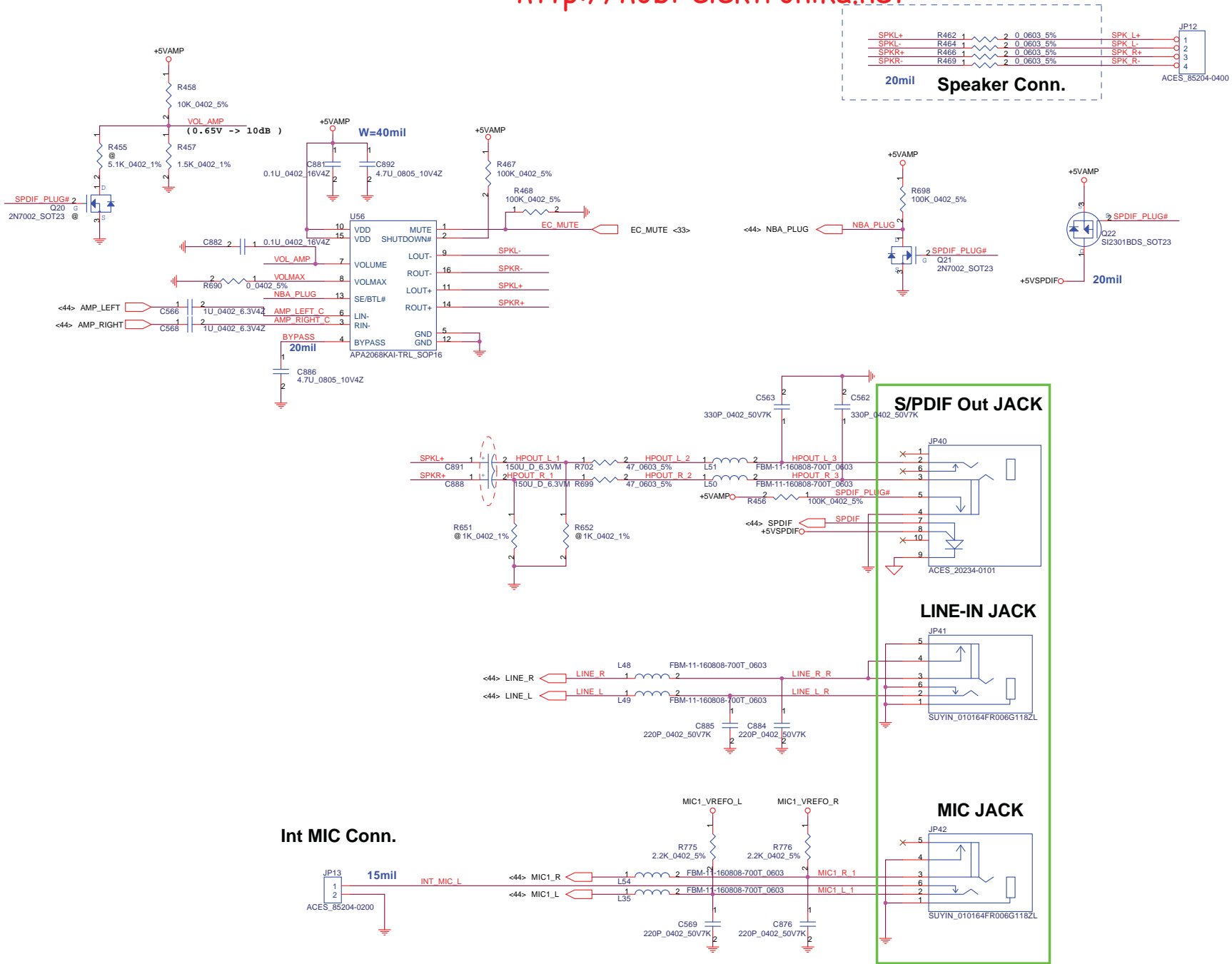
To LED/B Conn.

