

Compal confidential

Marseille 10ADG & 10AD

NWQAE LA-6191P Schematics Document

www.aitech1.ru

Mobile AMD S1G4/ RS880M / SB820M

2010-01-13 Rev. 0.1

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Title	SCHEMATIC,MB A6191
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	401879
				Date	Wednesday, February 10, 2010

Compal Confidential

Model Name : NALAE

File Name : LA-6052P

Thermal Sensor
ADM1032ARMZ page 7

Fan Control
page 5

AMD SIG4 CPU
uFCPGA-638 Package
page 5,6,7,8

Memory BUS(DDRIII)
Dual Channel

1.5V DDRIII 1066/1333MHZ

200pin DDRIII-SO-DIMM X2
BANK 0, 1, 2, 3 page 9,10



Hyper Transport Link 2.6GHz
16X16

AMD
RS880M
page 11,12,13,14,15

Madison & Park
Page 34,35,36,37,38,39
40,41,42

EC SMBus

HDMI-CEC
page 18

CRT
page 16

LCD Conn.
page 17

HDMI Conn.
page 18

RTL8105E 10/100M
RTL8111E 1G
PCIe port 3
page 27

RJ45
page 27

PCIe 1x
1.5V 2.5GHz(250MB/s)

Card readerO2 Fujin
PCIe port5
page 28

PCIe 4x
1.5V 2.5GHz(250MB/s)

PCIeMini Card
WiMax
USB port 13
page 26

PCIeMini Card
3G/TV#1 USB port 12
TV#2 USB port 10
page 26

Express Card
USB
USB port 11
page 26

B-CAS
page 25

SIM
page 26

A-Link Express II
4X PCI-E

AMD
SB820M
page 19,20,21,22,23

IO/B-- USB Right
USB port 0,1
page 25

IO/B-- USB Left
USB port 4
page 25

FingerPrinter
USB port 7
page 26

BT conn
USB port 6
page 26

Felica
USB port 12
page 26

Int. Camera
USB port 9
page 13

PCIeMini Card
WiMax
USB port 8
page 26

PCIeMini Card
3G/TV#1 USB port 5
TV#2 USB port 10
page 26

Express Card
USB
USB port 11
page 26

B-CAS
page 25

SIM
page 26

SATA port 0
5V 1.5GHz(150MB/s)

SATA HDD
page 24

SATA port 1
5V 1.5GHz(150MB/s)

SATA ODD
page 24

SATA port 3
5V 1.5GHz(150MB/s)

eSATA
ESATA port 3
page 24

USB port 2
5V 480MHz

USB
USB port 2
page 25

HD Audio
3.3V/1.5V 24MHz

Debug Port
page 31

ENE KB926 D3
page 30

Touch Pad
page 32

Int.KBD
page 31

EC ROM
page 31

MDC 1.5 Conn
page 31

HDA Codec
ALC269
page 29

Int.
MIC CONN
page 17

MIC CONN
page 29

HP CONN
page 29

SPK CONN
page 29

RTC CKT.
page 20

ODD/B
page 25

Power On/Off CKT.
page 33

Power/B
page 33

DC/DC Interface CKT.
page 34

Audio & USB/B
page 33

Power Circuit DC/DC
page 44,45,46,47
48,49,50,51

LED/B
page 33

Touch Pad/B
page 33

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Title	SCHEMATIC,MB A6191	
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	401879	Rev A
				Date	Wednesday, February 10, 2010	Sheet 2 of 50

www.aitech1.ru

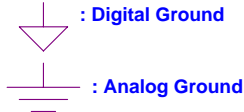
Security Classification		Compal Secret Data		Title	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	SCHEMATIC, MB A6191	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev	A
				Document Number	401879
Date: Wednesday, February 10, 2010				Sheet	3 of 50

Voltage Rails

O : ON
X : OFF

power plane	+B +3VL +5VL +RTCVC	+5VALW +3VALW +1.1VALW	+1.5V	+5VS +3VS +2.5VS +1.8VS +1.5VS +1.1VS +1.05VS +0.75VS +VGA_CORE +VDDNB +CPU_CORE
S0	O	O	O	O
S1	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

Symbol Note :



@ : just reserve , no build
UMA@ :Just reserved for UMA only
DIS@ :Just reserved for Power Xpress only
THM@ :Just reserved for Thermal only
MDC@ : Just reserved for MDC only
GSENSOR@ : Just reserved for GSENSOR only
FLICA@ :Just reserved for FLICA only
FP@ :Just reserved for Finger print only
BT@ : Just reserved for Blue Tooth only
NEW@ :Just reserved for New Card only
WLAN@ :Just reserved for WLAN only
WIMAX@ :Just reserved for WIMAX only
8105E@ :Just reserved for 10/100 LAN only
8111E@ :Just reserved for 1000 LAN only
3G@ :Just reserved for 3G only
TV@ :Just reserved for TV only
CAM@ :Just reserved for WebCam only
INT@ :Just reserved for internal clock only
EXT@ :Just reserved for external clock only
M9X@ :Just reserved for M92 only

Park@ :Just reserved for Park and Madison component only
Madison@ :Just reserved for Madison only
ParkC@ :Just reserved for Madison only
4PCS@ :Just reserved for 512M VRAM only
8PCS@ :Just reserved for 1G VRAM only
CONN@ :Just reserved for Connector only
CIR@ :Just reserved for CIR only

Platform	CPU	NB	SB	VGA	Comment
Danube	S1G4	RS880MC	SB820	M92XTX	
	S1G4	RS880M	SB820	Park XT	

BTO (Build-To-Order) Option Table

Function	BLUE TOOTH	RJ11	WiFi	HDMI	3 in 1 card reader	CAMERA & MIC
Description	(B)	(R)	(H)	(Y)	(C)	(X)
Explain			Half - size		RTS5138	
BTO	BT@	MDC@	WLAN@	H@	CARD@	

SMBUS Control Table

	SOURCE	BATT	CPU THERMAL SENSOR	SODIMM I / II	CLK GEN	WLAN	LCD DDC ROM	HDMI DDC ROM	New Card
EC_SMB_CK1 EC_SMB_DA1	KB926	V							
EC_SMB_CK2 EC_SMB_DA2	KB926		V						
I2C_CLK I2C_DATA	RS880M						V		
DDC_CLK0 DDC_DATA0	RS880M							V	
SCL0 SDA0	SB820			V	V				V
SCL1 SDA1	SB820					V			

EC SM Bus1 address

Device	HEX	Address
Smart Battery	16H	0001 011X b
HDMI-CEC	34H	0011 010X b
EC KB926D4		

EC SM Bus2 address

Device	HEX	Address
ADH1032-1 CPU	98H	1001 100X b
ADH1032-2 VGA	9AH	1001 101X b
EC KB926D3		

SB SM Bus1 Address

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

SB SM Bus2 Address

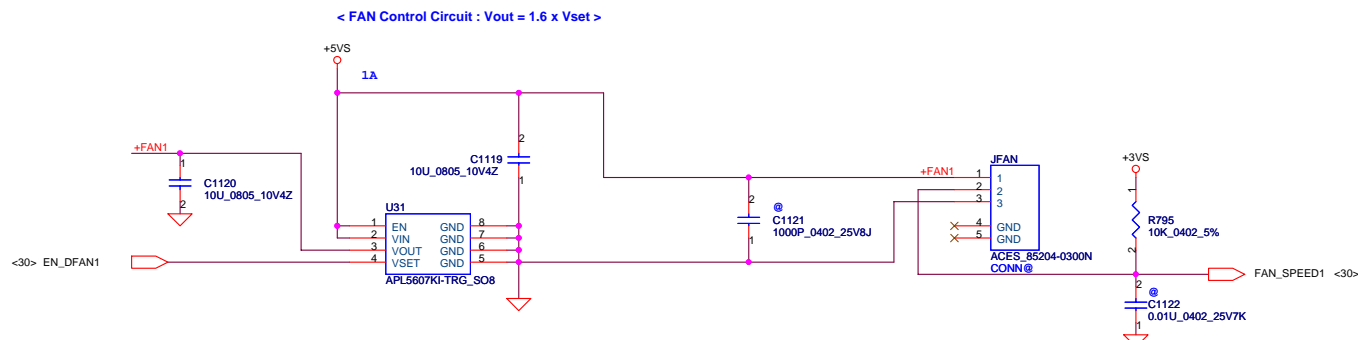
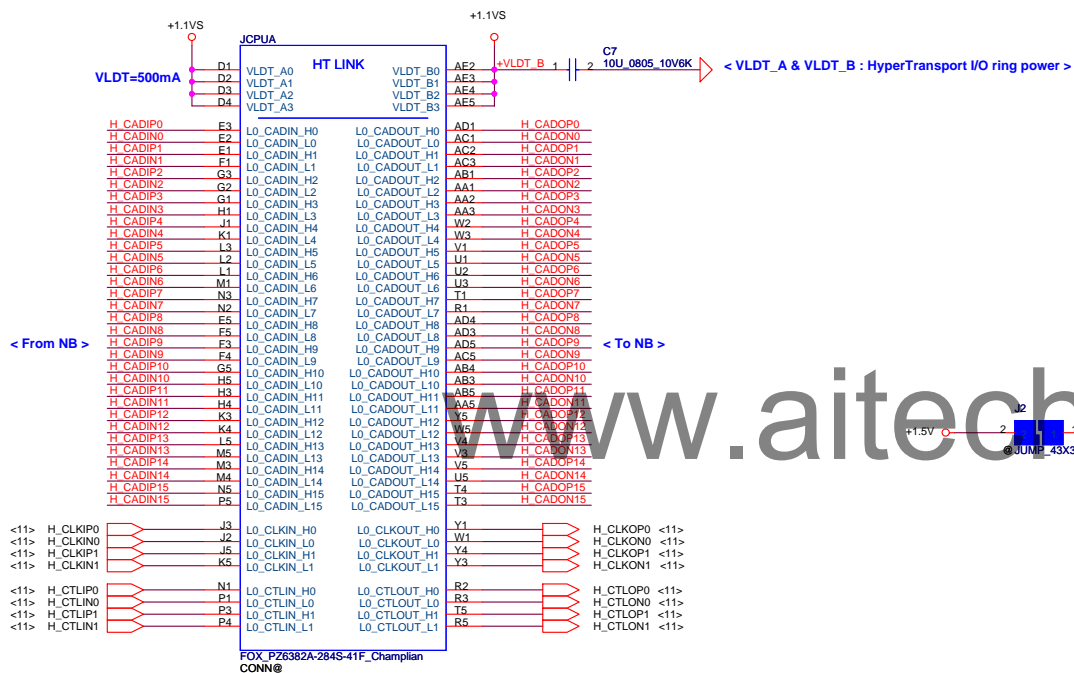
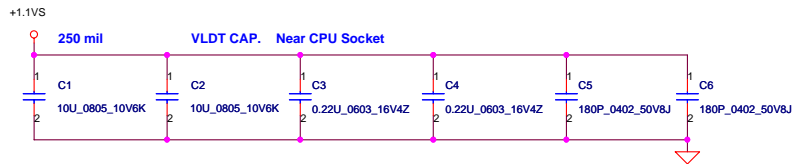
Power	Device	HEX	Address
+3VALW	WLAN/WIMAX		

THM@/MDC@/GSENSOR@/FLICA@/FP@/BT@/NEW@/WLAN@/WIMAX@/CAM@/INT@

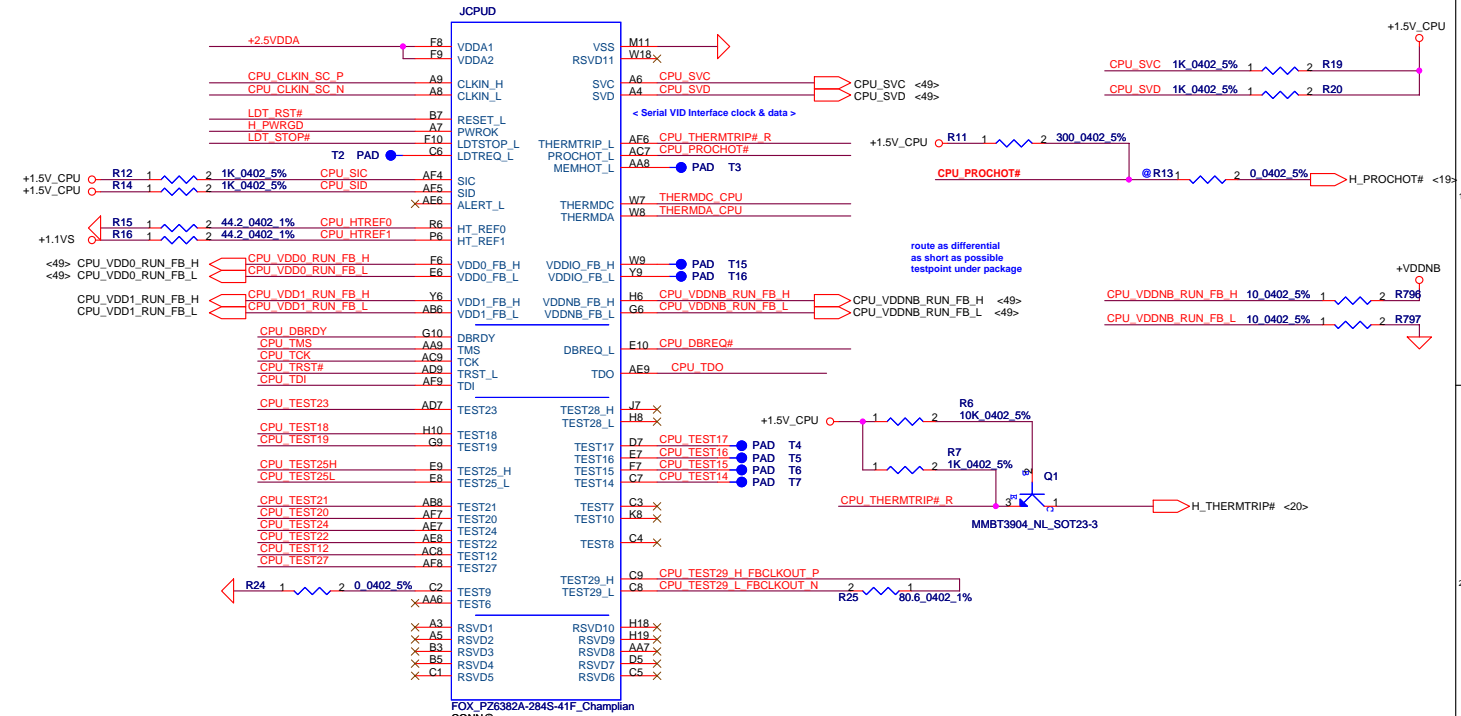
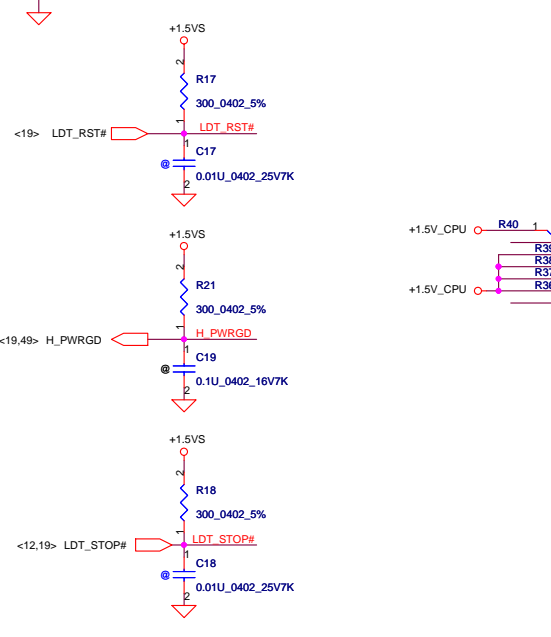
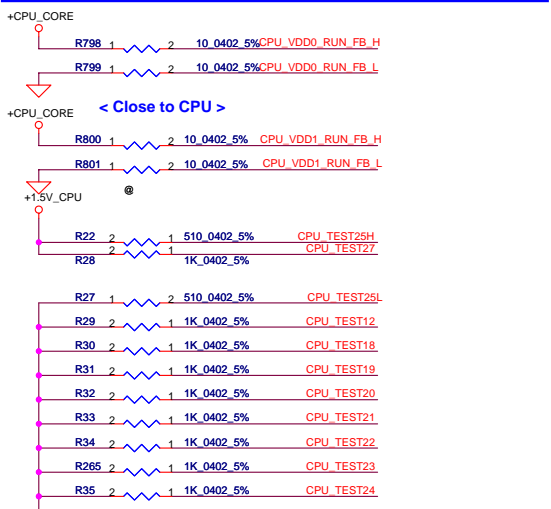
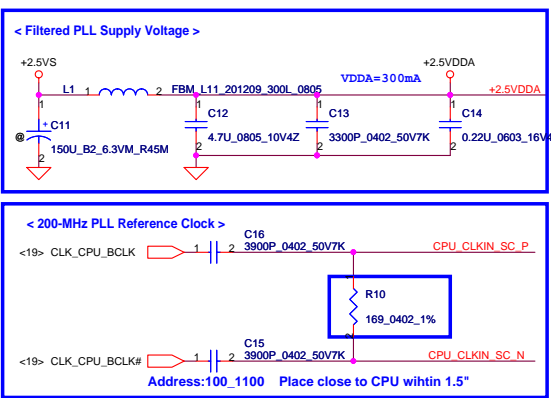
43187951L01:RS880MR1@/8105E@/TV@/UMA@
43187951L02:RS880MR1@/8105E@/TV@/DIS@/M9X@/4PCS@/
43187951L03:RS880MR1@/8105E@/3G@/DIS@/PARK@/PARKC@/4PCS@/CIR@
43187951L04:RS880MR1@/8111E@/3G@/DIS@/PARK@/Madison@/8PCS@/CIR@/CEC@

X7622651L01 : Hynix 512M
X7622651L02 : Hynix 1G
X7622651L03 : Samsung 512M
X7622651L04 : Samsung 1G

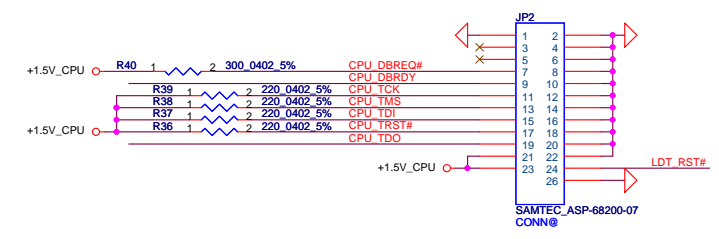
Security Classification	Compal Secret Data			Title		
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Rev	Document Number	Rev
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				401879	SCHEMATIC, MB A6191	A
Date: Wednesday, February 10, 2010				Sheet 4 of 50		



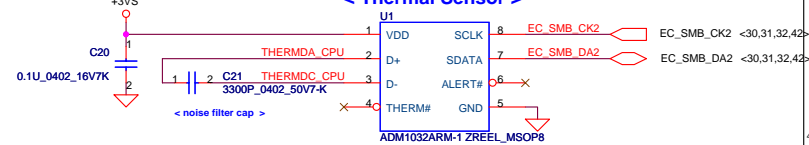
Security Classification			Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Title	SCHEMATIC, MB A6191	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	401879	Rev A
				Date:	Wednesday, February 10, 2010	Sheet 5 of 50



< HDT Connector >

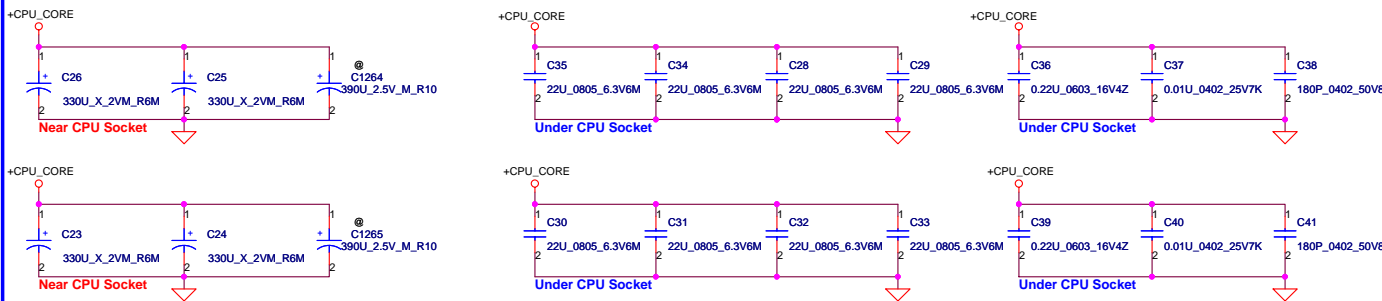


< Thermal Sensor >

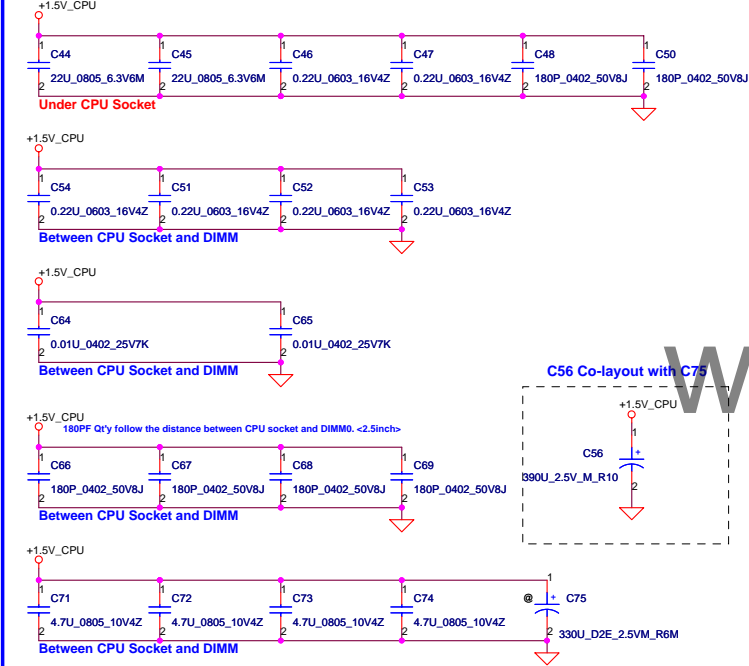


Security Classification	Compal Secret Data			Title	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev A
				401879	
				Date: Wednesday, February 10, 2010	Sheet 7 of 50

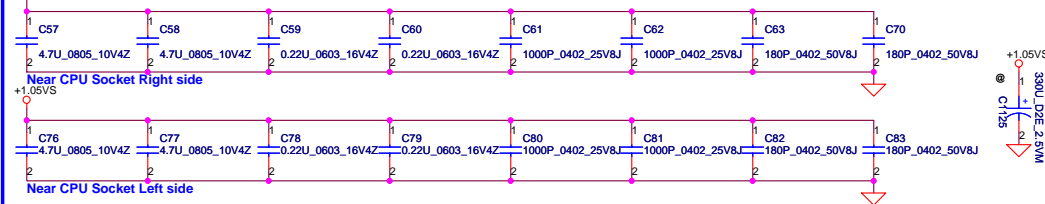
VDD decoupling : +CPU_CORE



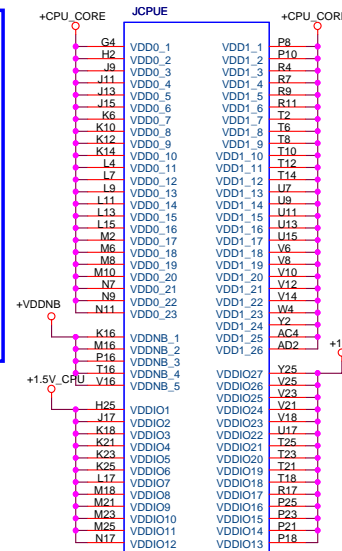
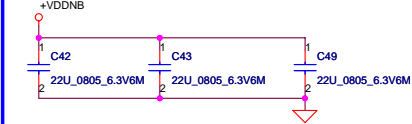
VDDIO decoupling : DDR SDRAM I/O ring power



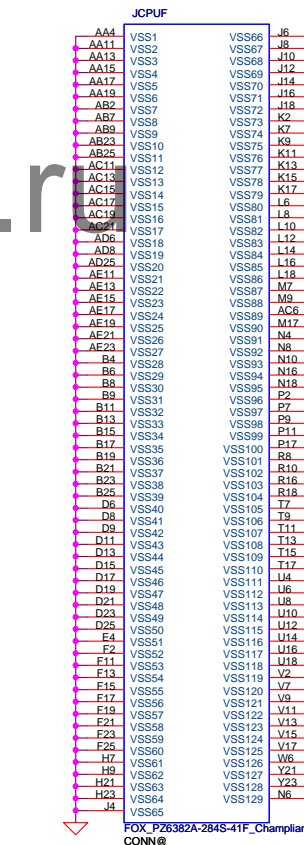
VDDR decoupling.



