Compal Confidential

VBL30/31

LA-9351P REV0.1 Schematic

Intel Ivy Bridge/Panther Point

AMD Seymour XT

2012-05-08 Rev 0.1

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

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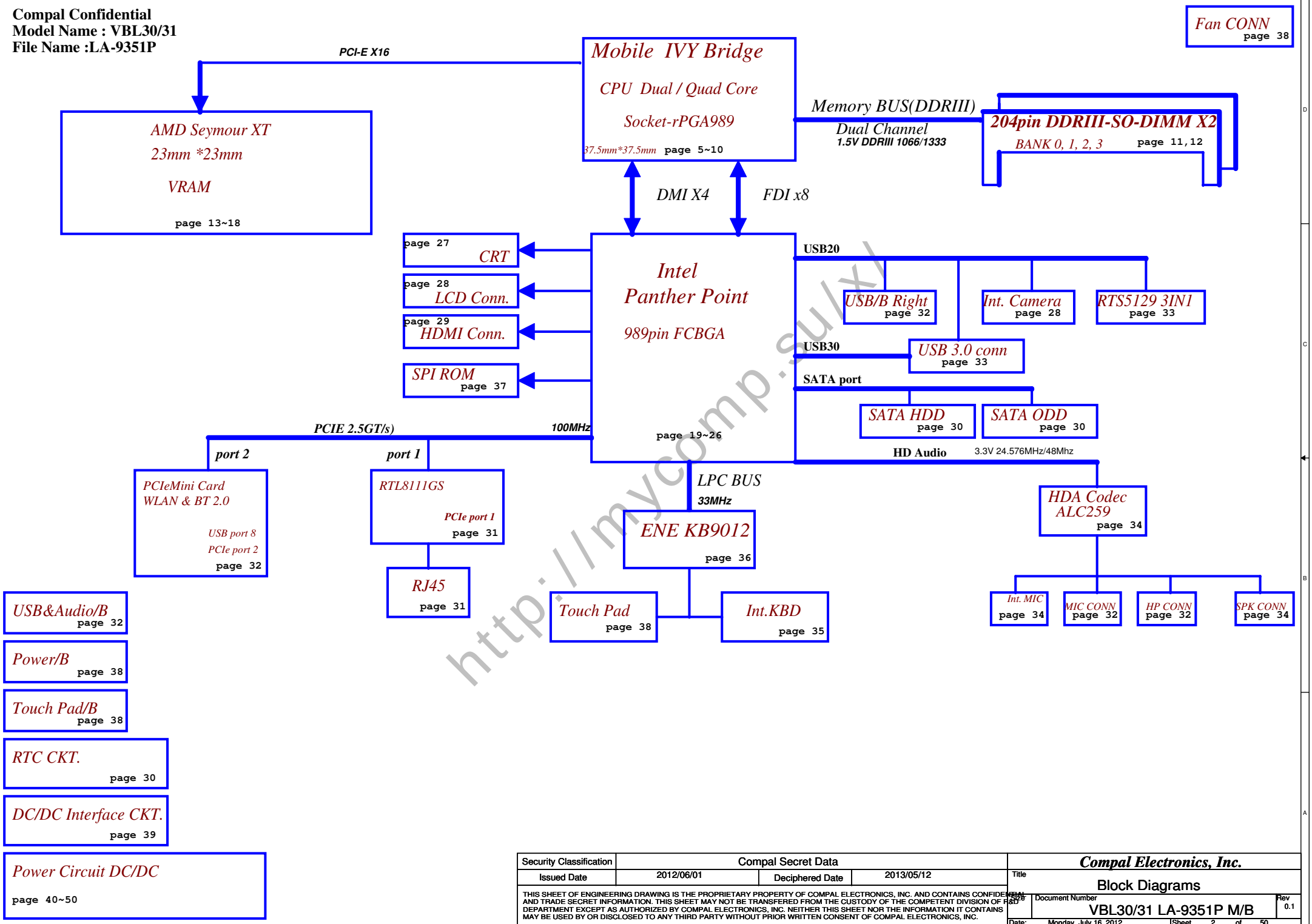
Title: Cover Page

Size: D | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 1 of 50

Compal Confidential
Model Name : VBL30/31
File Name :LA-9351P



Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

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Title: Block Diagrams

Size: | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

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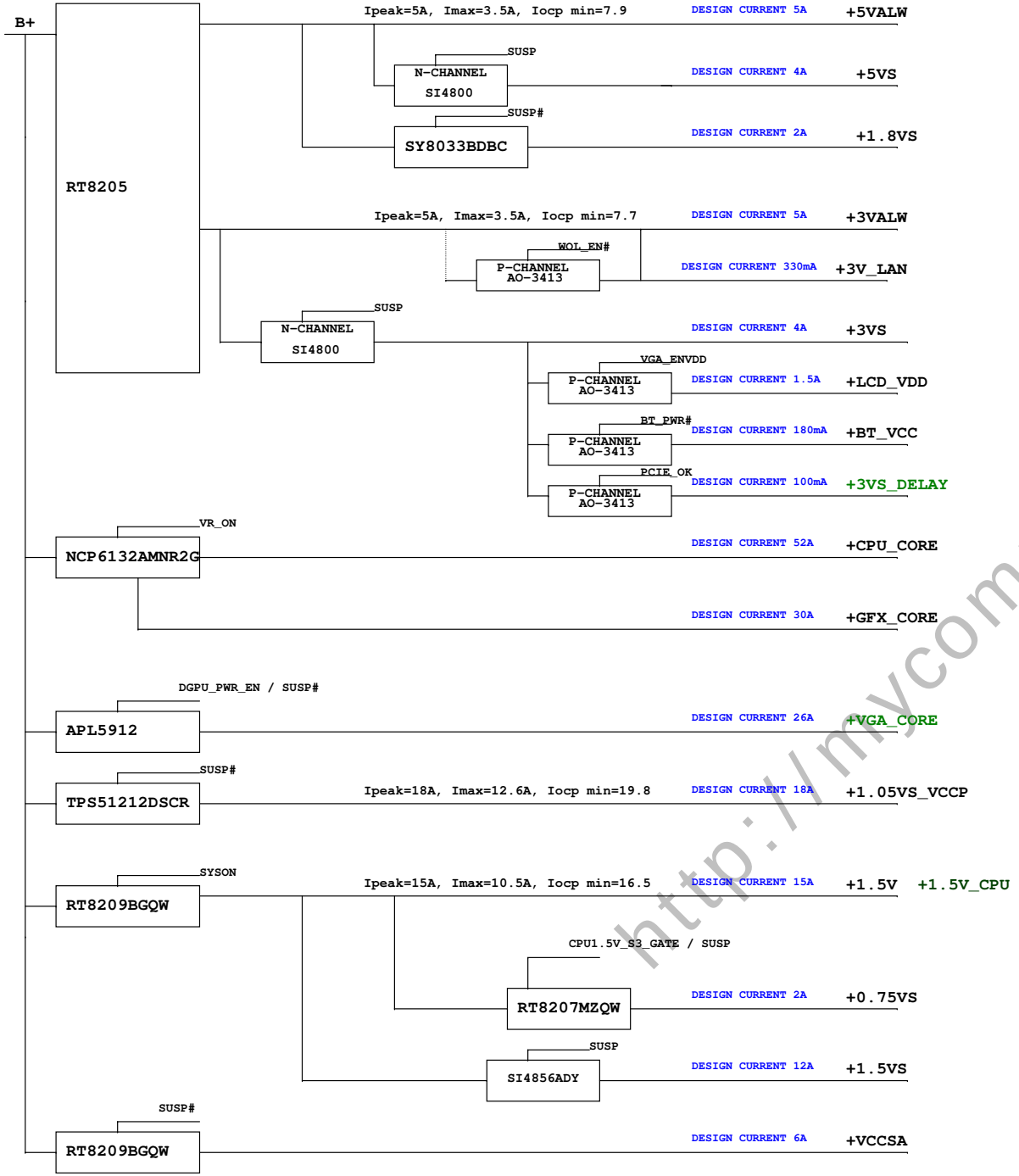

Security Classification	Compal Secret Data		
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Compal Electronics, Inc.

Title: Power Map

Size: | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

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Voltage Rails

power plane / State	+B	+5VALW +3VALW	+1.5V +1.5V_IO	+5VS +3VS +1.5VS +1.05VS_VTT +CPU_CORE +VGA_CORE +VCC_GFXCORE_AXG +1.8VS +0.75VS
S0	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

STATE \ SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1(Power On Suspend)	LOW	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)	LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)	LOW	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

@	Reserve
CONN@	ME CONNECTOR
KB9012@	ENE EC
Nuvton@	Nvuton EC
NOW8@	not Support Win8
WIN8@	Support Win8
UMA@	UMA Sku
PX@	PX Sku

EC SM Bus1 address

Power	Device	Address
+3VALW	Smart Battery	0001 011x b

EC SM Bus2 address

Power	Device	Address
+3VS	VGA Internal thermal sensor	1001 111Xb (0x9E)

PCH SM Bus address

Power	Device	Address
+3VS	DDR DIMMA	1001 000x b
+3VS	DDR DIMMB	1001 010x b

SMBUS Control Table

	SOURCE	VGA	BATT	KB9012	SODIMM	WLAN WWAN	Thermal Sensor	PCH
SMB_EC_CK1 SMB_EC_DA1	KB9012 +3VALW	X	V +3VALW	X	X	X	X	X
SMB_EC_CK2 SMB_EC_DA2	KB9012 +3VALW	X	X	X	X	X	X	V +3VS
SMBCLK SMBDATA	PCH +3VALW	X	X	X	V +3VS	V +3VS	X	X
SML0CLK SML0DATA	PCH +3VALW	X	X	X	X	X	X	X
SML1CLK SML1DATA	PCH +3VALW	V +3VS	X	V +3VS	X	X	V +3VS	X

PCH X76 and PCBA table

	config	
X76	ZZZ X76@ HYN 1G	ZZZ @ HYN 1G; R359 @ 10K_0402_5%; R361 @ 10K_0402_5%; R462 @ 10K_0402_5%
	ZZZ X76@ SAM 1G	ZZZ @ SAM 1G; R360 @ 10K_0402_5%; R361 @ 10K_0402_5%; R461 @ 10K_0402_5%
PCH	UH1 BD82HM70 QPXH C1 BGA 989P PCH@	
PCB	ZZZ DAZ@ PCB LA-6732P REV10; ZZZ DA8@ PCB LA-9351P REV01; ZZZ DA4@ PCB LS-6732P REV10; ZZZ DA2@ PCB LS-6731P REV10	

(@/CONN@/DA2@/DA4@/DA8@/DAZ@/KB9012@/NOW8@/Nuvton@/PCH@/PX@/Rev01@/Rev02@/Rev03@/Rev04@/Rev10@/UMA@/WIN8@/X76@)

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Title: Notes List

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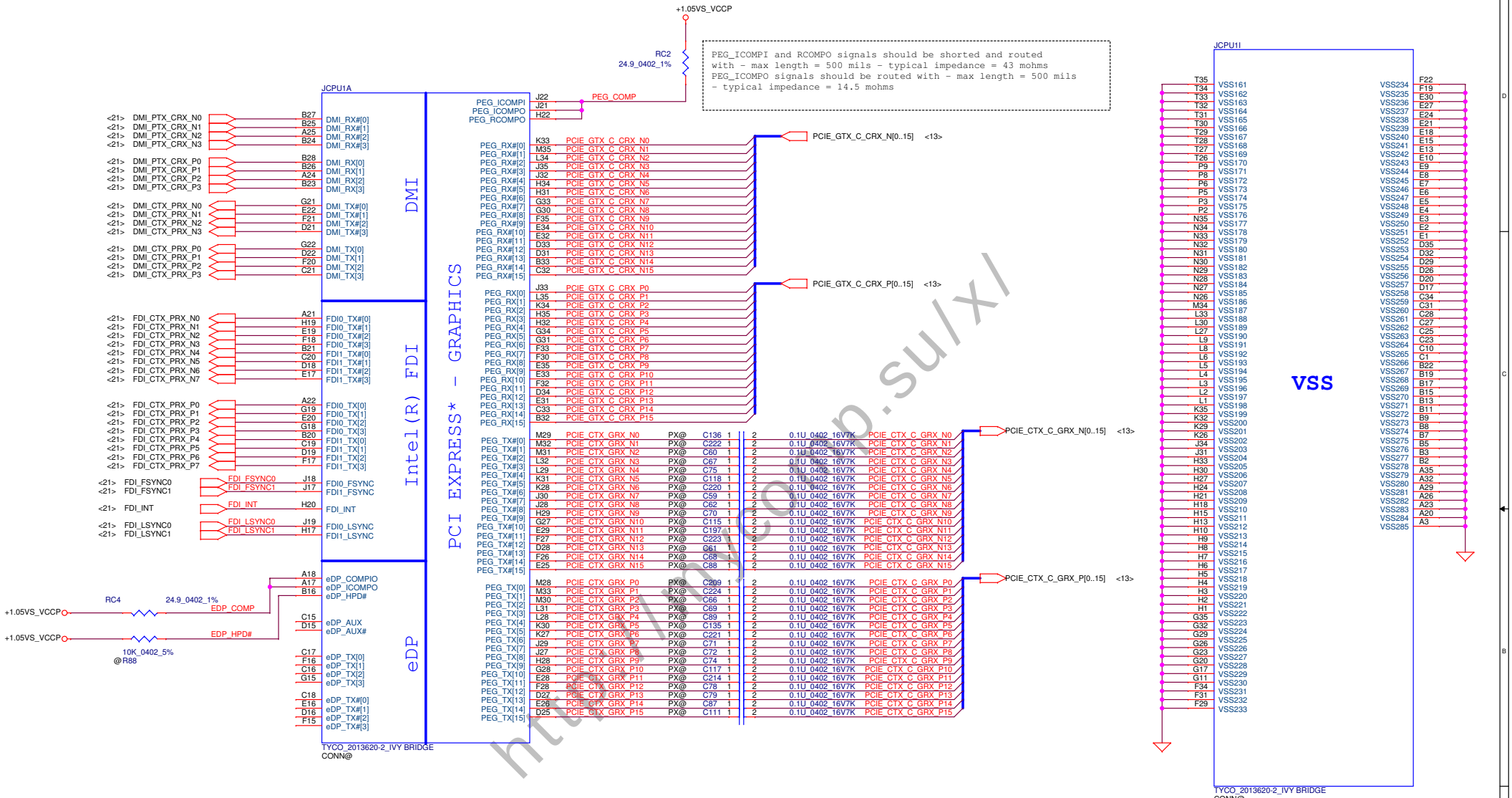

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.			
Title	PROCESSOR(1/6) DMI,FDI,PEG		
Size: Custom	Document Number: VBL30/31 LA-9351P M/B		Rev: 0.1
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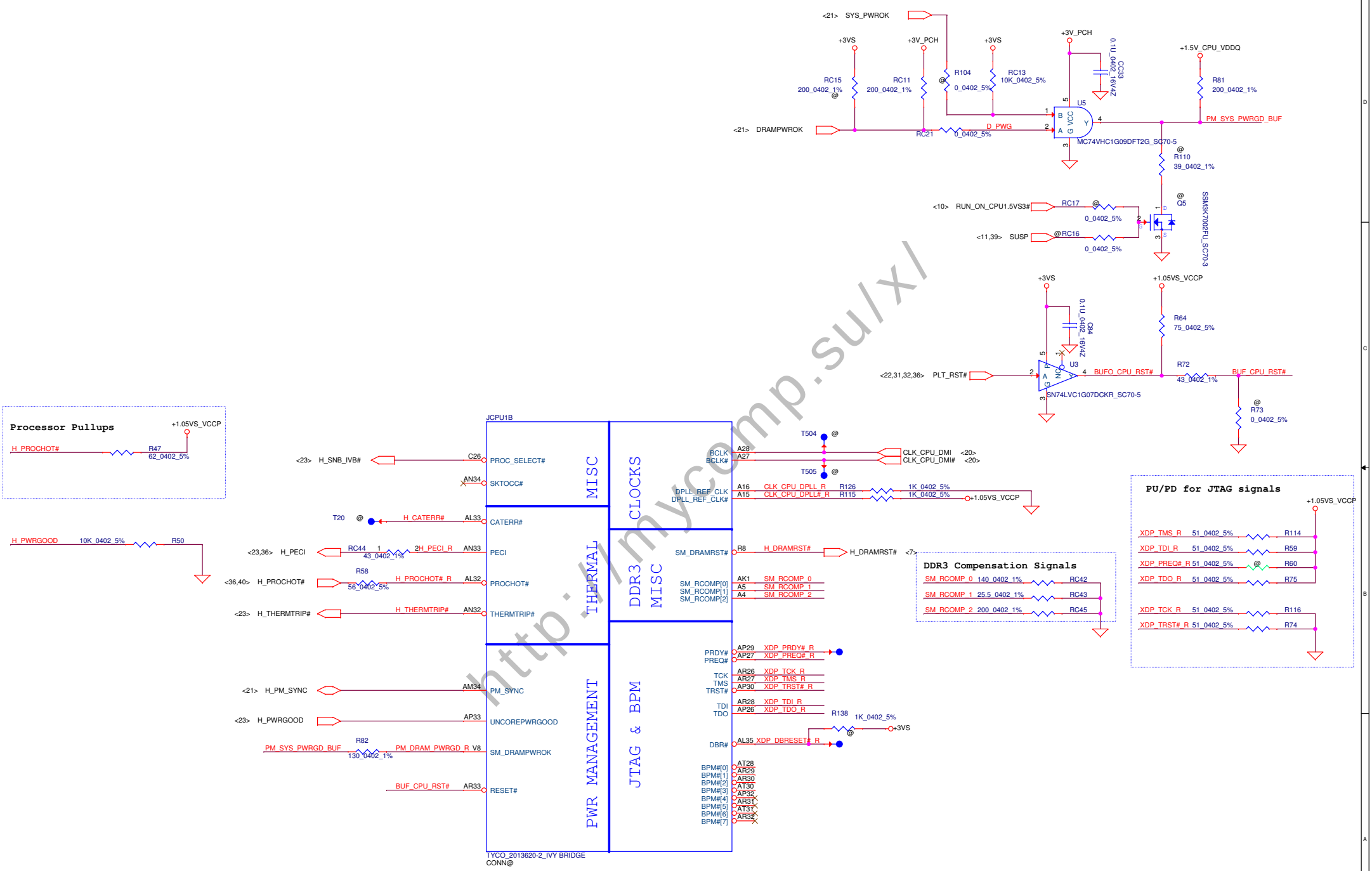

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: PROCESSOR(2/6) PM,XDP,CLK

Size	Document Number	Rev
Custom	VBL30/31 LA-9351P M/B	0.1

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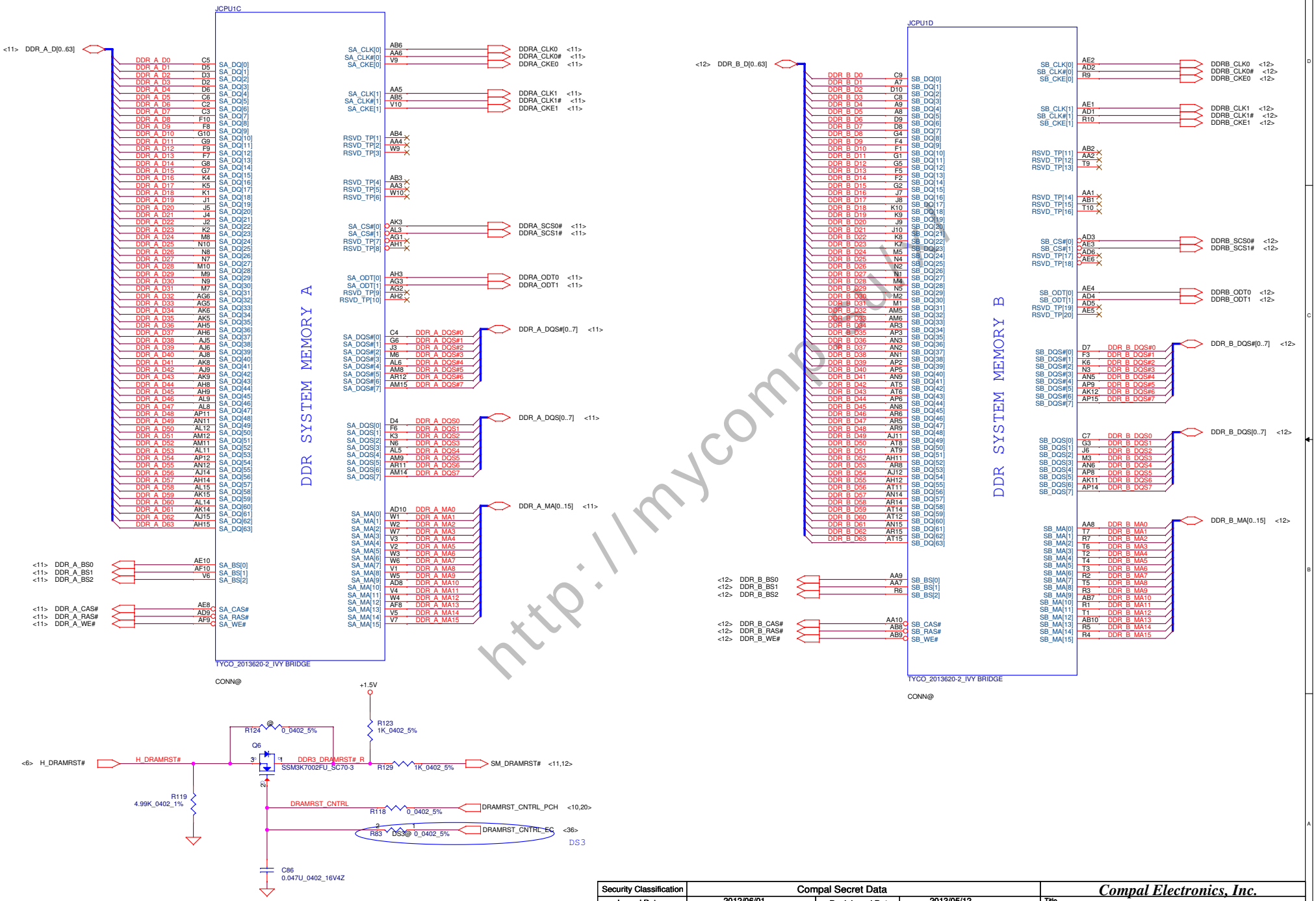

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.			
Title: PROCESSOR(3/6) DDRIII			
Size: Custom	Document Number: VBL30/31 LA-9351P M/B		Rev: 0.1
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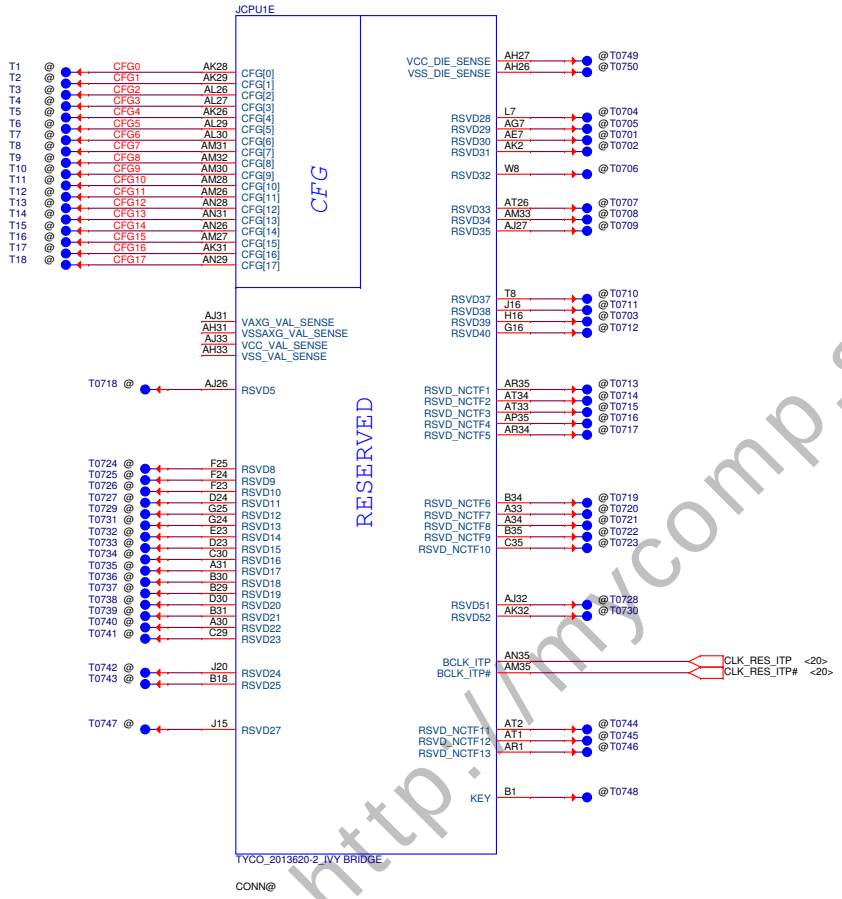
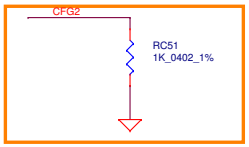
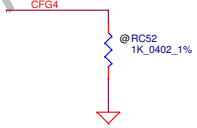
CFG Straps for Processor

