

Compal Confidential

Intel Haswell rPGA Processor with Lynx Point-H

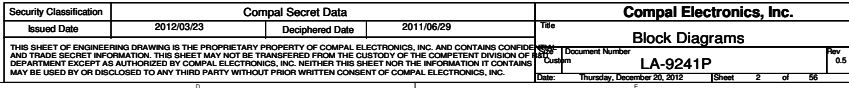
Viper MXM

Date : 2012/12/20

Version 0.5

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Issued Date	2011/06/29	Deciphered Date	2011/06/29	Title	Cover Page
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Model Name :
File Name :



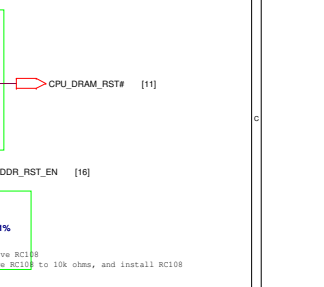
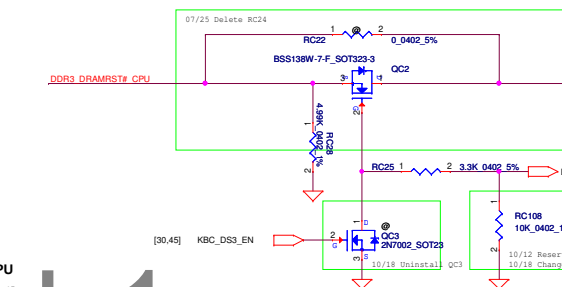
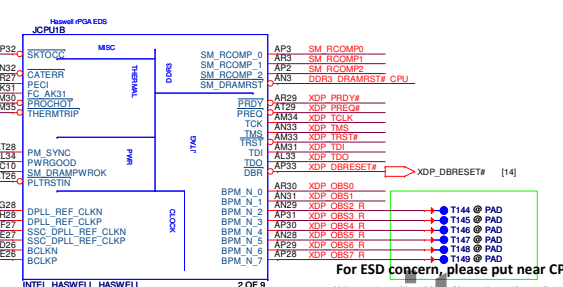
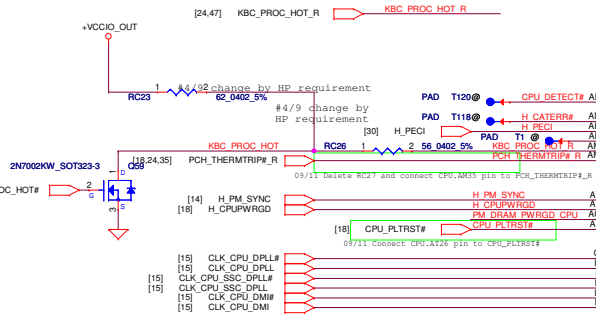
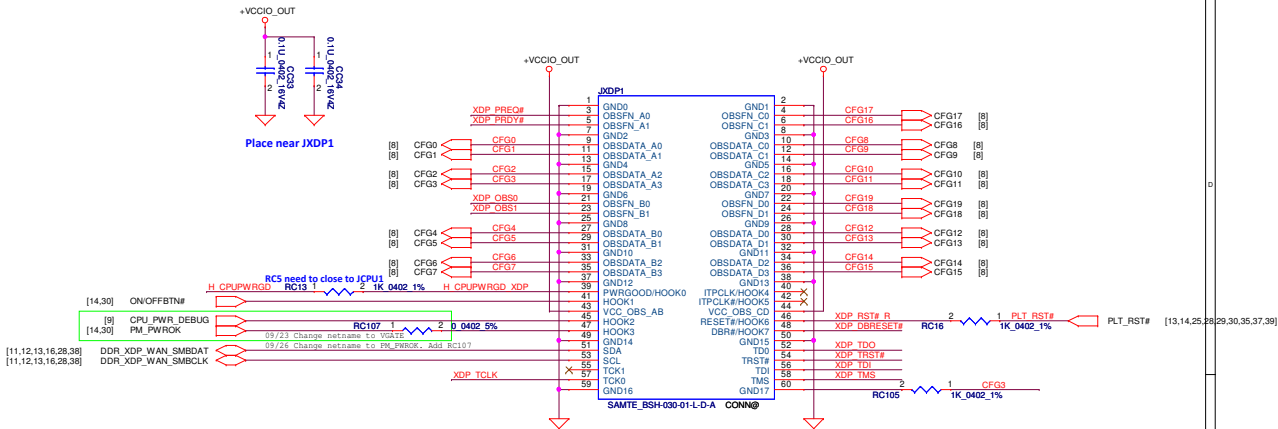
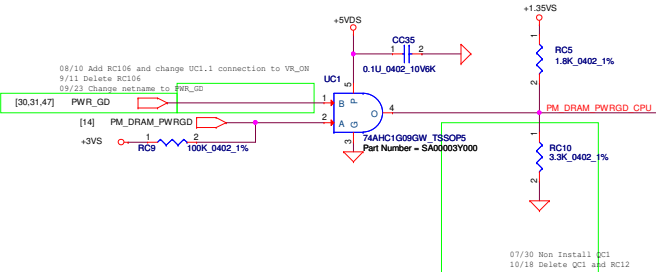
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SM_DRAMPWROK with DDR Power Gating Topology



For ESD concern, please put near CPU

09/11 Noninstall RC36, RC38, RC40, RC43, RC45, RC47

10/13 Change RC36, RC38, RC40, RC43, RC45, RC47 to 10k ohms, and install RC108

09/11 Change RC55.1 connection to R_CPUWROK

09/11 Delete RC56

09/11 Connect CPU.A126 pin to CPU_PLTRST#

09/11 Delete RC56

09/11 Delete RC56

09/11 Delete RC56

09/11 Delete RC56

09/11 Delete RC56

09/11 Delete RC56

09/11 Delete RC56

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09/11 Delete RC56

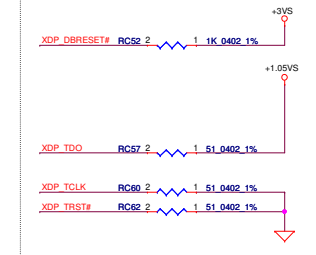
09/11 Delete RC56

09/11 Delete RC56

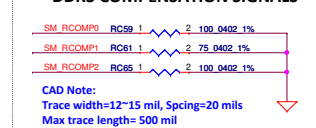
09/11 Delete RC56

09/11 Delete RC56

PU/PD for JTAG signals

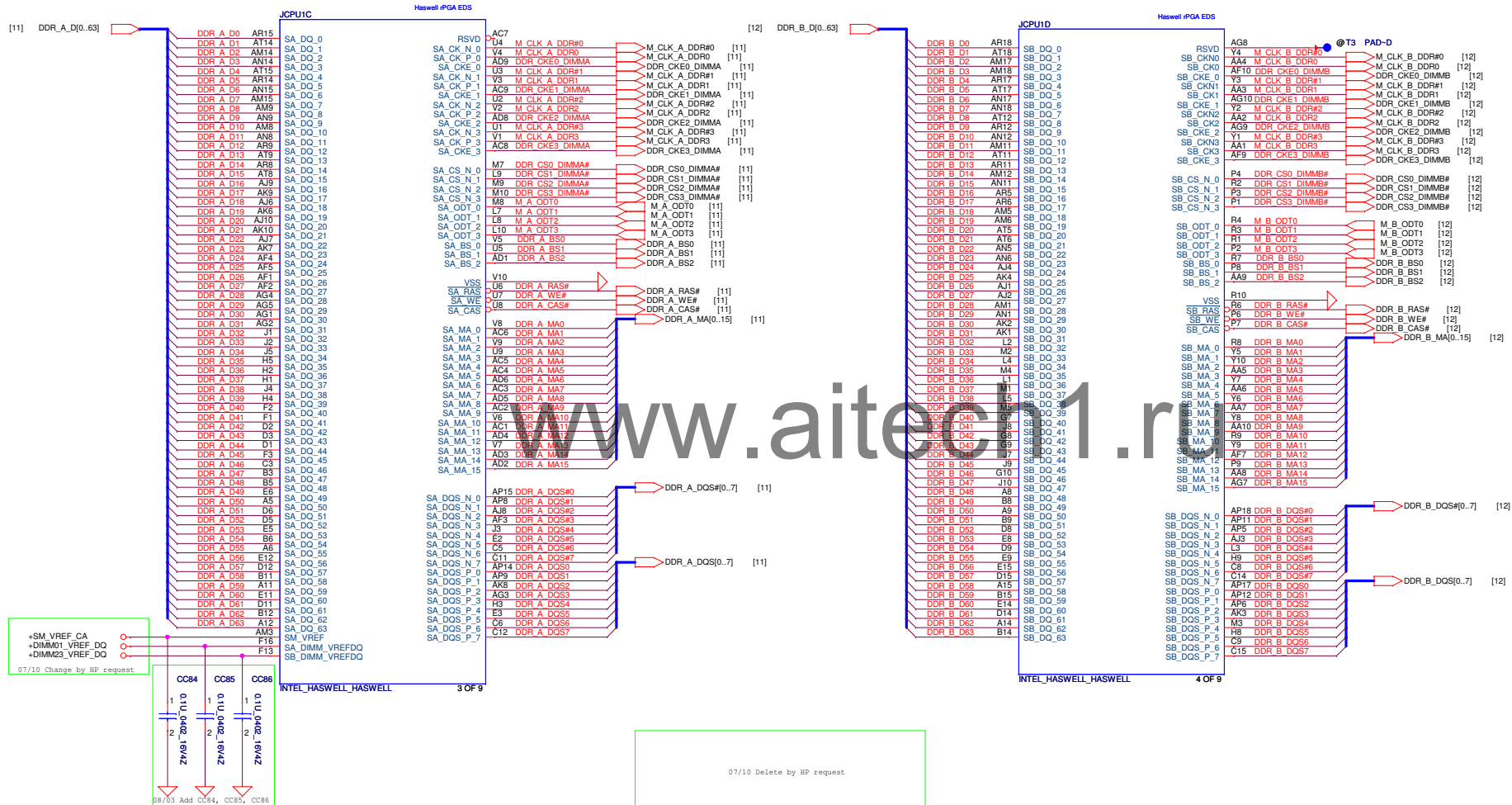


DDR3 COMPENSATION SIGNALS

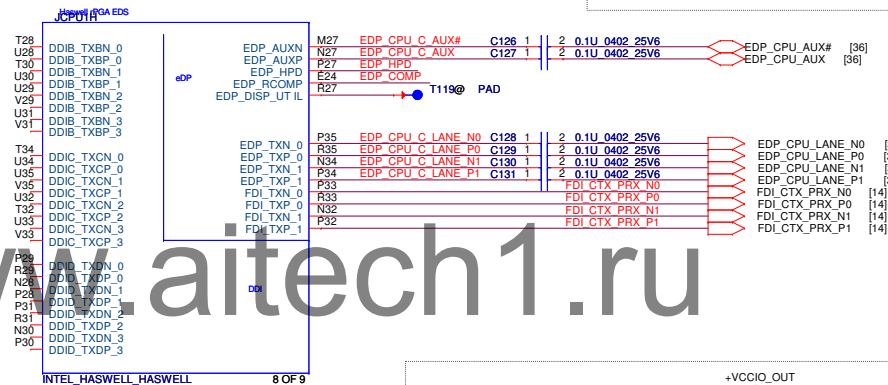


CAD Note:
Avoid stub in the PWRGD path
while placing resistors RC25 & RC130

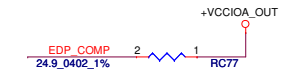
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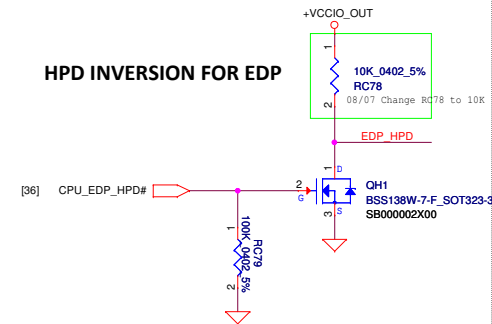


COMPENSATION PU FOR eDP



CAD Note: Trace width=20 mils, Spacing=25mil,
Max length=100 mils.

HPD INVERSION FOR EDP

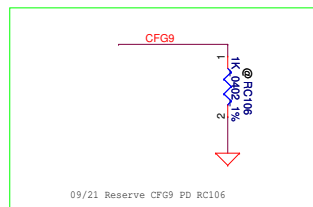
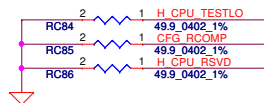
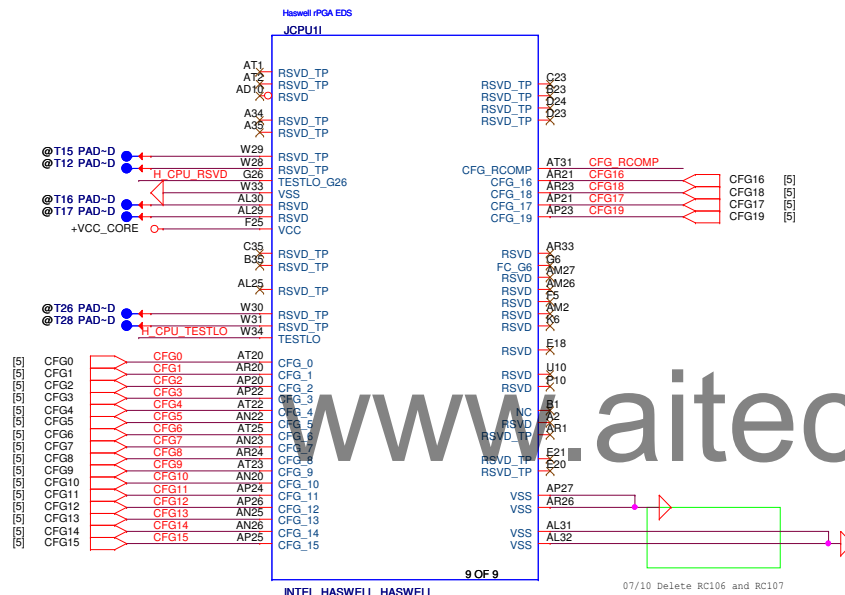


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A circuit diagram showing a 5V DC voltage source connected in series with a 1k resistor. The resistor is labeled with its value and tolerance: 1k 0.002% 1%. The circuit is connected to a node labeled '1', which is also connected to a 1k resistor. The other end of this resistor is connected to a node labeled '2', which is connected to ground. The voltage across the second resistor is labeled 'V2'.

A circuit diagram for RC81. It shows a horizontal line labeled 'CFG4' at the top. A vertical line descends from this point to a resistor. The resistor is labeled '1K 0402 1%' and 'RC81'. The resistor is connected to a ground symbol at the bottom, which is a triangle with a horizontal line.

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+1.35VS Source

11/06 Change QC5A.2 and QC5B.5 connection to SLP_S3

09/11 Delete RC93 and connect SLP_S3# to QC5.5

10/16 Add Q80

10/18 Delete Q80, R461, Q2, RC90. Modify +1.35VS power circuit
12/12 Uninstall QC4, RC92, CC39, RC89, QC5 and RC88. Add J4.
12/13 Install RC88

07/25 Delete RC96

VCC_SENSE

[47] VCCSENSE

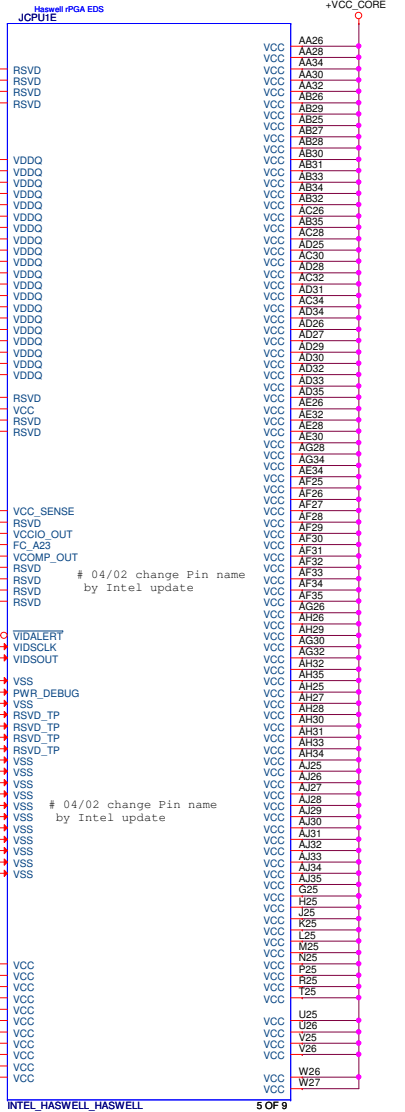
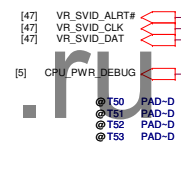
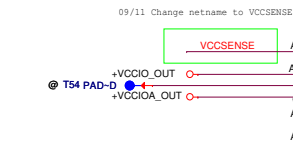
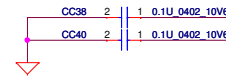
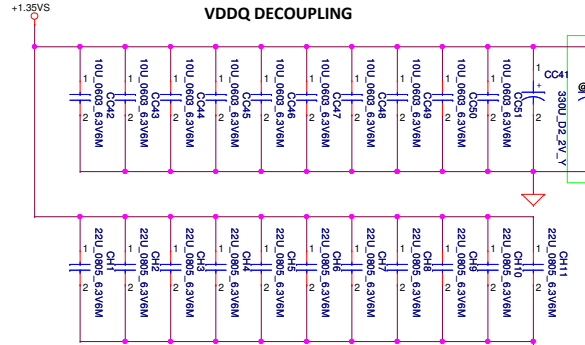
[10,47] VSSSENSE

CAD Note: RC101 SHOULD BE PLACED CLOSE TO CPU

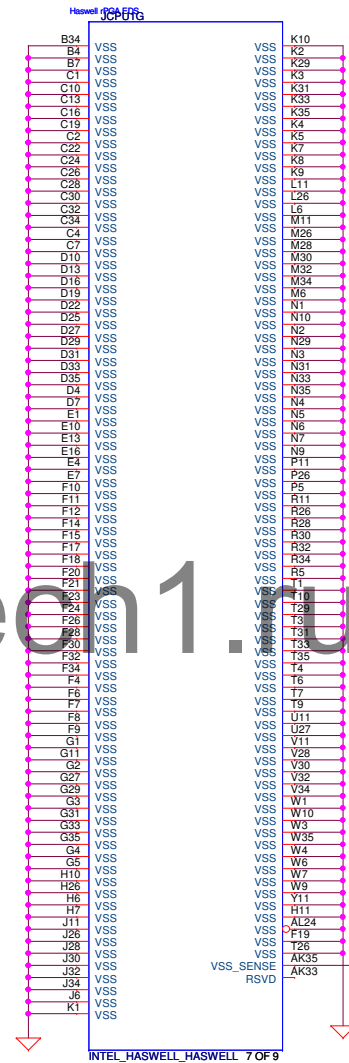
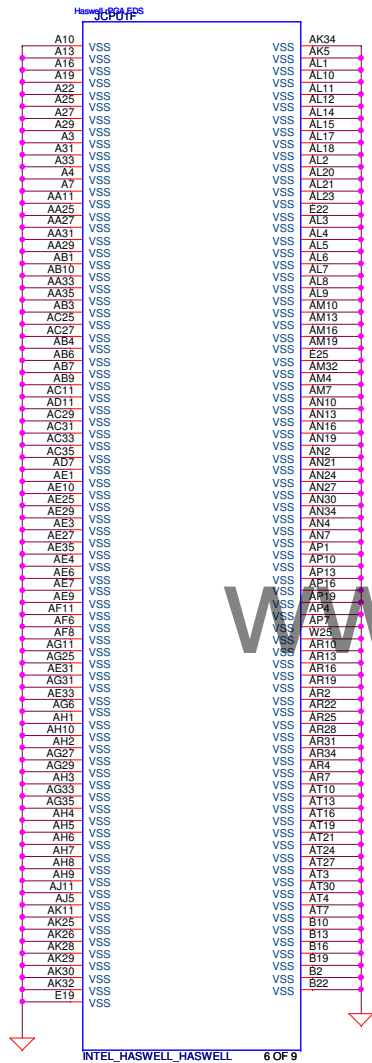
CAD Note: RC104 SHOULD BE PLACED CLOSE TO CPU

