HAZ00/HTW01

LA-2861 REV 1.0 Schematic

UFC-PGA Dothan/ RC410MD(RC410MB)/ SB450

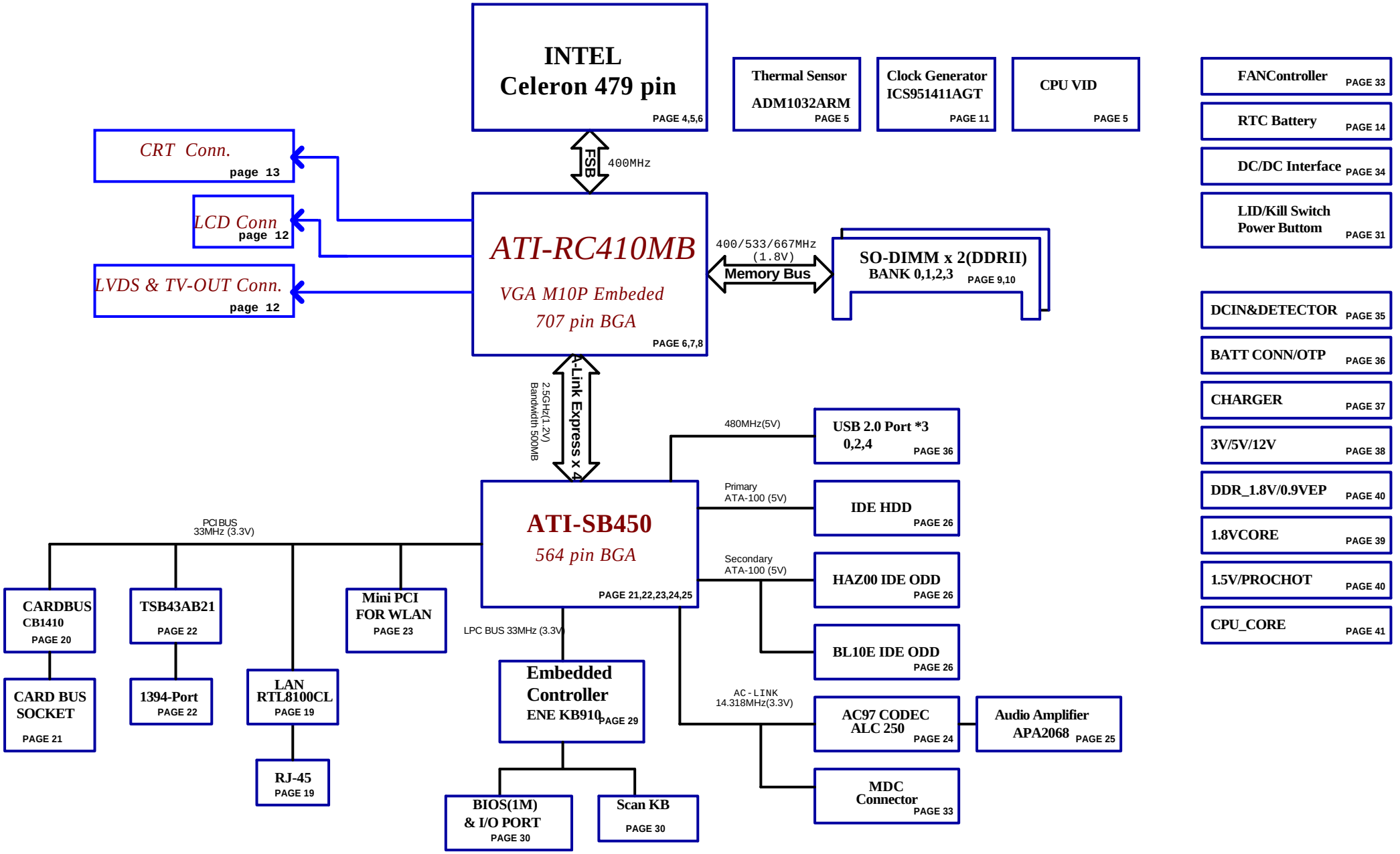
2005-07-11 Rev.1.0

Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title	Black Diagram	
Size B	Document Number HAZ00/BL10E (LA2861)	Rev 1.0
Date: Thursday, August 04, 2005	Sheet 1 of 42	

HAZ00 & HTW01 LA-2861 FUNCTION BLOCK DIAGRAM



Security Classification	Compal Secret Data		
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Title	Black Diagram	
Size B	Document Number HAZ00/BL10E (LA2861)	Rev 1.0
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Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	ON	ON	ON
B+	AC or battery power rail for power circuit.	ON	ON	ON
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+CPUVID	1.2V switched power rail for CPU AGTL Bus	ON	OFF	OFF
+VGA_CORE	1.0V/1.2V switched power rail for VGA chip	ON	OFF	OFF
+1.2VS	1.2VS for PCI-Express	ON	OFF	OFF
+0.9VS	0.9V switched power rail	ON	OFF	OFF
+1.5VS	DOTHAN B	ON	OFF	OFF
+1.8VS	1.8VS switched power rail	ON	OFF	OFF
+1.8VALW	1.8V always on power rail	ON	ON	ON*
+1.8V	1.8V power rail	ON	ON	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
+12VALW	12V always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

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

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts
TI 1410	AD20	2	PIRQA/PIRQB
LAN	AD22	1	PIRQG
Mini-PCI(WLAN)	AD18	3	PIRQF/PIRQG
1394	AD16	0	PIRQA

EC SM Bus1 address

Device	Address
Smart Battery	0001 011X b

EC SM Bus2 address

Device	Address
ADM1032	1001 110X b

SB450 SM Bus address

Device	Address	
Clock Generator (ICS951413BGLFT)	1101 001Xb	
DDR DIMM0	1010 0100b	A4
DDR DIMM1	1010 0110b	A6

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

Board ID Table for AD channel

Vcc	3.3V +/- 5%
Ra	100K +/- 5%

Board ID	Rb	V_{AD_BID} min	V_{AD_BID} typ	V_{AD_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	PCB Revision
0	0.1, 0.2
1	0.3
2	1.0
3	
4	
5	
6	
7	

SKU ID	SKU Status
0	
1	
2	
3	
4	
5	1 Buttons
6	
7	7 Buttons

	HDD Password
0	NO
1	Yes

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Title	Notes List		
Size B	Document Number HAZ00/BL10E (LA2861)		Rev 1.0
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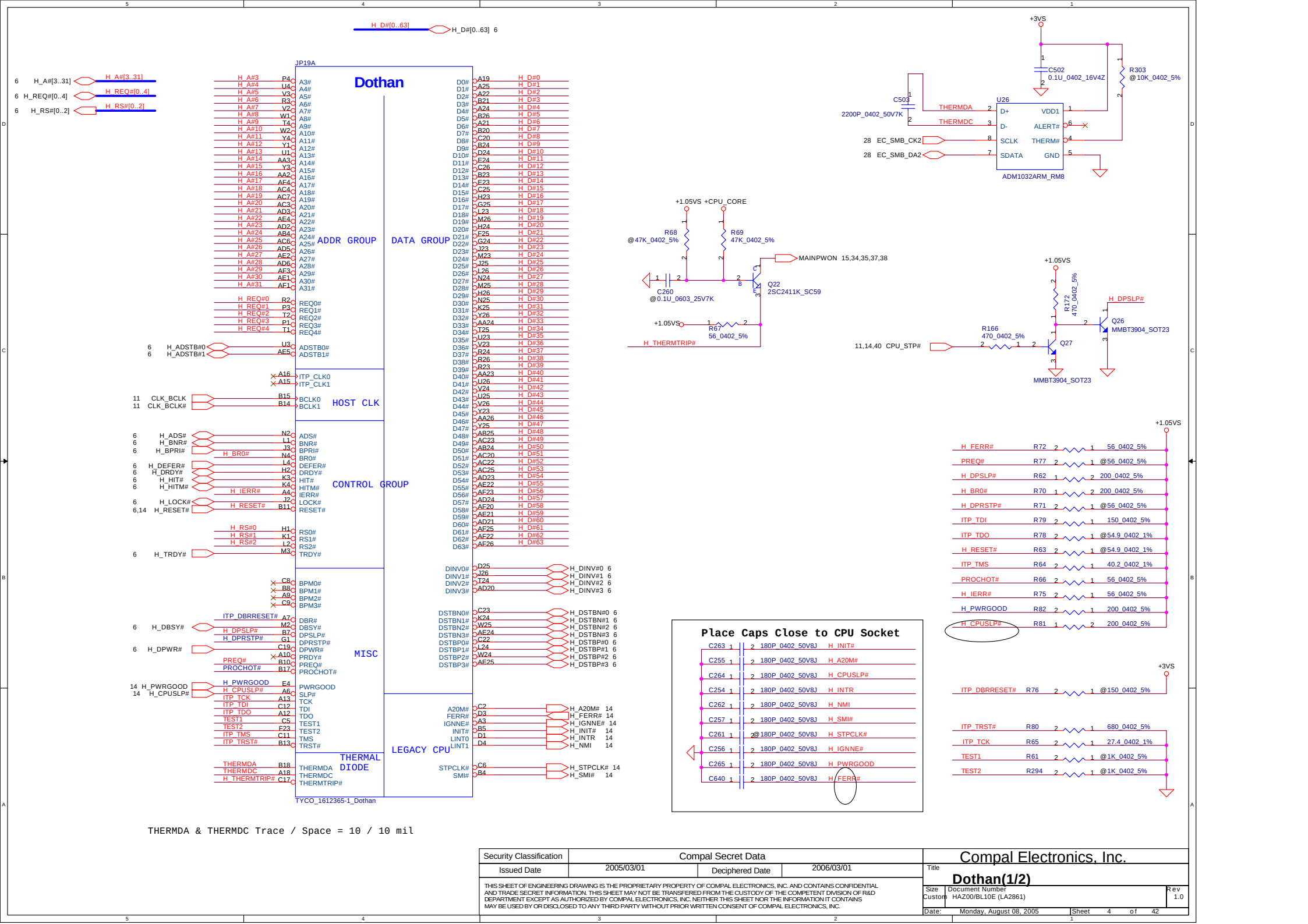

Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: **Dothan(1/2)**

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

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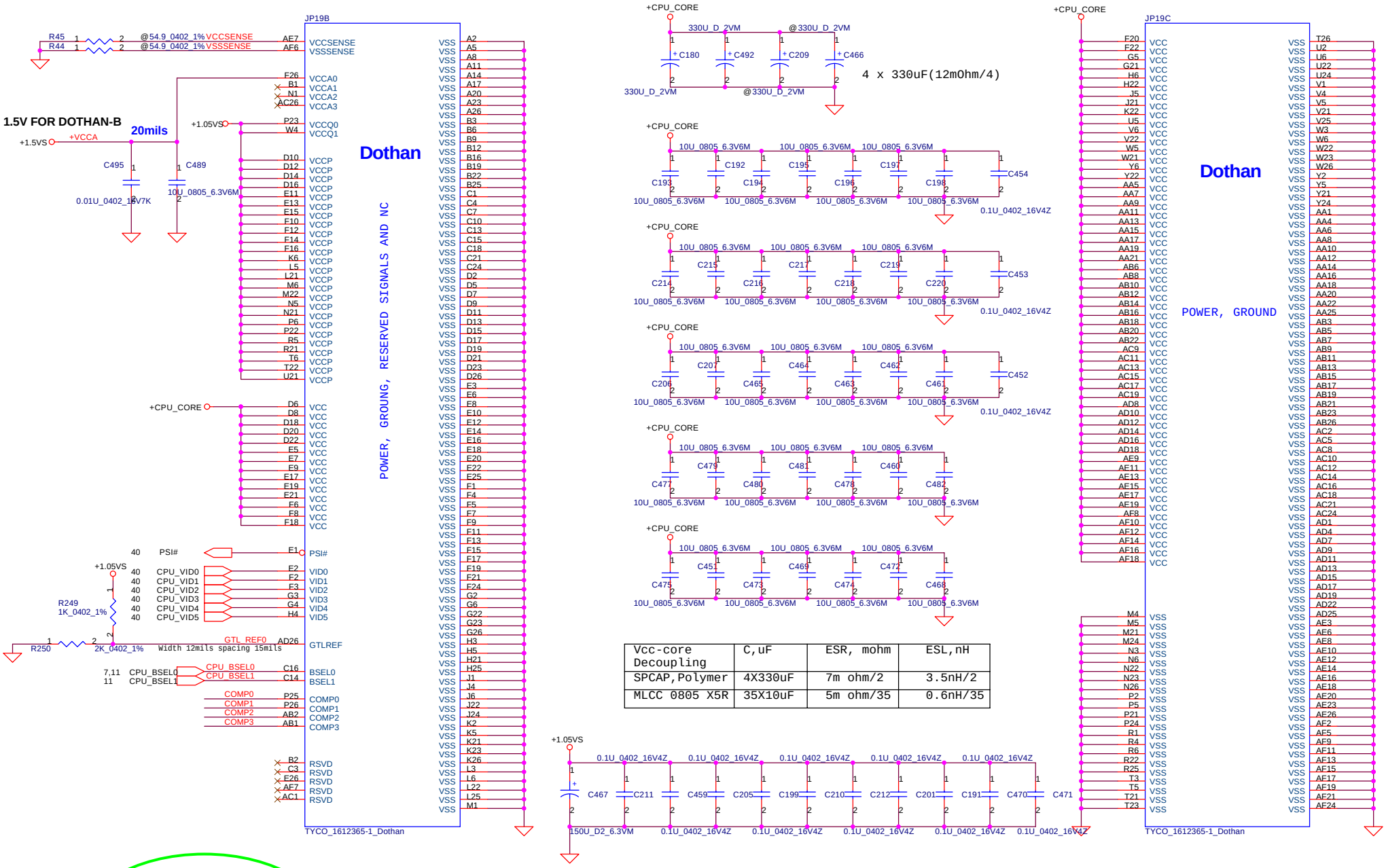

Vcc-core Decoupling	C,uF	ESR, mohm	ESL,nH
SPCAP,Polymer	4X330uF	7m ohm/2	3.5nH/2
MLCC 0805 X5R	35X10uF	5m ohm/35	0.6nH/35

Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: **Dothan(2/2)**

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

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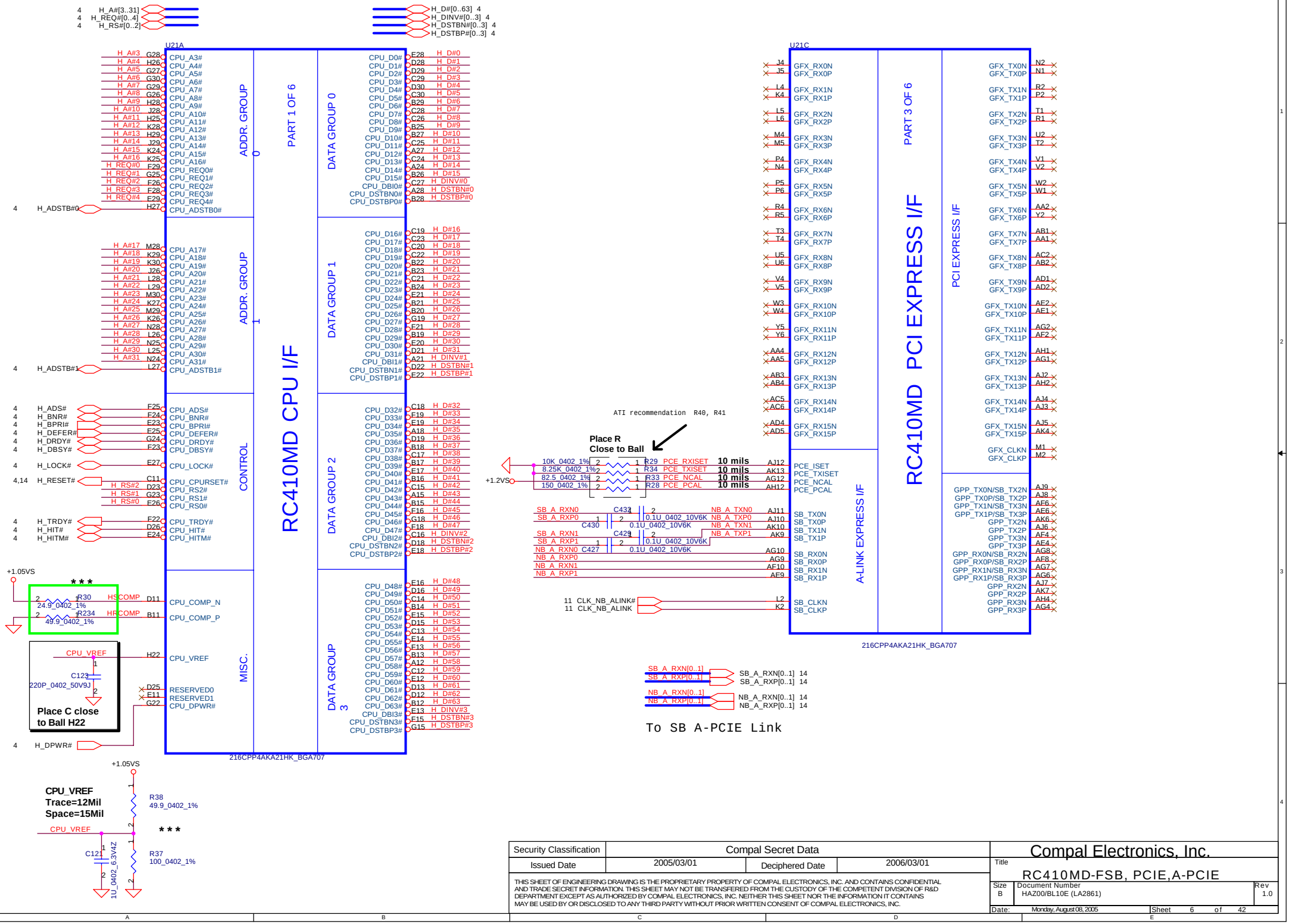

Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: RC410MD-FSB, PCIE,A-PCIE

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

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DDR_DQ[0..63] DDR_DQ[0..63] 9,10
DDR_DQS[0..7] DDR_DQS[0..7] 9,10
DDR_DQS#[0..7] DDR_DQS#[0..7] 9,10
DDR_DM[0..7] DDR_DM[0..7] 9,10
DDR_SMA[0..17] DDR_SMA[0..17] 9,10

U21B

DDR_SMA0 AK27 MEM_A0
DDR_SMA1 AJ27 MEM_A1
DDR_SMA2 AH26 MEM_A2
DDR_SMA3 AJ26 MEM_A3
DDR_SMA4 AH25 MEM_A4
DDR_SMA5 AJ25 MEM_A5
DDR_SMA6 AH24 MEM_A6
DDR_SMA7 AH23 MEM_A7
DDR_SMA8 AJ24 MEM_A8
DDR_SMA9 AJ23 MEM_A9
DDR_SMA10 AH27 MEM_A10
DDR_SMA11 AH22 MEM_A11
DDR_SMA12 AJ22 MEM_A12
DDR_SMA13 AF28 MEM_A13
DDR_SMA14 AJ21 MEM_A14
DDR_SMA15 AG27 MEM_A15
DDR_SMA16 AJ28 MEM_A16
DDR_SMA17 AH21 MEM_A17

ADDRESS

9,10 DDR_SRAS# AJ29 MEM_RAS#
9,10 DDR_SCAS# AG28 MEM_CAS#
9,10 DDR_SWE# AH30 MEM_WE#

CLK

9 DDR_CLK0# AC26 MEM_CK0N
9 DDR_CLK0 AC25 MEM_CK0P
9 DDR_CLK1# AF16 MEM_CK1N
9 DDR_CLK1 AF16 MEM_CK1P
V29 MEM_CK2N
V30 MEM_CK2P
10 DDR_CLK3# AC24 MEM_CK3N
10 DDR_CLK3 AC23 MEM_CK3P
10 DDR_CLK4# AG17 MEM_CK4N
10 DDR_CLK4 AF17 MEM_CK4P
W29 MEM_CK5N
W28 MEM_CK5P

+1.8V
R42 1K_0603_1%
C172 0.1U_0402_10V6K
+DDR_VREF
R46 1K_0603_1%
C174 0.1U_0402_10V6K

MSC

9 DDR_SCKE0 AH20 MEM_CKE0
9 DDR_SCKE1 AJ20 MEM_CKE1
9,10 DDR_SCKE2 AE24 MEM_CKE2
9,10 DDR_SCKE3 AE21 MEM_CKE3

9 DDR_SCS#0 AH29 DDR_SCS#0 MEM_CS#0
9 DDR_SCS#1 AG29 DDR_SCS#1 MEM_CS#1
9,10 DDR_SCS#2 AH28 DDR_SCS#2 MEM_CS#2
9,10 DDR_SCS#3 AF29 DDR_SCS#3 MEM_CS#3
9 DDR_ODT0 AG30 DDR_ODT0 MEM_ODT0
9,10 DDR_ODT1 AE28 DDR_ODT1 MEM_ODT1
9 DDR_ODT2 AC30 DDR_ODT2 MEM_ODT2/RSV2
9,10 DDR_ODT3 Y30 DDR_ODT3 MEM_ODT3/RSV3

+1.8V R431 1K_0402_5% AD28 MEM_VMODE

MEM_VMODE: 1.8V: DDR2

MEM_CAP1 10mil AJ14 MEM_CAP1
MEM_CAP2 10mil N30 MEM_CAP2
MEM_COMPP 10mil AJ15 MEM_COMPP
MEM_COMPN 10mil AE29 MEM_COMPN
+DDR_VREF 20mil AB27 MEM_VREF

+1.8V
R242 61.9_0603_1%
***
MEM_COMPN
MEM_COMPP
MEM_CAP1
MEM_CAP2
R237 61.9_0603_1%
C435 0.47U_0603_10V7K
C450 0.47U_0603_10V7K

Place these R and C close to relative Ball.

