

Compal Confidential

HCW50 Schematics Document

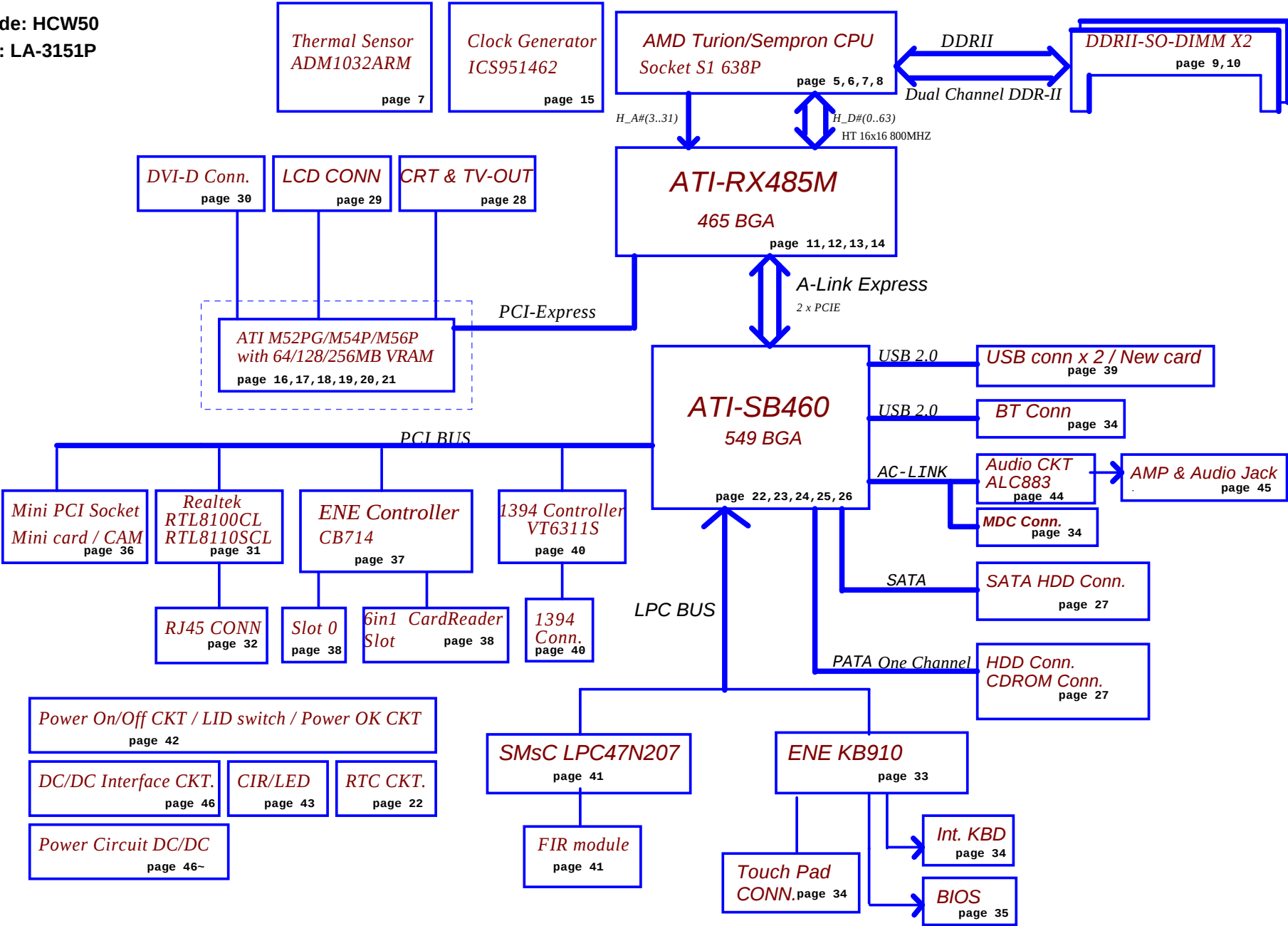
AMD/Sempron/ATI RX485/SB460 W/s M52/54/56P

2006 / 02 / 28 Rev:0.3 (For PVT)

Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		SCHEMATIC, M/B LA-3151P	
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Project Code: HCW50
File Name : LA-3151P



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Voltage Rails

Power Plane	Description	S0	S3	S5
VIN	Adapter power supply (19V)	NA	NA	NA
B+	AC or battery power rail for power circuit.	NA	NA	NA
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+0.9V	0.9V switched power rail for DDRII terminator	ON	ON	OFF
+1.2V_HT	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 DDRII	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*
+1.2VS	1.2V switched power rail for PCIE	ON	OFF	OFF
+0.9VS	0.9V switched power rail for VRAM terminator	ON	OFF	OFF
+1.8VALW	1.8V switched power rail	ON	ON	ON*
+VDD_CORE	1.0~1.2V switched power rail for VGA	ON	OFF	OFF

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
CardBus(SD)	AD20	2	PIRQE/PIRQH
1394	AD16	0	PIRQE
LAN(10/100)	AD17	3	PIRQF
Mini-PCI(WLAN/TV-Tuner)	AD18	1	PIRQG/PORQH

EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	Fintek F75383M	1001 100X b
EEPROM(24C16/02)	1010 000X b		
GMT G781-1	1001 101X b		

EC SM Bus2 address

SB460 SM Bus address

Device	Address
Clock Generator (ICS9LPRS325AKLFT_MLF72)	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	HIGH	ON	ON	ON	ON	ON	ON	ON
S1(Power On Suspend)	LOW	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON	ON	LOW
S3 (Suspend to RAM)	LOW	LOW	HIGH	HIGH	HIGH	ON	ON	OFF	OFF	OFF	OFF	OFF
S4 (Suspend to Disk)	LOW	LOW	LOW	HIGH	HIGH	ON	OFF	OFF	OFF	OFF	OFF	OFF
S5 (Soft OFF)	LOW	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF	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	0.1
1	
2	
3	
4	
5	
6	
7	

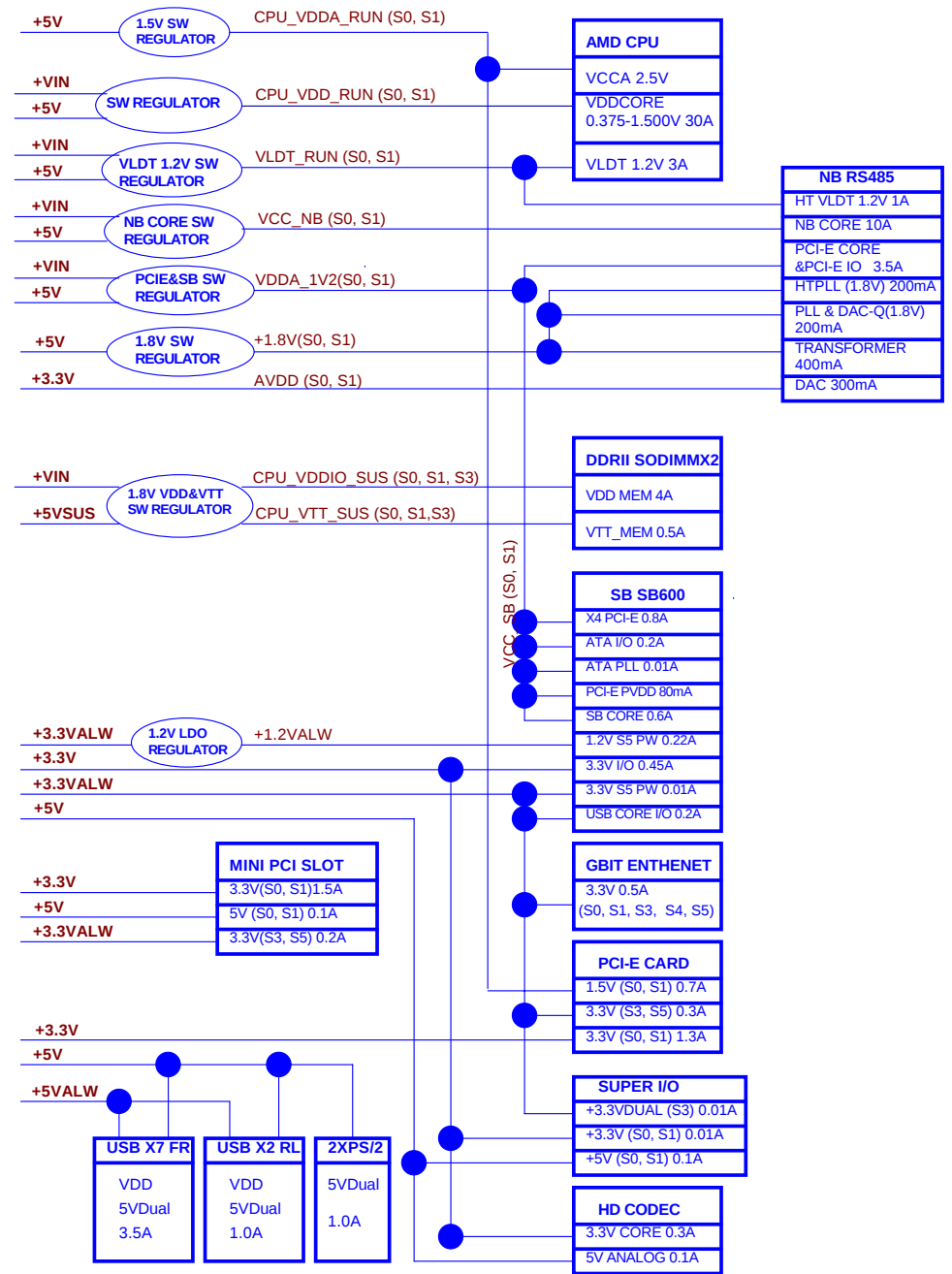
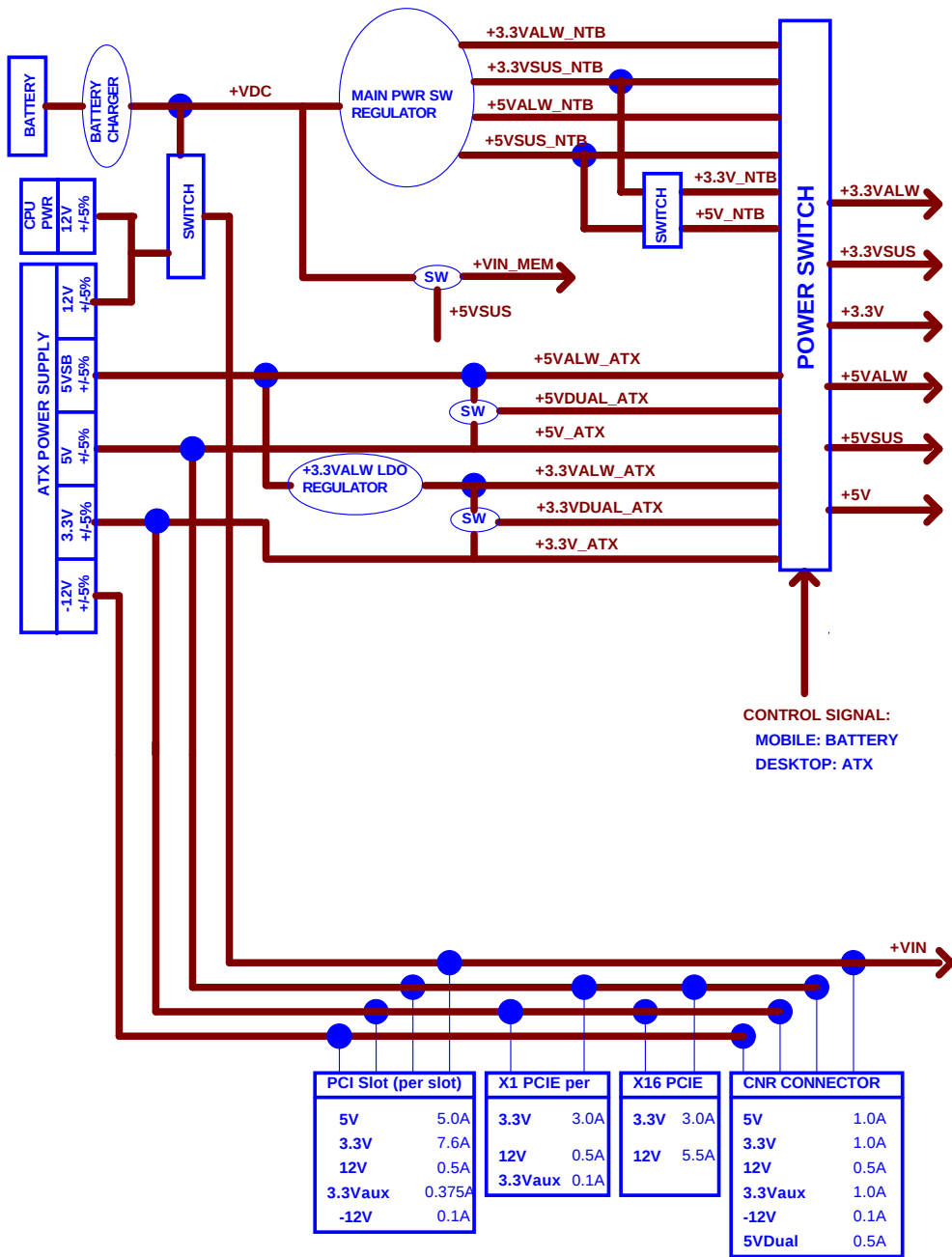
SKU ID Table

SKU ID	SKU
0	PM
1	GM
2	
3	
4	
5	
6	
7	

BTO Option Table

BTO Item	BOM Structure
VGA	
UMA	
UMA's DVI	
LAN(10/100)	
LAN(GIGA)	
MINI CARD1	
MINI CARD2	
SATA-to-IDE	
PATA	
GRAPEVINE	
G72MV Only	
G73 Only	
VRAM	
VRAM 64M	
VRAM 128M	
VRAM 256M	
MEDIA/B	
CIR	
FIR	
GENEVA	
LCM	
Sub-woofer	

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<11> H_CADIN[0..15] H_CADIN[0..15]

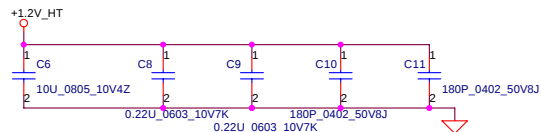
H_CADOP[0..15] H_CADON[0..15] <11>
H_CADON[0..15] H_CADON[0..15] <11>

PROCESSOR HYPERTRANSPORT INTERFACE

VLDT_Ax AND VLDT_Bx ARE CONNECTED TO THE LDT_RUN POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE. IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE



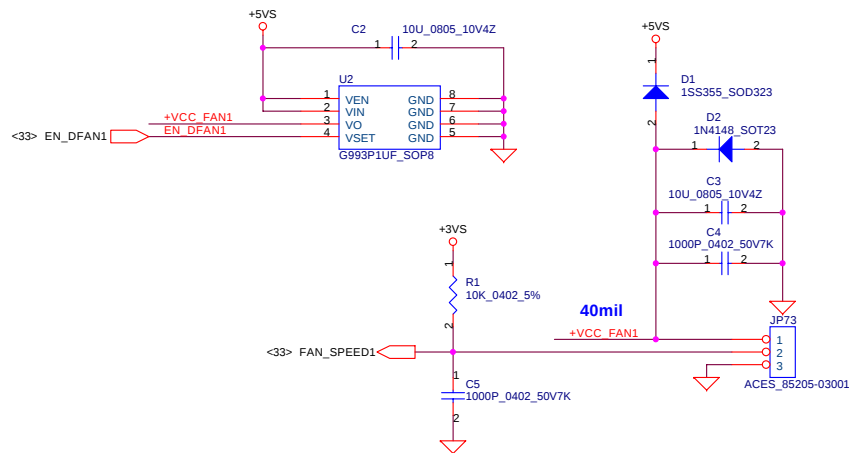
Athlon 64 S1
Processor Socket



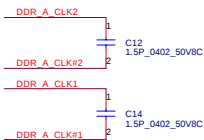
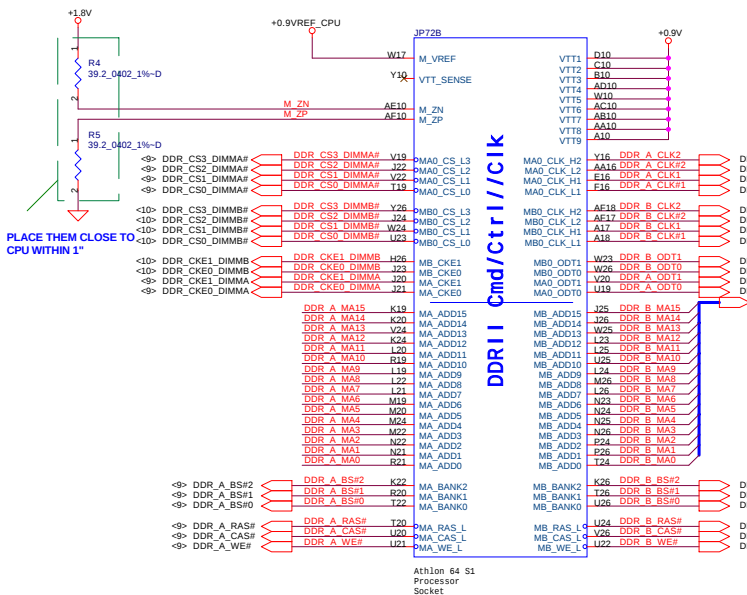
LAYOUT: Place bypass cap on topside of board

NEAR HT POWER PINS THAT ARE NOT CONNECTED DIRECTLY TO DOWNSTREAM HT DEVICE, BUT CONNECTED INTERNALLY TO OTHER HT POWER PINS
PLACE CLOSE TO VLDT0 POWER PINS

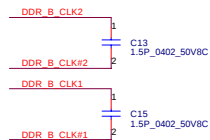
FAN1 Conn



VDD VTT SUS_CPU IS CONNECTED TO THE VDD VTT SUS_POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE

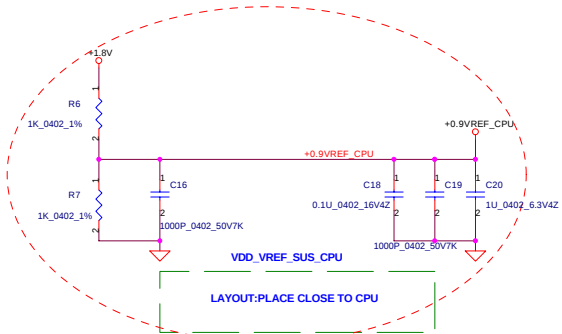


PLACE CLOSE TO PROCESSOR WITHIN 1.5 INCH



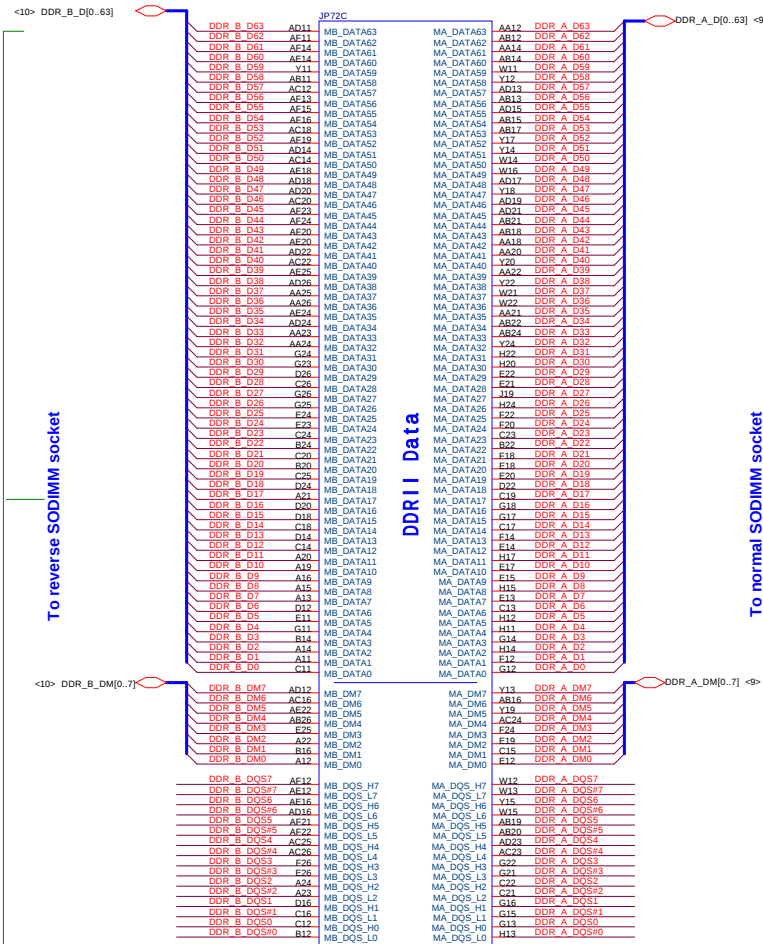
PLACE CLOSE TO PROCESSOR WITHIN 1.5 INCH

ATI check , Use +0.9V PWR , can delete or not



LAYOUT:PLACE CLOSE TO CPU

Processor DDR2 Memory Interface



DDR: DATA
Athlon 64 S1
Processor Socket



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ATHLON Control and Debug

LAYOUT: ROUTE VDDA TRACE APPROX.
50 mils WIDE (USE 2x25 mil TRACES TO
EXIT BALL FIELD) AND 500 mils LONG.

