Compal confidential

Schematics Document
Mobile Merom uFCPGA with Satna Rosa Platform

2007-08-02
REV:0.2

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

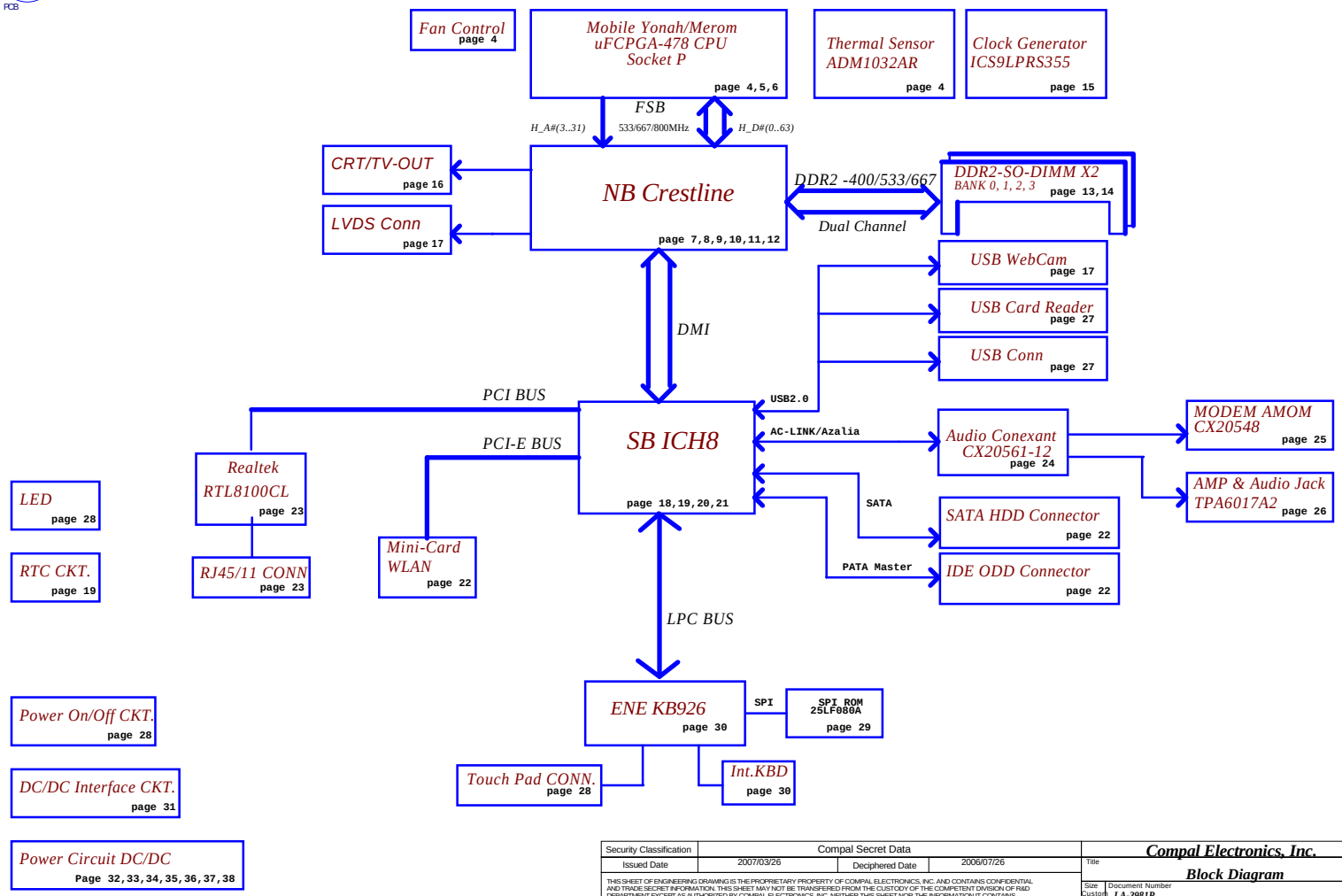
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title: Cover Sheet		
Size: Custom	Document Number: LA-3981P	Rev: 0.3
Date: Monday, October 22, 2007	Sheet 1 of 42	

Compal confidential

File Name : LA-3981P

LEON 1.0 (Merom +Crestline+ICH8)



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title: Block Diagram			
Size: Custom	Document Number: LA-3981P		Rev: 0.3
Date: Monday, October 22, 2007		Sheet 2 of 42	

Voltage Rails

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

Symbol Note :

: means Digital Ground

: means Analog Ground

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

External PCI Devices

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

I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	10100000
DDR SO-DIMM 1	A4	10100100
CLOCK GENERATOR (EXT.)	D2	11010010

SMBUS Control Table

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

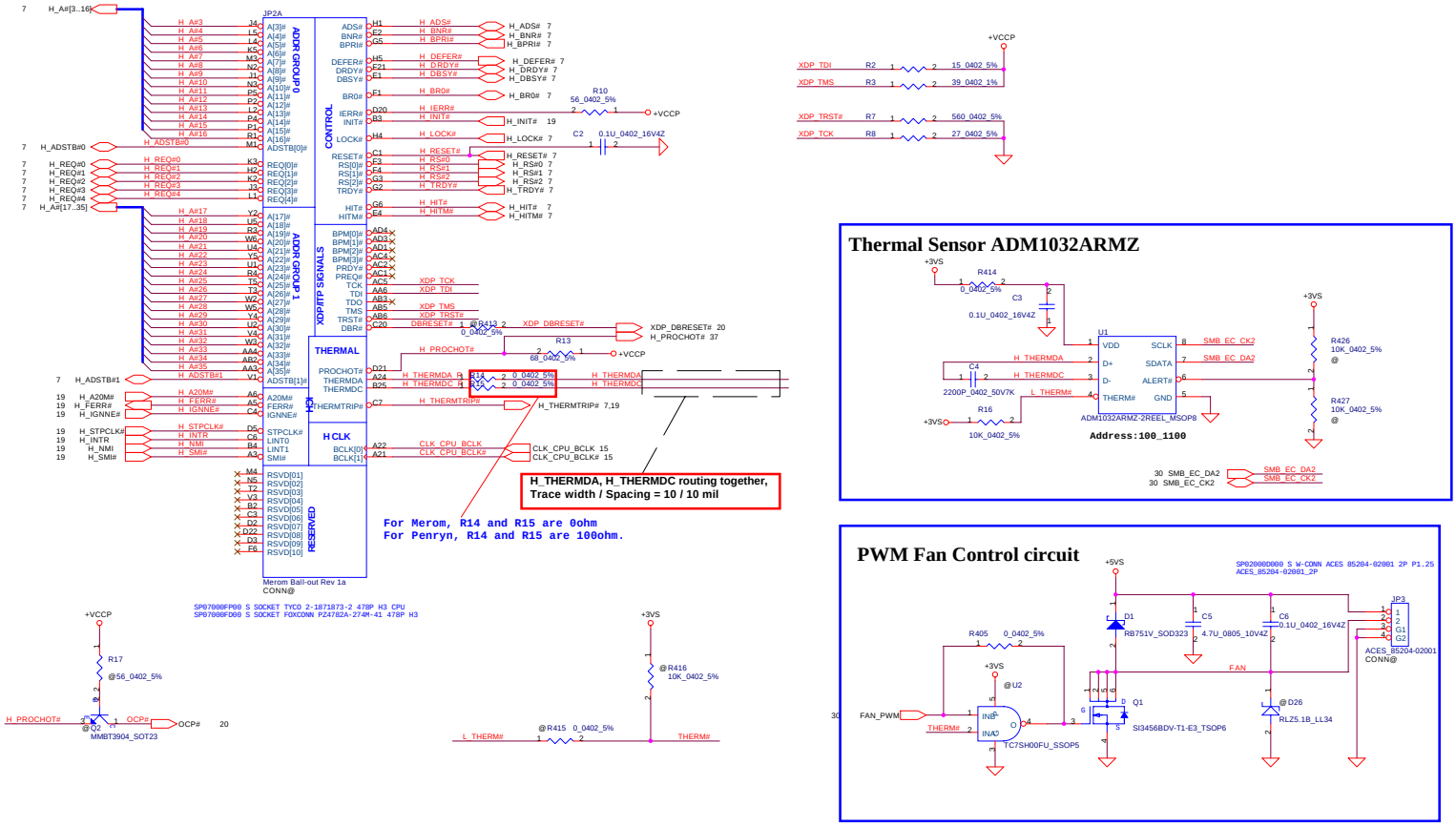
BOM: 43151732L01(965GM) & 443151732L02(960GML) with card reader
BOM: 43151732L03(965GM) & 43151732L04(960GML) without card reader

Jump-Short: PJP?

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title	Notes List		
Size	Document Number	LA-3981P	Rev 0.3
Date: Monday, October 22, 2007	Sheet 3 of 42		



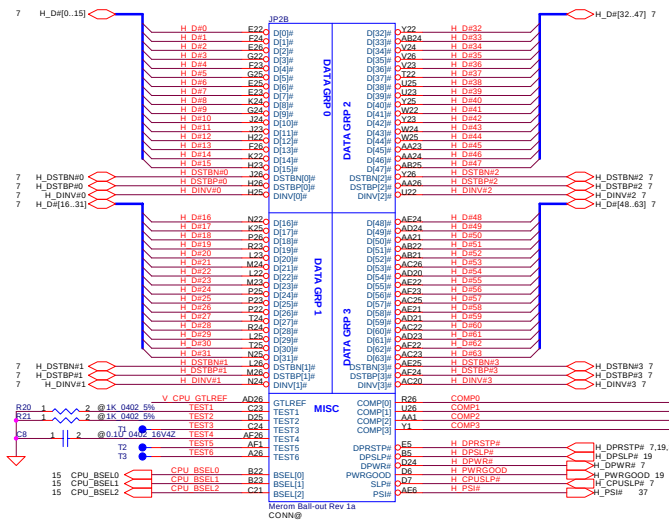
Thermal Sensor ADM1032ARMZ

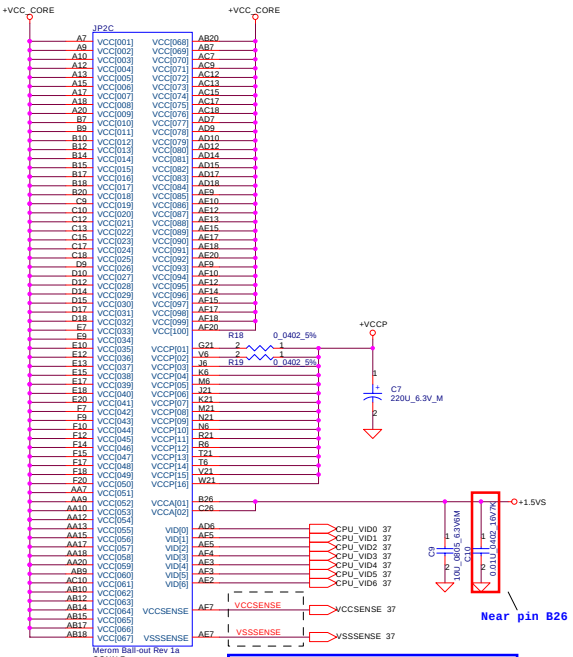
PWM Fan Control circuit

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.	
Title	Merom(1/3)-AGTL+/XDP
Size: Custom	Document Number: LA-3981P
Rev	0.3
Date: Monday, October 22, 2007	Sheet 4 of 42



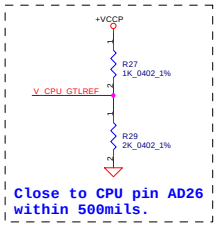


layout note: Route TEST3 & TEST5 traces on ground referenced layer to the TPs

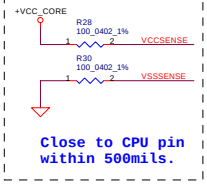
CPU_BSEL	CPU_BSEL2	CPU_BSEL1	CPU_BSEL0
166	0	1	1
200	0	1	0

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

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



Close to CPU pin AD26 within 500mils.



Close to CPU pin within 500mils.

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

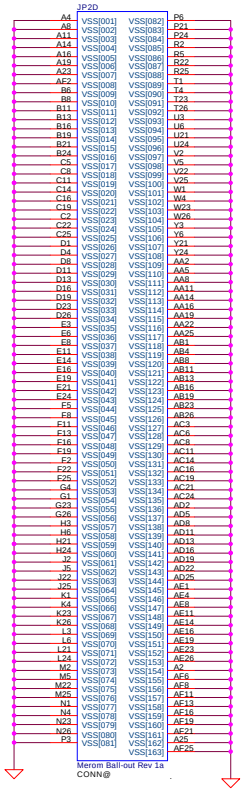
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

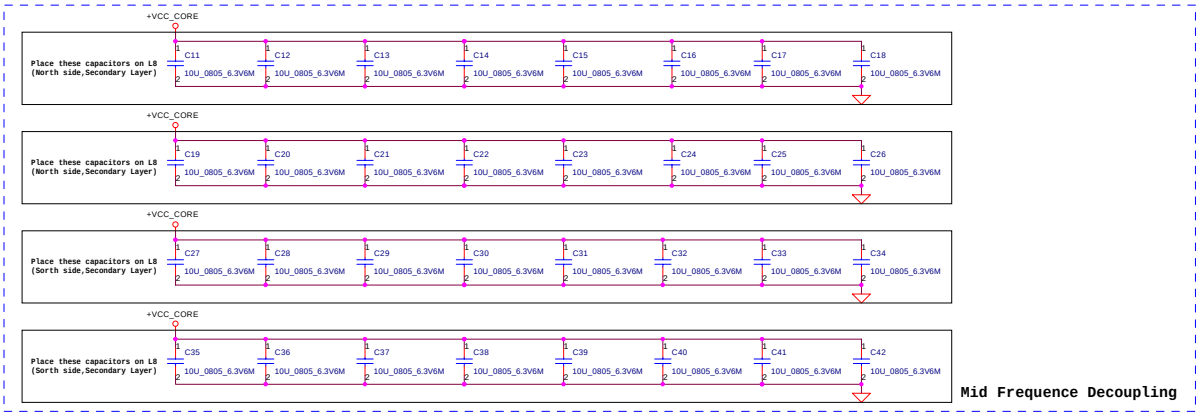
Compal Electronics, Inc.