DATA

DDR_DQS#0 AH17 DDR_DQS0 AH18 MEM_DQS0N MEM_DQS0P
DDR_DQS#1 AF15 DDR_DQS1 AE14 MEM_DQS1N MEM_DQS1P
DDR_DQS#2 AE22 DDR_DQS2 AF22 MEM_DQS2N MEM_DQS2P
DDR_DQS#3 AF26 DDR_DQS3 AE25 MEM_DQS3N MEM_DQS3P
DDR_DQS#4 W26 DDR_DQS4 W27 MEM_DQS4N MEM_DQS4P
DDR_DQS#5 AB30 DDR_DQS5 AB29 MEM_DQS5N MEM_DQS5P
DDR_DQS#6 R25 DDR_DQS6 P25 MEM_DQS6N MEM_DQS6P
DDR_DQS#7 R30 DDR_DQS7 R29 MEM_DQS7N MEM_DQS7P

PART 2 OF 6

RC410MD MEMORY I/F

216CPP4AKA21HK_BGA707

MEM_DQ0 AJ16 DDR_DQ0
MEM_DQ1 AH16 DDR_DQ1
MEM_DQ2 AJ19 DDR_DQ2
MEM_DQ3 AH19 DDR_DQ3
MEM_DQ4 AH15 DDR_DQ4
MEM_DQ5 AK16 DDR_DQ5
MEM_DQ6 AH18 DDR_DQ6
MEM_DQ7 AK19 DDR_DQ7
MEM_DQ8 AF13 DDR_DQ8
MEM_DQ9 AF14 DDR_DQ9
MEM_DQ10 AE19 DDR_DQ10
MEM_DQ11 AF19 DDR_DQ11
MEM_DQ12 AE13 DDR_DQ12
MEM_DQ13 AG13 DDR_DQ13
MEM_DQ14 AF18 DDR_DQ14
MEM_DQ15 AE17 DDR_DQ15
MEM_DQ16 AF20 DDR_DQ16
MEM_DQ17 AF21 DDR_DQ17
MEM_DQ18 AG23 DDR_DQ18
MEM_DQ19 AF24 DDR_DQ19
MEM_DQ20 AG19 DDR_DQ20
MEM_DQ21 AG20 DDR_DQ21
MEM_DQ22 AG22 DDR_DQ22
MEM_DQ23 AF23 DDR_DQ23
MEM_DQ24 AD25 DDR_DQ24
MEM_DQ25 AG25 DDR_DQ25
MEM_DQ26 AE27 DDR_DQ26
MEM_DQ27 AD27 DDR_DQ27
MEM_DQ28 AE23 DDR_DQ28
MEM_DQ29 AD24 DDR_DQ29
MEM_DQ30 AE26 DDR_DQ30
MEM_DQ31 AD26 DDR_DQ31
MEM_DQ32 AA25 DDR_DQ32
MEM_DQ33 Y26 DDR_DQ33
MEM_DQ34 W24 DDR_DQ34
MEM_DQ35 U25 DDR_DQ35
MEM_DQ36 AA26 DDR_DQ36
MEM_DQ37 Y25 DDR_DQ37
MEM_DQ38 V26 DDR_DQ38
MEM_DQ39 W25 DDR_DQ39
MEM_DQ40 AC28 DDR_DQ40
MEM_DQ41 AC29 DDR_DQ41
MEM_DQ42 AA29 DDR_DQ42
MEM_DQ43 Y29 DDR_DQ43
MEM_DQ44 AD30 DDR_DQ44
MEM_DQ45 AD29 DDR_DQ45
MEM_DQ46 AA30 DDR_DQ46
MEM_DQ47 Y28 DDR_DQ47
MEM_DQ48 U27 DDR_DQ48
MEM_DQ49 T27 DDR_DQ49
MEM_DQ50 N26 DDR_DQ50
MEM_DQ51 M27 DDR_DQ51
MEM_DQ52 U26 DDR_DQ52
MEM_DQ53 T26 DDR_DQ53
MEM_DQ54 P27 DDR_DQ54
MEM_DQ55 P26 DDR_DQ55
MEM_DQ56 U29 DDR_DQ56
MEM_DQ57 T29 DDR_DQ57
MEM_DQ58 P29 DDR_DQ58
MEM_DQ59 N29 DDR_DQ59
MEM_DQ60 U28 DDR_DQ60
MEM_DQ61 T28 DDR_DQ61
MEM_DQ62 P28 DDR_DQ62
MEM_DQ63 N27 DDR_DQ63

MEM_DM0 AJ17 DDR_DM0
MEM_DM1 AG15 DDR_DM1
MEM_DM2 AE20 DDR_DM2
MEM_DM3 AF25 DDR_DM3
MEM_DM4 Y27 DDR_DM4
MEM_DM5 AB28 DDR_DM5
MEM_DM6 R26 DDR_DM6
MEM_DM7 R28 DDR_DM7

U21D

12 NB_LUMA F9 Y
12 NB_CRMA D9 C
R27 75_0402_1% NB_COMPS E9 COMP
13 NB_CRT_R F10 RED
13 NB_CRT_G E10 GREEN
13 NB_CRT_B D10 BLUE
13 NB_CRT_HSYNC C3 DACHSYNC
13 NB_CRT_VSYNC B3 DACVSYNC
R232 715_0402_1% RSET B10 RSET
15mil
13 NB_DDC_CLK NB_DDC_CLK B2 DACSCL
13 NB_DDC_DATA NB_DDC_DATA C2 DACSDA
C422 @15P_0402_50V8J
11 CLK_NB_14M R218 10_0402_5% G1 OSCIN
F1 OSCOUT
R217 10K_0402_5% G2 TVCLKIN
11 CLK_NB_BCLK J1 CPU_CLKP
11 CLK_NB_BCLK# K1 CPU_CLKN
12 NB_EDID_CLK NB_EDID_CLK D2 I2C_CLK
12 NB_EDID_DATA NB_EDID_DATA C1 I2C_DATA
NB_DVI_DDCDATA H3 DDC_DATA
STRP_DATA D1 STRP_DATA
TESTMODE C4 TESTMODE
AH13 THERMALDIODE_P
AJ13 THERMALDIODE_N

CRT & TV I/F

CLK. GEN.

PART 4 OF 6

RC410MD

LVDS

216CPP4AKA21HK_BGA707

TXOUT_U0N B4
TXOUT_U0P A4
TXOUT_U1N B5
TXOUT_U1P C6
TXOUT_U2N B6
TXOUT_U2P A6
TXOUT_U3N B7
TXOUT_U3P A7
TXCLK_UN E7
TXCLK_UP F8

TXOUT_L0N E5 NB_TXOUT0- NB_TXOUT0- 12
TXOUT_L0P F5 NB_TXOUT0+ NB_TXOUT0+ 12
TXOUT_L1N D5 NB_TXOUT1- NB_TXOUT1- 12
TXOUT_L1P C5 NB_TXOUT1+ NB_TXOUT1+ 12
TXOUT_L2N E6 NB_TXOUT2- NB_TXOUT2- 12
TXOUT_L2P D6 NB_TXOUT2+ NB_TXOUT2+ 12
TXOUT_L3N E7
TXOUT_L3P E8
TXCLK_LN G6 NB_TXCLK- NB_TXCLK- 12
TXCLK_LP F6 NB_TXCLK+ NB_TXCLK+ 12

LVDS_BLON G3 LVDS_ENBKL R221 2 @4.7K_0402_5%
LVDS_DIGON F2 LVDS_ENVDD 1 R224 2 @4.7K_0402_5%
LVDS_BLEN F2

SYSRESET# A3 NB_RST# NB_RST# 14
SUS_STAT# AH14 SUS_STAT#
POWERGOOD E3 NB_PWRGD NB_PWRGD 16

BMREQ# H2 BM_REQ# BM_REQ# 14

TMDS_HPD J2
R216 10K_0402_5%

R230 4.7K_0402_5%

Low: Normal Mode(Fixed)
High: Test Mode

+3VS
R219 4.7K_0402_5% NB_EDID_CLK
R226 4.7K_0402_5% NB_EDID_DATA
R223 @4.7K_0402_5% NB_DVI_DDCDATA
R222 4.7K_0402_5%

+1.8V
R236 4.7K_0402_5%
SUS_STAT#
D21 CH751H-40_SC76 NB_SUS_STAT# 15
D20 CH751H-40_SC76 NB_RST#

+3VS
C420 @0.1U_0402_10V6K
R214 @1K_0402_5%
U19 @AT24C04N-10SI-2.7_SO8-D
NC VCC
A1 WP
A2 SCL
VSS SDA
NB_EDID_CLK
STRP_DATA
**

+3VALW
U5A SN74LVC08APW_TSSOP14
LVDS_ENBKL
ENBKL 28
***
NB_PWRGD
U5B SN74LVC08APW_TSSOP14
LVDS_ENVDD
NB_ENVDD 12

NB STRAPING PINS

FSB SPEED	BM_REQ#	NB_CRT_HSYNC	NB_CRT_VSYNC
100MHZ	0	0	0
133MHZ	0	0	1

BM_REQ# R223 @4.7K_0402_5% +3VS
NB_CRT_HSYNC R222 4.7K_0402_5%
R206 4.7K_0402_5% +3VS
R227 4.7K_0402_5%
NB_CRT_VSYNC R228 4.7K_0402_5%
Q35 MMBT3904_SOT23
R229 4.7K_0402_5% CPU_BSEL0 5,11

STRP_DATA R225 4.7K_0402_5% +3VS
R220 @4.7K_0402_5%

STRP_DATA: DEBUG STRAP
DEFAULT: 1
0: MEMORY CHANNEL STRAPING
1: E2PROM STRAPING

NB_DDC_CLK Q5 MMBT3904_SOT23
R211 2K_0402_5% SB_PWRGD# 16

NB_DDC_CLK: CPU VCC SEL
DEFAULT: 1 1: DESKTOP CPU 0: MOBILE CPU

Compal Electronics, Inc.

Title: RC410MD-DDR/DISP/MISC

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

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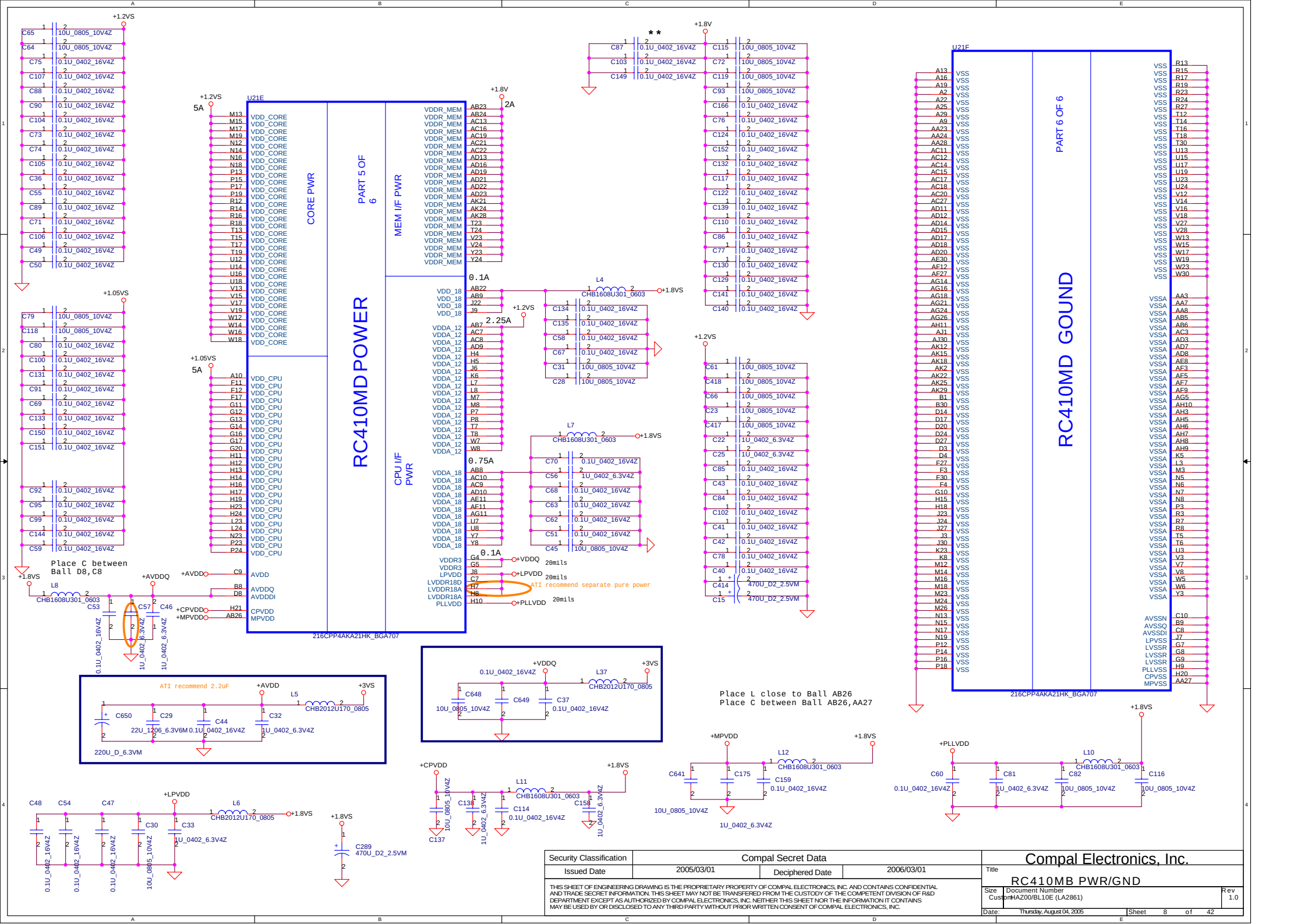

Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: RC410MB PWR/GND

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

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Layout Note:
Place near JDIM1

Layout Note:
Place one cap close to every 2 pullup resistors terminated to V_DDR_MCH_REF

Trace=20mil

Layout Note:
Place these resistor closely JDIM2,all trace length<750 mil

Layout Note:
Place these resistor closely JDIM2,all trace length Max=1.3"

DIMMA
Reverse

ATI recommendation

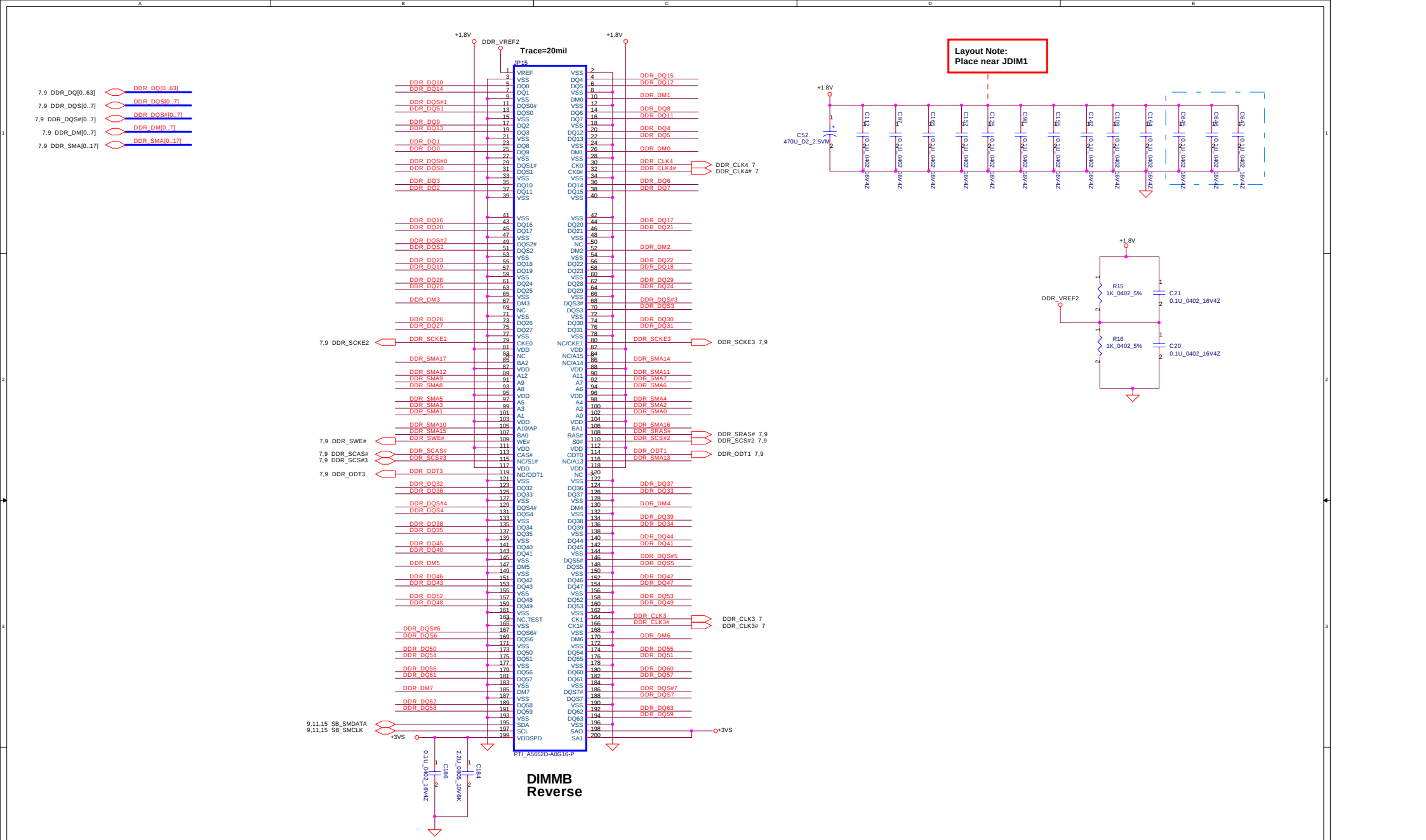
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: DDRII-SODIMM2

Size	Document Number	Rev
C	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 9 of 42



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: DDR-II SODIMM1

Size	Document Number	Rev
C	HAZ00/BL10E (LA2861)	1.0

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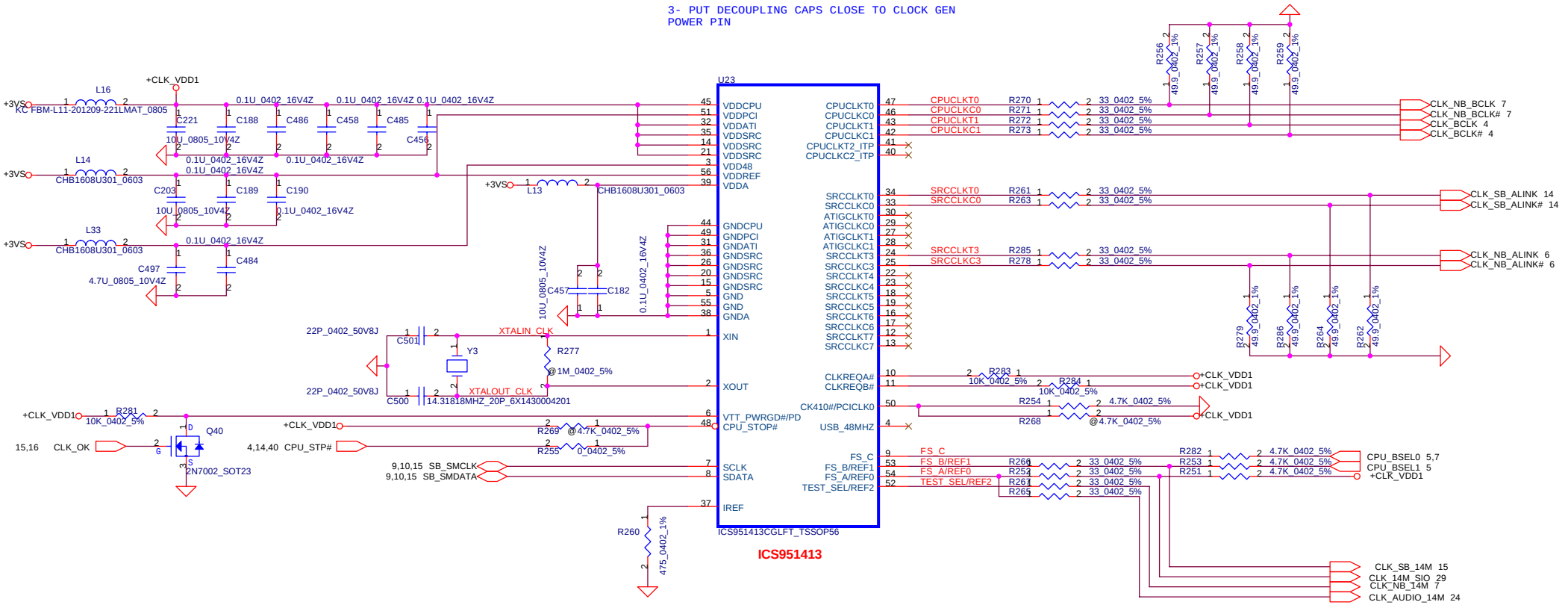
Clock Generator

1- PLACE ALL THE SERIES TERMINATION
RESISTORS AS CLOSE TO CLOCK GEN AS POSSIBLE

2- ROUTE ALL CPUCLK/#, NBCLK/#, ITPCLK/#
AND SCR/# ,AS DIFFERENT PAIR RULE

3- PUT DECOUPLING CAPS CLOSE TO CLOCK GEN
POWER PIN



FS_C	FS_B	FS_A	CPU	SRC	PCI	REF	USB
1	0	1	100.00	100.00	33.33	14.318	48.000
0	0	1	133.33	100.00	33.33	14.318	48.000
1	1	1	---	---	---	---	---

Compal Electronics, Inc.

