

Compal Confidential

NEW70 / 80 / 90 / 50 <LA-5892P> M/B Schematics Document PEW51 <LA-5892P> M/B Schematics Document

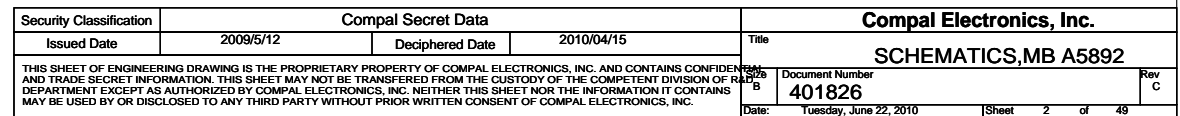
Intel Arrandale Processor with DDRIII + Ibex Peak-M

2010-06-09
REV:1.0

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File Name : LA-5892P

46@ ZZZ1
RO0000003HM
HDMI+HDCP LOGO



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	ON	OFF
+0.75VS	0.75V switched power rail for DDR terminator	ON	OFF	OFF
+1.05VS	1.05V switched power rail for PCH	ON	OFF	OFF
+1.05VS_VTT	1.05V switched power rail (1.05 for AUB CPU)	ON	OFF	OFF
+1.5V	1.5V power rail for DDRIII	ON	ON	OFF
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+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
+5V	5V power rail for PCH	ON	ON	ON
+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		

EC SM Bus2 address

Ibex SM Bus address

Device	Address
Clock Generator (9LRS3199AKLFT, SLG8SP587)	1101 0010b
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

Project ID / Board ID Table for EC-AD channel

Vcc	3.3V +/- 5%					
Ra/Rc	100K +/- 5%					
	Rb / Rd	VAD_BID min	VAD_BID typ	VAD_BID max	Board ID	Project ID
0	0	0 V	0 V	0 V	0.1	NEWX0
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V	0.2	PEW51
2	18K +/- 5%	0.436 V	0.503 V	0.538 V	0.3	
3	33K +/- 5%	0.712 V	0.819 V	0.875 V	1.0	
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		

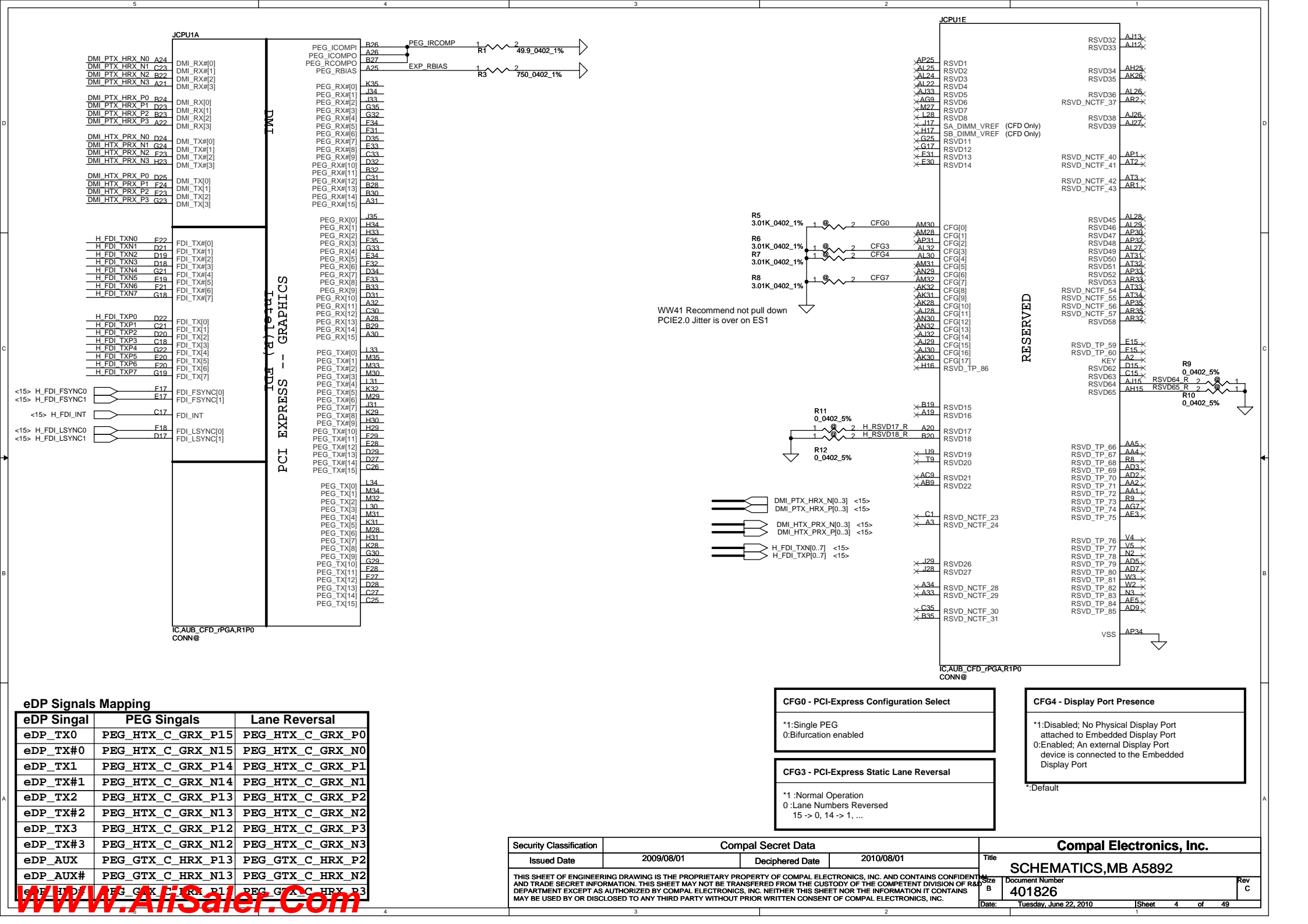
BTO Option Table	
BTO Item	BOM Structure
HDMI	HDMI@
3G	3G@
9050@	NEW90 / NEW50
7080@	NEW70 / NEW80
For NEWX0 ID	NEWX0@
For PEW51 ID	PEW51@

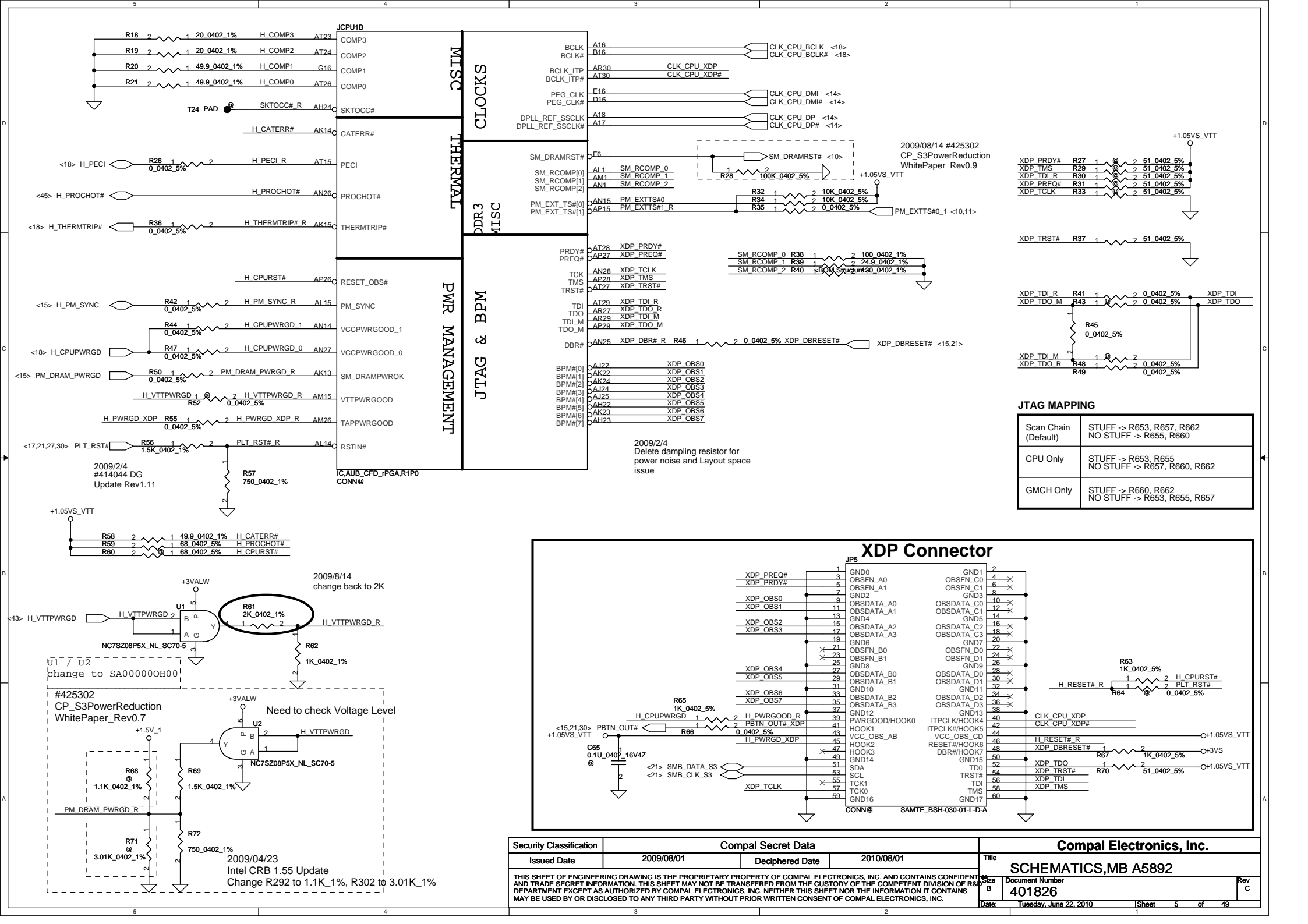
BOM Config

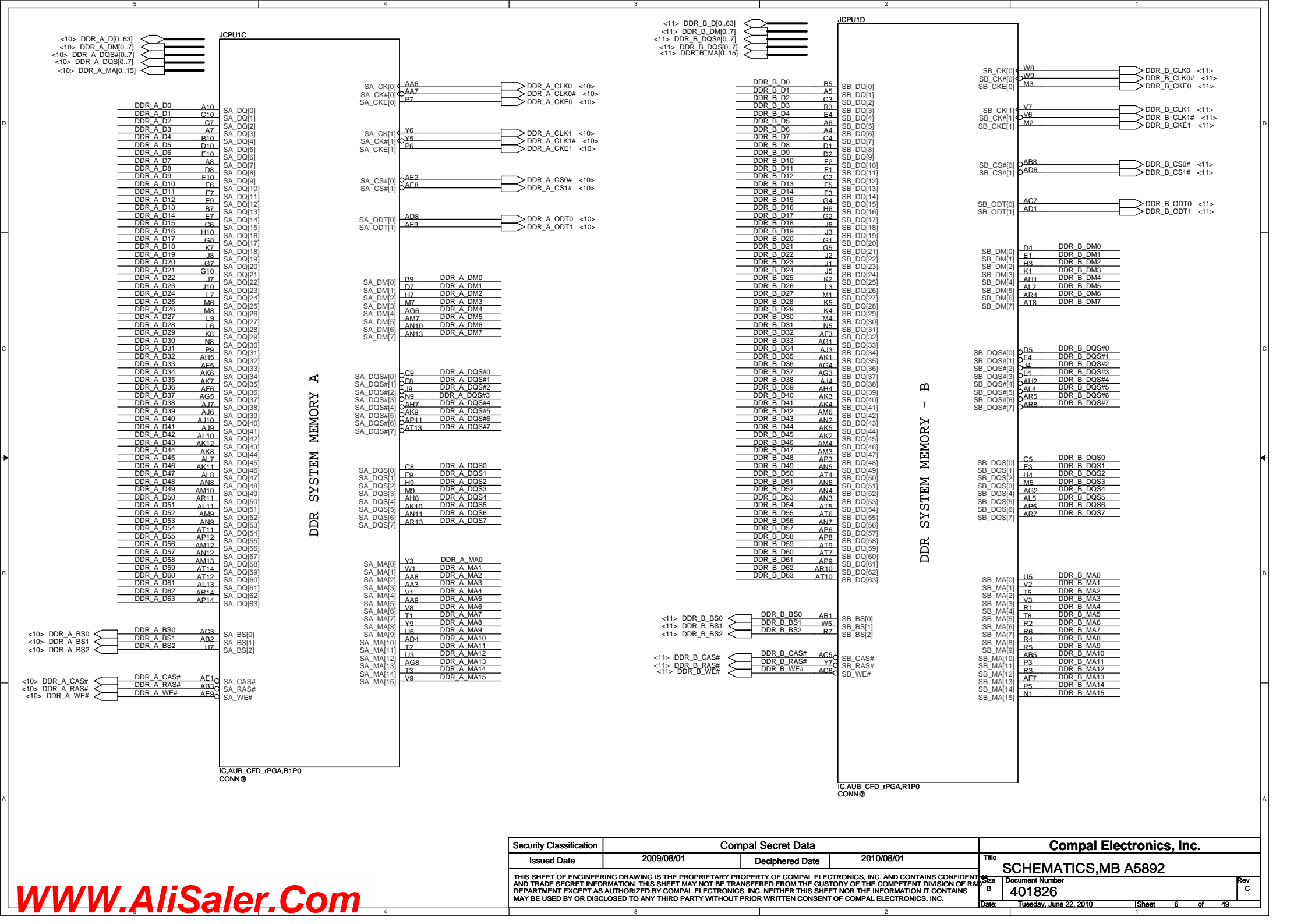
USB Port Table

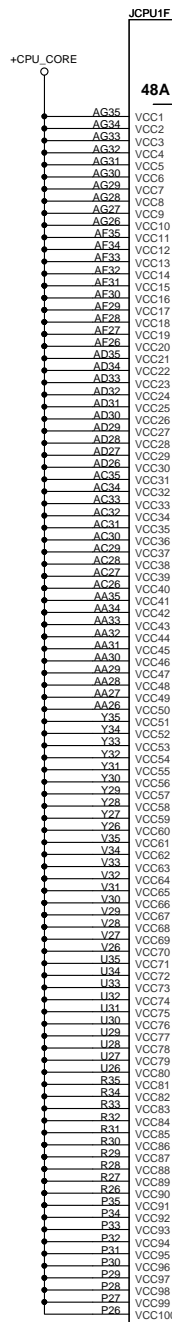
USB 2.0	USB 1.1	Port	4 External USB Port	3 External USB Port
EHCI1	UHCI0	0	Ext1 USB	Ext1 USB
		1	Ext3 HS USB	Ext3 HS USB
		2	Ext2 USB	Ext2 USB
	UHCI1	3		
		4		
	UHCI2	5		
		6		
	UHCI3	7		
EHCI2	UHCI4	8	Camera	Camera
		9	Card Reader	Card Reader
		10	SIM CARD	SIM CARD
	UHCI5	11	Blue Tooth	Blue Tooth
		12	1st Min-Card	1st Min-Card
	UHCI6	13	2st Min-Card	2st Min-Card

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WW15 MOW
Peak 21A
Continuous 18A

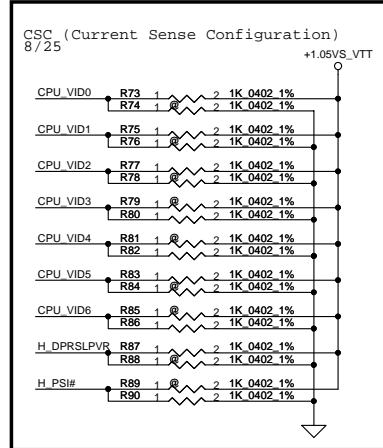
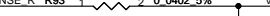
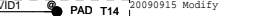
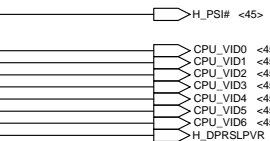
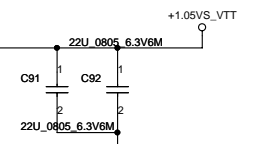
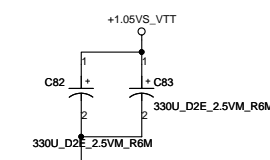
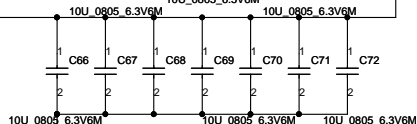
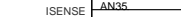
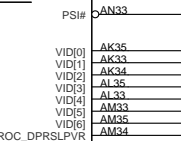
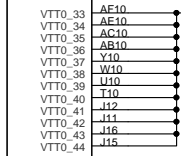
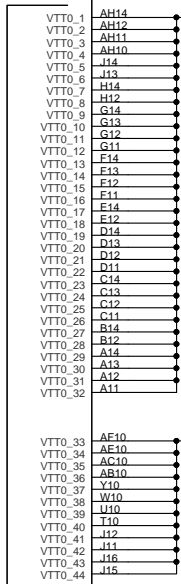
1.1V RAIL POWER

CPU CORE SUPPLY

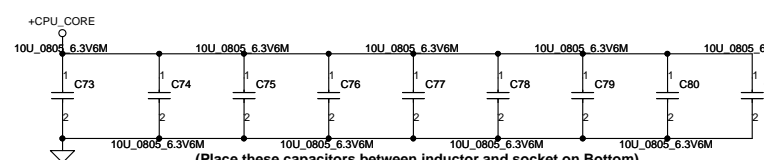
POWER

CPU VIDS

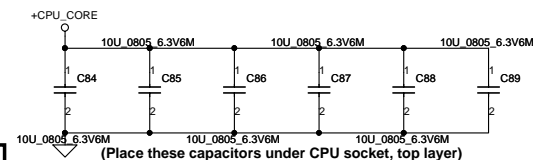
SENSE LINES



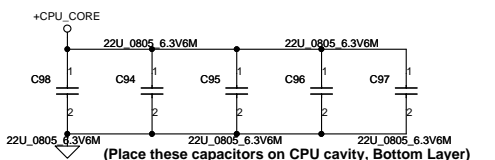
VTT Rail
Auburndale +1.1VS_VTT=1.05V
Clarksfield +1.1VS_VTT=1.1V



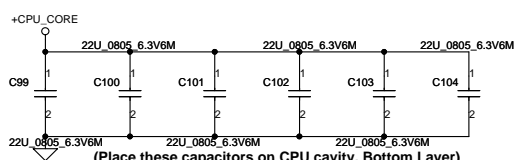
(Place these capacitors between inductor and socket on Bottom)



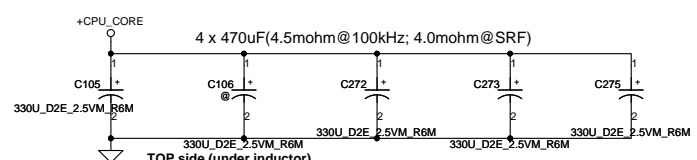
(Place these capacitors under CPU socket, top layer)



(Place these capacitors on CPU cavity, Bottom Layer)



