



Compal Confidential

Schematics Document

PAW20

Montevina

with Intel Cantiga + ICH9 core logic

REV:1.0A

2010-12-24

Security Classification	Compal Secret Data			Compal Electronics, Ltd.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title Cover Sheet	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF 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 LA7012P
				Date: Friday, December 24, 2010	Sheet 1 of 41

Clock Generator
SLG8SP556VTR

page16

Mobile Penryn

uPGA-478 CPU

page4, 5, 6

For 14"
LS-7011P 4PIN PWR/B
LS7013P Audio/B
LS7014P Touch/B

For 15"
LS-7012P 8PIN PWR/B
LS7013P Audio/B
LS7014P Touch/B

H_A#(3..35)
H_D#(0..63)



FSB
667/800MHz

CRT Connector

page21

LVDS
Connector

page22

Intel Cantiga GMCH

GM45

uFCBGA 1329

page 7, 8, 9, 10, 11, 12, 13



Dual Channel
DDR3-667/800(1.5V)

DDR3-SO-DIMM X2

BANK 0, 1, 2, 3

page 14,15

up to 4G

DMI *4



C-Link



2Channel Speaker
page26

Analog MIC_Int
page26

Audio Codec
CONEXTAN
CX20671

page26

**Wire Less Mini
card Slot 1**

page23

6*PCL-E BUS

Intel ICH9-M

page 17,18,19,20

**SPI ROM
BIOS**

LPC BUS

EC

ENE KB926 E0

page27

AR8151/8152

10/100/Giga LAN

page24

RJ45 CONN

page25

AZALIA

14*USB2.0

6*SATA serial

CMOS Camera

page22

BlueTooth CONN

page30

USB CONN X1(Right)

page29

USB PORT X1(Left)

page29

USB PORT X1(Left)

page29

Audio Jack SB CONN
HP X 1+
MIC_Ext X1

page30

Card Reader RTS5139

SATA HDD CONN

page28

SATA ODD CONN

page32

Touch Pad

page32

Int.KBD

page32

**SPI ROM
BIOS**

page28

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	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	LA7012P
				Date	Friday, December 24, 2010
				Sheet	2 of 41
				Rev	1.0

DDR3 Voltage Rails

power plane State	+B	+5VALW +3VALW	+1.5V	+5VS +3VS +1.5VS +CPU_CORE +VGA_CORE +1.8VS +0.75VS +1.05VS
S0	○	○	○	○
S3	○	○	○	✗
S5 S4/AC	○	○	✗	✗
S5 S4/ Battery only	○	✗	✗	✗
S5 S4/AC & Battery don't exist	✗	✗	✗	✗

SMBUS Control Table

	SOURCE	BATT	KB926	SODIMM	CLK CHIP	WLAN WWAN	ICH9	Thermal
EC_SMB_CK1 EC_SMB_DA1	KB926 +3VALW	✓ +3VALW	✗	✗	✗	✗	✗	✗
EC_SMB_CK2 EC_SMB_DA2	KB926 +3VALW	✗	✗	✗	✗	✗	✗	✓ +3VS
ICH_SMBCLK ICH_SMBDATA	ICH +3VALW	✗	✗	✓ +3VS	✓ +3VS	✓ +3VALW	✗	✗

I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM	A0	10100000
DDR SO-DIMM	A4	10100100
CLOCK GENERATOR (EXT.)	D2	11010010

@ FUNCTION

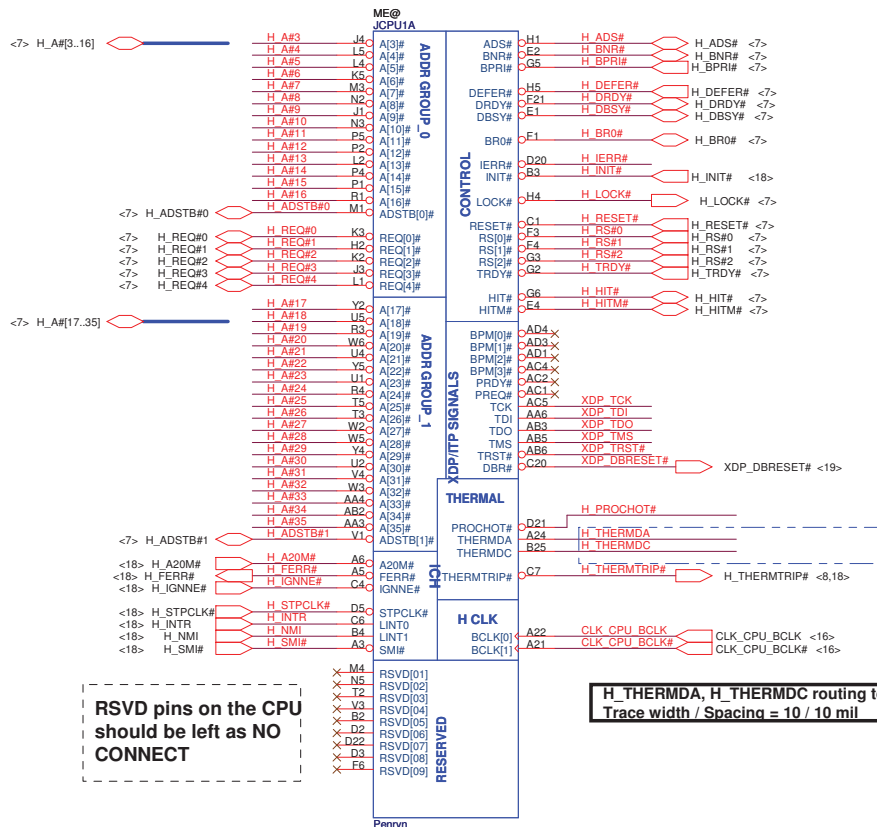
Structure	Description	NON-USE
45@	45 BOM	
BT@	Blue Tooth function	
CMOS@	CMOS CAMERA function	

PCIE PORT LIST

PORT	DEVICE
1	LAN
2	
3	WLAN
4	
5	
6	
7	
8	

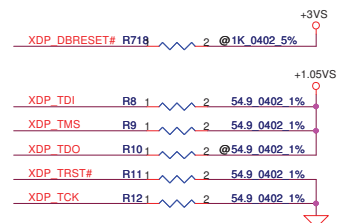
USB PORT LIST

PORT	DEVICE
0	RIGHT SIDE
1	LEFT SIDE
2	CMOS
3	
4	CARD READER
5	WIRELESS
6	BT
7	USB PORT (ESATA)
8	
9	
10	
11	
12	
13	

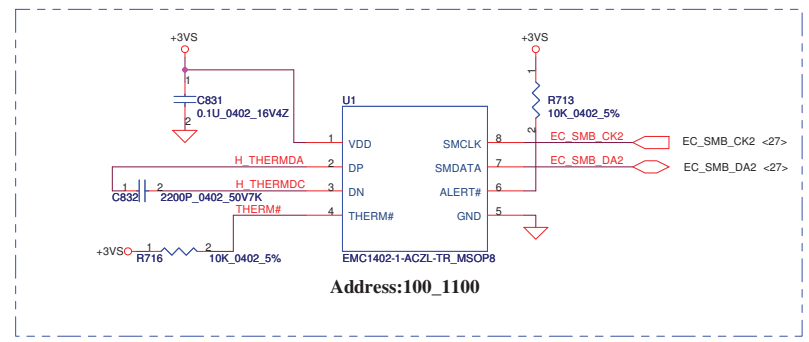
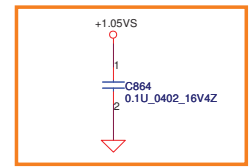


**H_THERMDA, H_THERMDC routing together,
Trace width / Spacing = 10 / 10 mil**

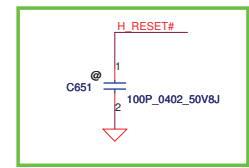
XDP Reserve for debug , Please close to CPU side



**PVT ESD solution.
Please close to R715**

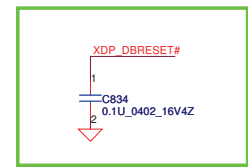


10/01 Add for reduce noise



Place closely pin C1

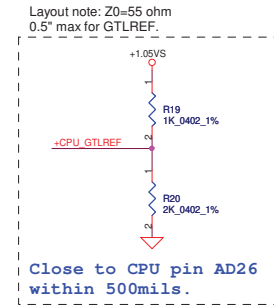
09/16 Add C834 For ESD



Place closely pin C20

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	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
				Customer	LA7012P
				Date	Friday, December 24, 2010
				Sheet	4 of 41
				Rev	1.0

FSB	BCLK	BSEL2	BSEL1	BSEL0
533	133	0	0	1
667	166	0	1	1
800	200	0	1	0
1067	266	0	0	0

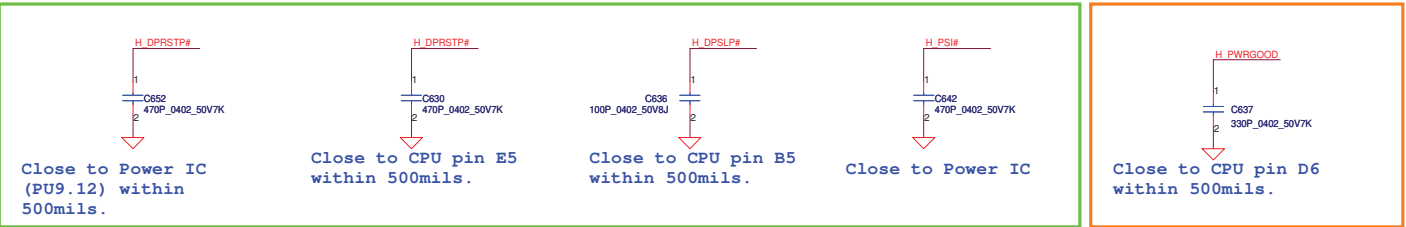


TRACE CLOSELY CPU < 0.5"

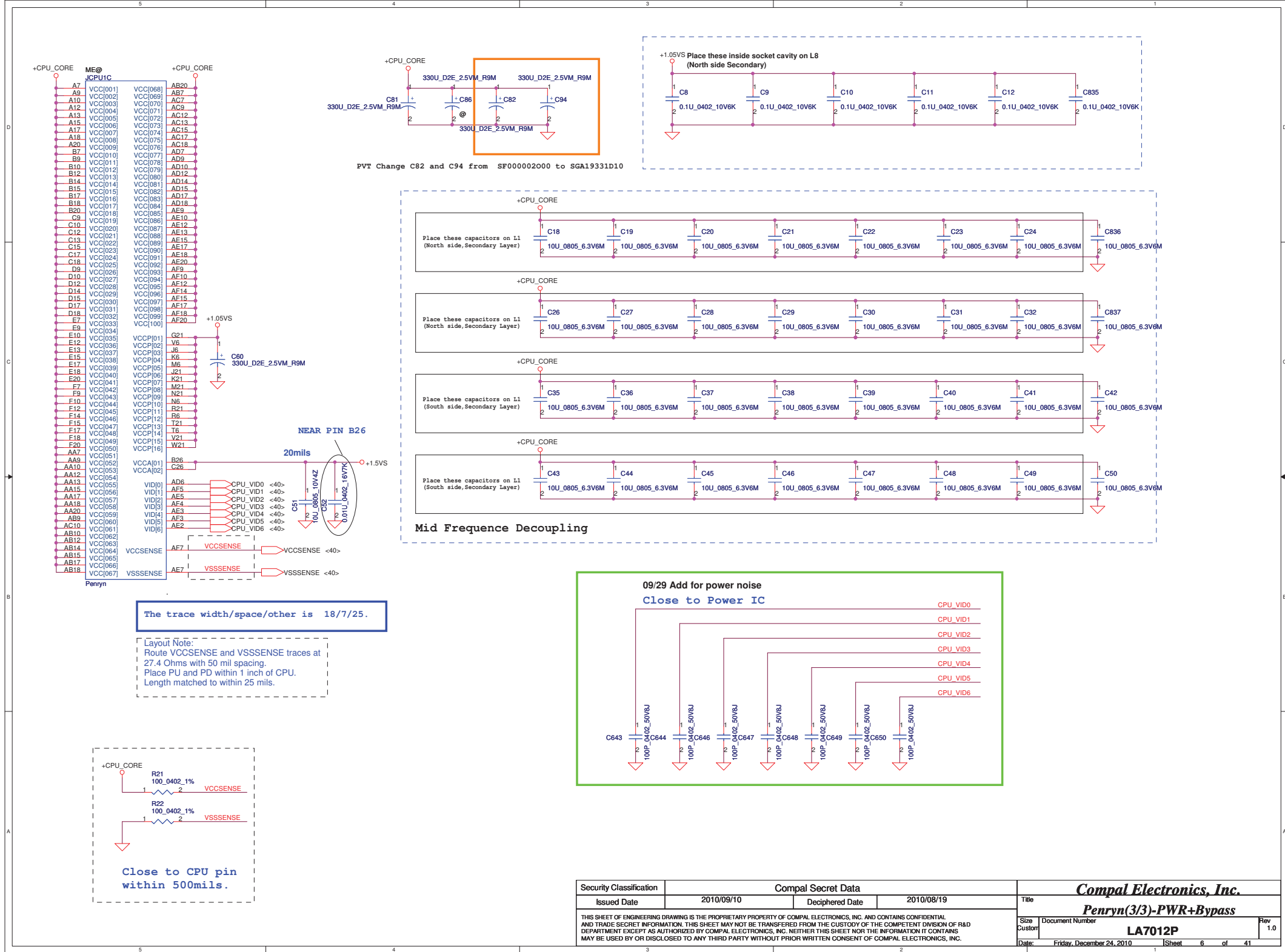
COMP0, COMP2 layout : Width 18mils and Space 25mils (27.4Ohms)
COMP1, COMP3 layout : Width 5mils and Space 25mils (55Ohms)

