

# QCLA4,5

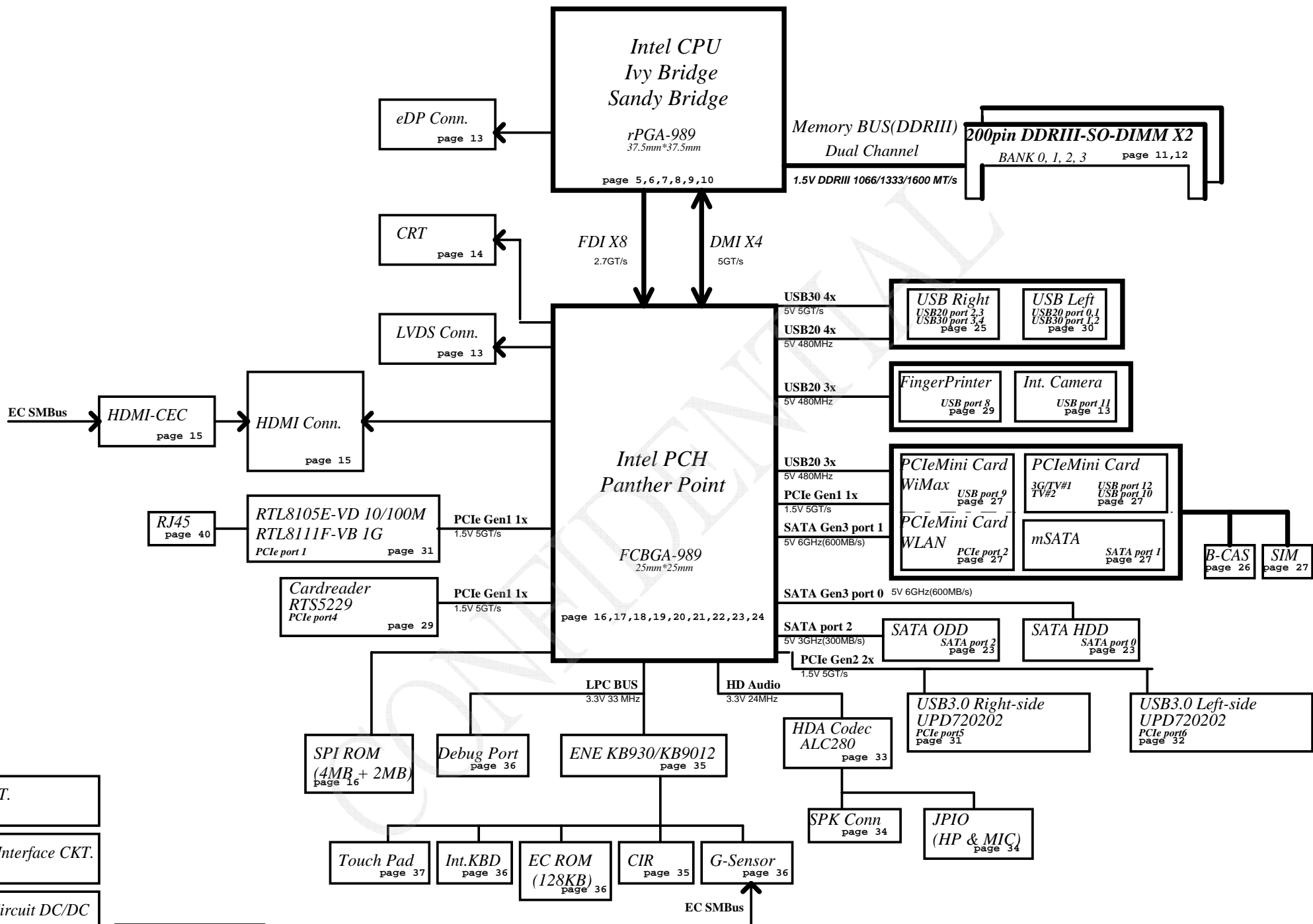
*Eureka 14" & 15"*

## LA-8862P REV 0.2 Schematic

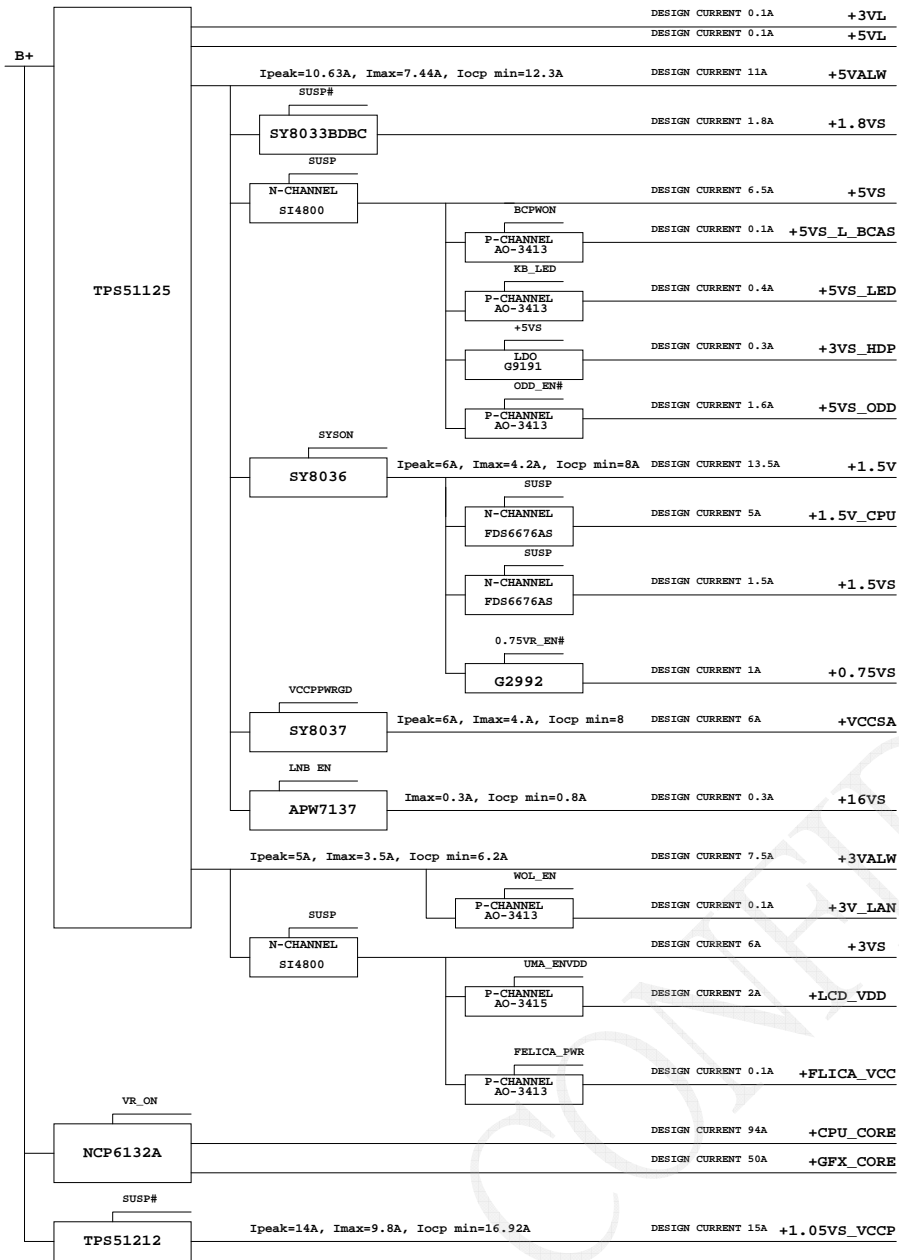
Intel Processor(Ivy Bridge / Sandy Bridge)  
PCH(Panther Point)

2011-11-24 Rev 0.2

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Issued Date	2011/01/31	Deciphered Date	2012/12/31	Title	
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				4019IV	B
				Date: Tuesday, March 27, 2012	Sheet 1 of 48

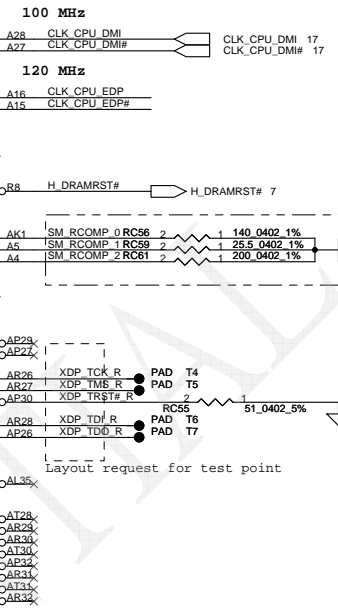
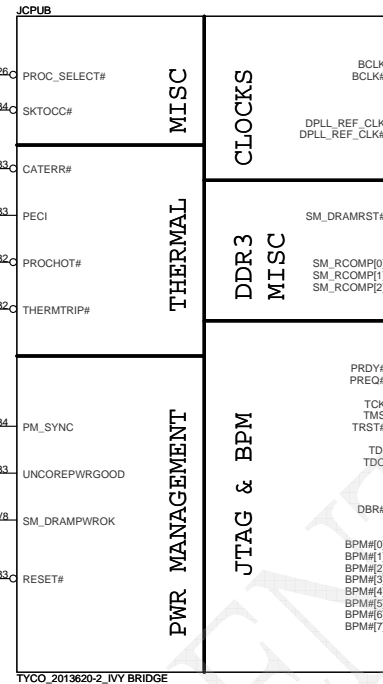
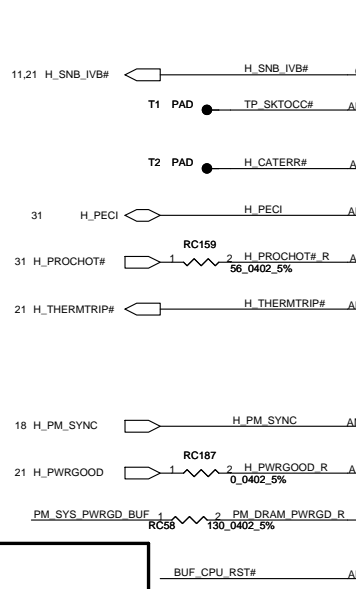
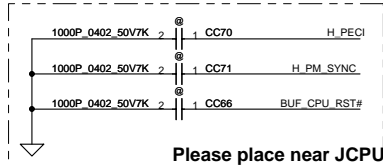
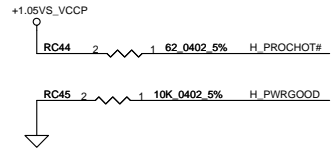
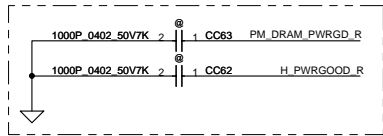


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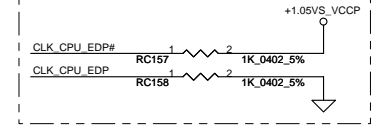


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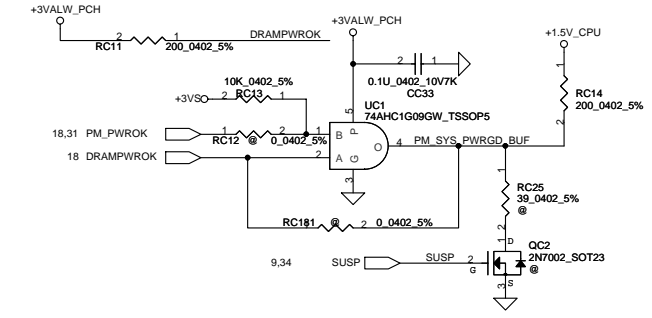
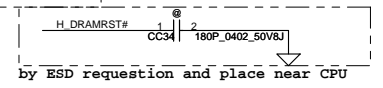




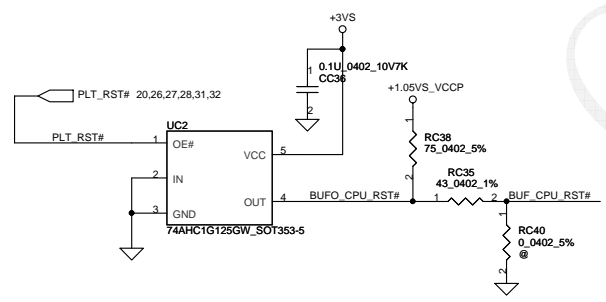
Stuff RC157 and RC158 if do not support eDP



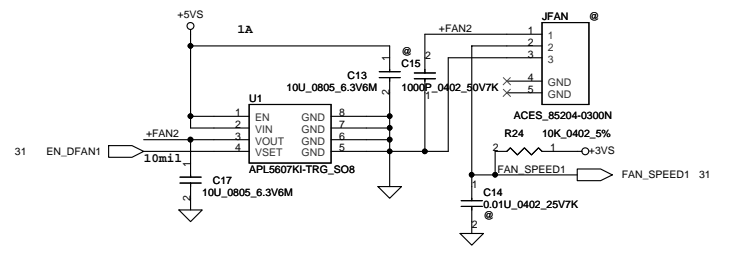
DDR3 Compensation Signals  
Layout Note: Place these resistors near Processor



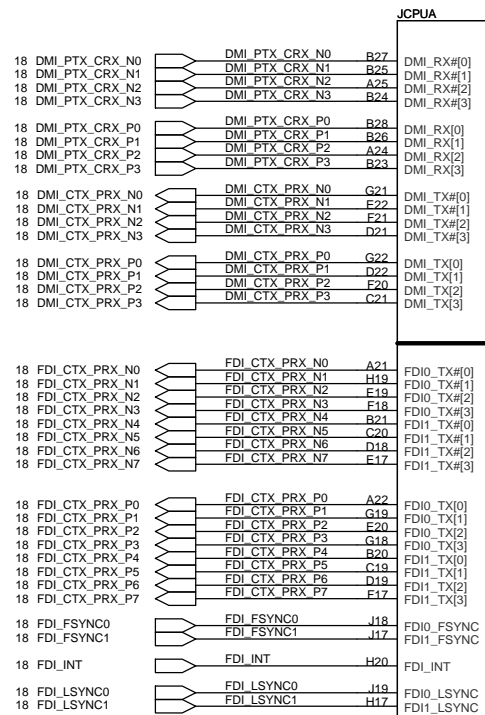
Buffered Reset to CPU



FAN Control Circuit

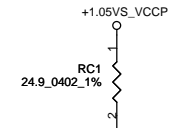
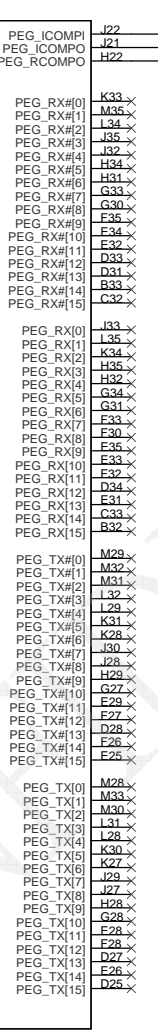


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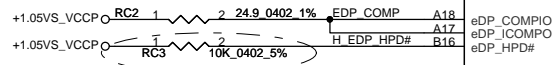
**Intel(R) FDI**

**PCI EXPRESS\* - GRAPHICS**



PEG\_ICOMPI and RCOMPO signals should be shorted and routed with - max length = 500 mils - typical impedance = 43 m ohm (4 mils)  
 PEG\_ICOMPO signals should be routed with - max length = 500 mils - typical impedance = 14.5 m ohm (12 mils)

eDP\_COMP signals should be shorted near balls and routed with typical impedance <25m ohm

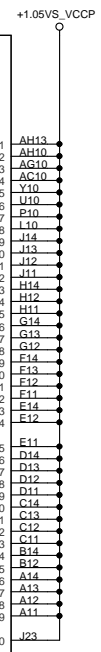
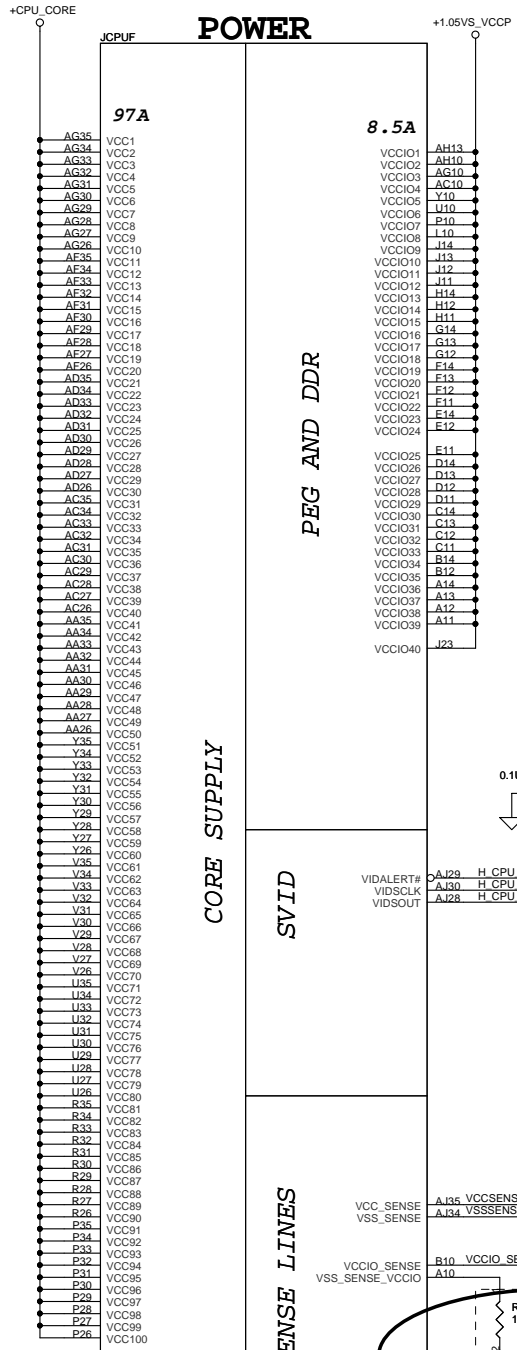


Reserve RC3 for HW Review demand

TYCO\_2013620-2\_IVY BRIDGE

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**POWER**

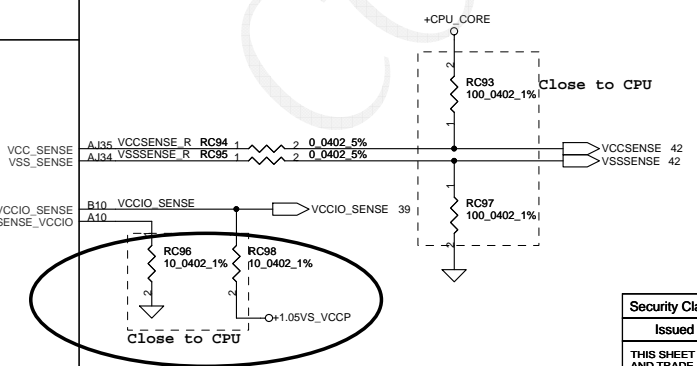
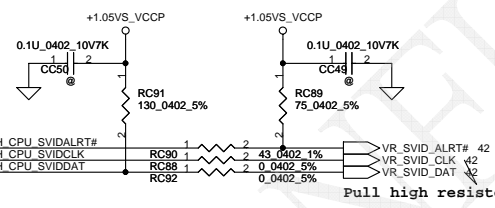
**CORE SUPPLY**

