

**Model Name: GA-H61M-S2PV****Revision 2.2****SHEET****TITLE**

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1155-A
05	CPU_LGA1155-B
06	CPU_LGA1155-C
07	DDR III CHANNEL A
08	DDR III CHANNEL B
09	PCH_FDI,DMI,USB,PCIE,NVRAM
10	PCH_DP,CLK BUFFER
11	PCH_HOST,SATA,PCI
12	PCH_GPIO,CTRL,AUDIO
13	PCH_PWR,GND
14	PCI EXPRESS*16 SLOT
15	PCI EXPRESS*1 SLOT
16	IT8892E
17	PCI SLOT1&2
18	ITE 8728 LPC IO
19	COM,KB_USB,USB_ESATA,-PROCHOT
20	HWM,FAN CTRL,OV,
21	DUAL BIOS
22	FP,FUSB,SPK,SATALED
23	Realtek ALC887-VD2
24	REAR AUDIO JACK
25	REALTEK RTL8111F-VL
26	DISCRETE POWER
27	ATX

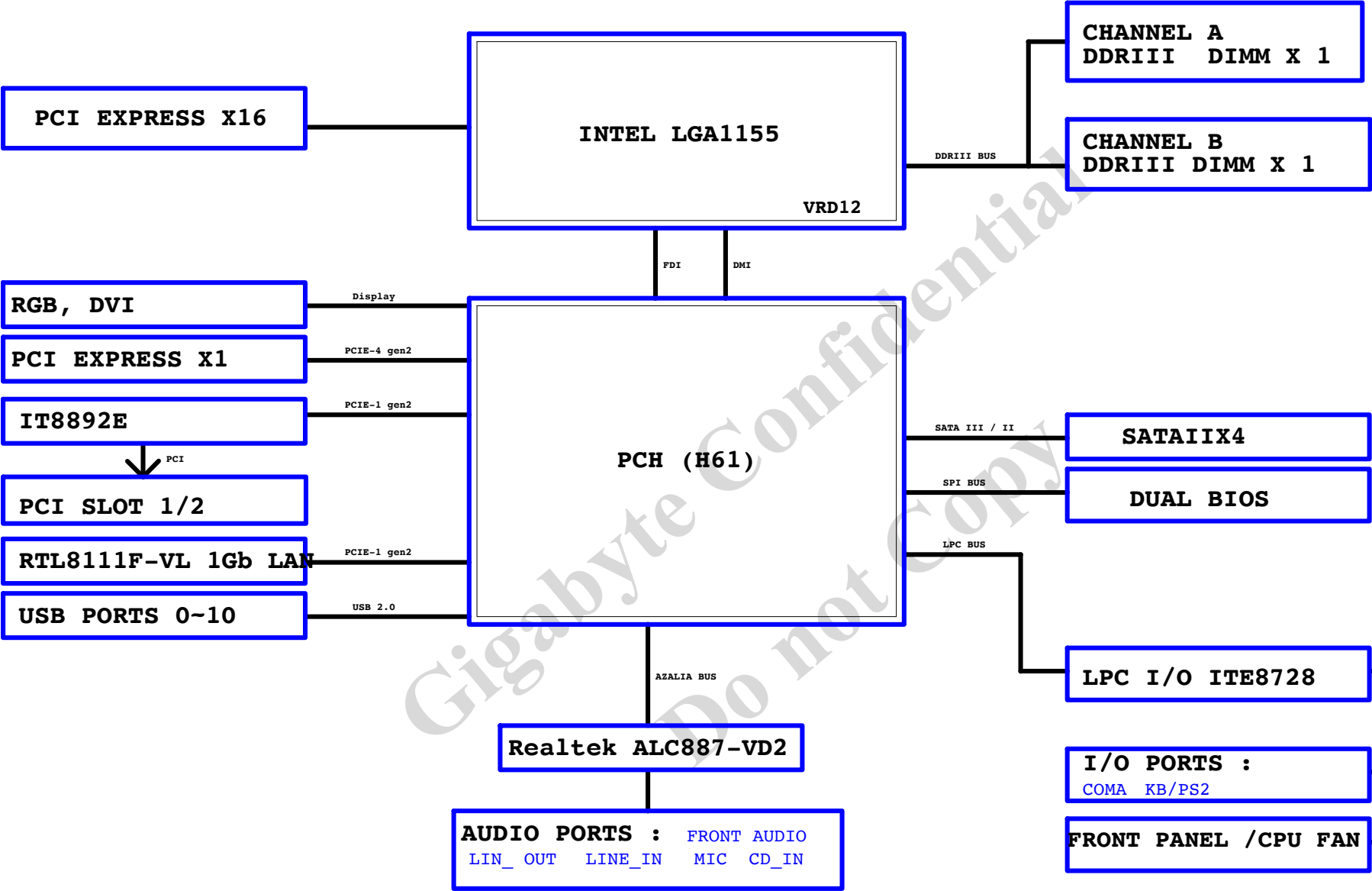
**SHEET****TITLE**

28	LINEAR CPU_VTT
29	VCORE ISL95836_1
30	VCORE ISL95836_2
31	VCORE ISL95836_3
32	LPT
33	DVI

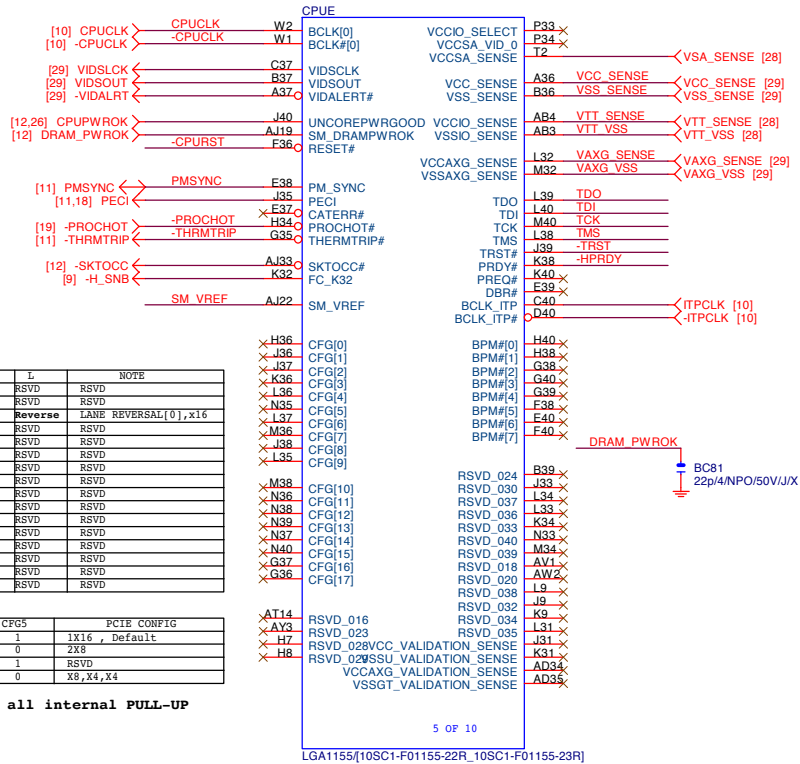
<b>Gigabyte Technology</b>		
Cover Sheet		
Size Custom	Document Number <b>GA-H61M-S2PV</b>	Rev <b>2.2</b>
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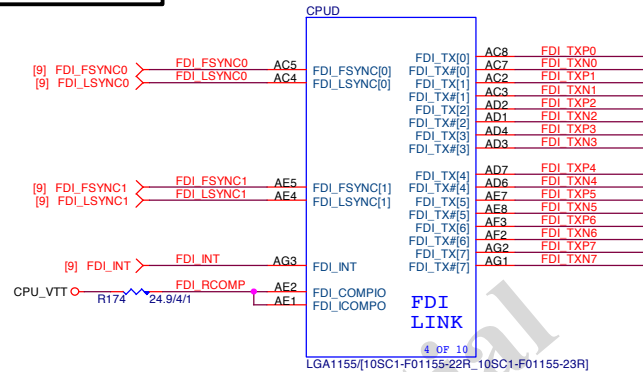
BLOCK DIAGRAM