Title: ClockGen ICS 951411

Size: B | Document Number: HAZ00/BL10E (LA2861) | Rev: 1.0

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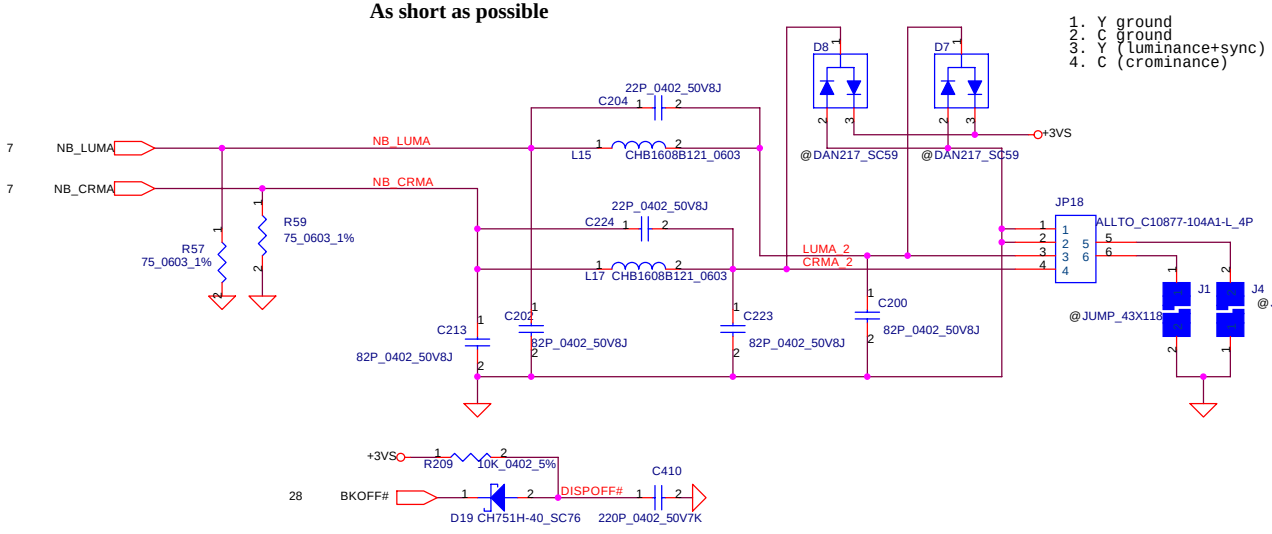
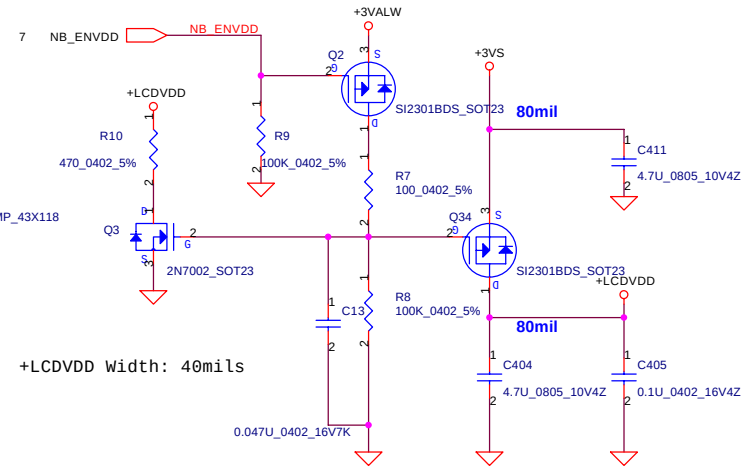
TV-OUT CONNECTOR

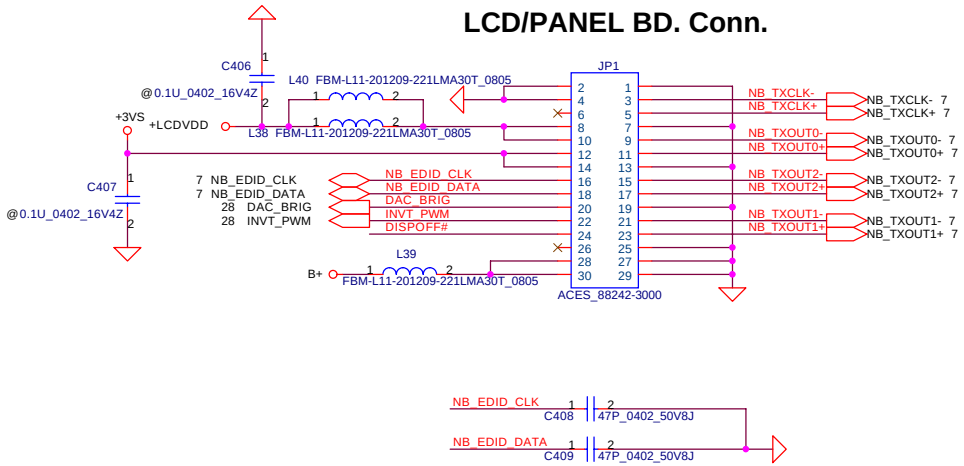
Reduce LUMA_1 and CRMA_1 length
As short as possible



PANEL +LCDVDD CTRL CKT



LCD/PANEL BD. Conn.



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: TV-OUT, LVDS CONNECTOR

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

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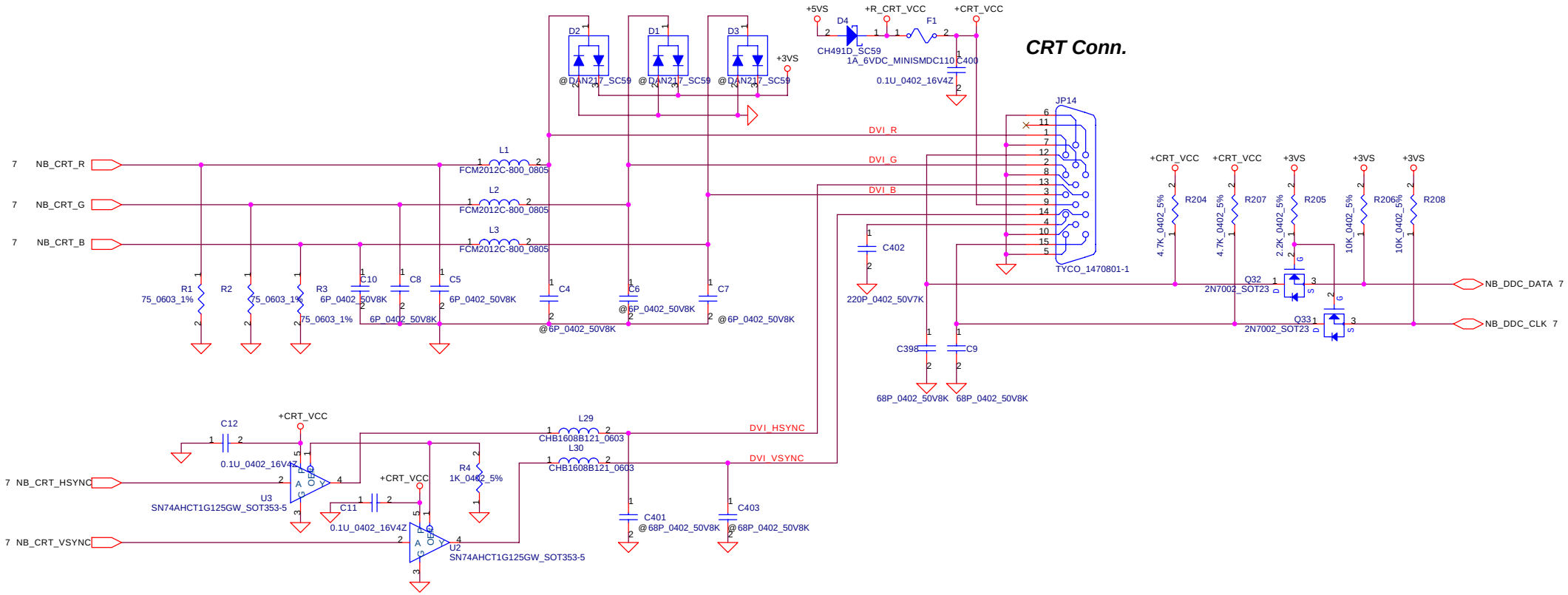
CRT CONNECTOR



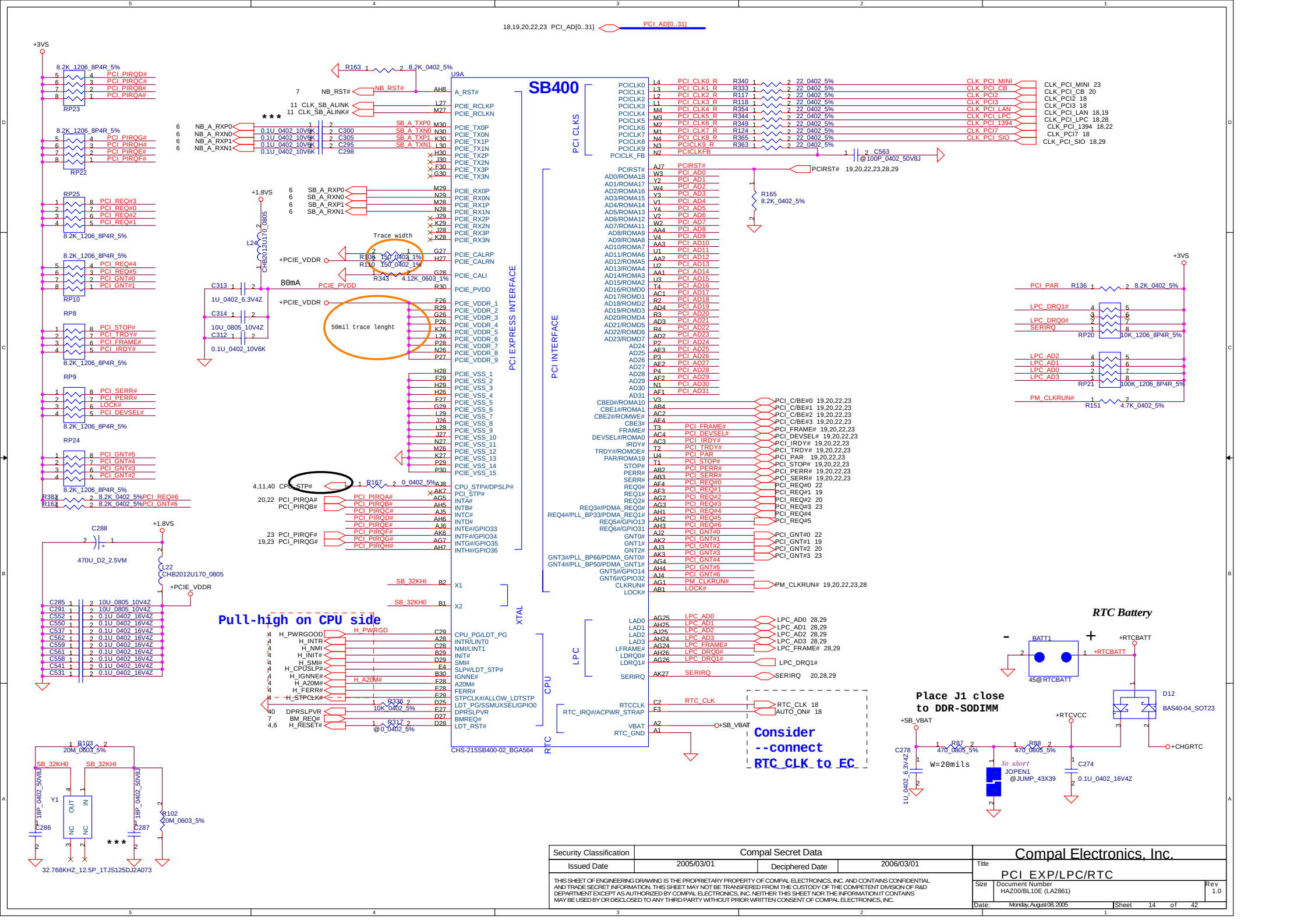
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: CRT CONNECTOR

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Thursday, August 04, 2005 | Sheet 13 of 42



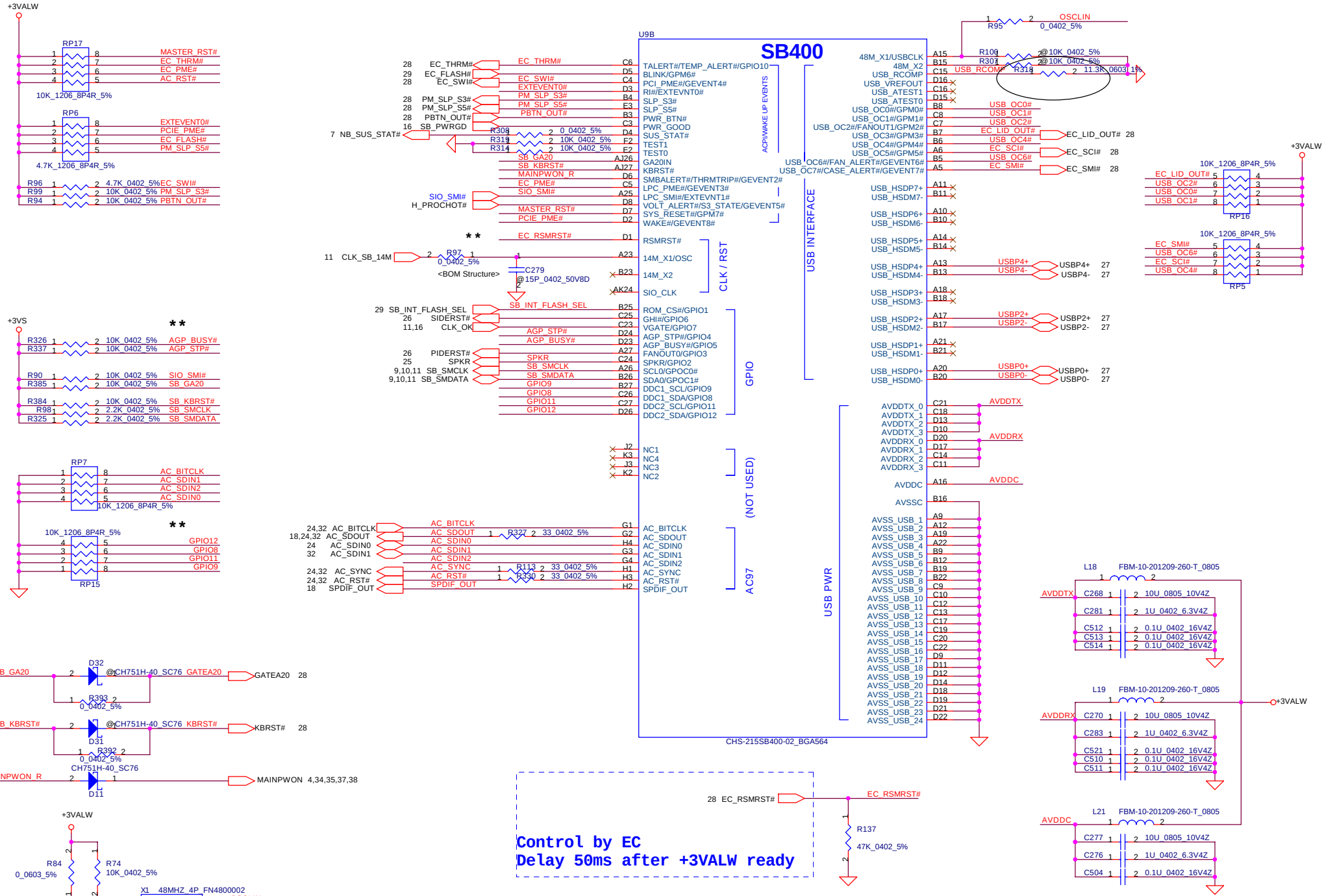
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: PCI_EXP/LPC/RTC

Size	Document Number	Rev
	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 14 of 42



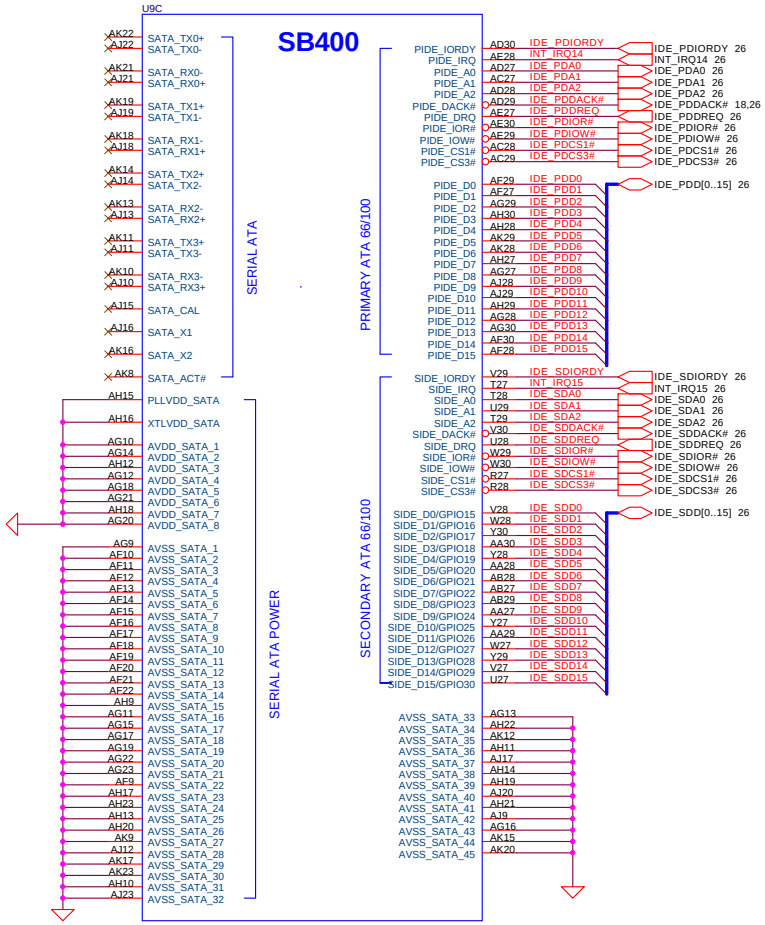
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

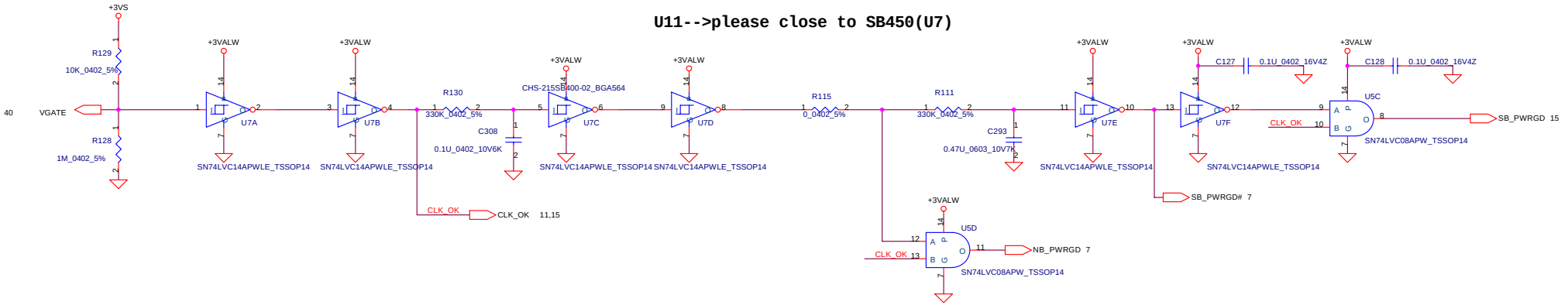
Title: SB450 USB/ACPI/AC97/GPIO

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 15 of 42



U11-->please close to SB450(U7)