(Place these capacitors on CPU cavity, Bottom Layer)

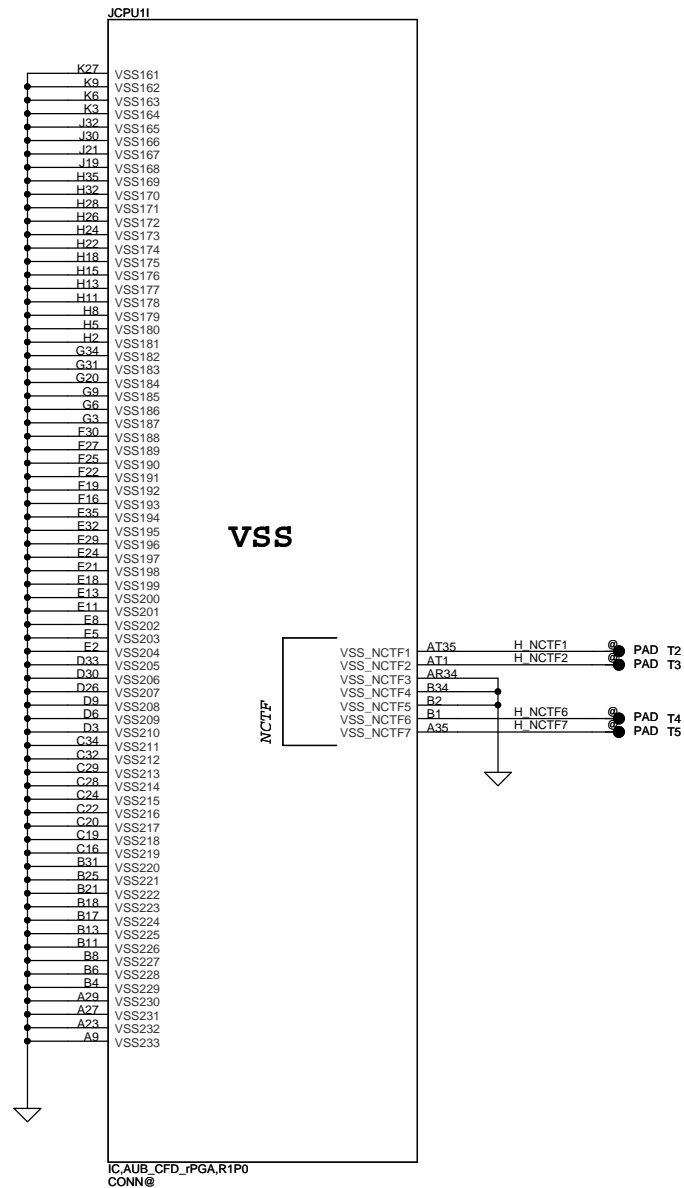
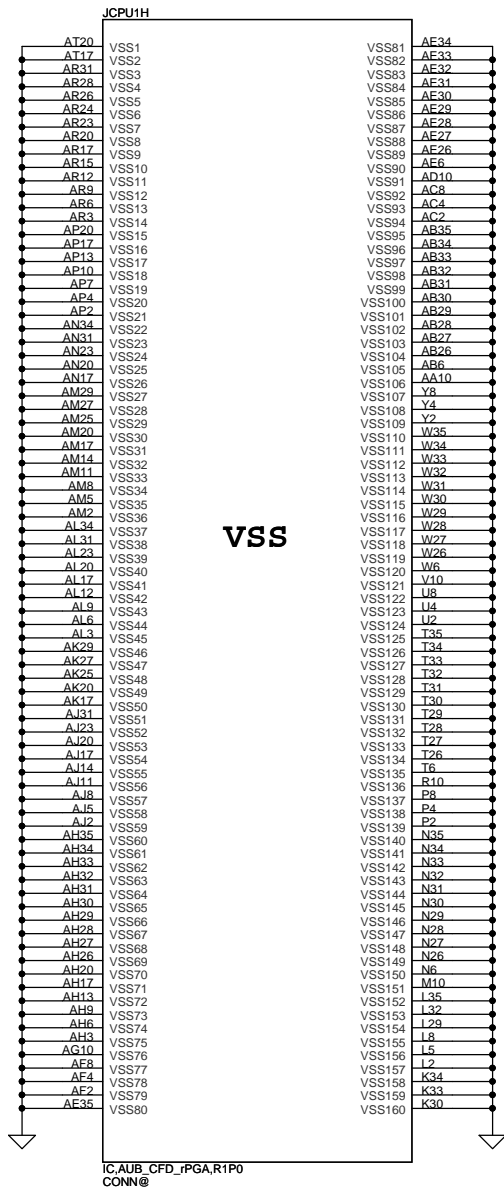


TOP side (under inductor)

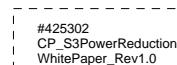
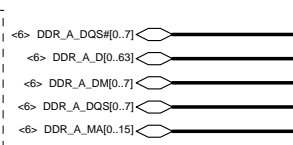
+CPU-CORE Decoupling	C,uF	ESR, mohm	Stuffing Option
SPCAP,Polymer	4X470uF	4m ohm/4	2X470uF
MLCC 0805 X5R	16X22uF	3m ohm/12	
	16X10uF	3m ohm/16	

IC,AUB_CFD_PGA,R1P0
CONN@

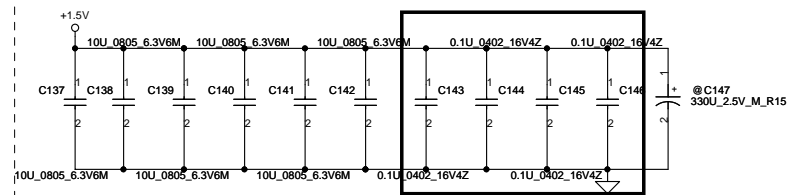
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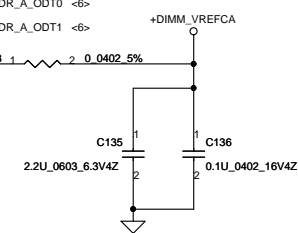
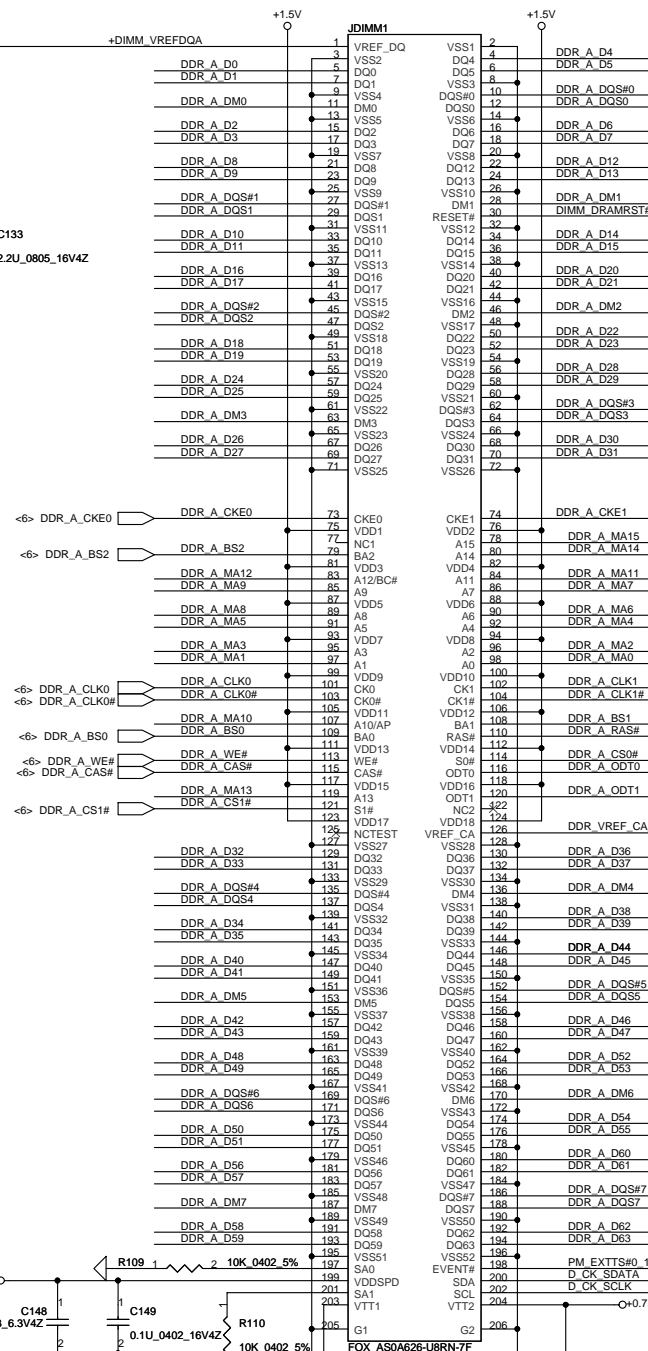
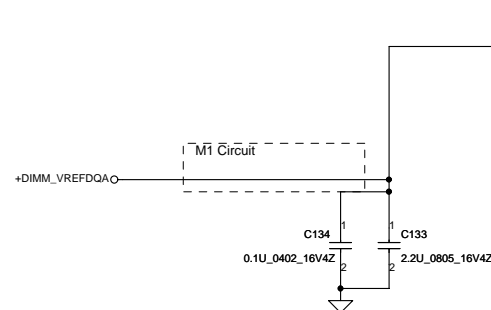
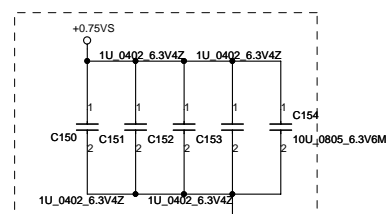
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Layout Note: Place these 4 Caps near Command and Control signals of DIMMA



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



DDR3 SO-DIMM A Change to Reverse Type 8mm High

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<6> DDR_B_DQS#[0..7]

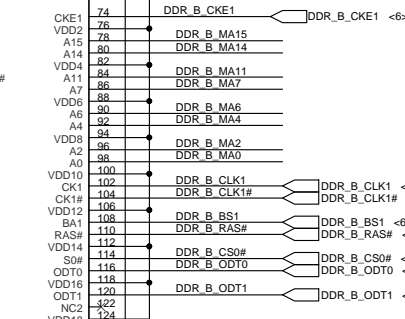
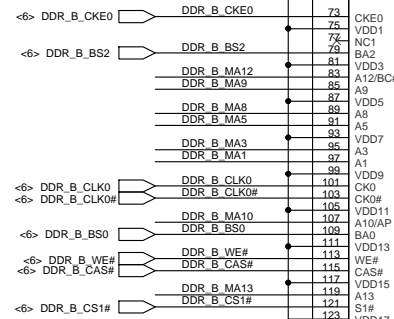
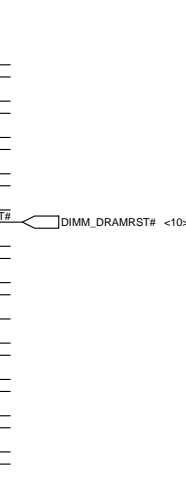
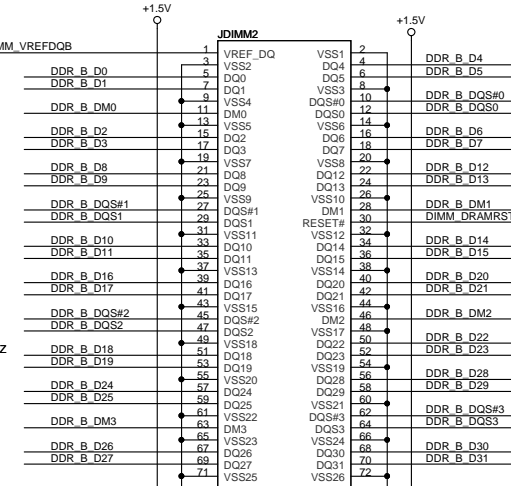
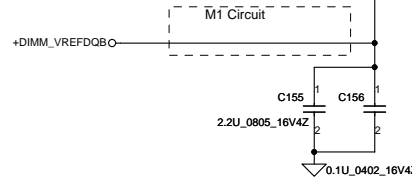
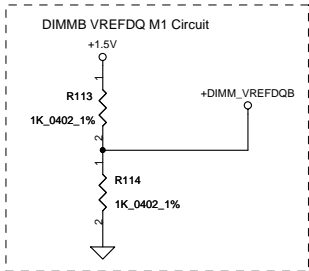
<6> DDR_B_D[0..63]

<6> DDR_B_DM[0..7]

<6> DDR_B_DQS[0..7]

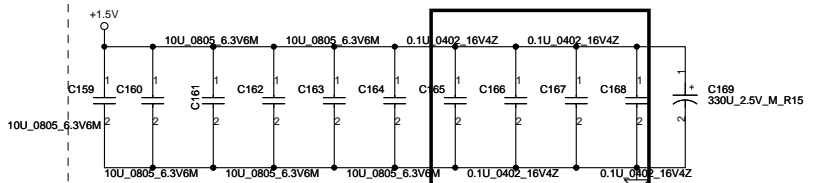
<6> DDR_B_MA[0..15]

2008/9/8 #400755
Calpella Clarksfield
DDR3 SO-DIMM
VREFDQ Platform
Design Guide Change Details

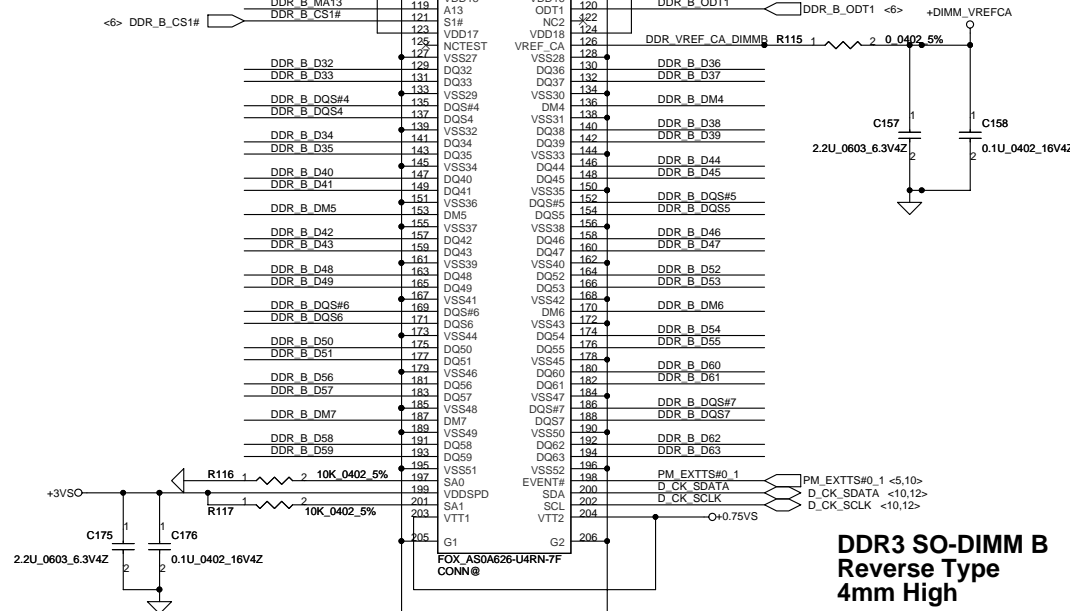
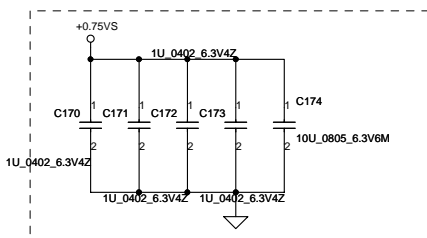


Layout Note:
Place near JDIMM2

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

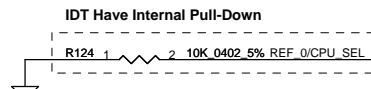
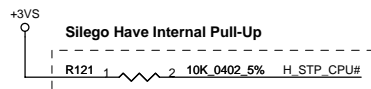
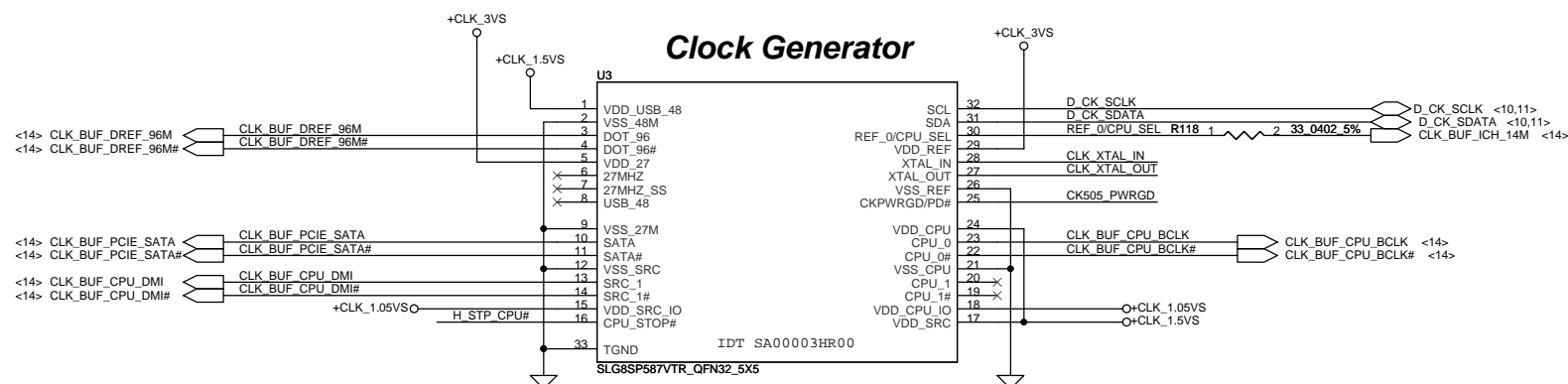
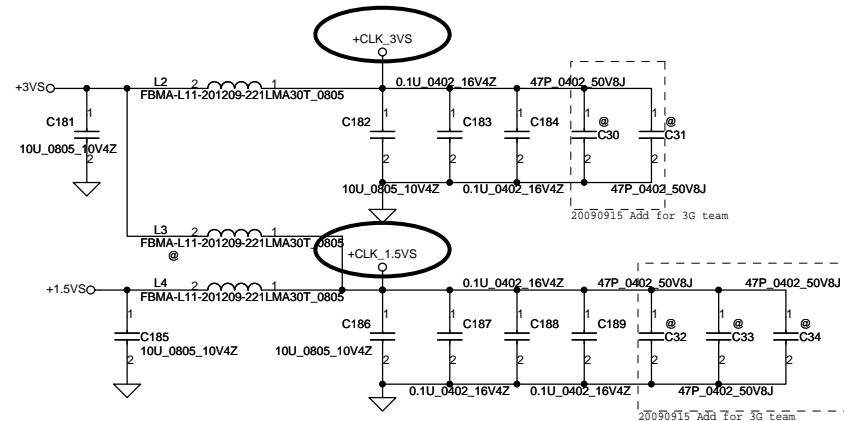
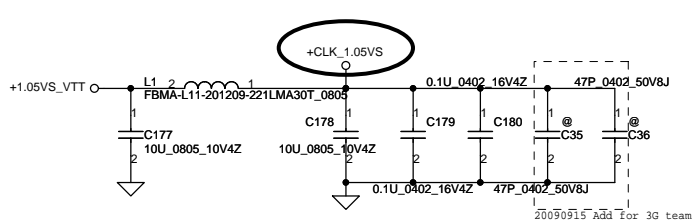


