

# Compal Confidential

## QBL50 Schematics Document

AMD Sabine

APU Llano / Hudson M2\_M3 / Vancouver Whistler

UMA only / PX Muxless with BACO

2011-04-25

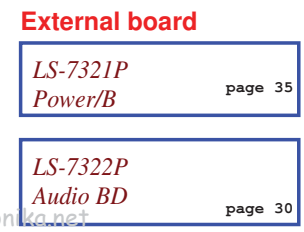
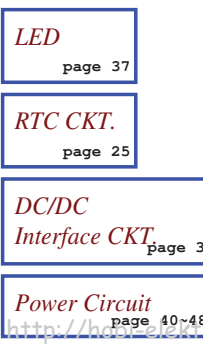
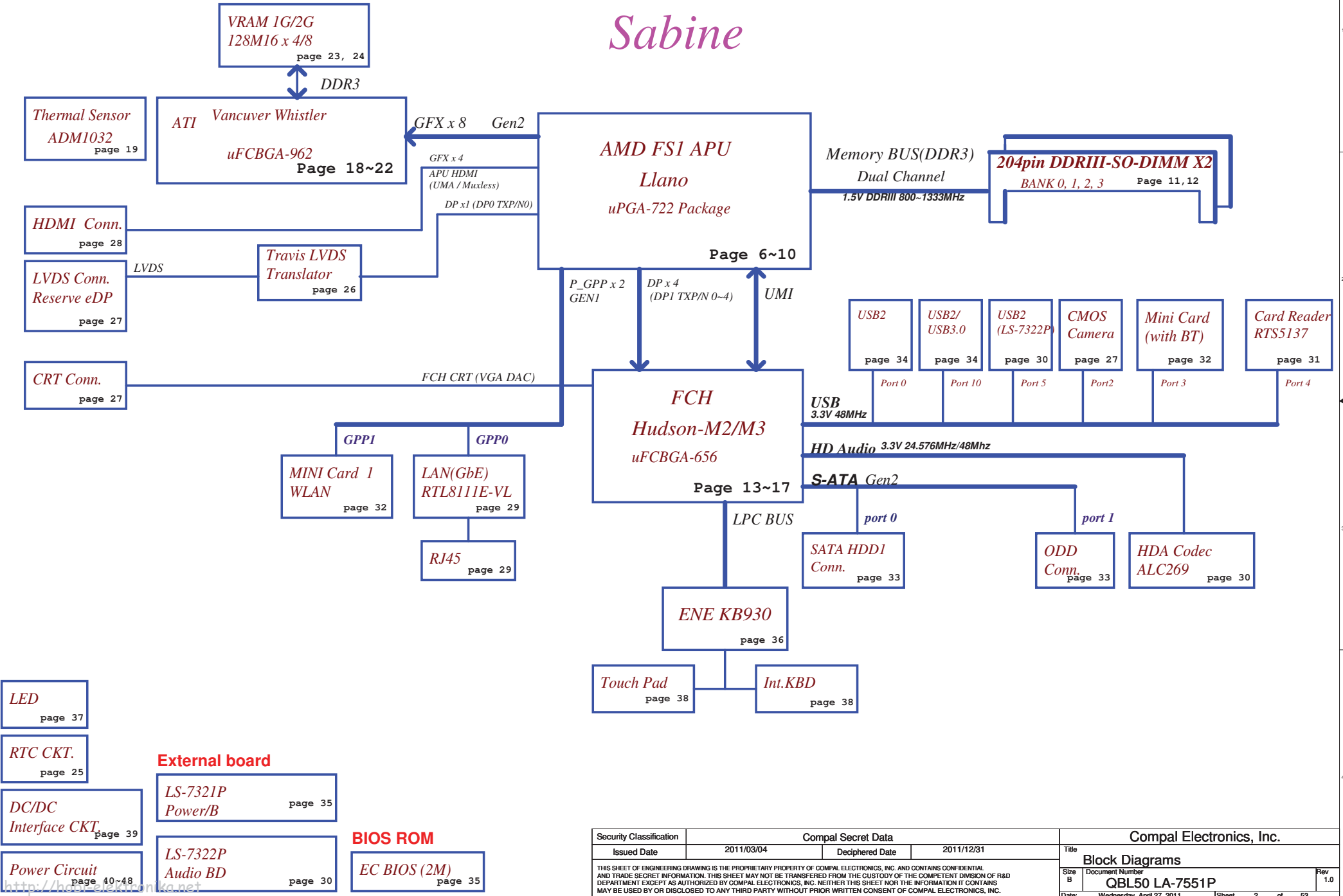
Rev : 1.0

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				Size B	Document Number QBL50 LA-7551P

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Model Name : QBL50

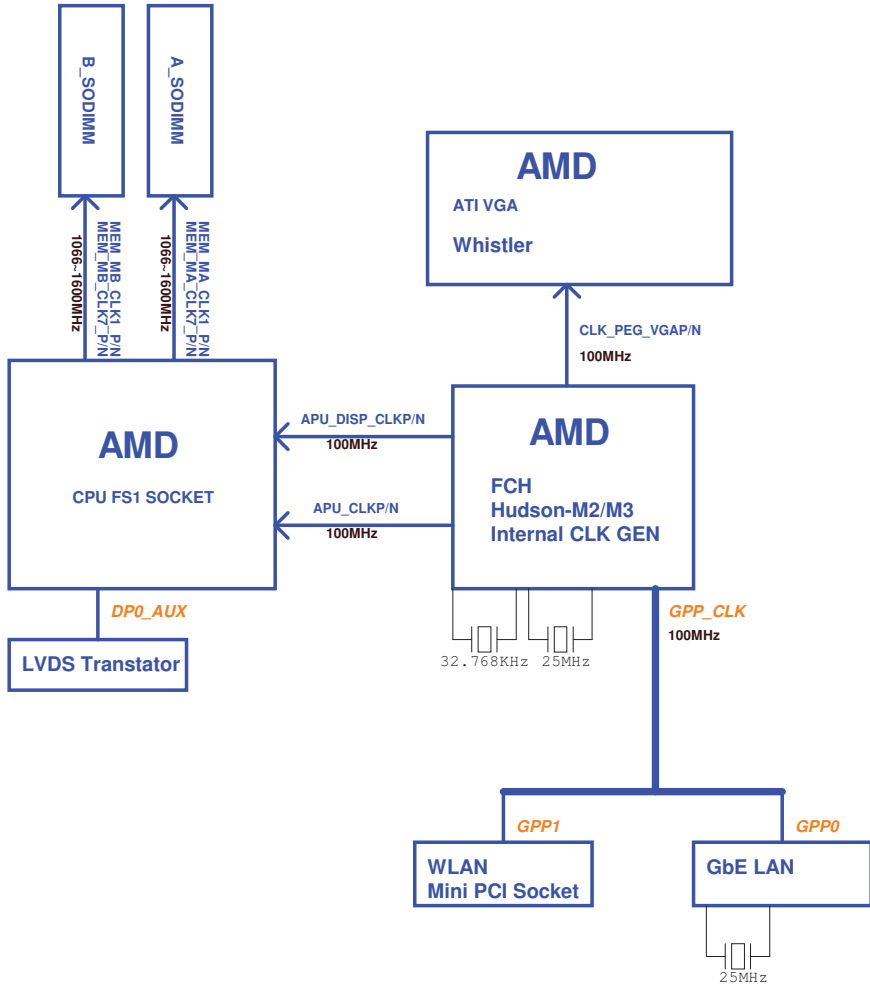
## Sabine



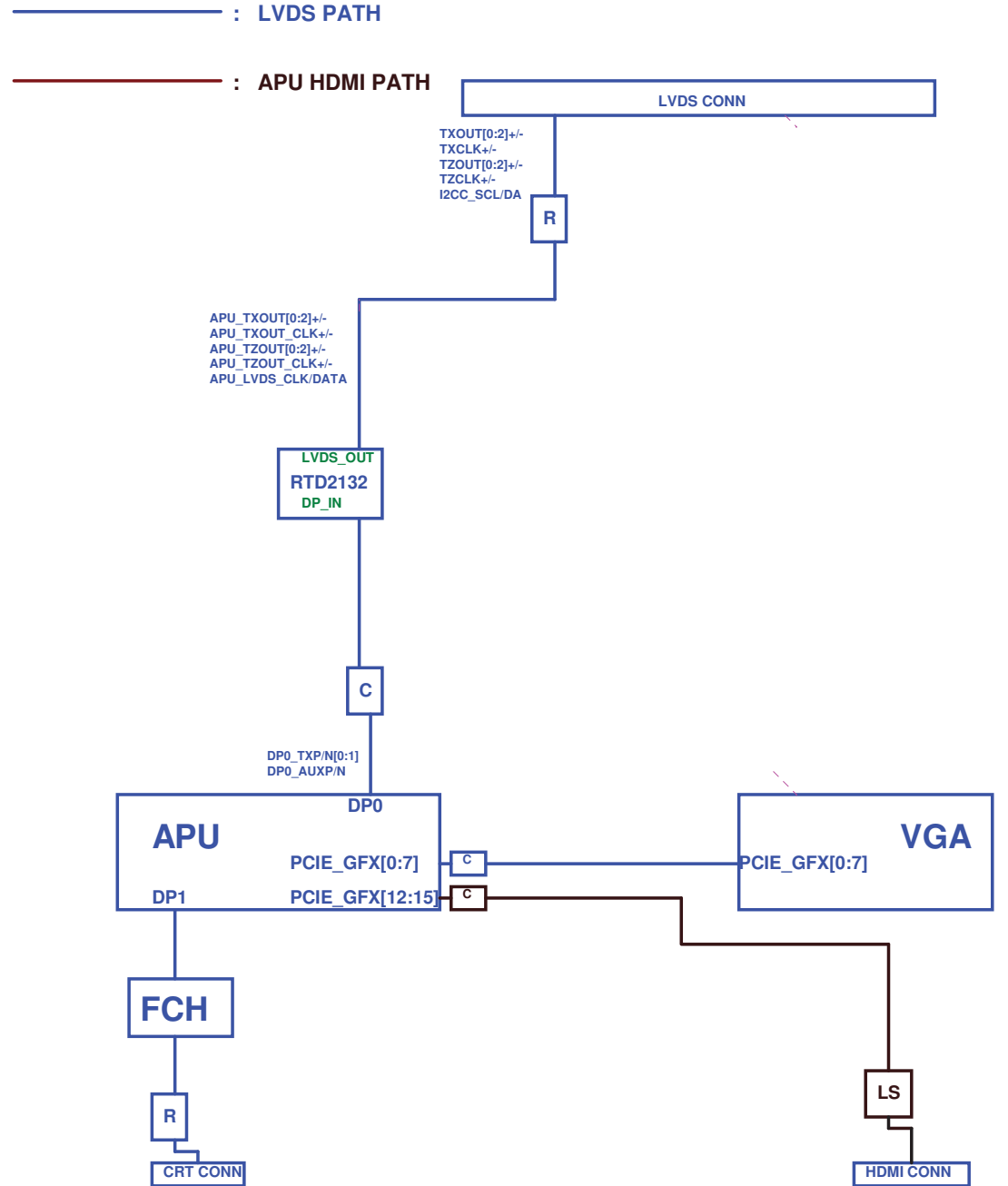
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Size B	Document Number	Rev	
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# CLOCK DISTRIBUTION

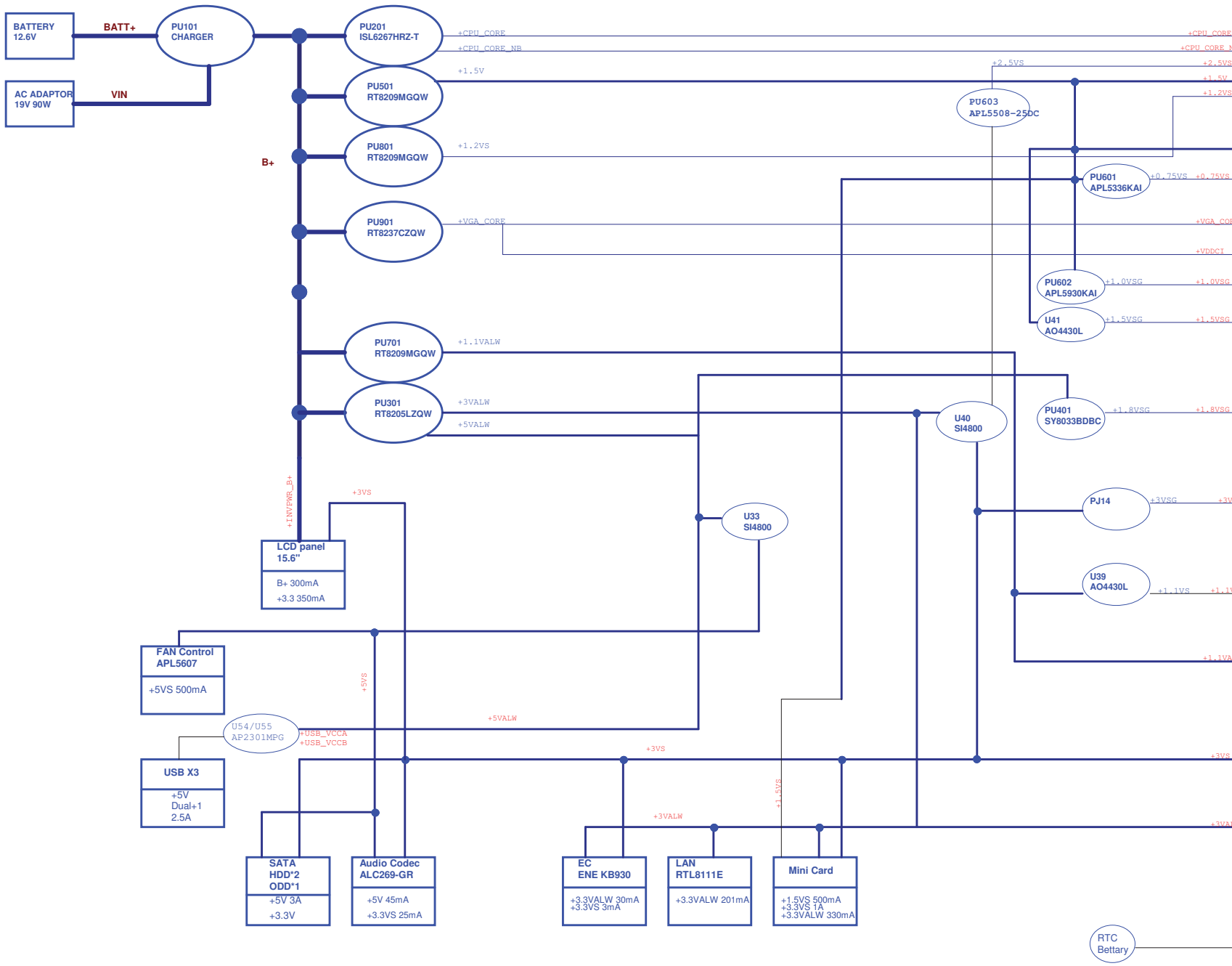


# DISPLAY DISTRIBUTION



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AMD APU FS1	
0.7~1.475V	VDD CORE 54A
0.7~1.475V	VDDNB 27.5A
+2.5VS	VDDA 500mA
+1.5V	VDDIO 4.6A
+1.2VS	VDDR 6.7A





RAM DDRIII SODIMMX2	
+1.5V	VDD_MEM 4A
+0.75VS	VTT_MEM 0.5A





VGA ATI Whistler/Seymour/Granville	
0.85~1.1V	VDDC 47A
0.9~1.0V	VDDCI 4.6A
+1.0VSG	DPLL_VDDC: 125 mA SPV10: 120 mA PCI_VDDC: 2000 mA DP[A,E]_VDD10: 680 mA
+1.5VSG	VDDR1: 3400 mA
+1.8VSG	PLL_PVDD: 75 mA TSVDD: 20 mA AVDD: 70 mA VDD1D1: 100 mA VDD2D1: 50 mA A2VDDC: 1.5 mA VDD_CT: 110 mA VDDR4: 170 mA PCI_VDDC: 40 mA MPV18: 150 mA SPV18: 75 mA PCI_VDDR: 400 mA DP[A,F]_VDD18: 920 mA DP[A,F]_PVDD: 120 mA
+3VSG	A2VDD: 130 mA VDDR3: 60 mA

VRAM 1GB/2GB 64M / 128Mx16 * 4 / 8	
+1.5VSG	2.4 A



FCH AMD Hudson M2/M3	
+1.1VS	VDDPL_11_DAC: 7 mA VDDAN_11_ML: 226 mA VDDCR_11: 1007 mA VDDAN_11_CLK: 340 mA VDDAN_11_PCIE: 1088 mA VDDAN_11_SATA: 1337 mA
+1.1VALW	VDDAN_11_USB_S: 140 mA VDDCR_11_USB_S: 197 mA VDDAN_11_SSUSB_S: 282 mA VDDCR_11_SSUSB_S: 424 mA VDDCR_11_S: 187 mA VDDPL_11_SYS: 70 mA
+3VS	VDDIO_33_PCIGP: 131 mA VDDPL_33_SYS: 47 mA VDDPL_33_DAC: 20 mA VDDPL_33_ML: 20 mA VDDAN_33_DAC: 200 mA VDDPL_33_PCIE: 43 mA VDDPL_33_SATA: 93 mA VDDIO_AZ_S: 26 mA
+3VALW	VDDPL_33_SSUSB_S: 20 mA VDDPL_33_USB_S: 17 mA VDDAN_33_USB_S: 658 mA VDDIO_33_S: 59 mA VDDXL_33_S: 5 mA VDDAN_33_HWM_S: 12 mA
GND	VDDIO_33_GBE_S VDDCR_11_GBE_S VDDIO_GBE_S
RTC BAT	VDDBT_RTC_G

Security Classification	Compal Secret Data			Title	POWER DELIVERY CHART
Issued Date	2010/06/04	Deciphered Date	2011/12/31		
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18 PCIE\_GTX\_C\_FRX\_P[0..7]    
 18 PCIE\_GTX\_C\_FRX\_N[0..7]  

PCIE\_FTX\_C\_GRX\_P[0..7] 18    
 PCIE\_FTX\_C\_GRX\_N[0..7] 18  

**APU To HDMI**

 PCIE\_FTX\_GRX\_P[12..15] 28  
 PCIE\_FTX\_GRX\_N[12..15] 28

JCPU1A		CONN@	
PCI EXPRESS			
PCIE_GTX_C_FRX_P0 AA8	P_GFX_RXP0	P_GFX_TXP0	AA2 PCIE_FTX_GRX_P0 C917VGA@ 1 2 0.1U_0402_16V7K PCIE_FTX_C_GRX_P0
PCIE_GTX_C_FRX_N0 AA9	P_GFX_RXN0	P_GFX_TXN0	AA3 PCIE_FTX_GRX_N0 C918VGA@ 1 2 0.1U_0402_16V7K PCIE_FTX_C_GRX_N0
PCIE_GTX_C_FRX_P1 Y7	P_GFX_RXP1	P_GFX_TXP1	Y2 PCIE_FTX_GRX_P1 C919VGA@ 1 2 0.1U_0402_16V7K PCIE_FTX_C_GRX_P1
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X B8	P_GFX_RXP9	P_GFX_TXP9	B2 X
X B9	P_GFX_RXN9	P_GFX_TXN9	R3 X
X P7	P_GFX_RXP10	P_GFX_TXP10	P2 X
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X N5	P_GFX_RXP11	P_GFX_TXP11	P4 X
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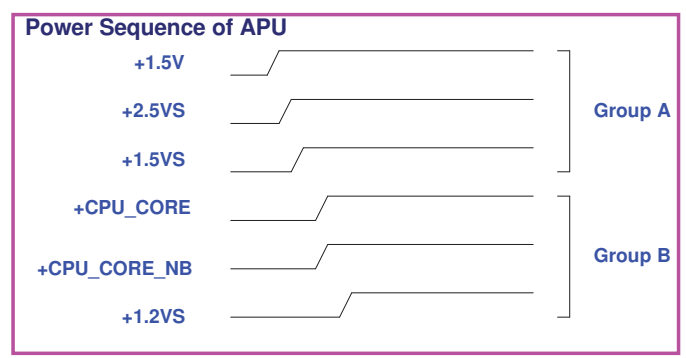
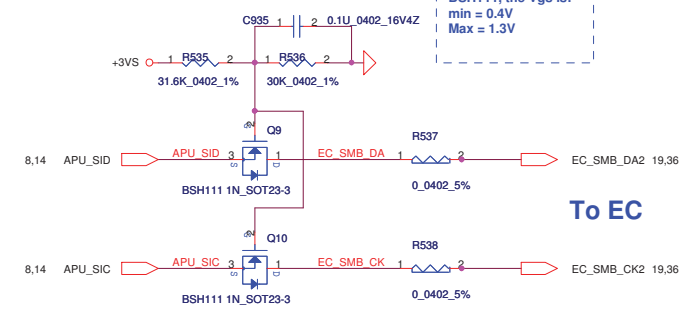
For UMA Mux.