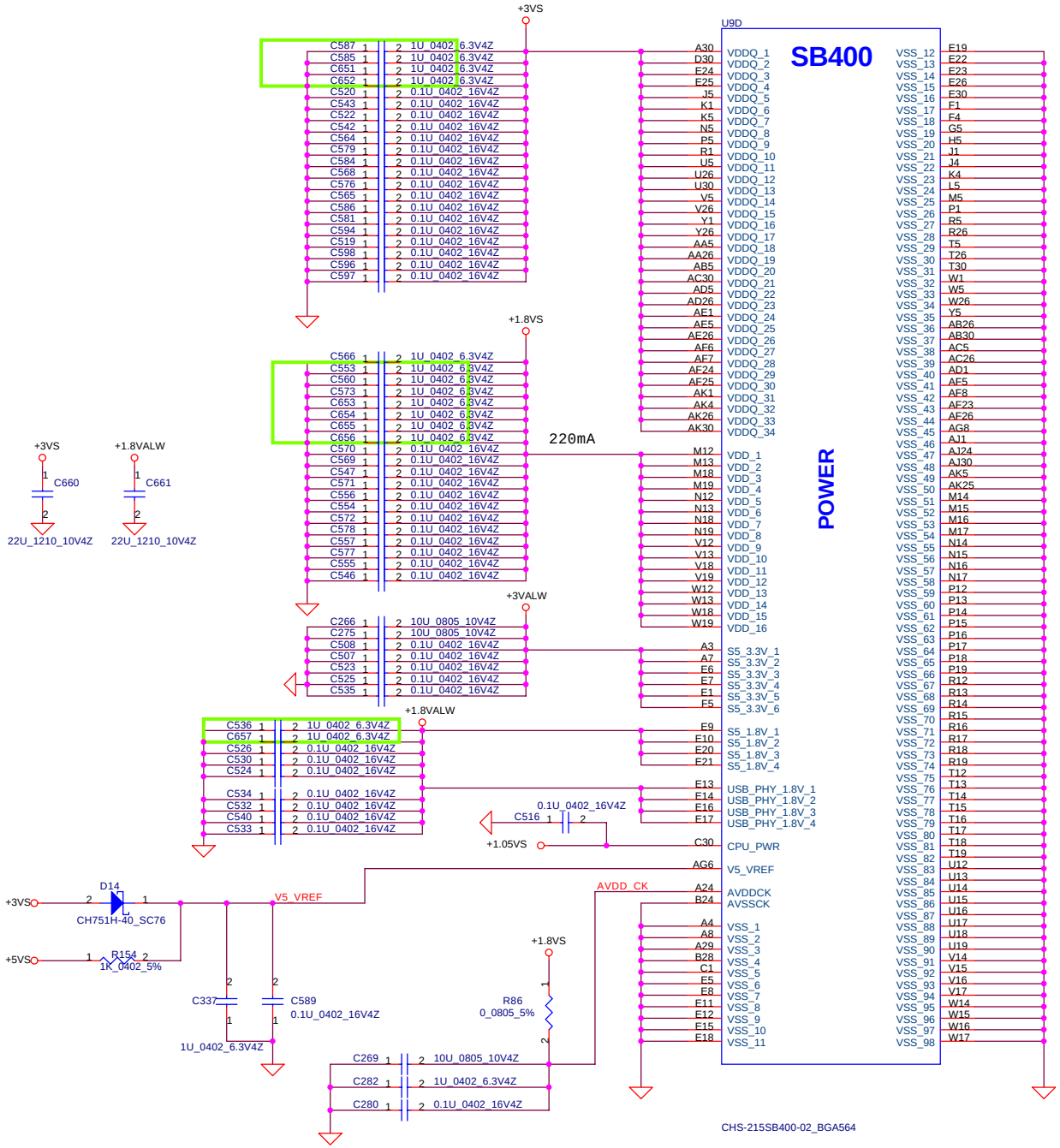
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: SB450 IDE/SATA

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 16 of 42



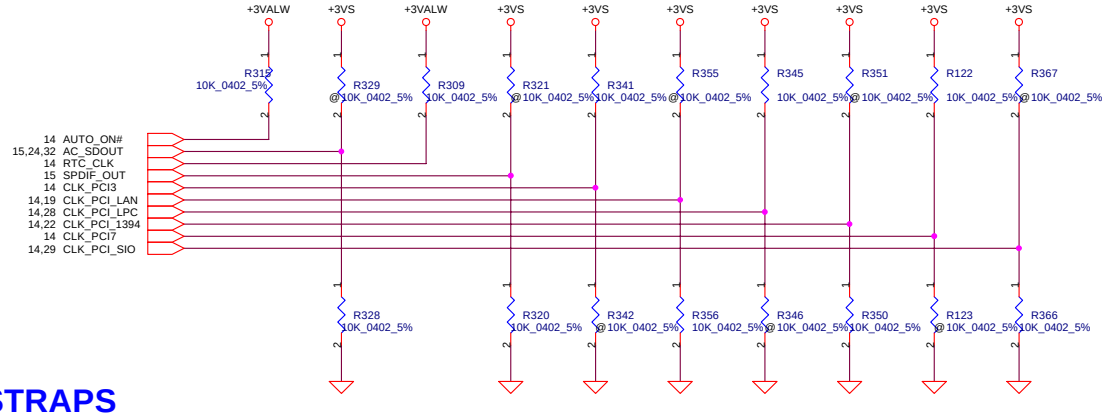
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

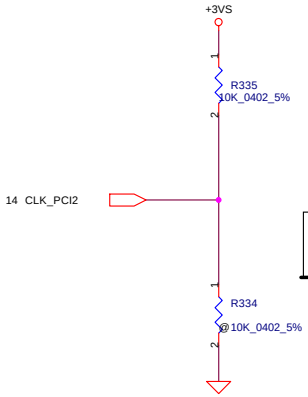
Compal Electronics, Inc.

Title: SB450/POWER/GND

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Thursday, August 04, 2005 Sheet 17 of 42



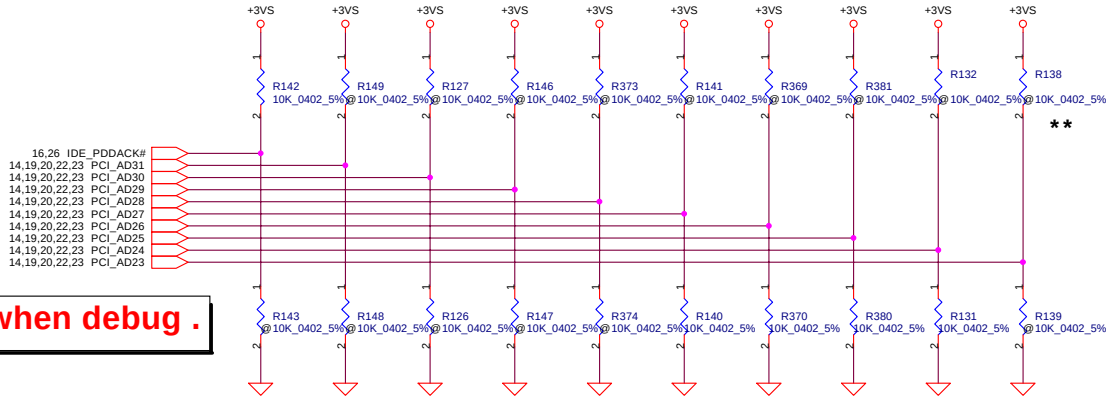


Selects type of 48MHz clock pad

REQUIRED STRAPS

ACPWRON

	AUTO_ON#	AC97_SDOUT	RTC_CLK	SPDIF_OUT	CLK_PCI3	CLK_PCI_LAN	CLK_PCI_LPC	PCI_CLK6	PCI_CLK7 PCI_CLK8	CLK_PCI_MINI2
PULL HIGH	MANUAL PWR ON DEFAULT	USE DEBUG STRAPS	INTERNAL RTC DEFAULT	PU for 48Mhz XTAL mode	USB PHY PWRDOWN DISABLE	Internal PLL	PCIE CM_SET low DEFAULT	CPU I/F = K8	ROM TYPE H,H = PCI ROM H,L = LPC ROM I L,H = LPC ROM II L,L = FWH ROM	Clock input buffer DEFAULT
PULL LOW	AUTO PWR ON	IGNORE DEBUG STRAPS DEFAULT	EXTERNAL RTC (NOT SUPPORTED W/ IT8712)	48M OSC mode DEFAULT	USB PHY PWRDOWN ENABLE DEFAULT	External Clock DEFAULT	PCIE CM_SET HIGH	CPU I/F = P4 DEFAULT		Crytsal Pad



Pop R634 when debug .

DEBUG STRAPS

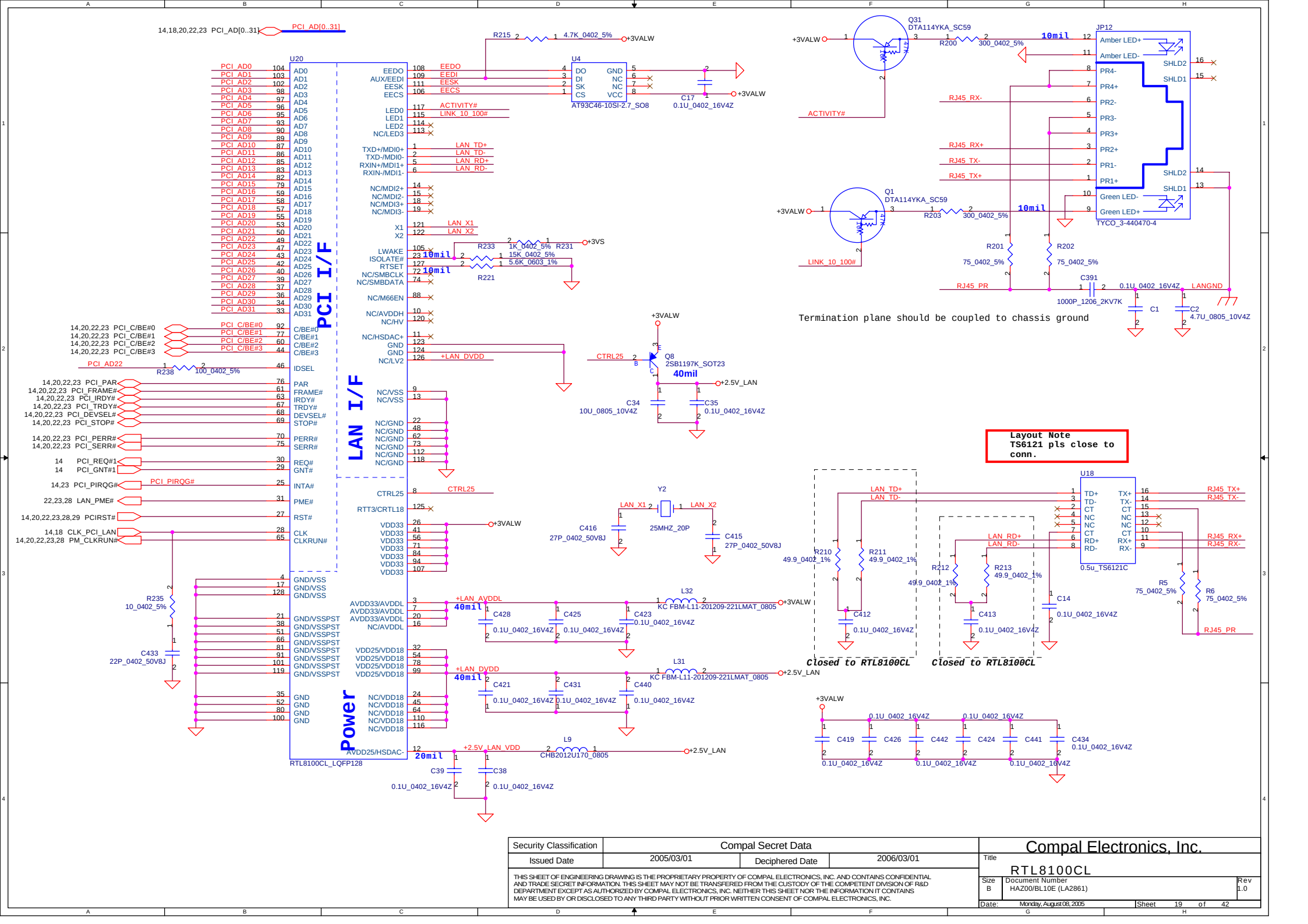
	IDE_PDDACK#	PCI_AD31	PCI_AD30	PCI_AD29	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	Reserved	Reserved	Reserved	Reserved	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	Reserved
PULL LOW	USE SHORT RESET					USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	

Compal Electronics, Inc.

Title: HARDWARE TRAP

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 18 of 42



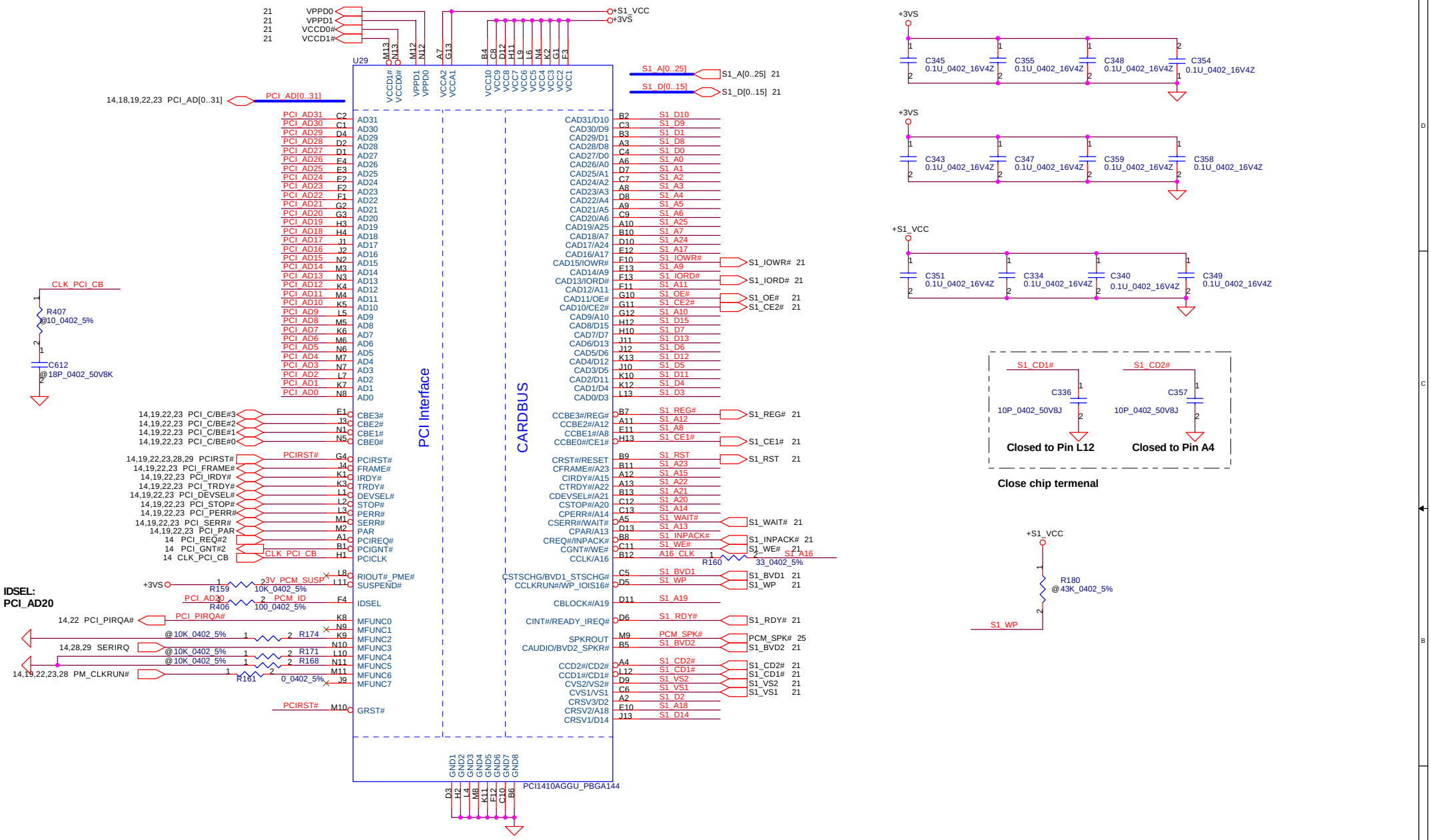
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: RTL8100CL

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 19 of 42



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

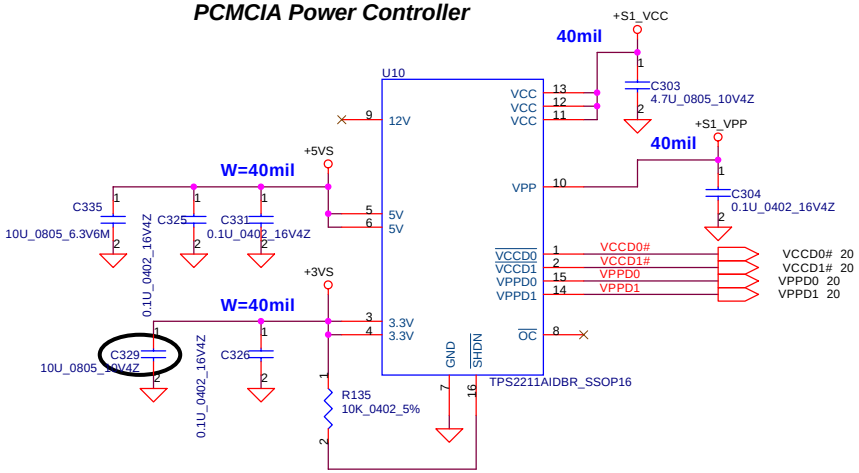
Compal Electronics, Inc.