Layout Note:
Place near JDIMM2.203 & JDIMM2.204



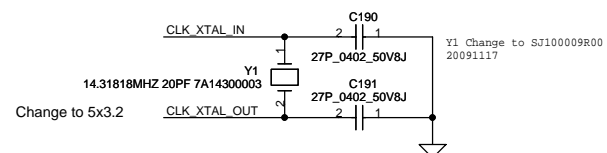
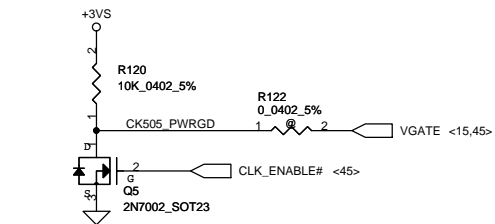
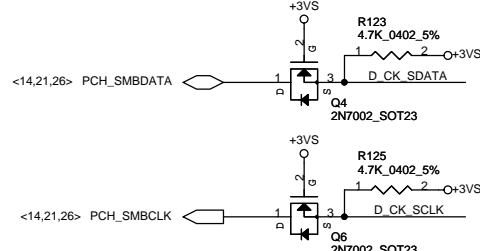
DDR3 SO-DIMM B
Reverse Type
4mm High

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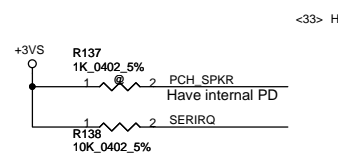
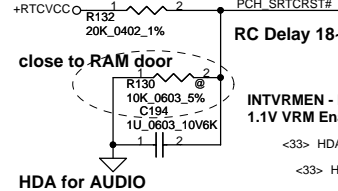
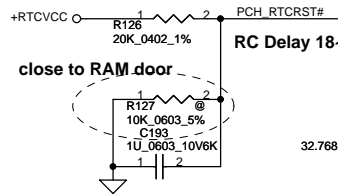


PIN 30	CPU_0	CPU_1
0 (Default)	133MHz	133MHz
1	100MHz	100MHz

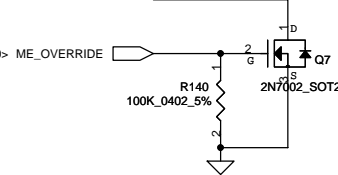
Low Power:
 IDT: 9LVS3199AKLFT, SA00003HR00
 Realtek: RTM890N-631-GRT, SA00003HQ00



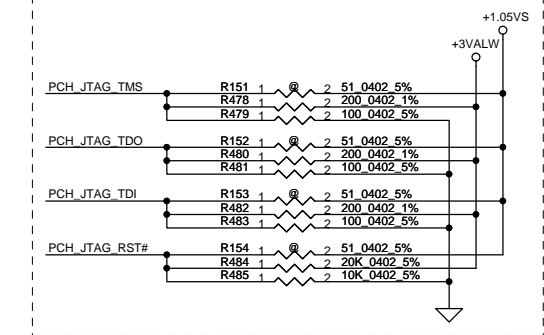
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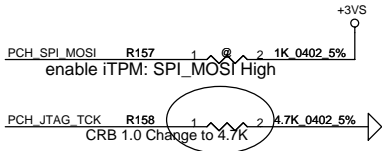
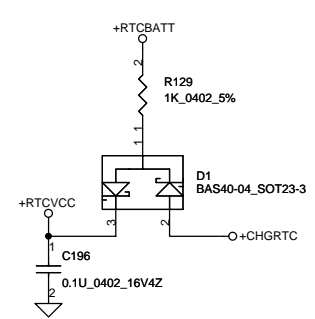
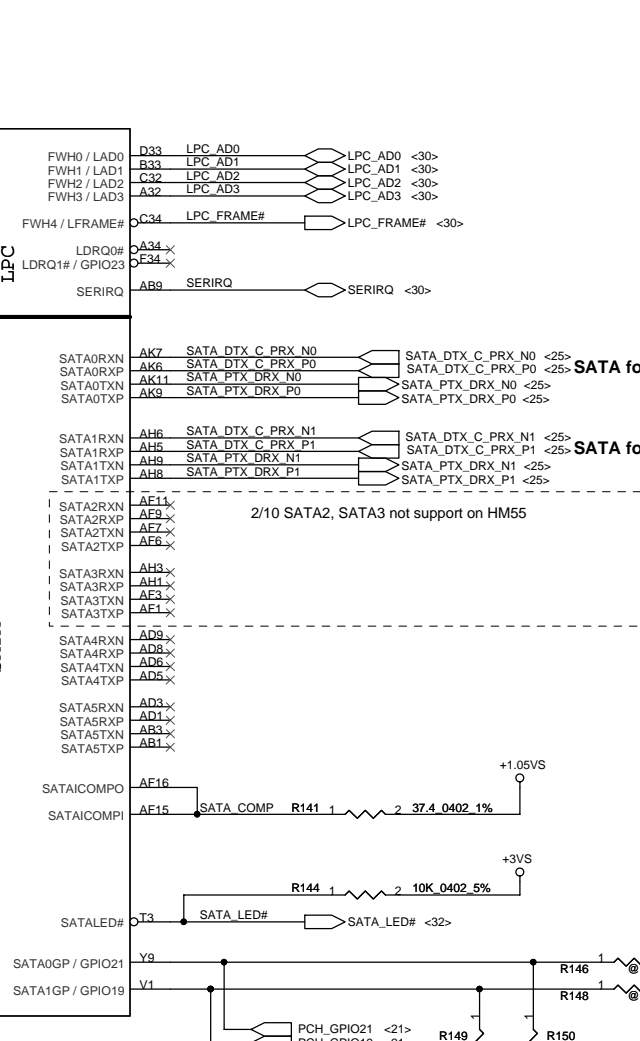
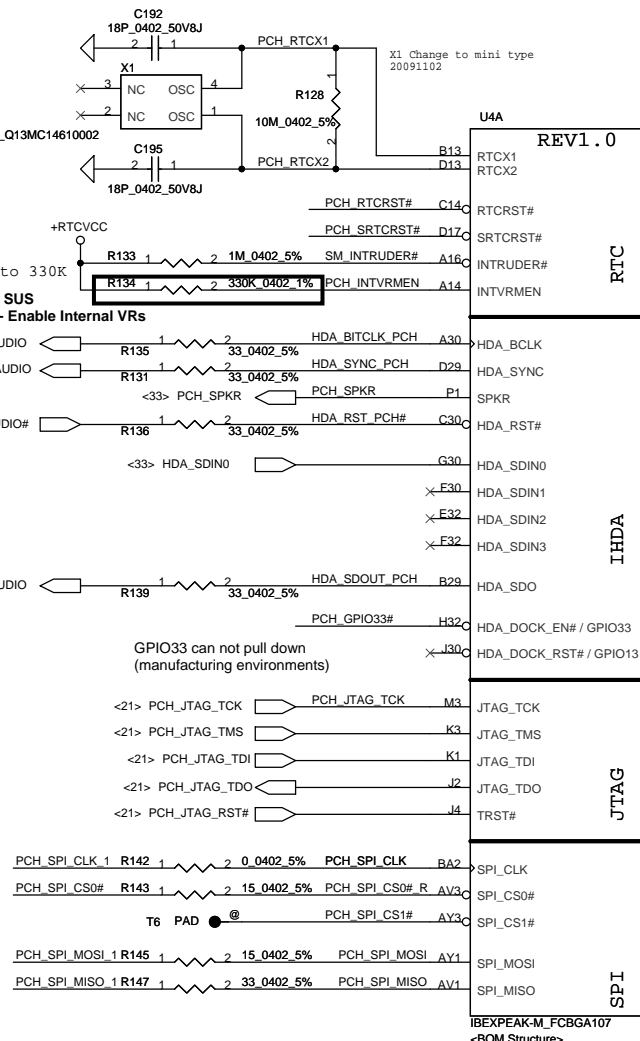
If GPIO33 pull down, ME will not working.
For factory update ME, pull down resistor pull under door.



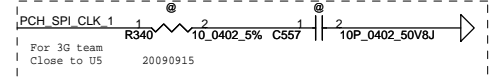
GPIO33 has a weak internal pull-up
NOTE: Asserting the GPIO33 low on the rising edge of PWROK will also halt Intel Management Engine after chipset bringup and disable runtime Intel Management Engine features. This is a debug mode and must not be asserted after manufacturing/ debug.



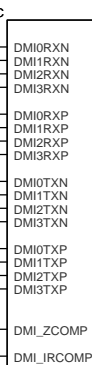
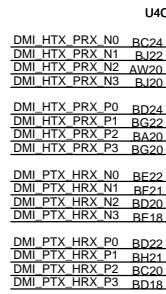
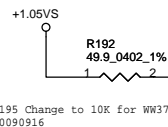
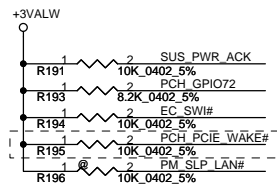
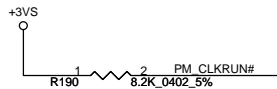
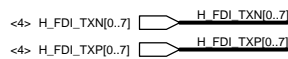
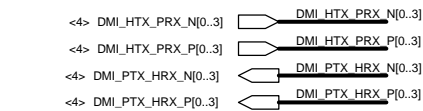
20090923 Update
2008 Intel MOW36/MOW50
TDO:
Reserved on ES1 Sample
Mount R516, R517 on ES2 Sample
MP mount R689, R690,
R691, R692 and remove
others



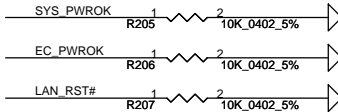
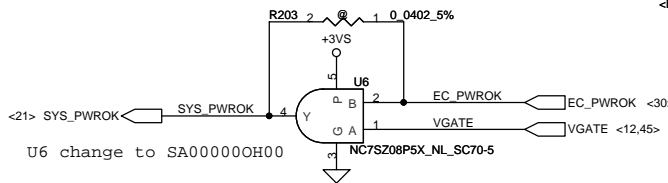
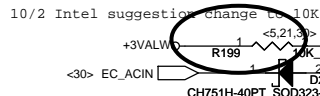
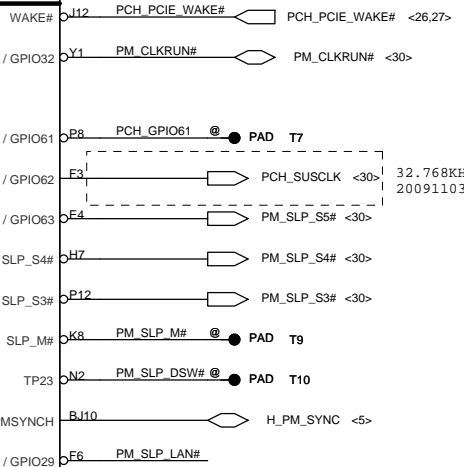
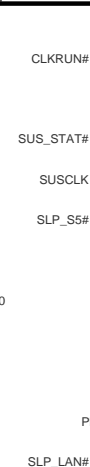
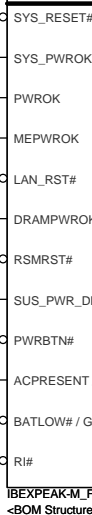
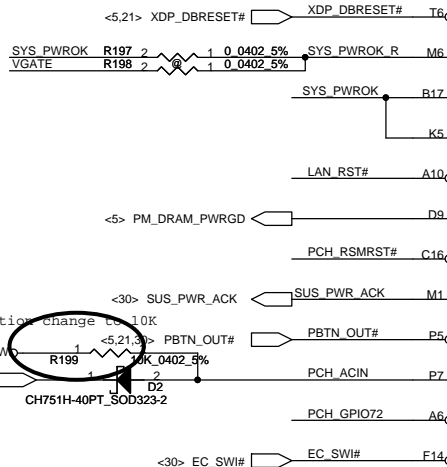
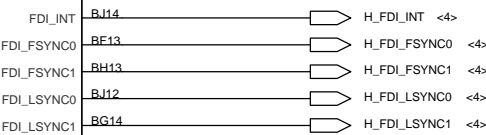
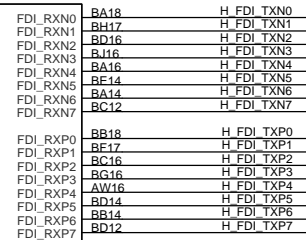
GPIO21	Project
0	NEW70/90
1	NEW71/91



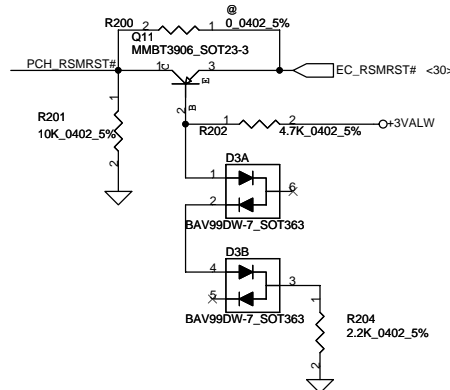
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								Customer		401826			
								Date:		Tuesday, June 22, 2010			
								Sheet		13 of 49			



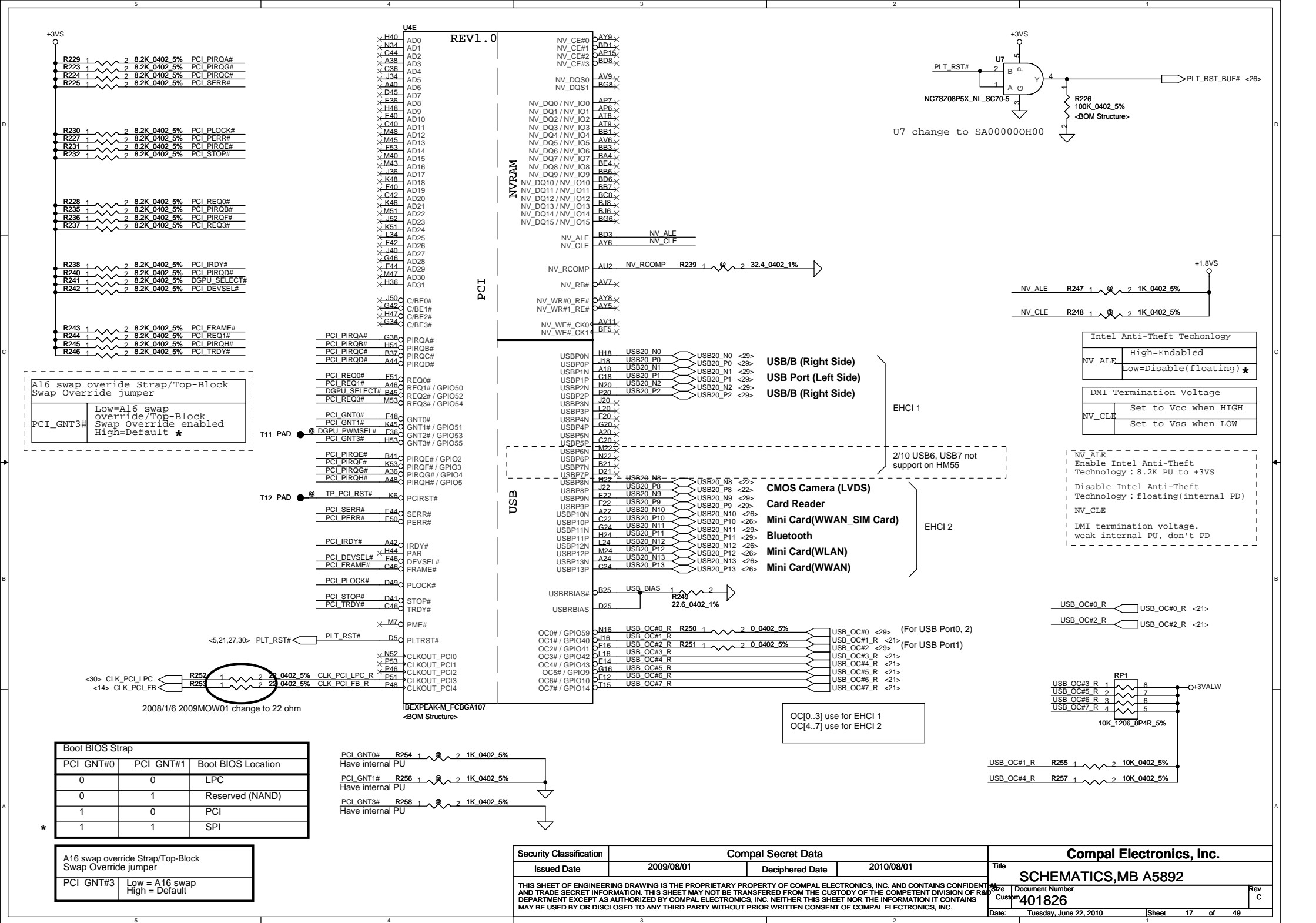
REV1.0

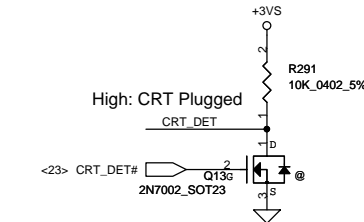
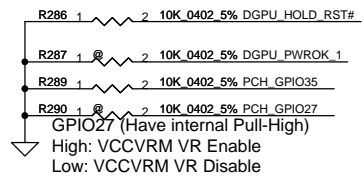
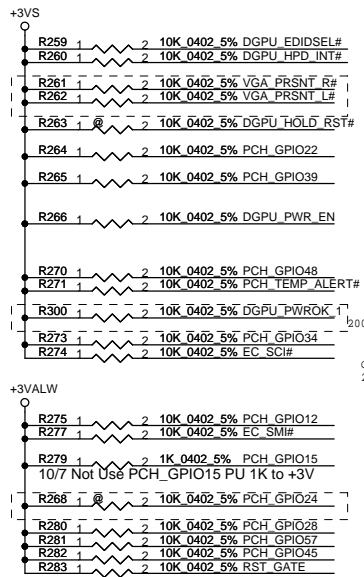


No used Integrated LAN,
connecting LAN_RST# to GND



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				Custom	401826
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				Rev	C