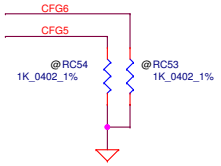




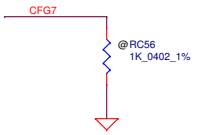
PEG Static Lane Reversal - CFG2 is for the 16x	
CFG2	1:(Default) Normal Operation; Lane # definition matches socket pin map definition 0:Lane Reversed



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



PEG DEFER TRAINING	
CFG7	1: (Default) PEG Train immediately following RESETB de assertion 0: PEG Wait for BIOS for training

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: PROCESSOR(4/6) RSVD,CFG

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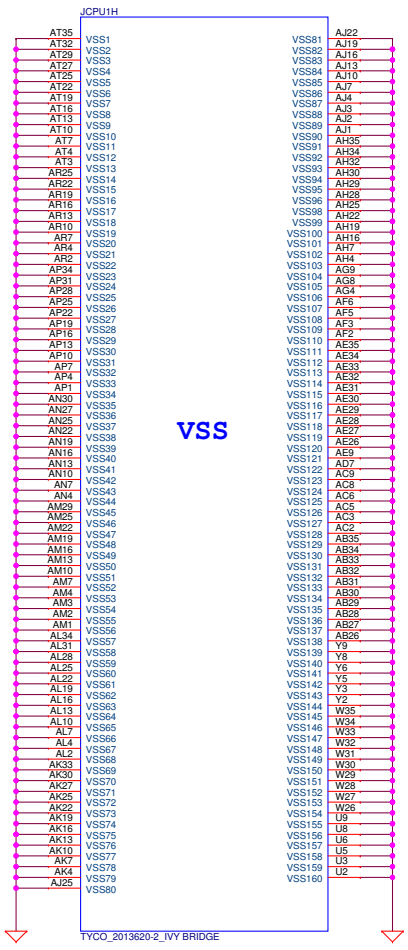
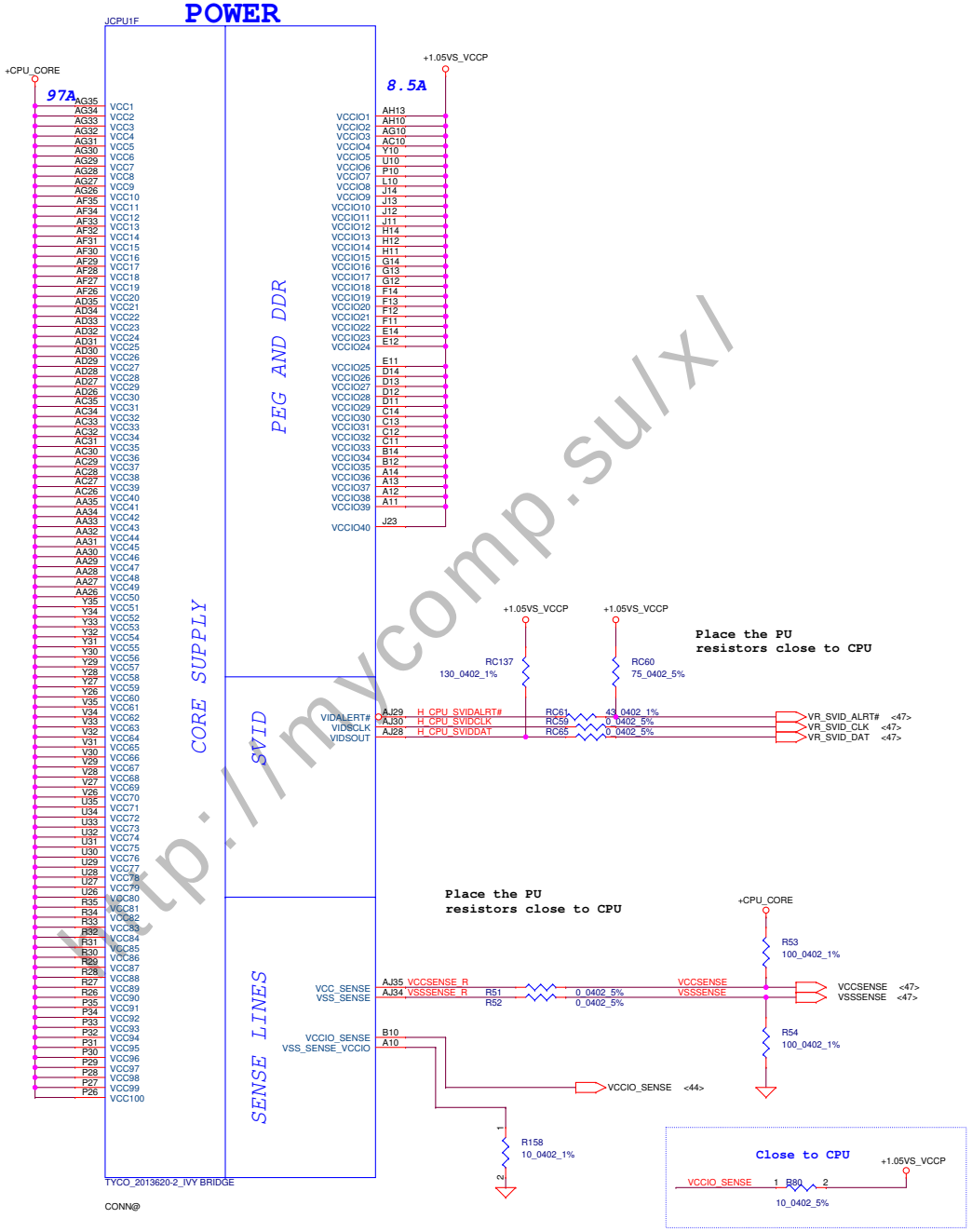
POWER





Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: PROCESSOR(5/6) PWR,BYPASS

Size: Custom | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

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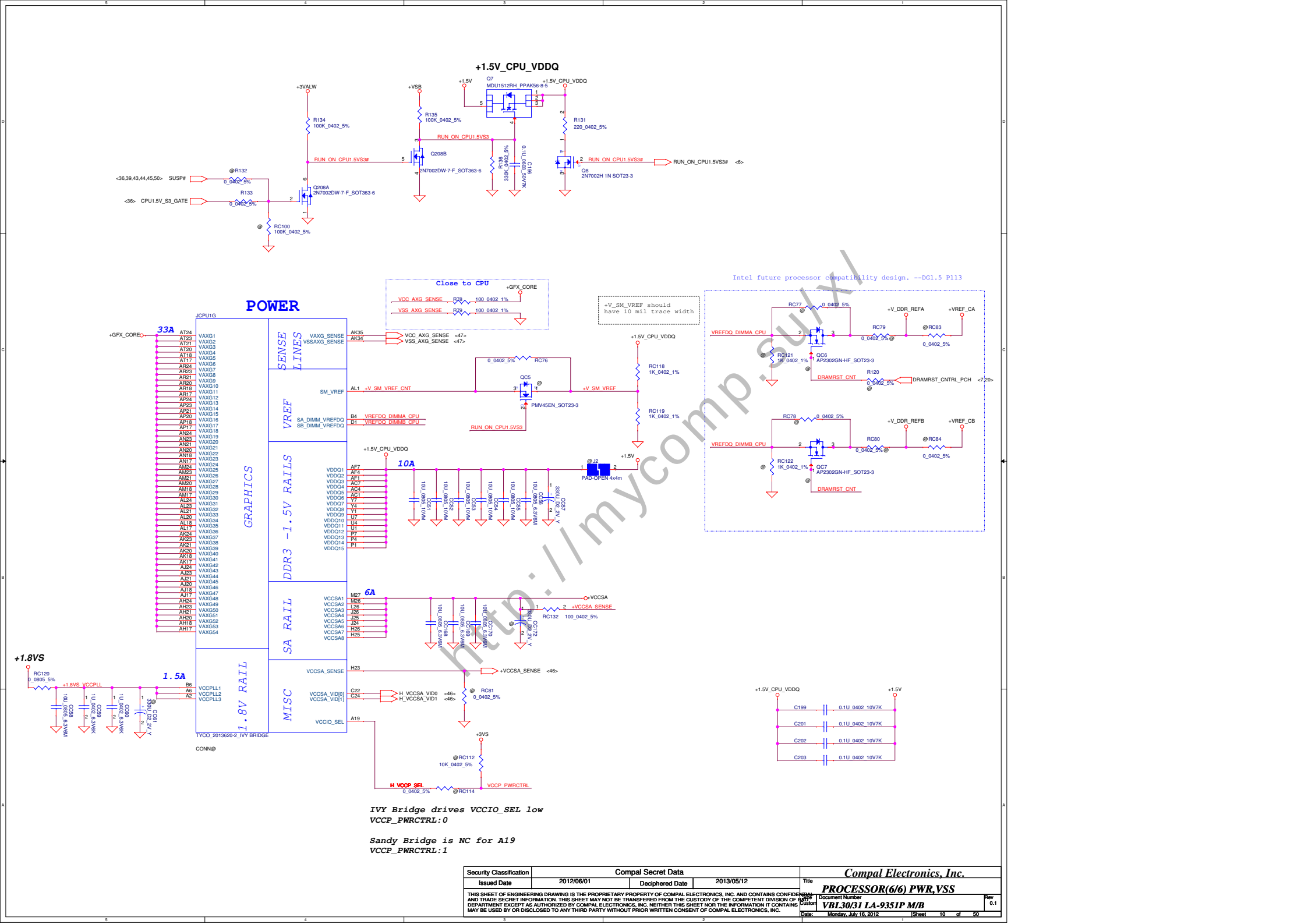

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.			
Title: PROCESSOR(6/6) PWR,VSS			
Size: Custom	Document Number: VBL30/31 LA-9351P M/B		Rev: 0.1
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DDR3 SO-DIMM A

3A01.5V

@JDDRL

FOX_AS0A626-U2RN-7F_204P

<7> DDR_A_D[0..63]
<7> DDR_A_DQS[0..7]
<7> DDR_A_DQS#[0..7]
<7> DDR_A_MA[0..15]

SM_DRAMRST# <7,12>

DDRA_CKE1 <7>

DDRA_CLK1 <7>
DDRA_CLK1# <7>

DDR_A_BS1 <7>
DDR_A_RAS# <7>

DDRA_SCS0# <7>
DDRA_ODT0 <7>

DDRA_ODT1 <7>

PM_SMBDATA <12,20,32>
PM_SMBCLK <12,20,32>

+0.75VS

0.65A@0.75V

Layout Note:
Place near JDDRL

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

Layout Note:
Place near JDDRL.203,204

<45> 0.75VR_EN

<44,46> +V1.05S_VCCP_PWRGOOD

<6,39> SUSP

Q5520B
2N7002DW-T/R7_SOT363-6

Q5520A
2N7002DW-T/R7_SOT363-6

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: DDRIII-DDRL

Size: Custom | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

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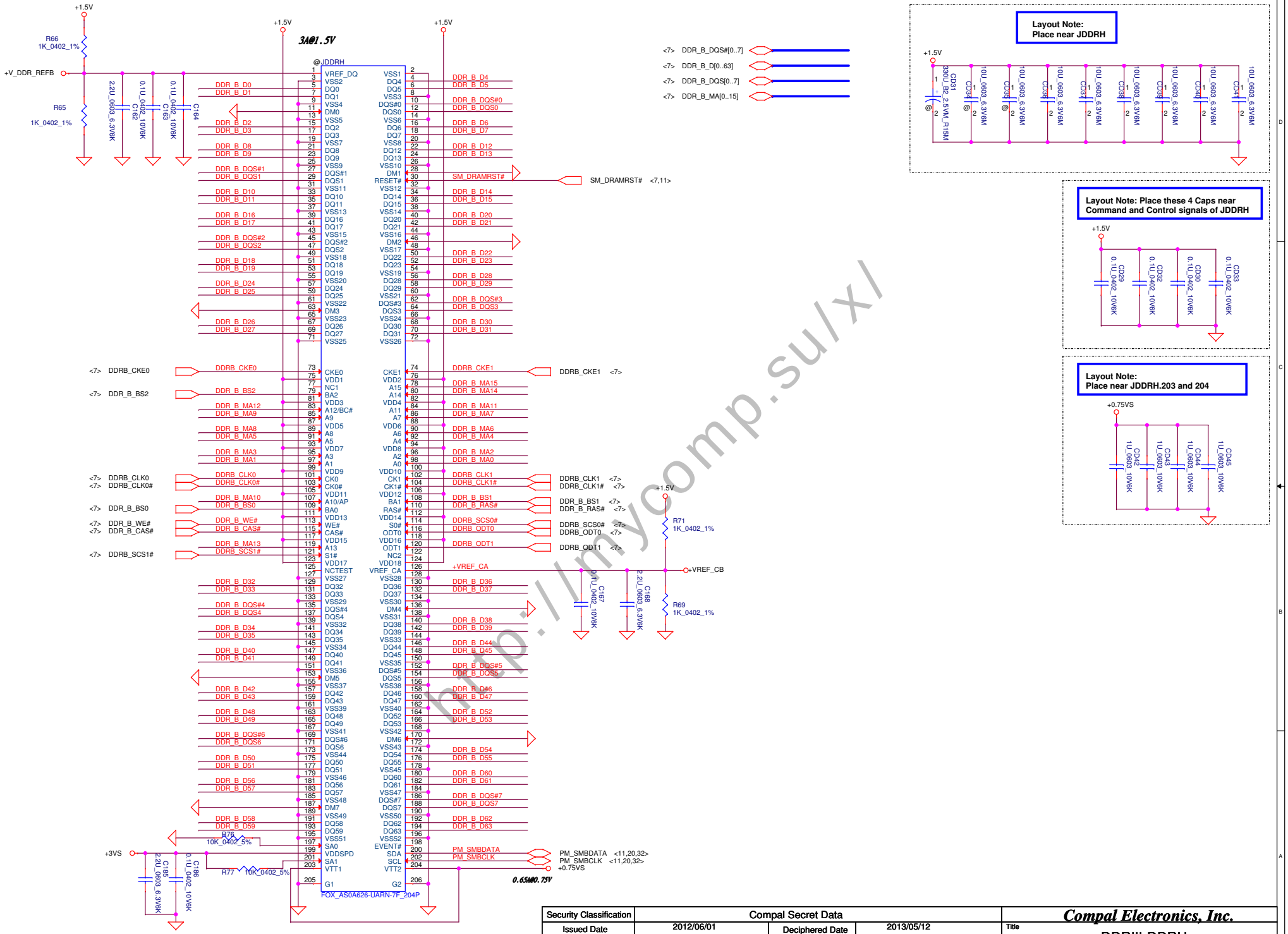

Security Classification	Compal Secret Data		
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Compal Electronics, Inc.	
Title	DDRIII-DDRH
Size	Document Number: VBL30/31 LA-9351P M/B
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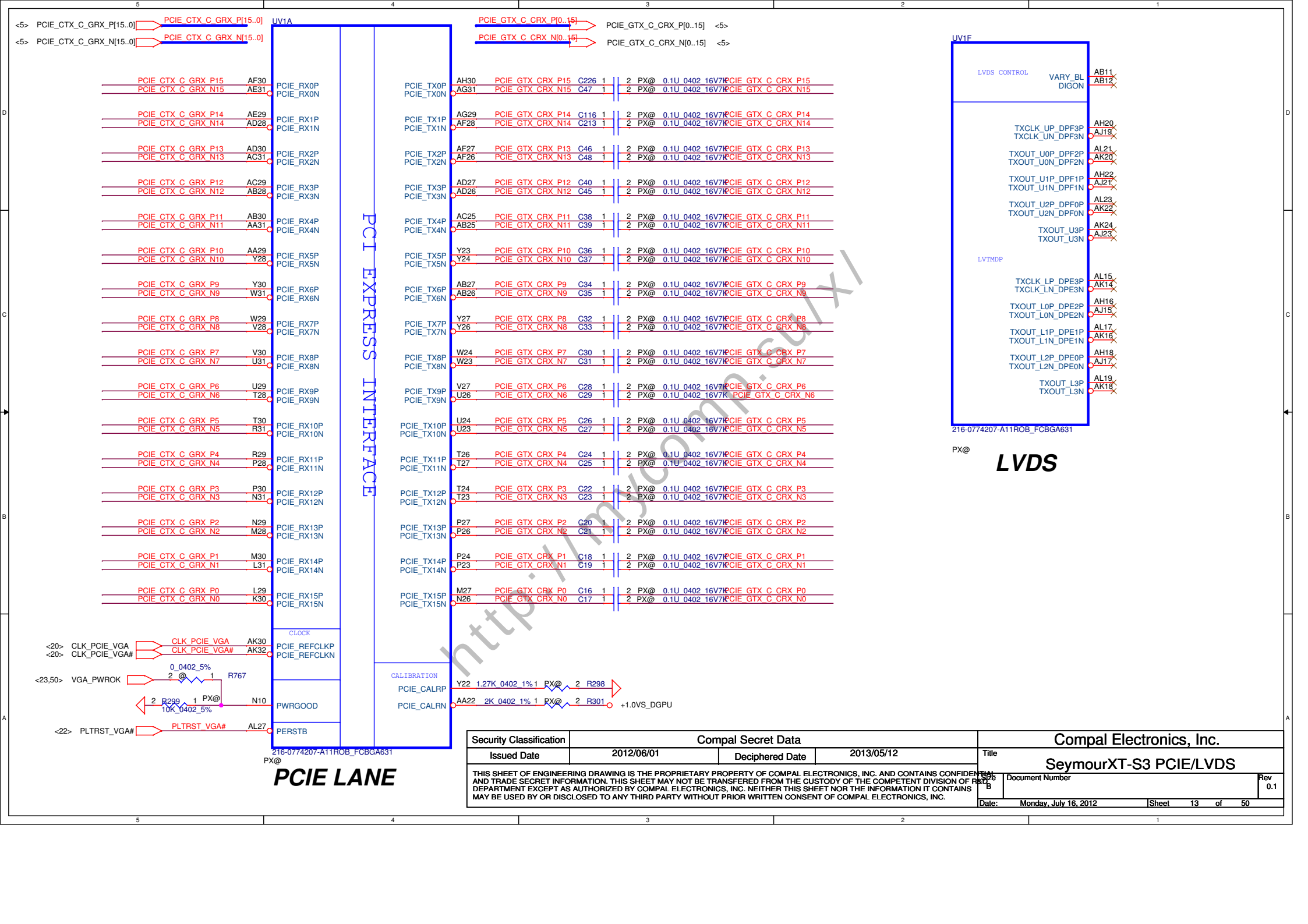

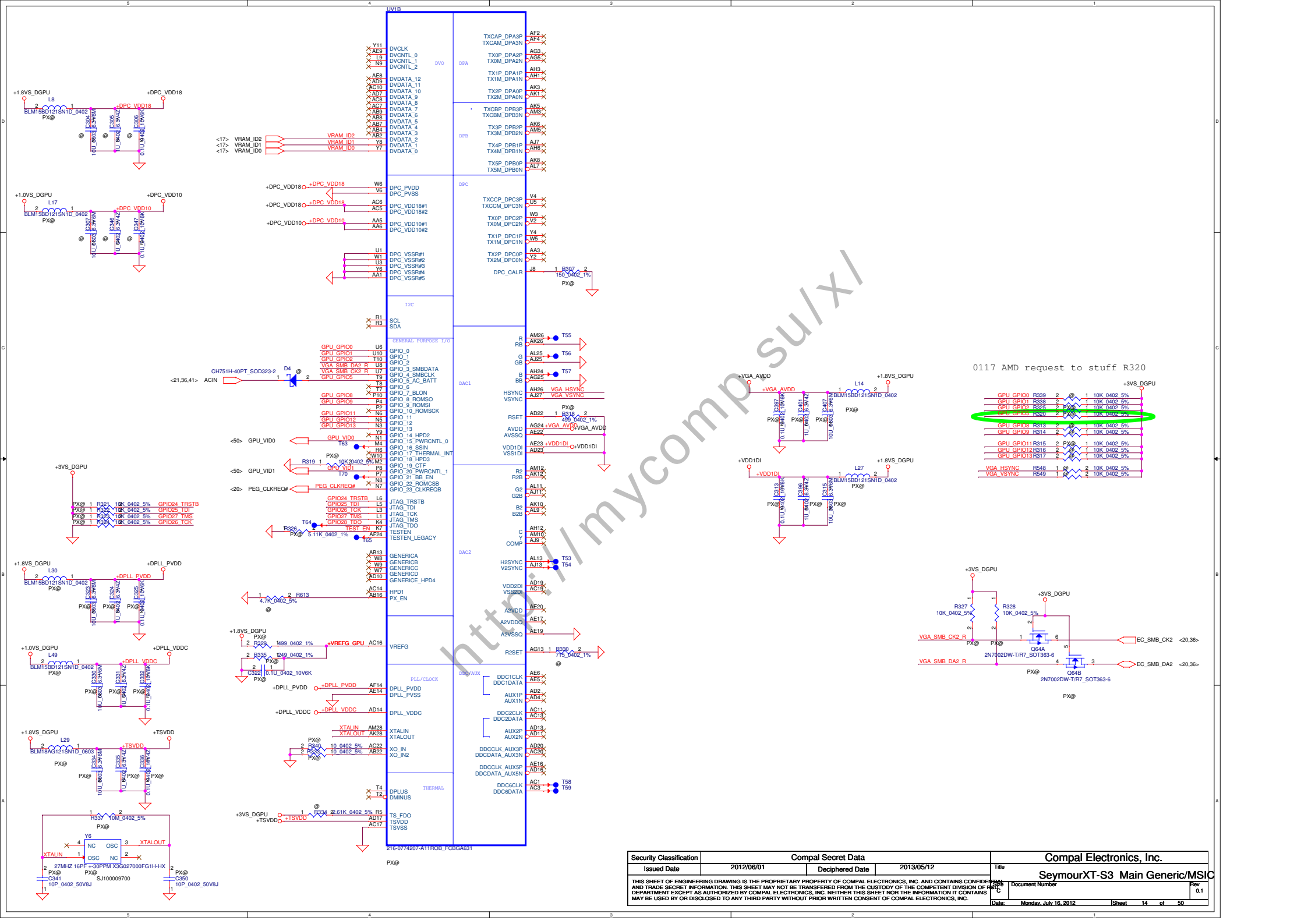

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Compal Electronics, Inc.

