

Compal Confidential

Tigger AMD M/B LA-A521P Schematics Document

AMD APUTemash FT3+DDR3

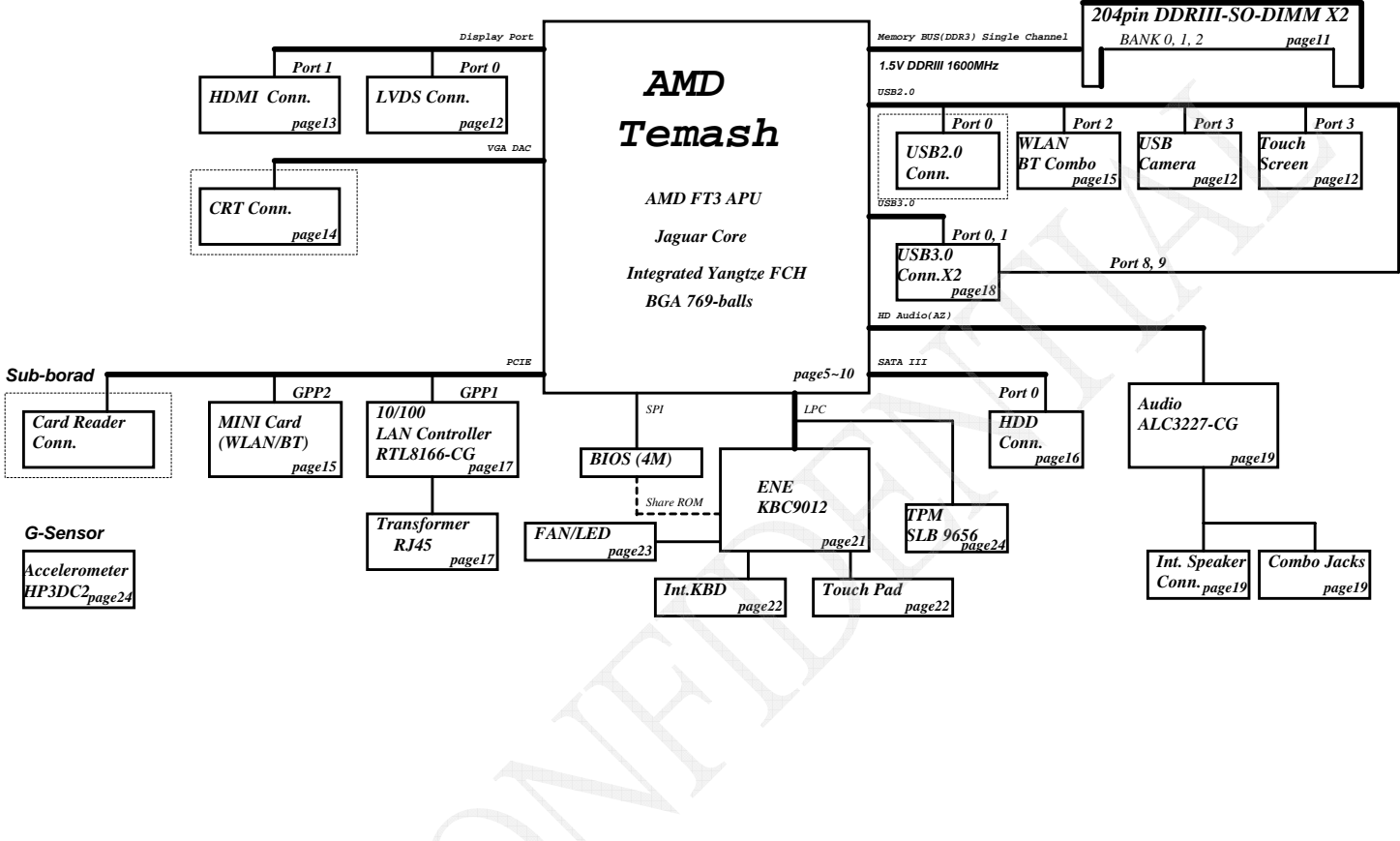
2013-05-24

REV:1.0

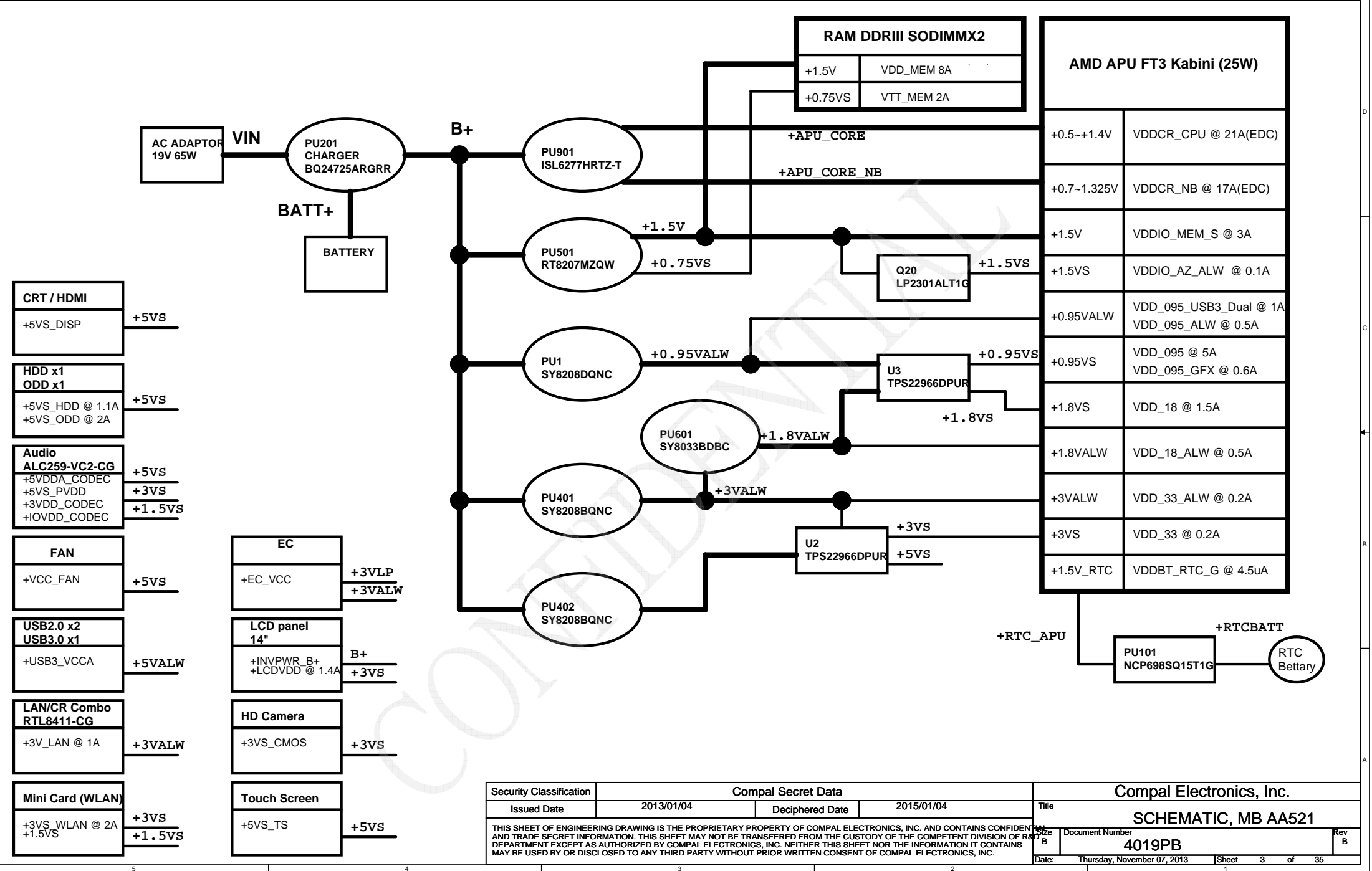
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2013/02/26		2015/07/08		SCHEMATIC, MB AA521	
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				C	4019PB
Date:				Thursday, November 07, 2013	Sheet 1 of 35

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Model Name : AMD Temash



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			4019PB	
			Date	Thursday, November 07, 2013
			Sheet	2 of 35



[illegible]

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

Vcc	3.3V +/- 1%				
Ra	100K +/- 1%				
Board ID	Rb	V _{AD_BID} min	V _{AD_BID} typ	V _{AD_BID} max	EC AD
0	0	0.000 V	0.000 V	0.300 V	0x00 - 0x0B
1	12K +/- 1%	0.347 V	0.354 V	0.360 V	0x0C - 0x1C
2	15K +/- 1%	0.423 V	0.430 V	0.438 V	0x1D - 0x26
3	20K +/- 1%	0.541 V	0.550 V	0.559 V	0x27 - 0x30
4	27K +/- 1%	0.691 V	0.702 V	0.713 V	0x31 - 0x3B
5	33K +/- 1%	0.807 V	0.819 V	0.831 V	0x3C - 0x46
6	43K +/- 1%	0.978 V	0.992 V	1.006 V	0x47 - 0x54
7	56K +/- 1%	1.169 V	1.185 V	1.200 V	0x55 - 0x64

EC SMBus Port1 (+3VALW)			EC SMBus Port2 (+3VS)		
Device	Address	HEX	Device	Address	HEX
Smart Battery	0001 011X b	16H	SB-TSI (APU)	1001 100X b	98H

Device	Address	HEX	Device	Address	HEX
DDR DIMM2	1010 000Xb	A0H			
DDR DIMM1	1010 001Xb	A2H			
Mini Card (DNI)					

BOM Structure	BTO Item
@	Unpop
CONN@	Connector Part Control by ME
EMI@	EMI pop component
@EMI@	EMI unpop component
ESD@	ESD pop component
@ESD@	ESD Unpop component
eDP@	eDP Panel
LVDS@	LVDS Panel
AL@	Auto Load EC ROM
DB@	Debug only, remove at MP


Timing diagram showing signals G-A through G-E and their relationship to system clocks and control signals.


- G-A** is connected to **+RTC**.
- G-B** is connected to **+3VALW/+5VALW**.
- G-C** is connected to **+1.5V**.
- G-D** is connected to **+3VS**.
- G-E** is connected to **+APU_CORE**.


The diagram also shows the timing of the following signals:

- BC_ON**
- +1.8VALW**
- +0.95VALW**
- SYSON**
- SUSP#**
- VR_ON**
- +APU_CORE_NB**

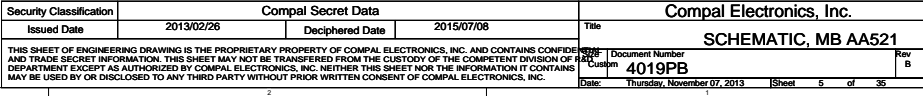
The signals are shown as step functions over time, indicating their state transitions.

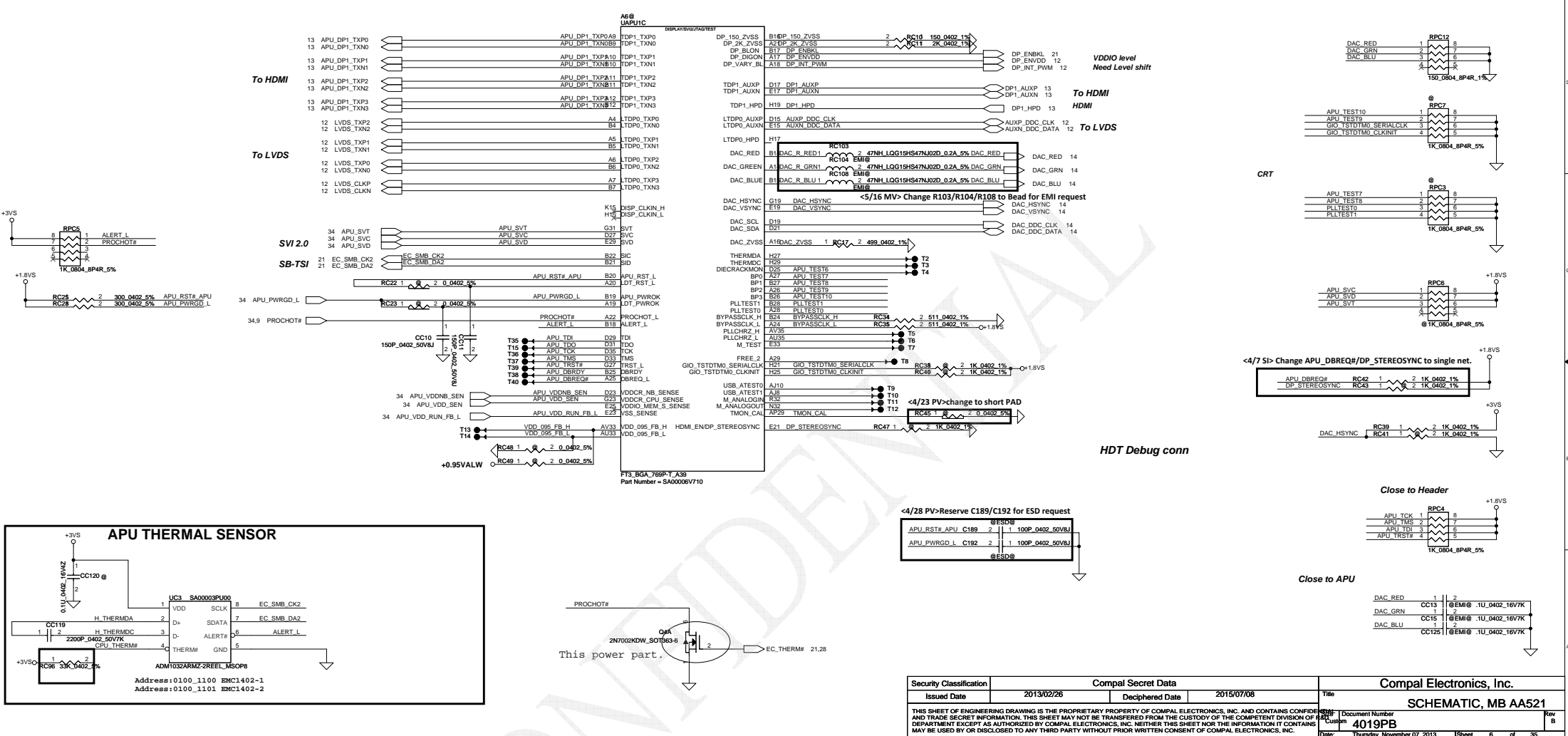
UAPU1 A4@

PCB
Part Number = SA000072100
S IC A4 SERIES AT1250IDJ23HM 1G BGA 769P

UAPU1 A6_R3@

PCB
Part Number = SA00006V720
S IC A6 SERIES AT1450IDJ44HM 1G BGA A32!