2  
1  
0  
To HDMI  
CK

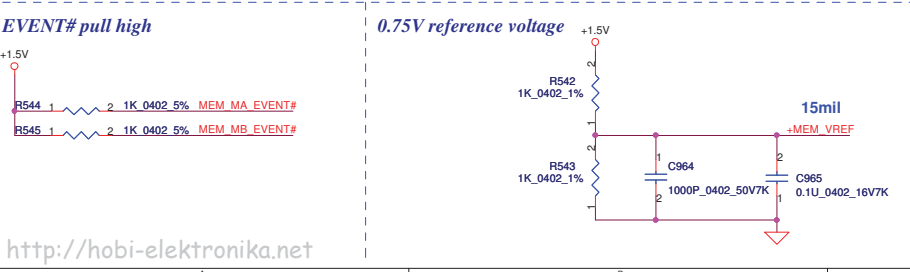
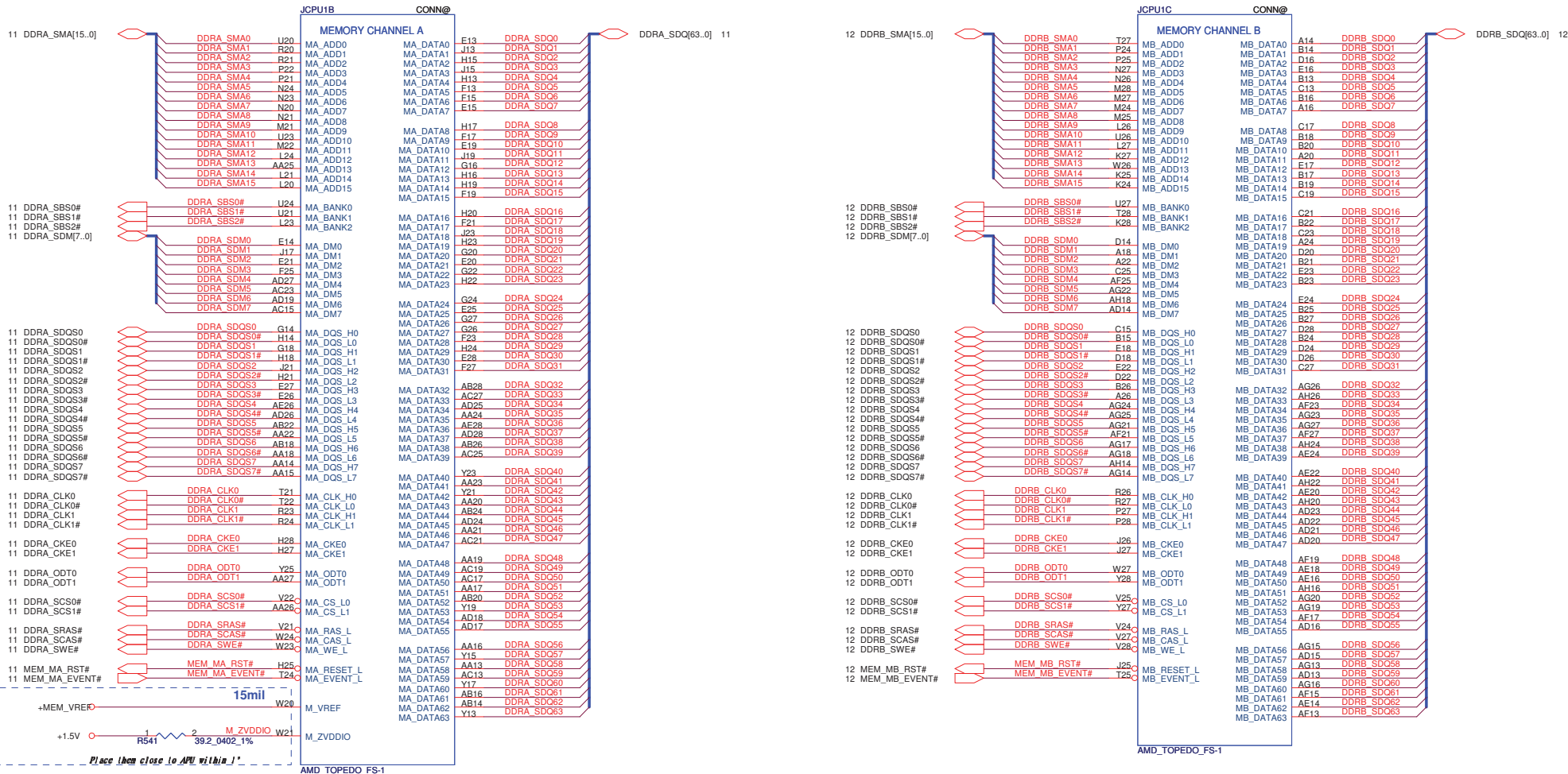
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+1.2VS R539	P_ZVDDP	P_ZVSS	K4 P_ZVSS R540 1 2 0.1U_0402_16V7K

GLAN  
WLAN

CPU TSI interface level shift



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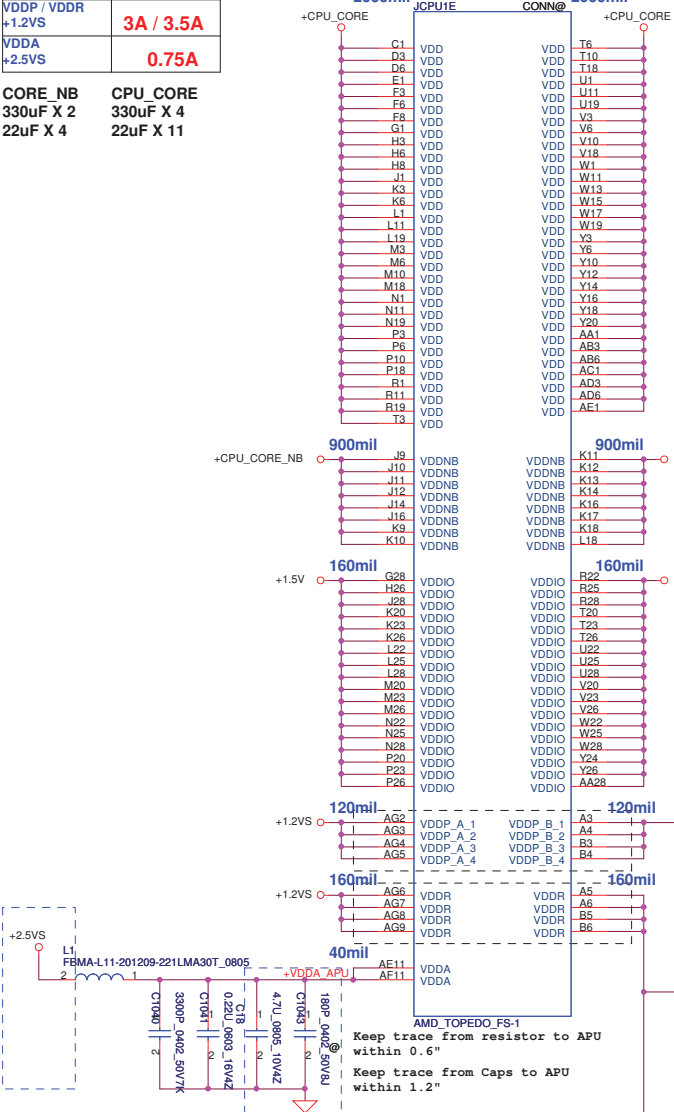
<b>Compal Electronics, Inc.</b>	
Title	AMD FS1 DDRIII I/F
Size	Document Number
Customer	QBL50 LA-7551P
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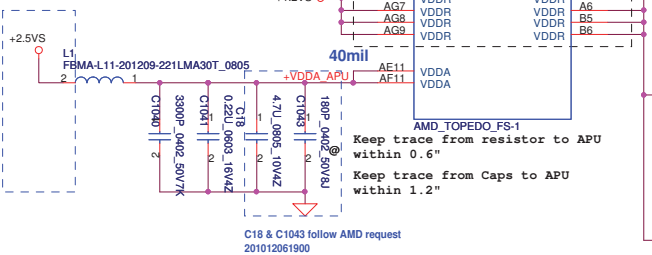
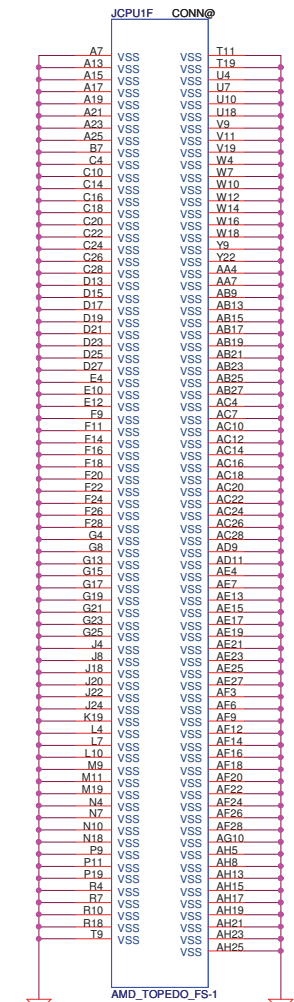
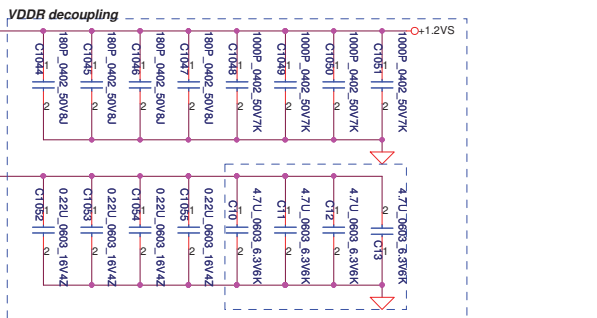
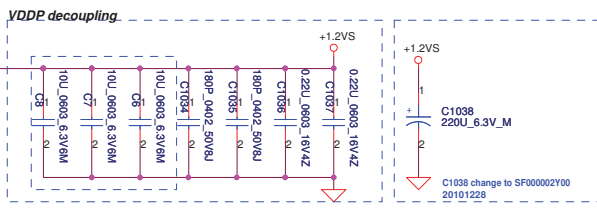
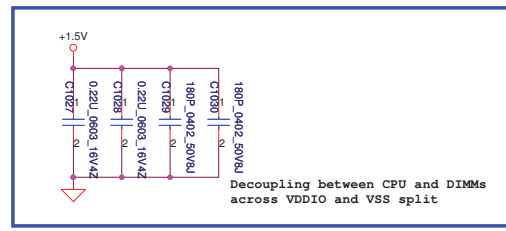
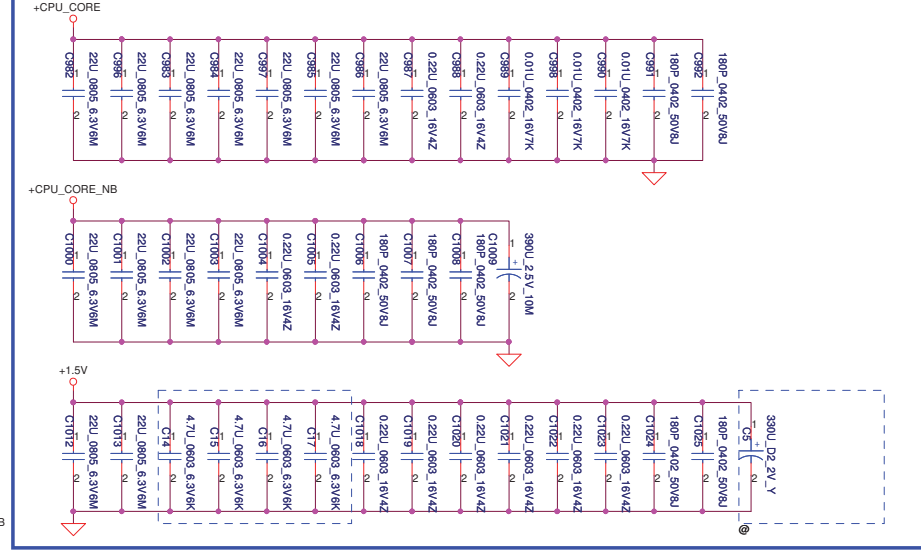


Power Name	Consumption
VDD +CPU_CORE	<b>50A</b>
VDDNB +CPU_CORE_NB	<b>22.5A</b>
VDDIO +1.5V	<b>4A</b>
VDDP / VDDR +1.2VS	<b>3A / 3.5A</b>
VDDA +2.5VS	<b>0.75A</b>

CORE\_NB CPU\_CORE  
330uF X 2 330uF X 4  
22uF X 4 22uF X 11



### CPU BOTTOM SIDE DECOUPLING

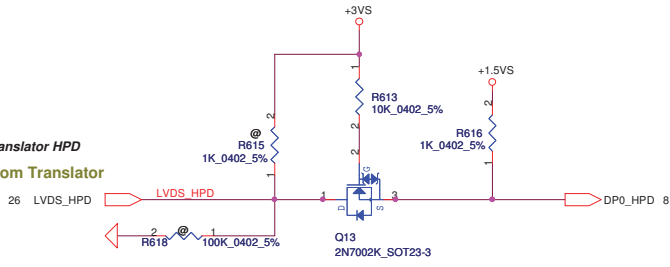


Demo Board Capacitor (include PWM side)						
CPU_CORE	CORE_NB	VDDIO_SUS	VDDIO_SUS	VDDP/R_PWM	VDDP	VDDR
470uF x 6	470uF x 4 (CPU side)	(DIMM x2)	470uF x 2	10uF x 3	4.7uF x 4	
22uF x 9	22uF x 6	680uF x 1	100uF x 4	0.22uF x 2	0.22uF x 4	
0.22uF x 2	0.22uF x 2	330uF x 1	0.1uF	180pF x 2	1nF x 4	
180pF x 2	180uF x 3	22uF x 3		4.7uF x 4	180pF x 4	
10nF x 3		0.22uF x 6		180pF x 4		

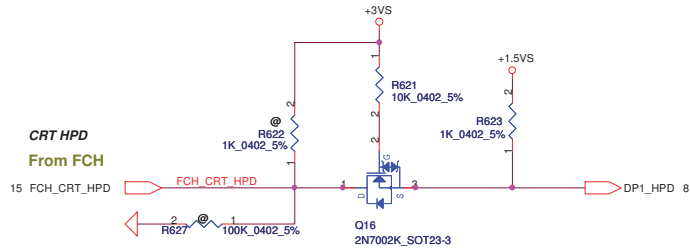
Security Classification	Compal Secret Data		Title	
Issued Date	2010/08/04	Deciphered Date	2011/12/31	AMD FS1 PWR / GND
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				Document Number <b>QBL50 LA-7551P</b>
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# HPD

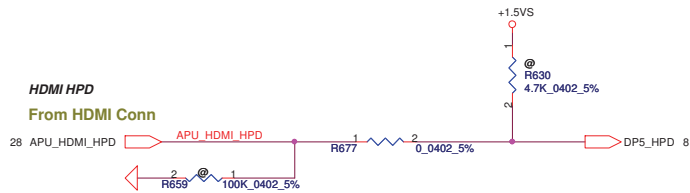
## Translator HPD From Translator



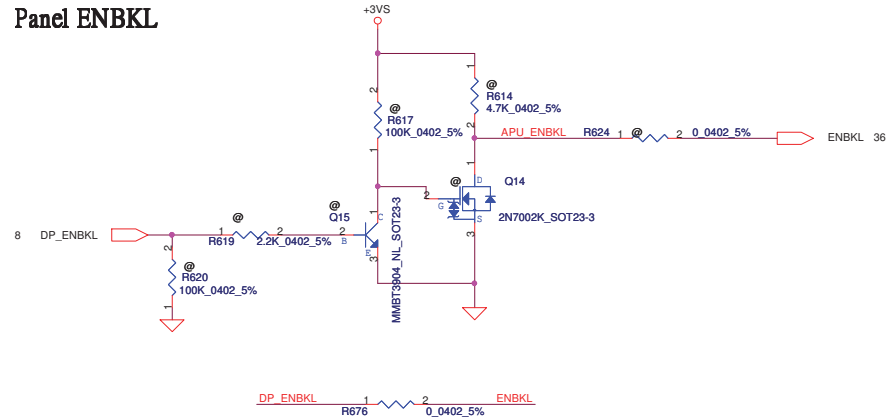
## CRT HPD From FCH



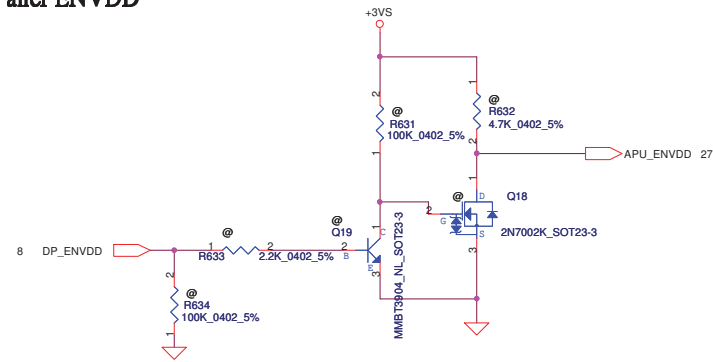
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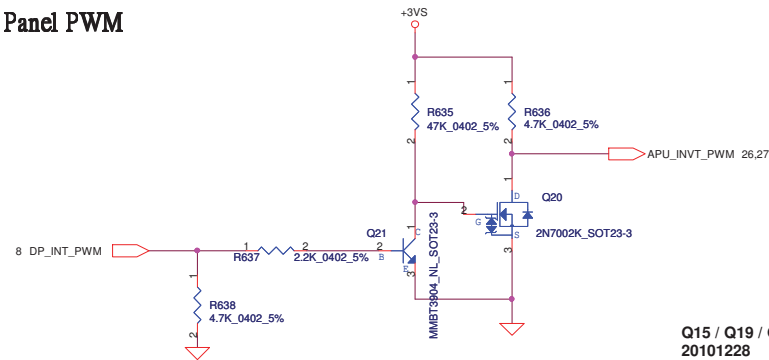
# Panel ENBKL



# Panel ENVDD



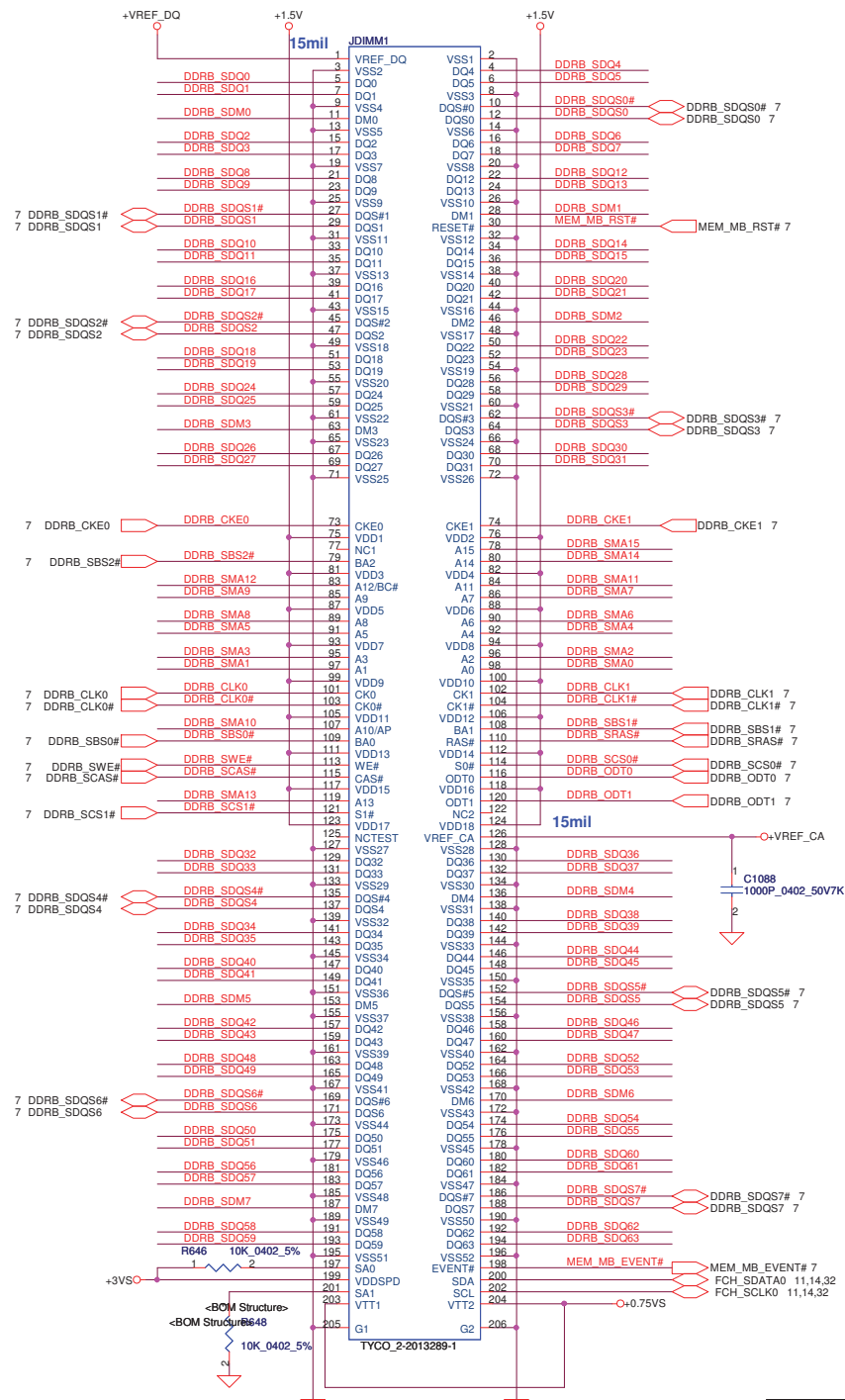
# Panel PWM



Q15 / Q19 / Q21 change to SB000006A00  
20101228

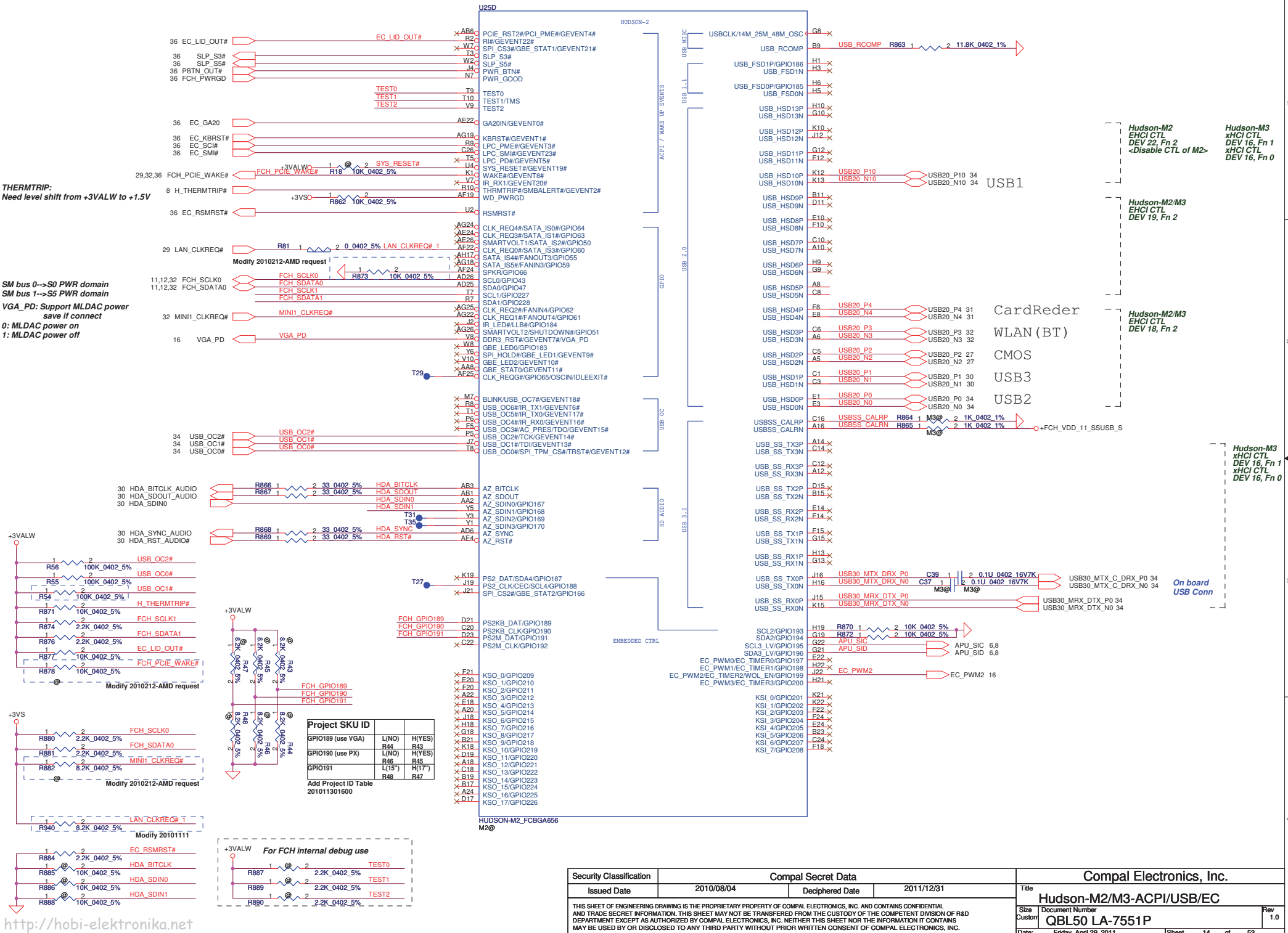
Security Classification	Compal Secret Data			Title	AMD FS1 Singal Level Shifter	
Issued Date	2010/08/04	Deciphered Date	2011/12/31	Size	Document Number	Rev
				Custom	QBL50 LA-7551P	1.0
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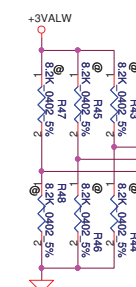
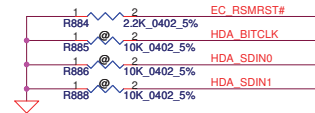
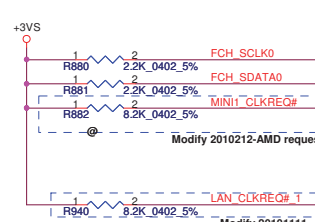
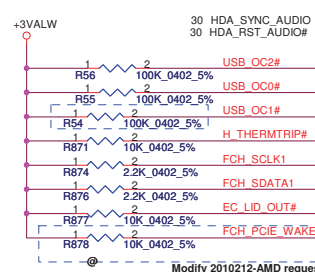
PCIE\_RST2 : Reset PCIE device on Hudson2



**THERMTRIP:**  
Need level shift from +3VALW to +1.5V

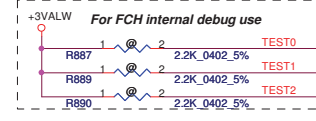
**SM bus 0->S0 PWR domain**  
**SM bus 1->S5 PWR domain**