Title: Merom(2/3)-AGTL+/PWR

Size: Custom | Document Number: LA-3981P | Rev: 0.3

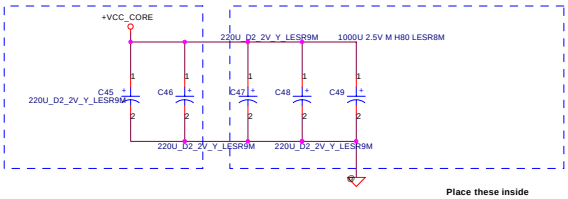
Date: Monday, October 22, 2007 | Sheet 5 of 42



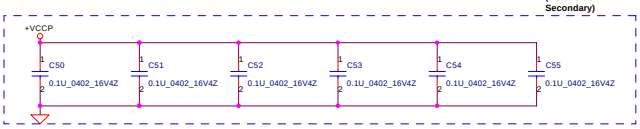


Near CPU CORE regulator

ESR <= 1.5m ohm
Capacitor > 1980uF



Place these inside socket cavity on L8 (North side Secondary)



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

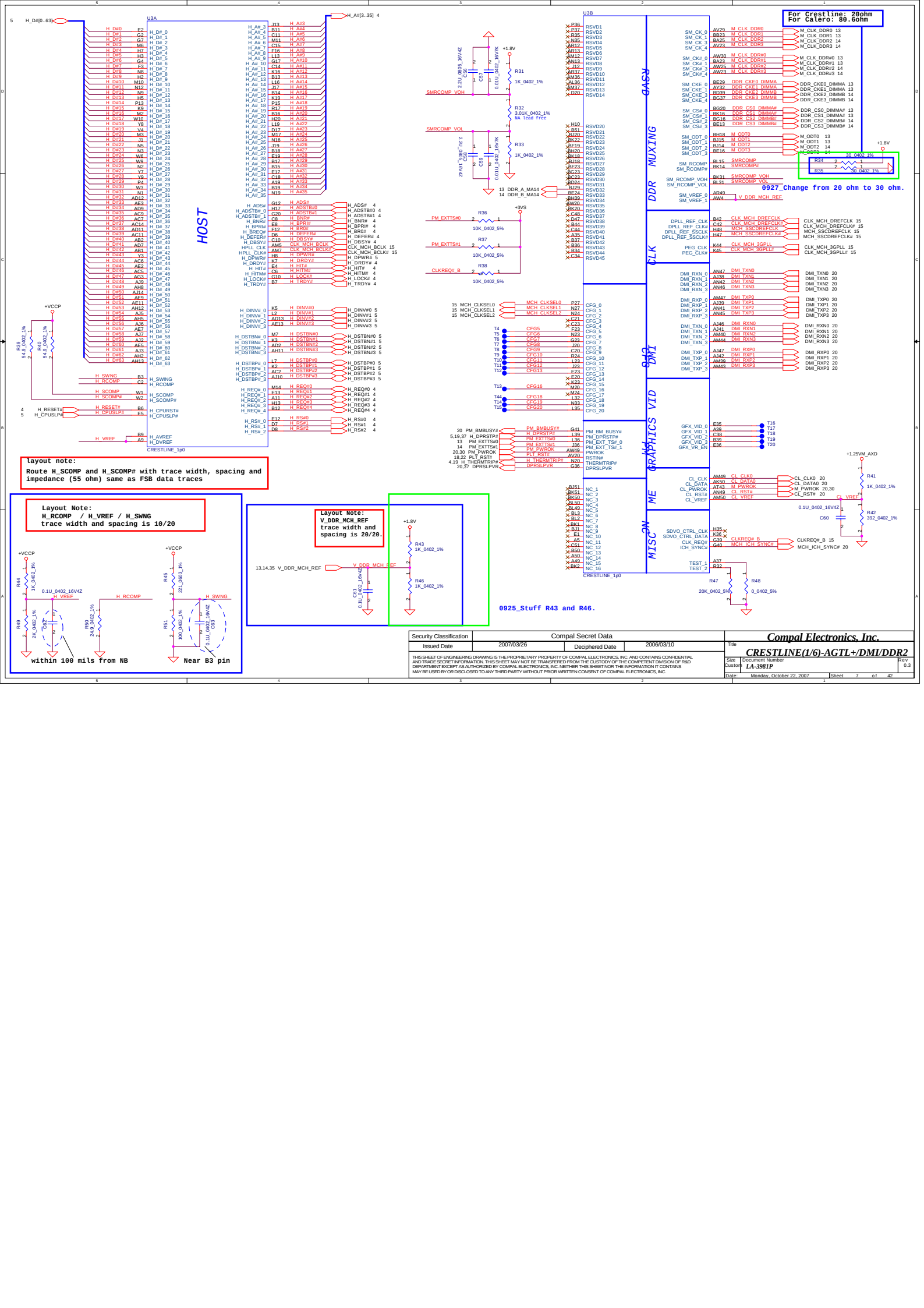
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

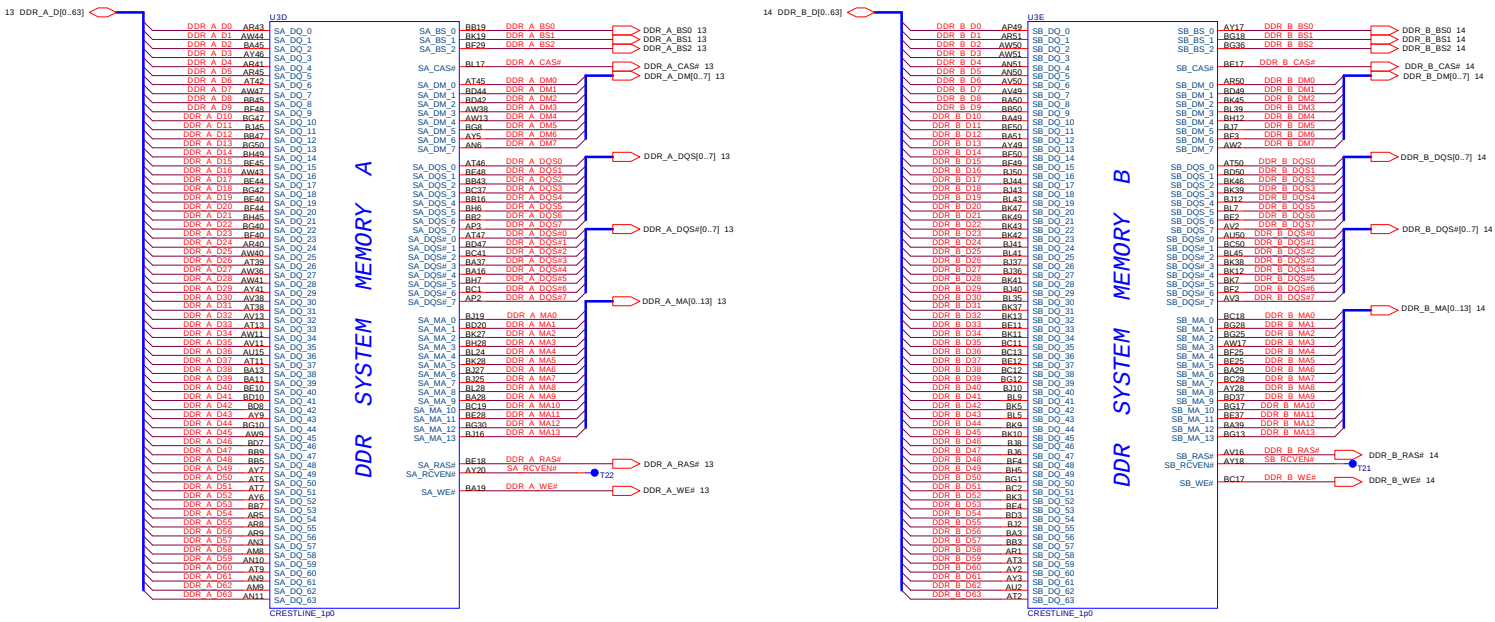
Compal Electronics, Inc.

Title: **Merom(3/3)-GND&Bypass**

Size	Document Number	Rev
Custom	LA-3981P	0.3

Date: Monday, October 22, 2007 Sheet 6 of 42


For Crestline: 20ohm
For Calero: 80.6ohm
0927_Change from 20 ohm to 30 ohm.
layout note:
Route H_SCOMP and H_SCOMP# with trace width, spacing and impedance (55 ohm) same as FSB data traces
Layout Note:
H_RCOMP / H_VREF / H_SWNG
trace width and spacing is 10/20
within 100 mils from NB
Near B3 pin
Layout Note:
V_DDR_MCH_REF
trace width and
spacing is 20/20.
0925_Stuff R43 and R46.
HOST
DDR MUXING
CLK
DMI
GRAPHICS VID
MISC
CRESTLINE_1p0
Security Classification
Compal Secret Data
Issued Date
2007/03/26
Deciphered Date
2006/03/10
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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.
Compal Electronics, Inc.
Title
CRESTLINE(1/6)-AGTL+/DMI/DDR2
Size
Custom
Document Number
LA-3981P
Rev
0.3
Date:
Monday, October 22, 2007
Sheet
7
of
42



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

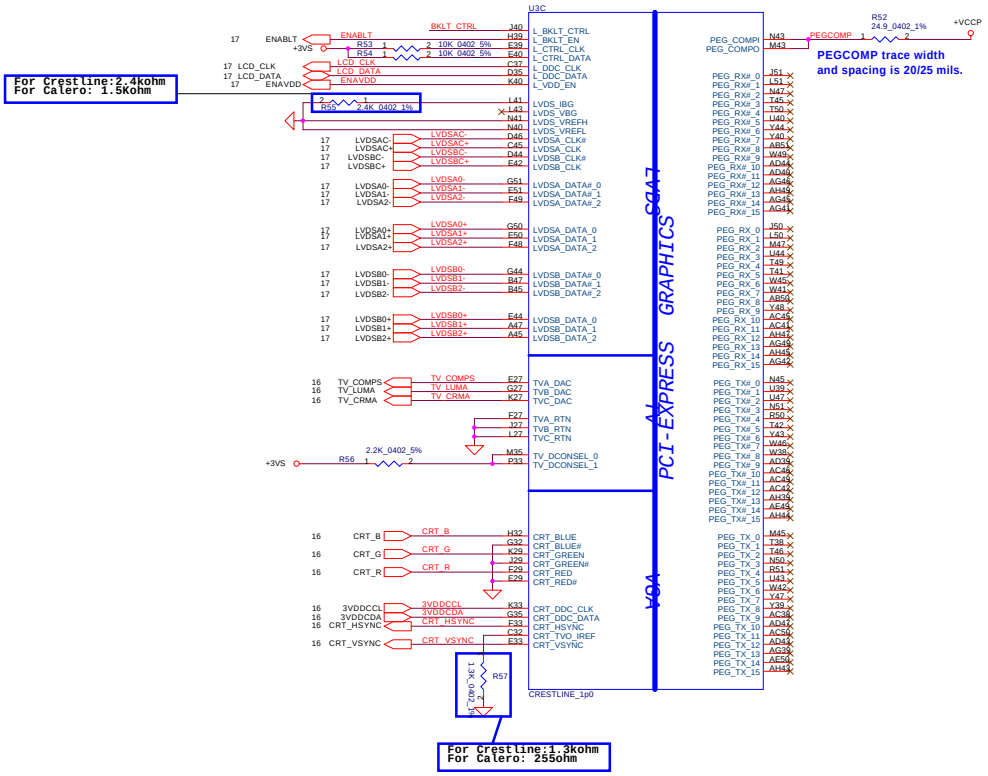
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title: **CRESTLINE((2/6)-DDR2 A/B CH**

Size	Document Number	Rev
Custom	LA-3981P	0.3

Date: Monday, October 22, 2007 Sheet 8 of 42



Strap Pin Table

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

CFG[17:3] have internal pull up
CFG[19:18] have internal pull down

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

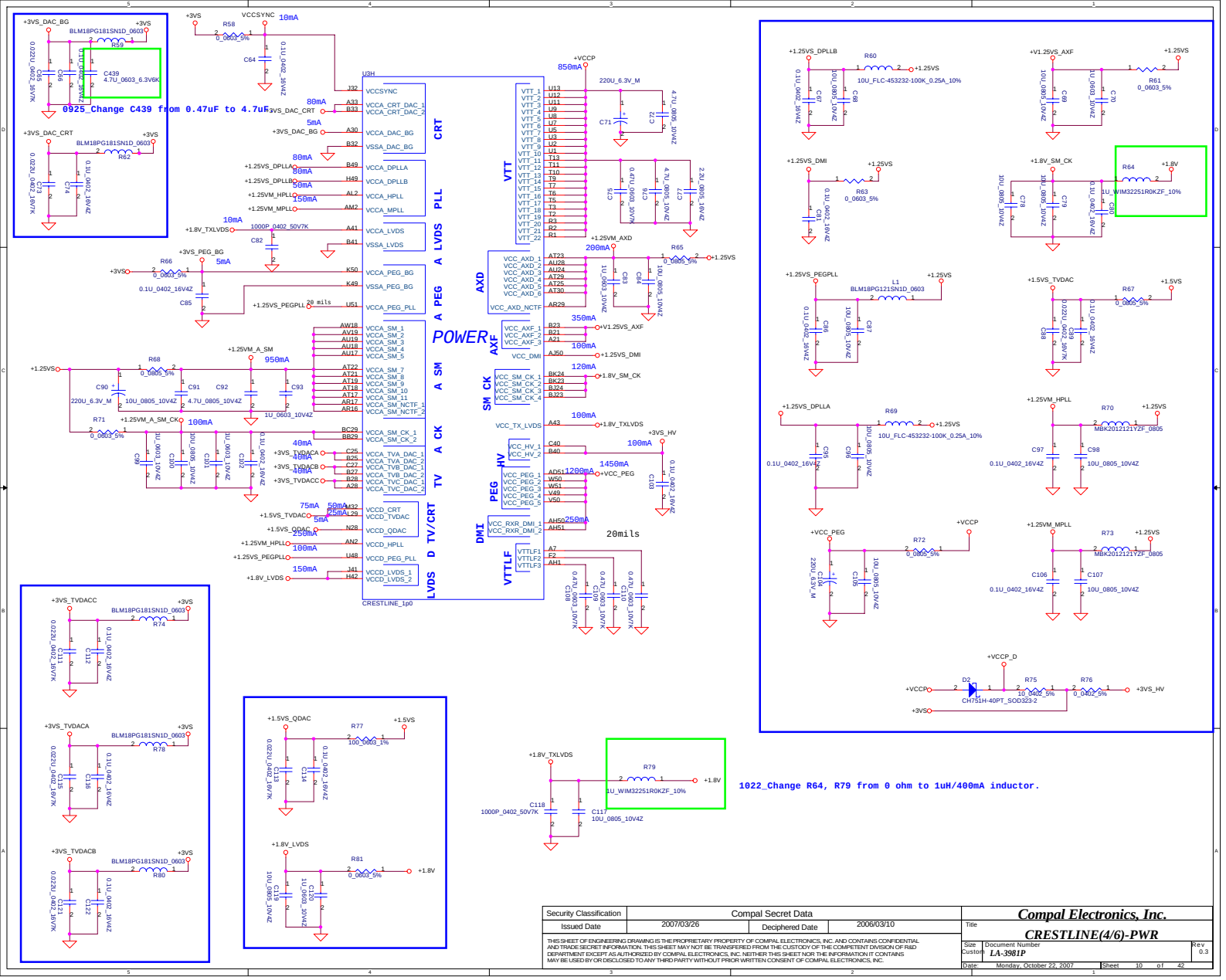
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

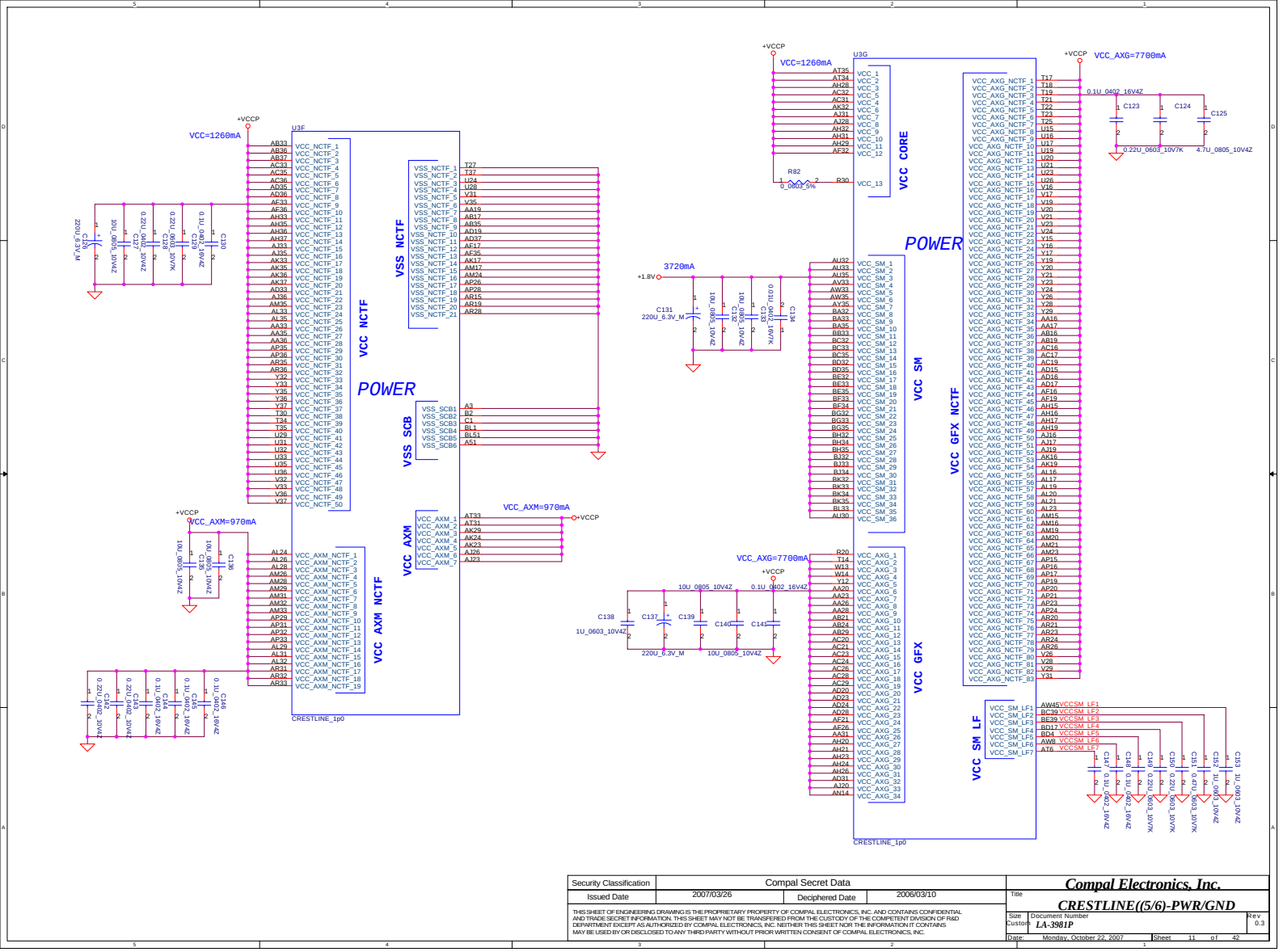
Compal Electronics, Inc.

