

Compal Confidential

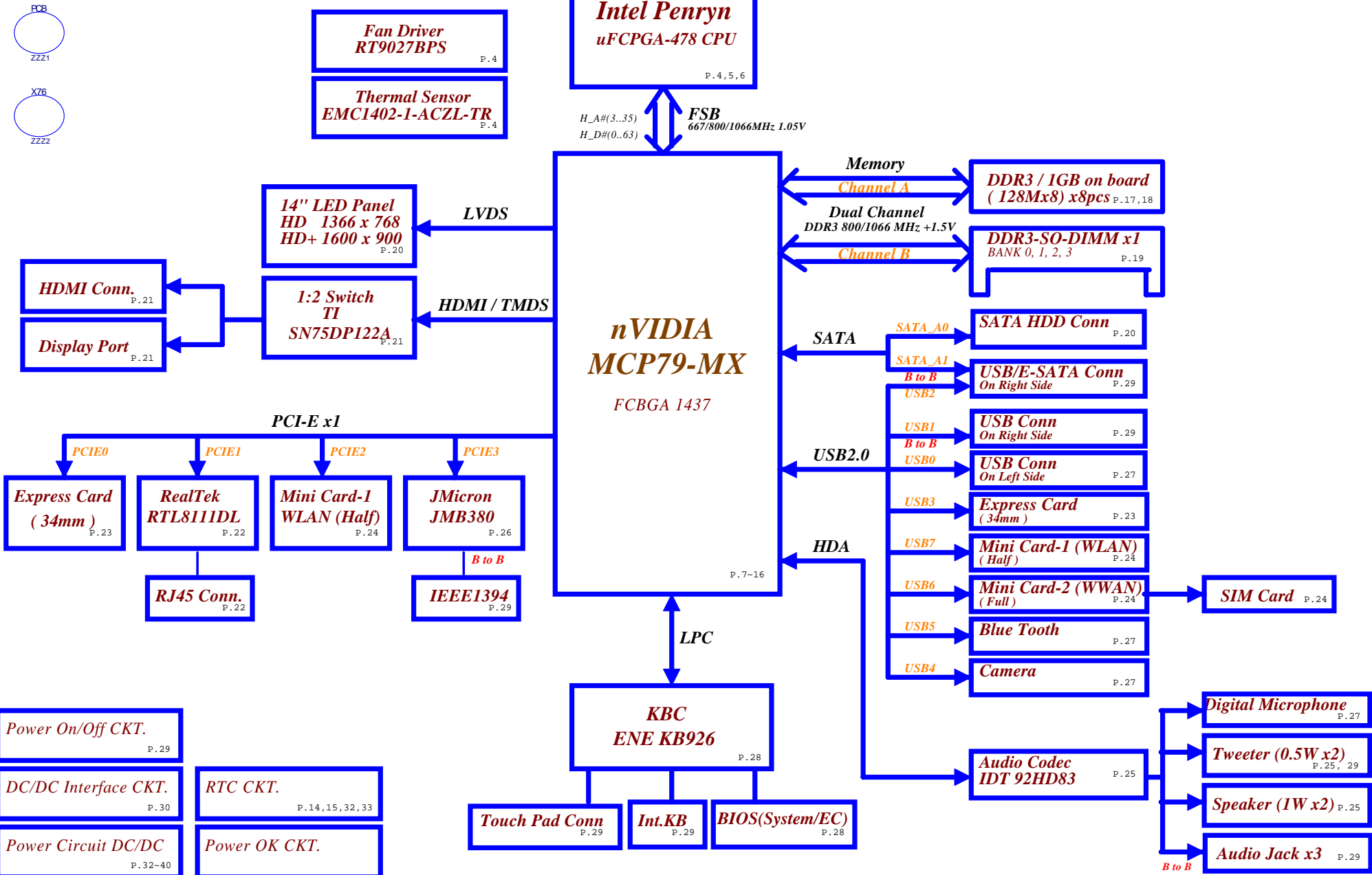
Schematic Document

MCP79-MX

2009 / 02 / 19 Rev:1.0

Security Classification		Compal Secret Data		Title	
Issued Date	2009/02/19	Deciphered Date	2009/12/31	Cover Sheet	
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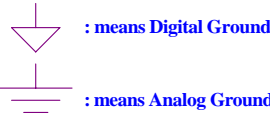
Braxton 14''



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power plane State	+B	+5VALW +3VALW +1.1VALW	+1.5V	+5VS +3VS +1.8VS +1.1VS +VCCP +1.0VS +0.75VS +CPU_CORE +1.5VS
S0	O	O	O	O
S1	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

Symbol Note :



@ : means just reserve , no build
 DEBUG@ : means just reserve for debug.

Board ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra	100K +/- 5%			
Board ID	Rb	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
1	18K +/- 5%	0.436 V	0.503 V	0.538 V
2	33K +/- 5%	0.712 V	0.819 V	0.875 V
3	56K +/- 5%	1.036 V	1.185 V	1.264 V
4	100K +/- 5%	1.453 V	1.650 V	1.759 V
5	200K +/- 5%	1.935 V	2.200 V	2.341 V
6	NC	2.500 V	3.300 V	3.300 V
7				

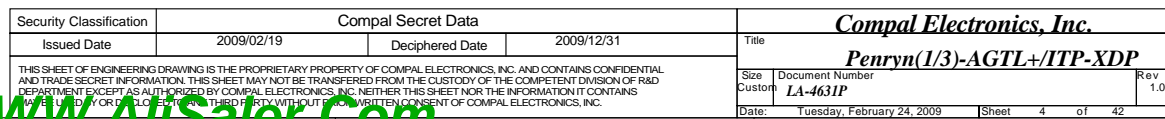
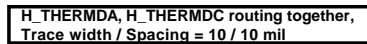
BOARD ID Table

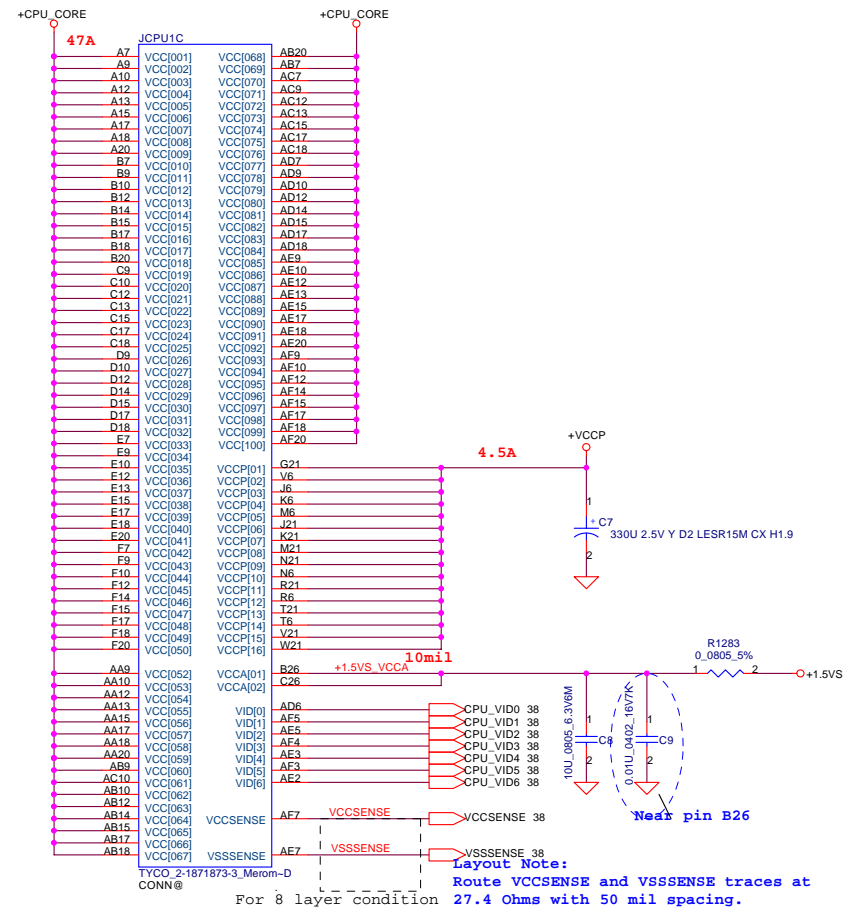
Board ID	PCB Revision
0	0.1
1	0.2
2	0.3
3	0.4
4	0.5
5	1.0
6	
7	

SMBUS Control Table

	SOURCE	INVERTER	BATT	SERIAL EEPROM	THERMAL SENSOR (CPU)	SODIMM	EXP CARD	MINI CARD1	MINI CARD2
EC_SMB_CK1 EC_SMB_DA1	KB926	X	V	X	X	X	X	X	X
EC_SMB_CK2 EC_SMB_DA2	KB926	X	X	X	V	X	X	X	X
MEM_SMBCLK MEM_SMBDATA	MCP79	X	X	X	X	V	X	X	X
MCP_SMB_CLK MCP_SMB_DATA	MCP79	X	X	X	X	X	V	V	V

MINI CARD 1 RESERVED +3VALW TO PULL HIGH





The diagram shows two horizontal lines representing power planes. The top line is labeled '+CPU_CORE' at its left end. A red circle with a dot is connected to this line. Below this line, a resistor labeled 'R21' is connected. The left terminal of R21 is connected to the +CPU_CORE line, and the right terminal is connected to a red line labeled 'VCCSENSE'. The bottom line is connected to a ground symbol (a red triangle with a dot). A resistor labeled 'R23' is connected between the bottom line and a red line labeled 'VSSSENSE'. The left terminal of R23 is connected to the bottom line, and the right terminal is connected to the VSSSENSE line. Both resistors are labeled with '1' on the left, '2' on the right, and '100_0402 1%' in the middle.

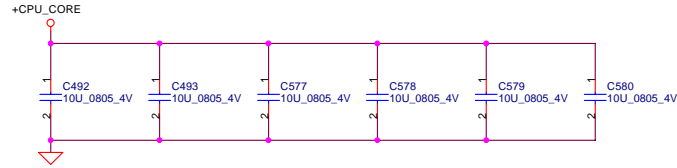
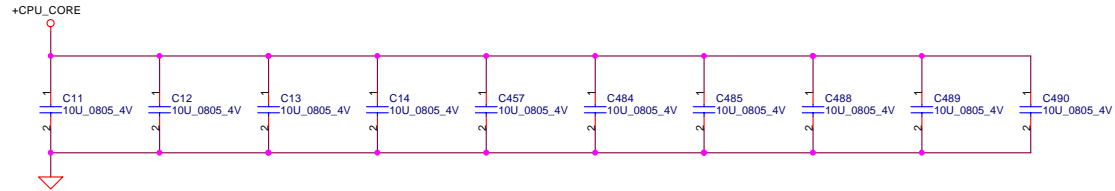
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Issued Date		2009/02/19	Deciphered Date	2009/12/31	Title		Penryn(2/3)-AGTL+/ITP-XDP		
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Near CPU CORE regulator

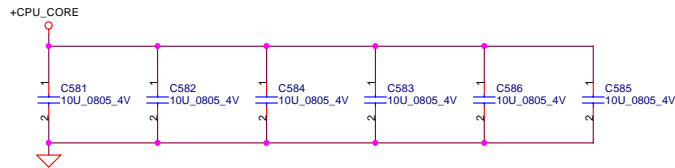
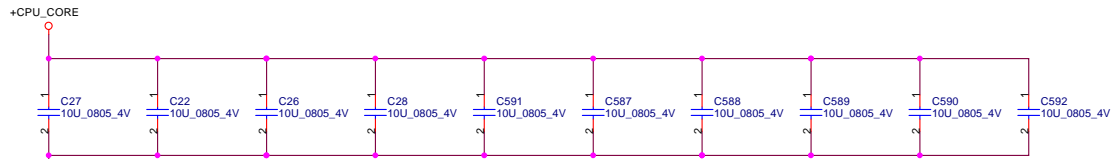
ESR <= 1.5m ohm
Capacitor > 1980uF

JCPU10		
A4	VSS[001]	P6
A8	VSS[002]	P21
A11	VSS[003]	P24
A14	VSS[004]	R2
A16	VSS[005]	R5
A19	VSS[006]	R22
A23	VSS[007]	R25
AF2	VSS[008]	T1
B6	VSS[009]	T4
B8	VSS[010]	T23
B11	VSS[011]	T26
B13	VSS[012]	U3
B16	VSS[013]	U6
B19	VSS[014]	U21
B21	VSS[015]	U24
B24	VSS[016]	V2
C5	VSS[017]	V5
C8	VSS[018]	V22
C11	VSS[019]	V25
C14	VSS[020]	W1
C16	VSS[021]	W4
C19	VSS[022]	W23
C2	VSS[023]	W26
C22	VSS[024]	Y3
C25	VSS[025]	Y6
D1	VSS[026]	Y21
D4	VSS[027]	Y24
D8	VSS[028]	AA2
D11	VSS[029]	AA5
D16	VSS[030]	AA11
D19	VSS[031]	AA12
D23	VSS[032]	AA14
D26	VSS[033]	AA16
E3	VSS[034]	AA19
E6	VSS[035]	AA22
E8	VSS[036]	AA25
E11	VSS[037]	AB1
E14	VSS[038]	AB4
E16	VSS[039]	AB8
E19	VSS[040]	AB11
E21	VSS[041]	AB13
E24	VSS[042]	AB16
F5	VSS[043]	AB19
F8	VSS[044]	AB23
F11	VSS[045]	AB26
F13	VSS[046]	AC3
F16	VSS[047]	AC6
F19	VSS[048]	AC8
F2	VSS[049]	AC11
F22	VSS[050]	AC14
F25	VSS[051]	AC16
G4	VSS[052]	AC19
G1	VSS[053]	AC21
G23	VSS[054]	AD2
G26	VSS[055]	AD5
H3	VSS[056]	AD8
H6	VSS[057]	AD11
H21	VSS[058]	AD13
H24	VSS[059]	AD16
J2	VSS[060]	AD19
J5	VSS[061]	AD22
J22	VSS[062]	AD25
J25	VSS[063]	AE1
K1	VSS[064]	AE4
K4	VSS[065]	AE8
K23	VSS[066]	AE11
K26	VSS[067]	AE14
L3	VSS[068]	AE16
L6	VSS[069]	AE19
L21	VSS[070]	AE23
L24	VSS[071]	AE26
M2	VSS[072]	A2
M5	VSS[073]	AF6
M22	VSS[074]	AF9
M25	VSS[075]	AF11
N1	VSS[076]	AF13
N4	VSS[077]	AF16
N23	VSS[078]	AF19
N26	VSS[079]	AF21
P3	VSS[080]	A25
	VSS[081]	AF25

