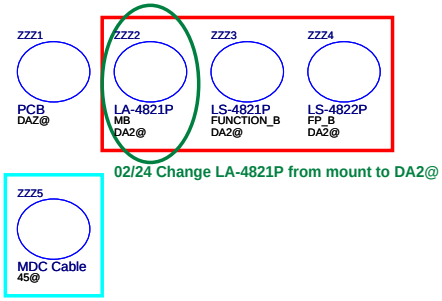

Compal Confidential

KFT00 Schematics Document

Intel Penryn Processor with SiSM672FX + DDRII + SiS968 + SiS307ELV

2009-03-10

REV:1.0

Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

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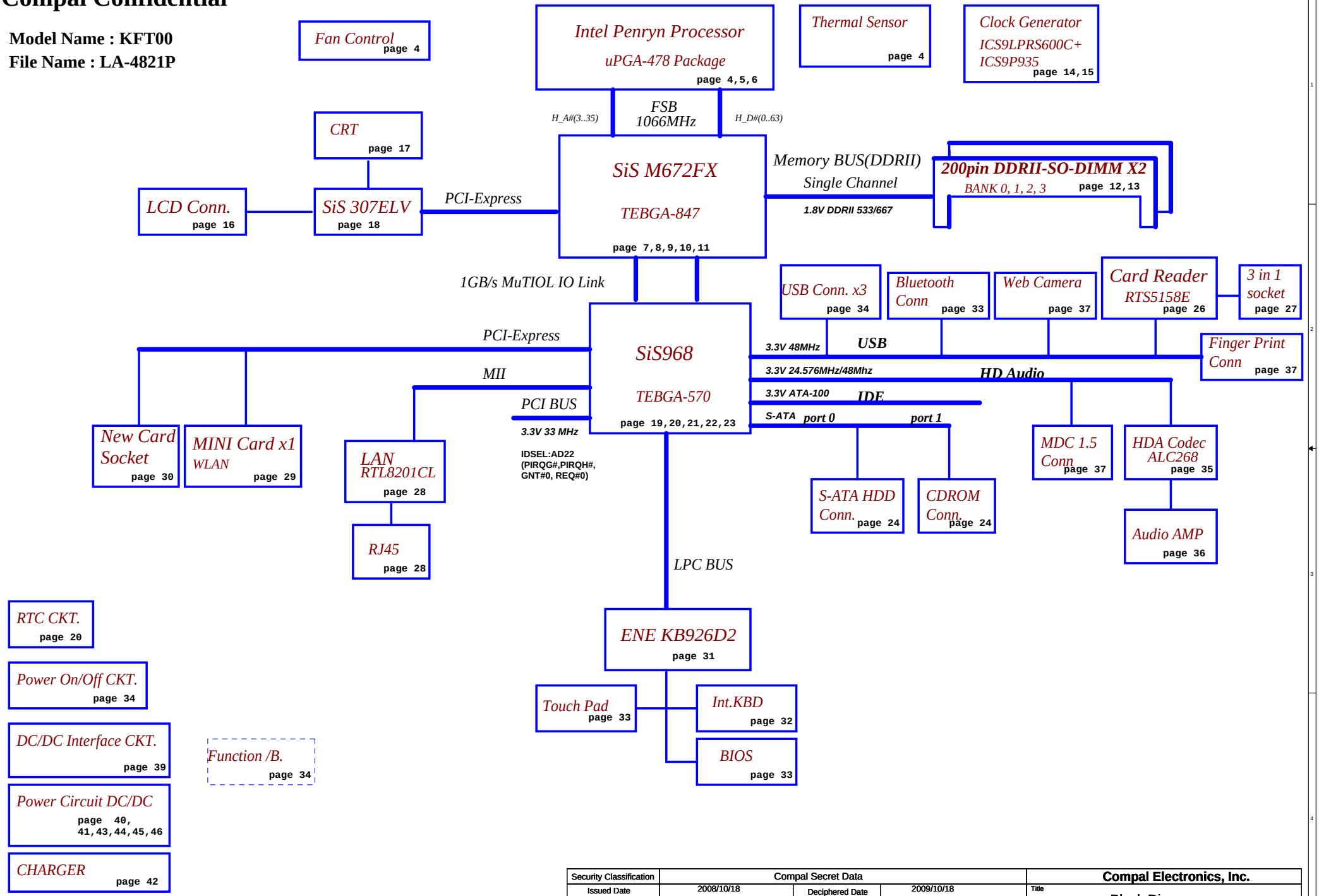
Title: Cover Page

Size: B | Document Number: KFT00-M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 1 of 47

Compal Confidential

Model Name : KFT00
File Name : LA-4821P



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: Block Diagrams

Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0

Date: Tuesday, February 10, 2009 | 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	Core voltage for CPU	ON	OFF	OFF
+0.9VS (Actual +0.9V)	0.9V switched power rail for DDR terminator	ON	ON	OFF
+1.05VS	1.05V switched power rail	ON	OFF	OFF
+1.2VS	1.2V switched power rail	ON	OFF	OFF
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8V	1.8V power rail for DDR	ON	ON	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	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

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

PROJECT ID Table

	PROJECT_ID1 GPIO5	PROJECT_ID0 GPIO0
KFT00	0	0
KSW01	1	0
KSW91	1	1

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 #	PIRQ

EC SM Bus1 address

Device	Address
Smart Battery	0001 011X b
EEPROM(24C16/02)	1010 000X b

EC SM Bus2 address

Device	Address
ADI ADM1032 SMC EMC1402-1	1001 100X b

M672 SM Bus address

Device	Address
Clock Generator	1101 001Xb
DDR DIMM0	1010 000Xb
DDR DIMM1	1010 001Xb

SKU ID Table

Vcc	3.3V +/- 5%
Ra	100K +/- 5%

Ra~ R312
Rb~ R311

R311 8.2K_0402_5% 12_C@

R311 18K_0402_5% 12_MP@

Board ID	Rb	V_{AD_BID} min	V_{AD_BID} typ	V_{AD_BID} max	Rb BOM Structure
0	0	0 V	0 V	0 V	12_A@
1	8.2K +/- 5%	0.217 V	0.250 V	0.288 V	12_C@
2	18K +/- 5%	0.439 V	0.503 V	0.575 V	12_MP@

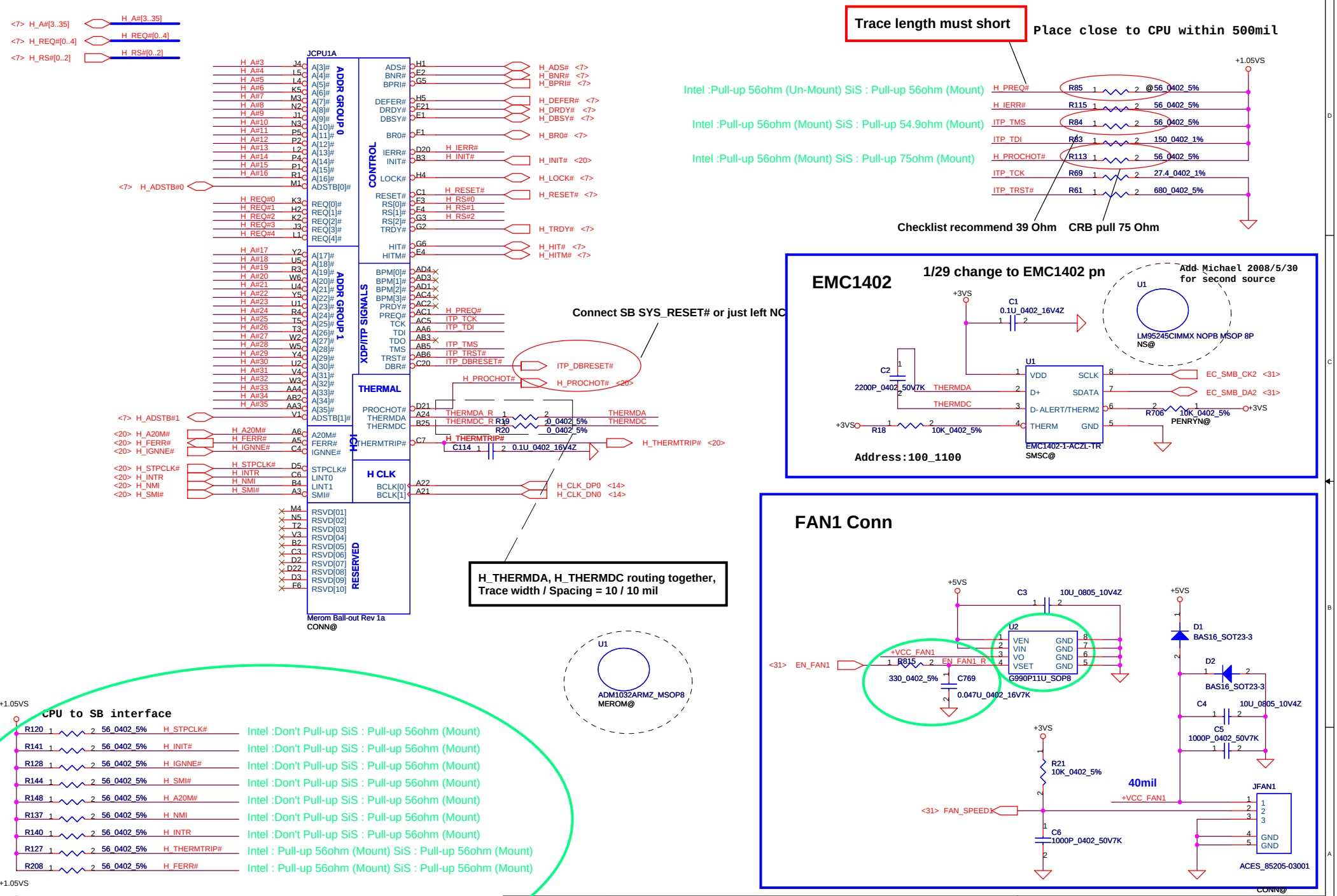
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: Notes List

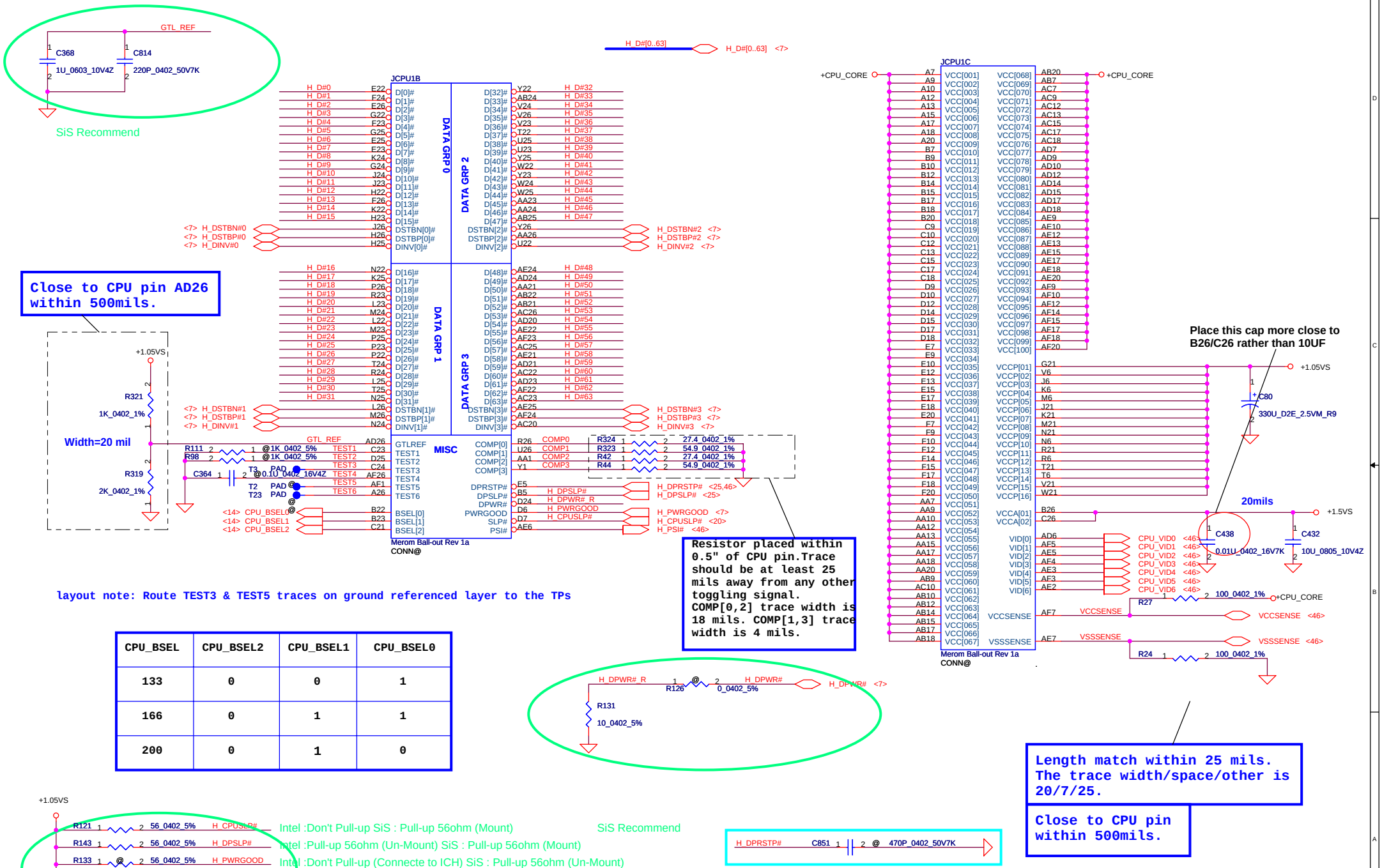
Size: B | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 3 of 47



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

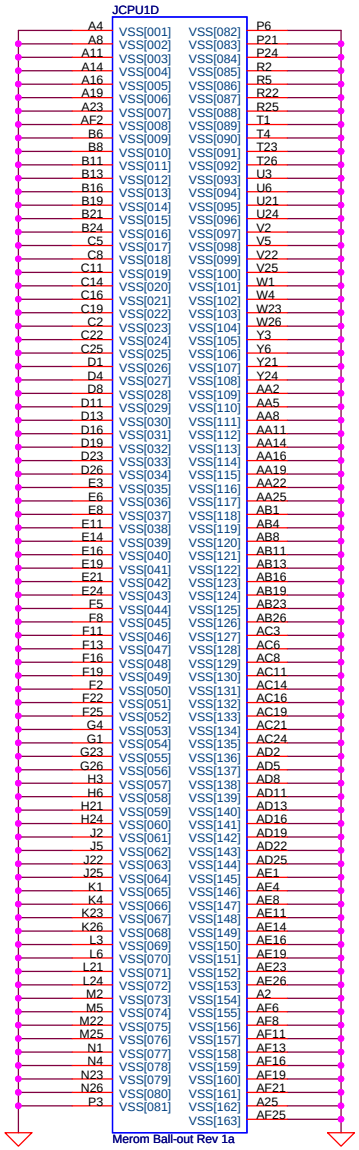
Compal Electronics, Inc.			
Title	Merom (1/3)		
Size B	Document Number KFT00 M/B LA-4821P Schematic		Rev 1.0
Date: Tuesday, March 10, 2009	Sheet 4 of 47		

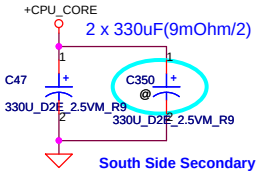


CPU_BSEL	CPU_BSEL2	CPU_BSEL1	CPU_BSEL0
133	0	0	1
166	0	1	1
200	0	1	0

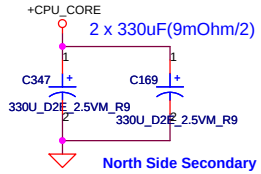
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.	
Title	Merom (2/3)
Size B	Document Number: KFT00 M/B LA-4821P Schematic
Rev	1.0
Date: Tuesday, March 10, 2009	Sheet 5 of 44

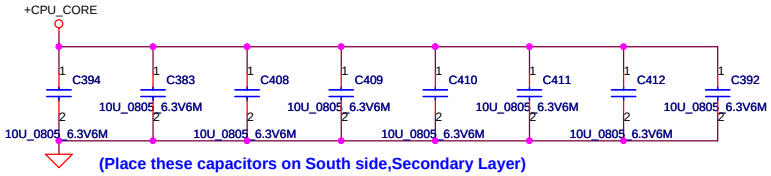




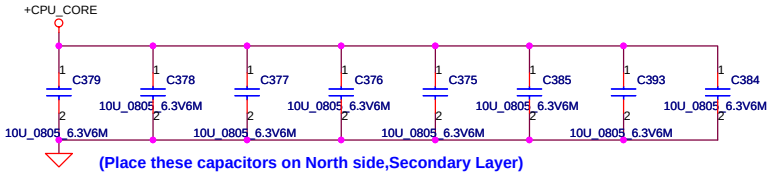
South Side Secondary



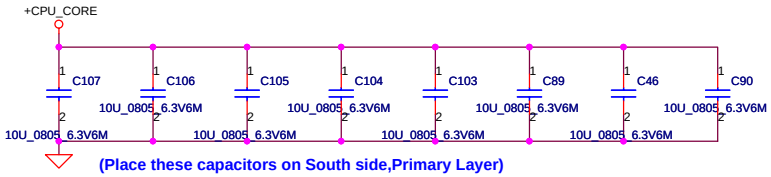
North Side Secondary



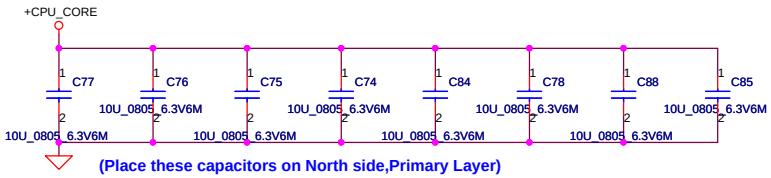
(Place these capacitors on South side,Secondary Layer)



(Place these capacitors on North side,Secondary Layer)

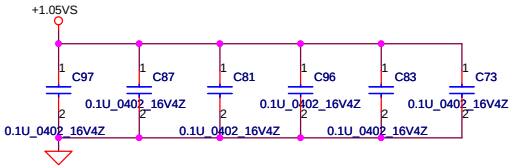


(Place these capacitors on South side,Primary Layer)



(Place these capacitors on North side,Primary Layer)

+CPU-CORE Decoupling	C,uF	ESR, mohm	ESL,nH
SPCAP,Polymer	6X330uF	9m ohm/6	1.8nH/6
MLCC 0805 X5R	32X22uF 32X10uF	3m ohm/32 3m ohm/32	0.6nH/32 0.6nH/32



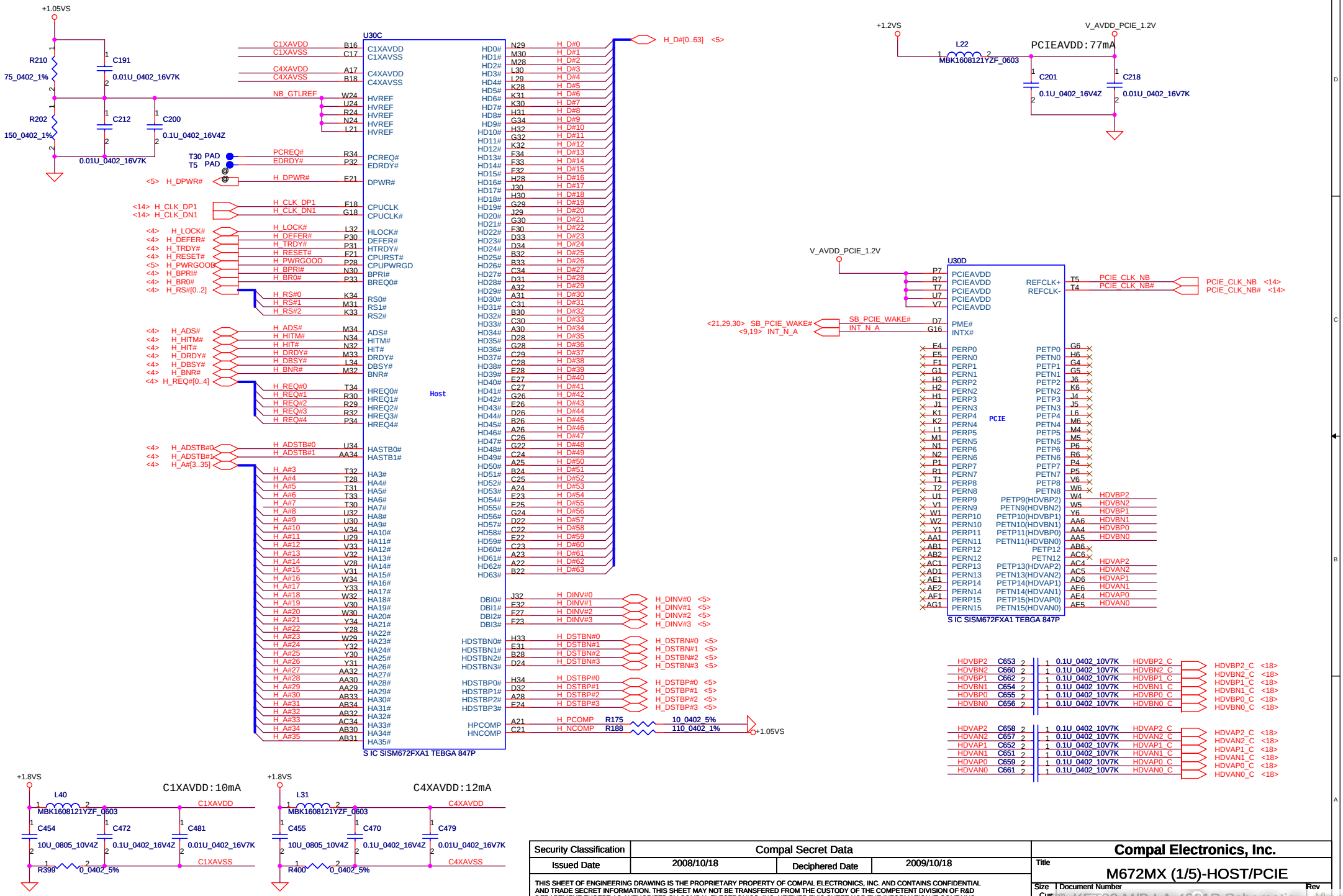
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: Merom (3/3)

Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0

Date: Tuesday, February 10, 2009 Sheet 6 of 47

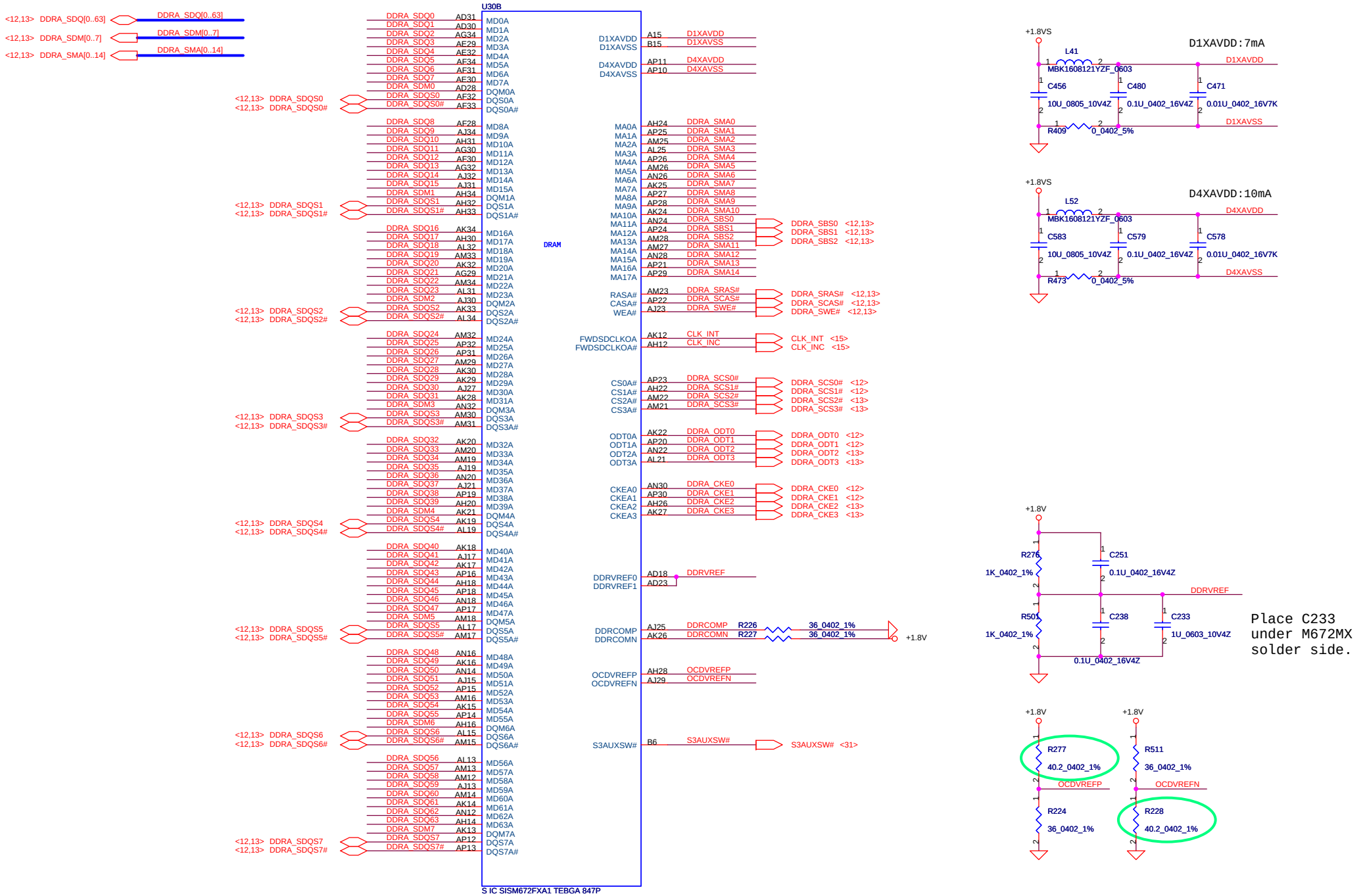


Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: M672MX (1/5)-HOST/PCIE

Size	Document Number	Rev
Custom	KF100 M/B LA-4821P Schematic	1.0
Date: Tuesday, March 10, 2009	Sheet 1 of 47	



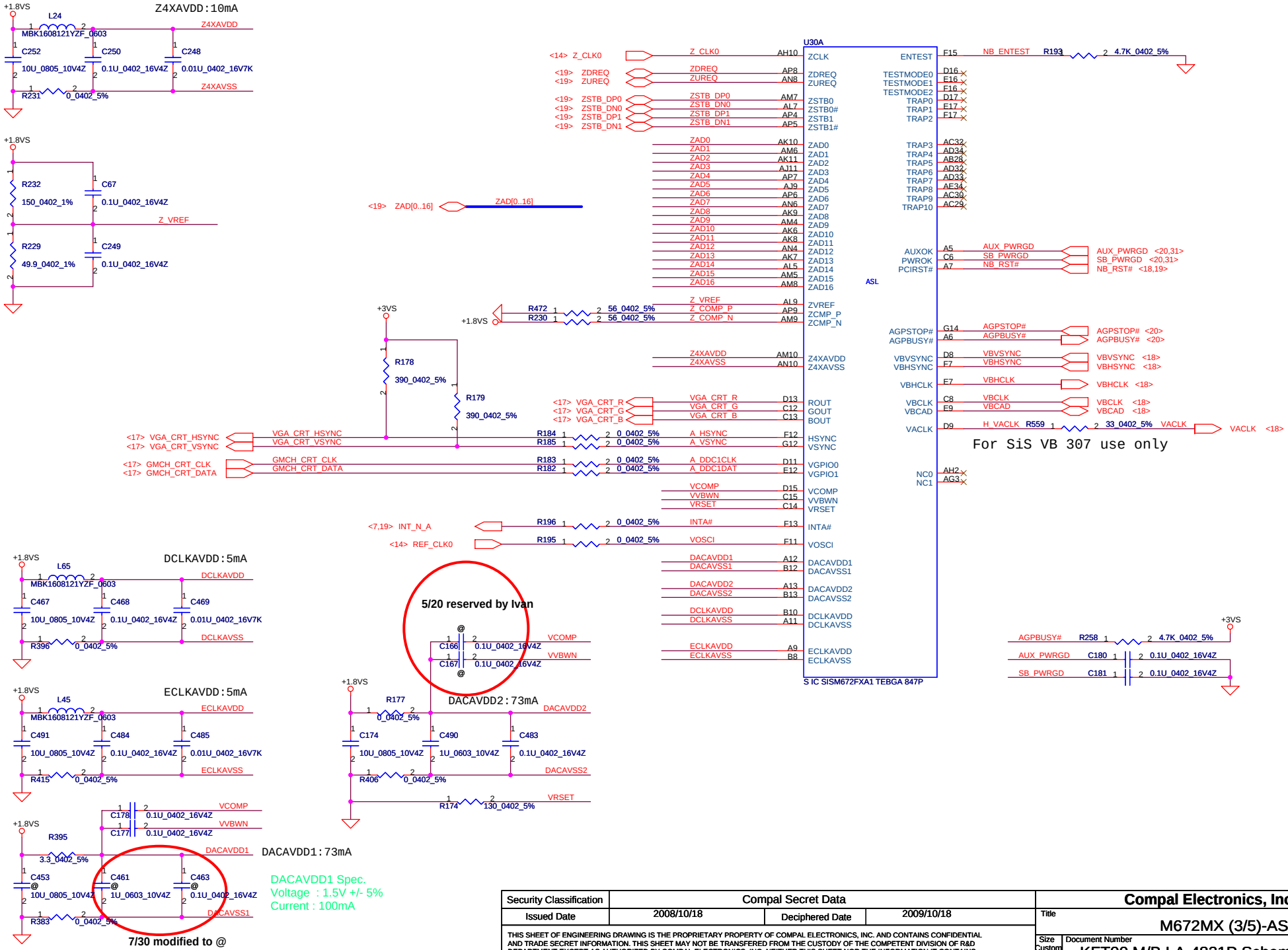
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: M672MX (2/5)-DDR

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 8 of 47

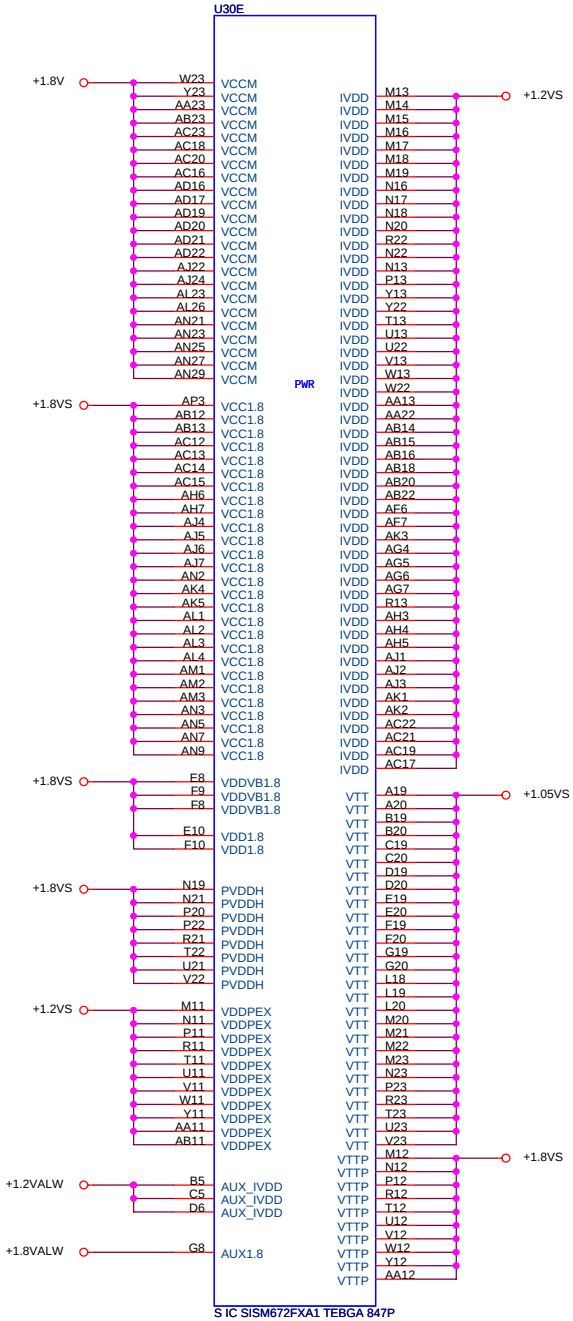


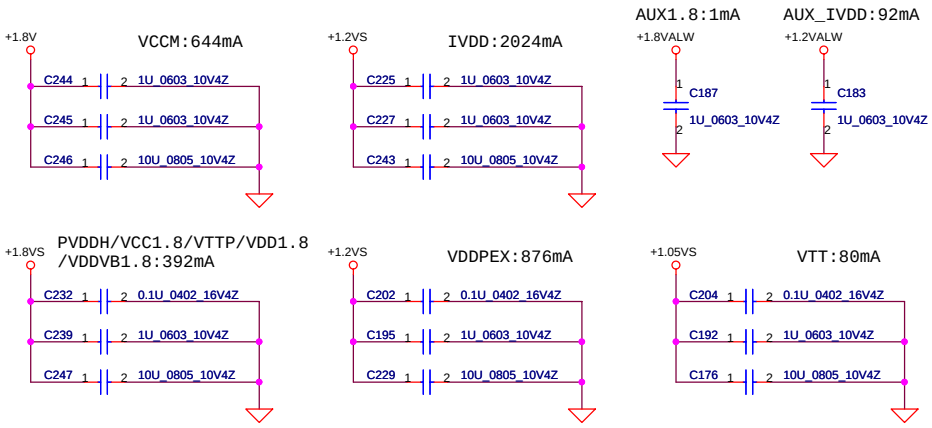
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

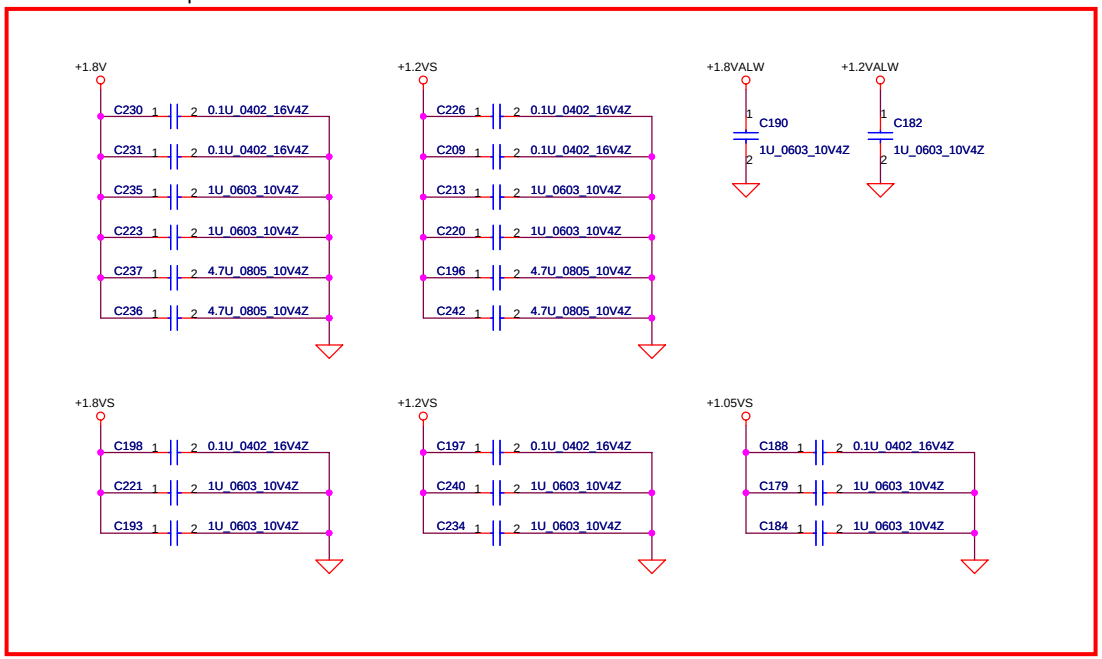
Title: M672MX (3/5)-ASL

Size	Document Number	Rev
Custom	KET00 M/B LA-4821P Schematic	1.0
Date: Tuesday, March 10, 2009	Sheet 8 of 47	





Place these Cap under M672MX solder side.



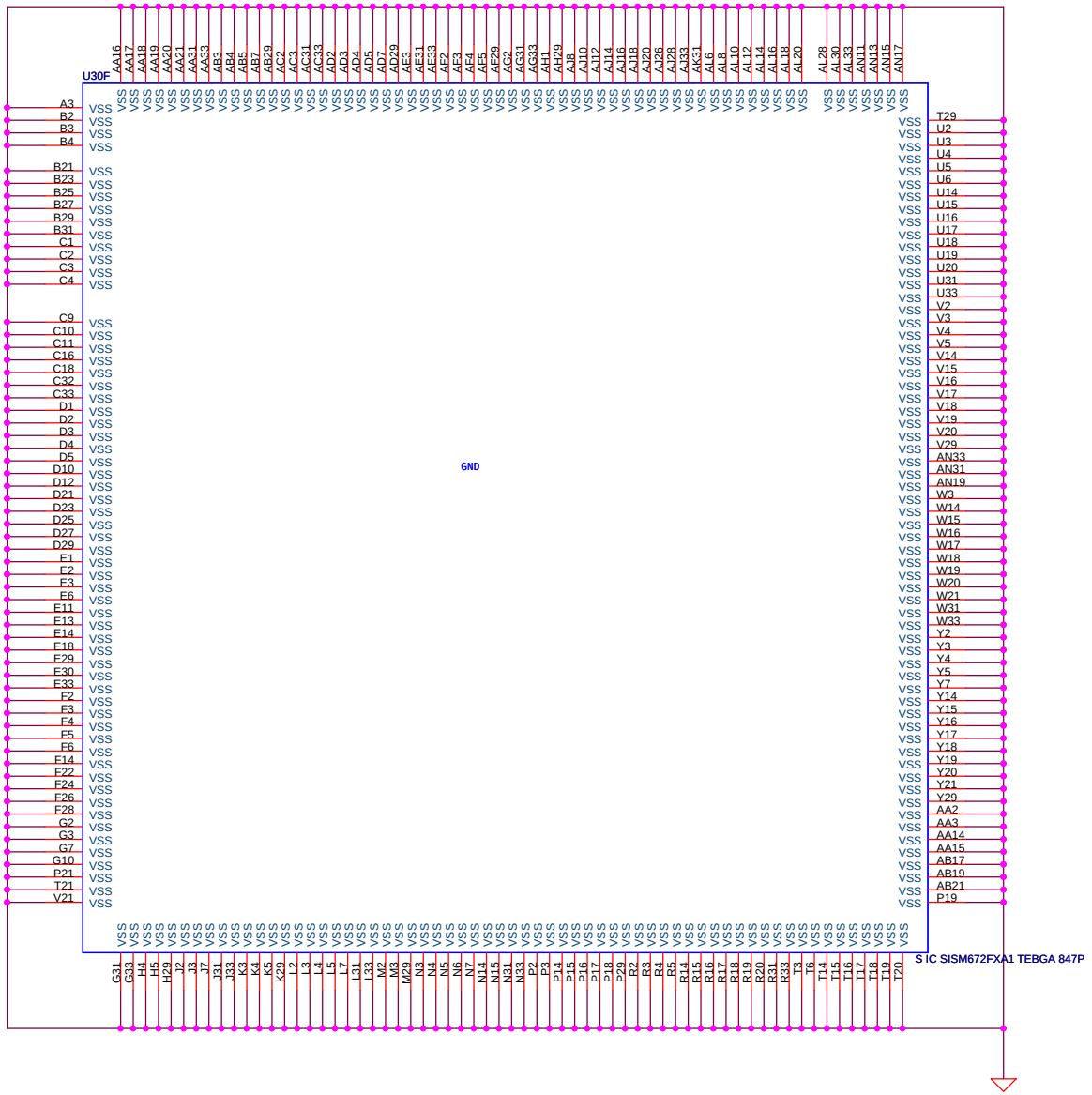
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: M672MX (4/5)-POWER

Size	Document Number	Rev
Custom	KFT00 M/B LA-4821P Schematic	1.0

Date: Tuesday, February 10, 2009 Sheet 10 of 47

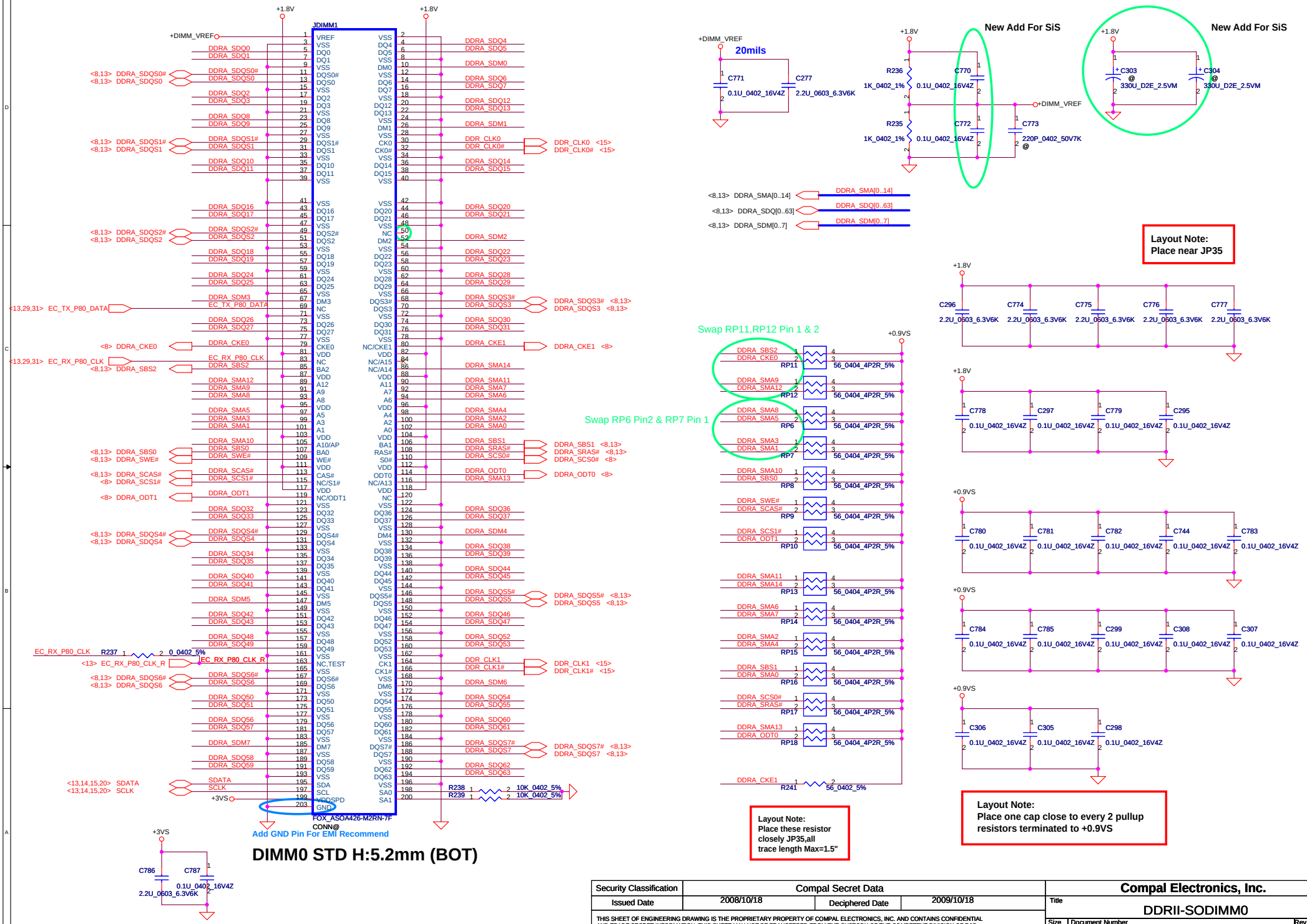


Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: M672MX (5/5)-GND

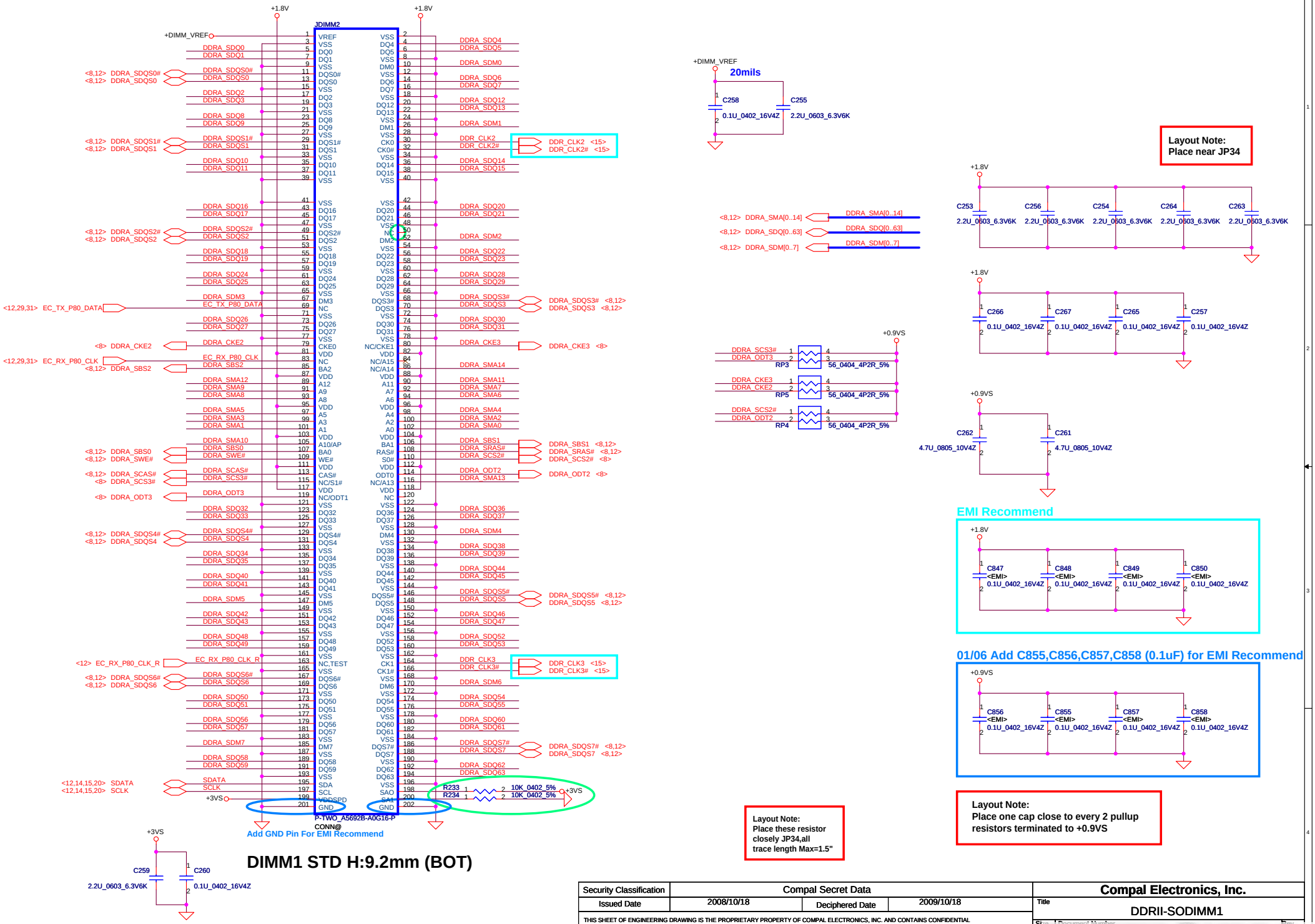
Size	Document Number	Rev
Custom	KF100 M/B LA-4821P Schematic	1.0
Date: Tuesday, February 10, 2009	Sheet 31 of 42	