Title: CRESTLINE((3/6)-VGA/LVDS/TV

Size	Document Number	Rev
Custom	LA-3981P	0.3

Date: Monday, October 22, 2007 Sheet 9 of 42


0925_Change C439 from 0.47uF to 4.7uF.
1022_Change R64, R79 from 0 ohm to 1uH/400mA inductor.
POWER
U3H
CRESTLINE_1p0
CRT
PLL
LVDS
A PEG
A SM
A CK
TV
D TV/CRT
LVDS
VTT
AXD
AXF
SM CK
PEG
HV
DMI
+VCCP
+3VS
+1.25VS
+1.8V
+1.5VS
+3VS_HV
+1.25VS_DPLLB
+1.25VS_AXF
+1.25VS_DMI
+1.8V_SM_CK
+1.25VS_PEGPLL
+1.5V_TVDAC
+1.25VS_DPLLA
+1.25VM_HPLL
+VCC_PEG
+1.25VM_MPLL
+VCCP_D
+3VS_TVDACC
+3VS_TVDACA
+3VS_TVDACB
+1.5VS_QDAC
+1.8V_LVDS
+1.8V_TXLVDS
Security Classification
Compal Secret Data
Issued Date
2007/03/26
Deciphered Date
2006/03/10
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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.
Compal Electronics, Inc.
Title
CRESTLINE(4/6)-PWR
Size
Custom
Document Number
LA-3981P
Rev
0.3
Date:
Monday, October 22, 2007
Sheet
10
of
42



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

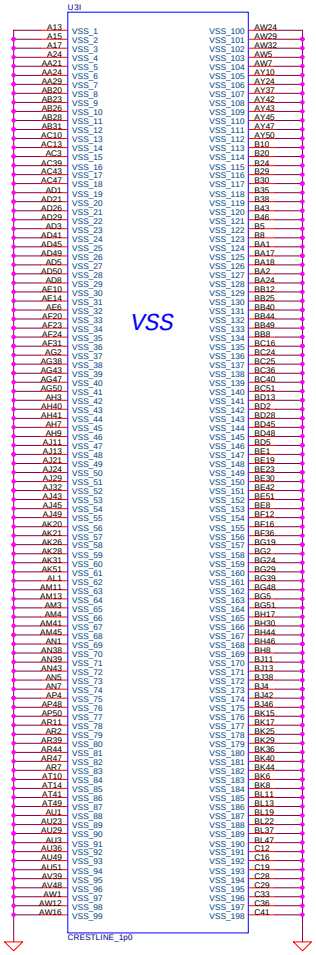
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

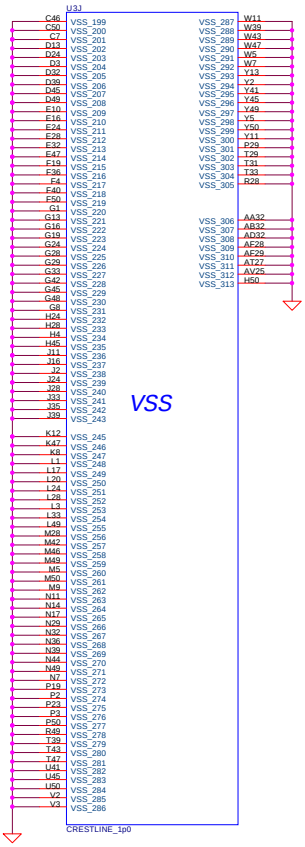
Compal Electronics, Inc.

Title: **CRESTLINE((5/6)-PWR/GND**

Size	Document Number	Rev
Custom	LA-3981P	0.3

Date: Monday, October 22, 2007 Sheet 11 of 42





Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

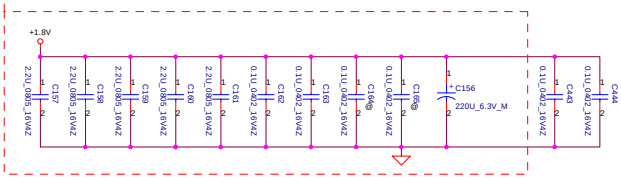
Title: **CRESTLINE((6/6)-PWR/GND**

Size	Document Number	Rev
Custom	LA-3981P	0.3

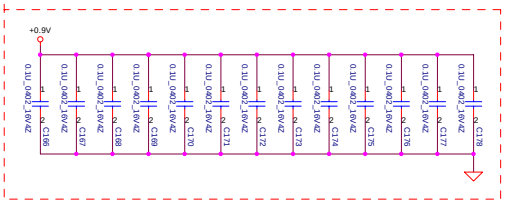
Date: Monday, October 22, 2007 Sheet 12 of 42

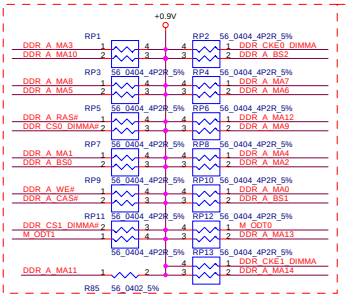
8 DDR_A_DQS#[0..7]
8 DDR_A_D[0..63]
8 DDR_A_DM[0..7]
8 DDR_A_DQS[0..7]
7,8 DDR_A_MA[0..14]

Layout Note:
Place near JP34

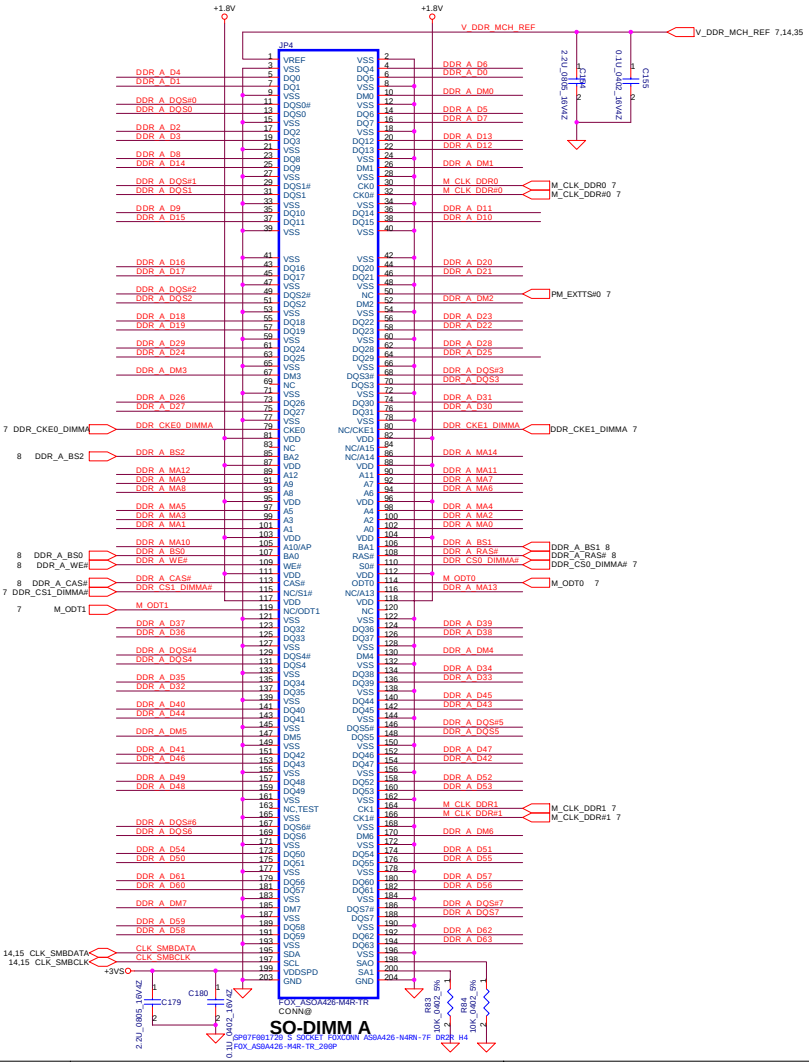


Layout Note:
Place one cap close to every 2 pullup resistors terminated to +0.9VS





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



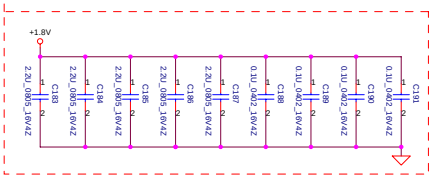
Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

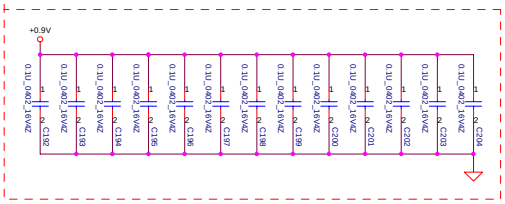
Title	Compal Electronics, Inc.		
	DDRII-SODIMM SLOT1		
Size: Custom	Document Number: LA-3981P		Rev: 0.3
Date: Monday, October 22, 2007	Sheet 13 of 42		

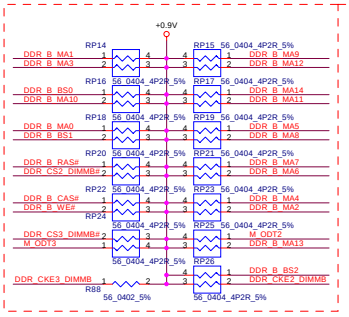
8 DDR_B_DQS#[0..7]
8 DDR_B_D[0..63]
8 DDR_B_DM[0..7]
8 DDR_B_DQS[0..7]
7,8 DDR_B_MA[0..14]

Layout Note:
Place near JP10

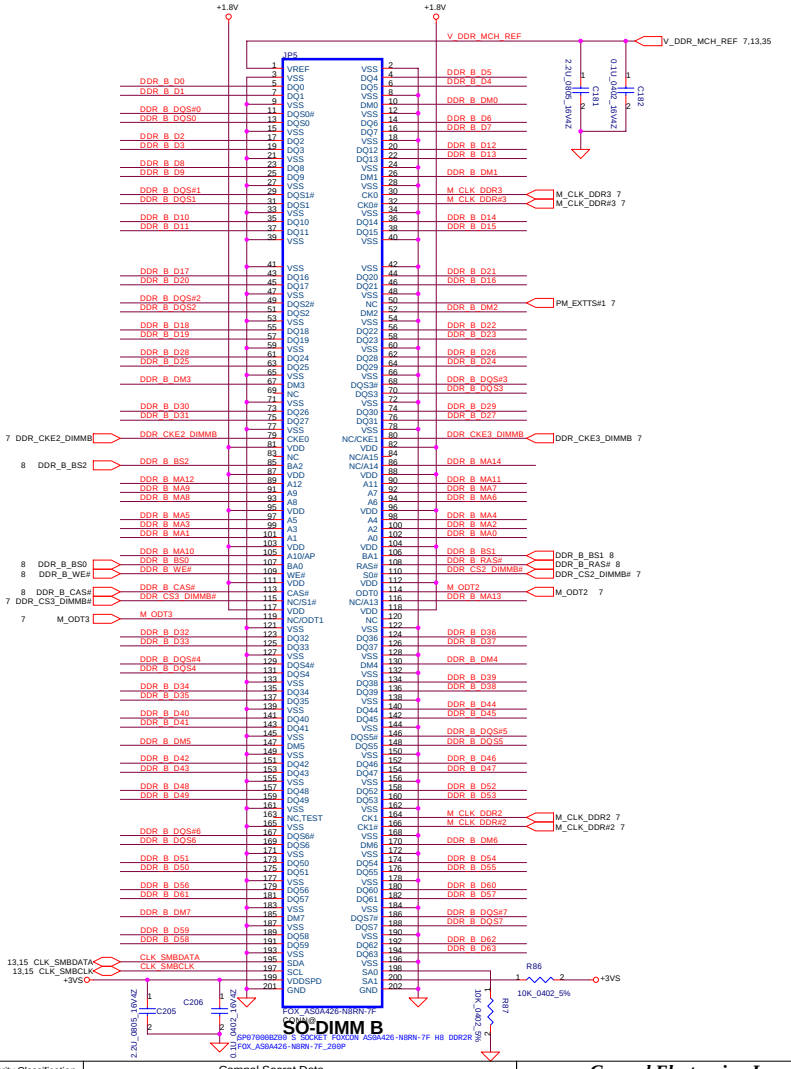


Layout Note:
Place one cap close to every 2 pullup resistors terminated to +0.9VS





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



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title: DDRII-SODIMM SLOT2			
Size	Document Number: LA-3981P		Rev: 0.3
Date: Monday, October 22, 2007	Sheet 14 of 42		

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

FSB Frequency Selet:

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

1019_Change CLRP1 and CLRP2 type like the same as PJP4.

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

Routing the trace at least 10mil

Place close to U4

SB, MINI PCI

For Layout request:
1. Change MINI_CLKREQ# from pin 32 to pin 43.
2. Change CLK_PCIE_MCARD from SRC9 to SRC6.