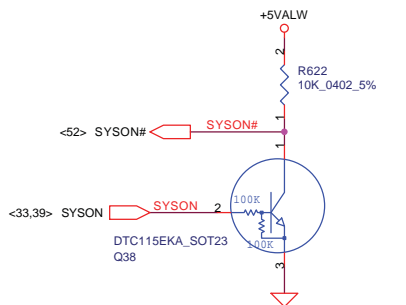
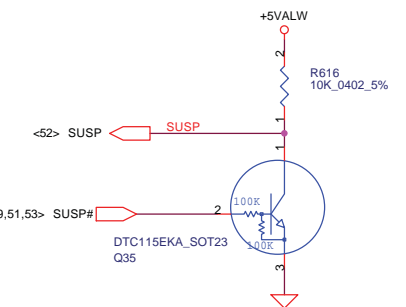
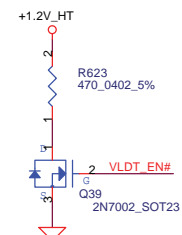
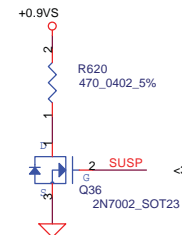
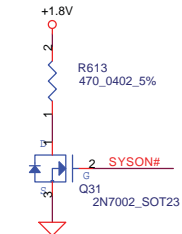
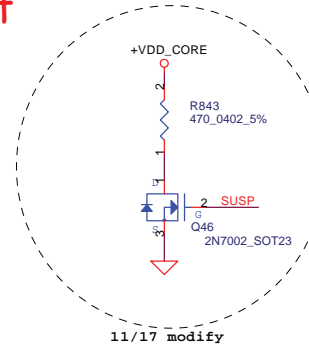
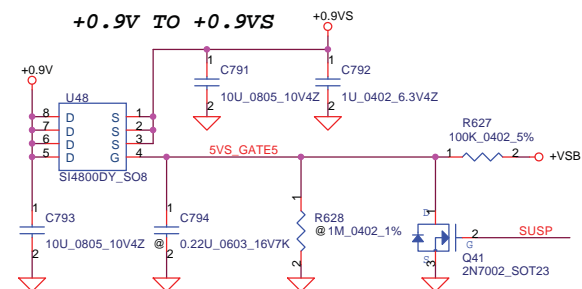
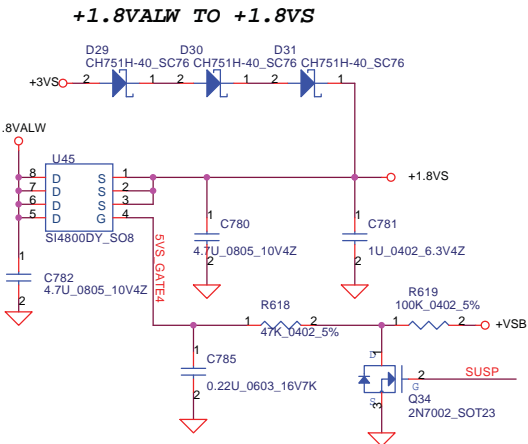
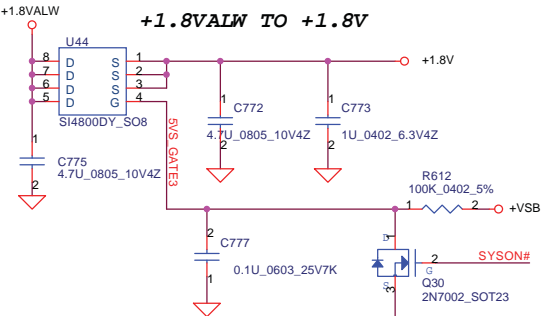
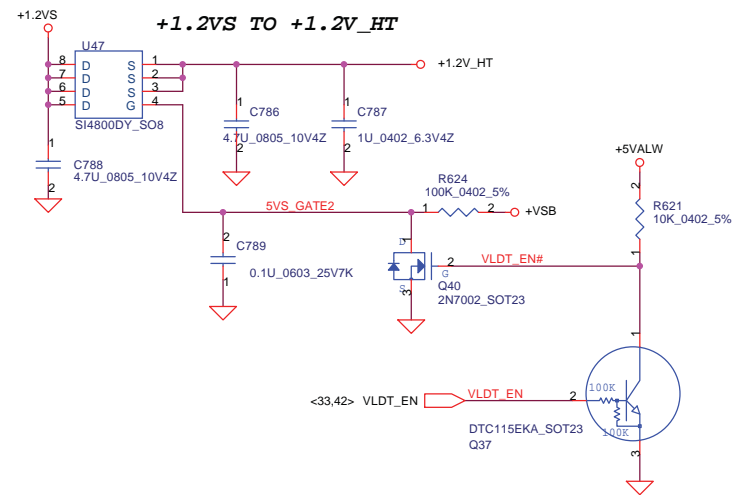
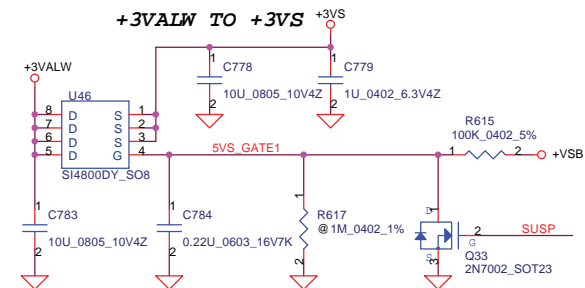
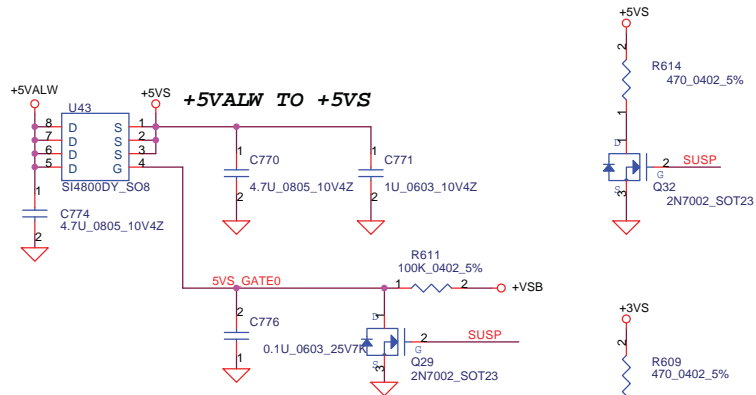


Geneva			Grapevine		
2005/09/04			2005/09/12		
	KSO16	KSO17		KSO16	KSO17
KSI0	VOL_UP	LEFT			
KSI1	RIGHT	VOL_DOWN			
KSI2	PLAY	ENTER			
KSI3	STOP				
KSI4	NEXT				
KSI5	REV				
KSI6		RECORD			

