

Compal confidential

Schematics Document

Mobile Yonah uFCPGA with Intel
Calistoga_GM/PM+ICH7-M core logic

2006-07-24

REV:1.0

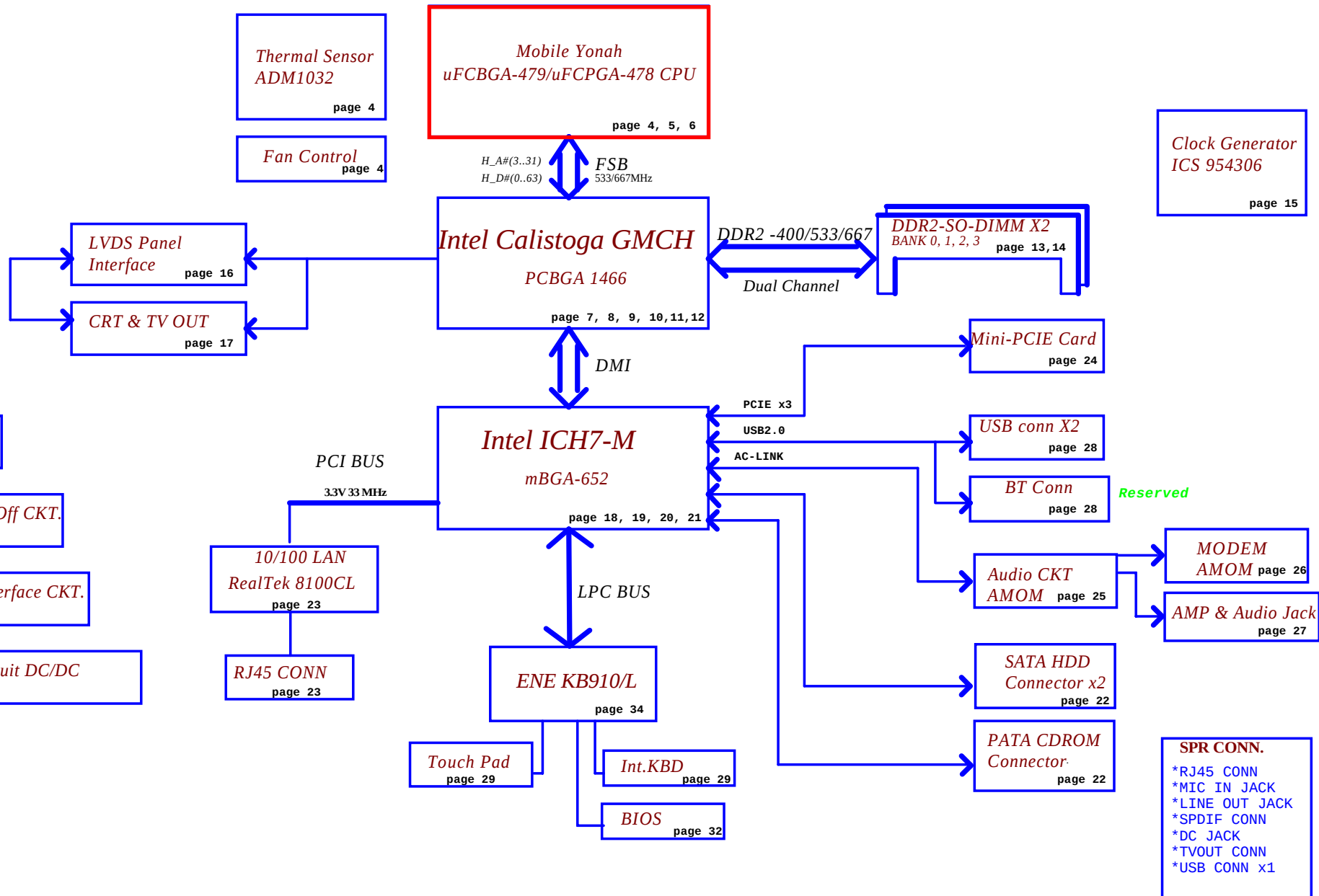
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				Block Diagram	

Voltage Rails

power plane State	+B LD03 LD05	+5VALW +3VALW	+1.8V +5V	+5VS +3VS +2.5VS +1.5VS +0.9VS +CPU_CORE +VCCP
S0	0	0	0	0
S1	0	0	0	0
S3	0	0	0	X
S5 S4/AC	0	0	X	X
S5 S4/ Battery only	0	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

0 MEANS ON
X MEANS OFF

PCI Devices

EXTERNAL	IDSEL#	REQ/GNT#	PIRQ
CARD BUS & 1394	AD22	2	C,D,E,G
RealTekK 8100CL	AD24	1	A

Load BOM check item

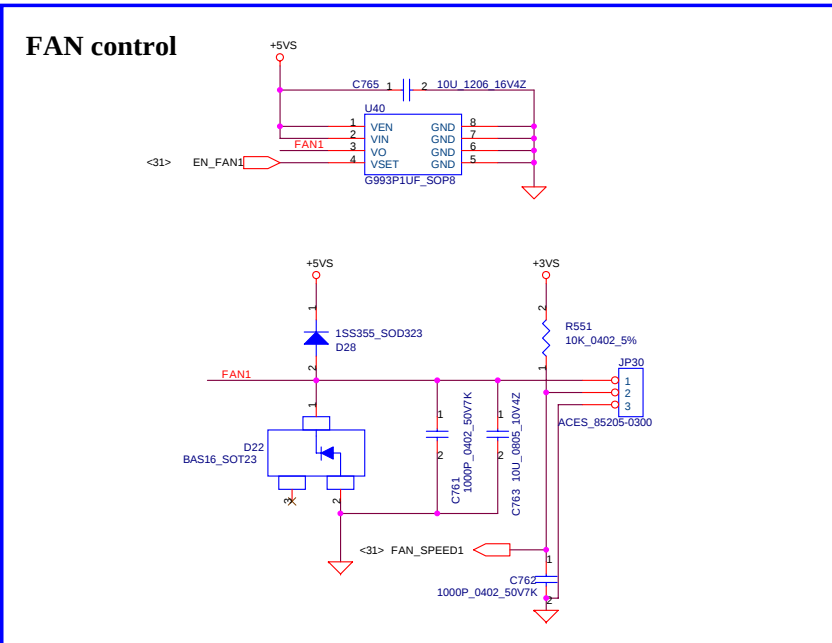
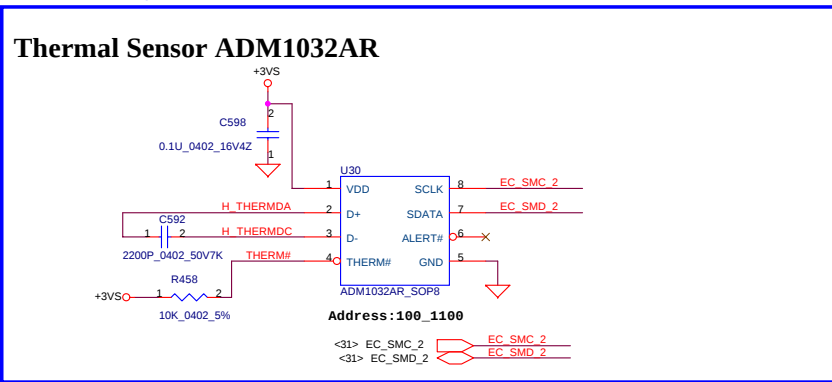
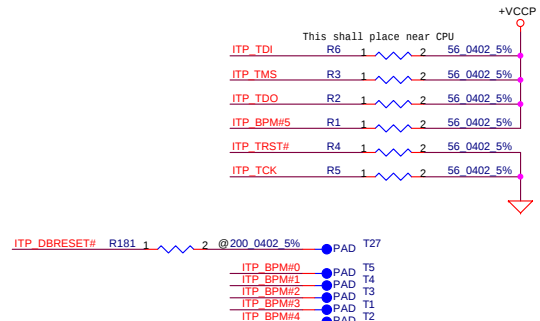
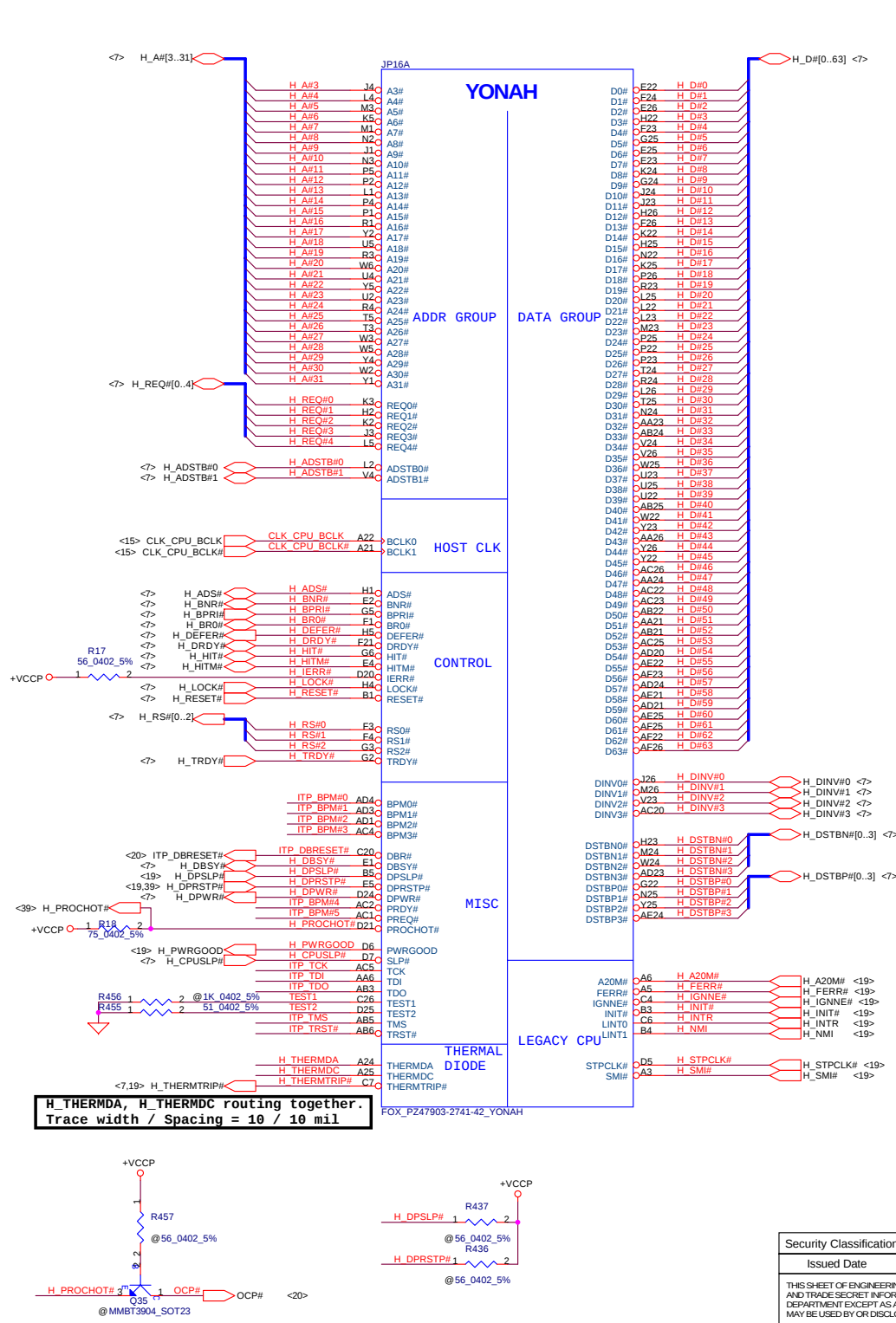
- 1.U31 GM/PM/GML part number
- 2.U6 ICH7 part number

BOM: 43144132L01 (GM)
43144132L02 (GML)

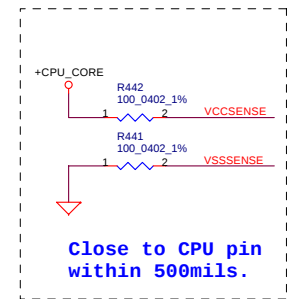
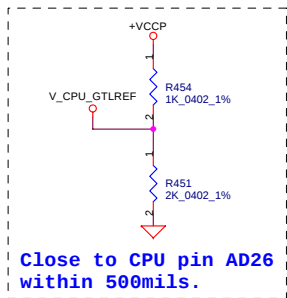
Jump-Short:

PJP4,PJP6,PJP7,PJP8,PJP10,PJP12,PJP14,PJP18,PJP19,PJP20,PJP25

MV step from PIRQE change to PIRQA for LAN poor performance.



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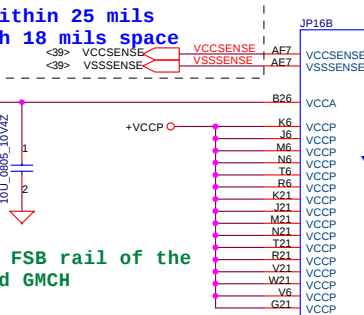
+1.5vs is a power source required by the PL clock generator on the processorsilicon

Length match within 25 mils
The trace width 18 mils space
7 mils

+VCCP is the FSB rail of the processor and GMCH

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

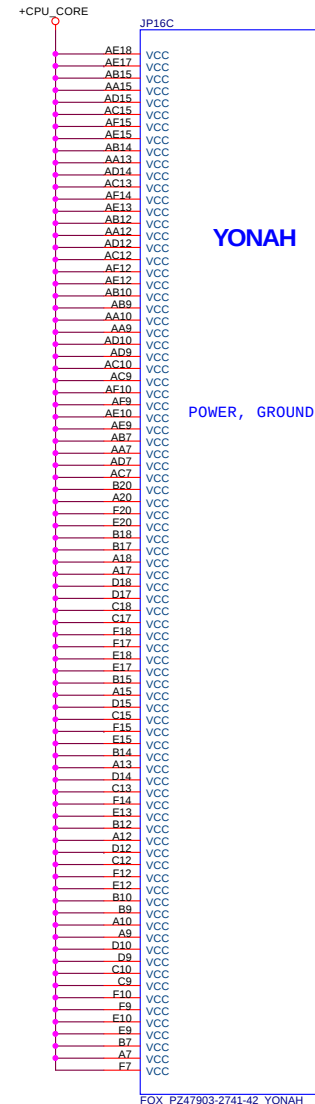
Resistor placed within 0.5" of CPU pin.Trace should be at least 25 mils away from any other toggling signal.



