

MODEL NAME: *NAP10*
PCB NAME: *LA-5812P MB*
COMPAL P/N:

Dell/Compal confidential

Schematics Document

Phantom Calpella

Arrandale ULV BGA + Ibex PCH

DISCRETE VGA N11P-GS1 (Switchable Graphics)

2010-04-19

Rev: 1.0

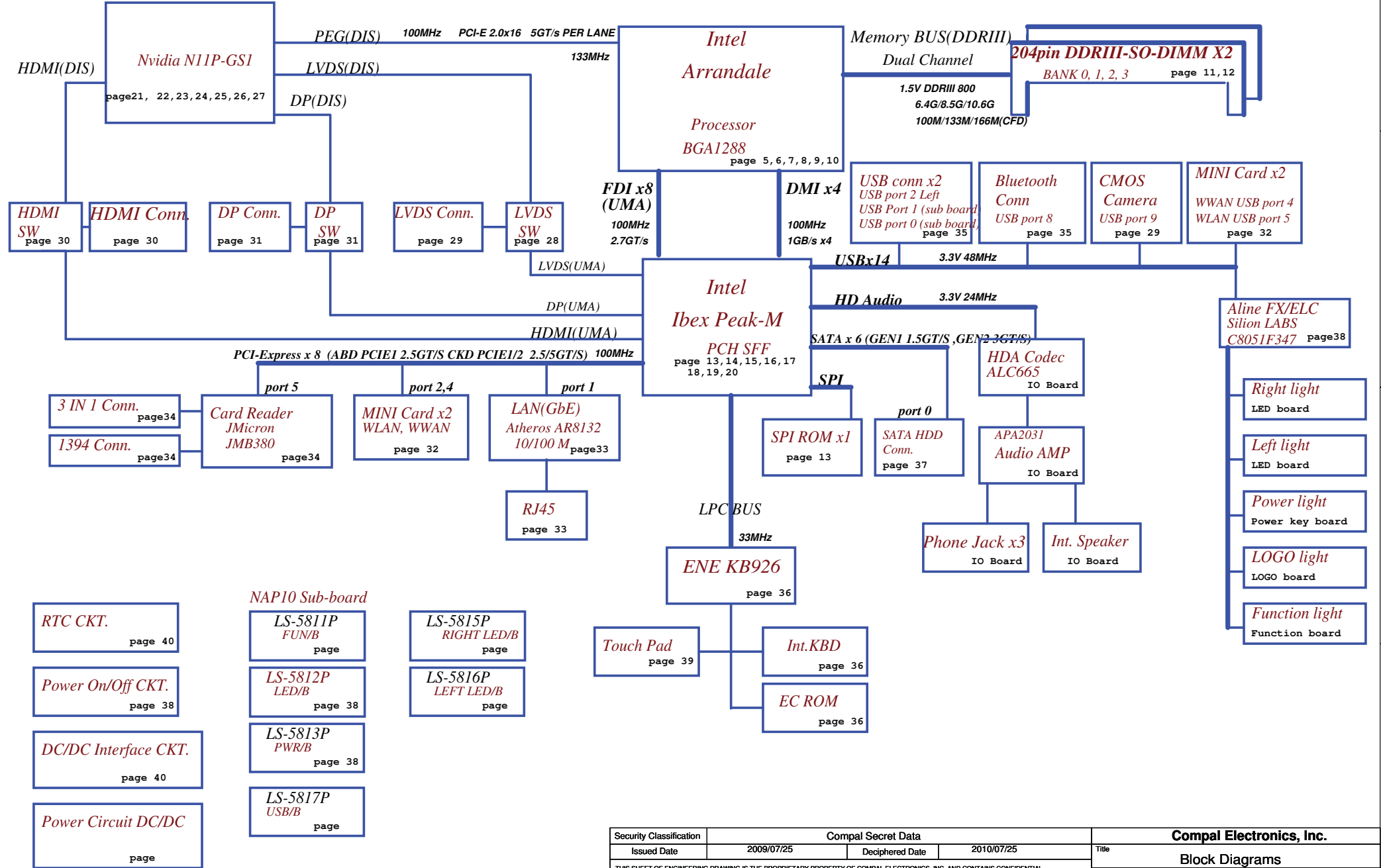
Security Classification		Compal Secret Data		Title	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	Cover Sheet	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number LA-5812P
				Date: Monday, May 10, 2010	Rev 1.0
				Sheet 1 of 55	

Compal Confidential

Model Name NAP10
File Name : LA5812P

Fan Control
page 37

Clock Generator
IDT: 9LRS3199AKLFT
SILEGO: SLG8SP587
133/120/100/96/14.318MHZ to PCH
27MHZ to N11P
page 4



Voltage Rails (O MEANS ON X MEANS OFF)

<div>power plane</div> <div>State</div>	B+	+5VALW +3VALW VL	+1.5V	+5VS +3VS +0.75VS +1.05VS +1.05VS_VTT +VCC_CORE +VCC_GFXCORE +1.5V_CPU_VDDQ +1.8VS +3VS_DELAY +1.8VSDGPU +1.05VSDGPU +1.5VSDGPU +VGA_CORE
S0	O	O	O	O
S1	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

Symbol Note :

 : means Digital Ground

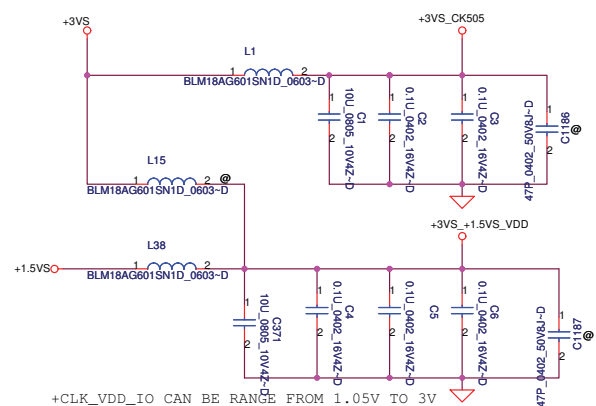
 : means Analog Ground

@ : means just reserve , no build
CONN@ : means ME part.
45@ : means install after SMT.

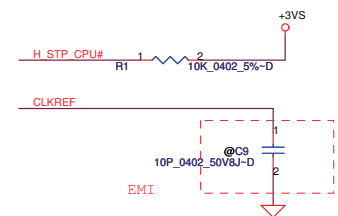
I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
EC_SMB_CK1 EC_SMB_DA1 Battery	16	00010110
EC_SMB_CK2 EC_SMB_DA2 CPU THERMAL SENSOR (EMC1412A-1-ACZL)	F8	11111000
CPU(PCH)INTERNAL THERMAL SENSOR	96	10010110
CPU(PCH)INTERNAL THERMAL SENSOR	98	10011000
(PCH_SML1BCLK) (PCH_SML1DATA) GPU THERMAL SENSOR (ADM1032ARMZ)	9A	10011010
GPU INTERNAL THERMAL SENSOR	9E	10011110
WWAN		
WLAN		
PCH_SMBCLK PCH_SMBDATA CLOCK GENERATOR (EXT.)	D2	11010010
DDR Memory		
Free Fall sensor	38	00111000

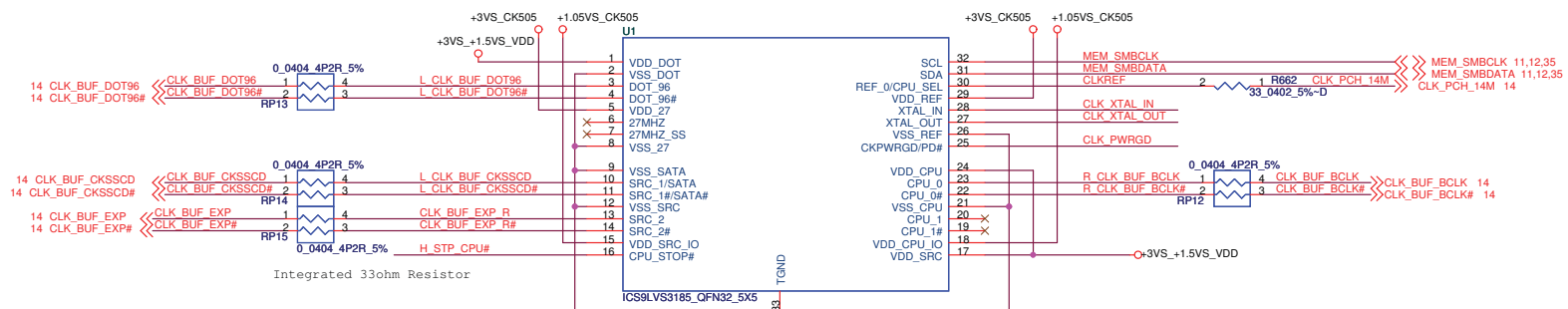
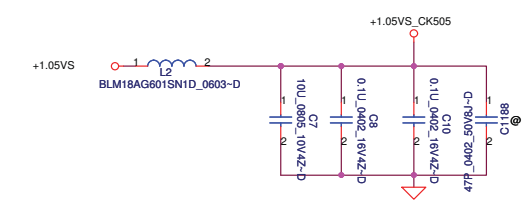
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/07/25	Deciphered Date	2010/07/25	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custort	LA-5812P	1.0
				Date:	Monday, May 10, 2010	Sheet 3 of 55



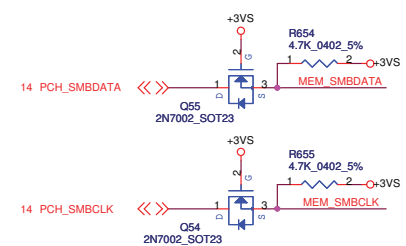
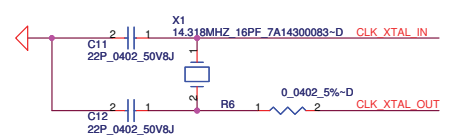
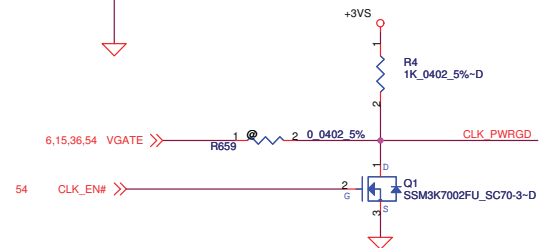
+CLK_VDD_IO CAN BE RANGE FROM 1.05V TO 3V



PIN	30	CPU0	CPU1
1 (0.7~1.5v)	100MHz	100MHz	
0 (DEFAULT)	133MHz	133MHz	



Integrated 33ohm Resistor



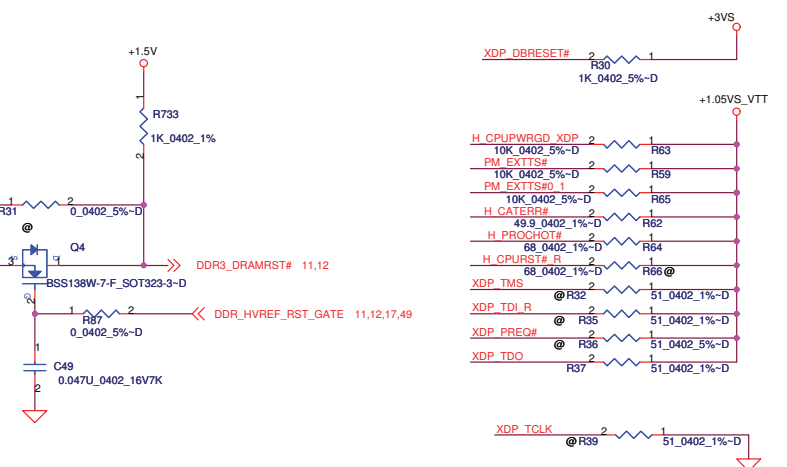
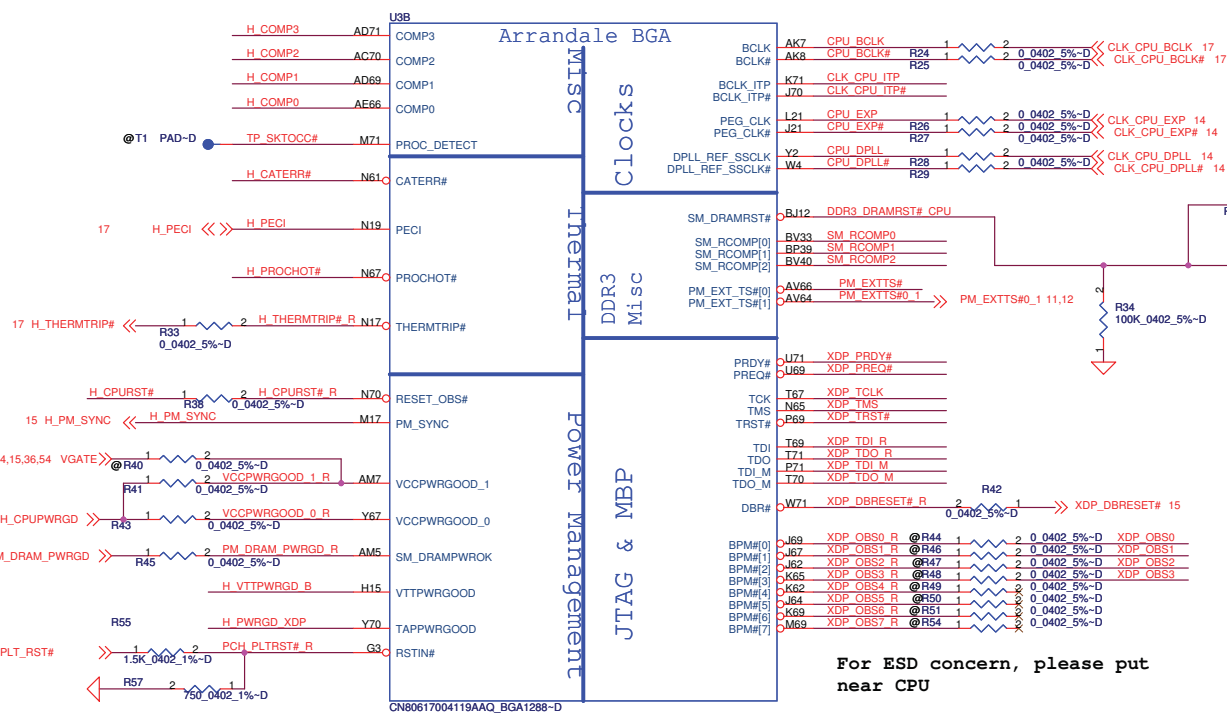
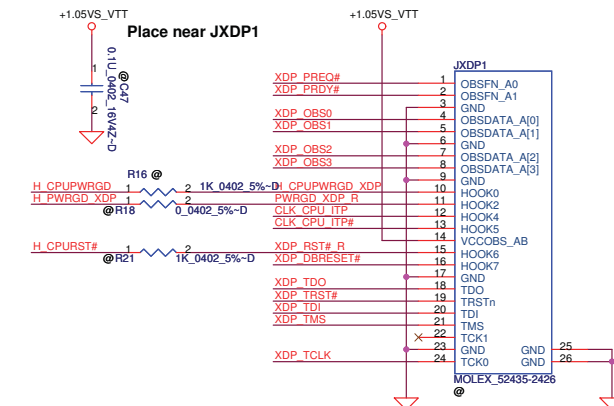
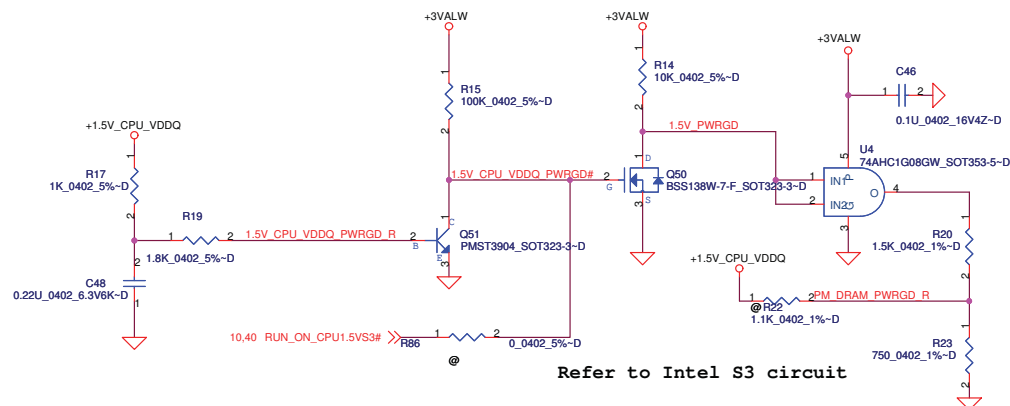
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.



Clock Generator			
File	Document Number	Rev	1.0
Size	LA-5812P		
Date	Monday, May 10, 2010	Sheet	4 of 55

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

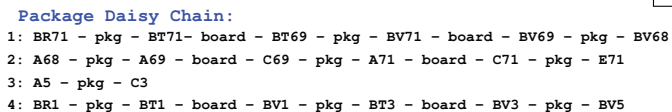


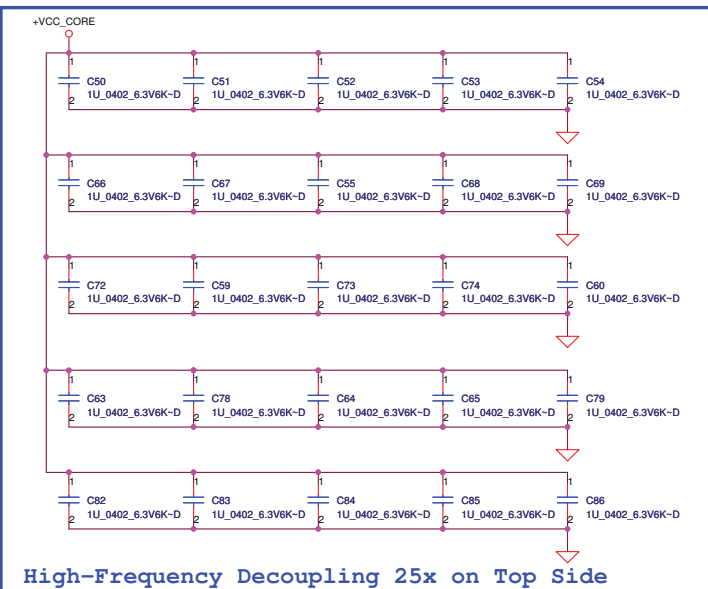
Scan Chain (Default)	Stuff -> R1153,R1156,R1157 No stuff -> R1154,R1155
CPU Only	Stuff -> R1153,R1154 No stuff -> R1154,R1155,R1156
PCH Only	Stuff -> R1155,R1156 No stuff -> R1153,R1154,R1155



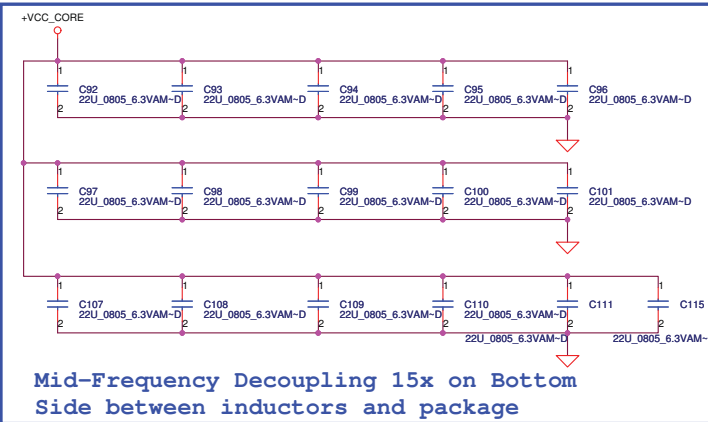
Date: Monday, May 10, 2010 Sheet 7 of 55

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

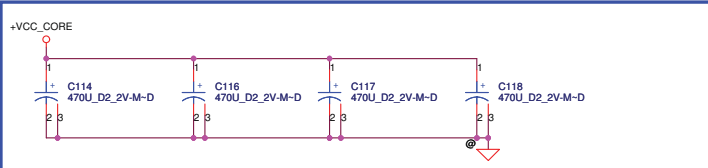




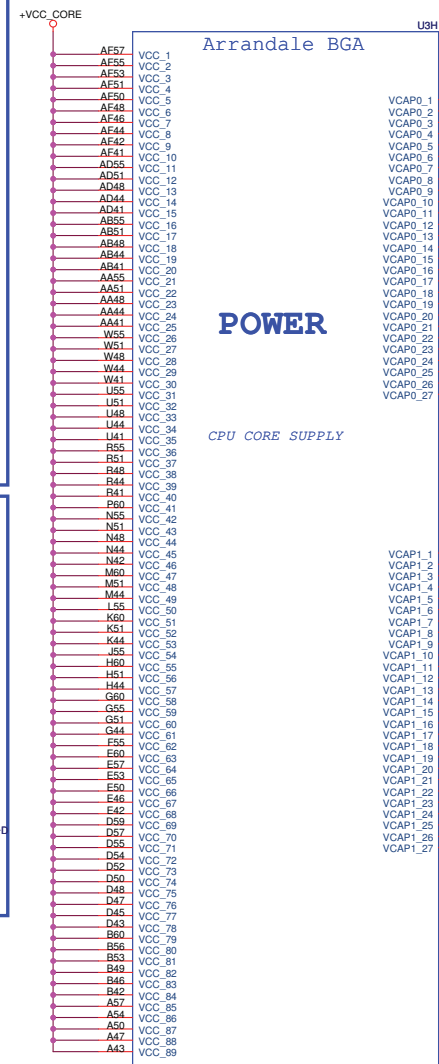
High-Frequency Decoupling 25x on Top Side



