

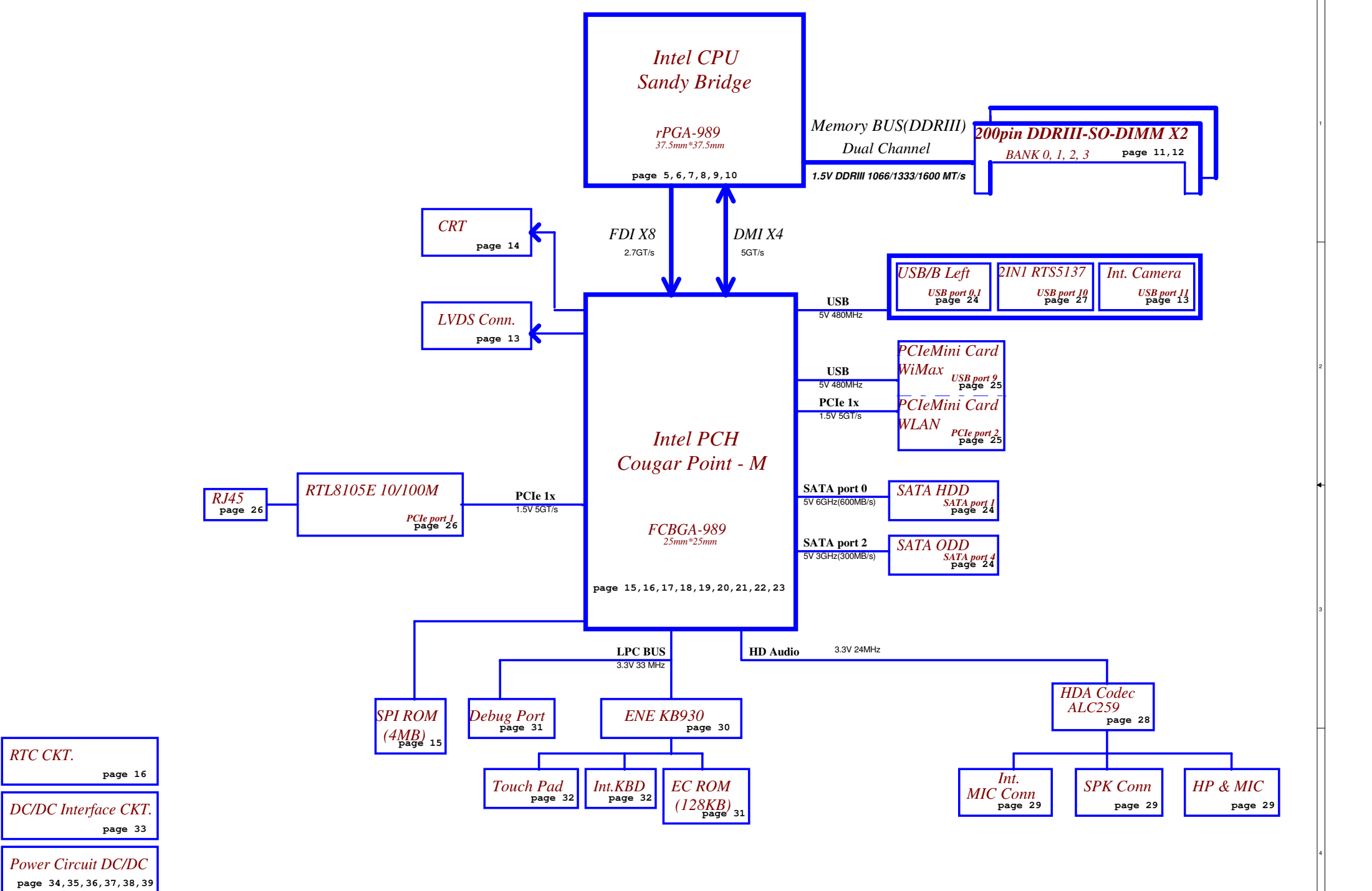
PWWHA

Delhi 10R

LA-7202P REV 1.0 Schematic

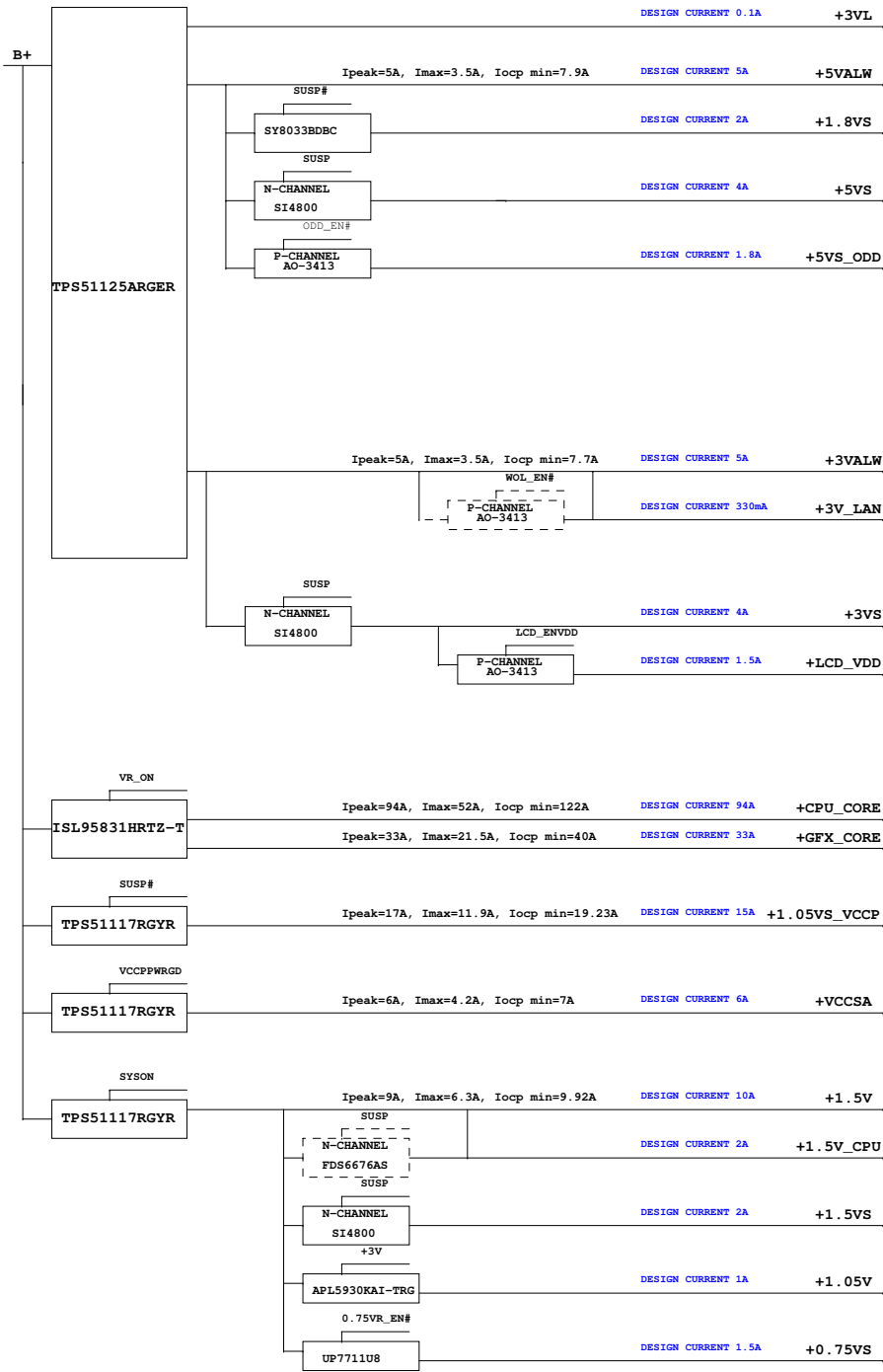
Intel Processor (Sandy Bridge) / PCH (Cougar Point)
2011-02-08 Rev 1.0

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title Cover Page		
<small>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.</small>				Size B	Document Number PWWHA LA-7202P M/B	Rev 1.0
				Date Friday, February 25, 2011	Sheet 1	of 43



RTC CKT.	page 16
DC/DC Interface CKT.	page 33
Power Circuit DC/DC	page 34, 35, 36, 37, 38, 39, 40, 41
Power/B DA40000XR10	page 32

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Block Diagram
Size	Document Number	PWWHA LA-7202P M/B		Rev 1.0
Date:	Wednesday, March 02, 2011	Sheet	2	of 43



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Power Tree	
Date: Friday, February 25, 2011				Sheet	3 of 43
				Rev	1.0
				PWVHWA LA-7202P M/B	

Voltage Rails

(O MEANS ON X MEANS OFF)

power plane / State	+RTCVC	B+	+3VL	+5VALW +3VALW +VSB	+1.5V	+5VS +3VS +1.8VS +1.5VS +1.05VS +0.75VS +CPU_CORE +GFX_CORE
S0	O	O	O	O	O	O
S1	O	O	O	O	O	O
S3	O	O	O	O	O	X
S5 S4/AC	O	O	O	O	X	X
S5 S4/ Battery only	O	O	O	X	X	X
S5 S4/AC & Battery don't exist	O	X	X	X	X	X

BTO Option Table

Function	MINI PCI-E SLOT	LAN		Camera & Mic	FAN		S3 Power Saving		Load Power Switch	
description	SLOT1	LAN		Camera & Mic	FAN		S3 Power Saving		Load Power Switch	
explain	WIMAX	10/100M	Giga	Camera & Mic	PWM	RPM	1.5V	1.5VS	Old Sch.	New Sch.
BTO	WIMAX@	8105E@	8111E@	CAM@	PWM@	RPM@	WPS3@	PS3@	OLS@	NLS@

PCH SM Bus Address

Power	Device	HEX	Address
+3VS	DDR SO-DIMM 0	A0 H	1010 0000 b
+3VS	DDR SO-DIMM 1	A4 H	1010 0100 b
+3VS	Clock Generator	D2 H	1101 0010 b
+3VS	WLAN/WIMAX		

EC SM Bus1 Address

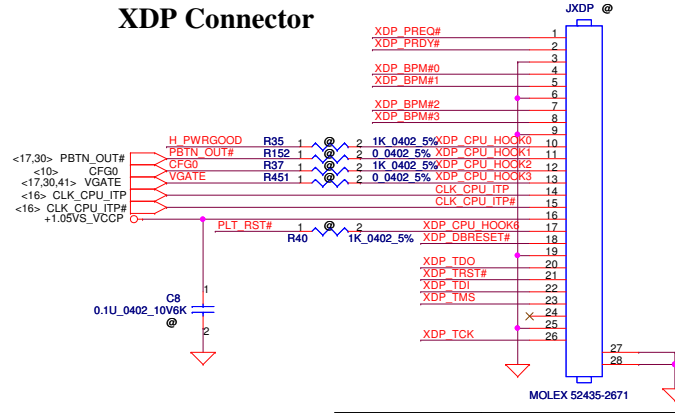
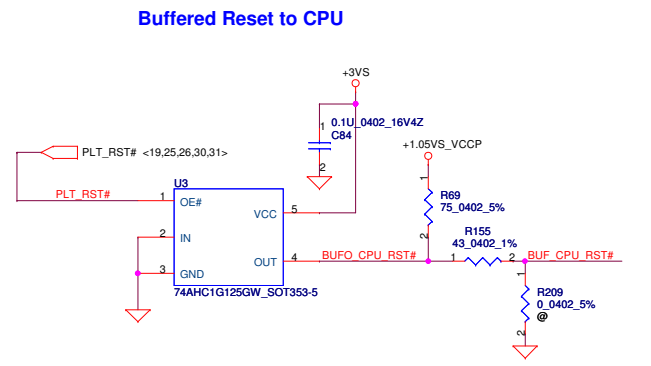
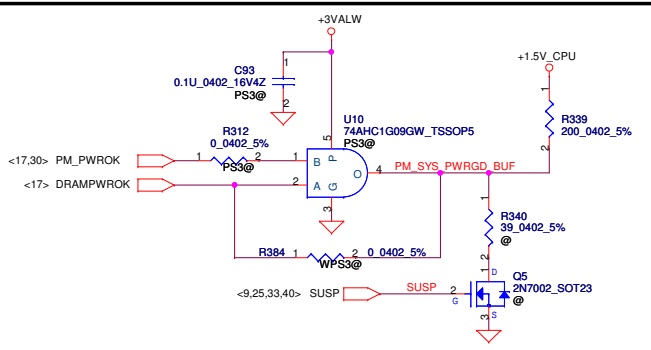
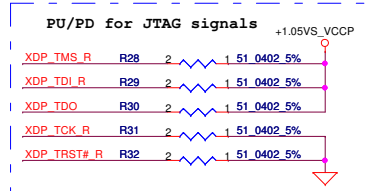
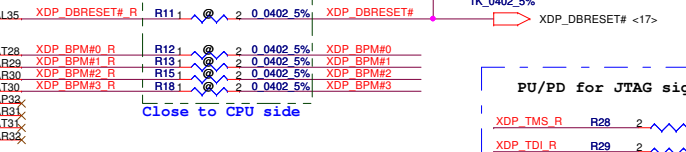
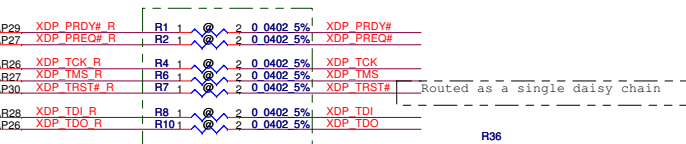
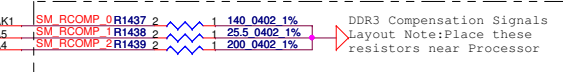
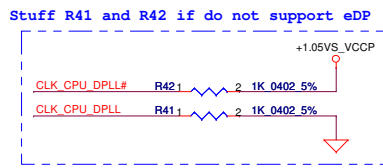
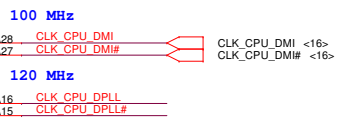
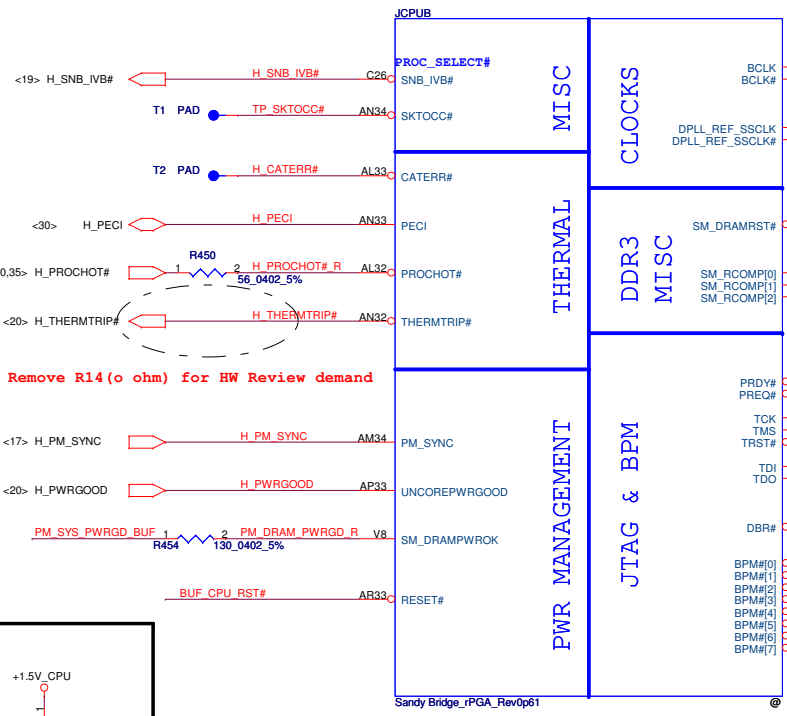
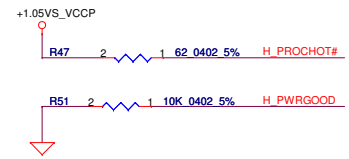
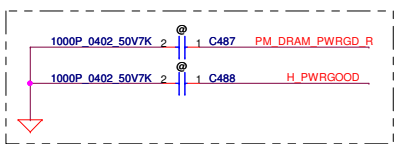
Power	Device	HEX	Address
+3VL	Smart Battery	16 H	0001 0110 b

EC SM Bus2 Address

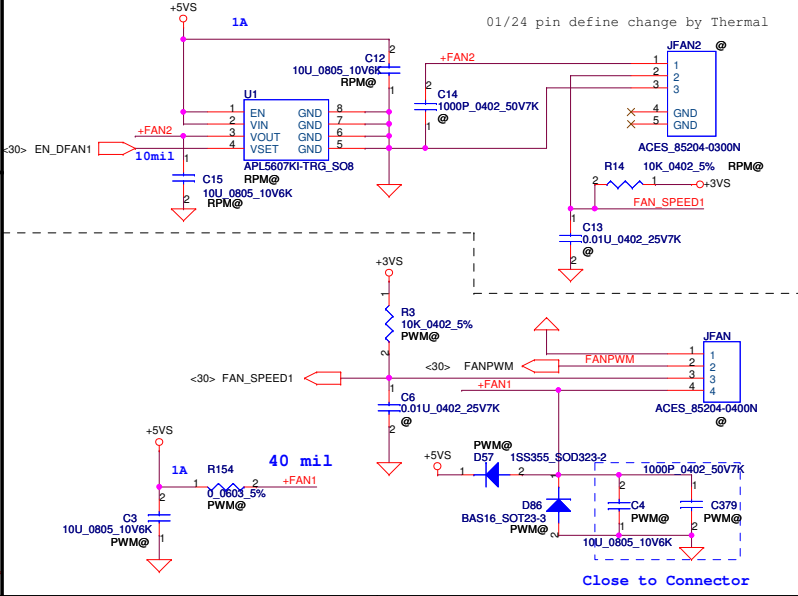
Power	Device	HEX	Address
+3VS	PCH	96 H	1001 0110 b

STATE \ SIGNAL	SLP_S3#	SLP_S4#	SLP_S5#
Full ON	HIGH	HIGH	HIGH
S1 (Power On Suspend)	HIGH	HIGH	HIGH
S3 (Suspend to RAM)	LOW	HIGH	HIGH
S4 (Suspend to Disk)	LOW	LOW	HIGH
S5 (Soft OFF)	LOW	LOW	LOW
G3	LOW	LOW	LOW

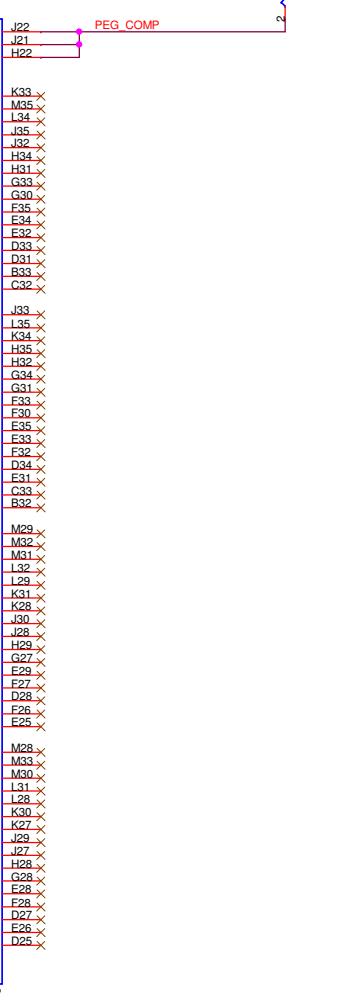
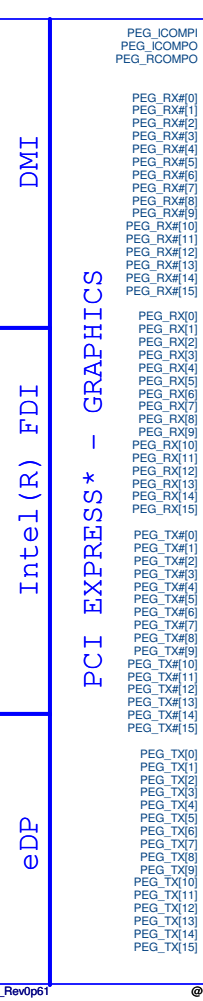
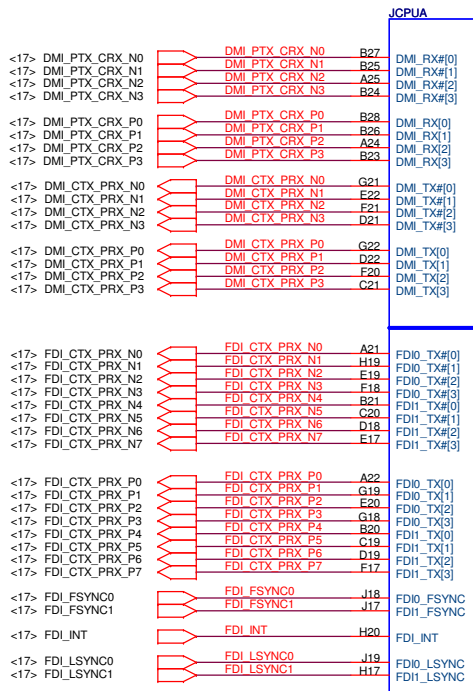
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Notes List		
				Size	Document Number	Rev
	Custom	PWWHA LA-7202P M/B	1.0			
Date:	Friday, February 25, 2011	Sheet	4 of 43			



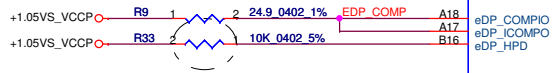
FAN Control Circuit (RPM and PWM)



Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Sandy Bridge_JTAG/XDP/FAN	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.					
Size	Document Number	PWWHA LA-7202P M/B		Rev	1.0
Date:	Friday, February 25, 2011	Sheet	5	of	49