**VGA\_PD: Support MLDAC power**  
save it connect  
0: MLDAC power on  
1: MLDAC power off



Project SKU ID	L(N)O	H(Y)ES
GPIO189 (use VGA)	R44	R45
GPIO190 (use PX)	R46	R45
GPIO191	L(15")	H(17")

Add Project ID Table  
201011301600

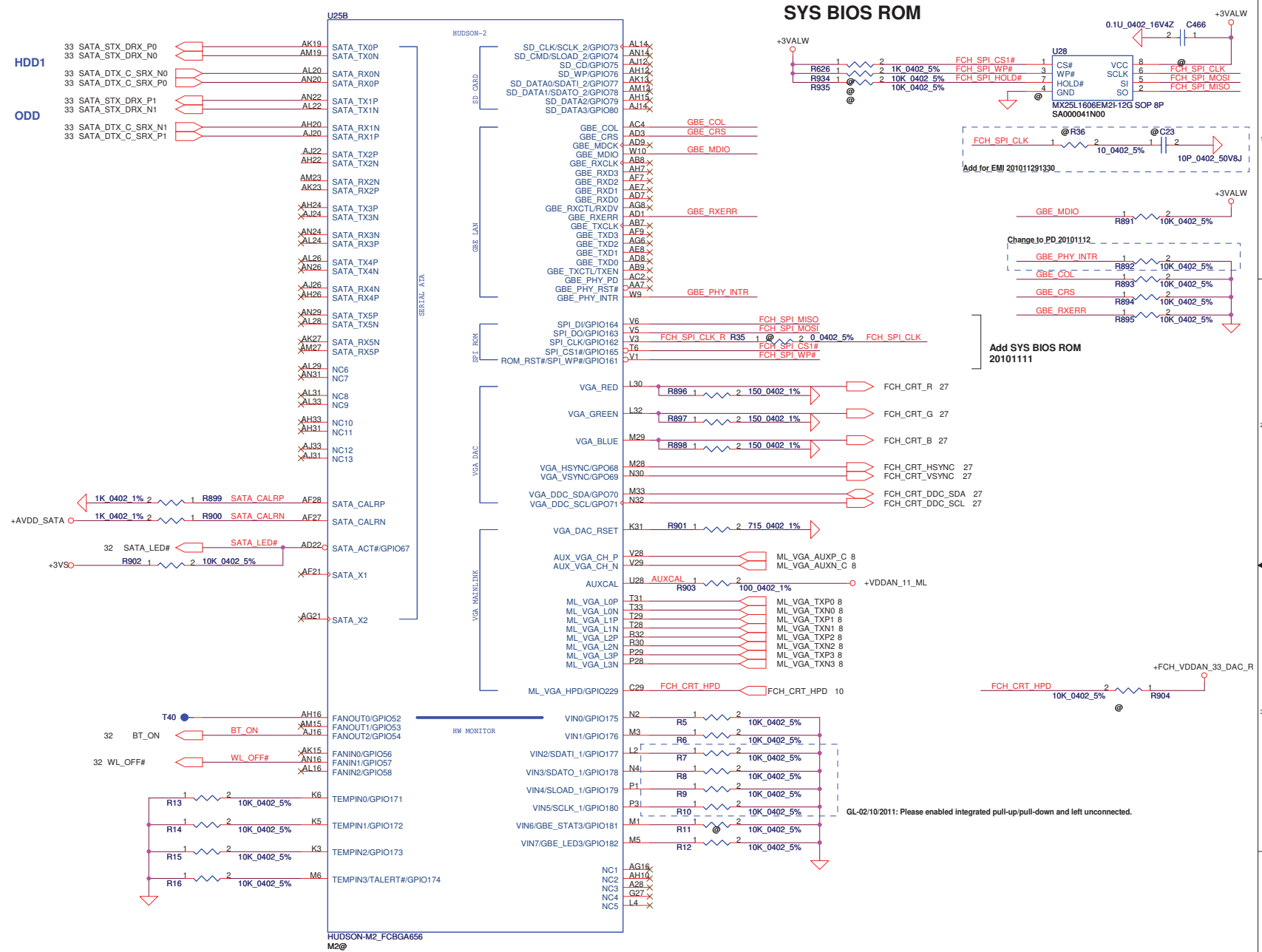


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		2011/12/31

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Title	Hudson-M2/M3-ACPI/USB/EC	
Size	Document Number	Rev
Custom	QBL50 LA-7551P	1.0
Date:	Friday, April 29, 2011	Sheet 14 of 53

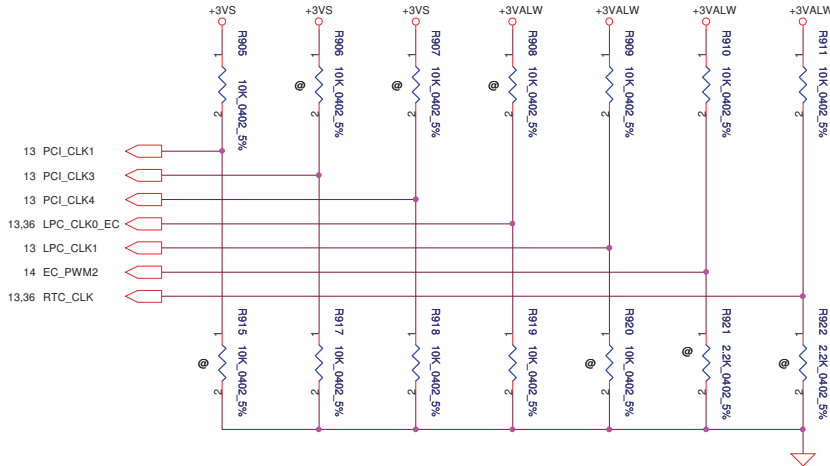




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Issued Date	2010/08/04	Deciphered Date	2011/12/31	Title	
				<b>Hudson-M2/M3-SATA/GBE/HWM</b>	
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				Custom	1.0
				Document Number	QBL50 LA-7551P
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# STRAP PINS

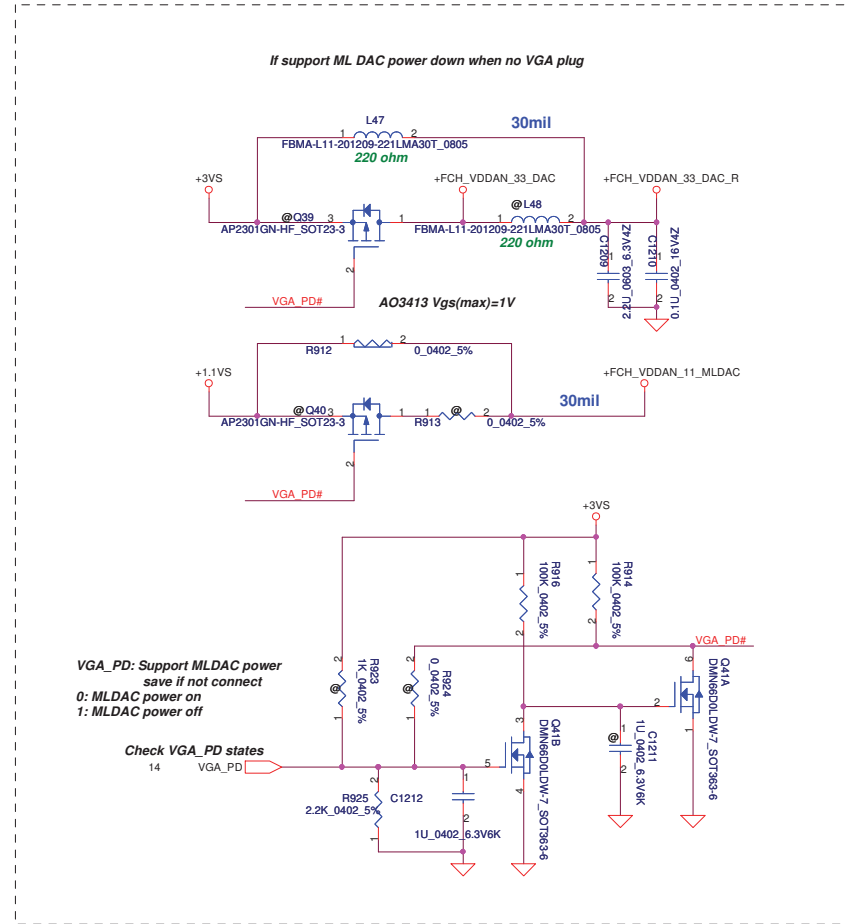
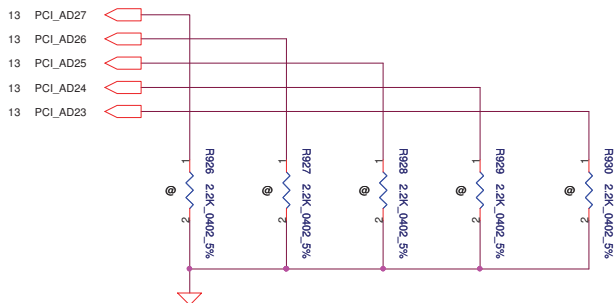
	PCI_CLK1	PCI_CLK3	PCI_CLK4	LPC_CLK0	LPC_CLK1	EC_PWM2	RTC_CLK
<b>PULL HIGH</b>	ALLOW PCIE GEN2 <b>DEFAULT</b>	USE DEBUG STRAPS	NON_FUSION CLOCK MODE	EC ENABLED	CLKGEN ENABLED <b>DEFAULT</b>	LPC ROM <b>DEFAULT</b>	S5 PLUS MODE DISABLED <b>DEFAULT</b>
<b>PULL LOW</b>	FORCE PCIE GEN1	IGNORE DEBUG STRAP <b>DEFAULT</b>	FUSION CLOCK MODE <b>DEFAULT</b>	EC DISABLED <b>DEFAULT</b>	CLKGEN DISABLE	SPI ROM	S5 PLUS MODE ENABLED



# DEBUG STRAPS

FCH HAS 15K INTERNAL PU FOR PCI\_AD[27:23]

PCI_AD26	PCI_AD27	PCI_AD25	PCI_AD24	PCI_AD23	
<b>PULL HIGH</b>	USE PCI PLL <b>DEFAULT</b>	DISABLE ILA AUTORUN <b>DEFAULT</b>	USE FC PLL <b>DEFAULT</b>	USE DEFAULT PCIE STRAPS <b>DEFAULT</b>	DISABLE PCI MEM BOOT <b>DEFAULT</b>
<b>PULL LOW</b>	BYPASS PCI PLL	ENABLE ILA AUTORUN	BYPASS FC PLL	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT



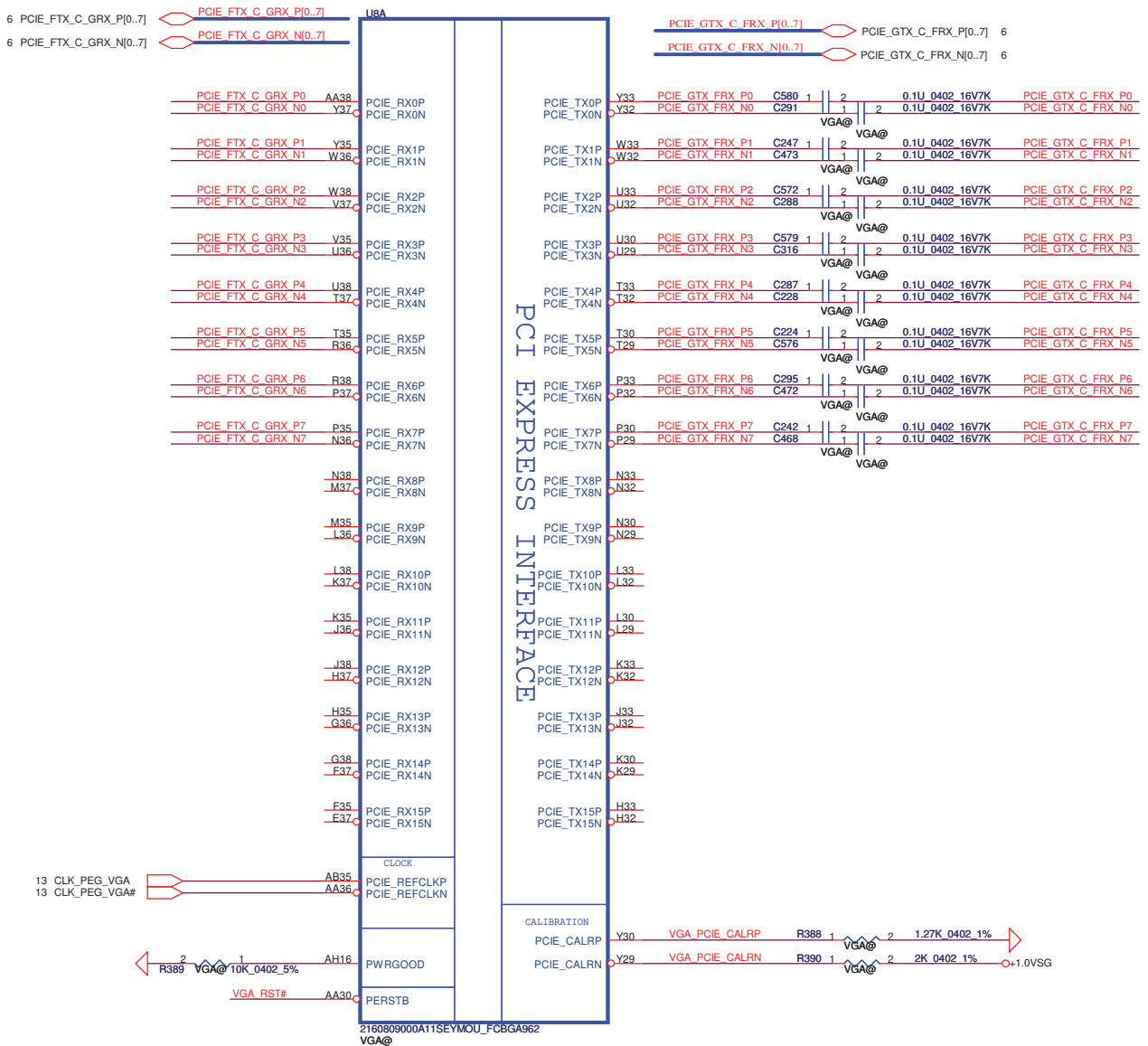
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<b>Issued Date</b>	2010/08/04	<b>Deciphered Date</b>	2011/12/31	<b>Title</b>	
				<b>Hudson-M2/M3-STRAP</b>	
				<b>Size</b>	<b>Document Number</b>
				Custom	<b>QBL50 LA-7551P</b>
				<b>Date</b>	<b>Rev</b>
				Wednesday, April 27, 2011	1.0
				<b>Sheet</b>	<b>of</b>
				16	53

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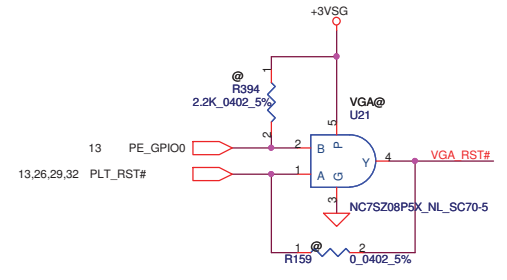
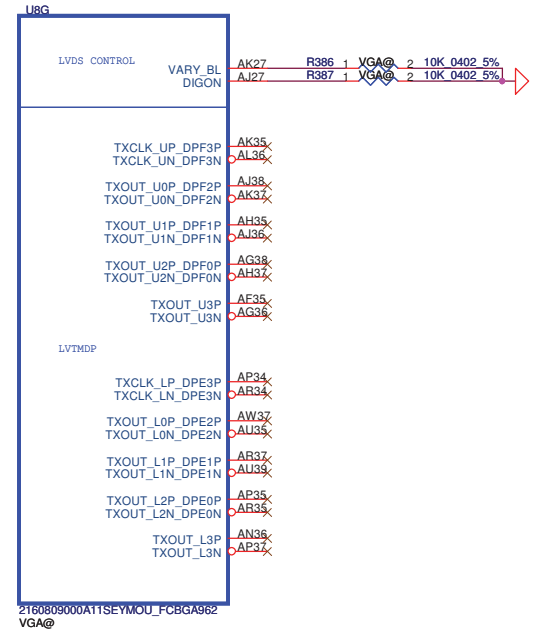
# GFX PCIE LANE REVERSAL



For UMA Mux.

**<DIGON>**  
Controls panel digital power on/off.  
Active High ,external PD need

**<VARY\_BL>**  
LCD PWM (pulse width modulated)  
output to adjust LCD brightness  
Active High ,external PD need

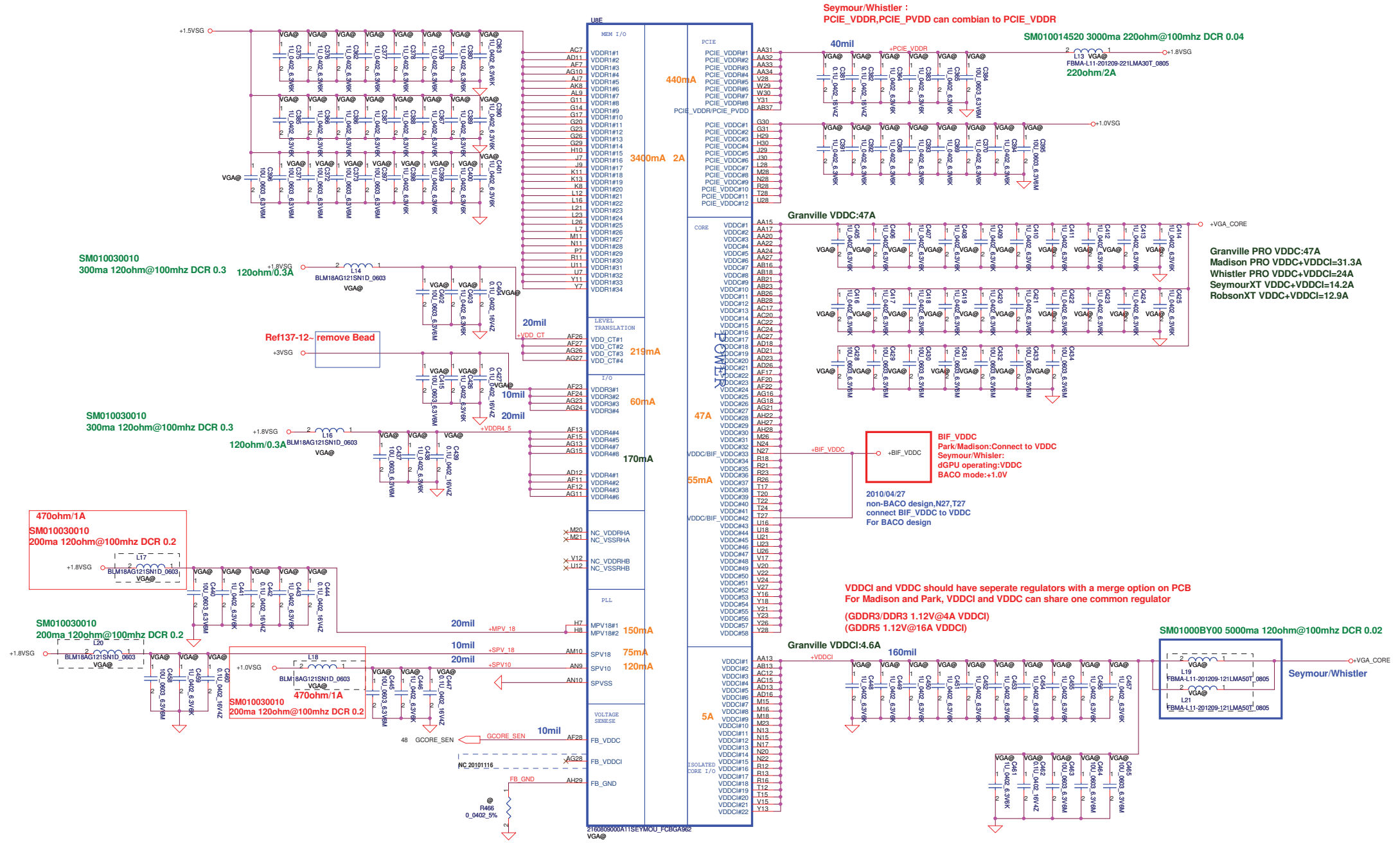


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Size Custom	Document Number			Rev	
QBL50 LA-7551P				1.0	
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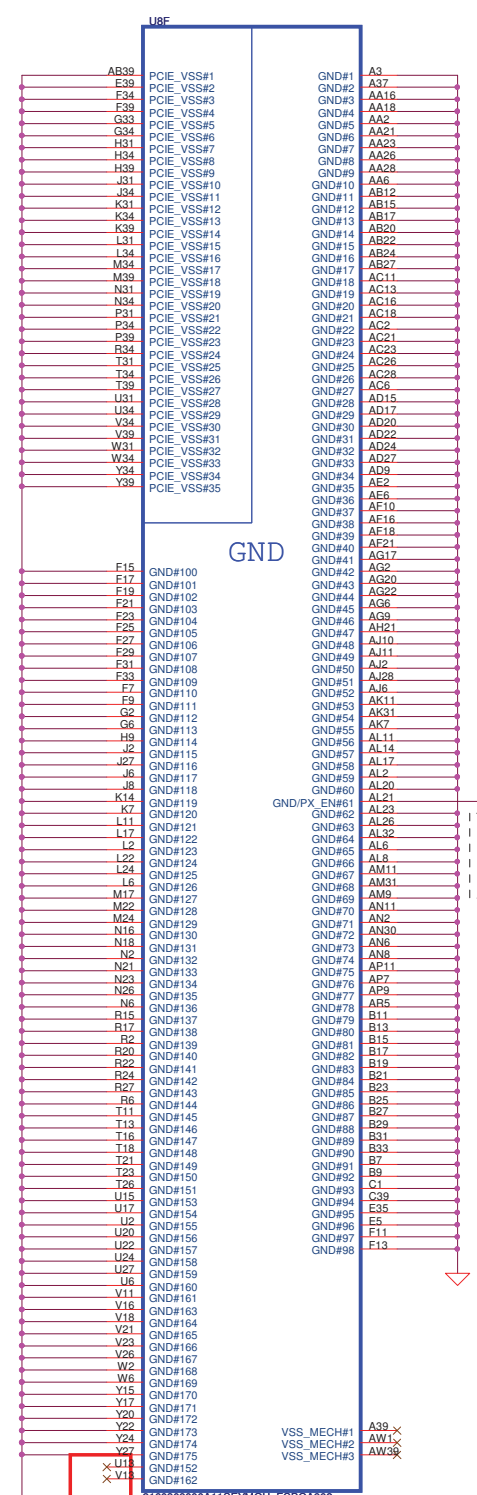








