

1

2

3

4

Compal Confidential

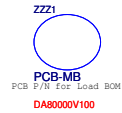
VAL40 MB Schematic Document

LA-8226P

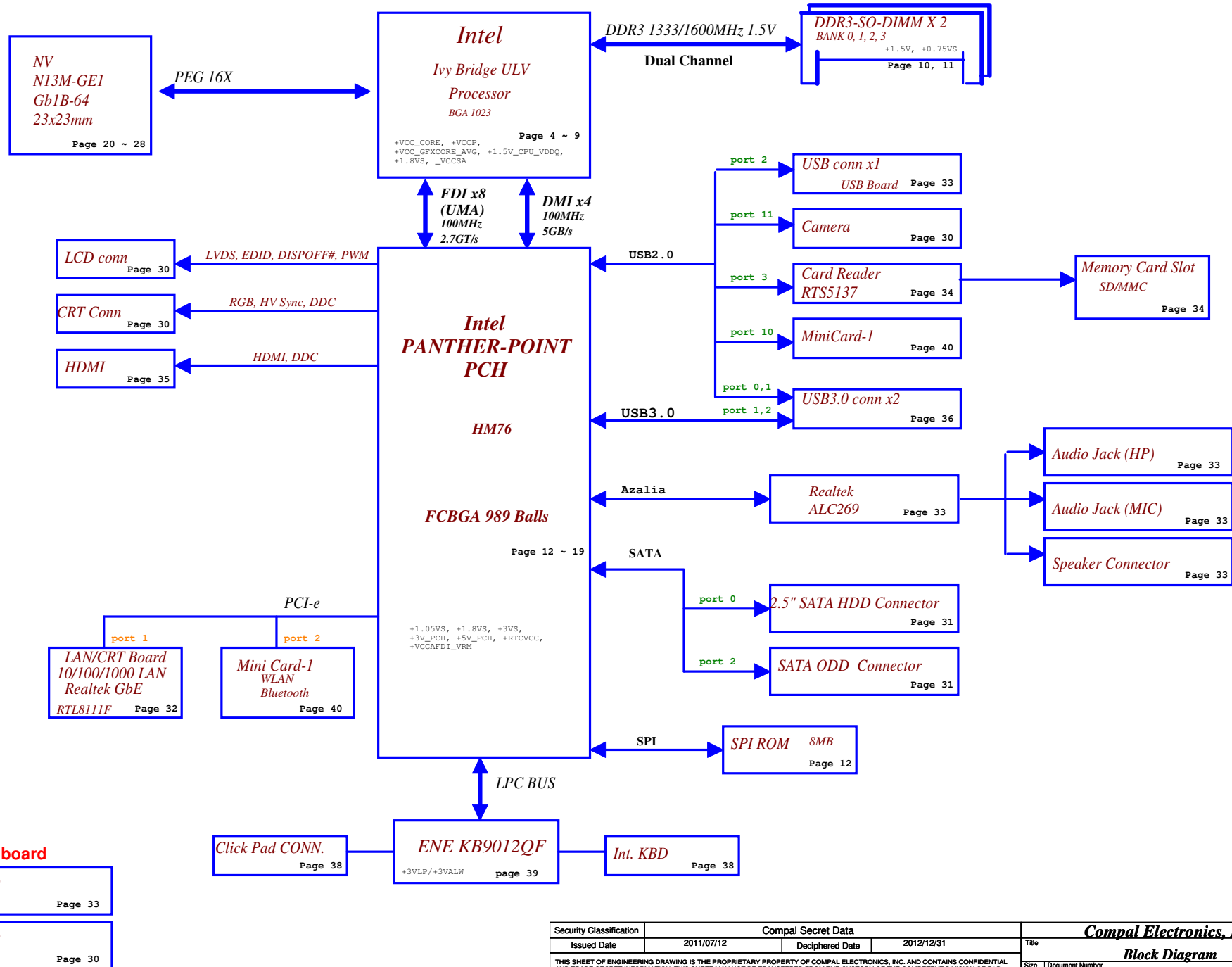
Rev: 1.0

2012.07.06

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	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 RECORDS AND INFORMATION MANAGEMENT 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.				Document Number	Rev
				LA-8226P	1.0
				Date: Monday, July 09, 2012	Sheet 1 of 58



VAL40



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Block Diagram	
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, July 09, 2012				Document Number LA-8226P	Sheet 2 of 58

BTO Option Table

BOM Structure	BTO Item
DIS@	VGA componet
GE8@	N13M-GE1_GB1b-64
X76L07@	VRAM Hynix 2Gb x8 256Mx8
GCLK@	G-CLK
GCLKDIS@	G-CLK + SLG3NB300
GCLKUMA@	G-CLK + SLG3NB244
NONGCLK@	NONE G-CLK
AI@	AI Charger
NAI@	Non AI Charger
46@	HDMI royalty rule
I33110@	CPU BGA I3-3110M 2.4G/3M
I32370@	CPU BGA I3-2370M 2.4G/3M
I32350@	CPU BGA I3-2350M 2.3G/3M

CPU BOM Config

I33310@	I3-3110M	CR	2.4G	SA00005M830 (INT I3-3110M 2.4G/3M SR0N2 BGA)
I32370@	I3-2370M	HR	2.4G	SA000059160 (INT I3-2370M 2.4G/3M SR0DQ BGA)
I32350@	I3-2350M	HR	2.3G	SA00004QXAO (INT I3-2350M 2.3G/3M SR0DQ BGA)

BOM Config : DIS

K45B (i3-3110M) DIS@/GE8@/X7607@/GCLK@/GCLKDIS@/I33110@/NAI@

* K45B (i3-2370M) DIS@/GE8@/X7607@/GCLK@/GCLKDIS@/I32370@/NAI@

BOM Config : UMA

K45B (i3-3110M) GCLK@/GCLKUMA@/I33110@/NAI@

K45B (i3-2370M) GCLK@/GCLKUMA@/I32370@/NAI@

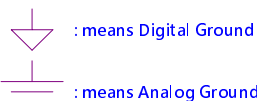
* K45B (i3-2350M) GCLK@/GCLKUMA@/I32350@/NAI@

SMBUS Control Table

	SOURCE	MINI1	BATT	PCH	EC	SODIMM	DGPU
EC_SMB_CK1 EC_SMB_DA1	KB930	X	V	X	X	X	X
EC_SMB_CK2 EC_SMB_DA2	KB930	X	X	V	X	X	V
PCH_SMBCLK PCH_SMBDATA	PCH	V	X	X	X	V	X
PCH_SMLCLK PCH_SMLDATA	PCH	X	X	X	V	X	V

CLK	DIFFERENTIAL	DESTINATION	FLEX CLOCKS	DESTINATION
	CLKOUT_PCIE0	10/100/1G LAN	CLKOUTFLEX0	CLK_SD_48M
	CLKOUT_PCIE1	MINI CARD WLAN	CLKOUTFLEX1	None
	CLKOUT_PCIE2	None	CLKOUTFLEX2	None
	CLKOUT_PCIE3	USB3.0 controller	CLKOUTFLEX3	None
	CLKOUT_PCIE4	None		
	CLKOUT_PCIE5	None		
	CLKOUT_PCIE6	None		
	CLKOUT_PCIE7	None		
	CLKOUT_PEG_B	None		

Symbol Note :



VRAMX8X8



CPU



CLKOUT	DESTINATION
PCI0	PCH_LOOPBACK
PCI1	EC
PCI2	None
PCI3	LPC Debug Port
PCI4	None

Voltage Rails

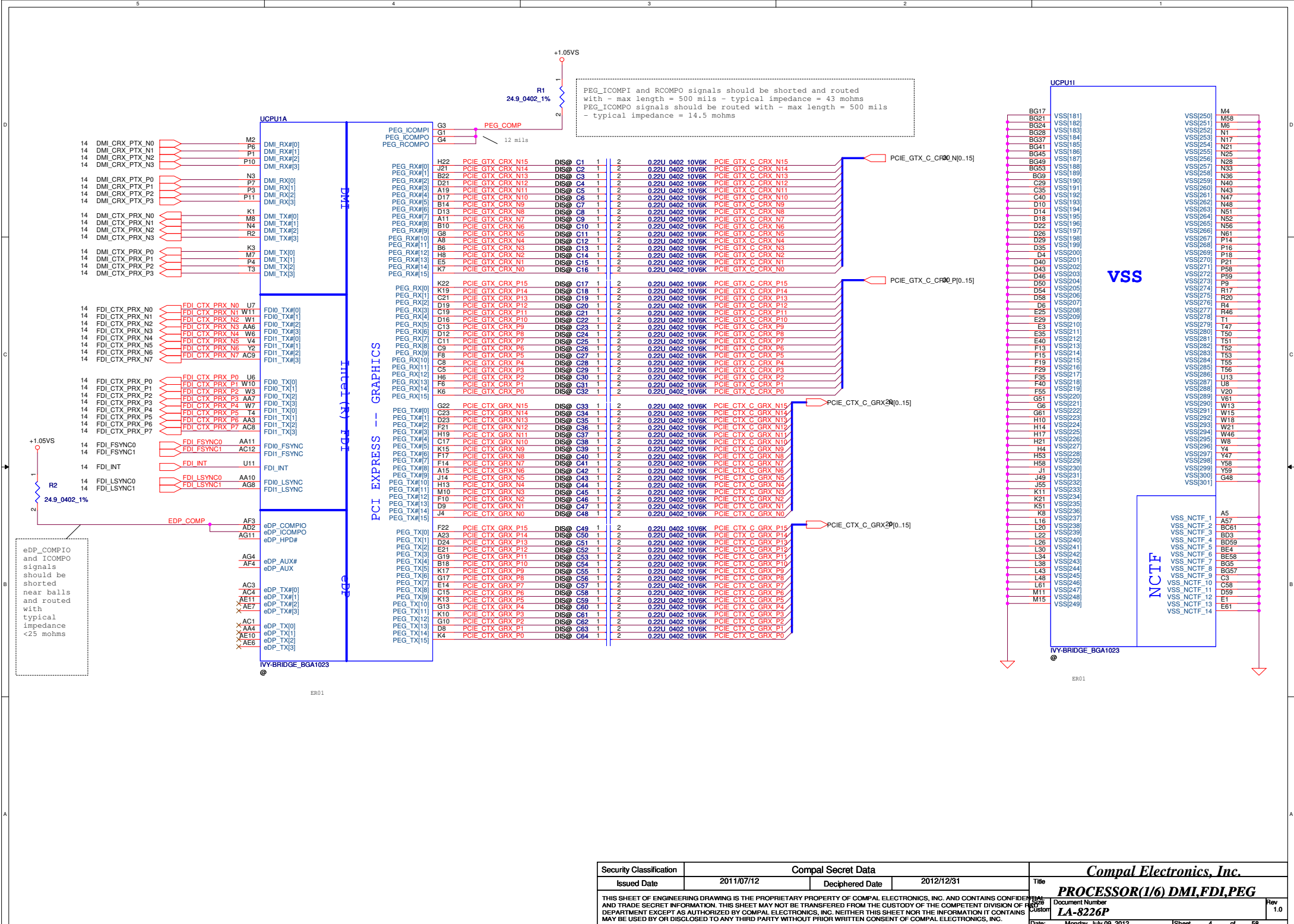
Power Plane	Description	S0	S3	Deep S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A	N/A
BATT+	Battery power supply (12.6V)	N/A	N/A	N/A	N/A
B+	AC or battery power rail for power circuit	N/A	N/A	N/A	N/A
+3VLP	3.3V power rail for 510N power management	ON	ON	ON	ON
+3VALW	3.3V always on power rail	ON	ON	ON	AC/ON; DC/OFF
+LAN_IO	3.3V power rail for ethernet	ON	ON	OFF	OFF
+3VS_WLAN	3.3V power rail for WLAN/BT Combo	ON	OFF	OFF	OFF
+3V_PCH	3.3V power rail for PCH suspend well plane	ON	ON	OFF	OFF
+3VS	3.3V power rail for DDR SPI,PCH,HDD,Audio,Card Reader	ON	OFF	OFF	OFF
+3VSG	3.3V power rail for VGA	ON	OFF	OFF	OFF
+LCDVDD	3.3V power rail for LCD	ON	OFF	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON	AC/ON; DC/OFF
+5V_PCH	5V power rail for PCH suspend well plane	ON	ON	OFF	OFF
+5VS	5V power rail for HDD,AUDIO,FAN,Touch PAD	ON	OFF	OFF	OFF
+5VS_ODD	5V power rail for SATA ODD	ON	OFF	OFF	OFF
+1.8VS	1.8V power rail for CPU,PCH	ON	OFF	OFF	OFF
+1.05VS	1.05V power rail for PCH	ON	OFF	OFF	OFF
+VCCP	1.05V power rail for CPU VCCIO,PCH	ON	OFF	OFF	OFF
+1.05VSG	1.05V power rail for N13P	ON	OFF	OFF	OFF
+1.5V	1.5V power rail for DDR3 system memory	ON	ON	ON	OFF
+1.5V_CPU_VDDQ	1.5V power rail CPU VDDQ	ON	OFF	OFF	OFF
+1.5VSG	1.5V power rail for N13P,VRAM	ON	OFF	OFF	OFF
+1.5VS	1.5V power rail for PCH,WLAN/BT combo	ON	OFF	OFF	OFF
+0.75VS	0.75V power rail for DDR VREF	ON	OFF	OFF	OFF
+VCCSA	VCCSA for CPU system agent	ON	OFF	OFF	OFF
+VCC_CORE	CORE Voltage for CPU	ON	OFF	OFF	OFF
+VCC_GFXCORR_AXG	1.5V power rail for N13P,VRAM	ON	OFF	OFF	OFF
+VGA_CORE	CORE Voltage for N13P Graphics	ON	OFF	OFF	OFF

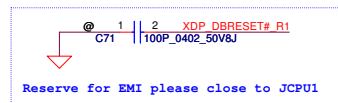
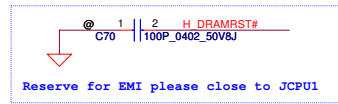
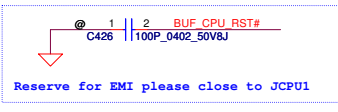
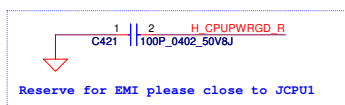
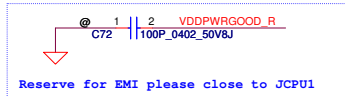
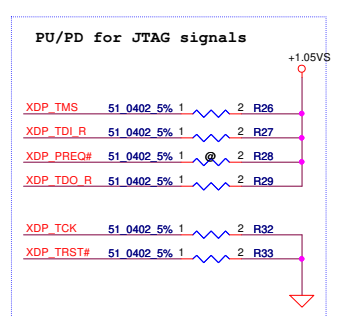
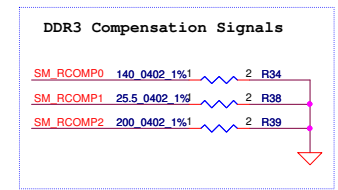
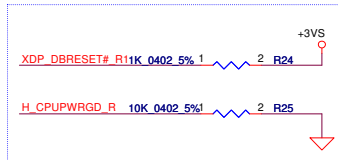
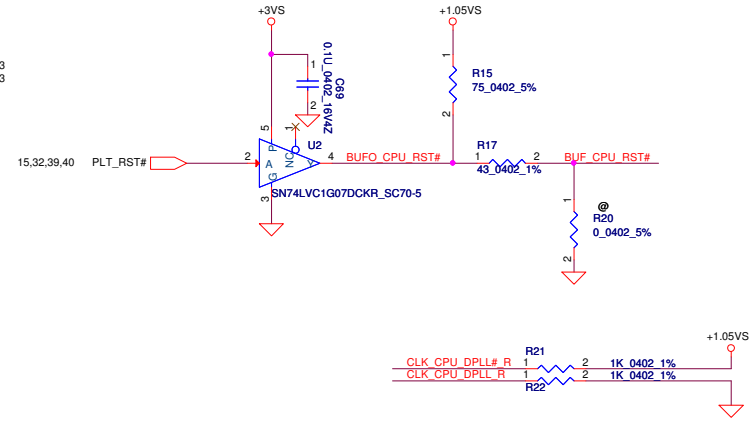
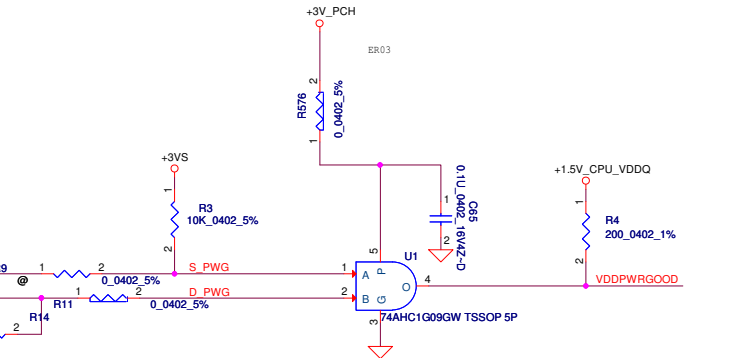
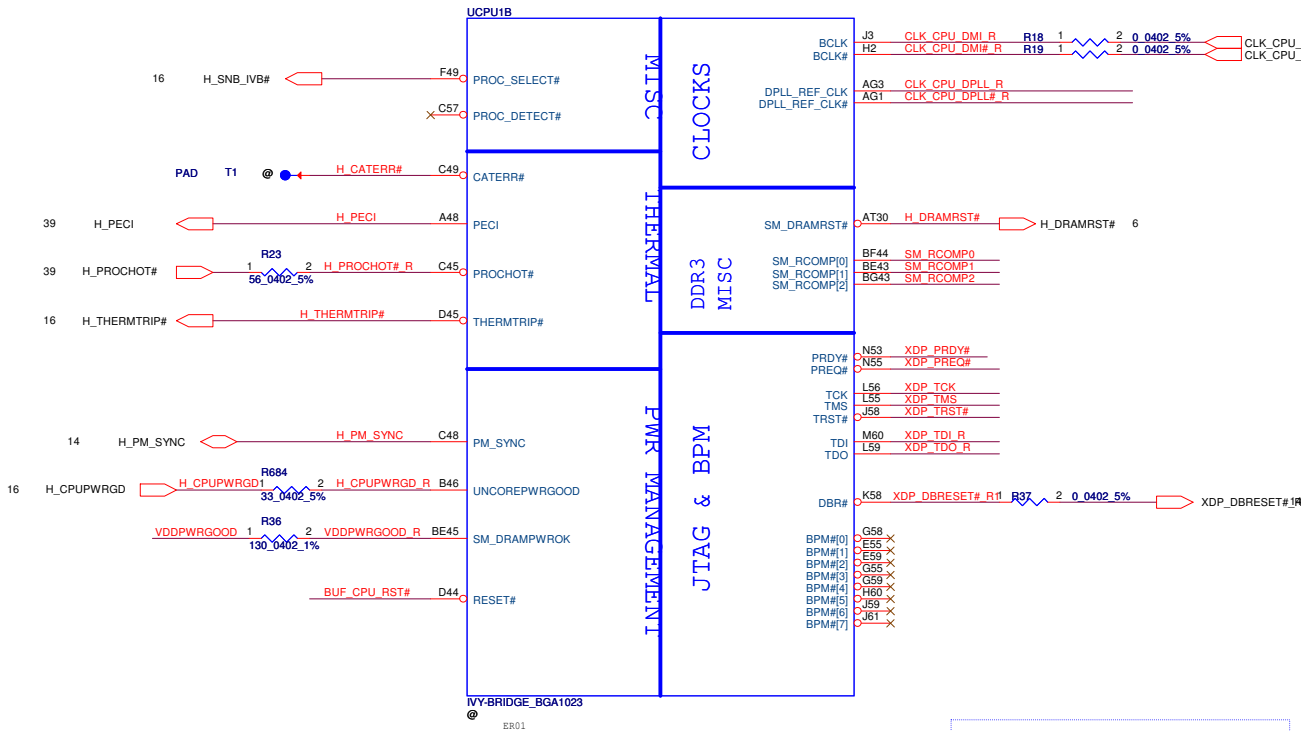
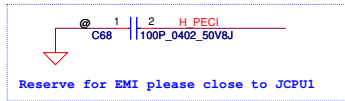
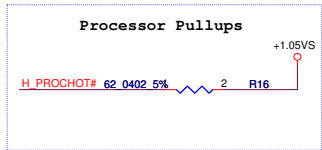
SATA	DESTINATION
SATA0	HDD
SATA1	None
SATA2	ODD
SATA3	None
SATA4	None
SATA5	None

USB2 PORT	DESTINATION
0	USB2.0+3.0
1	USB2.0+3.0
2	USB2
3	Card Reader
4	None
5	None
6	None
7	None
8	None
9	None
10	JMINI1 (WLAN) Bluetooth
11	CAMERA
12	None
13	None

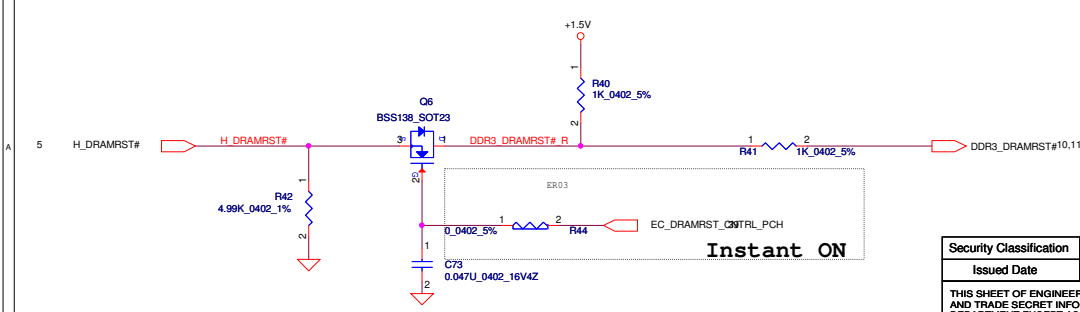
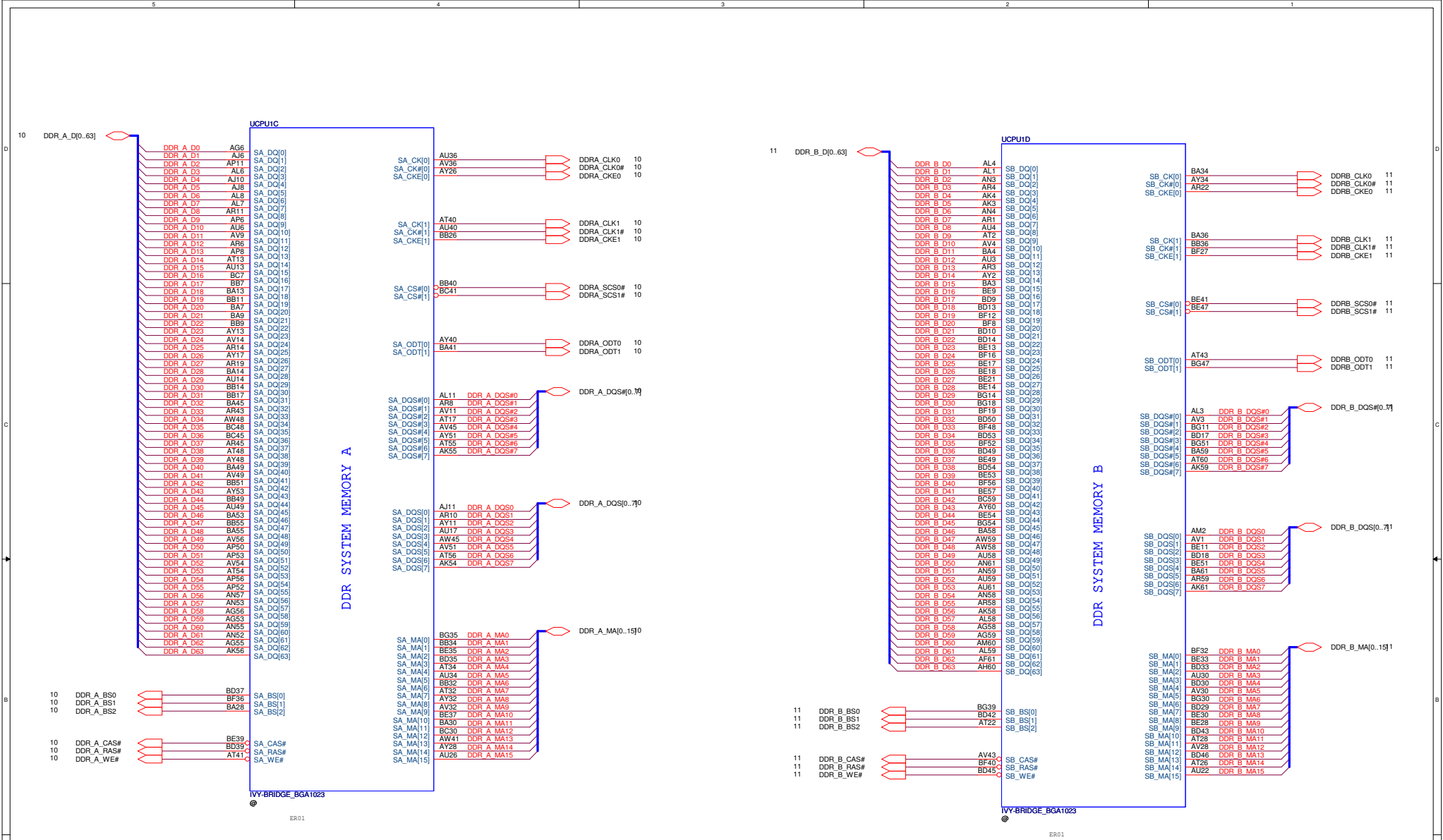
PCI EXPRESS	DESTINATION
Lane 1	10/100/1G LAN
Lane 2	MINI CARD WLAN
Lane 3	None
Lane 4	USB3.0 controller
Lane 5	None
Lane 6	None
Lane 7	None
Lane 8	None

