

Compal Confidential

PAWF5/F6 M/B Schematics Document

Intel Penryn Processor with Cantiga + DDRIII + ICH9M

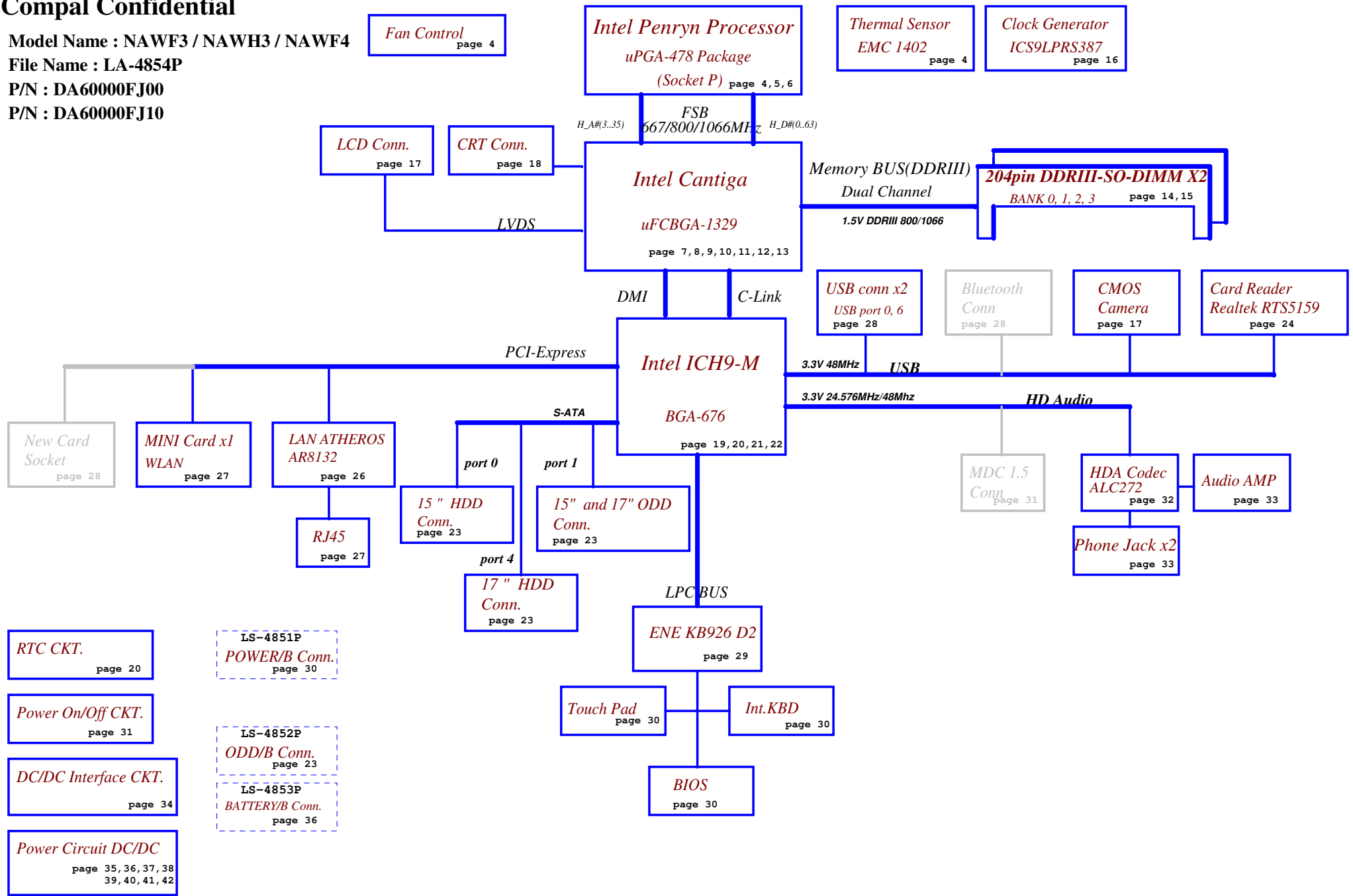
2010-02-03

REV : 0 . 1

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Model Name : NAWF3 / NAWH3 / NAWF4
File Name : LA-4854P
P/N : DA60000FJ00
P/N : DA60000FJ10



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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
+0.75VS	0.75V power rail for DDR	ON	OFF	OFF
+1.05VS	1.05V switched power rail	ON	OFF	OFF
+1.5V	1.5V power rail for DDR	ON	ON	OFF
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8V	1.8V power rail for LVDS	ON	ON	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V power rail for SB	ON	ON	OFF
+3V_LAN	3.3V power rail for LAN	ON	ON	ON
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+VSB	VSB always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

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

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts
--------	--------	-----------	------------

EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	ADI ADT7421	1001 100X b
EEPROM(24C16/02)	1010 000X b		
GMT G781-1	1001 101X b		

EC SM Bus2 address

ICH9M SM Bus address

Device	Address
Clock Generator (ICS9LPRS367, SLG8SP556V)	1101 001Xb
DDR DIMM0	1001 000Xb
DDR DIMM2	1001 010Xb

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

Board ID / SKU ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra/Rc/Re	100K +/- 5%			
Board ID	Rb / Rd / Rf	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V
2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
5	100K +/- 5%	1.453 V	1.650 V	1.759 V
6	200K +/- 5%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

BOARD ID Table

Board ID	PCB Revision
0	
1	
2	
3	
4	
5	0.1 (PVT)
6	
7	

BTO Option Table

BTO Item	BOM Structure
GM45	GM@
GL40	GL@
PAWF5	F5@
PAWF7	F7@
8114	8114@
8132	8132@

PCIE table

PCIE port1	Express Card(Reserved)
PCIE port2	Wireless Card
PCIE port3	PCIE LAN
PCIE port4	
PCIE port5	
PCIE port6	

SATA table

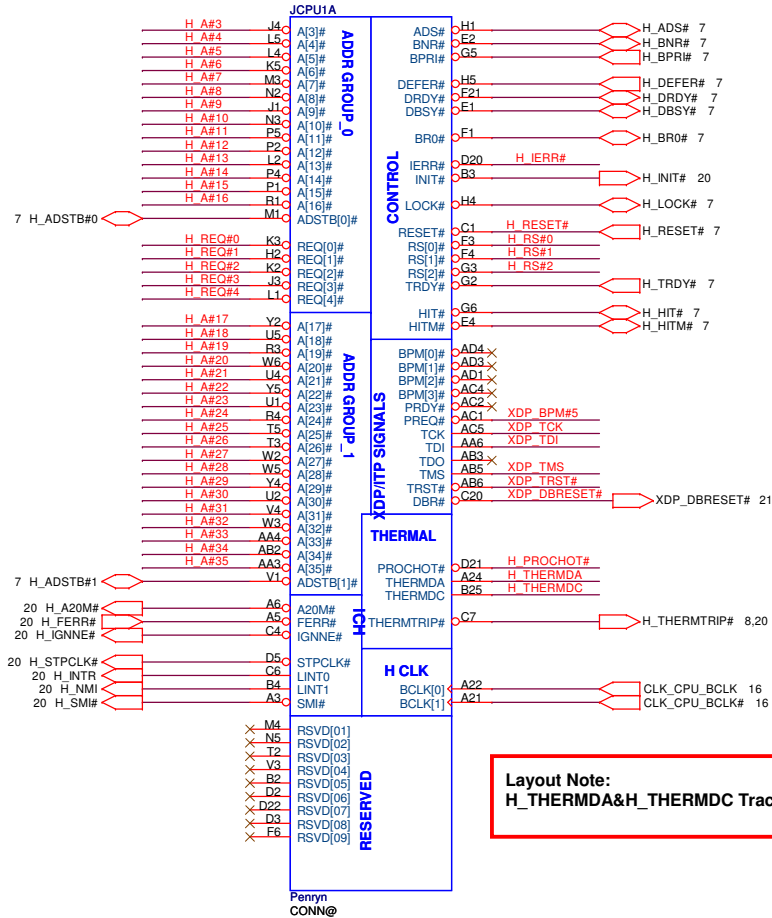
SATA port0	HDD
SATA port1	ODD
SATA port2	
SATA port3	
SATA port4	for 17" 2nd HDD
SATA port5	

USB table

EHCI1	UHCI1	Port0	MB USB Conn.
		Port1	
	UHCI2	Port2	
		Port3	CMOS Camera
EHCI2	UHCI3	Port4	Card Reader
		Port5	New Card(Reserved)
	UHCI4	Port6	MB USB Conn.
		Port7	
	UHCI5	Port8	Blue Tooth
		Port9	
	UHCI6	Port10	Wireless Card
		Port11	

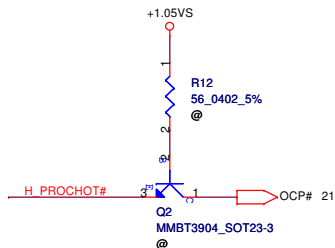
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7 H_A#[3..35] H_A#[3..35]
 7 H_REQ#[0..4] H_REQ#[0..4]
 7 H_RS#[0..2] H_RS#[0..2]

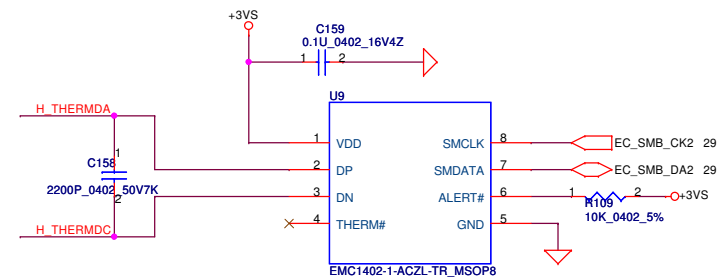
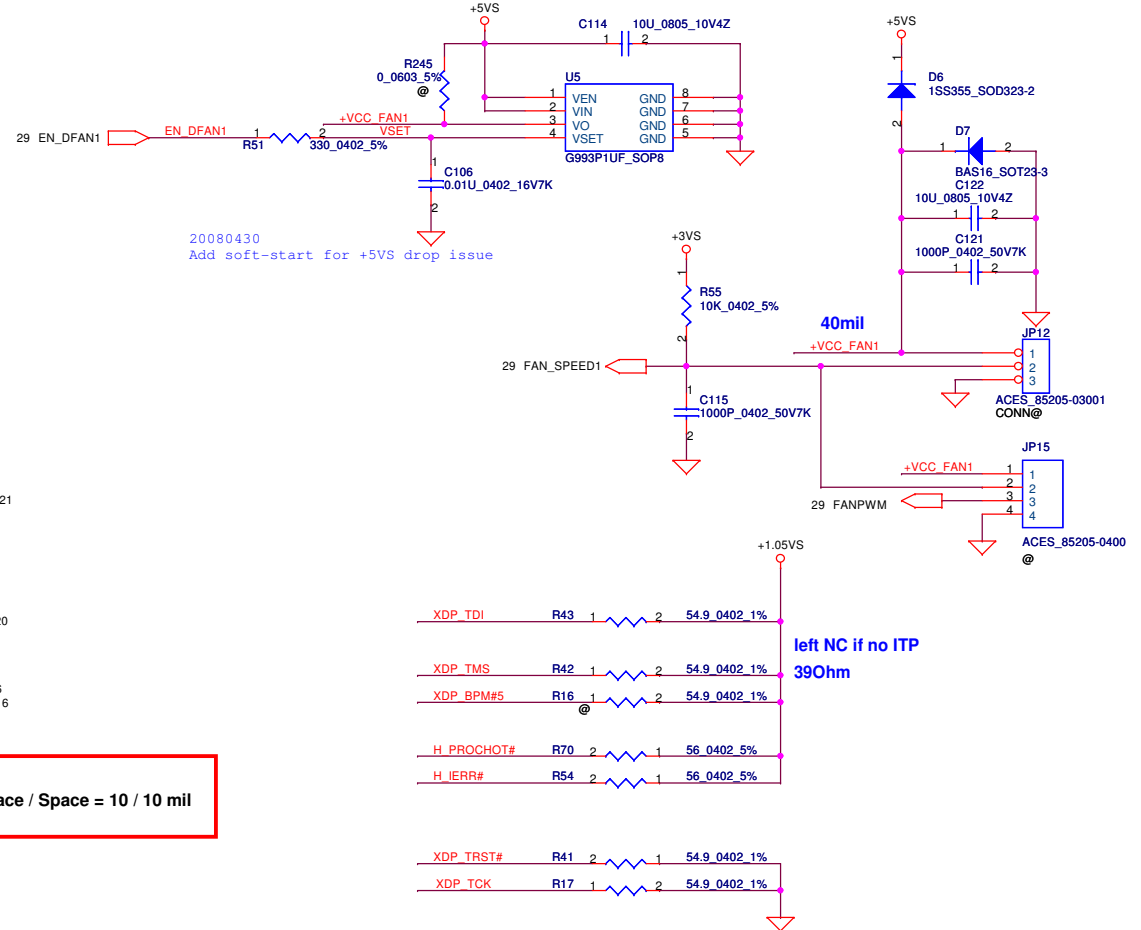


Layout Note:
 H_THERMDA&H_THERMDC Trace / Space = 10 / 10 mil

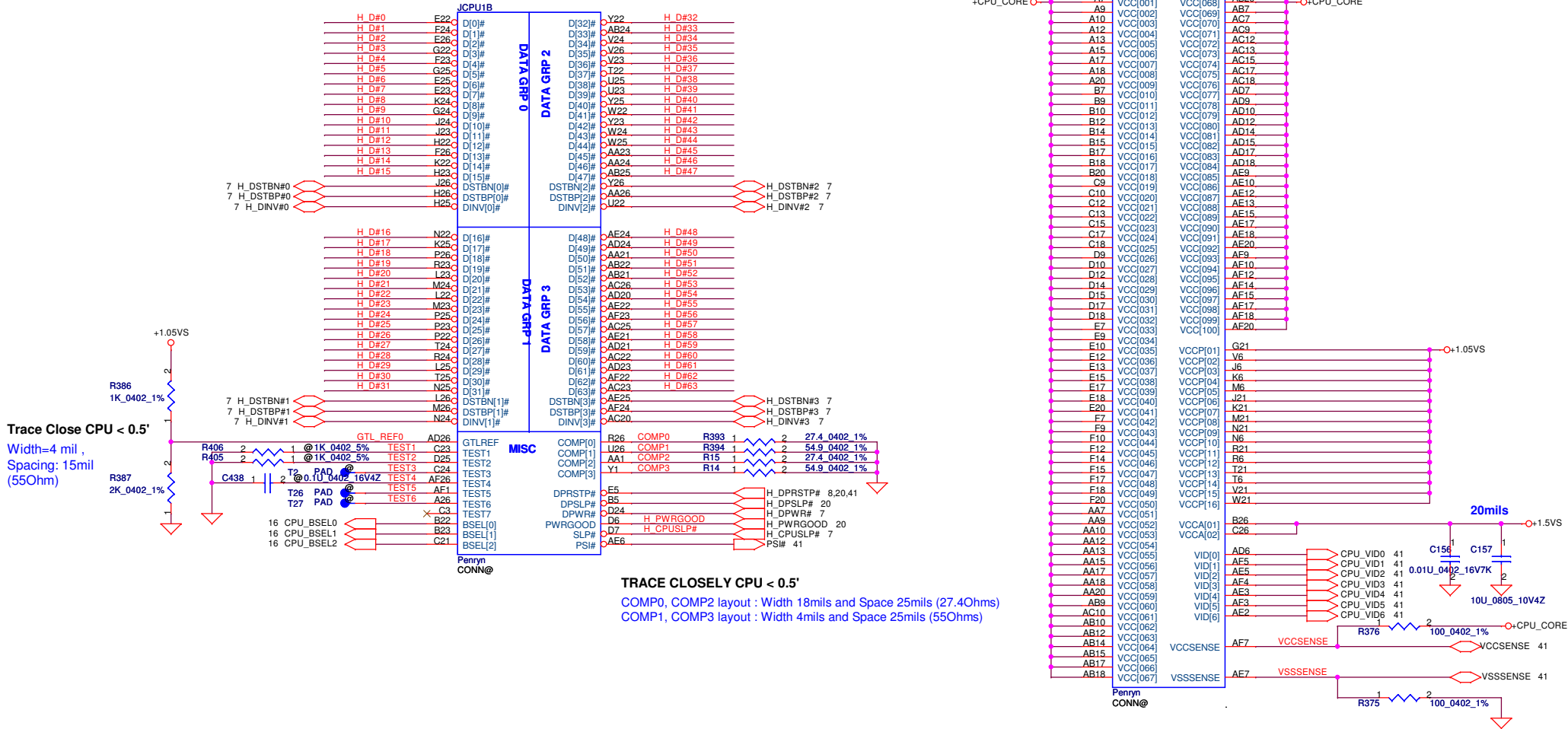
BSEL2	BSEL1	BSEL0	BCLK
0	0	0	266
0	1	0	200
0	1	1	166

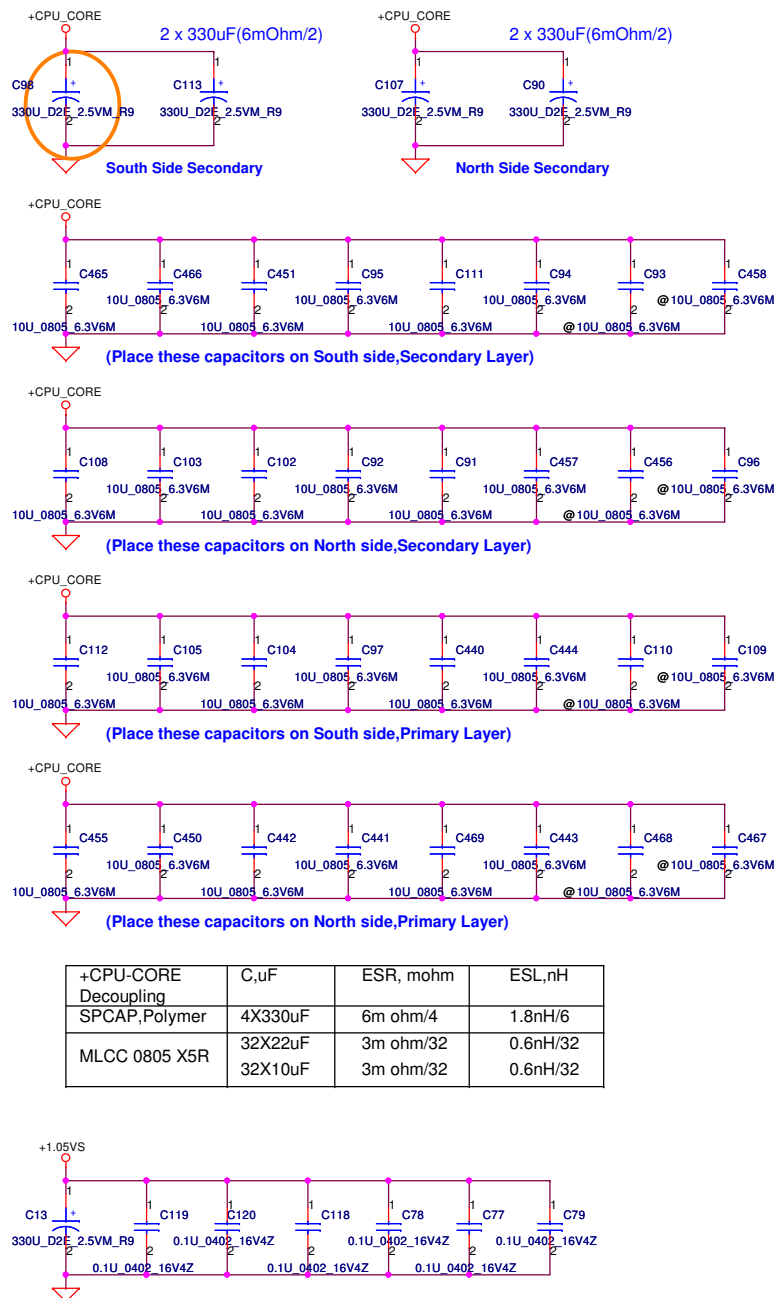
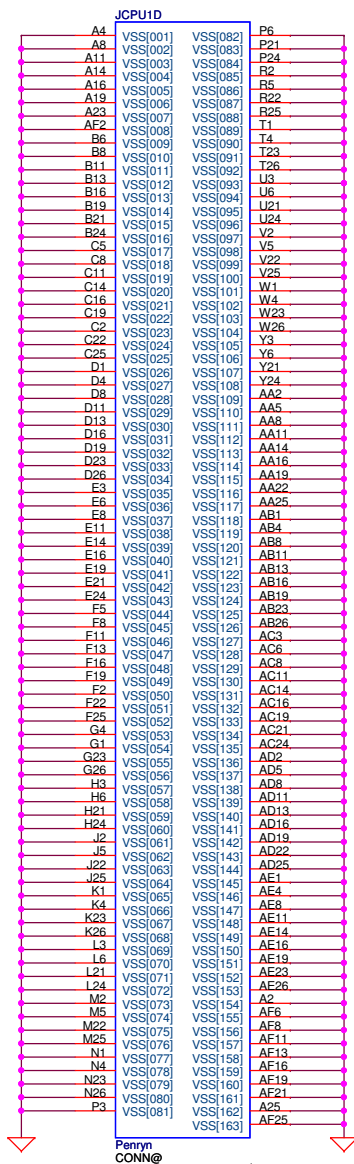