SB460 ONLY

place them to CPU within 1"

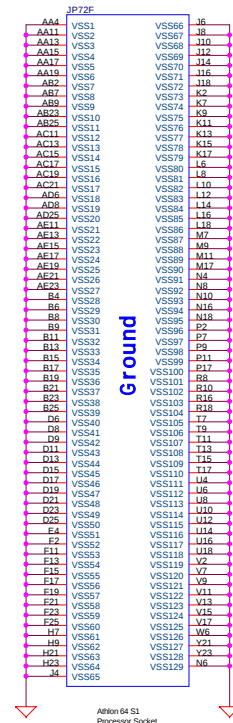
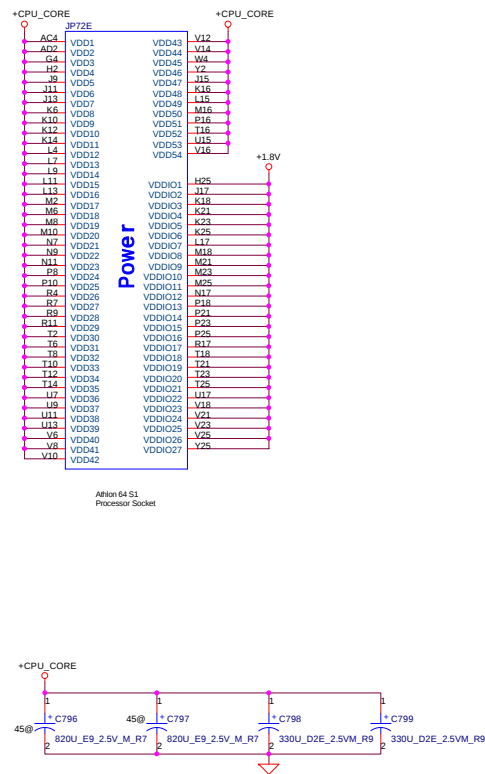
MISC

Modify 11/22

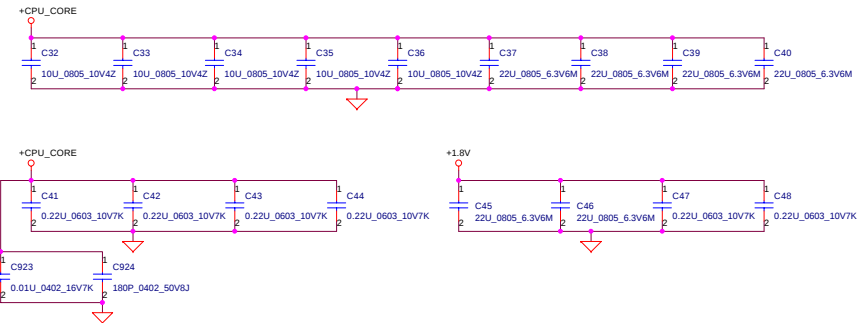
HDT Connector

NOTE: HDT TERMINATION IS REQUIRED
FOR REV. Ax SILICON ONLY.

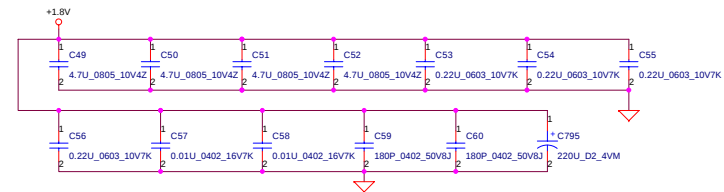
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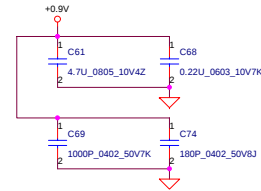
BOTTOMSIDE DECOUPLING



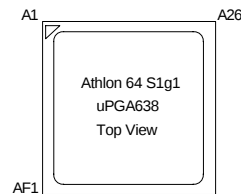
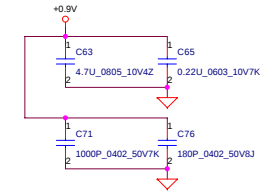
DECOUPLING BETWEEN PROCESSOR AND DIMMS PLACE CLOSE TO PROCESSOR AS POSSIBLE



CPU left-hand side

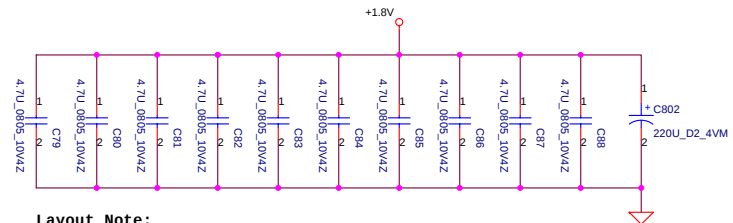
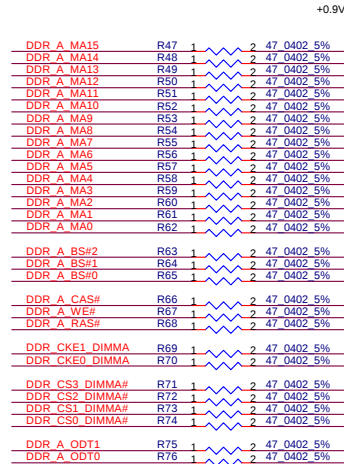


CPU right-hand side



PROCESSOR POWER AND GROUND

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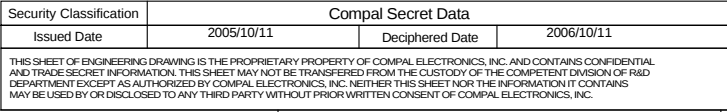


Layout Note:
Place a capacitor close to every 2 pull-up

11/3 Modify

The diagram shows a 1.8V supply connected to a series of capacitors (C392, C393, C394, C395, C396, C397, C398, C399, C39A, C39B, C39C) and resistors (0.1u, 0.002, 10k/4Z). The capacitors are connected in a chain, with the 1.8V supply connected to the top of C392. The bottom of C39C is connected to ground.

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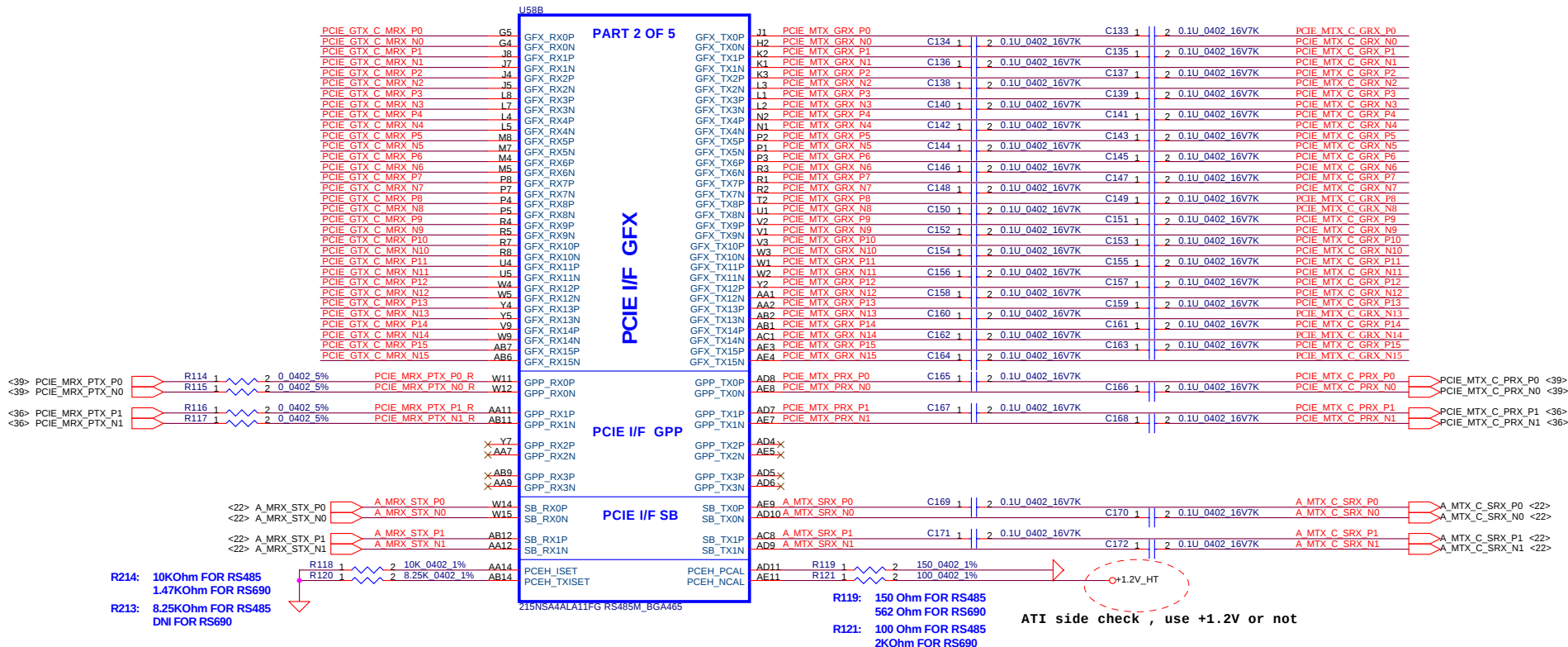
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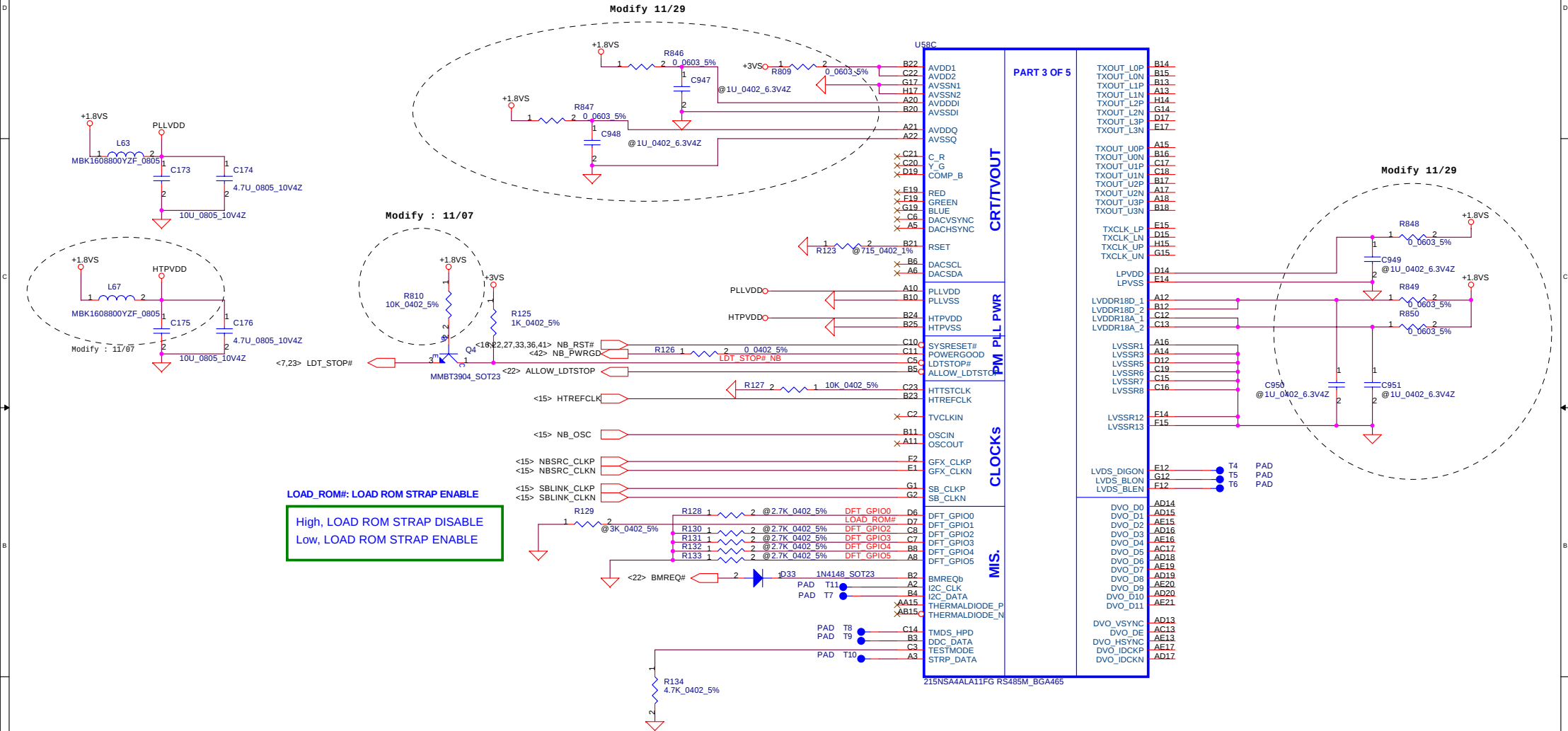
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ATI check , CRT / TV/ LVDS can delete or not when I use RX485

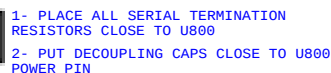


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Power Signal	S0	S1	S3	S4/S5	G3
VDDHT	ON	ON	OFF	OFF	OFF
VDDR	ON	ON	OFF	OFF	OFF
VDD18	ON	ON	OFF	OFF	OFF
VDDC	ON	ON	OFF	OFF	OFF
VDDA18	ON	ON	OFF	OFF	OFF
VDDA12	ON	ON	OFF	OFF	OFF
AVDD	ON	ON	OFF	OFF	OFF
AVDDDI	ON	ON	OFF	OFF	OFF
PLLVD	ON	ON	OFF	OFF	OFF
HTPVDD	ON	ON	OFF	OFF	OFF
VDDR3	ON	ON	OFF	OFF	OFF
LPVDD	ON	ON	OFF	OFF	OFF
LVDDR18D	ON	ON	OFF	OFF	OFF
LVDDR18A	ON	ON	OFF	OFF	OFF

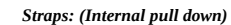
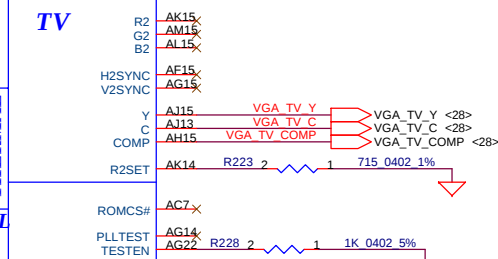
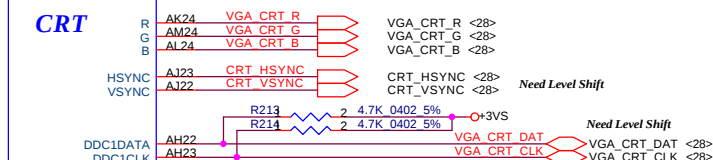
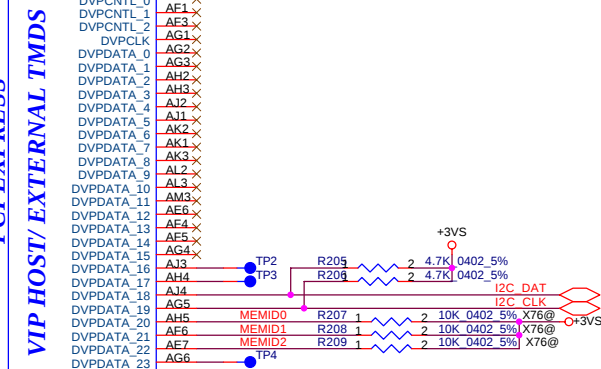
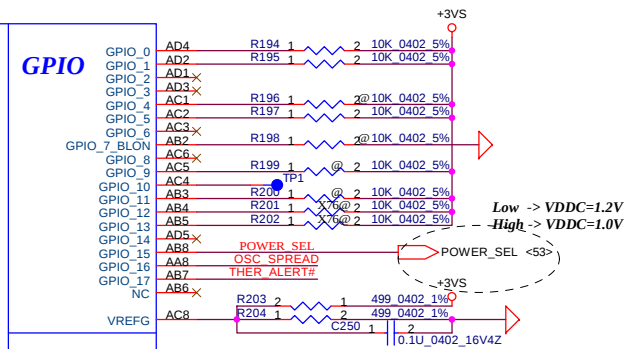
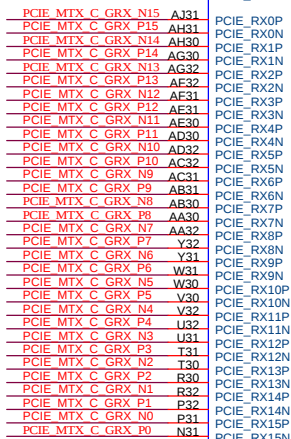
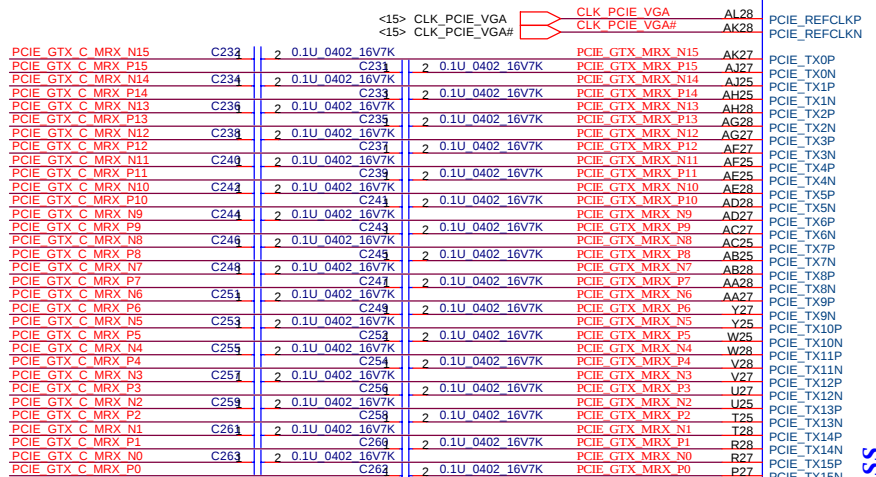


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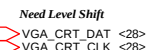
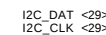


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PCIE Lane Reversal

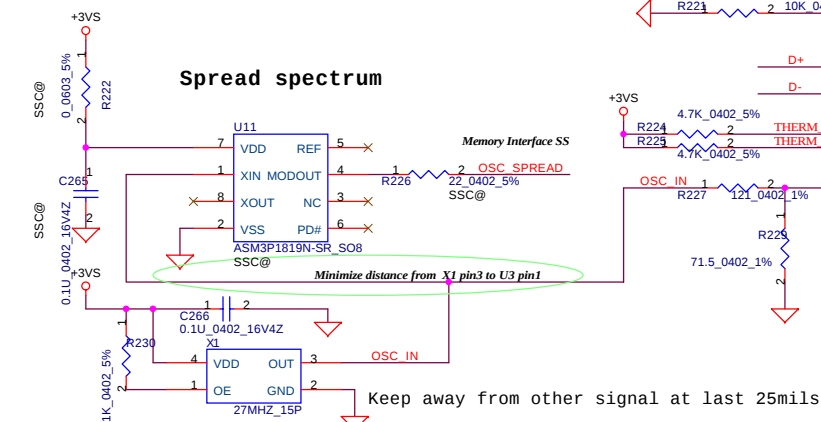
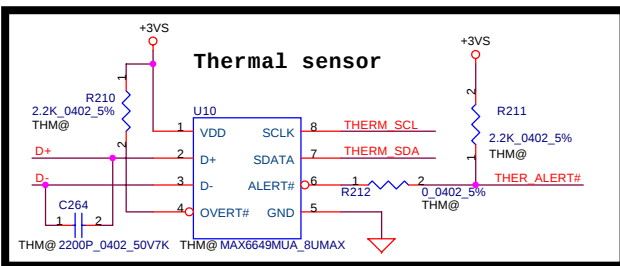


Transmitter power saving enable	GPIO[0]	0: 50% TX output swing 1: Full TX output swing
Transmitter de-emphasis enable	GPIO[1]	0: TX de-emphasis disable 1: TX de-emphasis enable
Debug Access	GPIO[4]	0: OFF Pad must be available 1: ON
PLL_IBIAS_RD	GPIO[6,5]	Default : 01
ROM ID Config	GPIO[9, 13:11]	000X: No ROM, AP_SIZE=00 128M share 001X: No ROMMemory AP_SIZE=01 256M share 010X: No ROMMemory AP_SIZE=10 64M share 011X: No ROMMemory AP_SIZE=11 Reserved



Vedio Memory Config. (VGA Internal PD)						
MEMID[2:0]	Size	Size	Vender	Chips	VGA	Frequence
0 0 0	64MB	16M16	Hynix	2		
0 0 1	64MB	16M16	Samsung	2		
0 1 0	128MB	16M16	Hynix	4		A-test
0 1 1	128MB	16M16	Samsung	4		
1 0 0	256MB	32M16	Hynix	4		A-test
1 0 1	256MB	32M16	Samsung	4		
1 1 0		Resreved				
1 1 1		Resreved				

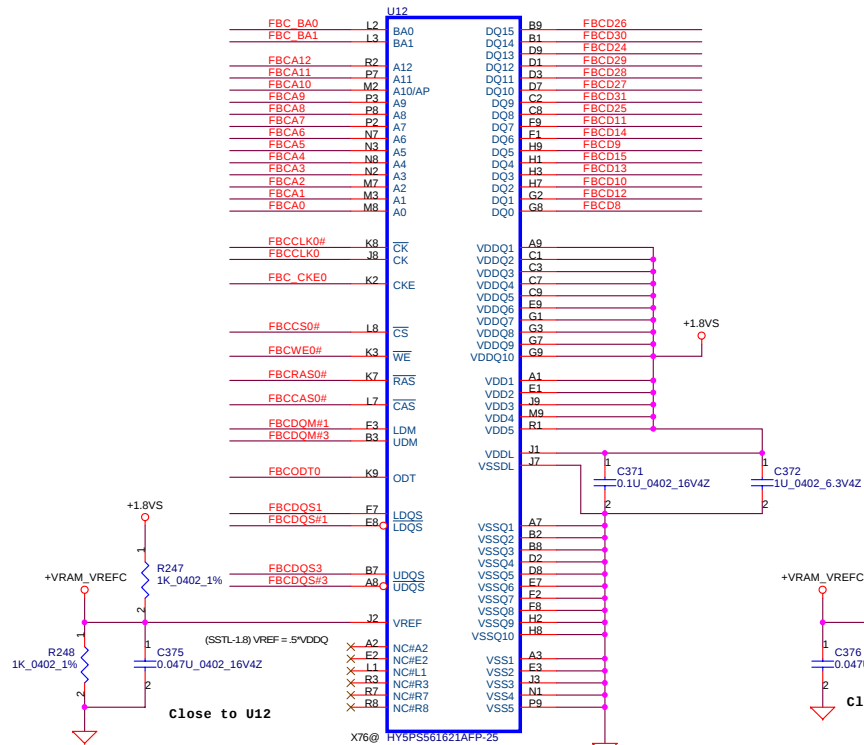
TBD



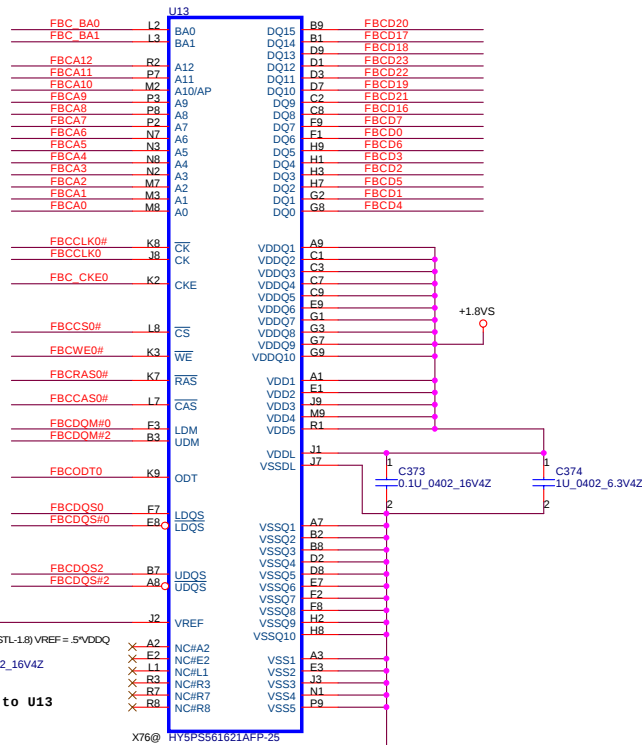
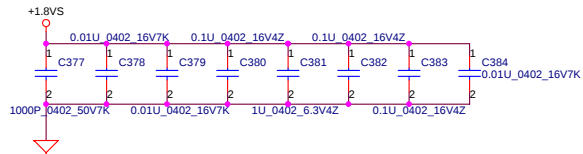
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				Size	Document Number	Rev
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11/03/05' SWAP NET
11/04/05' SWAP NET
11/08/05' SWAP NET