**SVID**

**SENSE LINES**

**PEG AND DDR**

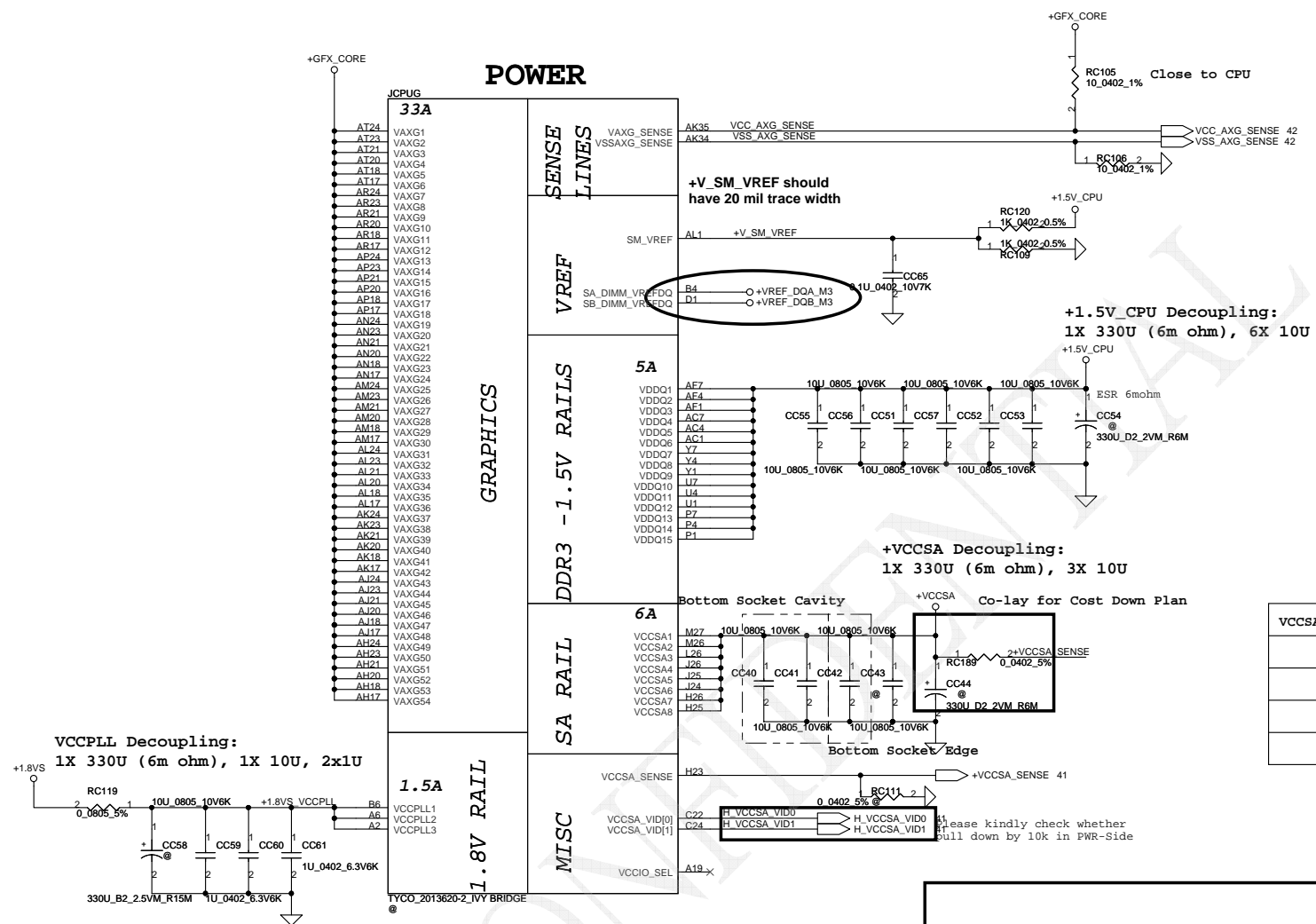
8.5A



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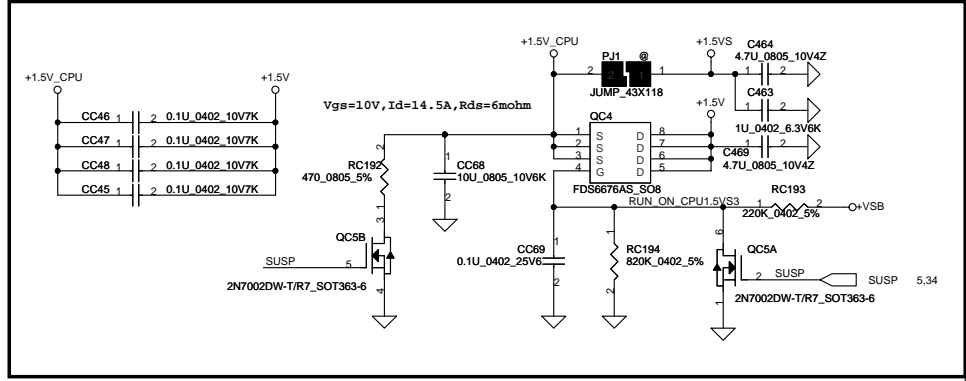
Compal Electronics, Inc.	
Sandy Bridge_POWER-1	
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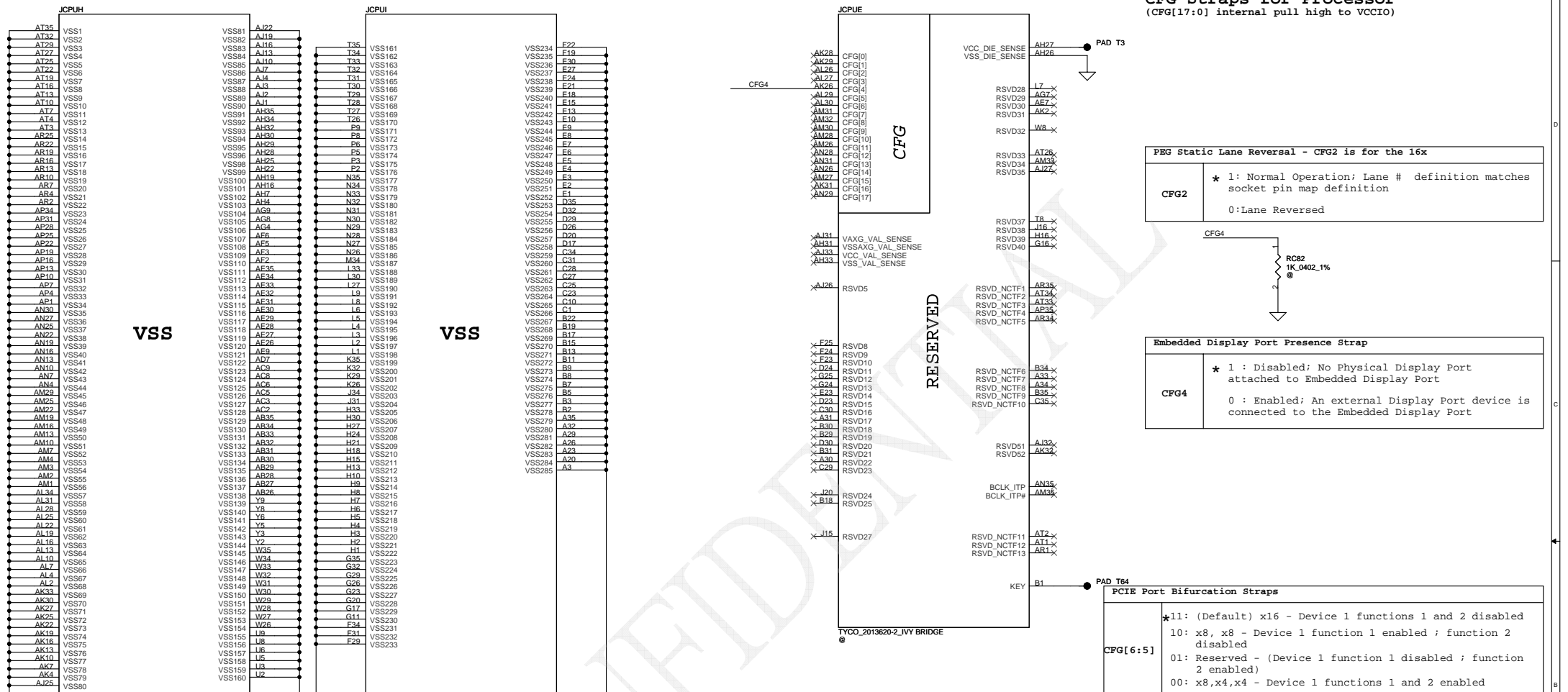


VCCSA_VID0	VCCSA_VID1	+VCCSA
0	0	0.90 V
0	1	0.80 V
1	0	0.75 V
1	1	0.65 V

For Sandy Bridge



**CFG Straps for Processor**  
(CFG[17:0] internal pull high to VCCIO)



**CFG2**

\* 1: Normal Operation; Lane # definition matches socket pin map definition  
0: Lane Reversed

**CFG4**

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

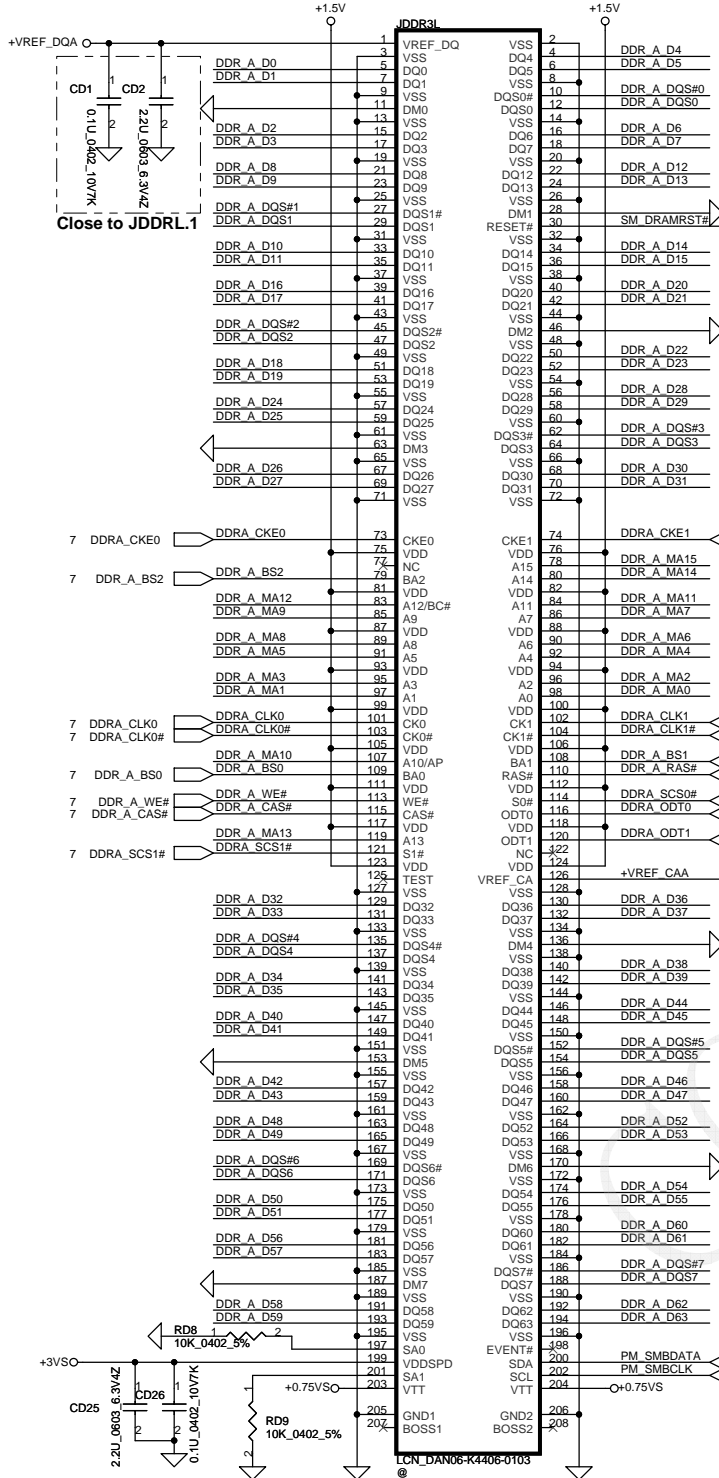
**CFG[6:5]**

\* 11: (Default) x16 - Device 1 functions 1 and 2 disabled  
10: x8, x8 - Device 1 function 1 enabled ; function 2 disabled  
01: Reserved - (Device 1 function 1 disabled ; function 2 enabled)  
00: x8,x4,x4 - Device 1 functions 1 and 2 enabled

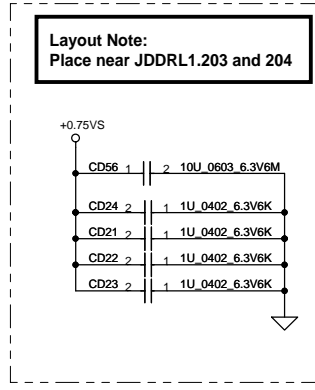
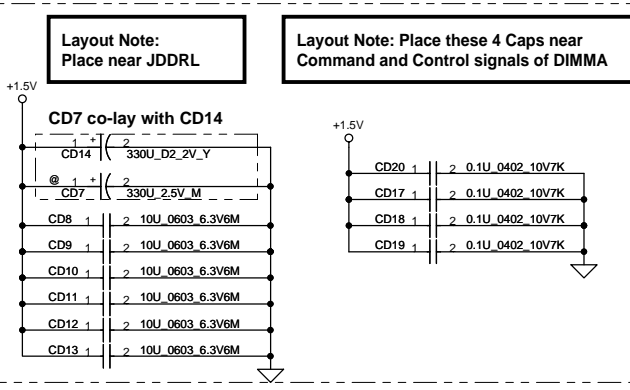
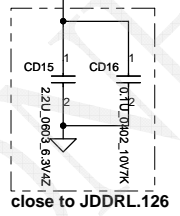
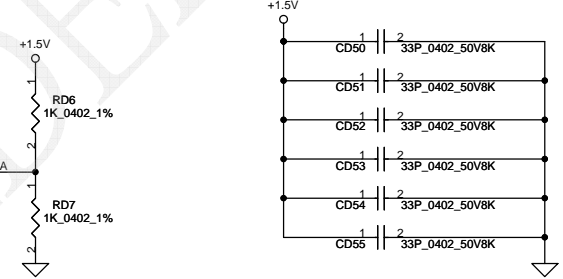
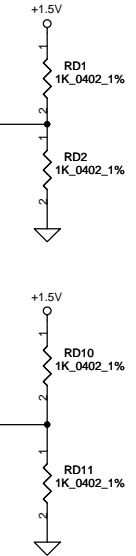
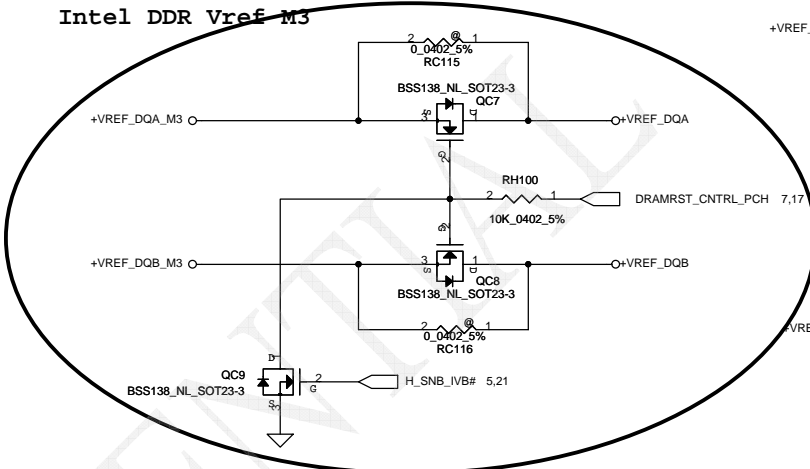
**CFG7**

1: (Default) PEG Train immediately following xxRESETB de assertion  
0: PEG Wait for BIOS for training

# DDR3 SO-DIMM A Reverse Type

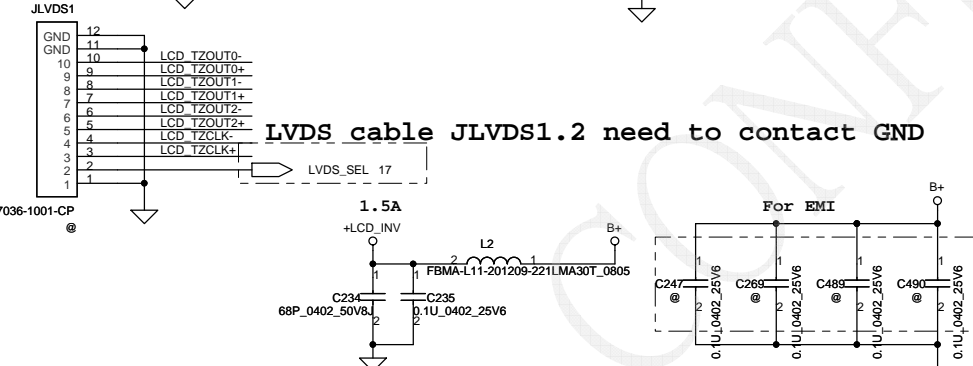
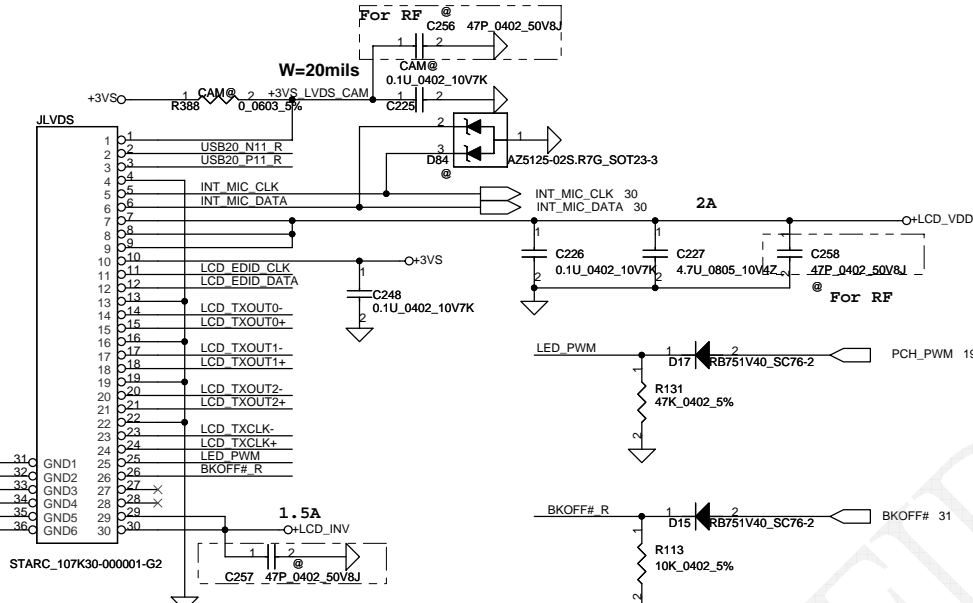
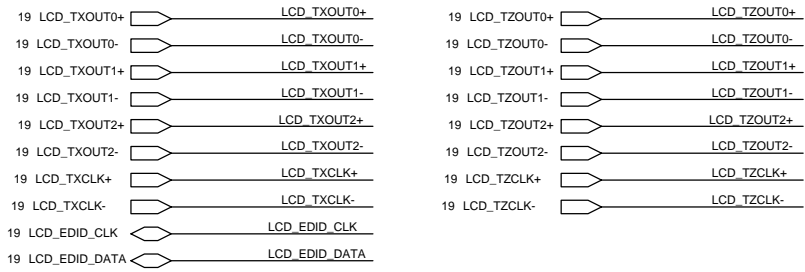


## Intel DDR Vref M3

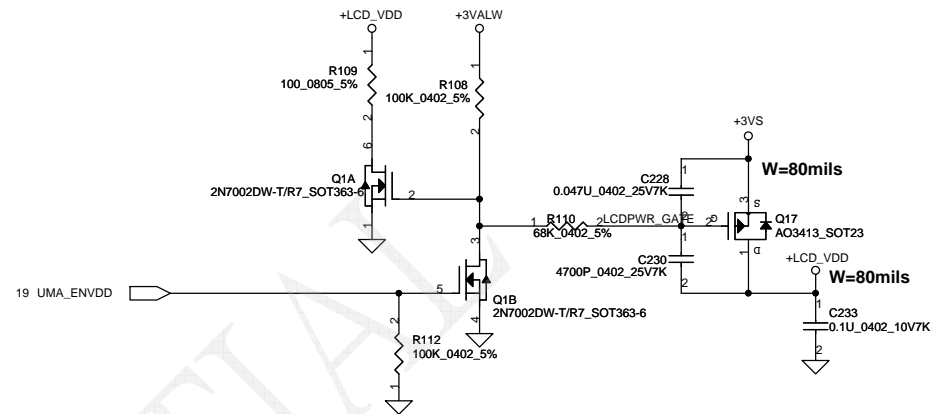


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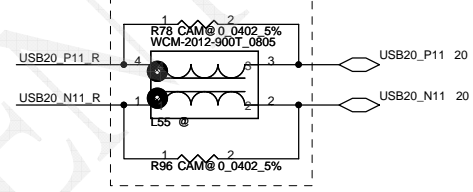




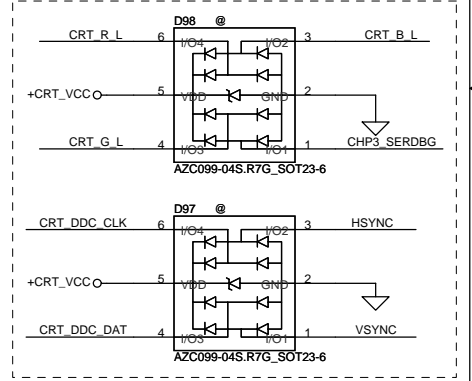
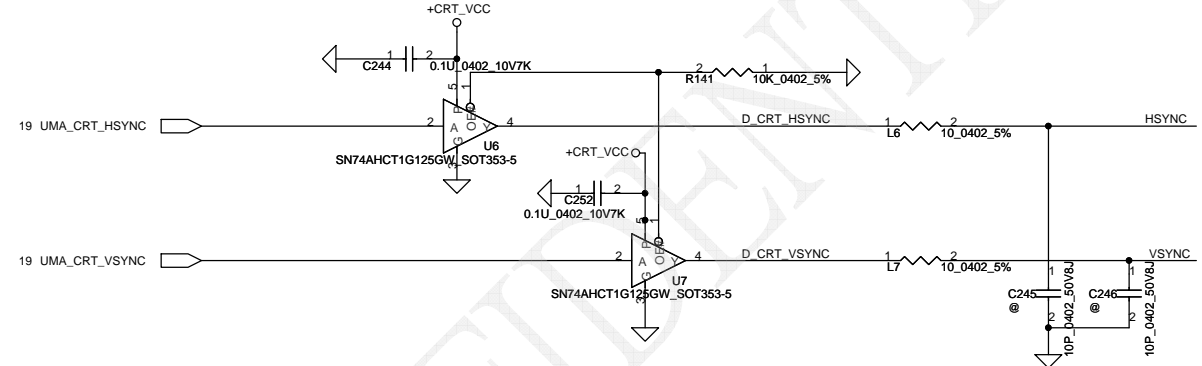
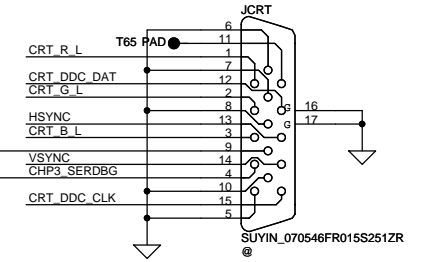
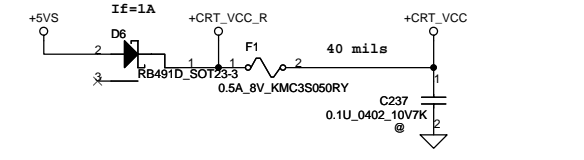
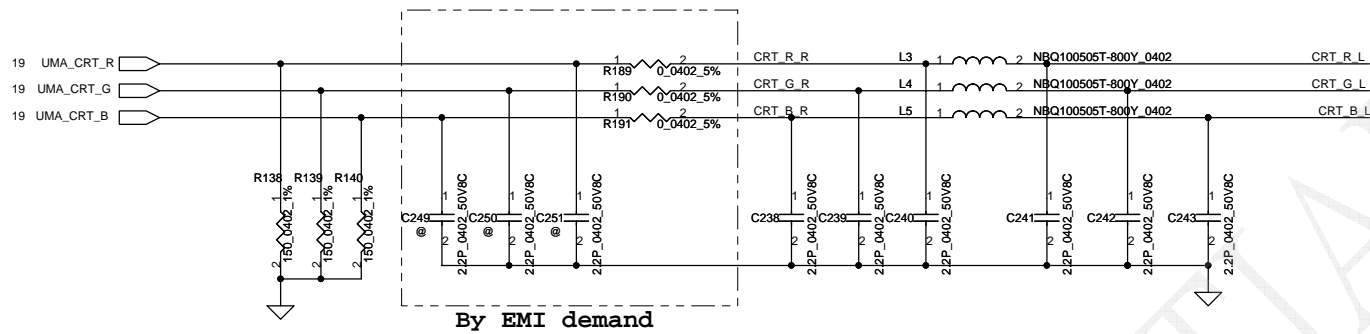
LVDS cable JLVD1.2 need to contact GND