09/11 Delete RC102 and RC103

VDDQ DECOUPLING



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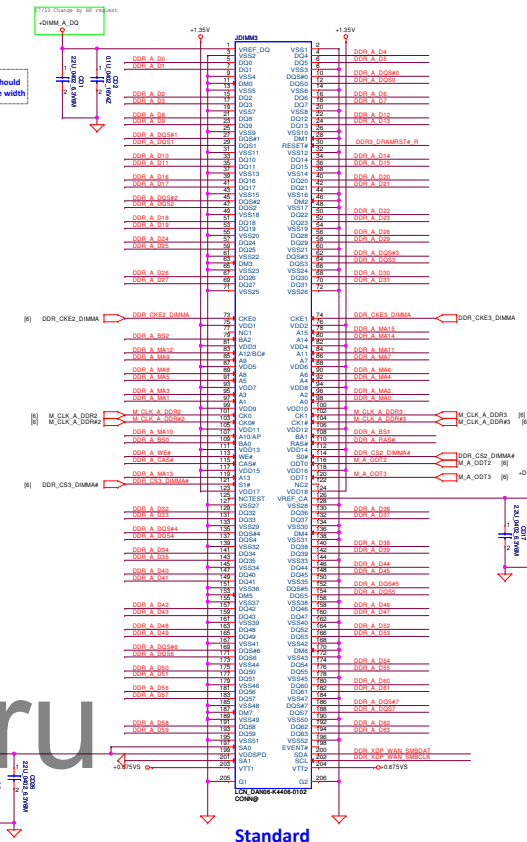
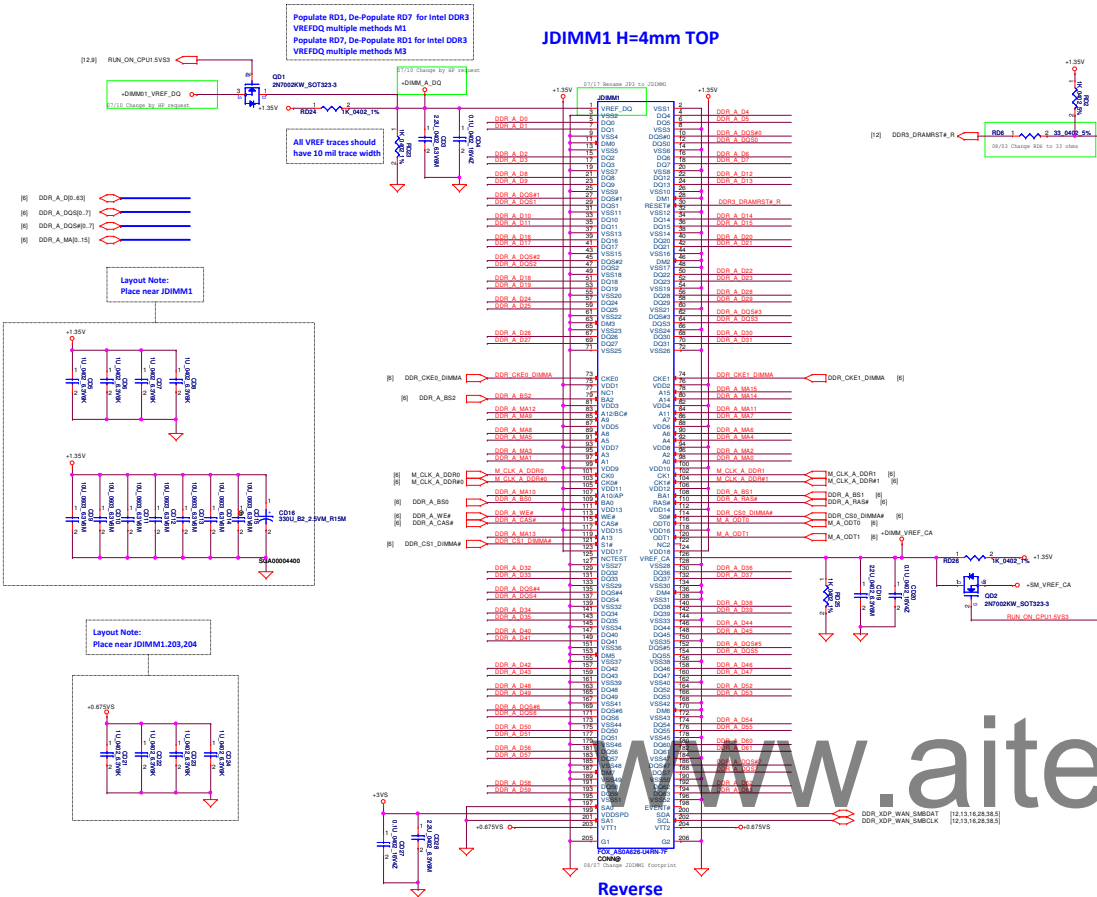


09/11 Change netname to VSSSENSE

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JDIMM1 H=5.2mm BOT

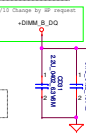
JDIMM1 H=4mm TOP



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Populate RD4, De-Populate RD8 for Intel DDR3
VREFDQ multiple methods M1
Populate RD8, De-Populate RD4 for Intel DDR3
VREFDQ multiple methods M3

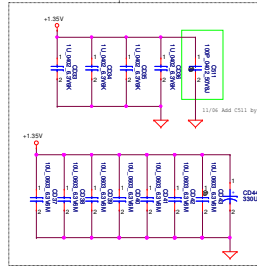
JDIMM2 H=9.2mm TOP



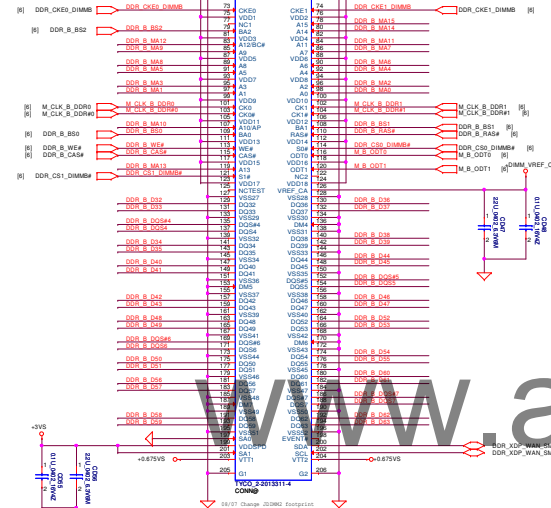
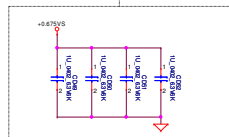
All VREF traces should have 10 mil trace width

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DDR_B_DQ[47]
DDR_B_DQ[51]
DDR_B_DQ[55]
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DDR_B_DQ[991]
DDR_B_DQ[995]
DDR_B_DQ[999]

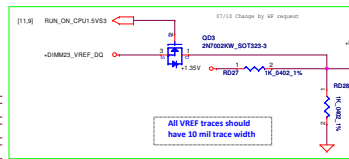
Layout Note:
Place near JDIMM2



Layout Note:
Place near JDIMM2.03.04

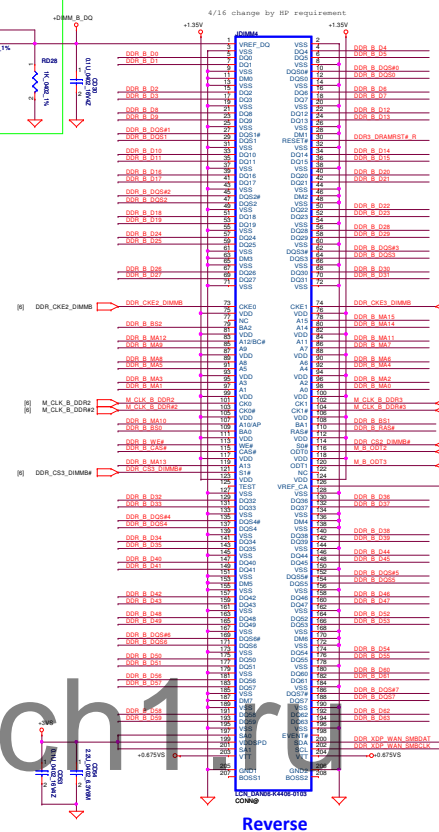


Reverse



All VREF traces should have 10 mil trace width

JDIMM4 H=5.2mm BOT



Reverse

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Size		Document Number		LA-9241 P		Rev		05	
Date		Thursday, December 28, 2012		Sheet		12		of 54	

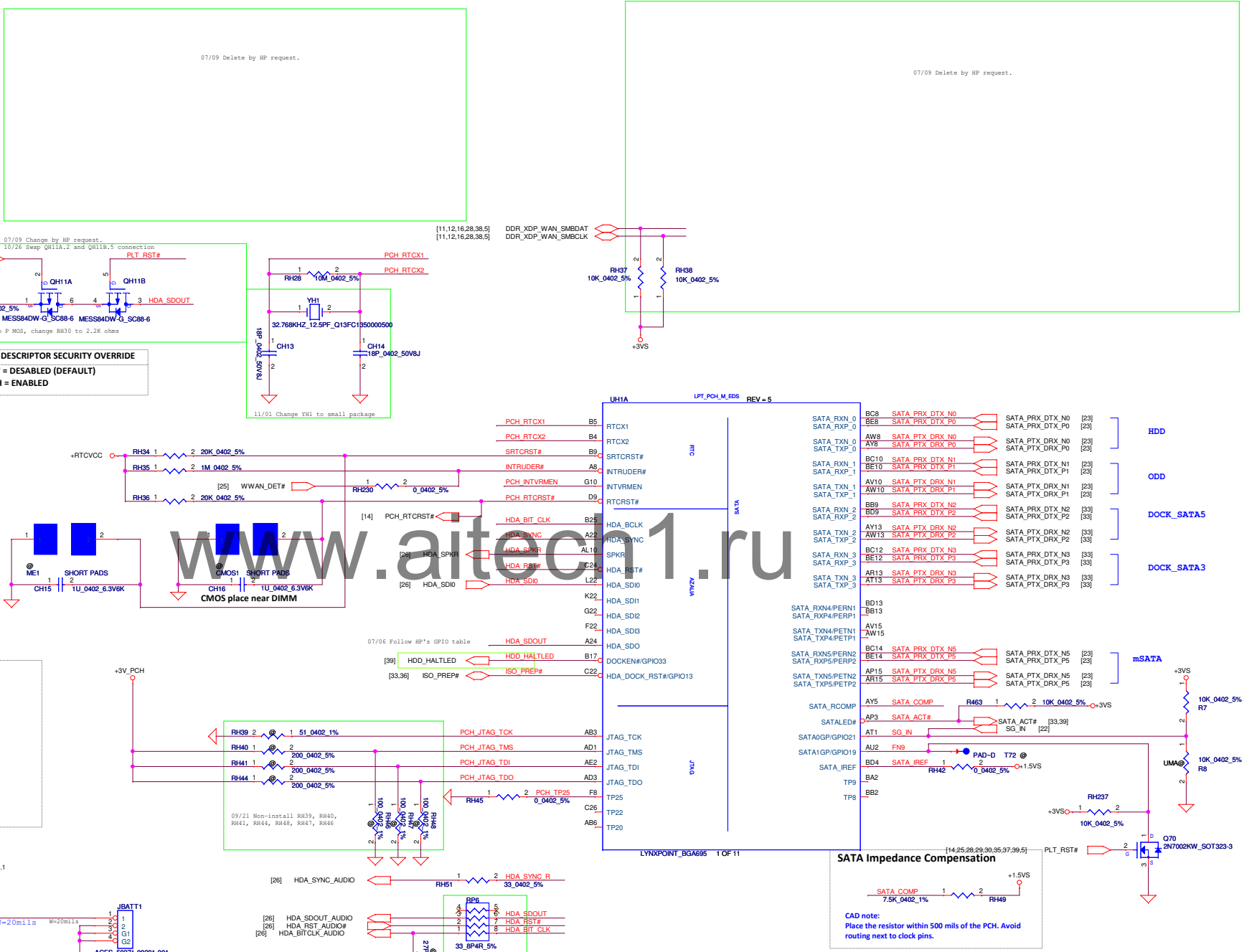
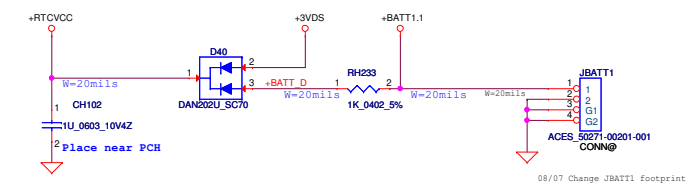
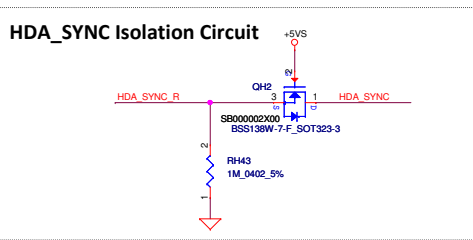
INTVRMEN - INTEGRATED SUS 1.05V VRM
ENABLE
High - Enable Internal VRs
Low - Enable External VRs

NO REBOOT STRAP
DISABLED WHEN LOW (DEFAULT)
ENABLED WHEN HIGH

FLASH DESCRIPTOR SECURITY OVERRIDE
LOW = DISABLED (DEFAULT)
HIGH = ENABLED

CMOS_CLR1	CMOS setting
Shunt	Clear CMOS
Open	Keep CMOS

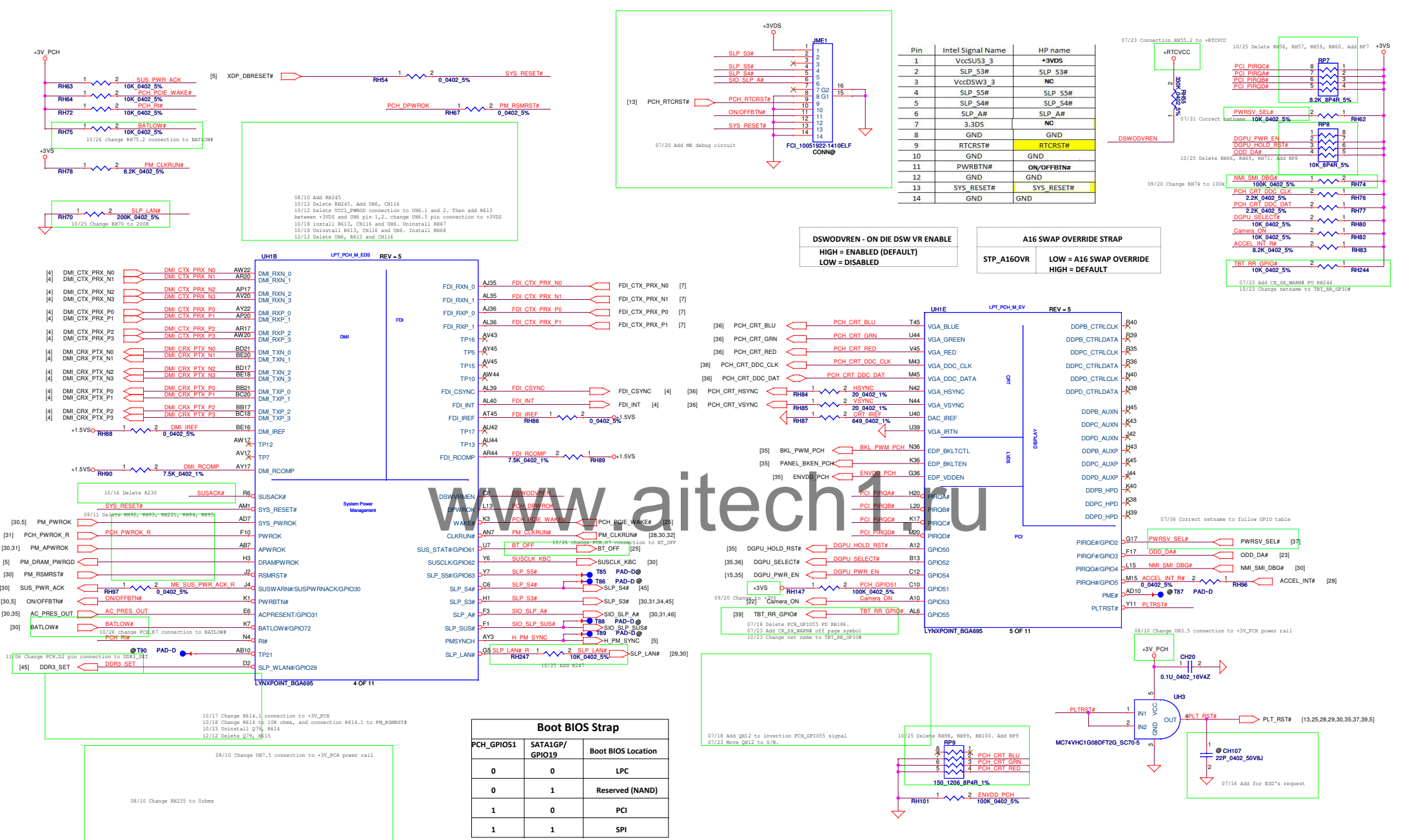
ME_CLR1	TPM setting
Shunt	Clear ME RTC Registers
Open	Keep ME RTC Registers



SATA Impedance Compensation

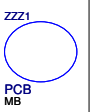
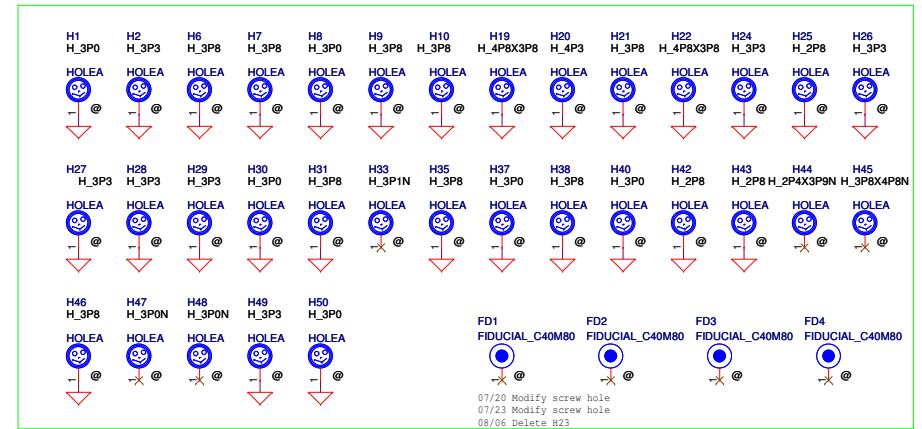
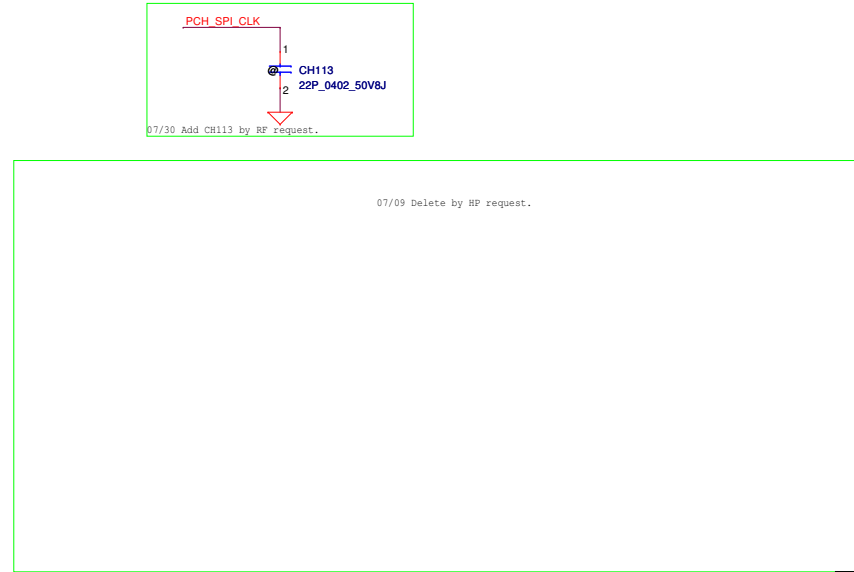
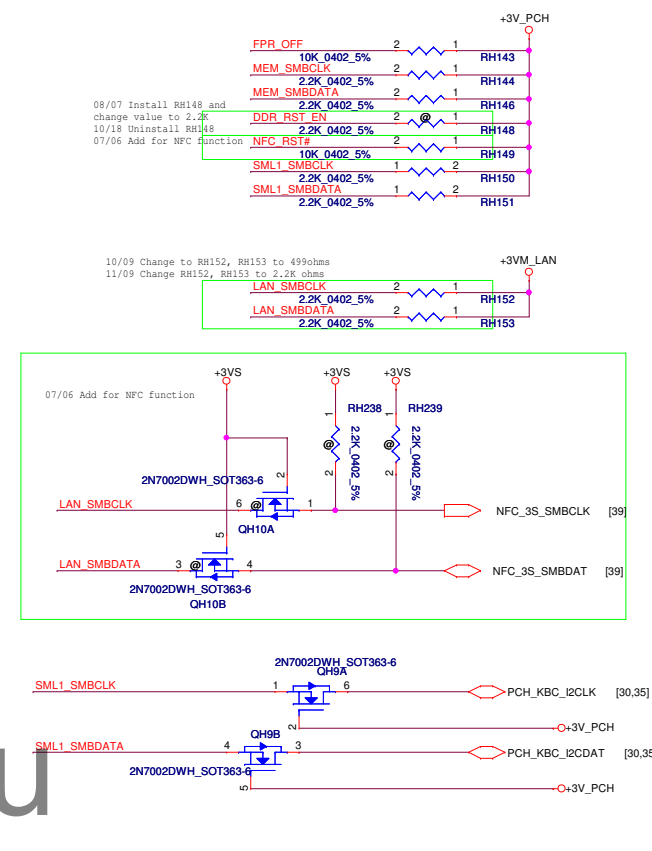
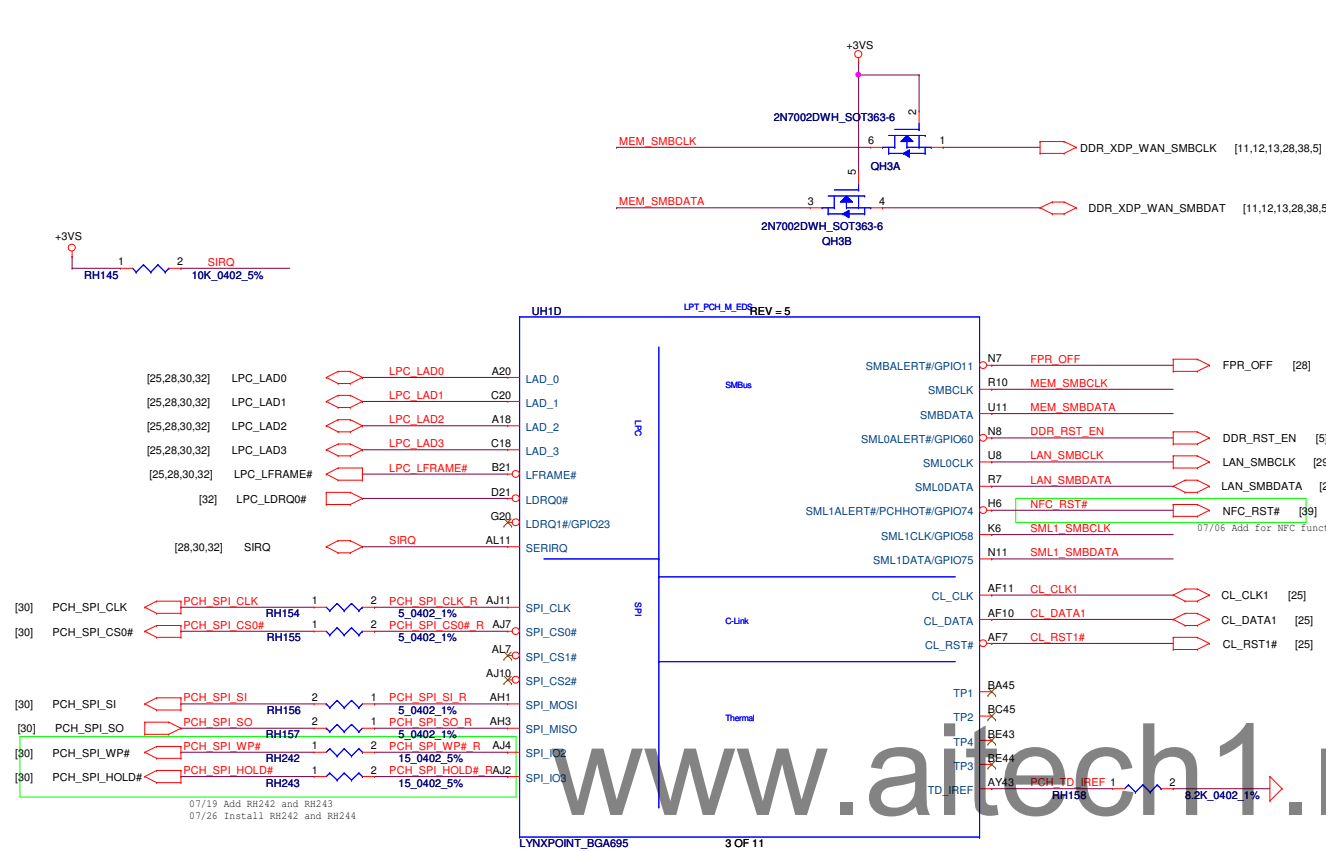
CAD note:
Place the resistor within 500 mils of the PCH. Avoid routing next to clock pins.