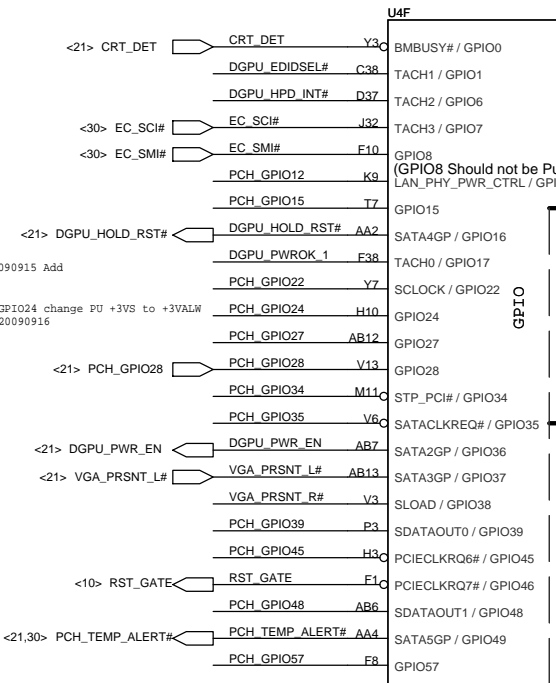


GPI027
On-Die PLL Voltage Regulator
This signal has a weak internal pull up

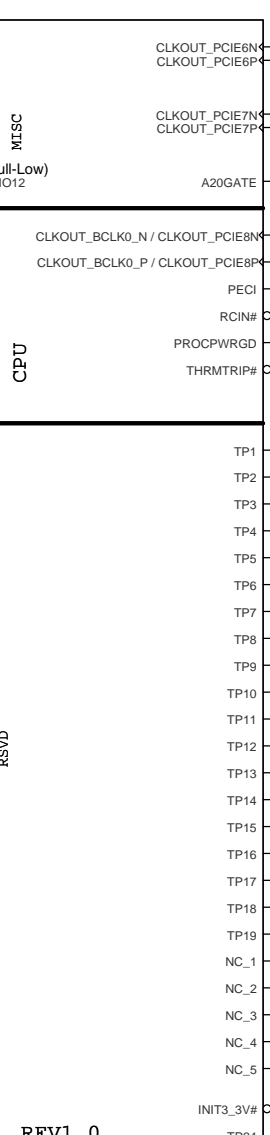
* H: On-Die voltage regulator enable
L: On-Die PLL Voltage Regulator disable

GPI08
This signal has a weak internal pull up
can't Pull low

GPI015
L: Intel ME Crypto Transport Layer Security(TLS) chiper suite with no confidentiality
H: Intel ME Crypto Transport Layer Security(TLS) chiper suite with confidentiality
It have weak internal PU 20K

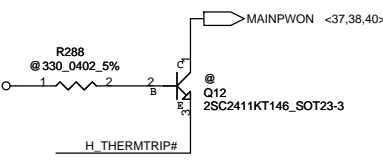
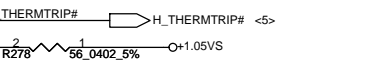
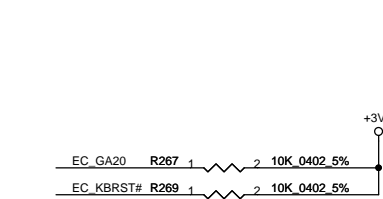


- A4 VSS_NCTF_1
- A49 VSS_NCTF_2
- A5 VSS_NCTF_3
- A50 VSS_NCTF_4
- A52 VSS_NCTF_5
- A53 VSS_NCTF_6
- B2 VSS_NCTF_7
- B4 VSS_NCTF_8
- B52 VSS_NCTF_9
- B53 VSS_NCTF_10
- BE1 VSS_NCTF_11
- BE53 VSS_NCTF_12
- BF1 VSS_NCTF_13
- BE53 VSS_NCTF_14
- BH1 VSS_NCTF_15
- BH2 VSS_NCTF_16
- BH52 VSS_NCTF_17
- BH53 VSS_NCTF_18
- B11 VSS_NCTF_19
- B12 VSS_NCTF_20
- B14 VSS_NCTF_21
- B149 VSS_NCTF_22
- B15 VSS_NCTF_23
- B150 VSS_NCTF_24
- B152 VSS_NCTF_25
- B153 VSS_NCTF_26
- D1 VSS_NCTF_27
- D2 VSS_NCTF_28
- D53 VSS_NCTF_29
- F1 VSS_NCTF_30
- F53 VSS_NCTF_31



REV1.0

IBEXPEAK-M_FCBGA107
<BOM Structure>



(Have internal PD,
Do not pull high)

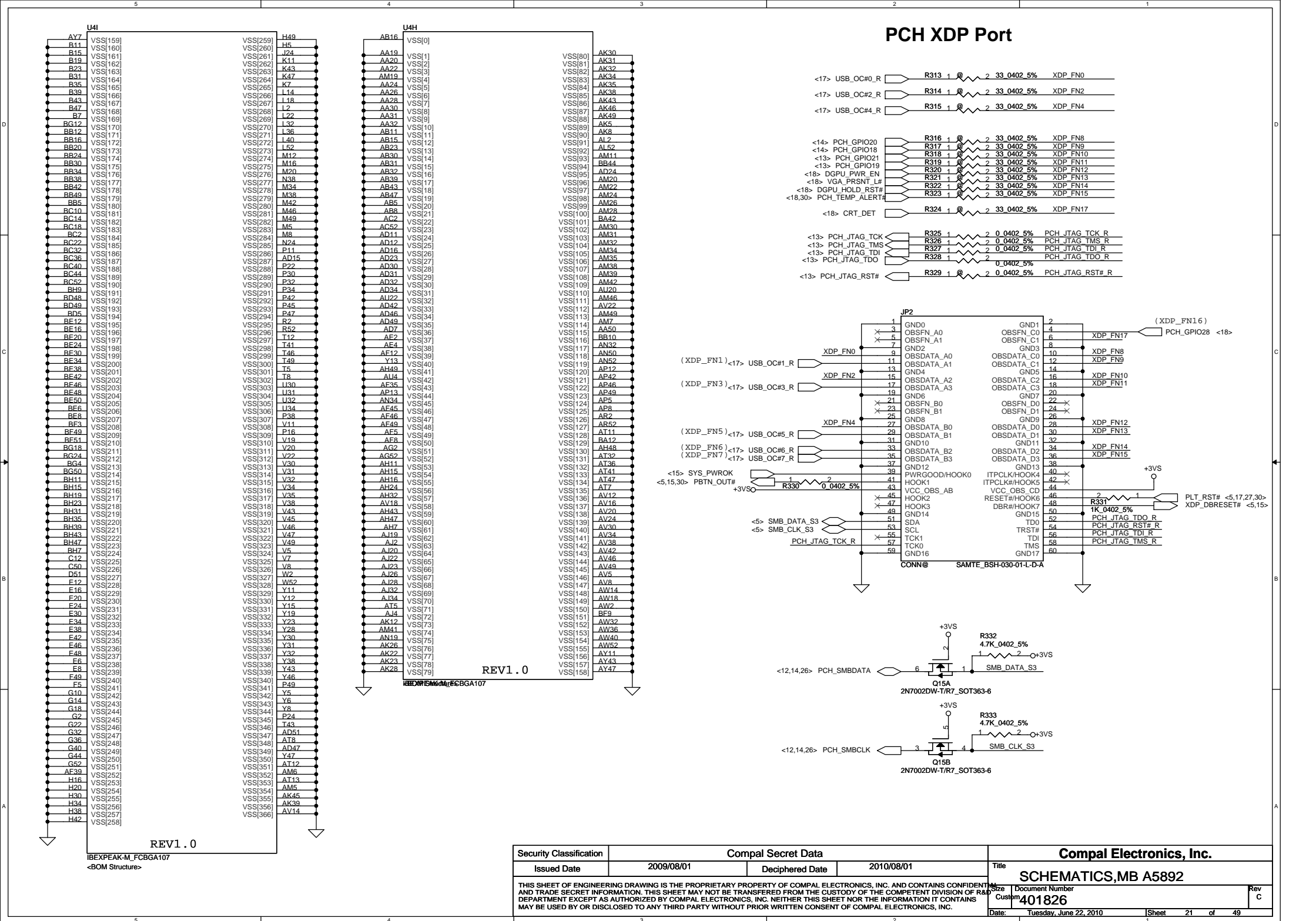
INIT3_3V
This signal has weak internal
PU, can't pull low

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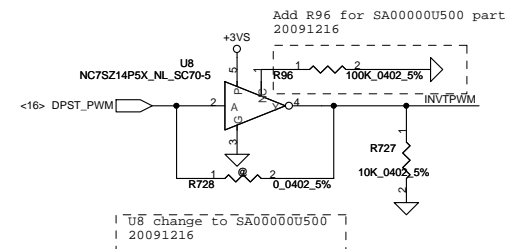
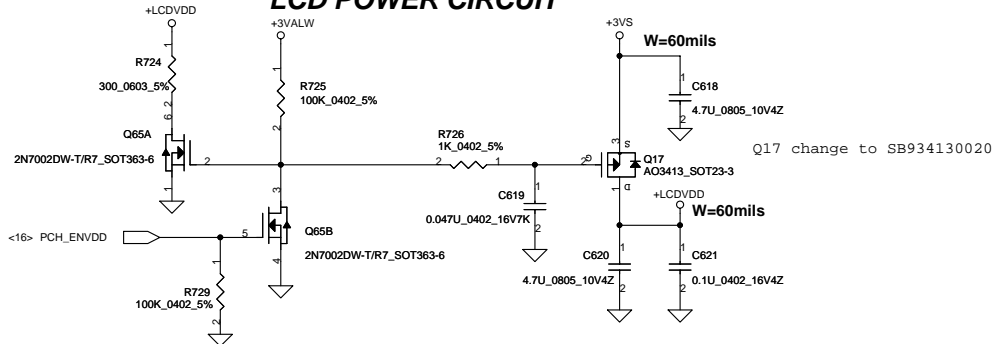
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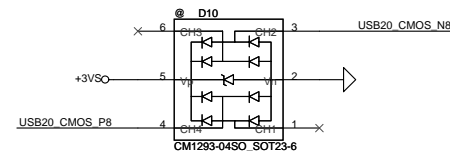
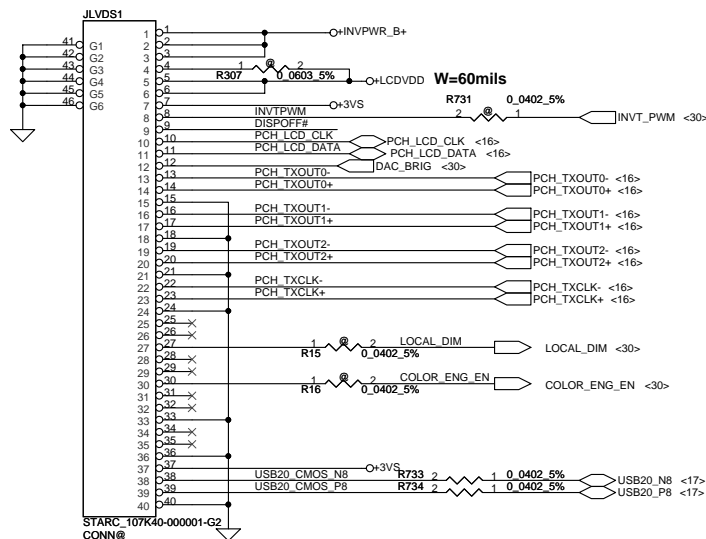
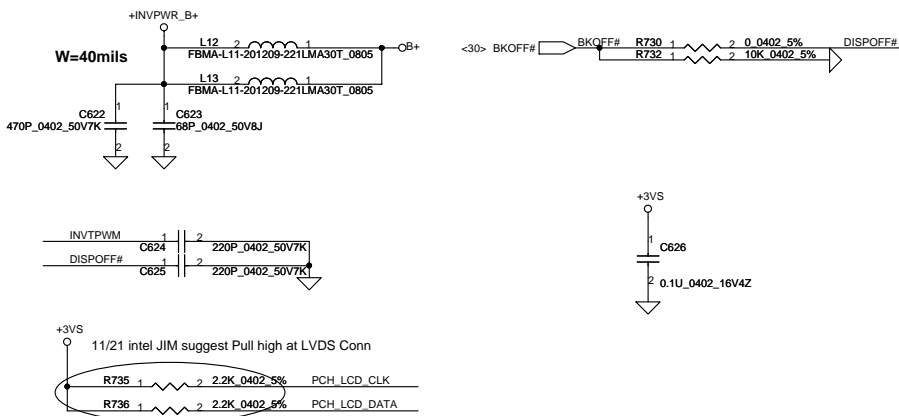




LCD POWER CIRCUIT

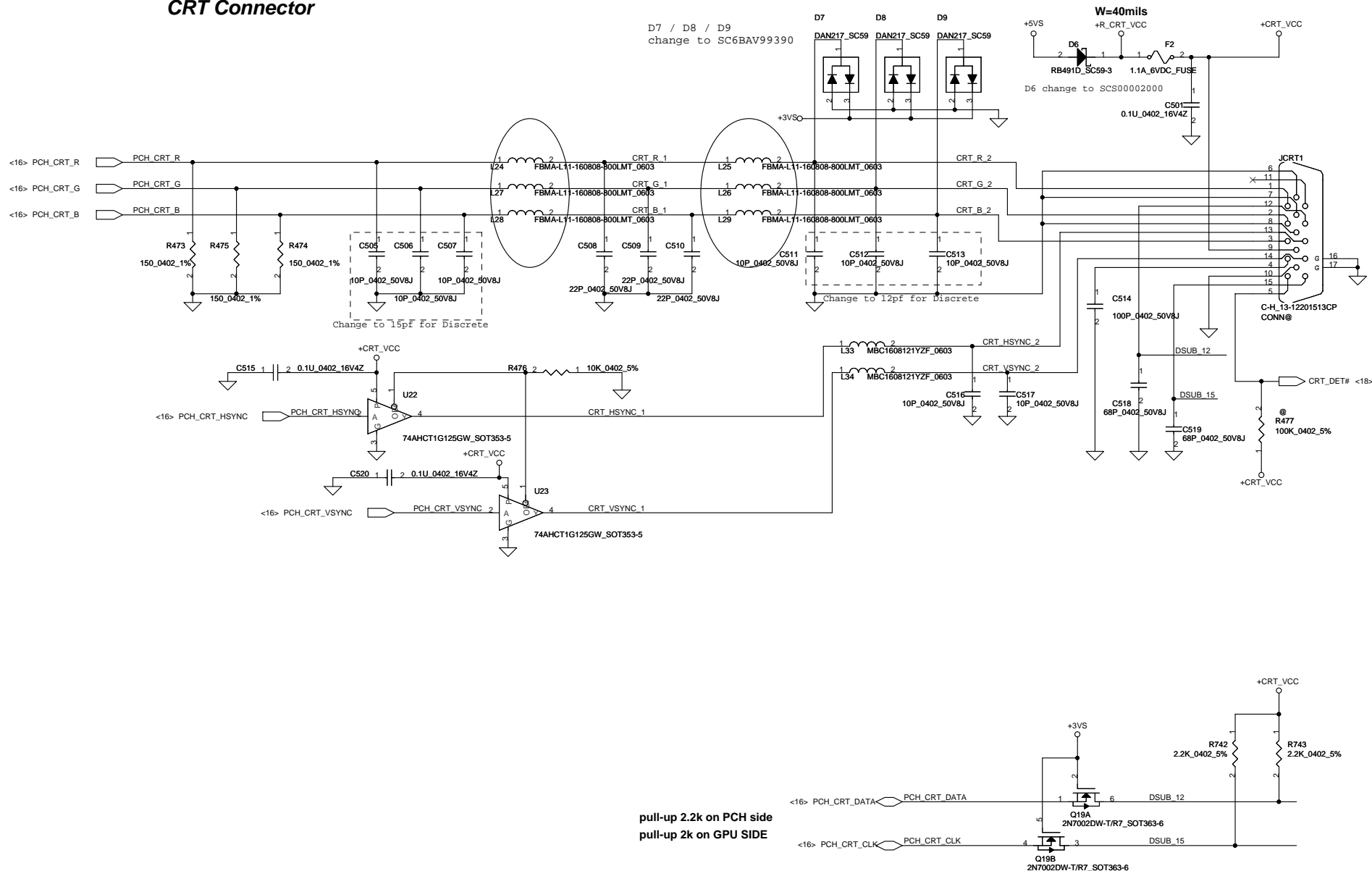


LED PANEL Conn.