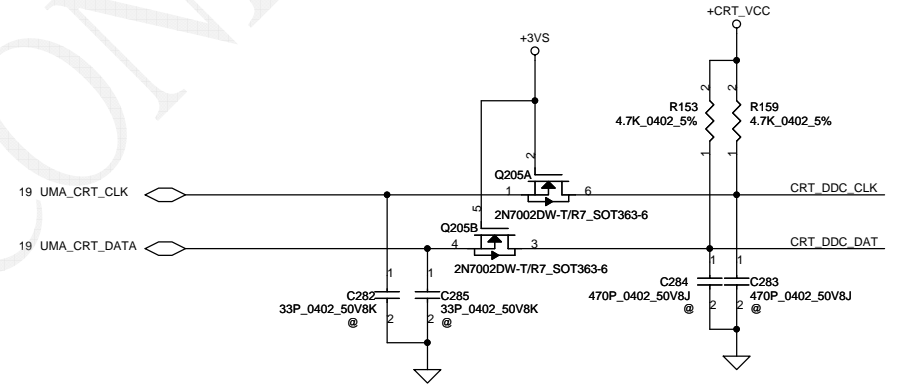
Reserve for EMI request



# CRT CONNECTOR

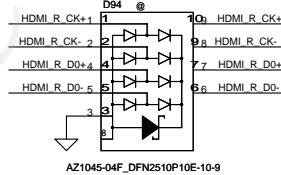
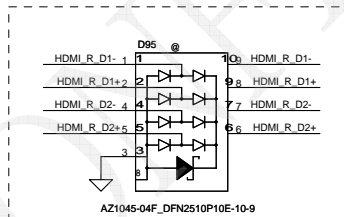
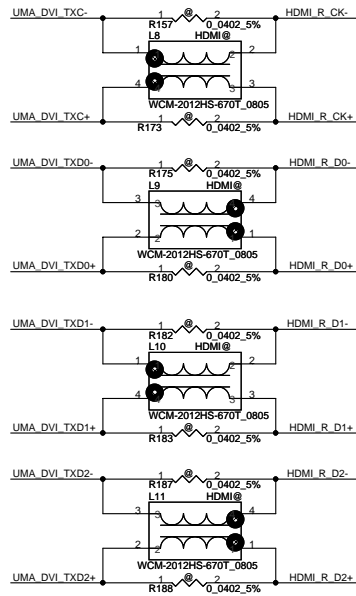
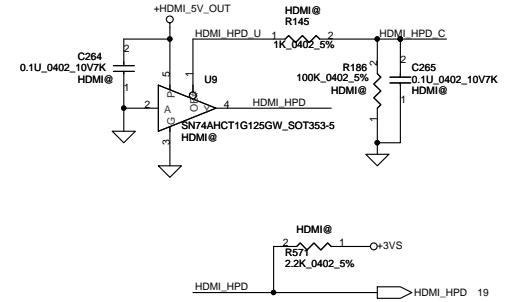
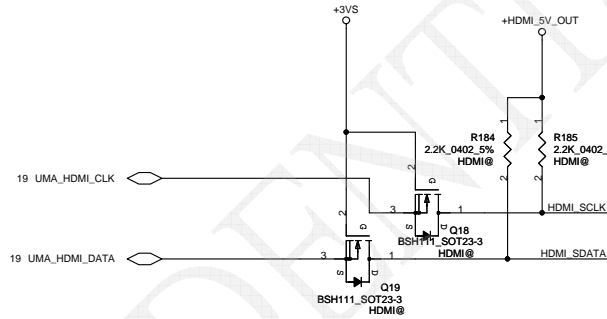


2/9: Add for ESD request

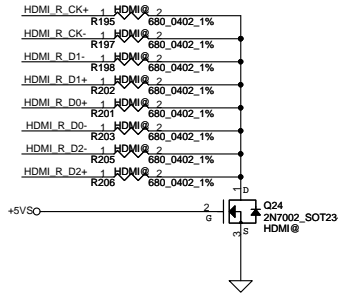


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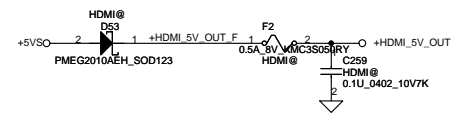
19	UMA_HDMI_TXC+	CV308	1	2	0.1U_0402_10V7K	HDMI@	UMA_DVI_TXC+
19	UMA_HDMI_TXC-	CV304	1	2	0.1U_0402_10V7K	HDMI@	UMA_DVI_TXC-
19	UMA_HDMI_TX0+	CV306	1	2	0.1U_0402_10V7K	HDMI@	UMA_DVI_TXD0+
19	UMA_HDMI_TX0-	CV302	1	2	0.1U_0402_10V7K	HDMI@	UMA_DVI_TXD0-
19	UMA_HDMI_TX1+	CV303	1	2	0.1U_0402_10V7K	HDMI@	UMA_DVI_TXD1+
19	UMA_HDMI_TX1-	CV301	1	2	0.1U_0402_10V7K	HDMI@	UMA_DVI_TXD1-
19	UMA_HDMI_TX2+	CV307	1	2	0.1U_0402_10V7K	HDMI@	UMA_DVI_TXD2+
19	UMA_HDMI_TX2-	CV305	1	2	0.1U_0402_10V7K	HDMI@	UMA_DVI_TXD2-



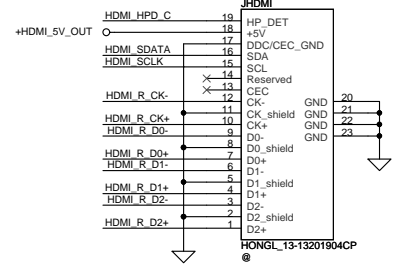
2/9: Add for ESD request



2/9: Add for ESD request



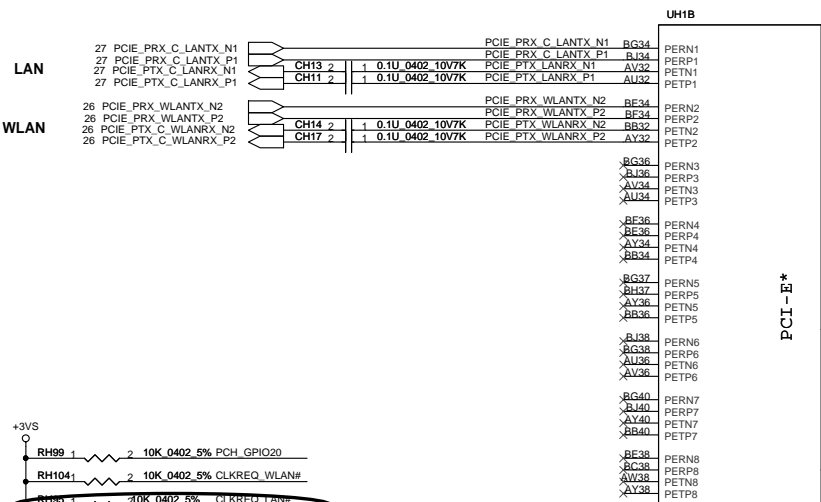
### HDMI Connector



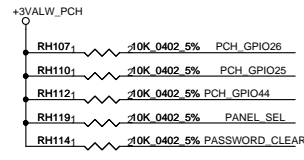
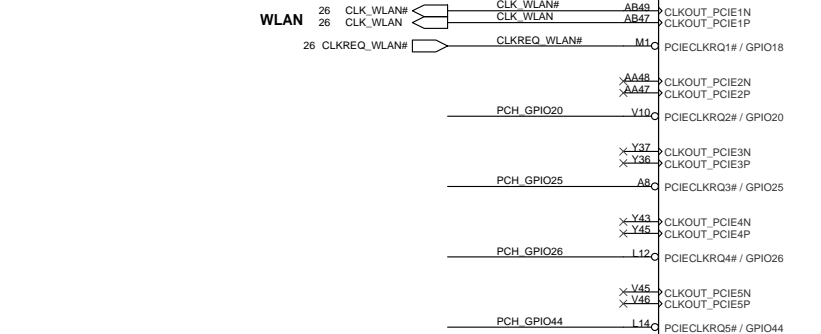
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Issued Date	2010/09/03	Deciphered Date	2012/12/31	HDMI Conn./CEC		
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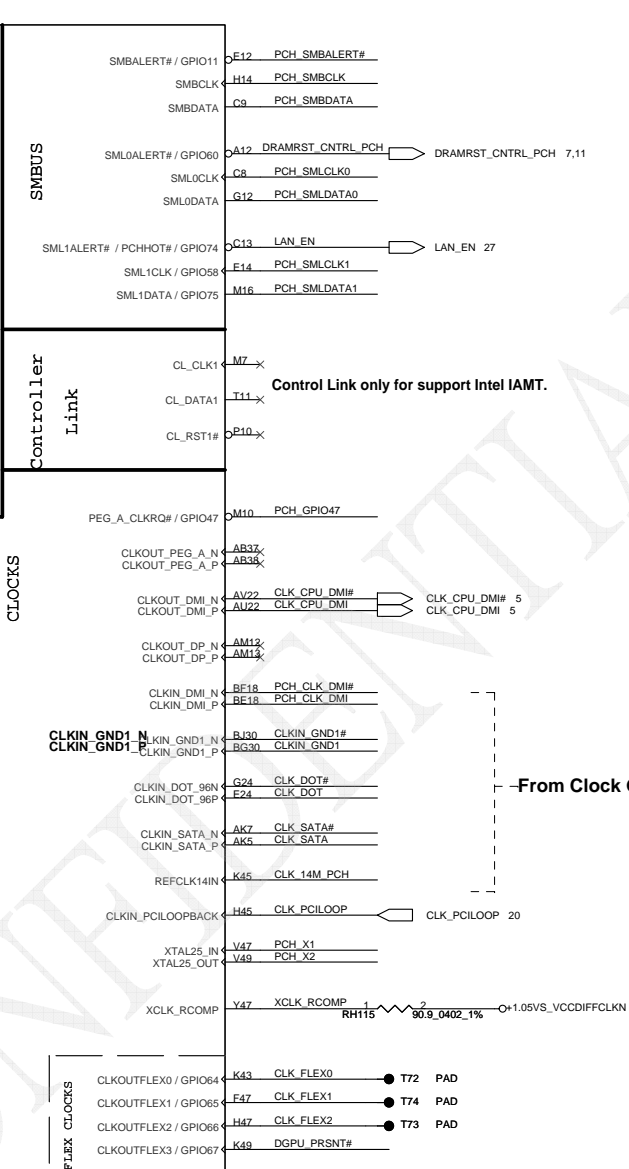
Intel Spec:  
**PCIECLK\_RQ0# is suspend well,**  
 but we pull high to +3VS  
 for LAN en/disable function



LVDS_SEL	H	L
Channel	Single (Default)	Dual

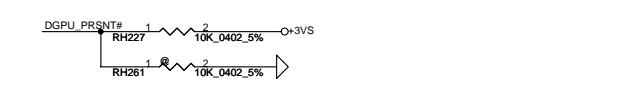
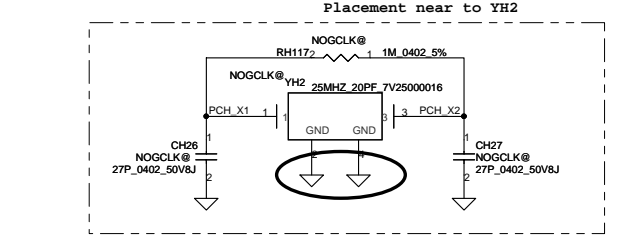
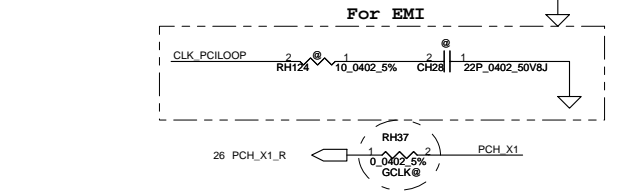
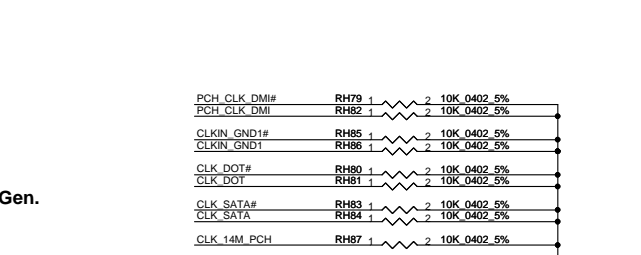
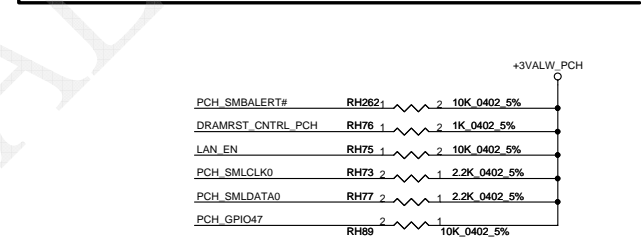
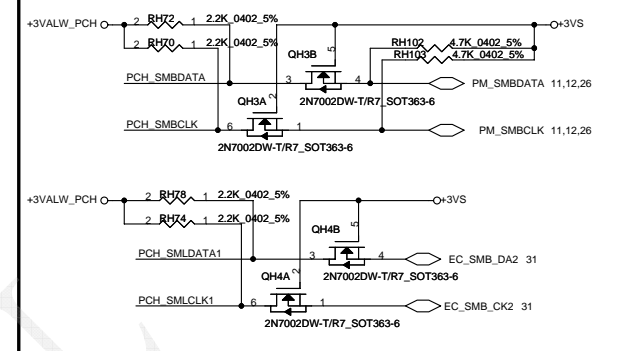
PANEL_SEL	H	L
Channel	LVDS	EDP

DGPU_PRSENT#	H	L
M/B SKU	UMA	DIS/OPT

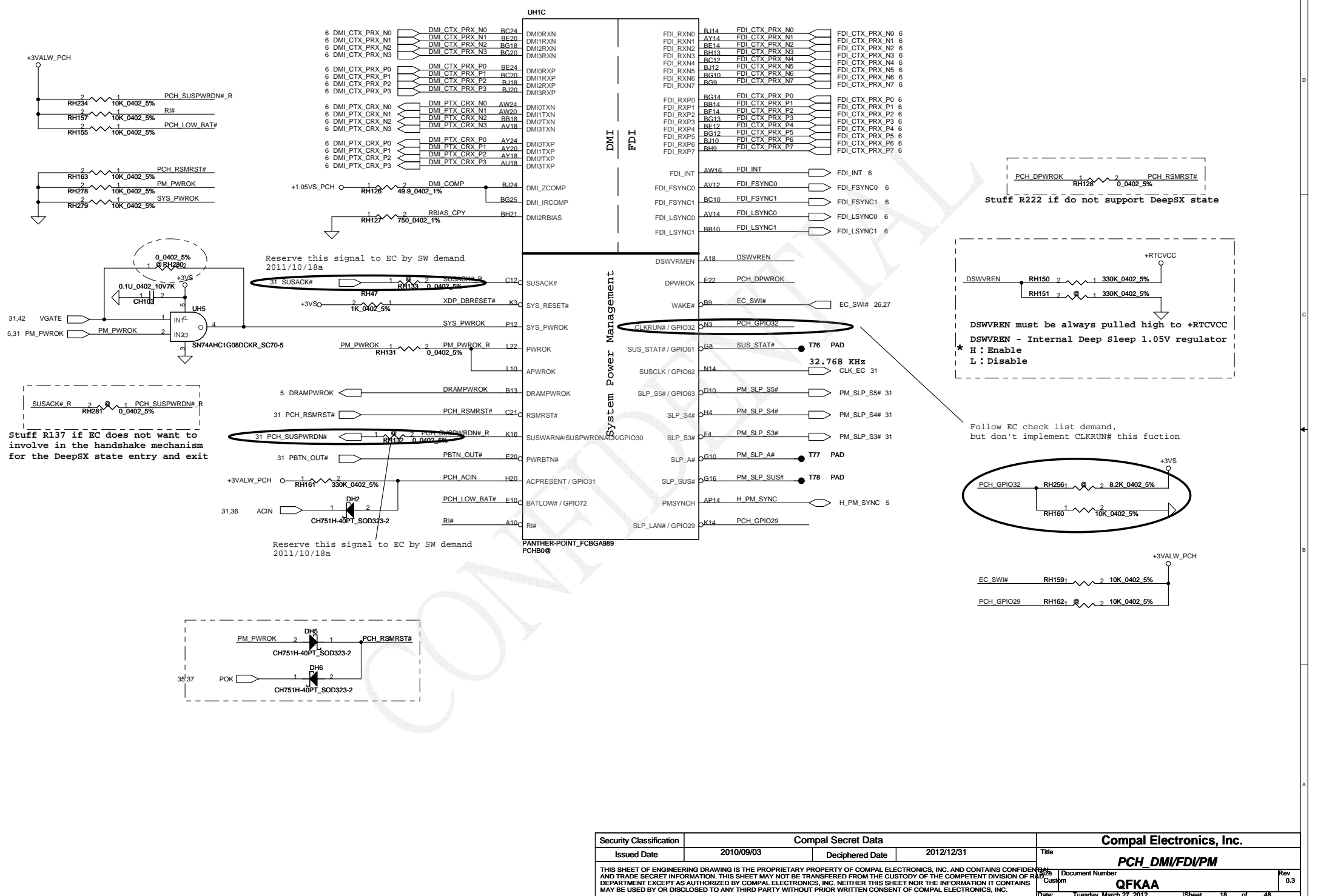


Control Link only for support Intel IAMT.

From Clock Gen.



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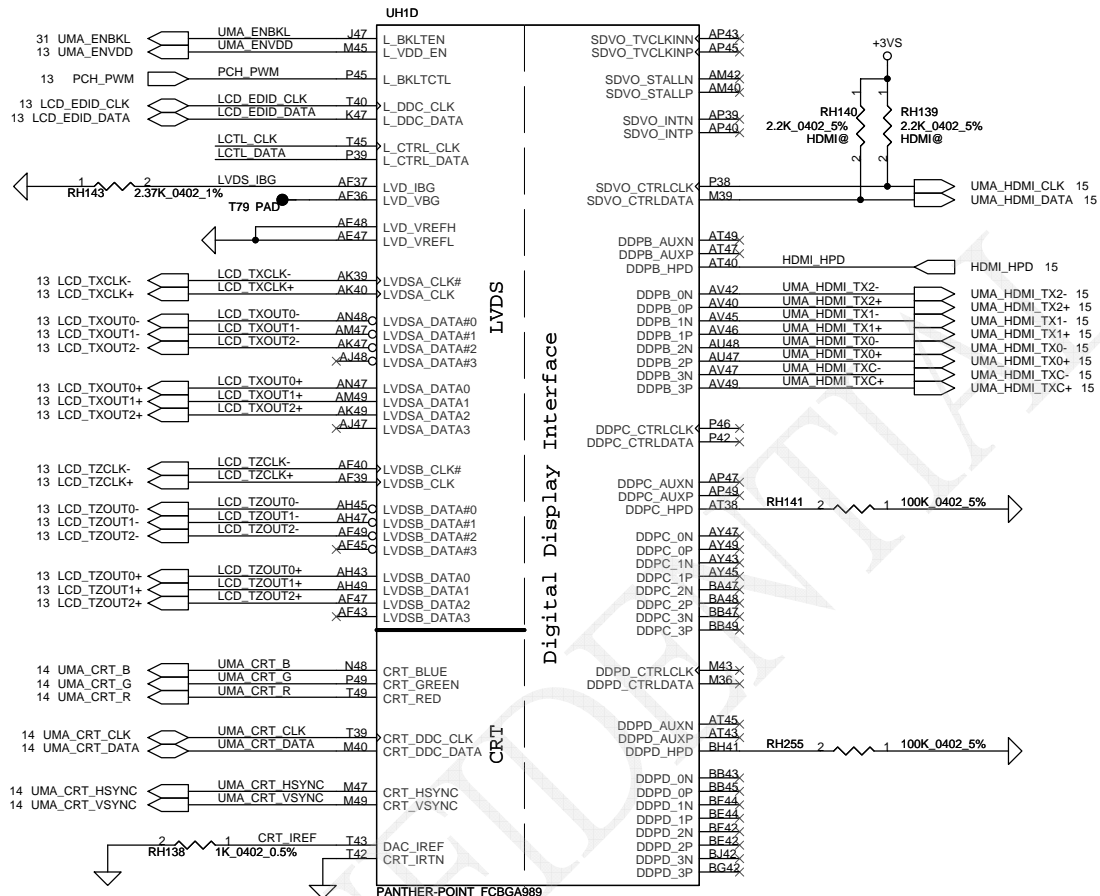
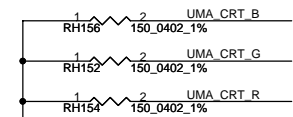
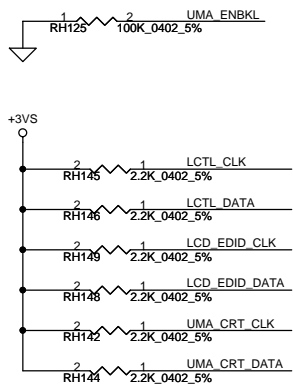
stuff R137 if EC does not want to involve in the handshake mechanism for the DeepSX state entry and exit

stuff R222 if do not support DeepSX state

DSWVREN must be always pulled high to +RTCVCC  
 \* H : Enable  
 L : Disable

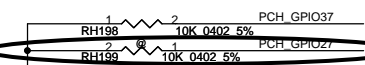
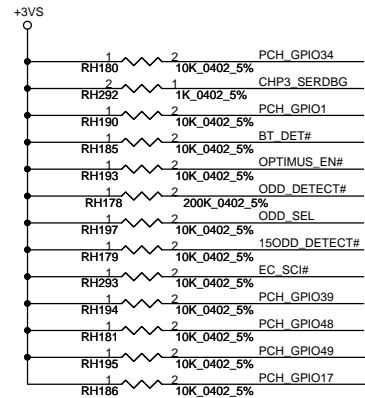
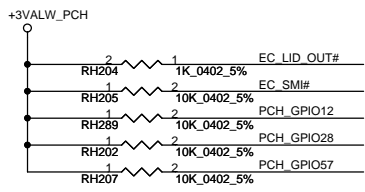
Follow EC check list demand, but don't implement CLKRUN# this function

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Title	PCH DMI/FDI/PM		Document Number	Rev
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ODD_SEL	14"	15"/17"
GPIO6	High	Low
SATA port	Port 2	Port 4

Follow Compal ORB and Intel Check list 460603 V1.5

**GPIO28**  
On-Die PLL Voltage Regulator  
H: Enable  
L: Disable

**3D\_DET#**

3D_DET#	H	L
SKU	Non3D	3D

**GPIO8**  
Integrated Clock Chip Enable (Removed)  
H: Disable  
\* L: Enable

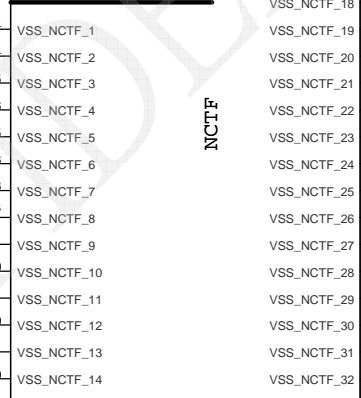
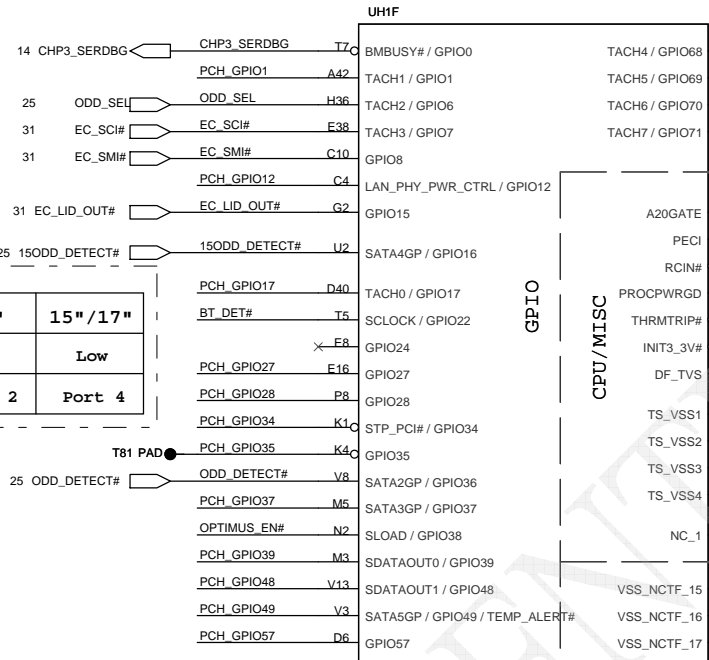
Integrated clock enable functionality is achieved by soft-strap  
The current default is clock enable