Title: SeymourXT-S3 Main Generic/MSIC

Size: C | Document Number | Rev: 0.1

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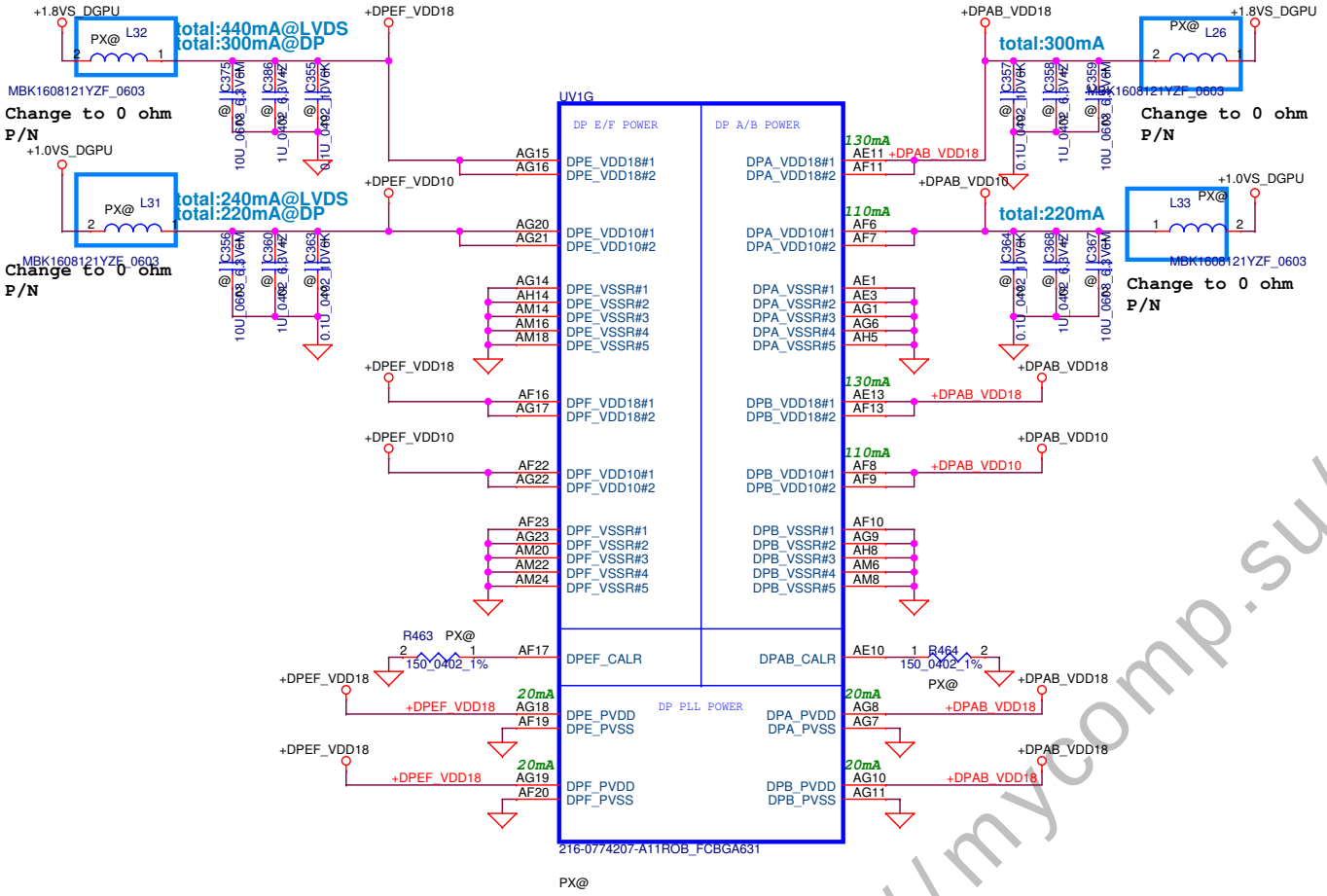


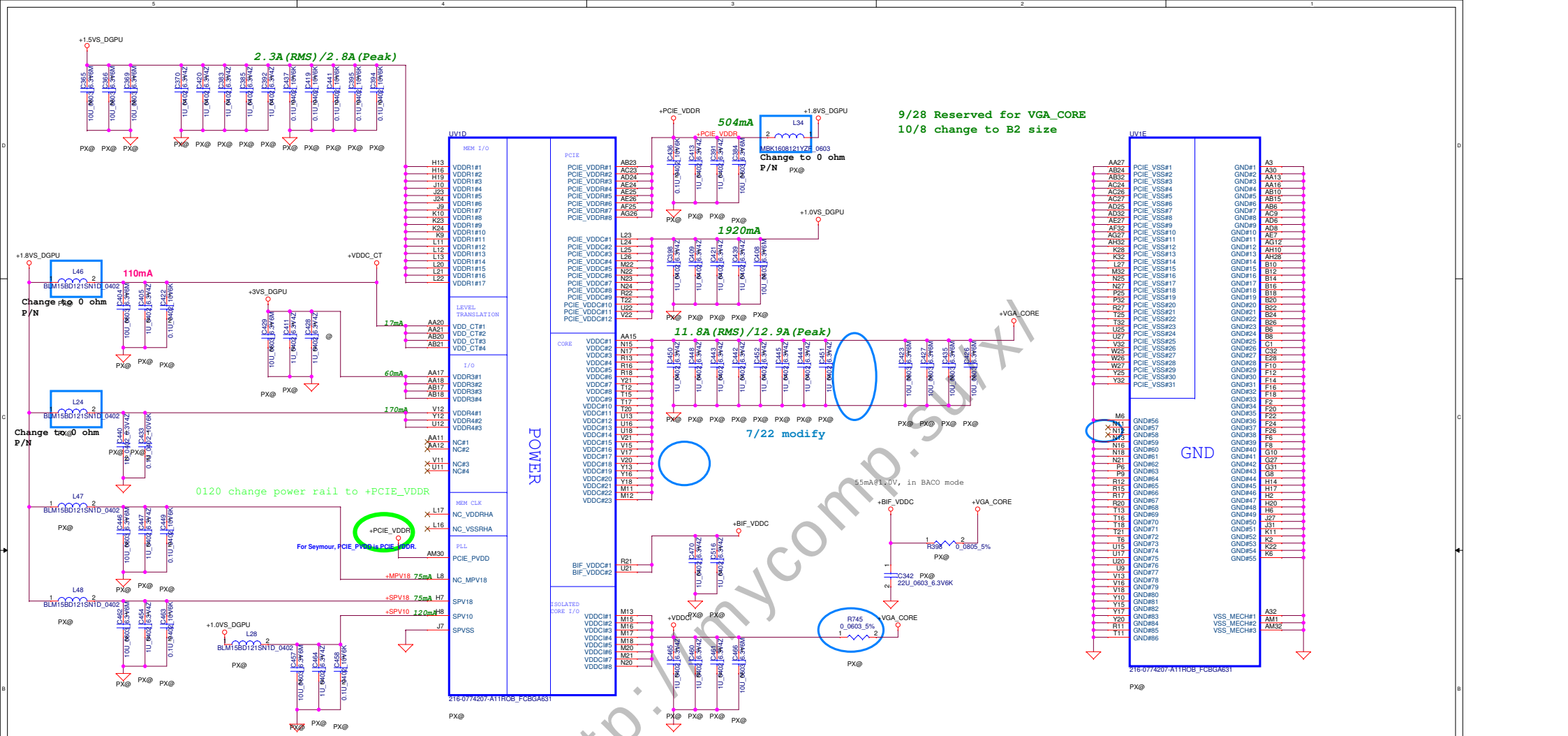
Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: SeymourXT-S3 DP PWR

Size	Document Number	Rev
B		0.1

Date: Monday, July 16, 2012 Sheet 15 of 50



Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.			
Title: SeymourXT-S3 PWR/GND			
Size: C	Document Number		Rev: 0.1
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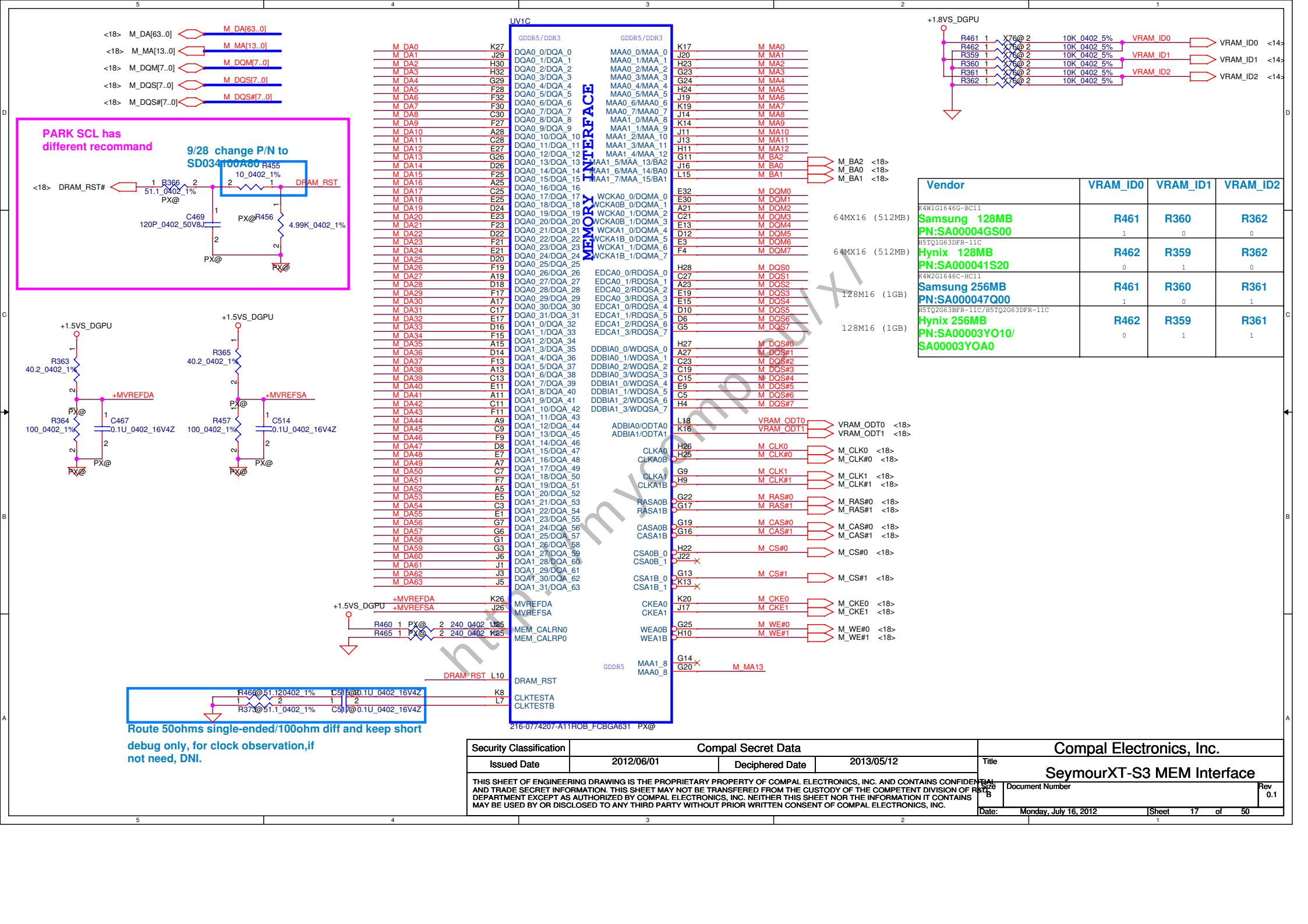

Vendor	VRAM_ID0	VRAM_ID1	VRAM_ID2
K4W1G1646G-BC11 Samsung 128MB PN:SA00004GS00	R461 1	R360 0	R362 0
H5TQ1G63DFR-11C Hynix 128MB PN:SA000041S20	R462 0	R359 1	R362 0
K4W2G1646C-HC11 Samsung 256MB PN:SA000047Q00	R461 1	R360 0	R361 1
H5TQ2G63BFR-11C/H5TQ2G63DFR-11C Hynix 256MB PN:SA00003YO10/ SA00003YOA0	R462 0	R359 1	R361 1

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: SeymourXT-S3 MEM Interface

Size: B | Document Number | Rev: 0.1

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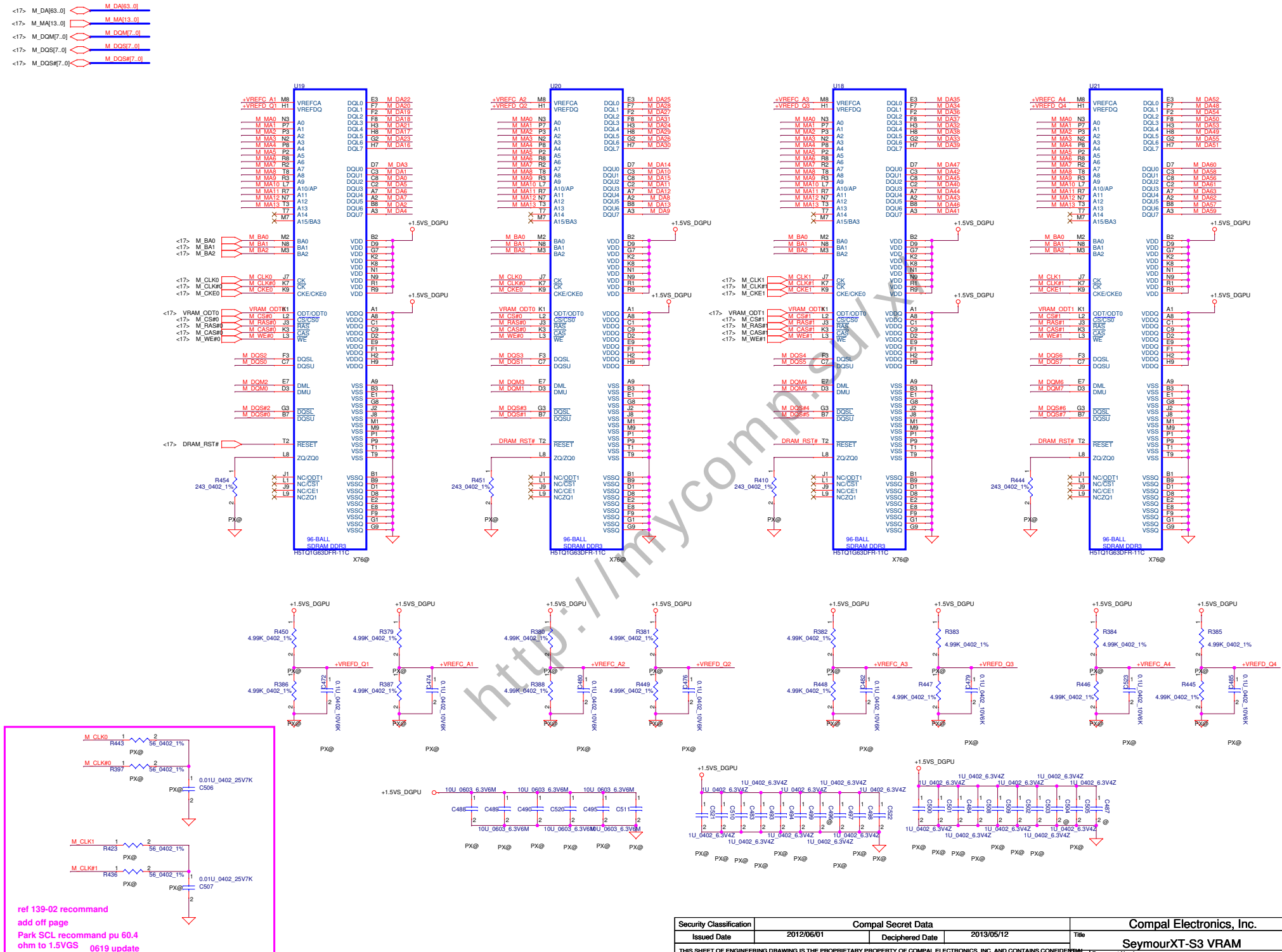
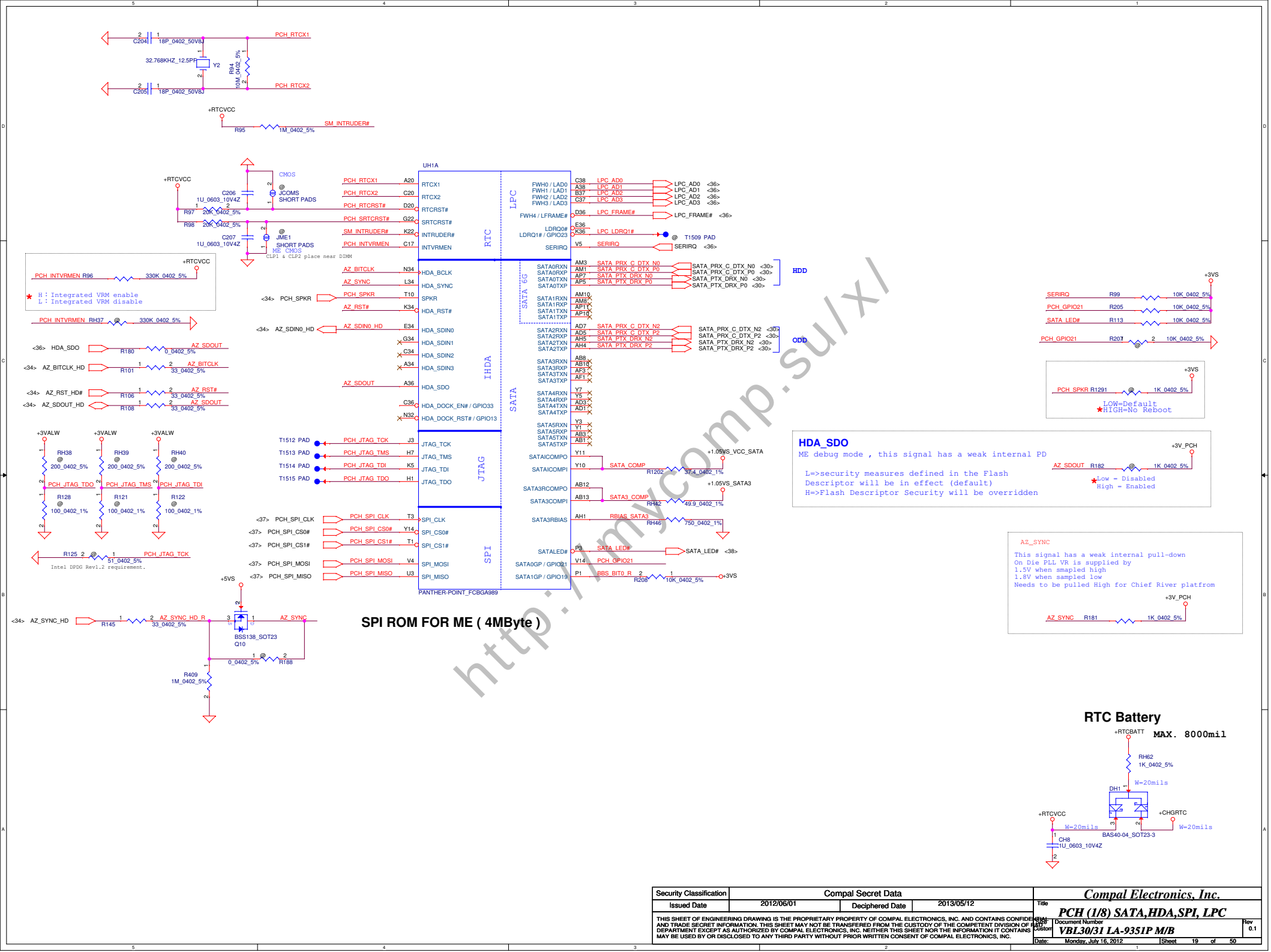


Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2012/06/01	Deciphered Date 2013/05/12	Title: SeymourXT-S3 VRAM

Size: C	Document Number		Rev: 0.1
Date: Monday, July 16, 2012	Sheet 18 of 50		

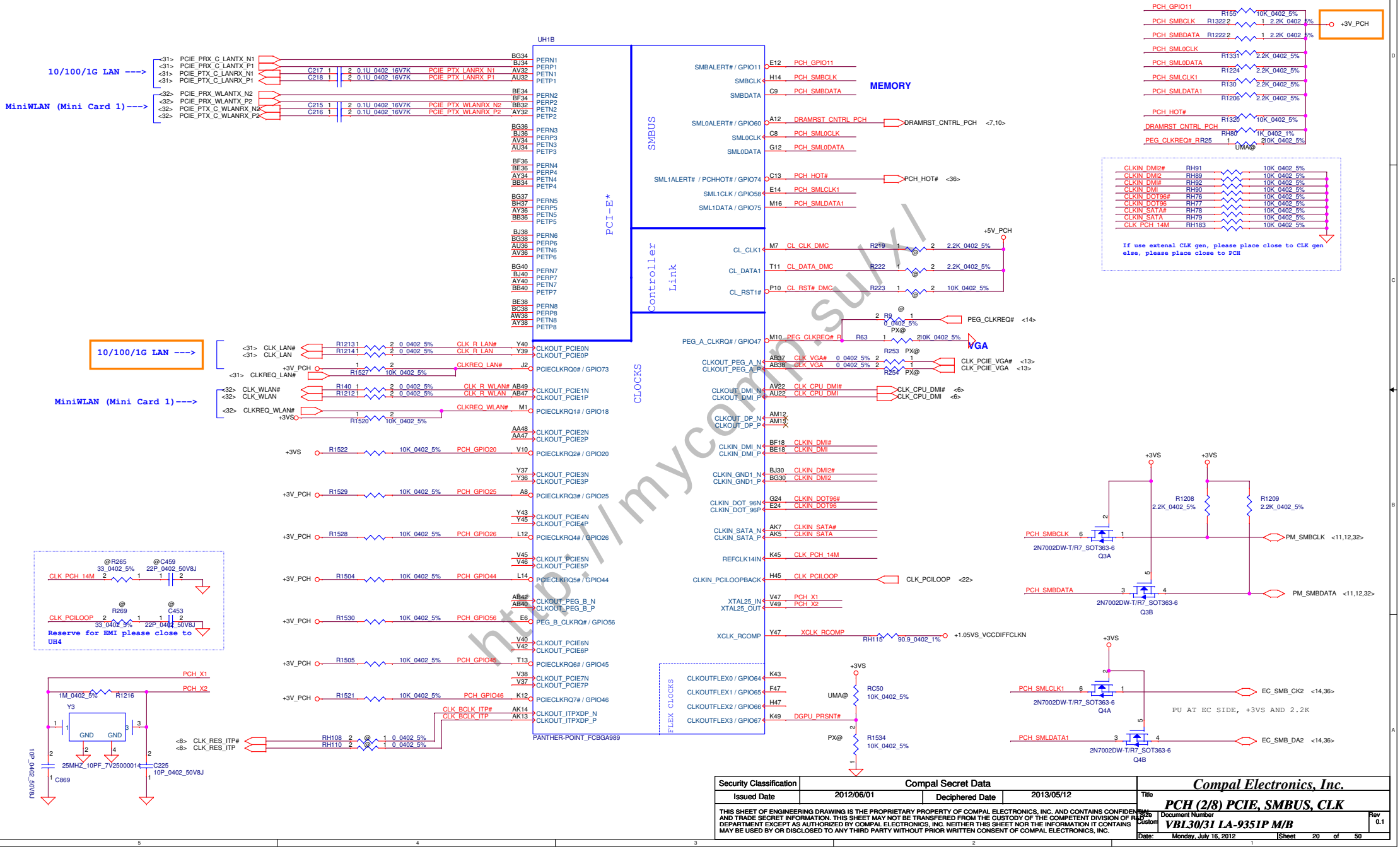


Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

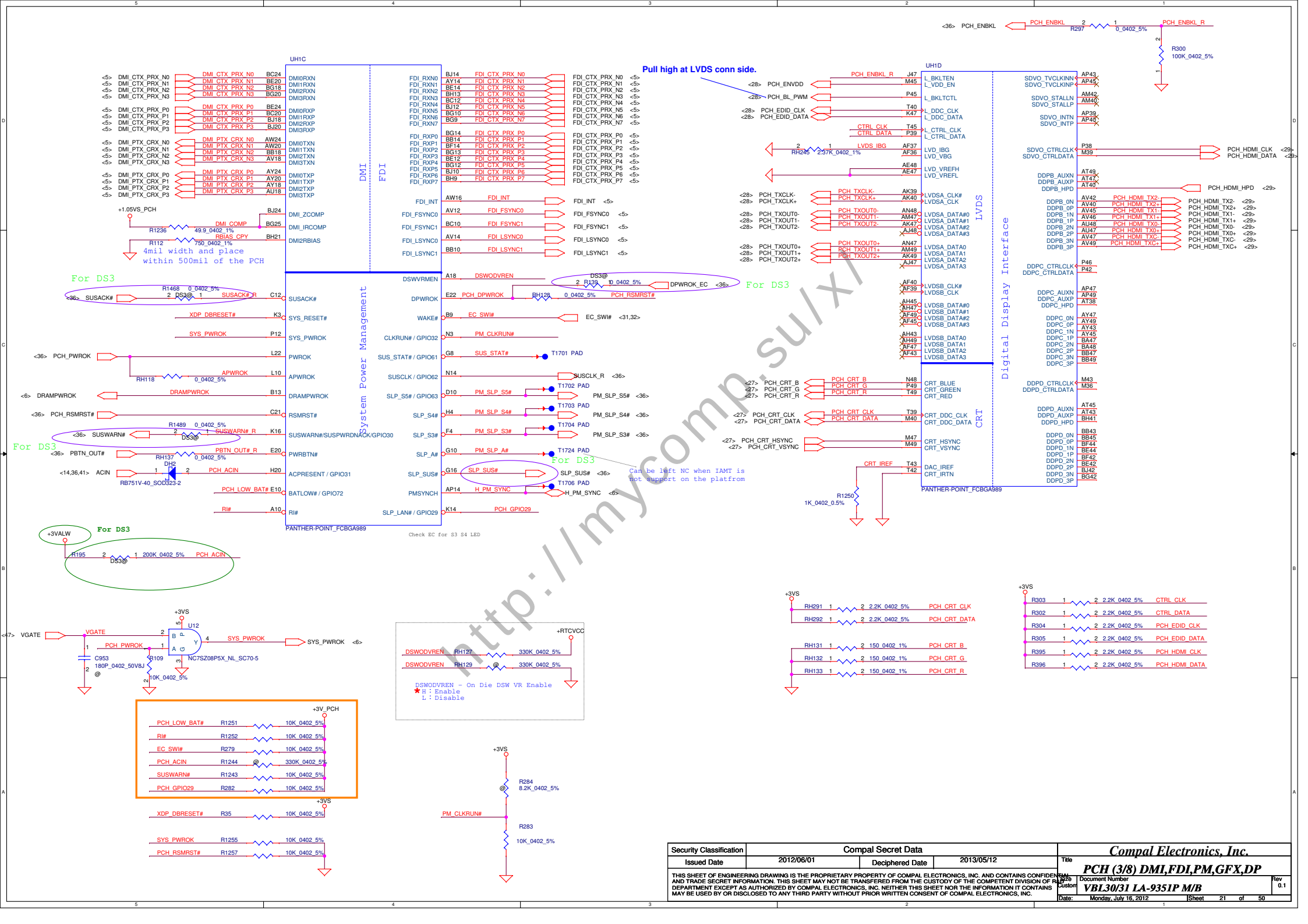
Title: PCH (1/8) SATA,HDA,SPI, LPC

Size: A3	Document Number: VBL30/31 LA-9351P M/B	Rev: 0.1
Date: Monday, July 16, 2012	Sheet 19 of 50	



Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.			
Title	PCH (2/8) PCIE, SMBUS, CLK		
Size: Custom	Document Number: VBL30/31 LA-9351P M/B		Rev: 0.1
Date: Monday, July 16, 2012	Sheet 20 of 50		



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Compal Electronics, Inc.