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title	DDRII-SODIMM0	
Size B	Document Number KFT00 M/B LA-4821P Schematic	Rev 1.0
Date: Tuesday, March 10, 2009	Sheet 12 of 47	



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: DDRII-SODIMM1

Size: B | Document Number: KFT00-M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet: 13 of 47

FSL4	FSL3	FSL2	FSL1	FSL0	CPU MHz	PCIE MHz	PCI MHz	ZCLK MHz
0	1	0	0	1	133	100	33.3	133
0	1	0	1	1	166	100	33.3	133
0	1	0	1	0	200	100	33.3	133

Use SB03904008L & SB000006A00 FootPrint

Remove R43 R66 R529 R527 and use PR39
Michael 2008/5/30

Reference schematic use 1206

ICS9LPR600

ICS9LPR600BGLF-T_TSSOP56

Pin 26 need BIOS to set disable,
for saving power & good EMI

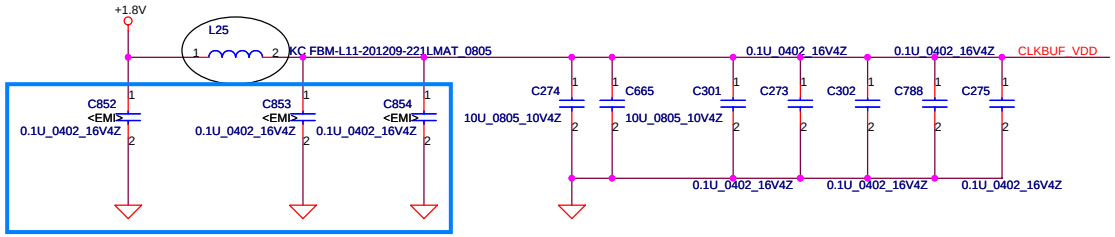
Replace Package from SOT23 to SOT363-6
Michael 2008/5/30

Security Classification	Compal Secret Data
Issued Date	2008/10/18
Deciphered Date	2009/10/18

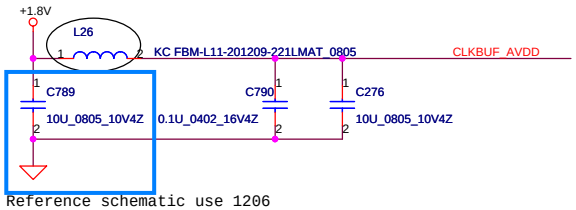
Title: Clock Generator ICS9LPR600C

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 14 of 47



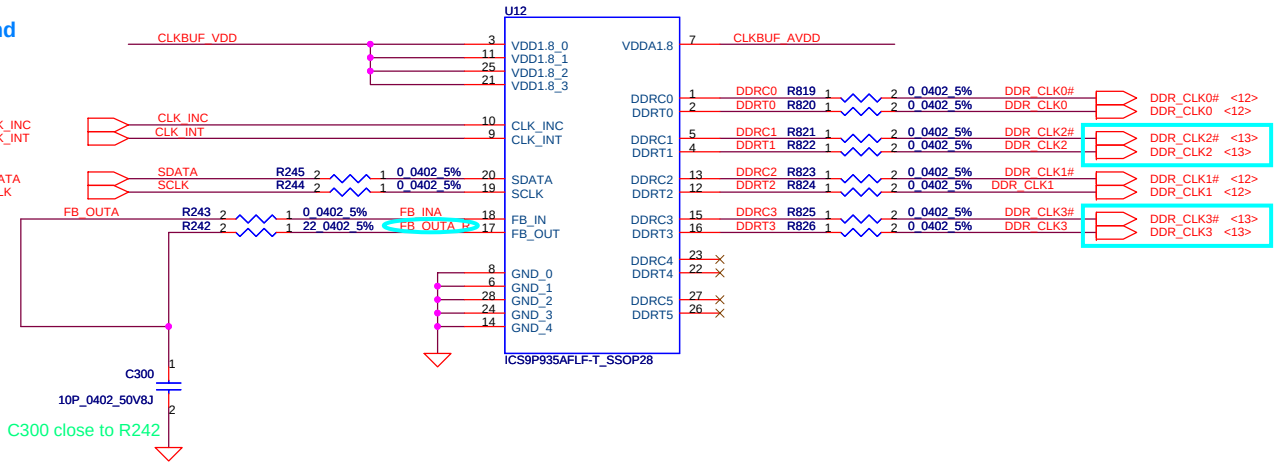
01/06 Add C852,C853,C854(0.1uF) for EMI Recommend



Reference schematic use 1206

01/10 Change C789 from @ to mount for EMI Recommend

Horizontal rotate



C300 close to R242

Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

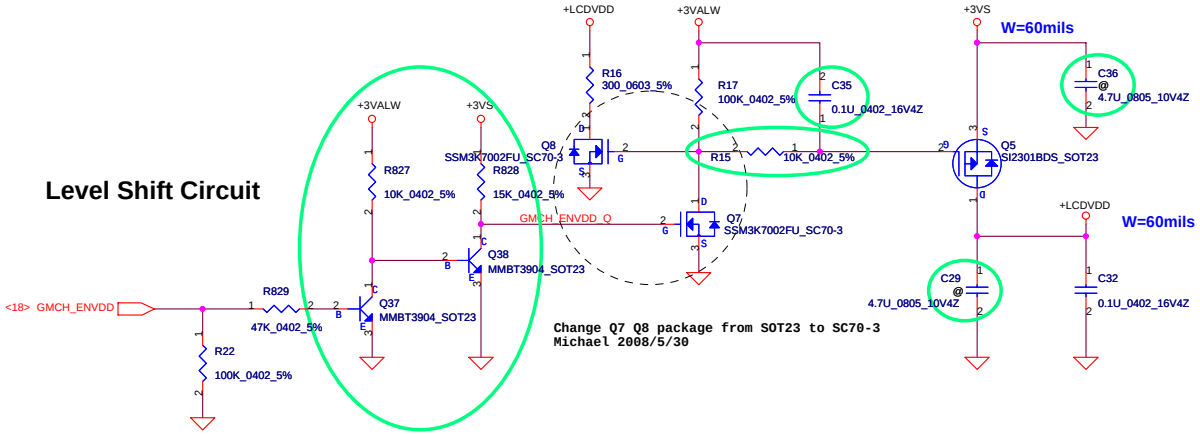
Title: Clock Buffer ICS9P935

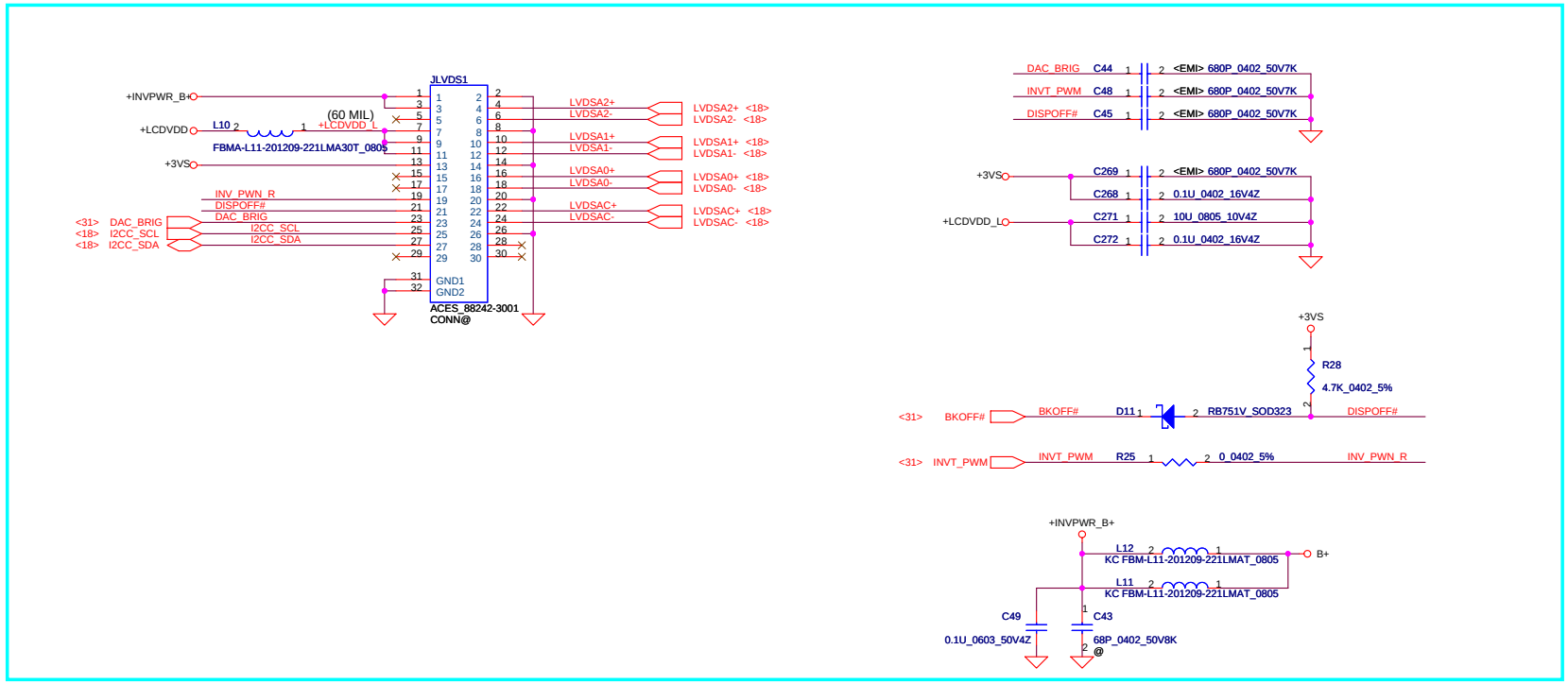
Size: Custor | Document Number: KF100 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 15 of 42

LCD POWER CIRCUIT

Level Shift Circuit





Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

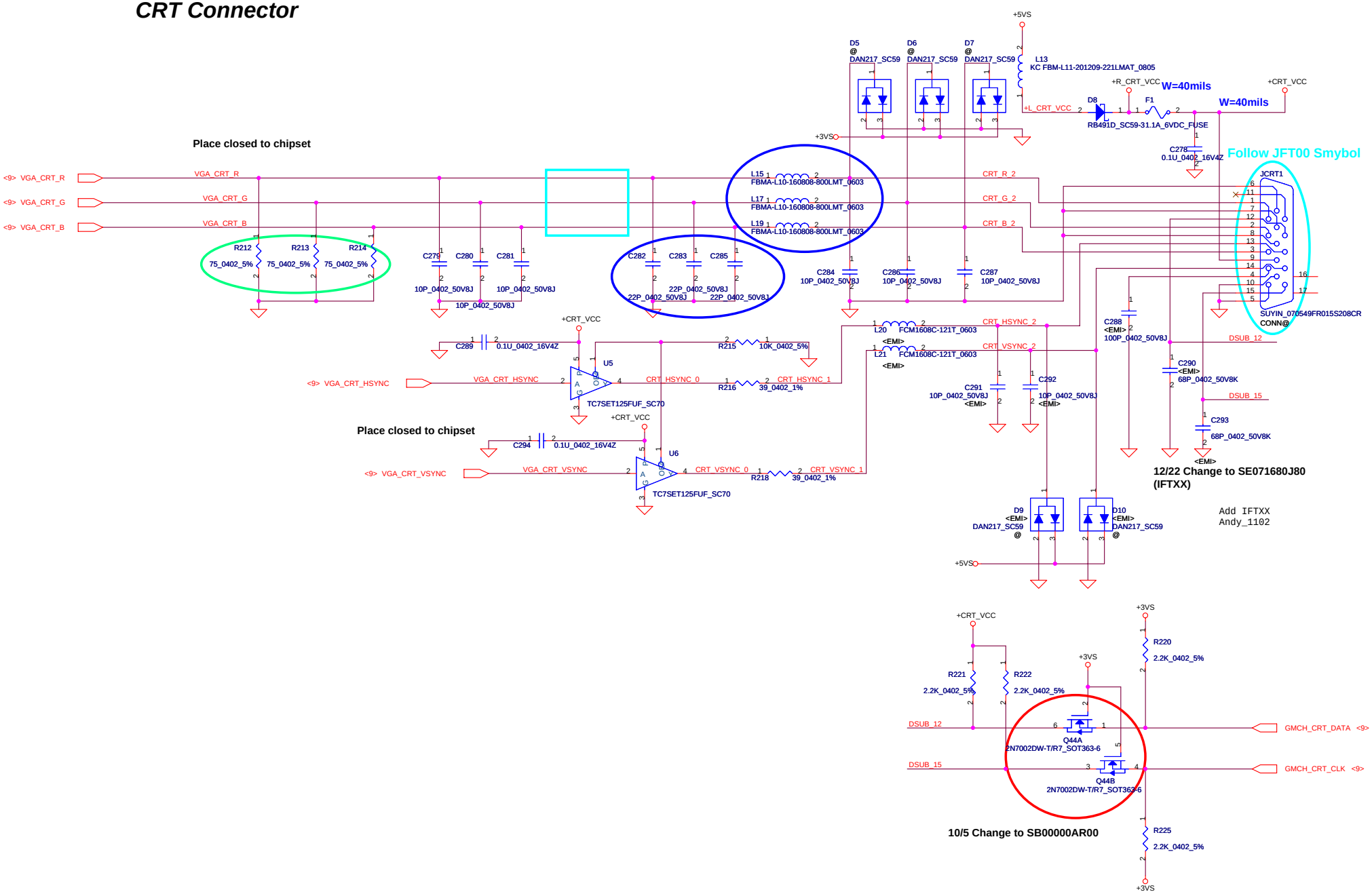
Compal Electronics, Inc.

Title: LVDS & DVI Connector

Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0

Date: Tuesday, March 10, 2009 | Sheet 16 of 47

CRT Connector



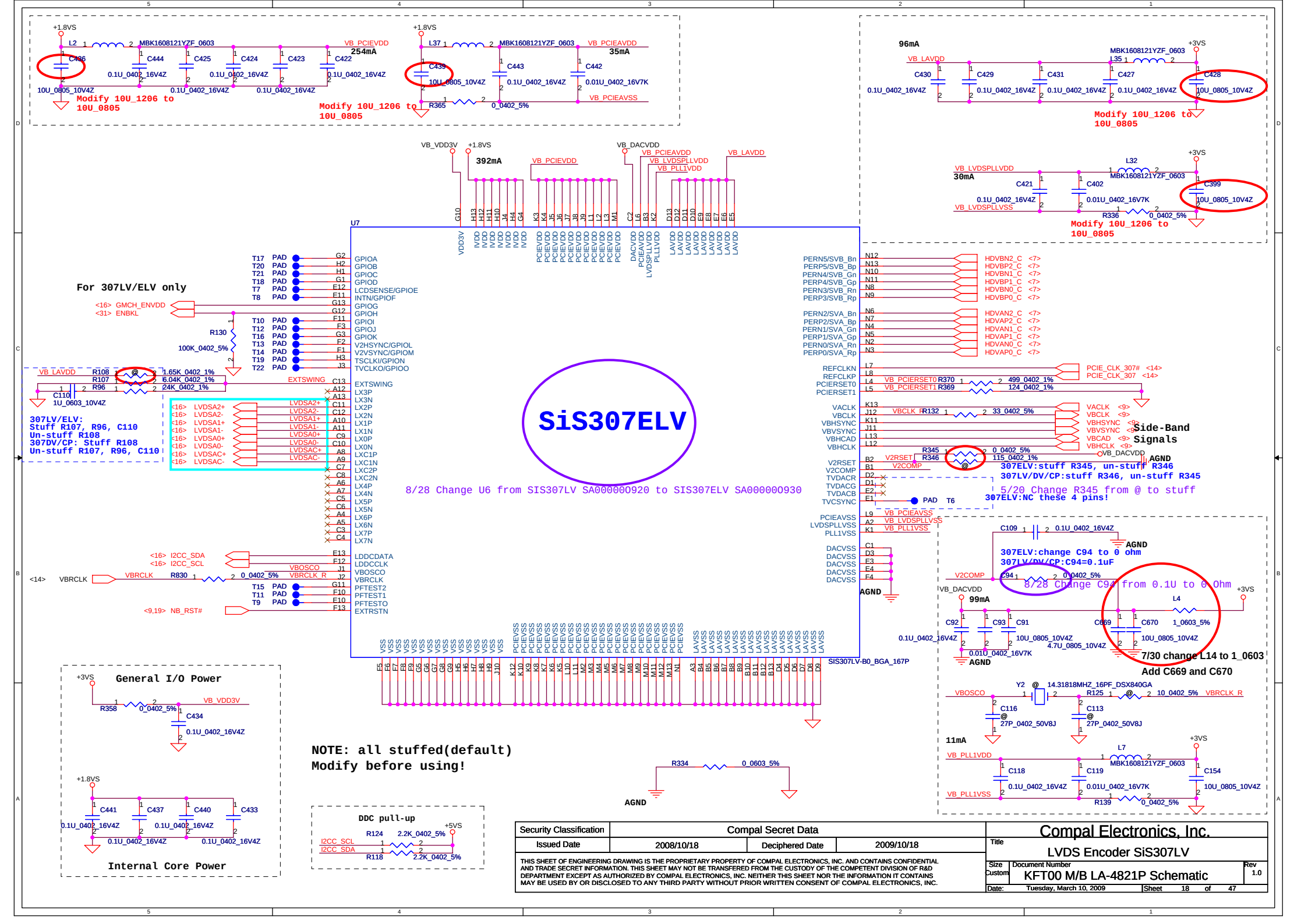
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: CRT & TV-OUT Connector

Size: B | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet: 17 of 47



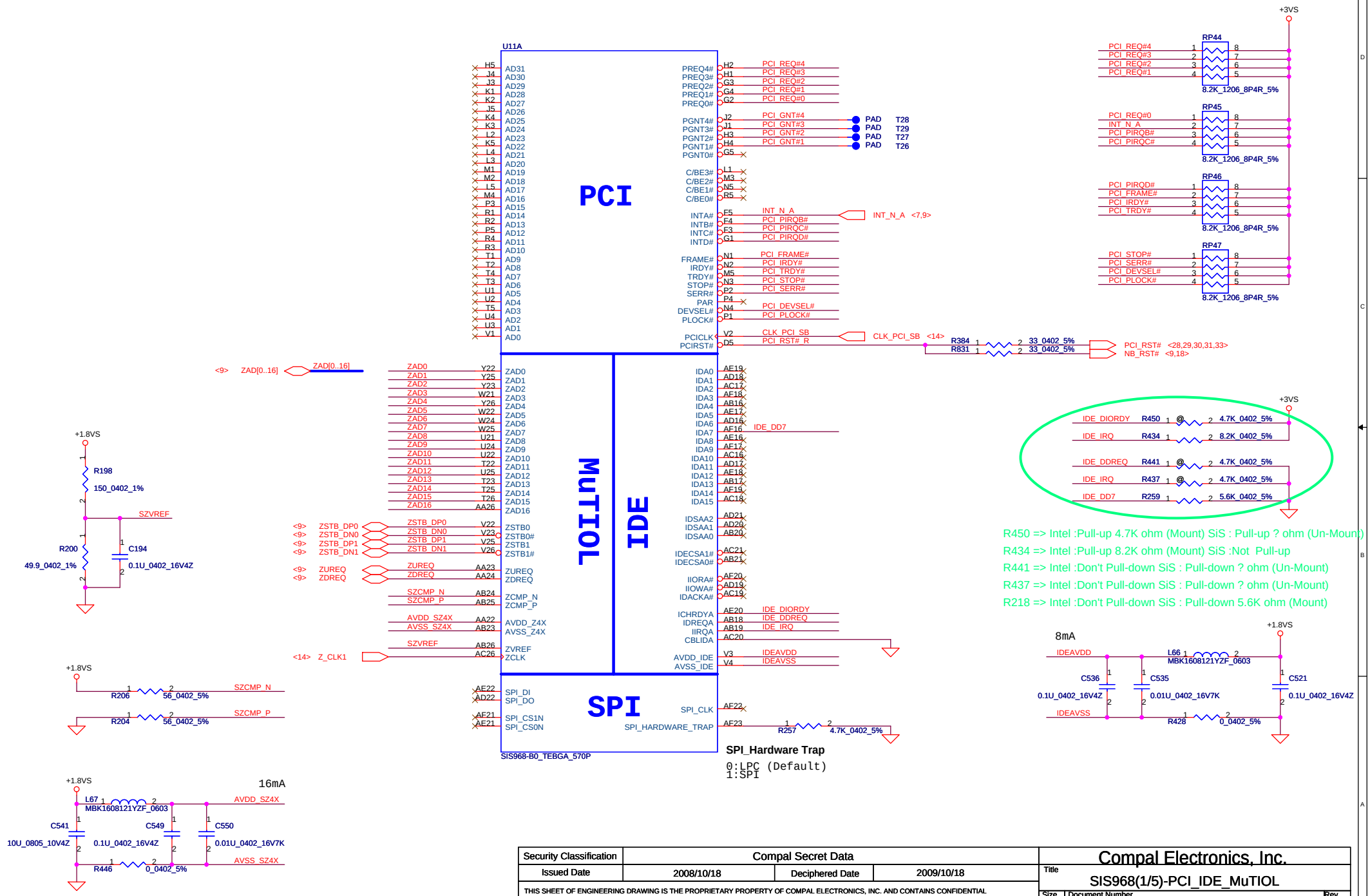
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: LVDS Encoder SiS307LV