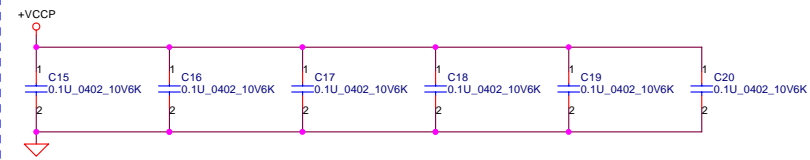
TYCO-2-1871873-3_Merom-D
CONN@



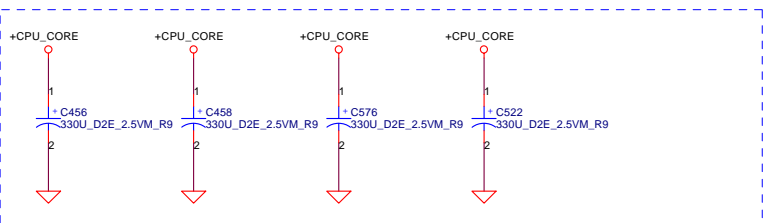
16pcs on TOP side



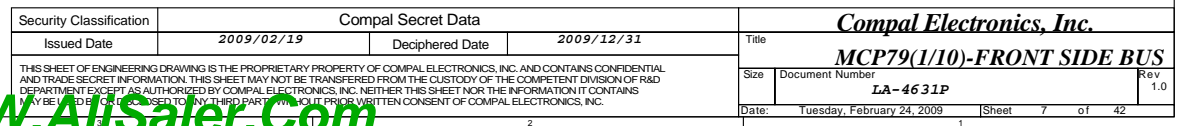
16pcs on bottom side

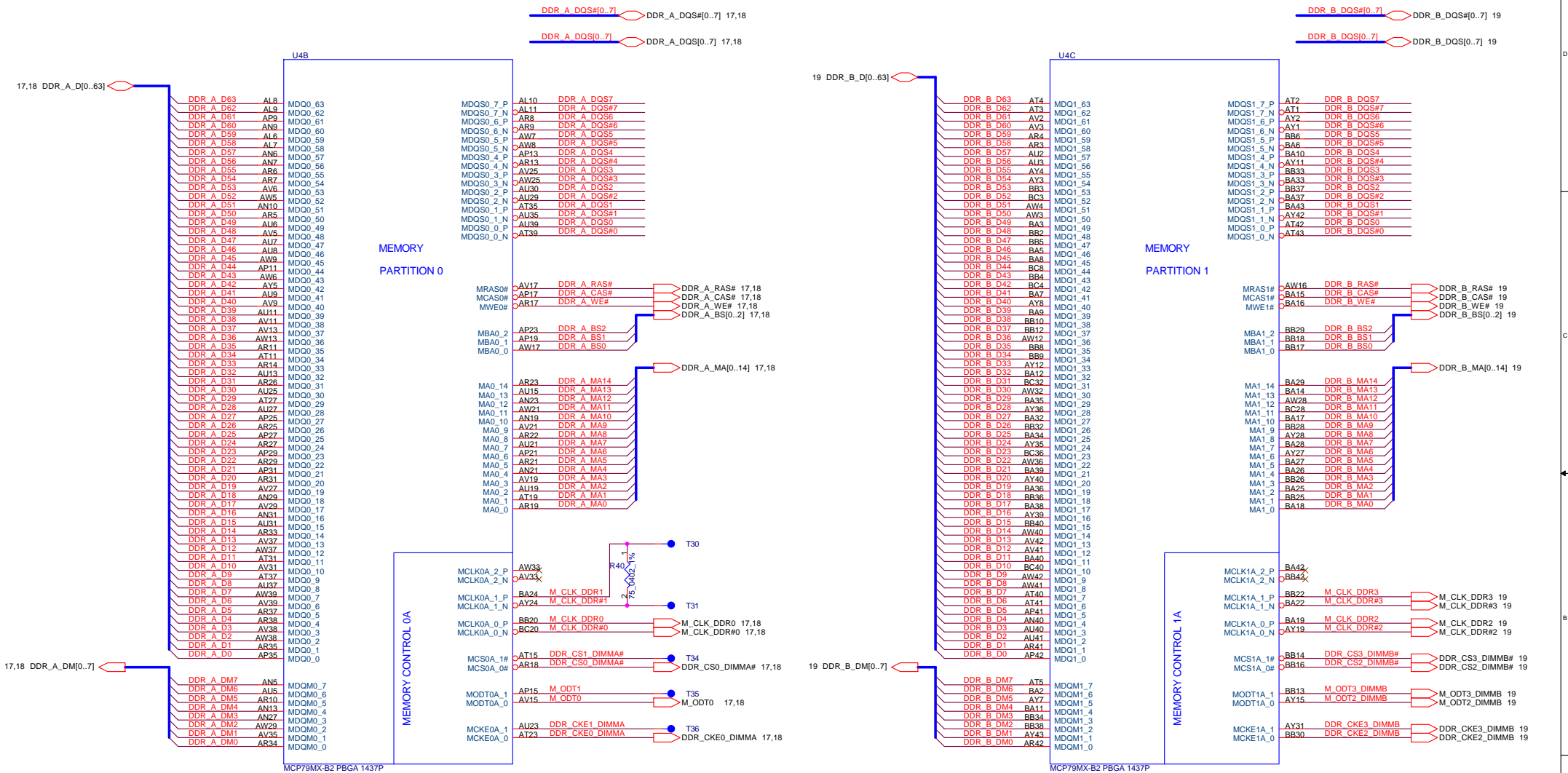


Place these caps inside the
socket cavity on Bottom side.
(North side Secondary)

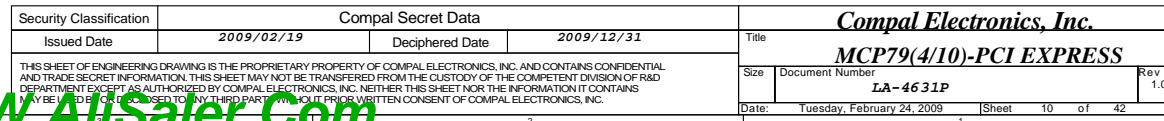


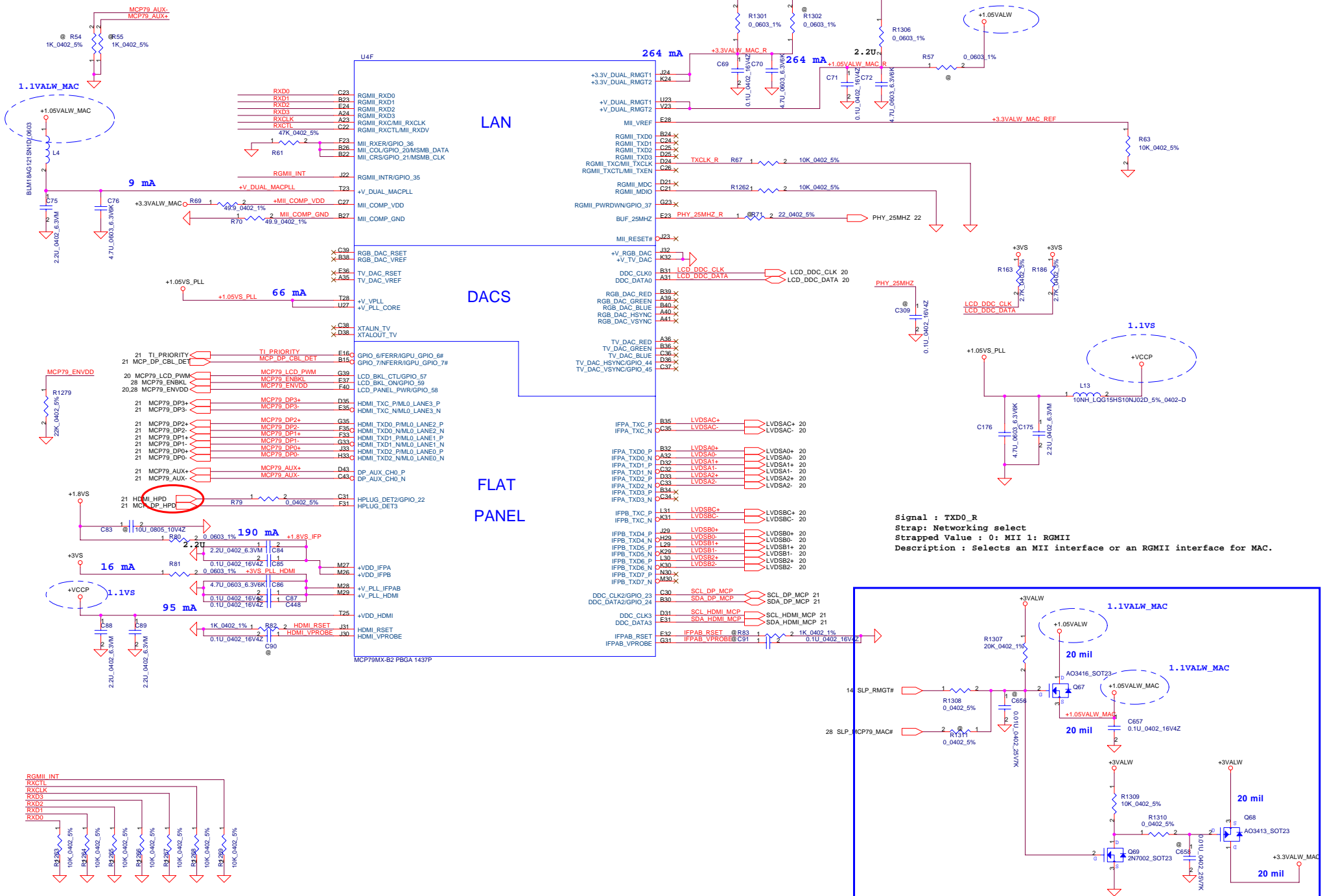
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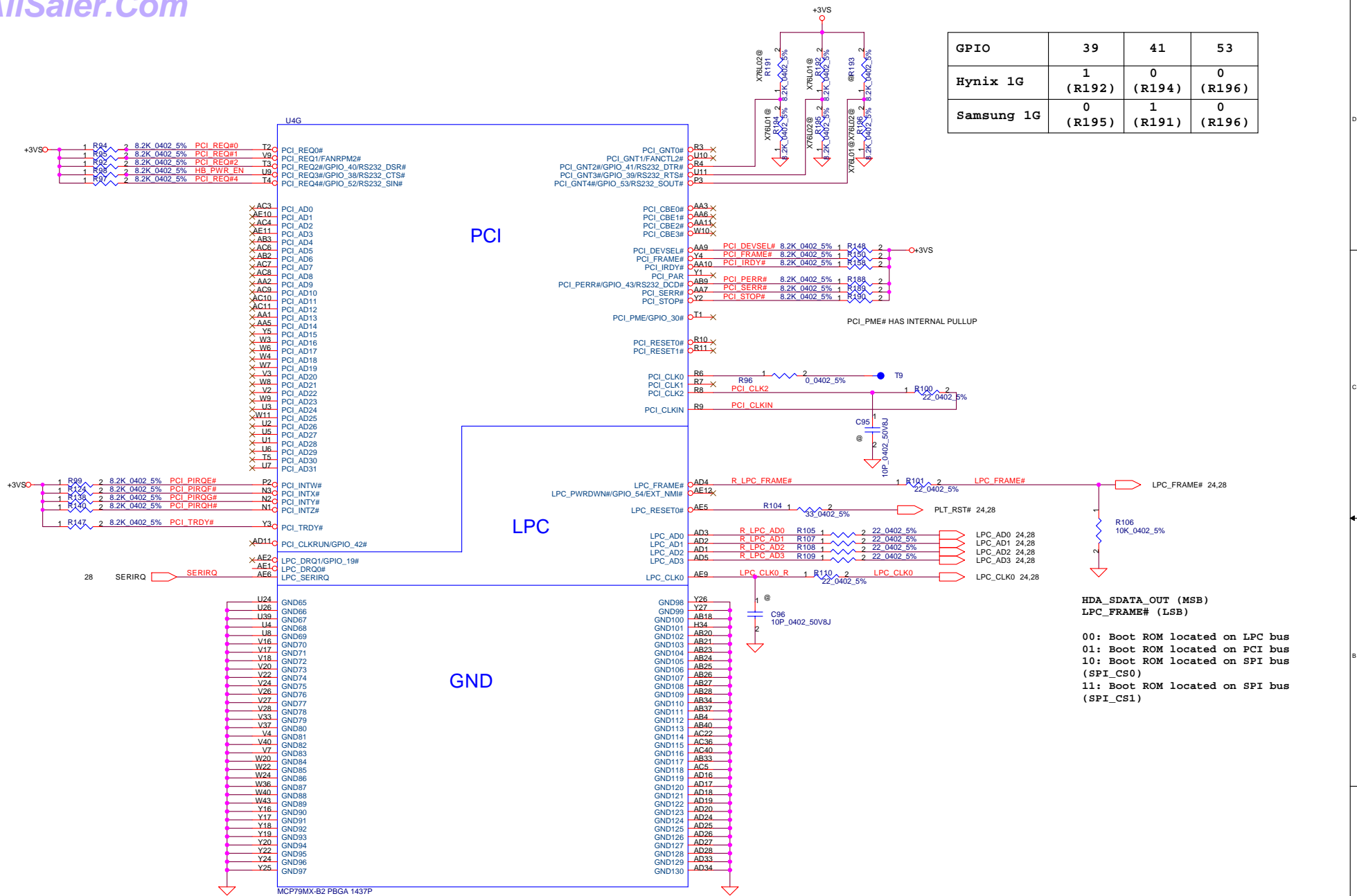
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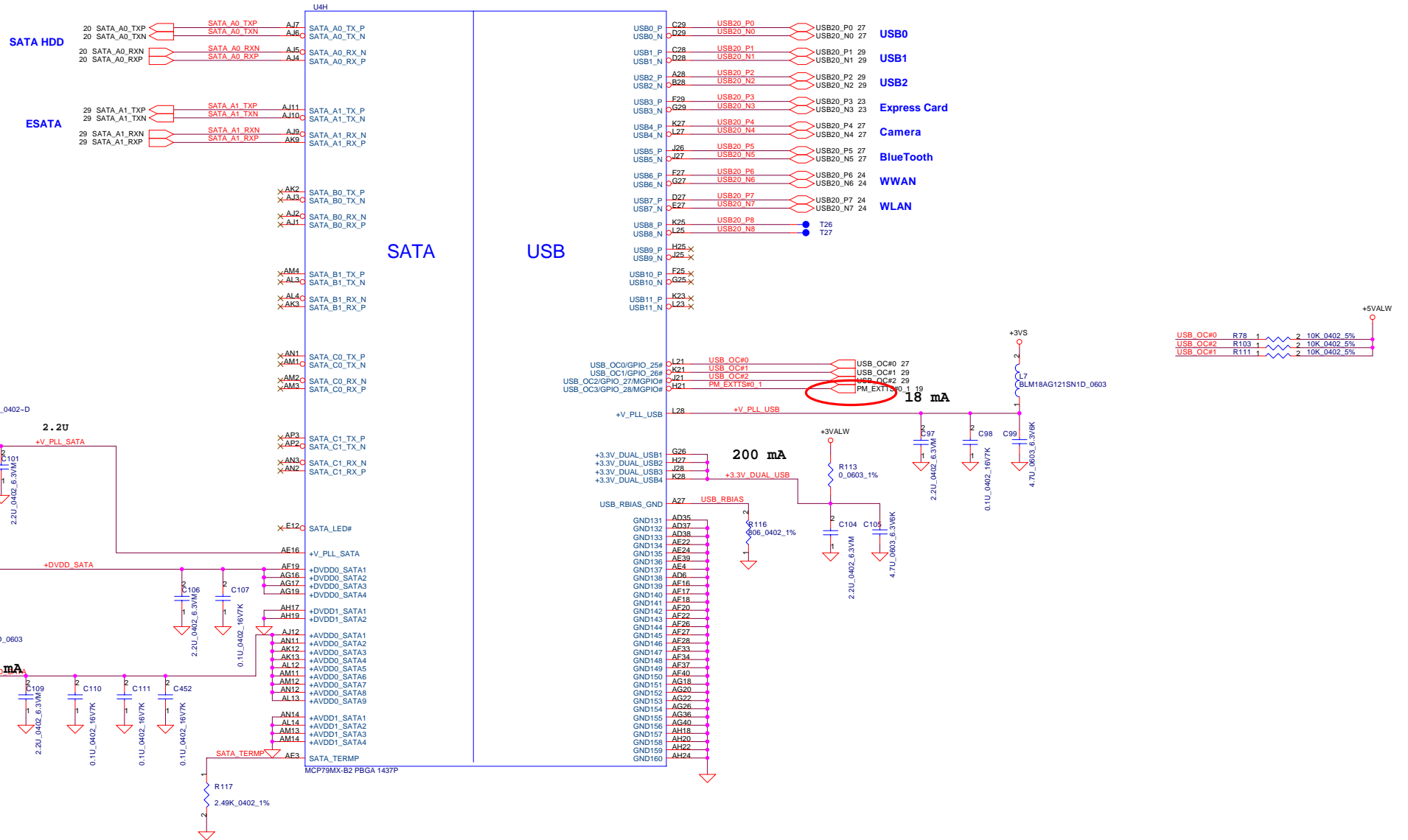




Signal : TXD0_R
 Strap: Networking select
 Strapped Value : 0: MII 1: RGMII
 Description : Selects an MII interface or an RGMII interface for MAC.