layout note: Route TEST3 & TEST5 traces on ground referenced layer to the TPs

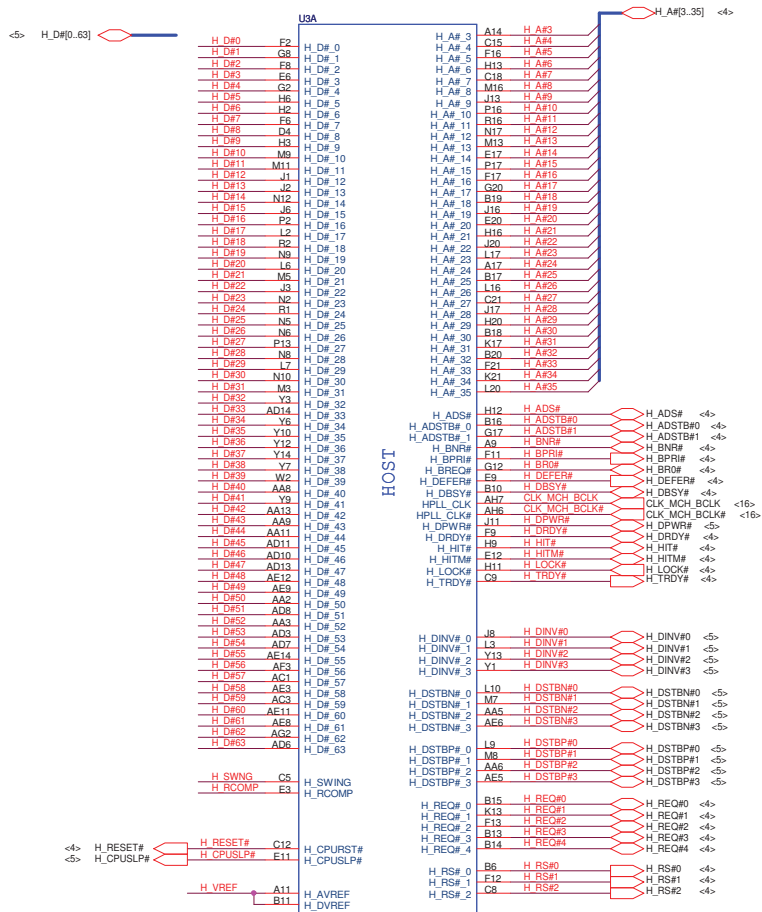
09/29 Add for power noise



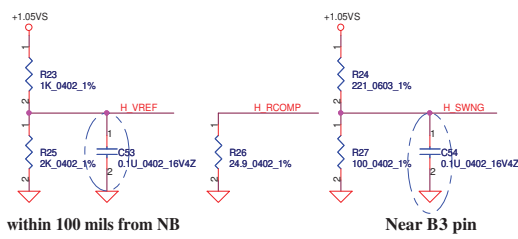
Security Classification		Compal Secret Data		Title	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Penryn(2/3)-AGTL+GND	
Size	Custom	Document Number	LA7012P	Rev	1.0
Date	Friday, December 24, 2010	Sheet	5	of	41



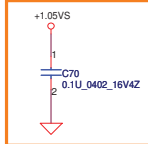
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Penryn(3/3)-PWR+Bypass	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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 LA7012P
				Date: Friday, December 24, 2010	Sheet 6 of 41



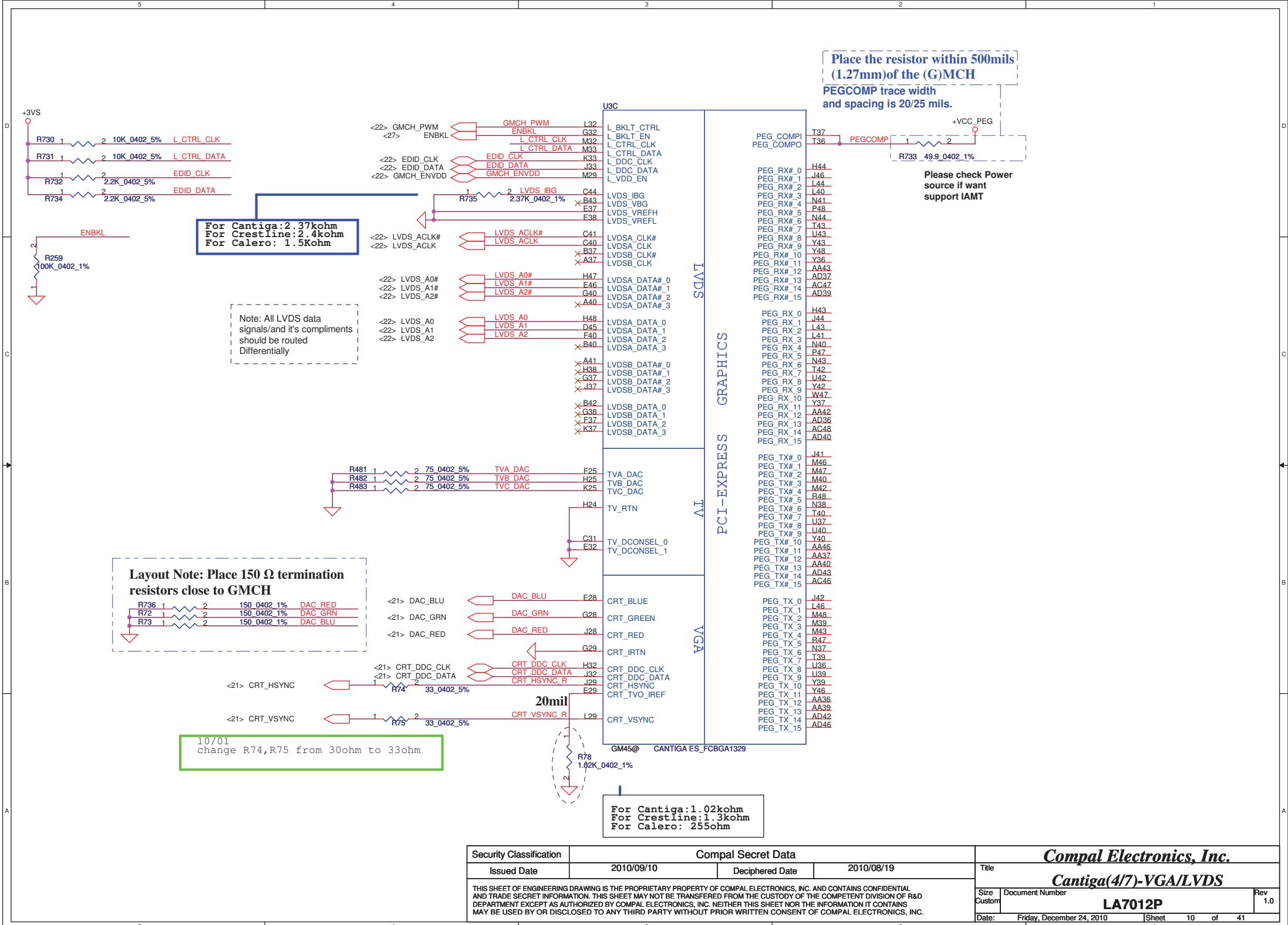
Layout Note:
H_RCOMP / H_VREF / H_SWNG
trace width and spacing is 10/20

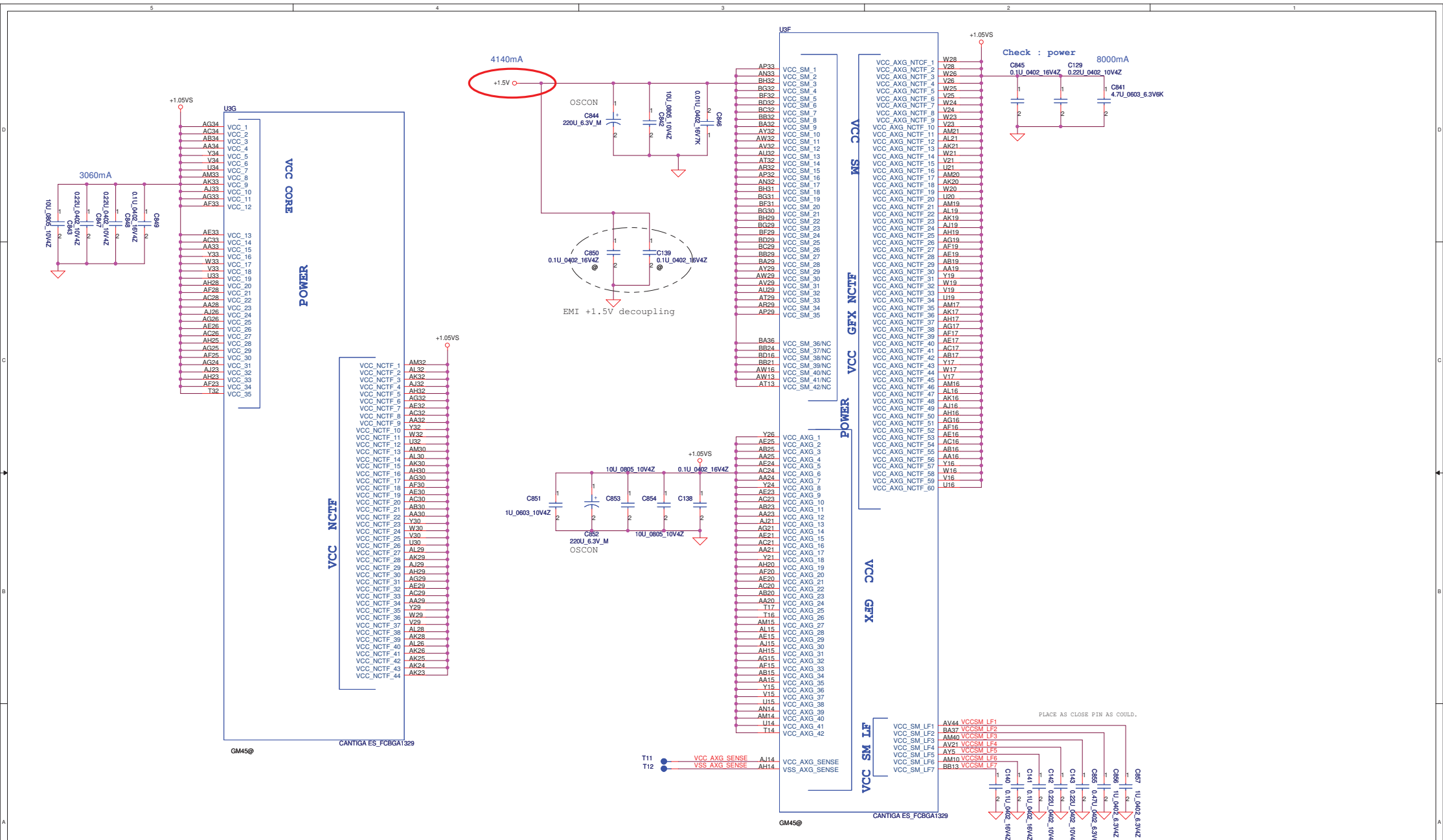


PVT ESD solution.
Please close to R23



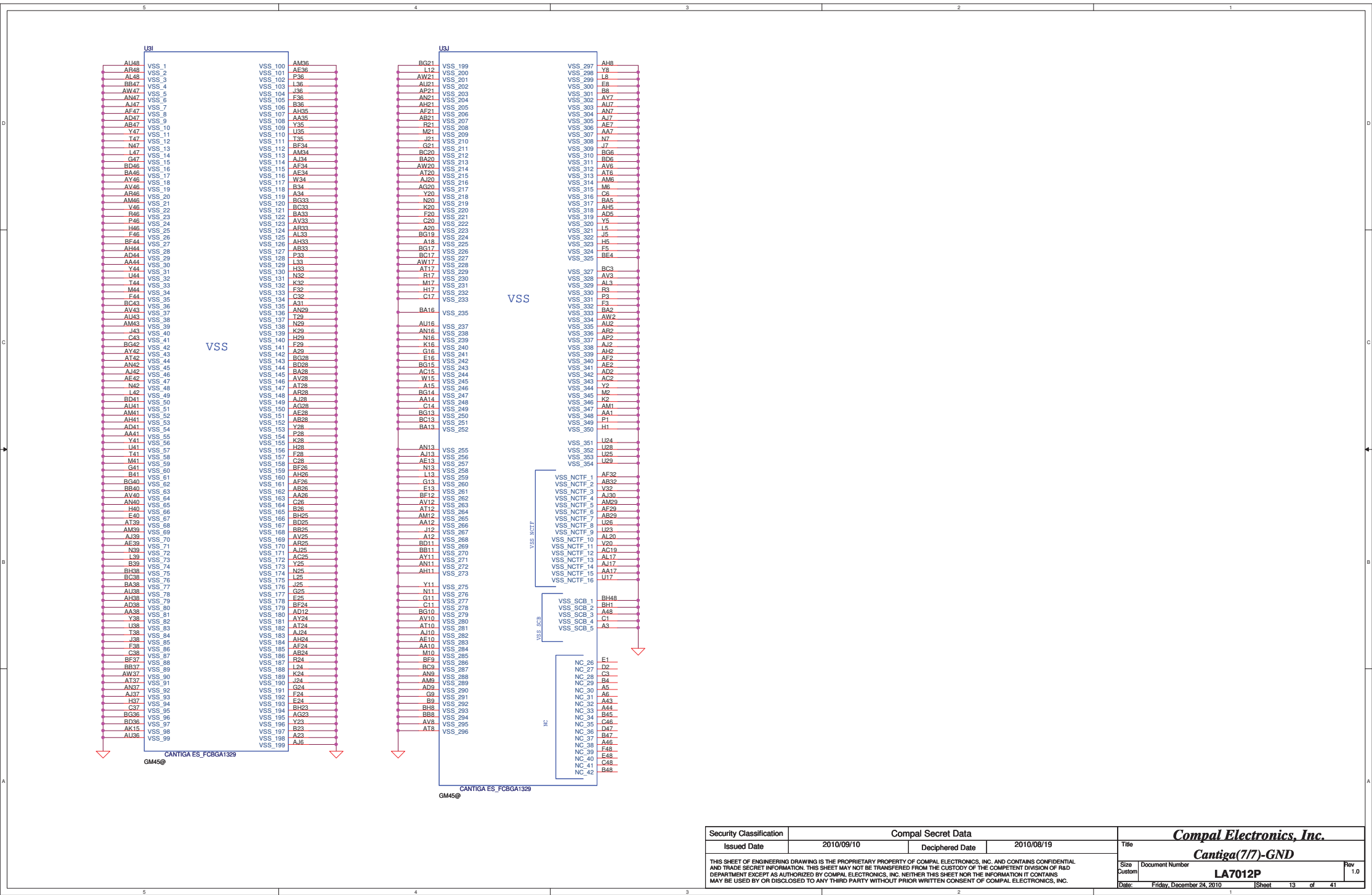
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		Deciphered Date		Title	
2010/09/10		2010/08/19		Cantiga(1/7)-AGTL+	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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	
				LA7012P	
Date:		Friday, December 24, 2010		Sheet 7 of 41	