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Doc No	Document Number	Rev	QBL50 LA-7551P	
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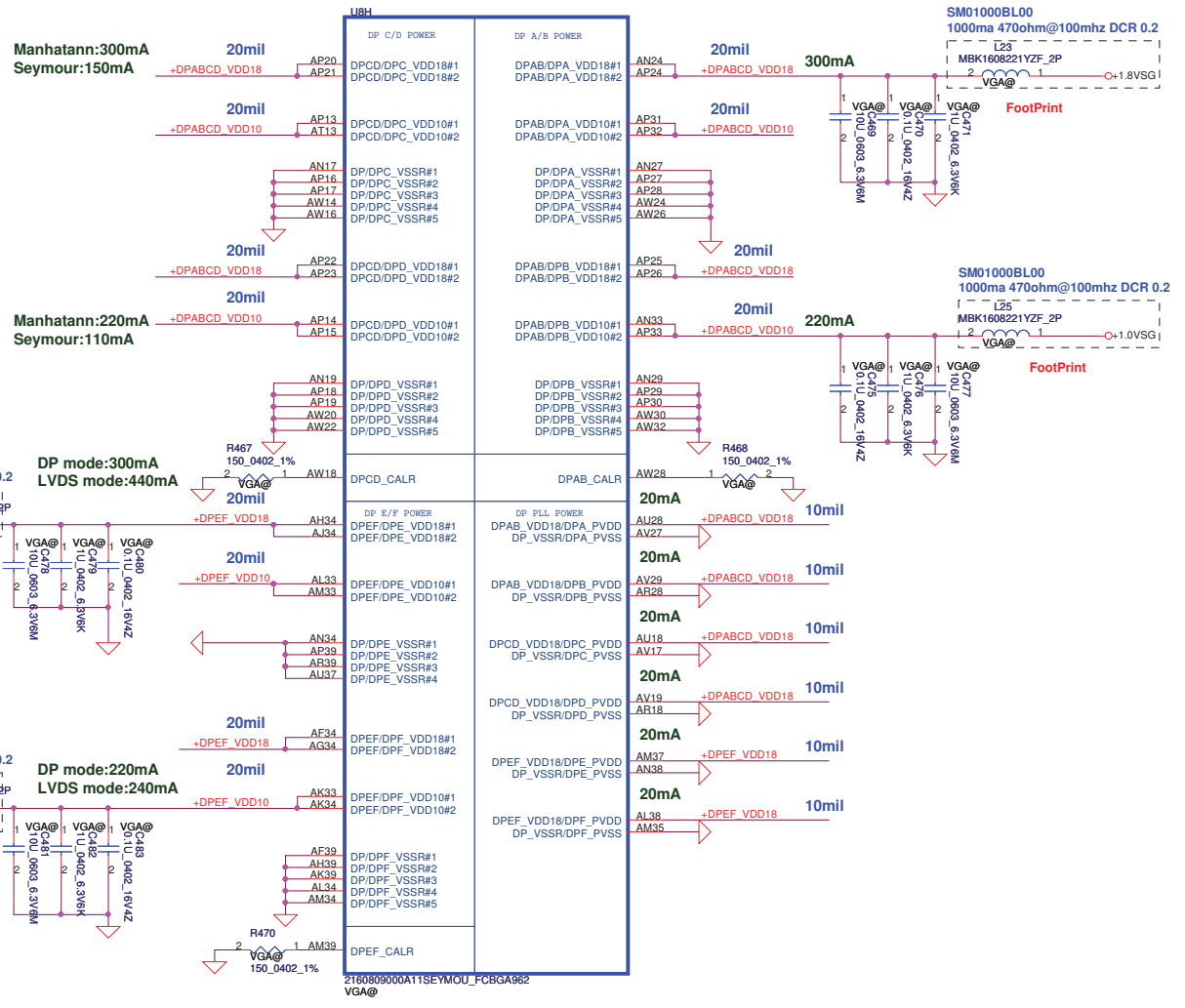


DPA\_VDD18,DPA\_PVDD,DPB\_VDD18,DPB\_PVDD can combian to DPAB\_VDD18  
 DPC\_VDD18,DPC\_PVDD,DPD\_VDD18,DPD\_PVDD can combian to DPCD\_VDD18  
 (DPD\_VDD18,DPD\_PVDD not applicable on Robson/Park)  
 DPE\_VDD18,DPE\_PVDD,DPF\_VDD18,DPF\_PVDD can combian to DPEF\_VDD18

Seymour/Whistler :  
 DPA\_VDD10,DPB\_VDD10 can combian to DPAB\_VDD10  
 DPC\_VDD10,DPD\_VDD10 can combian to DPCD\_VDD10  
 DPE\_VDD10,DPD\_VDD10 can combian to DPEF\_VDD10

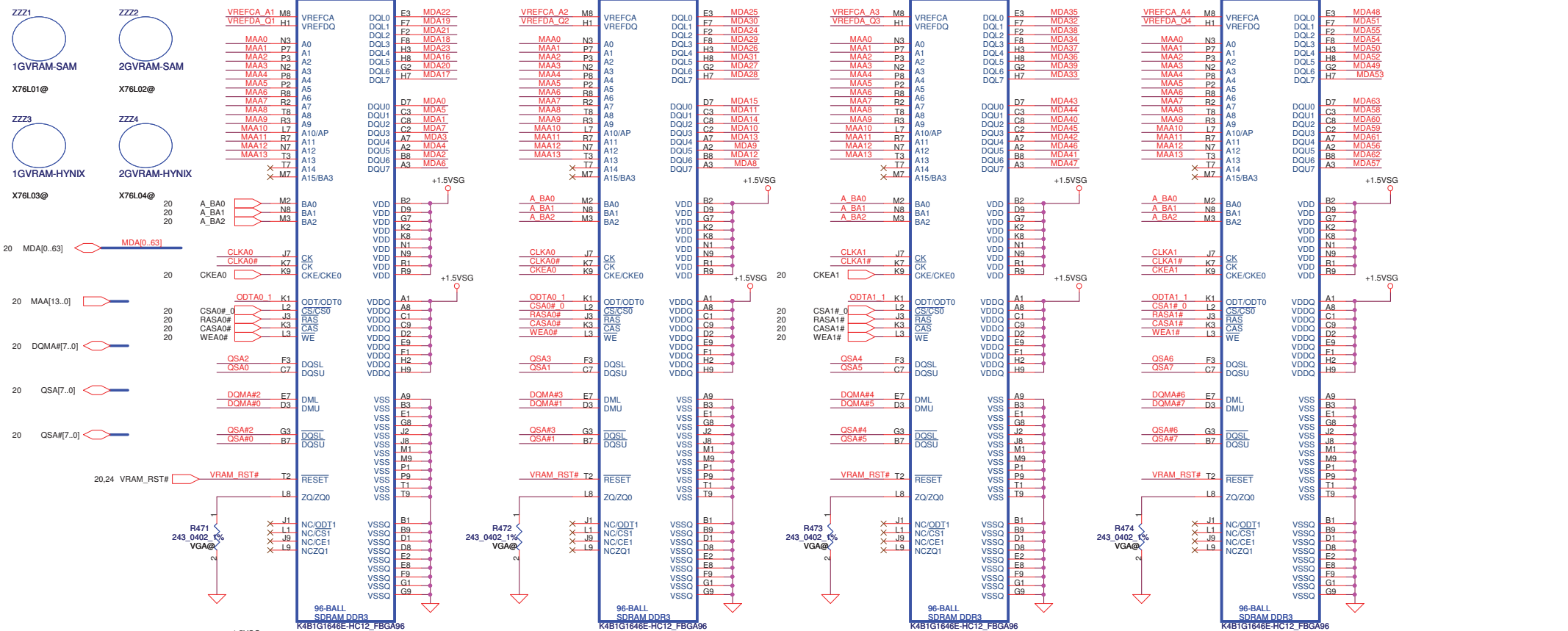
DPx-VSSR,DPx\_PVSS can combian to DP\_VSSR (Manhattan should have individual GND) where x is A,B,C,D,E,F

Park/Madison :AL2:left NC  
 Seymour/Whistler:  
 AL21:PX\_EN  
 use to control discreate GPU regulators for power express BACO mode  
 Support BACO:  
 output High3.3V:turn off regulators (BACO mode on)  
 output Low0V:turn on regulators (BACO mode off) need PD resistor  
 No support BACO:  
 left NC

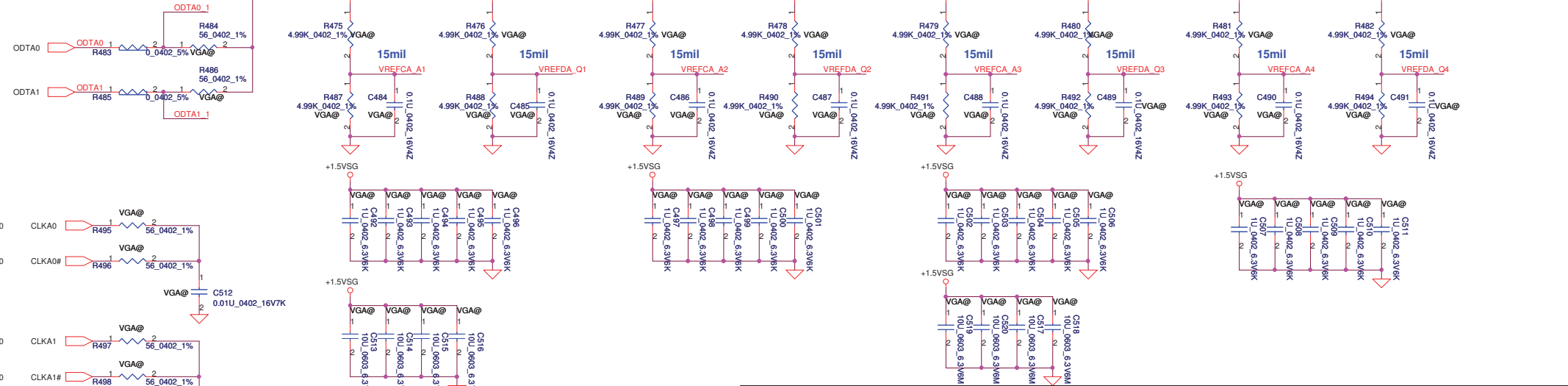


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Pull high for Madison and Park...

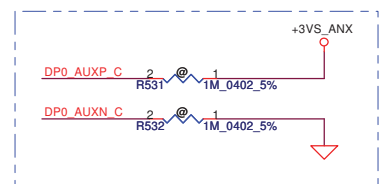
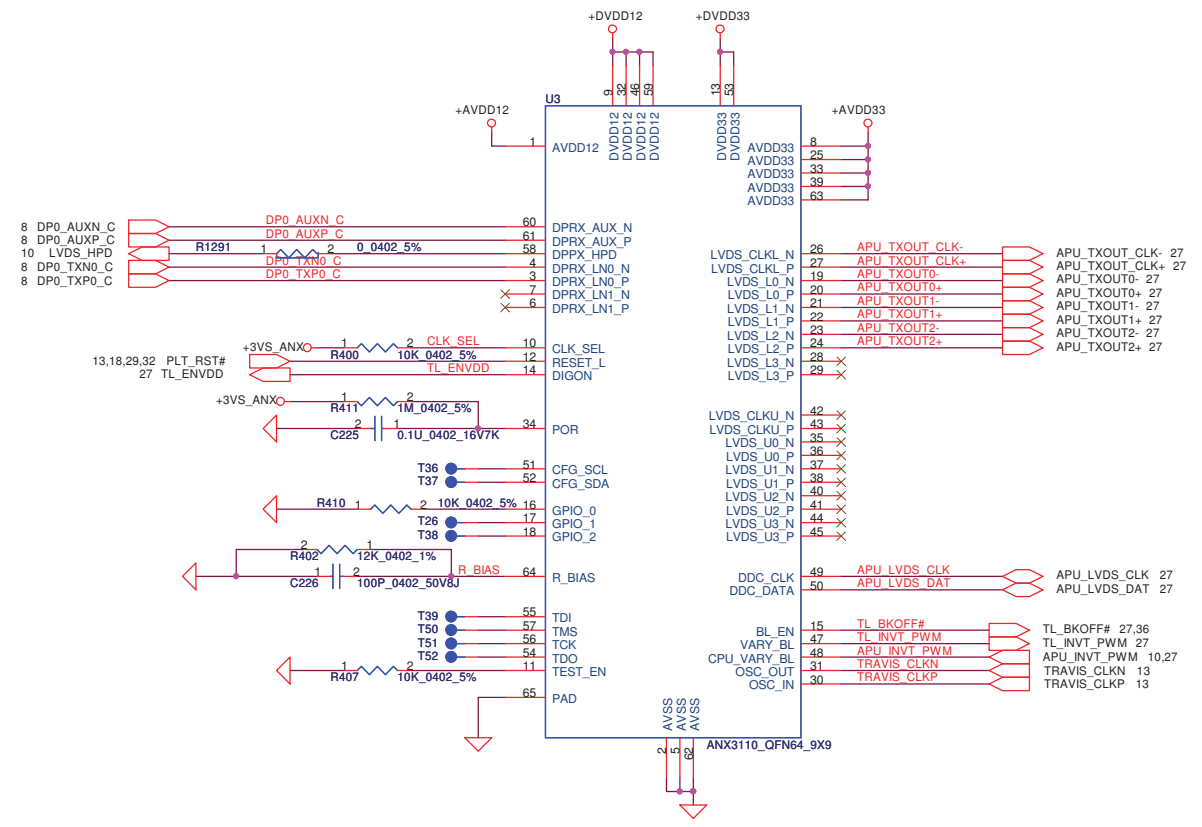
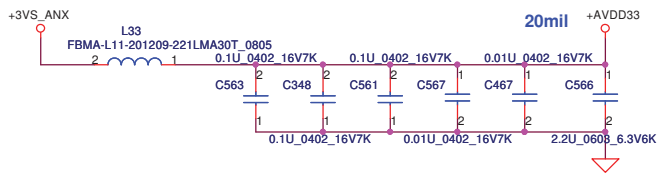
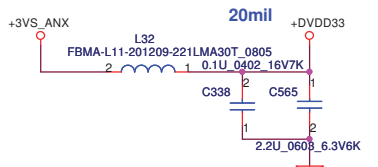
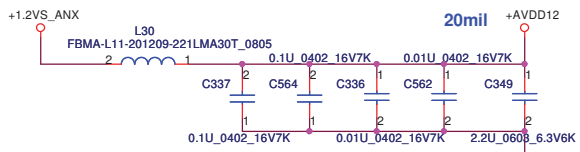
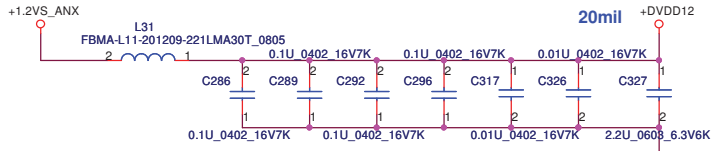
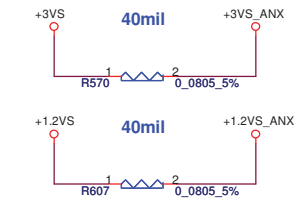


Security Classification		Compal Secret Data		Title	
Issued Date	2010/07/12	Deciphered Date	2011/12/31	VRAM DDR3 / Channel A	
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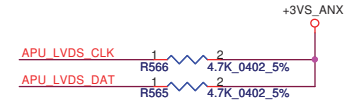






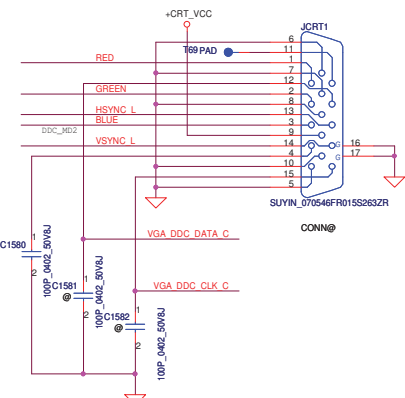
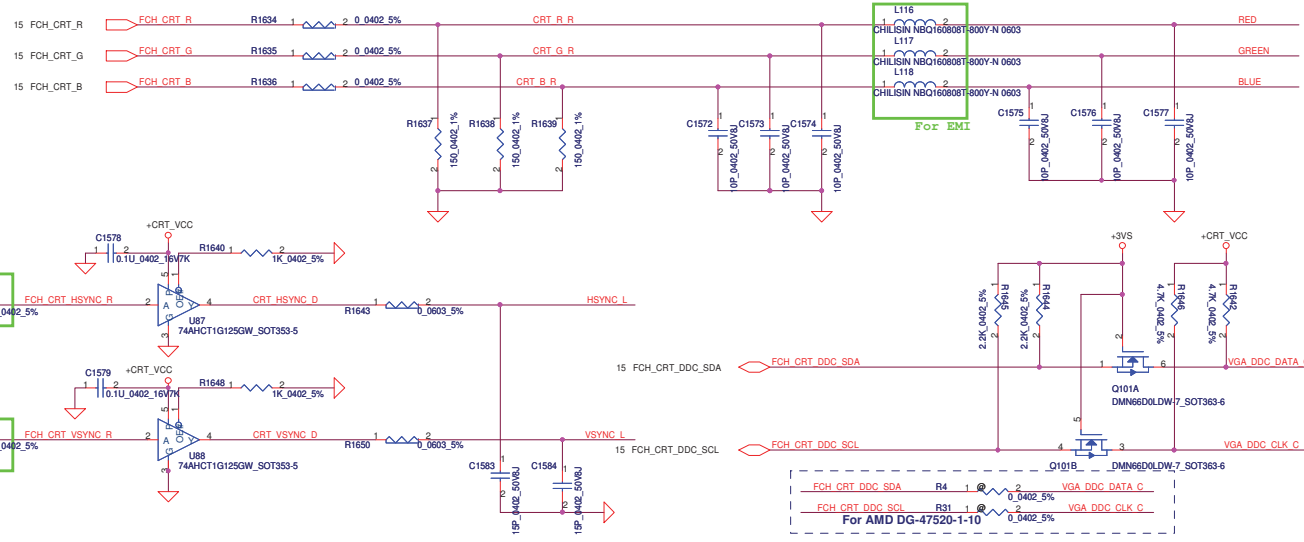
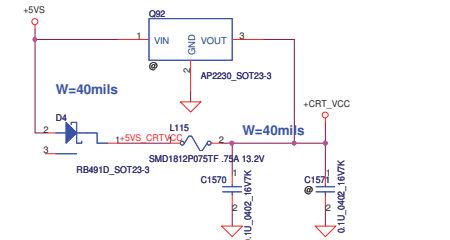
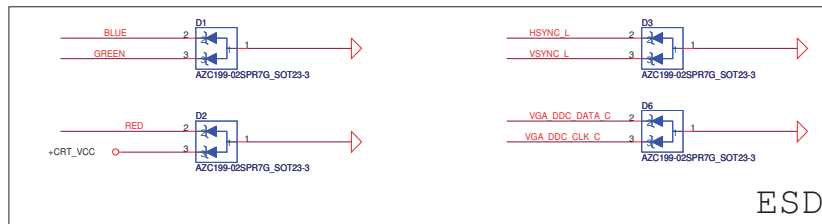


Place via on each trace bus and let resistor very close the via

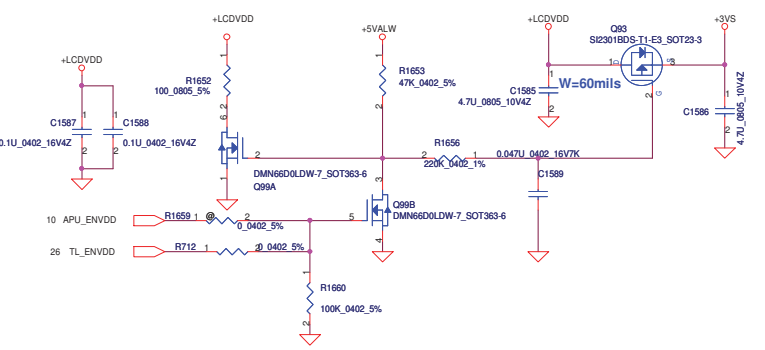


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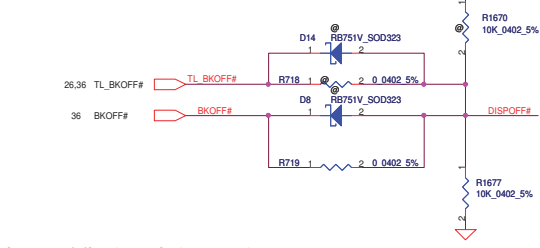
# CRT