Title: ENE-CB1410

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Thursday, August 04, 2005 Sheet 20 of 42

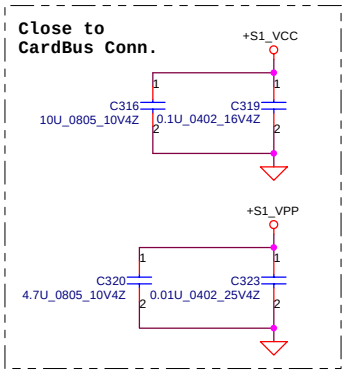
PCMCIA Power Controller

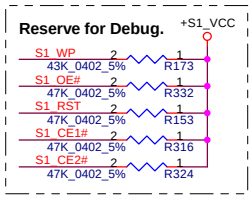


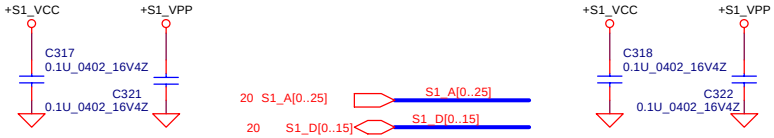
CardBus Socket

20 S1_A[0..25] S1_A[0..25]

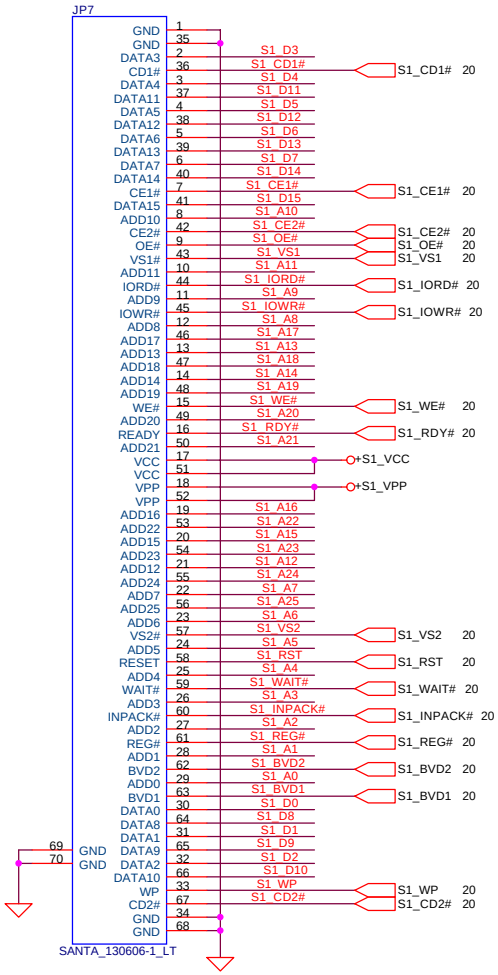
20 S1_D[0..15] S1_D[0..15]







CardBus Socket



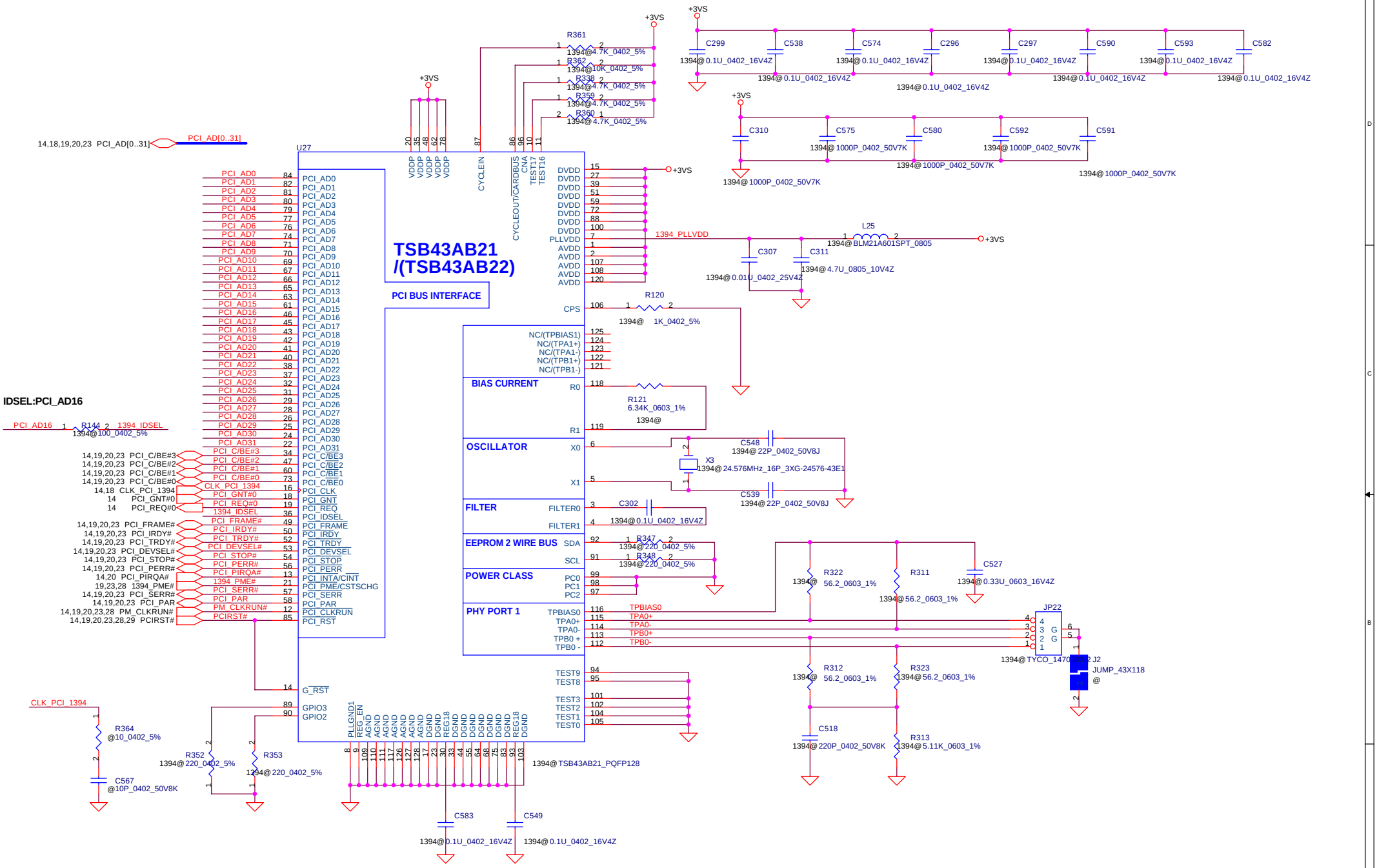
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: CARD BUS SOCKET

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Thursday, August 04, 2005 Sheet 21 of 42



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

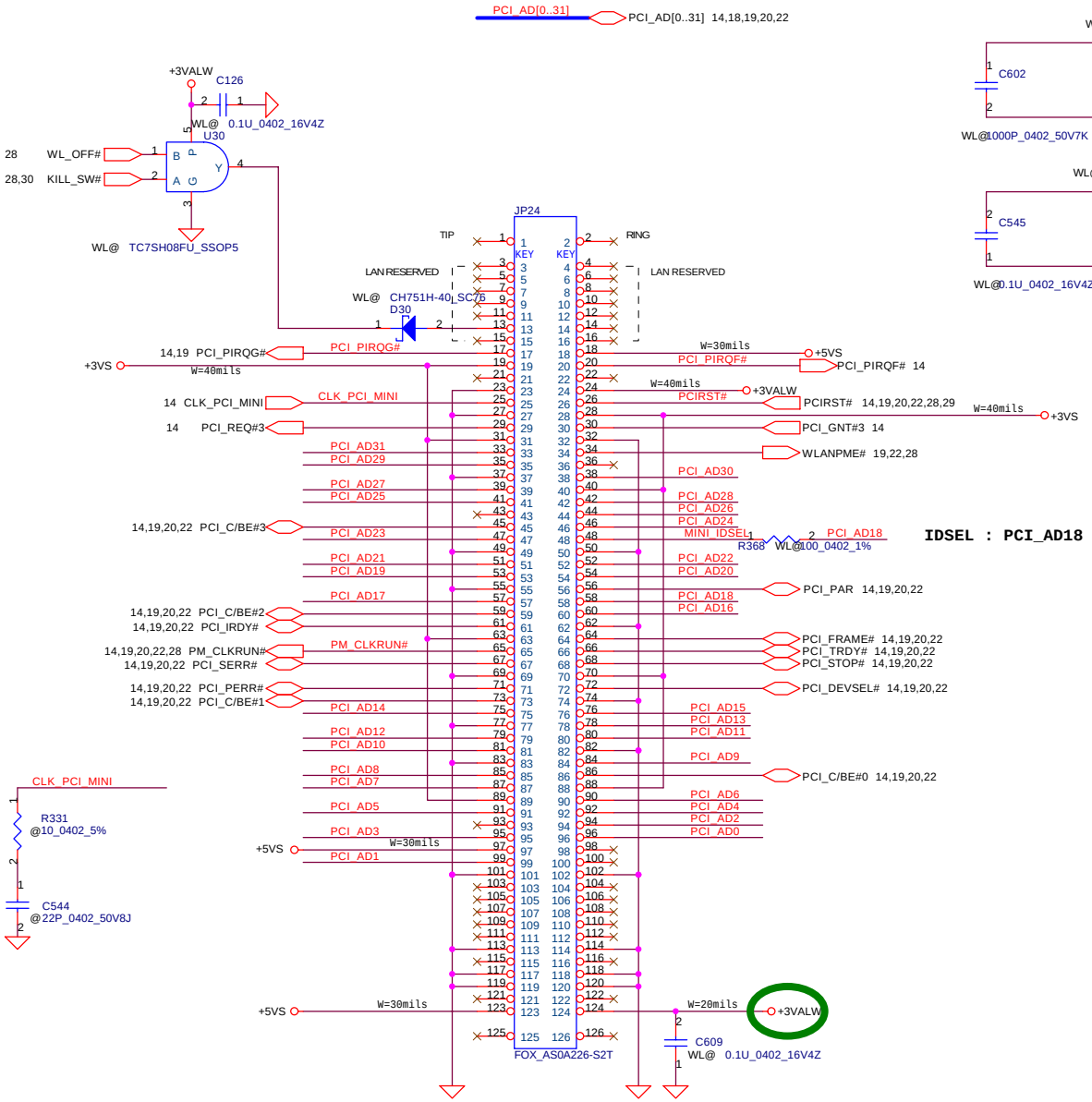
Compal Electronics, Inc.

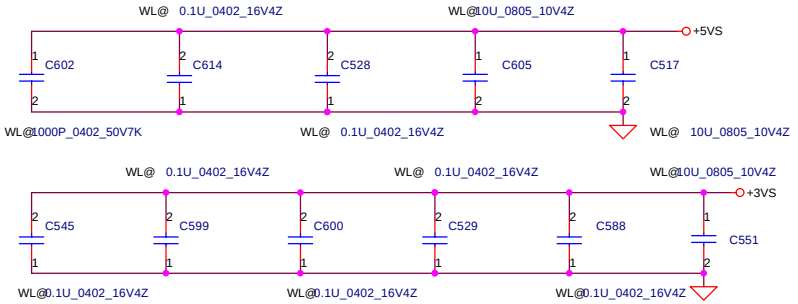
Title: TSB43AB21

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

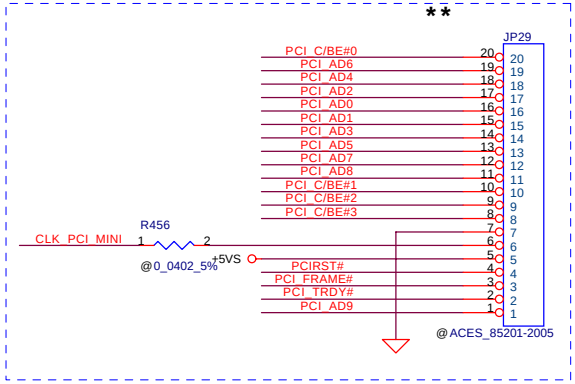
Date: Monday, August 08, 2005 Sheet 22 of 42

MINI_PCI SOCKET FOR WLAN (BOTTOM)





Port 80 Debug Card Connector



Place under MiniPCI Socket

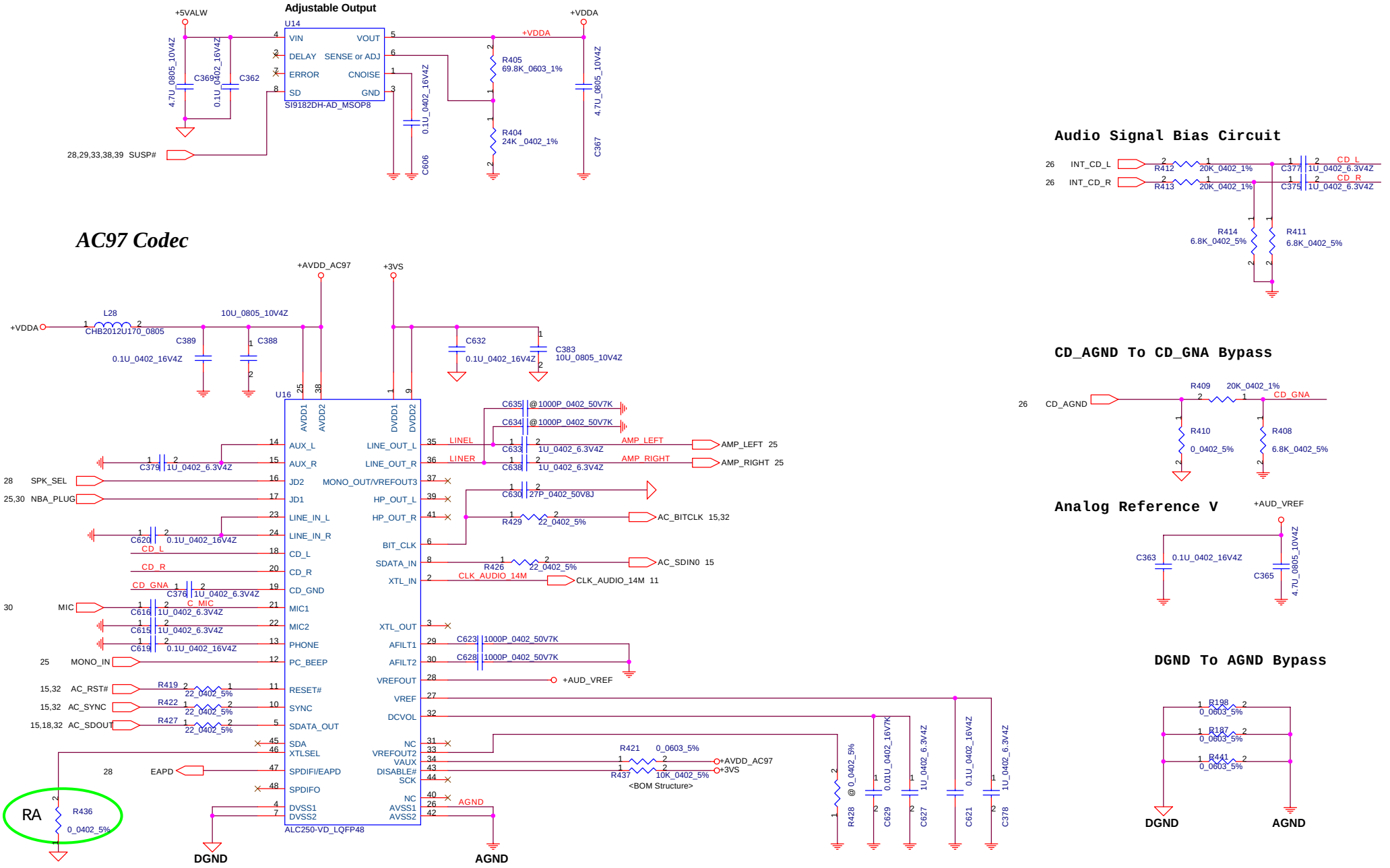
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: MINI PCI SLOT

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 23 of 42



WITH 14.318MHz : RA POP
WITH 24.576MHz : RA DEPOP

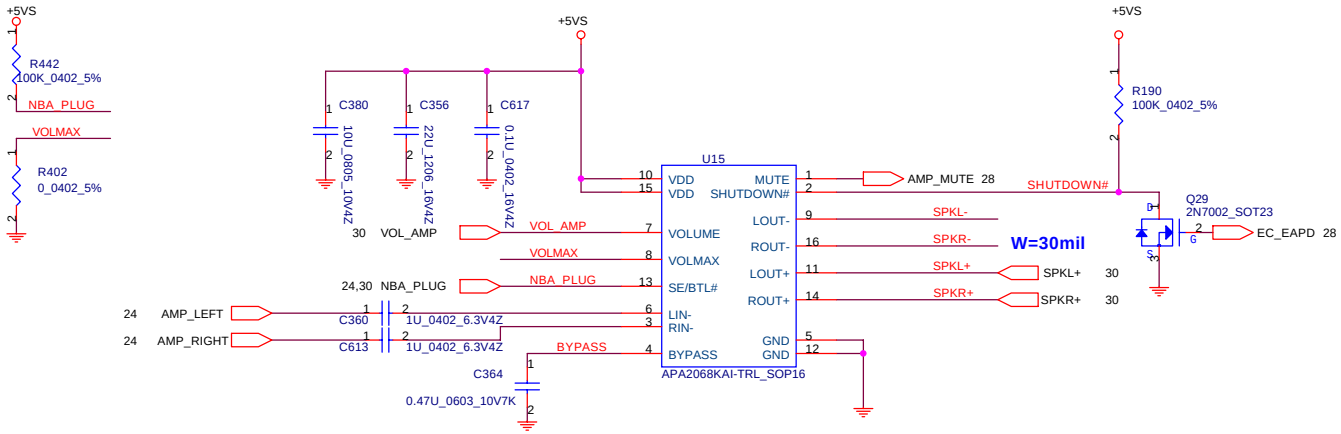
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

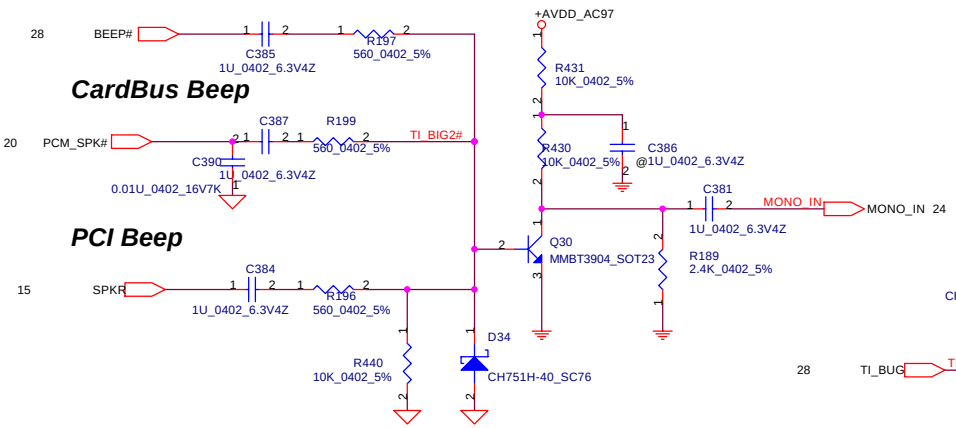
Title: AC97 CODEC ALC250D

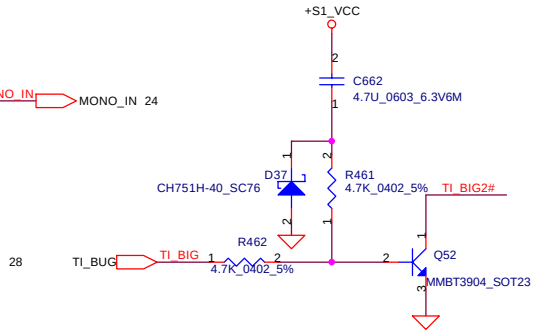
Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 24 of 42

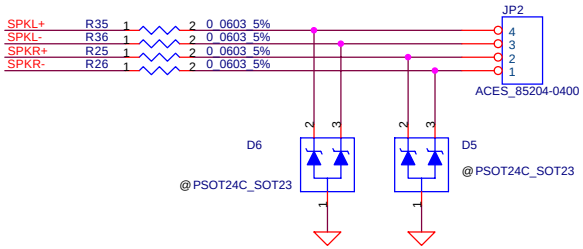


EC Beep





Speaker Conn.



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

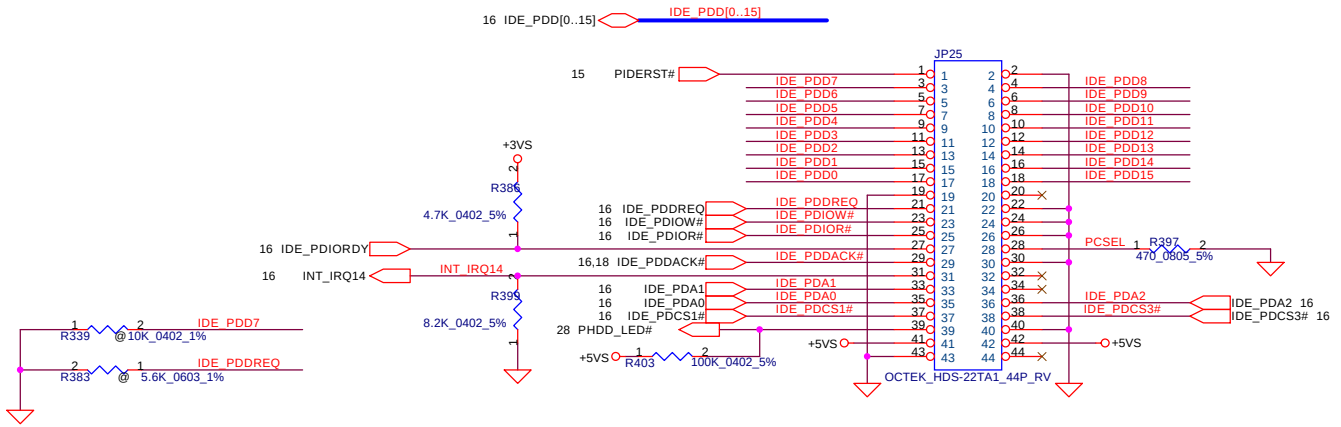
Compal Electronics, Inc.