**OPTIMUS\_EN#**

OPTIMUS_EN#	H	L
SKU	NonOPT	Optimus

**HDD2\_DET#**

HDD2_DET#	H	L
SKU	ONE HDD	TWO HDD

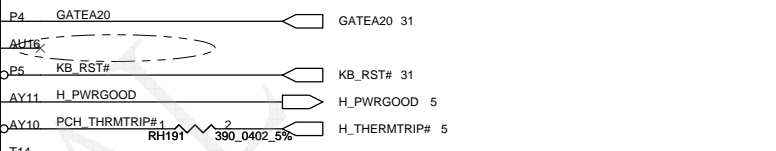
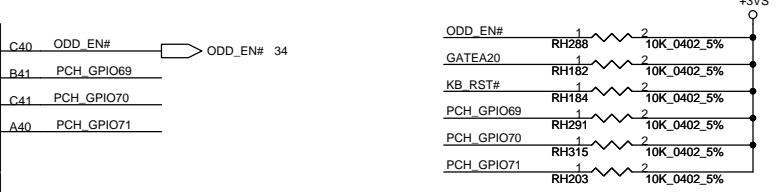


PANTHER-POINT\_FCBGA989  
PCHB0@

GPIO

CPU/MLSC

NCTF

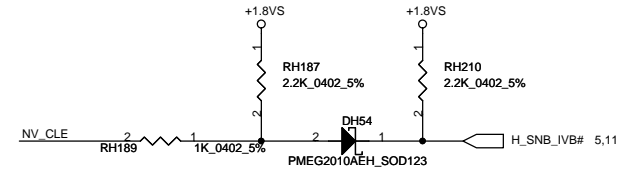


This signal has weak internal pull-up, can't be pulled low

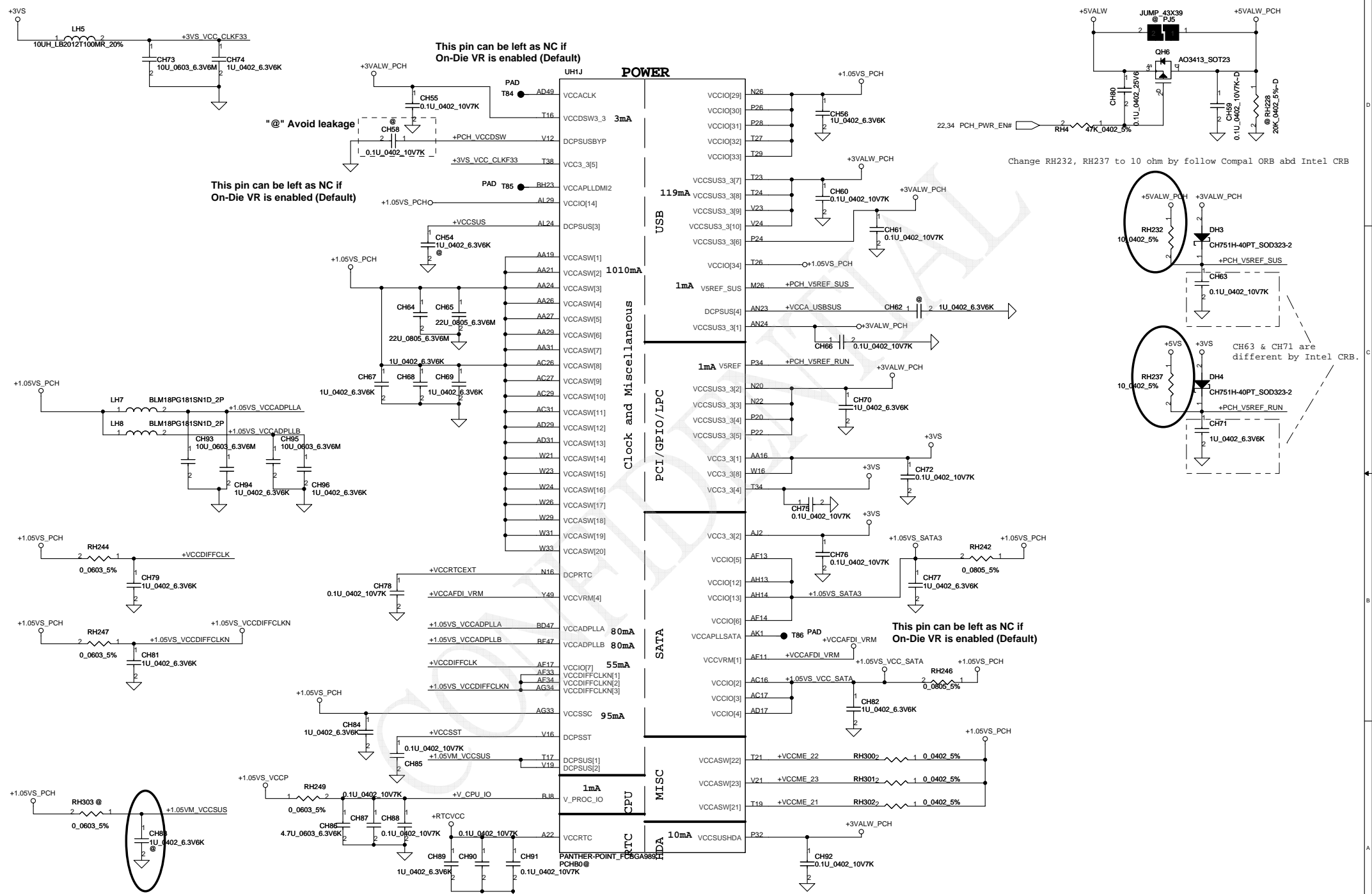


**DMI & FDI Termination Voltage**

NV_CLE	Set to VCC when HIGH
NV_CLE	Set to VSS when LOW







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				PCH_POWER-2	
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UH1H		UH1H	
AA17	VSS[1]	VSS[80]	AK38
AA2	VSS[2]	VSS[81]	AK4
AA3	VSS[3]	VSS[82]	AK42
AA33	VSS[4]	VSS[83]	AK46
AA34	VSS[5]	VSS[84]	AK8
AB11	VSS[6]	VSS[85]	AL16
AB14	VSS[7]	VSS[86]	AL17
AB39	VSS[8]	VSS[87]	AL19
AB4	VSS[9]	VSS[88]	AL2
AB43	VSS[10]	VSS[89]	AL21
AB5	VSS[11]	VSS[90]	AL26
AB7	VSS[12]	VSS[91]	AL27
AC19	VSS[13]	VSS[92]	AL31
AC2	VSS[14]	VSS[93]	AL33
AC21	VSS[15]	VSS[94]	AL34
AC24	VSS[16]	VSS[95]	AL48
AC33	VSS[17]	VSS[96]	AM11
AC34	VSS[18]	VSS[97]	AM14
AC48	VSS[19]	VSS[98]	AM38
AD10	VSS[20]	VSS[99]	AM39
AD11	VSS[21]	VSS[100]	AM43
AD12	VSS[22]	VSS[101]	AM45
AD13	VSS[23]	VSS[102]	AM46
AD19	VSS[24]	VSS[103]	AM7
AD24	VSS[25]	VSS[104]	AN2
AD26	VSS[26]	VSS[105]	AN29
AD27	VSS[27]	VSS[106]	AN3
AD33	VSS[28]	VSS[107]	AN31
AD34	VSS[29]	VSS[108]	AN3
AD36	VSS[30]	VSS[109]	AP12
AD37	VSS[31]	VSS[110]	AP19
AD38	VSS[32]	VSS[111]	AP28
AD39	VSS[33]	VSS[112]	AP30
AD4	VSS[34]	VSS[113]	AP32
AD40	VSS[35]	VSS[114]	AP38
AD42	VSS[36]	VSS[115]	AP4
AD43	VSS[37]	VSS[116]	AP22
AD45	VSS[38]	VSS[117]	AP46
AD46	VSS[39]	VSS[118]	AP8
AD8	VSS[40]	VSS[119]	AP2
AE2	VSS[41]	VSS[120]	AR48
AE3	VSS[42]	VSS[121]	AT11
AF10	VSS[43]	VSS[122]	AT13
AF12	VSS[44]	VSS[123]	AT18
AF14	VSS[45]	VSS[124]	AT22
AF16	VSS[46]	VSS[125]	AT26
AF19	VSS[47]	VSS[126]	AT28
AF24	VSS[48]	VSS[127]	AT30
AF28	VSS[49]	VSS[128]	AT34
AF27	VSS[50]	VSS[129]	AT39
AF29	VSS[51]	VSS[130]	AT39
AF31	VSS[52]	VSS[131]	AT42
AF38	VSS[53]	VSS[132]	AT46
AF4	VSS[54]	VSS[133]	AT7
AF42	VSS[55]	VSS[134]	AU24
AF46	VSS[56]	VSS[135]	AU30
AF5	VSS[57]	VSS[136]	AV16
AF7	VSS[58]	VSS[137]	AV20
AF8	VSS[59]	VSS[138]	AV24
AG19	VSS[60]	VSS[139]	AV30
AG2	VSS[61]	VSS[140]	AV38
AG31	VSS[62]	VSS[141]	AV4
AG48	VSS[63]	VSS[142]	AV43
AH11	VSS[64]	VSS[143]	AV4
AH36	VSS[65]	VSS[144]	AW14
AH39	VSS[66]	VSS[145]	AW18
AH40	VSS[67]	VSS[146]	AW2
AH42	VSS[68]	VSS[147]	AW22
AH46	VSS[69]	VSS[148]	AW26
AH7	VSS[70]	VSS[149]	AW28
AJ19	VSS[71]	VSS[150]	AW32
AJ21	VSS[72]	VSS[151]	AW34
AJ24	VSS[73]	VSS[152]	AW36
AJ3	VSS[74]	VSS[153]	AW40
AJ34	VSS[75]	VSS[154]	AW48
AK12	VSS[76]	VSS[155]	AV11
AK3	VSS[77]	VSS[156]	AV12
	VSS[78]	VSS[157]	AV22
	VSS[79]	VSS[158]	AV28

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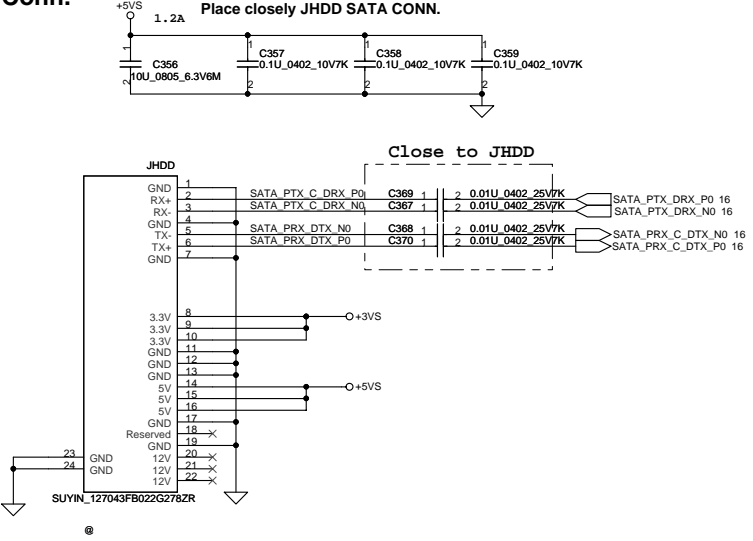
UH1		UH1	
AY4	VSS[159]	VSS[259]	H46
AY42	VSS[160]	VSS[260]	K48
AY46	VSS[161]	VSS[261]	K28
AY8	VSS[162]	VSS[262]	K39
B11	VSS[163]	VSS[263]	K46
B15	VSS[164]	VSS[264]	K7
B19	VSS[165]	VSS[265]	L18
B23	VSS[166]	VSS[266]	L2
B27	VSS[167]	VSS[267]	L20
B31	VSS[168]	VSS[268]	L26
B35	VSS[169]	VSS[269]	L28
B39	VSS[170]	VSS[270]	L36
B7	VSS[171]	VSS[271]	L48
F45	VSS[172]	VSS[272]	M12
AL17	VSS[173]	VSS[273]	E16
BB16	VSS[174]	VSS[274]	M18
BB20	VSS[175]	VSS[275]	M22
BB22	VSS[176]	VSS[276]	M24
AL23	VSS[177]	VSS[277]	M30
BB28	VSS[178]	VSS[278]	M32
BB30	VSS[179]	VSS[279]	M34
BB38	VSS[180]	VSS[280]	M38
BB4	VSS[181]	VSS[281]	M4
BB46	VSS[182]	VSS[282]	M42
BC14	VSS[183]	VSS[283]	M46
BC18	VSS[184]	VSS[284]	M8
BC2	VSS[185]	VSS[285]	N18
BC22	VSS[186]	VSS[286]	P30
BC26	VSS[187]	VSS[287]	N47
BC32	VSS[188]	VSS[288]	P11
BC34	VSS[189]	VSS[289]	P18
BC36	VSS[190]	VSS[290]	T33
BC40	VSS[191]	VSS[291]	P40
BC42	VSS[192]	VSS[292]	P43
BC48	VSS[193]	VSS[293]	P47
AN3	VSS[194]	VSS[294]	P7
AN31	VSS[195]	VSS[295]	R2
BE22	VSS[196]	VSS[296]	R48
BE26	VSS[197]	VSS[297]	T12
BE28	VSS[198]	VSS[298]	T37
BE30	VSS[199]	VSS[299]	T4
BE32	VSS[200]	VSS[300]	W34
BE38	VSS[201]	VSS[301]	T46
BE4	VSS[202]	VSS[302]	T47
BE42	VSS[203]	VSS[303]	T8
BE44	VSS[204]	VSS[304]	V11
BE46	VSS[205]	VSS[305]	V17
BE48	VSS[206]	VSS[306]	V26
BE50	VSS[207]	VSS[307]	V27
BE52	VSS[208]	VSS[308]	V29
BE58	VSS[209]	VSS[309]	V31
BE60	VSS[210]	VSS[310]	V36
BE62	VSS[211]	VSS[311]	V39
BE64	VSS[212]	VSS[312]	V43
BE68	VSS[213]	VSS[313]	V7
BE72	VSS[214]	VSS[314]	W17
BE74	VSS[215]	VSS[315]	W19
BE76	VSS[216]	VSS[316]	W2
BE78	VSS[217]	VSS[317]	W27
BE8	VSS[218]	VSS[318]	W48
BE82	VSS[219]	VSS[319]	Y12
BE84	VSS[220]	VSS[320]	Y38
BE86	VSS[221]	VSS[321]	Y4
BE88	VSS[222]	VSS[322]	Y46
BE92	VSS[223]	VSS[323]	Y8
BE94	VSS[224]	VSS[324]	RG29
BE96	VSS[225]	VSS[325]	N24
BE98	VSS[226]	VSS[326]	AJ3
BE100	VSS[227]	VSS[327]	AD47
BE102	VSS[228]	VSS[328]	BE10
BE104	VSS[229]	VSS[329]	BE10
BE106	VSS[230]	VSS[330]	BE10
BE108	VSS[231]	VSS[331]	BE10
BE110	VSS[232]	VSS[332]	BE10
BE112	VSS[233]	VSS[333]	BE10
BE114	VSS[234]	VSS[334]	BE10
BE116	VSS[235]	VSS[335]	BE10
BE118	VSS[236]	VSS[336]	BE10
BE120	VSS[237]	VSS[337]	BE10
BE122	VSS[238]	VSS[338]	BE10
BE124	VSS[239]	VSS[339]	BE10
BE126	VSS[240]	VSS[340]	BE10
BE128	VSS[241]	VSS[341]	BE10
BE130	VSS[242]	VSS[342]	BE10
BE132	VSS[243]	VSS[343]	BE10
BE134	VSS[244]	VSS[344]	BE10
BE136	VSS[245]	VSS[345]	BE10
BE138	VSS[246]	VSS[346]	BE10
BE140	VSS[247]	VSS[347]	BE10
BE142	VSS[248]	VSS[348]	BE10
BE144	VSS[249]	VSS[349]	BE10
BE146	VSS[250]	VSS[350]	BE10
BE148	VSS[251]	VSS[351]	BE10
BE150	VSS[252]	VSS[352]	BE10
BE152	VSS[253]		
BE154	VSS[254]		
BE156	VSS[255]		
BE158	VSS[256]		
BE160	VSS[257]		
BE162	VSS[258]		

PANTHER-POINT\_FCBGA989  
PCHB0@

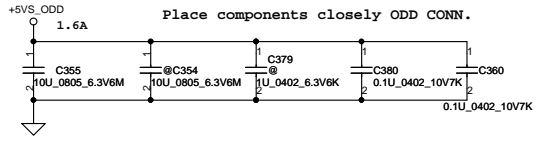
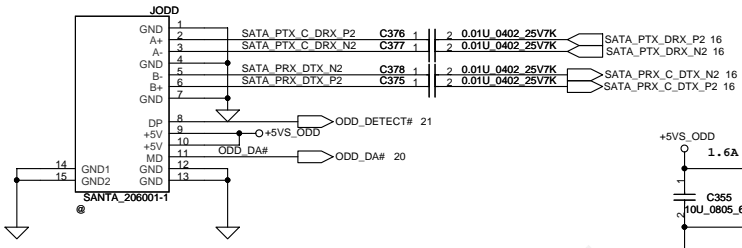
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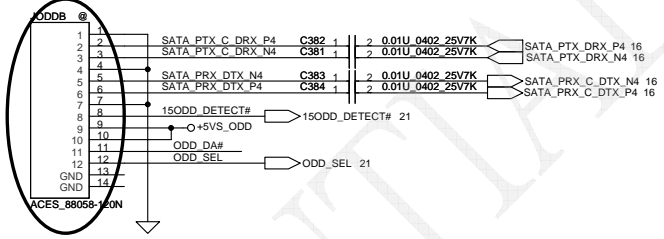
**SATA HDD Conn.**



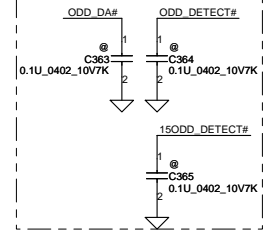
**SATA ODD Conn (for 14")**



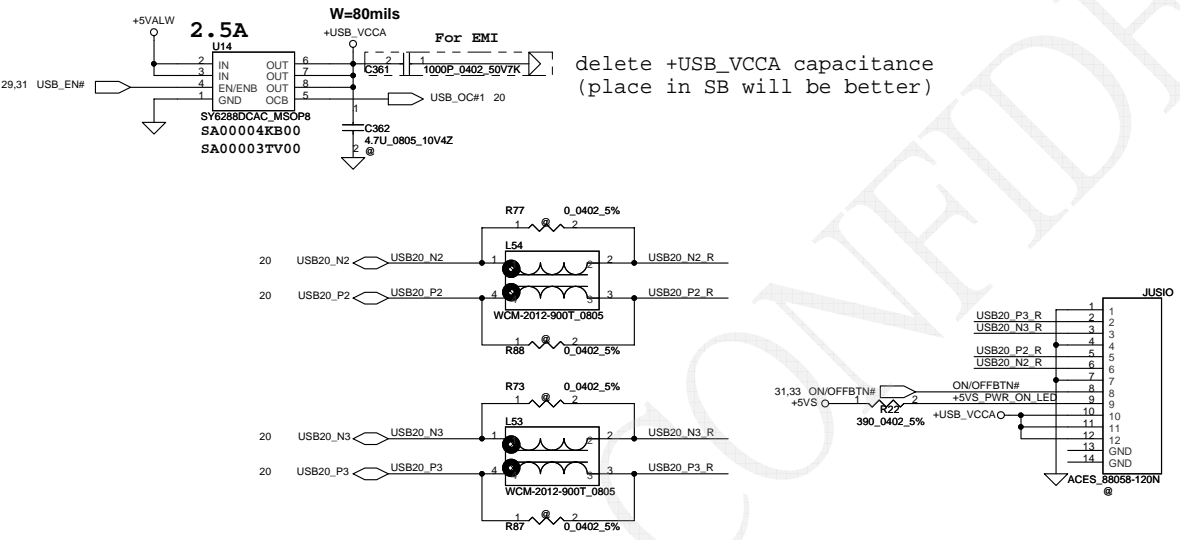
**SATA ODD Conn (for 15" 17")**



**Close to JODD (for EMI)**

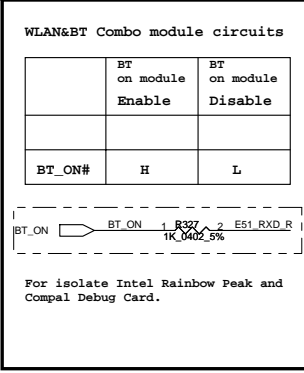
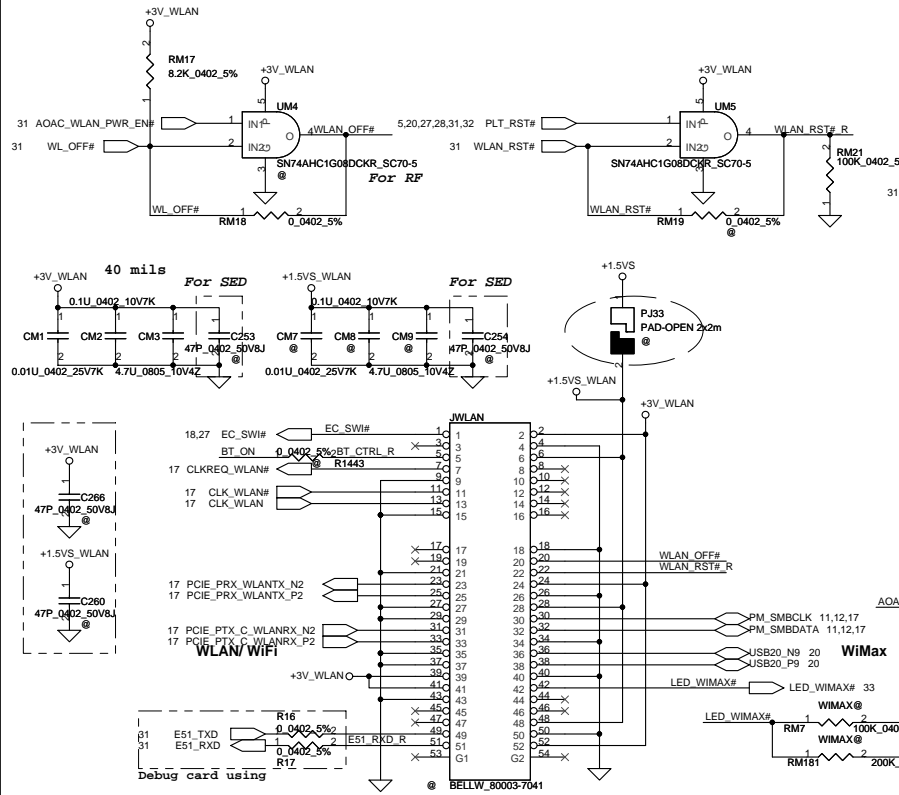