Title: PCH (3/8) DMI,FDI,PM,GFX,DP

Size: Custom | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

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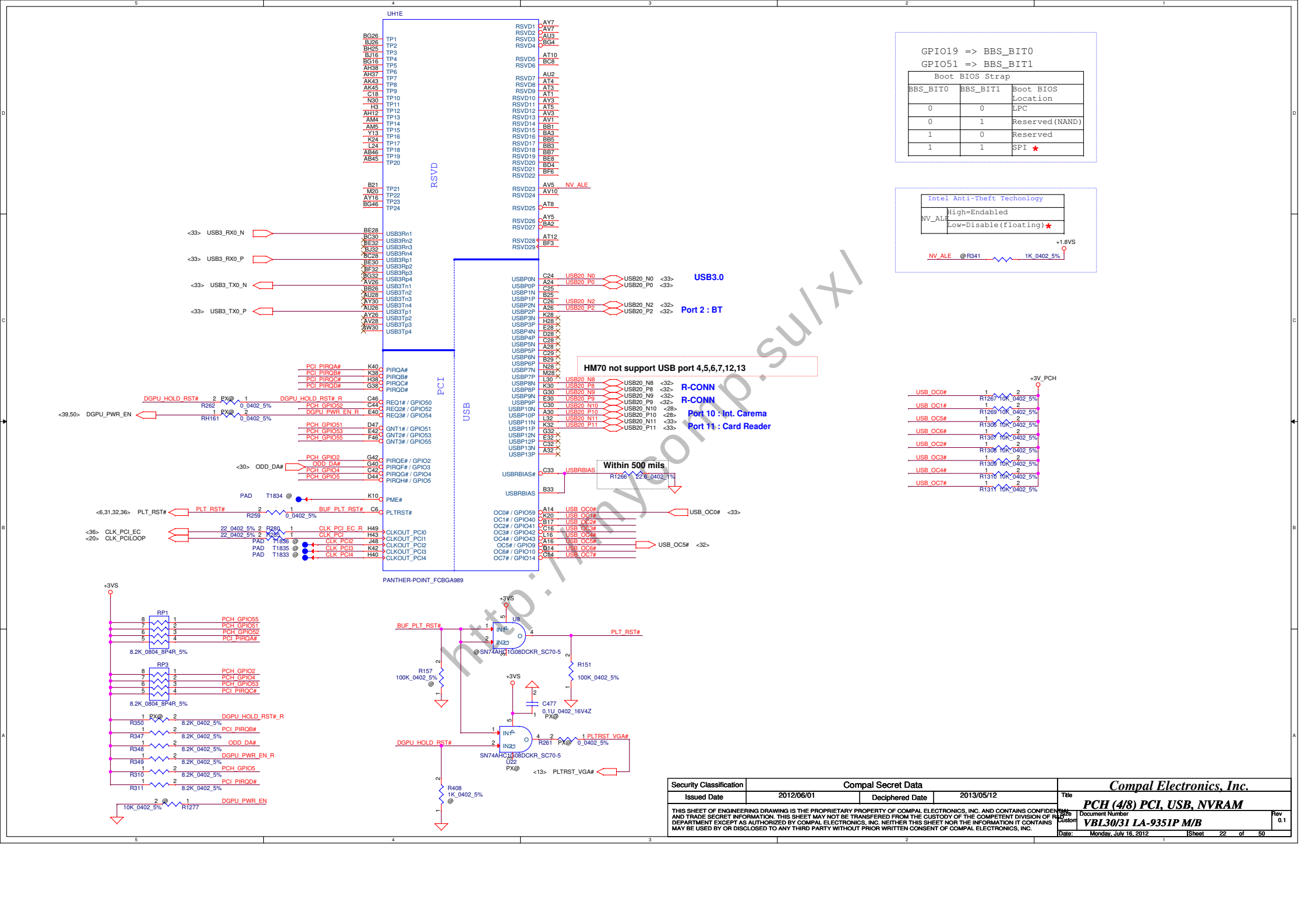

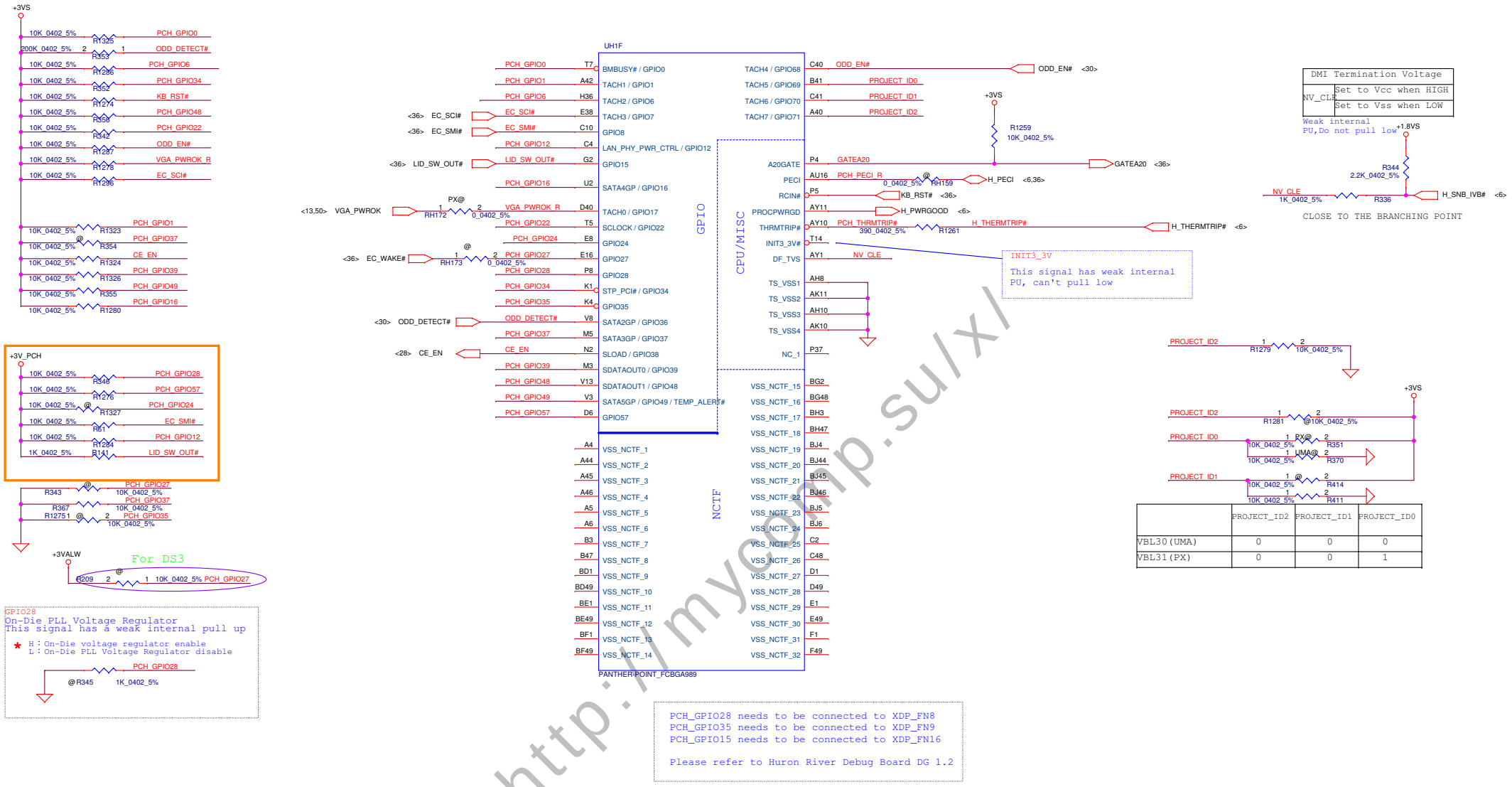

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.			
Title	PCH (5/8) GPIO, CPU, MISC		
Size	Document Number		Rev
Custom	VBL30/31 LA-9351P M/B		0.1
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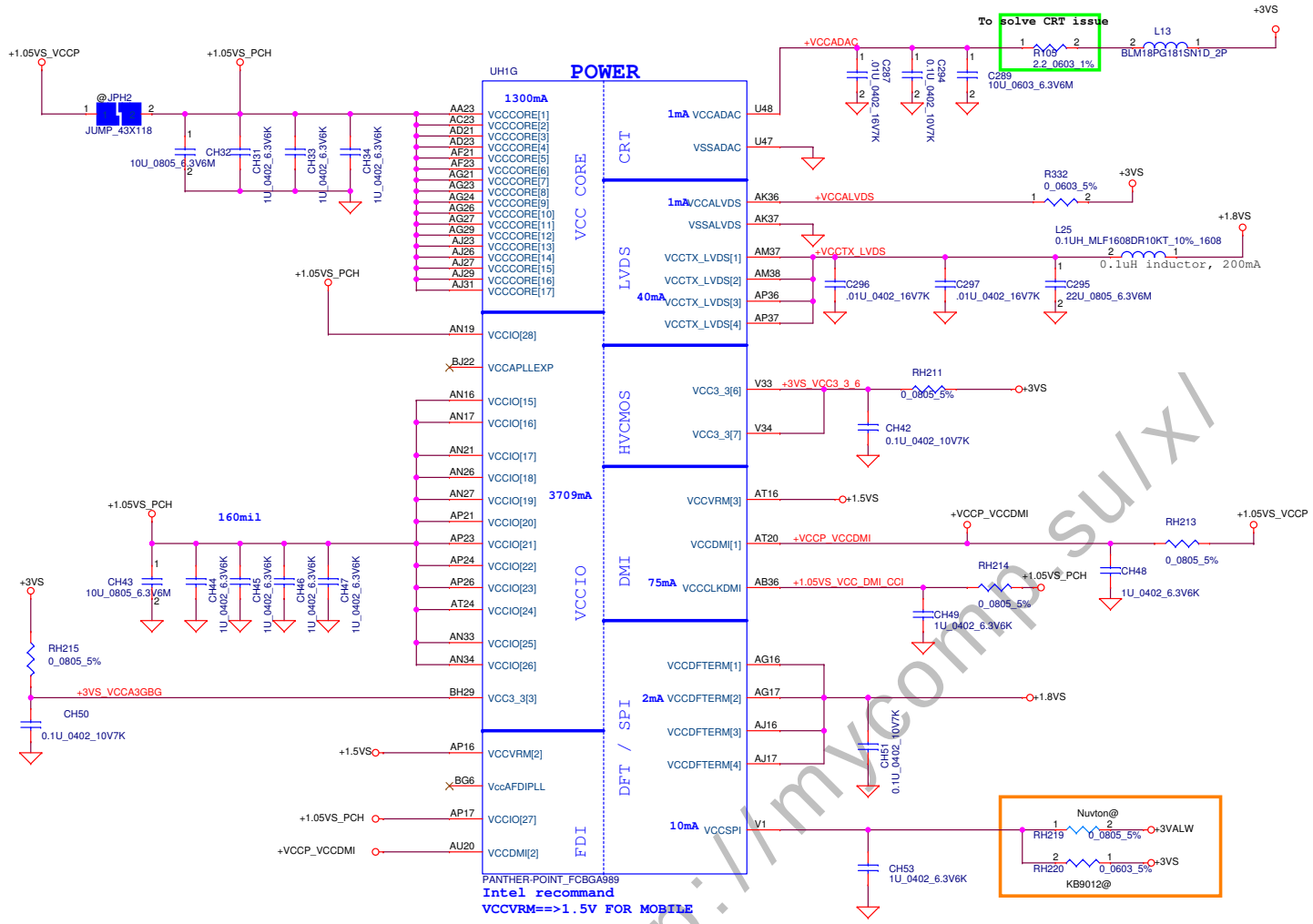

PCH Power Rail Table
Refer to CPU EDS R1.5

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

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: PCH (6/8) PWR

Size: Custom | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

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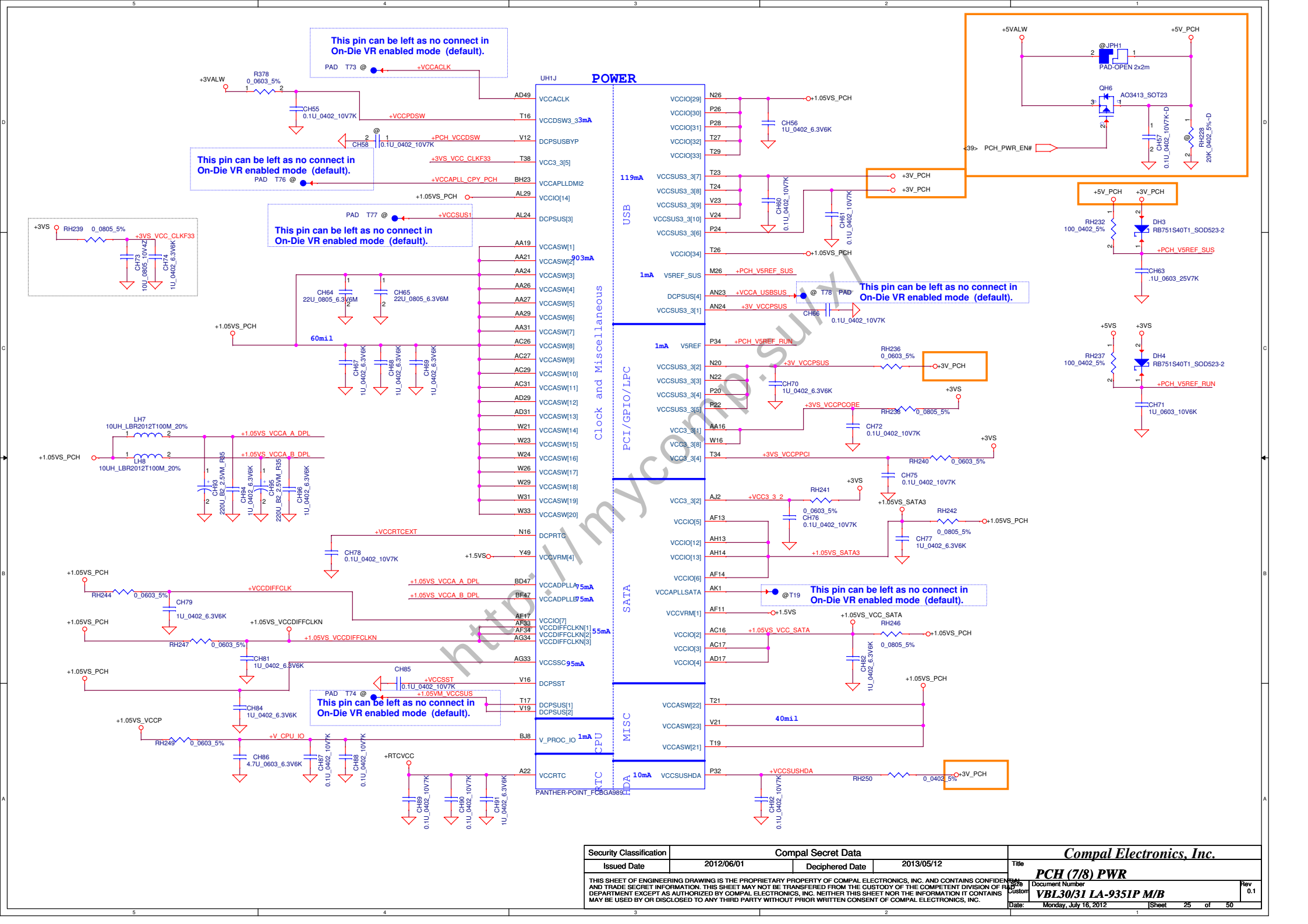
This pin can be left as no connect in On-Die VR enabled mode (default).
This pin can be left as no connect in On-Die VR enabled mode (default).
This pin can be left as no connect in On-Die VR enabled mode (default).
This pin can be left as no connect in On-Die VR enabled mode (default).
This pin can be left as no connect in On-Die VR enabled mode (default).
This pin can be left as no connect in On-Die VR enabled mode (default).
UH1J
POWER
PANTHER-POINT_FCBGA989
USB
Clock and Miscellaneous
PCI/GPIO/LPC
SATA
CPU
RTC
HDA
MISC
+5VALW
+5V_PCH
+3VALW
+3VS
+1.05VS_PCH
+3V_PCH
+3VS
+5VS
PCH_PWR_EN#
+V_CPU_IO
+RTCVCC
+VCCACLK
+VCCPDSW
+PCH_VCCDSW
+3VS_VCC_CLKF33
+VCCAPLL_CPY_PCH
+VCCSUS1
+PCH_V5REF_SUS
+VCCA_USBSUS
+3V_VCCPSUS
+PCH_V5REF_RUN
+3VS_VCCPCORE
+3VS_VCCPPCI
+VCC3_3_2
+1.05VS_SATA3
+1.05VS_VCC_SATA
+VCCSUSHDA
+VCCRTCEXT
+1.5VS
+VCCDIFFCLK
+1.05VS_VCCDIFFCLKN
+VCCSST
+1.05VM_VCCSUS
+1.05VS_VCCP
+1.05VS_VCCA_A_DPL
+1.05VS_VCCA_B_DPL
Compal Secret Data
2012/06/01
2013/05/12
Compal Electronics, Inc.
PCH (7/8) PWR
VBL30/31 LA-9351P M/B
Monday, July 16, 2012
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Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: PCH (8/8) VSS

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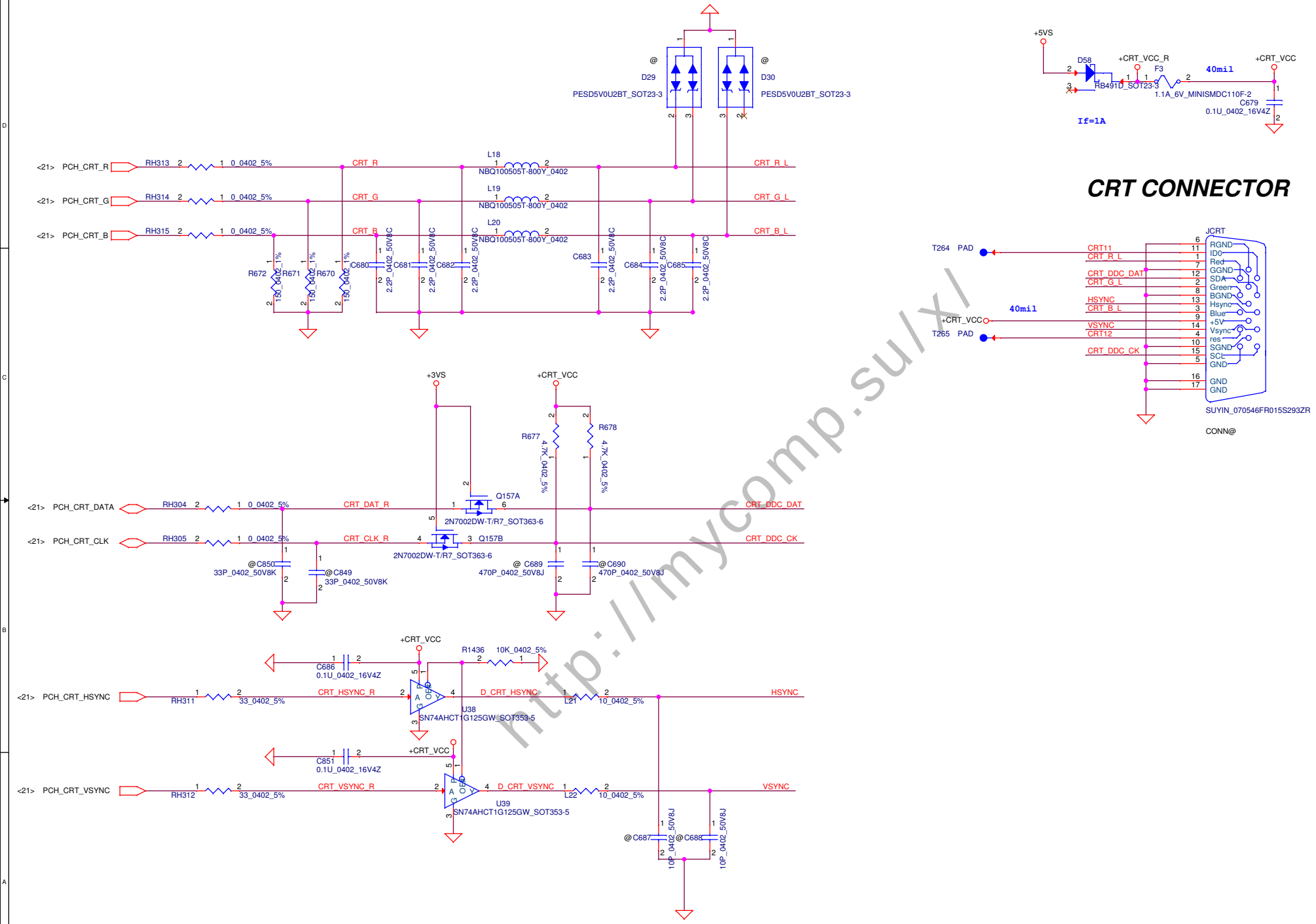
CRT CONNECTOR



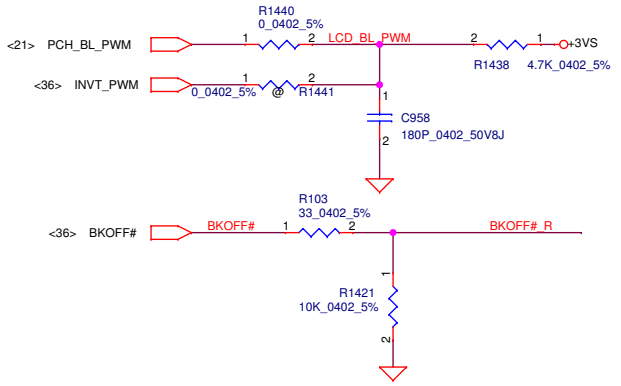
Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

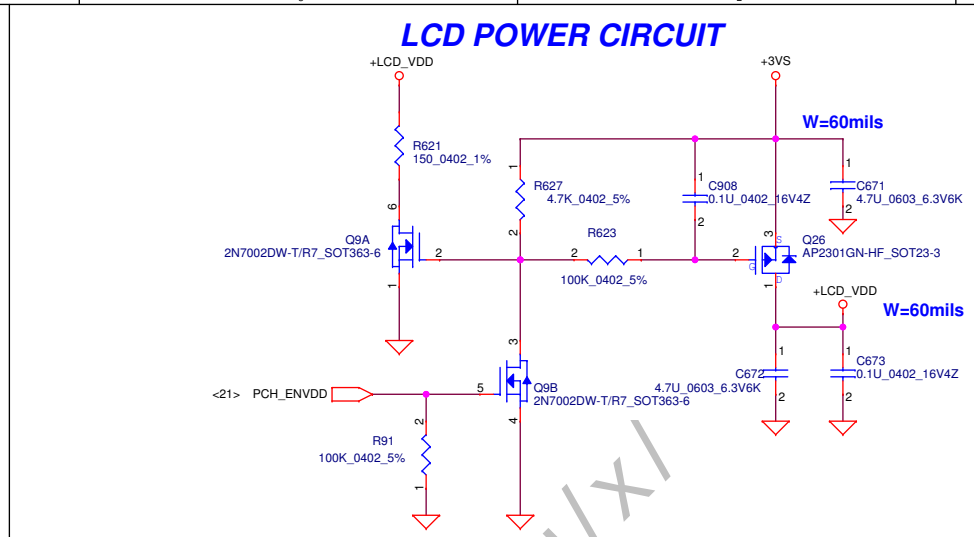
Compal Electronics, Inc.

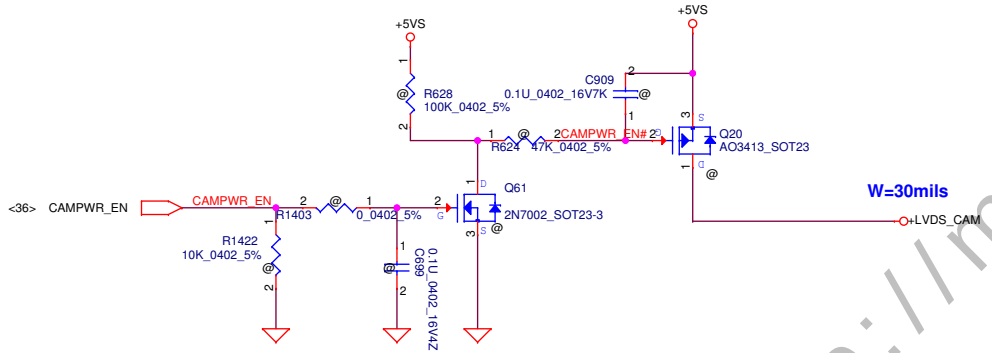
Title: CRT

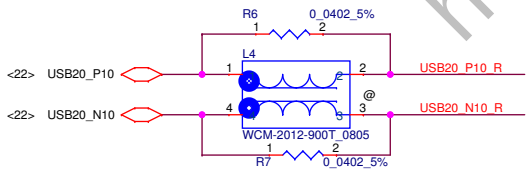
Size | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 27 of 50

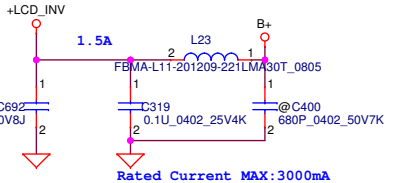


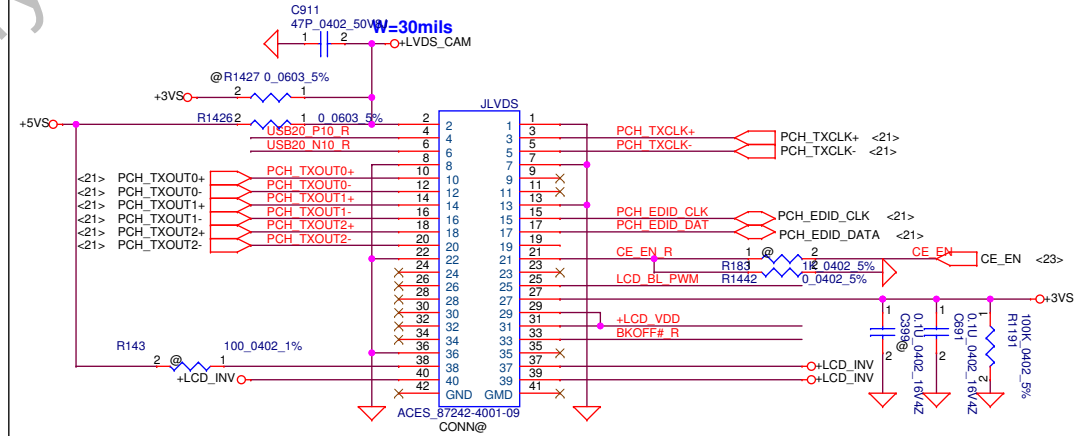






LCD/PANEL BD. Conn.





