

Compal Confidential

Model Name :PILP1
File Name : LA-6921P

Compal Confidential

LA-6921 Edge Schematics Document

Intel Sandy Bridge Processor with DDRIII + Cougar Point PCH + Whistler 128bit with BACO

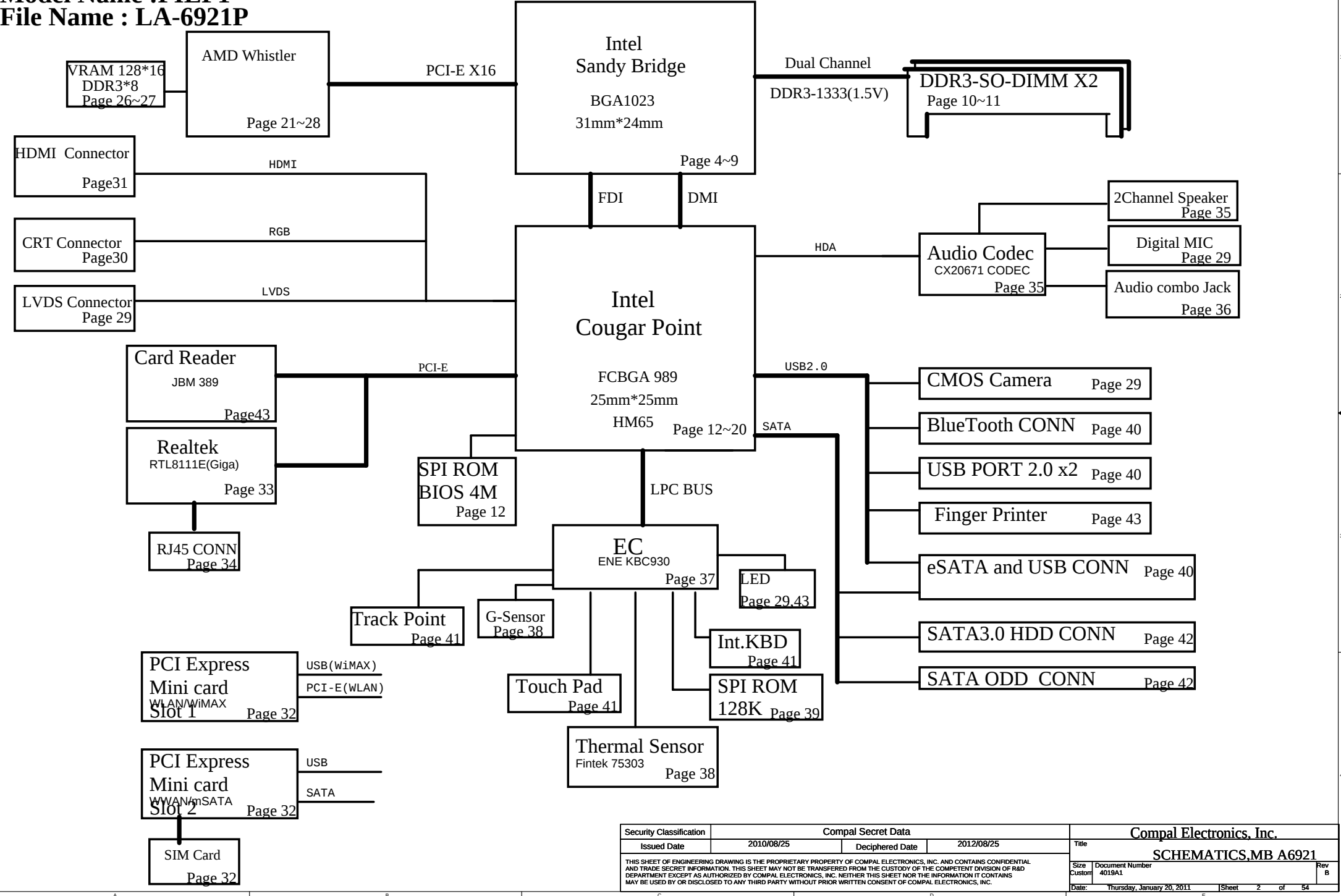
2010-11-30

REV:1.0

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2010/08/25		Deciphered Date	2012/08/25		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Title		
				SCHEMATICS,MB A6921		
				Size	Document Number	Rev
				Custom	4019A1	B
				Date:	Thursday, January 20, 2011	Sheet 1 of 54

Compal Confidential

Model Name :PILP1
File Name : LA-6921P



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RAD DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number 4019A1
				Date: Thursday, January 20, 2011	Rev B
				Sheet 2 of 54	

power plane	+B	+5VALW +3VALW	+1.5V	+5VS +3VS +1.8VS +1.5VS +1.05VS +VGFX_CORE +CPU_CORE +0.75VS +1.5VS_DISVGA +1.0VS +NWVDD +3VS_DISVGA +1.8VS_DISVGA
				State
S0	0	0	0	0
S3	0	0	0	X
S5 S4/AC	0	0	X	X
S5 S4/ Battery only	0	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

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

BOARD ID Table

Board ID	PCB Revision
0	0.1
1	0.2
2	0.3
3	
4	
5	
6	
7	

USB Port Table

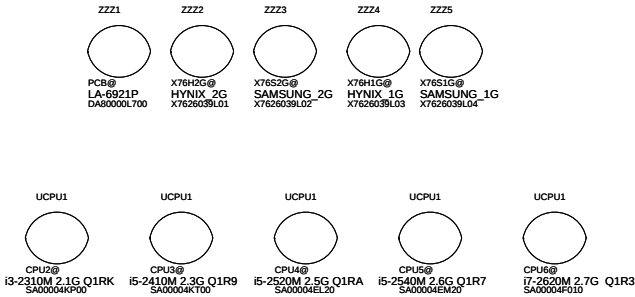
USB 2.0	USB 1.1	Port	3 External USB Port
EHCI0	UHCI0	0	USB_COMBO
		1	USB_PORT
	UHCI1	2	NO USE
		3	NO USE
	UHCI2	4	WWAN
		5	CAMERA
EHCI2	UHCI3	6	HM65 not support
		7	HM65 not support
	UHCI4	8	WLAN
		9	USB_CHARGER
	UHCI5	10	NO USE
		11	NO USE
	UHCI6	12	FINGER-PRINTER
		13	BLUETOOTH

BOM Structure Table

Structure	Function
CPU1@	CPU type
PX@	PX4.0 SKU
UMA@	UMA SKU
3G@	3G Sim card
X76H1G@	VRAM
PCB@	M/B

Vcc	3.3V +/- 5%				
R613	100K +/- 5%				
Board ID	R682	VAD_BID min	VAD_BID typ	VAD_BID max	
0	0K +/- 5%	0 V	0 V	0 V	SDV1
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V	SDV2
2	18K +/- 5%	0.436 V	0.503 V	0.538 V	FVT
3	33K +/- 5%	0.712 V	0.819 V	0.875 V	SIT
4	56K +/- 5%	1.036 V	1.185 V	1.264 V	SVT

PCH_GPI069	PCH_GPI070	PCH_GPI071	Function
0	0	0	UMA
1	1	0	PX4.0



EC SM Bus1 address

Device	Address
Smart Battery	0001 011X b

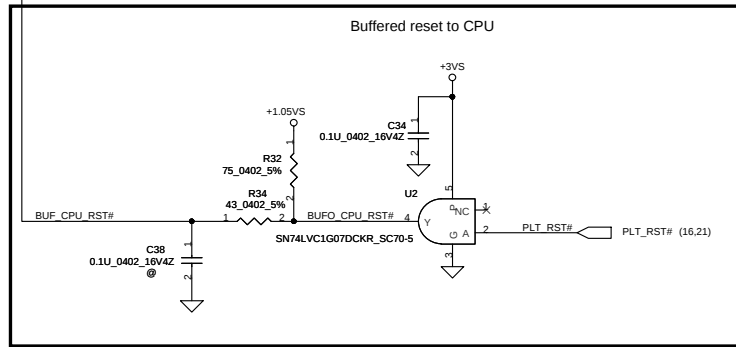
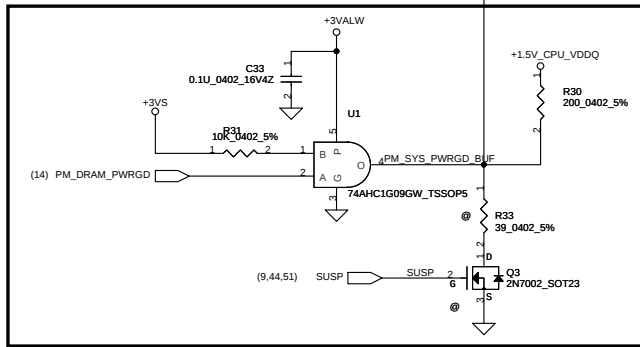
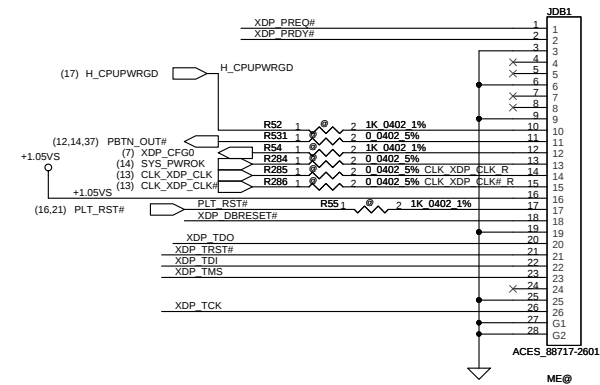
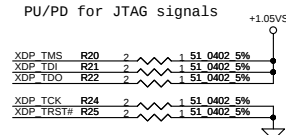
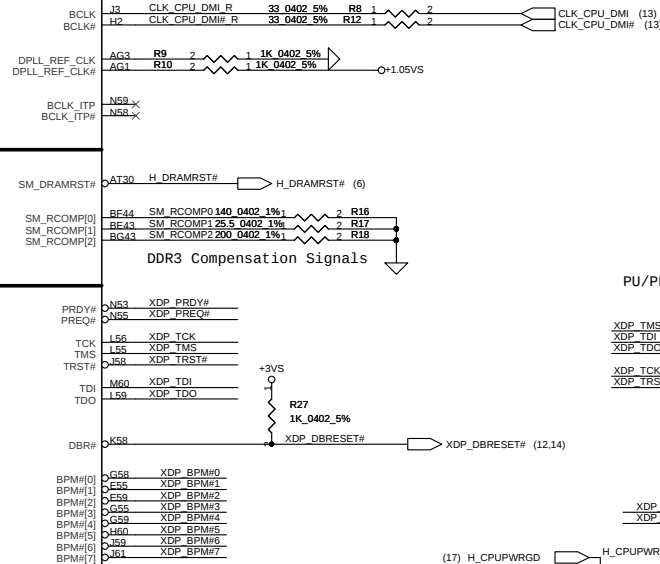
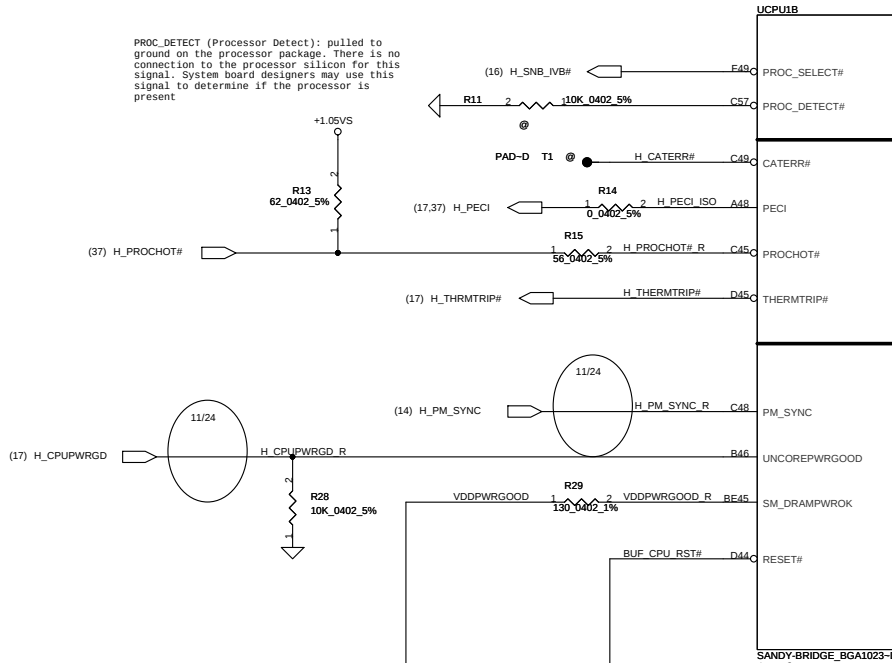
EC SM Bus2 address

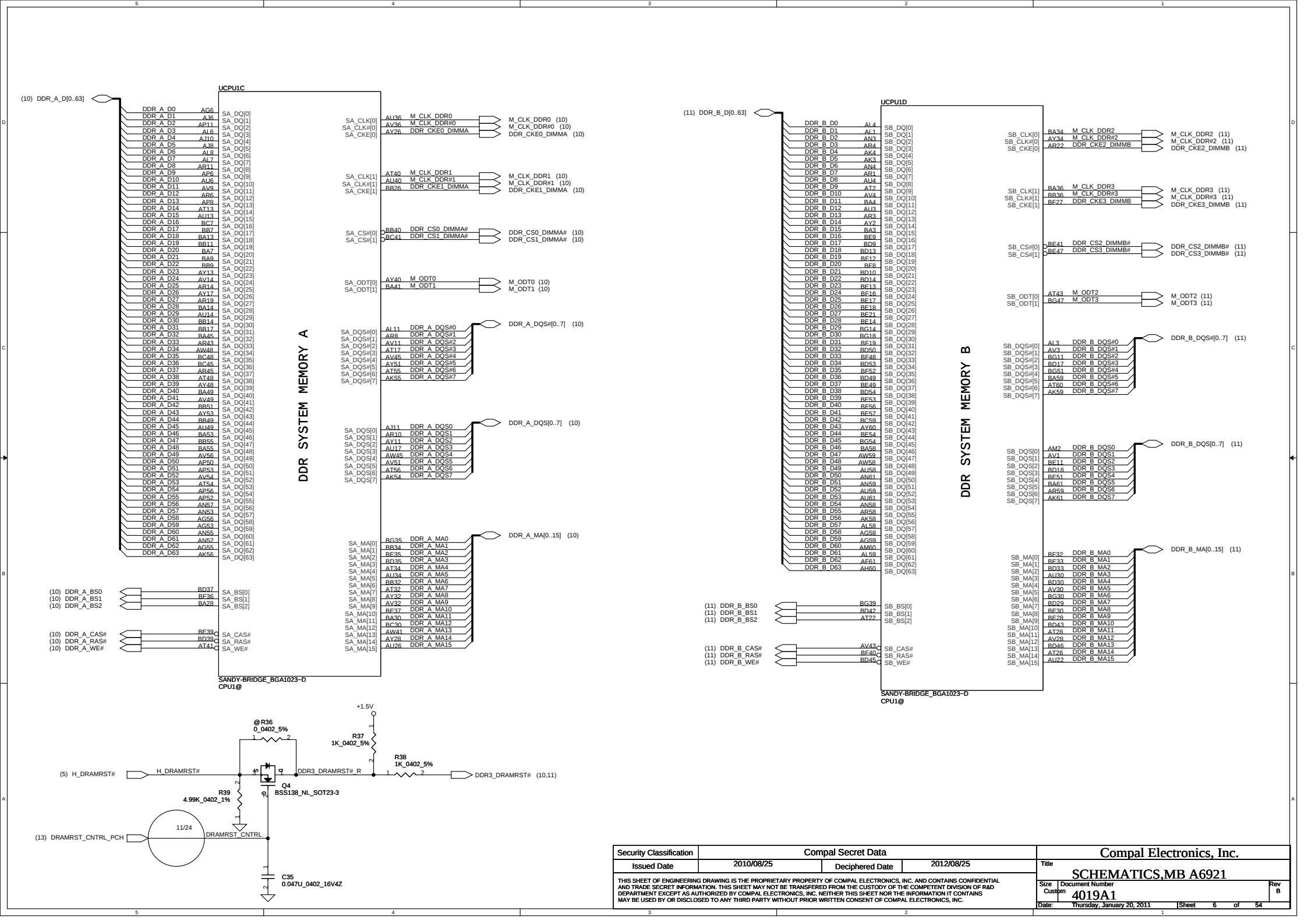
Device	Address
PCH	1001 0110 b
Thermal sensor(U30)	1001 101x b
GPU(U9)	1000_0010 b

PCH SM Bus address

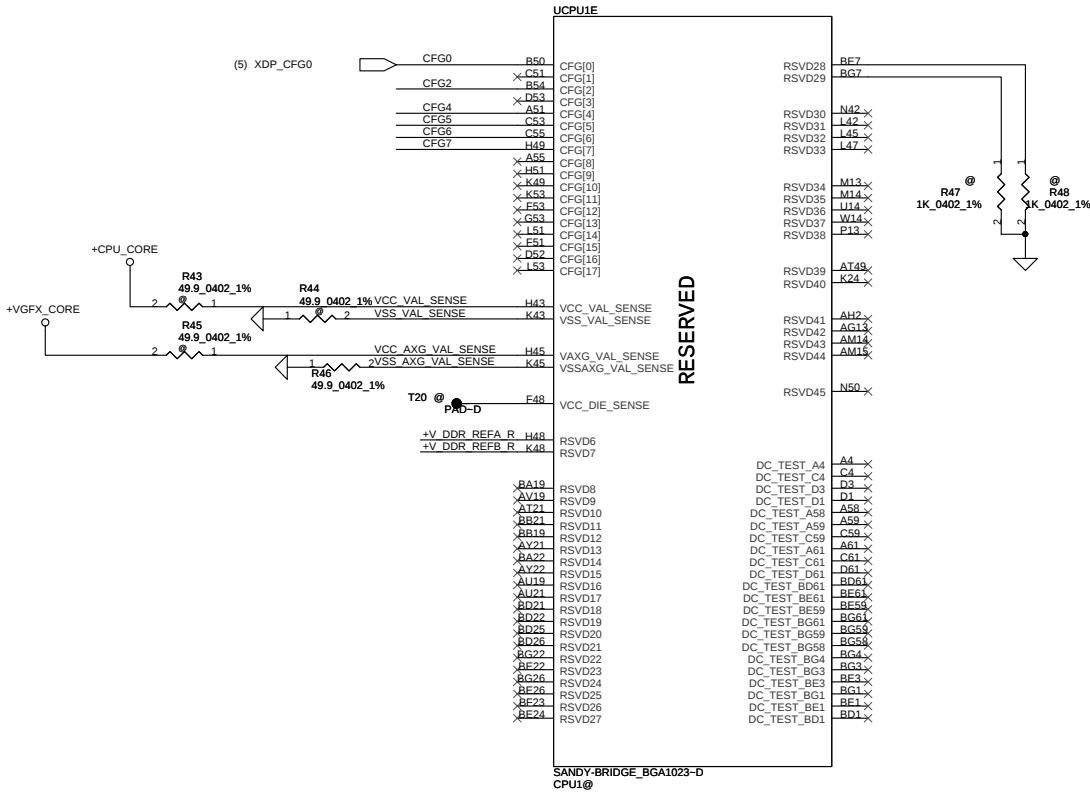
Device	Address
DDR DIMM0	1010 000xb
DDR DIMM2	1010 010xb
EEPROM(U32)	1010 100xb

PROC_DETECT (Processor Detect): pulled to ground on the processor package. There is no connection to the processor silicon for this signal. System board designers may use this signal to determine if the processor is present

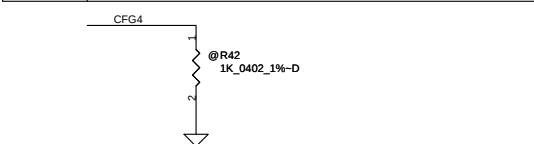




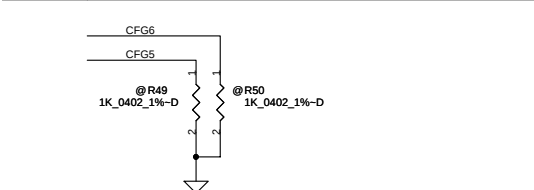
CFG Straps for Processor



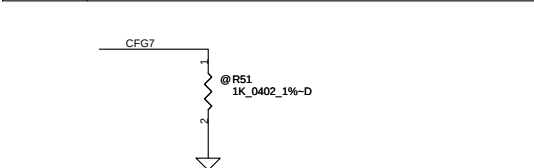
PEG Static Lane Reversal - CFG2 is for the 16x	
CFG2	1:(Default) Normal Operation; Lane # definition matches socket pin map *0: Lane Reversed



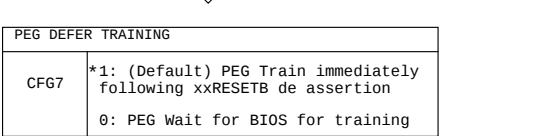
Display Port Presence Strap	
CFG4	* 1 : Disabled; No Physical Display Port attached to Embedded Display Port 0 : Enabled; An external Display Port device is connected to the Embedded Display Port