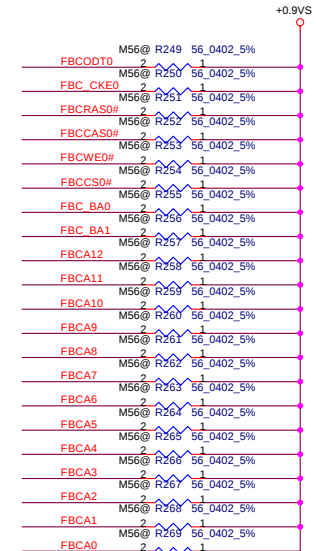
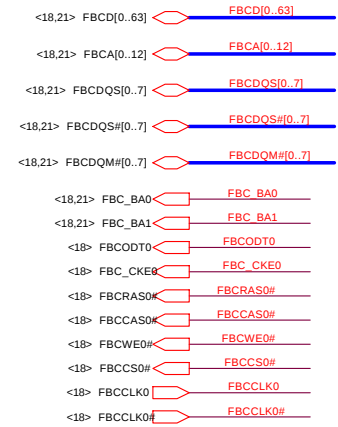
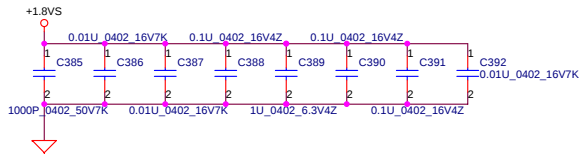
11/03/05' SWAP NET



DDR2 BGA MEMORY



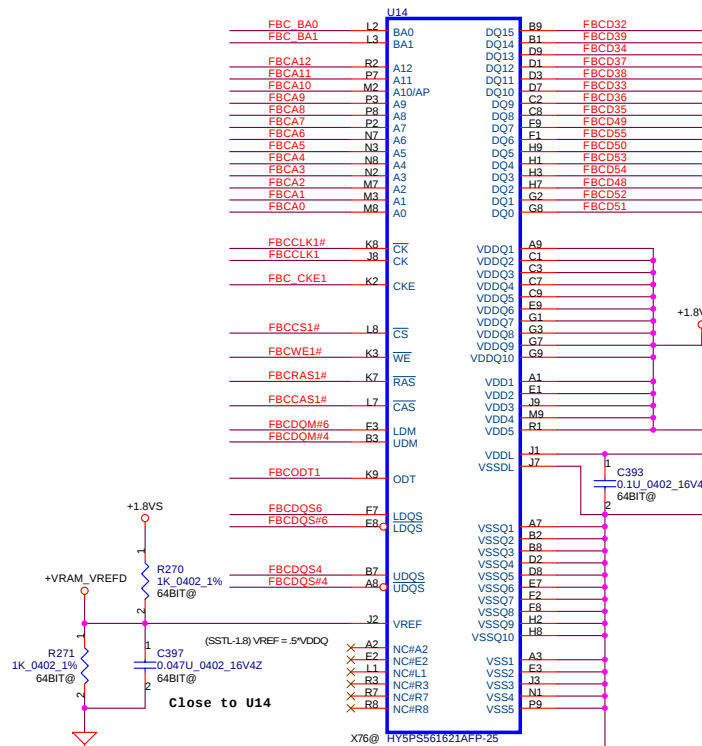
DDR2 BGA MEMORY



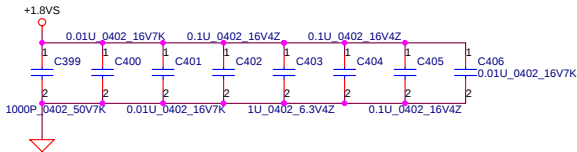
M56 Only

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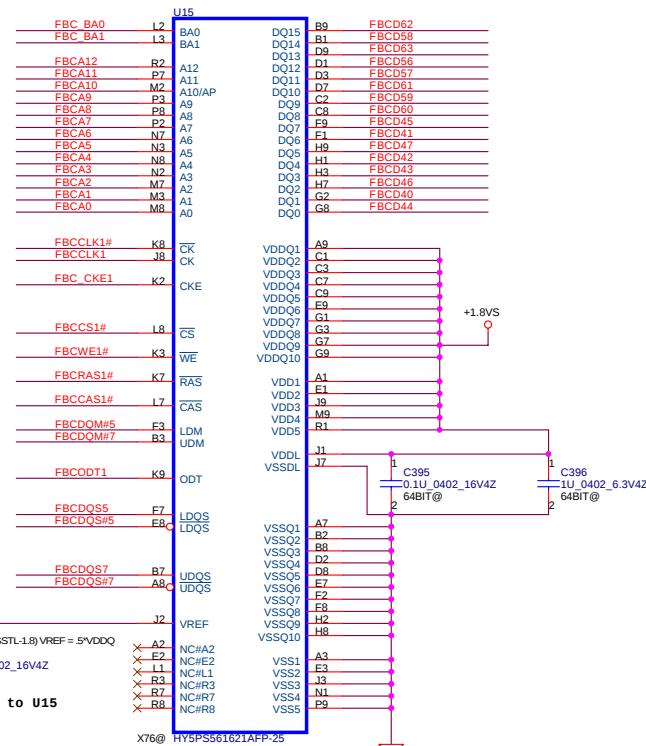
11/03/05' SWAP NET



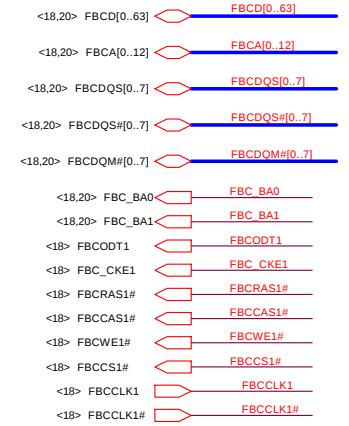
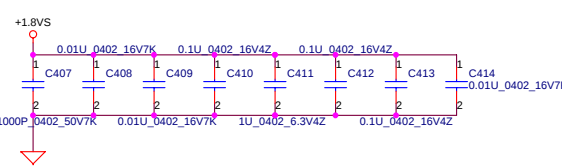
DDR2 BGA MEMORY



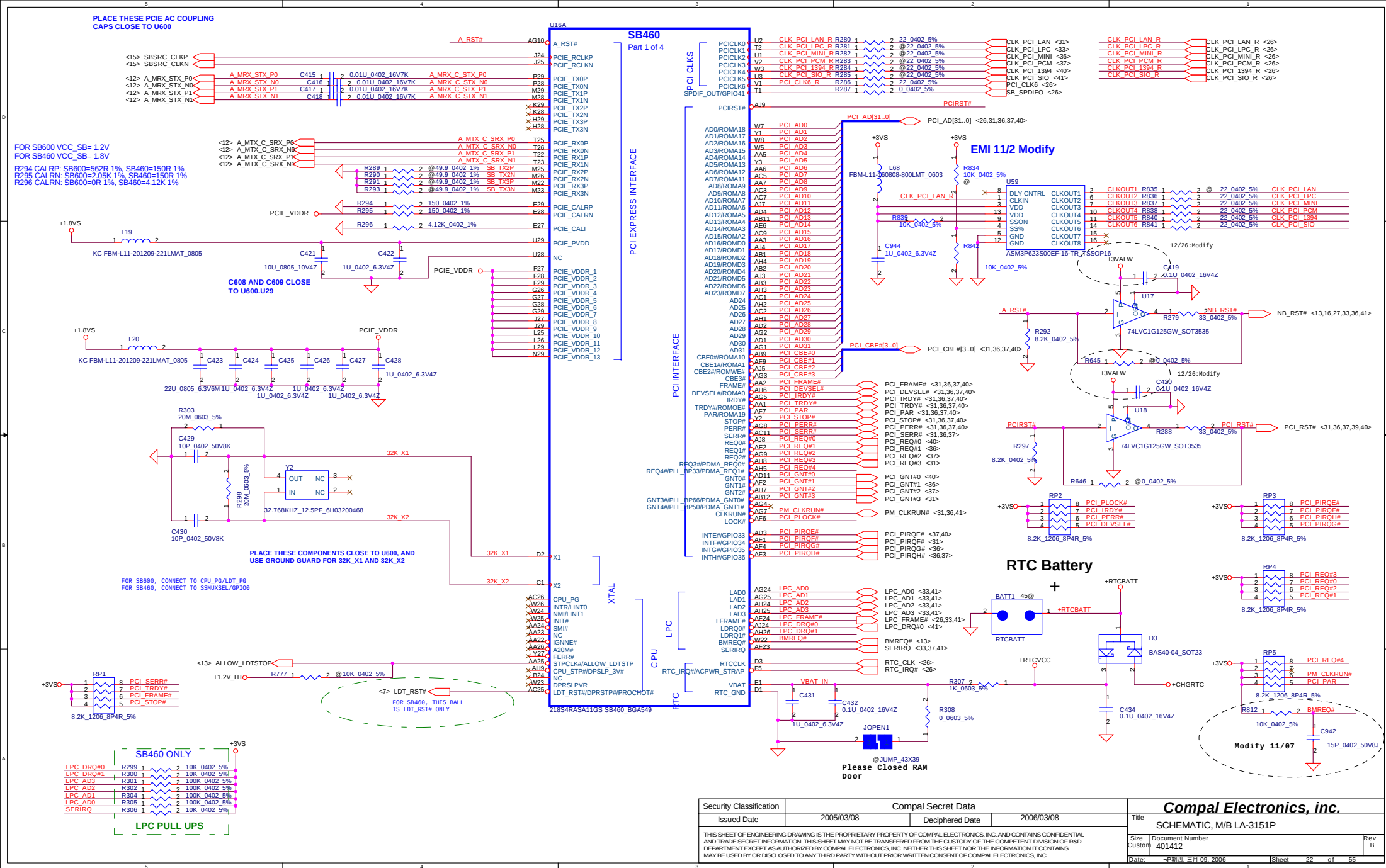
11/03/05' SWAP NET

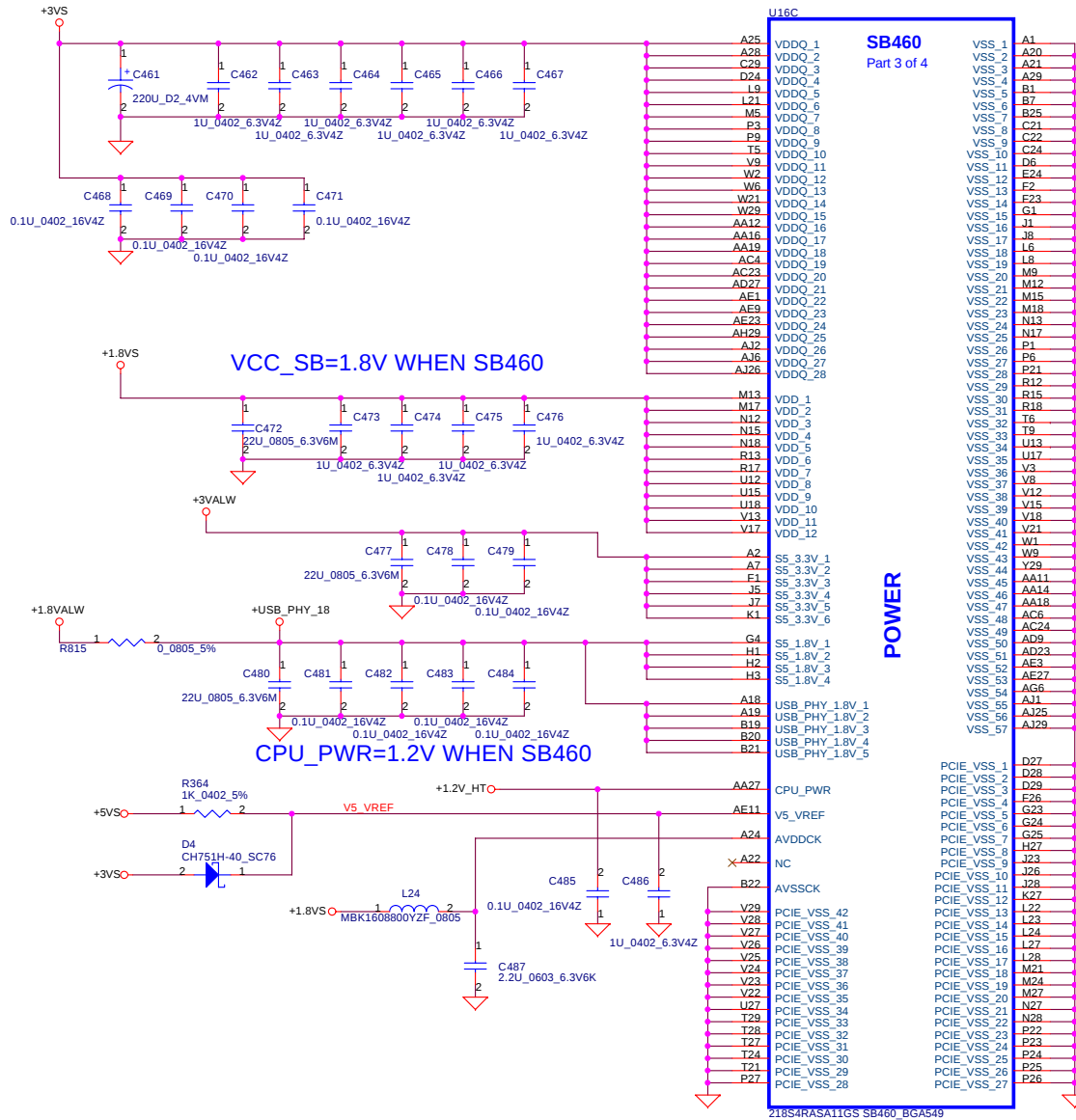


DDR2 BGA MEMORY



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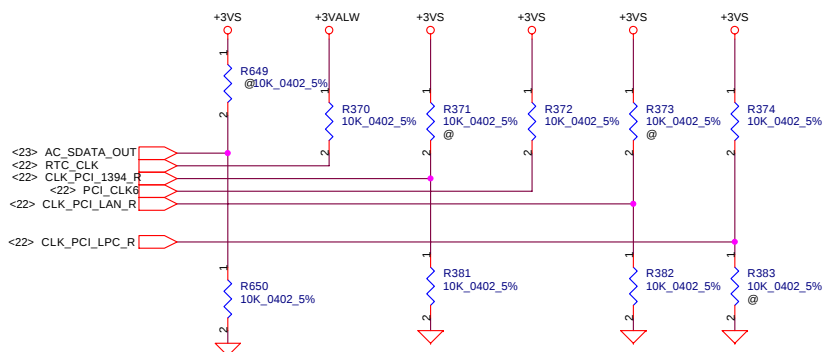




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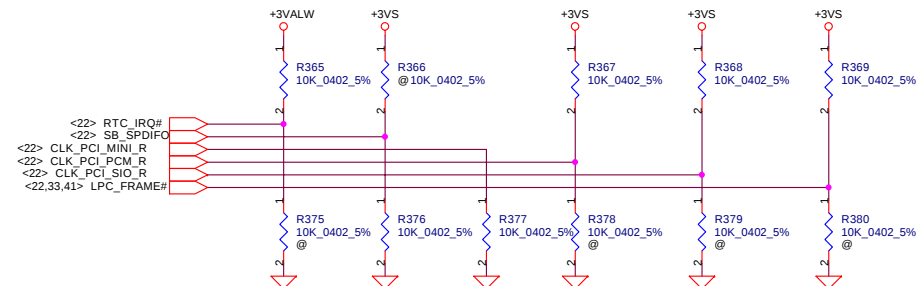
REQUIRED STRAPS

SB600 HAS 15K INTERNAL PD FOR AC_SDATA_OUT,
15K PU FOR RTC_CLK, EXTERNAL PU/PD IS
NOT REQUIRED; FOR SB460, EXTERNAL PU/PD ARE
REQUIRED



NOTE: R365 PU RESISTOR FOR
RTC_IRQ# IS REQUIRED FOR SB460
TO KEEP THE INPUT FROM FLOATING.

SB460 ONLY



	SB600				SB460			
	AC_SDATA_OUT	RTC_CLK	PCI_CLK4 CLK_PCI_1394	PCI_CLK6	PCI_CLK0 CLK_PCI_LAN	PCI_CLK1 CLK_PCI_LPC	PCI_CLK0 CLK_PCI_LAN	PCI_CLK1 CLK_PCI_LPC
PULL HIGH	USE DEBUG STRAPS	INTERNAL RTC DEFAULT	USE INT. PLL48	CPU IF=K8 DEFAULT	ROM TYPE: H, H = PCI ROM H, L = SPI ROM L, H = LPC ROM L, L = FWH ROM	DEFAULT	ROM TYPE: H, H = PCI ROM H, L = LPC I ROM L, H = LPC II ROM L, L = FWH ROM	DEFAULT
PULL LOW	IGNORE DEBUG STRAPS DEFAULT	EXTERNAL RTC	USE EXT. 48MHZ DEFAULT	CPU IF=P4	NOTE: FOR SB460, PCI_CLK[8:7] ARE CONNECTED TO SUBSTRATE BALLS PCI_CLK[1:0]			

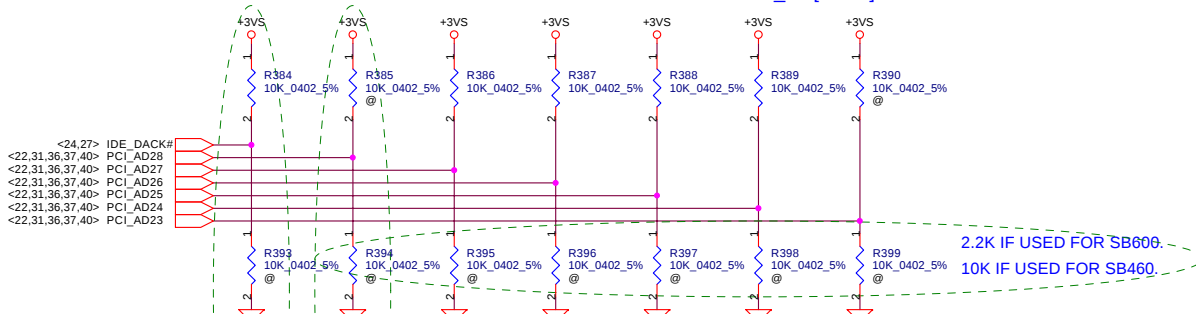
	ACPWRON	SPDIF_OUT	PCI_CLK2	PCI_CLK3	PCI_CLK5	LFRAME#
	RTC_IRQ#	SB_SPDIFO	CLK_PCI_MINI	CLK_PCI_PCM	CLK_PCI_SIO	LPC_FRAME#
PULL HIGH	MANUAL PWR ON DEFAULT	SIO 24MHZ	XTAL MODE NOT SUPPORTED	USB PHY POWERDOWN DISABLE DEFAULT	PCIE_CM_SET LOW DEFAULT	ENABLE THERMTRIP# DEFAULT
PULL LOW	AUTO PWR ON	SIO 48MHZ DEFAULT	48MHZ OSC MODE DEFAULT	USB PHY POWERDOWN ENABLE	PCIE_CM_SET HIGH	DISABLE THERMTRIP#



OVERLAP COMMON PADS WHERE
POSSIBLE FOR DUAL-OP RESISTORS.

DEBUG STRAPS

SB600 HAS 15K INTERNAL PU FOR PCI_AD[28:23]



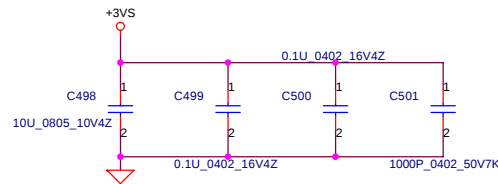
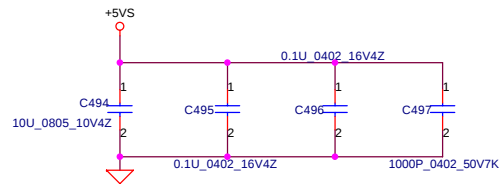
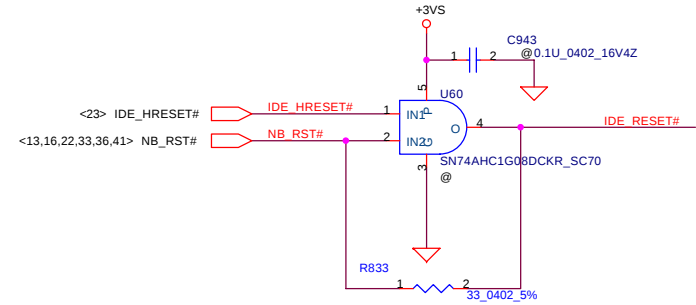
	IDE_DACK#	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	BOOTFAILTIMER DISABLED
PULL LOW	USE SHORT RESET	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	BOOTFAILTIMER ENABLED

SB600 ONLY

NOTE: FOR
SB460,
PCI_AD23 IS
RESERVED

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<24> IDE_D[0..15] IDE_D[0..15]
<24> IDE_A[0..2] IDE_A[0..2]



Schematic diagram of the SATA connector pinout for the OTEK SAT-22S61G-1R. The diagram shows a 22-pin connector with pins 1-7 for SATA signals, pins 8-17 for power, and pins 18-22 for reserved and power. A dashed oval encloses the power pins (8-17) and is labeled "Modify 11/07 for EMI".