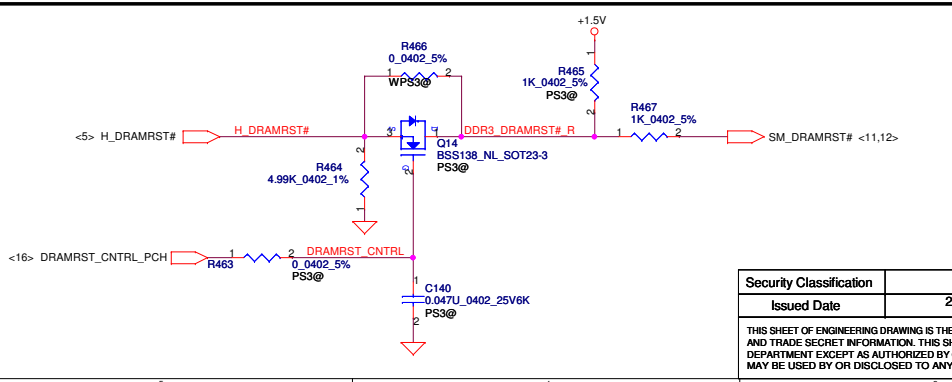
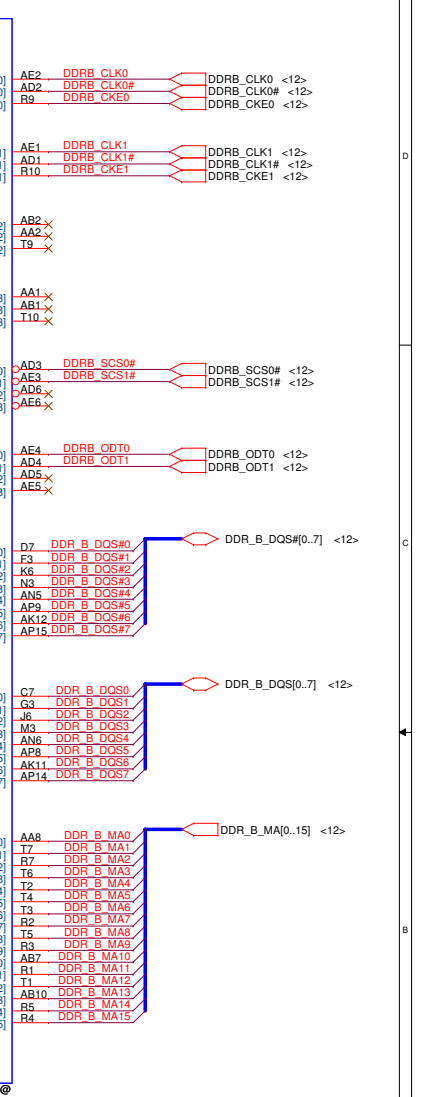
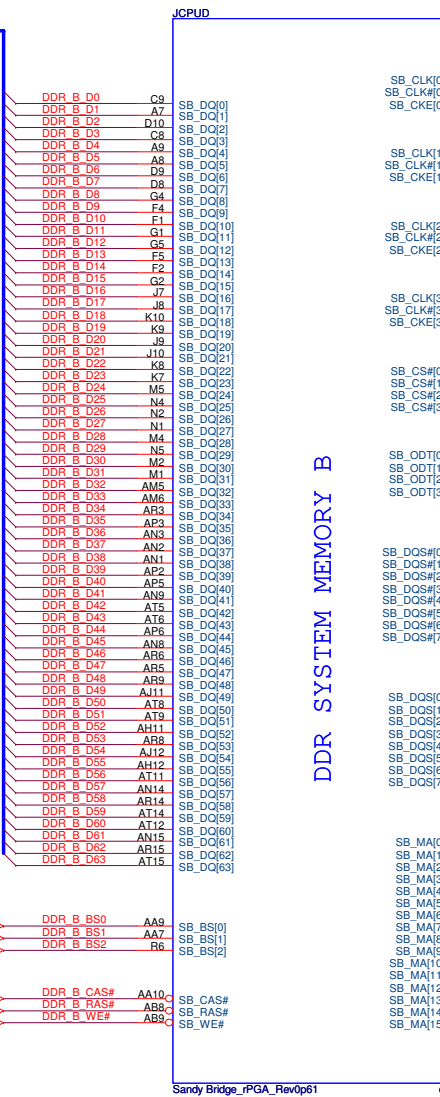
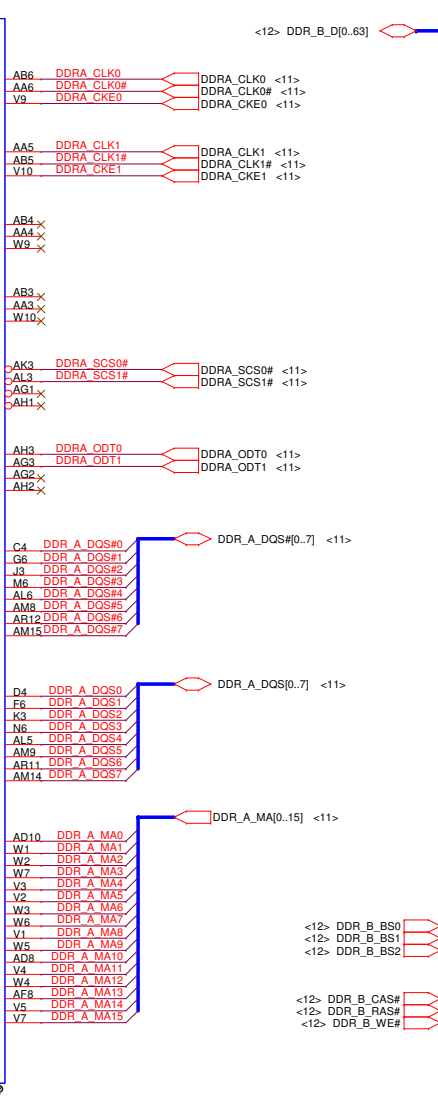
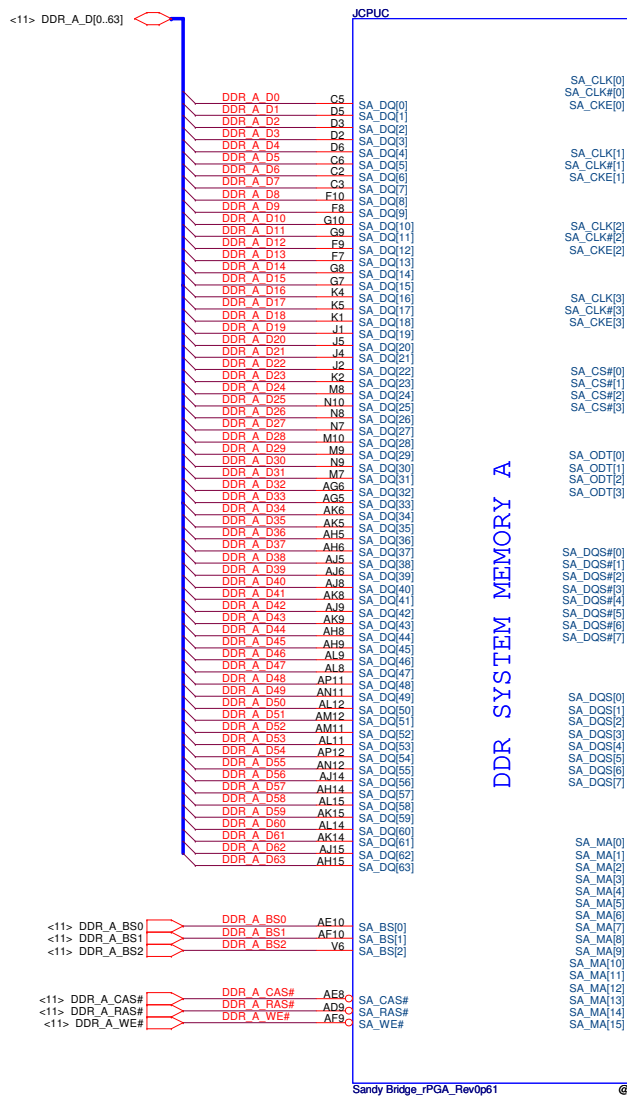


PEG_ICOMPI and RCOMP0 signals should be shorted and routed with - max length = 500 mils - typical impedance = 43 m ohm (4 mils)
 PEG_ICOMPO signals should be routed with - max length = 500 mils - typical impedance = 14.5 m ohm (12 mils)



Reserve R33 for HW Review demand
 eDP_COMP signals should be shorted near balls and routed with typical impedance <25m ohm

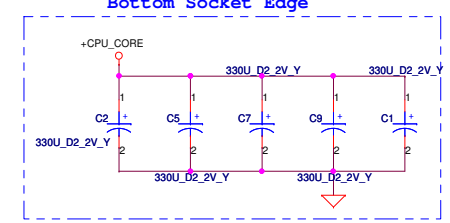
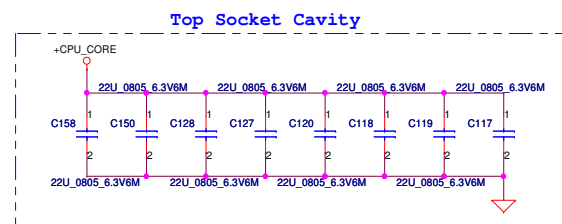
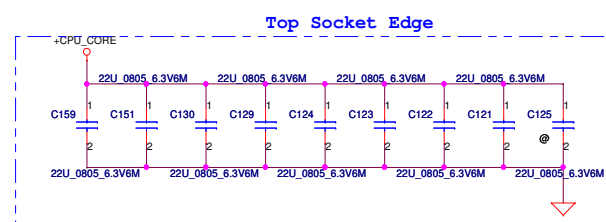
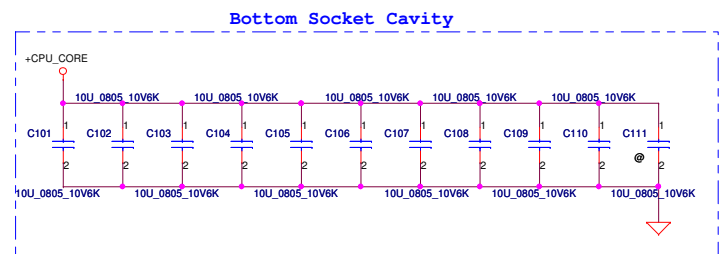
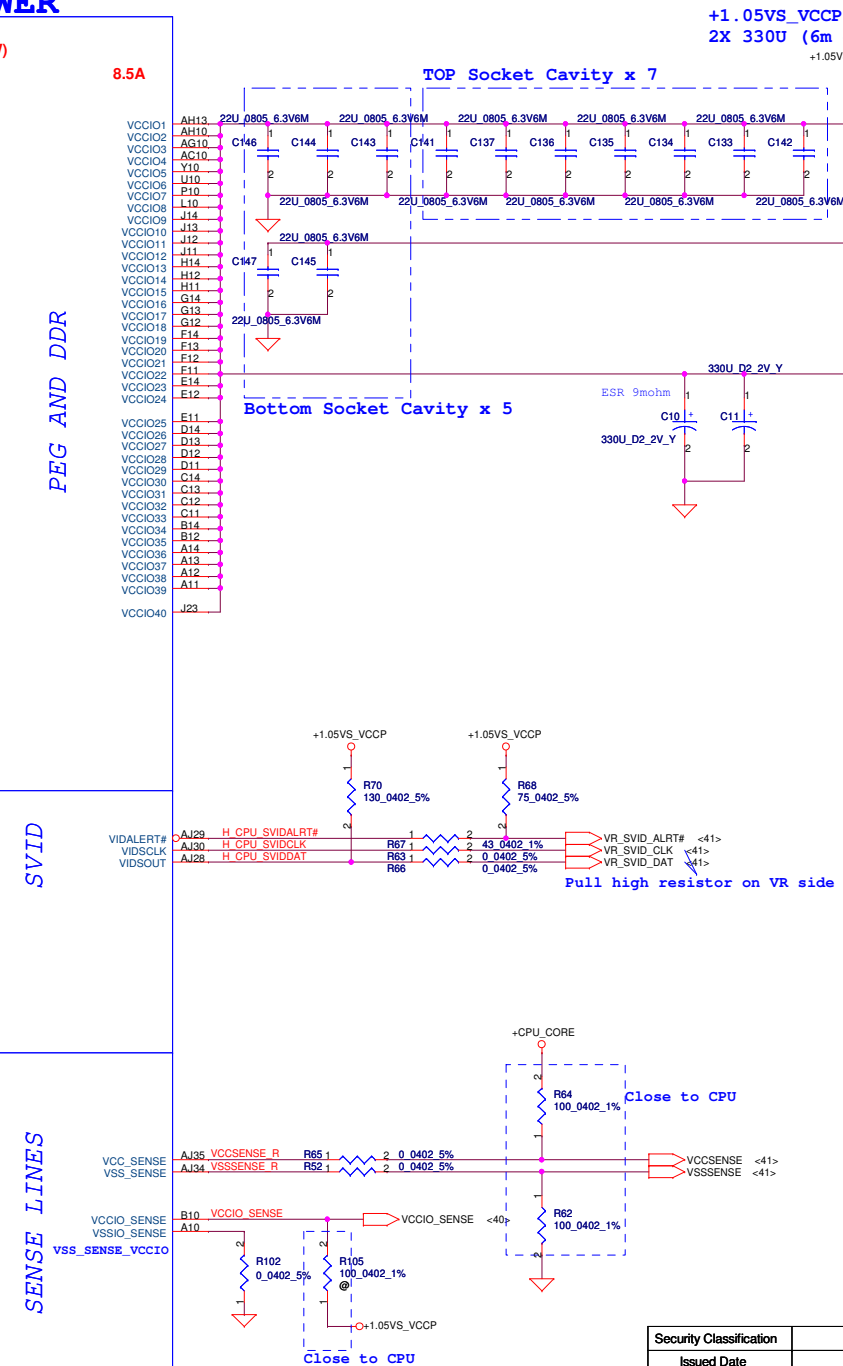
Security Classification		Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Sandy Bridge_DMI/PEG/FDI	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Custom	PWWHA LA-7202P M/B
				Date:	Friday, February 25, 2011
				Sheet	6 of 43
				Rev	1.0



Security Classification		Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Compal Electronics, Inc.	
				Sandy Bridge_DDR3	
Size	Document Number	Date		Rev	
Custom	PWWHA LA-7202P M/B	Friday, February 25, 2011		1.0	
				Sheet	7 of 43

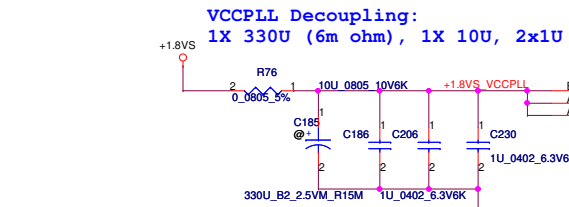
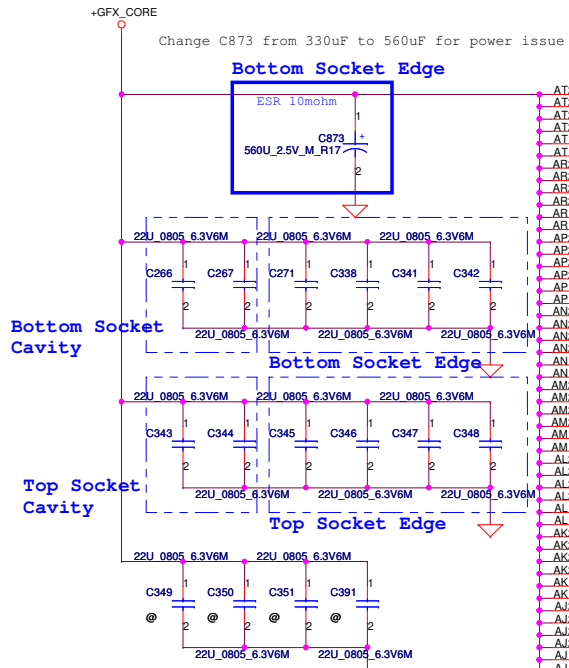
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

- POWER**
- 94A (Quad Core 45W)
53A (SV 35W)
- PEG AND DDR**
- CORE SUPPLY**
- SVID**
- SENSE LINES**
- AG35 VCC1
 - AG34 VCC2
 - AG33 VCC3
 - AG32 VCC4
 - AG31 VCC5
 - AG30 VCC6
 - AG29 VCC7
 - AG28 VCC8
 - AG27 VCC9
 - AG26 VCC10
 - AF35 VCC11
 - AF34 VCC12
 - AF33 VCC13
 - AF32 VCC14
 - AF31 VCC15
 - AF30 VCC16
 - AF29 VCC17
 - AF28 VCC18
 - AF27 VCC19
 - AD35 VCC20
 - AD34 VCC21
 - AD33 VCC22
 - AD32 VCC23
 - AD31 VCC24
 - AD30 VCC25
 - AD29 VCC26
 - AD28 VCC27
 - AD27 VCC28
 - AD26 VCC29
 - AC35 VCC30
 - AC34 VCC31
 - AC33 VCC32
 - AC32 VCC33
 - AC31 VCC34
 - AC30 VCC35
 - AC29 VCC36
 - AC28 VCC37
 - AC27 VCC38
 - AC26 VCC39
 - AA35 VCC40
 - AA34 VCC41
 - AA33 VCC42
 - AA32 VCC43
 - AA31 VCC44
 - AA30 VCC45
 - AA29 VCC46
 - AA28 VCC47
 - AA27 VCC48
 - AA26 VCC49
 - Y35 VCC50
 - Y34 VCC51
 - Y33 VCC52
 - Y32 VCC53
 - Y31 VCC54
 - Y30 VCC55
 - Y29 VCC56
 - Y28 VCC57
 - Y27 VCC58
 - Y26 VCC59
 - Y25 VCC60
 - V34 VCC61
 - V33 VCC62
 - V32 VCC63
 - V31 VCC64
 - V30 VCC65
 - V29 VCC66
 - V28 VCC67
 - V27 VCC68
 - V26 VCC69
 - V25 VCC70
 - U35 VCC71
 - U34 VCC72
 - U33 VCC73
 - U32 VCC74
 - U31 VCC75
 - U30 VCC76
 - U29 VCC77
 - U28 VCC78
 - U27 VCC79
 - U26 VCC80
 - R35 VCC81
 - R34 VCC82
 - R33 VCC83
 - R32 VCC84
 - R31 VCC85
 - R30 VCC86
 - R29 VCC87
 - R28 VCC88
 - R27 VCC89
 - R26 VCC90
 - P35 VCC91
 - P34 VCC92
 - P33 VCC93
 - P32 VCC94
 - P31 VCC95
 - P30 VCC96
 - P29 VCC97
 - P28 VCC98
 - P27 VCC99
 - P26 VCC100



Security Classification		Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Sandy Bridge_POWER-1	
Size	Document Number	Date		Rev	
Custom	PWWHA LA-7202P M/B	Friday, February 25, 2011		1.0	
				1 Sheet 8 of 43	

+GFX_CORE Decoupling:
 1X 560U (10m ohm), 12X 22U



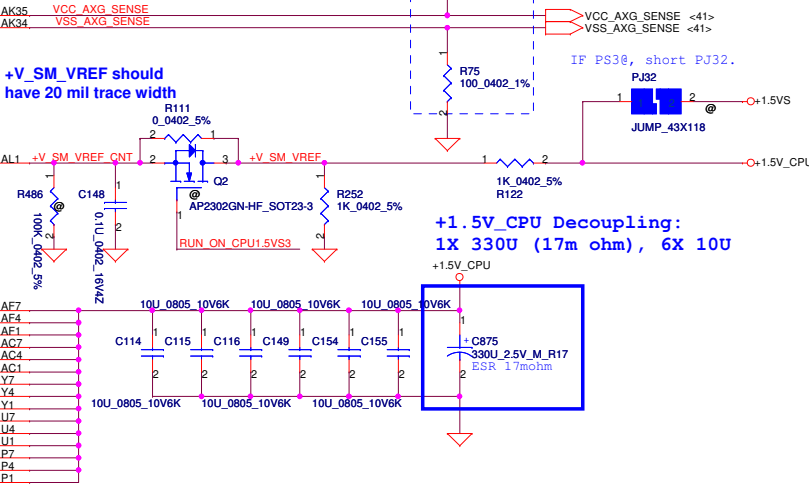
POWER

JCPU0G

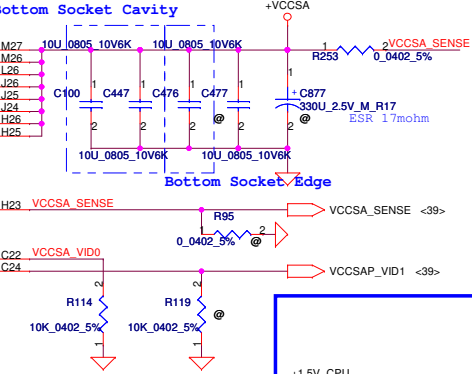
AT24	VAXG1	33A	SENSE LINES
AT23	VAXG2		
AT21	VAXG3		
AT20	VAXG4		
AT18	VAXG5		
AT17	VAXG6		
AR24	VAXG7		
AR23	VAXG8		
AR21	VAXG9		
AR20	VAXG10		
AR18	VAXG11		
AR17	VAXG12		
AP24	VAXG13		
AP23	VAXG14		
AP21	VAXG15		
AP20	VAXG16		
AP18	VAXG17		
AN24	VAXG18	33A	VREF
AN23	VAXG19		
AN21	VAXG20		
AN20	VAXG21		
AN18	VAXG22		
AN17	VAXG23		
AM24	VAXG24		
AM23	VAXG25		
AM21	VAXG26		
AM20	VAXG27		
AM18	VAXG28		
AM17	VAXG29		
AL24	VAXG30		
AL23	VAXG31		
AL21	VAXG32		
AL20	VAXG33		
AL18	VAXG34	33A	DDR3 -1.5V RAILS
AL17	VAXG35		
AK24	VAXG36		
AK23	VAXG37		
AK21	VAXG38		
AK20	VAXG39		
AK18	VAXG40		
AK17	VAXG41		
AJ24	VAXG42		
AJ23	VAXG43		
AJ21	VAXG44		
AJ20	VAXG45		
AJ18	VAXG46		
AH24	VAXG47		
AH23	VAXG48		
AH21	VAXG49		
AH20	VAXG50		
AH18	VAXG51		
AH17	VAXG52		
AH16	VAXG53		
AH15	VAXG54		
	VAXG55	33A	MISC
	VCCSA_SENSE		
	VCCSA_VID0 FC_C22 VCCSA_VID1		

GRAPHICS

VDD01	AF7	10U_0805_10V6K	5A	DDR3 -1.5V RAILS
VDD02	AF4	10U_0805_10V6K		
VDD03	AF1	10U_0805_10V6K		
VDD04	AC7	10U_0805_10V6K		
VDD05	AC4	10U_0805_10V6K		
VDD06	AC1	10U_0805_10V6K		
VDD07	Y7	10U_0805_10V6K		
VDD08	Y4	10U_0805_10V6K		
VDD09	Y1	10U_0805_10V6K		
VDD10	U7	10U_0805_10V6K		
VDD11	U4	10U_0805_10V6K		
VDD12	U1	10U_0805_10V6K		
VDD13	P7	10U_0805_10V6K		
VDD14	P4	10U_0805_10V6K		
VDD15	P1	10U_0805_10V6K		

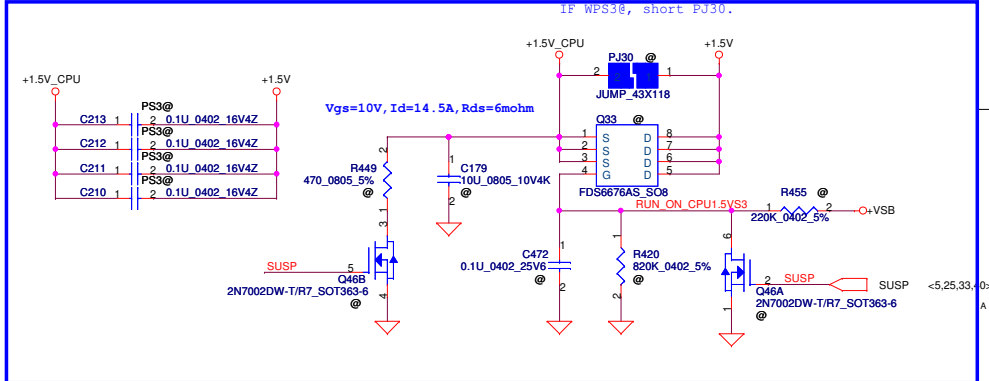


+VCCSA Decoupling:
 1X 330U (17m ohm), 4X 10U



VCCSA_VID0	VCCSA_VID1	+VCCSA
0	0	0.90 V
0	1	0.80 V
1	0	0.75 V
1	1	0.65 V

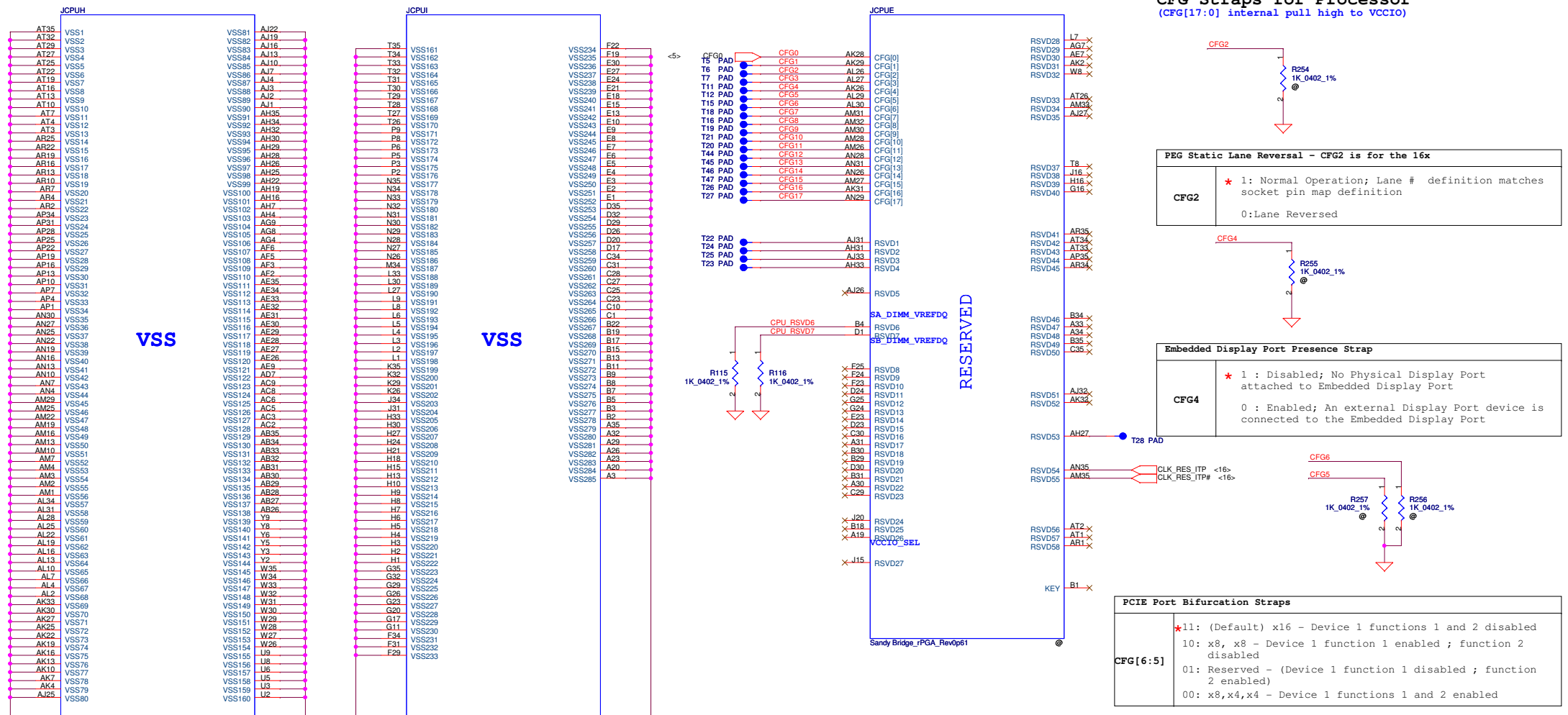
For Sandy Bridge



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Sandy Bridge_POWER-2 Document Number PWWHA LA-7202P M/B Date: Friday, February 25, 2011 Sheet 9 of 43

CFG Straps for Processor

(CFG[17:0] internal pull high to VCCIO)



CFG2

★ 1: Normal Operation; Lane # definition matches socket pin map definition
 0: Lane Reversed

CFG4

★ 1: Disabled; No Physical Display Port attached to Embedded Display Port
 0: Enabled; An external Display Port device is connected to the Embedded Display Port

CFG[6:5]

★ 11: (Default) x16 - Device 1 functions 1 and 2 disabled
 10: x8, x8 - Device 1 function 1 enabled; function 2 disabled
 01: Reserved - (Device 1 function 1 disabled; function 2 enabled)
 00: x8, x4, x4 - Device 1 functions 1 and 2 enabled

CFG7

1: (Default) PEG Train immediately following xxRESETB de assertion
 0: PEG Wait for BIOS for training

Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Sandy Bridge_GND/RSVD/CFG	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Size	Document Number	Rev
			Custom	PWWHA LA-7202P M/B	1.0
			Date: Friday, February 25, 2011	Sheet 10	of 43

VSS

VSS

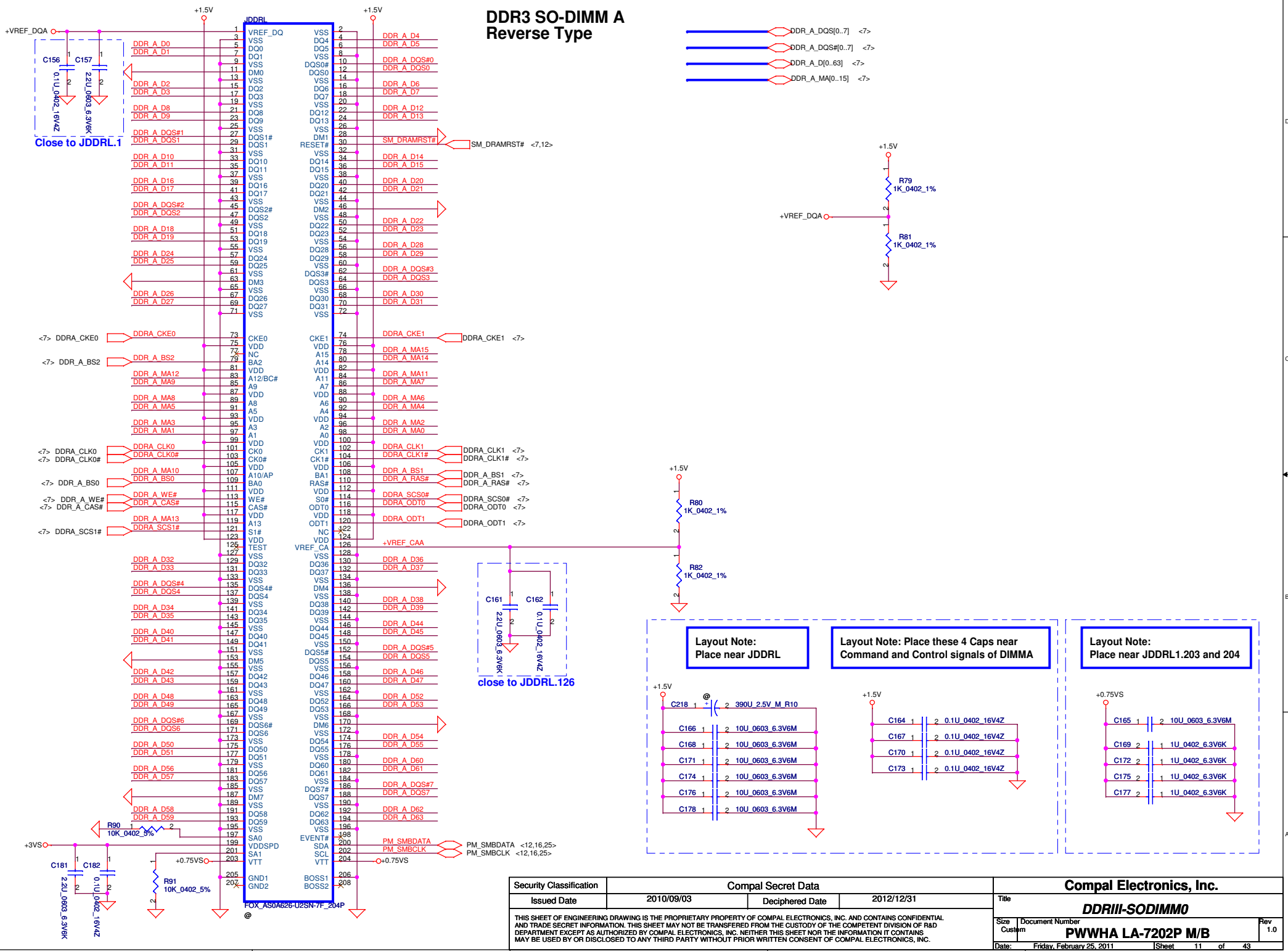
RESERVED

Sandy Bridge_rPGA_Rev0p61

Sandy Bridge_rPGA_Rev0p61

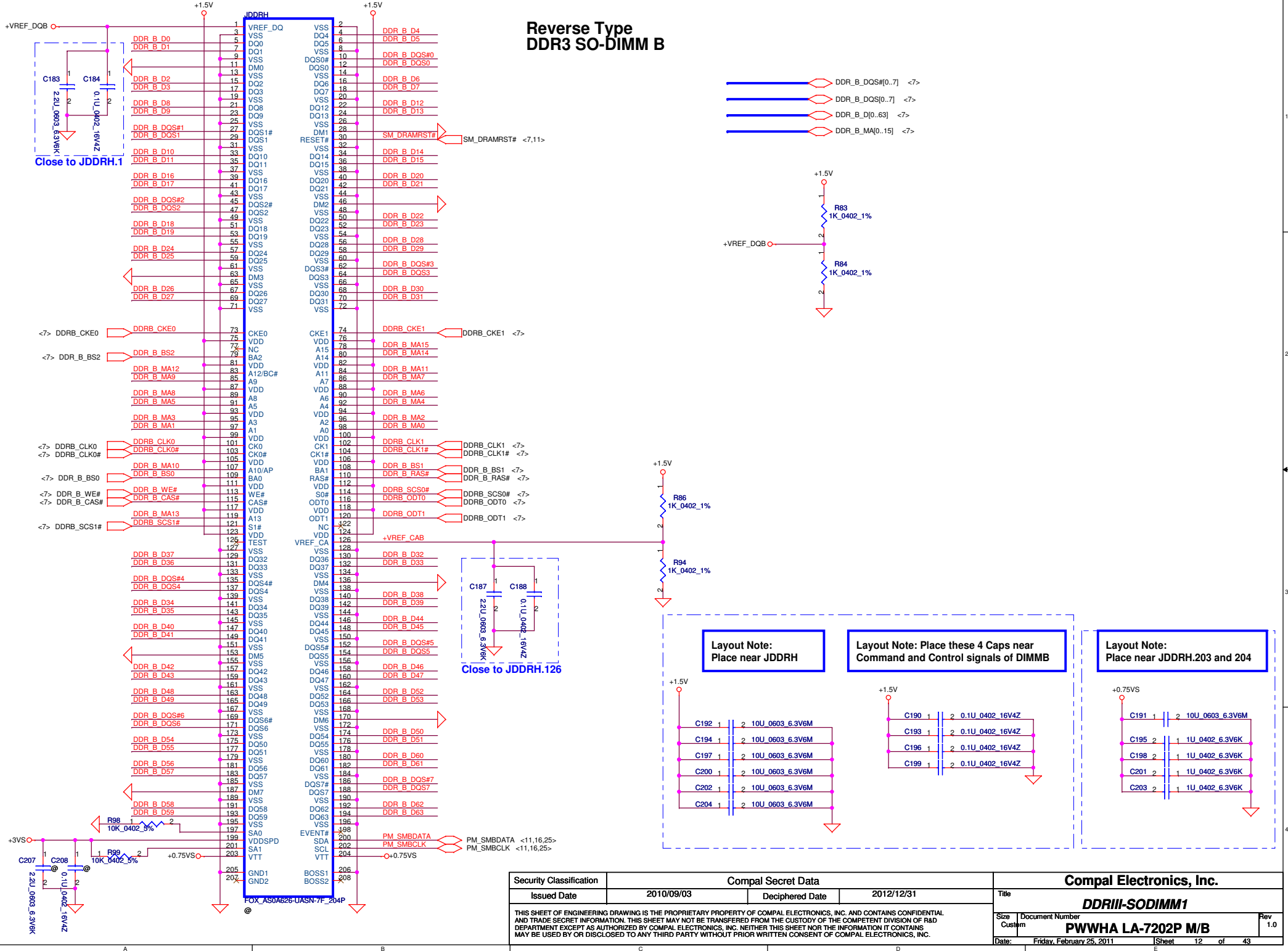
Sandy Bridge_rPGA_Rev0p61

DDR3 SO-DIMM A Reverse Type

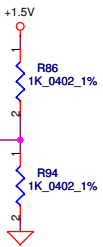
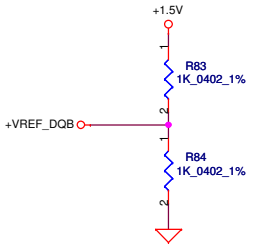


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				DDR3-SODIMMO Size Document Number Rev Custom PWWHA LA-7202P M/B 1.0 Date: Friday, February 25, 2011 Sheet 11 of 49	

Reverse Type DDR3 SO-DIMM B



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



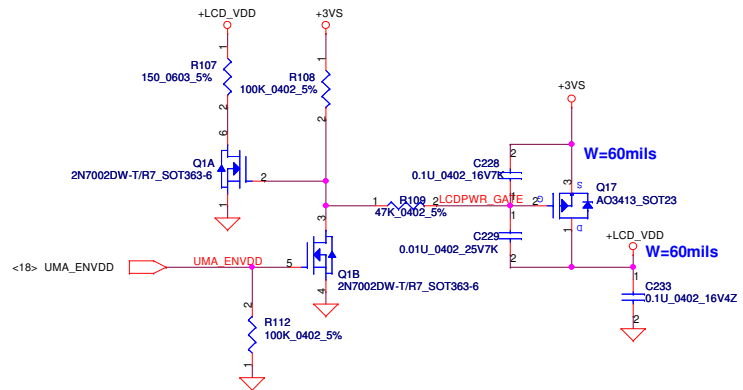
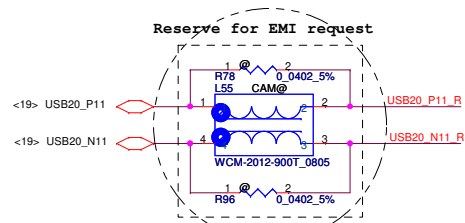
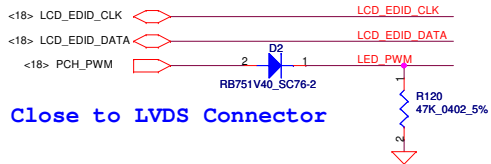
Layout Note:
Place near JDDRH

Layout Note: Place these 4 Caps near Command and Control signals of DIMMB

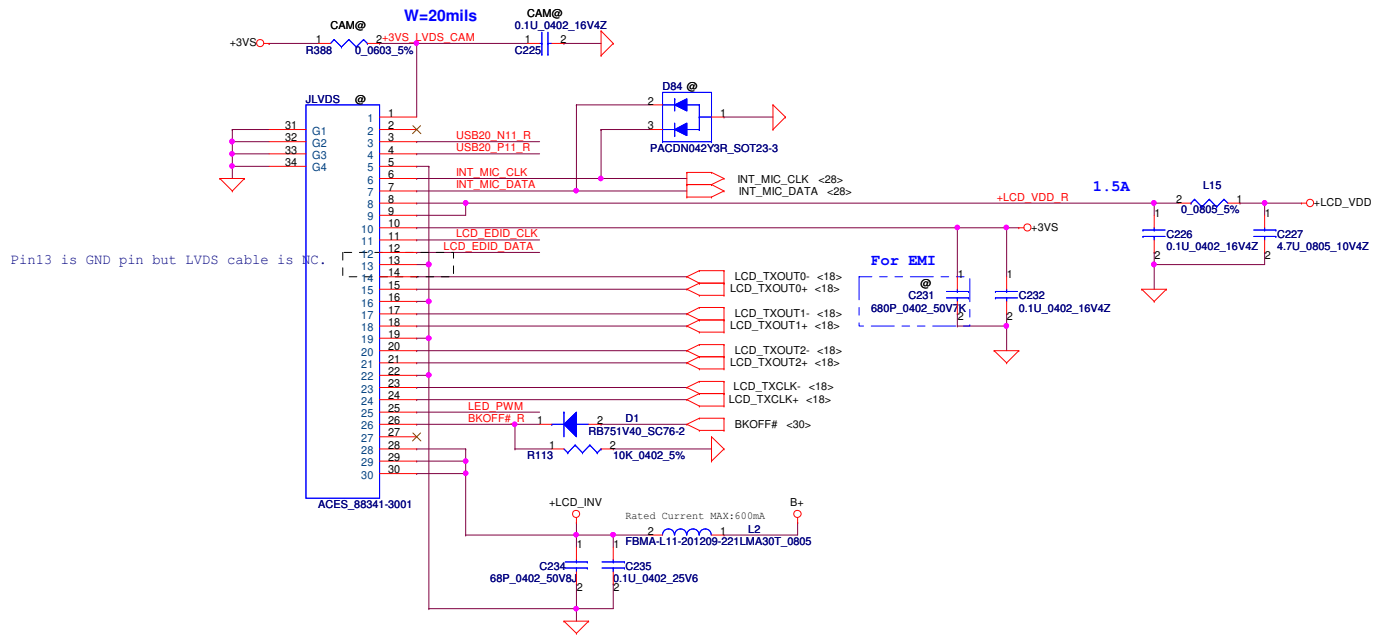
Layout Note: Place near JDDRH.203 and 204

Circuit diagrams for capacitors C192-C204 and C195-C203, showing their connections to +1.5V and +0.75V supply rails.

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title DDRIII-SODIMM1	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Document Number Rev Custom PWWHA LA-7202P M/B 1.0	
Date: Friday, February 25, 2011				Sheet 12 of 49	



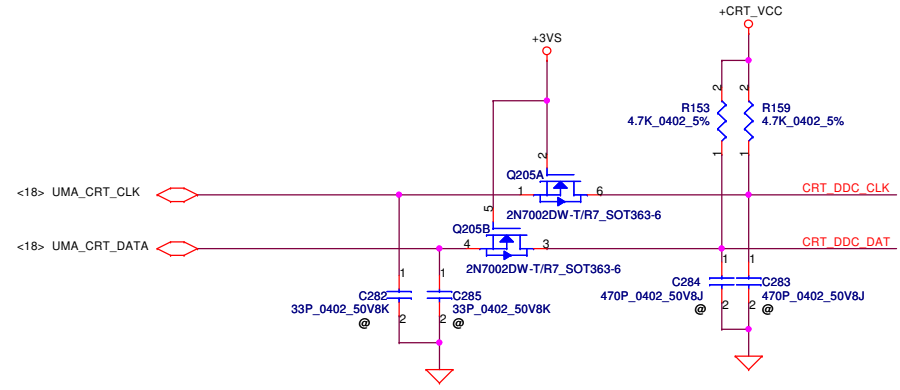
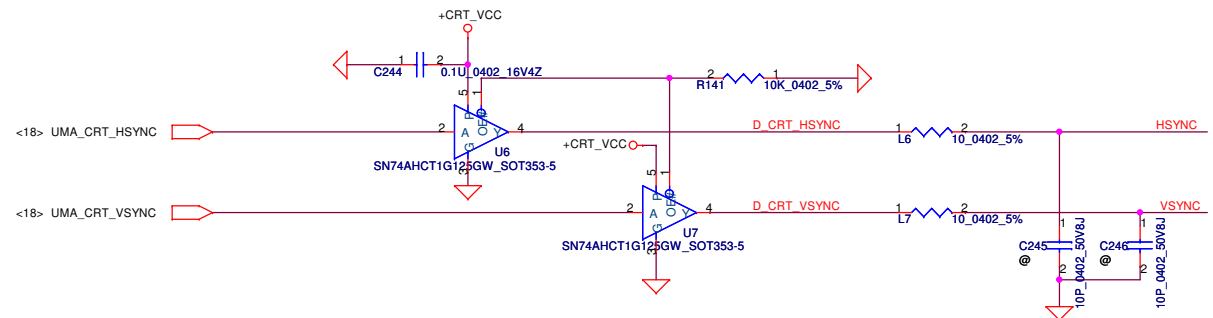
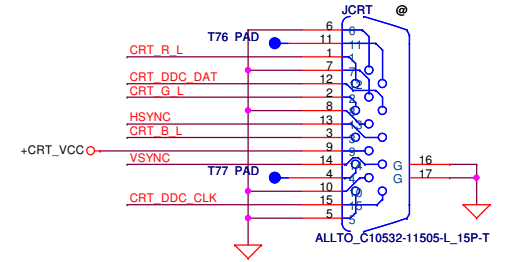
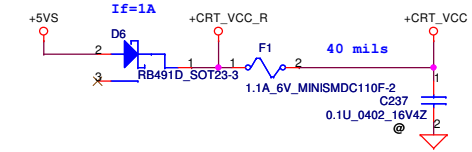
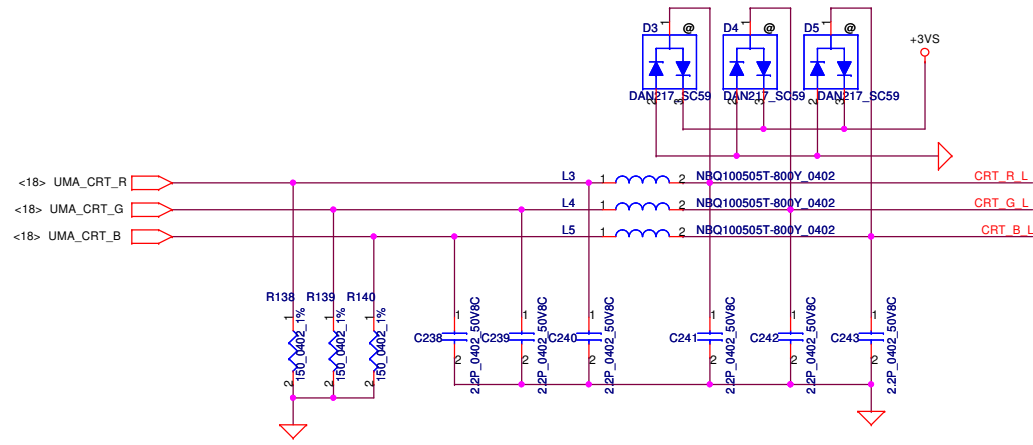
LCD/PANEL BD. Conn.



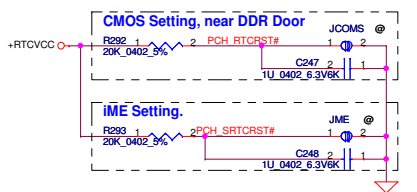
Pin13 is GND pin but LVDS cable is NC.

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				LVDS Size: Custom Document Number: PWWHA LA-7202P M/B Rev: 1.0 Date: Friday, February 25, 2011 Sheet: 13 of 43	

CRT CONNECTOR

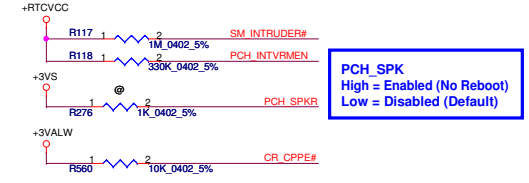


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				CRT	
Size	Document Number	Rev		1.0	
PWWHA LA-7202P M/B		Date:		Friday, February 25, 2011 Sheet 14 of 43	



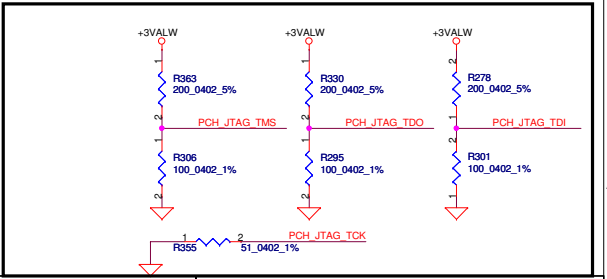
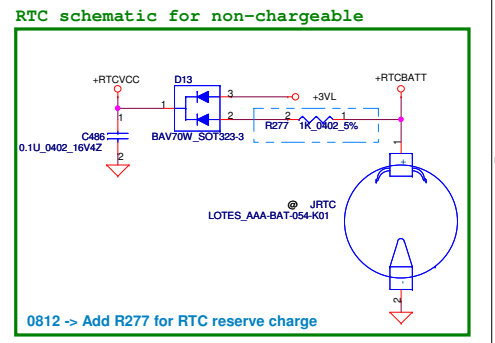
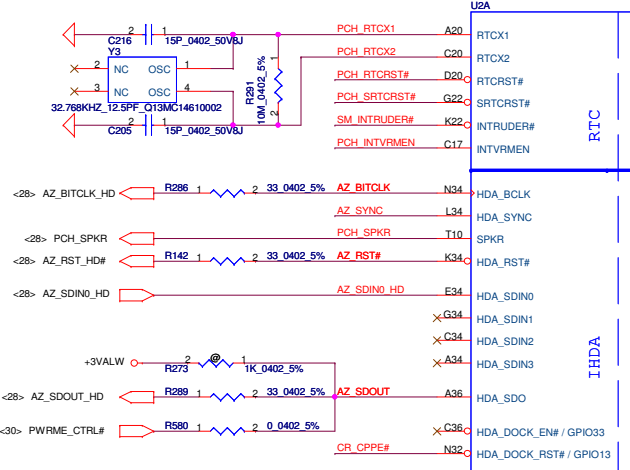
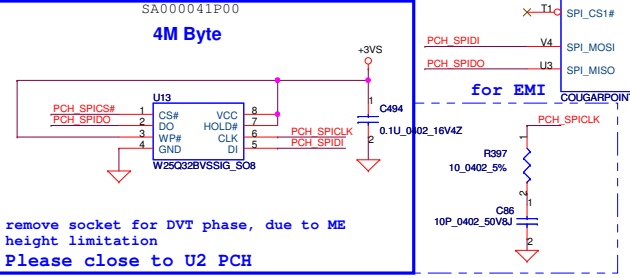
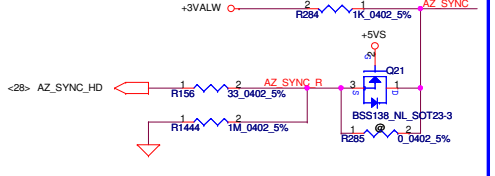
Integrated SUS 1.05V VRM Enable

PCH_INTRVEMEN High - Enable Internal VRs (must be always pulled high)

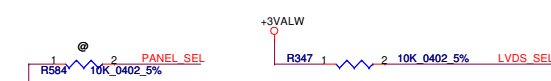
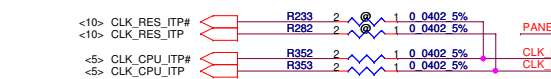
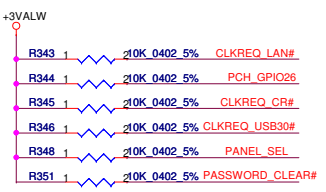
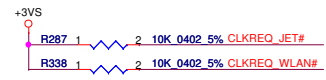
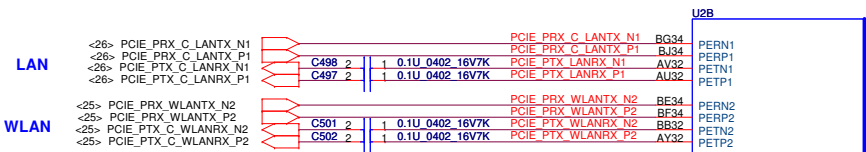


HDA_SDO
ME debug mode, this signal has a weak internal pull down
★Low = Disable (default)
High = Enable (flash descriptor security override)

HDA_SYNC
★This signal has a weak internal pull down
H=>On Die PLL is supplied by 1.5V
L=>On Die PLL is supplied by 1.8V
Need to pull high for Huron River platform