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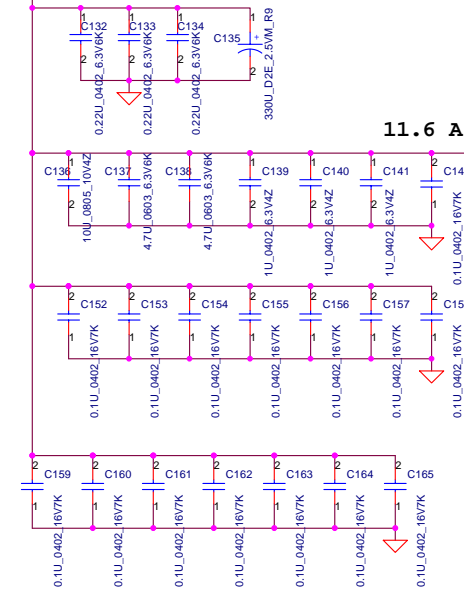
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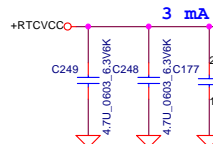
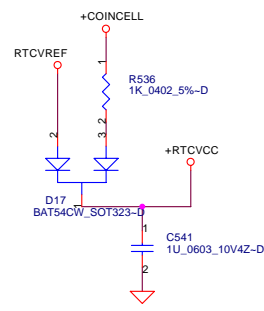
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0.75V ~ 1.05 V

+1.0V/S



RTC Battery

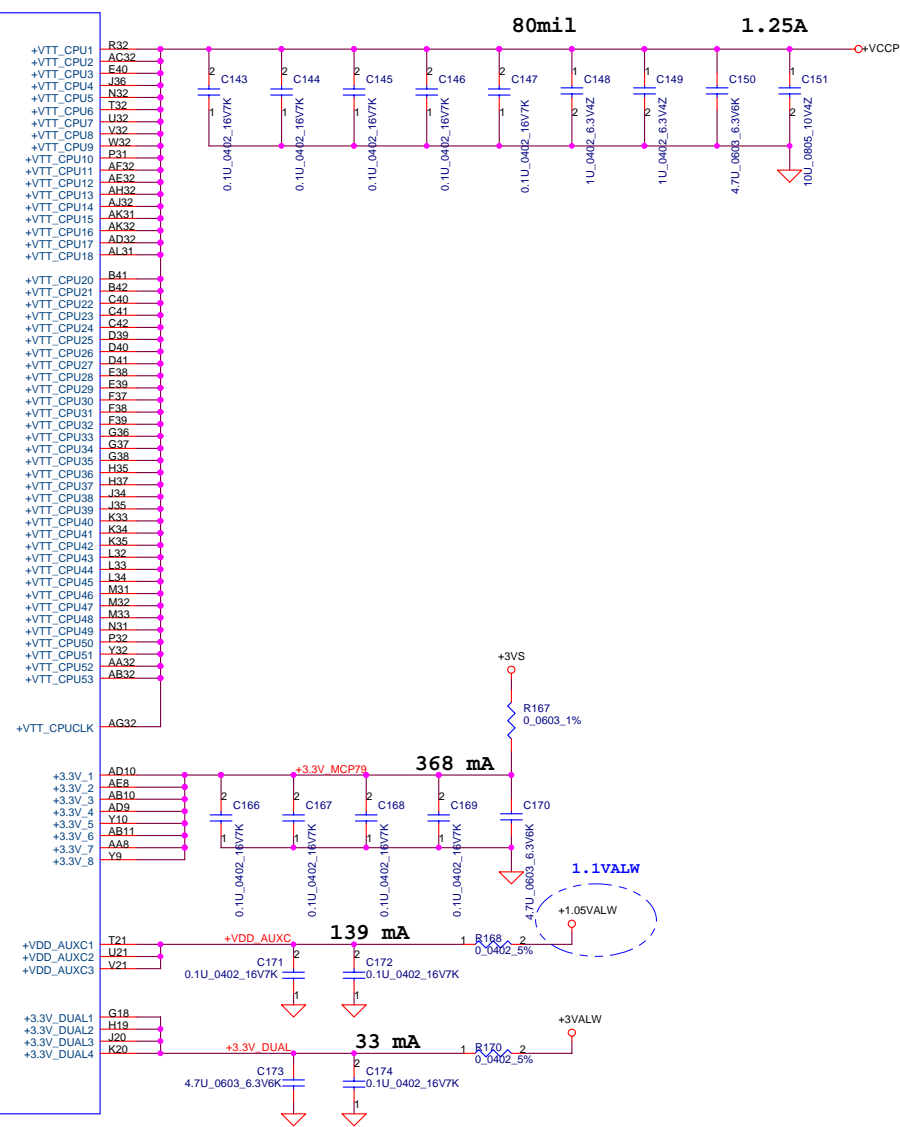


U4J

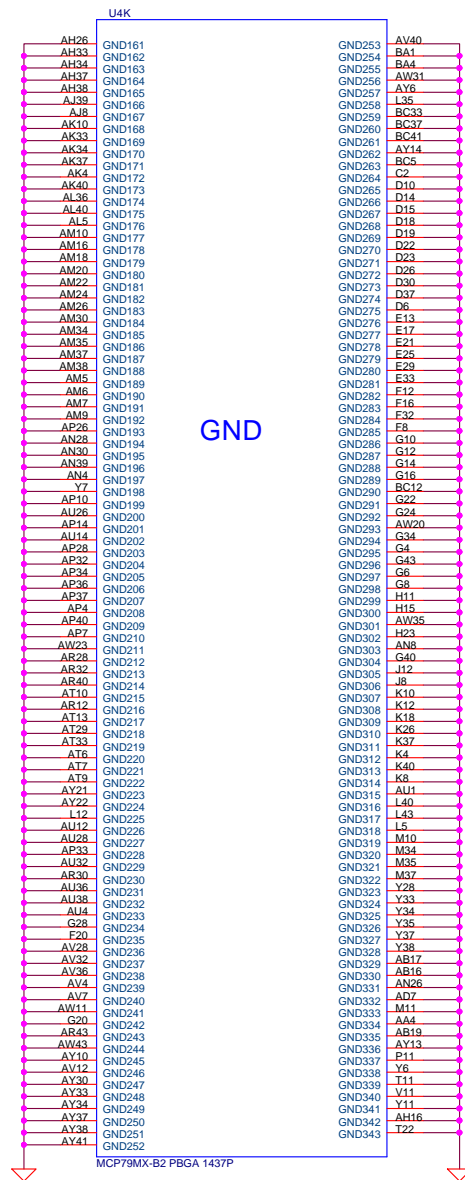
AA25 +VDD CORE1
AC23 +VDD CORE2
U25 +VDD CORE3
AH12 +VDD CORE4
AG10 +VDD CORE5
AG5 +VDD CORE6
Y21 +VDD CORE7
Y23 +VDD CORE8
AA16 +VDD CORE9
AA26 +VDD CORE10
AA27 +VDD CORE11
AA28 +VDD CORE12
AC16 +VDD CORE13
AC17 +VDD CORE14
AC18 +VDD CORE15
AC19 +VDD CORE16
AC20 +VDD CORE17
AC21 +VDD CORE18
AA17 +VDD CORE19
AC24 +VDD CORE20
AC25 +VDD CORE21
AC26 +VDD CORE22
AC27 +VDD CORE23
AC28 +VDD CORE24
AD21 +VDD CORE25
AD23 +VDD CORE26
W27 +VDD CORE27
V25 +VDD CORE28
AA18 +VDD CORE29
AE19 +VDD CORE30
AE21 +VDD CORE31
AE23 +VDD CORE32
AE25 +VDD CORE33
AE26 +VDD CORE34
AE27 +VDD CORE35
AE28 +VDD CORE36
AE10 +VDD CORE37
AE11 +VDD CORE38
AA19 +VDD CORE39
AF2 +VDD CORE40
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AG8 +VDD CORE59
AG9 +VDD CORE60
AH1 +VDD CORE61
AH10 +VDD CORE62
AH11 +VDD CORE63
AH12 +VDD CORE64
W26 +VDD CORE65
AH2 +VDD CORE66
AA23 +VDD CORE67
W28 +VDD CORE68
AH25 +VDD CORE69
AH21 +VDD CORE70
AH3 +VDD CORE71
AH4 +VDD CORE72
AH5 +VDD CORE73
AH6 +VDD CORE74
AH7 +VDD CORE75
AH9 +VDD CORE76
AA24 +VDD CORE77
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AA22 +VDD CORE81

MCP79MX-B2 PBGA 1437P

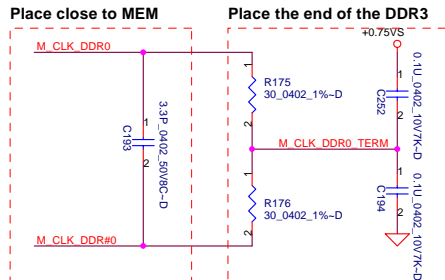
POWER



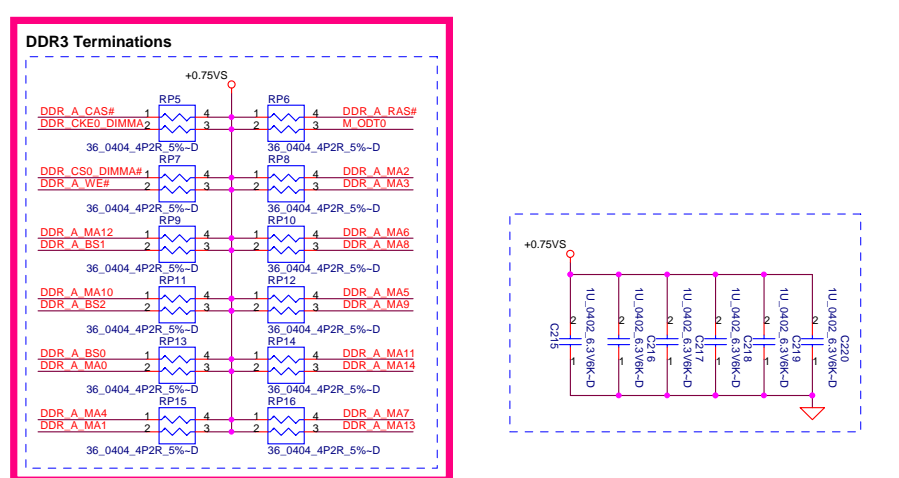
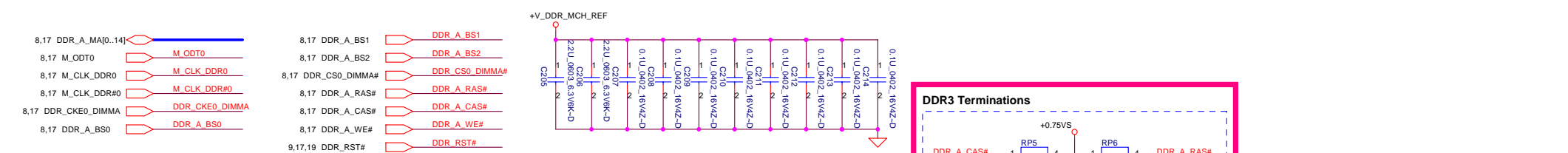
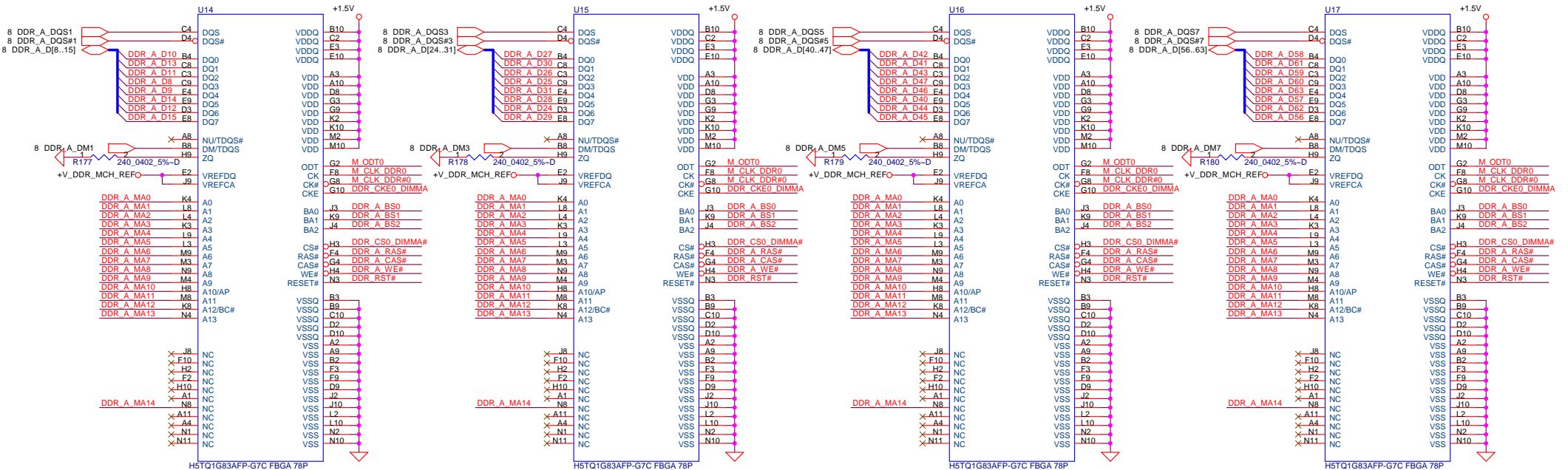
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1