SATA Signals (Pins 1-7):

- Pin 1: SATA_STX_C_DRX_P0
- Pin 2: SATA_STX_C_DRX_N0
- Pin 3: HTX+
- Pin 4: HTX-
- Pin 5: GND
- Pin 6: HRX+
- Pin 7: HRX-

Power (Pins 8-17):

- Pin 8: VCC3.3
- Pin 9: VCC3.3
- Pin 10: VCC3.3
- Pin 11: GND
- Pin 12: GND
- Pin 13: GND
- Pin 14: VCC5
- Pin 15: VCC5
- Pin 16: VCC5
- Pin 17: GND

Reserved and Power (Pins 18-22):

- Pin 18: RESERVED
- Pin 19: GND
- Pin 20: VCC12
- Pin 21: VCC12
- Pin 22: VCC12

Labels:

- +3VS (Pin 8)
- +5VS (Pin 14)
- R816 (Pin 8)
- R817 (Pin 14)
- 0_0805_5% (Pin 8)
- 0_0805_5% (Pin 14)

Legend:

- Pin 18: RESERVED
- Pin 19: GND
- Pin 20: VCC12
- Pin 21: VCC12
- Pin 22: VCC12

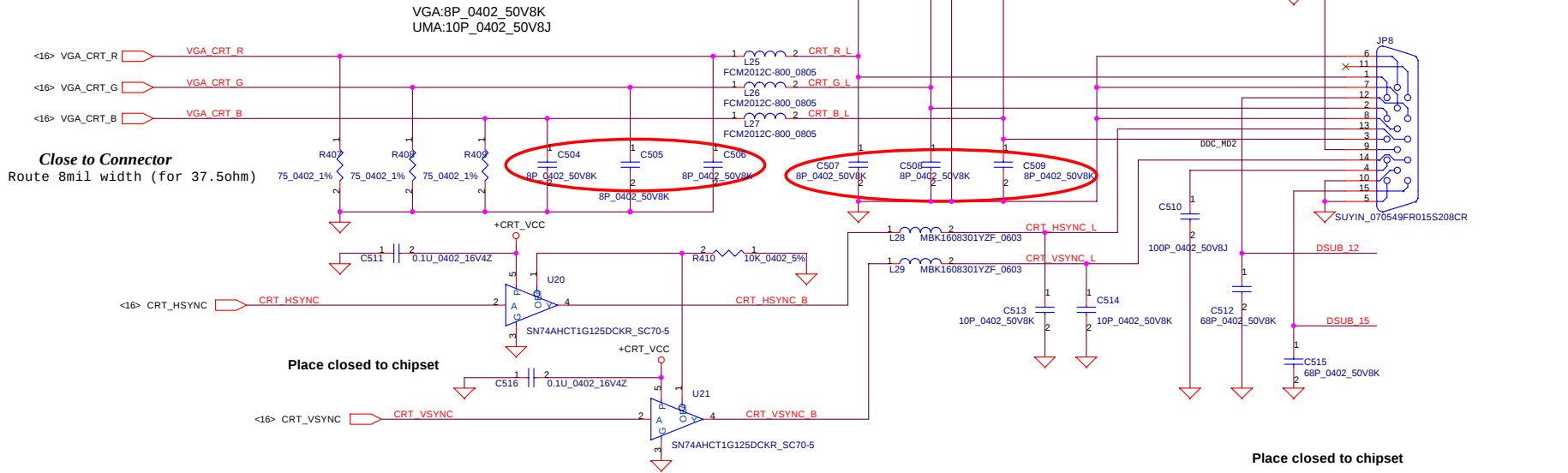
Manufacturer: SATA@ OTEK SAT-22S61G-1R (NEW)

[illegible]

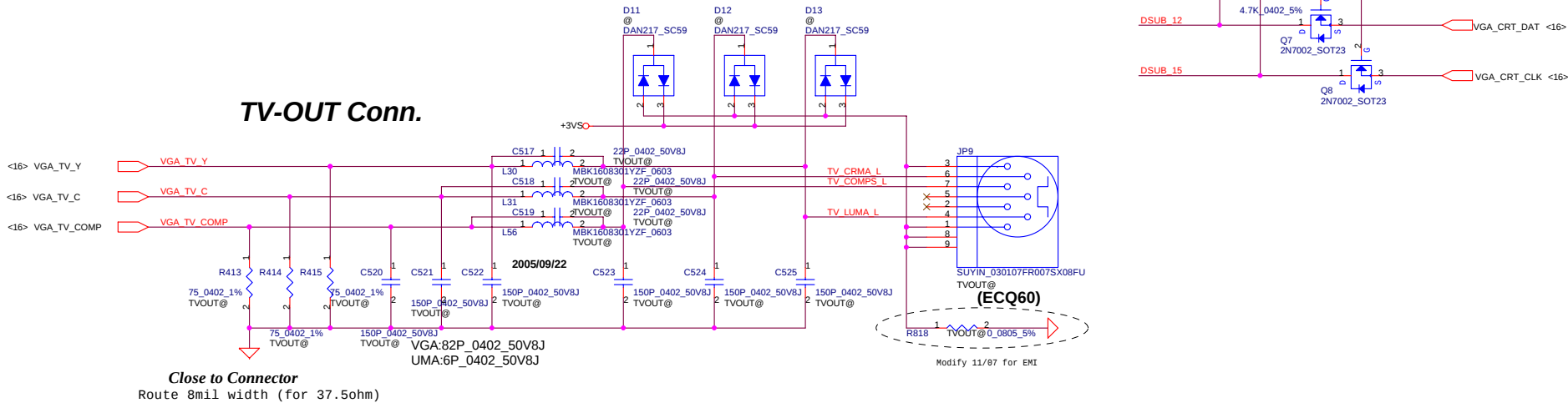
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Size	Document Number		Rev
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CRT Connector

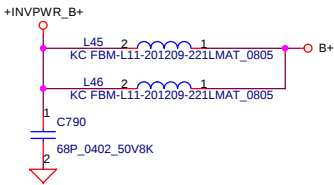
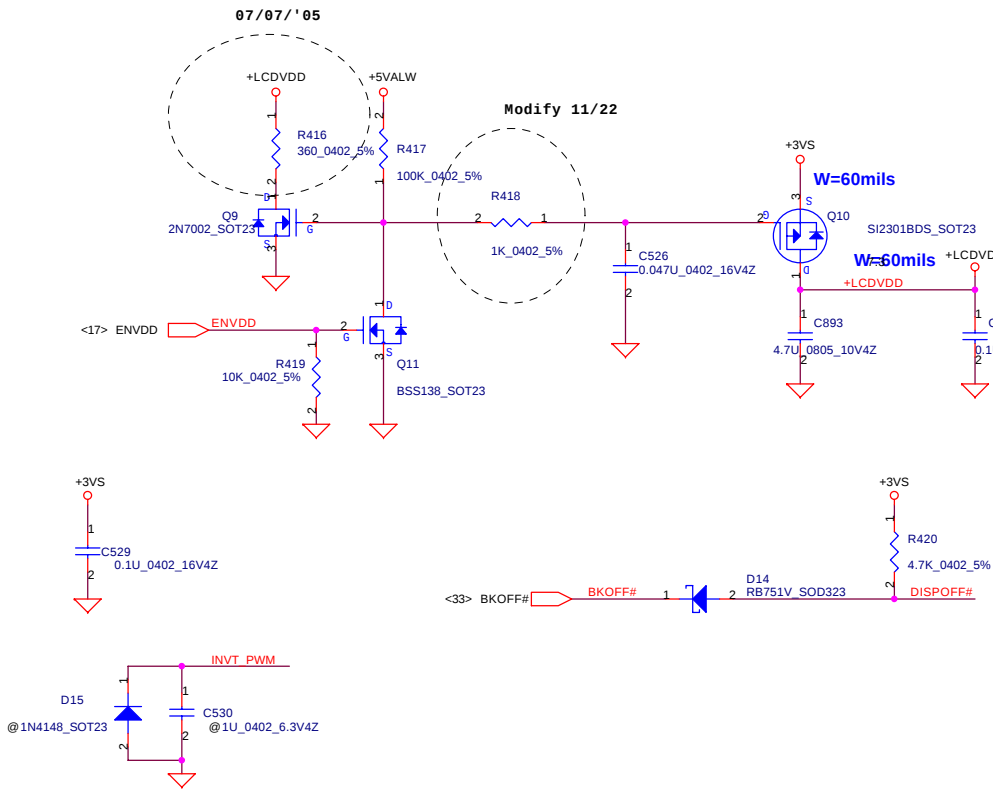


TV-OUT Conn.

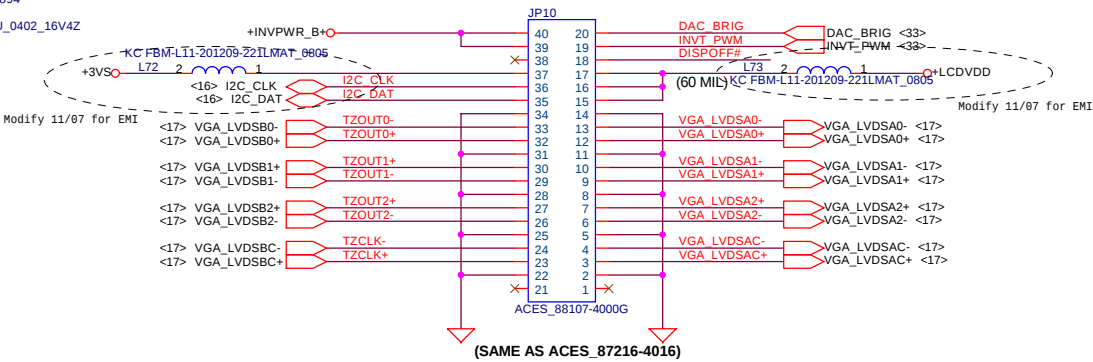


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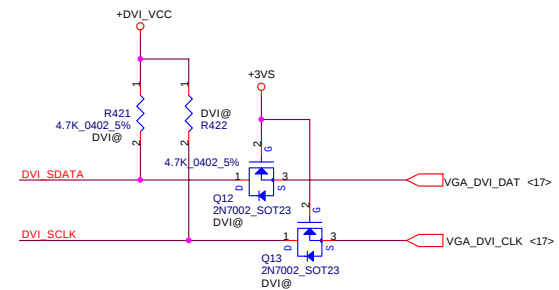
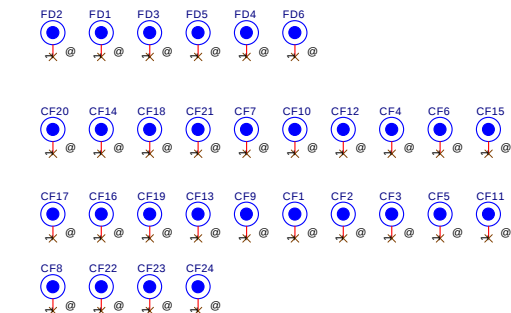
LCD POWER CIRCUIT



LCD/PANEL BD. Conn.



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<22,26,36,37,40> PCI_AD[0..31]

PCI AD0	104	AD0
PCI AD1	103	AD1
PCI AD2	102	AD2
PCI AD3	98	AD3
PCI AD4	97	AD4
PCI AD5	96	AD5
PCI AD6	95	AD6
PCI AD7	93	AD7
PCI AD8	90	AD8
PCI AD9	89	AD9
PCI AD10	86	AD10
PCI AD11	85	AD11
PCI AD12	85	AD12
PCI AD13	83	AD13
PCI AD14	82	AD14
PCI AD15	79	AD15
PCI AD16	59	AD16
PCI AD17	58	AD17
PCI AD18	57	AD18
PCI AD19	55	AD19
PCI AD20	53	AD20
PCI AD21	50	AD21
PCI AD22	49	AD22
PCI AD23	47	AD23
PCI AD24	43	AD24
PCI AD25	42	AD25
PCI AD26	40	AD26
PCI AD27	39	AD27
PCI AD28	37	AD28
PCI AD29	36	AD29
PCI AD30	34	AD30
PCI AD31	33	AD31

<22,36,37,40> PCI_CBE#0	92	CBE#0
<22,36,37,40> PCI_CBE#1	77	CBE#1
<22,36,37,40> PCI_CBE#2	60	CBE#2
<22,36,37,40> PCI_CBE#3	44	CBE#3
PCI AD17	1	LAN_IDSEL
PCI AD17	2	LAN_IDSEL
<22,36,37,40> PCI_PAR	76	PAR
<22,36,37,40> PCI_FRAME#	61	FRAME#
<22,36,37,40> PCI_IRDY#	63	IRDY#
<22,36,37,40> PCI_TRDY#	67	TRDY#
<22,36,37,40> PCI_DEVSEL#	68	DEVSEL#
<22,36,37,40> PCI_STOP#	69	STOP#
<22,36,37,40> PCI_PERR#	70	PERR#
<22,36,37,40> PCI_SERR#	75	SERR#
<22> PCI_REQ#3	30	REQ#
<22> PCI_GNT#3	29	GNT#
<22> PCI_PIRQ#	25	INTA#
<33> LAN_PME#	31	PME#
<22,36,37,39,40> PCI_RST#	27	RST#
<22> CLK_PCI_LAN	28	CLK
<22,36,41> PM_CLKRUN#	65	PM_CLKRUN#

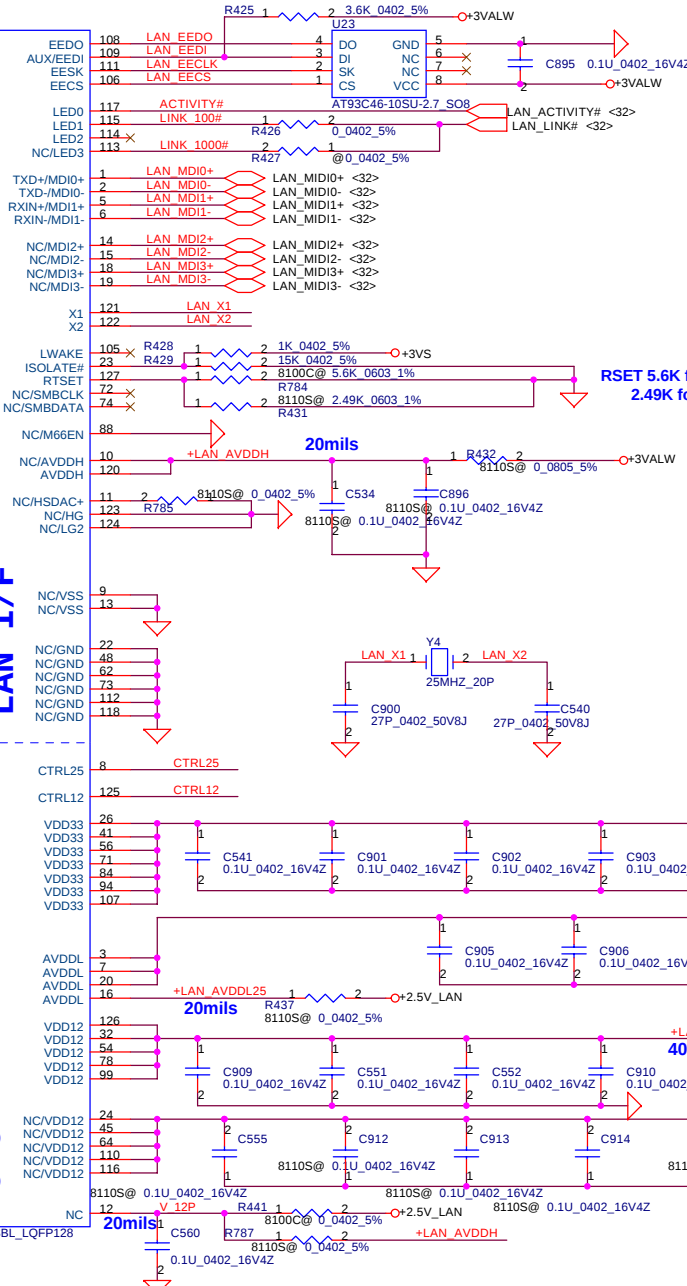
CLK_PCI_LAN	1	CLK_PCI_LAN
R786	1	@10_0402_5%
C911	1	@18P_0402_50V8J
GND	2	
GND	4	
GND	17	
GND	128	
GND/VSS	21	
GND/VSSPST	38	
GND/VSSPST	51	
GND/VSSPST	66	
GND/VSSPST	81	
GND/VSSPST	91	
GND/VSSPST	101	
GND/VSSPST	119	
GND	35	
GND	52	
GND	80	
GND	100	

RTL8110SBL change to Ver.D

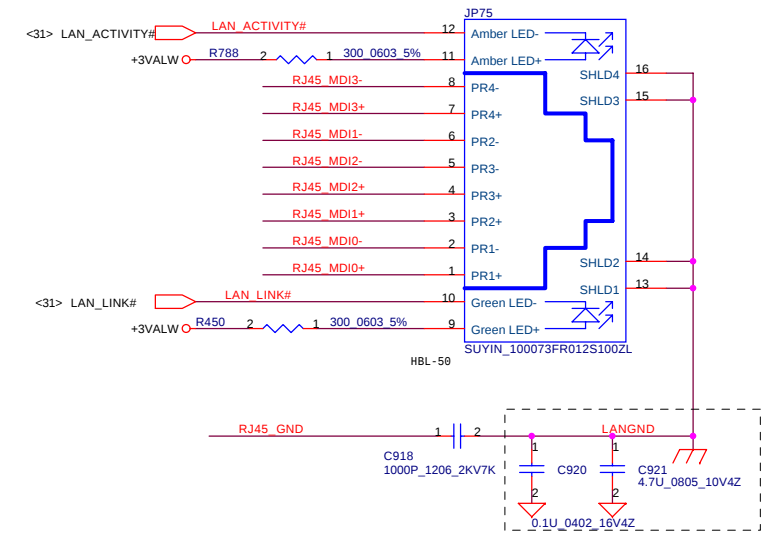
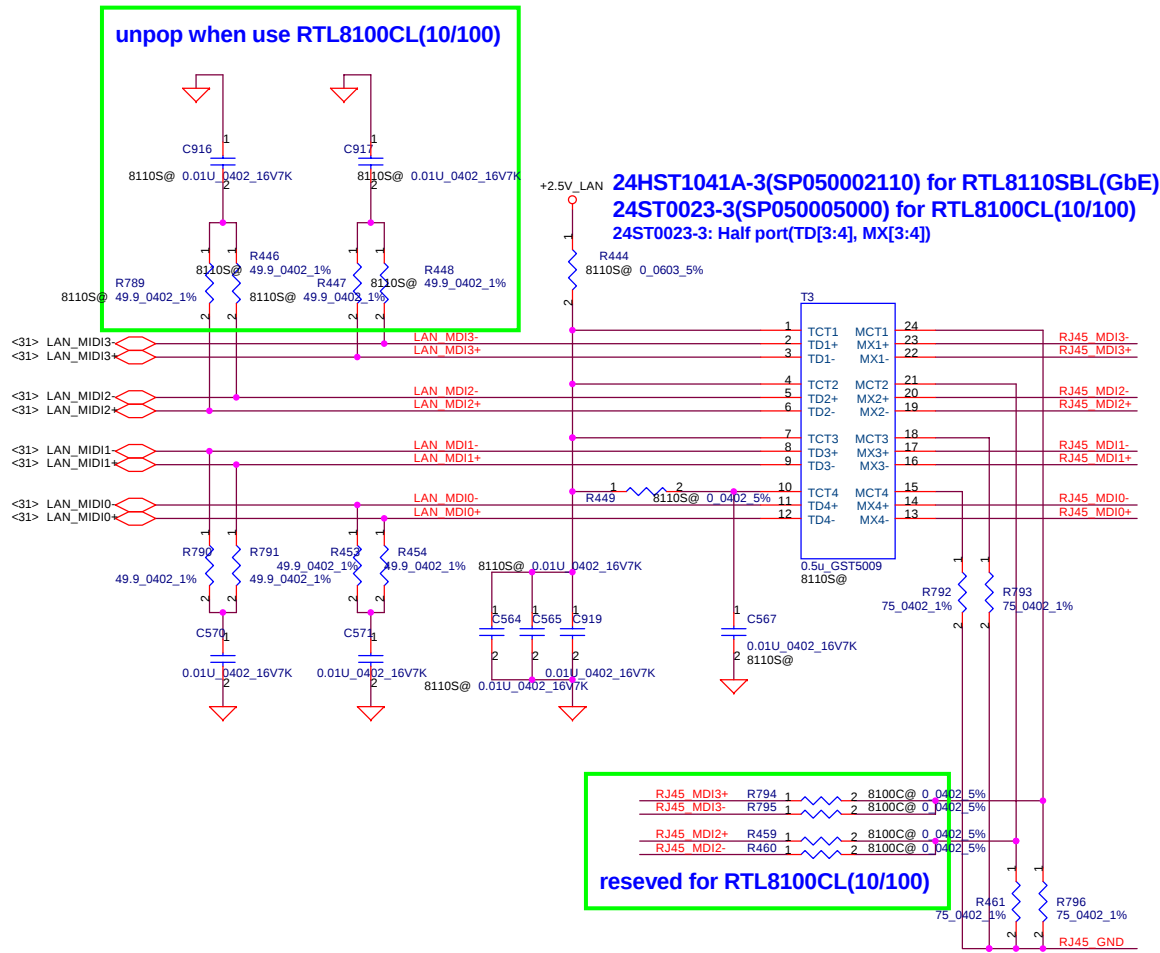
PCI I/F