+VDDNB decoupling : Northbridge power

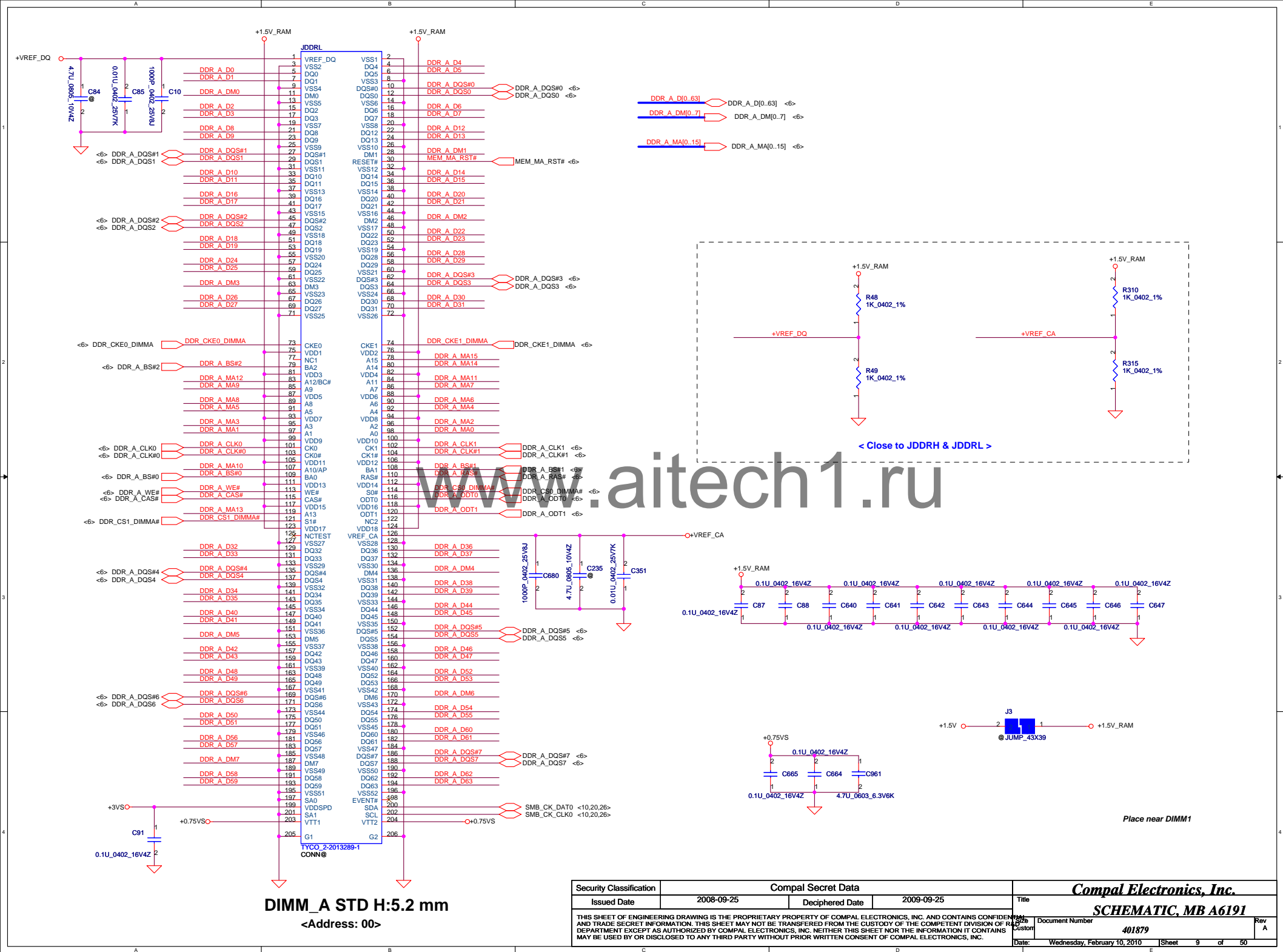


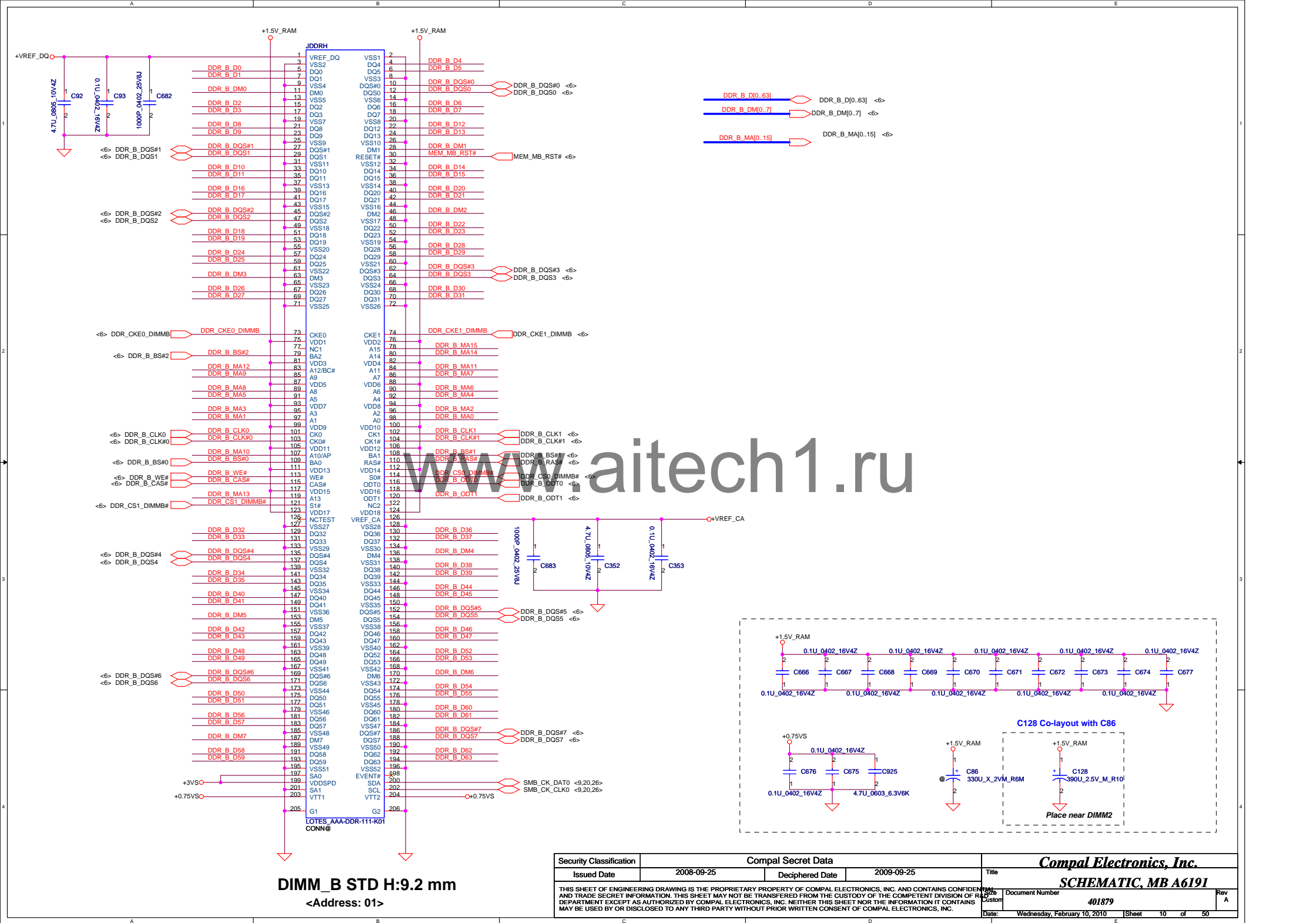
FOX_P26382A-284S-41F_Champion
CONN@

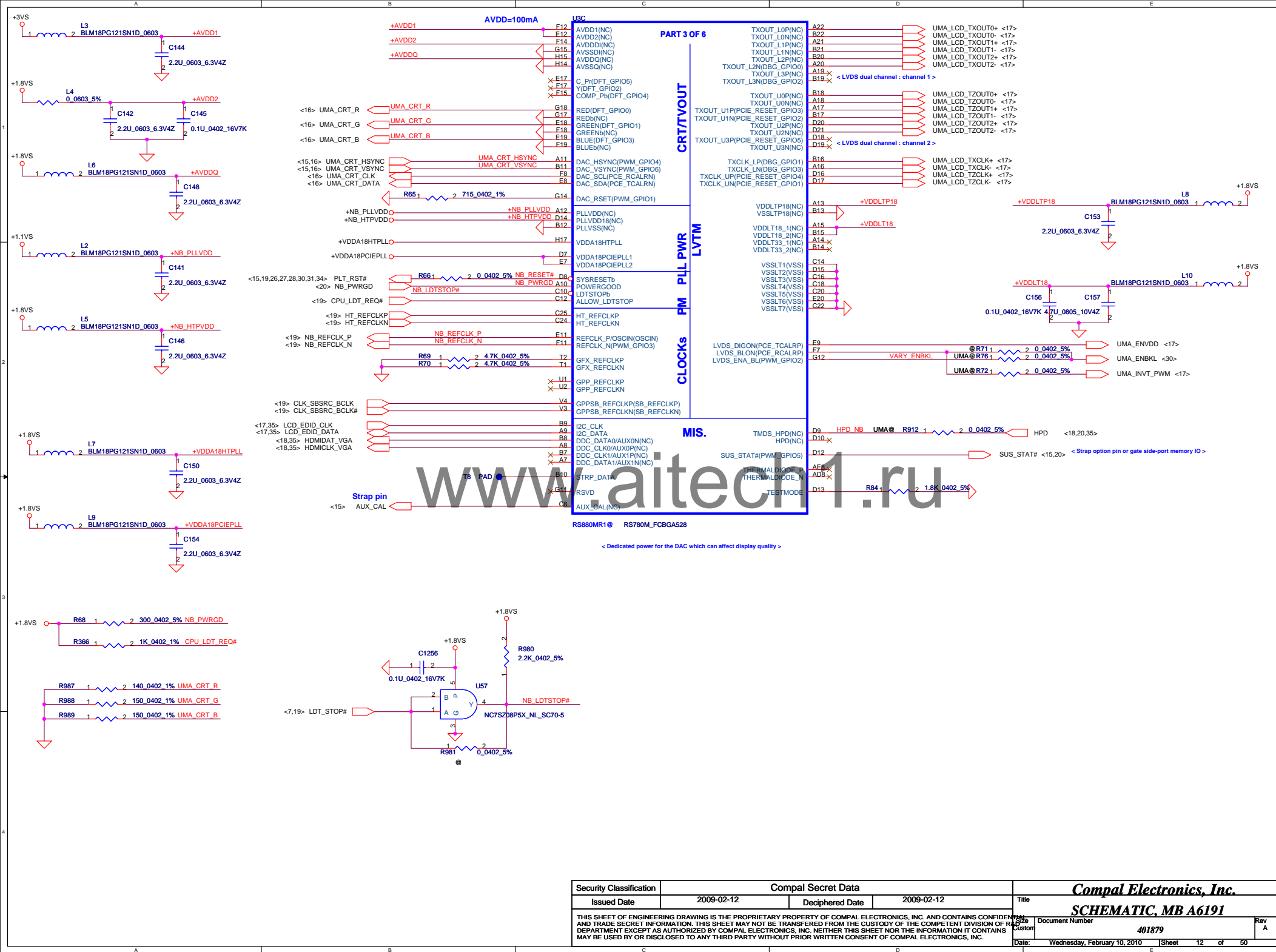


FOX_P26382A-284S-41F_Champion
CONN@

Security Classification		Compal Secret Data		Title	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Document Number	401879
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.				Date	Wednesday, February 10, 2010
				Sheet	8 of 50

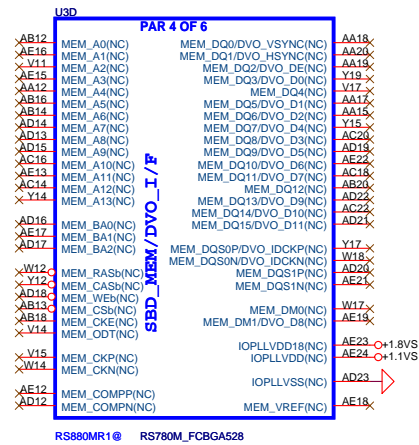




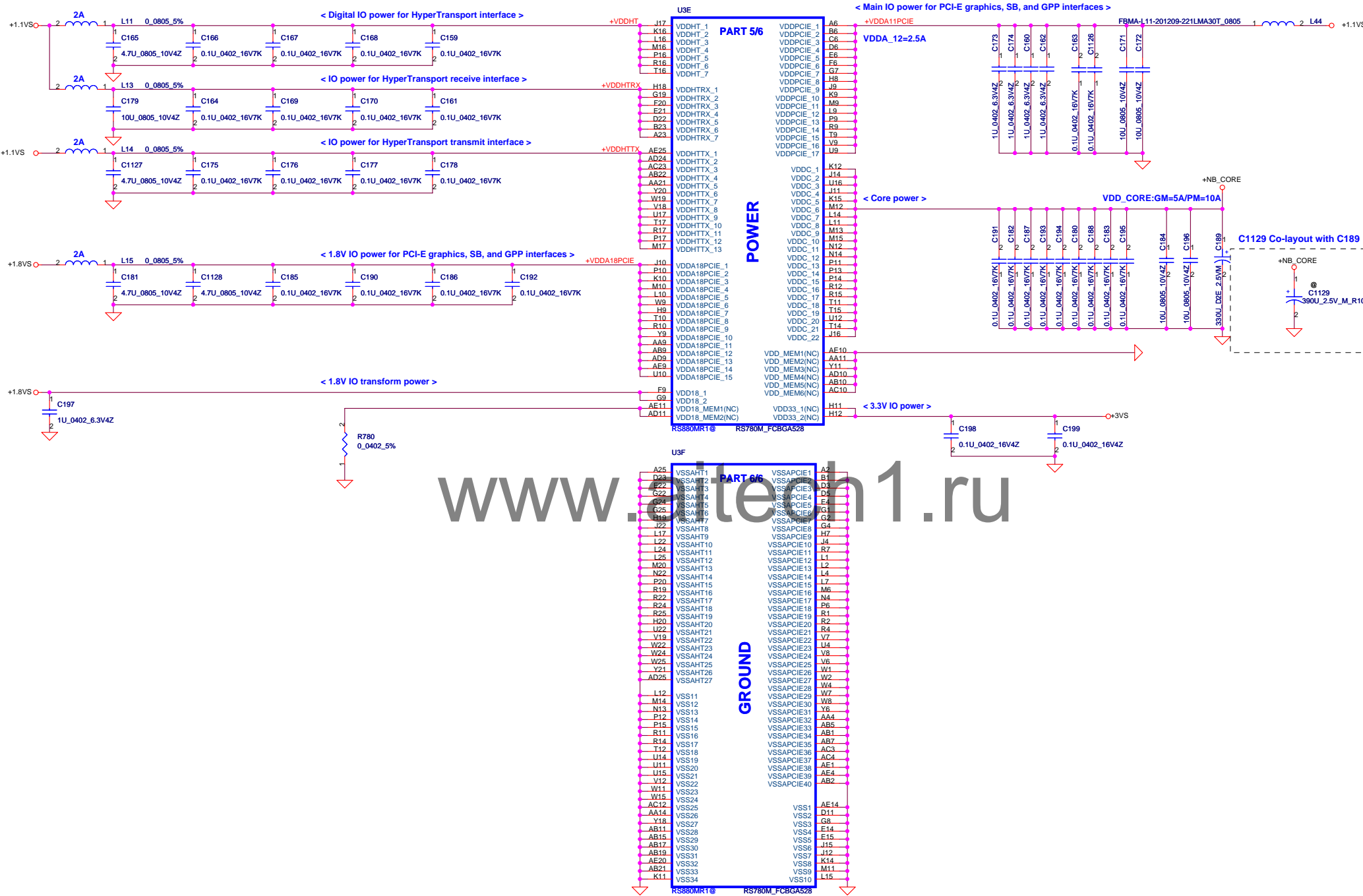


Security Classification		Compal Secret Data		Compal Electronics, Inc. SCHEMATIC, MB A6191	
Issued Date	2009-02-12	Deciphered Date	2009-02-12	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RAFAEL A. ARRIAGA 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.				Doc Number	Rev
				Customer	A
				Date: Wednesday, February 10, 2010	Sheet 12 of 50

www.aitech1.ru

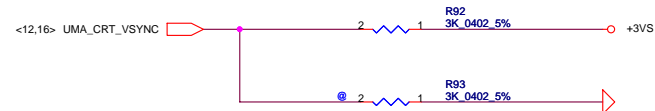


Security Classification		Compal Secret Data		Title	
Issued Date	2009-02-12	Deciphered Date	2009-02-12	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				401879	A
				Date: Wednesday, February 10, 2010	Sheet 13 of 50



Security Classification		Compal Secret Data		Title	
Issued Date	2009-02-12	Deciphered Date	2009-02-12	Document Number	401879
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.				Date: Wednesday, February 10, 2010	Rev A
				Sheet 14 of 50	

< RS880 VSYNC mux at CRT_VSYNC pull High to 3K >



< VSYNC : STRAP_DEBUG_BUS_GPIO_ENABLEb >

Enables the Test Debug Bus using GPIO.

1 : Disable (RX881, RS880)
0 : Enable (RX881, RS880)

PIN: RS880--> VSYNC#

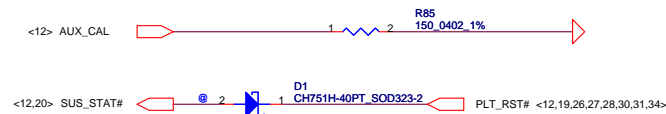
< RS880 use register to control PCI-E configure >

< DFT_GPIO[4:2] : STRAP_PCIE_GPP_CFG[2:0] >

These pin straps are used to configure PCI-E GPP mode.