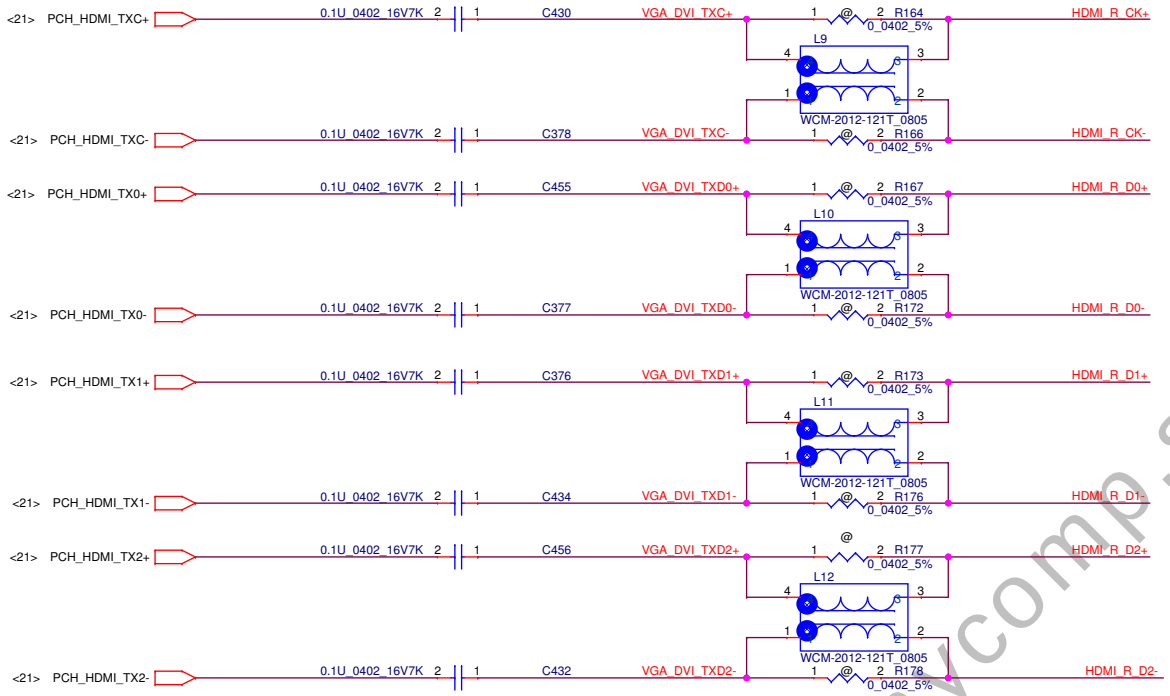
Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

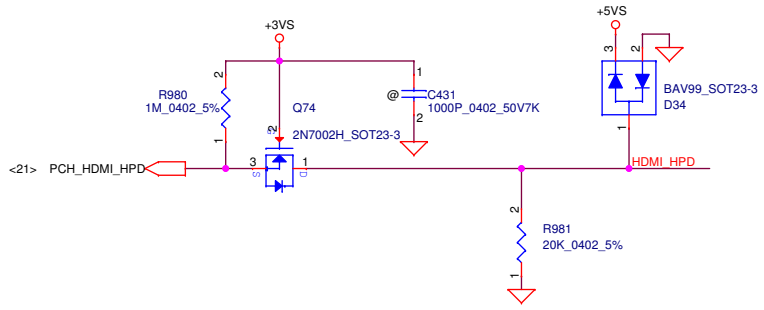
Compal Electronics, Inc.

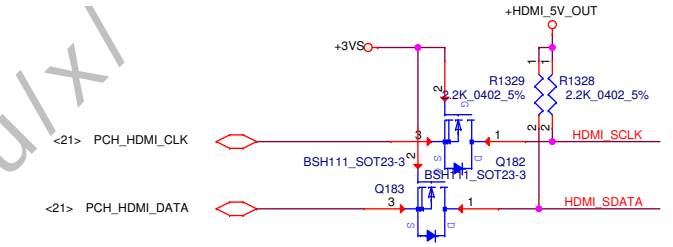
Title: LVDS

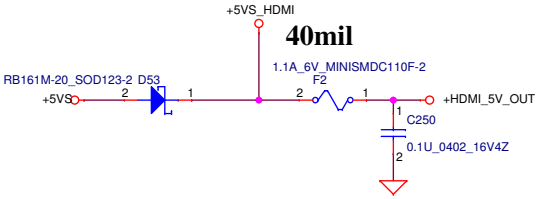
Size: C | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

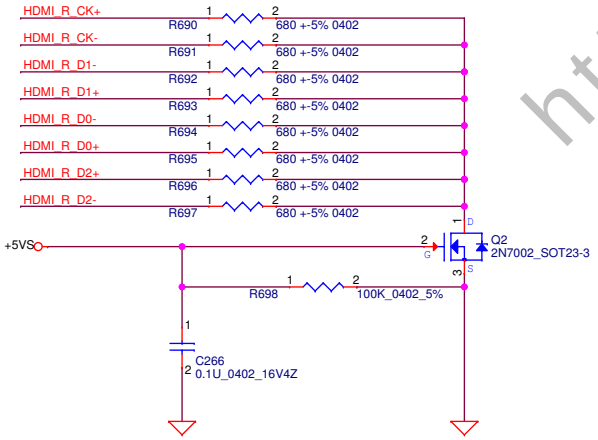
Date: Monday, July 16, 2012 | Sheet 28 of 50



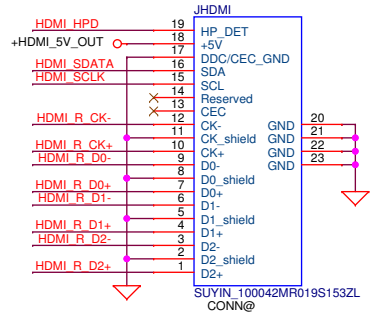








HDMI Connector



Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: HDMI Connector

Size: D | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

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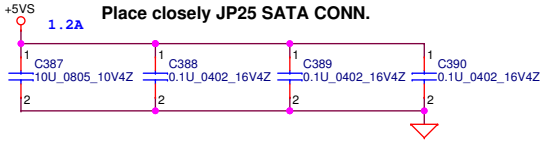
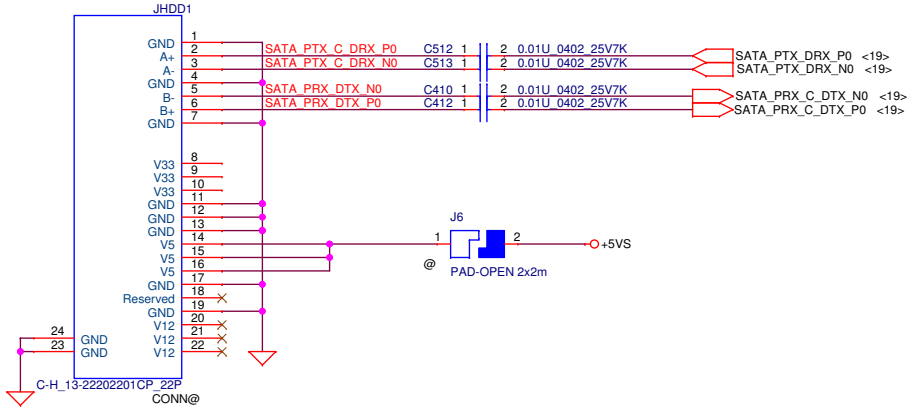
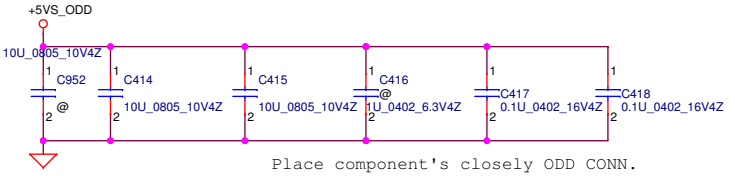
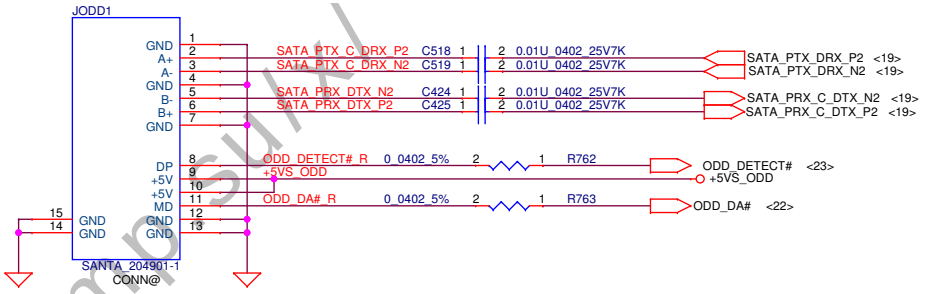
SATA HDD1 Conn.

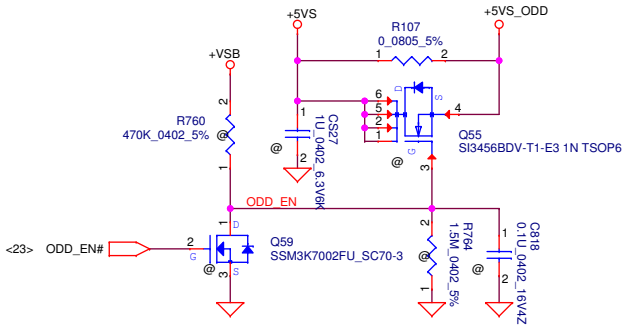




SATA ODD Conn







Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.			
Title	SATA-HDD/ODD		
Size	Document Number	VBL30/31 LA-9351P M/B	Rev 0.1
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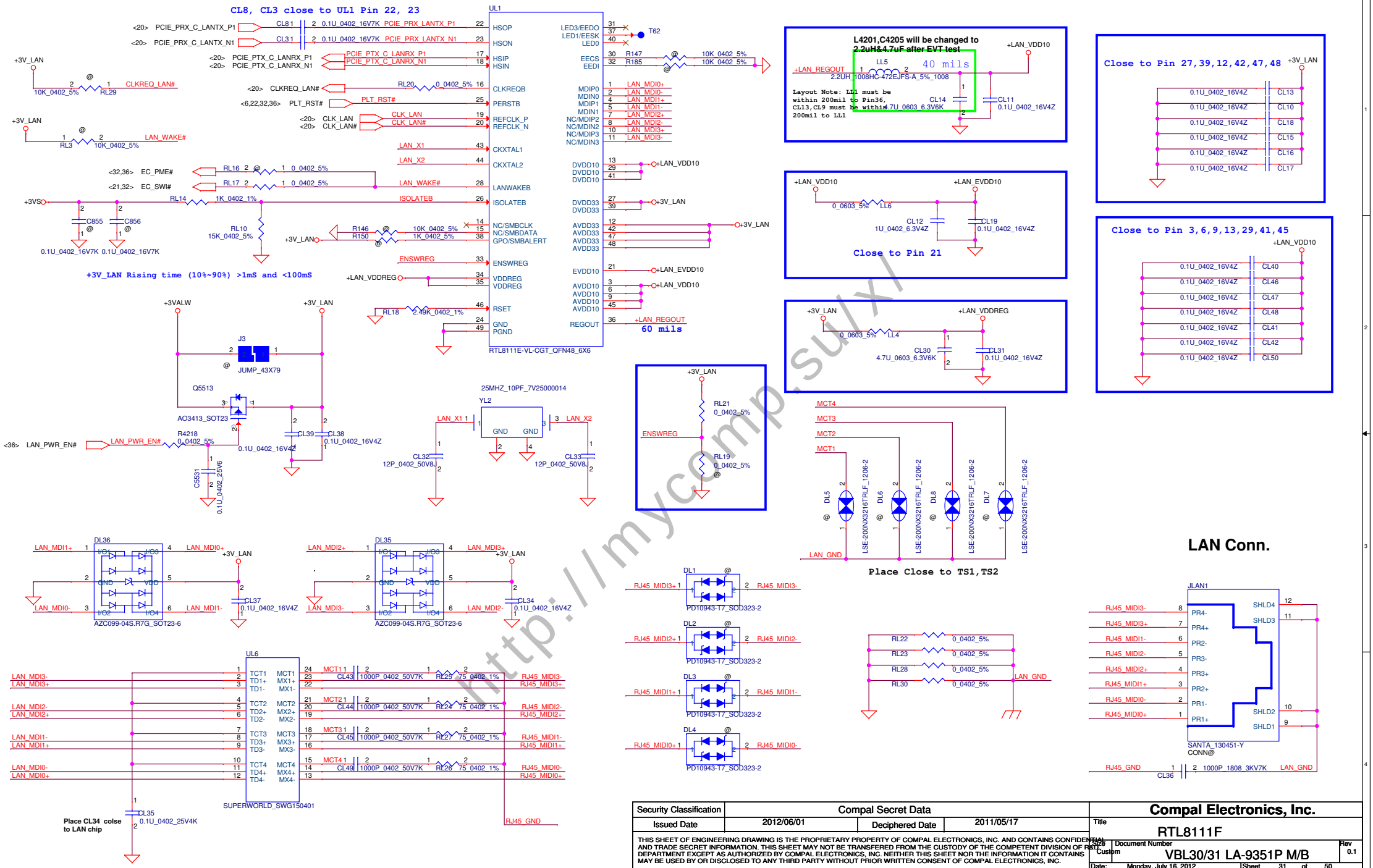

Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2011/05/17

Compal Electronics, Inc.

Title: RTL8111F

Size: Custom | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

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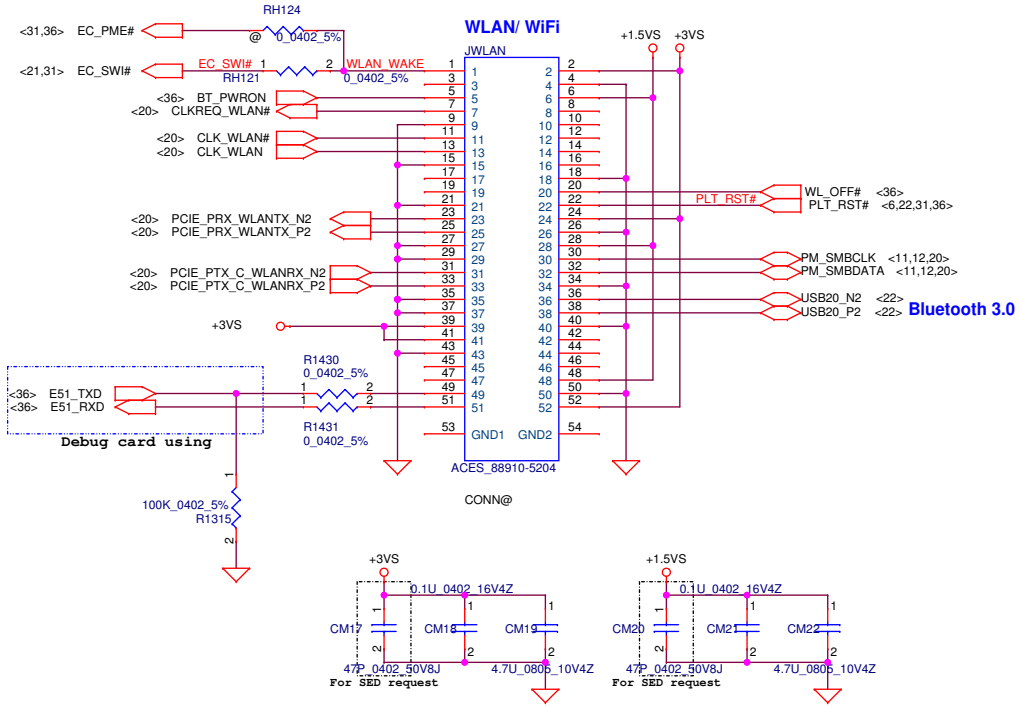
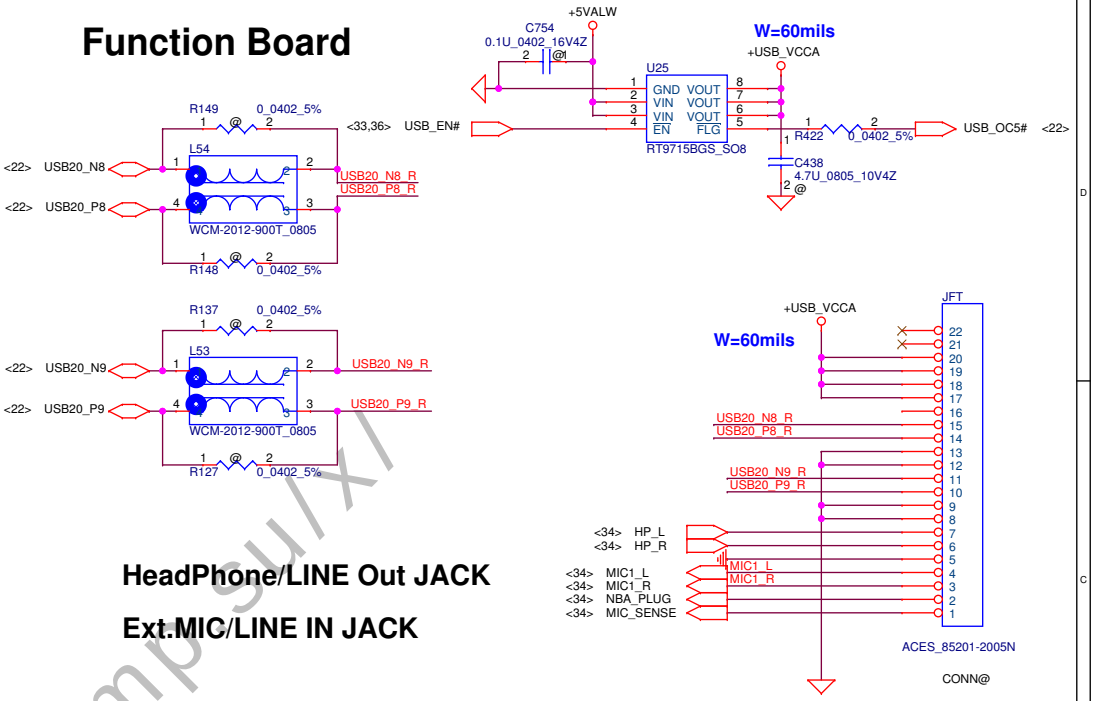
Slot 1 Half PCIe Mini Card-WLAN & BT3.0

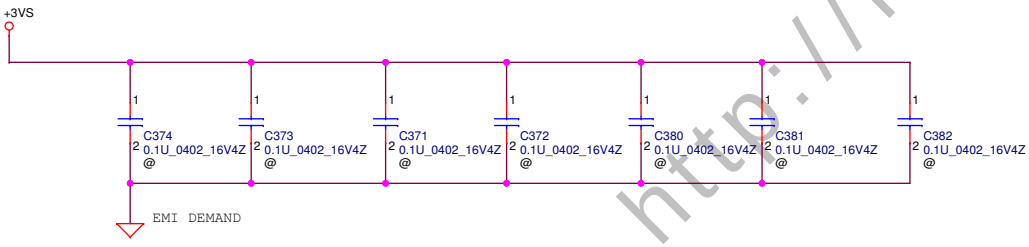


Function Board



HeadPhone/LINE Out JACK

Ext.MIC/LINE IN JACK



Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

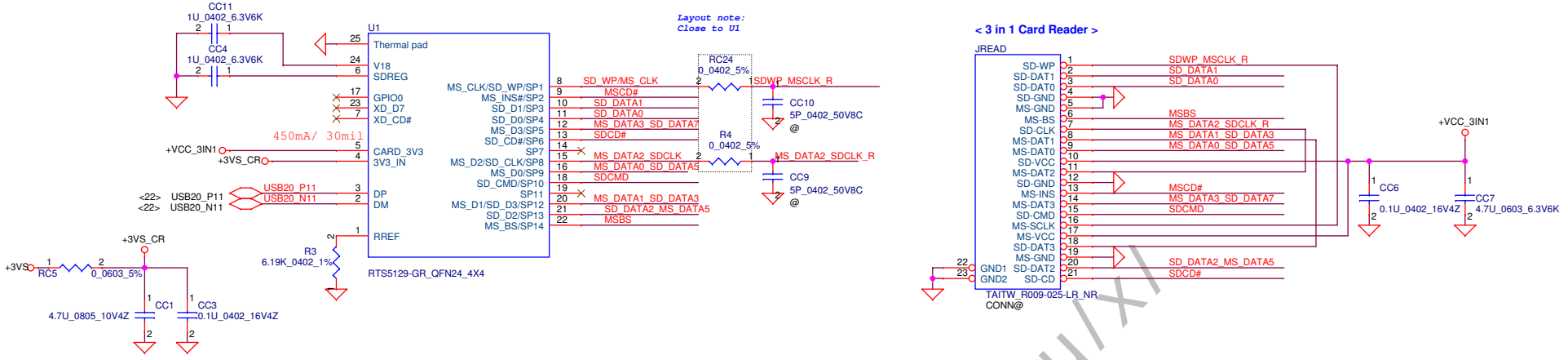
Compal Electronics, Inc.