FAN1 Conn

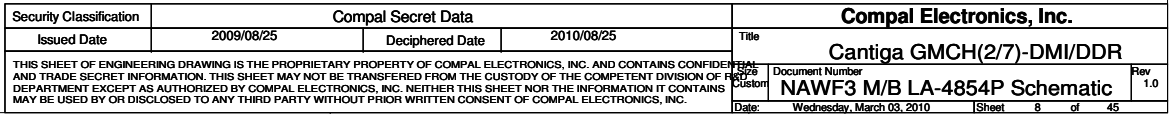


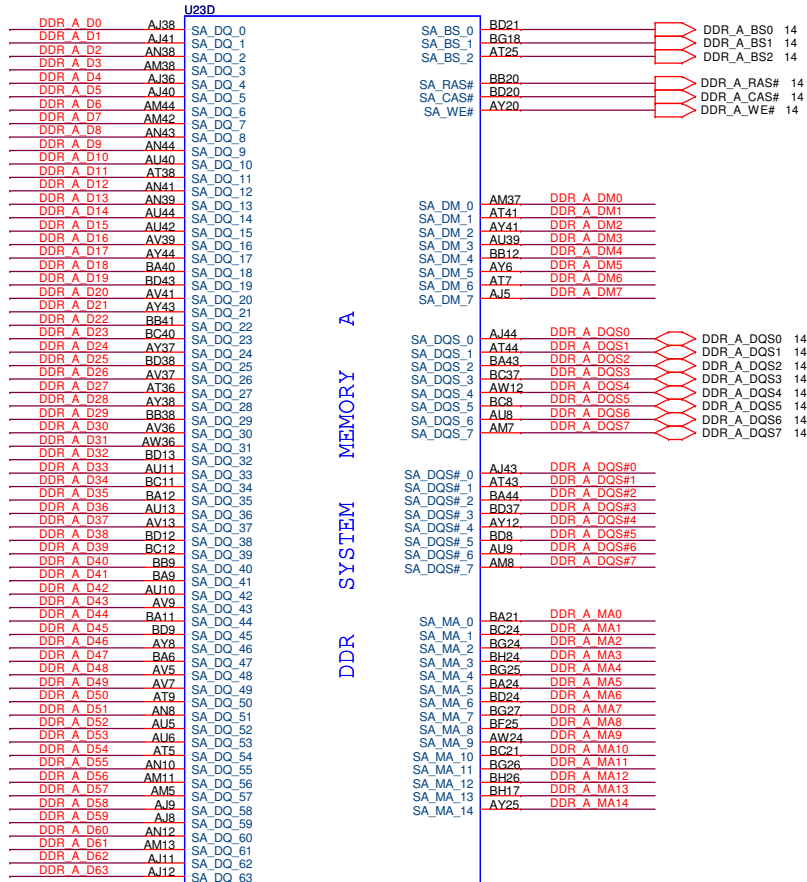
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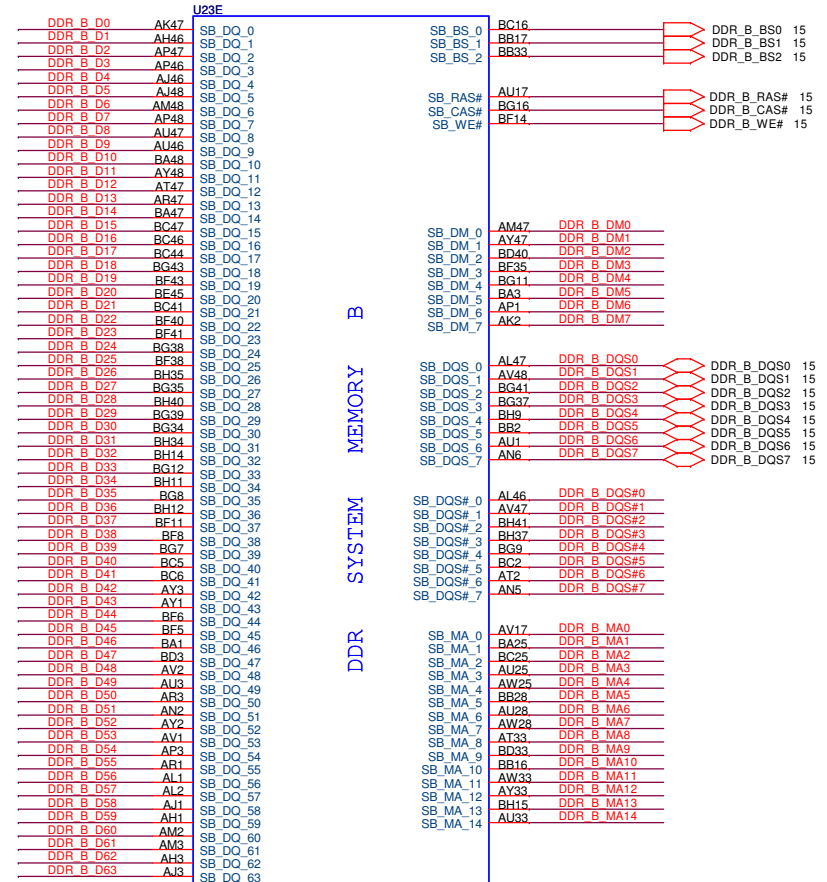


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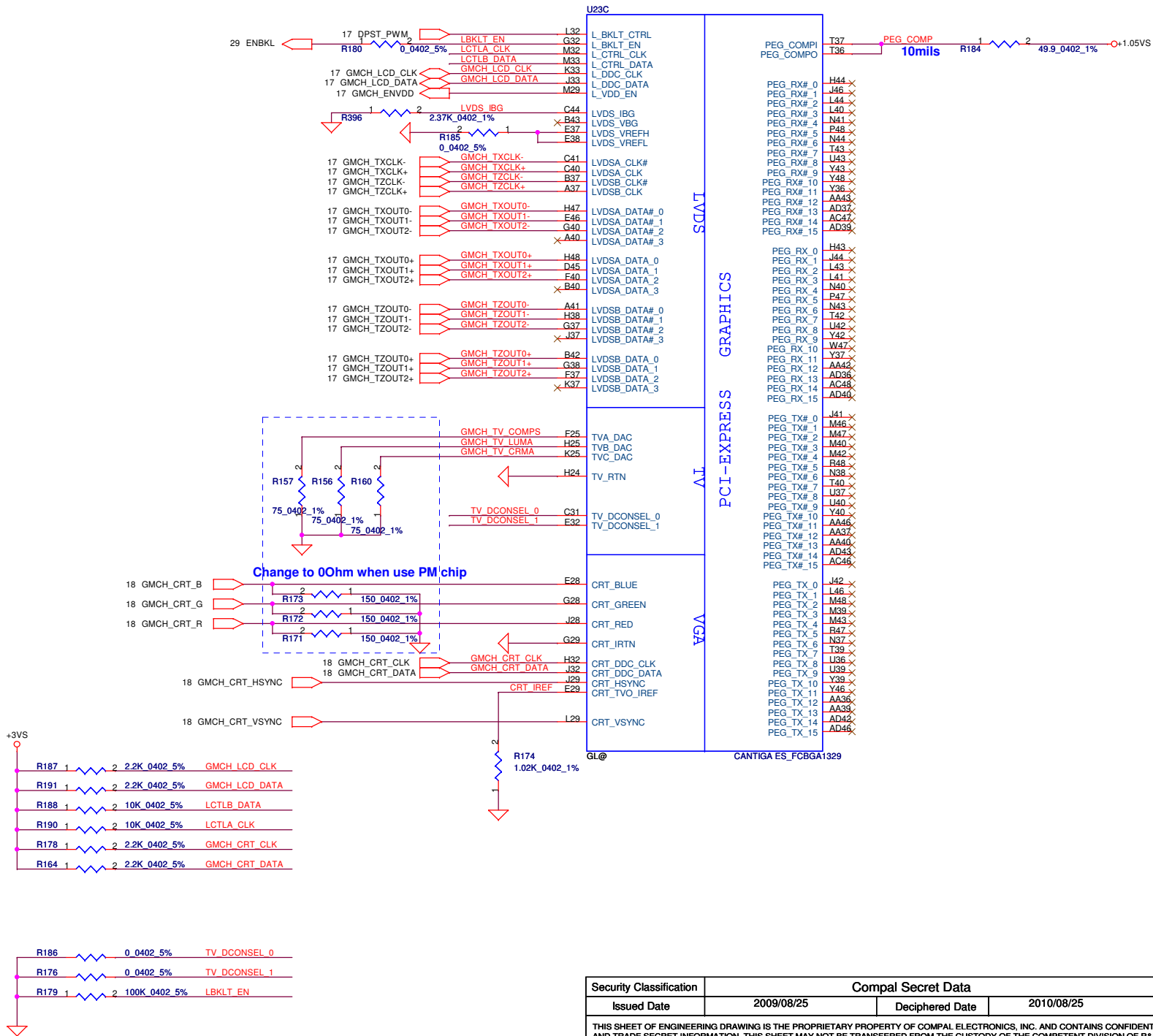


GM@ CANTIGA ES_FCBGA1329

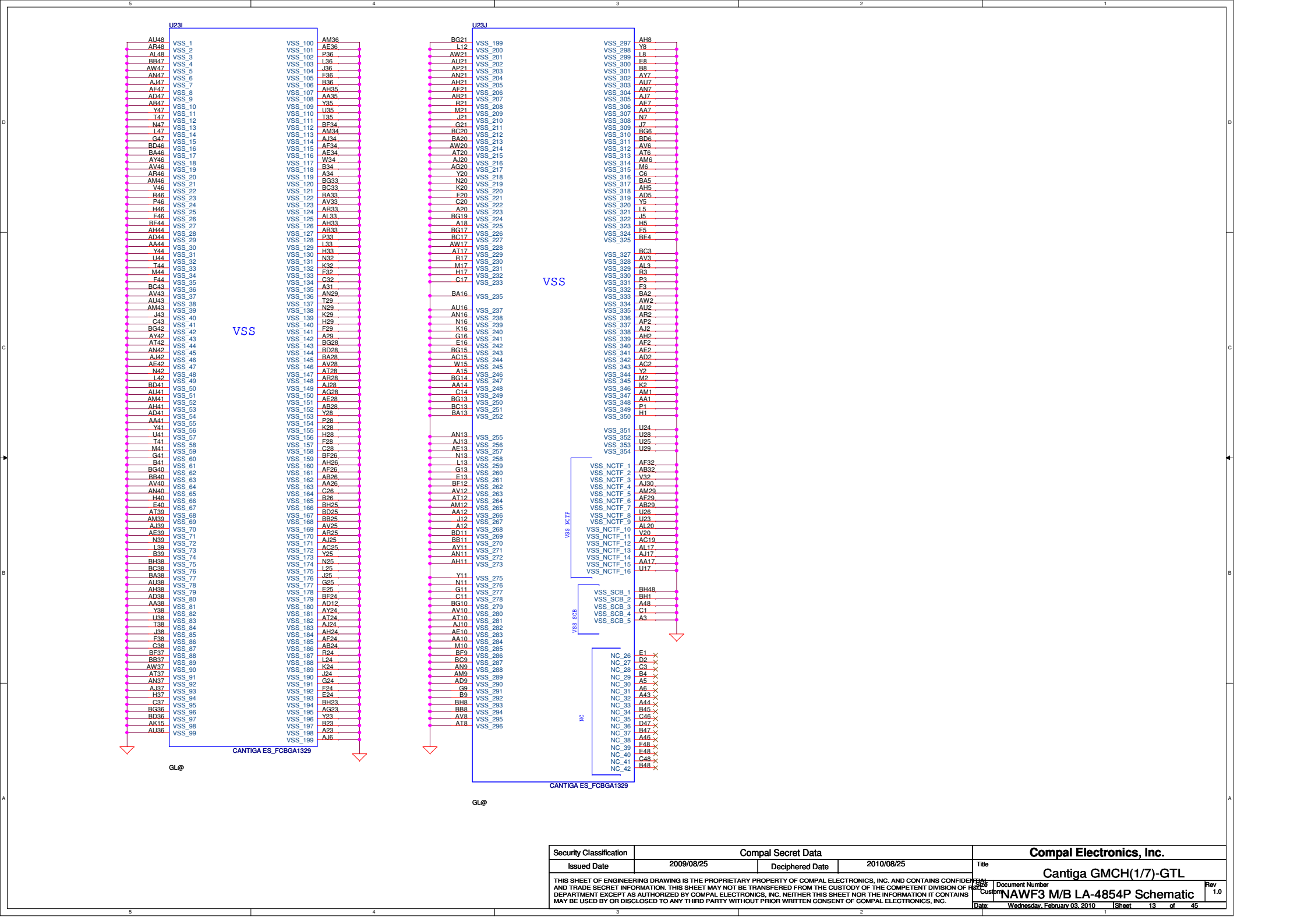


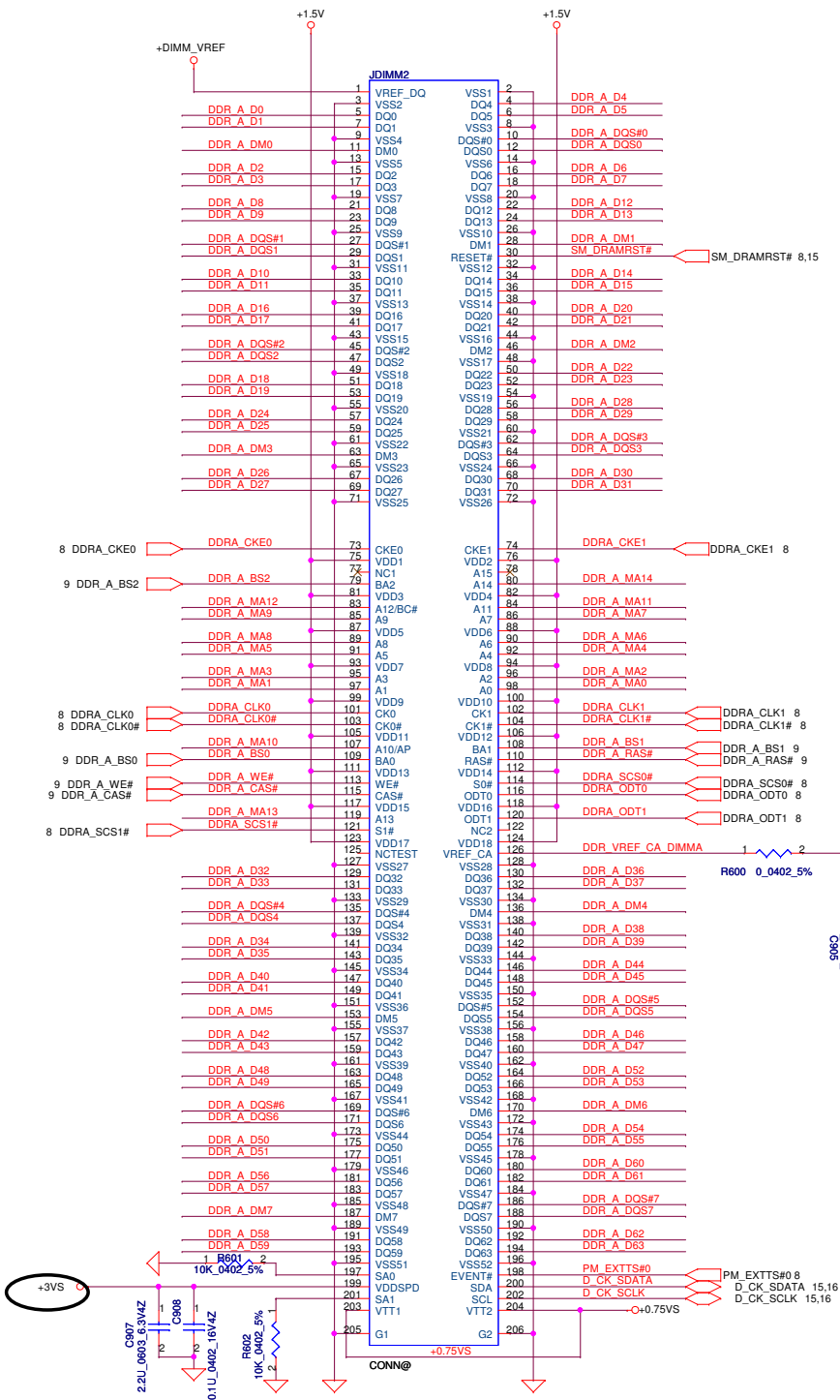
GM@ CANTIGA ES_FCBGA1329

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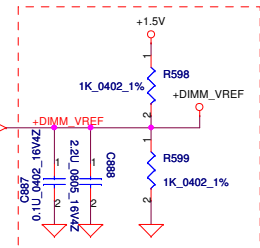
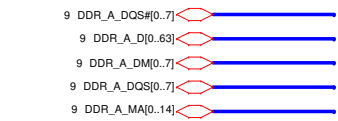


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						Size		Document Number		Rev	
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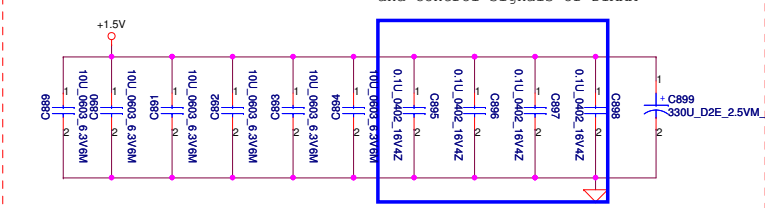


DIMM0 REV H:5.2mm (BOT)

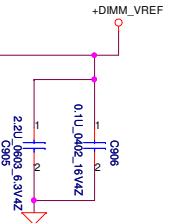
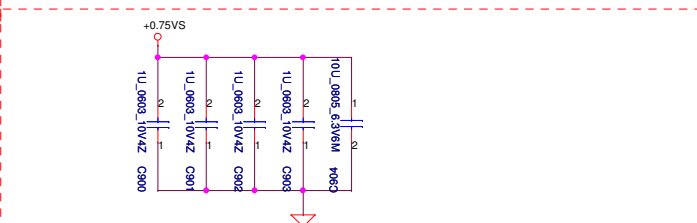