Mid-Frequency Decoupling 15x on Bottom Side between inductors and package



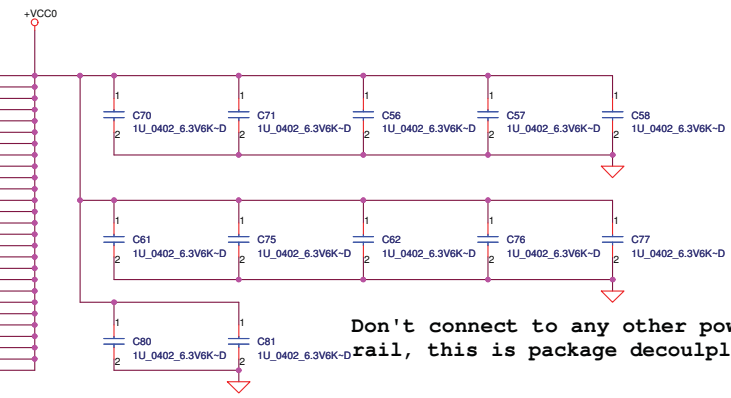
Current =48A



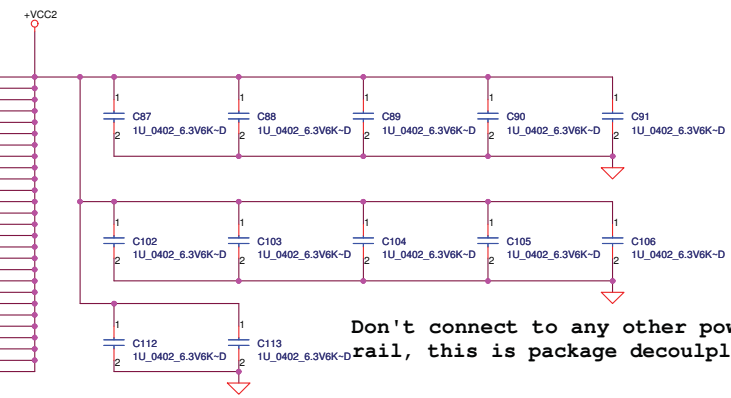
CN80617004119AAQ_BGA1288-D

POWER

CPU CORE SUPPLY



Don't connect to any other power rail, this is package decoupling



Don't connect to any other power rail, this is package decoupling

PROCESSOR Power Rail Table (EDS V1.0)		
Voltage Rail	Voltage	S0 Iccmax Current (A)
VXNG	1.5	22
VccPLL	1.8	1.35
VCORE	0.75	48
VDDR	1.5	3
VTT	1.05	18

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

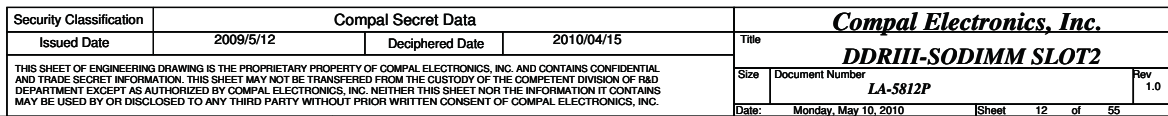
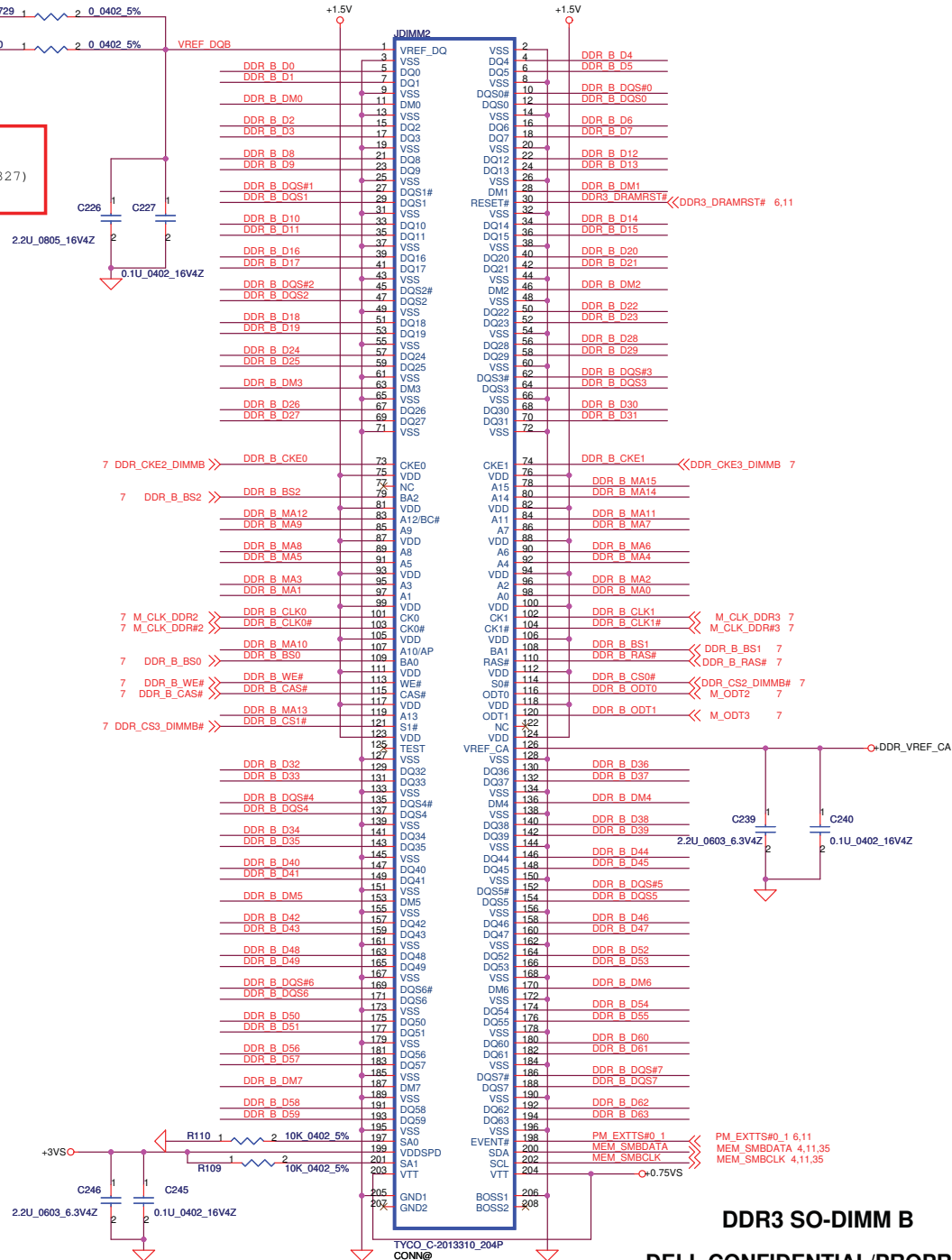
Arrandale(5/6)

File	LA-5812P	
Size	Document Number	Rev 1.0
Date:	Monday, May 10, 2010	Sheet 9 of 55

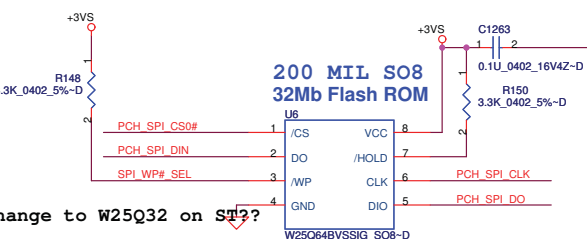
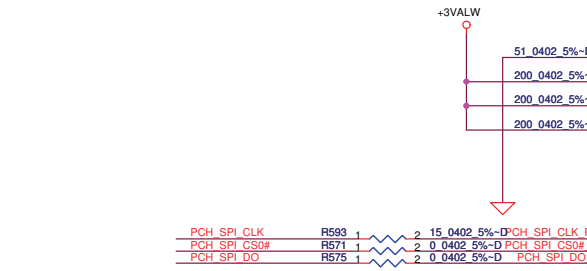
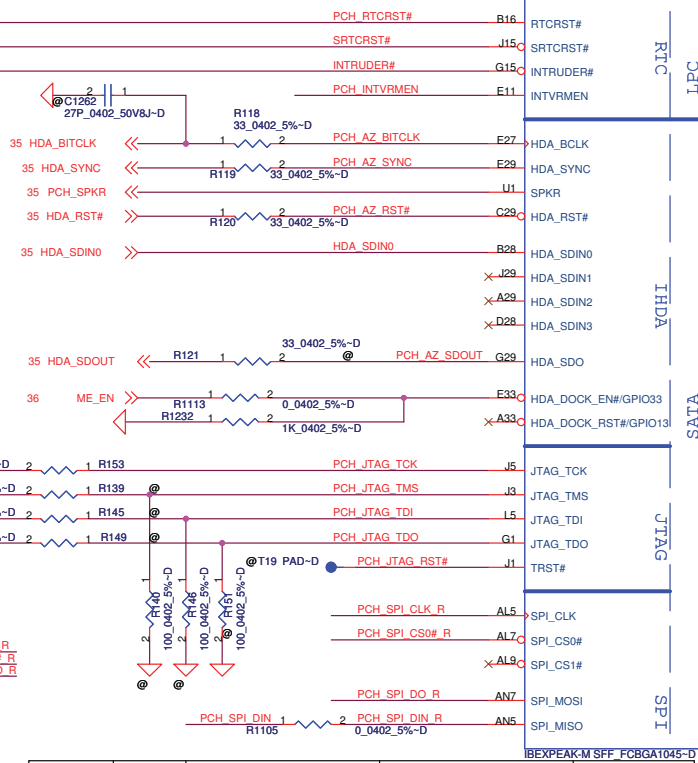
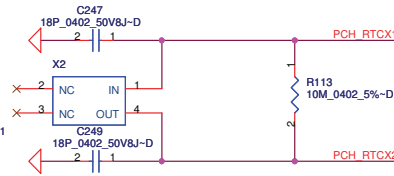
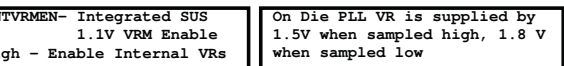
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



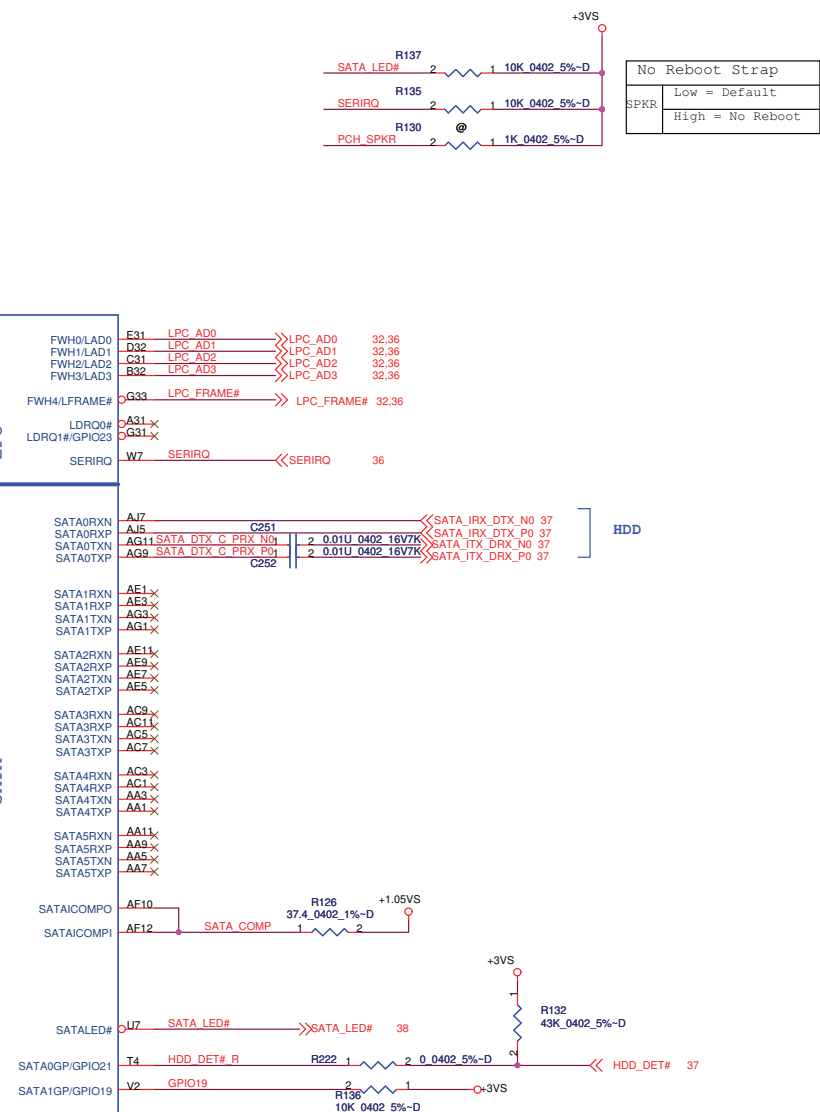
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/5/12	Deciphered Date	2010/04/15	Title	DDRIII-SODIMM SLOT1	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	LA-5812P	1.0
				Date:	Monday, May 10, 2010	Sheet 11 of 55



ME_CLR1	TPM setting
Shunt	Clear ME RTC Registers
Open	Keep ME RTC Registers



		PCH JTAG Enable		PCH JTAG Disable		Production
PCH Pin	Ref.	ES1	ES2	ES1	ES2	All
TDO	R149	No Stuff	200 ohm	No Stuff	No Stuff	51 ohm
	R151	No Stuff	100 ohm	No Stuff	No Stuff	No Stuff
TMS	R139	200 ohm	200 ohm	No Stuff	No Stuff	51 ohm
	R140	100 ohm	100 ohm	No Stuff	No Stuff	No Stuff
TDI	R145	200 ohm	200 ohm	20K ohm	No Stuff	51 ohm
	R146	100 ohm	100 ohm	10K ohm	No Stuff	No Stuff
TCK	R153	51 ohm	51 ohm	51 ohm	51 ohm	51 ohm
TRST#		20K ohm	20K ohm	No Stuff	No Stuff	
		10K ohm	10K ohm	No Stuff	No Stuff	

**Compal Electronics, Inc.**

PCH (1/8)

Document Number
LA 50407

Date: Monday, May 10, 2010

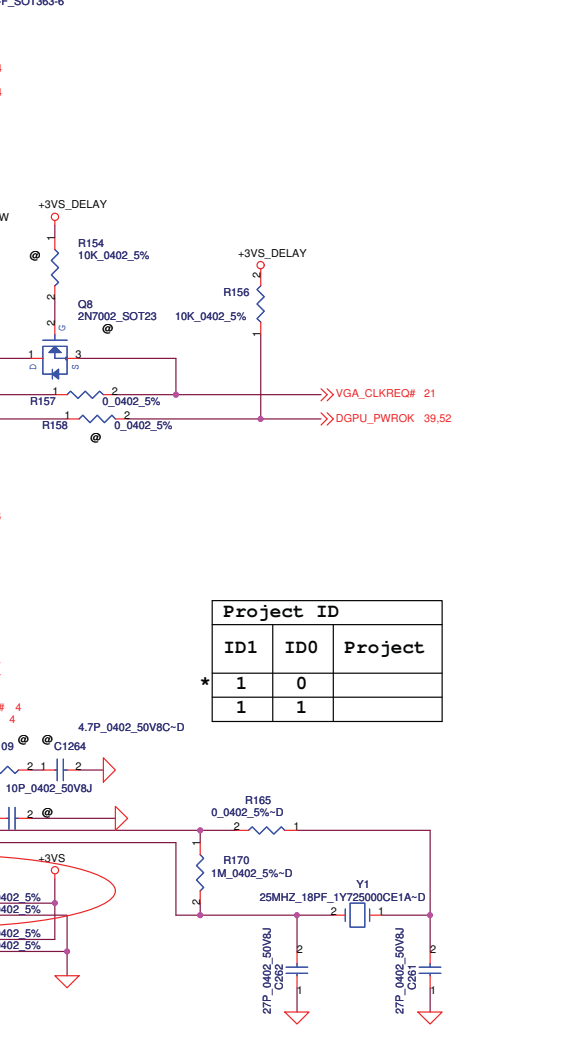
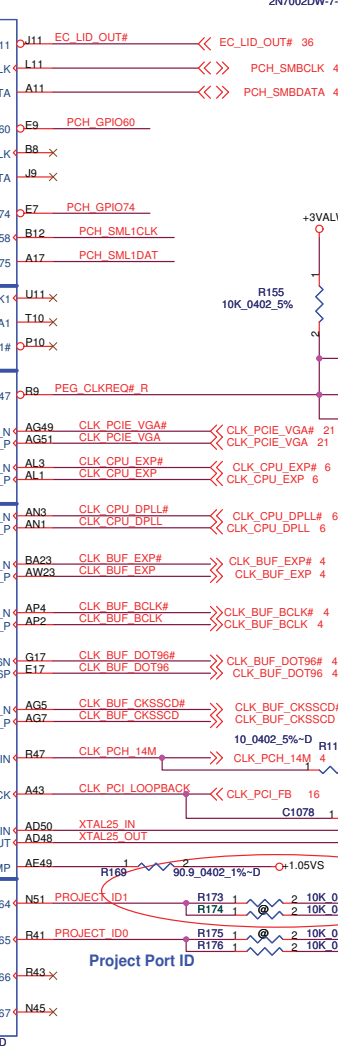
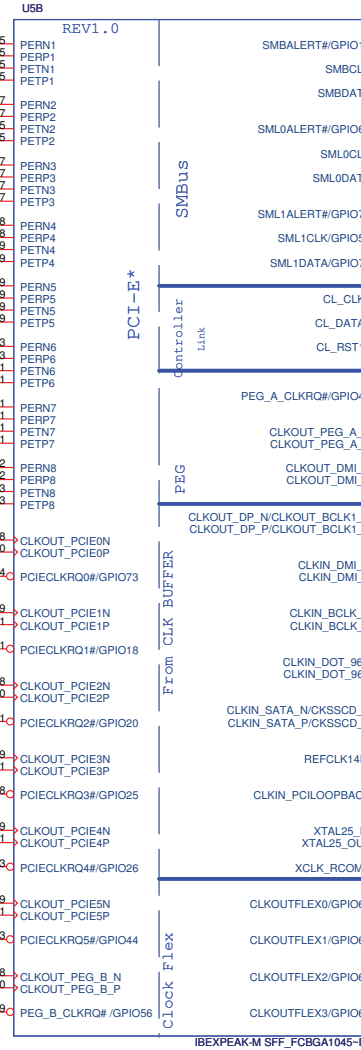
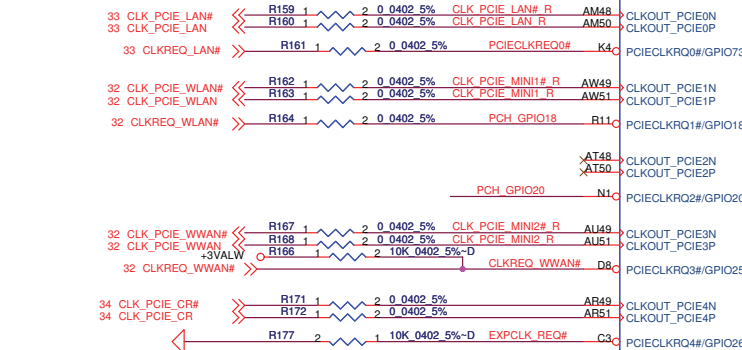
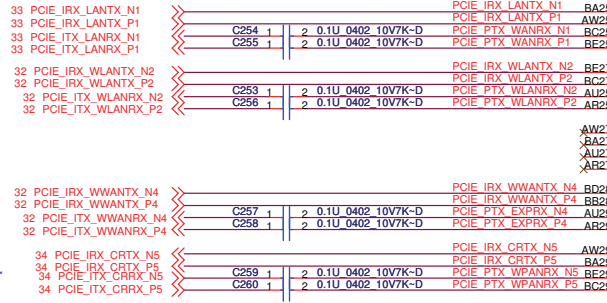
Sheet 13 of 5

For PCIE LAN

For Wireless LAN

For WWAN

For 1394/Card Reader

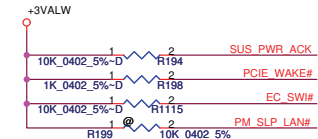
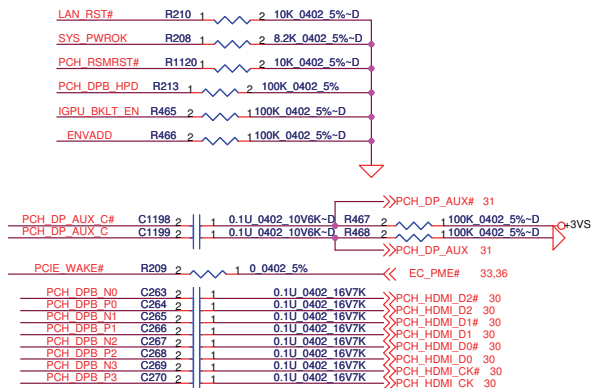