YONAH

POWER, GROUND, RESERVED SIGNALS AND NC

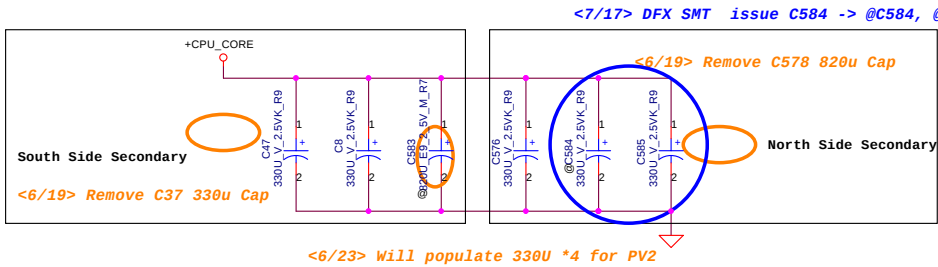
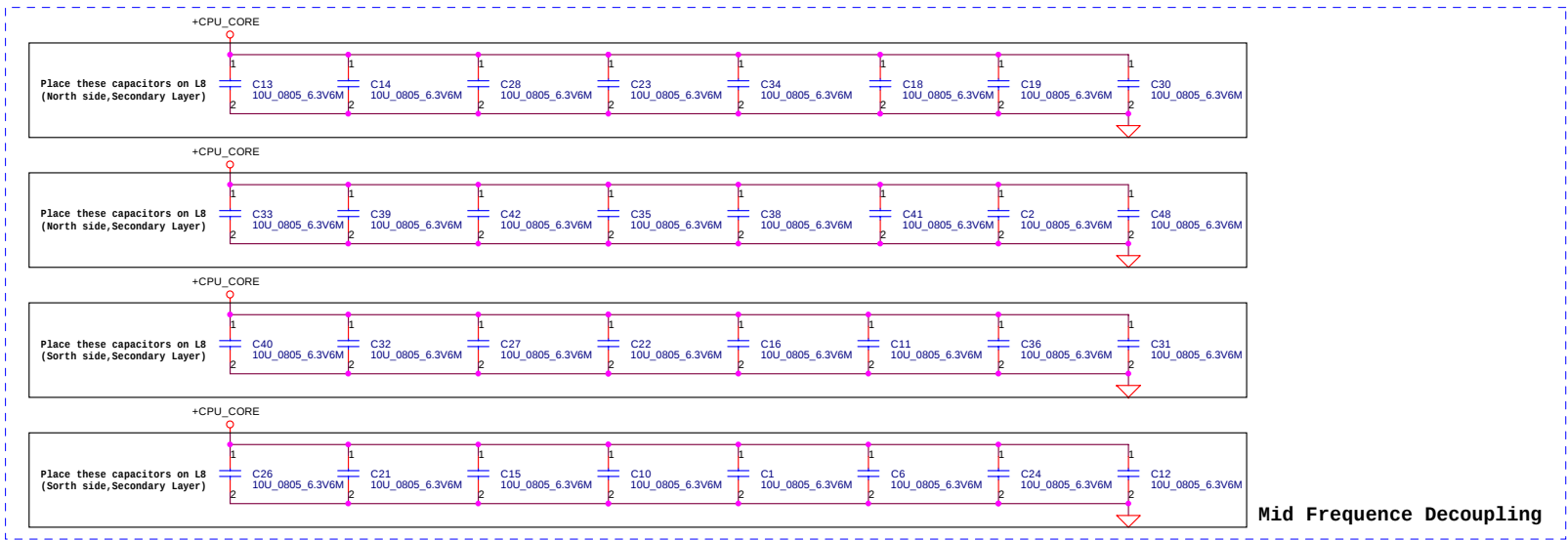
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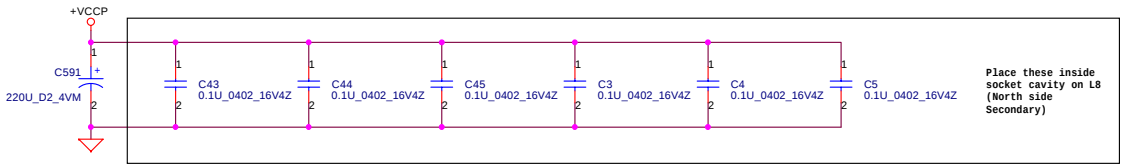
YONAH

POWER, GROUND

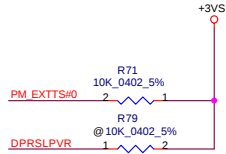
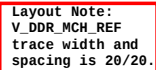
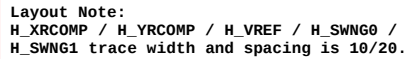
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ESR <= 1.5m ohm
Capacitor > 1980uF



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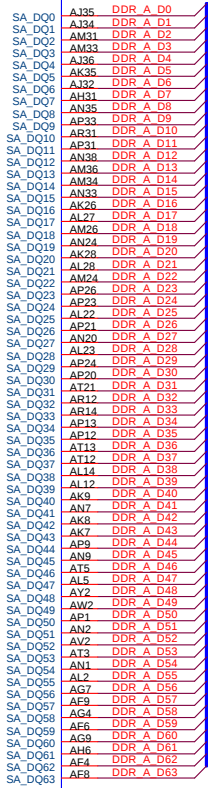


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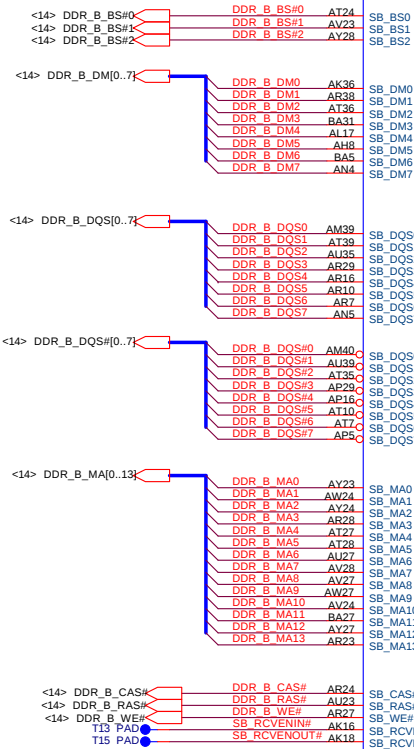


DDR SYS MEMORY A

CALISTOGA_FCBGA1466-D

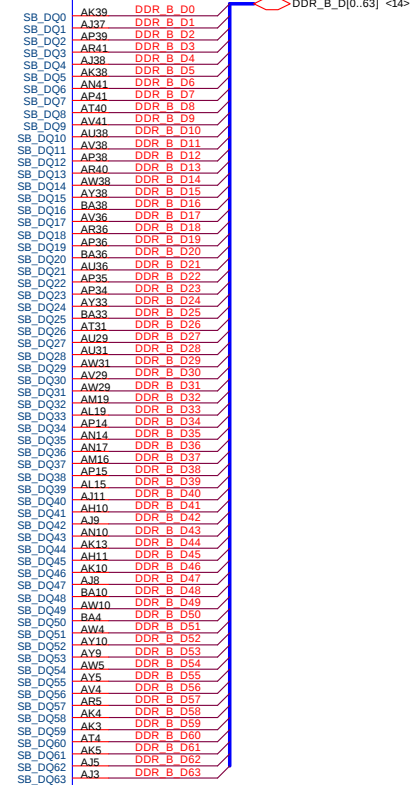


DDR_A_D[0..63] <13>



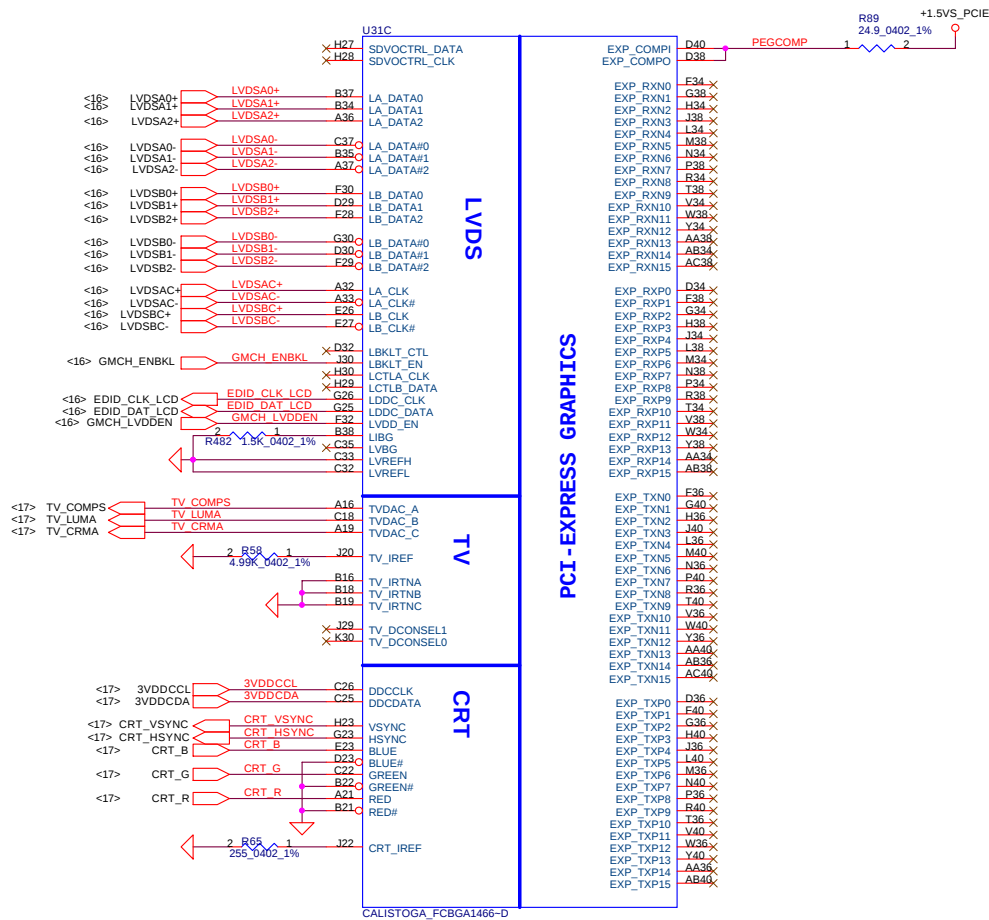
DDR SYS MEMORY B

CALISTOGA_FCBGA1466-D

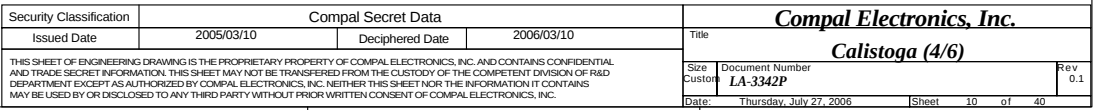


DDR_B_D[0..63] <14>

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Strap Pin Table

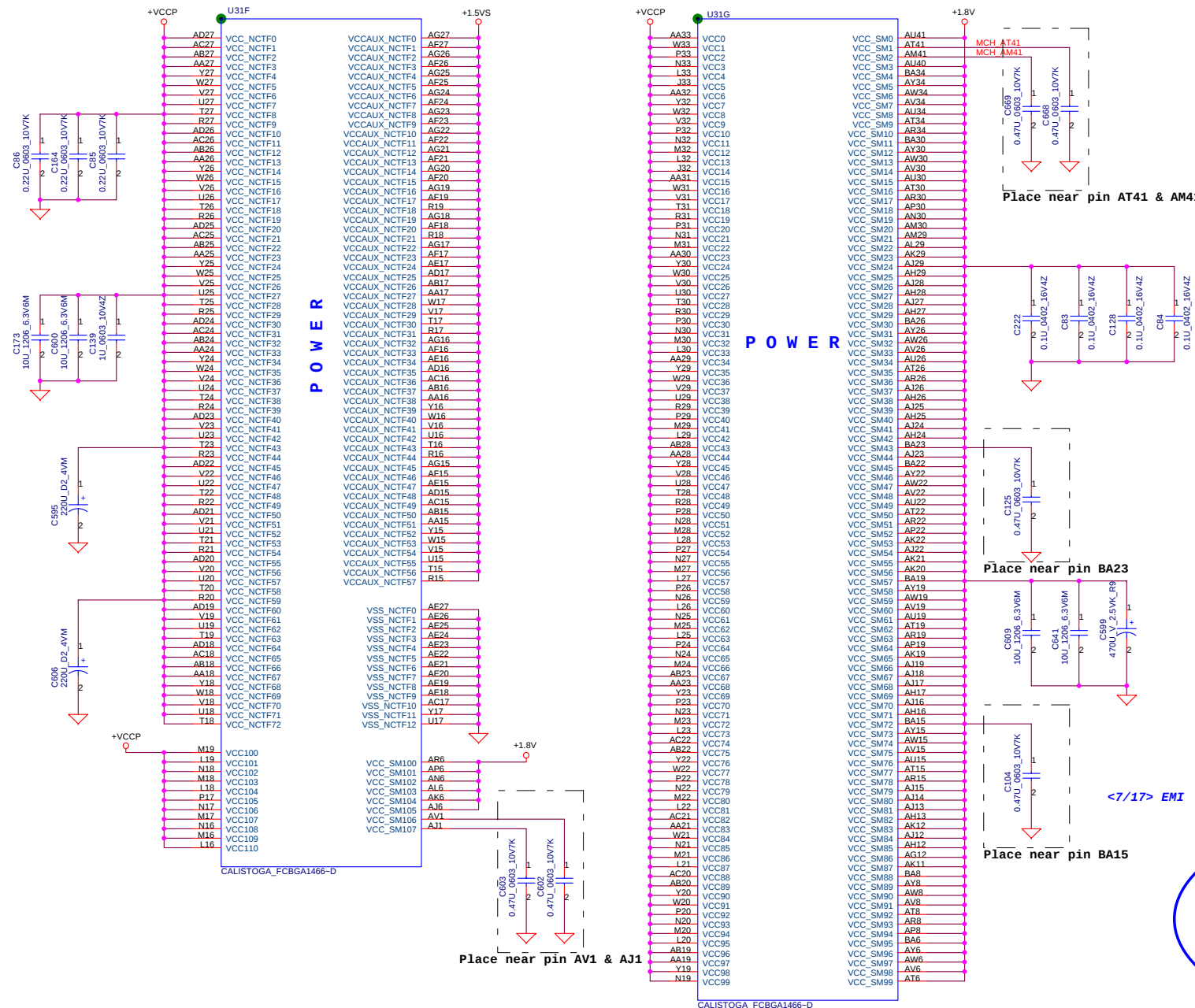
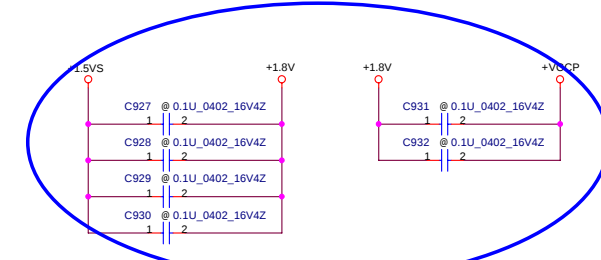
CFG[3:17] have internal pull up
CFG[19:18] have internal pull down

CFG[2:0]	011 = 667MT/s FSB 001 = 533MT/s FSB
CFG5	0 = DMI x 2 1 = DMI x 4*(Default)
CFG7	0 = Reserved 1 = Mobile Yonah CPU*(Default)
CFG9	0 = Lane Reversal Enable 1 = Normal Operation (Default)*
CFG6	0 = Reserved
PSB 4X CLK Enable	1 = Calistoga *
CFG[13:12]	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation *(Default)
CFG16	0 = Dynamic ODT Disabled 1 = Dynamic ODT Enabled *(Default)
CFG10 CFG18	10 = 1.05V*(Default) 01 = 1.5V
CFG19	0 = No SDVO Device Present *(Default) 1 = DMI Lane Reversal Enable
SDVO_CTRLDATA	0 = No SDVO Device Present 1 = SDVO Device Present
CFG20 (PCIE/SDVO select)	0 = Only PCIE or SDVO is operational. *(Default) 1 = PCIE/SDVO are operating simu.