**Power Button & RUSB connector**

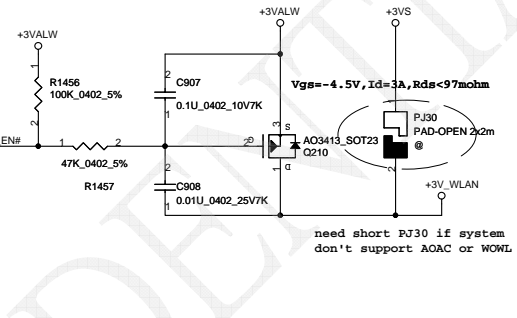


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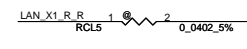
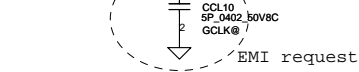
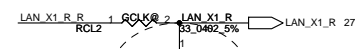
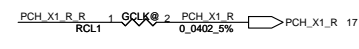
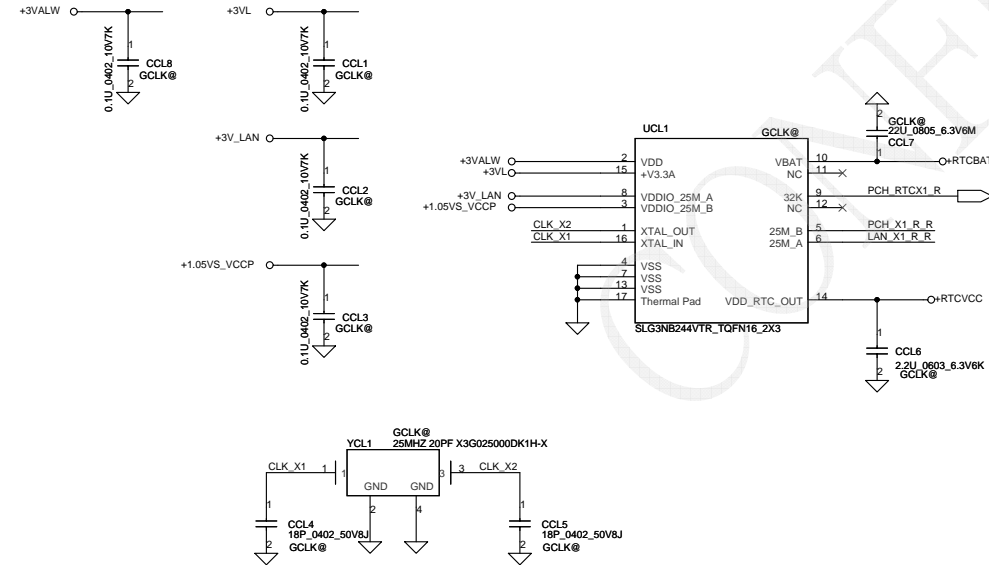
**Slot 1 Half PCIe Card-WLAN/ WiMax**



**+3VALW TO +3V\_WLAN for AOAC and WOWL**

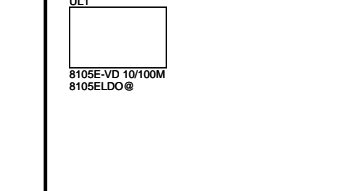
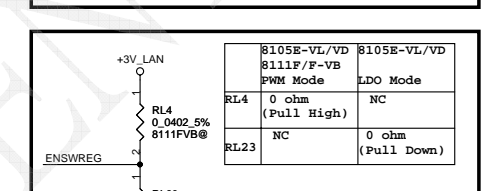
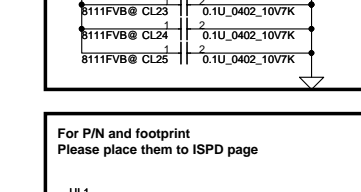
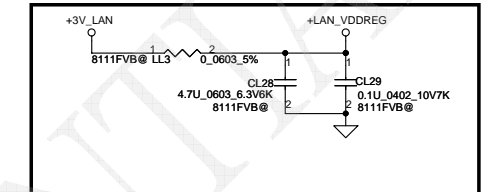
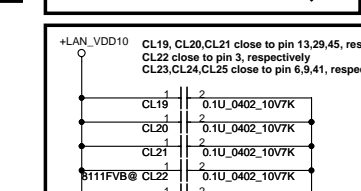
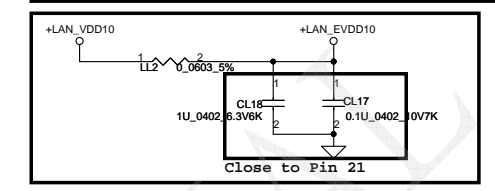
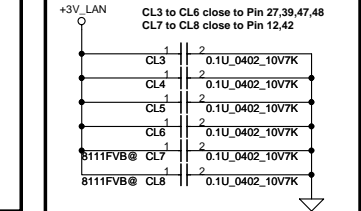
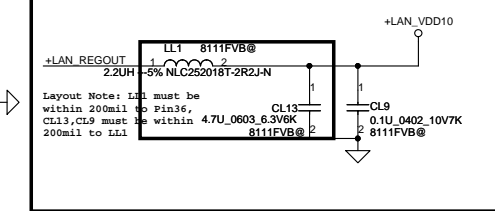
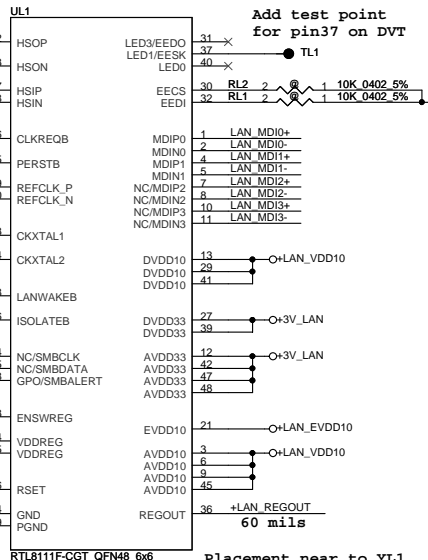
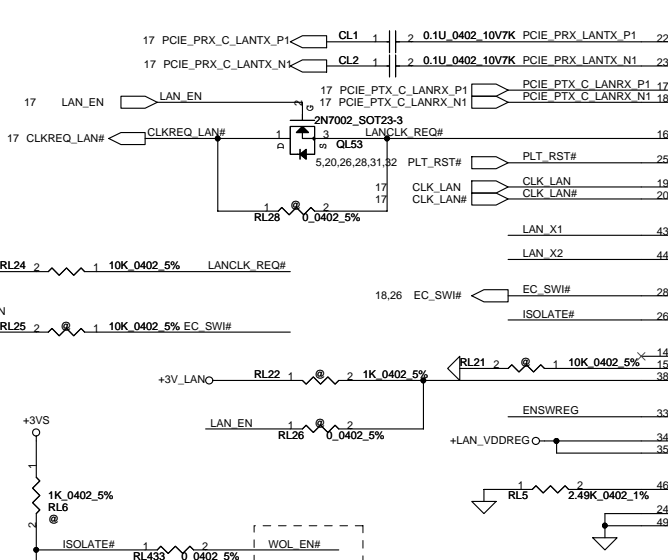


**Green Clock**

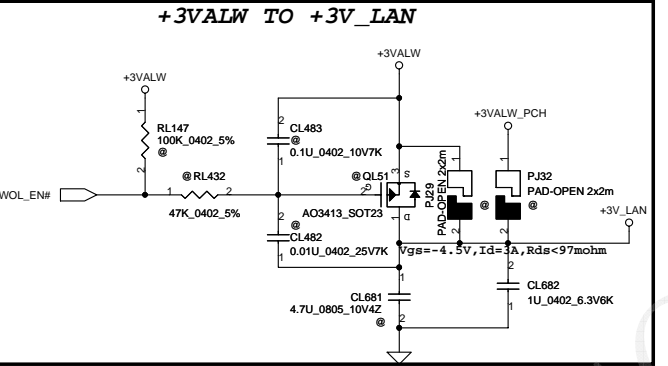


Reserved for Swing Level adjustment (Close GCLK side)

Security Classification	Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	PCIE-WLAN/JET/3G/TV/GCLK
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Size	Document Number	Rev	QFCAA	
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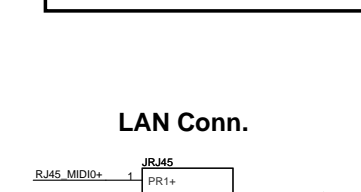
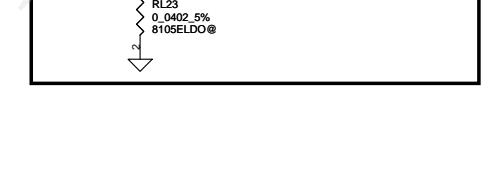
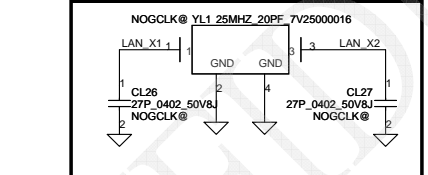


WOL_EN#	LOW	HIGH	S0	Sx Enable Wake up	Sx Disable Wake up
Pin14	NC	NC			
Pin15	NC	10K ohm PD			
Pin38	NC	1K ohm PH			



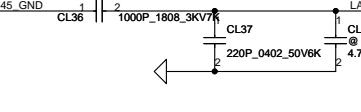
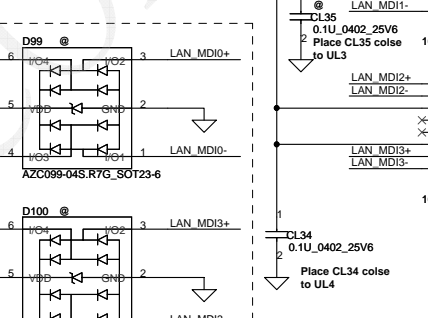
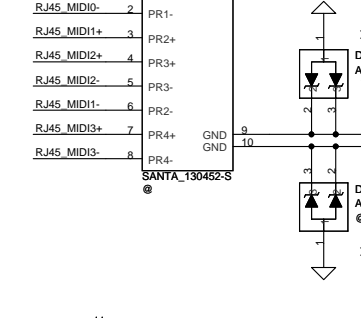
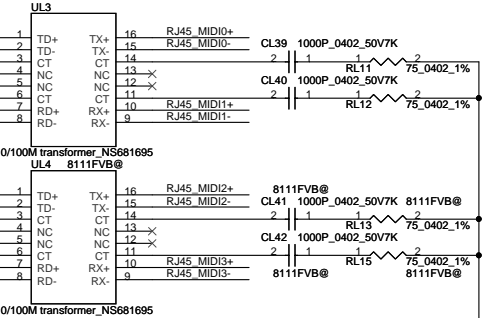
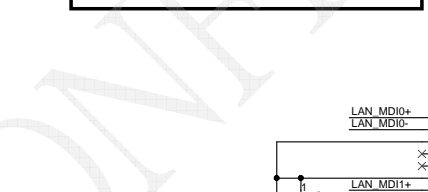
LAN	WOL	LAN_EN S0	ISOLATEB S0	Sx	Sx
0	0	0	0	1	1
0	1	0	0	1	1
1	0	1	1	1	1
1	1	1	1	1	0*

\* S3: after SUSP# assert low over 100ms  
S4/S5: after SYSON assert low over 100ms

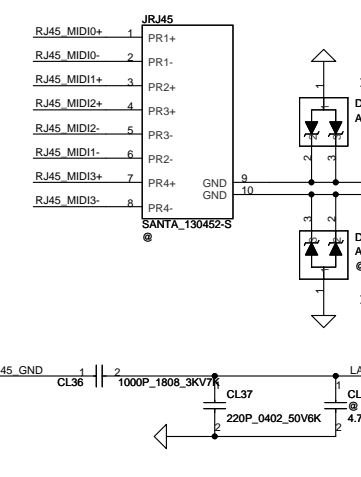


LAN	WOL	LAN_EN S0	ISOLATEB S0	Sx	Sx
0	0	0	0	1	1
0	1	0	0	1	1
1	0	1	1	1	1
1	1	1	1	1	0*

\* S3: after SUSP# assert low over 100ms  
S4/S5: after SYSON assert low over 100ms

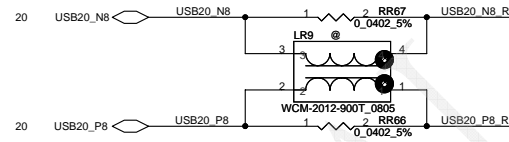
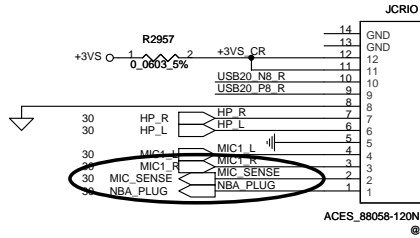


### LAN Conn.

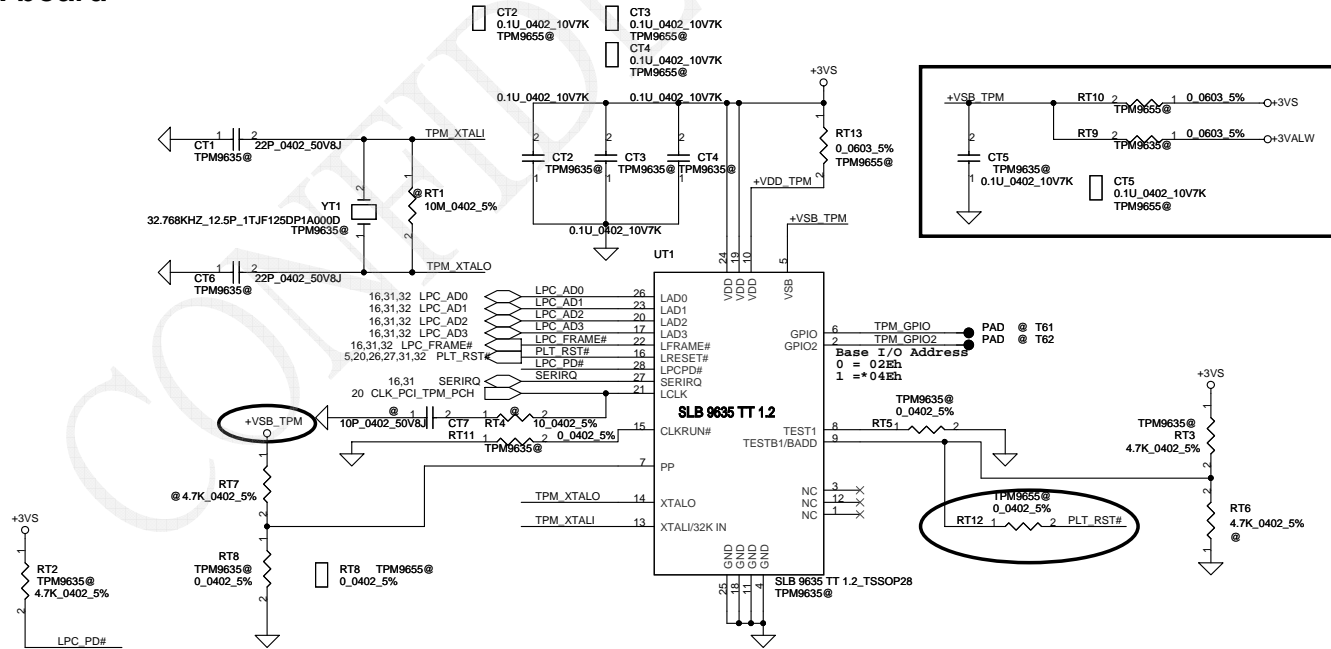


# CardReader Conn.

Add R2957 0 ohm to protect +3VS

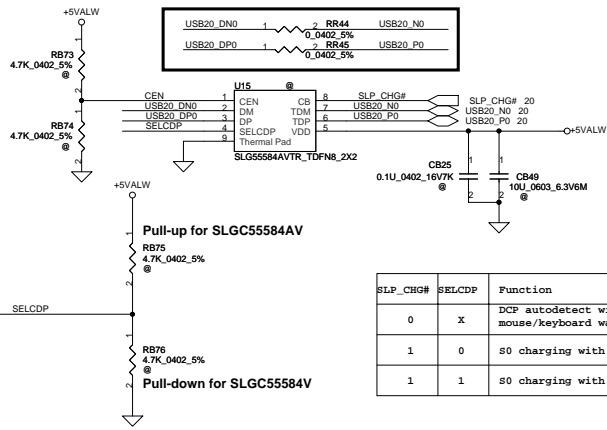


# TPM1.2 on board

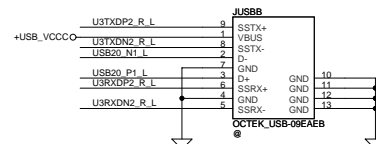
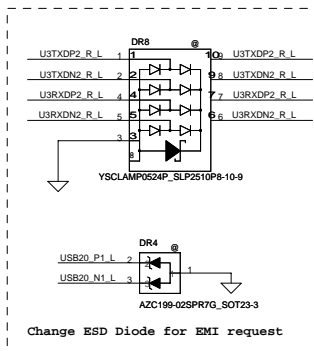
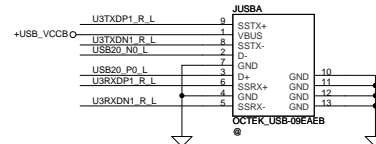
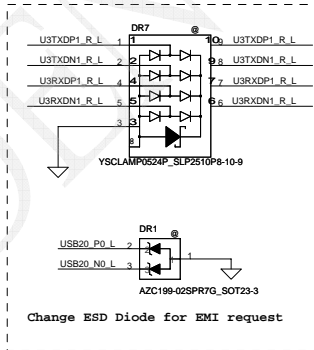
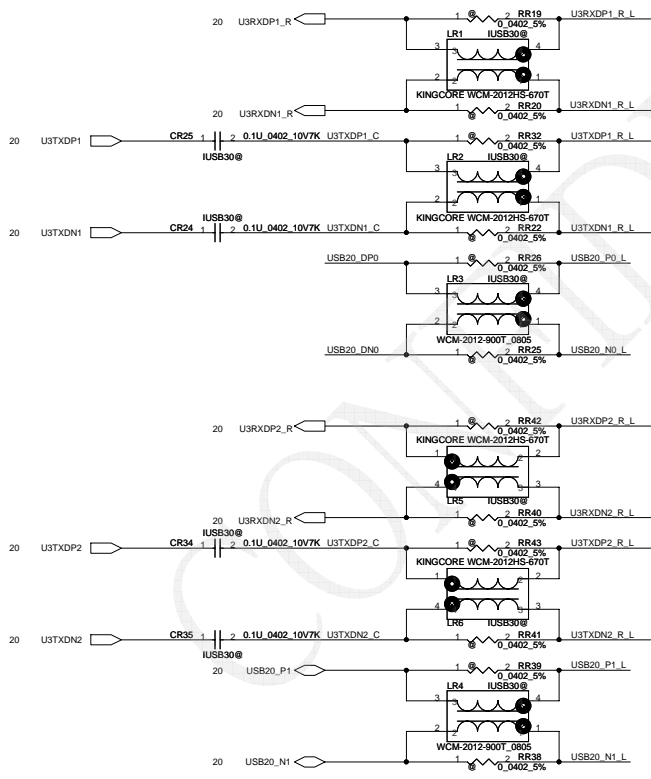
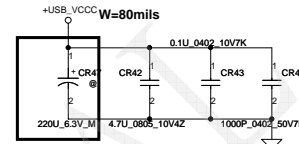
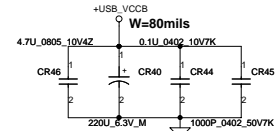
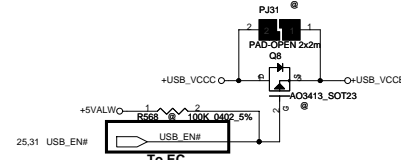
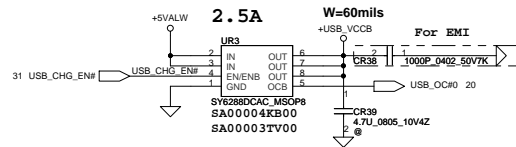


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Issued Date	2011/01/31	Deciphered Date	2012/12/31	RT3
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Date: Tuesday, March 27, 2012			Sheet 28 of 48	Document Number QFKAA

# Sleep & Charge Function



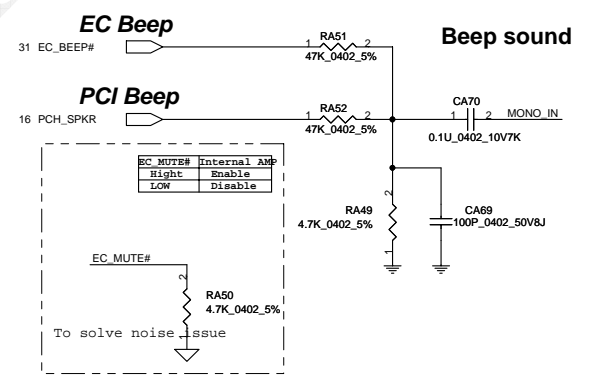
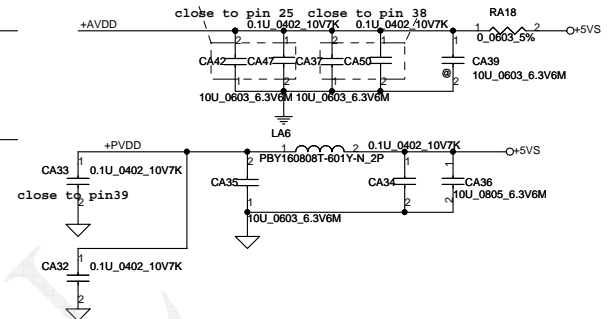
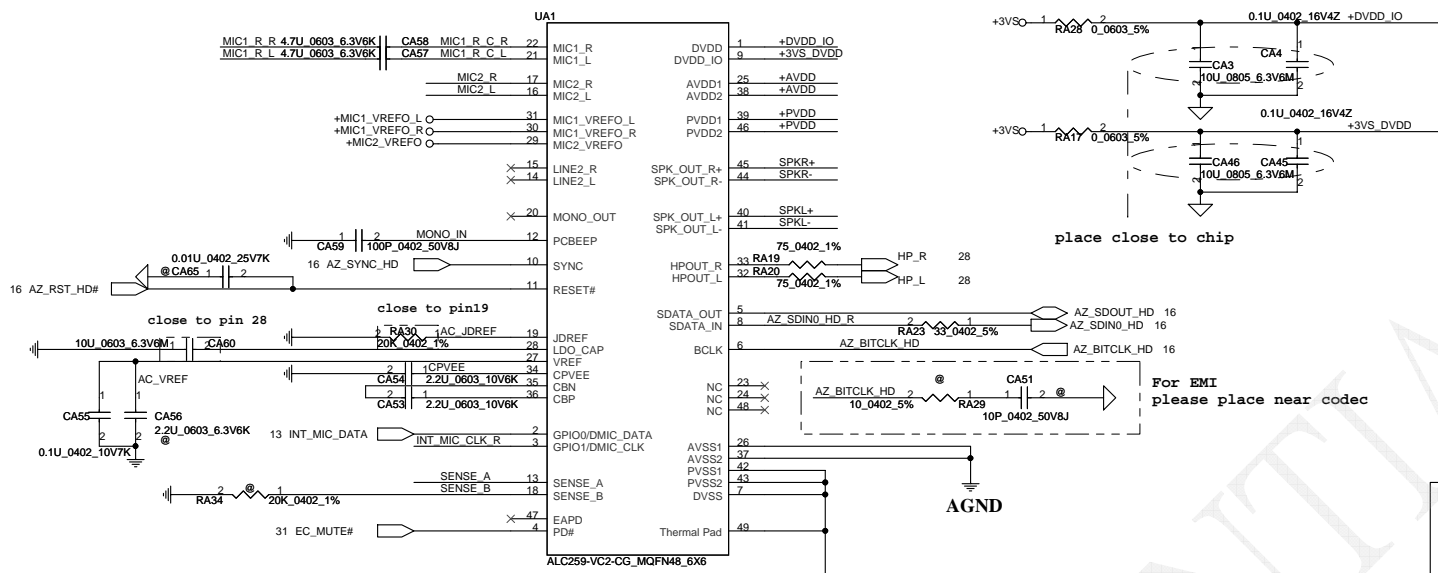
SLP_CHG#	SELCDP	Function
0	X	DCP autodetect with mouse/keyboard wakeup
1	0	S0 charging with SDP only
1	1	S0 charging with CDP or SDP only