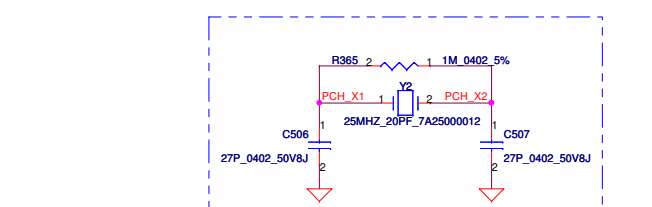
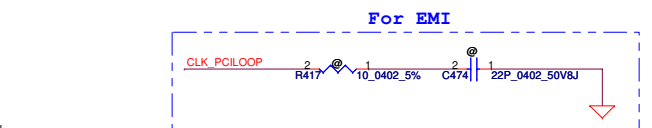
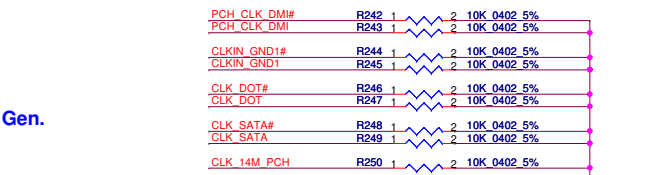
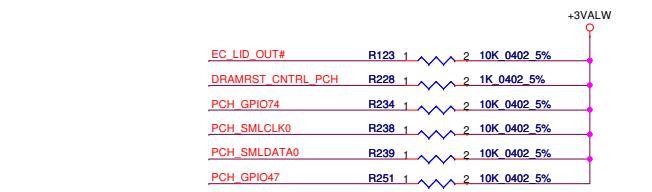
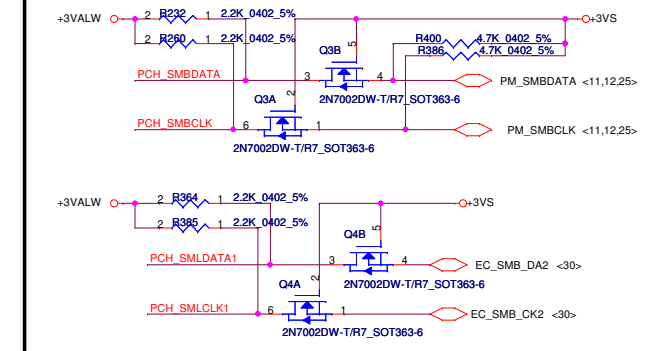
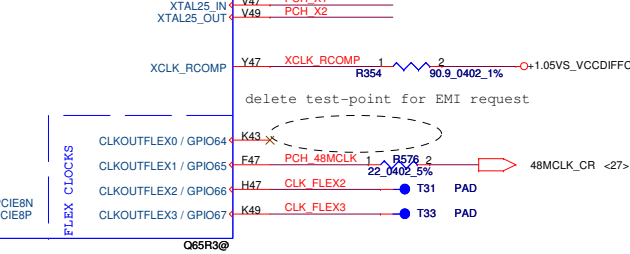
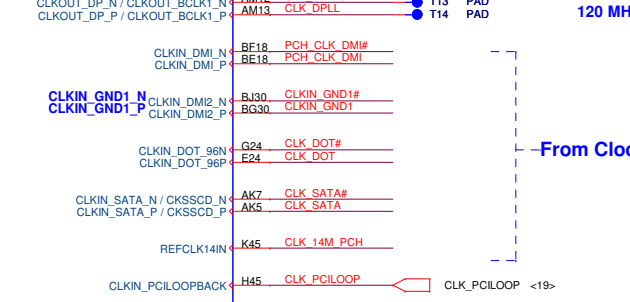
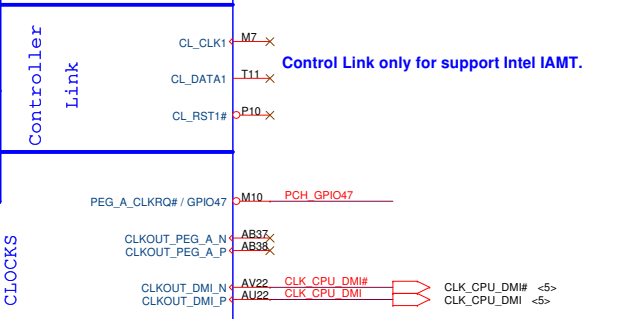
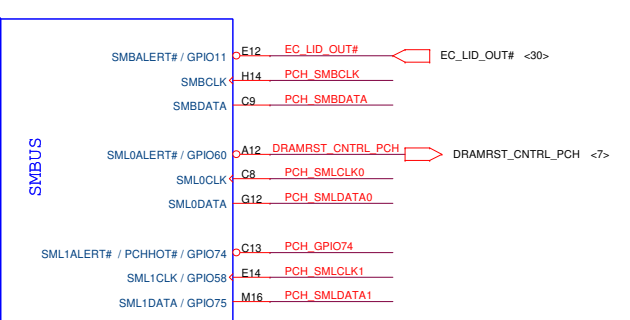


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PCH_HDA/JTAG/SATA/SPI/LPC Size: Custom Document Number: PWWHA LA-7202P M/B Date: Friday, February 25, 2011 Sheet: 15 of 43

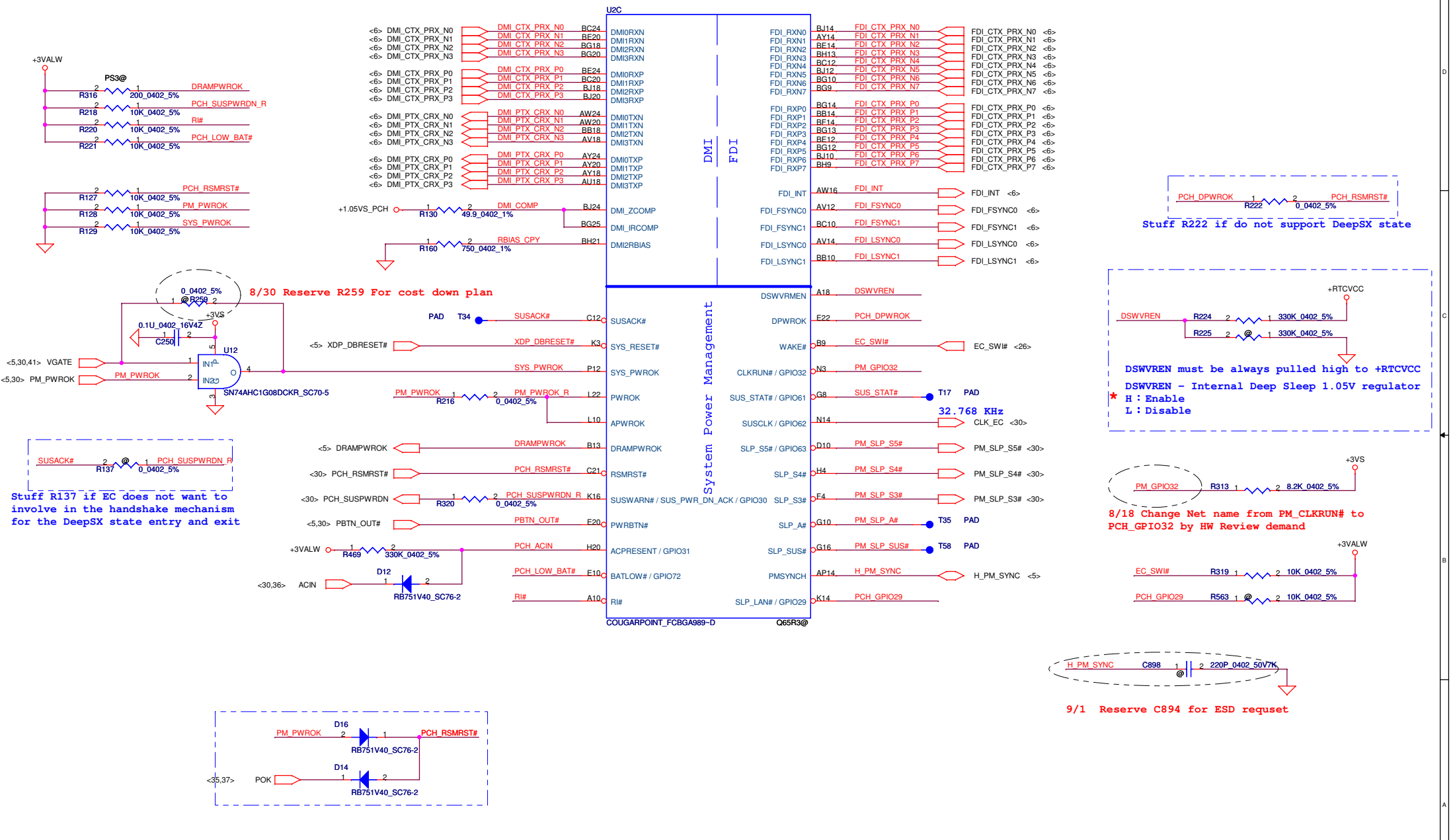


PANEL_SEL

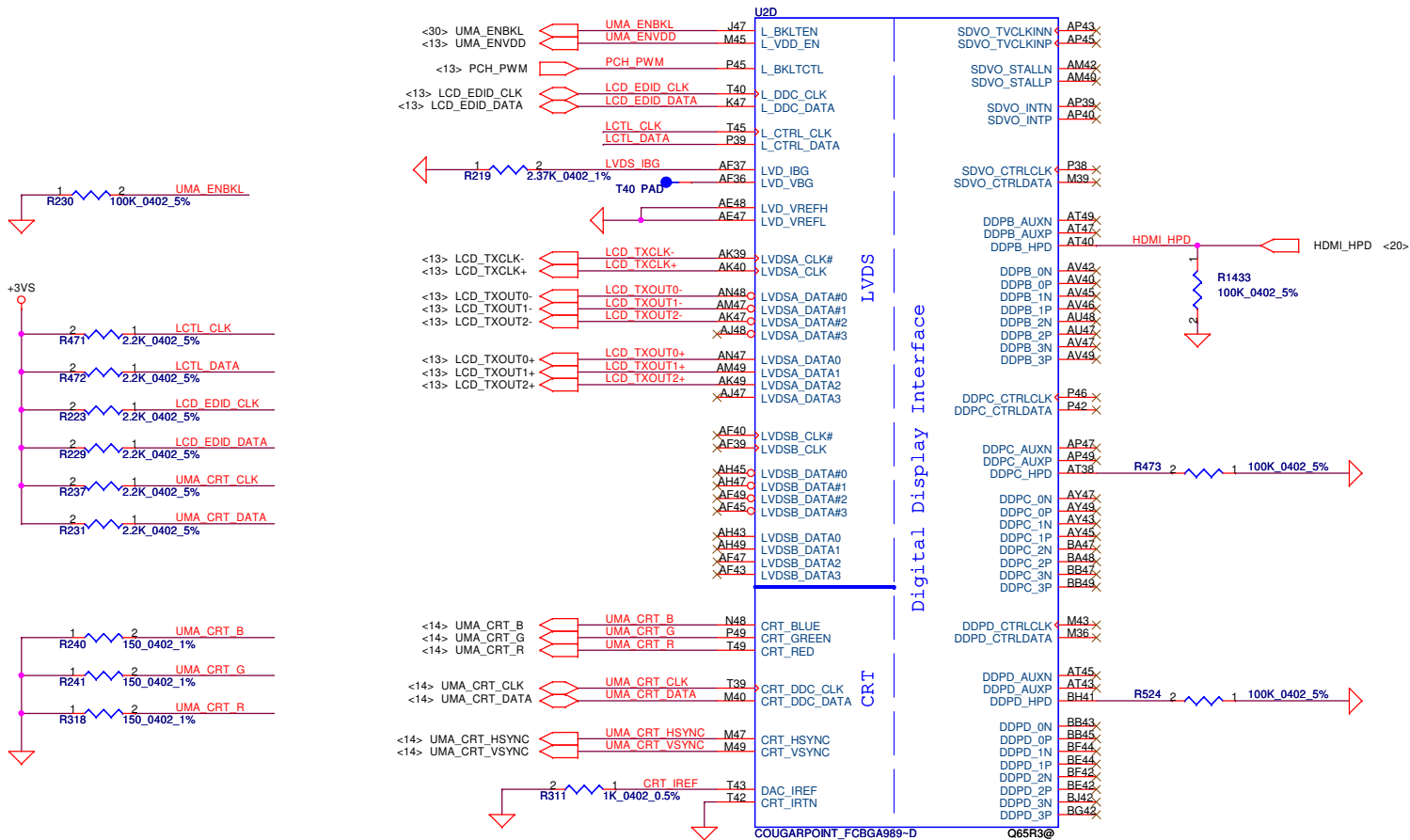
PANEL_SEL	H	L
Channel	LVDS	EDP



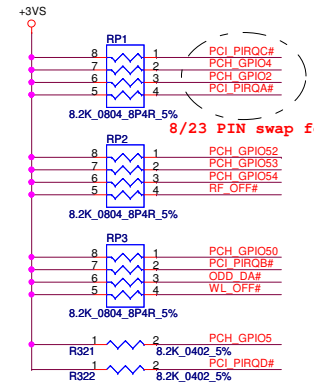
Security Classification		Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	PCH_PCI-E/SMBUS/CLK	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
Customer	Document Number	Date		PWWHA LA-7202P M/B	1.0
Date: Friday, February 25, 2011		Sheet		16	of 43



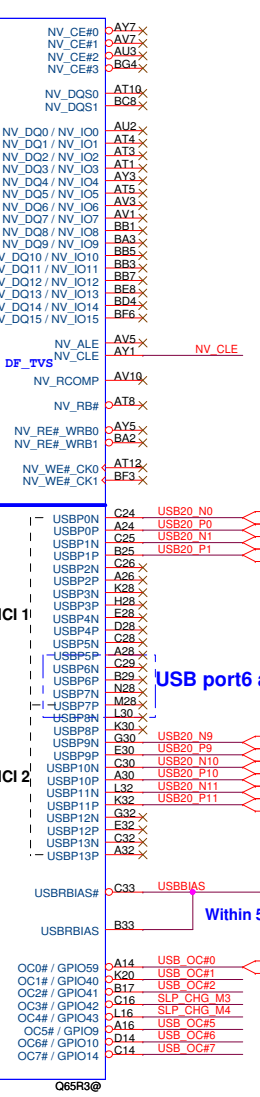
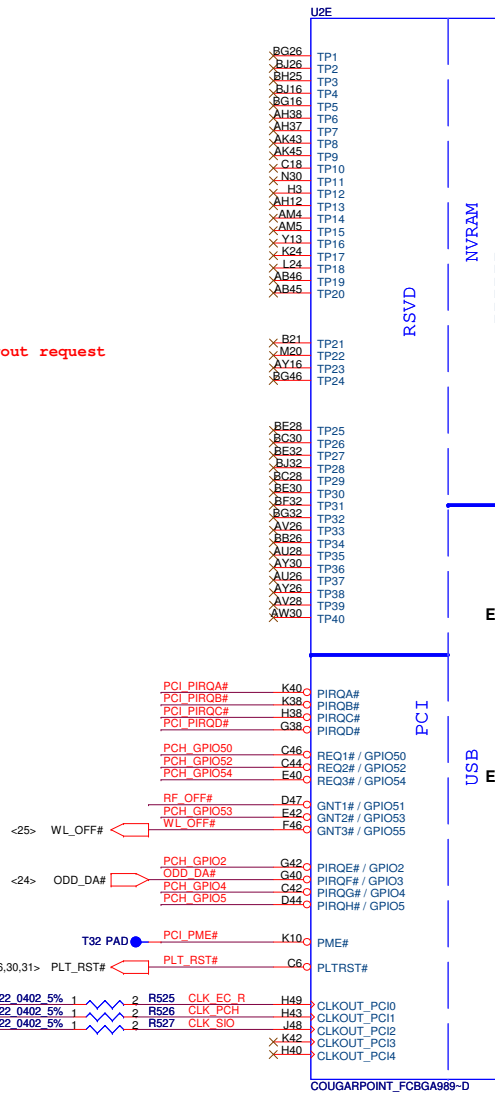
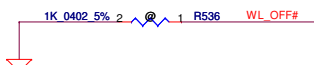
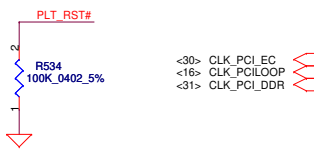
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				
Title	PCH_DMI/FDI/PM			
Size	Document Number	Rev		1.0
	PWWHA LA-7202P M/B			
Date:	Friday, February 25, 2011	Sheet	17	of 43



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PCH_CRT/LVDS	
Size	Custom	Document Number	PWWHA LA-7202P M/B	Rev	1.0
Date:	Friday, February 25, 2011	Sheet	18	of	43



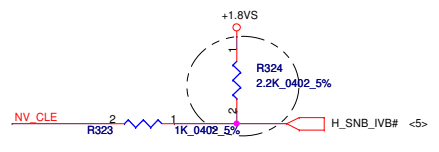
8/23 PIN swap for layout request



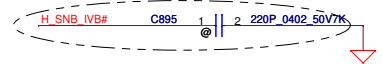
RF_OFF#	PCH_GPIO19	Boot BIOS Location
0	0	LPC
0	1	Reserved
1	0	PCI
1	1	SPI *

WL_OFF#	Low= A16 swap override Enable	High= A16 swap override Disable
*		

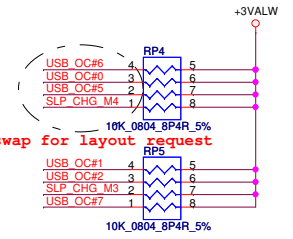
NV_CLE	Set to VCC when HIGH
	Set to VSS when LOW



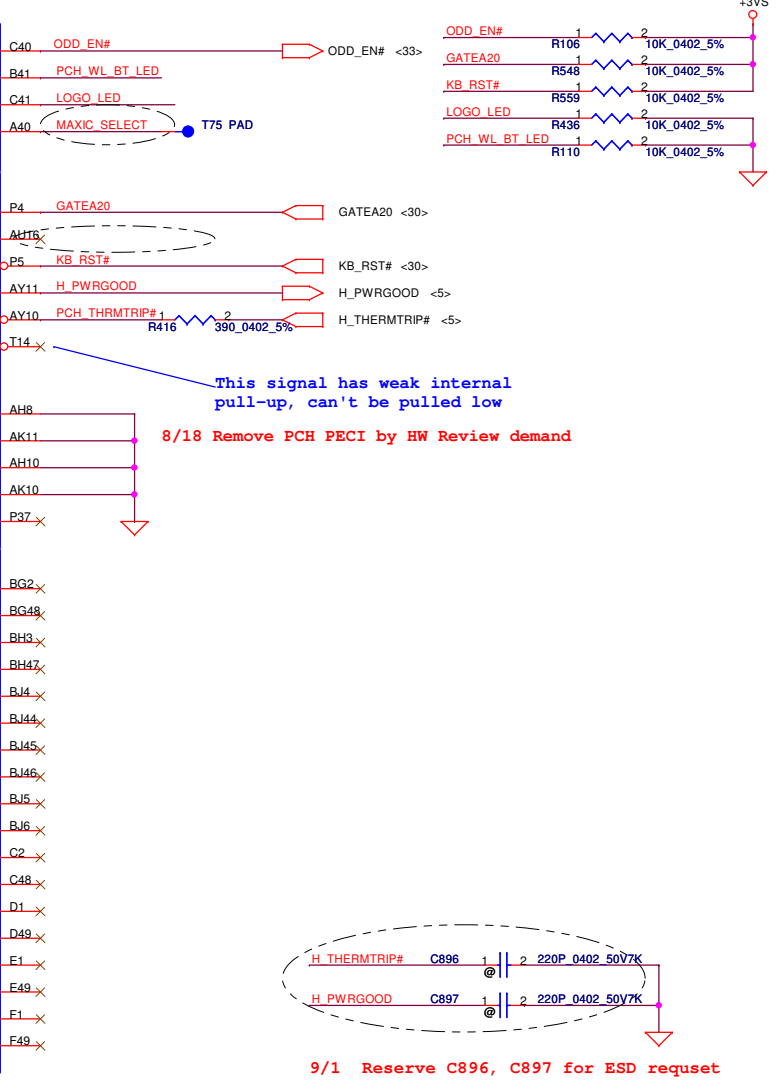
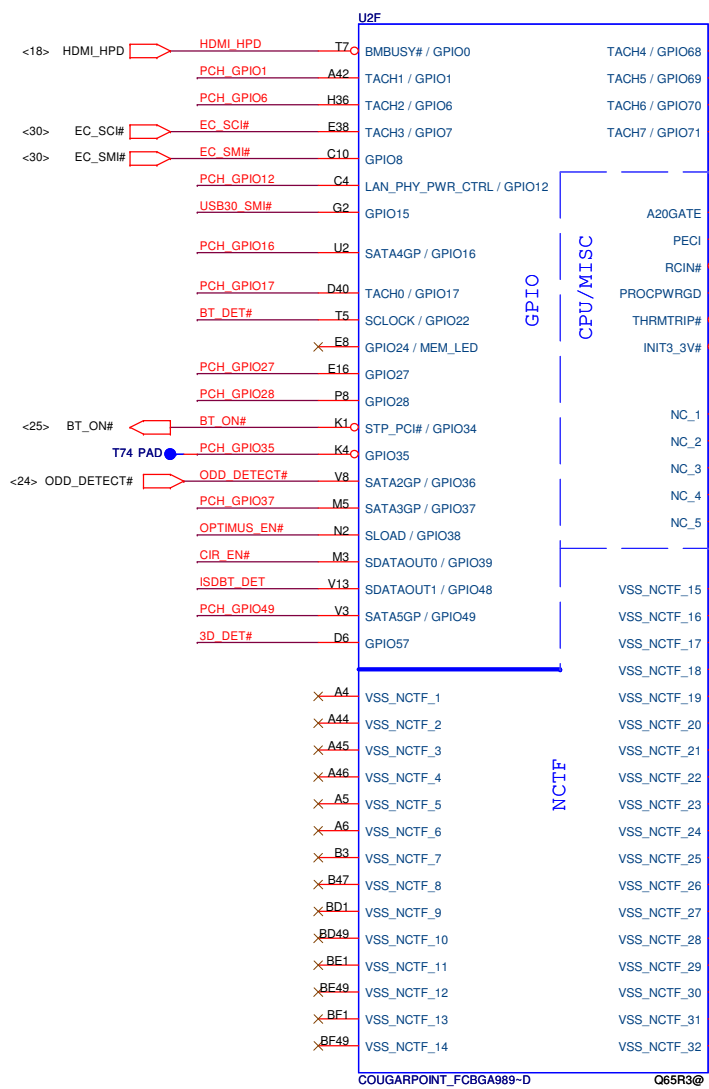
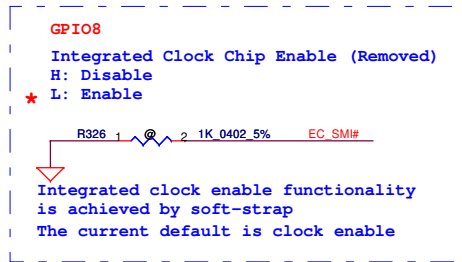
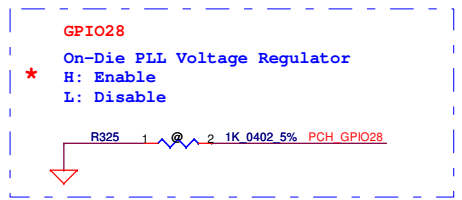
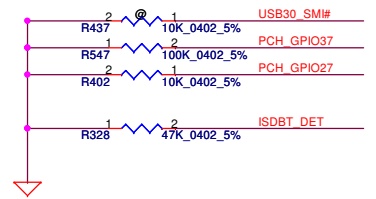
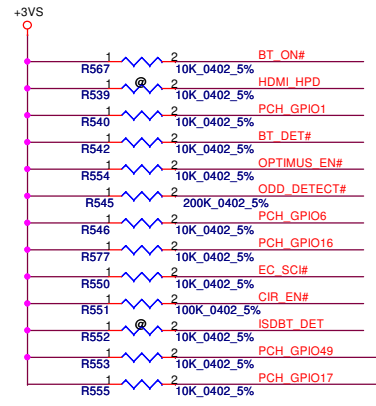
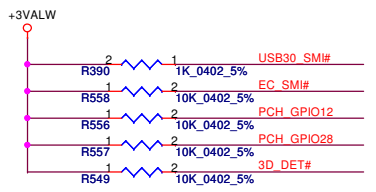
8/18 Change R324 From 1K to 2.2K by Intel check list demand



