

Compal Confidential

Model Name : Z5WAH

File Name : LA-B161P

Compal Confidential

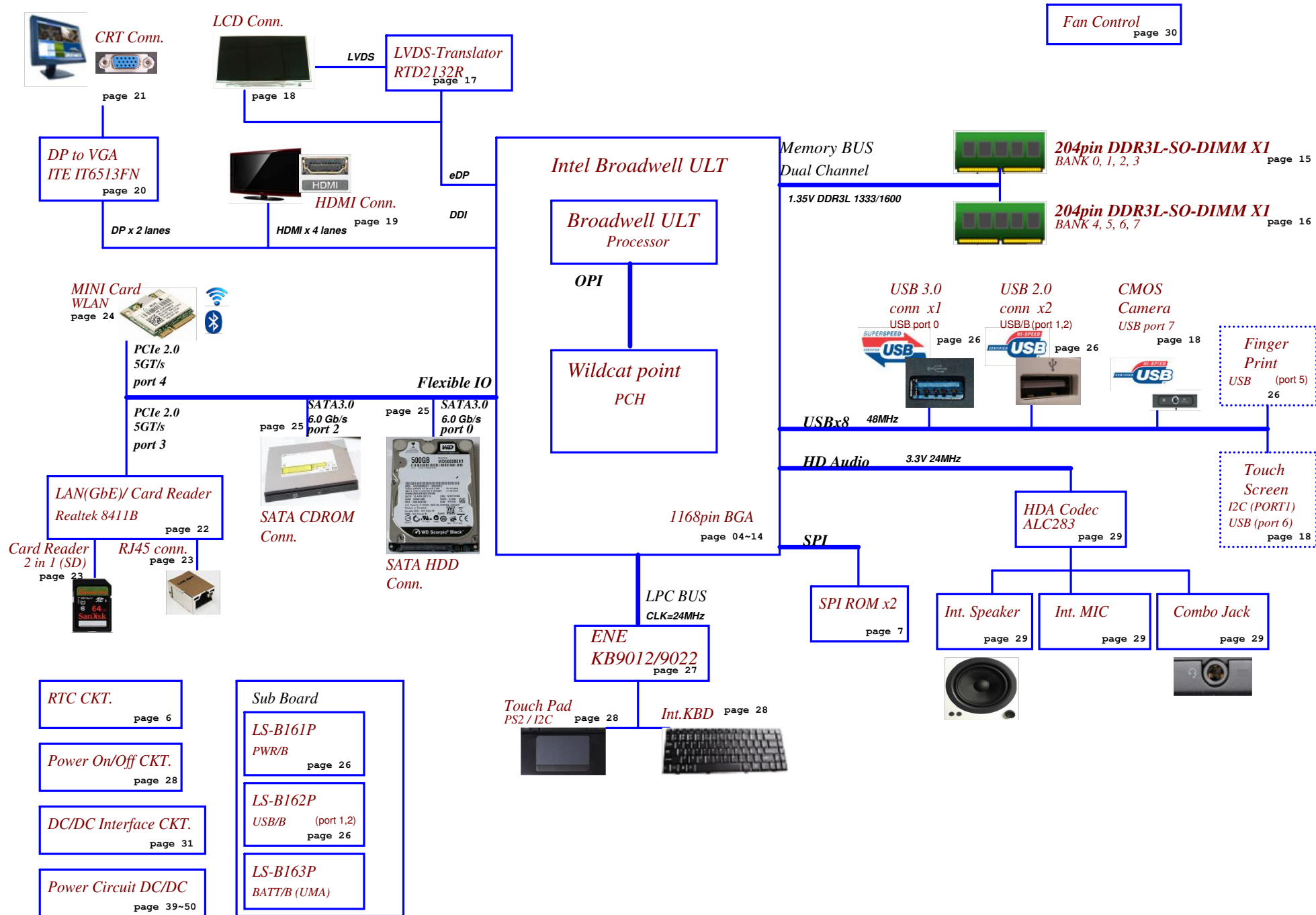
EA50_HB M/B Schematics Document

Intel Broadwell ULT (Broadwell + Wildcat point)

2014-03-04

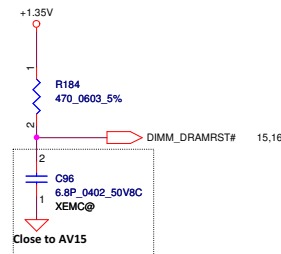
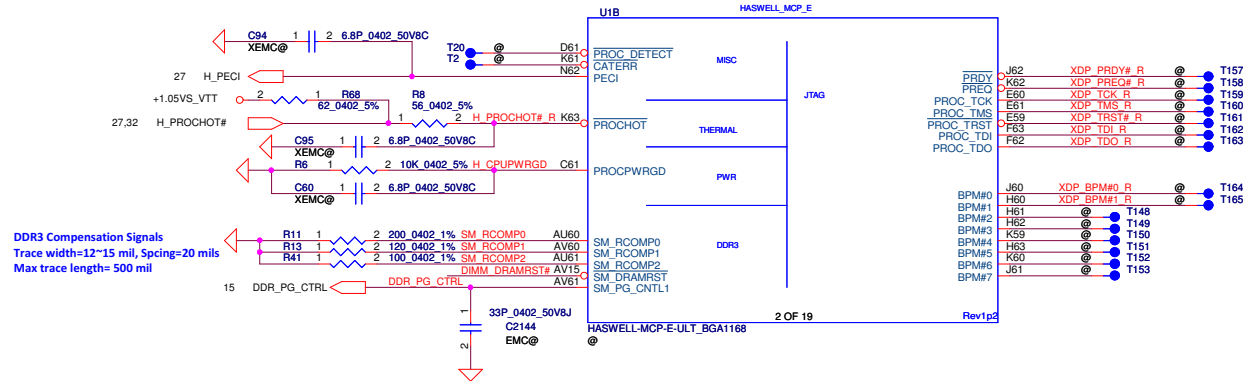
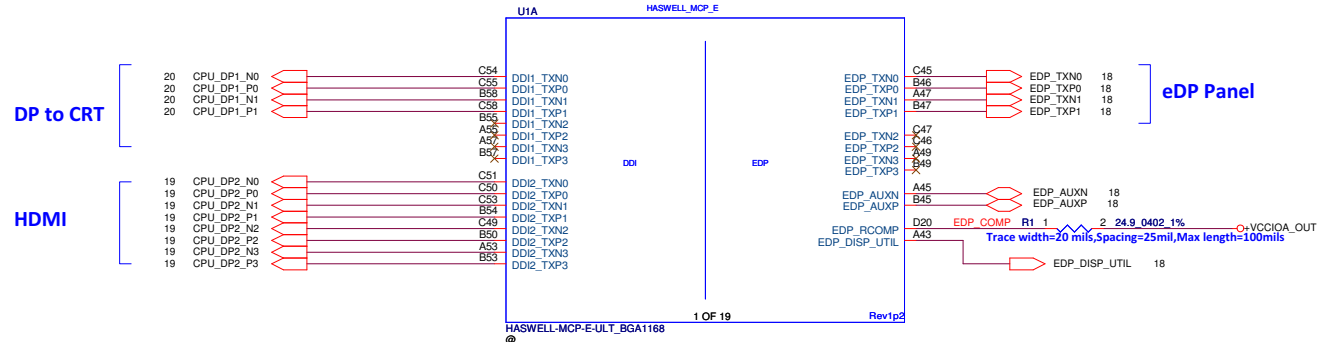
REV: 1.0

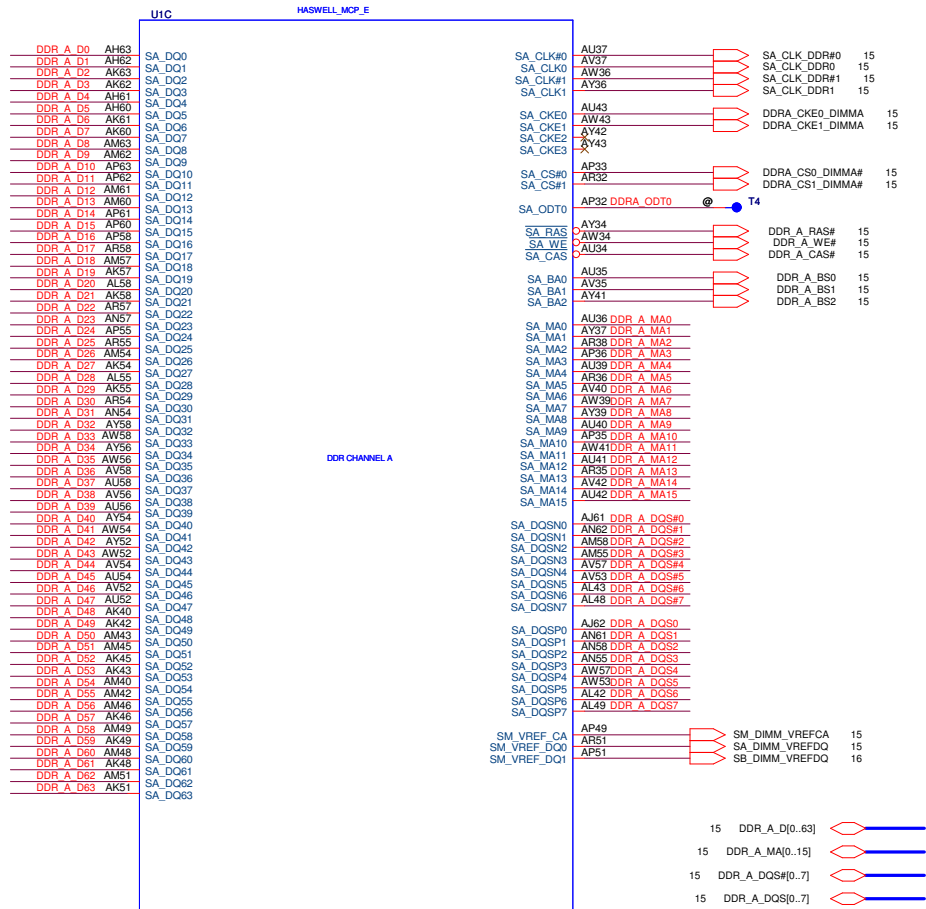
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Issued Date	2013/10/30	Deciphered Date	2014/10/30	Title	Cover Page
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				Z5WAH M/B LA-B161P	1.0
				Date: Tuesday, March 04, 2014	Sheet 1 of 44



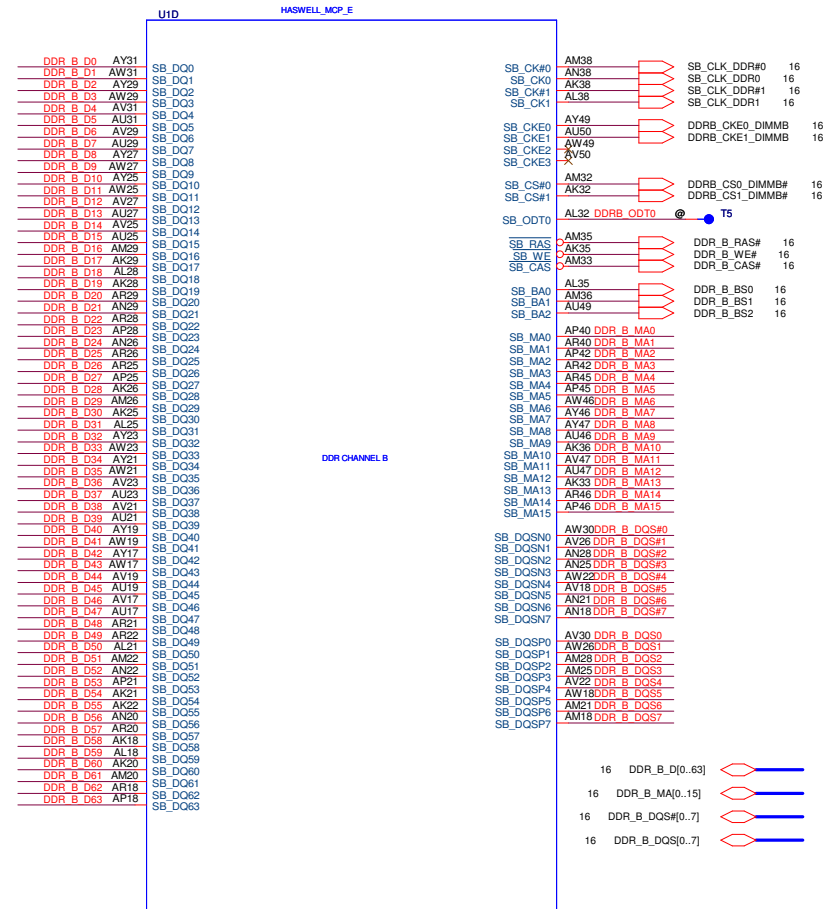
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Size	Document Number	Rev	1.0	
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PCB	ZZZ DAZ15400100 DAZ15400100	DAZ15400100
CPU PDC2957	U1 PDC2957@ S IC CL8064701570000 SR1DV D0 1.4G ABO! SA00007G060	4319S0B0L01
CPU I3-4158	U1 I34158@ S IC CL8064701526902 SR18B C0 2G ABO! SA00006VW40	4319S0B0L02
CPU PMD3558U	U1 PMD3558U@ S IC CL8064701569500 SR1E8 D0 1.7G ABO! SA00007G260	4319S0B0L03
CPU I5-4258	U1 I54258@ S IC CL8064701481503 SR18A C0 2.4G ABO! SA00006VZ60	4319S0B0L04
CPU I3-4010	U1 I34010@ S IC CL8064701478202 SR16Q C0 1.7G ABO! SA00006SX70	4319S0B0L05
CPU I3-4030	U1 I34030@ S IC CL8064701552900 SR1EN D0 1.9G BGA 1168 SA00007TA60	4319S0B0L08
CPU I5-4200	U1 I54200@ S IC CL8064701477702 SR170 C0 1.6G ABO! SA00006SMB0	4319S0B0L09
CPU I5-4210	U1 I54210@ S IC CL8064701477802 SR1EF D0 1.7G BGA 1168 ABO ! SA00007LQ70	4319S0B0L10
CPU BDW-ES1	U1 QG21@ S IC CL8065801674128 QG21 C0 1.2G BGA 1168 SA00007OS10	4319S0B0L06
CPU BDW-ES1	U1 QG22@ S IC CL8065801675027 QG22 C0 1.2G BGA 1168 SA00007CT10	4319S0B0L06

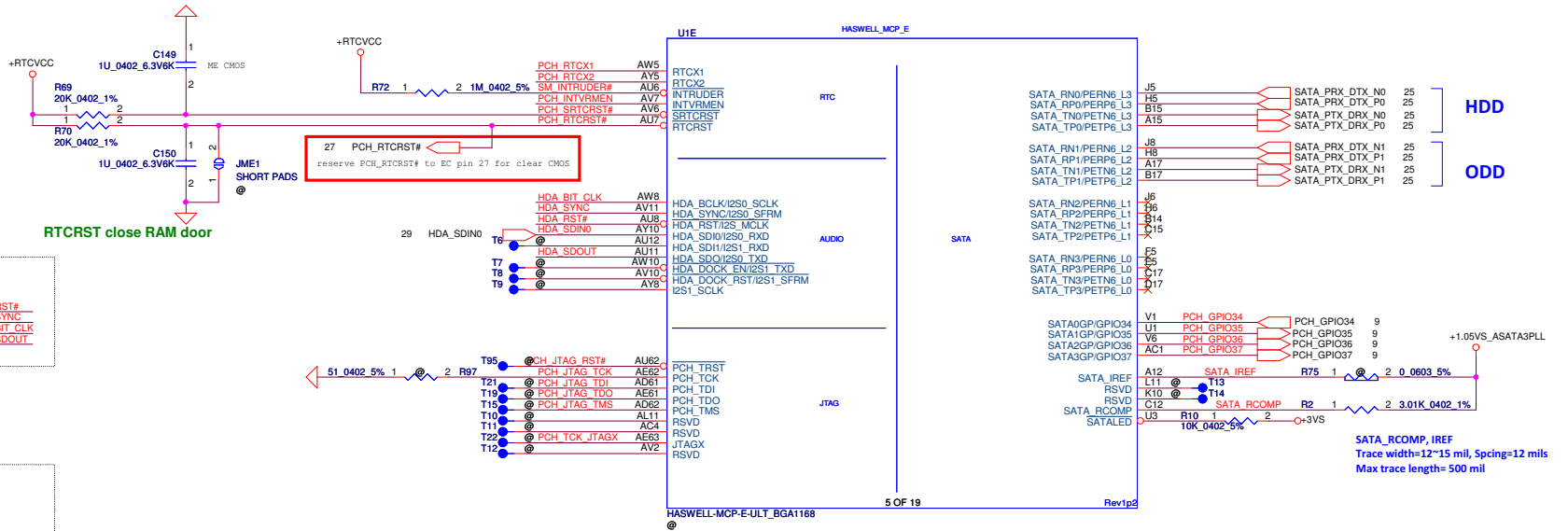
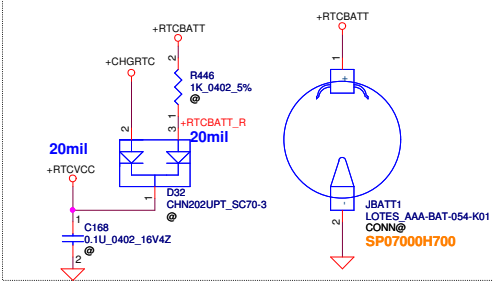
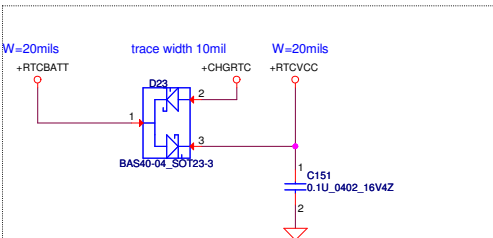
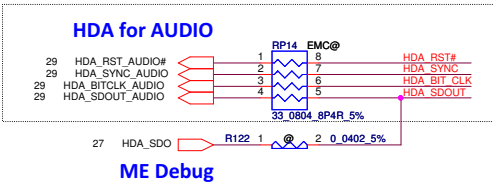
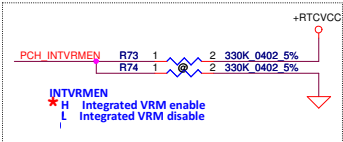
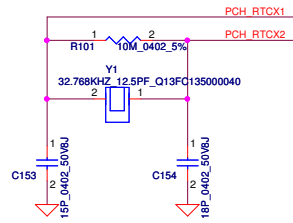




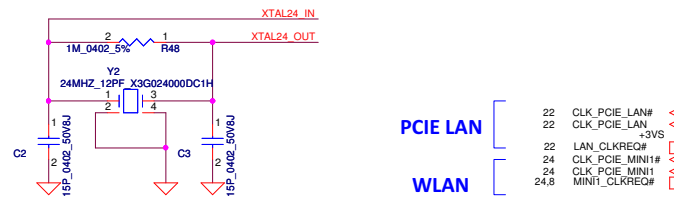
HASWELL-MCP-E-ULT_BGA1168 3 OF 19 Rev1p2