LAN I/F

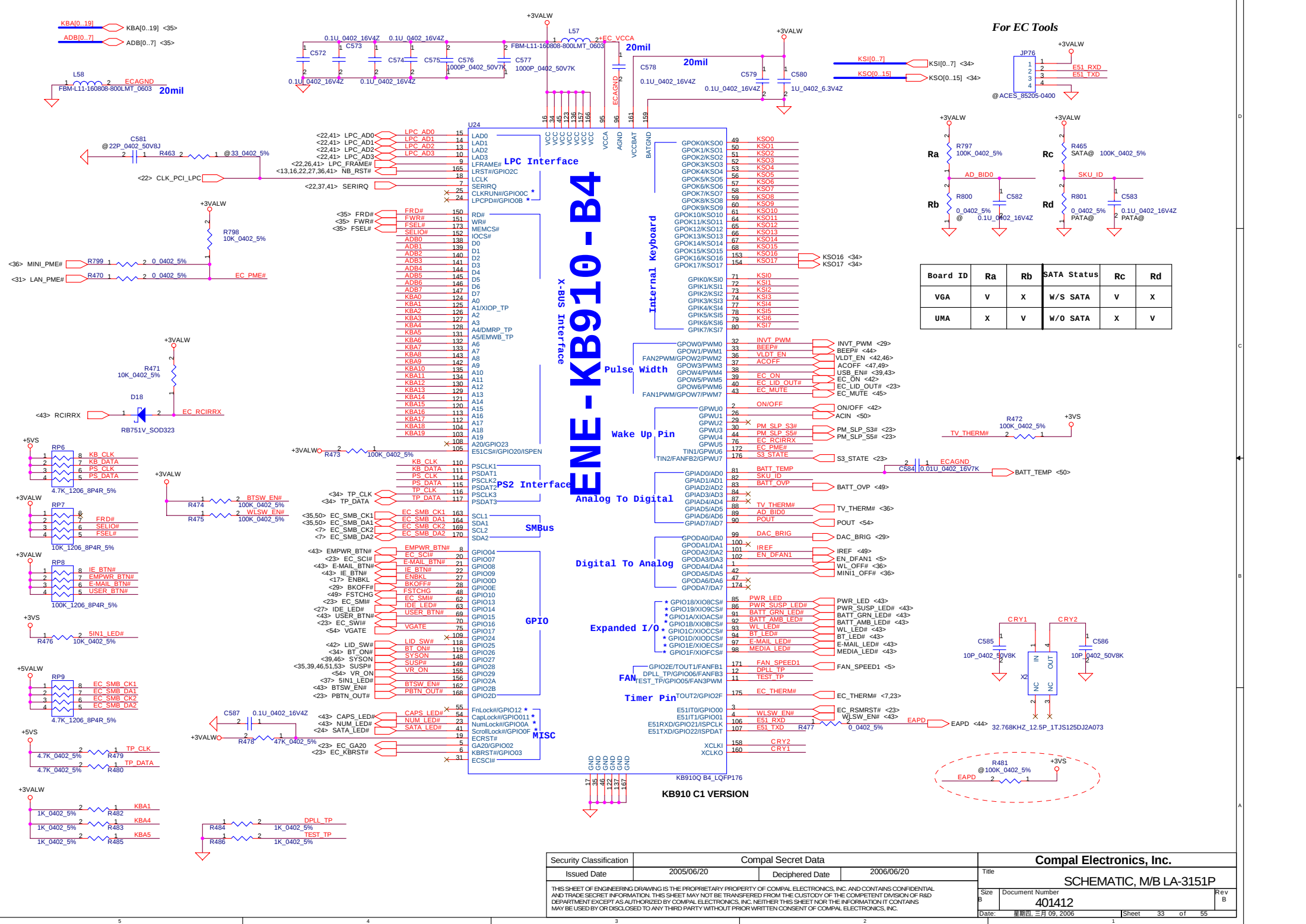
Power



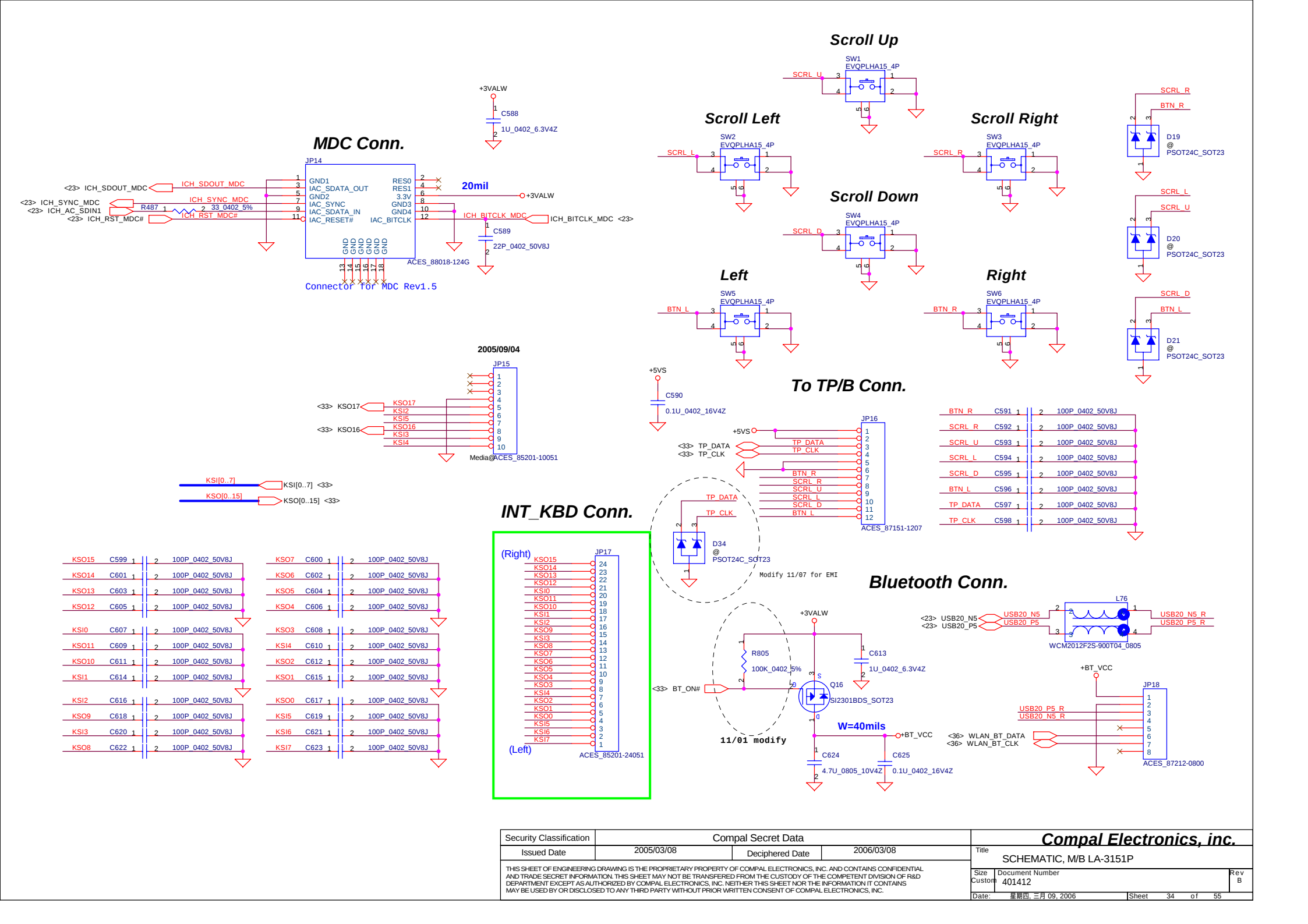
LAN RTL8110SBL/RTL8100CL



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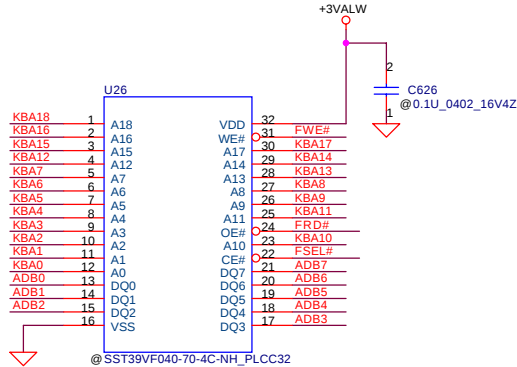


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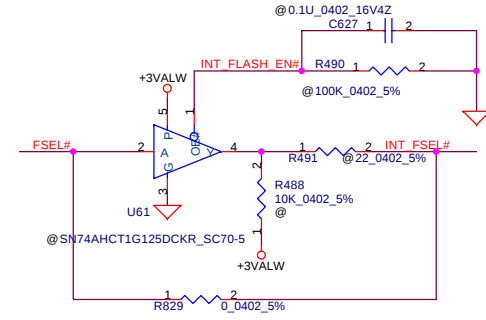
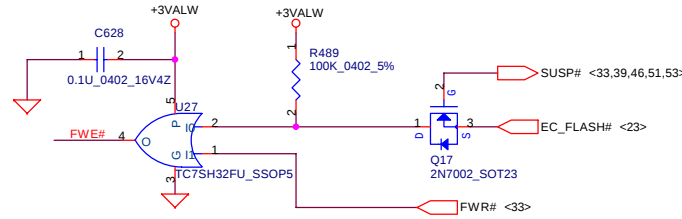


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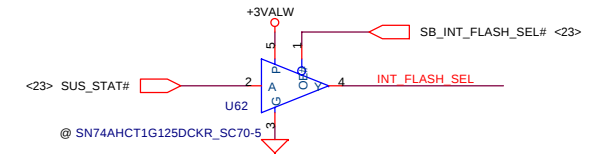
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<33> ADB[0..7] ADB[0..7]



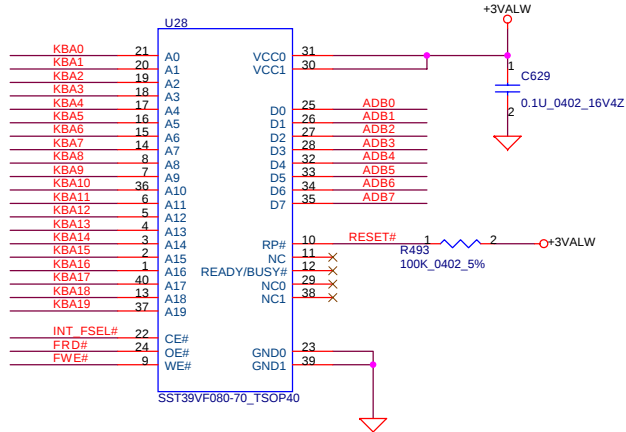
(CL55)



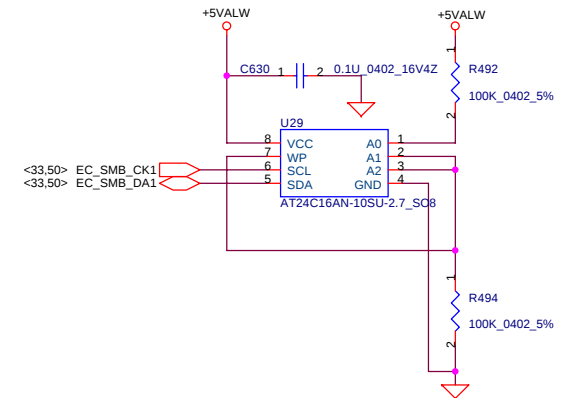
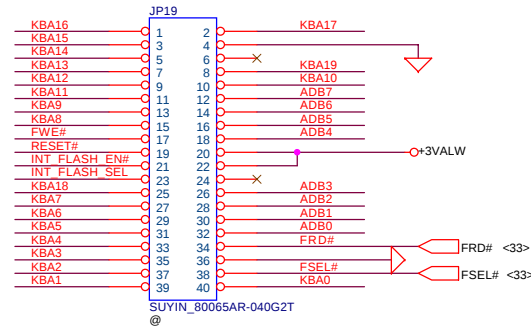
FOR DEBUG ONLY



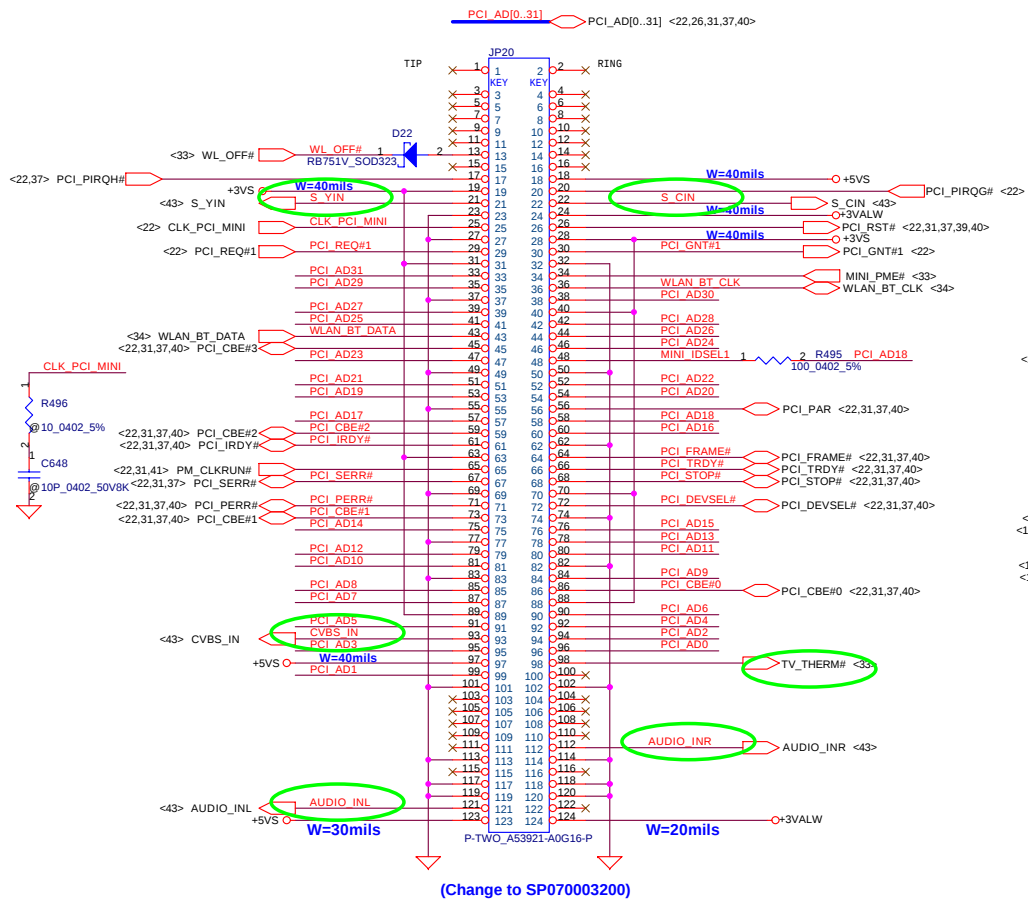
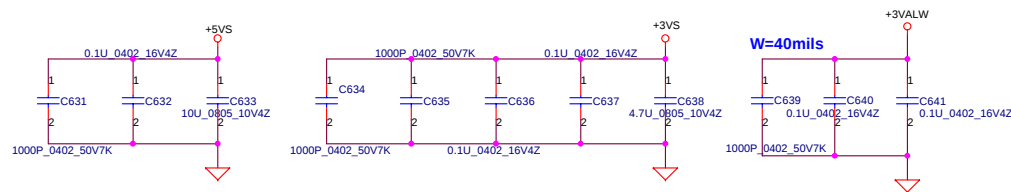
1MB Flash ROM



1MB Flash ROM

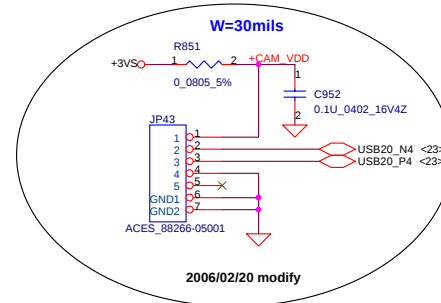
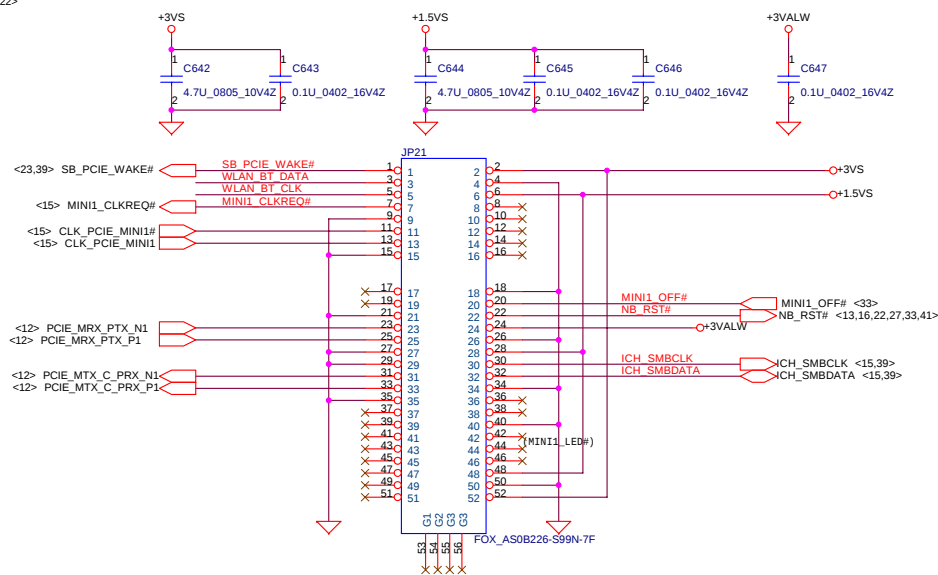


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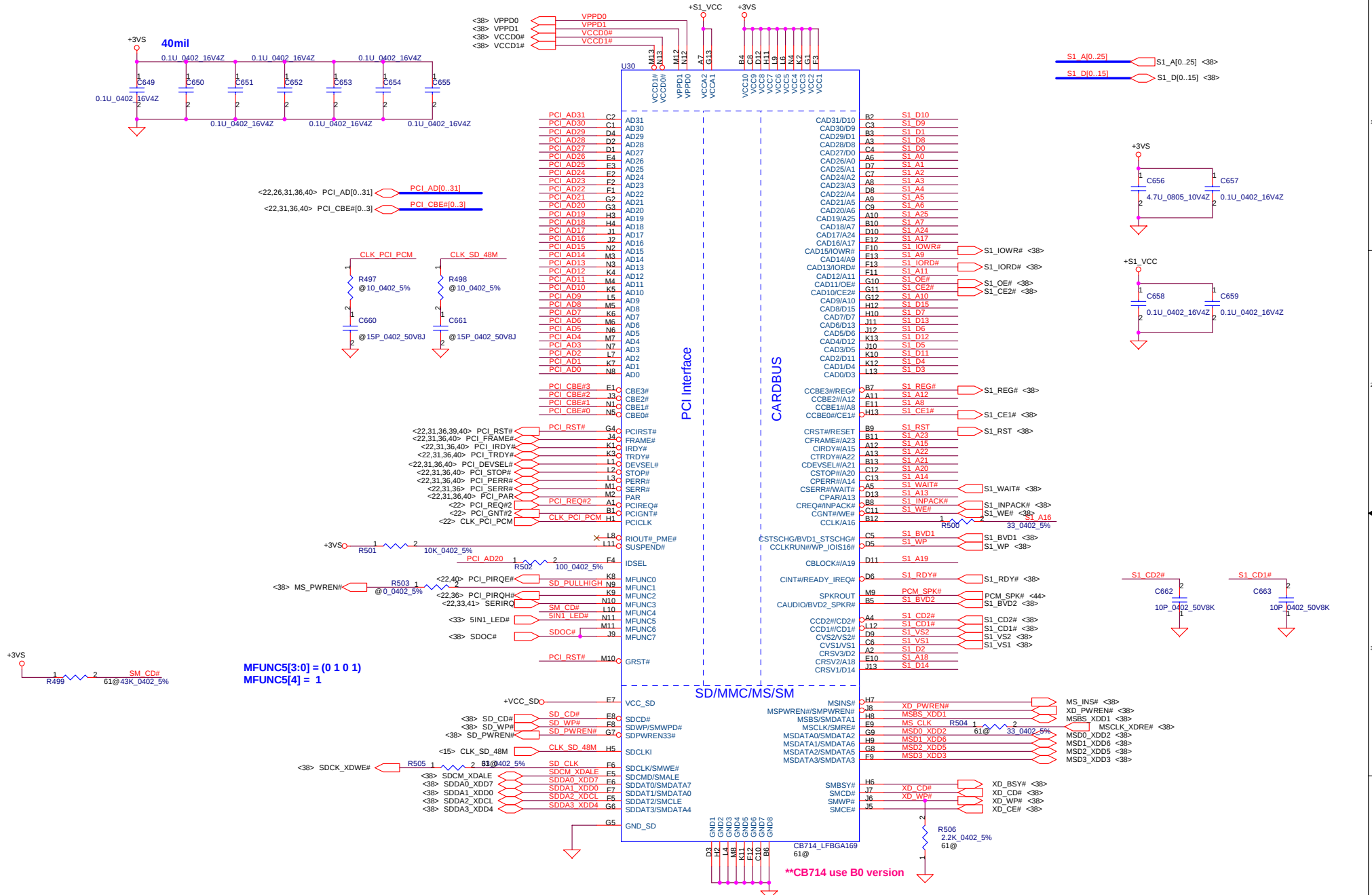
(Change to SP070003200)

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



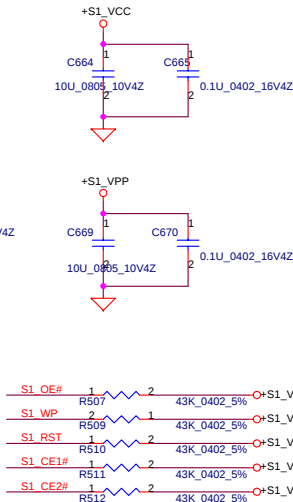
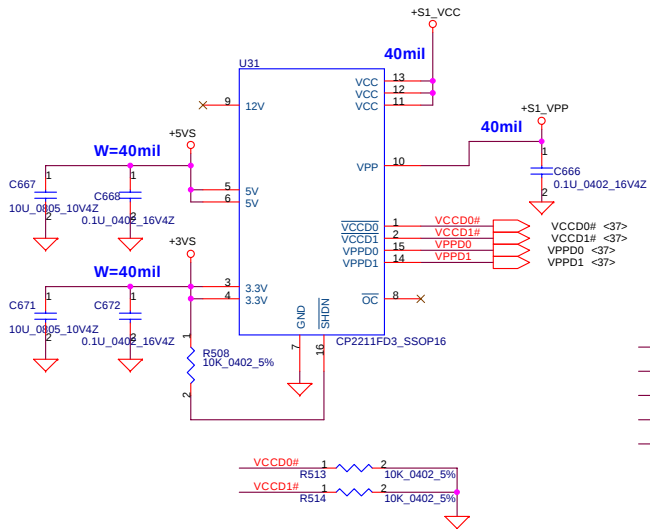
2006/02/20 modify