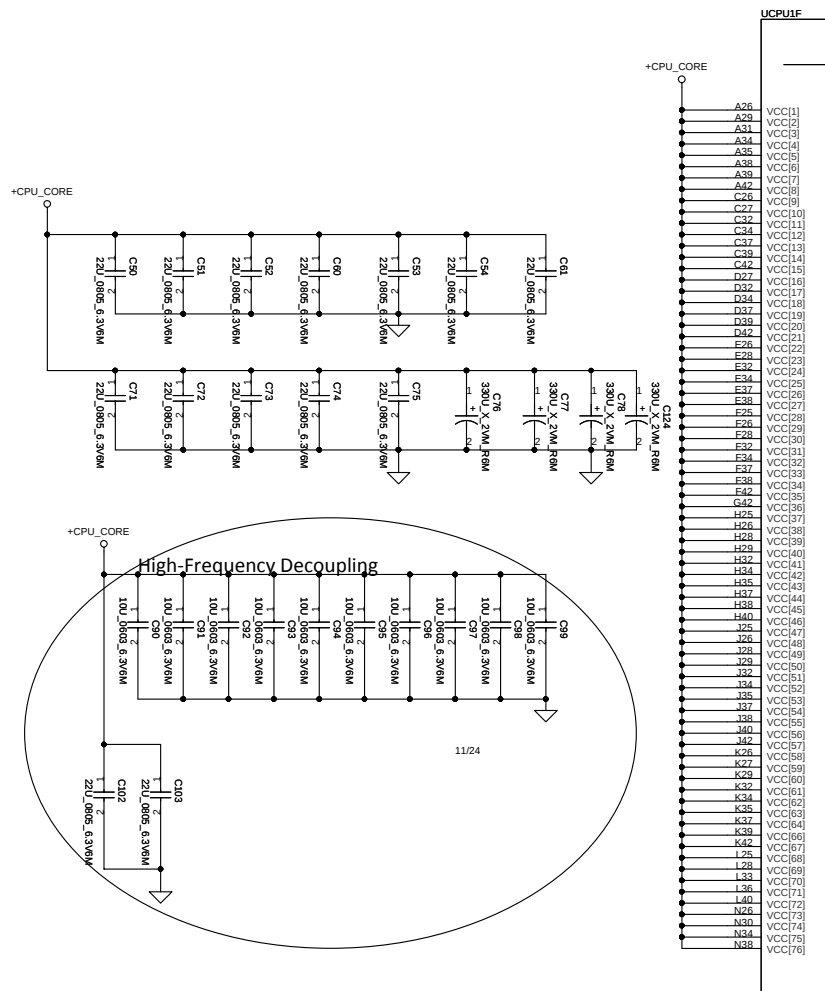


PCIe Port Bifurcation Straps	
CFG[6:5]	*11: (Default) x16 - Device 1 functions 1 and 2 disabled 10: x8, x8 - Device 1 function 1 enabled ; function 2 disabled 01: Reserved - (Device 1 function 1 disabled ; function 2 enabled) 00: x8,x4,x4 - Device 1 functions 1 and 2 enabled



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





CORE SUPPLY

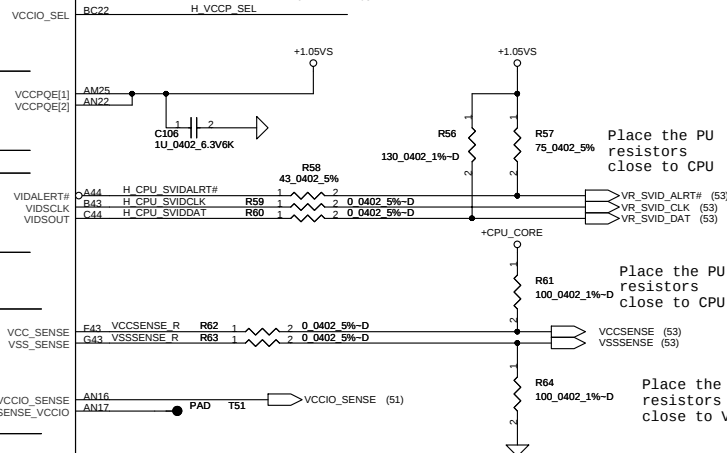
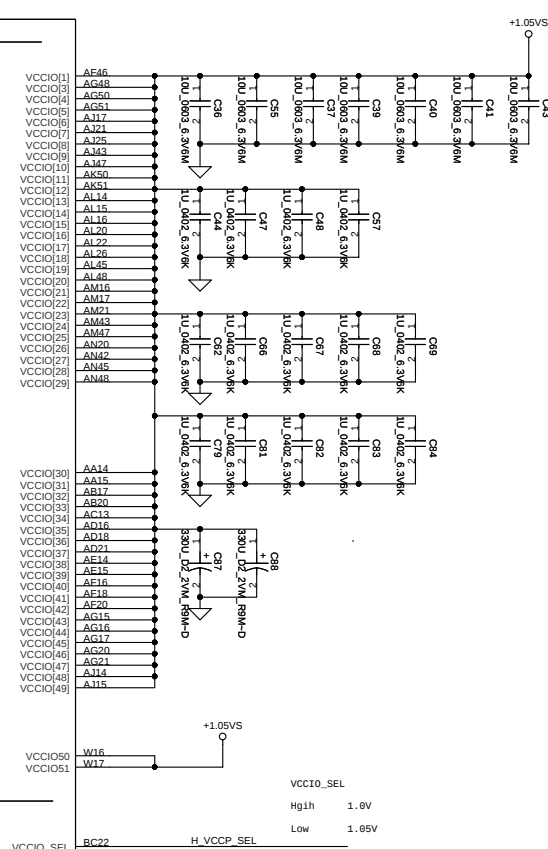
POWER

PEG AND DDR

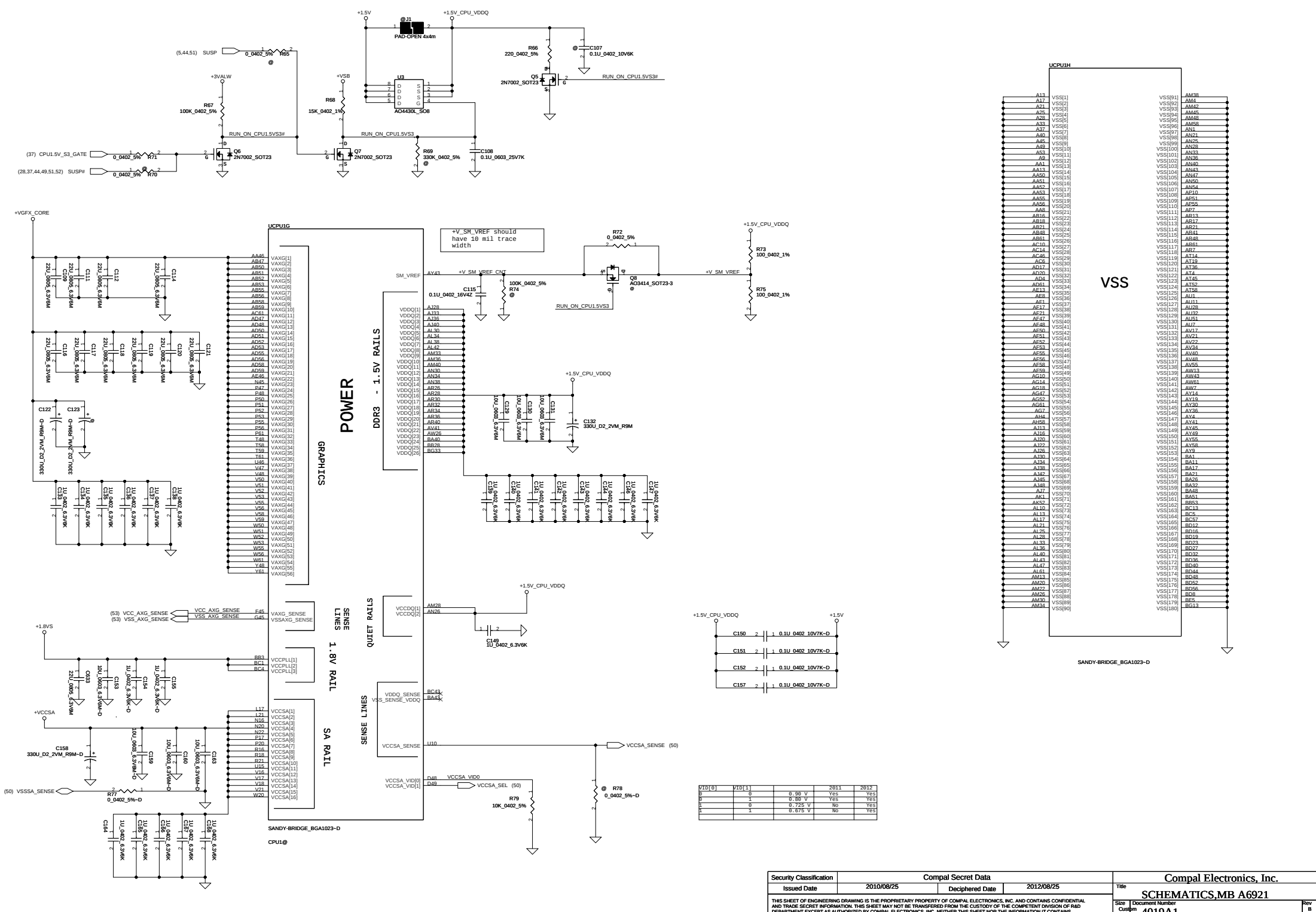
QUIET RAILS

SVID

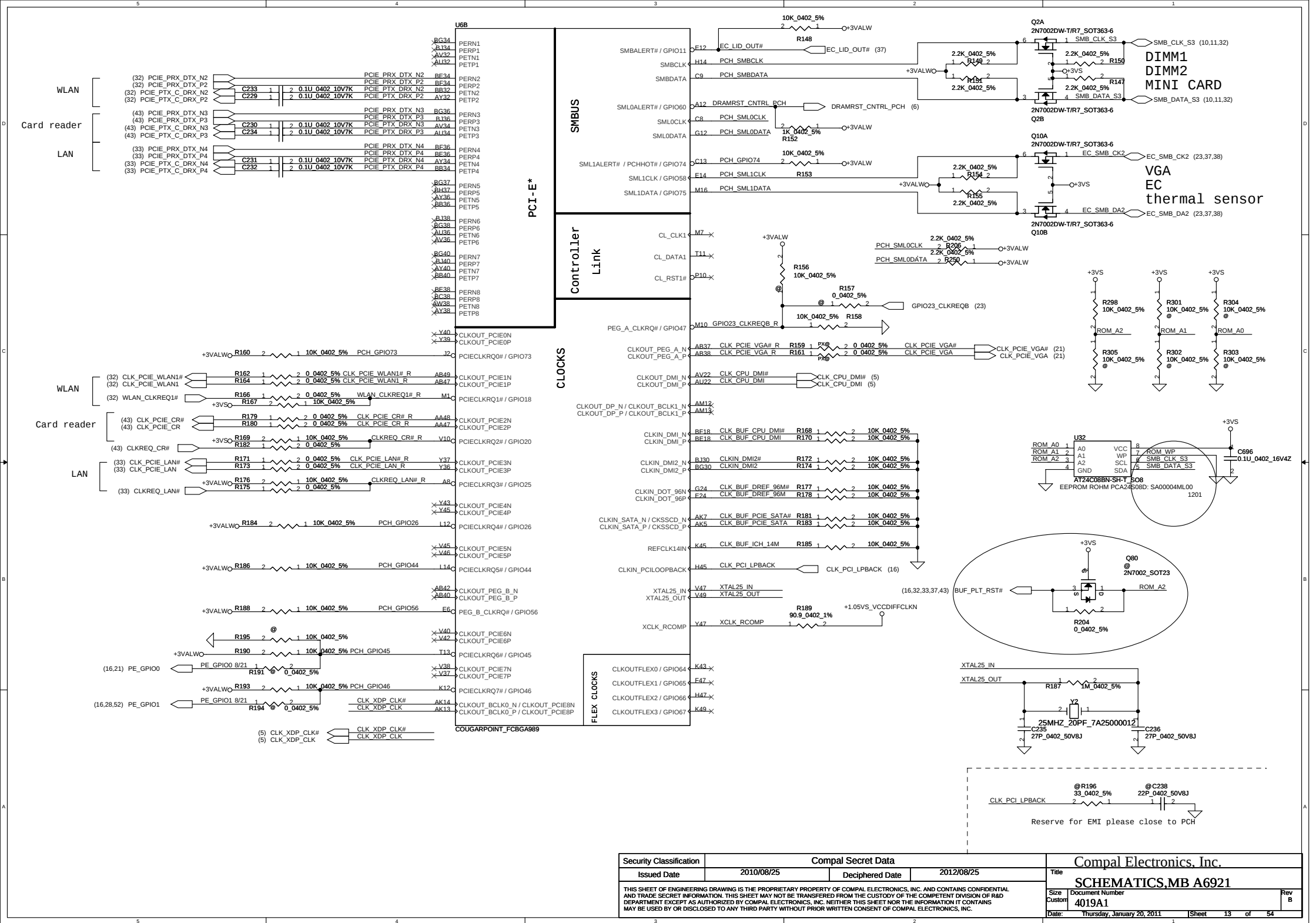
SENSE LINES

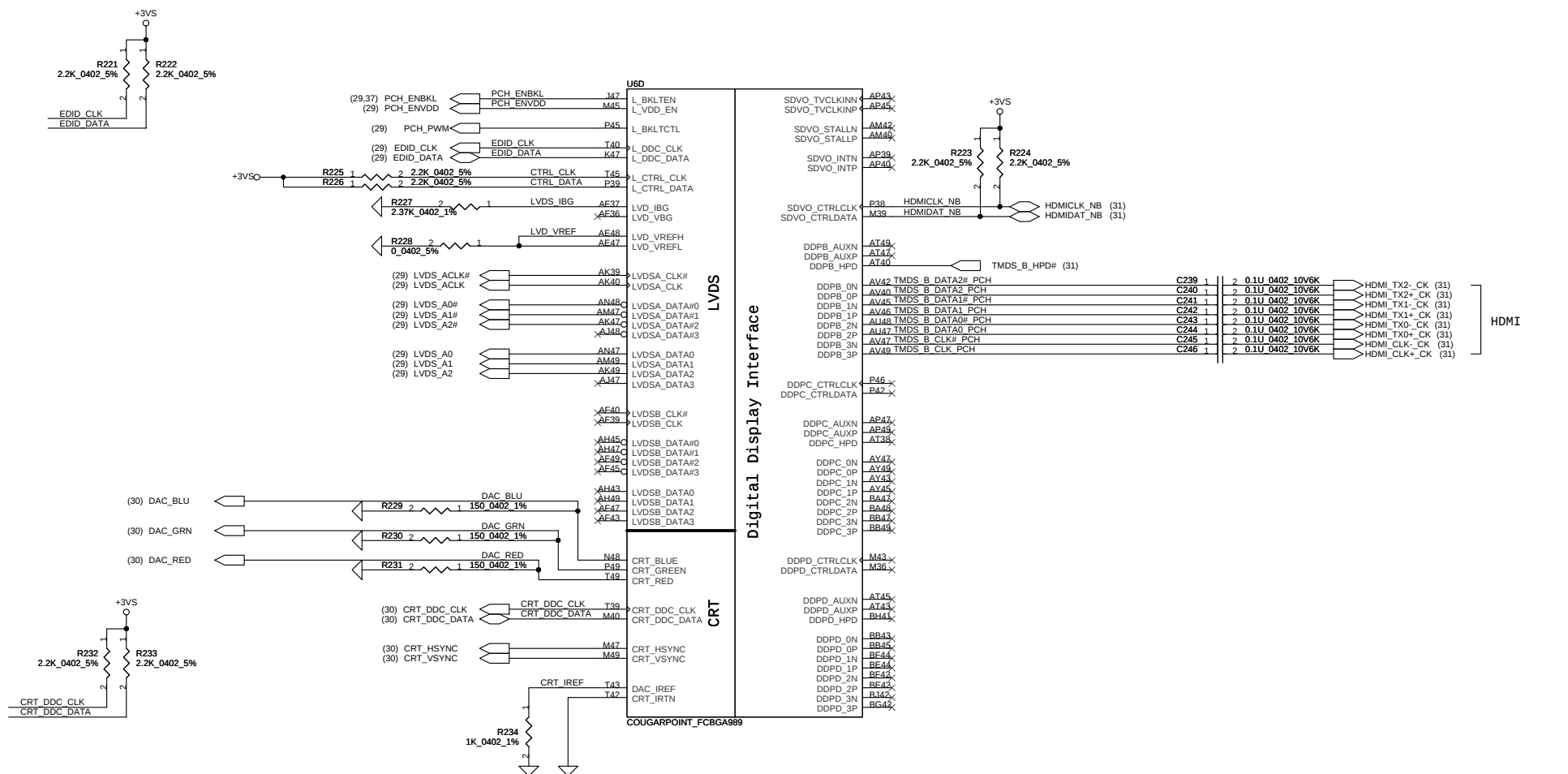


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	SCHEMATICS,MB A6921
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	4019A1
				Date	Thursday, January 20, 2011
				Sheet	8 of 54

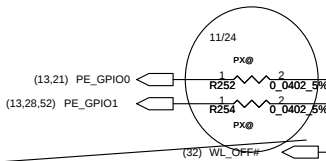
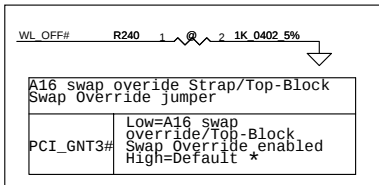
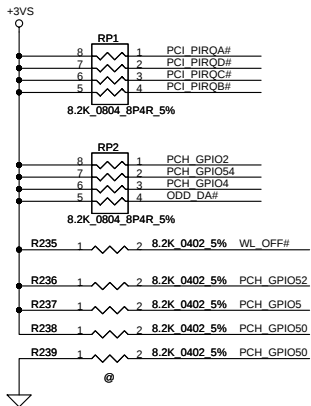


VID[0]	VID[1]	2011	2012
0	0	0.90 V	Yes
1	1	0.85 V	Yes
2	2	0.725 V	No
3	3	0.675 V	No

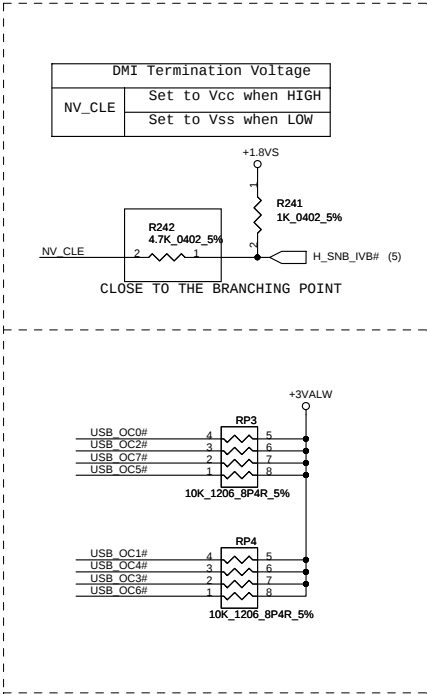
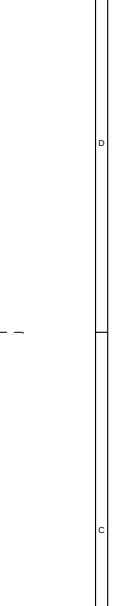
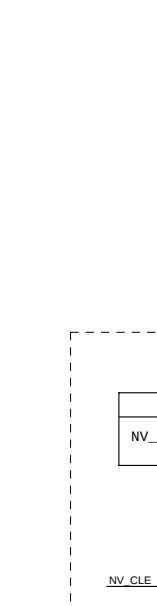
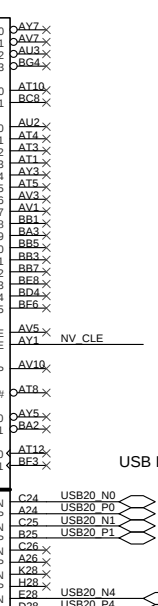
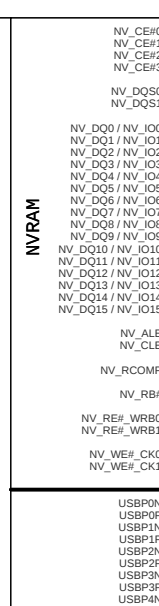
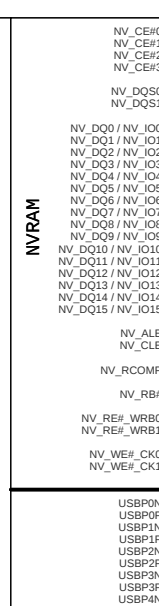
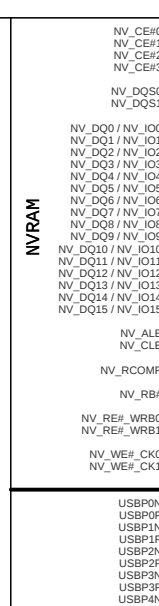
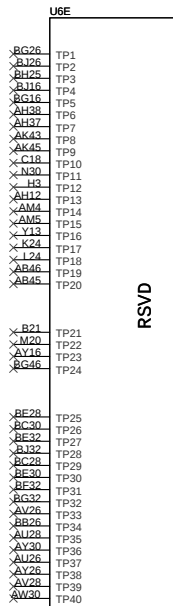
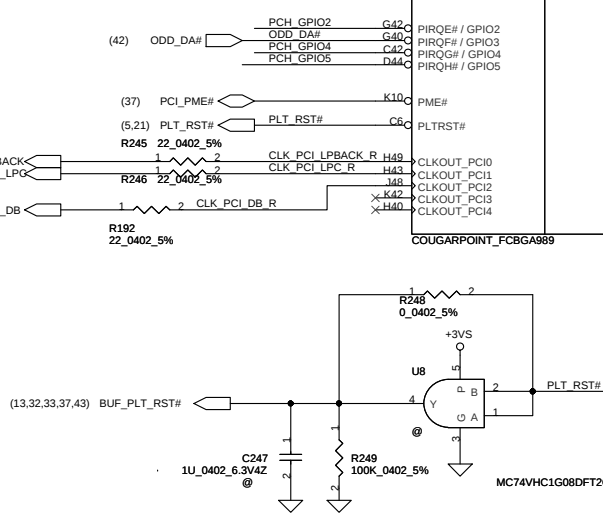




Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2010/08/25		Deciphered Date		2012/08/25		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RAD DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						SCHEMATICS,MB A6921					
						Size		Document Number		Rev	
						Cust		4019A1		B	
						Date:		Thursday, January 20, 2011		Sheet 15 of 54	



Boot BIOS Strap bit1 BBS1		
GPIO51 GPIO19		Boot BIOS Destination
Bit11	Bit10	
0	1	Reserved
1	0	Reserved
1	1	* SPI (Default)
0	0	LPC