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	Notes List
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-8226P	Rev 1.0
				Date	Monday, July 09, 2012
				Sheet	3 of 58



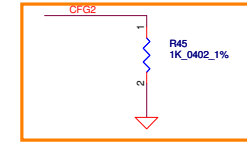
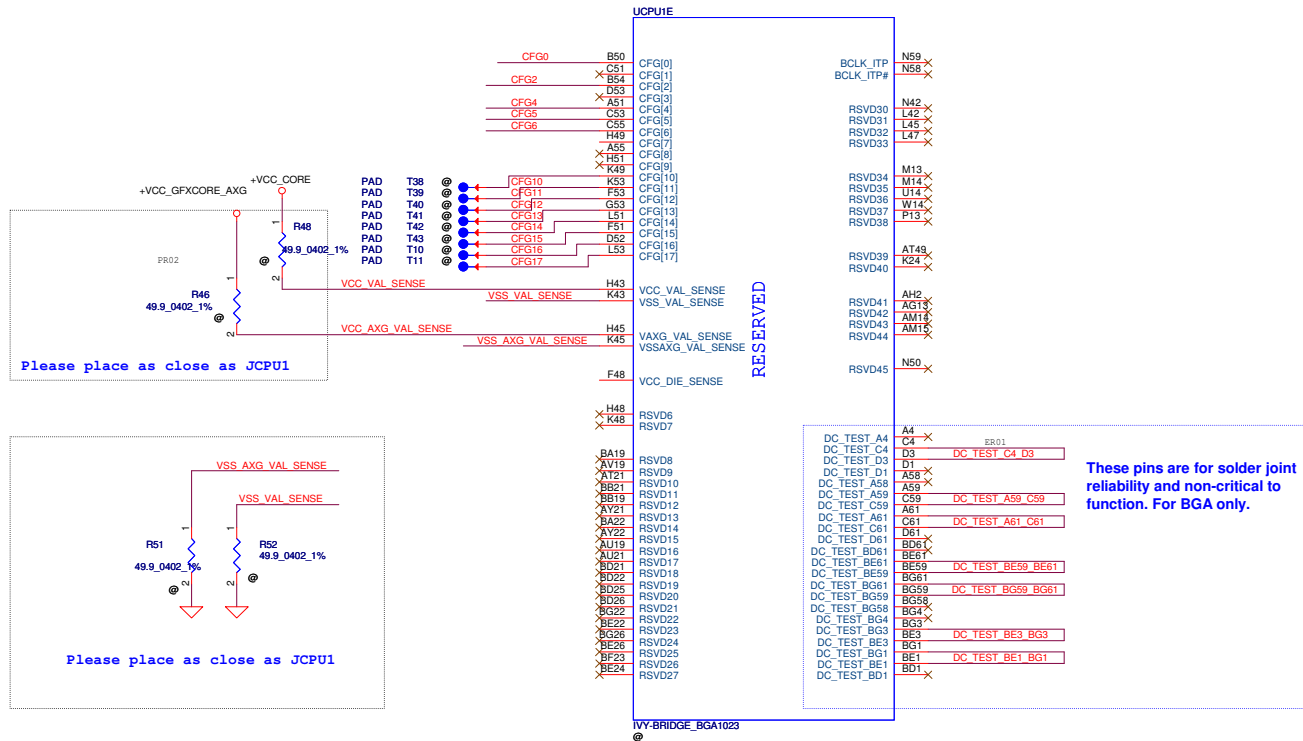


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	PROCESSOR(2/6) PM,XDP,CLK
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF 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
Date	Monday, July 09, 2012	Sheet	5	of	58

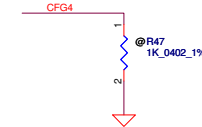


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	PROCESSOR(3/6) DDRIII	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				Document Number	Rev
				LA-8226P	1.0
				Date	Monday, July 09, 2012
				Sheet	6 of 58

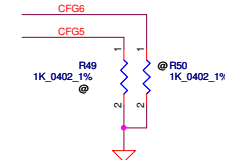
CFG Straps for Processor



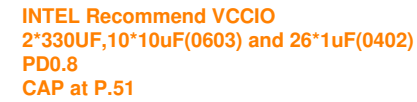
PEG Static Lane Reversal - CFG2 is for the 16x	
CFG2	1: (Default) Normal Operation; Lane # definition matches socket pin map definition 0: Lane Reversed



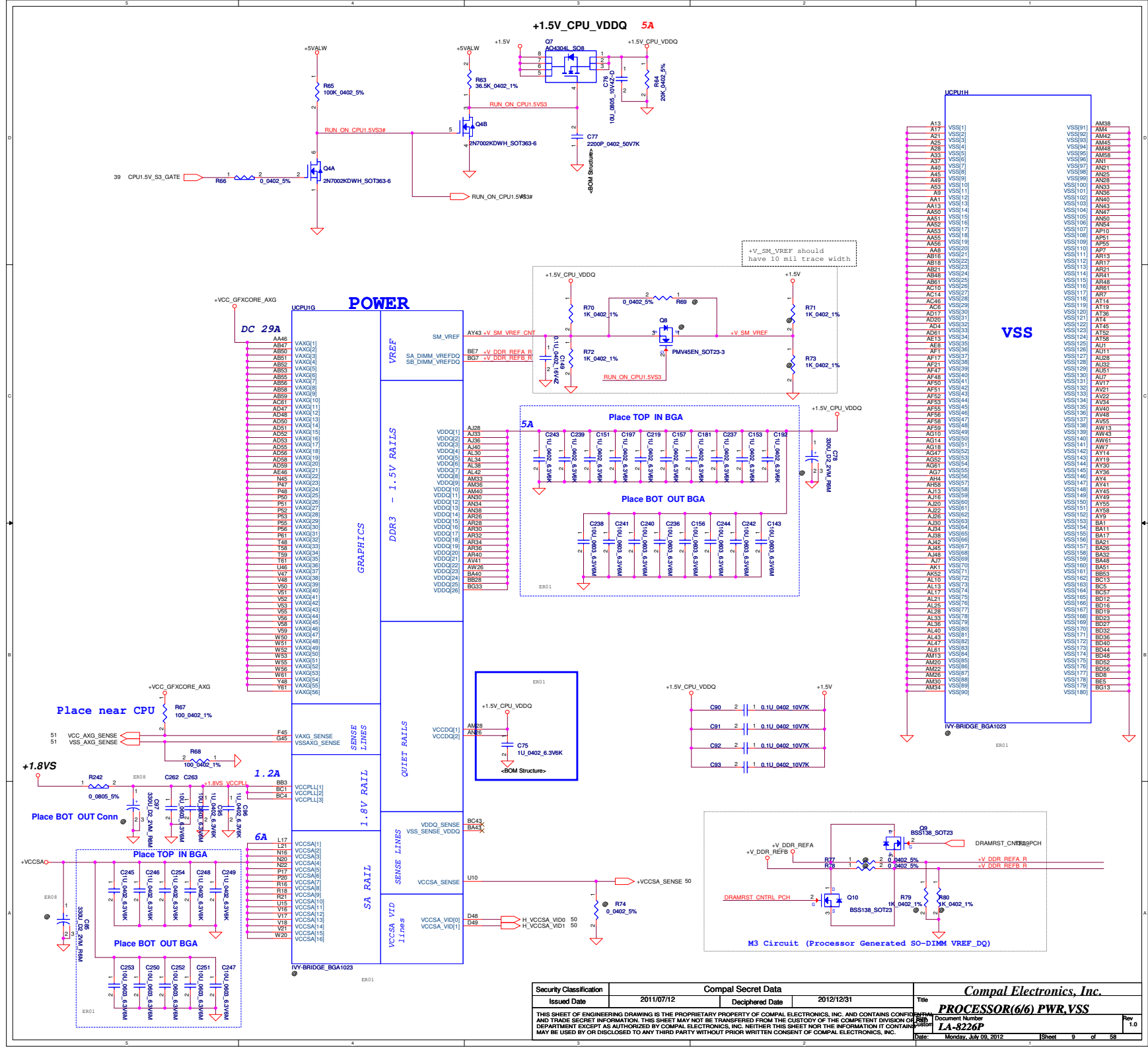
Display Port Presence Strap	
CFG4	1 : Disabled; No Physical Display Port attached to Embedded Display Port 0 : Enabled; An external Display Port device is connected to the Embedded Display Port



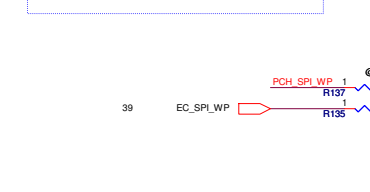
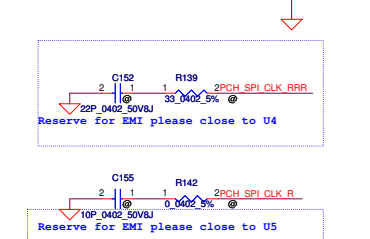
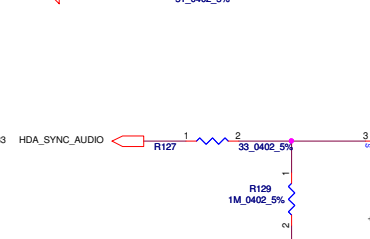
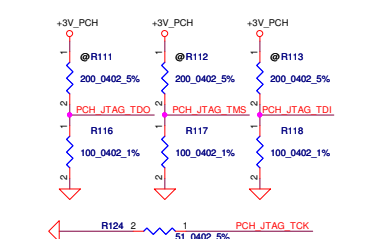
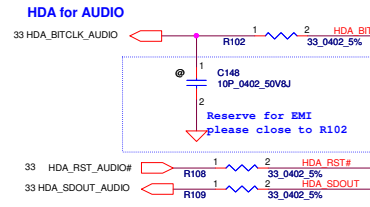
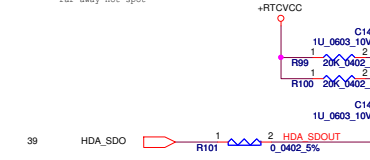
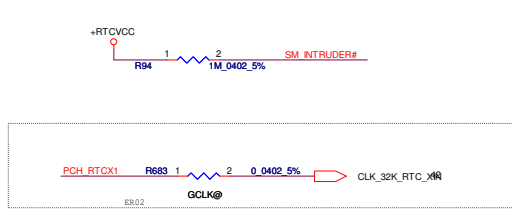
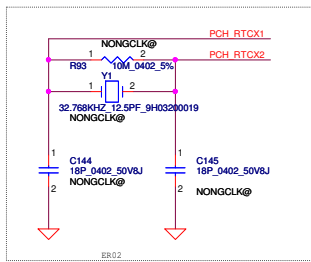
PCIe Port Bifurcation Straps	
CFG[6:5]	11: (Default) x16 - Device 1 functions 1 and 2 disabled 10: x8, x8 - Device 1 function 1 enabled ; function 2 disabled 01: Reserved - (Device 1 function 1 disabled ; function 2 enabled) 00: x8,x4,x4 - Device 1 functions 1 and 2 enabled

[illegible]

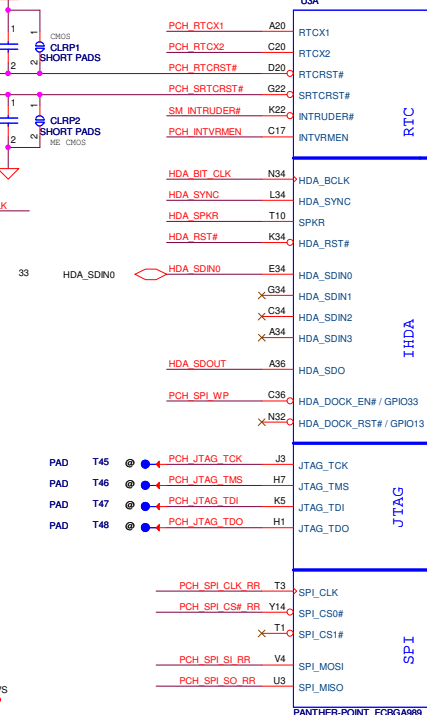
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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



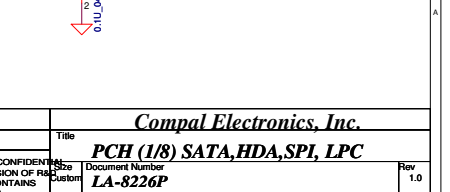
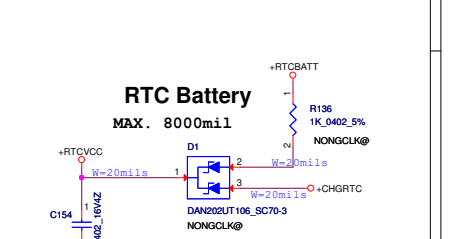
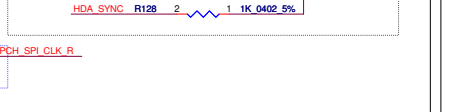
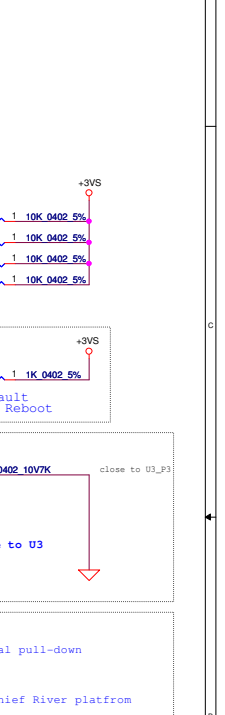
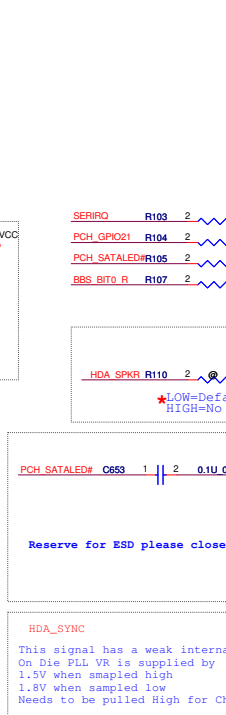
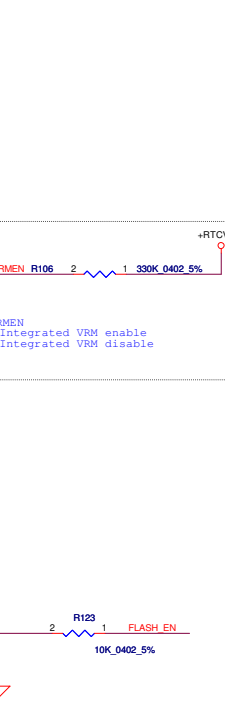
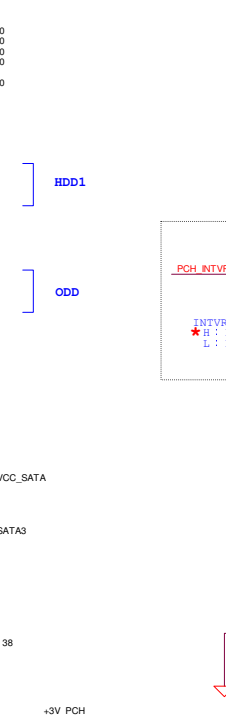
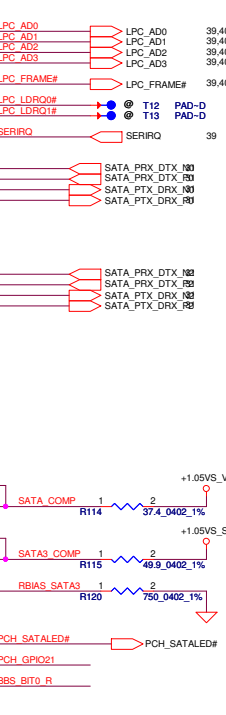
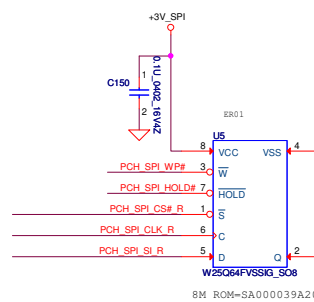
Security Classification	Compal Secret Data		2012/07/21		Title		Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31		Doc No.		PROCESSOR(66) PWR.VSS	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED FROM THE CUSTOMER TO THE COMPETENT DIVISION OF ANY OTHER COMPANY WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. NEITHER THE SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.					Document Number LA-8226P		Rev 1.0	
Date: Monday, July 09, 2012					Sheet		9 of 58	



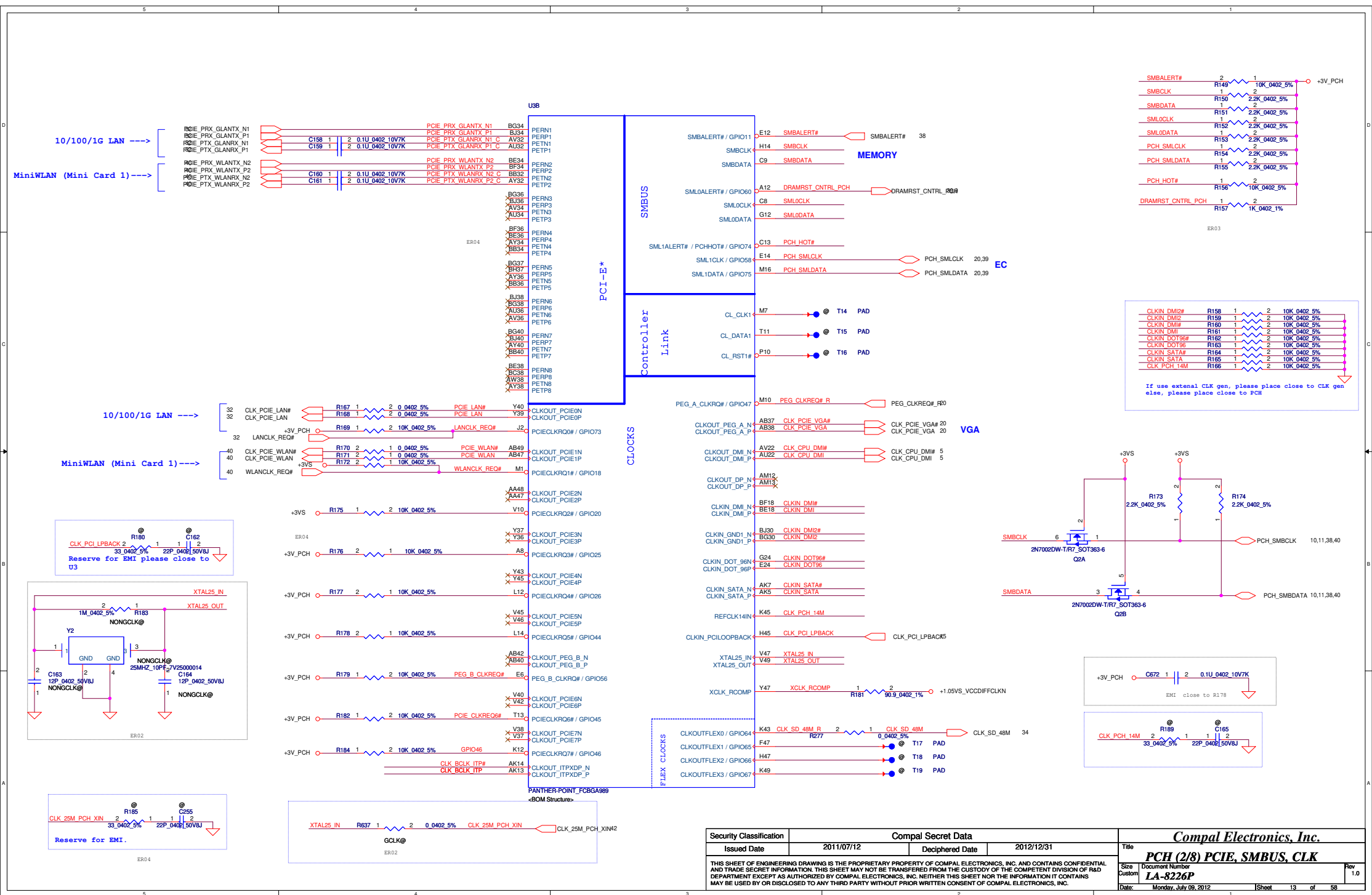
CLRP1 & CLRP2 place near DIMM



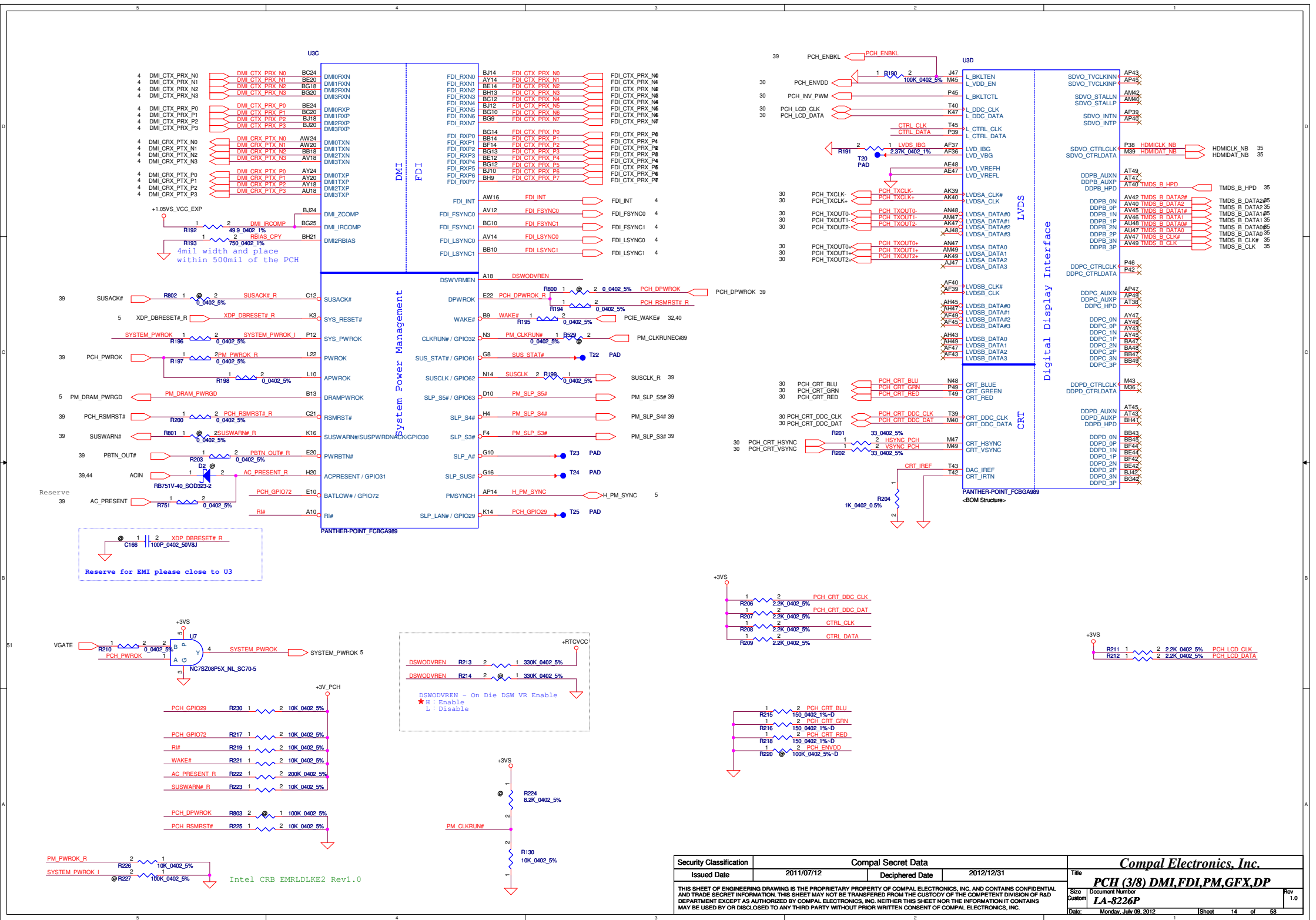
SPI ROM (8MByte)