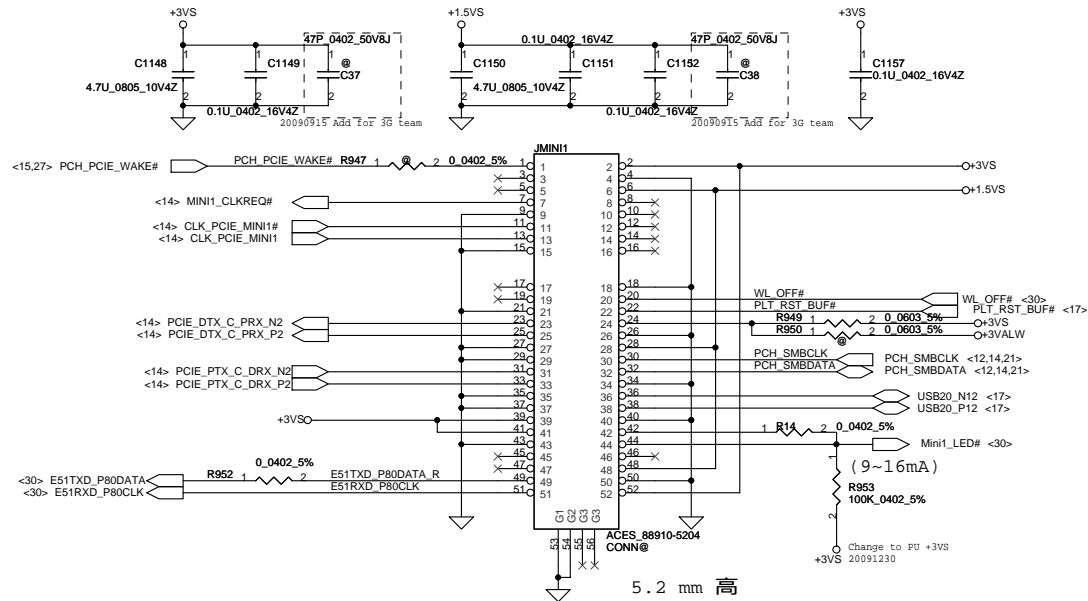
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CRT Connector



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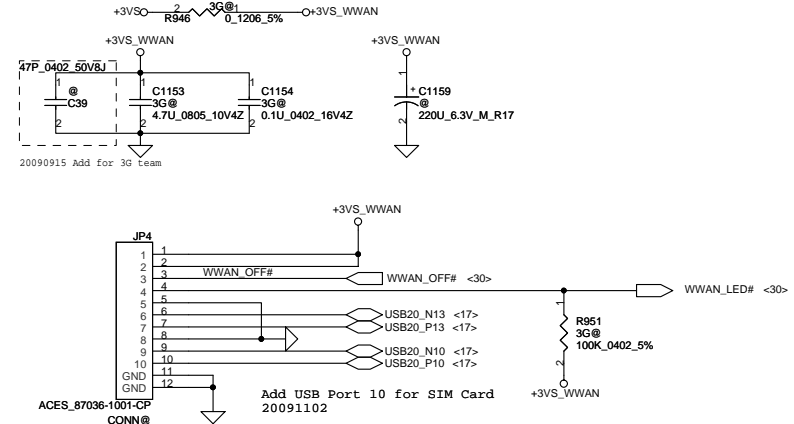
For Wireless LAN



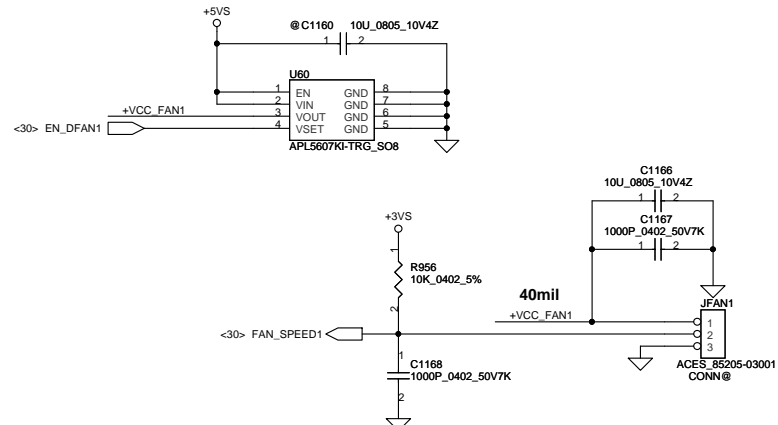
Mini Card Power Rating

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)

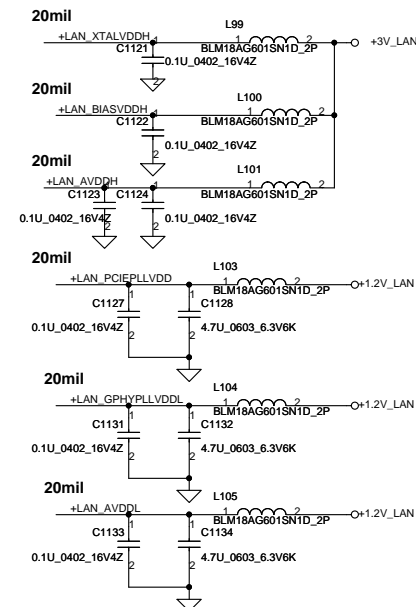
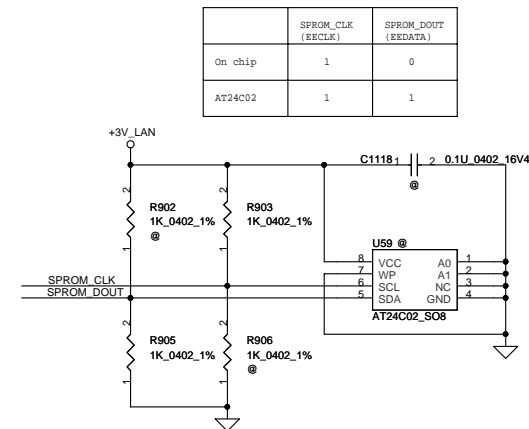
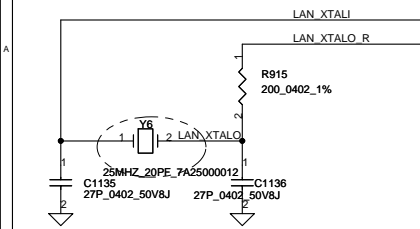
To 3G / GPS Module Connect



FAN1 Conn



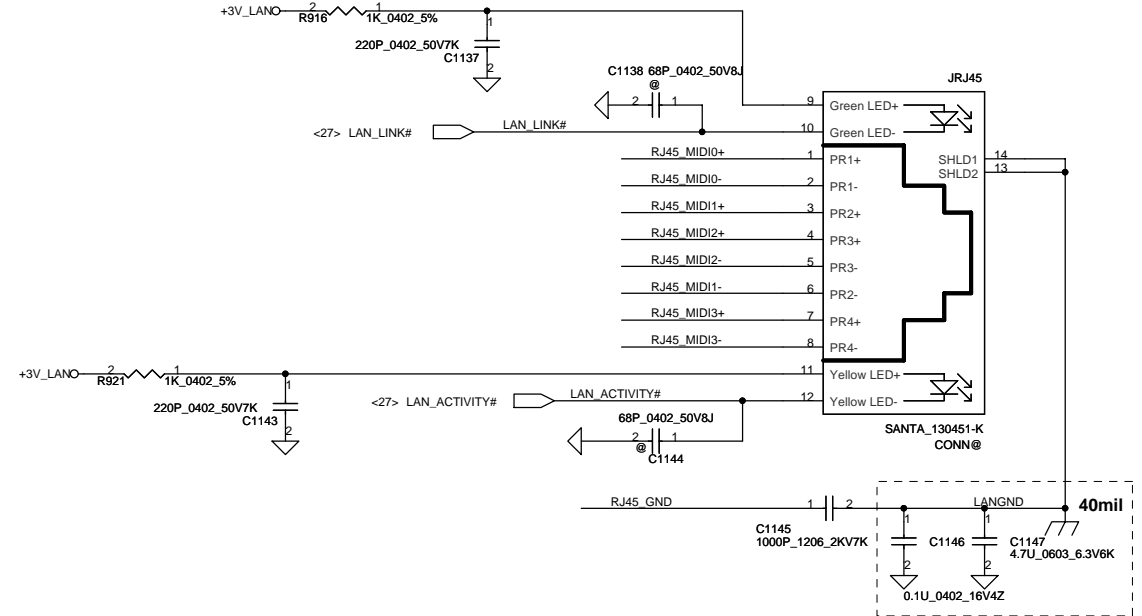
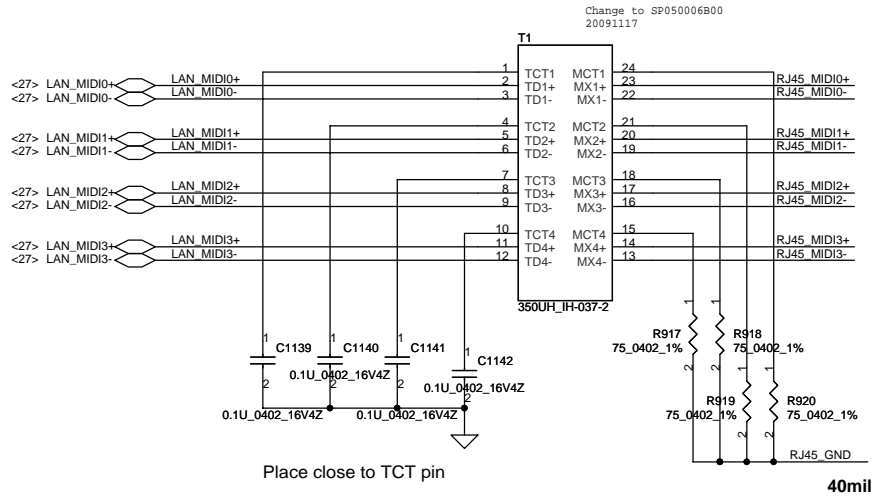
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	SPROM_CLK (EECLK)	SPROM_DOUT (EEDATA)
On chip	1	0
AT24C02	1	1

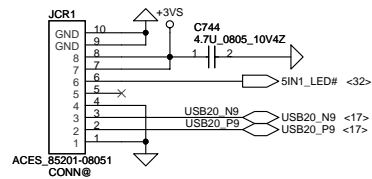
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				<div> <div>Date</div> <div>Tuesday, June 22, 2010</div> </div>	
				<div> <div>Sheet</div> <div>27 of 49</div> </div>	

LAN Connector

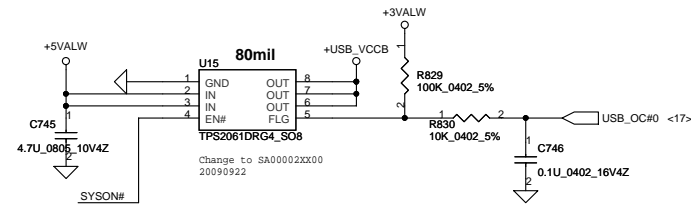
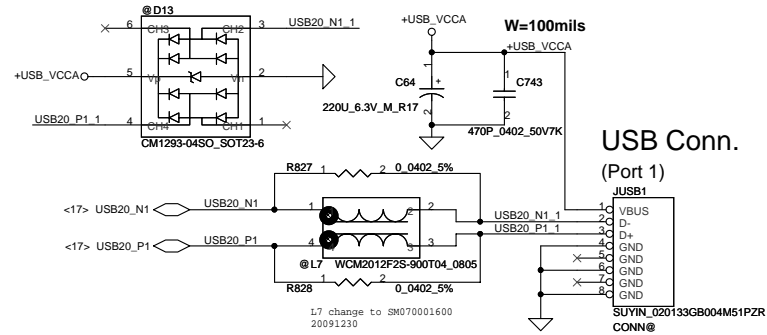
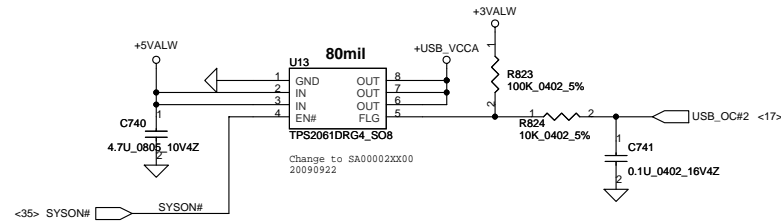
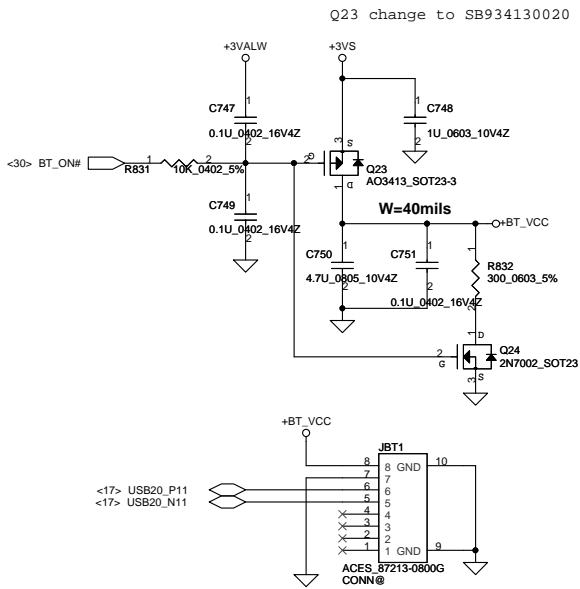


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Card Reader Conn.

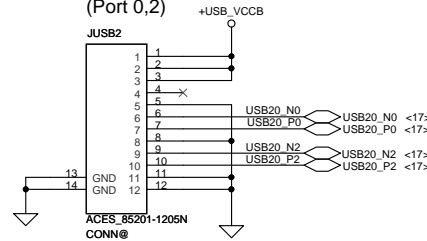


Bluetooth Conn.



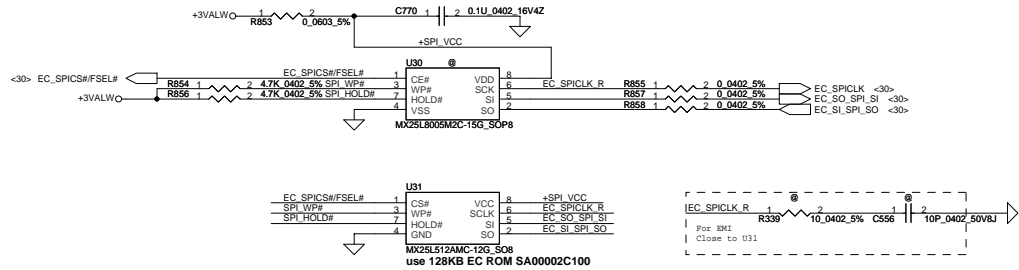
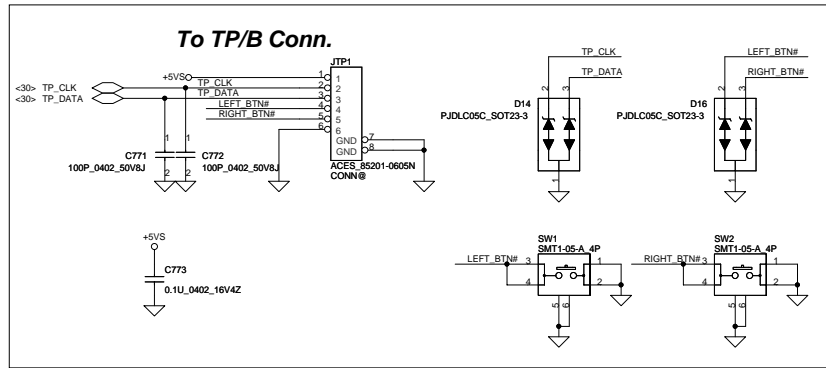
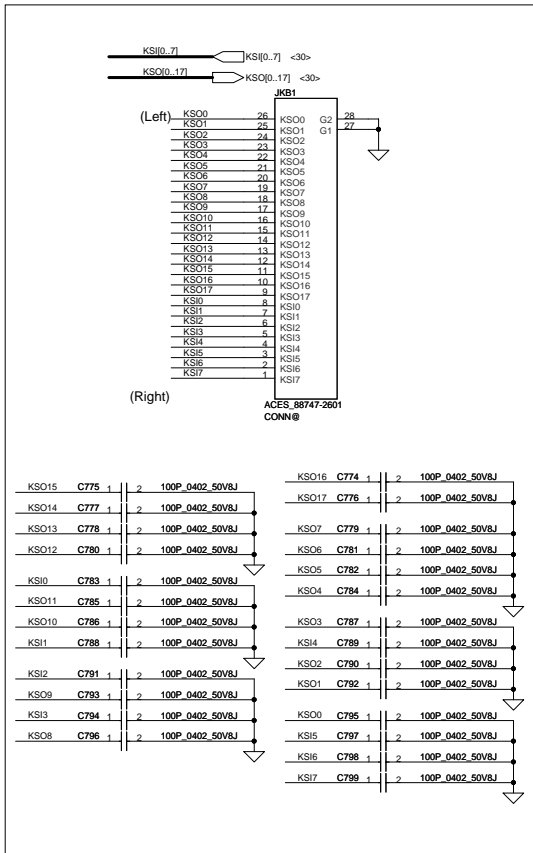
USB/B Conn.

(Port 0,2)



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For EC Tools

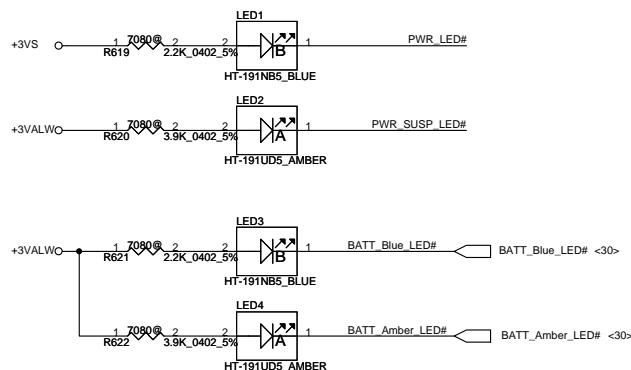
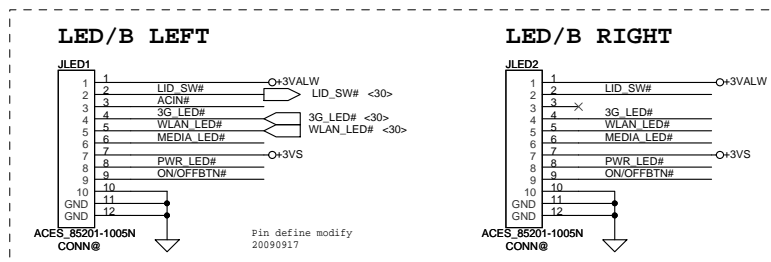
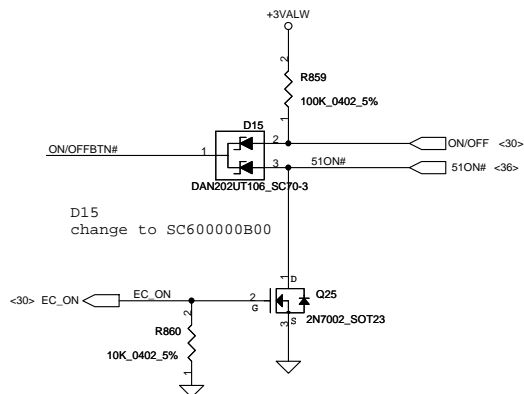


ENE suggestion SPI Frequency over 66MHz
 SST: 50MHz
 MXIC: 70MHz
 ST: 40MHz

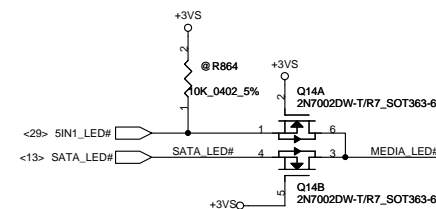
To BTN/B Conn.