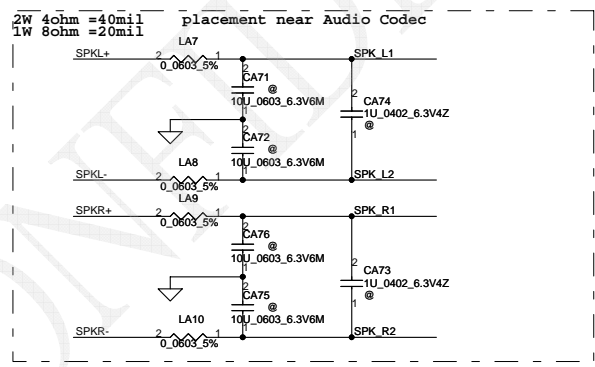
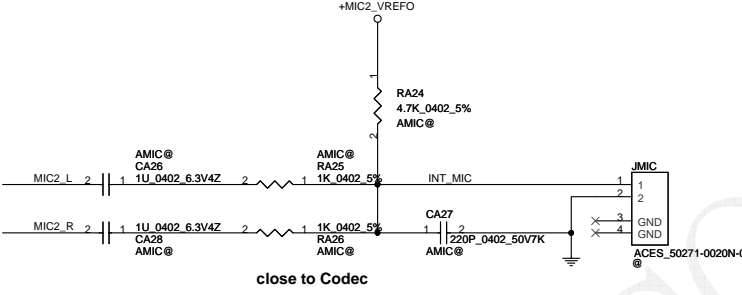
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Issued Date	200910/9	Deciphered Date	2010/01/23	Customer
				Rev
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**Compal Electronics, Inc.**  
**USB3.0**  
**QFKAA**  
 Document Number  
 Date: Tuesday, March 27, 2012 | Sheet 29 of 48

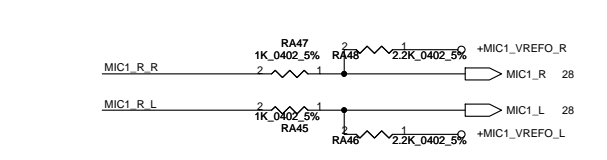
35mA for 3.3V level



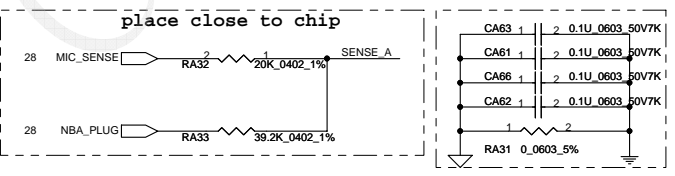
Analog MIC



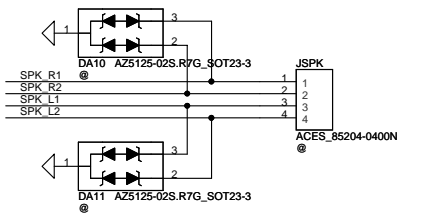
Ext.MIC/LINE IN JACK



Sense Pin	Impedance	Codec Signals	Function
SENSE A	39.2K	PORT-I (PIN 32, 33)	Headphone out
	20K	PORT-B (PIN 21, 22)	Ext. MIC
	10K	PORT-C (PIN 23, 24)	
	5.1K	(PIN 48)	
SENSE B	39.2K	PORT-E (PIN 14, 15)	
	20K	PORT-F (PIN 16, 17)	
	10K	PORT-H (PIN 20)	



SPK Conn.



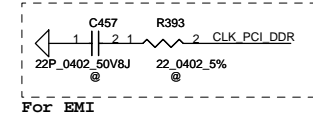
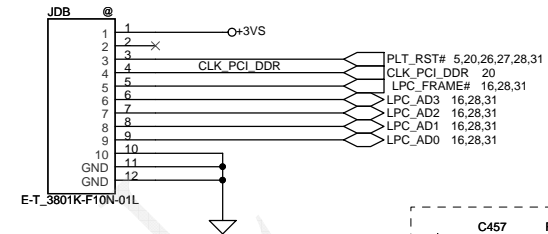
Security Classification	Compal Secret Data		Title	
Issued Date	2011/11/11	Deciphered Date	2012/12/31	Compal Electronics, Inc.
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SPI Flash (128KB)

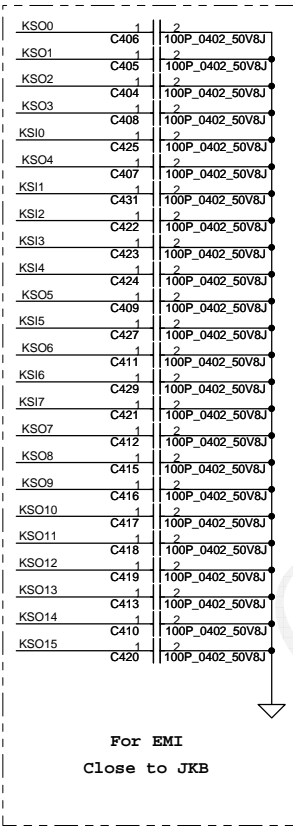
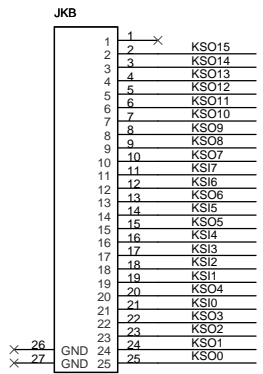
Lid SW

LPC Debug Port Place the JDB under DDR DIMM.



KEYBOARD CONN.

G-Sensor

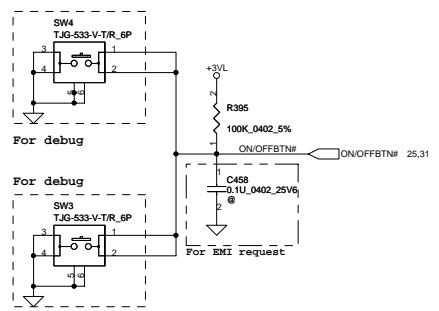


For EMI  
Close to JKB

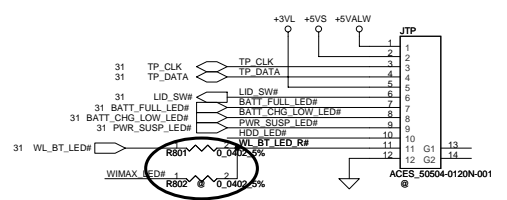
Security Classification	Compal Secret Data		Title	
Issued Date	2010/09/03	Deciphered Date	2012/12/31	Debug/KB
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**Power Button**

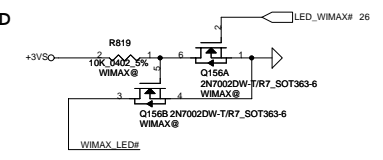


**Touchpad Connector**

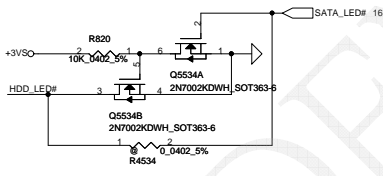


Mount R802 and un-mount R801  
When Wlan LED need Blinking

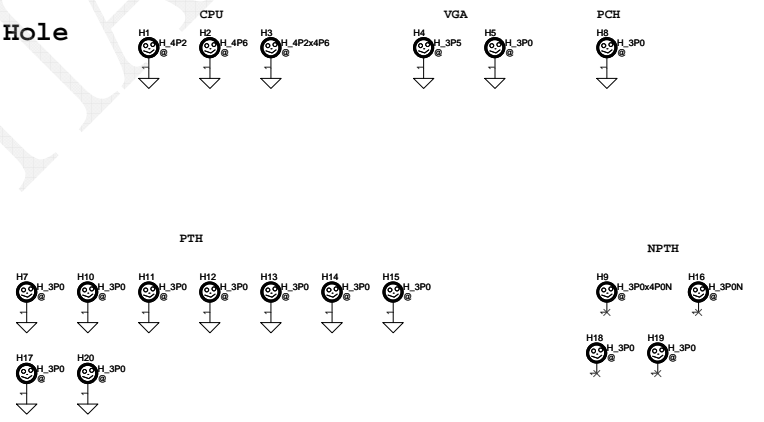
**WiMAX LED**



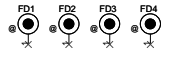
**SATA LED**



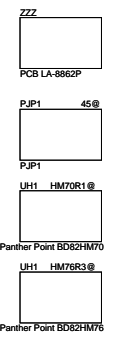
**Screw Hole**



**PCB Federal Mark PAD**

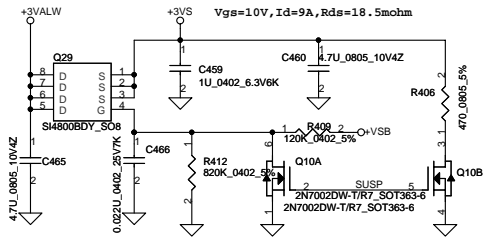


**ISPD**

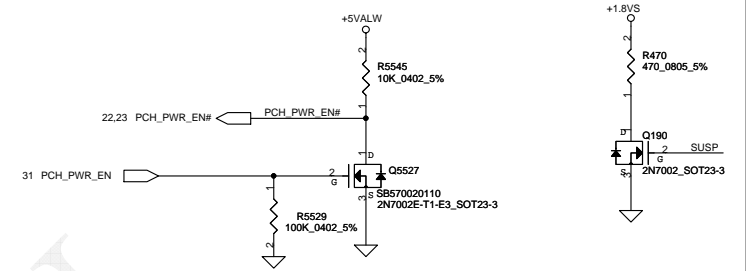
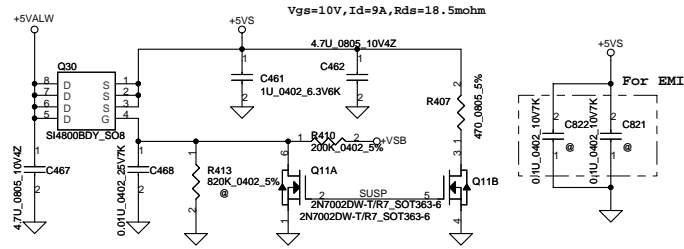


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				<b>TP/PWR/LED/Screw/ISPD</b>
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				Rev 0.3
				Sheet 33 of 48

**+3VALW TO +3VS**

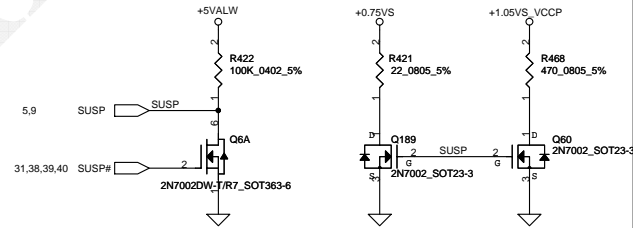
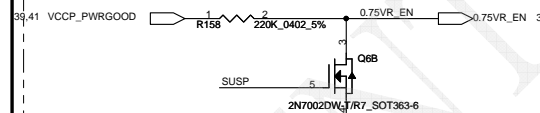


**+5VALW TO +5VS**

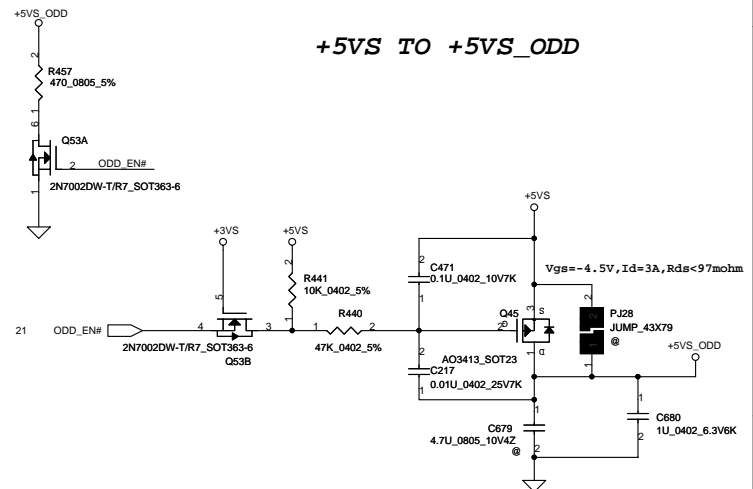


Un-used Dual MOS

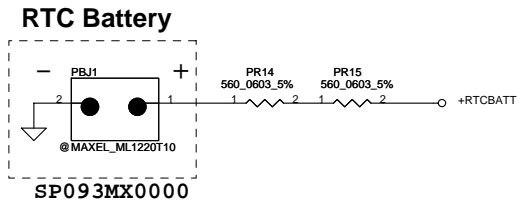
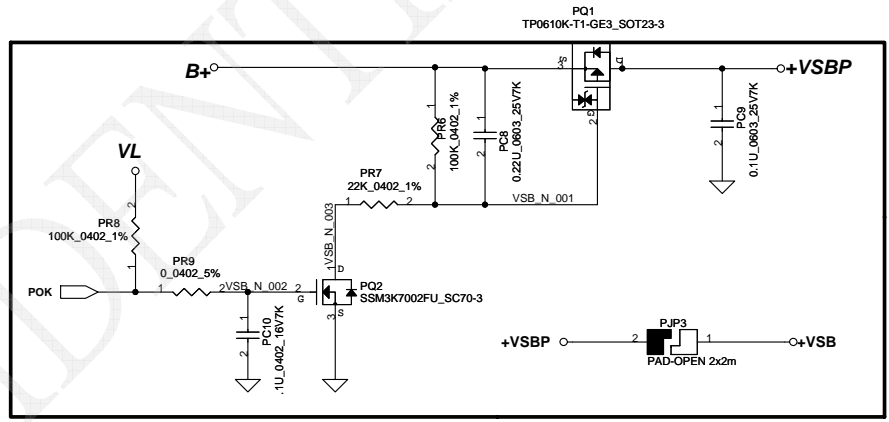
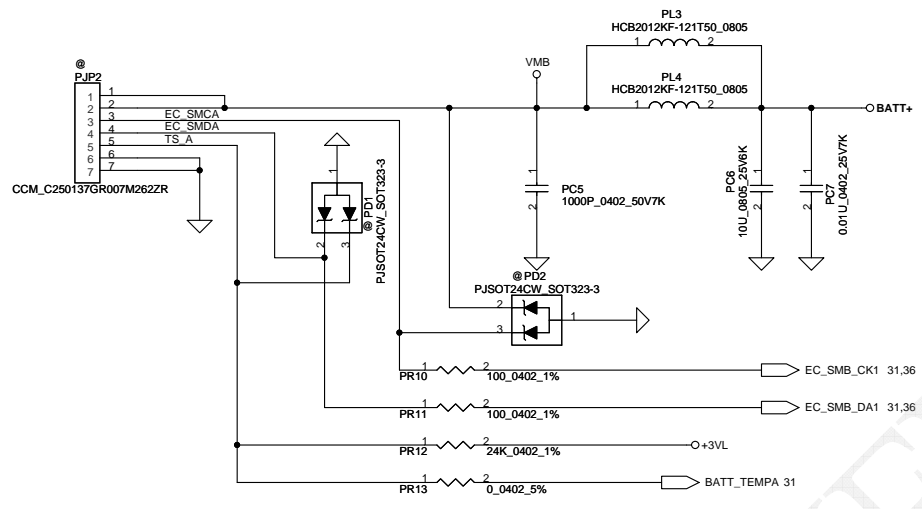
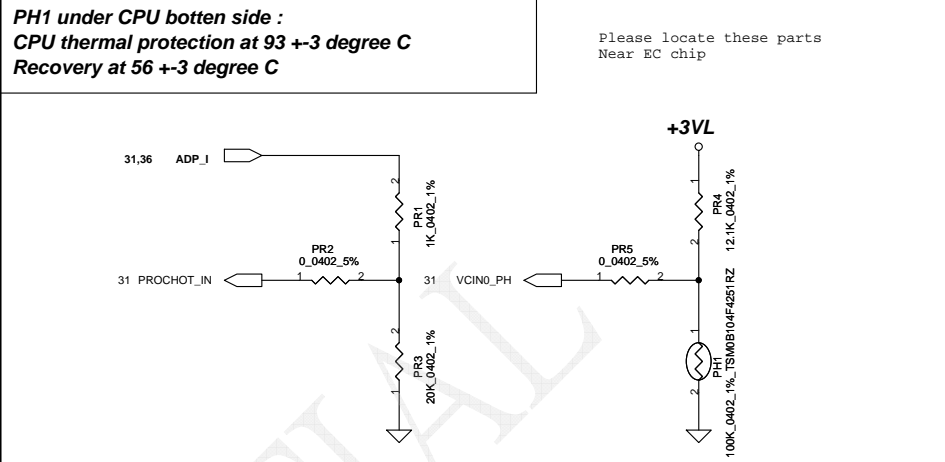
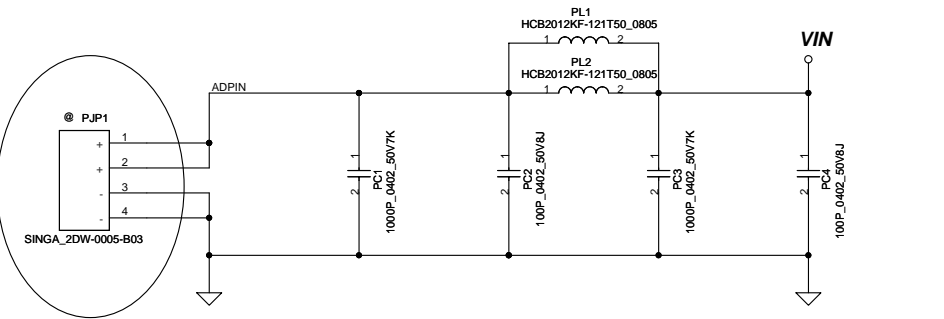
For S3 CPU Power Saving



**+5VS TO +5VS\_ODD**

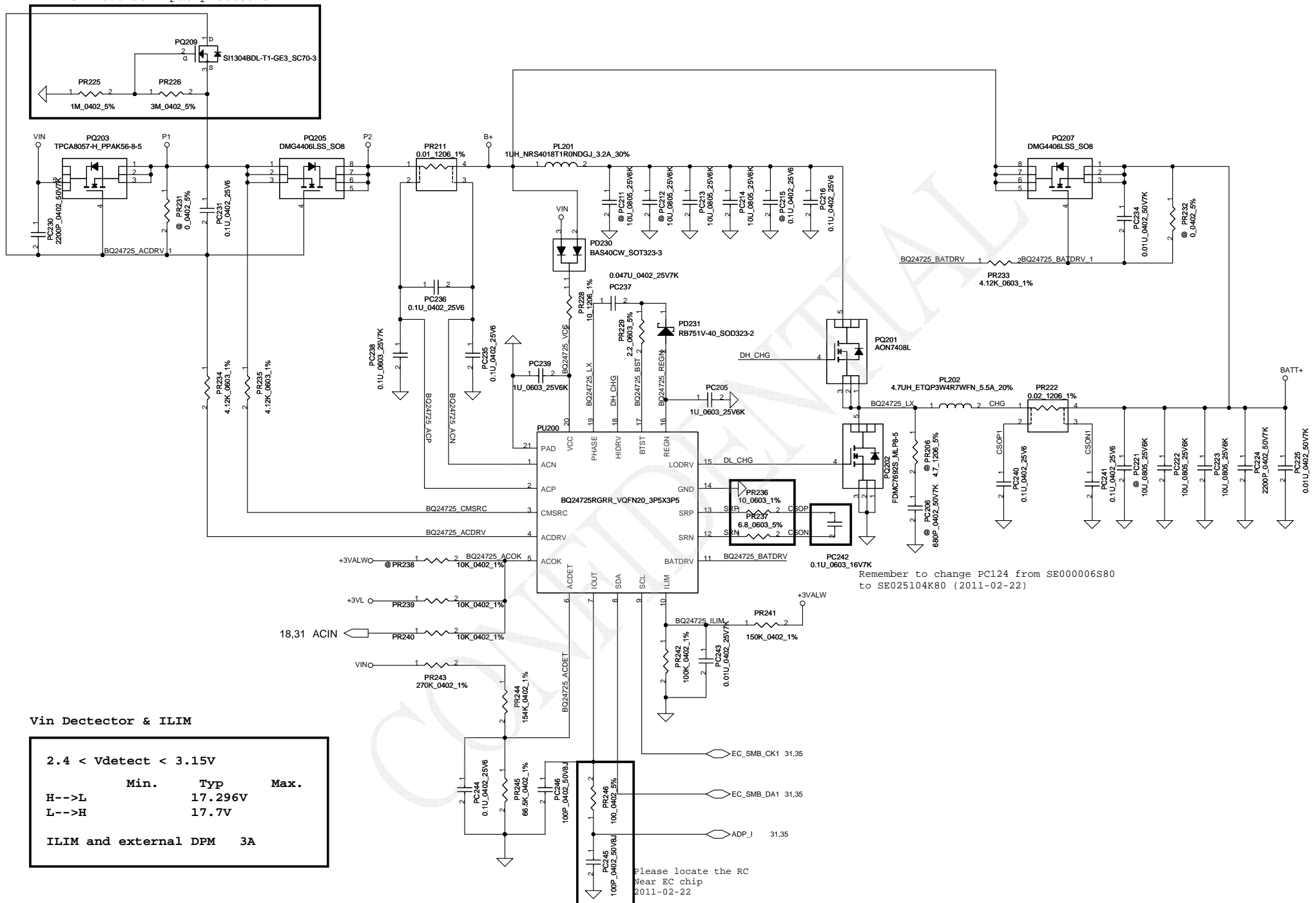


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				SAMSUNG	0.3
Date: Tuesday, March 27, 2012				Sheet	48 of 48