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	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.				4019A1	Rev B
Date: Thursday, January 20, 2011				Sheet	16 of 54

ICC_EN#
Integrated Clock Chip Enable

H ; Disable
* L ; Enable

Weak internal pull-high

GPI028
On-Die PLL Voltage Regulator

This signal has a weak internal pull up

* H : On-Die voltage regulator enable
L : On-Die PLL Voltage Regulator disable

R270 1K 0402 5% PCH_GPIO28

R280 10K 0402 5% ODD_DETECT#

R295 1K 0402 5%

(37) mSATA_PH PCH_GPIO27

R283 0_0402_5%
(32) mSATA_DET# PCH_GPIO27

R557 10K 0402 5%
PCH_GPIO37

(32) 3G_DET# 11/30

(40) BT_DET# BT_DET# R267 10K 0402 5%
KB_RST# R266 10K 0402 5%

+3VSO R253 10K 0402 5% PCH_GPIO0
(40) ESATA_DET# R300 0_0402_5%
+3VSO R257 10K 0402 5% PCH_GPIO1
R258 10K 0402 5% PCH_GPIO6
(37) EC_SCI# EC_SCI# H36
(37) EC_SMI# EC_SMI# C10
+3VALW R261 10K 0402 5% CPUSB# C4
R262 1K 0402 5% PCH_GPIO15
(40) ESATA_DET# R279 0_0402_5%
+3VSO R264 10K 0402 5% ESATA_DET# R
+3VSO R268 10K 0402 5% PCH_GPIO22
+3VALW (42) ODD_EN# ODD_EN# E8
R271 10K 0402 5% PCH_GPIO27
(40) BT_OFF# BT_OFF# K1
R273 10K 0402 5% PCH_GPIO35
(42) ODD_DETECT# ODD_DETECT# V8
+3VSO R274 10K 0402 5% PCH_GPIO37
R276 10K 0402 5% PCH_GPIO39
R277 10K 0402 5% PCH_GPIO48
R278 10K 0402 5% PCH_GPIO49
R294 10K 0402 5% PCH_GPIO57
+3VALW R281 10K 0402 5% PCH_GPIO57

VSS_NCTF_1
VSS_NCTF_2
VSS_NCTF_3
VSS_NCTF_4
VSS_NCTF_5
VSS_NCTF_6
VSS_NCTF_7
VSS_NCTF_8
VSS_NCTF_9
VSS_NCTF_10
VSS_NCTF_11
VSS_NCTF_12
VSS_NCTF_13
VSS_NCTF_14

COUGARPOINT_FCBGA989

U6F

BMBUSY# / GPIO0
TACH1 / GPIO1
TACH2 / GPIO6
TACH3 / GPIO7
GPIO8
LAN_PHY_PWR_CTRL / GPIO12
GPIO15
SATA4GP / GPIO16
TACH0 / GPIO17
SCLCK0 / GPIO22
GPIO24 / MEM_LED
GPIO27
GPIO28
STP_PCII# / GPIO34
GPIO35
SATA2GP / GPIO36
SATA3GP / GPIO37
SLOAD / GPIO38
SDATAOUT0 / GPIO39
SDATAOUT1 / GPIO48
SATA5GP / GPIO49
GPIO57

GPI0

CPU/MISC

NCTF

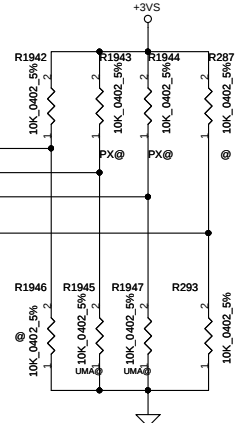
TACH4 / GPIO68
TACH5 / GPIO69
TACH6 / GPIO70
TACH7 / GPIO71

A20GATE
PECI
RCIN#
PROCPWRGD
THRMTRIP#
INIT3_3V#
NC_1
NC_2
NC_3
NC_4
NC_5

VSS_NCTF_15
VSS_NCTF_16
VSS_NCTF_17
VSS_NCTF_18
VSS_NCTF_19
VSS_NCTF_20
VSS_NCTF_21
VSS_NCTF_22
VSS_NCTF_23
VSS_NCTF_24
VSS_NCTF_25
VSS_NCTF_26
VSS_NCTF_27
VSS_NCTF_28
VSS_NCTF_29
VSS_NCTF_30
VSS_NCTF_31
VSS_NCTF_32

PCH_GPIO69	PCH_GPIO70	PCH_GPIO71	Function
0	0	0	UMA
1	1	0	PX4.0

PCH_GPIO68
PCH_GPIO69
PCH_GPIO70
PCH_GPIO71

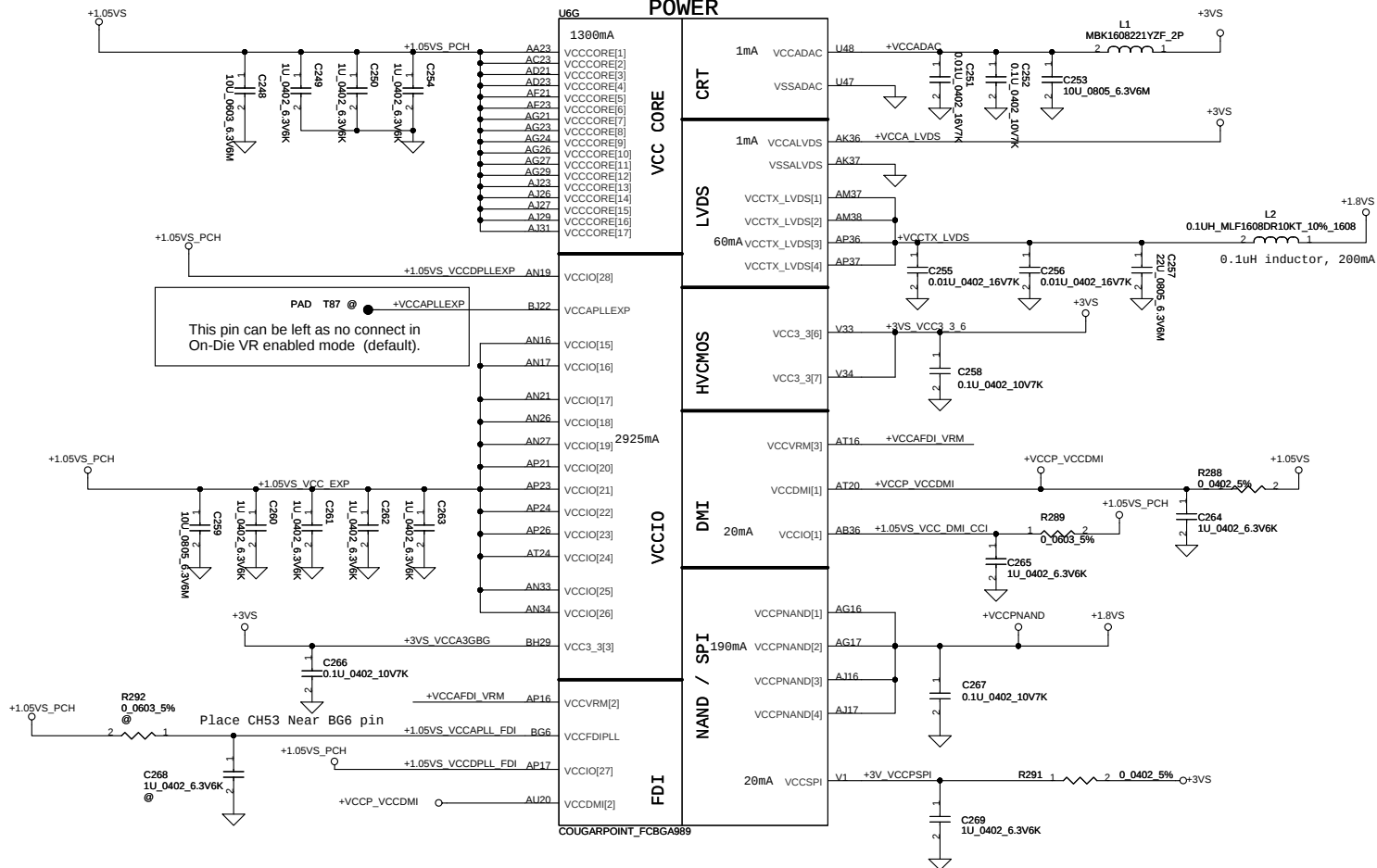


INIT3_3V
This signal has weak internal
PU, can't pull low

Intel schematic revieve recommend.

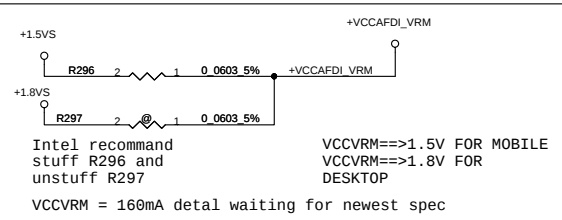
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				SHEMATICS,MB A6921	
				Size Custom	Document Number 4019A1
				Date: Thursday, January 20, 2011	Rev B
				Sheet 17 of 54	

POWER



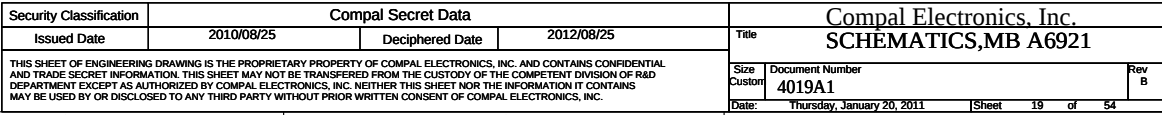
PAD T87 @ +VCCAPLLEXP
 This pin can be left as no connect in On-Die VR enabled mode (default).

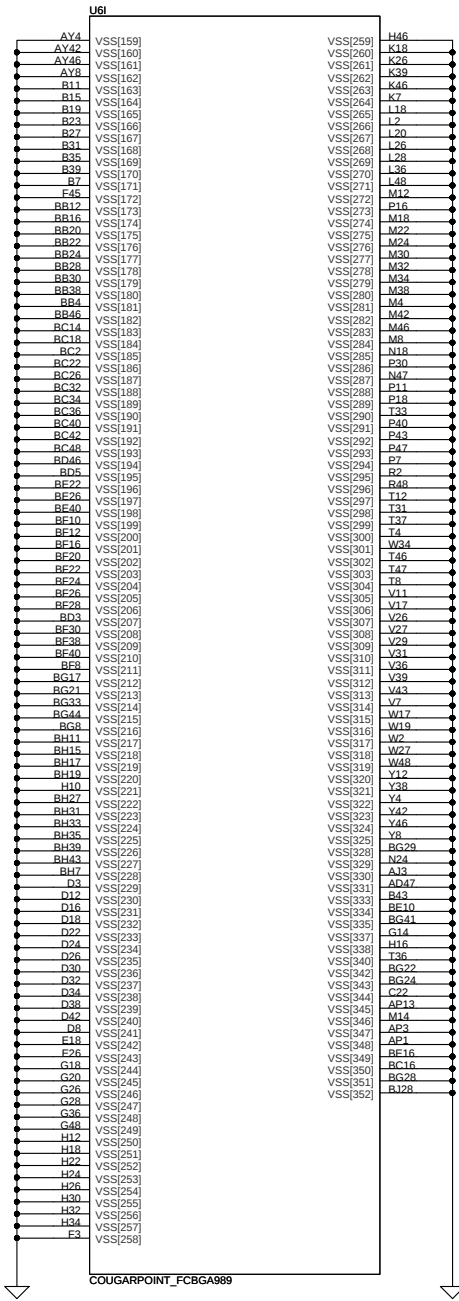
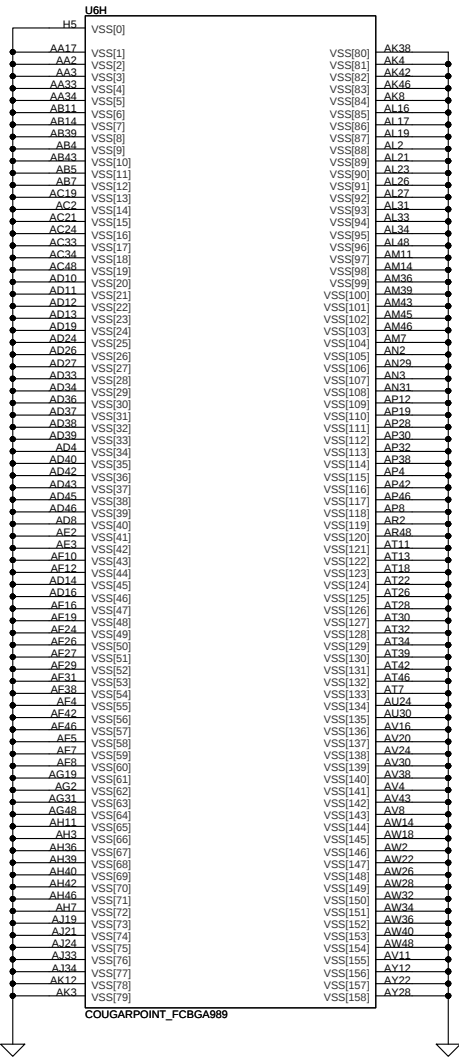
Place CH53 Near BG6 pin



PCH Power Rail Table

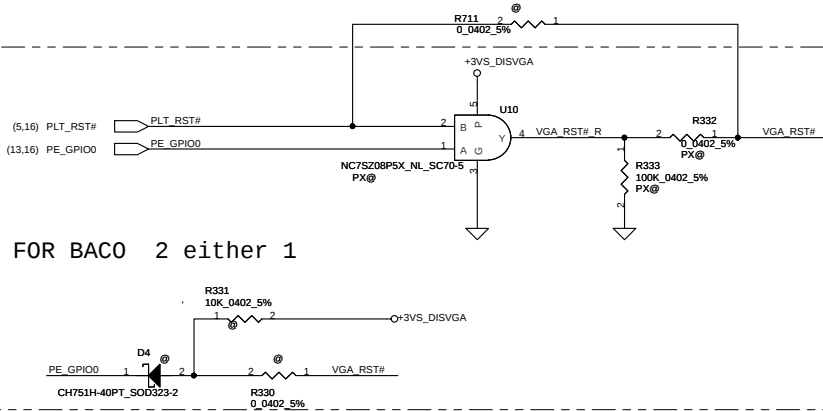
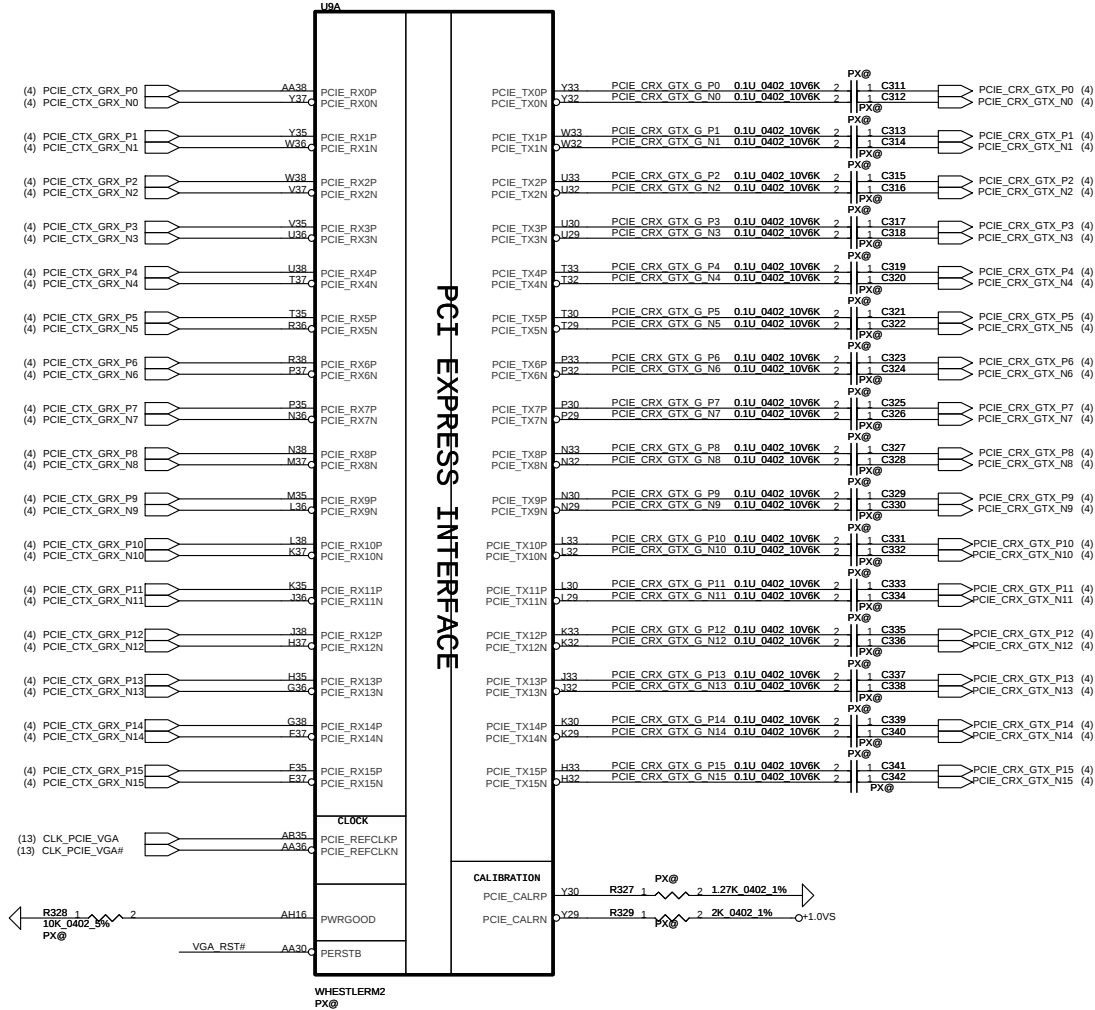
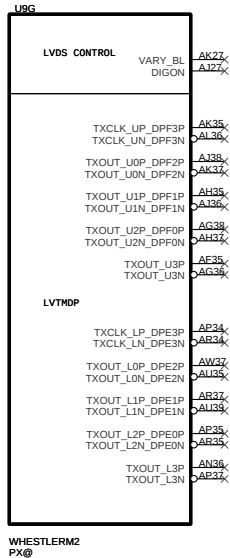
Voltage Rail	Voltage	S0 Iccmax Current (A)
V_PROC_I/O	1.05	0.001
V5REF	5	0.001
V5REF_Sus	5	0.001
Vcc_3	3.3	0.266
VccADAC	3.3	0.001
VccADPLLA	1.05	0.08
VccADPLLB	1.05	0.08
VccCore	1.05	1.3
VccDMI	1.05	0.042
VccIO	1.05	2.925
VccASW	1.05	1.01
VccSPI	3.3	0.02
VccDSW	3.3	0.003
VccpNAND	1.8	0.19
VccRTC	3.3	6 uA
VccSus3_3	3.3	0.119
VccSusHDA	3.3 / 1.5	0.01
VccVRM	1.8 / 1.5	0.16
VccCLKDMI	1.05	0.02
VccSSC	1.05	0.095
VccDIFFCLKN	1.05	0.055
VccALVDS	3.3	0.001
VccTX_LVDS	1.8	0.06