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Date:	Thursday, December 20, 2012	Sheet	13	of	56



Boot BIOS Strap		
PCH_GPIO51	SATA1GP/ GPIO19	Boot BIOS Location
0	0	LPC
0	1	Reserved (NAND)
1	0	PCI
1	1	SPI

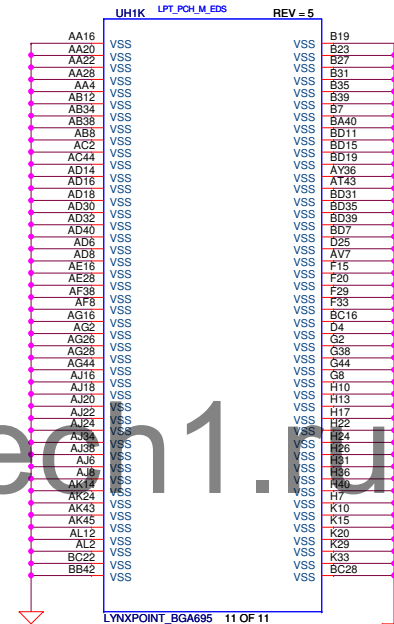
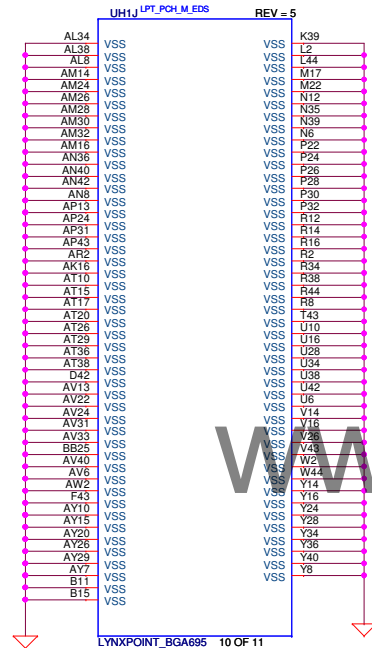
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
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				Date	Thursday, December 20, 2012
				Sheet	14 of 56



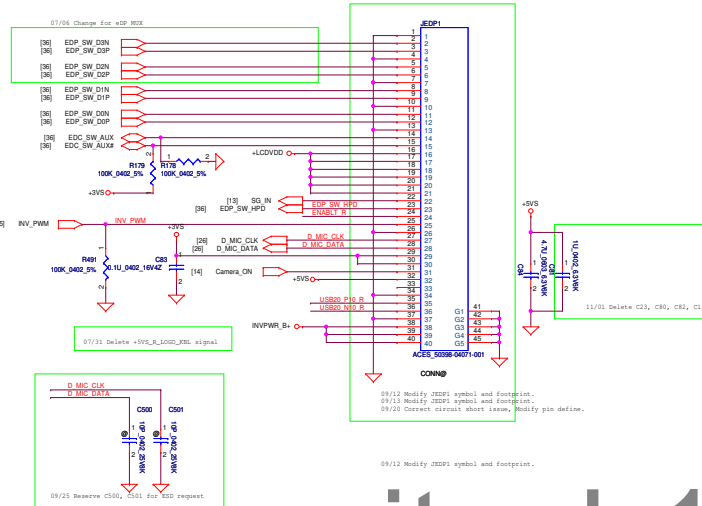
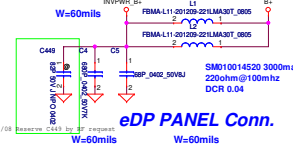
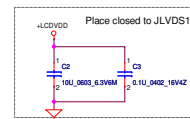
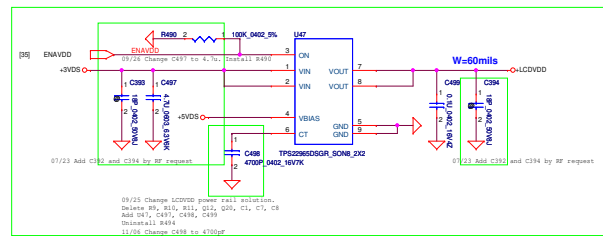
Security Classification		Compal Secret Data		Title	
Issued Date	2012/03/23	Deciphered Date	2011/06/29	Compal Electronics, Inc.	
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				LA-9241P	0.5
				Date: Thursday, December 20, 2012	Sheet 16 of 56



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				Customer		
				Date	Thursday, December 20, 2012	Sheet 18 of 56

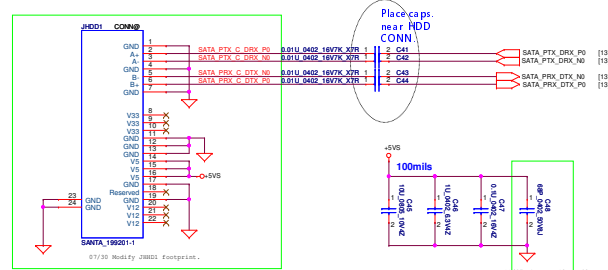


LCD POWER CIRCUIT



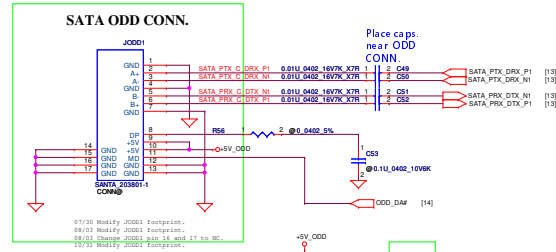
www.aitech1.ru

SATA HDD CONN.

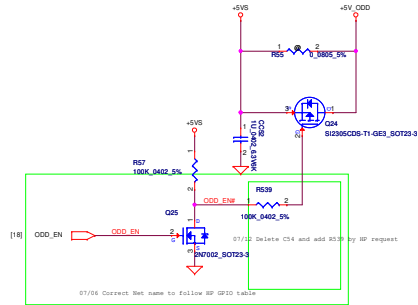


Place caps. near HDD CONN.

SATA ODD CONN.

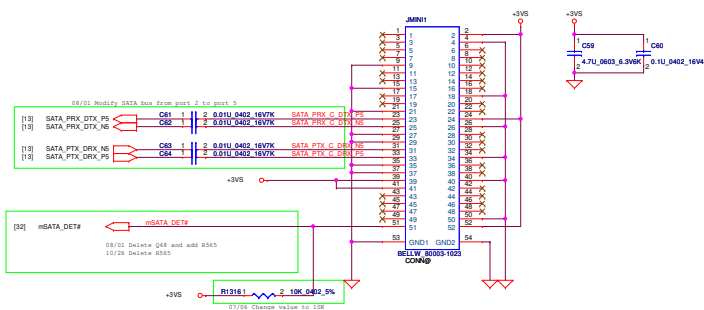


Place caps. near ODD CONN.

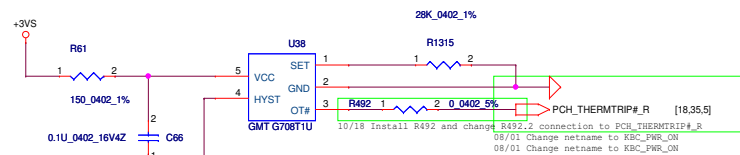
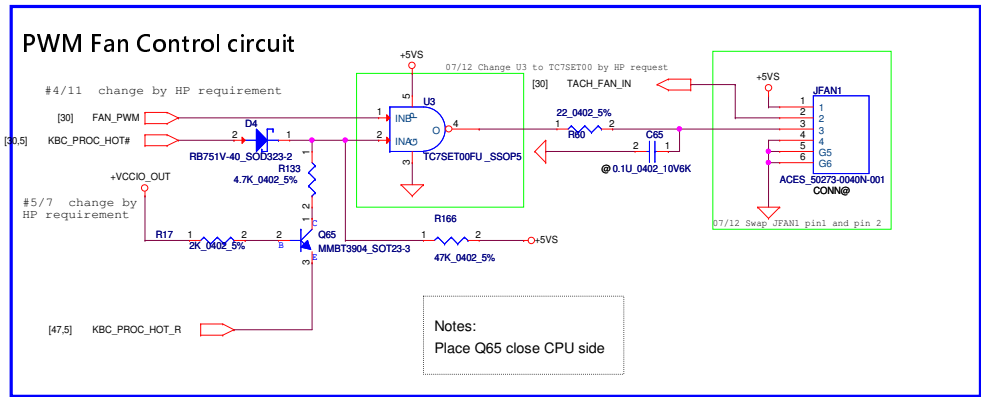


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mSATA Conn.



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				Date	1/29/2012
				Created	LA-924IP
				Revised	03/25/2012 [Sheet 23 of 56]



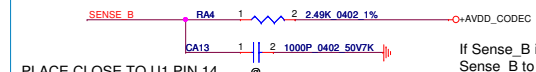
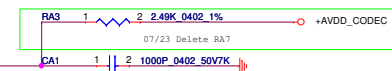
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				Rev	0.5

Notes:
Keep PVDD supply and speaker traces routed on the DGND plane.
Keep away from AGND and other analog signals

PLACE CLOSE TO U1 PIN 13

If Sense_A total length is greater than 6 inches, change C12 to 0.1uF



If Sense_B is un-used, then pull high Sense_B to AVDD by 10Kohm resistor

External MIC
Combo Jack
Headphone

07/06 Delete MIC_SENSE# circuit

Internal SPKR(front stereo speaker)

07/06 Delete MUTE_LED circuit

Place C209,C210,CA87,CA89 close to Codec

SB Beep

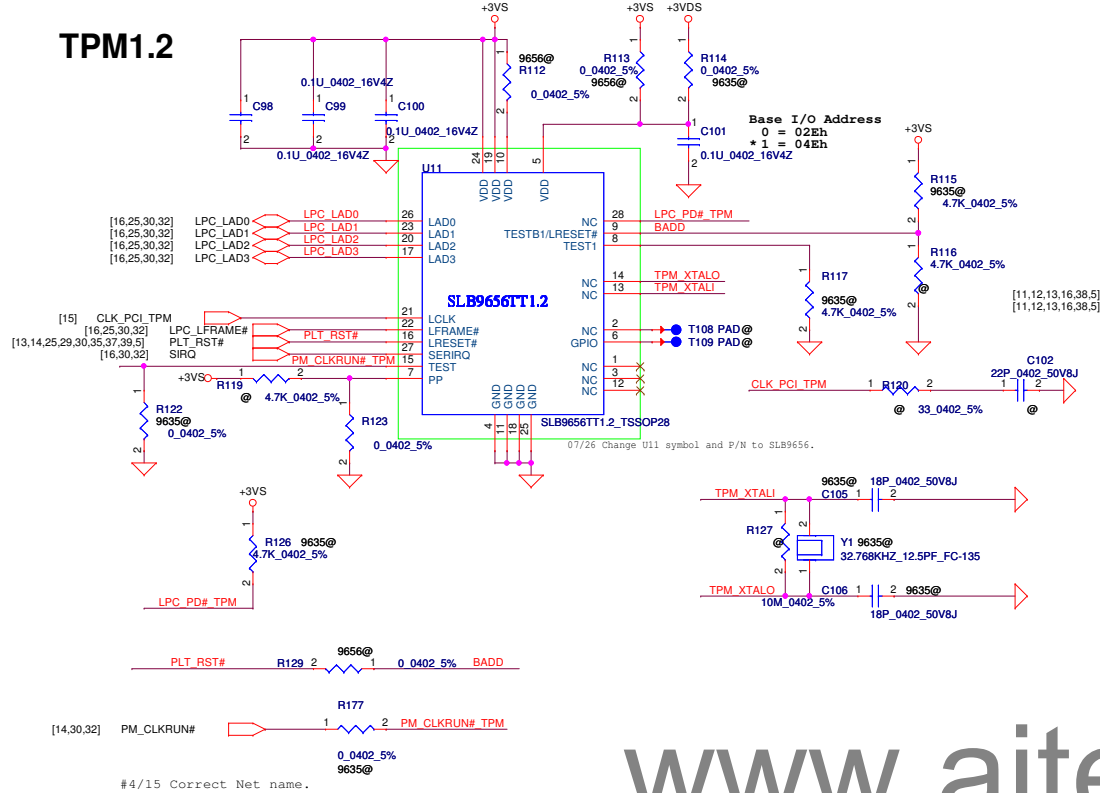
GND

GNDA

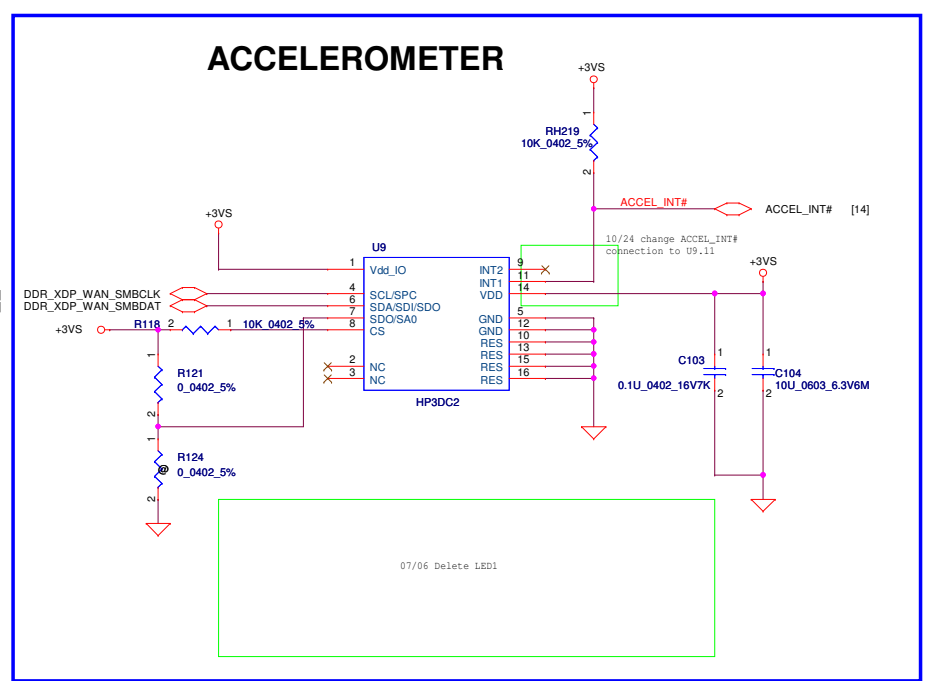
RA53 need under or near UA5

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				Date	Thursday, December 20, 2012
				Sheet	26 of 56

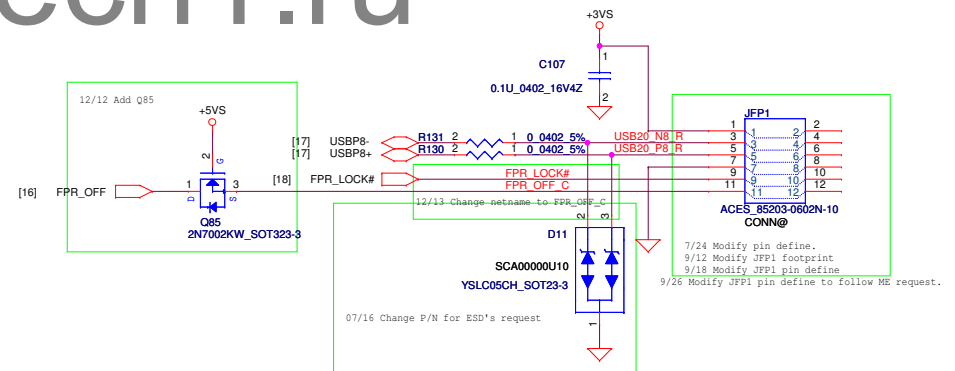
TPM1.2



ACCELEROMETER



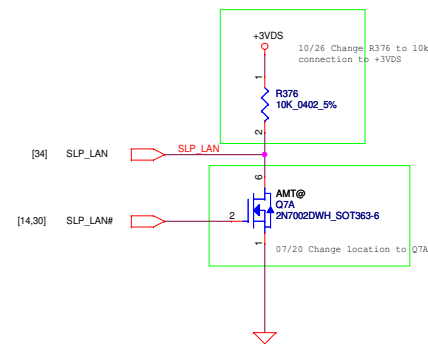
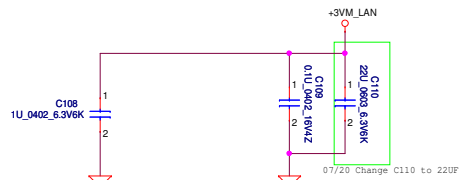
Finger printer



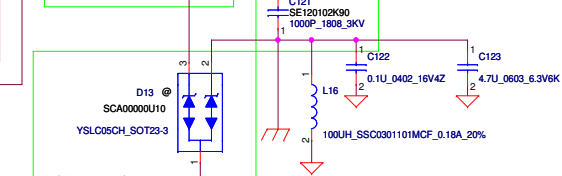
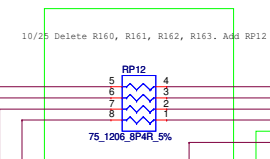
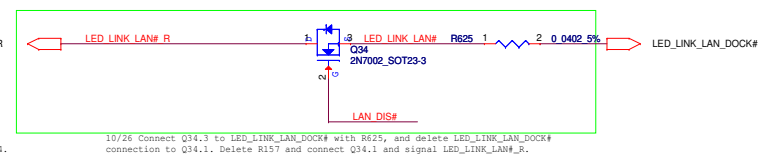
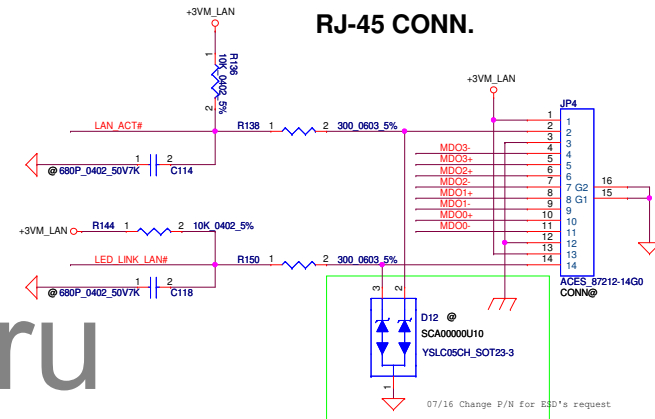
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Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2012/03/23	Deciphered Date	2006/09/25	Title	TPM/Gsensor
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				Date	Thursday, December 20, 2012
				Sheet	28 of 56
				Rev	0.5