Layout Note:
Place near JDIMM2

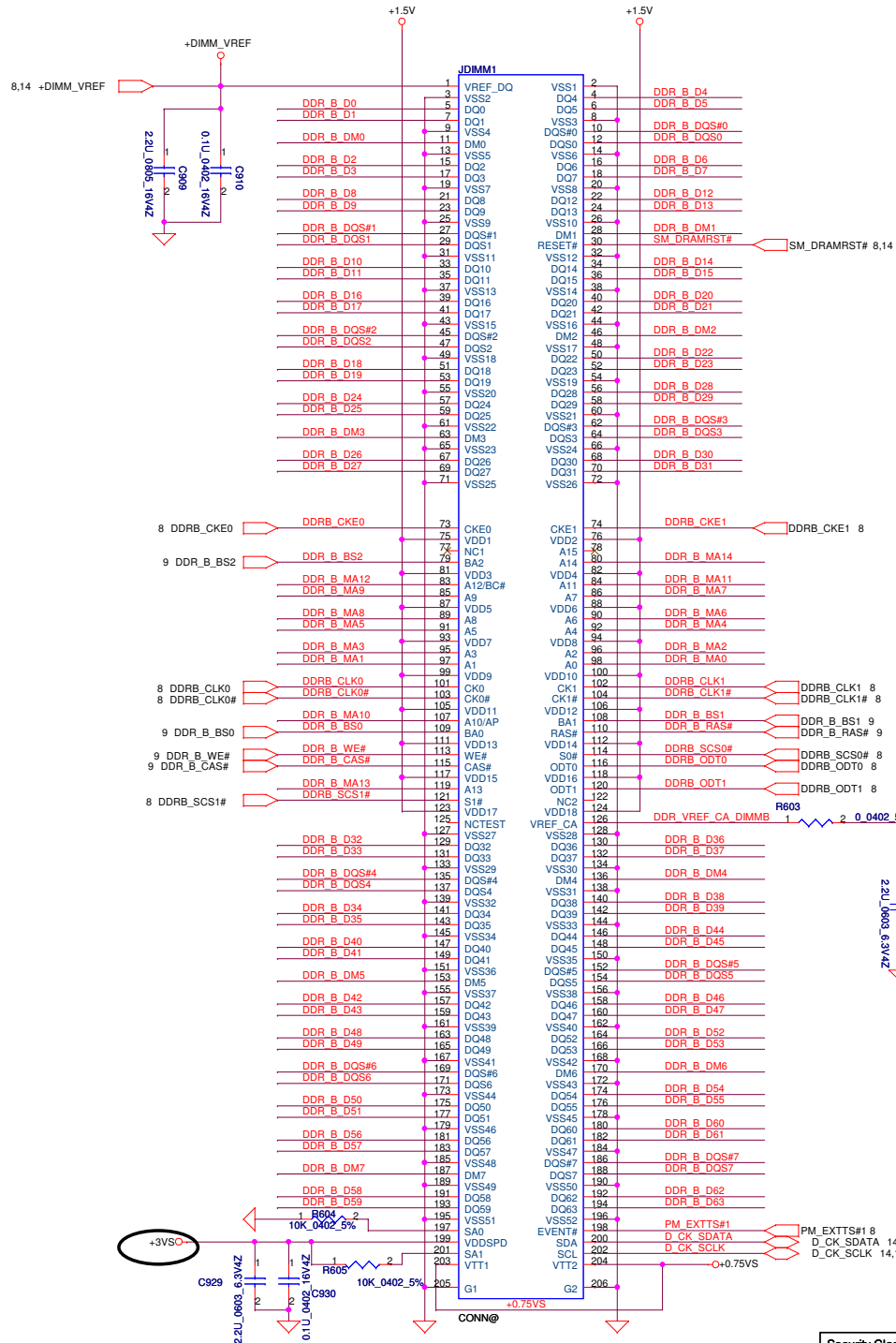
Layout Note: Place these 4 Caps near Command and Control signals of DIMM



Layout Note:
Place near JDIMM2.203 & JDIMM2.204



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DIMM1 REV H:9.2mm (BOT)

Layout Note:
Place near JDIMM1

Layout Note: Place these 4 Caps near Command and Control signals of DIMMA

Layout Note:
Place near JDIMM1.203 & JDIMM1.204

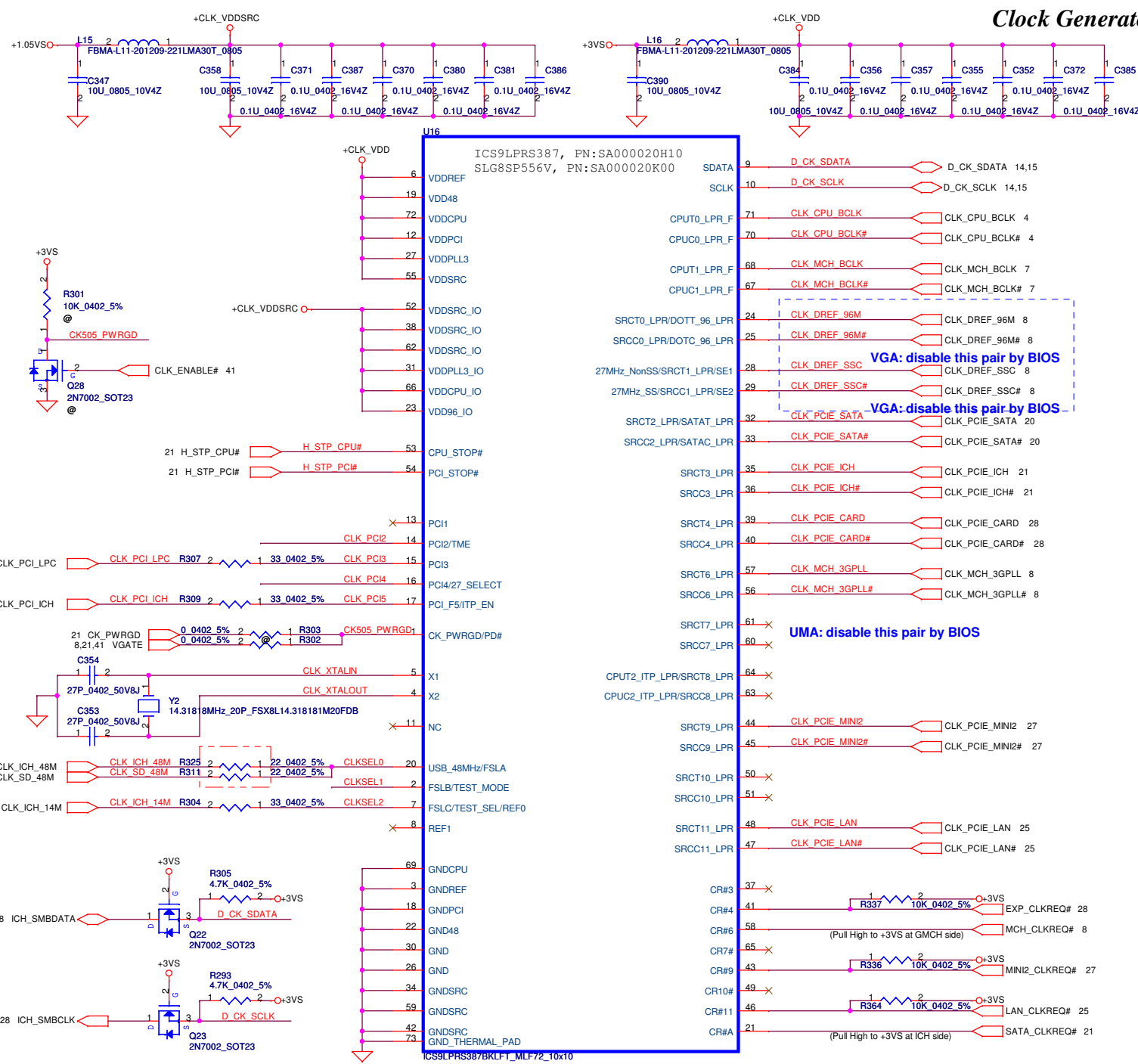
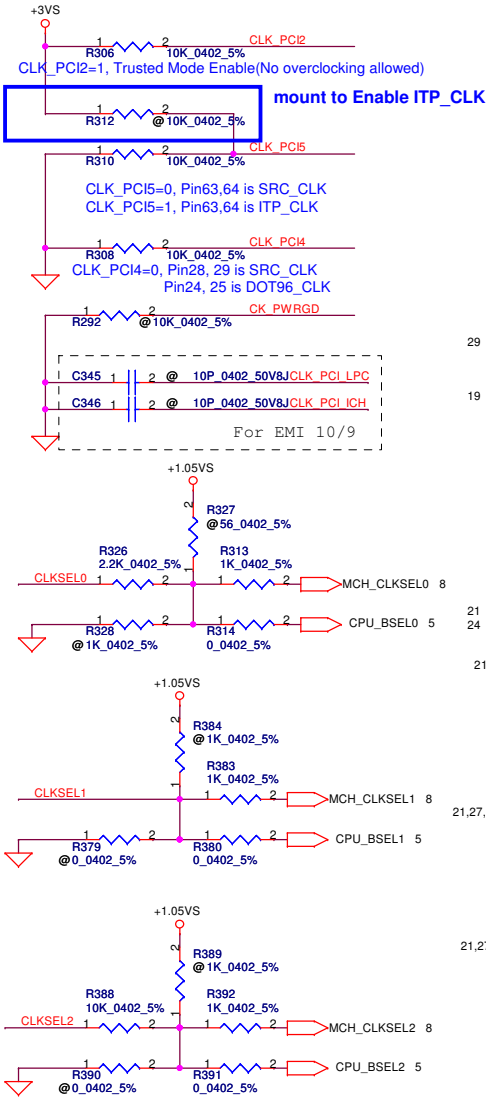
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FSLC	FSLB	FSLA	CPU MHz	SRC MHz	PCI MHz
CLKSEL2	CLKSEL1	CLKSEL0			
0	0	0	266	100	33.3
0	1	0	200	100	33.3
0	1	1	166	100	33.3

Table : ICS9LPRS387

CLK_REQ#	Control	Free-Run
CR#_10(WLAN)	PCIEX10	PCIEX0
CR#_6(MCH)	PCIEX6	PCIEX1
CR#_4(NEW CARD)	PCIEX4	
CR#_9(MINI CARDII)	PCIEX9	

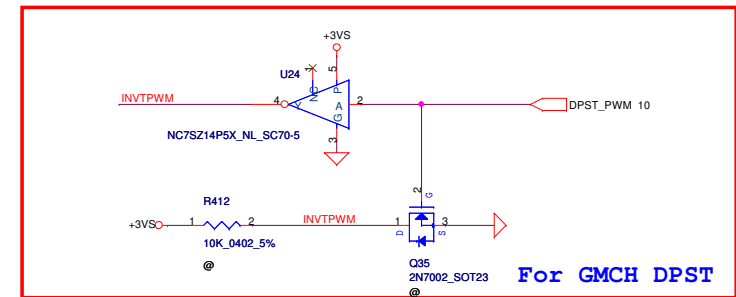
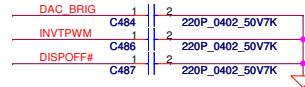
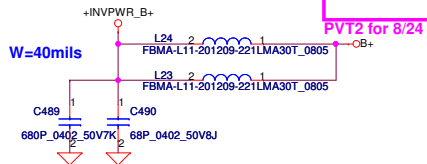
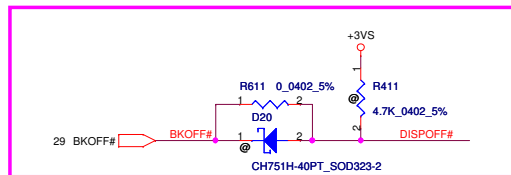
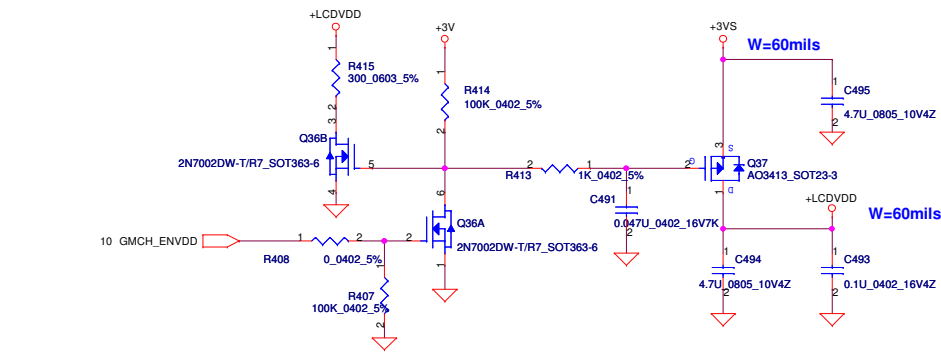
SRC7(VGA_CLK): Discrete VGA[Enable] UMA[Disable]



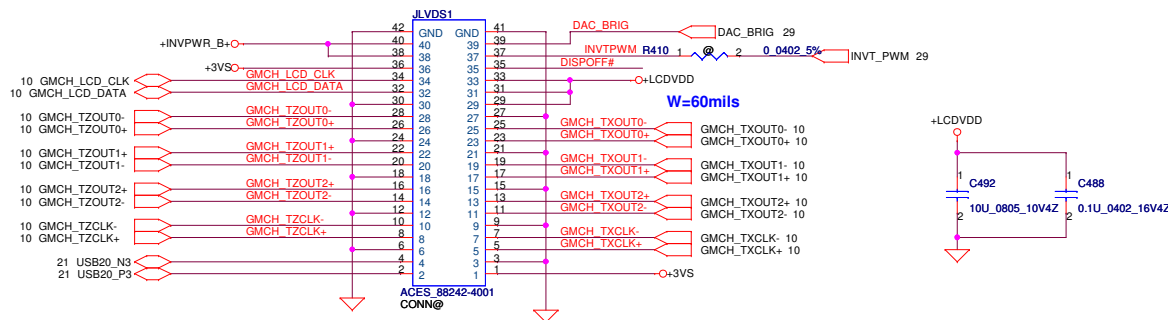
Clock Generator

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LCD POWER CIRCUIT

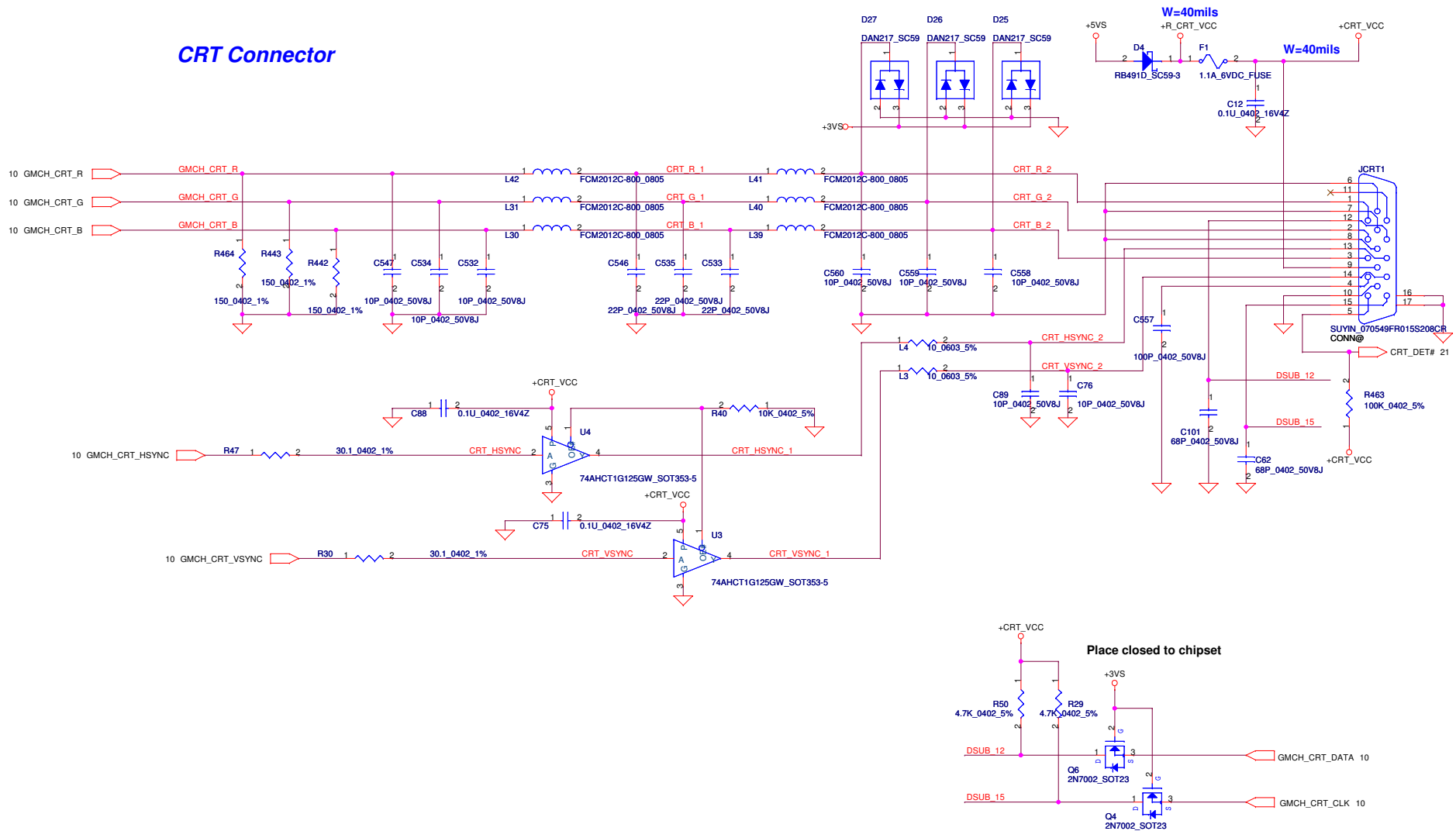


LCD/PANEL BD. Conn.

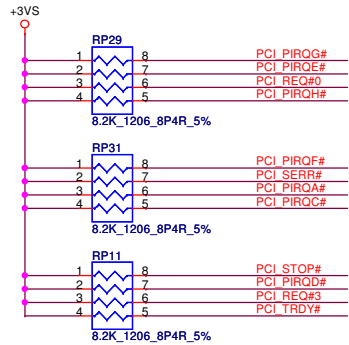
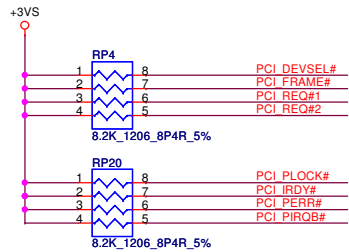


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CRT Connector

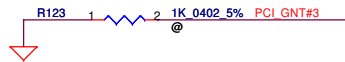


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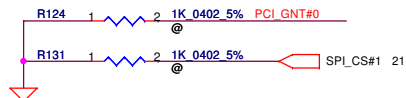


A16 Swap Override Strap

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

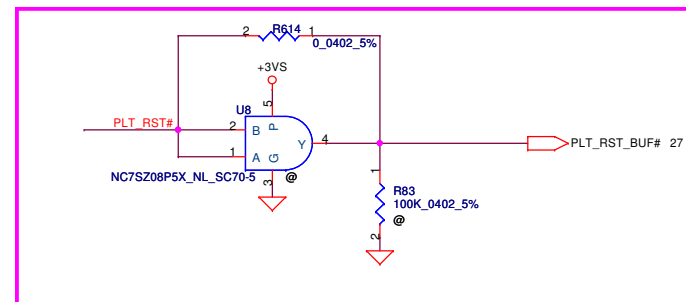
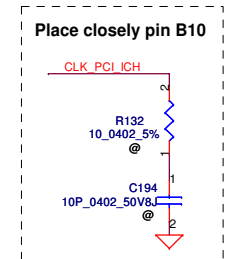
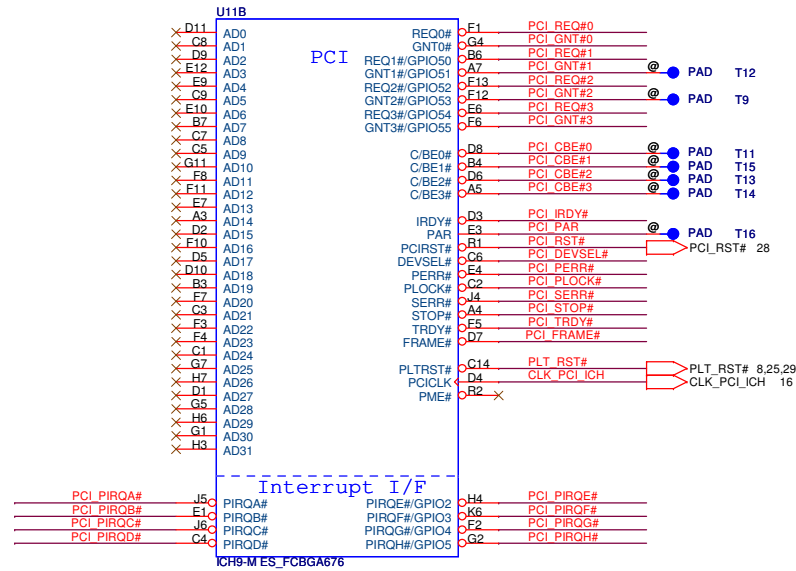


Boot BIOS Strap		
PCI_GNT#0	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC*