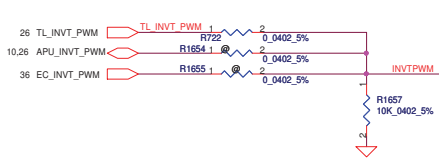
## Panel LCDVDD Control



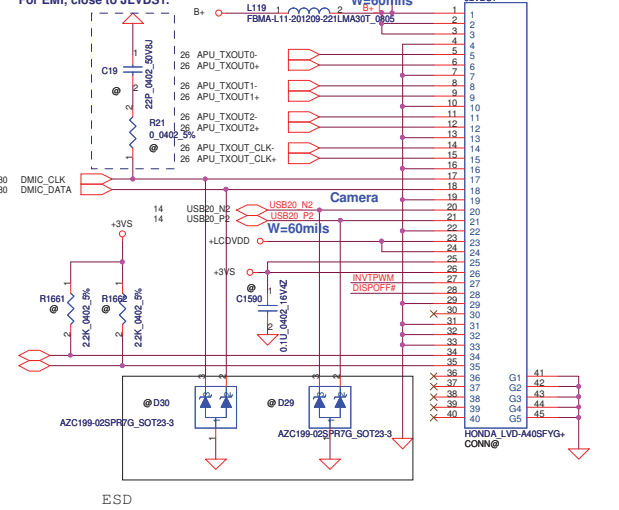
## Panel Backlight Control



## Panel PWM Control

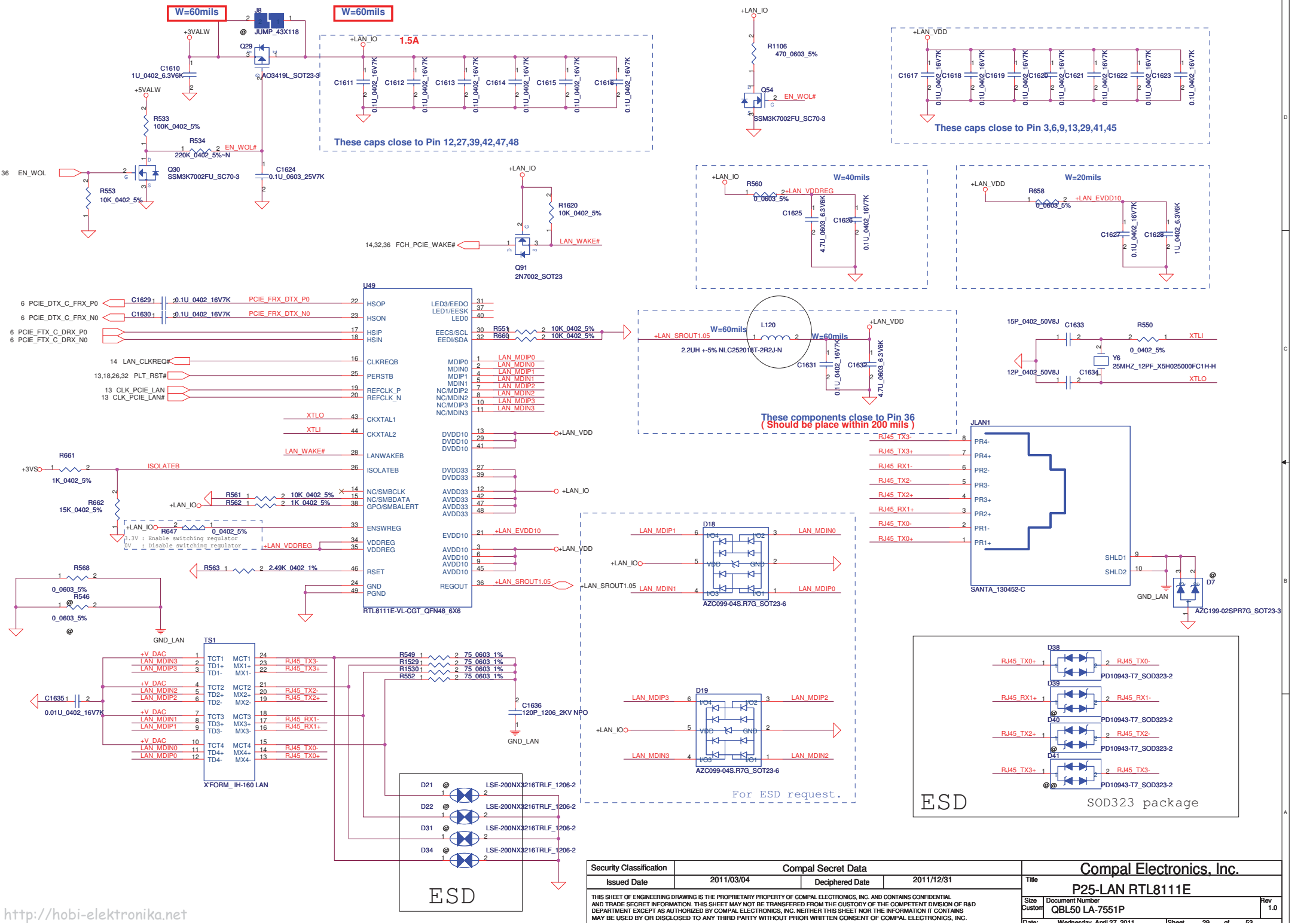


## For EMI, close to JLVDS1.



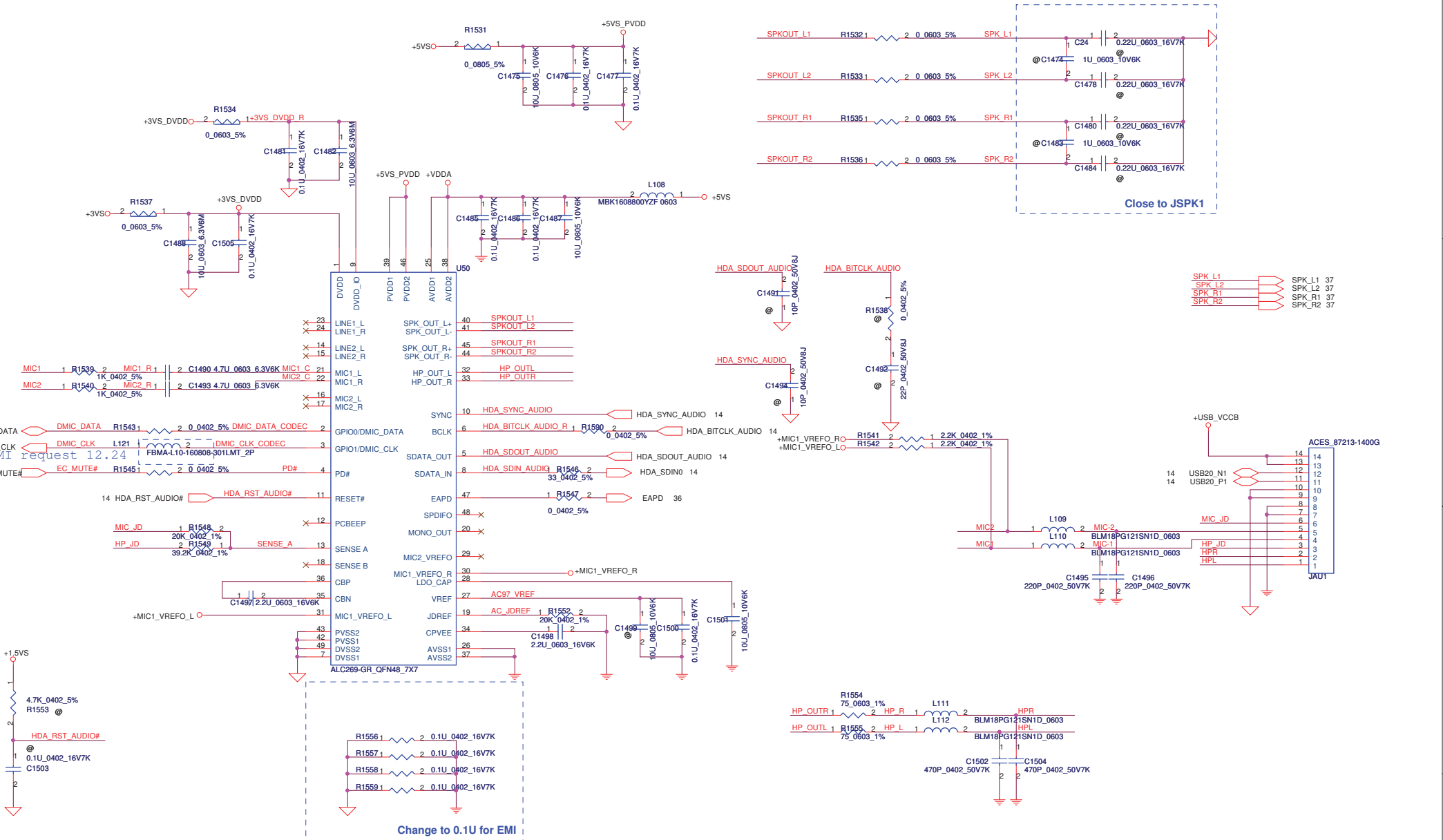
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Issued Date	2010/06/30	Deciphered Date	2011/12/31	Title
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Size	Document Number	QBL50 LA-7551P		Rev
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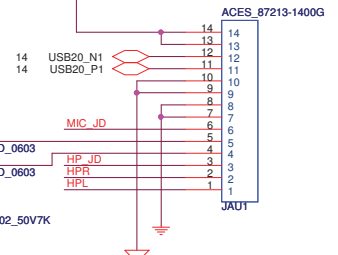


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				P25-LAN RTL8111E	
Size	Document Number			Rev	1.0
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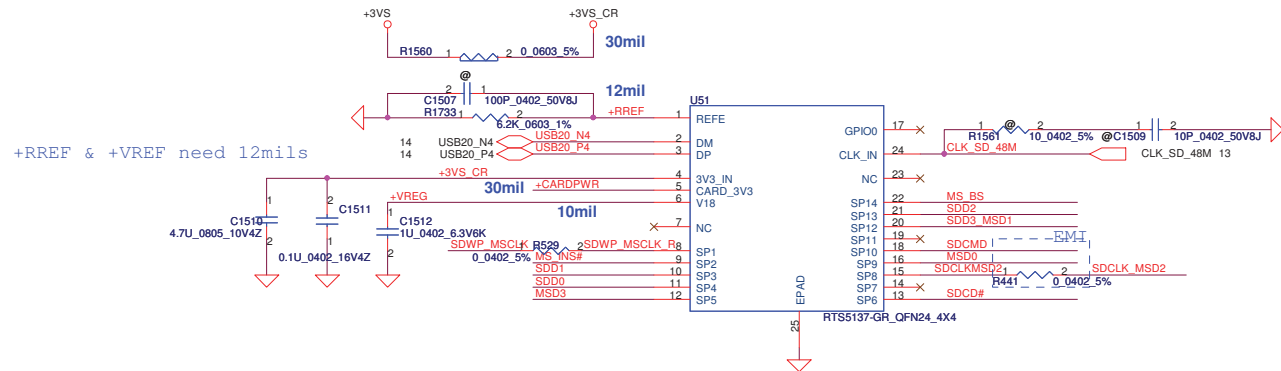


- SPK L1 → SPK\_L1 37
- SPK L2 → SPK\_L2 37
- SPK R1 → SPK\_R1 37
- SPK R2 → SPK\_R2 37

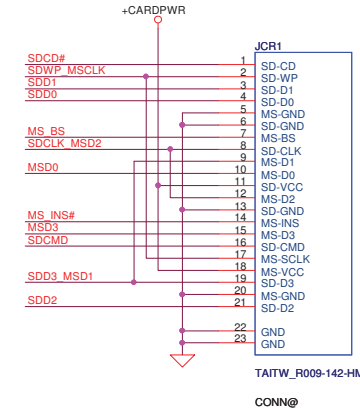
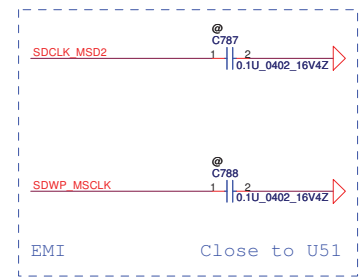
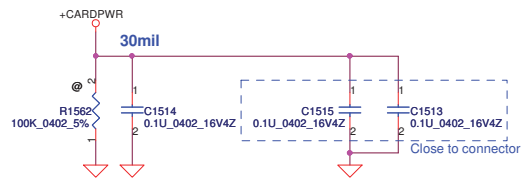


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# Card Reader RTS5137 (only SD/MMC/MS function)



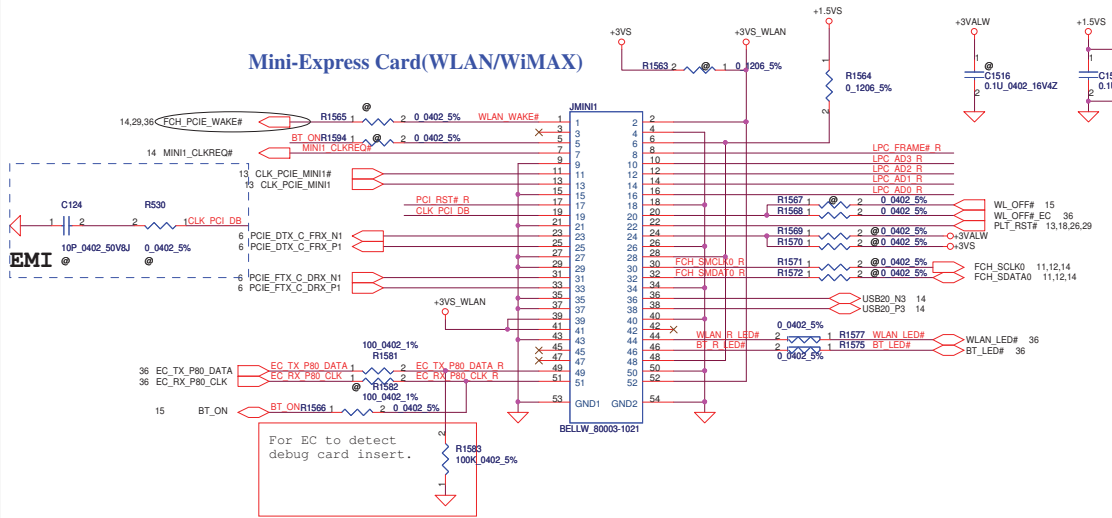
## Card Reader Connector



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Size	Document Number	Rev		Date	
Custom	QBL50 LA-751P	1.0		Wednesday, April 27, 2011	
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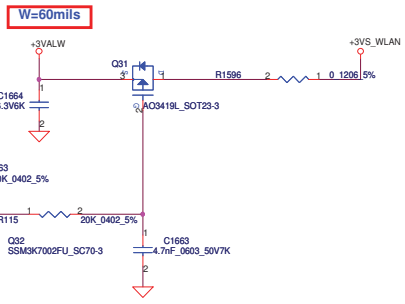
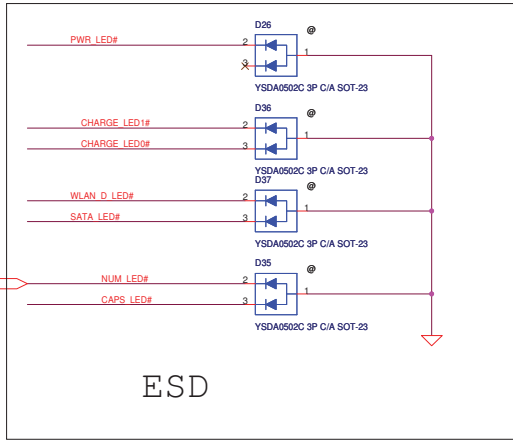
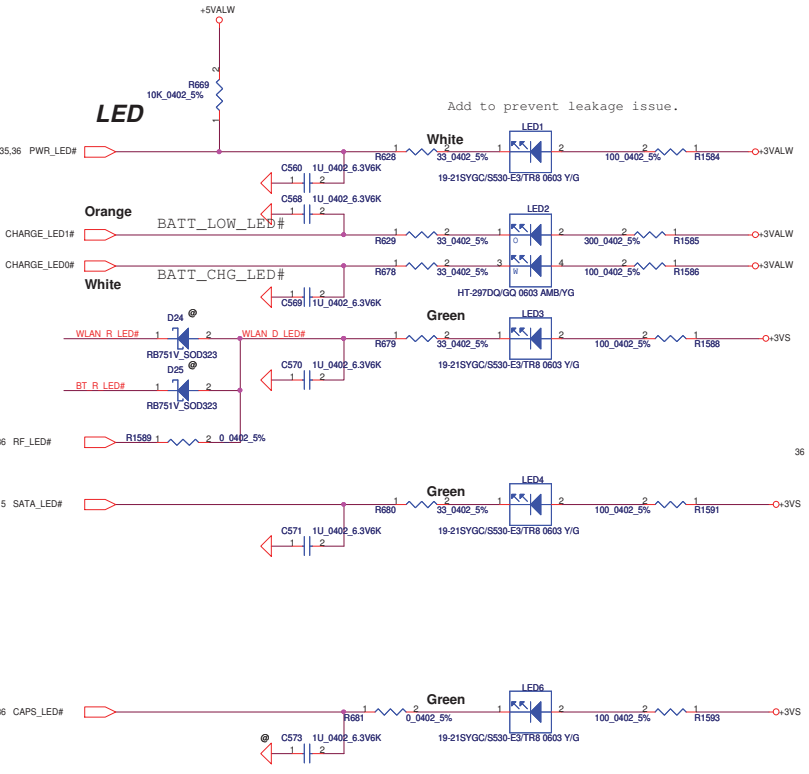
# Mini-Express Card for WLAN/WiMAX(Half)

## Mini-Express Card(WLAN/WiMAX)



Reserve for SW mini-pcie debug card.  
Series resistors closed to KBC side.

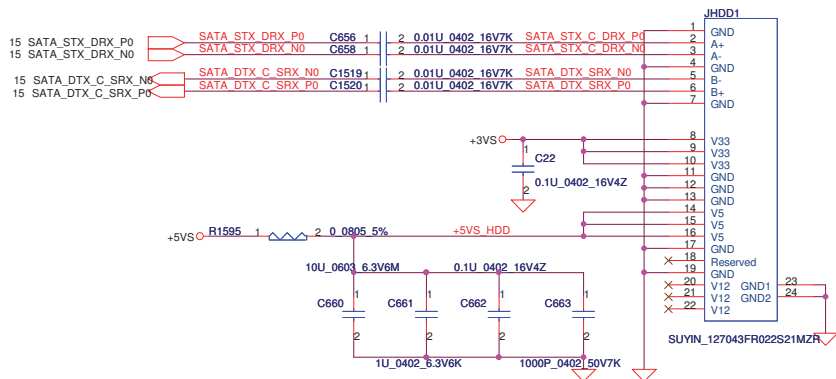
LPC_FRAME# R	R1573	1	2	0.0402 5%	LPC_FRAME#	LPC_FRAME#	13,36
LPC_AD3 R	R1574	1	2	0.0402 5%	LPC_AD3	LPC_AD3	13,36
LPC_AD2 R	R1576	1	2	0.0402 5%	LPC_AD2	LPC_AD2	13,36
LPC_AD1 R	R1578	1	2	0.0402 5%	LPC_AD1	LPC_AD1	13,36
LPC_AD0 R	R1579	1	2	0.0402 5%	LPC_AD0	LPC_AD0	13,36
PCI_RST# R	R1580	1	2	0.0402 5%	PLT_RST#	PLT_RST#	13
CLK_PCI_DB					CLK_PCI_DB	CLK_PCI_DB	13



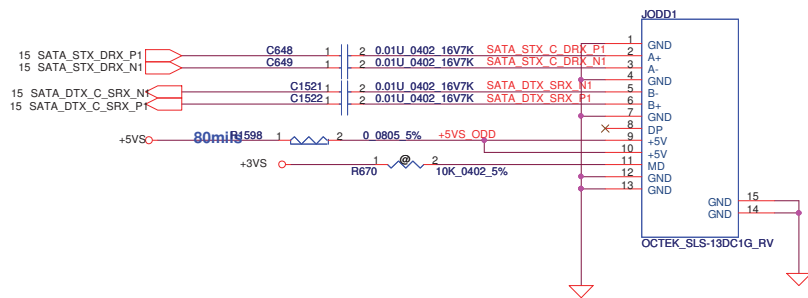
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/06/30	Deciphered Date	2011/12/31	Title
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Date	Wednesday, April 27, 2011	Sheet	32	of 53



### SATA HDD Conn.



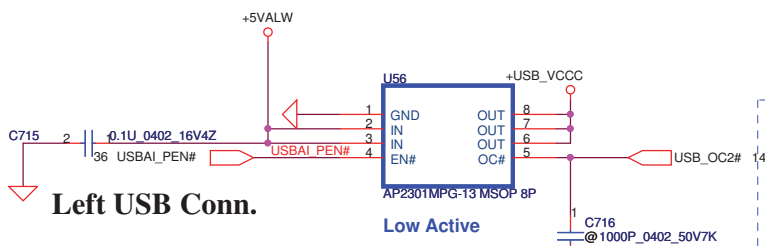
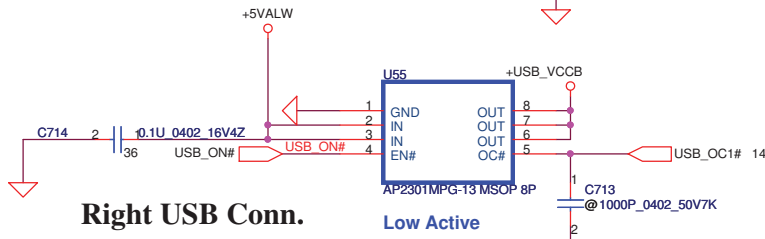
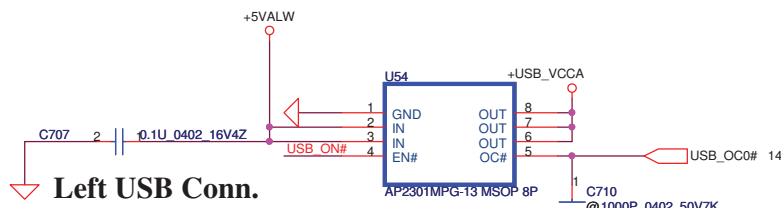
### SATA ODD FFC Conn.



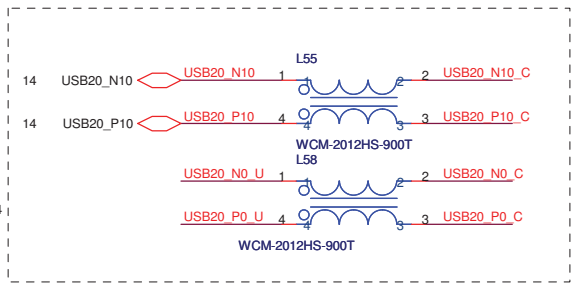
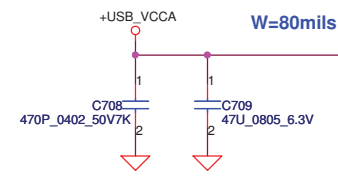
Security Classification	Compal Secret Data	
Issued Date	2010/06/30	Deciphered Date
		2011/12/31

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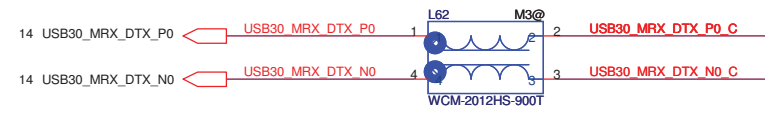
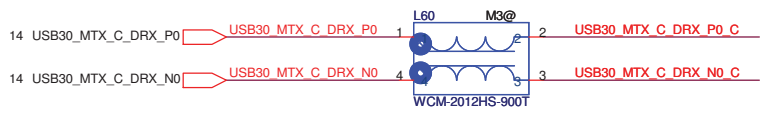
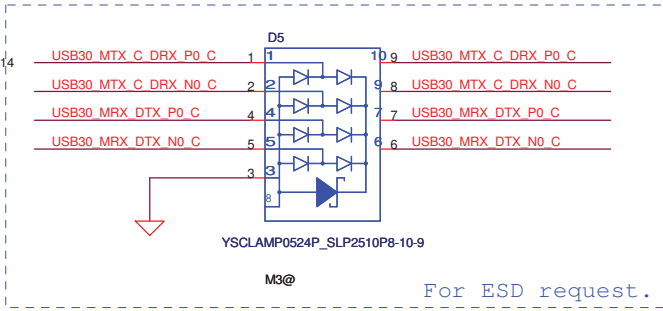
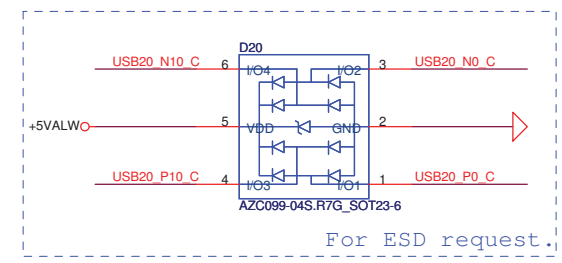
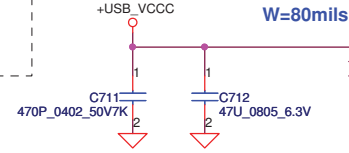
Title		
Compal Electronics, Inc.		
P29-HDD & ODD CONN		
Size B	Document Number	Rev
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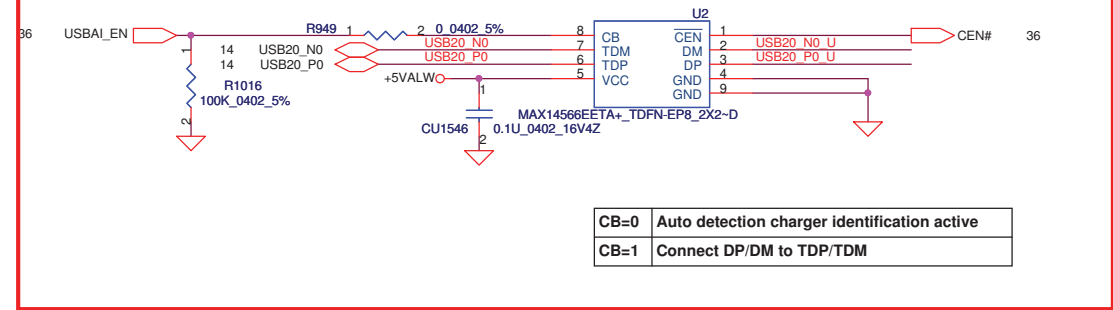
**Left USB Conn.**



**Left USB Conn.**



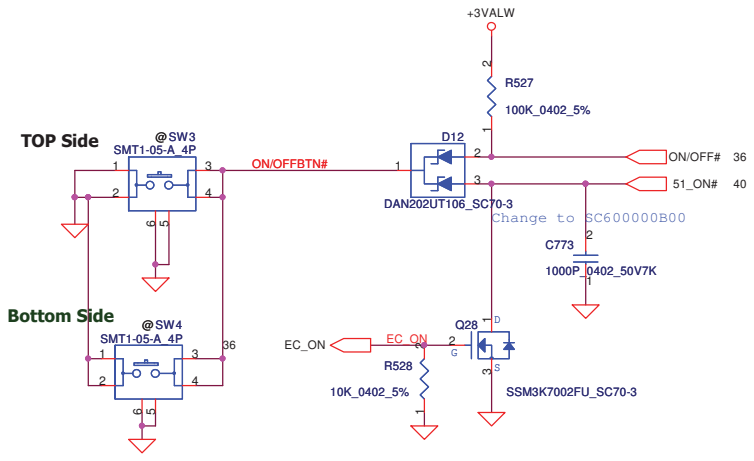
**AI CHARGER**



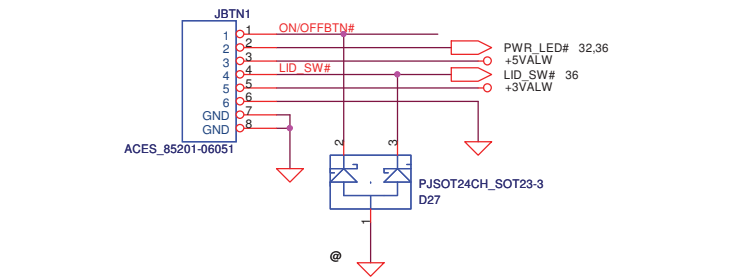
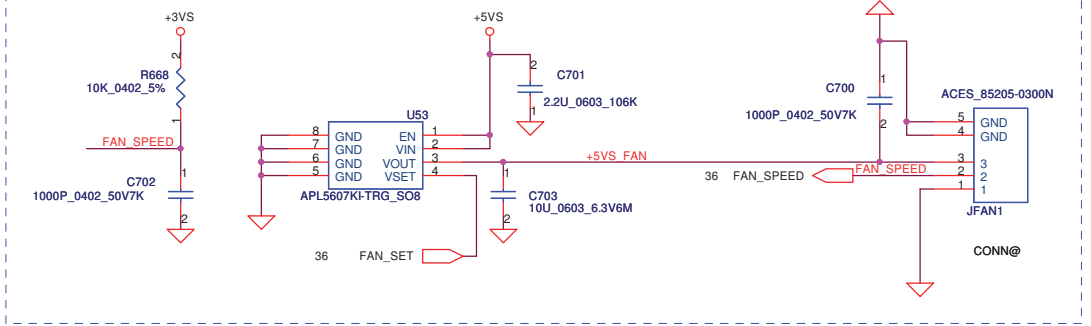
CB=0	Auto detection charger identification active
CB=1	Connect DP/DM to TDP/TDM