<7>	CFG5	R48	1	2	@ 2.2K 0402 5%
<7>	CFG7	R54	1	2	@ 2.2K 0402 5%
<7>	CFG9	R51	1	2	@ 2.2K 0402 5%
<7>	CFG11	R47	1	2	@ 2.2K 0402 5%
<7>	CFG12	R49	1	2	@ 2.2K 0402 5%
<7>	CFG13	R50	1	2	@ 2.2K 0402 5%
<7>	CFG16	R53	1	2	@ 2.2K 0402 5%

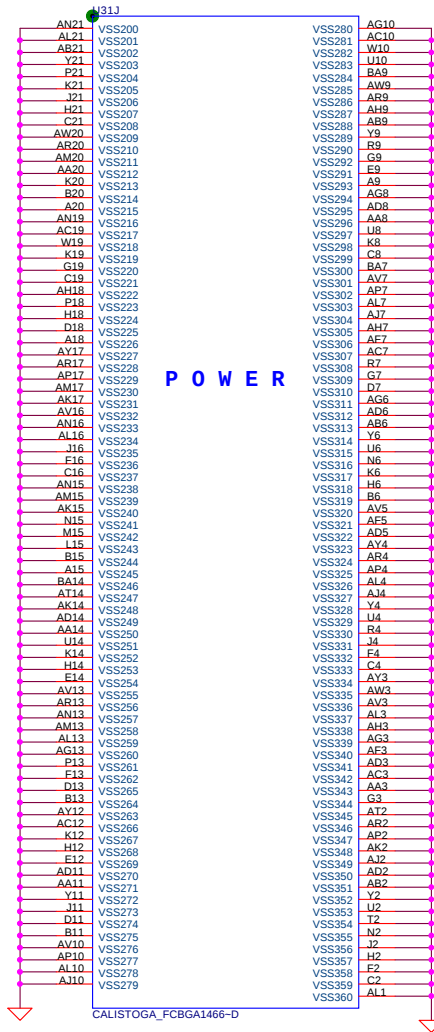
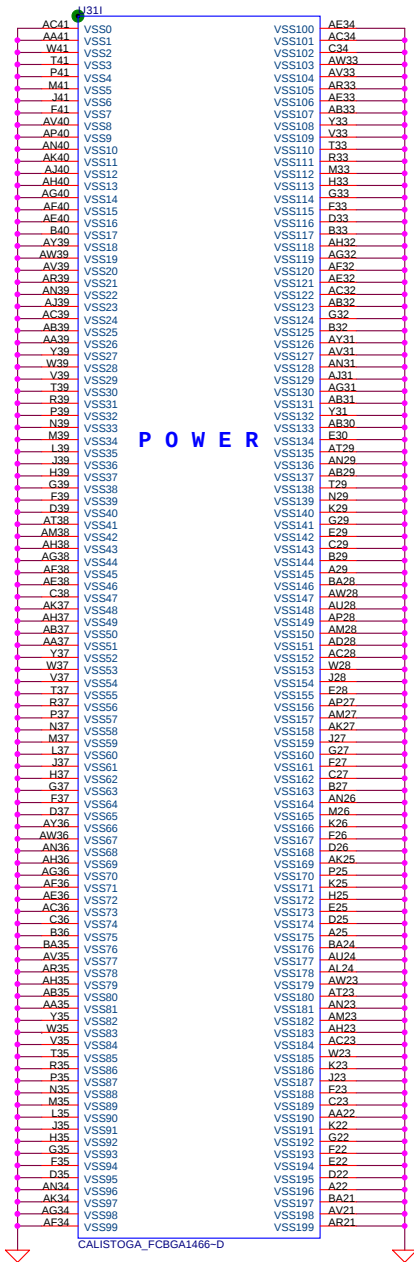
<7>	CFG18	R74	1	2	@ 1K 0402 5%
<7>	CFG19	R82	1	2	@ 1K 0402 5%
<7>	CFG20	R87	1	2	@ 1K 0402 5%

<7/17> EMI issue, add new parts C927,C928,C929,C930, C931,C932

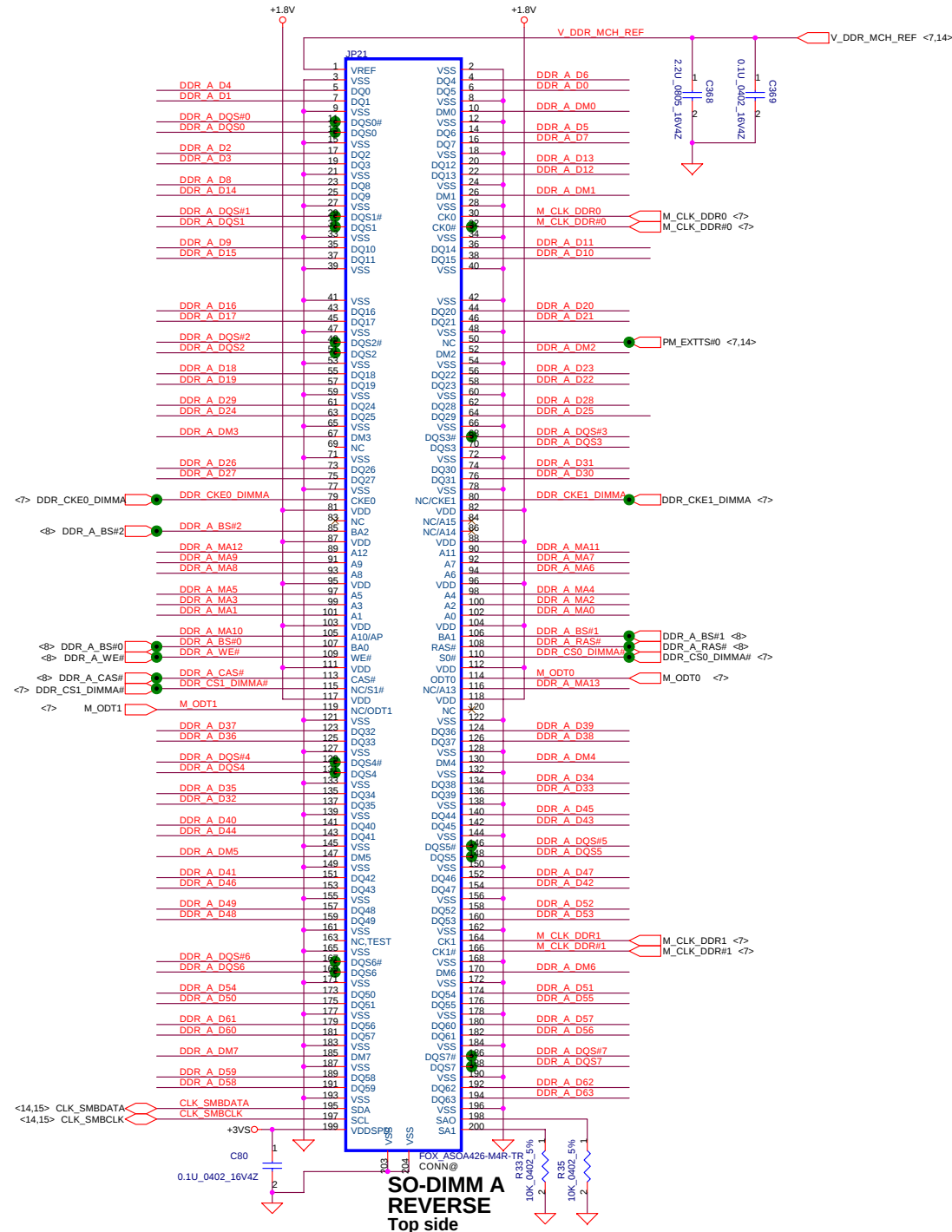
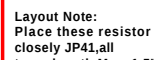
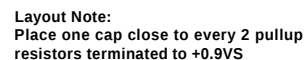
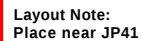


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Calistoga (5/6)