## CPU E



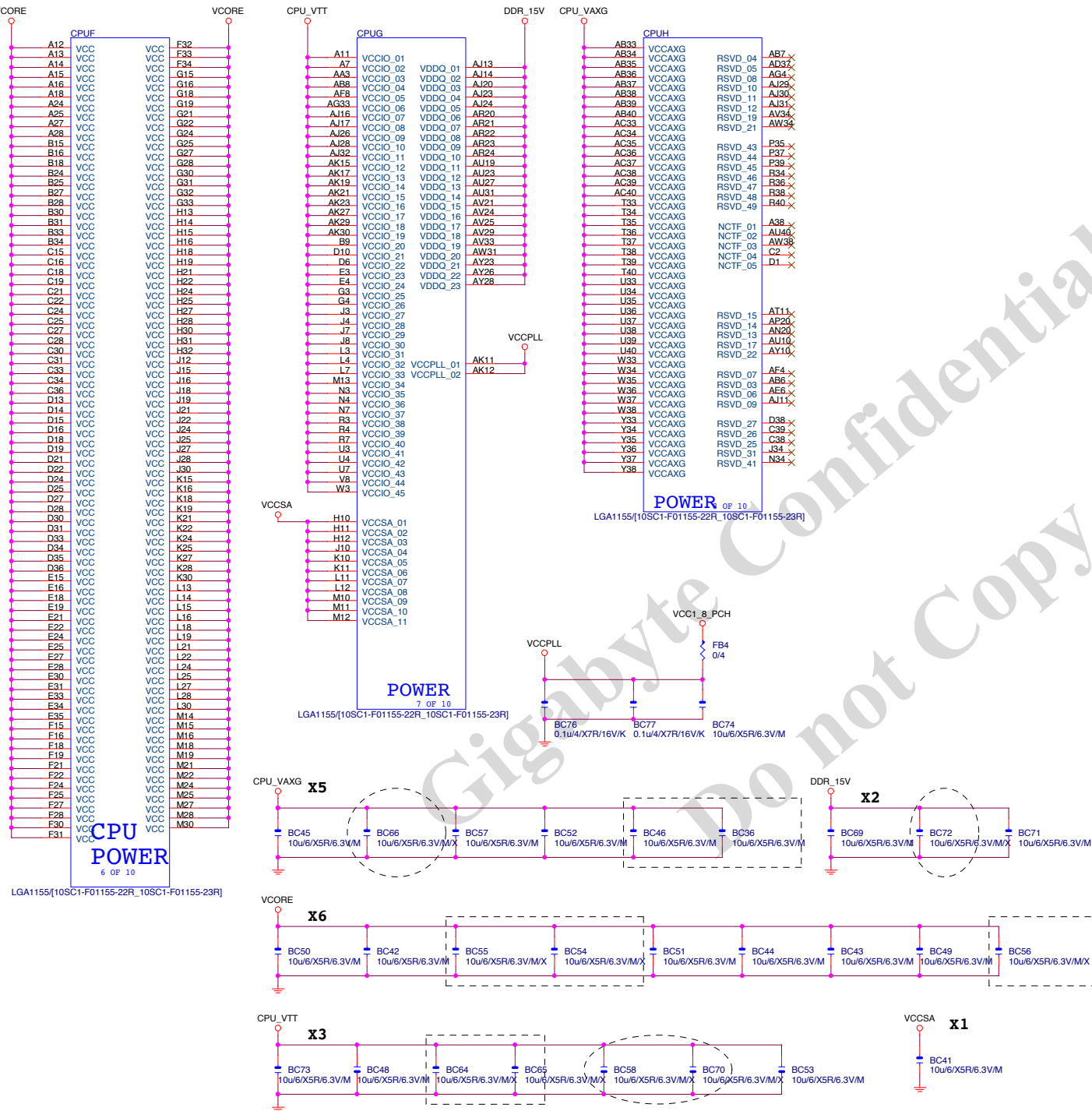
## CPU D FDI





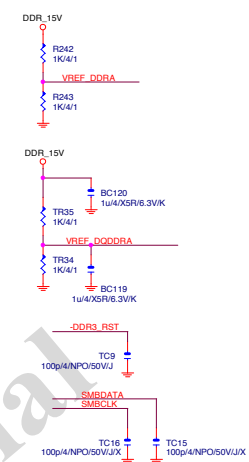
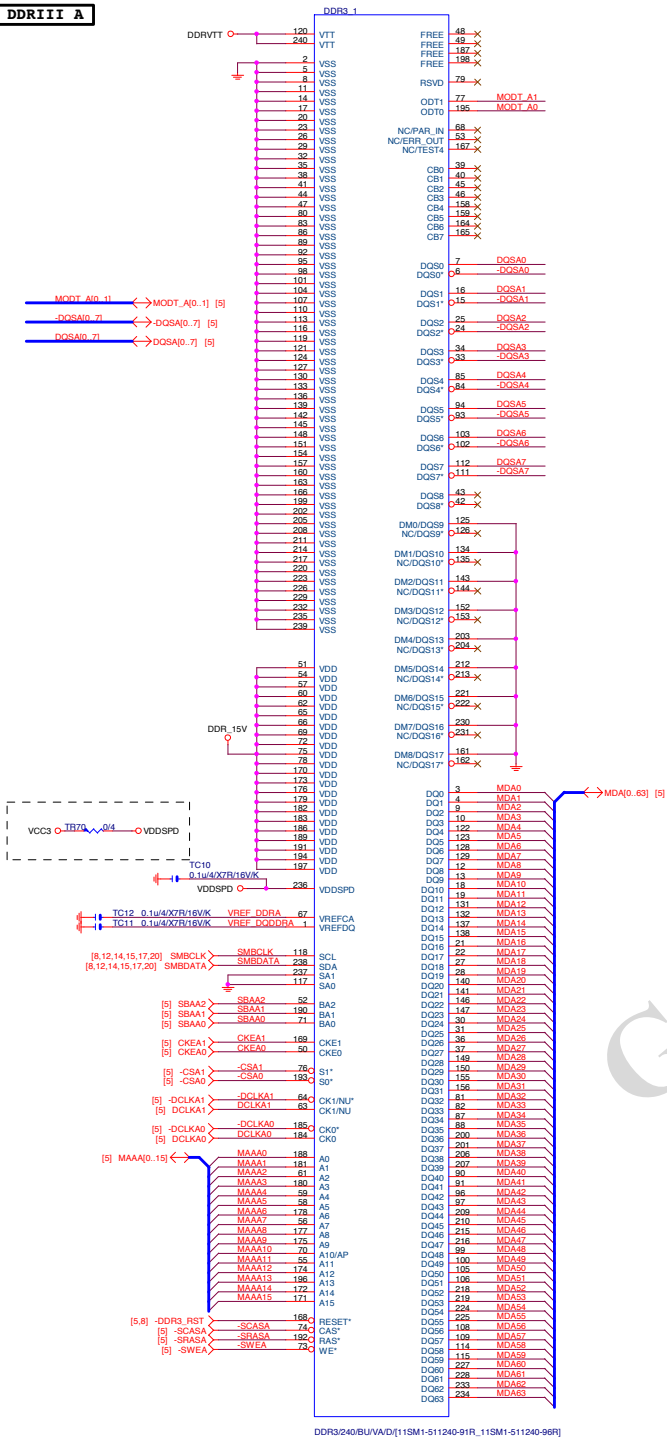
## CPU F, G, H POWER