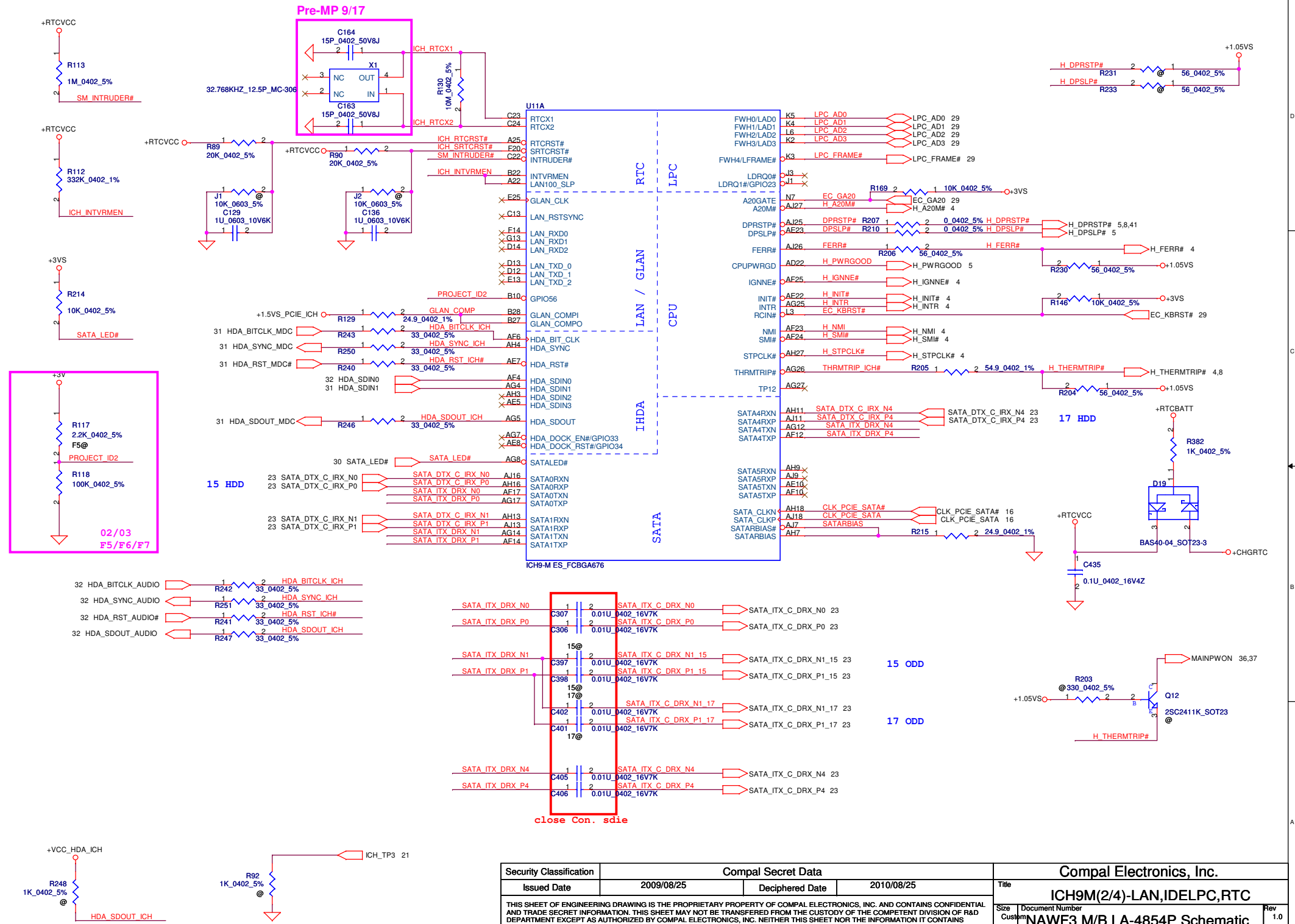
DMI for ESI-compatible operation

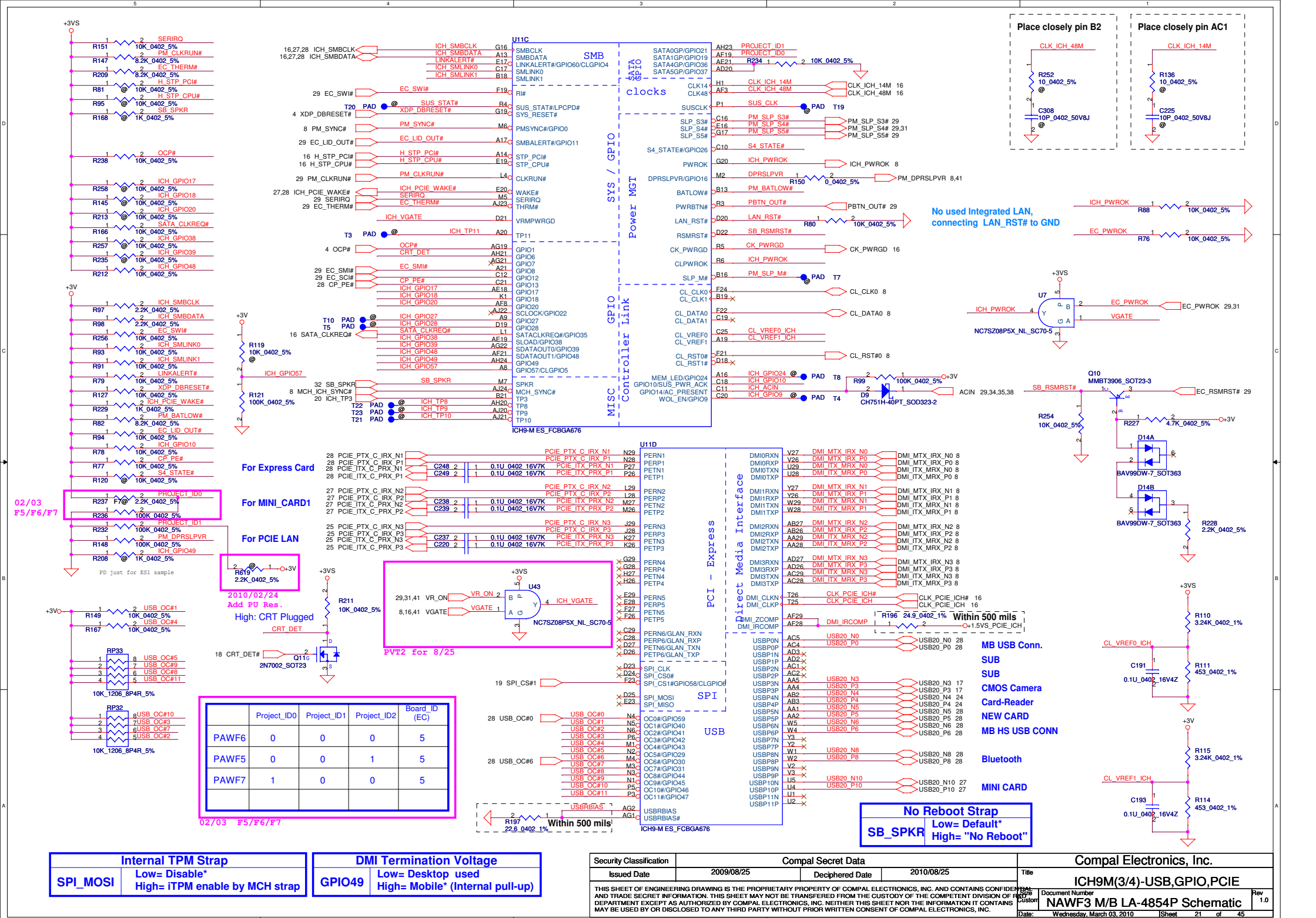
PCI_GNT#1 Low= DMI for ESI-compatible operation
High= Default* (Internal pull-up)

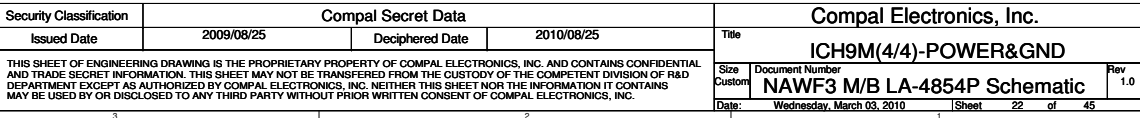


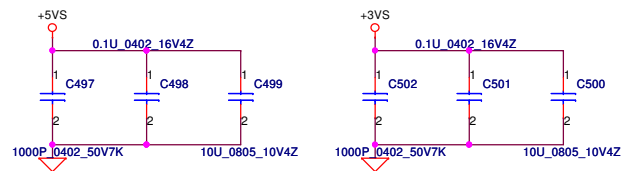
PVT2 8/24

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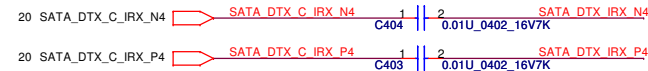
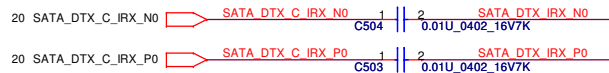
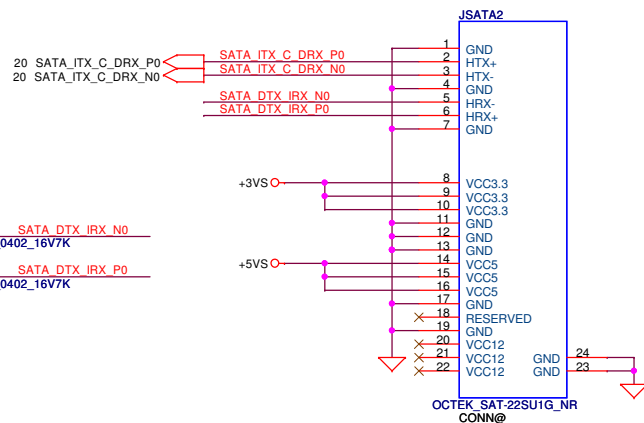




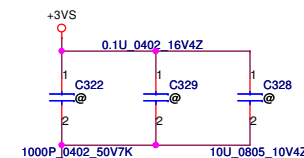
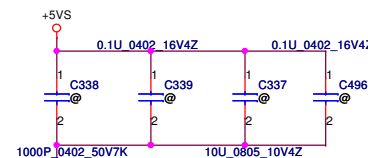
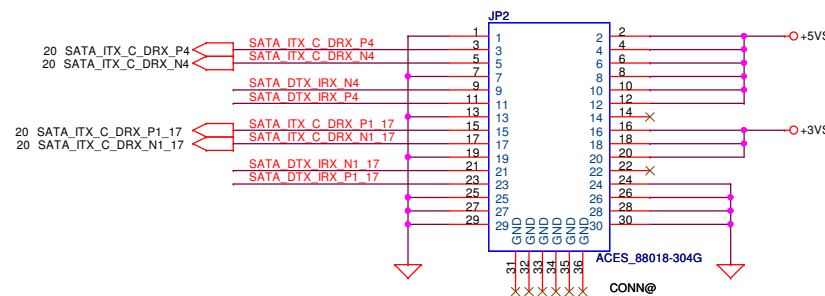
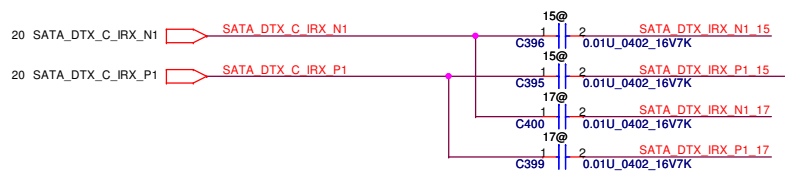
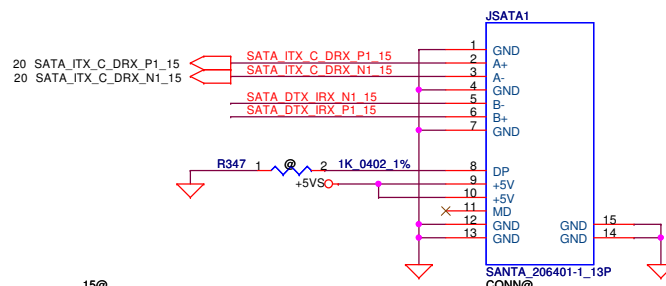
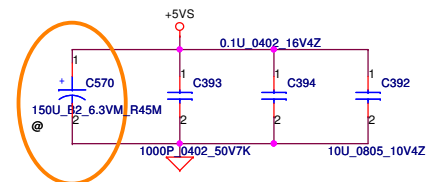




SATA HDD Conn.

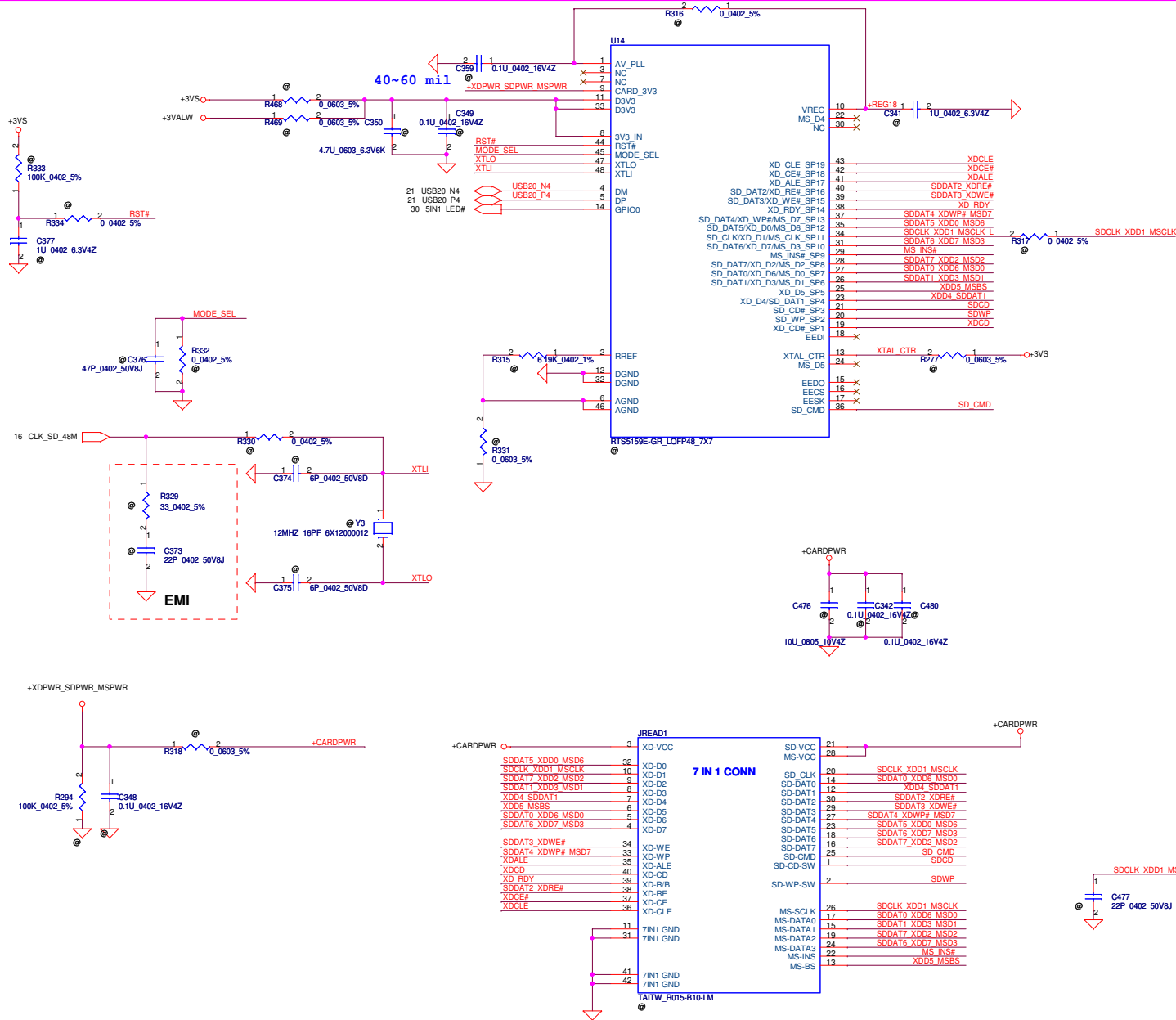


SATA ODD Conn.



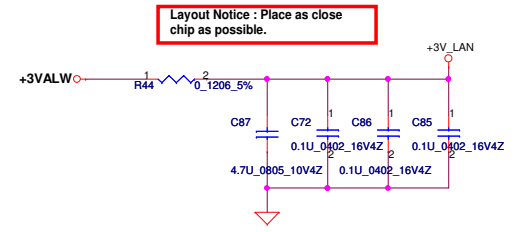
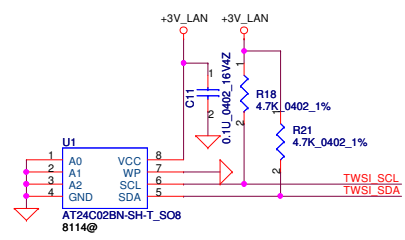
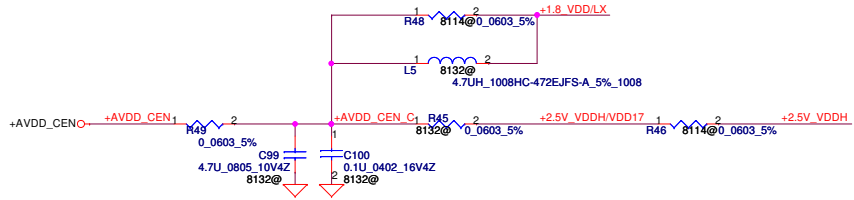
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Vender suggestion

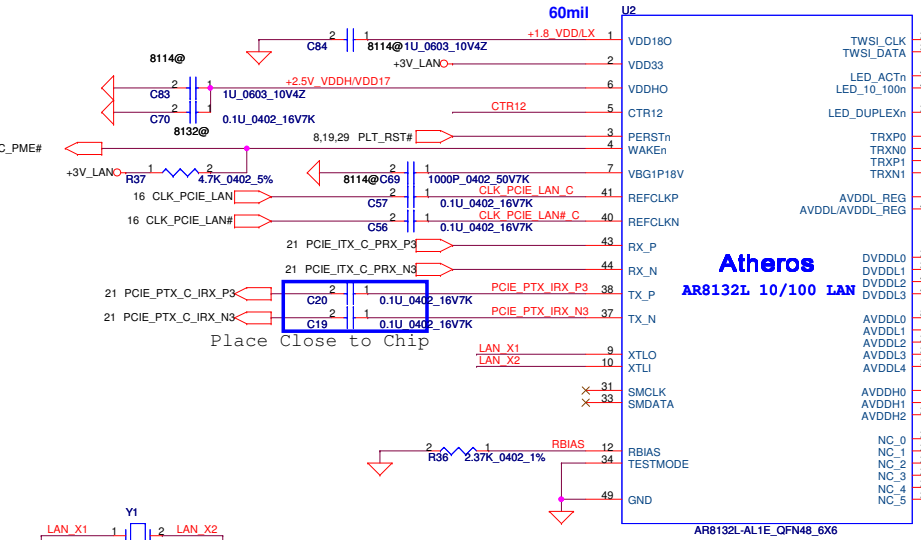


02/03 F5/F6/F7
remove Card reader

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Issued Date	2009/08/25	Deciphered Date	2010/08/25	5 in 1 Card reader	
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				Custom	1.0
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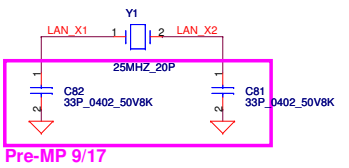


Layout Notice : Place as close chip as possible.

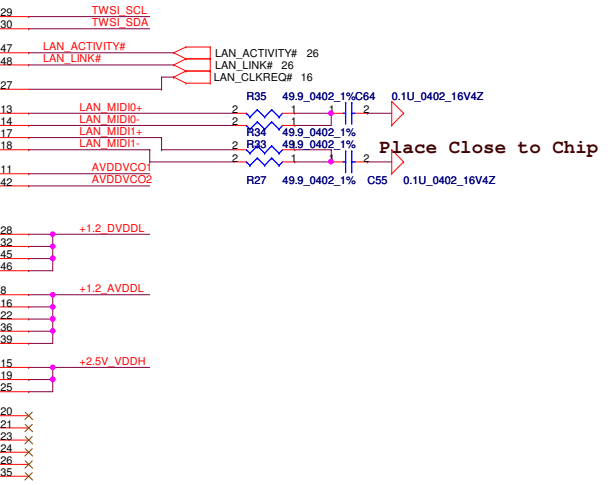


Atheros
AR8132L 10/100 LAN

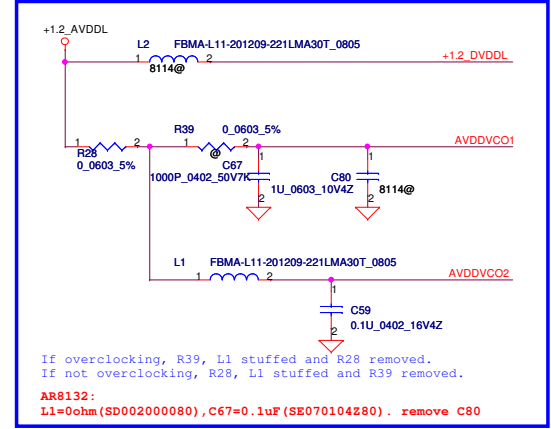
AR8132L-AL1E-QFN48_6X6



Pre-MP 9/17

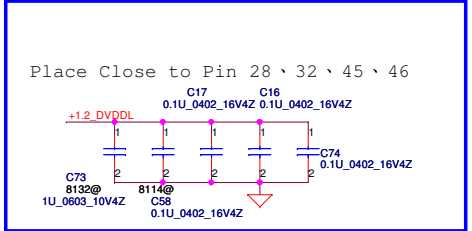


Place Close to Chip

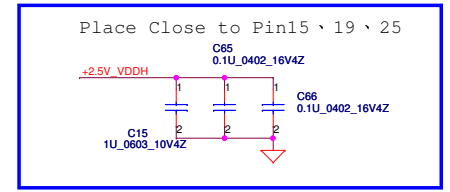


If overclocking, R39, L1 stuffed and R28 removed.
If not overclocking, R28, L1 stuffed and R39 removed.