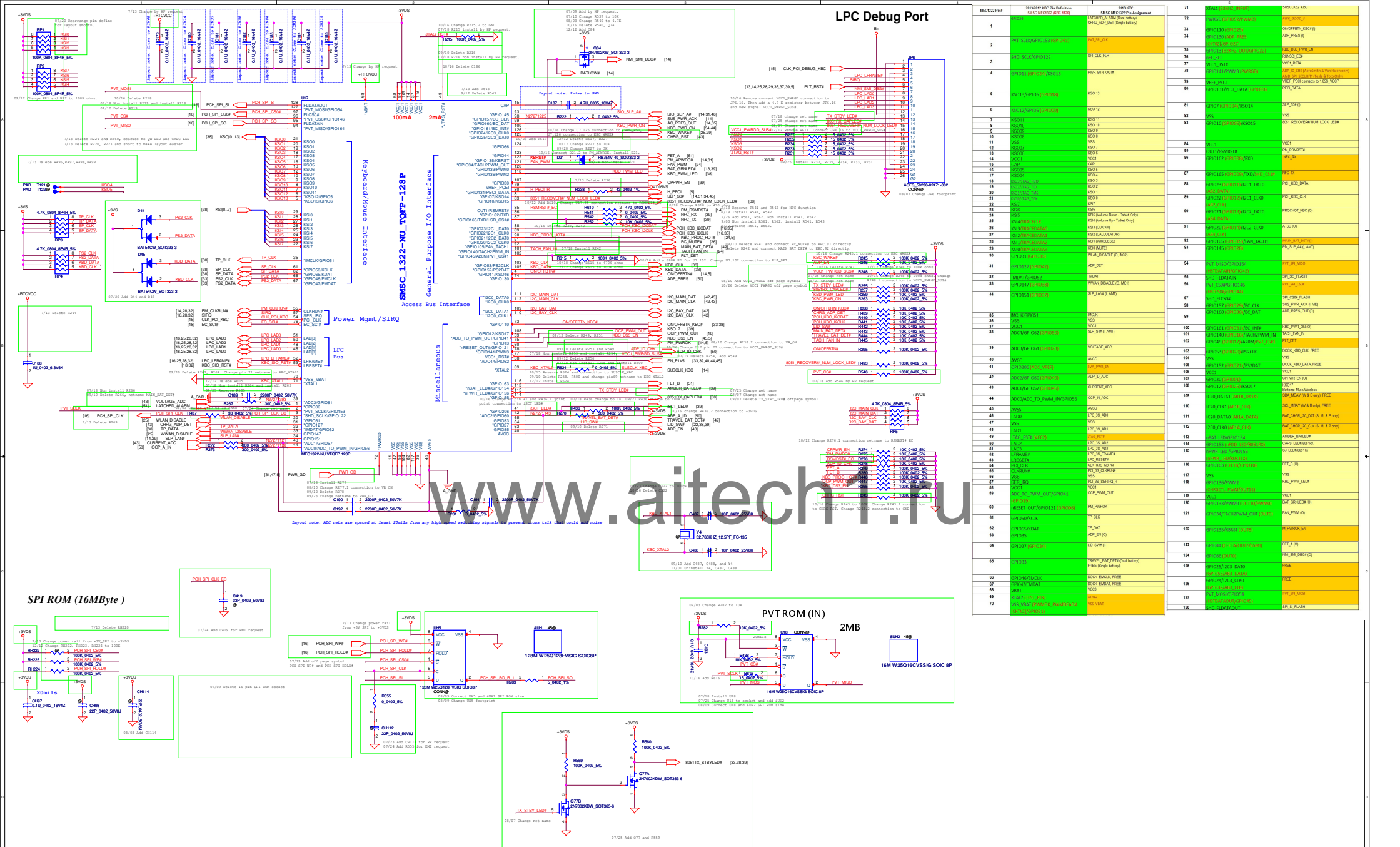
W=60mils



RJ-45 CONN.



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Date:		Thursday, December 20, 2012		Sheet 29 of 56	

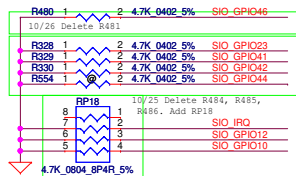
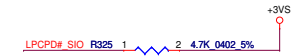
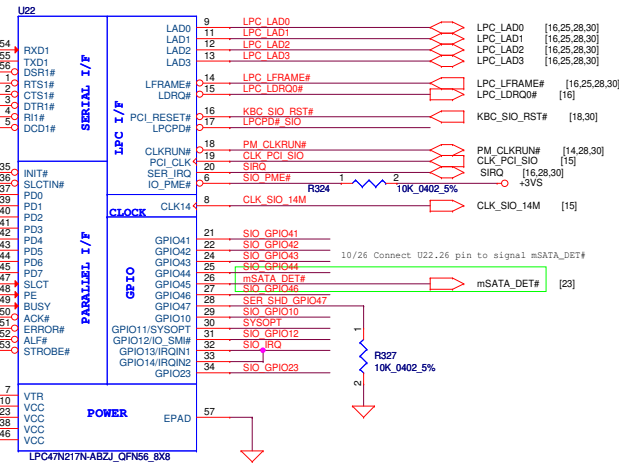
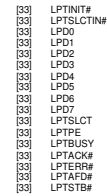
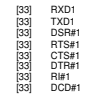
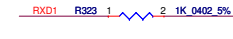
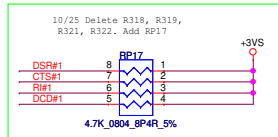
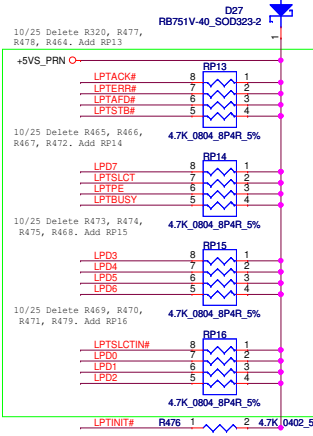




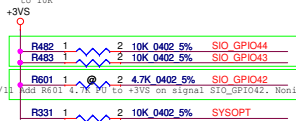
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Issued Date	2012/03/23	Deciphered Date	2010/03/31	Title	
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TO LPC47N217N

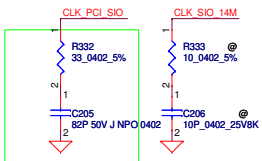
TO LPC47N217N



07/19 Change R483.1 and R482.1 connection to +3VS.
Change R330.1, R329.1, and R328.1 connection to GND
07/20 Reserve SIO_GPI044 PD R554, and modify R328,
R329, R330 value to 4.7K. Modify R482, R483 value
to 10K



```
Base I/O Address
0 = 02Eh
1 = 04Eh
```



11/07 Change R332 to 33 ohms, C205 to 82pF and install R332 and C205

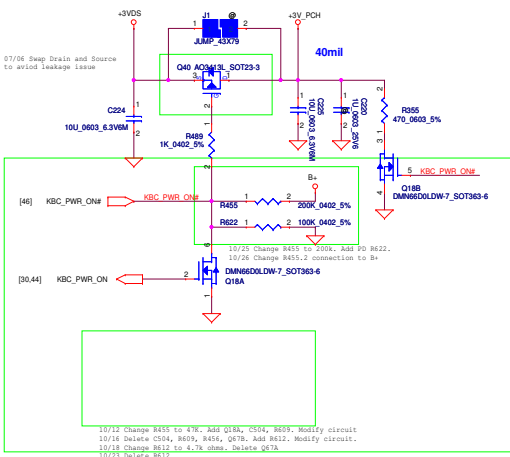
GPIO44	GPIO43	GPIO42	GPIO41	GPIO23	
0	1	0	0	0	Viper 4 DIMM
1	1	1	0	0	Viper 2 DIMM

DOCKING CONNECT

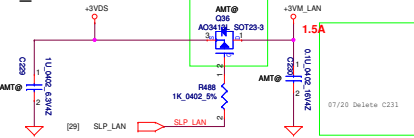


Security Classification		Compal Secret Data		<i>Compal Electronics, Inc.</i> DOCK CONN	
Issued Date	2012/03/23	Deciphered Date	2009/12/31	Title	
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				Custom	LA-9241P
				Date:	Thursday, December 20, 2012
				Sheet	33 of 56

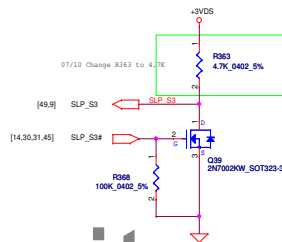
07/06 Swap Drain and Source
to avoid leakage issue

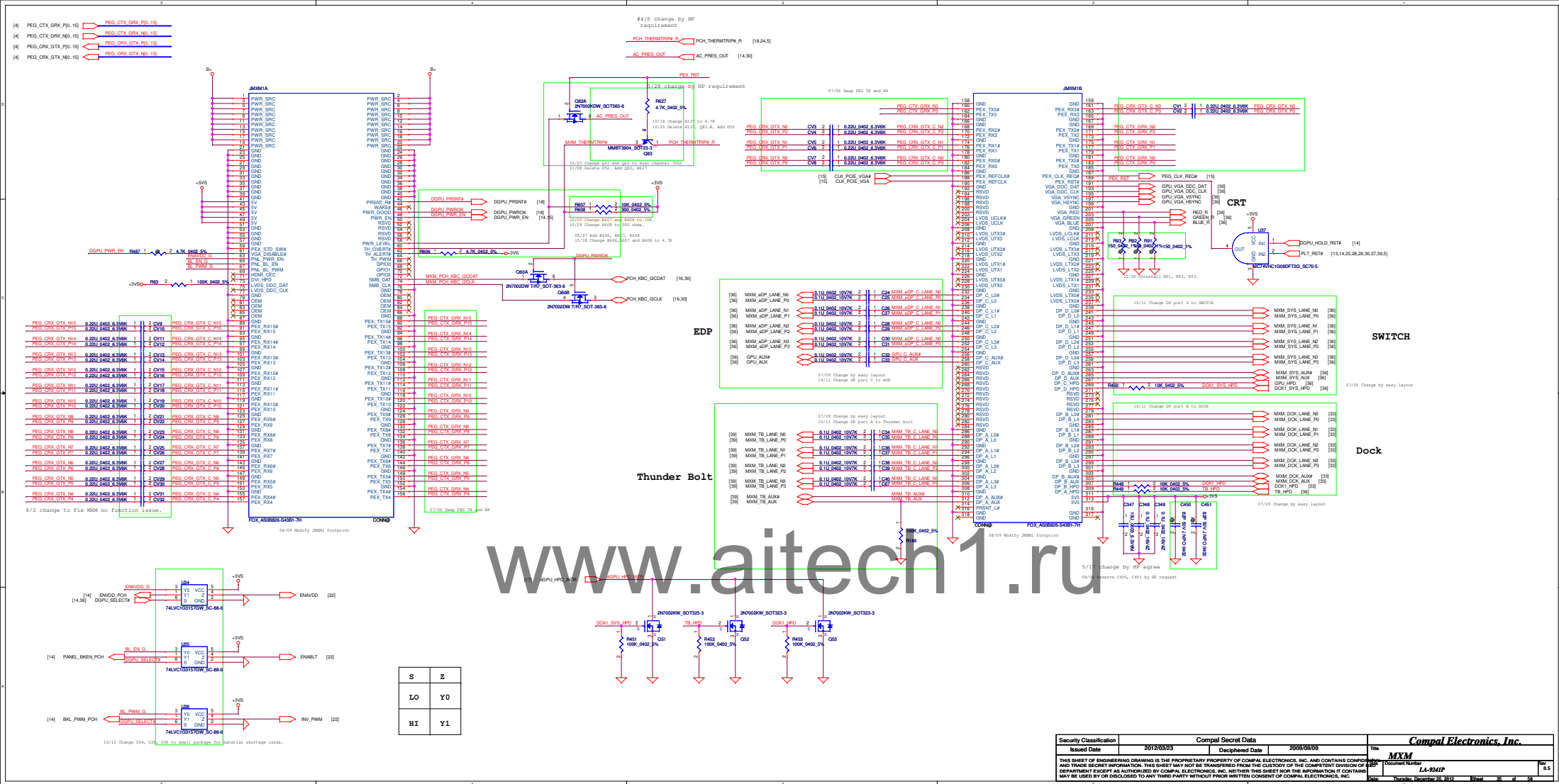
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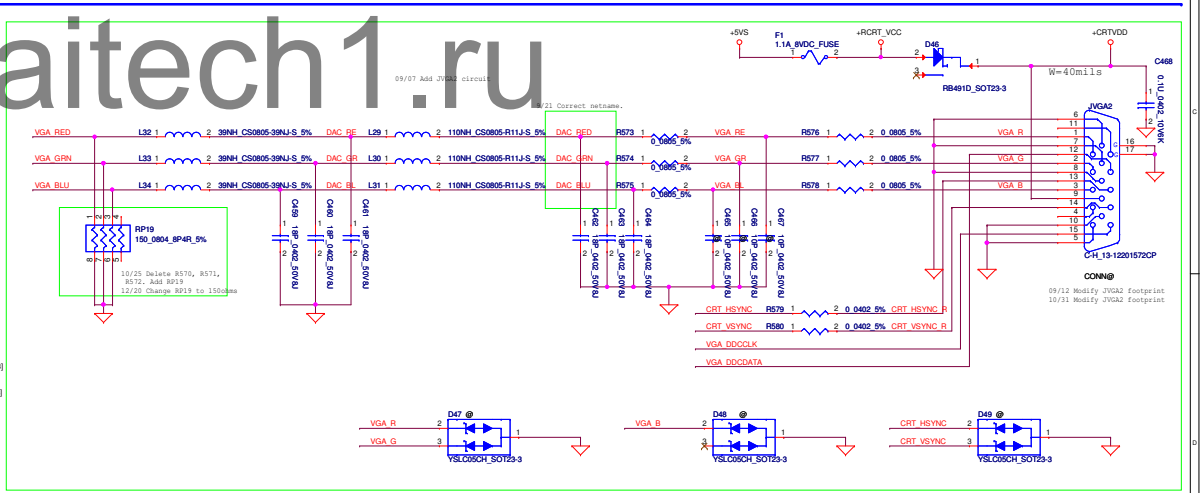
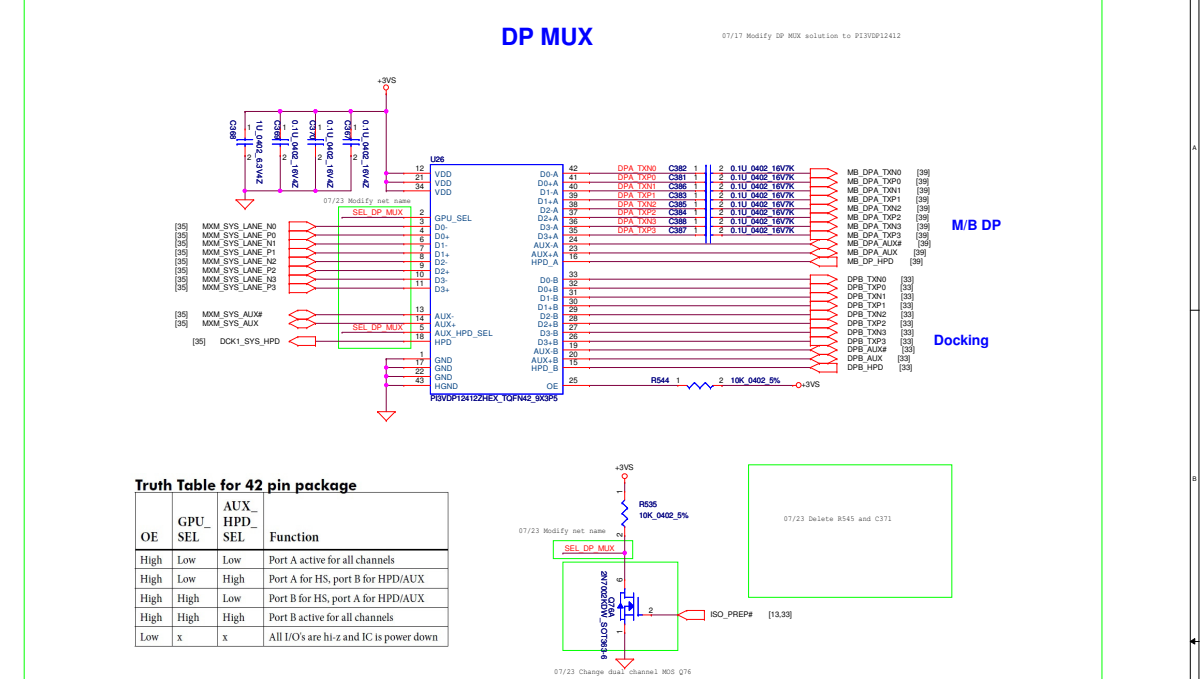
10/26 Change Q36 to A03413



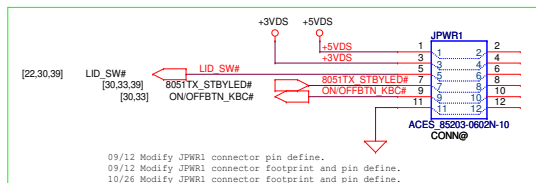
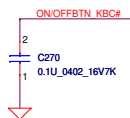
09/26 change netname to SLP_S3#
09/26 change +1.050V power circuit





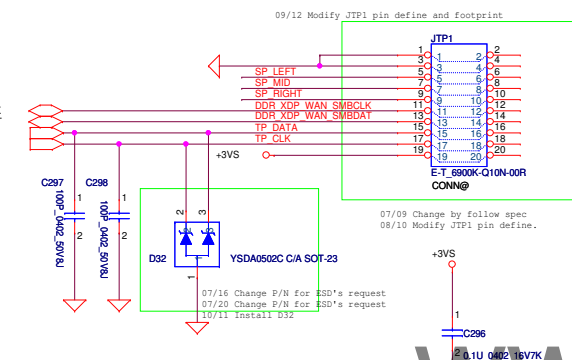


Power Board Conn

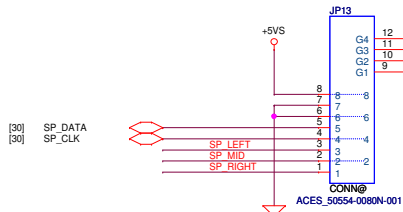


TP/B Conn

[11,12,13,16,28,5]
[11,12,13,16,28,5]
[30]
[30]

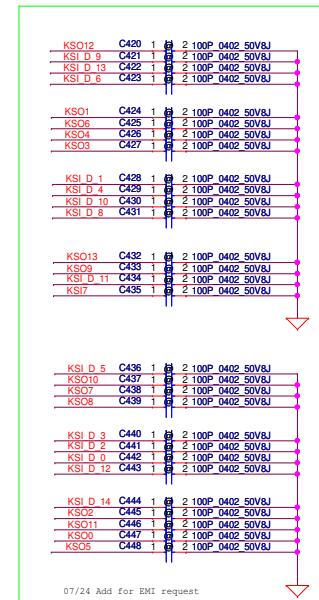
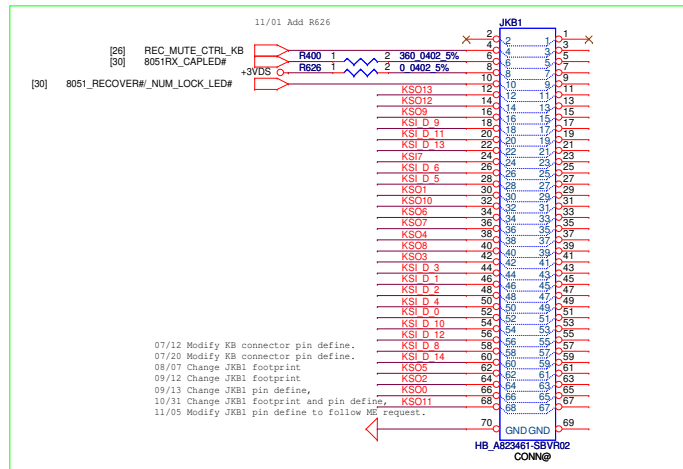
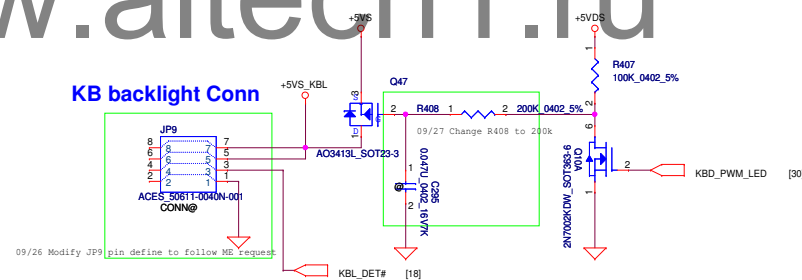


Stick Point CONN



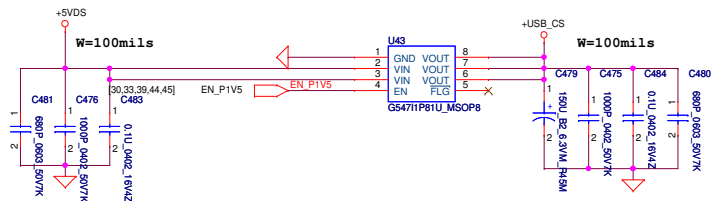
07/09 Change by follow spec
09/12 Delete JTP2 connector

KB backlight Conn



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Issued Date	2012/03/23	Deciphered Date	2011/11/02	Title	KB/TP/LED
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Size	Custom	Document Number		Rev	0.5
Date:	Thursday, December 20, 2012	Sheet	38	of	56

USB Power Switch

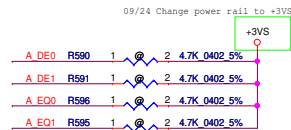


change power switch to high active parts
20120803

09/24 Delete Q79, Q80, C475, C477, C478, R588, R587.