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Size	Document Number	Rev		Date	
Custom	QBL50 LA-7551P	1.0		Friday, April 29, 2011	
				Sheet	34 of 53

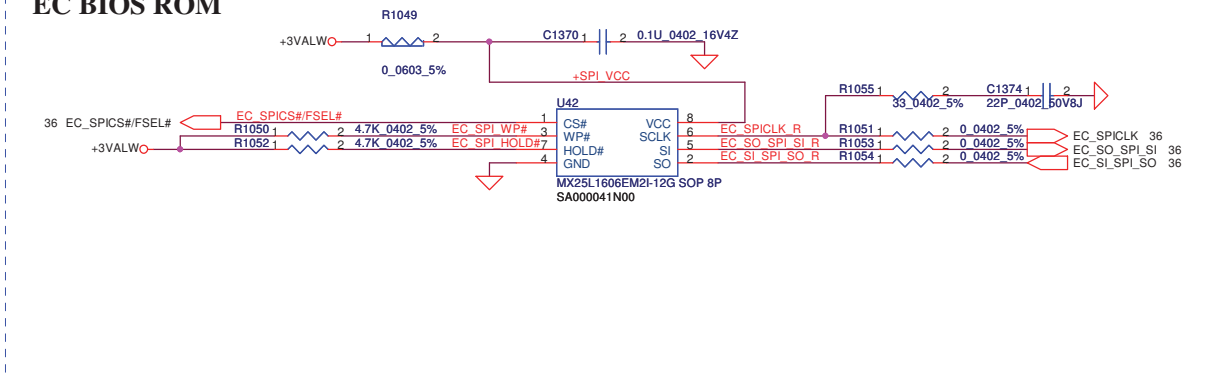
### ON/OFF switch **Power Button**



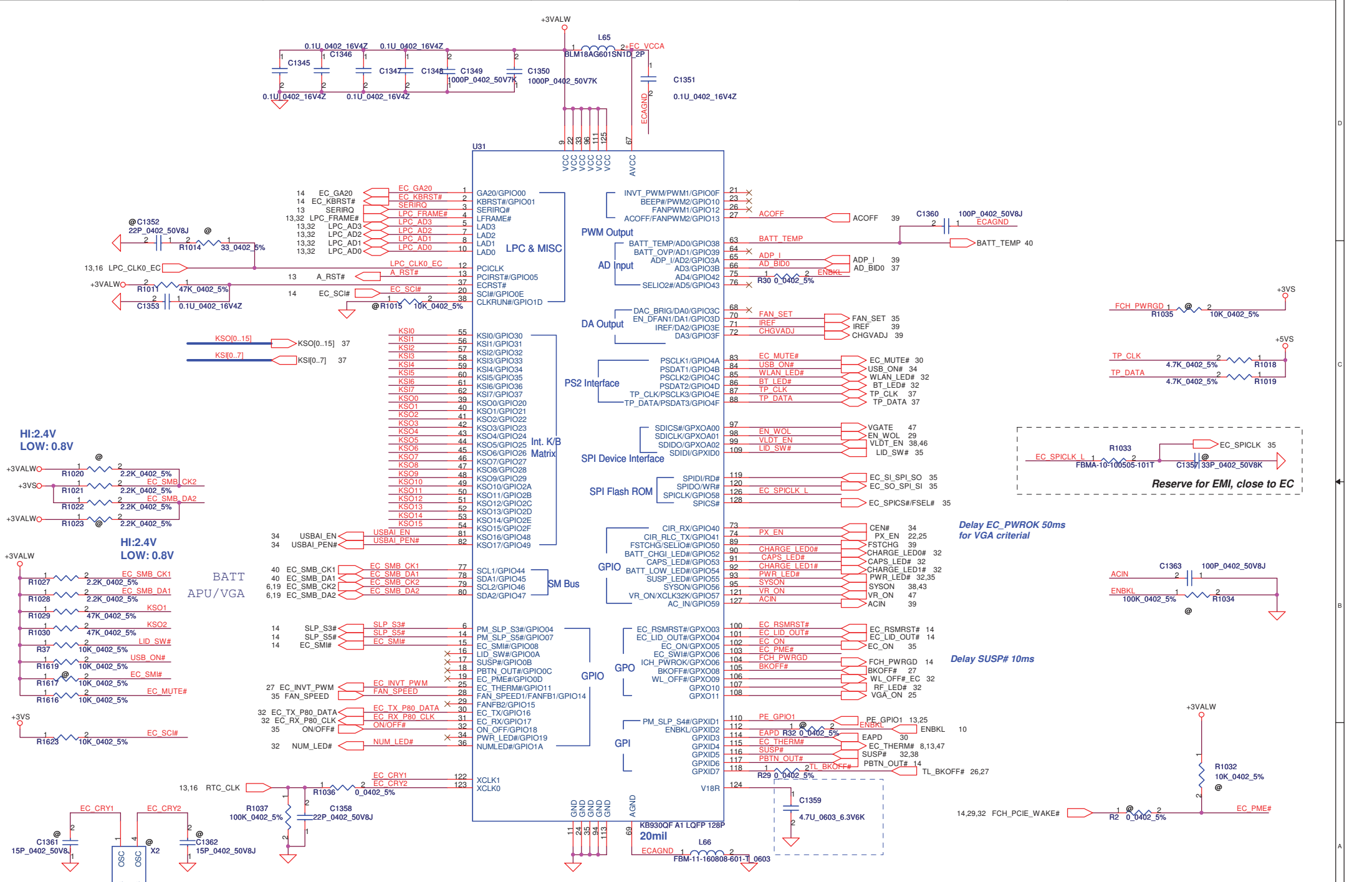
### Fan Control Circuit



### EC BIOS ROM

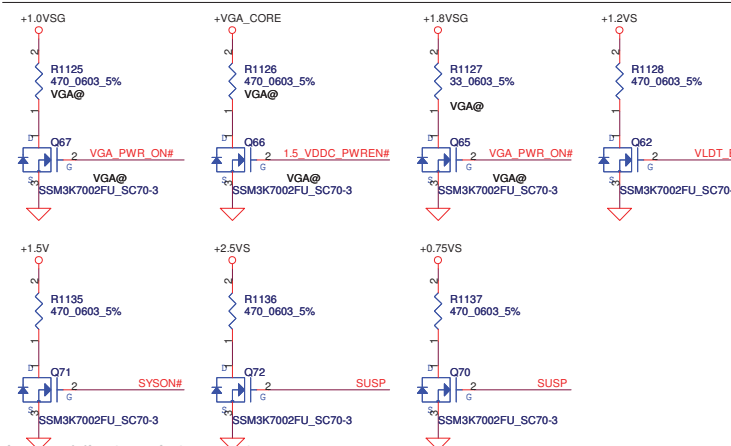
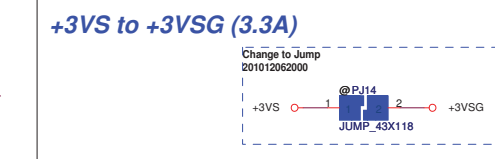
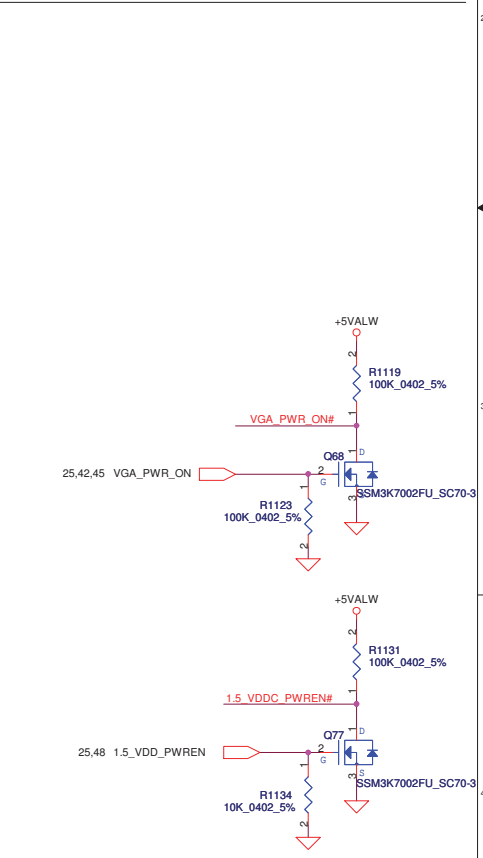
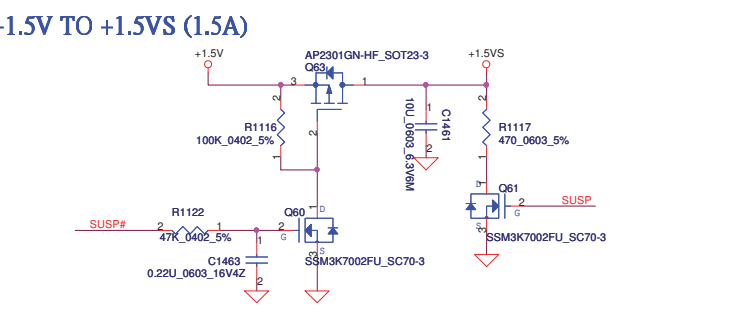
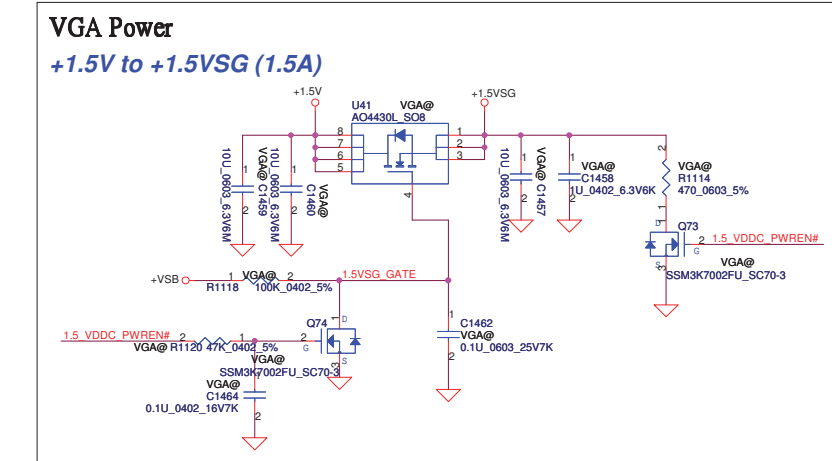
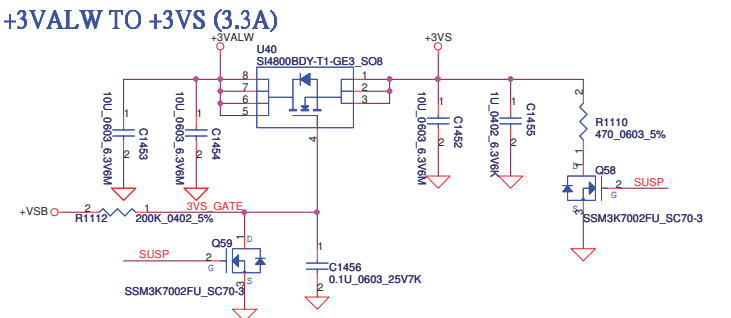
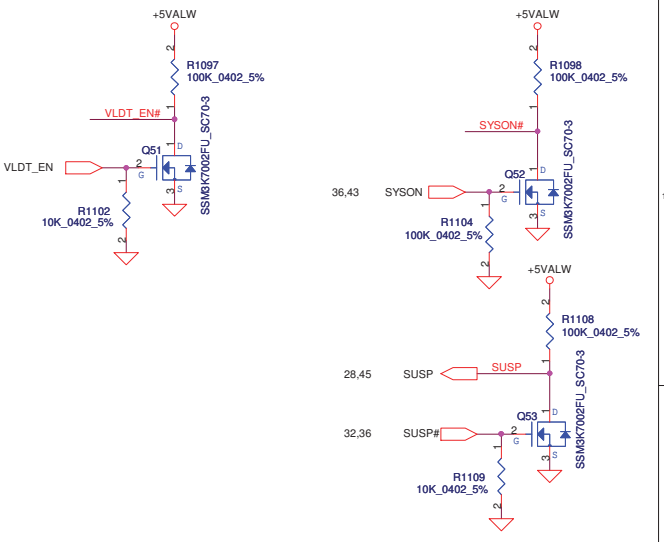
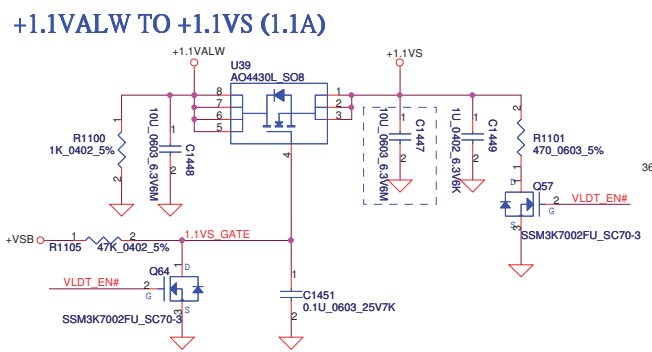
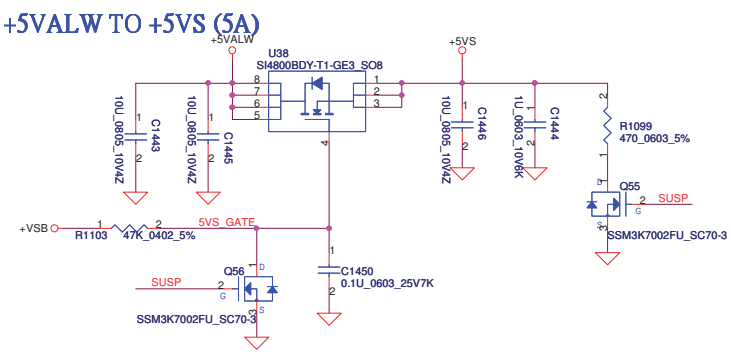


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				P31-KB /SW/TP/Lid	
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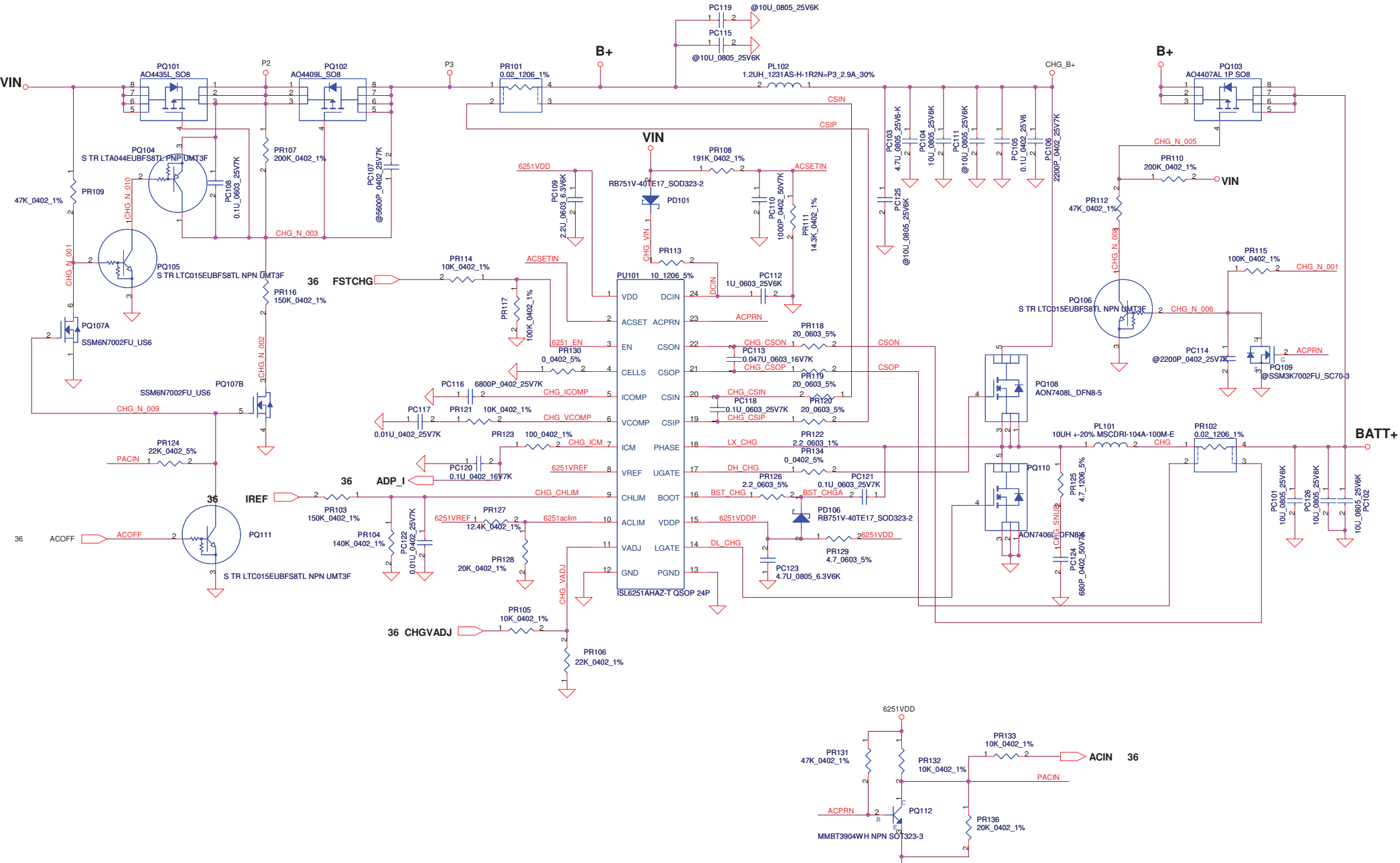
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/08/04	Deciphered Date	2011/12/31	Title	
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B				1.0	
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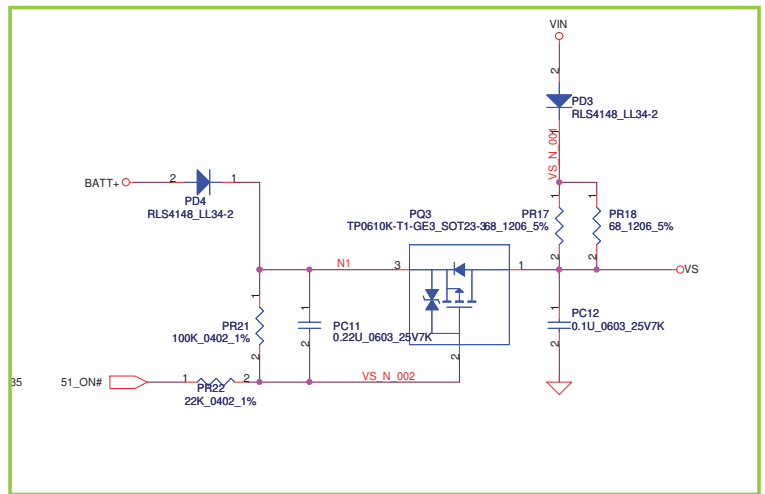
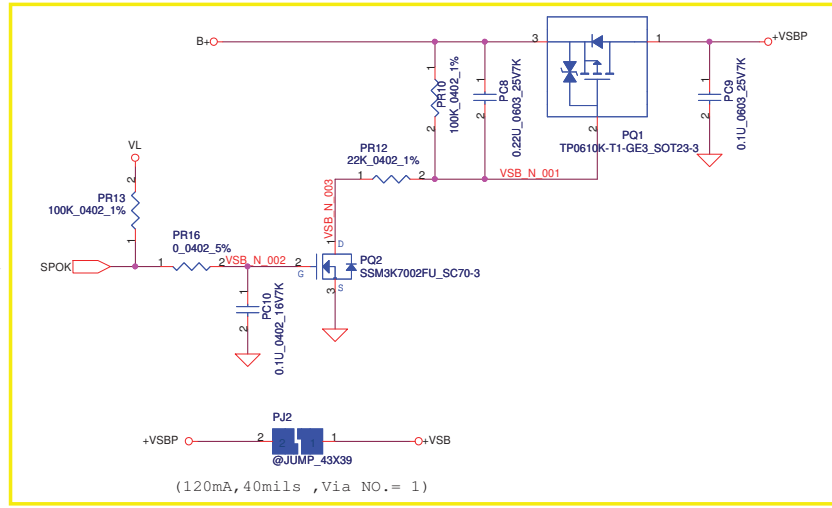
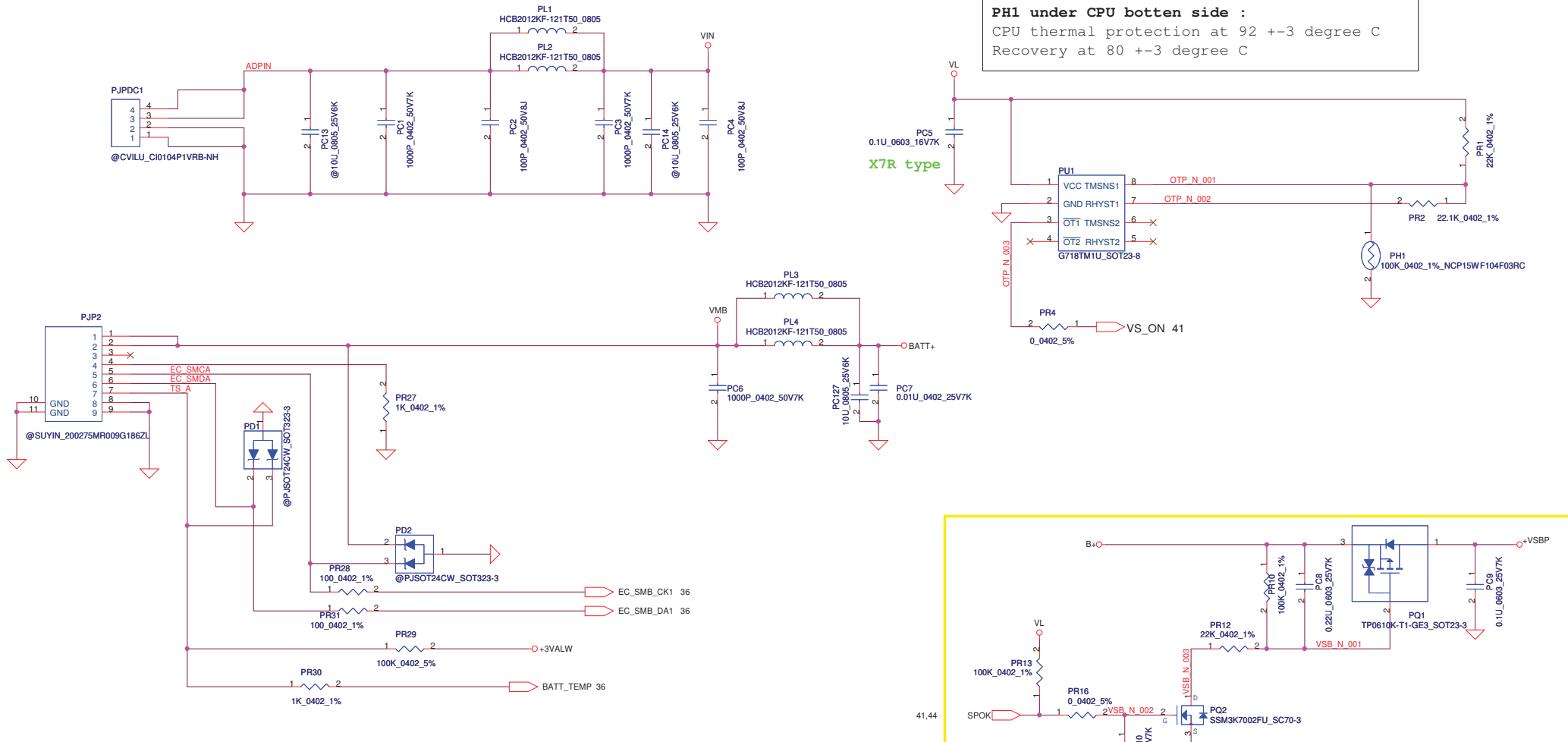
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Title <b>DC Interface</b>			
Size B	Document Number <b>QBL50 LA-7551P</b>	Rev 1.0	
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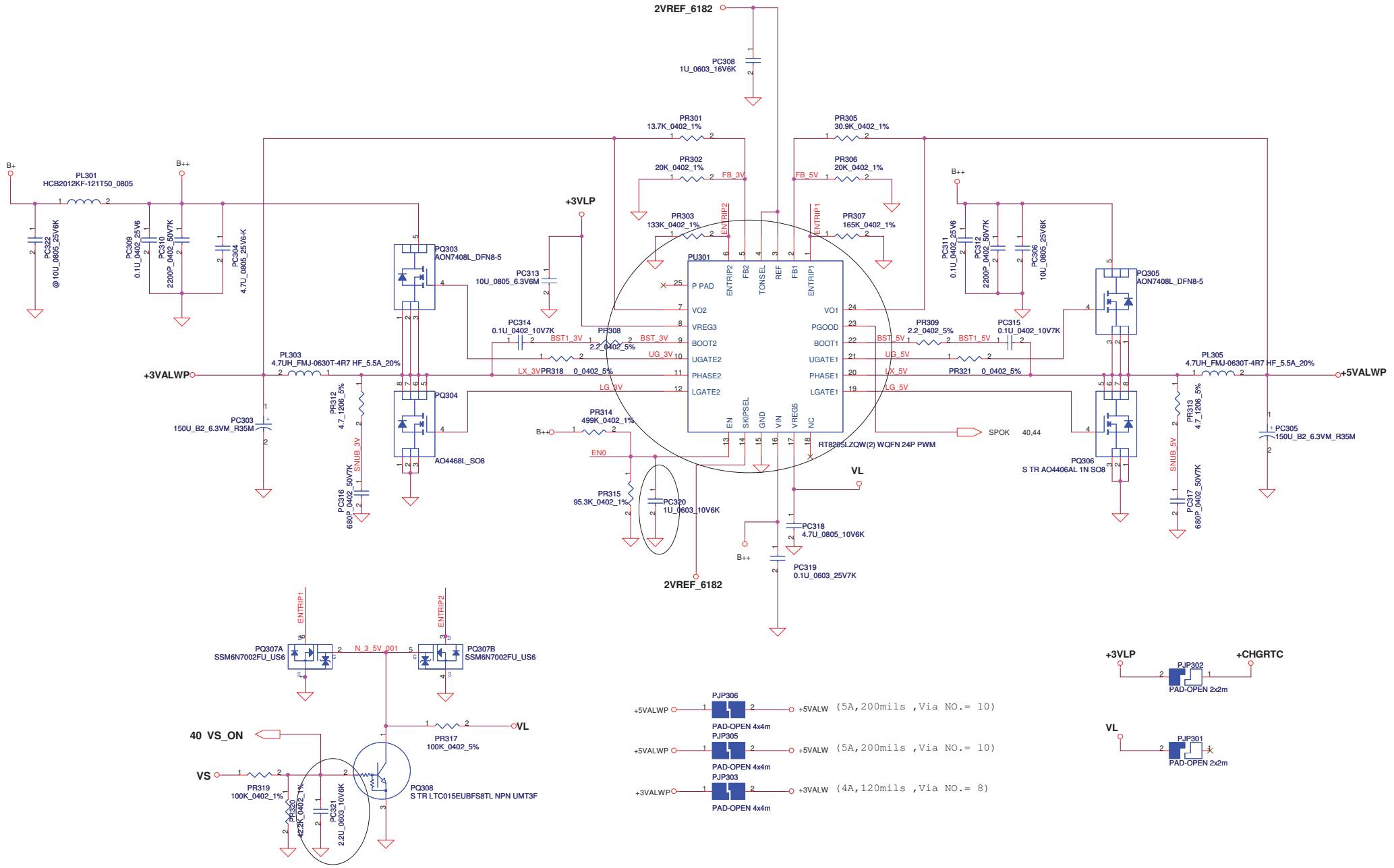
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Issued Date	2009/01/23	Deciphered Date	2011/12/31	Title	CHARGER
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**PH1 under CPU botten side :**  
 CPU thermal protection at 92 +/-3 degree C  
 Recovery at 80 +/-3 degree C