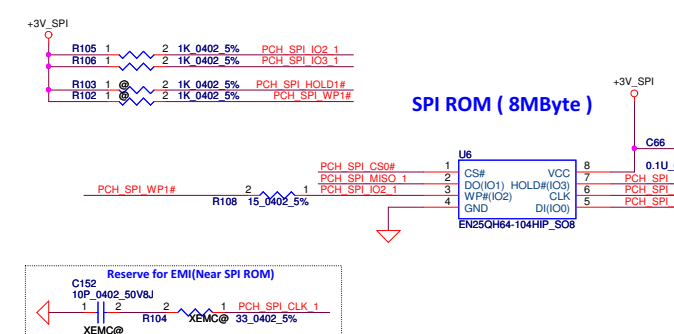
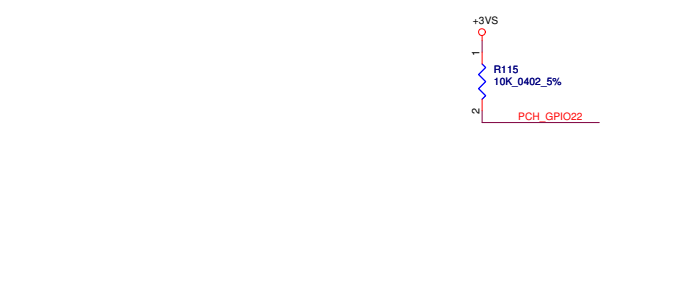
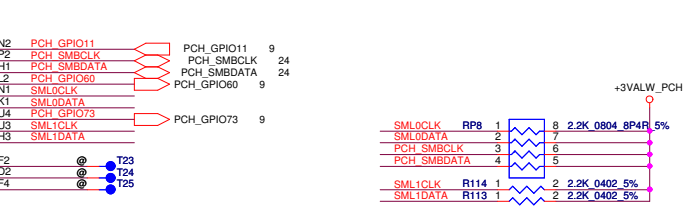
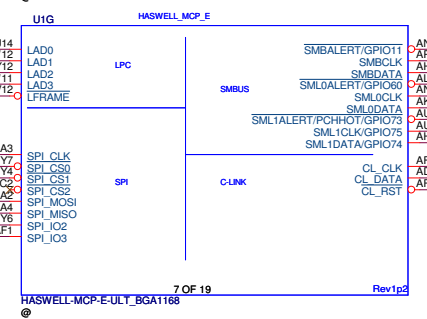
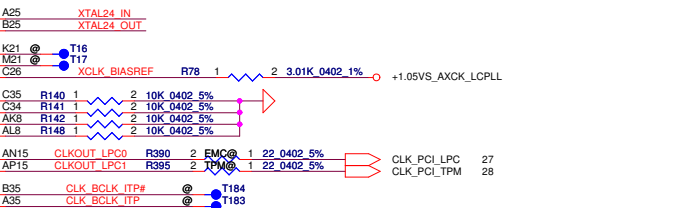
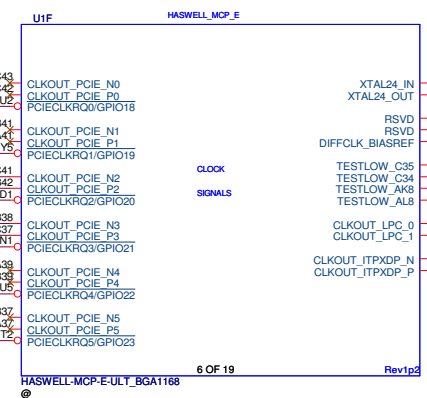
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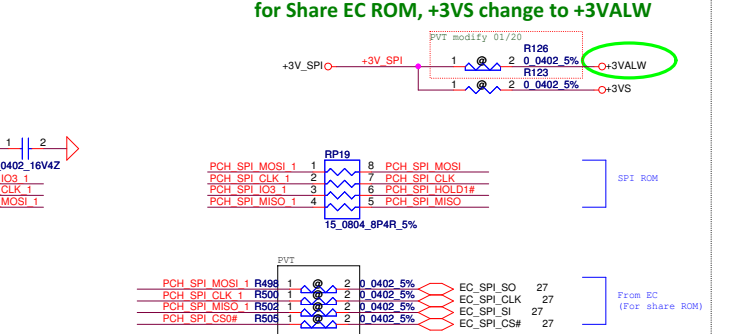
Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2013/10/30	Deciphered Date		2014/10/30	BDW MCP(3/11) RTC,SATA,XDP
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PCIe LAN
WLAN

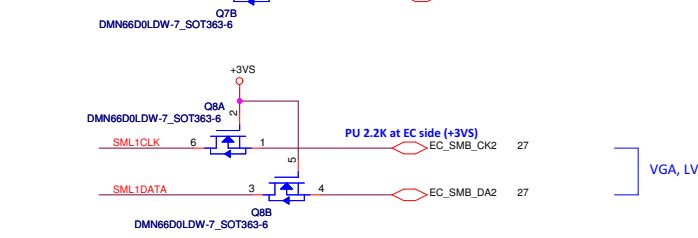
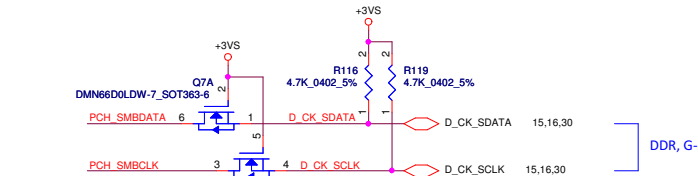
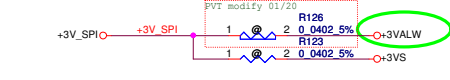


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C152 10P_0402_50V8J
R104 XEMC@ 33_0402_5%

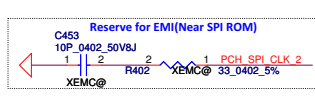


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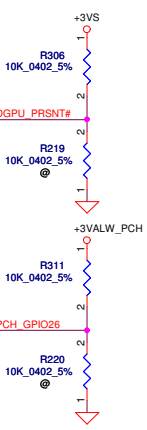
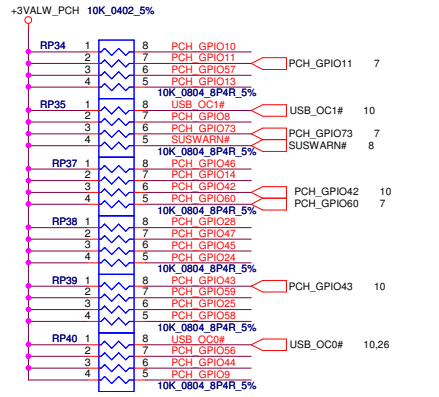
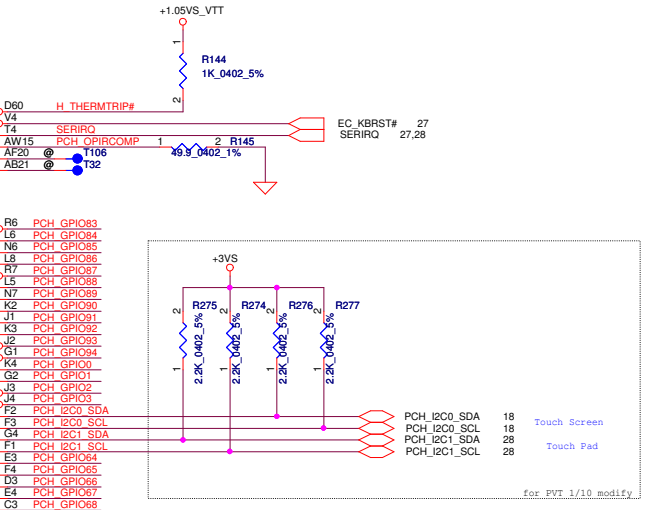
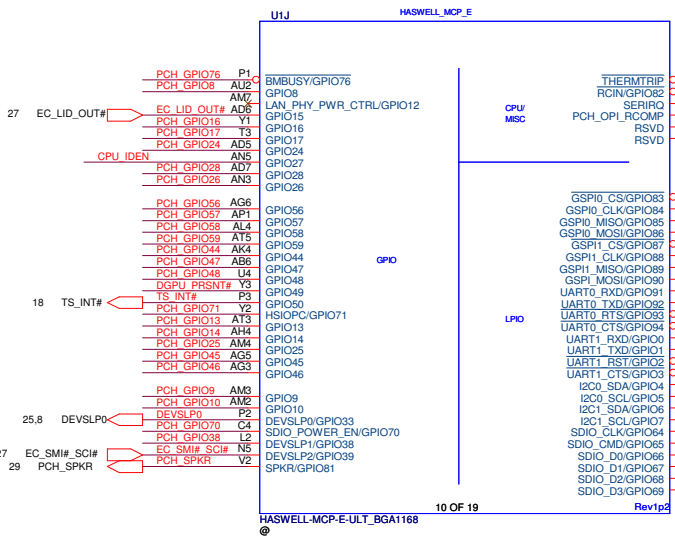
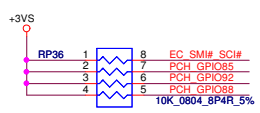
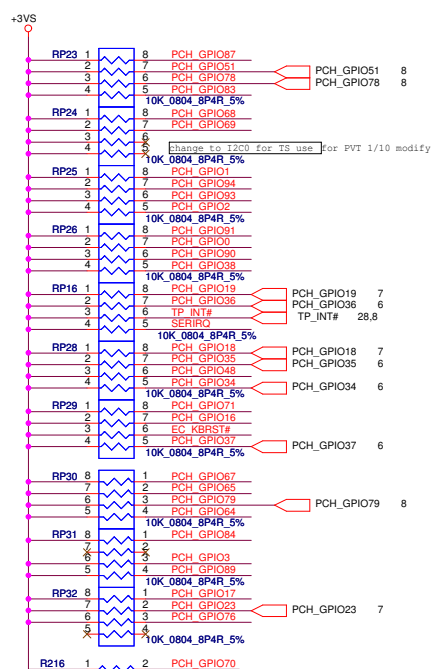
for Share EC ROM, +3VS change to +3VALW



R108 33 Ohm SD028330A80
R198 33 Ohm SD309330A80
U6 SA00004UG00
POP R102, R103, RP20, C67, U7, R109

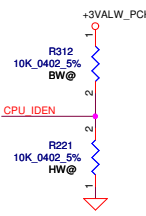


Security Classification		Compal Secret Data		Title	
Issued Date	2013/10/30	Deciphered Date	2014/10/30	BDW MCP(4/11) CLK,SPI,SMBUS	
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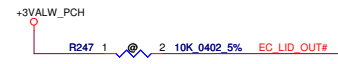


	GPIO49
DGPU_PRSN#	DGPU_PRSN#
DIS, Optimus	0
UMA	1

	GPIO26
	VGA INFO
N15V-GI	0
N15V-GM	1

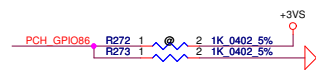


	GPIO27
	CPU INFO
Haswell	0
Boradwell	1



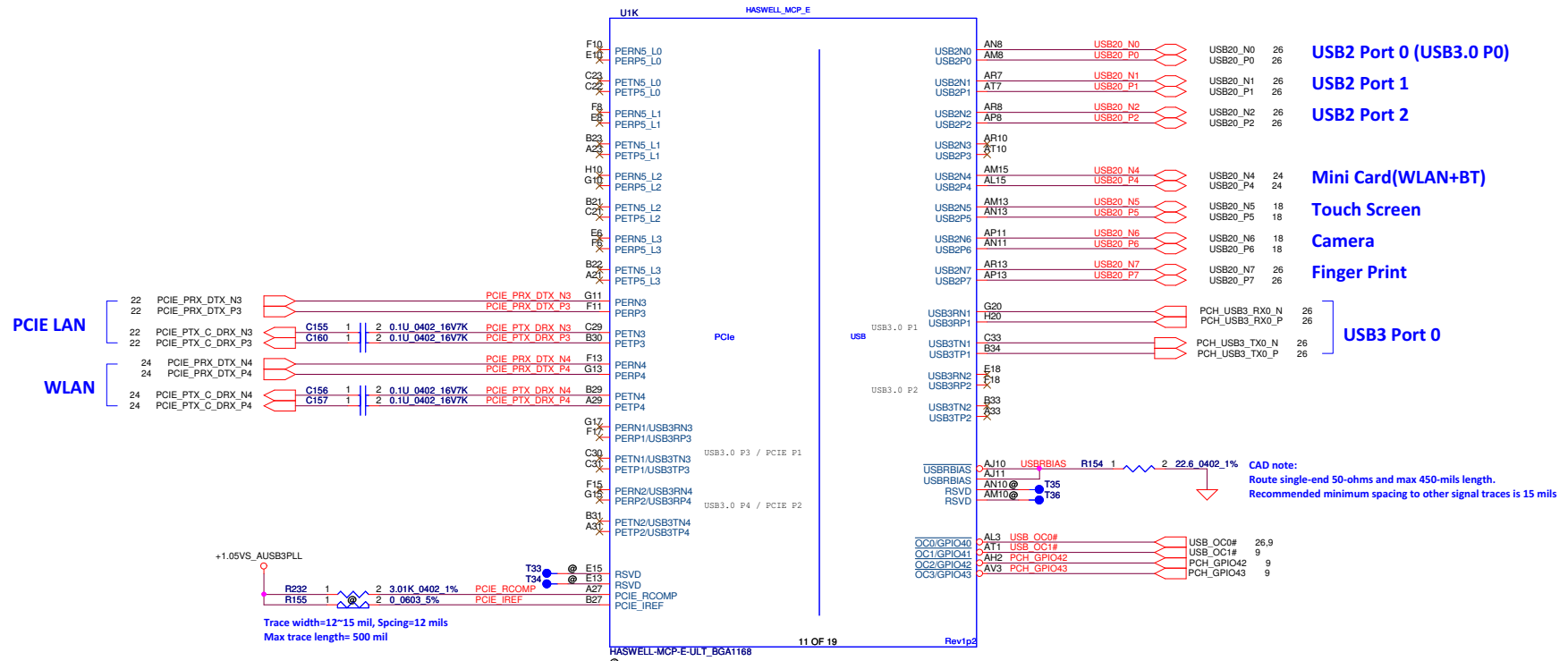
GPIO15 : TLS Confidentiality	
1:	Intel ME TLS with confidentiality
* 0:	Intel ME TLS with no confidentiality (Have internal PD)

SPKR / GPIO81 : NO REBOOT	
1:	ENABLED
* 0:	DISABLED (Have internal PD)

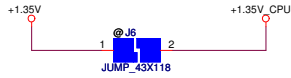


GPIO15 : TLS Confidentiality	
1:	ENABLED
* 0:	SPI ROM (Have internal PD)

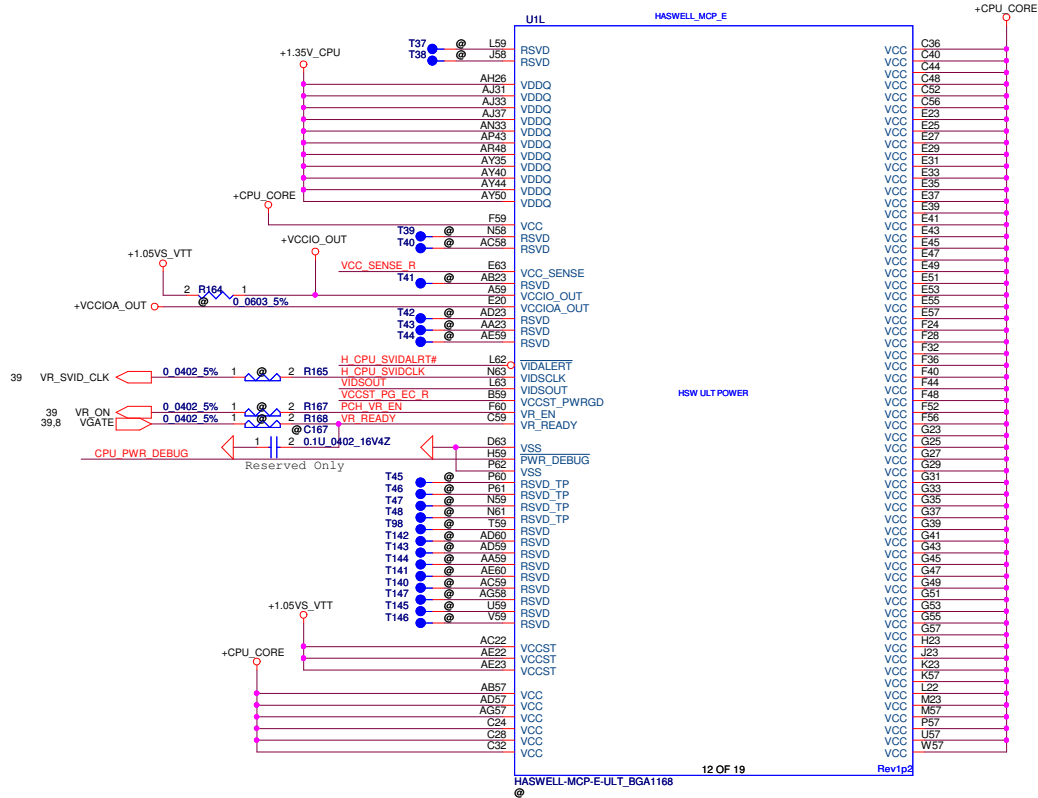
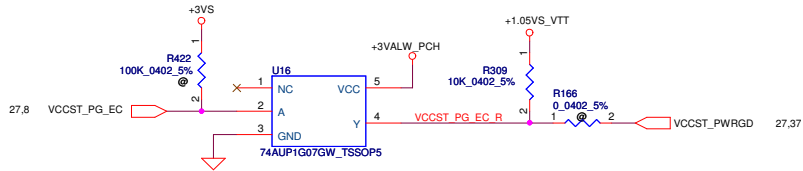
SDIO_D0 / GPIO66 : Top-Block Swap Override	
1:	ENABLED
* 0:	DISABLED (Have internal PD)



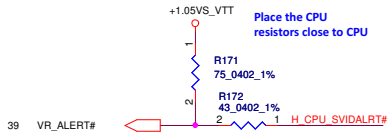
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Issued Date	2013/10/30	Deciphered Date	2014/10/30	BDW MCP(7/11) PCIE, USB
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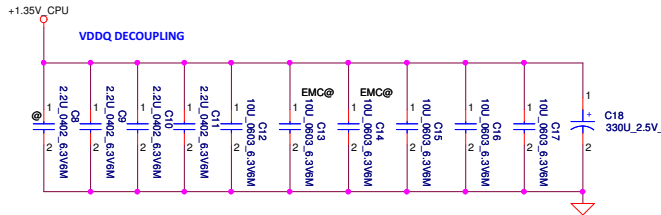
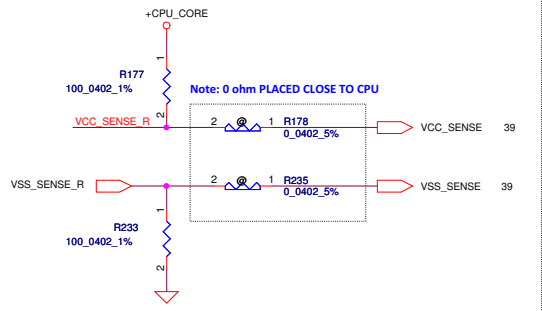
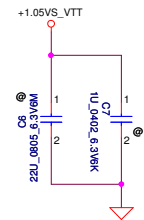
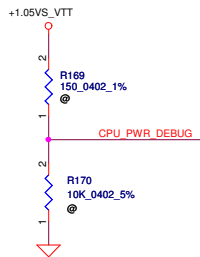
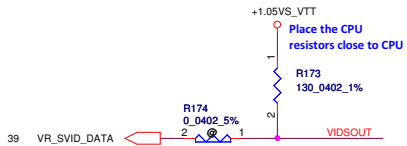
Shark Bay ULT have internal gate for VDDQ



SVID ALERT

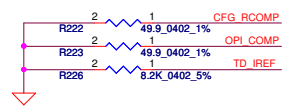
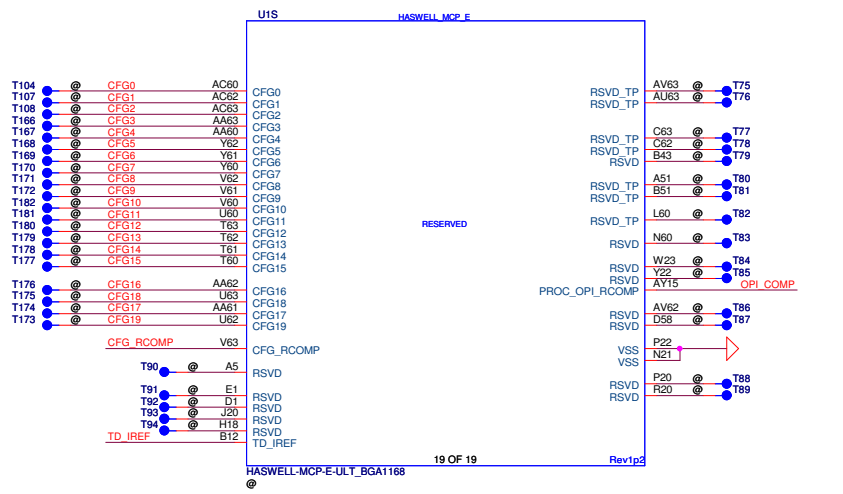
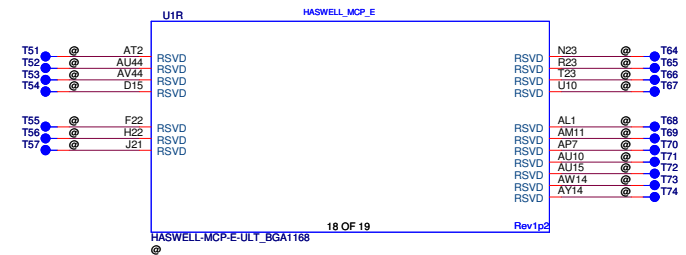
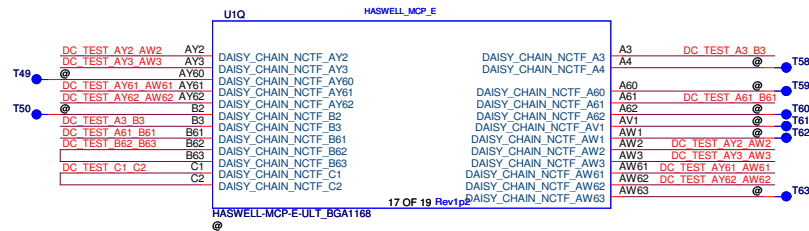