Project ID		
ID1	ID0	Project
1	0	
1	1	

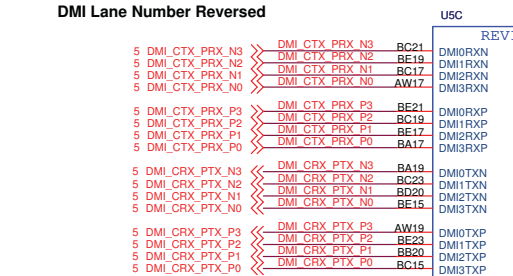
DELL CONFIDENTIAL/PROPRIETARY



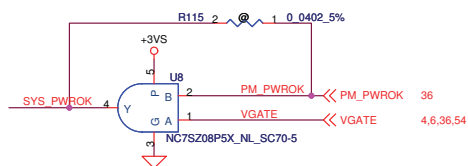
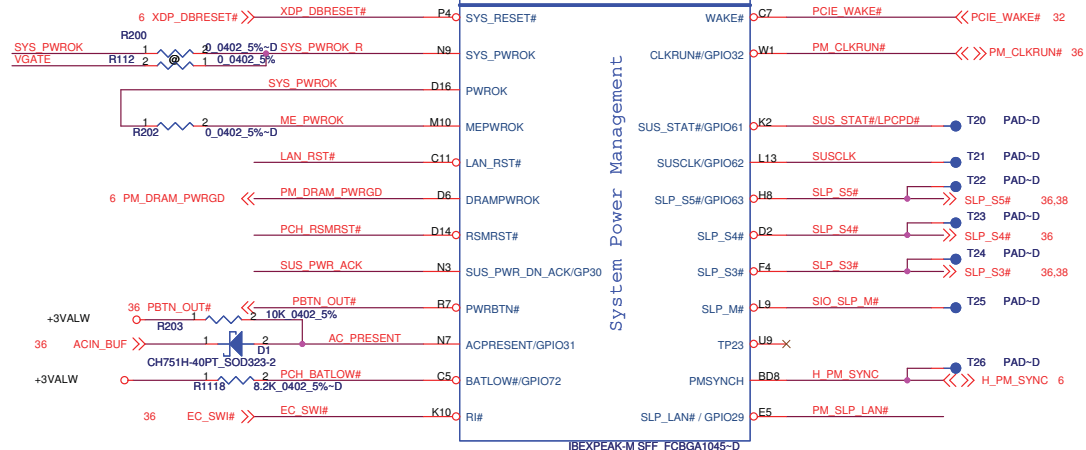
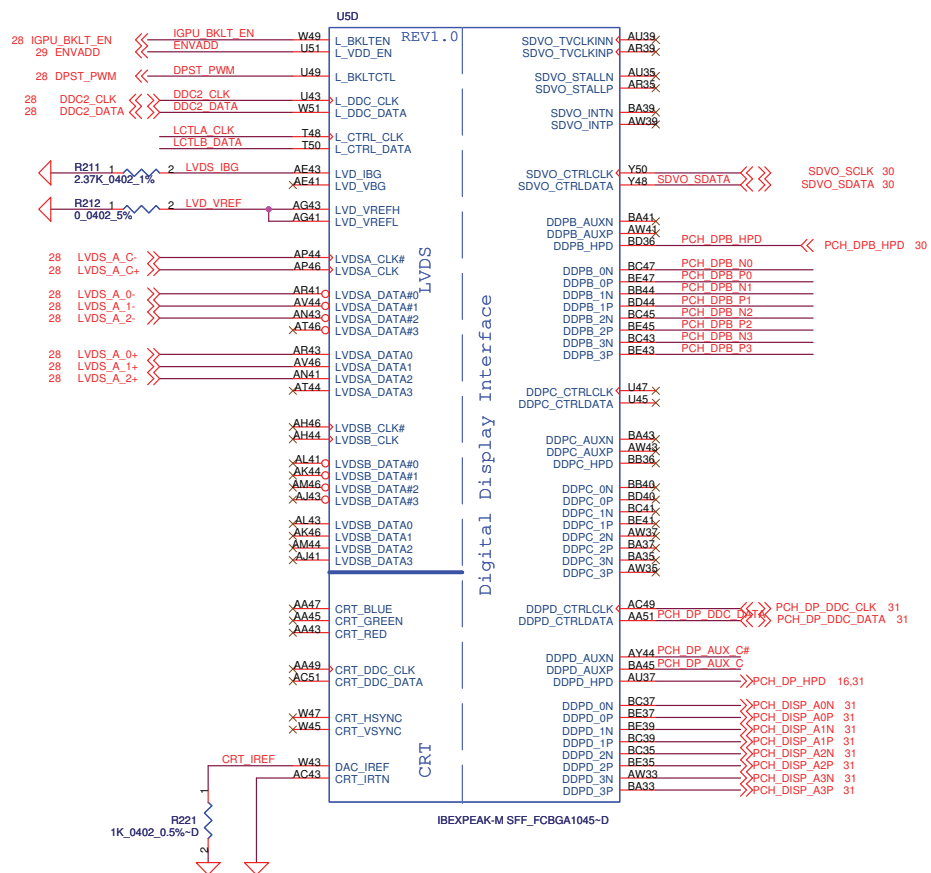
Compal Electronics, Inc.		
PCH (2/8)		
Size	Document Number	Rev
Monday, May 10, 2010	LA-5812P	1.0
Date	Sheet	of
14	14	55

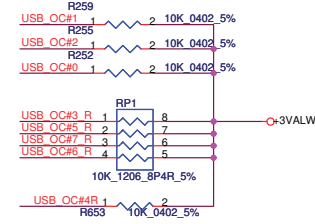
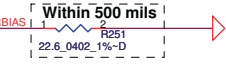
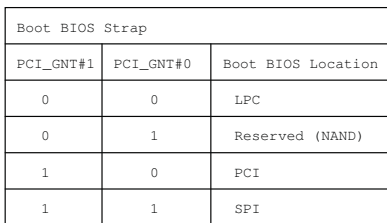
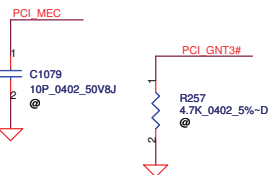


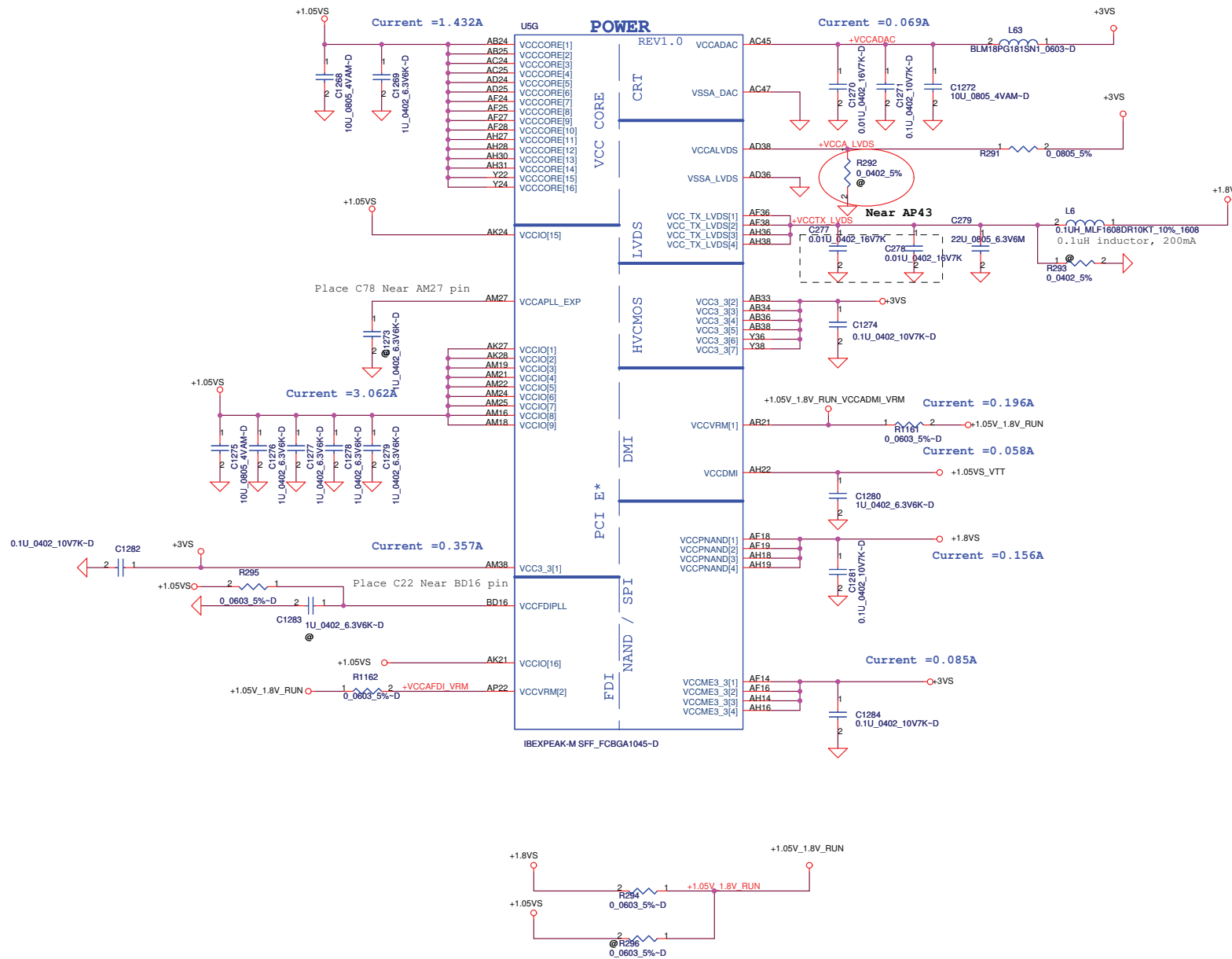
DMI Lane Number Reversed



FDI Lane Number Reversed





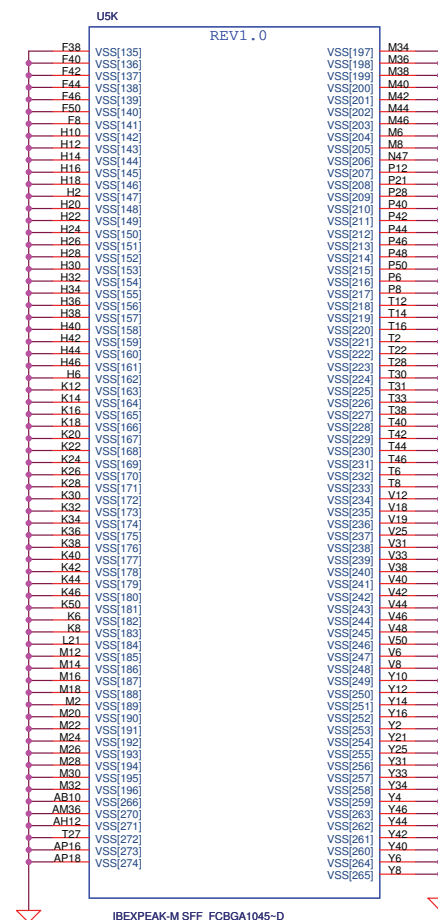


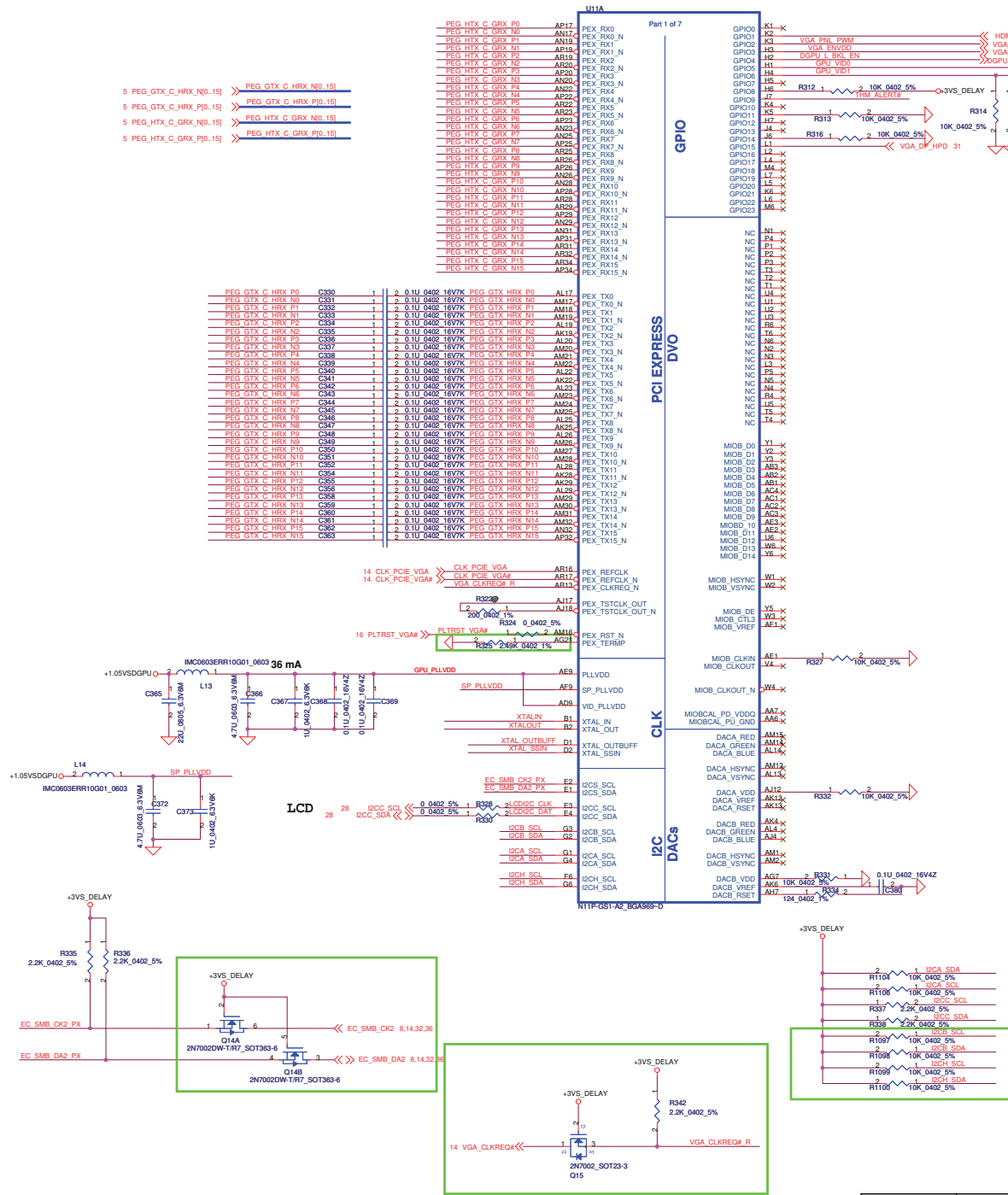
PCH Power Rail Table		
Voltage Rail	Voltage	S0 Iccmax Current (A)
V_CPU_IO	1.1/1.05	< 1 (mA)
V5REF	5	< 1 (mA)
V5REF_Sus	5	< 1 (mA)
Vcc3_3	3.3	0.357
VccAClk	1.1	0.052
VccADAC	3.3	0.069
VccADPLLA	1.1	0.068
VccADPLLB	1.1	0.069
Vccap11EXP	1.1	0.04
VccCore	1.1	1.432
VccDMI	1.1	0.058
VccDMI	1.1	0.061
VccFDIPLL	1.1	0.037
VccIO	1.1	3.062
VccLAN	1.1	0.32
VccME	1.1	1.849
VccME3_3	3.3	0.085
VccpNAND	1.8	0.156
VccSATAPLL	1.1	0.031
VccSus3_3	3.3	0.163
VccSusHDA	3.3	0.006
VccVRM	1.8 / 1.5	0.196
VccVRM	11	< 1 (mA)
VccALVDS	3.3	< 1 (mA)
VccTX_LVDS	1.8	0.059

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.		
File		
PCH (6/8)		
Size	Document Number	Rev
	LA-5812P	1.0
Date	Monday, May 10, 2010	Sheet 18 of 55

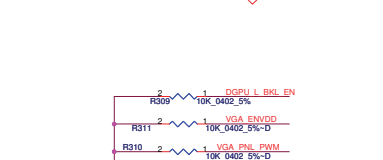
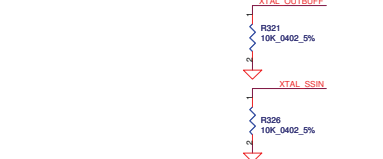
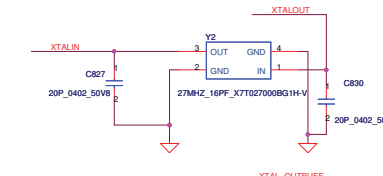




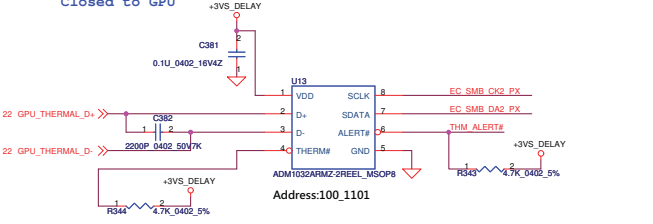
GPIO	I/O	ACTIVE	USAGE
GPIO0	IN	H	N/A
GPIO1	IN	H	HDMI Hot-plug
GPIO2	OUT	H	VGA_PNL_PWM
GPIO3	OUT	H	ENVDD
GPIO4	OUT	H	VGA_BKL_EN
GPIO5	OUT	N/A	NVVDD VIDO
GPIO6	OUT	N/A	NVVDD VID1
GPIO7	IN	L	N/A
GPIO8	IN	L	N/A
GPIO9	IN	L	THM_ALERT#
GPIO10	OUT	N/A	N/A
GPIO11	OUT	N/A	N/A
GPIO12	IN	N/A	N/A
GPIO13	OUT	N/A	N/A
GPIO14	OUT	N/A	N/A
GPIO15	IN	H	DP Hot-plug

GPIO6	GPIO5
GPU_VID1	GPU_VID0
0	0
0	1
1	1

N11P-GS1

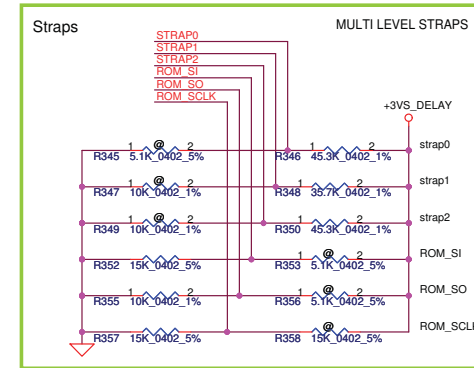
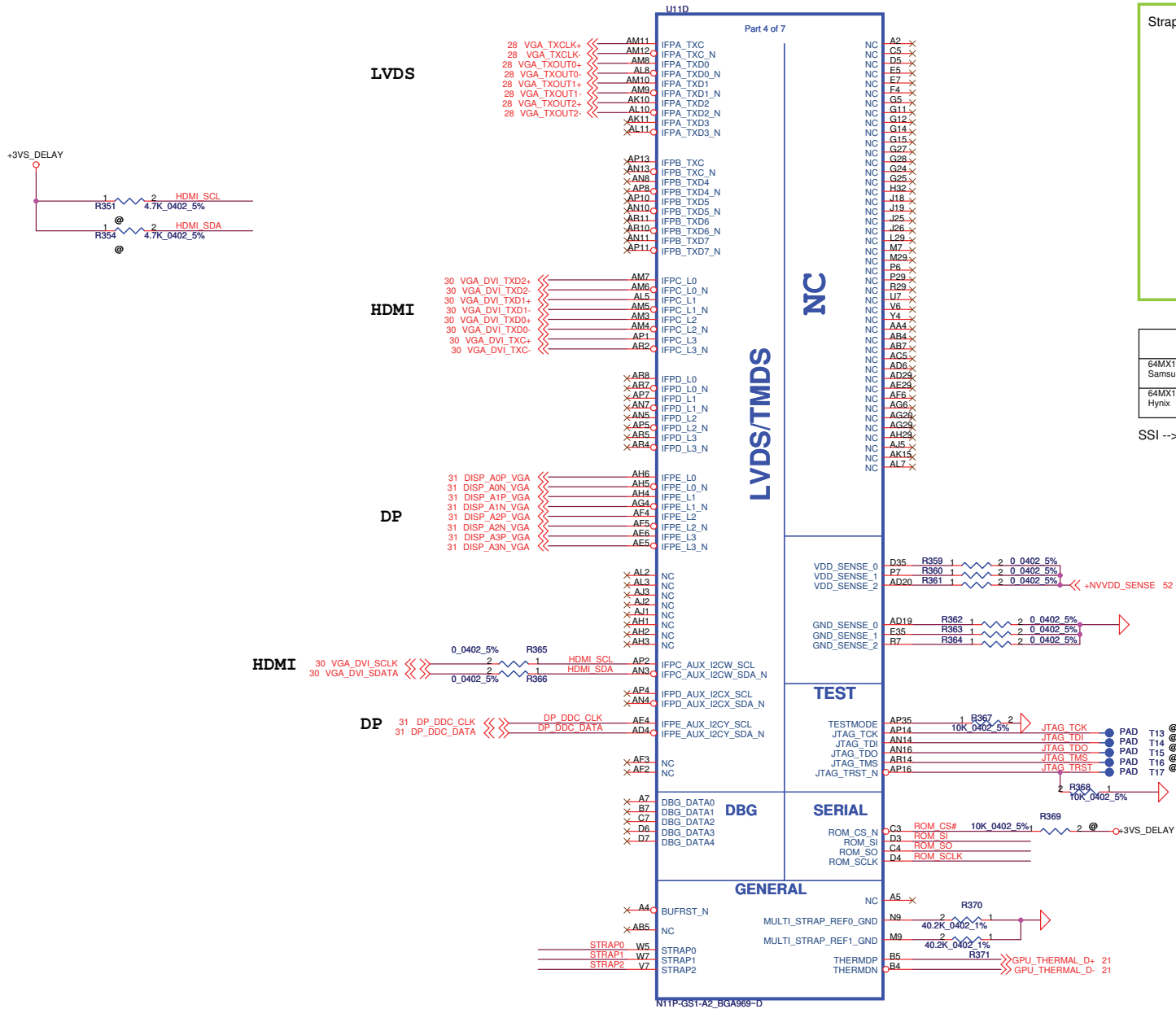