Title: AMP&Audio Jack

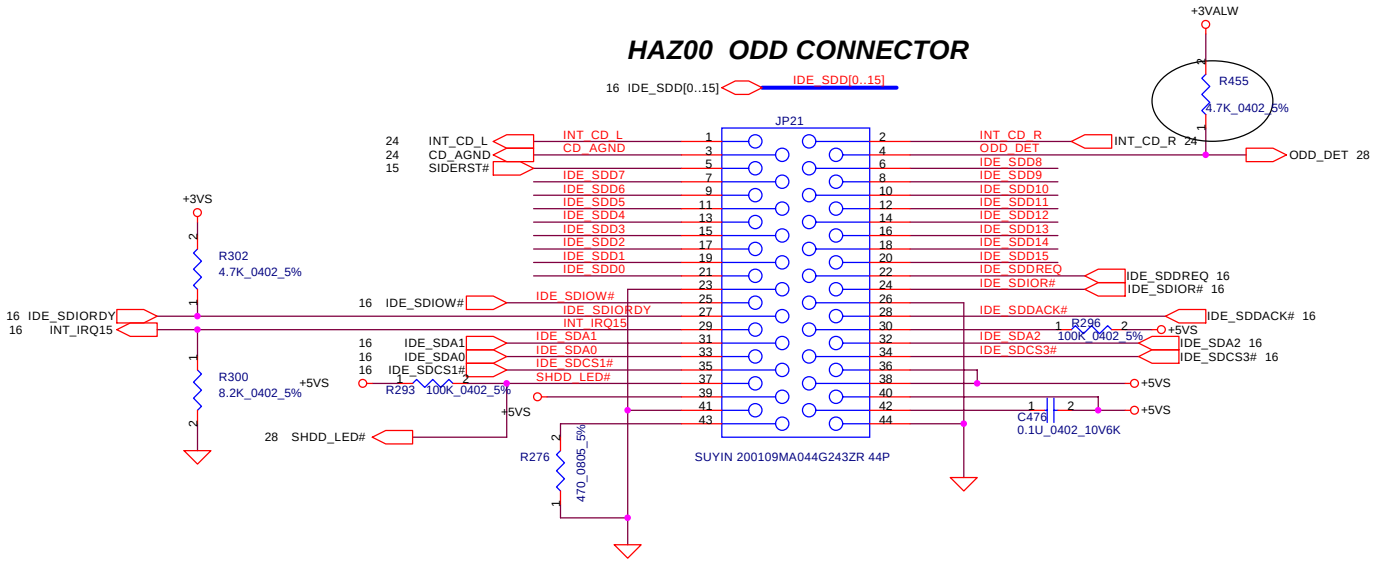
Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 25 of 42

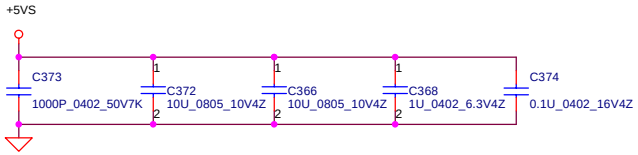
HDD CONNECTOR

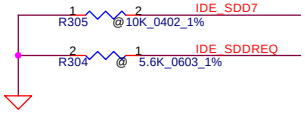


HAZ00 ODD CONNECTOR



Placea caps. near HDD CONN.





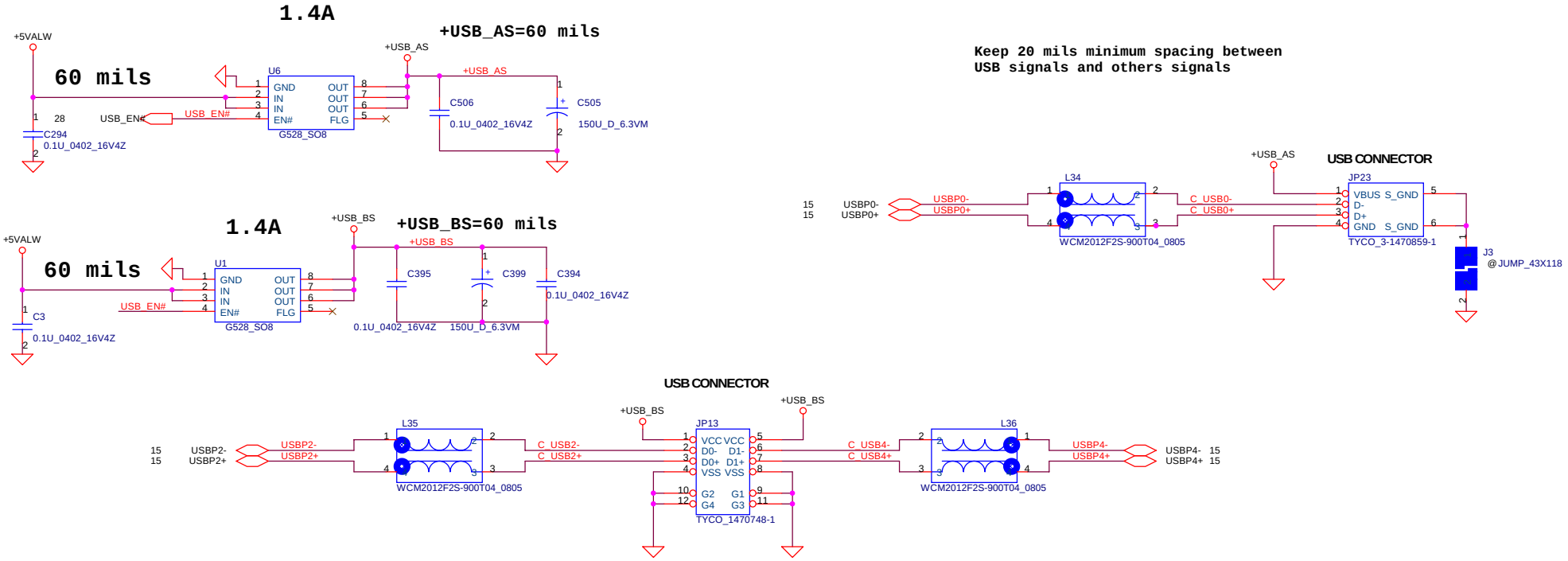
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

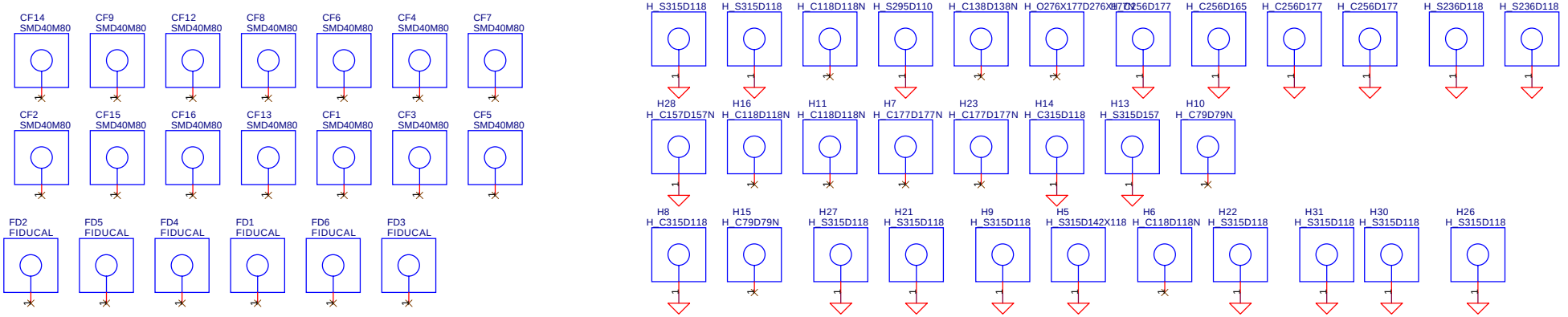
Compal Electronics, Inc.

Title: IDE/ ODD CONNECTORS

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Thursday, August 04, 2005 Sheet 26 of 42





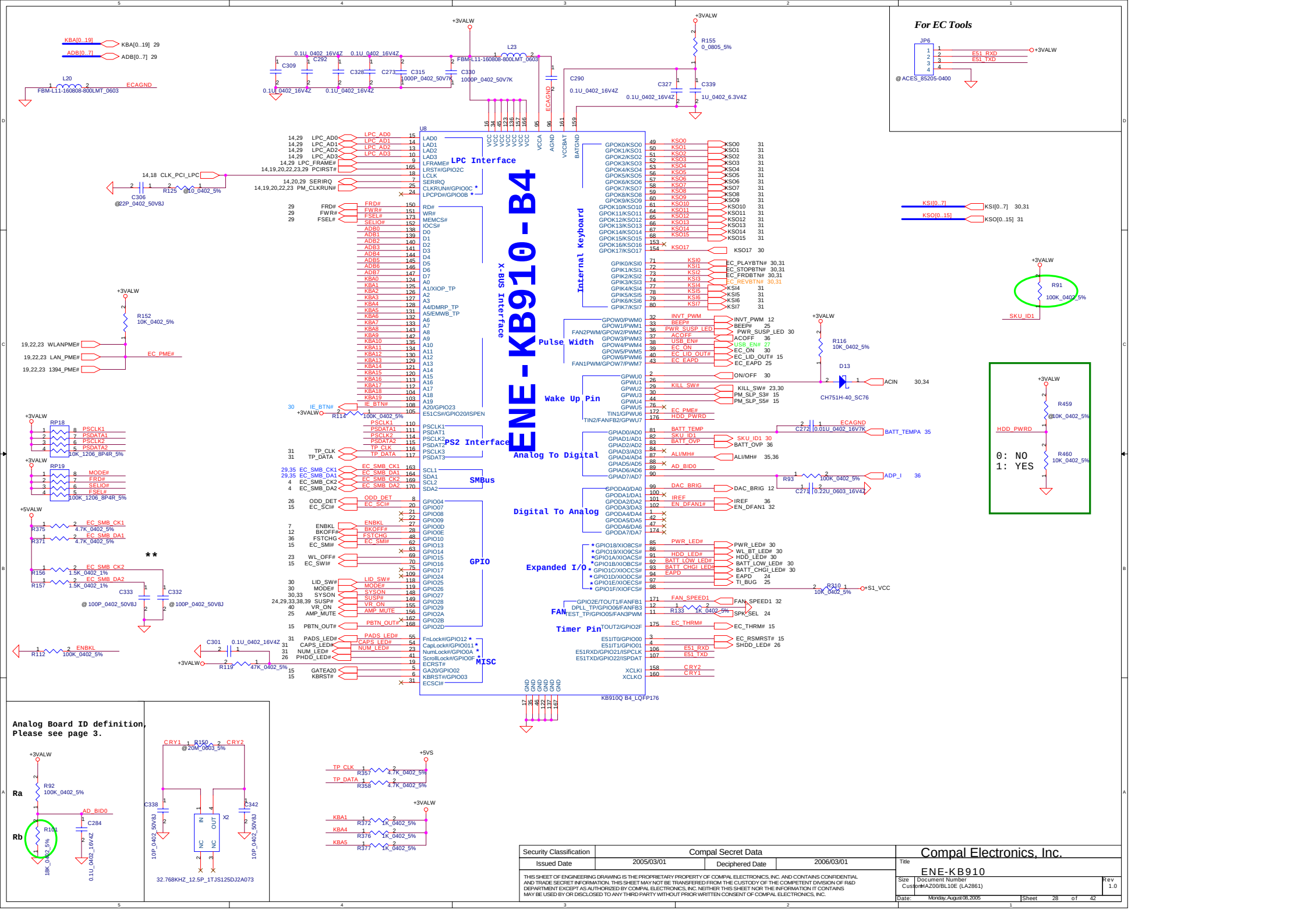
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: USB Conn.

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

Date: Thursday, August 04, 2005 Sheet 27 of 42



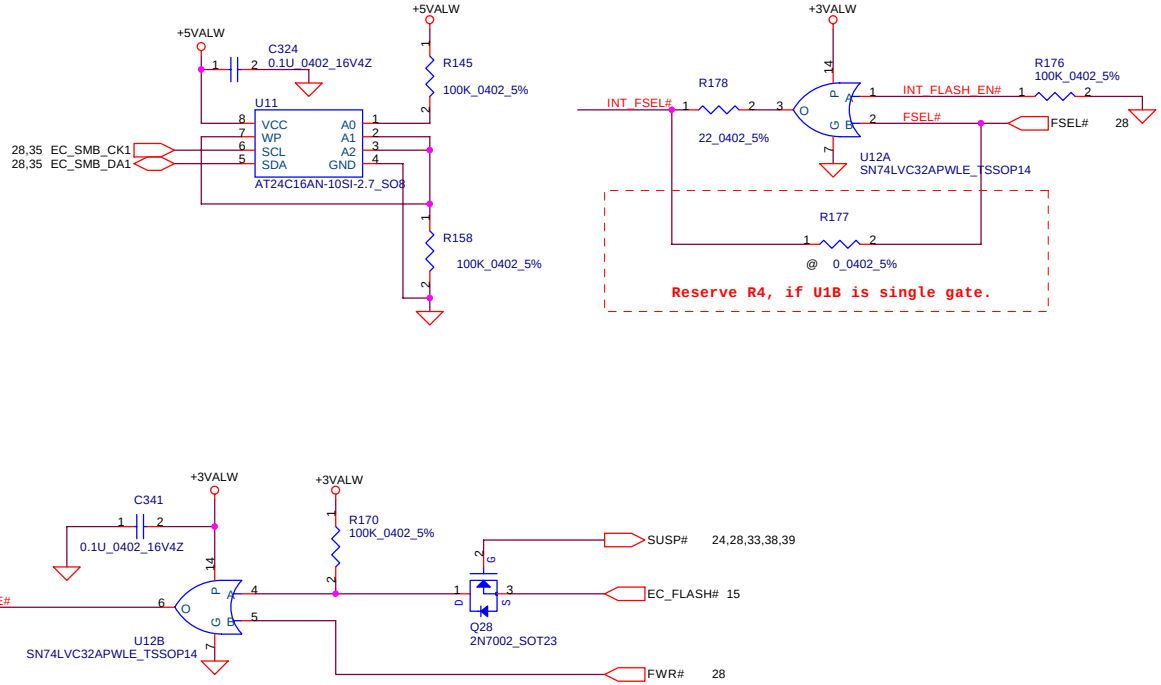
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

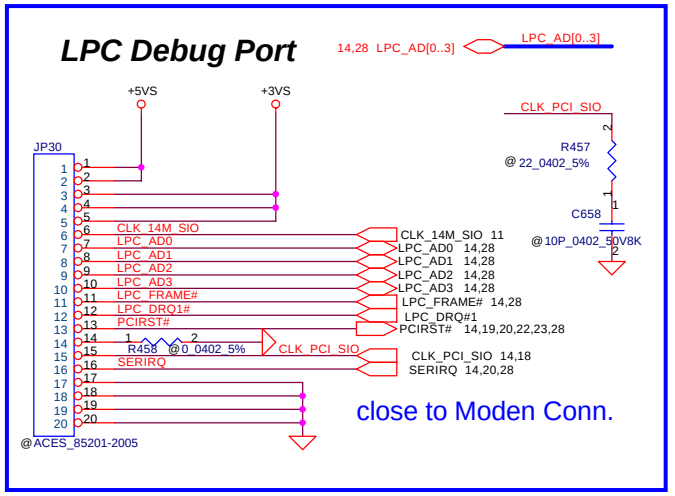
Compal Electronics, Inc.

Title: ENE-KB910

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

Date: Monday, August 08, 2005 Sheet 28 of 42

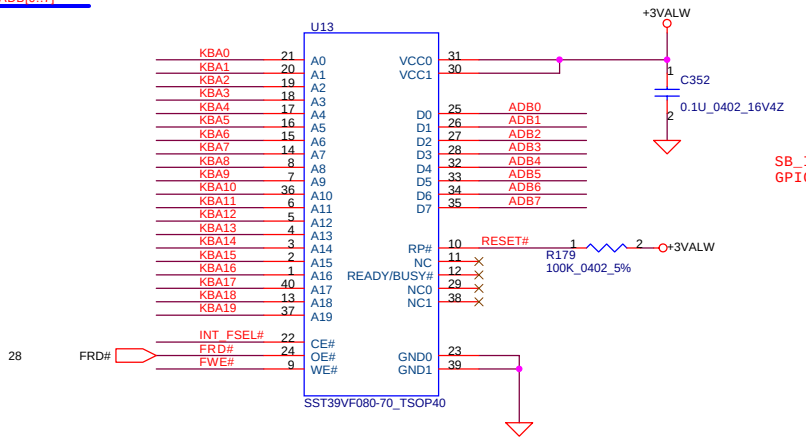




28 KBA[0..19] KBA[0..19]

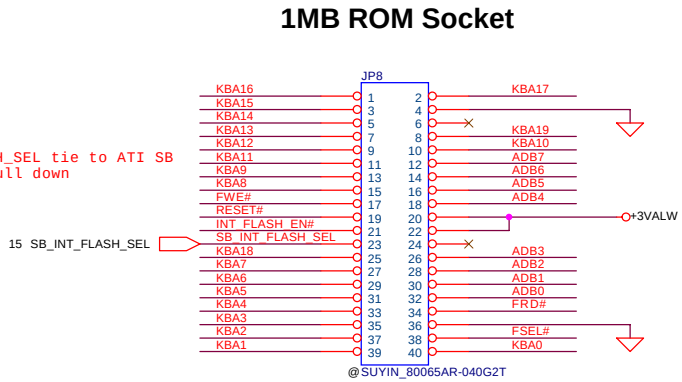
28 ADB[0..7] ADB[0..7]

1MB Flash ROM



SB_INT_FLASH_SEL tie to ATI SB GPIO1 and pull down

1MB ROM Socket



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

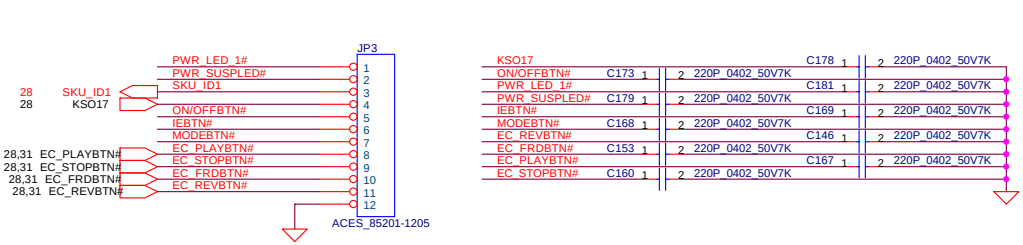
Compal Electronics, Inc.

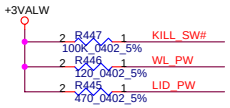
Title: BIOS& I/O PORT

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

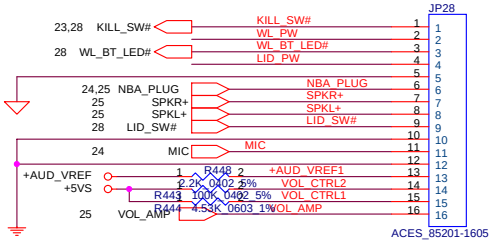
Date: Monday, August 08, 2005 Sheet 29 of 42

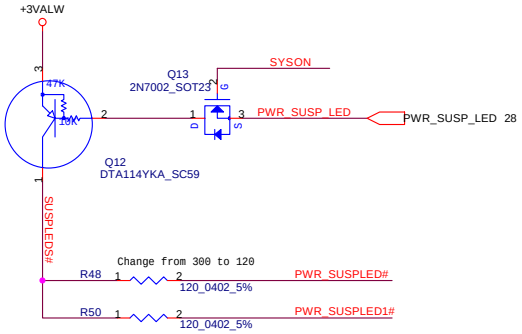
Switch Board Conn.

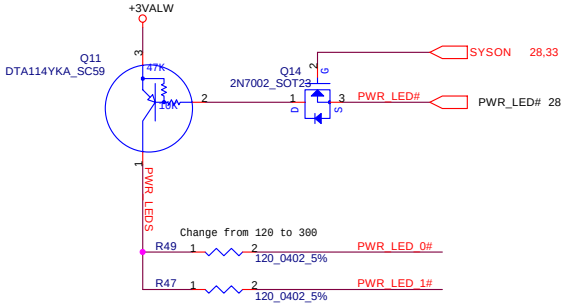




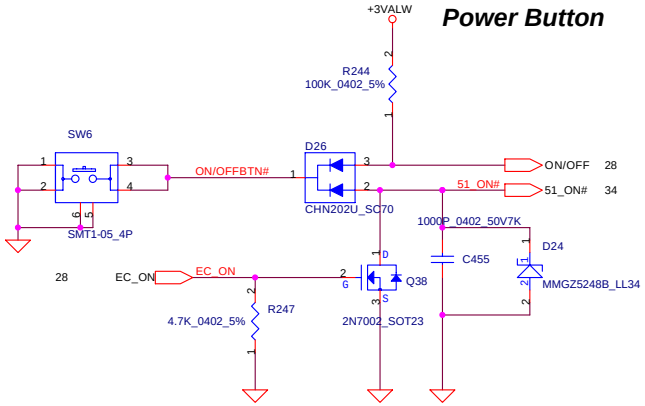
VR Conn.