SVID DATA

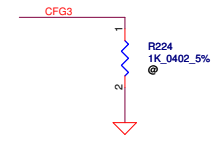


+1.35V : 470UF/2V/7343 * 2
 10UF/6.3V/0603 * 6
 2.2UF/6.3V/0402 * 4

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Issued Date	2013/10/30	Deciphered Date	2014/10/30	BDW MCP(8/11) Power
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Size: 11 of 44 Sheet: 11 of 44 Rev: 1.0				

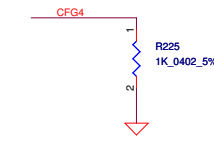


CFG Straps for Processor



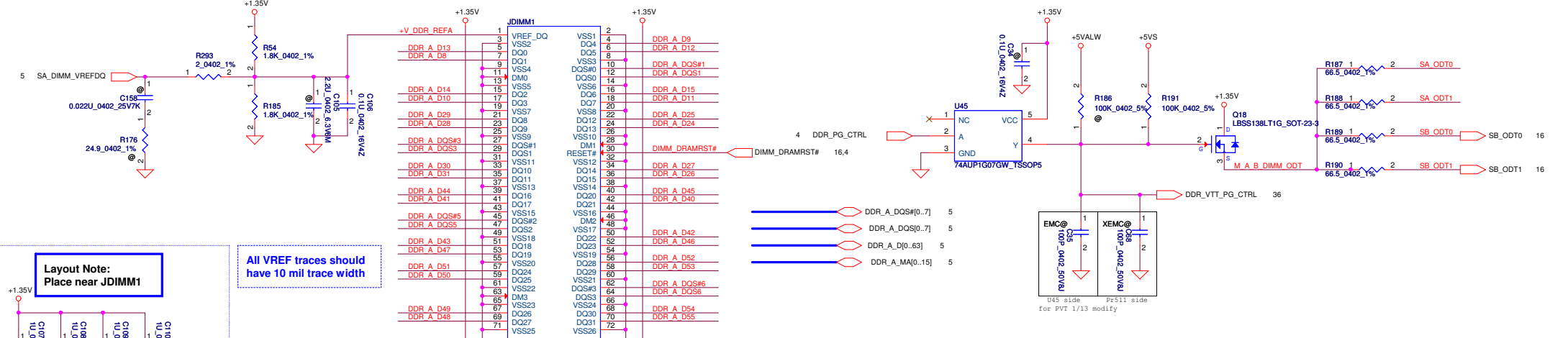
Physical Debug Enable (DFX Privacy)

CFG3	1: DISABLED 0: ENABLED; SET DFX ENABLED BIT IN DEBUG INTERFACE MSR
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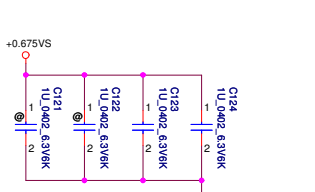
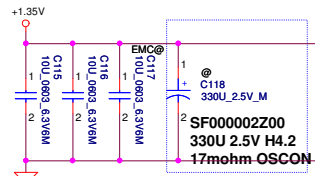
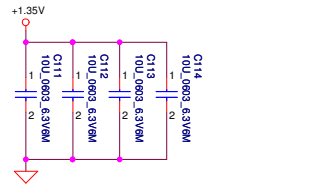
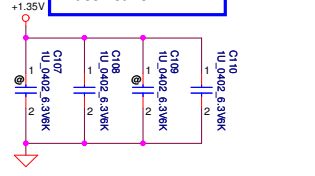
Display Port Presence Strap

CFG4	1: Disabled; No Physical Display Port attached to Embedded Display Port 0: Enabled; An external Display Port device is connected to the Embedded Display Port
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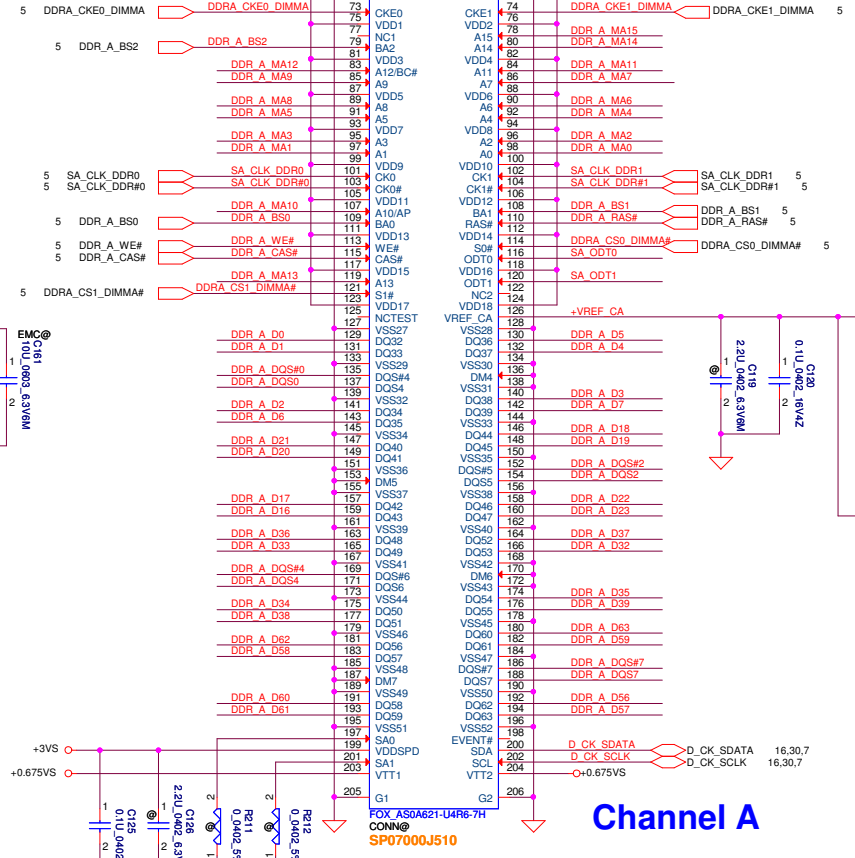


Layout Note:
Place near JDIMM1

All VREF traces should have 10 mil trace width

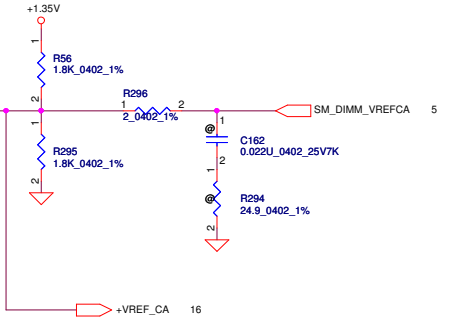
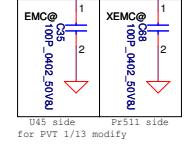


Layout Note:
Place near JDIMM1.203,204

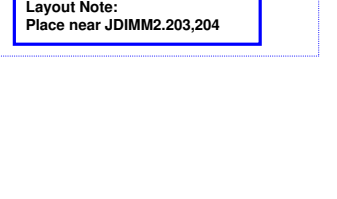
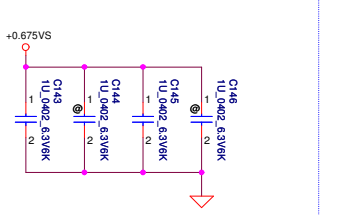
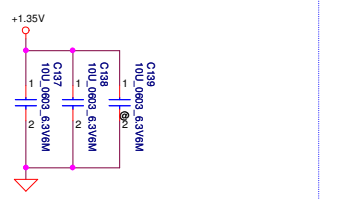
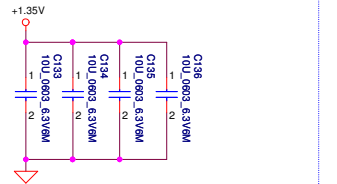
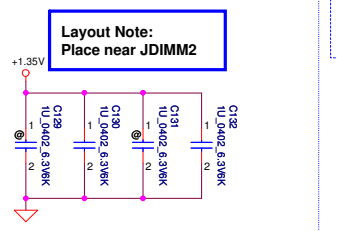
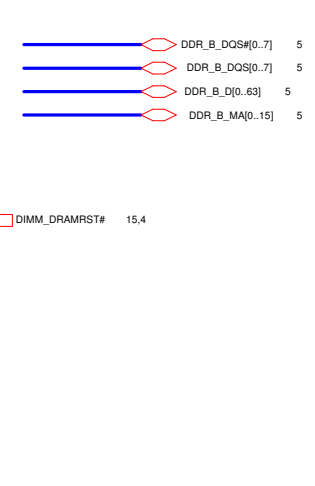
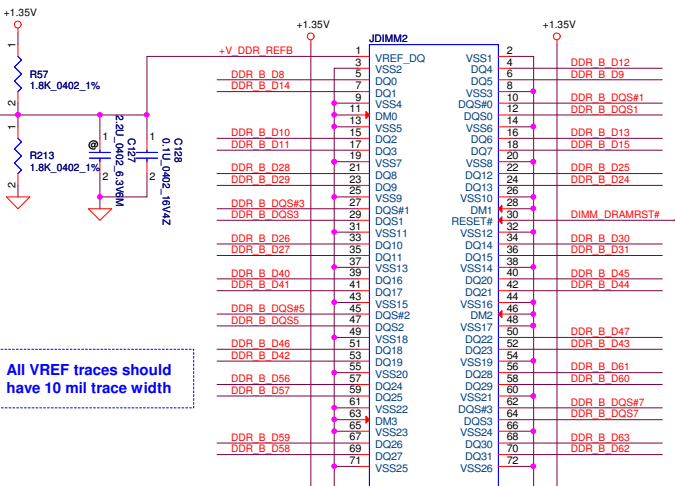
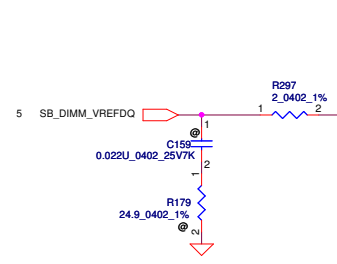


Channel A

<Address: SA1:SA0=00>
DIMM_1 H:4mm
DIS for Standard type
UMA for Reverse type



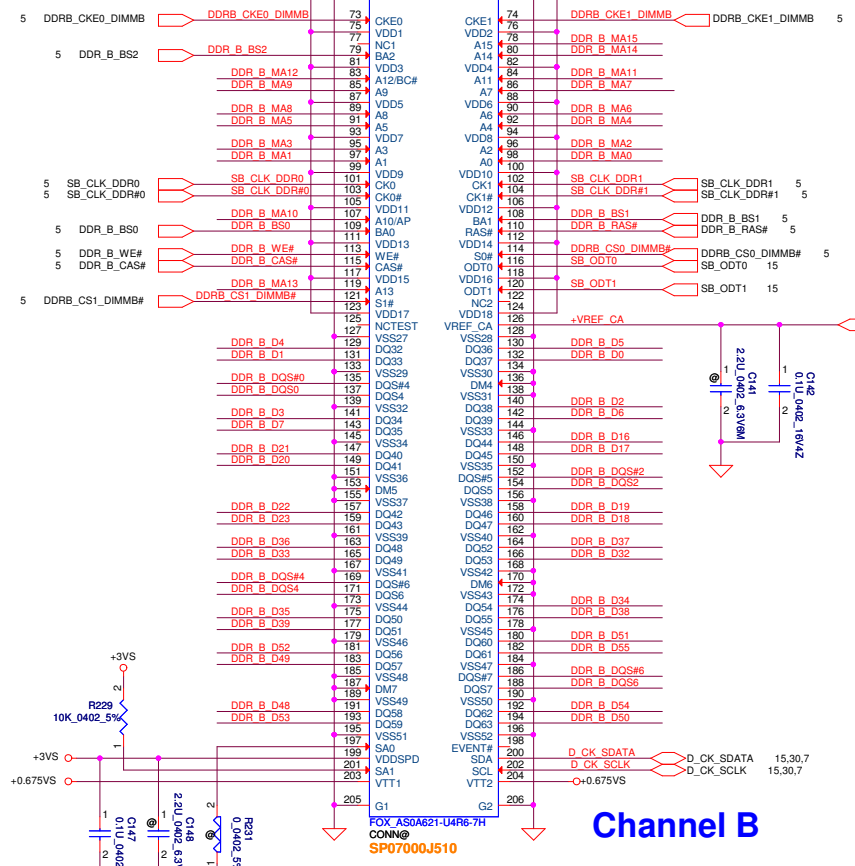
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Issued Date	2013/10/30	Deciphered Date	2014/10/30	DDR III DIMMA	
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All VREF traces should have 10 mil trace width

Layout Note: Place near JDIMM2

Layout Note: Place near JDIMM2.203,204

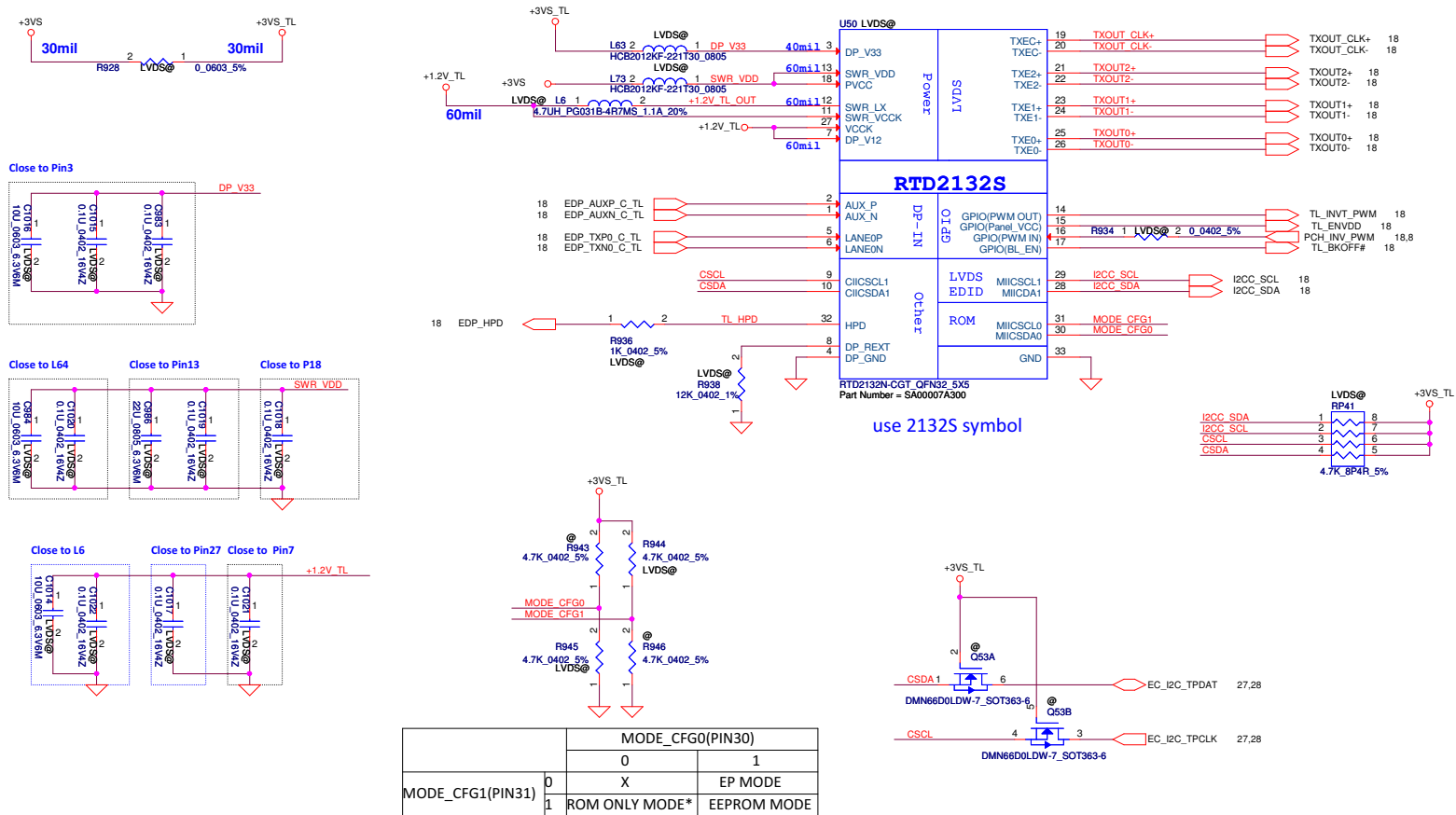


Channel B

<Address: SA1:SA0=10>
DIMM_2 H:4mm
DIS for Standard type
UMA for Reverse type

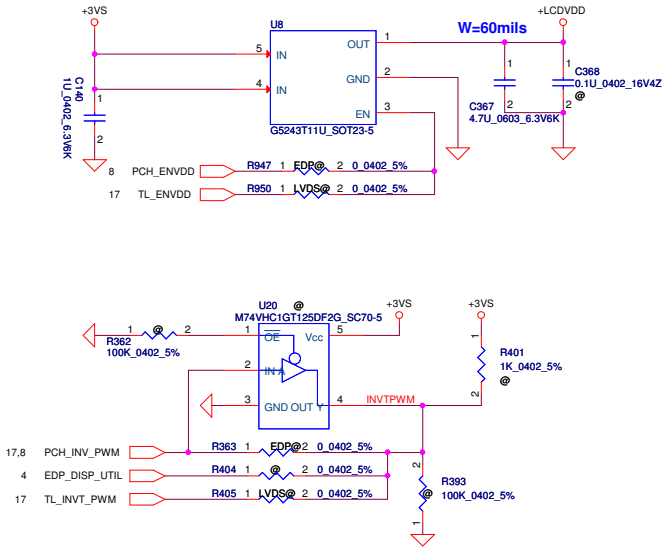
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LVDS Translator - RTD2132R

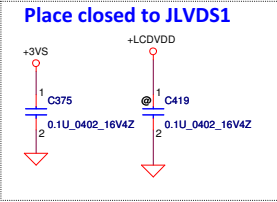
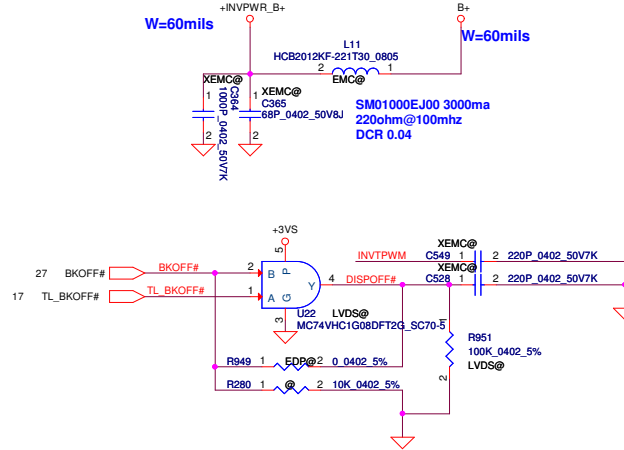


EDP / LVDS conn.

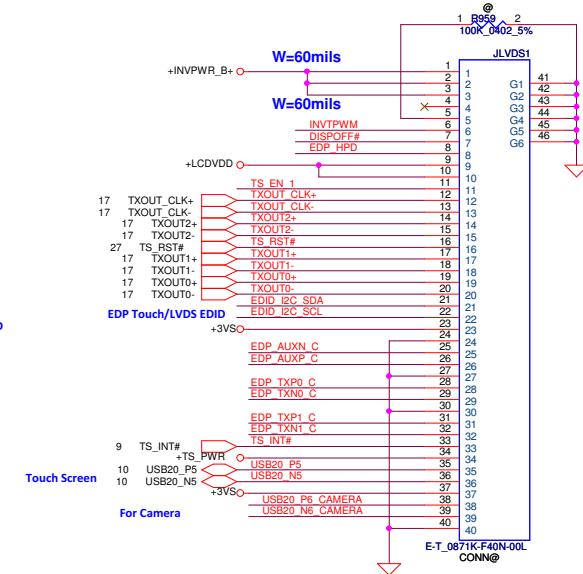
LCD POWER CIRCUIT



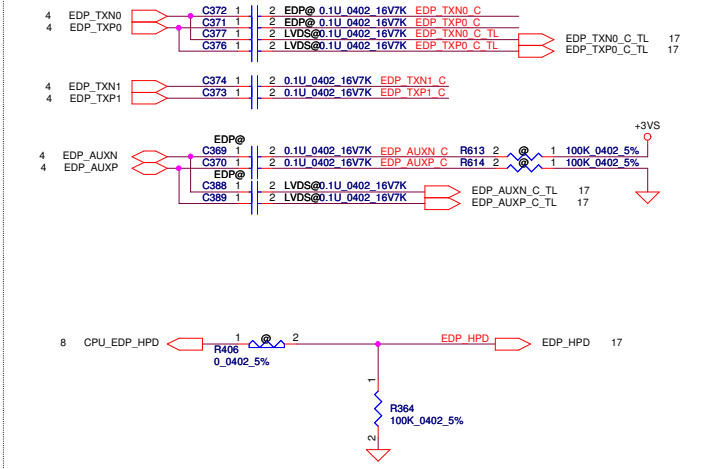
W=60mils



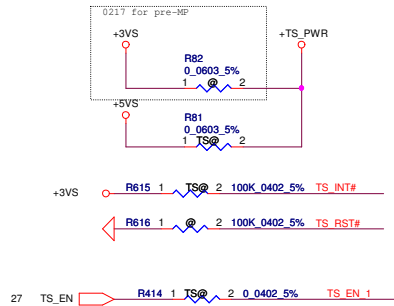
LCD/ LED PANEL Conn.