VGA Thermal Sensor ADM1032ARMZ



DELL CONFIDENTIAL/PROPRIETARY

Security Classification	Compal Secret Data	Compal Electronics, Inc.
Issued Date	2009/07/25	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.		Title
		N11P-GS1(1/5)PCIE/STRAPS/THERM
		Site
		LA-5812P
		Date
		Monday, May 10, 2010
		Sheet
		21 of 55

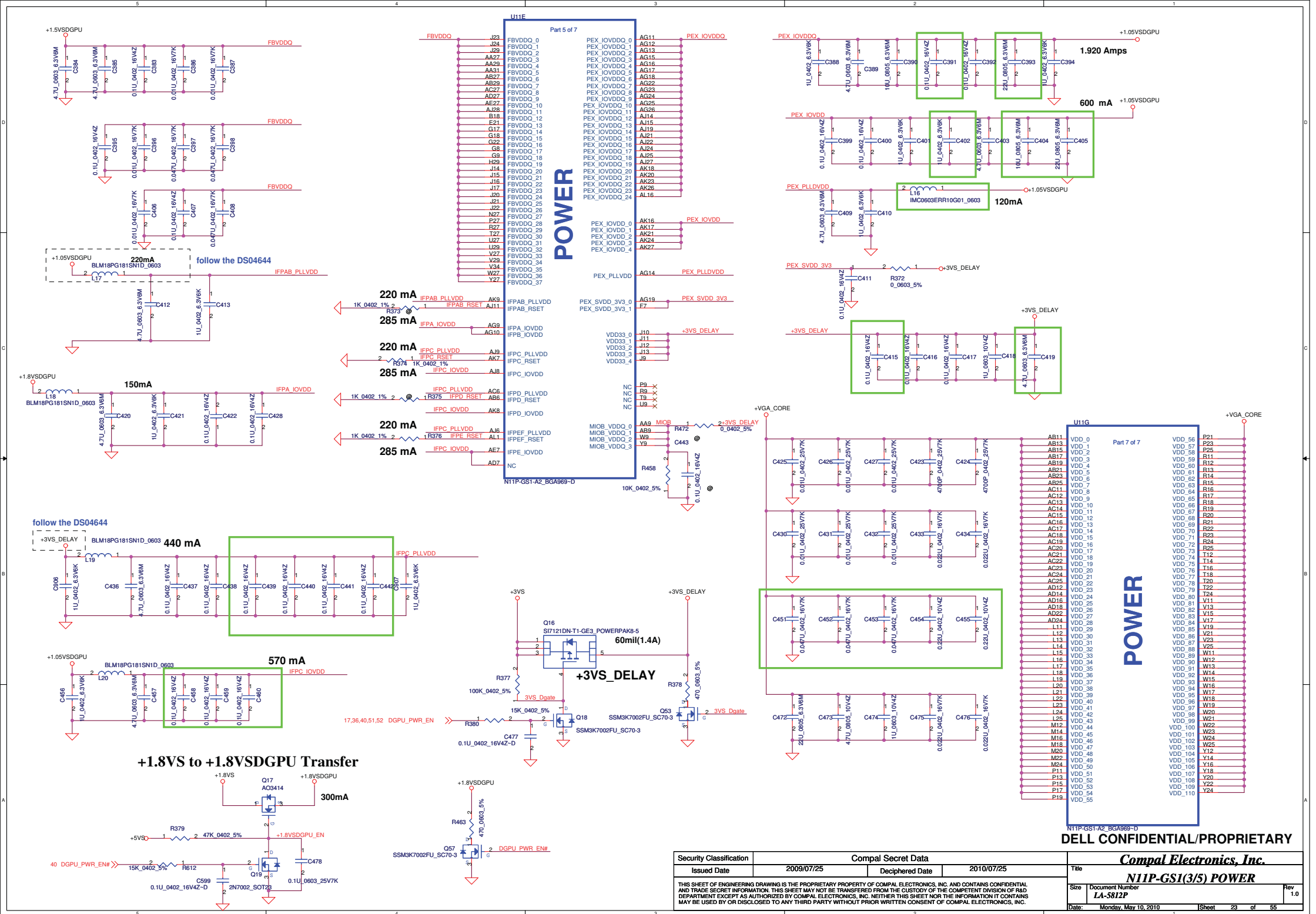


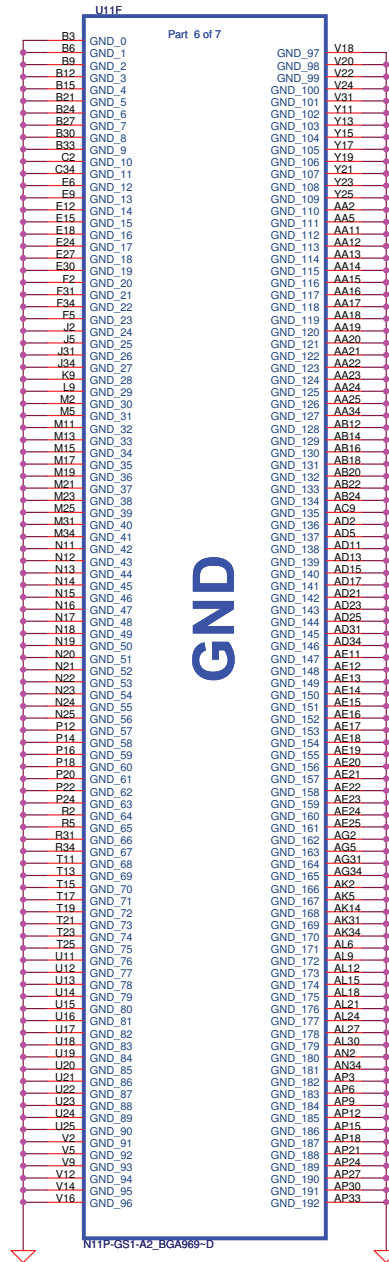
	strap0	strap1	strap2	ROM_SI	ROM_SO	ROM_SCLK
64MX16 Samsung	H 45K	H 35K	L 30K	L 20K	L 10K	H 15K
64MX16 Hynix	H 45K	H 35K	H 45.3K	L 15K	L 10K	H 15K

SSI --> Hynix

DELL CONFIDENTIAL/PROPRIETARY

Security Classification		Compal Secret Data		Title	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				1A-5812P	Rev 1.0
				Date: Monday, May 10, 2010	Sheet 22 of 55

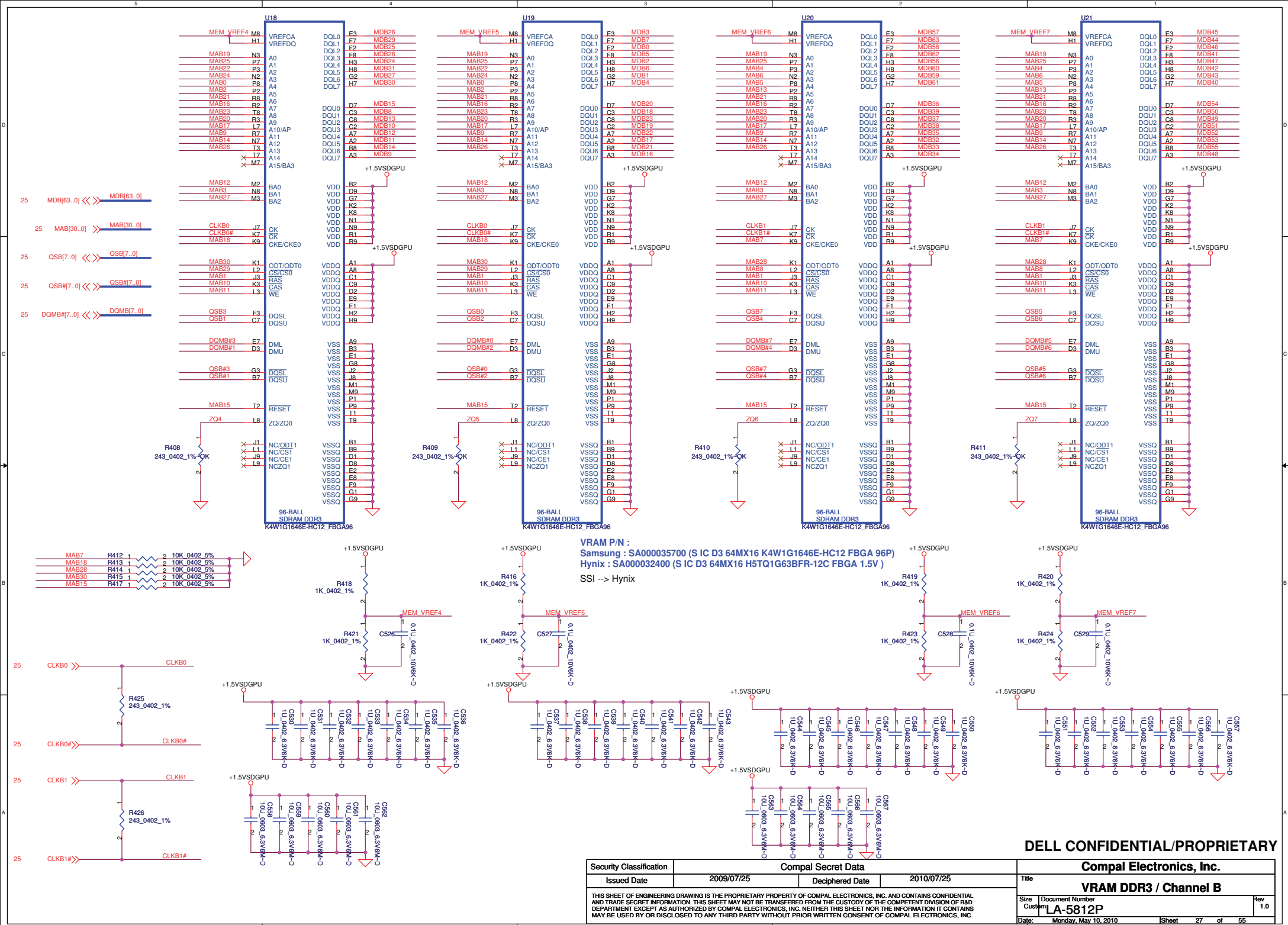




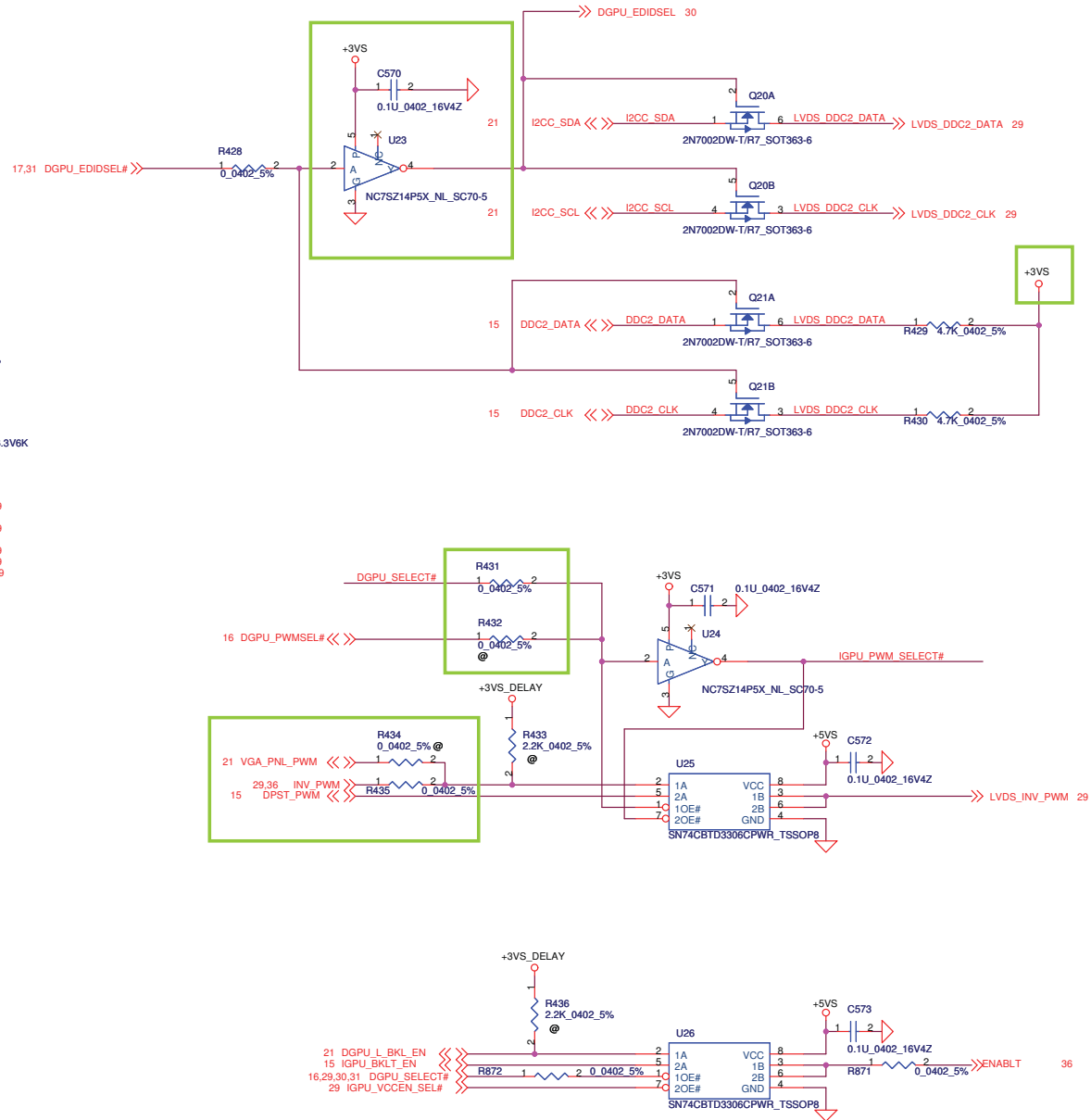
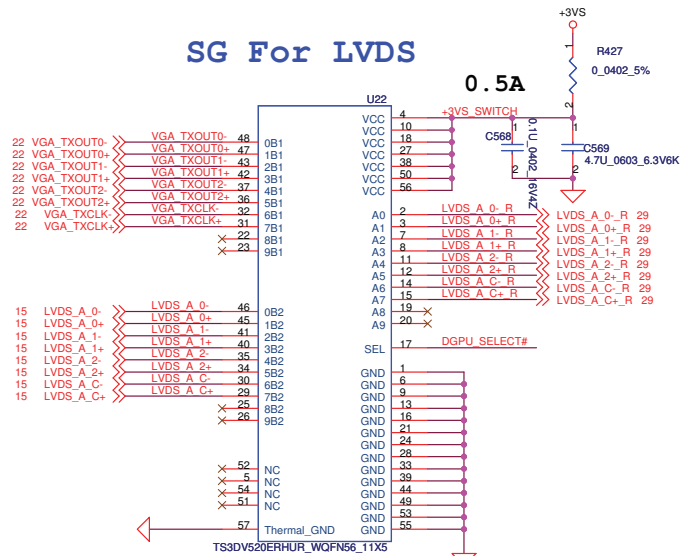
DELL CONFIDENTIAL/PROPRIETARY

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				LA-5812P	Rev 1.0
Date: Monday, May 10, 2010				Sheet 24	of 55

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/07/25	Deciphered Date	2010/07/25	Title	VRAM DDR3 / Channel A	
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 LA-5812P	Rev 1.0
				Date:	Monday, May 10, 2010	
				Sheet	26	of 55

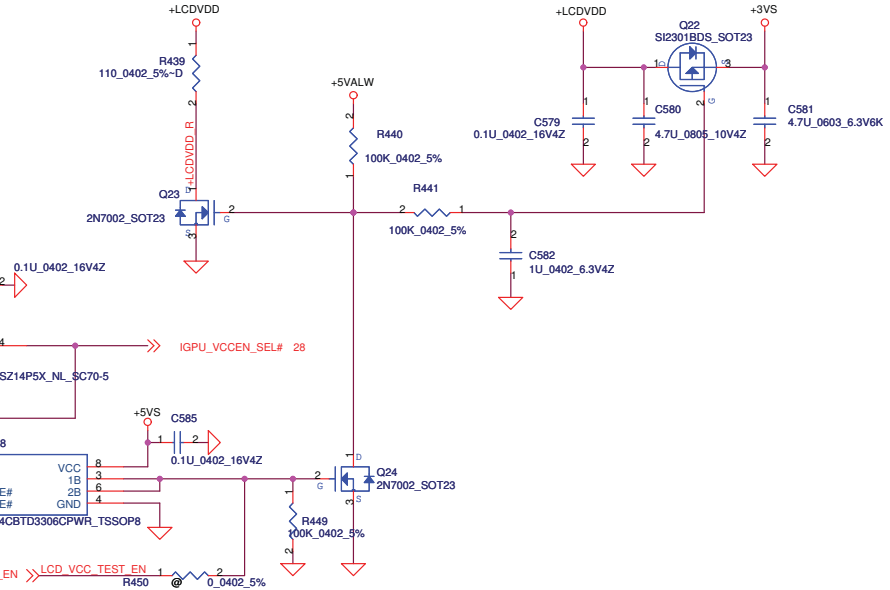
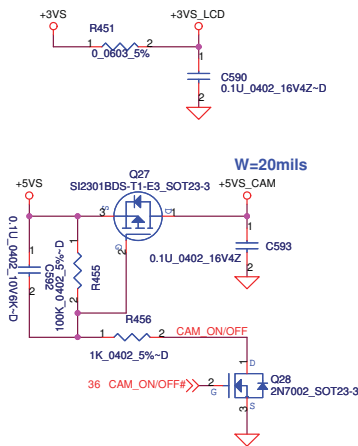
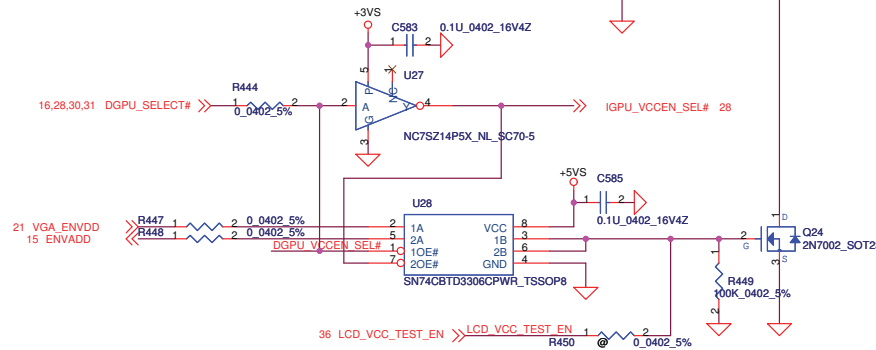
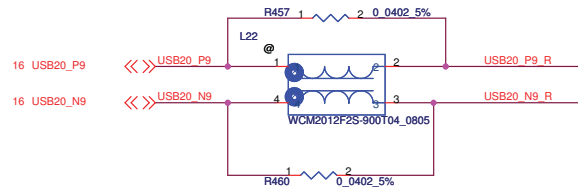
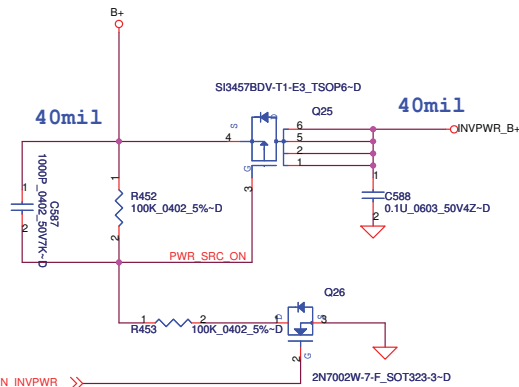
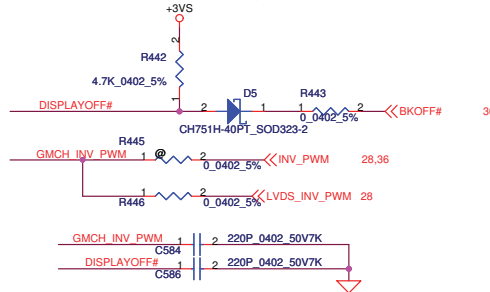
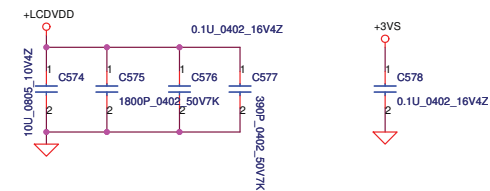


SG For LVDS

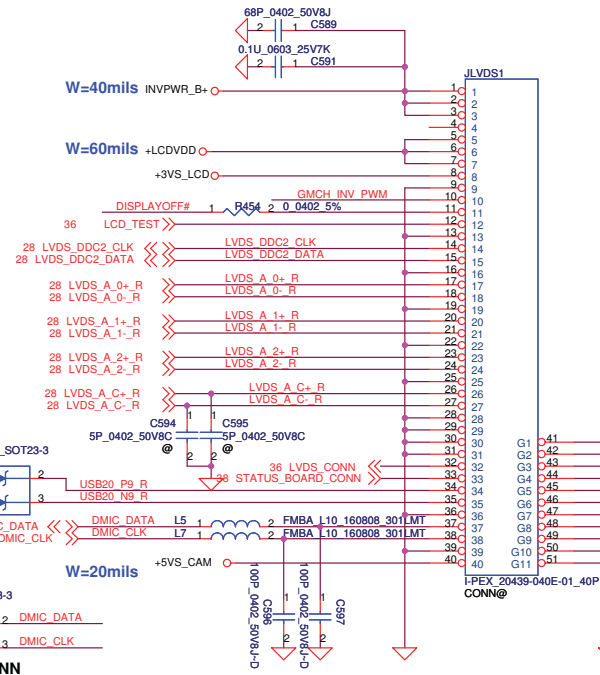


DELL CONFIDENTIAL/PROPRIETARY

Security Classification		Compal Secret Data		Title	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	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.				LVDS Switch	
Size	Document Number	Rev		1.0	
Custom	LA-5812P	Date:		Monday, May 10, 2010	
Sheet		28		of 55	

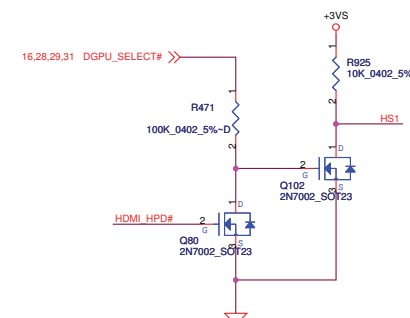
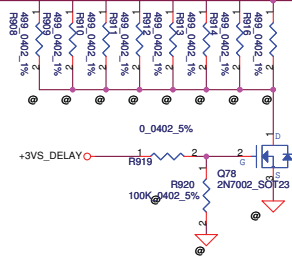


LVDS and USB CAM connector



DELL CONFIDENTIAL/PROPRIETARY

Security Classification		Compal Secret Data		Title	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	LCD CONN	
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
				Monday, May 10, 2010	Rev 1.0
				Sheet 29	of 55



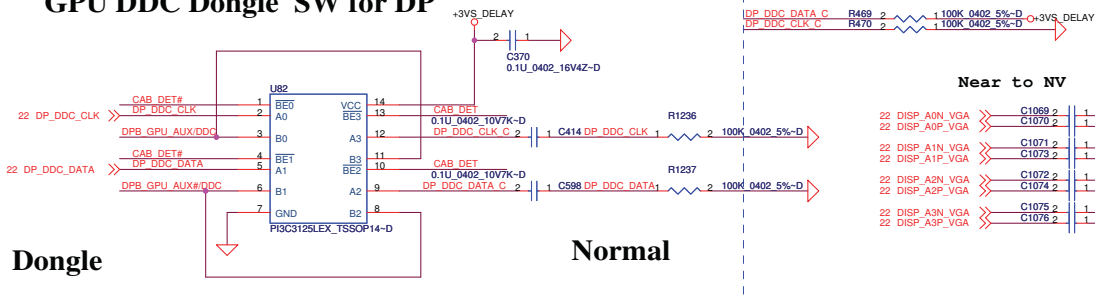
Compal Electronics, Inc.