## CPU I, J GND

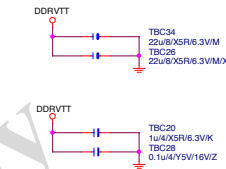




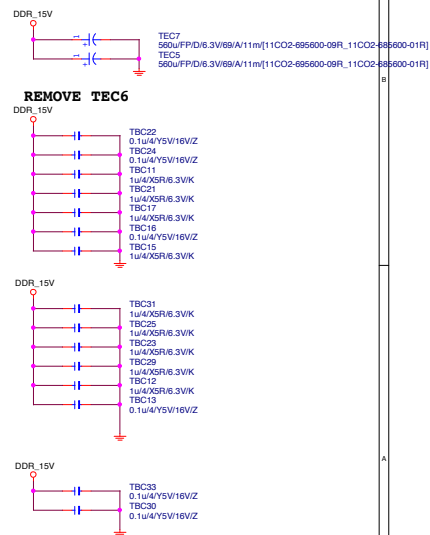
## DDRII A

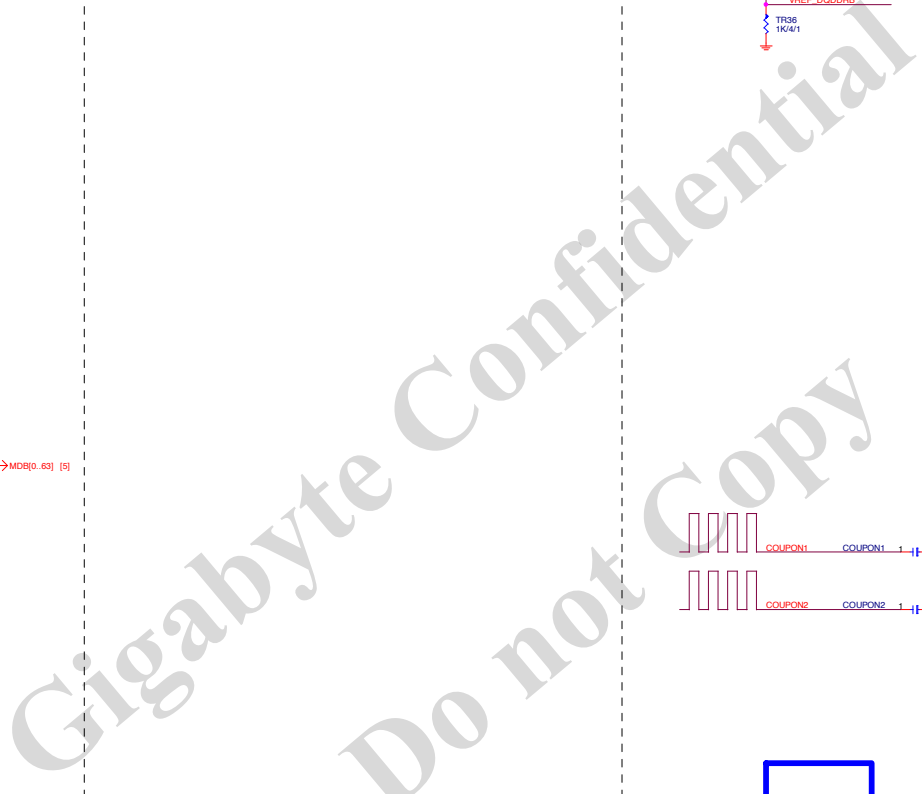


**DDRVTT Decouple**



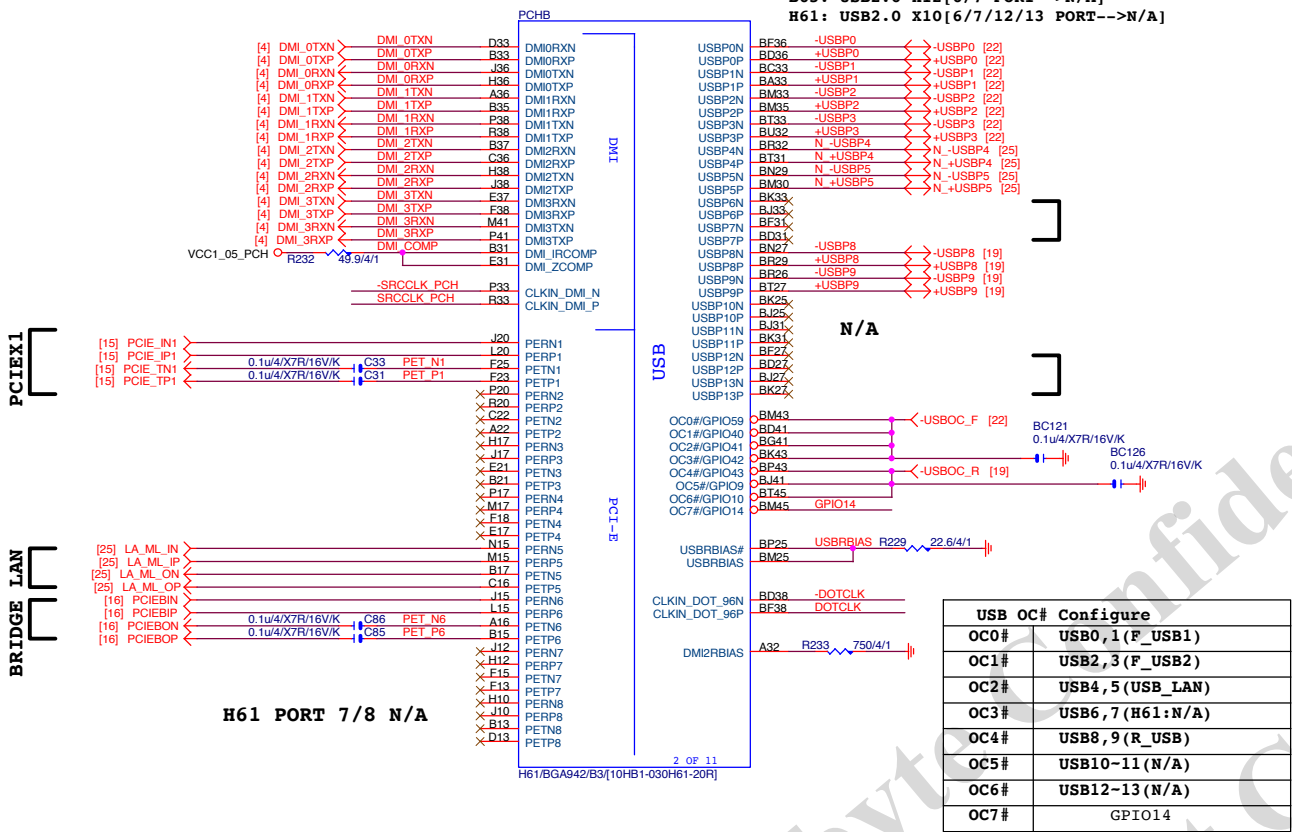
**DDR15V Decouple**



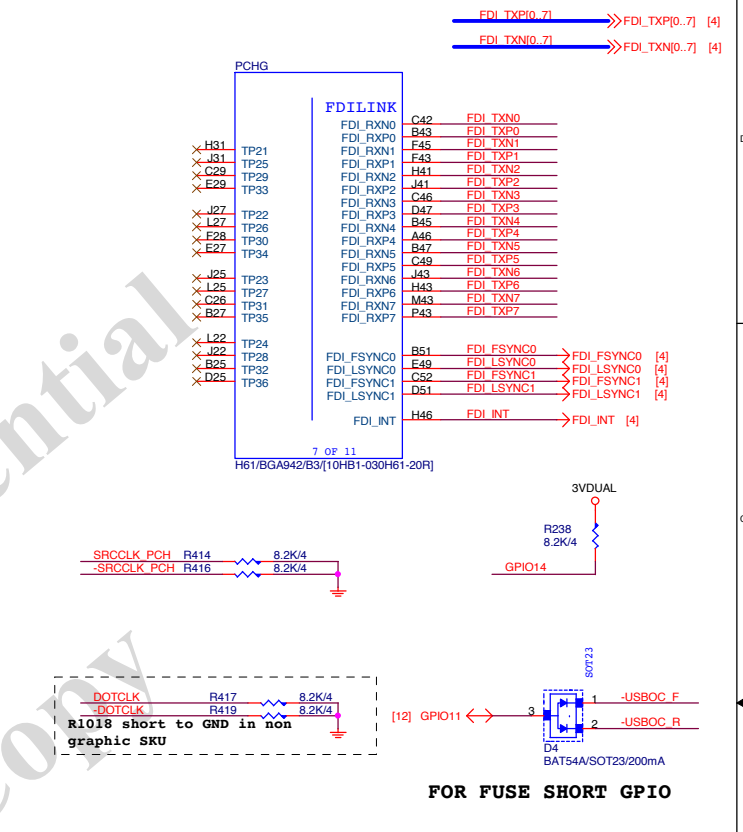




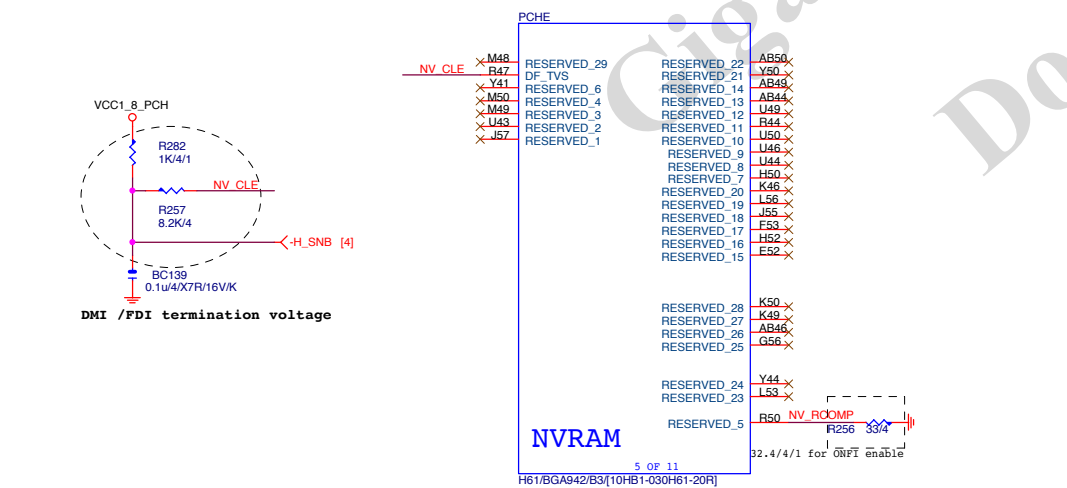
PCH B



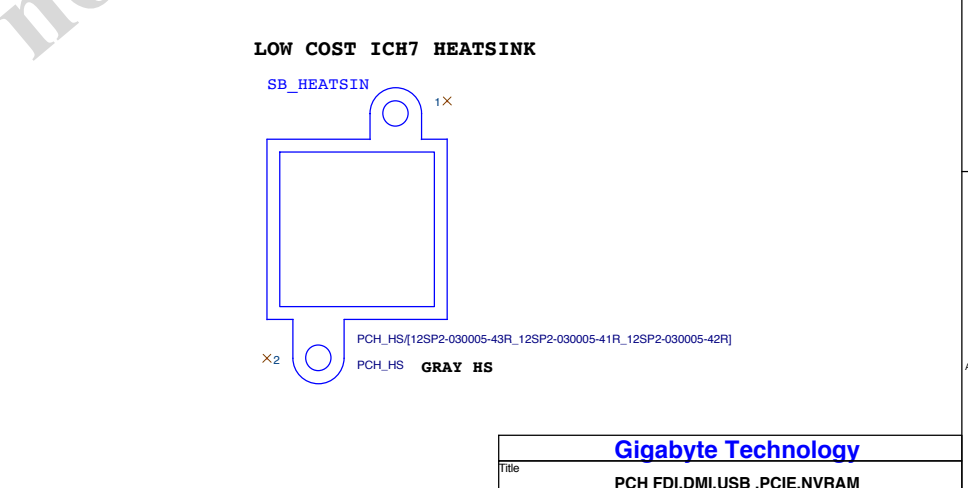
PCH G FDI



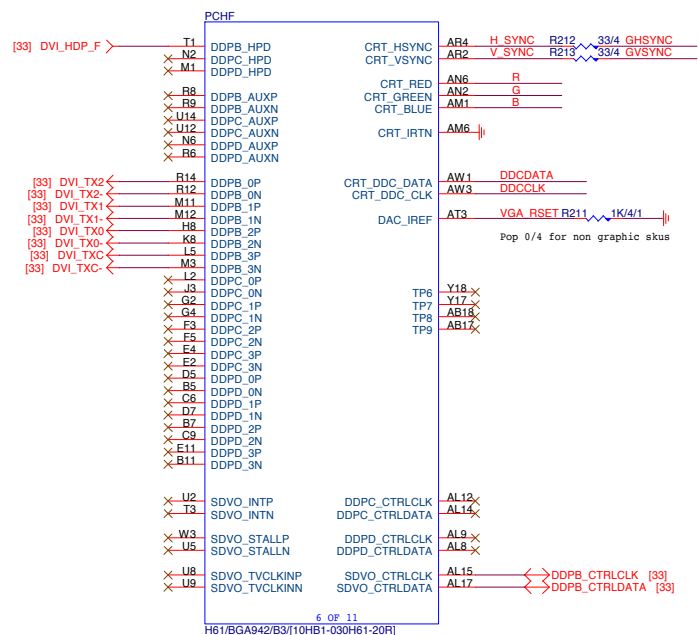
PCH E



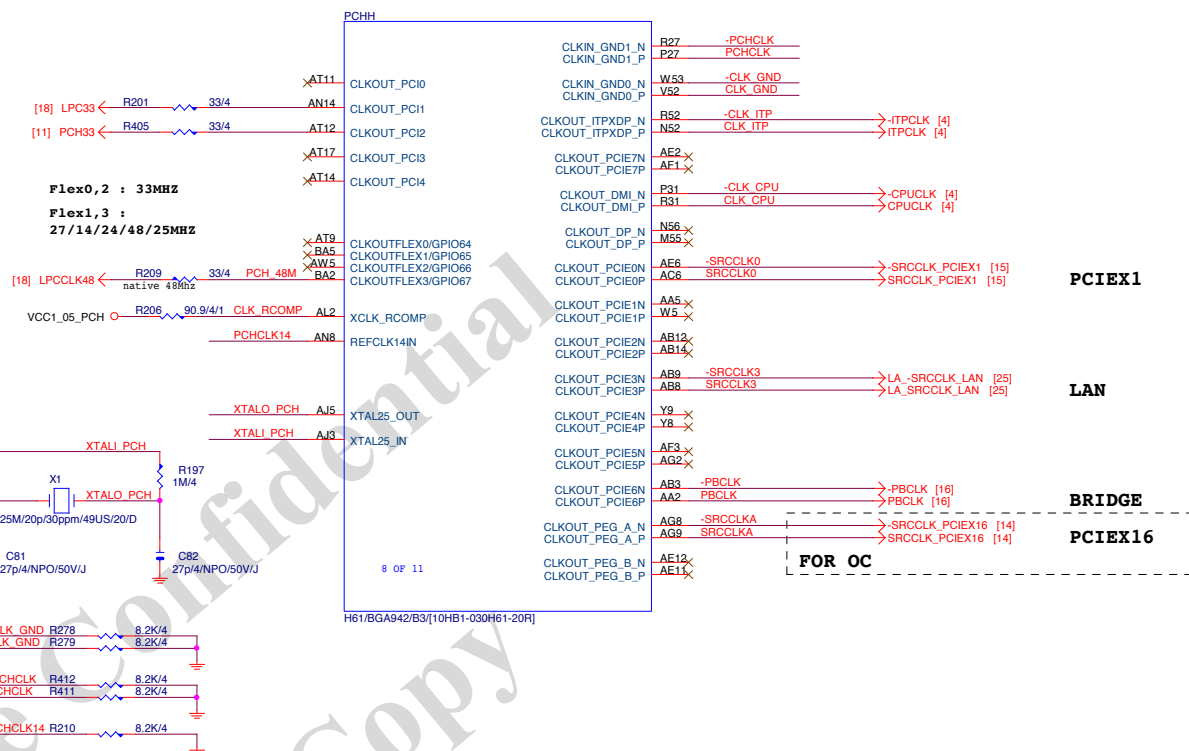
PCH HS



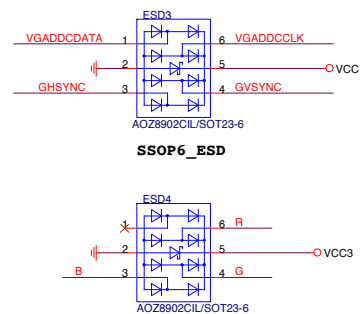
PCH F DISPLAY



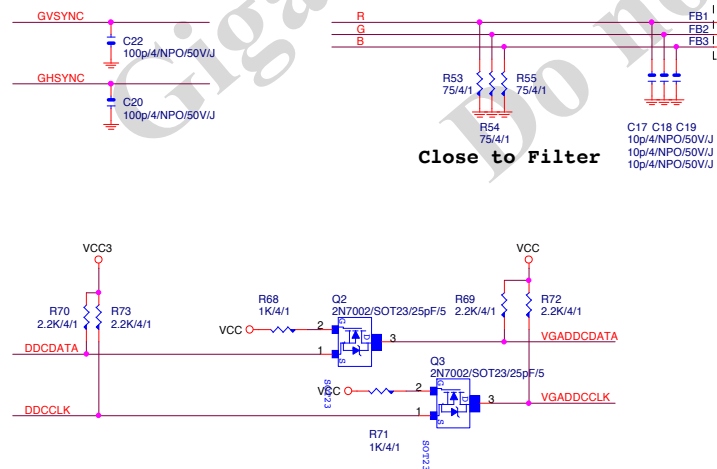
**PCH H CLK BUFFER**



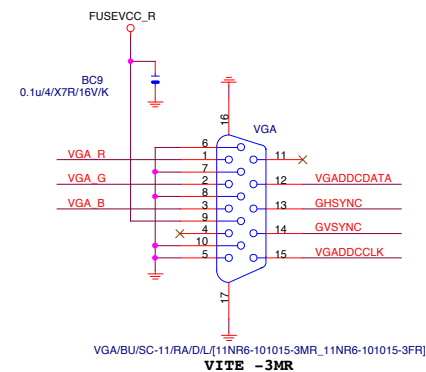
## VGA ESD



VGA SIGNAL
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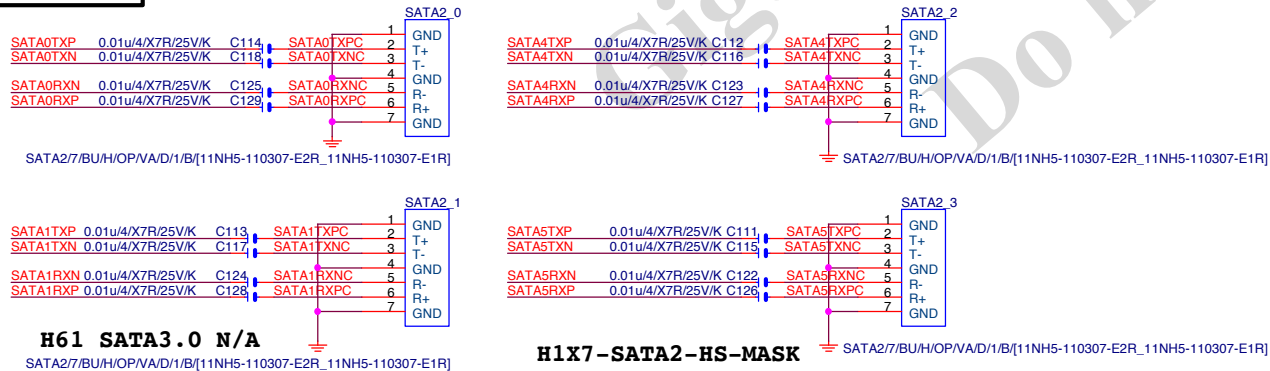
**D-SUB**