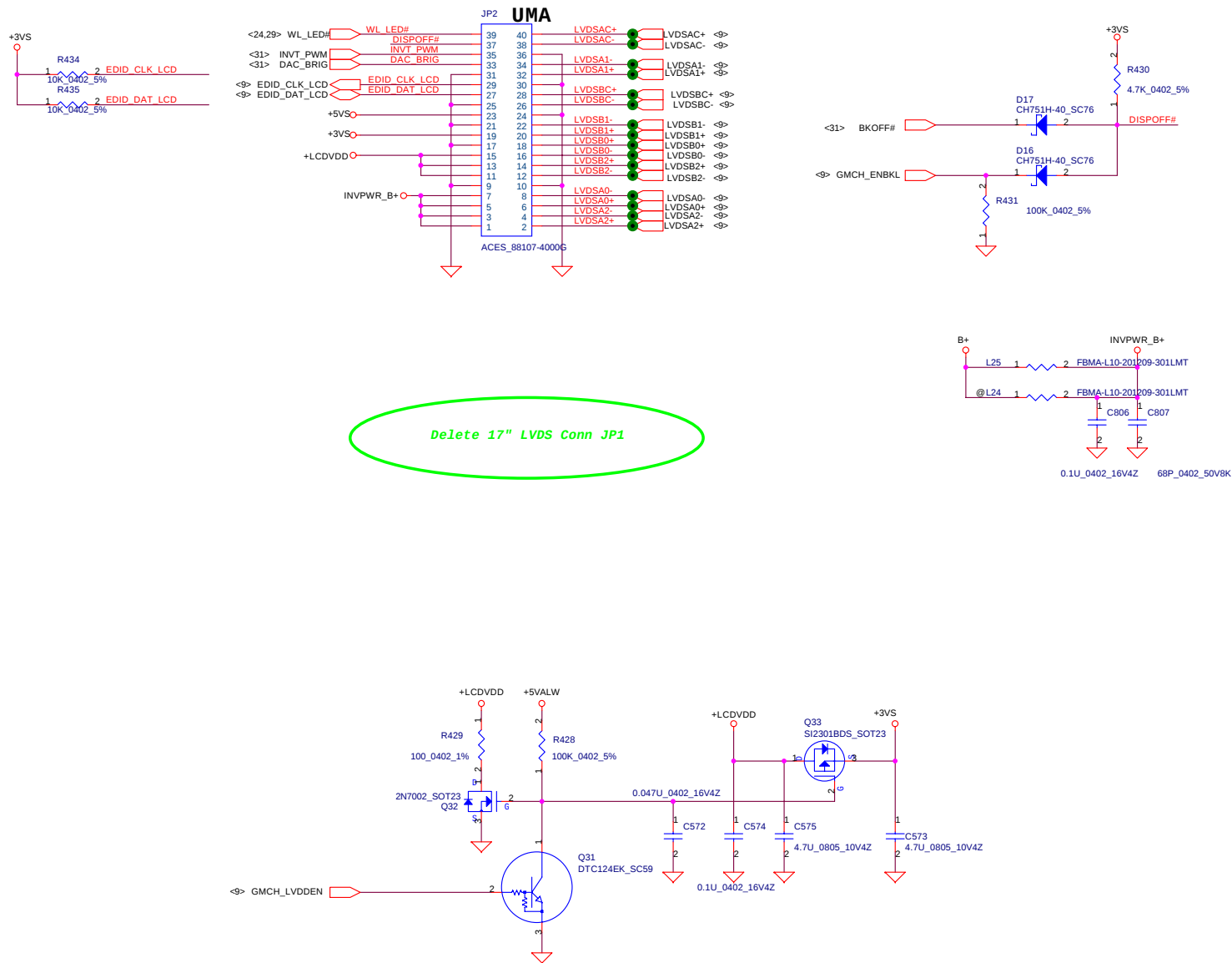
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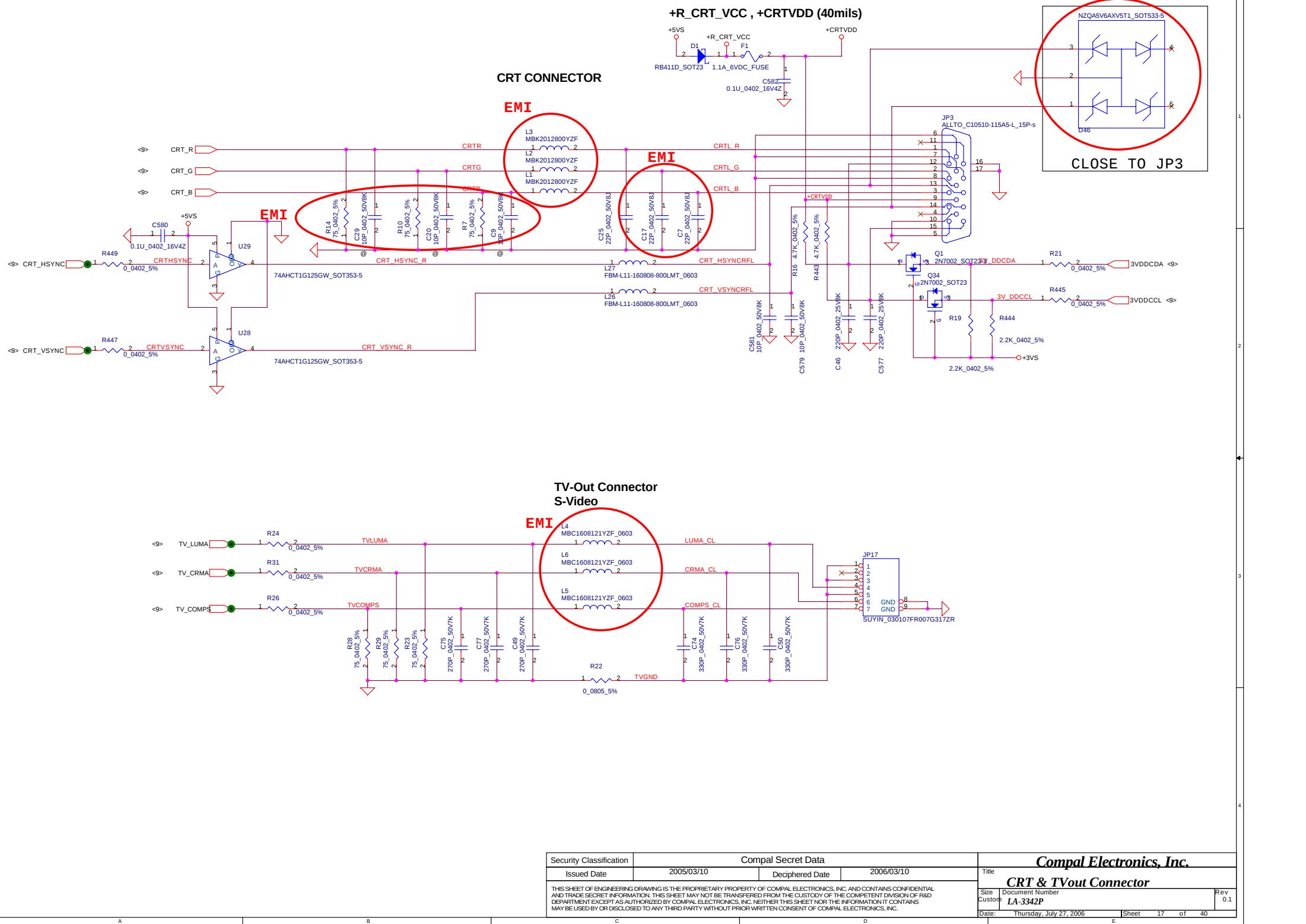
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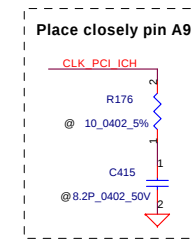
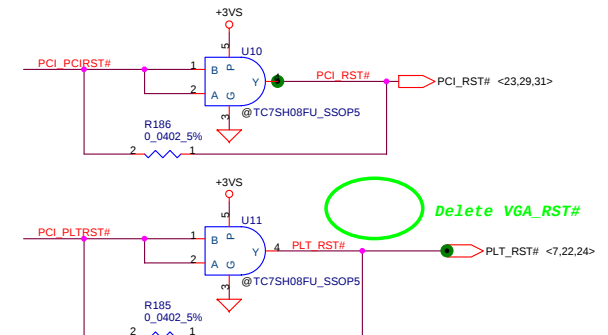
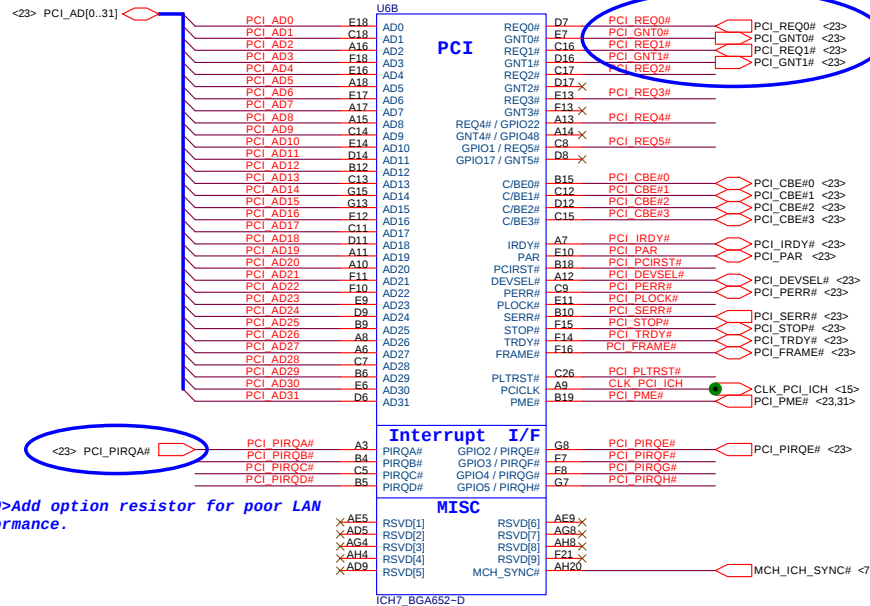
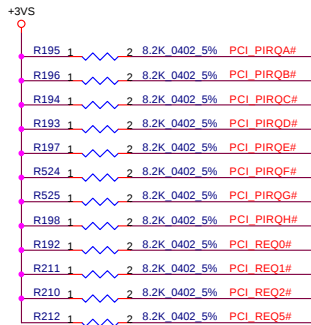
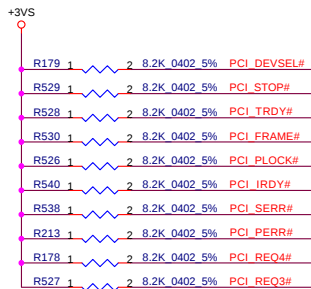
LCD Panel & inverter Connector



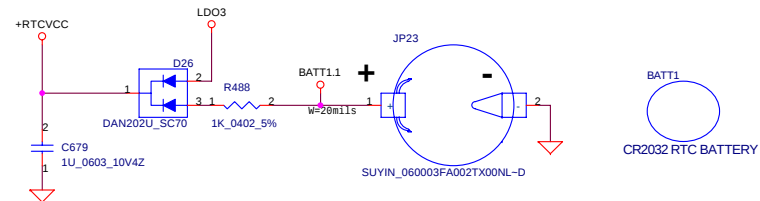
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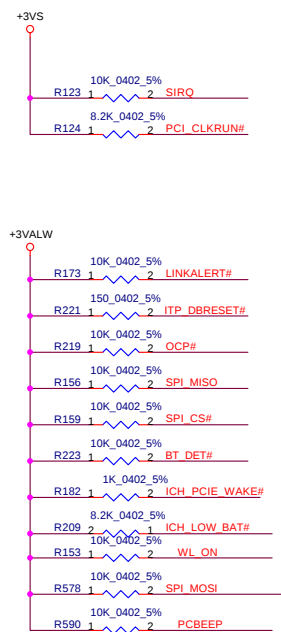
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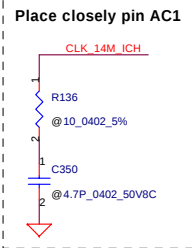
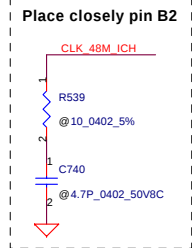
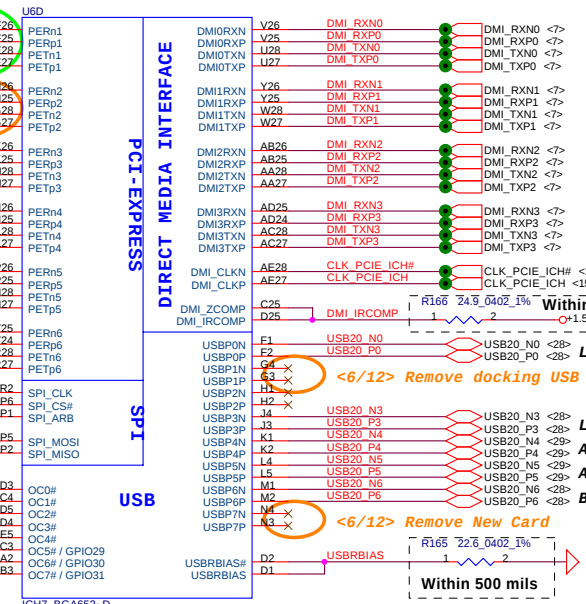
<7/20>Add resistor connect LAN chip clock LAN pin for poor LAN performance.

Remove EC Flash# (for 128K) PCI LANCLKRUN#

Delete 17" New Card PCIE traces

<6/20> Remove New Card trace

To mini PCIE Card



Need update symbol

Within 500 mils

Left side USB port

Left side USB port

Audio Board USB port

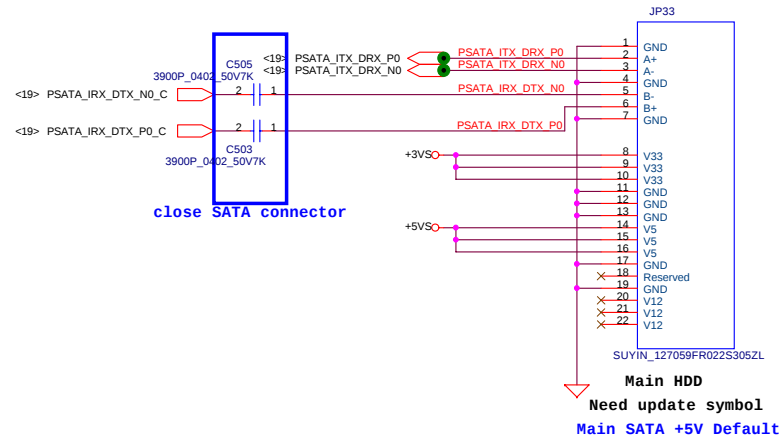
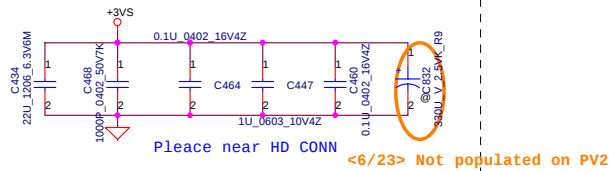
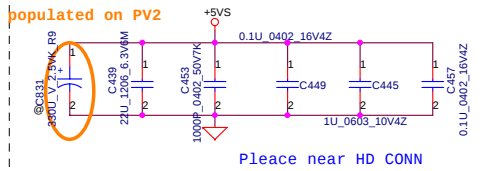
Audio Board USB port

BT module

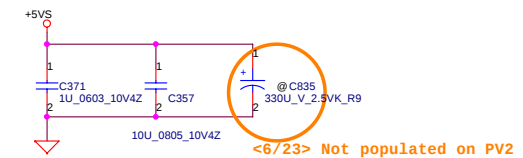
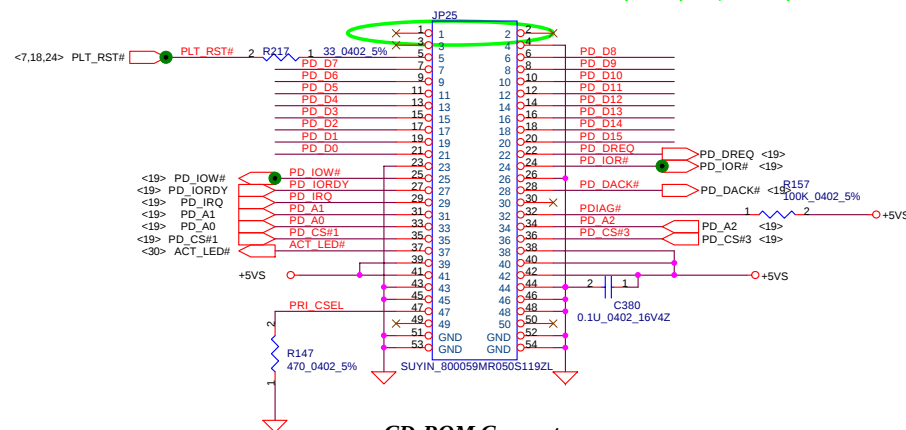
<6/12> Remove New Card

Within 500 mils

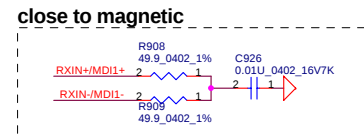
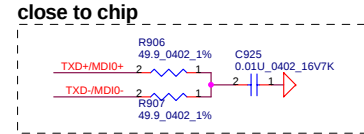
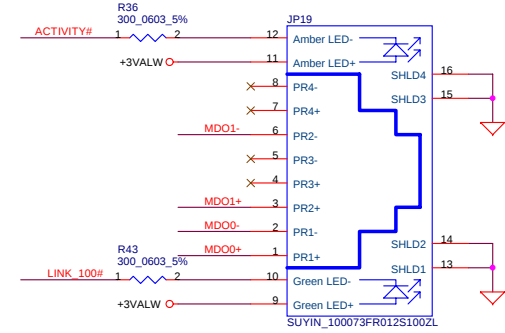
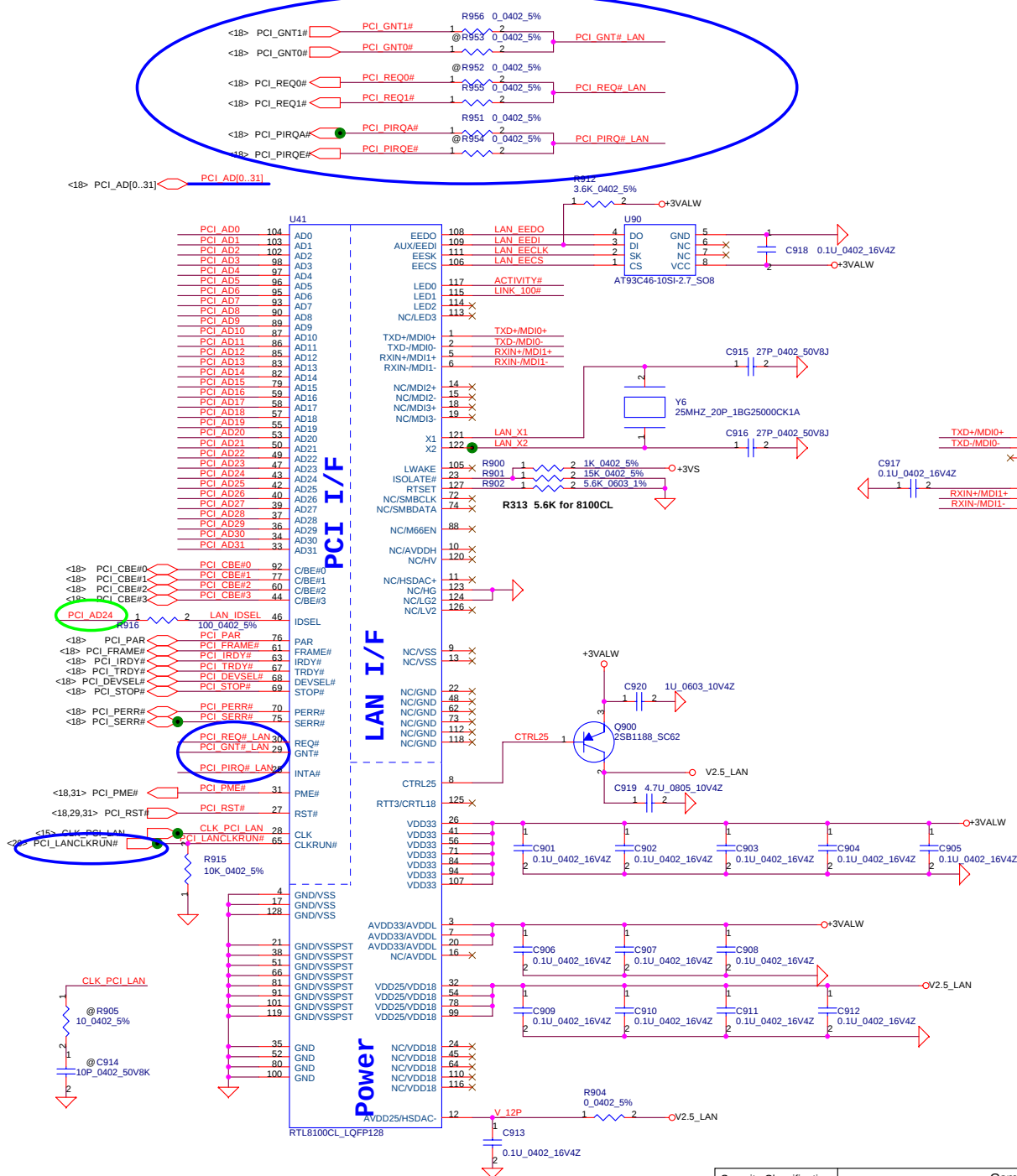
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Issued Date	2005/03/10	Deciphered Date	2006/03/10	Compal Electronics, Inc.	
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				Custom	LA-3342P
				Date:	Thursday, July 27, 2006
				Sheet	20 of 40
				Rev	1.0