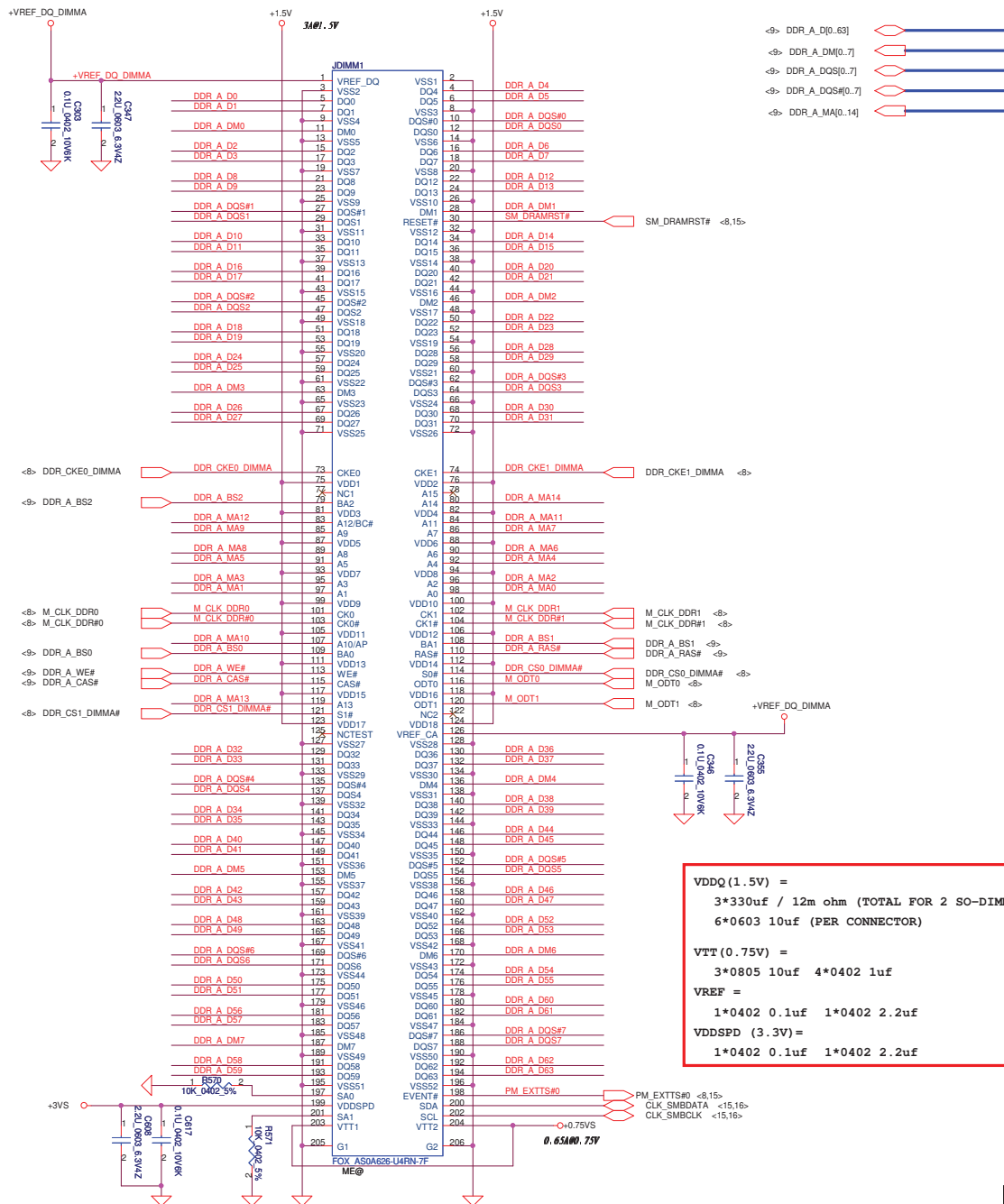


Security Classification		Compal Secret Data		2010/08/19		Compal Electronics, Inc.	
Issued Date		2010/09/10		Deciphered Date		Title	
						Cantiga(6/7)-VCC-1	
						Size	
						Document Number	
						LA7012P	
						Date	
						Friday, December 24, 2010	
						Sheet	
						12 of 41	

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.



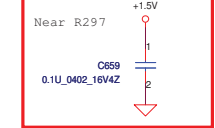
Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		2010/09/10	
2010/09/10		2010/08/19		2010/08/19	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.		2010/08/19		2010/08/19	
Size		Document Number		Rev	
Custom		LA7012P		1.0	
Date:		Friday, December 24, 2010		Sheet 13 of 41	



DDR3 SO-DIMM A H=4mm Reverse type

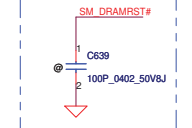
- <-> DDR_A_D[0..63]
- <-> DDR_A_DM[0..7]
- <-> DDR_A_DQS[0..7]
- <-> DDR_A_DQS#0..7]
- <-> DDR_A_MA[0..14]

Pre MP ADD for ESD solution



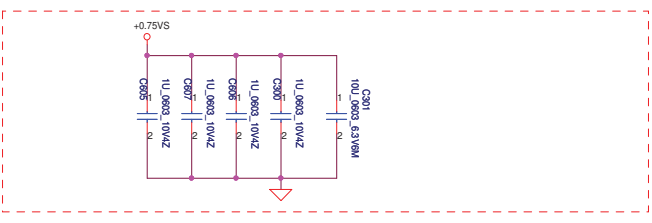
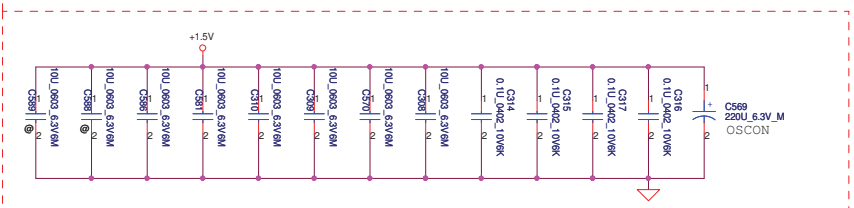
For Arranale only +VREF_DQ_DIMMA supply from a external 1.5V voltage divide circuit.
07/17/2009

Place closely pin JDIMM1.30



1224 Change C639 to @ for download image fail issue

Layout Note:
Place near DIMM



VDDQ(1.5V) =
3*330uF / 12m ohm (TOTAL FOR 2 SO-DIMMs)
6*0603 10uF (PER CONNECTOR)

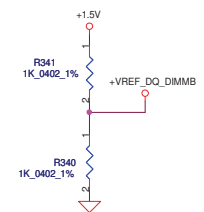
VTT(0.75V) =
3*0805 10uF 4*0402 1uF

VREF =
1*0402 0.1uF 1*0402 2.2uF

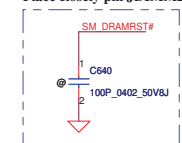
VDDSPD (3.3V) =
1*0402 0.1uF 1*0402 2.2uF

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title	
				DDR3 SO-DIMM A	
				Size	Document Number
				Customer	LA7012P
				Date	Friday, December 24, 2010
				Sheet	14 of 41

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.

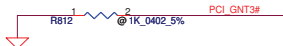
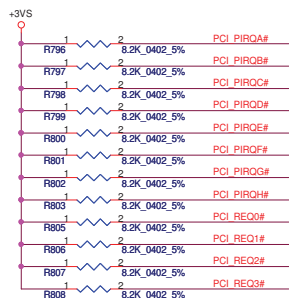
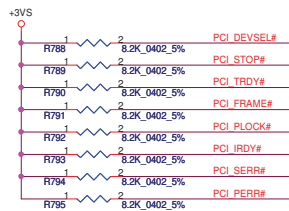


07/17/2009

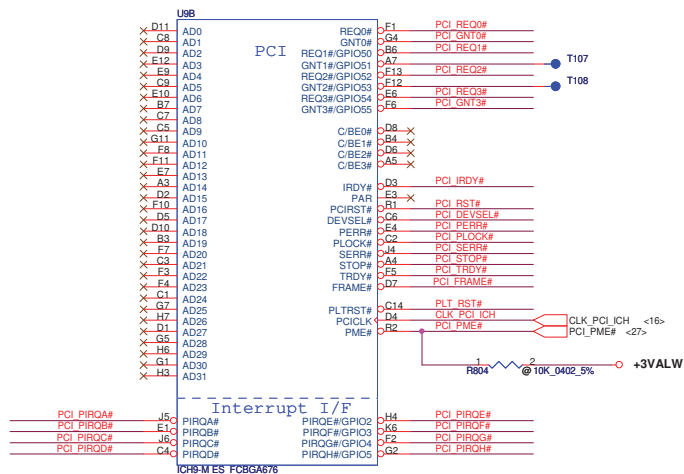


1224 Change C640 to @ for download image fail issue

Security Classification	Compal Secret Data			Compal Electronics, Inc. DDRIII SO-DIMM B		
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title	DDRIII SO-DIMM B LA7012P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	LA7012P	1.0
				Date:	Friday, December 24, 2010	Sheet 15 of 41



A16 Swap Override Strap	
PCI_GNT#3	Low= A16 swap override Enable High= Default*

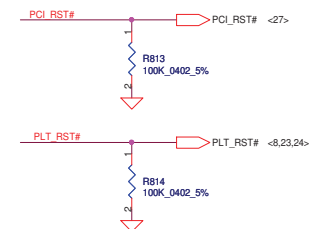
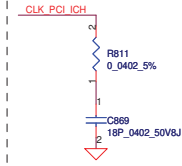


Boot BIOS Strap		
PCI_GNT#0	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC*

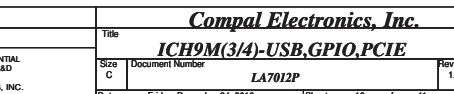
09/16 Add C858 For ESD
Place closely pin C14

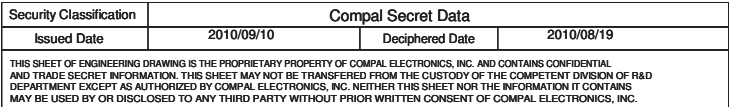


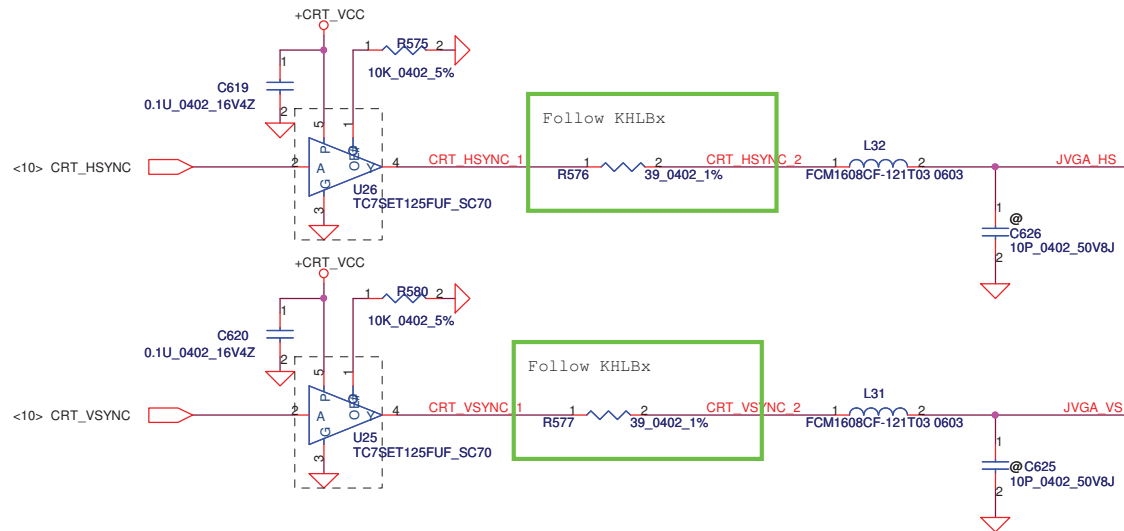
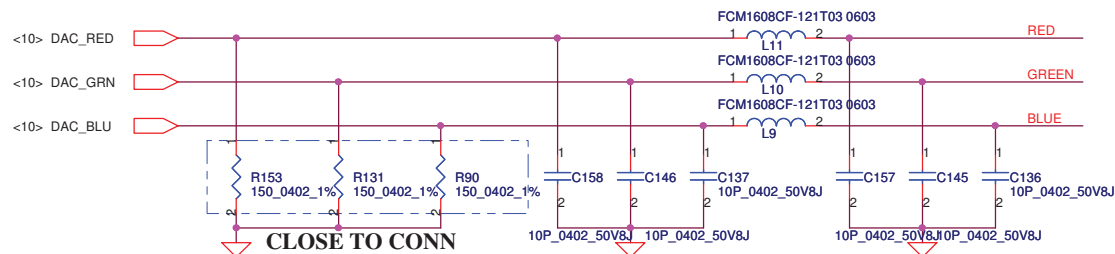
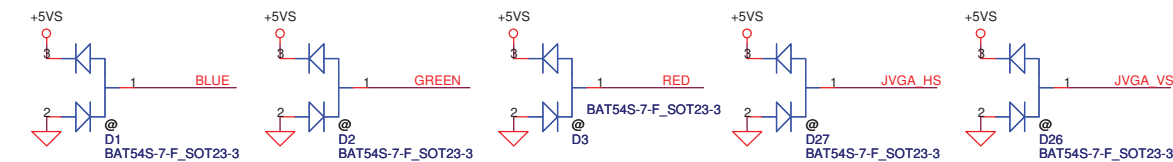
Place closely pin D4