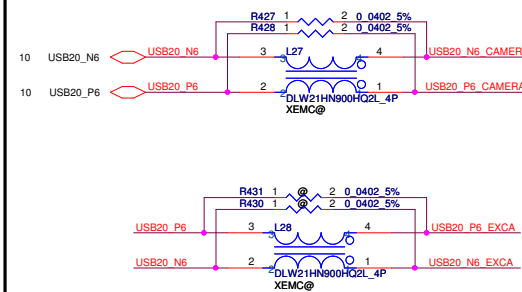
eDP



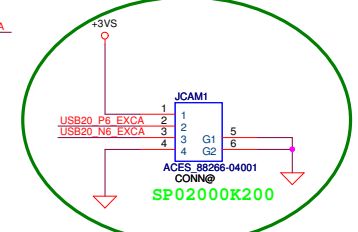
Touch Screen



Camera

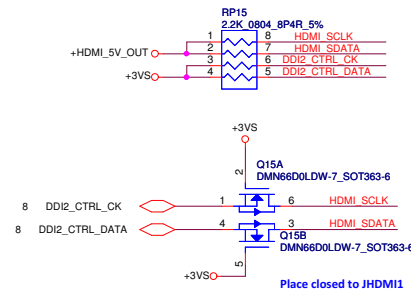
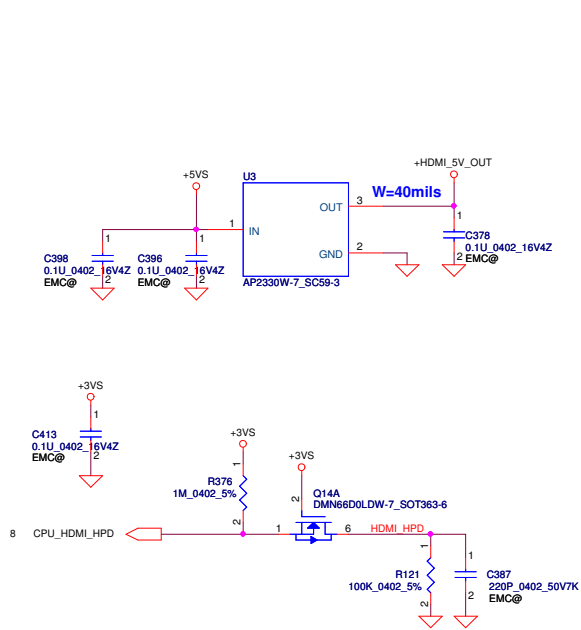


pin define, conn need to confirm



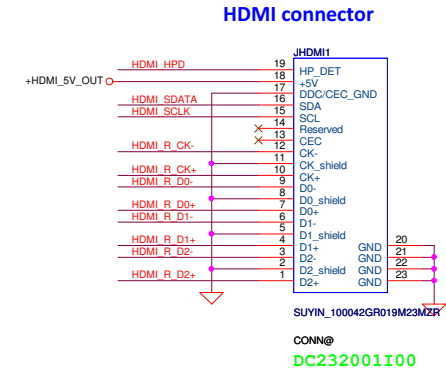
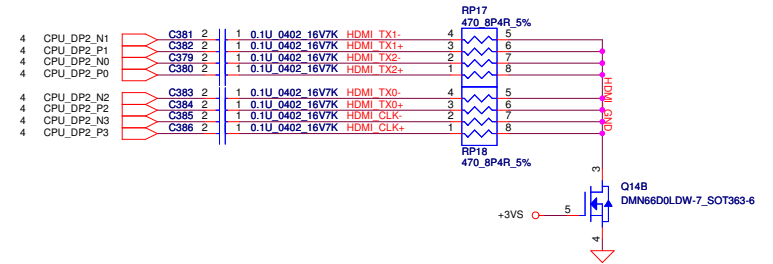
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HDMI conn.

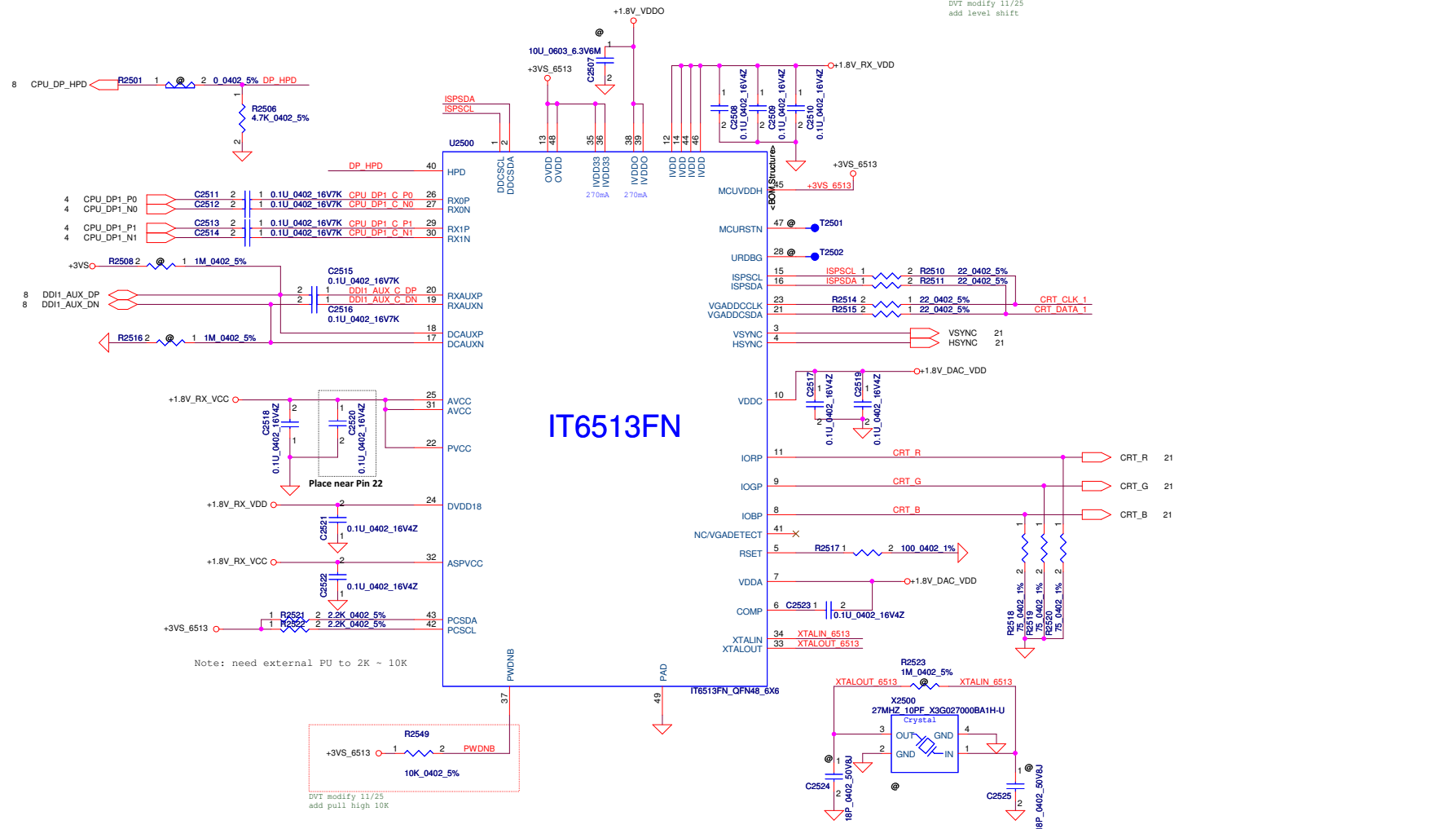
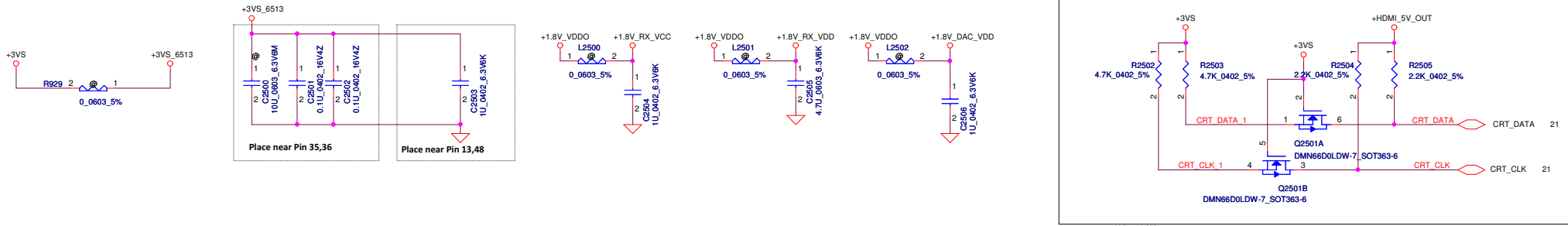


SM070001310 400ma 90ohm@100mhz DCR 0.3

HDMI_CLK-	R368	1	2	0.0402_5%	HDMI_R_CLK-
HDMI_CLK+	R369	1	2	0.0402_5%	HDMI_R_CLK+
HDMI_TX0-	R370	1	2	0.0402_5%	HDMI_R_D0-
HDMI_TX0+	R371	1	2	0.0402_5%	HDMI_R_D0+
HDMI_TX1-	R372	1	2	0.0402_5%	HDMI_R_D1-
HDMI_TX1+	R373	1	2	0.0402_5%	HDMI_R_D1+
HDMI_TX2-	R374	1	2	0.0402_5%	HDMI_R_D2-
HDMI_TX2+	R375	1	2	0.0402_5%	HDMI_R_D2+



DP to VGA-IT6513

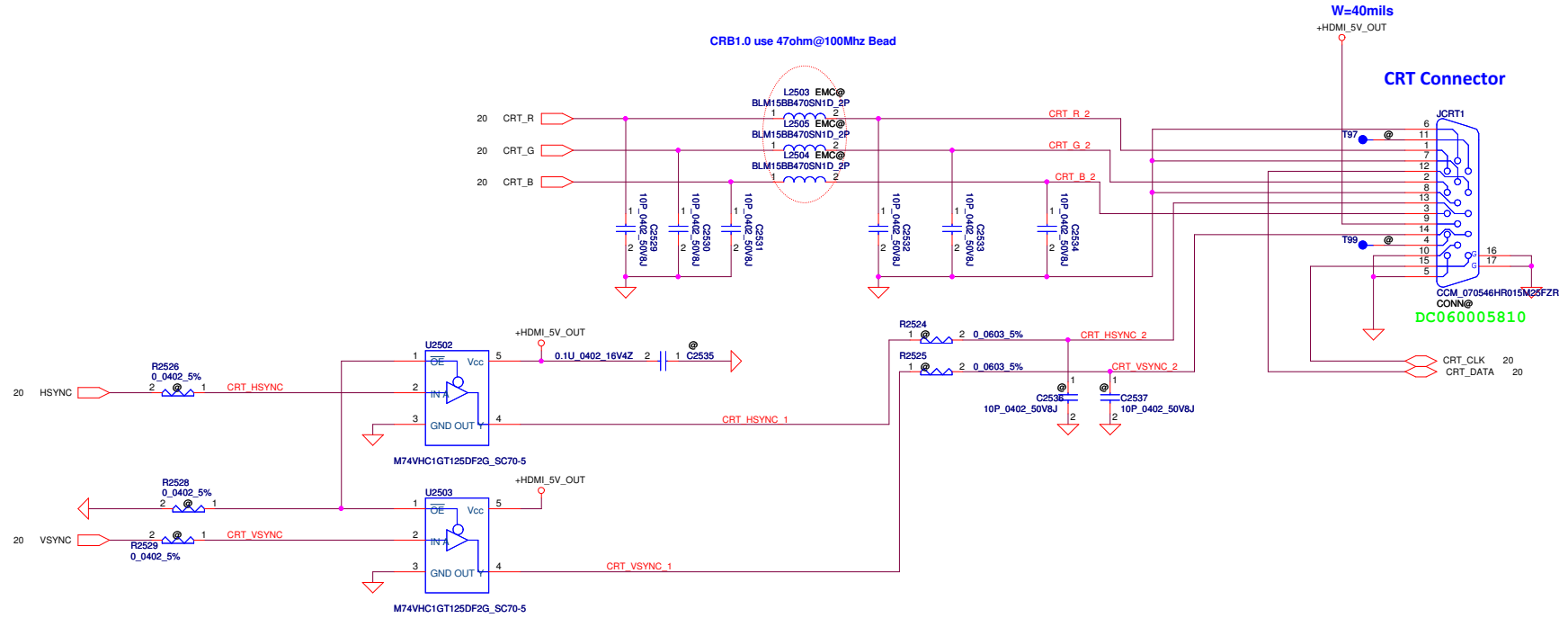


Note: need external PU to 2K ~ 10K

DVT modify 11/25
add pull high 10K

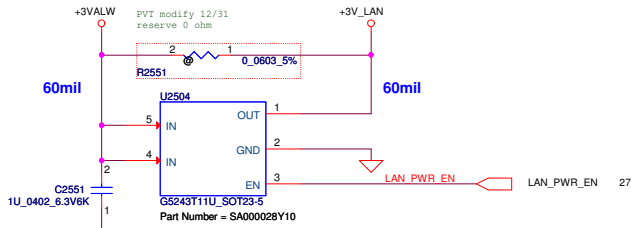
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Issued Date	2013/10/30	Deciphered Date	2014/10/30	Title	
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Size	Document Number	Customer		Rev	
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CRT conn.



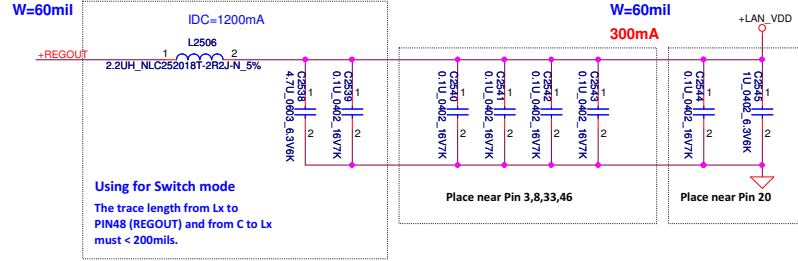
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	Z5WAH	M/B LA-B161P	1.0	
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LAN-RTL8411B

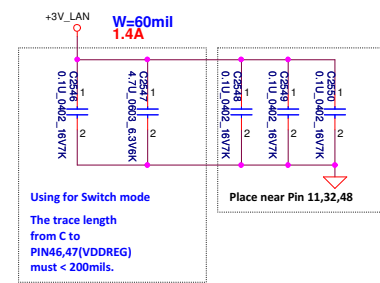


From EC
High active.
EN threshold voltage min:1.2V typ:1.6V max:2.0V
Current limit threshold 1.5~2.8A
+3V_LAN Rising time must >0.5ms and <100ms

EC_PME# pull high 10K to +3VALW

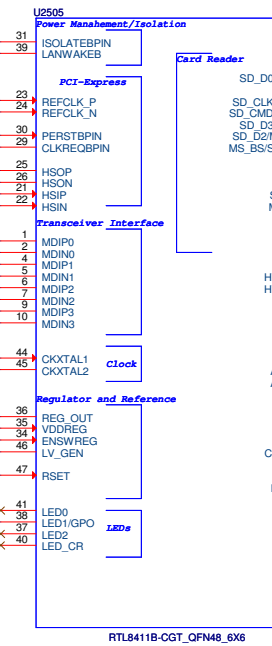
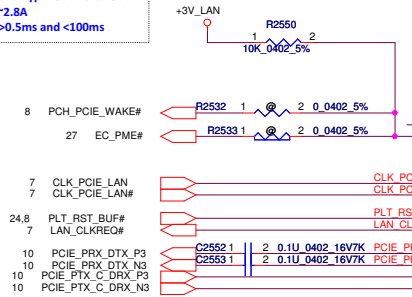


Using for Switch mode
The trace length from Lx to PIN48 (REGOUT) and from C to Lx must < 200mils.



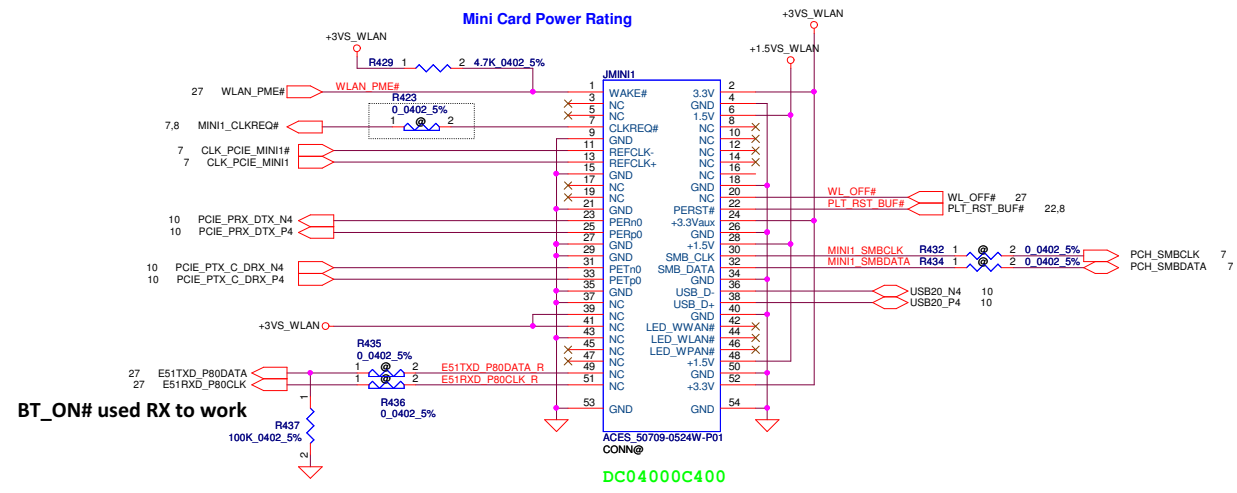
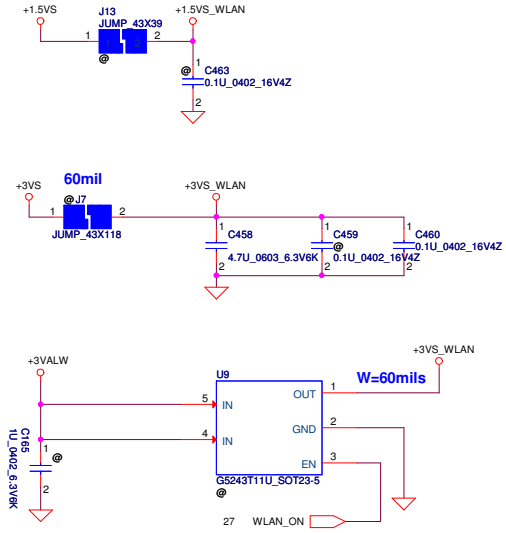
Using for Switch mode
The trace length from C to PIN46,47(VDDREG) must < 200mils.