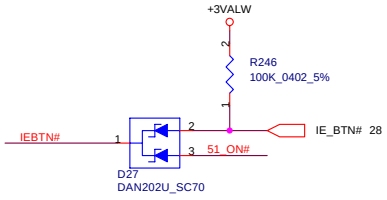


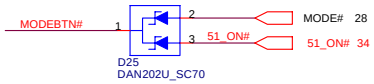




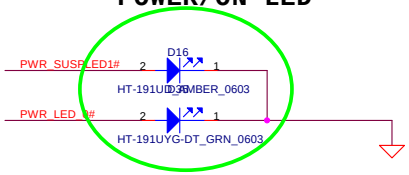
Power Button



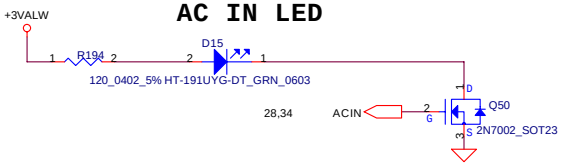




POWER/ON LED

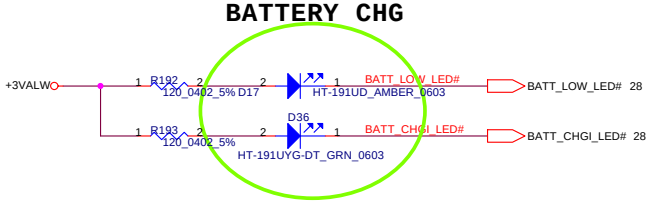


AC IN LED



HDD LED

BATTERY CHG



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: Kill SW/ Sub Conn./LEDS

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

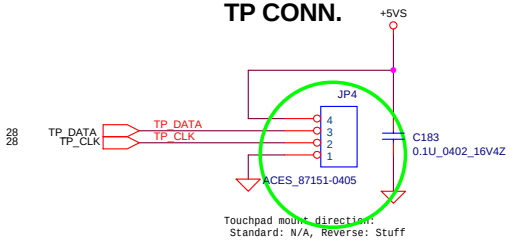
Date: Thursday, August 04, 2005 | Sheet 30 of 42

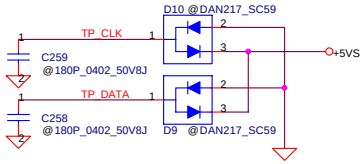
KSI[0..7]
KSO[0..15]

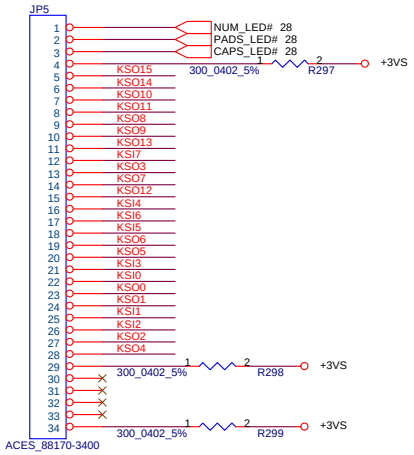
KSI[0..7] 28,30
KSO[0..15] 28

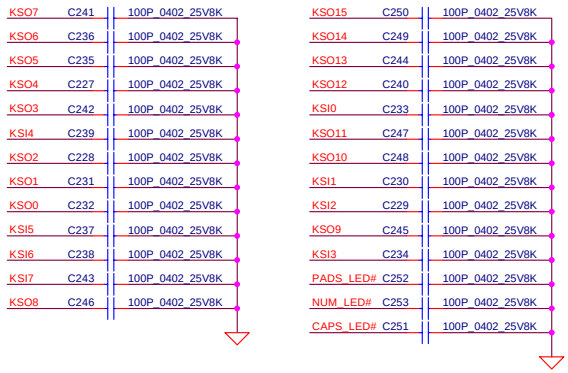
INT_KBD CONN.

TP CONN.









Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: KB/Touch Pad& hibernation

Size	Document Number	Rev
Custom	HAZ00/BL10E (LA2861)	1.0

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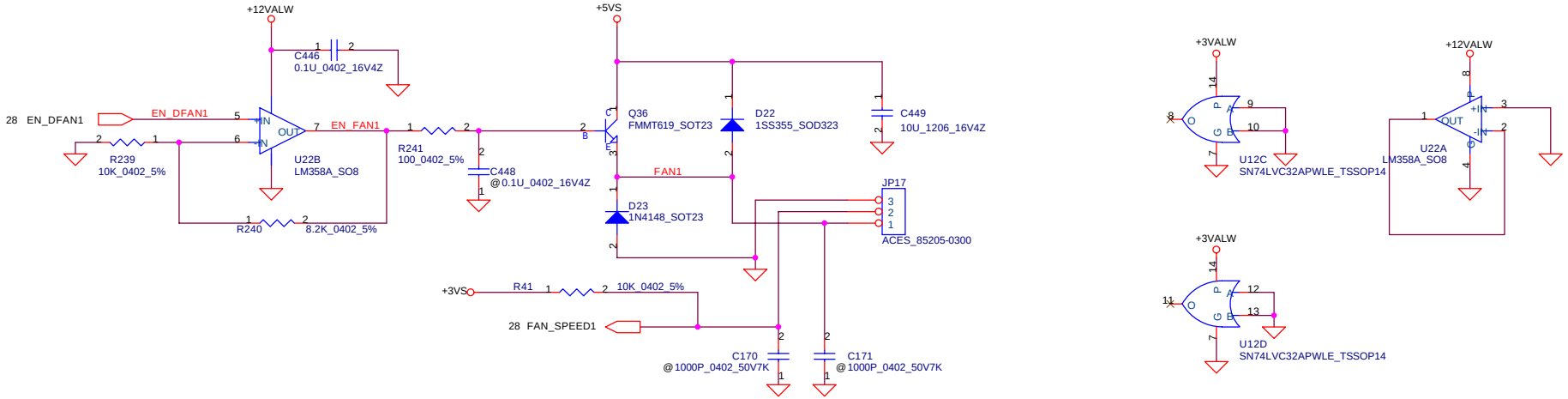
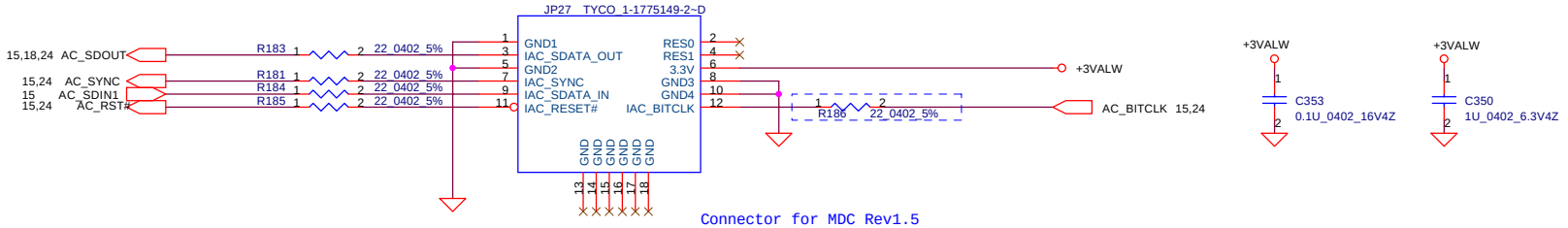
FAN Conn



MDC CONN.



Connector for MDC Rev1.5

Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: FAN & MDC

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

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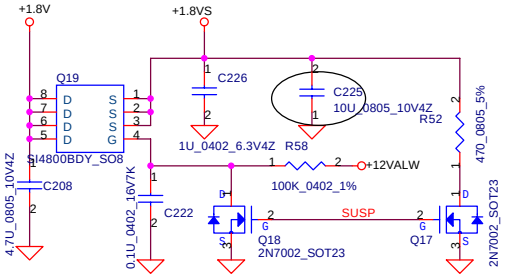
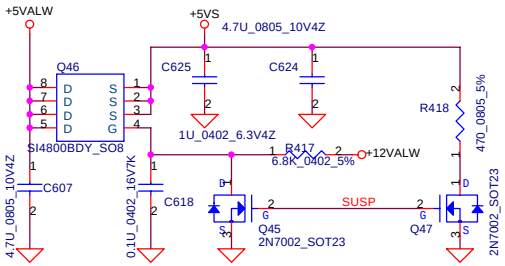
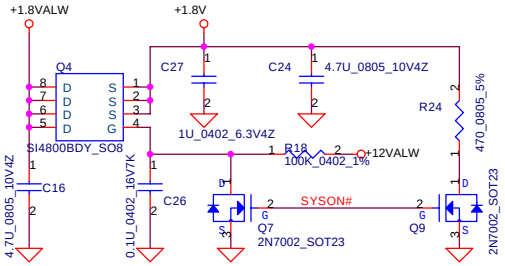
+1.8VALW TO +1.8VS

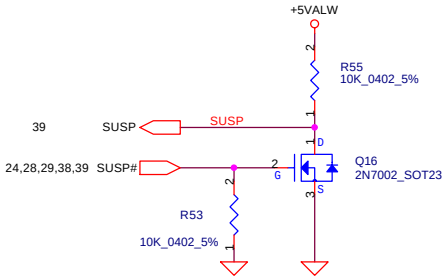


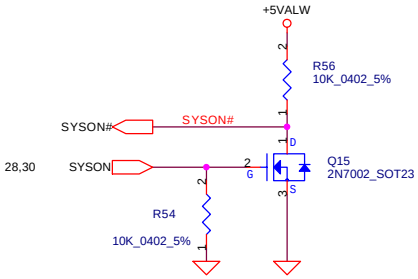
+5VALW TO +5VS



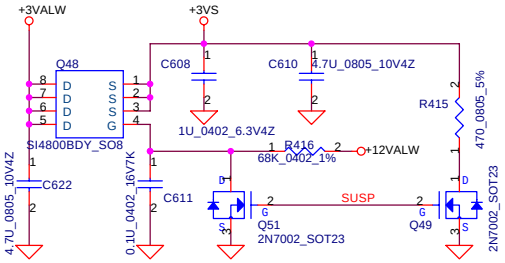
+1.8VALW TO +1.8V

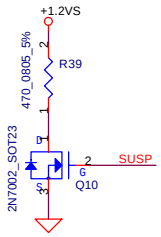


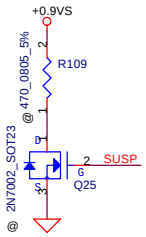


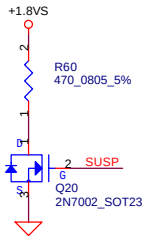


+3VALW TO +3VS









Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: DC-DC INTERFACE

Size	Document Number	Rev
B	HAZ00/BL10E (LA2861)	1.0

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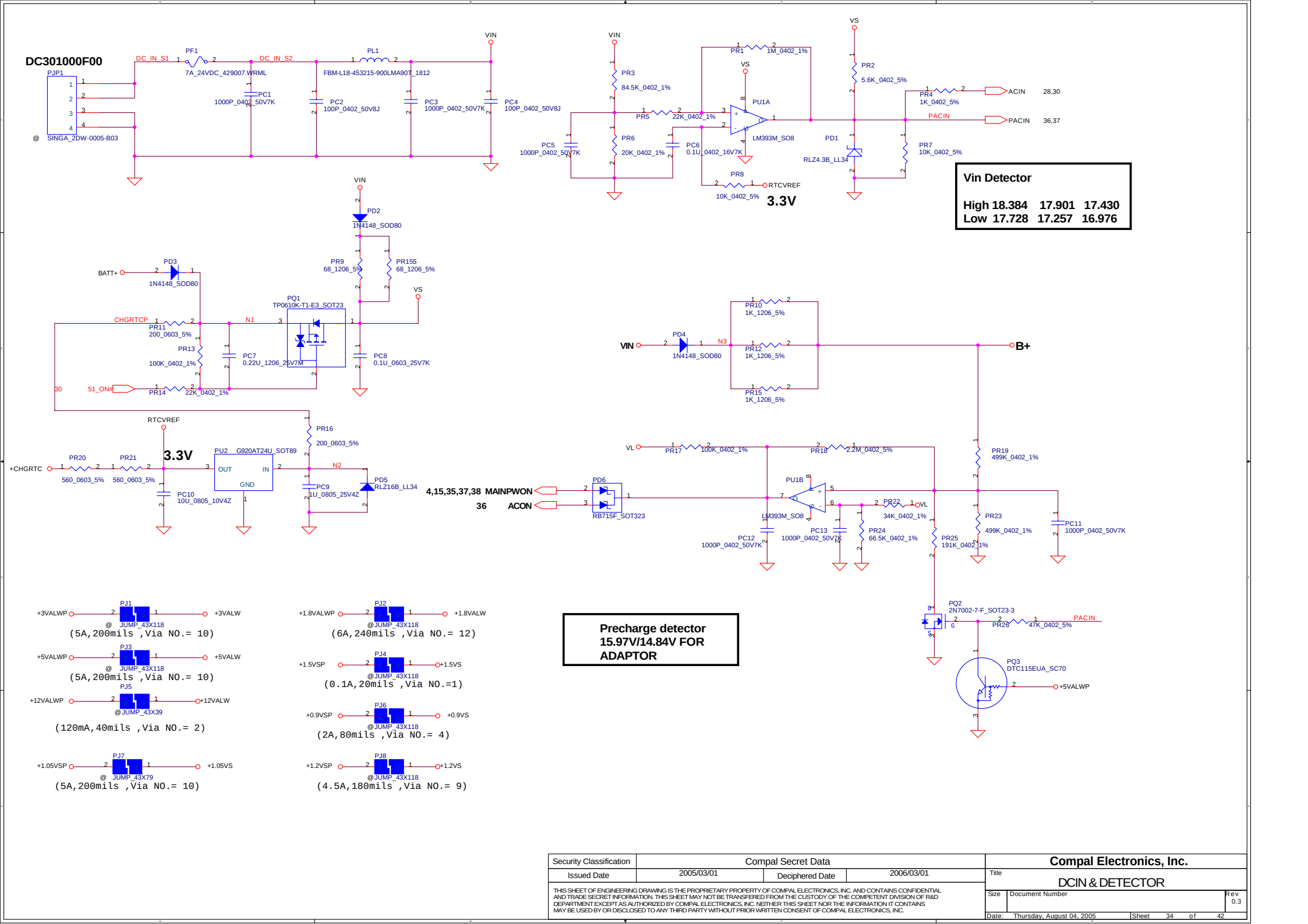

Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: DCIN & DETECTOR

Size	Document Number	Rev
		0.3

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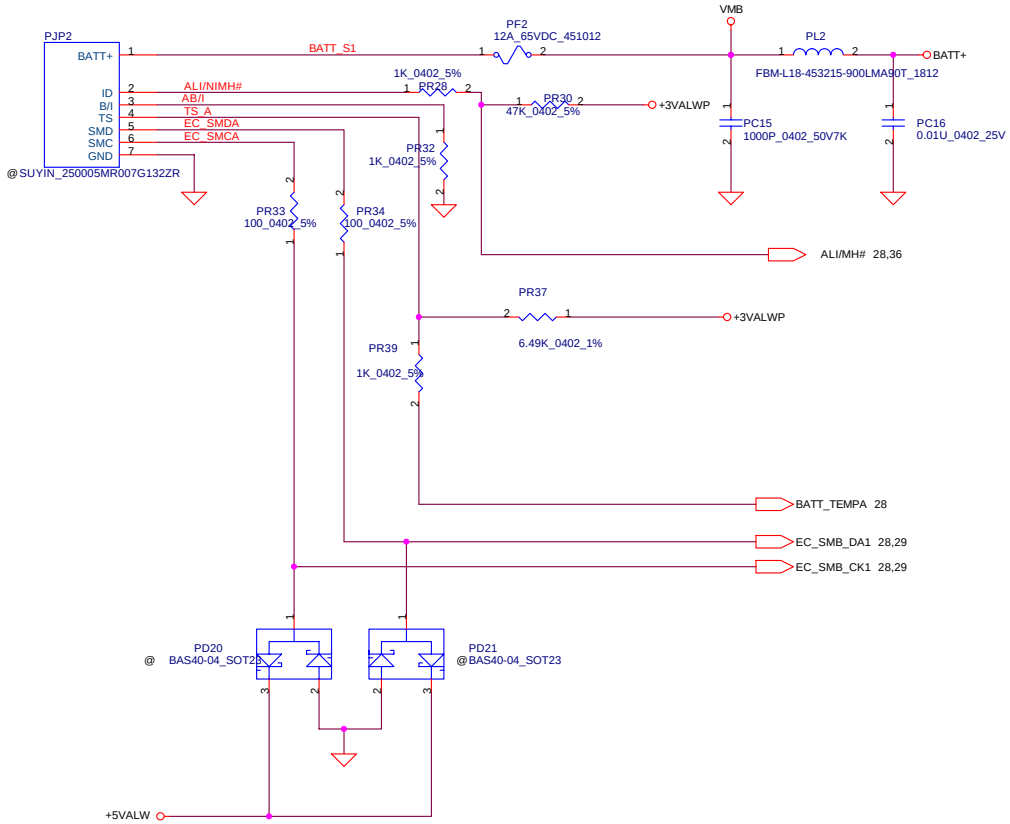
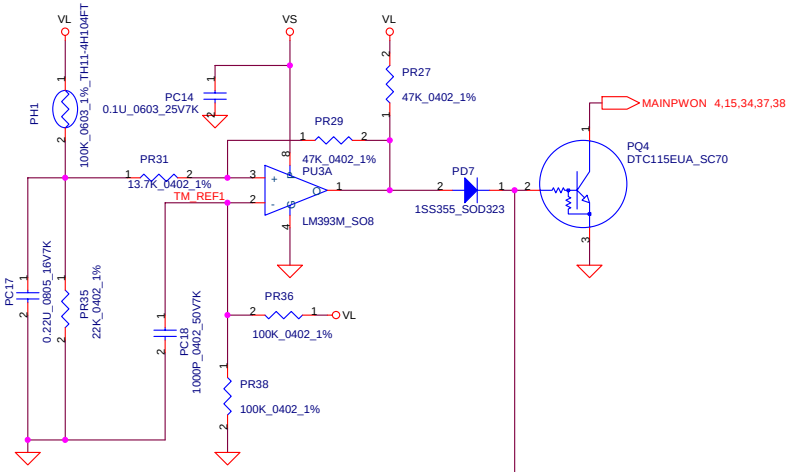
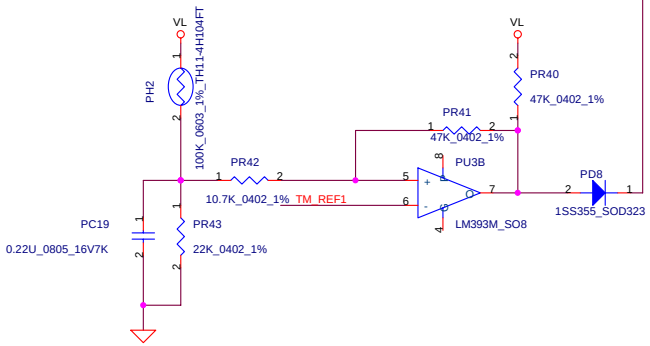
PH1 under CPU botten side :
CPU thermal protection at 84 degree C
Recovery at 45 degree C





PH2 near main Battery CONN :
BAT. thermal protection at 79 degree C
Recovery at 45 degree C



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: BATTERY CONN / OTP

Size	Document Number	Rev
		0.3

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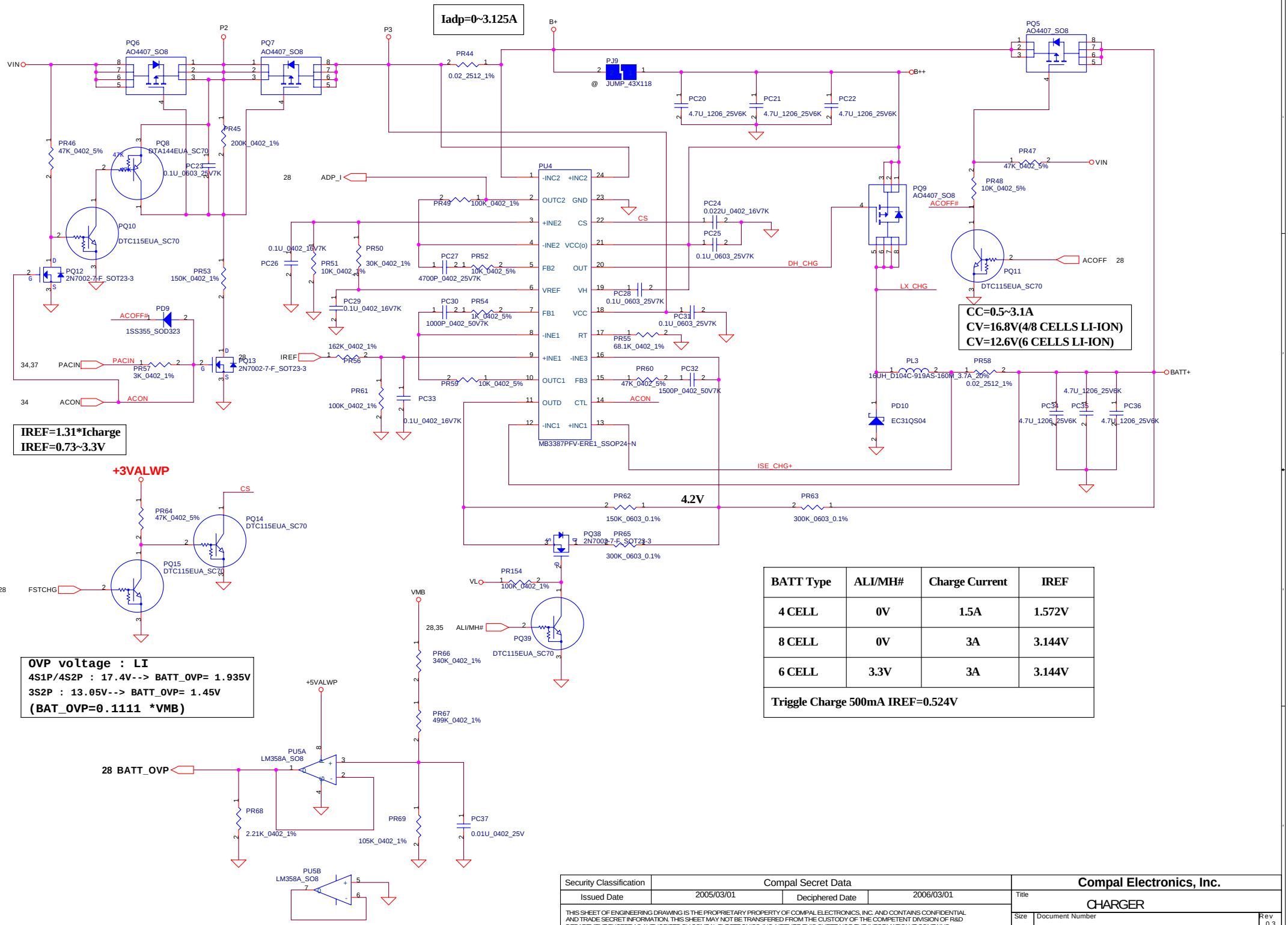