KSO0	KSO3
KSI1	WL_BTN#
KSI2	T/P lock_BTN#
KSI3	Back up_BTN#
KSI4	BT_BTN#
KSI5	Power save_BTN#

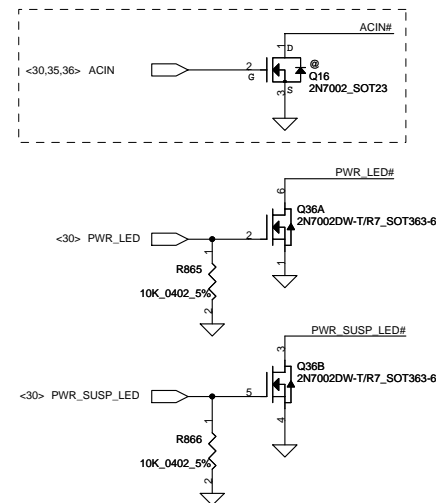
Power Button



NEW70 / 80
R619/R621 to 2.2Kohm
R620/R622 to 3.9kohm
20091116

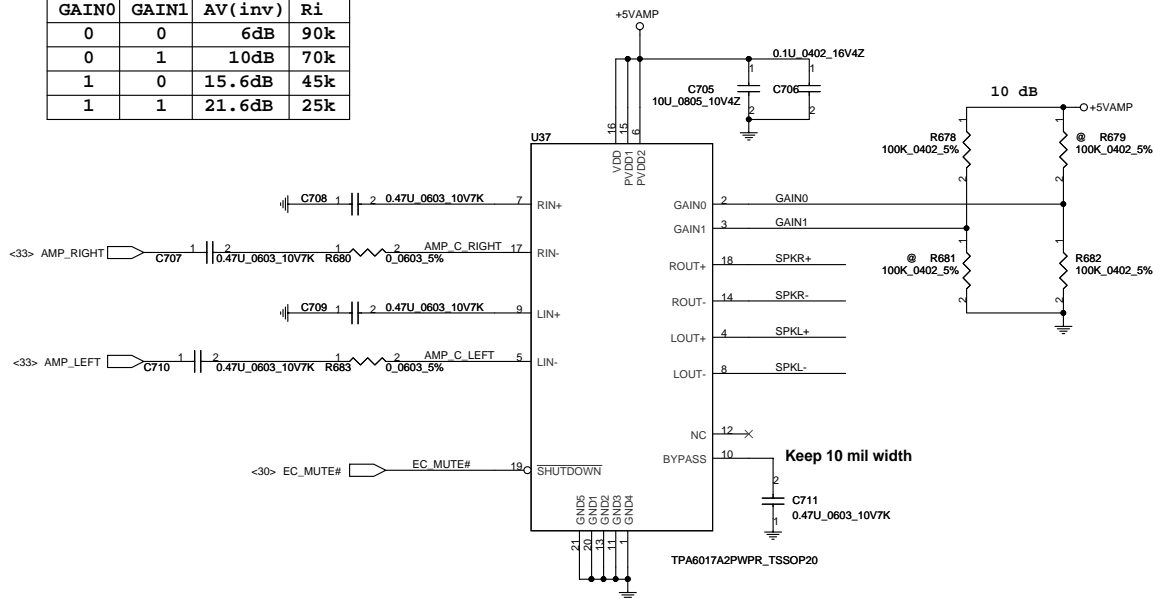


For NEW60 ACIN LED control
20091110

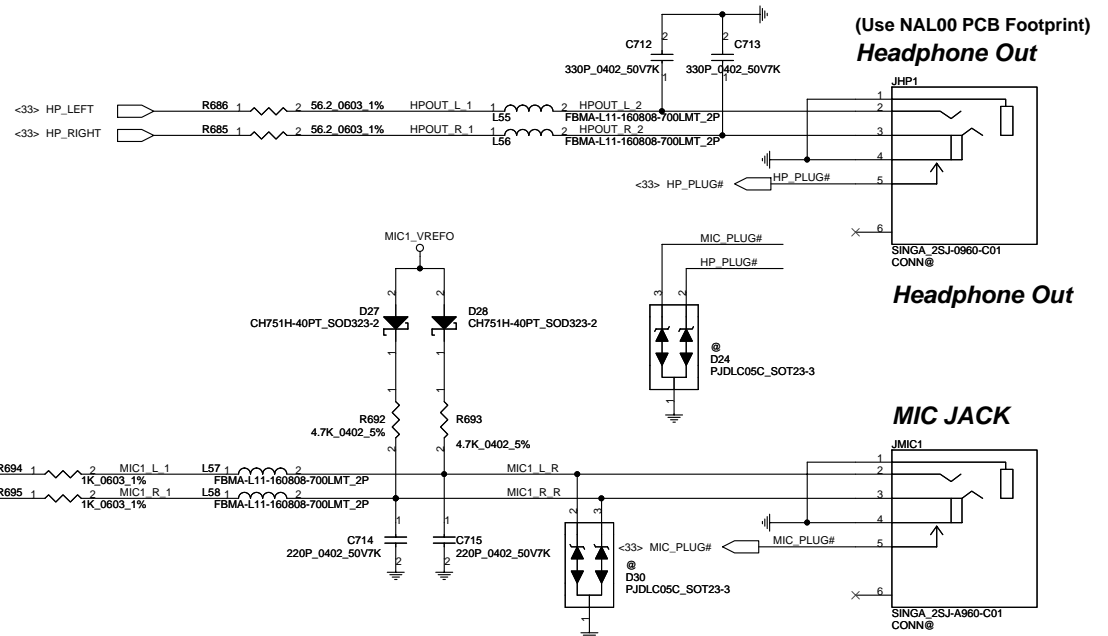
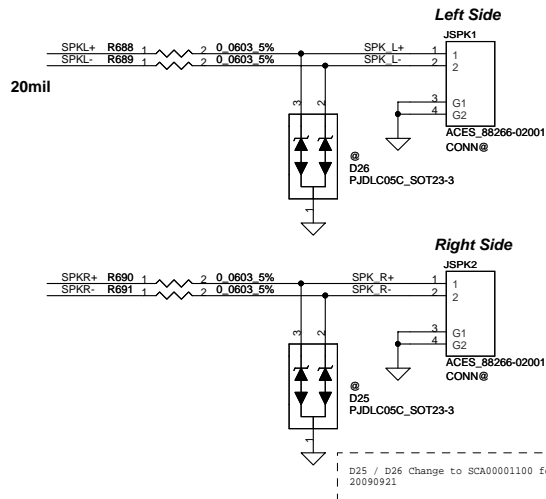


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GAIN0	GAIN1	AV(inv)	Ri
0	0	6dB	90k
0	1	10dB	70k
1	0	15.6dB	45k
1	1	21.6dB	25k

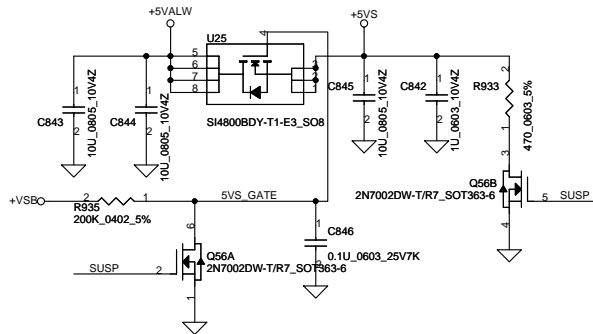


Int. Speaker Conn.

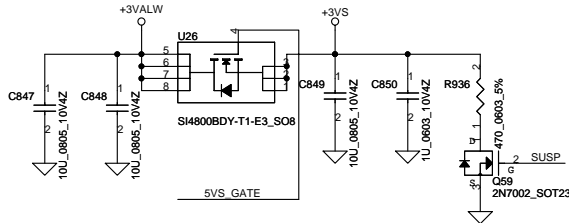


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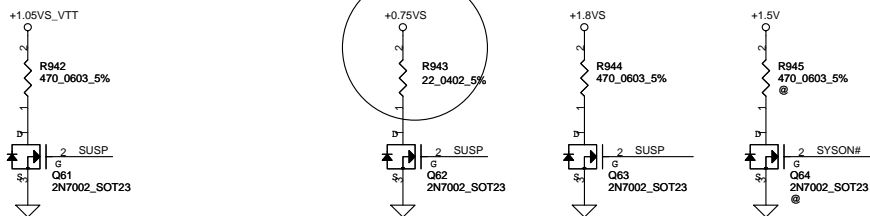
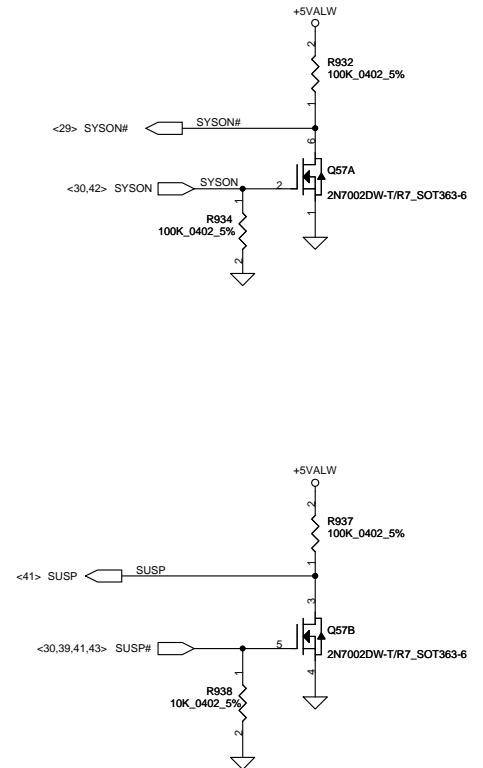
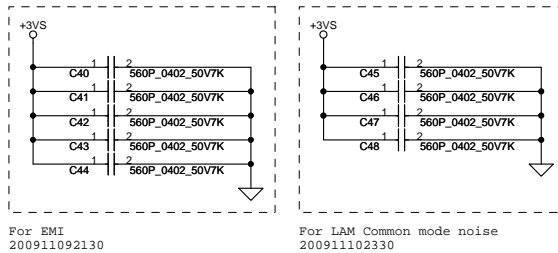
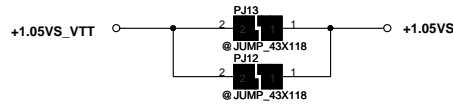
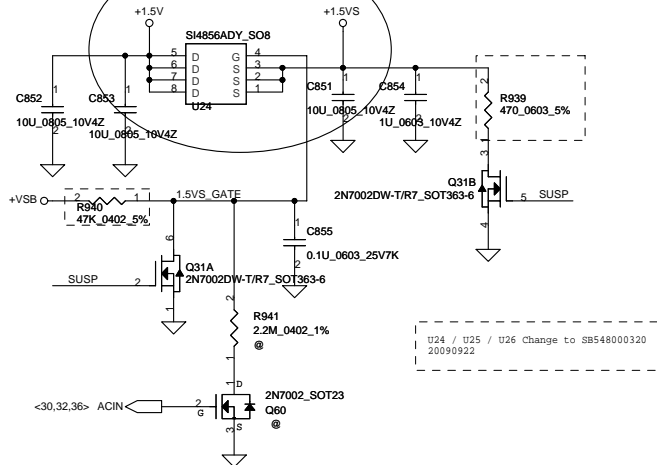
+5VALW TO +5VS



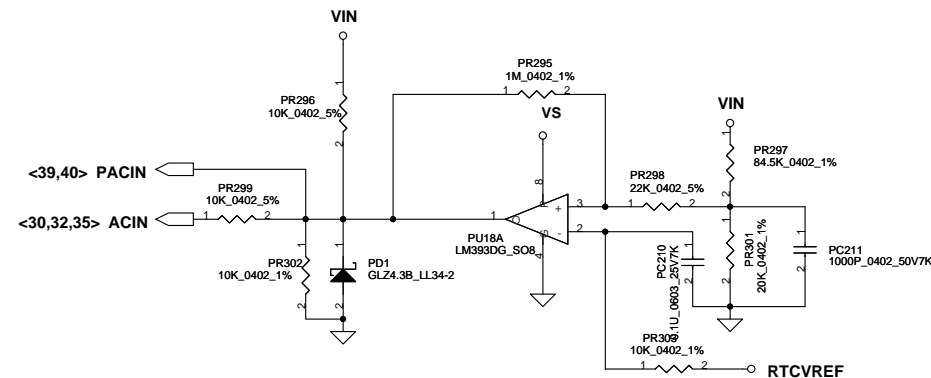
+3VALW TO +3VS



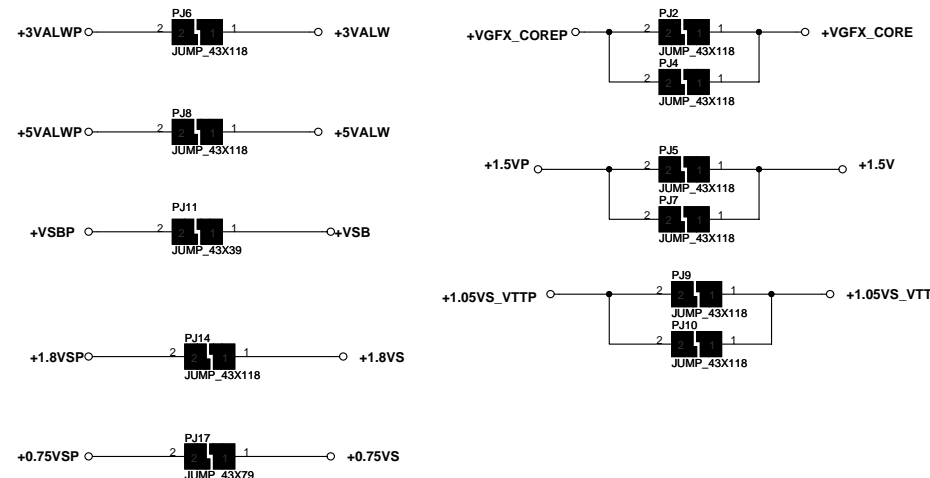
+1.5V to +1.5VS

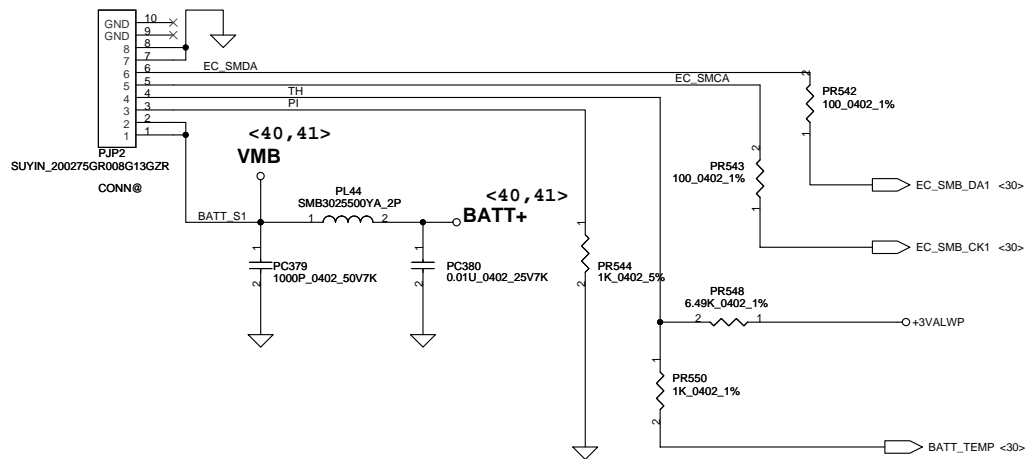


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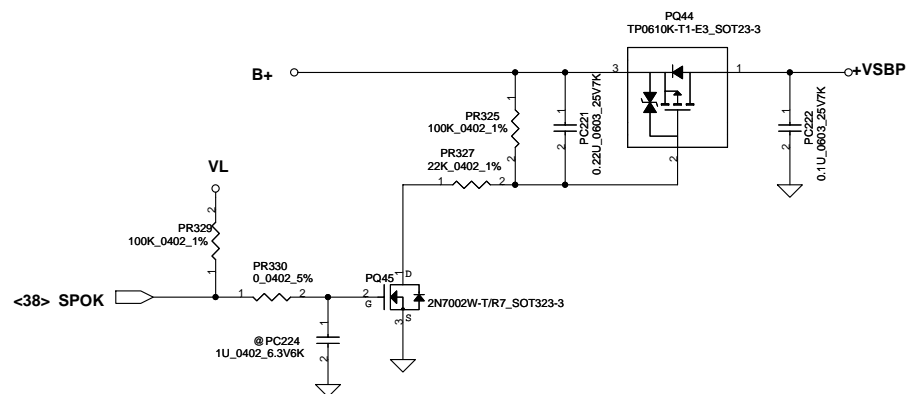
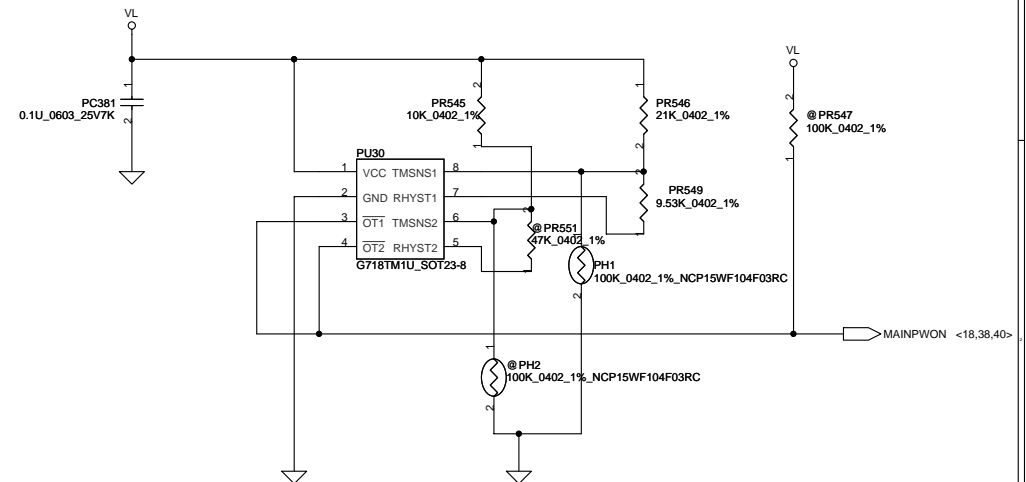


	Min.	Typ	Max.
H-->L	16.976V	17.525V	17.728V
L-->H	17.430V	17.901V	18.384V

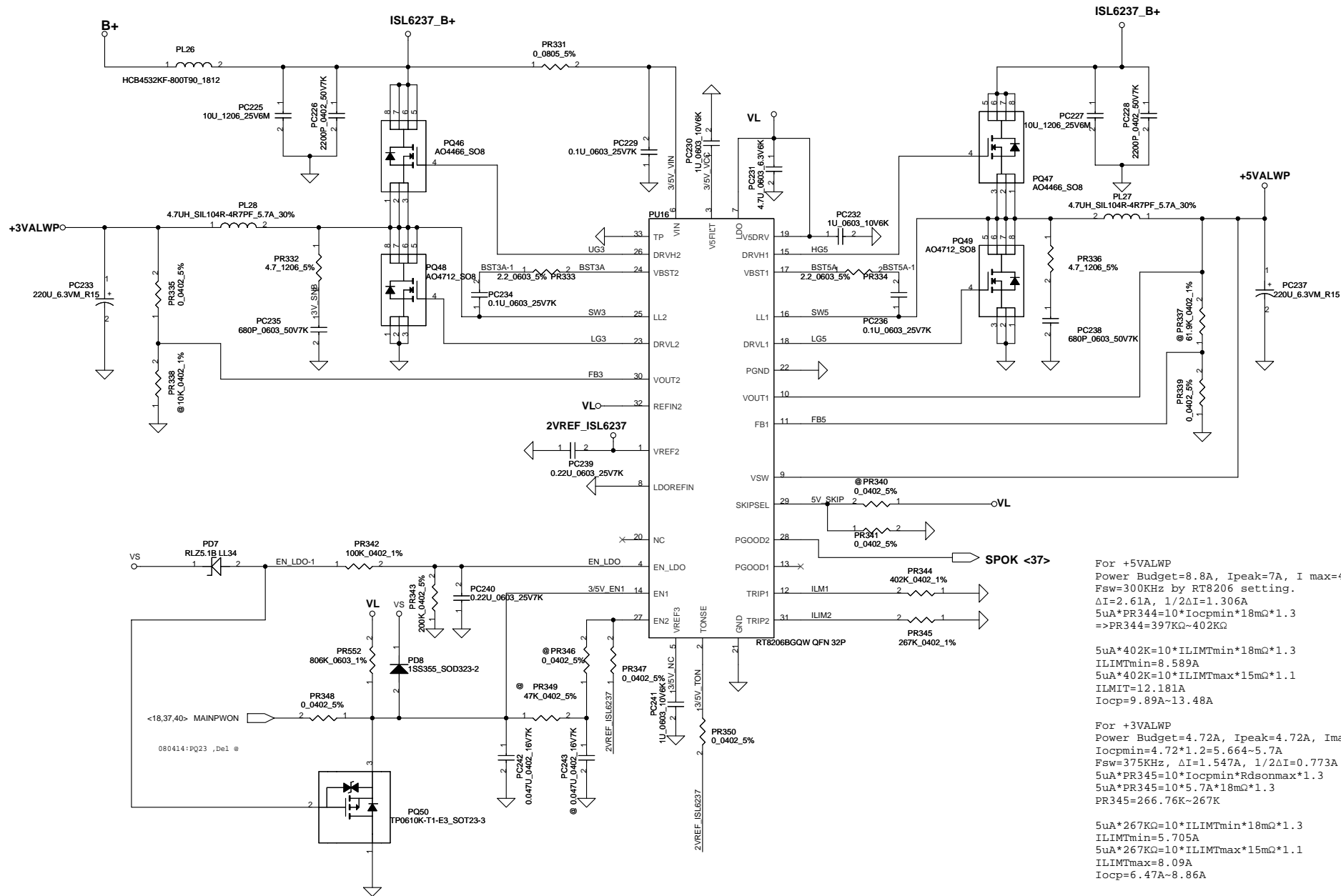




PH1 under CPU botten side :
CPU thermal protection at 92 degree C
Recovery at 56 degree C