Title: WLAN/USB

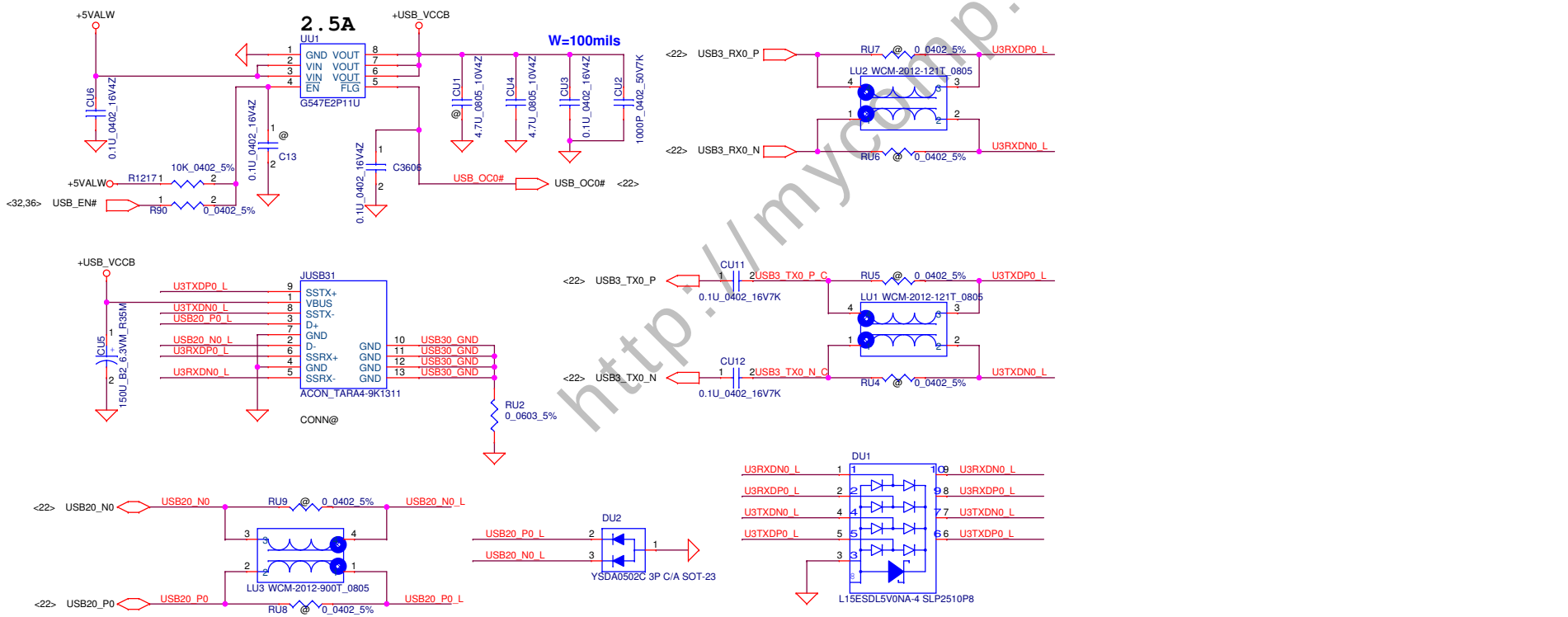
Size: D | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 32 of 50

Card Reader



USB3.0 Port



Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

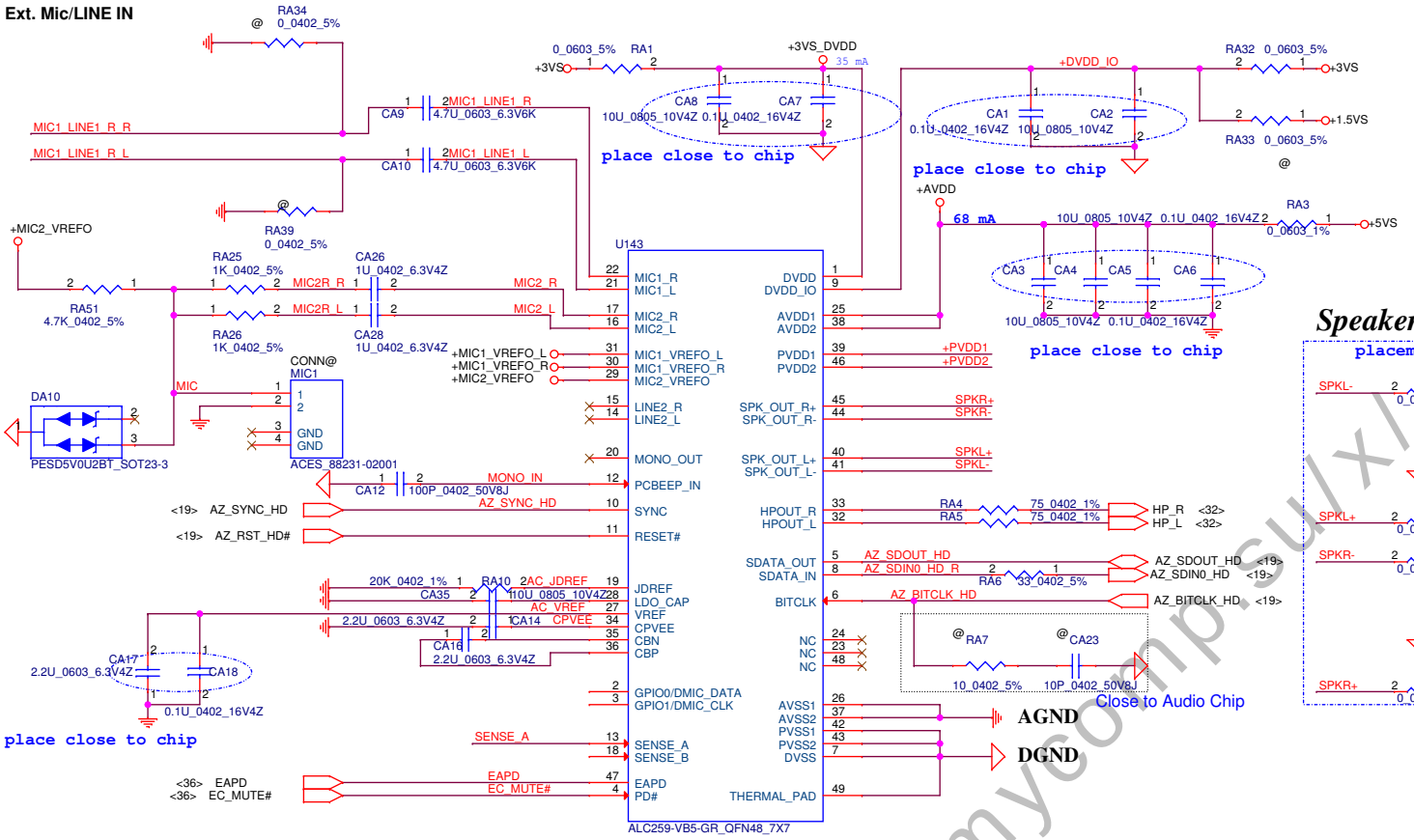
Compal Electronics, Inc.

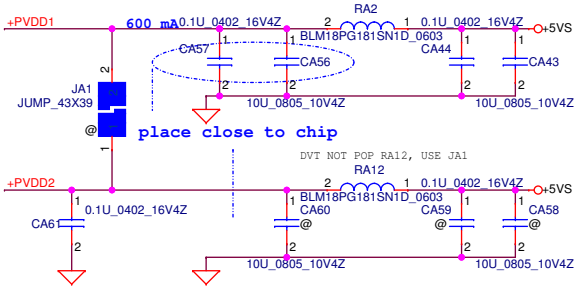
Title: USB-Card Reader-RTS5129

Size: D | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

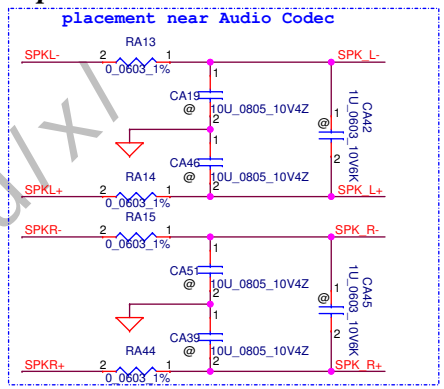
Date: Monday, July 16, 2012 | Sheet 33 of 50

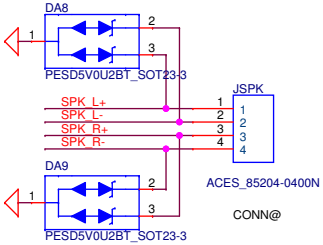
Ext. Mic/LINE IN



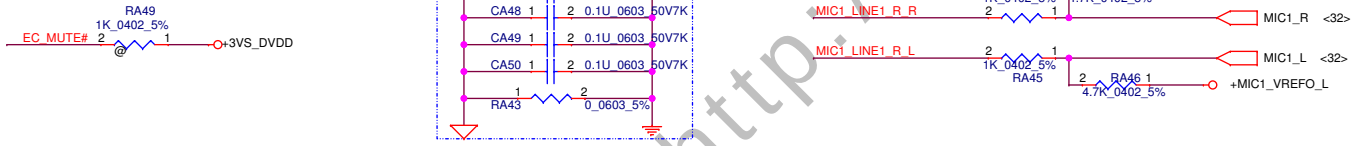


Speaker Connector

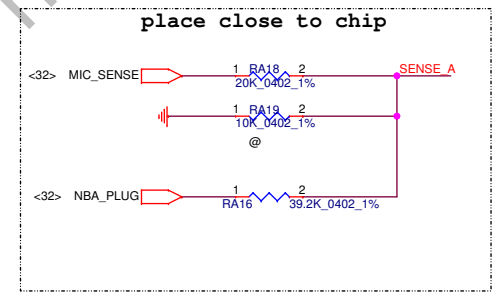




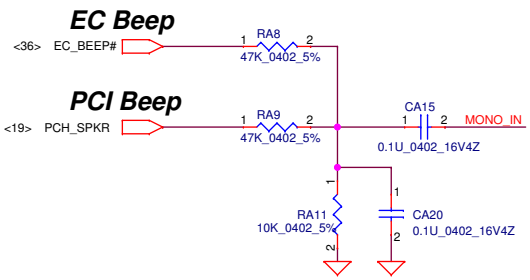
Ext.MIC/LINE IN JACK



Sense Pin	Impedance	Codec Signals	Function
SENSE A	39.2K	PORT-A (PIN 39, 41)	
	20K	PORT-B (PIN 21, 22)	Ext. MIC
	10K	PORT-C (PIN 23, 24)	
	5.1K	PORT-D (PIN 35, 36)	SPK out
SENSE B	39.2K	PORT-E (PIN 14, 15)	
	20K	PORT-F (PIN 16, 17)	Int. MIC
	10K	PORT-H (PIN 37)	
	5.1K	PORT-I (PIN 32, 33)	Headphone out



Beep sound



Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: HD CODEC ALC259

Size: D | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 34 of 50

KEYBOARD CONN.

For EMC

KSO10	C803	100P_0402_50V8J	
KSO11	C804	100P_0402_50V8J	
KSO12	C805	100P_0402_50V8J	
KSO15	C807	100P_0402_50V8J	
KSI7	C808	100P_0402_50V8J	
KSI2	C810	100P_0402_50V8J	
KSI3	C811	100P_0402_50V8J	
KSI4	C812	100P_0402_50V8J	
KSI0	C813	100P_0402_50V8J	
KSI5	C814	100P_0402_50V8J	
KSI6	C815	100P_0402_50V8J	
KSI1	C816	100P_0402_50V8J	
KSO2	C793	100P_0402_50V8J	
KSO1	C790	100P_0402_50V8J	
KSO0	C791	100P_0402_50V8J	
KSO4	C792	100P_0402_50V8J	
KSO3	C795	100P_0402_50V8J	
KSO5	C796	100P_0402_50V8J	
KSO14	C797	100P_0402_50V8J	
KSO6	C798	100P_0402_50V8J	
KSO7	C799	100P_0402_50V8J	
KSO13	C800	100P_0402_50V8J	
KSO8	C801	100P_0402_50V8J	
KSO9	C802	100P_0402_50V8J	

JKB

1	1	KSI1
2	2	KSI7
3	3	KSI6
4	4	KSO9
5	5	KSI4
6	6	KSI5
7	7	KSO0
8	8	KSI2
9	9	KSI3
10	10	KSO5
11	11	KSO1
12	12	KSI0
13	13	KSO2
14	14	KSO4
15	15	KSO7
16	16	KSO8
17	17	KSO6
18	18	KSO3
19	19	KSO12
20	20	KSO13
21	21	KSO14
22	22	KSO11
23	23	KSO10
24	24	KSO15
25	25	
26	26	
27	GND2	
28	GND1	

E&T_6916-Q26N-00R
CONN@

13.3" and 14"

KSI[0..7] → KSI[0..7] <36>
KSO[0..15] → KSO[0..15] <36>

Lid SW

+3VALW +3VL

R144 0_0402_5%

R142 0_0402_5% @

U34
APX9132ATI-TRL_SOT23-3
VDD GND VOUT

LID_SW# <36>

C645 0.1U_0402_16V4Z

C647 0.1U_0402_16V4Z

Screw Hole

H2 H3 H4 H5 H6 H7 H1 — H_3P0

Break hole

H31 H30 H32 — H_3P0

CPU

H11 H12 H10 H13 — H_4P5

JWLAN

H20 — H_3P0X3P5N

VGA

H15 H17 — H_4P2

PCB Fedical Mark PAD

FD1 FD2 FD3 FD4

H22 — H_3P3

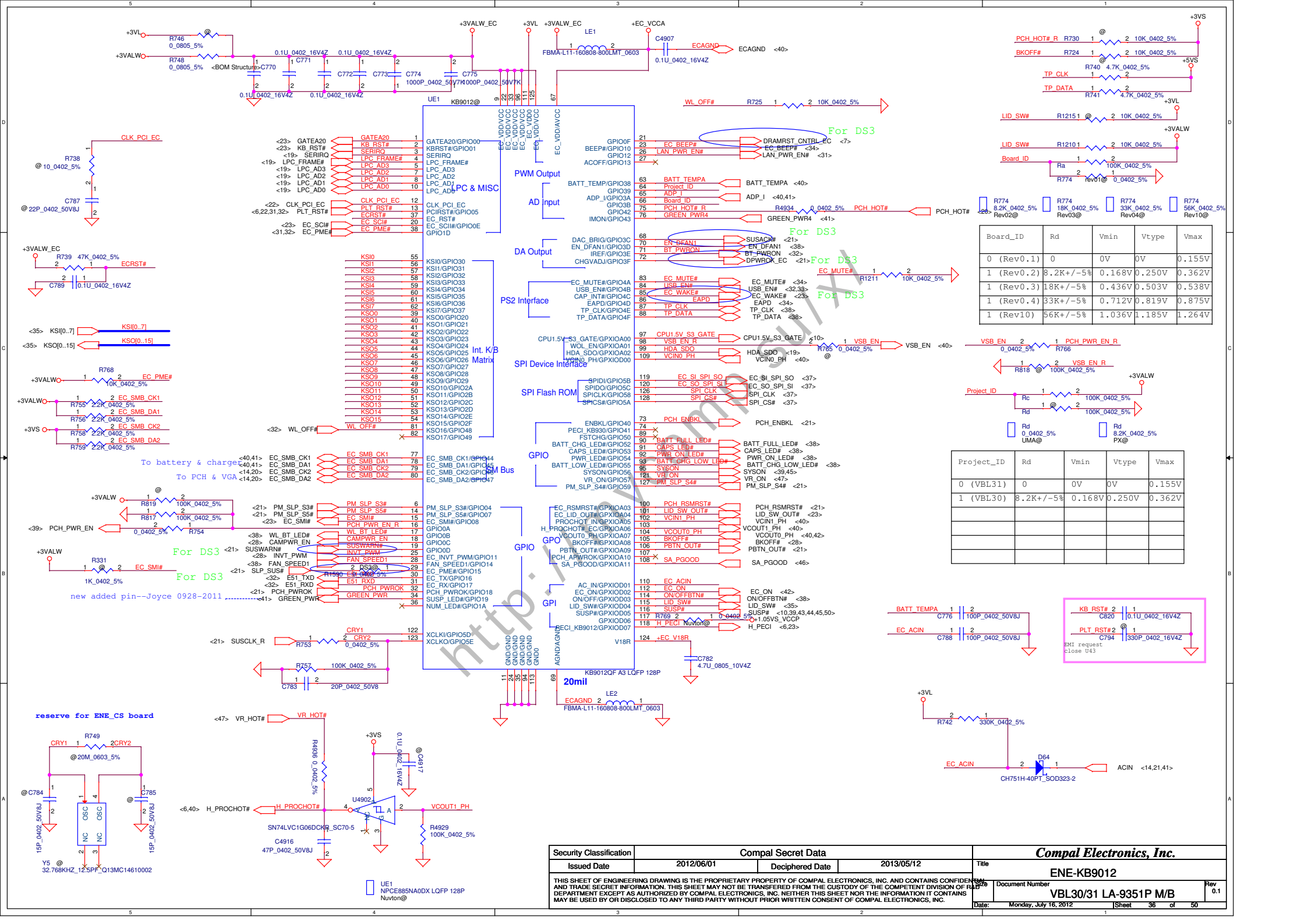
Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: KB/PAD/ISPD/LID/ECROM

Size: D | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

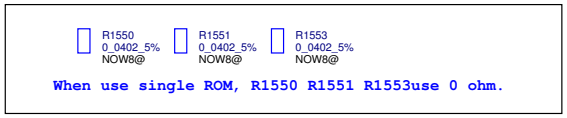
Date: Monday, July 16, 2012 | Sheet 35 of 50



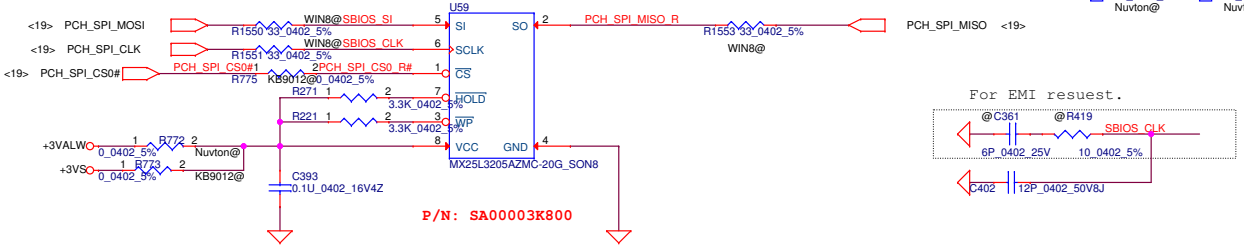
Board_ID	Rd	Vmin	Vtype	Vmax
0 (Rev0.1)	0	0V	0V	0.155V
1 (Rev0.2)	8.2K+/-5%	0.168V	0.250V	0.362V
1 (Rev0.3)	18K+/-5%	0.436V	0.503V	0.538V
1 (Rev0.4)	33K+/-5%	0.712V	0.819V	0.875V
1 (Rev10)	56K+/-5%	1.036V	1.185V	1.264V

Project_ID	Rd	Vmin	Vtype	Vmax
0 (VBL31)	0	0V	0V	0.155V
1 (VBL30)	8.2K+/-5%	0.168V	0.250V	0.362V

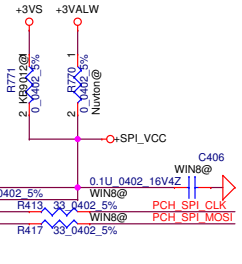
BIOS Bus switch

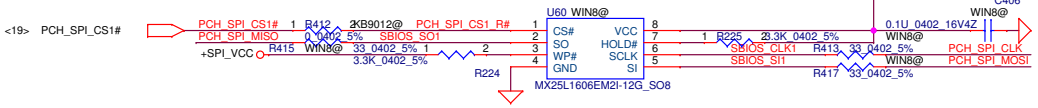


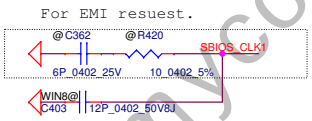
BIOS SPI Flash (4MByte*1)



BIOS SPI Flash (2MByte*1) For Win8



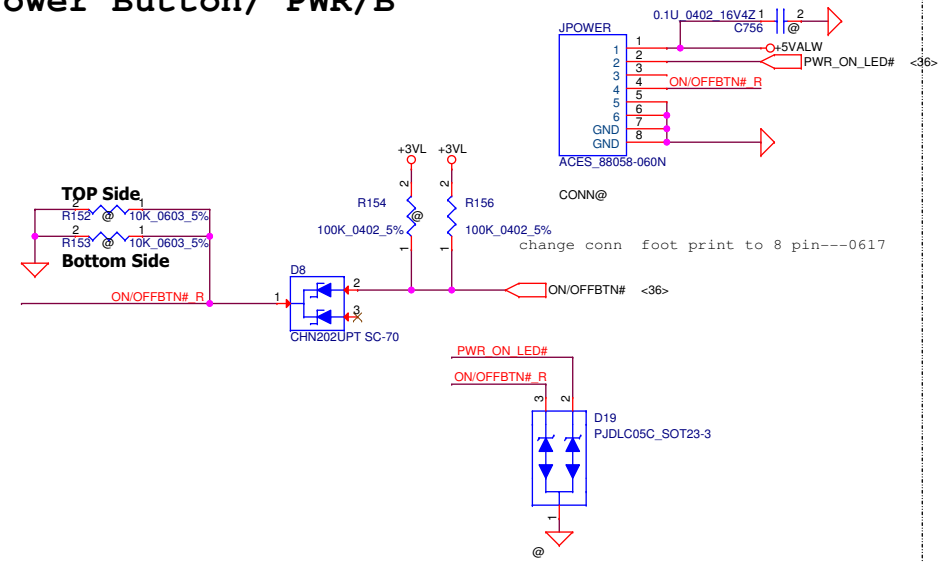




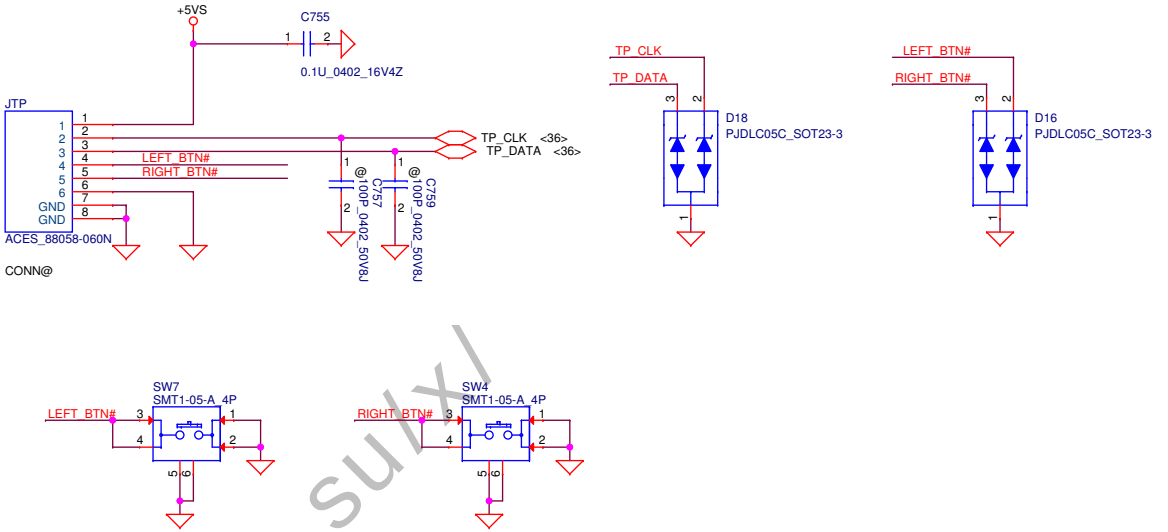
Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.			
Title	SBIOS & EC ROM		
Size	Document Number	VBL30/31 LA-9351P M/B	Rev 0.1
Date: Monday, July 16, 2012	Sheet 37 of 50		

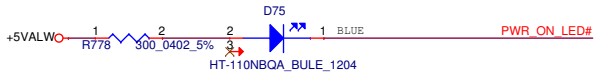
Power Button/ PWR/B



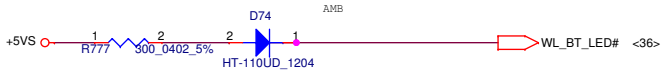
Touch/B Connector



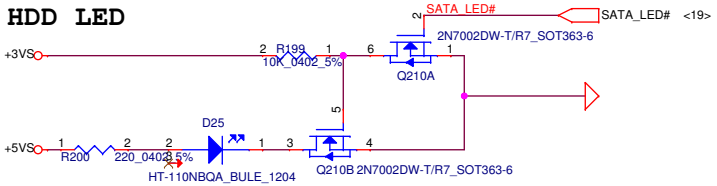
DC-IN LED



WL&BT LED

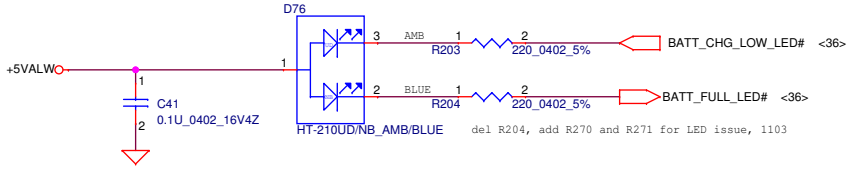


HDD LED



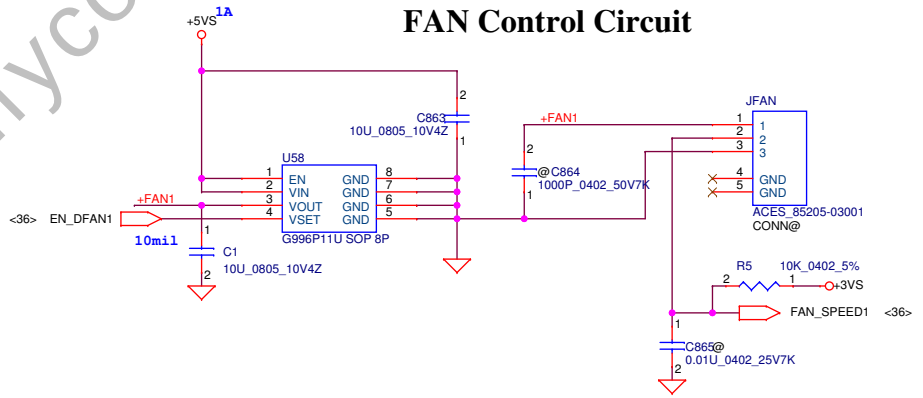
BATT CHARGE/FULL LED

Vf=2.1V(typ),2.4V(max) for amber
Vf=2.2V(typ),2.4V(max) for green
If=25mA(max)



CAP LOCK LED

FAN Control Circuit

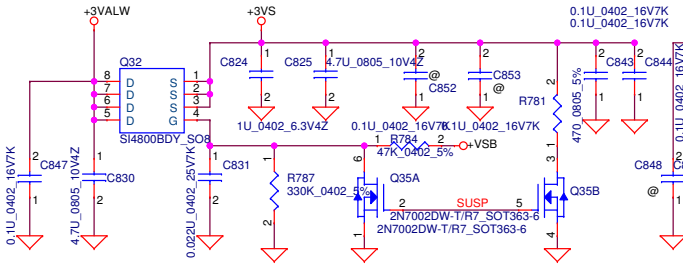


Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

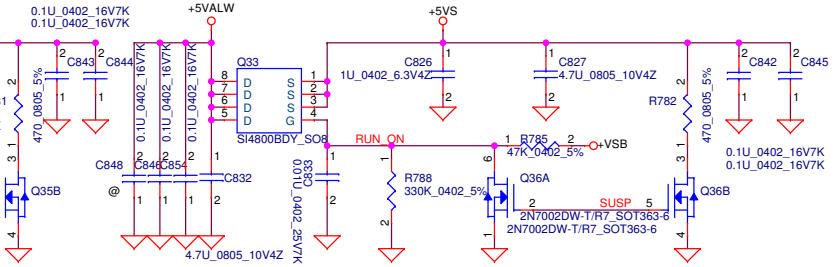
Compal Electronics, Inc.			
Title	PWR/TP/LED/FAN		
Size	Document Number	VBL30/31 LA-9351P M/B	Rev 0.1
Date: Monday, July 16, 2012	Sheet 38 of 50		