UAPU1 A4_R3@

PCB
Part Number = SA000072110
S IC A4 SERIES AT1250IDJ23HM 1G BGA A32!

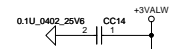
Board ID	PCB Revision
0	EVT
1	
2	
3	
4	
5	
6	
7	



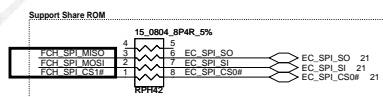
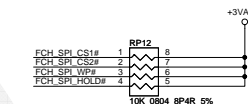


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				Date:	Thursday, November 07, 2013
				Sheet	6 of 35
				Rev	B

4MB SPI ROM & Non-share ROM.



Check CS# PU R 1k or 10k and popinpop SCL v1.20. If an SPI ROM is shared between the FCH and the Embedded Controller a 10-K pull-up resistor to +3.3V_S5 is installed.

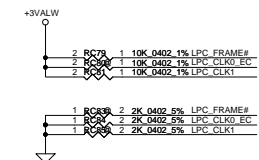


<4/3 SI> SWAP FCH_SPI_MISO/FCH_SPI_MOSI for EC fix code



STRAPS OF APU

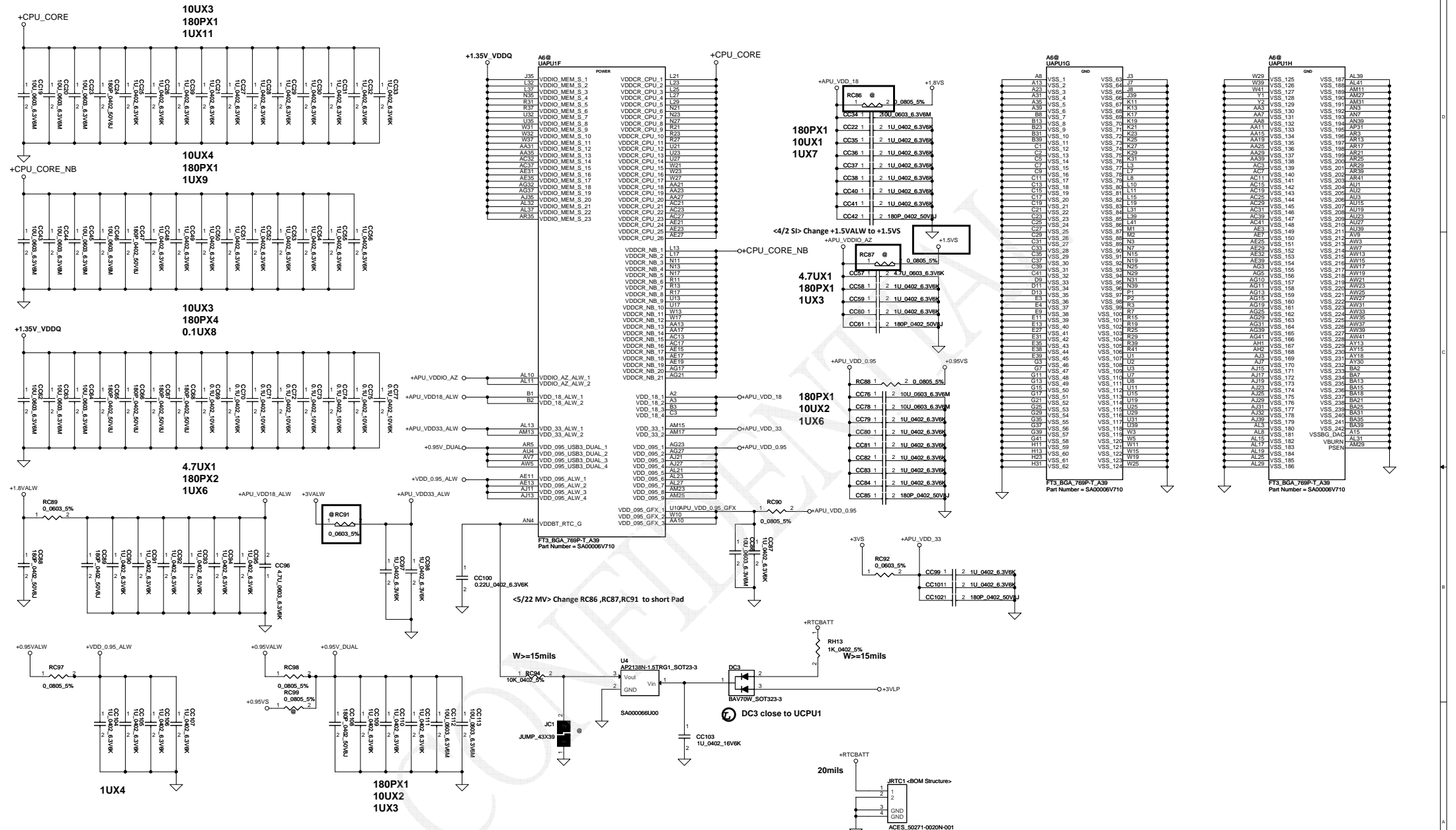
	LPC_FRAME#	LPC_CLK0_EC	LPC_CLK1	GEVENT2_L	RTC_CLK
H	SPI ROM (DEFAULT)	BOOT FAIL TIMER ENABLED	CLKGEN ENABLE (DEFAULT)	1.8V SPI ROM	NORMAL POWER UP/RESET TIMING (DEFAULT)
L	LPC ROM	BOOT FAIL TIMER DISABLED (DEFAULT)	CLKGEN DISABLED	3.3V SPI ROM (DEFAULT)	FAST POWER UP/RESET TIMING FOR SIMULATION



Security Classification	Compal Secret Data	Document Number	Rev
Issued Date	Deciphered Date	4019PB	B
2013/02/26	2015/07/08	Thursday, November 07, 2013	7 of 35

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SCHEMATIC, MB AA521



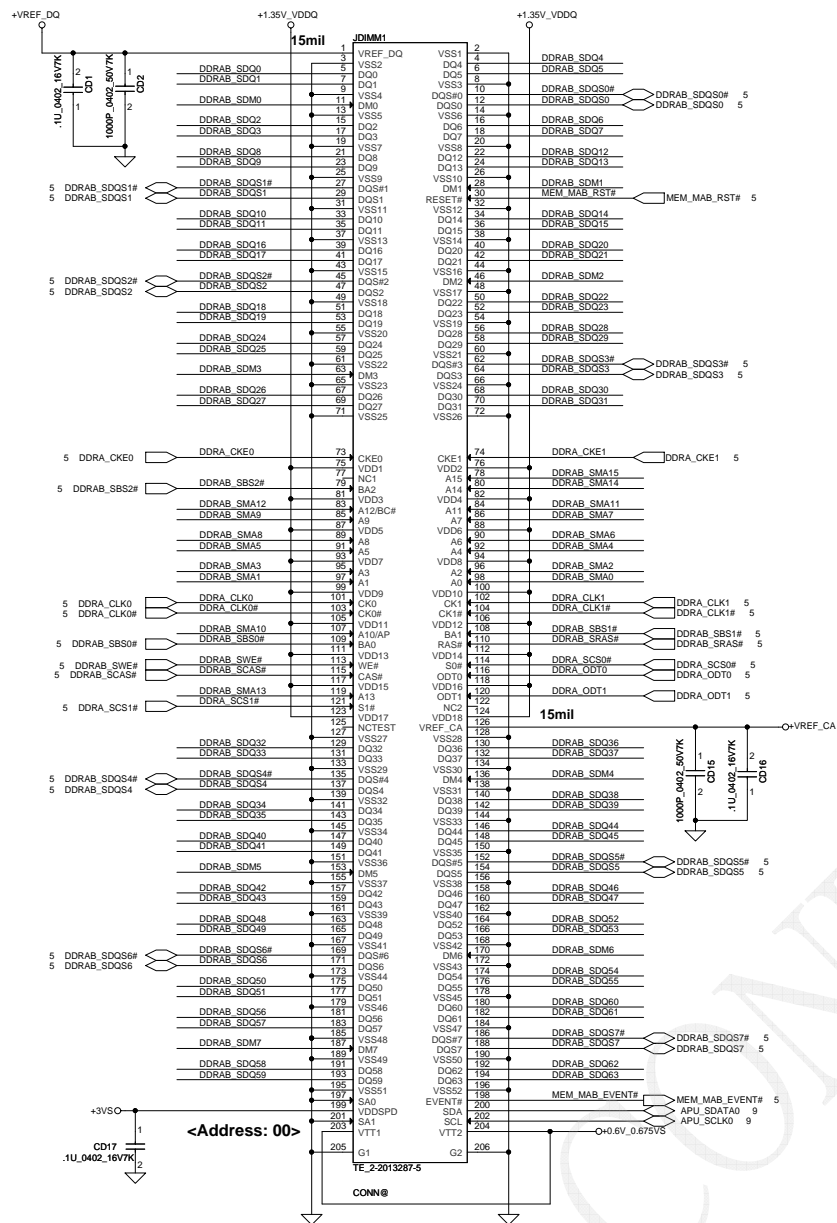
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Document Number	4019PB	Date	Thursday, November 07, 2013	Sheet	8 of 35

Panel ENBKL

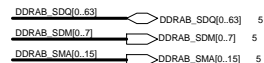
Panel ENVDD

Panel PWM

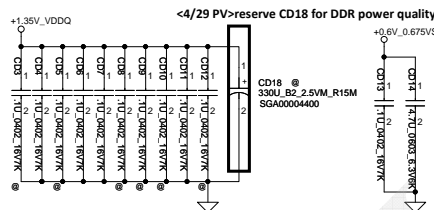
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				4019PB	B
				Date	Thursday, November 07, 2013
				Sheet	10 of 35