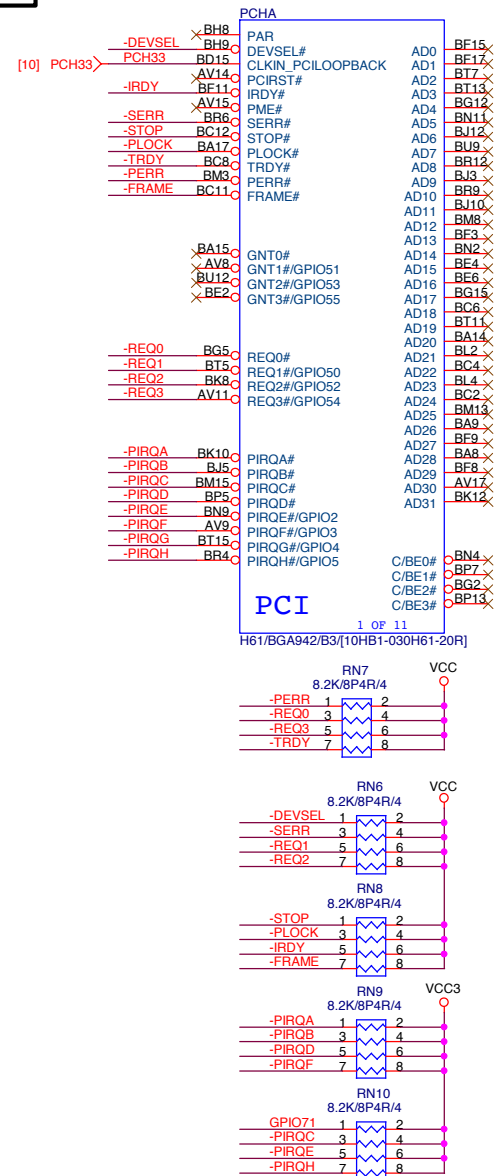
**PCH C**



## SATA CONN.



**PCH A**

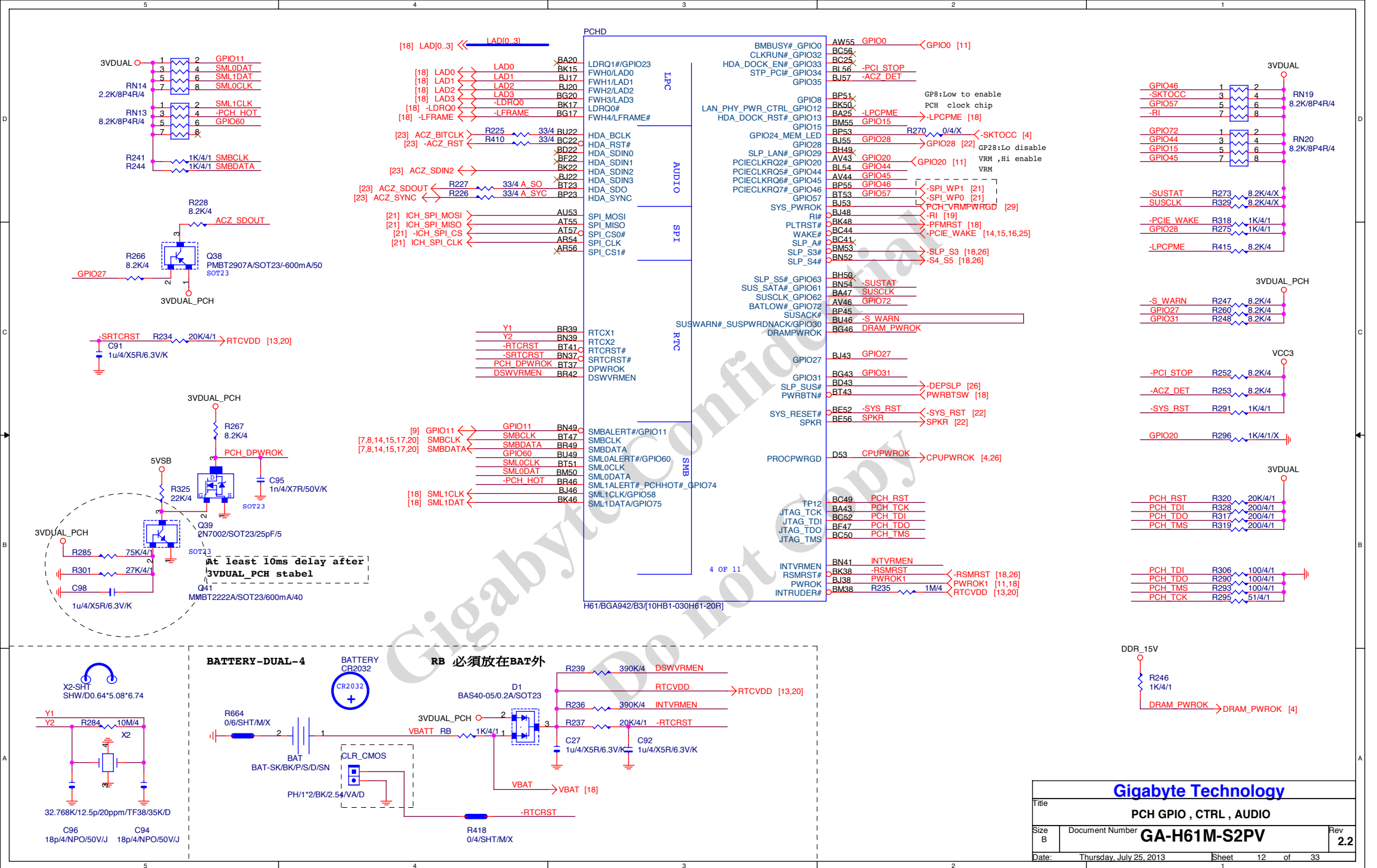


## Gigabyte Technology

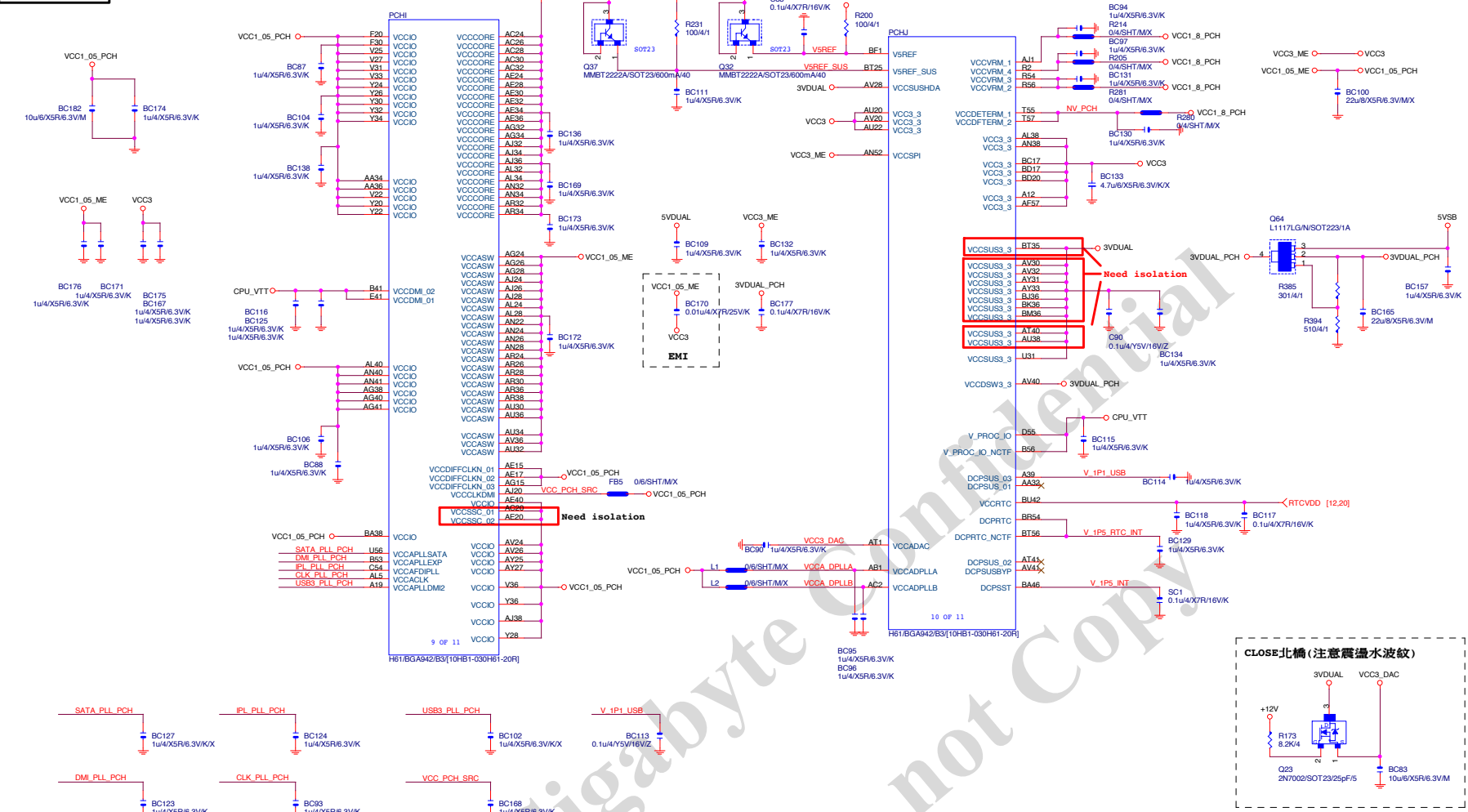
Title	PCH HOST , SATA, PCI
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Size B	Document Number <b>GA-H61M-S2PV</b>	Rev <b>2.2</b>
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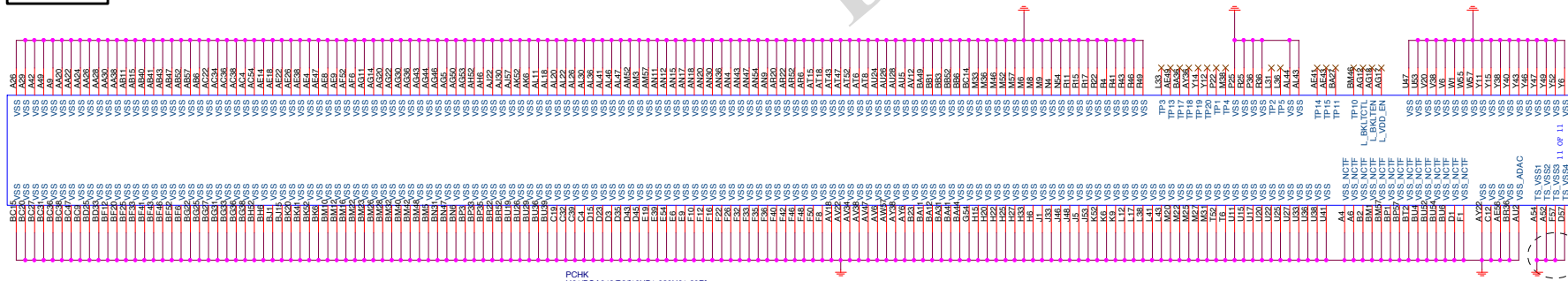
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PCH I POWER	
1	100
2	100
3	100
4	100
5	100
6	100
7	100
8	100
9	100
10	100
11	100
12	100
13	100
14	100
15	100
16	100
17	100
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88	100
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100	100