Place decaps close end termination resistors, one decap for 4 resistors

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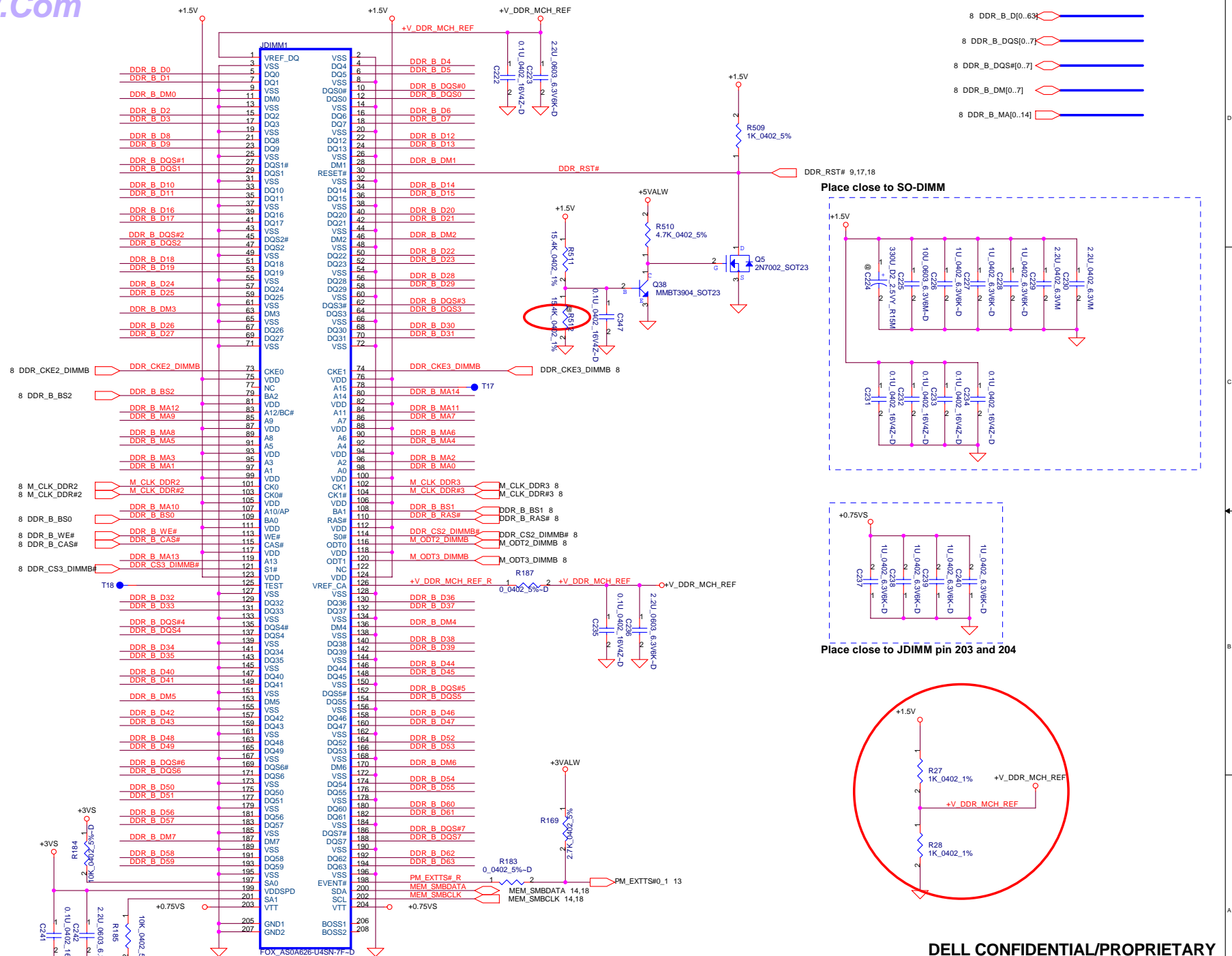
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DRR11-Memory Down (Bottom)

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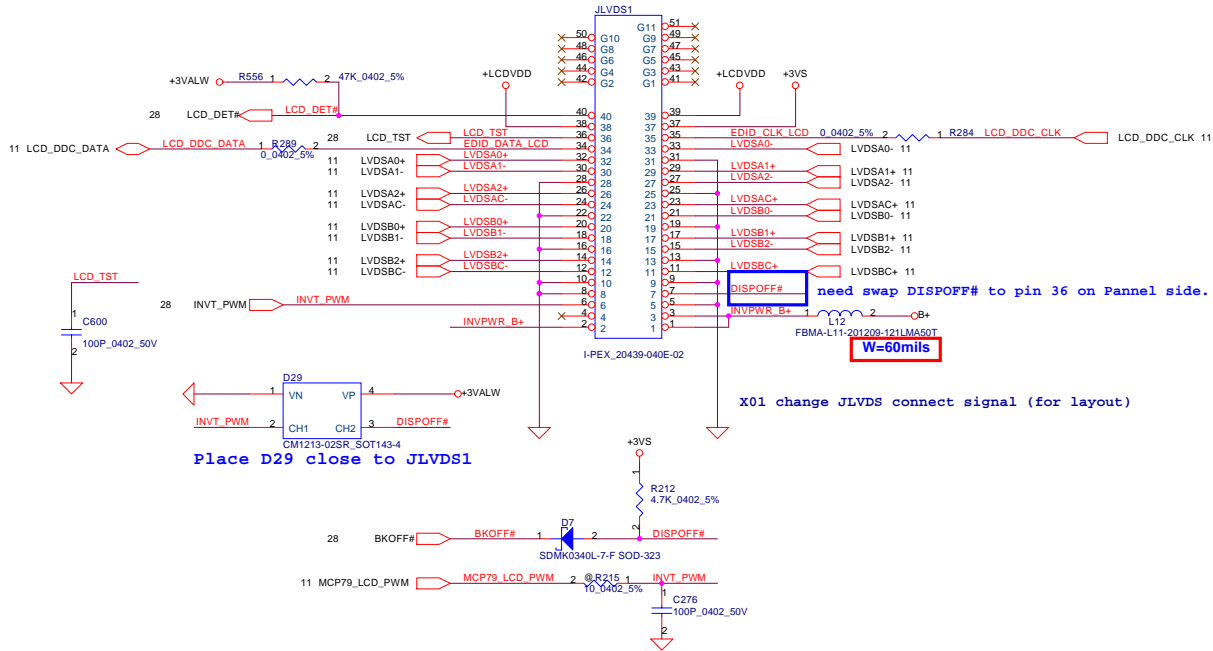
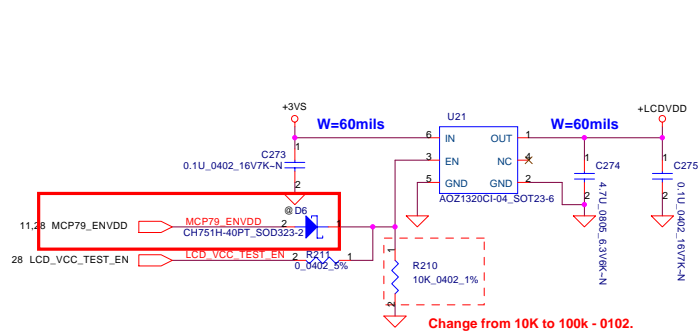
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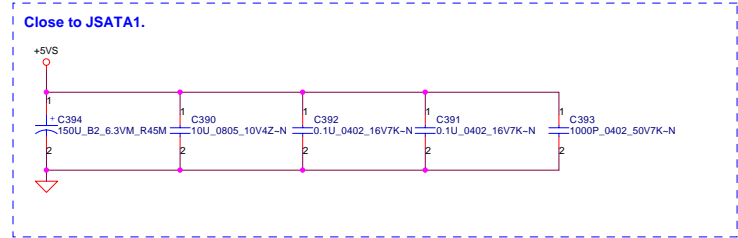
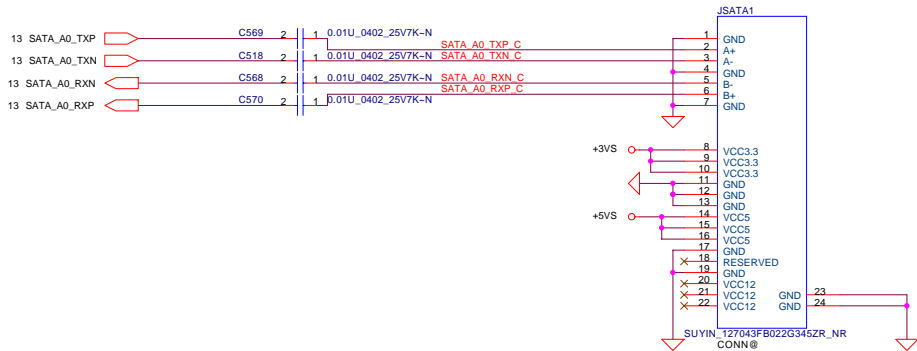
DDRIII SO-DIMM SLOT

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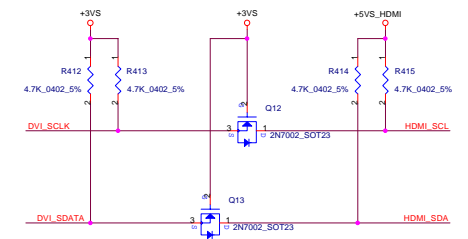
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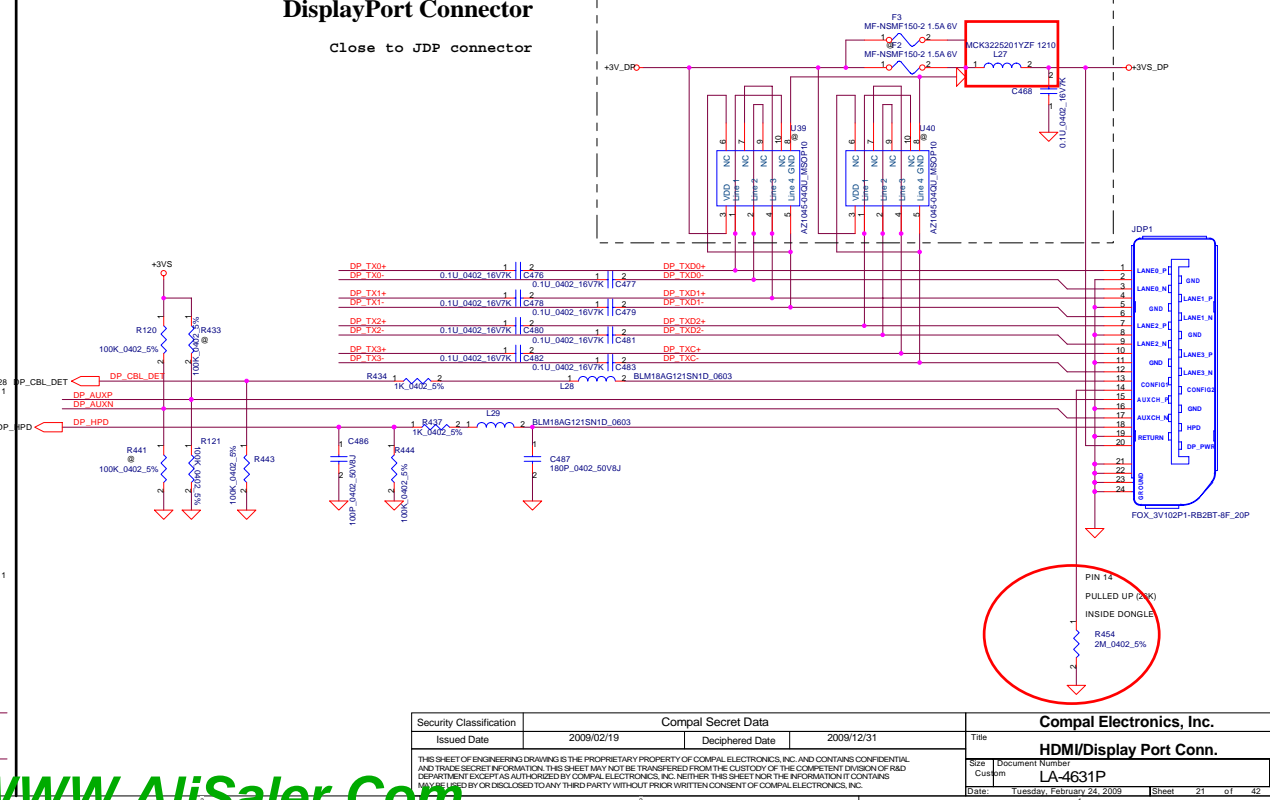
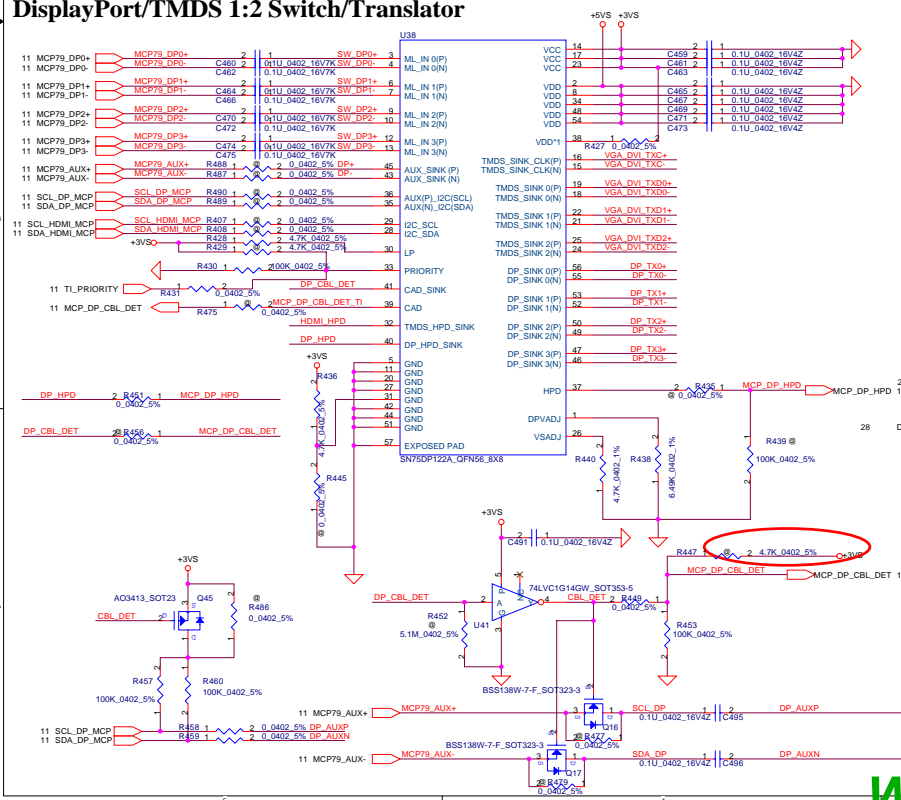
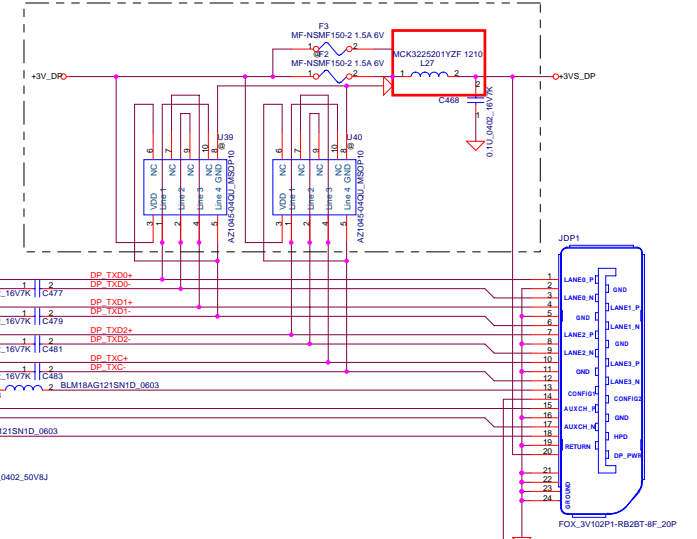
SATA HDD



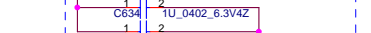
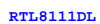
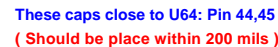
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/02/19	Deciphered Date	2009/12/31	Title	LCD/SATA HDD
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Close to JDP connector

