Compal Confidential

NAWE6 Schematics Document

AMD Danube

Champlain Processor with RS880M/SB820/Park VGA

2010-02-24

LA5754 REV: 0.2

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2008/10/06	Deciphered Date	2010/03/12	Title	Cover Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size B	Document Number NAWE6 LA-5754P	Rev 0.2
				Date: Monday, March 01, 2010	Sheet 1 of 47

Compal Confidential

Model Name : AMD Danube + Park

ZZZ1 LA5754P DAZ@ DA80000IP00

ZZZ2 LS-5758P @ DA40000TD00
POWER BD:
POWER BTN
NOVO BTN
POWER MANAGE BTN

ZZZ3 4 layer LS5756P @ DA40000T300
CAP SENSOR BD:
VOLUME UP
VOLUME DOWN
MUTE
AUDIO ENHANCE
BUTTON & LED

ZZZ4 LS5753P @ DA40000Q210
CARD READER BD:
RTS5159
HP JACK
MIC JACK

Danube

VRAM 512MB 64M16 x 4 page 18

DDR3

ATI M93-S3 Park - S3 uFCBGA-631 Page 13,14,15,16,17

PCI-Express x 16 Gen2

AMD S1G4 Processor uPGA-638 Package Champlain page 4,5,6,7

Hyper Transport Link 16 x 16

Memory BUS(DDR3) Dual Channel 1.5V DDRIII 800~1333MHz

204pin DDRIII-SO-DIMM X2 BANK 0, 1, 2, 3 page 8,9

ATI RS880M uFCBGA-528 page 10,11,12,13

Thermal Sensor ADM1032 page 6

Clock Generator ICS9LPRS488 page 19

LVDS page 27

CRT page 25

HDMI Conn. page 26

A link Express2 Gen1

ATI SB820M uFCBGA-605 page 20,21,22,23,24

page 37	page 37	page 27	page 37	page 28	page 28	page 28
USB PORT (LEFT)	USB conn (Right)	CMOS Camera	Bluetooth Conn <Option>	Mini card (WL)X1	3G/GPS WWAN <Option>	New Card
USB port 0	USB port 12	USB port 5	USB port 6	USB port 11	USB port 10	USB port 7

3.3V 48MHz USB

S-ATA Gen2

3.3V 24.576MHz/48Mhz HD Audio

New Card WLAN page 28 — GPP3

3G/WWAN MINI Card page 28 — GPP2

SIM Card page28

USB (WWAN)

MINI Card WLAN page 28 — GPP1

LAN(GbE) Atheros AR8151/8152 page 29 — GPP0

RJ45 page 30

SATA HDD Conn. page 32 — port 0

CDROM Conn. page 32 — port 1

ESATA & USB Combine CON — USB port 4 page28

LPC BUS

ENE KB926 page 34

Touch Pad page 35

Int.KBD page 35

BIOS page 34

Audio Codec Realtec ALC259 page33

Analog MIC_Int page33

2Channel Speaker page33

USB port 2
Card Reader / Audio Jack SB CONN
RTS5159-GR
MS/MS
pro/SD/SD
pro/mmc/XD
HP X 1+
MIC_Ext X1
page38

LED page 36

LID SW / IO BD page 32

Power On/Off CKT. page 32

DC/DC Interface CKT. page 38

Fan Control page 31

Power Circuit page 39,40,41,42,43,44,45,46,47,48,49

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2009/10/06	Title: Block Diagrams

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

Size: B	Document Number: NAWE6 LA-5754P		Rev: 0.2
Date: Monday, March 01, 2010	Sheet 2 of 47		

Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit.	N/A	N/A	N/A
+CPU_CORE_0	Core voltage for CPU (0.7-1.2V)	ON	OFF	OFF
+CPU_CORE_1	Core voltage for CPU (0.7-1.2V)	ON	OFF	OFF
+CPU_CORE_NB	Voltage for On-die Northbridge of CPU(0.8-1.1V)	ON	OFF	OFF
+0.75VS	+0.75VS LDO power rail for DDR3 VTT	ON	ON	OFF
+1.1VS	1.1V switched power rail for NB VDDC & VGA	ON	OFF	OFF
+VGA_CORE	0.95-1.2V switched power rail	ON	OFF	OFF
+1.5VS	1.5V power rail for PCIE Card	ON	OFF	OFF
+1.5V	1.5V power rail for CPU VDDIO and DDR	ON	ON	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+2.5VS	2.5V for CPU_VDDA	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V_LAN	3.3V power rail for LAN	ON	ON	ON
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+VSB	VSB always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts

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

EC SM Bus1 address

Device	Address	HEX
Smart Battery	0001 011X b	16H

EC SM Bus2 address

Device	Address	HEX
EMC1402-1 (CPU)	100_1100b	4CH
EMC1412-A (GPU)	111_1100b	7CH
EMC1403-2 (DDR,WWAN)	100_1101b	4DH

SB820 SM Bus 0 address

Device	Address	HEX
Clock Generator (SILEGO SLG8SP626)	1101 001Xb	D2
DDR DIMM1	1001 000Xb	90
DDR DIMM2	1001 010Xb	94

SB820 SM Bus 1 address

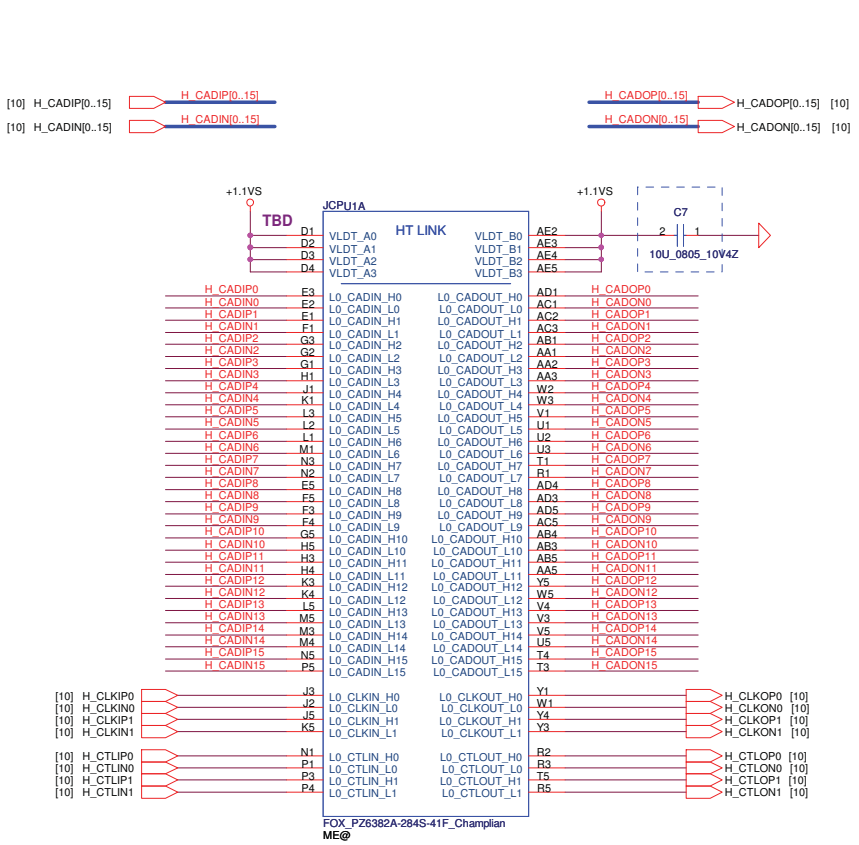
Device	Address

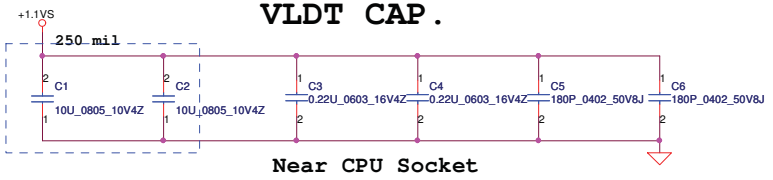
BOM Config

UMA only SKU: UMA@
DIS ONLY (Park S3): DIS@
EXT CLK Mode:EXT@
INT CLK mode:INT@
LAN GIGA: 8151@
LAN 100: 8152@
CMOS@
BT@
3G@
S@
H@

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

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2010/03/12	Title: Notes List
			Size: B; Document Number: NAWE6 LA-5754P; Rev: 0.2
			Date: Monday, March 01, 2010; Sheet 3 of 47

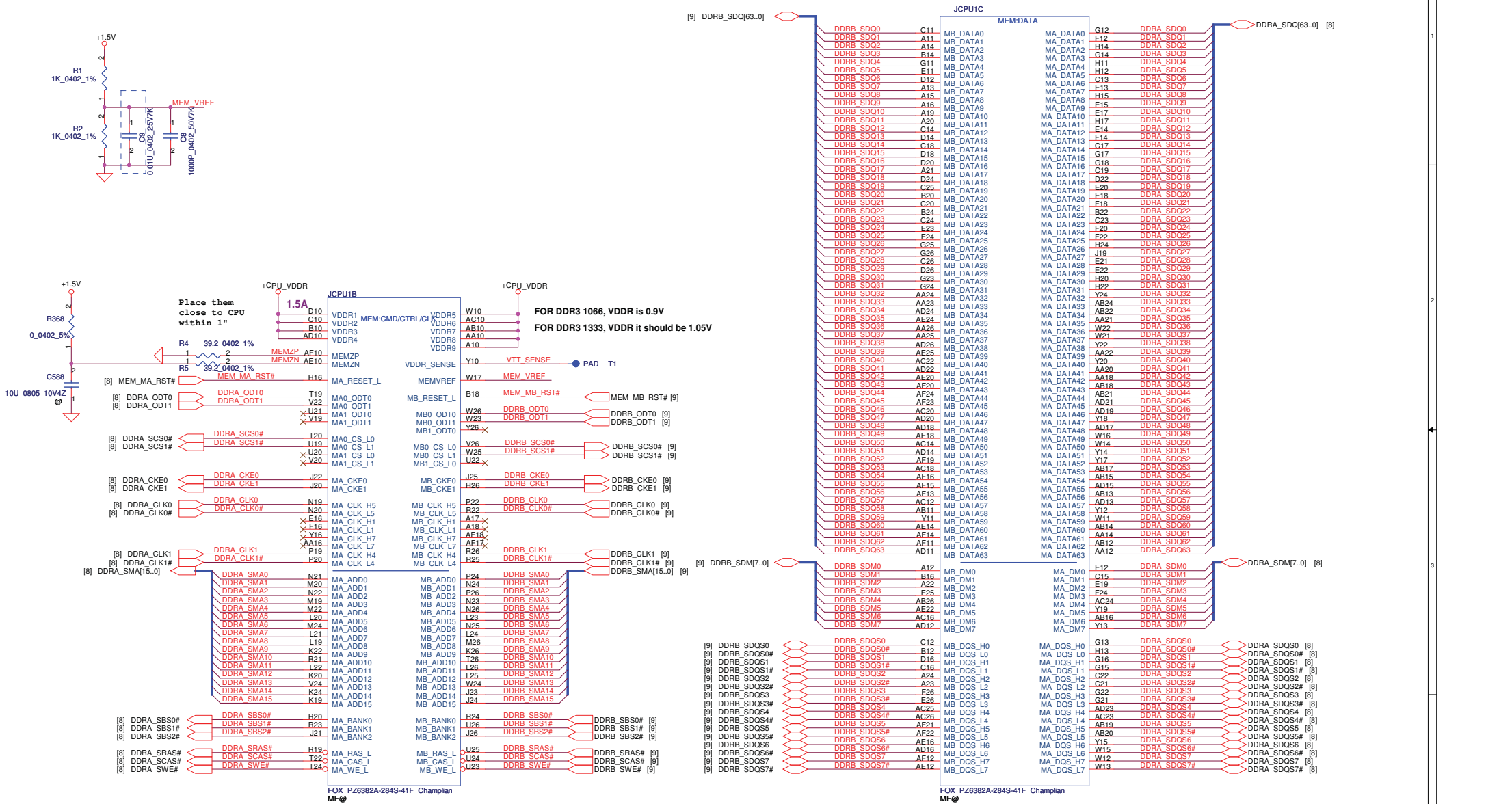




Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2010/03/12	Title AMD CPU S1G4 HT I/F
Size Custom	Document Number NAWE6 LA-5754P		Rev 0.2
Date: Monday, March 01, 2010	Sheet 4 of 47		

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

Processor DDR3 Memory Interface



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2010/03/12	Title: AMD CPU S1G4 DDRII I/F

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: B Custom	Document Number: NAWE6 LA-5754P		Rev: 0.2
Date: Monday, March 01, 2010	Sheet 5 of 47		

Champlain: C1E
C1E: LDT_REQ# no connect
CLMC: LDT_REQ# connect to NB

LDT_RES# / MEMHOT#
no support in S1g4

VDDA=0.25A

JCPU1D

FOX_PZ6382A-284S-41F_Champlian
ME@

U1
EMC1402-1-ACZL-TR-MSOP-8P

TI
TMP411ADGKR MSOP 8P
SA00002DE10
Address: 100 1100

EMC1402-1
(SA00001Z700)
Address 100_1100b
S IC EMC1402-1-ACZL-TR MSOP 8P SENSOR

CPU internal thermal sensor

FDV301N, the Vgs is:
min = 0.65V
Typ = 0.85V
Max = 1.5V

2.09V for Gate

Q2 @ FDV301N_NL_SOT23-3
Q3 @ FDV301N_NL_SOT23-3

T0 SB
TO EC

PROCHOT:
Input: For HTC Function
Output: Over Temperature Condition

For SCAN connect use

JP17
ACES_87212-12G0
ME@

Q1 MMBT3904_NL_SOT23-3

U2 NC7SZ08P5X_NL_SC70-5

Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

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.

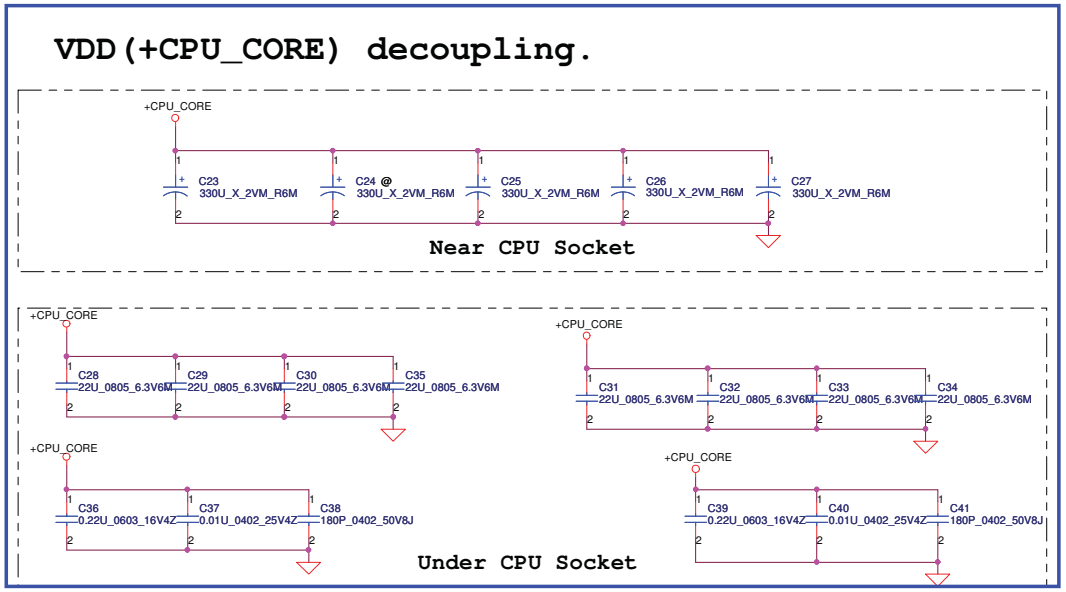
Compal Electronics, Inc.

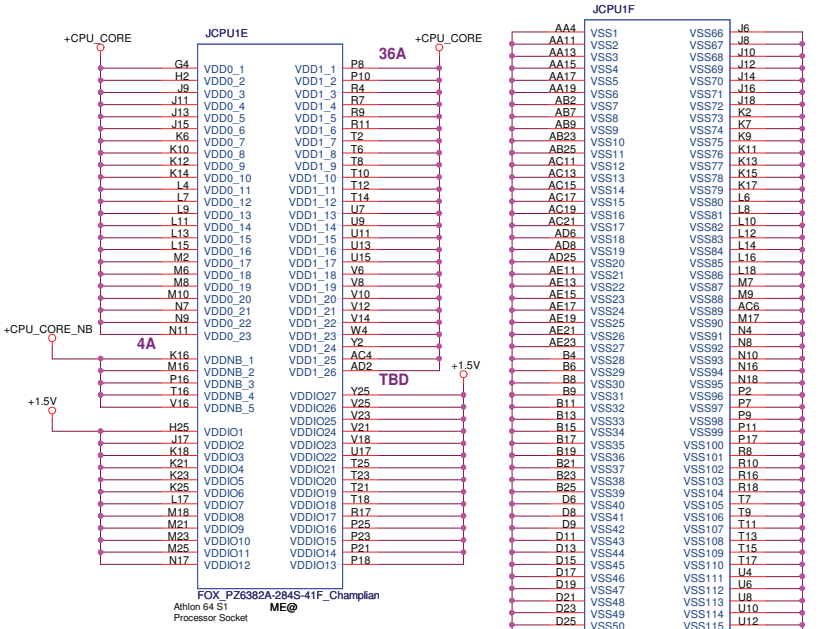
Title: AMD CPU S1G4 CTRL

Size: B2B Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

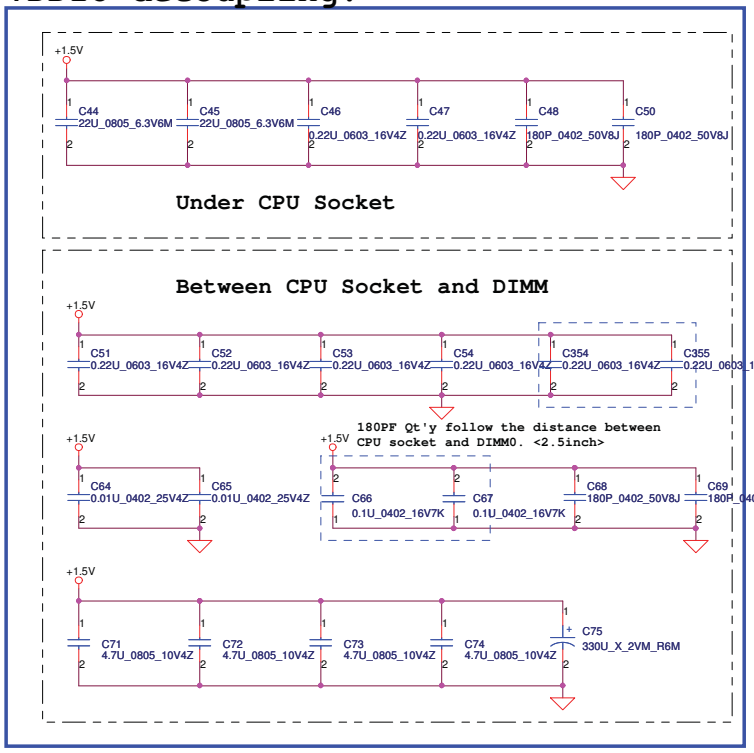
Date: Tuesday, March 02, 2010 | Sheet 6 of 47

VDD(+CPU_CORE) decoupling.

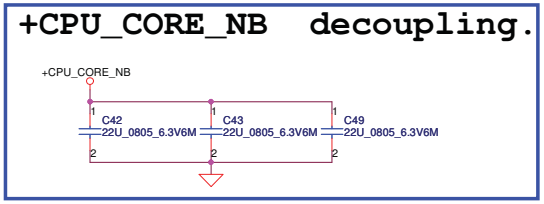




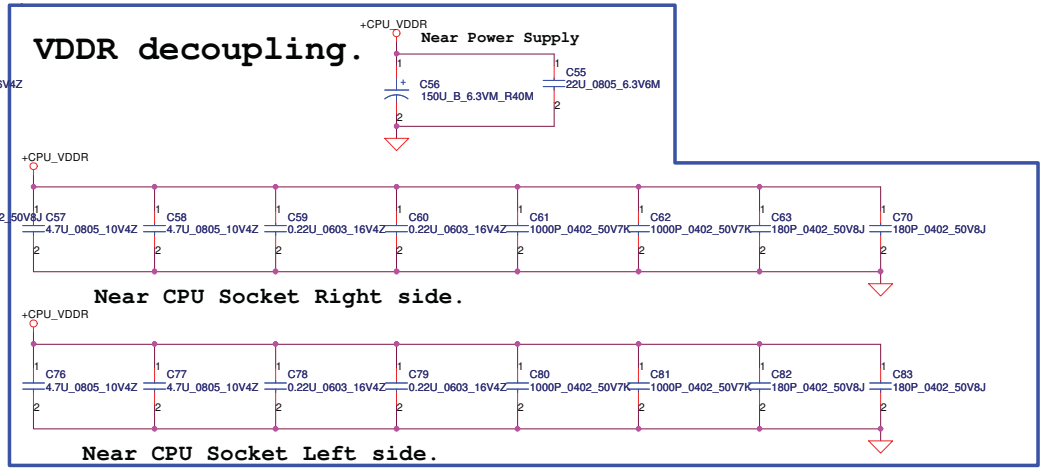
VDDIO decoupling.



+CPU_CORE_NB decoupling.



VDDR decoupling.



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

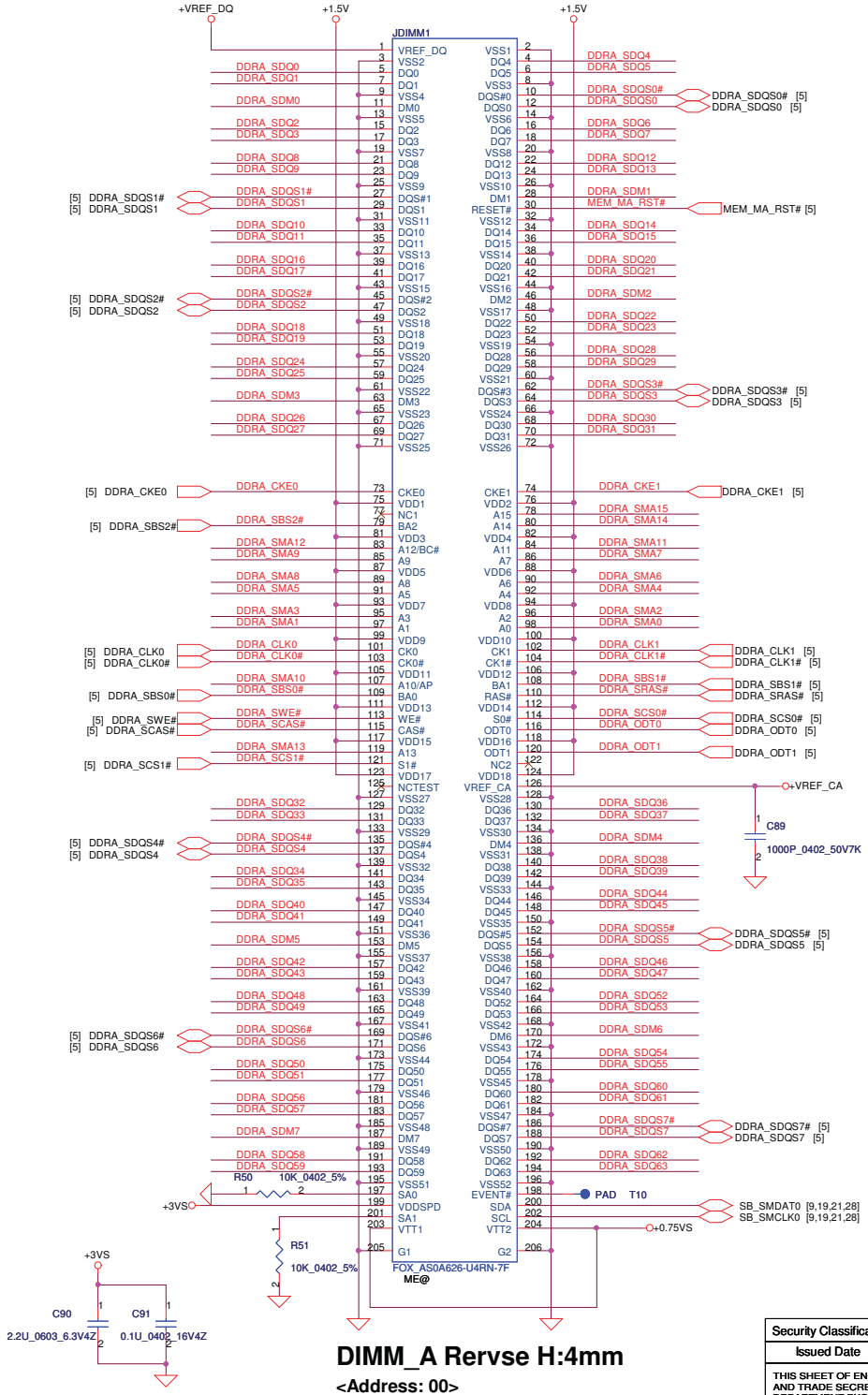
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

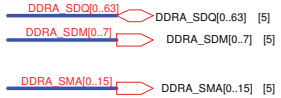
Compal Electronics, Inc.