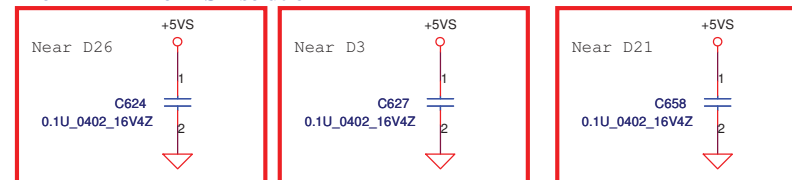
Security Classification	Compal Secret Data		Title	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	2010/08/19
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev 1.0
Size Custom	Document Number	LA7012P		Date: Friday, December 24, 2010
Sheet 17 of 41		Sheet 17 of 41		



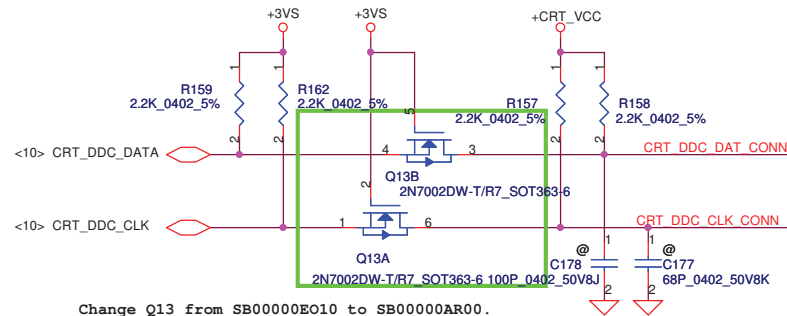
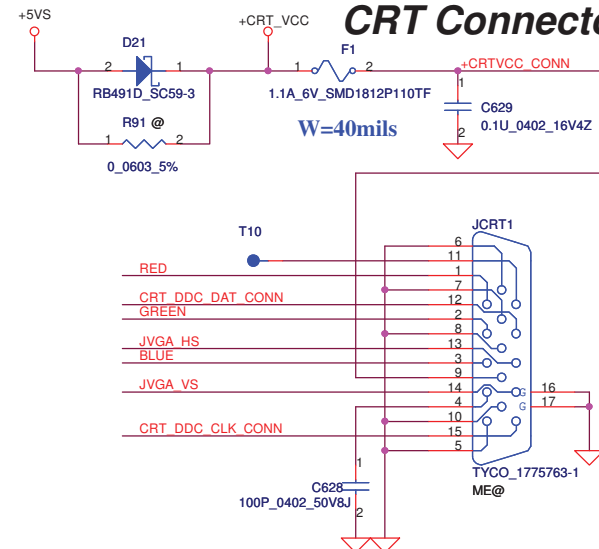




Pre MP ADD for ESD solution

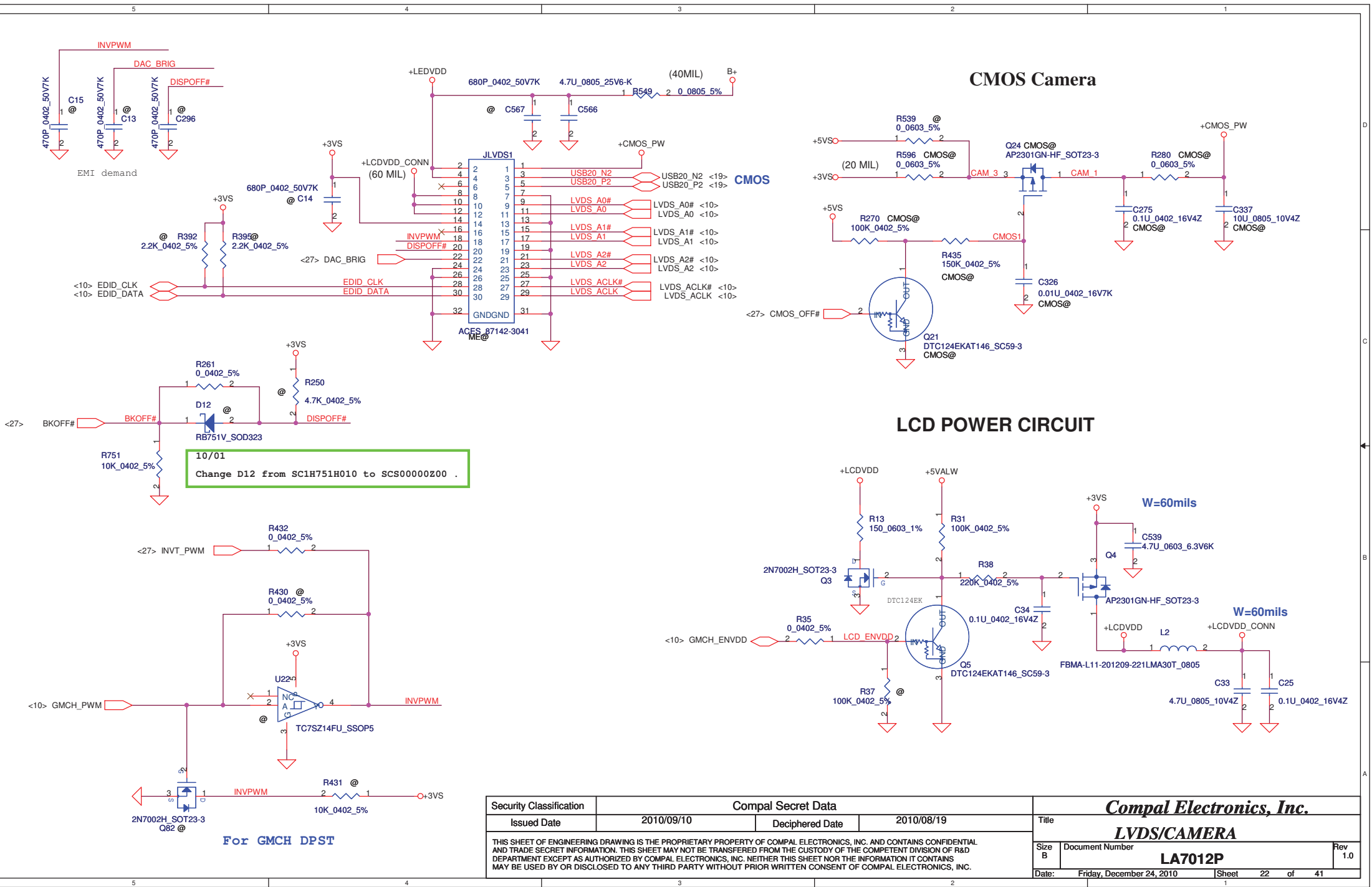


CRT Connector



Change Q13 from SB00000EO10 to SB00000AR00.

Security Classification		Compal Secret Data		Title	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	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
				LA7012P	
				Date:	Friday, December 24, 2010
				Sheet	21 of 41
				Rev	1.0