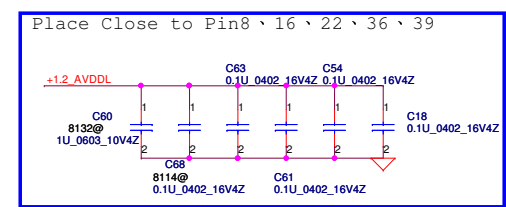
AR8132:
L1=0ohm(SD002000080), C67=0.1uF(SE070104Z80). remove C80



Place Close to Pin 28、32、45、46

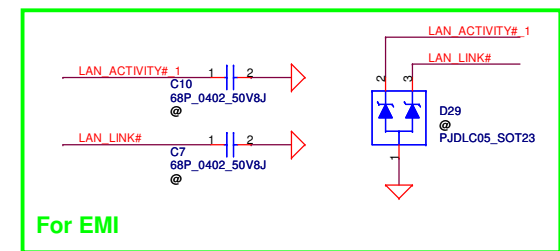
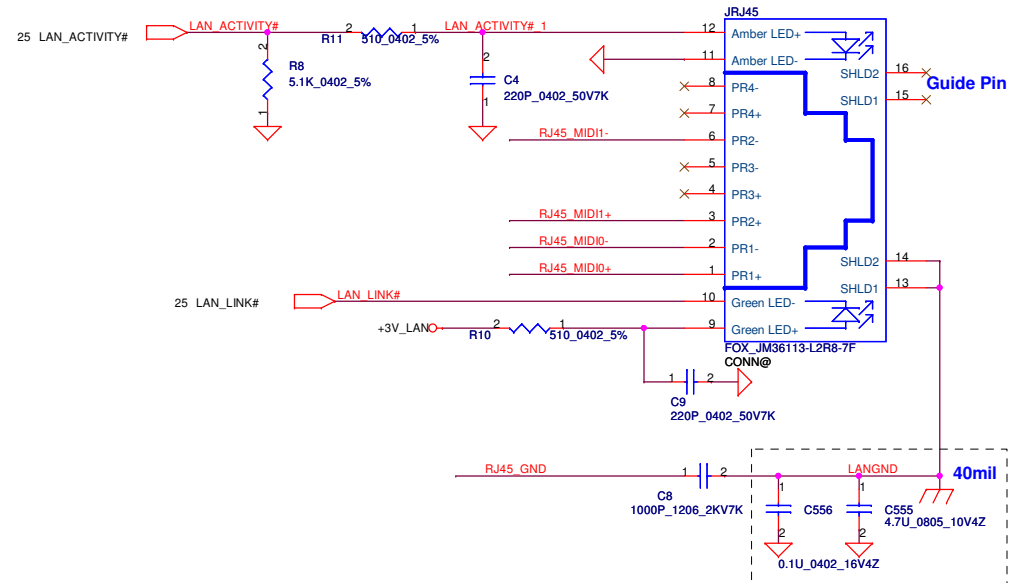
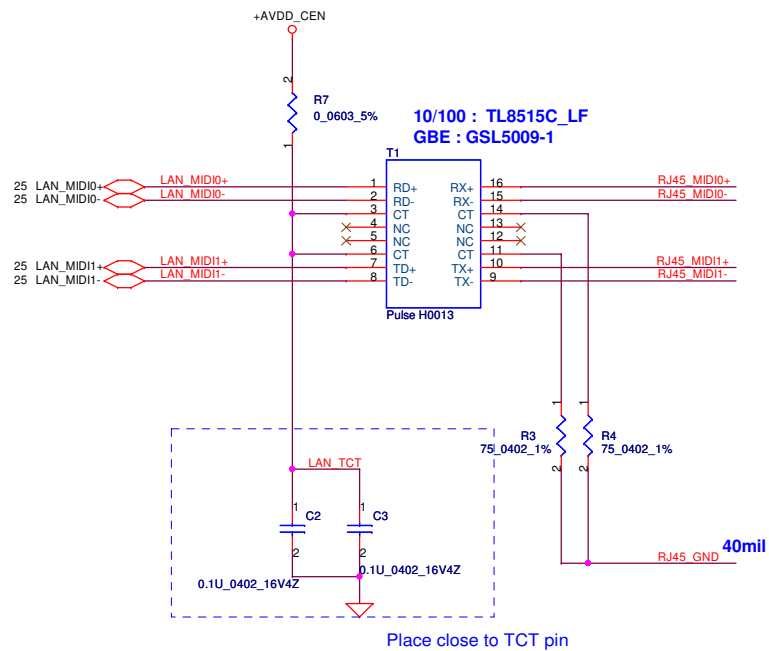


Place Close to Pin15、19、25



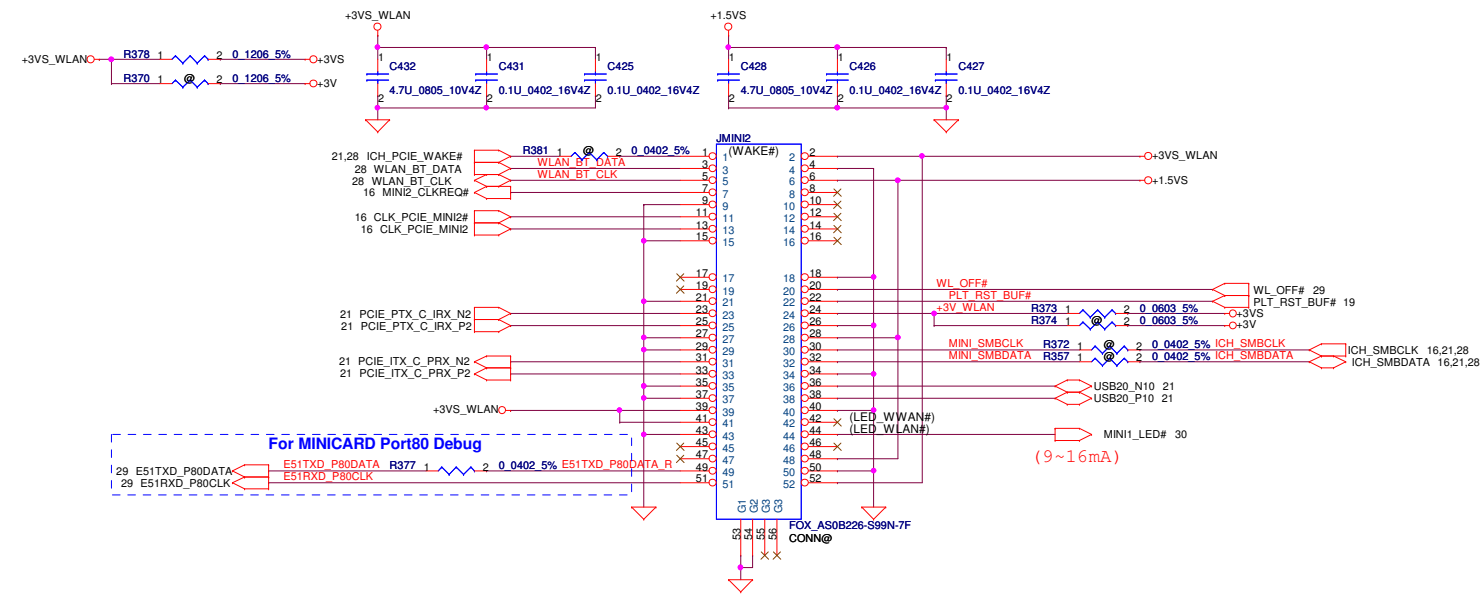
Place Close to Pin8、16、22、36、39

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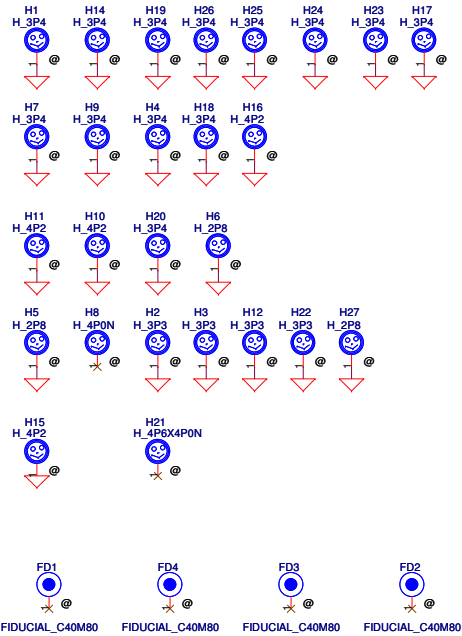


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Size	B	Document Number	NAWF3 M/B LA-4854P Schematic		Rev
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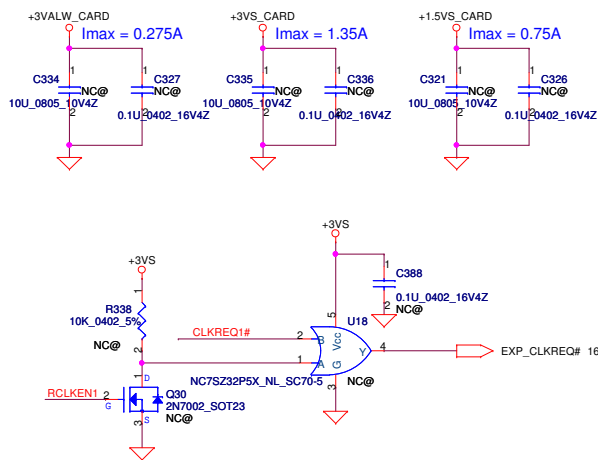
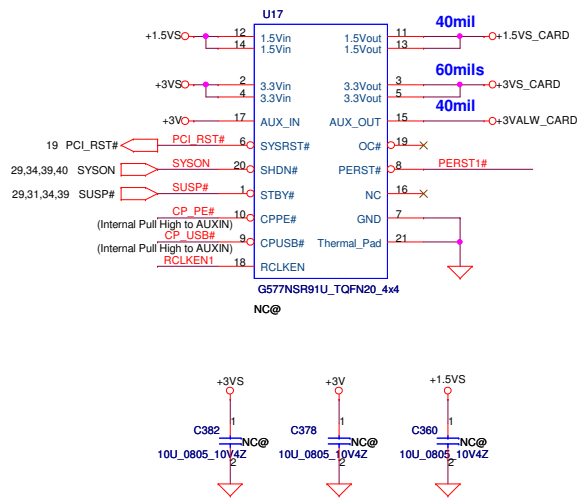
For Wireless LAN



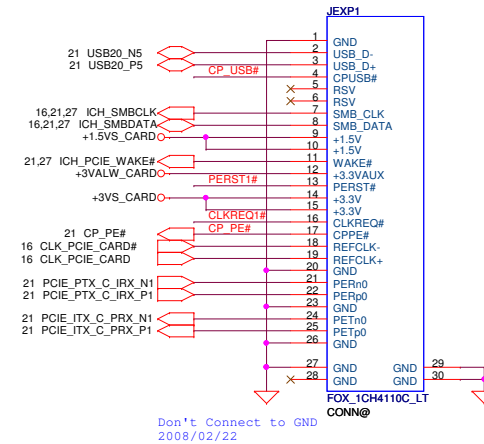
Mini Card Power Rating			
Power	Primary Power (mA)		Auxiliary Power (mA)
	Peak	Normal	Normal
+3VS	1000	750	
+3V	330	250	250 (wake enable)
+1.5VS	500	375	5 (Not wake enable)



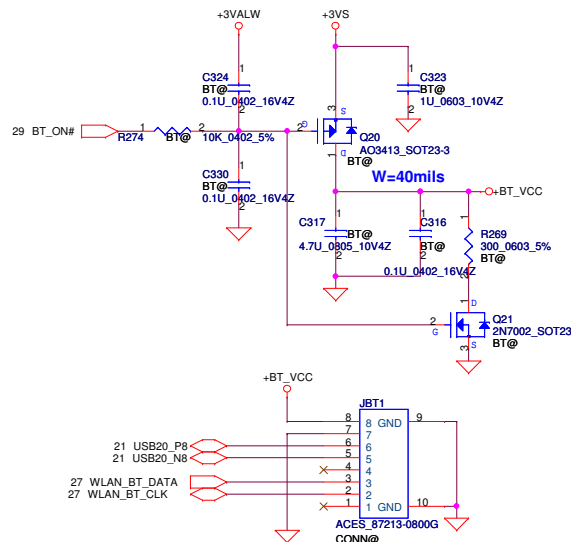
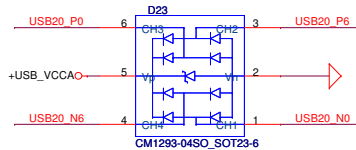
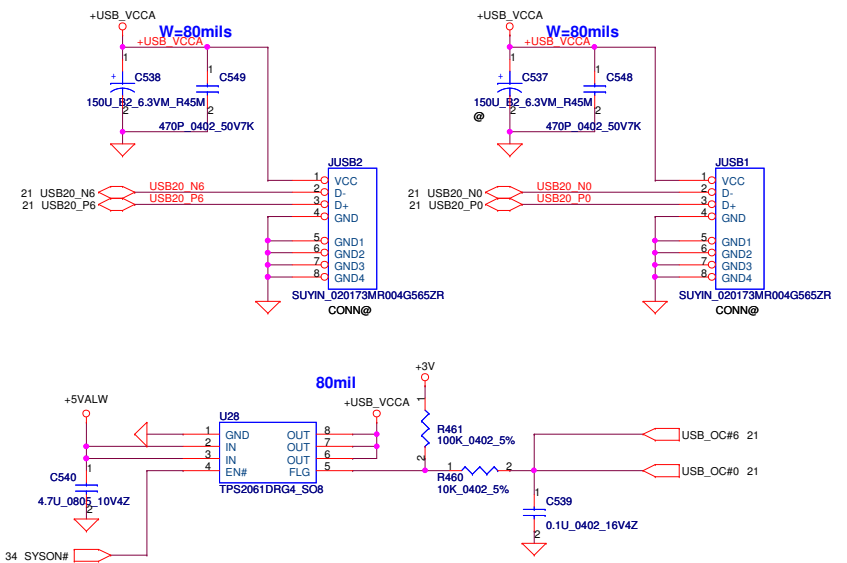
New Card Power Switch



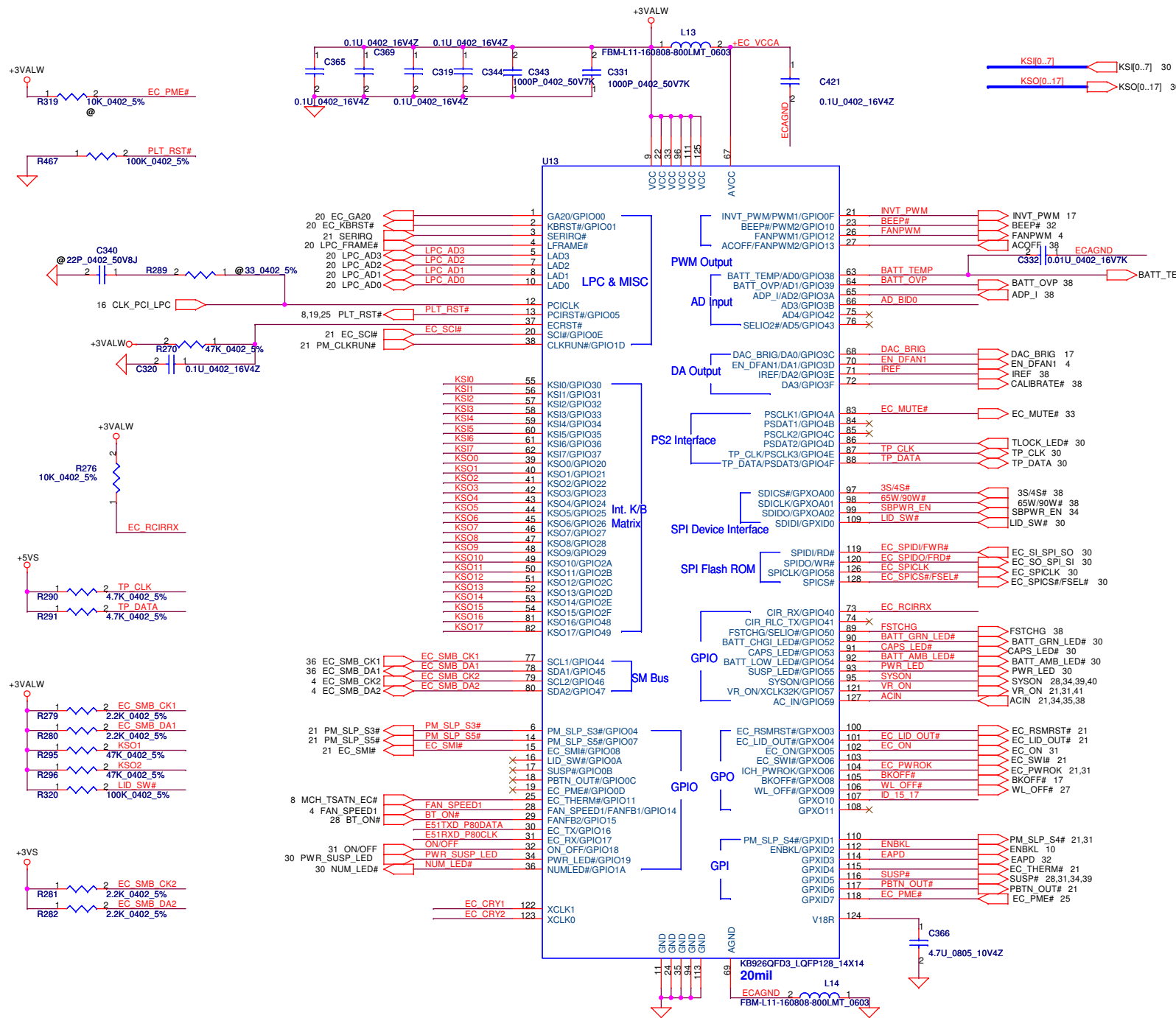
New Card Socket (Left/TOP)

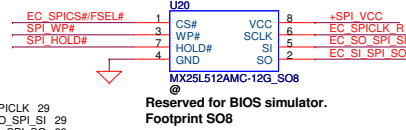
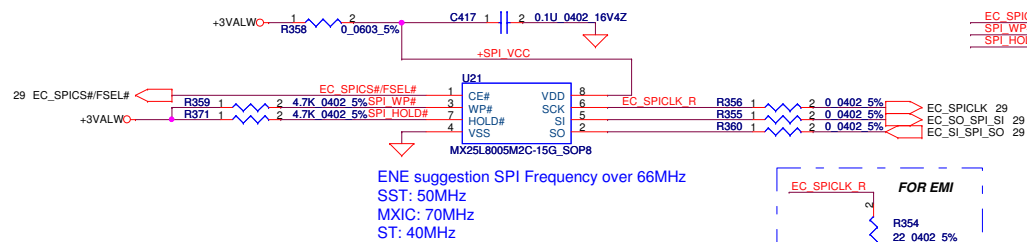


Bluetooth Conn.