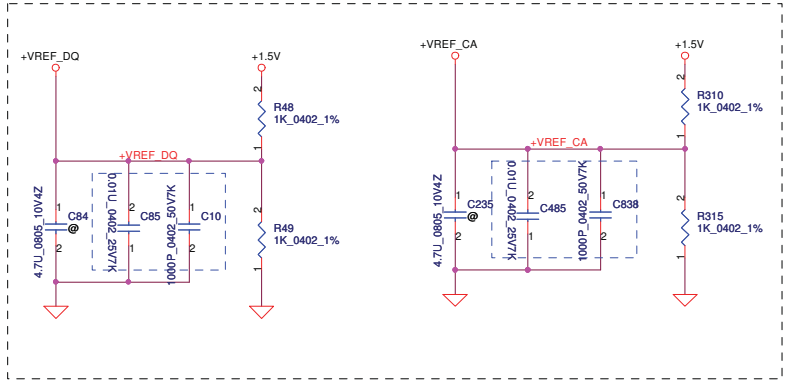
Title: AMD CPU S1G4 PWR & GND

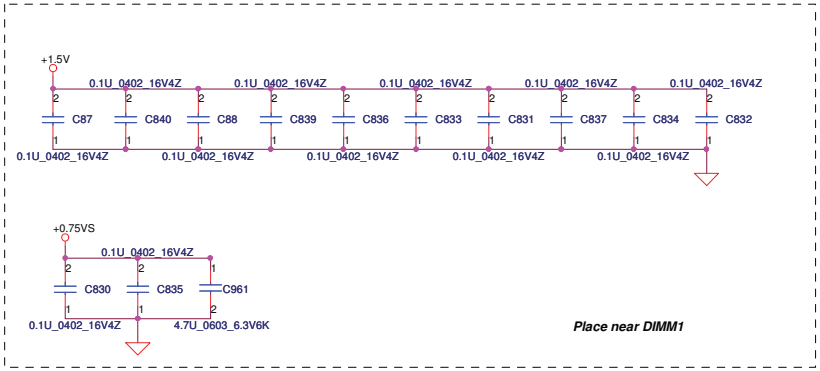
Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Monday, March 01, 2010 | Sheet 7 of 47









DIMM_A Rervse H:4mm

<Address: 00>

Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

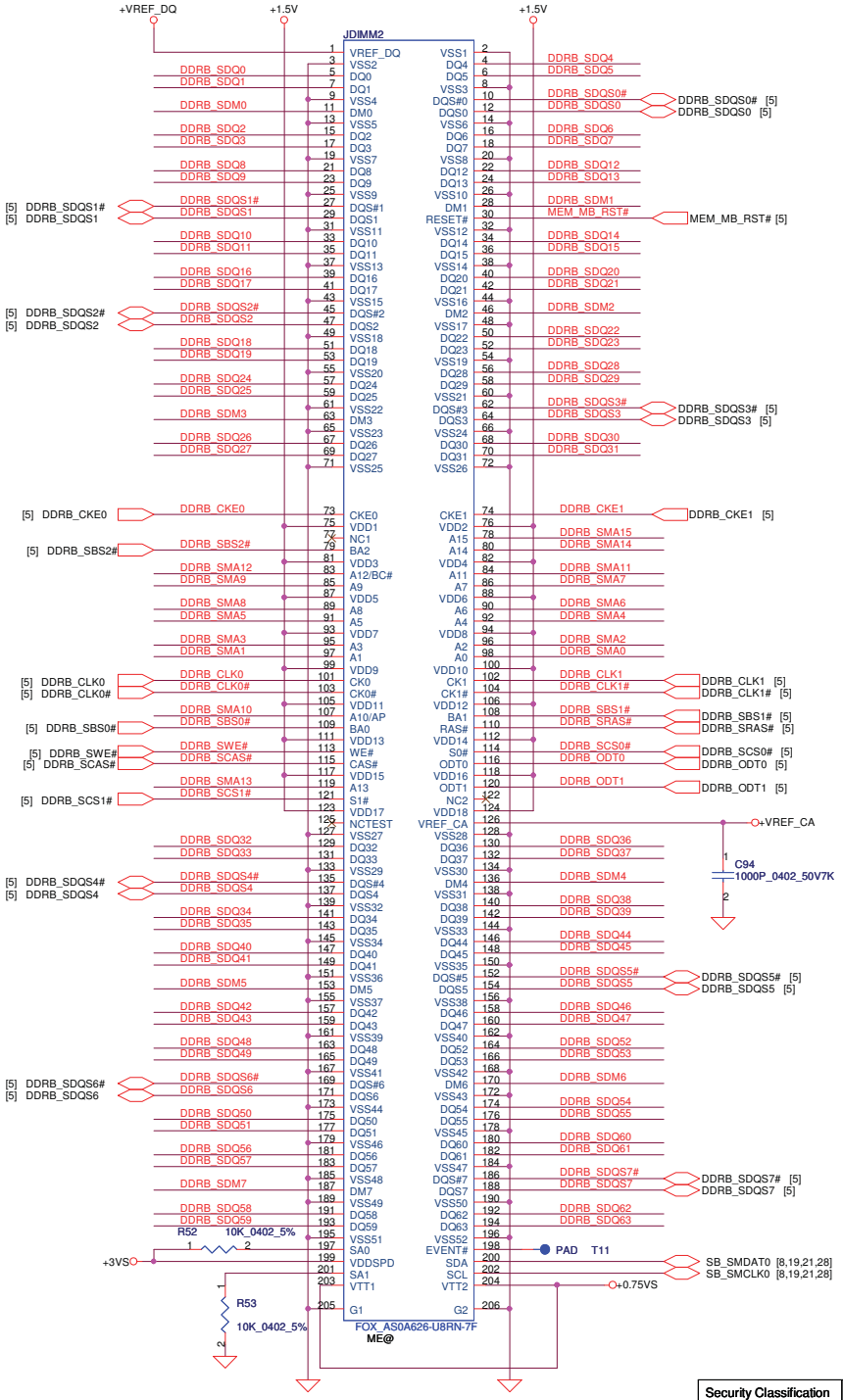
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: DDRII SO-DIMM 1

Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

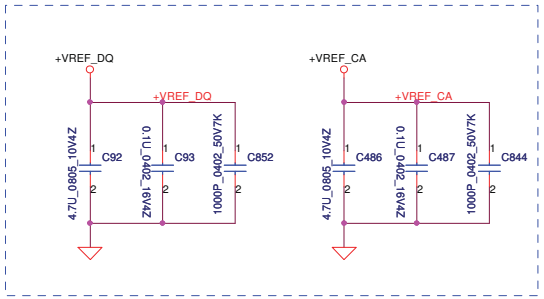
Date: Monday, March 01, 2010 | Sheet 8 of 47

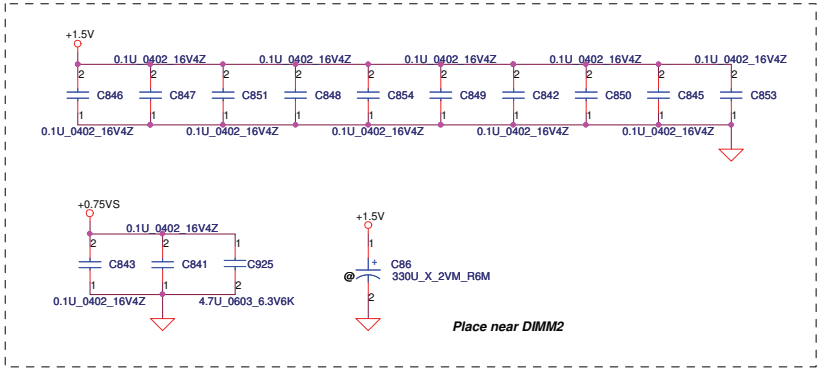


DDRB_SDQ[0..63] DDRB_SDQ[0..63] [5]

DDRB_SDM[0..7] DDRB_SDM[0..7] [5]

DDRB_SMA[0..15] DDRB_SMA[0..15] [5]





DIMM_B Reverse H:8mm

<Address: 01>

Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

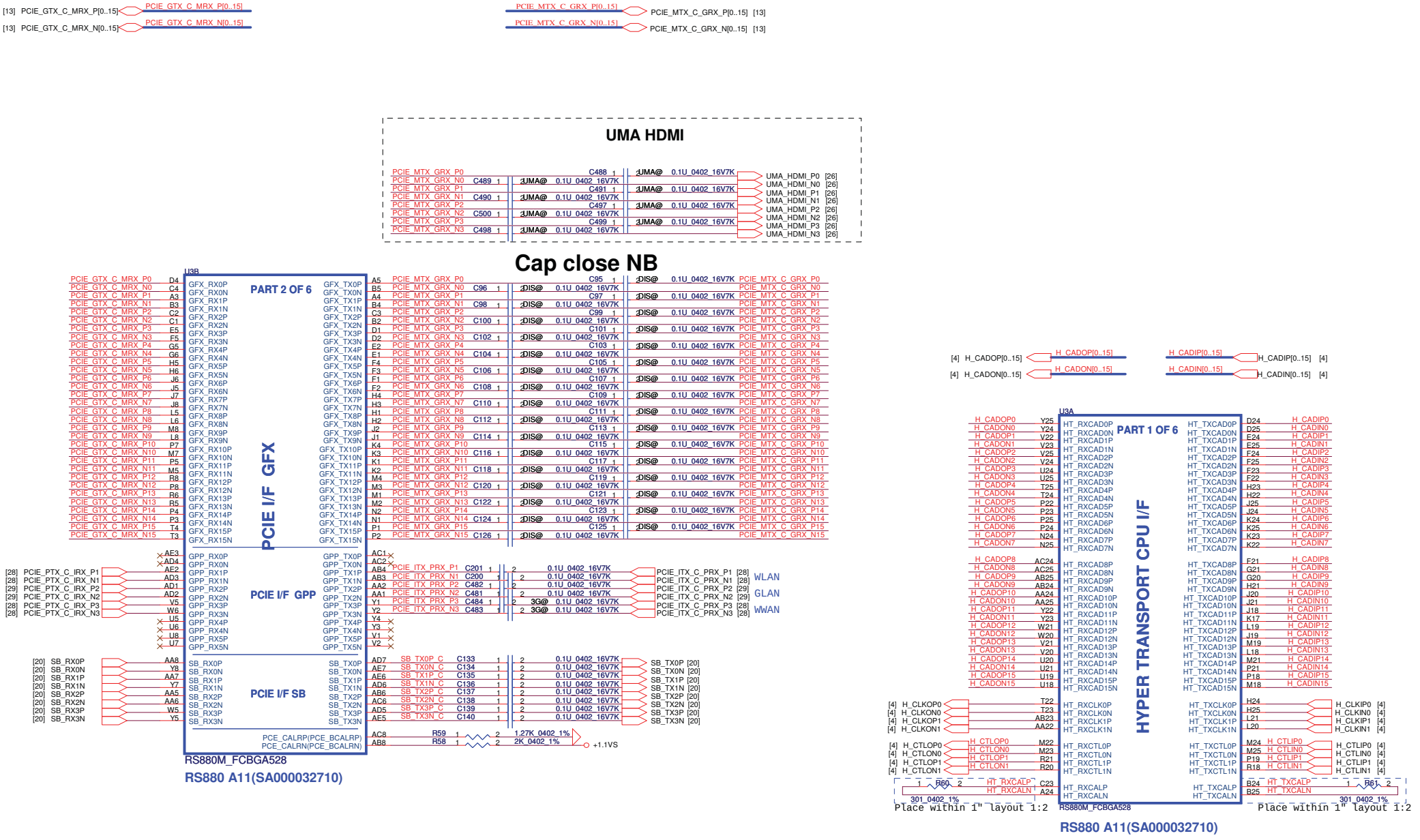
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: DDRII SO-DIMM 2

Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Monday, March 01, 2010 | Sheet 9 of 47



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

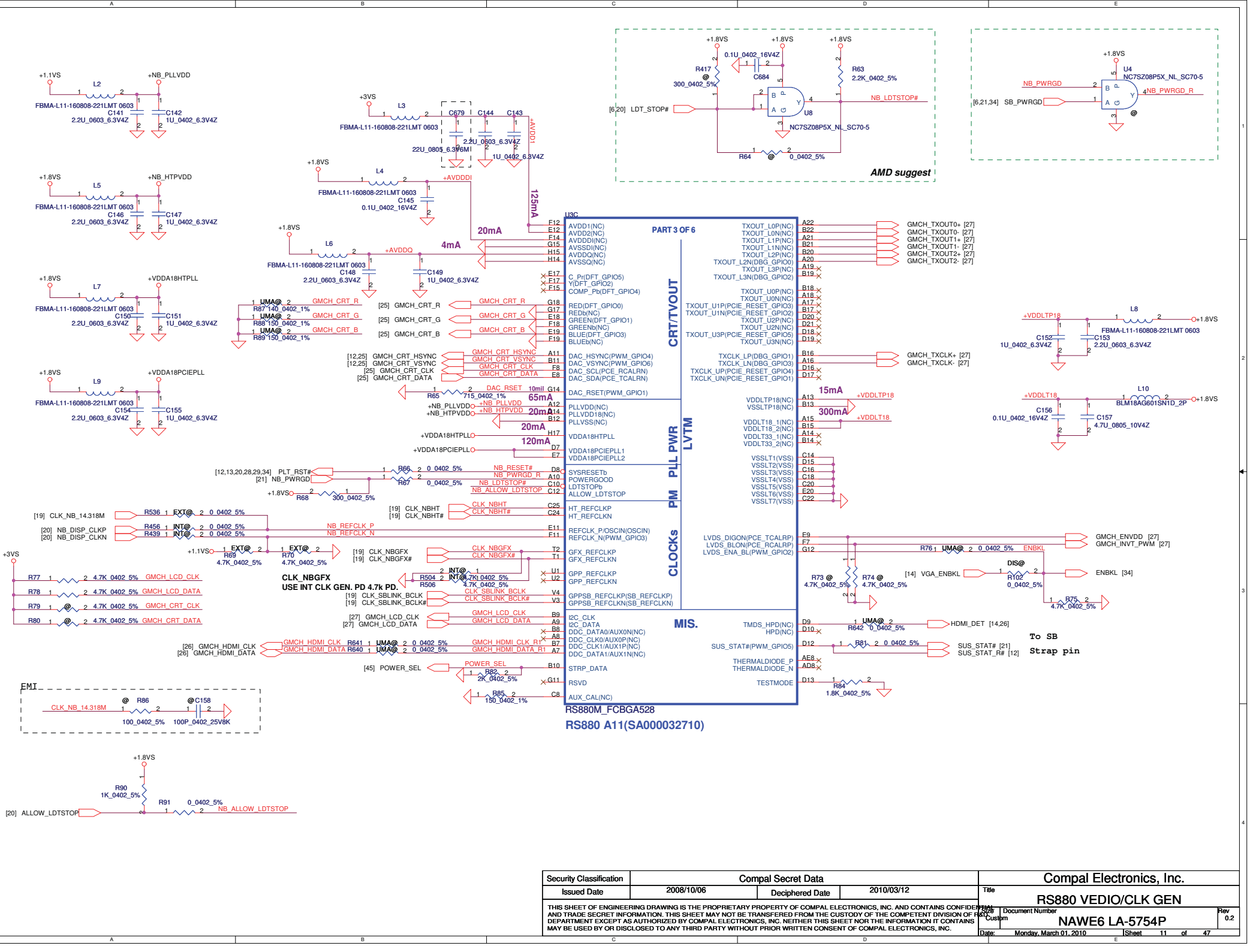
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

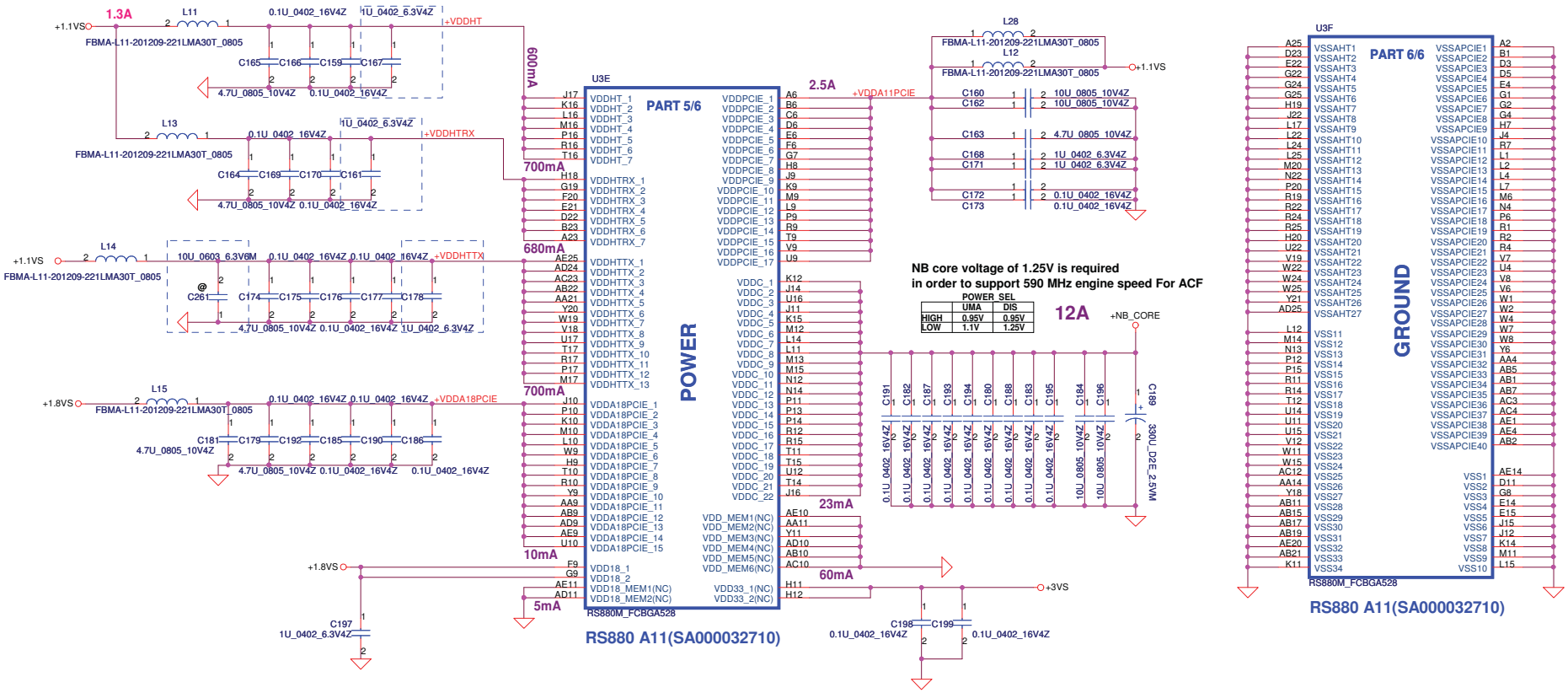
Title: RS880-HT/PCIE

Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Monday, March 01, 2010 | Sheet 10 of 47



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2010/03/12	Title: RS880 VEDIO/CLK GEN
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: NAWE6 LA-5754P; Rev: 0.2
			Date: Monday, March 01, 2010; Sheet 11 of 47

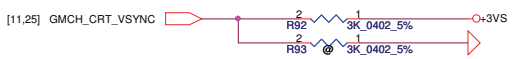


RS880 A11(SA000032710)

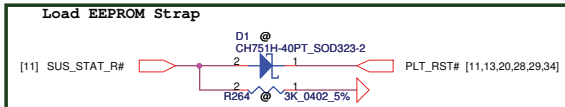
RS880 A11(SA000032710)

Side port and Strap setting

Debug Mode



Load EEPROM Strap



Enable Side Port Memory

DFT_GPIO5:STRAP_DEBUG_BUS_GPIO_ENABLEb

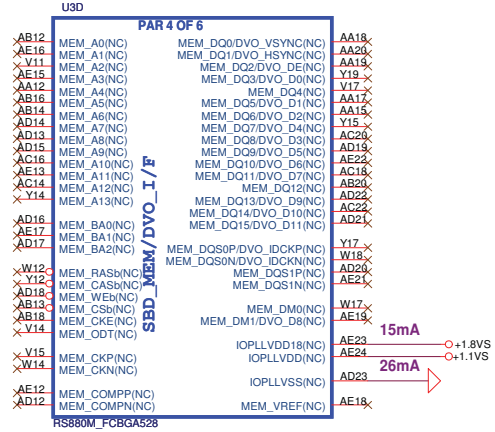
```
Enables the Test Debug Bus using GPIO. (VSYNC)
1 : Disable
0 : Enable
```

DFT_GPIO1: 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
```

Enable Side Port Memory