Add DC to DC interface
2012/8/3

9/07 Add USB3.0 repeater and connector

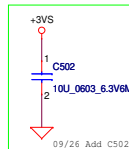


09/24 Change power rail to +3VS

Programmable output pre-emphasis level setting for channel A
3.3V tolerant. Internally pulled down at ~150K Ω .
[A_EQ1, A_EQ0] ==
LL: 3.5dB de-emphasis
LH: No de-emphasis
HL: 5dB de-emphasis
HH: Reserved

Equalizer control and program for channel A
3.3V tolerant. Internally pulled down at ~150K Ω .
[A_EQ1, A_EQ0] ==
LL: adaptive EQ enable
LH: program EQ at 3.5dB
HL: program EQ at 6dB
HH: program EQ at 10dB

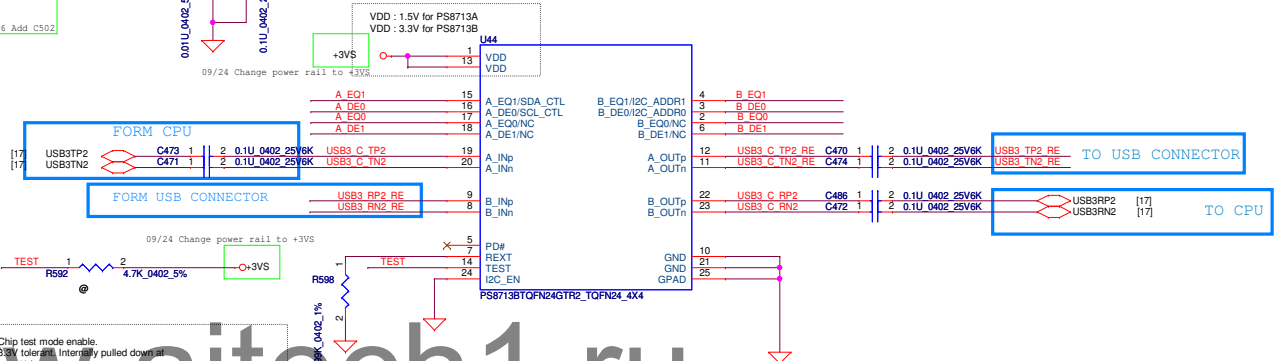
09/24 Change power rail to +3VS



09/24 Change power rail to +3VS



USB3.0 Repeater



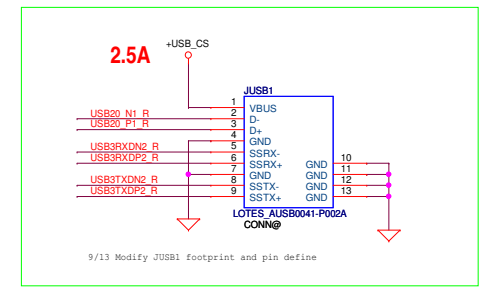
09/24 Change power rail to +3VS



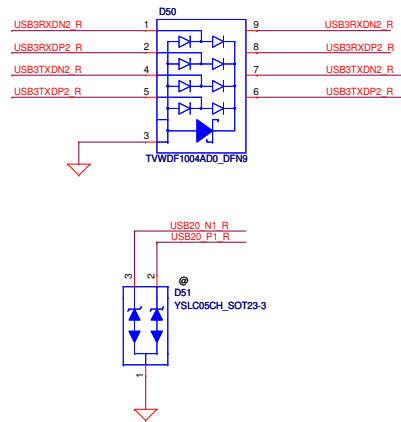
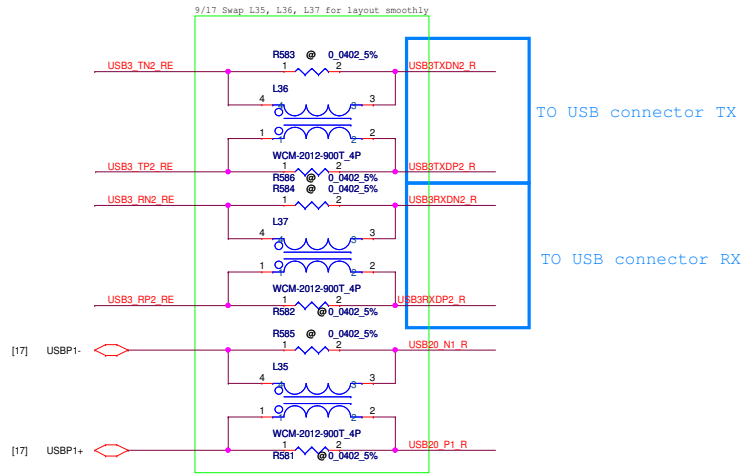
Chip test mode enable.
3.3V tolerant. Internally pulled down at ~150K Ω .
TEST ==
L: Normal operation (default)
H: Test mode enable

Follow BSD team recommend change ESD diode D5 D6
20120713

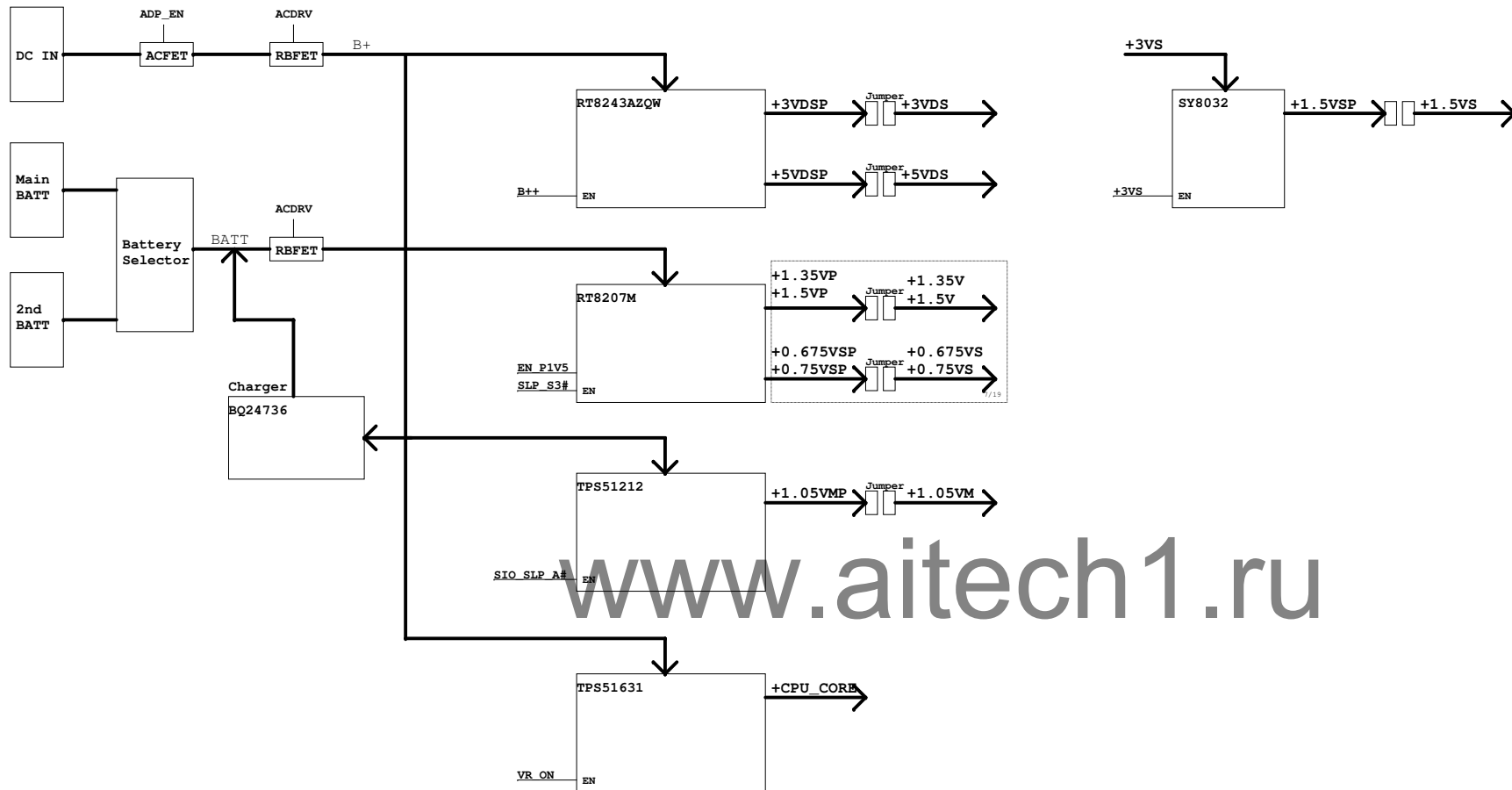
USB3.0 Connector

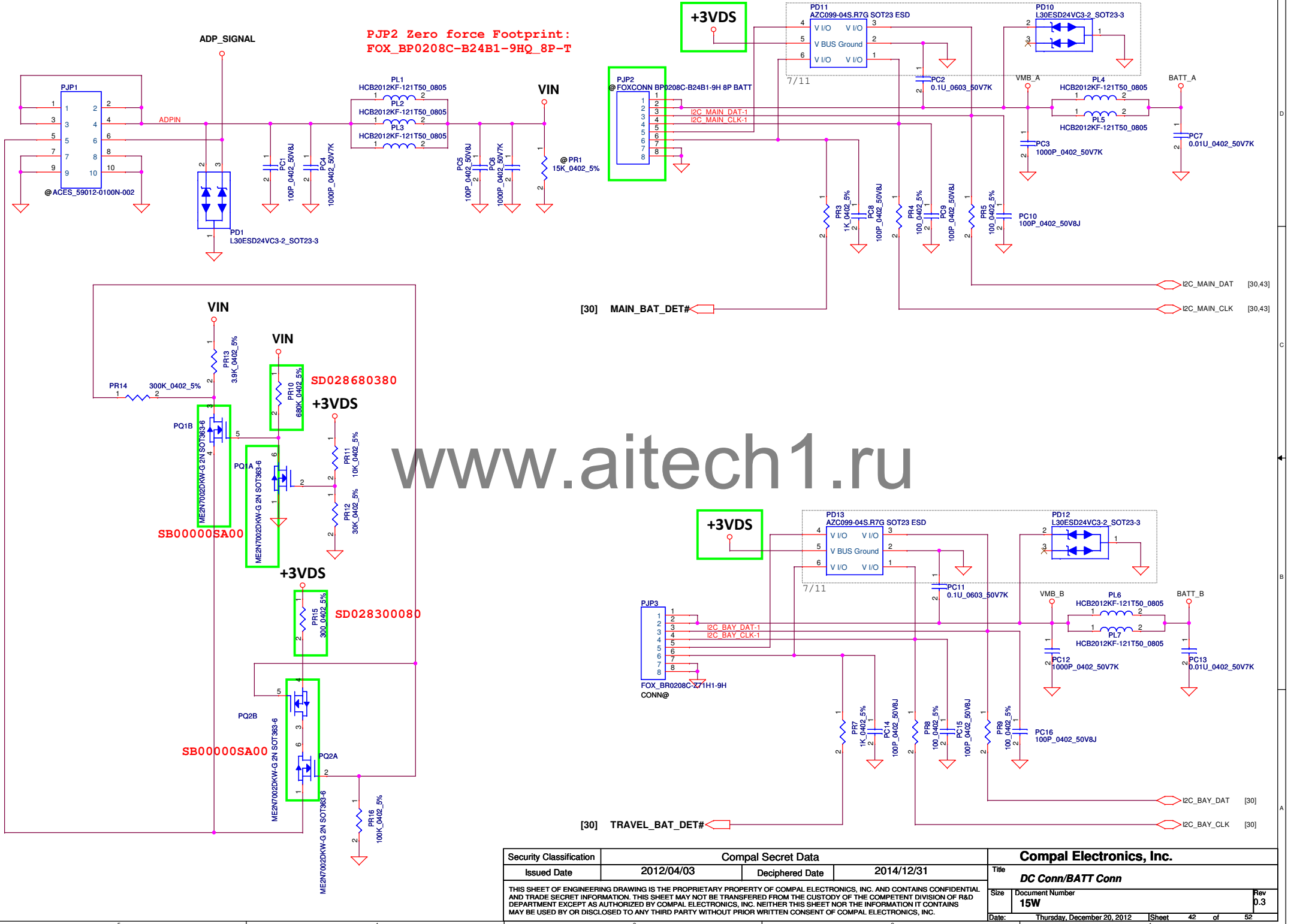


9/13 Modify JUSB1 footprint and pin define



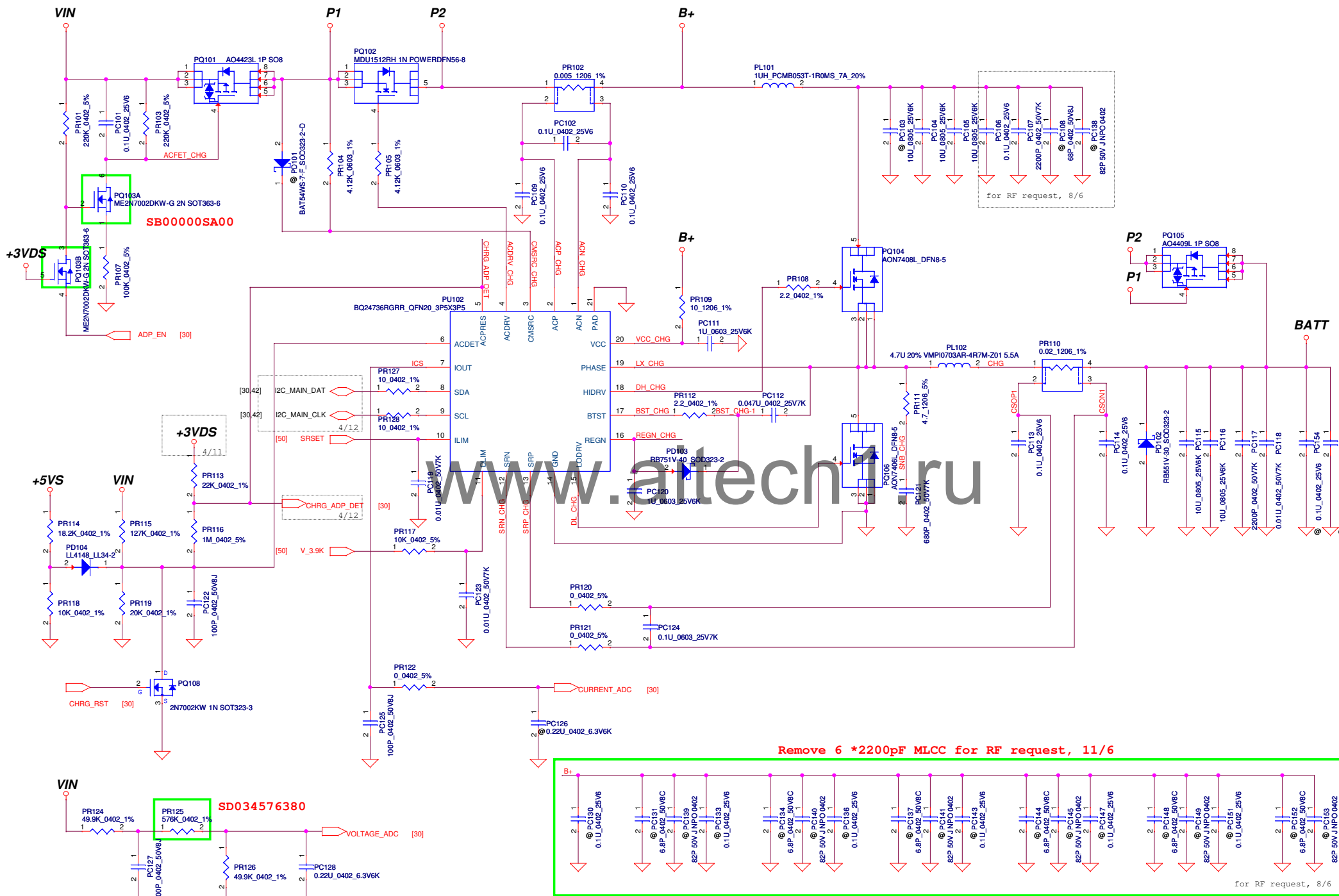
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2012/05/11	Deciphered Date	2013/05/11	Title	USB3.0 CONN/Repeater
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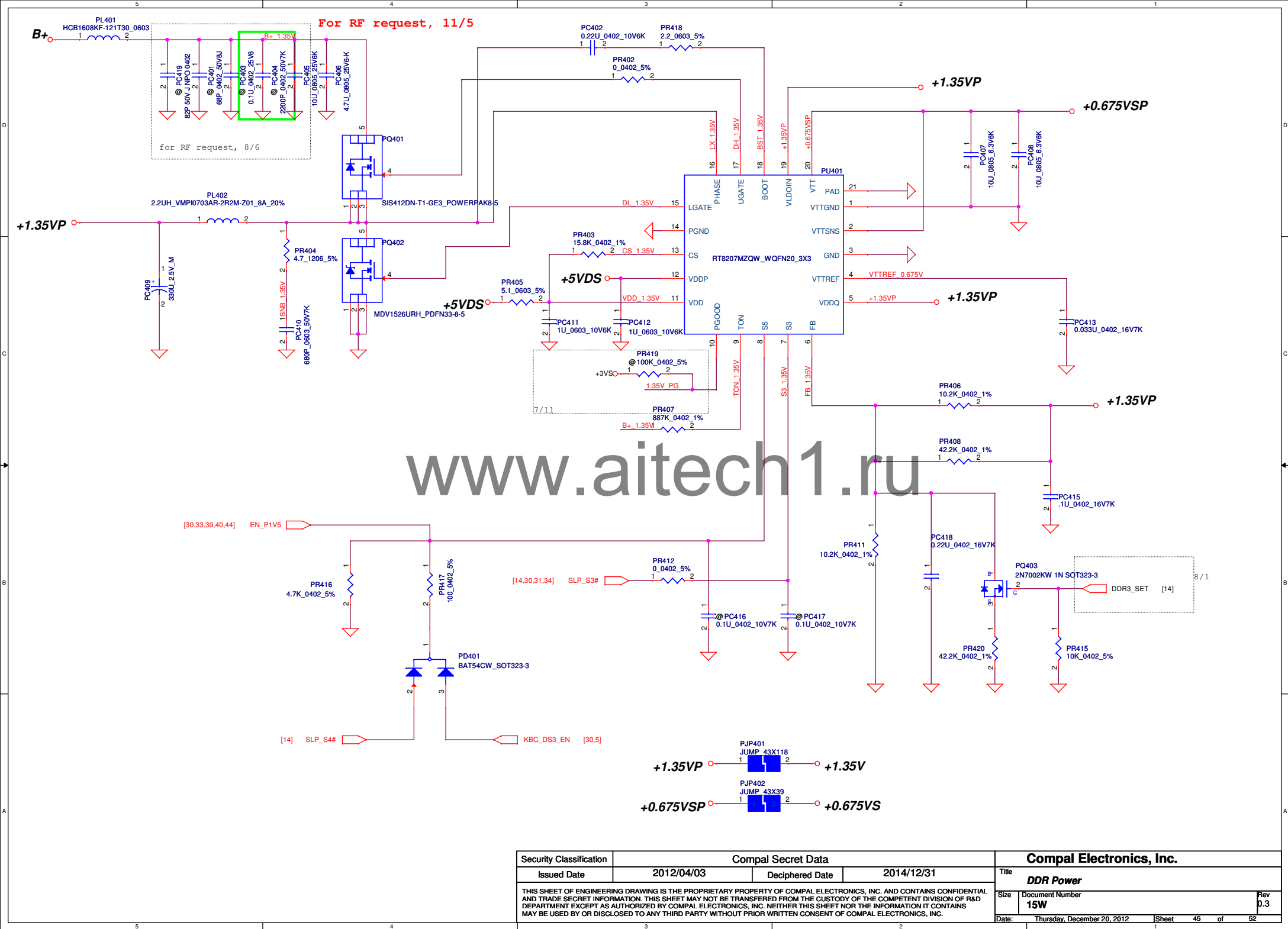