000 : 00001
001 : 00010
010 : 01011
011 : 00100
100 : 01010
101 : 01100
111 : 01011

< RS880 SUS_STAT# >



< SUS_SATA# : LOAD_EEPROM_STRAPS >

Selects Loading of STRAPS from EPROM

1 : Bypass the loading of EEPROM straps and use Hardware Default Values
0 : I2C Master can load strap values from EEPROM if connected, or use default values if not connected

RS880:SUS_STAT#

< RS880 use HSYNC to enable SIDE PORT (internal pull high) >



< HSYNC : STRAP_DEBUG_BUS_PCIE_ENABLEb >

RX881: Enables the Test Debug Bus using PCIE bus

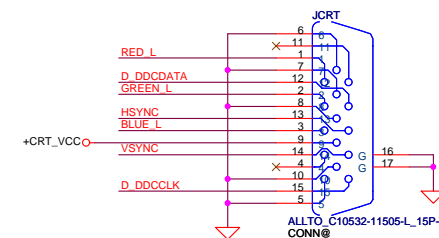
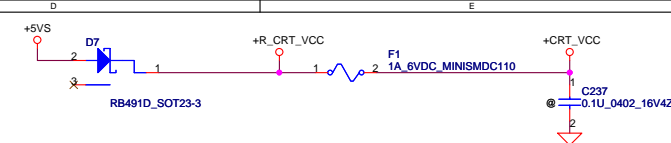
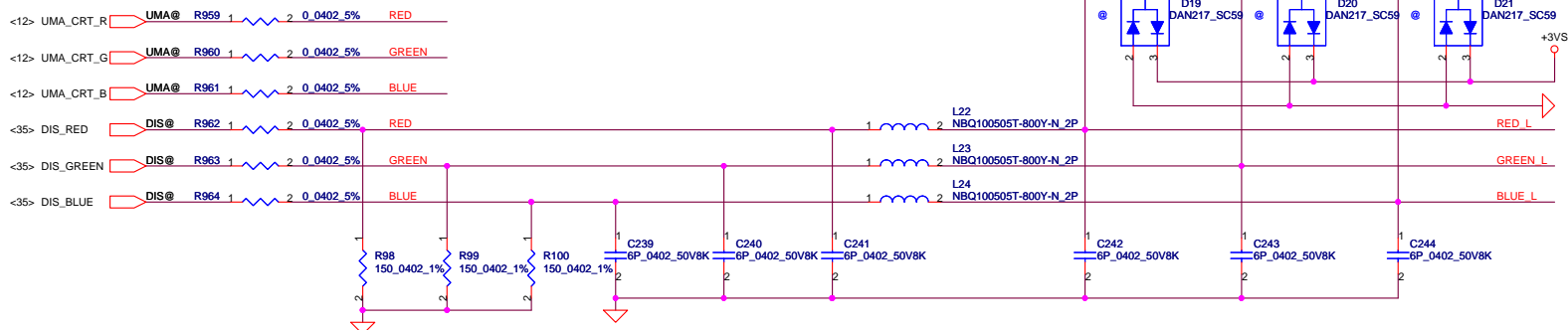
1: Disable (Can still be enabled using nbcfg register access)
0 : Enable

RS880: Enables Side port memory (RS780 use HSYNC#)

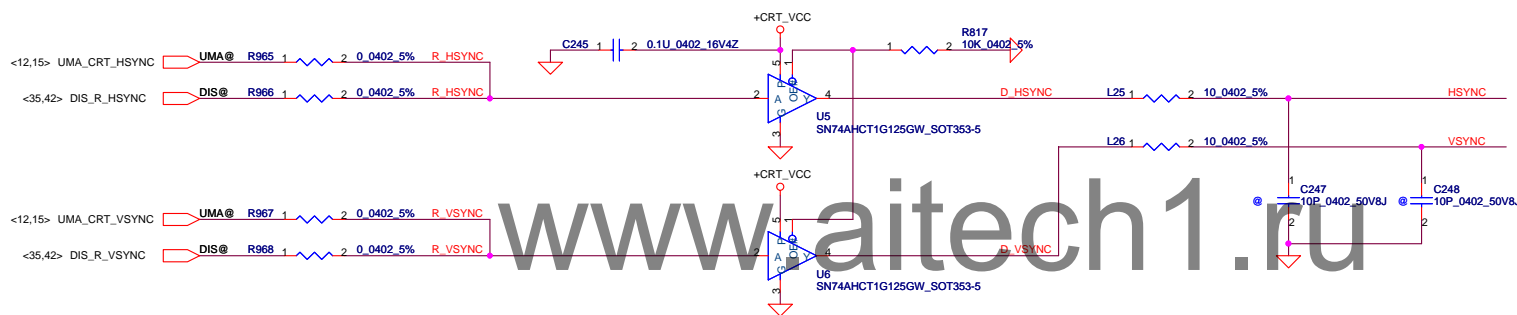
1. Disable (RS880)
0 : Enable (RS880)

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009-02-12	Deciphered Date	2009-02-12	Title	SCHEMATIC, MB A6191	
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	401879	Rev A
				Date:	Wednesday, February 10, 2010	Sheet 15 of 50

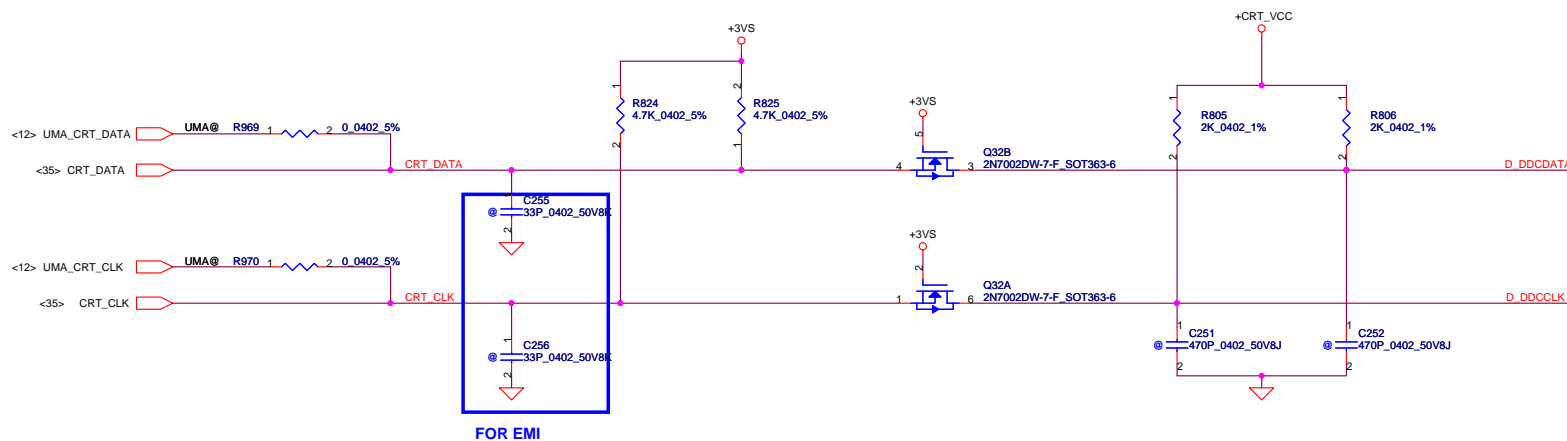
< CRT CONNECTOR >



< SYNC SIGNAL >

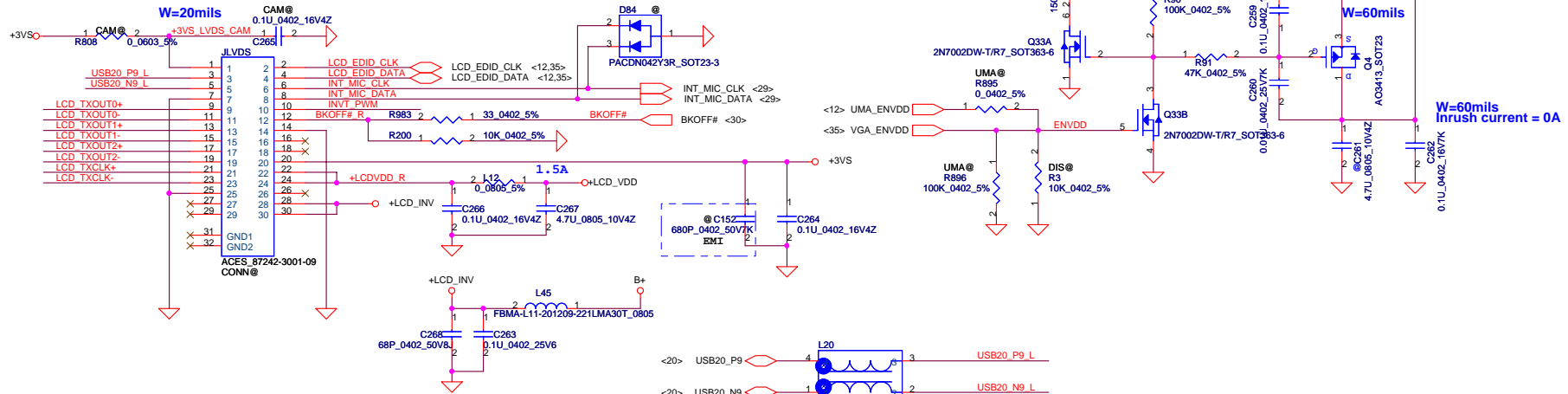


< Display Data Channel >

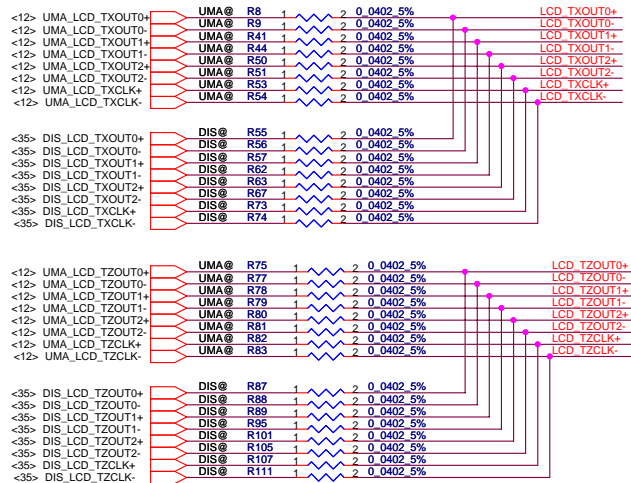
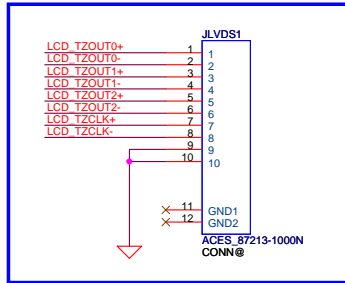


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Document Number	Rev A
				401879	
				Date: Wednesday, February 10, 2010	Sheet 16 of 50

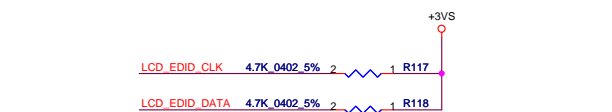
LCD/PANEL BD. Conn.



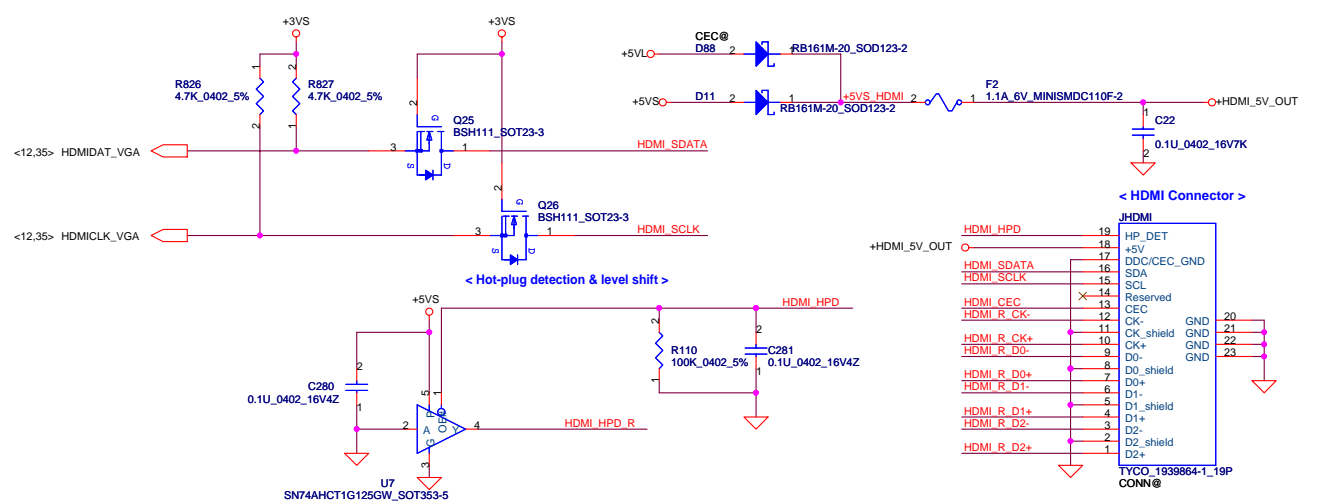
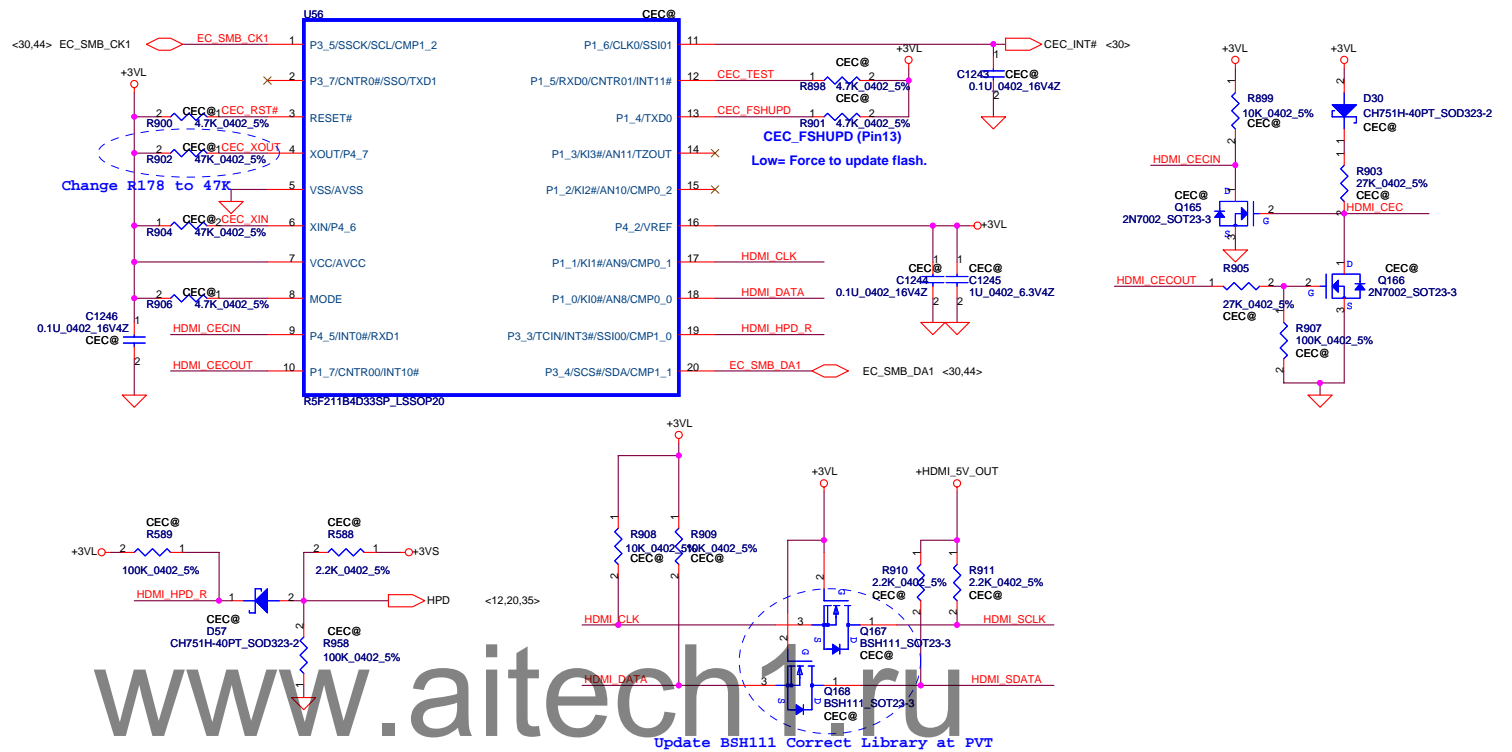
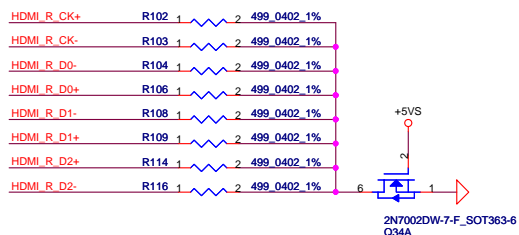
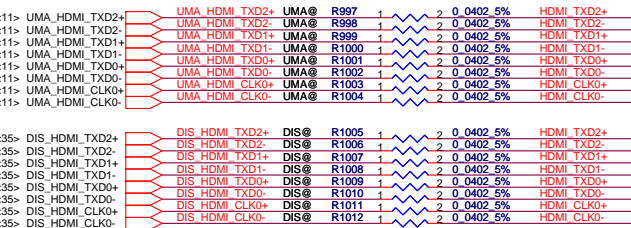
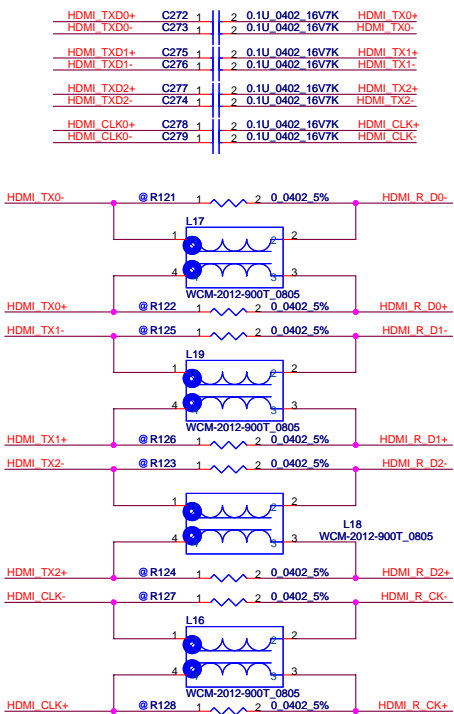
For Full-HD LCD



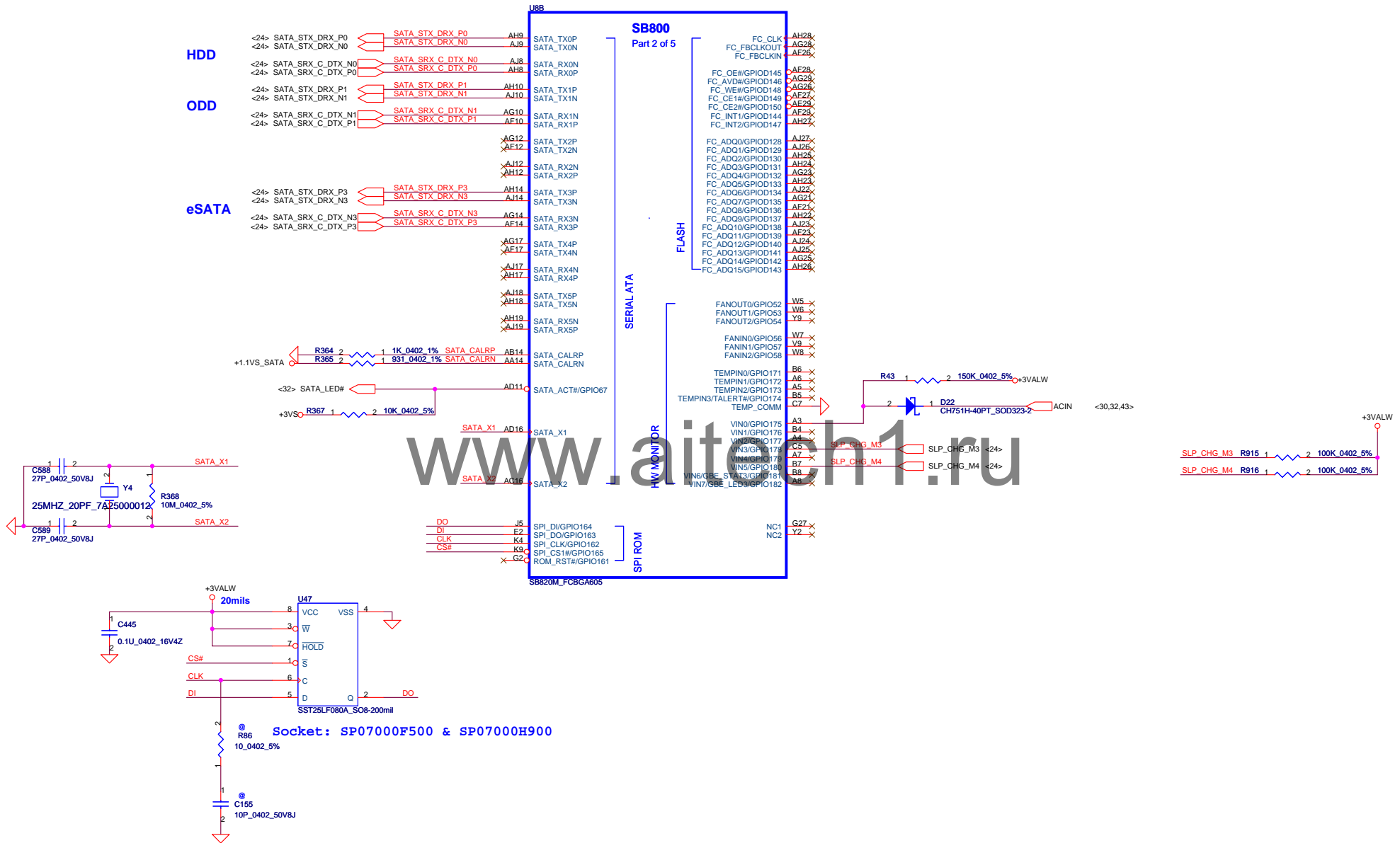
www.aitech1.ru



Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2008-09-25				Deciphered Date			
								2009-09-25			
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				Schematic, MB A6191			
				Document Number				401879			
				Date				Wednesday, February 10, 2010			
				Sheet				17 of 50			