```
RS880: HSYNC#
0:   Enable        Register Readback of strap:
1 :  Disable       NB_CLKCFG:CLK_TOP_SPARE_D[1]
```



RS880 A11(SA000032710)

Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

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.

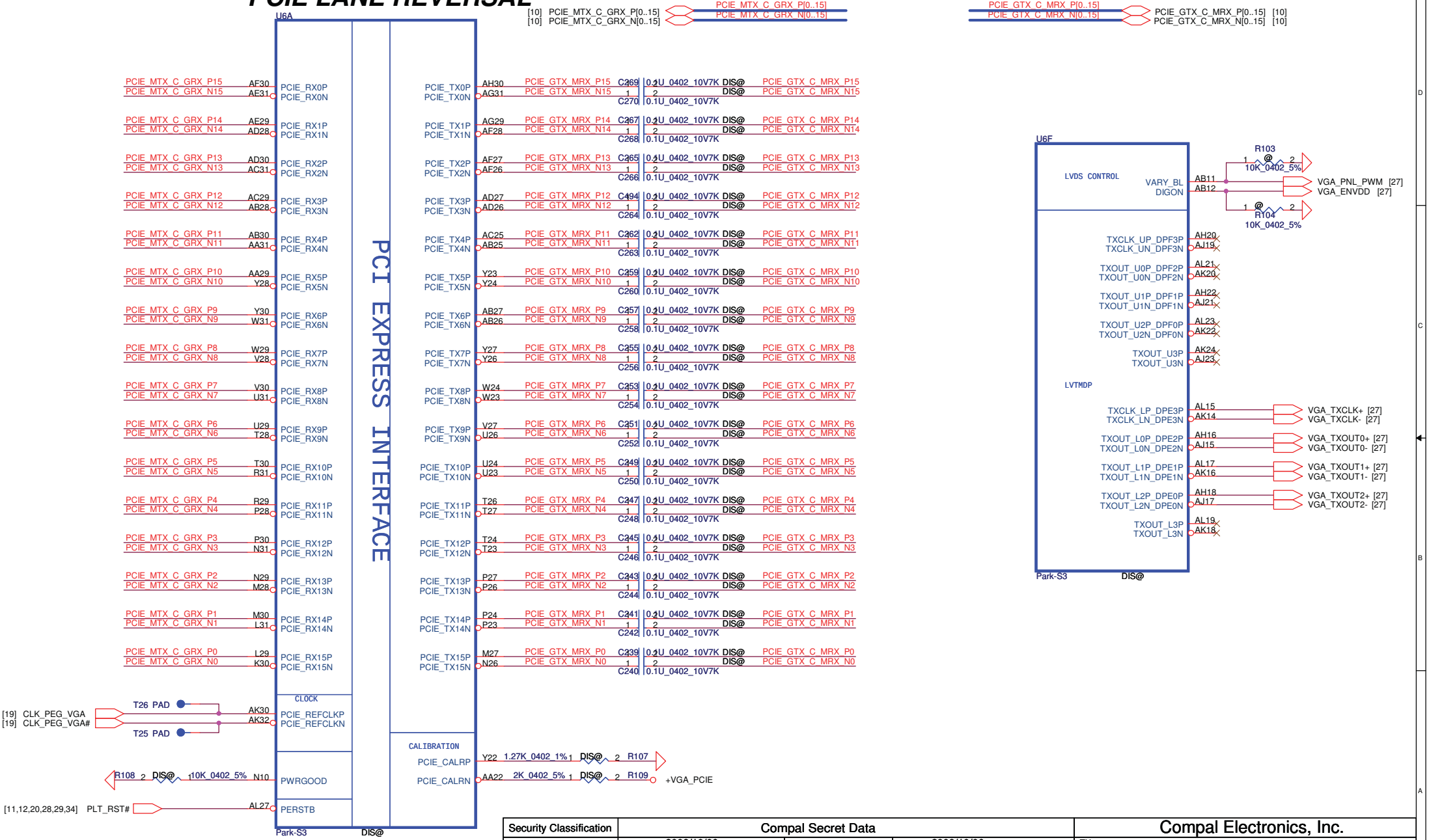
Compal Electronics, Inc.

Title: RS880 PWR/GND

Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Monday, March 01, 2010 | Sheet 12 of 47

PCIE LANE REVERSAL



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2009/10/06

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

Compal Electronics, Inc.

Title: PARK-S3 PCIE/LVDS

Size	Document Number	Rev
Custom	NAWE6 LA-5754P	0.2

Date: Tuesday, March 02, 2010 Sheet 13 of 47

TX_PWRS_ENB	GPIO0	Transmitter Power Saving Enable 0: 50% Tx output swing for mobile mode 1: full Tx output swing (Default setting for Desktop)
TX_DEEMPH_EN	GPIO1	PCI Express Transmitter De-emphasis Enable 0: Tx de-emphasis diabled for mobile mode 1: Tx de-emphasis enabled (Defailt setting for desktop)

CONFIGURATION STRAPS

ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET

RECOMMENDED SETTINGS
0= DO NOT INSTALL RESISTOR
1 = INSTALL 10K RESISTOR
X = DESIGN DEPENDANT
NA = NOT APPLICABLE

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	1
BIF_GEN2_EN_A	GPIO2	PCIE GNE2 ENABLED	0
	GPIO8		0
BIF_VGA DIS	GPIO9	VGA ENABLED	0
	GPIO21		0
BIOS_ROM_EN	GPIO_22_ROMCSB	ENABLE EXTERNAL BIOS ROM	0
ROMIDCFG(2:0)	GPIO[13:11]	SERIAL ROM TYPE OR MEMORY APERTURE SIZE SELECT	001
VIP_DEVICE_STRAP_ENA	V2SYNC	IGNORE VIP DEVICE STRAPS	0
	H2SYNC		0
	GENERICC		0
AUD[1] AUD[0]	HSYNC VSYNC	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	11

AMD RESERVED CONFIGURATION STRAPS

ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET

H2SYNC	GENERICC

PULLUP PADS ARE NOT REQUIRED FOR THESE STRAPS BUT IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET

GPIO21_BB_EN

STRAPS

GPU_GPIO0 R111 10K 0402 5%
GPU_GPIO1 R112 10K 0402 5%
GPU_GPIO2 R113 10K 0402 5%
GPU_GPIO8 R114 10K 0402 5%
GPU_GPIO9 R115 10K 0402 5%
GPU_GPIO11 R117 10K 0402 5%
GPU_GPIO12 R118 10K 0402 5%
GPU_GPIO13 R119 10K 0402 5%
VGA_CRT_HSYNC R120 10K 0402 5%
VGA_CRT_VSYNC R121 10K 0402 5%
VGA_CRT_VSYNC2 R122 10K 0402 5%
VGA_CRT_HSYNC2 R123 10K 0402 5%

VGA Thermal Sensor ADM1032 Closed to GPU

EMC1412-A (SA00003Y40L)
Address 1111_100xb
S IC EMC1412-A-ACZL-TR MSOP 8P SENSOR

XTALIN
Voltage Swing: 1.8 V

Suggest connect to GND by AMD

Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2009/10/06

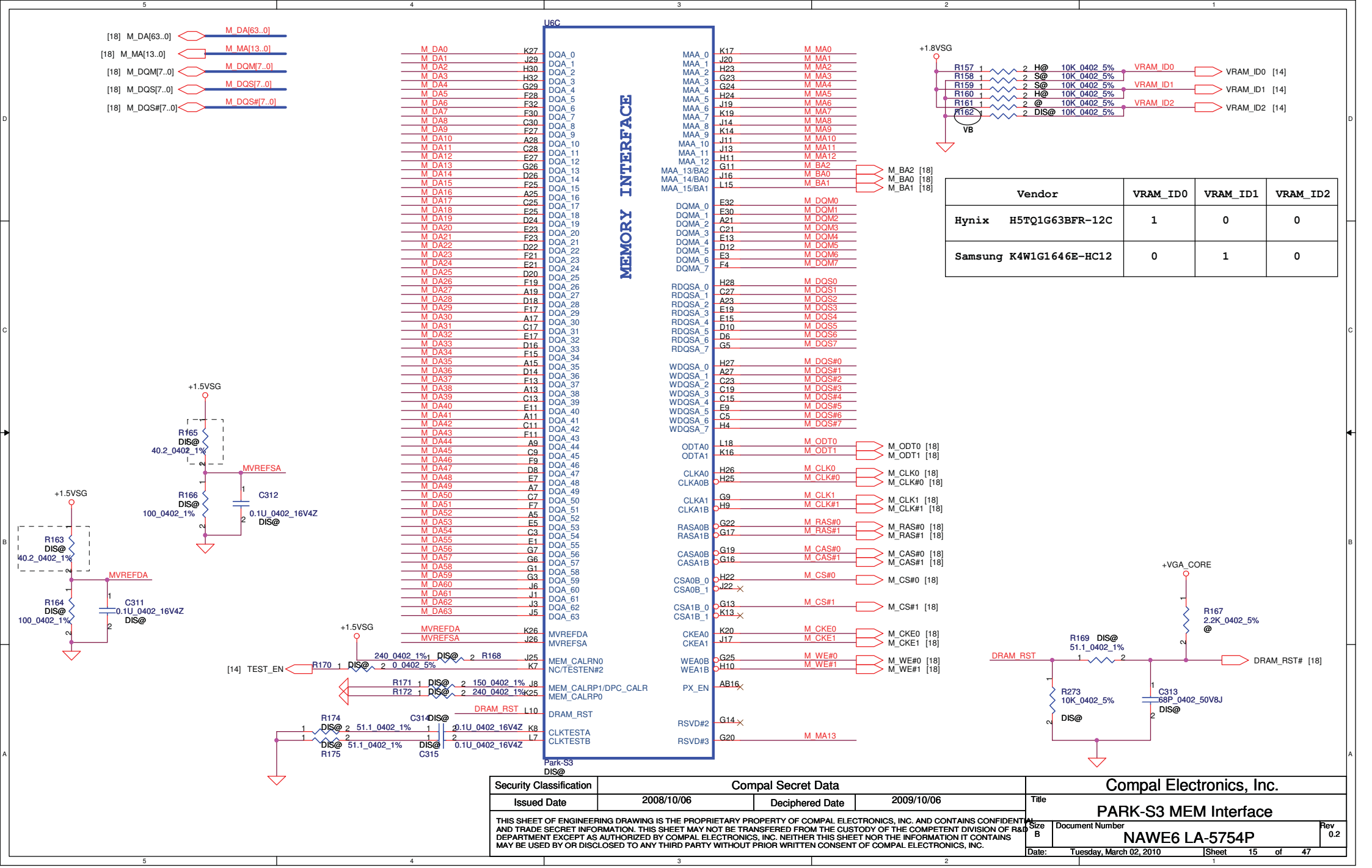
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: PARK-S3 Main Generic/MSIC

Size	Document Number	Rev
C	NAWE6 LA-5754P	0.2

Date: Tuesday, March 02, 2010 Sheet 14 of 47

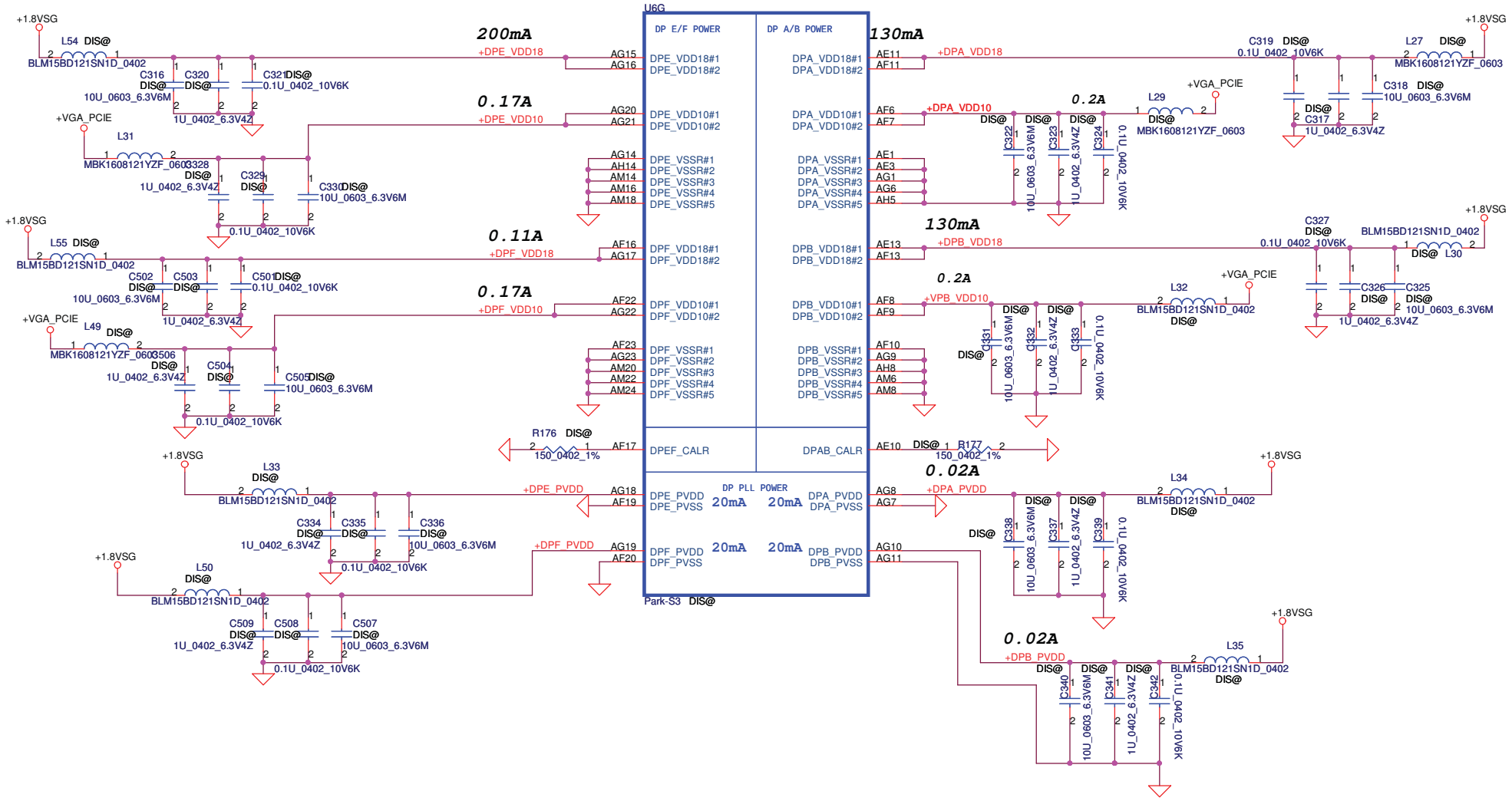


Vendor	VRAM_ID0	VRAM_ID1	VRAM_ID2
Hynix H5TQ1G63BFR-12C	1	0	0
Samsung K4W1G1646E-HC12	0	1	0

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2009/10/06	Title: PARK-S3 MEM Interface
Size: B	Document Number: NAWE6 LA-5754P		Rev: 0.2
Date: Tuesday, March 02, 2010	Sheet 15 of 47		

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

DPE_VDD10 DPF_VDD10	Park-S3: TMDS/DP=110mA@1.0V : LVDS=120mA@1.0V



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2009/10/06

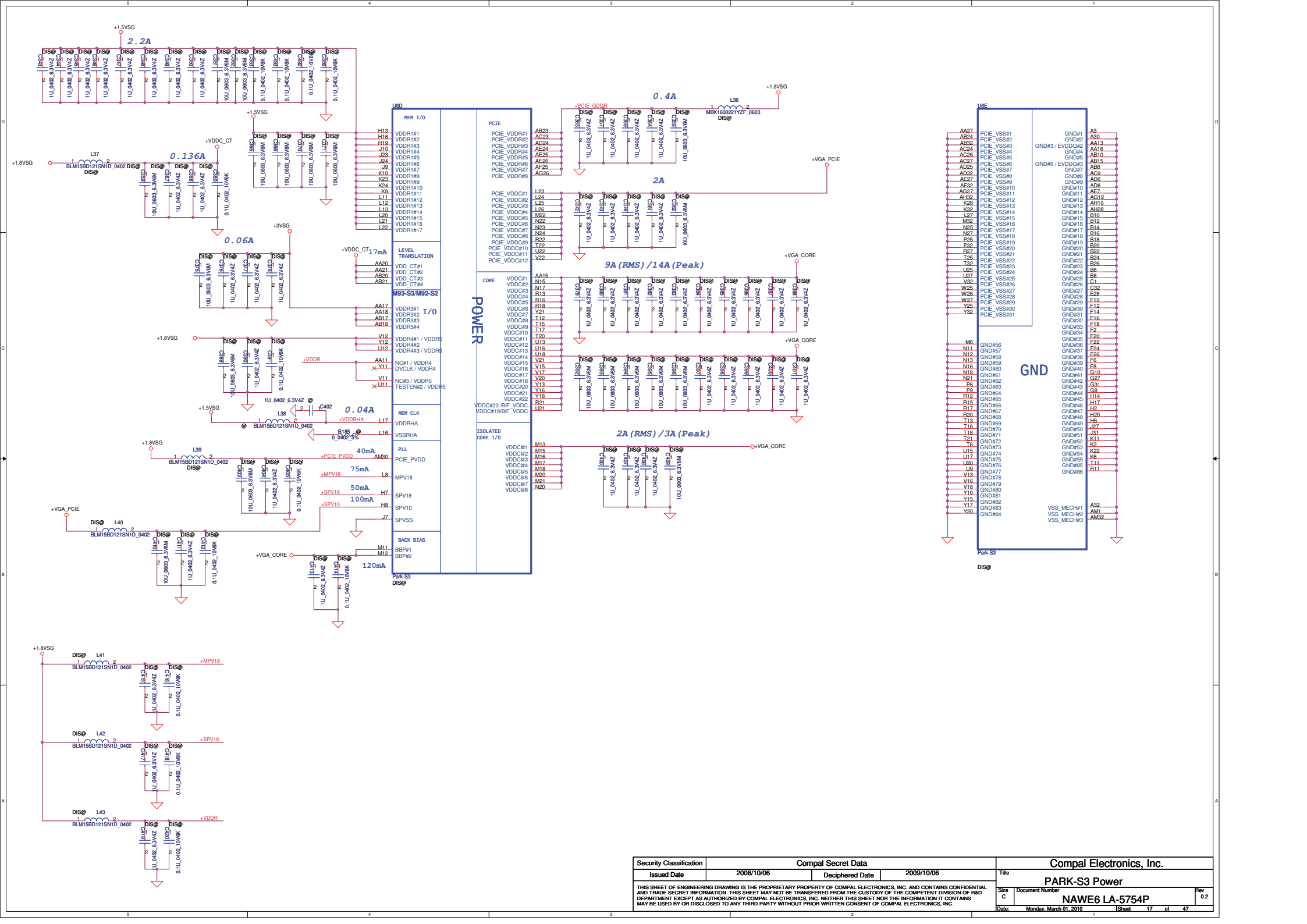
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: PARK-S3 DPX Power

Size: B | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Monday, March 01, 2010 | Sheet 16 of 47



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2009/10/06

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

Compal Electronics, Inc.

Title: PARK-S3 Power

Size	Document Number	Rev
C	NAWE6 LA-5754P	0.2

Date: Monday, March 01, 2010 Sheet 17 of 47

[15] M_DA[63..0] → M_DA[63..0]
[15] M_MA[13..0] → M_MA[13..0]
[15] M_DQM[7..0] → M_DQM[7..0]
[15] M_DQS[7..0] → M_DQS[7..0]
[15] M_DQS#[7..0] → M_DQS#[7..0]

X76-H: Hynix X76H@ X76223381L02
X76-S: Samsung X76S@ X76223381L01

U9 SAMSUNG VRAM S@
U10 SAMSUNG VRAM S@
U11 SAMSUNG VRAM S@
U12 SAMSUNG VRAM S@

U9 / U10 / U11 / U12
100-BALL SDRAM DDR3
64MX16 H5TQ1G63BFR-12C FBGA
H@

+1.5VSG

R189 240_0402_1% DIS@
R190 240_0402_1% DIS@
R191 240_0402_1% DIS@
R192 240_0402_1% DIS@

R193 4.99K_0402_1% DIS@ — VREFD_Q1
R194 4.99K_0402_1% DIS@ — VREFC_A1
R195 4.99K_0402_1% DIS@ — VREFC_A2
R196 4.99K_0402_1% DIS@ — VREFD_Q2
R197 4.99K_0402_1% DIS@ — VREFC_A3
R198 4.99K_0402_1% DIS@ — VREFD_Q3
R199 4.99K_0402_1% DIS@ — VREFC_A4
R200 4.99K_0402_1% DIS@ — VREFD_Q4
R201 4.99K_0402_1% DIS@
R202 4.99K_0402_1% DIS@
R203 4.99K_0402_1% DIS@
R204 4.99K_0402_1% DIS@