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For +5VALWP
 Power Budget=8.8A, Ipeak=7A, I max=4.9A
 Fsw=300KHz by RT8206 setting.
 $\Delta I = 2.61A$, $1/2\Delta I = 1.306A$
 $5uA * PR344 = 10 * I_{ocpmin} * 18m\Omega * 1.3$
 $\Rightarrow PR344 = 397K\Omega - 402K\Omega$

$5uA * 402K = 10 * ILIMITmin * 18m\Omega * 1.3$
 $ILIMITmin = 8.589A$
 $5uA * 402K = 10 * ILIMITmax * 15m\Omega * 1.1$
 $ILIMIT = 12.181A$
 $I_{ocp} = 9.89A - 13.48A$

For +3VALWP
 Power Budget=4.72A, Ipeak=4.72A, I max=4A
 $I_{ocpmin} = 4.72 * 1.2 = 5.664 \sim 5.7A$
 Fsw=375KHz, $\Delta I = 1.547A$, $1/2\Delta I = 0.773A$
 $5uA * PR345 = 10 * I_{ocpmin} * R_{dsonmax} * 1.3$
 $5uA * PR345 = 10 * 5.7A * 18m\Omega * 1.3$
 $PR345 = 266.76K - 267K$

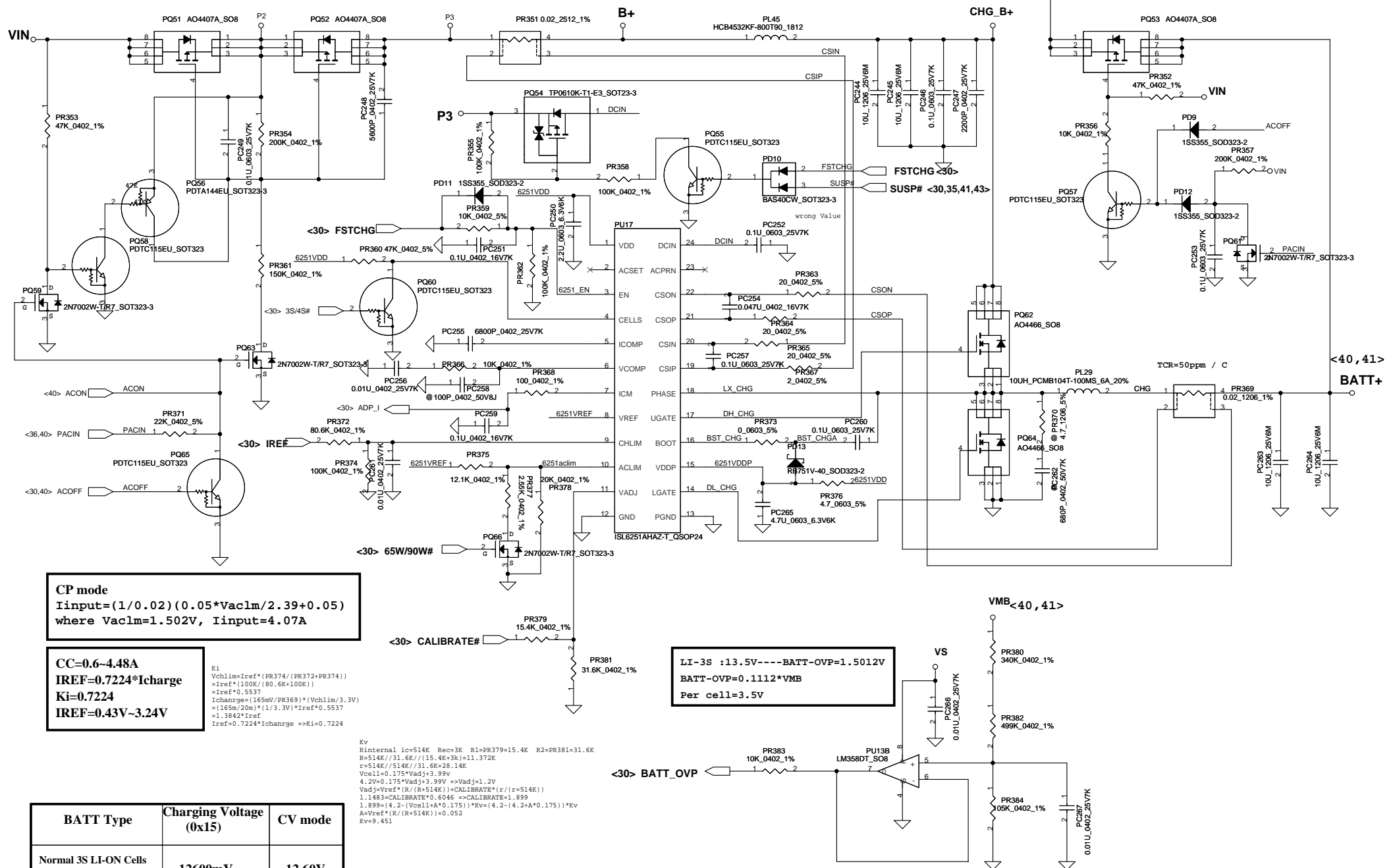
$5uA * 267K\Omega = 10 * ILIMITmin * 18m\Omega * 1.3$
 $ILIMITmin = 5.705A$
 $5uA * 267K\Omega = 10 * ILIMITmax * 15m\Omega * 1.1$
 $ILIMITmax = 8.09A$
 $I_{ocp} = 6.47A - 8.86A$

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Iada=0~4.74A(90W/19V=4.736A)
Iada=0~3.42A(90W/19V=3.421A)

ADP_I = 19.9*Iadapter*Rsense

CP = 85%*Iada ; CP = 4.07A
CP = 85%*Iada ; CP = 2.91A



CP mode
 $I_{input} = (1/0.02) (0.05 * V_{ac1m} / 2.39 + 0.05)$
where $V_{ac1m} = 1.502V$, $I_{input} = 4.07A$

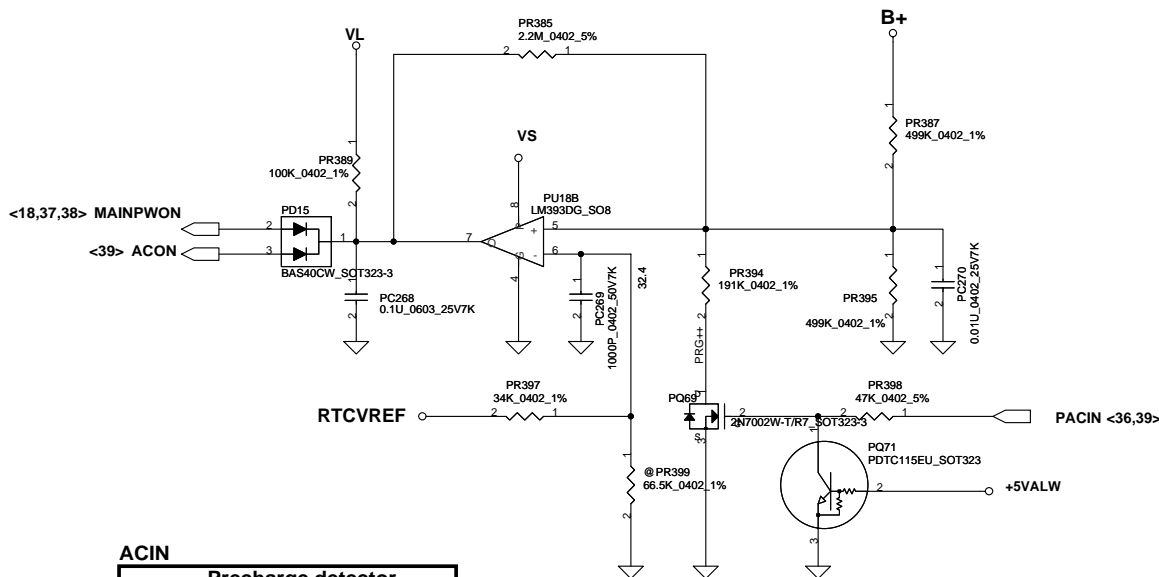
CC=0.6~4.48A
IREF=0.7224*Icharge
Ki=0.7224
IREF=0.43V~3.24V

Ki
 $V_{chlim} = I_{ref} * (PR374 / (PR372 + PR374))$
 $= I_{ref} * (100K / (80.6K + 100K))$
 $= I_{ref} * 0.5537$
 $I_{charge} = (165mV / PR369) * (V_{chlim} / 3.3V)$
 $= (165mV / 20m) * (1/3.3V) * I_{ref} * 0.5537$
 $= 1.3842 * I_{ref}$
 $I_{ref} = 0.7224 * I_{charge} \Rightarrow Ki = 0.7224$

Kv
Rinternal ic=514K Rcc=3K R1=PR379=15.4K R2=PR381=31.6K
R=514K//31.6K/(15.4K+3K)=11.372K
r=514K//514K//31.6K=28.14K
 $V_{cell1} = 0.175 * V_{adj} + 3.99V$
 $4.2V = 0.175 * V_{adj} + 3.99V \Rightarrow V_{adj} = 1.2V$
 $V_{adj} = V_{ref} * (R / (R + 514K)) + CALIBRATE * (r / (r + 514K))$
 $1.1483 = CALIBRATE * 0.6046 \Rightarrow CALIBRATE = 1.899$
 $1.899 = (4.2 - (V_{cell1} + A * 0.175)) * Kv = (4.2 - (4.2A * 0.175)) * Kv$
 $A = V_{ref} * (R / (R + 514K)) = 0.052$
 $Kv = 9.451$

LI-3S :13.5V---BATT-OVP=1.5012V
BATT-OVP=0.1112*VMB
Per cell=3.5V

BATT Type	Charging Voltage (0x15)	CV mode
Normal 3S LI-ON Cells	12600mV	12.60V



ACIN

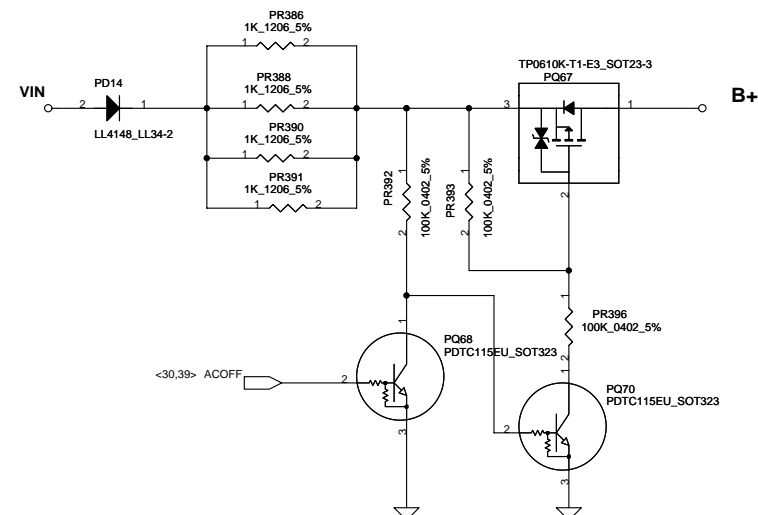
Precharge detector

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

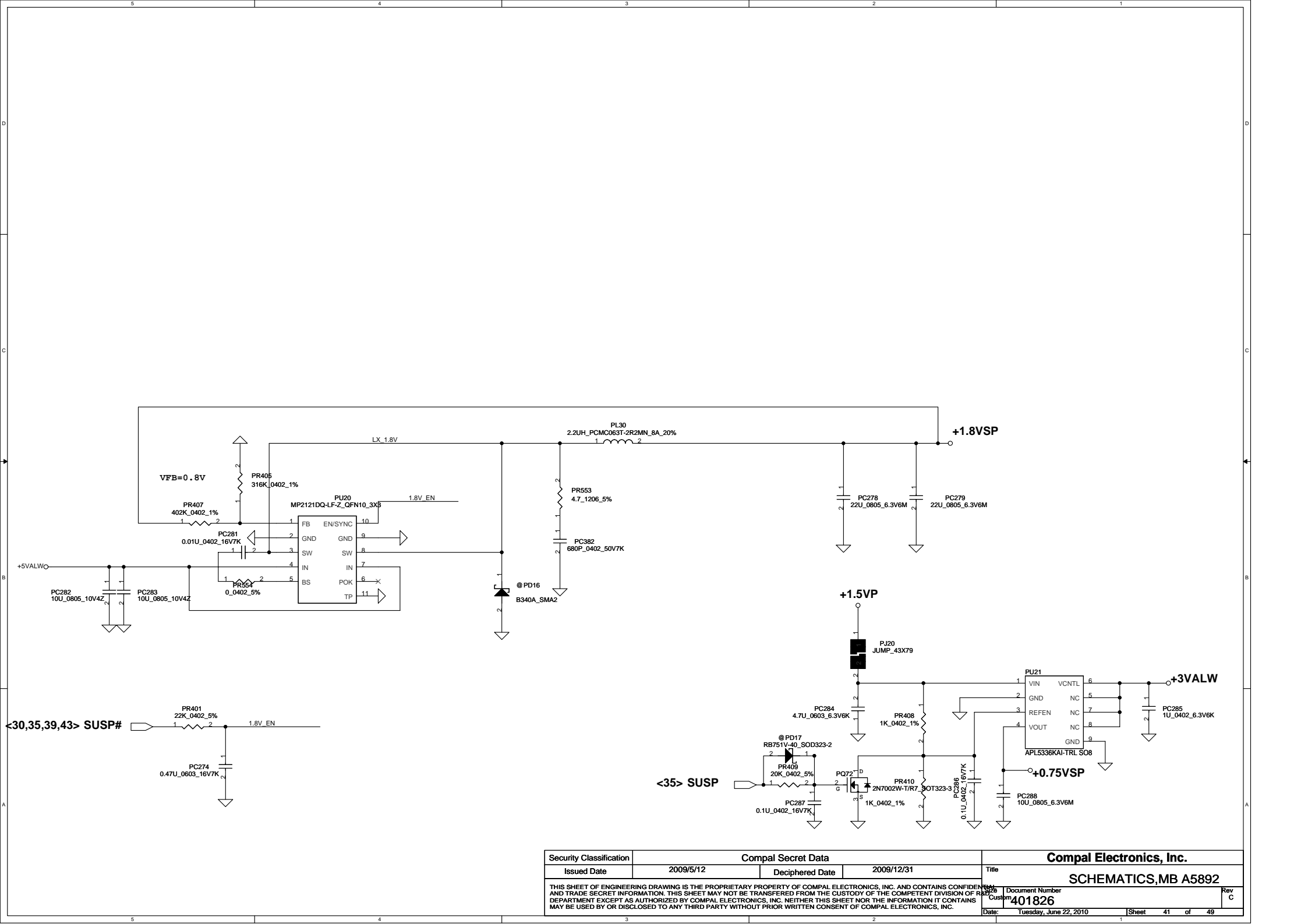
BATT ONLY

Precharge detector

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

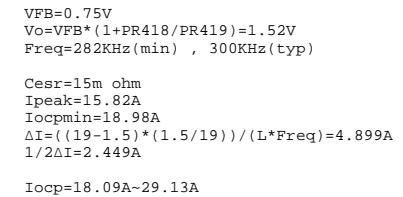


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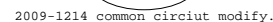
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Because +1.5VSP has 17.74A power budget, it includes DDR3, VGA chip, VRAM, so must use molding choke.