Delete CD traces (JP25 pin1,2 and3)

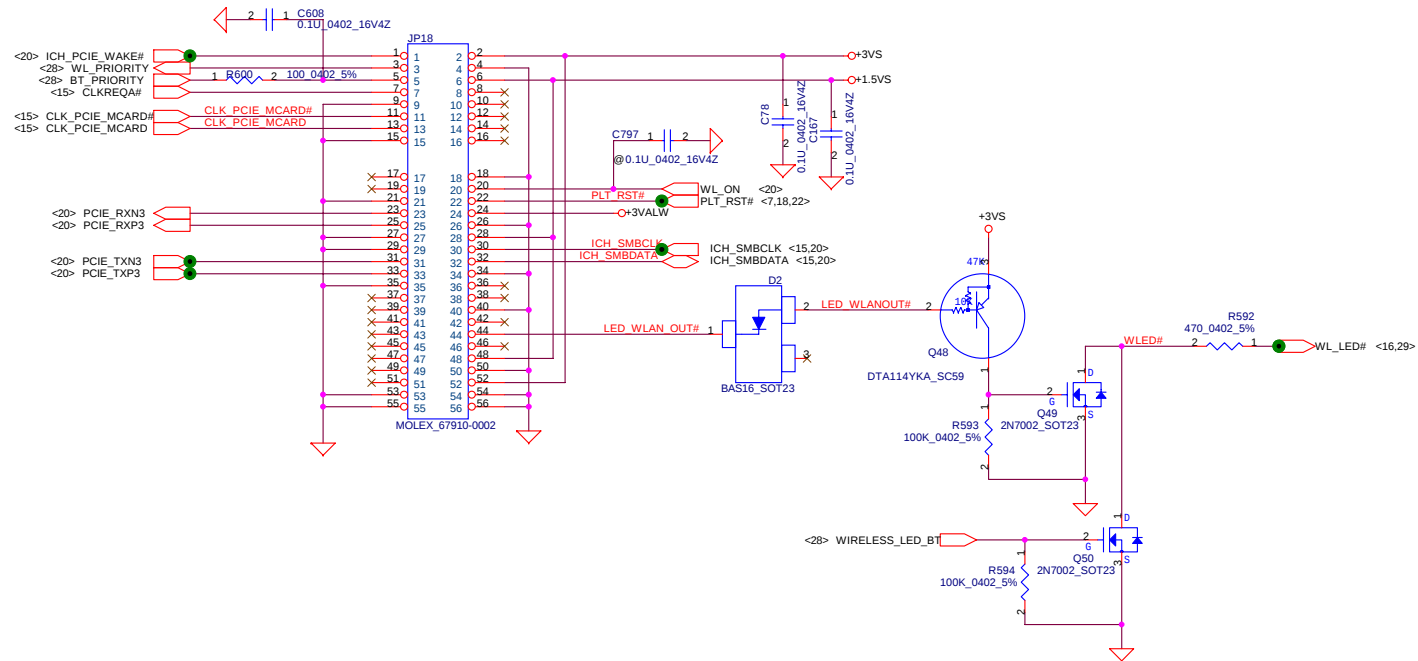


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2005/04/06				2005/04/06				LAN-8100CL			
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Custom				LA-3342P				Rev			
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Mini-Express Card(Slot 1-WLAN)



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				Rev	0.1

<6/12> Remove PCM_SPK

For Layout:

Place decoupling caps near the power pins of SmartAMC device.

Delete CD traces

<6/12> Remove Docking line out

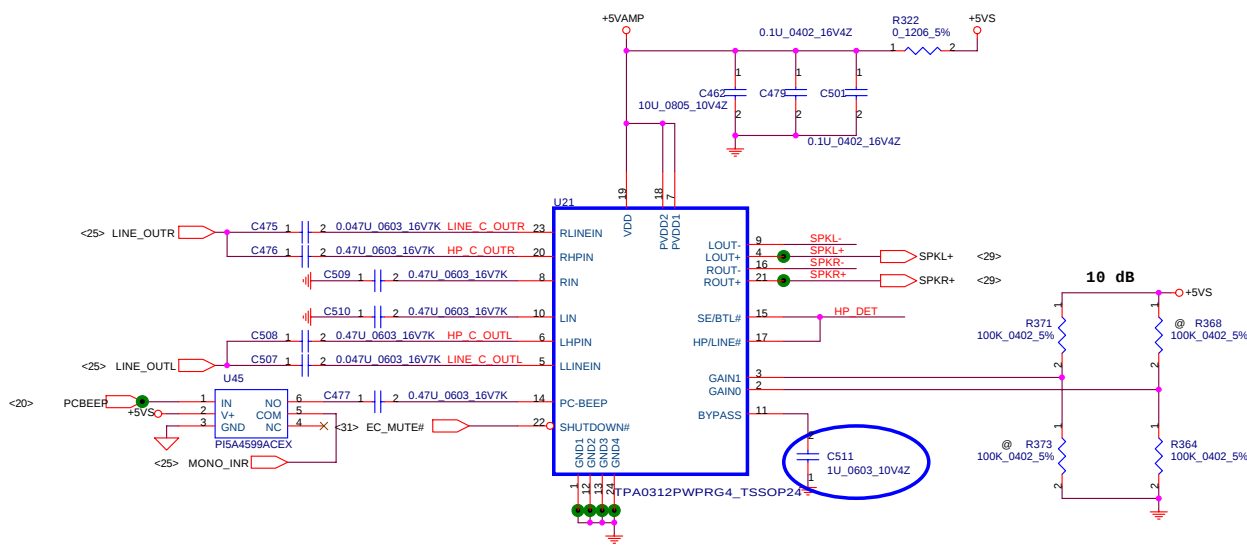
<6/12> Remove Docking MIC

<6/12> Remove JACK_DET from Docking

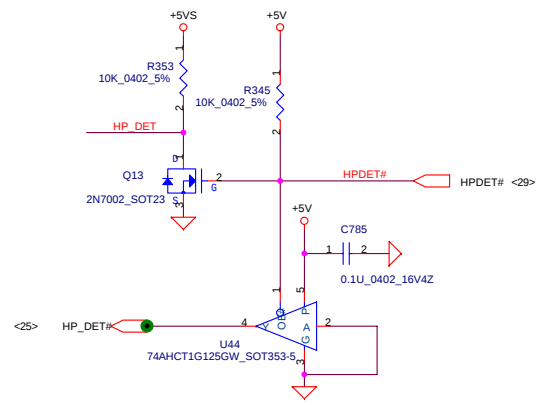
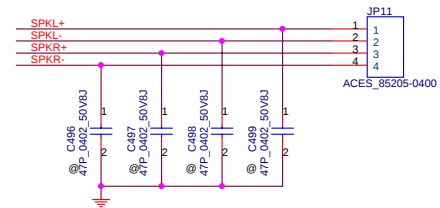
HP_DET#	JACK_DET#	PORT-A	PORT-B	EQ
0	0	ON	OFF	Disable
0	NC	ON	OFF	Disable
NC	0	OFF	ON	Disable
NC	NC	ON	OFF	Enable

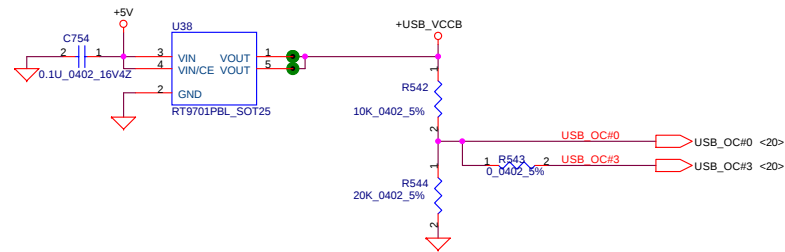
MIC_DET	PORT-C	PORT-F
0	ON	OFF
NC	OFF	ON

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				Custom	LA-3342P
				Date	Thursday, July 27, 2006
				Sheet	25 of 40
				Rev	0.1

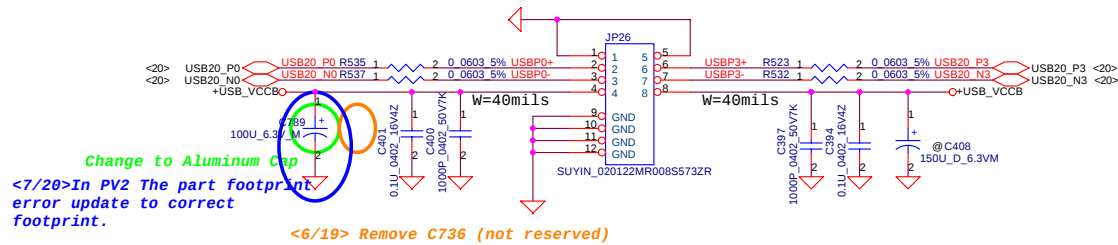


Gain Settings			
GAIN0	GAIN1	SE/BTL#	Av(inv)
0	0	0	6 dB
0	1	0	* 10 dB
1	0	0	15.6 dB
1	1	0	21.6 dB
X	X	1	4.1 dB



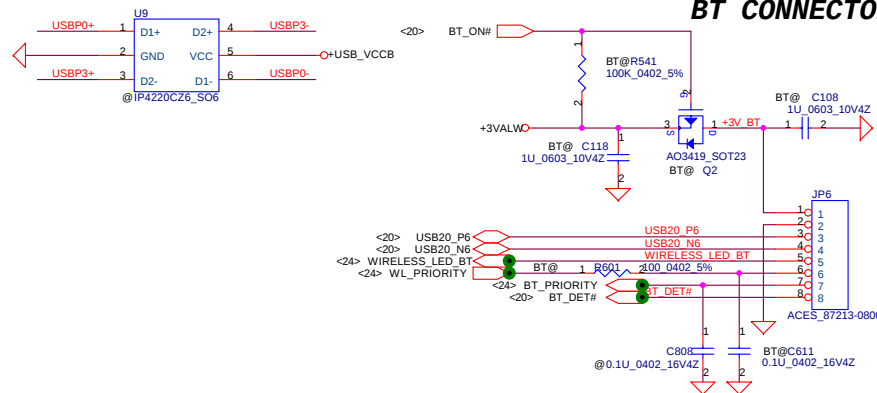


USB CONNECTOR (Left side)



BT CONNECTOR

Reserve Bluetooth

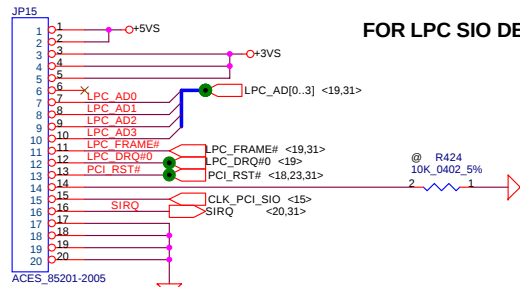


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				Custom	1.0
				Date: Thursday, July 27, 2006	
				Sheet	28 of 40

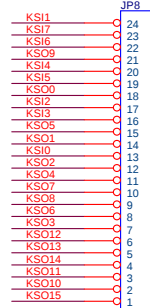
KSI[0..7] <31>
KSO[0..16] <31>

<31> KSO_D_17 <KSO_D_17>

FOR LPC SIO DEBUG PORT

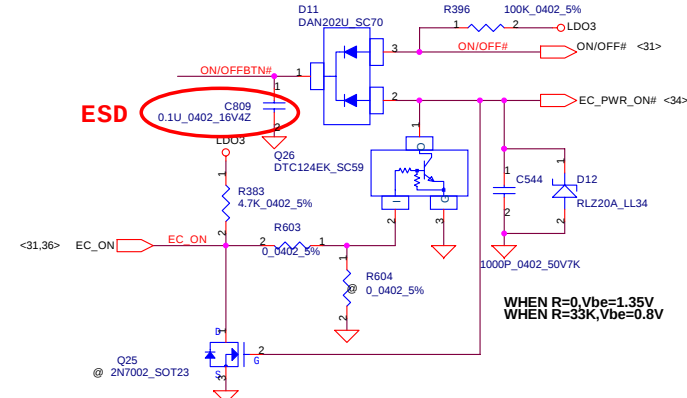


15.4 (TYPE "C" KB)