for reverse input protection



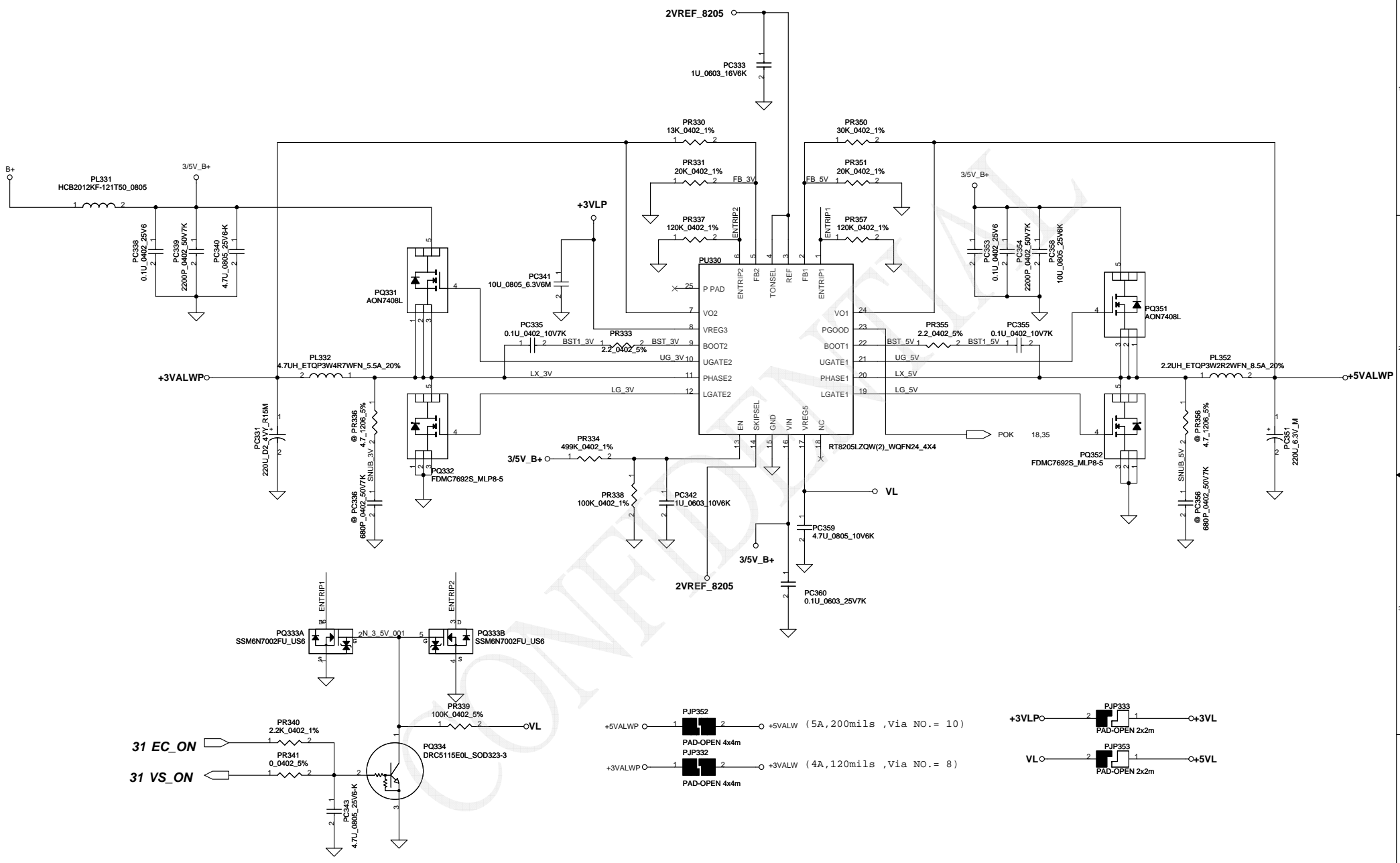
Vin Detector & ILIM

2.4 < Vdetect < 3.15V			
	Min.	Typ	Max.
H-->L		17.296V	
L-->H		17.7V	
ILIM and external DPM		3A	

Remember to change PC124 from SE000006S80 to SE025104K80 (2011-02-22)

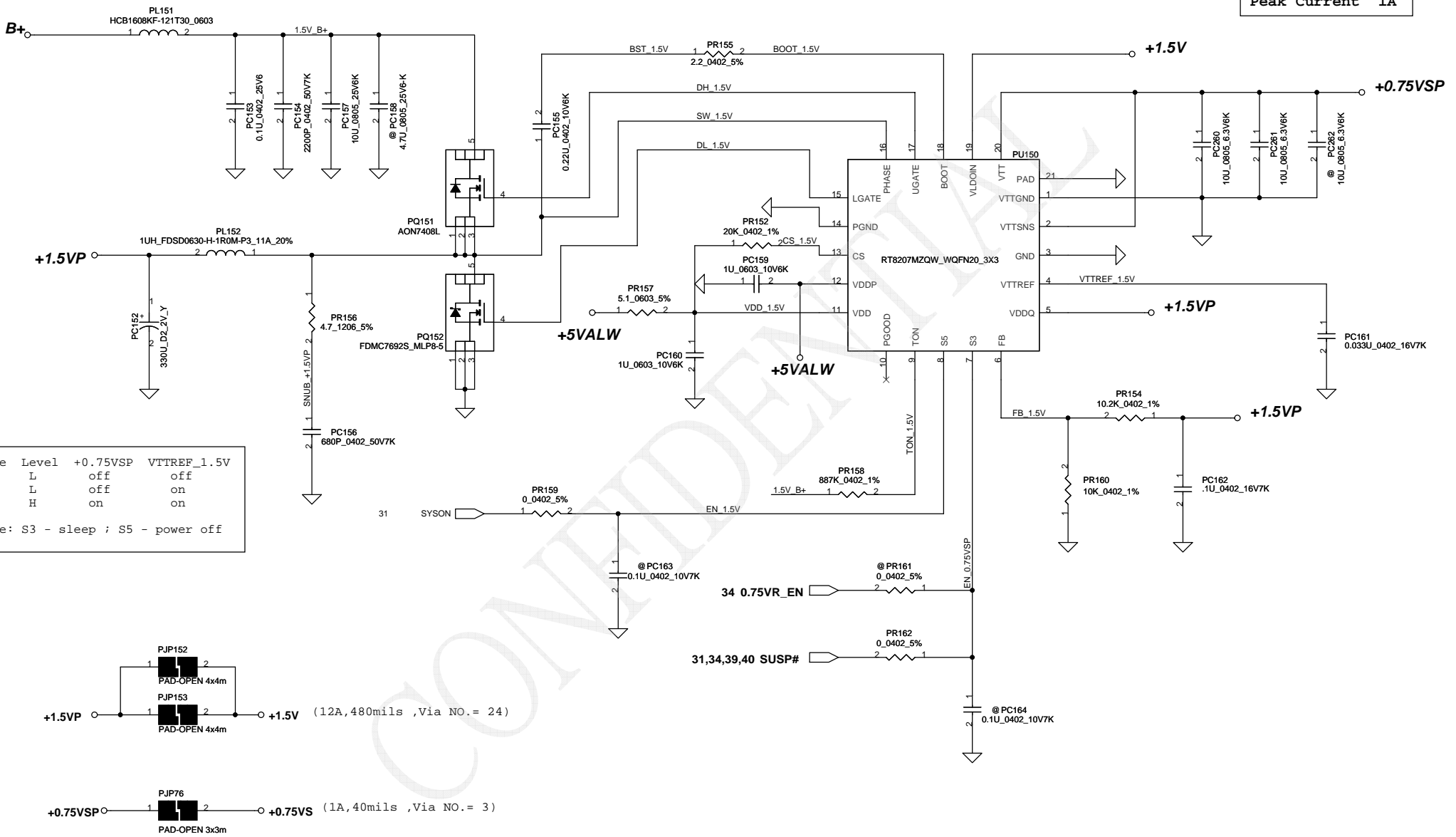
Please locate the RC Near IC chip 2011-02-22

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Document Number	SAMSUNG			Rev	0.3
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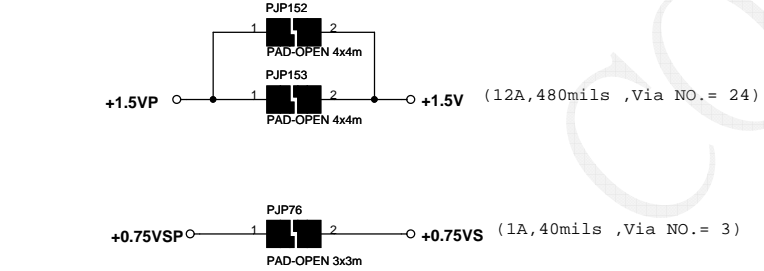


Security Classification	Compal Secret Data			Title	<b>Compal Electronics, Inc.</b>	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	Document Number	<b>PWR-3.3VALWP/SVALWP</b>	
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				Date:	Tuesday, March 27, 2012	Rev 0.3
				Sheet	37	of 48

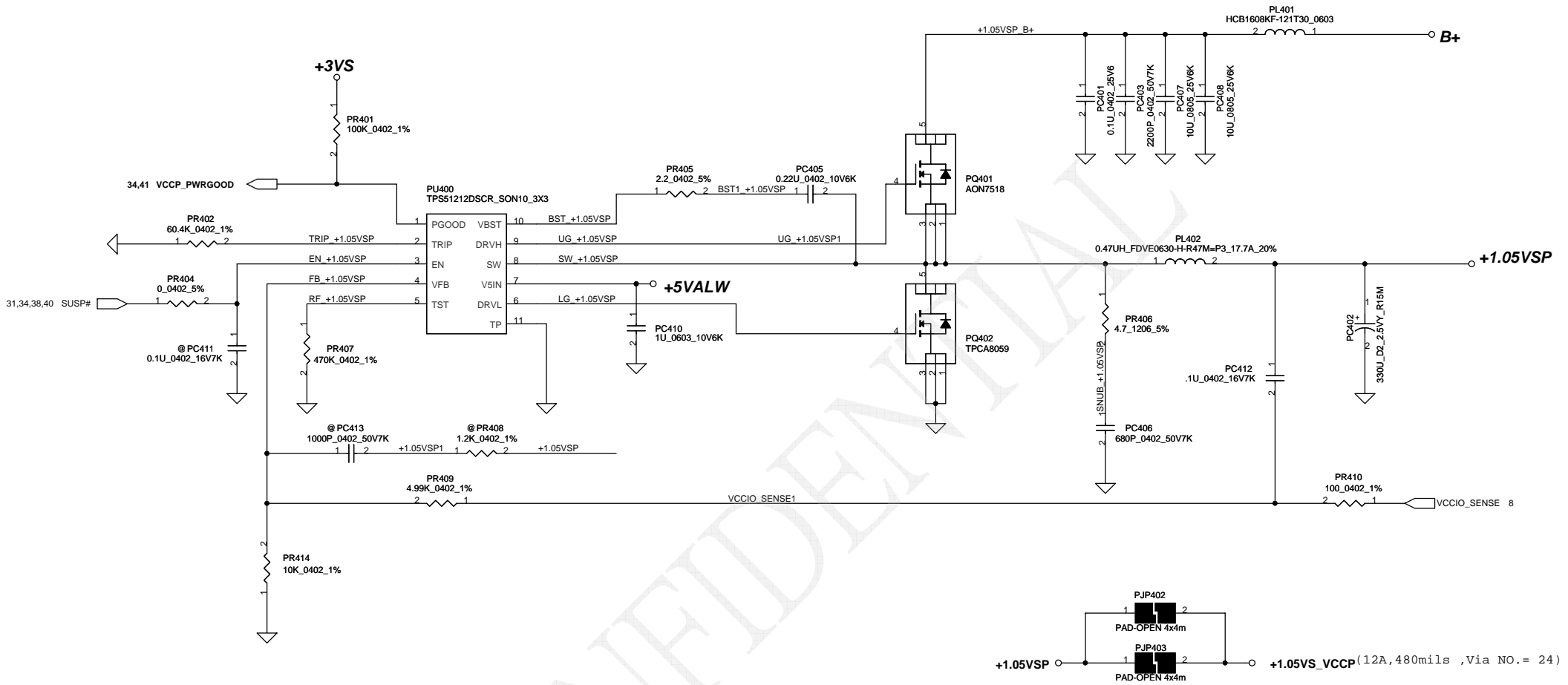
0.75Volt +/- 5%  
TDC 0.7A  
Peak Current 1A



Mode Level +0.75VSP VTTREF\_1.5V  
S5 L off off  
S3 L off off  
S0 H on on  
Note: S3 - sleep ; S5 - power off



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				Custom	SAMSUNG
				Date:	Tuesday, March 27, 2012
				Sheet	38 of 48



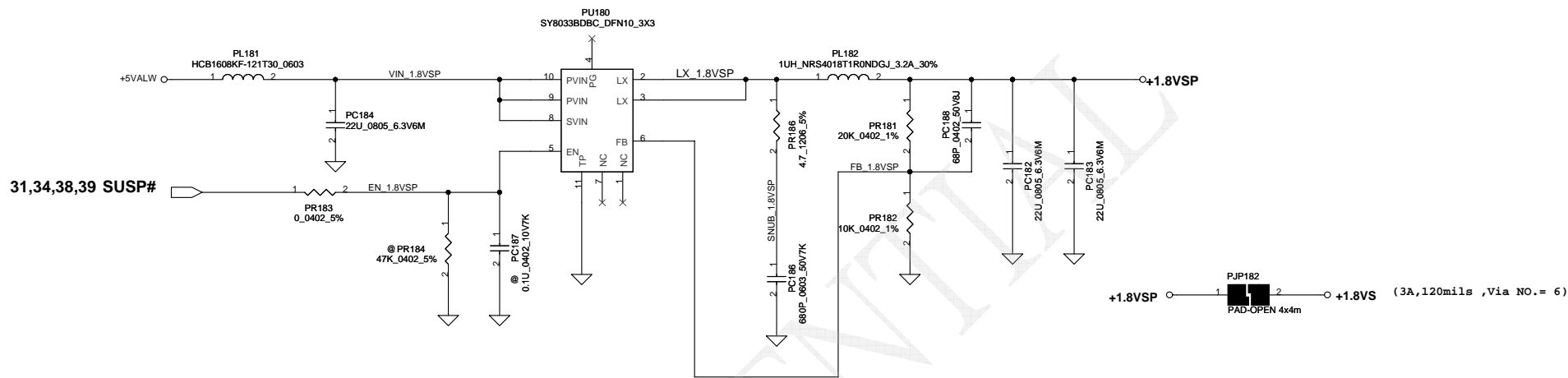
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Issued Date		Deciphered Date		Document Number	
2010/07/20		2012/12/31		SAMSUNG	
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PWR-V1.05SP

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				Date:	Tuesday, March 27, 2012
				Sheet	40 of 48
				Rev	0.3

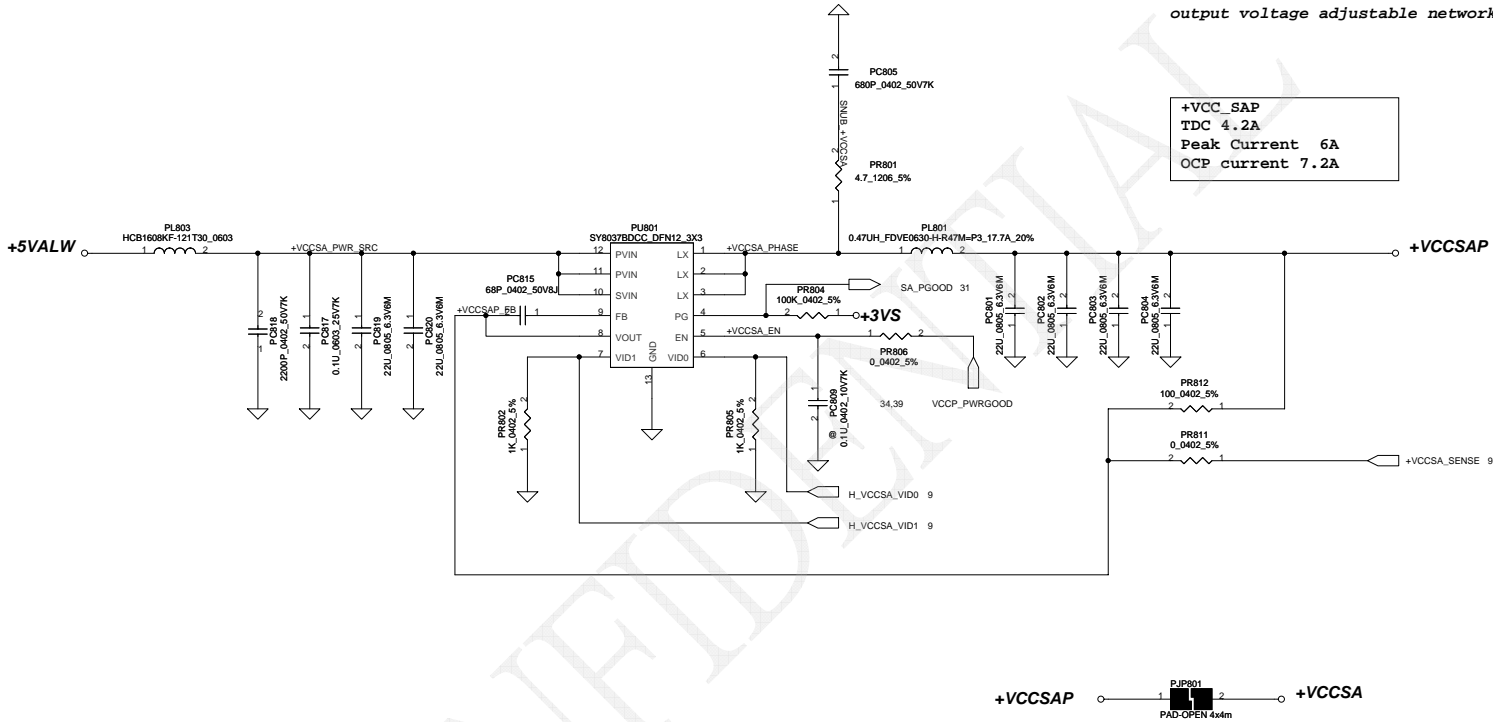


The 1k PD on the VCCSA VIDs are empty.  
These should be stuffed to ensure that  
VCCSA VID is 00 prior to VCCIO stability.

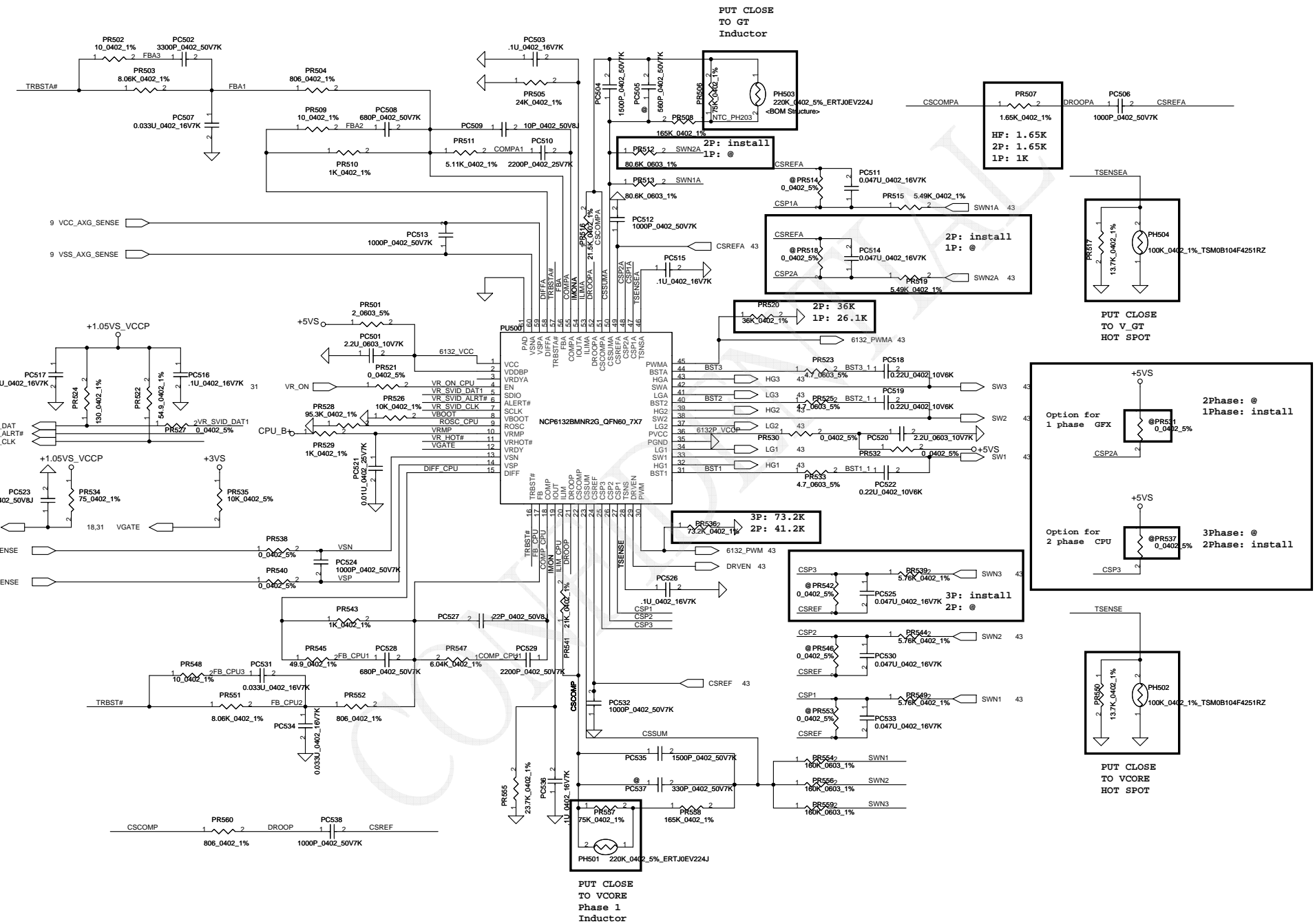
VID [0]	VID[1]	VCCSA Vout
0	0	0.9V
0	1	0.8V
1	0	0.725V
1	1	0.675V