HDMI

Security Classification		Compal Secret Data		Compal Electronics, Inc. HDMI	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number LA-5812P
				Date:	Monday, May 10, 2010
				Sheet	30 of 55

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

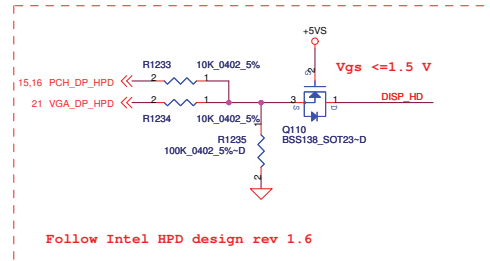
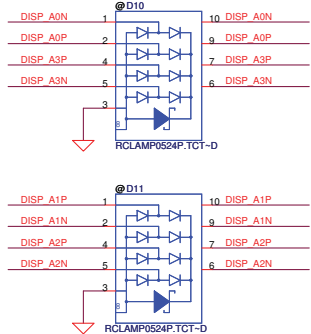
GPU DDC Dongle SW for DP



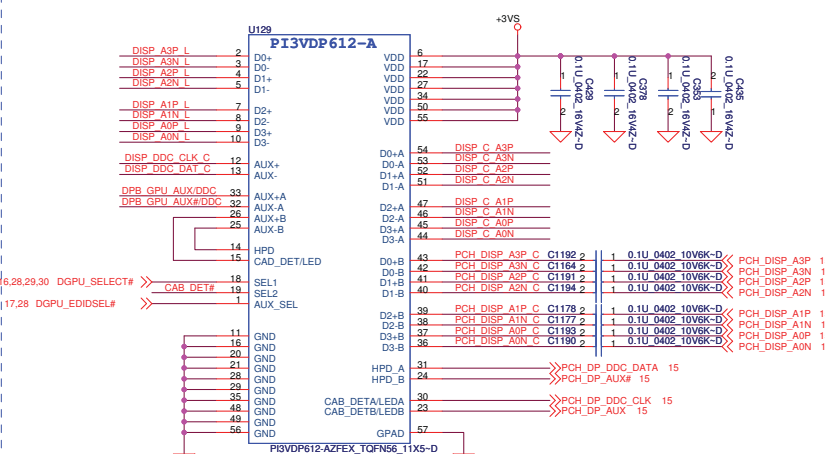
Dongle

Normal

Place close JDP1



PCH/GPU AUX&LANE SW for DPB

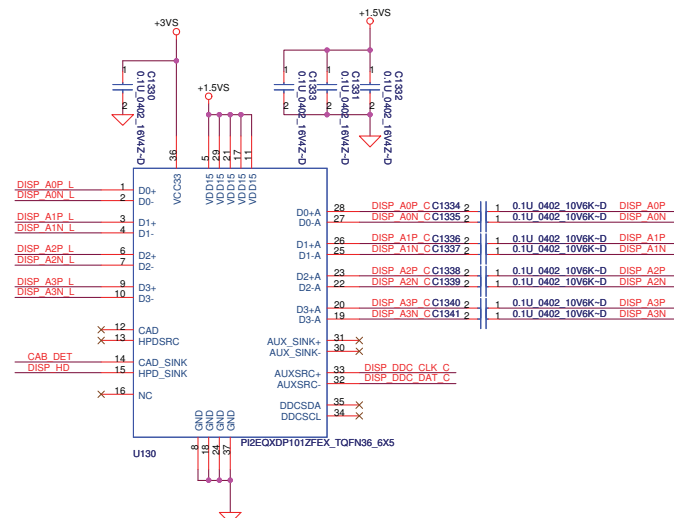


Truth Table (SEL control)

Function	SEL 1/SEL2/AUX_SEL
Port A is active	L
Port B is active	H

Notes:

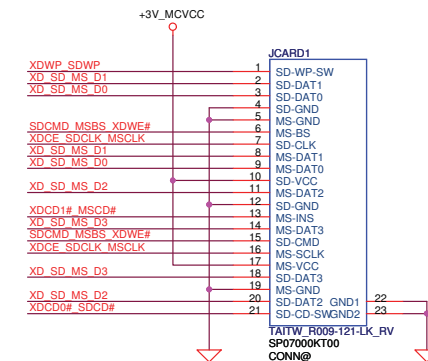
SEL1 is only for DP lanes
SEL2 is only for HPD/CAB_DET signals
AUX_SEL is only for AUX path



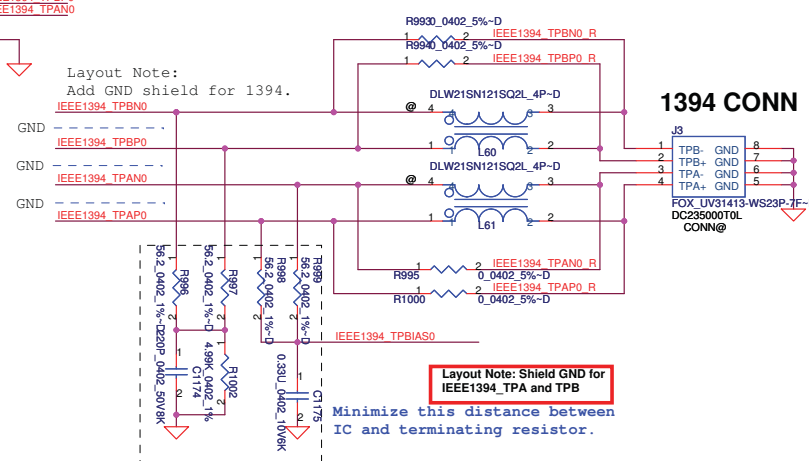
DELL CONFIDENTIAL/PROPRIETARY

Security Classification	Compal Secret Data	Title	Compal Electronics, Inc.
Issued Date	2009/07/25	Deciphered Date	2010/07/25
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	LA-5812P	Rev	1.0
Date:	Monday, May 10, 2010	Sheet	31 of 55

3 in 1 Card Reader CONN

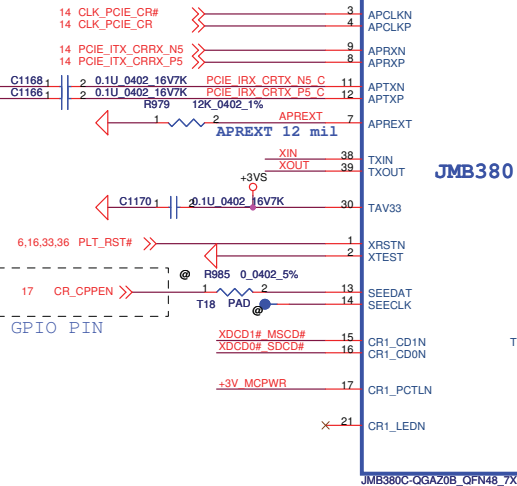
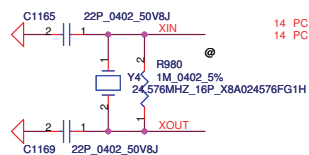
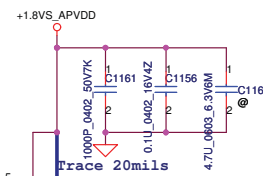
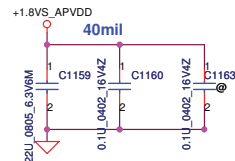
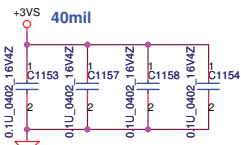


1394 CONN

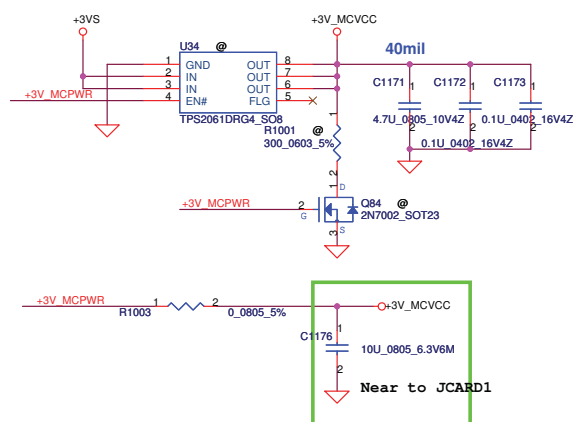


Layout Note:
Add GND shield for 1394.

Layout Note: Shield GND for IEEE1394_TPA and TPB
Minimize this distance between IC and terminating resistor.

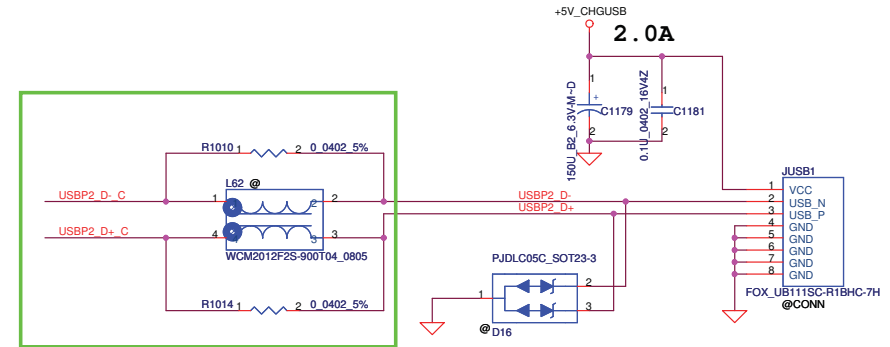
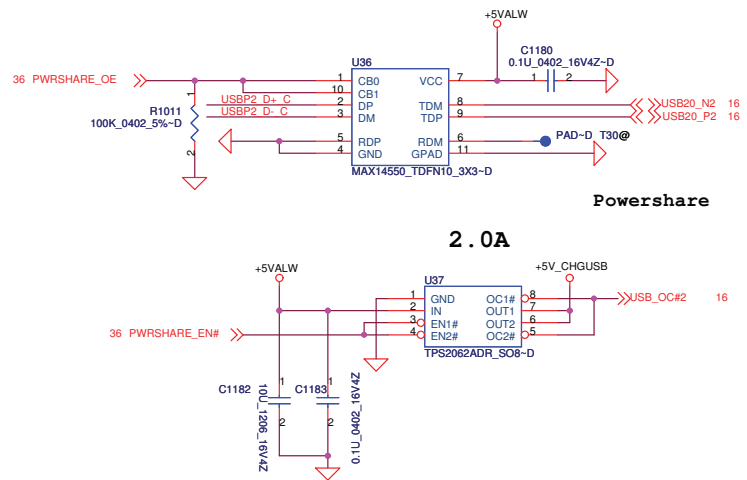
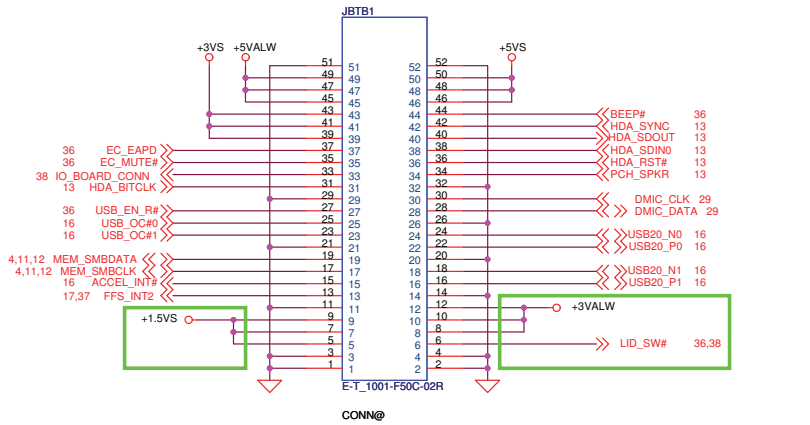


Memory Card Power Switch



Security Classification				Compal Secret Data				DELL CONFIDENTIAL/PROPRIETARY			
Issued Date				2009/07/25				Compal Electronics, Inc.			
Deciphered Date				2010/07/25				CARD READER/1394			
Title				Size				Document Number			
Date				Monday, May 10, 2010				Sheet 34 of 55			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev 1.0							

IO Board CONN



Security Classification		Compal Secret Data		Title	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Custom	LA-5812P
				Date:	Monday, May 10, 2010
				Sheet	35 of 55
				Rev	1.0

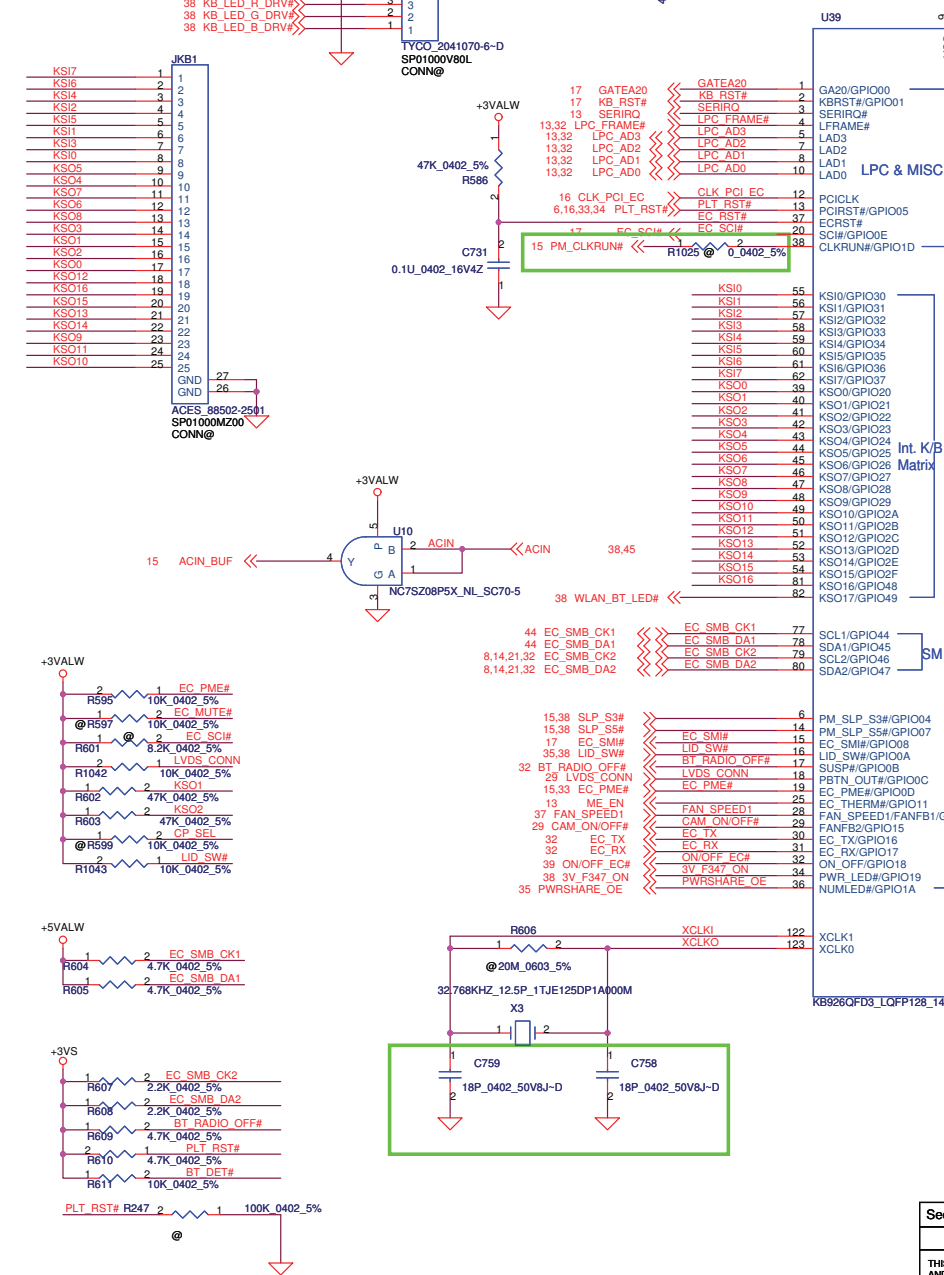
Compal Electronics, Inc.

USB/LID SW/IO CONN

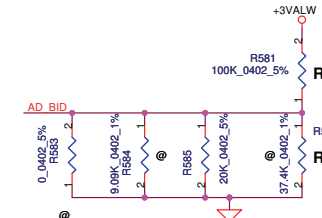
Size: Custom
Document Number: LA-5812P
Date: Monday, May 10, 2010
Sheet: 35 of 55
Rev: 1.0

RSMRST circuit

KEYBOARD CONN.