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

* Internal Pull-Up Resistor
** Internal Pull-Down Resistor

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

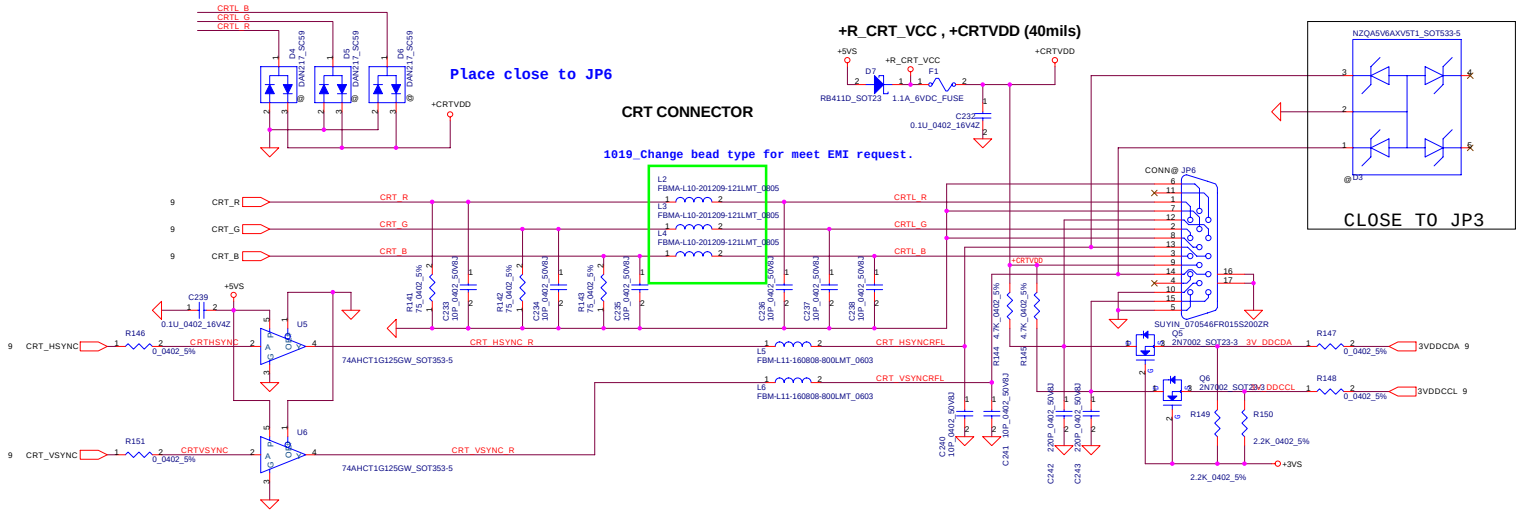
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

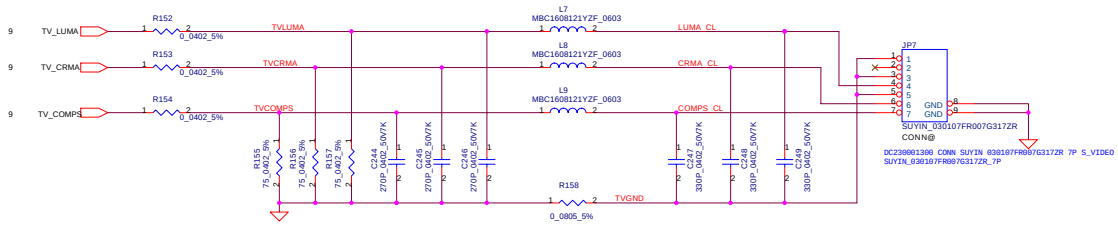
Title: Clock generator

Size: | Document Number: LA-3981P | Rev: 0.3

Date: Monday, October 22, 2007 | Sheet 15 of 42



TV-Out Connector
S-Video

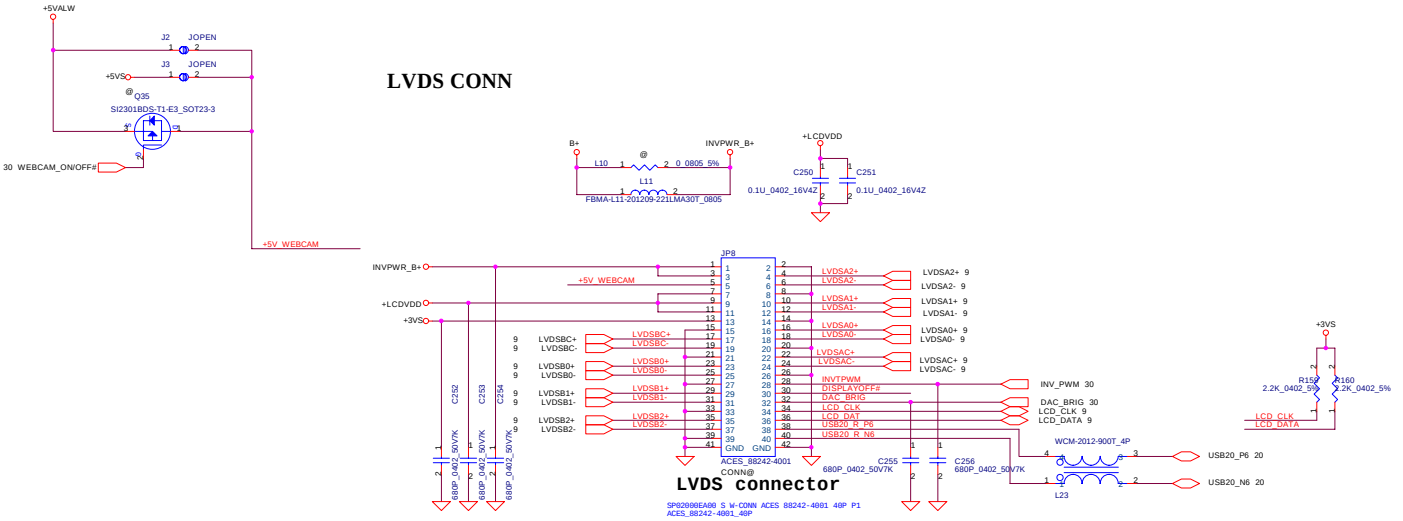


Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

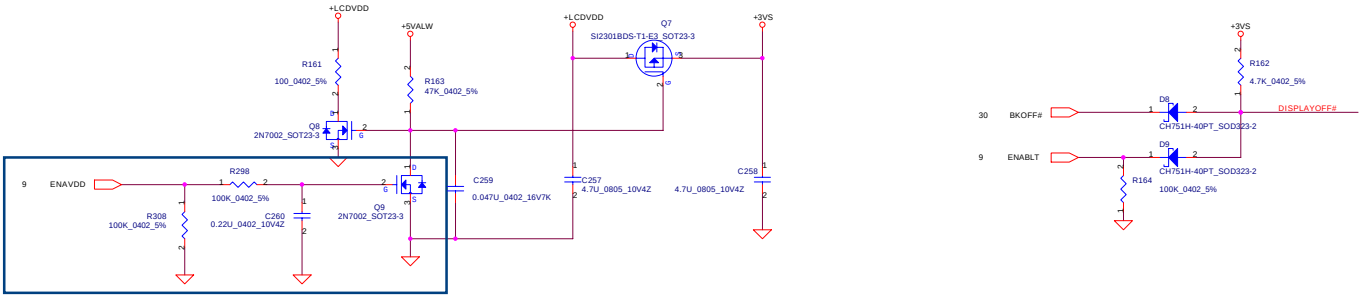
Compal Electronics, Inc.			
Title: CRT & TVout Connector			
Size	Document Number: LA-3981P		Rev: 0.3
Date: Monday, October 22, 2007		Sheet 16 of 42	

LVDS CONN



LVDS connector

SP02000EA00 S W-CONN ACES 88242-4001 40P P1
ACES_88242-4001_40P



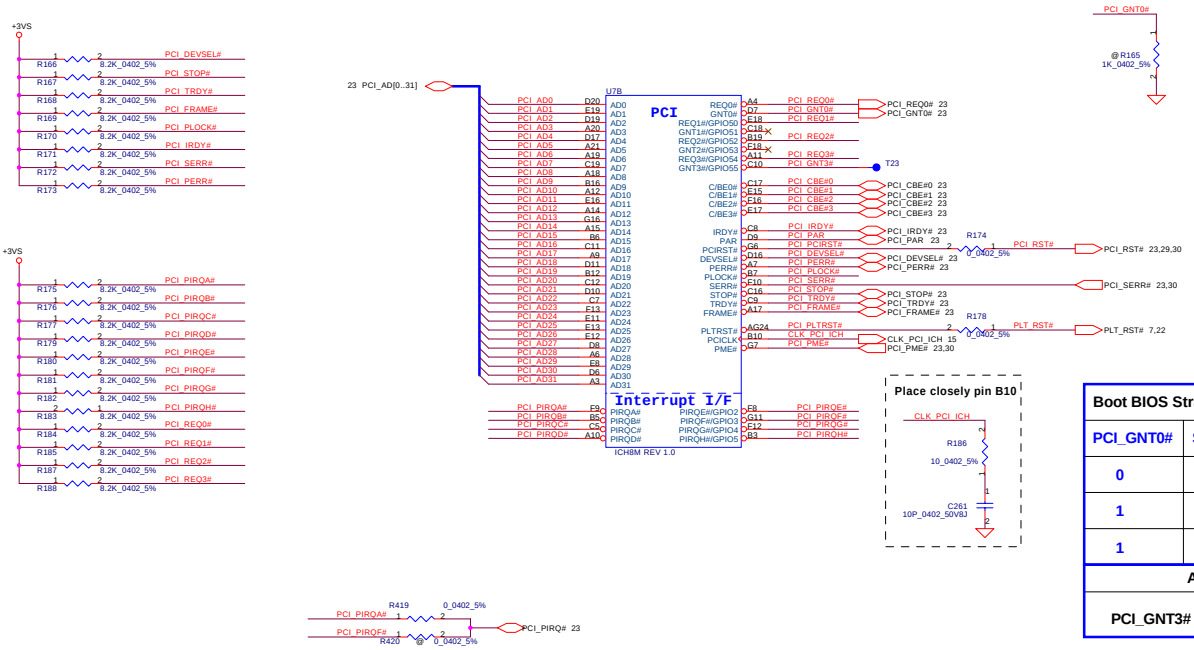
Avoid Panel display garbage after power on.

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title	LCD CONN.		
Size	Document Number		Rev
	LA-3981P		0.3
Date:	Monday, October 22, 2007	Sheet	17 of 42



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

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

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title	ICH8(1/4)-PCI/INT		
Size	Document Number LA-3981P		Rev 0.3
Date: Monday, October 22, 2007		Sheet 18 of 42	

ICH8M Internal VR Enable Strap (Internal VR for VccSus1.05, VccSus1.5, VccCL1.5)	
ICH_INTVRMEN	Low = Internal VR Disabled High = Internal VR Enabled(Default)

ICH8M LAN100 SLP Strap (Internal VR for VccLAN1.05 and VccCL1.05)	
ICH_LAN100_SLP	Low = Internal VR Disabled High = Internal VR Enabled(Default)

0925_Change C262 and C263 from 12pF to 15pF.

Within 500 mils

within 2" from R1557

placed within 2" from ICH8M

ML1220 MAXELL LITHIUM RTC BATTERY

ICH8M REV 1.0

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

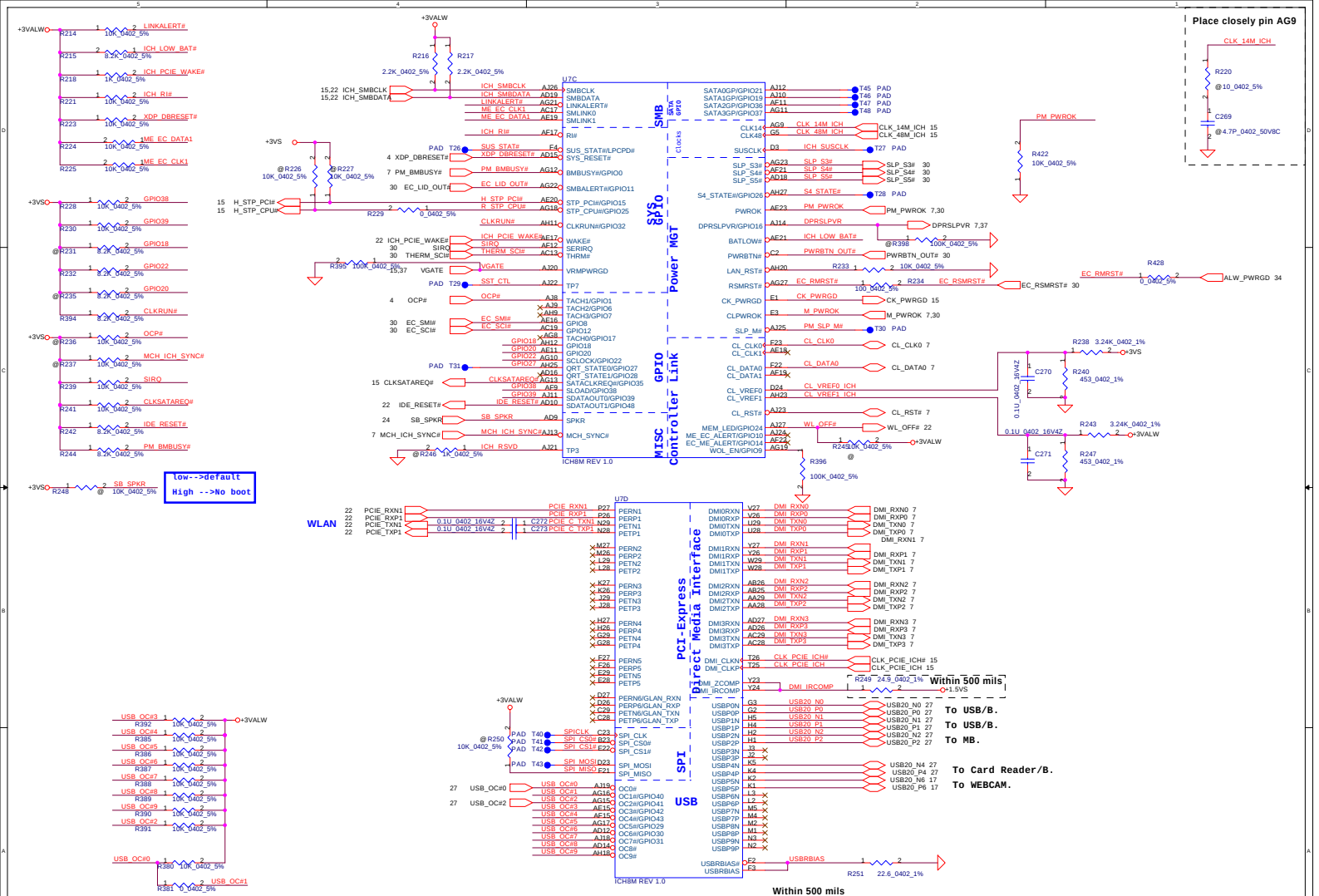
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title: ICH8(2/4) LAN,HD,IDE,LPC

Size	Document Number	Rev
Custom	LA-3981P	0.3

Date: Monday, October 22, 2007 Sheet 19 of 42



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

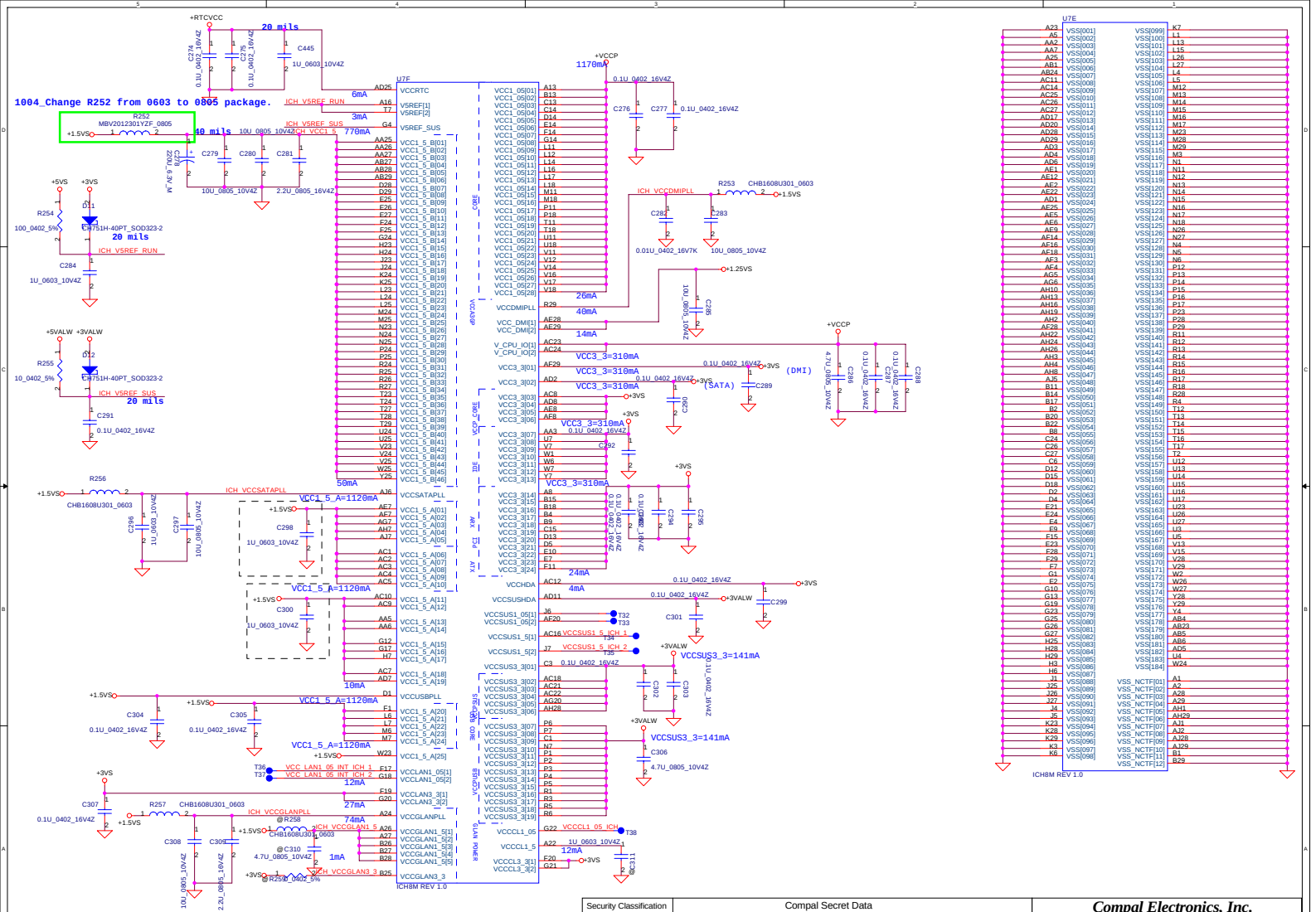
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title: *ICH8(3/4) PM,USB,GPIO*