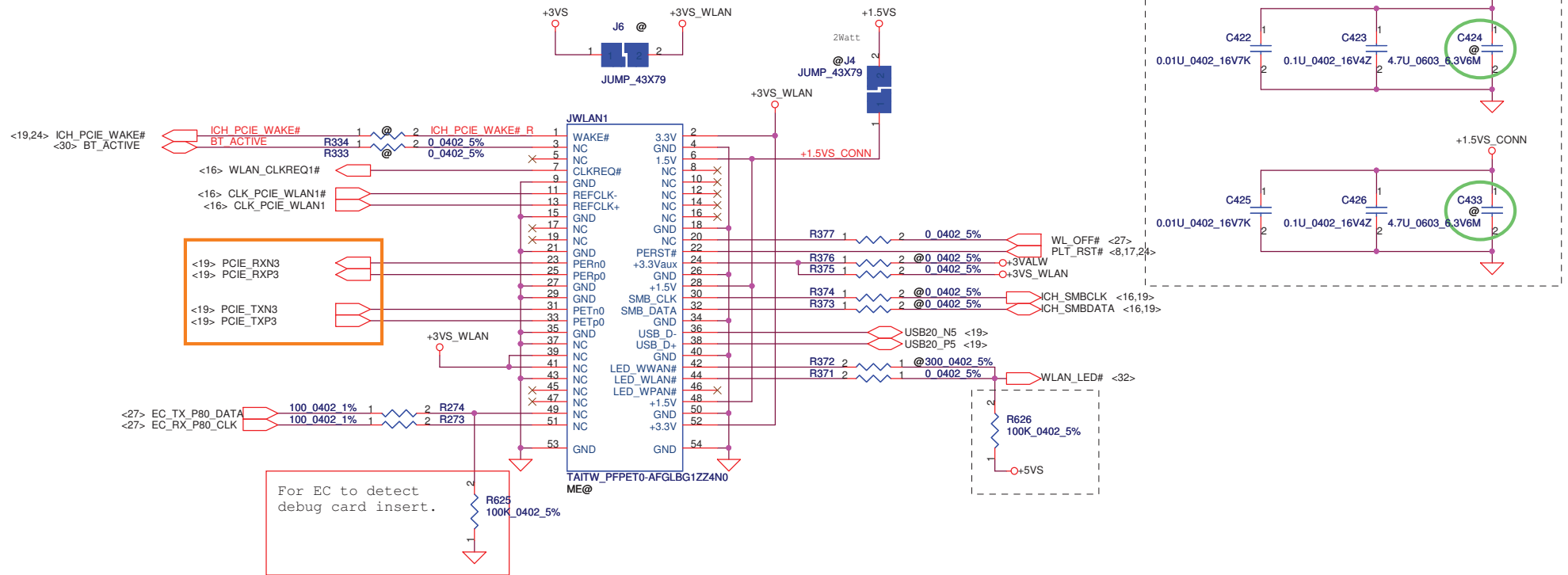
CMOS Camera

LCD POWER CIRCUIT

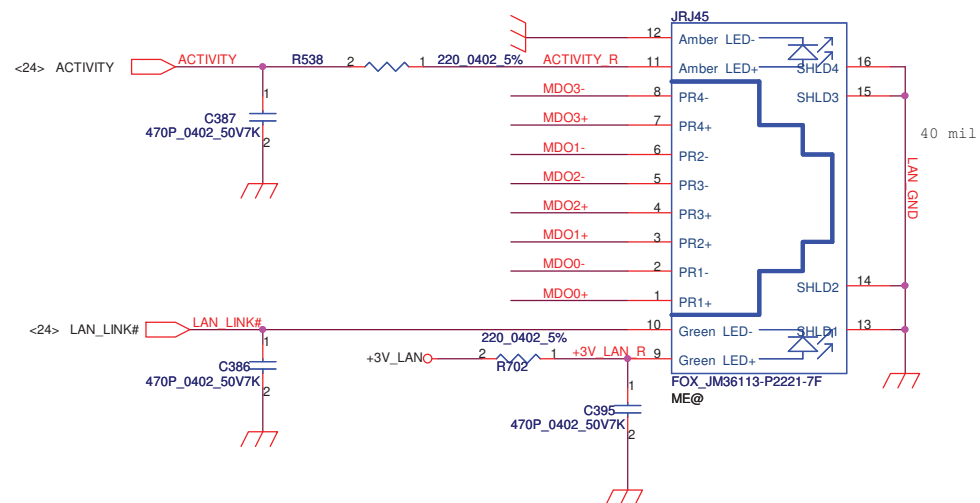
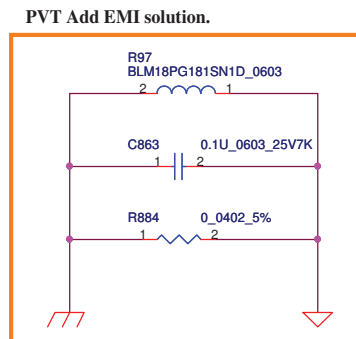
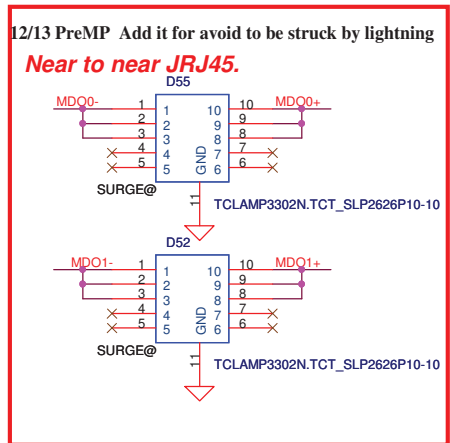
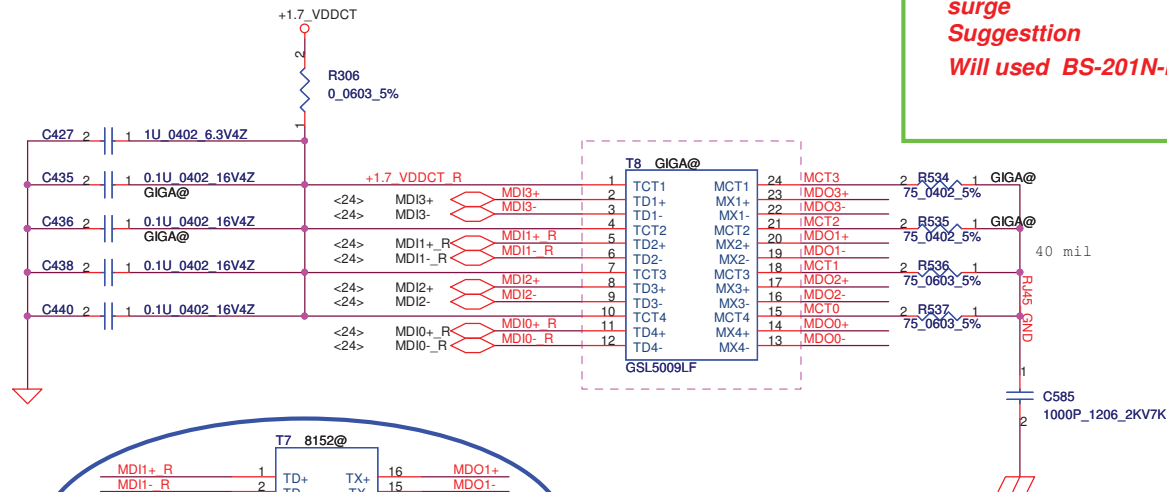
For GMCH DPST

Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		Size B	
2010/09/10		2010/08/19		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 1.0		LA7012P	
		Date:		Sheet 22 of 41	
		Friday, December 24, 2010			

Mini-Express Card for WLAN(Half)

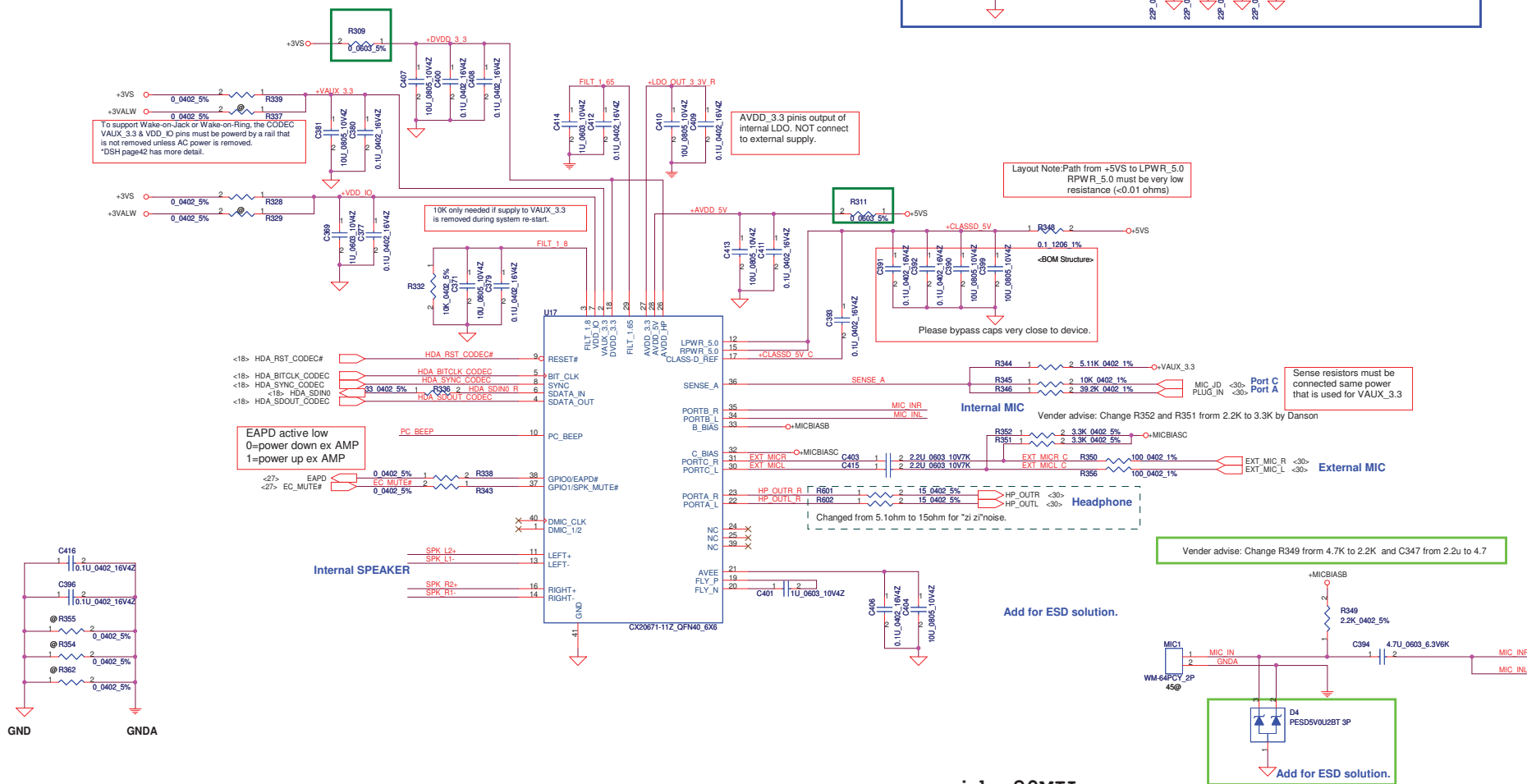


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Mini-Card/DEBUG-PORT	
Size		Document Number		LA7012P	
Date:		Friday, December 24, 2010		Sheet 23 of 41	
				Rev 1.0	

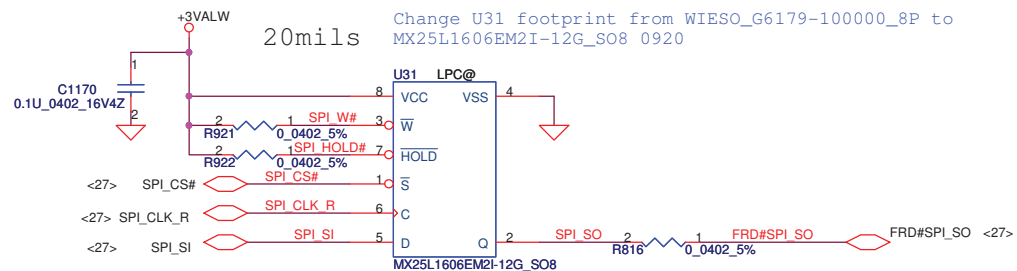


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				LAN_Transformer	
Size	Document Number	LA7012P		Rev	1.0
Date:	Friday, December 24, 2010	Sheet	25	of	41

CX20671
High Definition Audio Codec SoC
With Integrated Class-D Stereo
Amplifier.
An integrated 5 V to 3.3 V Low-dropout
voltage regulator (LDO).
An integrated 3.3 V to 1.8V Low-dropout
voltage regulator (LDO).

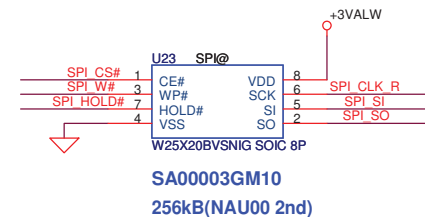


FOR EC 16M SPI ROM

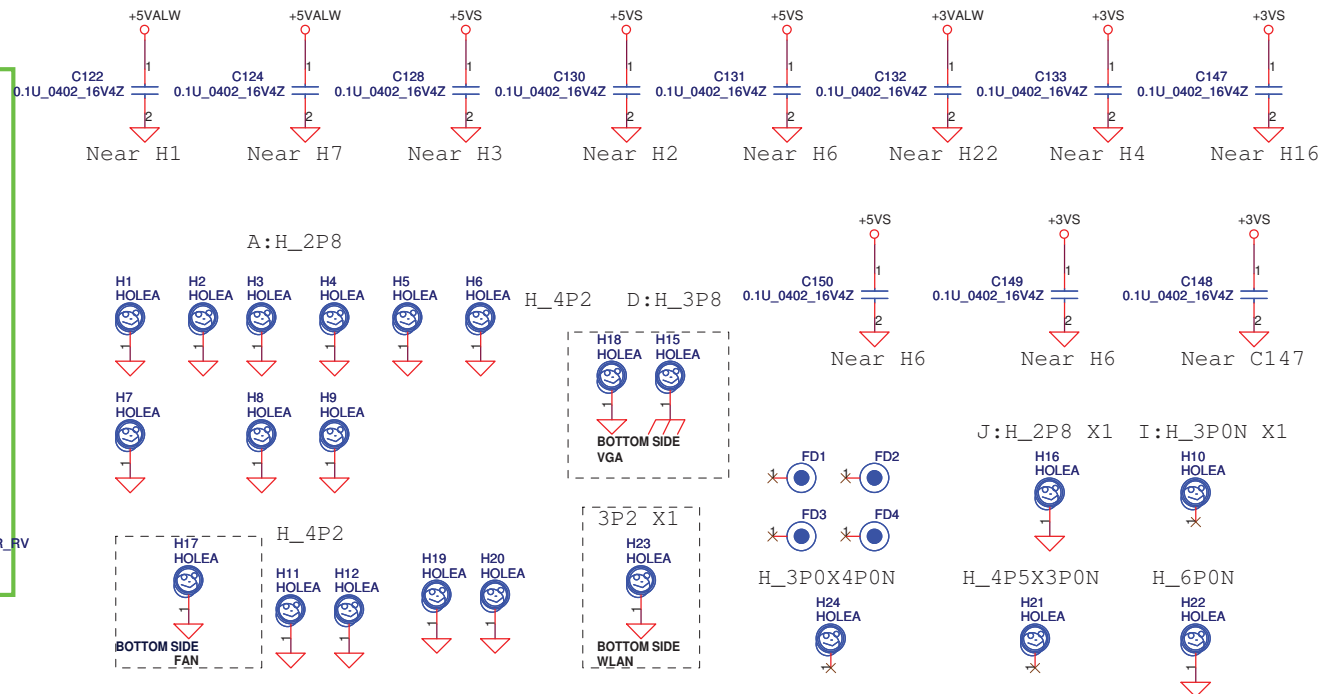
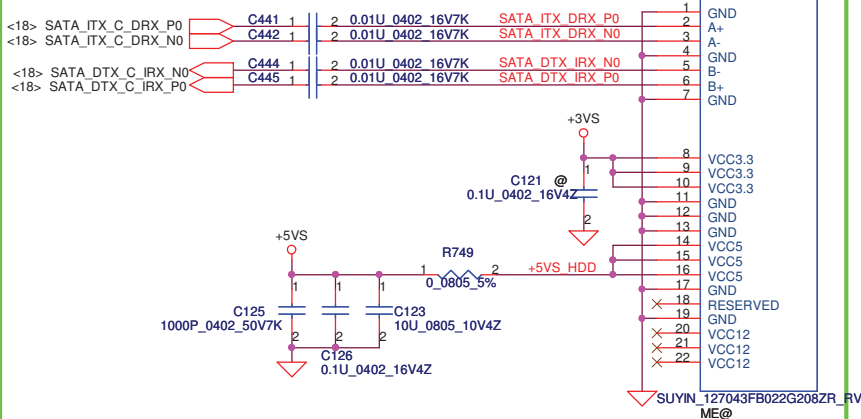


Change U31 P/N from SA00000XT00 to SA000041N00 0915
Change U31 footprint from WIESO_G6179-100000_8P to
MX25L1606EM2I-12G_S08 0920

2010/09/24 Add U23 for NONShare SPI ROM.