PU at PCH side
C788,C791
Place near Pin 25,26



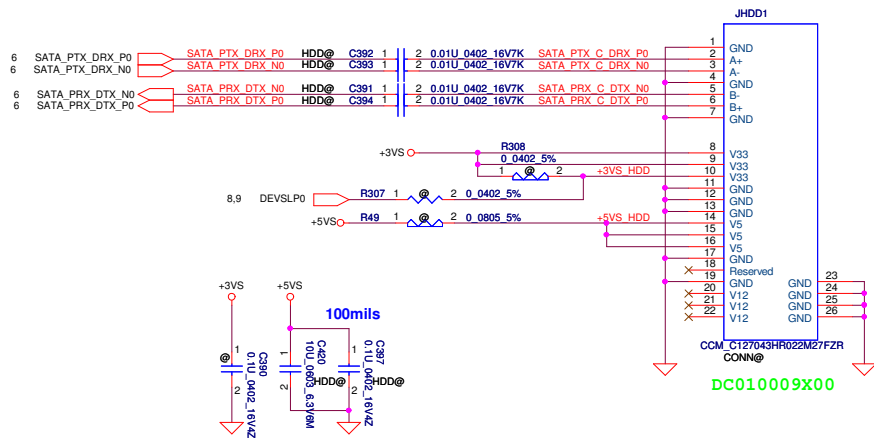
	Protect contact		Card contact
	Write protect (Lock)	Write Enable (Unlock)	
Card Uninsert	Open	Open	Open
Card insert	Open	Close	Close

Wireless LAN

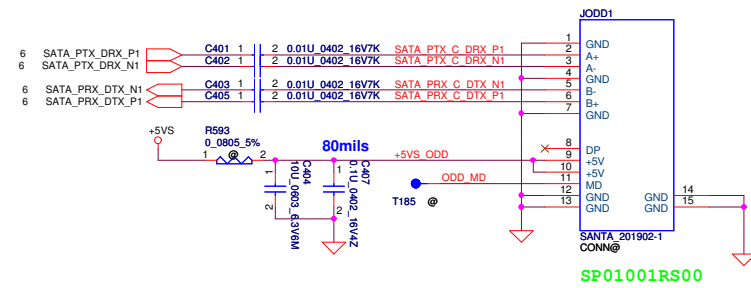


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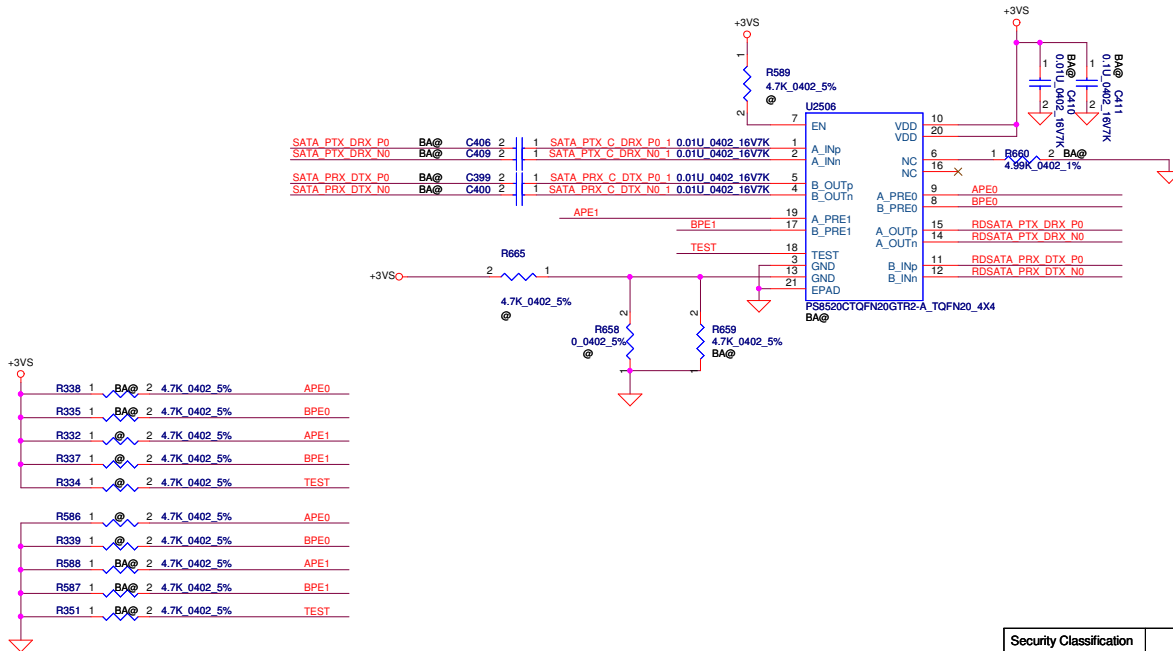
SATA HDD1 Conn.



SATA ODD Conn.

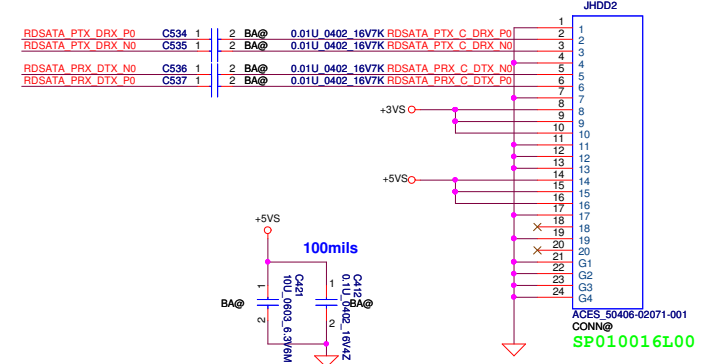


SATA Re-Driver HDD Conn. Reserve



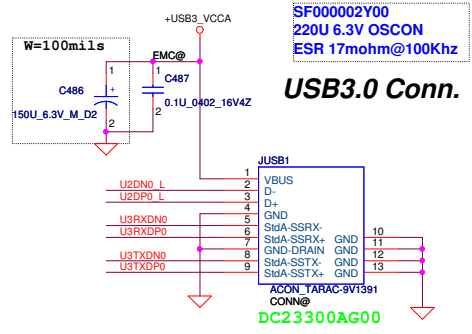
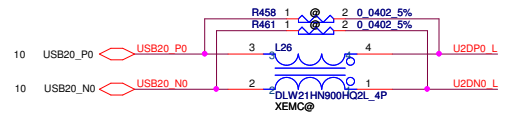
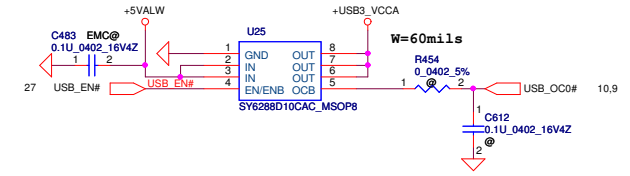
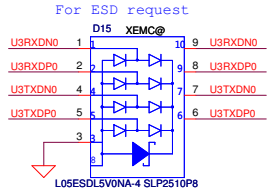
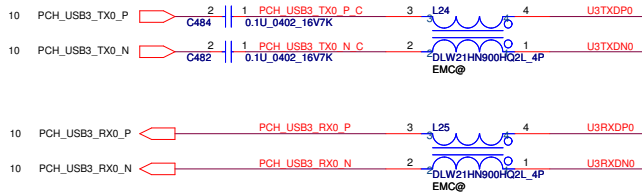
SATA HDD1 Conn.

CL 4.0 mm

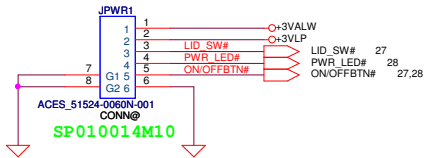


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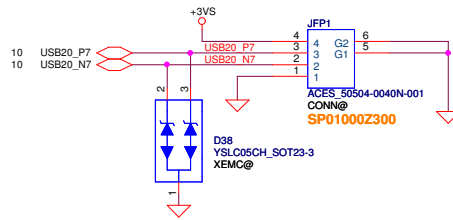
USB3.0 (Port 0)



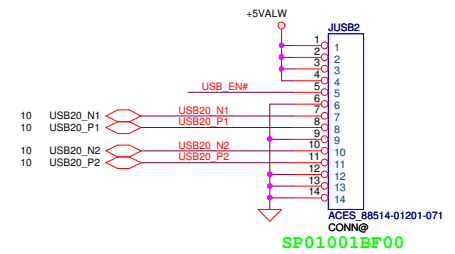
PWR/B



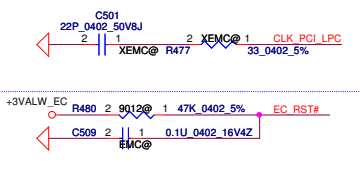
Finger Print /B Reserve



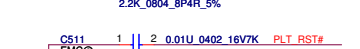
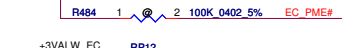
USB/B (USB Port 1, Port2)



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9022: ECRST# is internally pull-up to VCC via 40Kohm resistor, so can remove external pull-up resistor and capacitor.

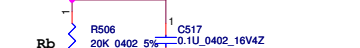


9022: Change control method from push-pull to open-drain, so EC_SCI# must be pull high. *PU on PCH side (Pull high in PCH side)

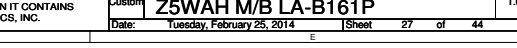
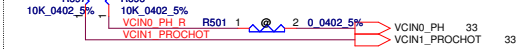
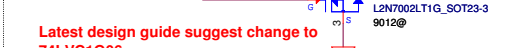
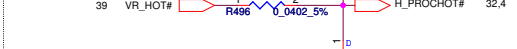
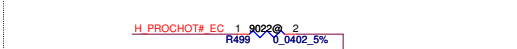
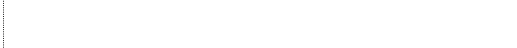
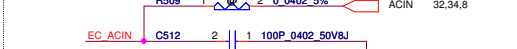
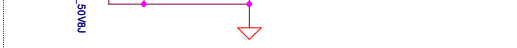
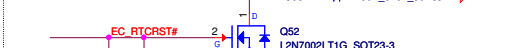
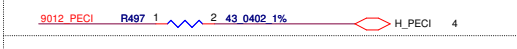
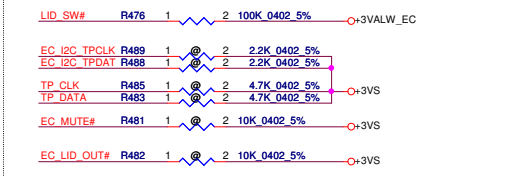
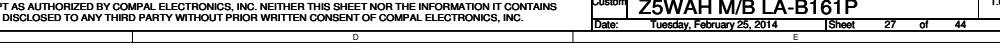
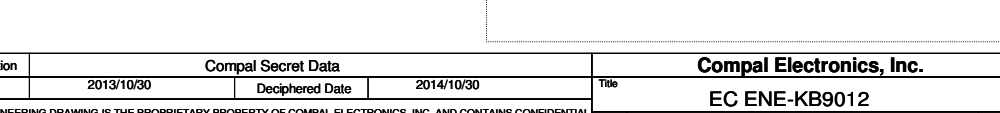
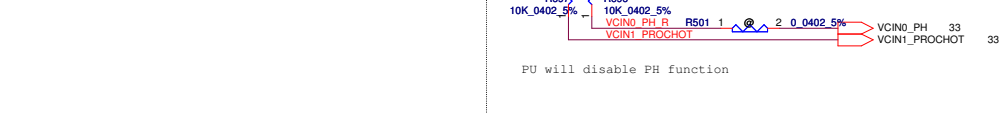
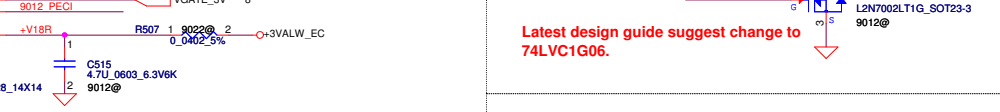
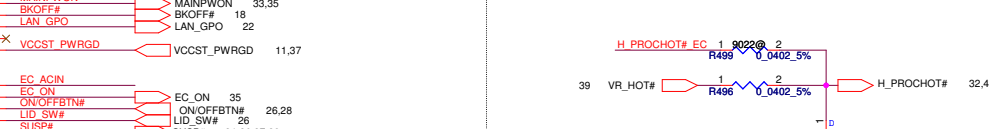
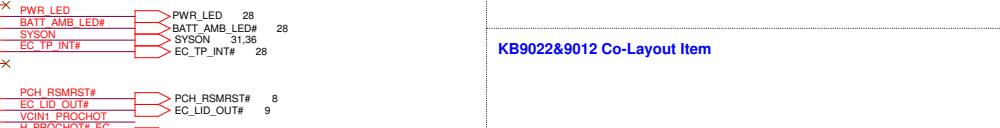
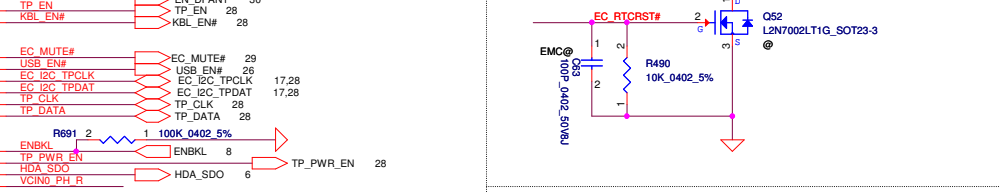
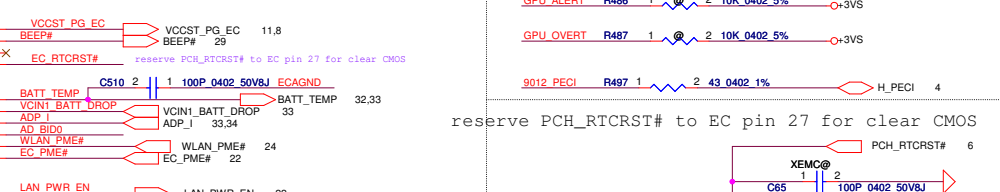
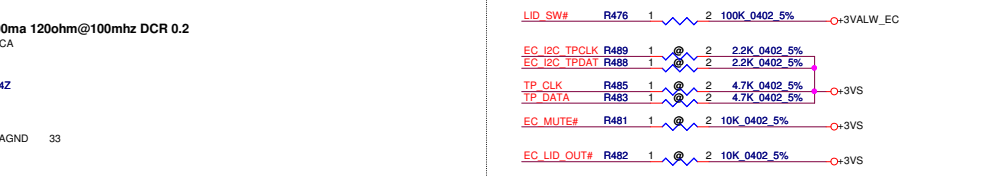
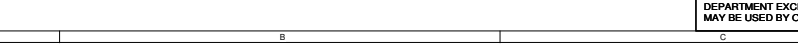
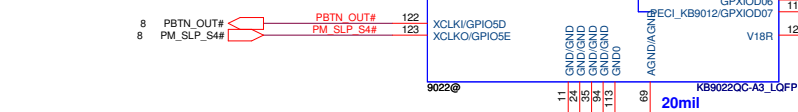
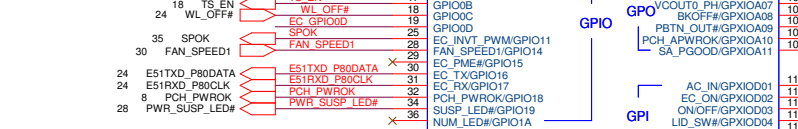
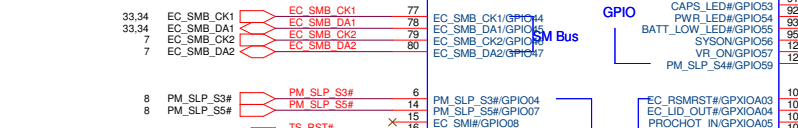
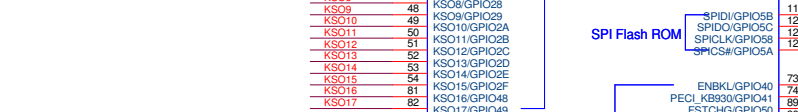
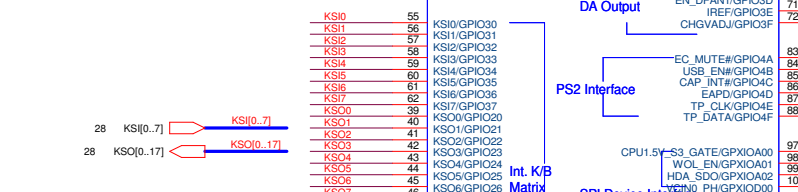
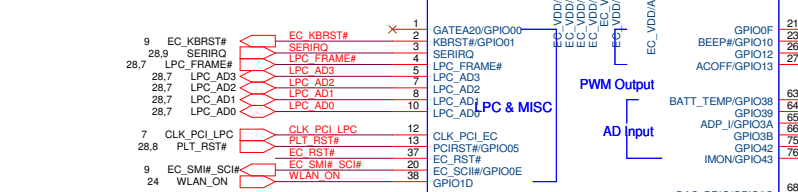
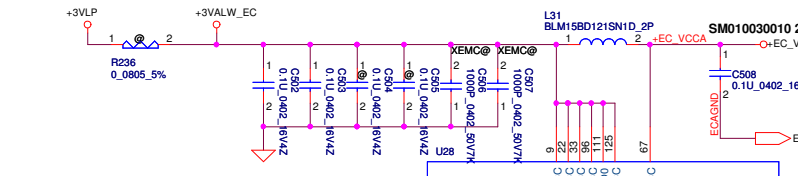
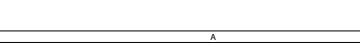
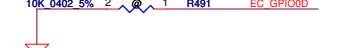
For abnormal shutdown



Board ID
Analog Board ID definition, Please see page 3.

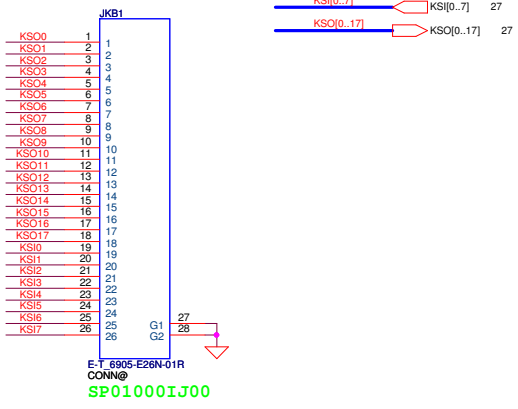


R491 reserve for RTD2132 EP_MODE

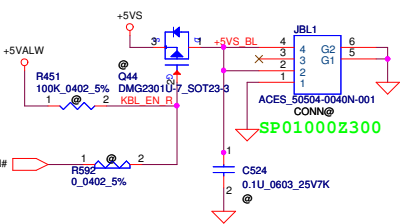


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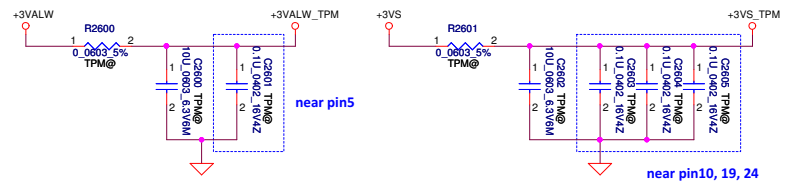
KB Conn.



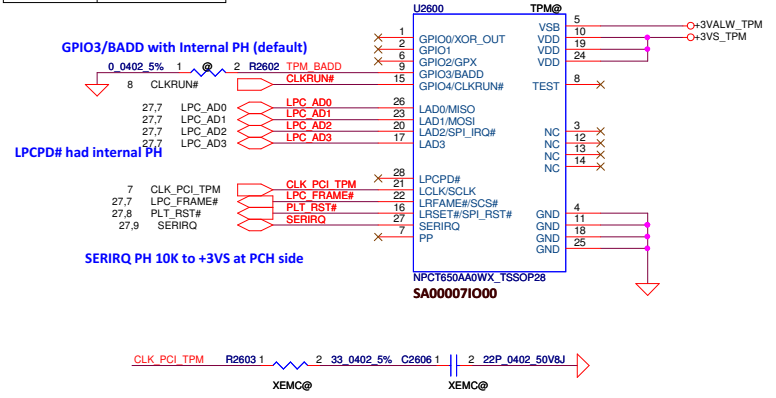
KB BackLight Conn. Reserve



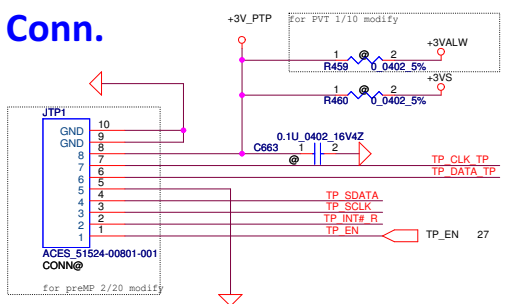
TPM Board for 2015



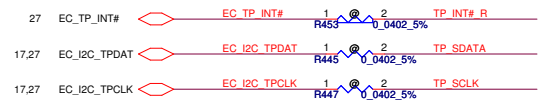
BADD	SELECTION
0	EEh - EFh
* 1	7Eh - 7Fh



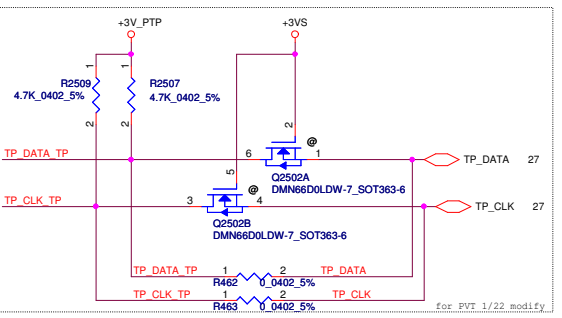
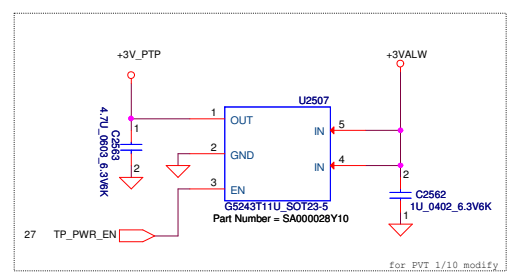
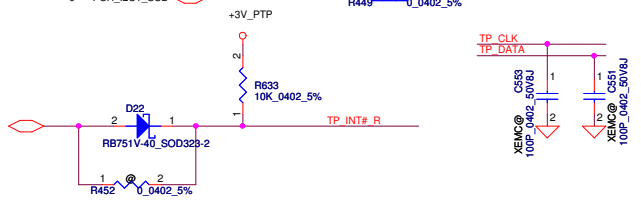
TP/B Conn.