DIMM_A H:4mm Reverse

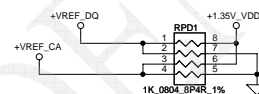


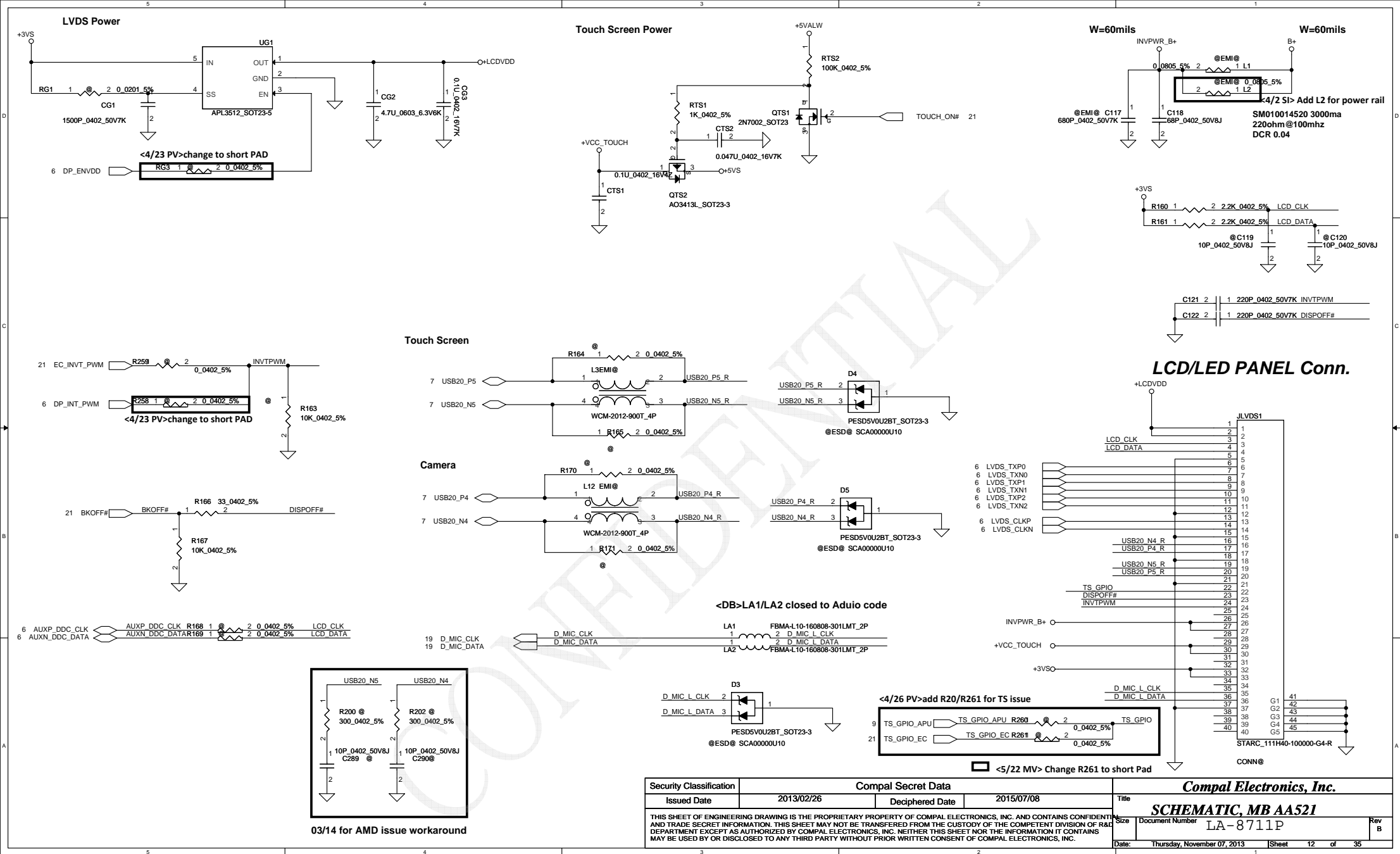
+1.35V_VDDQ/+0.675V OF DIMM1



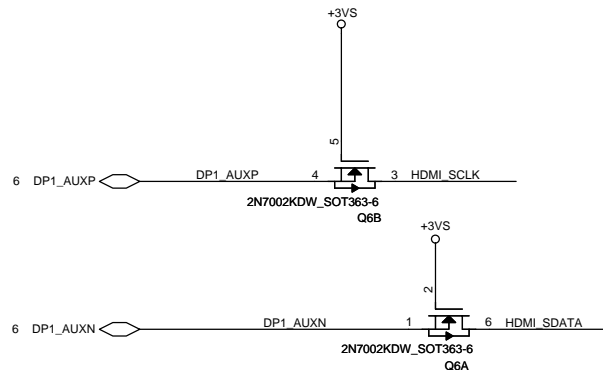
0.1UX10

VREF for DIMM1,2



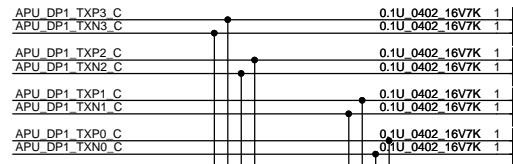
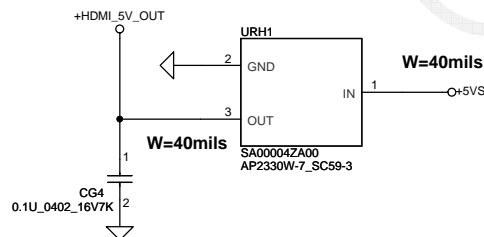
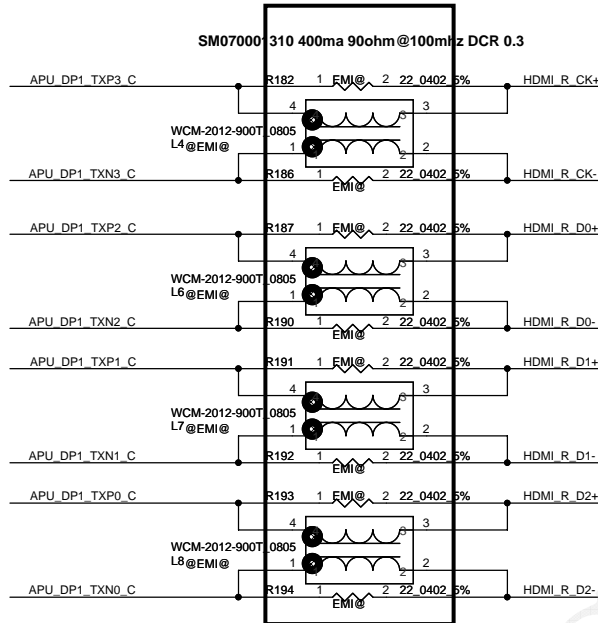


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Date: Thursday, November 07, 2013				Sheet 12	of 35



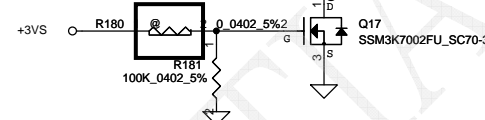
5V PULL UP IN CONNECTER SIDE

<5/22 MV> Change R182/R186/R187/R190/R191/R192/R193/R194 for EMI request

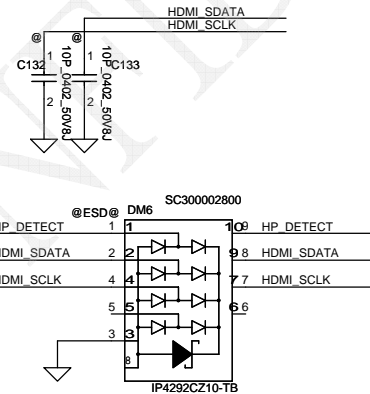
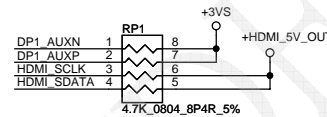
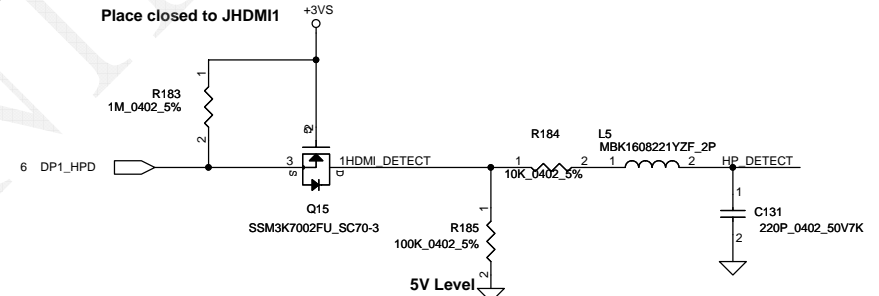


NET: HDMIRES_GND
WIDTH>20 mils

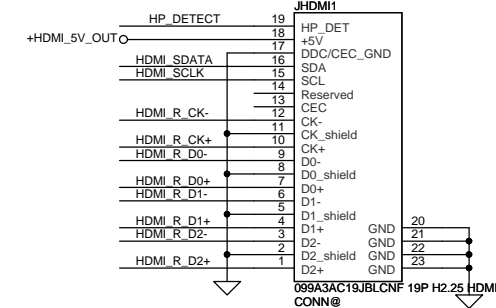
<5/22 MV> Change R180 to short Pad



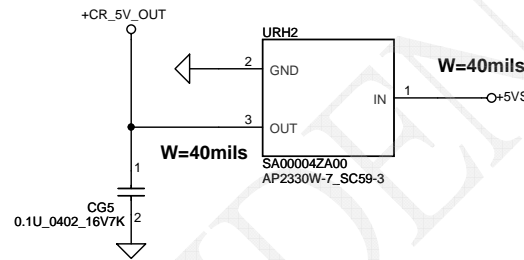
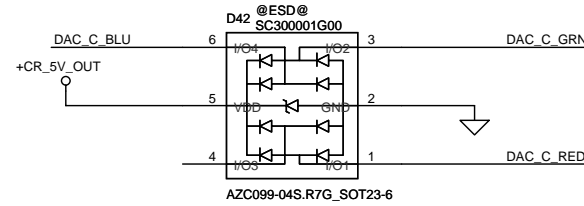
Place closed to JHDMI1



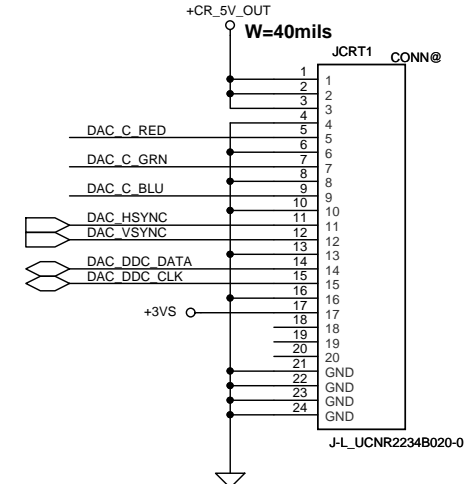
HDMI Conn.
<Si>Jon : Change footprint to
CONCR_099A3AC19JBLCNF_19P-T



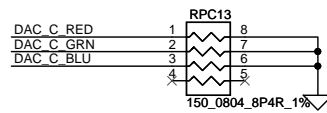
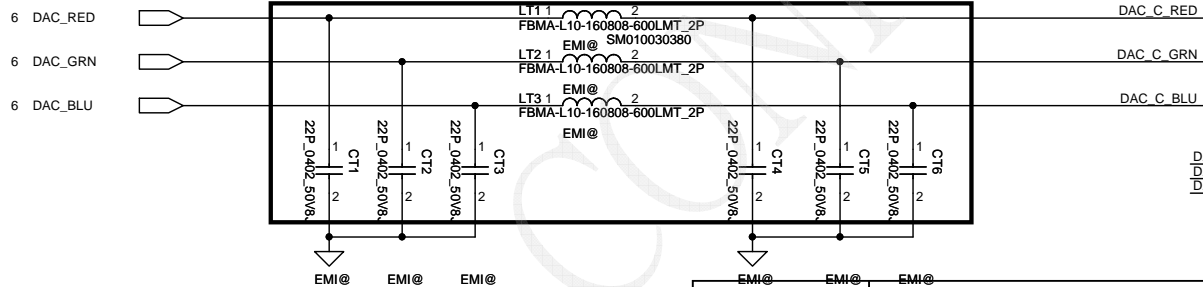
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				Date	Thursday, November 07, 2013
				Sheet	13 of 35



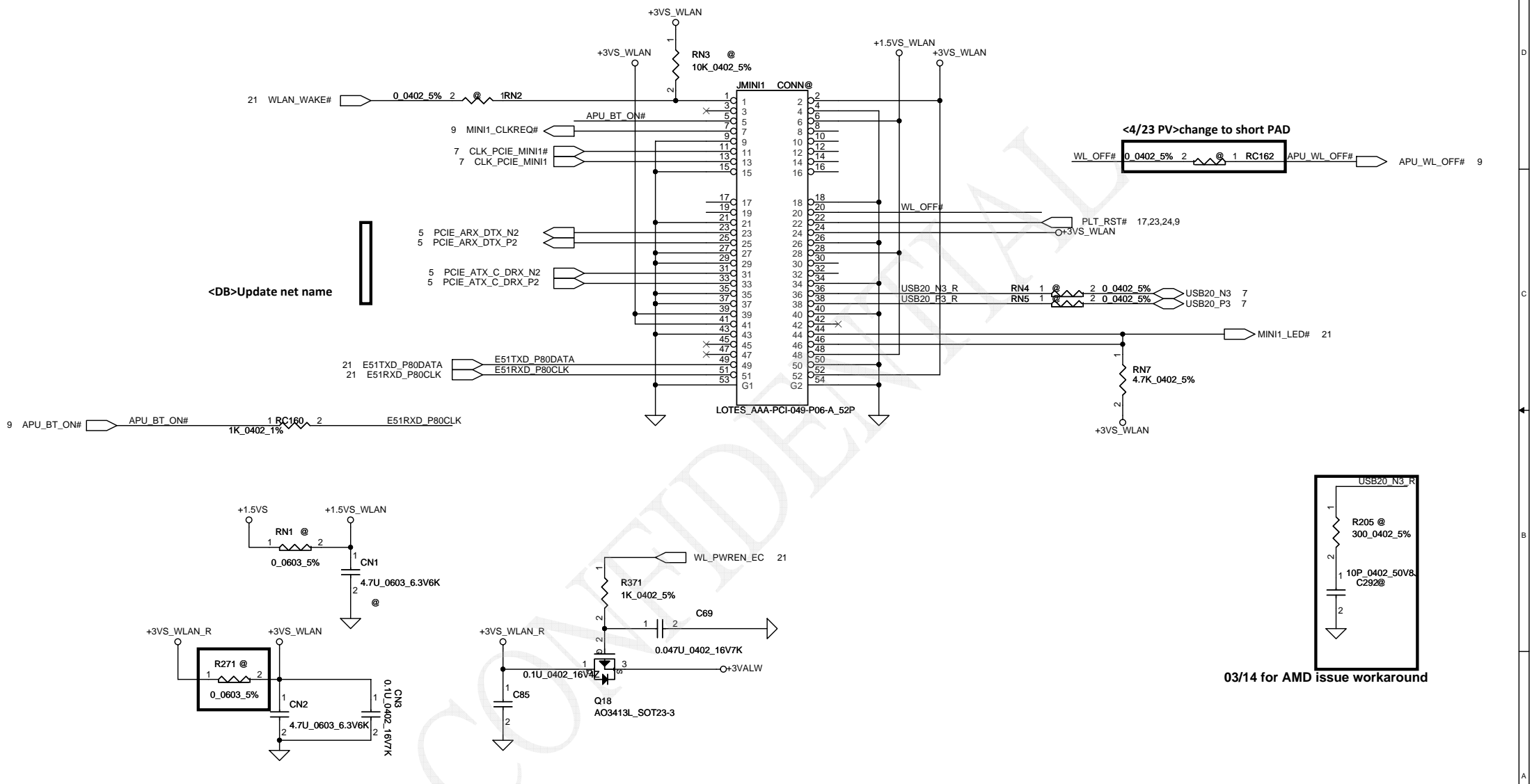
6 DAC_HSYNC
6 DAC_VSYNC
6 DAC_DDC_DATA
6 DAC_DDC_CLK