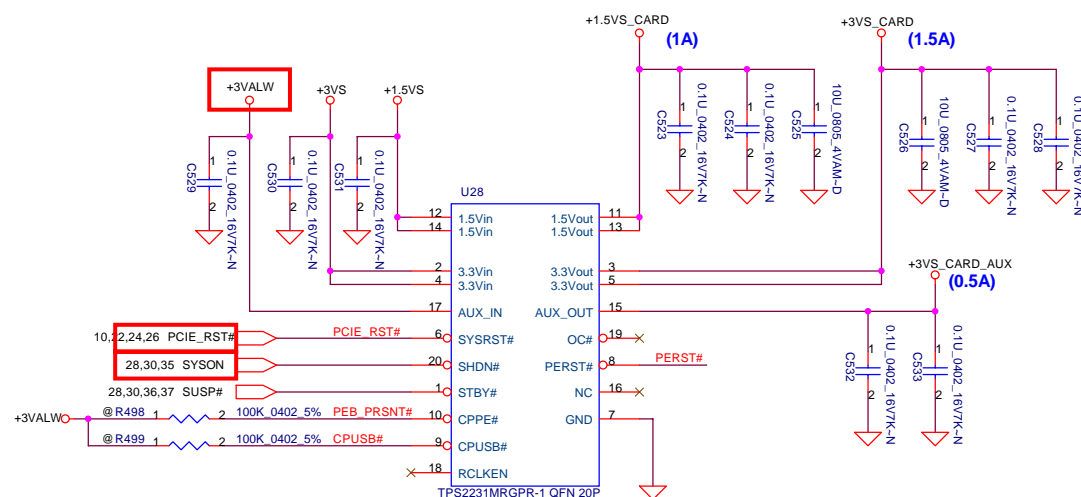


Security Classification	Compal Secret Data		Title	
Issued Date	2009/02/19	Deciphered Date	2009/12/31	Document Number
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			Size Custom	LA-4631P
			Date	Tuesday, February 24, 2009
			Sheet	21 of 42

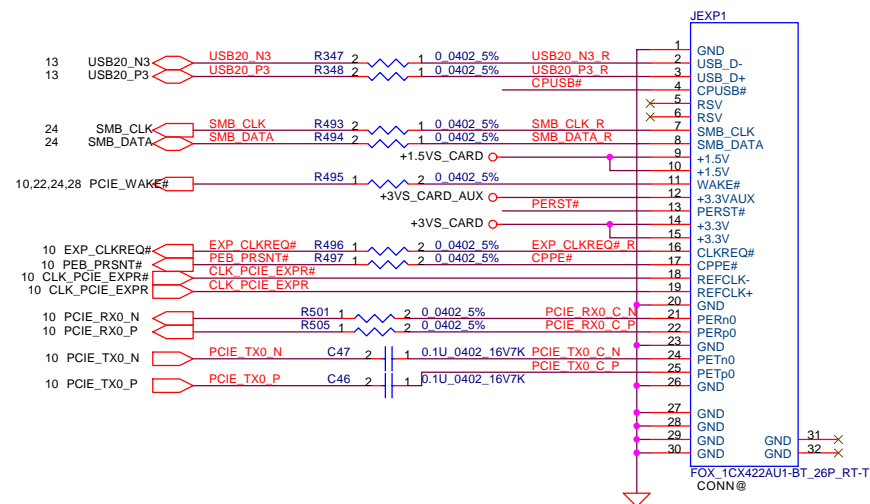


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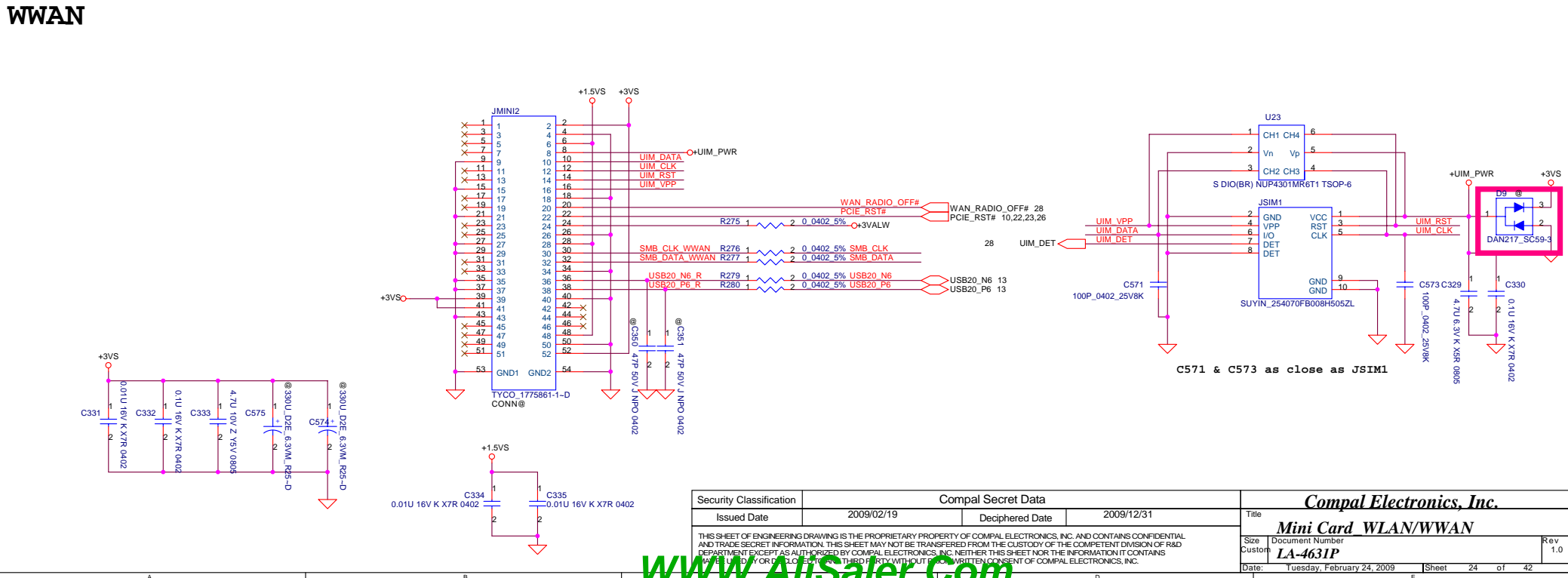
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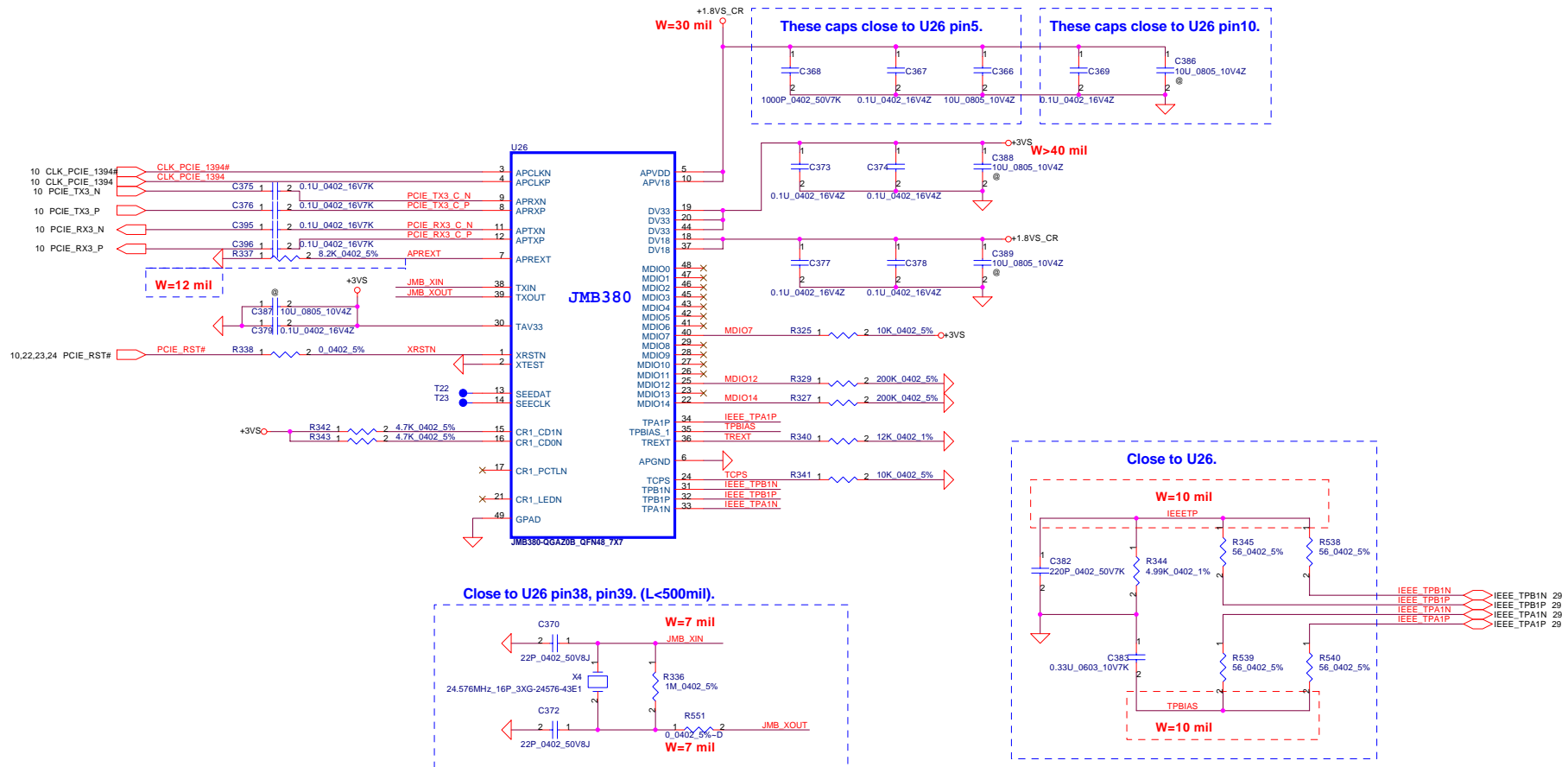
Express Card



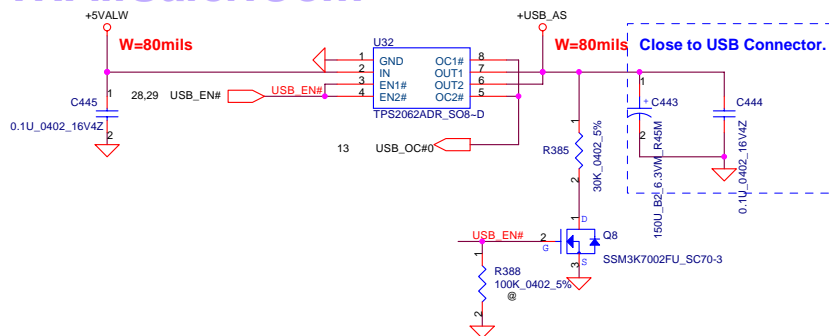
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Size		Document Number		Rev	
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Date:		Tuesday, February 24, 2009		Sheet 23 of 42	



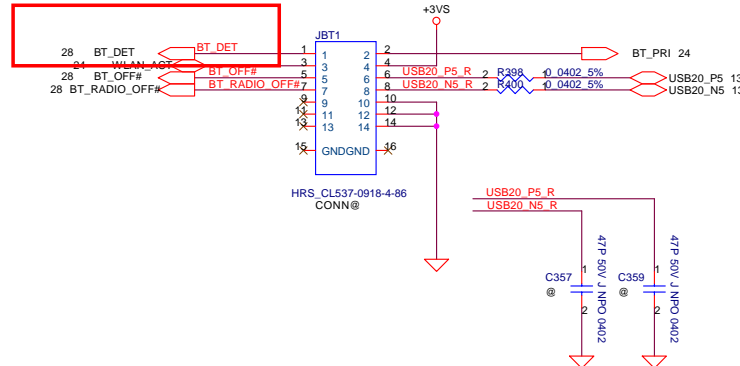
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Issued Date	2009/02/19	Deciphered Date	2009/12/31	Title	
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Date: Tuesday, February 24, 2009				Sheet 24 of 42	



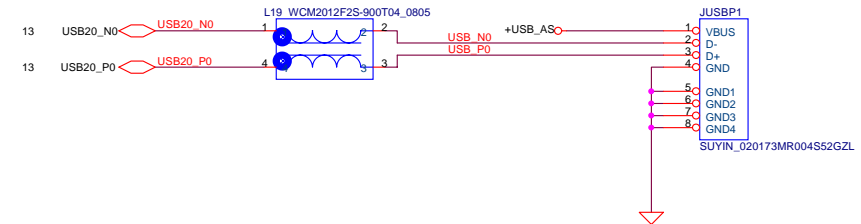
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Issued Date	2009/02/19	Deciphered Date	2009/12/31	Title	IEEE1394 JMB380
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				Document Number	LA-4631P
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Bluetooth

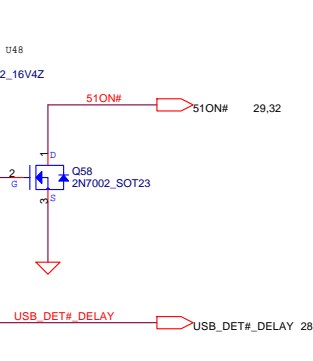
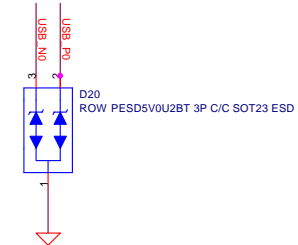
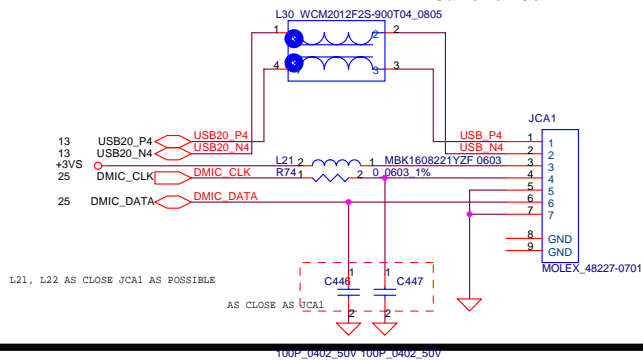


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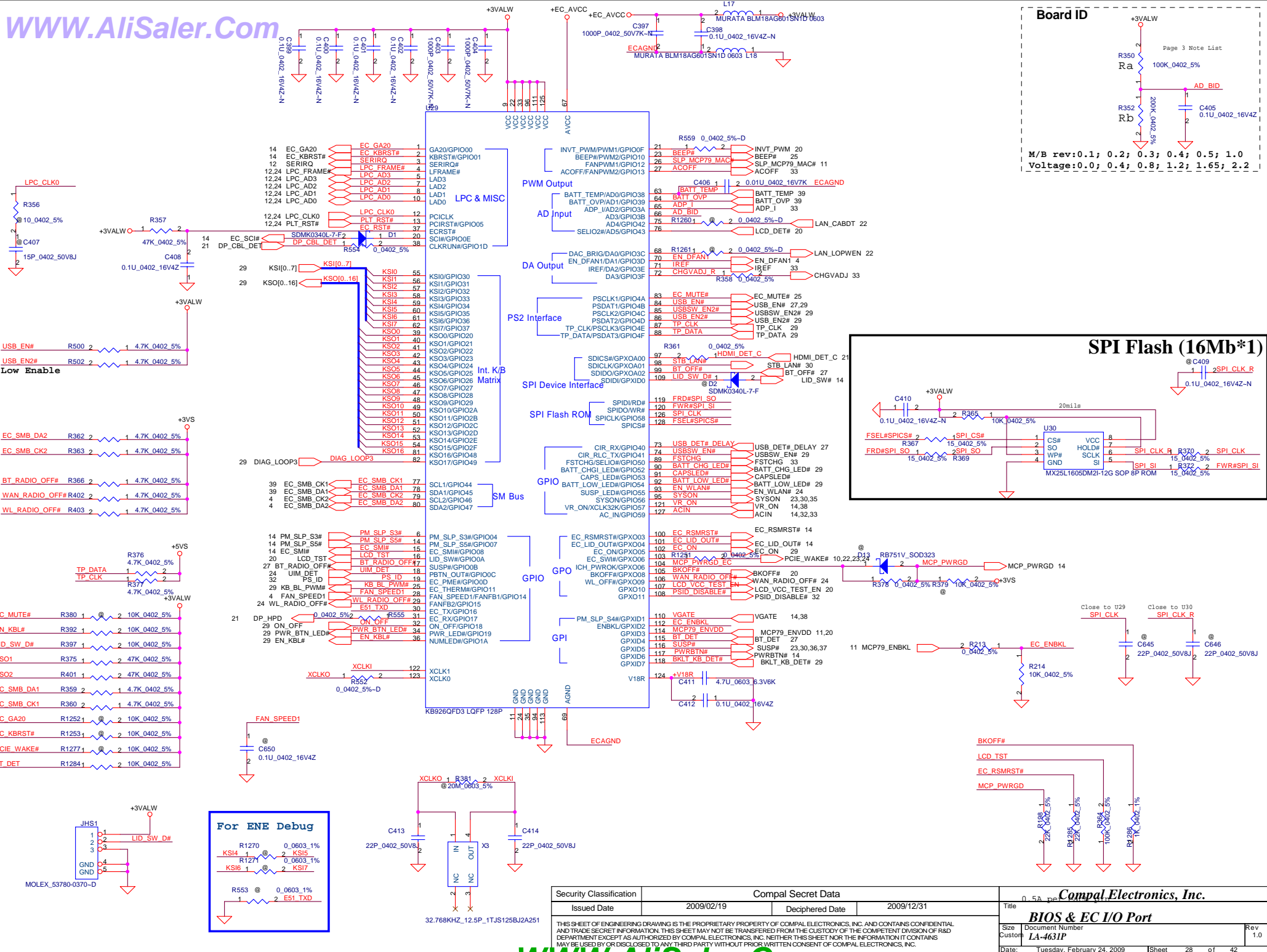


change JUSBP1 connect signal (for layout)