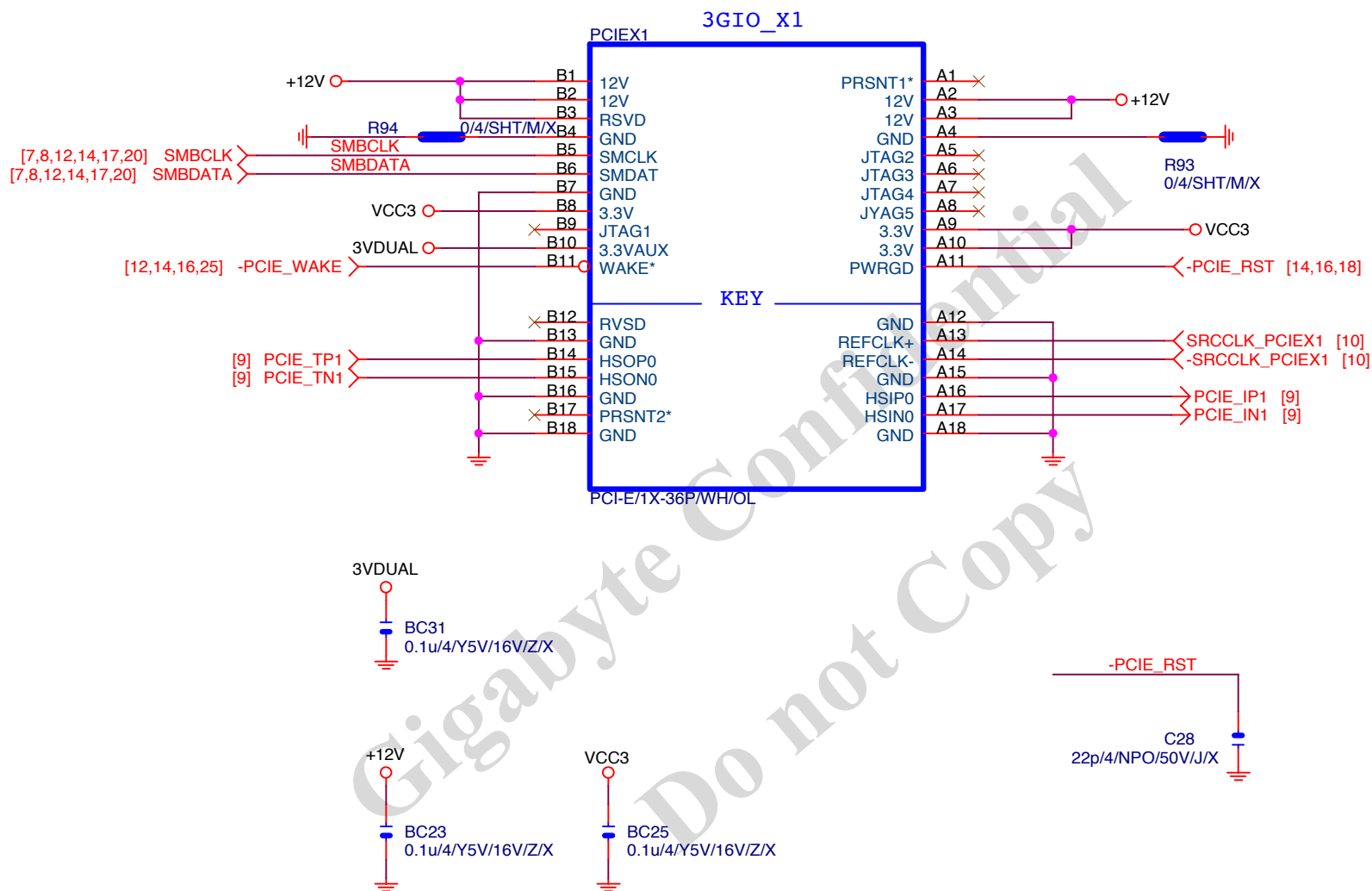


PCH K GND







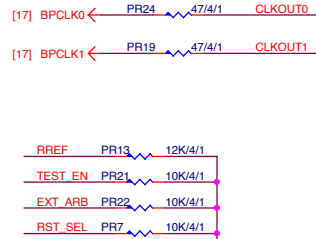
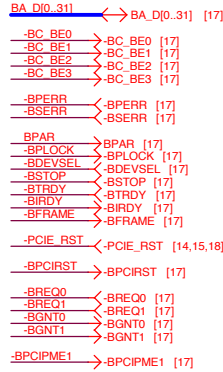


Gigabyte Technology			
Title			
PCI EXPRESS X 1 PORT			
Size A	Document Number		Rev
	GA-H61M-S2PV		2.2
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# PCIe TO PCI

PCI:5/4/5 Impedance=50 +- 15%



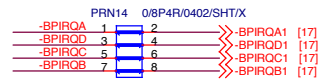
High: Enable PCI CLK 66MHz  
Low: Disable PCI CLK 66MHz



High: PCICLK INPUT form CLK Gen  
Low: PCICLK OUTPUT form IT8893 chip

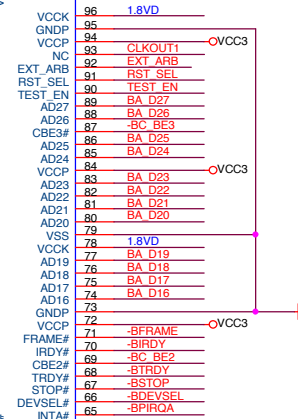
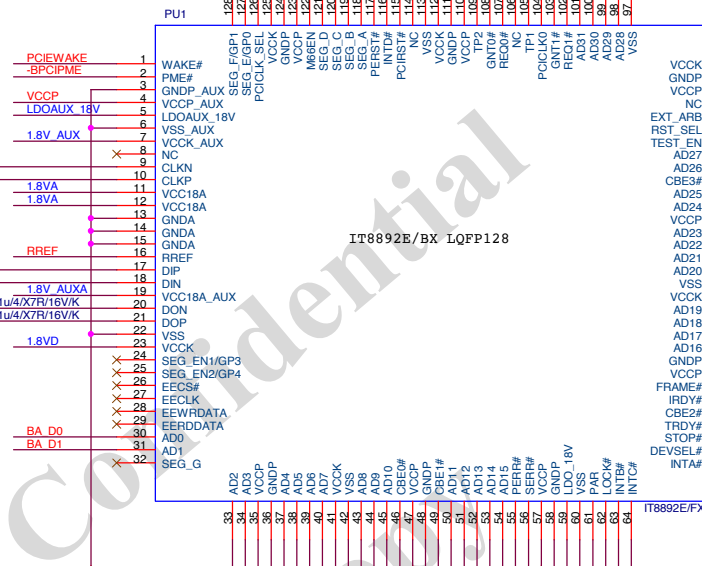
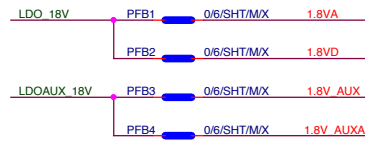
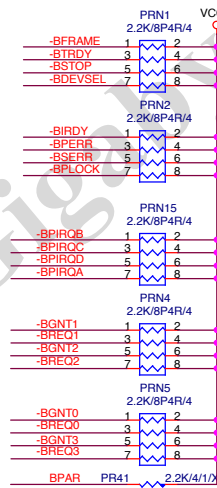
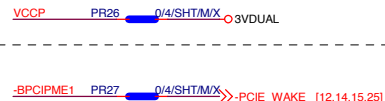


IT8892

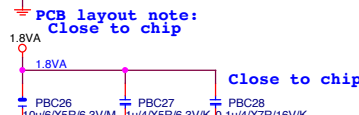
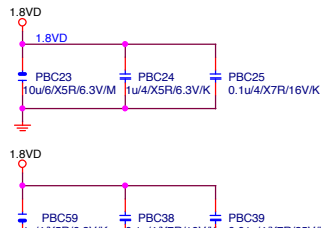
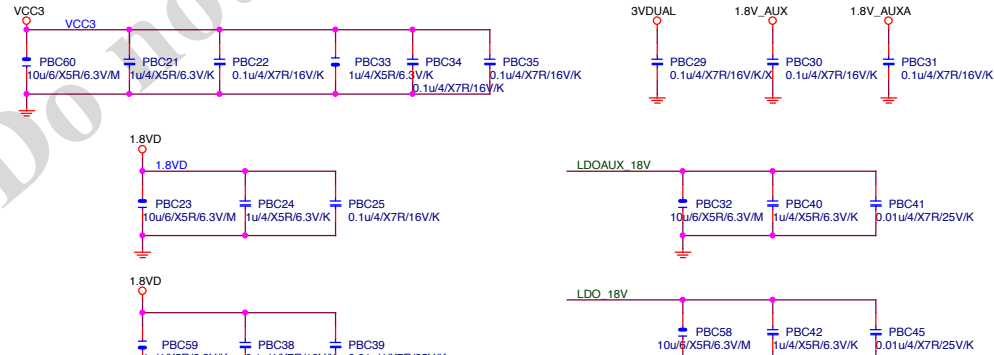


PCI slot

PCI slot



IT8892E/FX/S[10HP2-698892-40R]