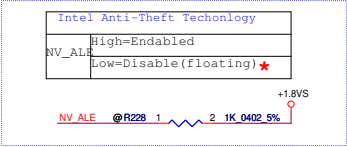


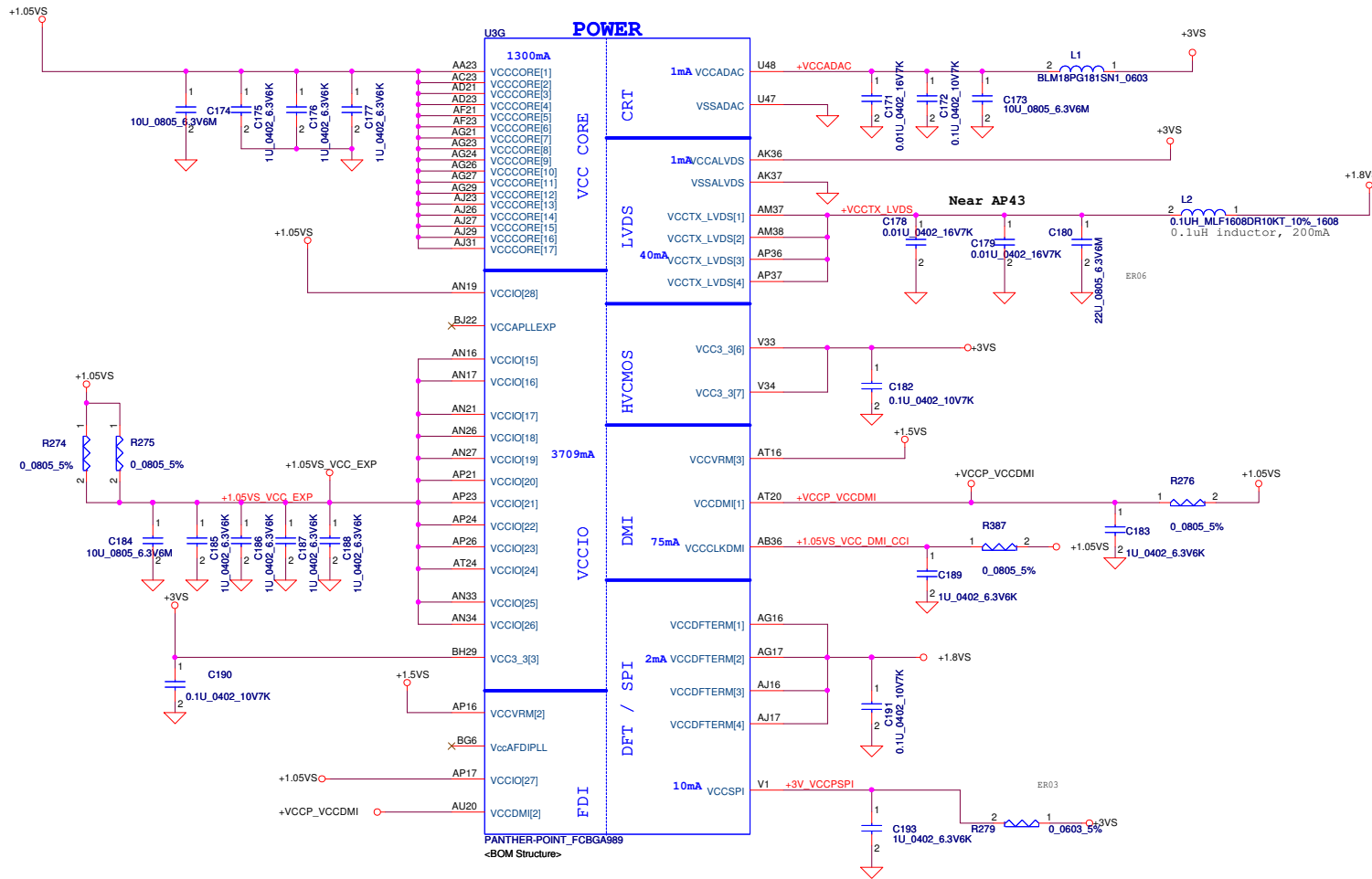
Security Classification		Compal Secret Data		<i>Compal Electronics, Inc.</i>	
Issued Date		Deciphered Date		Title	
2011/07/12		2012/12/31		<i>PCH (1/8) SATA,HDA,SPI, LPC</i>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF 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.				Document Number	Rev
				Customer	1.0
				LA-8226P	
Date:				Monday, July 09, 2012	Sheet 12 of 58



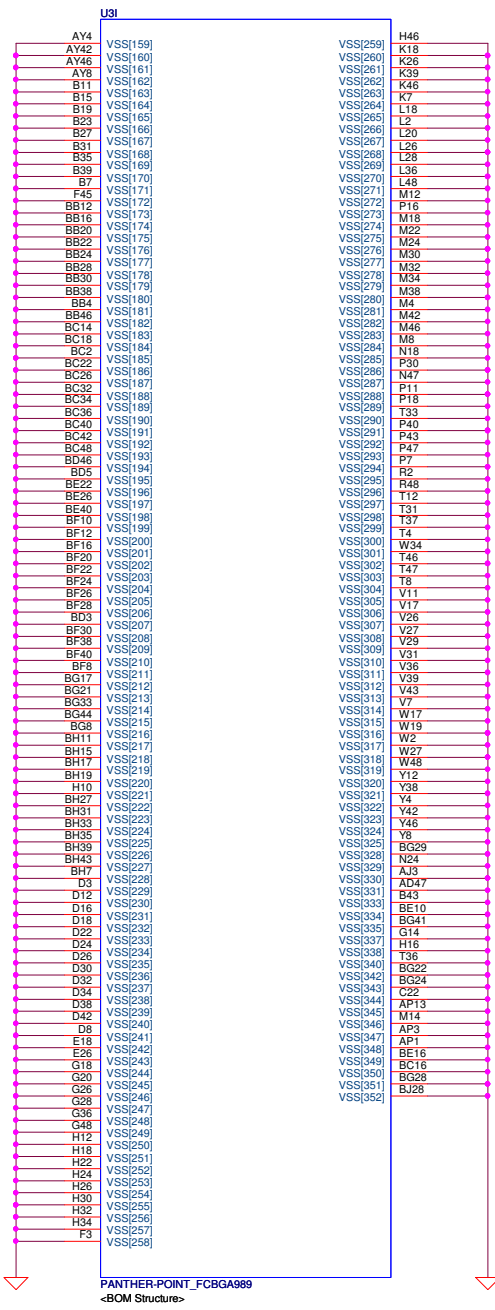
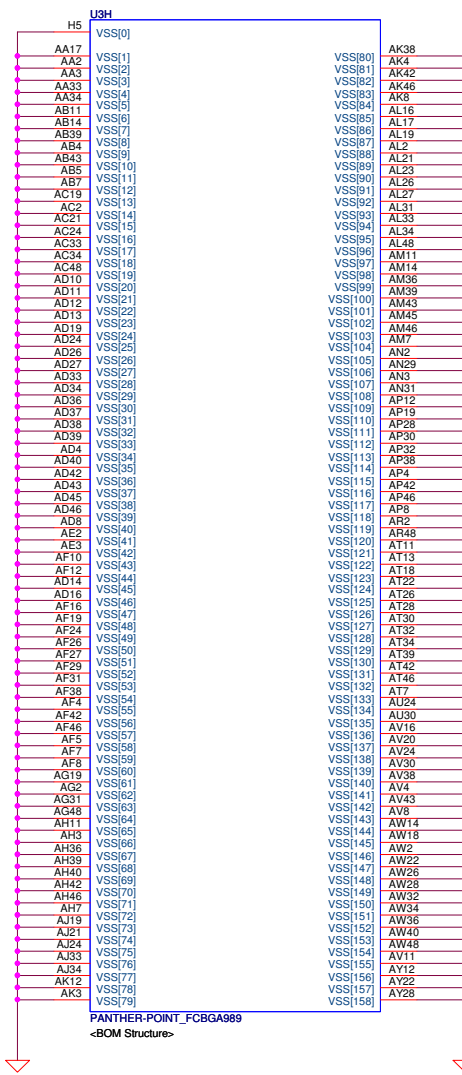
Security Classification		Compal Secret Data		Compal Electronics, Inc. PCH (2/8) PCIE, SMBUS, CLK	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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.				Size	Rev
				Custom	1.0
Date: Monday, July 09, 2012				Sheet 13 of 58	

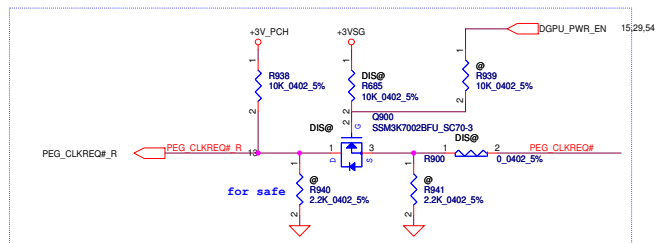




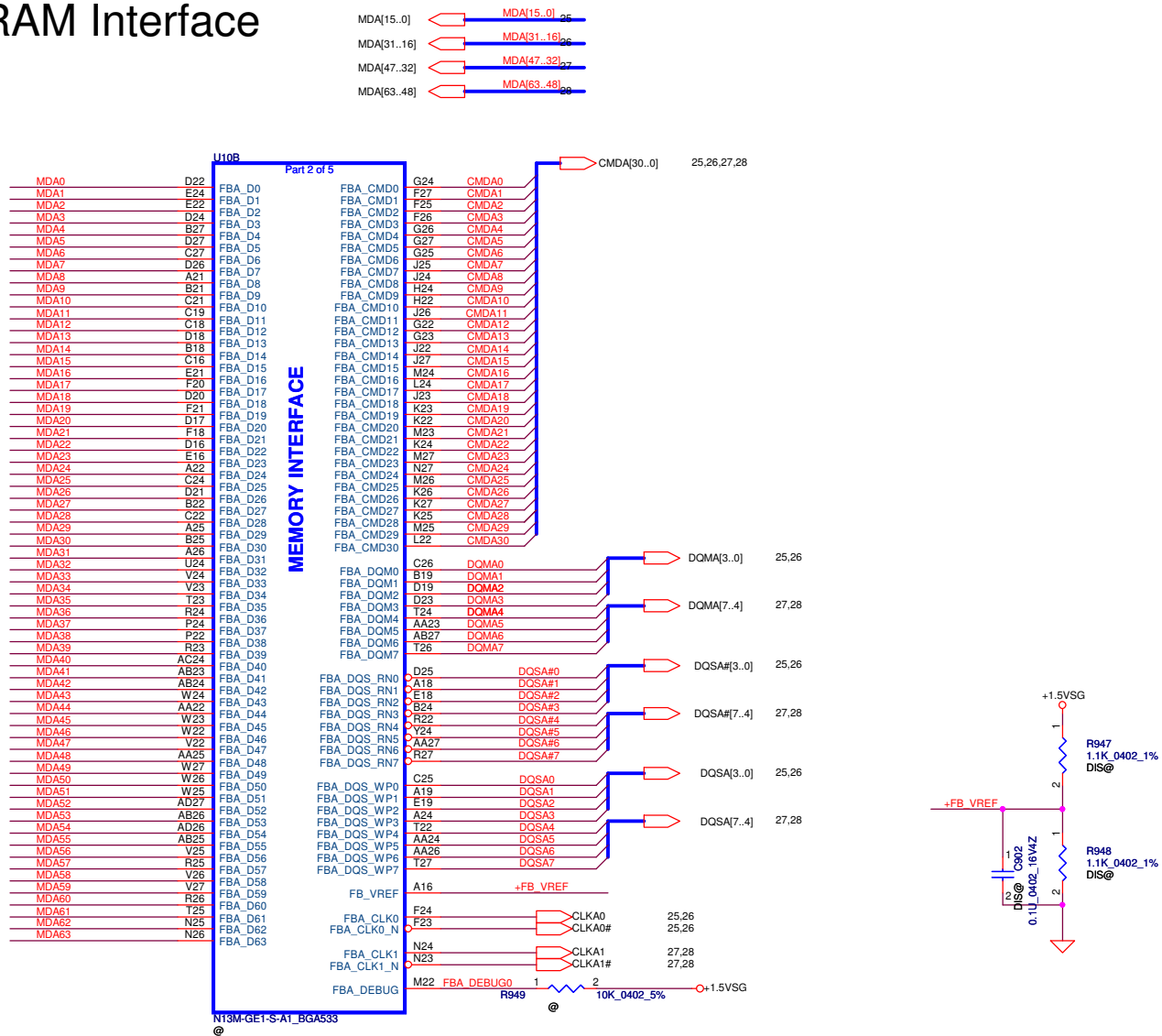


PCH Power Rail Table Refer to CPU EDS R1.5		
Voltage Rail	Voltage	S0 Iccmax Current (A)
V_PROC_IO	1.05	0.001
V5REF	5	0.001
V5REF_Sus	5	0.001
Vcc3_3	3.3	0.228
VccADAC	3.3	0.001
VccADPLLA	1.05	0.075
VccADPLLB	1.05	0.075
VccCore	1.05	1.3
VccDMI	1.05	0.042
VccIO	1.05	3.709
VccASW	1.05	0.903
VccSPI	3.3	0.01
VccDSW	3.3	0.001
VccDFTerm	1.8	0.002
VccRTC	3.3	6 uA
VccSus3_3	3.3	0.065
VccSusHDA	3.3 / 1.5	0.01
VccVRM	1.8 / 1.5	0.167
VccCLKDMI	1.05	0.075
VccSSC	1.05	0.095
VccDIFFCLKN	1.05	0.055
VccALVDS	3.3	0.001
VccTX_LVDS	1.8	0.04

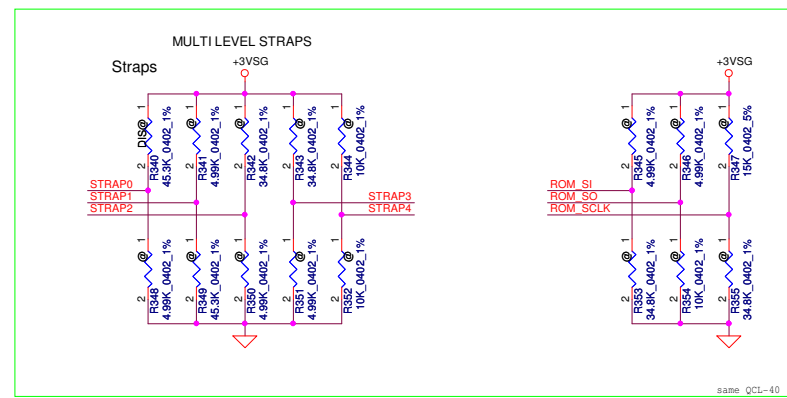
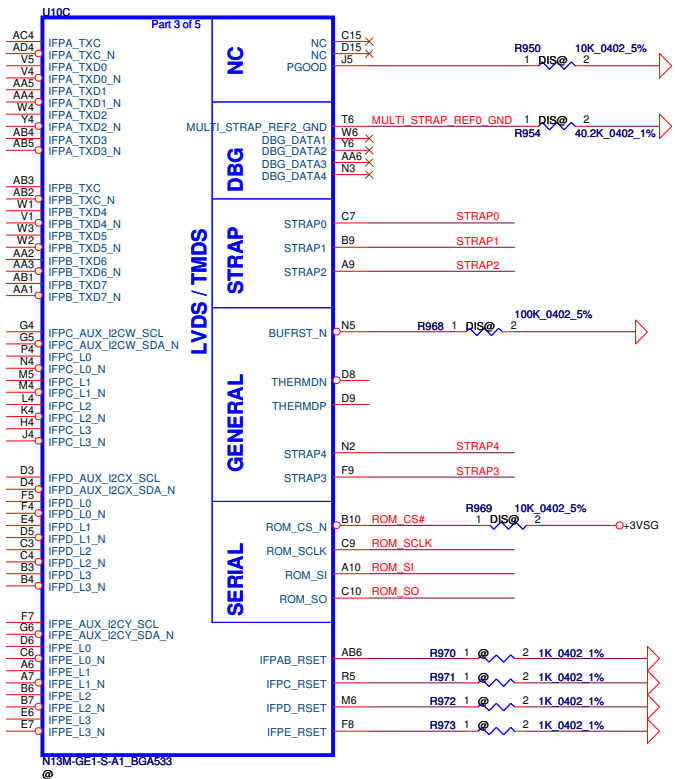




VRAM Interface



Security Classification		Compal Secret Data		Compal Electronics, Inc. N13M VRAM 2/9	
Issued Date	2011/07/12	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.				Size	Document Number
				Custom	LA-8226P
				Date:	Monday, July 09, 2012
				Sheet	21 of 58
				Rev	1.0

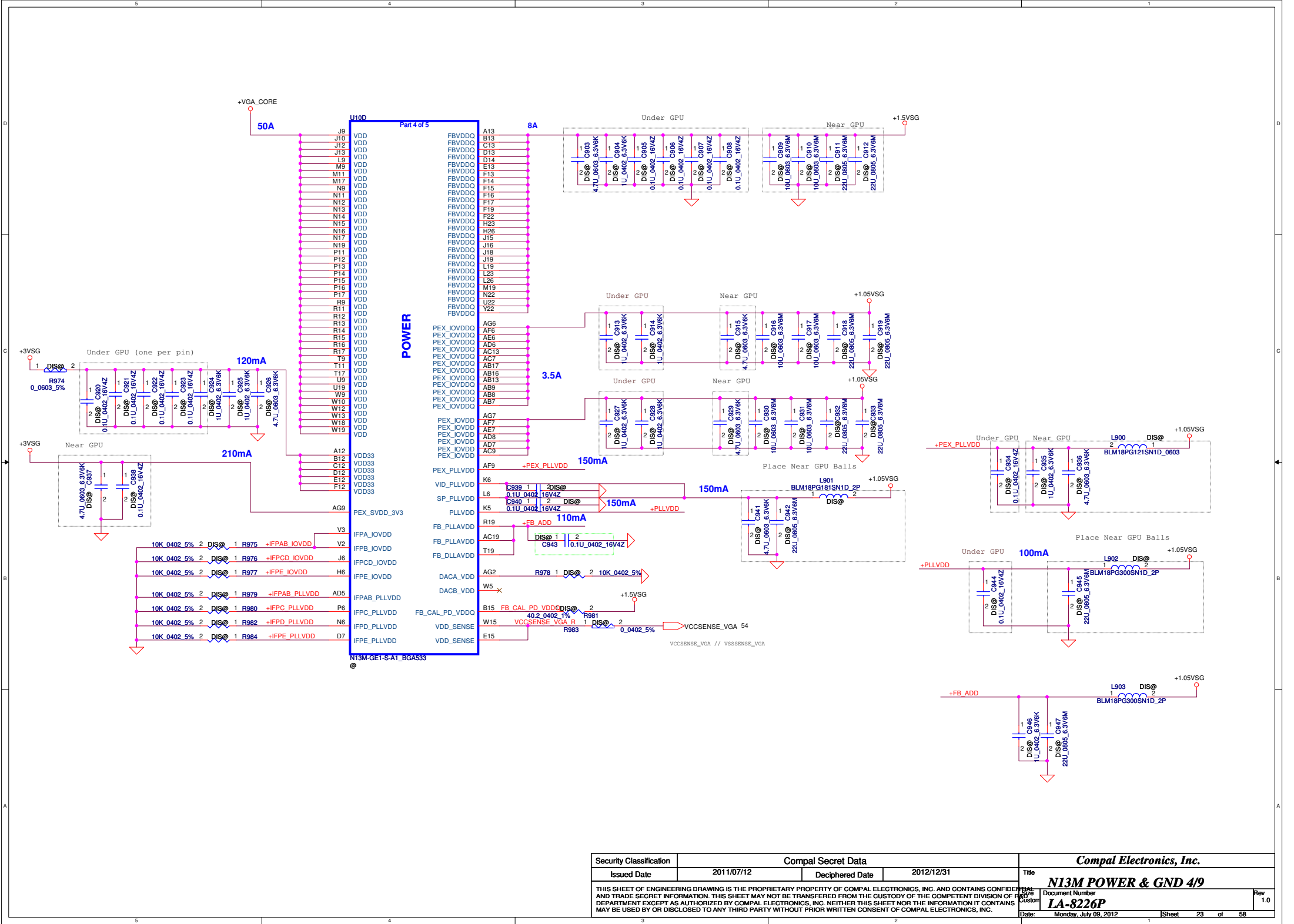


Need check with NVIDIA
For N13M-GE1 GB1b-64_256Mx8 strap table

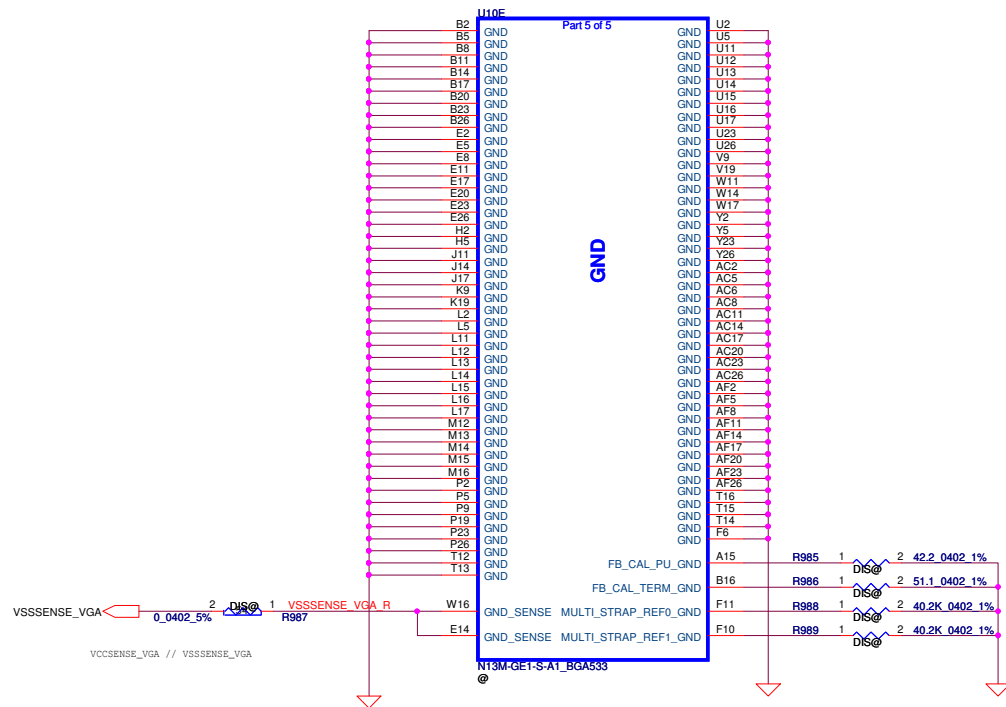
GPU	Freq.	Memory Size	Memory Config	strap0	strap1	strap2	strap3	strap4	ROM SI	ROM SO	ROM SCLK
N13M-GE1	800 MHz	256M*8*8	ELPIDA SA000056P00 EDJ2108BCSE-DJ-F	R PU 45K	R PD 45K	R PU 5K	R PD 5K	R PD 10K	R PD 5K	R PU 10K	R PU 5K
N13M-GE1	800 MHz	256M*8*8	HYNIX SA000056O00 H5TQ2G83CFR-H9C	R PU 45K	R PD 45K	R PU 5K	R PD 5K	R PD 10K	R PD 10K	R PU 10K	R PU 5K