Size	Document Number	Rev
Custom	LA-3981P	0.3

Date: Monday, October 22, 2007 Sheet 20 of 42



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/03/10

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

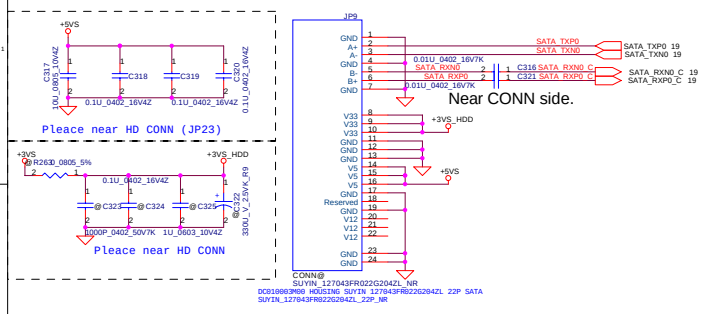
Compal Electronics, Inc.

Title: **ICH8(4/4)_POWER&GND**

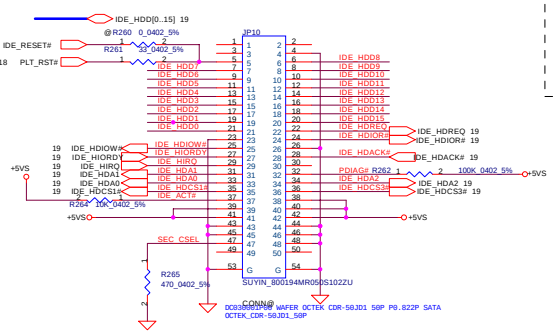
Size	Document Number	Rev
Custom	LA-3981P	0.3

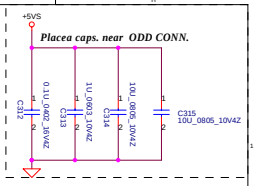
Date: Monday, October 22, 2007 Sheet 21 of 42

HDD Connector

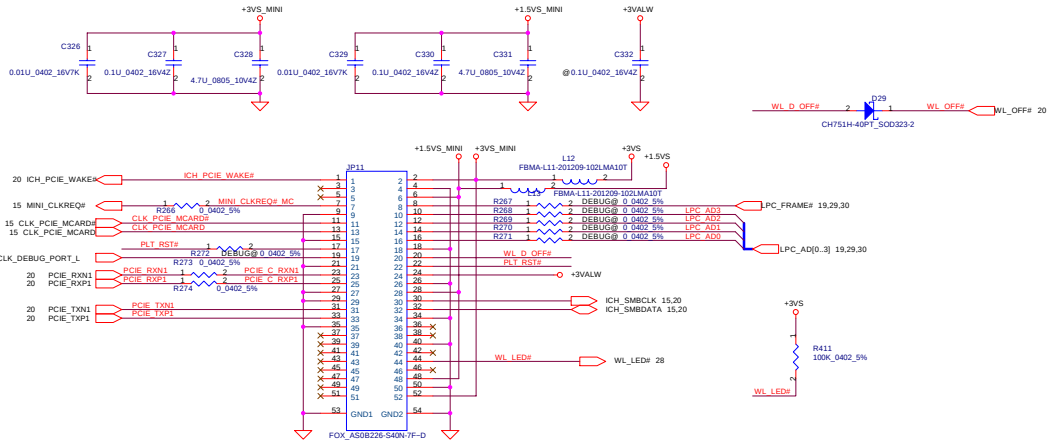


CD-ROM Connector





Mini-Express Card---WLAN



Mini Card STANDOFF



EC029000100 MINICARD_STANDOFF_8

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2007/08/29

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

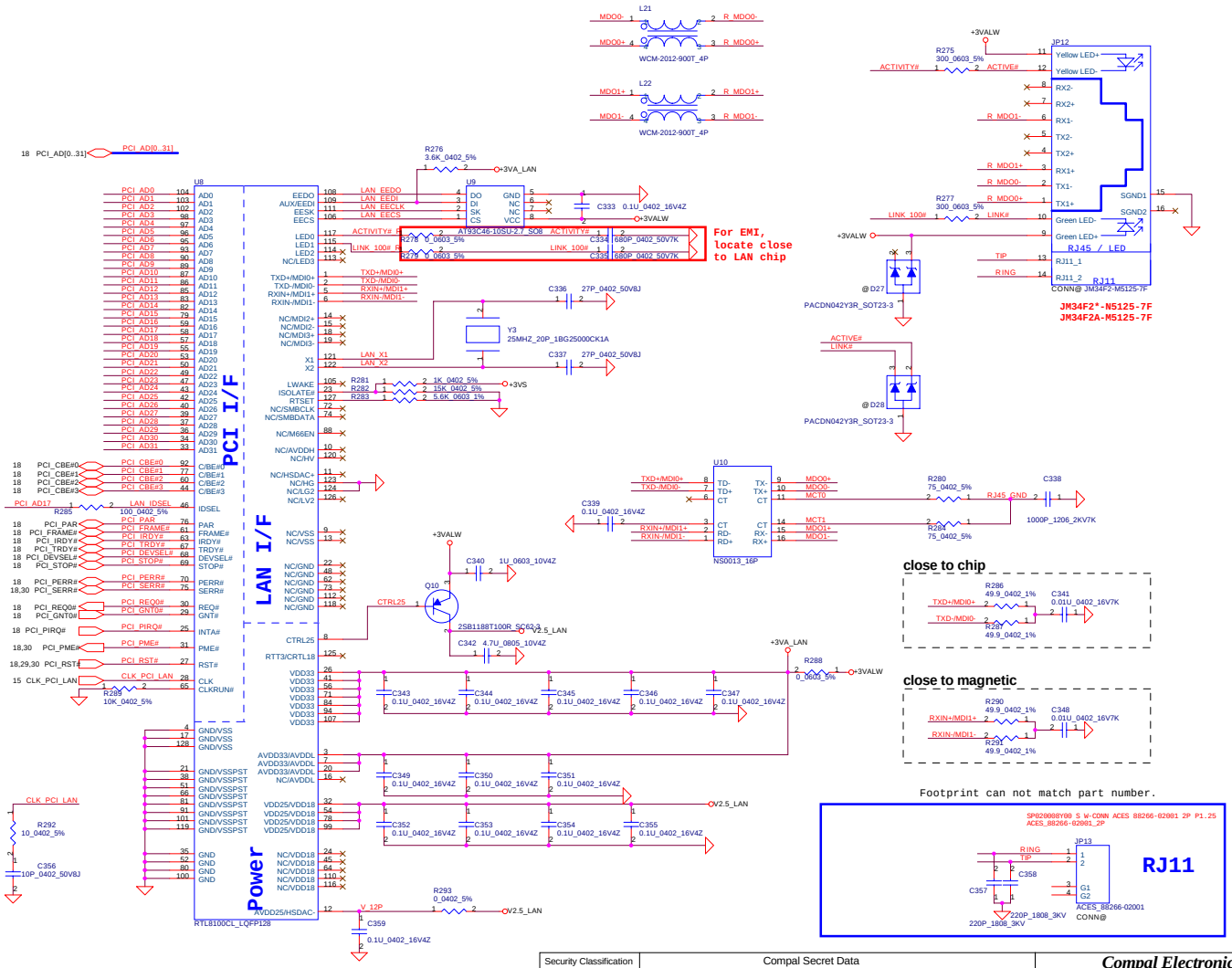
Compal Electronics, Inc.

Title: **HDD/ODD/Mini Card CONN.**

Size	Document Number	Rev
	LA-3981P	0.3

Date: Monday, October 22, 2007 | Sheet 22 of 42

Cloase to JP12.



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2007/08/29

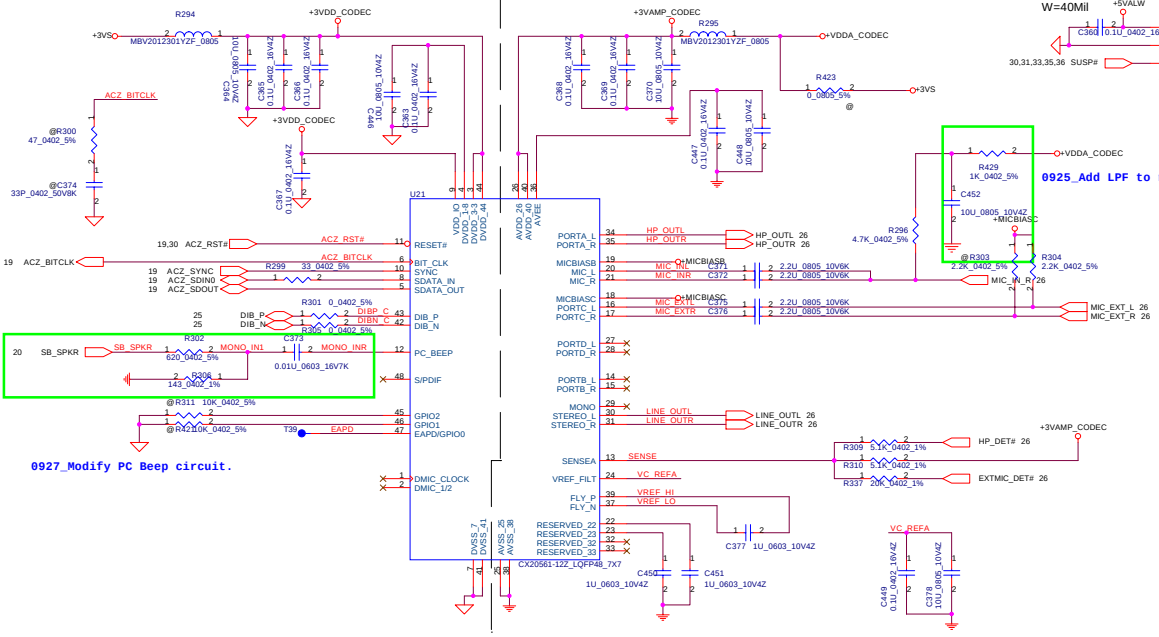
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.	
Title	LAN-8100CL
Size	Document Number: LA-3981P
Rev	0.3
Date: Monday, October 22, 2007	Sheet 23 of 42

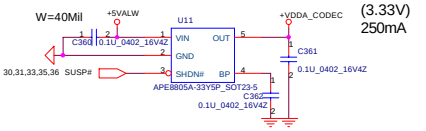
AUDIO CODEC

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

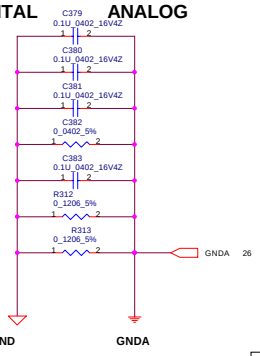
For Layout:
Place decoupling caps near the power pins of SmartAMC device.



CODEC POWER



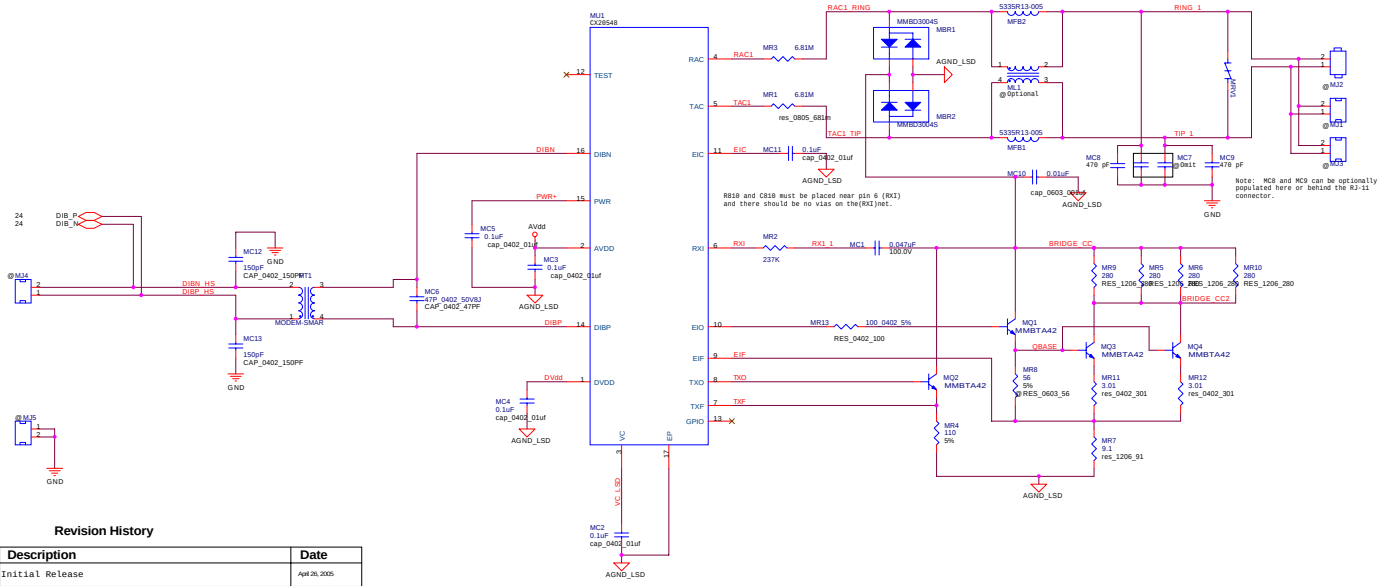
DIGITAL ANALOG



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

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2007/03/26	Deciphered Date	2006/03/10
Title: AMOM_codec			
Size: Custom	Document Number: LA-3981P		Rev: 0.3
Date: Monday, October 22, 2007		Sheet 24 of 42	

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 TRANSFERED 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.