R205 4.99K_0402_1% DIS@
R206 4.99K_0402_1% DIS@
R207 4.99K_0402_1% DIS@
R208 4.99K_0402_1% DIS@

C421–C426 0.1U_0402_10V6K DIS@
C427–C428 0.1U_0402_10V6K DIS@

M_CLK0 R209 56_0402_1%
M_CLK#0 R211 56_0402_1%
C455 0.01U_0402_16V7K DIS@
M_CLK1 R210 56_0402_1%
M_CLK#1 R212 56_0402_1%
C456 0.01U_0402_16V7K DIS@

+1.5VSG
C446 10U_0603_6.3V6M DIS@
C429 10U_0603_6.3V6M DIS@
C447 10U_0603_6.3V6M DIS@
C448 10U_0603_6.3V6M DIS@
C449 10U_0603_6.3V6M DIS@
C430 10U_0603_6.3V6M DIS@
10U_0603_6.3V6M

+1.5VSG
C431–C439 1U_0402_6.3V4Z DIS@
C440–C445 1U_0402_6.3V4Z DIS@
C450–C455 1U_0402_6.3V4Z DIS@

VRAM P/N :
Samsung : SA000035700 (S IC D3 64MX16 K4W1G1646E-HC12 FBGA 96P)
Hynix : SA000032400 (S IC D3 64MX16 H5TQ1G63BFR-12C FBGA 1.5V)

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

Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2009/10/06

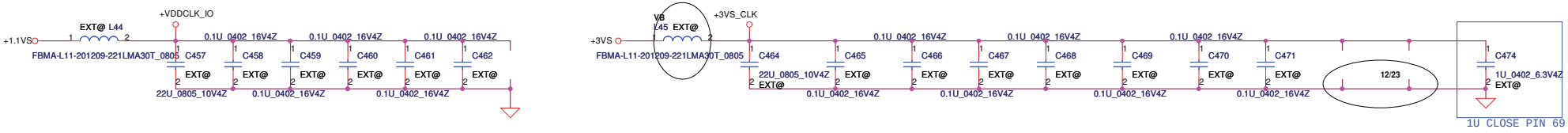
Compal Electronics, Inc.

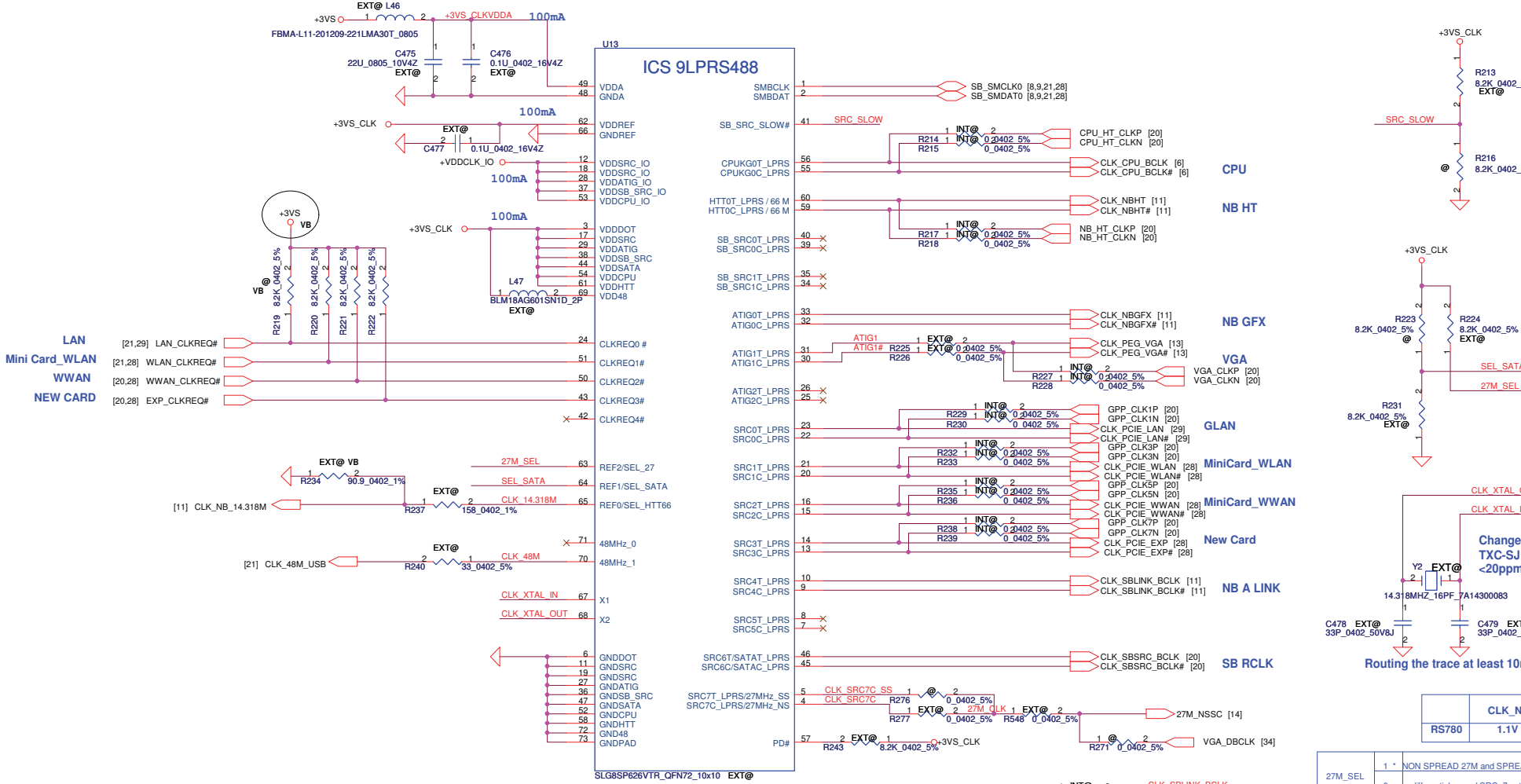
Title: PARK-S3 DDR3 VRAM

Size: C | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Monday, March 01, 2010 | Sheet 18 of 47

Check Timing +1.1VS <50us +3VS for EXT CLKGEN satable





	CLK_NB_14.318M
RS780	1.1V 158R/90.0R

27M_SEL	1 *	NON SPREAD 27M and SPREAD 27M output
	0	differential spread SRC_7 output
SEL_HTT66	1	single-ended 66MHz HTT output
	0 *	differential 100MHz HTT output
SEL_SATA	1	NON SPREAD 100M_SATA SRC6 output
	0 *	SPREAD 100M_SATA SRC6 output

* default

1st (SILEGO) : SA00001Z310 S IC SLG8SP626VTR QFN 72P CLK GEN

2nd (ICS) : SA000023H10 S IC ICS9LPRS488CKLFT MLF 72P CLK GEN

Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

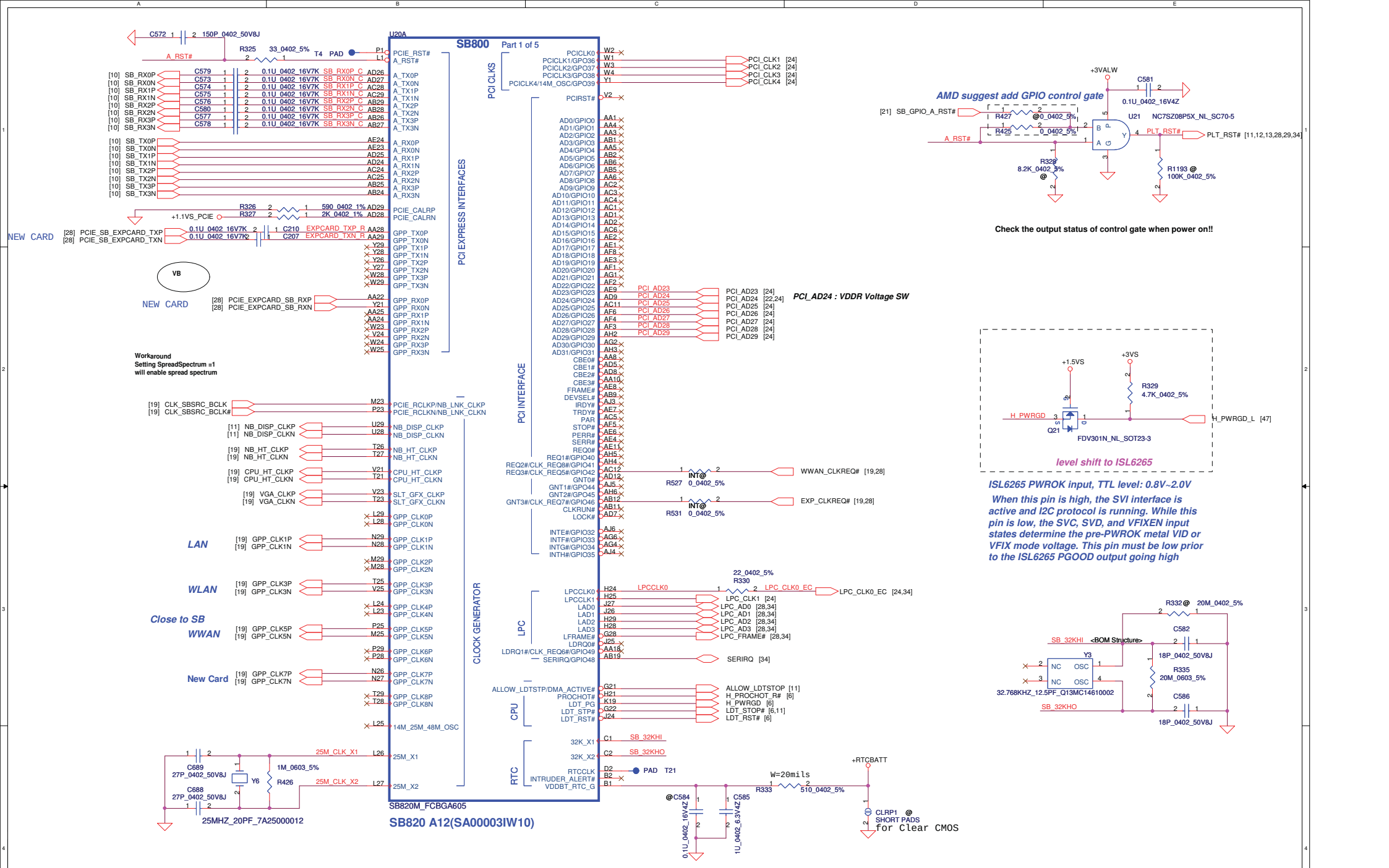
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: Clock generator

Size: B, Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Tuesday, March 02, 2010 | Sheet 19 of 47



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

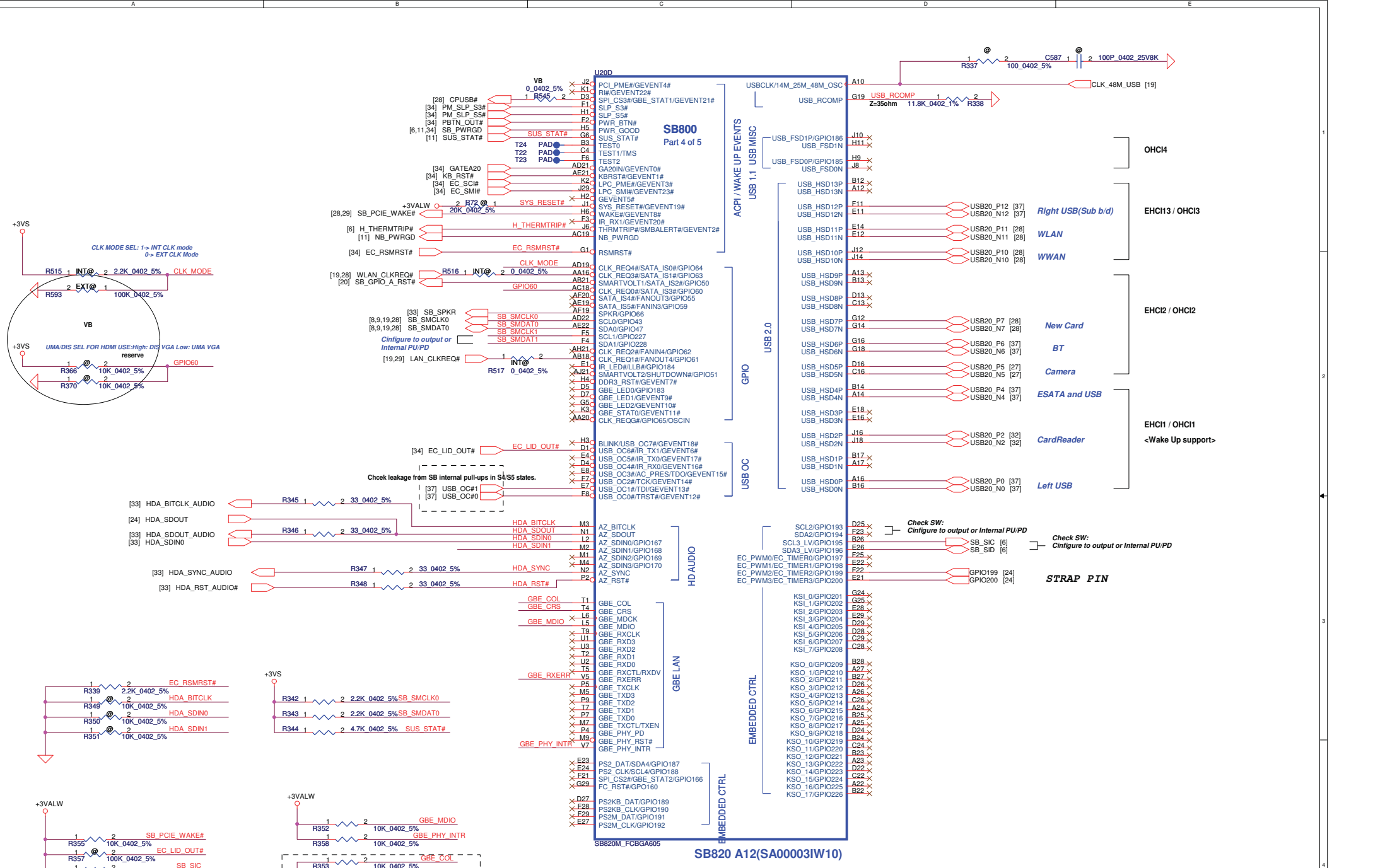
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: SB820-PCIE/PCI/ACPI/LPC/RTC

Size	Document Number	Rev
B2B Custom	NAWE6 LA-5754P	0.2

Date: Tuesday, March 02, 2010 | Sheet 20 of 47



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

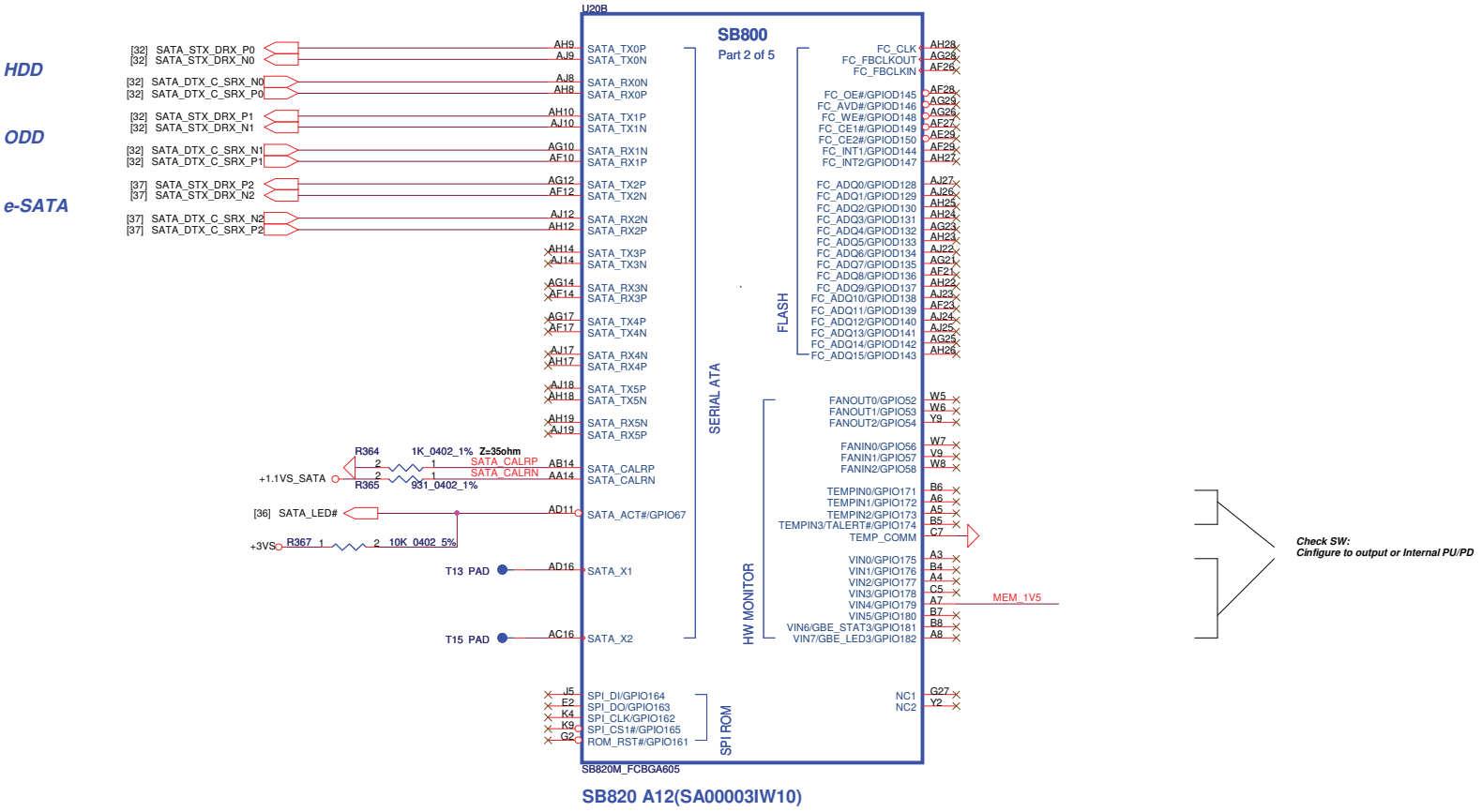
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE-SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

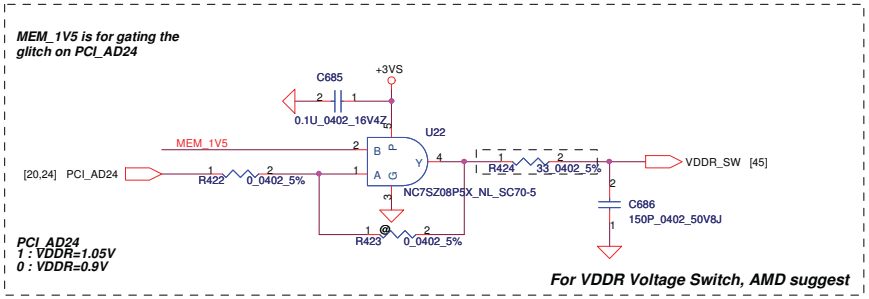
Title: SB820 USB/HD audio

Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Tuesday, March 02, 2010 | Sheet 21 of 47

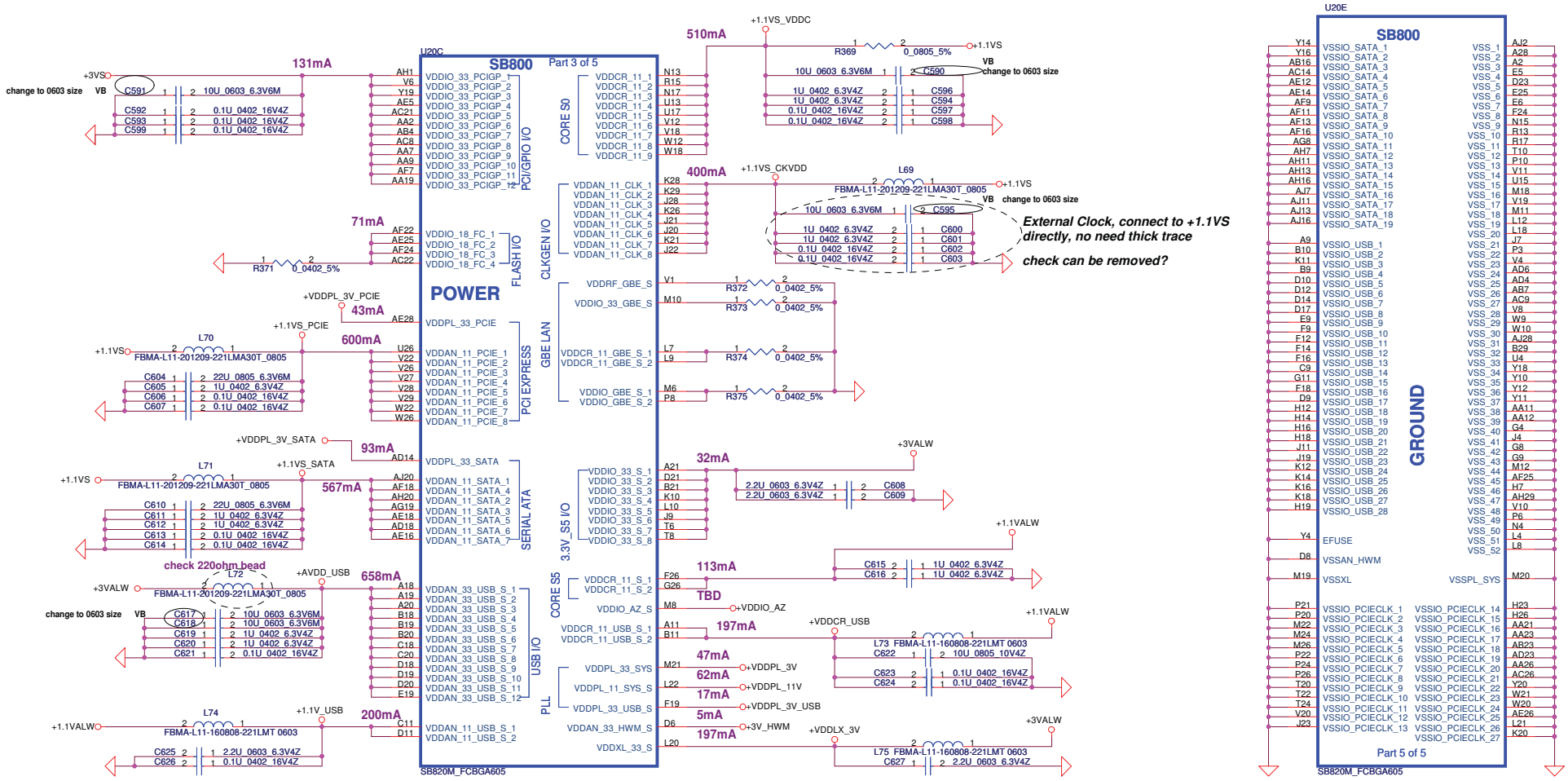


SB820 A12(SA00003IW10)



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2010/03/12	Title SB820 SATA/IDE/SPI
Size Custom	Document Number NAWE6 LA-5754P		Rev 0.2
Date: Monday, March 01, 2010	Sheet 22 of 47		

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



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

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.

Compal Electronics, Inc.

Title: SB820 power/GND

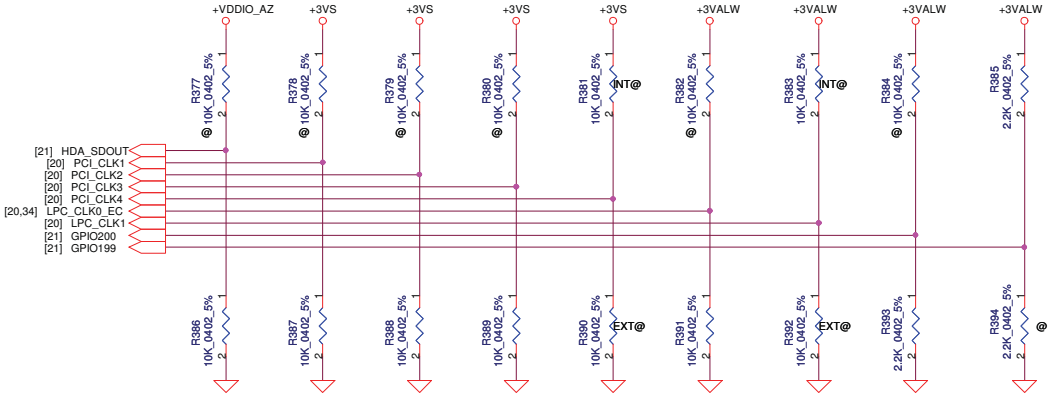
Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Tuesday, March 02, 2010 | Sheet 23 of 47

REQUIRED STRAPS

Check Internal PU/PD

	AZ_SDOUT	PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4	LPC_CLK0	LCP_CLK1	GPIO200 GPIO199
PULL HIGH	LOW POWER MODE	ALLOW PCIE GEN2	WATCHDOG TIMER ENABLE	USE DEBUG STRAP	CPU/HT CLK SEL Enable	EC ENABLE	CLOCKGEN ENABLE	H,H = Reserved H,L = SPI ROM **L,H = LPC ROM (Default L,NC)** L,L = FWH ROM
PULL LOW	Performance MODE DEFAULT	FORCE PCIE GEN1 DEFAULT	WATCHDOG TIMER DISABLE DEFAULT	IGNORE DEBUG STRAP DEFAULT	CPU/HT CLK SEL Disable DEFAULT	EC DISABLE DEFAULT	CLOCKGEN DISABLE DEFAULT	



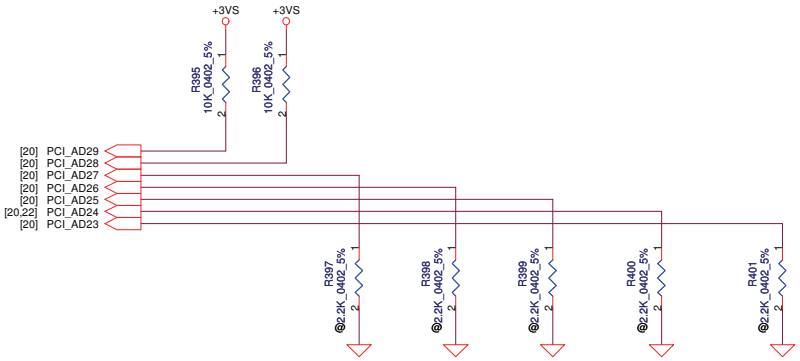
DEBUG STRAPS

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 DEFAULT	DISABLE ILA AUTORUN DEFAULT	USE FC PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	DISABLE PCI MEM BOOT DEFAULT
PULL LOW		BYPASS PCI PLL	ENABLE ILA AUTORUN	BYPASS FC PLL	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT

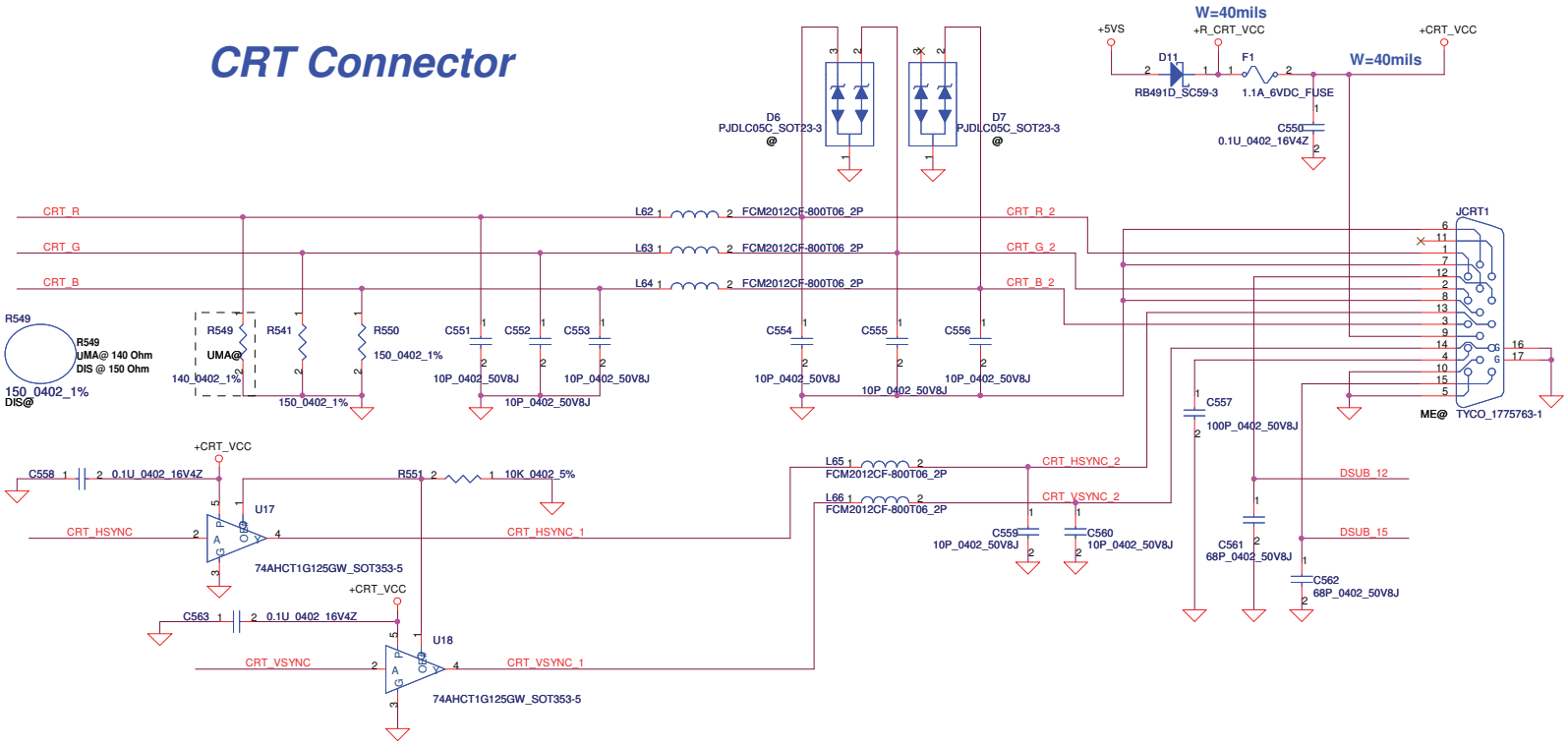
Check AD29,AD28 strap function

check default



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2010/03/12	Title SB820 STRAPS
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 B Custom / Document Number NAWE6 LA-5754P / Rev 0.2
			Date: Monday, March 01, 2010 / Sheet 24 of 47

CRT Connector



For UMA Only

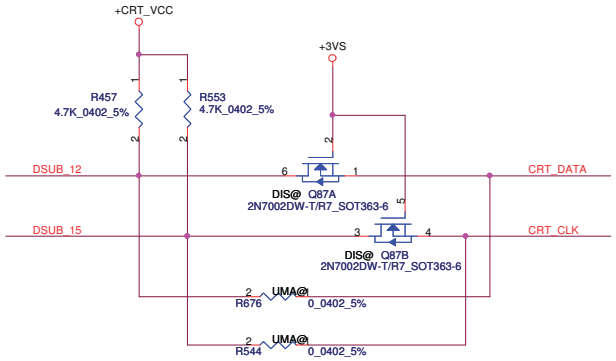
[11] GMCH_CRT_R	GMCH_CRT_R	R677	UMA@	0_0402_5%	CRT_R
[11] GMCH_CRT_G	GMCH_CRT_G	R542	UMA@	0_0402_5%	CRT_G
[11] GMCH_CRT_B	GMCH_CRT_B	R679	UMA@	0_0402_5%	CRT_B