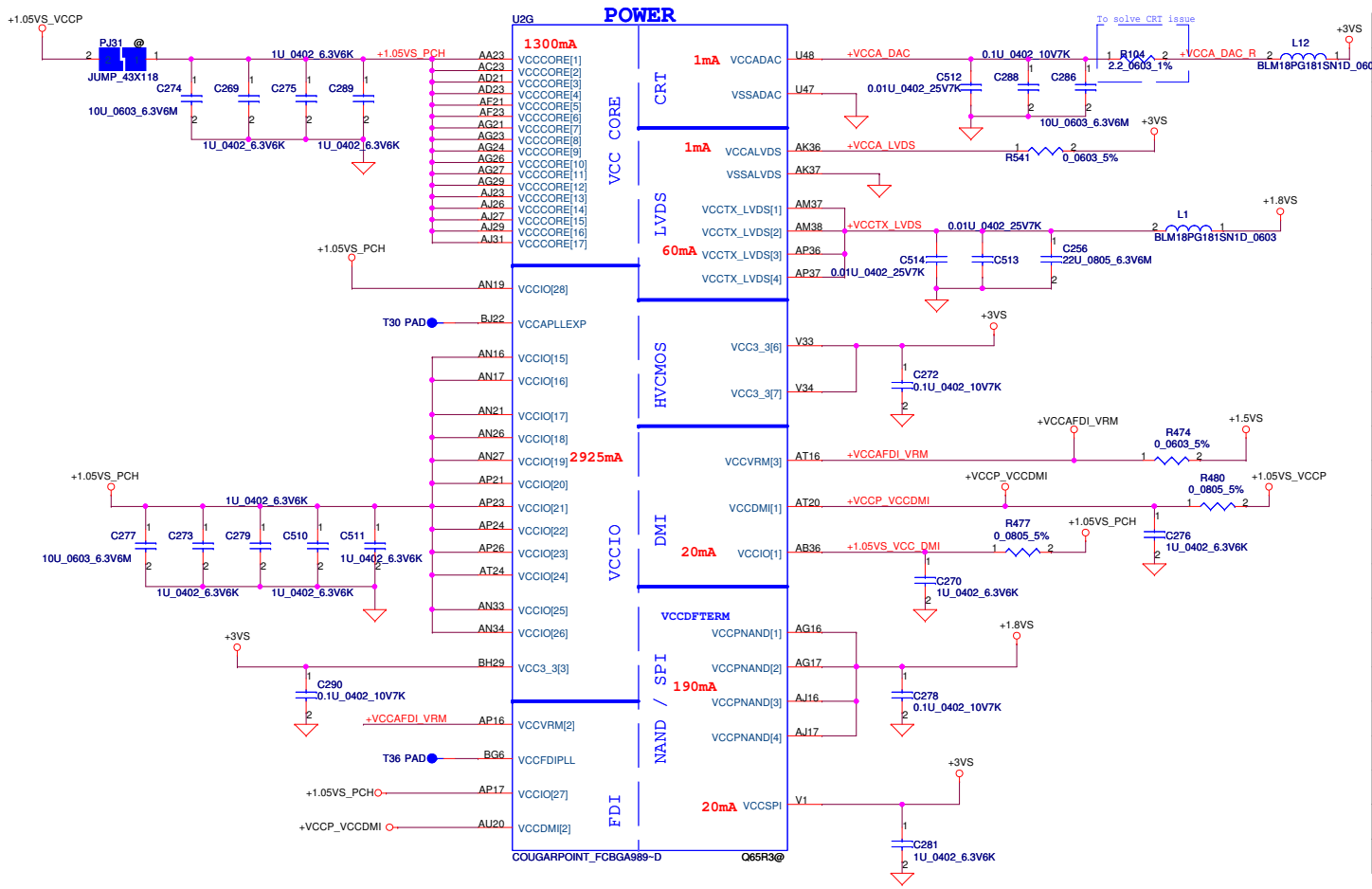
9/1 Reserve C895 for ESD request



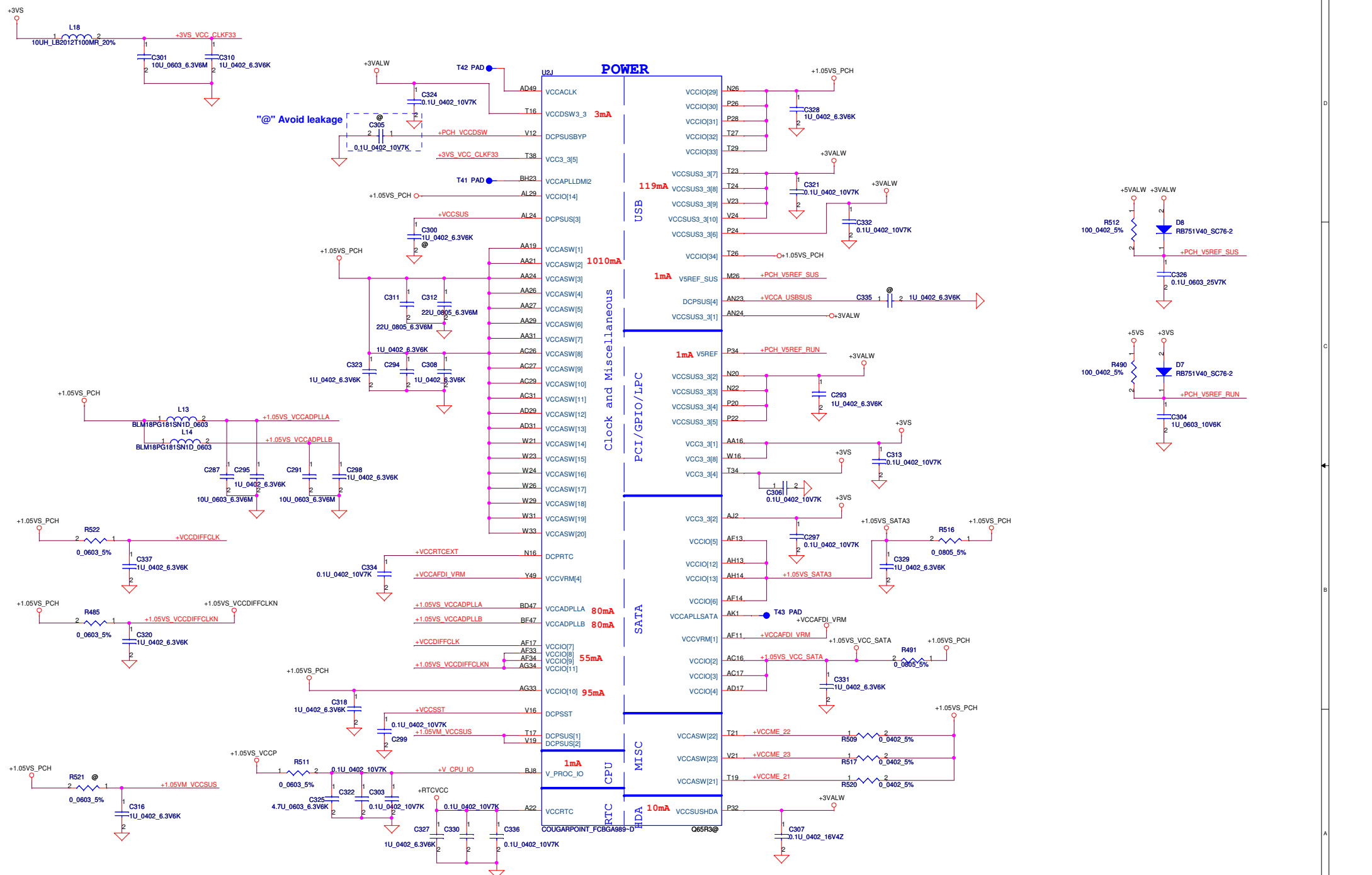
8/23 PIN swap for layout request



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
				PCH_CPU/GPIO	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size B	Document Number
				PWWHA LA-7202P M/B	
				Date:	Friday, February 25, 2011
				Sheet	20 of 43
				Rev	1.0

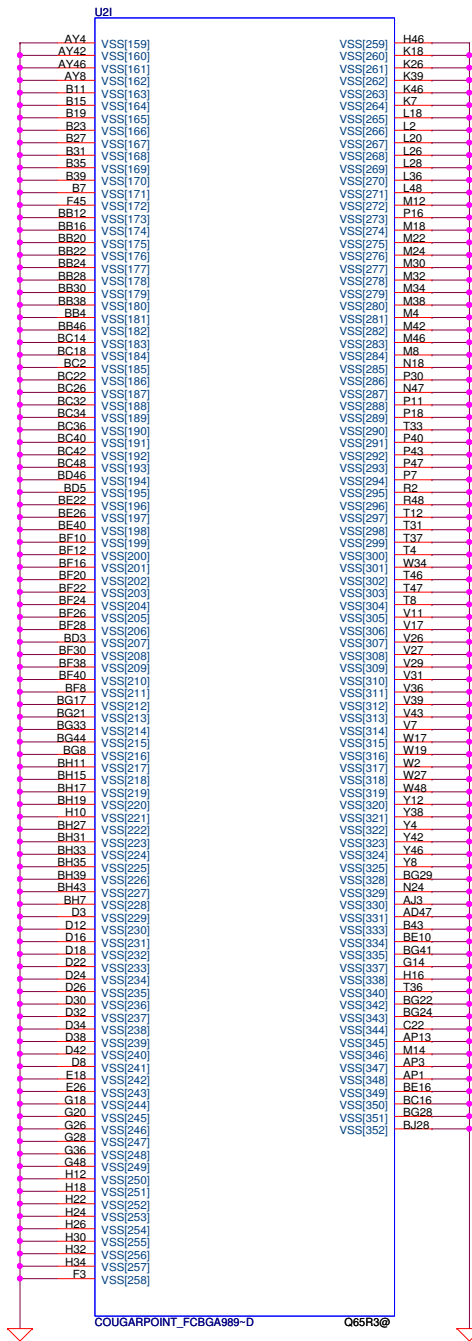
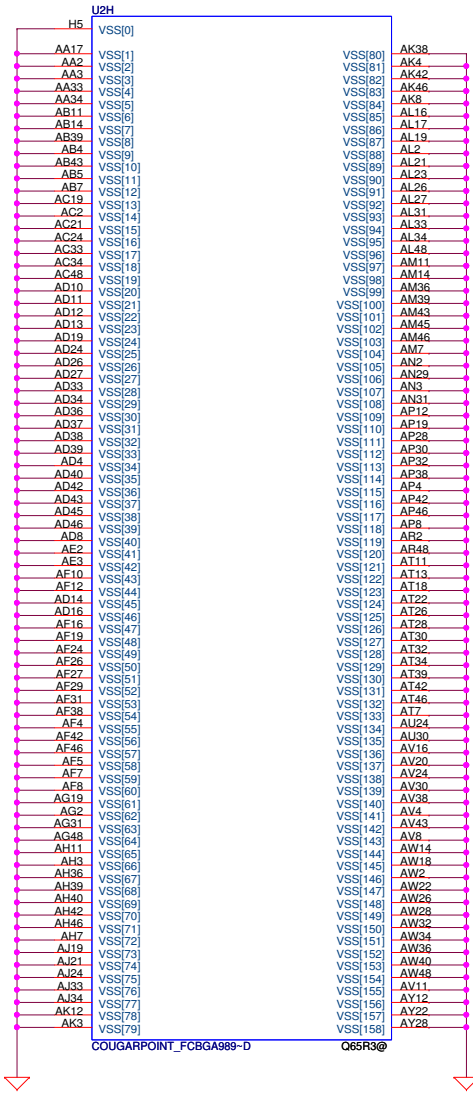


PCH Power Rail Table		
Voltage Rail	Voltage	S0 Iccmax Current (A)
V_PROC_IO	1.05	0.001
V5REF	5	0.001
V5REF_SUS	5	0.001
VCC3_3	3.3	0.266
VCCADAC	3.3	0.001
VCCADPILLA	1.05	0.08
VCCADPLL	1.05	0.08
VCCCORE	1.05	1.3
VCCDMI	1.05	0.042
VCCIO	1.05	2.925
VCCASW	1.05	1.01
VCCSPI	3.3	0.02
VCCDSW	3.3	0.002
VCCDFTERM	1.8	0.19
VCCRTC	3.3	6 uA
VCCSUS3_3	3.3	0.97
VCCSUSHDA	3.3 / 1.5	0.01
VCCVRM	1.5	0.16
VCCCLKDMI	1.05	0.02
VCCSSC	1.05	0.095
VCCDIFFCLKN	1.05	0.055
VCCALVDS	3.3	0.001
VCCTX_LVDS	1.8	0.06

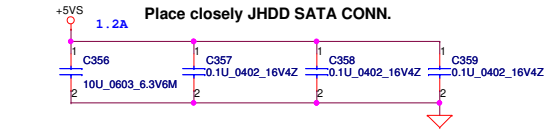


Security Classification	Compal Secret Data		
Issued Date	2010/09/03	Deciphered Date	2012/12/31
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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.			

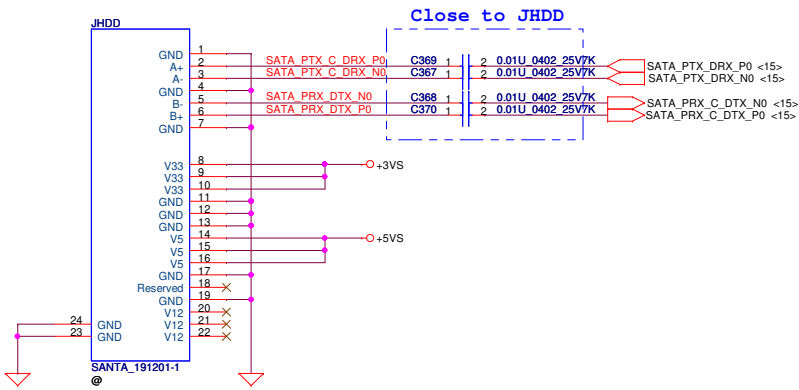
Compal Electronics, Inc.			
Title PCH_POWER-2			
Size	Document Number	Rev	
Custom	PWWHA LA-7202P M/B	1.0	
Date:	Friday, February 25, 2011	Sheet	22 of 43



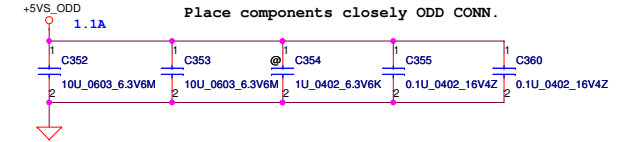
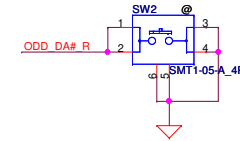
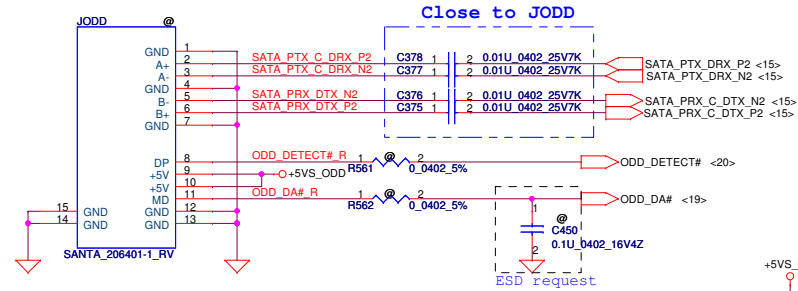
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PCH_GND	
Size	Document Number	Rev		1.0	
Custom	PWWHA LA-7202P M/B	Date:		Friday, February 25, 2011	
Date:		Sheet		23 of 43	



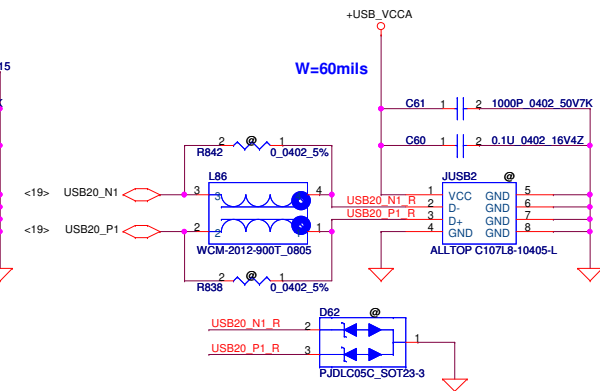
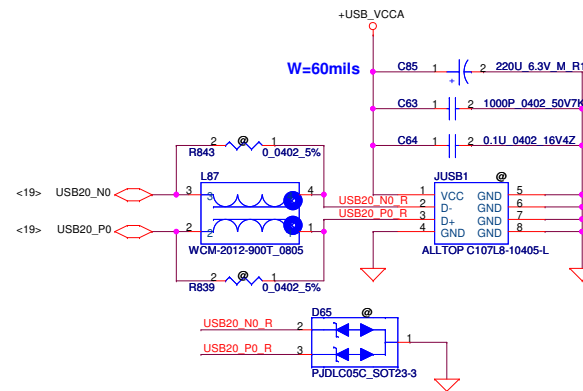
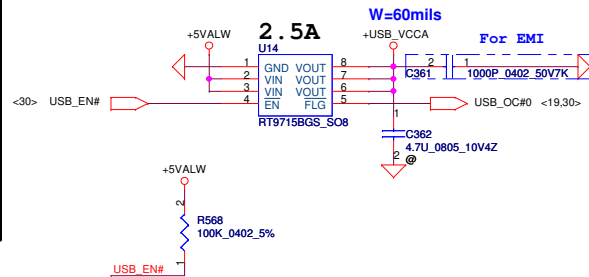
SATA HDD Conn.



SATA ODD Conn

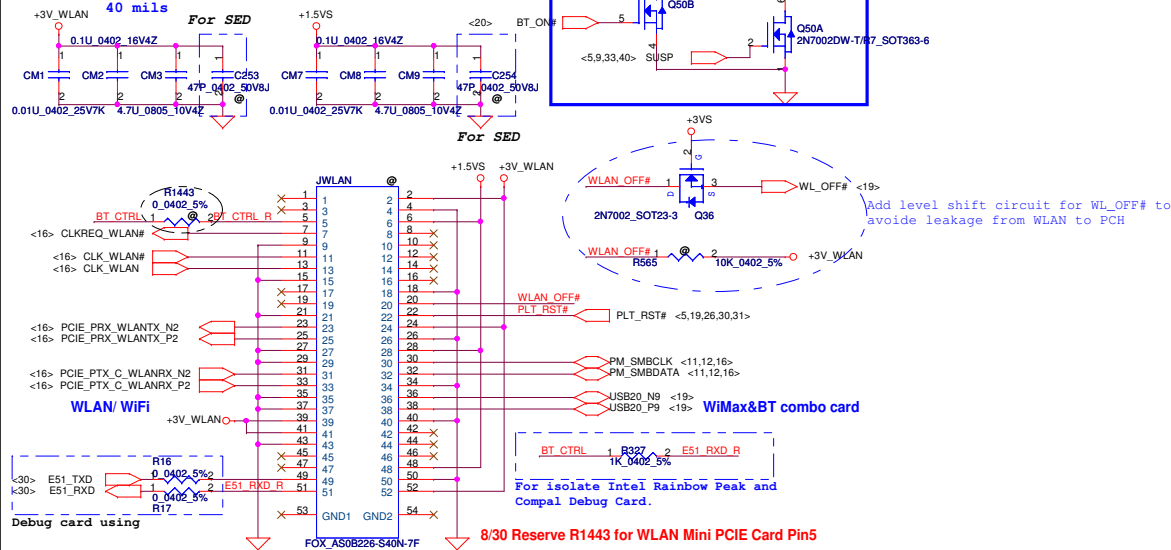
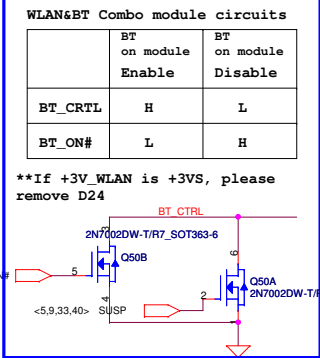
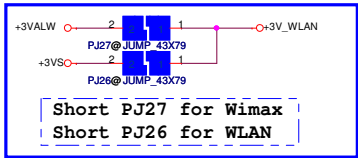


USB Conn. Left Side

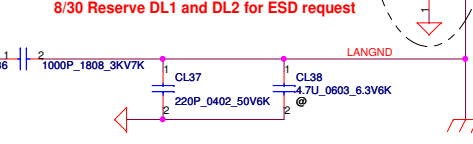
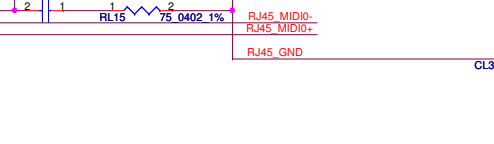
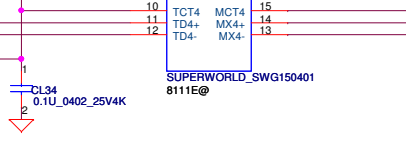
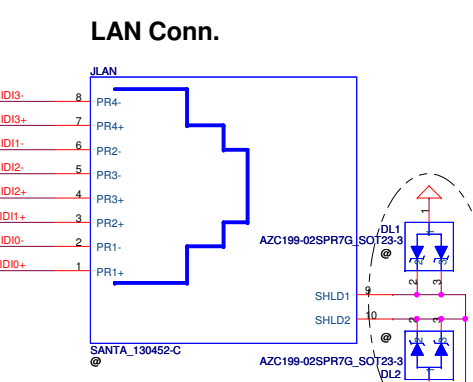
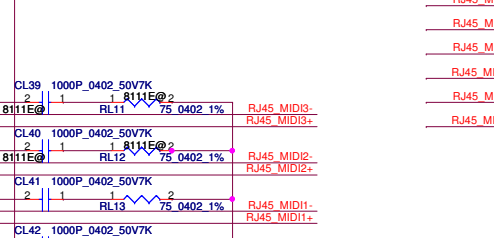
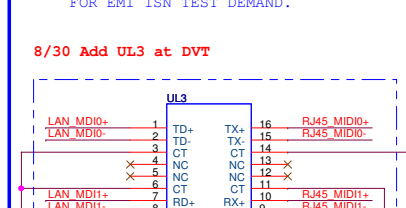
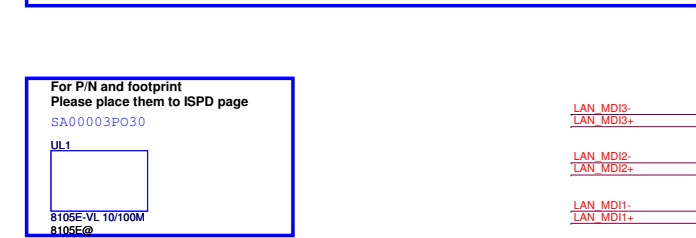
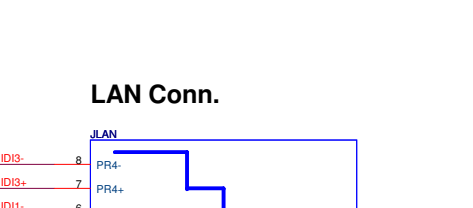
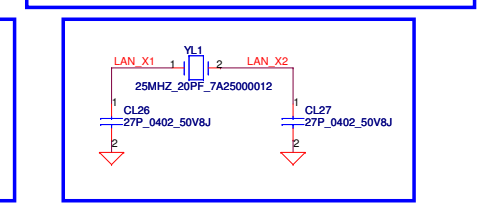
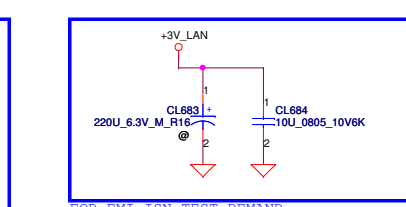
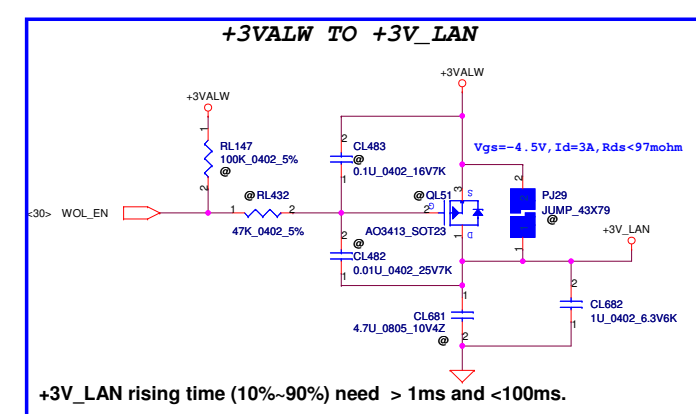
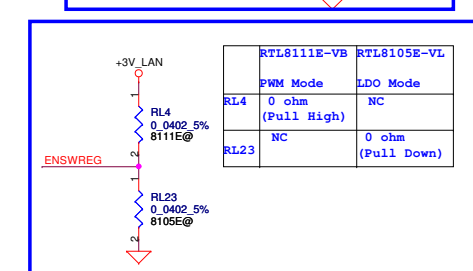
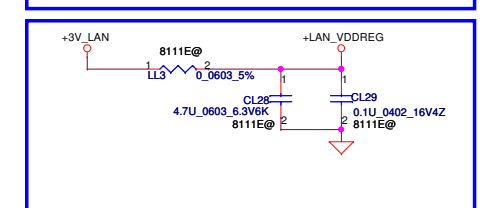
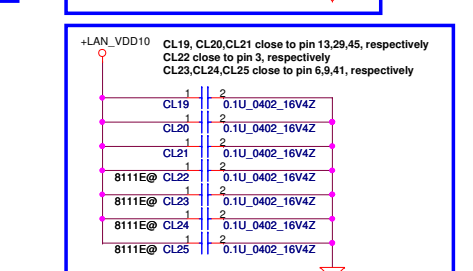
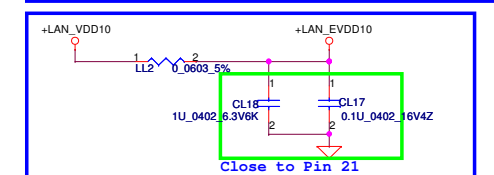
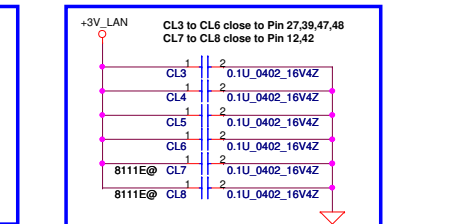
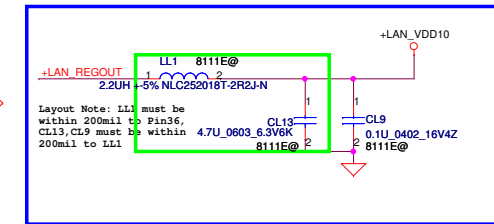
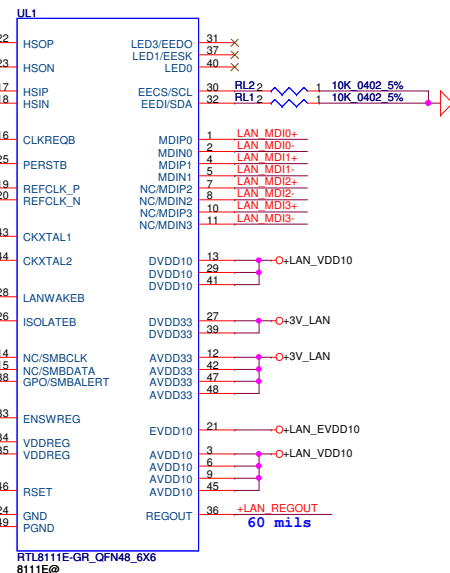
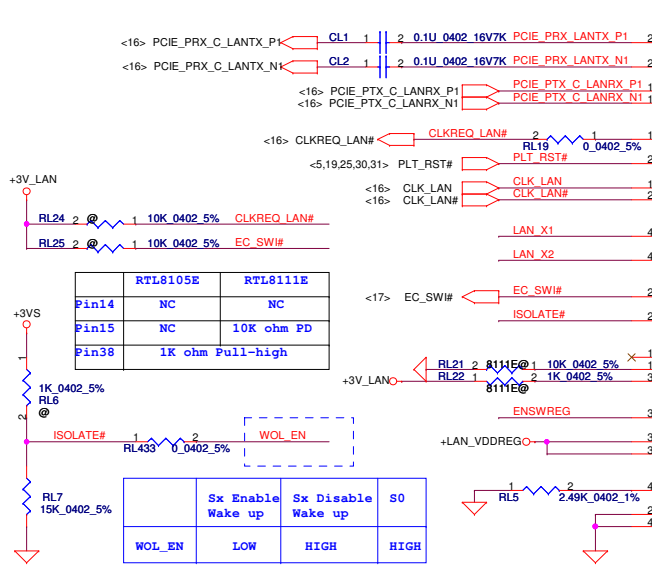