Revision History

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

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2007/07/26

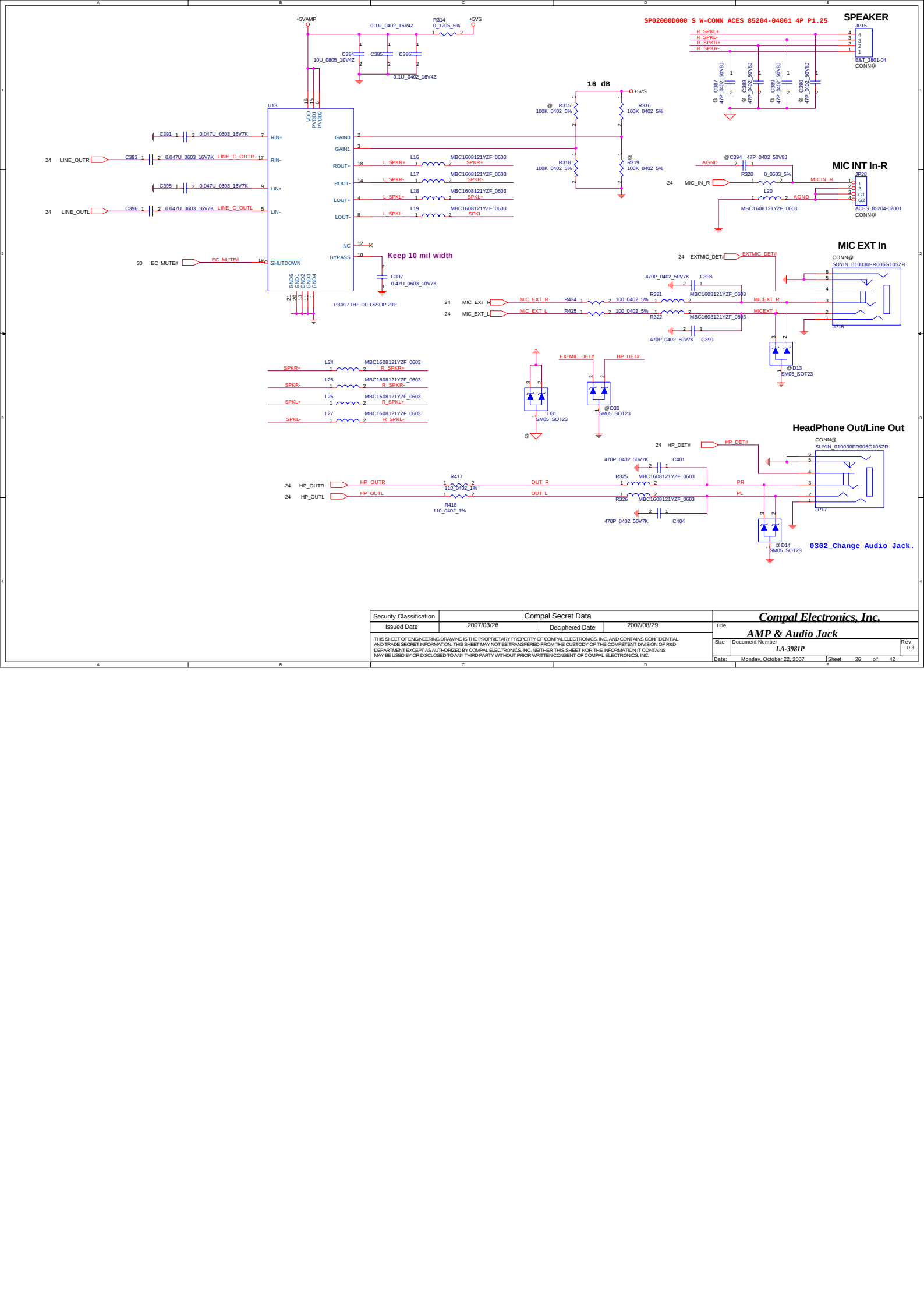
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title: **AMOM-CX20548**

Size: Document Number: **LA-3981P** Rev: 0.3

Date: Monday, October 22, 2007 Sheet 25 of 42

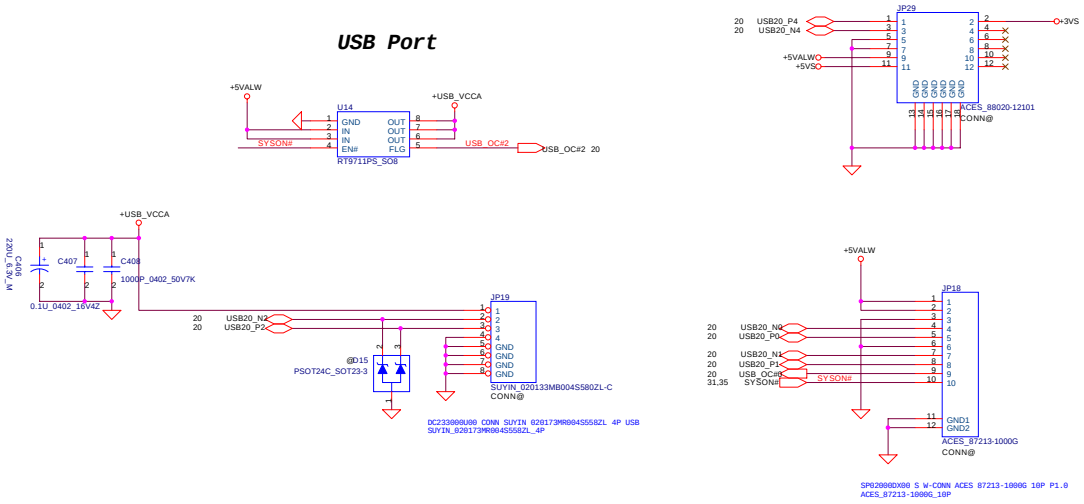


Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2007/08/29

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title: AMP & Audio Jack			
Size	Document Number: LA-3981P		Rev: 0.3
Date: Monday, October 22, 2007		Sheet 26 of 42	

USB Port



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

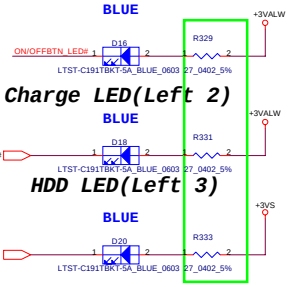
Title: **USB CONN.**

Size	Document Number	Rev
	LA-3981P	0.3

Date: Monday, October 22, 2007 Sheet 27 of 42

POWER LED(Left 1)

BLUE



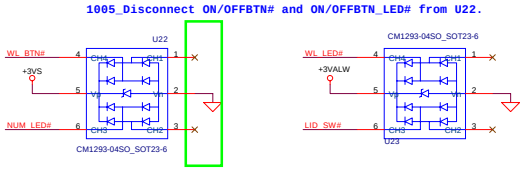
Battery Charge LED(Left 2)

BLUE

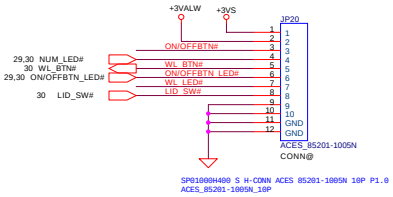
HDD LED(Left 3)

BLUE

1005_Disconnect ON/OFFBTN# and ON/OFFBTN_LED# from U22.

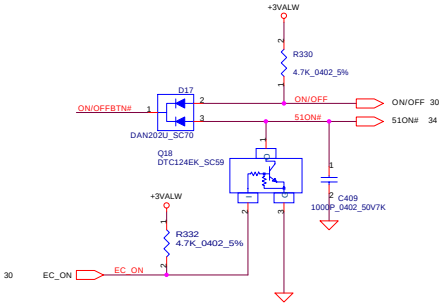


M/BtoS/B

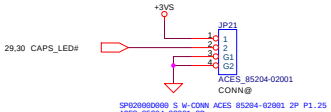


0927_Change R329, R331, R333 (75 ohm), R335 (33 ohm) to 27 ohm.

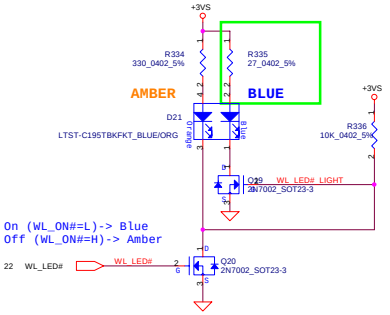
Power ON/OFF



M/B to SB(Caps Lock LED)

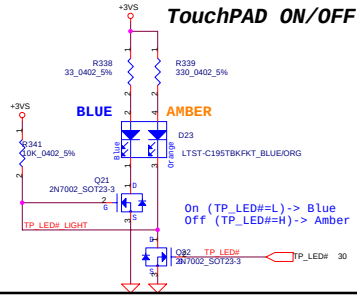


Wireless ON/OFF LED(Left 4)

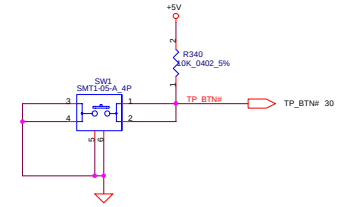


D21, D25, D23 Footprint can not match part number.

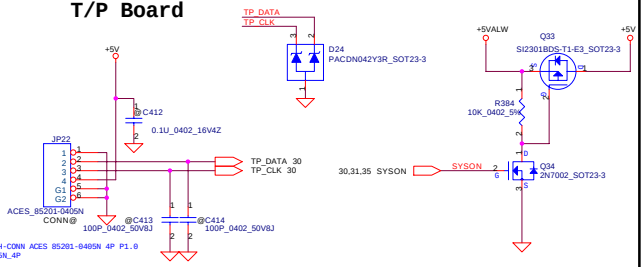
TouchPAD ON/OFF LED



TP ON/OFF



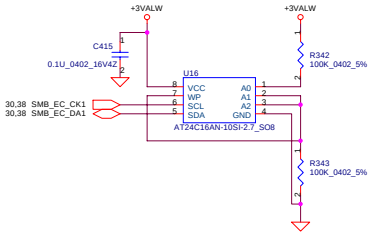
T/P Board



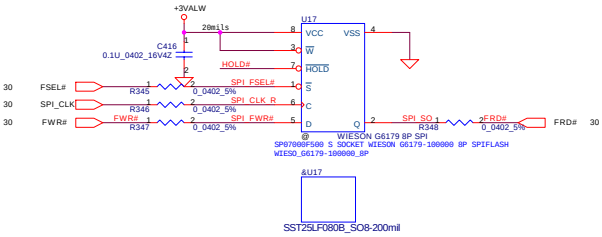
Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

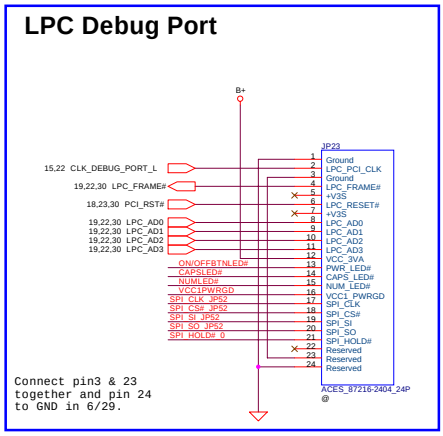
Compal Electronics, Inc.			
Title: LED/SW			
Size	Document Number: LA-3981P		Rev: 0.3
Date: Monday, October 22, 2007		Sheet 28 of 42	



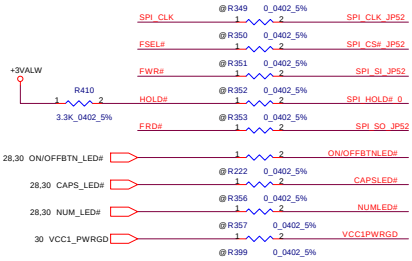
SPI ROM



LPC Debug Port



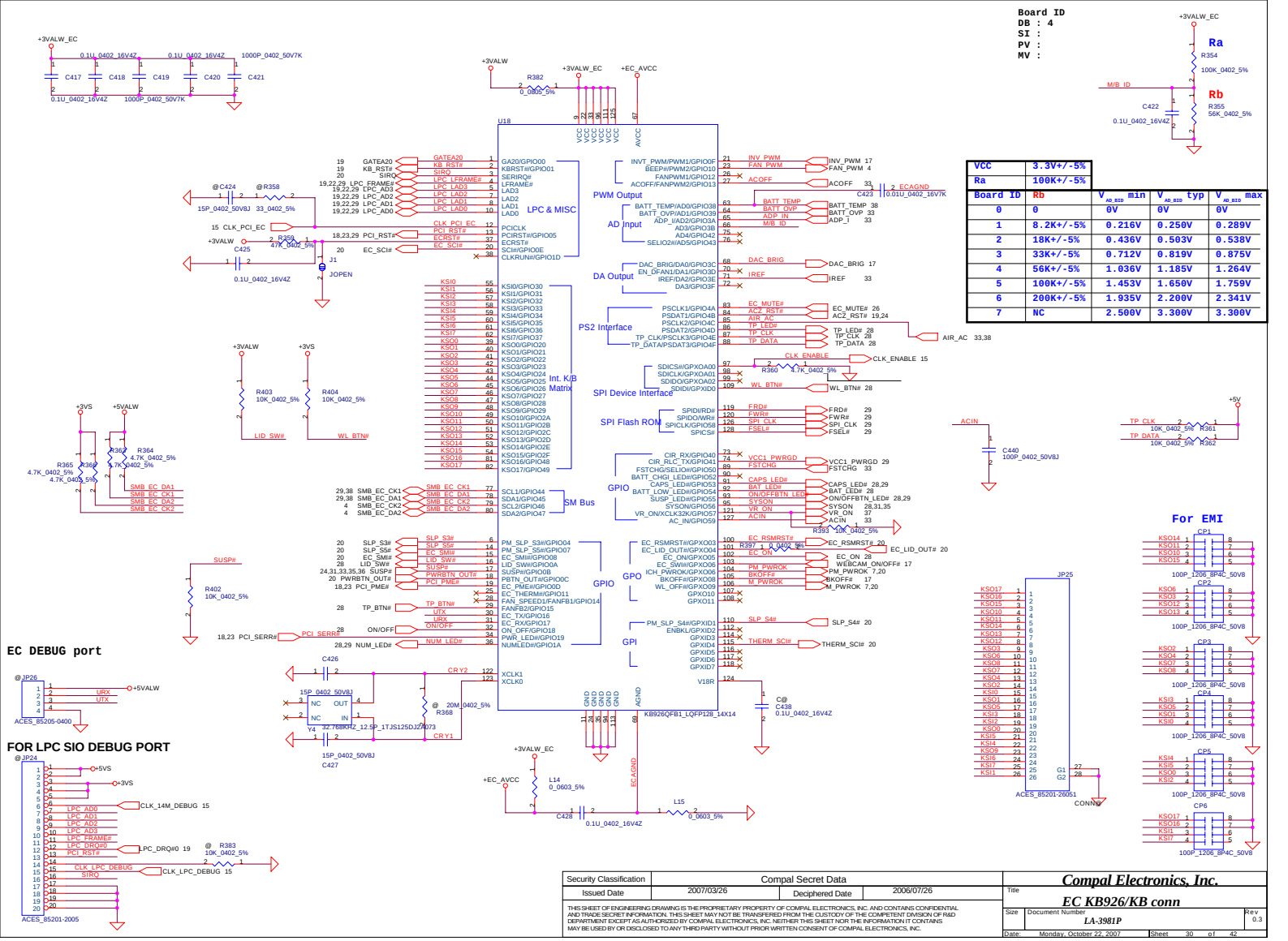
Connect pin3 & 23
together and pin 24
to GND in 6/29.



Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title: BIOS ROM			
Size	Document Number: LA-3981P		Rev: 0.3
Date: Monday, October 22, 2007		Sheet 29 of 42	



VCC	3.3V+/-5%			
Ra	100K+/-5%			
Board ID	Rb	V_{AD_BID} min	V_{AD_BID} typ	V_{AD_BID} max
0	0	0V	0V	0V
1	8.2K+/-5%	0.216V	0.250V	0.289V
2	18K+/-5%	0.436V	0.503V	0.538V
3	33K+/-5%	0.712V	0.819V	0.875V
4	56K+/-5%	1.036V	1.185V	1.264V
5	100K+/-5%	1.453V	1.650V	1.759V
6	200K+/-5%	1.935V	2.200V	2.341V
7	NC	2.500V	3.300V	3.300V

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

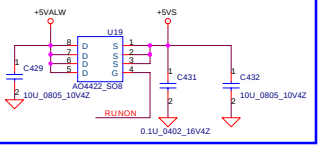
Compal Electronics, Inc.