[11,12] GMCH_CRT_HSYNC	GMCH_CRT_HSYNC	R547	UMA@	0_0402_5%	CRT_HSYNC
[11,12] GMCH_CRT_VSYNC	GMCH_CRT_VSYNC	R543	UMA@	0_0402_5%	CRT_VSYNC
[11] GMCH_CRT_DATA	GMCH_CRT_DATA	R546	UMA@	0_0402_5%	CRT_DATA
[11] GMCH_CRT_CLK	GMCH_CRT_CLK	R678	UMA@	0_0402_5%	CRT_CLK

For VGA Only

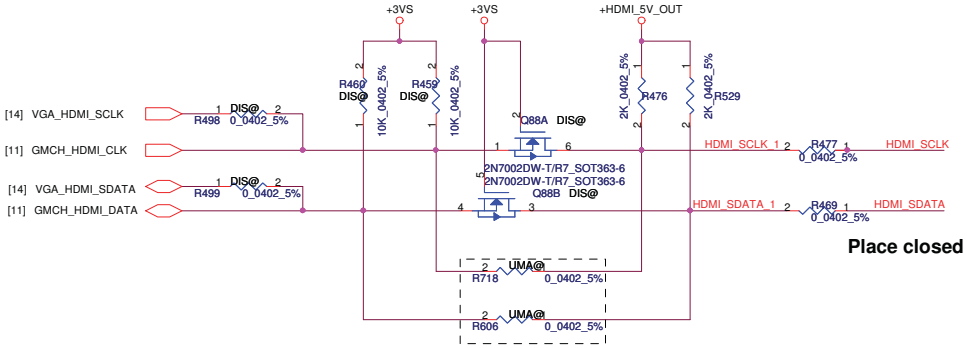
[14] VGA_CRT_R	VGA_CRT_R	R539	DIS@	0_0402_5%	CRT_R
[14] VGA_CRT_G	VGA_CRT_G	R552	DIS@	0_0402_5%	CRT_G
[14] VGA_CRT_B	VGA_CRT_B	R554	DIS@	0_0402_5%	CRT_B
[14] VGA_CRT_HSYNC	VGA_CRT_HSYNC	R535	DIS@	0_0402_5%	CRT_HSYNC
[14] VGA_CRT_VSYNC	VGA_CRT_VSYNC	R557	DIS@	0_0402_5%	CRT_VSYNC
[14] VGA_CRT_DATA	VGA_CRT_DATA	R538	DIS@	0_0402_5%	CRT_DATA
[14] VGA_CRT_CLK	VGA_CRT_CLK	R556	DIS@	0_0402_5%	CRT_CLK

NOTE:
IF RS880M ONLY(NO MXM SUPPORT),
DAC_SDAT AND DAC_SCL DON'T
NEED LEVEL SHIFT, PU TO +5V DIRECTLY.
DAC_SDAT AND DAC_SCL ARE 5V TOLERANCE.

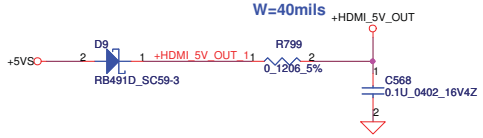
Close to Conn side

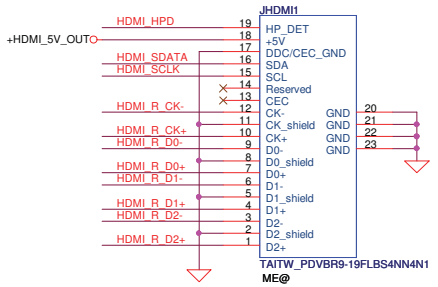


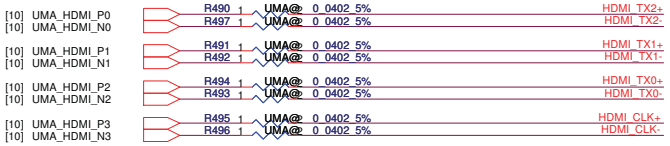
Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2008/10/06	Deciphered Date 2010/03/12	Title: CRT Connector
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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: B; Document Number: NAWE6 LA-5754P; Rev: 0.2
			Date: Monday, March 01, 2010; Sheet 25 of 47

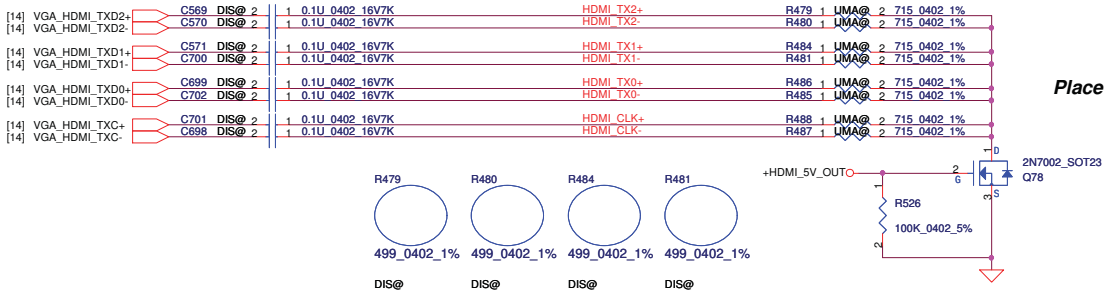


Place closed to JHDMI1

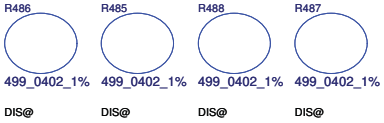




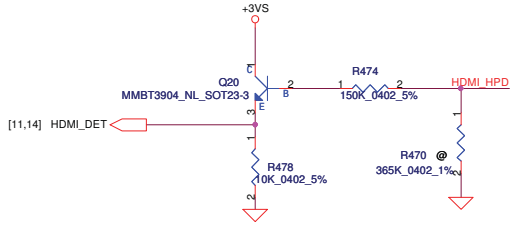


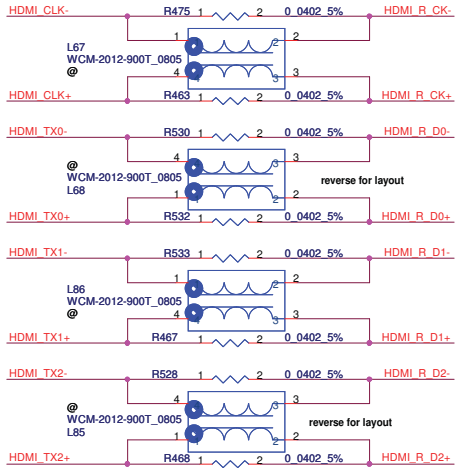


Place closed to JHDMI1



UMA use 715 ohm
VGA use 499 ohm





Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

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

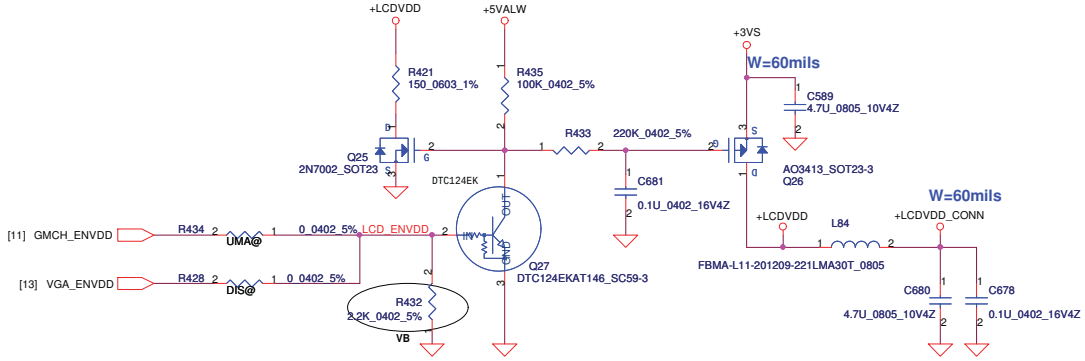
Compal Electronics, Inc.

Title: HDMI Connector

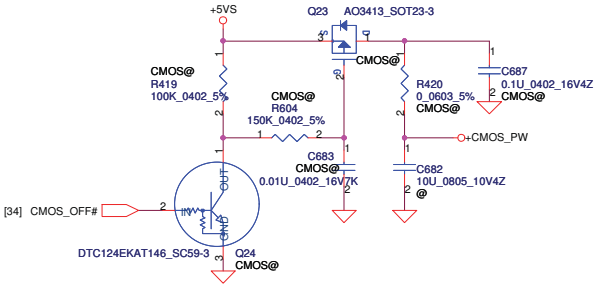
Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

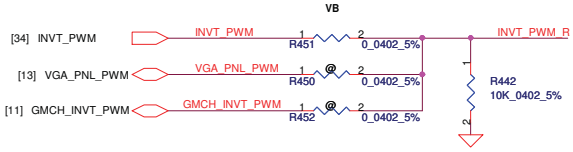
Date: Monday, March 01, 2010 | Sheet 26 of 47

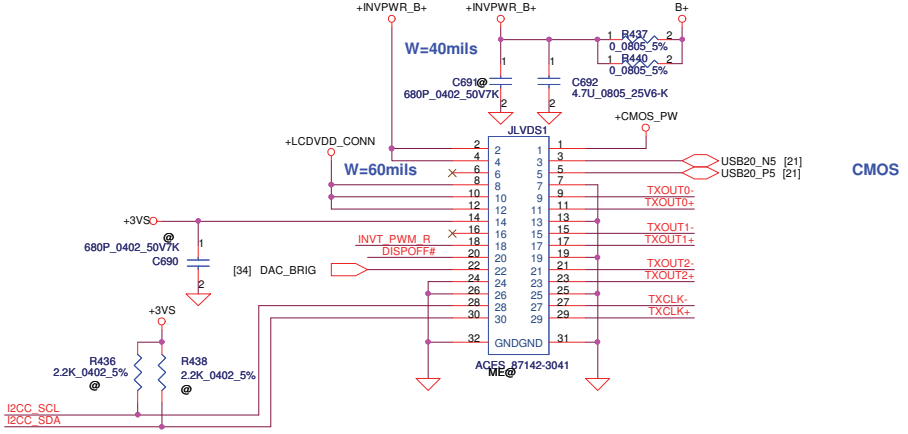
LCD POWER CIRCUIT



CMOS Camera

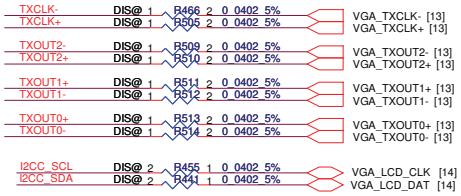




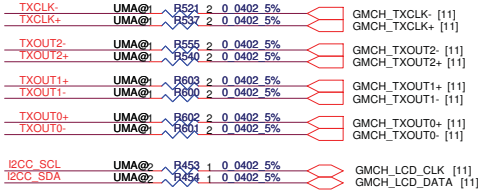


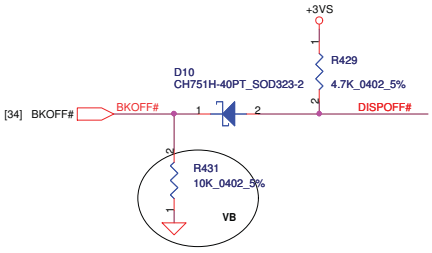
CMOS

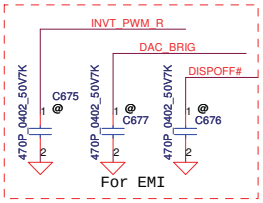
VGA ONLY



UMA ONLY







Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

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

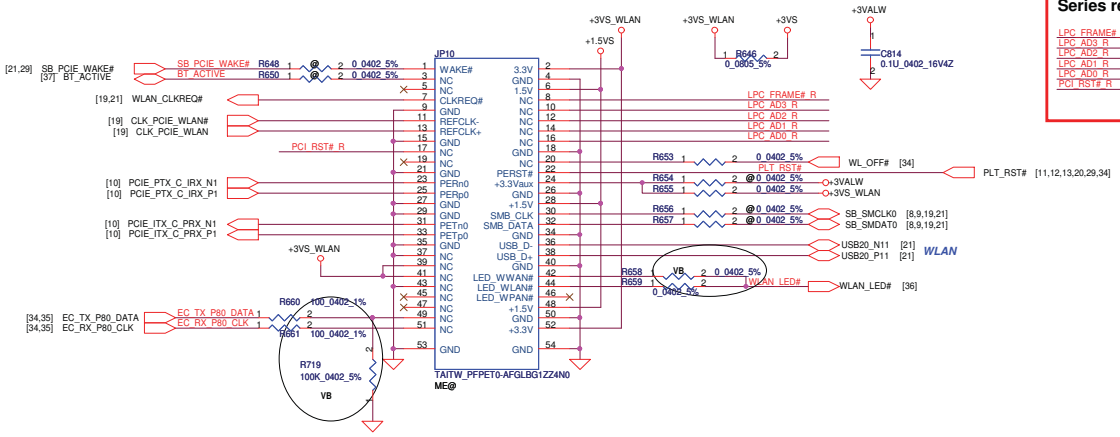
Compal Electronics, Inc.

Title: LVDS/CAMERA

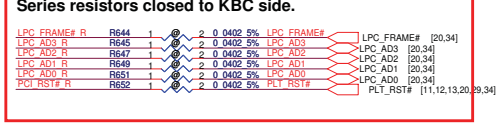
Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Tuesday, March 02, 2010 | Sheet 27 of 47

Mini-Express Card for WLAN/WiMAX(Half)

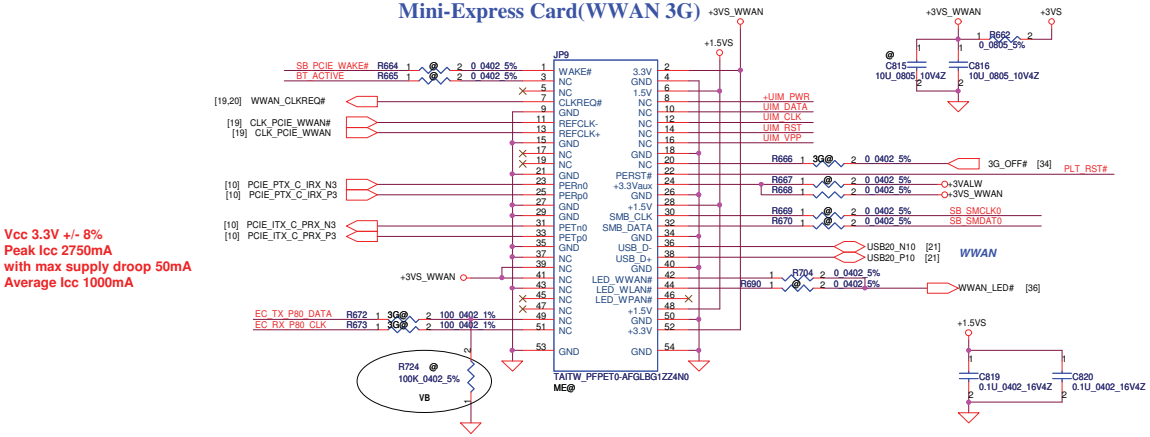


Reserve for SW mini-pcie debug card.
Series resistors closed to KBC side.

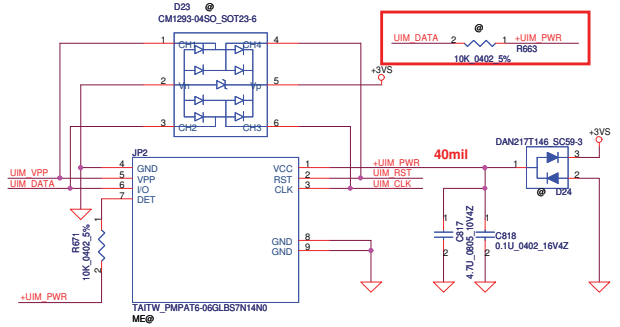


Mini-Express Card for WWAN(Full)

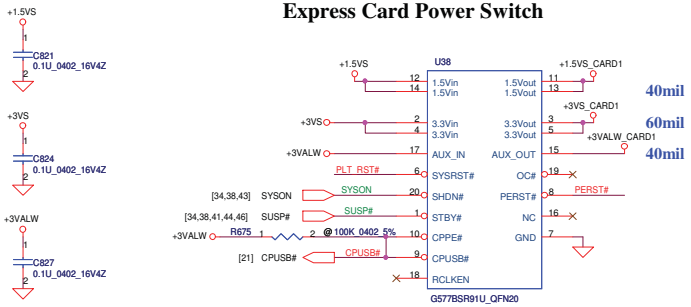
Mini-Express Card(WWAN 3G)



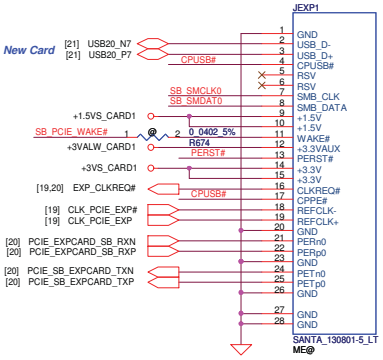
Vcc 3.3V +/- 8%
Peak Icc 2750mA
with max supply droop 50mA
Average Icc 1000mA



Express Card Power Switch



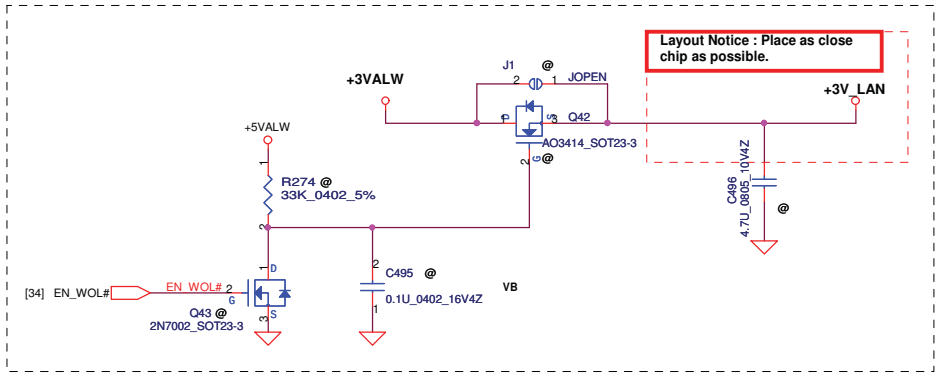
New Card 34mm Socket (Left/TOP)

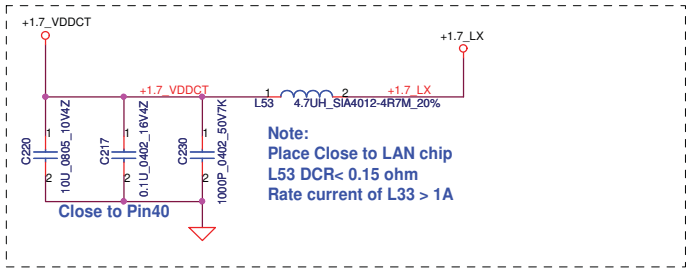


Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

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

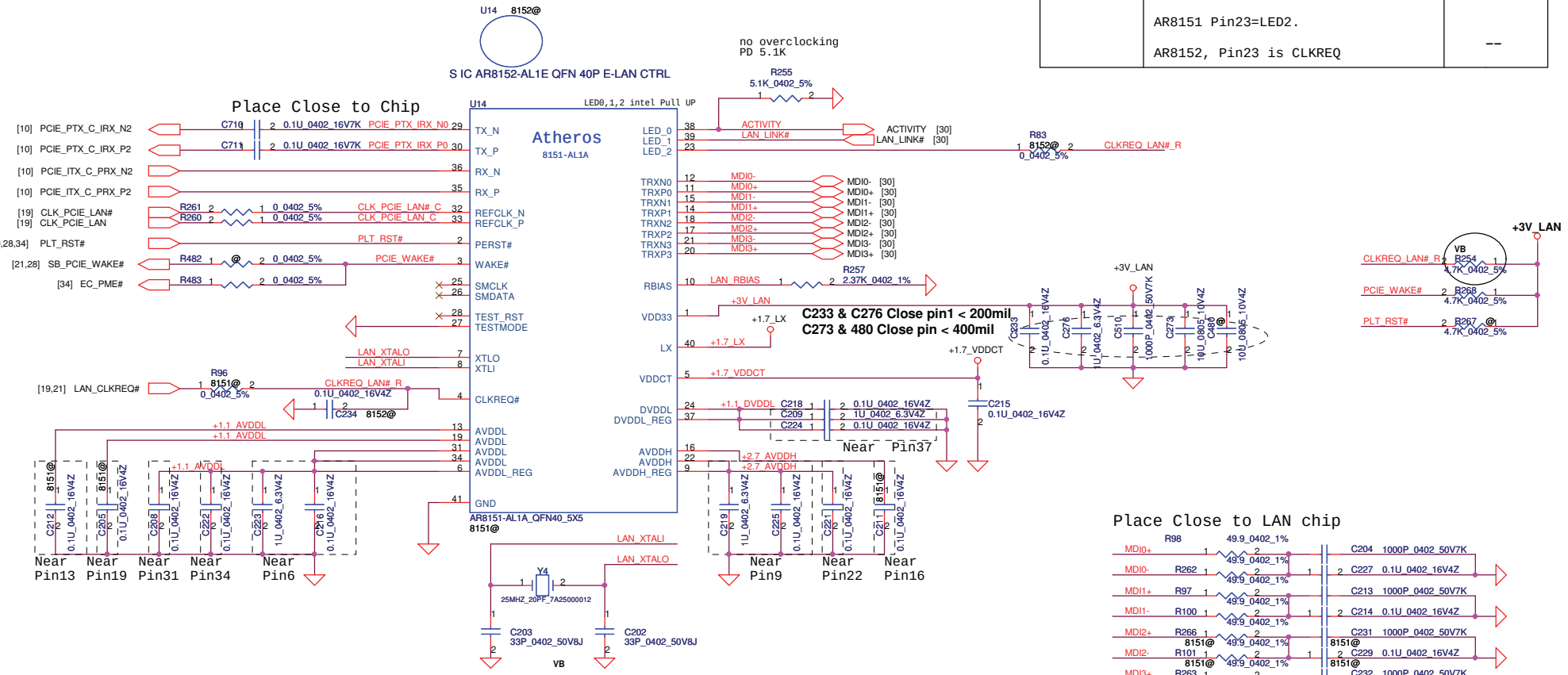
Compal Electronics, Inc.			
Title: Mini-Card/Nwe Card/SIM			
Size	Document Number: NAWE6 LA-5754P		Rev: 0.2
Date: Tuesday, March 02, 2010	Sheet 28 of 47		





Power On strapping

Pin	Description	Chip Default
LED0	H:Over Clock Enable L:Over Clock Disable ★	H
	H:SWR Switch mode regulator Select ★ AR8151 Pin23=LED2. AR8152, Pin23 is CLKREQ	--



8152 no mount MDI3+,MDI3-,MDI2-,MDI2+ resister and cap

For AR8152, pin23 is the LDO output. Mount C234 and no mount R96.close to this pin4

For AR8151, pin4 is the CLKREQn pin, mount R96 and no mount C234.close to this pin4

Security Classification	Compal Secret Data		
Issued Date	2006/08/04	Deciphered Date	2006/10/06

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

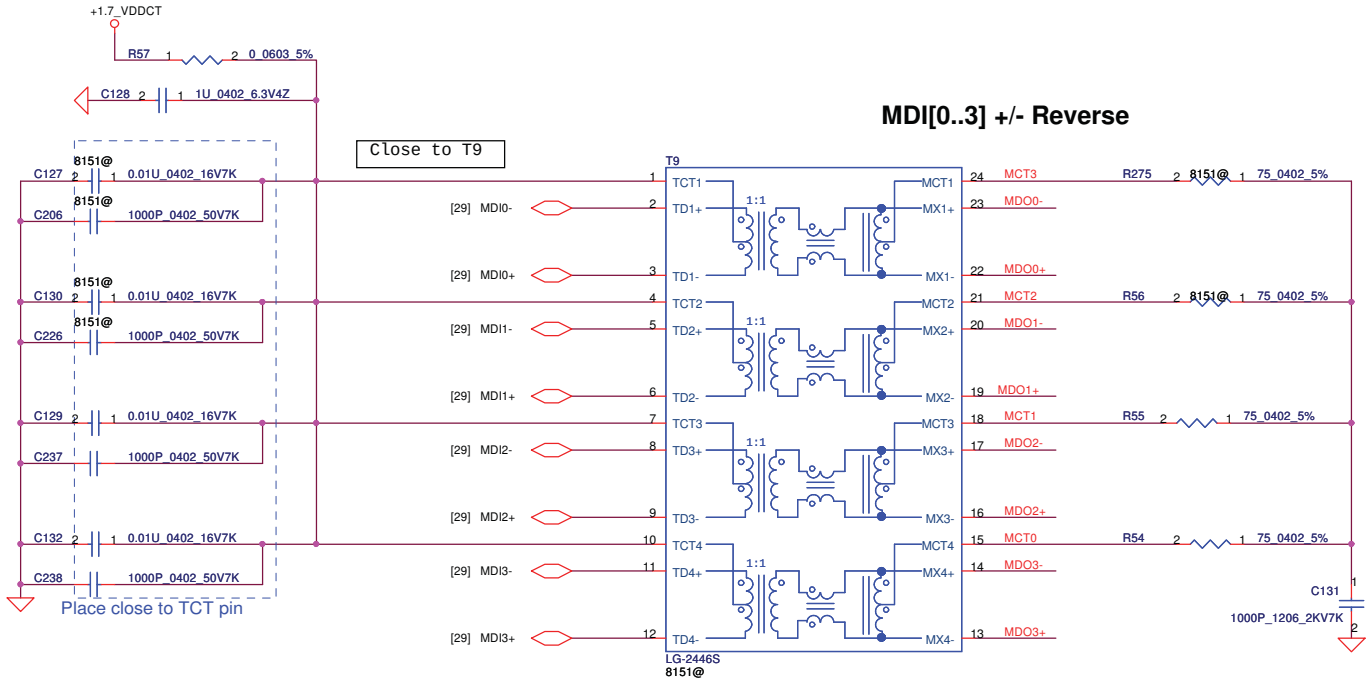
Compal Electronics, Inc.

Title: LAN-AR8151/8152

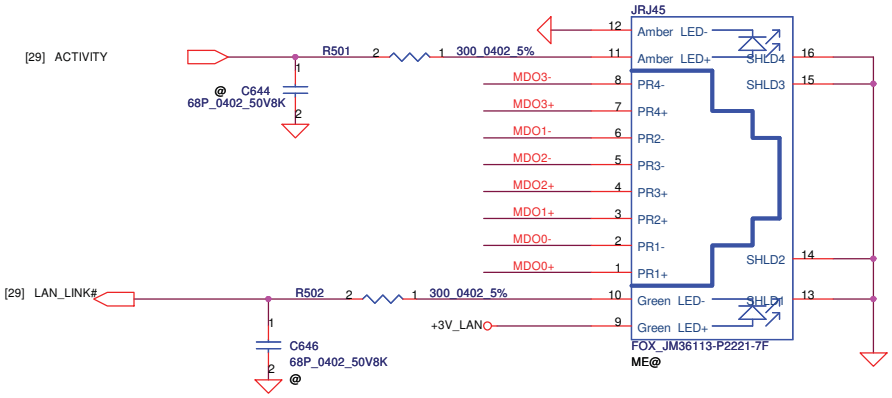
Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Tuesday, March 02, 2010 | Sheet 29 of 47

MDI[0..3] +/- Reverse



RJ45 Conn.



Security Classification	Compal Secret Data		
Issued Date	2009/03/20	Deciphered Date	2010/03/20

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

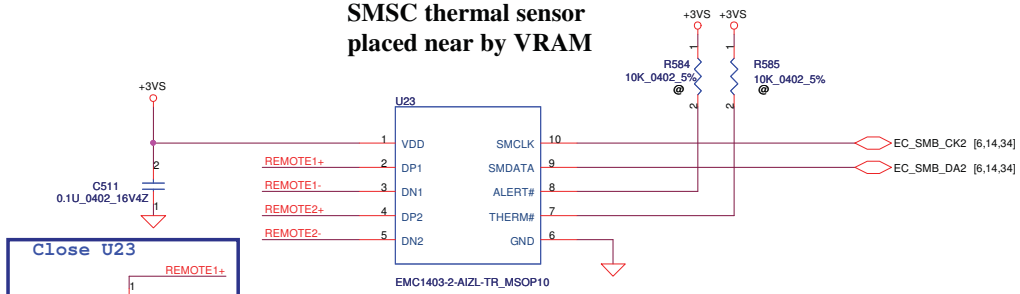
Compal Electronics, Inc.

Title: **LAN_Transformer**

Size	Document Number	Rev
Custom	NAWE6 LA-5754P	0.2