<5/16 MV> Change CT1/CT2/CT3/CT4/CT5/CT6 to 22P and LT1, LT2, LT3 to Bead for EMI request



EMI@		EMI@		EMI@		Compal Secret Data				Compal Electronics, Inc.					
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												4019PB			
Date:		Thursday, November 07, 2013				Sheet		14		of		35			



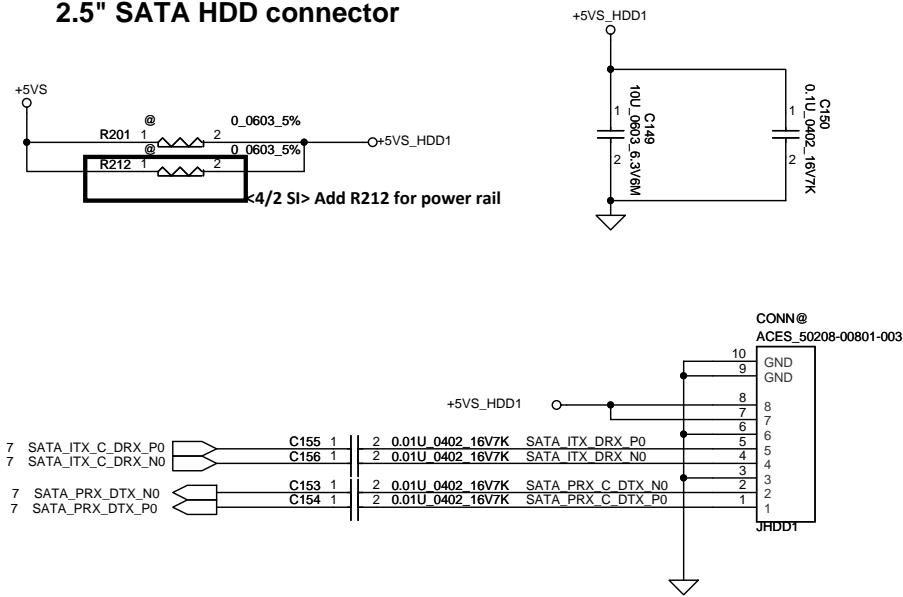
<4/23 PV>change to short PAD

<5/22 MV> Change RC86, RC87, RC92, RC91 to short Pad

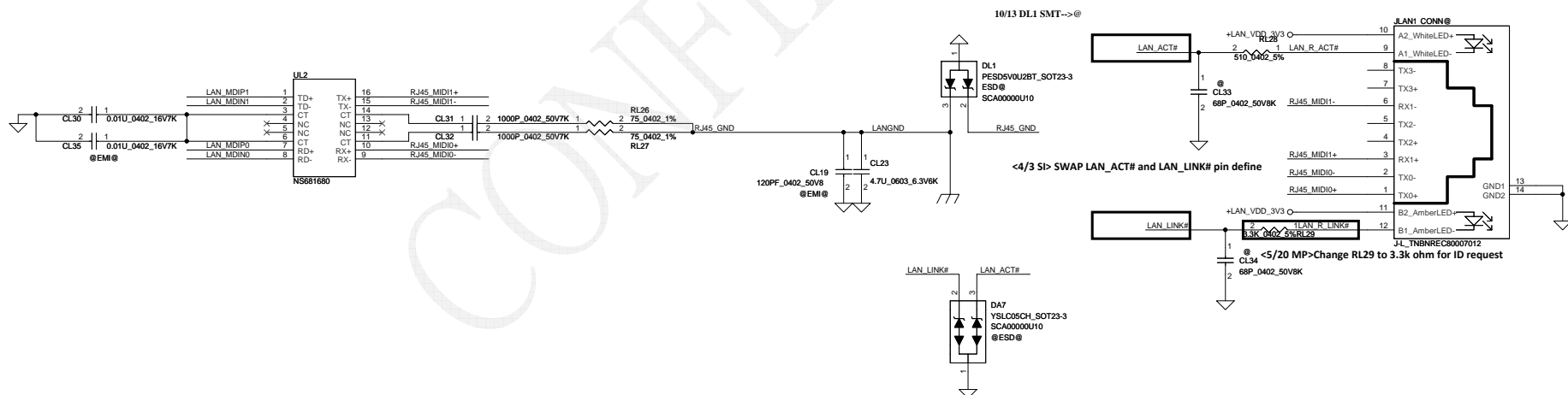
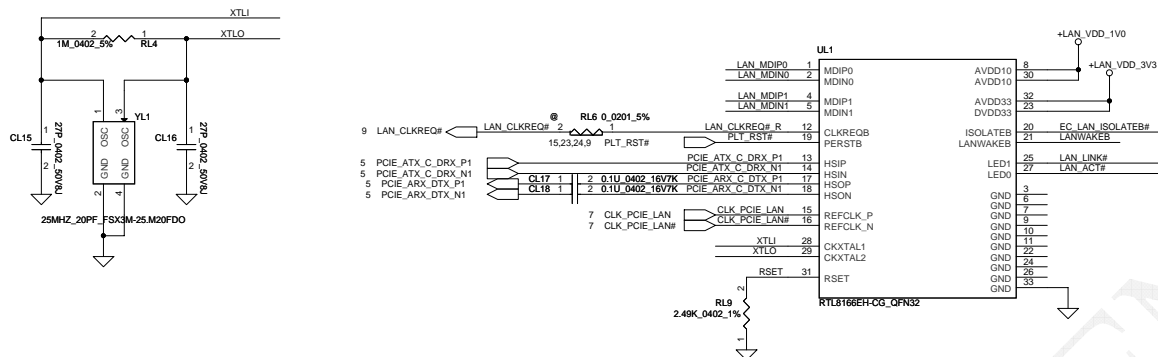
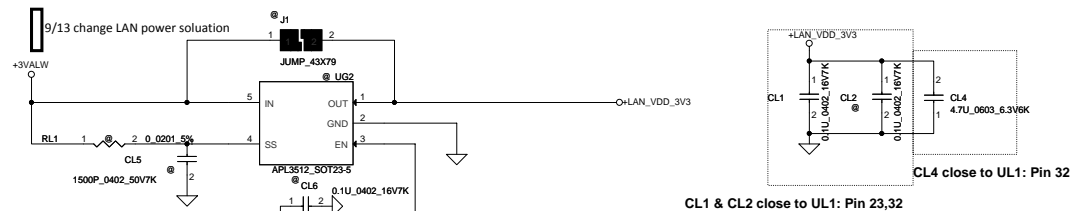
03/14 for AMD issue workaround

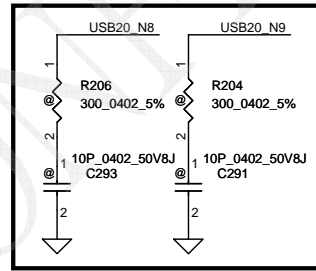
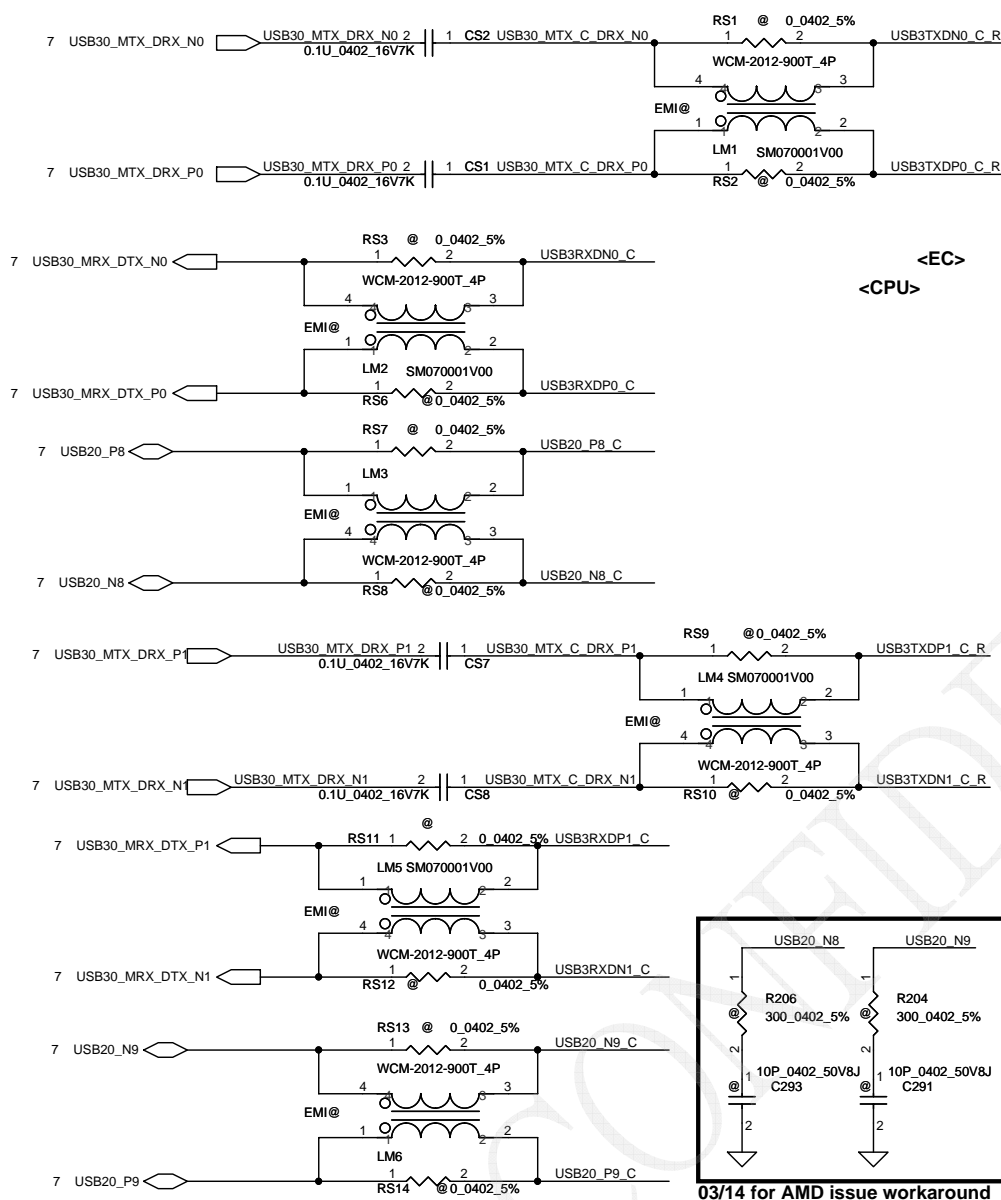
REV- Change RC86, RC87, RC92, RC91 to short Pad								Compal Electronics, Inc.					
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										4019PB		B	
		3		2		Date:		Thursday, November 07, 2013		Sheet 15 of 35			

2.5" SATA HDD connector

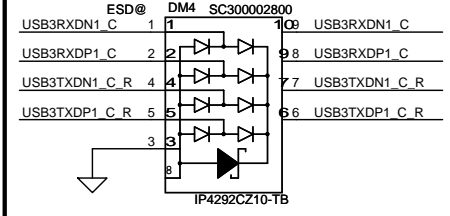
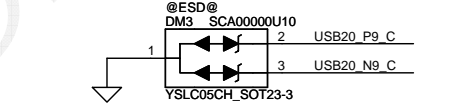
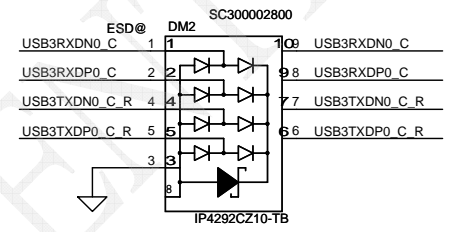
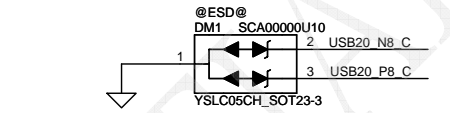
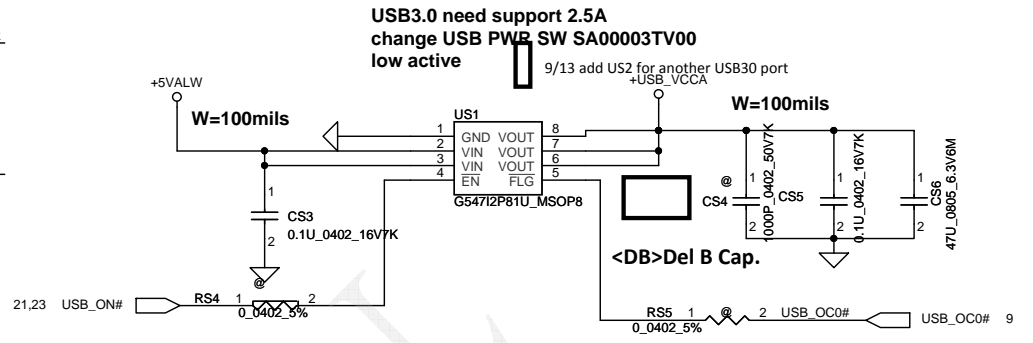


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				Date:	Thursday, November 07, 2013
				Sheet	16 of 35