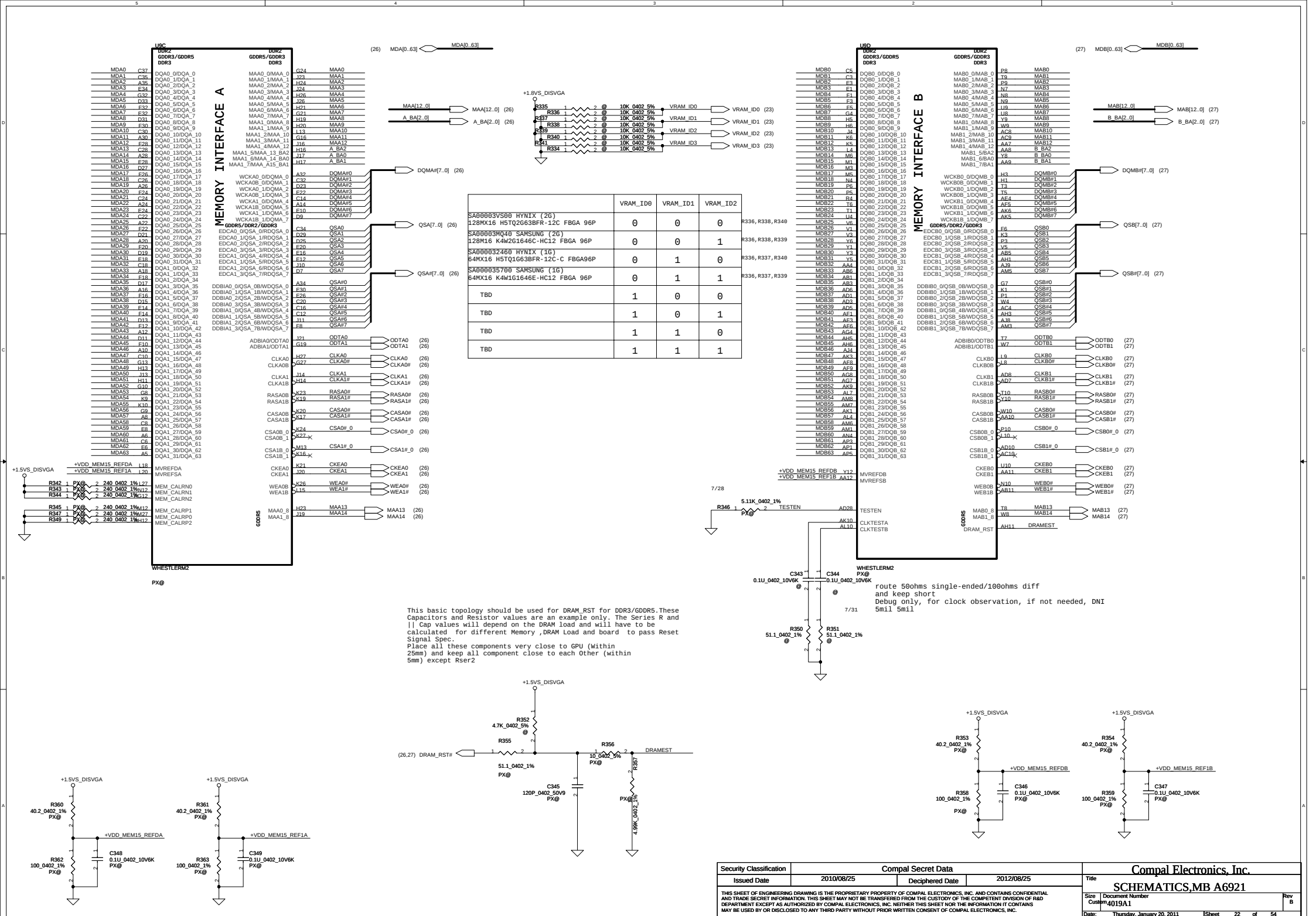


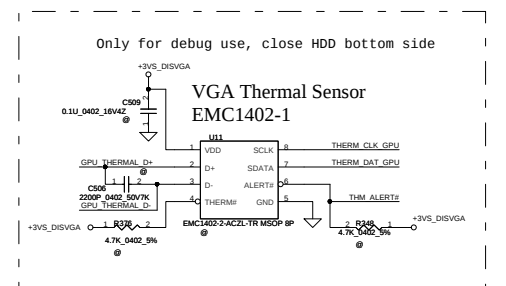
PEG Interface

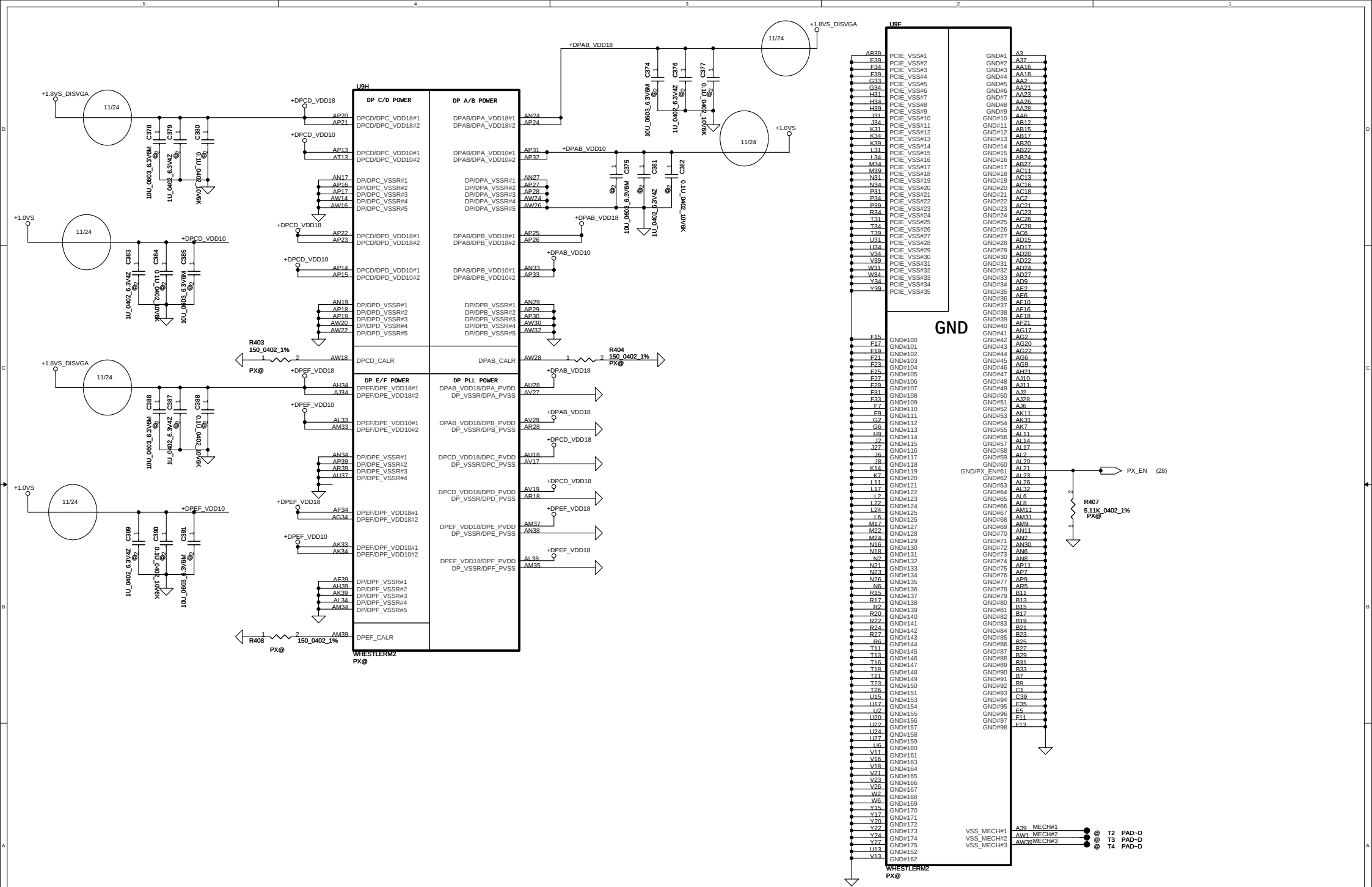
LVDS Interface

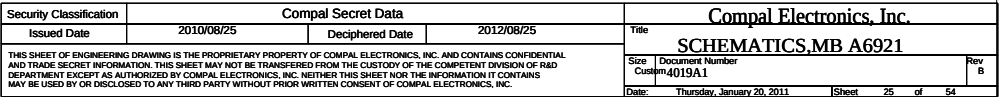


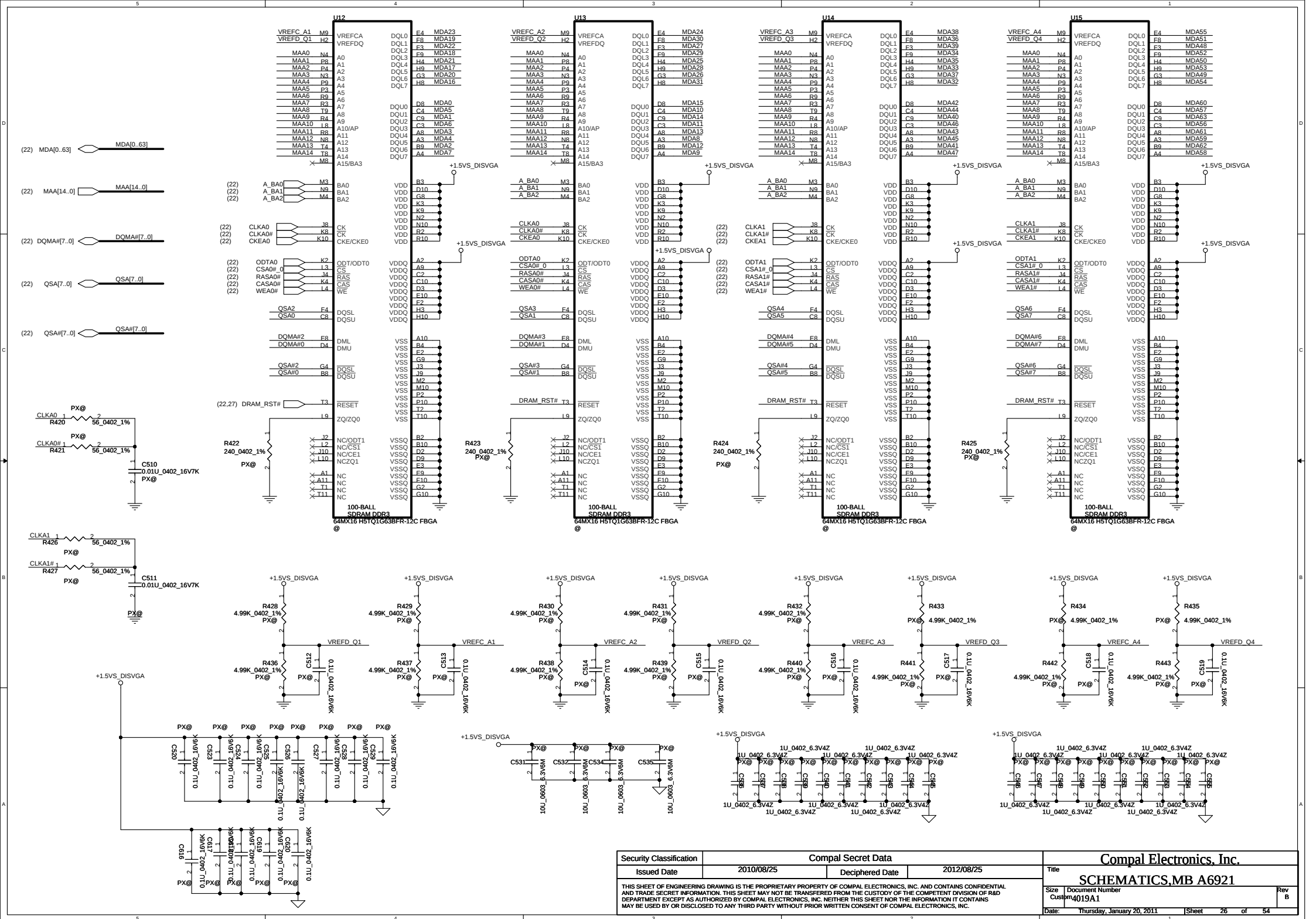
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	SCHEMATICS, MB A6921	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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
				Cust	4019A1	B
				Date	Thursday, January 20, 2011	Sheet 21 of 54

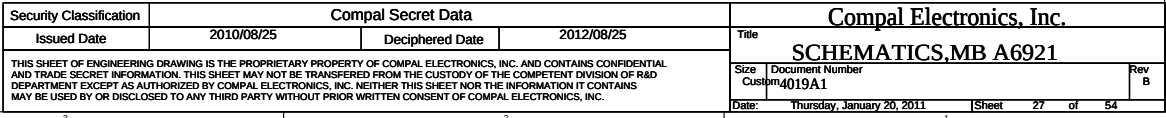




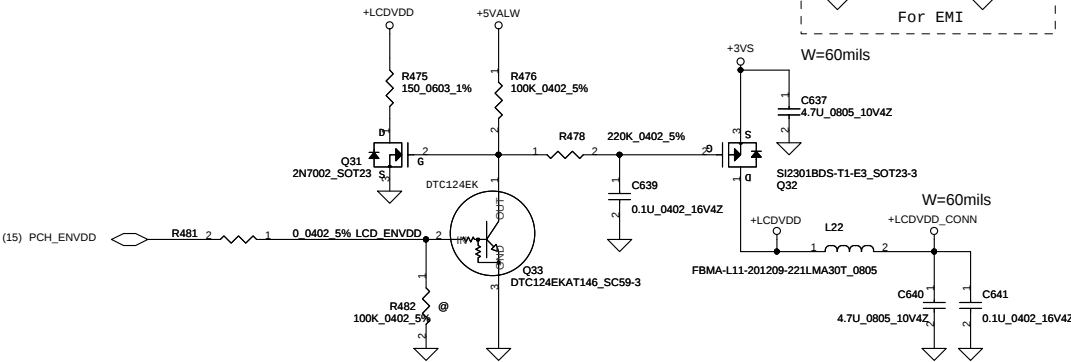




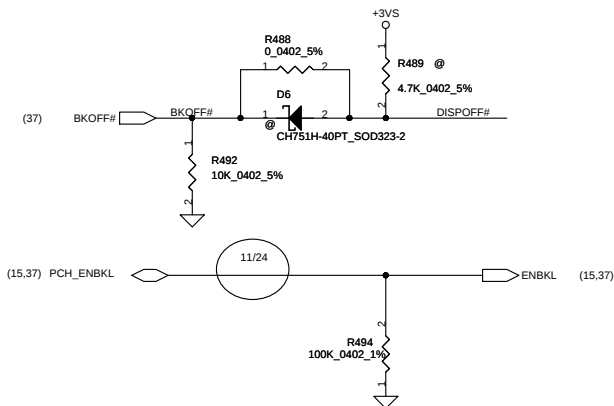
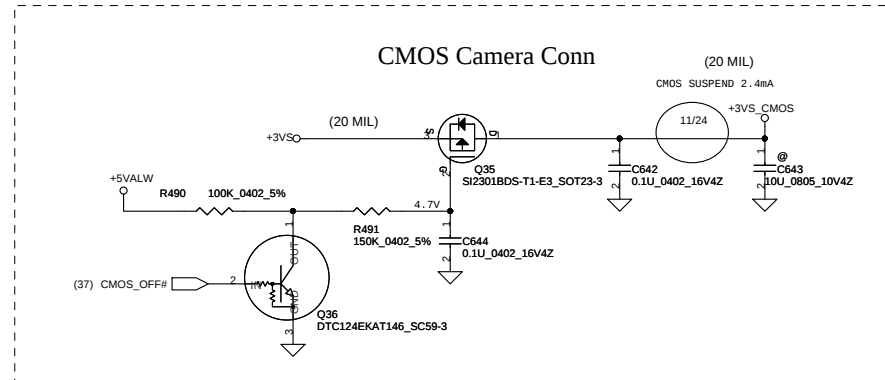
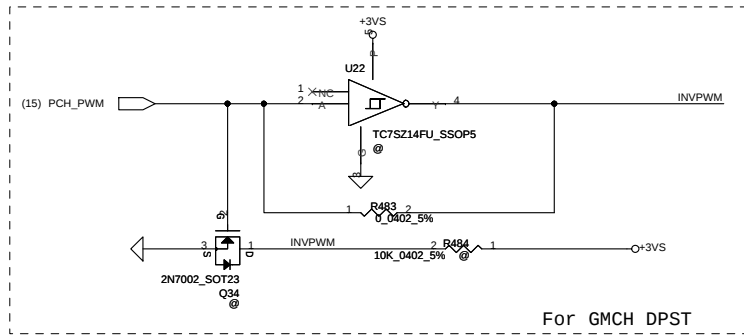
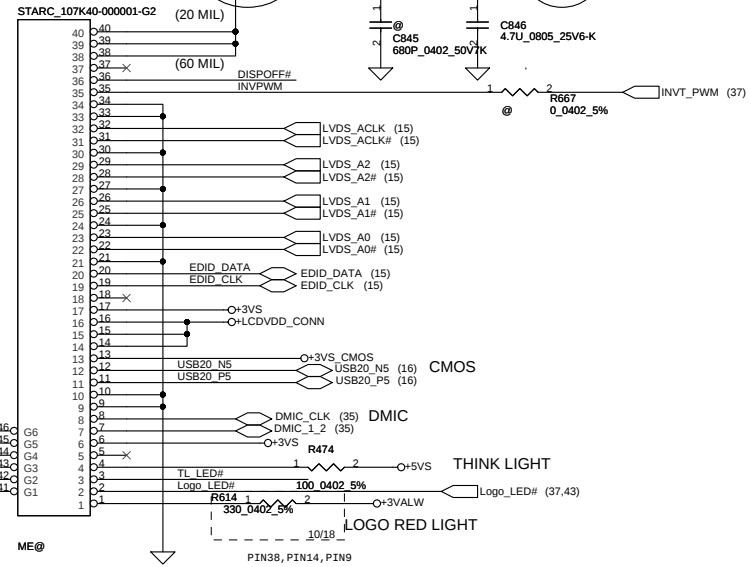




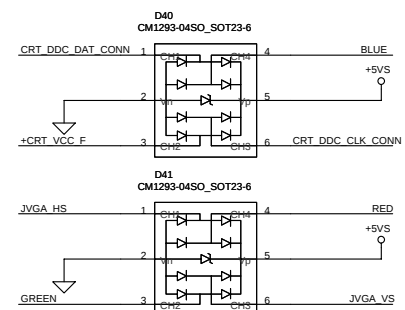
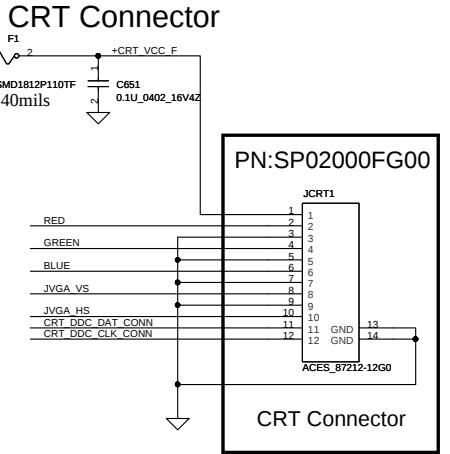
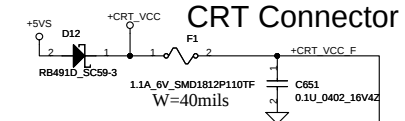
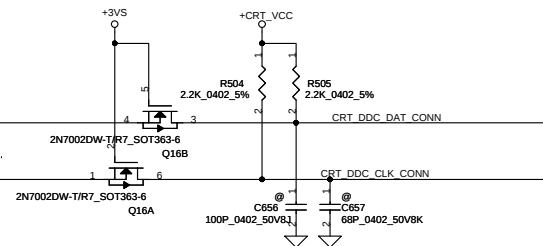
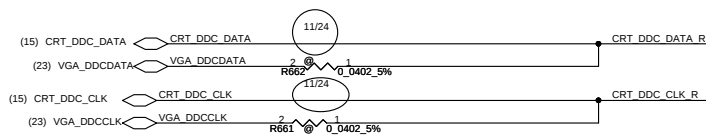
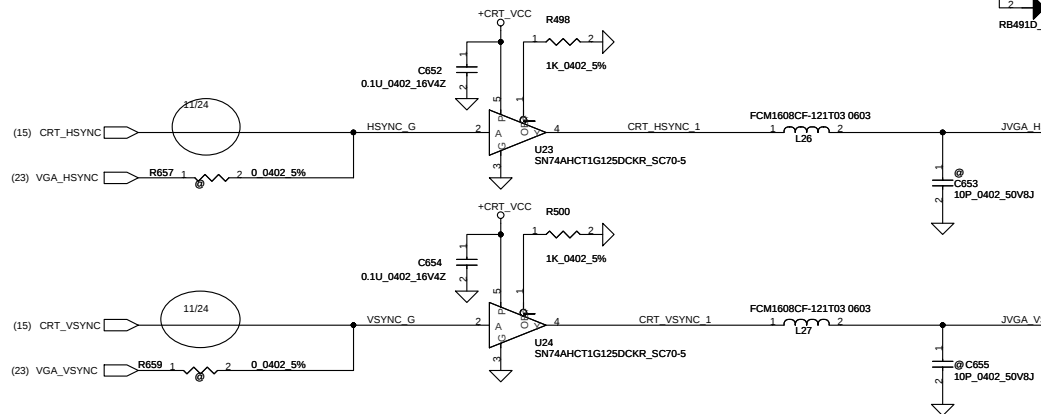
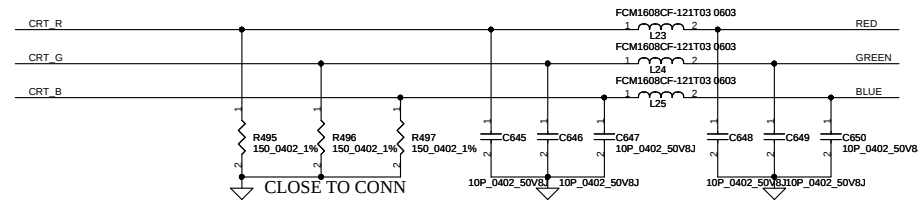
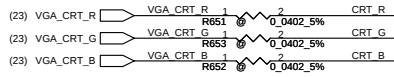
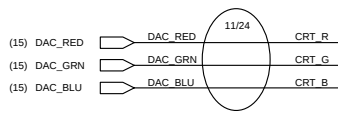
LCD POWER CIRCUIT



PN:SP01000XE00
JLCD1

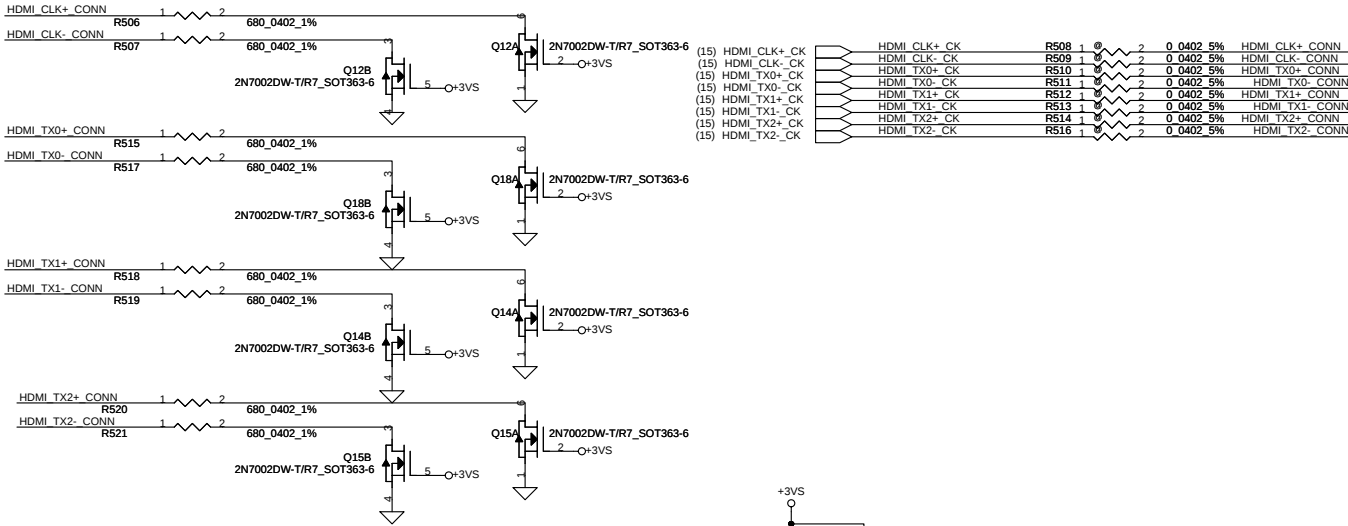


Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2010/08/25				Title			
				Deciphered Date				2012/08/25			
								SCHEMATICS,MB A6921			
								4019A1			
								Date: Thursday, January 20, 2011			
								Sheet 29 of 54			