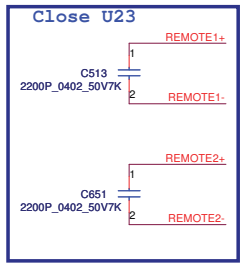
Date: Monday, March 01, 2010 Sheet 30 of 47

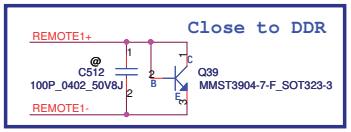
SMSC thermal sensor placed near by VRAM

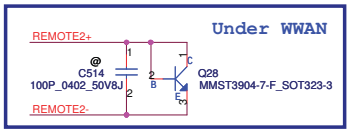


Address 1001_101xb

P/N SA000029210

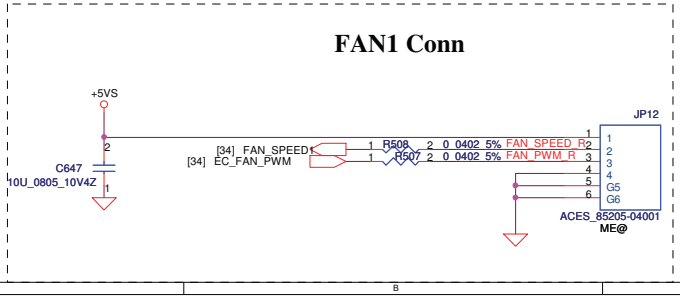






REMOTE1,2+/-:
Trace width/space:10/10 mil
Trace length:<8"

FAN1 Conn



Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

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

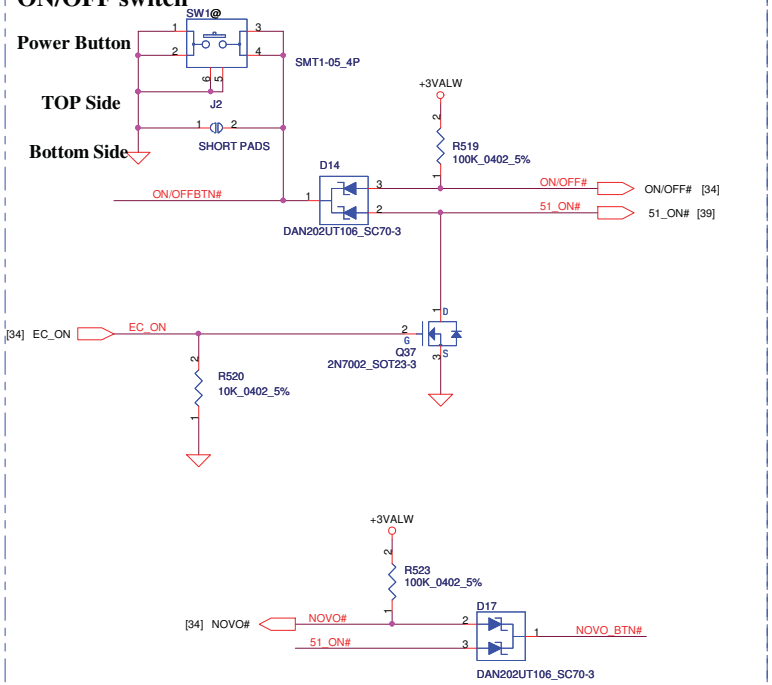
Compal Electronics, Inc.

Title: EMC1403_sensor/FAN

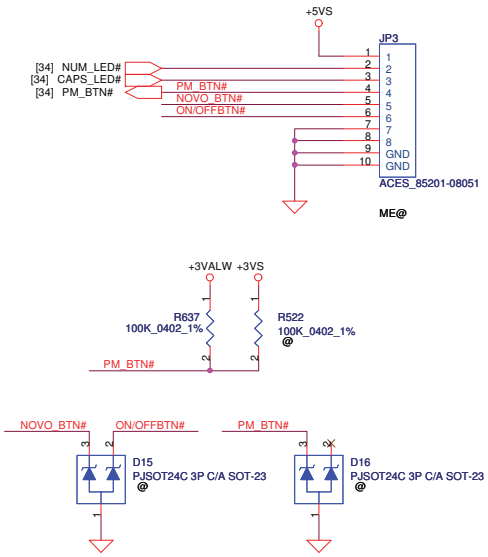
Size: B | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Monday, March 01, 2010 | Sheet 31 of 47

ON/OFF switch

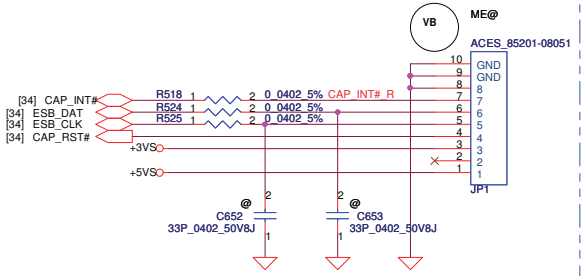


Power Bottom Board Conn. 8pin

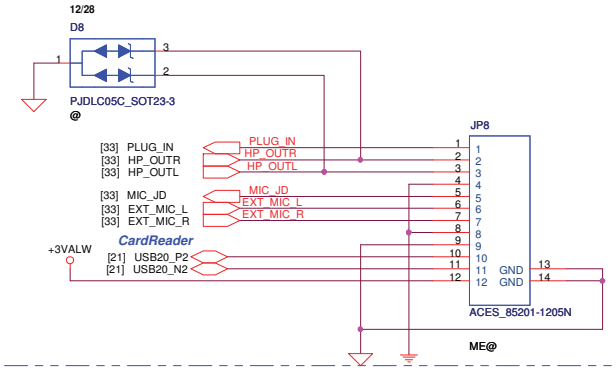


EMI REQUEST 1ST = SCA00000E00
2ST = SCA00000R00

Cap Sensor Board Conn. 8pin

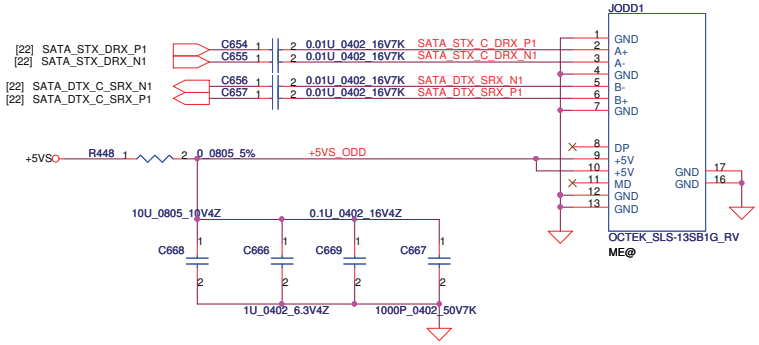


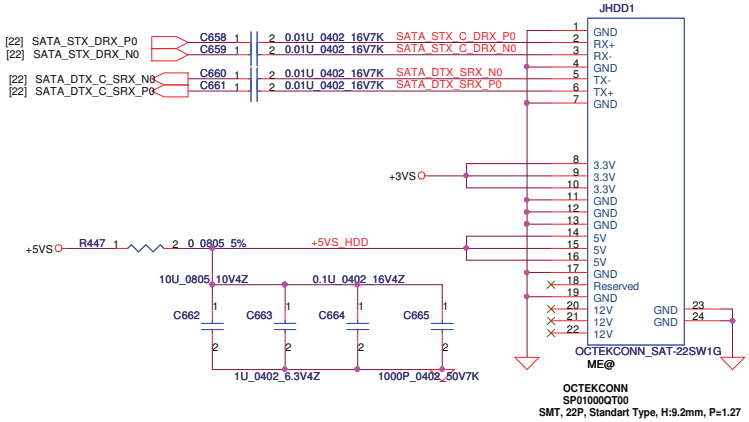
Card Reader/Audio Jack SB CONN



SATA HDD Conn.

SATA ODD Conn.



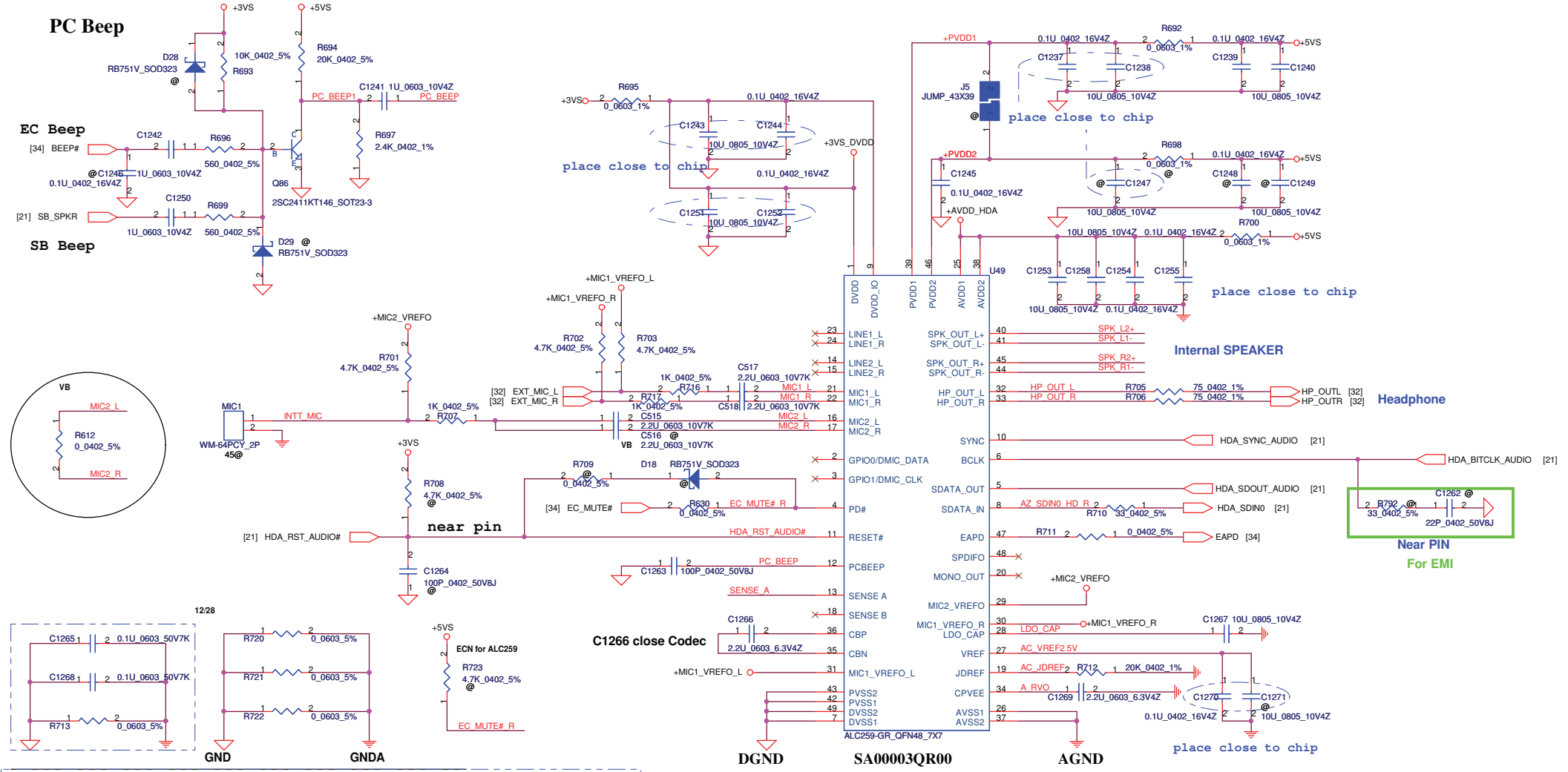


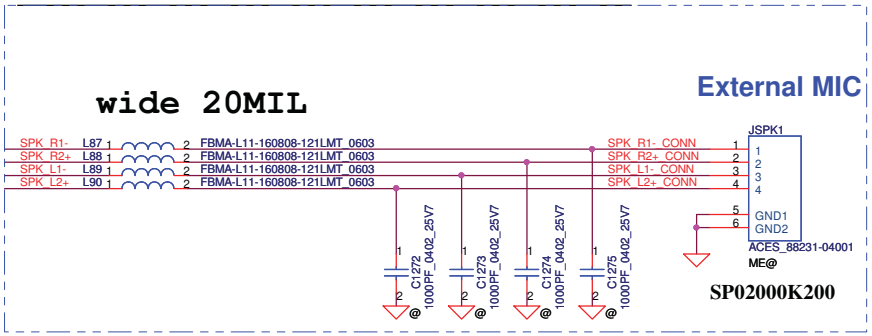
OCTEKCONN
SP01000QT00
SMT, 22P, Standart Type, H:9.2mm, P=1.27

Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

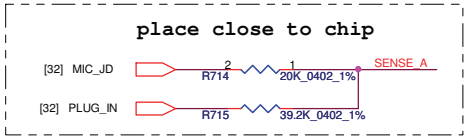
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.			
Title: HDD/ODD Connector			
Size: Custom	Document Number: NAWE6 LA-5754P		Rev: 0.2
Date: Tuesday, March 02, 2010	Sheet 32 of 47		





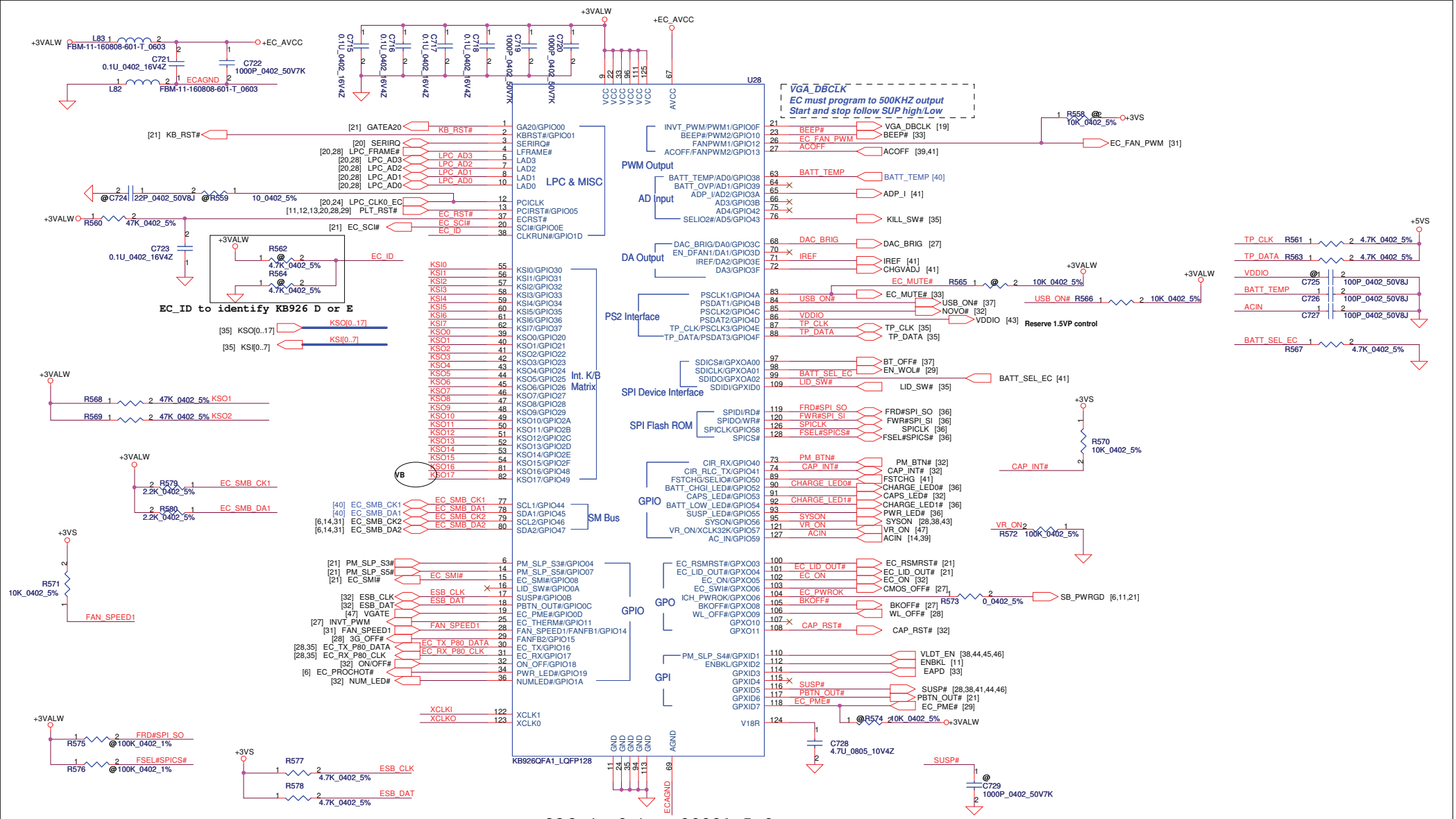
Sense Pin	Impedance	Codec Signals	Function
SENSE A	39.2K	PORT-I (PIN 32, 33)	Headphone out
	20K	PORT-B (PIN 21, 22)	Ext. MIC
	10K	PORT-C (PIN 23, 24)	
	5.1K	(PIN 48)	



Security Classification	Compal Secret Data		Compal Electronics,Ltd.
Issued Date	2008/03/25	Deciphered Date	2008/04/

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

Title	ALC259 Codec		
Size: Custom	Document Number: NAWE6 LA-5754P		Rev: 0.2
Date: Tuesday, March 02, 2010	Sheet 33 of 47		



Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

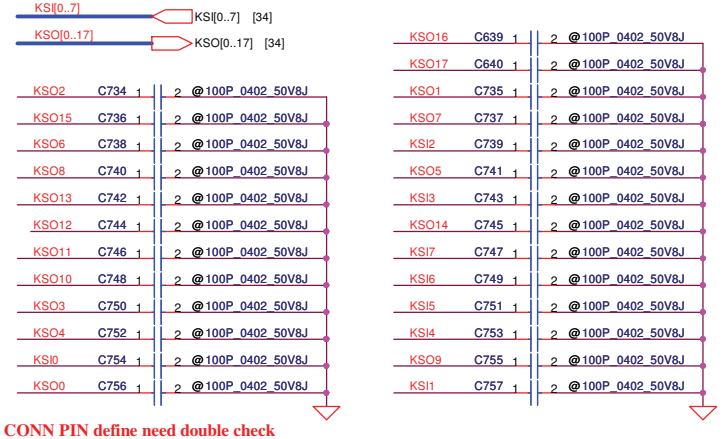
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: **BIOS & EC I/O Port**

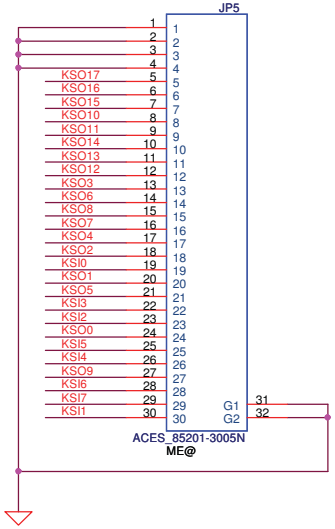
Size: Custom	Document Number: NAWE6 LA-5754P	Rev: 0.2
Date: Tuesday, March 02, 2010	Sheet 34 of 47	

INT_KBD Conn.

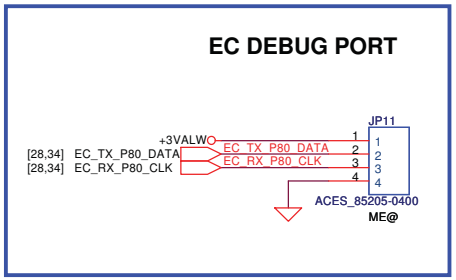


CONN PIN define need double check

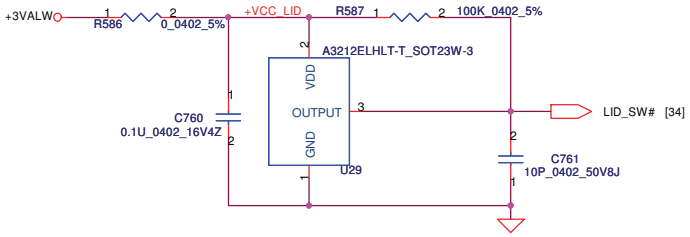
reversal of NIWE1



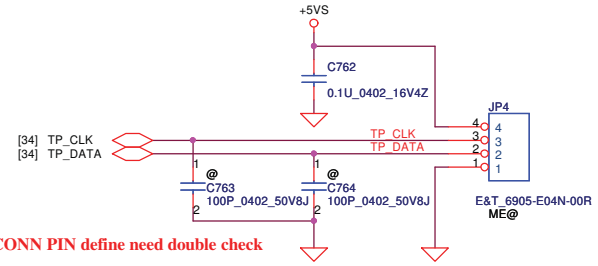
EC DEBUG PORT



Lid Switch

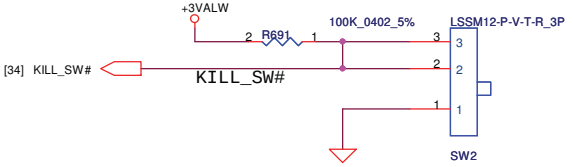


To TP/B Conn.



CONN PIN define need double check

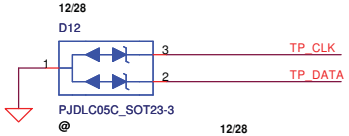
Kill Switch



Kill

STATUS	
1,2(LOW)	OFF
2,3(HI)	ON

12/28



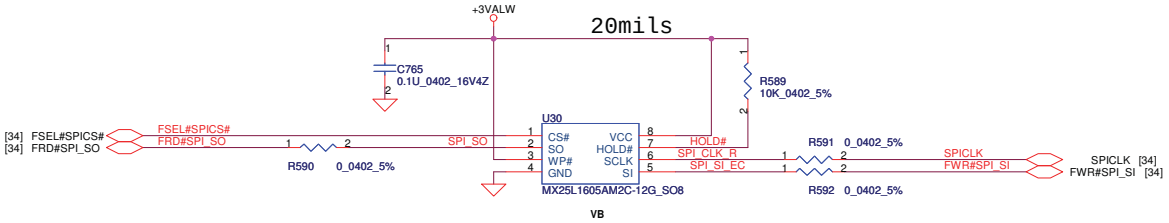
12/28

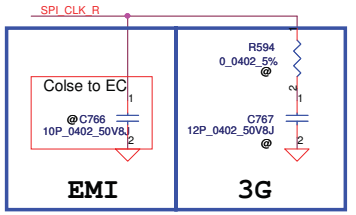
Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

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

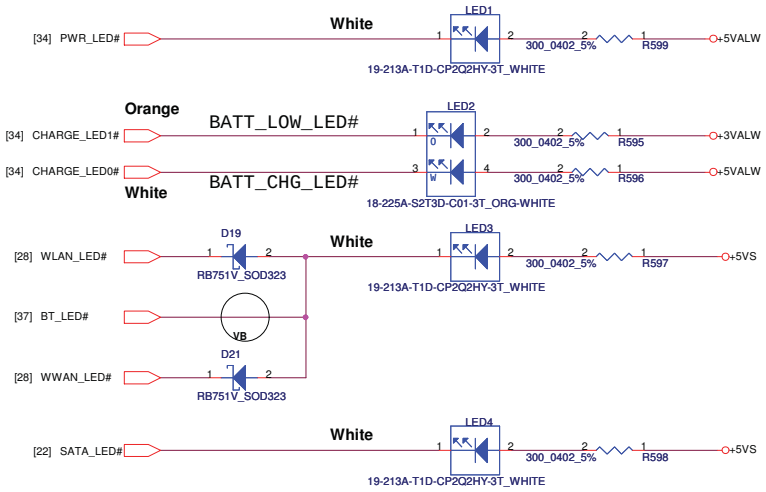
Compal Electronics, Inc.			
Title: KB /SW /LPC Debug Conn.			
Size: B	Document Number: NAWE6 LA-5754P		Rev: 0.2
Date: Monday, March 01, 2010		Sheet 35 of 47	

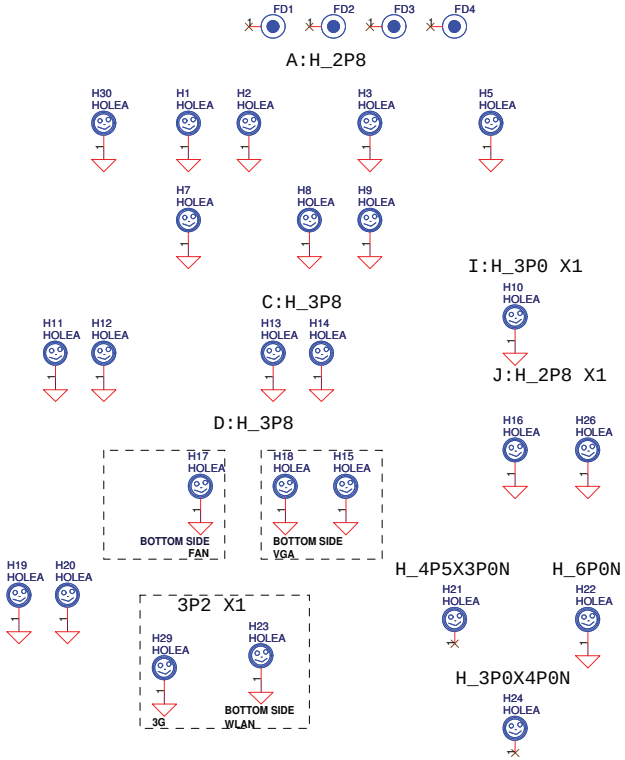
SA00002TO00 pakage 200mil
S IC FL 16MBIT MX25L1605AM2C-12G SO8 ROM

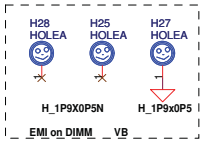




LED







Security Classification	Compal Secret Data		
Issued Date	2007/10/15	Deciphered Date	2008/10/15

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

Compal Electronics, Inc.

Title: **LED/EC SPI ROM**

Size	Document Number	Rev
B	NAWE6 LA-5754P	0.2

Date: Tuesday, March 02, 2010 Sheet 36 of 47

Right USB Conn.

Right USB(Sub b/d)

W=80mils

+USB_VCCA

C1220 150U_B2_6.3VM_R35M

C1221 470P_0402_50V7K

USB20_N12_R

USB20_P12_R

JUSB1 ACES_85205-04001 ME@

D30 @ PJDLC05_SOT23-3

[21] USB20_N12 — R588 0_0402_5% — USB20_N12_R

L91 WCM-2012-900T_0805 @

[21] USB20_P12 — R472 0_0402_5% — USB20_P12_R

+5VALW

C1222 0.1U_0402_16V4Z

U46 APL3510BKI_SO8

[34] USB_ON# — USB_ON#

+USB_VCCA

RIGHT USB PORT X1

USB_OC#1 [21]

C1223 @1000P_0402_50V7K

[21] USB20_N0 — R632 0_0402_5% — USB20_N0_R

L92 WCM-2012-900T_0805 @

[21] USB20_P0 — R634 0_0402_5% — USB20_P0_R

Left USB Conn.

W=80mils

+USB_VCCB

C1224 470P_0402_50V7K

USB20_N0_R

USB20_P0_R

JUSB2 SUYIN_020173MR004S558ZL ME@

D26 @ PJDLC05_SOT23-3

USB power switch need update symbol to SA000039E00(Low enable)

ESATA and USB Conn.

+USB_VCCB

W=80mils

C1225 150U_B2_6.3VM_R35M

C1227 470P_0402_50V7K

[21] USB20_N4

[21] USB20_P4

ESATA and USB

JESAT1 TYCO_1759576-1 ME@

USB

VBUS, D-, D+, GND