SA000056A10
C.S N13M-GE1-S-A1 FCBGA533
NVIDIA GB1b-64 GF119-660-A1 (小包裝)
搭配VRAM 256*8*8

256M*8*8
1.SA000056O00
DDR3 1600 256*8 1.5V FBGA78
HYNIX/H5TQ2G83CFR-PBC
2.SA000056P00
DDR3 1600 256*8 1.5V FBGA78
ELPIDA/EDJ2108BDBG-GN-F

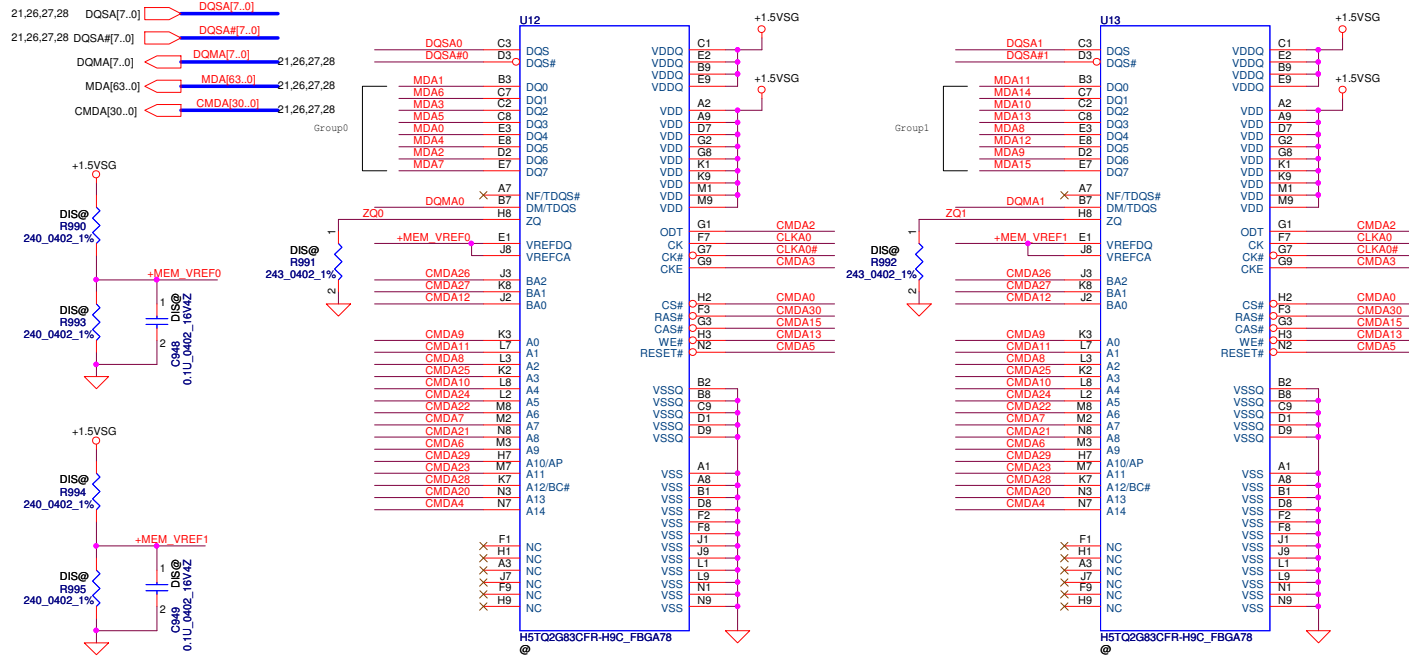


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	N13M POWER & GND 4/9
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF 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
Date	Monday, July 09, 2012	Sheet	23	of	58



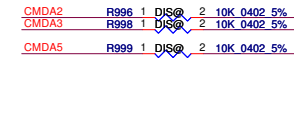
VRAM DDR3 chips

256Mx8 DDR3 *8==>2GB



Mode D Address	0..31	32..63
CMD0	CS0_L#	
CMD1		
CMD2	ODT_L	
CMD3	CKE	
CMD4	A14	A14
CMD5	RST	RST
CMD6	A9	A9
CMD7	A7	A7
CMD8	A2	A2
CMD9	A0	A0
CMD10	A4	A4
CMD11	A1	A1
CMD12	BA0	BA0
CMD13	WE*	WE*
CMD14	A15	A15
CMD15	CAS*	CAS*
CMD16		CS0_H#
CMD17		
CMD18		ODT_H
CMD19		CKE_H
CMD20	A13	A13
CMD21	A8	A8
CMD22	A6	A6
CMD23	A11	A11
CMD24	A5	A5
CMD25	A3	A3
CMD26	BA2	BA2
CMD27	BA1	BA1
CMD28	A12	A12
CMD29	A10	A10
CMD30	RAS*	RAS*
Not Available		

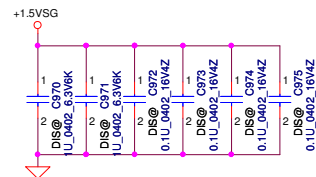
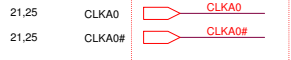
LOW HIGH



Command Bit	Default Pull-down
ODTx	10k
CKEx	10k
RST	10k
CS*	No Termination

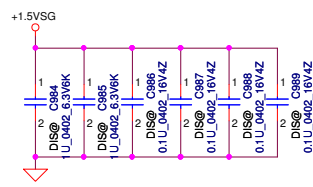
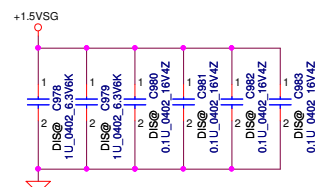
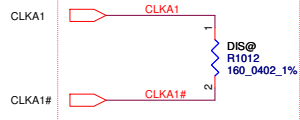
Hynix : SA000054600 (S IC D3 256MX8/1333 H5TQ2G83CFR-H9C FBGA)
Elpida : SAxxxxxxx (S IC D3 256MX8/1333 xxxxxxxxxxxxxxxxx)

256Mx8 DDR3 *8==>2GB



LOW HIGH

256Mx8 DDR3 *8==>2GB

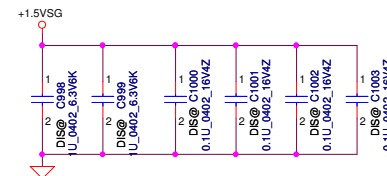
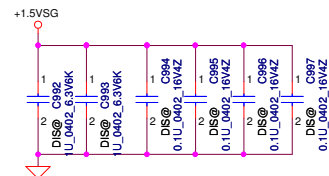
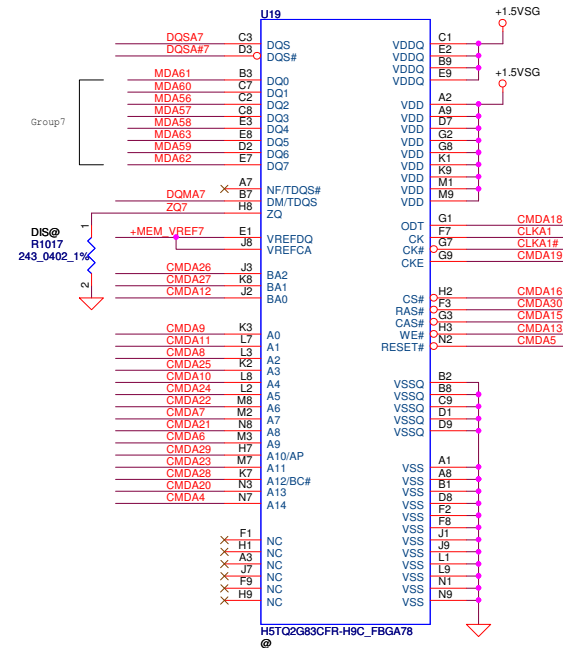
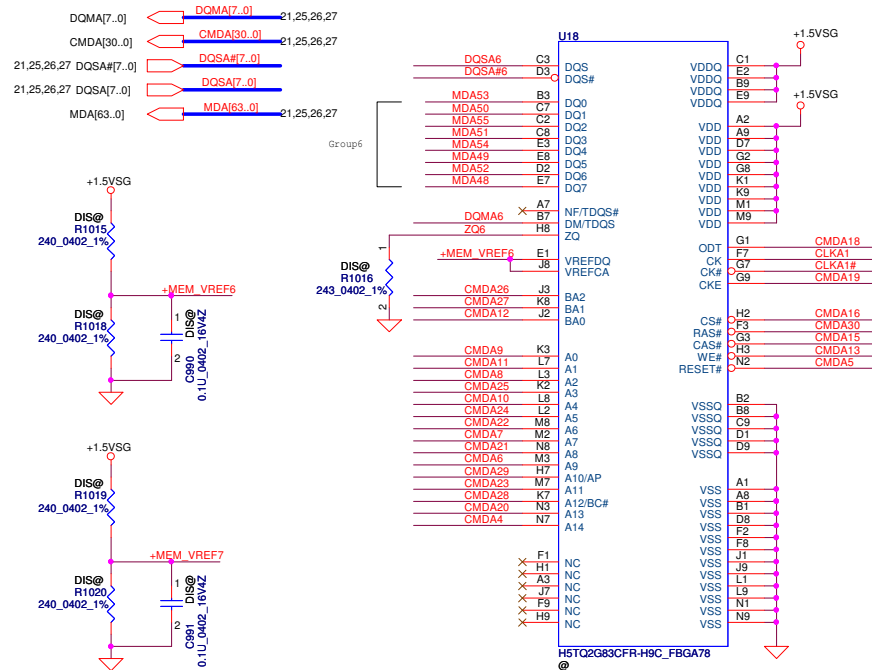


LOW	HIGH
-----	------

Elpida : SAxxxxxxx (S IC D3 256MX8/1333 xxxxxxxxxxxxxxxxx)

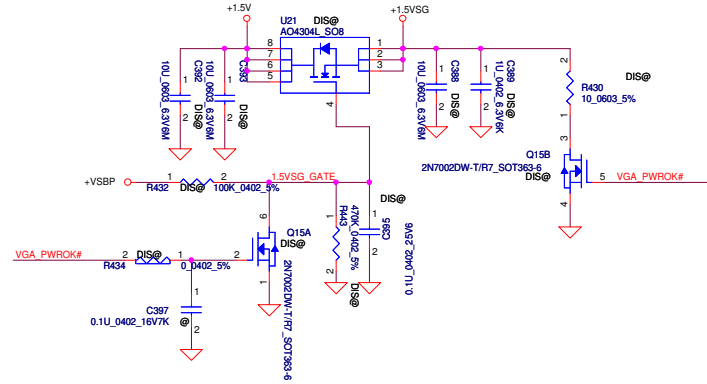
VRAM DDR3 chips

256Mx8 DDR3 *8==>2GB

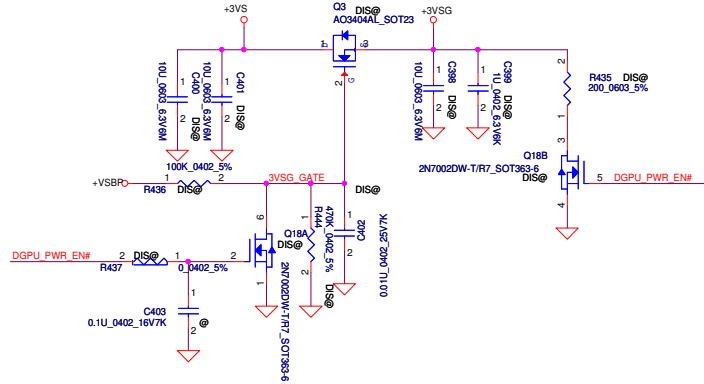


Mode D Address	0..31	32..63
CMD0	CS0_L#	
CMD1		
CMD2	ODT_L	
CMD3	CKE	
CMD4	A14	A14
CMD5	RST	RST
CMD6	A9	A9
CMD7	A7	A7
CMD8	A2	A2
CMD9	A0	A0
CMD10	A4	A4
CMD11	A1	A1
CMD12	BA0	BA0
CMD13	WE*	WE*
CMD14	A15	A15
CMD15	CAS*	CAS*
CMD16		CS0_H#
CMD17		
CMD18		ODT_H
CMD19		CKE_H
CMD20	A13	A13
CMD21	A8	A8
CMD22	A6	A6
CMD23	A11	A11
CMD24	A5	A5
CMD25	A3	A3
CMD26	BA2	BA2
CMD27	BA1	BA1
CMD28	A12	A12
CMD29	A10	A10
CMD30	RAS*	RAS*
Not Available		
	LOW	HIGH

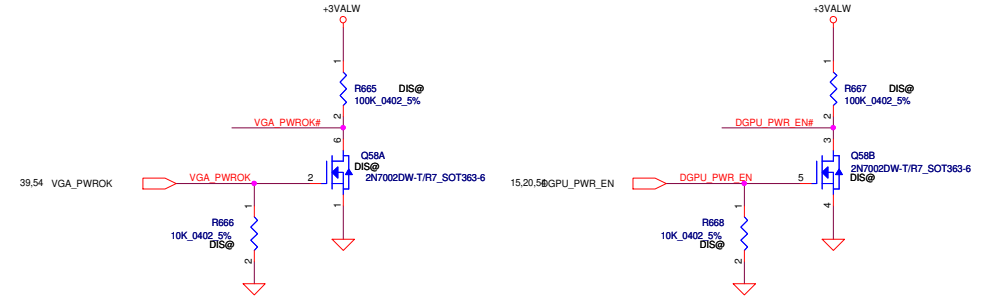
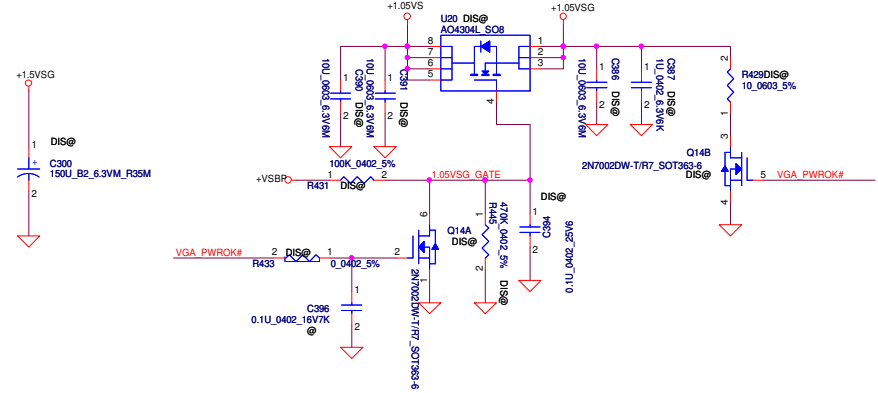
+1.5V to +1.5VSG

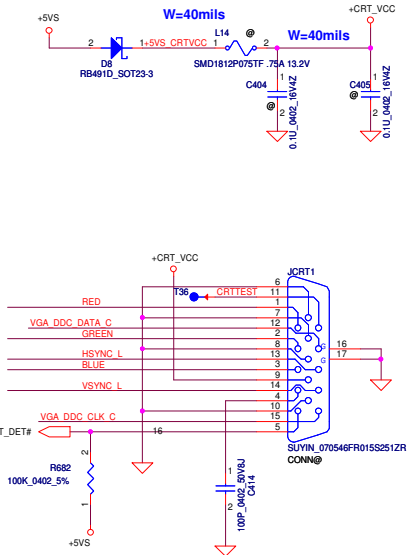


+3VS to +3VSG



+VCCP to +1.05VSG



[illegible]

The PCB layout for the Panel Backlight section includes the following components and dimensions:

- Capacitors:**
 - C425: 0.1U_0402_16V4Z
 - C426: 0.1U_0402_16V4Z
 - C427: 0.047U_0402_16V7K
 - C428: 4.7U_0603_6.3VK
 - C429: 4.7U_0603_6.3VK
 - C430: 0.1U_0603_50V_X7R
 - C431: 0.1U_0603_50V_X7R
- Resistors:**
 - R447: 47K_0402_5%
 - R448: 47K_0402_5%
 - R449: 220K_0402_1%
 - R450: 0.0402_5%
 - R451: 100K_0402_5%
 - R674: 0.0402_5%
 - R676: 100K_0402_5%
- Transistors:**
 - Q23: P2301 1P SOT23-3
 - Q24: 2N7002WD-7-F_SOT363-6
 - Q25: 2N7002WD-7-F_SOT363-6
 - Q26: 2N7002WD-7-F_SOT363-6
 - Q27: 2N7002WD-7-F_SOT363-6
 - Q28: 2N7002WD-7-F_SOT363-6
 - Q29: 2N7002WD-7-F_SOT363-6
 - Q30: 2N7002WD-7-F_SOT363-6
 - Q31: SSM3KV0028FU_SC70-3
- Other Components:**
 - R452: 0.0402_5%
 - R453: 0.0402_5%
 - R454: 0.0402_5%
 - R455: 0.0402_5%
 - R456: 0.0402_5%
 - R457: 0.0402_5%
 - R458: 0.0402_5%
 - R459: 0.0402_5%
 - R460: 0.0402_5%
 - R461: 0.0402_5%
 - R462: 0.0402_5%
 - R463: 0.0402_5%
 - R464: 0.0402_5%
 - R465: 0.0402_5%
 - R466: 0.0402_5%
 - R467: 0.0402_5%
 - R468: 0.0402_5%
 - R469: 0.0402_5%
 - R470: 0.0402_5%
 - R471: 0.0402_5%
 - R472: 0.0402_5%
 - R473: 0.0402_5%
 - R474: 0.0402_5%
 - R475: 0.0402_5%
 - R476: 0.0402_5%
 - R477: 0.0402_5%
 - R478: 0.0402_5%
 - R479: 0.0402_5%
 - R480: 0.0402_5%
 - R481: 0.0402_5%
 - R482: 0.0402_5%
 - R483: 0.0402_5%
 - R484: 0.0402_5%
 - R485: 0.0402_5%
 - R486: 0.0402_5%
 - R487: 0.0402_5%
 - R488: 0.0402_5%
 - R489: 0.0402_5%
 - R490: 0.0402_5%
 - R491: 0.0402_5%
 - R492: 0.0402_5%
 - R493: 0.0402_5%
 - R494: 0.0402_5%
 - R495: 0.0402_5%
 - R496: 0.0402_5%
 - R497: 0.0402_5%
 - R498: 0.0402_5%
 - R499: 0.0402_5%
 - R500: 0.0402_5%
 - R501: 0.0402_5%
 - R502: 0.0402_5%
 - R503: 0.0402_5%
 - R504: 0.0402_5%
 - R505: 0.0402_5%
 - R506: 0.0402_5%
 - R507: 0.0402_5%
 - R508: 0.0402_5%
 - R509: 0.0402_5%
 - R510: 0.0402_5%
 - R511: 0.0402_5%
 - R512: 0.0402_5%
 - R513: 0.0402_5%
 - R514: 0.0402_5%
 - R515: 0.0402_5%
 - R516: 0.0402_5%
 - R517: 0.0402_5%
 - R518: 0.0402_5%
 - R519: 0.0402_5%
 - R520: 0.0402_5%
 - R521: 0.0402_5%
 - R522: 0.0402_5%
 - R523: 0.0402_5%
 - R524: 0.0402_5%
 - R525: 0.0402_5%
 - R526: 0.0402_5%
 - R527: 0.0402_5%
 - R528: 0.0402_5%
 - R529: 0.0402_5%
 - R530: 0.0402_5%
 - R531: 0.0402_5%
 - R532: 0.0402_5%
 - R533: 0.0402_5%
 - R534: 0.0402_5%
 - R535: 0.0402_5%
 - R536: 0.0402_5%
 - R537: 0.0402_5%
 - R538: 0.0402_5%
 - R539: 0.0402_5%
 - R540: 0.0402_5%
 - R541: 0.0402_5%
 - R542: 0.0402_5%
 - R543: 0.0402_5%
 - R544: 0.0402_5%
 - R545: 0.0402_5%
 - R546: 0.0402_5%
 - R547: 0.0402_5%
 - R548: 0.0402_5%
 - R549: 0.0402_5%
 - R550: 0.0402_5%
 - R551: 0.0402_5%
 - R552: 0.0402_5%
 - R553: 0.0402_5%
 - R554: 0.0402_5%
 - R555: 0.0402_5%
 - R556: 0.0402_5%
 - R557: 0.0402_5%
 - R558: 0.0402_5%
 - R559: 0.0402_5%
 - R560: 0.0402_5%
 - R561: 0.0402_5%
 - R562: 0.0402_5%
 - R563: 0.0402_5%
 - R564: 0.0402_5%
 - R565: 0.0402_5%
 - R566: 0.0402_5%
 - R567: 0.0402_5%
 - R568: 0.0402_5%
 - R569: 0.0402_5%
 - R570: 0.0402_5%
 - R571: 0.0402_5%
 - R572: 0.0402_5%
 - R573: 0.0402_5%
 - R574: 0.0402_5%
 - R575: 0.0402_5%
 - R576: 0.0402_5%
 - R577: 0.0402_5%
 - R578: 0.0402_5%
 - R579: 0.0402_5%
 - R580: 0.0402_5%
 - R581: 0.0402_5%
 - R582: 0.0402_5%
 - R583: 0.0402_5%
 - R584: 0.0402_5%
 - R585: 0.0402_5%
 - R586: 0.0402_5%
 - R587: 0.0402_5%
 - R588: 0.0402_5%
 - R589: 0.0402_5%
 - R590: 0.0402_5%
 - R591: 0.0402_5%
 - R592: 0.0402_5%
 - R593: 0.0402_5%
 - R594: 0.0402_5%
 - R595: 0.0402_5%
 - R596: 0.0402_5%
 - R597: 0.0402_5%
 - R598: 0.0402_5%
 - R599: 0.0402_5%
 - R600: 0.0402_5%
 - R601: 0.0402_5%
 - R602: 0.0402_5%
 - R603: 0.0402_5%
 - R604: 0.0402_5%
 - R605: 0.0402_5%
 - R606: 0.0402_5%
 - R607: 0.0402_5%
 - R608: 0.0402_5%
 - R609: 0.0402_5%
 - R610: 0.0402_5%
 - R611: 0.0402_5%
 - R612: 0.0402_5%
 - R613: 0.0402_5%
 - R614: 0.0402_5%
 - R615: 0.0402_5%
 - R616: 0.0402_5%
 - R617: 0.0402_5%
 - R618: 0.0402_5%
 - R619: 0.0402_5%
 - R620: 0.0402_5%
 - R621: 0.0402_5%
 - R622: 0.0402_5%
 - R623: 0.0402_5%
 - R624: 0.0402_5%
 - R625: 0.0402_5%
 - R626: 0.0402_5%
 - R627: 0.0402_5%
 - R628: 0.0402_5%
 - R629: 0.0402_5%
 - R6

Panel PWM Control

The diagram illustrates the Panel PWM Control circuit. It features two input signals, `EC_INV_PWM` and `PCH_INV_PWM`, which are connected to a network of resistors. The output signal is `INVTPWM`. The circuit includes a `3V5` supply and a `4.7k 0.402 5%` resistor. The resistors are labeled `R457` and `R458`. The input signals are connected to the resistors, and the output is taken from the node between the resistors.