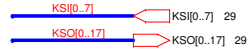
**USB CONN.**

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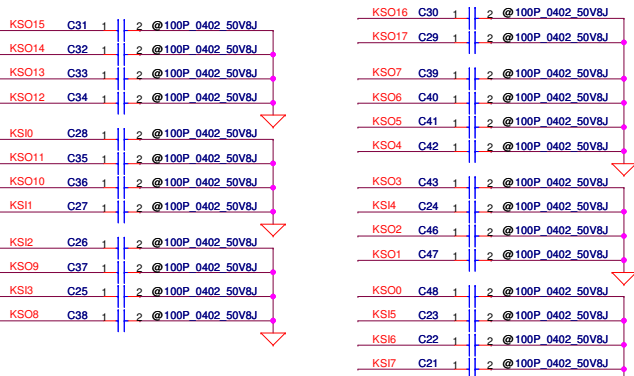
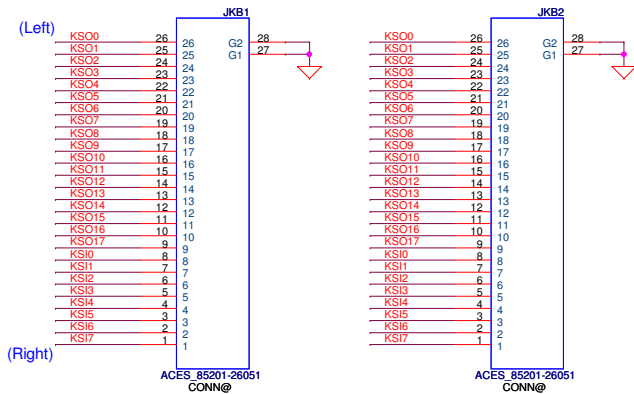


INT_KBD Conn.

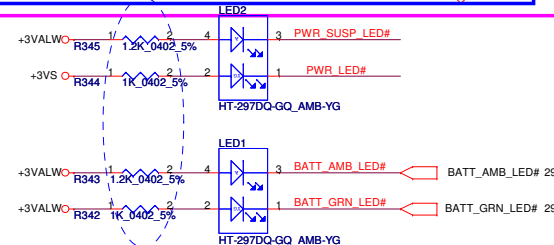
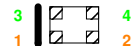


15"

17"

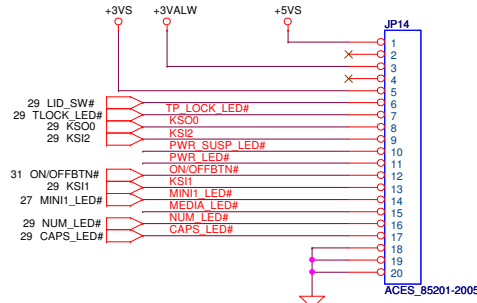


Compal Footprint

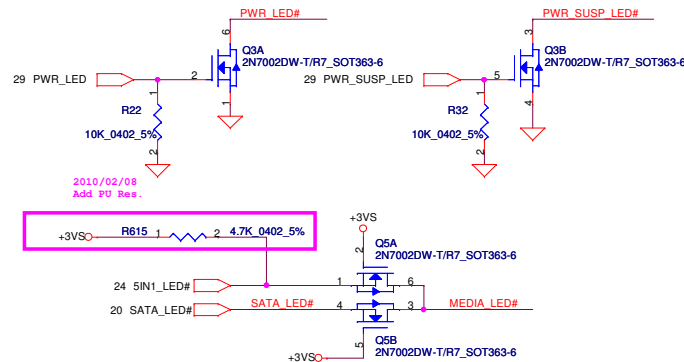


For PVT2

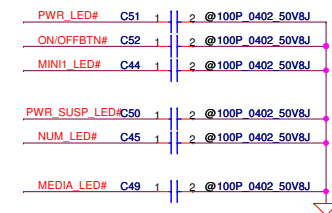
To POWER/B



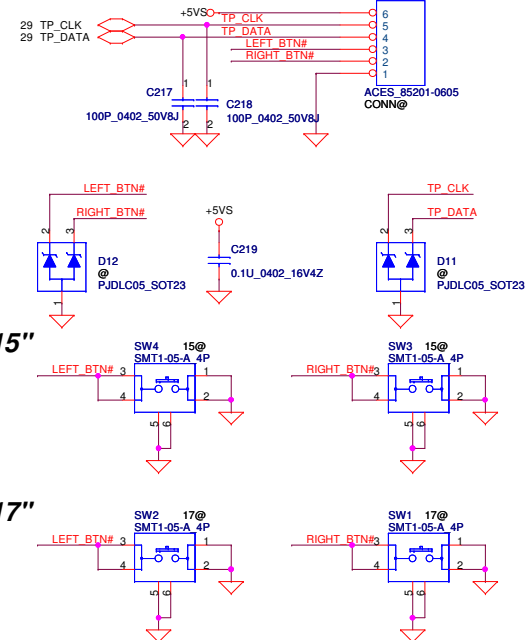
	KSO0
KSI1	WL_BTN#
KSI2	TLOCK_BTN#
KSI3	
KSI4	
KSI5	



FOR EMI



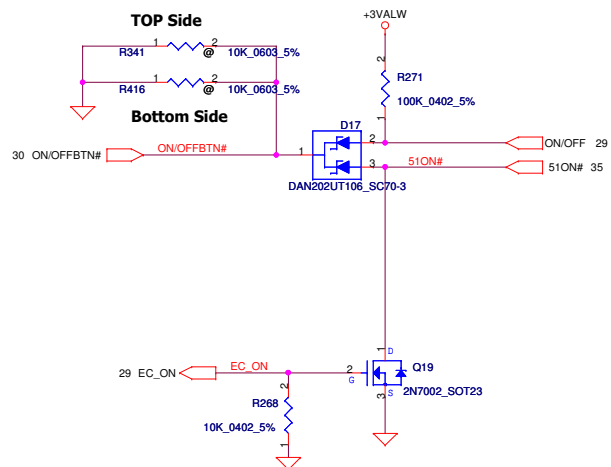
To TP/B Conn.



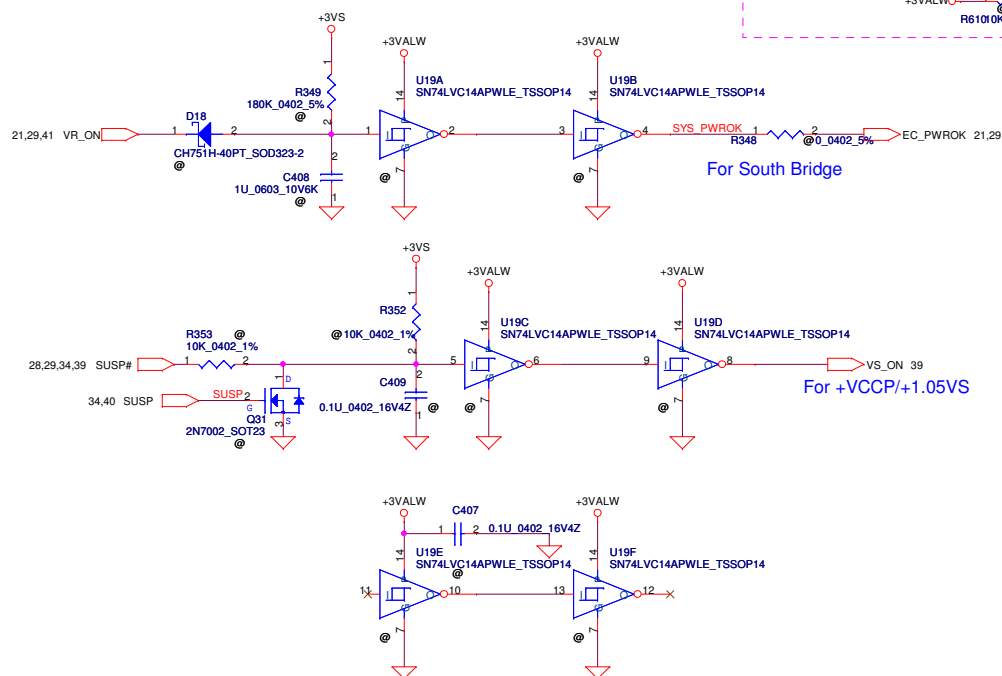
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Power Button

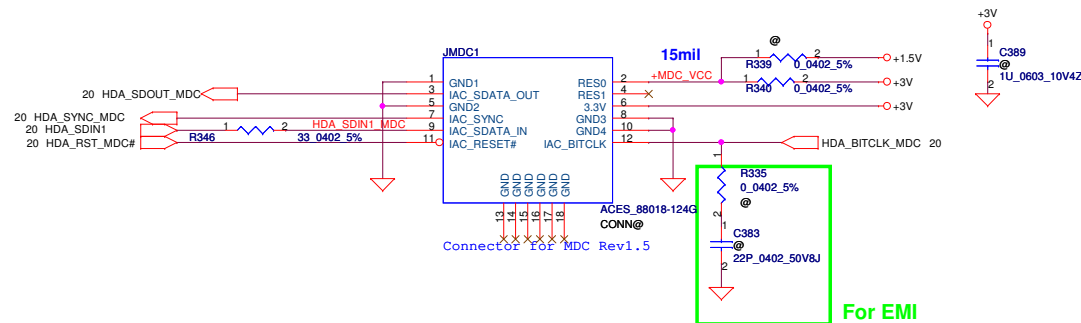
ON/OFF switch



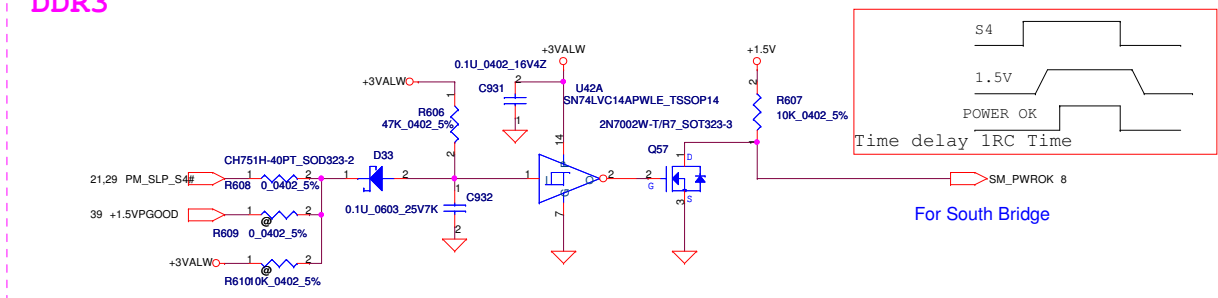
Power ON Circuit



HDA MDC Conn.

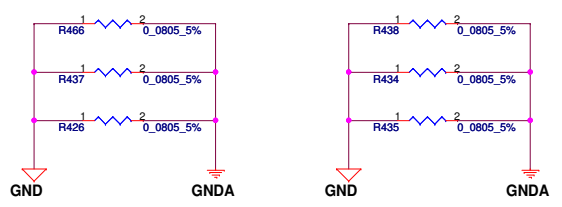


DDR3

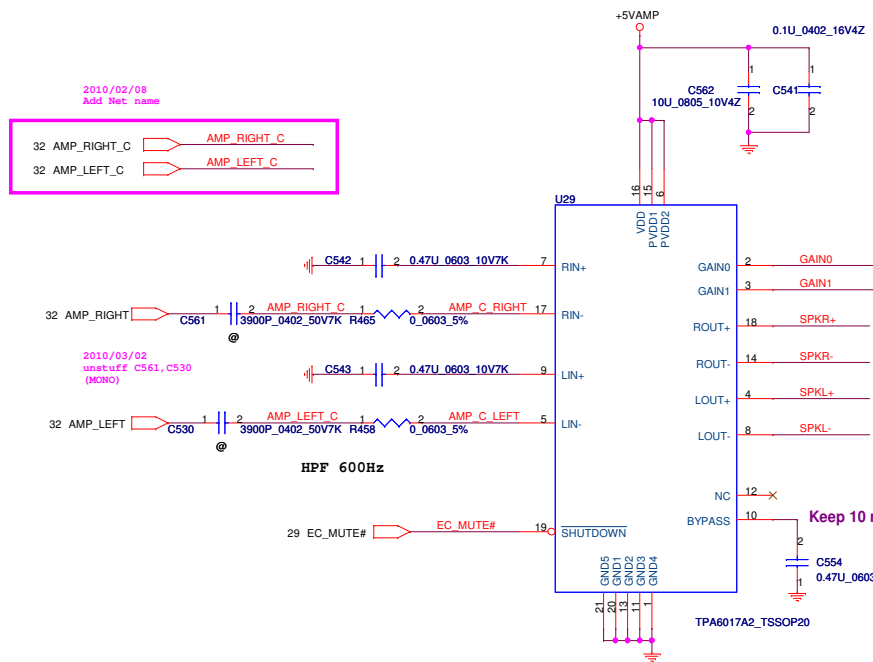


For South Bridge

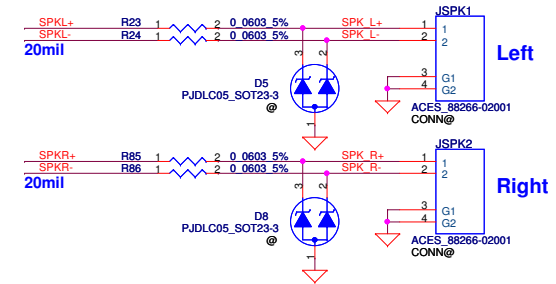
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Issued Date	2009/08/25	Deciphered Date	2010/08/25	Title		
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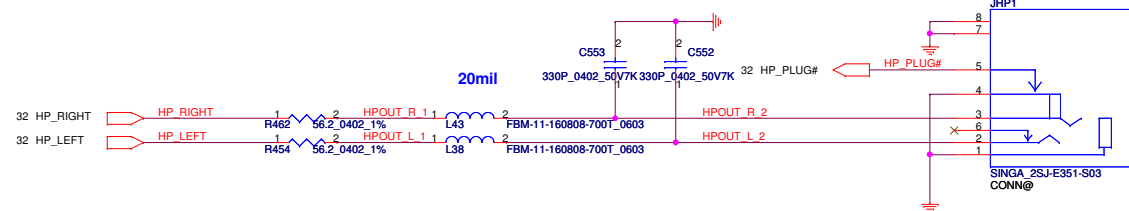
Sense Pin	Impedance	Codec Signals
SENSE A	39.2K	
	20K	PORT-B (PIN 21, 22)
	10K	
	5.1K	
SENSE B	39.2K	
	20K	
	10K	
	5.1K	PORT-H (PIN 32,33)



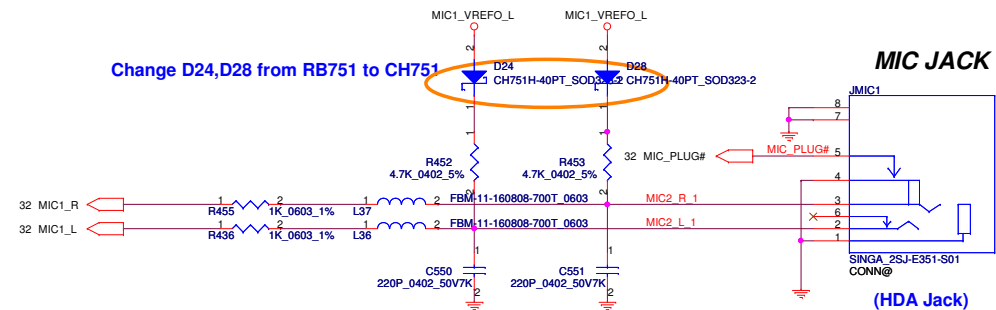
Int. Speaker Conn.



LINE Out/Headphone Out

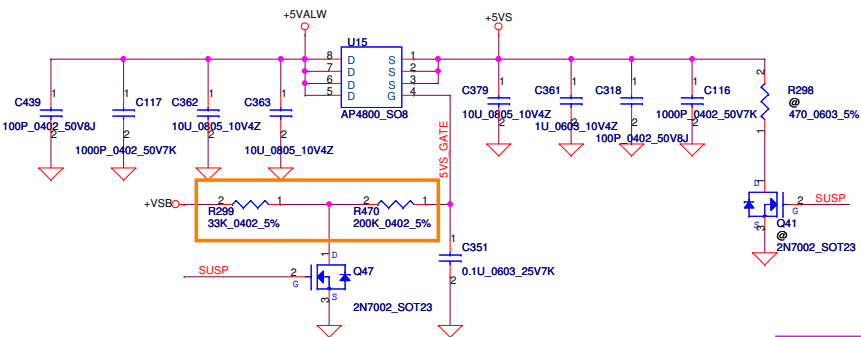


Change D24,D28 from RB751 to CH751

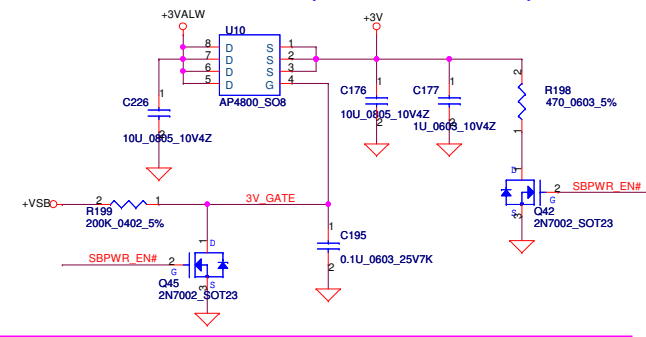


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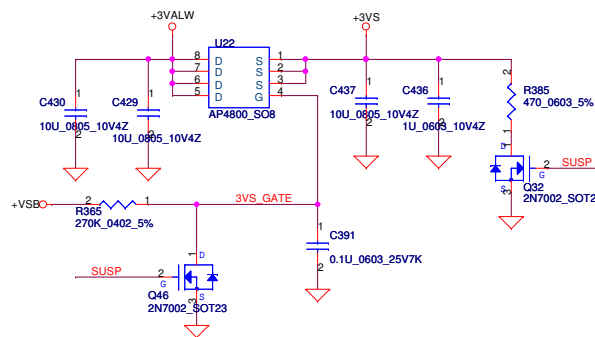
+5VALW TO +5VS



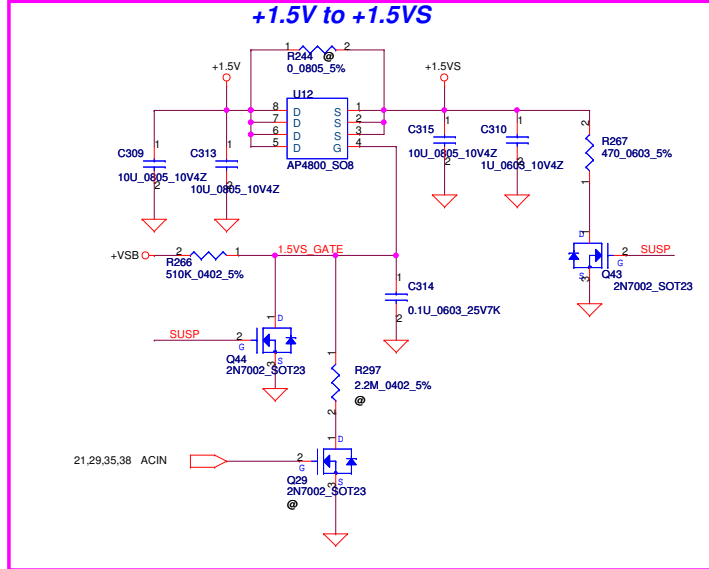
+3VALW TO +3V_SB(ICH8M AUX Power)



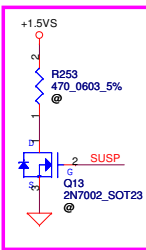
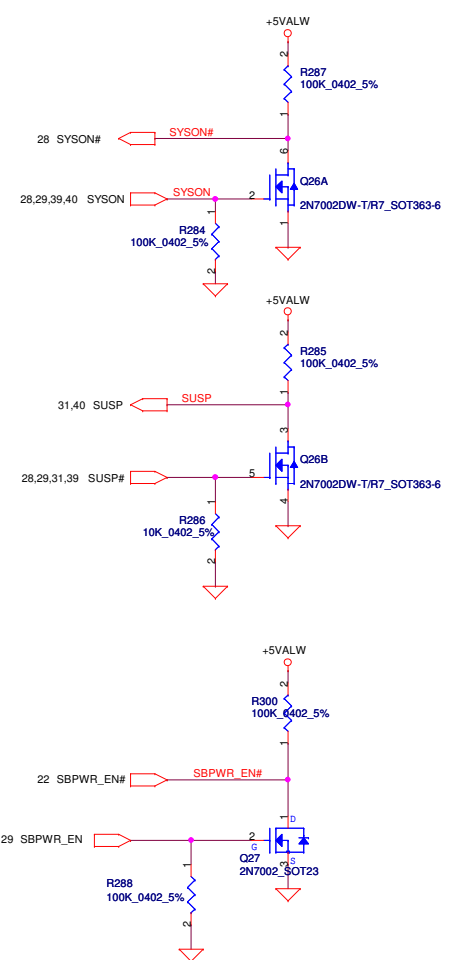
+3VALW TO +3VS