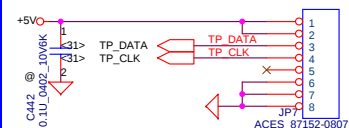


ACES_85201-2405

Power BTN

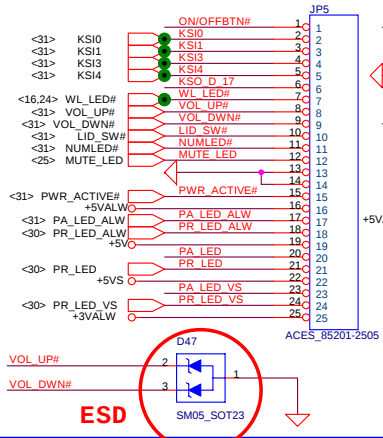


TP to MB CONN(15.4)



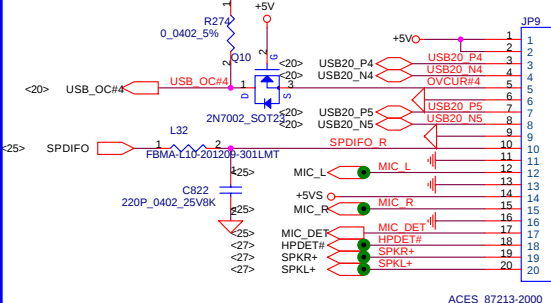
<6/21> Remove CIR

Switch board conn



ESD

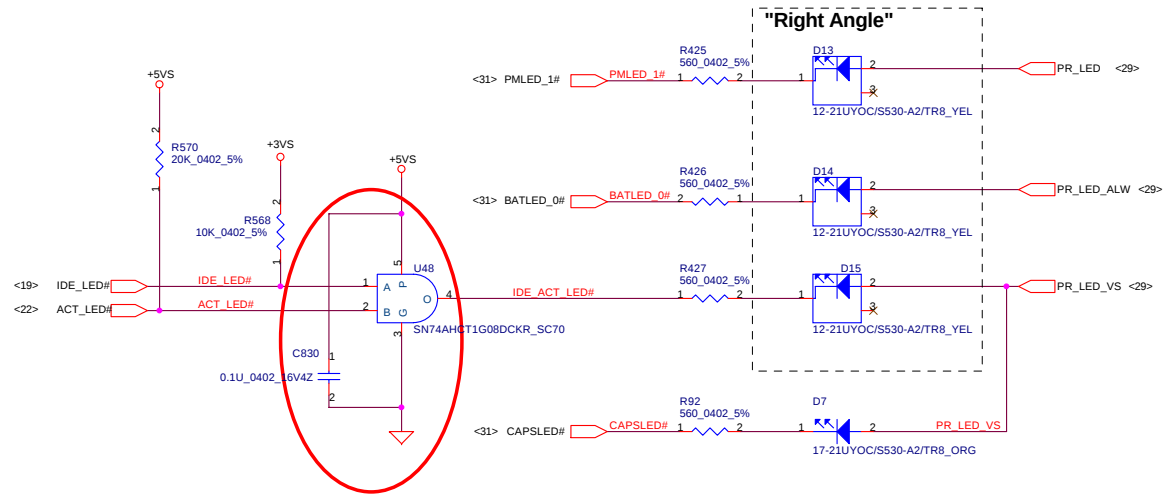
Audio board conn



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				Date	Thursday, July 27, 2006
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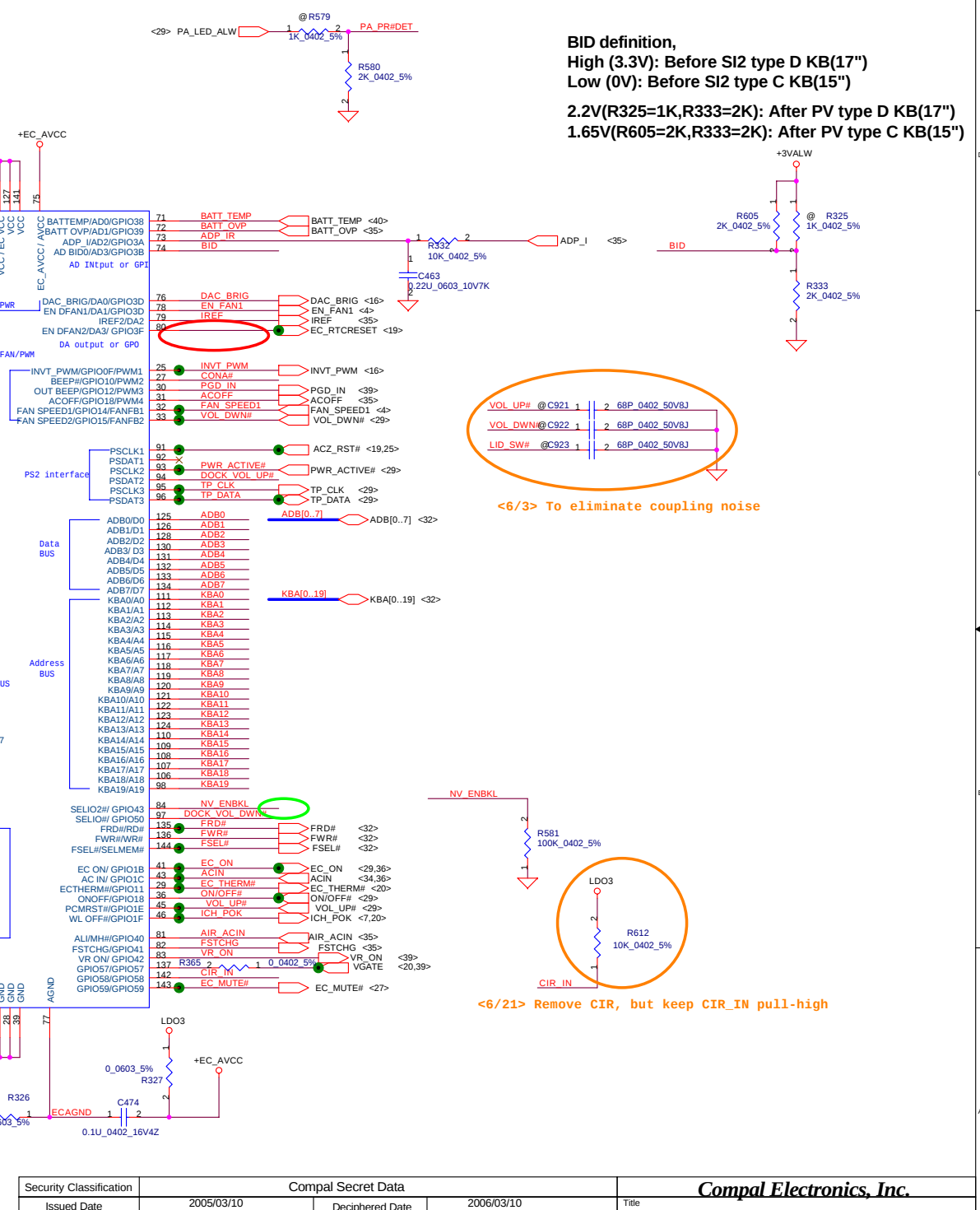
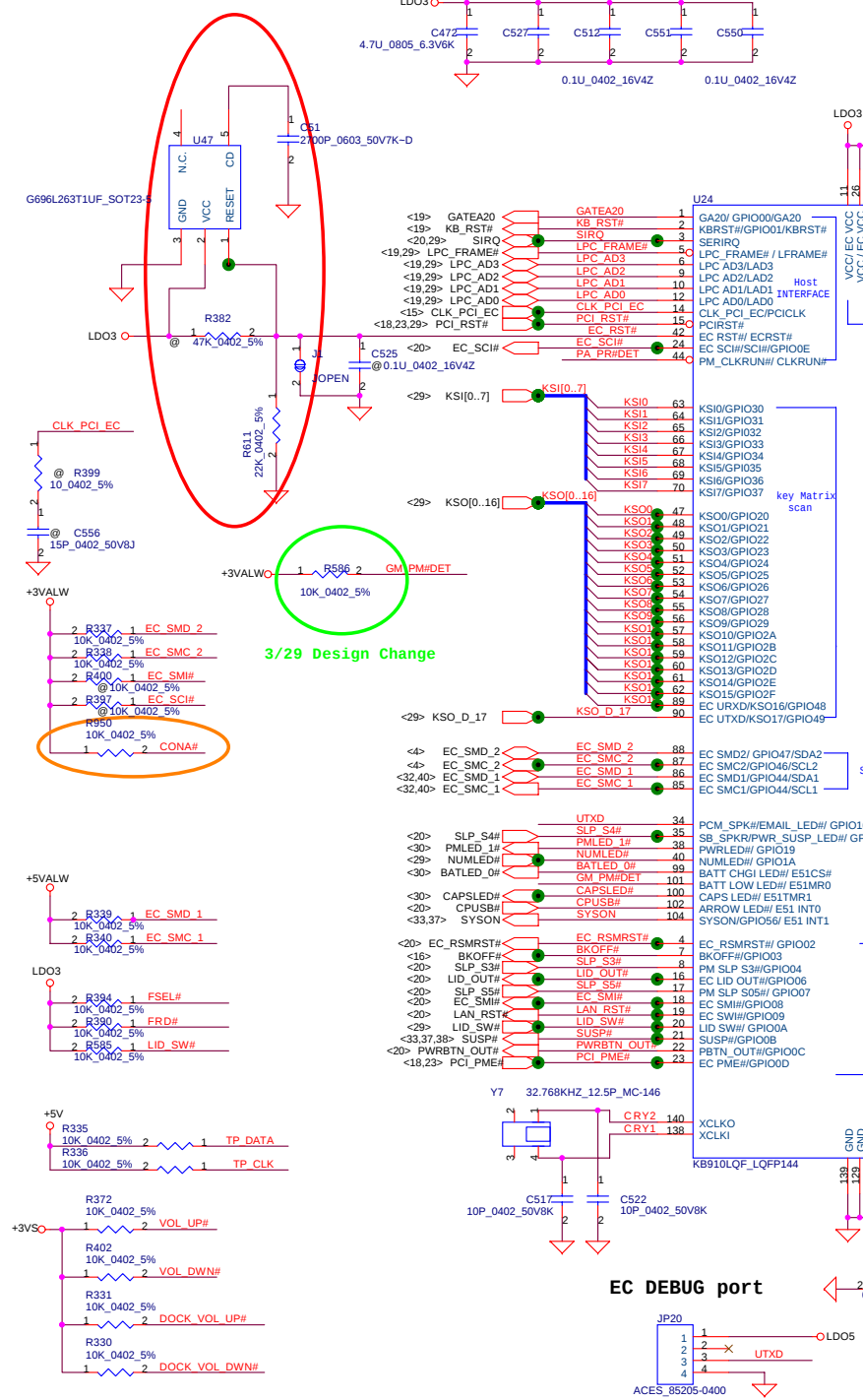
For PR

FOR POWER BUTTON BACKLIGHT SYSTEM POWER



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Issued Date	2005/03/10	Deciphered Date	2006/03/10	INDICATE LED	
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				Sheet 30 of 40	

Cd(uF)=T(ms) / 1685
Cd=2700PF -----> T=3.6ms

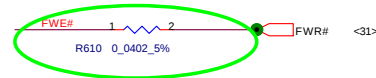
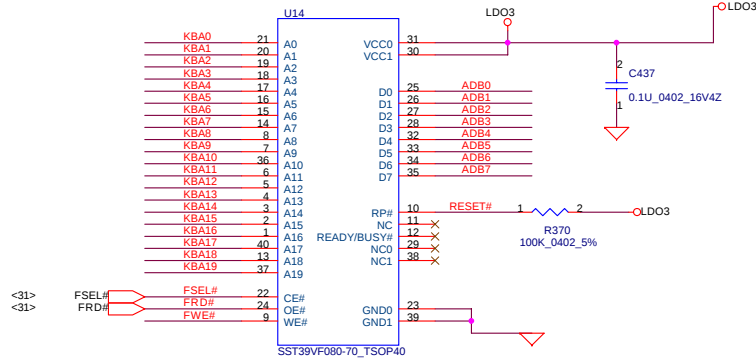
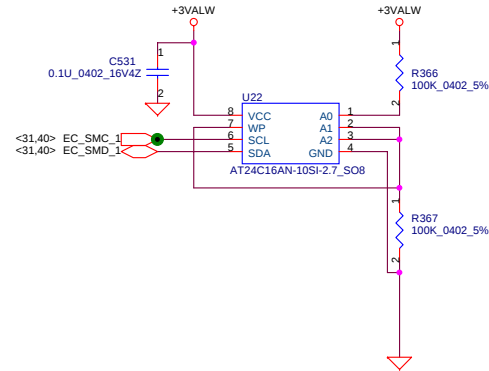
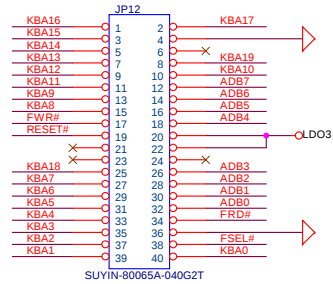


BID definition,
High (3.3V): Before SI2 type D KB(17")
Low (0V): Before SI2 type C KB(15")