BATT Type	ALI/MH#	Charge Current	IREF
4 CELL	0V	1.5A	1.572V
8 CELL	0V	3A	3.144V
6 CELL	3.3V	3A	3.144V
Triggle Charge 500mA IREF=0.524V			

Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: CHARGER

Size	Document Number	Rev
		0.3

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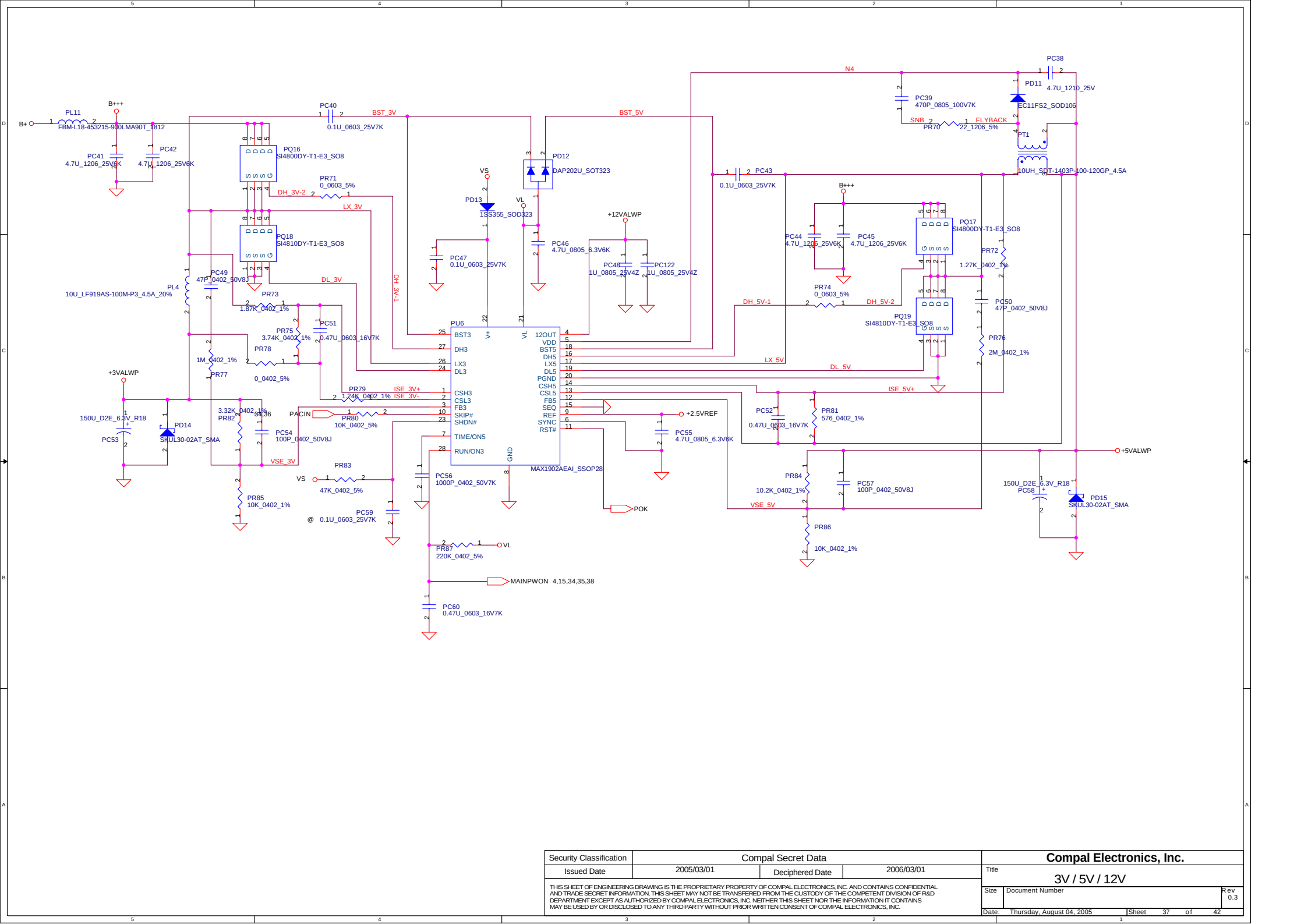


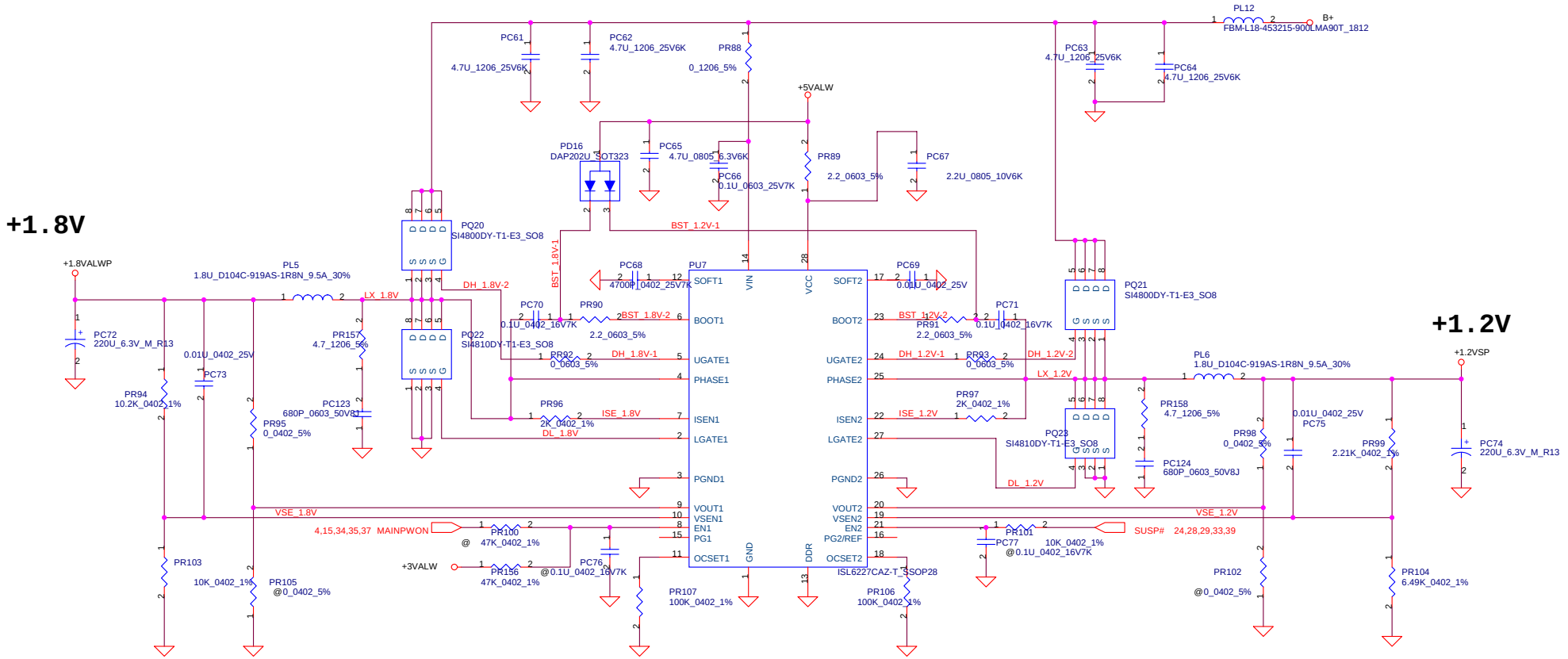
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: 3V / 5V / 12V

Size	Document Number	Rev
		0.3

Date: Thursday, August 04, 2005 | Sheet 37 of 42



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: 1.8V / VGA_CORE

Size | Document Number | Rev 0.3

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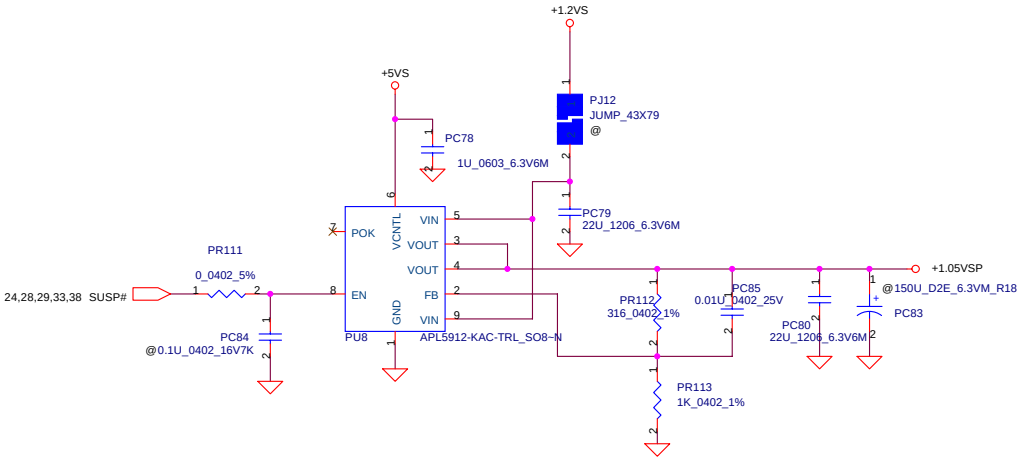
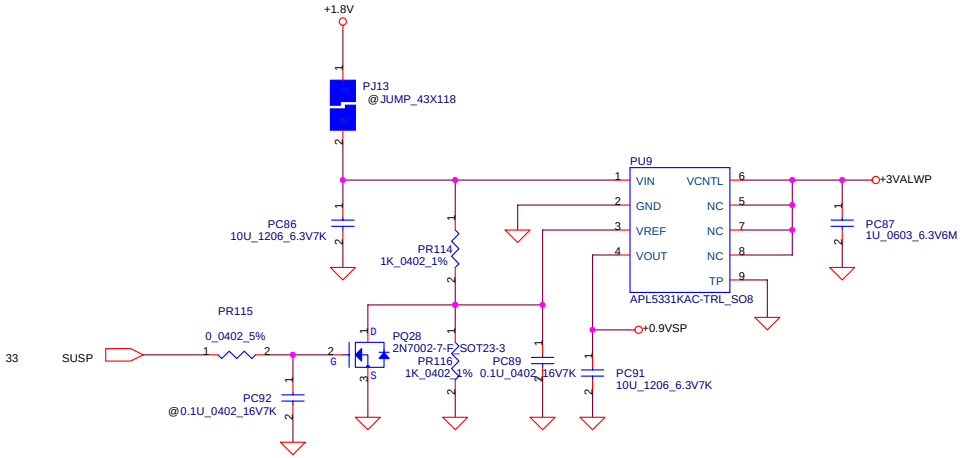
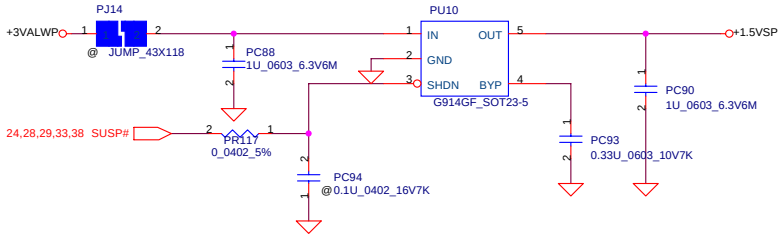






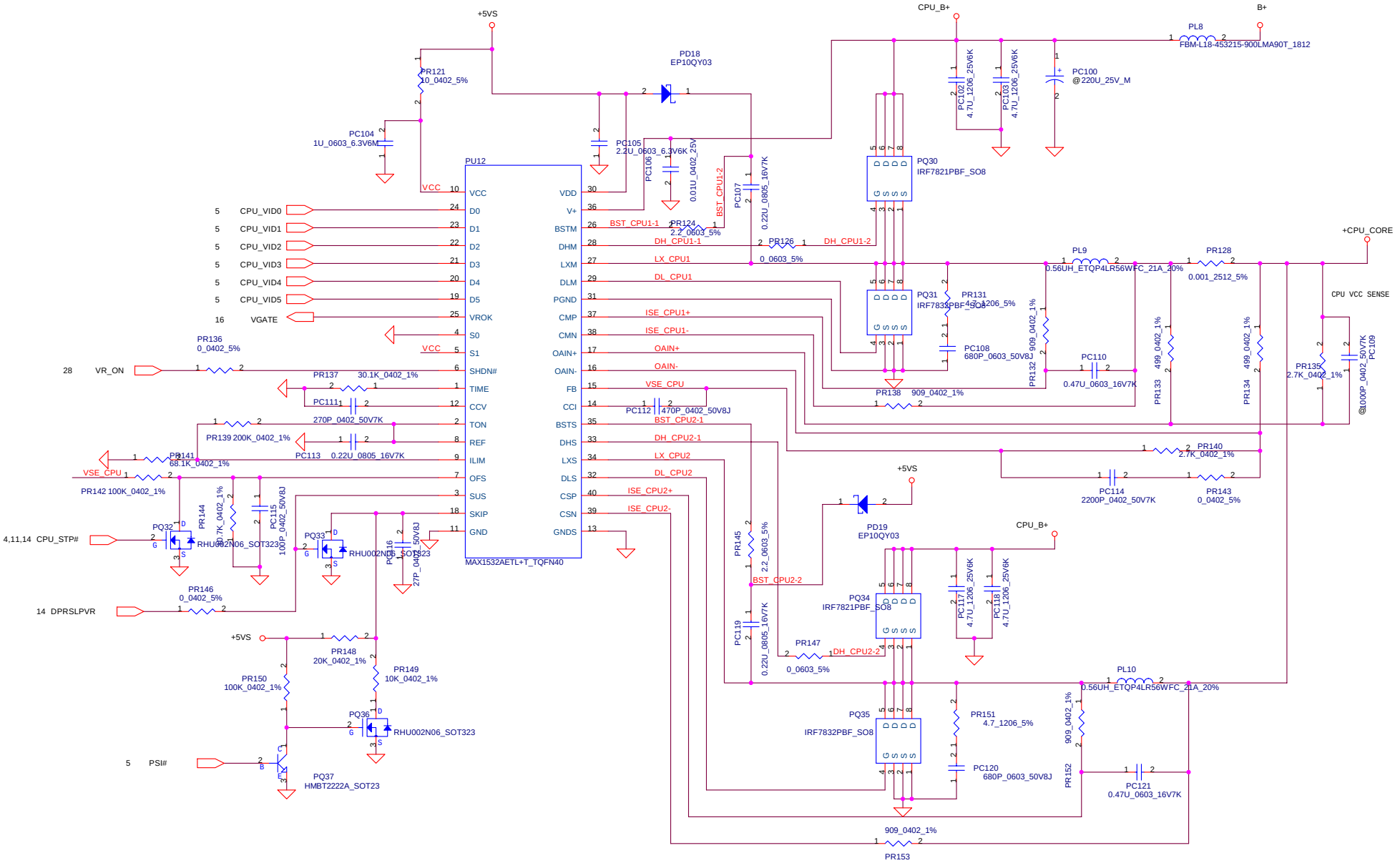
Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: 1.5V / 1.25V / 1.2V

Size | Document Number | Rev 0.3

Date: Thursday, August 04, 2005 | Sheet 39 of 42



Security Classification	Compal Secret Data		
Issued Date	2005/03/01	Deciphered Date	2006/03/01

Compal Electronics, Inc.

Title: CPU_CORE

Size | Document Number | Rev 0.3

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0.1==>0.2 Writed by Timo

Date	Page	Action	Purpose
6/12	9	Add C642, C643 and C644	For Increase the DDR bypass capaciotrs
6/12	10	Add C645, C646 and C647	For Increase the DDR bypass capaciotrs
	12	Modify JP18 circuit	Making TV out function become correct
	15	Add @ on R317	Metting ATI reference circuit
	24	Del @ on R436	Solving MDC issue and sound slow issue
	26	Del R306 (move to sub board)	To differentiate between HAZ00 and HTW01 BIOS
	28	Add @ on Super I/O circuit	For DVT build
	29	Modify pin74 net-name of KB910	Solving reserve button no function
	31	Modify D16, D17	
		Add D35, D36	Change from double colors to signal color LED
6/22	27	Add H34, H33	For Me update new drawing

0.2==>0.3 Writed by Timo

7/8	8	Add C648, C649 and C650	Seperate the AVDD and DVDD for TVout and CRT
	17	Add C651~C657 Change C585, C587, C566, C533, C560, C573, C536 from 10 to 4.7U	For height limited of SB
	34	Change C225 from 4.7 to 10U	For height limited of SB
7/11	25	Del R456	
		Add Q52	For insert card bus device beep sound issue.
	27	Del R449~R454	For EMI request
7/13		Del Super I/O circuit	
	29	Add JP30, R457, C658	For LPC debug port
	23	ADD JP29, R456	For Port80 Debug card connector
	28	ADD R459, R460	For HDD password detect pin
	12	ADD J1, J4	
	22	ADD J2	
	27	ADD J3	For EMI request

0.3==>1.0 Writed by Timo

7/28	25	Add C662, R461, D37, R462, Q52	For Insert card bus device PoPo noise sound
	29	Change R101 from 8.2k to 18kohm	For Board ID change
	14 17	Change C587, C585, C651, C652, C566, C553, C560, C573, C653, C654, C655, C656, C536, C657 from 4.7U to 1U	For avoide the interfere area of HDD
		Change C288 from 150U fo 470UF	Making the capacitors of 1.8VS source blance of SB
		Add C660, C661	Making the capacitors of 1.8VALW and 3VS sources blance of SB
7/30	4	Add @ in C261	For throttle issue
	5	Add @ in C180	For cost down
	12	Add L38, L39, L40	For EMI issue

Compal Electronics, Inc.

Title: PIR

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EVT

page	Reason for change	Modify list
37	12V noise	Change PC38 from 4.7u_1206_25V to 4.7u_1210_25V
37	Lead free parts	Change PC53,PC58 to NEC lead free parts.
38	Modify 1.8V power sequence for HW requirement	Change PR100 from 0_0402_5% to 47K_0402_1% Add 0.1u_0402_16V at PC76
39	Modify 1.05V circuit	Delete PQ24,PQ26,PL7,PD17,PC82,PC81,PR109,PQ25,PQ27,PR110 Change PU8 to APL5912-KAC-TRL Change PC85 to 0.01u_0402_25V Change PR112 to 316_0402_1% Change PR13 to 1K_0402_1%
39	Delete reserved 1.5V circuit	Delete PU11,PC95,PR118,PR120,PQ29,PR119,PC99,PC97,PC98,PC96
39	Change 1.5V IC	Change PU10 from APL5151 to G914
40	Add snubber for CPU CORE	Add 4.7_1206_5% to PR131,PR151 Add 680P_0603_50V to PC108,PC120
37,38	Add bead at 3V/5V and 1.2V/1.8V input for EMI requirement	Add PL11,PL12 to replace PJ10,PJ11

DVT

34	Change VS resistor to 33 ohm	Change PR9 from 47_1206_5% to 33_1206_5%
34	Change 1N4148 to lead free P/N	Change PD2,PD3,PD4 P/N to SC11N414880
40	Change HMBT2222 to lead free P/N	Change PQ37 P/N to SB322220080
38	Raise 1.8V to 1.82V for HW requirement	Change PR94 from 10K_0402_1% to 10.2K_0402_1%

PVT

34	Change VS resistor to standard part	Change PR9 from 33_1206_5% to 68_1206_5% Add 68_1206_5% at PR155
38	Change 1.8VALWP power sequence for HW requirement	Change 47K_0402_1% from PR100 to PR156 Delete PC76 Change PC68 from 0.01u_0402_25V to 4700P_0402_25V

Pre-MP

38	Add BOOST 2.2 ohm and snubber at 1.8V / 1.2V for EMI	Add 4.7_1206_5% to PR157,PR158 Add 680P_0603_50V to PC123,PC124 Change PR90,PR91 from 0_0603_5% to 2.2_0603_5%
42	Change CPU CORE mosfet for EMI	Change PQ30,PQ34 from AO4408 to IRF7821 Change PQ31,PQ35 from AO4410 to IRF7832
42	Delete CPU VID 0 ohm debug resistor	Delete PR122,PR123,PR125,PR127,PR129,PR130

Compal Electronics, Inc.

Title: PIR

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