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								SCHEMATIC, M/B LA-3151P			
Size		Document Number		Date		Rev					
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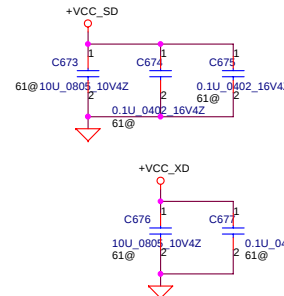
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PCMCIA Power Control

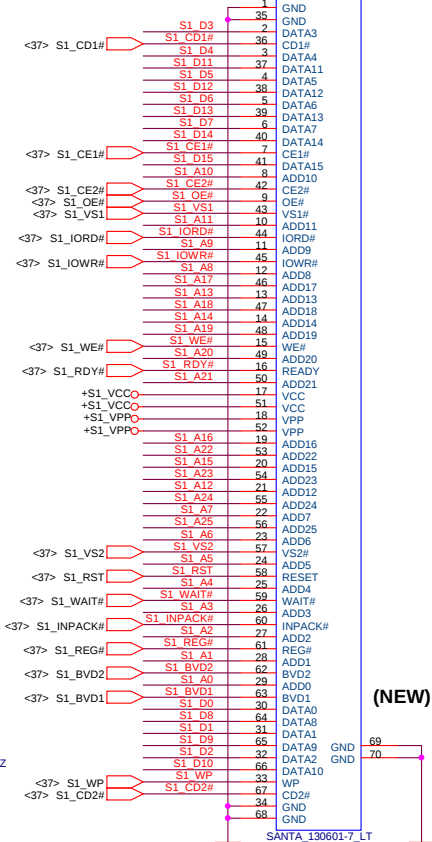


<37> S1_A[0..25] S1_A[0..25]

<37> S1_D[0..15] S1_D[0..15]

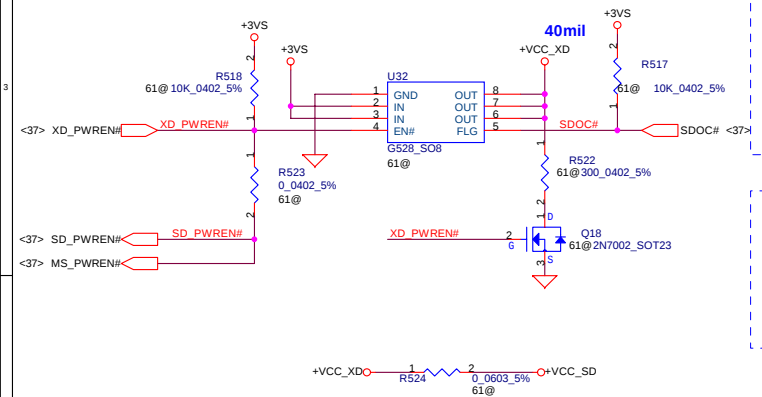


PCMCIA Socket

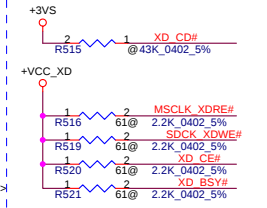


SD/MS Power Control

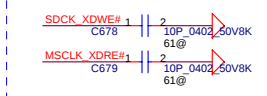
XD Power Control



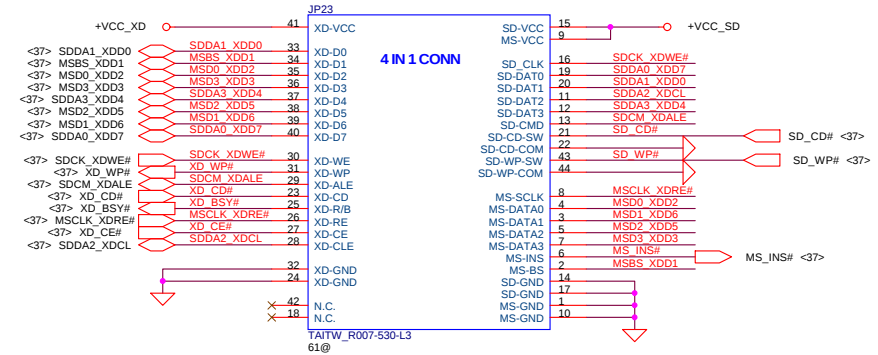
xD PU and PD. Close to Socket



Reserve for SD,MS CLK. Close to Socket

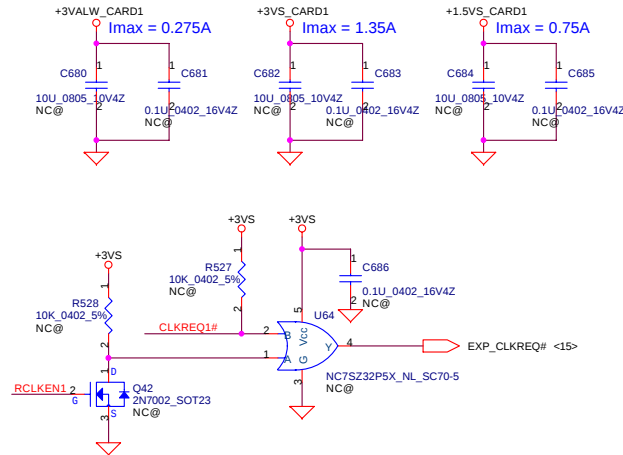
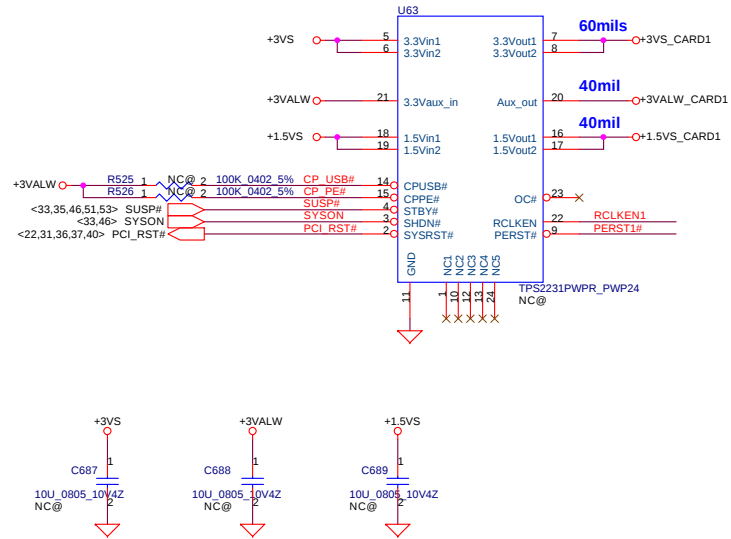


4 IN 1 Socket (HDQ70)

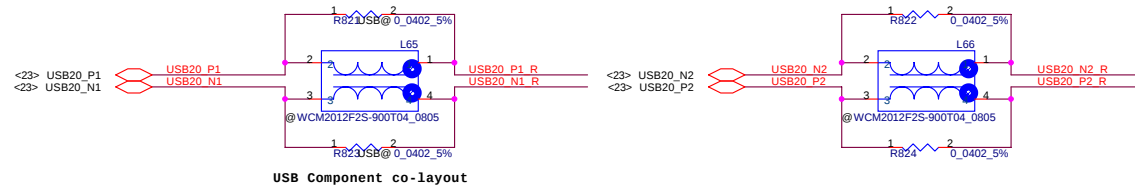
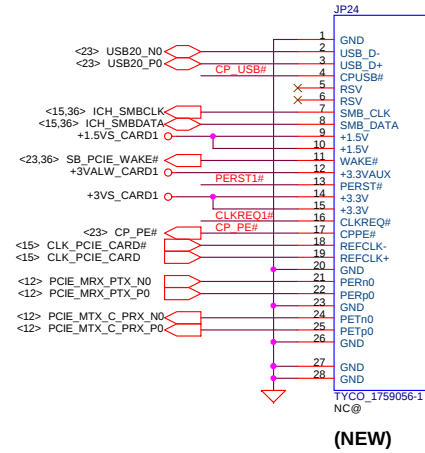


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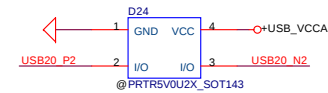
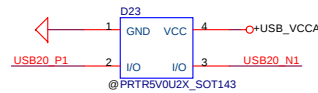
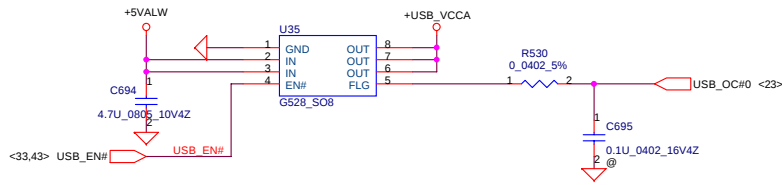
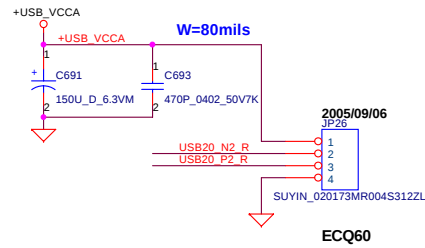
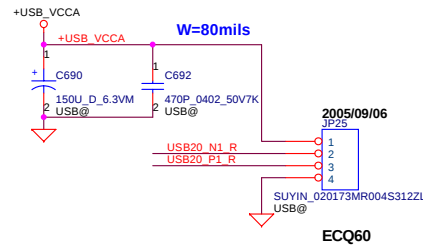
New Card Power Switch



New Card Socket (Left)

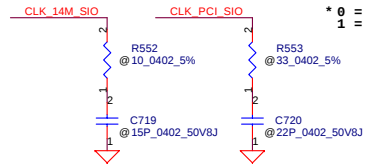
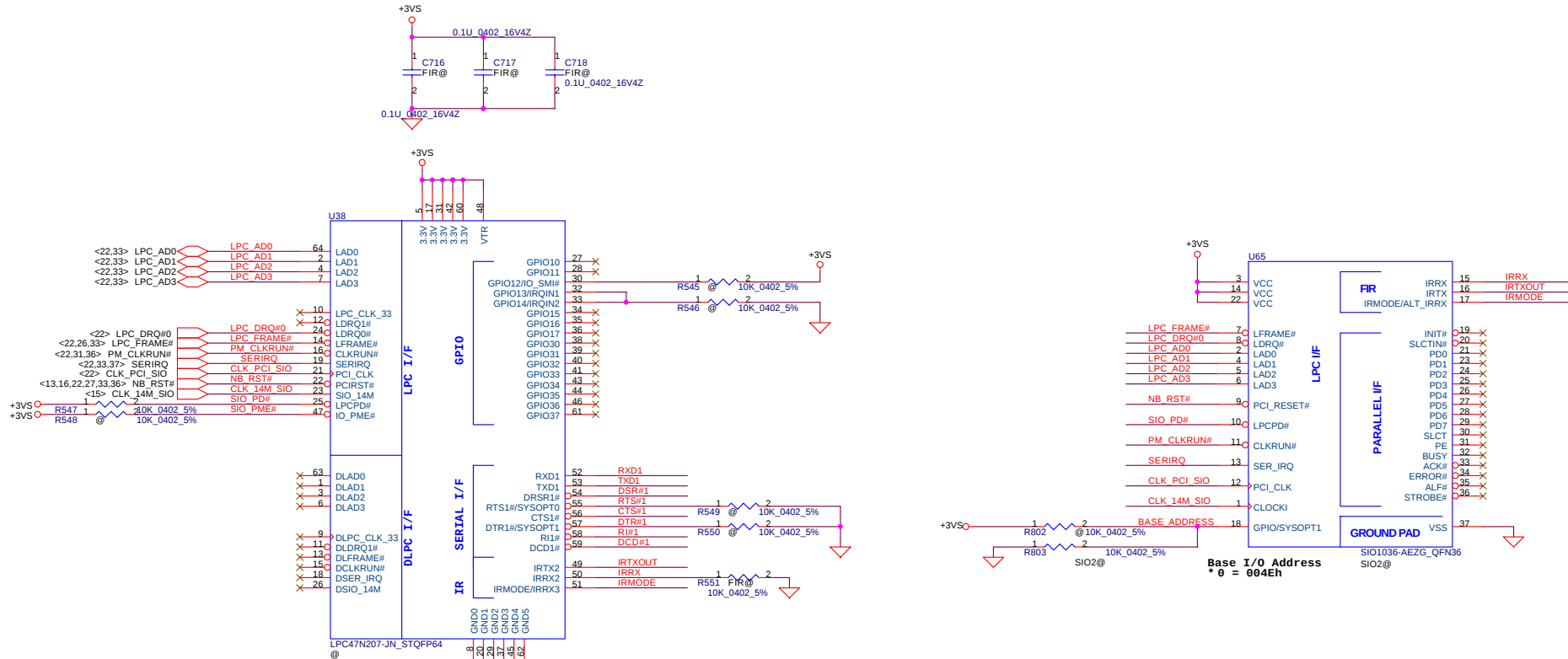


USB CONN. 1 & 2

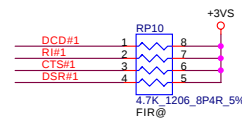
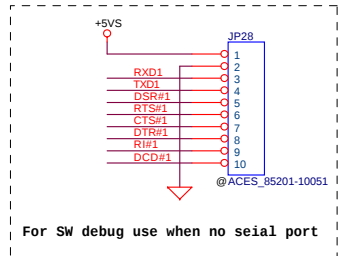


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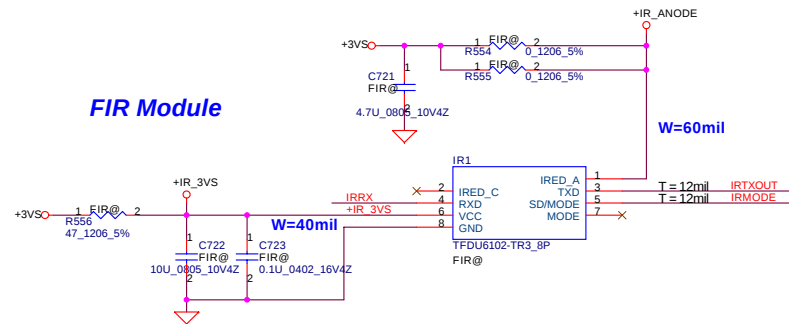
SUPER I/O SMSc LPC47N207



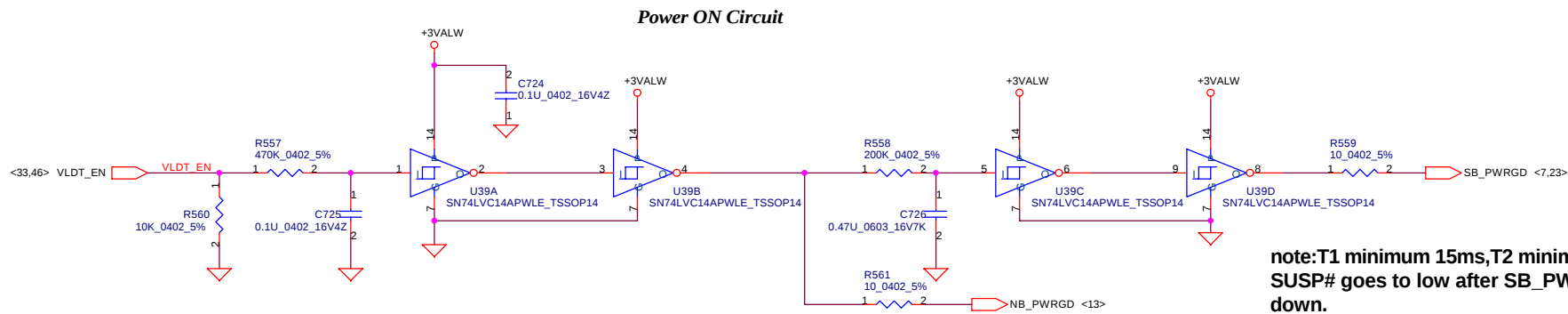
Place on the BOT side(near MINIPCI conn.)



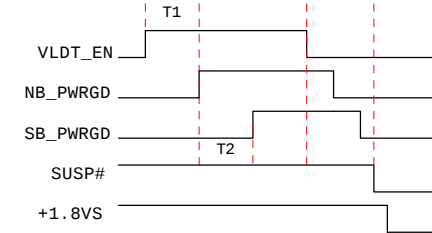
FIR Module



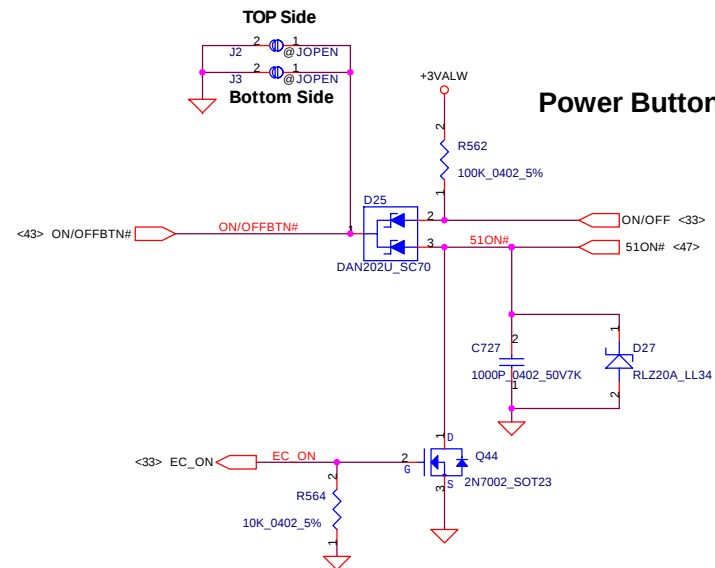
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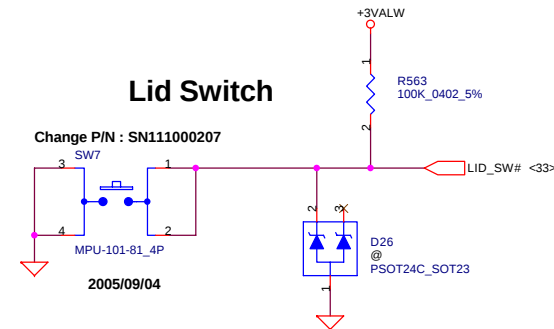
note:T1 minimum 15ms,T2 minimum 33ms/maximum 500ms,
SUSP# goes to low after SB_PWRGD goes to low for power
down.