ESATA

GND, A+, A-, GND, B-, B+, GND, GND, GND, GND, GND

SATA_STX_C_DRX_P2_R

SATA_STX_C_DRX_N2_R

SATA_DTX_SRX_N2_R

SATA_DTX_SRX_P2_R

USB20_N4

USB20_P4

D27 @ PJDLC05_SOT23-3

USB

A+ = RXP

A- = RXN

B- = TXN

B+ = TXP

+5VALW

C1226 0.1U_0402_16V4Z

U47 APL3510BKI_SO8

USB_ON#

+USB_VCCB

E-SATA COMBO

LEFT USB PORT

USB_OC#0 [21]

C1228 @1000P_0402_50V7K

+3VS

R106 @ 4.7K_0402_5%

C1232 0.1U_0402_16V4Z-D @

C1229 0.01U_0402_16V7K @

R680 4.7K_0402_5% @

R681 4.7K_0402_5% @

U48 MAX4951ETP+T_TQFN20_4X4~D @

[22] SATA_STX_DRX_P2 — C1230 0.01U_0402_16V7K — SATA_STX_C_DRX_P2

[22] SATA_STX_DRX_N2 — C1231 0.01U_0402_16V7K — SATA_STX_C_DRX_N2

[22] SATA_DTX_C_SRX_N2 — C1234 0.01U_0402_16V7K — SATA_DTX_SRX_N2

[22] SATA_DTX_C_SRX_P2 — C1233 0.01U_0402_16V7K — SATA_DTX_SRX_P2

SATA_STX_C_DRX_P2_R

SATA_STX_C_DRX_N2_R

SATA_DTX_SRX_P2_R

SATA_DTX_SRX_N2_R

R682 0_0402_5% @

R683 0_0402_5% @

SATA_STX_C_DRX_P2 — R685 0_0402_5% — SATA_STX_C_DRX_P2_R

SATA_STX_C_DRX_N2 — R687 0_0402_5% — SATA_STX_C_DRX_N2_R

SATA_DTX_SRX_P2 — R688 0_0402_5% — SATA_DTX_SRX_P2_R

SATA_DTX_SRX_N2 — R689 0_0402_5% — SATA_DTX_SRX_N2_R

BT MODULE CONN

+5VALW

BT@ R684 100K_0402_5%

BT@ R686 100K_0402_5%

BT@ C1235 0.1U_0402_16V4Z

[34] BT_OFF# — BT@ Q80 DTC124EKAT146_SC59-3

+3VS Q81 AO3413_SOT23-3 BT@

+3VS_BT 30mils

BT@ C1236 0.1U_0402_16V4Z

[36] BT_LED# — BT@ Q82 DTC124EKAT146_SC59-3

BT

[21] USB20_P6

[21] USB20_N6

[28] BT_ACTIVE

BTON_LED

BT_ACTIVE

JP16 ACES_87213-0600G ME@

Security Classification	Compal Secret Data		
Issued Date	2006/08/18	Deciphered Date	2007/8/18

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

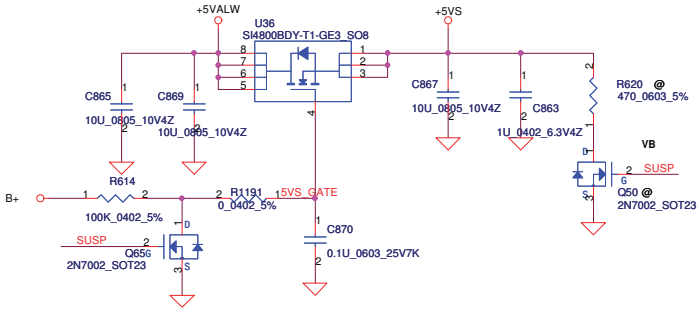
Compal Electronics, Inc.

Title: USB ports/BT/E-SATA

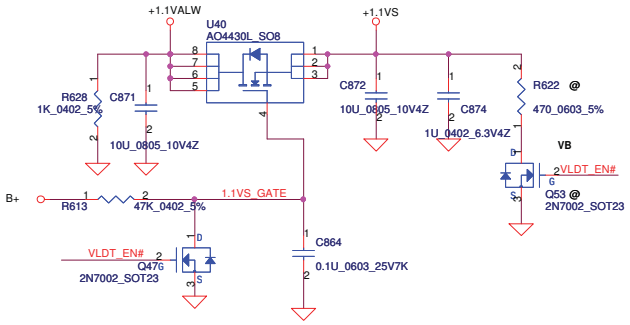
Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Monday, March 01, 2010 | Sheet 37 of 47

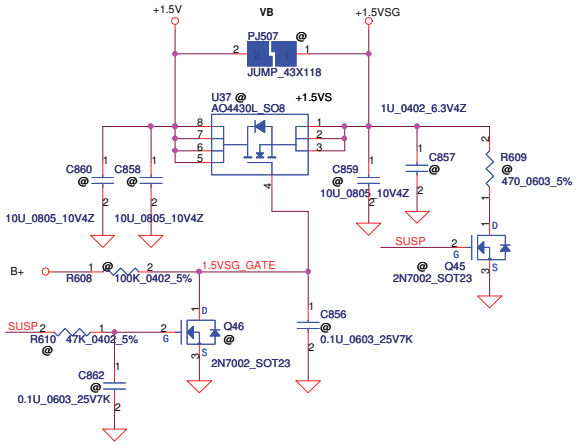
+5VALW TO +5VS



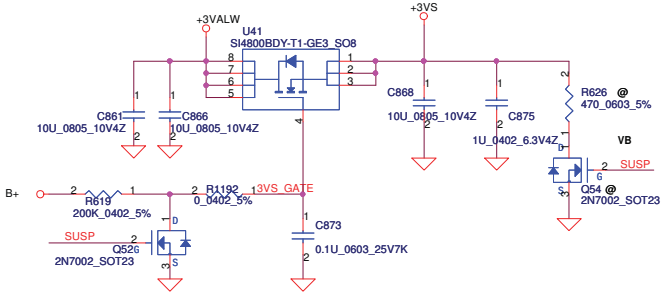
+1.1VALW TO +1.1VS (NB HT)

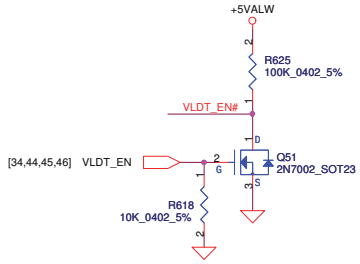


+1.5V to +1.5VSG

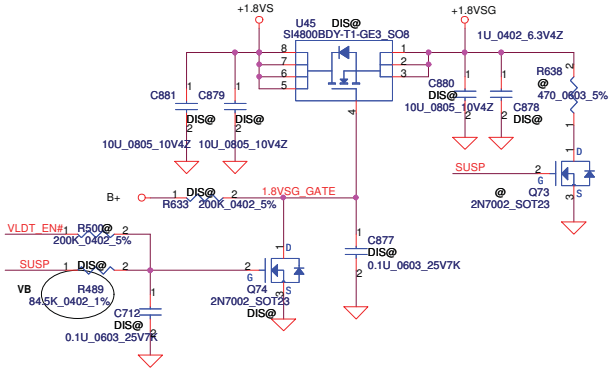


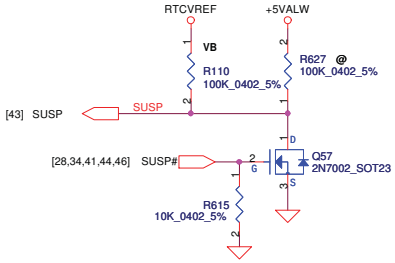
+3VALW TO +3VS

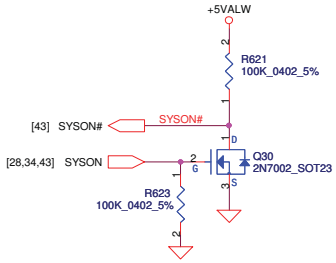




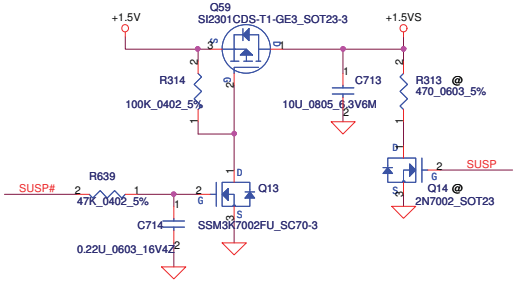
+1.8VS to +1.8VSG



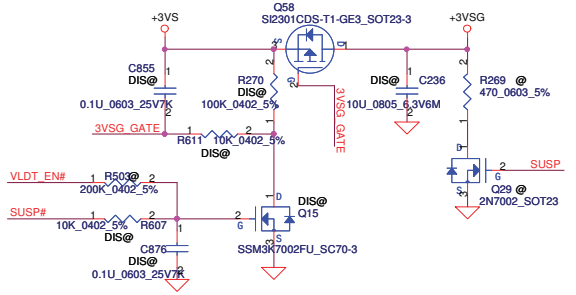


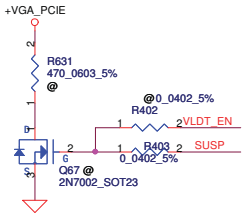


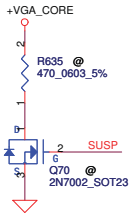
+1.5VS

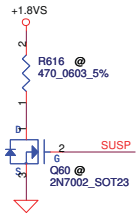


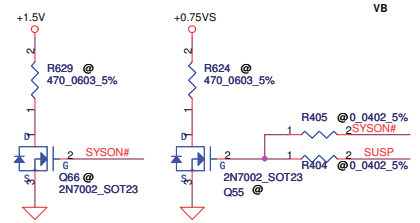
+3VSG











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

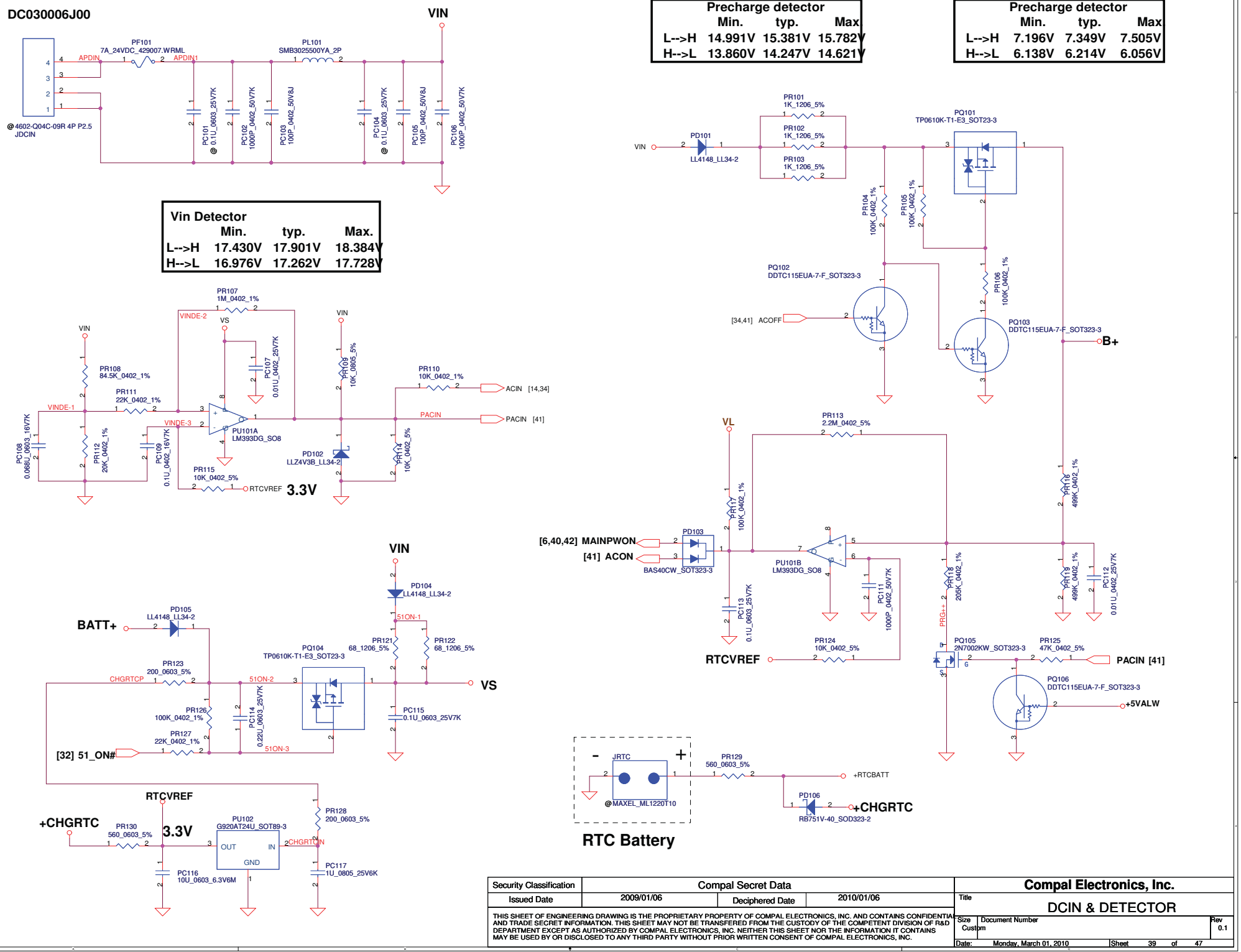
Security Classification	Compal Secret Data		
Issued Date	2008/10/06	Deciphered Date	2010/03/12

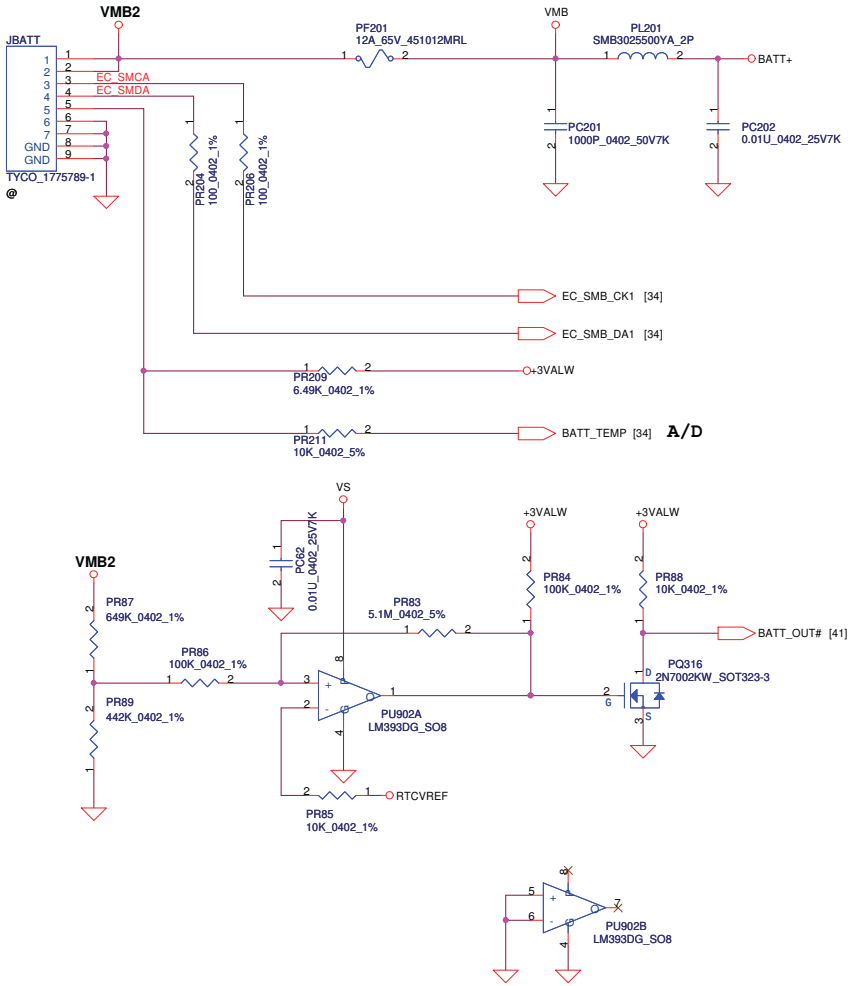
Compal Electronics, Inc.

Title: DC Interface

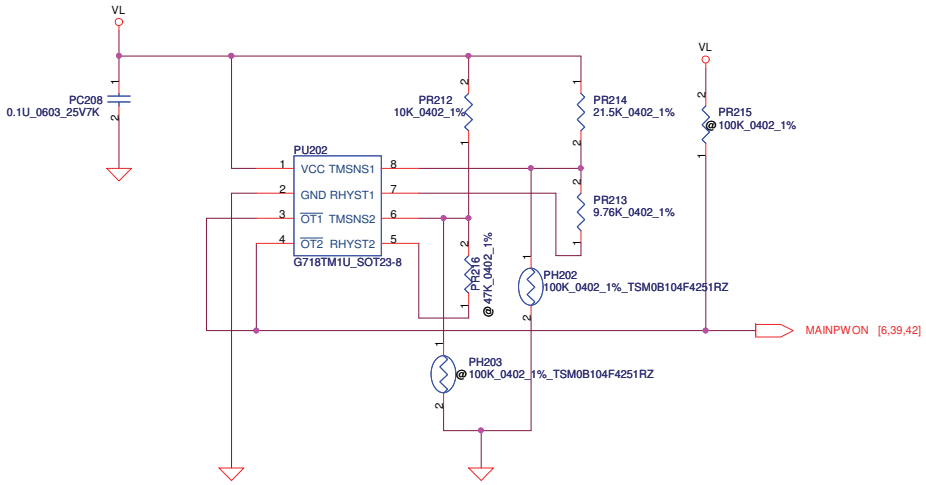
Size: Custom | Document Number: NAWE6 LA-5754P | Rev: 0.2

Date: Tuesday, March 02, 2010 | Sheet 38 of 47


DC030006J00
VIN
PF101
7A_24VDC_429007.WRML
PL101
SMB3025500YA_2P
APDIN
APDIN1
@4602-Q04C-09R 4P P2.5
JDCIN
PC101
@ 0.1U_0603_25V7K
PC102
1000P_0402_50V7K
PC103
100P_0402_50V8J
PC104
@ 0.1U_0603_25V7K
PC105
100P_0402_50V8J
PC106
1000P_0402_50V7K
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
PR101
1K_1206_5%
PR102
1K_1206_5%
PR103
1K_1206_5%
PD101
LL4148_LL34-2
PQ101
TP0610K-T1-E3_SOT23-3
PR104
100K_0402_1%
PR105
100K_0402_1%
PR106
100K_0402_1%
PQ102
DDTC115EUA-7-F_SOT323-3
[34,41] ACOFF
PQ103
DDTC115EUA-7-F_SOT323-3
B+
PR107
1M_0402_1%
VINDE-2
VS
PC107
0.01U_0402_25V7K
PR109
10K_0805_5%
PR108
84.5K_0402_1%
PR111
22K_0402_1%
VINDE-1
VINDE-3
PU101A
LM393DG_SO8
PR110
10K_0402_1%
ACIN [14,34]
PACIN
PACIN [41]
PC108
0.068U_0603_16V7K
PR112
20K_0402_1%
PC109
0.1U_0402_16V7K
PD102
LLZ4V3B_LL34-2
PR114
10K_0402_5%
PR115
10K_0402_5%
RTCVREF
3.3V
VL
PR113
2.2M_0402_5%
PR117
100K_0402_1%
PR116
499K_0402_1%
[6,40,42] MAINPWON
[41] ACON
PD103
BAS40CW_SOT323-3
PU101B
LM393DG_SO8
PC113
0.1U_0603_25V7K
PC111
1000P_0402_50V7K
PR118
205K_0402_1%
PR119
499K_0402_1%
PC112
0.01U_0402_25V7K
PRG++
PR124
10K_0402_5%
RTCVREF
PQ105
2N7002KW_SOT323-3
PR125
47K_0402_5%
PACIN [41]
PQ106
DDTC115EUA-7-F_SOT323-3
+5VALW
VIN
PD104
LL4148_LL34-2
BATT+
PD105
LL4148_LL34-2
51ON-1
PR121
68_1206_5%
PR122
68_1206_5%
PQ104
TP0610K-T1-E3_SOT23-3
PR123
200_0603_5%
CHGRTCP
51ON-2
VS
PR126
100K_0402_1%
PC114
0.22U_0603_25V7K
PC115
0.1U_0603_25V7K
PR127
22K_0402_1%
[32] 51_ON#
51ON-3
RTCVREF
+CHGRTC
PR130
560_0603_5%
3.3V
PU102
G920AT24U_SOT89-3
OUT
IN
GND
2CHGRTON
PR128
200_0603_5%
PC116
10U_0603_6.3V6M
PC117
1U_0805_25V6K
JRTC
@MAXEL_ML1220T10
PR129