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 18 of 47



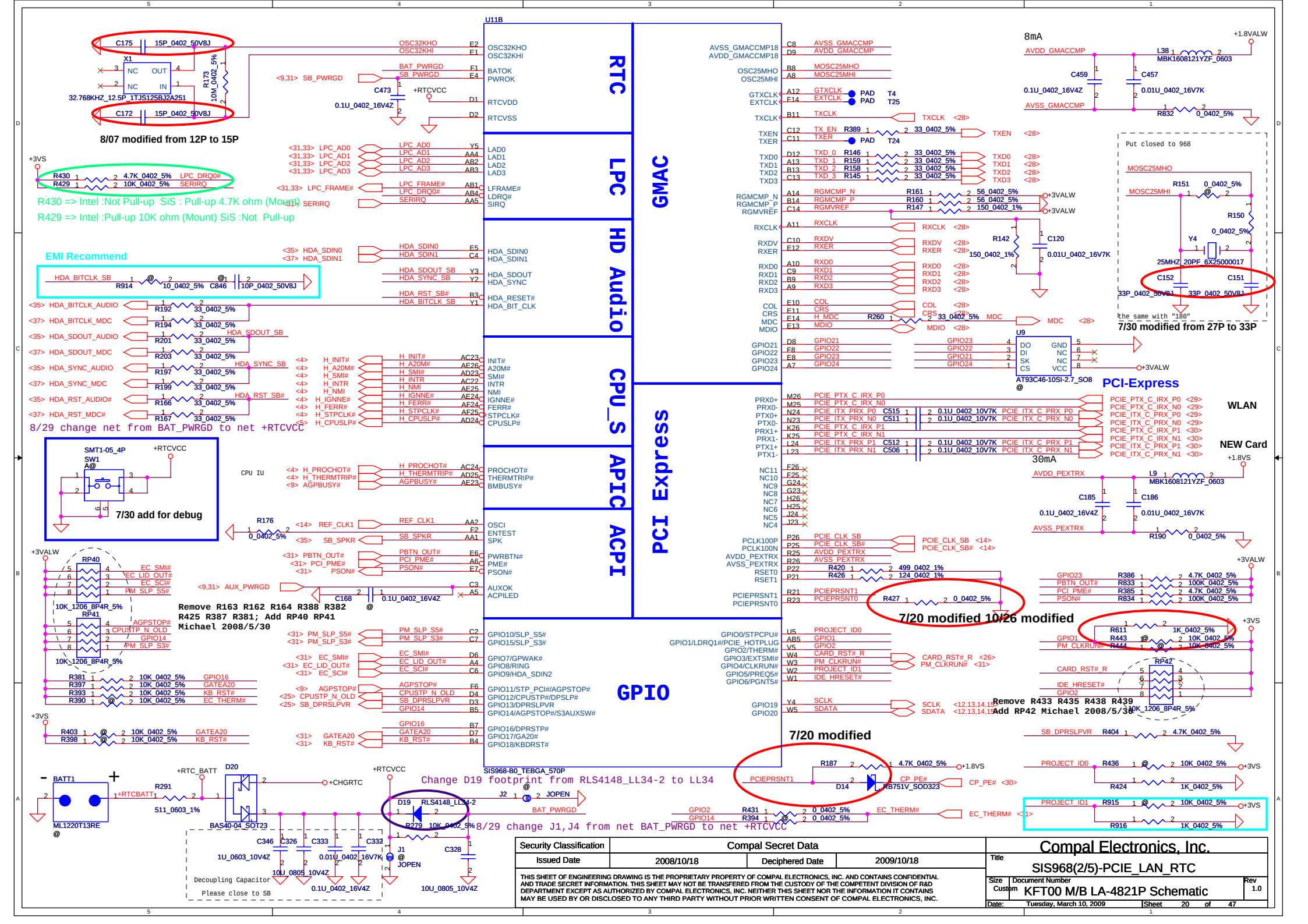
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: SIS968(1/5)-PCI_IDE_MuTIOL

Size: Custom | Document Number: KF100 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 19 of 47



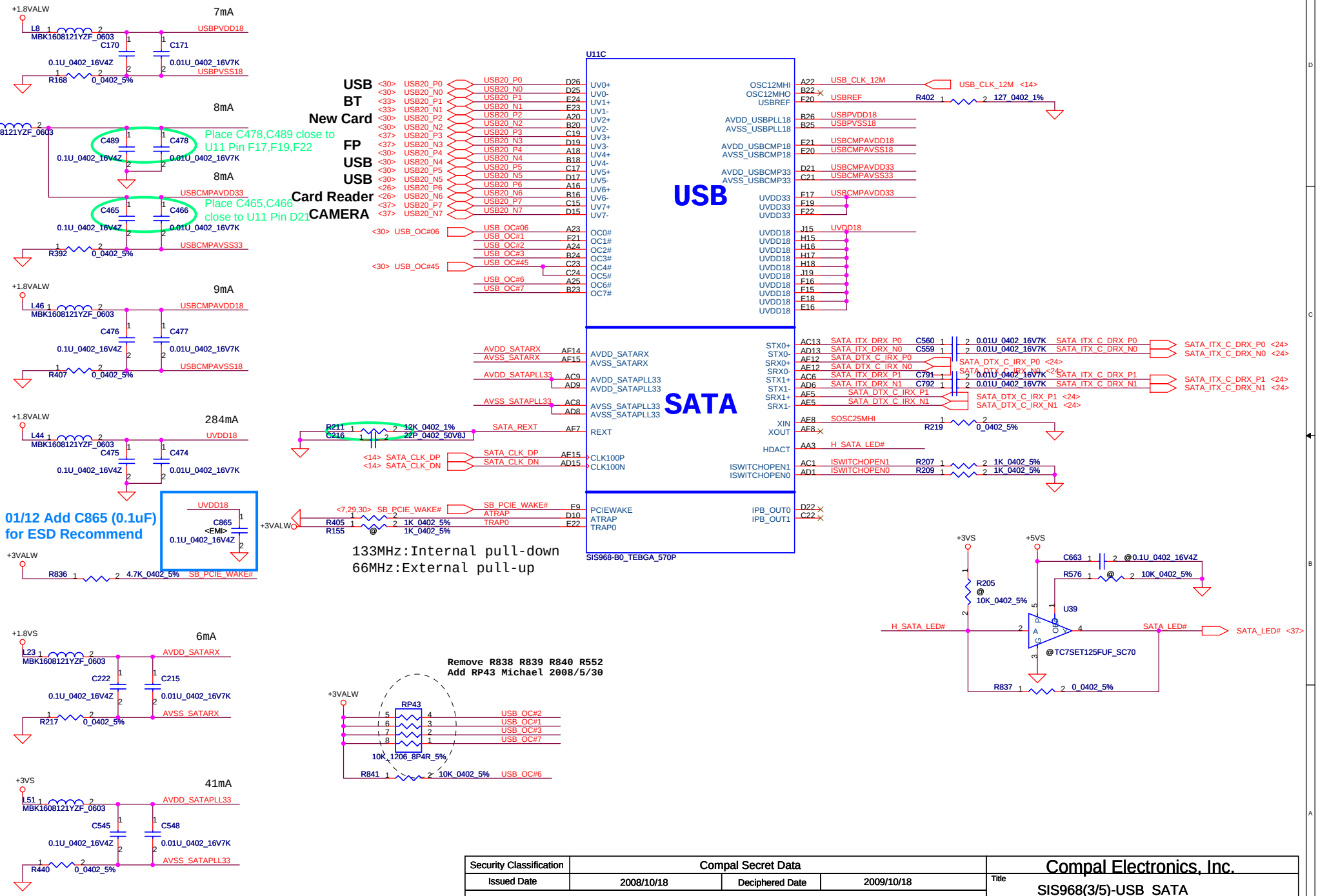
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: SIS968(2/5)-PCIE_LAN_RTC

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 20 of 47

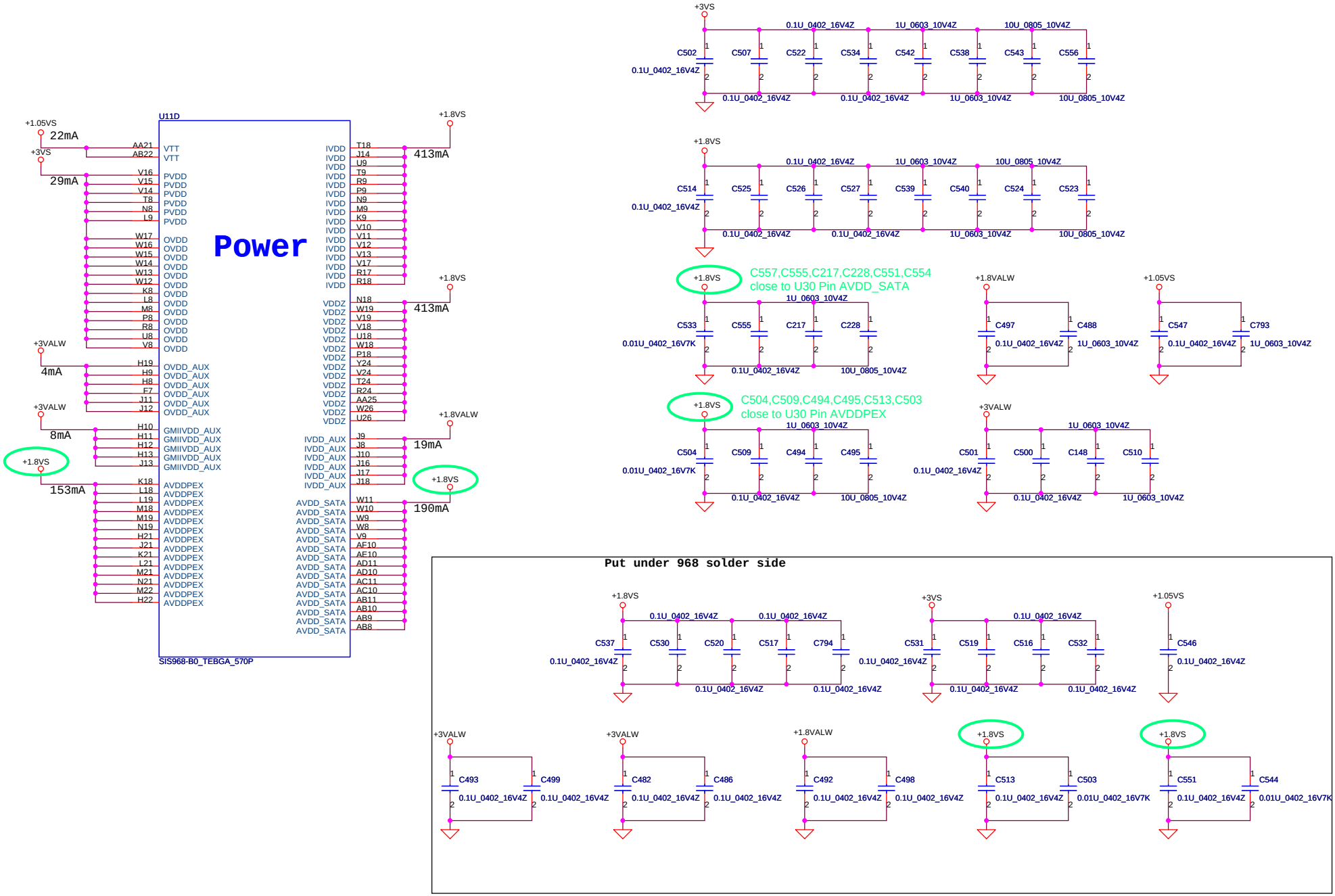


Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: SIS968(3/5)-USB_SATA

Size	Document Number	Rev
Custom	KFT00 M/B LA-4821P Schematic	1.0
Date: Tuesday, March 10, 2009	Sheet 21 of 47	



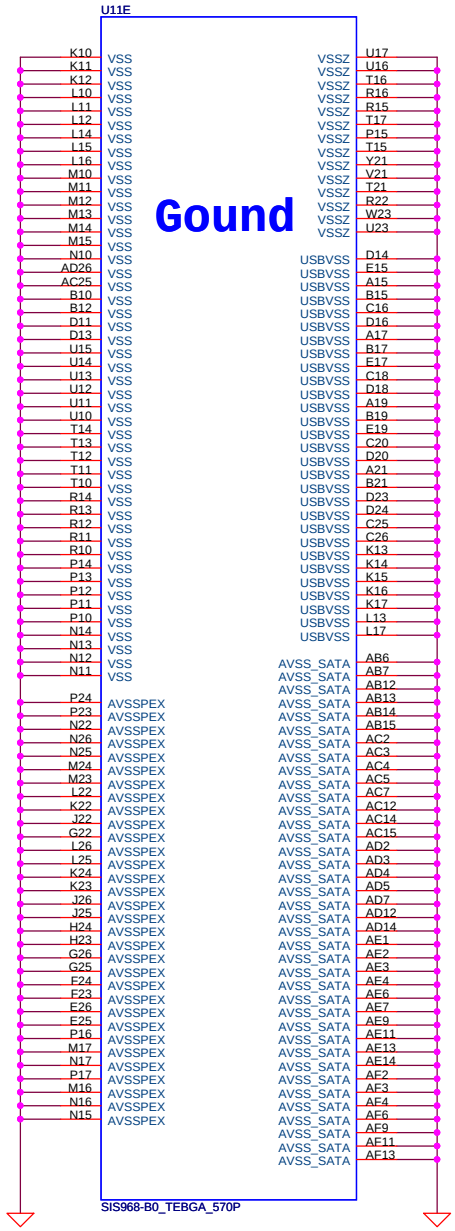
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: SIS968(4/5)-POWER

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, February 10, 2009 | Sheet 22 of 47



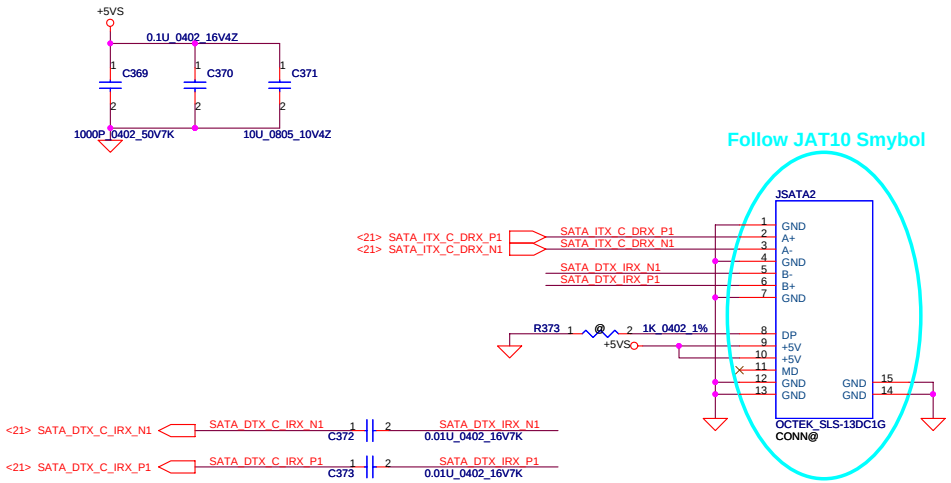
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: SIS968(5/5)-GND

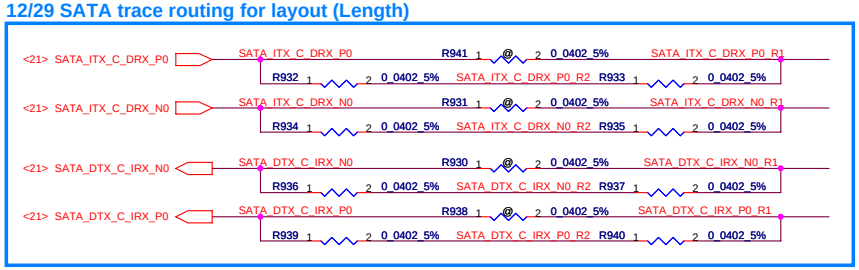
Size	Document Number	Rev
Custom	KFT00 M/B LA-4821P Schematic	1.0
Date: Tuesday, March 10, 2009	Sheet 23 of 47	

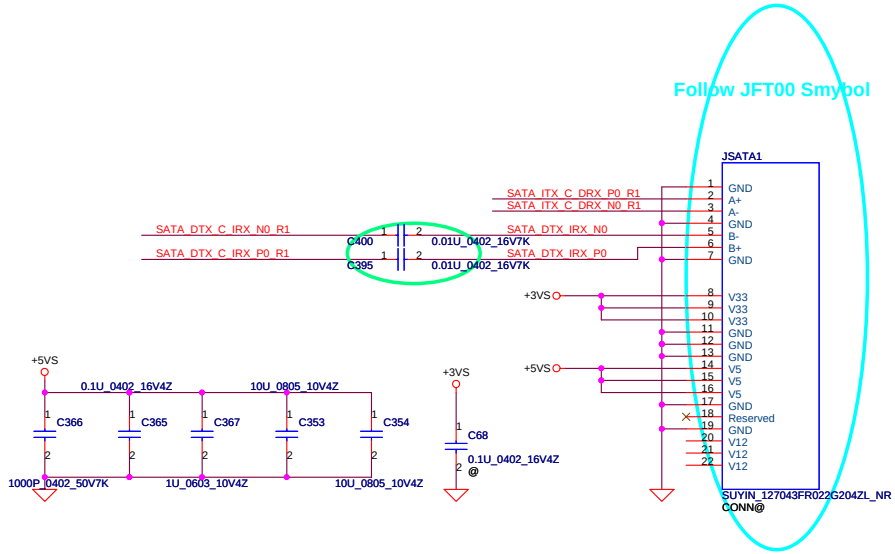
SATA ODD Conn.

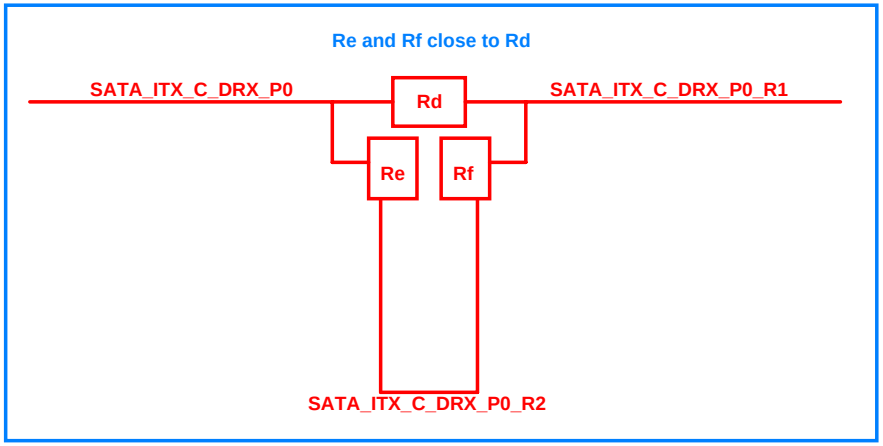


SATA HDD Conn.

12/29 SATA trace routing for layout (Length)







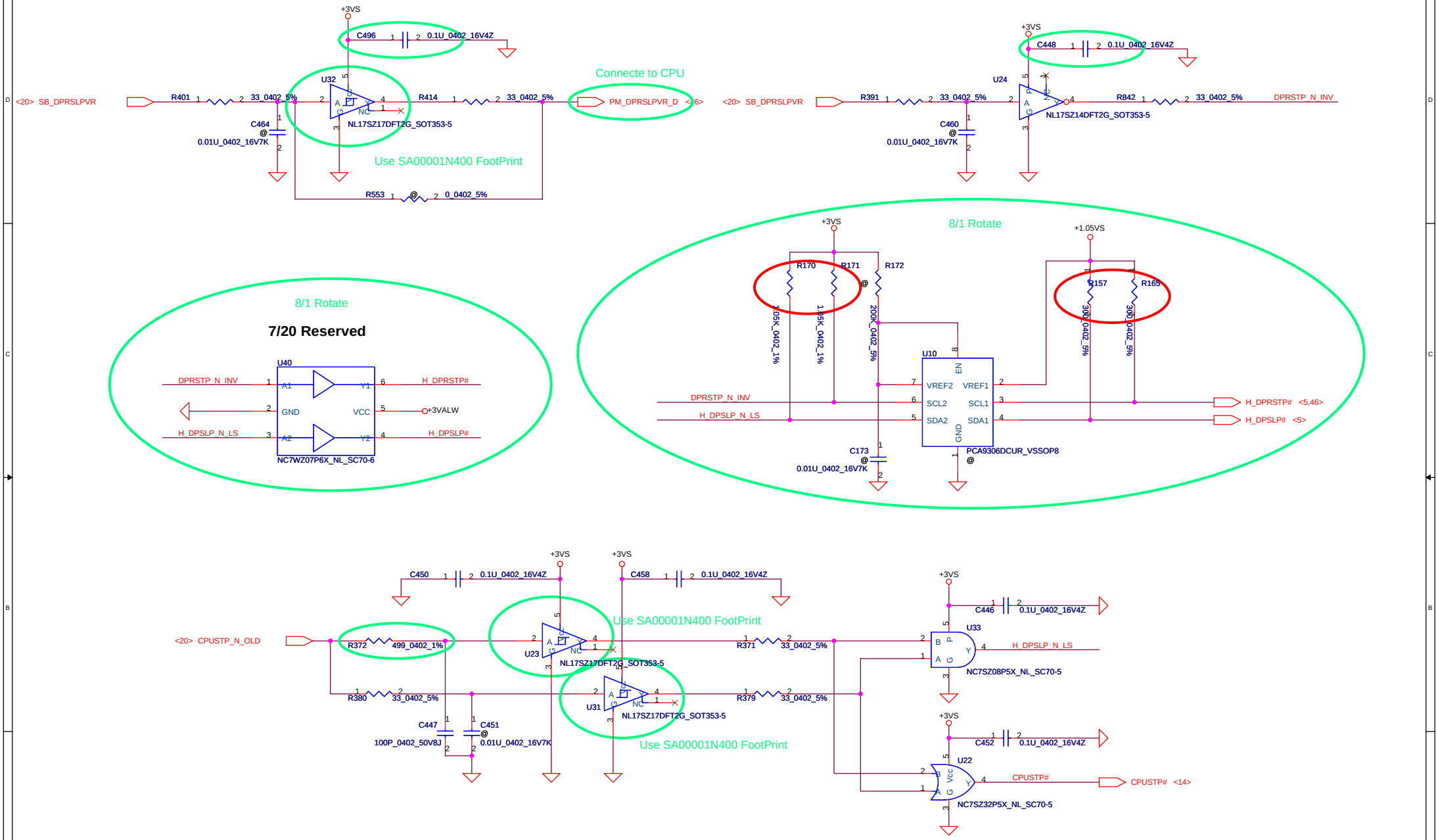
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: HDD & ODD Connector

Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0

Date: Tuesday, March 10, 2009 | Sheet 24 of 47



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: Other

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

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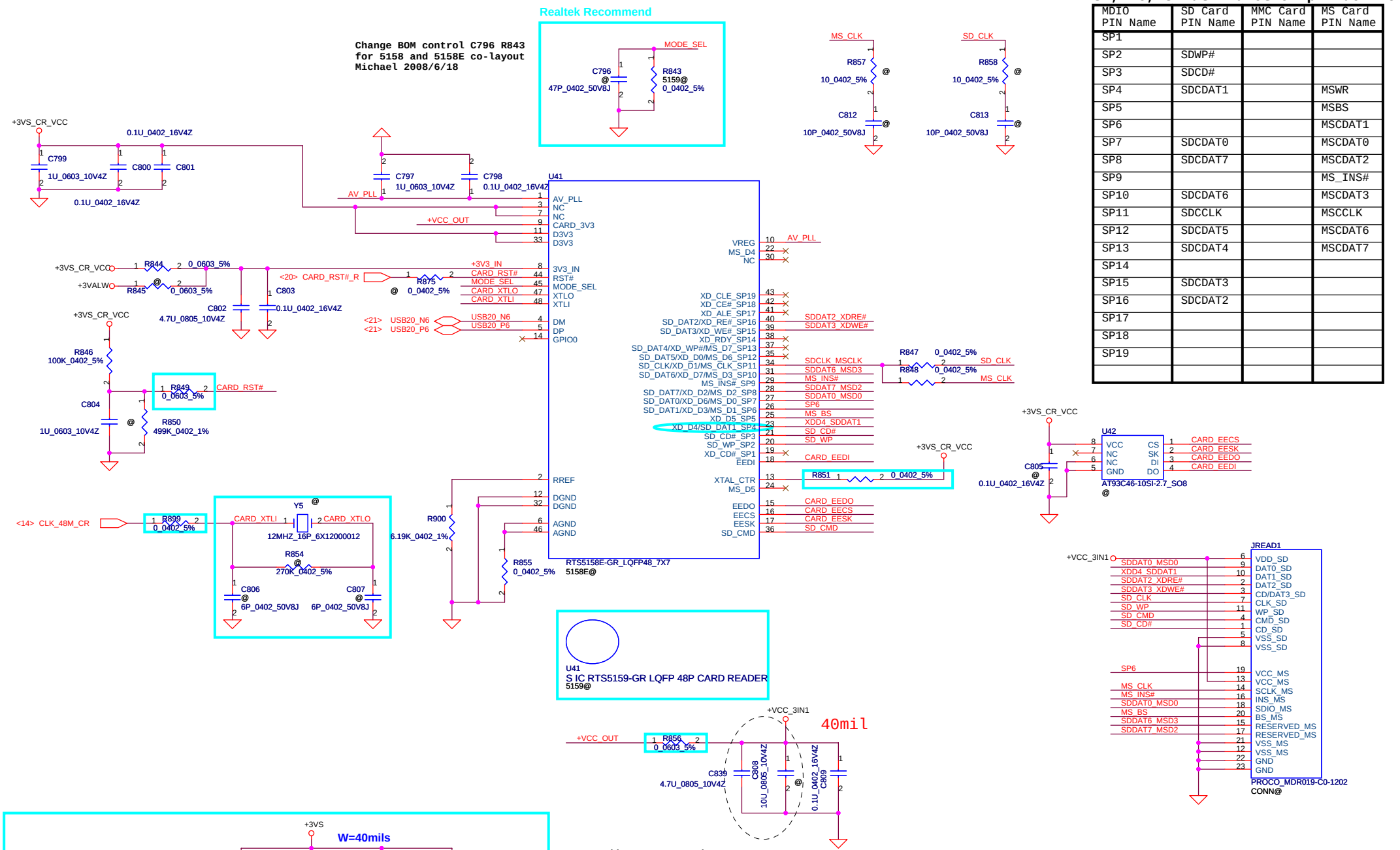
SD,MMC,MS muti-function pin define