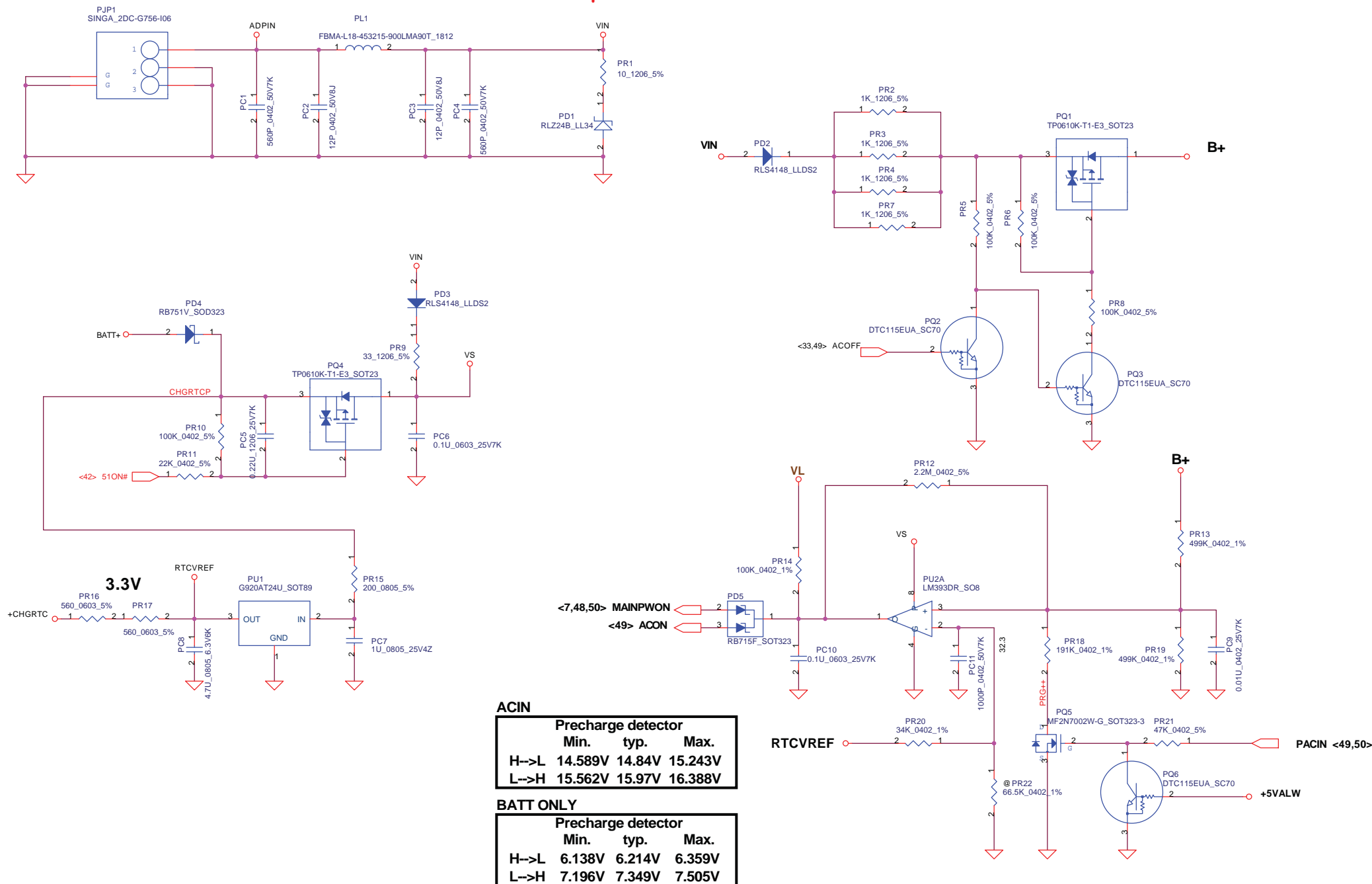
(output = 250 mA)