Panel Backlight Control

39

BKOFF#

BKOFF#

1

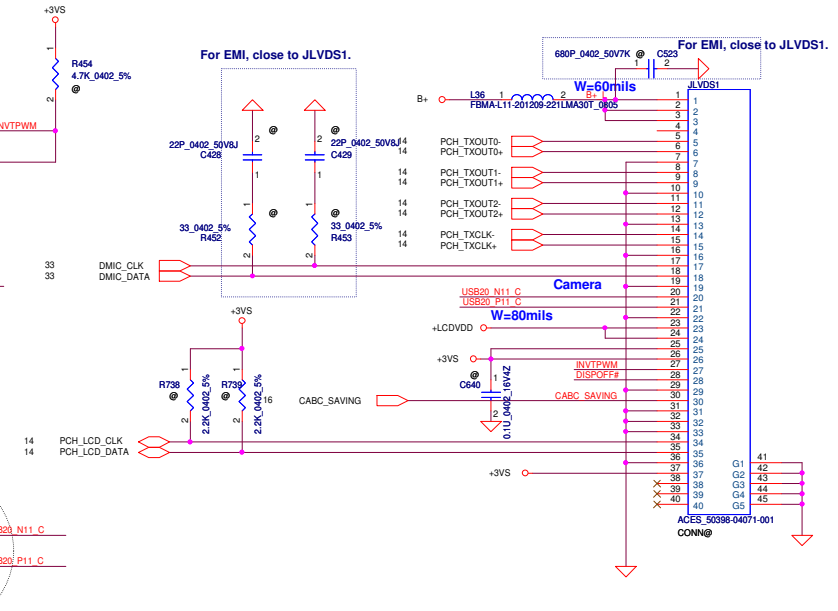
2

R455 33k 0402 5%

DISPOFF#

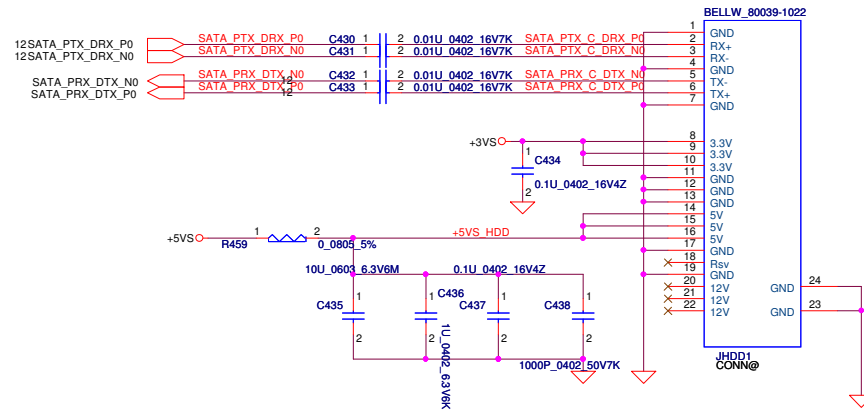
R456 10K 0402 5%

GND

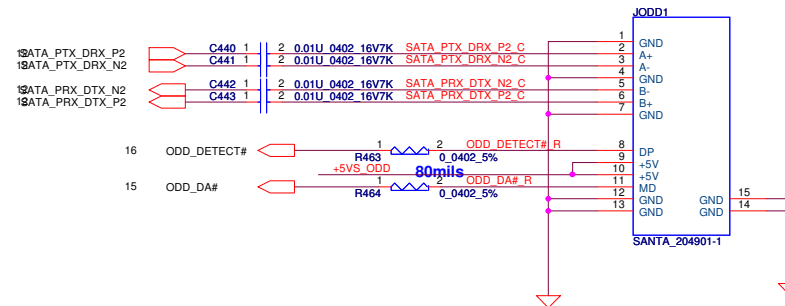
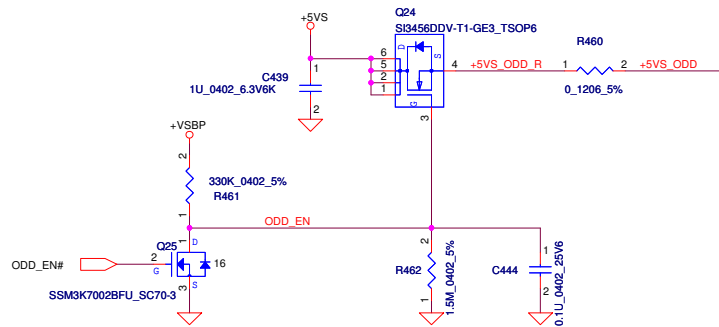


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	LVDs/CRT CONN
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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
					LA-8226P
				Date:	Monday, July 09, 2012
				Sheet	30 of 58

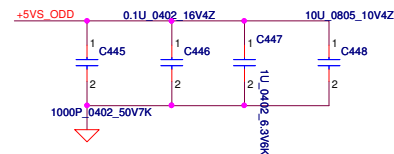
SATA HDD Conn.



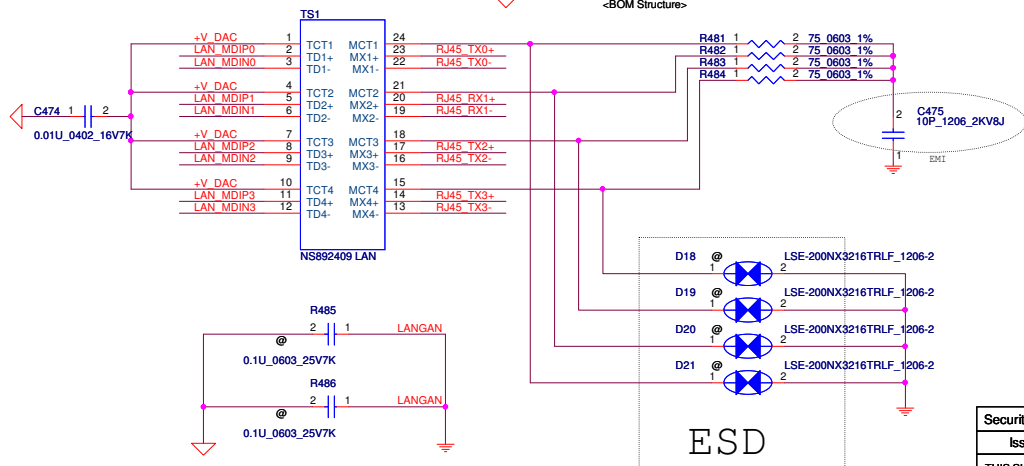
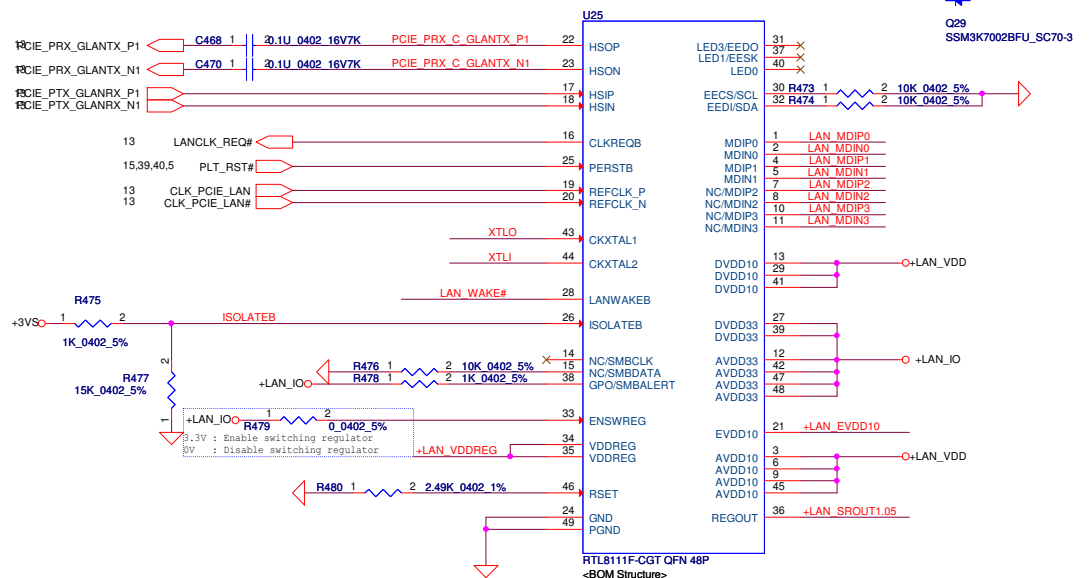
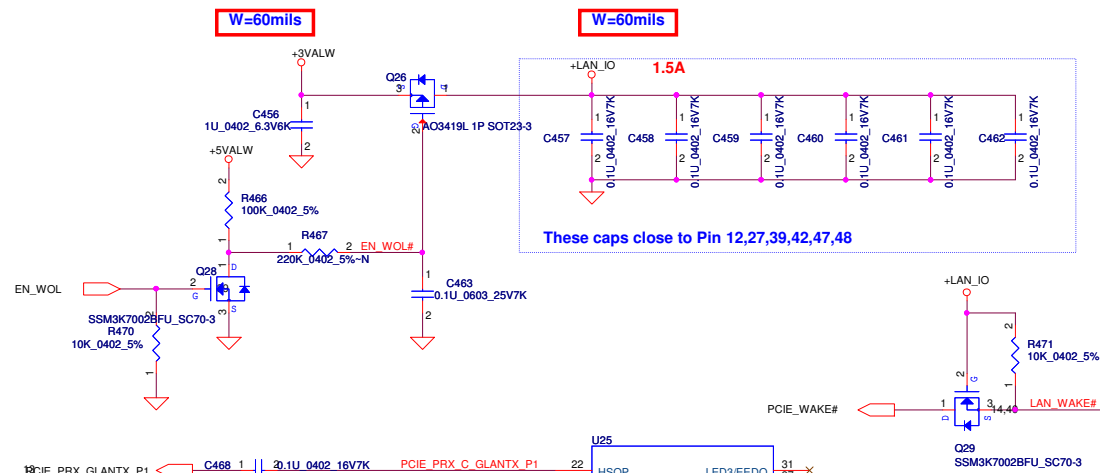
SATA ODD Conn.



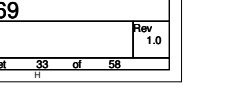
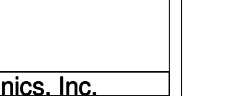
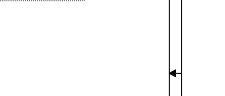
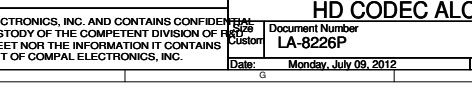
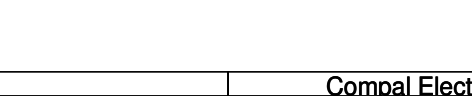
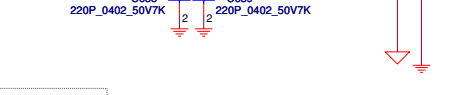
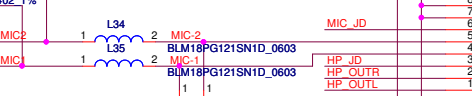
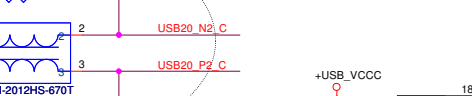
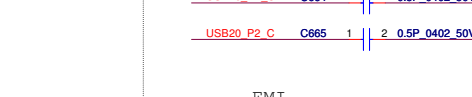
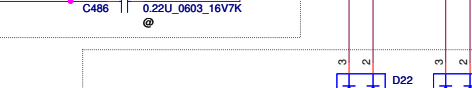
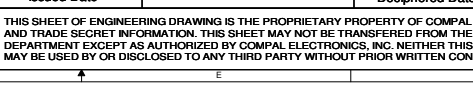
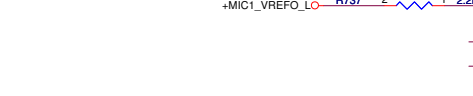
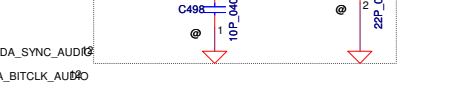
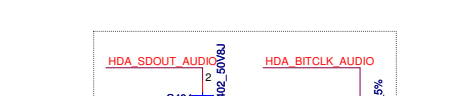
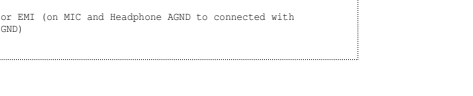
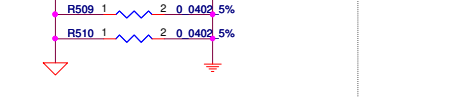
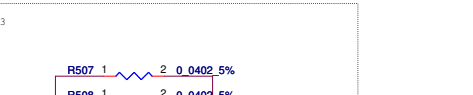
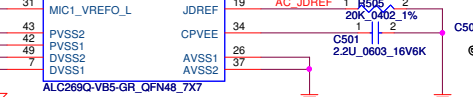
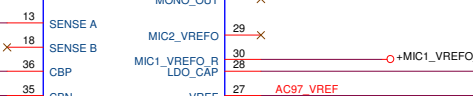
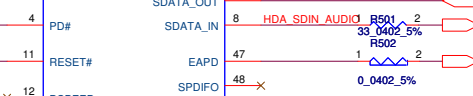
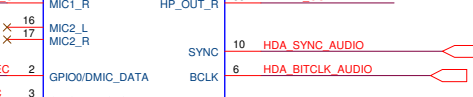
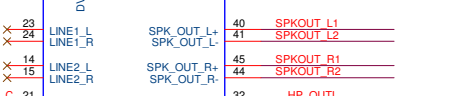
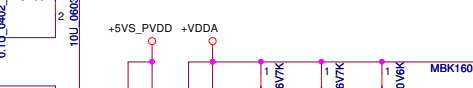
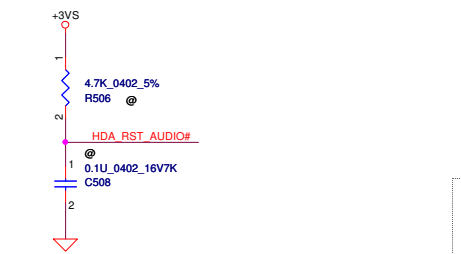
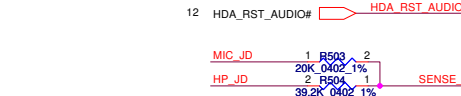
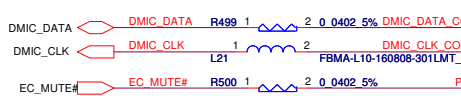
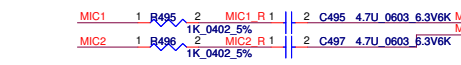
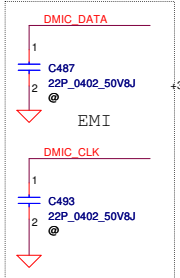
Place caps. near ODD CONN.

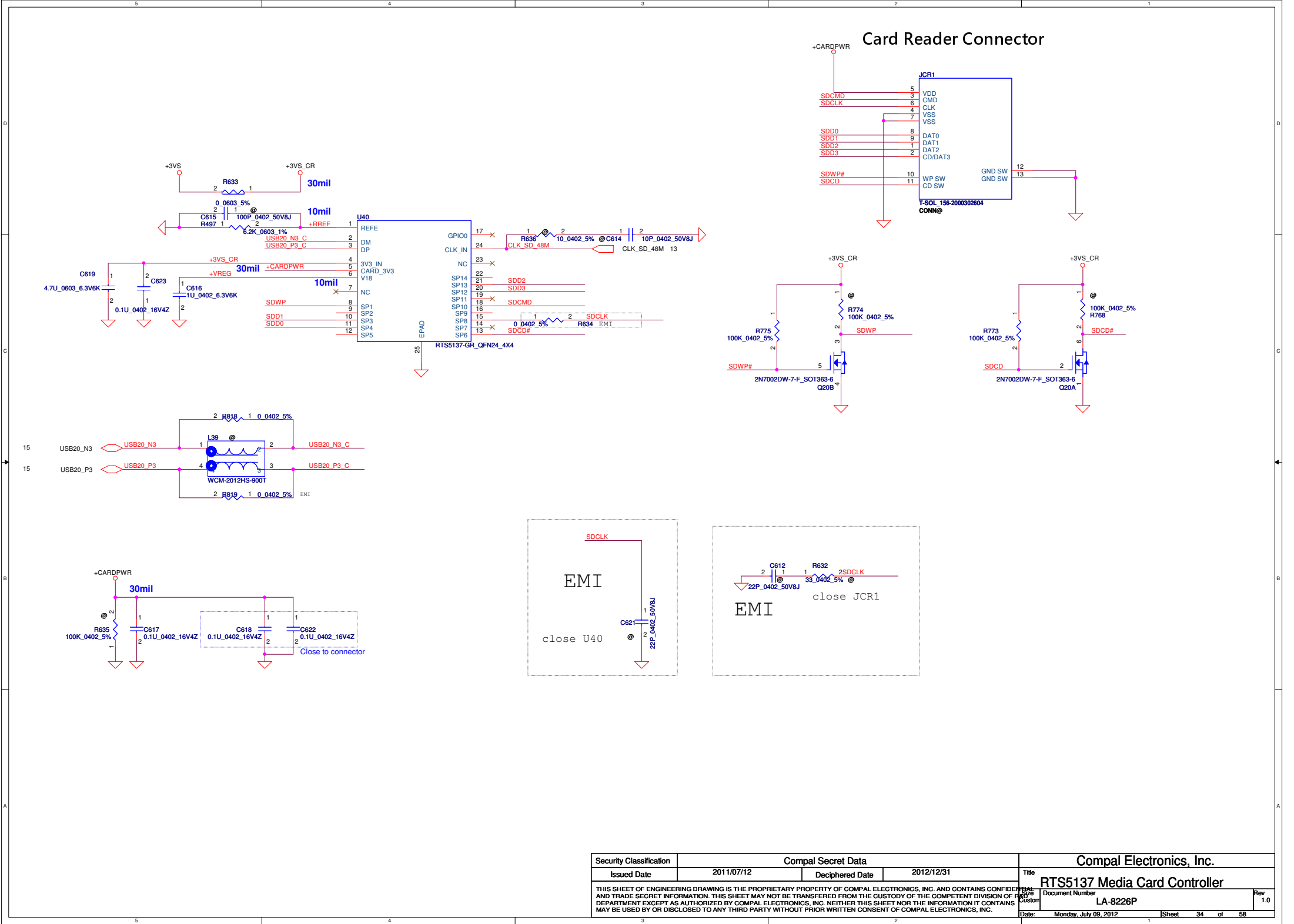


Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2011/07/12		Deciphered Date		2012/12/31		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF THE 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.						HDD & ODD CONN					
						Document Number		LA-8226P		Rev 1.0	
						Date: Monday, July 09, 2012				Sheet 31 of 58	

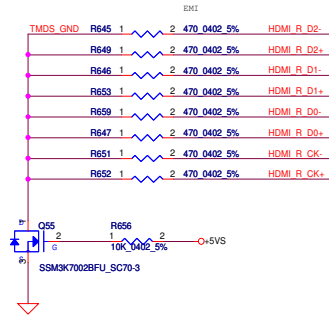
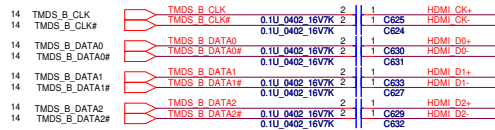
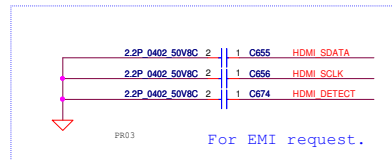
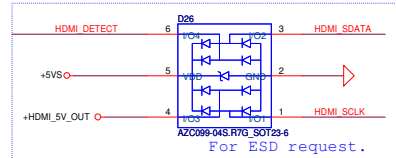
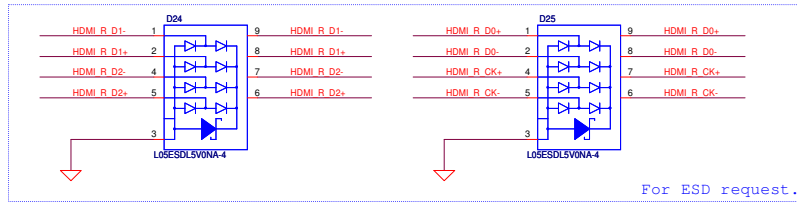


Security Classification		Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2011/07/12		Deciphered Date		2012/12/31		Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF THE 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.								LAN RTL8111F	
								Document Number	
								LA-8226P	
Date: Monday, July 09, 2012								Sheet 32 of 56	