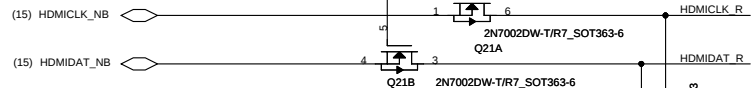
PN: SC300001G00

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	SCHEMATICS,MB A6921
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RAD DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Custom	4019A1
				Date:	Thursday, January 20, 2011
				Sheet	30 of 54
				Rev	B

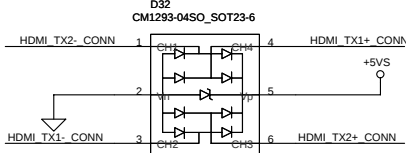
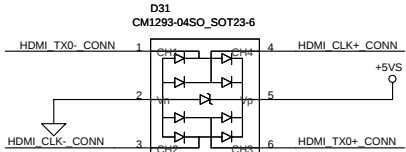
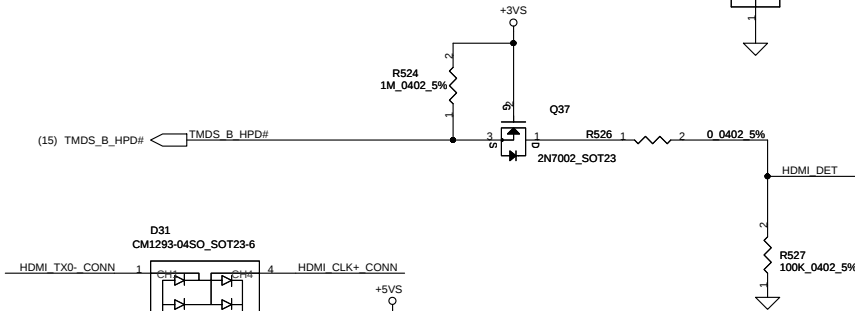


(15) HDMI_CLK+ CK	R508	1	0	2	0	0402	5%	HDMI_CLK+ CONN
(15) HDMI_CLK- CK	R509	1	0	2	0	0402	5%	HDMI_CLK- CONN
(15) HDMI_TX0+ CK	R510	1	0	2	0	0402	5%	HDMI_TX0+ CONN
(15) HDMI_TX0- CK	R511	1	0	2	0	0402	5%	HDMI_TX0- CONN
(15) HDMI_TX1+ CK	R512	1	0	2	0	0402	5%	HDMI_TX1+ CONN
(15) HDMI_TX1- CK	R513	1	0	2	0	0402	5%	HDMI_TX1- CONN
(15) HDMI_TX2+ CK	R514	1	0	2	0	0402	5%	HDMI_TX2+ CONN
(15) HDMI_TX2- CK	R516	1	0	2	0	0402	5%	HDMI_TX2- CONN

Pull up R for PCH SIDE

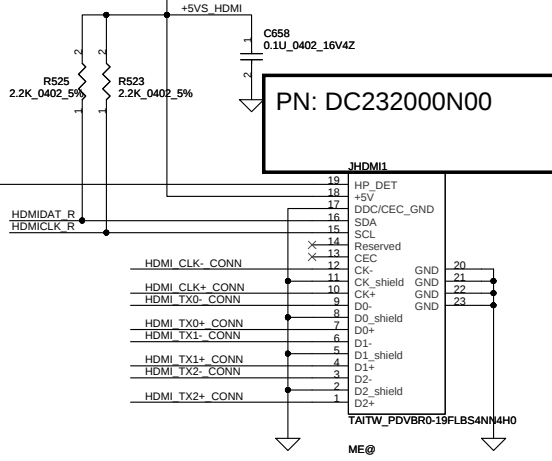
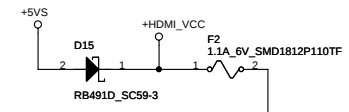
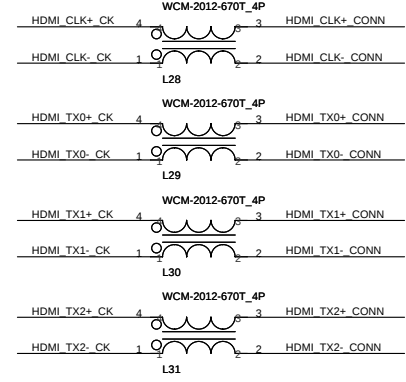


PN: SCA00000U10



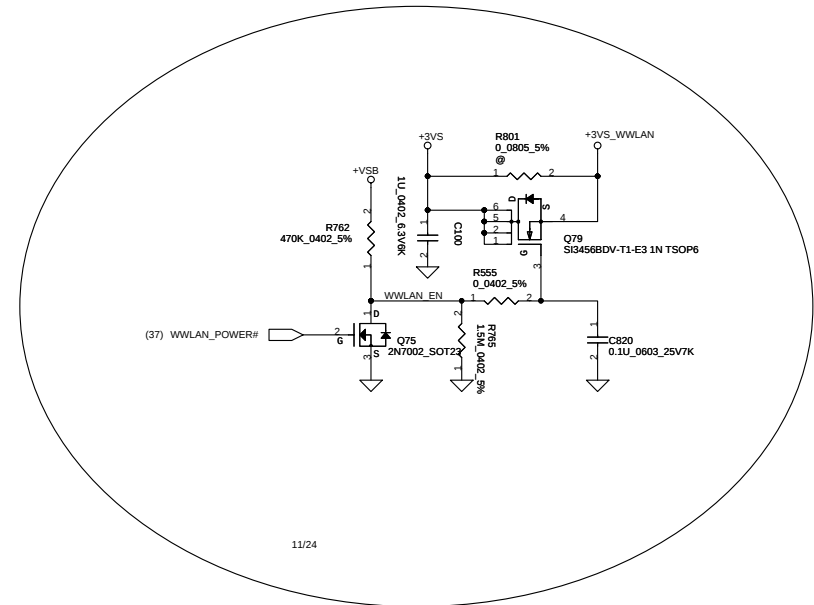
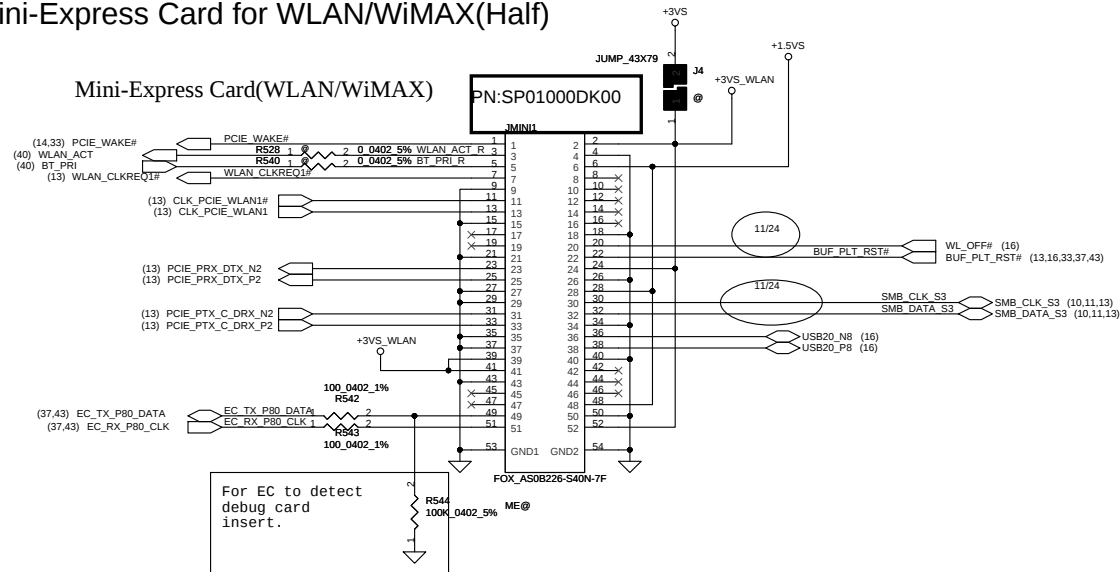
PN: SC300001G00x 2

PN:SM070000I00x 4



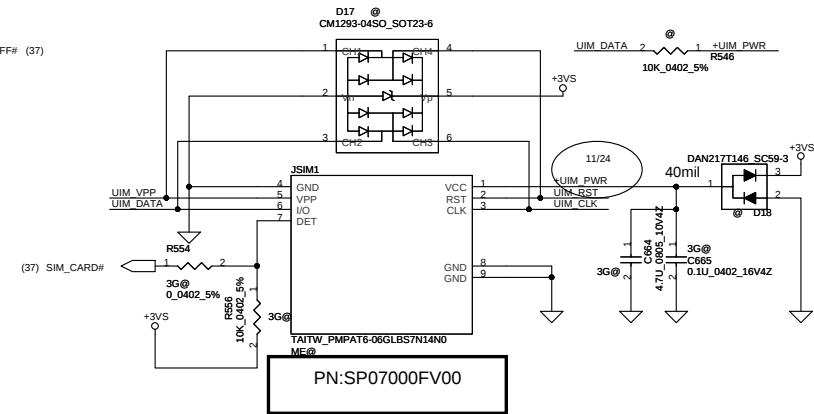
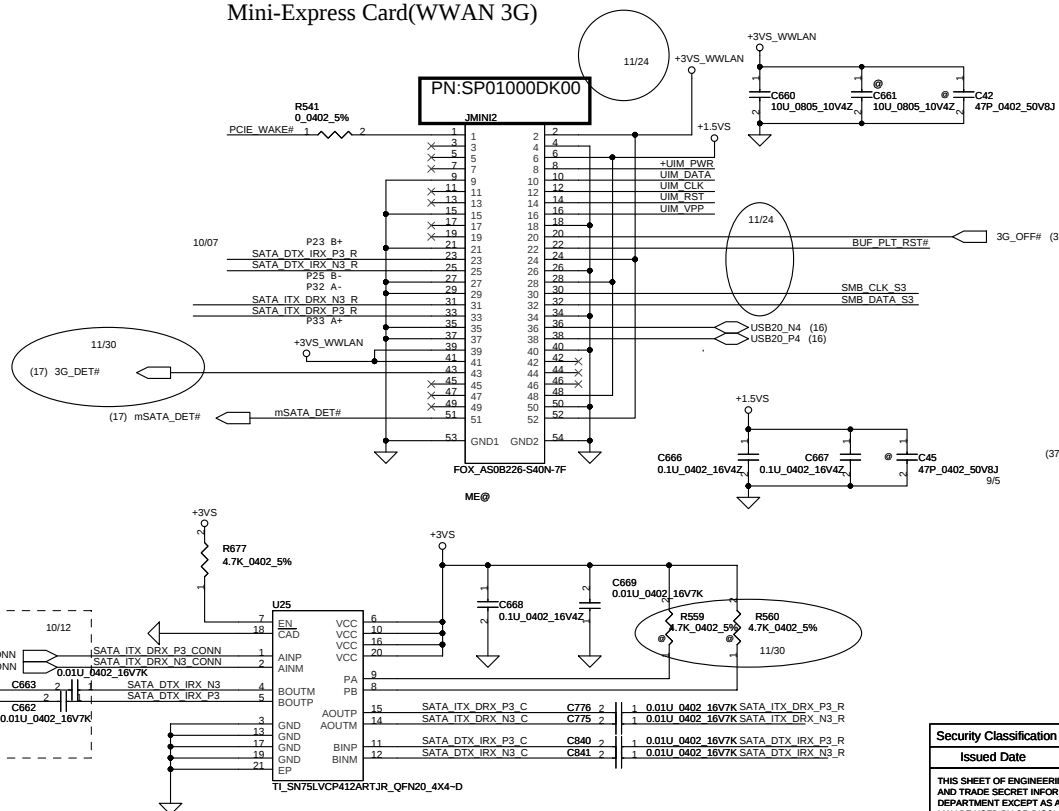
Security Classification	Compal Secret Data	Compal Electronics,Ltd.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Title	SCHEMATICS,MB A6921
Size	Document Number	Rev	B
Custom	4019A1	Date	Thursday, January 20, 2011
		Sheet	31 of 54

Mini-Express Card for WLAN/WiMAX(Half)

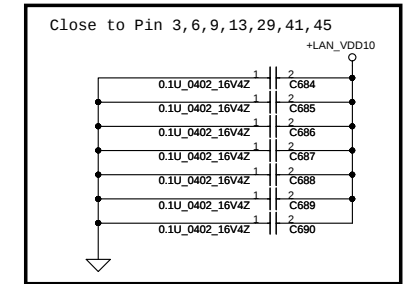
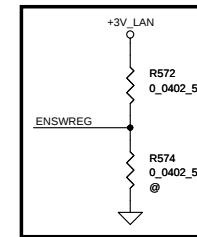
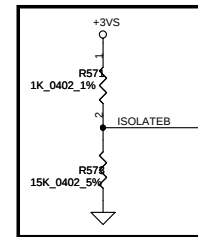
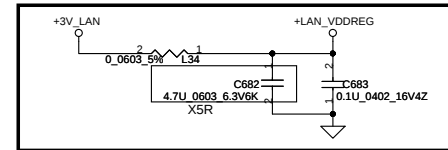
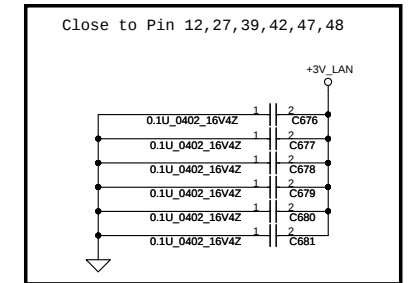
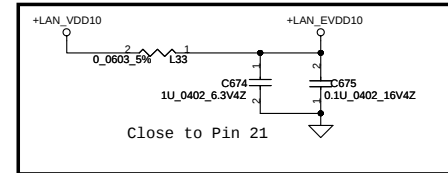
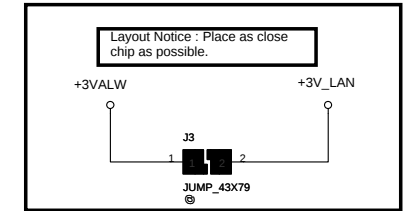
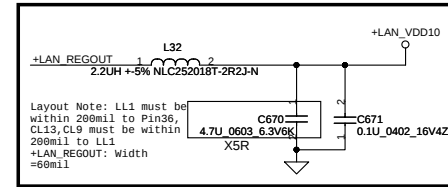
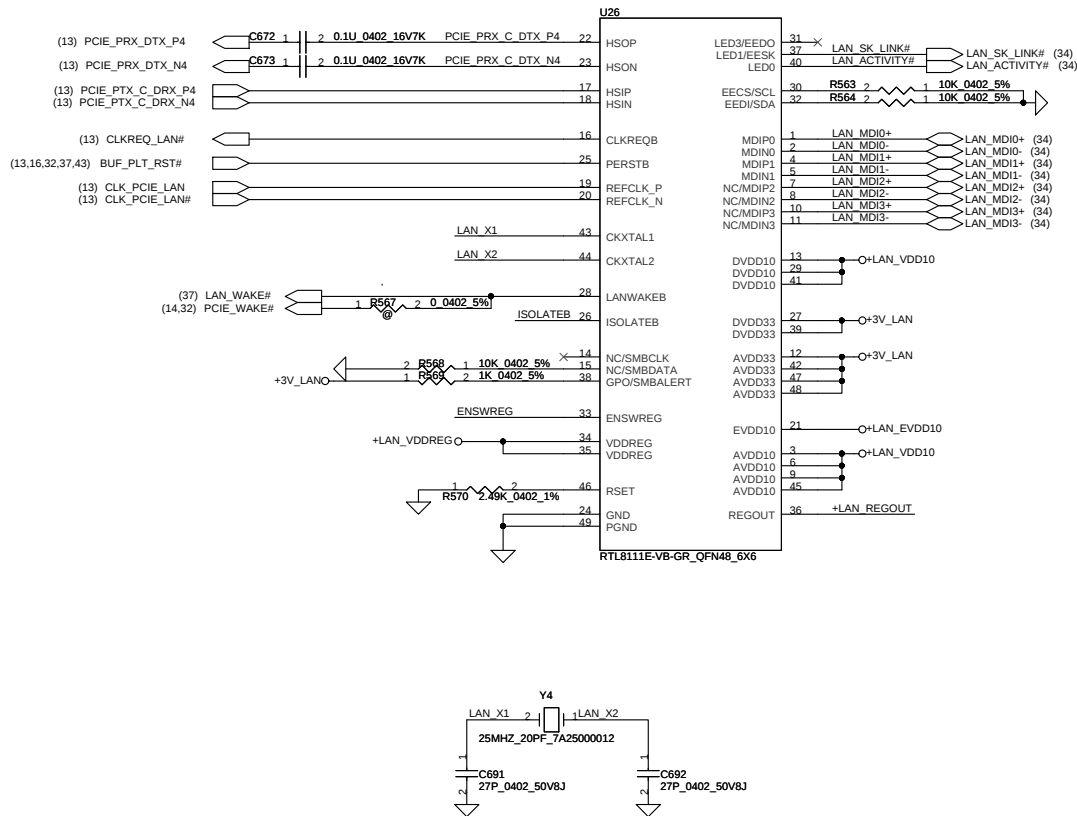


Mini-Express Card for WWAN/mSATA(Full)

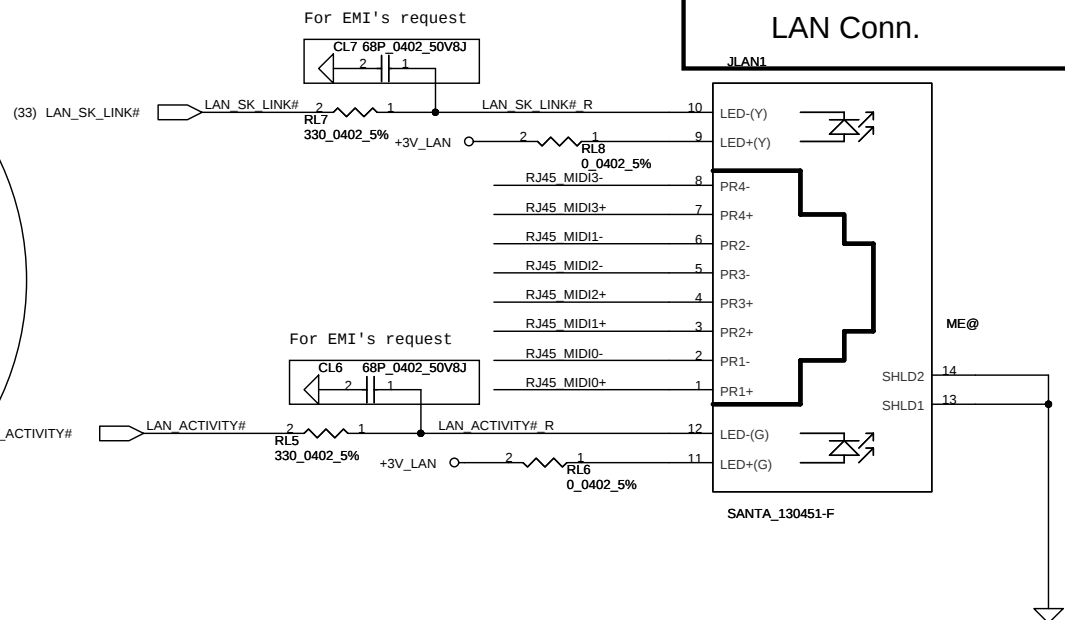
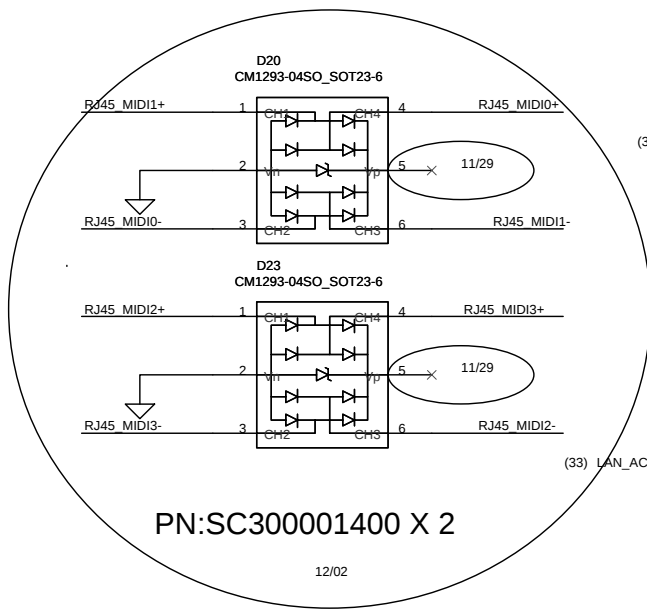
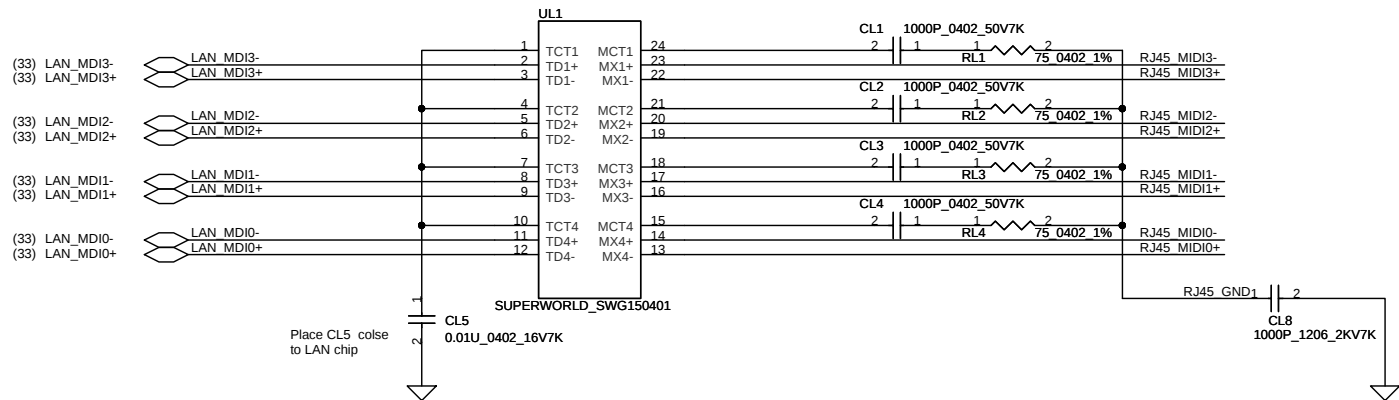
Mini-Express Card(WWAN 3G)