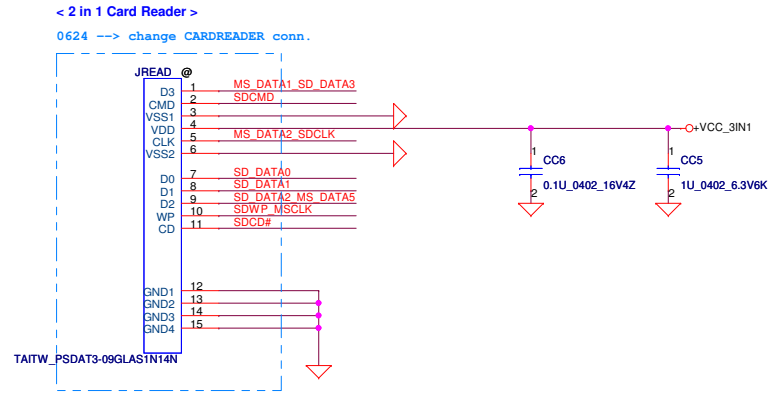
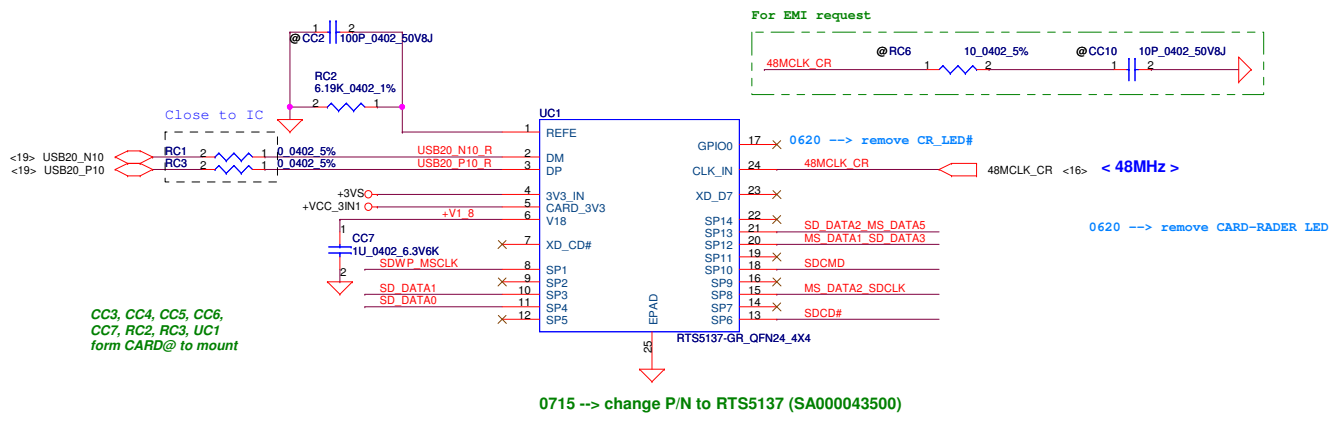
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	SATA-HDD/ODD/USB
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.					
Size	Document Number	PWWHA LA-7202P M/B		Rev	1.0
Date:	Friday, February 25, 2011	Sheet	24	of	43

Slot 1 Half PCIe Mini Card-WLAN/ WiMax



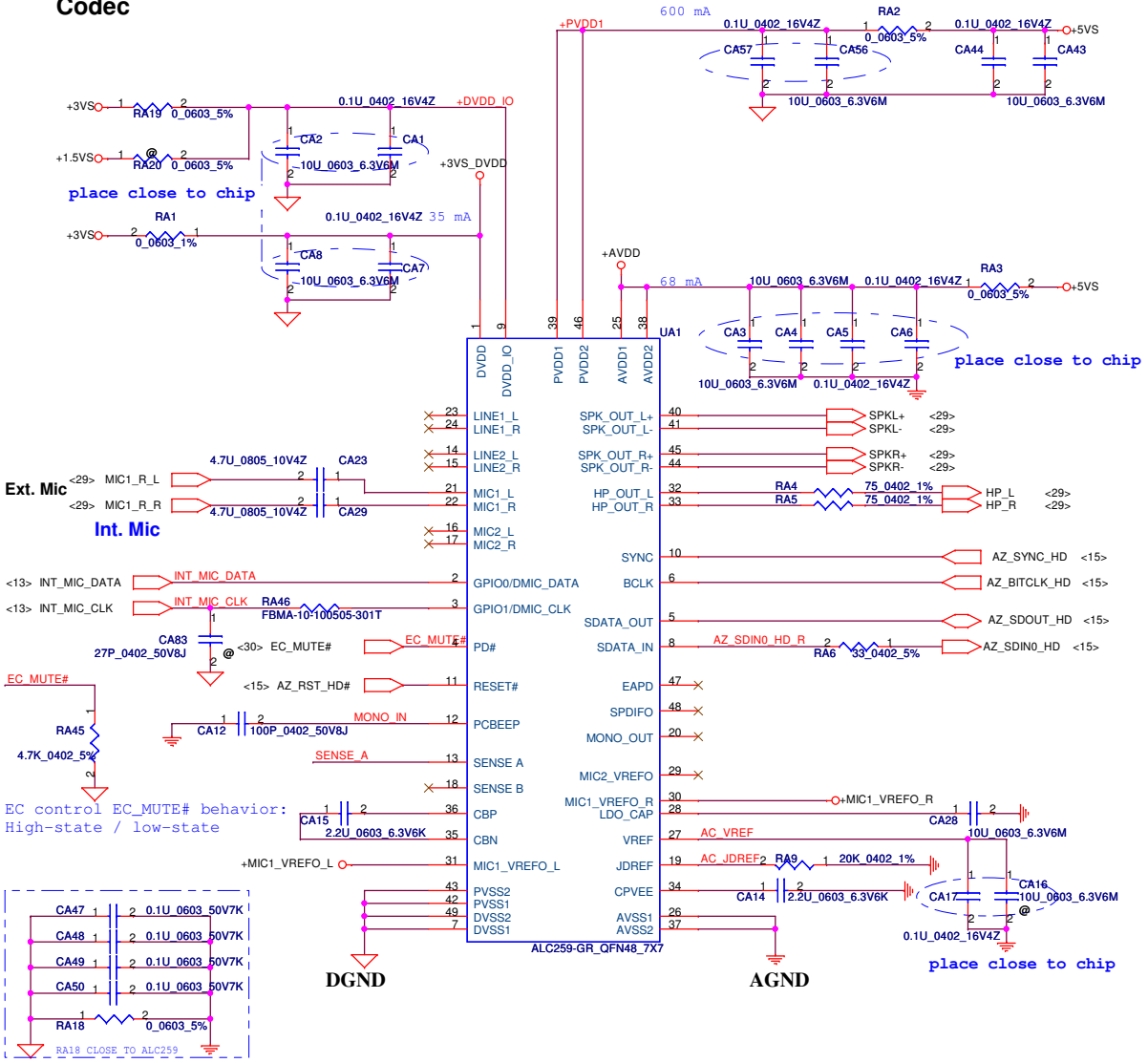
Security Classification		Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Compal Electronics, Inc.	
				PCIe-WLAN	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				PWWHA LA-7202P M/B	
Date:	Friday, February 25, 2011	Sheet	25	of	43



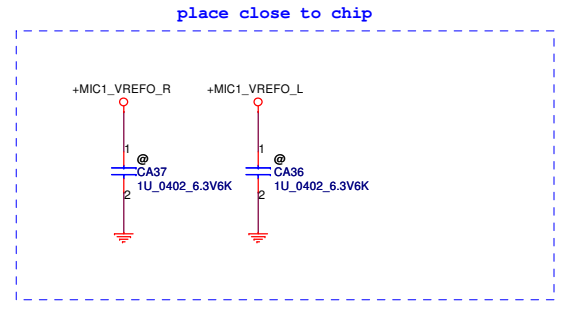
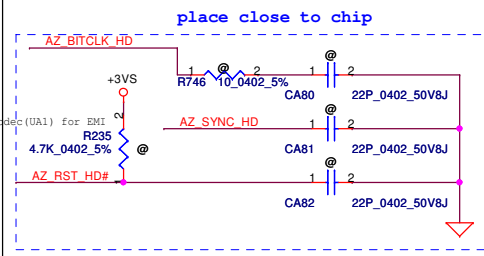
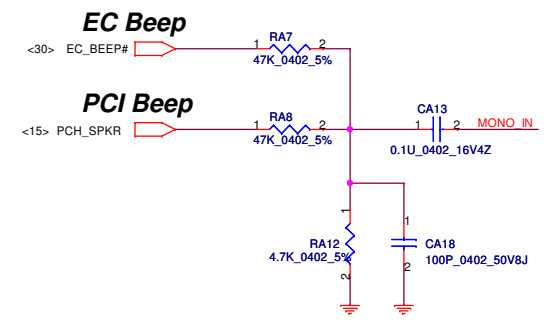


Security Classification	Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PCle-CardReader RTSS137
Size	Document Number	PWWHA LA-7202P M/B		Rev
Custom				1.0
Date:	Friday, February 25, 2011	Sheet	27	of 43

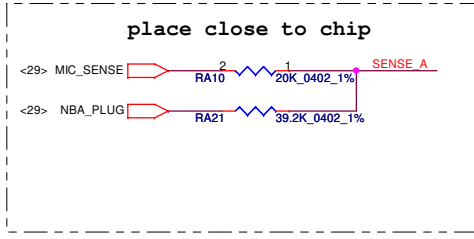
Codec



Beep sound

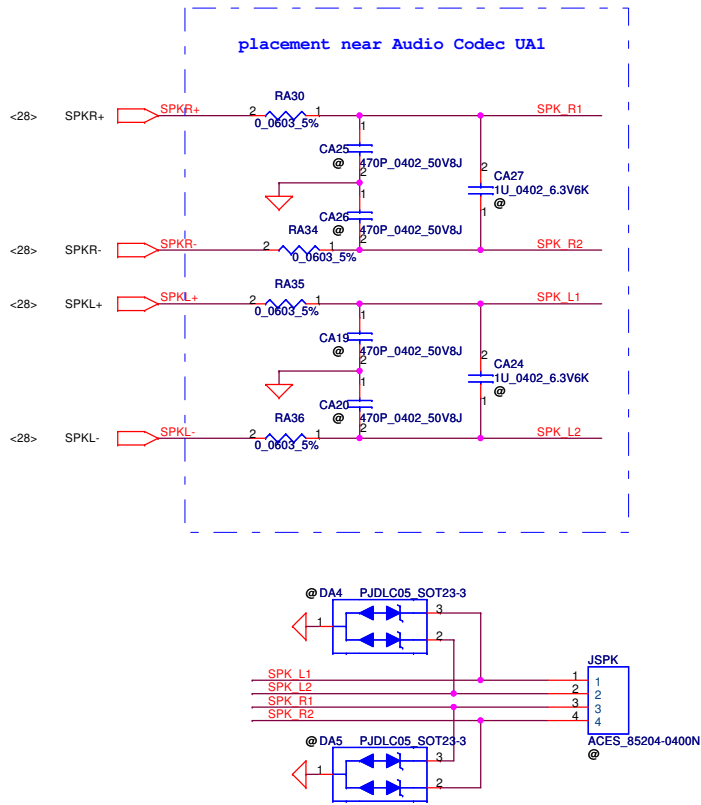


Sense Pin	Impedance	Codec Signals	Function
SENSE A	39.2K	PORT-I (PIN 32, 33)	Headphone out
	20K	PORT-B (PIN 21, 22)	Ext. MIC
	10K	PORT-C (PIN 23, 24)	
SENSE B	5.1K	(PIN 48)	
	39.2K	PORT-E (PIN 14, 15)	
	20K	PORT-F (PIN 16, 17)	Int. MIC
	10K	PORT-H (PIN 20)	

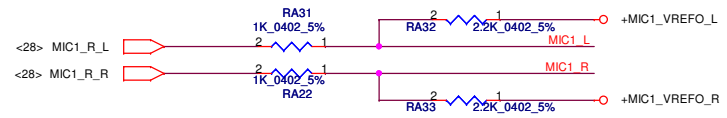


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				HDA-ALC259 Size Document Number PWWHA LA-7202P M/B Date: Friday, February 25, 2011 Sheet 28 of 43	

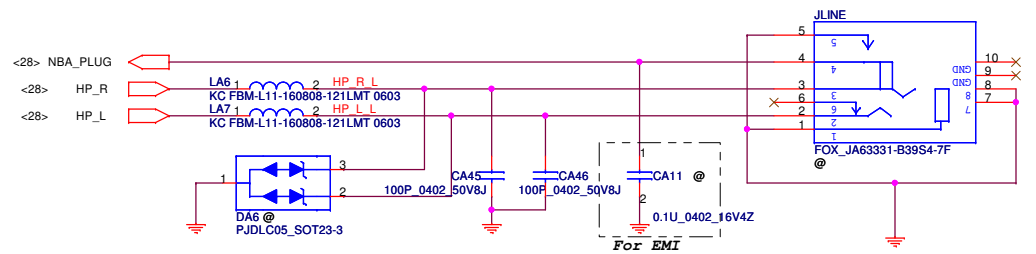
Speaker Connector



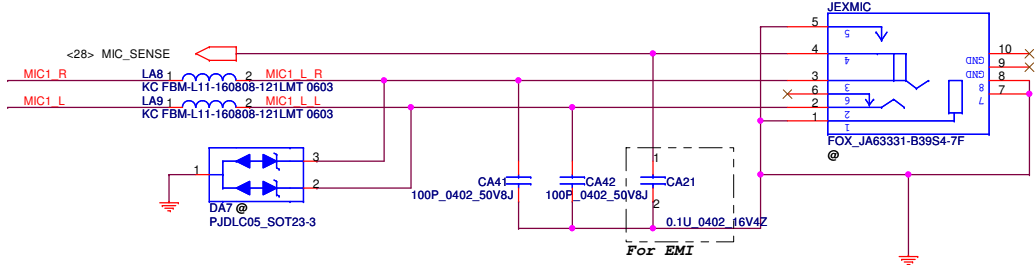
Ext. Mic



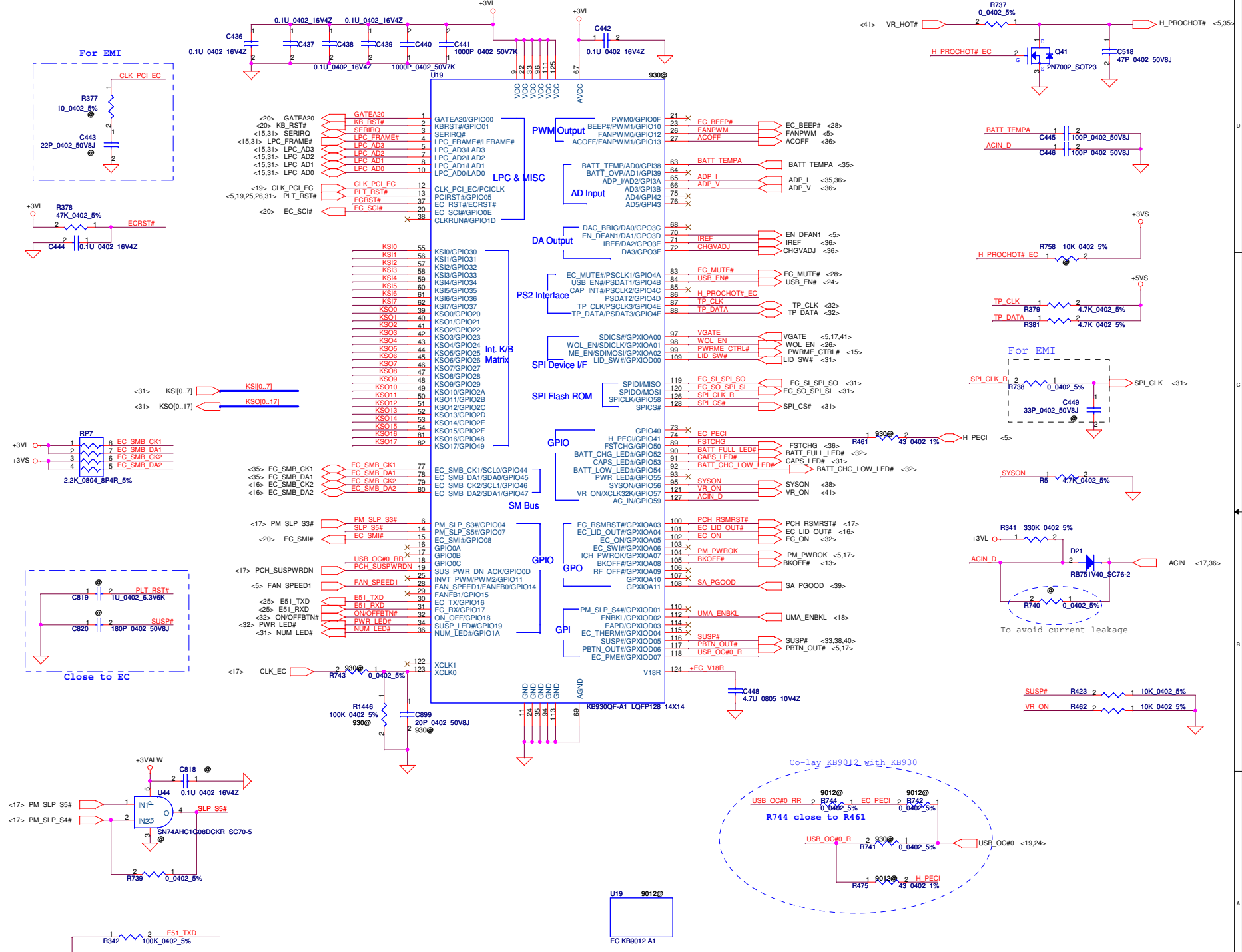
HeadPhone/LINE Out JACK



Ext.MIC/LINE IN JACK

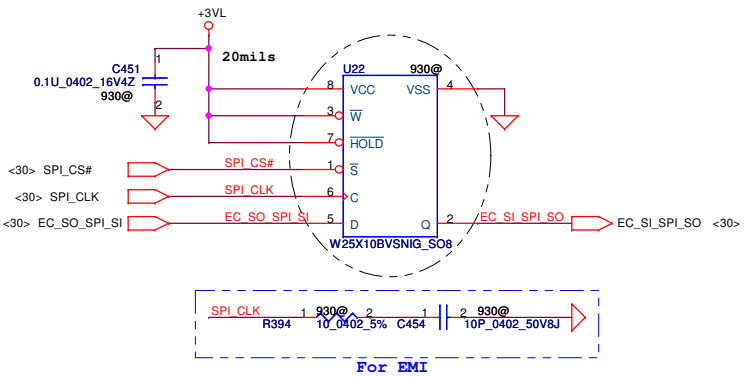


Security Classification	Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF 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. AUDIO AMP/MIC/SPK/VR Size Document Number PWWHA LA-7202P M/B Date: Friday, February 25, 2011 Sheet 29 of 43	
			Rev	1.0

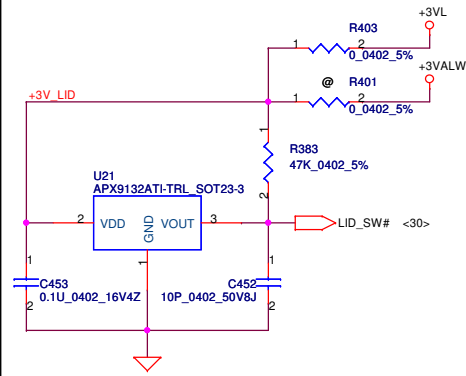


Security Classification	Compal Secret Data	
Issued Date	2010/09/03	Deciphered Date
		2012/12/31
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		
Title	Compal Electronics, Inc. LPC-EC-KB930	
Size	Document Number	Rev
	PWWHA LA-7202P M/B	1.0
Date:	Friday, February 25, 2011	Sheet 30 of 43

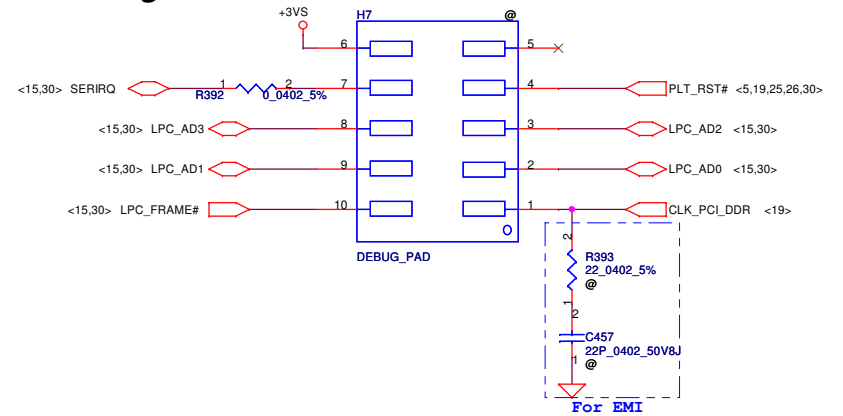
SPI Flash (256KB)



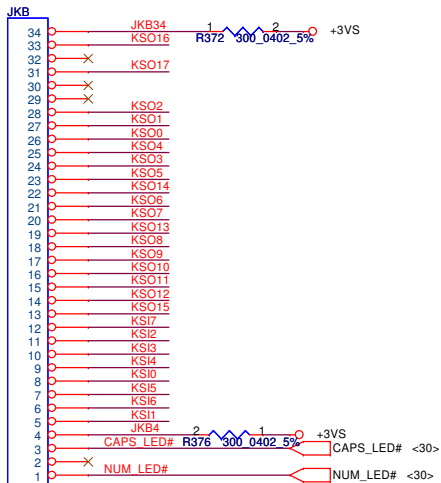
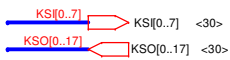
Lid SW



LPC Debug Port



KEYBOARD CONN.



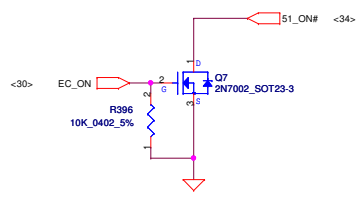
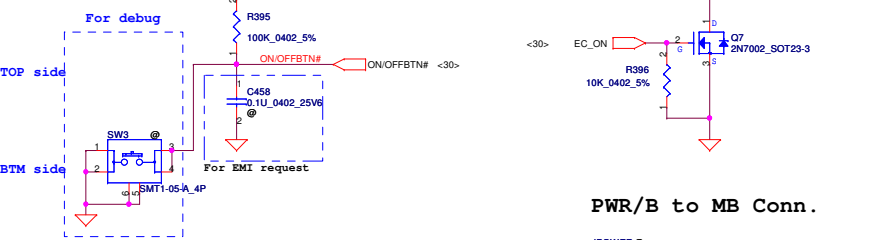
For EMI

Close to JKB

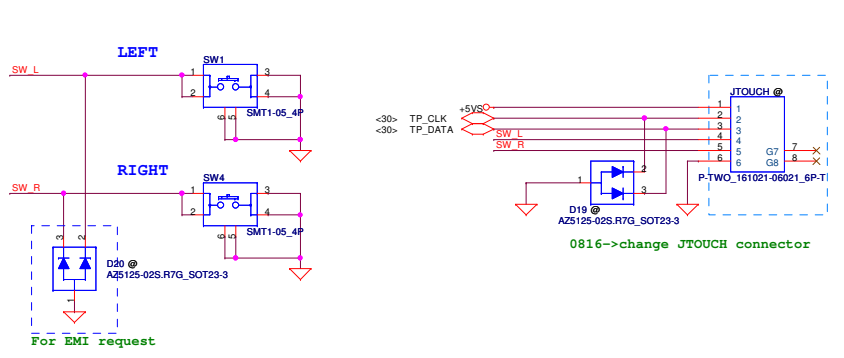
KSO16	1	2
C401	100P_0402_50V8J	
KSO17	1	2
C402	100P_0402_50V8J	
KSO2	1	2
C404	100P_0402_50V8J	
KSO1	1	2
C405	100P_0402_50V8J	
KSO0	1	2
C406	100P_0402_50V8J	
KSO4	1	2
C407	100P_0402_50V8J	
KSO3	1	2
C408	100P_0402_50V8J	
KSO5	1	2
C409	100P_0402_50V8J	
KSO14	1	2
C410	100P_0402_50V8J	
KSO6	1	2
C411	100P_0402_50V8J	
KSO7	1	2
C412	100P_0402_50V8J	
KSO13	1	2
C413	100P_0402_50V8J	
KSO8	1	2
C415	100P_0402_50V8J	
KSO9	1	2
C416	100P_0402_50V8J	
KSO10	1	2
C417	100P_0402_50V8J	
KSO11	1	2
C418	100P_0402_50V8J	
KSO12	1	2
C419	100P_0402_50V8J	
KSO15	1	2
C420	100P_0402_50V8J	
KSI7	1	2
C421	100P_0402_50V8J	
KSI2	1	2
C422	100P_0402_50V8J	
KSI3	1	2
C423	100P_0402_50V8J	
KSI4	1	2
C424	100P_0402_50V8J	
KSI0	1	2
C425	100P_0402_50V8J	
KSI5	1	2
C427	100P_0402_50V8J	
KSI6	1	2
C429	100P_0402_50V8J	
KSI1	1	2
C431	100P_0402_50V8J	
CAPS_LED#	1	2
C433	100P_0402_50V8J	
NUM_LED#	1	2
C435	100P_0402_50V8J	

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				SPI ROM/LID/Debug/KB Size Document Number PWWHA LA-7202P M/B Date: Friday, February 25, 2011 Sheet 31 of 43 Rev 1.0

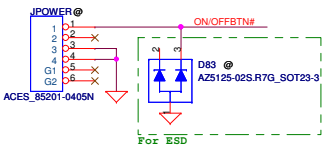
Power Button



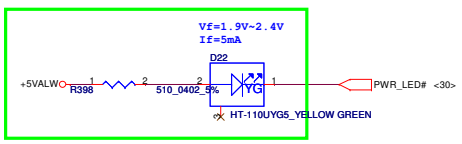
TP Button/Conn.