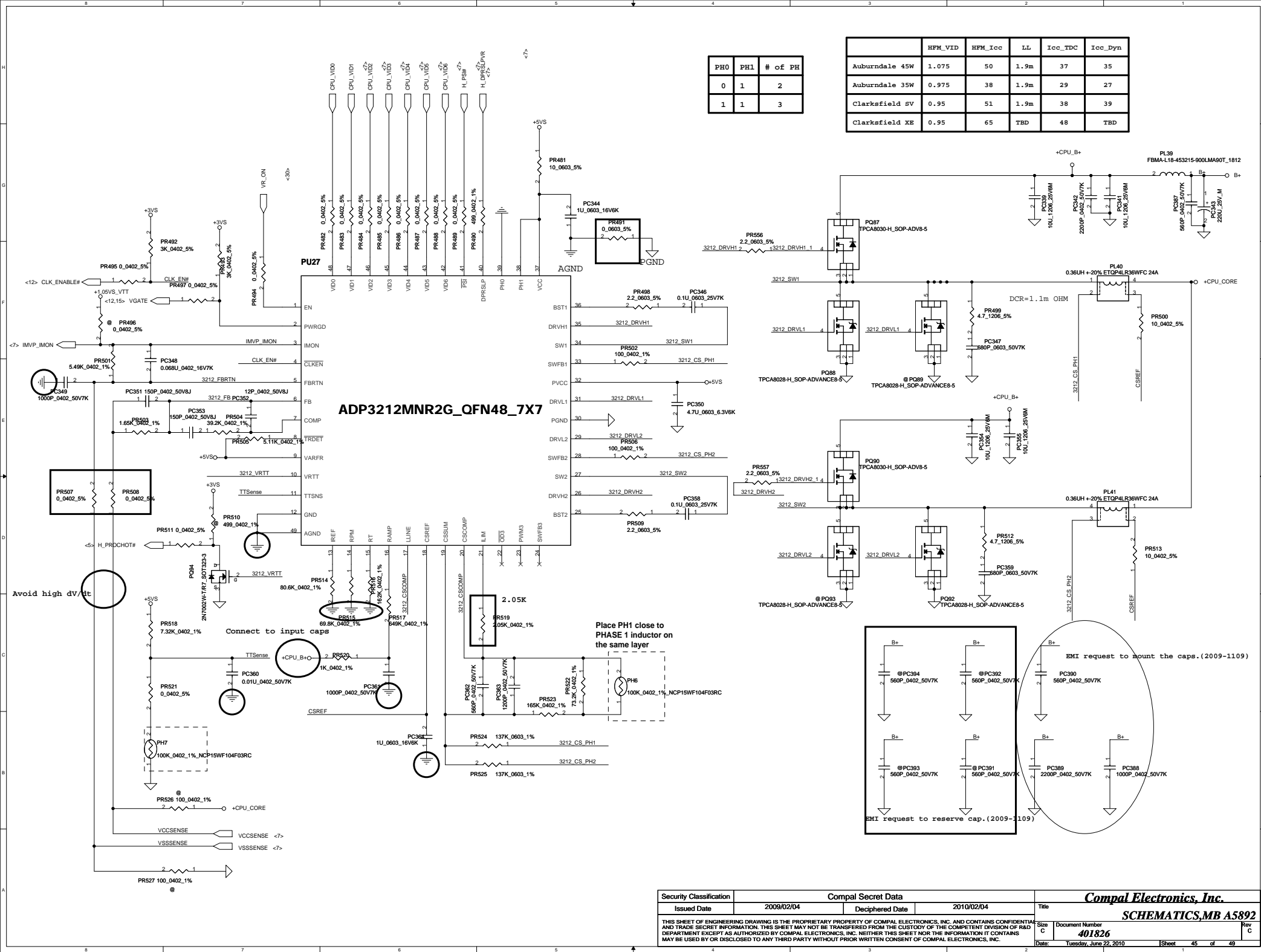


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PL23
FBMA-L18-453215-900LMA90T 1812



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	HFM_VID	HFM_Icc	LL	Icc_TDC	Icc_Dynr
Auburndale 45W	1.075	50	1.9m	37	35
Auburndale 35W	0.975	38	1.9m	29	27
Clarksfield SV	0.95	51	1.9m	38	39
Clarksfield XE	0.95	65	TBD	48	TBD

PH0	PH1	# of PH
0	1	2
1	1	3

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

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for PWR

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1	Arrandale CPU of UMA SKU only use 1 LS MOS	Arrandale CPU of UMA SKU only use 1 LS MOS	0.1	45	1 pop PQ87,PQ90, un-pop PQ86. 2 Delete PQ89, PQ93 SB00000GL00(S TR TPCA8028-H 1N SOP ADVANCE 4 PC A false)	2009-1019	to DVT
2	BOM unique.	In order to BOM unique for 1SS355, re-link PD8.	0.1	38	Change PD8 from SC1SS355003 to SC100001K00	2009-1019	to DVT
3	CIS link error.	CIS link error.	0.1	45	Change PR500 from SD028100A00(S RES 1/16W 10 +-5% 0402) to SD028100A80(S RES 1/16W 10 +-5% 0402)	2009-1019	to DVT
4	BOM unique.	BOM unique.	0.1	39	Change PC265 from SE107475M80(S CER CAP 4.7U 6.3V M X5R 0603 to SE107475K80(S CER CAP 4.7U 6.3V K X5R 0603)	2009-1019	to DVT
5	BOM unique.	BOM unique.	0.1	41	Change PC284 from SE107475M80(S CER CAP 4.7U 6.3V M X5R 0603 to SE107475K80(S CER CAP 4.7U 6.3V K X5R 0603)	2009-1019	to DVT
6	BOM unique.	BOM unique.	0.1	45	Change PC350 from SE107475M80(S CER CAP 4.7U 6.3V M X5R 0603 to SE107475K80(S CER CAP 4.7U 6.3V K X5R 0603)	2009-1019	to DVT
7	BOM unique.	BOM unique.	0.1	38	Change PC225/PC227 from SE153106K80(S CER CAP 10U 25V K X6S 1206) to SE142106M80 (S CER CAP 10U 25V M X5R 1206)	2009-1019	to DVT
8	BOM unique.	BOM unique.	0.1	45	Change PC354/PC355 from SE153106K80(S CER CAP 10U 25V K X6S 1206) to SE142106M80 (S CER CAP 10U 25V M X5R 1206)	2009-1019	to DVT
9	BOM unique.	BOM unique.	0.1	43	Change PQ83 from SB00000I900(S TR AON6704L 1N DFN) to SB00000GL00(S TR TPCA8028-H 1N SOP)	2009-1019	to DVT
10	VTT Power rail command design.	VTT Power rail command design.	0.1	43	Delete PQ95 SB00000GL00(S TR TPCA8028-H 1N SOP)-X63826BOL1 Delete PQ95 SB00000I900(S TR AON6704L 1N DFN)-OTHERS	2009-1019	to DVT
11	Charger, EMI request.	EMI request to add a bead to replace Jump to PASS EMI test.	0.2	39	Add PL45 SM010018210(S SUPPRE TAI-TECH HCB4532KF-800T90 1812)	2009-1105	to DVT
12	+VSBP, EMI request.	EMI request to add PC221/PC222 to PASS EMI test	0.2	37	Add PC221 SE000005Z80 S CER CAP .22U 25V K X7R 0603 Add PC222 SE042104K80 S CER CAP .1U 25V K X7R 0603	2009-1105	to DVT
13	+1.8VSP, BOM error.	+1.8VSP EN delete wrong. Must add PR401 and PC274 for SUSP# enable.	0.2	41	Add PR401 SD028220280 S RES 1/16W 22K 0402 5% Add PC274 SE026474K80 S CER CAP 0.47U 16V K X7R 0603	2009-1105	to DVT
14	+1.5VP, EMI request.	EMI request add snubber for +1.5VP to PASS EMIU test.	0.2	42	Add PR415 SD001470B80 S RES 1/4W 4.7 +-5% 1206 Add PC294 SE025681K80 S CER CAP 680P 50V K X7R 0603	2009-1105	to DVT
15	+1.5VP, EMI request.	EMI request add a small cap to reduce high Freq noise. EMI request change boost R to 2.2 ohm.	0.2	42	Add PC383 SE074561K80 S CER CAP 560P 50V K X7R 0402 Change PR414 from SD013000080 to SD013220B80	2009-1105	to DVT
16	+1.05VS_VTTP EMI request.	EMI request add two small cap to reduce high Freq noise.	0.2	43	Add PC384 SE074561K80 S CER CAP 560P 50V K X7R 0402 Add PC385 SE074561K80 S CER CAP 560P 50V K X7R 0402	2009-1105	to DVT
17	+1.05VS_VTTP EMI request.	EMI request add snubber for +1.05VS_VTTP to PASS EMIU test.	0.2	43	Add PR465 SD001470B80 S RES 1/4W 4.7 +-5% 1206 Add PC332 SE024681J80 S CER CAP 680P 50V J NPO 0603	2009-1105	to DVT
18	+1.05VS_VTTP EMI request.	EMI request change boost R to 2.2 ohm.	0.2	43	Change PR461 from SD013000080 to SD013220B80	2009-1105	to DVT
19	+1.05VS_VTTP, HW request.	HW request to increase +1.05VS_VTTP voltage.	0.2	43	Change PR472 from SD034499180 to SD034649180.	2009-1105	to DVT
20	+GFX_COREP, EMI request.	EMI request add a small cap to reduce high Freq noise.	0.2	44	Add PC386 SE074561K80 S CER CAP 560P 50V K X7R 0402	2009-1105	to DVT
21	+GFX_COREP, EMI request.	EMI request add snubber for +1.05VS_VTTP to PASS EMIU test.	0.2	44	Add PR268 SD001470B80 S RES 1/4W 4.7 +-5% 1206 Add PC199 SE024681J80 S CER CAP 680P 50V J NPO 0603	2009-1105	to DVT
22	+GFX_COREP, EMI request.	EMI request change boost R to 2.2 ohm.	0.2	44	Change PR266 from SD013000080 to SD013220B80	2009-1105	to DVT

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Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
24	+CPU_COREP, EMI request.	EMI request add a small cap to reduce high Freq noise.	0.2	45	Add PC387 SE074561K80 S CER CAP 560P 50V K X7R 0402	2009-1105	to DVT
25	+CPU_COREP, EMI request.	EMI request change boost R to 2.2 ohm.	0.2	45	Change PR498/PR509 from SD013000080 to SD013220B80	2009-1105	to DVT
26	+CPU_COREP, EMI request.	EMI request add snubber for +CPU_COREP to PASS EMIU test.	0.2	45	Add PR499/PR512 SD001470B80 S RES 1/4W 4.7 +-5% I206 Add PC347/PC359 SE024681J80 S CER CAP 680P 50V J NPO 0603	2009-1105	to DVT
27	+CPU_COREP, Transient Loadline issue.	LA5892 transient and loadline must change some value to meet intel spec.	0.2	45	Change PL40/PL41 from SH000005680 to SH0000012036BM00.	2009-1105	to DVT
28	+CPU_COREP, Transient Loadline issue.	LA5892 transient and loadline must change some value to meet intel spec.	0.2	45	Change PR524/PR525 from SD013120380 to SD013137380.	2009-1105	to DVT
29	+CPU_COREP, Transient Loadline issue.	LA5892 transient and loadline must change some value to meet intel spec.	0.2	45	Change PC362 from SE074391K80 S CER CAP 390P 50V K X7R 0402 to SE074561K80 S CER CAP 560P 50V K X7R 0402	2009-1105	to DVT
30	+CPU_COREP, Transient Loadline issue.	LA5892 transient and loadline must change some value to meet intel spec.	0.2	45	Change PR501 from SD034536180 S RES 5.36K 0402 1% to SD034549180 S RES 1/16W 5.49K 0402 1%	2009-1105	to DVT
31	+CPU_COREP, EMI request.	+CPU_COREP, EMI request.	0.3	45	Add PC388 SE074102K80 S CER CAP 1000P 50V K X7R 0402	2009-1113	to DVT
32	+CPU_COREP, EMI request.	+CPU_COREP, EMI request.	0.3	45	Add PC389 SE074222K80 S CER CAP 2200P 50V K X7R 0402 Add PC390 SE074561K80 S CER CAP 560P 50V K X7R 0402	2009-1113	to DVT
33	+CPU_COREP, cost issue.	Because SF000000G80 will cost too, change to SF22004M210.	0.3	45	Change PC343 from SF000000G80 to SF22004M210.	2009-1113	to DVT
34	+CPU_COREP, IMON issue.	Because Intel update IMON RC time constant, update PC348 to 0.068u to meet spec.	0.3	45	Change PC348 from SE076103K80 S CER CAP .01U 16V K X7R 0402 to SE000003J80 S CER CAP 0.068U 16V K X7R 0402	2009-1113	to DVT
35	+3V/+5V cost issue.	Because Nippon cost up their OS-CON cap, so we change Nippon cap to Sanyo cap by sourcer request.	0.4	38	Change PC233/PC237 from SF22001M300 S ELE CAP 220U 6.3V M F60(6.3X5.7) PXC to SF22001M200 S ELE CAP 220U 6.3V M B C6 SVPC ESR15	2009-1118	to DVT
36	+1.05VS_VTTP issue.	HW request to increase +1.05VS_VTTP voltage.	0.4	43	Change PR472 from SD034649180 to SD034511180.	2009-1118	to DVT
37	+1.05VS_VTTP issue.	HW request to increase +1.05VS_VTTP voltage.	0.4	43	Change PR476 from SD034665180 to SD034649180.	2009-1118	to DVT
38	+0.75VSP power sequence issue.	HW request to adjust power sequence.	0.4	47	Change PR409 from SD028000080 S RES 0 0402 5% to SD028200280 S RES 1/16W 20K 0402 5%.	2009-1118	to DVT
39	+1.05VS_VTTP issue.	+1.05VS_VTTP choke unique to +1.5VP.	0.4	43	Change PL38 from SH000008V80 S COIL 1UH +-20% PCMB103E-1R0MS 20A to SH000009U00 S COIL 1UH +-20% FDU1040D-1R0M=P3 21.3A	2009-1118	to DVT
40	+1.05VS_VTTP 2nd source issue.	In order to phase in 2nd source, change ISL6268 to APW7138.	0.5	43	Change PU26 from SA00001HT80 S IC ISL6268CAZ-T SSOP 16P to PU999 SA000020600 S IC APW7138NITRL SSOP 16P	2009-1208	to PVT
41	+1.05VS_VTTP 2nd source issue.	APW7138 needn't pop PC335.	0.5	43	Delete PC335 SE075103K80 S CER CAP .01U 25V K X7R 0402 and change location to PC999.	2009-1208	to PVT
42	HDD LED flash issue.	HDD LED will flash when plug in adapter, because +3VS rise a little. HW request add PC224 to solve it.	0.5	37	Add PC224 SE000000K80 S CER CAP 1U 6.3V X5R 0402	2009-1208	to PVT
43	HDD LED flash issue.	If add PC224, must change PR330 from 0 to 1k to avoid SPOK pin fail. that is add a current limit R on SPOK pin.	0.5	37	Change PR330 from SD028000080 to SD028100180.	2009-1208	to PVT
44	BOM error.	+1.8VSP choke use wrong material. Unique MP2121 to other project.	0.5	41	Change PL30 from SH000006I80 S COIL 2.2UH +-20% PCMC063T-2R2MN 8A to SH000009Q00 S COIL 2.2UH 20% MSCDRI-74A-2R2M-E 6.5A Add PR554 SD028000080 0 0402 5%	2009-1208	to PVT
45	+1.05VS_VTTP issue.	HW request to adjust +1.05VS_VTTP Vout.	0.5	43	Change PR472 from SD034511180 to SD0344999180.	2009-1208	to PVT
46	+VGFX_COREP issue	ISL62881 common circuit update.	0.5	44	Delete PR291 SD028000080. Add PR555 SD028000080.	2009-1208	to PVT

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

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for PWR

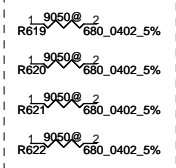
Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
24	Sequense issue.	Modify sequense by HW request.	0.6	37	Chnage PR330 from SD028100180 S RES 1/16W 1K +-5% 0402 to SD028000080 S RES 1/16W 0 +-5% 0402.	2010-0112	to Pre-MP
25	Sequense issue.	Modify sequense by HW request.	0.6	37	Delete PC224 SE000000K80 S CER CAP 1U 6.3V K X5R 0402	2010-0112	to Pre-MP
26	EMI issue.	Because EMI has power BB on 250MHz, add HS gate R to solve.	0.6	45	Add PR556/PR557 SD013220B80 S RES 1/10W 2.2 +-5% 0603	2010-0112	to Pre-MP
27	BOM loss update in DVT.	BOM loss update in DVT, change 1.8V choke.	0.6	41	Change PL30 from SH000006180 S COIL 2.2UH +-20% PCMC063T-2R2MN 8A to SH000009Q00 S COIL 2.2UH 20% MSCDRI-74A-2R2M-E 6.5A	2010-0112	to Pre-MP
28	Common circiut update.	GFX_COREP common circiut update.	0.6	44	Add PR291 SD028000080 0 0402 5% Delete PR555 SD028000080 0 0402 5%	2010-0112	to Pre-MP
29	Changer choke issue.	Because Cyntec has quality issue and can't use in MFG, in order to prevent shortage issue, change to Maglayer.	0.6	39	Chnage PL29 from SH000005Z80 S COIL 10UH +-20% PCMBI04T-100MS 6A to SH000009R00 S COIL 10UH +-20% MMD-10DZ-100M-X1 6A	2010-0112	to Pre-MP
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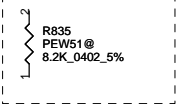
Version change list (P. I. R. List)

Item	Phase	PAGE	DATE	Modifycatio list	Purpose
1			09 / 30	Q9 / Q15 / Q65 / Q14 / Q36 / Q19 / Q31 / Q56 / Q57 Change to SB00000AR10 Q4/Q5/Q6/Q7/Q13/Q24/Q25/Q59/Q61/Q62/Q63/Q20 Change to SB570020120	
2	DVT		11 / 03	Modify VWWAN Mini catd PIN define. X1 / X2 Change to SJ132P7KW10. Add PCH_SUSCLK net for remove EC crystal. Remove C147. Add F2 for RF team. Add C670 / C671 / C672 / C673 For INTEL Change C217 to 22U and add C221 22U for CRT issue.	
			11 / 05	Add P80DATA PD 100Kohm(R51) for EC common design. Add C40 / C41 / C42 / C43 / C44 for EMI. Add ACIN#(Q16) for ACIN LED(NEW60) Add C45 / C46 / C47 / C48 for LAN Common mode noise Remove net BT_LED#.	
			11 / 09	Add R14 for MINI1 LED Function.	
			11 / 10	Add D13/D14/D16/D23/D24/D25/D26/D30 for ESD Add R836/C160 R338/C555 for RF.	
			11 / 11	L21 Change to SM010012010 L5 Change to SM01000AX00 Change R619/R621 to 680ohm Change R620/R622 to 3.9kohm Y1 Change to SJ100009R00 R841 Change to 8.2k ohm	
			11 / 16	Update Power SCH	
			11 / 17	Change T1 to SP050006B00 Change PCH P/N to SA00003N7B0 Change R167 to 470 ohm.	
			11 / 18	Update Power SCH	
			11 / 19		
3	PVT		12 / 07	C259 / C279 / C692 / C693 Change to SE107475K80 0603 type	
			12 / 09	Reserved R15 (net LOCAL_DIM) / R16 (net COLOR_ENG_EN) for LVDS function. Reserved R307 for +LCDVDD. EC Pin36 for WLAN_LED# (output), Pin 17 for MINI1_LED# (input) EC Pin91 for 3G_LED#(output) & Pin85 for VWWAN_LED# (input) Update Power SCH	
			12 / 10	Update Power SCH	
			12 / 11	Add R96 PD 100K for LVDS Panel Issue. Add C674 / C675 / C676 For EMI. Del SW3 Power on SW Update Power SCH	
			12 / 14	US change to SA00000U500	
			12 / 16	R619 / R621 change to 2.2K SD028220180 for LED	
			12 / 17	Q13 / R477 Change to unpop R171 Change to pop,R172 change to unpop for Board ID. Add R777 / R778 For HDMI Issue.Only pop R778. R751 Change to 2.2K.	
4	PRE MP			ADD PU R951 / R953 UNPOP D23 for MIC noise issue. UNPOP R827 / R828, ADD L7 SM070001600 for USB. Update Power SCH	
			01 / 06	Change Q9,Q65,Q15,Q14,Q36,Q19,Q31,Q56,Q57 to SB00000DH00	
			01 / 11	Change LED1 / LED3 to SC591NB5A30 Del L7, Add R827 / R828. Del D26 / D25 Update Power SCH	
			01 / 21	Modify Power SCH NAME	
			03 / 01		
	MP		05 / 11	Reserve D13 / D24 / D30 @ (ESD)	
			06 / 09	Add NEW7X0@ / PEW51@ BOM Structure fo ID	

For NEW50 / NEW90 LED



For PEW51 project ID



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