+3VALW TO +3VS

Vgs=-0V, Id=9A, Rds=18.5mohm

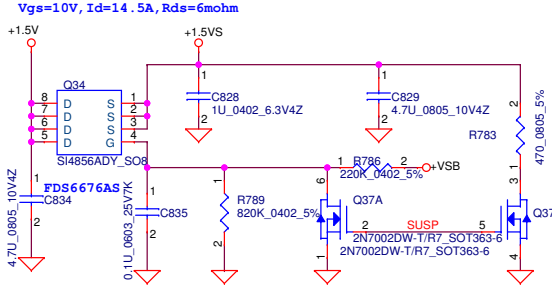


+5VALW TO +5VS

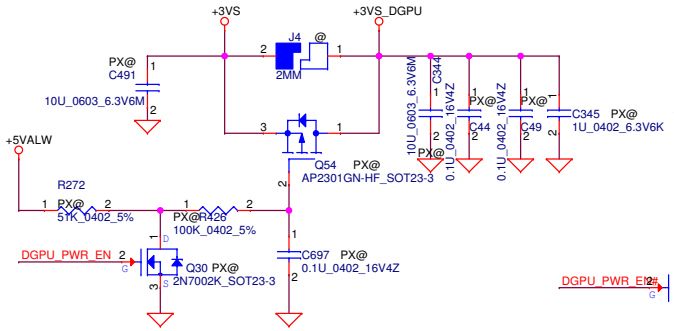


+1.5V to +1.5VS

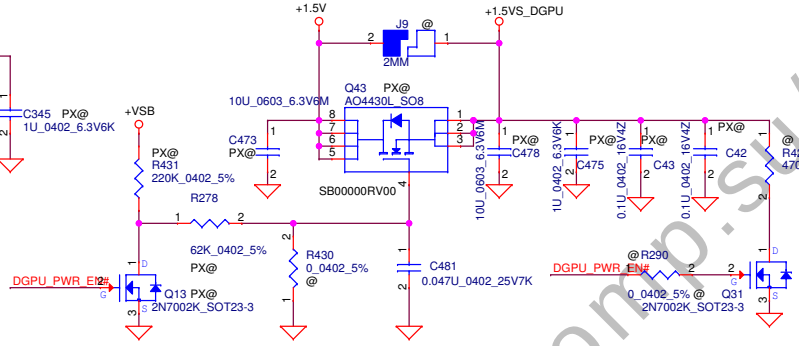
Vgs=10V, Id=14.5A, Rds=6mohm



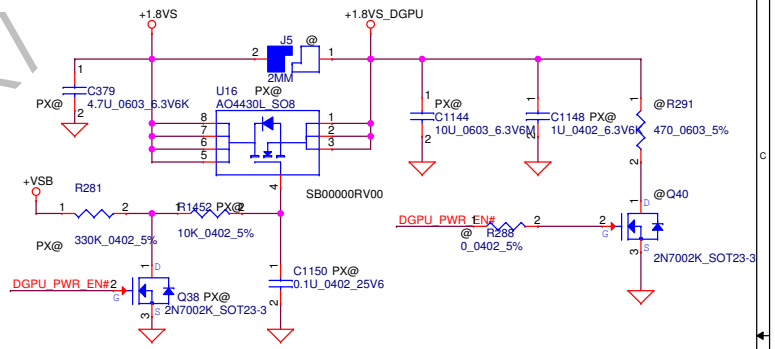
+3VS TO +3VS_DGPU



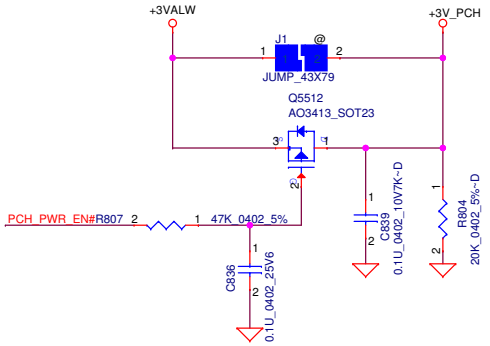
+1.5V TO +1.5VS_DGPU

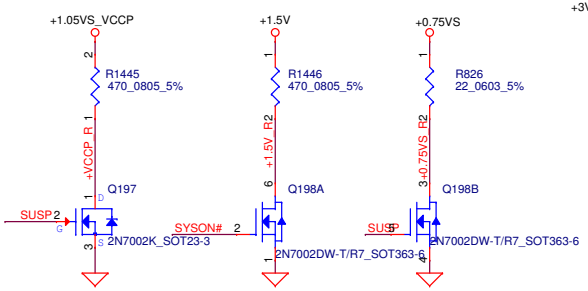


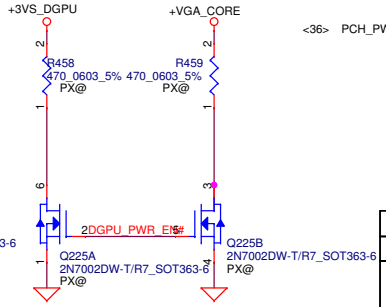
+1.8VS TO +1.8VS_DGPU

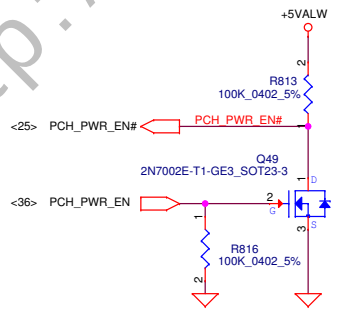


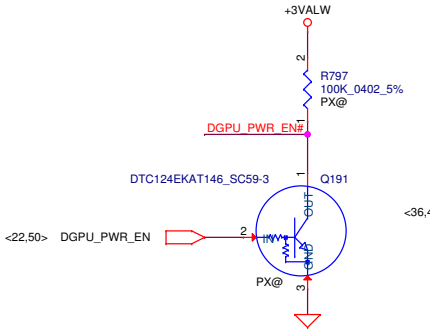
+3VALW to +3V_PCH

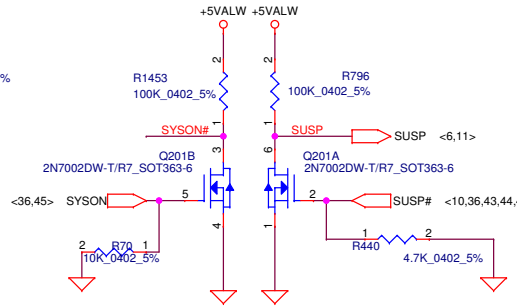












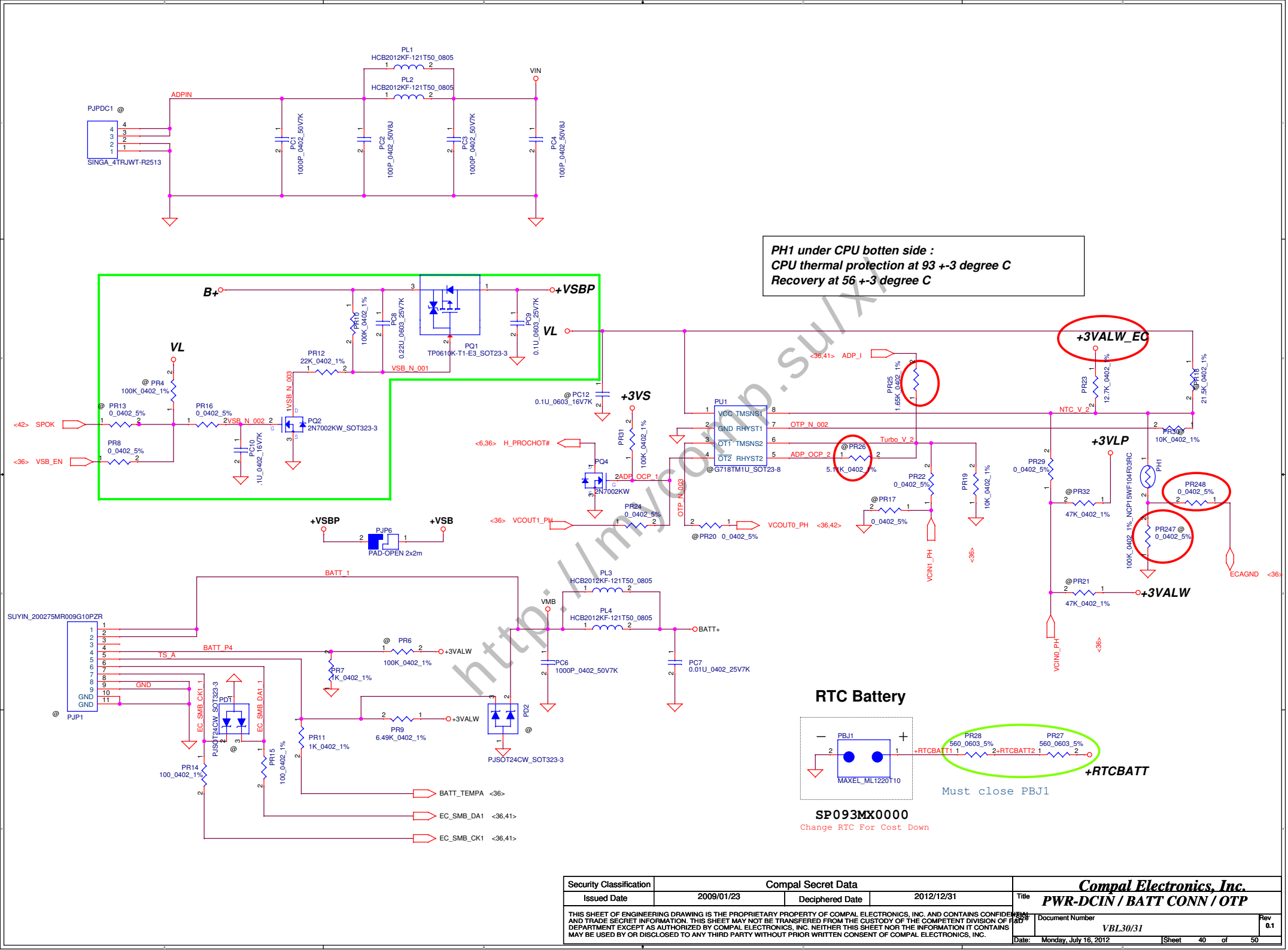
Security Classification	Compal Secret Data		
Issued Date	2012/06/01	Deciphered Date	2013/05/12

Compal Electronics, Inc.

Title: DC-DC INTERFACE

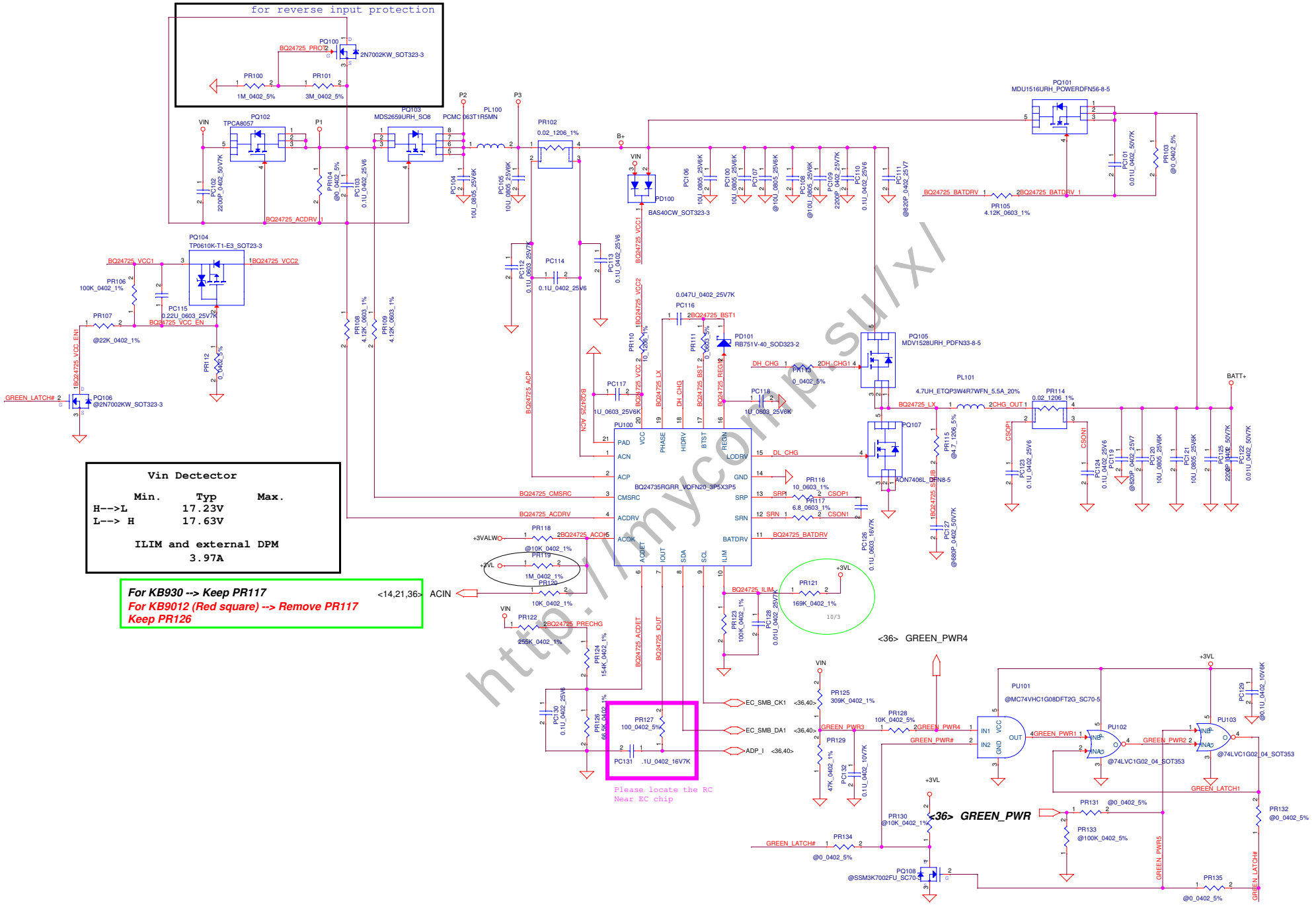
Size: D | Document Number: VBL30/31 LA-9351P M/B | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 39 of 50



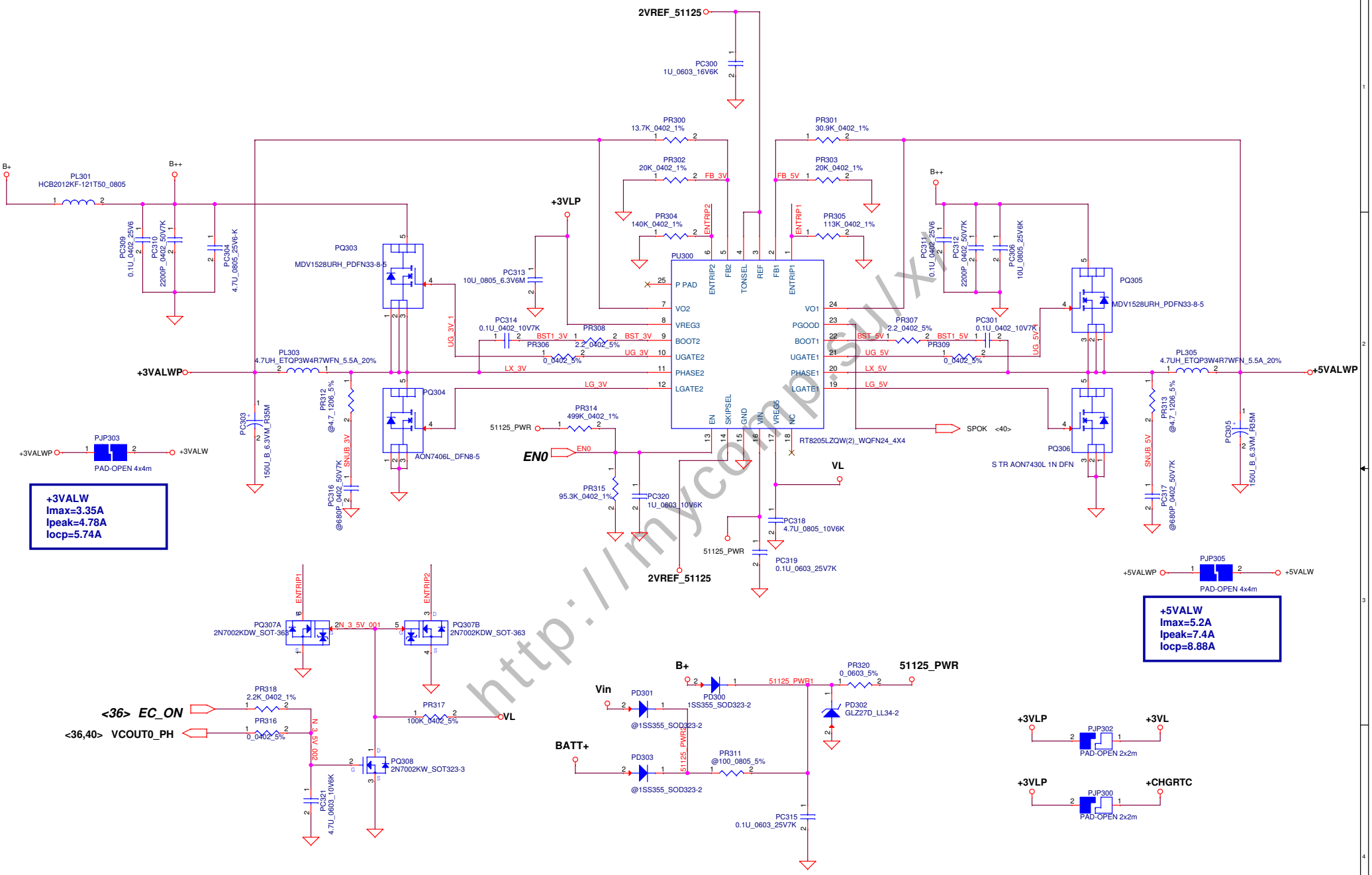
Security Classification	Compal Secret Data		
Issued Date	2009/01/23	Deciphered Date	2012/12/31

Compal Electronics, Inc.	
Title	PWR-DCIN / BATT CONN / OTP
Size	Document Number: VBL30/31 — Rev: 0.1
Date: Monday, July 16, 2012	Sheet 40 of 50



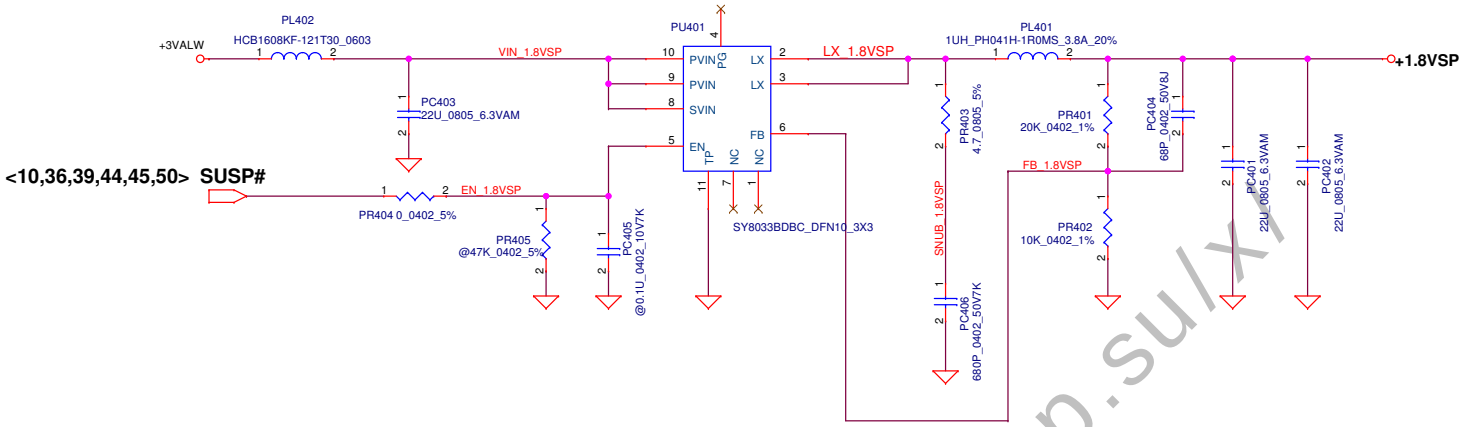
Security Classification	Compal Secret Data		
Issued Date	2009/01/23	Deciphered Date	2012/12/31

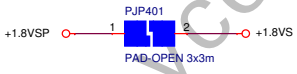
Compal Electronics, Inc.			
Title	PWR-CHARGER		
Document Number	VBL30/31	Rev	0.1
Date: Monday, July 16, 2012	Sheet 41 of 50		



Security Classification	Compal Secret Data		
Issued Date	2007/08/02	Deciphered Date	2012/12/31

Compal Electronics, Inc.			
Title	PWR-3.3VALWP/5VALWP		
Size Custom	Document Number VBL30/31		Rev 0.1
Date: Monday, July 16, 2012	Sheet 42 of 50		





(3.5A,140mils ,Via NO.= 7)

+1.8V
Imax=2.25A
Ipeak=3.22A

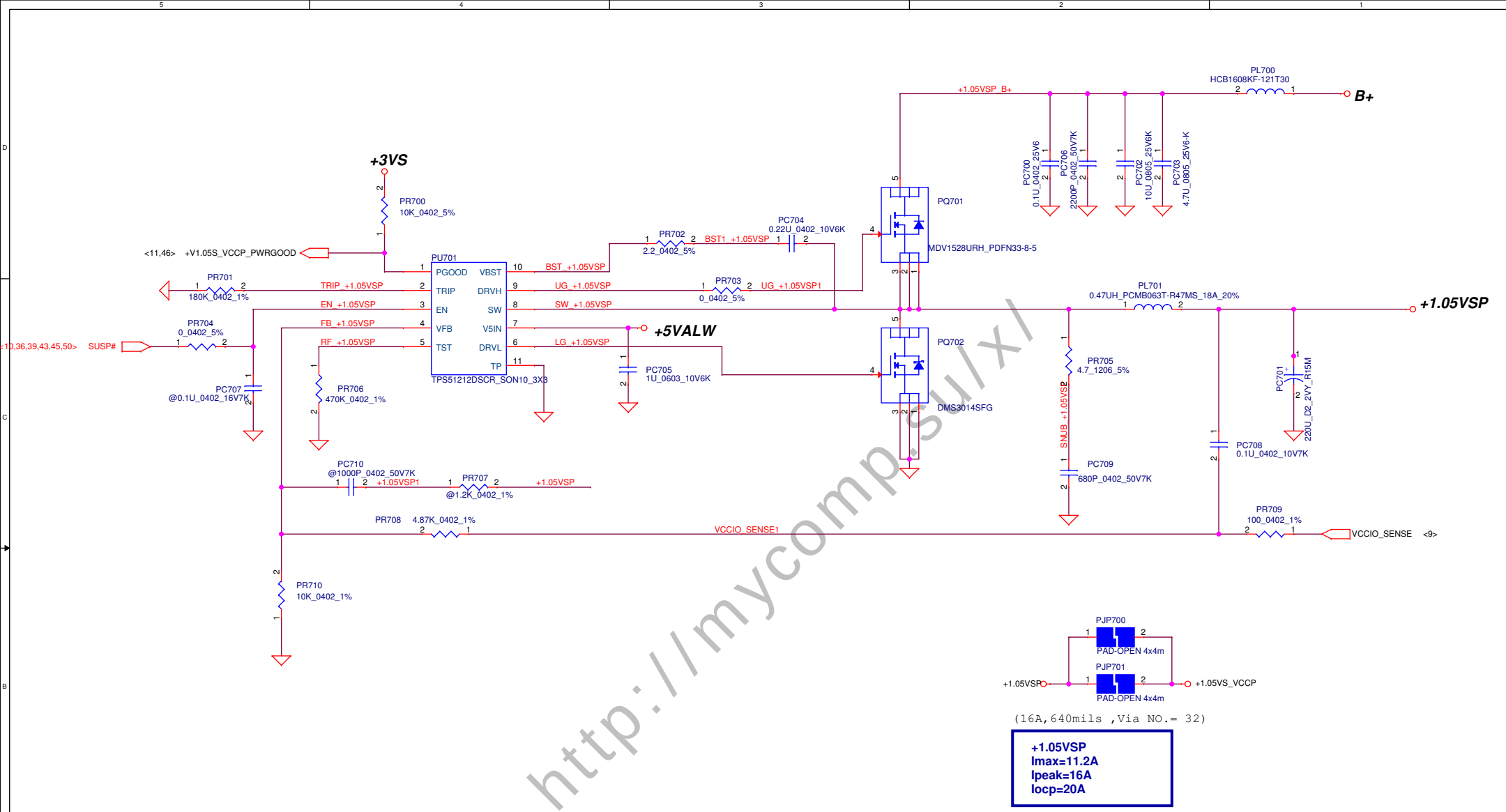
Security Classification	Compal Secret Data		
Issued Date	2009/01/23	Deciphered Date	2012/12/31

Compal Electronics, Inc.