Security Classification		Compal Secret Data		Compal Electronics, Ltd.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Time	SCHEMATICS, MB A6921
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	4019A1
				Date	Thursday, January 20, 2011
				Sheet	32 of 54



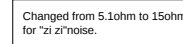
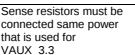
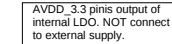
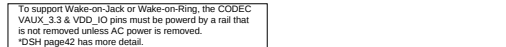
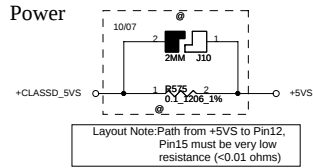
Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2010/08/25				Deciphered Date			
2010/08/25				2012/08/25				Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				SCHEMATICS,MB A6921				Rev B			
Size Custom				Document Number 4019A1				Date: Thursday, January 20, 2011			
				Sheet 33 of 54							



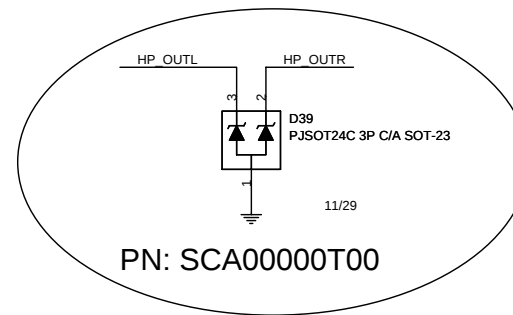
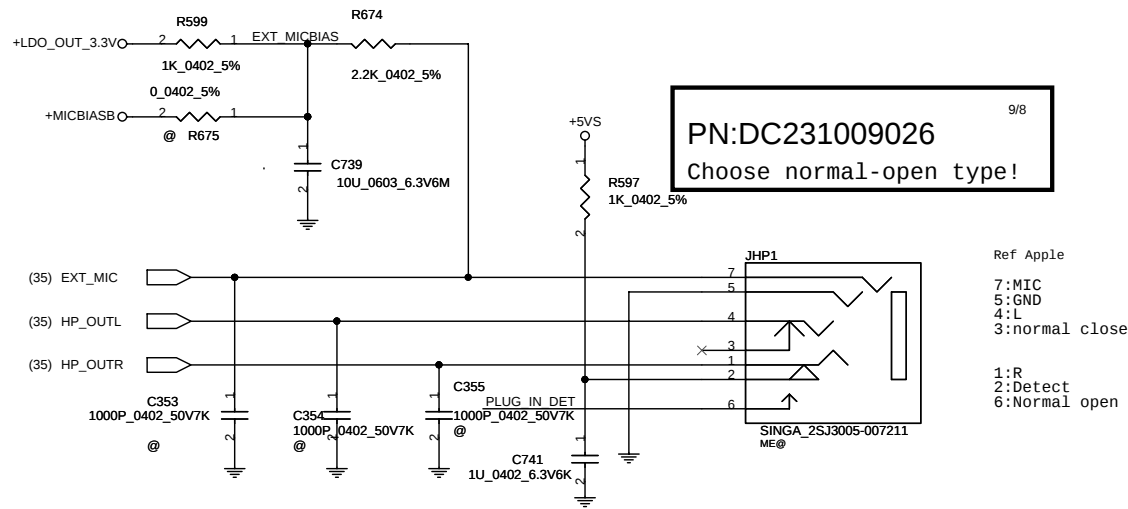
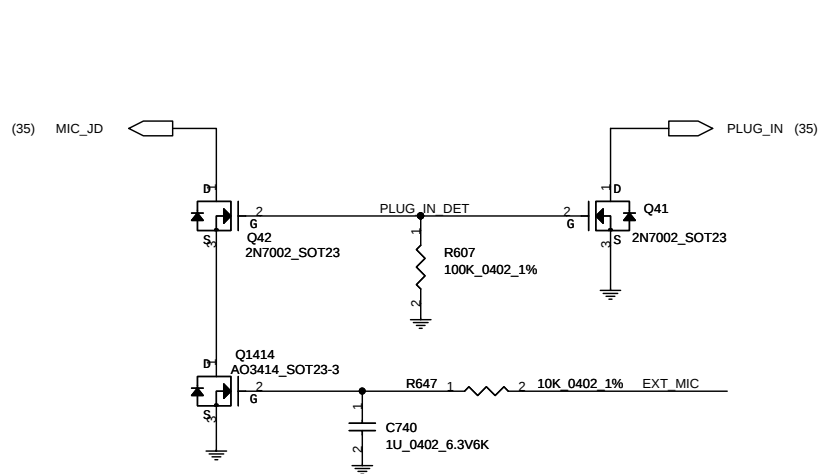
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				SCHEMATICS,MB A6921	
				Size Custom	Document Number 4019A1 Rev B
Date:	Thursday, January 20, 2011	Sheet	34 of 54		

An integrated 5 V to 3.3 V Low-dropout voltage regulator (LDO).

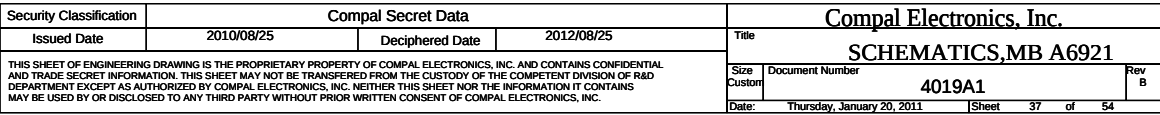
An integrated 3.3 V to 1.8V Low-dropout voltage regulator (LDO).

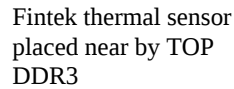
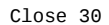


Security Classification	Compal Secret Data			Compal Electronics, Ltd.		
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title SCHEMATICS, MB A6921		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 4019A1	Rev B
				Date: Thursday, January 20, 2011	Sheet 35 of 54	



Security Classification		Compal Secret Data		Compal Electronics, Inc.								
Issued Date		2010/08/25	Deciphered Date		2012/08/25							
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						Title	SCHEMATICS,MB A69					
						Size	Document Number	4019A1		Rev	B	
						Custom						
						Date:	Thursday, January 20, 2011	Sheet	36	of	54	





REMOTE1, 2+/- :

Trace width/space:10/10 mil

Trace length:<8"



FAN +5VS DROOP



Security Classification

Compal Secret Data

2010/08/25

Deciphered Data

2012/08/25

Compal Electronics,Ltd.

Title	SCHEMATICS,MB A6921
-------	---------------------

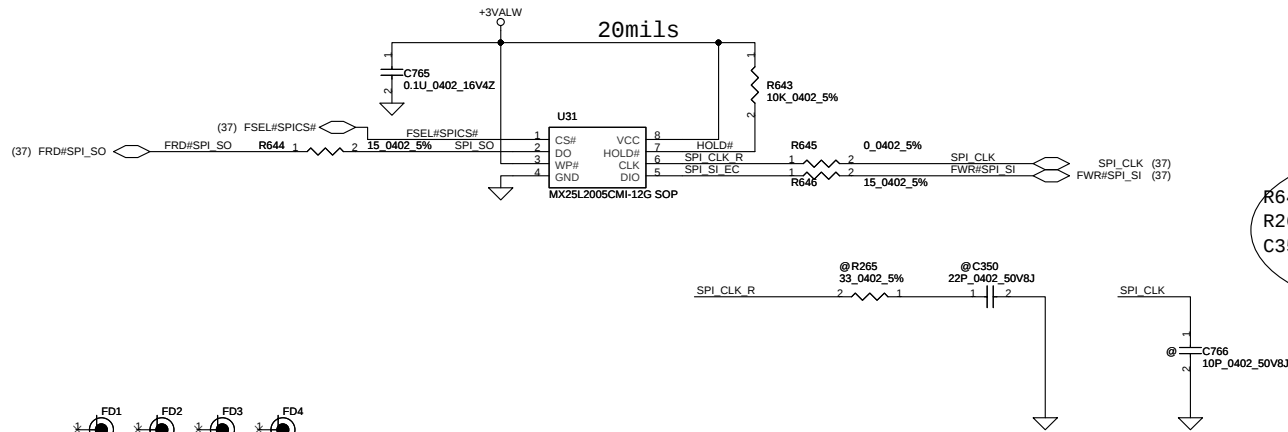
Size	Document Number
------	-----------------

4019A1

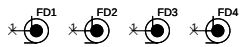
Date: Thursday, January 20, 2011 Sheet 38 of 54

ev

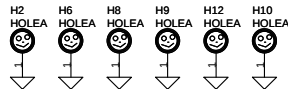
FOR EC 128KB SPI ROM
(150mil PACKAGE)
PN:SA00002C100



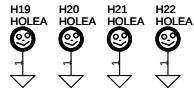
R645: BEAD 100 OHM, SM01000DI00 (SIT)
R265: 33 OHM (SIT)
C350: 22pf (SIT)



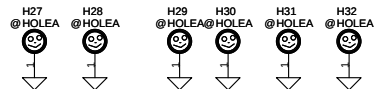
A TYPE H_2.8P8



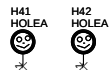
B TYPE H_3.2P6



C TYPE H_4P5.4



D TYPE H_2P8x4P8N



E TYPE H_2.5



F TYPE H_2P3



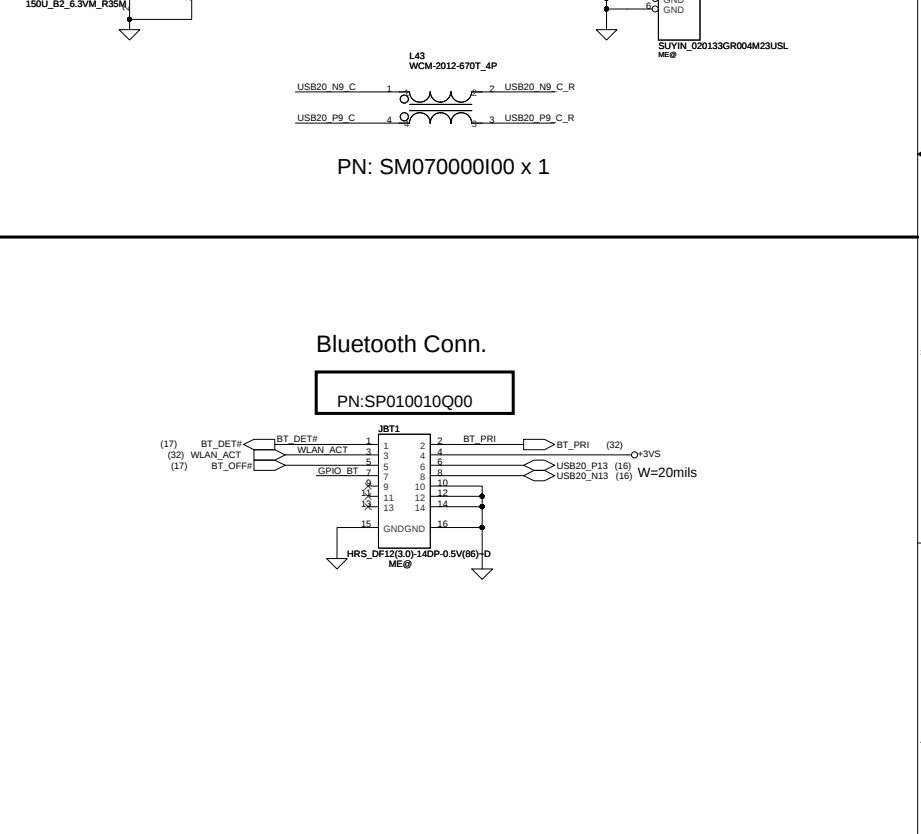
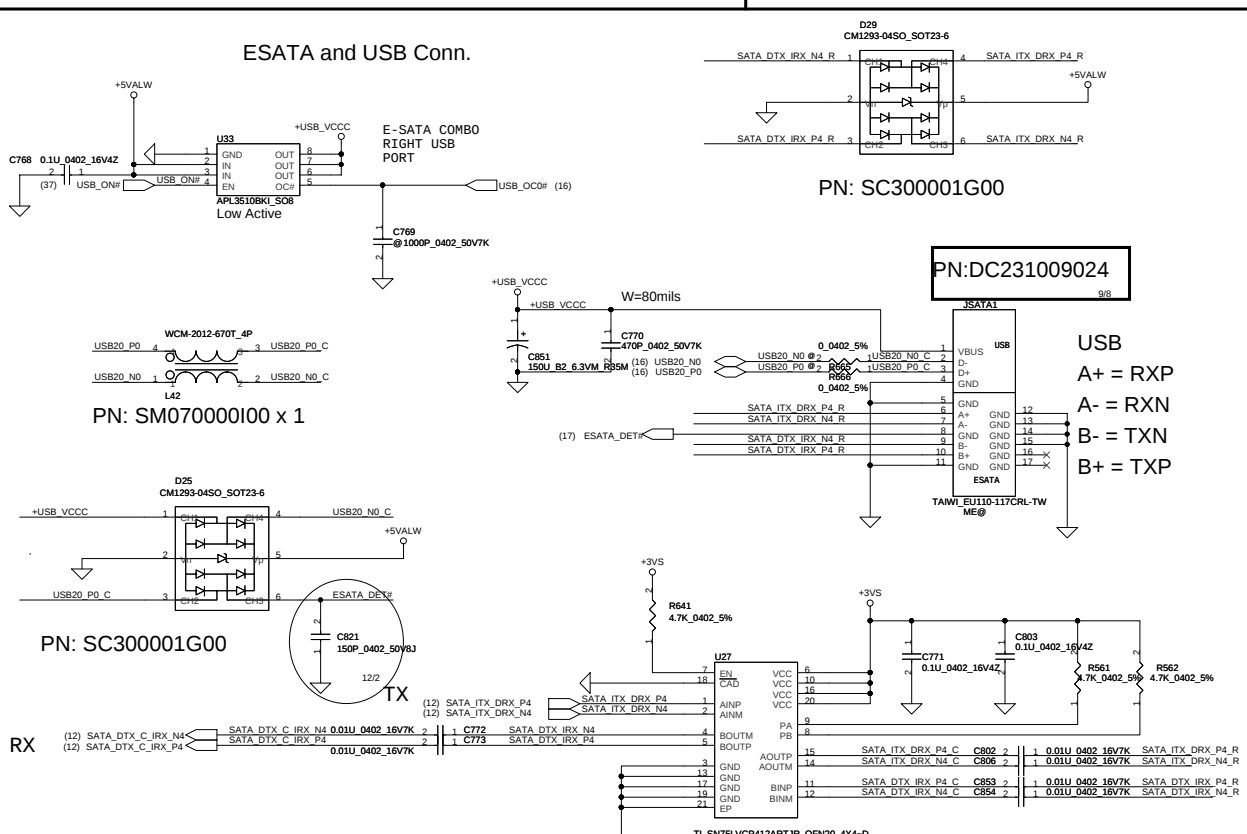
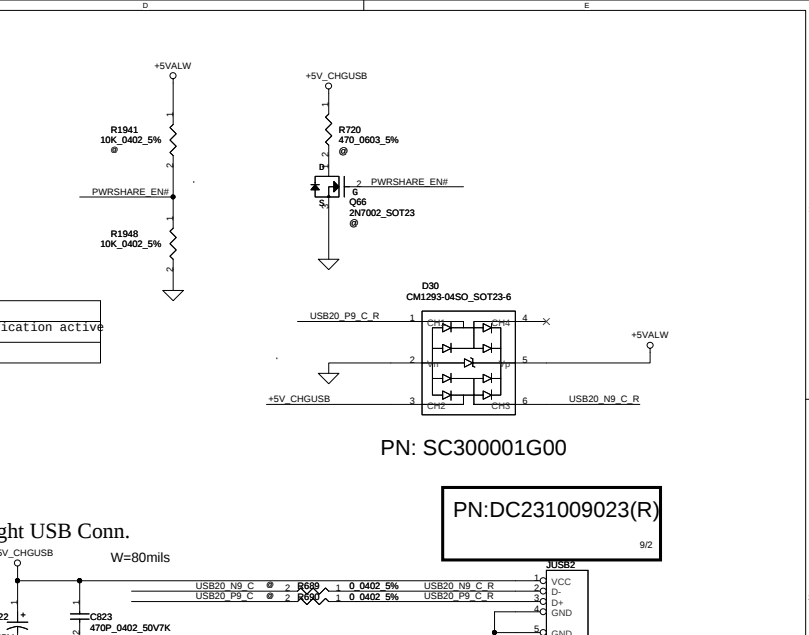
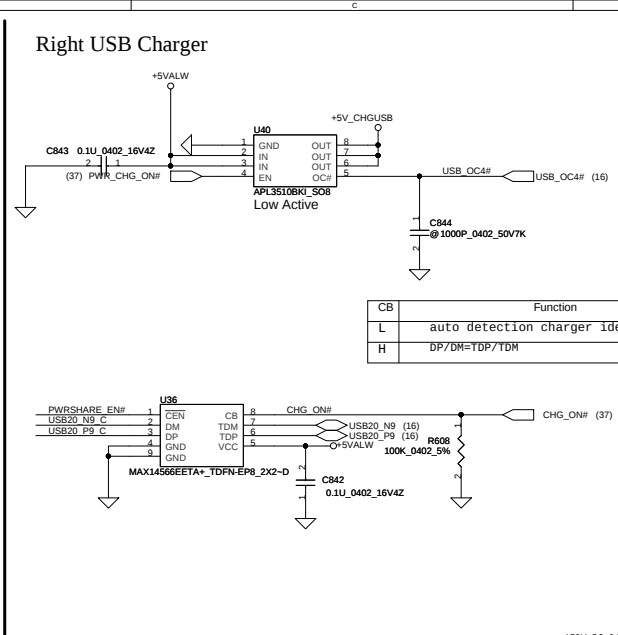
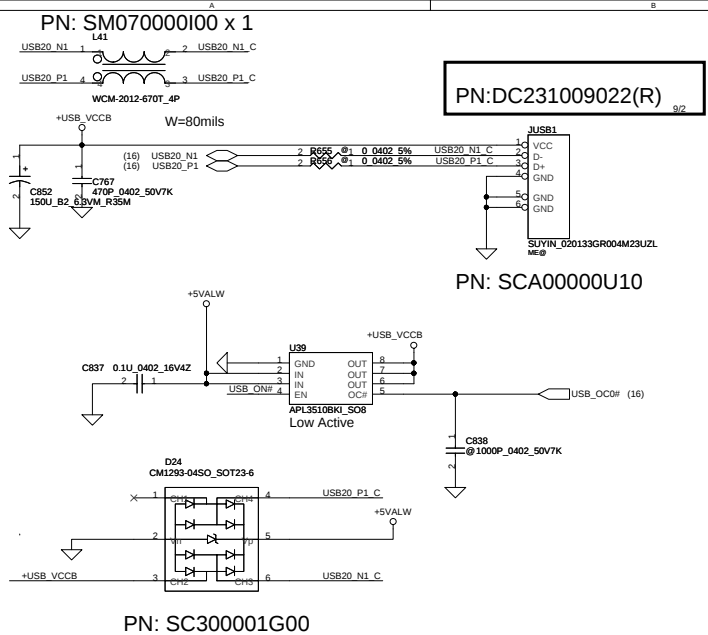
G TYPE H_3.8P8



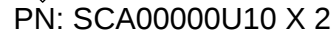
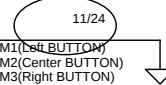
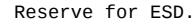
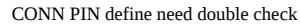
H TYPE H_2.3



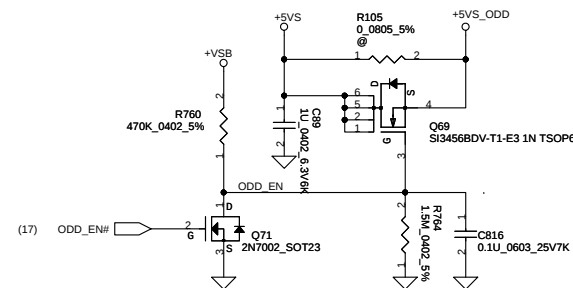
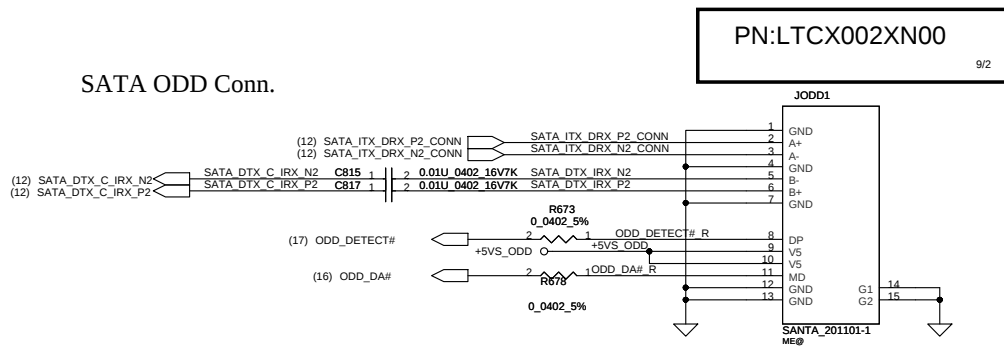
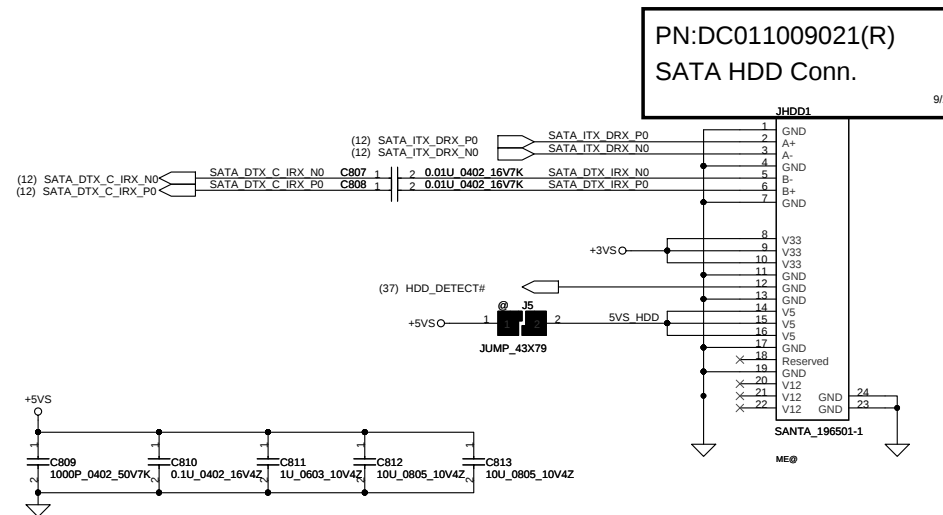
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	4019A1	B
				Date:	Thursday, January 20, 2011	Sheet 39 of 54