Title: EC KB926/KB conn

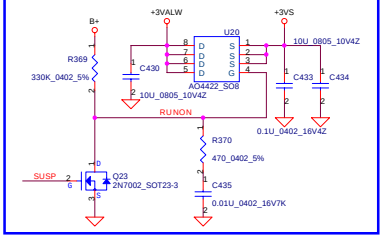
Size	Document Number	Rev
	LA-3981P	0.3

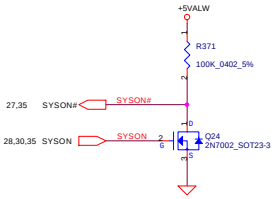
Date: Monday, October 22, 2007 Sheet 30 of 42

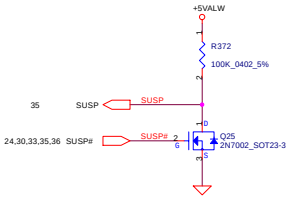
+5VALW to +5VS Transfer

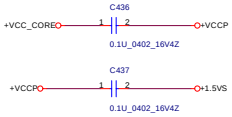


+3VALW to +3VS Transfer

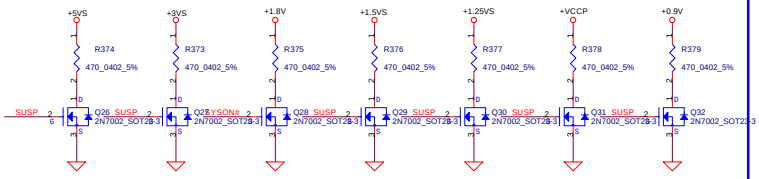


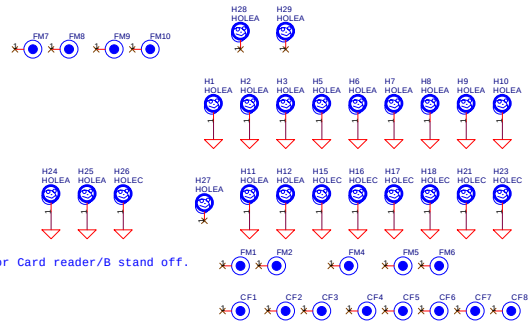






Discharge circuit

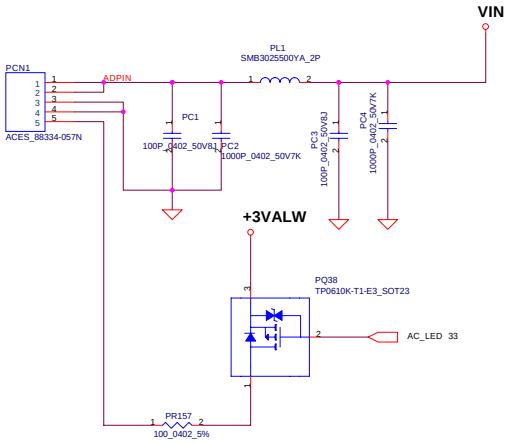




Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2006/07/26

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title	DC/DC Interface		
Size	Document Number	LA-3981P	Rev 0.3
Date: Monday, October 22, 2007	Sheet 31 of 42		



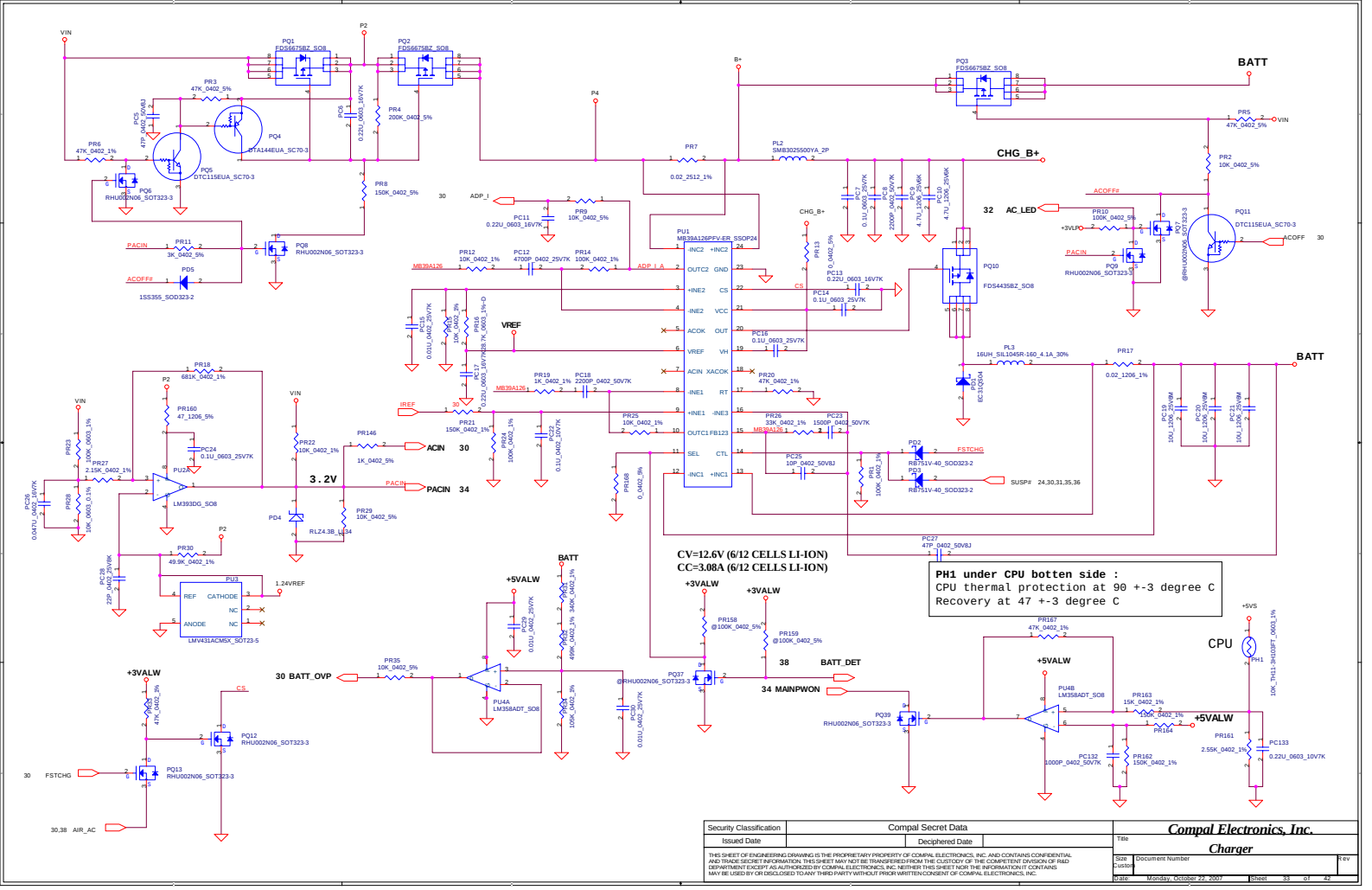
Security Classification	Compal Secret Data		
Issued Date	<Issued_Date>	Deciphered Date	<Deciphered_Date>

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

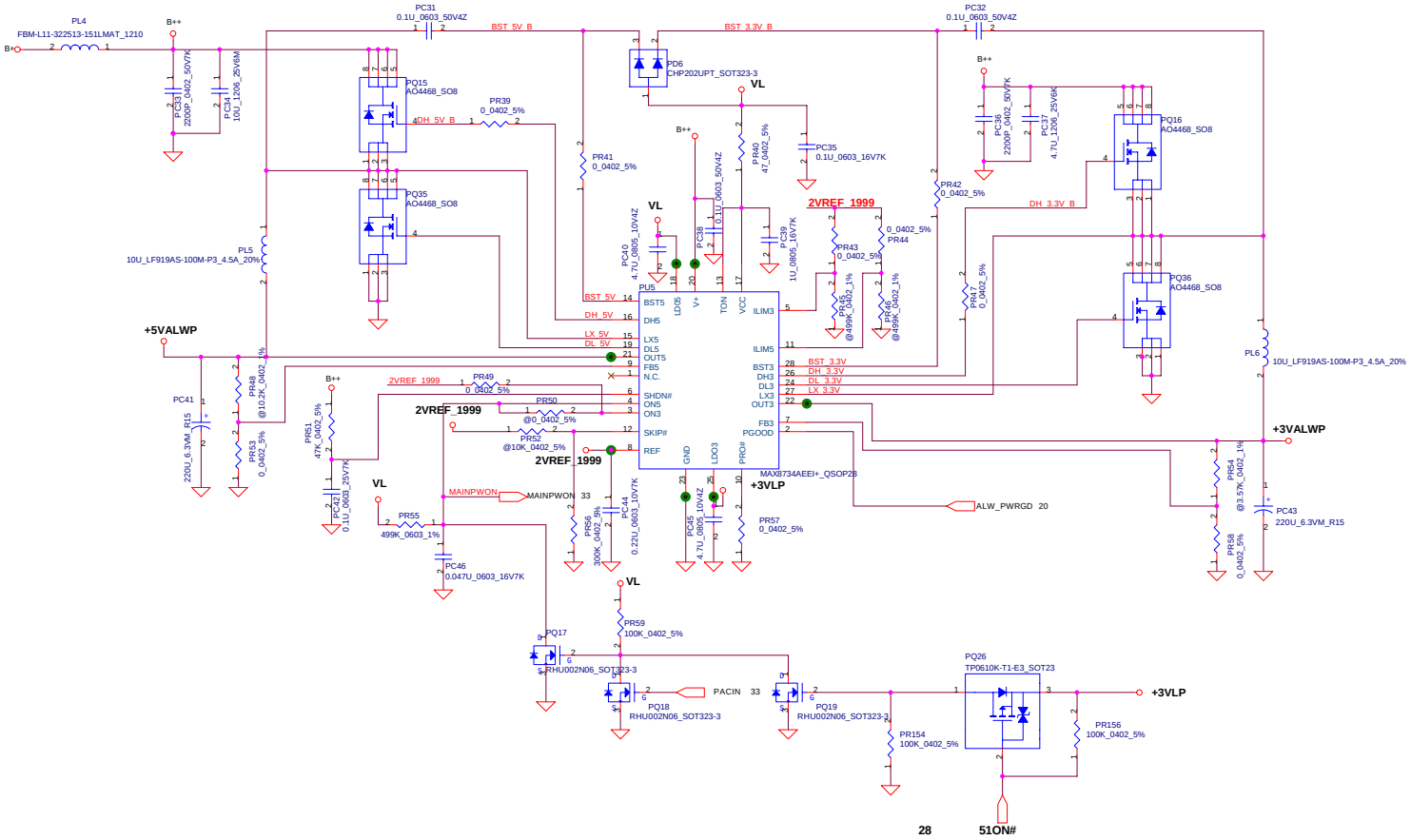
Title: **DC CONN**

Size	Document Number	Rev
Custom	LA-3981P	

Date: Monday, October 22, 2007 Sheet 32 of 42



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date		Deciphered Date	Title: Charger
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED 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 / Rev
			Date: Monday, October 22, 2007 / Sheet 33 of 42



Security Classification	Compal Secret Data		
Issued Date	<Issued_Date>	Deciphered Date	<Deciphered_Date>

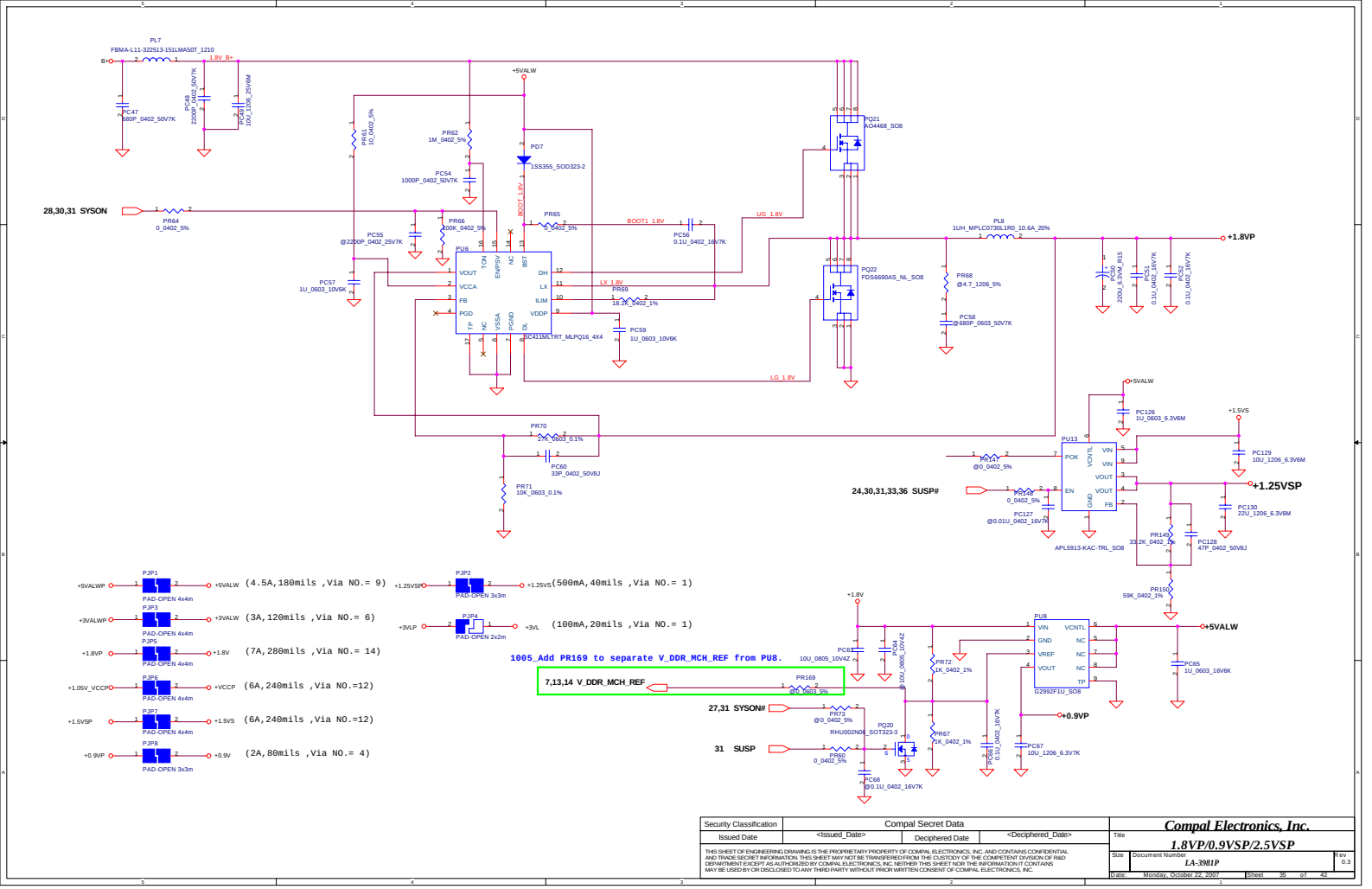
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title: **3.3VALWP / 5VALWP**