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008-09-25	Deciphered Date	2009-09-25		
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	
				SCHEMATIC, MB A6191	
				Document Number 401879	Rev A
Date:				Wednesday, February 10, 2010	Sheet 18 of 50

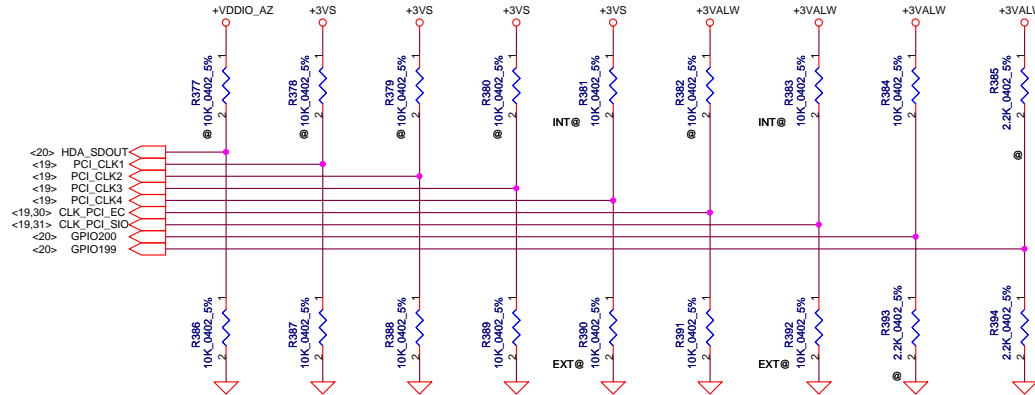


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Document Number	401879	Rev A
				Date:	Wednesday, February 10, 2010	Sheet 21 of 50

REQUIRED STRAPS

Check Internal PU/PD

	AZ_SDOUT	PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4	LPC_CLK0	LPC_CLK1	GPIO200	GPIO199
PULL HIGH	LOW POWER MODE	ALLOW PCIE GEN2	WATCHDOG TIMER ENABLE	USE DEBUG STRAP	Inter CLK Gen Mode Enable	EC ENABLE	CLOCKGEN ENABLE	H,H = Reserved H,L = SPI ROM (Default)	
PULL LOW	Performance MODE	FORCE PCIE GEN1	WATCHDOG TIMER DISABLE	IGNORE DEBUG STRAP	Inter CLK Gen Mode Disable	EC DISABLE	CLOCKGEN DISABLE	L,H = LPC ROM (Default L,NC) L,L = FWH ROM	
	DEFAULT	DEFAULT	DEFAULT	DEFAULT	DEFAULT	DEFAULT	DEFAULT		



www.aitech1.ru

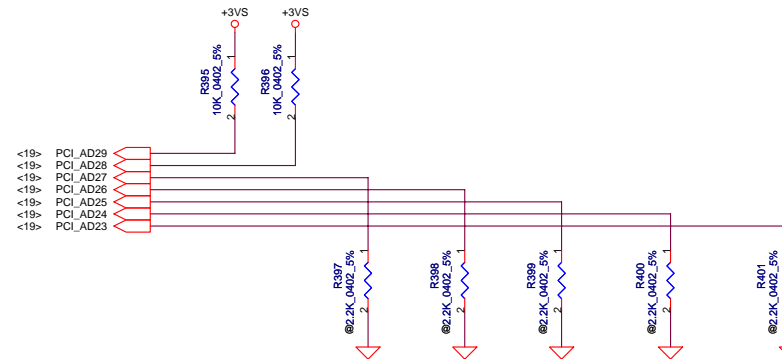
DEBUG STRAPS

SB800 HAS 15K INTERNAL PU FOR PCI_AD[27:23]

	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE PCI PLL	DISABLE ILA AUTORUN	USE FC PLL	USE DEFAULT PCIE STRAPS	DISABLE PCI MEM BOOT
	DEFAULT	DEFAULT	DEFAULT	DEFAULT	DEFAULT
PULL LOW	BYPASS PCI PLL	ENABLE ILA AUTORUN	BYPASS FC PLL	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT

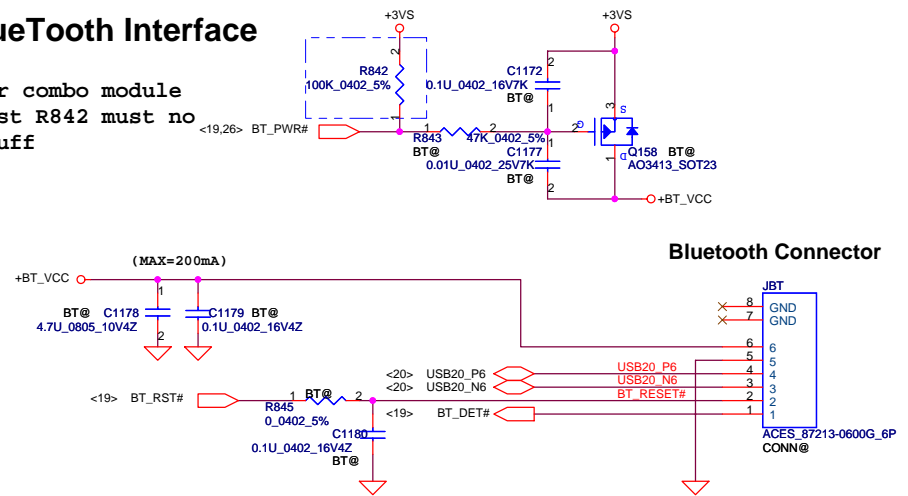
Check AD29,AD28 strap function

check default

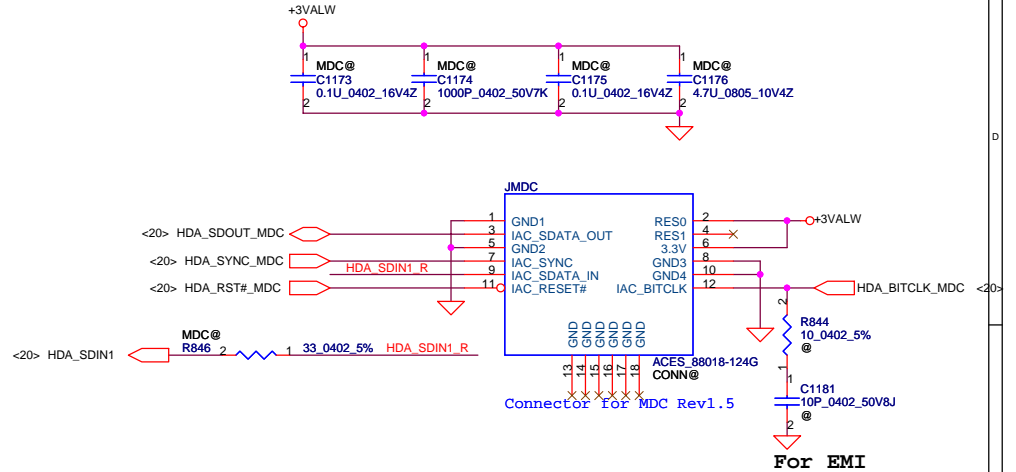


BlueTooth Interface

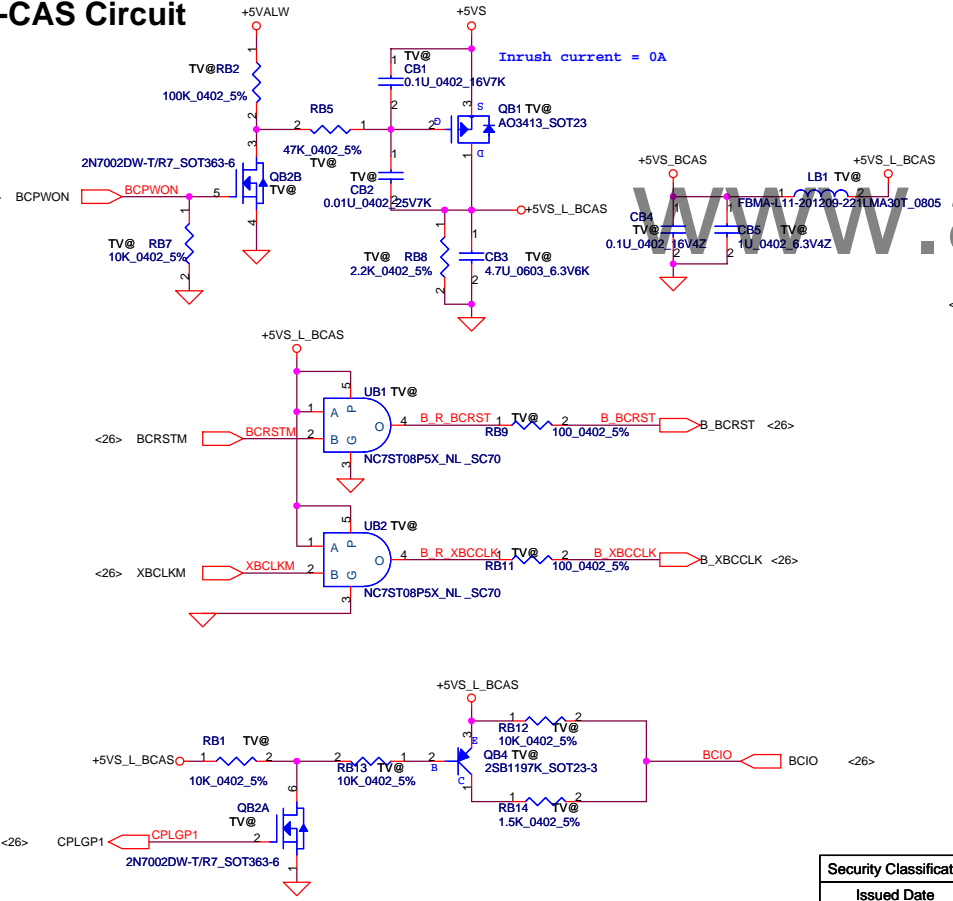
For combo module
must R842 must no
stuff



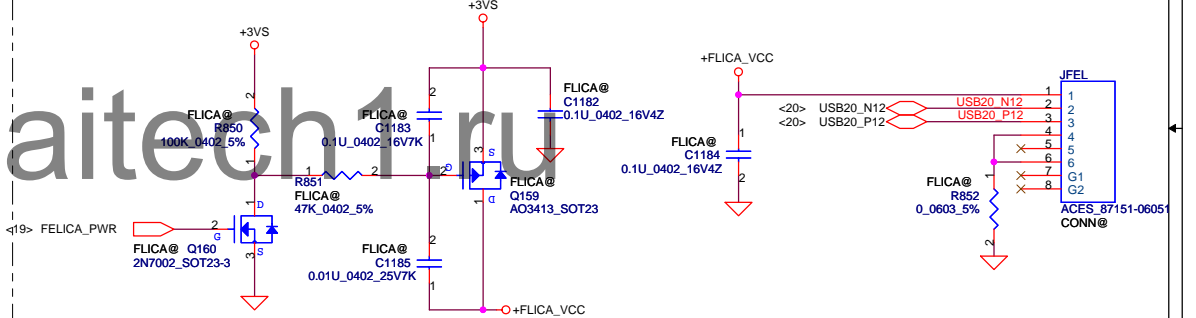
MDC 1.5 Conn.



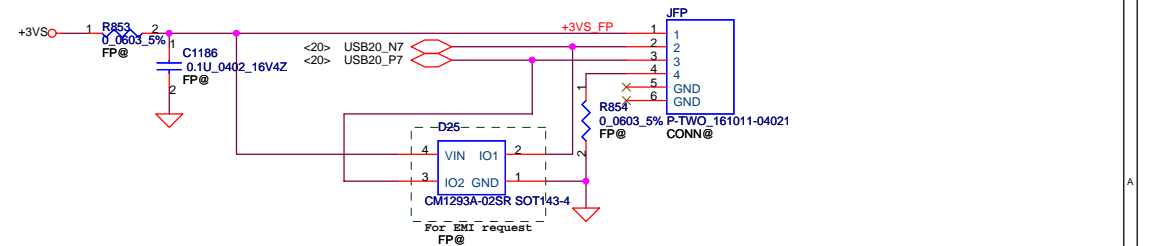
B-CAS Circuit



Felica

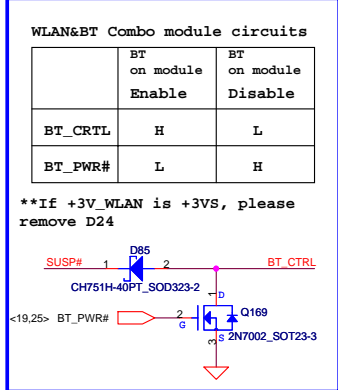


Finger printer



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/10/05	Deciphered Date	2010/01/23	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev A
				401879	
				Date: Wednesday, February 10, 2010	Sheet 25 of 50

Short PJ27 for Wimax
Short PJ26 for WLAN



www.aitech1.ru

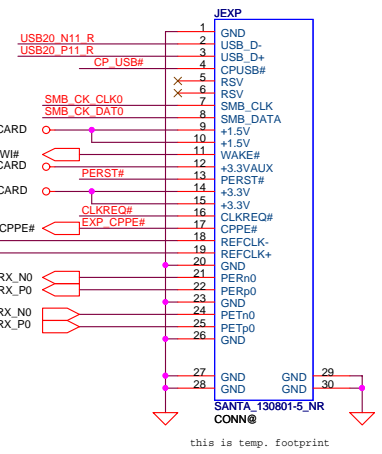
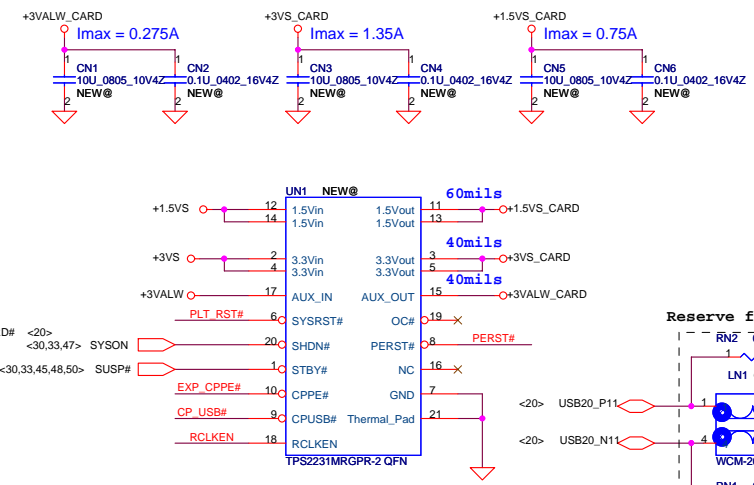
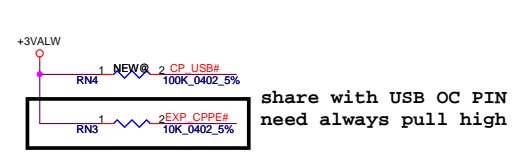
The diagram illustrates the electrical connections for the B-CAS module. It is divided into three main sections: PCIE-JET, B-CAS, and J3GSM.

- PCIE-JET Section:** Shows connections for signals like XBCLKM, CLKREQ_IET#, CLK_PCIE_IET#, BCRSTM, BCPWON, PCIE_PTX_C_IRX_N4, PCIE_PTX_C_IRX_P4, PCIE_ITX_C_PRX_N4, PCIE_ITX_C_PRX_P4, and TMPTU2_SXP. It also indicates a +3VS connection.
- B-CAS Section:** Shows connections for UIM_PWR, UIM_DATA, UIM_CLK, UIM_RESET, COMMON, ISDBT_DET, RF_OFF#, PLT_RST#, USB20_P5_TV, USB20_N5_TV, RM18, RM7, RM15, USB20_N10, USB20_P10, LED_WIMAX#, CPLGP1, and TMPTU1_SXP. It also shows a +UIM_PWR connection.
- J3GSM Section:** Shows connections for VCC, RST, CLK, NC, GND, VPP, I/O, and SIM_DATA. It also shows a +VCC_SIM, SIM_RESET, and SIM_CLK connection.

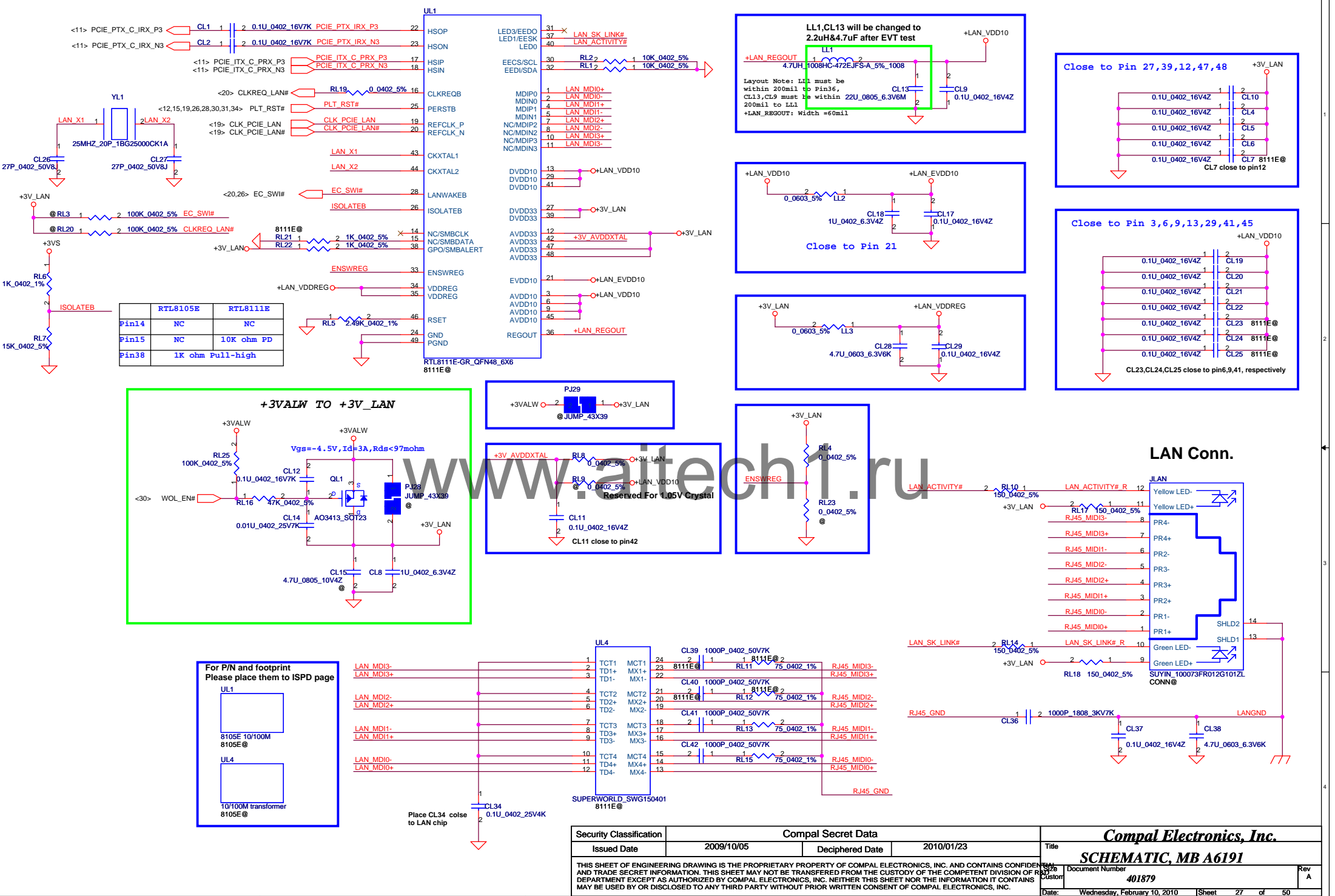
The diagram includes various components and their values, such as capacitors (e.g., 10P_0402_50VBJ, 10P_0402_50VJ, 10P_0402_16V4Z, 10P_0402_22P), resistors (e.g., 4.7K_0402, 22P_0402_50VJ, 470_0402_5%), and integrated circuits (e.g., DM1 RLZ20A_LL34, MOLEX_47273-0001-D).

The diagram also shows the connection of the B-CAS module to the J3GSM module, with the J3GSM module providing power and data to the B-CAS module.

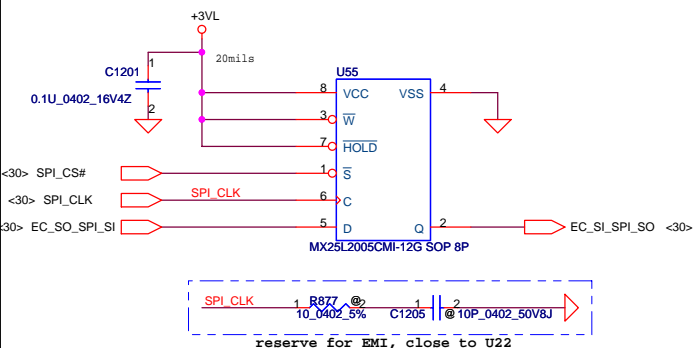
The diagram is a detailed schematic showing the electrical connections between the PCIE-JET, B-CAS, and J3GSM modules. It includes various components like capacitors, resistors, and integrated circuits, along with their pin connections and values.