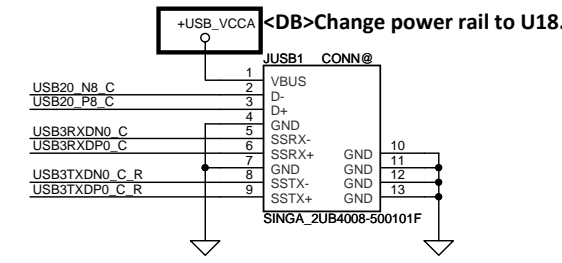




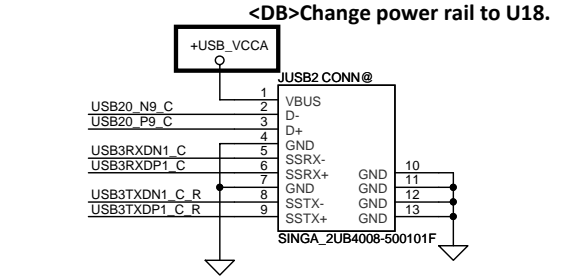
03/14 for AMD issue workaround



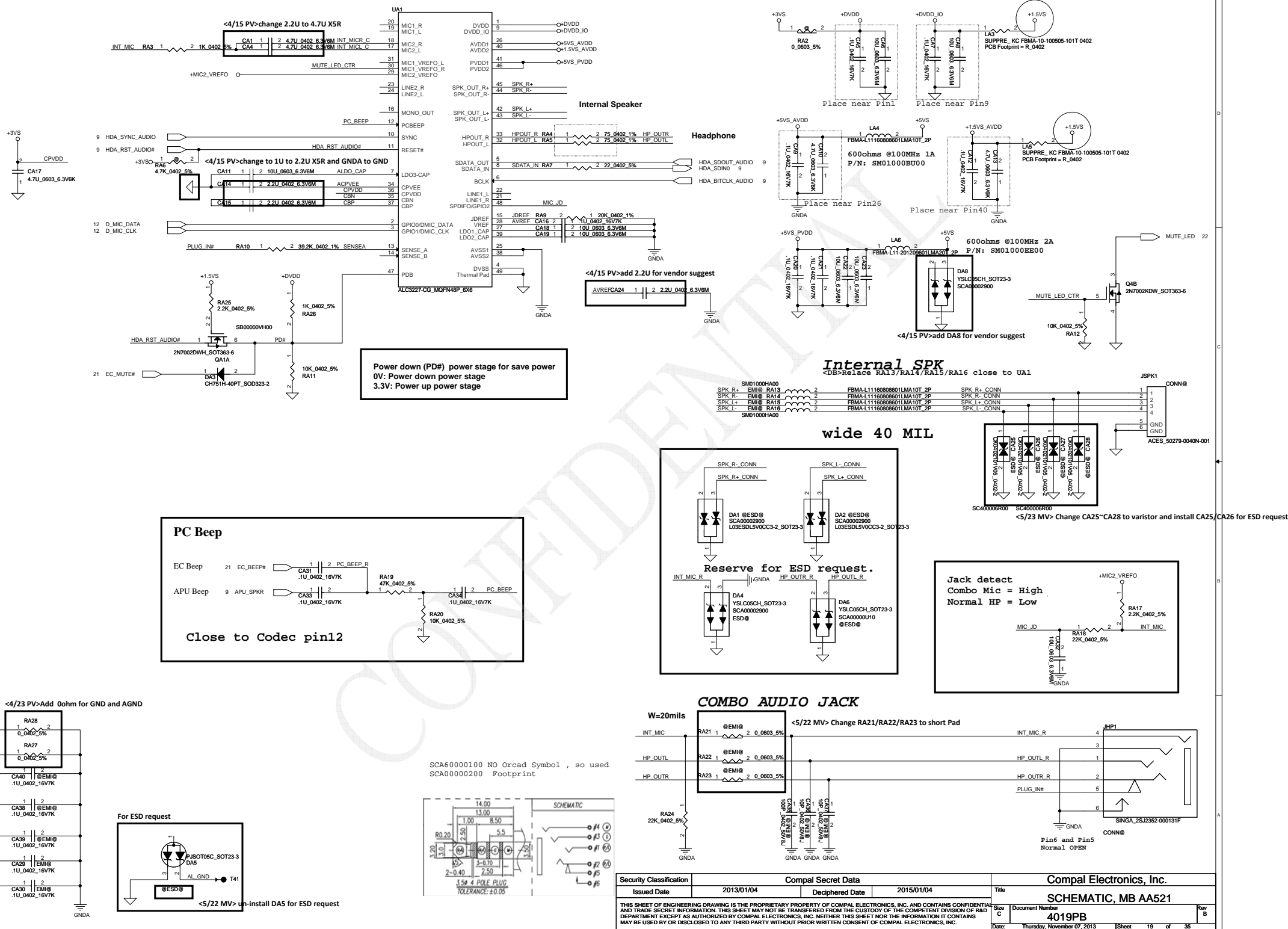
<DB>Update footprint to DC233008M10. USB2.0/USB3.0 port 1



USB2.0/USB3.0 port 2



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Date:	Thursday, November 07, 2013	Sheet	18	of	35



SPK Conn.

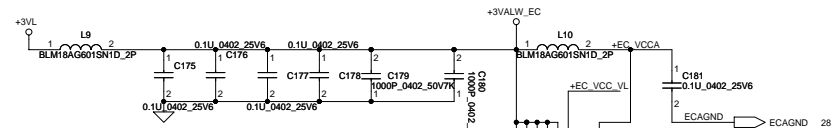
SM_DET	BIOS setup	Speaker Type	BOM
1	S&M option	Harman/Kardon	269@
0		Non Harman	259@

Non-Harman detection		
SPK_DET	0	ONKYO
	1	Non-Brand

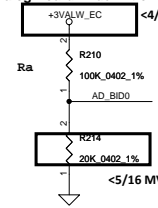
HeadPhone/LINE Out JACK

MIC/LINE IN JACK

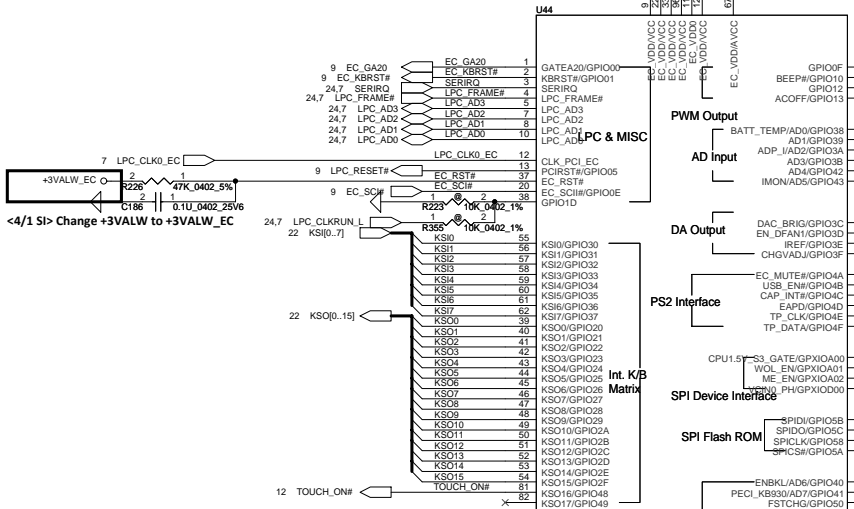
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				Date:	Thursday, November 07, 2013	Sheet 20 of 35



Analog Board ID definition



	DB	SI	PV	MV
Board ID	0 ohm	12K ohm	15K ohm	20K ohm
Project ID	100k ohm	100k ohm	100k ohm	100k ohm



<4/1 SI> Change +3VALW to +3VALW_EC

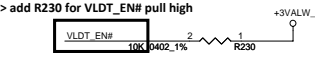
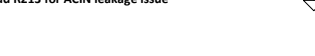
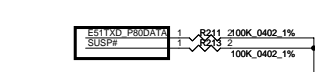
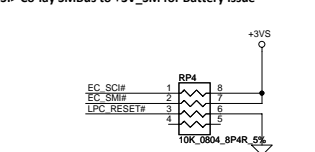
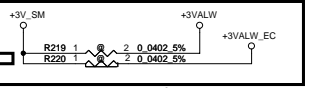
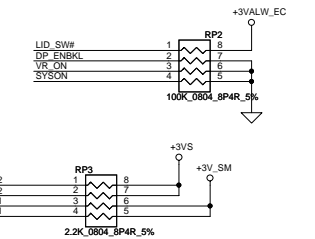
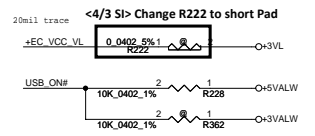
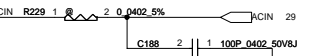
<4/24 PV> remove SM_PG_CTRL

<4/3 SI> Change VLDT_EN to Low Active

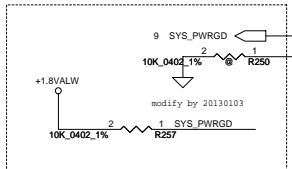
<4/26 PV> add TS_GPIO_EC for TS issue clarify

Delay SUSP# 10ms

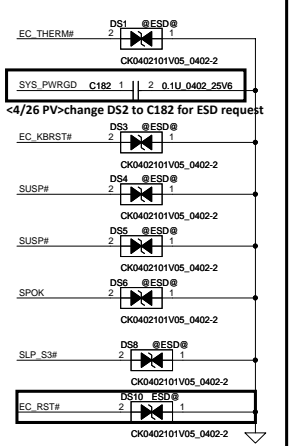
<4/3 SI> remove prohot#_EC for EC request



Delay EC_PWROK 50ms for VGA criteria



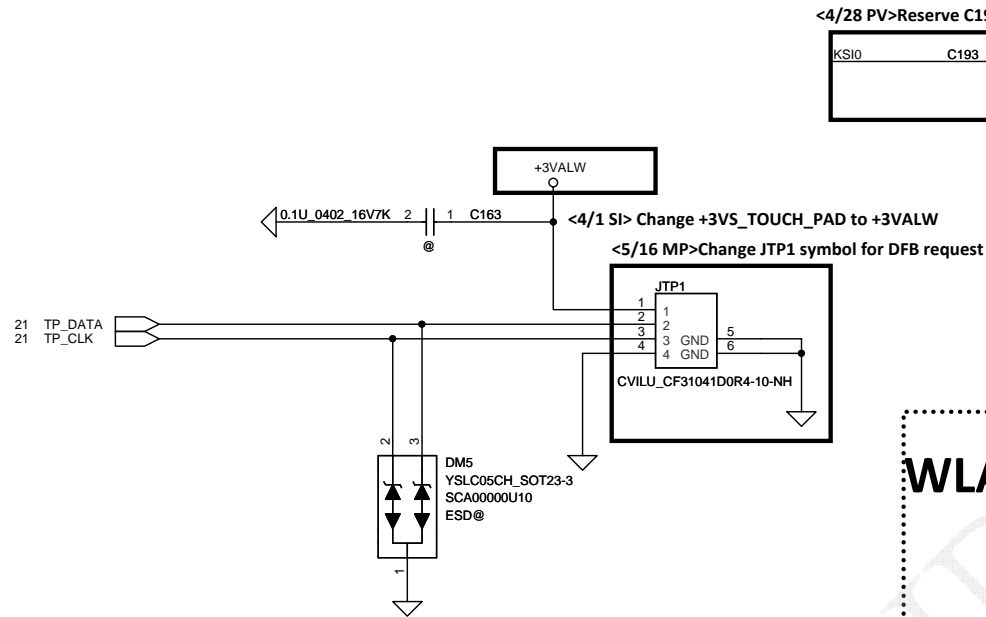
<4/3 SI> Add D51~D56 for ESD request



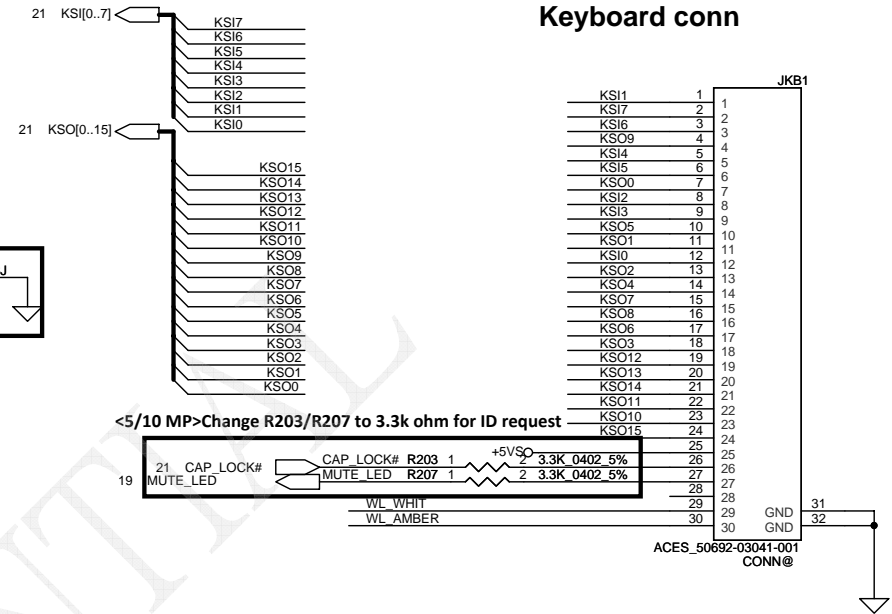
<4/26 PV> change D52 to C182 for ESD request