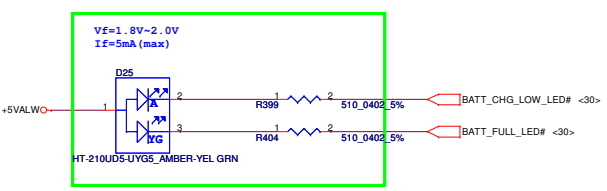
PWR/B to MB Conn.



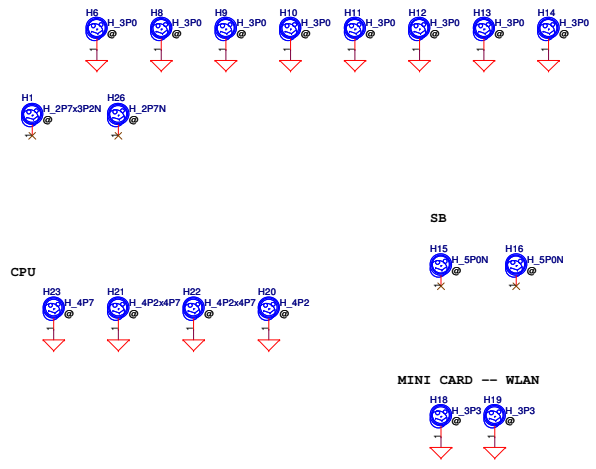
POWER/SUSPEND LED



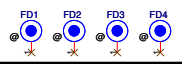
BATT CHARGE/FULL LED



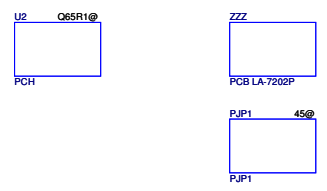
Screw Hole



PCB Fedcal Mark PAD

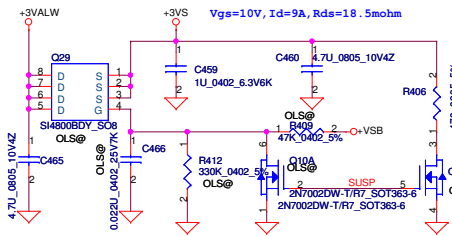


ISPD

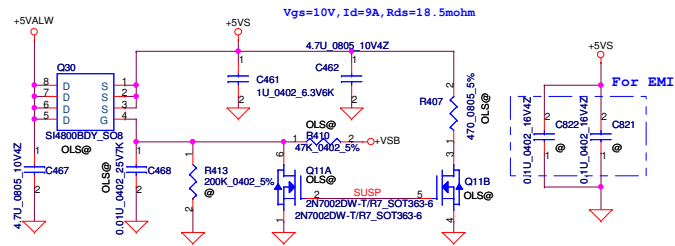


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR&TP CON/LED/ISPD Size Document Number Rev PWWHA LA-7202P M/B 1.0
Date:	Friday, February 25, 2011	Sheet	32	of 43

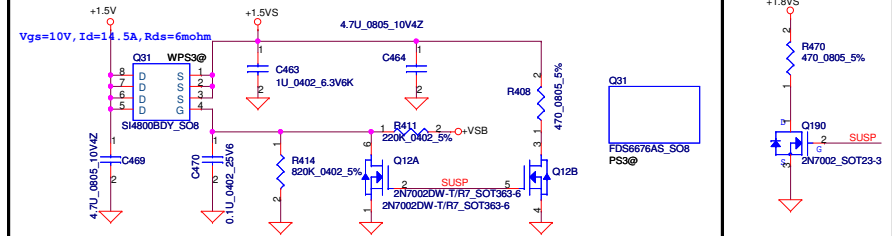
+3VALW TO +3VS



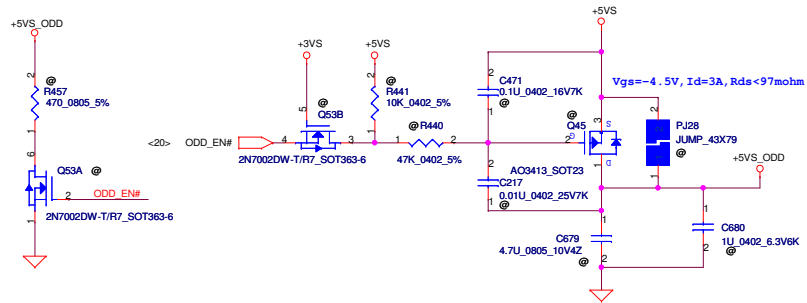
+5VALW TO +5VS



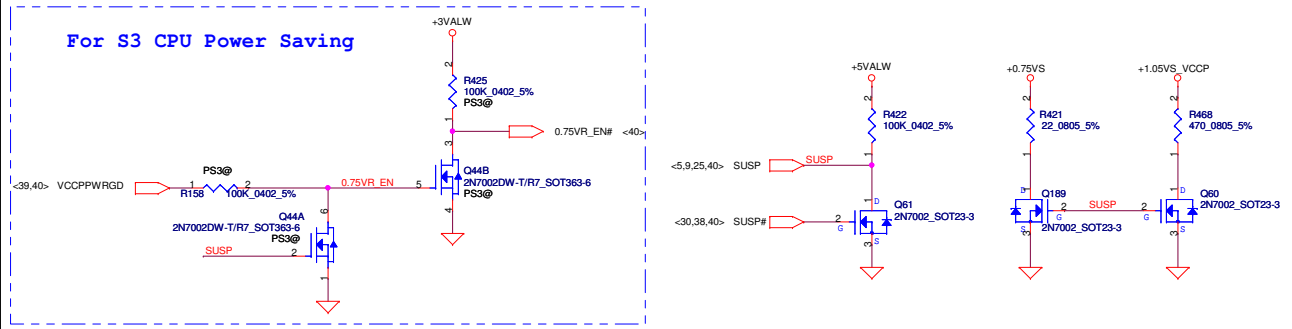
+1.5V to +1.5VS



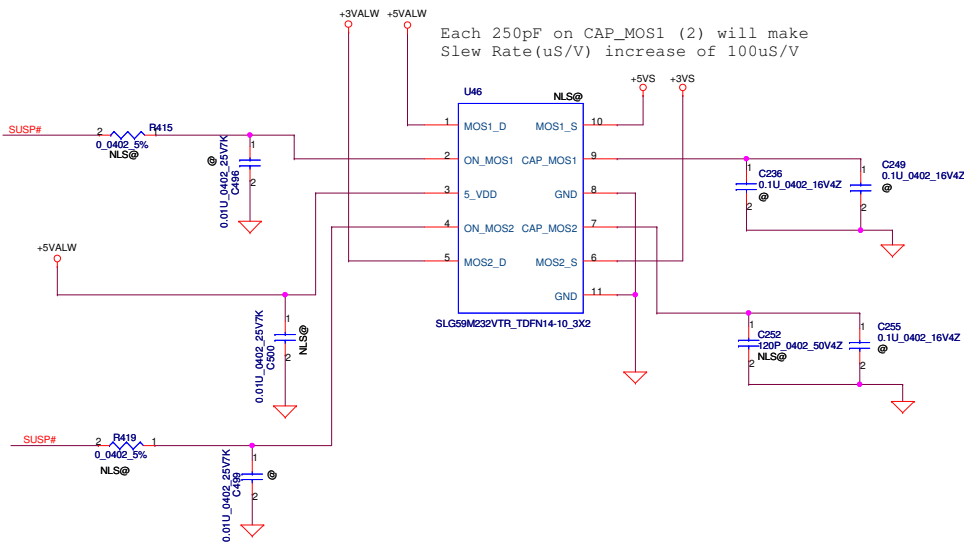
+5VS TO +5VS_ODD



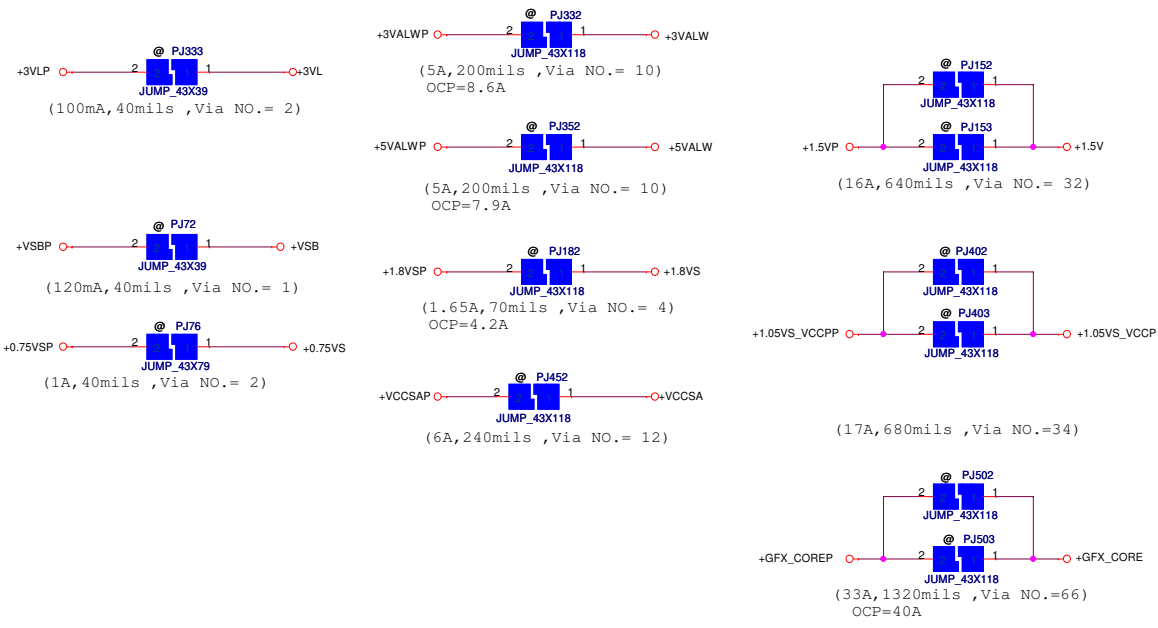
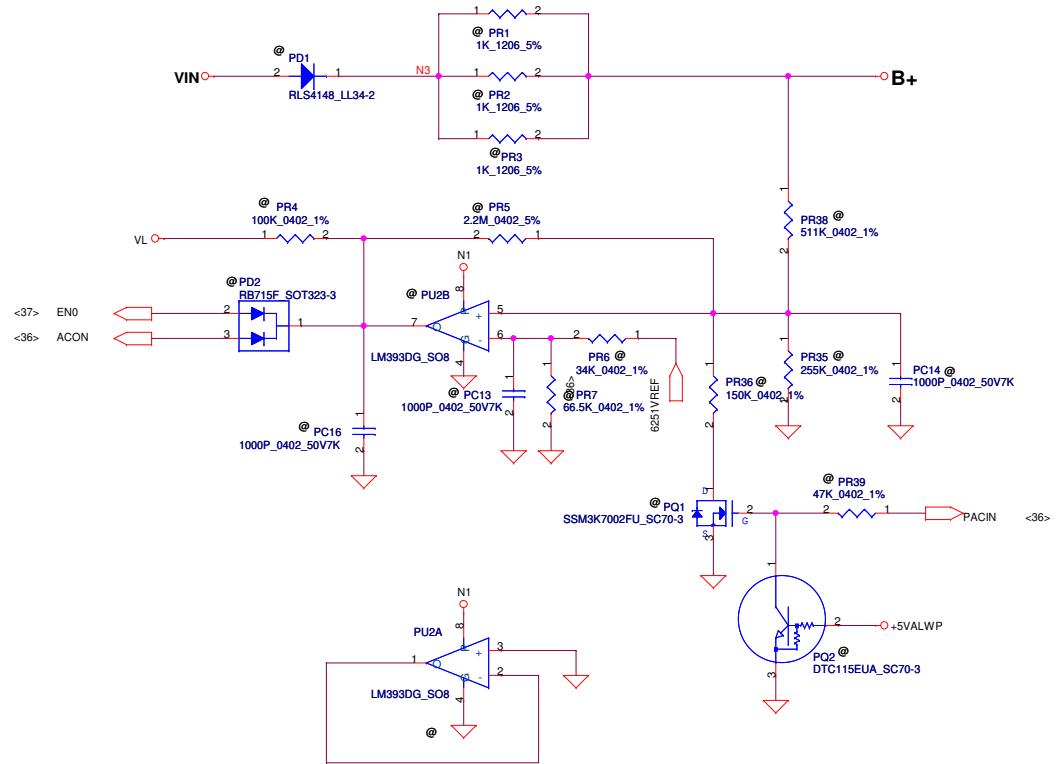
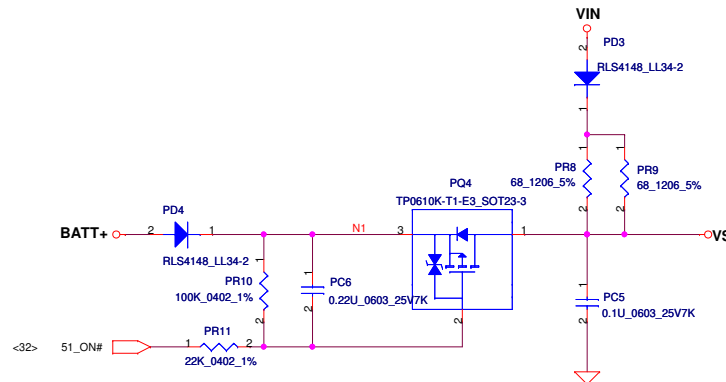
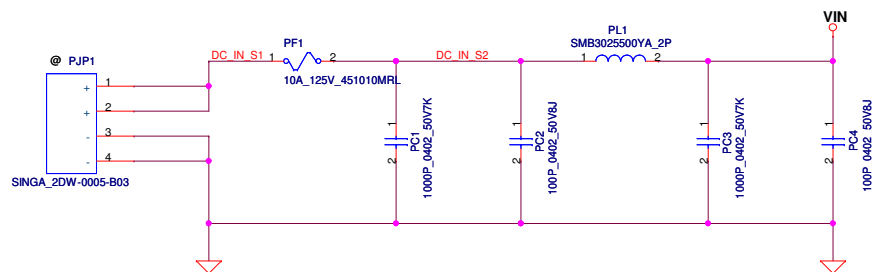
For S3 CPU Power Saving



Each 250pF on CAP_MOS1 (2) will make Slew Rate(uS/V) increase of 100uS/V



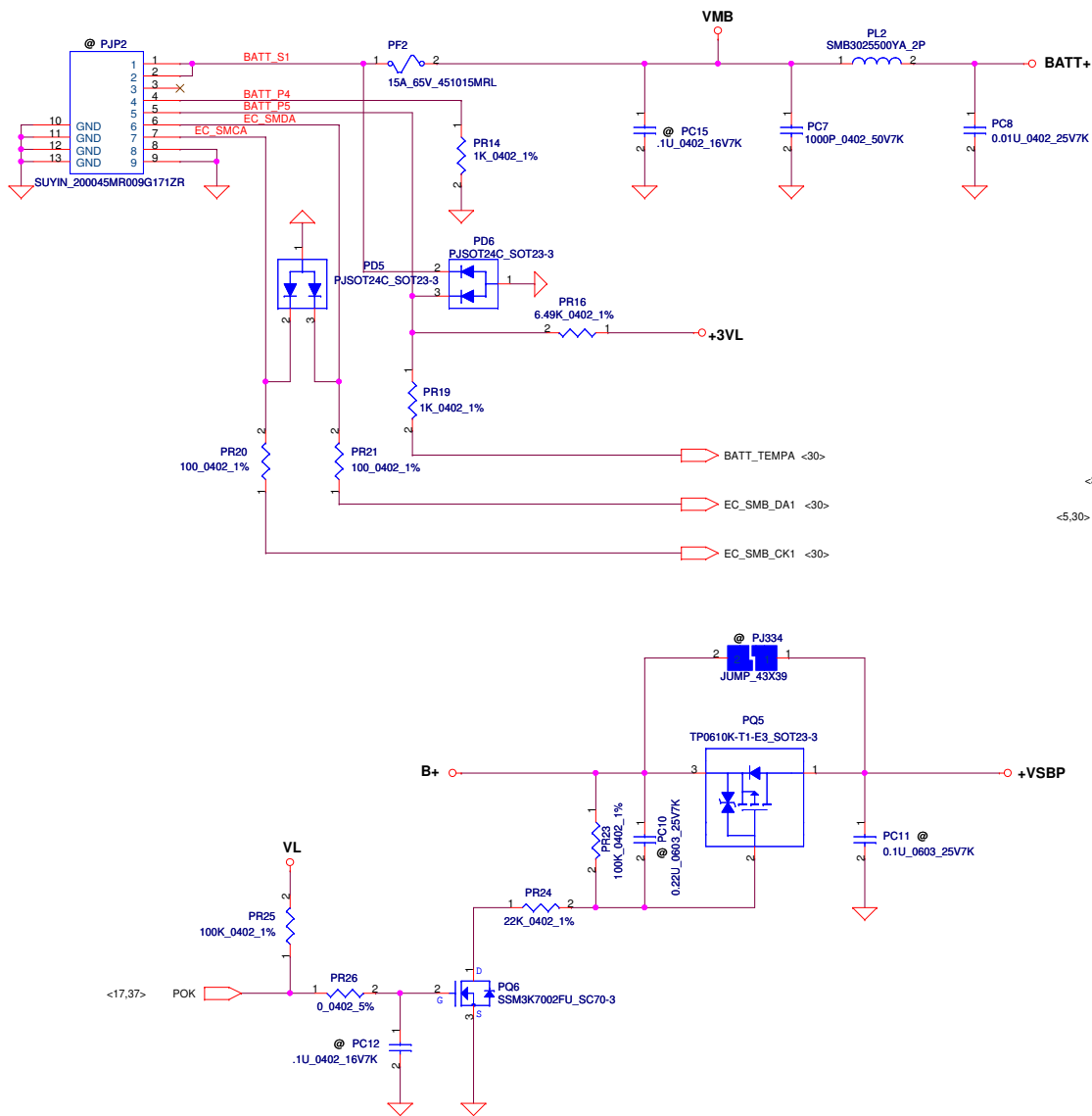
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				DC-DC INTERFACE
Size	Document Number	PWWHA LA-7202P M/B		Rev 1.0
Date:	Friday, February 25, 2011	Sheet	33	of 43



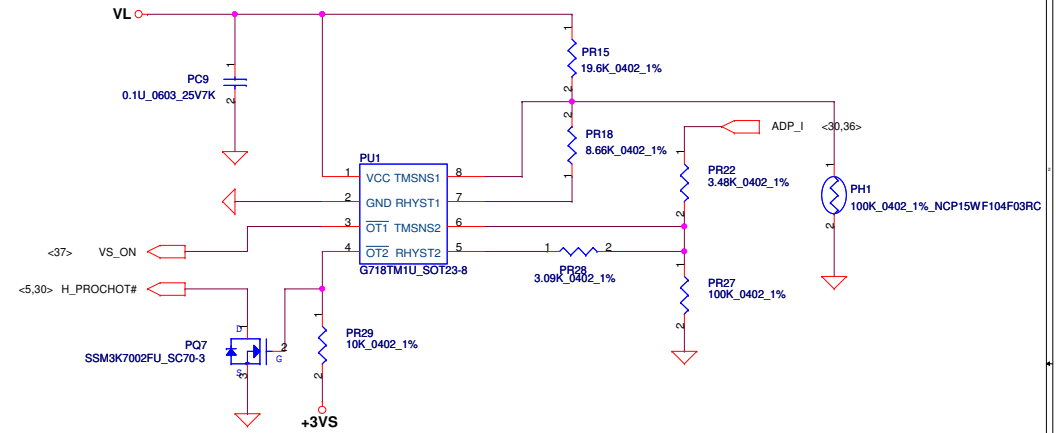
ACIN

	Precharge detector	Min.	typ.	Max.
H->L	14.42V	14.74V	15.23V	
L->H	15.39V	15.88V	16.39V	

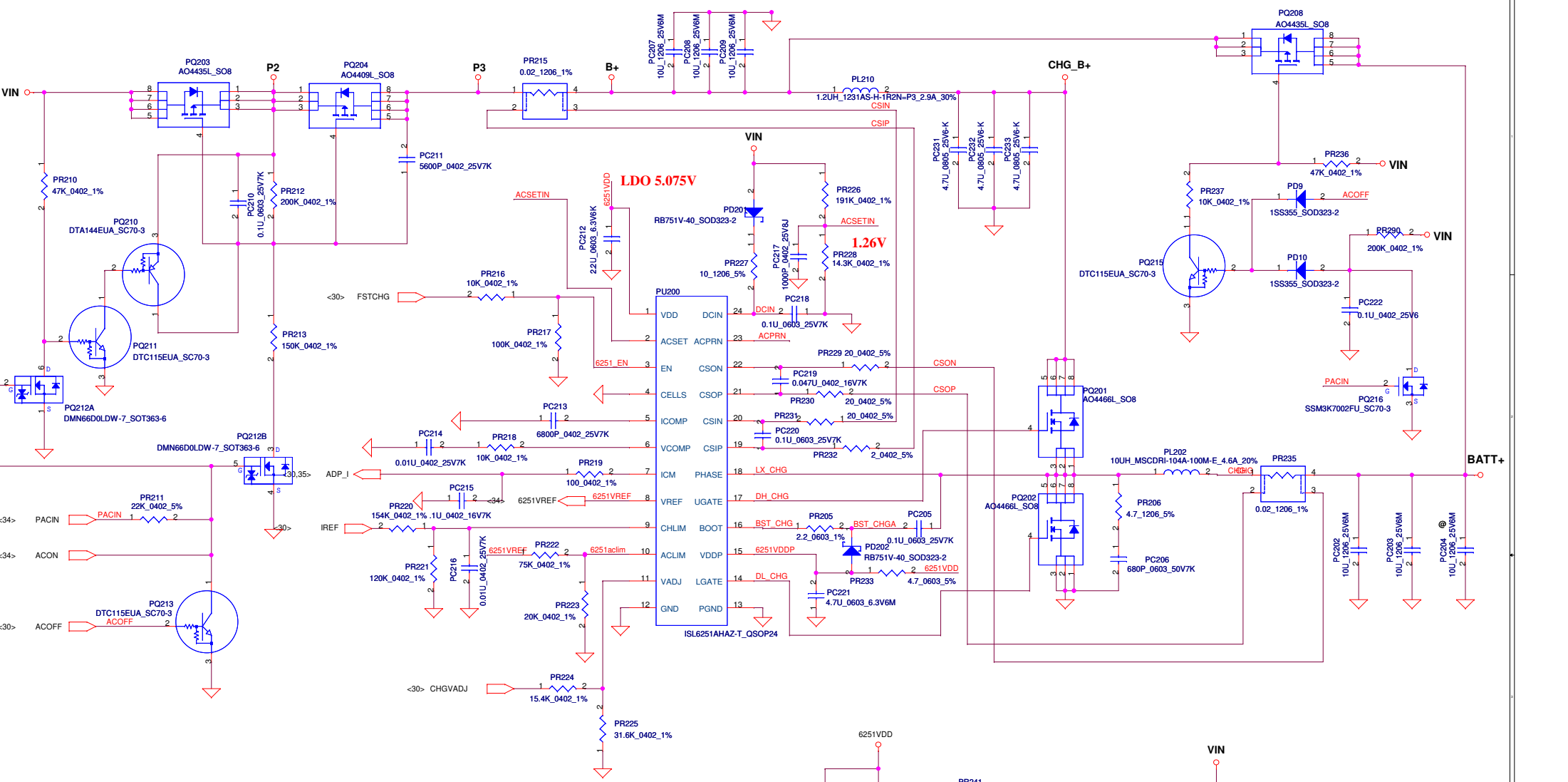
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	DCIN/VIN DECTOR
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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.</small>					Size Document Number PWWHA LA-7202 M/B
Date:	Friday, February 25, 2011	Sheet	34	of	43



PH1 under CPU bottom side :
 CPU thermal protection at 95 degree C
 Recovery at 56 degree C



Adapter	Throttle Watt	Recovery Watt	Throttle Point	Recovery Point
65W_UMA	71.25W	62.4W	1.48V	1.308V
75W_DIS	85.5W	72W	1.78V	1.5V
75W_QCore	85.5W	72W	1.78V	1.5V



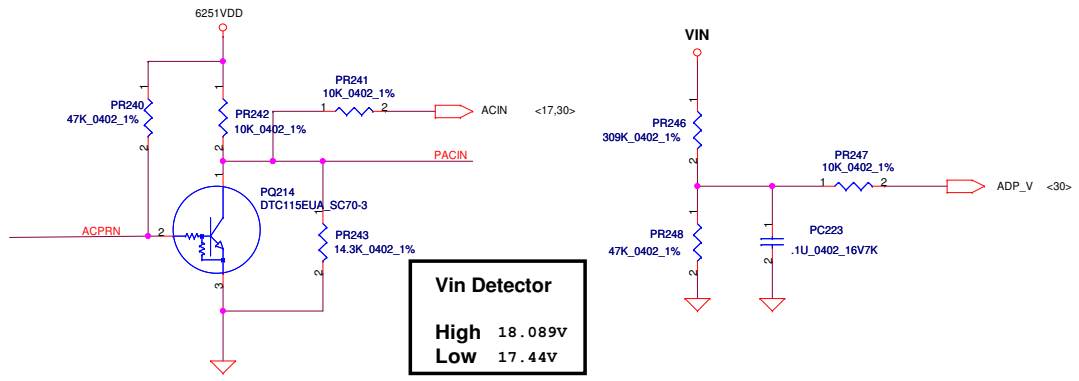
CC=0.25A-3A
 IREF=1.016*Icharge
 IREF=0.254V~3.048V
 VCHLM need over 95mV