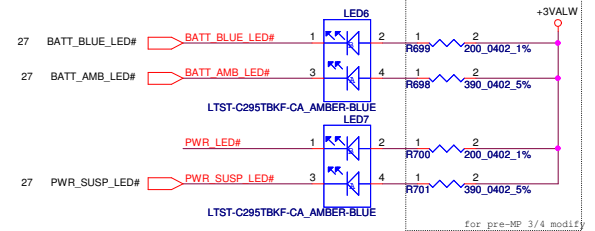
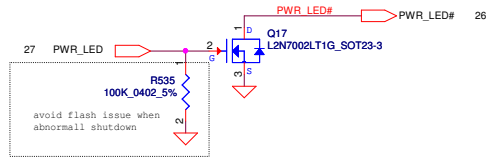
EC I2C



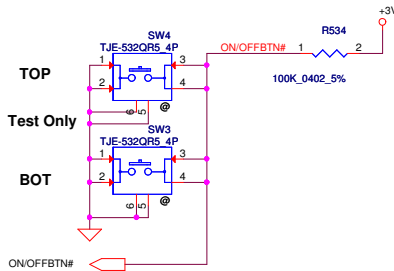
PCH I2C



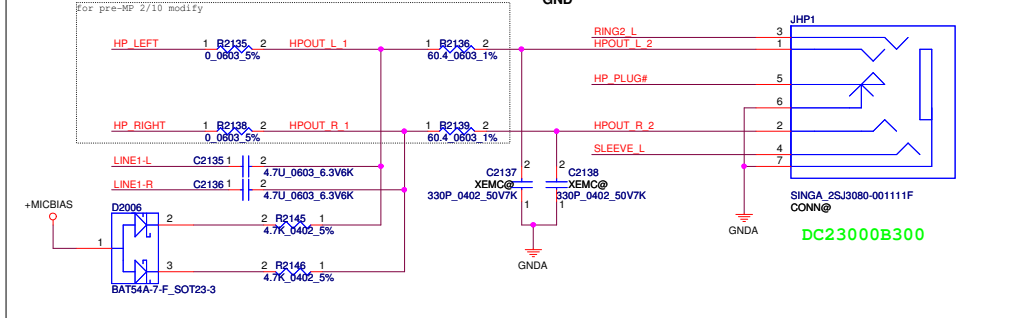
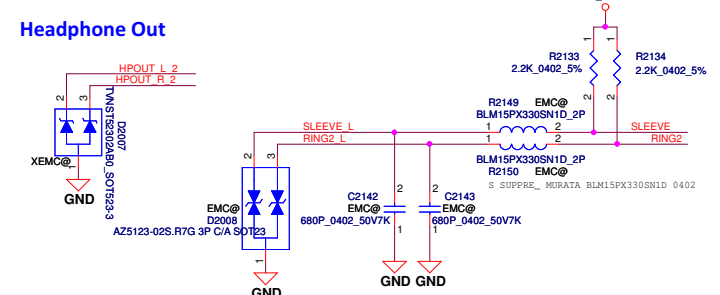
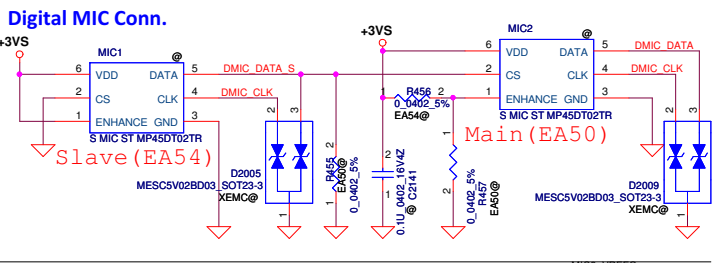
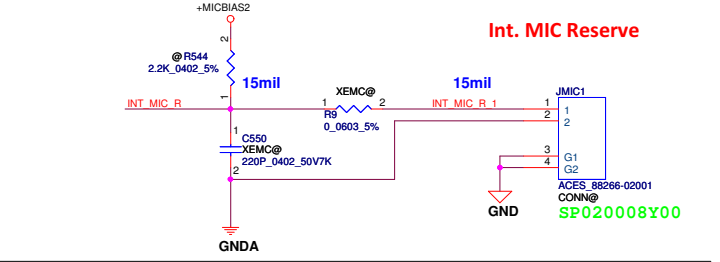
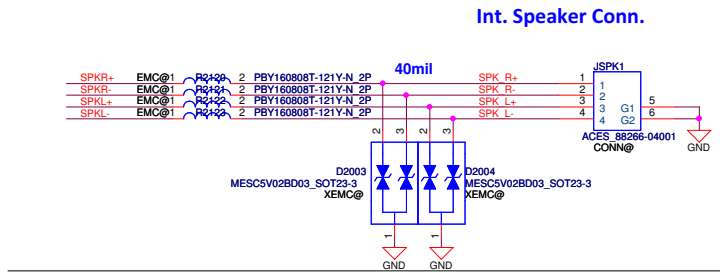
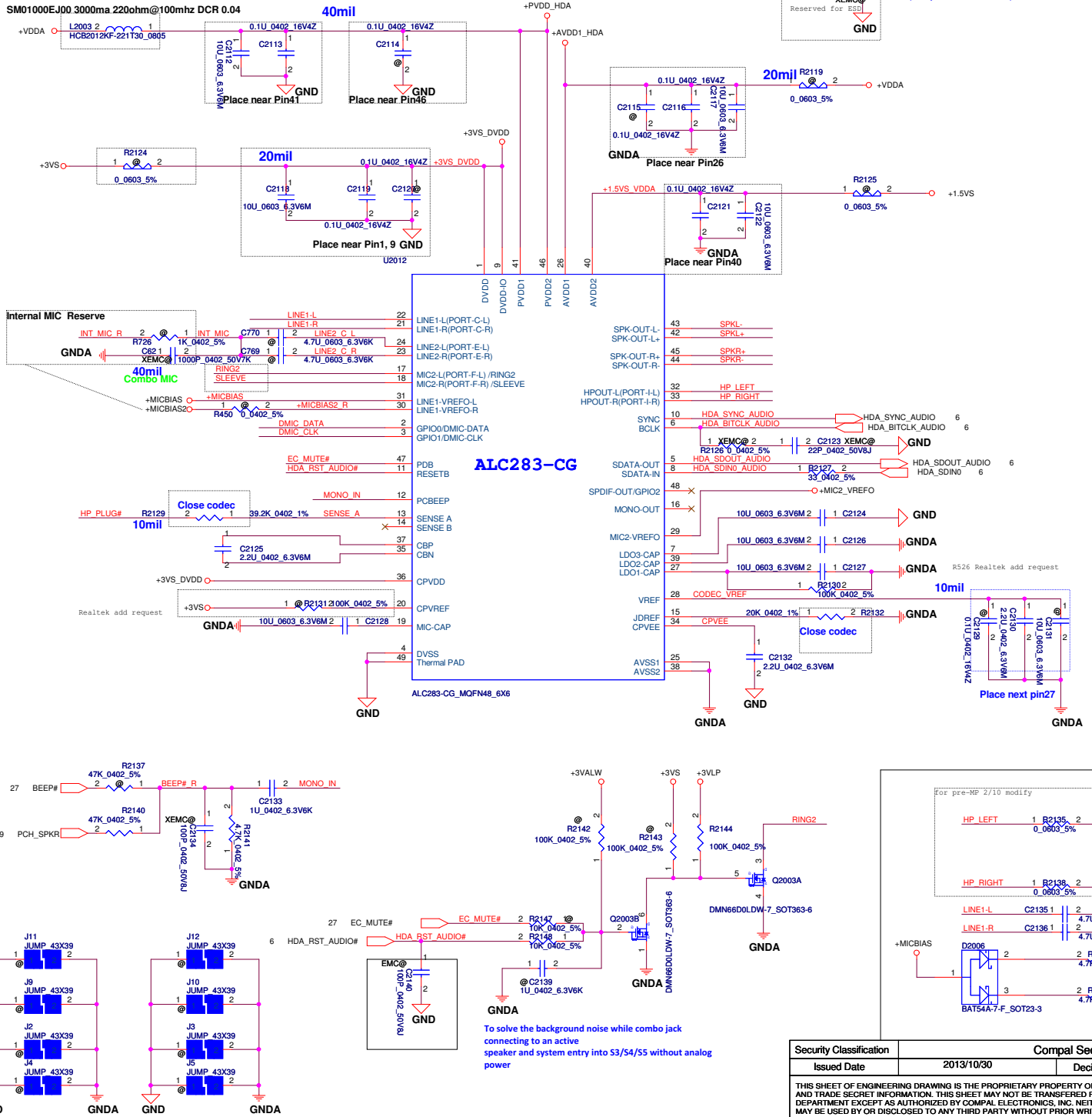
LED



ON/OFF BTN



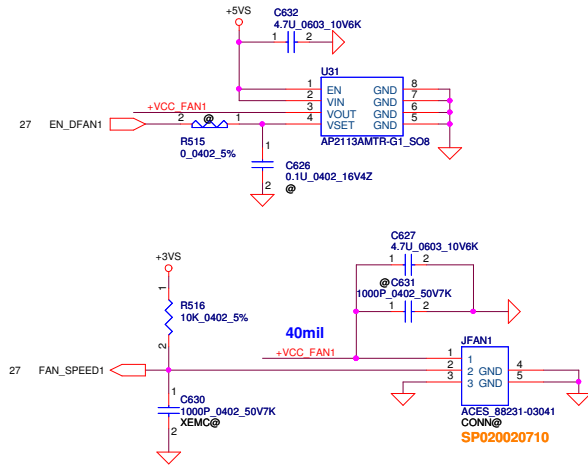
HD Audio Codec



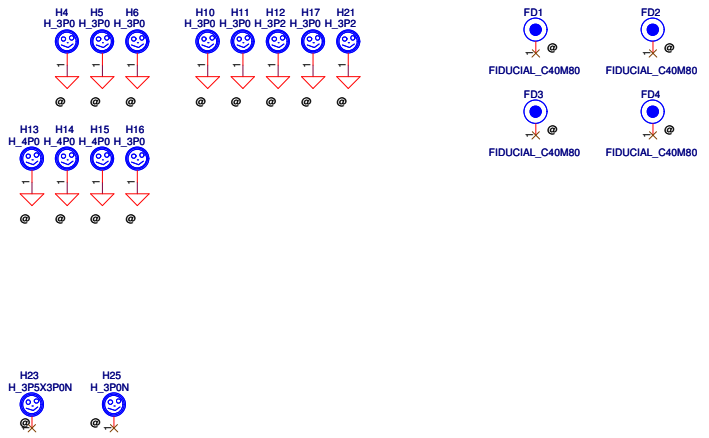
To solve the background noise while combo jack connecting to an active speaker and system entry into S3/S4/S5 without analog power

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Customer Number Z5WAH/M/B LA-B161P			Rev 1.0
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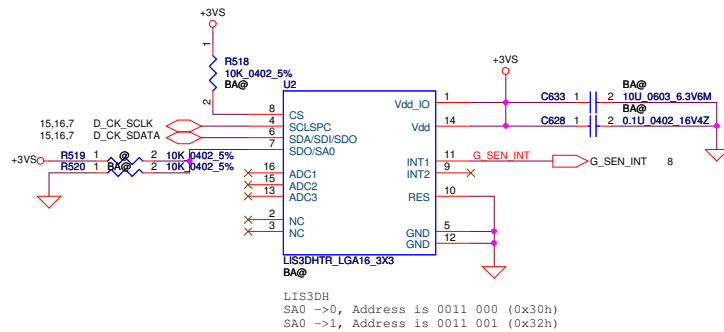
FAN1 Conn



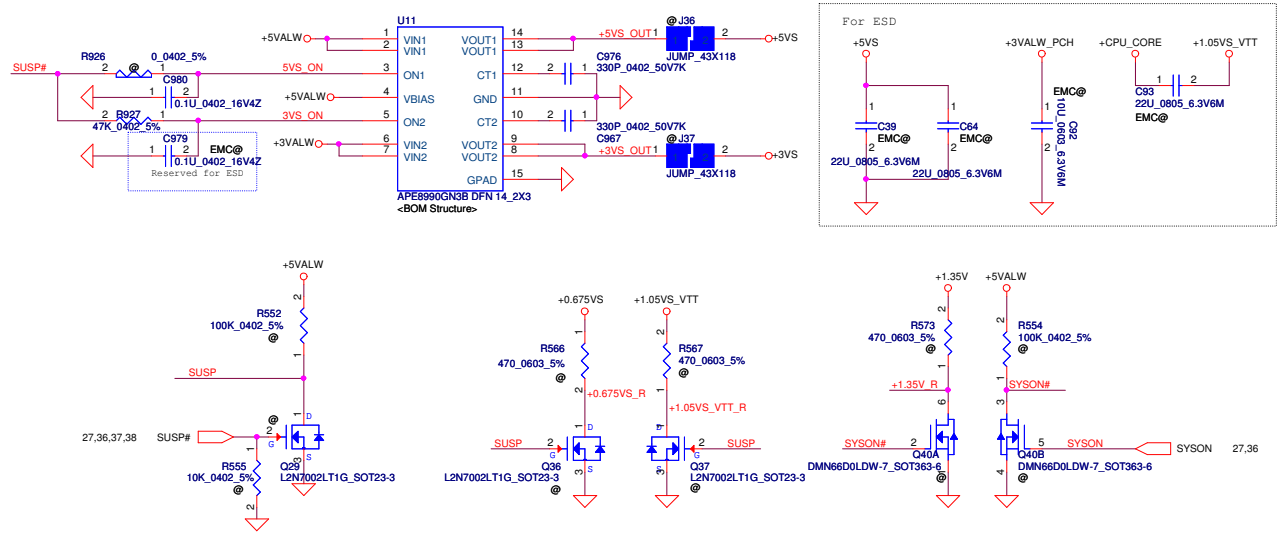
Screw Hole



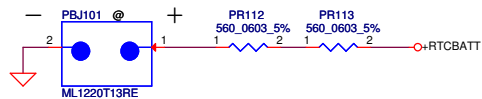
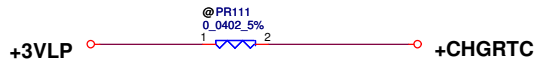
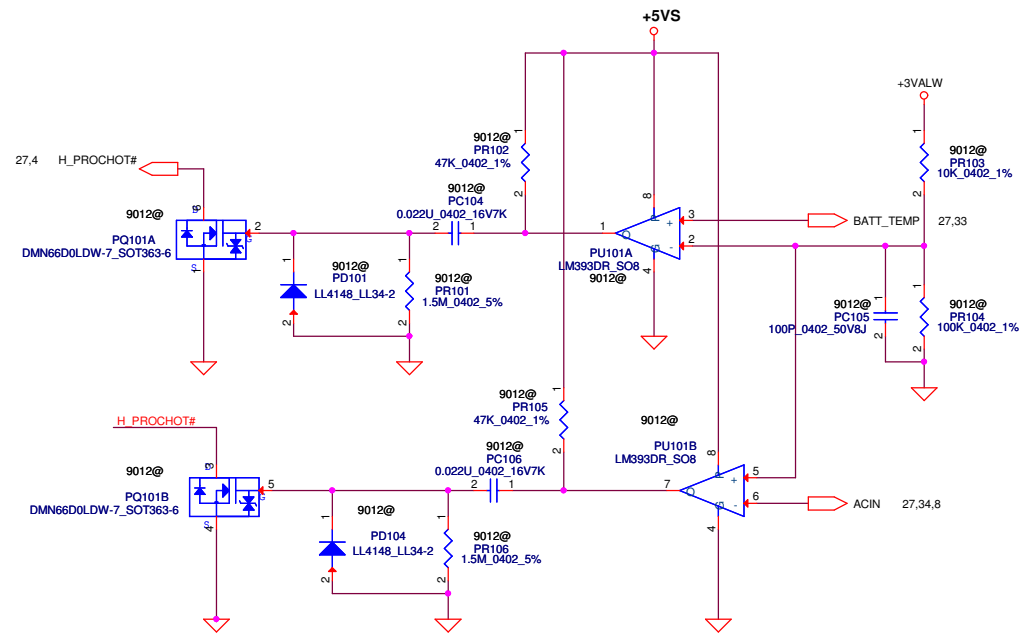
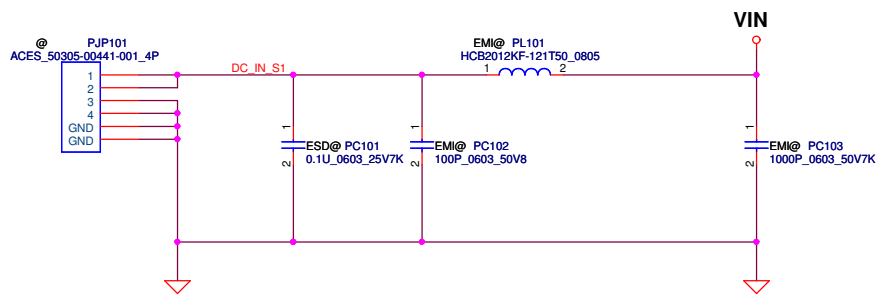
G-Sensor Reserve



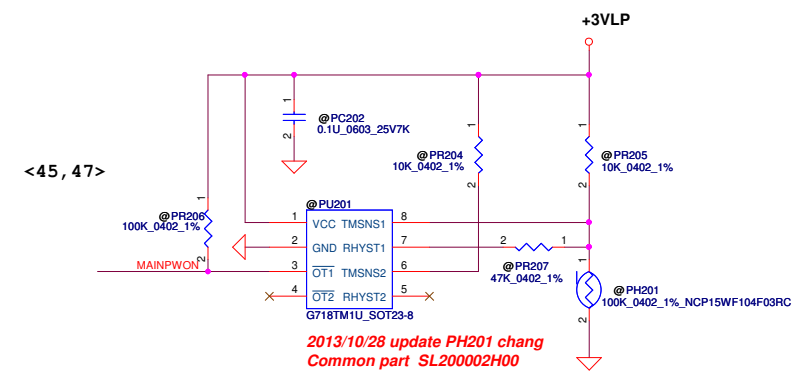
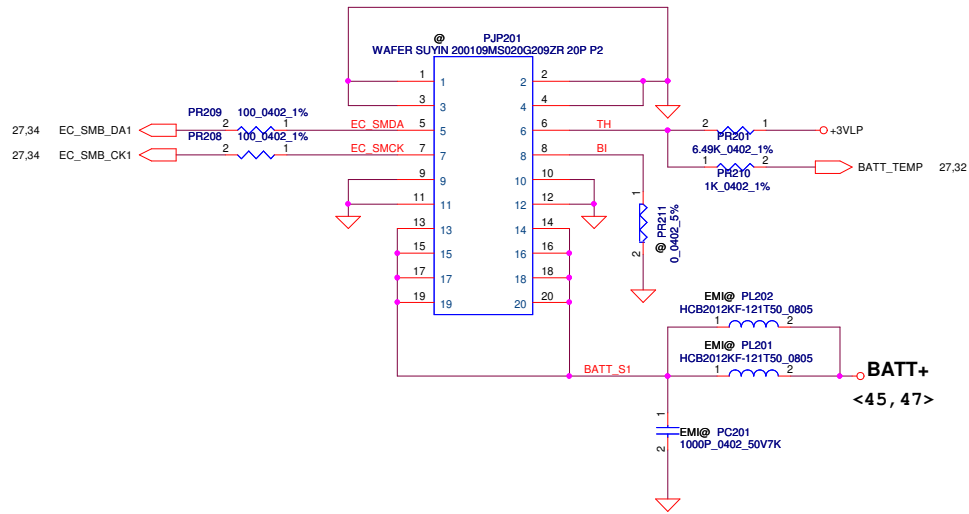
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Title	FAN & Screw Hole & G-Sensor		Size	Rev
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2013/10/28 update PH201 chang
Common part SL200002H00

---Battery_pin define---
 PIN1 GND
 PIN2 GND
 PIN3 SMD
 PIN4 SMC
 PIN5 TS
 PIN6 B/I
 PIN7 Batt+
 PIN8 Batt+

---Battery Con_pin define---
 PIN8 GND
 PIN7 GND
 PIN6 SMD
 PIN5 SMC
 PIN4 TS
 PIN3 B/I
 PIN2 Batt+
 PIN1 Batt+

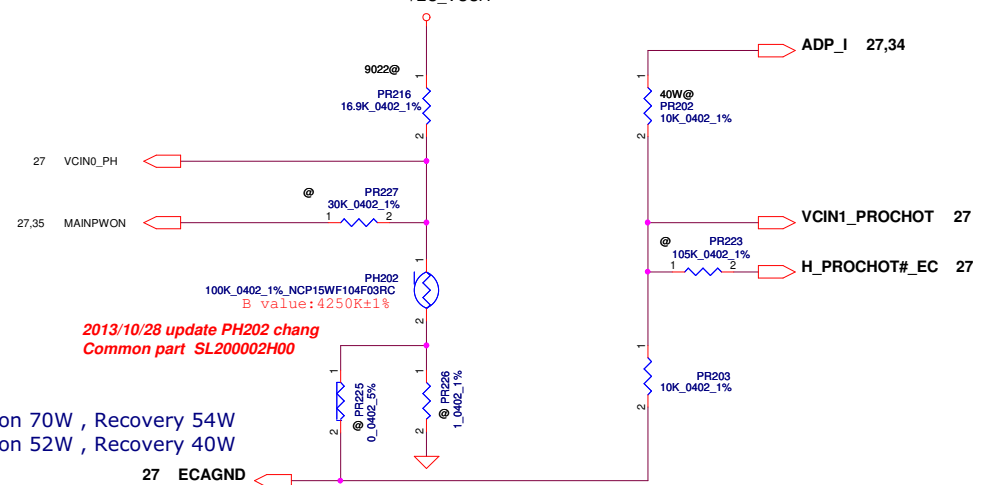
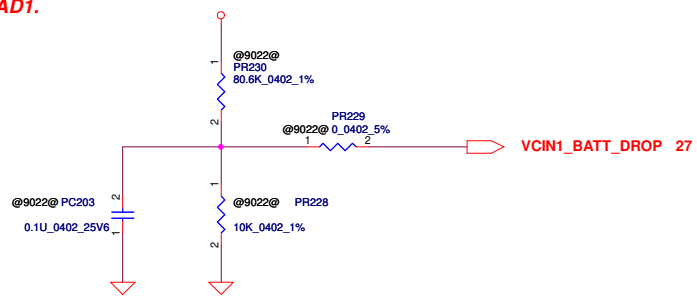
2013/10/14 update

For KB9022 sense 20mΩ	Active	Recovery
40W PR202 10K ohm	52W, 0.54V	40W, 0.42V
65W PR202 22.6K ohm	84.5W, 0.54V	65W, 0.42V

PH201 under CPU bottom side :
 CPU thermal protection at 92 degree C (shutdown)
 Recovery at 56 degree C

2013/10/02
 Add for ENE9022 Battery Voltage drop detection. B+
 Connect to ENE9022 pin64 AD1.