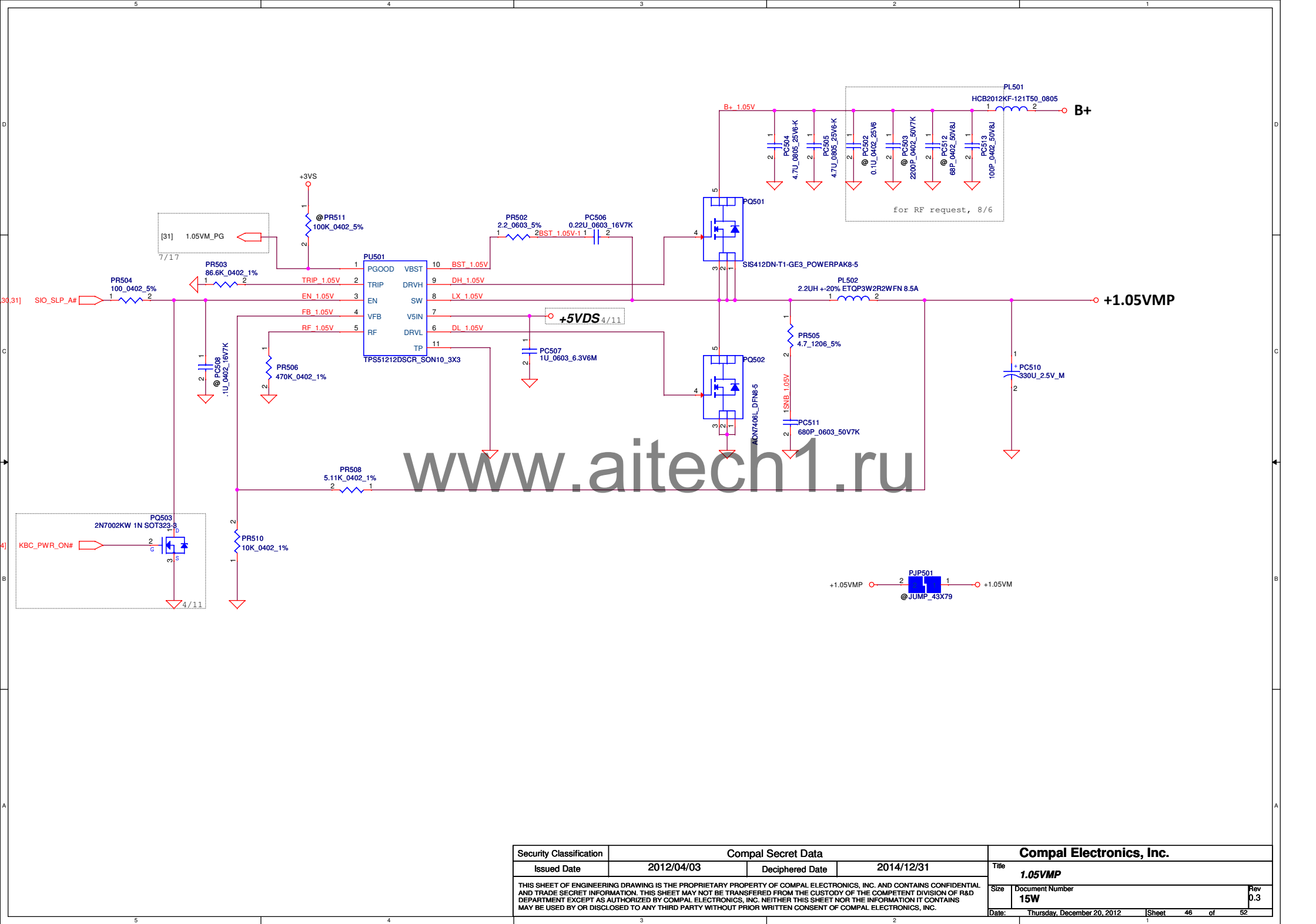
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Size	Document Number	Rev		Date	
15W		0.3		Thursday, December 20, 2012	
Sheet		42		of	
				52	

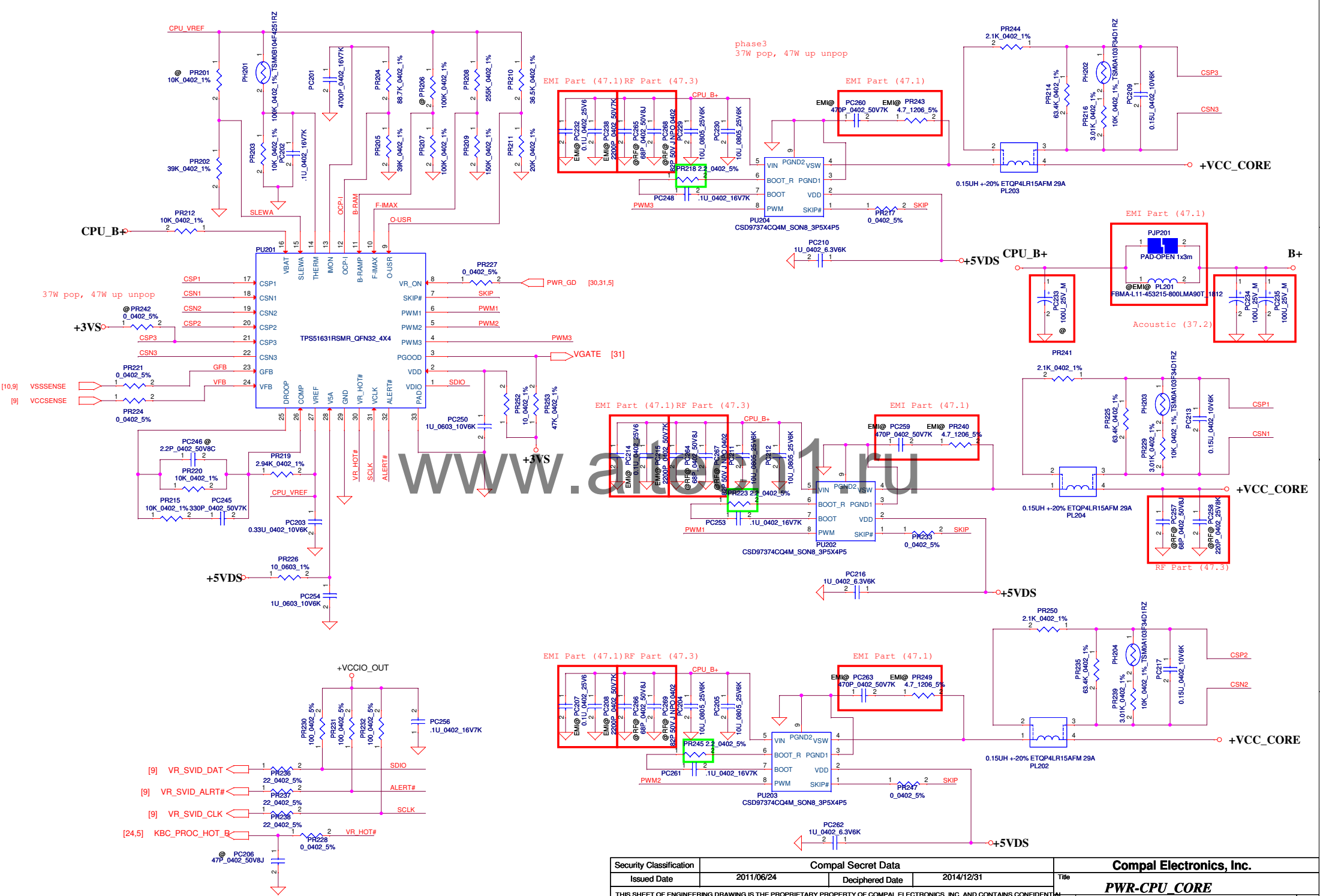


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				15W	Rev 0.3
				Date:	Thursday, December 20, 2012
				Sheet	43 of 52





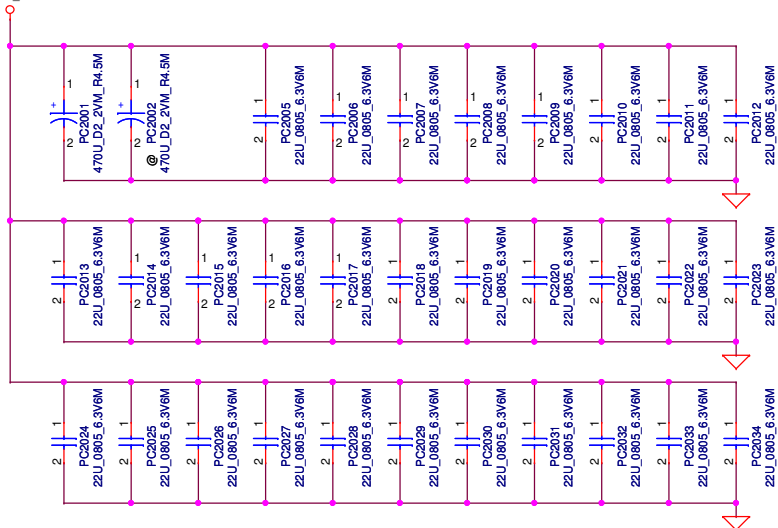
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2012/04/03	Deciphered Date	2014/12/31	Title	1.05VMP
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				Sheet	46 of 52
				Rev	0.3



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				Custom	Rev 0.3
				Date:	Sheet 47 of 52

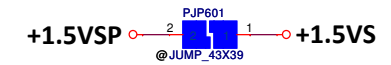
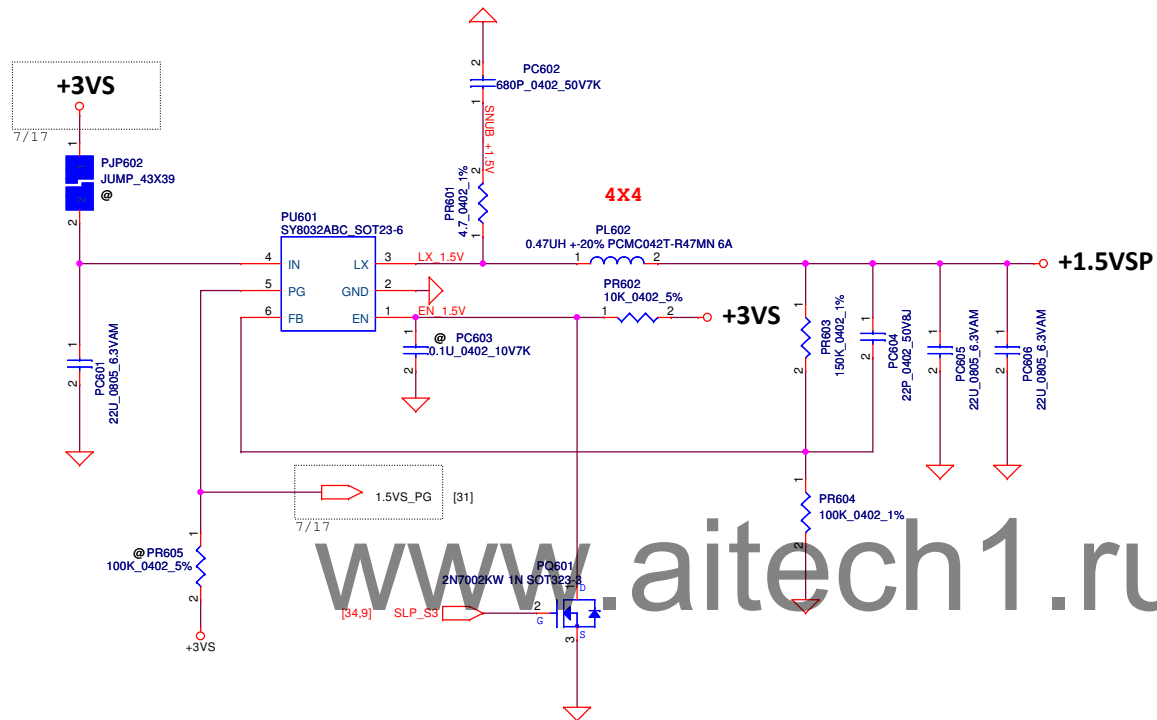
+VCC_CORE 2 X 470u/4m
30 X 22u/0805

+VCC_CORE



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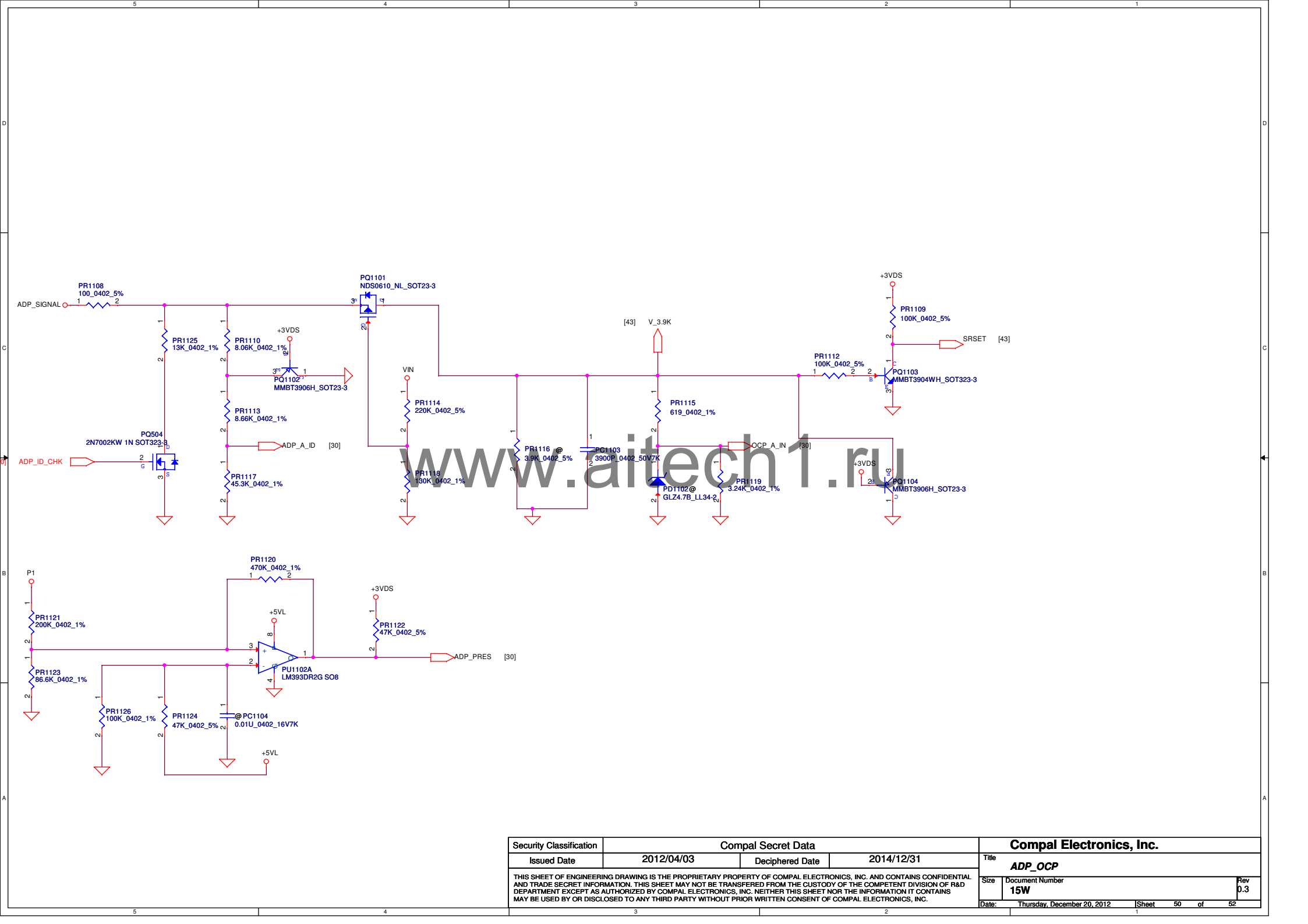
Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date	2012/04/03	Deciphered Date	2014/12/31	Title	PROCESSOR DECOUPLING		
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				Date: Thursday, December 20, 2012		Sheet	48 of 52
				Rev		0.3	



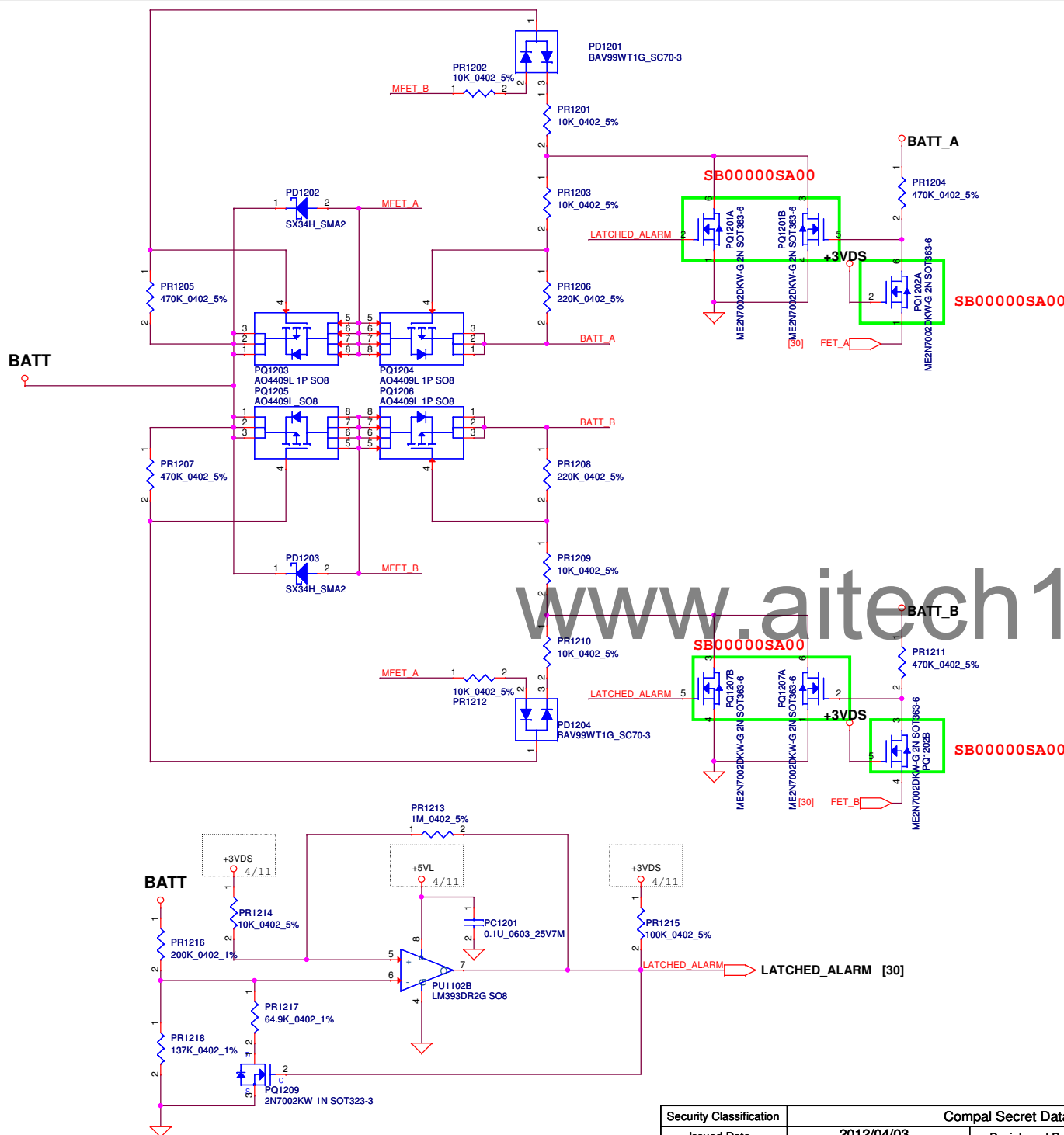
+1.5V_PCIEP
TDC=0.46A
Peak Current=0.66A