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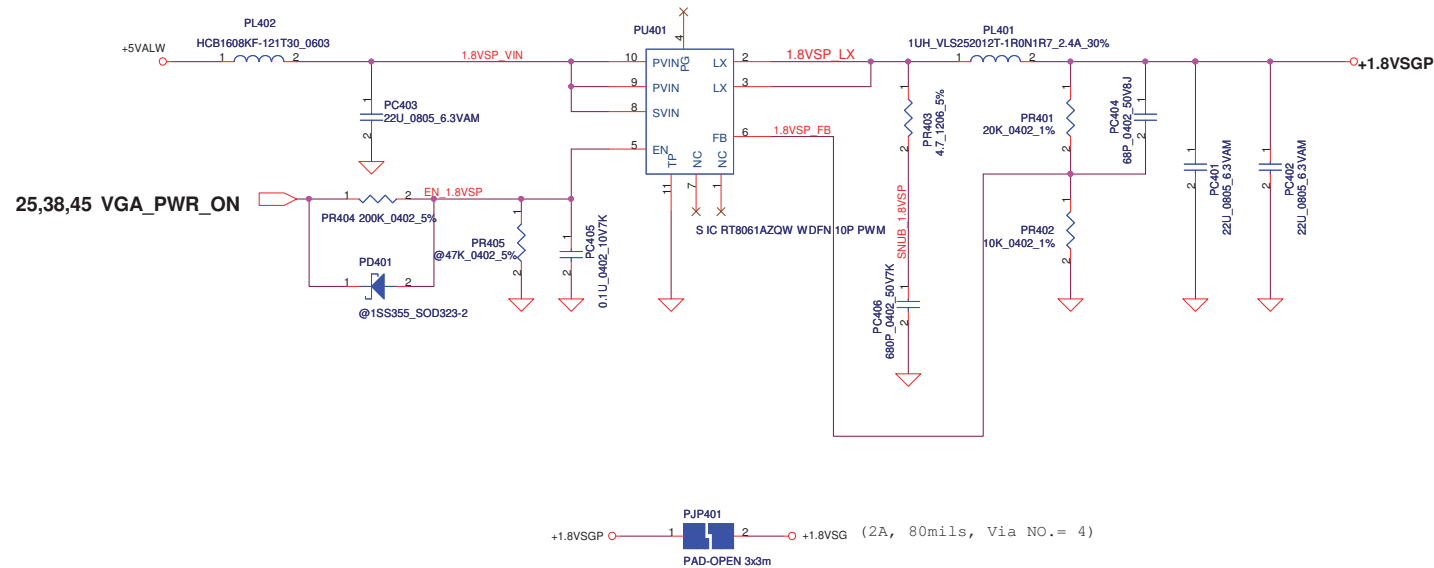


EC:+3VL, reserve PR319, install PR318, PR320 100K  
 EC:+3VALW, reserve PR318, install PR319, PR320 42.2K

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		2011/12/31


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Title		
<b>3.3VALWP/5VALWP</b>		
Size	Document Number	Rev
Custort	<b>QBL50 LA-7551P</b>	1.0
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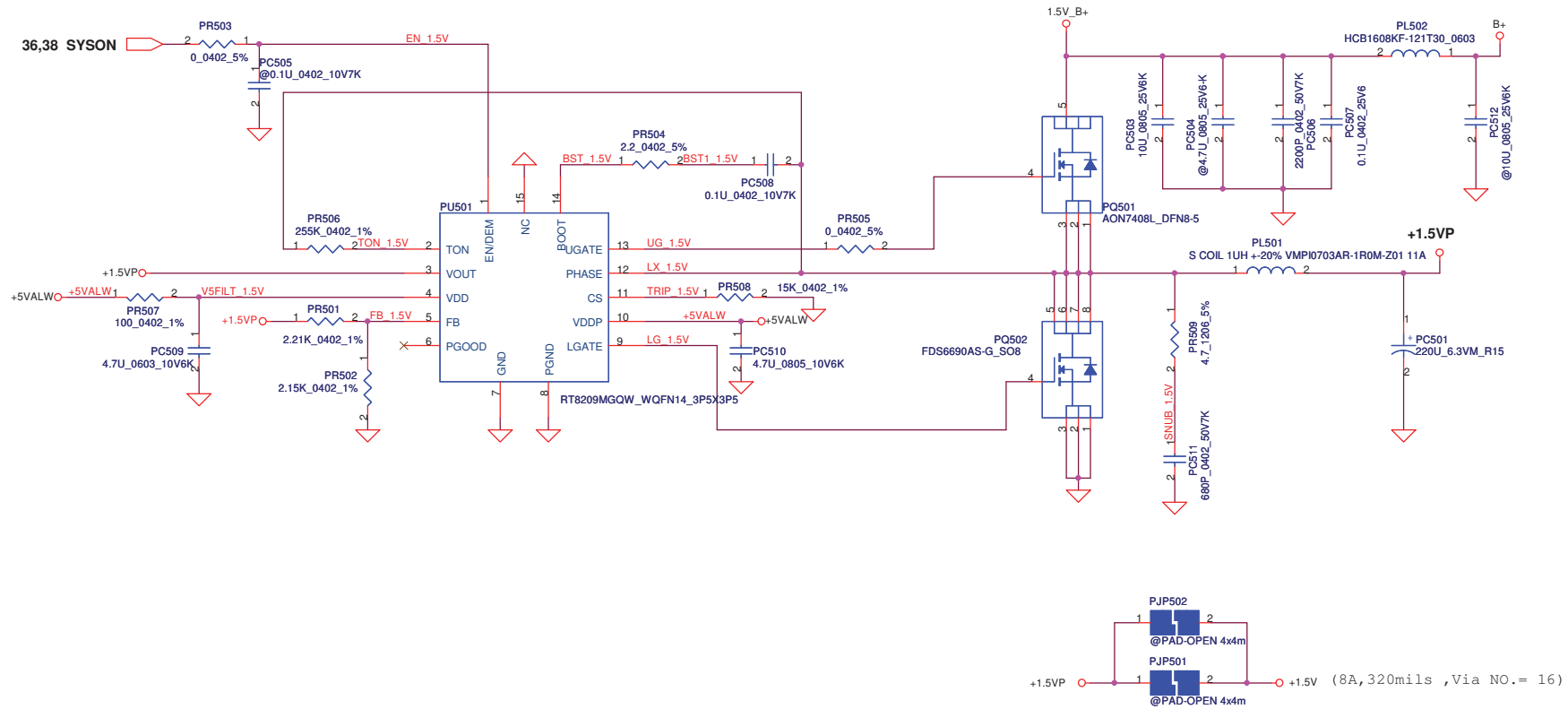


$\langle V_o = 1.8V \rangle \quad V_{FB} = 0.6V$   
 $V_o = V_{FB} * (1 + PR401/PR402) = 0.6 * (1 + 20K/10K) = 1.8V$

25,38,45 VGA\_PWR\_ON

+1.8VSGP  2 +1.8VSG (2A, 80mils, Via NO. = 4)  
 PAD-OPEN 3x3m

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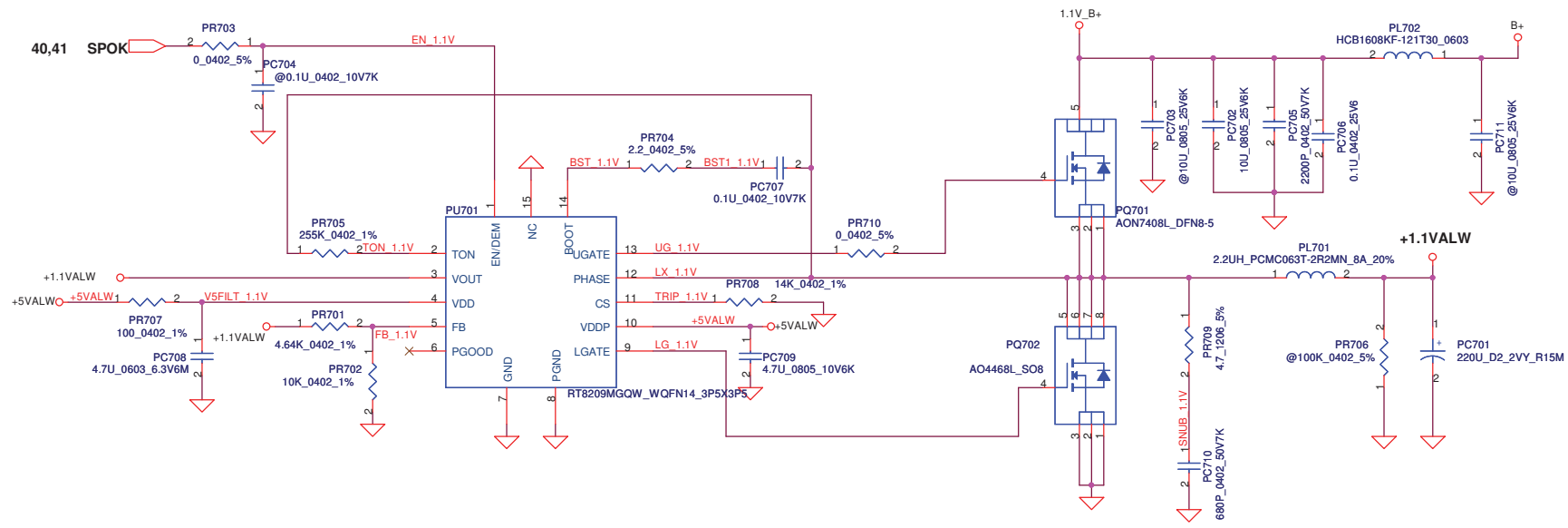
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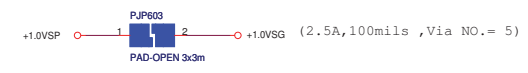
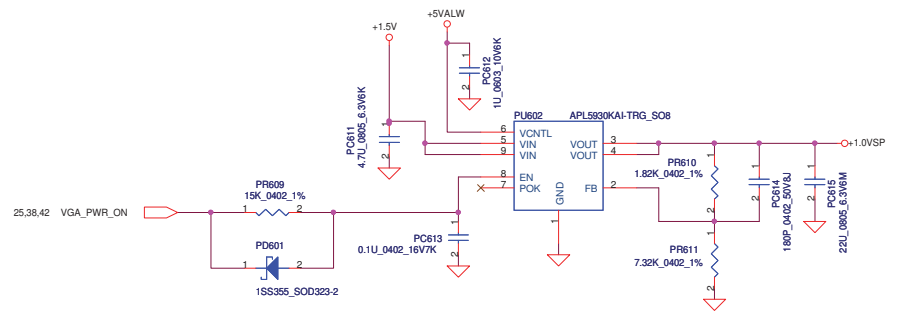
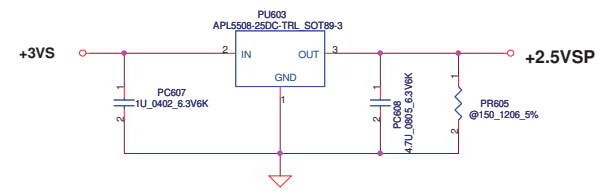
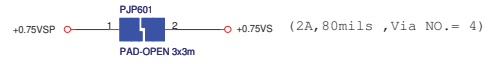
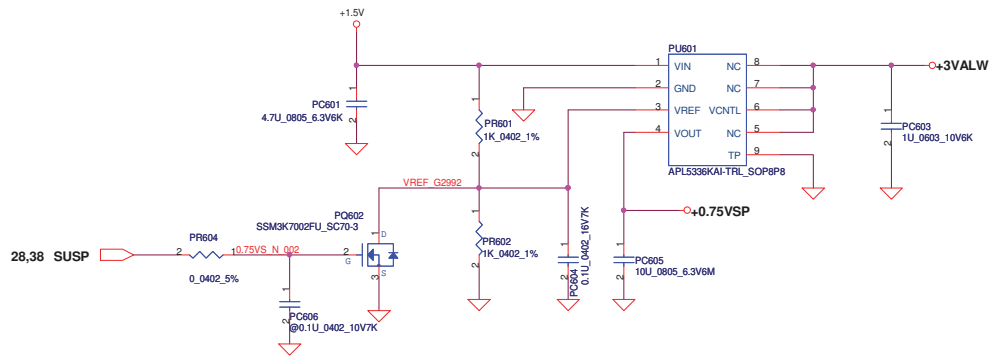
**+1.5VP**

**QBL50 LA-7551P**

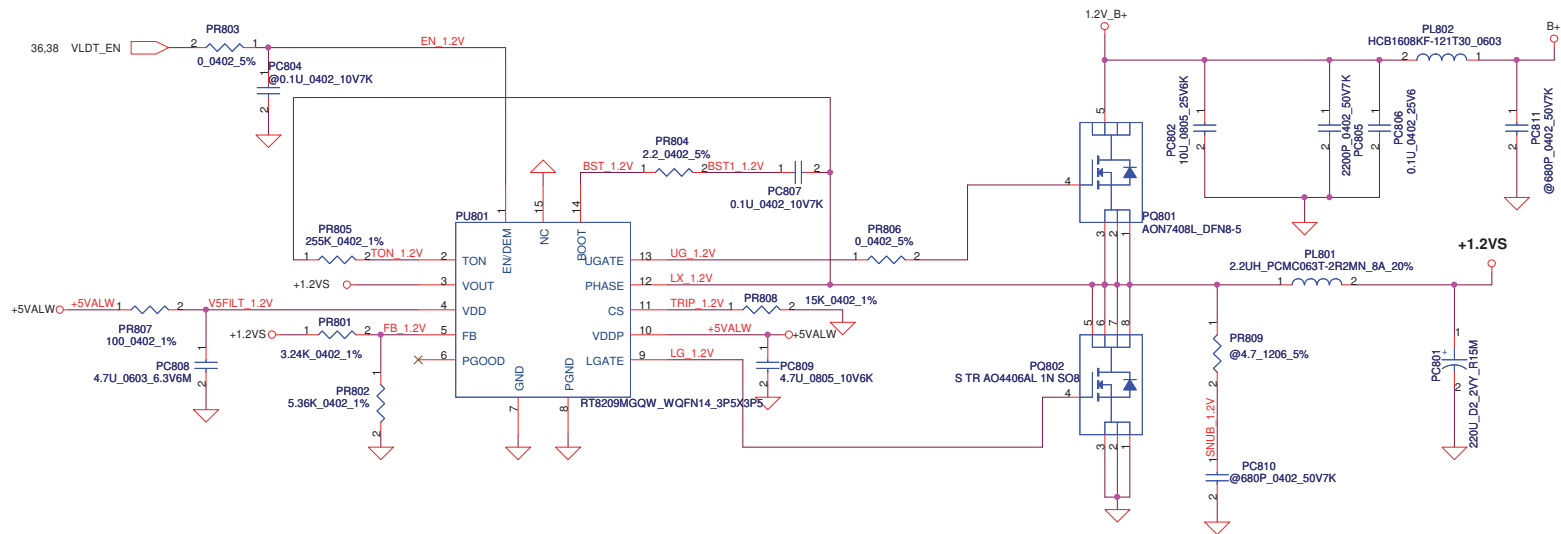
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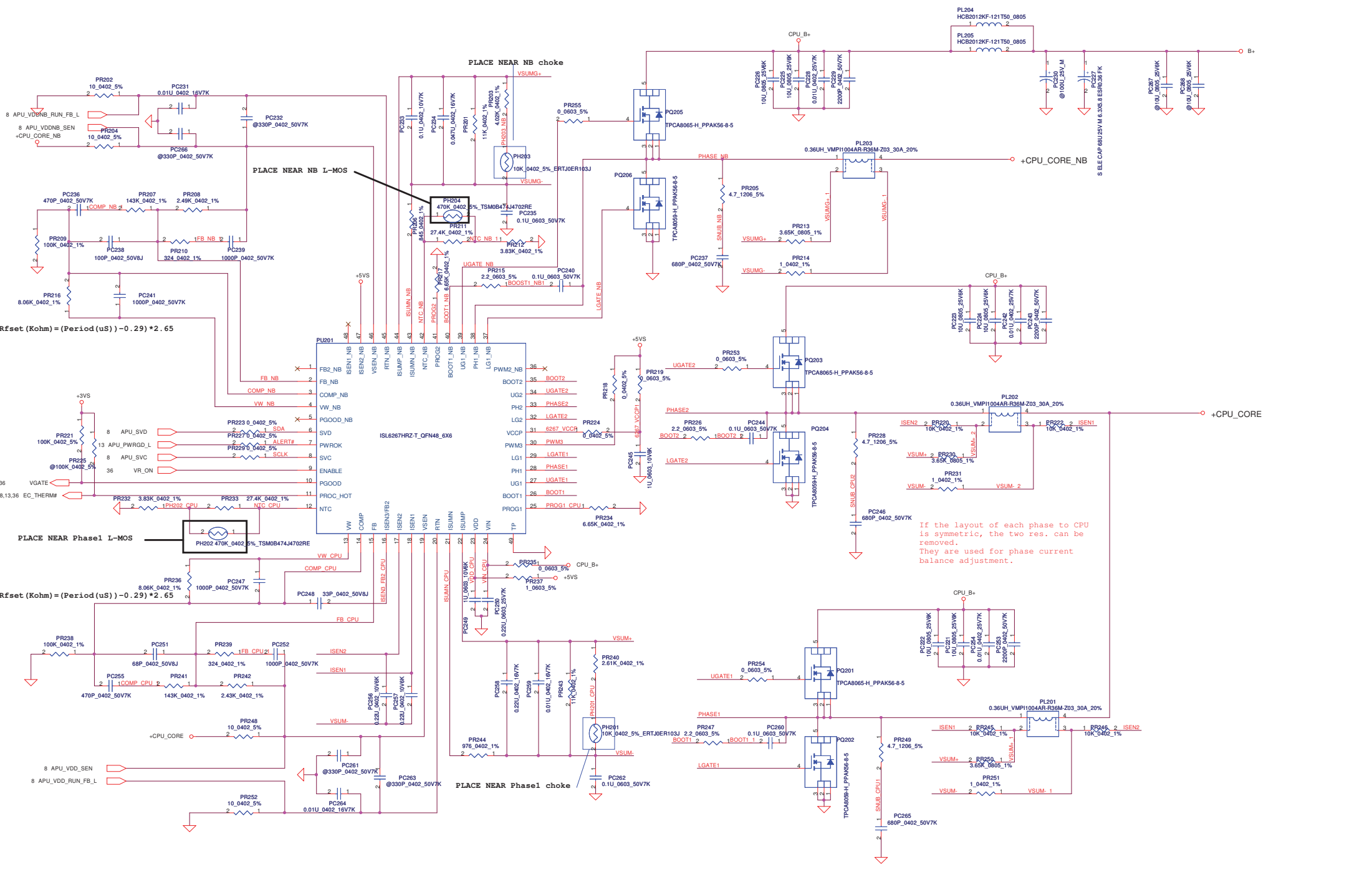
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Issued Date	2009/12/01	Deciphered Date	2011/12/31	Title	<b>PWR+1.1VALWP</b>
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Issued Date	2006/11/23	Deciphered Date		
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$R_{fset} (Kohm) = (Period (uS)) - 0.29 * 2.65$