Board ID



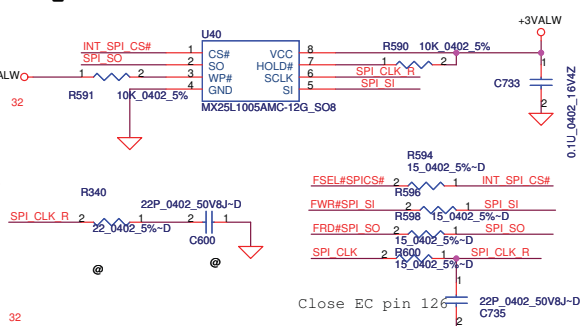
BOARD ID Table

ID	BOARD ID	Ra	Rb	Vab
0	0.1(X00)	NC	0	0V
1	0.2(X01)	100K	9.09K	0.25V
2	0.3(X02)	100K	20K	0.50V
3	1.0(A00)	100K	37.4K	0.82V

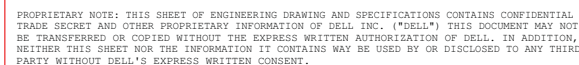
EC Team request

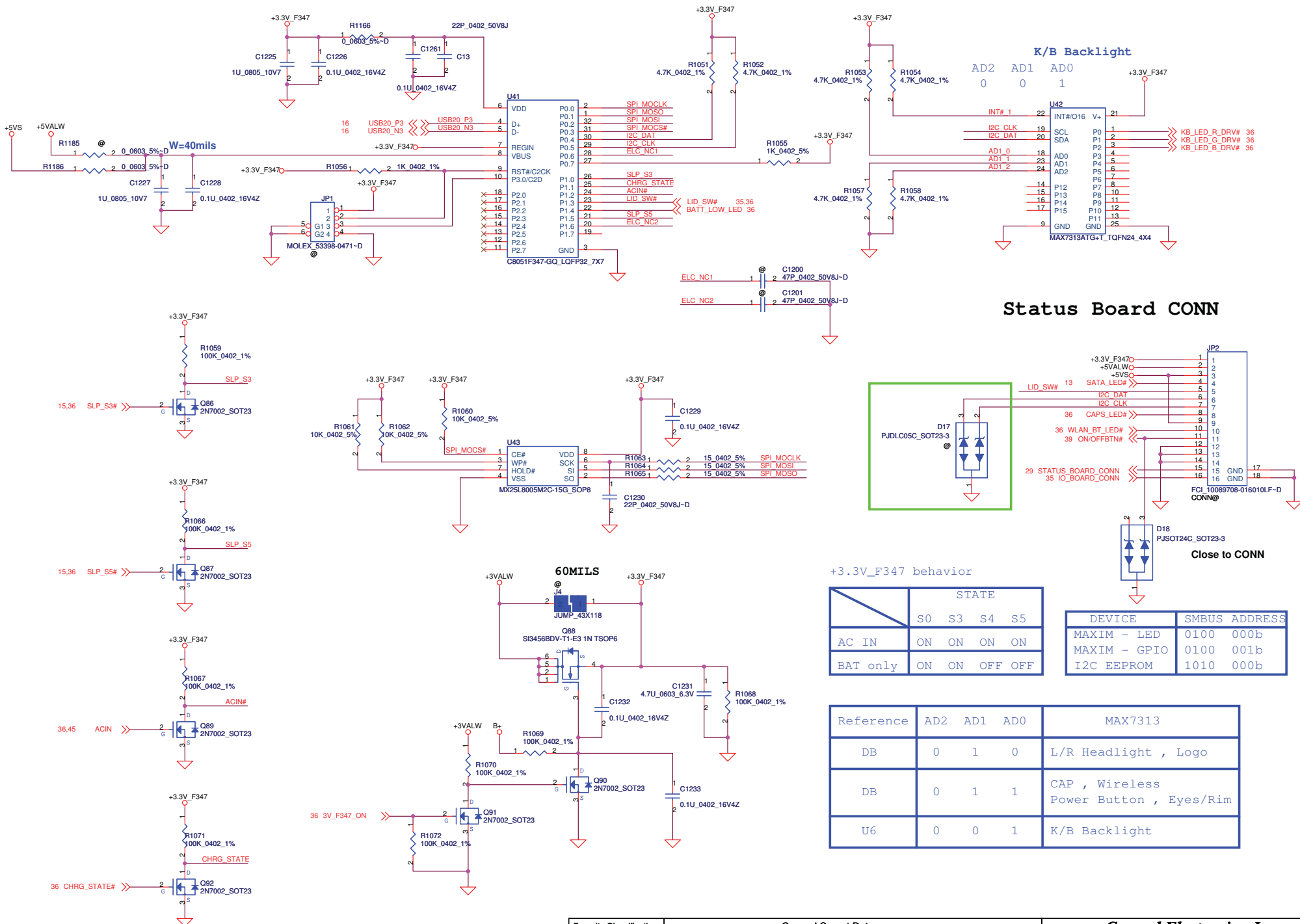


System SPI Flash ROM (1Mb)

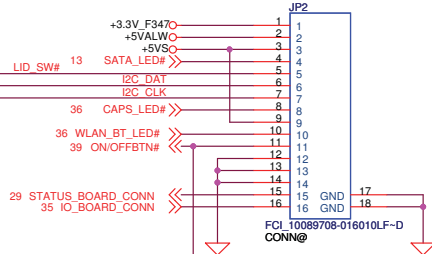
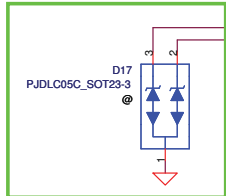


KSO8 @C736	100P_0402_25V8K	100P_0402_25V8K	C737@	KSI7
KSI3 @C738	100P_0402_25V8K	100P_0402_25V8K	C739@	KSI6
KSO9 @C740	100P_0402_25V8K	100P_0402_25V8K	C741@	KSI5
KSI2 @C742	100P_0402_25V8K	100P_0402_25V8K	C743@	KSO0
KSI1 @C744	100P_0402_25V8K	100P_0402_25V8K	C745@	KSO1
KSO10 @C746	100P_0402_25V8K	100P_0402_25V8K	C747@	KSO2
KSO11 @C750	100P_0402_25V8K	100P_0402_25V8K	C751@	KSI4
KSI0 @C752	100P_0402_25V8K	100P_0402_25V8K	C753@	KSO3
KSO12 @C754	100P_0402_25V8K	100P_0402_25V8K	C755@	KSO4
KSO13 @C756	100P_0402_25V8K	100P_0402_25V8K	C757@	KSO5
KSO14 @C760	100P_0402_25V8K	100P_0402_25V8K	C761@	KSO6
KSO15 @C762	100P_0402_25V8K	100P_0402_25V8K	C763@	KSO7
KSO16 @C764	100P_0402_25V8K			





Status Board CONN



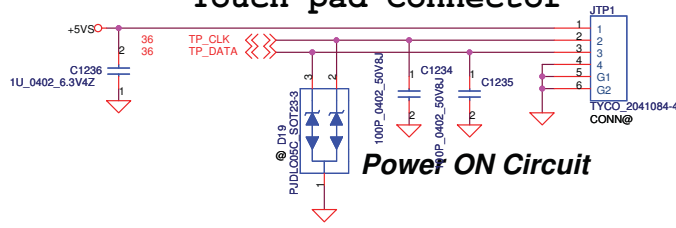
+3.3V_F347 behavior

	STATE			
	S0	S3	S4	S5
AC IN	ON	ON	ON	ON
BAT only	ON	ON	OFF	OFF

DEVICE	SMBUS ADDRESS
MAXIM - LED	0100 000b
MAXIM - GPIO	0100 001b
I2C EEPROM	1010 000b

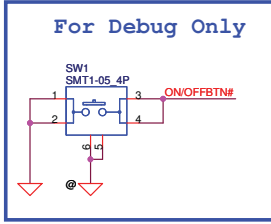
Reference	AD2	AD1	AD0	MAX7313
DB	0	1	0	L/R Headlight , Logo
DB	0	1	1	CAP , Wireless Power Button , Eyes/Rim
U6	0	0	1	K/B Backlight

Touch pad Connector

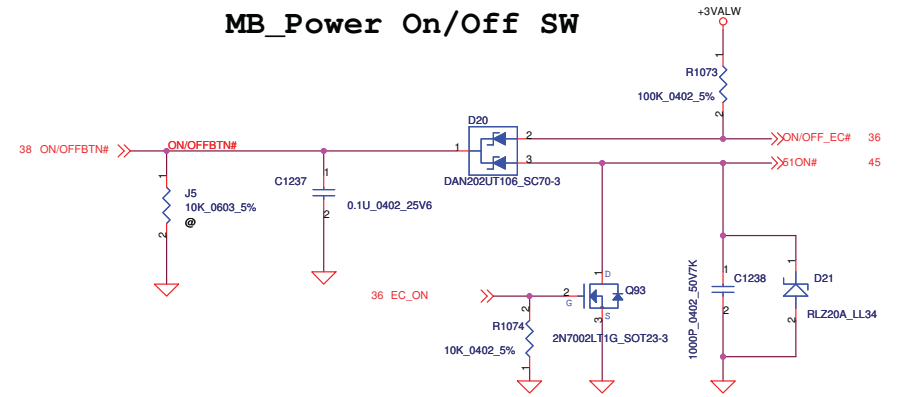


Power ON Circuit

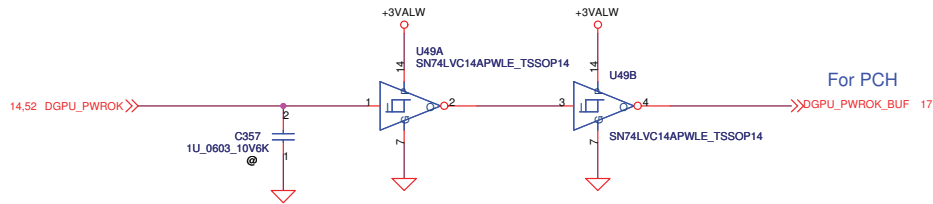
For Debug Only



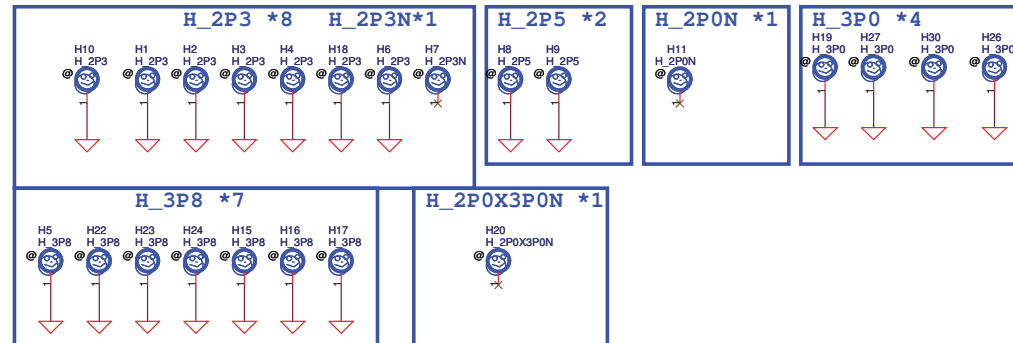
MB_Power On/Off SW



For PCH

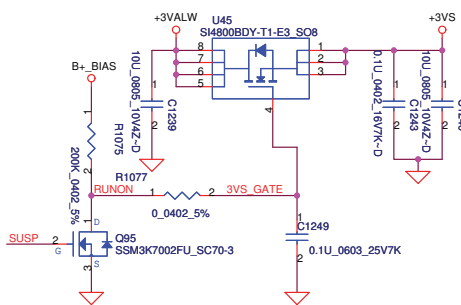


ZZZ
PCB-MB

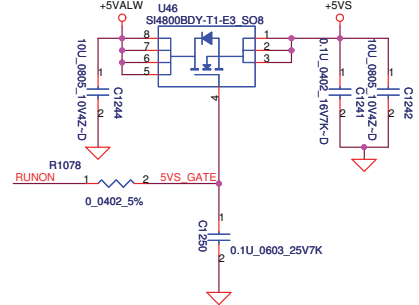


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number LA-5812P
				Date: Monday, May 10, 2010	Rev 1.0
				Sheet 39	of 55

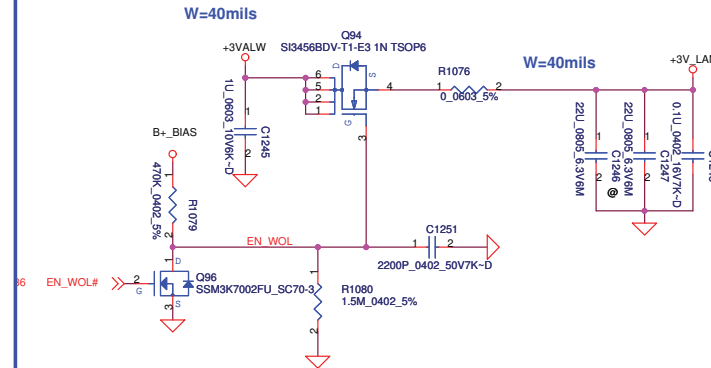
+3VALW to +3VS Transfer



+5VALW to +5VS Transfer

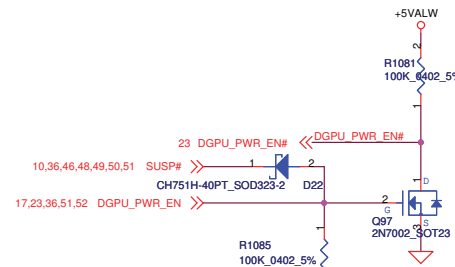
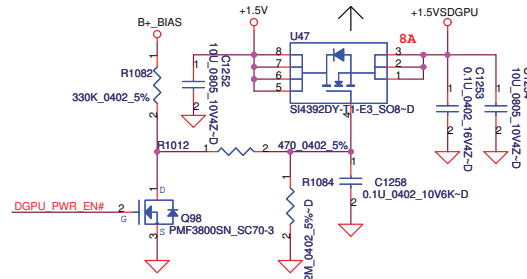


+3VALW to +3LAN Transfer

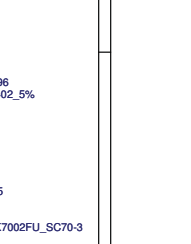
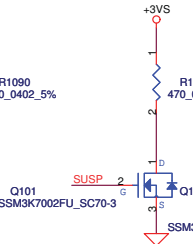
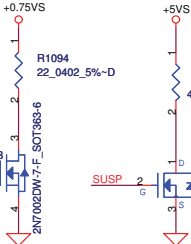
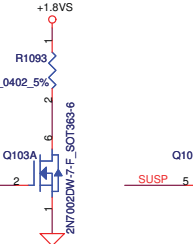
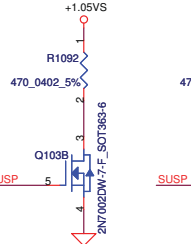
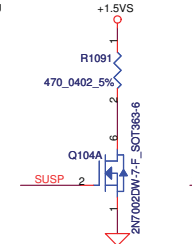
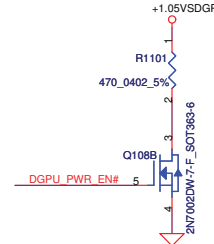
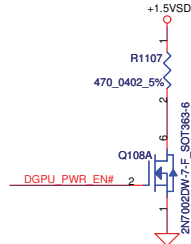
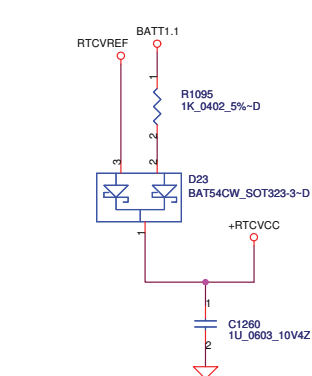
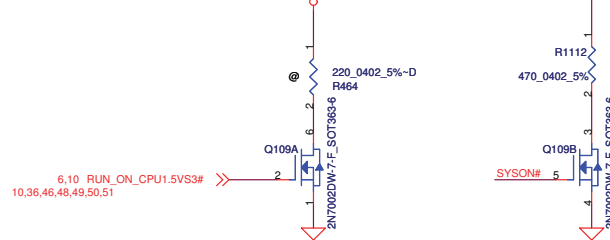
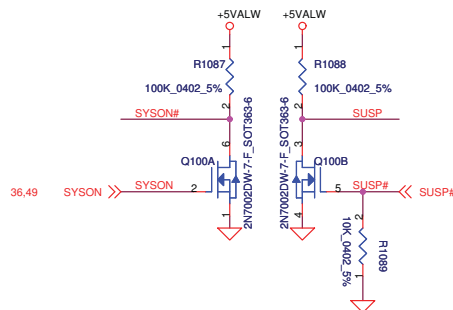
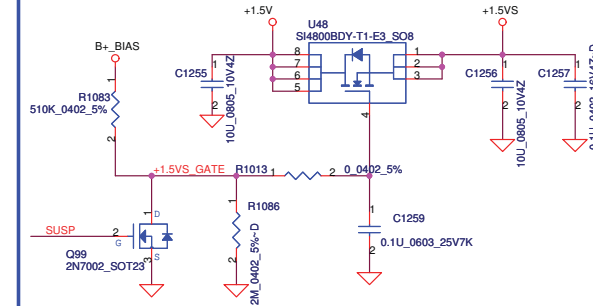


+1.5V to +1.5VSDGPU Transfer

SB54392008L EOL, P/N change to SB54800038L



+1.5V to +1.5VS Transfer



Security Classification		Compal Secret Data		Title	
Issued Date	2009/07/25	Deciphered Date	2010/07/25	DC/DC INTERFACE	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Rev 1.0
Date: Monday, May 10, 2010				Sheet 40	of 55

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

EE section

Page 1 of 2

Item	Reason for change	PG#	Modify List	Date	Phase
1	The S3 status power +3VS leakage	17	Change C1151 to +3VS	2009/12/17	PT
2	The NV vender request	23	Add R472 to link +3VS_Delay and U11 pin AA9,AB9,W9,Y9	2009/12/17	PT
3	The NV vender request	23	Add C443	2009/12/17	PT
4	The power +VCC_CORE can't up	10	Add R226,R227 H_DPRLPVR Pull up,Pull down	2009/12/17	PT
5	The power +VCC_CORE can't up	10	Add R225,R228 H_PSI# Pull up,Pull down	2009/12/17	PT
6	The EA LVDS Part	29	Change BOM R439 from 330ohm to 110ohm	2009/12/21	PT
7	The DGPU_PWR_EN signal to PCH	36	Add R614 to U39	2009/12/21	PT
8	WLAN can't detect	14	Change BOM R186 from 10Kohm to reserve	2009/12/21	PT
9	Audio can't detect	19	Add R1184,R1183	2009/12/21	PT
10	Signal GFX_VR_ON spike noise	10	Change BOM R104 from 10Kohm to 470ohm	2009/12/21	PT
11	The power request MAINPWON del EC control	36	Del MAINPWON FOR EC Command	2009/12/21	PT
12	Add CP_SEL Function decter for 65W or 90W adapter	36	Add CP_SEL link to U39	2009/12/21	PT
13	Intel request 10uf need to 16 pice	9	Add C115	2009/12/21	PT
14	SUS_PWR_ACK signal double Pull high	15	Del R195	2009/12/21	PT
15	DP power change +3vs_delay	31	Change +3vs_delay to R469 pin1 ,U82 Pin14	2009/12/21	PT
16	Intel request PCH check list need to pull high	15	ADD R218 for PCH_DP_DDC_CLK Signal,	2009/12/24	PT
17	Intel request PCH check list need to pull high	15	ADD R219 for DDC2_CLK signal	2009/12/24	PT
18	Intel request PCH check list DP solution	15	Change R467 to +3vs ,R468 to GND	2009/12/24	PT
19	PCH Check list TPM_ID0,TPM_ID1 pull high to +3ALW -->+3VS	17	Change R1147 pin 2 ,R1157 to +3VS	2009/12/24	PT
20	Modify screw H5,H10,H27,H30,H19,H26,H18,H25,H31,H32 for ME request	39	change H5,H10,H27,H30,H19,H26,H18,H25,H32,H31	2009/12/24	PT
21	The power +1.5V_CPU_VDDQ change to EC control	6	Change 0ohm from R223 to R224	2009/12/24	PT
22	The signal VGA_CLKREQ# double control	12	Change BOM R154,Q8 to reserve	2009/12/24	PT
23	The DP vendor request	31	Add R1236,R1237	2009/12/24	PT
24	The EC_SMI# signal double pull up	36	Del R599	2009/12/24	PT
25	The VGA_CLKREQ#_R signal double pull up	11	Del R339	2009/12/24	PT
26	The PCH_RSMRST# Signal double diod	15	Del D2 change to D26	2009/12/24	PT
27	The discharge +1.8VS and +1.5vs change	40	Change Q103A and Q104A location	2009/12/24	PT
28	The ACIN function leakage	36	Del R613,D3	2009/12/24	PT
29	The ACIN function leakage	36	Add Q10	2009/12/24	PT
30	The RF request	4	Add C1186,C1187,C1188 for 47PF to CLK power	2009/12/30	PT
31	The RF request	14	Add C1078 10PF to CLK_PCI_FB signal	2009/12/30	PT
32	The RF request	16	Add C1079 10PF to PCI_MEC(CLK_PCI_EC) signal	2009/12/30	PT
33	The RF request	32	Add C1189 for 47PF to +3Vs JWWANI,but notice to JWWANI connector space	2009/12/30	PT
34	The RF request	38	Add C1200,C1201 to U41 Dummy pin	2009/12/30	PT
35	The BIOS request	36	Add R1113 for PCH_GPI033 to Ec pin25	2009/12/30	PT
36	The EA SPI Fail	13	Change R593 15ohm for PCH_SPI_CLK	2009/12/30	PT
37	The EMI request	29	Change R458,R459 to L5,L7 SM0100I7710	2009/12/30	PT
38	ADD R599 to CP_SEL signal pull high	36	ADD R599 to CP_SEL signal	2010/01/04	PT
39	The NV vender request	23	ADD R458 pull down	2010/01/04	PT
40	The NAP10 request	38	The ELC chip U41 pin8 select +5vs and +5VALW ADD R1185,R1186	2010/01/04	PT
41	The EC part need board ID	36	Change BOM R581 to 100Kohm	2010/01/04	PT
42	The EC part need board ID	36	Change BOM R584 to 9.09Kohm	2010/01/04	PT
43	The EC part need board ID	36	Change BOM R583 from 0ohm to reserve	2010/01/04	PT
44	The power +VCC_CORE add bulk for power request	10	Change BOM C117 add 470uF	2010/01/04	PT
45	The power +VCC_GFXCORE add bulk for power request	9	Change BOM C181 add 330uF	2010/01/04	PT
46	Audio S3/S4 resum fail	13	Change BOM C1262 from 27PF to reserve	2010/01/04	PT
47	H_VITTPWRGD_B Signal	6	add R88,Change R747 connection ,and R746,R747 Change BOM reserve	2010/01/24	PT
48	Leakage +3vs	33	Change BOM R966 to Reserve	2010/02/02	PT
49	The EC part need board ID	36	Change BOM R584 to Reserve	2010/02/05	PT
50	The EC part need board ID	36	Change BOM R585 to 20Kohm	2010/02/05	PT
51	Signal DGPU_PWR_EN two level	17	Change BOM R1148 to reserve	2010/02/10	ST
52	Signal EC_SCI# Pull high	36	Change BOM R601 to Reserve	2010/02/10	ST
53	Signal GPIO0 dual Pull high	17	Remove R1163	2010/02/10	ST
54	HDMI EA TEST	30	Change BOM D8 3CS00004000	2010/02/10	ST
				2010/02/22	ST

Security Classification		Compal Secret Data		Title		
Issued Date		2009/07/25		Deciphered Date		2010/07/25
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 1.0
		Date:		Monday, May 10, 2010		Sheet 41 of 55

Compal Electronics, Inc.