<4/28 PV> add D510 for ESD request

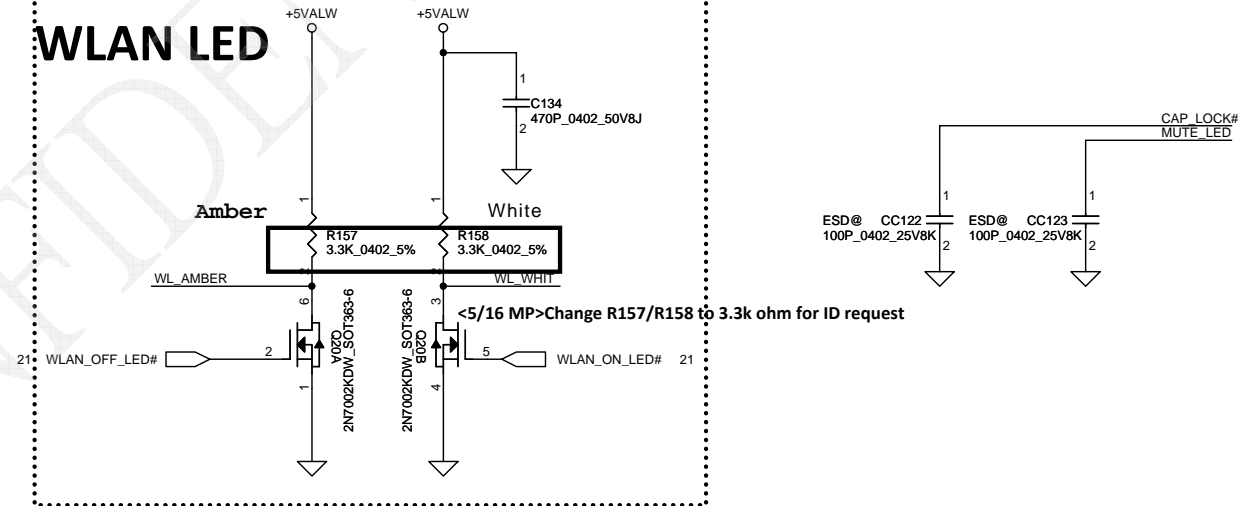
Touch pad conn



Keyboard conn

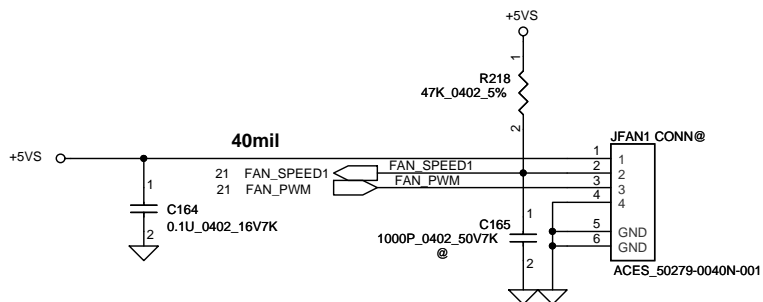


WLAN LED

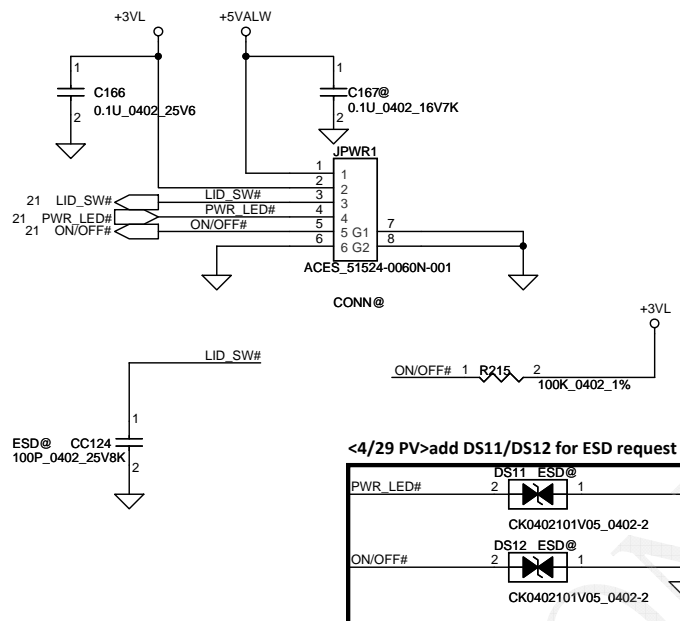


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				Date:	Thursday, November 07, 2013
				Sheet	22 of 35

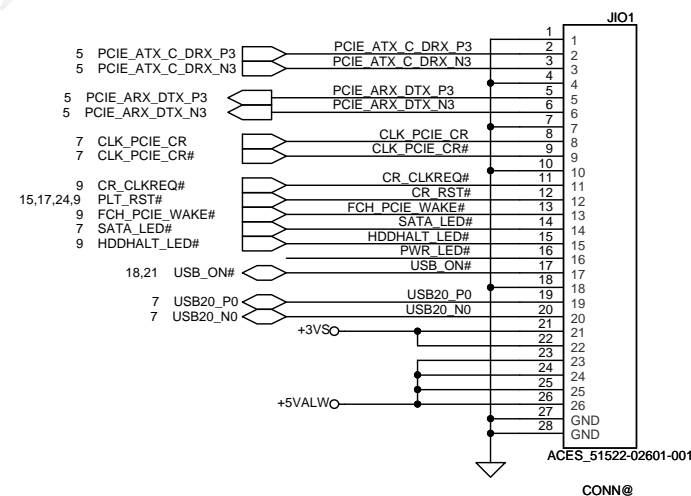
FAN conn



Power Button Connector

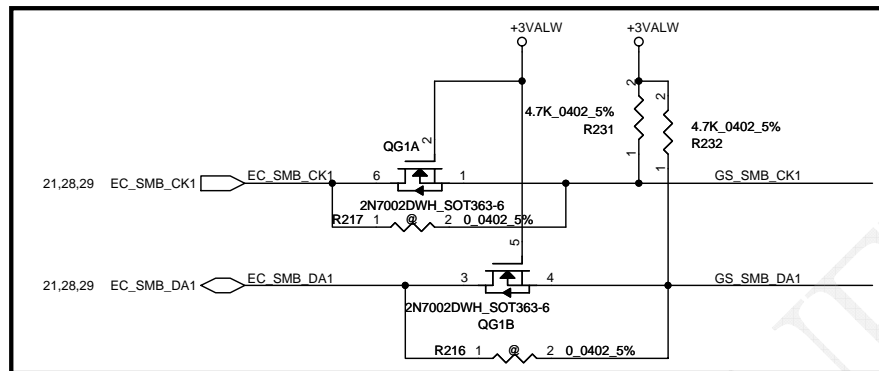
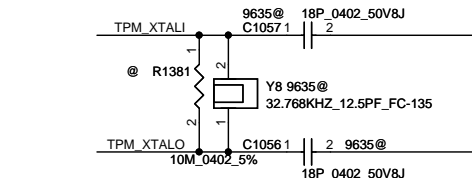
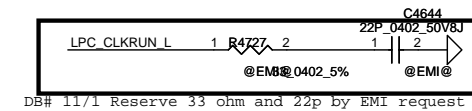
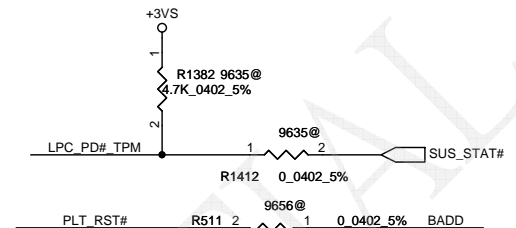
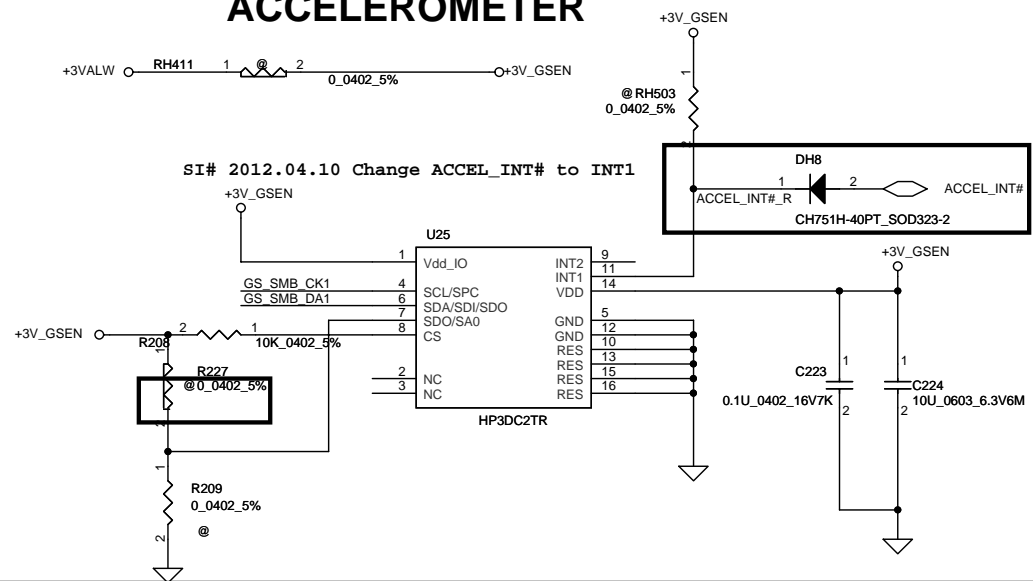


Card reader/USB IO Connector

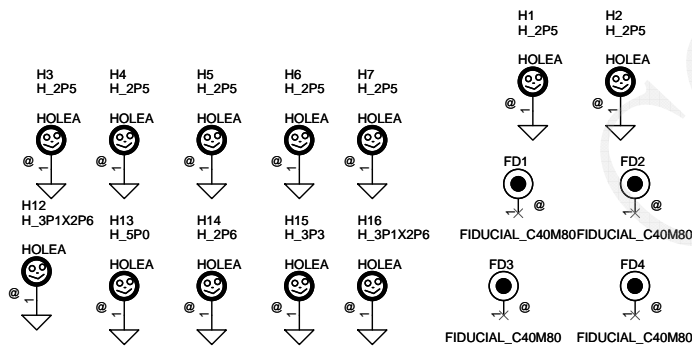


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Date:	Thursday, November 07, 2013	Sheet	23	of	35