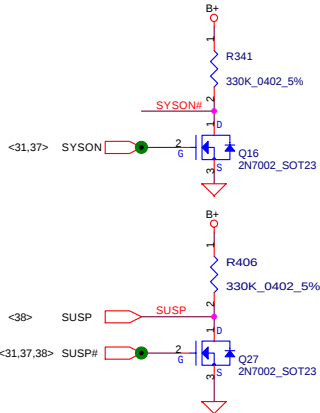
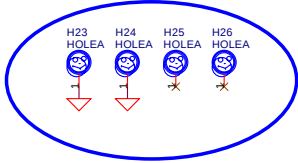
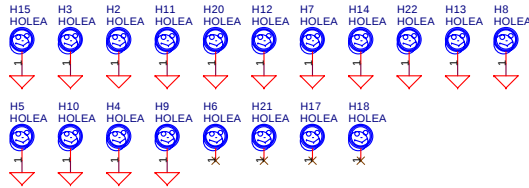
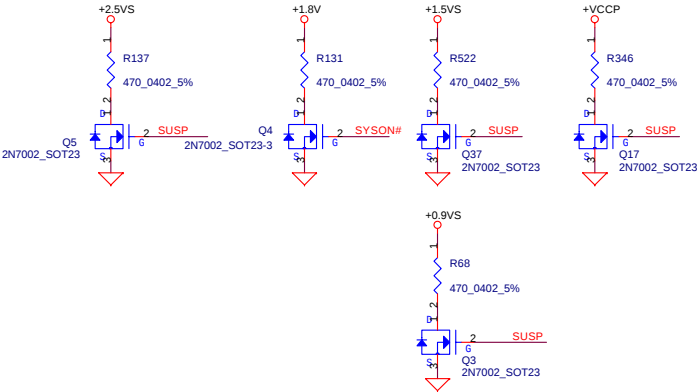
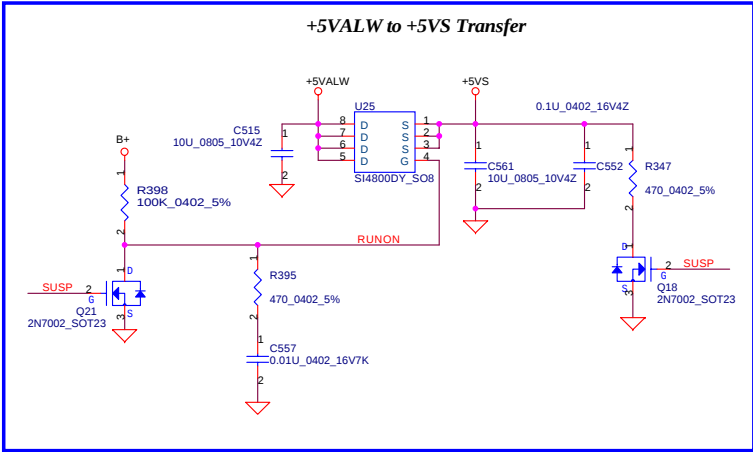
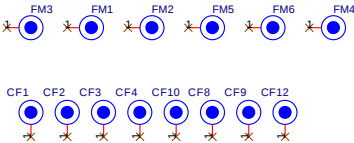
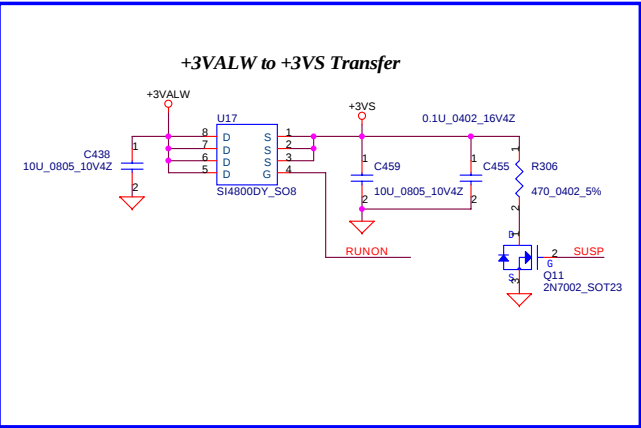
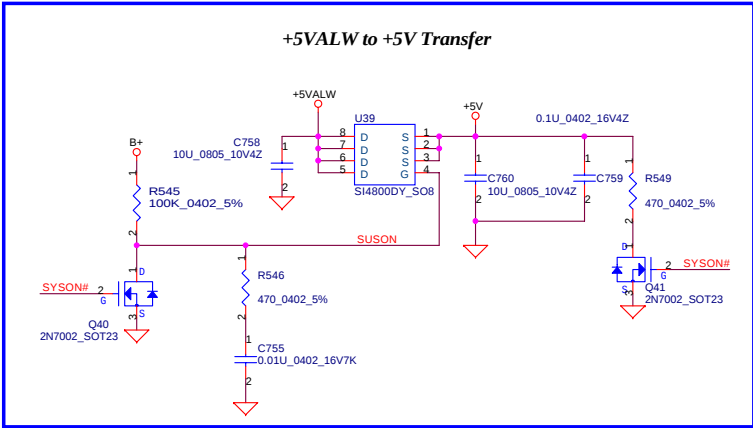
2.2V(R325=1K,R333=2K): After PV type D KB(17")
1.65V(R605=2K,R333=2K): After PV type C KB(15")

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				Date	Thursday, July 27, 2006
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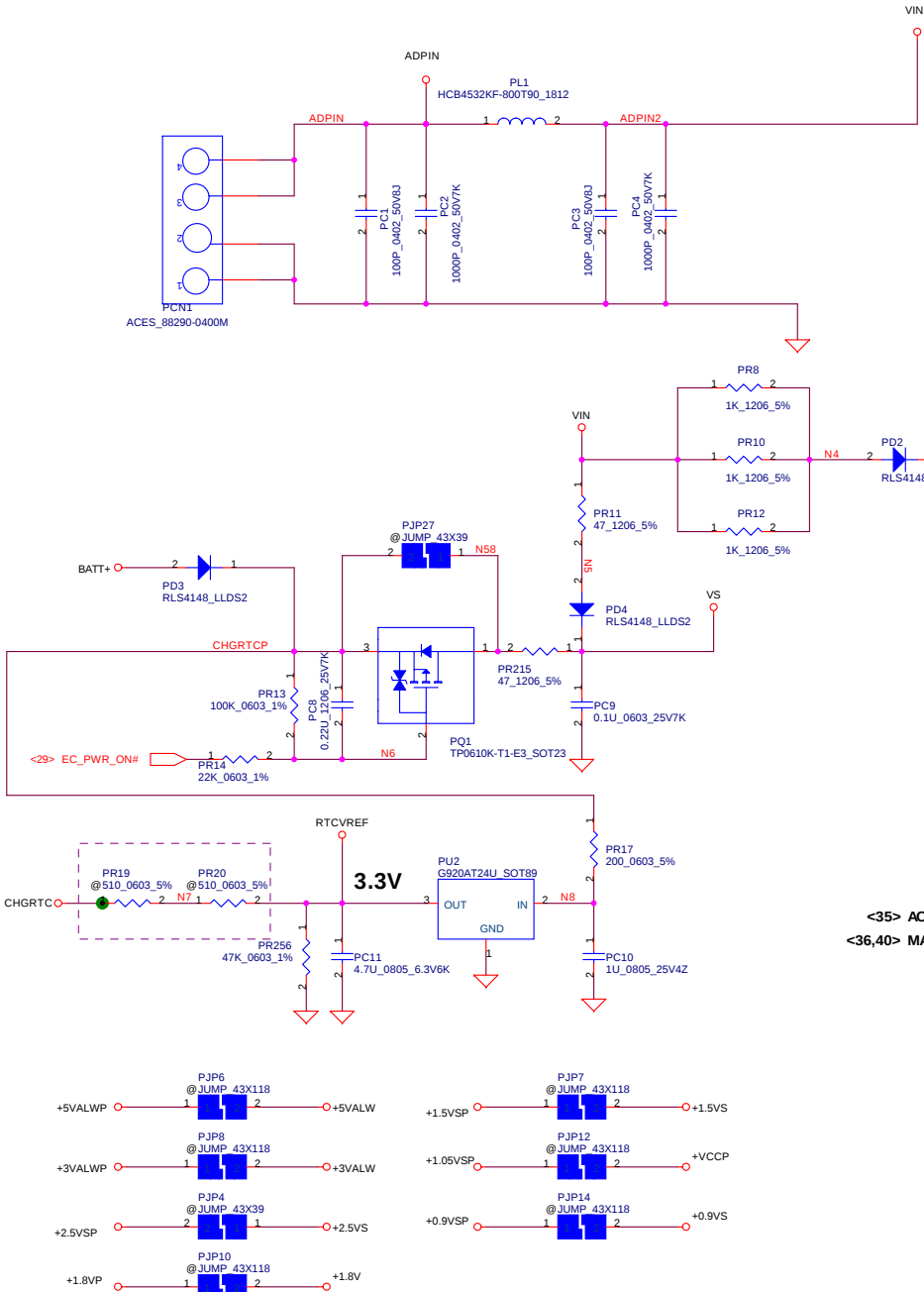
<31> ADB[0..7] ADB[0..7]
<31> KBA[0..19] KBA[0..19]



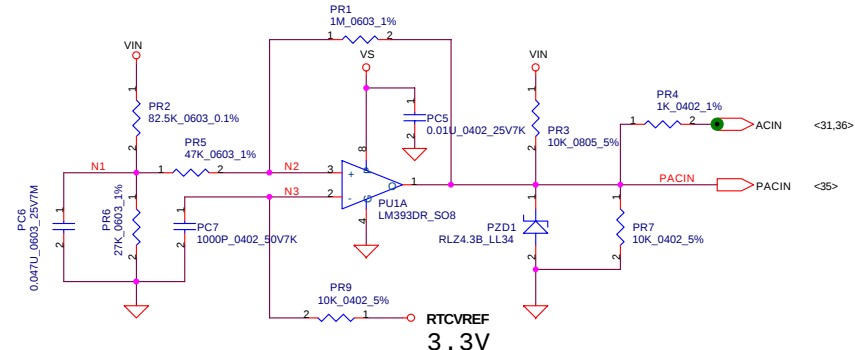
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Issued Date		2005/03/10	Deciphered Date		2006/03/10	
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				BIOS & EC I/O Port		
				Size	Document Number	Rev
				Custom	LA-3342P	0.1
				Date: Thursday, July 27, 2006		
				Sheet 32 of 40		



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				Custom	LA-3342P
				Date:	Thursday, July 27, 2006
				Sheet	33 of 40
				Rev	0.1

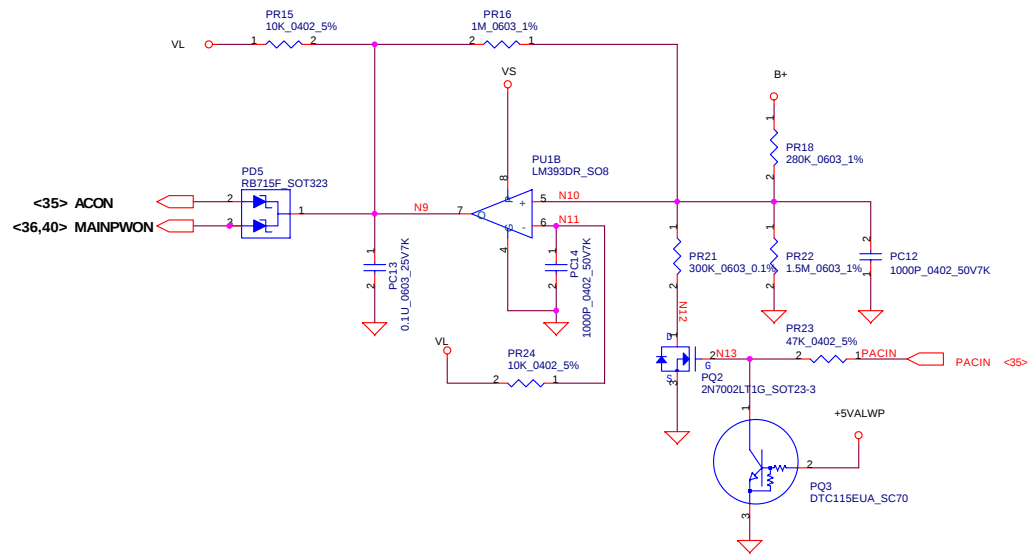


Vin Detector :			
14.698	14.285	13.879	
13.818	13.411	13.000	



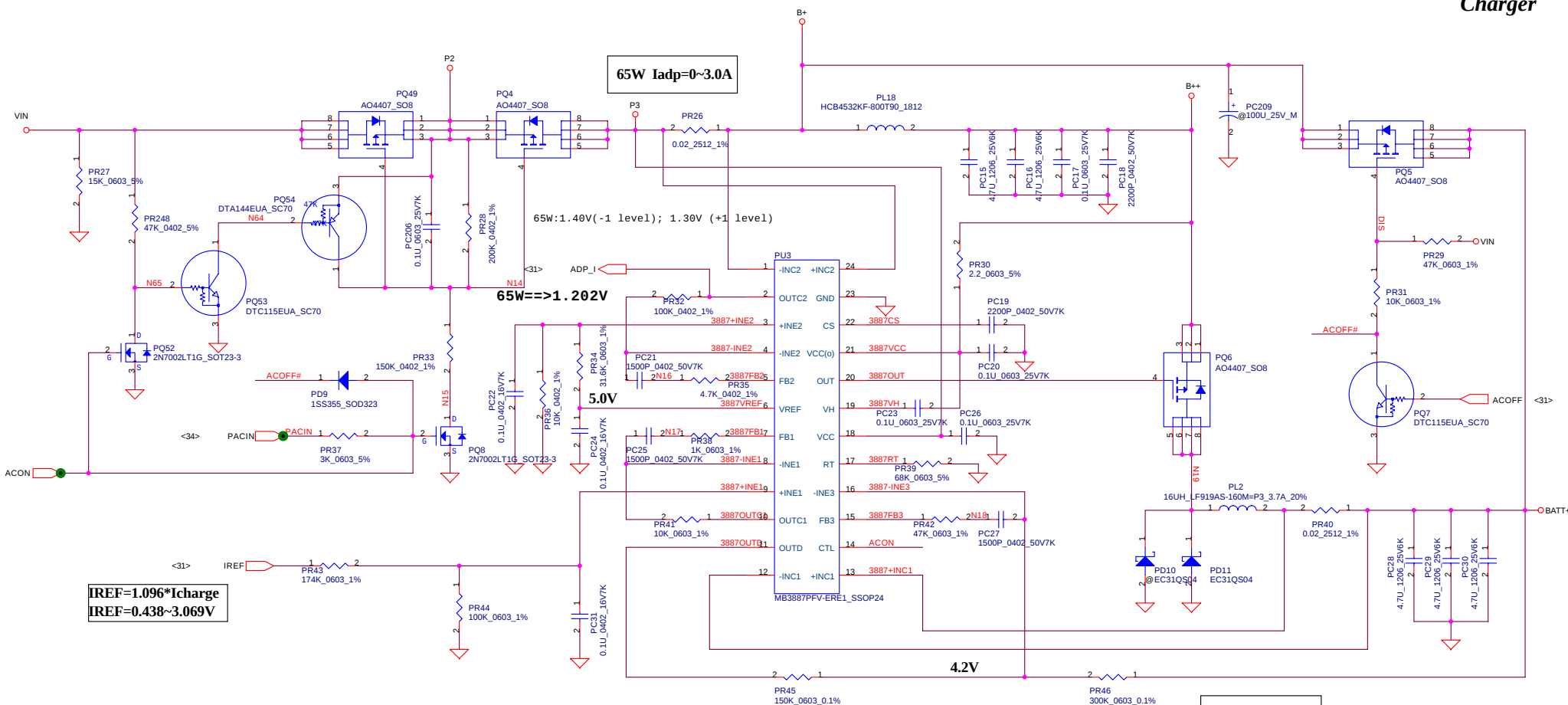
ACIN:			
Precharge detector			
12.384	12.000	11.624	
10.927	10.600	10.223	