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				Document Number	Rev 0.3
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Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	43	Reserve PC130,129,131,139,133,132,134,140,136,135,137,141,143,142,144,145,146,147,148,149,151,150,152,153,138	2012/08/06		RF solution		
2	44	Reserve PC324,322,323,325326,327,328,329,330,331,302,303	2012/08/06		RF solution		
3	44	Add PC305,304,308,309	2012/08/06		RF solution		
4	45	Reserve PC419,401	2012/08/06		RF solution		
5	45	Add PC403,404,405	2012/08/06		RF solution		
6	46	Reserve PC512,513	2012/08/06		RF solution		
7	46	Add PC502,503	2012/08/06		RF solution		
8	48	Reserve PC264,267,266,269,265,268	2012/08/06		RF solution		
9	48	Add PC214,215,207,203,232,236	2012/08/06		RF solution		
10	48	Change PC233,234 from SF000001280 to SF000004M00	2012/08/09		Change the hieght to 6mm		
11	47	Change PR234 from 19.1K to 62K	2012/08/10		HP suggestion		
12	48	Change PQ203,204,211 from SB00000K300 to SB00000U200	2012/09/11		Design change		
13	48	Change PQ201,205,209 from SB00000S300 to SB00000W200	2012/09/13		Design change		
14	44	Change PQ301,302 from SB00000JM00 to SB00000IA00	2012/09/17		Design change		
15	44	Change PQ303 from SB00000CT00 to SB00000H700	2012/09/17		Design change		
16	44	Change PQ304 from SB00000N800 to SB00000TZ00	2012/09/17		Design change		
17	45	Change PQ401 from SB00000H800 to SB00000IA00	2012/09/17		Design change		
18	45	Change PQ402 from SB00000N800 to SB00000TZ00	2012/09/17		Design change		
19	46	Change PQ501 from SB00000H800 to SB00000IA00	2012/09/17		Design change		
20	46	Change PQ502 from SB00000N800 to SB00000H700	2012/09/17		Design change		
21	51	Reserve PR1101,1102,1103,1104,1105,1106,1107,PC1101,1102,PD1101	2012/10/2		HP suggestion		
22	45	Change PD401 from SC600000D00 to SCS00006400	2012/10/2		HP suggestion		
23	45	Change PR416 from SD034100380 to SD028470180	2012/10/2		HP suggestion		
24	43	Change PL101 from SH00000MR00 to SH00000NW00	2012/10/2		Design change		
25	23	Change PR240,243,249 from SD001470B80 to SD000010280	2012/10/2		Design change		
26	23	Reserve PL201	2012/10/2		Design change		
27	25	Reserve PL301	2012/10/2		Design change		

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				Date	Thursday, December 20, 2012	Sheet 52 of 52

VBL20 from DB0 to DB1 LA-9241P REV:0.1 -> 0.2 Modify <2012.07.04.~2012.08.07. >					
Rev.	Item	Date	Impact	Page	Change Cause
0.2	1	7/6	CKT	13	-Follow HP GPIO table
0.2	2	7/6	CKT	14,37	-Follow HP GPIO table
0.2	3	7/6	CKT	15	-Follow HP GPIO table
0.2	4	7/6	CKT, LAYOUT	16	-For NFC function
0.2	5	7/6	CKT, LAYOUT	18,23	-Follow HP GPIO table
0.2	6	7/6	CKT, LAYOUT	18	-Follow HP GPIO table
0.2	7	7/6	CKT, LAYOUT	19	-Add PU resistor to avoid issue.
0.2	8	7/6	CKT, LAYOUT	22	-eDP MUX
0.2	9	7/6	CKT	23	-Power driving
0.2	10	7/6	CKT, LAYOUT	25	-Change WWAN connector to NFCC
0.2	11	7/6	CKT, LAYOUT	26	-Move Mute circuit to S/B
0.2	12	7/6	CKT, LAYOUT	26	-Audio Combo Jack
0.2	13	7/6	CKT, LAYOUT	27	-Follow reference design
0.2	14	7/6	CKT, LAYOUT	28	-No ACCELEROMETER LED
0.2	15	7/6	CKT, LAYOUT	29	-NIC yellow ban issue
0.2	16	7/6	CKT, LAYOUT	30	-Follow HP KBC pin define.
0.2	17	7/6	CKT, LAYOUT	34	-Avoid leakage issue
0.2	18	7/6	CKT, LAYOUT	35	-MXM no display out issue
0.2	19	7/6	CKT, LAYOUT	36	-Avoid eDP signal quality fail issue
0.2	20	7/6	CKT, LAYOUT	36	-To support DP1.2a
0.2	21	7/6	CKT, LAYOUT	39	-Add NFC function
0.2	22	7/9	CKT, LAYOUT	13	-HP request
0.2	23	7/9	CKT, LAYOUT	13	-HP request
0.2	24	7/9	CKT, LAYOUT	16	-HP request
0.2	25	7/9	CKT, LAYOUT	30	-HP request
0.2	26	7/9	CKT, LAYOUT	30	-HP request
0.2	27	7/9	CKT, LAYOUT	35	-HP request
0.2	28	7/9	CKT, LAYOUT	38	-Follow spec pin define
0.2	29	7/9	CKT, LAYOUT	39	-Follow spec pin define
0.2	30	7/10	CKT, LAYOUT	6,11,12	-Following Intel CRB by HP request
0.2	31	7/10	CKT, LAYOUT	8	-HP request
0.2	32	7/10	CKT, LAYOUT	30	-HP request
0.2	33	7/10	CKT, LAYOUT	34	-HP request
0.2	34	7/11	CKT, LAYOUT	36	-Follow vendor request
0.2	35	7/11	CKT, LAYOUT	29	-HP request
0.2	36	7/12	CKT, LAYOUT	22	-HP request
0.2	37	7/12	CKT, LAYOUT	23	-HP request
0.2	38	7/12	CKT, LAYOUT	24	-HP request
0.2	39	7/12	CKT, LAYOUT	24	-FAN module pin define wrong.
0.2	40	7/12	CKT, LAYOUT	37	-Follow latest Smart card module pin define.
0.2	41	7/12	CKT, LAYOUT	38	-Follow latest KB connector pin 1 location.
0.2	42	7/13	CKT, LAYOUT	27,39	-Reduce layout spacing
0.2	43	7/13	CKT, LAYOUT	30	-Correct KBC circuit
0.2	44	7/13	CKT, LAYOUT	39	-Follow ME connector list
0.2	45	7/13	CKT, LAYOUT	39	-Follow ME connector list
0.2	46	7/16	CKT, LAYOUT	14	-ESD request
0.2	47	7/16	CKT, LAYOUT	25	-ESD request
0.2	48	7/16	CKT, LAYOUT	27	-ESD request
0.2	49	7/16	CKT, LAYOUT	27	-ESD request
0.2	50	7/16	CKT, LAYOUT	28	-ESD request
0.2	51	7/16	CKT, LAYOUT	29	-ESD request
0.2	52	7/16	CKT, LAYOUT	33	-ESD request
0.2	53	7/16	CKT, LAYOUT	37	-Follow HP latest generation smart card connector pin define.
0.2	54	7/16	CKT, LAYOUT	38	-ESD request
0.2	55	7/17	CKT	11	-Correct connector name
0.2	56	7/17	CKT, LAYOUT	36	-Change DP and eDP MUX to passive solution
0.2	57	7/17	CKT, LAYOUT	17,39	-Follow HP request
0.2	58	7/18	CKT, LAYOUT	14	-Follow HP request
0.2	59	7/18	CKT, LAYOUT	17	-Follow HP request
0.2	60	7/18	CKT, LAYOUT	30,32	-Follow HP request

Modify Description

-Change UH1.B17 to HDD_HALTLED
-Change UH1.G17 and U30.26 to PWRSV_SEL#.
-Change UH1.U4 to WLAN_TRAMSIT_OFF#
-Change UH1.H6 to NFC_RST#, and add QH10, RH238, RH239 for NFC SMBUS level shift
-Change UH1.C16 to ODD_EN. Change Q25.1 netname to ODD_EN and Q25.2 netname to ODD_EN#
-Change UH1.U12 and RH185.1 to NFC_INT
-Add RH240 and RH241PU resistor of THERM_SCI# and WWAN_TRANSMIT_OFF#
-Modify eDP connector signal source from eDP MUX.
-Change R1316 from 100K to 10K ohms
-Modify JMINI3 connector type and pin define
-Move QA2 and R95 to S/B
-Delete MIC_SENSE# circuit.
-Change C91 and C94 to 2.2uF as spec
-Delete LED1
-Add C350 and C373 to +1.05VM_LAN
-Modify U17 pin define.
-Swap Q40 drain and source
-Swap JMXM1 PEG TX and RX bus
-Change U42 to PS8321 which had include repeater function
-Change U26 to PS8338 to support DP1.2a spec.
-Add JNFC1 circuit.
-Delete PCH_XDP circuit
-Add QH11
-Delete U39, U40, RH232
-Delete 16pin SPI ROM socket
-Add R537,Q73
-Swap MXM port A and port C for layout smoothly
-Modify JTP1 and JTP2 pin define
-Modify JNFC1 pin define
-Modify JCPU1 pin AM3,F16,F13 netname. Delete RC73,RC76,C13,C75. Add QD3,RD27,RD28
-Delete RC106, RC107
-Modify R537 to 10K ohms
-Modify R363 to 4.7K ohms
-Add CC75,CC76,CC77,CC78,CC79,CC80,CC81,CC82. Modify U26 circuit
-Delete R135, R139, R151, R152, R140, R142 for layout.
-Delete C6
-Delete C54. Add R539.
-Change U3 to T07SE100
-Modify JFAN1 pin define by follow latest spec.
-Modify J3 pin define.
-Modify JKB1 pin define.
-Move R494,R495,LA5,LA9,CA37,CA38,DA4 to sub board
-Change U17.68, C179.1, C188.1 to +RTCVCC.
-Delete R224, R460, R220, R223, R496, R497, R498, R499, R244, R269, R236, RH220.
-Change RH222.1, RH223.1, RH224.1, CH97.1, CH98.1, UH5.8 to +3VDS
-Reserve R541, R542 for NFC TX/RX
-Modify JVGAI1 footprint and pin define.
-Modify JTB1 pin define, add WL/BT_LED# signal.
-Reserve CH107
-Reserve C375
-Change DA2 and DA3 P/N.
-Delete DA1
-Change D11 P/N
-Change D12 and D13 P/N
-Add D42
-Modify J3 pin define.
-Change D32 P/N.
-Change JP3 to JDIMM1
-Modify U26 and U42 to P13VDP12412ZHEX and releate circuit.
-Modify JTB1 pin define. Add CH108, CH109, CH110, CH111. Connect PCIE port 1 and port 2 to JTB1.
-Delete RH186, and add QH12 to inversion PCH_GPIO56 signal for CR_SX_WARN#
-Change RH165.2 net name to TB_HOT_PLUG# for TBT function.
-Change JP6.13 connection to 8051TX_STBYLED# (instead of 8051TX_STBLED#)
-Change Q35.2 connection to 8051TX_STBYLED# (instead of 8051TX_STBLED#)
-Add a 100K pullup resistor between signal PVT_CS# and +3VDS power rail.
-Make these resistors as non-install (from Install): R219,R266,R258,R253,R216,R264
-Make R215 install
-Change R436 to 1K (from 10 ohm)
-Make these resistors as install (from un-install): R242,R254,R500,R277,R269,R262,R218
-Make U18 as install.

VBL20 from DB0 to DB1 LA-9241P REV:0.1 -> 0.2 Modify <2012.07.04.~2012.08.07. >										
Rev.	Item	Date	Impact	Page	Change Cause	Modify Description				
0.2	61	7/18	CKT, LAYOUT	31	-Follow HP request	-Modify PM_APWROK circuit				
0.2	62	7/18	CKT, LAYOUT	39	-Follow HP request	-Modify JTB1 connector pin define. Add HDD_HALTLED and PWR_GD				
0.2	63	7/19	CKT, LAYOUT	16,30	-Follow HP request	-Reserve RH242 and RH243. Add off page symbol of PCH_SPI_WP# and PCH_SPI_HOLD#				
0.2	64	7/19	CKT	20	-Follow Intel reference schematic V1.2	-Non-install CH101				
0.2	65	7/19	CKT,LAYOUT	25	-Follow HP request	-Delete C79 and C85. Change R457.1 power rail to +3VDS				
0.2	66	7/19	CKT,LAYOUT	30	-Follow HP request	-Delete R254				
0.2	67	7/19	CKT,LAYOUT	32	-Follow HP request	-Change R483.1 and R482.1 connection to +3VS. Change R330.1, R329.1, and R328.1 connection to GND				
0.2	68	7/19	CKT,LAYOUT	36	-Follow HP request	-Delete CC70, CC71, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82				
0.2	69	7/19	CKT,LAYOUT	39	-Follow HP request	-Modify pin define JVGAI and JCR1 pin define for better return path				
0.2	70	7/19	CKT,LAYOUT	40	-Follow HP request	- Connect signal ADP_ID_CHK to pin 78 of KBC via a 0 ohm resistor (install this resistor). - Connect NFC_RX to pin 86 of KBC directly, and then move R541 (install) between ADP_ID_CHK and pin 86 of KBC. - Connect NFC_TX to pin 87 of KBC directly, and then move R542 (install) between pin 87 of KBC and signal PLT_SEL.				
0.2	71	7/20	CKT,LAYOUT	14	-Follow HP request	-Add ME debug connector JME1				
0.2	72	7/20	CKT,LAYOUT	16	-Follow latest ME drawing.	-Correct screw hole size.				
0.2	73	7/20	CKT,LAYOUT	19,20	-Follow HP request.	-Delete CH60, CH62, CH63, CH102				
0.2	74	7/20	CKT,LAYOUT	19,21,38	-Follow HP request.	-Add RA28 and Q75 for REC_MUTE_CTRL_KB signal. Modify JKB1 pin define.				
0.2	75	7/20	CKT	27,38	-Follow ESD request.	-Change DA2, DA3, D32 P/N				
0.2	76	7/20	CKT,LAYOUT	29,34	-Follow HP request.	-Change C110 to 22uF, Delete C231. Change Q170A lation to Q7A				
0.2	77	7/20	CKT,LAYOUT	30	-Layout smooth	-Modify RP1 pin define.				
0.2	78	7/20	CKT,LAYOUT	30	-Follow HP request.	-Add D44 and D45				
0.2	79	7/20	CKT,LAYOUT	31	-Follow HP request.	-Modify PWR_GD circuit.				
0.2	80	7/20	CKT	37	-Vendor's suggestion	-Change C258 and C255 to 1uF. Non install RH225.				
0.2	81	7/20	CKT	38	-Modify for 2 DIMM and 4 DIMM SKU.	-Reserve SIO_GPIO44 PD R554, and modify R328, R329, R330 value to 4.7K. Modify R482, R483 value to 10K				
0.2	82	7/23	CKT,LAYOUT	14	-Schematic wrong.	-Connection RH55.2 to power rail +RTCVCC				
0.2	83	7/23	CKT,LAYOUT	14	-Follow HP request.	-Move QH12 to sub board. Add CR_SX_WARN# PU 10K ohms RH244				
0.2	84	7/23	CKT,LAYOUT	15,17,18	-No connection to other page.	-Delete FN14, FN15, USB_OC0#_R, USB_OC1#_R, USB_OC2#, USB_OC3#, USB_OC4#_R, PCH_GPIO24, FN_CLK2, PCH_GPIO37 off page symbol.				
0.2	85	7/23	CKT,LAYOUT	16	-Follow latest ME drawing.	-Modify screw hole size.				
0.2	86	7/23	CKT,LAYOUT	17	-Correct net name	-Change RH171.1 connection to ODD_EN				
0.2	87	7/23	CKT,LAYOUT	18,29,30,34	-Follow VBK10	-Non install RH184 and RH185. Add C389, C390, C391, C392. Change C121 to 1000pF. Change C322 to 100pF. Delete Q37, R366, R361.				
0.2	88	7/23	CKT,LAYOUT	22,30	-Follow RF request.	-Reserve C393, C394, CH112				
0.2	89	7/23	CKT,LAYOUT	26	-MIC_SENSE circuit had been removed.	-Delete RA7.				
0.2	90	7/23	CKT,LAYOUT	27	-Reduce layout spacing	-Combine QA2B with QA1A.				
0.2	91	7/23	CKT,LAYOUT	31	-Follow HP request.	-Change R286 to 10K				
0.2	92	7/23	CKT,LAYOUT	36	-Follow HP request.	-Combine Q63 and Q72 to Dual channel Q76. Delete R516, R545, CC84, C371.				
0.2	93	7/23	CKT,LAYOUT	36	-Modify netname to more clear.	-Change SEL to SEL_eDP_MUX. Change SEL_DP to SEL_DP_MUX				
0.2	94	7/23	CKT,LAYOUT	17	-Layout smooth	-Modify RPH1 and BPH2 pin define				
0.2	95	7/24	CKT,LAYOUT	25	-Follow latest NGFF pin define.	-Modify JMIN3 pin define.				
0.2	96	7/24	CKT,LAYOUT	28	-Follow latest FP spec.	-Modify JPP1 pin define.				
0.2	97	7/24	CKT,LAYOUT	30,38	-Follow EMI request	-Add C420, C421, C422, C422, C423, C424, C425, C426, C427, C428, C429, C430, C431, C432, C433, C434, C435, C436, C437, C438, C439, C440, C441, C442, C443, C444, C445, C446, C447, C448, R555 and C419. Change R437.2 netname to PCH_SPI_CLK_EC.				
0.2	98	7/24	CKT,LAYOUT	39	-Follow HP request	-Modify JUB1 pin define.				
0.2	99	7/25	CKT,LAYOUT	5,9,20	-Follow HP request	-Delete RC24, RC96. Change UH1 pin AJ12 and AJ14 connection to +1.05VS				
0.2	100	7/25	CKT,LAYOUT	30	-Follow HP request	-Change U18 to socket and add &UH2 for KBC ROM				
0.2	101	7/25	CKT,LAYOUT	30	-Follow HP request	-Connect JP6.13, U17.115, and R255.1 to TX_STBY_LED. Add R559, R560, and Q77				
0.2	102	7/25	CKT,LAYOUT	36	-Reduce layout spacing	-Combine Q56 and Q57 to dual channel Q79				
0.2	103	7/25	CKT,LAYOUT	25	-Follow latest NGFF spec	-Modify JMIN3 and JSIM1 pin define.				
0.2	104	7/26	CKT,LAYOUT	16,30	-Follow HP request	-Install RH242, RH244. Add R561, R562. Noninstall R541, R542				
0.2	105	7/26	CKT,LAYOUT	28	-Follow RFQ spec	-Change U11 to SLB9656				
0.2	106	7/27	CKT,LAYOUT	36	-Follow HP request	-Add R563, R564				
0.2	107	7/30	CKT,LAYOUT	5	-Follow Intel reference schematic	-Non install QC1				
0.2	108	7/30	CKT,LAYOUT	16	-Follow RF request	-PCH_SPI_CLK reserve CH113 to GND				
0.2	109	7/30	CKT,LAYOUT	22,39	-Follow HP request	-Change R10.1 to +5VDS and Q20.3 to +3VDS for layout easy. Modify JVGAI and JCR1 pin define.				
0.2	110	7/30	CKT,LAYOUT	23	-Follow latest connector list	-Modify JHDD1, JODD1 and JCR1 footprint.				
0.2	111	7/30	CKT,LAYOUT	39	-Correct JNFC1 pin define	-Modify JNFC1 pin define.				
0.2	112	7/31	CKT,LAYOUT	25,39	-Follow HP request	-Modify Q4A circuit. Change JTB1.95 connection to +3VDS.				
0.2	113	7/31	CKT	25	-Wireless LED fail issue.	-Install Q29 and Q31				
0.2	114	7/31	CKT,LAYOUT	26	-No LOGO KBL function	-Delete Q21,Q22,R454,R14. Delete JEDP1.35 signal				
0.2	115	7/31	CKT,LAYOUT	14	-Correct netname	-Change RH62.2 netname to PWRSV_SEL#				
0.2	116	8/01	CKT,LAYOUT	23,33,39	-HP request	-Swap SATA bus port 2 and port 5. JCR1.35 connection to PCH_PCIE_WAKE#				
0.2	117	8/01	CKT,LAYOUT	18,23,25	-HP request	-Uninstal Q68, R459. Change PCH.AT3 and RH198.2 netname to Sec_HDD_DET. Change PCH.AP1 and RH180.2 to mSATA_DET#. Delete Q48. Add R565.				
0.2	118	8/01	CKT,LAYOUT	24	-PWR request	-Change R492.2 connection to KBC_PWR_ON				
0.2	119	8/01	CKT	30	-Follow RFQ spec	-Change KBC symbol to SMC1322				
0.2	120	8/03	CKT,LAYOUT	6,11,13,18	-HP request	-Add CC84, CC85, CC86. Change RD6 to 33ohms. RH33.1 connection to GND. Delete RH201, RH202. Q4.2 connection to BT_ON				
0.2	121	8/03	CKT,LAYOUT	22	-Layout smooth	-Swap L3 pin define for layout smooth				
0.2	122	8/03	LAYOUT	23	-Follow ME connector list	-Modify JODD1, JMINI3 footprint				
0.2	123	8/03	CKT,LAYOUT	25,30,39	-HP request	-Q4.2 connection to BT_ON. Change R437 to 33 ohms. Change R540 to 4.7K. Change JVGAI pin 39 and 40 connection to +3VDS				
0.2	124	8/03	CKT,LAYOUT	30	-RF request	-Add CH114				
0.2	125	8/06	CKT,LAYOUT	9,15	-HP request	-Reserve CC87. Change JCPU1 pin AM43 and pin AL44 ball name				
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VBL20 from DB0 to DB1 LA-9241P REV:0.1 -> 0.2 Modify <2012.07.04.~2012.08.14. >					
Rev.	Item	Date	Impact	Page	Change Cause
0.2	126	8/07	CKT, LAYOUT	7,16,25,29	-Follow HP request
0.2	127	8/07	CKT, LAYOUT	30	-Correct netname
0.2	128	8/07	CKT, LAYOUT	11,12,13,30,38,39	-Follow latest ME connector list
0.2	129	8/08	CKT, LAYOUT	22,35	-RF request
0.2	130	8/08	CKT, LAYOUT	39	-Follow latest ME connector list
0.2	131	8/09	CKT	39	-Follow latest ME connector list
0.2	132	8/10	CKT, LAYOUT	5,14,30	-Follow HP request
0.2	133	8/10	CKT	39	-Add +3VDS power rail for USB repeater
0.2	134	8/10	CKT	38	-Follow TP module pin define
0.2	135	8/10	CKT, LAYOUT	34	-RF request
0.2	136	8/14	CKT		-Material EOL
0.2	137	8/14	CKT	24,25,30,32	-Material EOL
					Modify Description
					-Change RC78 to 10Kohms. Install RH148 and change to 2.2Kohms. Add R567, R568 and R569.
					-Change TX_STBY_LED net name to TX_STBY_LED#
					-Modify JDIMM1, JDIMM2, JBATT1, JKB1, JCR1, JNFC1, JP6 connector footprint
					-Reserve C449, C450, C451
					-Modify JCR1 and JNFC1 pin define.
					-Modify JMXM1 footprint
					-Add RC106 and change UC1.1 connection to VR_ON. Change UH7.5 and UH3.5 connection to +3V_PCH power rail. Change RH235 to 0ohms. Add RH245 and connection to VCC1_PWRGD. Change R277.1 and R253.2 connection to VR_ON
					-Change JCR1.21 connection to +3VDS
					-Modify JTP1 pin define.
					-Reserve C452, C453, C454, C455, C456, C457, C458
					-Change Q59, Q70, Q55, Q58, Q68, Q75, Q39, Q61, Q51, Q52, Q53 to SB0000009Q80 (S TH 2N7002KW 1N SOT323-3)
					-Change D4, D8, D10, D21, D27 to SCS00000Z00 (S SCH DIO RB751V-40 SOD-323)