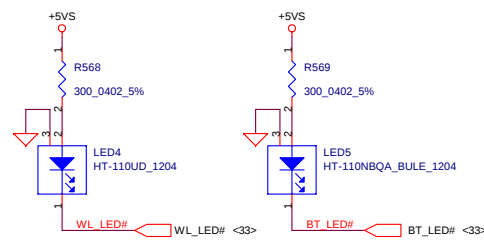
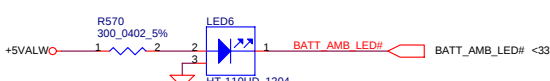
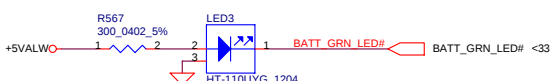
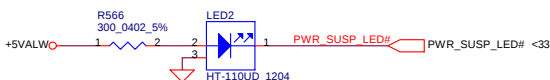
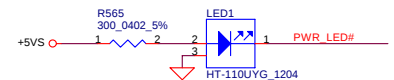
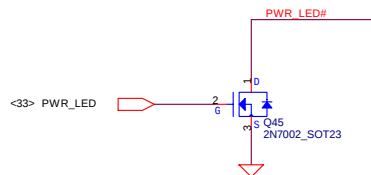
ON/OFF switch



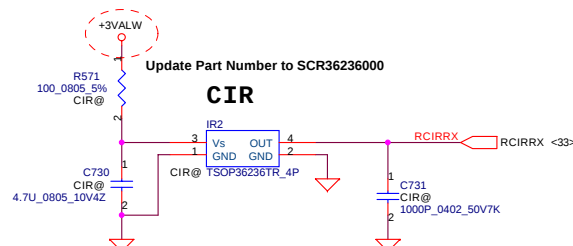
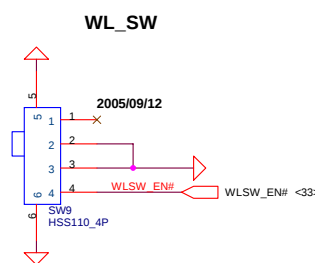
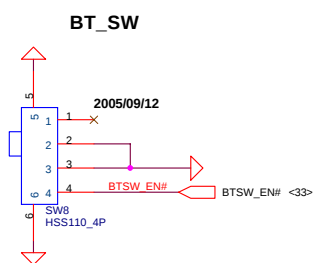
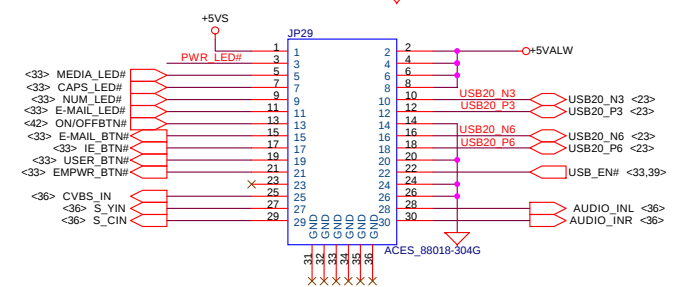
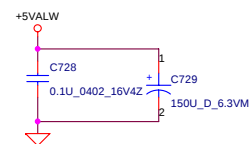
Lid Switch



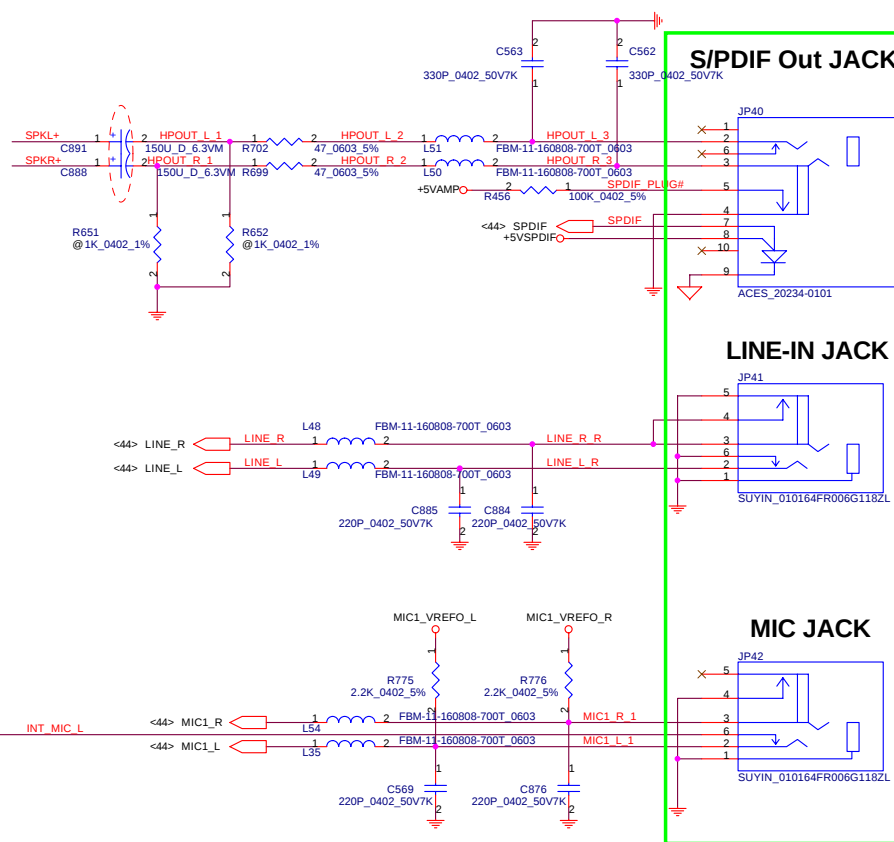
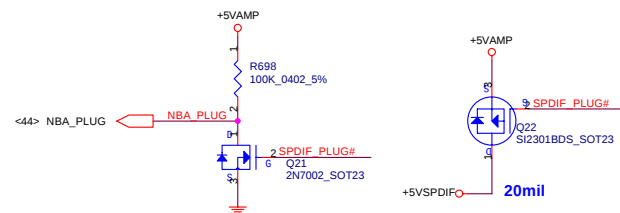
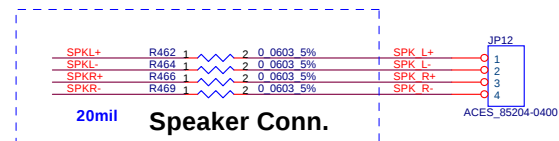
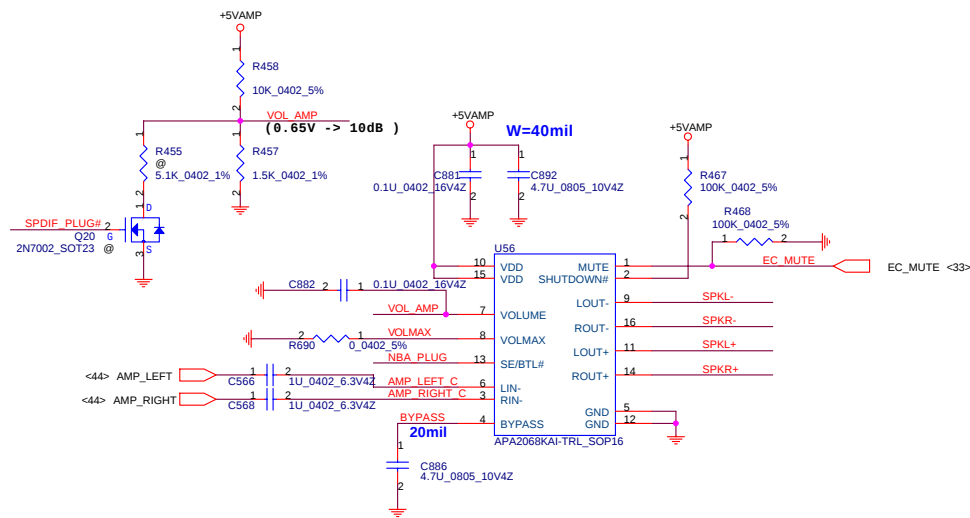
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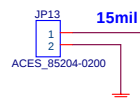
To LED/B Conn.



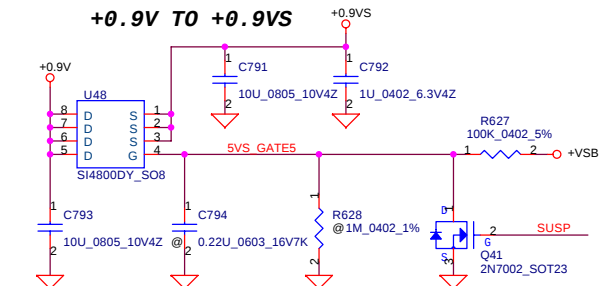
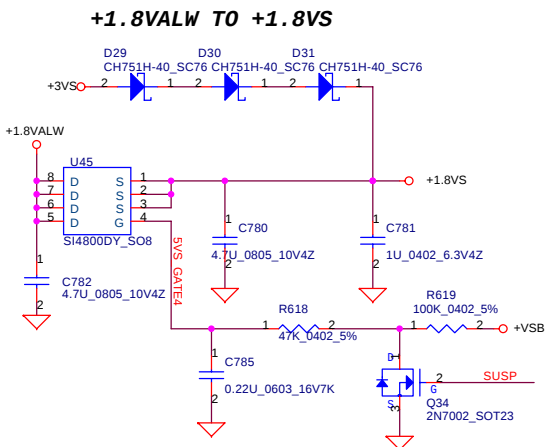
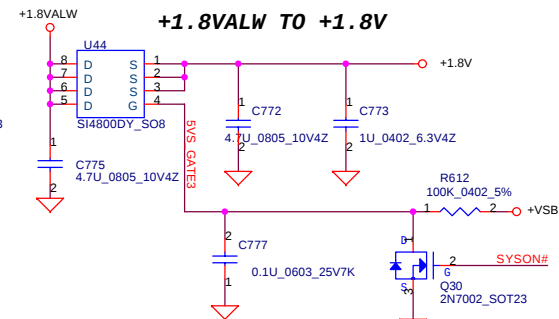
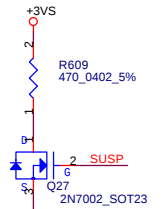
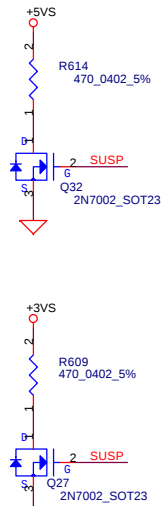
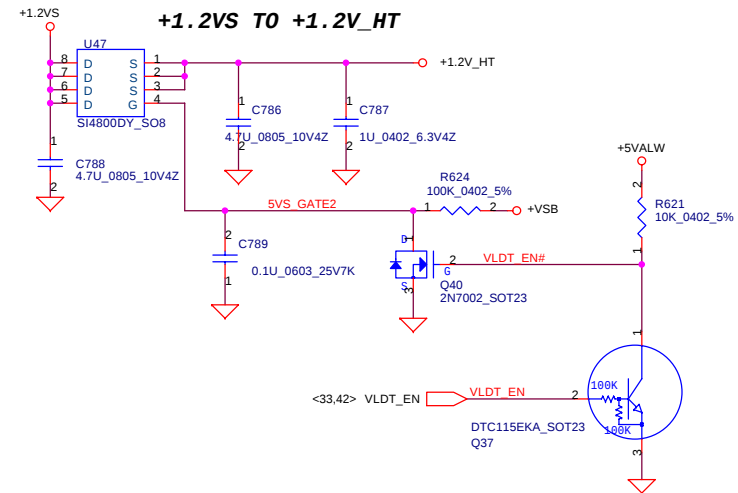
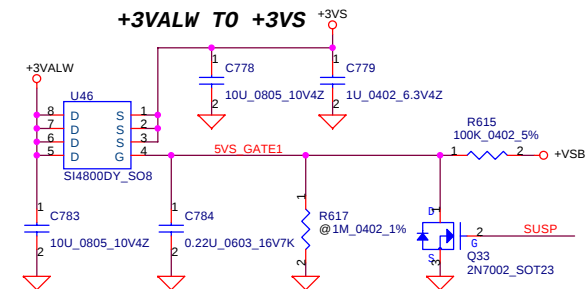
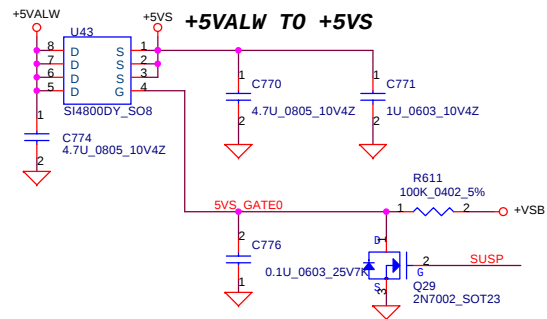
Geneva			Grapevine		
	KSO16	KSO17		KSO16	KSO17
KSI0	VOL_UP	LEFT			
KSI1	RIGHT	VOL_DOWN			
KSI2	PLAY	ENTER	KSI2	PLAY	
KSI3	STOP		KSI3	STOP	VOL_UP
KSI4	NEXT		KSI4	NEXT	VOL_DOWN
KSI5	REV		KSI5	REV	ARCADE_TV
KSI6		RECORD			



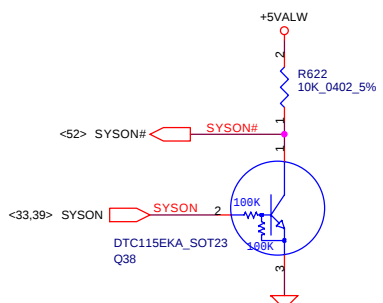
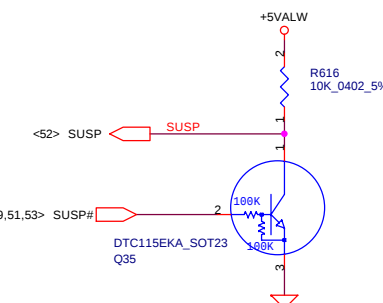
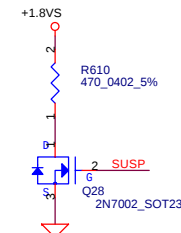
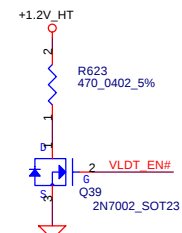
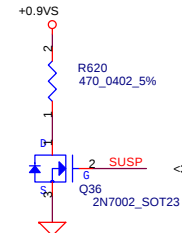
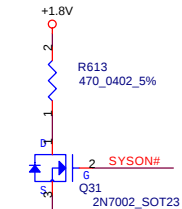
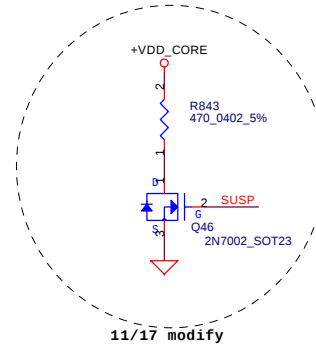
Int MIC Conn.



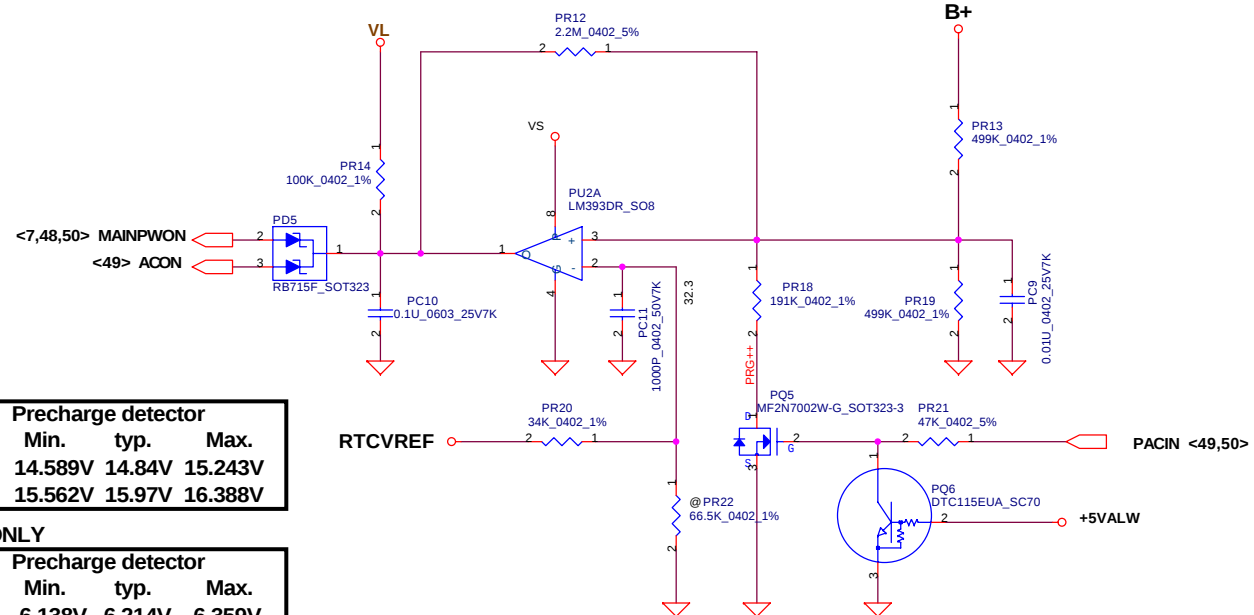
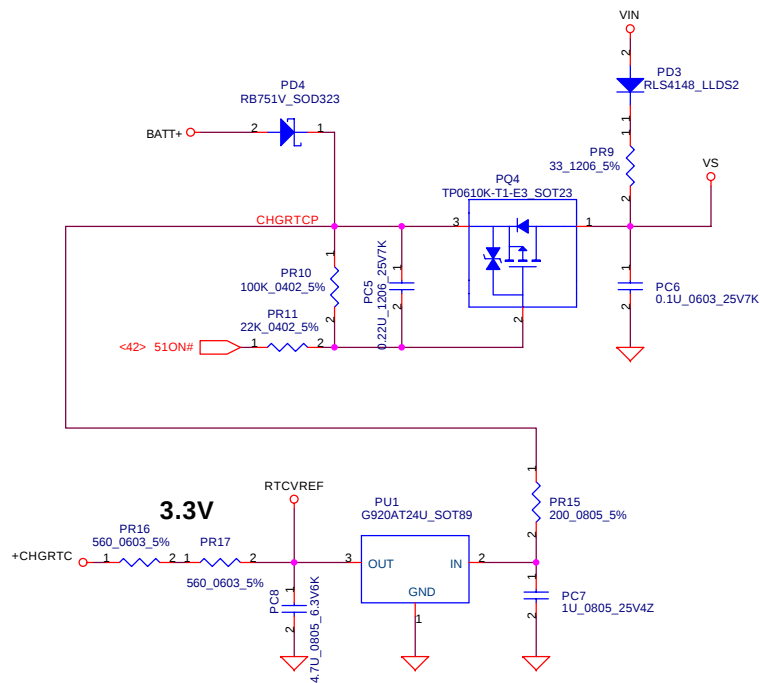
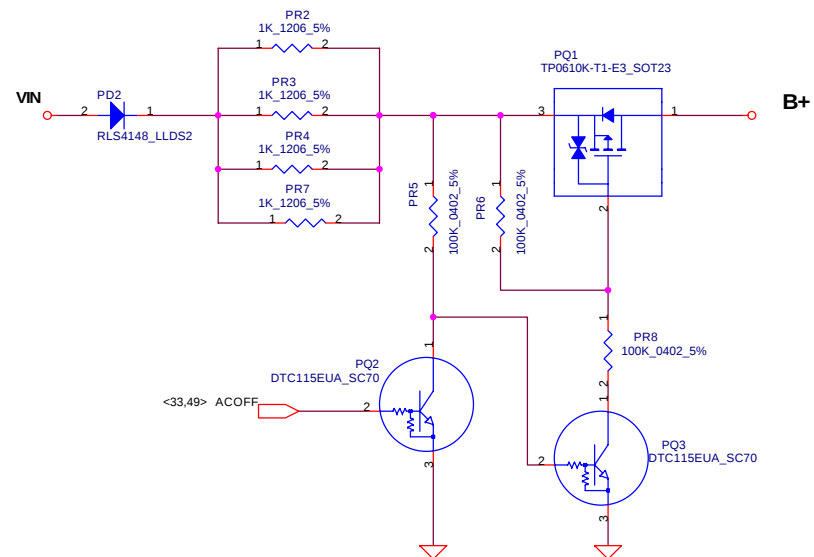
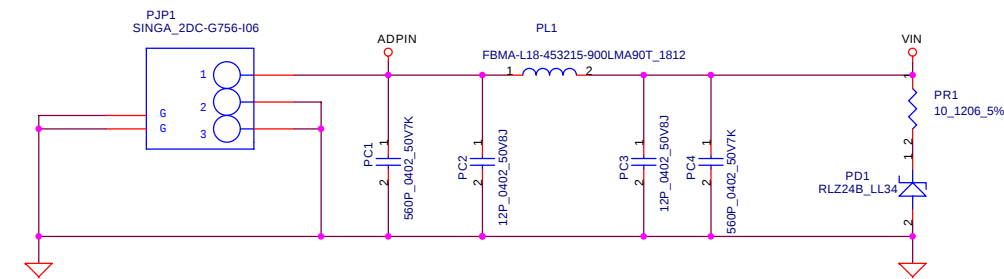
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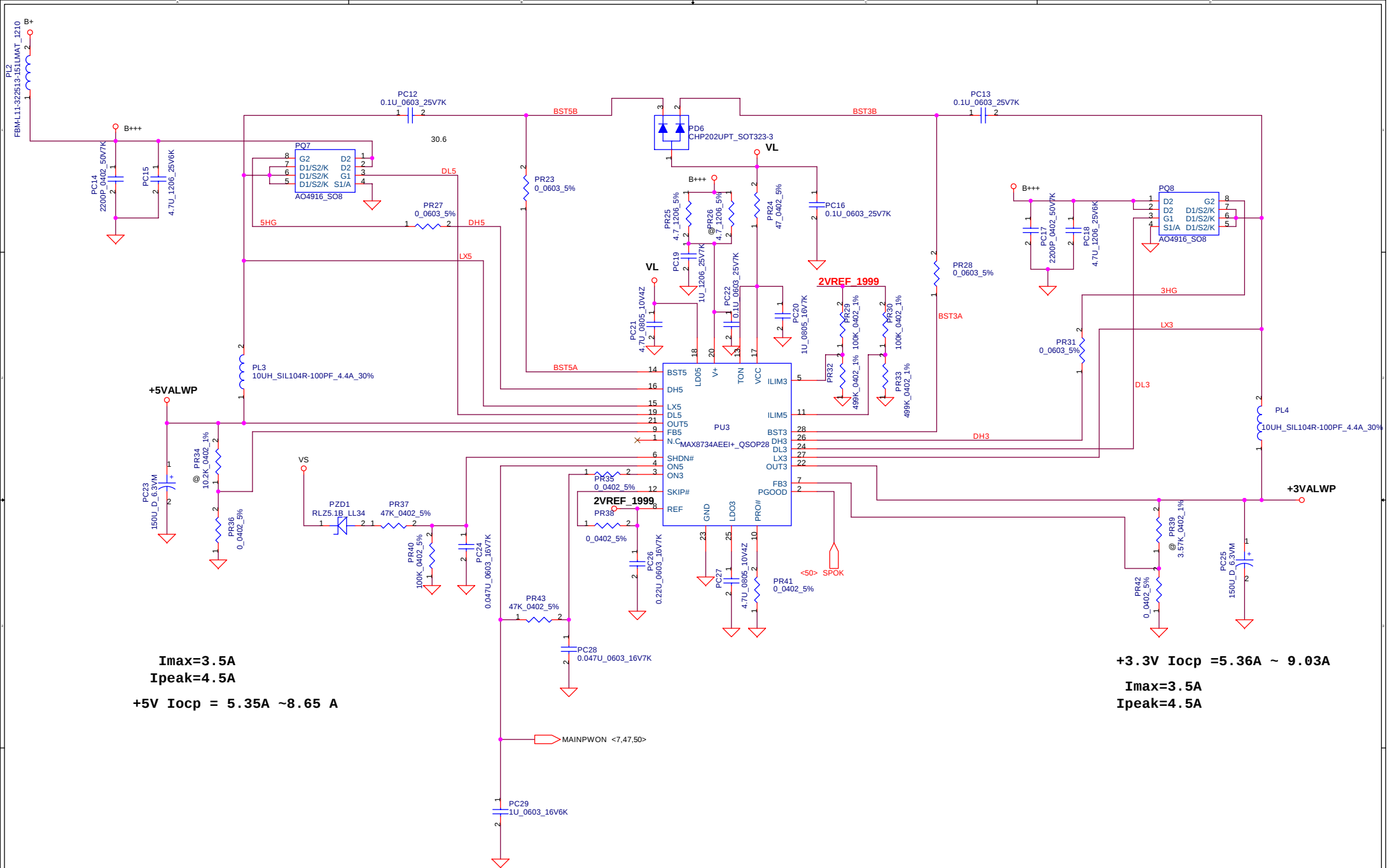
ACIN

	Precharge detector		
	Min.	typ.	Max.
H-->L	14.589V	14.84V	15.243V
L-->H	15.562V	15.97V	16.388V