Title: **PWR-1.8VSP**

Size: | Document Number: VBL30/31 | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 43 of 50

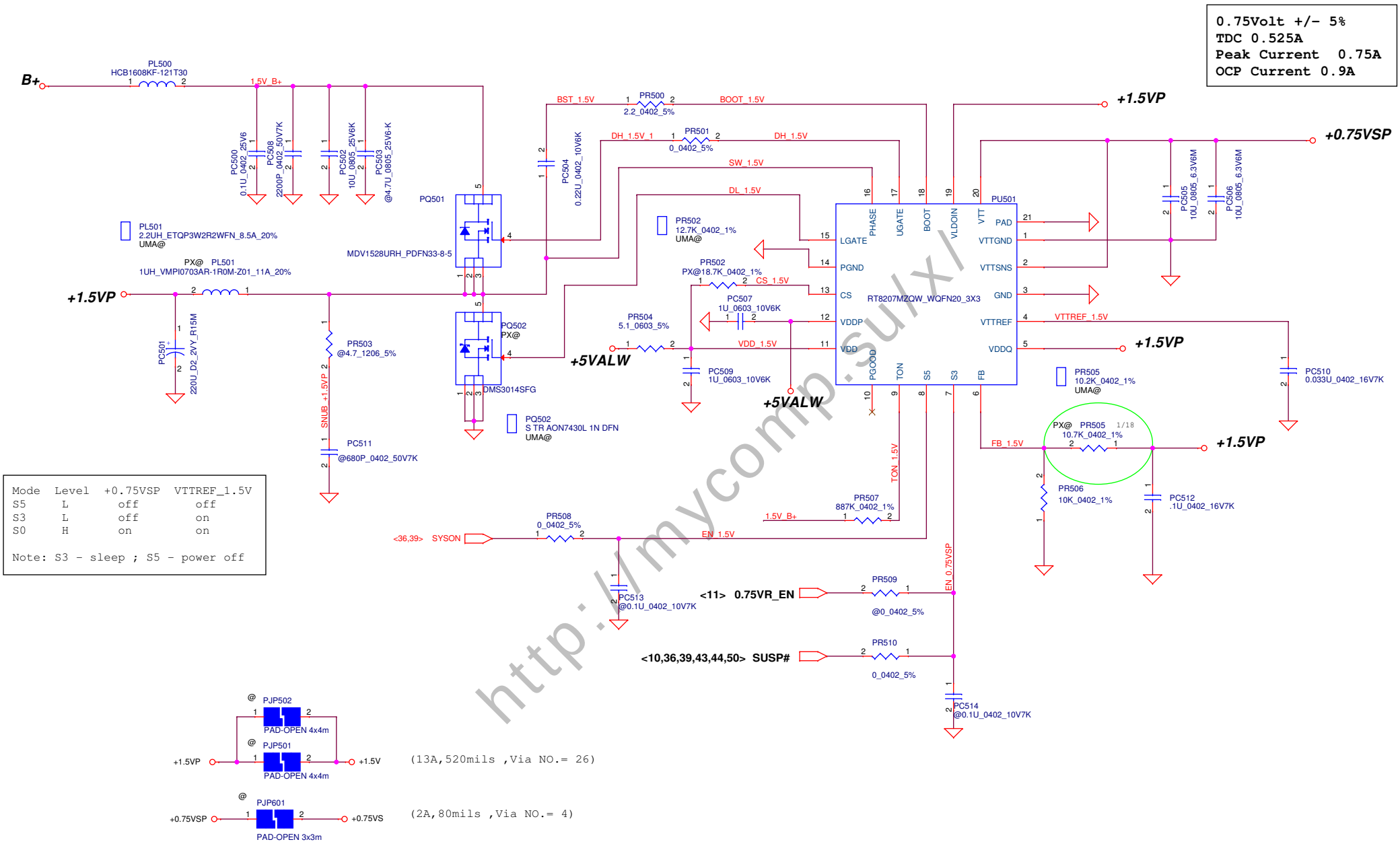


Security Classification	Compal Secret Data		
Issued Date	2010/07/20	Deciphered Date	2012/12/31

Compal Electronics, Inc.

Title: **PWR-+V1.05S_VCCP**

Size: Custom	Document Number: VBL30/31	Rev: 0.1
Date: Monday, July 16, 2012	Sheet 44 of 50	



Security Classification	Compal Secret Data		
Issued Date	2010/07/20	Deciphered Date	2012/12/31

Compal Electronics, Inc.

Title: **PWR-1.5VP / +0.75VSP**

Size: Custom	Document Number: VBL30/31	Rev: 0.1
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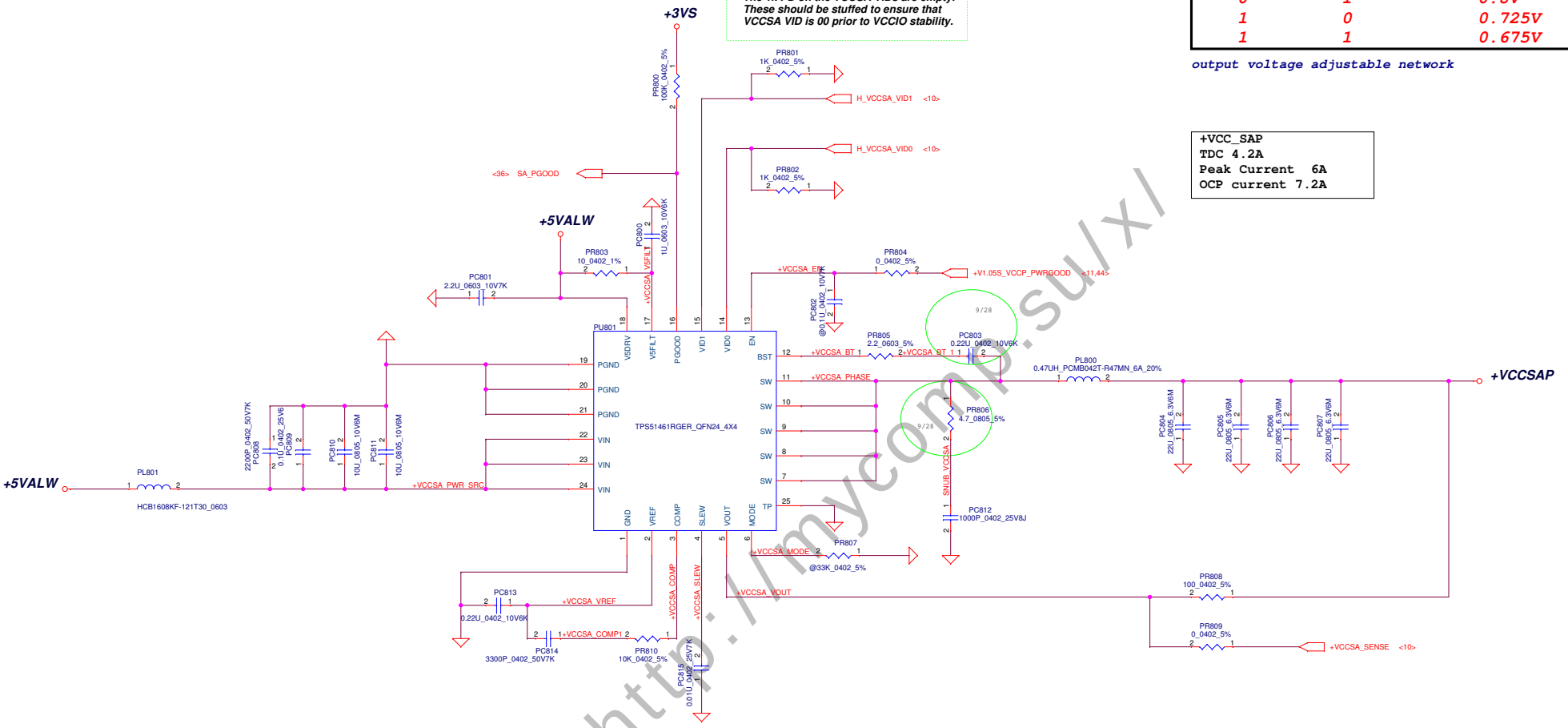
VID [0]	VID[1]	VCCSA Vout
0	0	0.9V
0	1	0.8V
1	0	0.725V
1	1	0.675V

output voltage adjustable network

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

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



(6A,240mils ,Via NO.= 12)

+VCCSA
Imax=4.2A
Ipeak=6A
Iocp=7.2

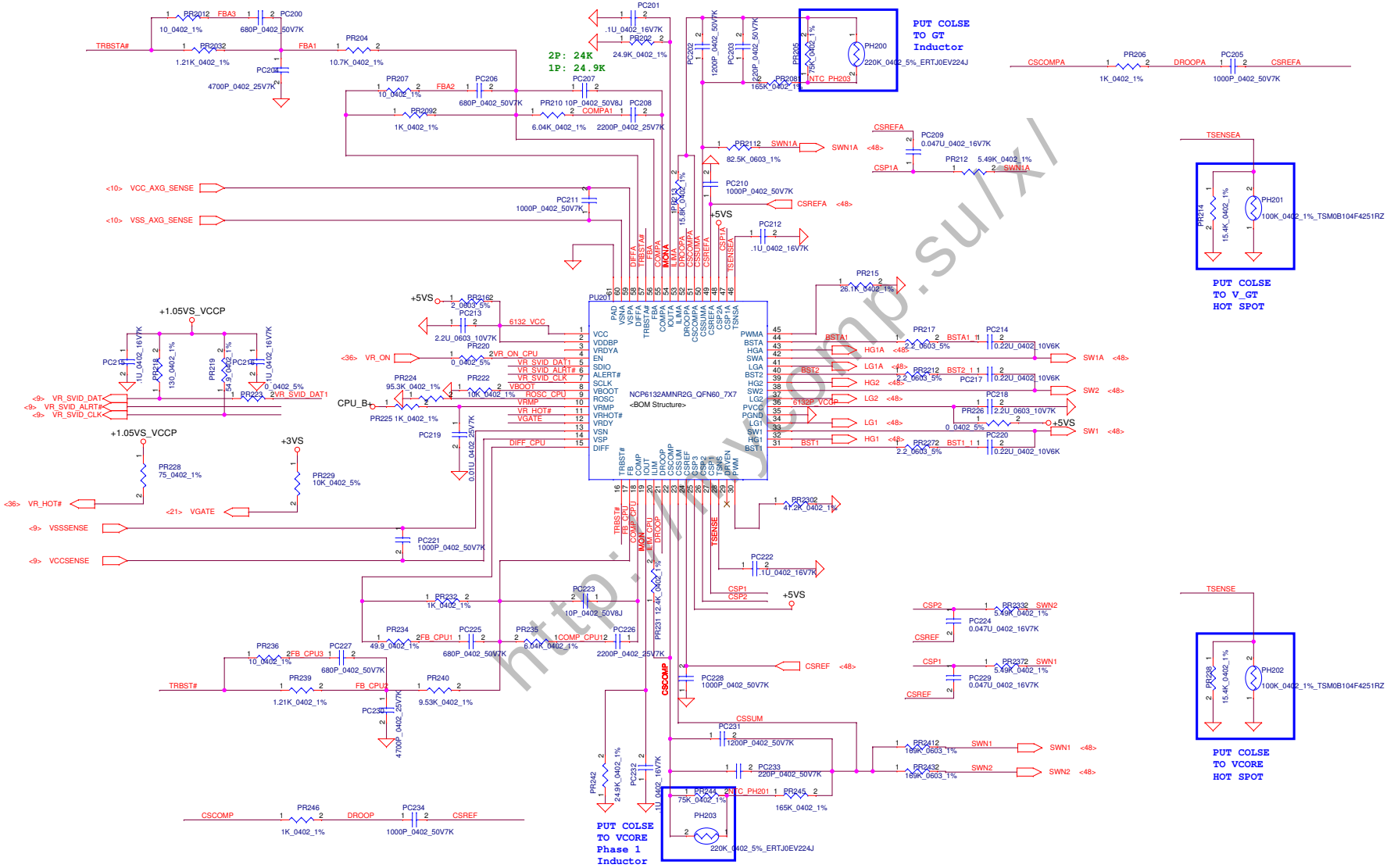
Security Classification	Compal Secret Data		
Issued Date	2010/07/20	Deciphered Date	2012/12/31

Compal Electronics, Inc.

Title: PWR-VCC_SAP

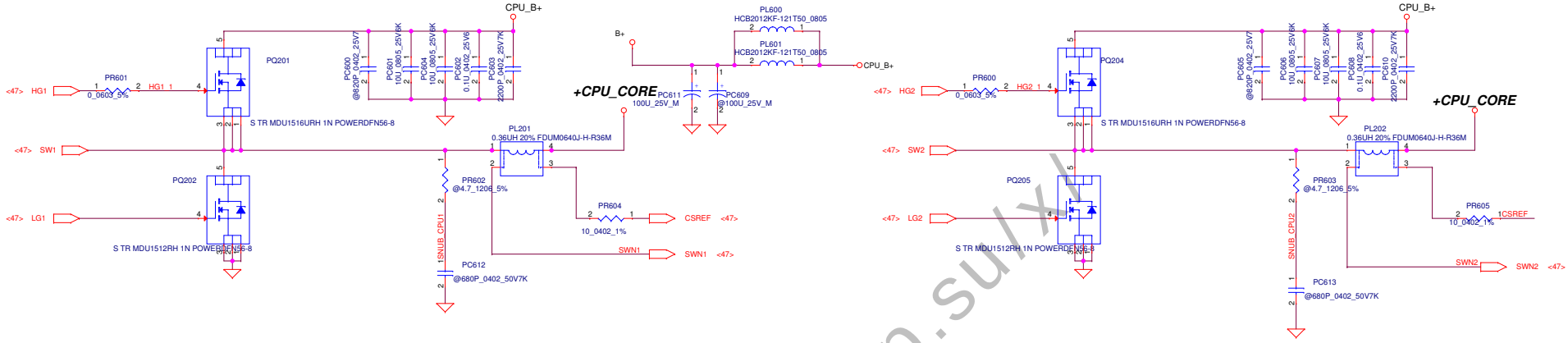
Size: C | Document Number: VBL30/31 | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 46 of 50

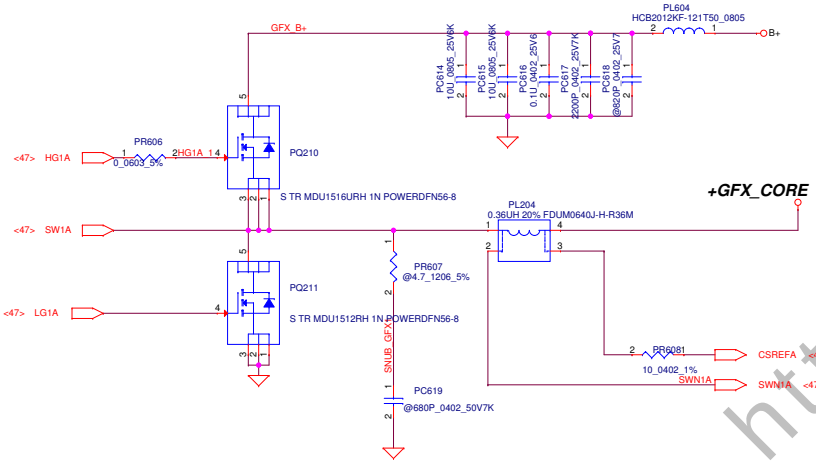


Security Classification	Compal Secret Data		
Issued Date	2011/10/31	Deciphered Date	2012/12/31

Compal Electronics, Inc.			
Title: PWR-CPU_CORE			
Size: C	Document Number: VBL30/31		Rev: 0.1
Date: Monday, July 16, 2012	Sheet 47 of 50		



DC 35W CPU
VID1=1.05V
IccMax=53A
Icc_Dyn=43A
Icc_TDC=36A
R_LL=1.9m ohm
OCP~65A



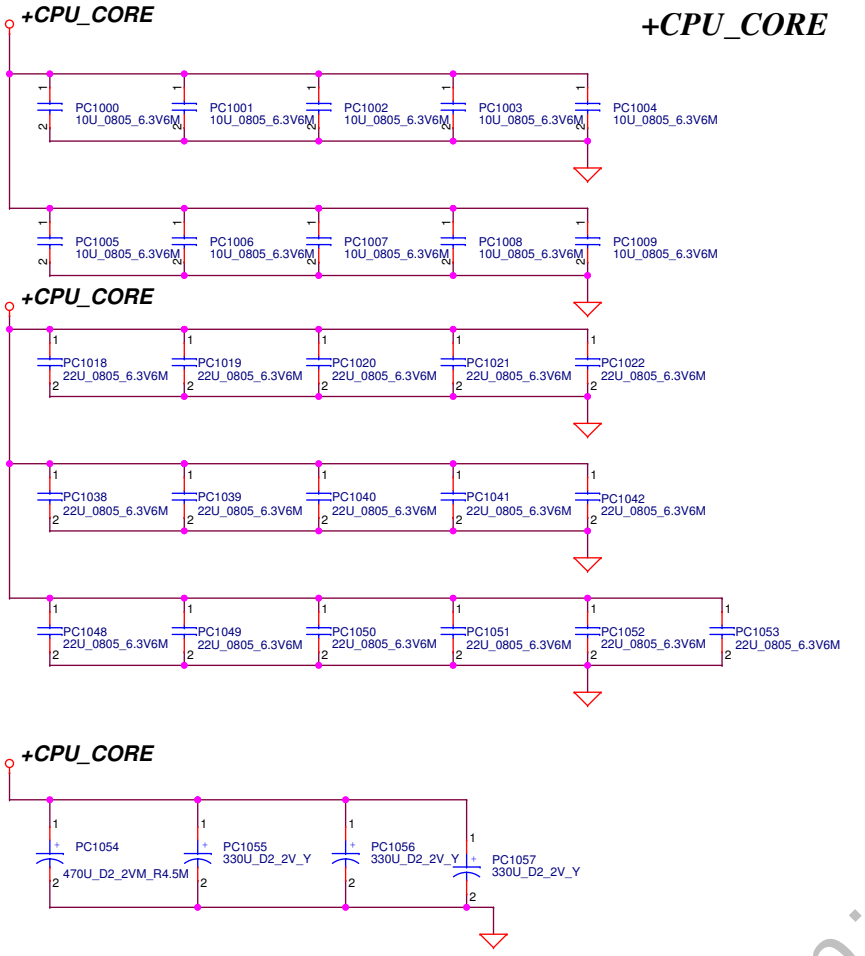
DC 35W GT2
VID1=1.23V
IccMax=33A
Icc_Dyn=20.2A
Icc_TDC=21.5A
R_LL=3.9m ohm
OCP~40A

Security Classification	Compal Secret Data		
Issued Date	2011/10/31	Deciphered Date	2012/12/31

Title: ***PWR-VCC_CORE***

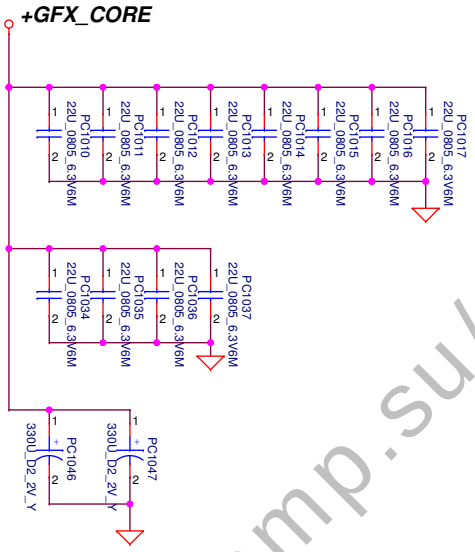
Size: C | Document Number: VBL30/31 | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 48 of 50



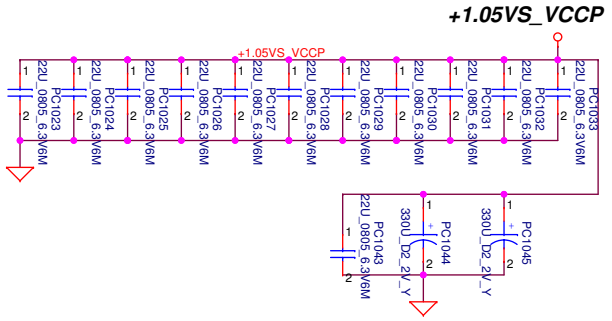
+CPU_CORE

+GFX_CORE



Below is 458544_CRV_PDDG_0.5 Table 5-8.

Socket Bottom	5 x 22 µF (0805) 5 x (0805) no-stuff sites
Socket Top	7 x 22 µF (0805) 2 x (0805) no-stuff sites



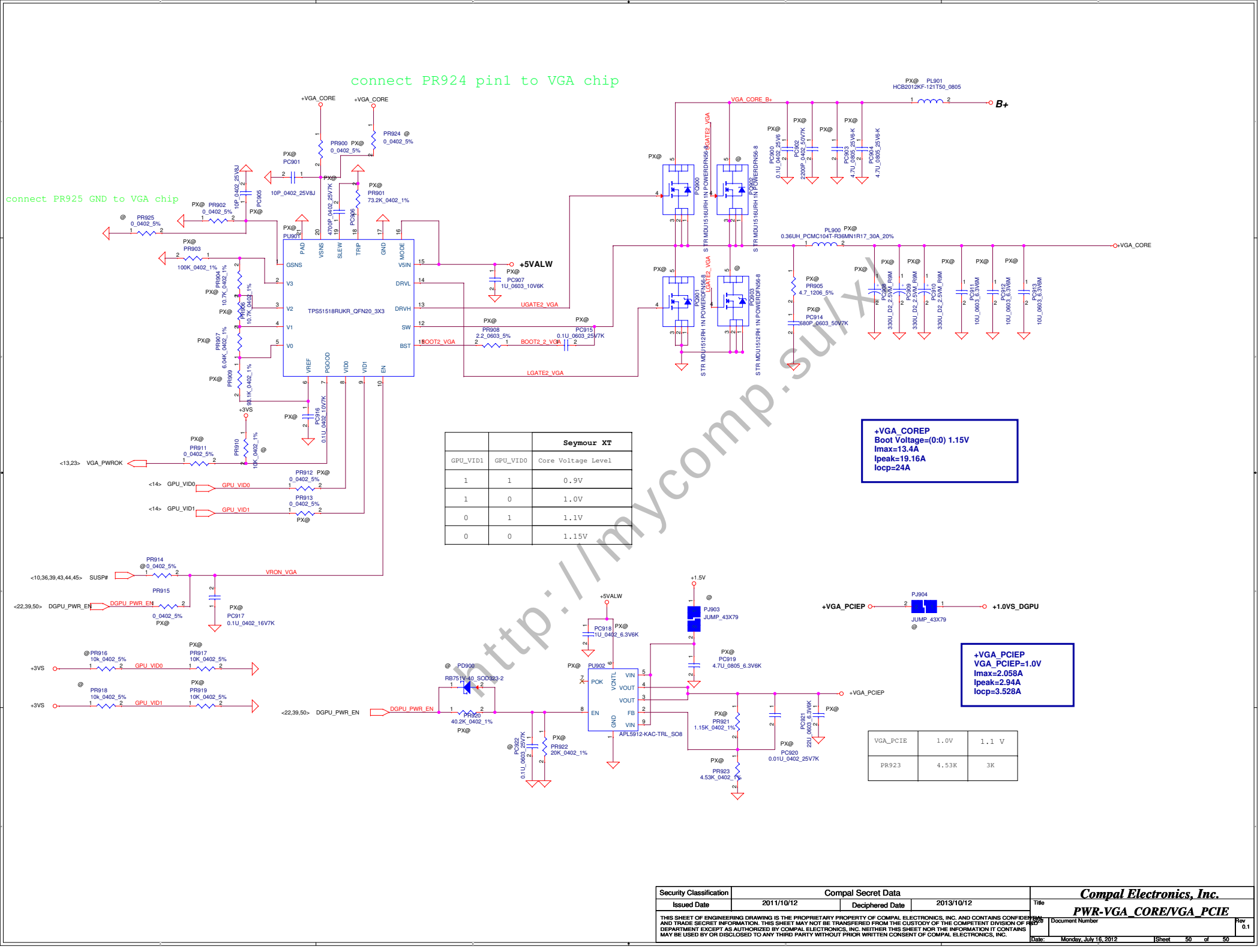
Security Classification	Compal Secret Data		
Issued Date	2011/10/31	Deciphered Date	2012/12/31

Compal Electronics, Inc.

Title: PWR - PROCESSOR DECOUPLING

Size: B | Document Number: VBL30/31 | Rev: 0.1

Date: Monday, July 16, 2012 | Sheet 49 of 50



Security Classification	Compal Secret Data	
Issued Date	2011/10/12	Deciphered Date 2013/10/12

Compal Electronics, Inc.	
Title	PWR-VGA_CORE/VGA_PCIE
Document Number	Rev 0.1
Date: Monday, July 16, 2012	Sheet 50 of 50