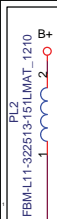






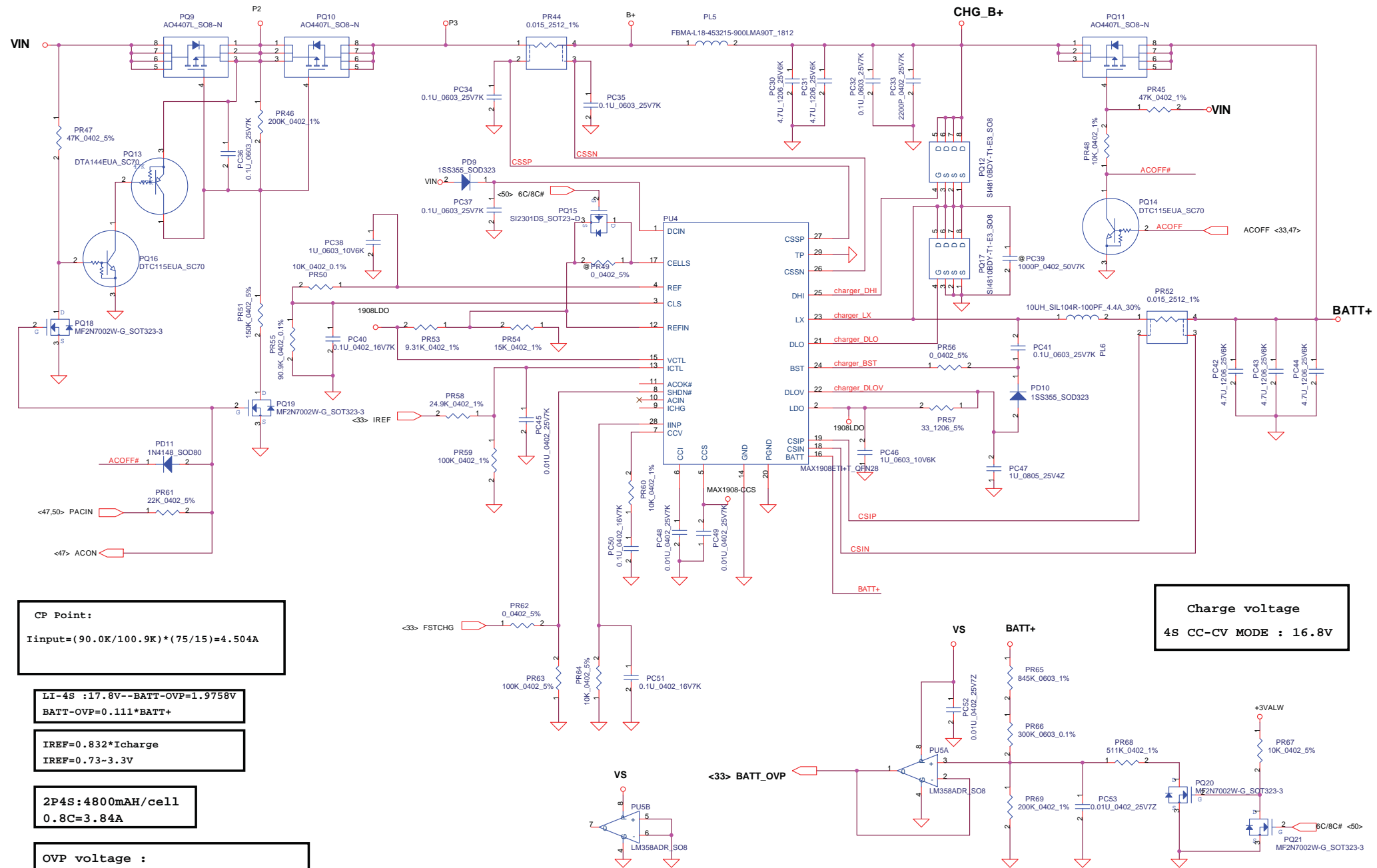
Security Classification		Compal Secret Data		Compal Electronics, inc.	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Custom	Document Number	401412	Rev	
Date	星期四, 三月 09, 2006	Sheet	46	of 55	





PL2
FBM-L11-322513-151MAT_1210
B+

Iadp=0~4.5A (90W)



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

LI-4S : 17.8V--BATT-OVP=1.9758V
BATT-OVP=0.111*BATT+

IREF=0.832*Icharge
IREF=0.73~3.3V

2P4S: 4800MAH/cell
0.8C=3.84A

OVP voltage :
LI-3S : 17.8V---BATT-OVP=1.9758V
BATT-OVP=0.111*BATT+

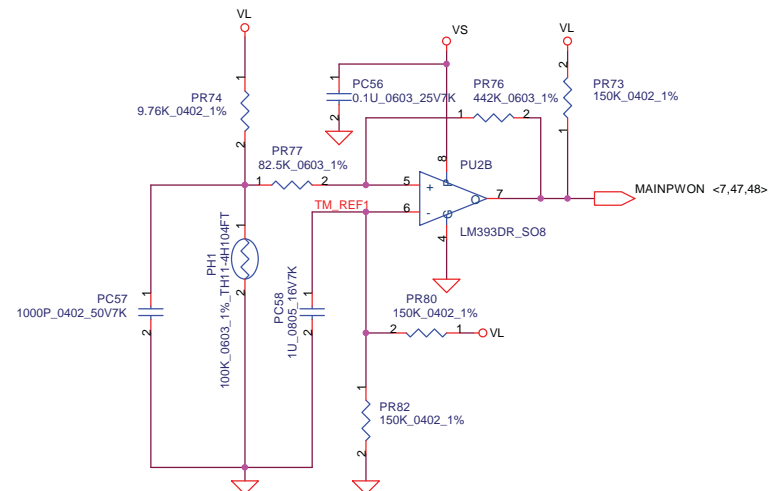
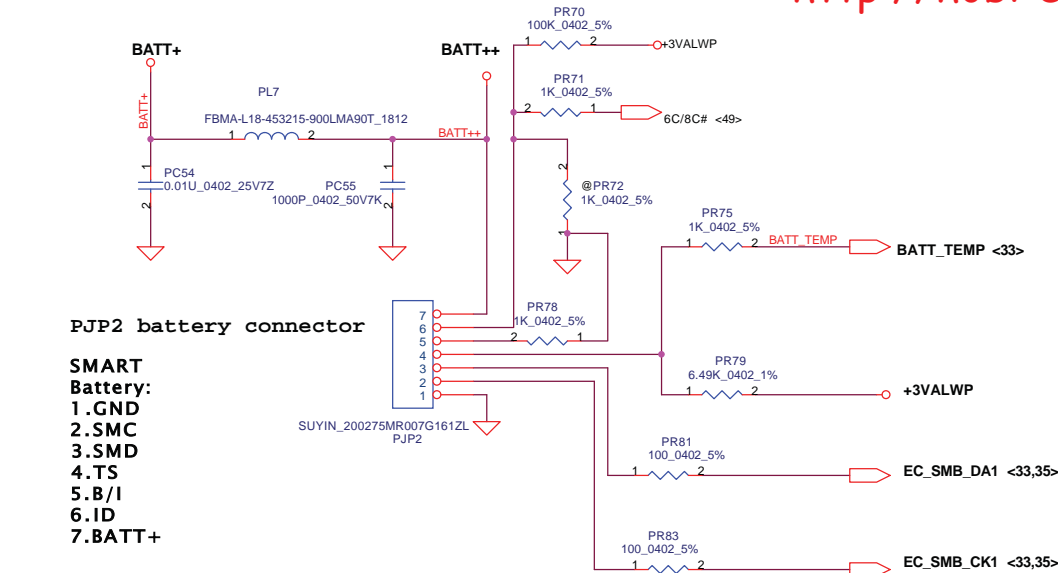
Charge voltage
4S CC-CV MODE : 16.8V