$R_{fset} (Kohm) = (Period (uS)) - 0.29 * 2.65$

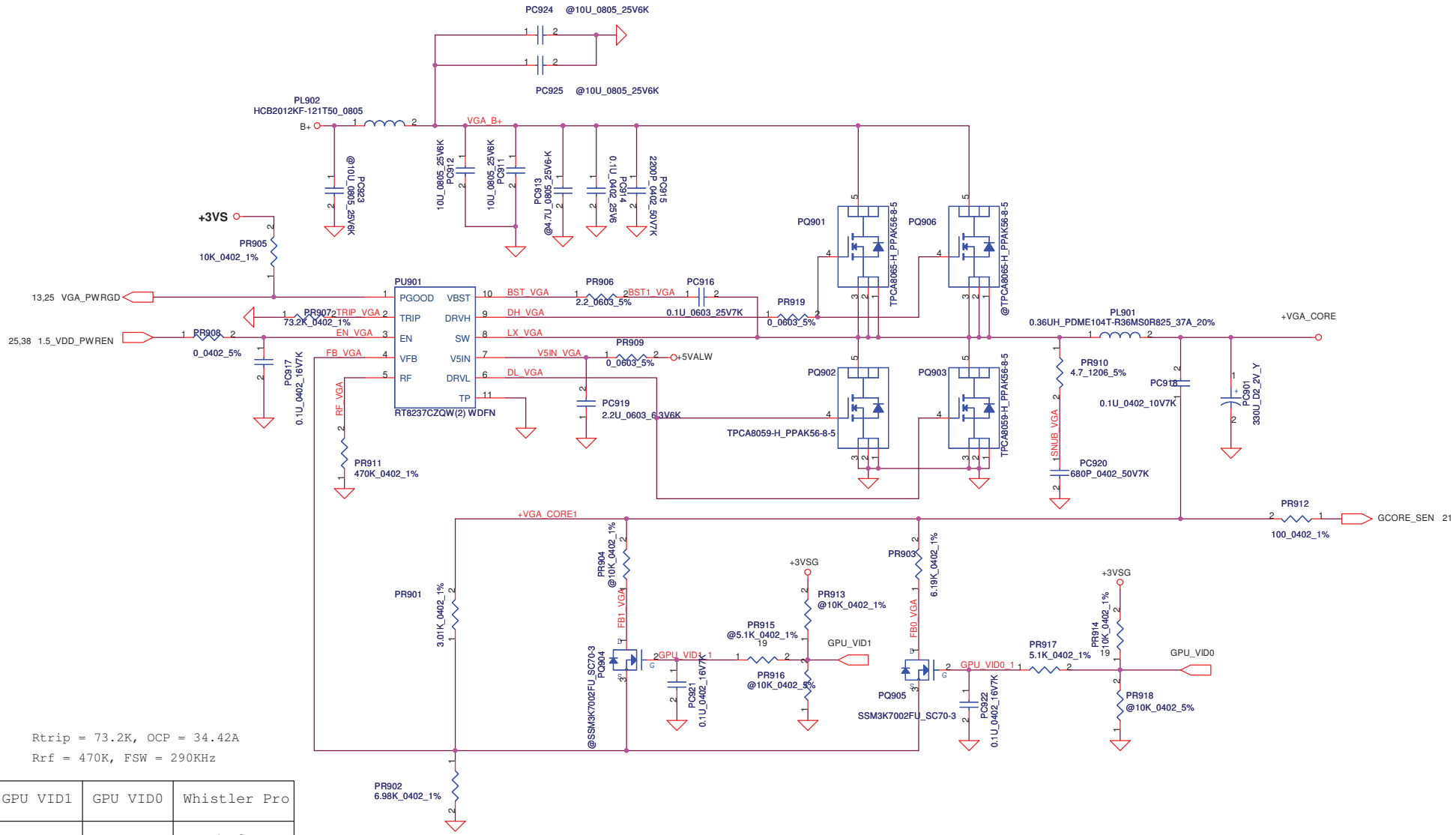
If the layout of each phase to CPU is symmetric, the two res. can be removed. They are used for phase current balance adjustment.

ISL267HRZ-7-QFN48\_6X6

1	FB2_NB
2	FB_NB
3	COMP_NB
4	VW_NB
5	VW_CPU
6	PGOOD_NB
7	SVD
8	FWROK
9	SVC
10	ENABLE
11	PGOOD
12	PROC_HOT
13	NTC
14	ISEN1
15	ISEN2
16	ISEN3
17	ISEN4
18	ISEN5
19	ISEN6
20	RTN
21	ISUMN
22	ISUMP
23	VDD
24	VIN
25	TP
26	BOOT1
27	UGATE1
28	PHASE1
29	LGATE1
30	PWM3
31	VCCP
32	LGATE2
33	PHASE2
34	UGATE2
35	BOOT2
36	PWM2_NB
37	LG1_NB
38	RH1_NB
39	BOOT1_NB
40	PROG1
41	PROG2
42	NTC_NB
43	ISUMN_NB
44	ISUMN
45	RTN_NB
46	ISEN1_NB
47	ISEN2_NB
48	ISEN3_NB

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/11/11	Deciphered Date	2011/12/31	Title
				<b>PWR +CPU_CORE+CPU_CORE_NB</b>
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Rtrip = 73.2K, OCP = 34.42A  
 Rrf = 470K, FSW = 290KHz

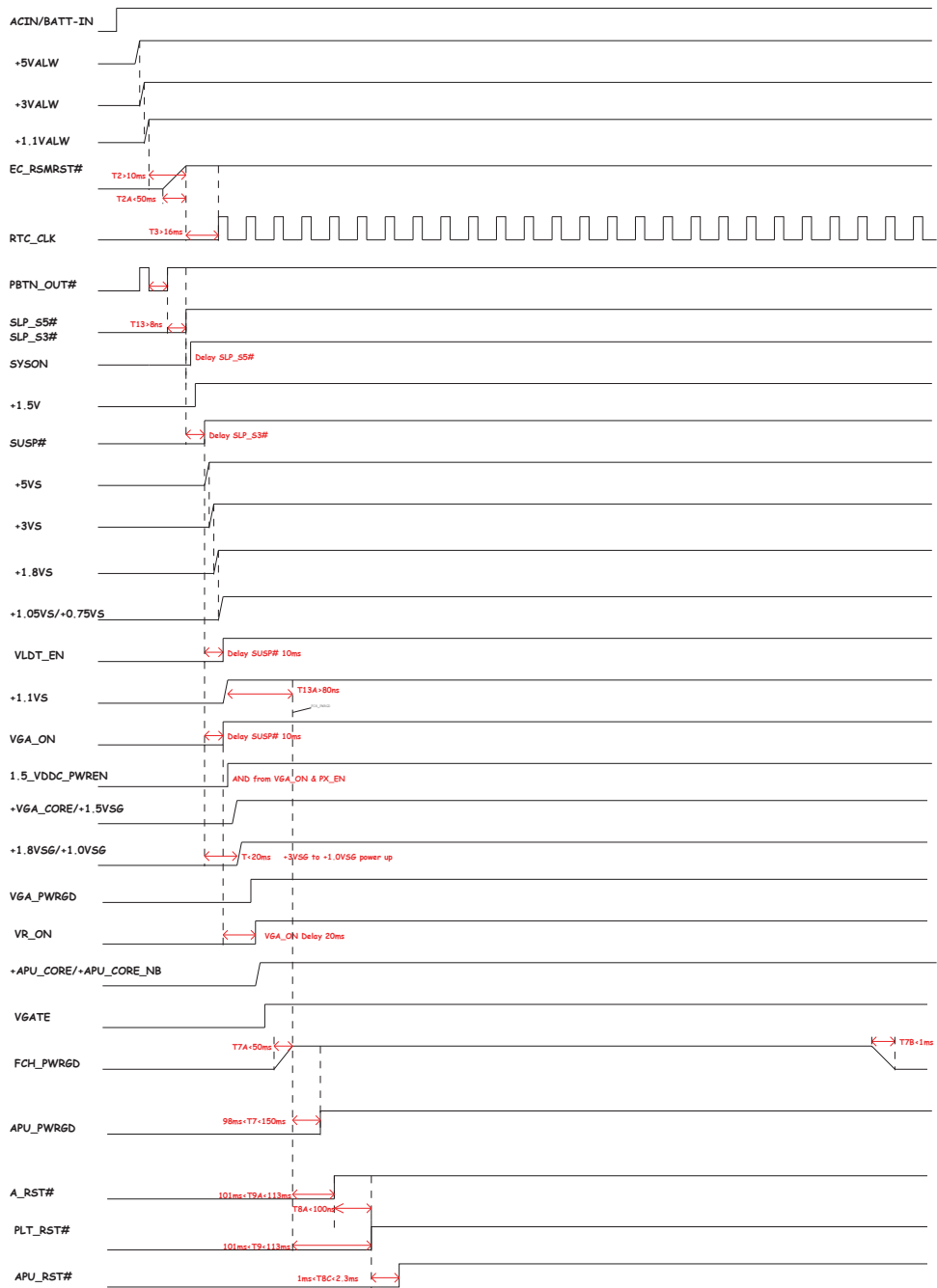
GPU VID1	GPU VID0	Whistler Pro
X	L	1.0V
X	H	0.9V
H	L	
H	H	

Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>VGA CORE</b>	
Issued Date	2007/05/29	Deciphered Date	2011/12/31		
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					<b>QBL50 LA-751P</b>
				Date:	Wednesday, April 27, 2011
				Sheet	48 of 53
				Rev	1.0

Item	Reason for change	PG#	Modify List	Date	Phase
1					
2					
3					
4					
5					
6					
7					

Security Classification	Compal Secret Data		Title	
Issued Date	2008/09/15	Deciphered Date	2011/12/31	
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Size	Document Number	Rev	1 of 1	
08E	QB150 LA-7551P			
Date	Wednesday, April 27, 2011	Sheet	49	of 55

# POWER SEQUENCE



Document Classification	Control System Data	Revision	Date
SECRET	SECRET	1	2011/03/31
Doc No.	Doc Name	Doc Rev	Doc Date
001	POWER SEQUENCE	1	2011/03/31
Doc No.			Doc Date
001			2011/03/31
Doc Name			Doc Rev
POWER SEQUENCE			1
Doc Rev			Doc Date
1			2011/03/31
Doc Date			Doc Rev
2011/03/31			1

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1		For AMD request	0.11	PG#26	Translator change to ANX3110	03/15	ER
2		For AI charge function	0.11	PG#34	Add U2 & U56	03/15	ER
3		For PBL60 MEMO	0.11	PG#32	Change LED1 to Green color.	03/15	ER
4		For switch quality of ME.	0.11	PG#37	Change SW5,SW6 to 100g switch for ME.	03/15	ER
5		For LED brightness.	0.11	PG#32	Change R1584 to 200 ohm. Change R1586,R1588,R1591,R1592,R1593 to 100 ohm	03/15	ER
6		For DFB.	0.12	PG#11	JDIMM1 footprint change to FOX_AS0A626-J8SG-7H_204P-T	03/17	ER
7		For USB3.0 & AI charge.	0.12	PG#34	USBP0 connect to JUSB1 and USBP10 connect to JUSB2.	03/17	ER
8		For Back light function.	0.12	PG#36	U31.15 connect to ENBKL from APU.	03/17	ER
9		For HDMI HPD issue.	0.12	PG#10	Q34 change to 2N7002(ESD) Add R469 to +1.5VS.	03/19	ER
10		For DP0_HPD & DP1_HPD from AMD recommend.	0.12	PG#10	Swap Q13.1 & Q13.3, R618 unmount. Swap Q16.1 & Q16.3, R627 unmount.	03/19	ER
11		For Travis Vendor request	0.12	PG#26	Del DP0_TXN0_C & DP0_TXP0_C	03/22	ER
12		For LED1	0.12	PG#32	LED1 connect to +3VALW	03/22	ER
13		For EC SMBUS	0.2	PG#36	R1021,R1022 change to install.	03/24	ER
14		For Sourcer recommend	0.2		SE100105Z80 change to SE000000K80	03/24	ER
15		For Sourcer recommend	0.2		SE103225Z80 change to SE000008880	03/24	ER
16		For Sourcer recommend	0.2		SB000006A00 change to SB000006A10	03/24	ER
17		For Thermal	0.2	PG#37	Del H4	03/24	ER
18		For +5VS rising time	0.2	PG#38	R1103 change to 47K	03/24	ER
19		For Crystal EA	0.2	PG#29	C1634 change to 12P & C1633 change to 15P	03/24	ER
20		For Crystal EA	0.2	PG#13	C1200 & C1201 change to 12P	03/24	ER
21		For Crystal EA	0.2	PG#19	C353 change to 15P & C354 change to 12P	03/24	ER
22		For EMI request	0.2	PG#36	R1033 change to SM01000DI00 R1055 change to 33 ohm	03/24	ER
23		For EMI request	0.2	PG#28	L38,L39,L40,L41 change to SM070001S00	03/24	ER
24		For EMI request	0.2	PG#27	D1,D2,D3,D6 change to install	03/24	ER
25		For Crystal EA	0.2	PG#13	C1205,C1206 change to 10P	03/24	ER
26		For AI charge	0.2	PG#36 PG#34	U2 reserve CEN# to EC	03/25	ER
27		For AMD spec	0.2	PG#27	R1642 & R1646 change to 4.6K ohm	03/29	ER

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Issued Date	2010/06/30	Deciphered Date	2011/12/31	<b>Compal Electronics, Inc.</b>	
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				Custom	1.0
				Date: Wednesday, April 27, 2011   Sheet 51 of 53	

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1		For EMI request	0.2	PG#30	R1555,R1556,R1557,R1558 change to 0.1uF	03/29	ER
2		For share ROM request	0.2	PG#15 PG#16	U28,R626,R934,R935,R35 change to Un-install R921 change un-install & U910 change to install	03/29	ER
3		For EMI request	0.2	PG#34	D5 change to SC300001Y00 (YSCLAMP0524P)	03/29	ER
4		For Crystal vendor recommend	0.21	PG#13	Y4 change to SJ100007N00 (32.768K 7PF)	04/07	PR
5		For EMI recommend	0.21	PG#29	TS1 change to SP050006F00 (IH-160)	04/07	PR
6		For discharge EA	0.21	PG#38	R1127 change from 470 ohm to 33 ohm	04/07	PR
7		For leakage current	0.21	PG#27	R1644,R1645,Q101 change to install R4,R31 change to un-install	04/07	PR
8		For EMI recommend	0.21	PG#29	C1636 change from 1000P to 120P	04/08	PR
9		For thermal recommend	0.21	PG#19	Add R78, R79, R80, R82	04/18	PR
10		Reserve PX_EN signal	0.21	PG#36	Reserve signal PX_EN to EC pin 74	04/18	PR
11		Swap JDIMM1 & JDIMM2 location	0.21	PG#11 PG#12	Follow ME BOM	04/18	PR
12		Do not use for MP	0.21	PG#35	Del SW3 SW4	04/18	PR
13		Change Board ID to PR10	0.21	PG#37	Change R1036 to 18k	04/18	PR
14		For DFB request del co-lay schematic	0.21	PG#34	Del R672~R675, R664~R667	04/18	PR
15		For EMI request	0.22	PG#29	ADD D7	04/19	PR
16		For EMI request	1.0	PG#13	unstuff C1193	04/25	PR
17		For Customer change FCH P/N	1.0	PG#13 ~17	location U25, for M2 change to SA000042C80, M3 change to SA000043ID0	04/25	PR
18		For ESD request	1.0	PG#32	R628,R629,R678,R679,R680,R681 change from 0ohm to 33ohm & Add 1uF for C560,C568,C569,C570,C573,C571	04/27	PR
19							
20							
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Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2010/06/30	Deciphered Date	2011/12/31	Title	
				<b>HW-PIR</b>	
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				Rev 1.0	Date: Wednesday, April 27, 2011
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Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase																																																																																																																																																																																																																																																																																																																		
1		For MP cost down	1.0		As picture	03/15	PR																																																																																																																																																																																																																																																																																																																		
2					<table border="1"> <thead> <tr> <th>Reference</th> <th>Value</th> <th>Source Part</th> <th>Source Library</th> <th>Page</th> <th>Schematic</th> </tr> </thead> <tbody> <tr><td>R22</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R23</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R24</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R26</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R27</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R28</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R81</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P14-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R483</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P23-VRA...</td><td>SCHEMA...</td></tr> <tr><td>R485</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P23-VRA...</td><td>SCHEMA...</td></tr> <tr><td>R511</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P24-VRA...</td><td>SCHEMA...</td></tr> <tr><td>R513</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P24-VRA...</td><td>SCHEMA...</td></tr> <tr><td>R537</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P06-FS1 ...</td><td>SCHEMA...</td></tr> <tr><td>R538</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P06-FS1 ...</td><td>SCHEMA...</td></tr> <tr><td>R591</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P08-FS1 ...</td><td>SCHEMA...</td></tr> <tr><td>R598</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P08-FS1 ...</td><td>SCHEMA...</td></tr> <tr><td>R606</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P08-FS1 ...</td><td>SCHEMA...</td></tr> <tr><td>R608</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P08-FS1 ...</td><td>SCHEMA...</td></tr> <tr><td>R611</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P08-FS1 ...</td><td>SCHEMA...</td></tr> <tr><td>R647</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P29-LAN ...</td><td>SCHEMA...</td></tr> <tr><td>R912</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P16-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R945</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R1291</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P26-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R1575</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P32-Mini...</td><td>SCHEMA...</td></tr> <tr><td>R1577</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P32-Mini...</td><td>SCHEMA...</td></tr> <tr><td>R1634</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P27-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R1635</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P27-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R1636</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P27-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R1641</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P27-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R1651</td><td>0_0402_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P27-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R19</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R20</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R25</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R560</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P29-LAN ...</td><td>SCHEMA...</td></tr> <tr><td>R658</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P29-LAN ...</td><td>SCHEMA...</td></tr> <tr><td>R1049</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P35-FAN ...</td><td>SCHEMA...</td></tr> <tr><td>R1145</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R1148</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R1534</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P30-HD ...</td><td>SCHEMA...</td></tr> <tr><td>R1537</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P30-HD ...</td><td>SCHEMA...</td></tr> <tr><td>R1560</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P31-RTS...</td><td>SCHEMA...</td></tr> <tr><td>R1643</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P27-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R1650</td><td>0_0603_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P27-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R570</td><td>0_0805_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P26-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R607</td><td>0_0805_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P26-LVD...</td><td>SCHEMA...</td></tr> <tr><td>R937</td><td>0_0805_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R938</td><td>0_0805_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R941</td><td>0_0805_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P17-HUD...</td><td>SCHEMA...</td></tr> <tr><td>R1531</td><td>0_0805_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P30-HD ...</td><td>SCHEMA...</td></tr> <tr><td>R1595</td><td>0_0805_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P33-HDD...</td><td>SCHEMA...</td></tr> <tr><td>R1598</td><td>0_0805_5%</td><td>R-SHORT</td><td>X\CIS_SYMB...</td><td>P33-HDD...</td><td>SCHEMA...</td></tr> </tbody> </table>	Reference	Value	Source Part	Source Library	Page	Schematic	R22	0_0402_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R23	0_0402_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R24	0_0402_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R26	0_0402_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R27	0_0402_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R28	0_0402_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R81	0_0402_5%	R-SHORT	X\CIS_SYMB...	P14-HUD...	SCHEMA...	R483	0_0402_5%	R-SHORT	X\CIS_SYMB...	P23-VRA...	SCHEMA...	R485	0_0402_5%	R-SHORT	X\CIS_SYMB...	P23-VRA...	SCHEMA...	R511	0_0402_5%	R-SHORT	X\CIS_SYMB...	P24-VRA...	SCHEMA...	R513	0_0402_5%	R-SHORT	X\CIS_SYMB...	P24-VRA...	SCHEMA...	R537	0_0402_5%	R-SHORT	X\CIS_SYMB...	P06-FS1 ...	SCHEMA...	R538	0_0402_5%	R-SHORT	X\CIS_SYMB...	P06-FS1 ...	SCHEMA...	R591	0_0402_5%	R-SHORT	X\CIS_SYMB...	P08-FS1 ...	SCHEMA...	R598	0_0402_5%	R-SHORT	X\CIS_SYMB...	P08-FS1 ...	SCHEMA...	R606	0_0402_5%	R-SHORT	X\CIS_SYMB...	P08-FS1 ...	SCHEMA...	R608	0_0402_5%	R-SHORT	X\CIS_SYMB...	P08-FS1 ...	SCHEMA...	R611	0_0402_5%	R-SHORT	X\CIS_SYMB...	P08-FS1 ...	SCHEMA...	R647	0_0402_5%	R-SHORT	X\CIS_SYMB...	P29-LAN ...	SCHEMA...	R912	0_0402_5%	R-SHORT	X\CIS_SYMB...	P16-HUD...	SCHEMA...	R945	0_0402_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R1291	0_0402_5%	R-SHORT	X\CIS_SYMB...	P26-LVD...	SCHEMA...	R1575	0_0402_5%	R-SHORT	X\CIS_SYMB...	P32-Mini...	SCHEMA...	R1577	0_0402_5%	R-SHORT	X\CIS_SYMB...	P32-Mini...	SCHEMA...	R1634	0_0402_5%	R-SHORT	X\CIS_SYMB...	P27-LVD...	SCHEMA...	R1635	0_0402_5%	R-SHORT	X\CIS_SYMB...	P27-LVD...	SCHEMA...	R1636	0_0402_5%	R-SHORT	X\CIS_SYMB...	P27-LVD...	SCHEMA...	R1641	0_0402_5%	R-SHORT	X\CIS_SYMB...	P27-LVD...	SCHEMA...	R1651	0_0402_5%	R-SHORT	X\CIS_SYMB...	P27-LVD...	SCHEMA...	R19	0_0603_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R20	0_0603_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R25	0_0603_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R560	0_0603_5%	R-SHORT	X\CIS_SYMB...	P29-LAN ...	SCHEMA...	R658	0_0603_5%	R-SHORT	X\CIS_SYMB...	P29-LAN ...	SCHEMA...	R1049	0_0603_5%	R-SHORT	X\CIS_SYMB...	P35-FAN ...	SCHEMA...	R1145	0_0603_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R1148	0_0603_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R1534	0_0603_5%	R-SHORT	X\CIS_SYMB...	P30-HD ...	SCHEMA...	R1537	0_0603_5%	R-SHORT	X\CIS_SYMB...	P30-HD ...	SCHEMA...	R1560	0_0603_5%	R-SHORT	X\CIS_SYMB...	P31-RTS...	SCHEMA...	R1643	0_0603_5%	R-SHORT	X\CIS_SYMB...	P27-LVD...	SCHEMA...	R1650	0_0603_5%	R-SHORT	X\CIS_SYMB...	P27-LVD...	SCHEMA...	R570	0_0805_5%	R-SHORT	X\CIS_SYMB...	P26-LVD...	SCHEMA...	R607	0_0805_5%	R-SHORT	X\CIS_SYMB...	P26-LVD...	SCHEMA...	R937	0_0805_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R938	0_0805_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R941	0_0805_5%	R-SHORT	X\CIS_SYMB...	P17-HUD...	SCHEMA...	R1531	0_0805_5%	R-SHORT	X\CIS_SYMB...	P30-HD ...	SCHEMA...	R1595	0_0805_5%	R-SHORT	X\CIS_SYMB...	P33-HDD...	SCHEMA...	R1598	0_0805_5%	R-SHORT	X\CIS_SYMB...	P33-HDD...	SCHEMA...		
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Security Classification		Compal Secret Data		Title	
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