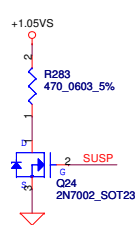
+1.5V to +1.5VS



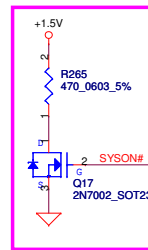
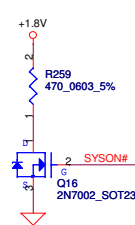
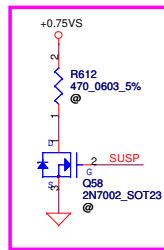
PVT2 for 8/24



PVT2 for 8/24

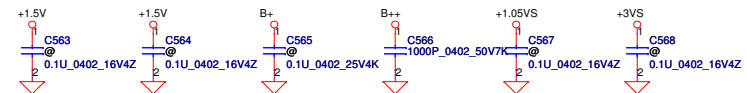


PVT2 for 8/24

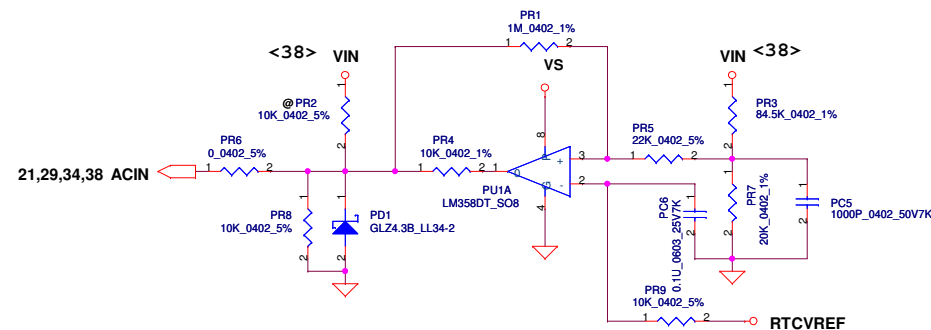
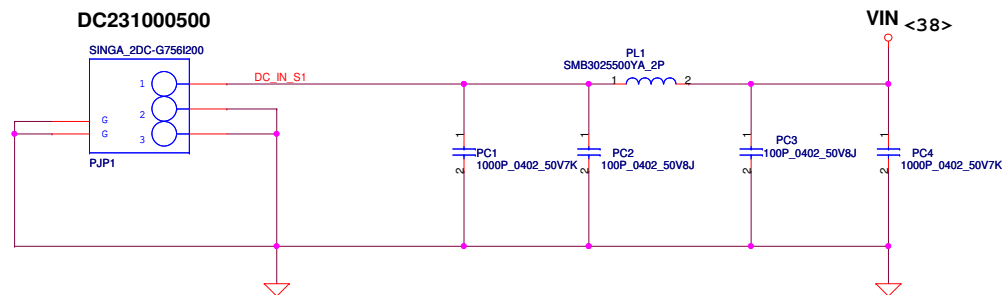


PVT2 for 8/24

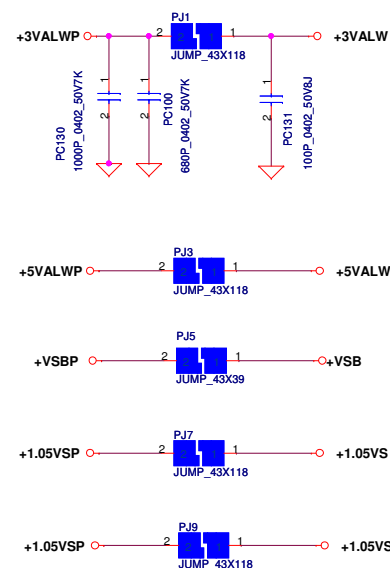
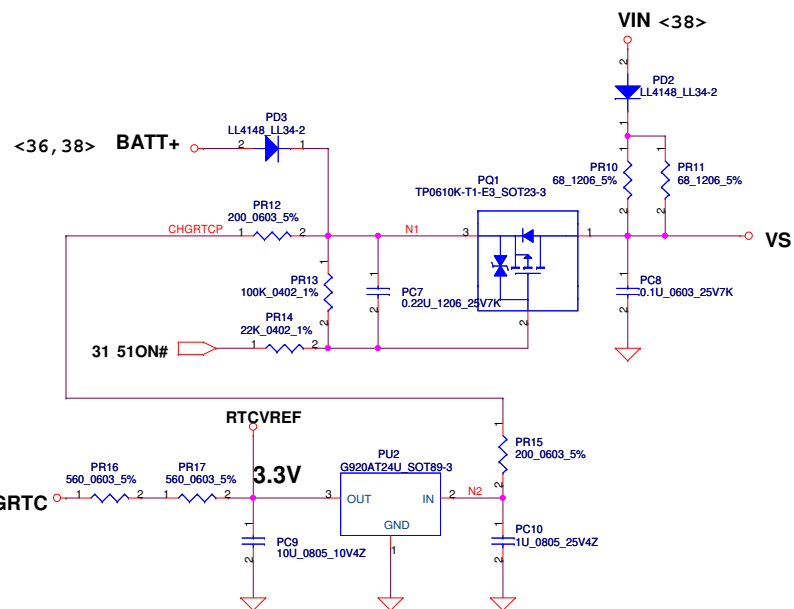
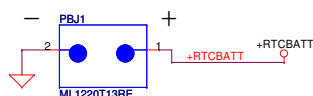
Reserve for EMI request



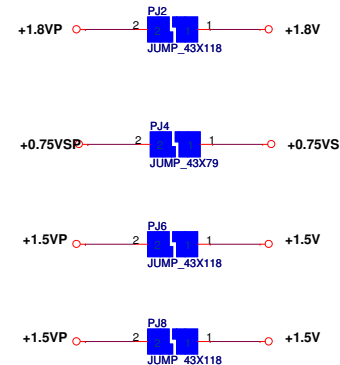
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Issued Date	2009/08/25	Deciphered Date	2010/08/25	Title	
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Vin Dectector			
	Min.	Typ	Max.
H-->L	16.976V	17.525V	17.728V
L-->H	17.430V	17.901V	18.384V



Delete (PJ16/PJ17/PJ18)
1.1VLD0 + VGA_CORE JUMPER



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Size		Document Number		Rev	
Custom		NAWF3 M/B LA-4854P Schematic		1.0	
Date:		Wednesday, March 03, 2010		Sheet 35 of 45	

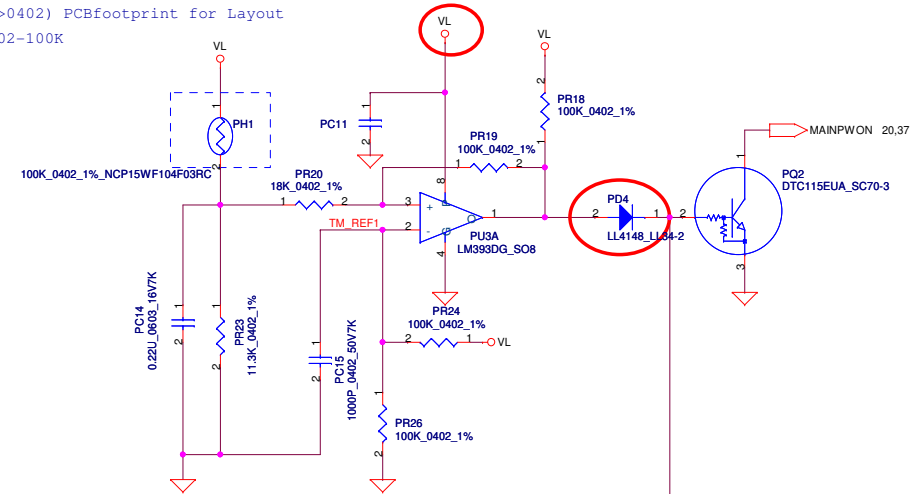
PH1 under CPU botten side :

CPU thermal protection at 90 degree C

Recovery at 70 degree C

2009_08_06 (0603->0402) PCBfootprint for Layout

Change P/N for 0402-100K



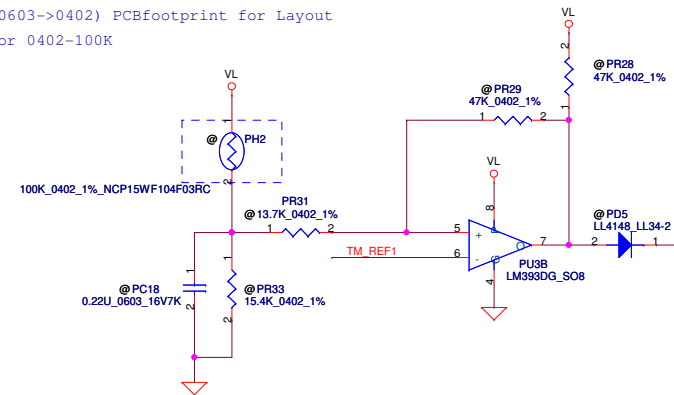
PH2 near main Battery CONN :

BAT. thermal protection at 90 degree C

Recovery at 70 degree C

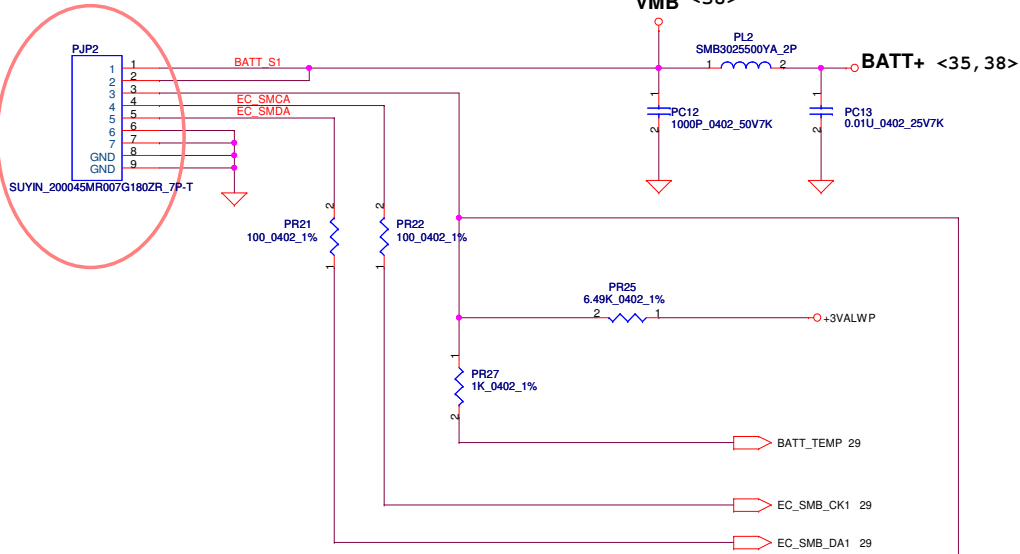
2009_08_06 (0603->0402) PCBfootprint for Layout

Change P/N for 0402-100K

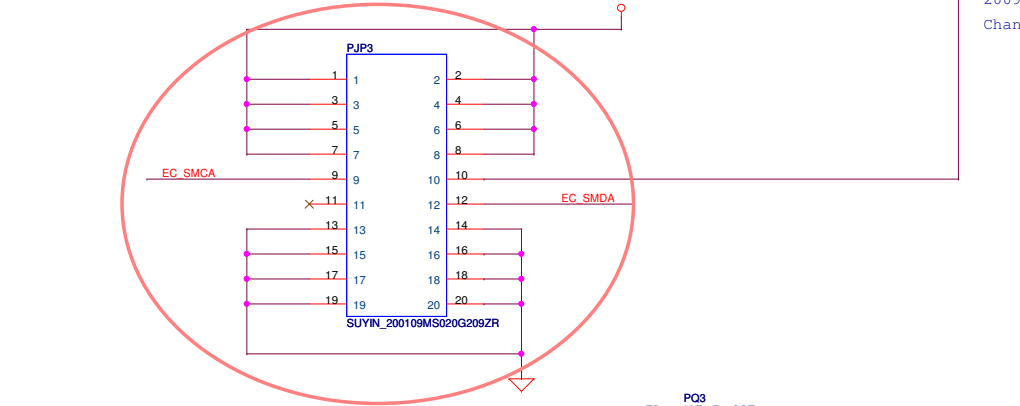


VMB <38>

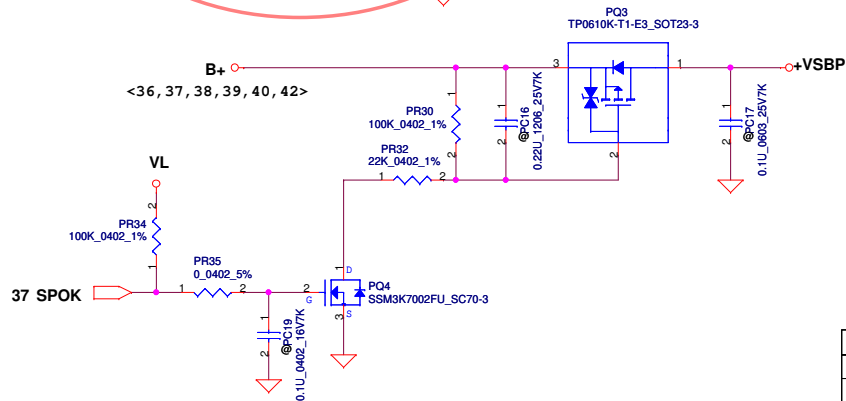
BATT+ <35, 38>



VMB <38>

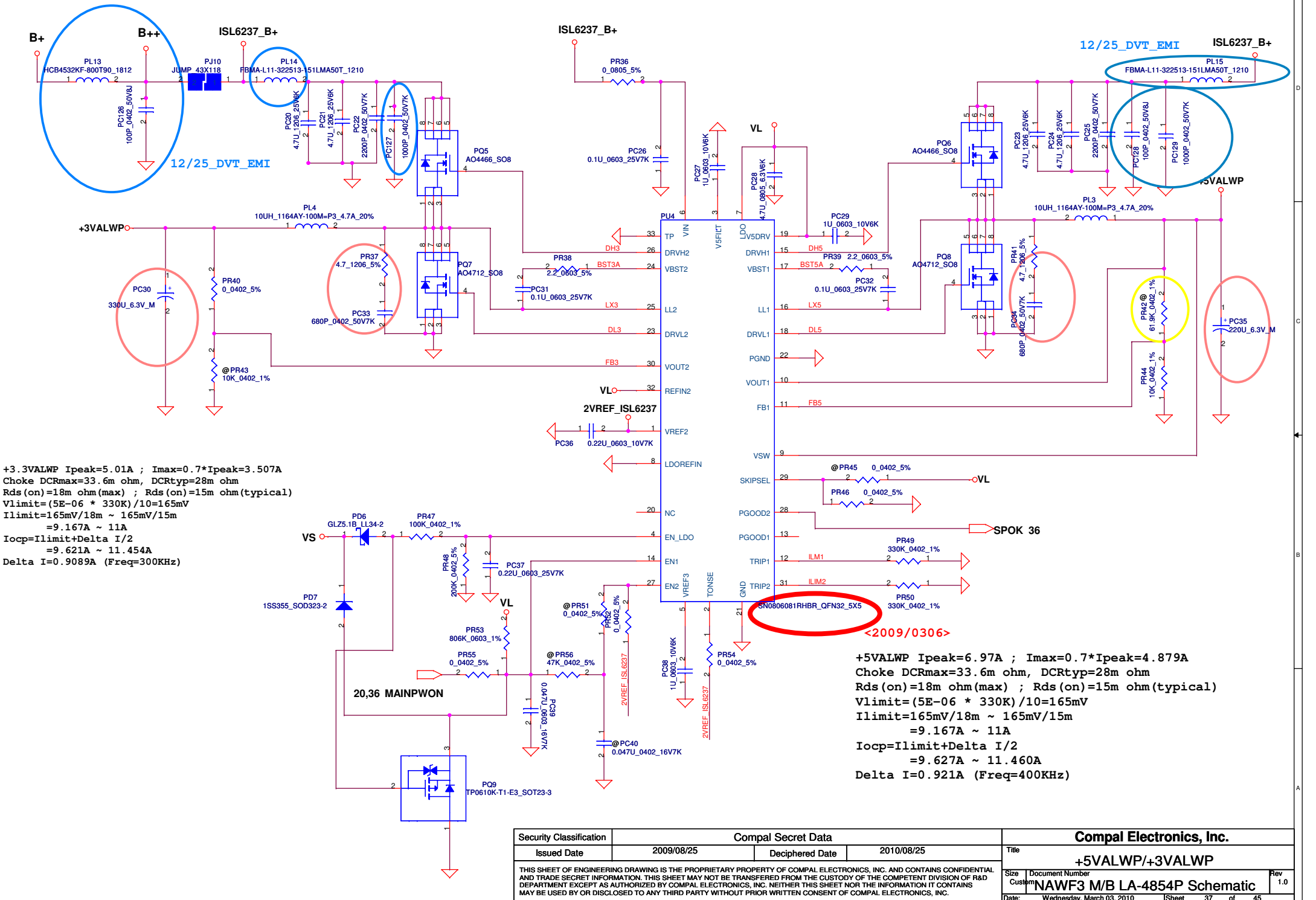


<36, 37, 38, 39, 40, 42>



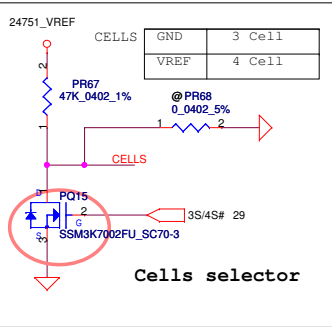
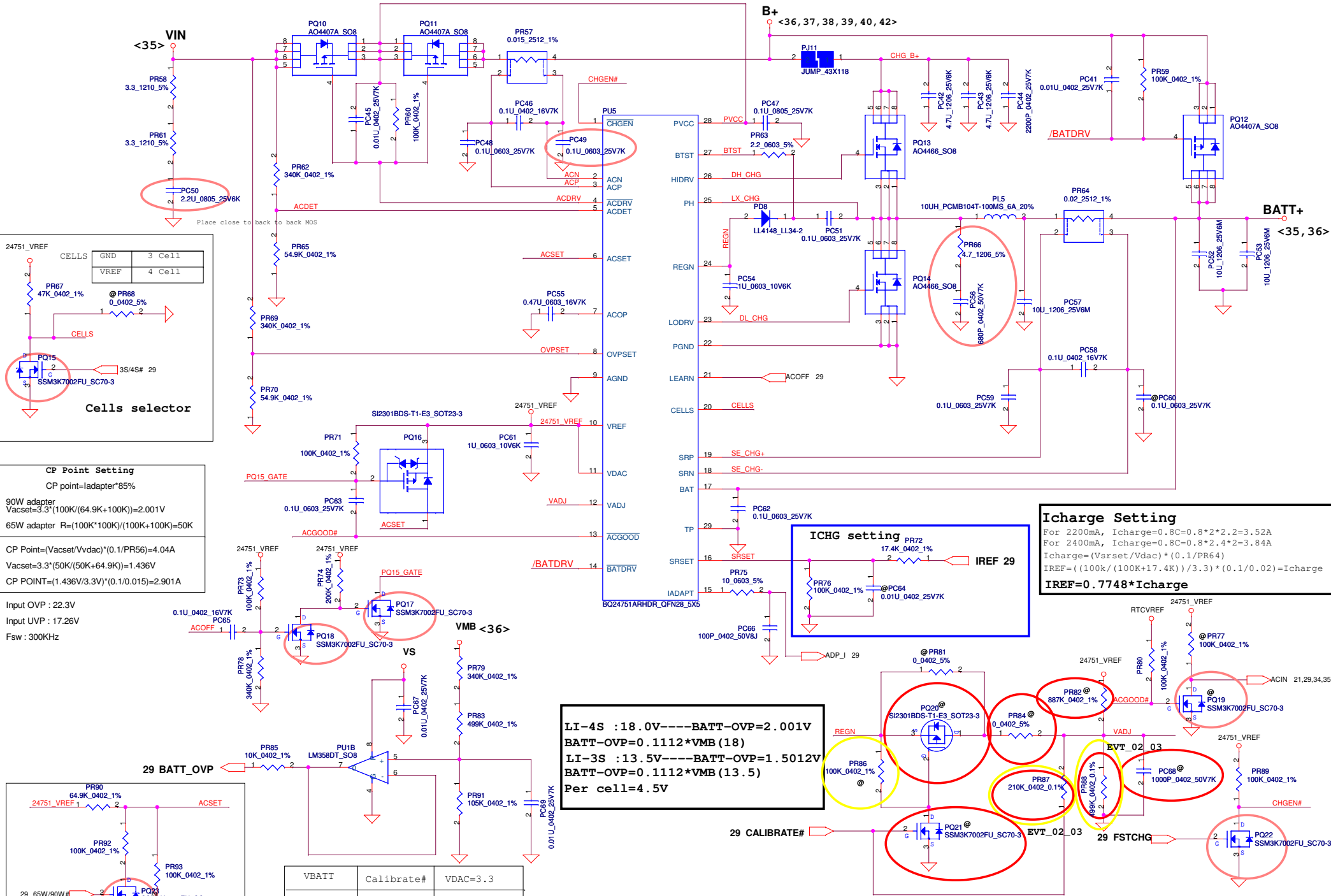
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						Size	Document Number			Rev	
						Customer	NAWF3 M/B LA-4854P Schematic			1.0	
Date		Wednesday, March 03, 2010		Sheet		36		of 45			