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.				Size	Document Number
				Custom	401412
				Date	Rev B
				星期四, 三月 09, 2006	Sheet 49 of 55

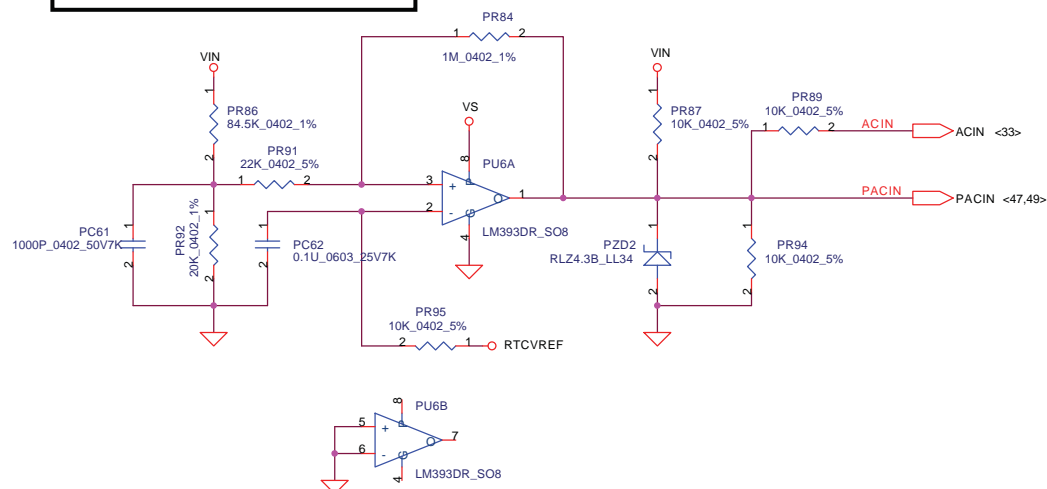
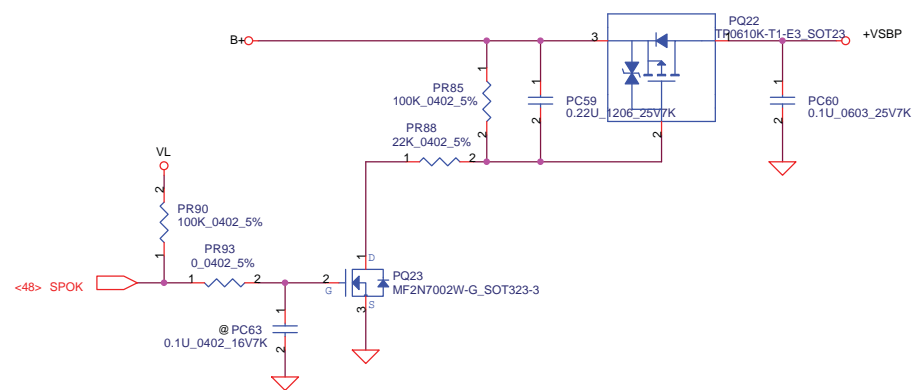
PH1 under CPU botten side :
CPU thermal protection at 90 degree C
Recovery at 70 degree C