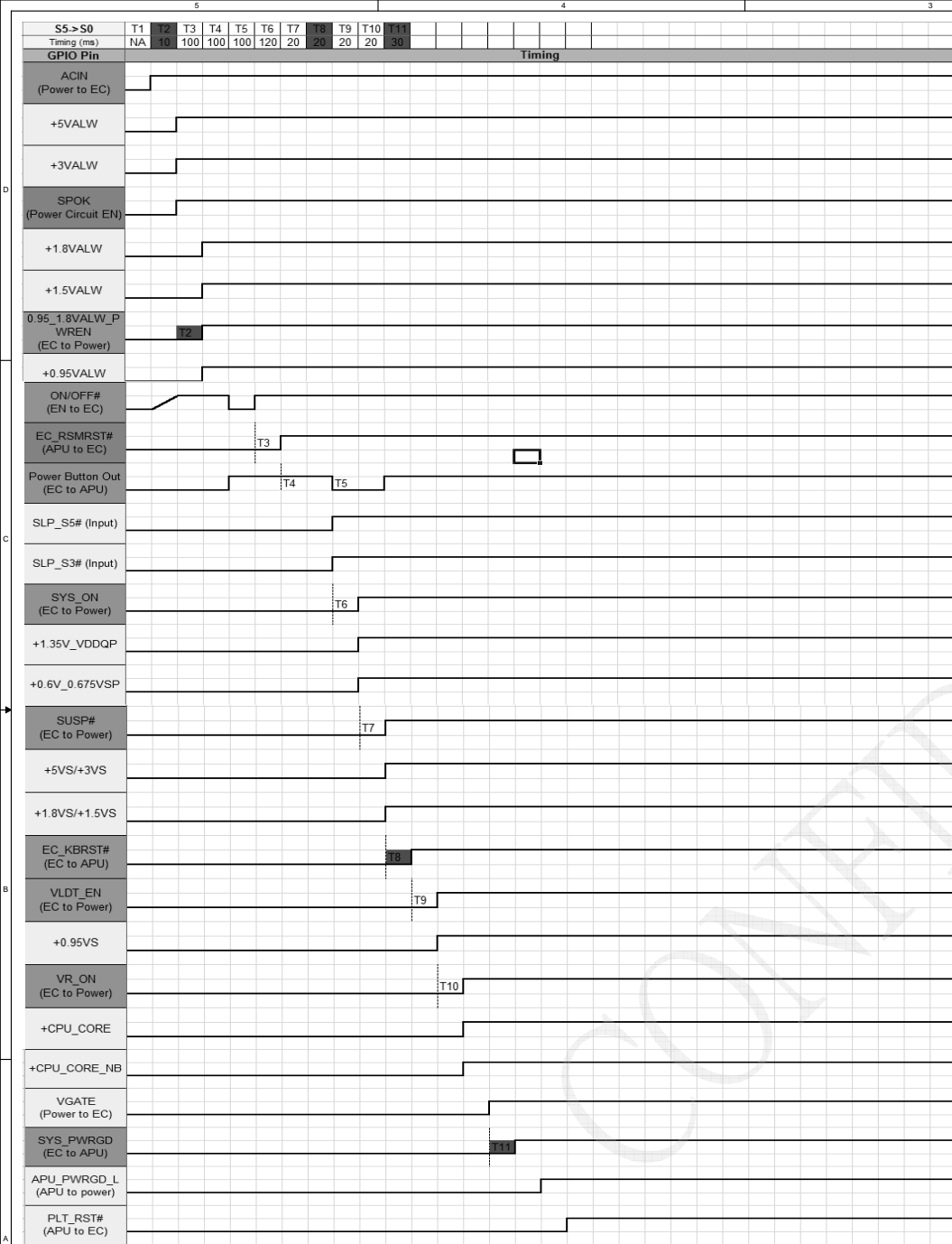
ACCELEROMETER



<4/8 SI> reserve MOS for power leakage



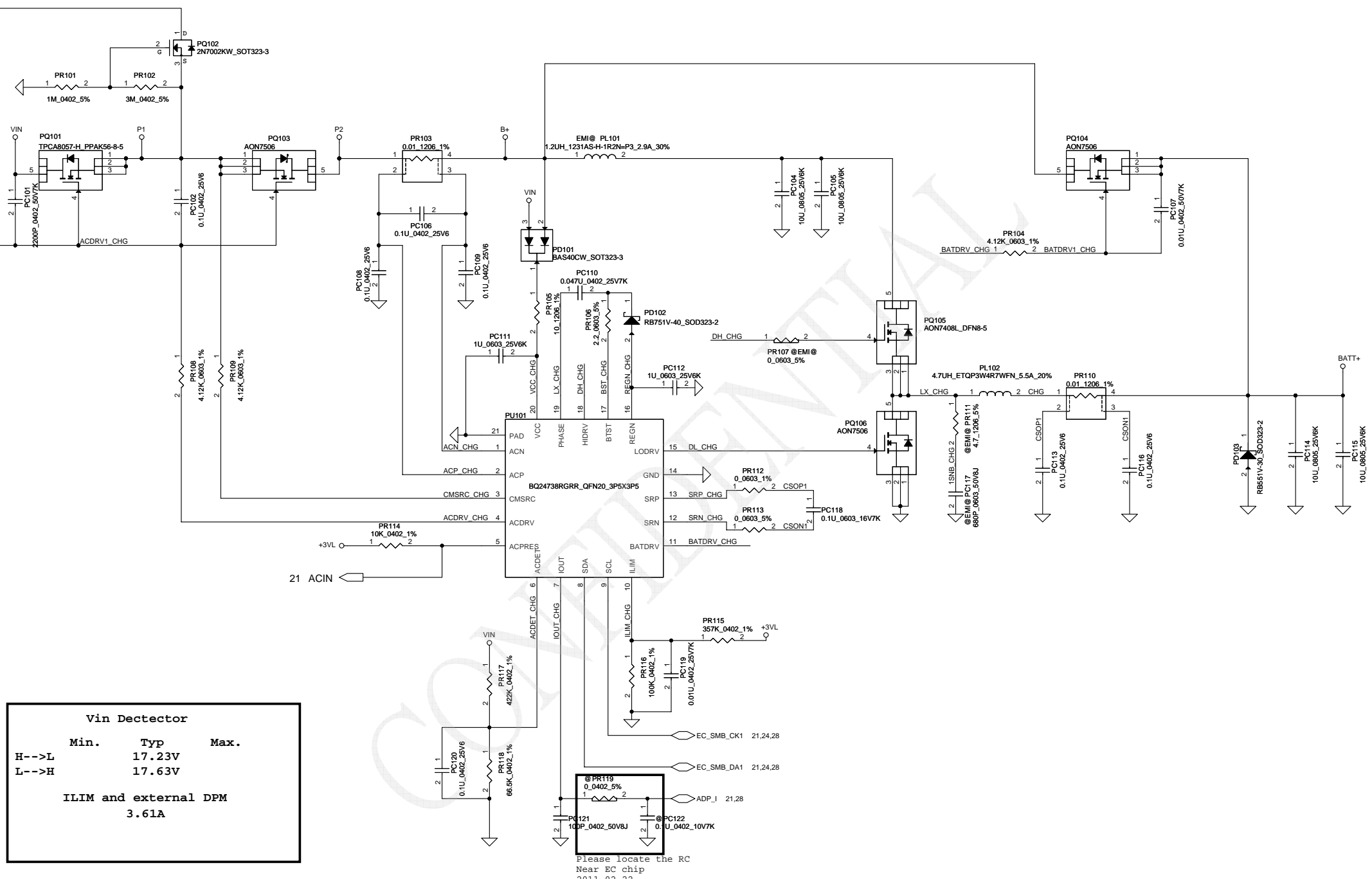
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				4019PB	
				Date: Thursday, November 07, 2013	Sheet 24 of 35

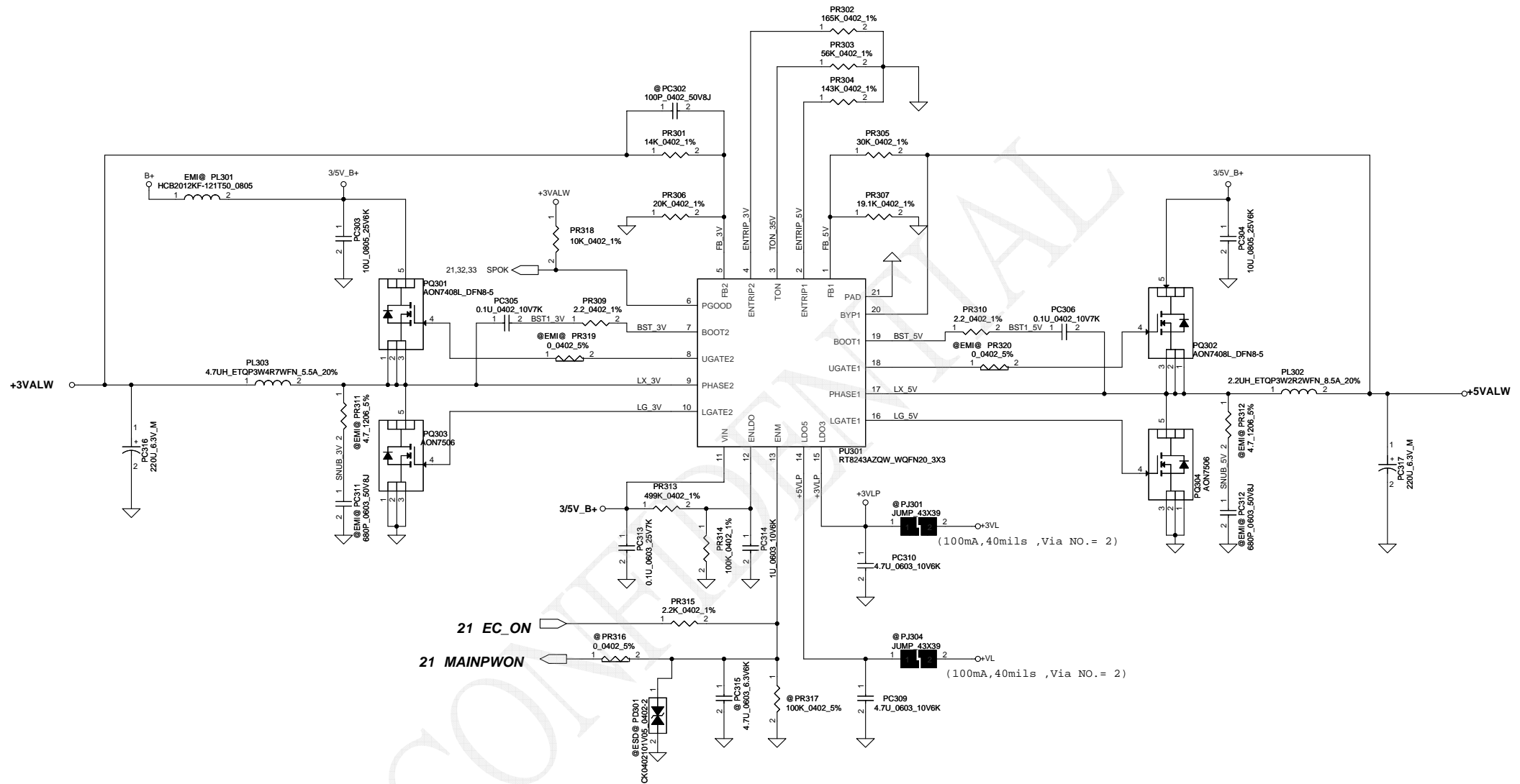


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Date:	Thursday, November 07, 2013	Sheet	26	of	35	

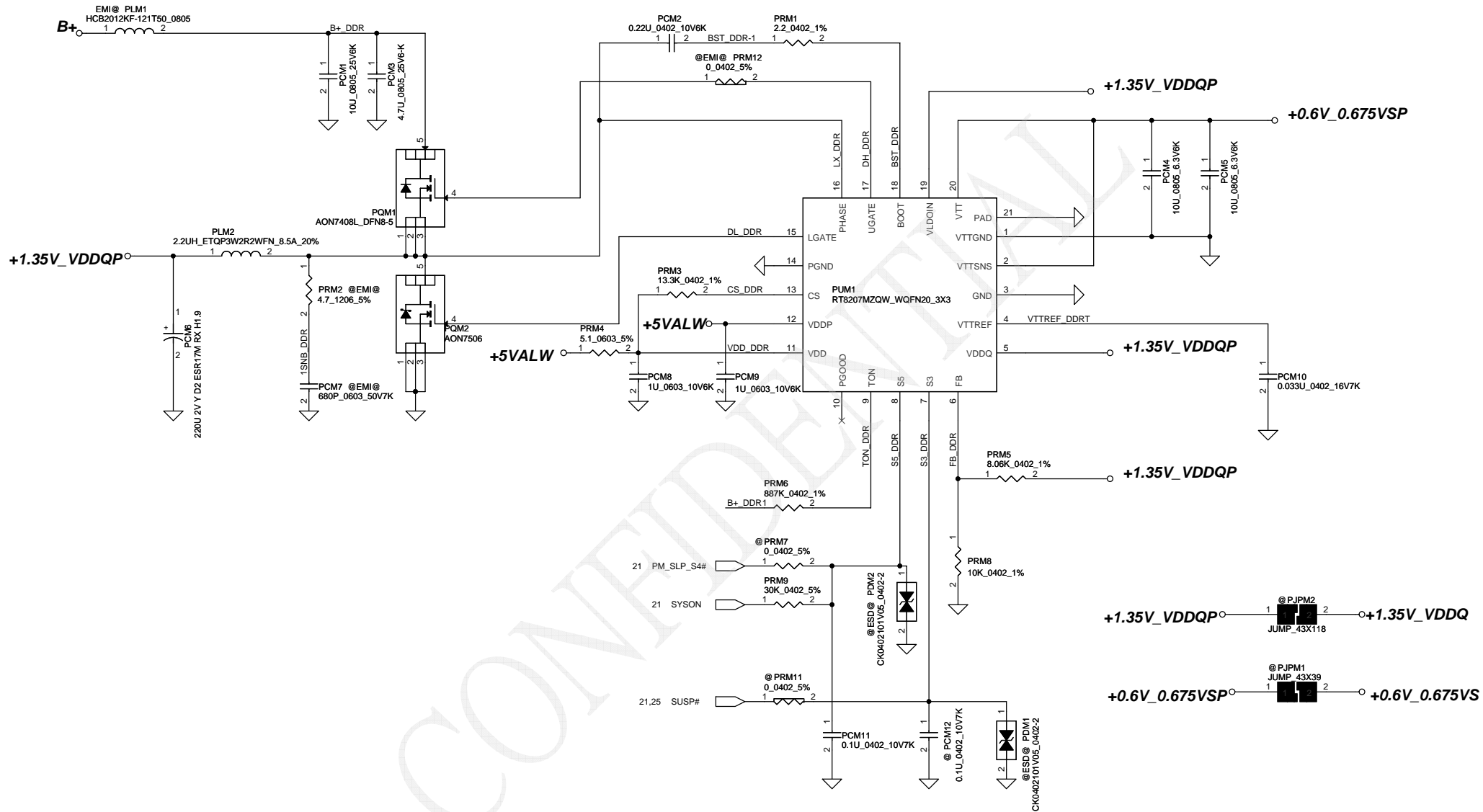
CONFIDENTIAL

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				4019PB	B
				Date: Thursday, November 07, 2013	Sheet 27 of 35