MDIO PIN Name	SD Card PIN Name	MMC Card PIN Name	MS Card PIN Name
SP1			
SP2	SDWP#		
SP3	SDCD#		
SP4	SDCDAT1		MSWR
SP5			MSBS
SP6			MSCDAT1
SP7	SDCDAT0		MSCDAT0
SP8	SDCDAT7		MSCDAT2
SP9			MS_INS#
SP10	SDCDAT6		MSCDAT3
SP11	SDCCLK		MSCCLK
SP12	SDCDAT5		MSCDAT6
SP13	SDCDAT4		MSCDAT7
SP14			
SP15	SDCDAT3		
SP16	SDCDAT2		
SP17			
SP18			
SP19			

Realtek Recommend

Change BOM control C796 R843
for 5158 and 5158E co-layout
Michael 2008/6/18



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: RTS5158E Cardreader

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 26 of 47

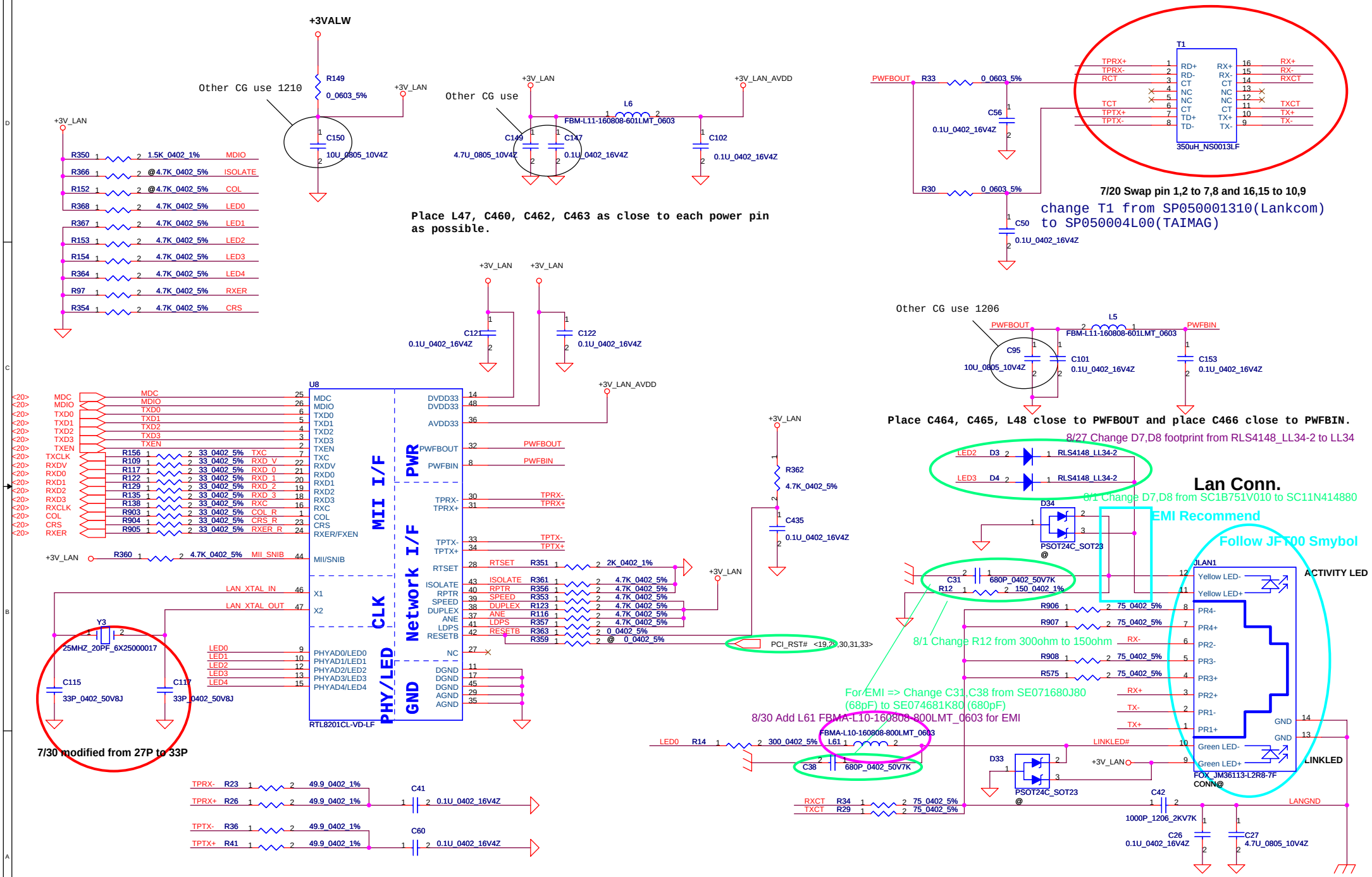
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: None

Size: | Document Number: KFT00 M/B LA-4321P Schematic | Rev: 1.0

Custom | Date: Tuesday, February 10, 2009 | Sheet 27 of 47



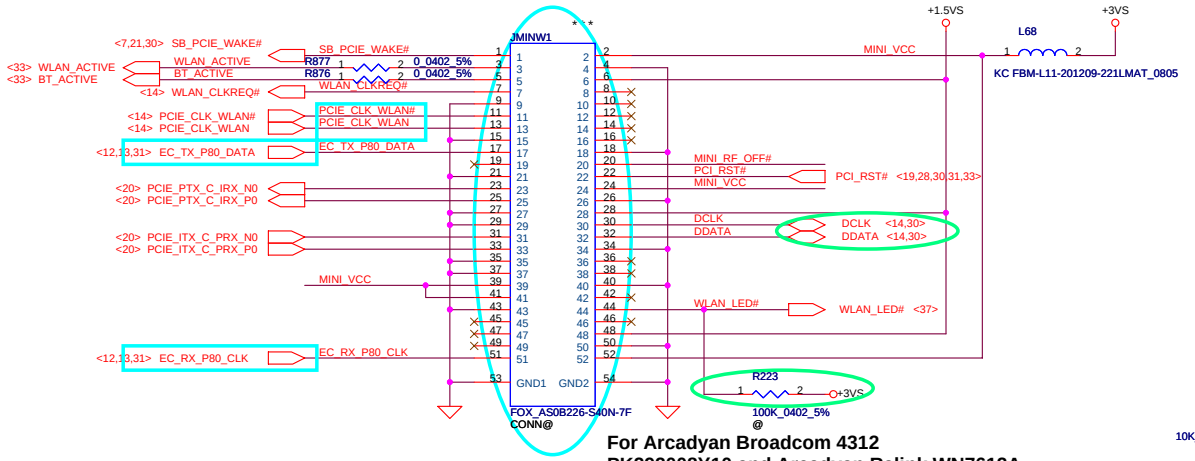
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

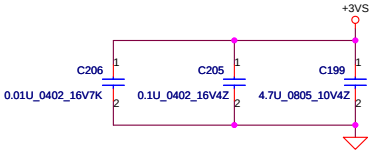
Title	LAN RTL8201CL	
Size: Custom	Document Number: KFT00 M/B LA-4821P Schematic	Rev: 1.0
Date: Tuesday, March 10, 2009	Sheet 28 of 47	

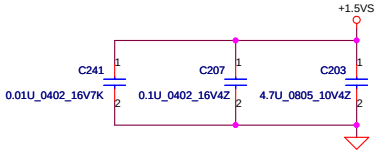
Mini-Express Card for WLAN

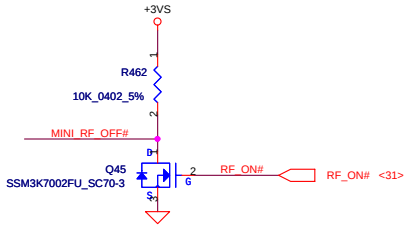
Follow JFT00 Smybol



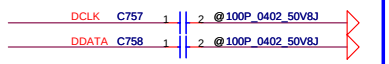
For Arcadyan Broadcom 4312
PK292008Y10 and Arcadyan Ralink WN7612A
PK29200BN00 WLAN pull +3VS







Please place these caps between JMIN1 and JMIN2



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

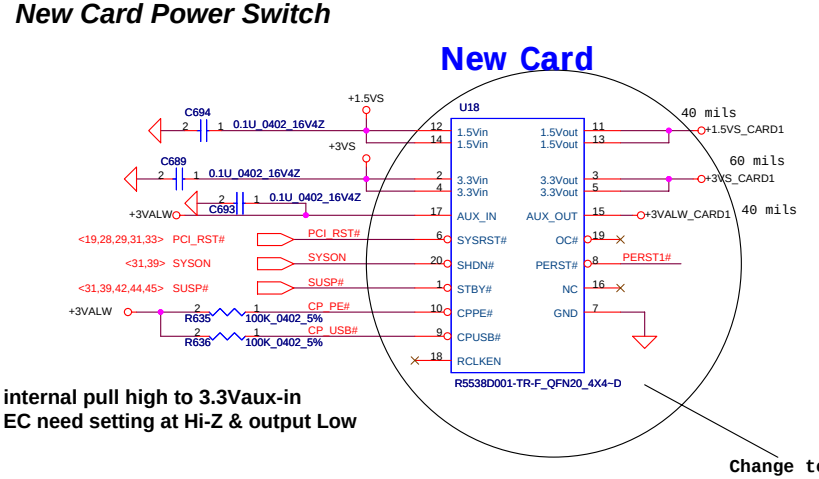
Title: Mini-Card/Kill SW

Size | Document Number | Rev 1.0

KFT00-M/B LA-4821P Schematic

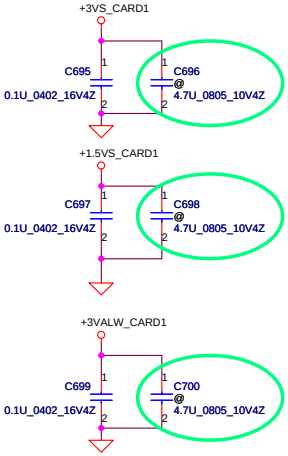
Date: Tuesday, March 10, 2009 | Sheet 29 of 47

New Card Power Switch

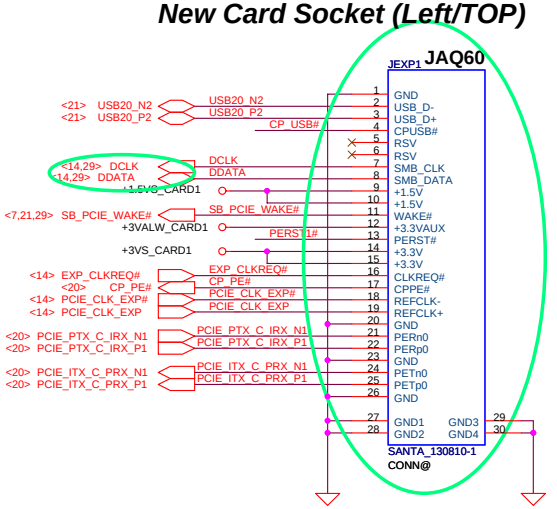


internal pull high to 3.3Vaux-in
EC need setting at Hi-Z & output Low

Change to GMT PartNumber

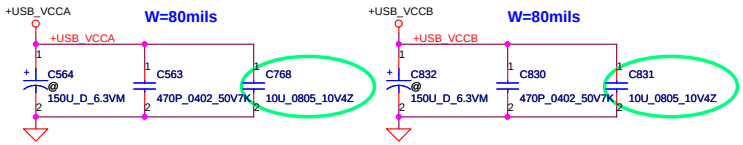


New Card Socket (Left/TOP)

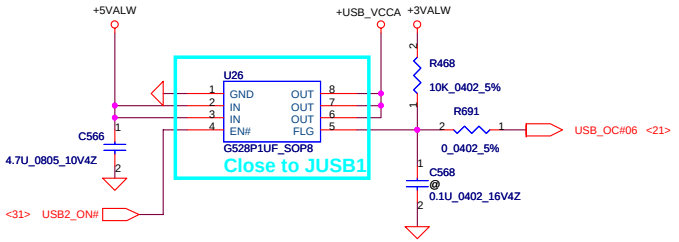


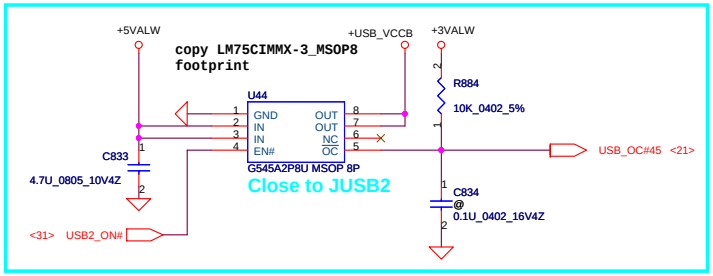
Update FootPrint from SANTA_13181060-5_26P-T to SANTA_130810-1_26P

USB Connector

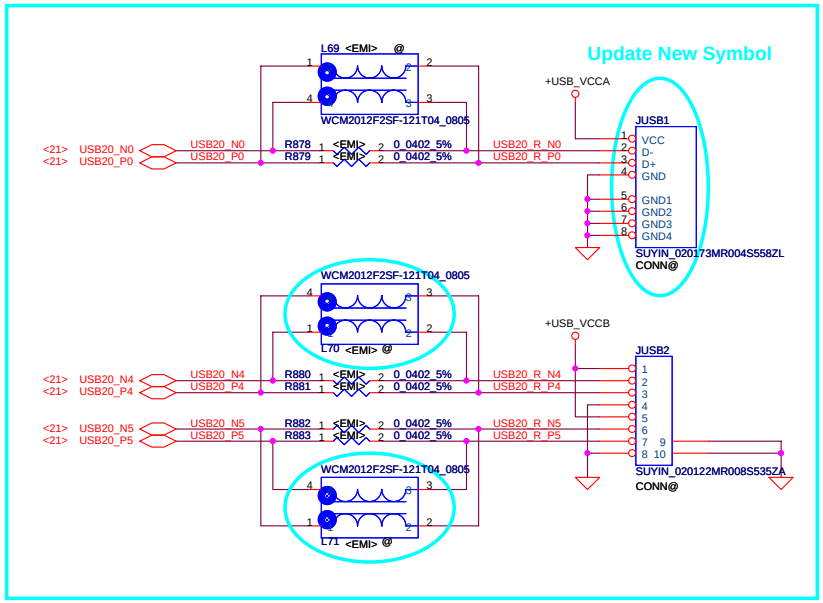


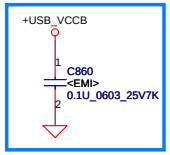
Change SA005280110 SOP8



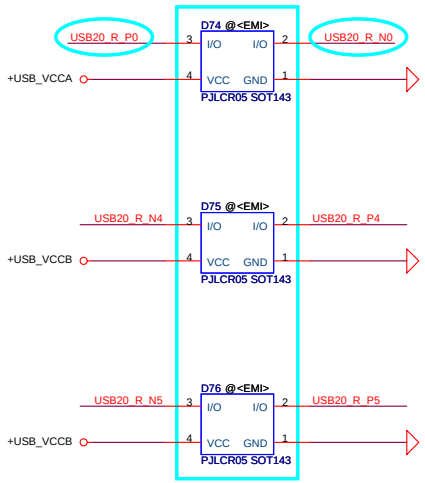


11/29 change this symbol's footprint as ADT7421ARMZ-REEL_MSOP8





01/06 Add C860 for ESD Recommend



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: NewCard & USB Connector

Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0

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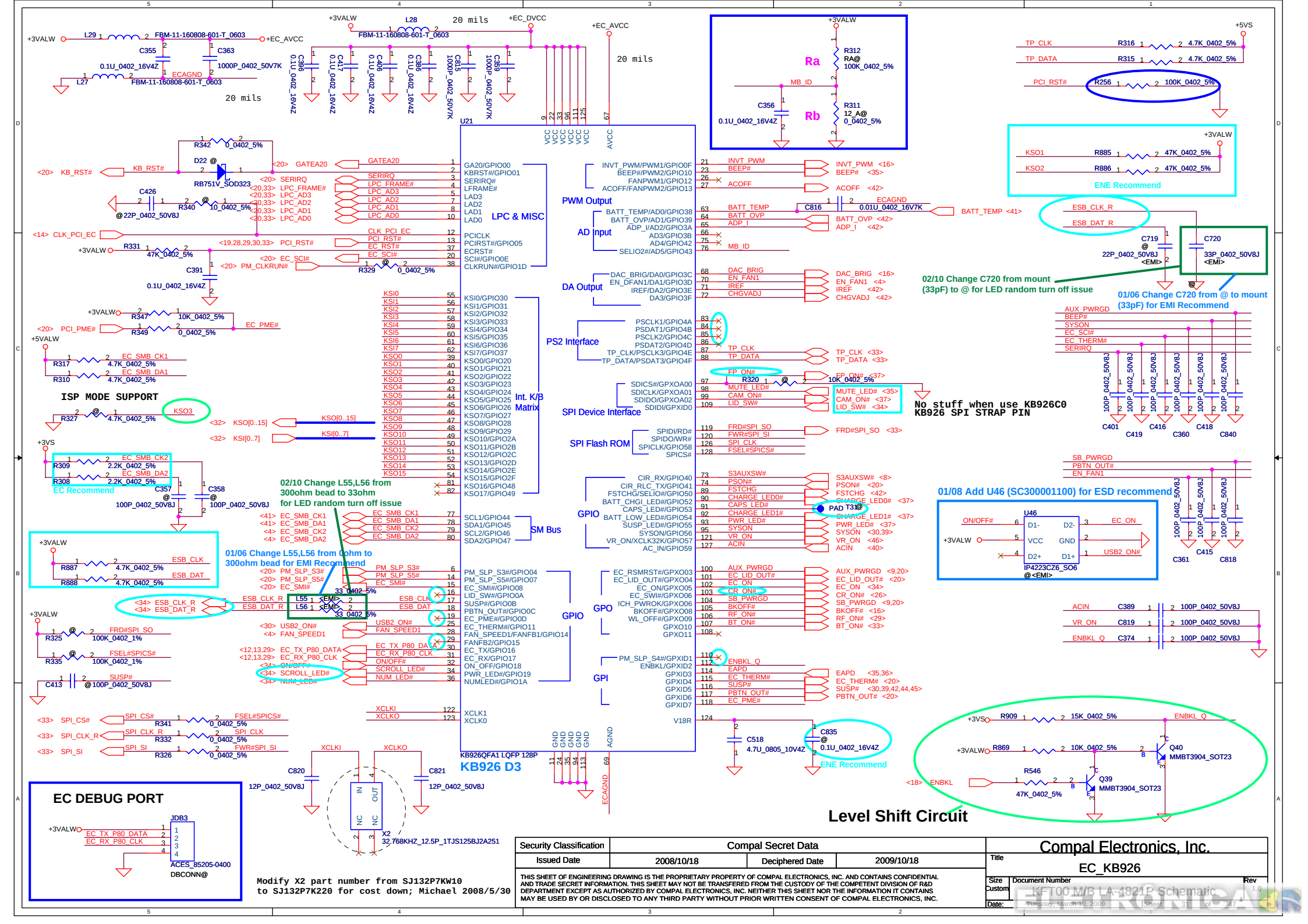

Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

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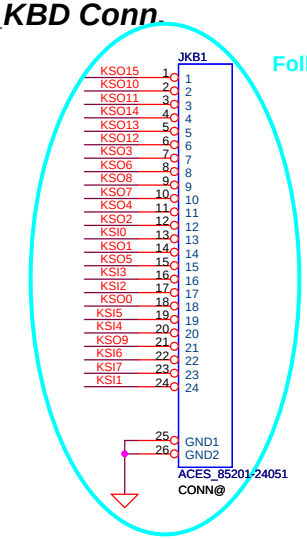
Compal Electronics, Inc.

Title: EC_KB926

Size: Custom | Document Number: KF100 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 31 of 47

INT_KBD Conn.

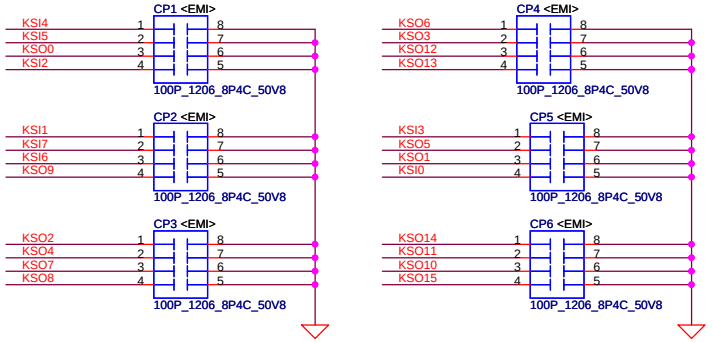


Follow JFT00 Smybol

KSI[0..7] KSI[0..7] <31>

KSO[0..15] KSO[0..15] <31>

Delete C525~C548 SE071101J80 (100pF)
Add SI102101K80 (CP : 100pF)
(EMI Recommend)



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

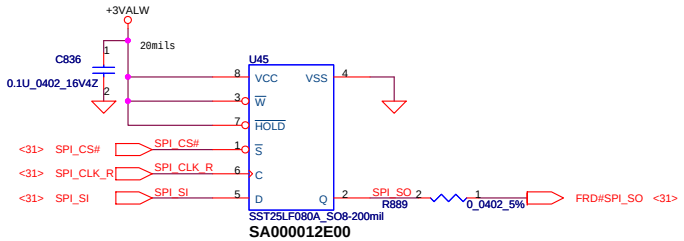
Title: KB /SW Conn.

Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0

Date: Tuesday, March 10, 2009 Sheet 32 of 47

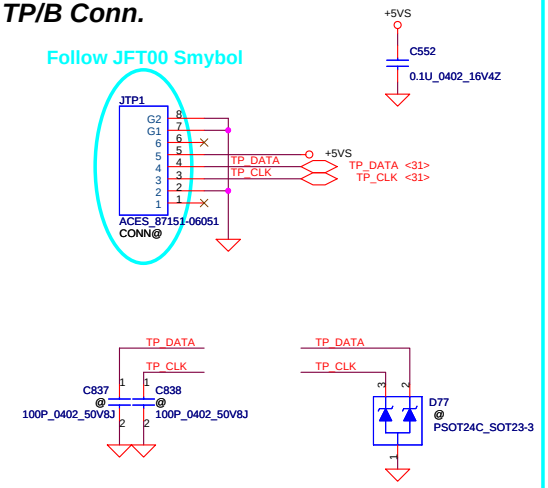
8M SPI ROM

For EC+BIOS



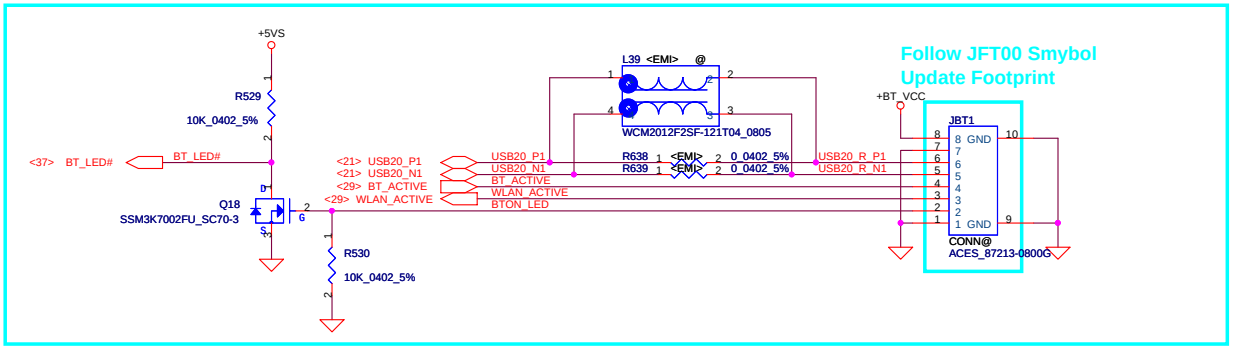
To TP/B Conn.

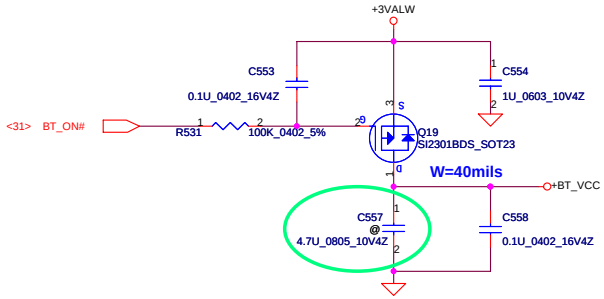
Follow JFT00 Smybol



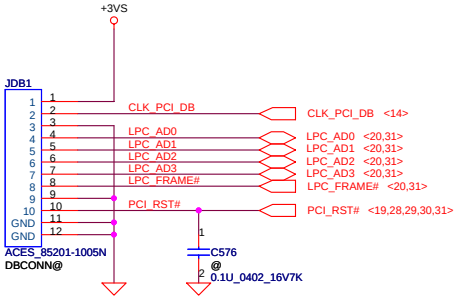
Bluetooth Conn.

Follow JFT00 Smybol
Update Footprint





FOR LPC DEBUG PORT



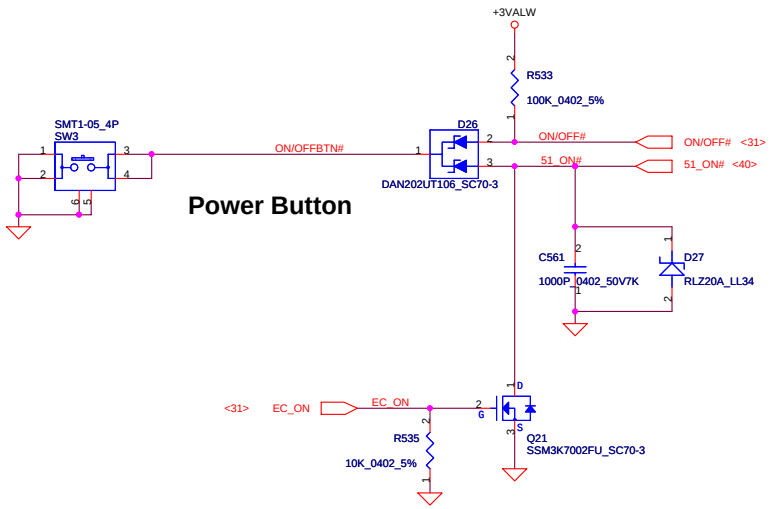
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

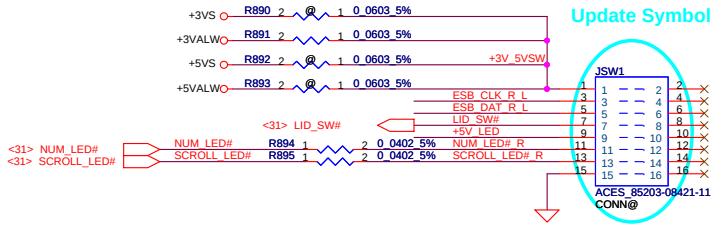
Title: BIOS, I/O Port & K/B Connector

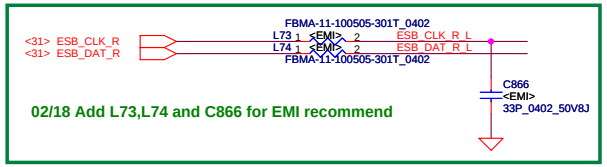
Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0
Date: Tuesday, March 10, 2009	Sheet 33 of 47	

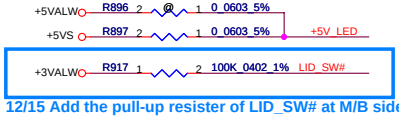
ON/OFF switch



Conductive Board Conn.

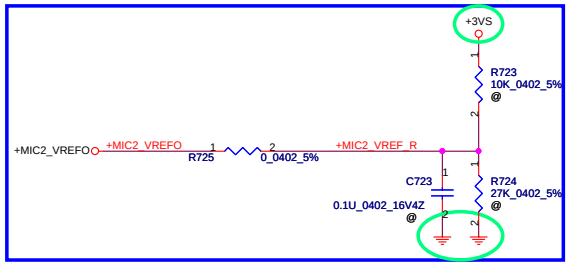




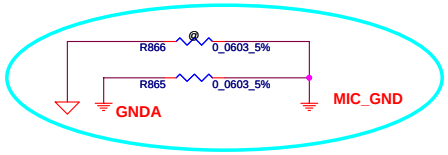


12/15 Add the pull-up resister of LID_SW# at M/B side.
Solve system can't power on when unplug function board and w/ DC only.

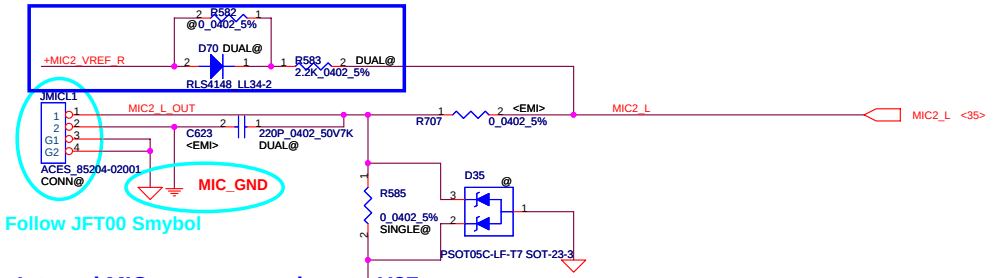
SINGLE INT MIC/DUAL INT MIC



Internal MIC component close to U27

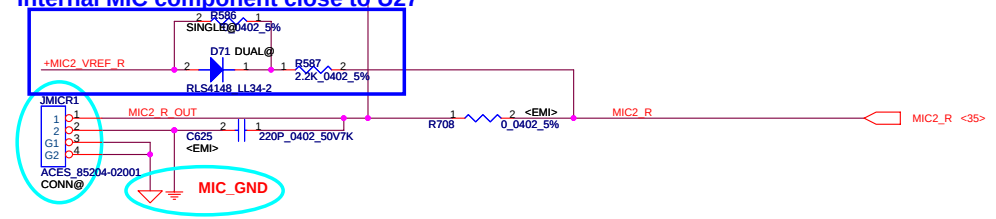


Internal MIC component close to U27



Follow JFT00 Smybol

Internal MIC component close to U27



Follow JFT00 Smybol

Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

Compal Electronics, Inc.

Title: PWROK/LID/Front/IO Board

Size: B | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

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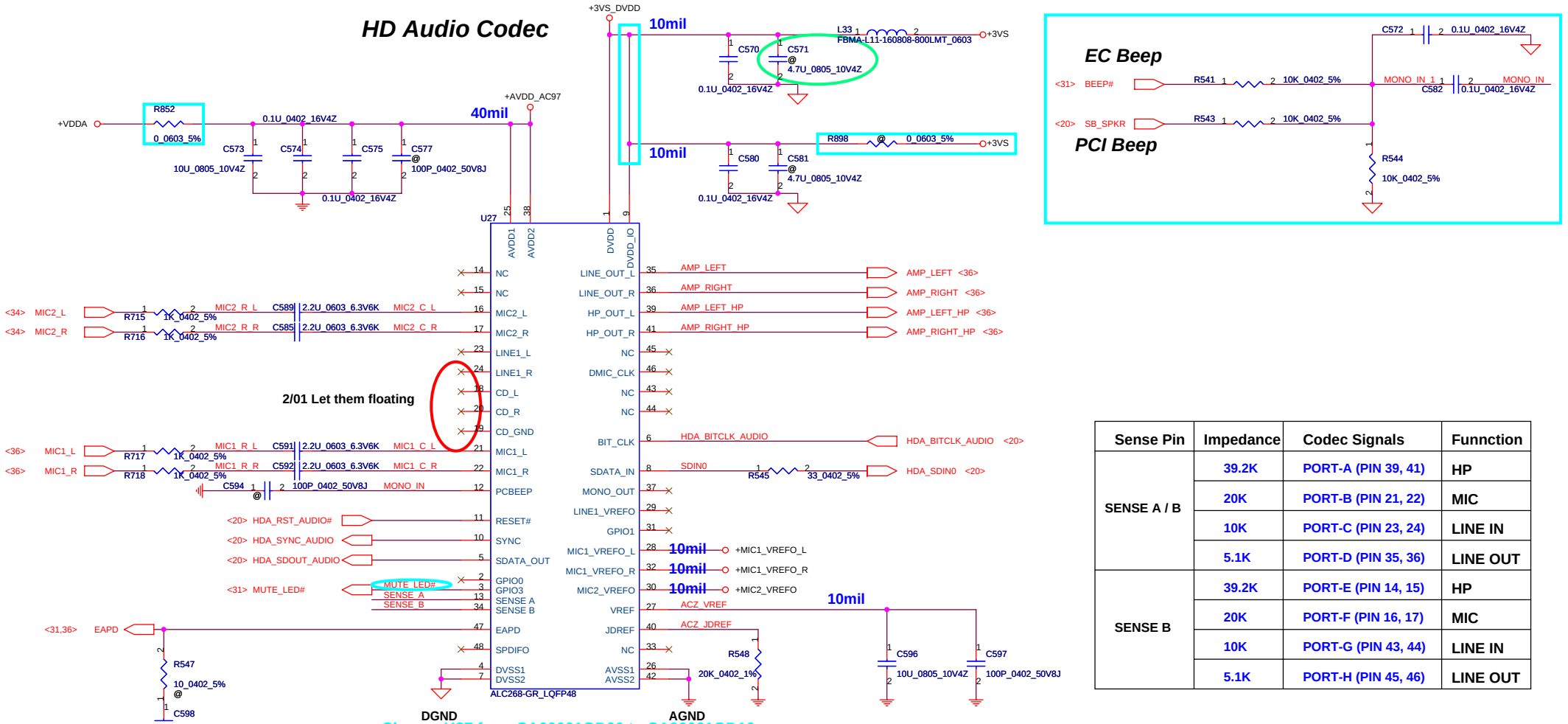
HD Audio Codec



Change U27 from SA00001GD00 to SA00001GD10

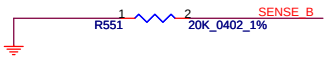
EC Beep

PCI Beep

Sense Pin	Impedance	Codec Signals	Funnction
SENSE A / B	39.2K	PORT-A (PIN 39, 41)	HP
	20K	PORT-B (PIN 21, 22)	MIC
	10K	PORT-C (PIN 23, 24)	LINE IN
	5.1K	PORT-D (PIN 35, 36)	LINE OUT
SENSE B	39.2K	PORT-E (PIN 14, 15)	HP
	20K	PORT-F (PIN 16, 17)	MIC
	10K	PORT-G (PIN 43, 44)	LINE IN
	5.1K	PORT-H (PIN 45, 46)	LINE OUT

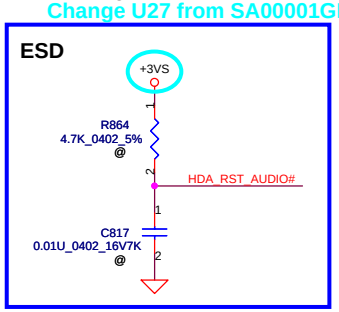
SENSE FOR Ext. Mic.

SENSE FOR Solo Int. Mic.

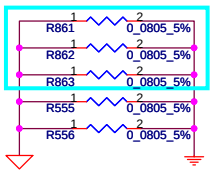


SENSE FOR HP

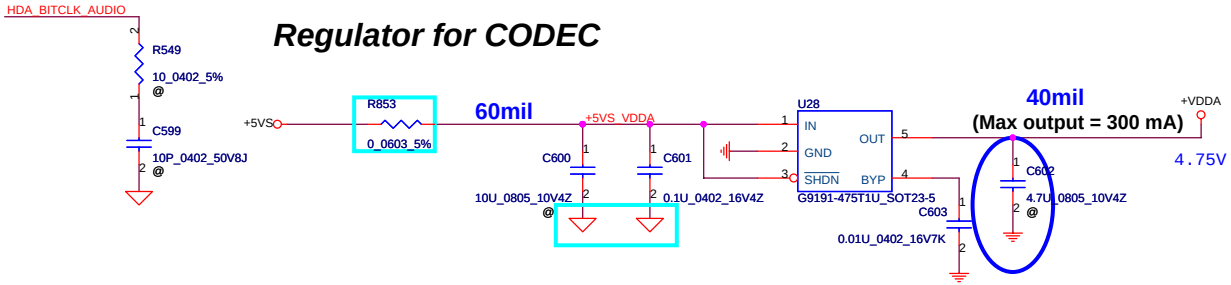
ESD



Moat Bridge



Regulator for CODEC



10/2 change circuit

U8 change footprint

Security Classification	Compal Secret Data		
Issued Date	2008/08/30	Deciphered Date	2009/8/30

Compal Electronics, Inc.

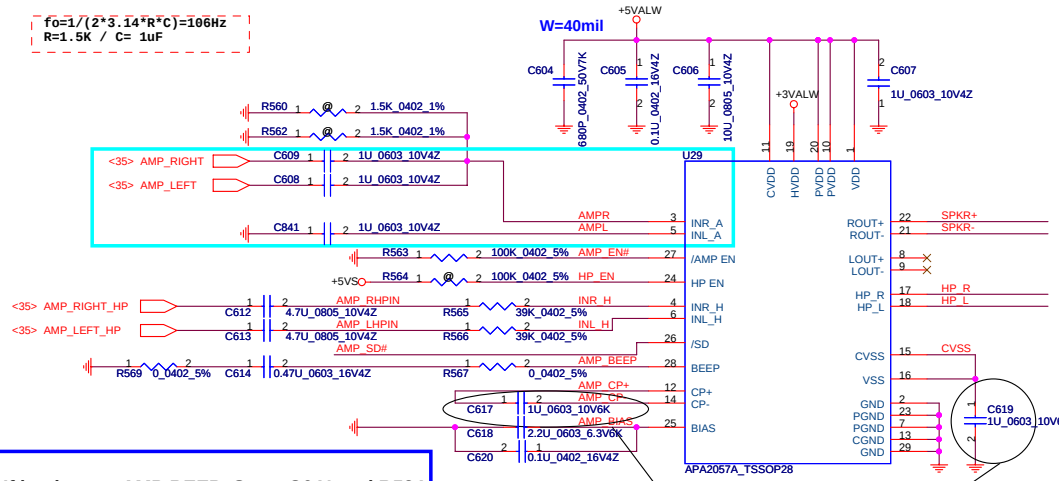
Title: <Title> HD Audio Codec ALC268

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet 35 of 47

APA2057 SPK/HP Amplifier

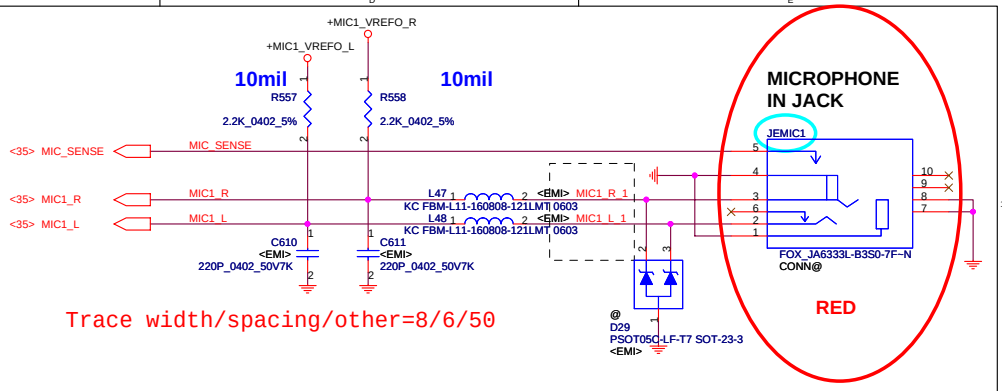
fo=1/(2*3.14*R*C)=106Hz
R=1.5K / C= 1uF



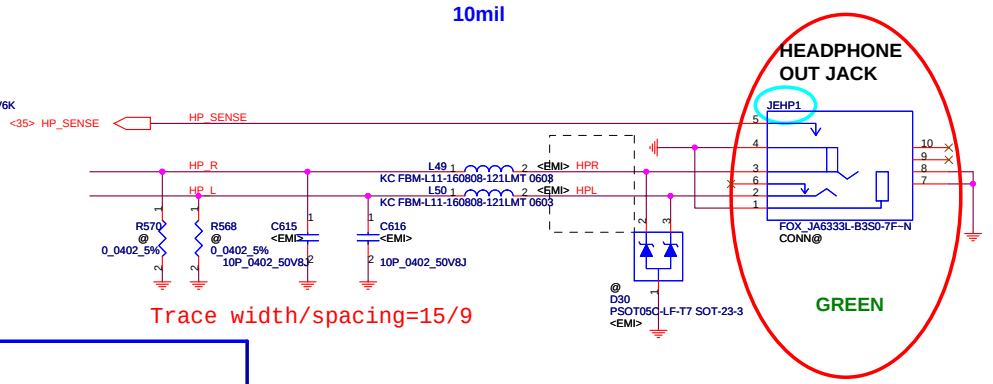
9/5 If implement AMP BEEP, Swap C641 and R524.
R524 change from 0 Ohm to 47K

IN_A Gain = 10dB (Internal Speaker)
IN_H Gain = 0dB (Headphone)

11/28 Modified to X5R
11/28 Change to SE080105K80

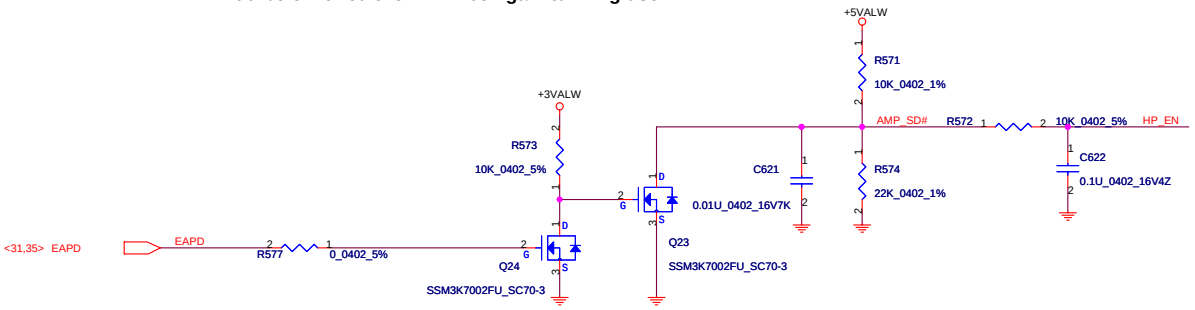


Trace width/spacing/other=8/6/50



Trace width/spacing=15/9

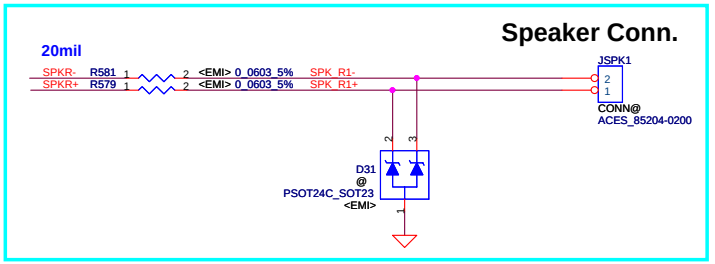
Add below circuit for APA2057 gain tunning use



Gain= 10dB

Gain (dB)	Low (V)	High (V)	Recommended (V)
10	3.45	3.51	3.48
11	3.56	3.62	3.59
12	3.68	3.73	3.70
13	3.80	3.85	3.82

+5VALW assume equal 5.1V
10 dB ---> 5.1 x 220 / 320 = 3.5



Security Classification	Compal Secret Data		
Issued Date	2008/08/30	Deciphered Date	2009/8/30

Compal Electronics, Inc.