PJP2 battery connector

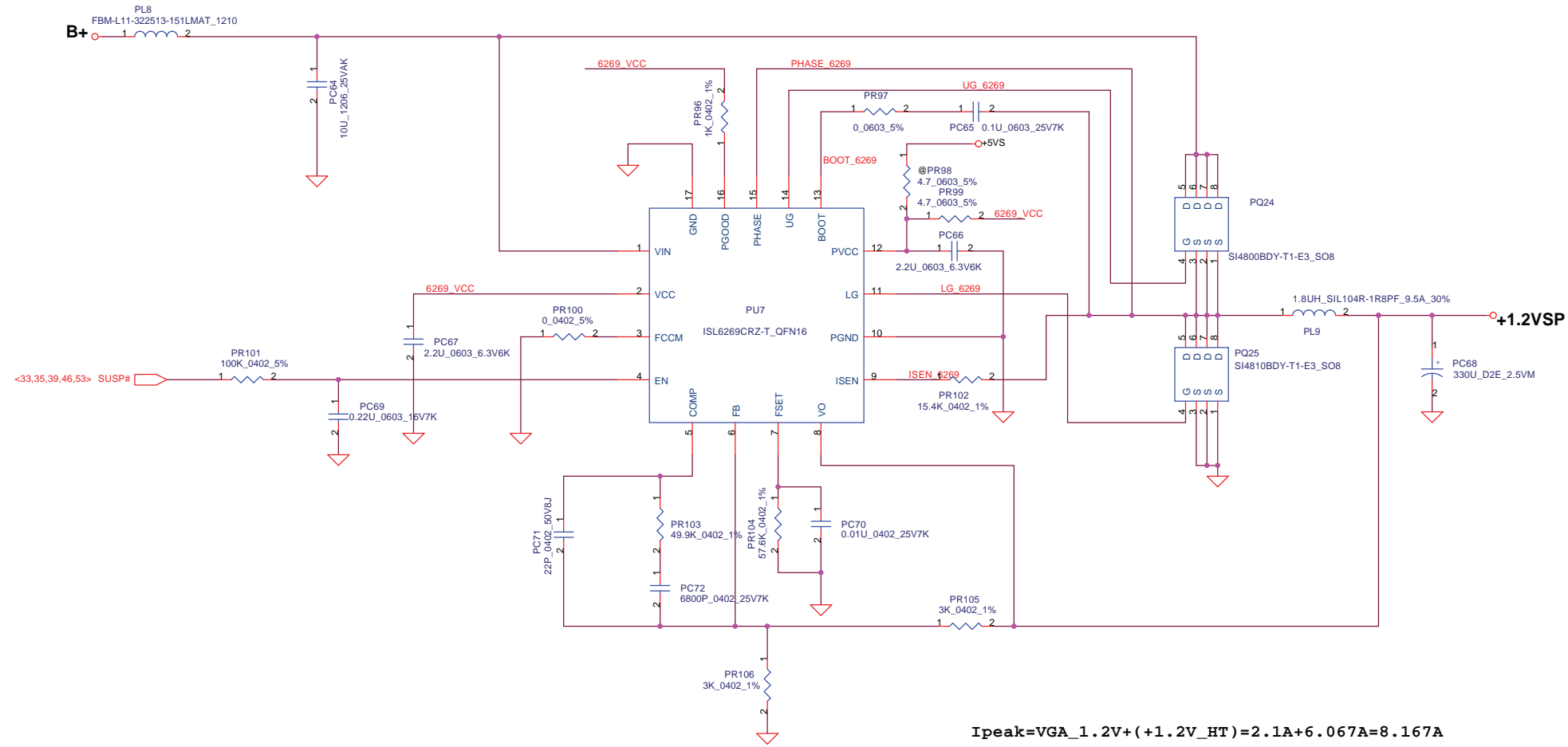
SMART
Battery:
1.GND
2.SMC
3.SMD
4.TS
5.B/I
6.ID
7.BATT+