Camera Conn

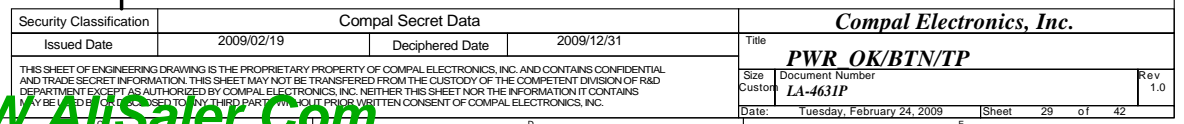
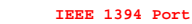


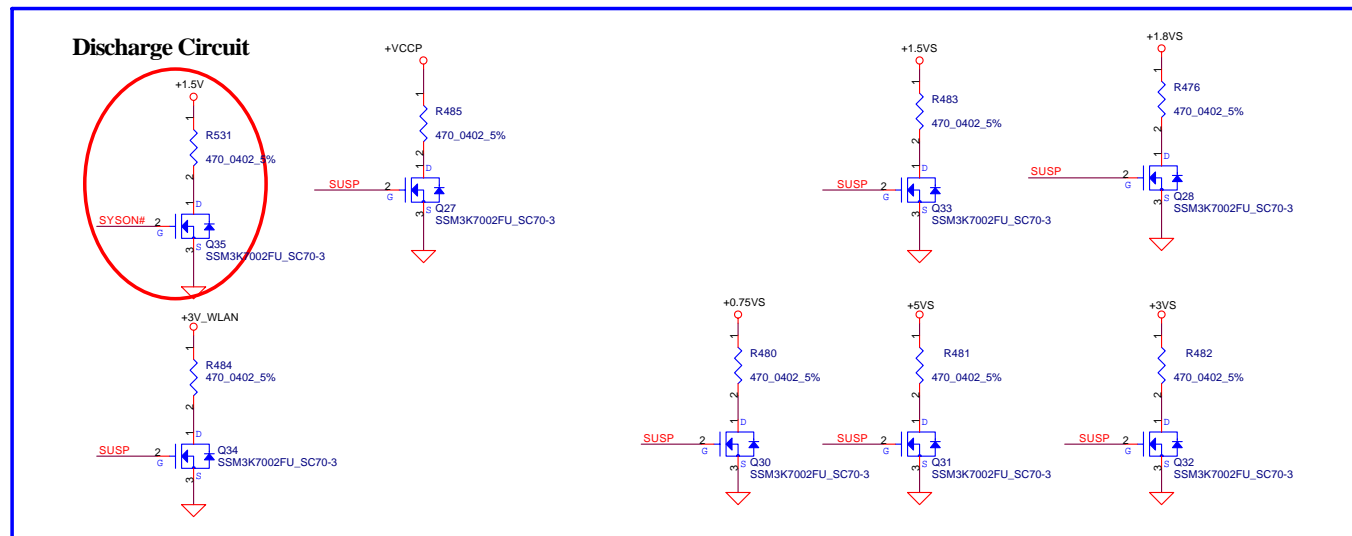
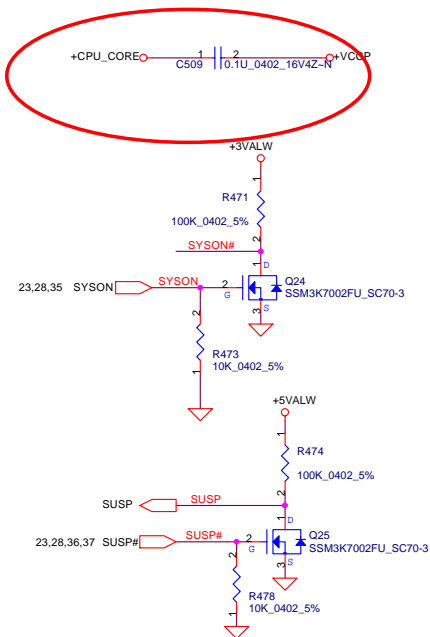
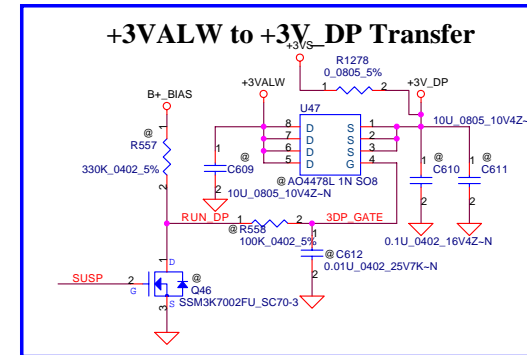
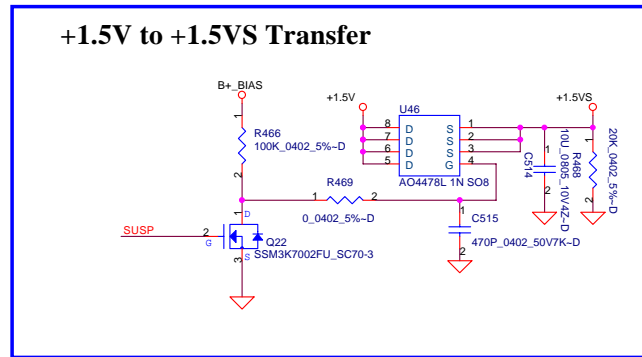
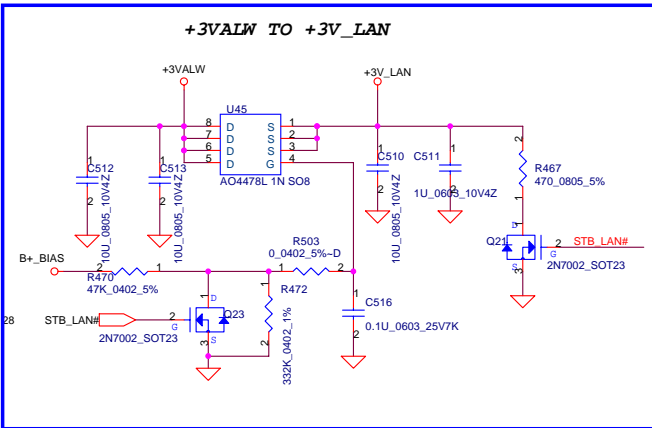
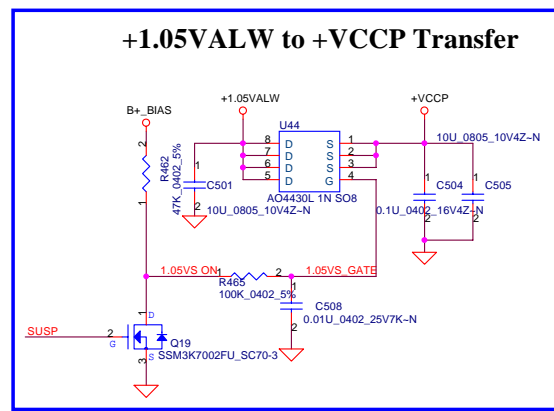
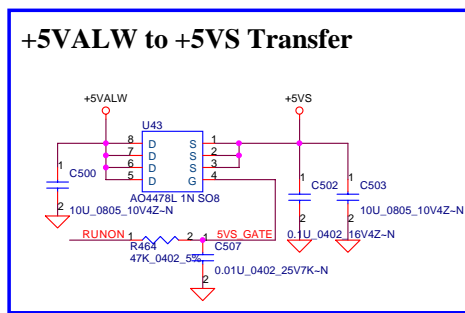
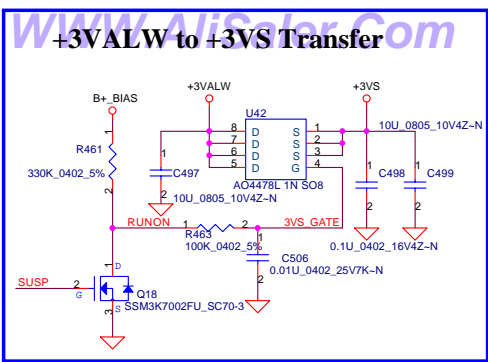
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Issued Date	2009/02/19	Deciphered Date	2009/12/31	Title		
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Size	Document Number	Rev		1.0		
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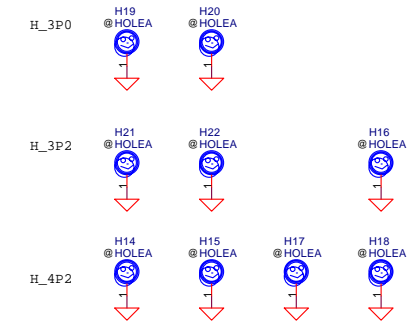
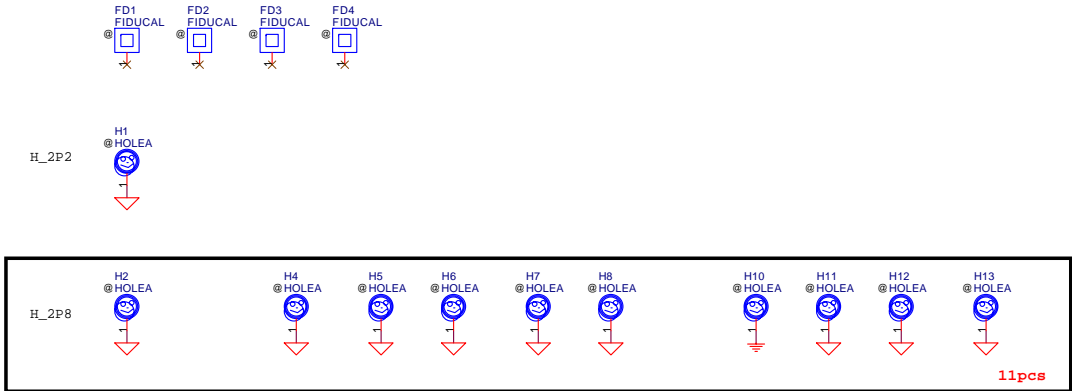


B to B Conn.

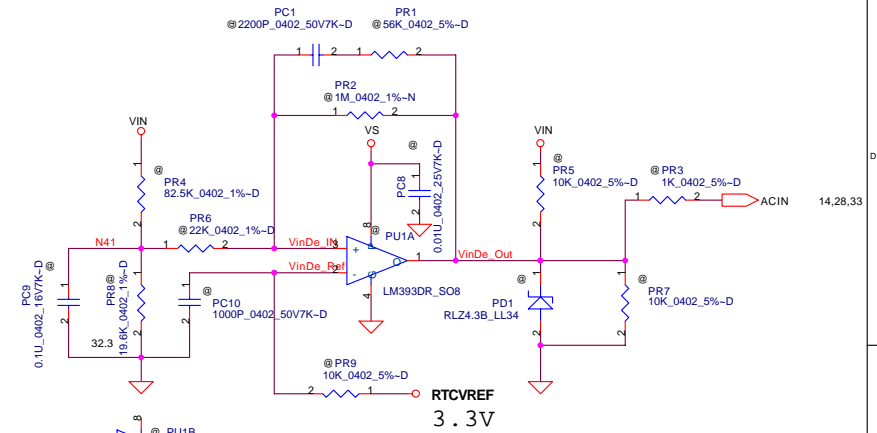
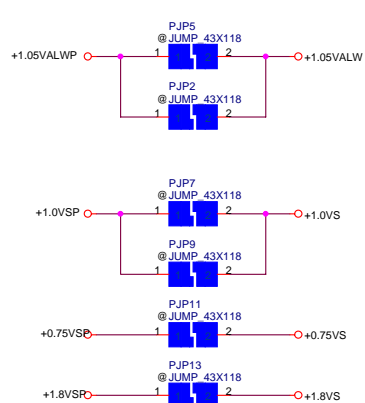
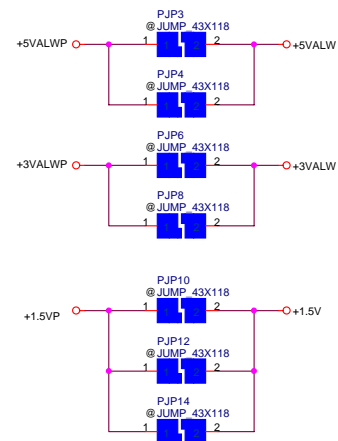
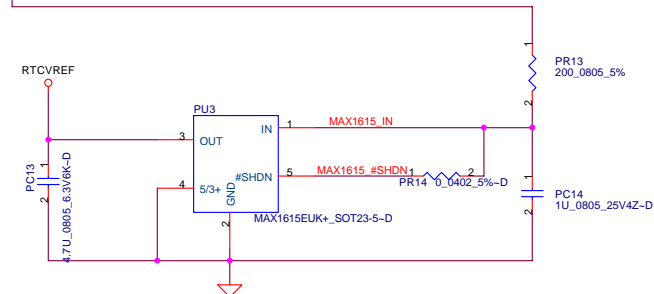
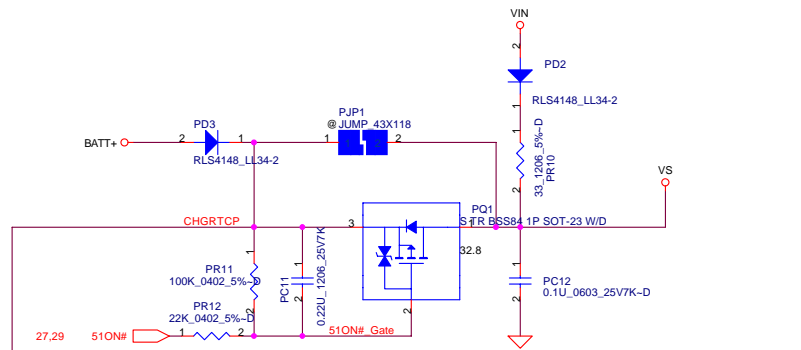
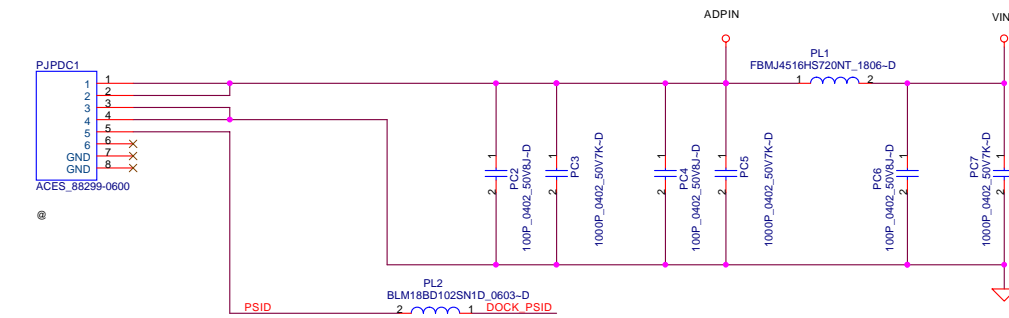