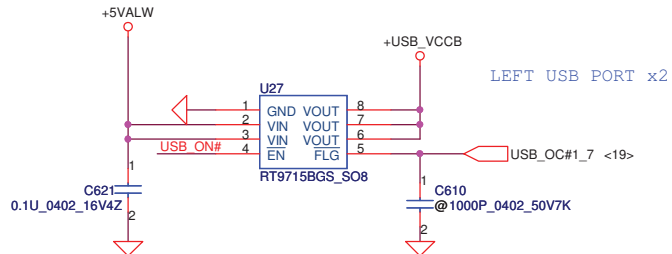
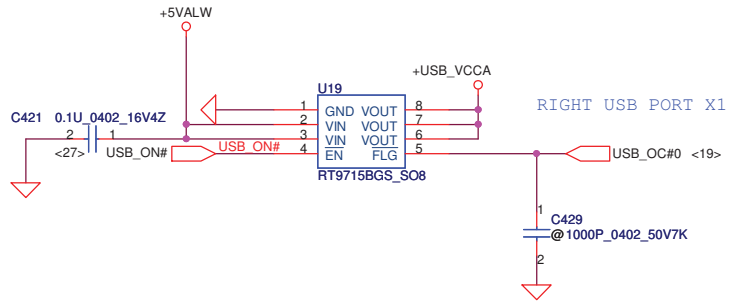


10/11 Change JHDD1 P/N from SP01000QT00 to SP01000FX00

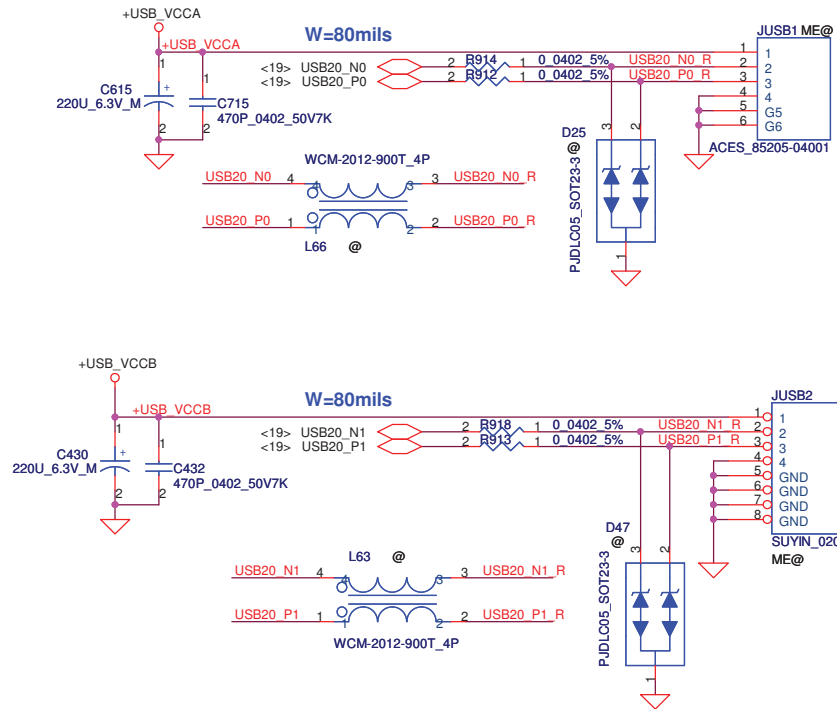
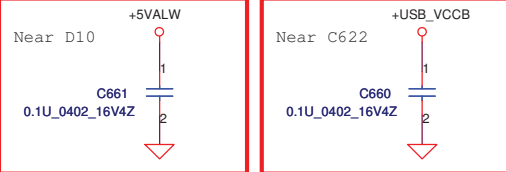


Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title HDD / SPI ROM / Hold		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 LA7012P	Rev 1.0
				Date: Friday, December 24, 2010		Sheet 28 of 41

PVT Change U19 and U27 part number from SA000039E00 to SA00002XX00



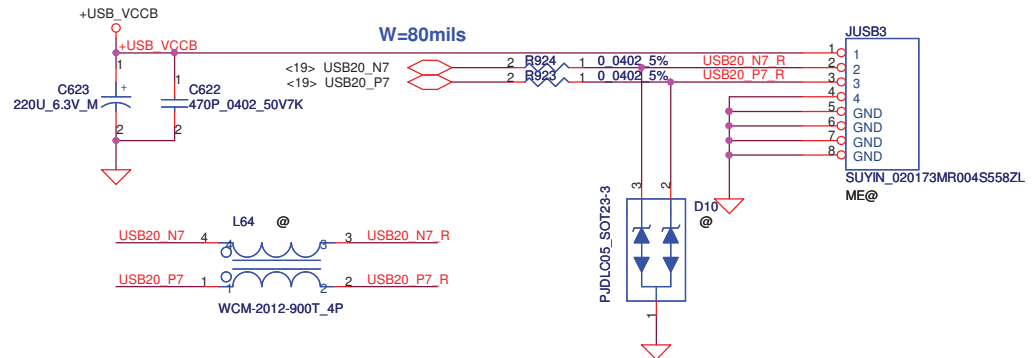
Pre MP ADD for ESD solution



Right USB Conn.

Left USB Conn.

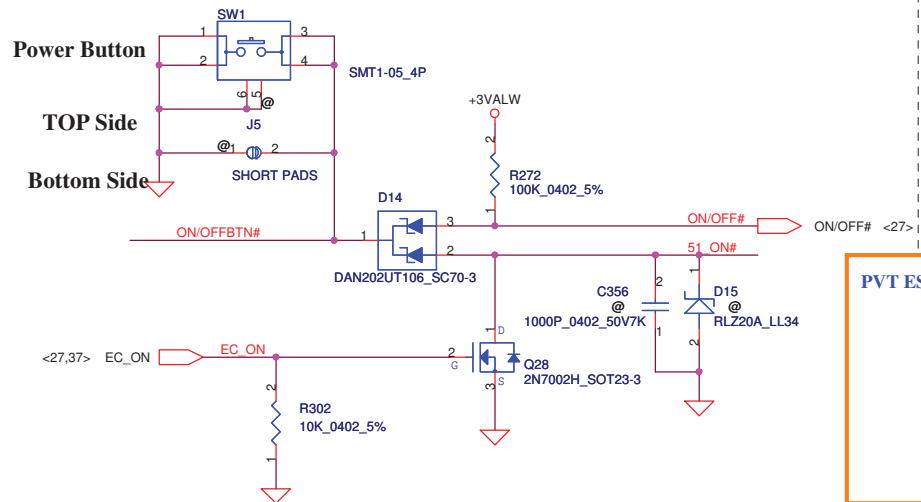
Change JUSB3 connector from ESATA to USB



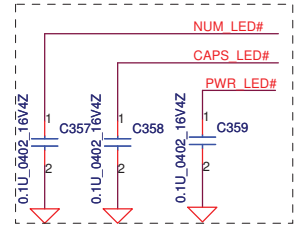
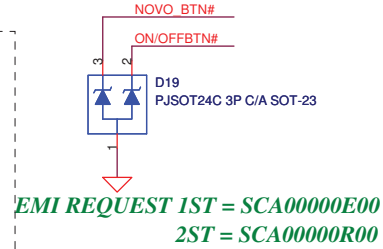
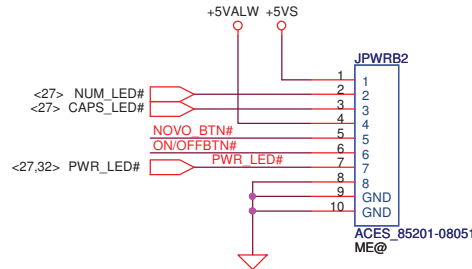
Left2 USB Conn.

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	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.				USB ports/BT	
Size B	Document Number			LA7012P	
Date:	Friday, December 24, 2010			Sheet	29 of 41
				Rev	1.0

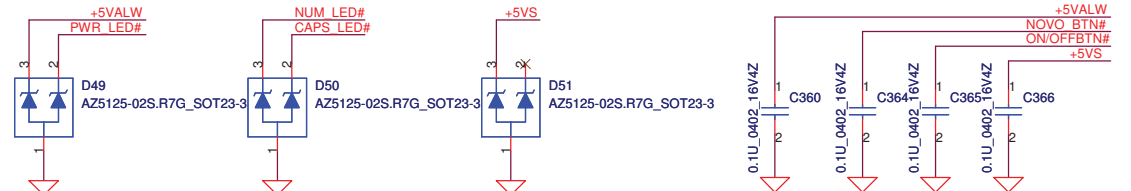
ON/OFF switch



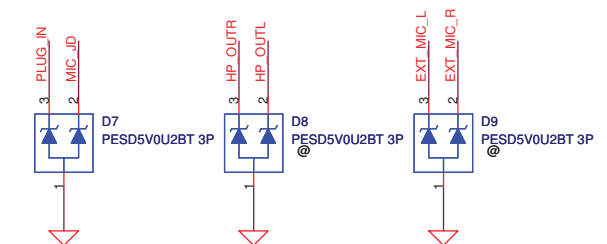
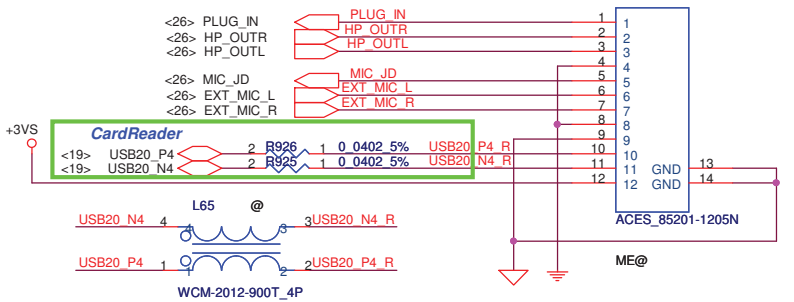
Power Bottom Board Conn. 8pin



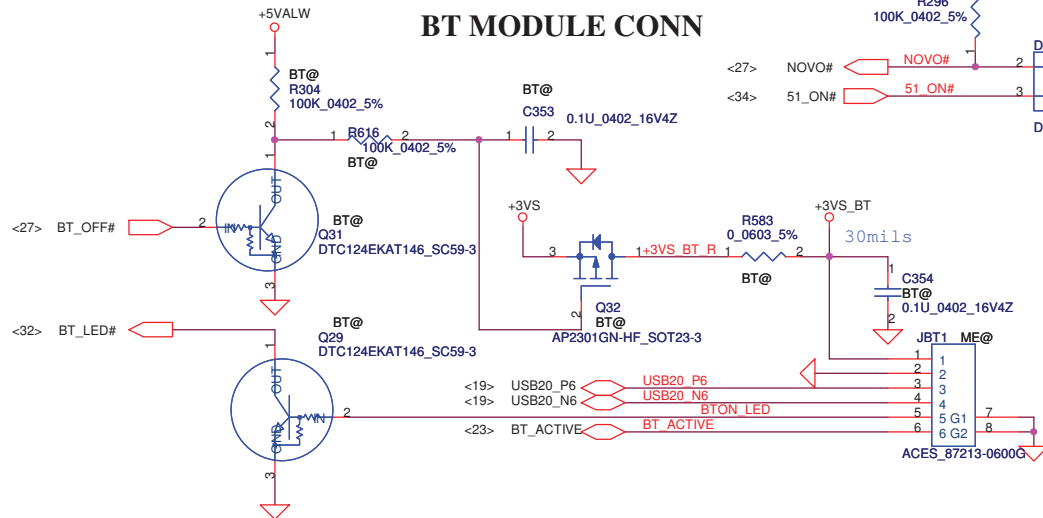
PVT ESD solution.



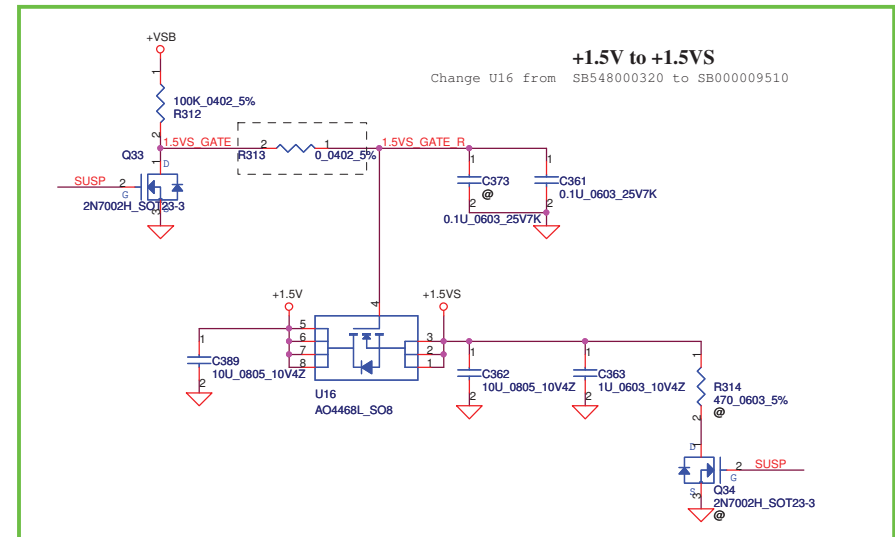
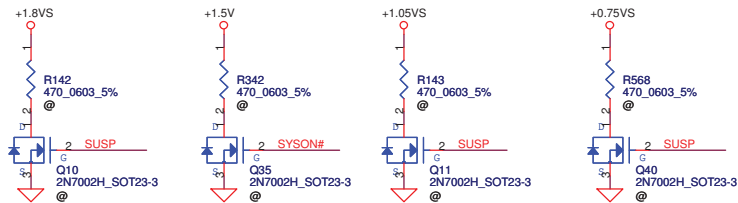
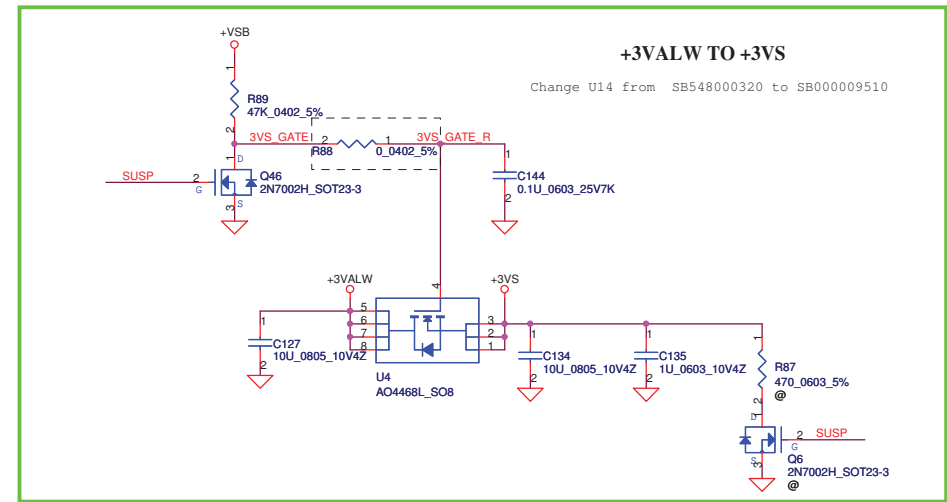
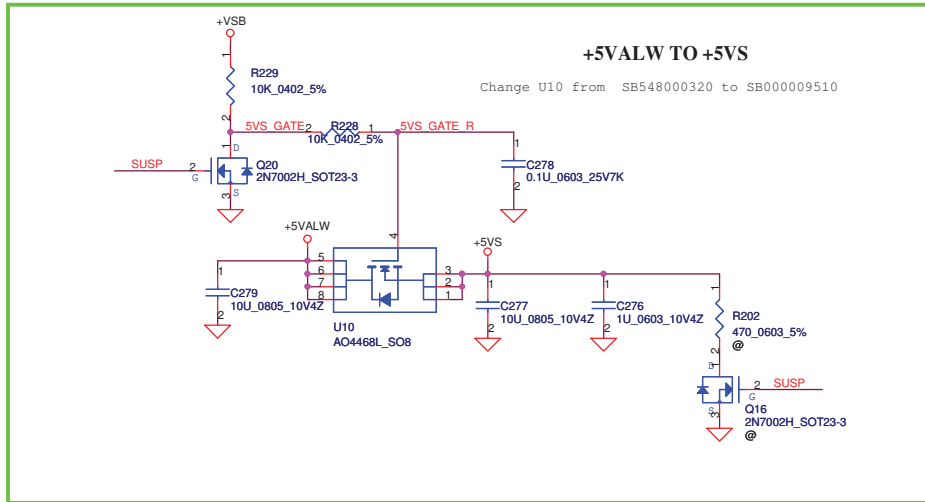
Card Reader/Audio Jack SB CONN