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

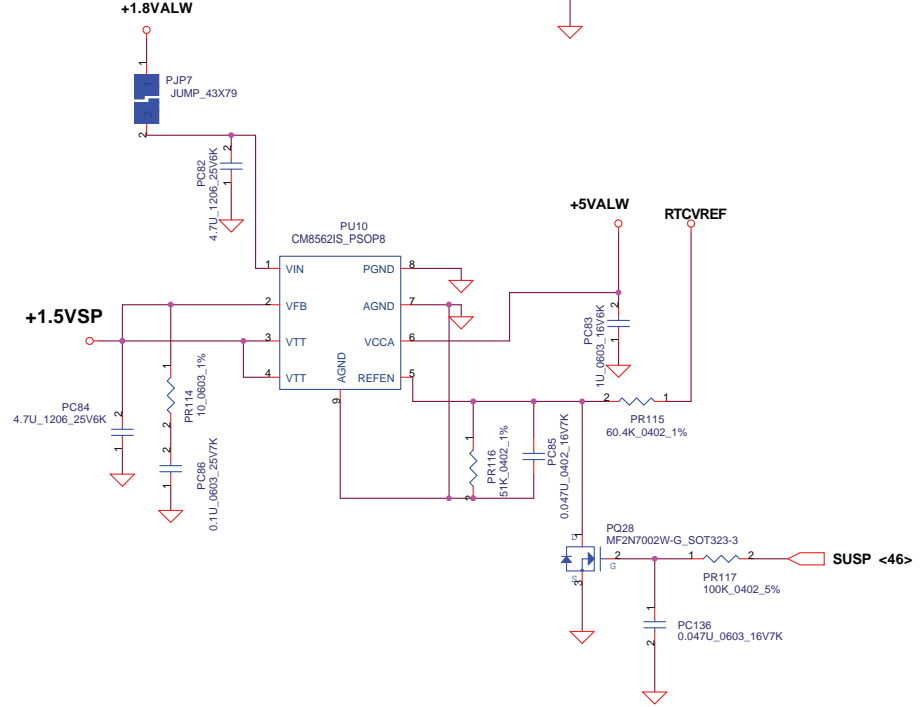
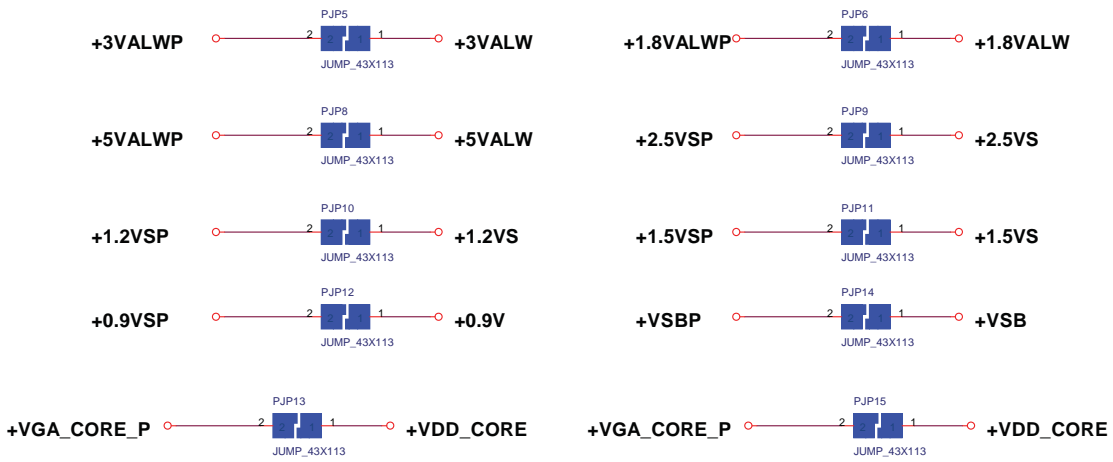
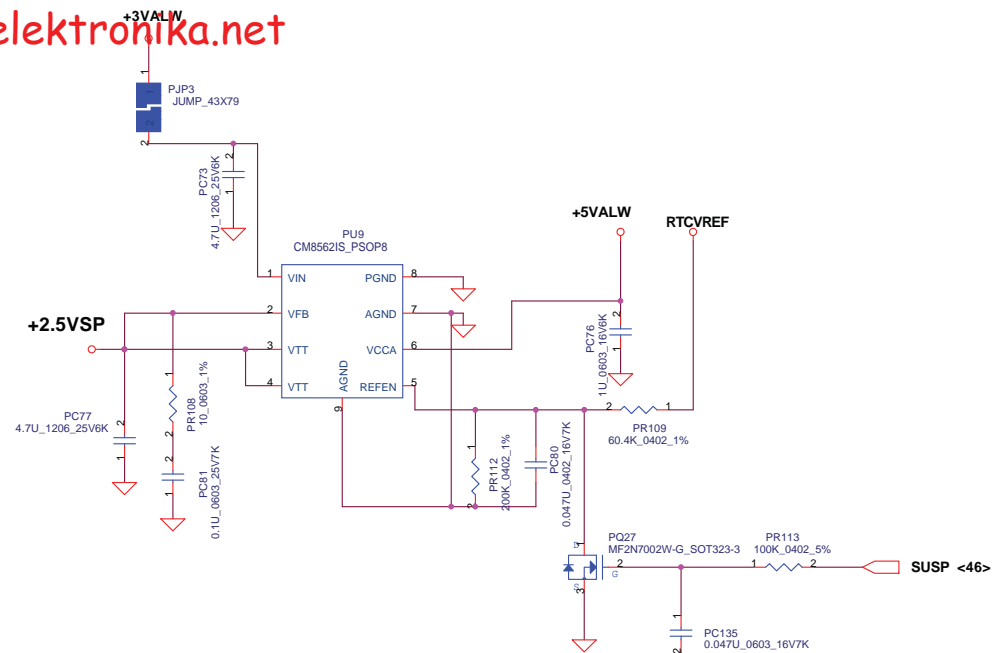
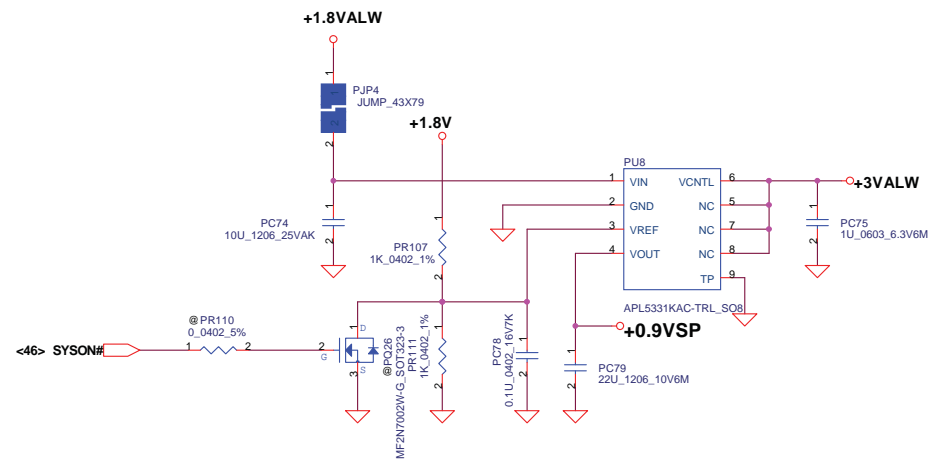