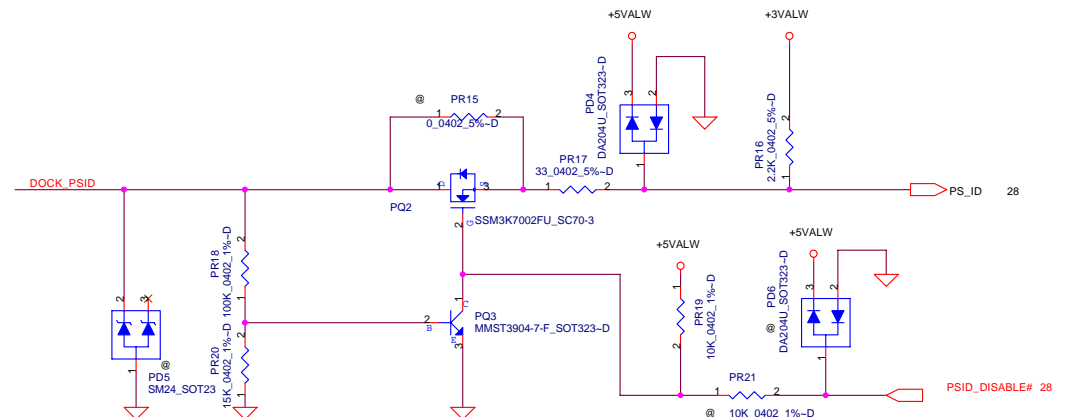
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Issued Date	2009/02/19	Deciphered Date	2009/12/31	Title	
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				Size	Document Number
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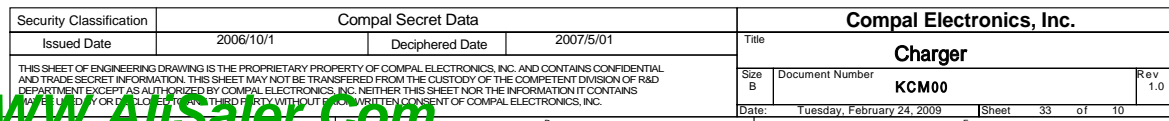
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Issued Date	2009/02/19	Deciphered Date	2009/12/31	Title	Screws
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				Date:	Thursday, February 19, 2009
				Sheet	31 of 42
				Rev	1.0

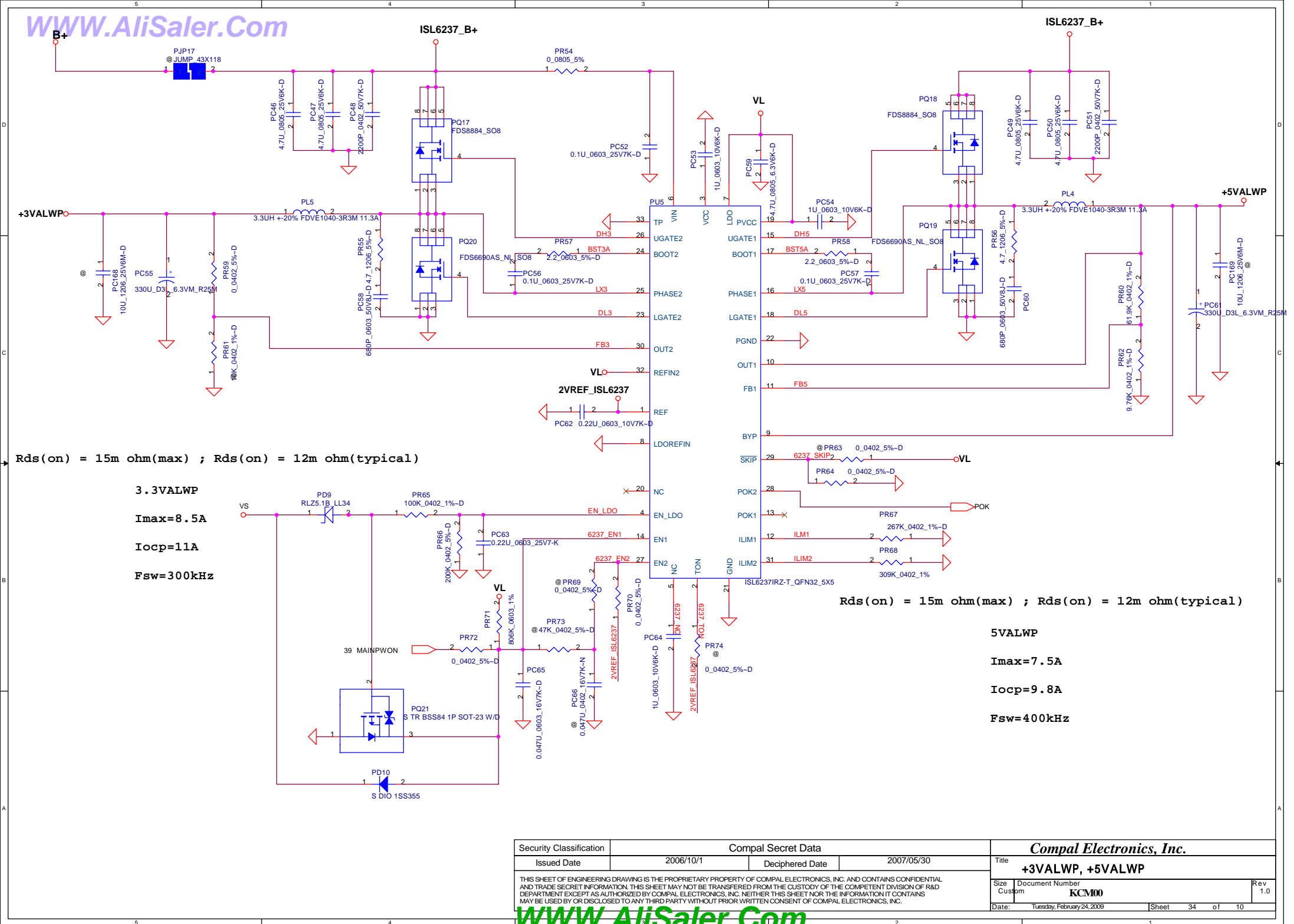


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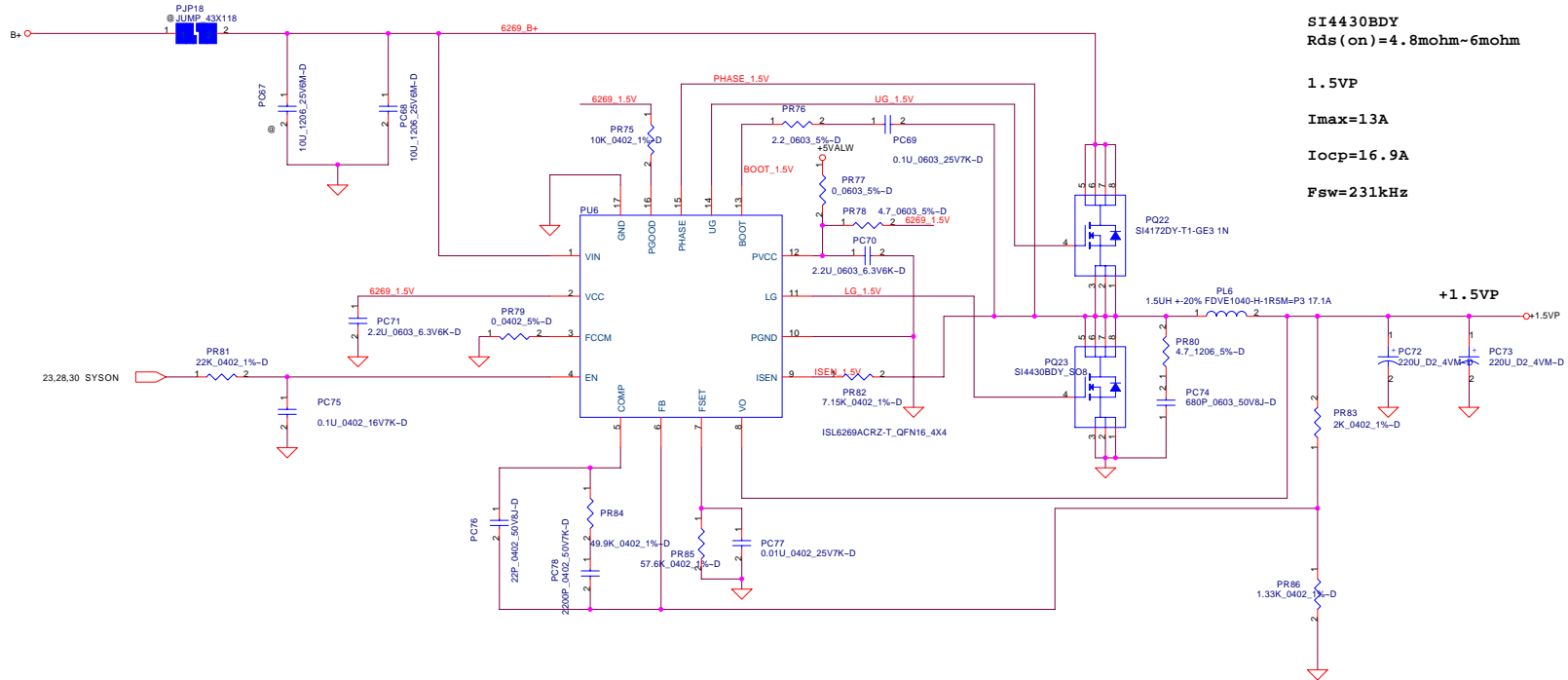


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Size		Document Number				Rev	
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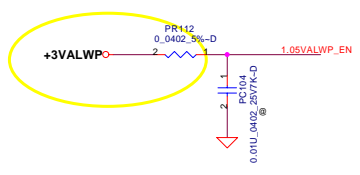
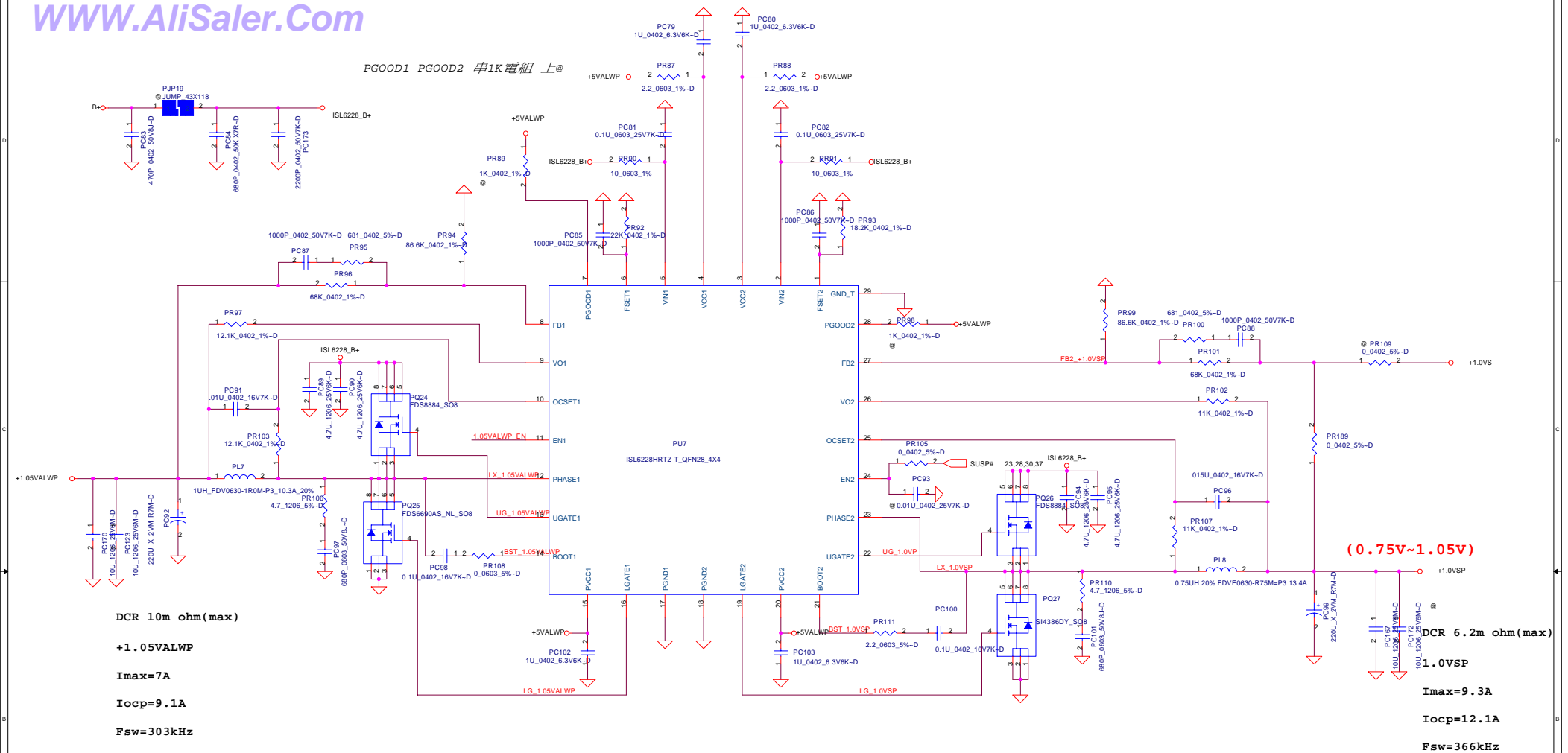