Battery is 3-cell design.
 B+=9V

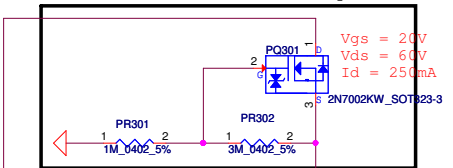


2013/10/28 update PH202 chang
 Common part SL200002H00

For 65W adapter==>action 70W , Recovery 40W
 For 40W adapter==>action 52W , Recovery 40W

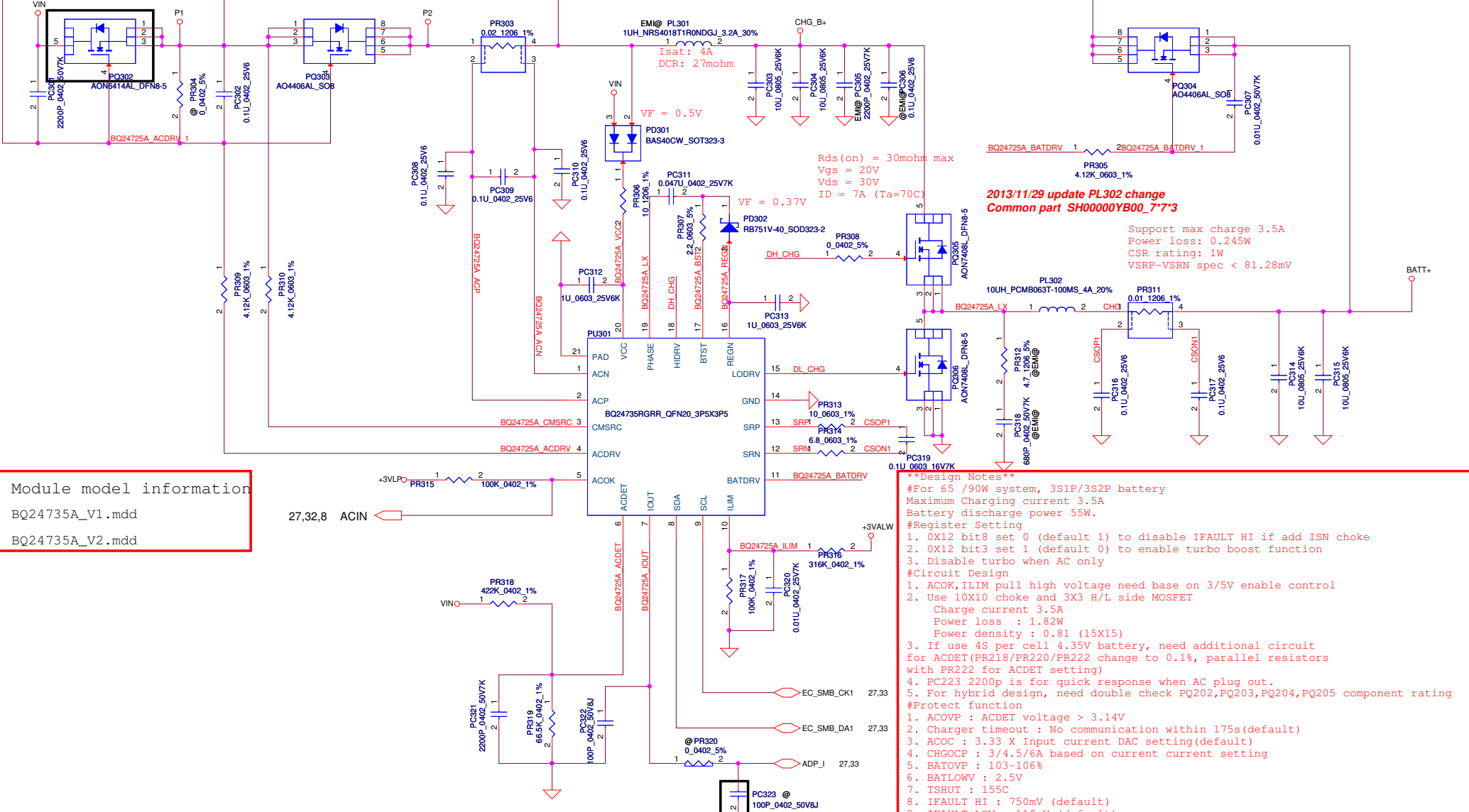
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Protection for reverse input



2013/10/14
PR303 10m ohm chang -->20m ohm
SD00000S120

Need check the SOA for inrush



Module model information
BQ24735A_V1.mdd
BQ24735A_V2.mdd

27,32,8 ACIN

Vin Dectector			
	Min.	Typ	Max.
L-->H	17.16V	17.63V	18.12V
H-->L	16.76V	17.22V	17.70V

VILIM = 20*ILIM*Rsr
ILIM = 3.3*100/(100+107)/20/0.02
= 3.986 A

****Design Notes****

#For 65 /90W system, 3S1P/3S2P battery
Maximum Charging current 3.5A
Battery discharge power 55W.

#Register Setting

- 0X12 bit8 set 0 (default 1) to disable IFAULT HI if add ISN choke
- 0X12 bit3 set 1 (default 0) to enable turbo boost function
- Disable turbo when AC only

#Circuit Design

- ACOK, ILIM pull high voltage need base on 3/5V enable control
- Use 10X10 choke and 3X3 H/L side MOSFET
Charge current 3.5A
Power loss : 1.82W
Power density : 0.81 (15X15)
- If use 4S per cell 4.35V battery, need additional circuit for ACDET (PR218/PR220/PR222 change to 0.1%, parallel resistors with PR222 for ACDET setting)
- PC223 2200p is for quick response when AC plug out.
- For hybrid design, need double check PQ202, PQ203, PQ204, PQ205 component rating

#Protect function

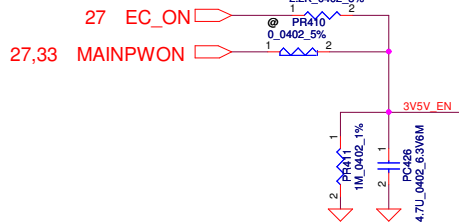
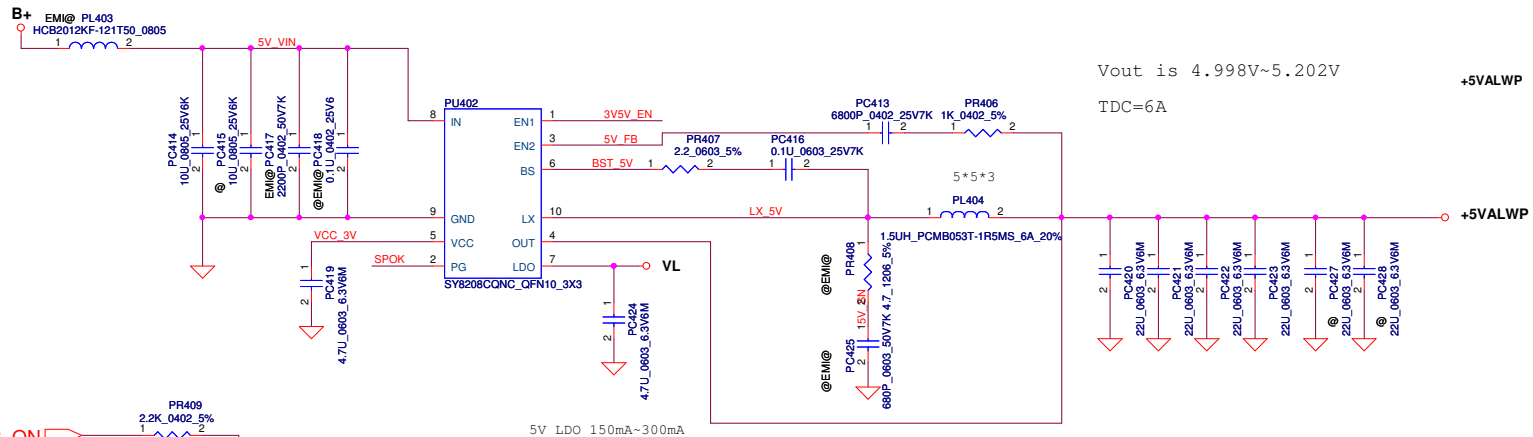
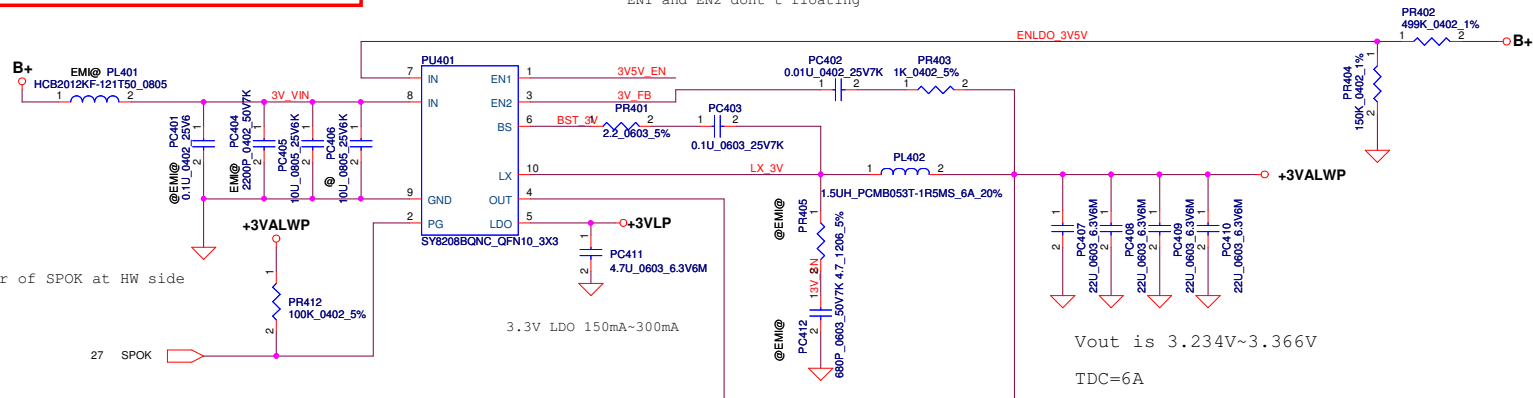
- ACOVPP : ACDET voltage > 3.14V
- Charger timeout : No communication within 175s(default)
- ACOC : 3.33 X Input current DAC setting(default)
- CHGOCP : 3/4.5/6A based on current current setting
- BATOVPP : 103-106%
- BATLOWV : 2.5V
- TSHUT : 155C
- IFAULT HI : 750mV (default)
- IFAULT LOW : 110mV (default)

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Module model information

SY8208B_V2.mdd
SY8208C_V2.mdd

EN1 and EN2 dont't floating



EC VDD0 is +3VL, PC426 UNPOP
EC VDD0 is +3VALW, PC426 POP

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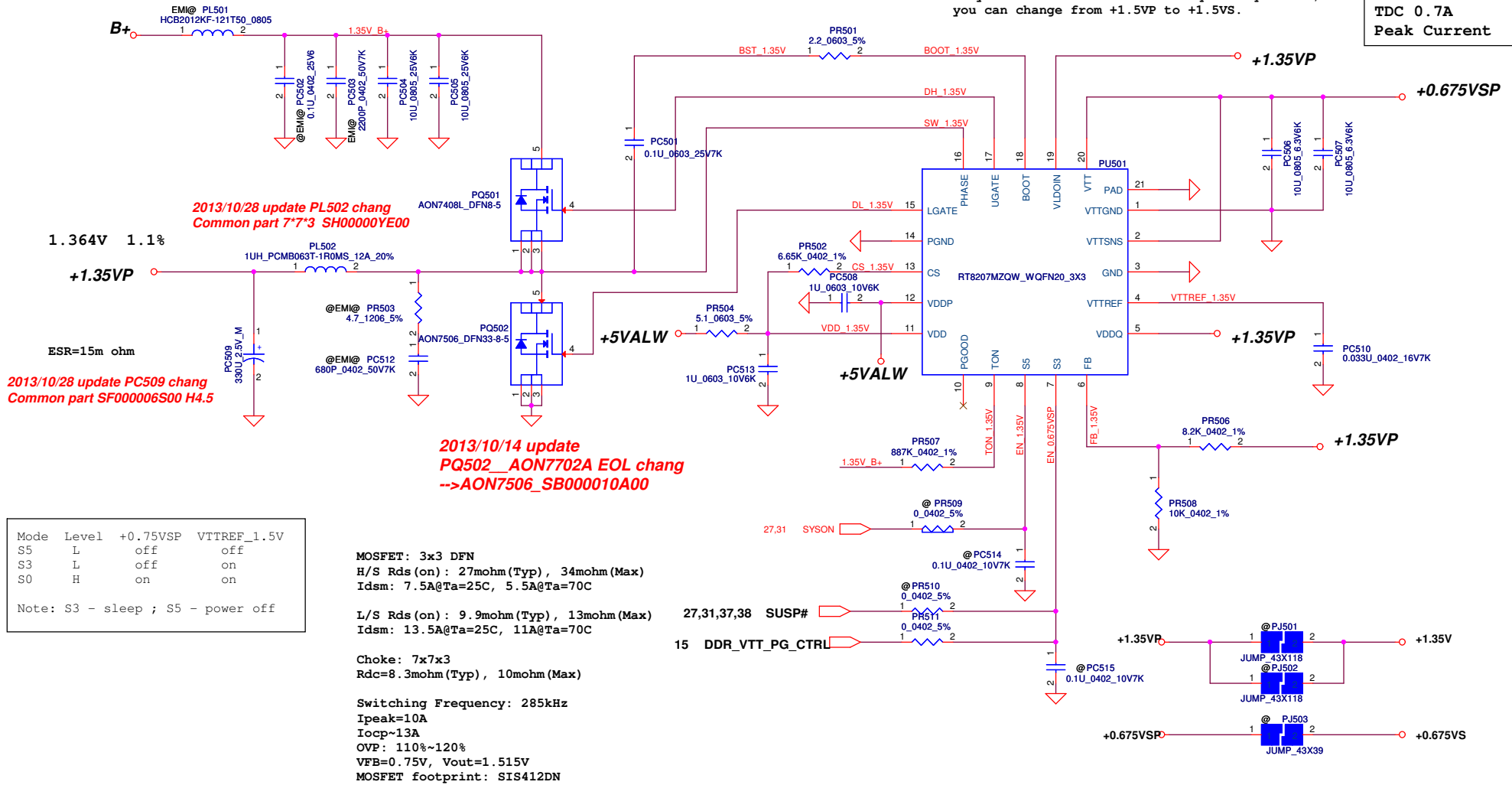
Compal Electronics, Inc.
+3VALW/+5VALW

Module model information

RT8207M_v1.mdd For Single layer
 RT8207M_v2.mdd For Dual layer

Pin19 need pull separate from +1.5VP.
 If you have +1.5V and +0.75V sequence question,
 you can change from +1.5VP to +1.5VS.