Title: AMP/VR/Audio Jack

Size: Custom | Document Number: KFT00 M/B LA-4821P Schematic | Rev: 1.0

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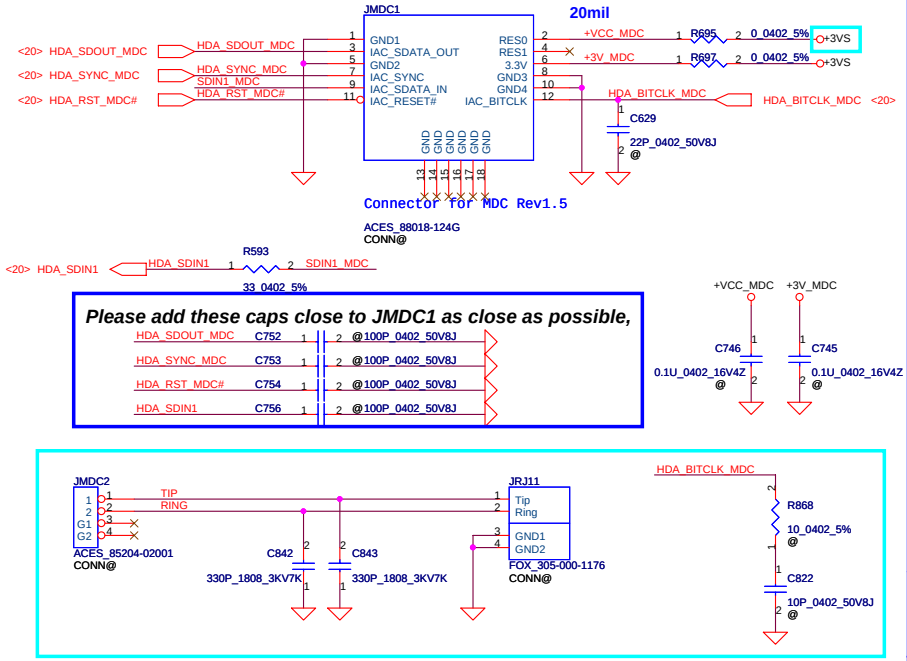
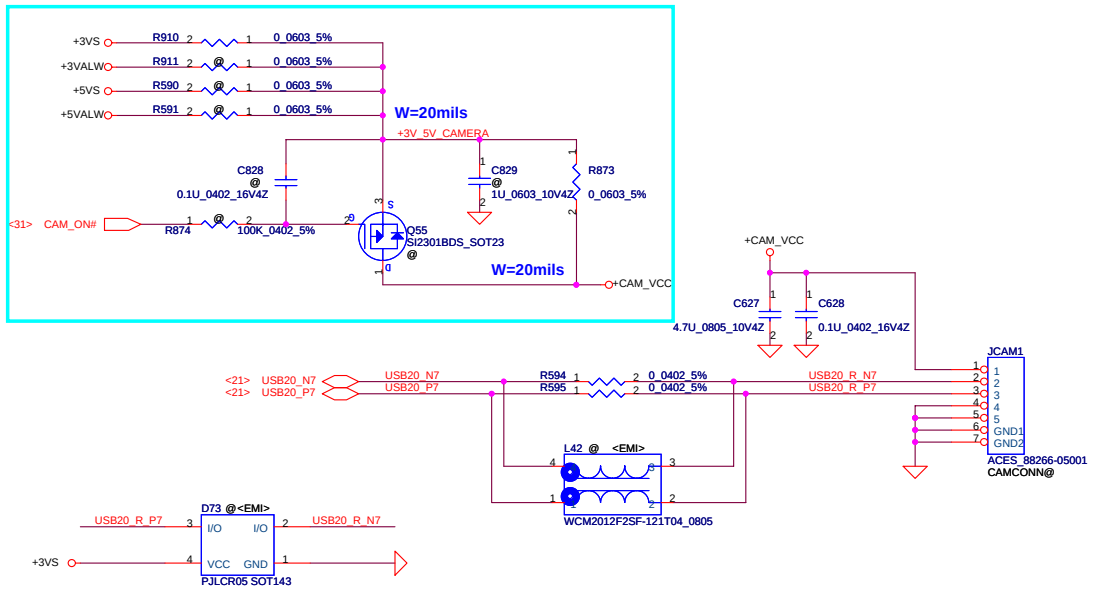
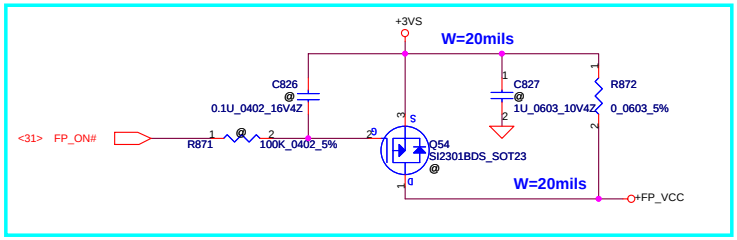
MDC Conn.



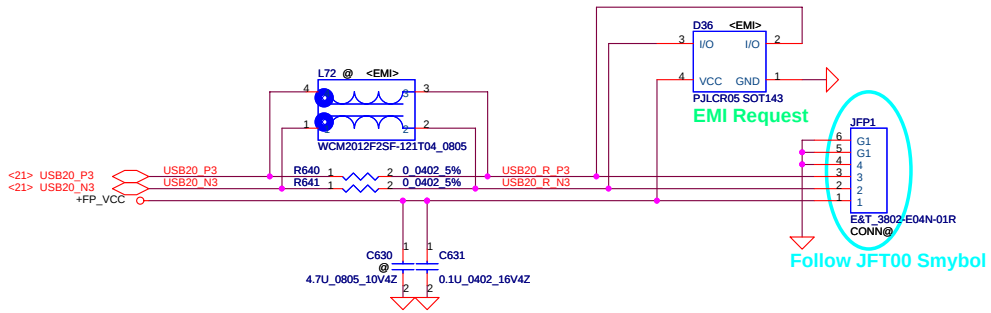
Camera Conn



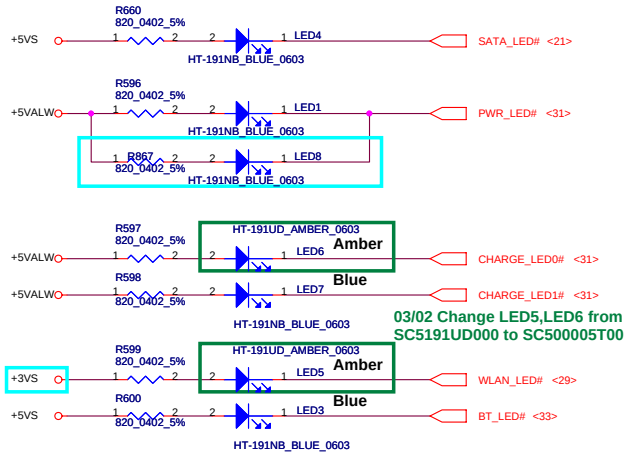
Finger Print board



05/26 Change D36 from SC300000X00 to SC300000K00



LED



03/02 Change LED5,LED6 from SC5191UD000 to SC500005T00

12/7 Modified LED footprint to LED_HT-297UD-CB_4P

12/15 Modified to correct LED symbol!

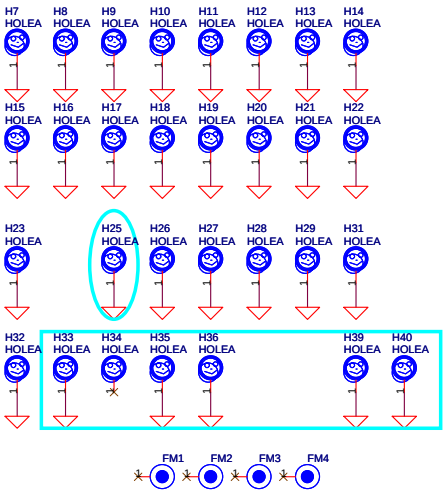
Security Classification	Compal Secret Data		
Issued Date	2008/08/30	Deciphered Date	2009/8/30

Compal Electronics, Inc.

Title: MDC/LED/Camera/FP

Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0

Date: Tuesday, March 10, 2009 Sheet 37 of 47



Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

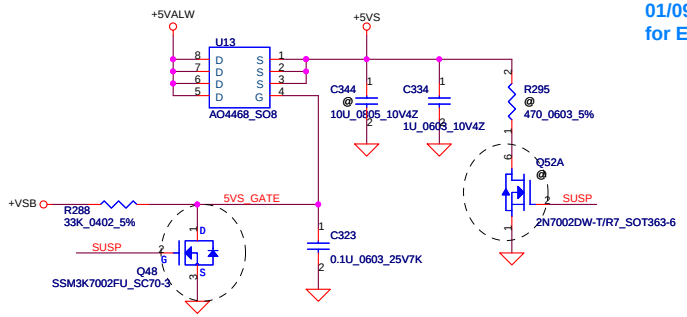
Compal Electronics, Inc.

Title: FAN & Screw Hole

Size	Document Number	Rev
B	KFT00 M/B LA-4821P Schematic	1.0

Date: Tuesday, February 10, 2009 | Sheet 38 of 47

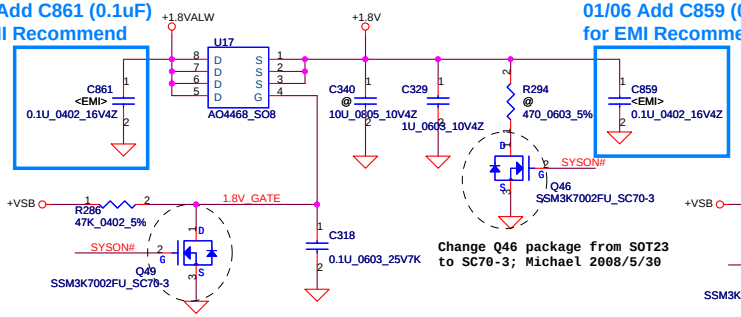
+5VALW TO +5VS



Change Q48 package from SOT23 to SC70-3; Michael 2008/5/30

+1.8VALW TO +1.8V

01/09 Add C861 (0.1uF) for EMI Recommend

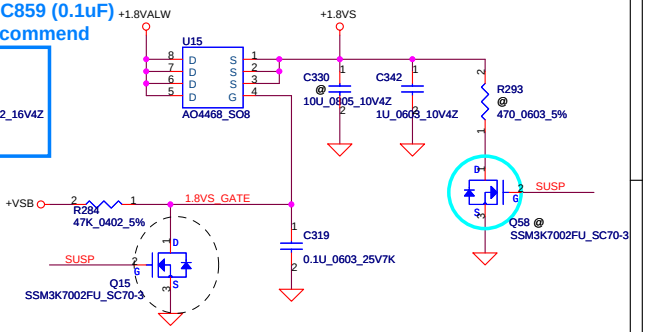


Change Q46 package from SOT23 to SC70-3; Michael 2008/5/30

Change Q49 package from SOT23 to SC70-3; Michael 2008/5/30

+1.8VALW to +1.8VS

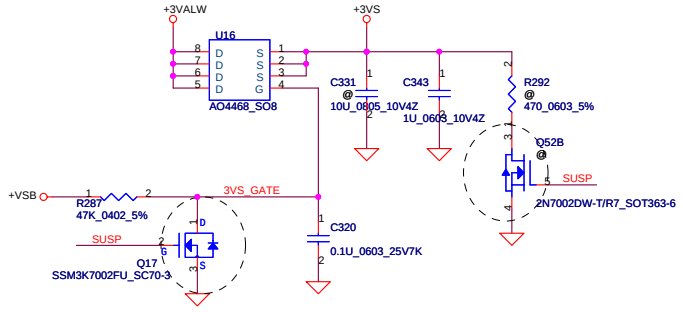
01/06 Add C859 (0.1uF) for EMI Recommend



Change Q15 package from SOT23 to SC70-3; Michael 2008/5/30

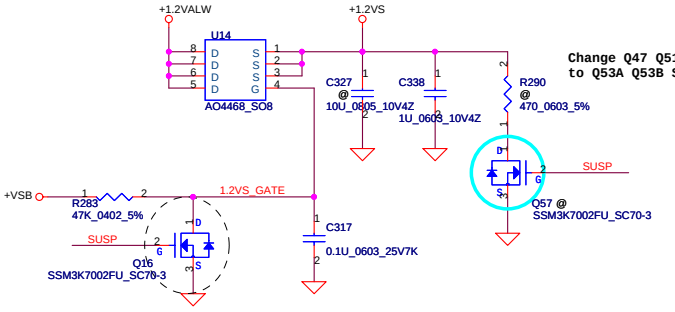
+3VALW TO +3VS

Change Q25 Q50 package from SOT23 to Q52A Q52B SOT363-6; Michael 2008/5/30



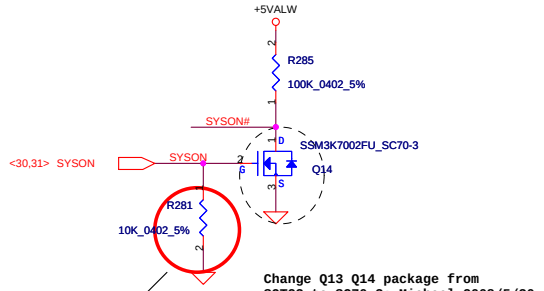
Change Q17 package from SOT23 to SC70-3; Michael 2008/5/30

+1.2VALW TO +1.2VS



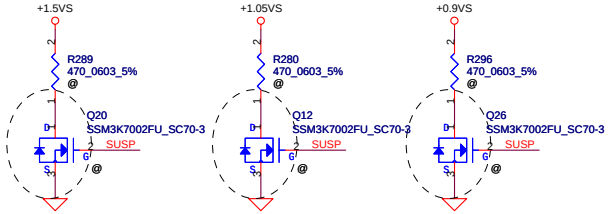
Change Q16 package from SOT23 to SC70-3; Michael 2008/5/30

Change Q47 Q51 package from SOT23 to Q53A Q53B SOT363-6; Michael 2008/5/30



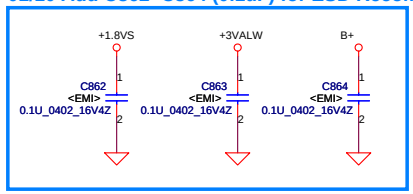
Change Q13 Q14 package from SOT23 to SC70-3; Michael 2008/5/30

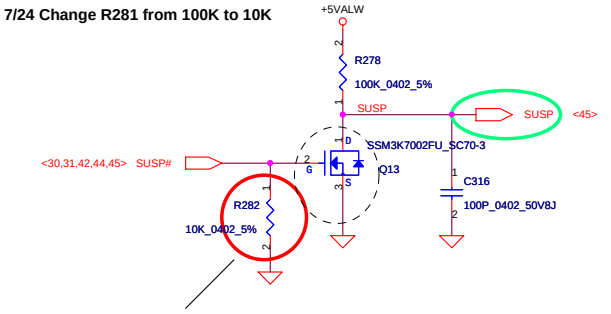
7/24 Change R281 from 100K to 10K



Change Q20 Q12 Q26 package from SOT23 to SC70-3; Michael 2008/5/30

01/10 Add C862~C864 (0.1uF) for ESD Recommend





3/14 Change R16 from 100K to 10K

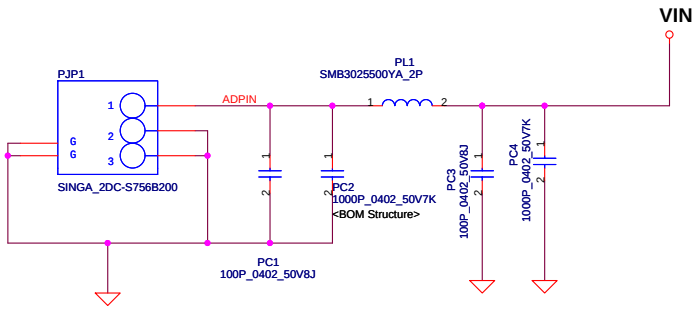
Security Classification	Compal Secret Data		
Issued Date	2008/10/18	Deciphered Date	2009/10/18

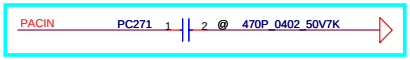
Compal Electronics, Inc.

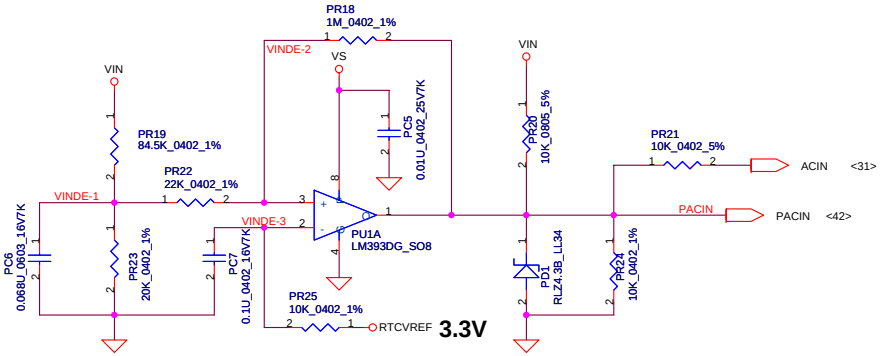
Title: DC Interface

Size: B | Document Number: KFT00 M/B LA-4321P Schematic | Rev: 1.0

Date: Tuesday, March 10, 2009 | Sheet: 39 of 47

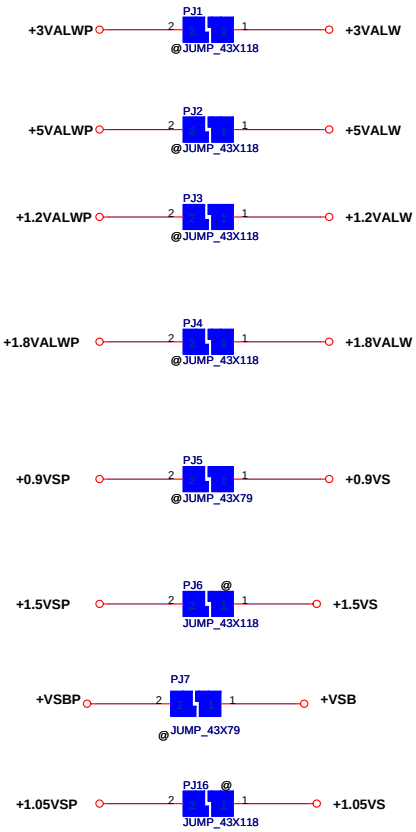


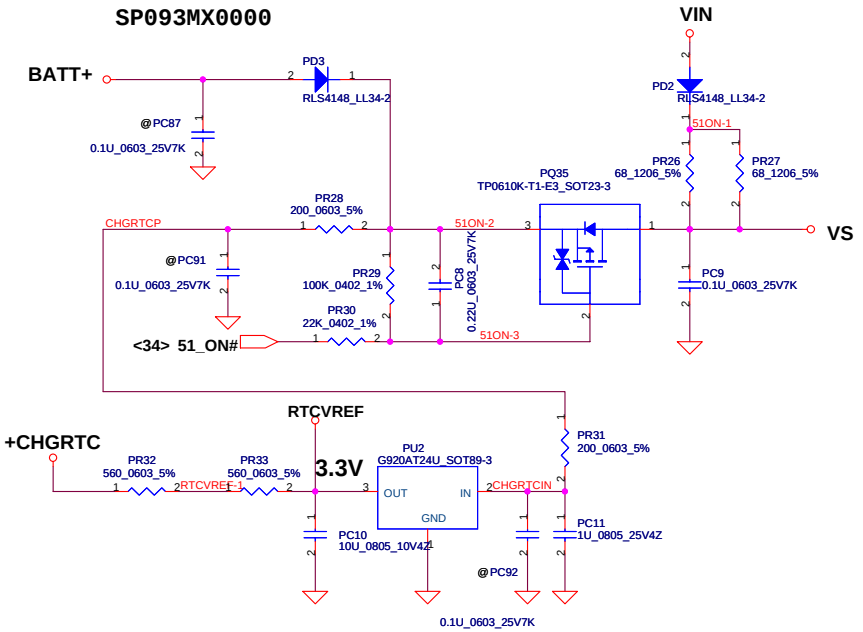




Vin Detector

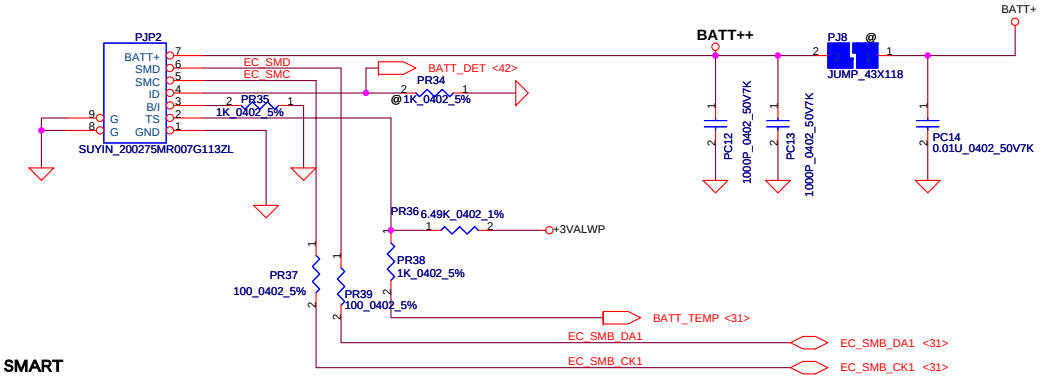
High	18.384	17.901	17.430
Low	17.728	17.257	16.976





Compal Electronics, Inc.

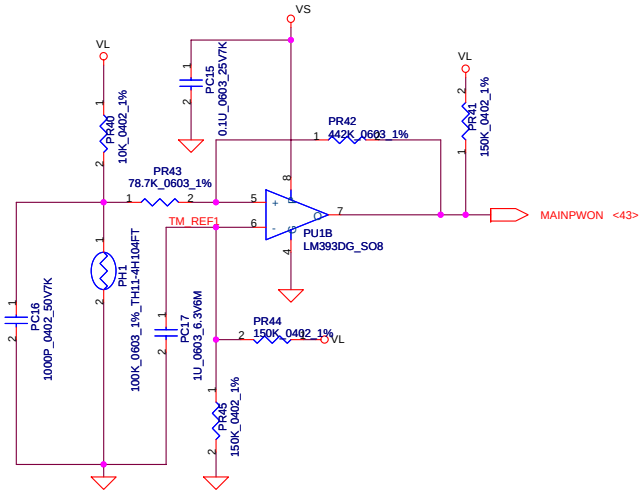
Title	DCIN & DETECTOR	
Size: Custom	Document Number: KFT00 MB Schematic	Rev: 0.2
Date: Tuesday, March 10, 2009	Sheet 40 of 47	

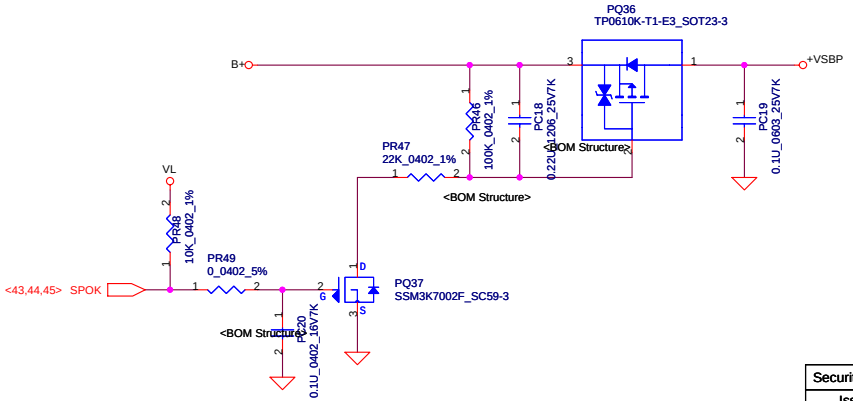


SMART Battery:
7.BATT+
6.SMD
5.SMC
4.ID
3.B/I
2.TS
1.GND

	BATT_DET
3S	Floating
4S	LOW

PH1 under CPU botten side :
CPU thermal protection at 89 degree C
Recovery at 70 degree C





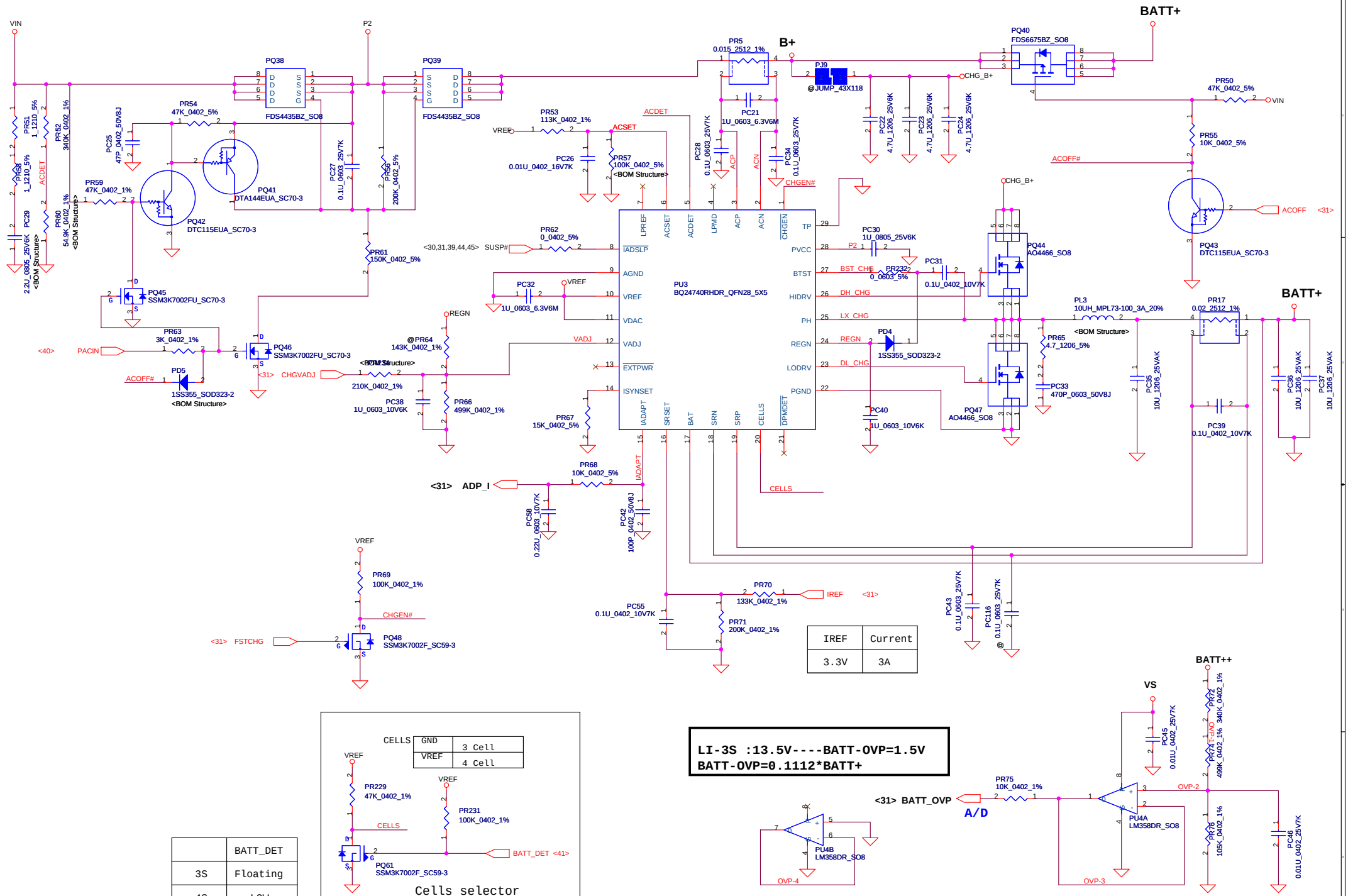
Security Classification	Compal Secret Data		
Issued Date	2008/07/15	Deciphered Date	2009/07/15

Compal Electronics, Inc.