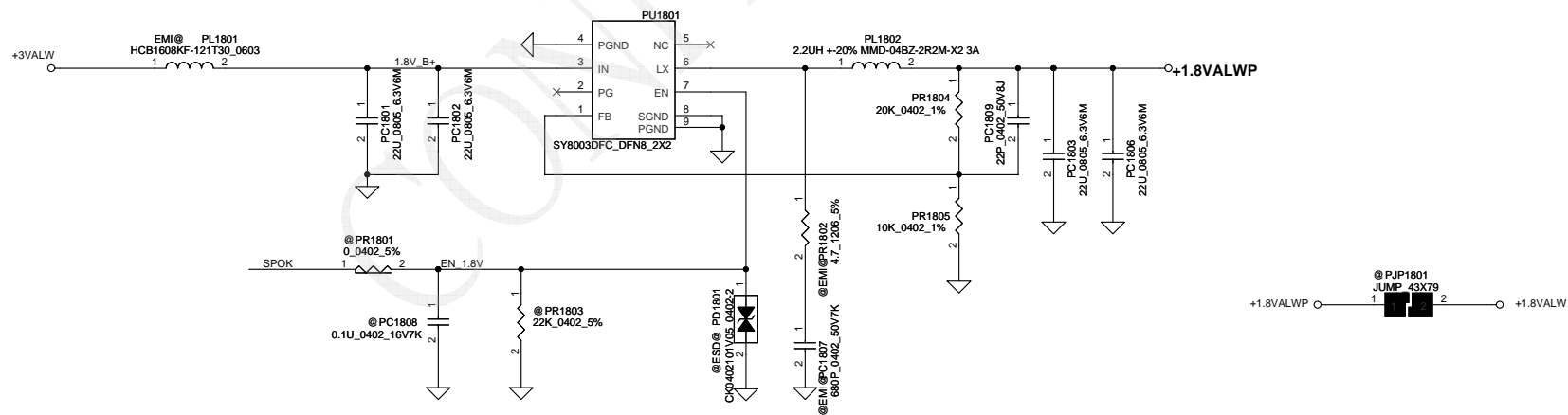
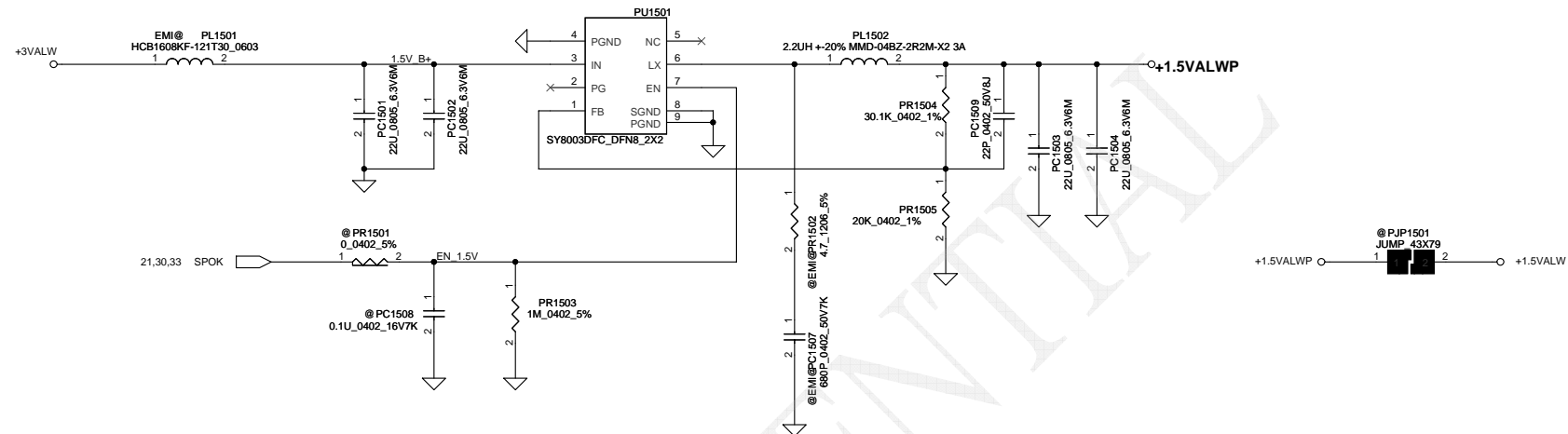




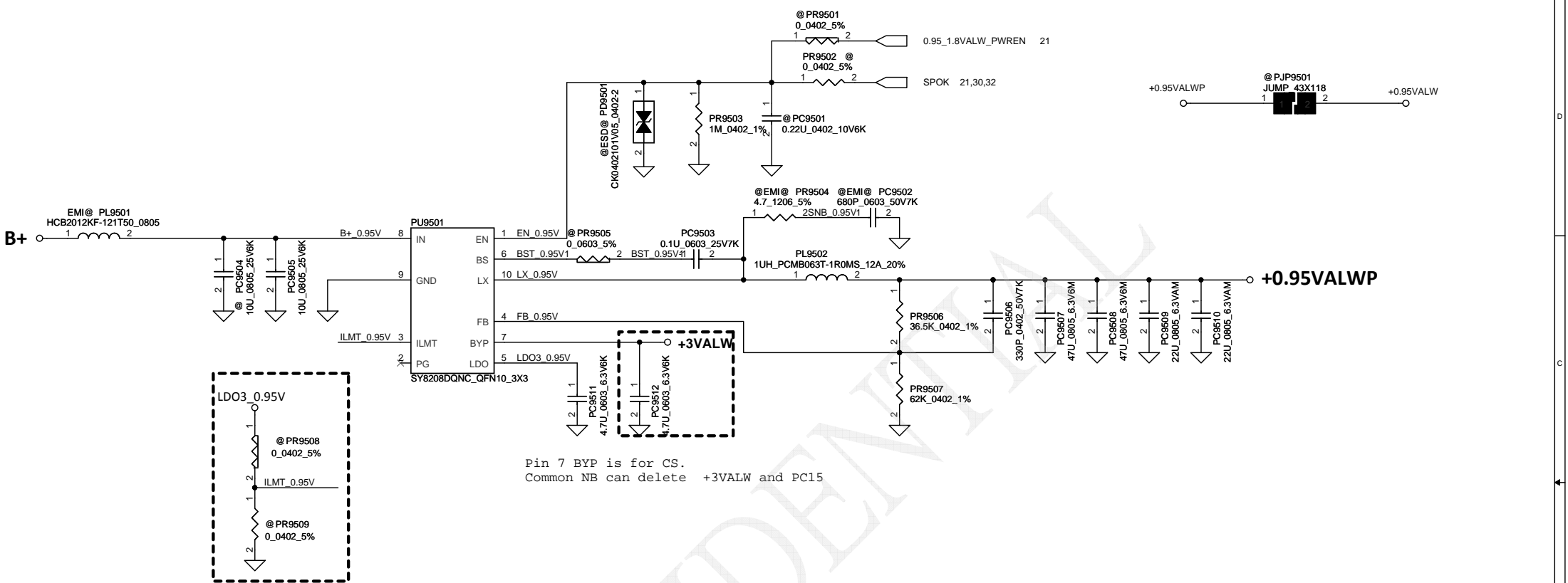
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				Date:	Rev B
				Sheet	30 of 35



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				Date:	Thursday, November 07, 2013
				Sheet	31 of 35



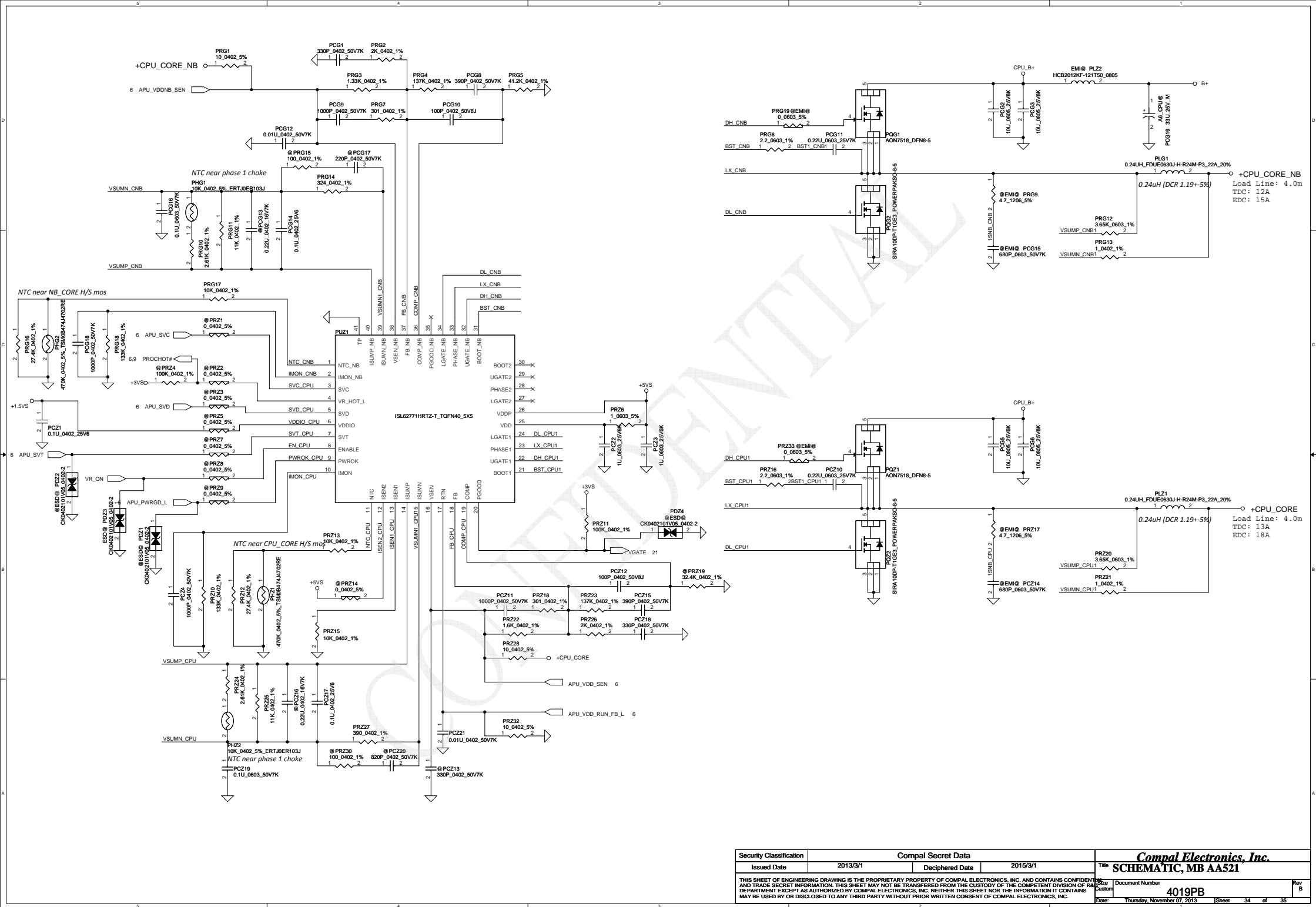
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Date:					Sheet 32 of 35



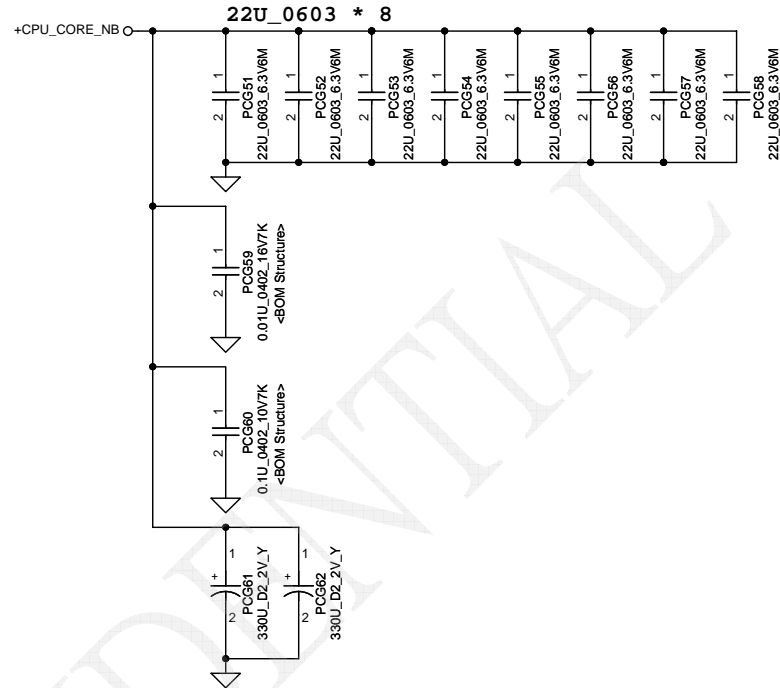
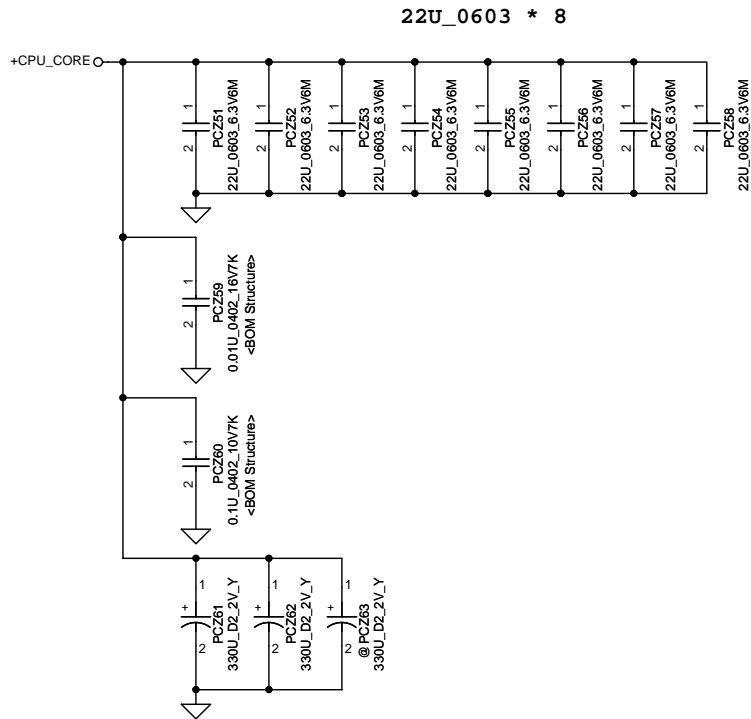
The current limit is set to 8A, 12A or 16A when this pin is pull low, floating or pull high

Pin 7 BYP is for CS.
Common NB can delete +3VALW and PC15

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				4019PB	
Date: Thursday, November 07, 2013				Sheet 33	of 35



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Date: Thursday, November 07, 2013			Sheet	34	of 35



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				Date:	Thursday, November 07, 2013
				Sheet	35 of 35