Size	Document Number	Rev

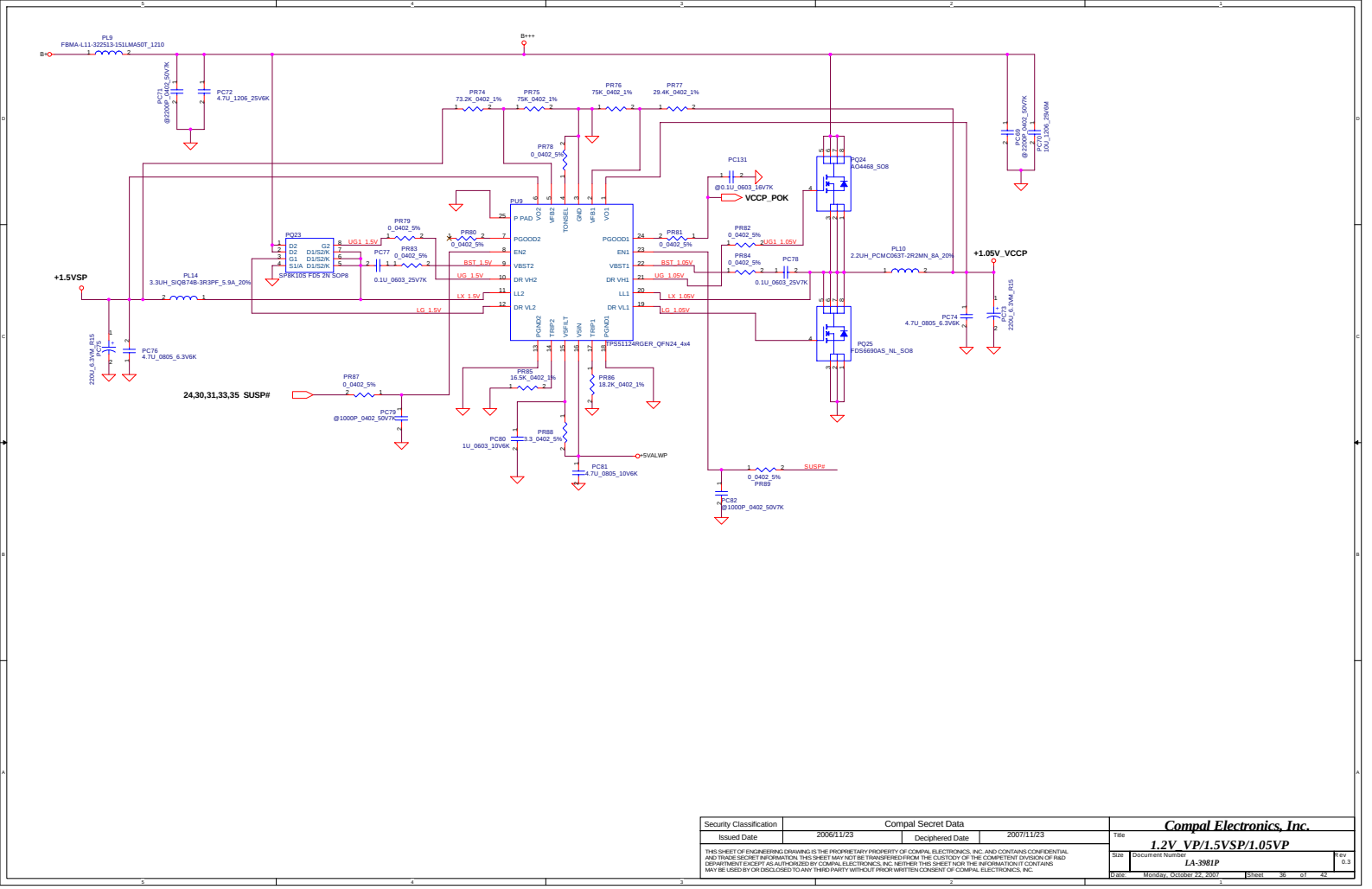
Date: Monday, October 22, 2007 Sheet 34 of 42



Security Classification	Compal Secret Data		
Issued Date	<Issued_Date>	Deciphered Date	<Deciphered_Date>

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

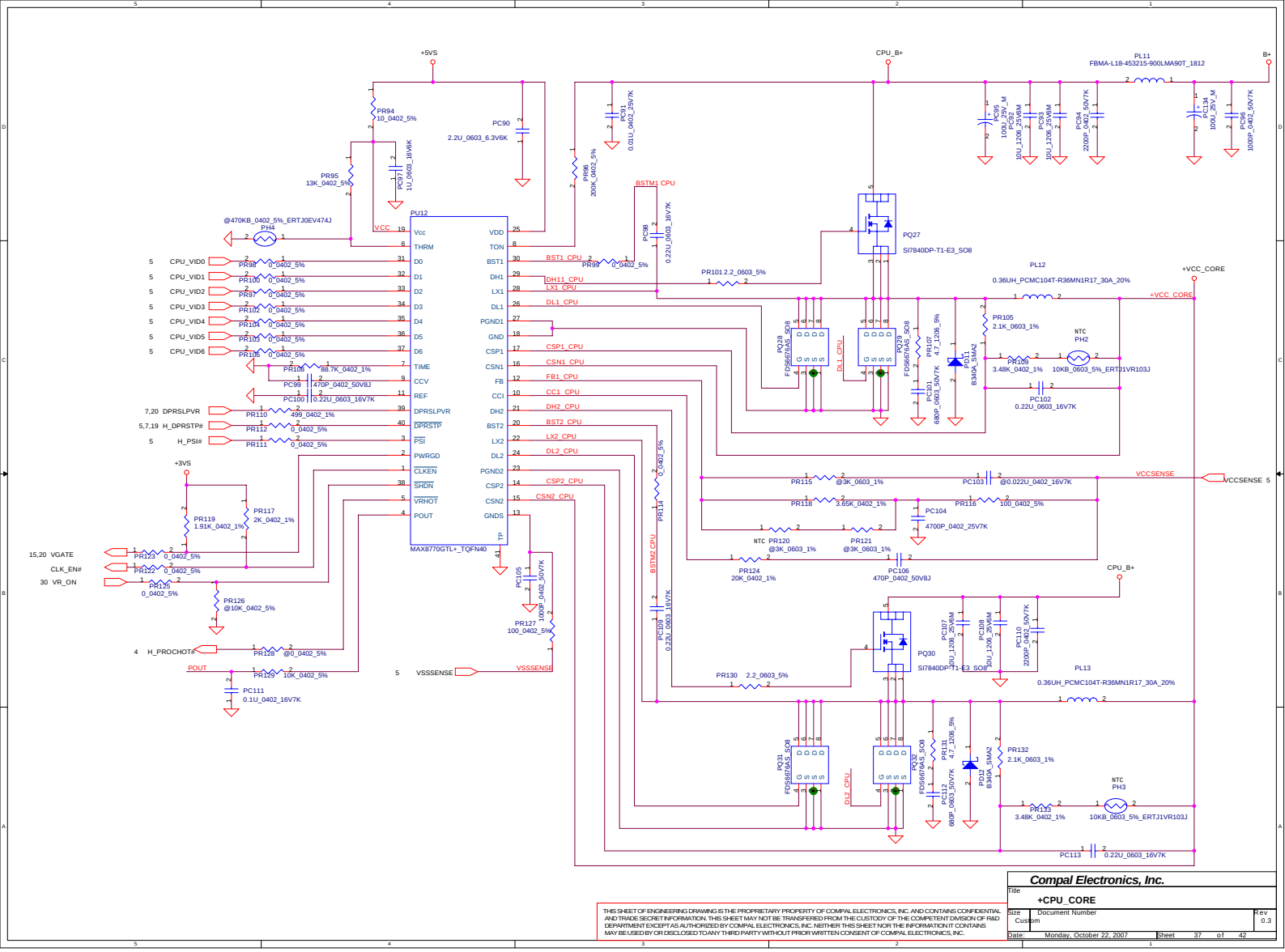
Compal Electronics, Inc.			
Title	1.8VP/0.9VSP/2.5VSP		
Size	Document Number		Rev
	LA-3981P		0.3
Date: Monday, October 22, 2007		Sheet 35 of 42	



Security Classification	Compal Secret Data		
Issued Date	2006/11/23	Deciphered Date	2007/11/23

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title	1.2V_VP/1.5VSP/1.05VP		
Size	Document Number		Rev
	LA-3981P		0.3
Date:	Monday, October 22, 2007	Sheet	36 of 42



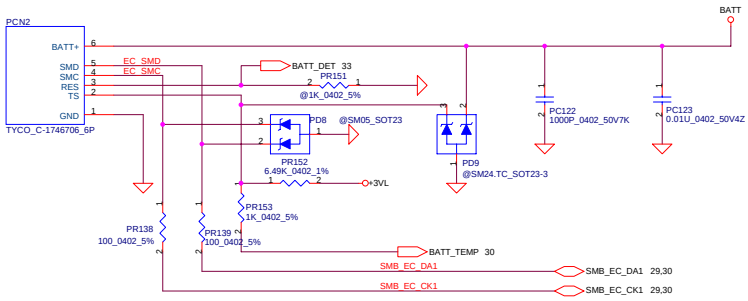
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

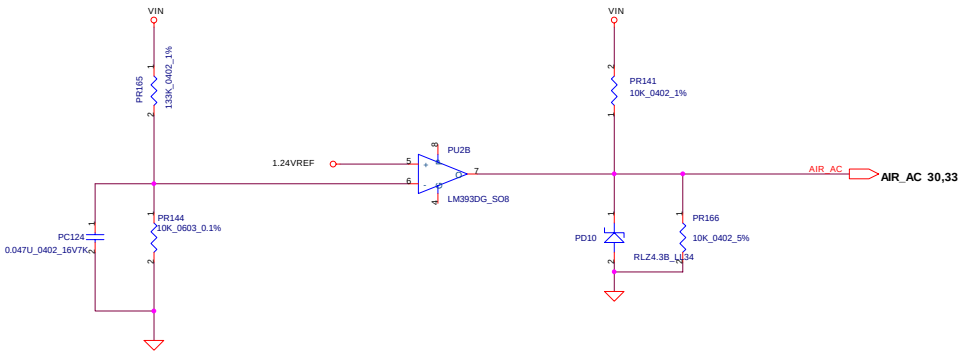
Compal Electronics, Inc.

Title: +CPU_CORE

Size: Custom | Document Number | Rev: 0.3

Date: Monday, October 22, 2007 | Sheet 37 of 42





Security Classification	Compal Secret Data		
Issued Date	<Issued_Date>	Deciphered Date	<Deciphered_Date>

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title: **BATTERY CONN**

Size	Document Number	Rev
Custom	LA-3981P	

Date: Monday, October 22, 2007 Sheet 42 of 38

Item	Reason for change	PG#	Modify List	Date	Phase
1			1009_PL8 change to 1uH.		
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

Security Classification: Compal Secret Data
Issued Date: 2006/02/28 Deciphered Date: 2007/02/28
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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.
Title: Changed-List History-1
Size: Document Number: LA-3981P Rev: 0.3
Date: Monday, October 22, 2007 Sheet 39 of 42

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

Item	Change item	Page		Date	Phase
1	Change C262 and C263 from 15pF to 12pF	19	Same as IBL80 MV BOM	7/16	DB --> SI
2	Reserved R245 and Add R422	20		7/16	DB --> SI
3	Add D29 prevent leakage issue	22		7/16	DB --> SI
4	Reserved diode D30 D31 for ESD	26		7/16	DB --> SI
5	Reserved R423 for coat down plan	24		7/24	DB --> SI
6	Remove Q12~Q17,R323 R324 R327 R328 R417 R418	26		7/30	DB --> SI
7	Change EXT MIC port B to port C	24		7/31	DB --> SI
8					DB --> SI
9					DB --> SI
10					DB --> SI
11					DB --> SI
12					DB --> SI
13					DB --> SI
14					DB --> SI
15					DB --> SI
16					DB --> SI
17					DB --> SI
18					DB --> SI
19					DB --> SI
20					DB --> SI
21					DB --> SI
22					DB --> SI
23					DB --> SI
24					DB --> SI
25					DB --> SI
26					DB --> SI
27					DB --> SI
28					DB --> SI
29					DB --> SI

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2007/02/28

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title: **HW Changed-List History-1**

Size | Document Number: **LA-3981P** | Rev: 0.3

Date: Monday, October 22, 2007 | Sheet 40 of 42

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

Item	Change item	Page		Date	Phase
1	Change R296 R337 R value	24	Follow conexant new design rule	8/6	SI --> PV
2	Add R424 R425 100ohm on MIC_EXT_R and MIC_EXT_L	26	Follow conexant new design rule	8/6	SI --> PV
3	Change PIRQ from F to A	18	Choose R419 then control PIRQ A	8/14	SI --> PV
4	Connect PCI_SERR# to EC GPIO pin.	18	Connect PCI_SERR# to EC GPIO pin.	8/31	SI --> PV
5	Modify PC BEEP circuit.	20	Modify PC BEEP circuit.	8/31	SI --> PV
6	For support Intel Penryn CPU.	04	Reserve R426 and R427 for support Intel Penryn CPU.	9/3	SI --> PV
7	For ESD request.	28	Add U22 and U23 for ESD request.	9/3	SI --> PV
8	For EMI request.	26	Add L24~L27	9/5	SI --> PV
9	Change C391, C393, C395, C396 from 0.47uF to 0.047uF.	26	Change C391, C393, C395, C396 from 0.47uF to 0.047uF.	9/7	SI --> PV
10	Add R417 and R418 to fine-tune Vp-p.	26	Add R417 and R418 to fine-tune Vp-p.	9/7	SI --> PV
11	For ESD request.	20	Add U22 and U23 for ESD request.	9/7	SI --> PV
12					SI --> PV
13					SI --> PV
14					SI --> PV
15					SI --> PV
16					SI --> PV
17					SI --> PV
18					SI --> PV
19					SI --> PV
20					SI --> PV
21					SI --> PV
22					SI --> PV
23					SI --> PV
24					SI --> PV
25					SI --> PV
26					SI --> PV
27					SI --> PV
28					SI --> PV
29					SI --> PV
30					SI --> PV
31					SI --> PV
32					SI --> PV
33					SI --> PV
34					SI --> PV
35					SI --> PV
36					SI --> PV
37					SI --> PV
38					SI --> PV

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2007/02/28

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title	HW Changed-List History-1	
Size	Document Number: LA-3981P	Rev 0.3
Date: Monday, October 22, 2007	Sheet 41 of 42	

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

Item	Change item	Page		Date	Phase
1	Solve Vref miss when entry S3 mode.	7	Stuff R43 and R46.	9/25	PV --> MV
2	Solve wave ripple on CRT and TV.	10	Change C439 from 0.47uF to 4.7uF.	9/25	PV --> MV
3	Solve RTC timing too exceed.	18	Change C262 and C263 from 12pF to 15pF.	9/25	PV --> MV
4	Reduce INT.MIC noise.	24	Add LPF (R429 and C452).	9/25	PV --> MV
5	Solve S3 resume fail when use Micron DDR module.	35	Add PR169 to separate V_DDR_MCH_REF from PU8.	10/05	PV --> MV
6	Solve pop noise when entry or resume from S3.	24	Modify PC Beep (C373, R302, R306) circuit.	9/27	PV --> MV
7	Solve EMI fail for Memory module.	7	Change R34/R35 from 20 ohm to 30 ohm.	9/27	PV --> MV
8	Fine-tune LED brightness.	28	Change R329, R331, R333, R335 from 33 ohm to 27 ohm.	9/27	PV --> MV
9	ICH 1.5V power rail 700mA current requirement.	21	Change R252 package from 0603 to 0805.	10/04	PV --> MV
10	Solve can not power on when stuff U22.	28	Disconnect ON/OFFBTN# and ON/OFFBTN_LED# from U22.	10/05	PV --> MV
11	For EMI request.	16	Change L2, L3, L4 to FBMA-L10-201209-121LMT_0805.	10/19	PV --> MV
12	To avoid too easy to open solder for CLRP2.	15	Change CLRP1 and CLRP2 type like the same as PJP4.	10/19	PV --> MV
13	Solve acoustic noise issue.	10	Change R64, R79, R81 from 0 ohm to 1uH/400mA inductor.	10/22	PV --> MV

Security Classification	Compal Secret Data		
Issued Date	2007/03/26	Deciphered Date	2007/02/28

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 TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title: HW Changed-List History-1		
Size	Document Number: LA-3981P	Rev: 0.3
Date: Monday, October 22, 2007	Sheet 42 of 42	