560_0603_5%
+RTCBATT
PD106
RB751V-40_SOD323-2
+CHGRTC
RTC Battery
Security Classification
Compal Secret Data
Issued Date
2009/01/06
Deciphered Date
2010/01/06
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.
Compal Electronics, Inc.
Title
DCIN & DETECTOR
Size
Custom
Document Number
Rev
0.1
Date:
Monday, March 01, 2010
Sheet
39
of
47



PH1 under CPU botten side :
CPU thermal protection at 92 degree C
Recovery at 56 degree C



Security Classification	Compal Secret Data		
Issued Date	2009/01/06	Deciphered Date	2010/01/06

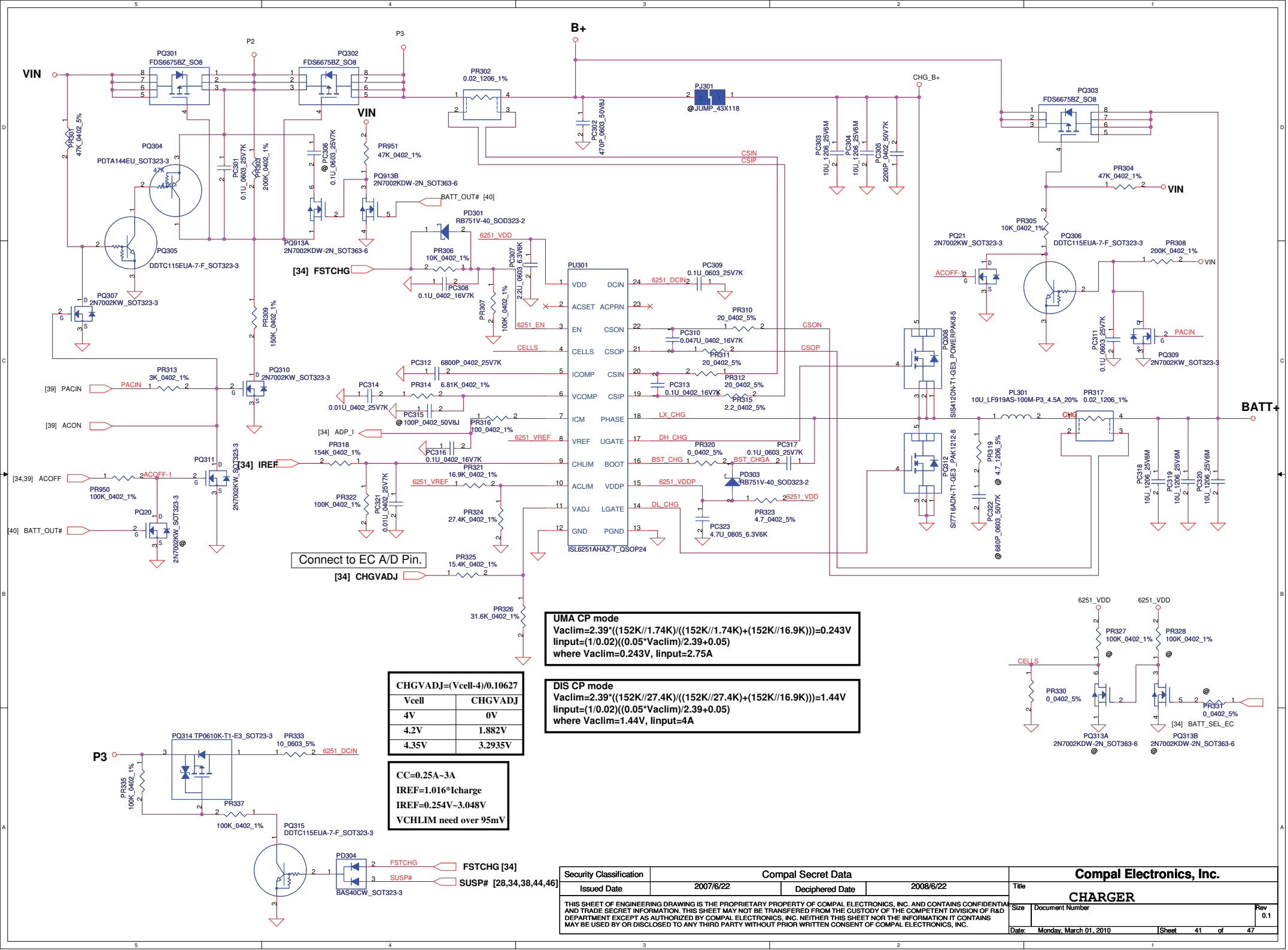
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

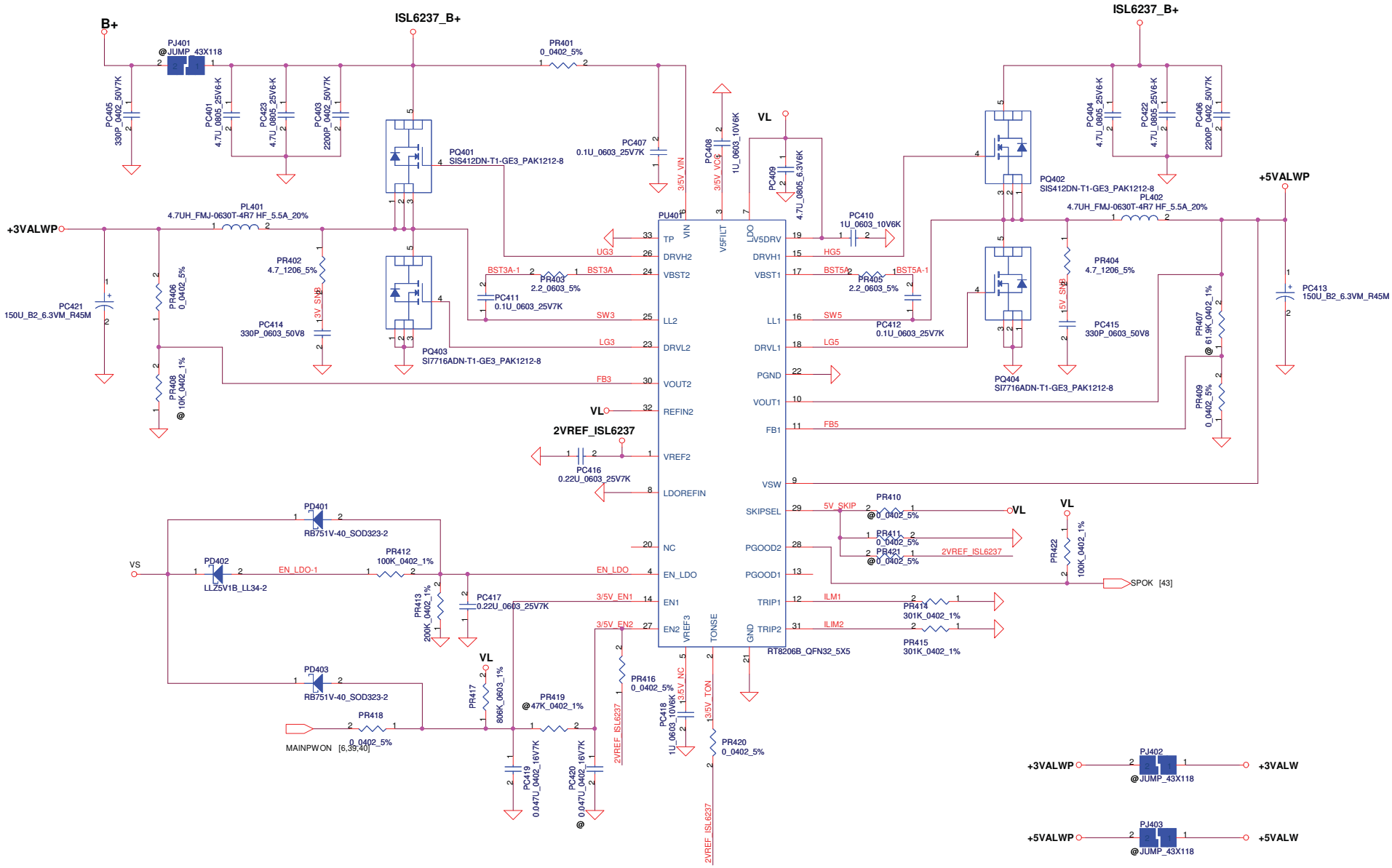
Compal Electronics, Inc.

Title: BATTERY CONN / OTP

Size	Document Number	Rev
		0.1

Date: Monday, March 01, 2010 Sheet 40 of 47


VIN
B+
BATT+
PU301
ISL6251AHAZ-T_QSOP24
VDD
DCIN
ACSET
ACPRN
EN
CSON
CELLS
CSOP
ICOMP
CSIP
VCOMP
PHASE
ICM
UGATE
VREF
BOOT
CHLIM
VDDP
ACLIM
LGATE
VADJ
PGND
GND
[34] FSTCHG
[34] IREF
[34] CHGVADJ
[34] ADP_I
[39] PACIN
[39] ACON
[34,39] ACOFF
[40] BATT_OUT#
Connect to EC A/D Pin.
CSIN
CSIP
CSON
CSOP
LX_CHG
DH_CHG
BST_CHG
DL_CHG
6251_VDD
6251_DCIN
6251_EN
6251_VREF
PQ301 FDS6675BZ_SO8
PQ302 FDS6675BZ_SO8
PQ303 FDS6675BZ_SO8
PQ304 PDTA144EU_SOT323-3
PQ305 DDTC115EUA-7-F_SOT323-3
PQ306 DDTC115EUA-7-F_SOT323-3
PQ307 2N7002KW_SOT323-3
PQ309 2N7002KW_SOT323-3
PQ310 2N7002KW_SOT323-3
PQ311 2N7002KW_SOT323-3
PQ20 2N7002KW_SOT323-3
PQ21 2N7002KW_SOT323-3
PQ913A 2N7002KDW-2N_SOT363-6
PQ913B 2N7002KDW-2N_SOT363-6
PQ313A 2N7002KDW-2N_SOT363-6
PQ313B 2N7002KDW-2N_SOT363-6
PQ314 TP0610K-T1-E3_SOT23-3
PQ315 DDTC115EUA-7-F_SOT323-3
PD301 RB751V-40_SOD323-2
PD303 RB751V-40_SOD323-2
PD304 BAS40CW_SOT323-3
PJ301 @JUMP_43X118
PL301 10U_LF919AS-100M-P3_4.5A_20%
PC308 SIS412DN-T1-GE3_POWERPAK8-5
PC312 SI7716ADN-T1-GE3_PAK1212-8
FSTCHG [34]
SUSP# [28,34,38,44,46]
BATT_SEL_EC [34]
UMA CP mode
Vaclim=2.39*((152K//1.74K)/((152K//1.74K)+(152K//16.9K)))=0.243V
linput=(1/0.02)((0.05*Vaclim)/2.39+0.05)
where Vaclim=0.243V, linput=2.75A
DIS CP mode
Vaclim=2.39*((152K//27.4K)/((152K//27.4K)+(152K//16.9K)))=1.44V
linput=(1/0.02)((0.05*Vaclim)/2.39+0.05)
where Vaclim=1.44V, linput=4A
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
Security Classification | Compal Secret Data
Issued Date | 2007/6/22 | Deciphered Date | 2008/6/22
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.
Compal Electronics, Inc.
Title
CHARGER
Size | Document Number | Rev 0.1
Date: Monday, March 01, 2010 | Sheet 41 of 47



Security Classification	Compal Secret Data		
Issued Date	2009/01/06	Deciphered Date	2010/01/06

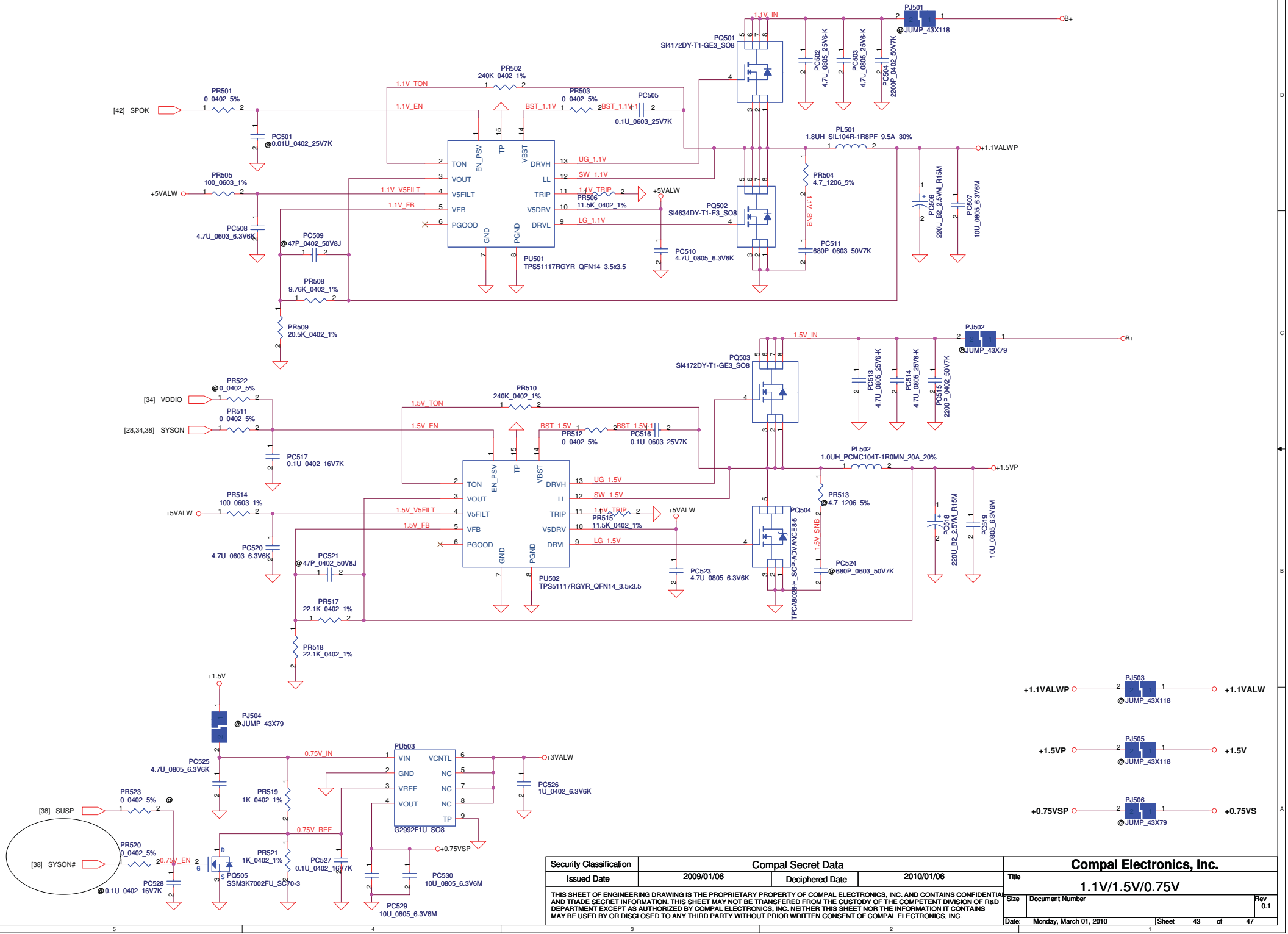
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: 3VALW/5VALW

Size	Document Number	Rev
Custom		0.1

Date: Monday, March 01, 2010 | Sheet 42 of 47



Security Classification	Compal Secret Data		
Issued Date	2009/01/06	Deciphered Date	2010/01/06

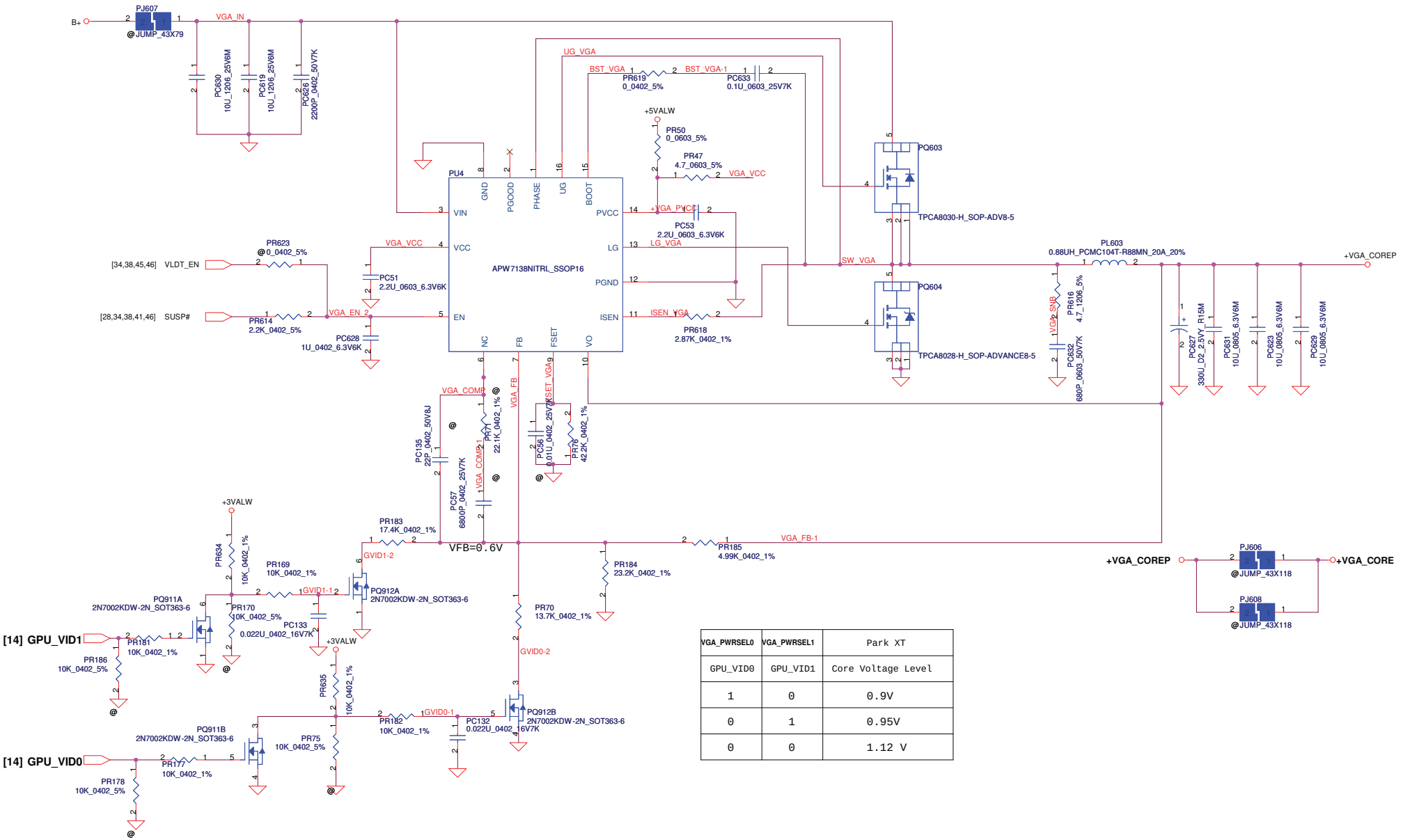
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: 1.1V/1.5V/0.75V

Size | Document Number | Rev 0.1

Date: Monday, March 01, 2010 | Sheet 43 of 47



VGA_PWRSEL0	VGA_PWRSEL1	Park XT
GPU_VID0	GPU_VID1	Core Voltage Level
1	0	0.9V
0	1	0.95V
0	0	1.12 V

Security Classification	Compal Secret Data		
Issued Date	2009/01/06	Deciphered Date	2010/01/06

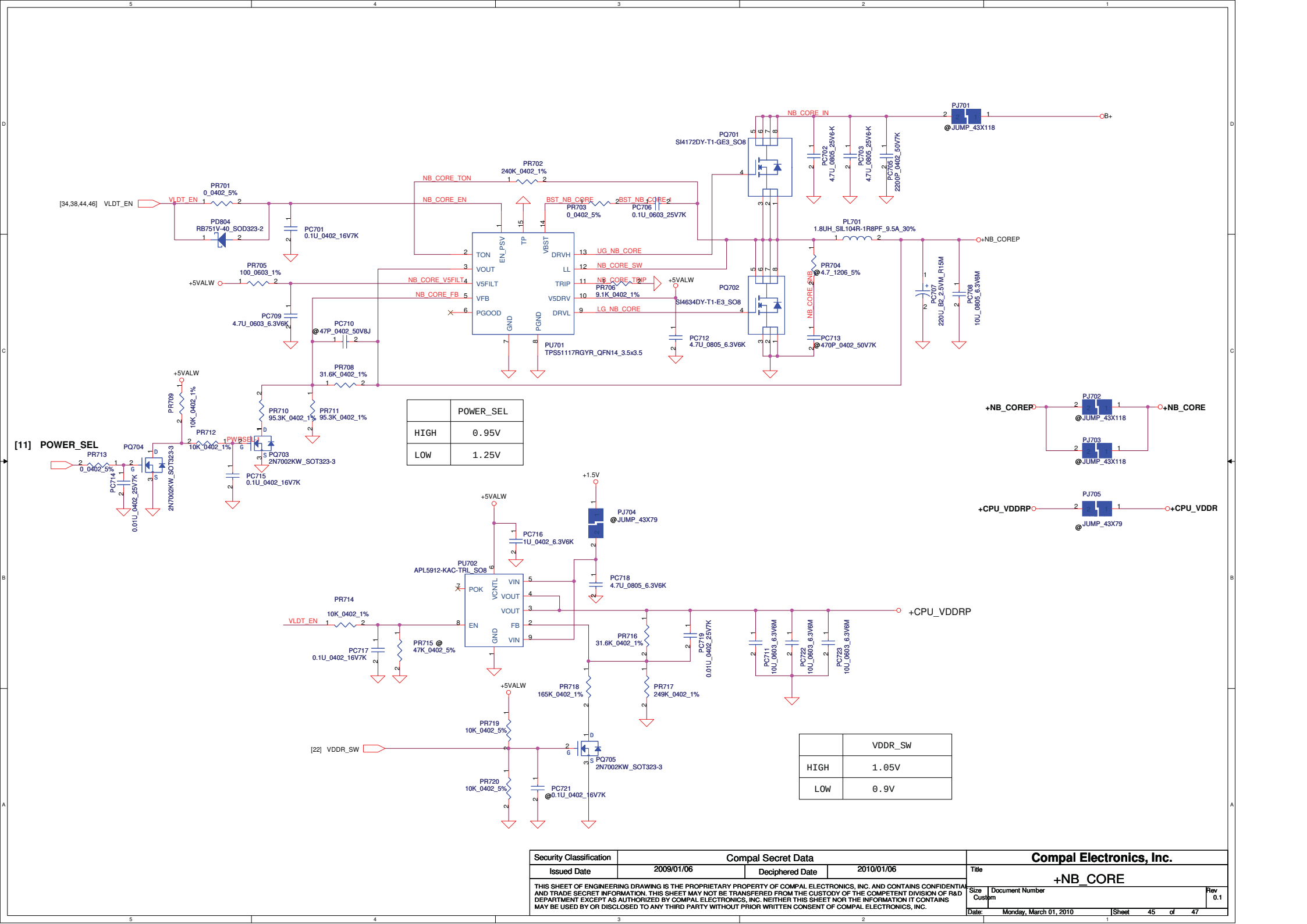
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: 1.5V/VGA_CORE

Size	Document Number	Rev
		0.1

Date: Monday, March 01, 2010 | Sheet 44 of 47



Security Classification	Compal Secret Data		
Issued Date	2009/01/06	Deciphered Date	2010/01/06

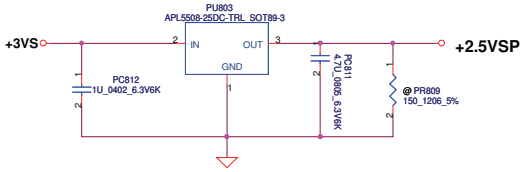
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

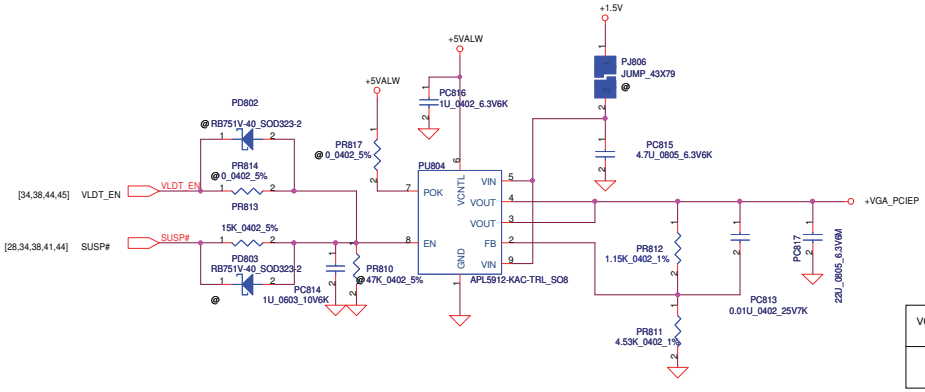
Compal Electronics, Inc.

Title: +NB_CORE

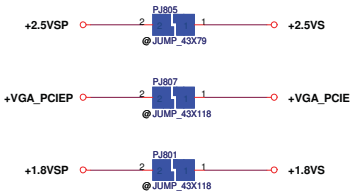
Size: Custom | Document Number | Rev: 0.1

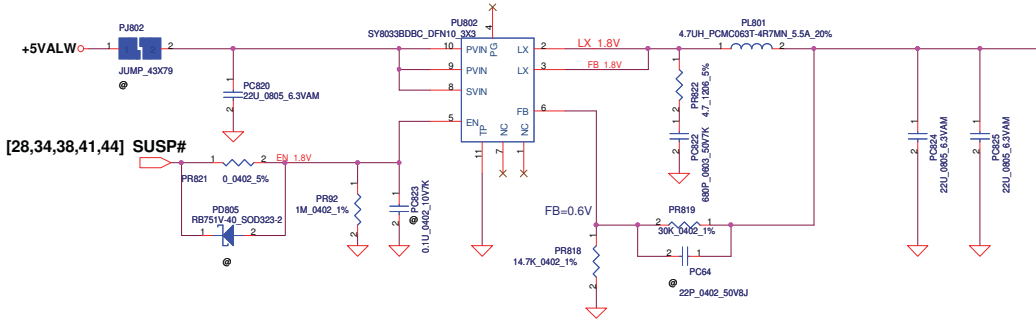
Date: Monday, March 01, 2010 | Sheet 45 of 47





VGA_PCIE	1.0V	1.1 V
PR811	4.53K	3K





1.8VSP
TDC 2 A
Peak Current 3 A

Security Classification	Compal Secret Data		
Issued Date	2009/01/06	Deciphered Date	2010/01/06

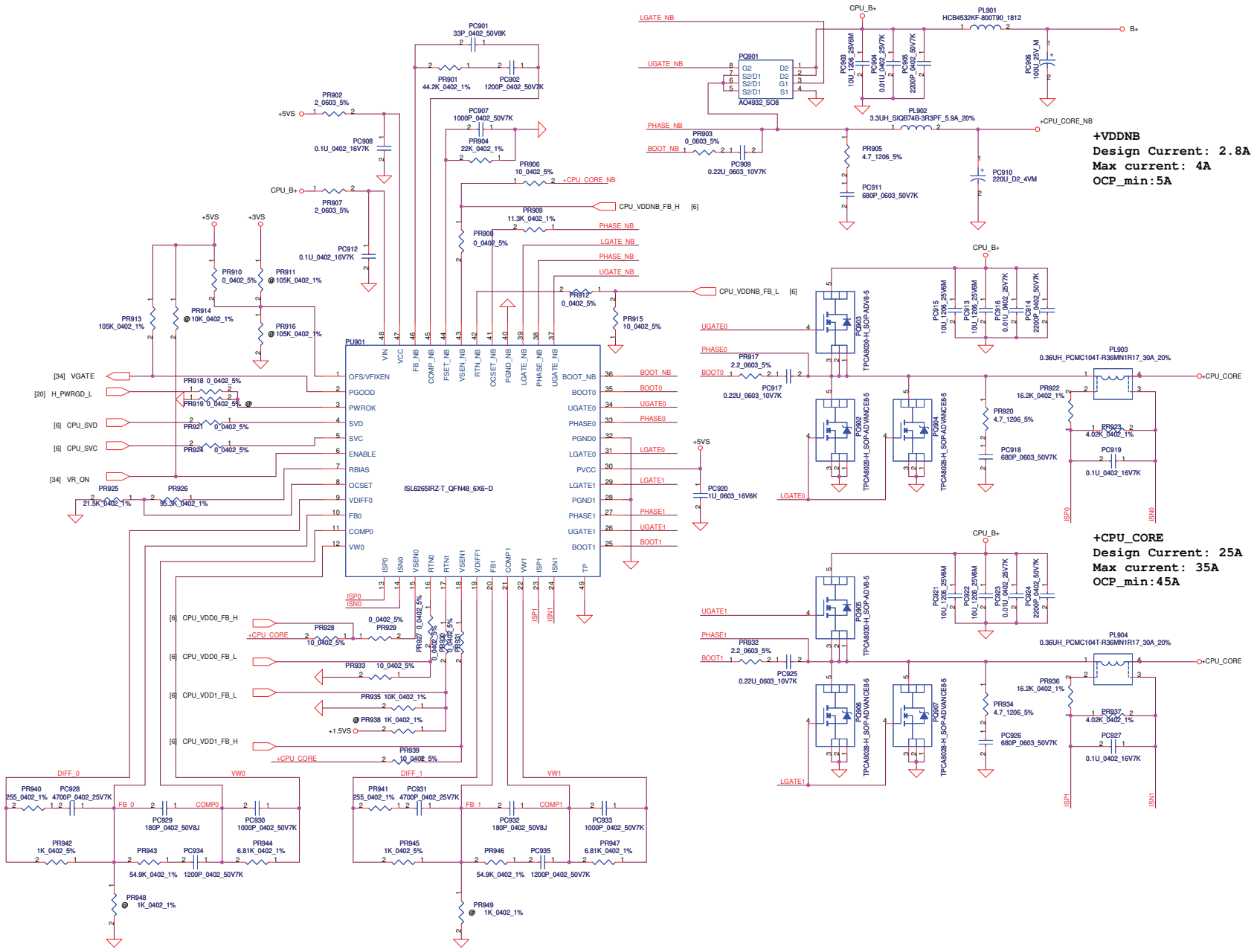
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

Title: 2.5VS/PCIE/1.8VS

Size | Document Number | Rev 0.1

Date: Monday, March 01, 2010 | Sheet 46 of 47



Security Classification	Compal Secret Data		
Issued Date	2009/01/06	Deciphered Date	2010/01/06

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

Compal Electronics, Inc.

Title: **CPU_CORE**

Size	Document Number	Rev
		0.1

Date: Monday, March 01, 2010 | Sheet 47 of 47