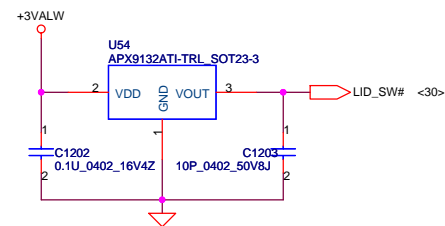
Security Classification	Compal Secret Data			<i>Compal Electronics, Inc.</i>		
Issued Date	2009/10/05	Deciphered Date	2010/01/23	Title	SCHEMATIC, MB A6191	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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
					401879	A
				Date:	Wednesday, February 10, 2010	Sheet 26 of 50



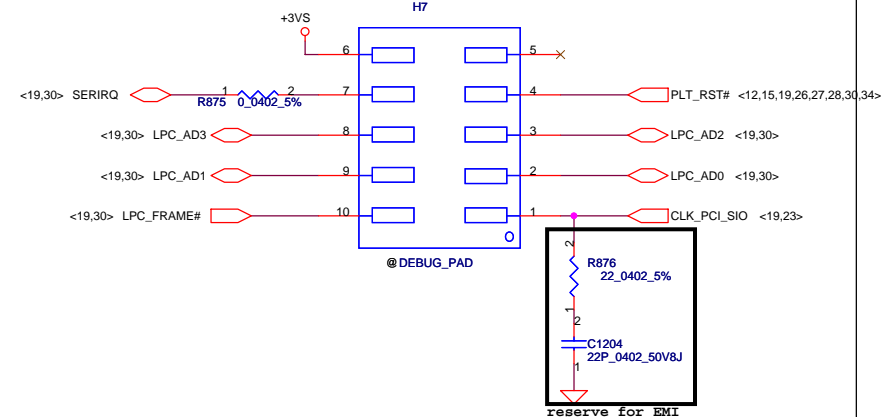
Socket: SP07000F500 & SP07000H900



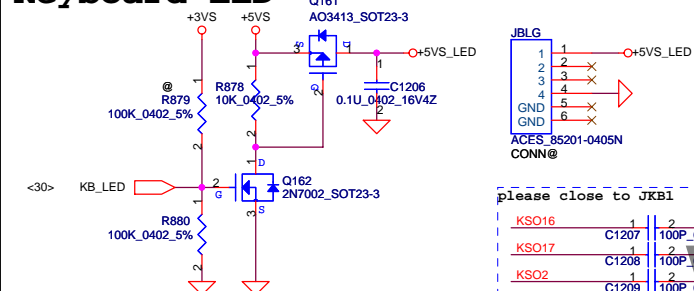
Lid SW



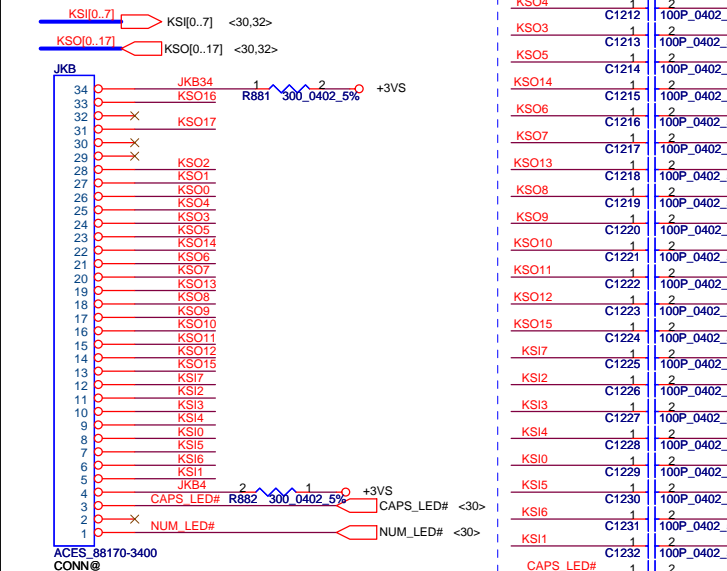
LPC Debug Port Please place the PAD under DDR DIMM.



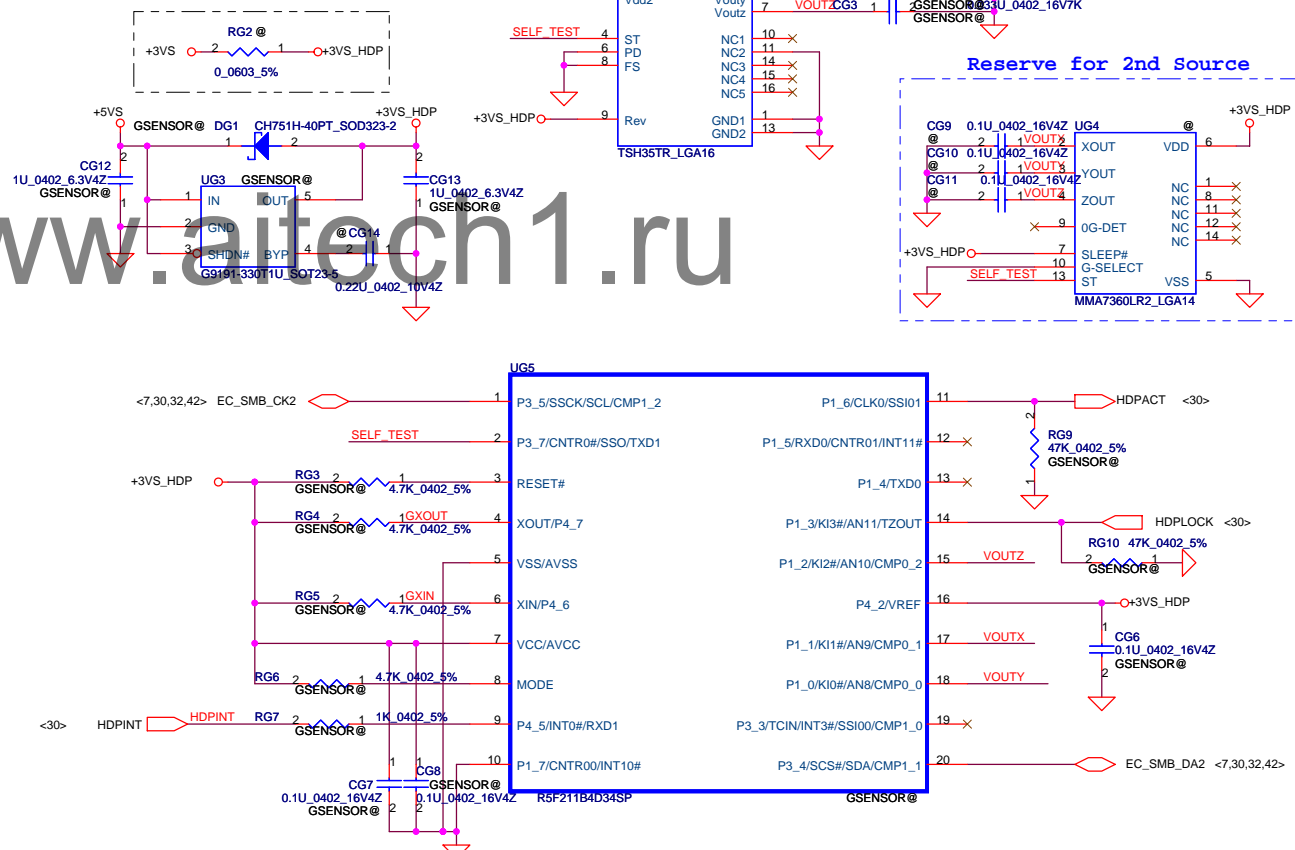
Keyboard LED



KEYBOARD CONN.

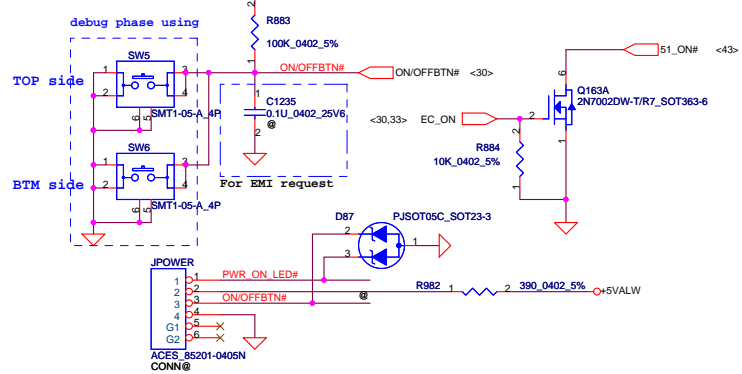


G-Sensor

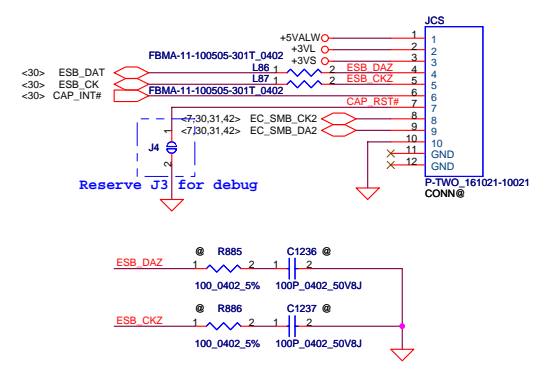


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/10/05	Deciphered Date	2010/01/23	Title	SCHEMATIC, MB A6191	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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 A
					401879	
				Date:	Wednesday, February 10, 2010	Sheet 31 of 50

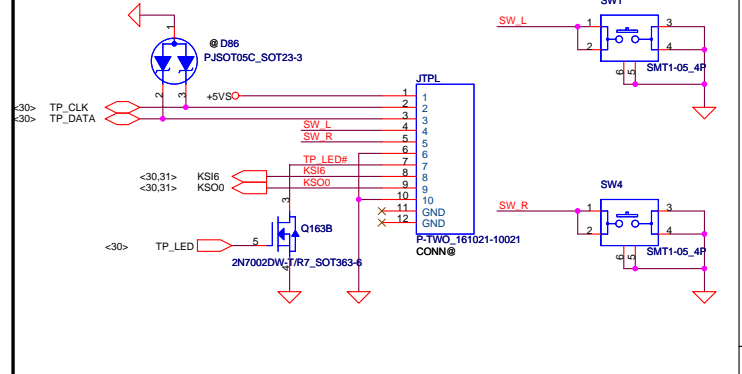
Power Button



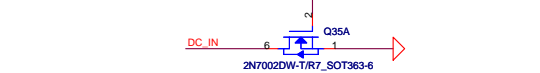
Caps Sensor Connector



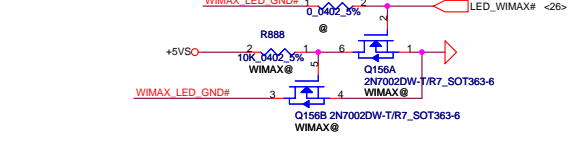
Touch/B Connector



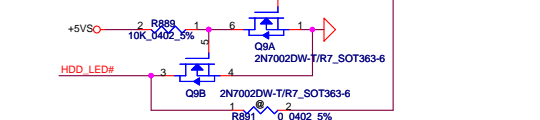
DC-IN LED



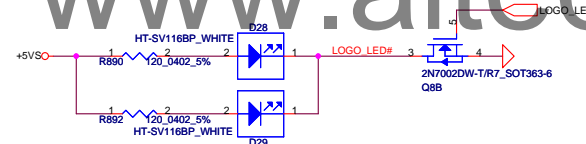
WiMAX LED



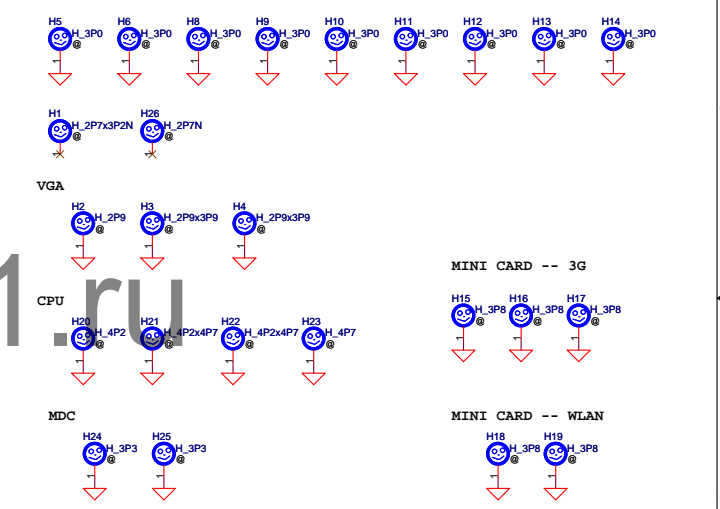
HDD LED



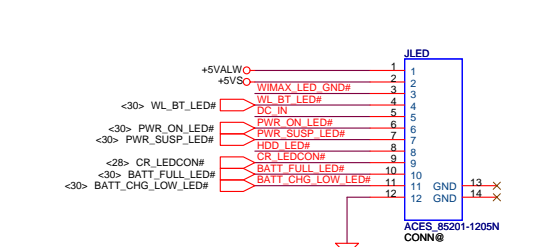
Logo LED



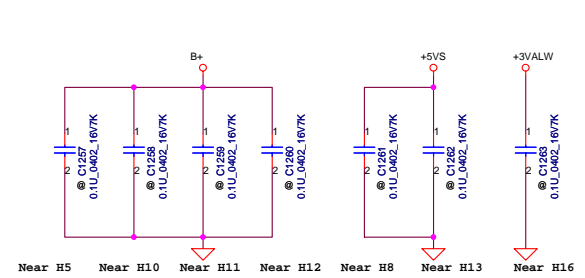
Screw Hole



LED/B Connector



ESD reserved

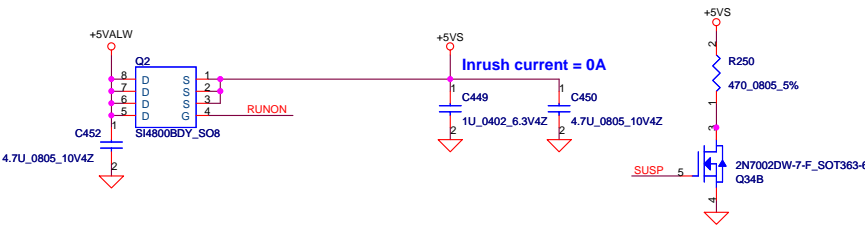


PCB

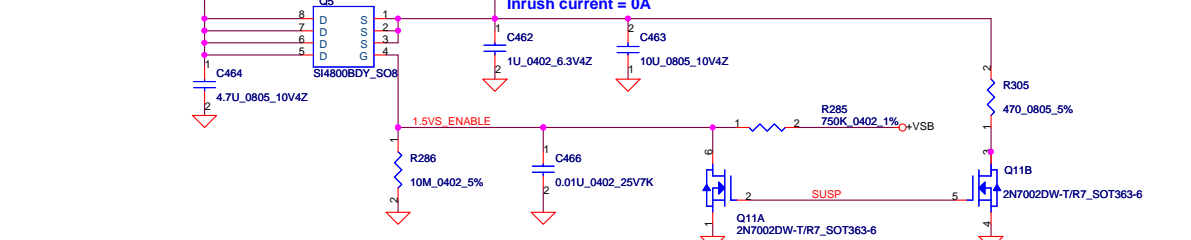


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/10/05	Deciphered Date	2010/01/23	Title	SCHEMATIC, MB A6191
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
					401879
				Date	Wednesday, February 10, 2010
				Sheet	32 of 50

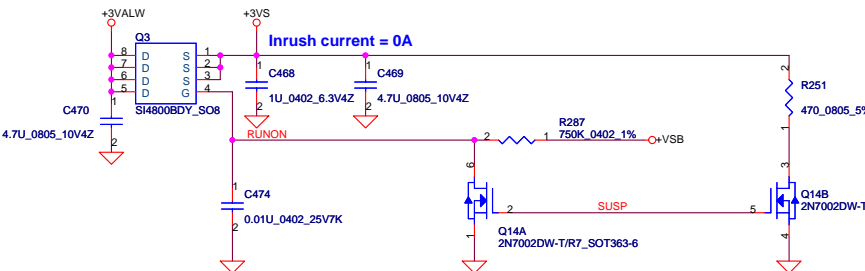
< +5VALW TO +5VS >



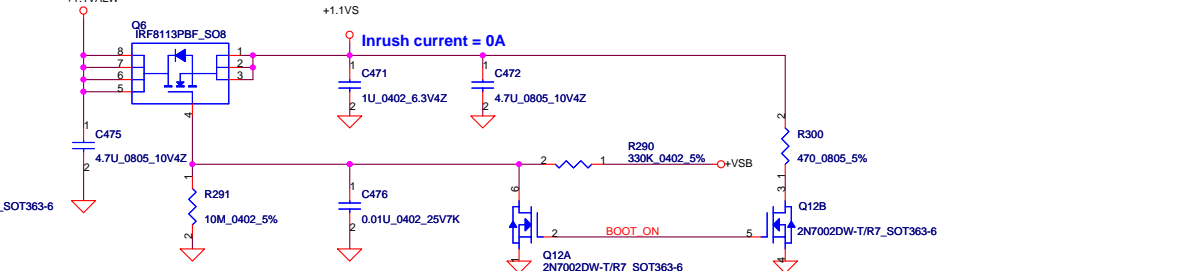
< +1.5V TO +1.5VS >



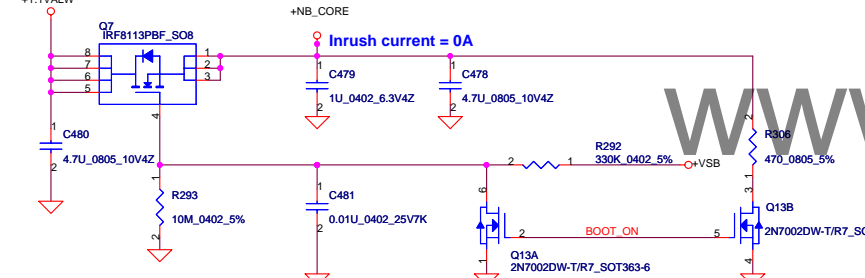
< +3VALW TO +3VS >



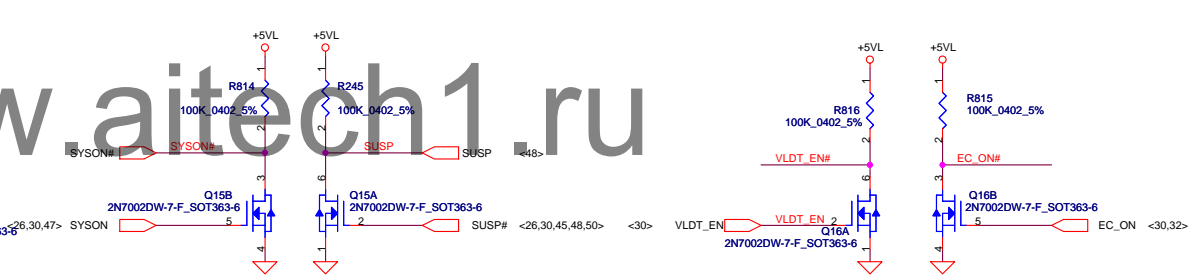
< +1.1VALW TO +1.1VS >



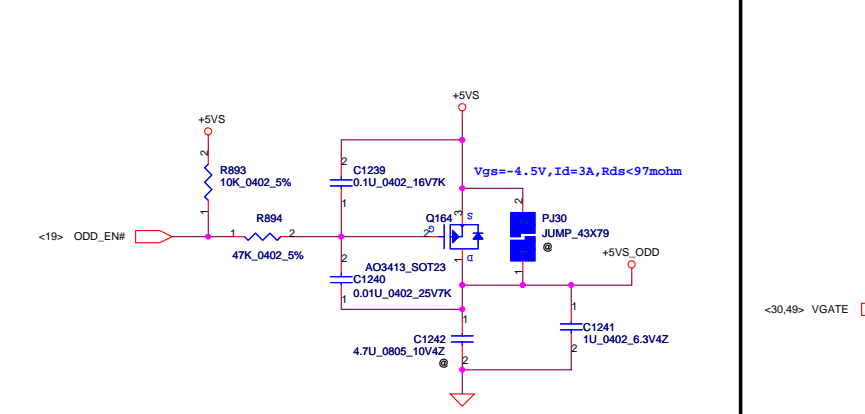
< +1.1VALW TO +NB_CORE >



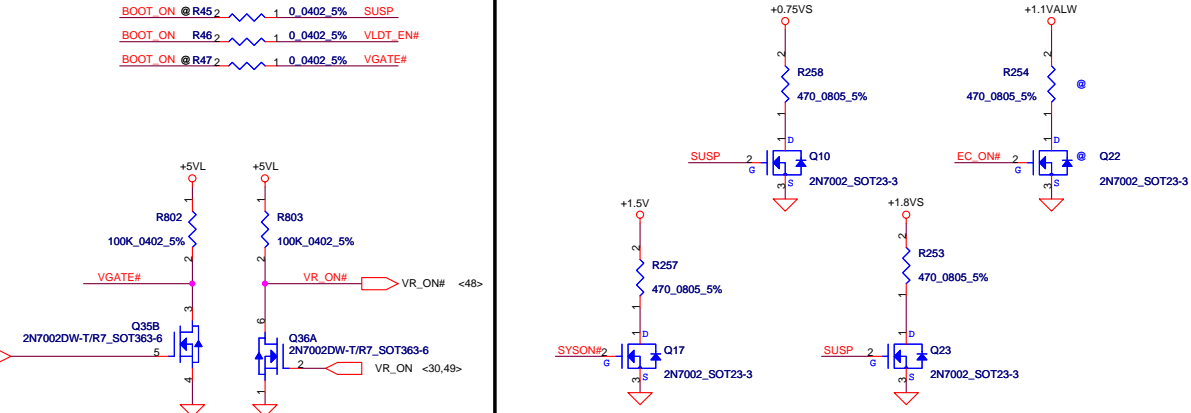
< Inversion of SYSON, SUSP#, VLDT_EN, EC_ON >