0.75Volt +/- 5%
 TDC 0.7A
 Peak Current 1A



Mode	Level	+0.75VSP	VTTREF_1.5V
S5	L	off	off
S3	L	off	on
S0	H	on	on

Note: S3 - sleep ; S5 - power off

MOSFET: 3x3 DFN
 H/S Rds (on): 27mohm(Typ), 34mohm(Max)
 Idsm: 7.5A@Ta=25C, 5.5A@Ta=70C

L/S Rds (on): 9.9mohm(Typ), 13mohm(Max)
 Idsm: 13.5A@Ta=25C, 11A@Ta=70C

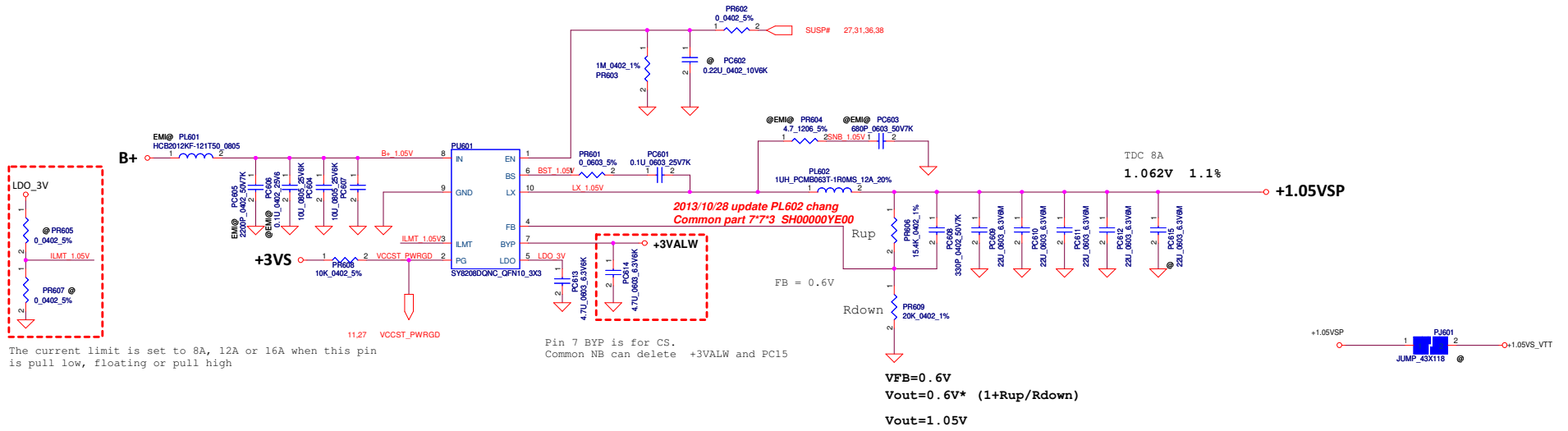
Choke: 7x7x3
 Rdc=8.3mohm(Typ), 10mohm(Max)

Switching Frequency: 285kHz
 Ipeak=10A
 IoCP~13A
 OVP: 110%~120%
 VFB=0.75V, Vout=1.515V
 MOSFET footprint: SIS412DN

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								+1.35VP/+0.675VSP					
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Module model information
SY8208D_V1.mdd

EN pin don't floating
If have pull down resistor at HW side, pls delete PR2



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

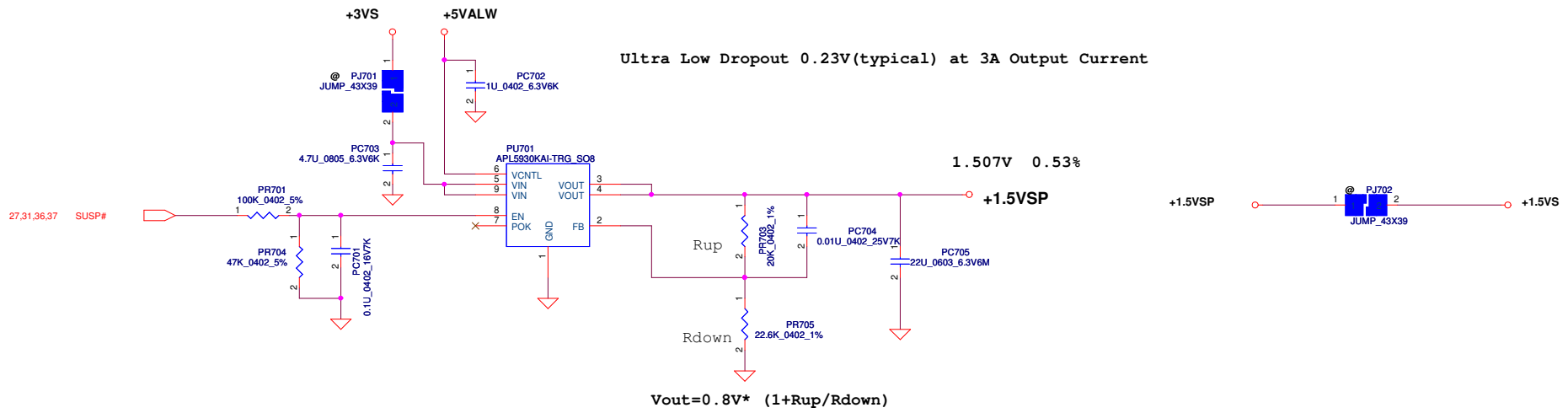
Pin 7 BYP is for CS. Common NB can delete +3VALW and PC15

$$V_{FB} = 0.6V$$

$$V_{out} = 0.6V * (1 + R_{up}/R_{down})$$

$$V_{out} = 1.05V$$

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Ultra Low Dropout 0.23V(typical) at 3A Output Current

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Module model information:
ISL95813 (for 15W & 28W CPU)

Base on BDW PDDG Rev_0_73

Location	15W	28W	Note
	TDC 14A	MAX 32A	
MAX 32A		MAX 40A	
OCF 38.4A		OCF 48A	
Loadline=-2.0mv/A		Loadline=-2.0mv/A	
PR820	392 Ohm	449 Ohm	OCF
PR816	1.27kOhm	1.58kOhm	Droop
PC816	0.033uF	0.022uF	RC Match
PR804	90.9kOhm	113kOhm	PROG1
PR807	93.1kOhm	95.3kOhm	IMON
PC811	0.1uF (0402)	0.1uF (0402)	RC Filter

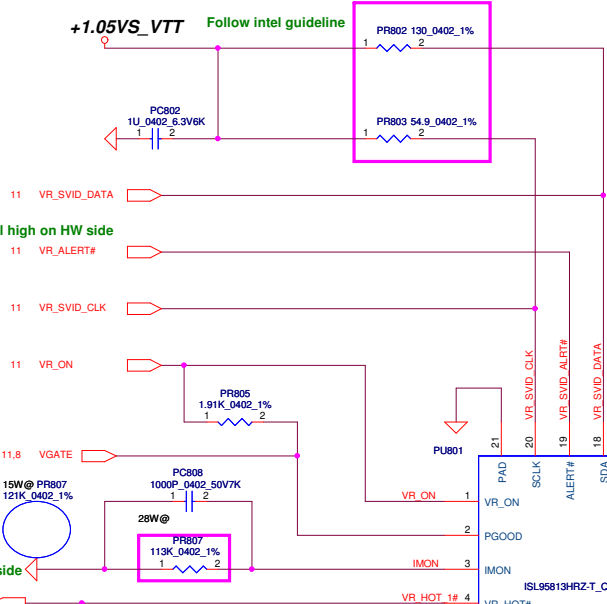
H-side MOS: MDV1525URH
Rds(on):
<10.1mohm@Vgs=10V
<14.0mohm@Vgs=4.5V
Id :24A@Vgs=10V

L-side MOS: MDU1511RH
Rds(on):
<2.4mohm@Vgs=10V
<3.3mohm@Vgs=4.5V
Id :100A@Vgs=10V

-->20130828
Choke: 0.15UH (Size:7*7*4)
SH00000U300
Rdc=0.66mohm +-7%
Heat Rating Current=36A
Saturation Current=45A

+1.05V_{S_VTT} Follow intel guideline

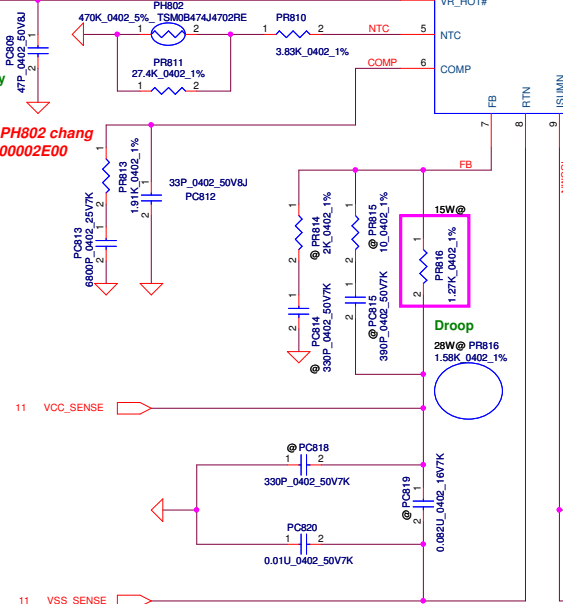
Note:
VR_SVID_ALRT# Pull high on HW side



Note:
VR_HOT# Pull high on HW side

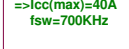
Over temperature protection:
OTP Setting: 100C active
Pin5 (NTC) voltage <-0.88V, Protect
Pin5 (NTC) voltage >0.92v, recovery

2013/10/28 update PH802 chang
Common part SL200002E00



Local sense put on HW site

Note:
PR804=113K
=>Icc(max)=40A
fsw=700KHz



CPU_B+



2013/12/12 update PL802 change

Common part SH000011H00

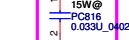
Height 8 mm
100u_SF000000180
Height 6 mm
68u_SF000000W00

TDC 19A
MAX 40A
OCF 48A
Loadline=-2.0mv/A

Note:
PR812=124K
=>Slew rate=53mV/us
Vboot = 1.7V



RC Match



OCF Setting
15W: 38A
28W: 48A



2013/10/28 update PH801 chang
Common part SL200002G00



123

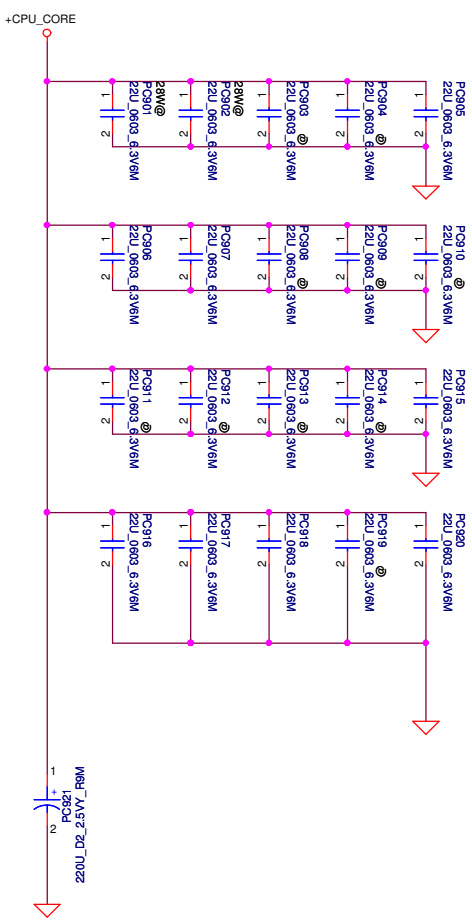
File
CPU CORE/GFX CORE

Size Document Number
Z5WAH M/B LA-B161P

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PWR Rule
 新增规格
 Modify 8/6. SPEC.



30 X 22uF 0805
 2012/10/23
 check the output cap Qty!!!
 2012/10/24
 23 pcs 22uF and reserve 7 pcs
 2013/01/14
 22uF*17 unpop:22uF*3

20130828
 15W: 22uF*14
 28W: 22uF*16

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				CPU CORE CAP		
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Item	Fixed Issue	Reason for change	PG#	Modify List	Date	Phase
1	Design Update		P.35 P.37 P.39 P.34 P.33	Add unpop PC428 PC427,22U_0603_6.3V6M_SE00000M000 Add unpop PC615,22U_0603_6.3V6M_SE00000M000 PC609 PC610,SE00000PL00 change to 0603_6.3V6M_SE00000M000 PL801 PC807,Swap positions. PL302,10uH_10104_SH000005Z80 change to 10uH_773_SH00000YB00 Add PL202_SM01000C000	11/29	EVT
2	Design Update		P.35	PR410 R-short change to PD401_SCS00000Z00	12/09	EVT
3	Design Update	CPU Transient Test	P.39 P.40 P.40 P.40 P.33	PL802_SH00000U300 change to Common part SH000011P00 PC906 PC910 PC915 22U_0603_SE00000M000 SMT PC901 PC902 22U_0603_SE00000M000,SMT change to 28W@ PC916 PC915 22U_0603_SE00000M000 ,28W@ change to SMT PR227_30.9K_0402_1%_SD034309280 change to_30K_0402_1%_SD034300280	12/12	EVT
4	Design Update	CPU Transient Test		PR820_348_0402_SD00000EI80 change to 357_0402_SD034357080 (28W) PR820_348_0402_SD00000EI80 change to 316_0402_SD000003480 (15W) PR814_2K_0402_1%_SD034200180 change to unpop PC814_330P_0402_50V7K_SE074331K80 change to unpop PR813_5.9K_0402_SD034590180 change to 1.91K_0402_SD000009080 PR807_95.3K_0402_1%_SD034953280 change to 113K_0402_SD034113380 (28W) PR807_95.3K_0402_1%_SD034953280 change to 121K_0402_1%_SD034121380 (15W) PR817_Unpop change to 4.99M_0402_SD00000VO00	12/13	EVT
5	Design Update	VCINO VCIN1 B/I PIN Pull down Update Common part CPU Transient Test		PR211_1K_0402_SD034100180 Change to 0_0402_SD028000080 PR227_30K_0402_1%_SD034300280 change to unpop. PR216_32.4K_0402_1%_SD034324280 change to 16.9K_0402_1%_SD034169280 PR223_105K_0402_1%_SD034105380 change to unpop. PR202_10.5K_0402_1%_SD034105280 change to 10K_0402_1%_SD034100280 PQ303 PQ304 AON4466_SB00000CG80 --> AON4406_SB00000I800 PL301_1UH_SH00000MW00 --> 1UH +-30% 2.8A_SH00000YG00 Add PC426_4.7u_0402_SE00000SO00 15W:PR804_169K_0402_1%_SD034169380 --> 90.9K_0402_1%_SD034909280 28W:PR804_205K_0402_1%_SD034205380 --> 113K_0402_1%_SD034113380 PL802 0.15UH 20%_SH000011P00 -->0.22UH_20%_SH000011H00 15W:PR820_316_0402_1%_SD000003480 --> 392_0402_1%_SD00000F080 28W:PR820_357_0402_1%_SD034357080 --> 499_0402_1%_SD034499080 Add PC921_220U_D2_2.5VY_R9M_SGA00009800 Un pop PC903 PC904 PC908 PC909 PC9010 PC912 PC913 PC914 PC919	2014/ 01/21	DVT
15	Design Update	Update Common part		PR211 SD028000080 change to R-short PD401 SCS00000Z00 change to PR410 R-short	2014/ 02/17	PVT
16						
17						

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Item	Fixed Issue	Reason for change	PG#	Modify List	Date	Phase
1	Module Design	Module Design change 3/5V solution	3/5V	Un-pop PR1	11/13	DVT
2						
12						
13						
14						
15						
16						
17						

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Item	Fixed Issue	Reason for change	PG#	Modify List	Date	Phase
1		extra cap	24	unpop C165	1107	DVT
2	Desidn change	change EC board ID	27	AD_BID0 > change R506 to 12K POP R503	1107	DVT
3	Desidn change	change net "LINE1-L/LINE1-R" cap material	29	change C2135,C2136 to 4.7u 0402 to 0603	1107	DVT
4	Desidn change	modify ON/OFFBYN# circuit	27,28	DEL D24 , ON/OFF change to ON/OFFBTN#	1112	DVT
5	Desidn change	change CRT RGB bead material	21	change L2503,L2504,L2505 to 0402 bead(SM01000FH00)	1112	DVT
6	Desidn change	change +EC_VCCA_EC_GND bead material	27	change L31 L32 to SM010009U00	1112	DVT
7	Desidn change	change USB port assign	18	Change USB port6 for CCD Change USB port5 for TS	1112	DVT
8	Desidn change	change USB port assign	26	Change USB port7 for CR(USB)_FP	1112	DVT
9	Desidn change	reserve RTCRST# to EC	27	reserve RTCRST# to EC pin 27 for clear CMOS	1115	DVT
10	Desidn change	reserve RTCRST# to EC	28	add Q52 R490 reserve to EC RTCRST#	1115	DVT
11	Desidn change	share ROM function	7	POP R498,R500,R502,R505 for share ROM	1115	DVT
12	Desidn change	option LVDS EDID/EDP touch	18	change R438,R439,R415,R433 for option LVDS EDID/EDP touch	1115	DVT
13	Desidn change	EC_SMB_DA2	17	change to EC_I2C_TPDAT	1118	DVT
15	Desidn change	EC_SMB_CK2	17	change to EC_I2C_TPCLK	1118	DVT
16	Desidn change	RTD2132 EP_MODE	27	Add R491 reserve for RTD2132 EP_MODE	1118	DVT
17	Desidn change	change TP POWER	28	Change TP power to +3VALW	1118	DVT
18	CRT leakage	CRT_DATA/CRT_CLK add level shift	20	add R2502,R2503,Q2501 for level shift	1126	DVT
19	CRT leakage	change CRT POWER from 5VS to 3VS	20	add R2549	1126	DVT
20	CRT leakage	change CRT POWER from 5VS to 3VS	20	change pin PCSDA,PCSCSL to +3VS_6513	1126	DVT
21	CRT leakage	change CRT POWER from 5VS to 3VS	20	change pin MCUVDDH to +3VS_6513	1126	DVT
22	Desidn change	change T/P int net connection support S3 wake	28	Change Q51 to D22 ,TP_INT#_POP R633,del R452	1126	DVT
23	Desidn change	change EC_PME# pull up	22	add R2550 pull up to +3VLAN	1128	DVT
24	Desidn change	change EC_PME# pull up	27	unpop R484	1128	DVT
25	Desidn change	solve ESD	19	add C413 to +3VS	1204	DVT
26	Desidn change	solve ESD	29	add C2140,C2142,R2149,R2150	1205	DVT
27	Desidn change	solve ESD	29	change D2008 package	1205	DVT
28	Desidn change	ME drawing change	30	Del H9	1205	DVT
29	Desidn change	solve EMI	26	add R459,R460,R462,R463,L7,L8 for EMI request	1206	DVT
30	Desidn change	Change part number	18	change U22 PN	1209	DVT
31	Desidn change	Change part number	11	change C18 to SF000006S00	1209	DVT
32	Desidn change	Change part number	12	change C408 to SF000006R00	1209	DVT
33	Desidn change	Change part number	15	change C118 to SF000006S00	1209	DVT
34	Desidn change	Change part number	26	change C486 to SF000006R00	1209	DVT
35	Desidn change	Change part number	6	change C153 to 15pF to SE071150J80	1210	DVT
36	Desidn change	Change part number	7	change C2,C3 to 15pF to SE071150J80	1210	DVT
37	Desidn change	Change part number	22	change C2558,C2559 to 10pF to SE071100J80	1210	DVT
38	Desidn change	Change part number	29	change R2135,R2138 to 59 Ohm 0603	1210	DVT
39	Desidn change	solve EMI	29	change R2149,R2150 to SM01000NA00	1210	DVT
40	Desidn change	solve ESD	29	change C2142 , C2143 to 680pF	1210	DVT
41	Desidn change	Change part number	28	change SW to SN100000K00	1210	DVT
42	Desidn change	TP leakage from change TP VCC	28	add R452,R459,R460	1211	DVT
43	Desidn change	Change part number	23	change D1 to SCA00002M00	1216	DVT

Item	Fixed Issue	Reason for change	PG#	Modify List	Date	Phase
44	Desidn change	LAN Chip GPO	22	reserve R2551 0 ohm +3VALW to +3VLAN	1231	PVT
45	Desidn change	LAN Chip GPO	22	add R2540 (0 - Ohm) for disable PHY	1231	PVT
46	Desidn change	change CRT POWER from +5VS_6513 to +HDMI_5V_OUT	21	change CRT POWER from +5VS_6513 to +HDMI_5V_OUT	1231	PVT
47	Desidn change	TP PWR	27/28	unpop R459,add C2563,C2562,U2507 , add net "TP_PWR_EN" to EC pin 98	0110	PVT
48	Desidn change	TP connector	28	change connector type	0110	PVT
49	Desidn change	TS change to I2C0	09	change PCH GPIO4/GPIO5 to PCH_I2C0_SDA/PCH_I2C0_SCL	0110	PVT
50	Desidn change	TS change to I2C0	09	Del RP24 pin5 pin6 ,Add R276,R277 for TS I2C	0110	PVT
51	Desidn change	TS change to I2C0	18	change PCH_I2C1_SDA/PCH_I2C1_SCL to PCH_I2C0_SDA/PCH_I2C0_SCL	0110	PVT
52	Desidn change	R-Short		follow ZACH list	0110	PVT
53	Desidn change	solve ESD	15/29/27	add C35/C2140/C63 ,reserve C65/C68	0113	PVT
54	Desidn change	change USB CAP to 150U D2 size	26	change C486 to D2 150uF	0113	PVT
55	Desidn change	change LED brightness	28	change R699/R700 to 330 Ohm ,R698/R701 to 560 Ohm	0114	PVT
56	Desidn change	change Board ID to 0.3	27	change R506 to 15K (board ID)	0114	PVT
57	Desidn change	Change part number	29	change R2135,R2138 to 60.4 Ohm 0603	0114	PVT
58	Desidn change	Change TPM from module to on board	7	change R395 to TPM@	0115	PVT
59	Desidn change	Change TPM from module to on board	8	del net "LPCPD#" , reserve U2600,R2600,R2601,C2600,C2601,C2602,C2603,C2604,C2605 for TPM , R2603,C2606 for EMI , R2602 > @	0115	PVT
60	Desidn change	Change TPM from module to on board	28			
61	Desidn change	solve ESD	27	POP C509 EMC@	0116	PVT
62	Desidn change	solve epon crystal issue	22	add R2552	0116	PVT
63	Desidn change	solve EMI	29	change R2120,R2121,R2122,R2123 to bead SM01000CC00	0116	PVT
64	Desidn change	solve EMI	4	add C2144	0117	PVT
65	Desidn change	R-Short	11	change R126 to 0 - short	0120	PVT
66	Desidn change	Add Toch pad PS2 BUS level shift(solve PS2 leakage)	28	add R2509,R2507,R462,R463 reserve Q2502	0122	PVT
67	solve jack BO noise	solve audio BO noise sync with other project	29	change R2136/R2139 to 60.4 Ohm , R2135,R2138 to 0 Ohm	0210	pre-MP
68	Desidn change	modify DMIC net	29	delete R457	0213	pre-MP
69	Desidn change	reserve +3.3V for touch screen	18	add R82	0217	pre-MP
70	Desidn change	change +3.3V for touch screen	18	pop R82 , unpop R81	0218	pre-MP
71			28	unpop SW4	0218	pre-MP
72	Desidn change	change EC board ID to 1.0	27	change R506 to 20K Ohm	0224	pre-MP
73	Desidn change	change LED brightness	28	change R699/R700 to 200 Ohm ,R698/R701 to 390 Ohm	0304	pre-MP