Title: BATTERY CONN / OTP

Size: Custom | Document Number: KFT00 MB Schematic | Rev: 0.2

Date: Tuesday, March 10, 2009 | Sheet 41 of 47



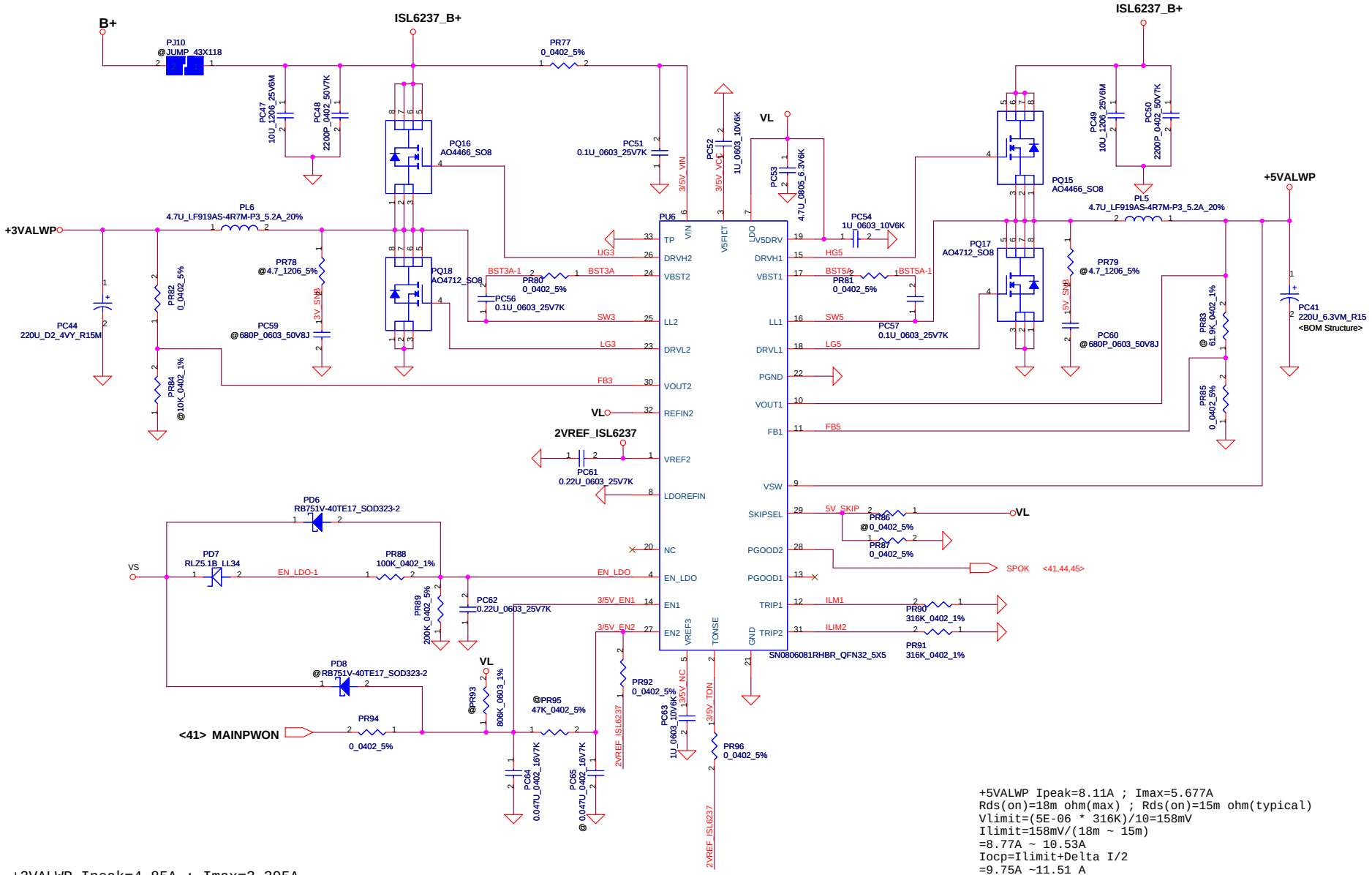
Security Classification	Compal Secret Data		
Issued Date	2008/07/15	Deciphered Date	2009/07/15

Compal Electronics, Inc.

Title: CHARGER

Size	Document Number	Rev
Custom	KFT00 MB Schematic	0.2

Date: Tuesday, March 10, 2009 | Sheet 42 of 47



+3VALWP Ipeak=4.85A ; Imax=3.395A
Rds(on)=18m ohm(max) ; Rds(on)=15m ohm(typical)
Vlimit=(5E-06 * 180K)/10=90mV
Ilimit=90mV/(18m ~ 15m)
=5A ~ 6A
Iocp=Ilimit+Delta I/2
=5.967A ~ 6.967A
Delta I=1.934A (Freq=300KHz)

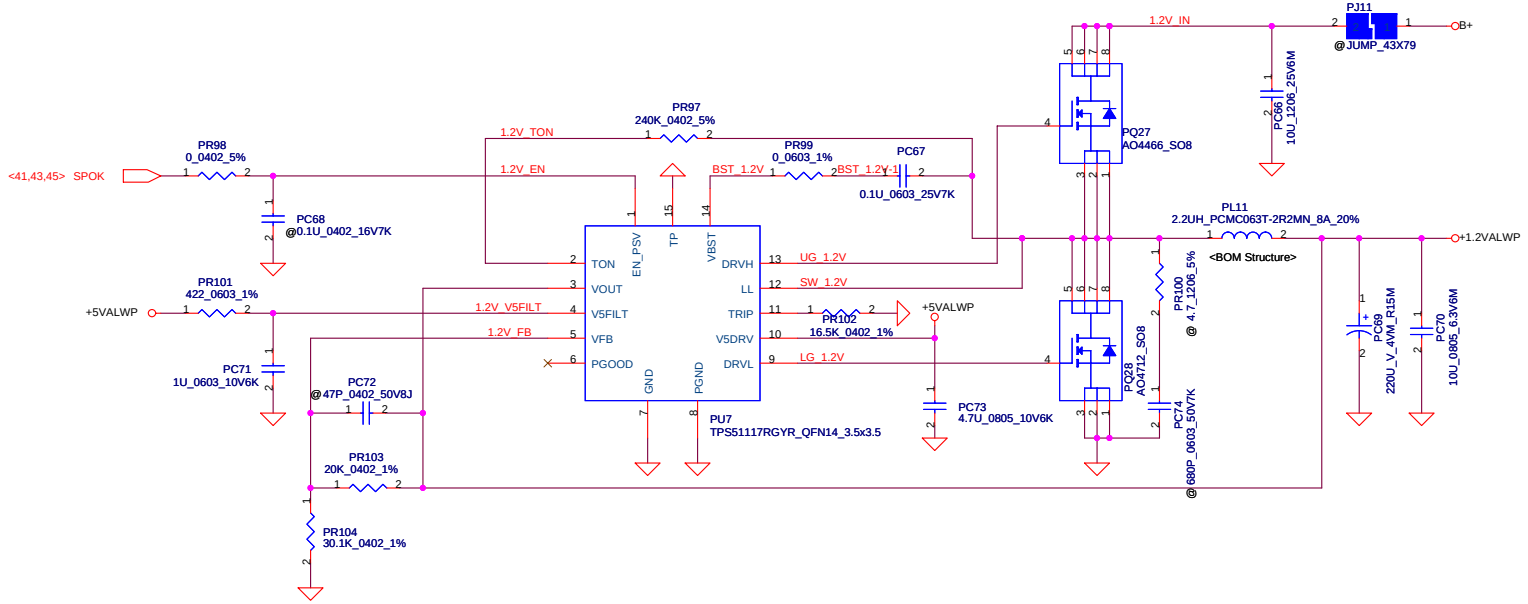
+5VALWP Ipeak=8.11A ; Imax=5.677A
Rds(on)=18m ohm(max) ; Rds(on)=15m ohm(typical)
Vlimit=(5E-06 * 316K)/10=158mV
Ilimit=158mV/(18m ~ 15m)
=8.77A ~ 10.53A
Iocp=Ilimit+Delta I/2
=9.75A ~11.51 A
Delta I=1.956A (Freq=400KHz)

Security Classification	Compal Secret Data		
Issued Date	2008/07/15	Deciphered Date	2009/07/15

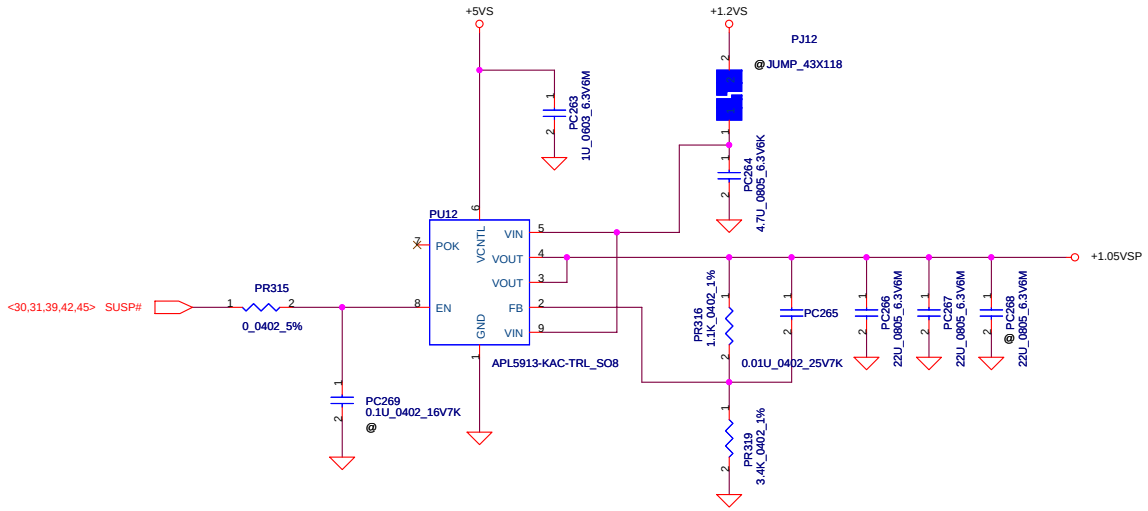
Compal Electronics, Inc.

Title: 3VALW/5VALW

Size	Document Number	Rev
Custom	KFT00 MB Schematic	0.2
Date: Tuesday, March 10, 2009	Sheet 43 of 47	



VFB=0.75V
Vo=VFB*(1+PR103/PR104)=1.203V
Ton=187.68ns
Freq=337KHz
Cesr=15m ohm
Ipeak=7.82A Imax=5.474A
Delta I=((19-1.2)*(1.2/19))/(L*Freq)=1.516A
Vtrip=Rtrip*10uA=165mV
Iocp-min=Vtrip/(Rdsonmax*1.2)+0.758=8.4A
Iocp-max=Vtrip/(Rdsontyp*1.2)+0.758=9.92A
Iocp=8.4A~9.92A

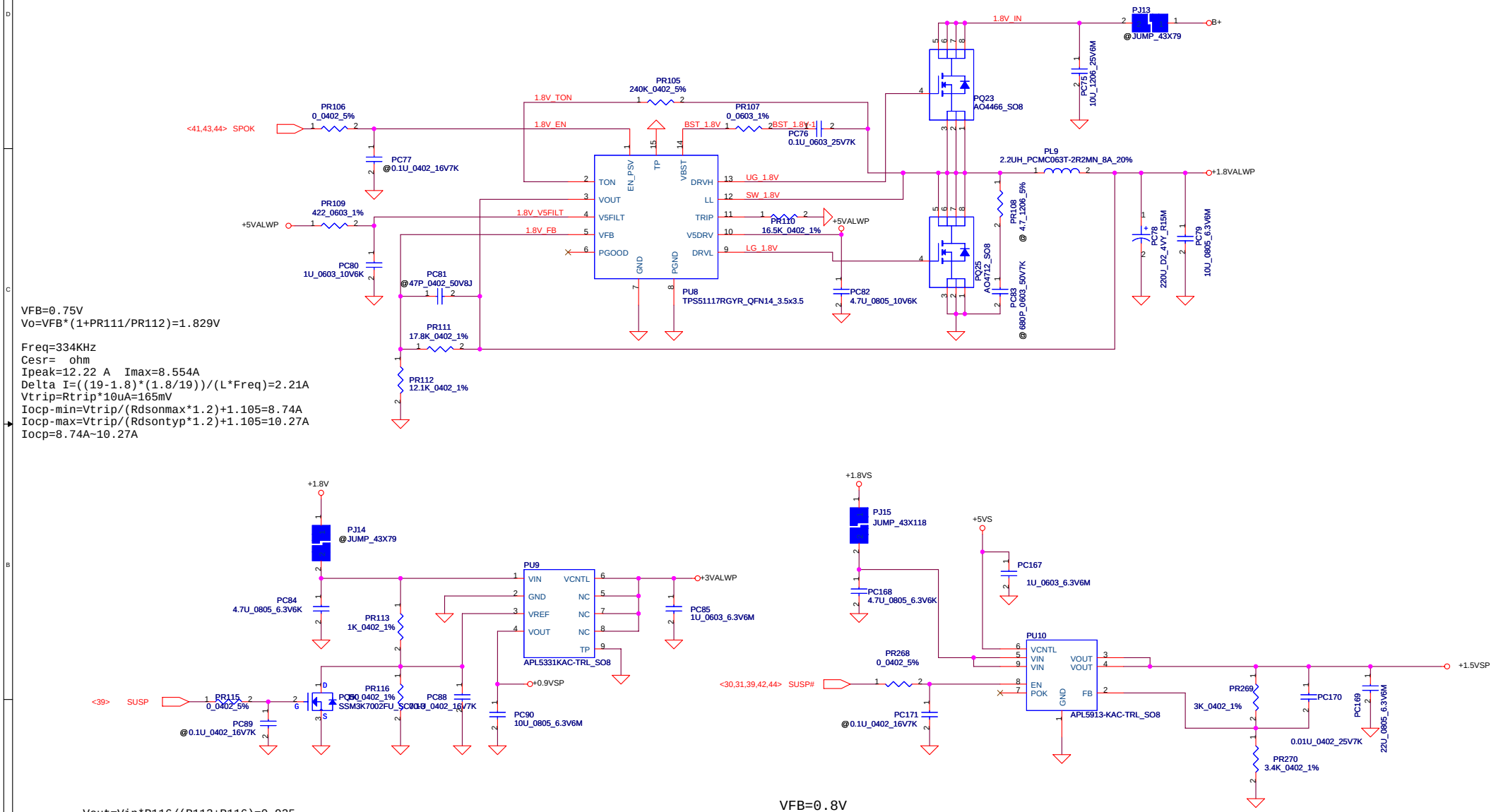


FB=0.8V
Vout=0.8v*(1+R316/R319)
Imax=3.22A Ipeak=4.6A

Security Classification	Compal Secret Data		
Issued Date	2008/07/15	Deciphered Date	2009/07/15

Compal Electronics, Inc.

Title	1.2V//1.05V	
Size: Custom	Document Number: KFT00 MB Schematic	Rev: 0.2
Date: Tuesday, March 10, 2009	Sheet 44 of 47	



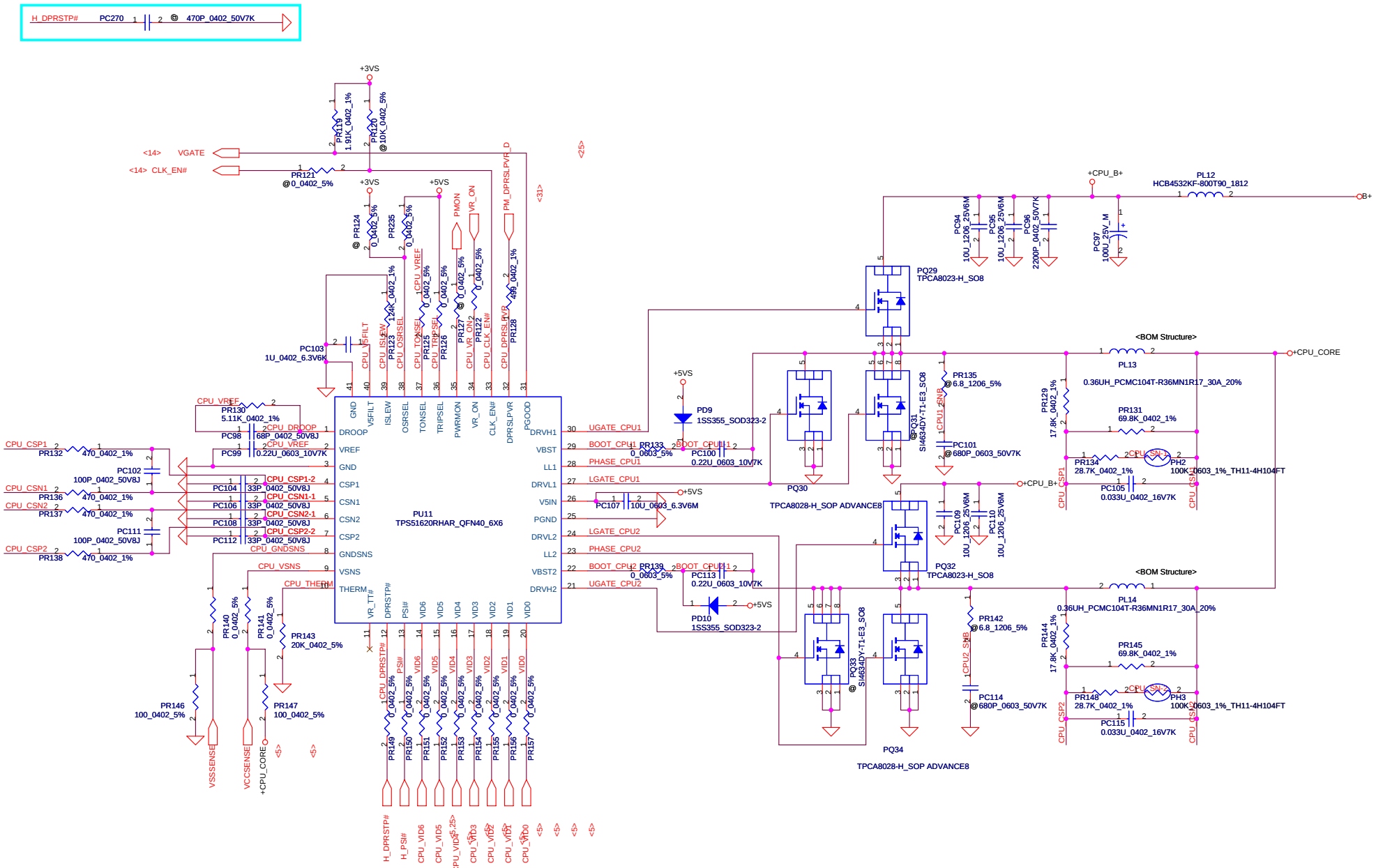
Security Classification	Compal Secret Data		
Issued Date	2008/07/15	Deciphered Date	2009/07/15

Compal Electronics, Inc.

Title: 1.8V/1.5V/0.9V

Size: C | Document Number: KFT00 MB Schematic | Rev: 0.2

Date: Tuesday, March 10, 2009 | Sheet 45 of 47



Security Classification	Compal Secret Data		
Issued Date	2008/07/15	Deciphered Date	2009/07/15

Compal Electronics, Inc.

Title	+CPU_CORE	
Size: Custom	Document Number: KFT00 MB Schematic	Rev: 0.2
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Version change list (P.I.R. List)

for PWR

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1		Change charge current to 3.36A at Iref=3.3V	A	3	change PR70 from 133K to 97.6K		
2		change charger current sense size and value	A	3	change PR17 from 15m to 20m ohm		
3		Set charger voltage	A	3	Delet PR64		
4		change PQ38 ,PQ39 for EOL	A	3	Change to FDS4435BZ		
5		change PR90 ,PR91 for 3V,5V ocp set	A	4	Change from 301K to 315K and 174K		
6		change PR102 for 1.2V OCP set	A	5	Change from 14.7K to 16.5K		
7		change 1.2v from 1.225V to 1.2V follow KSWXX	A	5	Change PR103 and PR104 to 18.2K and 30.1K		
8		change PR110 for 1.8V OCP set	A	6	Change from 14.7K to 16.5K		
9		change 1.8v from 1.851V to 1.829V follow KSWXX	A	6	Change PR111 and PR112 to 17.4K and 12.1K		
10		change chgvadj risister match ec parameter	A	3	Change PR66 100K to 499K		
11		change PL13,PL14 for cost	A	7	Change PL13 PL14 to Toho		
12		modify CP point to 3.13A	A	3	change PR53 from 0 to 113K ohm		
13		change charger current to 3A	C		change PR70 from 97.6K to 133K ohm		
14		change 3V OCP	C		change PR91 from 180K to 316K ohm		
15		adjust cpu load line	C		change PR130 from 4.02K to 5.49 K ohm		
16		change cpu choke footprint	C		change choke footprint from toho to cyntec		
17		change PR229 from 100k to 47k			adjust cell pin voltage		
18		adjust back to back mos turn off time			change PC27 from 0.47U to 0.1U		
19		Adjust 1.2v voltage from 1.2035V to 1.2483V for hw requet			change PR103 from 18.2k to 20k		
20		Adjust 1.8v voltage from 1.8285V to 1.8533V for hw request			change PR111 from 17.4k to 17.8k		
21		adjust cpu load line			change PR130 from 5.49k to 5.11k		
22		NPO must use J tolerance			change PC104 PC106 PC108 PC112 from K to J tolerance		
23							

Compal Electronics, Inc.

Title: PIR (PWR)

Size: C | Document Number: KFT00 MB Schematic | Rev: 0.2

Date: Tuesday, March 10, 2009 | Sheet 47 of 47