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/09/26	Deciphered Date	2006/09/26	Title	SCHEMATIC, M/B LA-3151P
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 50 of 55

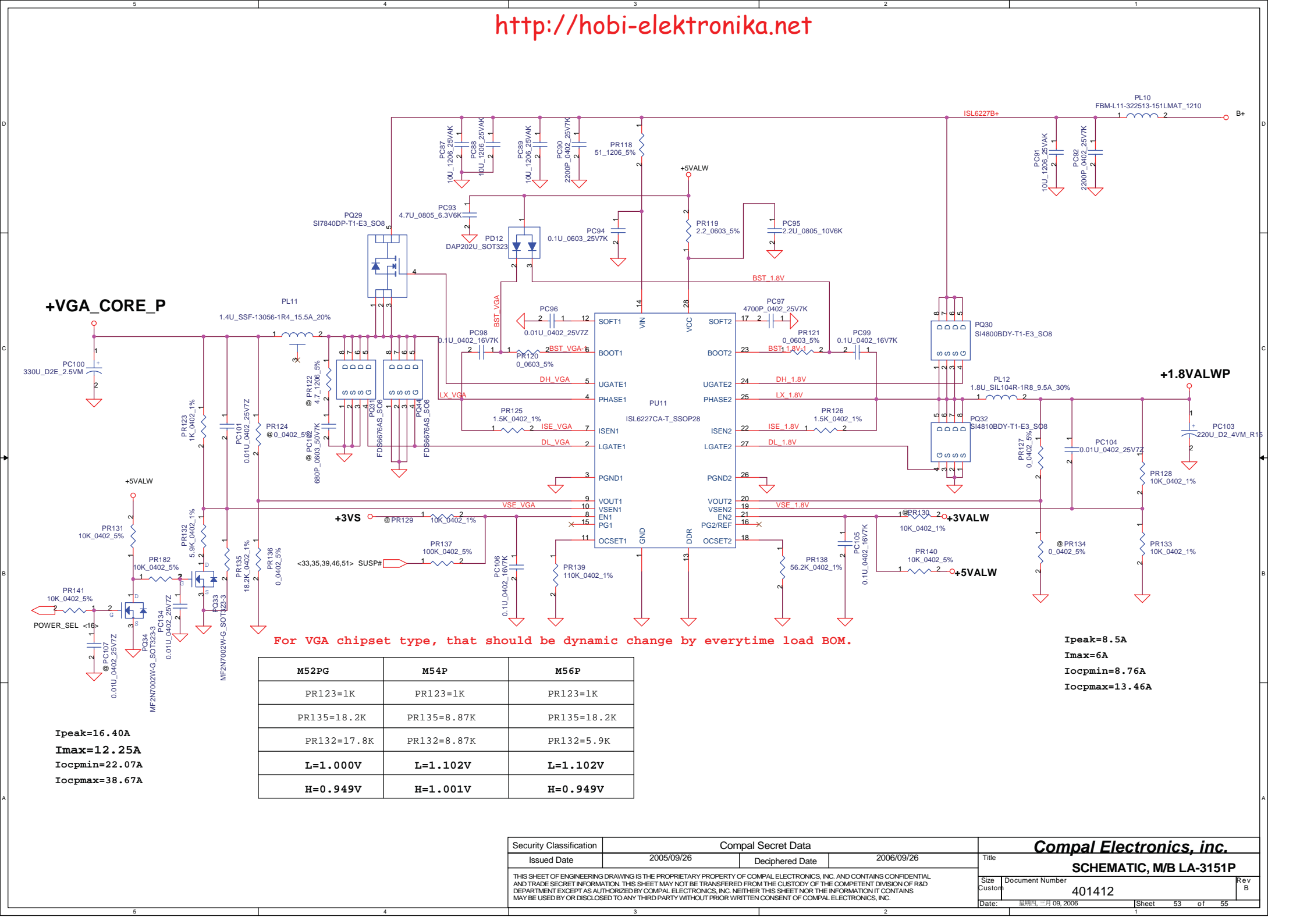


Ipeak=VGA_1.2V+(+1.2V_HT)=2.1A+6.067A=8.167A
Imax=5.7A
Iocmin=9.23A
Iocmax=19.23A

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.				Size	Document Number
				Custom	401412
				Date:	Rev B
				星期四, 三月 09, 2006	Sheet 51 of 55



http://hobi-elektronika.net



http://hobi-elektronika.net

http://hobi-elektronika.net

+VGA_CORE_P

+5VALW

+3VS

+1.8VALWP

+3VALW

+5VALW

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

M52PG	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=16.40A
Imax=12.25A
Iocpmin=22.07A
Iocpmax=38.67A

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

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	Document Number
				Custom	401412
Date: 星期四, 三月 09, 2006				Sheet	53 of 55

http://hobi-elektronika.net

+VGA_CORE_P

+5VALW

+3VS

+1.8VALWP

+3VALW

+5VALW

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

M52PG	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=16.40A
Imax=12.25A
Iocpmin=22.07A
Iocpmax=38.67A

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

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	Document Number
				Custom	401412
Date: 星期四, 三月 09, 2006				Sheet	53 of 55

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							

Compal Electronics, Inc.		
Title		
SCHEMATIC, M/B LA-3151P		
Size	Document Number	Rev
	401412	B
Date:	日 月 年 09, 2006	Sheet 55 of 55