VBL20 from DB1 to DB2 LA-9241P REV:0.2 -> 0.3 Modify <2012.09.03.~ 2012.09.28 >

Rev.	Item	Date	Impact	Page	Change Cause	Modify Description
0.3	1	9/03	CKT	26	-Chang UA1 to HP P/N	-Change UA1 P/N to 92HD91B2X5NLGXWCX8
0.3	2	9/03	CKT	30,31	-Follow HP request	-Install R451, R452. Noninstall R561, R562, R284. Change R282 to 10K ohms. Change R289 to 11.5k ohms
0.3	3	9/07	CKT	30,36	-No used	-Delete TX_STBY_LED#, VGA_RED, VGA_GRN, VGA_BLU, VGA_DDCCLK, VGA_DDCDATA, CRT_HSYNC, and CRT_VSYNC off page symbol
0.3	4	9/07	CKT, LAYOUT	36,39,40	-Follow latest ME drawing	-Add VGA circuit and connector. Remove JVG1 BTB connector. Add JFUN1 connector. Add USB3.0 repeater and connector
0.3	5	9/10	CKT, LAYOUT	25	-Follow HP request	-Add WWAN_FULL_PWR and WWAN_RSVD2 PU R599 and R600 to +3V_WWAN. Delete T126 and T128
0.3	6	9/10	CKT, LAYOUT	30	-Follow HP request	-Delete R219, R258, R500, R262, R264, R266, R216, R241, R242, R253, R549, R271. Change U17 pin69 to KBC_XTA2, pin 71 to KBC_XTAL1. Add C487, C488, Y4 Connect EC_MUTE# to KBC.91. MAIN_BAT_DET# to KBC.92. pin 70 of KBC to GND. ADP_ID_CHK signal to KBC.78. AIDP_EN signal to KBC.63
0.3	7	9/11	CKT, LAYOUT	5,9,10,14,15,17,20,31,32,33	-Follow HP request	-Delete RC102 and RC103. Connect CPU.AL35 pin to VCCSENSE. Connect CPU.AK35 pin to VSSSENSE. Delete RH165 and connect PCH.M1 to TB_HOT_PLUG# directly. Connect RPH1.3 to TB_HOT_PLUG# directly. Delete RH226 and connect pin AD12 of PCH to +3V_PCH power rail. Delete RC106 and connect UC1.1 to VR_ON. Noninstall RC36,RC38,RC40,RC43,RC45,RC47. Delete RC66. Connect CPU.AT26 pin to CPU_PLTRST#. Delete RC30. Connect CPU.AL34 pin to H_CPUUPWRGD. Change RC55.1 connection to H_CPUUPWRGD. Delete RC27. Connect CPU.AM35 pin to PCH_THERMTRIP#. R. Delete RC93 and connect SLP_S3# to QC5.5. Delete R351. Connect EN_P1V5 to JDOCK1.140. Change C299 to 0.01uF. Delete R336 and connect C299.1 to ON/OFFBTN_KBC#. Connect ON/OFFBTN_KBC# to JDOCK1.49. Delete R287. Connect joint point of R286.1 and U18.1 to VR_ON. Add R601 4.7K PU to +3VS on signal SIO_GPIO42. Noninstall R601. Delete RH92, RH93, RH221, RH94, RH95, RH107, RH103, RH203, RH114, RH116, RH205, RH122, RH124, RH126, RH127, RH128, RH130
0.3	8	9/12	CKT, LAYOUT	30	-Follow HP request	-Delete R543, R561, R562. Delete signal ADP_ID_CHK connection to KBC.86 pin. Delete R249 and connect signal OCP_PWM_OUT to KBC.59 pin. Delete R251 and connect signal PM_PWROK to KBC.60 pin. Delete R256 and connect signal EN_P1V5 to KBC.38 pin. Delete R277 and connect signal VR_ON to KBC.72. Change RP1 and RP2 to 100K.
0.3	9	9/12	CKT, LAYOUT	38,	-ME move LID SW from Power board to Function board.	-Modify JPWR1 and JFUNC1 connector pin define.
0.3	10	9/12	CKT, LAYOUT	37	-ME rotate Smart connector 90 degree.	-Modify J3 pin define.
0.3	11	9/13	CKT, LAYOUT	16	-Follow latest ME drawing	-Delete H4, H82, H34, H41, JP2, Add H42, H43, H44, H45, H46. Modify JEDP1, JSIM1, JFP1, JVG2, J3, JKB1, JTP1. JFUN1 pin define and footprint.
0.3	12	9/14	CKT, LAYOUT	14,31	-Follow HP request	-Delete UH7, RH235. Move RH236, CH106 to page 31. Modify POWER OK circuit
0.3	13	9/14	CKT, LAYOUT	22,30,38,39,40	-Follow ME and DFX request	-Modify JEDP1, UH5, JTB1, JUSB1 and JKB1 pin define and footprint.
0.3	14	9/17	CKT, LAYOUT	40	-Layout request	-Swap L35, L36, L37 for layout smoothly.
0.3	15	9/17	CKT, LAYOUT	38	-Follow ME connector list	-Change JPWR1 footprint and pin define.
0.3	16	9/17	CKT, LAYOUT	38	-Follow Keyboard spec	-Modify JKB1 pin define.
0.3	17	9/18	CKT, LAYOUT	28	-Follow ME drawing	-Modify JFP1 pin define.
0.3	18	9/19	CKT, LAYOUT	13,39	-Follow HP request	-Add a 0ohm resistor between JCR1.5 and signal PCH_PCIE_WAKE#. Then make this resistor open. Change QH11 to P MOS. Change RH30 to 2.2K ohms
0.3	19	9/19	CKT, LAYOUT	34	-Layout smooth	-Delete J2
0.3	20	9/20	CKT, LAYOUT	14,26,30,37	-Follow HP request	-Change RH74 to 100K. Change RH147.1 power rail to +3VS. Delete RA13, CA20. Change R227 to 3K. Delete R393, CC67, and connector U30.23 to PLT_RST#.
0.3	21	9/20	CKT, LAYOUT	22	-Correct circuit short issue	-Modify JEDP1 connector circuit. Add one more +3VS power pin for power consumption
0.3	22	9/20	CKT, LAYOUT	22,26	-Change to common part.	-Change D3 and DH1 to RB751V-40_SOD323-2
0.3	23	9/21	CKT, LAYOUT	8,13,30,39	-Follow HP request	-Reserve CFG9 PD resistance RC106. Non-install RH39, RH40, RH41, RH44, RH48, RH47, RH46. Change R436 to 100K and connection R436.2 to GND. Delete R557, Non-install R358, C374
0.3	24	9/21	CKT, LAYOUT	36	-Netname issue.	-Change L29.2 netname to DAC_RED. L30.2 netname to DAC_GRN. L31.2 netname to DAC_BLU
0.3	25	9/23	CKT, LAYOUT	5,30,31,47	-Follow HP request	-Change netname VR_ON to PWR_GD, change netname PWR_GOOD_3 to VGATE
0.3	26	9/24	CKT, LAYOUT	20,30	-Follow HP request	-Non install D21. Delete RH213, RH216, and change netname
0.3	27	9/24	CKT, LAYOUT	40	-No need another DC/DC circuit to provide +3VDS_P to U44.	-Delete Q79, Q80, C475, C477, C478, R588, R587. Change +3VDS_P power rail to +3VS.
0.3	28	9/25	CKT, LAYOUT	22	-Change +3VS, +5VS and +LCDVDD power rail soultion	-Delete R9, R10, R11, Q12, Q20, C1, C7, C8, U24, C226, C221, C222, U25, C218, C223, C219, C227, R354, R356, R357, Q9. Add U47, C497, C498, C499, U45, R603, C489, C490, C491, C492, U46, R604, C493, C494, C495, C496, Uninstall R370, R373, Q43, Q44, R490
0.3	29	9/25	CKT, LAYOUT	30	-Follow HP request	-Install R237, R235, R234, R233, R231
0.3	30	9/25	CKT, LAYOUT	31	-Reserve for EC CLK issue	-Reserve R605 and connect R605.1 to SUSCLK_KBC
0.3	31	9/26	CKT, LAYOUT	5,22,34,40	-Follow HP request	-Change JXDP1.47 connection to PM_PWROK via a 0ohm resistor. Add a C502 (10uF cap) for +3VS decoupling. Change C489 and C492 value to 10uF or 4.7uF. Change C494 and C496 to 10uF or 4.7uF. Change C499 value to 4.7uF and make R480 as install. Change C483 and C490 to 0.01uF.
0.3	32	9/26	CKT, LAYOUT	34	-Correct Netname	-Change R375.1 connection netname to SLP_S3#
0.3	33	9/26	CKT, LAYOUT	38,39	-Follow ME request	-Modify JP9 and JFUN1 pin define.
0.3	34	9/26	CKT, LAYOUT	34	-Follow HP request.	-Modify +1.05VS power circuit.
0.3	35	9/27	CKT, LAYOUT	33,35,38	-Follow HP request.	-Delete R339, R340, R341, R342. Add R606, R607, R608 PU to +3VS. Change R408 to 200K ohms. Uninstall C295.
0.3	36	9/27	CKT, LAYOUT	29	-Material shortage issue	-Change Y2 to smaller (32x25 mm) package.
0.3	37	9/28	CKT, LAYOUT	34	-Follow HP request.	-Add C503
0.3	38	10/09	ckT	16	-Follow HP request.	-Change RH152, RH153 to 499ohms.

VBL20 from DB1R to SI1 LA-9241P REV:0.3 -> 0.4 Modify <2012.10.11.~ 2012.11.09>					
Rev.	Item	Date	Impact	Page	Change Cause
0.4	1	10/11	CKT, LAYOUT	26,27	-Follow IDT request
0.4	2	10/11	CKT,	33	-Follow ESD request.
0.4	3	10/11	CKT, LAYOUT	35	-Follow HP request
0.4	4	10/12	CKT, LAYOUT	5,14,30,34	-Follow HP request
0.4	5	10/16	CKT, LAYOUT	9,14,25,29,30,34,39	-Follow HP request
0.4	6	10/17	CKT, LAYOUT	14,30	-Follow HP request
0.4	7	10/18	CKT, LAYOUT	5,9,14,16,20,24,25,30,34,35	-Follow HP request
0.4	8	10/23	CKT, LAYOUT	14,20,30,34,39	-Follow HP request
0.4	9	10/24	CKT, LAYOUT	18,25,28	-Follow HP request
0.4	10	10/25	CKT, LAYOUT	14,18,25,29,34,35	-Follow HP request
0.4	11	10/25	CKT, LAYOUT	30	-Solve KBC external crystal can not work issue.
0.4	12	10/26	CKT, LAYOUT	13,14,15,29,32,36	-Follow Compal HW request
0.4	13	10/26	CKT, LAYOUT	13,14,15,29,32,36	-For layout smoothly.
0.4	14	10/26	CKT, LAYOUT	38	-Move LID switch to PWR board by ME request.
0.4	15	10/26	CKT, LAYOUT	13,14,17,18,23,29,30,32,34,38,	-Follow HP request.
0.4	16	10/29	CKT, LAYOUT	18,35	-Follow HP request.
0.4	17	10/31	CKT, LAYOUT	18,36	-Follow ME request.
0.4	18	10/31	CKT, LAYOUT	18,37	-Follow HP request.
0.4	19	11/01	CKT, LAYOUT	31	-Follow HP request.
0.4	20	11/01	CKT, LAYOUT	13,15,37	-Material shortage issue
0.4	21	11/01	CKT, LAYOUT	22,30,37,38	-Follow HW request
0.4	22	11/02	CKT, LAYOUT	29	-Follow HP request.
0.4	23	11/05	CKT, LAYOUT	27	-Audio Jack change to normal open type
0.4	24	11/05	CKT, LAYOUT	38	-Follow ME request
0.4	25	11/05	CKT, LAYOUT	39	-Smart Card Reader AU9560-GBS-GR no need external crystal
0.4	26	11/06	CKT, LAYOUT	9,14,22, 25	-Follow HP request
0.4	27	11/06	CKT, LAYOUT	12	-Follow RF request
0.4	28	11/07	CKT, LAYOUT	5	-Follow ESD request
0.4	29	11/07	CKT, LAYOUT	23,32	-Follow RF request
0.4	30	11/08	CKT, LAYOUT	23,33	-Follow HP request
0.4	31	11/09	CKT	16,34,35	-Follow HP request
VBL20 from SI1 to SI2 LA-9241P REV:0.4 -> 0.5 Modify <2012.12.12.~ >					
Rev.	Item	Date	Impact	Page	Change Cause
0.5	1	12/12	CKT, LAYOUT	9,14,28,30,31	-Follow HP request
0.5	2	12/12	CKT, LAYOUT	35	-Material shortage issue.
0.5	3	12/13	CKT	9,28	-Follow HP request
0.5	4	12/20	CKT	35,36	-Solve CRT switch issue
Modify Description					
-Change RA14 to 0 ohm. Change C91, C94 to 150u. Change R97, R98, R102, R104 to 1%. Non-install R106, R107. Change C95 to 0.47u X5R. Change QA1.4, R110.2, Q6.1, R111.2, Q6.4 to AGND.					
-Non-install D42. Install D32.					
-Re-arrange MXM DP port. Port A for Thunder Bolt. Port B for Dock. Port C for EDP. Port D for SWITCH					
-Reserve RC108, UH6, CH116, R610. Change U17.85 and R276.1 connection netname to RSMRST#_EC. Change R455 to 47K. Add Q18A, C504, R609. Modify +3V_PCH power circuit					
-Install R567, D21. Add R612, R616, Q80, R614, Q79. Delete R602, C504, R609, R456, Q67B, R218, R239, R240, R540, Q74, R247, C322, C186, R230, R64. Change R568.1, R569.1 and R245.1 connection to KBC_WAKE#. Remove current VCC1_PWRGD connection to JP6.16. Then add a 4.7 K resistor between JP6.16 and new signal VCC1_PWRGD_SUS#. Change R215.2 to GND. Change R227 to 3.3K. Add a R615 PD for U7.102. Change U7.102 connection to PLT_DET. Change R248 to 200k ohms. Change R248.1, U17.77 connection to VCC1_PWRGD_SUS#. Change R243.1 and U7.125 connection to CHRg_RST. Change R243 to 100K. Change R243.2 connection to GND. Change R436.2 connection to +3VDS. Change JTB1.91, U17.41 and R436.1 connection to iSCT_LED#. Change D21.2 connection to PM_APWROK. Modify +3V_PCH power circuit. Change JCR1.5 connection to +5VDS.					
-Change R614.1 connection to +3V_PCH. Correct R227 to 10K.					
-Change R615 to 470K, R610 to 470 ohm, R614 to 10K ohms, R612, R137, R606, R607 and R608 to 4.7K ohms, RC108 to 10K ohms . Delete Q67A, QC1, RC12, Q80, R461, Q2, RC90. Install RH209, R492, RC108, R613, CH116 and UH6. Uninstall QC3, RH148, RH67, RH208. Change R492.2 connection to PCH_THERMTRIP#_R Connection R614.1 to PM_RSMRST#. Modify +1.35VS power circuit					
-Delete R612. Reserve R616 between KBC_124 pin and signal SIO_SLP_SUS#. Uninstall RH209, Q79, R614, R613, CH116 and UH6. Install RH67, RH208. Change PCH.AL6, JTB1.91 and RH244.2 connection to TBT_RA_GPIO#. Add Q80 for iSCT_LED# circuit					
-Add R618, R619, R620, R621. Delete R567, and connect JMINI3.15 to WLAN_WAKE# directly. Change ACCEL_INT# connection to U9.11. Change RH176.2 connection to GND and make RH176 install. Change RH185 as install					
-Add R247, Q63. Change RH70 to 200k ohms. Add LANWAKE# PU RH248 to +3VDS. Delete R618, R89. Change R455 to 200k. Add PD R622. Change Q61 and Q62 to dual channel 7002					
-Reserve R624 and connection to SUSCLK_KBC					
-Delete RH56, RH57, RH59, RH60, RH66, RH69, RH71, RH98, RH99, RH100, RH141, RH234, RH139, RH108, RH110, RH111, RH112, R160, R161, R162, R163, R320, R477, R478, R464, R465, R466, R467, R472, R473, R474, R475, R468, R469, R470, R471, R479, R484, R485, R486, R318, R319, R321, R322, R570, R571, R572. Add RP7, RP8, RP9, RP10, RP11, RP12, RP13, RP14, RP15, RP16, RP17, RP18, RP19.					
-Rearrange RP11, RP8, RP17, RP13, RP14, RP15, RP16, RP12, RP10, RP7 pin assignment for layout smoothly.					
-Change JPWR1 to 6 pin, and modify the JPWR1 pin define.					
-Delete R153, R481, R565. Swap QH11A.2 and QH11B.5 connection. Change RH75.2 and PCH.K7 connect to BATLOW#. Change PCH.U7 connect to BT_OFF. Change PCH.P3 and RPH2.4 connect to WWAN_DET#. PCH. Delete A20GATE and VCC1_PWRGD_SUS# off page symbol. Change RH180.2 and UH1.AP1 connect to PCH_GPIO_35. Change RH198.1 and UH1.AT3 connect to PCH_GPIO_36. Change R376 to 10k. Change R376.1 connect to +3VDS. Connect Q34.3 to LED_LINK_LAN_DOCK# with R625, and delete LED_LINK_LAN_DOCK# connection to Q34.1. Delete R157 and connect Q34.1 and signal LED_LINK_LAN#_R. Connect U22.26 pin to signal mSATA_DET#. Change R455.2 connection to B+. Change Q36 to AO3413.					
-Change RH179 to 100ohms. Delete R137, Q82.B. Add D52					
-Change JODD1, JVGA2, JKB1 footprint					
-Change R291.1 connection to +5VL. Change R291 to 105K_1%					
-Change R304.1 connection to +5VL. Change R304 to 88.7k +-1%. Uninstall R306.					
-Change Y3, YH1, YH2 to small package					
-Uninstall Y4, C487, C488. Delete C23, C80, C82, C111. Change U30 to AU9560-GBS-GR. Add R626					
-Reserve C504. Add C505					
-Delete R174, QA1B. HP_SENSE# connection to R167.1					
-Modify JKB1 pin define to follow ME request.					
-Uninstall Y3, CV33, CV34					
-Change QC5A.2 and QC5B.5 connection to SLP_S3. Change PCH.D2 pin connection to DDR3_SET. Delete Q68, R459. Change R458 to 0ohm. Change JMINI3.13 connection to signal WWAN_DET#. PCH. Change JMINI3.85 connection to GND. Change C498 to 4700pF.					
-Add C506, C507, C508, C509, C510, C511					
-Delete RC36, RC38, RC40, RC43, RC45, RC47 by ESD request. Add T144, T145, T146, T147, T148, T149					
-Change C48 and C58 to 68pF. Change R332 to 33 ohms, C205 to 82pF and install R332 and C205					
-Delete D52. Add Q83, R627					
-Change RH152 and RH153 value to 2.2K. Change C491 and C495 to 4700pF. Change R627 to 4.7K.					

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Issued Date	2011/11/5	Deciphered Date	2010/12/01	Title	HW PIR3
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