PCB layout note:  
Close to chip

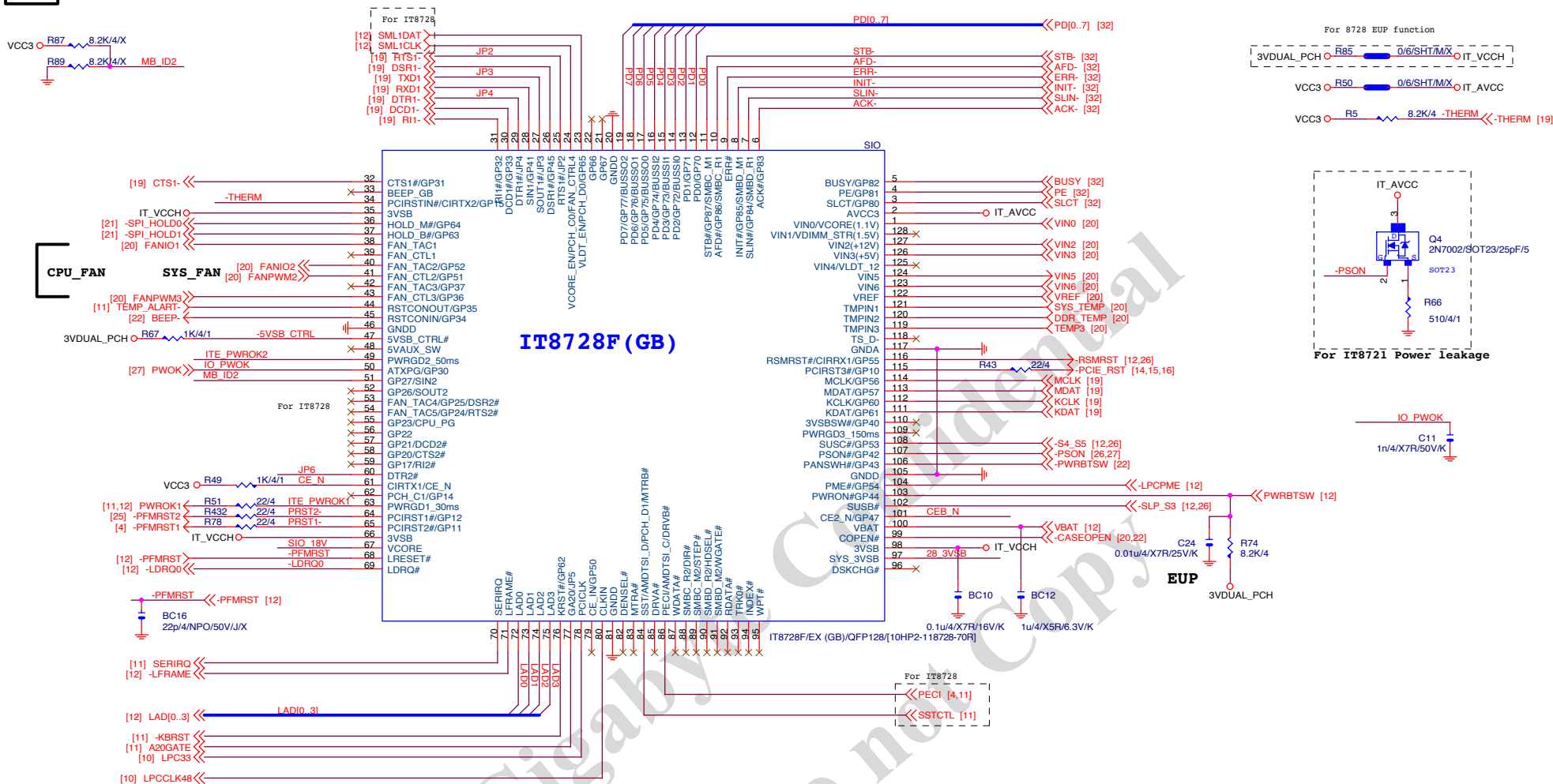
Close to chip

PCB layout note:  
Close to chip

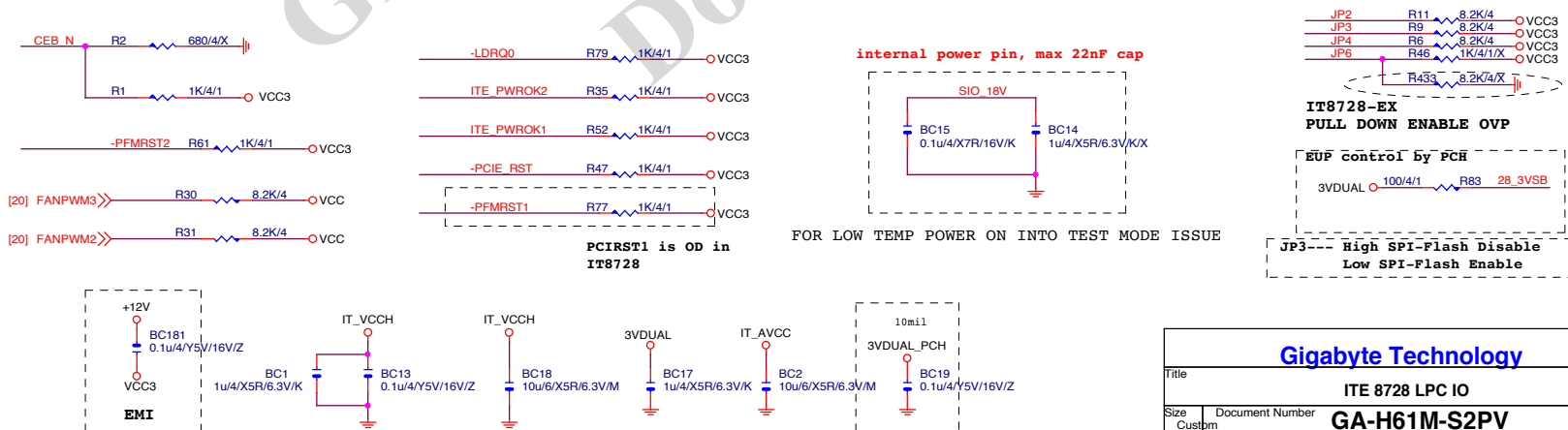
Gigabyte Technology

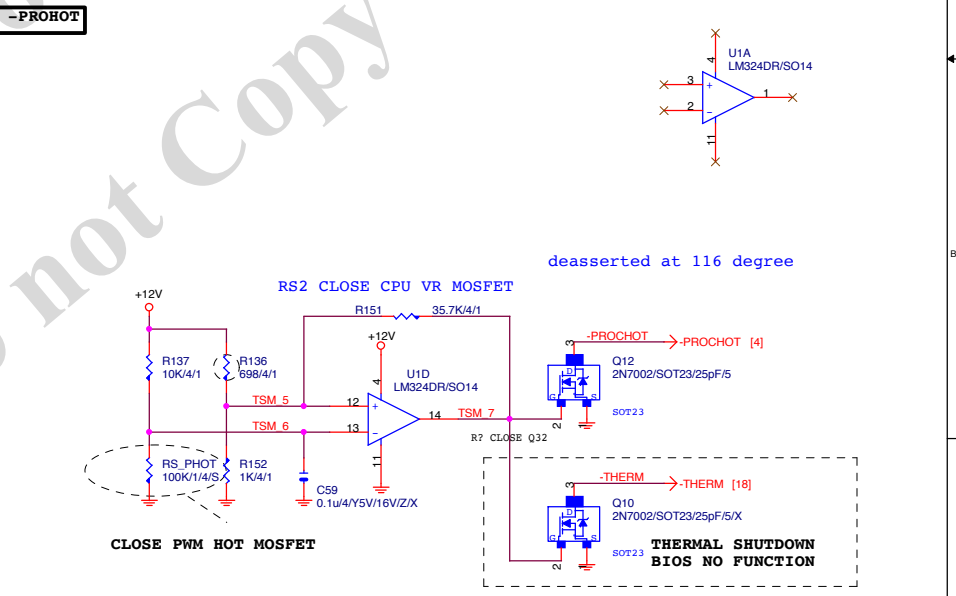
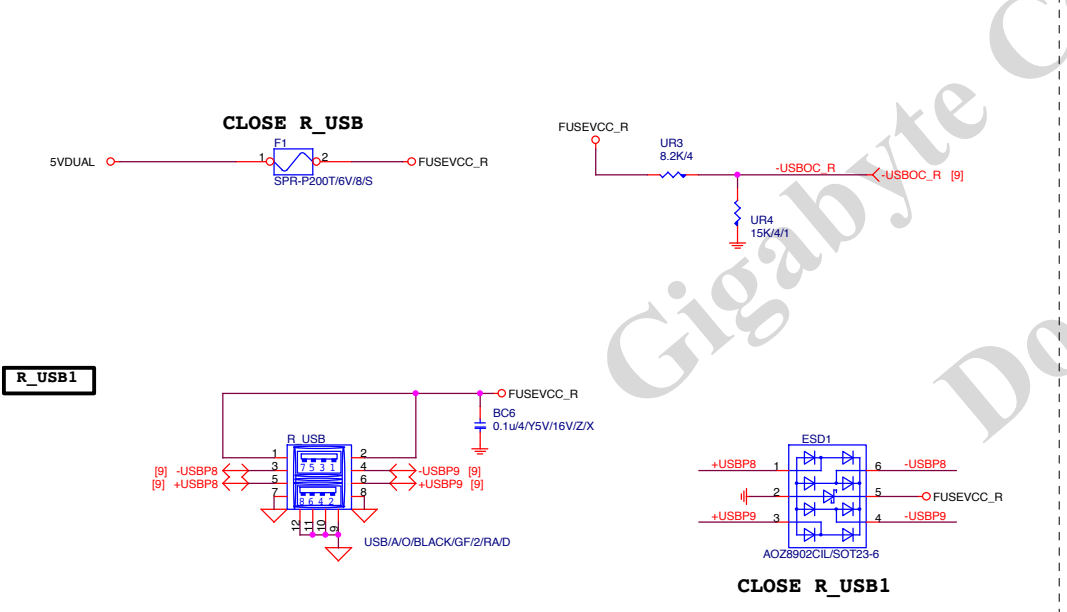
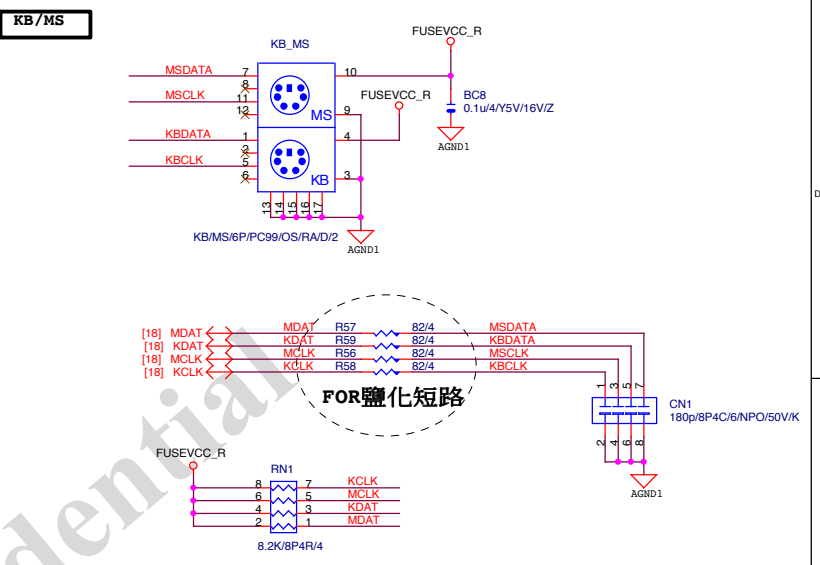
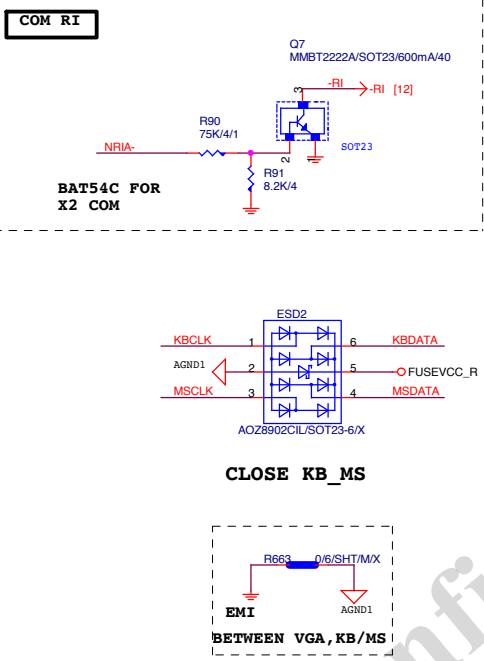
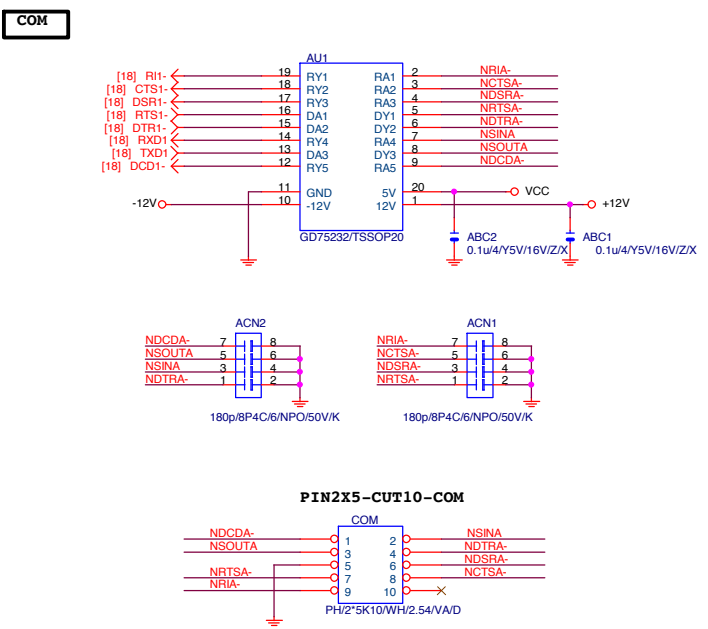
Title				Rev
ITE IT8892E				
Size	Document Number			2.2
Custom	GA-H61M-S2PV			
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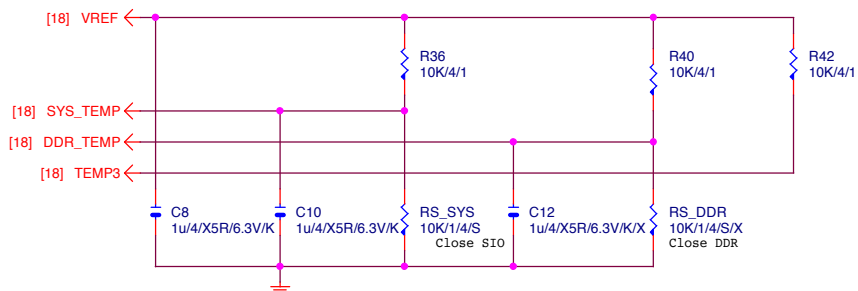