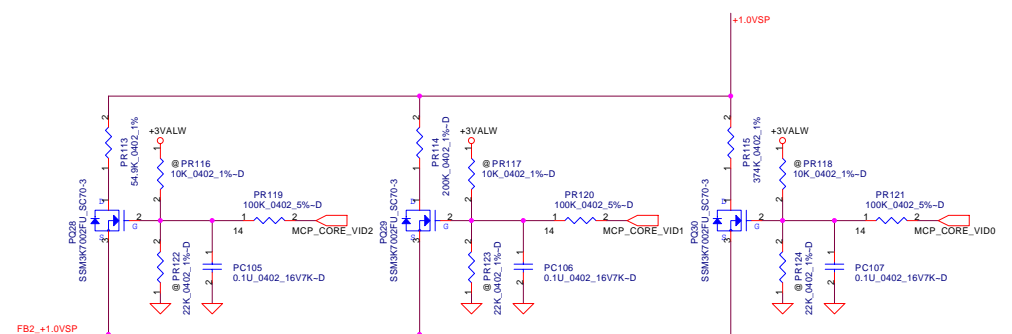
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Issued Date	2006/10/1	Deciphered Date	2007/05/30	Title	
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Size		Document Number		Rev	
Custom		KCM00		1.0	
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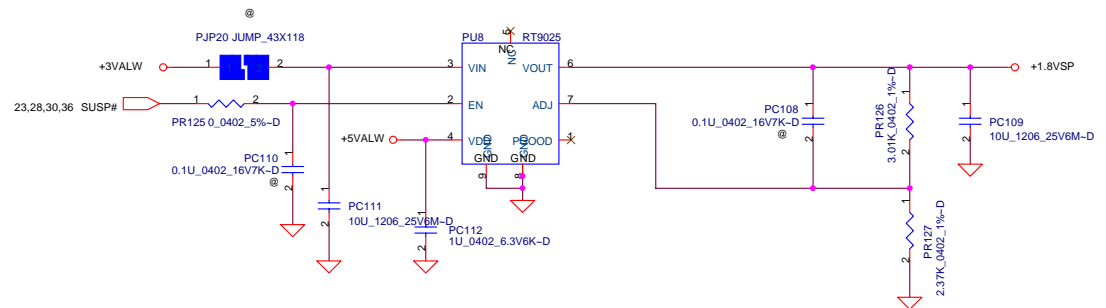
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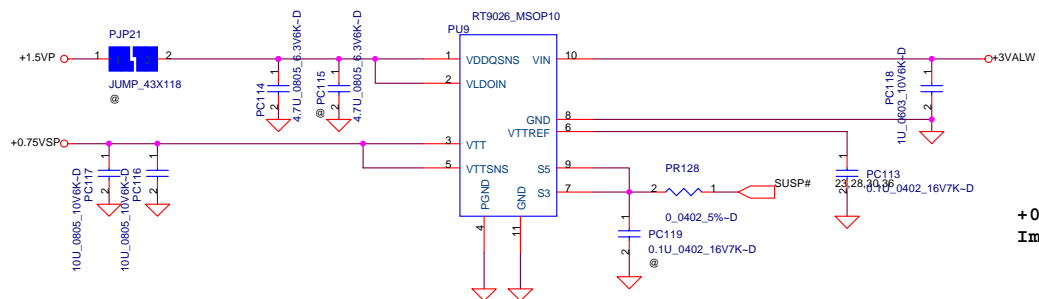
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L	L	H	0.98
L	H	L	0.90
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H	L	L	0.80
H	L	H	0.79
H	H	L	0.77
H	H	H	0.75



Security Classification	Compal Secret Data		Title	
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Size	Document Number	KCM00		Rev 1.0
Date:	Tuesday, February 24, 2009	Sheet	36	of 10

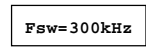


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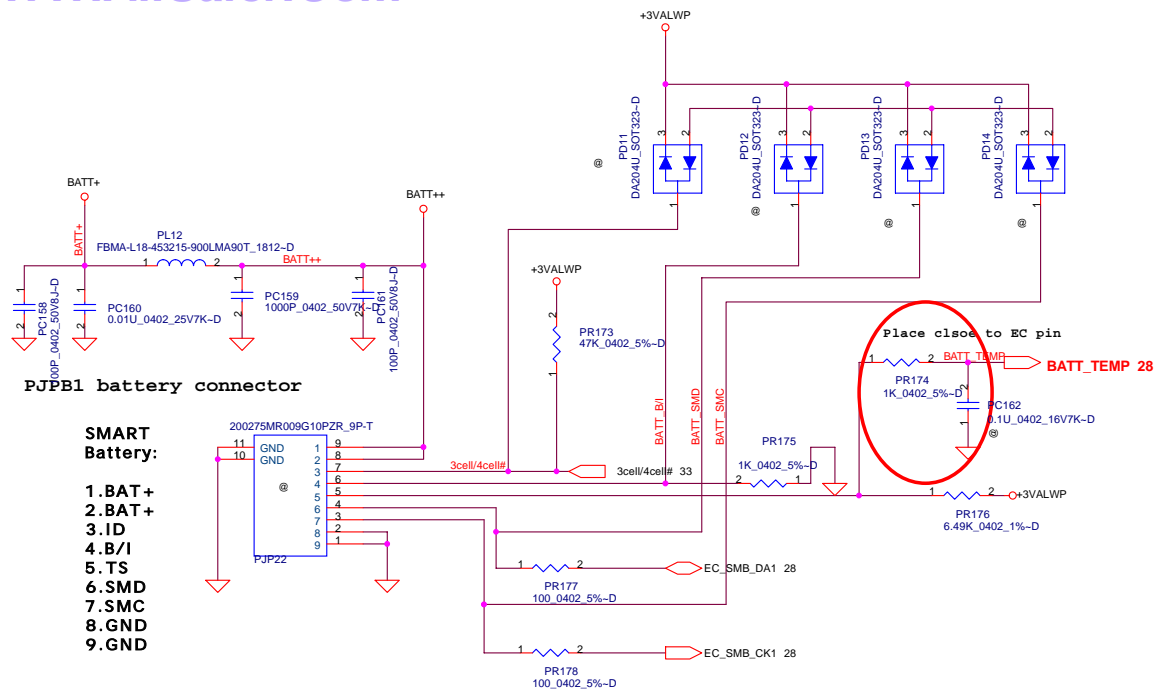


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Issued Date	2005/10/1	Deciphered Date	2007/05/30	Title	
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Size Custom		Document Number KCM00			Rev 1.0
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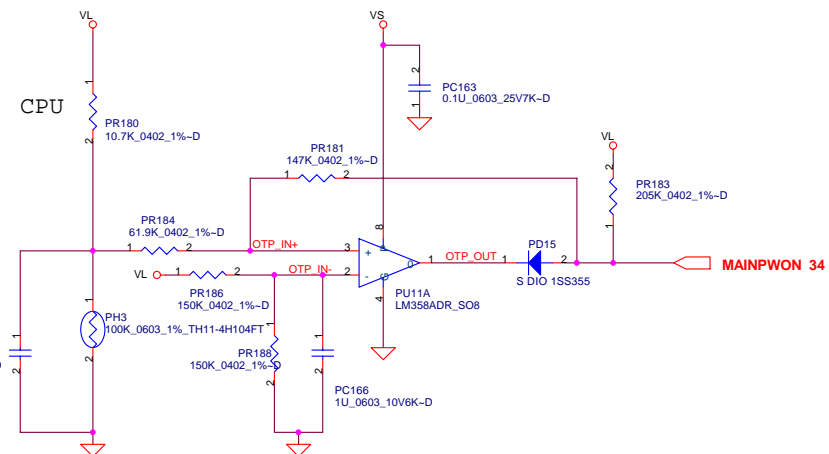
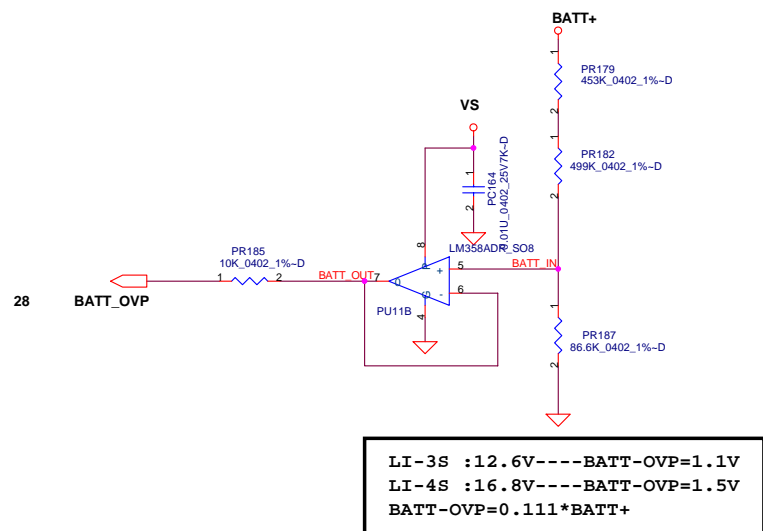


Security Classification		Compal Secret Data		Compal Electronics, Inc. +CPU CORE		
Issued Date	2007/1/15	Deciphered Date	2008/1/15	Title		
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CPU

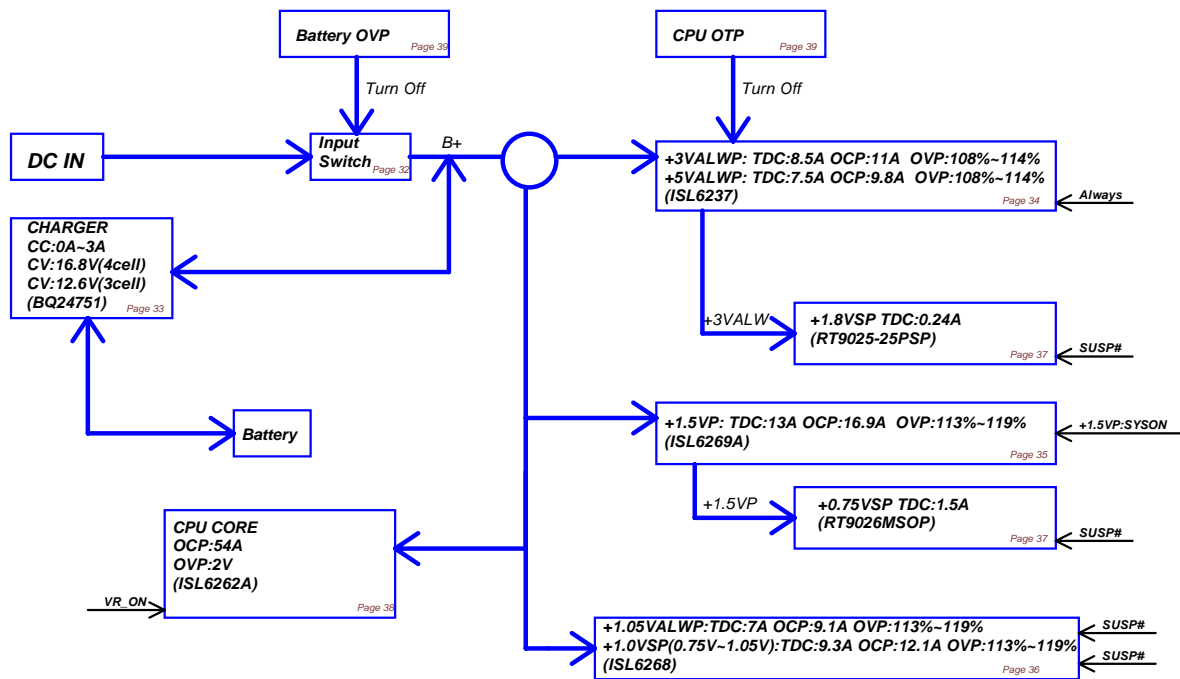
PH1 under CPU bottom side :
CPU thermal protection at 90 +-3 degree C
Recovery at 50 +-3 degree C



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Issued Date		2005/10/1		Deciphered Date		2007/05/30	
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				BATTERY CONN			
				Size	Document Number	Rev	
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Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	p37	+0.75VSP/1.8VSP	08/10/15	compal	source shortage	pu9	
2	p33	charger	08/10/15	compal	design change	PQ6 PQ8	
3	p32	DCIN / Precharge	08/10/15	compal	meet PSL	PQ2	
4	p33	charger	08/10/15	compal	meet PSL	PQ16	
5	p32	DCIN / Precharge	08/10/15	compal	meet PSL	PQ1	
6	p33	charger	08/10/15	compal	meet PSL	PQ12	
7	p34	+3VALWP/+5VALWP	08/10/15	compal	meet PSL	PQ21	
8	p33	charger	08/10/15	compal	meet PSL	PR22 PR29	
9	p37	+0.75VSP/1.8VSP	08/10/15	compal	adjust 1.8V output voltage	PR127 PR124	
10	p33	charger	08/10/15	compal	adjust charge current to 3.1A	PR38	
11	p33	charger	08/10/15	compal	adjust CP set for ICPP function	PR38	
12	p34	+3VALWP/+5VALWP	08/10/15	compal	meet choke component current limit	PL4 PL5	
13	p32	DCIN / Precharge	08/10/15	compal	meet PSL	PL1	
14	p38	CPU_CORE	08/10/15	compal	meet PSL	PL9	
15	p39	BATTERY CONN	08/10/15	compal	meet PSL	PL12	
16	p33	charger	08/10/22	compal	design change	PQ6 PQ8	
17	p35	+1.5VSP	08/10/22	compal	reduce L/S MOS Vds	PQ22	
18	p36	+1.05VALWP/1.0VP	08/10/22	compal	Add remote sense function	PR189	
19	p36	+1.05VALWP/1.0VP	08/10/22	compal	adjust output voltage	pr94	
20	p36	+1.05VALWP/1.0VP	08/10/22	compal	design change	PL8	
21	p35	+1.5VSP	08/10/22	compal	design change	PL6	
22	p33	charger	08/10/22	compal	EMI request	PL13	
23	ALL	every power	08/10/22	compal	reduce output ripple	PC123 PC167 PC168 PC169 PC170	
24	ALL	every power	08/10/22	compal	sunbber for EMI request	PR30 PR106 PR55 PR56 PR80 PR110 PR105 PR155	
25	ALL	every power	08/10/22	compal	sunbber for EMI request	PC33 PC58 PC60 PC74 PC97 PC101 PC134 PC144	
26	P34 P35	every power	08/10/22	compal	increase boost resistor value form 0 ohm to 2.2 ohm for EMI request	PR57 PR58 Pr76	
27	p39	BATTERY CONN	08/12/03	compal	adjust OTP set	PR183	
28	p33	charger	08/12/03	compal	DFX request	PQ10 PQ11 PQ13 PQ14 PQ15	
29	p36	+1.05VALWP/1.0VP	08/12/03	compal	adjust +1.0VSP OCP set	PR102 PR107	
30	p36	+1.05VALWP/1.0VP	08/12/03	compal	adjust +1.0VSP output voltage	PR99	
31	p35	+1.5VSP	08/12/12	compal	design change(already trail run in PT phase)	PQ22	
32	p39	BATTERY CONN	08/12/12	compal	adjust OTP set	PR183	
33	p33	charger	08/12/31	compal	reduce AC-IN inrush current	PR24 PR25	
34	p36	+1.05VALWP/1.0VP	08/12/31	compal	WWAN issue	PC173 PC174 PC175	
34	p34	+3VALWP/+5VALWP	08/12/31	compal	adjust +5VALWP voltage	PR62 change frome 10k to 9.62k	

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Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	19	P19-DDR3_SO-DIMM SLOT	2008/09/22	nVidia	can't use SO-DIMM	change SO-DIMM SA0 to pull high & SA1 to pull down	0.2
2	20	P20-LCD/SATA HDD	2008/09/25	Compal	can't read EDID for Panel	change JLVDS1 Pin 37 from +LCDVDD TO +3VS	0.2
3	21	P21-HDMI/Display Port	2008/10/07	Compal	Change DP122 to DP122A	change R440 from 4.64K to 5.11K and R438 from 5.11K to 6.49K	0.2
4	12	P12-MCP79(6/10)_PCI/LPC	2008/10/13	Compal	can't select on board SPD data	ADD R191,R192,R193 TO SELECT ON BOARD MEMORY VENDOR	0.2
5	28	P28-EC_KB926/BIOS/Reed SW	2008/10/20	Compal		Change EC_SMB_DA1 and EC_SMB_CK1 from +5VALW to +3VALW	0.2
6	18	P18-1GB/2GB_DDR3_On Board	2008/12/04	nVidia	On board Ram unstable	Add 0.1uF cap between Termination Resistor and +0.75VS	0.4
7	14	P14-MCP79(8/10)_HDA/MISC	2009/02/03	Dell	saving power consumption	change +3VALW to +3VS on MEM_SMBCLK & MEM_SMBDATA	1.0
8	24	P24-Mini Card_WLAN/WWAN	2009/02/04	Dell		reserve SMBus from MCP79	1.0
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