CHGVADJ=(Vcell-4)*9.445

Vcell	CHGVADJ
4V	0V
4.2V	1.882V
4.35V	3.2935V

CP mode

Iada=0~3.42A (65W)	CP= 92%*Iada; CP=3.147A
Vaclim=1.08V (65W)	PR222=75k PR223=20k PR215=0.02
Iada=0~3.947A (75W)	CP= 92%*Iada; CP=3.63A
Vaclim=0.736V (75W)	PR222=24k PR223=20k PR215=0.02

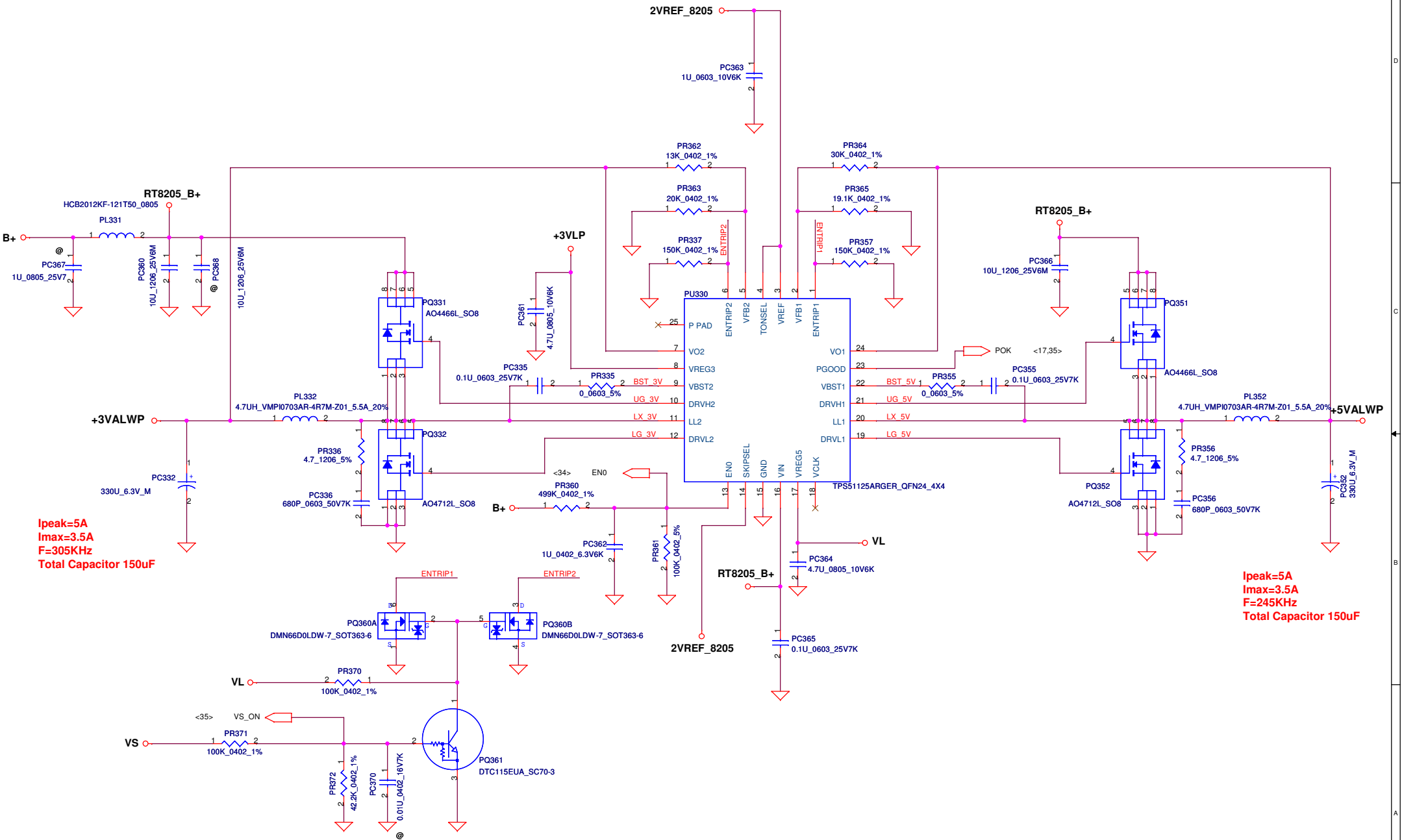


Vin Detector
 High 18.089V
 Low 17.44V

$1.26 / 14.3 * 205.3 = 18.089V$

Security Classification		Compal Secret Data	
Issued Date	2010/09/03	Deciphered Date	2012/12/31
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.			

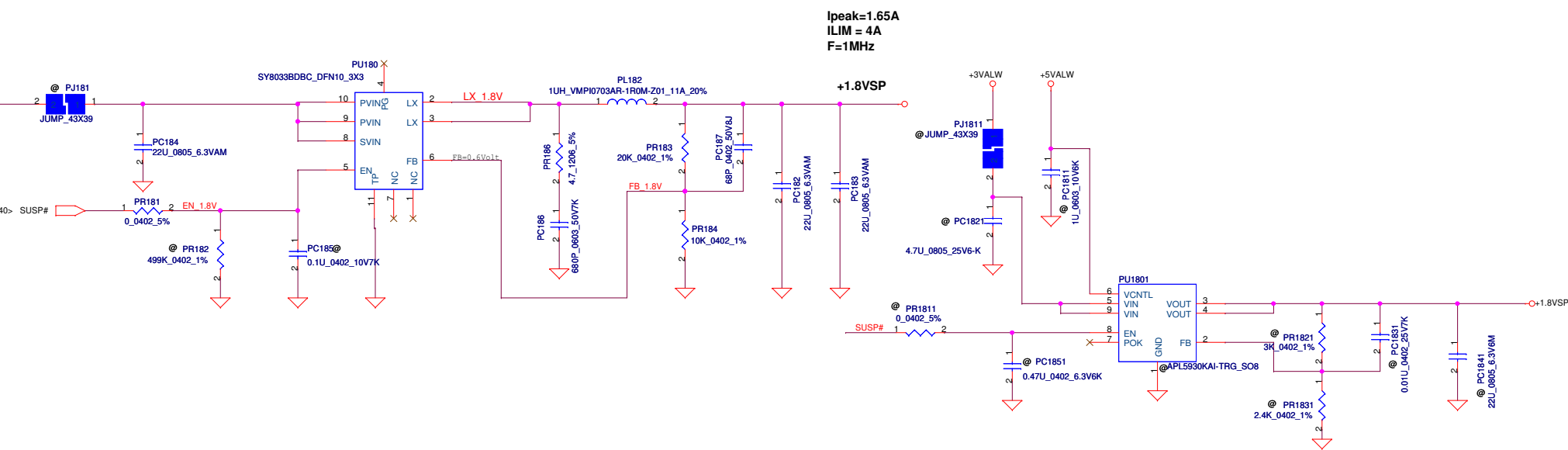
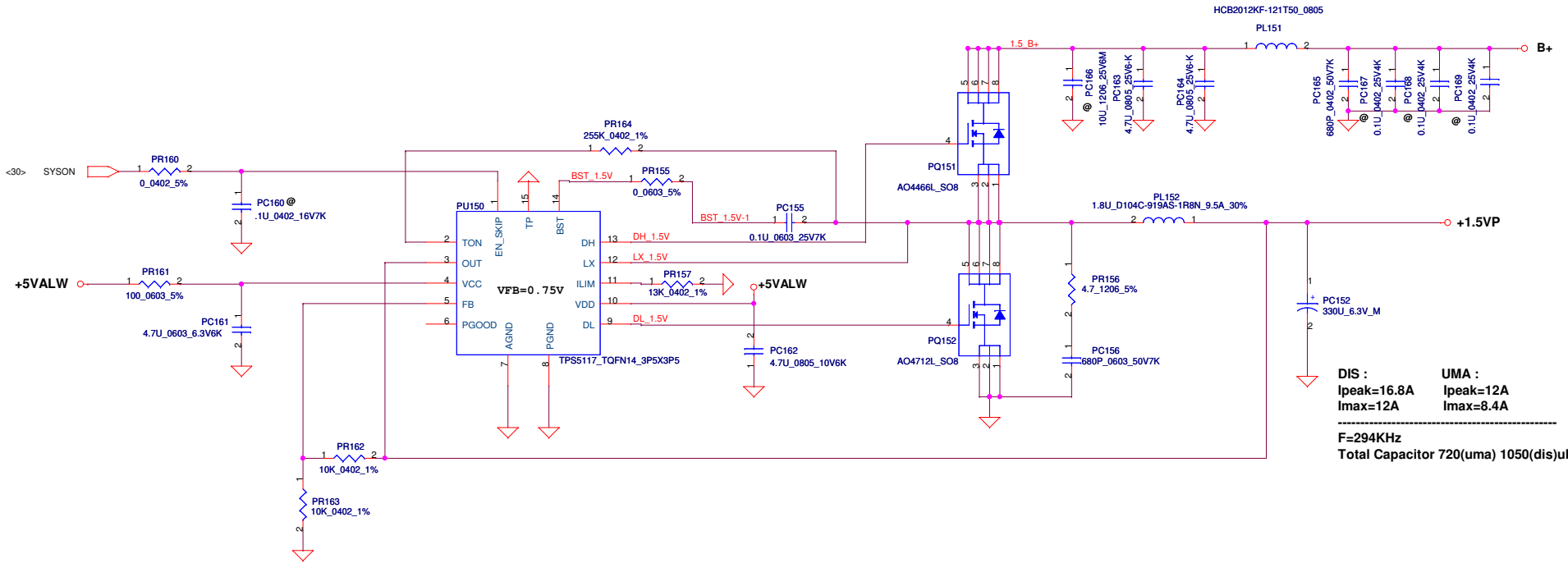
Compal Electronics, Inc.			
CHARGER			
Size	Document Number	Rev	
Custom	PWWHA LA-7202 M/B	1.0	
Date:	Friday, February 25, 2011	Sheet	36 of 43



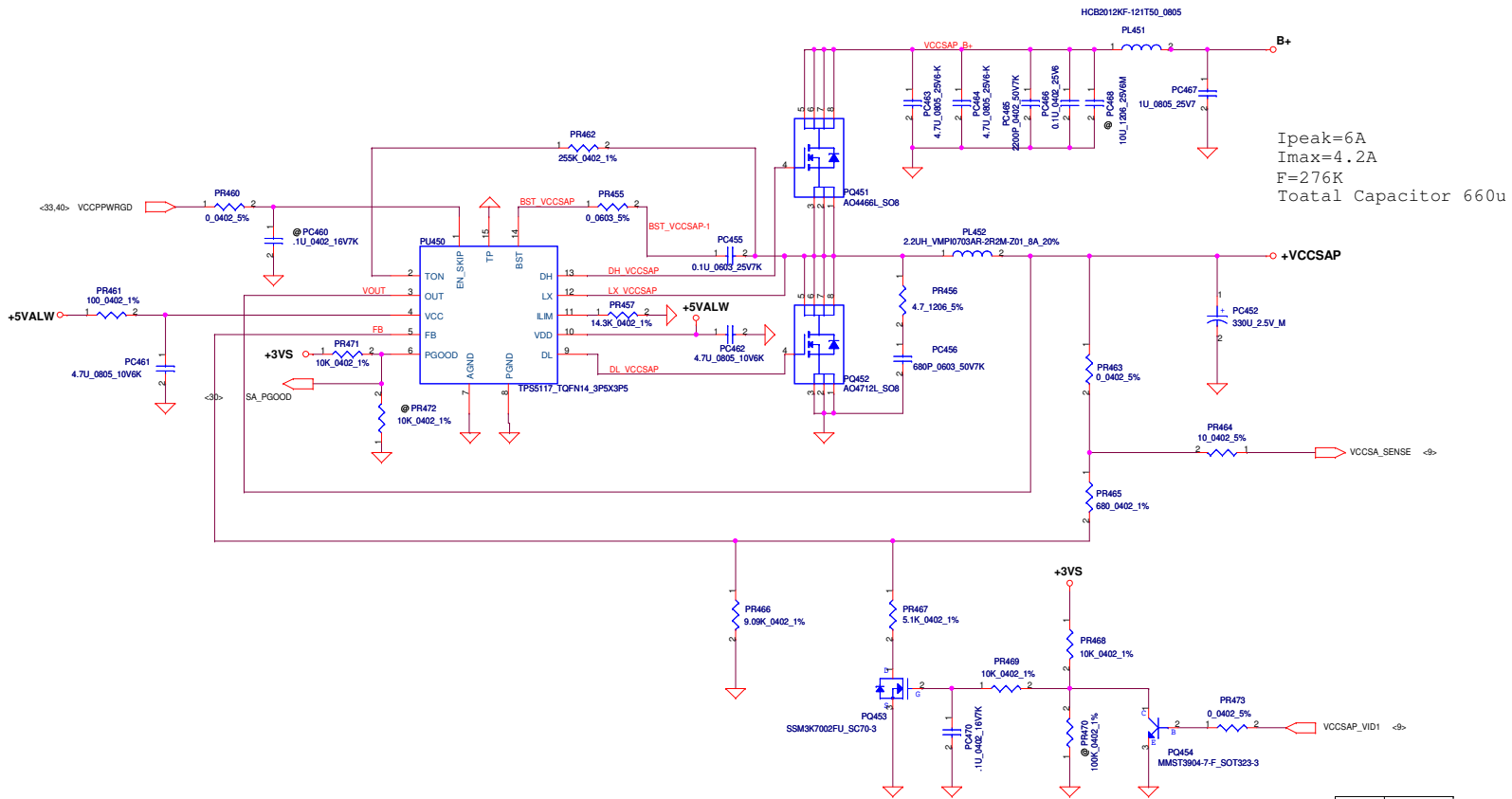
I_{peak}=5A
I_{max}=3.5A
F=305KHz
Total Capacitor 150uF

I_{peak}=5A
I_{max}=3.5A
F=245KHz
Total Capacitor 150uF

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
				3VALWP/5VALWP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				PWWHA LA-7202 M/B	
				Date:	Friday, February 25, 2011
				Sheet	37 of 43

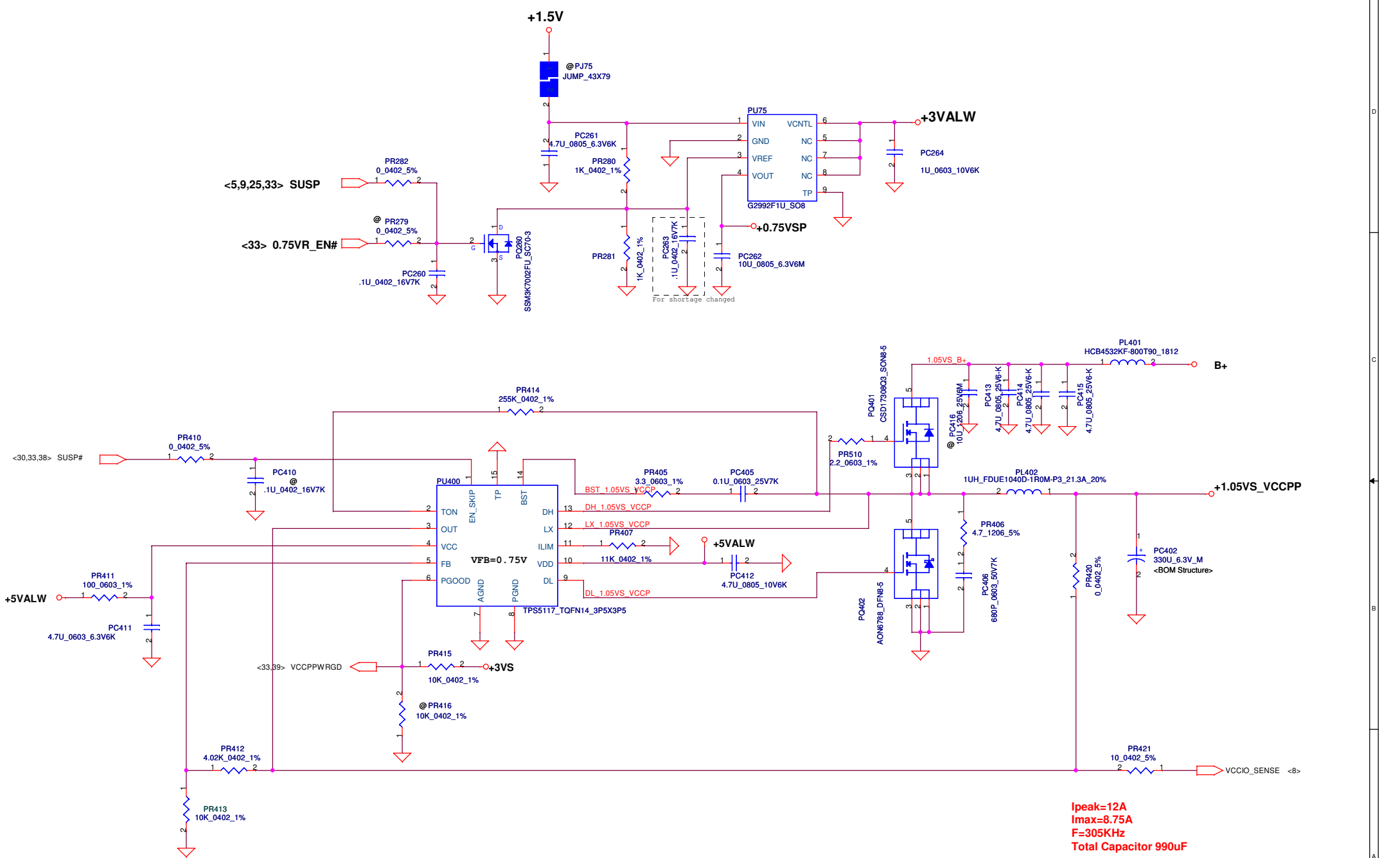


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				+1.5VP/+1.8VSP	
Size	Document Number	PWWHA LA-7202 M/B		Rev	1.0
Date:	Friday, February 25, 2011	Sheet	38	of	43



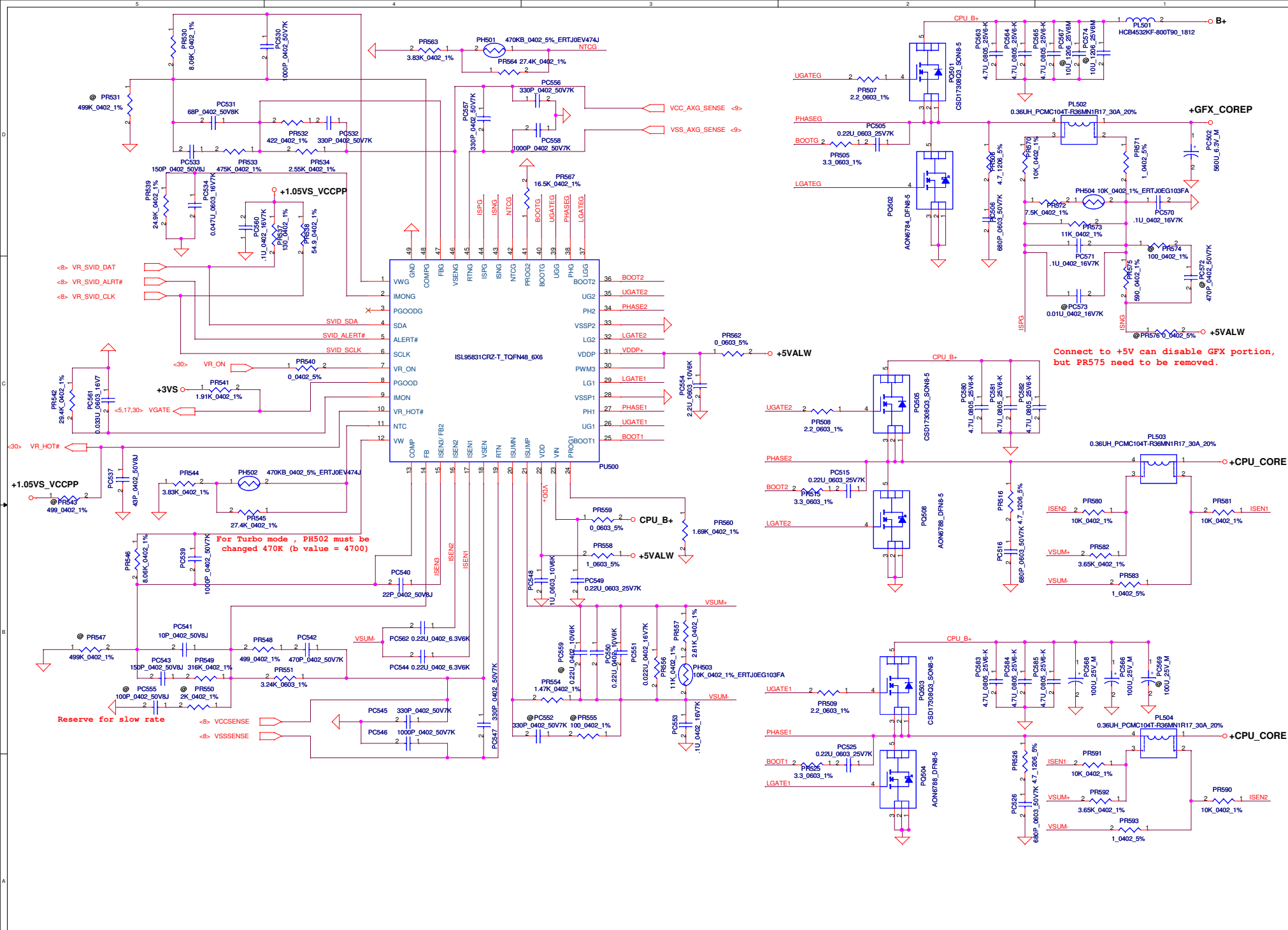
I_{peak}=6A
 I_{max}=4.2A
 F=276K
 Total Capacitor 660u

VID1	+VCCSAP
1	0.8V
0	0.9V



I_{peak}=12A
I_{max}=8.75A
F=305KHz
Total Capacitor 990uF

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				+1.05VS_VCCPP/+0.75VSP	
Size Custom	Document Number	Date	Friday, February 25, 2011	Sheet	40 of 43
	PWWHA LA-7202 M/B	Rev	1.0		



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Title CPU_CORE/GFX
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RAD DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				
Size Custom	Document Number PWWHA LA-7202 M/B	Rev 1.0	Date: Friday, February 25, 2011 Sheet 41 of 43	

2010/12/31 (PVT) P36 Charger	Change PQ203,PQ208 to AO4435L	Cost down
2010/12/31 (PVT) P36 Charger	add PQ207,PQ208,PQ209 10u	EMI command
2010/12/31 (PVT) P36 Charger	add snubber PR206,PC206	EMI command
2010/12/31 (PVT) P36 Charger	change boost to 2.2 ohm PR205	EMI command
2010/12/31 (PVT) P35 +3VALW/+5VALW	add snubber PR336,PC336,PR356,PC336	EMI command
2010/12/31 (PVT) P37 +1.5VP/+1.8VSP	add snubber PR156,PC156	EMI command
2010/12/31 (PVT) P37 +1.5VP/+1.8VSP	add PC165 for MEI	EMI command
2010/12/31 (PVT) P37 +VCCSA	add snubber PR456,PC456	EMI command
2010/12/31 (PVT) P37 +VCCSA	change output capacitor PC452 to OS-con	cost down
2010/12/31 (PVT) P37 +VCCSA	change choke PL452 to molding	cost down
2010/12/31 (PVT) P38 +1.05VS/+0.75	add snubber PC406 PR406	EMI command
2010/12/31 (PVT) P38 +1.05VS/+0.75	change 0.75V enable PR279 tp PR282	HW command
2010/12/31 (PVT) P39 +CPU_CORE	change PC549,PC515,PC525,PC 505 to correct rating	design change
2010/12/31 (PVT) P39 +CPU_CORE	change PL502,PL503,PL504 to DCR 5%	design change
2010/12/31 (PVT) P39 +CPU_CORE	change PC568 PC 566 to 5.8mmm capacitor	design change
2010/12/31 (PVT) P39 +CPU_CORE	change PL551 for load line adjust	design change
2010/12/31 (PVT) P39 +CPU_CORE	change PR560 for program temperture	design change
2010/12/31 (PVT) P39 +CPU_CORE	change PC502,PC531,PC532 for burn-in shun down	design change

Title		
<Title>		
Size A	Document Number PWWHA LA-7202P M/B	Rev 1.0
Date:	Friday, February 25, 2011	Sheet 42 of 43

HW PIR (Product Improve Record)

PWWHA LA-7202P SCHEMATIC CHANGE LIST

REVISION CHANGE: 1.0

GERBER-OUT DATE: 2011/02/18

NO DATE PAGE MODIFICATION LIST

PURPOSE

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
1)	01/24	05	modify FAN with BTO item PWM and RPM	For HW BTO item
2)	01/24	05	modify RPM FAN connector pin define	Request from thermal team
3)	02/14	30	co-lay KB9012	For BTO item
4)	02/15	24	Add C450	For ESD request

Security Classification	Compal Secret Data		Title		Compal Electronics, Inc.
Issued Date	2010/09/03	Deciphered Date	2012/12/31	HW-PIR	
<small>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 THIS 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.</small>				Size	Document Number
				Custom	PWWHA LA-7202P M/B
				Date:	Friday, February 25, 2011
				Sheet	43 of 43

www.s-manuals.com