	<b>IT8728</b>
PIN121	VCORE_EN/PCH_C0
PIN120	VLDT_EN/PCH_D0
PIN19	ATXPG
PIN31	PCH_C1
PIN53	SST/AMDT_S1_D/NTSRB#/PCH_D1
PIN55	PECI/AMDT_S1_C/DRV#
PIN66	SYS_3VSB
PIN70	GP47
PIN95	VIN2(VCC5)
PIN96	VIN1(VCC12)
PIN97	VIN1/VDDIM_STR(1.5V)
PIN98	VIN0/VCORE(1.1V)/NC

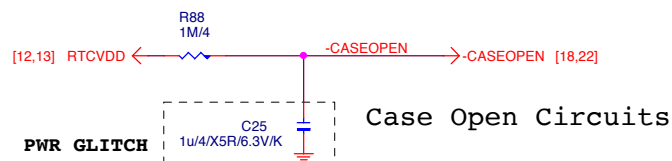




**TEMP H/W MONITOR**

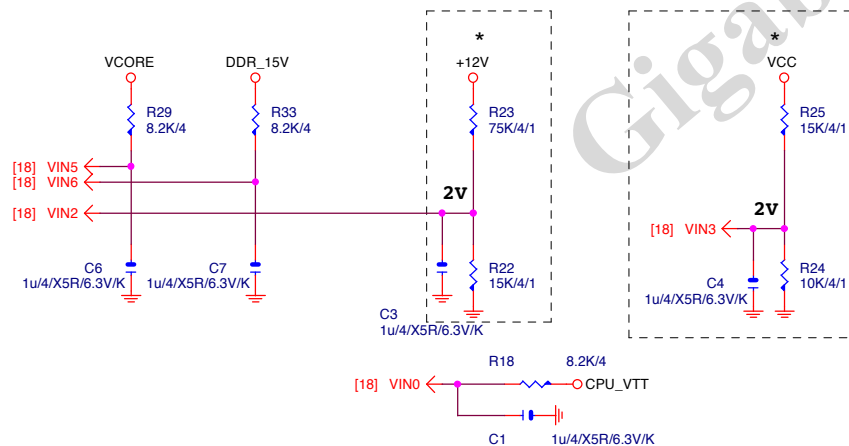


**CASE OPEN**

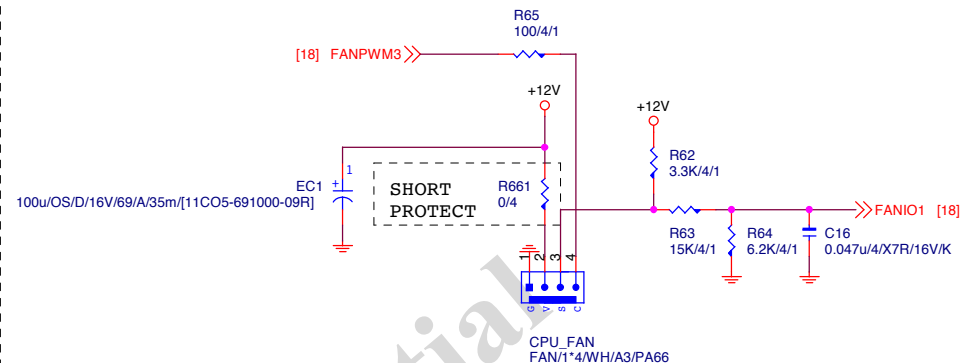


**VOLTAGE-- H/W MONITOR**

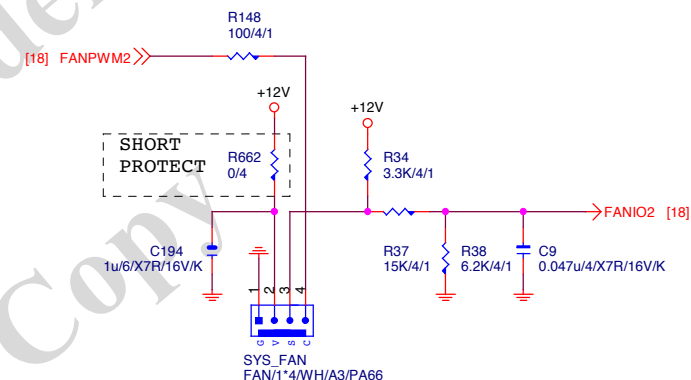
IT8728/EX VIN2/VIN3-->2V



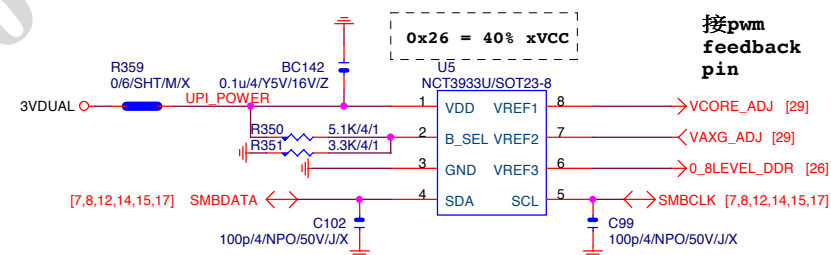
## CPU SMART FAN



**SYS SMART FAN**



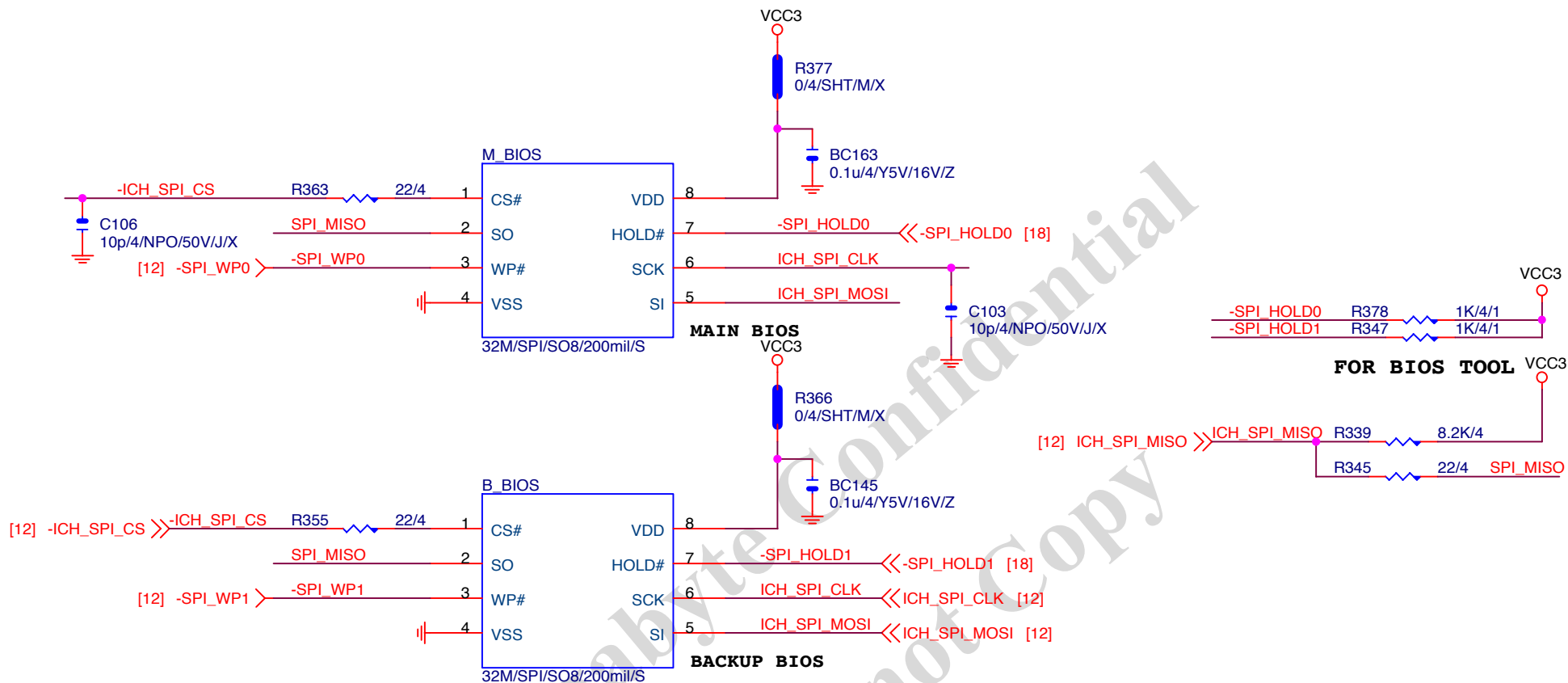
O.V.