BATT			
Precharge detector			
7.558	7.333	7.112	
6.108	5.933	5.704	

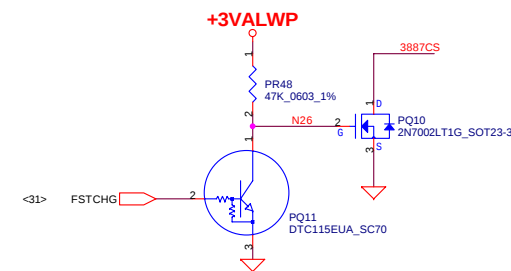
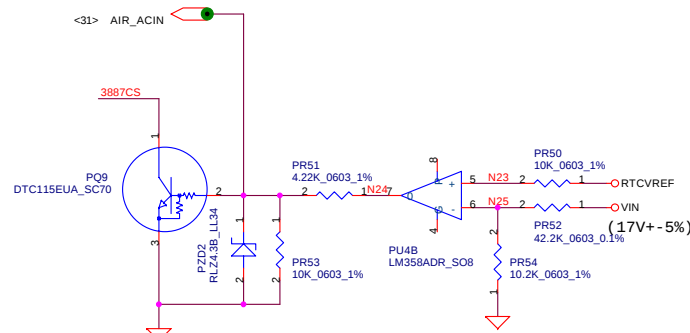
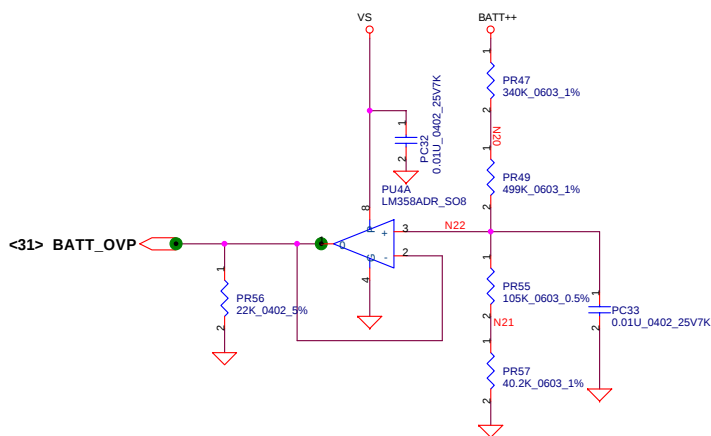


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Issued Date		2006/04/03		Deciphered Date		2007/04/03		Dectector / Precharge					
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						Customer						0.2	
						Date:		Thursday, July 27, 2006		Sheet		34 of 40	

Charger

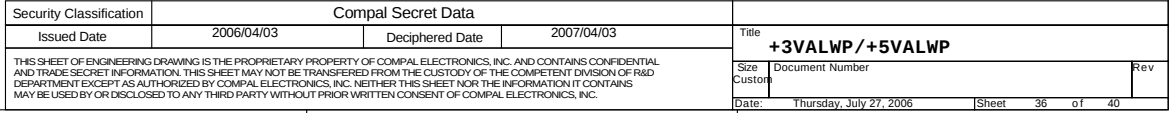


3S2P/3S4P : 13.5V--> BATT_OVP= 2.0V
(BAT_OVP=0.14753 *BATT+)

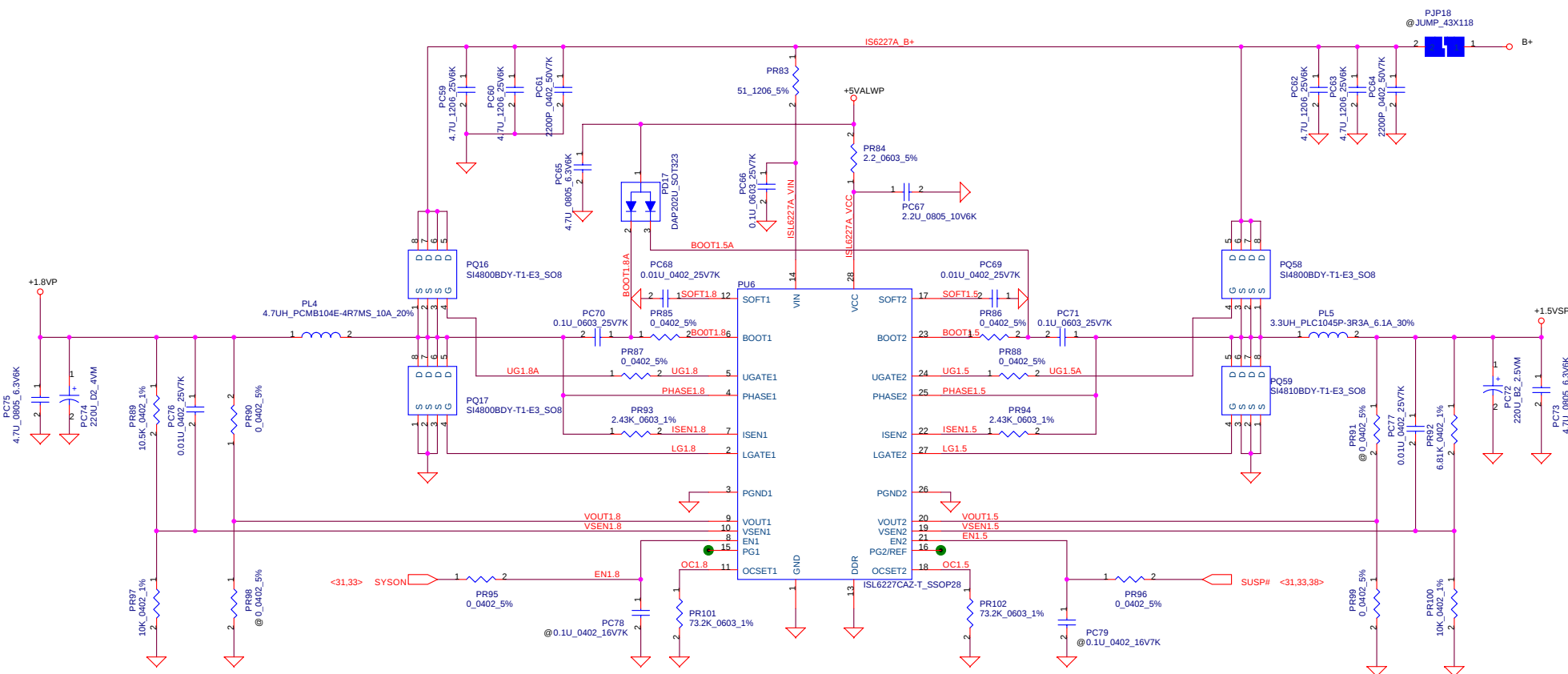


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				Date: Thursday, July 27, 2006 Sheet 35 of 40	

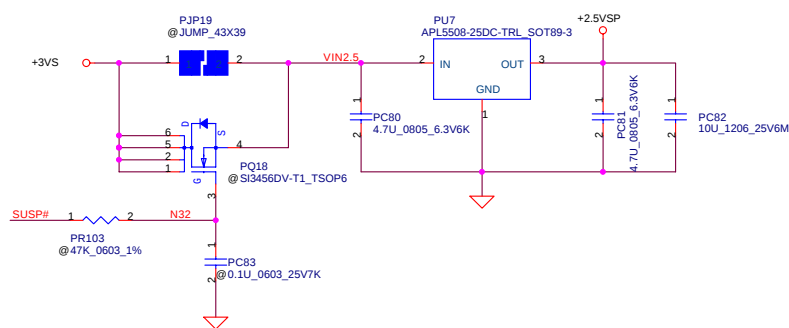
Title	+3VALWP/+5VALWP
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+2.5VSP/+1.8VP/+1.5VSP

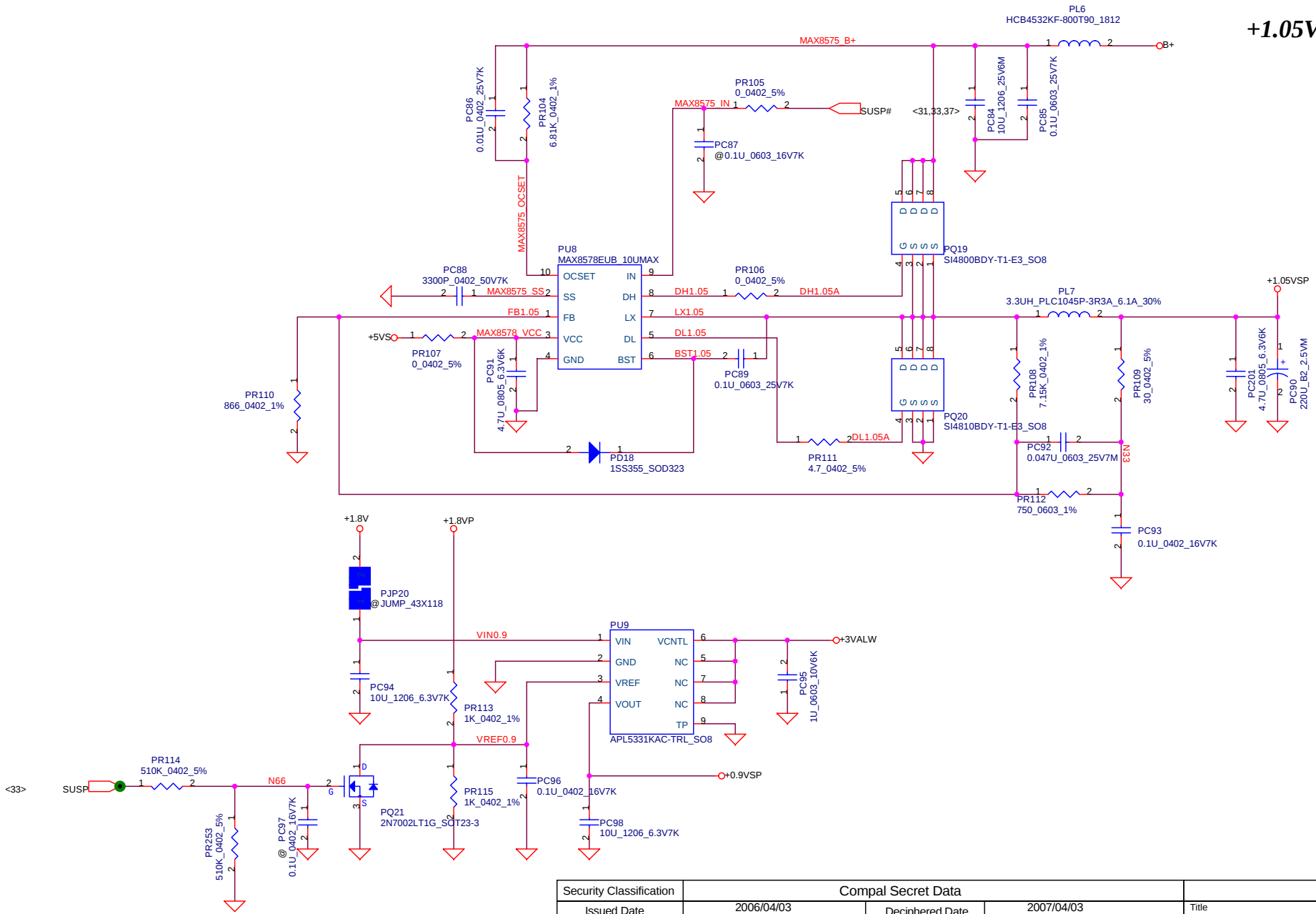


(400mA, 40mils, Via NO.= 1)

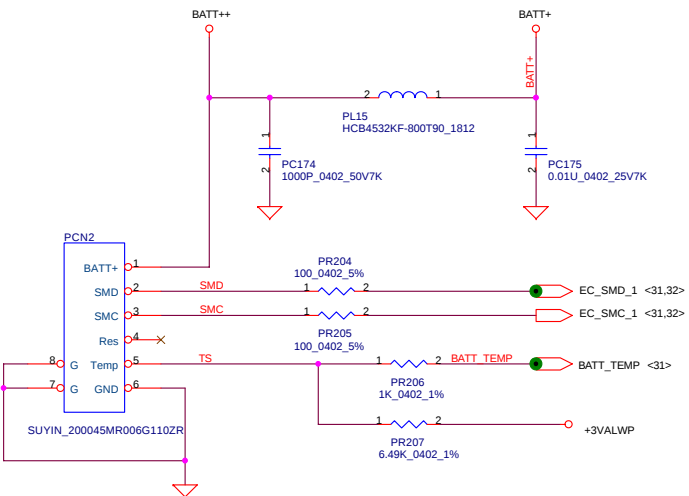


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Issued Date		2006/04/03	Deciphered Date	2007/04/03		Title		
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+1.05V_VCCPP/+0.9VSP



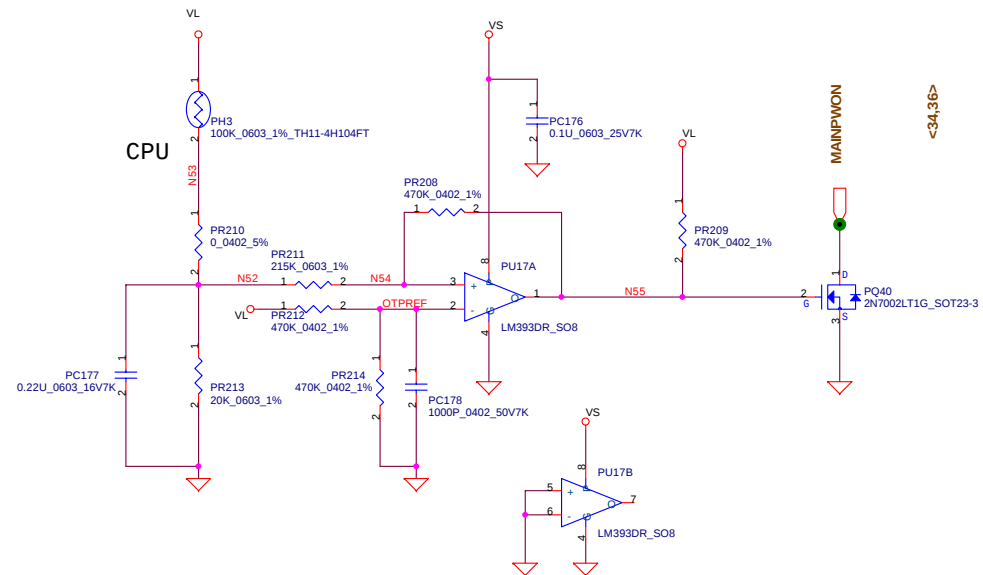
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PJPB1 battery connector

**SMART
Battery:**
1.BATT+
2.SMBD
3.SMBC
4.Res
5.Temp
6.GND

PH1 under CPU botten side :
CPU thermal protection at 90 +-3 degree C
Recovery at 50 +-3 degree C



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