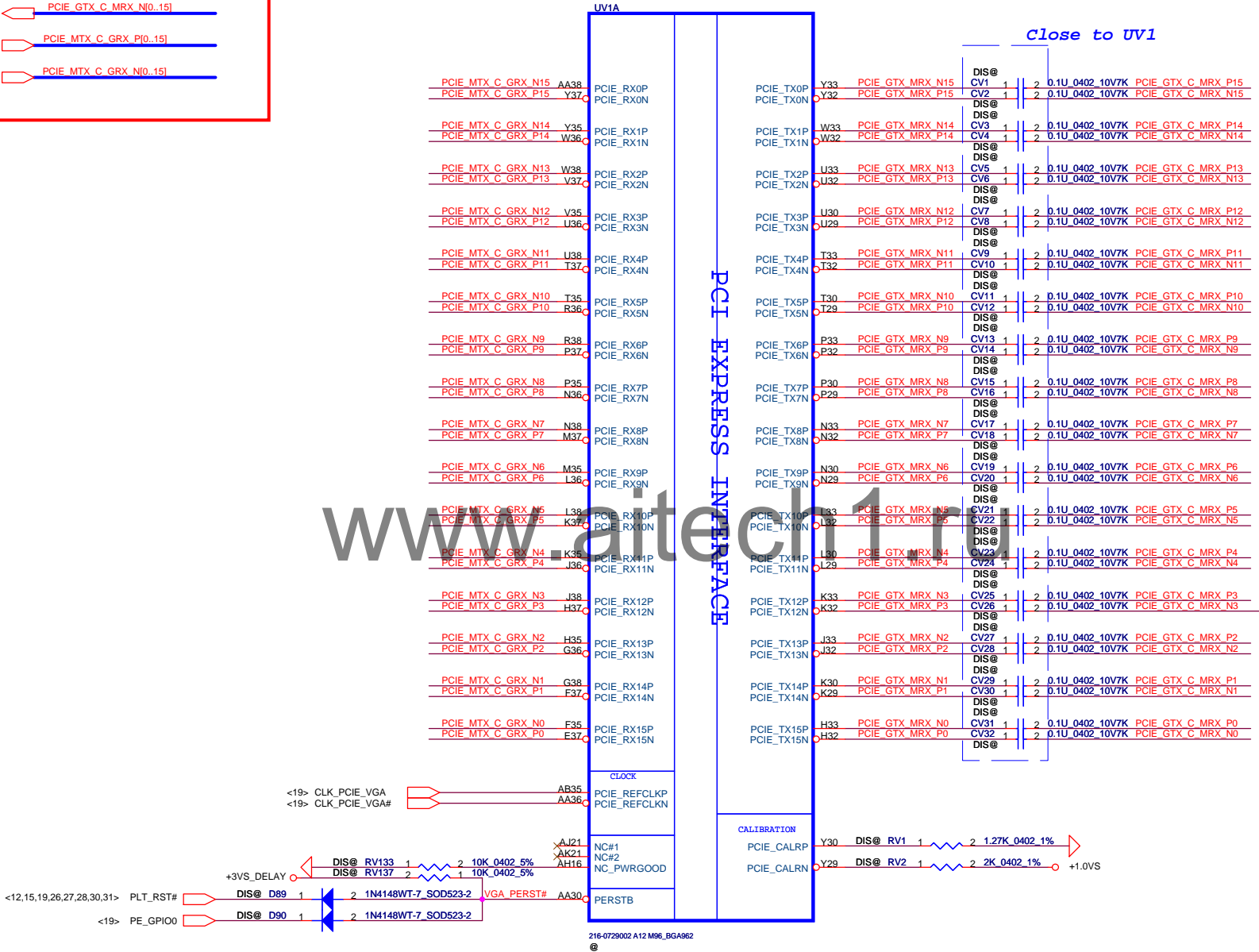
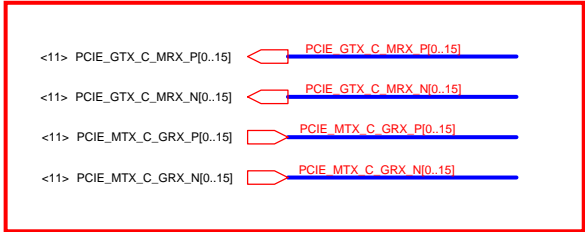
+5VS TO +5VS_ODD



< Discharge circuit >

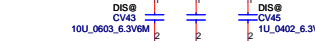
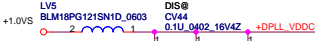
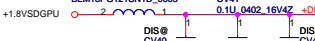
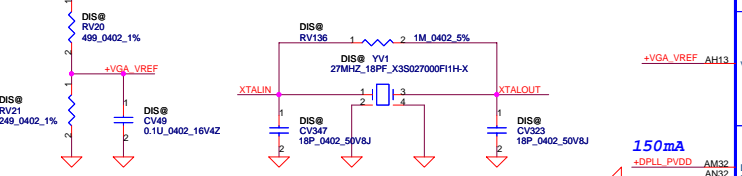
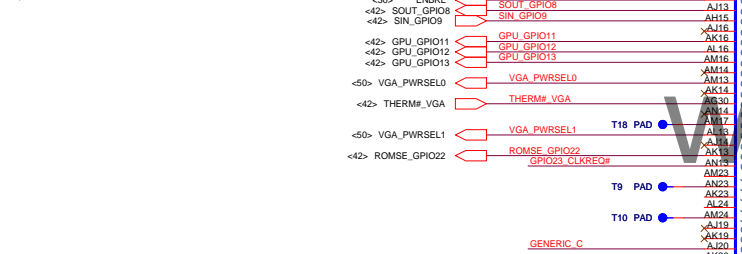
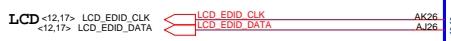
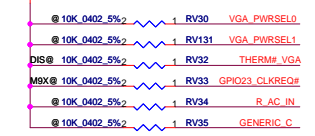


Security Classification		Compal Secret Data		Title	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev A
				401879	
				Date: Wednesday, February 10, 2010	Sheet 33 of 50



Security Classification		Compal Secret Data		Title	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev A
				401879	
				Date: Wednesday, February 10, 2010	Sheet 34 of 50

+3VS_DELAY



GENERAL PURPOSE I/O

GPIO_0

GPIO_1

GPIO_2

GPIO_3

GPIO_4

GPIO_5

GPIO_6

GPIO_7

GPIO_8

GPIO_9

GPIO_10

GPIO_11

GPIO_12

GPIO_13

GPIO_14

GPIO_15

GPIO_16

GPIO_17

GPIO_18

GPIO_19

GPIO_20

GPIO_21

GPIO_22

GPIO_23

GPIO_24

GPIO_25

GPIO_26

GPIO_27

GPIO_28

GPIO_29

GPIO_30

GPIO_31

GPIO_32

GPIO_33

GPIO_34

GPIO_35

GPIO_36

GPIO_37

GPIO_38

GPIO_39

GPIO_40

GPIO_41

GPIO_42

GPIO_43

GPIO_44

GPIO_45

GPIO_46

GPIO_47

GPIO_48

GPIO_49

GPIO_50

GPIO_51

GPIO_52

GPIO_53

GPIO_54

GPIO_55

GPIO_56

GPIO_57

GPIO_58

GPIO_59

GPIO_60

GPIO_61

GPIO_62

GPIO_63

GPIO_64

GPIO_65

GPIO_66

GPIO_67

GPIO_68

GPIO_69

GPIO_70

GPIO_71

GPIO_72

GPIO_73

GPIO_74

GPIO_75

GPIO_76

GPIO_77

GPIO_78

GPIO_79

GPIO_80

GPIO_81

GPIO_82

GPIO_83

GPIO_84

GPIO_85

GPIO_86

GPIO_87

GPIO_88

GPIO_89

GPIO_90

GPIO_91

GPIO_92

GPIO_93

GPIO_94

GPIO_95

GPIO_96

GPIO_97

GPIO_98

GPIO_99

GPIO_100

GPIO_101

GPIO_102

GPIO_103

GPIO_104

GPIO_105

GPIO_106

GPIO_107

GPIO_108

GPIO_109

GPIO_110

GPIO_111

GPIO_112

GPIO_113

GPIO_114

GPIO_115

GPIO_116

GPIO_117

GPIO_118

GPIO_119

GPIO_120

GPIO_121

GPIO_122

GPIO_123

GPIO_124

GPIO_125

GPIO_126

GPIO_127

GPIO_128

GPIO_129

GPIO_130

GPIO_131

GPIO_132

GPIO_133

GPIO_134

GPIO_135

GPIO_136

GPIO_137

GPIO_138

GPIO_139

GPIO_140

GPIO_141

GPIO_142

GPIO_143

GPIO_144

GPIO_145

GPIO_146

GPIO_147

GPIO_148

GPIO_149

GPIO_150

GPIO_151

GPIO_152

GPIO_153

GPIO_154

GPIO_155

GPIO_156

GPIO_157

GPIO_158

GPIO_159

GPIO_160

GPIO_161

GPIO_162

GPIO_163

GPIO_164

GPIO_165

GPIO_166

GPIO_167

GPIO_168

GPIO_169

GPIO_170

GPIO_171

GPIO_172

GPIO_173

GPIO_174

GPIO_175

GPIO_176

GPIO_177

GPIO_178

GPIO_179

GPIO_180

GPIO_181

GPIO_182

GPIO_183

GPIO_184

GPIO_185

GPIO_186

GPIO_187

GPIO_188

GPIO_189

GPIO_190

GPIO_191

GPIO_192

GPIO_193

GPIO_194

GPIO_195

GPIO_196

GPIO_197

GPIO_198

GPIO_199

GPIO_200

GPIO_201

GPIO_202

GPIO_203

GPIO_204

GPIO_205

GPIO_206

GPIO_207

GPIO_208

GPIO_209

GPIO_210

GPIO_211

GPIO_212

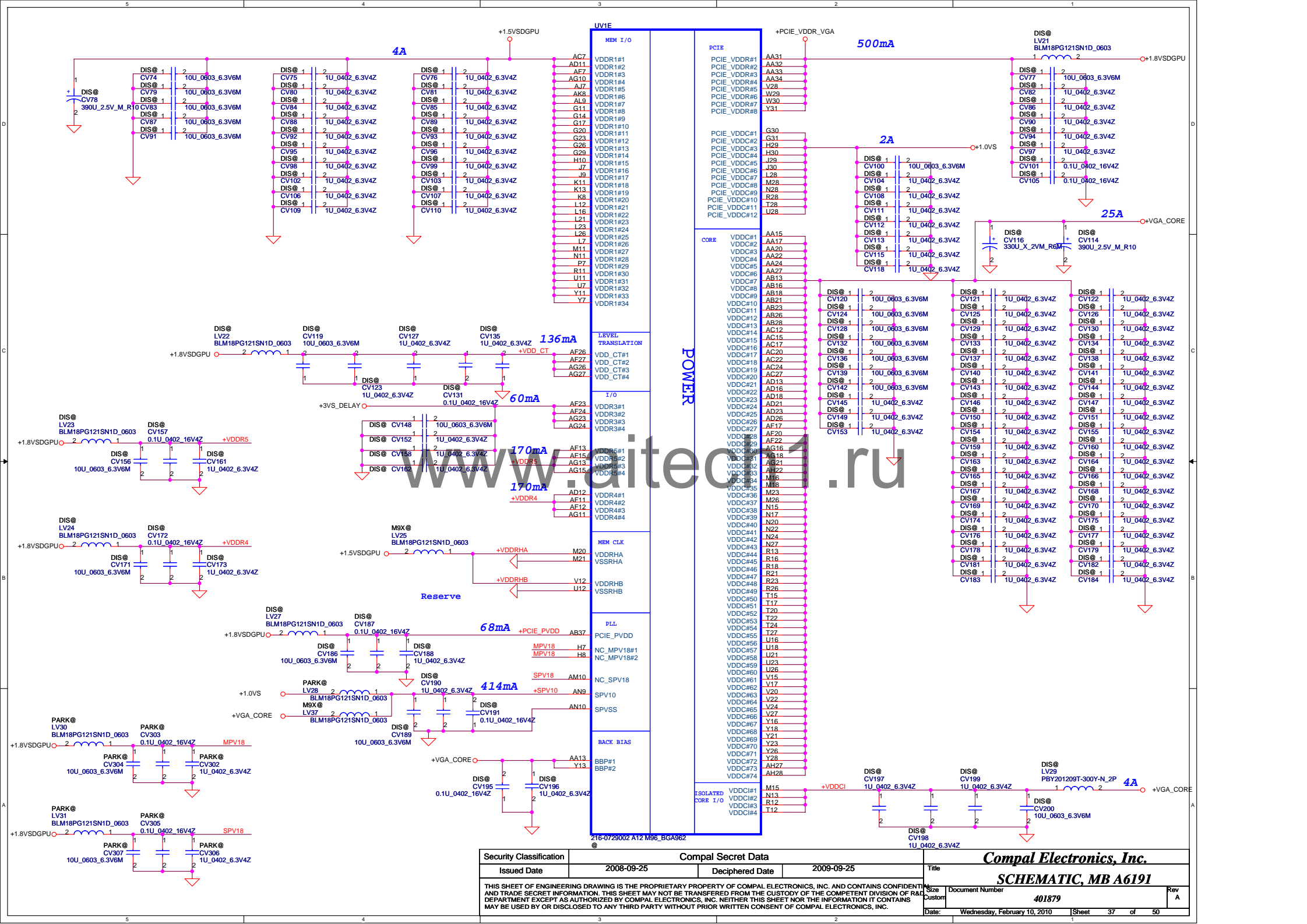
GPIO_213

GPIO_214

GPIO_215

GPIO_216

GPIO_217



UV1F

AB39 PCIE_VSS#1
E39 PCIE_VSS#2
F34 PCIE_VSS#3
F39 PCIE_VSS#4
G33 PCIE_VSS#5
G34 PCIE_VSS#6
H31 PCIE_VSS#7
H34 PCIE_VSS#8
H39 PCIE_VSS#9
J31 PCIE_VSS#10
J34 PCIE_VSS#11
K31 PCIE_VSS#12
K34 PCIE_VSS#13
K39 PCIE_VSS#14
L31 PCIE_VSS#15
L34 PCIE_VSS#16
M34 PCIE_VSS#17
M39 PCIE_VSS#18
N31 PCIE_VSS#19
N34 PCIE_VSS#20
P31 PCIE_VSS#21
P34 PCIE_VSS#22
P39 PCIE_VSS#23
R34 PCIE_VSS#24
T31 PCIE_VSS#25
T34 PCIE_VSS#26
T39 PCIE_VSS#27
U31 PCIE_VSS#28
U34 PCIE_VSS#29
V34 PCIE_VSS#30
V39 PCIE_VSS#31
W31 PCIE_VSS#32
W34 PCIE_VSS#33
Y34 PCIE_VSS#34
Y39 PCIE_VSS#35

GND

F15 GND#101
F17 GND#102
F19 GND#103
F21 GND#104
F23 GND#105
F25 GND#106
F27 GND#107
F29 GND#108
F31 GND#109
F33 GND#110
E7 GND#111
F9 GND#112
G2 GND#113
G6 GND#114
H6 GND#115
J2 GND#116
J27 GND#117
J6 GND#118
J8 GND#119
K14 GND#120
K7 GND#121
L11 GND#122
L17 GND#123
L2 GND#124
L22 GND#125
L24 GND#126
L6 GND#127
M17 GND#128
M22 GND#129
M24 GND#130
N16 GND#131
N18 GND#132
N2 GND#133
N21 GND#134
N23 GND#135
N26 GND#136
N6 GND#137
R15 GND#138
R17 GND#139
R2 GND#140
R20 GND#141
R22 GND#142
R24 GND#143
R27 GND#144
R6 GND#145
T11 GND#146
T13 GND#147
T16 GND#148
T18 GND#149
T21 GND#150
T23 GND#151
T26 GND#152
U15 GND#153
U17 GND#154
U2 GND#155
U20 GND#156
U22 GND#157
U24 GND#158
U27 GND#159
U6 GND#160
V11 GND#161
V16 GND#162
V18 GND#163
V21 GND#164
V23 GND#165
V26 GND#166
W2 GND#167
W6 GND#168
Y15 GND#169
Y17 GND#170
Y20 GND#171
Y22 GND#172
Y24 GND#173
Y27 GND#174
U13 GND#175
V13 GND#176

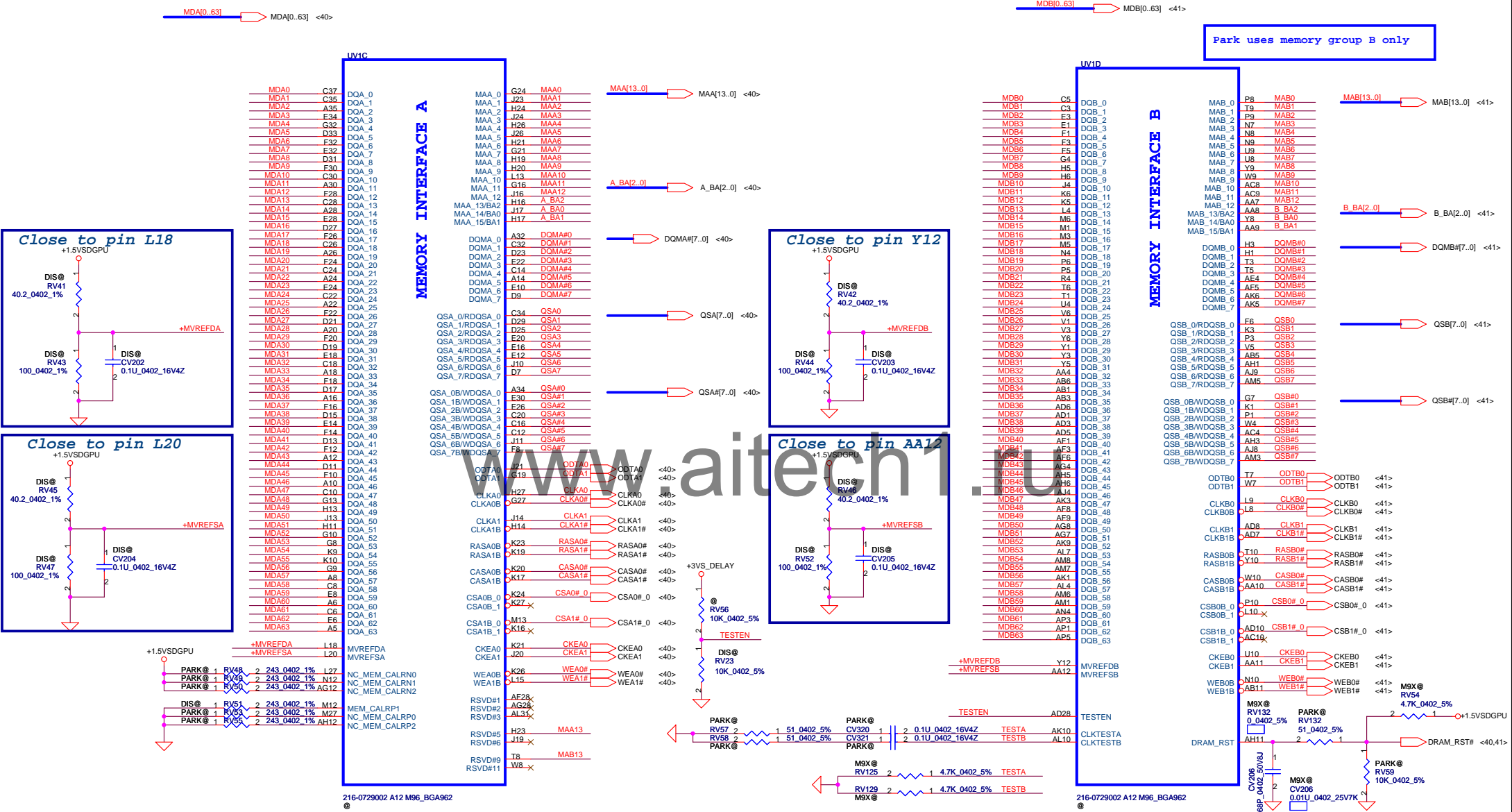
VSS_MECH#1
VSS_MECH#2
VSS_MECH#3

A3 GND#1
A37 GND#2
AA16 GND#3
AA18 GND#4
AA2 GND#5
AA21 GND#6
AA23 GND#7
AA26 GND#8
AA28 GND#9
AA6 GND#10
AB12 GND#11
AB15 GND#12
AB17 GND#13
AB20 GND#14
AB22 GND#15
AB24 GND#16
AB27 GND#17
AC11 GND#18
AC13 GND#19
AC16 GND#20
AC18 GND#21
AC2 GND#22
AC21 GND#23
AC23 GND#24
AC26 GND#25
AC28 GND#26
AC6 GND#27
AD15 GND#28
AD17 GND#29
AD20 GND#30
AD22 GND#31
AD24 GND#32
AD27 GND#33
AD9 GND#34
AE2 GND#35
AE6 GND#36
AF10 GND#37
AF16 GND#38
AF18 GND#39
AF21 GND#40
AG17 GND#41
AG2 GND#42
AG20 GND#43
AG22 GND#44
AG6 GND#45
AG9 GND#46
AH21 GND#47
AH29 GND#48
AJ10 GND#49
AJ11 GND#50
AJ2 GND#51
AJ28 GND#52
AJ6 GND#53
AK11 GND#54
AK31 GND#55
AK7 GND#56
AL11 GND#57
AL16 GND#58
AL18 GND#59
AL2 GND#60
AL20 GND#61
AL21 GND#62
AL23 GND#63
AL26 GND#64
AL32 GND#65
AL6 GND#66
AL8 GND#67
AM11 GND#68
AM31 GND#69
AM9 GND#70
AN11 GND#71
AN2 GND#72
AN30 GND#73
AN6 GND#74
AN8 GND#75
AP11 GND#76
AP7 GND#77
AP9 GND#78
AR5 GND#79
AW34 GND#80
B11 GND#81
B13 GND#82
B15 GND#83
B17 GND#84
B19 GND#85
B21 GND#86
B23 GND#87
B25 GND#88
B27 GND#89
B29 GND#90
B31 GND#91
B33 GND#92
B7 GND#93
B9 GND#94
C1 GND#95
C39 GND#96
E5 GND#97
F11 GND#98
F13 GND#99
GND#100