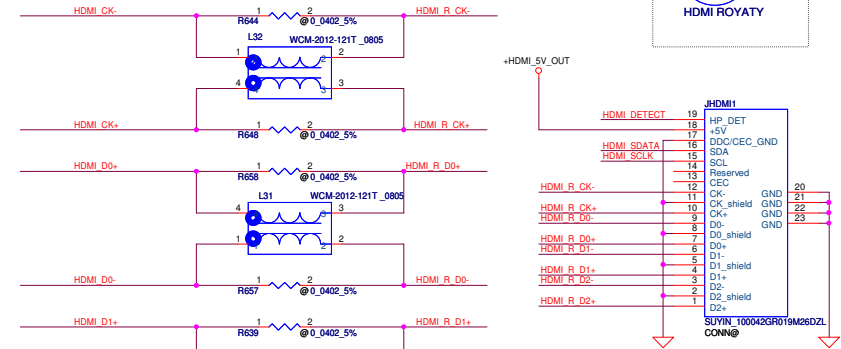
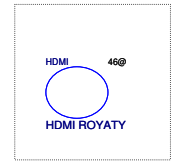
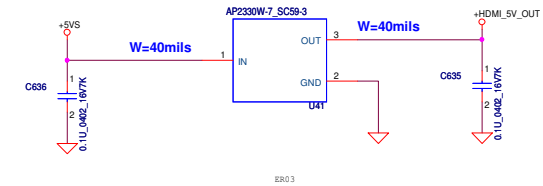
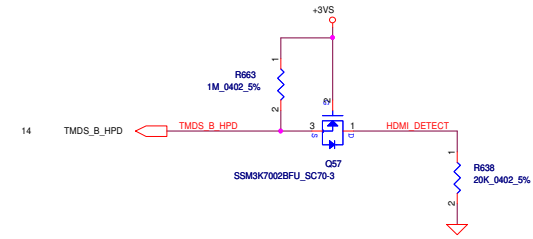
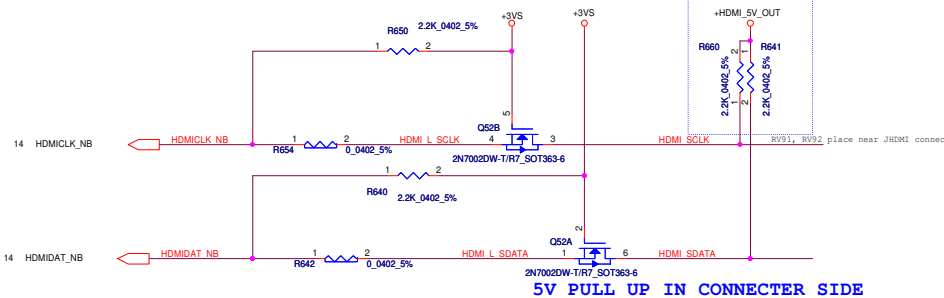




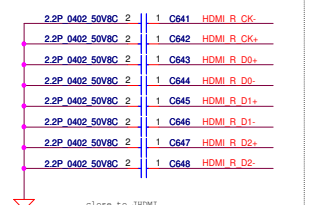
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	RTS5137 Media Card Controller
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF 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.				Document Number	LA-8226P
				Date	Monday, July 09, 2012
				Sheet	34 of 58



HDMI



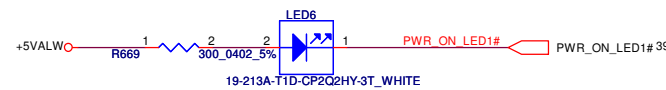
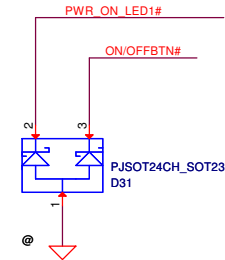
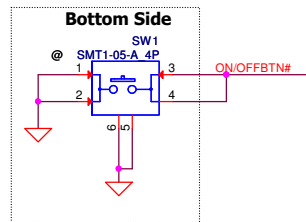
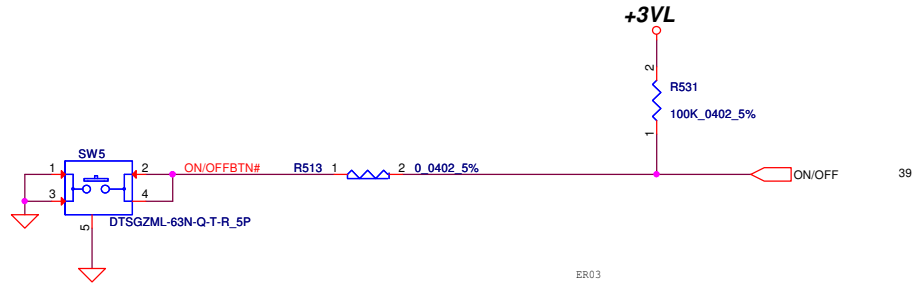
EMI



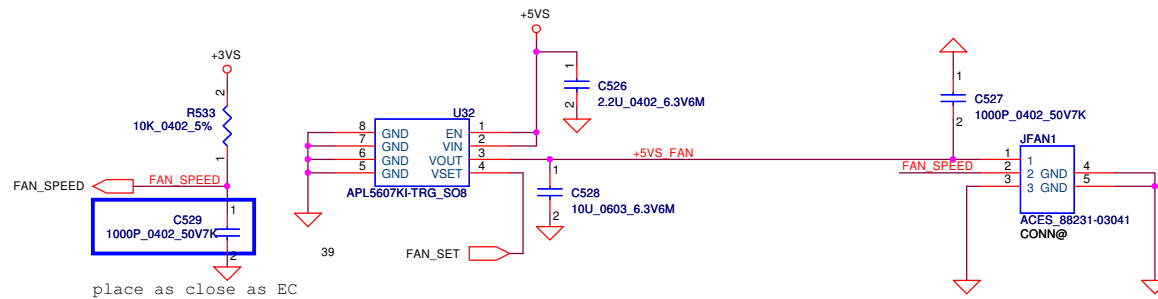
Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		HDMI Connector	
2011/07/12		2012/12/31		Document Number	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Size		Rev	
		C		LA-8226P	
Date:		Monday, July 09, 2012		Sheet 35 of 58	

Power Button

ON/OFF switch



Fan Control Circuit

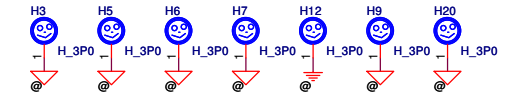


Screw Hole

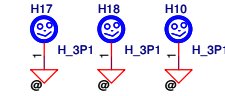
2.7



3.0



3.1



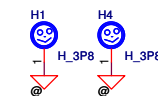
3.3



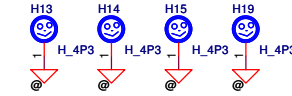
3.8



3.8

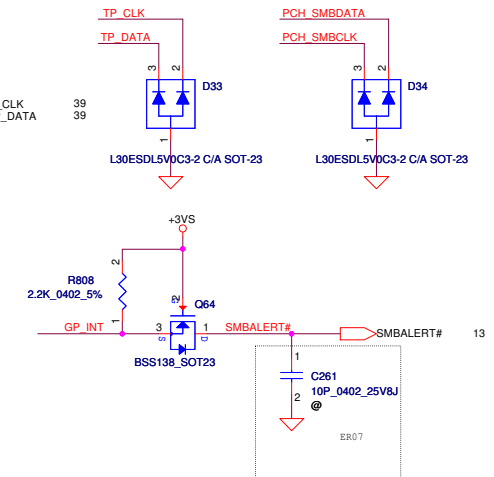
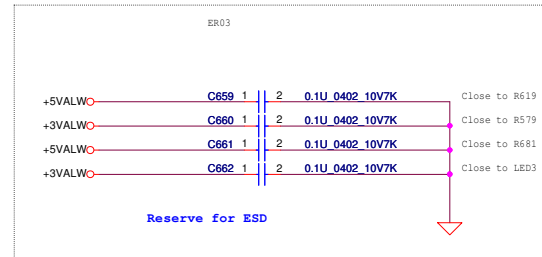
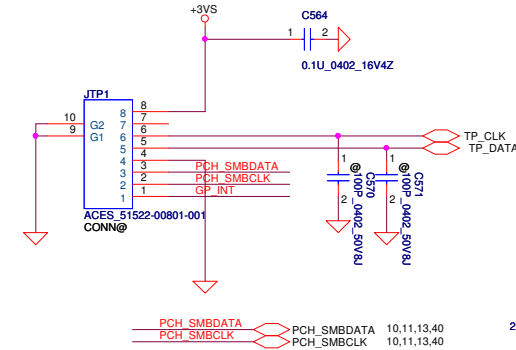
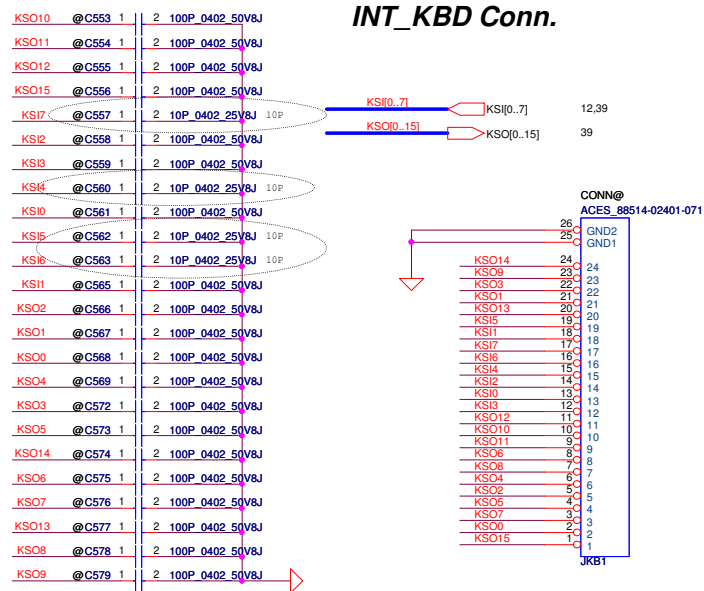


4.3

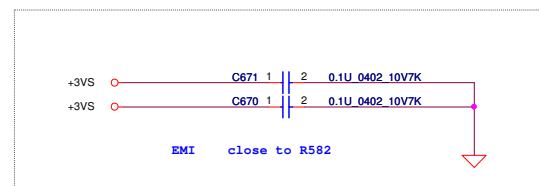
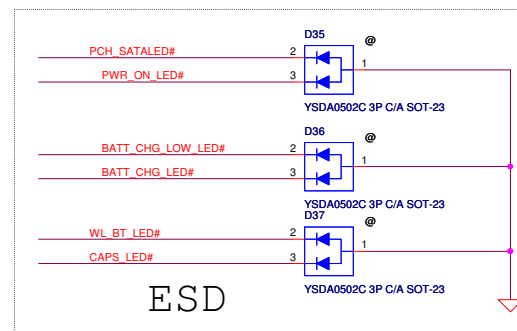
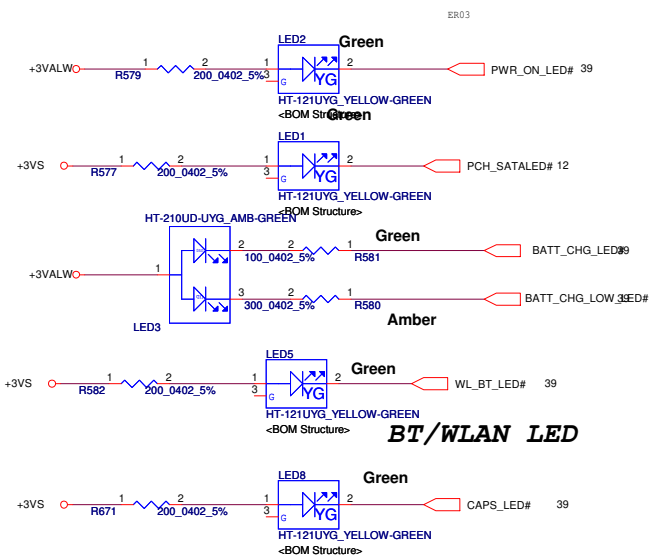


Security Classification	Compal Secret Data			Compal Electronics, Inc. PWRBTN/ FAN / Screws		
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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.				Size	Document Number	Rev
				Custom	LA-8226P	1.0
				Date:	Monday, July 09, 2012	Sheet 37 of 58

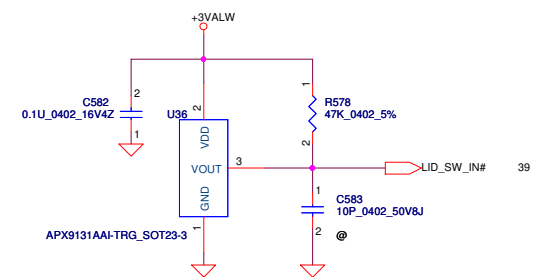
Touch/B Connector



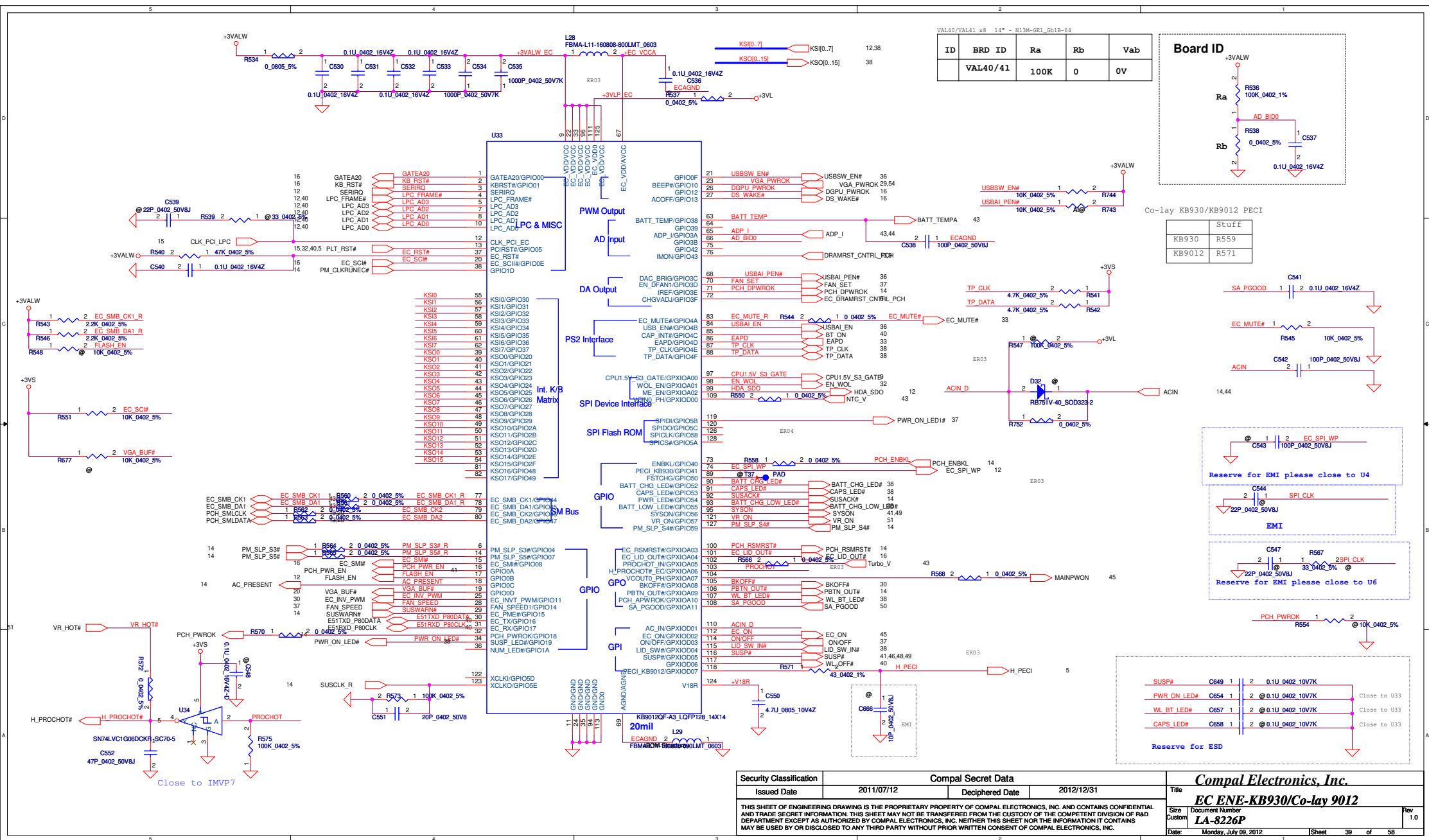
LED

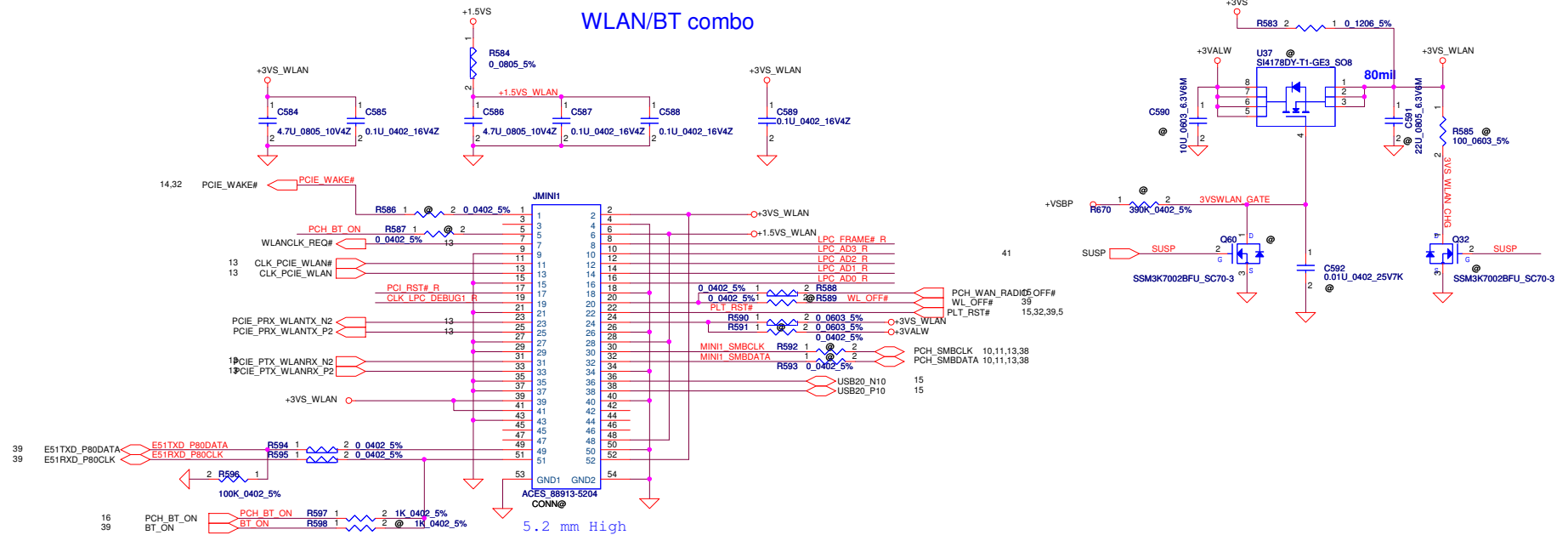


Lid Switch (Hall Effect Switch)



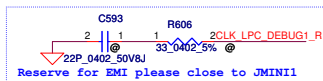
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	KB/EC ROM/TP/FUN/LED
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				Document Number	LA-8226P
				Date:	Monday, July 09, 2012
				Sheet	38 of 58





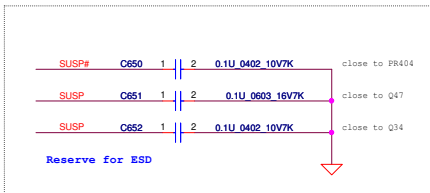
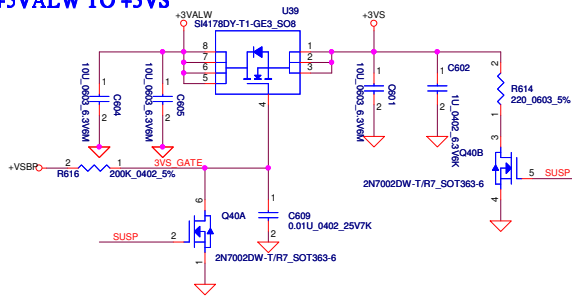
**Reserve for SW mini-pcie debug card.
Series resistors closed to KBC side.**

LPC_FRAME#_R	R599	1	2	0.0402 5%	LPC_FRAME#	12.39
LPC_AD3_R	R600	1	2	0.0402 5%	LPC_AD3	12.39
LPC_AD2_R	R601	1	2	0.0402 5%	LPC_AD2	12.39
LPC_AD1_R	R602	1	2	0.0402 5%	LPC_AD1	12.39
LPC_AD0_R	R603	1	2	0.0402 5%	LPC_AD0	12.39
PCH_RST#_R	R604	1	2	0.0402 5%	PLT_RST#	12.39
CLK_LPC_DEBUG1_R	R605	1	2	0.0402 5%	CLK_LPC_DEBUG1	12.39

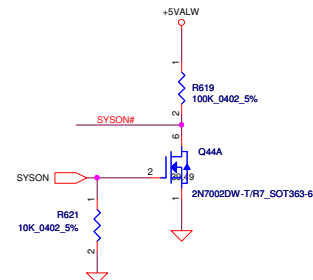
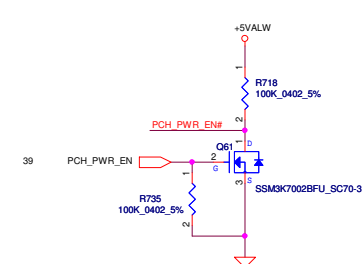
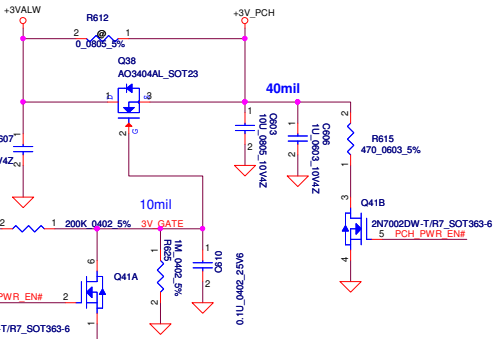
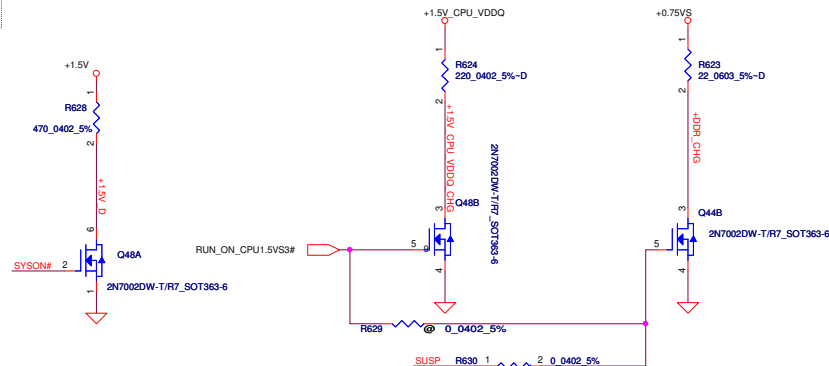
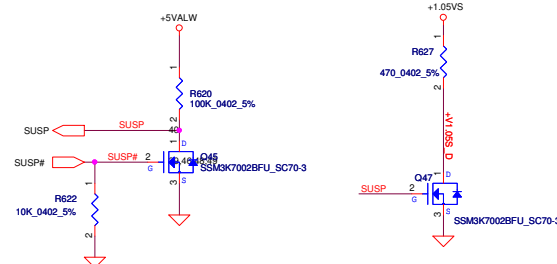
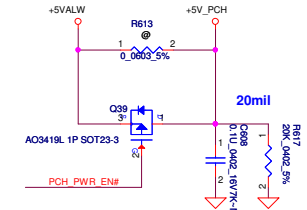


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	WLAN/ WWAN/ m-SATA
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
Date	Monday, July 09, 2012	Sheet	40	of	58

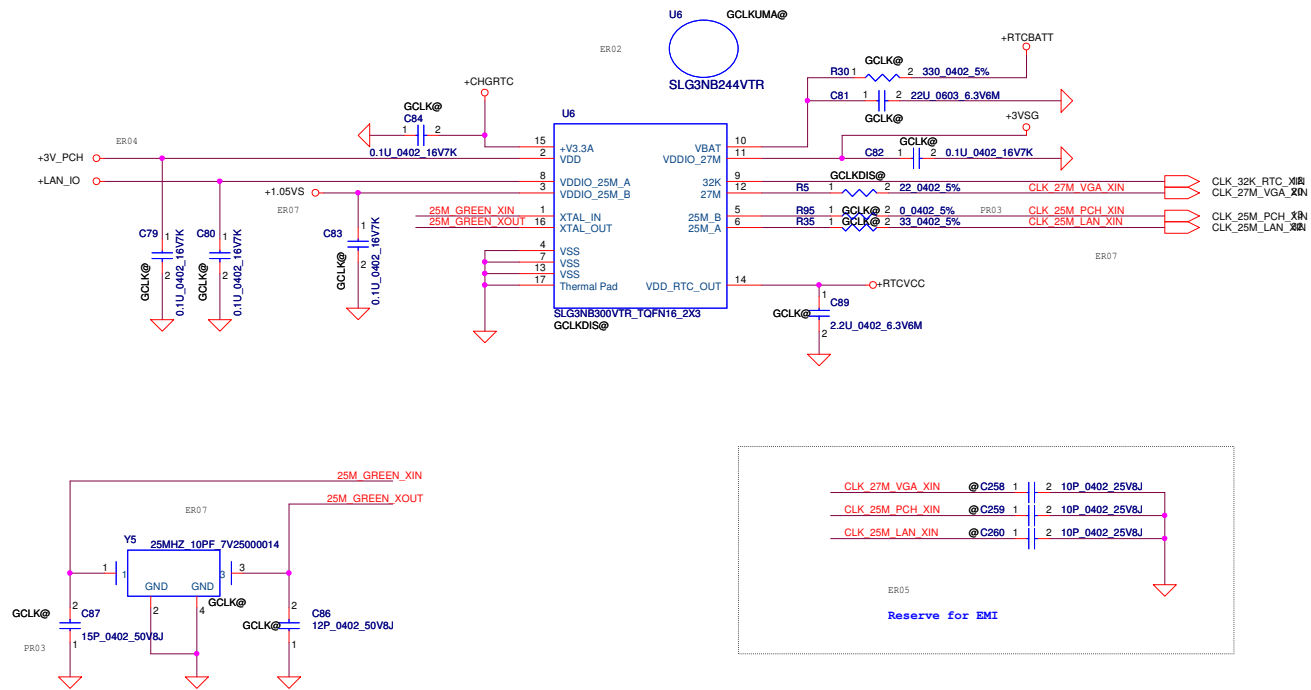
+3VALW TO +3VS



The schematic diagram illustrates the power supply section of the AO3419L 1P SOT23-3. It features a +5V_ALW input connected to a resistor R613 (0.0603 5%). The output of R613 is connected to the gate of a MOSFET Q39 (AO3419L 1P SOT23-3). The MOSFET's source is connected to a 20mF capacitor and its drain is connected to the PCH_PWR_EN# signal line. A 20k 0.002 5% resistor R617 is connected between the PCH_PWR_EN# line and ground.