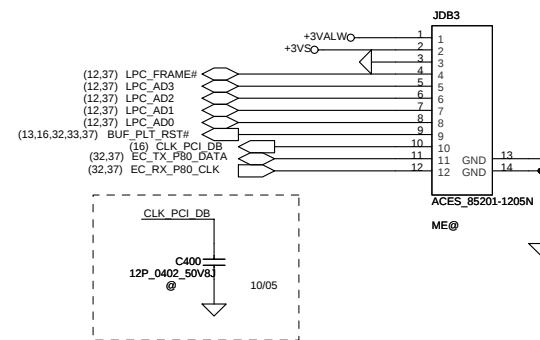
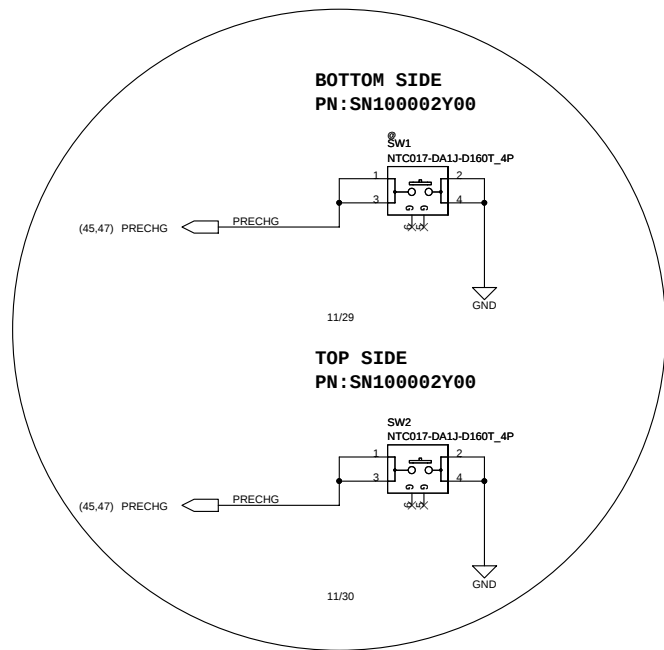
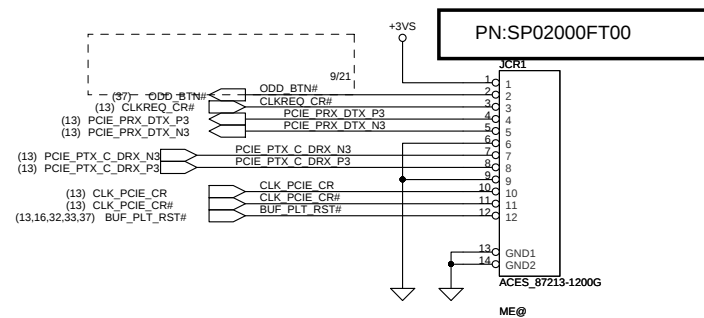
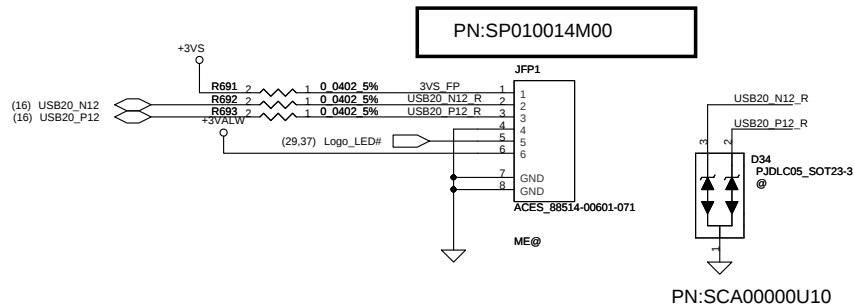
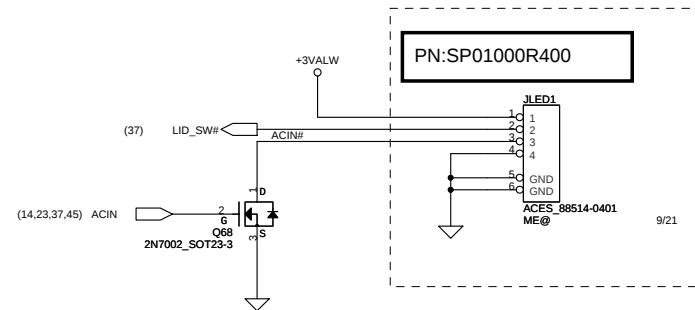
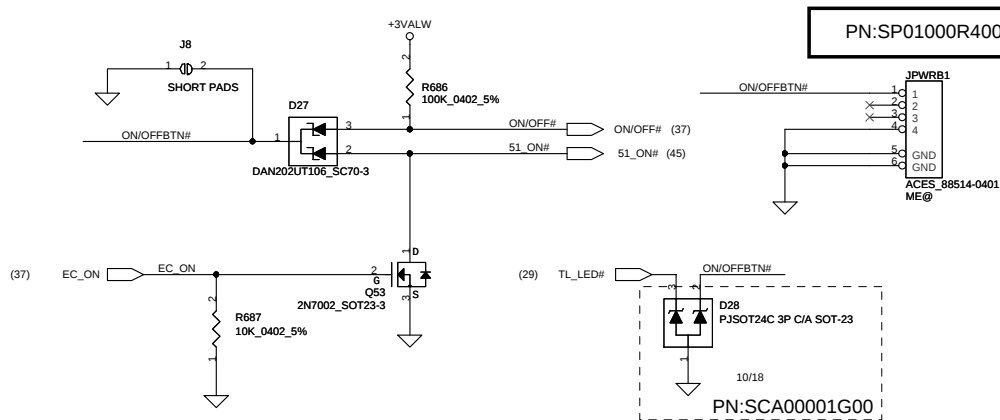




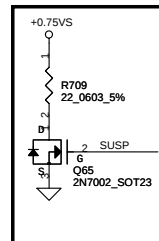
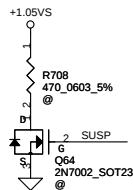
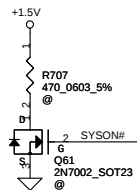
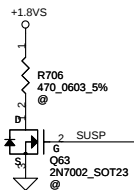
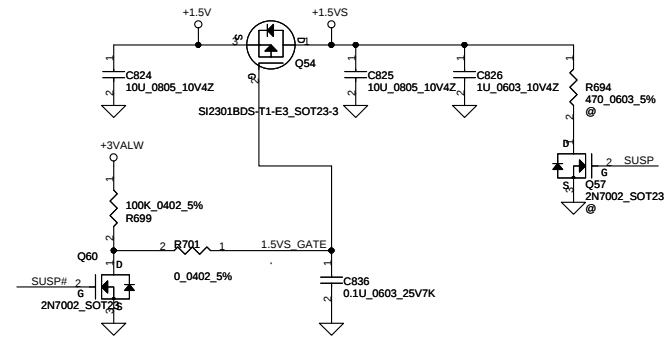
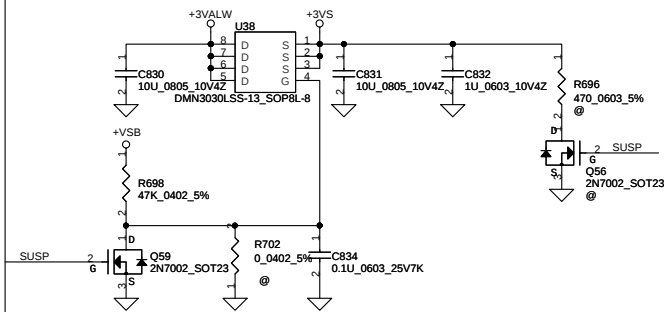
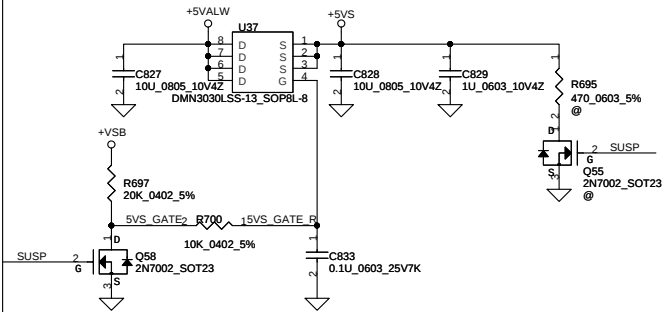
Security Classification		Compal Secret Data		Compal Electronics, Inc. SCHEMATICS,MB A6921	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Custom	B
				Document Number 4019A1	
Date:	Thursday, January 20, 2011	Sheet	41	of	54



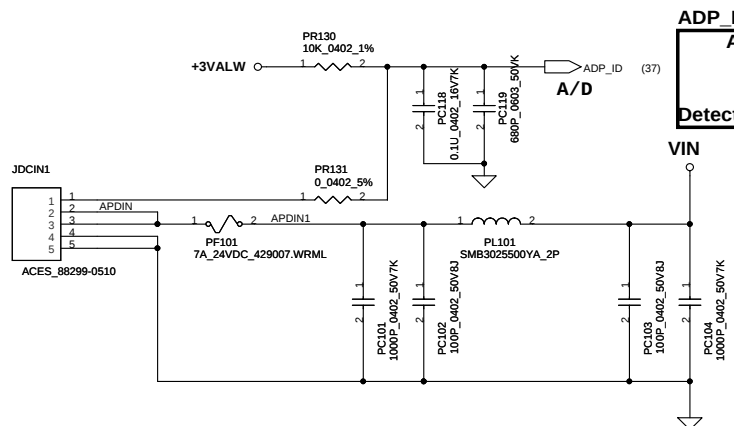
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number 4019A1
				Date: Thursday, January 20, 2011	Rev B
				Sheet 42 of 54	



Security Classification	Compal Secret Data			Compal Electronics, Ltd.		
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	SCHEMATICS, MB A6921	
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
				Custor	4019A1	B
				Date:	Thursday, January 20, 2011	Sheet 43 of 54



Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2010/08/25	Deciphered Date	2012/08/25	Title	SCHEMATICS,MB A6921	
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
				Custm	4019A1	B
Date:		Thursday, January 20, 2011		Sheet	44	of 54

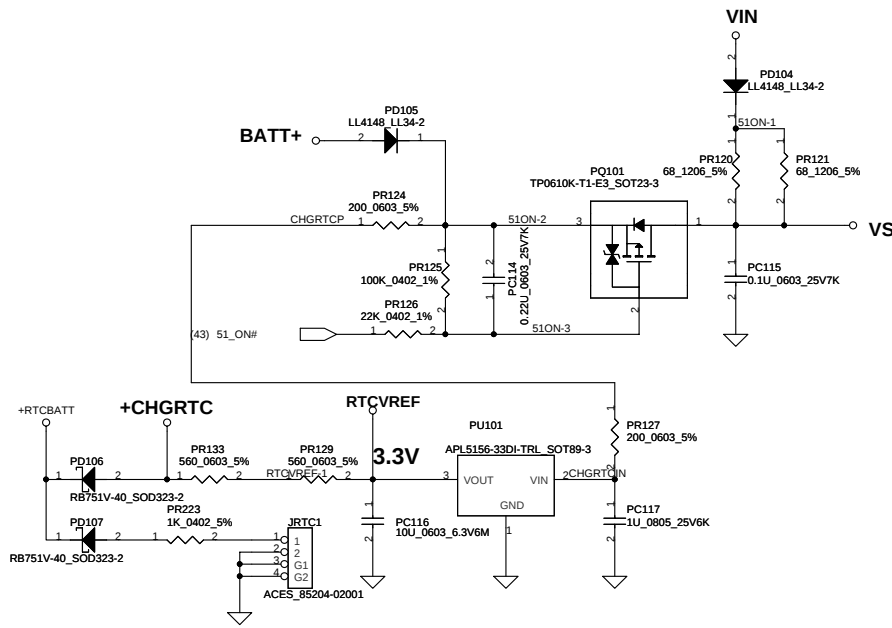
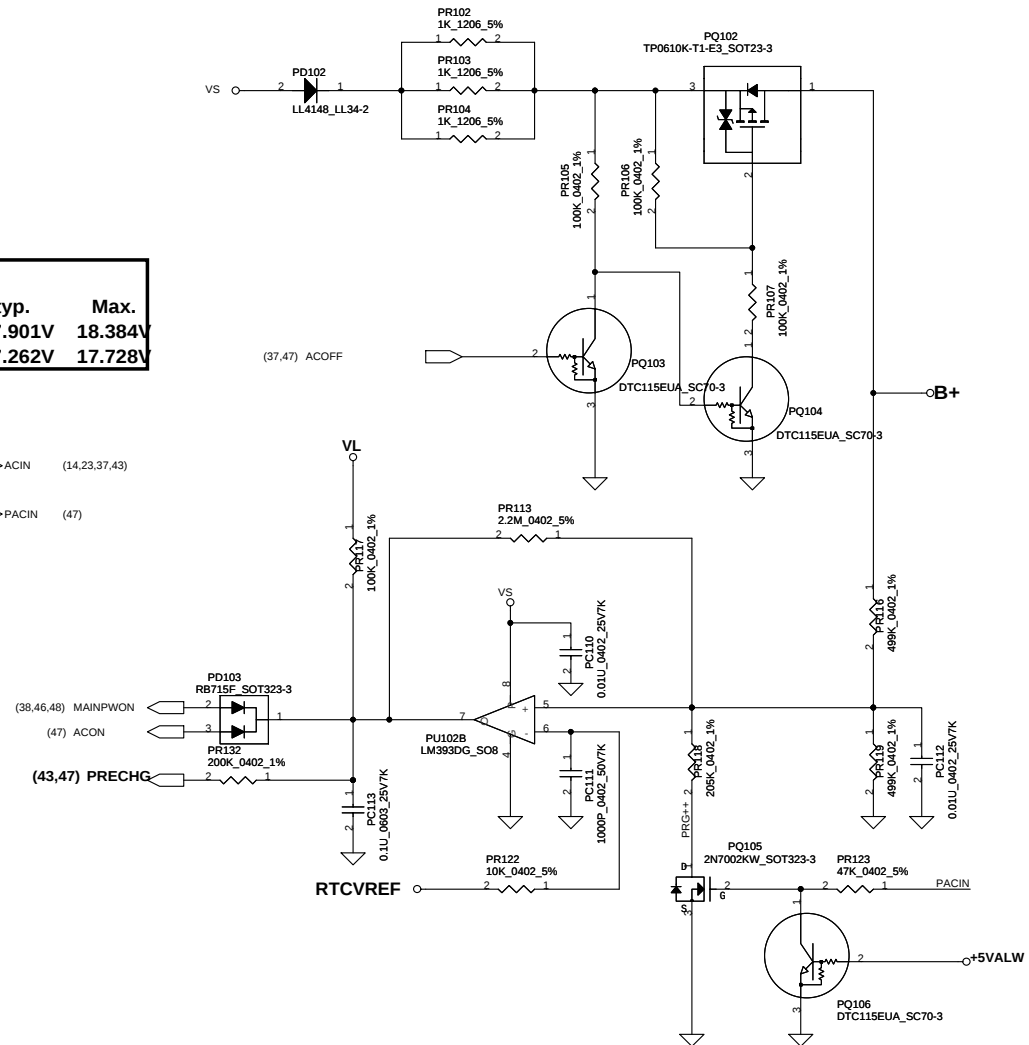
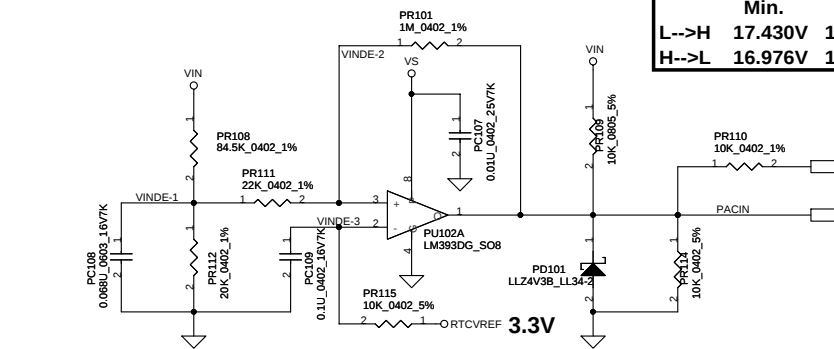


ADP_ID			
AC Adapter	90W	65W	
R(K ohm)	open	10	
ADP_ID(V)	3.3	1.65	
Detection voltage	>2.64	1.32~1.98	

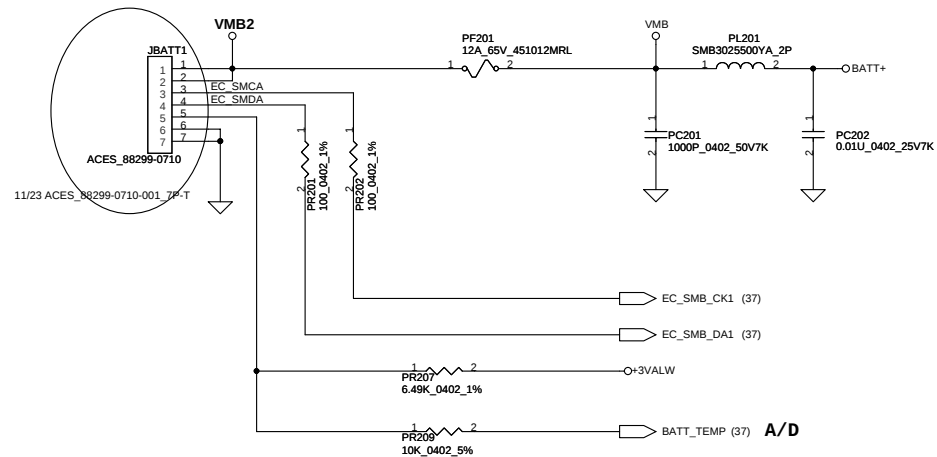
ACIN			
Precharge detector			
	Min.	typ.	Max
L-->H	14.991V	15.381V	15.782V
H-->L	13.860V	14.247V	14.621V

BATT ONLY			
Precharge detector			
	Min.	typ.	Max
L-->H	7.196V	7.349V	7.505V
H-->L	6.138V	6.214V	6.056V

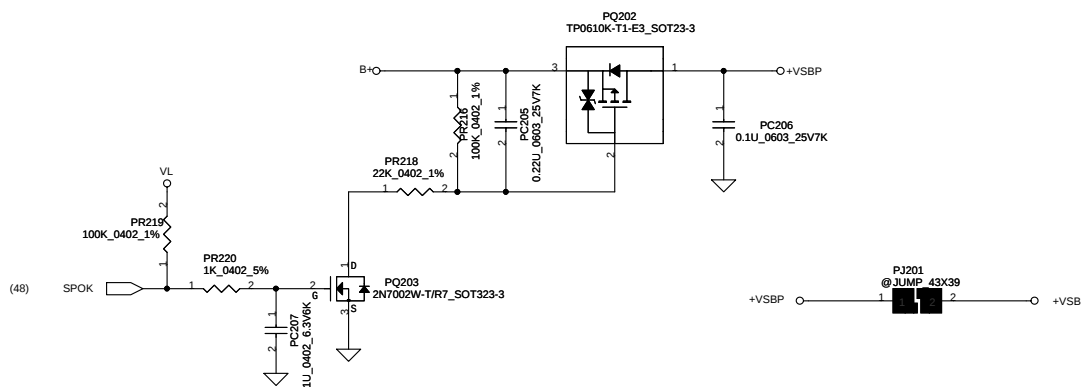
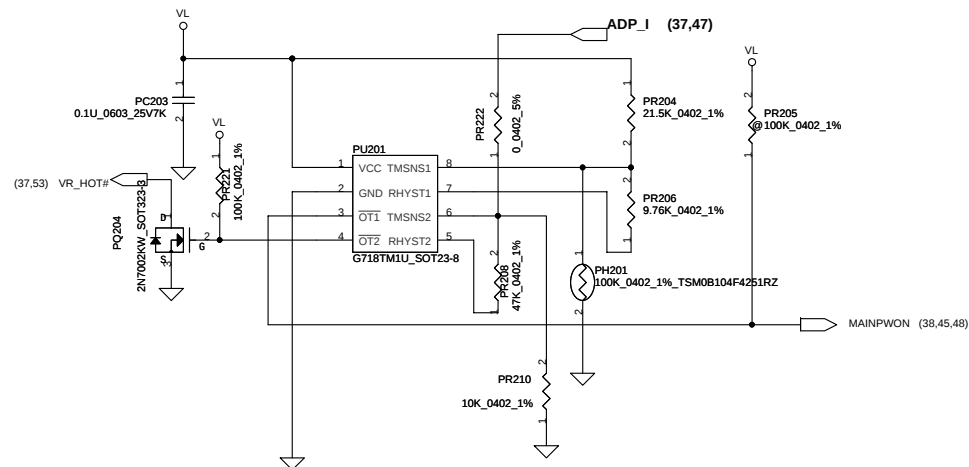
Vin Detector			
	Min.	typ.	Max
L-->H	17.430V	17.901V	18.384V
H-->L	16.976V	17.262V	17.728V