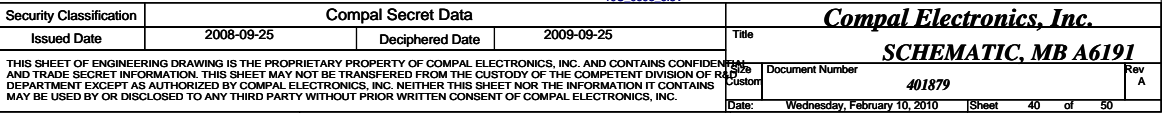
A39-X
AW15-X
AW3X

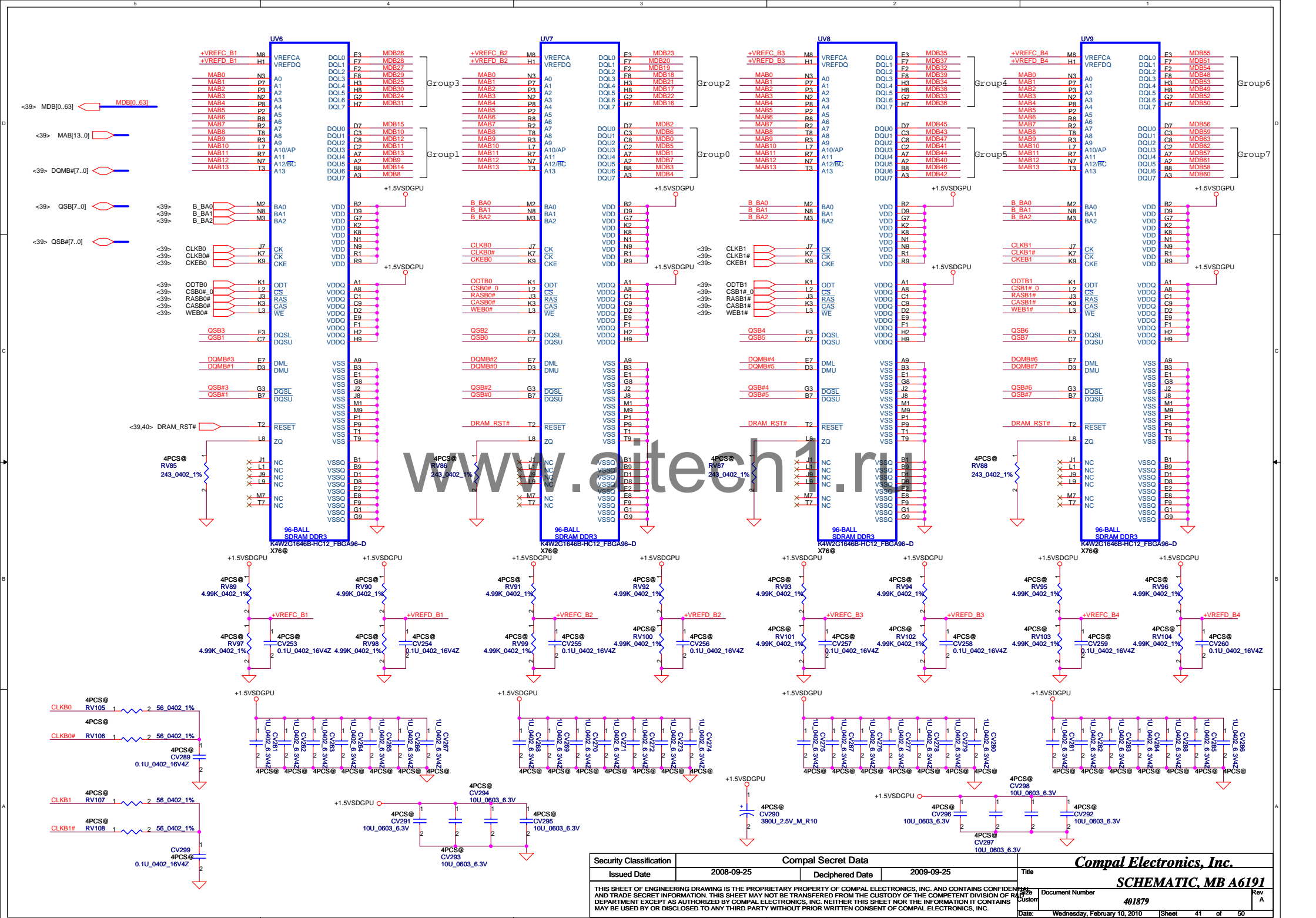
216-0729002 A12 M96_BGA962

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Title	SCHEMATIC, MB A6191
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	401879
				Date	Wednesday, February 10, 2010
				Sheet	38 of 50

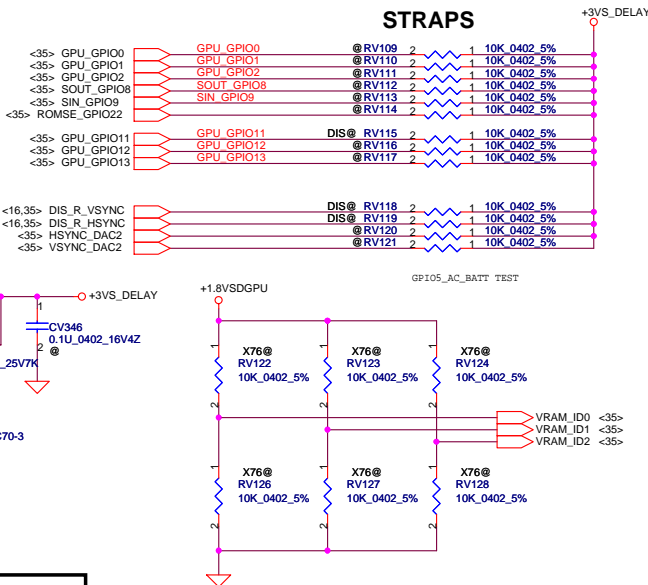
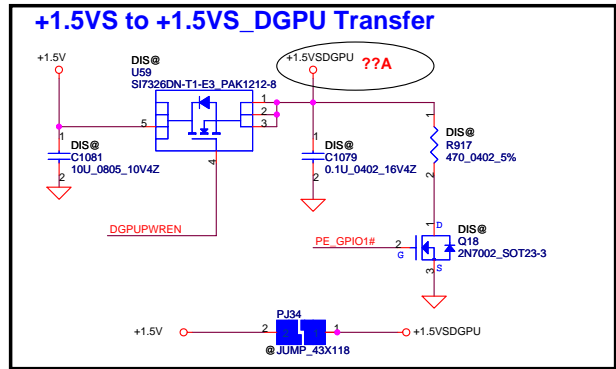
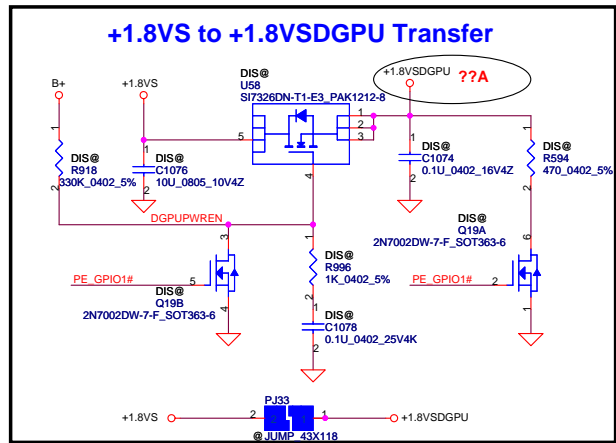
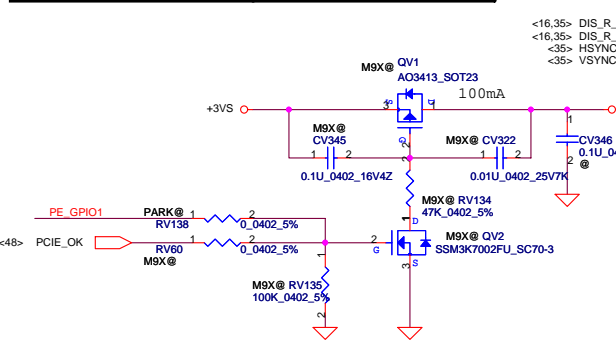


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Title	SCHEMATIC, MB A6191
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	Customer	401879	Rev	A	
Date:	Wednesday, February 10, 2010	Sheet	39	of	50





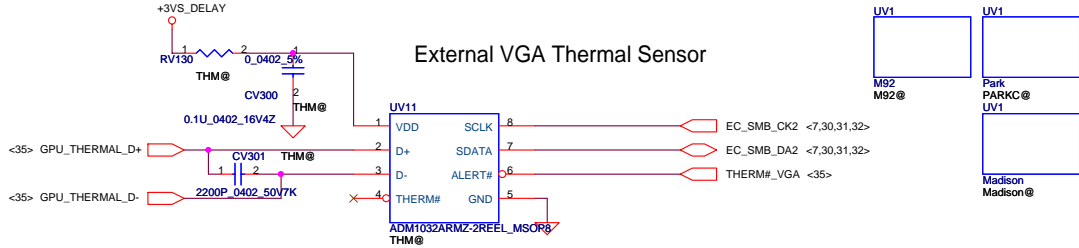
GPU by the system BIOS		GPU by VBIOS	
GPIO22 = 0 (BIOS_ROM_EN = 0)		GPIO22 = 1 (BIOS_ROM_EN = 1)	
GPIO[13:11]	MEMORY SIZE	GPIO[13:11]	
0 0 0	128MB	1 0 0 (M25P05A)	
0 0 1	256MB		
0 1 0	64MB		



CONFIGURATION STRAPS			
ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET			
STRAPS	PIN	DESCRIPTION OF DEFAULT SETTINGS	RECOMMENDED SETTINGS
TX_PWRS_ENB	GPIO0	PCIE FULL TX OUTPUT SWING	0
TX_DEEMPH_EN	GPIO1	PCIE TRANSMITTER DE-EMPHASIS ENABLED	0
BIF_GEN2_EN_A	GPIO2	PCIE GNE2 ENABLED	0
BIF_CLK_PM_EN	GPIO8	BIF_CLK_PM_EN	0
BIF_VGA_DIS	GPIO9	VGA Controller ENABLED	0 (Enable)
BIOS_ROM_EN	GPIO_22_ROMCSB	Enable External BIOS device	0
ROMIDCFG(2:0)	GPIO[13:11]	ROM Configurations	0 0 1
VIP_DEVICE_STRAP_ENA	VSYN0_DAC2	IGNORE VIP DEVICE STRAPS	0
AUD[1]	HSYN0	AUD[1] AUD[0] 0 0 No audio function 0 1 Audio for DisplayPort and HDMI if dongle is detected 1 0 Audio for DisplayPort only 1 1 Audio for both DisplayPort and HDMI	1 1
AUD[0]	VSYN0		
RSVD	HSYN0_DAC2		0
RSVD	GENERICC		0

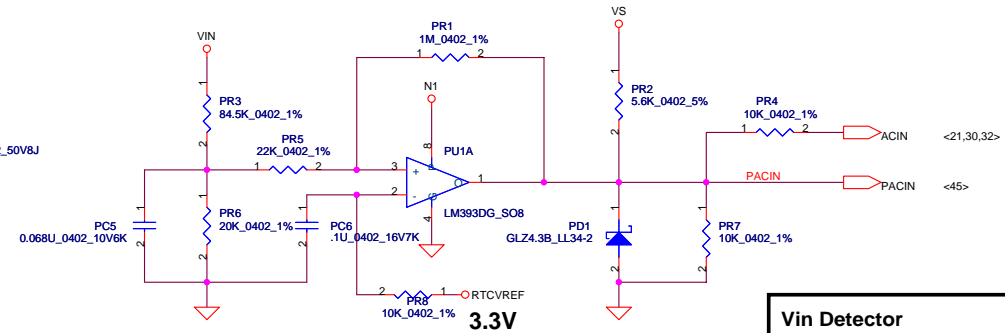
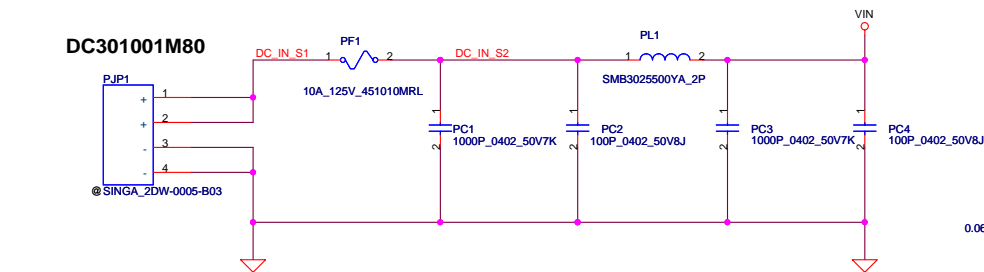
AMD RESERVED CONFIGURATION STRAPS			
ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET			
HSYN0_DAC2	GENERICC		
PULLUP PADS ARE NOT REQUIRED FOR THESE STRAPS BUT IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET			
GPIO_28_IDO	GPIO21_BB7EN		

STRAPS	PIN	GPU	VRAM size	Vendor Part Number#	Compal Part Number#	VRAM_ID 2,1,0
VRAM_ID[2:0]	DVPDATA (2,1,0)	Park M2	512M 64Mx16 (x4)	HYN H5TQ1G63BFR-12C	SA000032400	0 0 0
			512M 64Mx16 (x4)	SAM K4W1G1646E-HC12	SA000035700	0 0 1
			1G 128Mx16 (x4)	HYN		0 1 0 (Reserve)
			1G 128Mx16 (x4)	SAM K4W2G1646B-HC12	SA00003M000	0 1 1 (Reserve)
		Madison M2	1G 64Mx16 (x8)	HYN H5TQ1G63BFR-12C	SA000032400	1 0 0
			1G 64Mx16 (x8)	SAM K4W1G1646E-HC12	SA000035700	1 0 1
			2G 128Mx16 (x8)	HYN		1 1 0 (Reserve)
			2G 128Mx16 (x8)	SAM K4W2G1646B-HC12	SA00003M000	1 1 1 (Reserve)



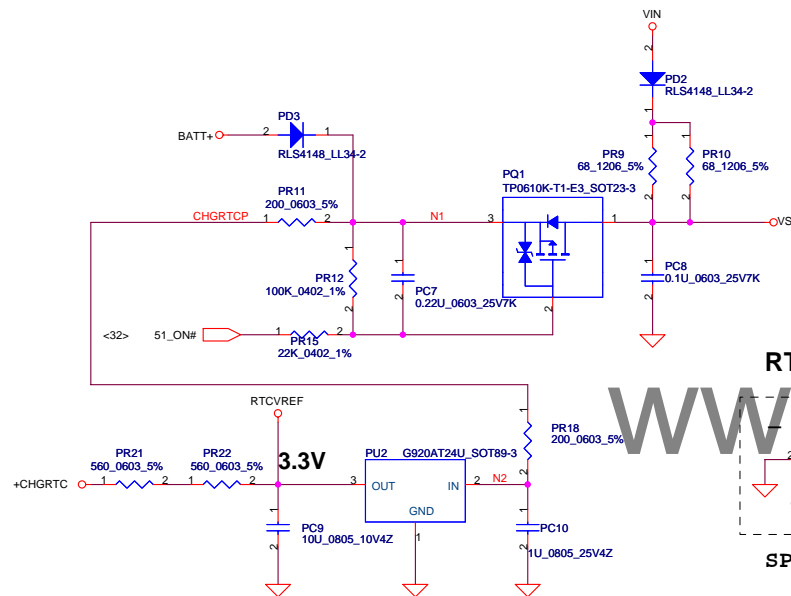
Security Classification	Compal Secret Data		Title	
Issued Date	2008-09-25	Deciphered Date	2009-09-25	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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.				Rev A
Date: Wednesday, February 10, 2010				Sheet 42 of 50

DC301001M80



Vin Detector

High 18.384 17.901 17.430
Low 17.728 17.257 16.976



RTC Battery

SP093MX0000

+3VALWP (5A, 200mils, Via NO. = 10)
OCP(min) = 7.7A

+5VALWP (5A, 200mils, Via NO. = 10)
OCP(min) = 7.9A

+VSBP (120mA, 40mils, Via NO. = 1)

+0.75VSP (1A, 40mils, Via NO. = 2)

+1.1VALWP (8A, 320mils, Via NO. = 16)
OCP(min) = ?A

+1.5VP (7A, 280mils, Via NO. = 14)
OCP(min) = ?A

+1.8VSP (2.5A, 100mils, Via NO. = 5)

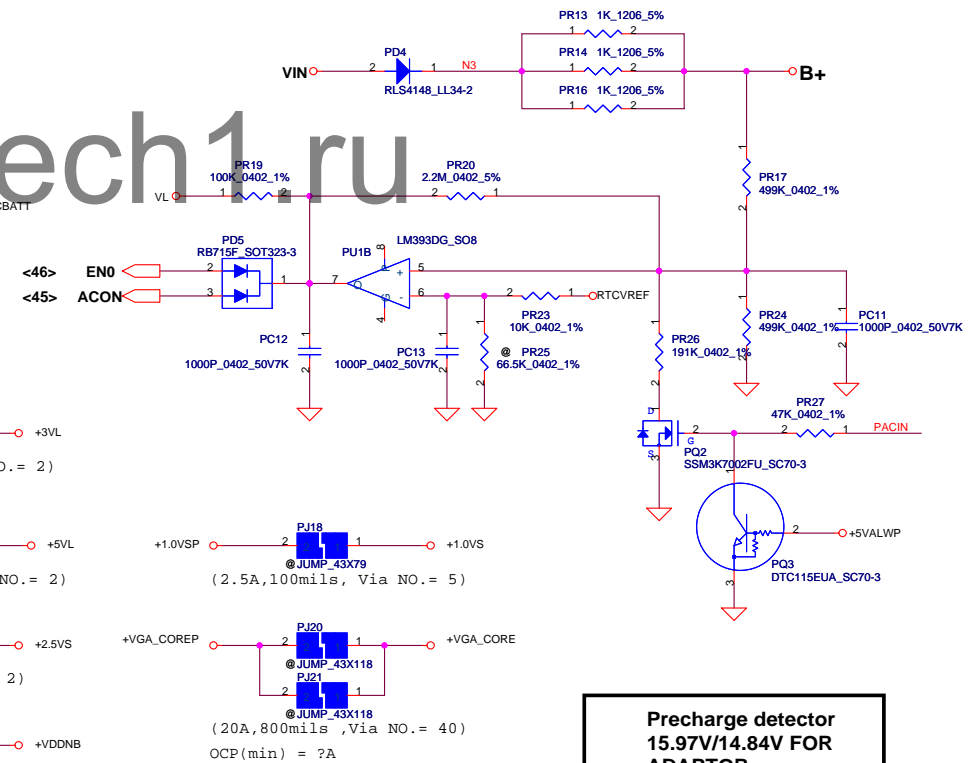
+1.05VSP (1.5A, 60mils, Via NO. = 3)

+3VLP (100mA, 40mils, Via NO. = 2)

VL (100mA, 40mils, Via NO. = 2)

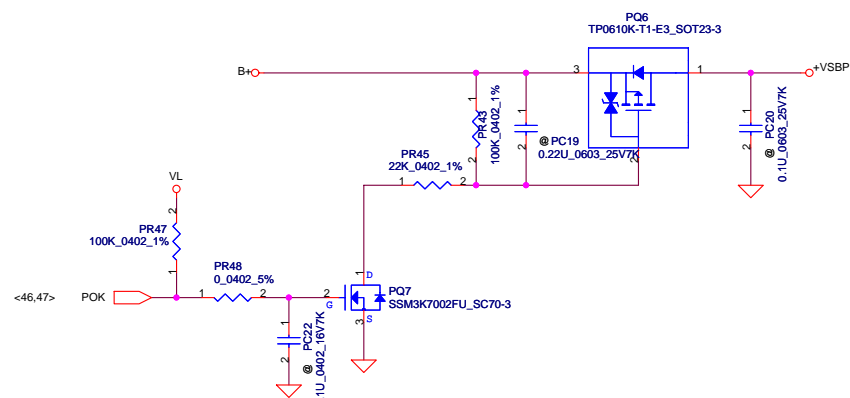
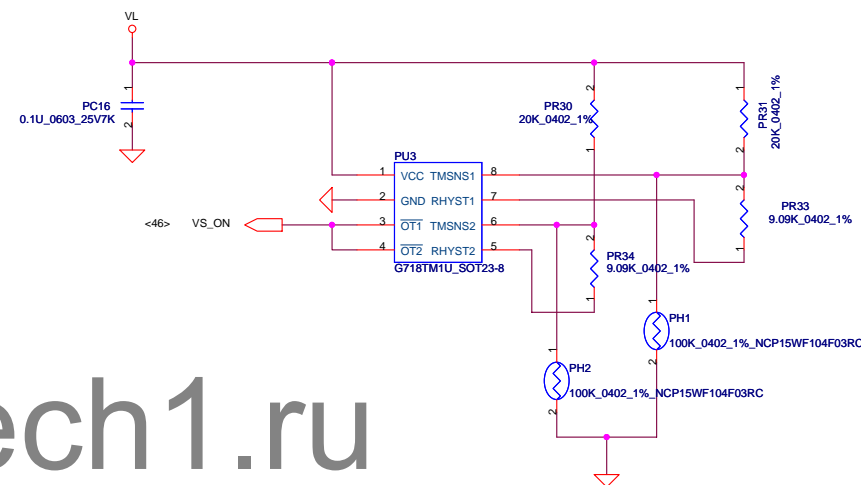
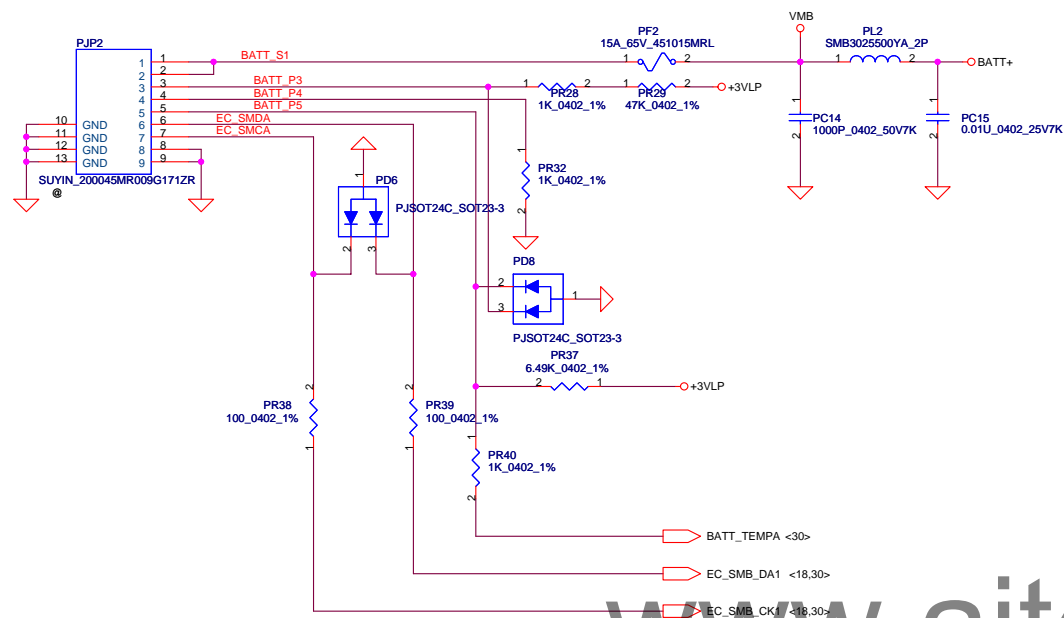
+2.5VSP (1A, 40mils, Via NO. = 2)