<36, 37, 38, 39, 40, 42>



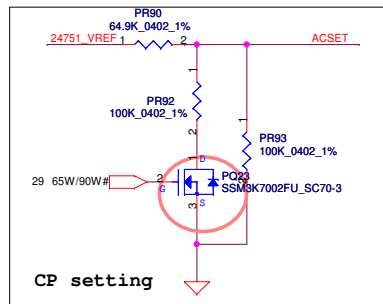
+3.3VALWP Ipeak=5.01A ; Imax=0.7*Ipeak=3.507A
Choke DCRmax=33.6m ohm, DCRtyp=28m ohm
Rds(on)=18m ohm(max) ; Rds(on)=15m ohm(typical)
Vlimit=(5E-06 * 330K)/10=165mV
Ilimit=165mV/18m ~ 165mV/15m
=9.167A ~ 11A
Iocp=Ilimit+Delta I/2
=9.621A ~ 11.454A
Delta I=0.9089A (Freq=300KHz)

+5VALWP Ipeak=6.97A ; Imax=0.7*Ipeak=4.879A
Choke DCRmax=33.6m ohm, DCRtyp=28m ohm
Rds(on)=18m ohm(max) ; Rds(on)=15m ohm(typical)
Vlimit=(5E-06 * 330K)/10=165mV
Ilimit=165mV/18m ~ 165mV/15m
=9.167A ~ 11A
Iocp=Ilimit+Delta I/2
=9.627A ~ 11.460A
Delta I=0.921A (Freq=400KHz)



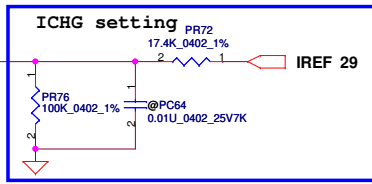
CP Point Setting
CP point=ladapter*85%
90W adapter
 $V_{acset}=3.3 \cdot (100K/(64.9K+100K))=2.001V$
65W adapter $R=(100K \cdot 100K)/(100K+100K)=50K$
CP Point= $(V_{acset}/V_{vdac}) \cdot (0.1/PR56)=4.04A$
 $V_{acset}=3.3 \cdot (50K/(50K+64.9K))=1.436V$
CP POINT= $(1.436V/3.3V) \cdot (0.1/0.015)=2.901A$

Input OVP : 22.3V
Input UVP : 17.26V
Fsw : 300KHz



VBATT	Calibrate#	VDAC=3.3
4.0V	L=0	
4.2V	1.8755V	
4.3V	2.8132V	
4.35V	H=3.3	

LI-4S : 18.0V----BATT-OVP=2.001V
BATT-OVP=0.1112*VMB(18)
LI-3S : 13.5V----BATT-OVP=1.5012V
BATT-OVP=0.1112*VMB(13.5)
Per cell=4.5V



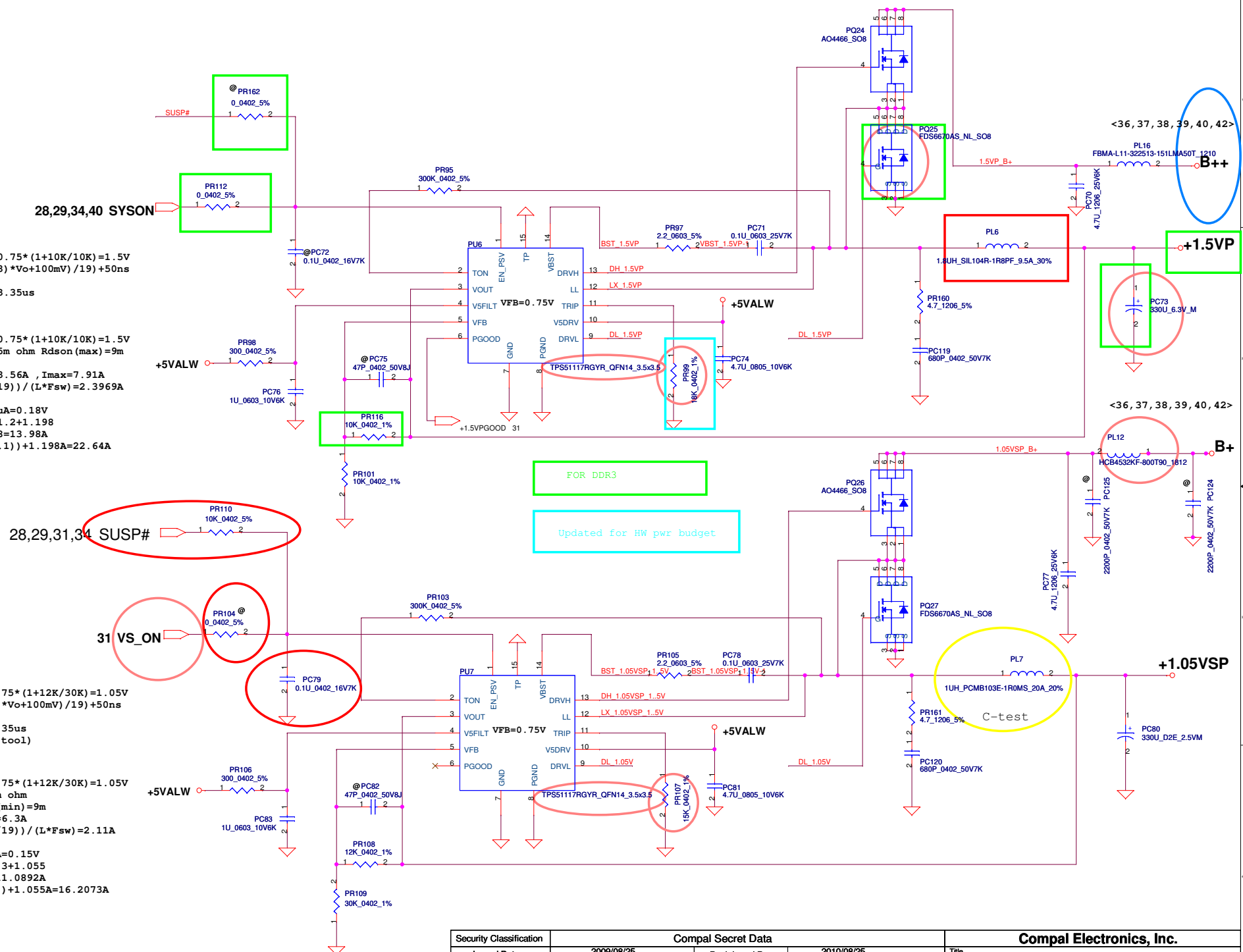
Icharge Setting
For 2200mA, $I_{charge}=0.8C=0.8 \cdot 2 \cdot 2.2=3.52A$
For 2400mA, $I_{charge}=0.8C=0.8 \cdot 2 \cdot 2.4=3.84A$
 $I_{charge}=(V_{srset}/V_{dac}) \cdot (0.1/PR64)$
 $IREF=((100K/(100K+17.4K))/3.3) \cdot (0.1/0.02)=I_{charge}$
IREF=0.7748*Icharge

VFB=0.75V
 $V_o = VFB * (1 + PR116 / PR117) = 0.75 * (1 + 10K / 10K) = 1.5V$
 $Ton = 19 * e^{-12 * 143000 * ((2/3) * V_o + 100mV) / 19} + 50ns = 2.645e-7 us$
 $=> V_o / Vin = D = Ton / Ts => Ts = 3.35us$
 $Fsw = 262KHz$

<Vo=1.5V> VFB=0.75V
 $V_o = VFB * (1 + PR116 / PR117) = 0.75 * (1 + 10K / 10K) = 1.5V$
 $Fsw = 262KHz$ Cout ESR=15m ohm Rdson(max)=9m Rdson(min)=11.5m
 $I_{peak} = 11.3A$, $I_{2Ipeak} = 13.56A$, $I_{max} = 7.91A$
 $\Delta I = ((19 - 1.5) * (1.5 / 19)) / (L * Fsw) = 2.3969A$
 $=> 1/2 \Delta I = 1.198A$
 $V_{trip} = R_{trip} * I_{0uA} = 18K * 10uA = 0.18V$
 $I_{ocpmin} = V_{trip} / Rdsonmax * 1.2 + 1.198 = 0.075 / (0.018 * 1.3) + 1.198 = 13.98A$
 $I_{ocpmax} = (0.075 / (0.015 * 1.1)) + 1.198A = 22.64A$
 $I_{ocp} = 13.98 \sim 22.64A$

VFB=0.75V
 $V_o = VFB * (1 + PR108 / PR109) = 0.75 * (1 + 12K / 30K) = 1.05V$
 $Ton = 19 * e^{-12 * 143000 * ((2/3) * V_o + 100mV) / 19} + 50ns = 2.645e-7 us$
 $=> V_o / Vin = D = Ton / Ts => Ts = 3.35us$
 $Fsw = 261KHz$ (by calculation tool)

<Vo=1.05V> VFB=0.75V
 $V_o = VFB * (1 + PR108 / PR109) = 0.75 * (1 + 12K / 30K) = 1.05V$
 $Fsw = 261KHz$ Cout ESR=15m ohm Rdson(max)=11.5m Rdson(min)=9m
 $I_{peak} = 9A$, $I_{max} = I_{peak} * 0.7 = 6.3A$
 $\Delta I = ((19 - 1.05) * (1.05 / 19)) / (L * Fsw) = 2.11A$
 $=> 1/2 \Delta I = 1.055A$
 $V_{trip} = R_{trip} * I_{0uA} = 15K * 10uA = 0.15V$
 $I_{ocpmin} = V_{trip} / Rdsonmax * 1.3 + 1.055 = 0.15 / (0.011 * 1.3) + 1.055 = 11.0892A$
 $I_{ocpmax} = (0.15 / (0.009 * 1.1)) + 1.055A = 16.2073A$
 $I_{ocp} = 11.0892A \sim 16.2073A$



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

Page 1 of 3 of PWR

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1		Add PC57 :10U_1206_25V_6M	0.1	38	Add PC57 :10U_1206_25V_6M	20080902	EVT
2		Add snubber for EMI	0.1	42	Add snubber for EMI	20080915	EVT
3		Shift PC99 from +cpu_B+ to B+	0.1	42	Shift PC99 from +cpu_B+ to B+	20080915	EVT
4		Add PJ15 to B+	0.1	39	Add PJ15 to B+	20080915	EVT
5		PR135 and PR140 change to 0_0603_5%	0.1	42	PR135 and PR140 change to 0_0603_5%	20080915	EVT
6	Charger feedback trace too long	ADD PC49	0.2	38	ADD PC49	20081124	DVT
7	Power sequence error	+1.5VP: enable pin change from SUSP# to SYSON +0.9VSP: enable pin change from SUSP# to SUSP	0.2	40	+1.5VP: enable pin change from SUSP# to SYSON +0.9VSP: enable pin change from SUSP# to SUSP	20081124	DVT
8	Load line over spec	PR131: change to 5.76K_0402_1%	0.2	42	PR131: change to 5.76K_0402_1%	20081124	DVT
9	3D hang	Charger PR63:change to 2.2_0603_5% PR66:Add 4.7_1206_5% PC56:Add 680P_0402_50V7K	0.2	38	Charger PR63:change to 2.2_0603_5% PR66:Add 4.7_1206_5% PC56:Add 680P_0402_50V7K	20081124	DVT
10	3D hang	+1.8VP PR97:change to 2.2_0603_5% PR160:Add 4.7_1206_5% PC119:Add 680P_0402_50V7K	0.2	39	+1.8VP PR97:change to 2.2_0603_5% PR160:Add 4.7_1206_5% PC119:Add 680P_0402_50V7K	20081124	DVT
11	3D hang	+1.05VSP PR105:change to 2.2_0603_5% PR161:Add 4.7_1206_5% PC120:Add 680P_0402_50V7K Add bead between B+ and 1.05VSP_B+	0.2	39	+1.05VSP PR105:change to 2.2_0603_5% PR161:Add 4.7_1206_5% PC120:Add 680P_0402_50V7K Add bead between B+ and 1.05VSP_B+	20081124	DVT
12	EMI solution	+5VALW/+3VALW PR37: Add 4.7_1206_5% PR41: Add 4.7_1206_5% PC33: Add 680P_0402_50V7K PC34: Add 680P_0402_50V7K PR38: change to 2.2_0603_5% PR39: change to 2.2_0603_5%	0.2	37	+5VALW/+3VALW PR37: Add 4.7_1206_5% PR41: Add 4.7_1206_5% PC33: Add 680P_0402_50V7K PC34: Add 680P_0402_50V7K PR38: change to 2.2_0603_5% PR39: change to 2.2_0603_5%	20081124	DVT
13	EMI solution	+CPU CORE PR158: Add 4.7_1206_5% PR159: Add 4.7_1206_5% PC117: Add 680P_0402_50V7K PC118: Add 680P_0402_50V7K PR135: change to 2.2_0603_5% PR140: change to 2.2_0603_5%	0.2	42	+CPU CORE PR158: Add 4.7_1206_5% PR159: Add 4.7_1206_5% PC117: Add 680P_0402_50V7K PC118: Add 680P_0402_50V7K PR135: change to 2.2_0603_5% PR140: change to 2.2_0603_5%	20081124	DVT
16	EMI solution	+CPU CORE PC122: Reserve 2200P_0402_50V7K on B+	0.2	42	+CPU CORE PC122: Reserve 2200P_0402_50V7K on B+	20081124	DVT
17	EMI solution	+1.05VSP PR105 : change to 2.2_0603_5% PL12 : Add HCB4532KF-800T90_1812 PC124: Reserve 2200P_0402_50V7K on B+ PC125: Reserve 2200P_0402_50V7K on B+	0.2	39	+1.05VSP PR105 : change to 2.2_0603_5% PL12 : Add HCB4532KF-800T90_1812 PC124: Reserve 2200P_0402_50V7K on B+ PC125: Reserve 2200P_0402_50V7K on B+	20081124	DVT

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/08/25	Deciphered Date	2010/08/25	Title	
				PIR (PWR)	
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Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
18	Battery & HW solution	Charger PQ20:Reserve(@)SI2301BDS-T1-E3_SOT23-3 PQ21:Reserve(@)SSM3K7002FU_SC70-3 PR82:Reserve(@)887K_0402_1% PR84:Reserve(@)0_0402_5% PC68:Reserve(@)1000P_0402_50V7K PR87:change to 210K_0402_1% PR88:change to 499K_0402_1%	0.2	38	Charger PQ20:Reserve(@)SI2301BDS-T1-E3_SOT23-3 PQ21:Reserve(@)SSM3K7002FU_SC70-3 PR82:Reserve(@)887K_0402_1% PR84:Reserve(@)0_0402_5% PC68:Reserve(@)1000P_0402_50V7K PR87:change to 210K_0402_1% PR88:change to 499K_0402_1%	20081124	DVT
		+1.05VSP PR104: Reserve(@)0_0402_5% PR110: change to 10K_0402_5% PR79 : Add 0.1U_0402_16V7K +1.5VP PR112: Reserve(@) 0_0402_5%		39 40	+1.05VSP PR104: Reserve(@)0_0402_5% PR110: change to 10K_0402_5% PR79 : Add 0.1U_0402_16V7K +1.5VP PR112: Reserve(@) 0_0402_5%		
19	EMI soultion	+3VALWP/+3VALW PC100: 680P_0402_50V7K PC130: 1000P_0402_50V_7K PC131: 1000P_0402_50V_8J +1.5VP ADD PR113: 2.2_0603_5% ADD PR163: 4.7_1206_5% ADD PC121: 680P_0402_50V7K ADD PL16 :FBMA-L11-322513-151LMA50T_1210	0.3	35 40	+3VALWP/+3VALW PC100: 680P_0402_50V7K PC130: 1000P_0402_50V_7K PC131: 1000P_0402_50V_8J +1.5VP ADD PR113: 2.2_0603_5% ADD PR163: 4.7_1206_5% ADD PC121: 680P_0402_50V7K ADD PL16 :FBMA-L11-322513-151LMA50T_1210	20081224	PVT
20	POWER Solution	+3VALWP/+5VALWP RT8206- Fix output 5V for HW no HDMI	0.3	37	+3VALWP/+5VALWP PR42: Reserve 61.9K_0402_1%	20090111	PVT

COMPAL ELECTRONICS			
Title			
PIR POWER2			
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	KAWF0 M/B LA-4431P Schematic		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
21	EMI solution	Reduce the Noise	0.3	37	Add PL 13 (HCB4532KF-800T90_1812) Add PL 14 (FBMA-L11-322513-151LMA50T_1210) Add PL 15 (FBMA-L11-322513-151LMA50T_1210) Add PC126 (100P_0402_50V8J) Add PC128 (100P_0402_50V8J) Add PC129 (1000P_0402_50V7K)	20090112	PVT
22	Battery solution	Adjust battery voltage	0.3	38	Reserve PR86 (100K_0402_1%)	20090112	PVT
23	Saturation current	1.8u choke saturation current too small	0.3	39	change PL7 to 1UH_PCMB103E-1R0MS_20A_20%	20090113	PVT
24	GP BOM	Tolerance: K:+-10% ; J:+-5%	0.4	42	Change PC106 to 33P_0402_50V8J Change PC108 to 33P_0402_50V8J Change PC110 to 33P_0402_50V8J Change PC114 to 33P_0402_50V8J	20090123	PVT
COMPAL ELECTRONICS Title <Title> PIR POWER3 Size A Document Number KAWF0 M/B LA-4431P Schematic Rev 0.2 Date: Wednesday, February 03, 2010 Sheet 44 of 45							

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09/01 Change DDR2 as DDR3 PIR

1. P.8 Remove R181 ; Stuff R220, R222 ; Unstuff R221
2. P.14 Remove RP28, RP27, RP19, RP18, RP10, RP9, RP3, RP25, RP26, RP17, RP16, RP8, RP7, R138, R200, R195, R350, R351
Remove C148, C186, C185, C134, C202, C415, C412, C413, C414, C187, C149, C146,C183, C188, C147, C203, C150, C135
Remove C201, C204, C184, C200, C285, C411, C410
Change JDIMM2 P/N
Add R598~R602 ; C887~C908
3. P.15 Remove RP30, RP24, RP23, RP15, RP14, RP6, RP2, RP22, RP21, RP13, RP12, RP5, RP1, R137, R52, R53
Remove C283, C284, C197, C181, C143, C198, C144, C182, C210, C180, C142, C131, C212, C133, C179
Remove C211, C196, C199, C132, C209, C141, C140, C178, C145
Change JDIMM1 P/N
Add R603~R605 ; C909~C930
4. P.31 Add R608, R607, R606, C931, C932, D33, U42, Q57
5. P.34 Unstuff R244, R253, Q13 ; Stuff C309, C313, C310, C314, R266, R267, Q43, Q44, U12, R265, Q17

09/01 Other PIR

1. P.17 Unstuff D20, R411 ; Add R611 for DISPOFF#
2. P.19 Unstuff U8, R83 ; Add R614 for PLT_RST#
3. P.21 Add U43 ; Remove R75 for ICH_VGATE
4. P.23 Unstuff C570
5. P.30 Change LED1, LED2 P/N
6. P.32 Add D34, R613 for Audio BEEP#

09/17

1. P.25 Change C81, C82 27pF as 33pF for Xtal 25MHz(TXC suggest value)
2. P.20 Change C163, C164 18pF as 15pF for Xtal 32.768kHz (TXC suggest value)
3. P.29 Change R273 8.2k ohm as 18k ohm for Board ID

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