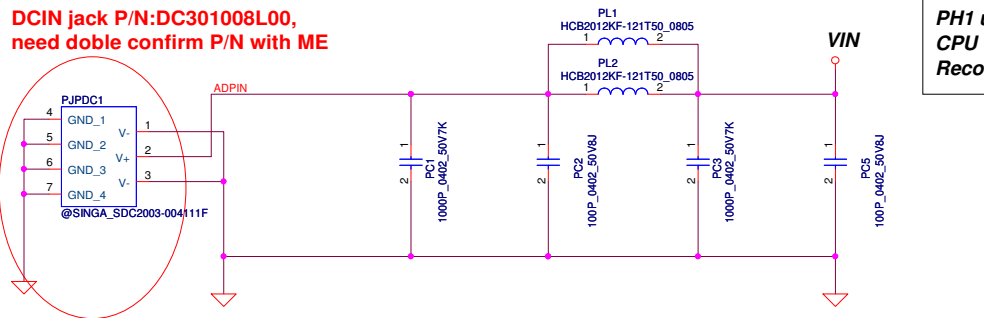


Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		2011/07/12	Deciphered Date		2012/12/31	Title
						DC/DC Interface
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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.				Document Number	Rev	
				LA-8226P	1.0	
Date: Monday, July 09, 2012				Sheet	41 of 56	

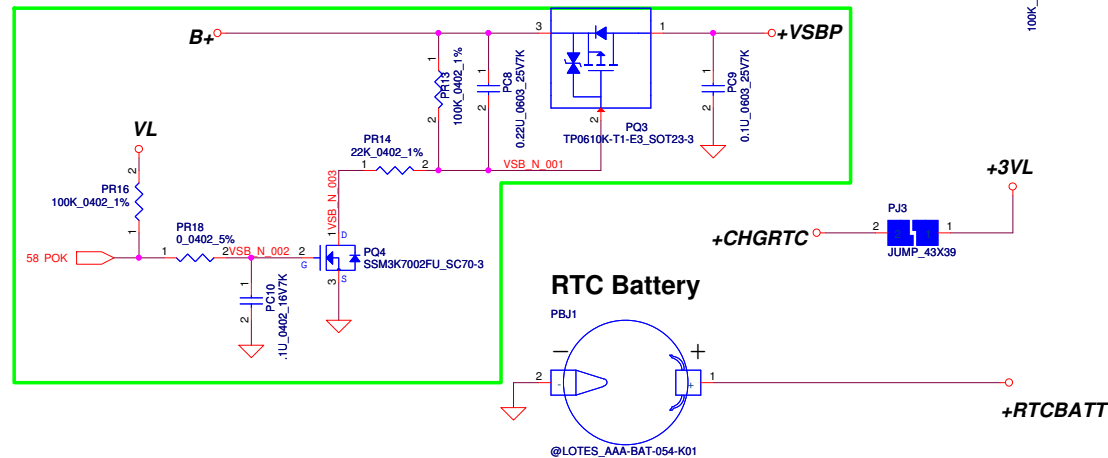
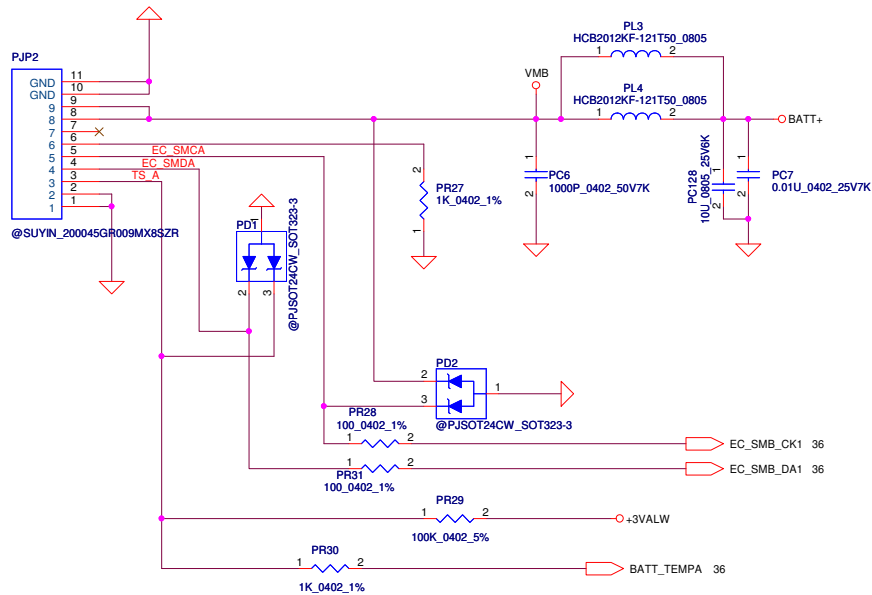
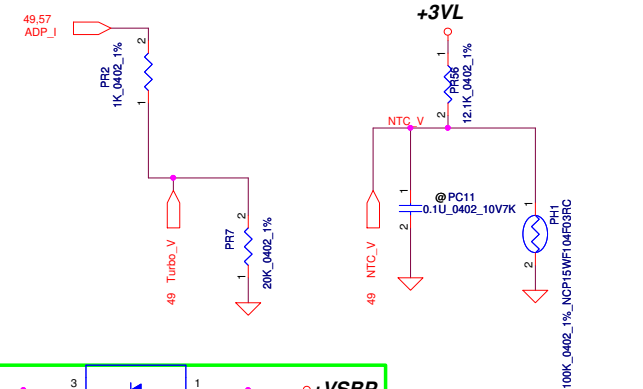


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/07/12	Deciphered Date	2012/12/31	Title	Green CLK SLG3NB300VTR
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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-8226P
				Date: Friday, July 13, 2012	Rev 1.0
				Sheet 42 of 58	

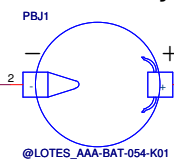
DCIN jack P/N:DC301008L00,
need doble confirm P/N with ME



PH1 under CPU bottom side :
CPU thermal protection at 93 +3 degree C
Recovery at 56 +3 degree C



RTC Battery



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/01/23	Deciphered Date	2010/01/23	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
					LA-8226P	1.0
				Date:	Friday, July 13, 2012	Sheet 43 of 56

3.3V
Peak Current 18A
OCP current ??A
FSW=300kHz
DCR 38mohm +/-5%

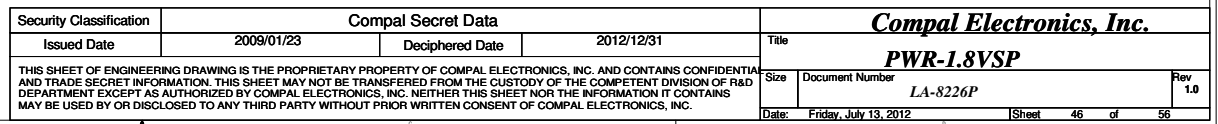
	TYP	MAX
H/S Rds (on)	:11.2mohm	14mohm
L/S Rds (on)	:6.2mohm	7.8mohm

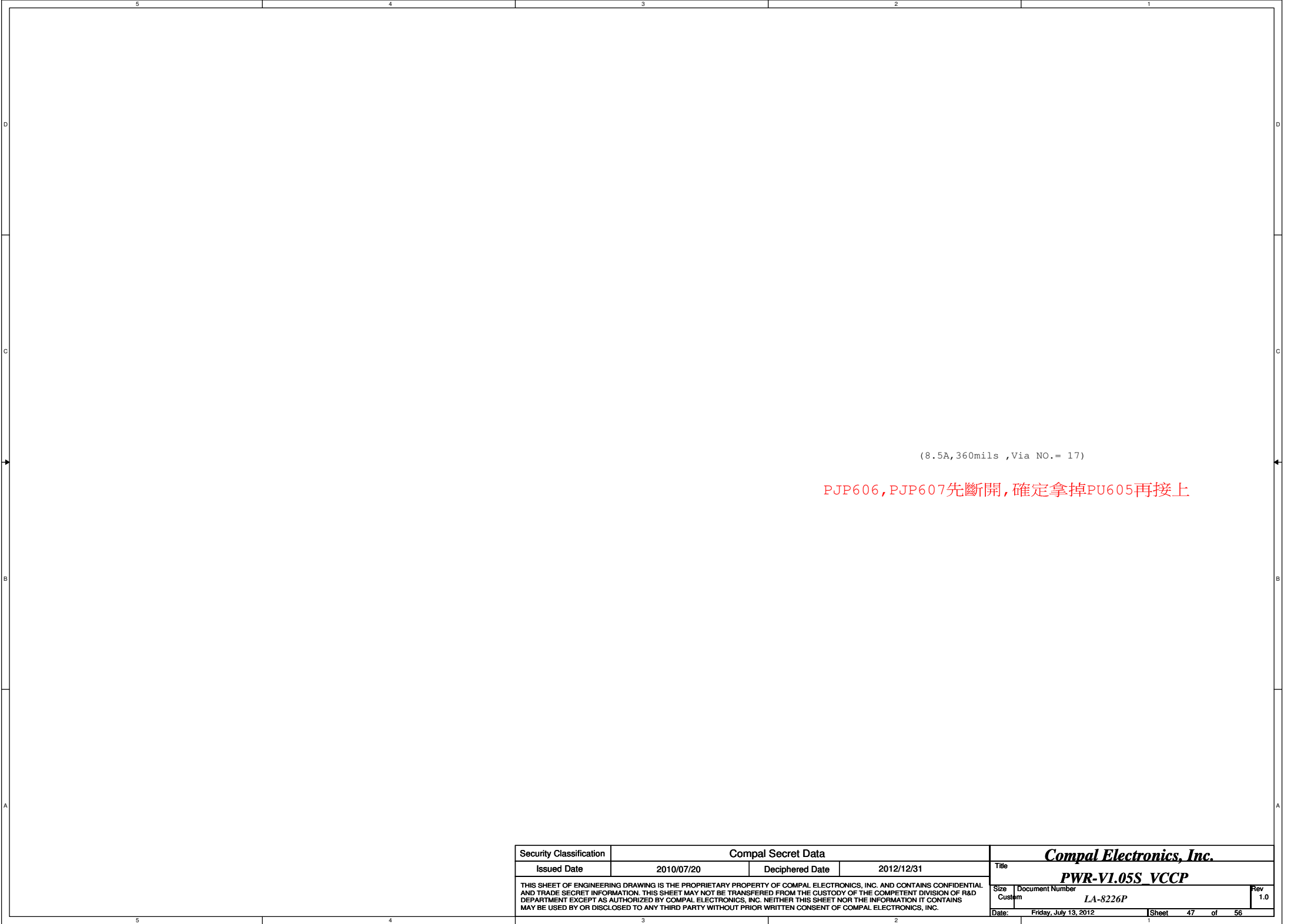
<40> EC_ON
<40> MAINPWON

5V
Peak Current 18A
OCP current ??A
FSW=300kHz
DCR 13.2mohm +/-5%

	TYP	MAX
H/S Rds (on)	:11.2mohm	14mohm
L/S Rds (on)	:6.2mohm	7.8mohm

Security Classification	Compal Secret Data			Title	
Issued Date	2012/03/13	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 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.				Document Number	Rev
				LA-8226P	1.0
Date: Monday, July 09, 2012				Sheet	45 of 53

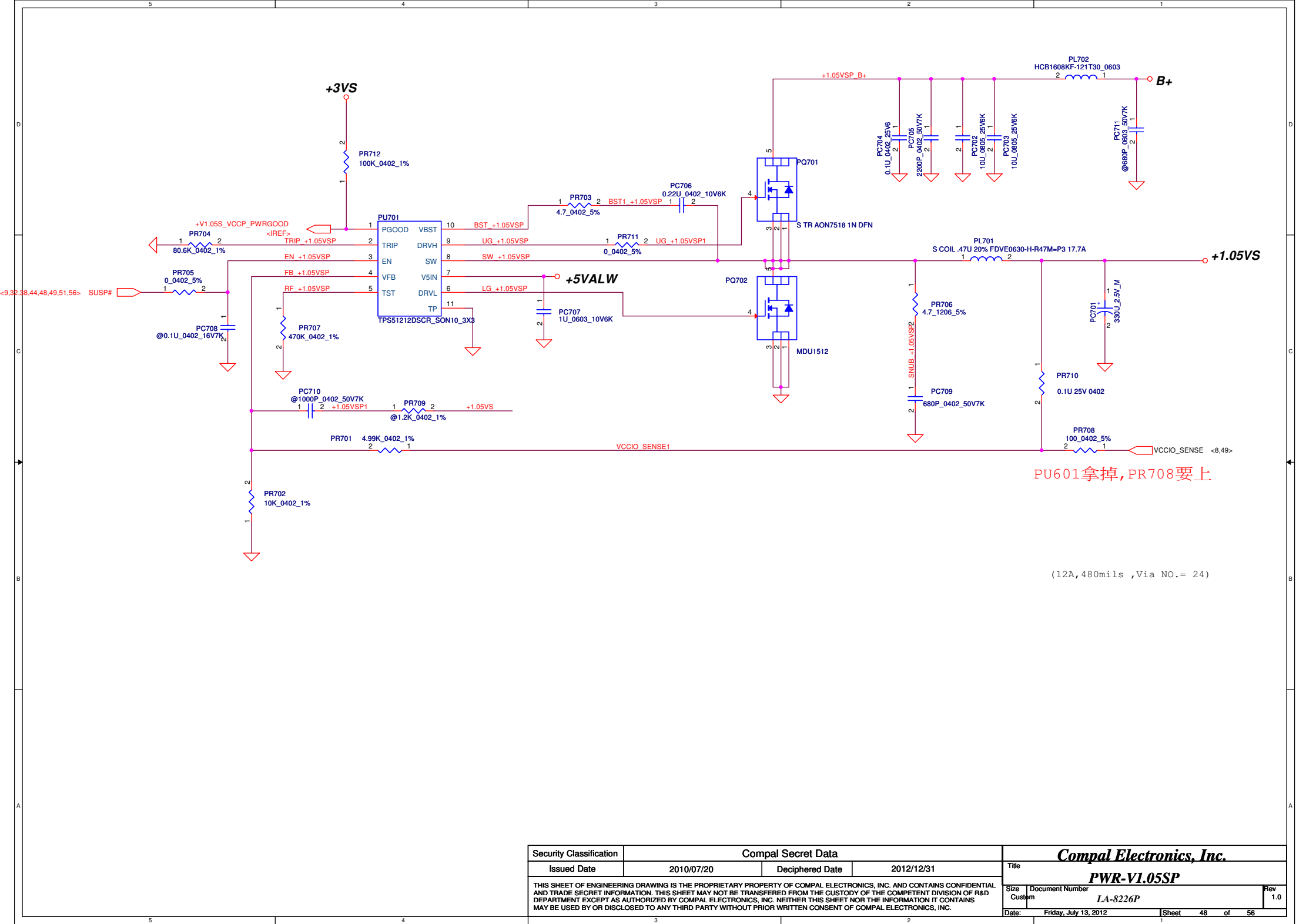




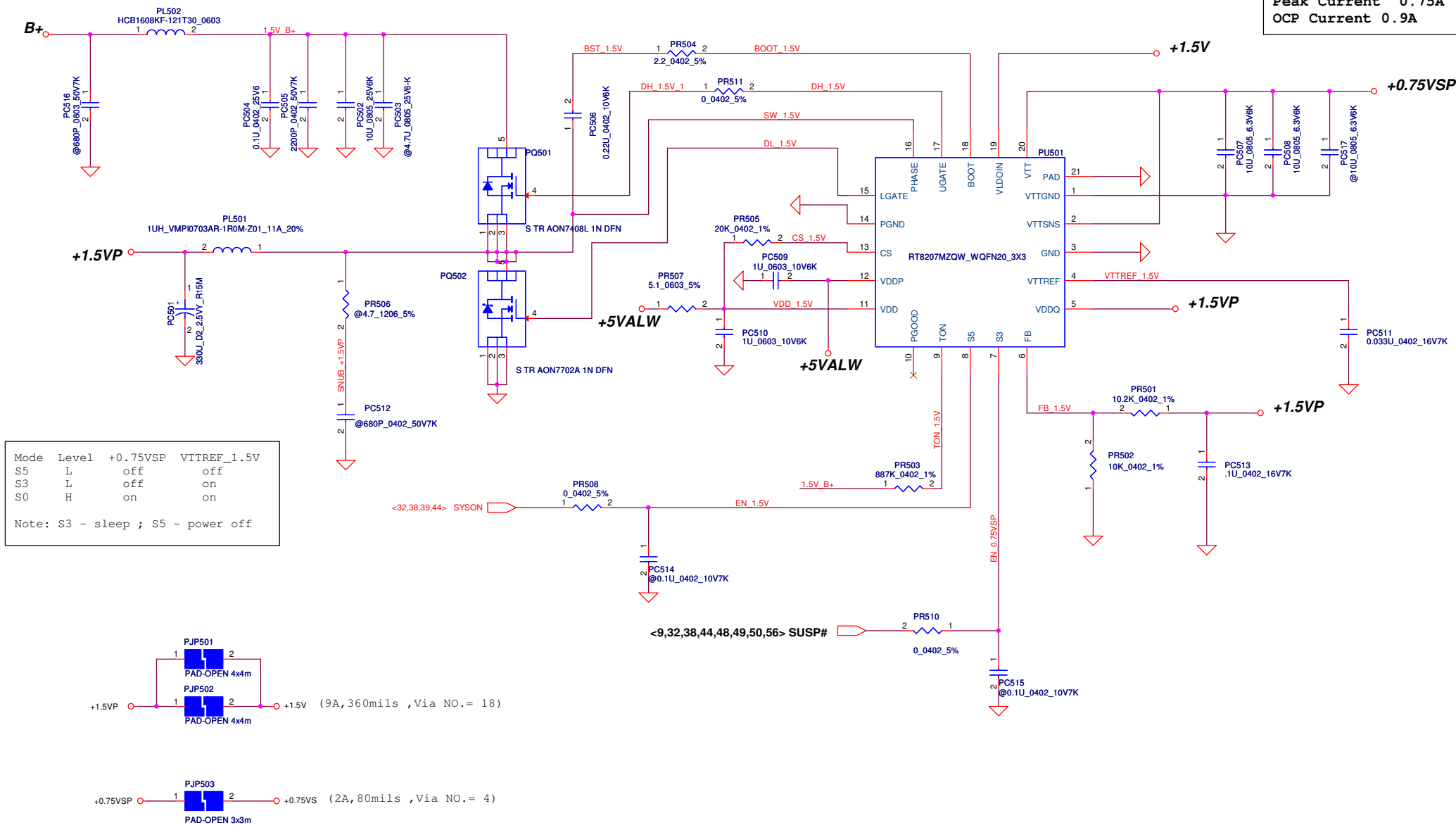
(8.5A,360mils ,Via NO.= 17)

PJP606,PJP607先斷開,確定拿掉PU605再接上

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2010/07/20	Deciphered Date	2012/12/31	Title PWR-V1.05S VCCP		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number LA-8226P	Rev 1.0
Date:		Friday, July 13, 2012		Sheet	47	of 56