+VDDNBP (4A, 160mils, Via NO. = 8)

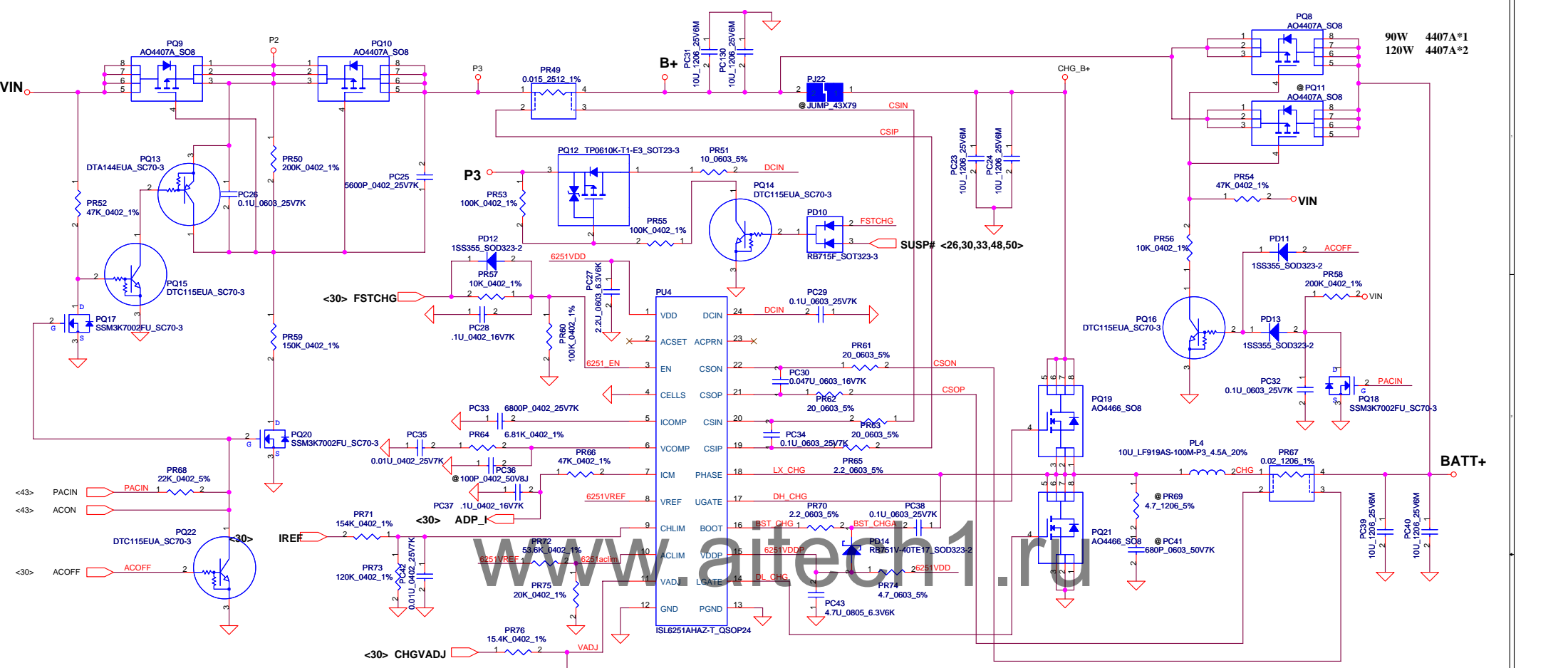


Precharge detector
15.97V/14.84V FOR
ADAPTOR

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/9/25	Deciphered Date	2009/9/25	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.				Document Number	Rev A
				401879	
Date: Wednesday, February 10, 2010				Sheet	50
				43	



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/9/25	Deciphered Date	2009/9/25	Title	SCHEMATIC, MB A6191
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	401879
				Date:	Wednesday, February 10, 2010
				Sheet	44 of 50
				Rev	A



CP mode
 $V_{ac1m} = 2.39 * (R_b // 152K) / (R_t // 152K + R_b // 152K)$
 $I_{input} = (1 / PR49) * ((0.05 * V_{ac1m}) / (2.39 + 0.05))$
where $V_{ac1m} = 1.09986V$, $I_{input} = 3.65A$
 $V_{ac1m} = 0.7717V$, $I_{input} = 4.41A$
 $V_{ac1m} = 0.4204V$, $I_{input} = 5.88A$

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

CHGVADJ=(Vcell-4)*9.445	
Vcell	CHGVADJ
4V	0V
4.2V	1.898V
4.35V	3.315V

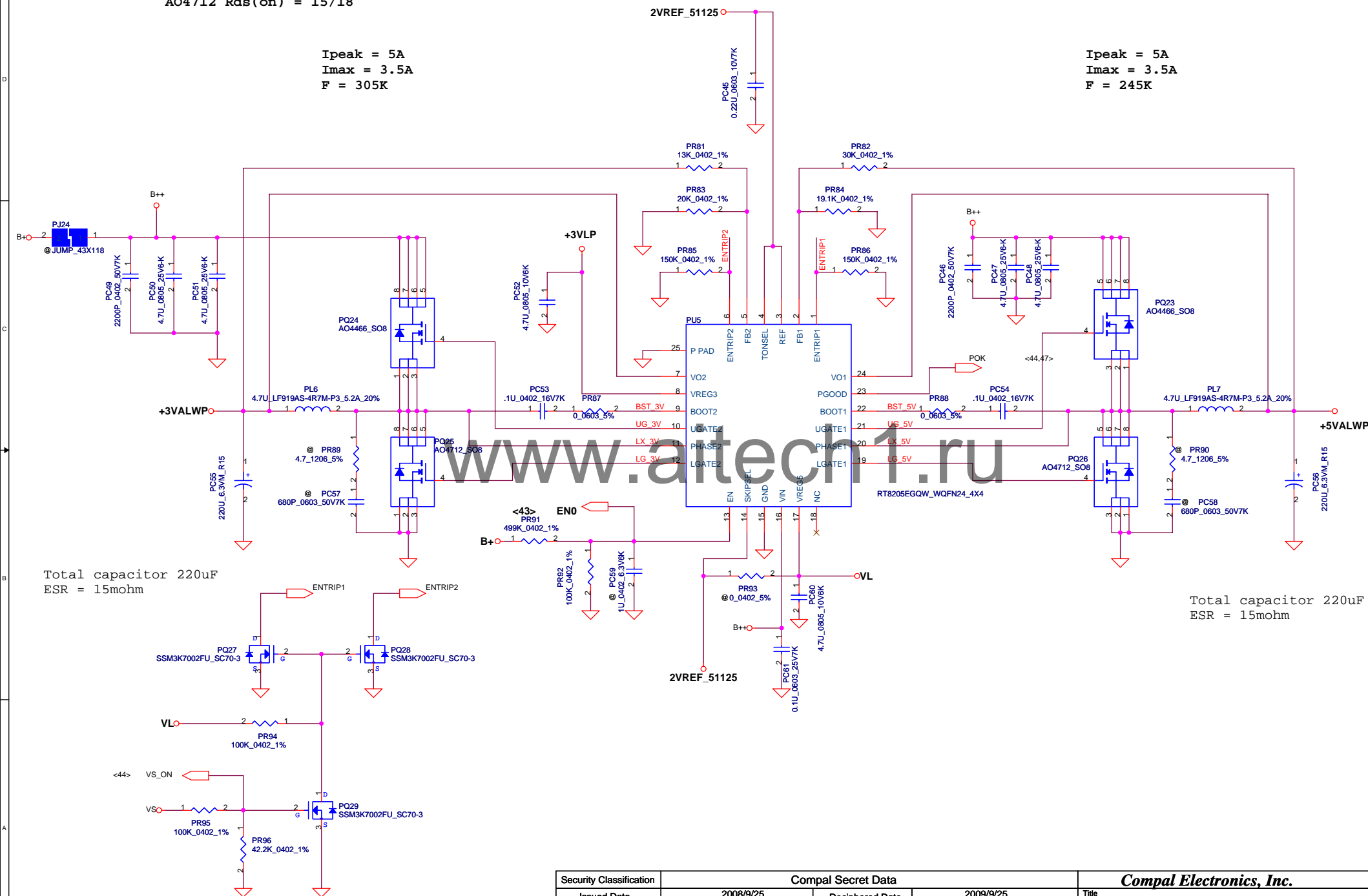
CELLS	VDD	GND	Float
CELL number	4	3	2

Iada=0~3.421A(65W)	CP=3.15A	PR49=0.02, PR72=75k, PR75=20k
Iada=0~3.947A(75W)	CP=3.63A	PR49=0.02, PR72=24k, PR75=20k
Iada=0~4.737A(90W)	CP=4.36A	PR49=0.015, PR72=53.6k, PR75=20k
Iada=0~6.316A(120W)	CP=5.81A	PR49=0.015, PR72=8.25k, PR75=26.7k
CP= 92%*Iada		

AO4712 Rds(on) = 15/18

Ipeak = 5A
Imax = 3.5A
F = 305K

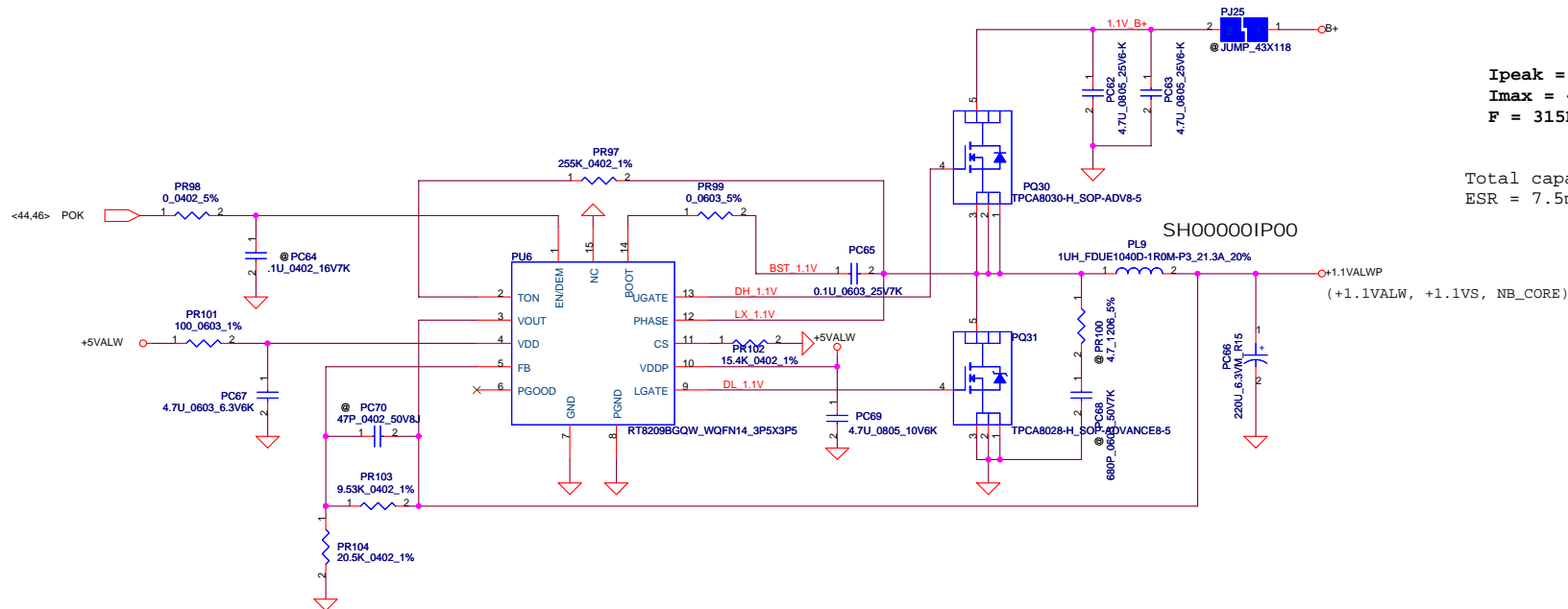
Ipeak = 5A
Imax = 3.5A
F = 245K



Total capacitor 220uF
ESR = 15mohm

Total capacitor 220uF
ESR = 15mohm

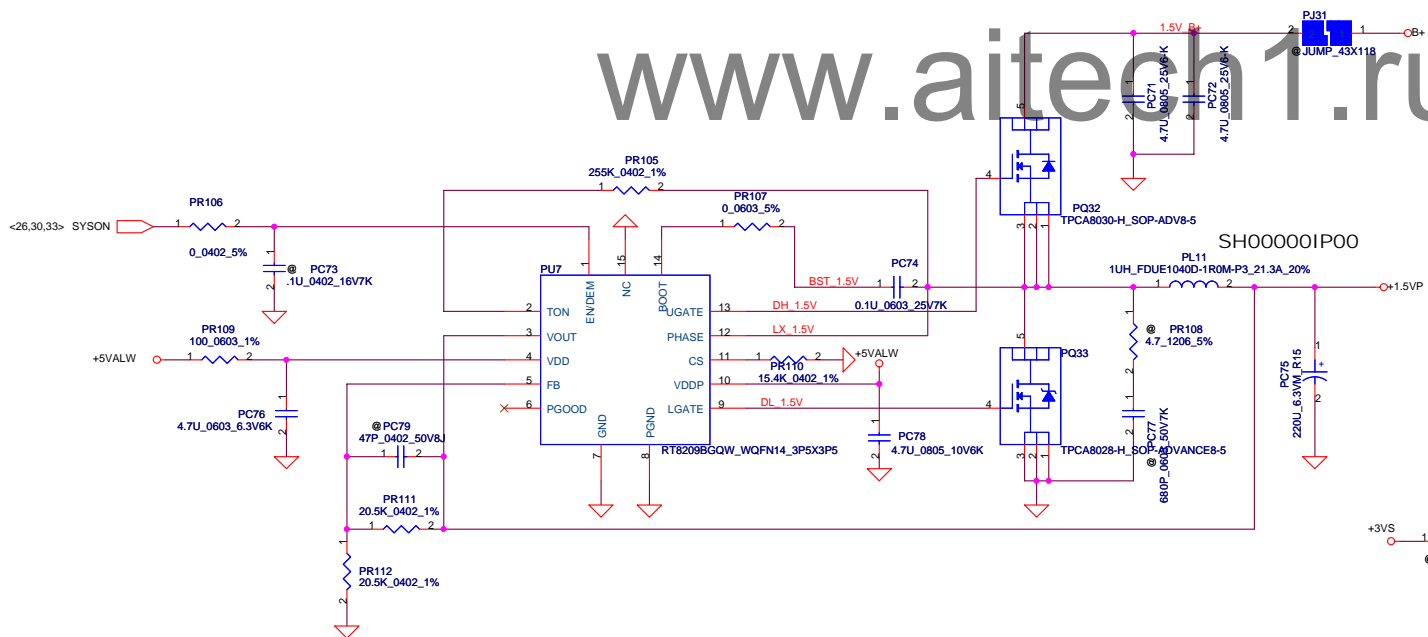
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/9/25	Deciphered Date	2009/9/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
				Custom	401879
				Date	Wednesday, February 10, 2010
				Sheet	46 of 50



Ipeak = 7A
Imax = 4.9A
F = 315K

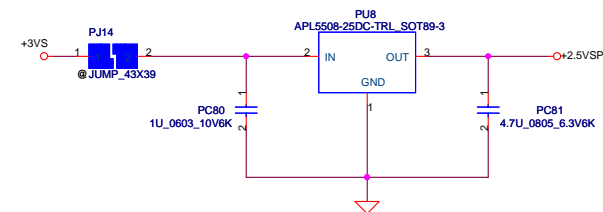
Total capacitor 550uF
ESR = 7.5mohm

www.aitech1.ru



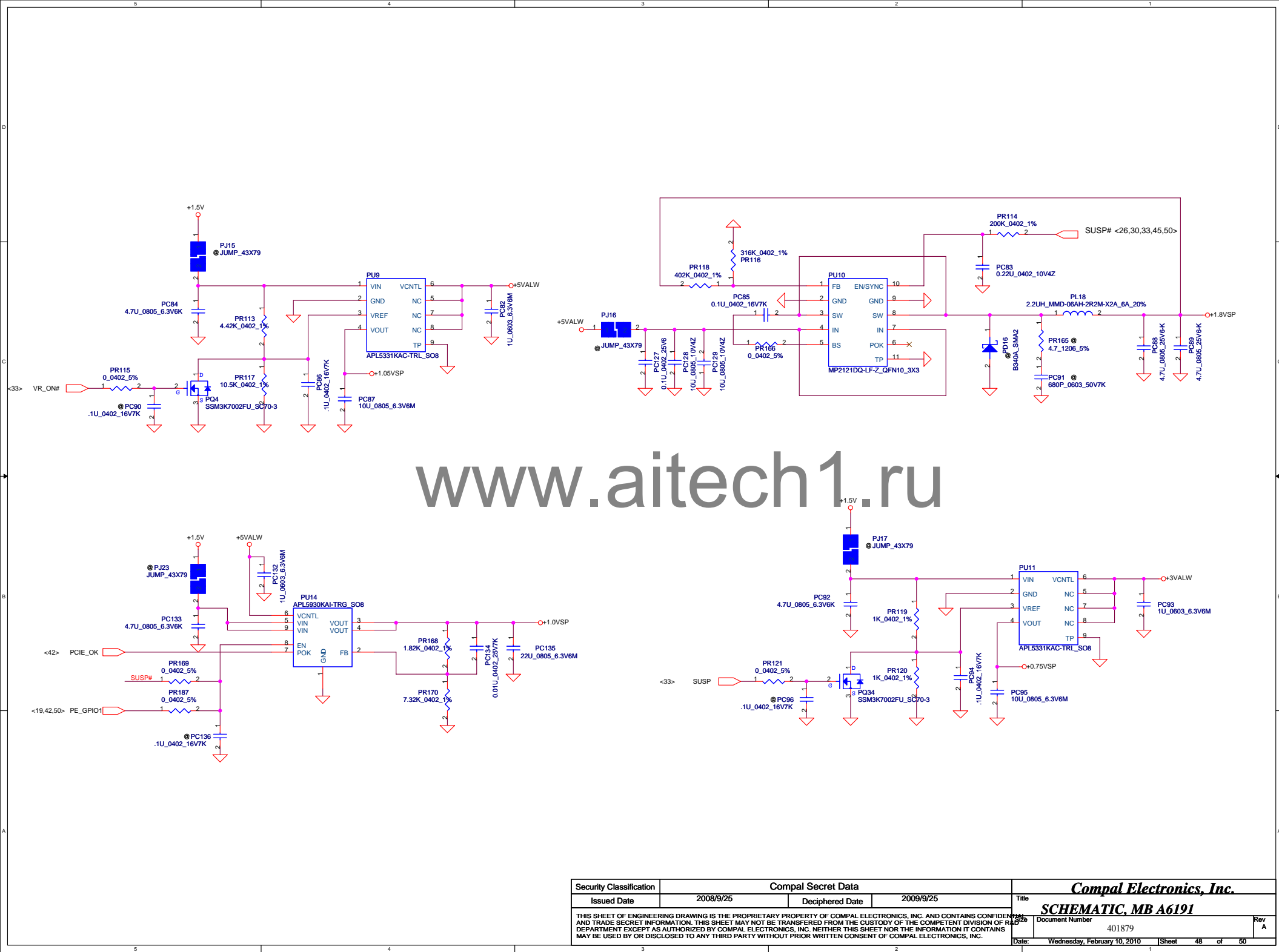
Ipeak = 5A
Imax = 3.5A
F = 315K

Total capacitor 220uF
ESR = 15mohm



Security Classification		Compal Secret Data		Title	
Issued Date	2008/9/25	Deciphered Date	2009/9/25	Document Number	401879
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev	A
Date: Wednesday, February 10, 2010				Sheet	47 of 50

Compal Electronics, Inc.
SCHEMATIC, MB A6191



www.aitech1.ru

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2008/9/25	Deciphered Date	2009/9/25	Title	SCHEMATIC, MB A6191
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.					Rev A
Date: Wednesday, February 10, 2010					Sheet 48 of 50