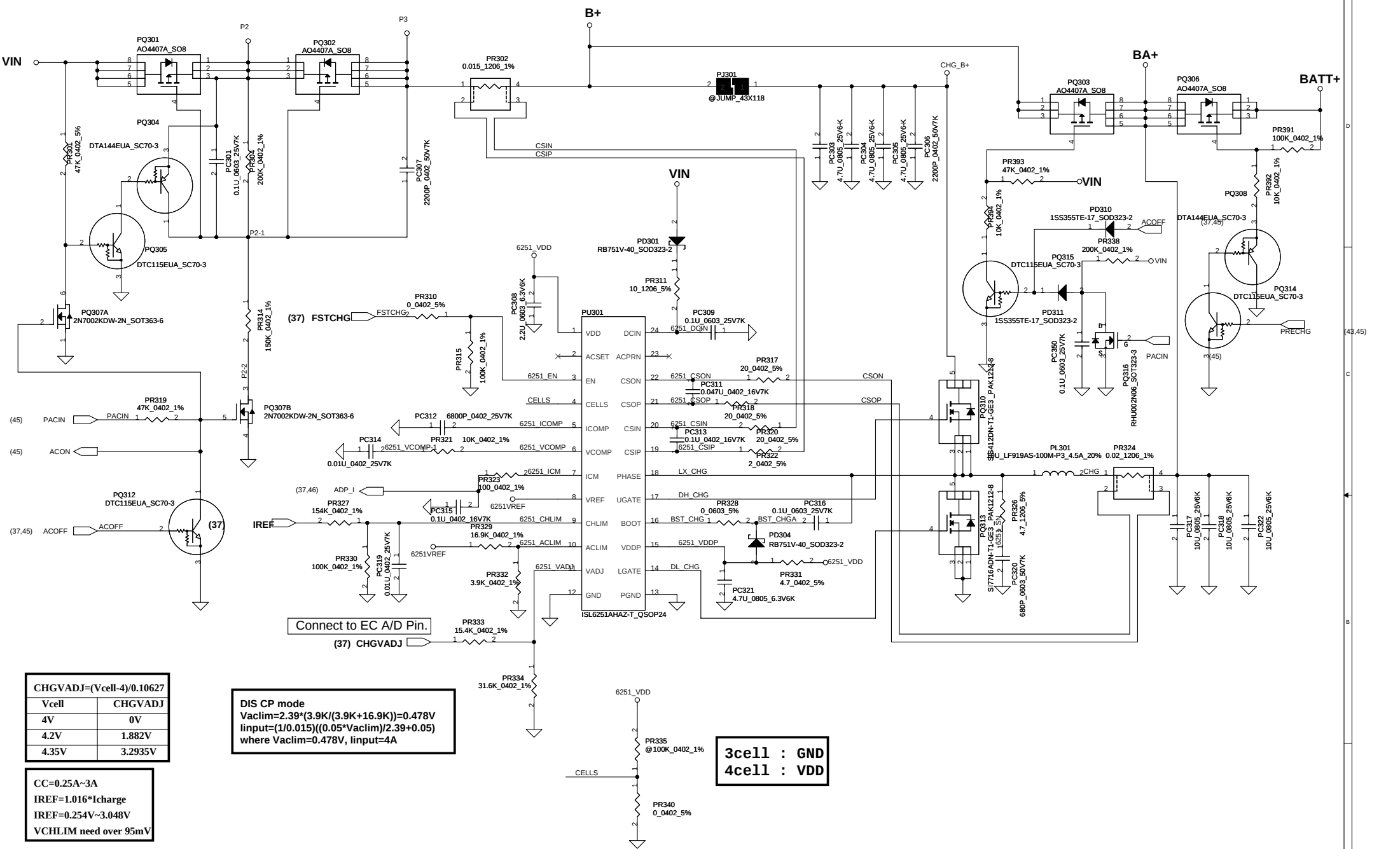
Security Classification			
Issued Date	2010/01/25	Deciphered Date	2010/12/31
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			
Compal Secret Data			Title
SCHEMATICS, MB A6921			Document Number
4019A1			Rev B
Date: Thursday, January 20, 2011			Sheet 45 of 54



PH201 under CPU bottom side :
CPU thermal protection at 92 degree C
Recovery at 56 degree C



Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/01/25	Deciphered Date	2010/12/31	Title	SCHEMATICS, MB A6921
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	4019A1
				Date	Thursday, January 20, 2011
				Sheet	46 of 54
				Rev	B

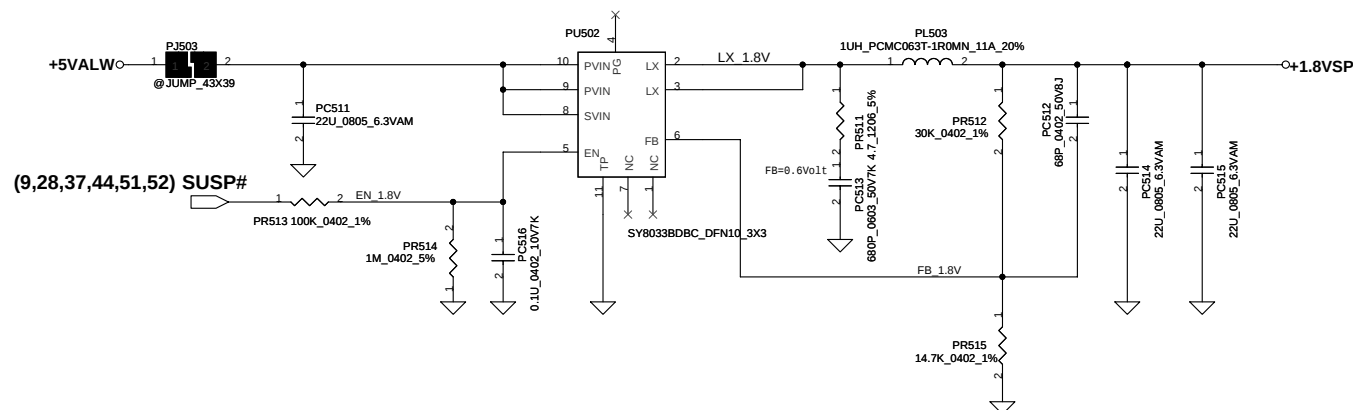
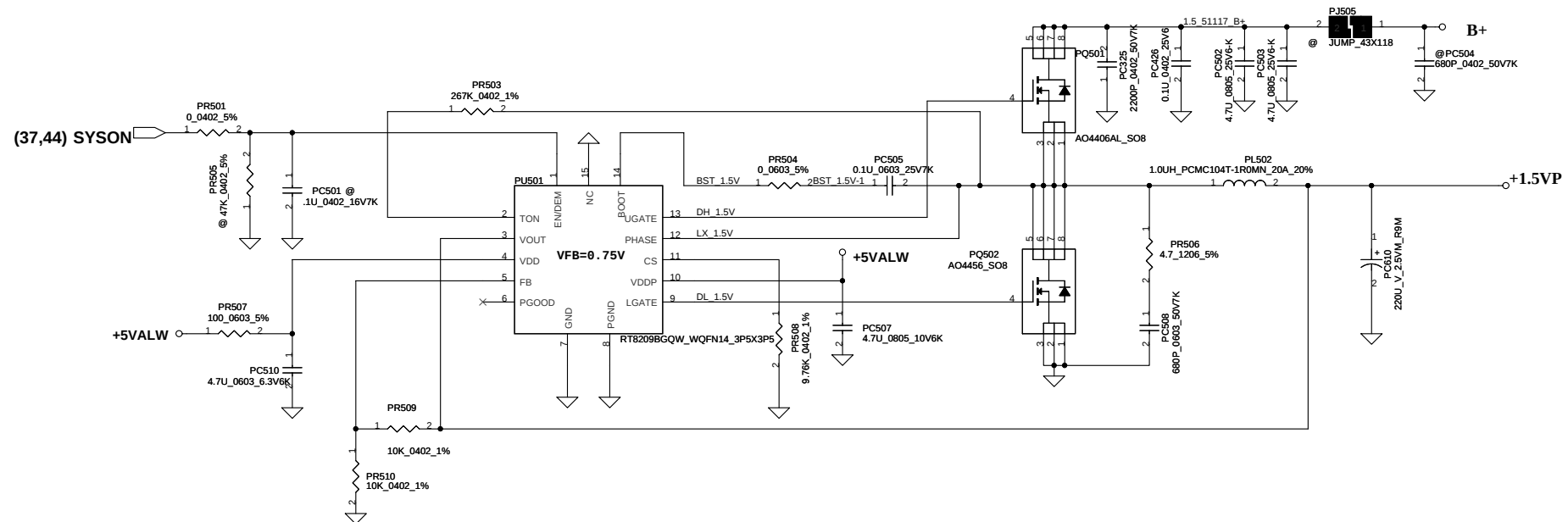


CHGVADJ=(Vcell-4)/0.10627	
Vcell	CHGVADJ
4V	0V
4.2V	1.882V
4.35V	3.2935V

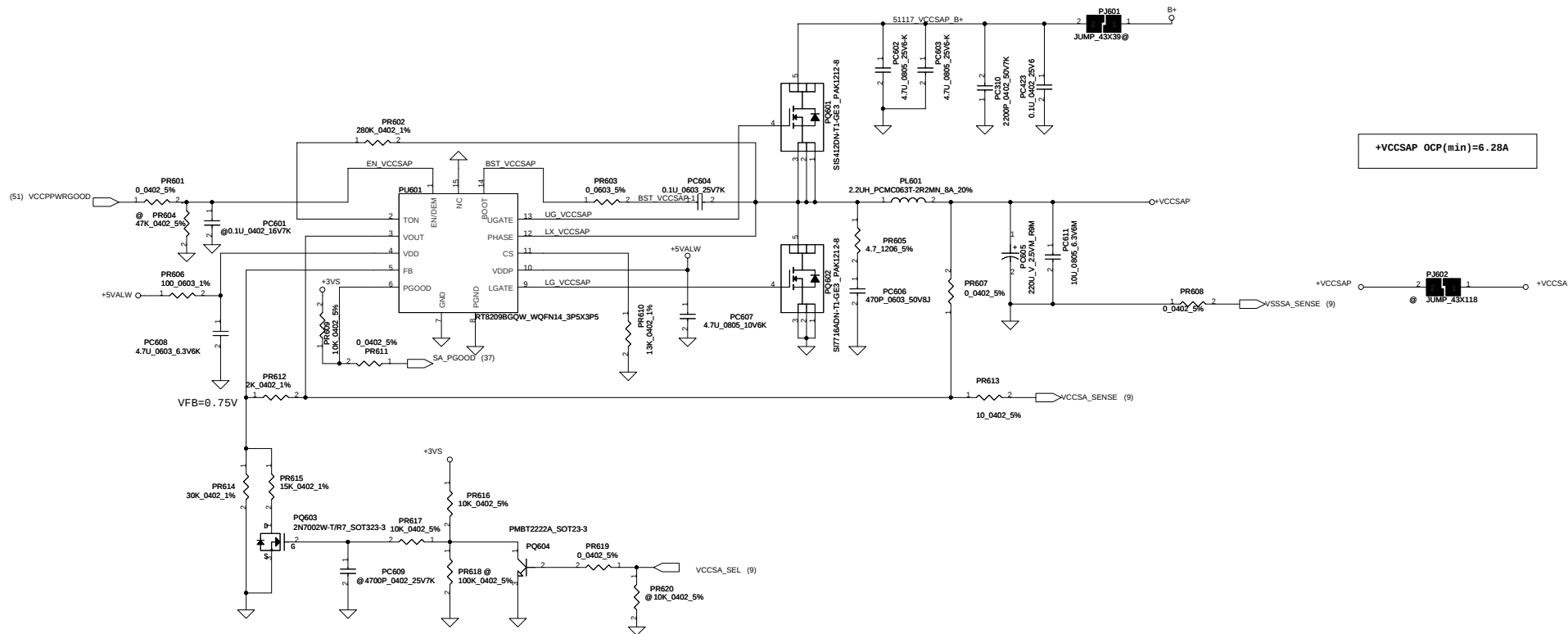
CC=0.25A~3A
IREF=1.016*Icharge
IREF=0.254V~3.048V
VCHLIM need over 95mV

DIS CP mode
 $V_{aclim}=2.39*(3.9K/(3.9K+16.9K))=0.478V$
 $I_{inpu}=(1/0.015)/((0.05*V_{aclim})/2.39+0.05)$
where $V_{aclim}=0.478V$, $I_{inpu}=4A$

3cell : GND
4cell : VDD

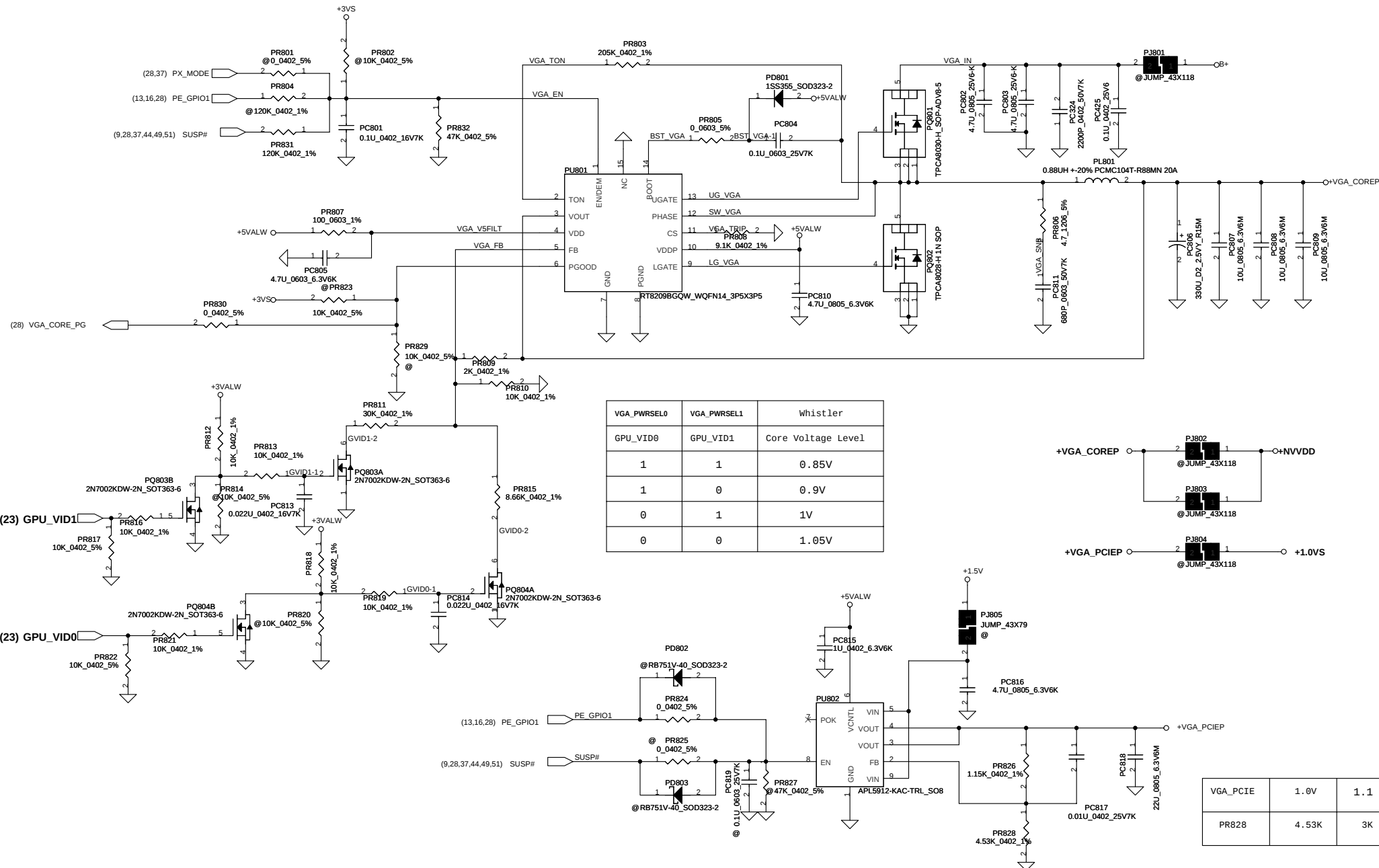


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/01/25	Deciphered Date	2010/12/31	Title	SCHEMATICS,MB A6921
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	4019A1
				Rev	B
				Date:	Thursday, January 20, 2011
				Sheet	49 of 54

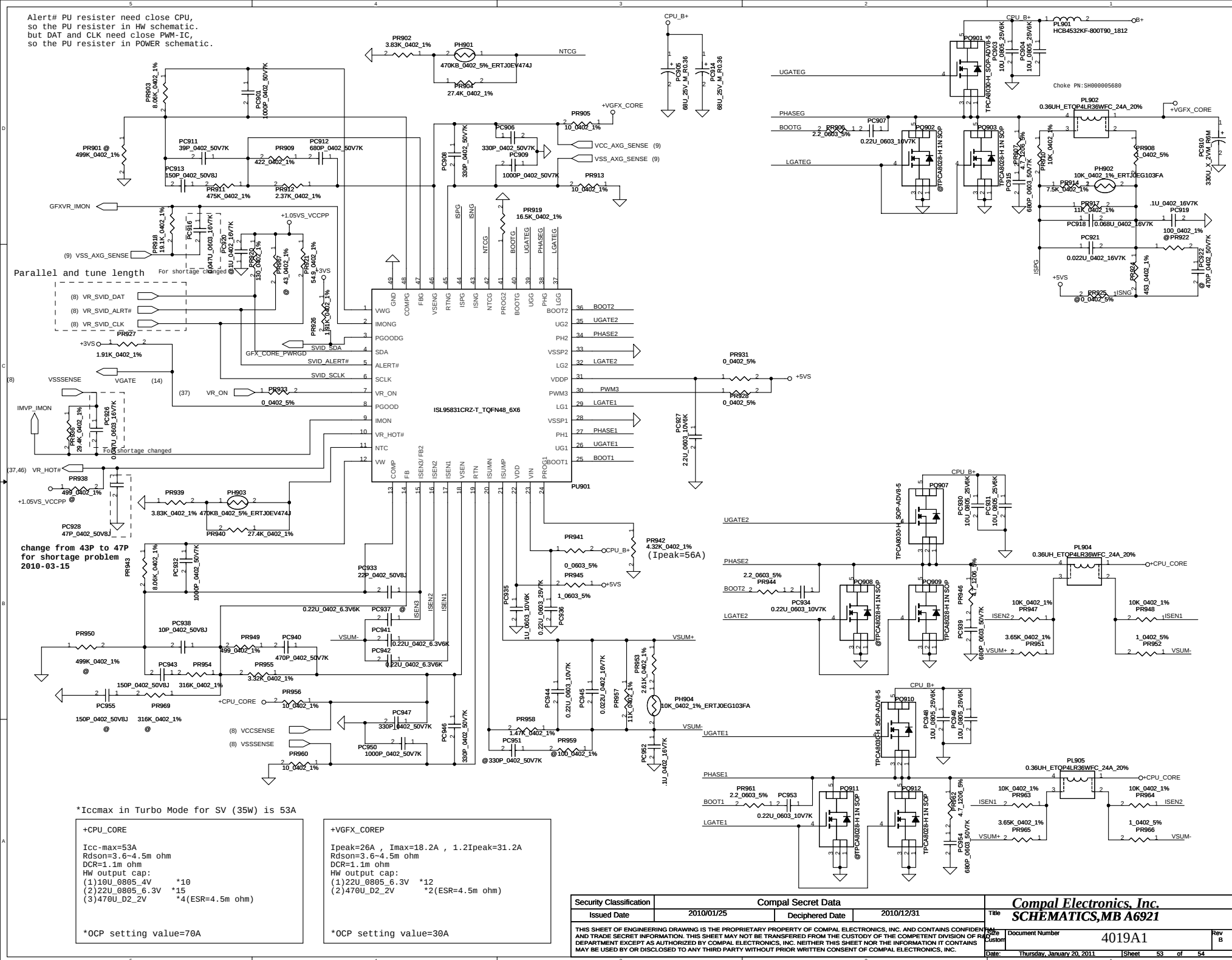


VID[0]	VID[1]	VCCSA Vout	Require on 2011/ 2012 Required
0	0	0.9 V	Yes/Yes
0	1	0.8 V	Yes/Yes
1	1	0.75V	No/Yes
1	1	0.65V	No/Yes

Note: Use VCCSA_SEL to switch High & Low Level for VID[1]
(ie. VCCSA_SEL) due to the VID[0] is don't care for this setting.



Alert# PU resister need close CPU,
so the PU resister in HW schematic.
but DAT and CLK need close PWM-IC,
so the PU resister in POWER schematic.



Security Classification		Compal Secret Data		Compal Electronics, Inc. SCHEMATICS, MB A6921	
Issued Date	2010/01/25	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 RACAL DATA SYSTEMS, INC. TO ANY OTHER PERSON OR ORGANIZATION WITHOUT THE WRITTEN AUTHORIZATION 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.				Drawing Number 4019A1	Rev B
				Date: Thursday, January 20, 2011	Sheet 53 of 54

Item	Reason for change	PG #	Modify List	Date	Phase
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2009/01/06	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.				SHEETS	
				Document Number	
				4019A1	
Date: Thursday, January 20, 2011				Sheet	54 of 54
				Rev	B