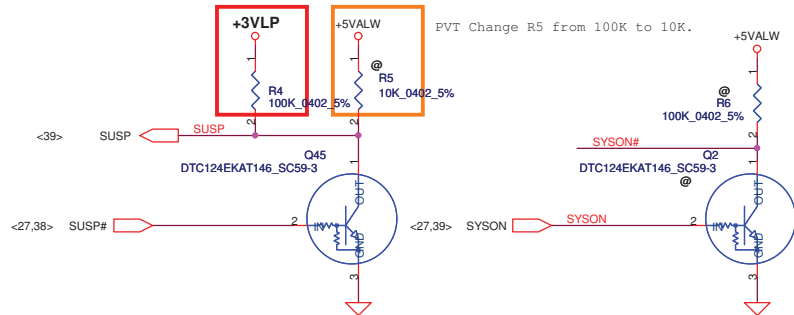
BT MODULE CONN



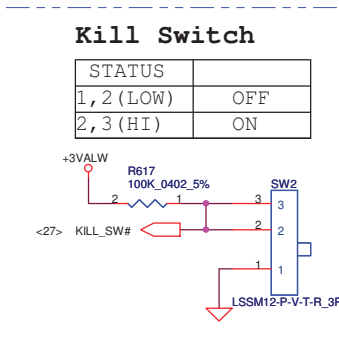
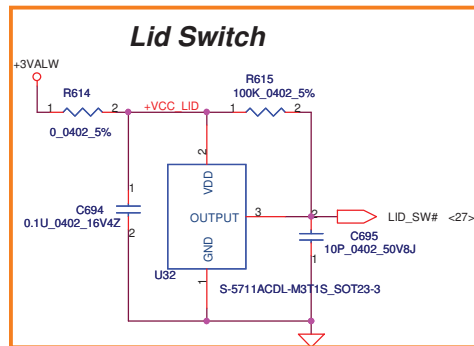
Security Classification		Compal Secret Data		Compal Electronics, Ltd.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title	Audio Jack & SW & BT Conn.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Rev	1.0
				Date: Friday, December 24, 2010	Sheet 30 of 41



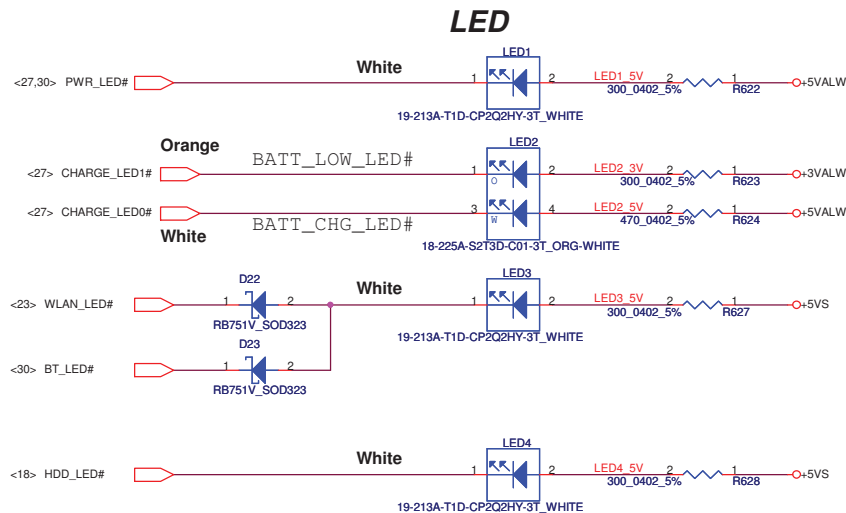
Pre MP Change SUSP pull high from +5VALW to +3VLP.



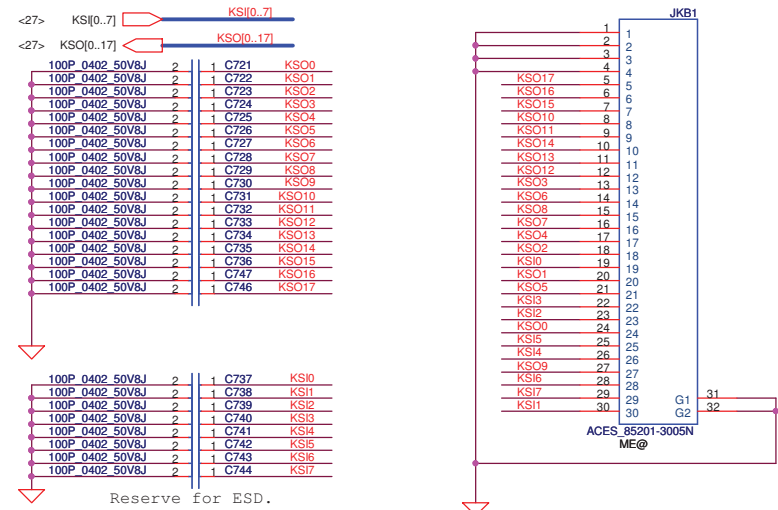
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				DC Interface	
Size		Document Number		Rev	
Custom		LA7012P		1.0	
Date:		Friday, December 24, 2010		Sheet	
				31 of 41	



PVT Change U32 part number from SA032120010 to SA000031C00



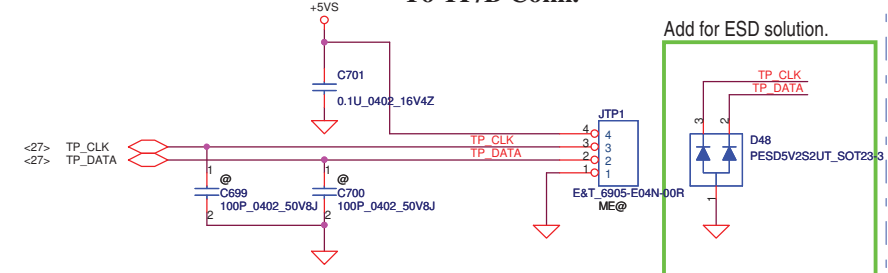
INT_KBD Conn.



check connector & pin define.

CONN PIN define need double check

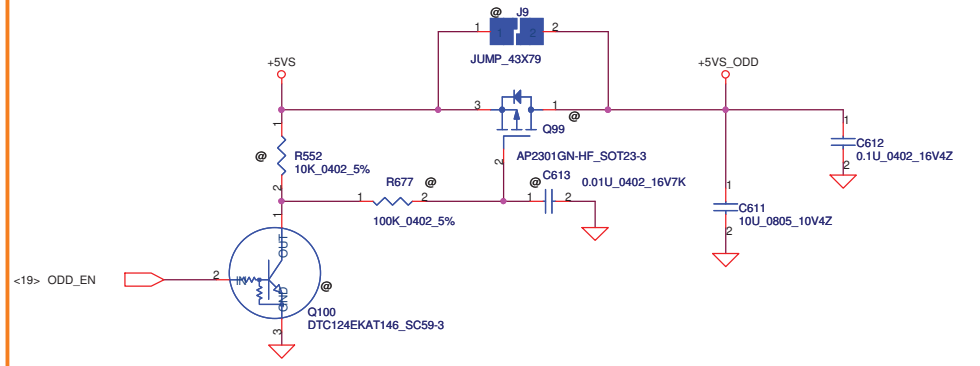
To TP/B Conn.



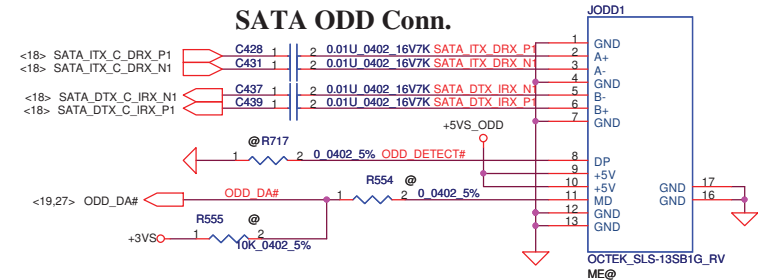
Add for ESD solution.

ODD Power Control

11/05 Add this function.



SATA ODD Conn.



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	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.				KB/TP/LID/KLL/ODD/LED FOR 14
				Size Custom
				Document Number
				LA7012P
				Rev 1.0
				Date: Friday, December 24, 2010
				Sheet 32 of 41

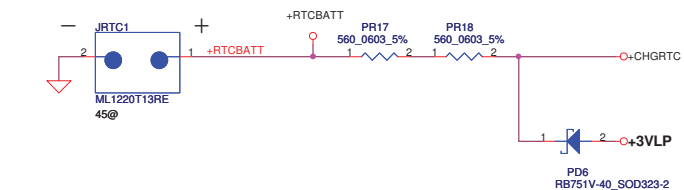
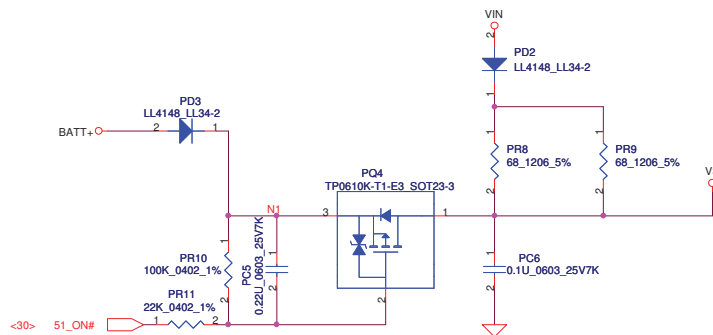
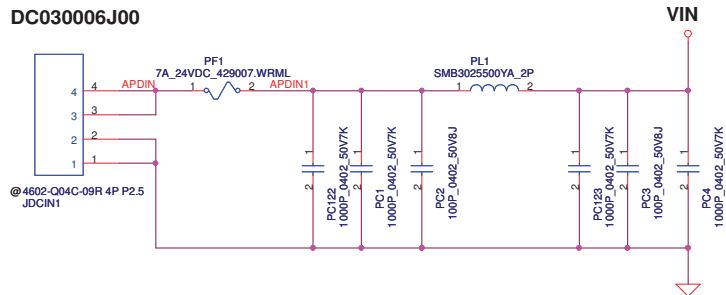
Version change list (P.I.R. List)