output voltage adjustable network

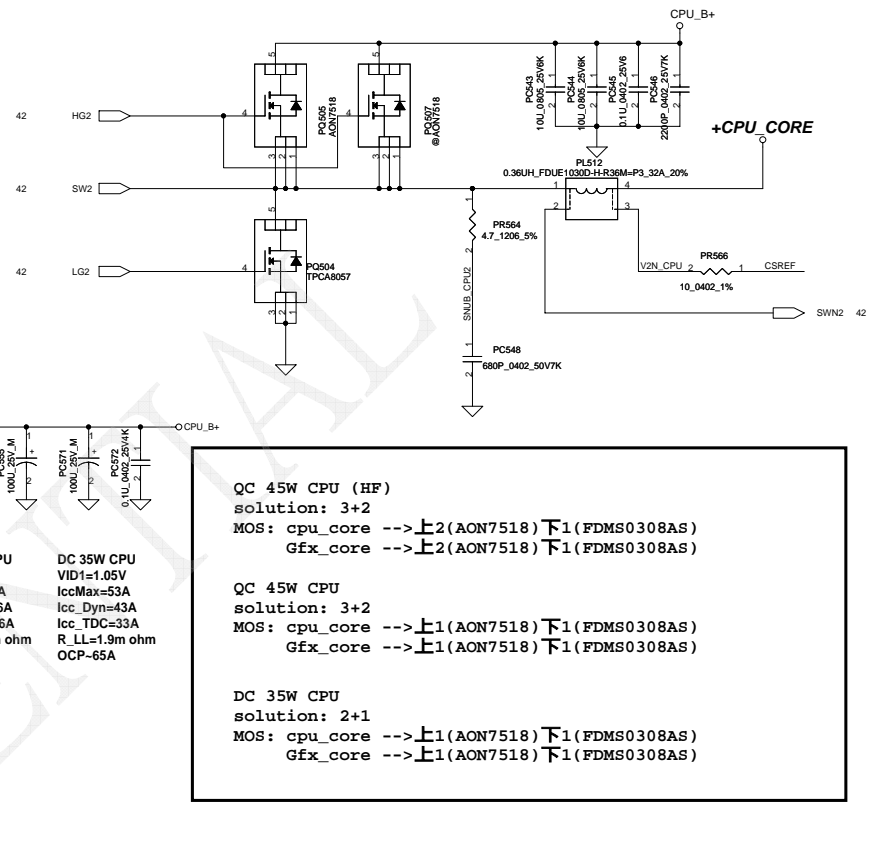
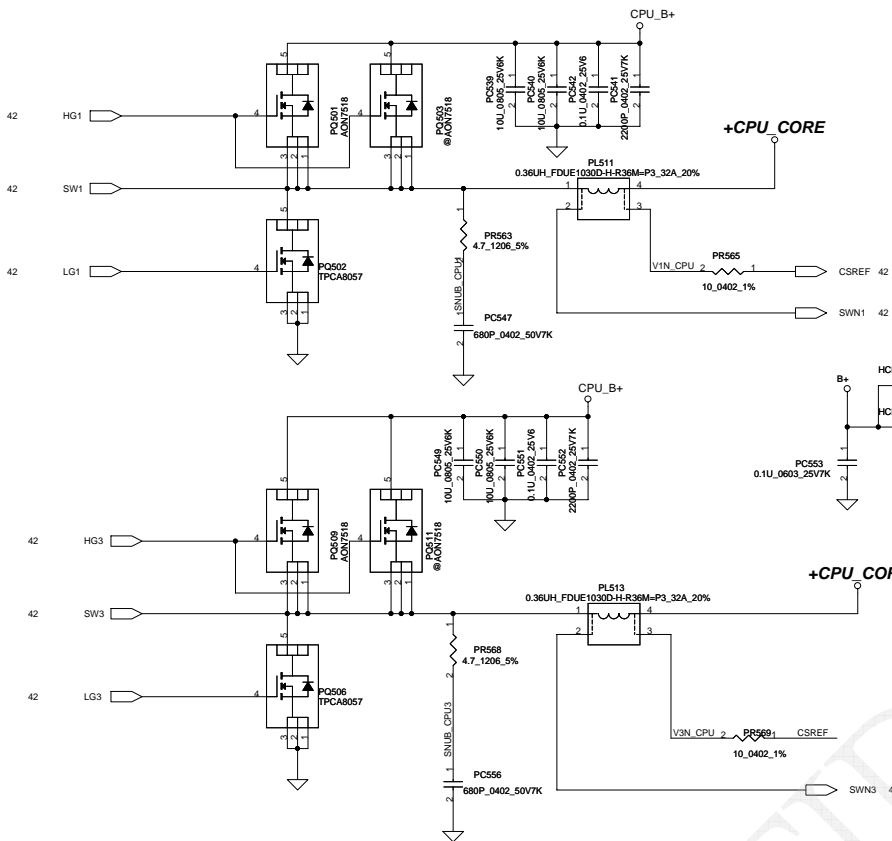
+VCC\_SAP  
TDC 4.2A  
Peak Current 6A  
OCP current 7.2A



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Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/12/01	Deciphered Date	2010/12/31	Title
				<b>PWR-CPU_CORE</b>
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				QCL70
				Rev 0.3
				Date: Tuesday, March 27, 2012   Sheet 42 of 48



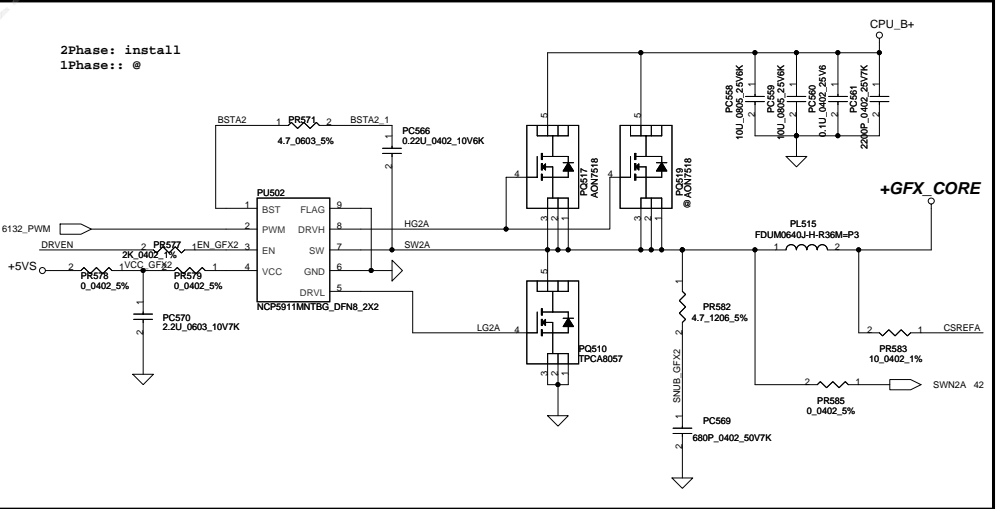
QC 45W CPU (HF)  
 solution: 3+2  
 MOS: cpu\_core --> 上2(AON7518) 下1(FDMS0308AS)  
 Gfx\_core --> 上2(AON7518) 下1(FDMS0308AS)

QC 45W CPU  
 solution: 3+2  
 MOS: cpu\_core --> 上1(AON7518) 下1(FDMS0308AS)  
 Gfx\_core --> 上1(AON7518) 下1(FDMS0308AS)

DC 35W CPU  
 solution: 2+1  
 MOS: cpu\_core --> 上1(AON7518) 下1(FDMS0308AS)  
 Gfx\_core --> 上1(AON7518) 下1(FDMS0308AS)

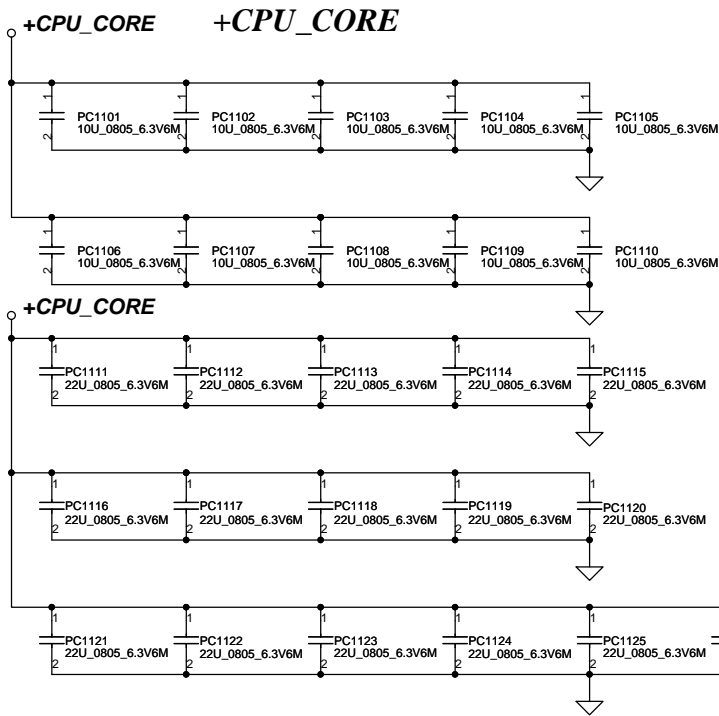
QC 45W GT2  
 VID1=1.23V  
 IccMax=46A  
 Icc\_Dyn=37A  
 Icc\_TDC=38A  
 R\_LL=3.9m ohm  
 OCP=55A

DC 35W GT2  
 VID1=1.23V  
 IccMax=33A  
 Icc\_Dyn=20.2A  
 Icc\_TDC=21.5A  
 R\_LL=3.9m ohm  
 OCP=40A

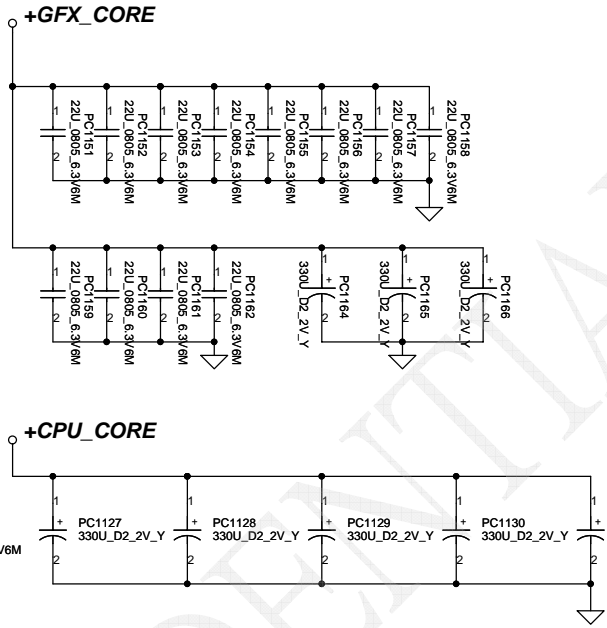


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Issued Date	2009/12/01	Deciphered Date	2010/12/31
Title			PWR-CPU CORE
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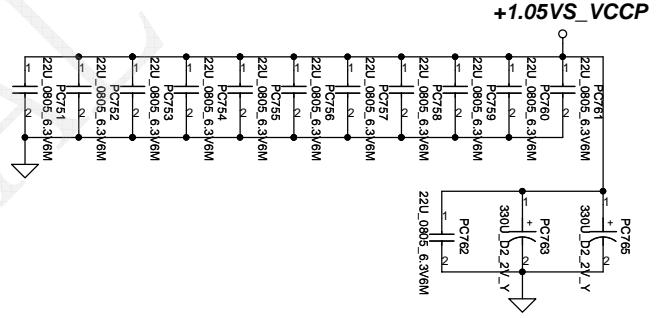


**+GFX\_CORE**



Below is 458544\_CRV\_PDDG\_0.5 Table 5-8.

Socket Bottom	5 x 22 $\mu$ F (0805) 5 x (0805) no-stuff sites
Socket Top	7 x 22 $\mu$ F (0805) 2 x (0805) no-stuff sites



	330uF*9m	470uF*4.5m	22uF	10uF
Chief River				
8layer for DC CPU	4		16	10
8layer for QC CPU	5		16	10
6layer for DC CPU	5		16	10
6layer for QC CPU	4	1	16	10
GFX_CORE DC	2		12	
GFX_CORE QC	3		12	
1.05V_VCCP	2		12	

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1.	2011/09/29	P51-PWR_+3VALWP/+5VALWP	Change PU330 to RT8205L	Change source
2.	2011/09/29	P53-PWR_ +1.05VS_VCCP/+16VSP	Change PU400 to RT8237C	Change source
3.	2011/09/29	P54-PWR_+VCCSAP/1.8VSP	Change PU450 to SY8037B	Change source
4.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change HMOS to MDV1525	Change source
5.	2011/09/29	P53-PWR_ +1.05VS_VCCP/+16VSP	Change HMOS to MDV1525	Change source
6.	2011/09/29	P49-PWR_BATTERY CONN / OTP	Change PD5,PD6 to SCA00001G00	ESD team request
7.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change PR589 from 348 to 8.06k	FAE suggestion
8.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change PR590 from 3.65k to 806	FAE suggestion
10.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change PC574 from 680P to 0.033u	FAE suggestion
11.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change PC577 from 4700P to 0.033u	FAE suggestion
12.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change PR548 from 1.21k to 8.06k	FAE suggestion
13.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change PR550 from 10.7k to 806	FAE suggestion
14.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change PC547 from 680P to 0.033u	FAE suggestion
15.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Change PC551 from 4700P to 0.033u	FAE suggestion
16.	2011/09/29	P57-PWR +CPU_CORE DECOUPLING	Add snubber and boost resistor	For 3x3 H-MOS solution
17.	2011/09/29	P49-PWR_BATTERY CONN / OTP	Add PR22 30k,PR27 100k, PR32 0 Ohm	For 120W adapter protect(9012)
18.	2011/09/29	P51-PWR_+3VALWP/+5VALWP	Change PC360 to SE000006R80	Change source
19.	2011/09/29	P49-PWR_BATTERY CONN / OTP	Add PR17 14k, PR33 0 Ohm	For CPU temperature protect(9012)
20.	2011/09/29	P51-PWR_+3VALWP/+5VALWP	Add PR373 0 Ohm	For 3/5V always power on(9012)

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			Sheet 45 of 48	Rev 0.3

# HW PIR (Product Improve Record)

QCLA4,5 LA-7201P SCHEMATIC CHANGE LIST

REVISION CHANGE: 0.0 TO 0.1

GERBER-OUT DATE: 2011/12/30

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
1	11/24	33	Change P33 ALC280 schematic to ALC259 schematic.	For audio function
2	11/24	34	Change JEMXIC.4 JACK_SENSE to MIC_SENSE.	For audio function
3	11/24	35	Delete UB3, RB26, CB18, RH296	For delete CIR function
4	11/24	6,13,21	Delete QCL, RC4, C261, U17, R147, R103, R360, R392, R390, R1441-1442, R361, R106, RH304	For LVDS only
5	11/24	6,13,17	Delete Q23, C293, R62, R389, R120, R79, R97, L60, R262-265, R299-300, RH275, R1440	For LVDS only
6	11/24	6,13	Delete CPU_EDP_HPD, +LCD_VDD_R, +PANEL_VDD, LVDS_ENVDD, +3VS_LVDSDDC	For LVDS only
7	11/24	13	Delete D15 BOM structure and JLVDS.10 connect to +3VS	For LVDS function
8	11/24	13	Add J17 connector and change JLVDS from 40 to 30 pin connector.	For LVDS function
9	11/24	20	Delete USB20_M13, USB20_P13	For no Glasses free 3D Panel
10	11/24	13	Change RC82 BOM structure from IEDP@ to @.	For LVDS function
11	11/24	5,17	Change RC157, RC158, RH119, RH203 BOM structure from LVDS@ to mount.	For LVDS function
12	11/24	17	Delete CLK_CPU_EDP#, CLK_CPU_EDP	For LVDS only
13	11/24	15	Delete CEC schematic and JHDMI.13 HDMI_CEC net	For no CEC support
14	11/24	15	Delete R570, D55 and change U9.4 HDMI_HPD_R to HDMI_HPD	For HDMI HPD
15	11/25	15	Change L8-11 to SM070001U00	For HDMI signal
16	11/25	15	Delete U9.5 from +5VL to +5VS	For HDMI HPD
17	11/25	33	Change Audio codec schematic	For ALC259-VC2
18	11/25	17,29	Delete CH16, CH18, card reader schematic	For RT85129
19	11/25	26	Delete FP & B-CAS schematic	For no support FP & B-CAS function
20	11/25	35,37	Delete JFUN, R8, R1466-1467, D90	For no support JFUN
21	11/25	20,27	Delete USB20_M10, USB20_P10, USB20_M12, USB20_P12	For no support TV tuner & 3G
22	11/25	27	Delete RH181 & 3G, B-CAS, JET schematic	For no support TV tuner & 3G
23	11/25	16,27	Delete mSATA schematic	For no support mSATA function
24	11/25	27	Delete RCL3, 271@ component and net OSC_IN_R, OSC_IN_R	For no support S&M function
25	11/25	6	Change RC3 from 1Kohm to 10Kohm (SD028100280)	For no support eDP function
26	11/25	35	Delete UB1.89 HDPACT, UB1.86 HDPLOCK, UB1.68 HDPINT	For no support G-SENSOR function
27	11/28	35	Change PCH_PWR_EN from UB1.70 to UB1.68 and add UB1.70 EN_DFNAN1	For support RPM FAN
28	11/28	5,35	Delete C1-4, R1-2, D1 and UB1.26 FANPWM	For no support PWM FAN
29	11/29	25	Delete S&C schematic	For no support S&C
30	11/29	31,32	Delete USB3.0 Host schematic	For no support external USB3.0 host IC
31	11/30	38	change R409 from 120K_1% to 120K_5%	For change tolerance
32	11/30	33	change RA17 from 0_1% to 0_5%	For change tolerance
33	11/30	13	Delete R260 and short directly	For reduce circuit
34	12/01	16	change DH1 from @ to NOGCLK@	For BOM control
35	12/01	37	Add SW4	For Debug
36	12/01	36	Delete U21, C453, C452	For LID on small board
37	12/02	35	Delete CPSETIN	For delete EC930 schematic
38	12/02	16	Add JRTC, CH9, DHS, DH9, R227	For non-rechargeable RTC schematic
39	12/02	36	Delete JBLG schematic	For non-keyboard led schematic
40	12/05	36	Modify JKB pin define	For meet SS KB Matrix
41	12/05	13	Change location from J17 to JLVDS1	For location naming
42	12/06	35	Delete UB1.85 SM_SENSE#	For no support S&M
43	12/06	25	Modify JUSIO pin define	For small board connect
44	12/06	38	Delete R425 and 0.75VVR_EN#	For Power circuit connect
45	12/07	25	Add JODDB	For 15" ODD connector
46	12/07	15	Change U9.5 connect from +5VS to +HDMI_5V_OUT	For prevent leakage issue
47	12/08	29	Change JCRI0 pin define	For small board connect
48	12/12	21	Change UH1.K1 and RH180.2 from BT_ON# to PCH_GPIO34	For common GPIO pins on EC side
49	12/12	35	UB1.18 and RB11 connect to BT_ON#	For common GPIO pins on EC side
50	12/12	25,35,37	Delete PWR_ON_LED# net	For common GPIO pins on EC side
51	12/12	25	Change JUSIO pin define	For LED behavior
52	12/12	16	Delete CH9, DHS, DH9, R277, JRTC	For RTC change to rechargeable
53	12/13	21	Delete Q51 and change PCH_WL_BT_LED to PCH_GPIO69	For change WL_BT_LED# to EC GPIO
54	12/13	35	UB1.21 connect WL_BT_LED#	For change WL_BT_LED# to EC GPIO
55	12/13	37	Change Q156B.3 from WL_BT_LED# to WIMAX_LED# and connect to R802	For WLAN LED behavior
56	12/13	35	Delete UB1.127 (USB_OC#0) and UB1.17 (USB_OC#1)	For no support USB S&C
57	12/13	20,29	Add TFM schematic	For TFM function
58	12/13	27	Delete Q36	For change BT_ON# to EC GPIO
59	12/13	14,30,37	Change JCRT, JUSBA, JUSBB, JTP symbol	For connector list update
60	12/13	25,29	Change JUSIO, JCRI0 symbol	For connector list update
61	12/14	27	Change UCL1 to SLG3NB244VTR	For green clock
62	12/14	29	Change UT1.5 and RT7.1 net from +3VALW to +3VALW_PCH	For ErP Lot6 function
63	12/14	21	Add RH181 and connect ISDBT_DET, delete RH297	For no support TV tuner
64	12/14	21	Change RH194 from 100K 5% to 10K 5%	For update resistor value
65	12/14	21	Change RH315.2 connect +3VS and BOM structure to mount	For update resistor value
66	12/14	37	Change ZZZ P/N to DA60000T600	For update PCB P/N
67	12/14	37	Move D89 to TP small board	For Move to TP small board
68	12/15	16-24	Change UH1 P/N to SA00005FH30	For update UH1 P/N
69	12/15	30	Change CR40 P/N to SF000002Y00	For layout limitation
70	12/15	33	Delete RA53	For common design
71	12/15	25	Delete C381-4	For placement update
72	12/15	30	Delete RR23-24, CR26, RR36-37, CR29	For connect GND directly
73	12/15	9	Delete CC67	For not reserve
74	12/19	16	Delete T67-T69	For not reserve
75	12/19	29	Change YT1 form SJ132P7KW10 to SJ100004Z00 (small package)	For change to small size
76	12/19	29	Change CT2, CT3, CT4, CT5 from SE095104K80 to SE102104K00	For BOM reduce
77	12/19	29	Change JCRI0 to SP010015H00	For follow connector list
78	12/20	13	Delete JLVDS.28 (+LCD_INV)	For prevent issue
79	12/20	37	Modify H1-H17	For Update screw hole

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QCLA4,5 LA-8862P SCHEMATIC CHANGE LIST

REVISION CHANGE: 0.1 TO 0.2

GERBER-OUT DATE: 2012/01/10

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
21	02/08	27	Add T11 test point	For LAN FAE suggestion
22	02/09	15	Add D94-D96 on HDMI signal	For ESD request
23	02/09	27	Add D99,D100 on LAN signal	For ESD request
24	02/09	14	DEL D3-D5 and add D97,D98 on CRT signal	For ESD request
25	02/09	7,31	Add RC74 and net DRAMRST_CNTRL_EC connect RC74.1 & UB1.89	For DS3 function reserve
26	02/09	25	Add R79-82	For reduce SATA signals reflection
27	02/14	11	Change CD7 from SF000002000 (H=5.9) to SF000002Z00 (H=4.4)	For thermal issue
28	02/20	33	Change SW3,SW4 from SN100002Y00 to SN100000W00	For SN100002Y00 is EOL

QCLA4,5 LA-8862P SCHEMATIC CHANGE LIST

REVISION CHANGE: 0.2 TO 0.3

GERBER-OUT DATE: 2012/03/13

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
01	03/08	13	Change R109 to 100ohm 0805,R110 to 68Kohm,C228 to 0.047U,C230 to 4700P	For LVDS power sequence
02	03/08	13	Change R108 power rail to +3VALW	For LVDS power sequence
03	03/08	16,25	Add SATA port4 to connect JODDB and UH1	For 15" ODD
04	03/09	25	Add ODD_SEL to connect JODDB.12 and UH1 GPIO6	For 15" ODD detection
05	03/09	11	Add CD14 colay with CD7	For thermal over temperature
06	03/11	21,25	Add 15ODD_DETECT# to connect JODDB.8 & UH1.U2 & RH179.2	For 15" ODD detection
07	03/12	25	Add C363,C364,C365	For ESD
08	03/13	33	Add H20	For drawing update
09	03/14	27	Change RL26 and RL28 to @ and RL24 and QL53 to always mount	For LAN disable function
10	03/14	27	Change UL3 and UL4 to SP050006N00	For LAN transformer

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