HW Changed-List History-1

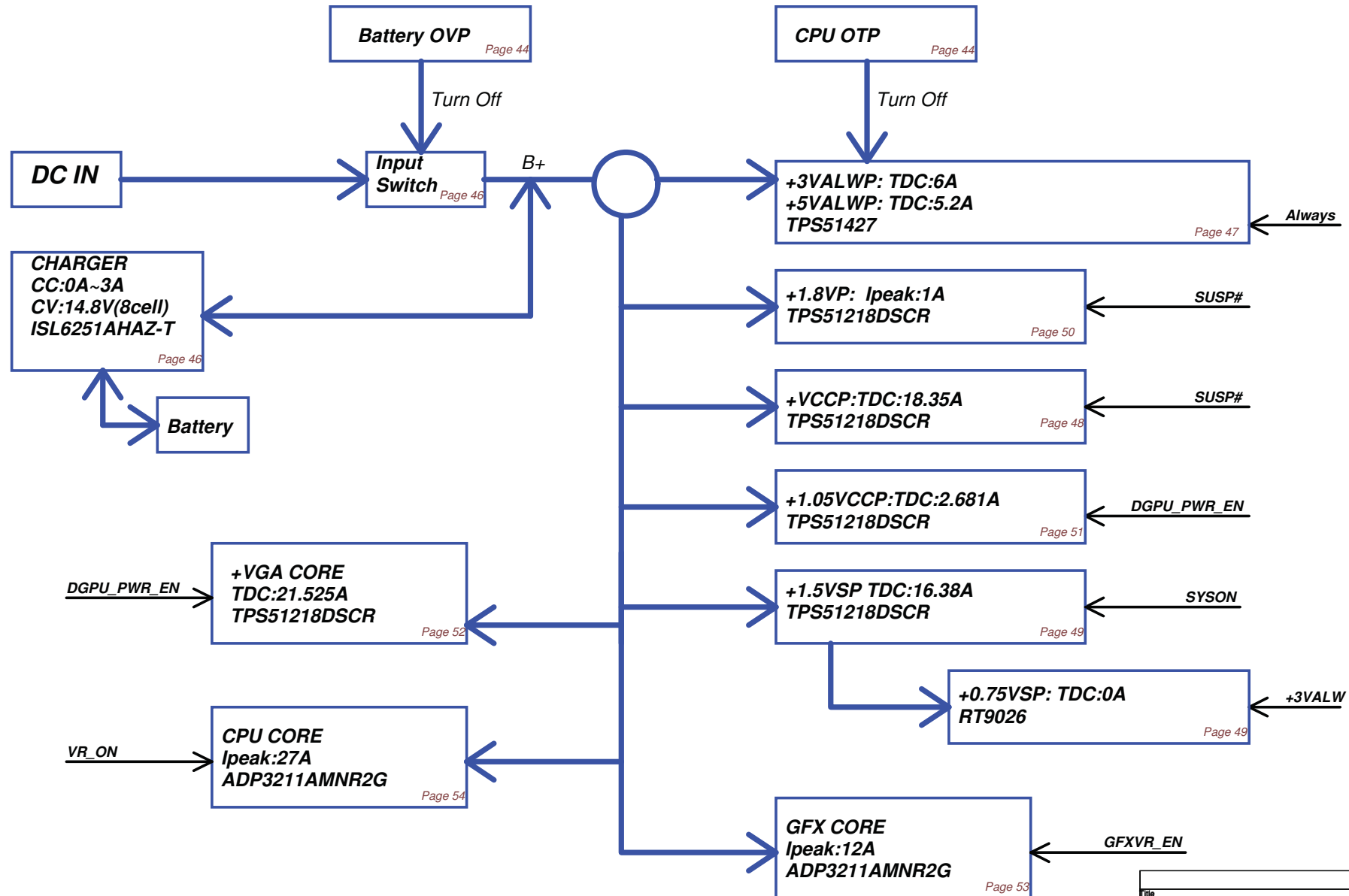
LA-5812P

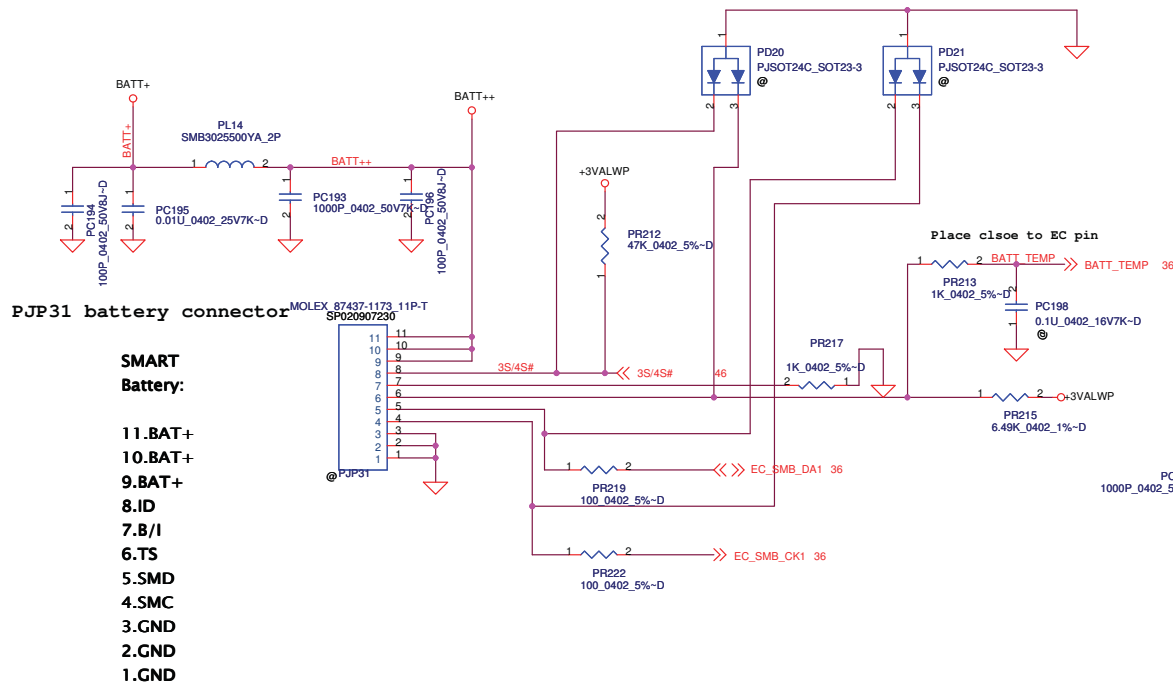
Version change list (P.I.R. List)

EE section

Item	Reason for change	PG#	Modify List	Date	Phase
55	HDMI detector low	17	Add R131 1Kohm	2010/02/22	ST
56	The 1394 and card reader function change to JMB380C	34	Change BOM U33 to SA000023A20	2010/02/23	ST
57	The 1394 and card reader function change to JMB380C	34	Change BOM R980,R990,R992 to reserve	2010/02/23	ST
58	The 1394 and card reader function change to JMB380C	34	Change BOM R979 From 8.2k to 12k	2010/02/23	ST
59	SMBUS Address conflict	8	Change BOM U7 to SA00003YA0L	2010/02/26	ST
60	SMBUS Address conflict	8	Change BOM R306 to 4.7Kohm	2010/02/26	ST
61	Add Power jump to open door	39	Add J5	2010/03/01	ST
62	Detect DP type	16	Add R274	2010/03/01	ST
63	Detect DP type	16	Change BOM 243 to reserve	2010/03/02	ST
64	FFS_INT2 pull up	17	Add R1158	2010/03/03	ST
65	Cost issue	33	Del C1150,C1151	2010/03/04	ST
66	Deep Green	14	Change BOM R186 to 10K	2010/03/09	ST
67	Change Q16 to SI7121DN for +3VS_DELAY 1380mA	23	Change Q16 from SB923010020 to SB00000KI00	2010/04/15	X-build
68	NV Timming	23	Change R380 from SD028000080 to SD028150280	2010/05/10	X-build
69	NV Timming	23	Change C477 to SE07010428L	2010/05/10	X-build
70	NV Timming	23	Change R612 from SD028100180 to SD028150280	2010/05/10	X-build

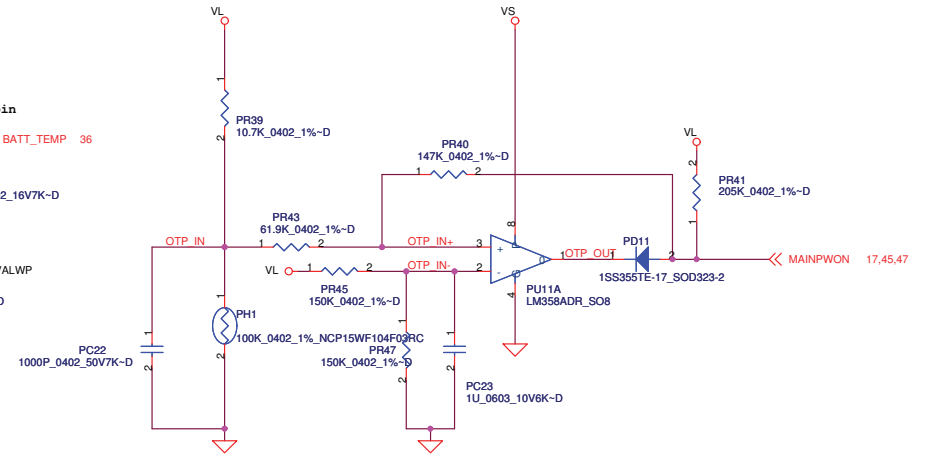
Power block



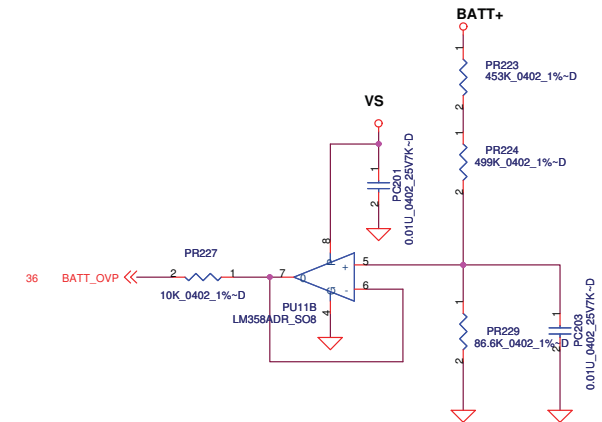
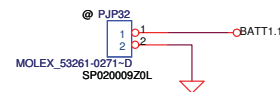
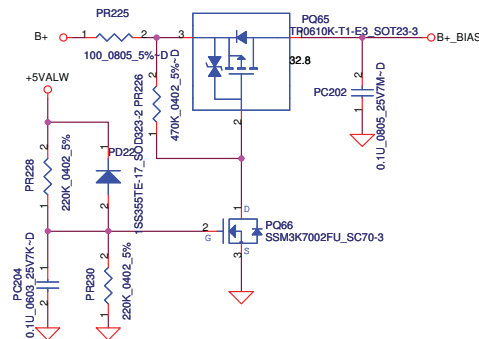


CPU OTP

PH1 under CPU botten side :
CPU thermal protection at 90 +-3 degree C
Recovery at 50 +-3 degree C

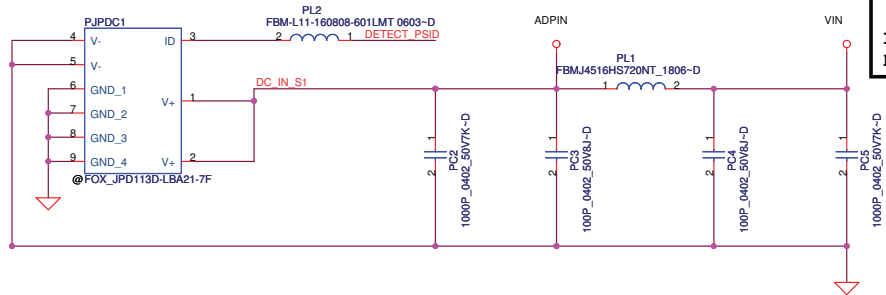


COIN RTC Battery

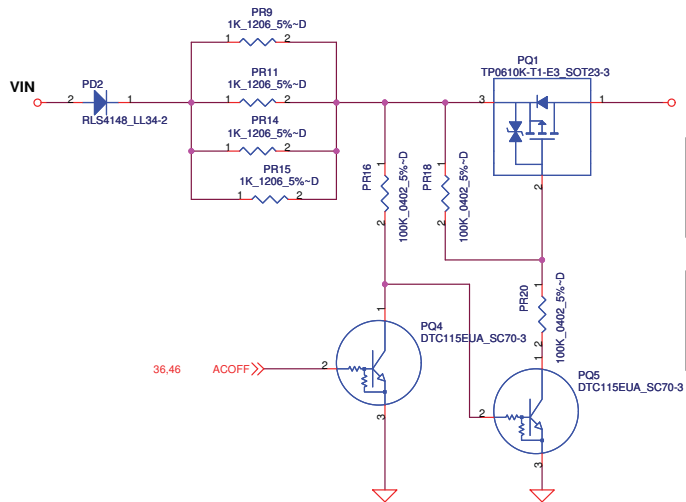


LI-3S :13.5V---BATT-OVP=1.126V
LI-4S :18V---BATT-OVP=1.5V
BATT-OVP=0.08338*BATT+

Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date		Deciphered Date		Title			
				BATTERY CONN/OTP			
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			
				Date:	Monday, May 10, 2010		Sheet 44 of 55

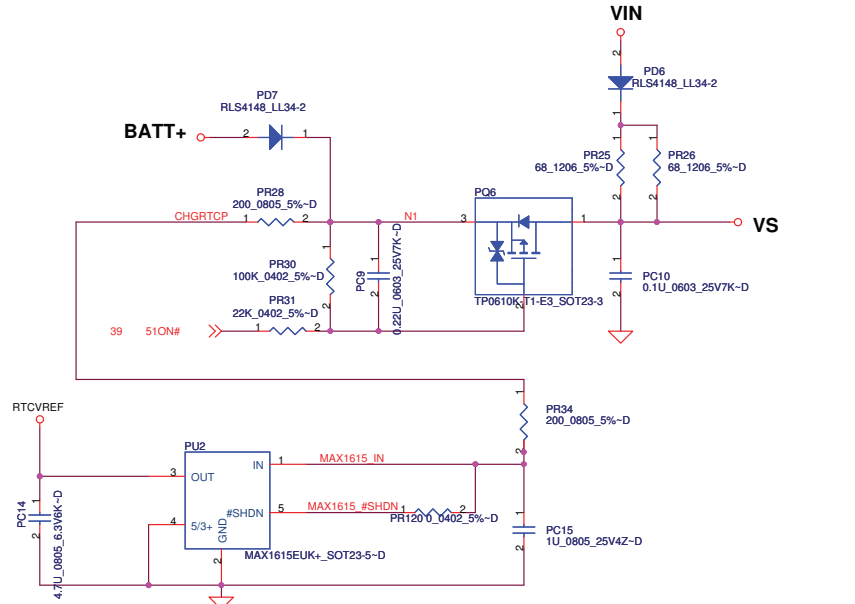
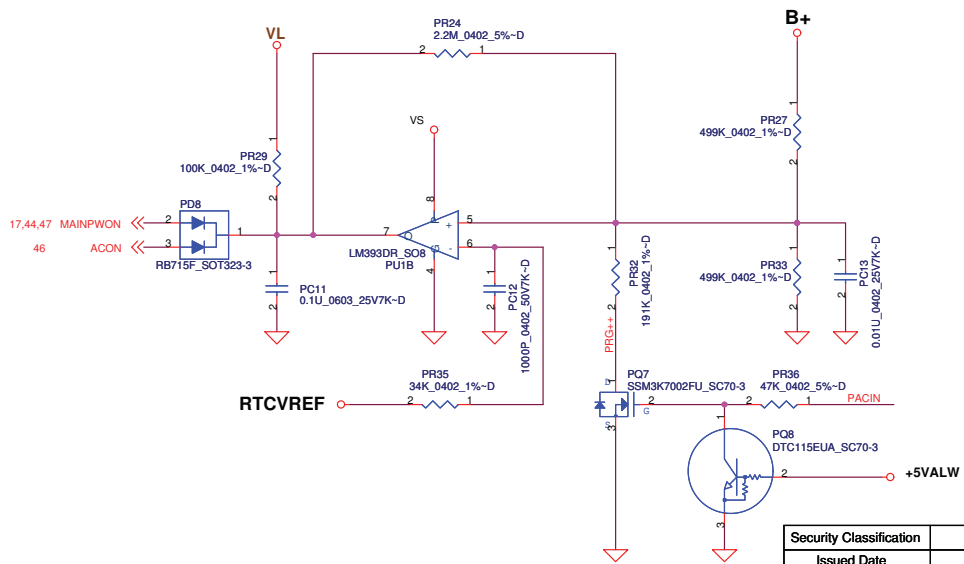
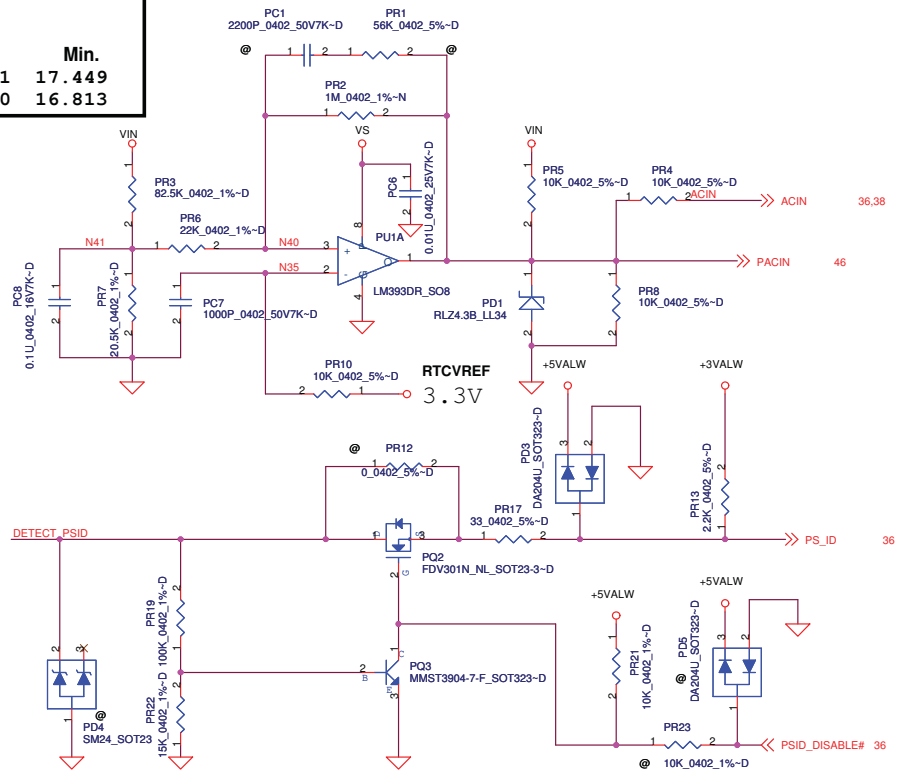


Vin Detector			
	Max.	typ.	Min.
L-->H	18.234	17.841	17.449
H-->L	17.597	17.210	16.813



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

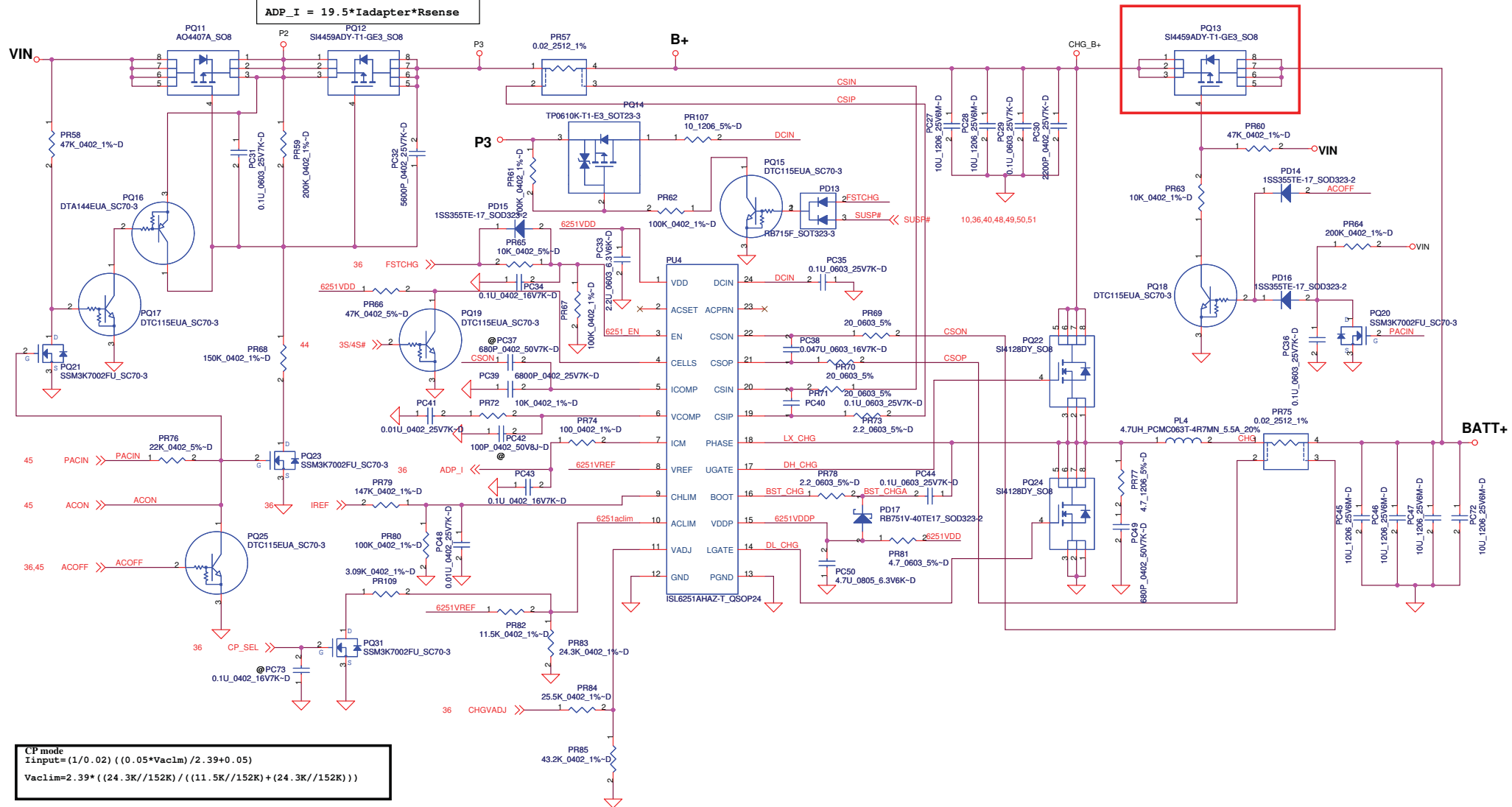
Precharge detector			
	Min.	typ.	Max.
H-->L	6.138V	6.214V	6.359V
L-->H	7.196V	7.349V	7.505V