0.75Volt +/- 5%
TDC 0.525A
Peak Current 0.75A
OCP Current 0.9A



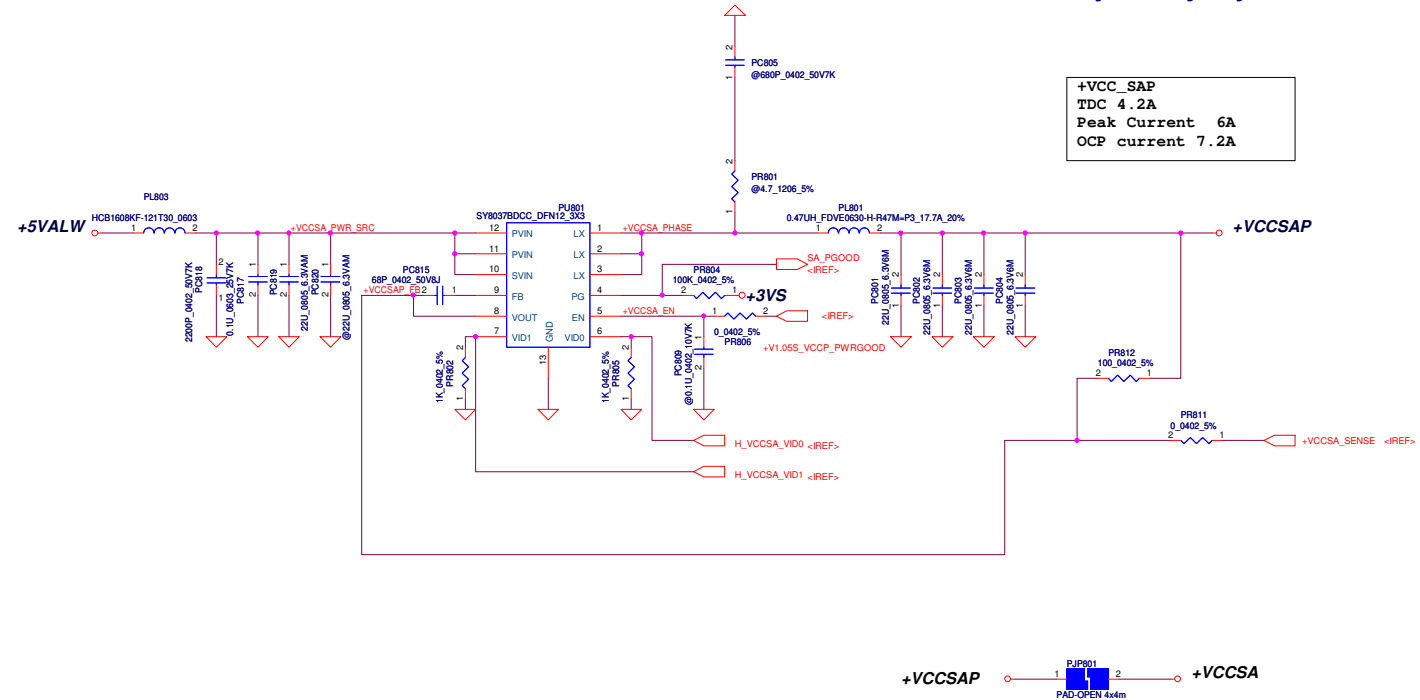
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/07/20	Deciphered Date	2012/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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-1.5VP / +0.75VSP	
Size	Document Number	Rev		Date	
Custom	LA-8226P	1.0		Friday, July 13, 2012	
Sheet		49		of	
56					

***The 1k PD on the VCCSA VIDs are empty.
These should be stuffed to ensure that
VCCSA VID is 00 prior to VCCIO stability.***

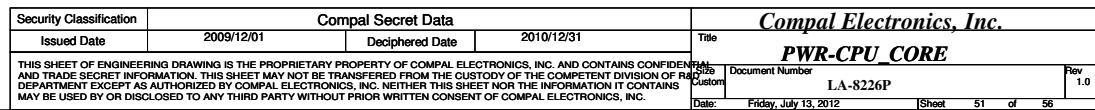
VID [0]	VID[1]	VCCSA Vout
0	0	0.9V
0	1	0.8V
1	0	0.725V
1	1	0.675V

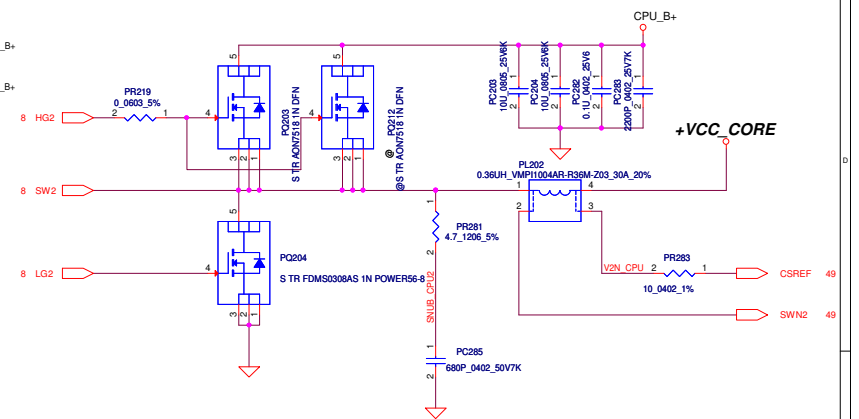
output voltage adjustable network

```
+VCC_SAP
TDC 4.2A
Peak Current 6A
OCP current 7.2A
```



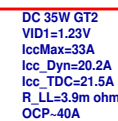
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/07/20	Deciphered Date	2012/12/31	Title	
				PWR-VCC SAP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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 C	Document Number
					LA-8226P
				Date:	Friday, July 13, 2012
				Sheet	50 of 56
				Rev	1.0



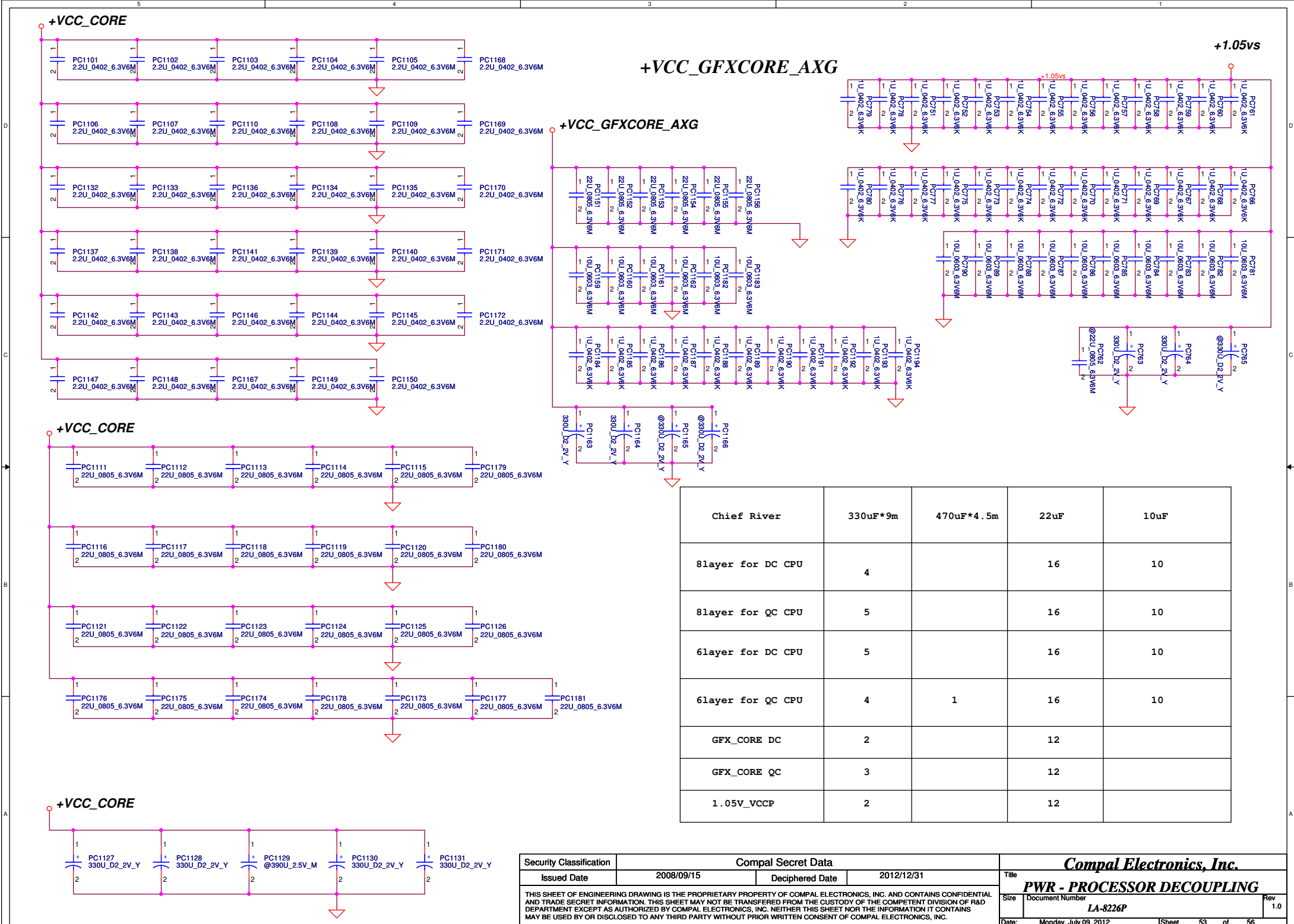


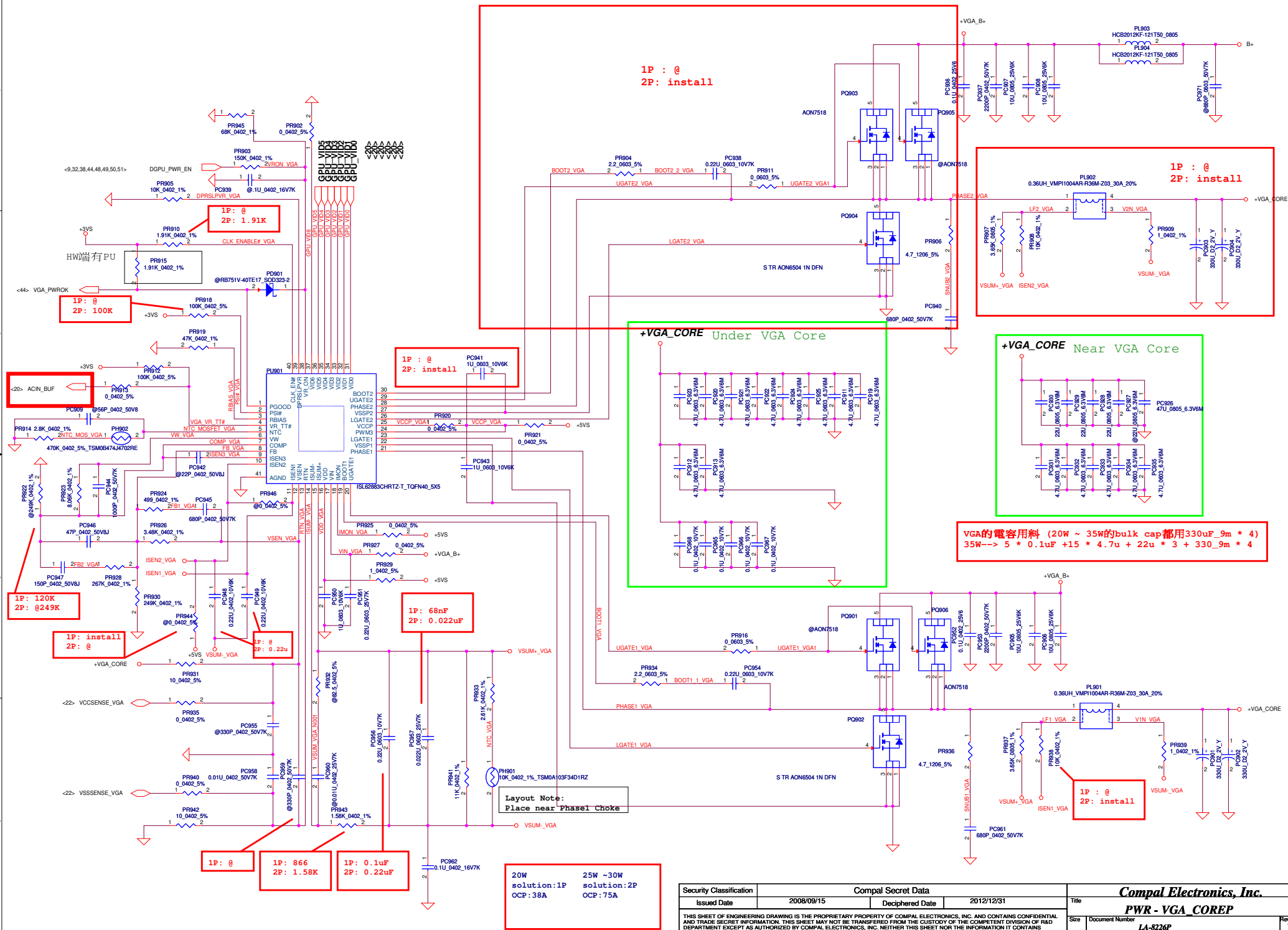
DC 35W CPU
VID1=1.05V
IccMax=53A
Icc_Dyn=43A
Icc_TDC=33A
R_LL=1.9m ohm
OCP~65A

```
DC 35W CPU
solution: 2+1
MOS: cpu_core --> 上1(CSD17308) 下1(TPCA8059)
      Gfx_core --> 上1(CSD17308) 下1(TPCA8057)
```

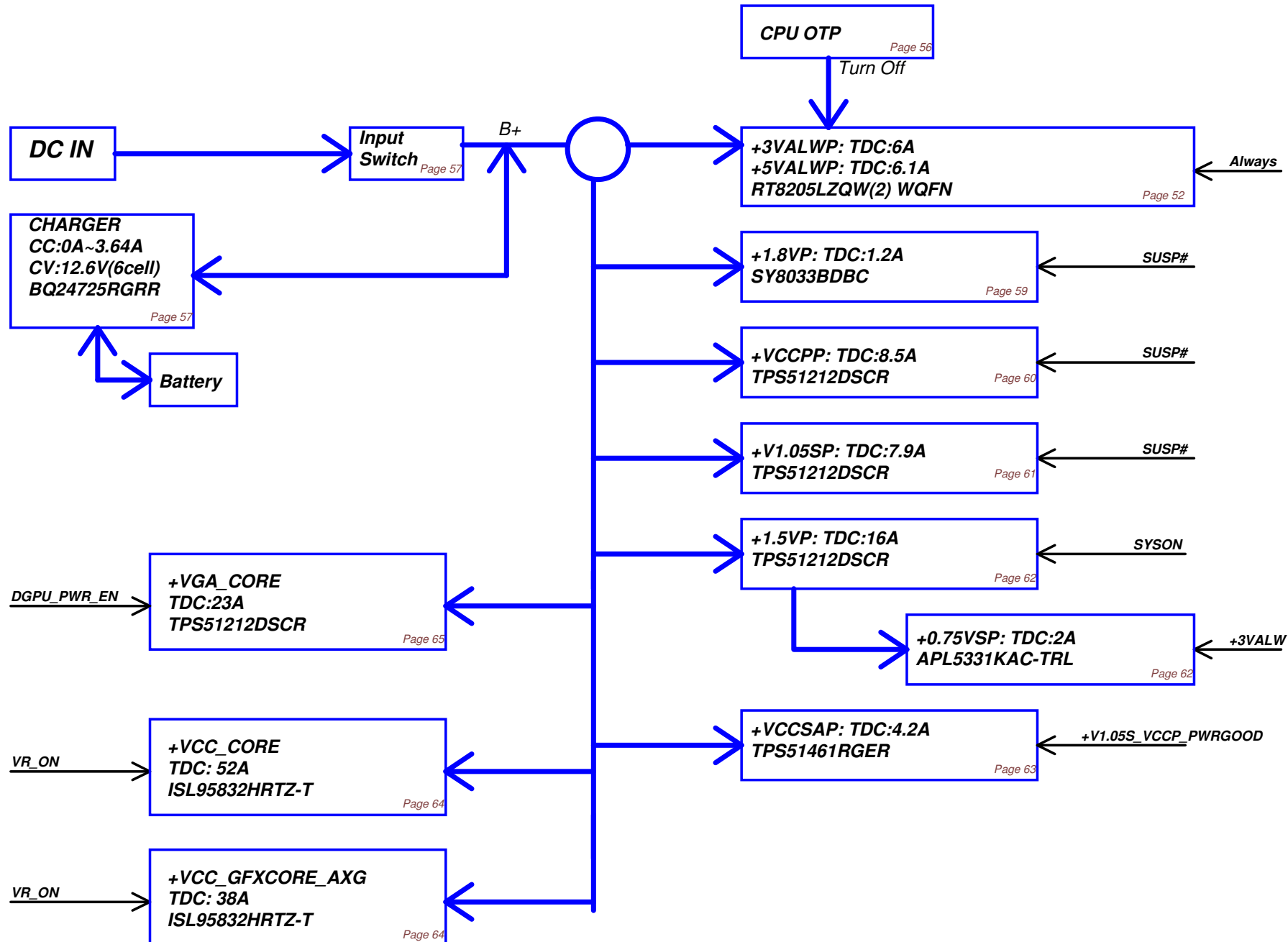


Security Classification		Compal Secret Data		<i>Compal Electronics, Inc.</i> PWR-CPU CORE	
Issued Date	2009/12/01	Deciphered Date	2010/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				Size	Document Number
					LA-8226P
Date:				Friday, July 13, 2012	Sheet 52 of 56 Rev 1.0





Power block

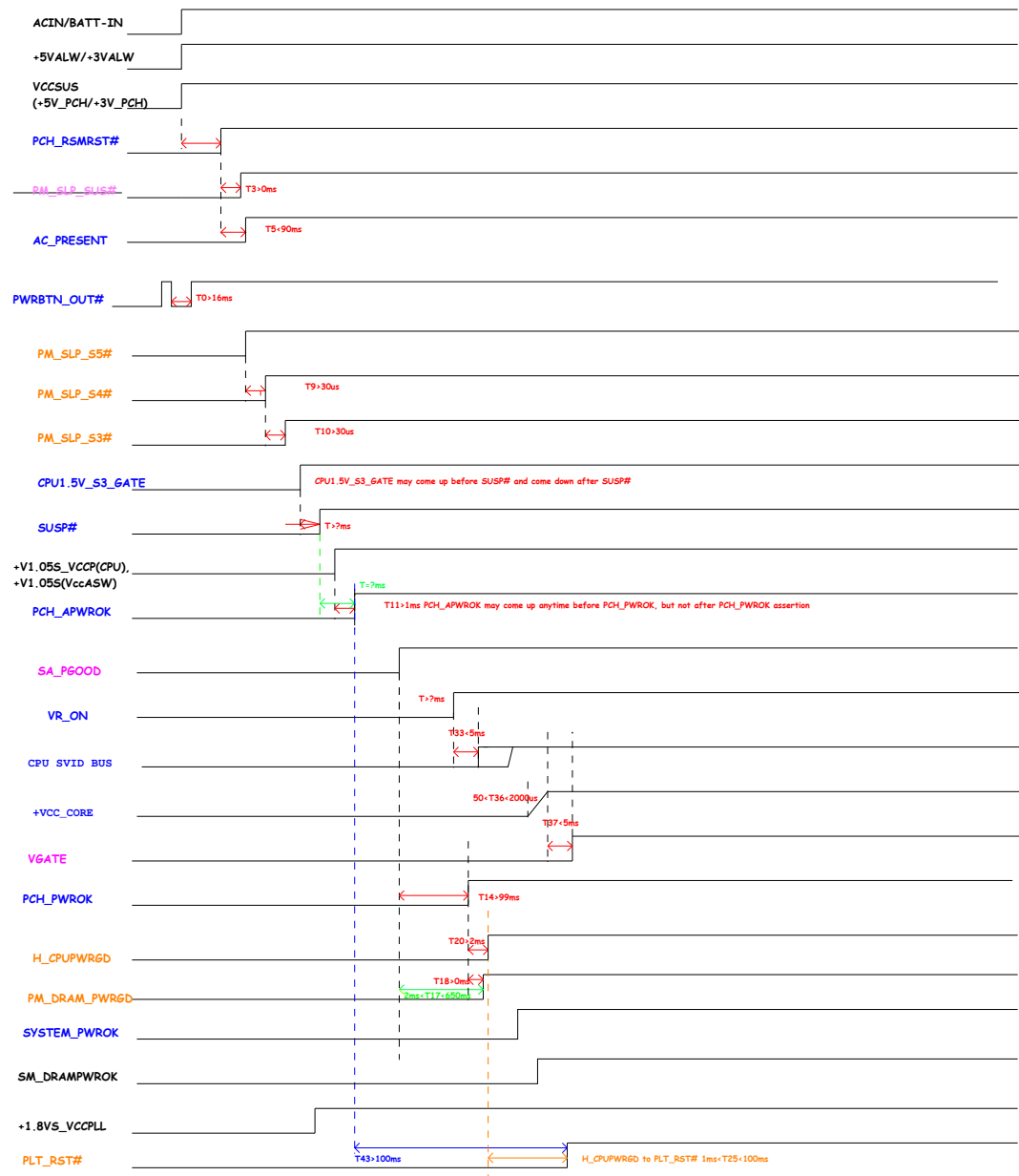


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/08/03	Deciphered Date	2012/12/31	Title	POWER BLOCK DIAGRAM
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF THE 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.				Document Number	LA-8226P
				Date	Monday, July 09, 2012
				Sheet	55 of 56

Page 1

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008/09/15	Deciphered Date	2012/12/31	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 FSC 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.				Document Number	Rev	
					1.0	
Date: Monday, July 09, 2012				Sheet	56	of 56

Timing Diagram for G3 or S4-5/M-off (Suspend Well Off) to S0/M0 [non Deep S4/S5 Platform]



Color	Command
Signal Names	Timing of these signals is set by PCH or processor
Signal Names	Timing of these signals should be met by the platform (EC)
Signal Names	Timing of these signals is set by IntelR MVP
Signal Names	Voltage rails or chip-to-chip buses

Version Change List (P. I. R. List)

Page 1/1

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
ER01		CPU change from socket to BGA 1023	0.1	4~9	CPU change to UCPU1(BGA1023) from JCPU1(socket).	5/28	
		Modify CPU Cap.	0.1	8,9	Change C74,C75 to 1uf/0402 Del C79,C80,C81,C82,C83,C84. Add C243,C239,C151,C177,C219,C157,C181,C237, C153,C192 to 1uF/0402 Add C238,C241,C240,C236,C156,C244,C242,C143 to 10uF/0603 Del C86,C87,C88,C89,C94. Add C245,C246,C254,C248,C249, to 1uF/0402. Add C253,C250,C252,C251,C247 to 10uF/0603.	5/28	
ER02		For Green CLK	0.1	12 13 32 20 43	Add R683 0 ohm. (PCH_32K) Add R637 0 ohm. (PCH_25M) Add R555 0 ohm. (LAN_25M) Add R96 0 ohm. (VGA_27M) Add C89 2.2uF. Add C86,C87 12pF. Add C81 22uF. Add C79,C83,C84,C82,C80 0.1uF. Add Y5 25M. Add U6 SLG3NB300VTR. Add R31 1M. Add R5 22ohm. Add R95,R35 33ohm. Add R30 330ohm. Add R97 0ohm.	5/28	
ER03		Remove reserve components	0.1	33 39 35 38 5,6,13, 17,18	Del C504,C505,C507. Del C655,C656,R681. Del C626,C628,C634,F1,Q53,Q56,R643,R664. Del D30,Q30,R532,R530. Del R267,R43,R750,R278,R290.	5/29	
ER04		Remove ASM1042 (Del page 36) Green CLK VDD change EMI solution	0.1	13,36,37 43 13,32,20	Del ASM1042 . U6 VDD change to +3V_PCH from +LAN_IO. Add R185,R186,R187.(reserve) Add C255,C256,C257.(reserve)	5/30	
ER05		EMI solution	0.1	42	Add C258,C259,C260.(reserve)	5/31	
ER06		BOM modify	0.1	17 15	C180 change to 22uf (SE000000I110). stuff R234 0 ohm	6/4	
ER07		Green CLK modify EMI solution	0.1	42 38	Del R31,R97. Change U6 pin3 voltage to +1.05VS. Add C261.(reserve)	6/4	
ER08		Modify Cap.	0.1	09	Add C262,C263 to 10uf . un-stuff C97,C85,C78 .	6/6	
PR01		Change JDIMM1. footprint	1.0	10	Change JDIMM1 footprint.(TYCO_2-2013298-1_204P)	7/4	
PR02		Swap Resistor	1.0	07	Swap R48 & R46.	7/5	
PR03		EMI solution / GCLK	1.0	35,42	Add C655,C656,C674 to 2.2pf . C87 change to 15pf. R95 change to 0 ohm.		

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/12/01	Deciphered Date	2011/12/31	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 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.				EE-PIR-1	
Document Number				Rev	
LA-8226P				1.0	
Date: Friday, July 13, 2012				Sheet 58 of 58	

www.s-manuals.com