Page 1 of 1 for HW

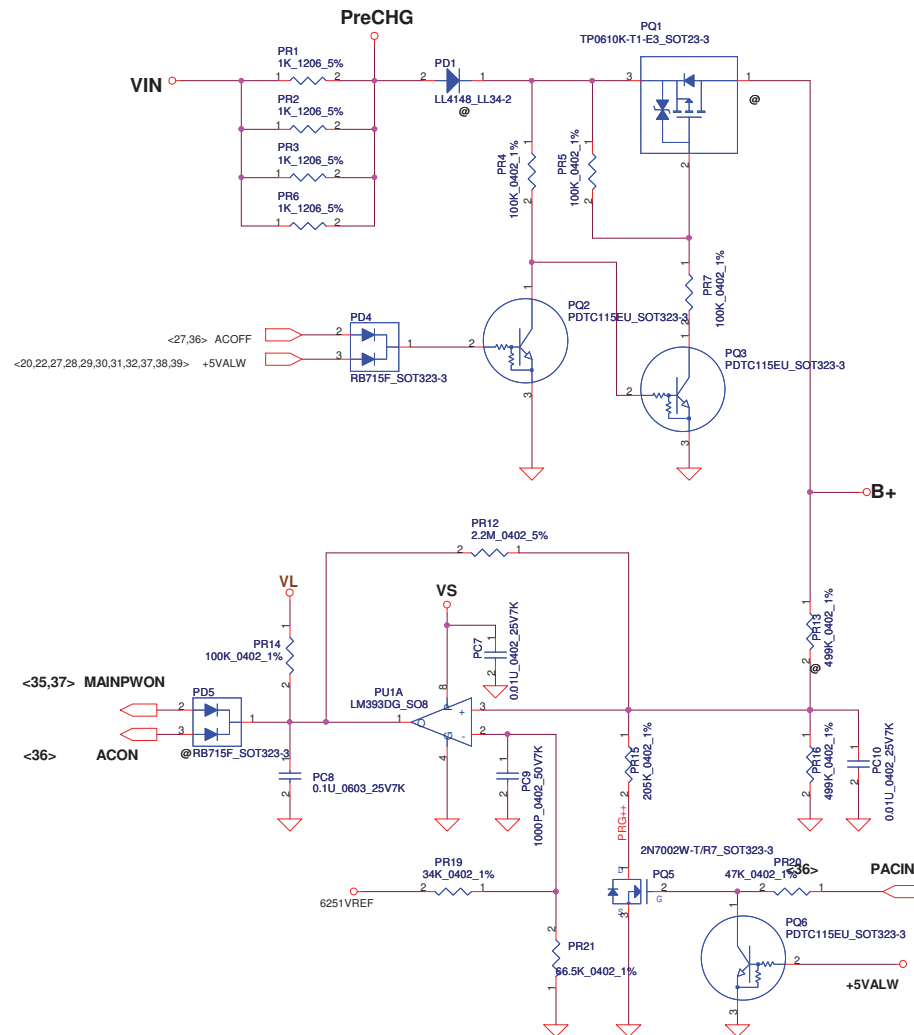
Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/09/10	Deciphered Date	2010/08/19	Title HW PIR	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF 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 LA7012P
				Date Friday, December 24, 2010	Rev 1.0
				Sheet	33 of 41

DC030006J00



Precharge detector 15.97V/14.84V FOR ADAPTOR



ACIN

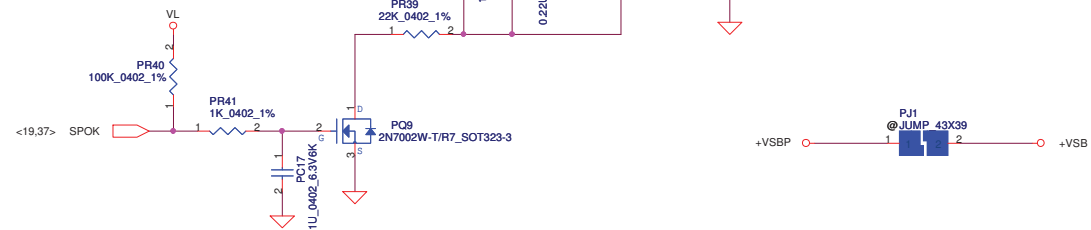
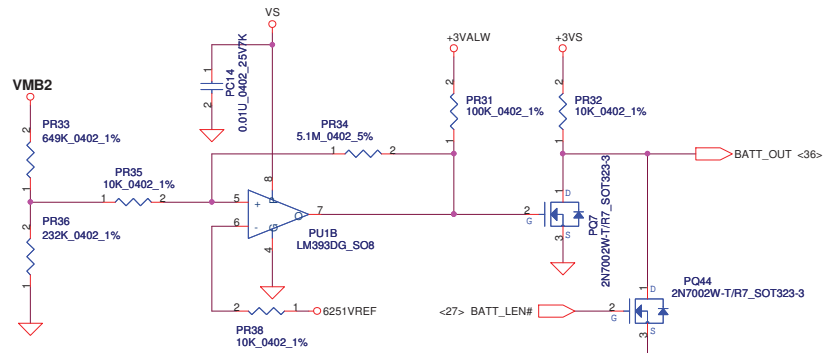
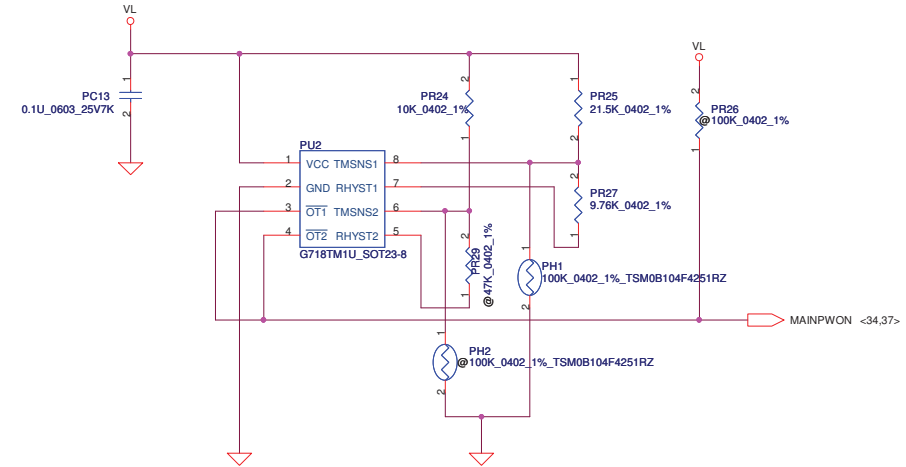
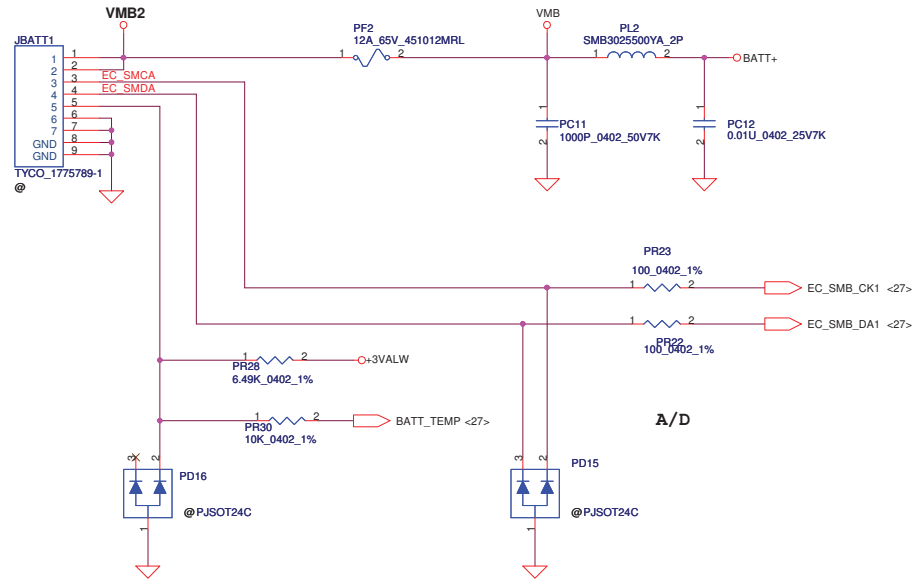
	Min.	typ.	Max.
L-->H	14.991V	15.381V	15.782V
H-->L	13.860V	14.247V	14.621V

BATT ONLY

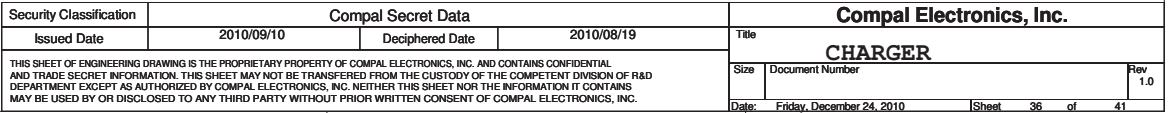
	Min.	typ.	Max.
L-->H	7.196V	7.349V	7.505V
H-->L	6.138V	6.214V	6.056V

PH1 under CPU botten side :

CPU thermal protection at 92 degree C
Recovery at 56 degree C



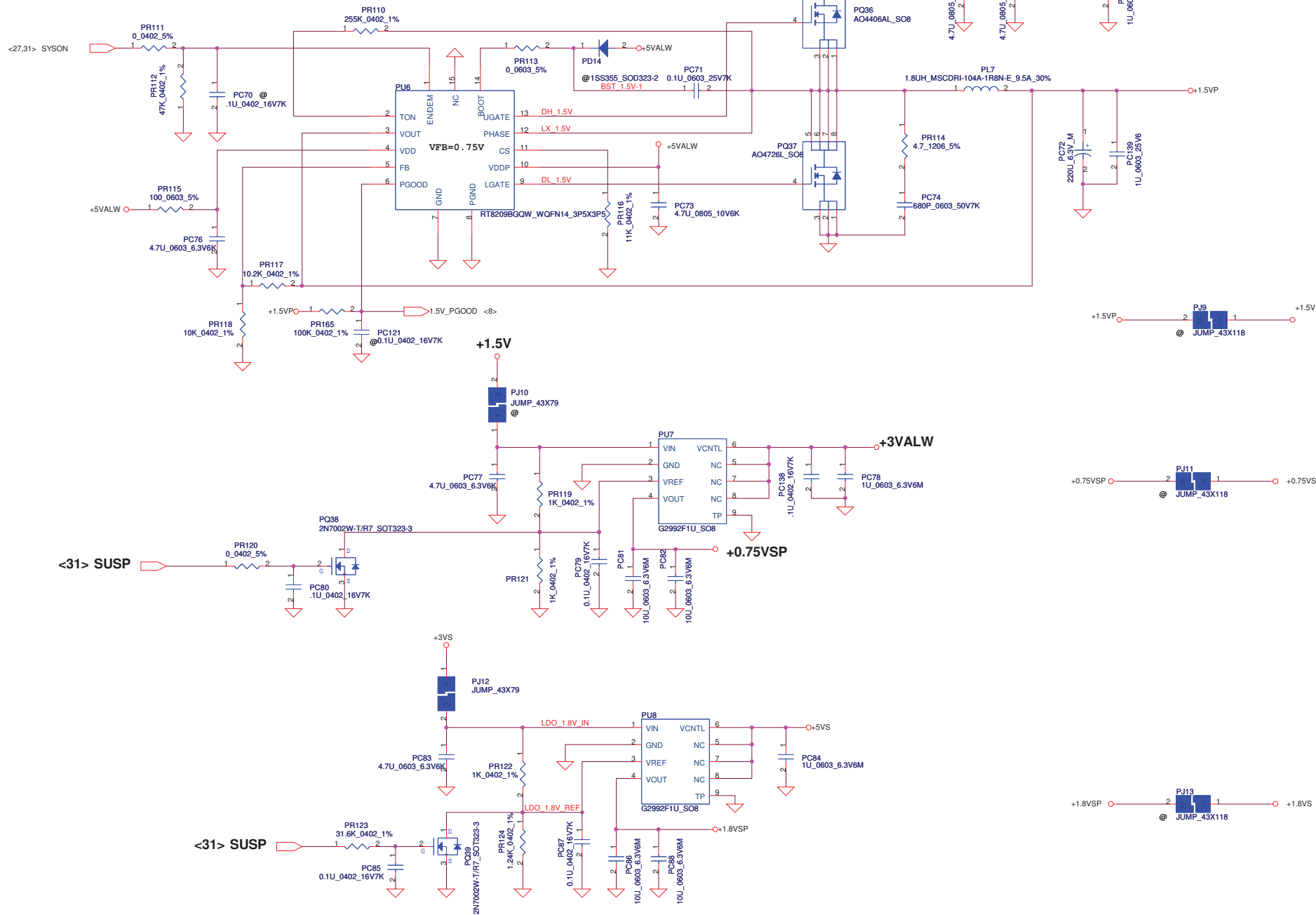
Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2010/09/10				Title			
Deciphered Date				2010/08/19				BATTERY CONN/OTP			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET 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			
				Date				Friday, December 24, 2010			
				Sheet				35 of 41			
								Rev 1.0			



A



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				Compal Electronics, Inc.			
Issued Date				2010/09/10				Title			
				Deciphered Date				1.5VP/1.8VSP/0.75VSP			
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			
								1.0			
								Date			
								Friday, December 24, 2010			
								Sheet			
								39 of 41			

Version Change List (P. I. R. List) for Power Circuit

Page#	Title	Date	Request Owner	Issue Description	Solution Description
P35,37,39	Add capacities for EMI request	2010.11.12	EMI	EMI test fail	Add PC132,PC133,PC134,PC135,PC136,PC137
P37	Change resistance for EMI request	2010.11.12	EMI	EMI test fail	Change PR104 from 0 ohm to 2.2ohm
P35	Add one capacitor for prevent inrush current too large	2010.11.12	PWR	If there isn't add capacity, the MOS of PQ11 have damaged risk.	Add PC131 which value is 5600PF
P34	Add one transistor for improve design margin	2010.11.12	PWR	If there isn't add transistor, the design margin of PQ11 is not enough.	Add PQ44
p39	Change resistance for CPU loadline fine tuning	2010.11.12	PWR	For meet the load line of intel spec	Change PR138 from 4.3k to 4.75k
P35	Add one capacitor for improve ripple current	2010.11.12	PWR	For meet the ripple current spec of Compal	Add PC130

Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		Power PIR	
2010/09/10		2010/08/19		Size	
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	
		LA7011P		1.0	
		Date: Friday, December 24, 2010		Sheet 41 of 41	