Security Classification		Compal Secret Data		Compal Electronics, Inc.				
Issued Date		Deciphered Date		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.				DCIN & DETECTOR				
				Size		Document Number		Rev
				Custom				
				Date:		Monday, May 10, 2010		Sheet 45 of 55

Iada=0~4.62A (90W)

ADP_I = 19.5*Iadapter*Rsense

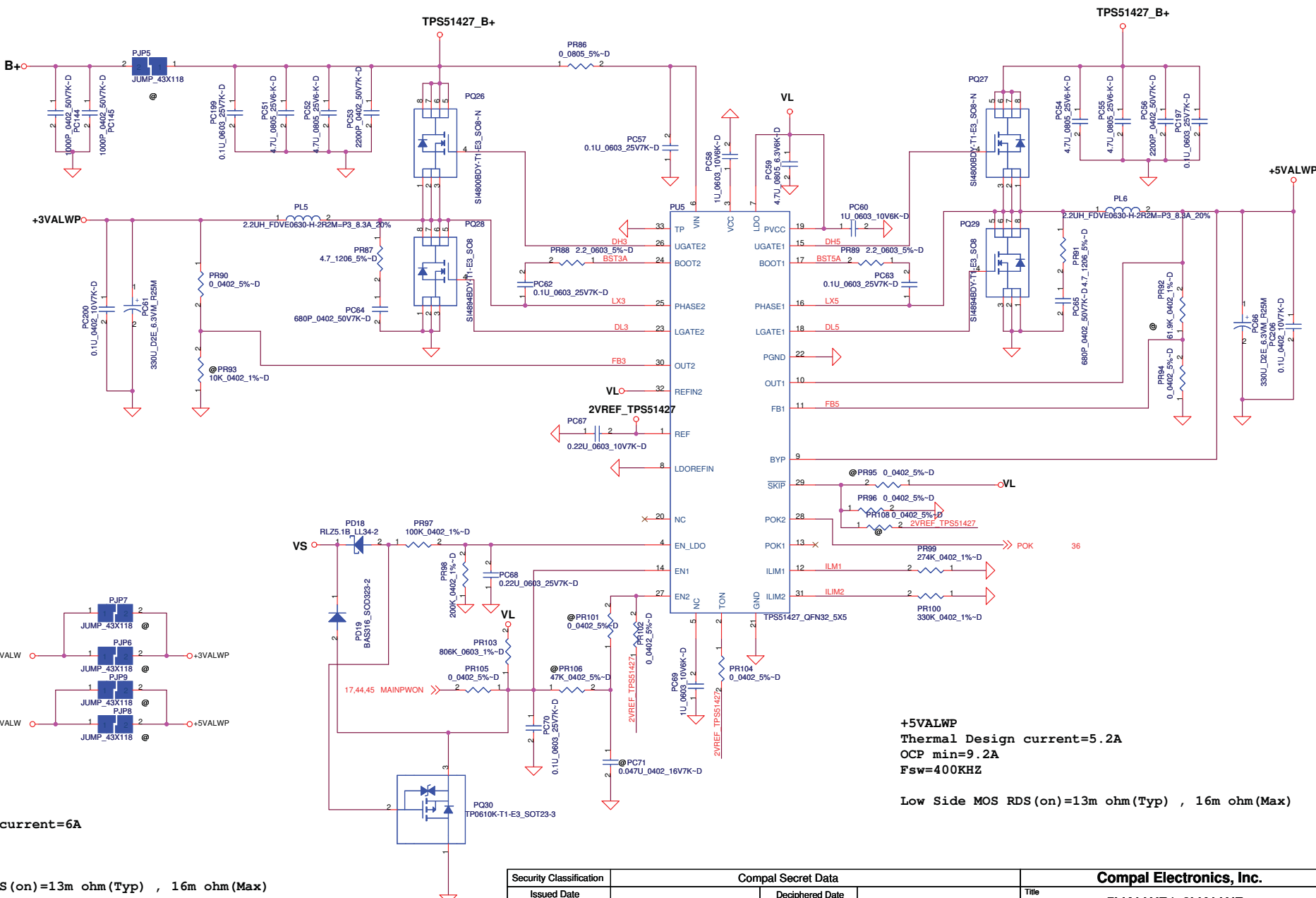


CP mode
 $I_{input} = (1/0.02) * ((0.05 * V_{acim}) / (2.39 + 0.05))$
 $V_{acim} = 2.39 * ((24.3K / 152K) / ((11.5K / 152K) + (24.3K / 152K)))$

CC=3.3A
 IREF=1*Icharge
 IREF=0.25V~3.3V

CHGVADJ	CV mode
0V	3.99V per cell
1.93V	4.2V per cell
3.3V	4.35V per cell

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Date: Monday, May 10, 2010	Sheet 46 of 55	



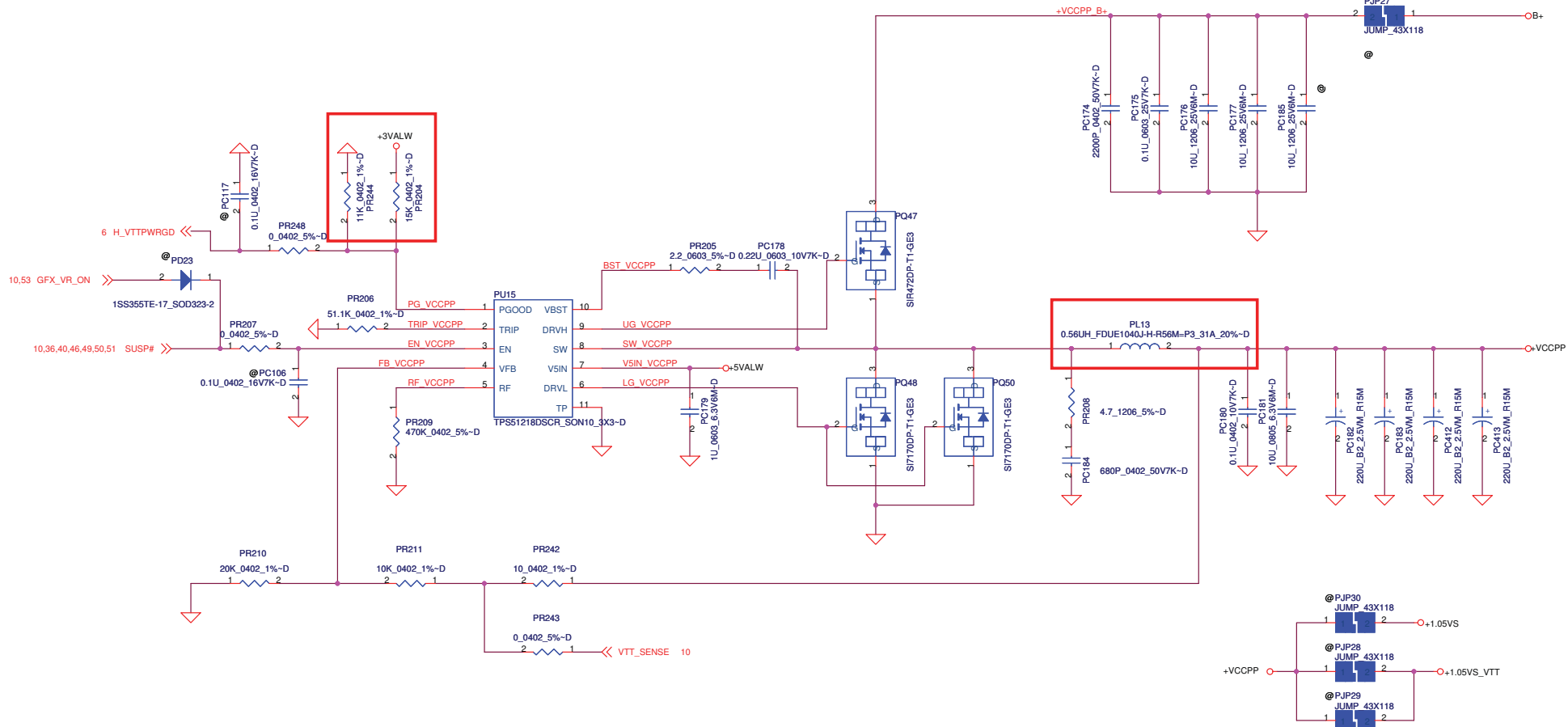
+3.3VALWP
Thermal Design current=6A
OCP min=11A
Fsw=300KHZ

Low Side MOS RDS(on)=13m ohm(Typ) , 16m ohm(Max)

+5VALWP
Thermal Design current=5.2A
OCP min=9.2A
Fsw=400KHZ

Low Side MOS RDS(on)=13m ohm(Typ) , 16m ohm(Max)

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		Deciphered Date		+5VALWP/+3VALWP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Custom	
				Date:	Monday, May 10, 2010
				Sheet	47 of 55



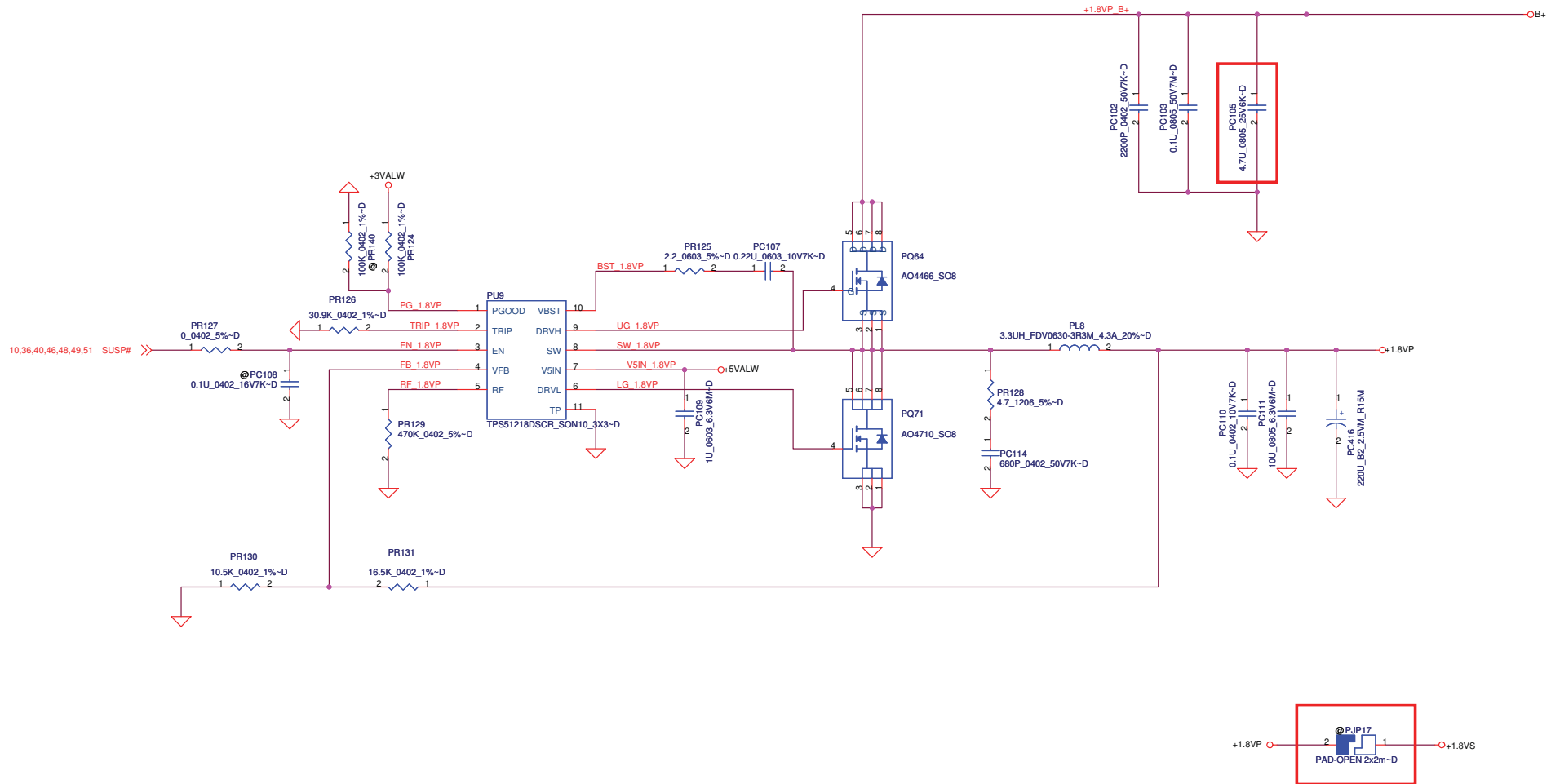
+VCCPP
Thermal Design current=18.35A
OCpmin=27.5A
Fsw=290KHZ

Low Side MOS RDS (on)=1.8m ohm(Typ) , 2.25m ohm(Max)

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title	+VCCPP	
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		
				Date:	Monday, May 10, 2010	Sheet 48 of 55

+1.8VP
Thermal Design current=1A
OCPmin=3A
Fsw=290KHZ

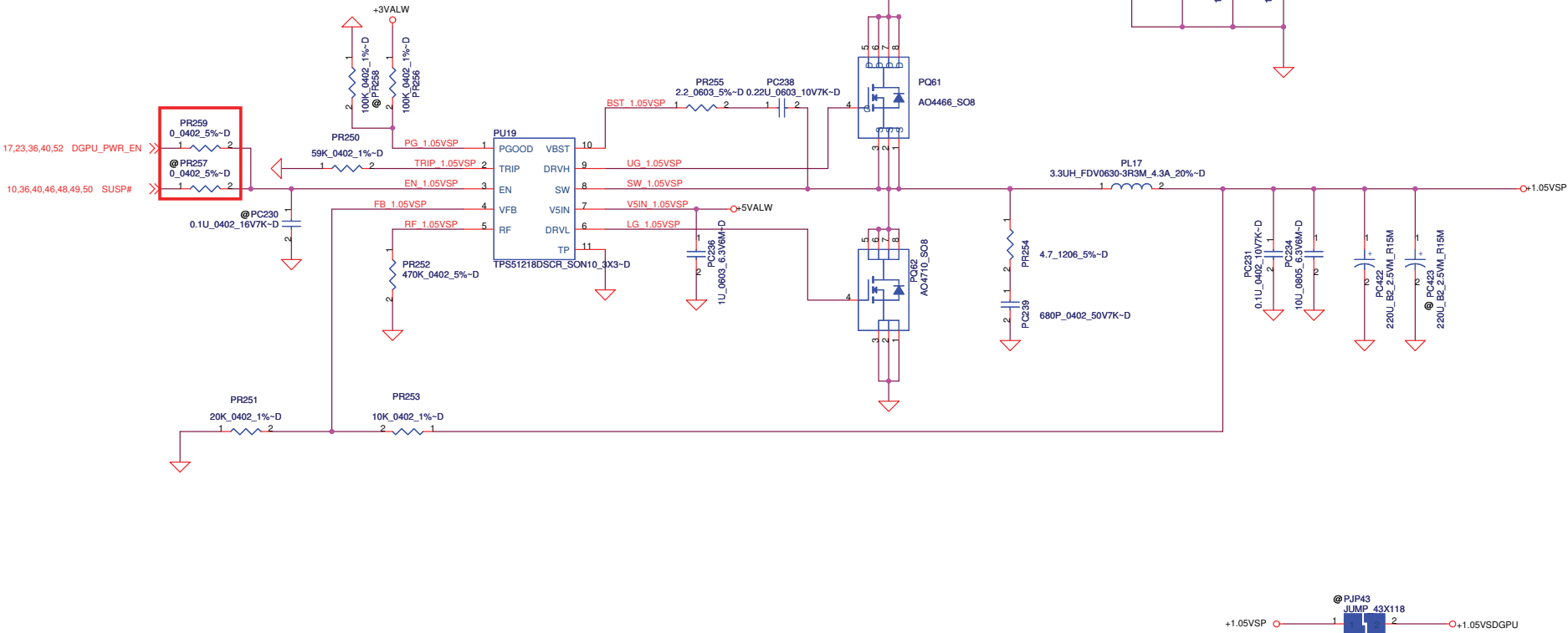
Low Side MOS RDS(on)=11.7m ohm(Typ) , 14.2m ohm(Max)



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		Deciphered Date		Title	+1.8VP
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	Rev
				Date:	Monday, May 10, 2010
				Sheet	50 of 55

+1.05VSP
Thermal Design current=2.681A
OCPmin=5A
Fsw=290KHZ

Low Side MOS RDS(on)=11.7m ohm(Typ) , 14.2m ohm(Max)

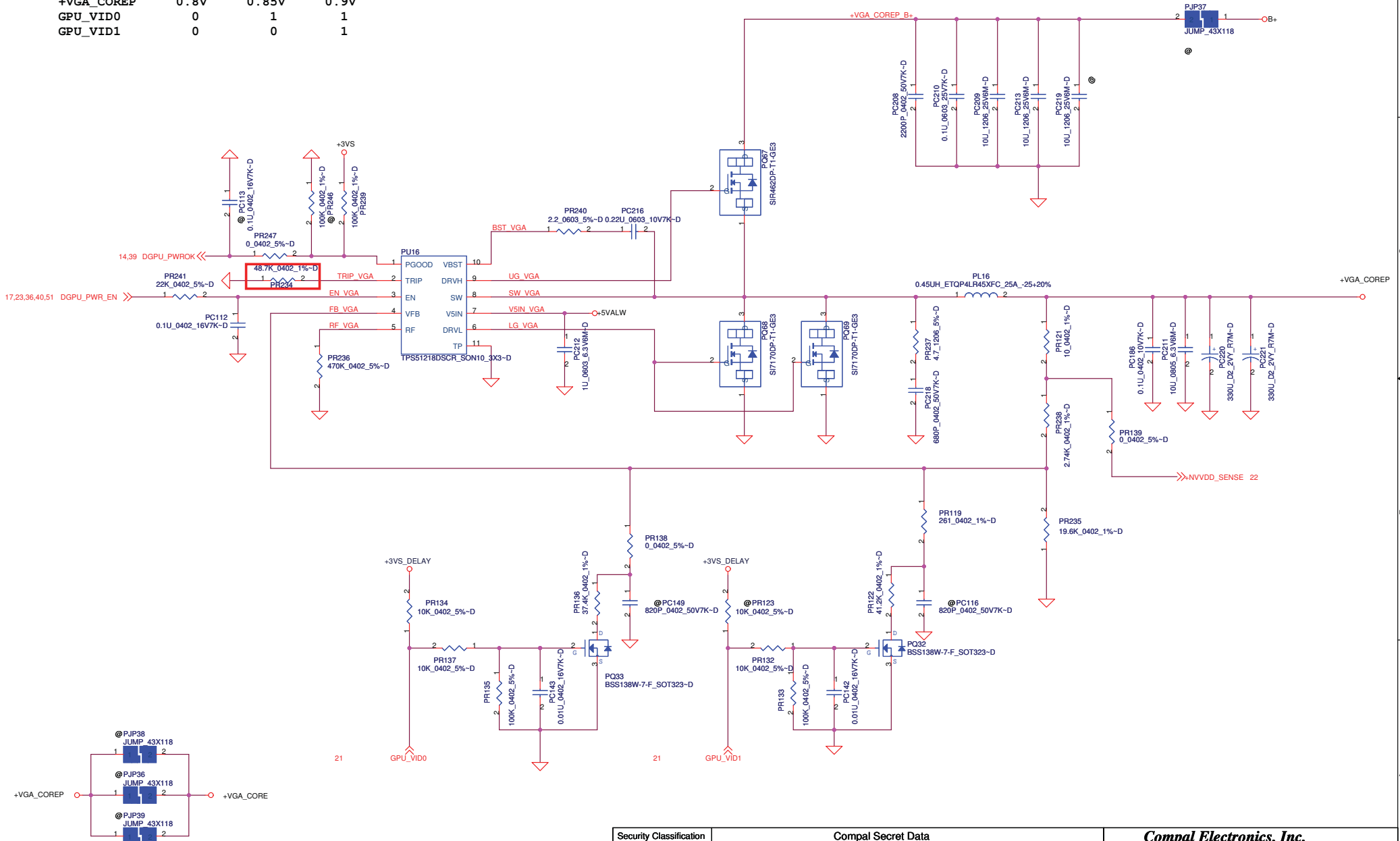


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title	+1.05VSP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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		
				Date:	Monday, May 10, 2010	Sheet 51 of 55

+VGA_COREP
ThermalDesigncurrent=21.525A
OCPmin=36.9A
Fsw=290KHZ
Low Side MOS RDS(on)=1.8m ohm(Typ) , 2.25m ohm(Max)

+VGA_COREP (N11P_GS1) PR122=41.2K ohm

+VGA_COREP	0.8V	0.85V	0.9V
GPU_VID0	0	1	1
GPU_VID1	0	0	1



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title +VGA_COREP		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number	Rev
				Date: Monday, May 10, 2010	Sheet 52 of 55	

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/10/07	Deciphered Date	2012/09/28	Title PWR-PIR		
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 0.1
				Date:	Monday, May 10, 2010	Sheet 55 of 55

www.s-manuals.com