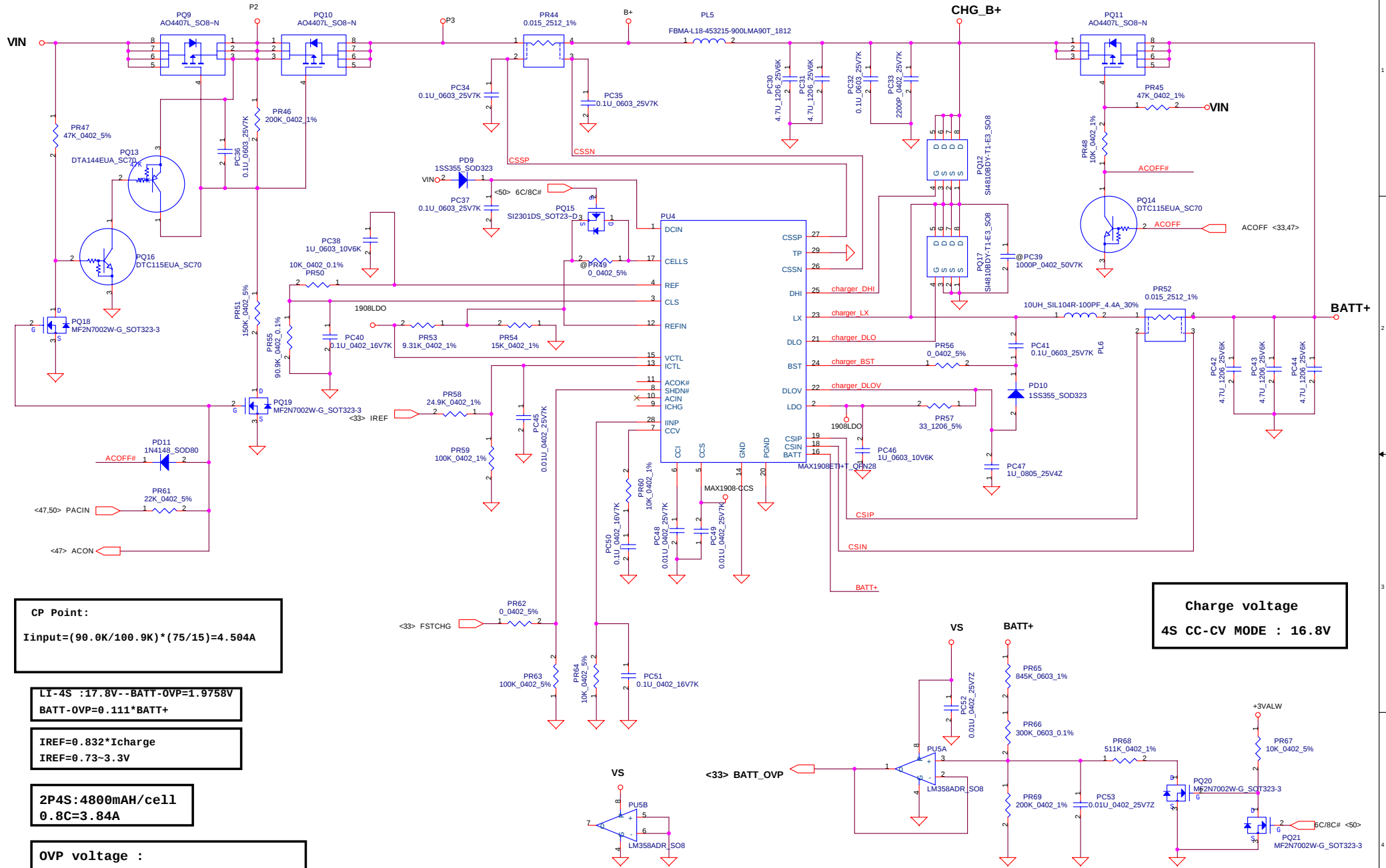
BATT ONLY

	Precharge detector		
	Min.	typ.	Max.
H-->L	6.138V	6.214V	6.359V
L-->H	7.196V	7.349V	7.505V

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I_{adp}=0~4.5A(90W)

CP Point:

$$I_{input} = (90.0K / 100.9K) * (75/15) = 4.504A$$

LI-4S :17.8V--BATT-OVP=1.9758V

BATT-OVP=0.111*BATT+

IREF=0.832*I_{charge}

IREF=0.73~3.3V

2P4S:4800mAh/cell

0.8C=3.84A

OVP voltage :

LI-3S :17.8V---BATT-OVP=1.9758V

BATT-OVP=0.111*BATT+

Charge voltage

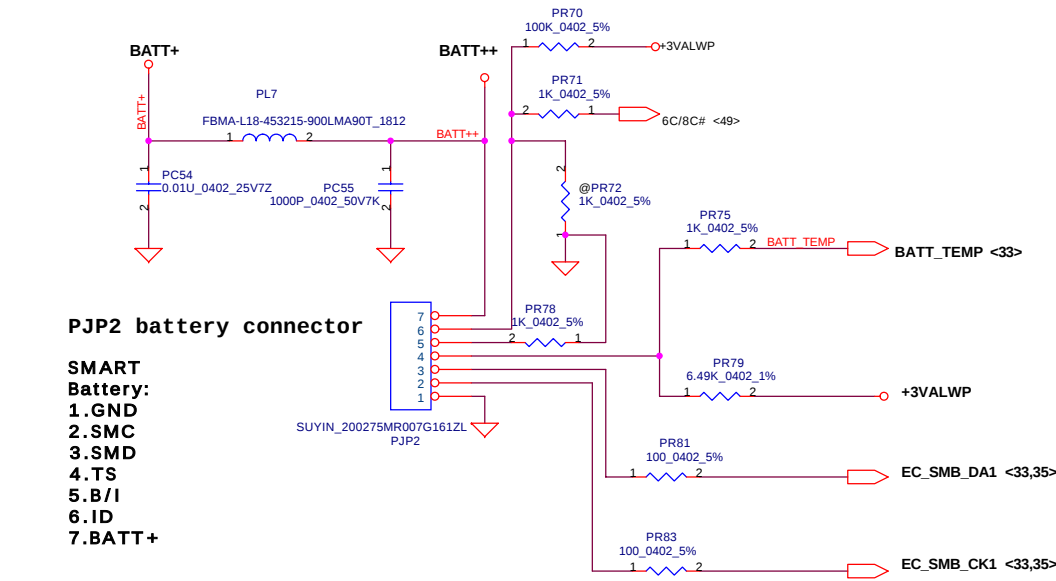
4S CC-CV MODE : 16.8V

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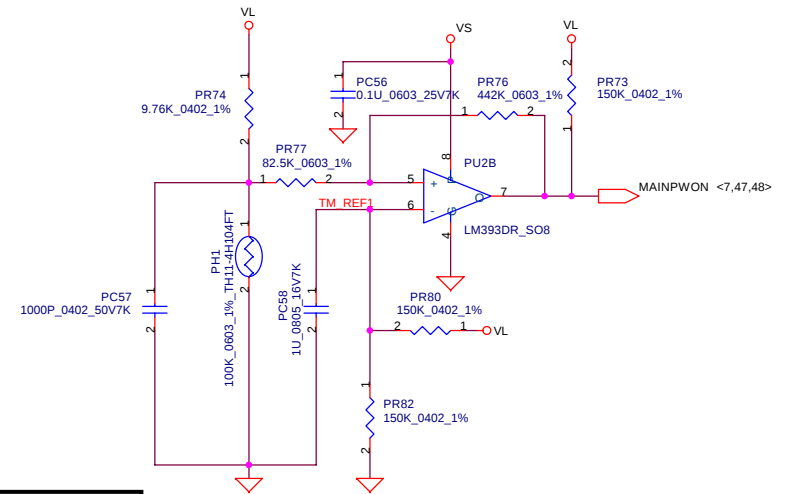
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PJP2 battery connector

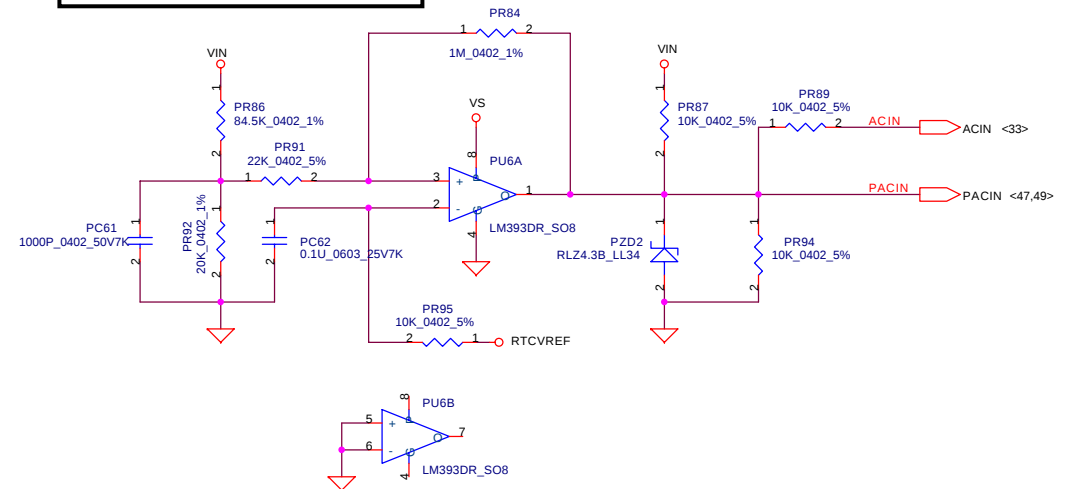
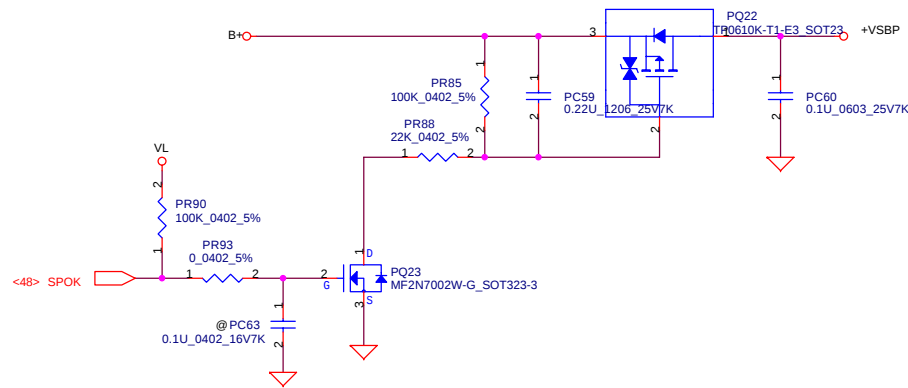
SMART Battery:
1.GND
2.SMC
3.SMD
4.TS
5.B/I
6.ID
7.BATT+



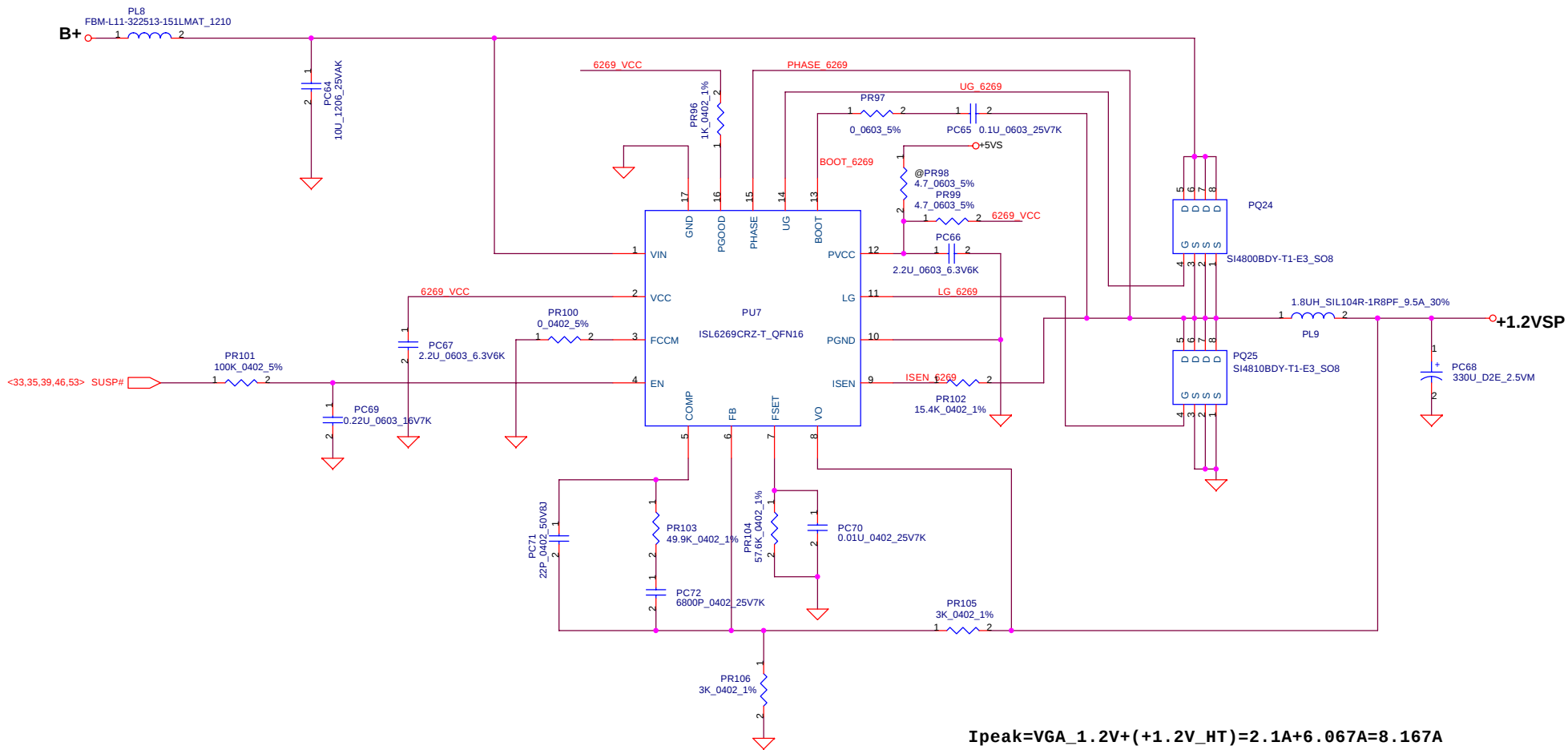
PH1 under CPU bottom side :
 CPU thermal protection at 90 degree C
 Recovery at 70 degree C



Vin Detector			
	Min.	typ.	Max.
H-->L	16.976V	17.257V	17.728V
L-->H	17.430V	17.901V	18.384V

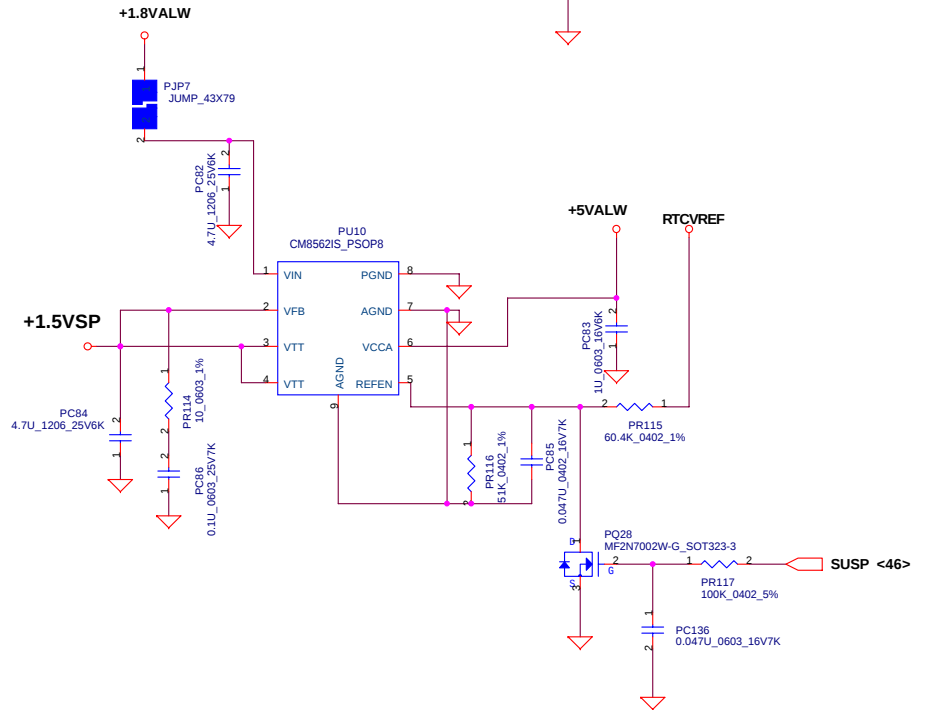
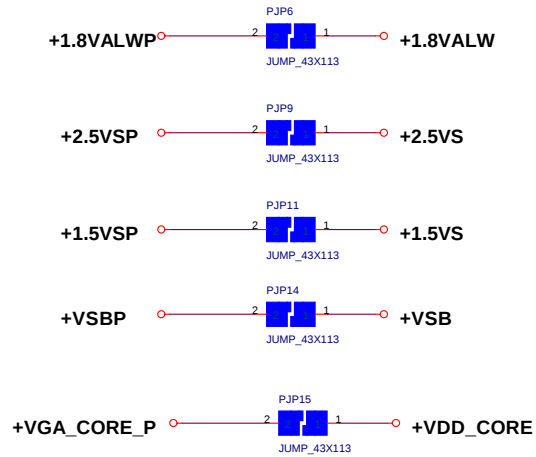
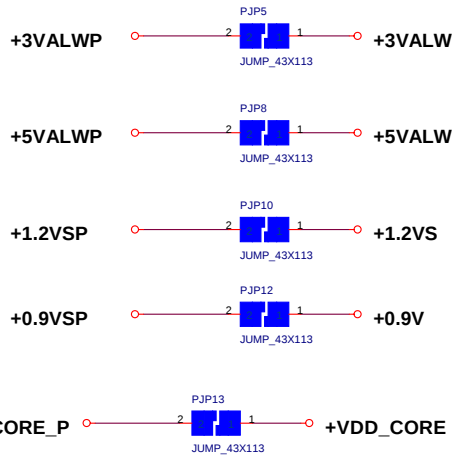
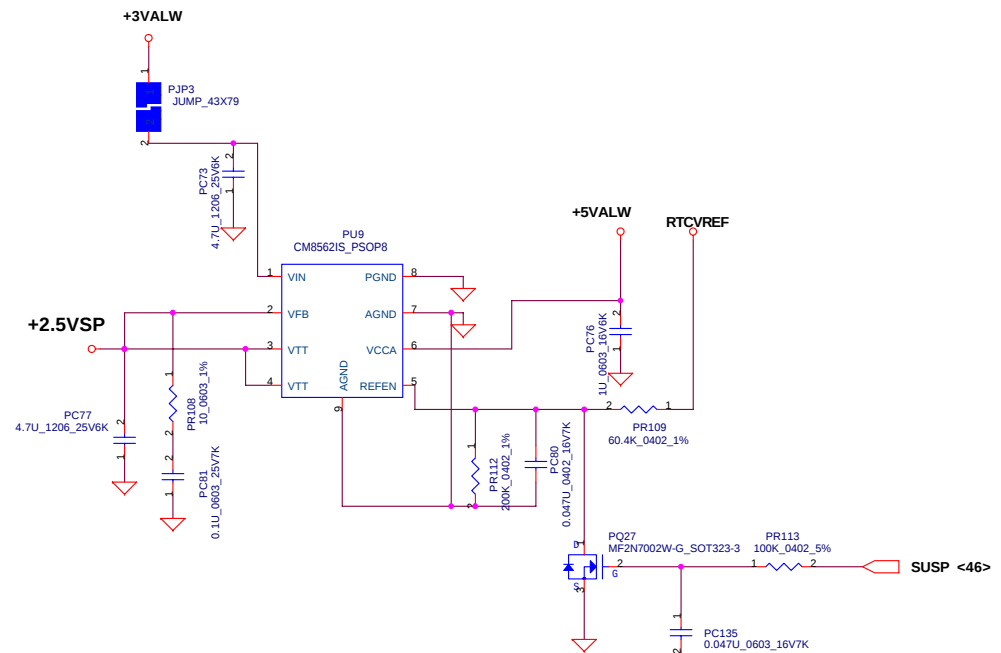
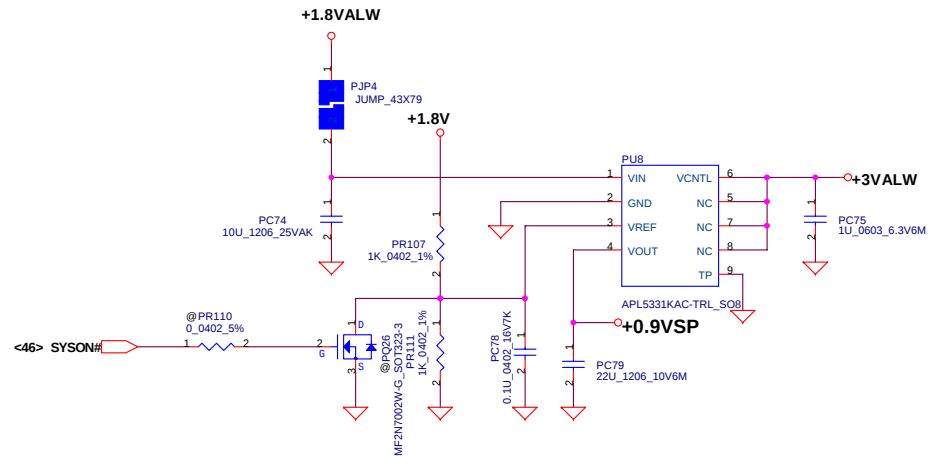


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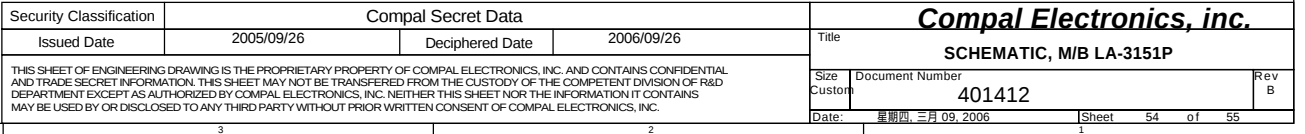


$I_{peak} = V_{GA_1.2V} + (+1.2V_{HT}) = 2.1A + 6.067A = 8.167A$
 $I_{max} = 5.7A$
 $I_{ocmin} = 9.23A$
 $I_{ocmax} = 19.23A$

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