## Gigabyte Technology

Title			
HWM,FAN CTRL,OV			
Size	Document Number		Rev
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# DUAL BIOS



**B65使用64M BIOS**  
**使用H67暫用32M**  
**H61使用32M BIOS**

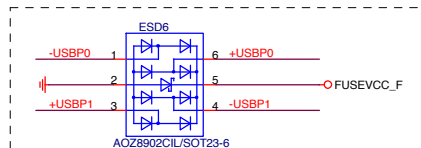
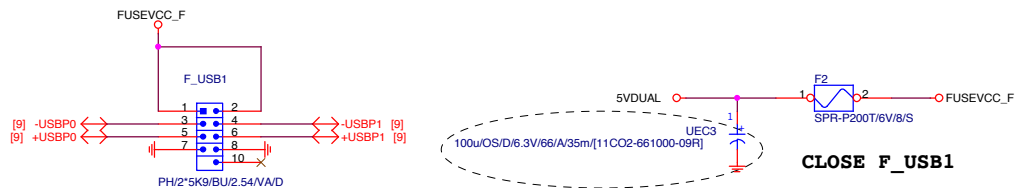
BOOT DEVICE	GNT1	GNT0
LPC	0	0
PCI	0	1
SPI	1	1

1 means floating  
0 means PD 1K

**Gigabyte Technology**

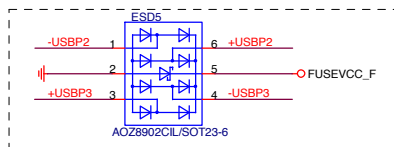
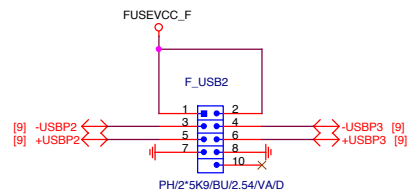
Title		
DUAL BIOS		
Size A	Document Number	Rev
	GA-H61M-S2PV	2.2
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# FRONT USB1



Close to connector

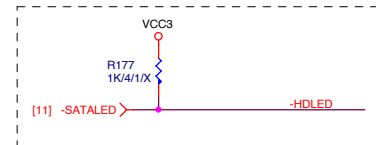
# FRONT USB2



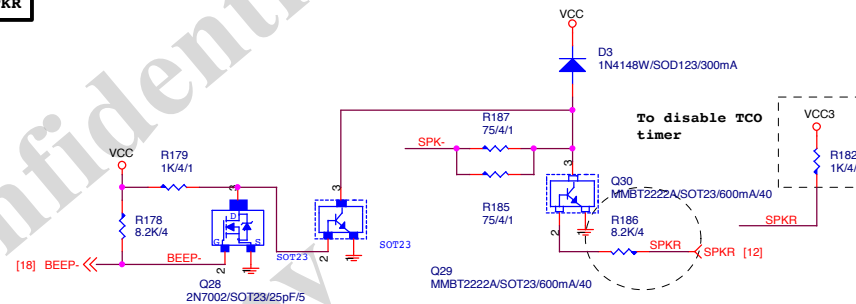
Close to connector

# SATA LED

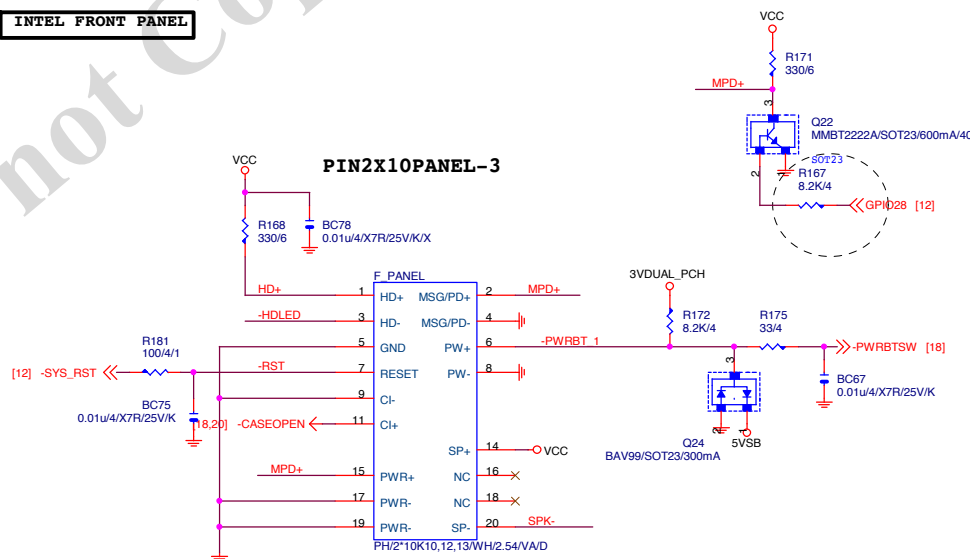
REMOVE R117 FOR RED LED



# SPKR



# INTEL FRONT PANEL



Gigabyte Technology

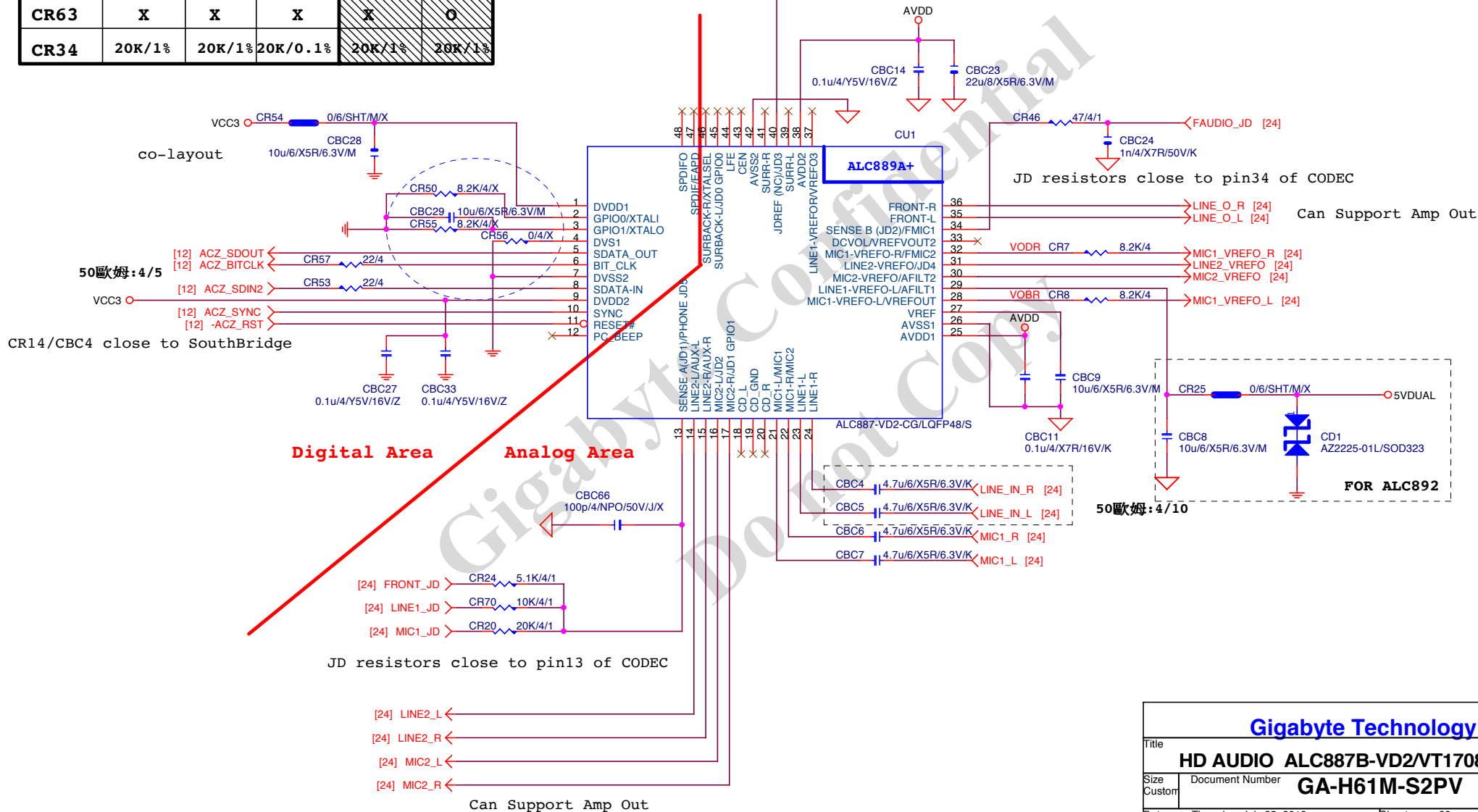
Title			
FP,F_USB,USB PWR,SPKR,SATA LED			
Size	Document Number	Rev	
Custom	GA-H61M-S2PV	2.2	
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# AZALIA CODEC

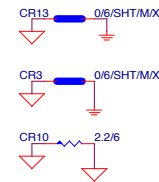
## ALC892/ALC889A/ALC889/ALC888B Colay

	ALC888B	ALC888-VA	ALC889A	ALC888-VD	ALC892
CR59	X	O	O	O	O
CR53, 58	X	X	O	X	X
CR56	O	O	O	O	X
CR63	X	X	X	X	O
CR34	20K/1%	20K/1%	20K/0.1%	20K/1%	20K/1%

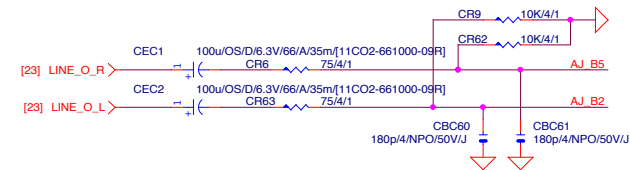


Gigabyte Technology			
Title	HD AUDIO ALC887B-VD2/VT1708S/VT2021		
Size	Document Number	GA-H61M-S2PV	
Custom		Rev 2.2	
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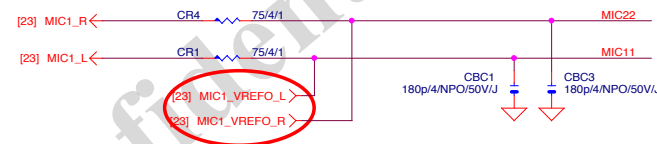
**SPDIF** **N/A**



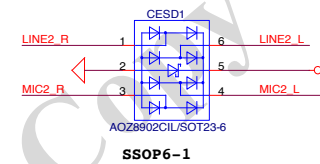
## LINE-IN



## MIC-IN



## F\_AUDIOESD



**BLUE**  
**LINE-IN**

[23] LINE1\_JD ← LINE1\_JD  
C4 C4  
C3 C3  
C5 C5  
LINE\_IN RR  
C2 C2  
LINE\_IN LL  
C2 C2  
GND

**GREEN**  
**LINE-OUT**

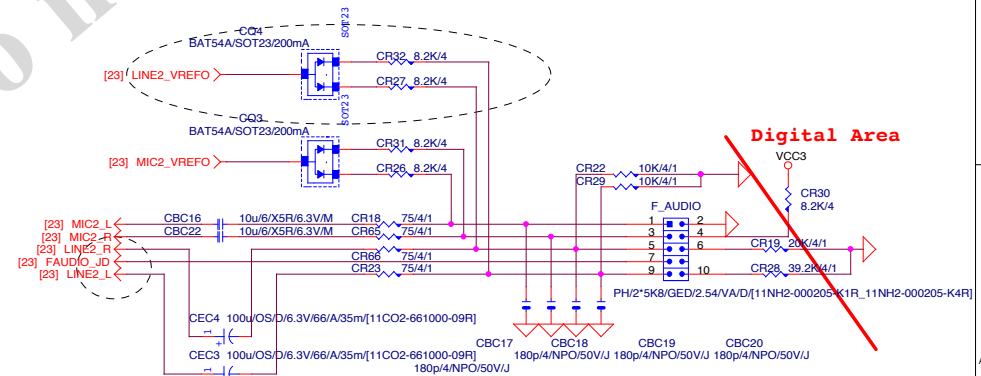
[23] FRONT\_JD ← FRONT\_JD  
B4 B4  
AJ B5 B3  
B5 B5  
AJ B2 B2  
B2 B2  
GND

**PINK**  
**MIC-IN**

[23] MIC1\_JD ← MIC1\_JD  
A4 A4  
MIC22 A3  
A5 A5  
MIC11 A2  
A2 A2  
A1 A1  
GND

MH1 MH1  
MH2 MH2  
MH3 MH3  
MH4 MH4  
MH5 MH5

AUDIO/BTX11NR6-403007-71R, 11NR6-403007-76R

**AZALIA FRONT PANEL**

## Gigabyte Technology

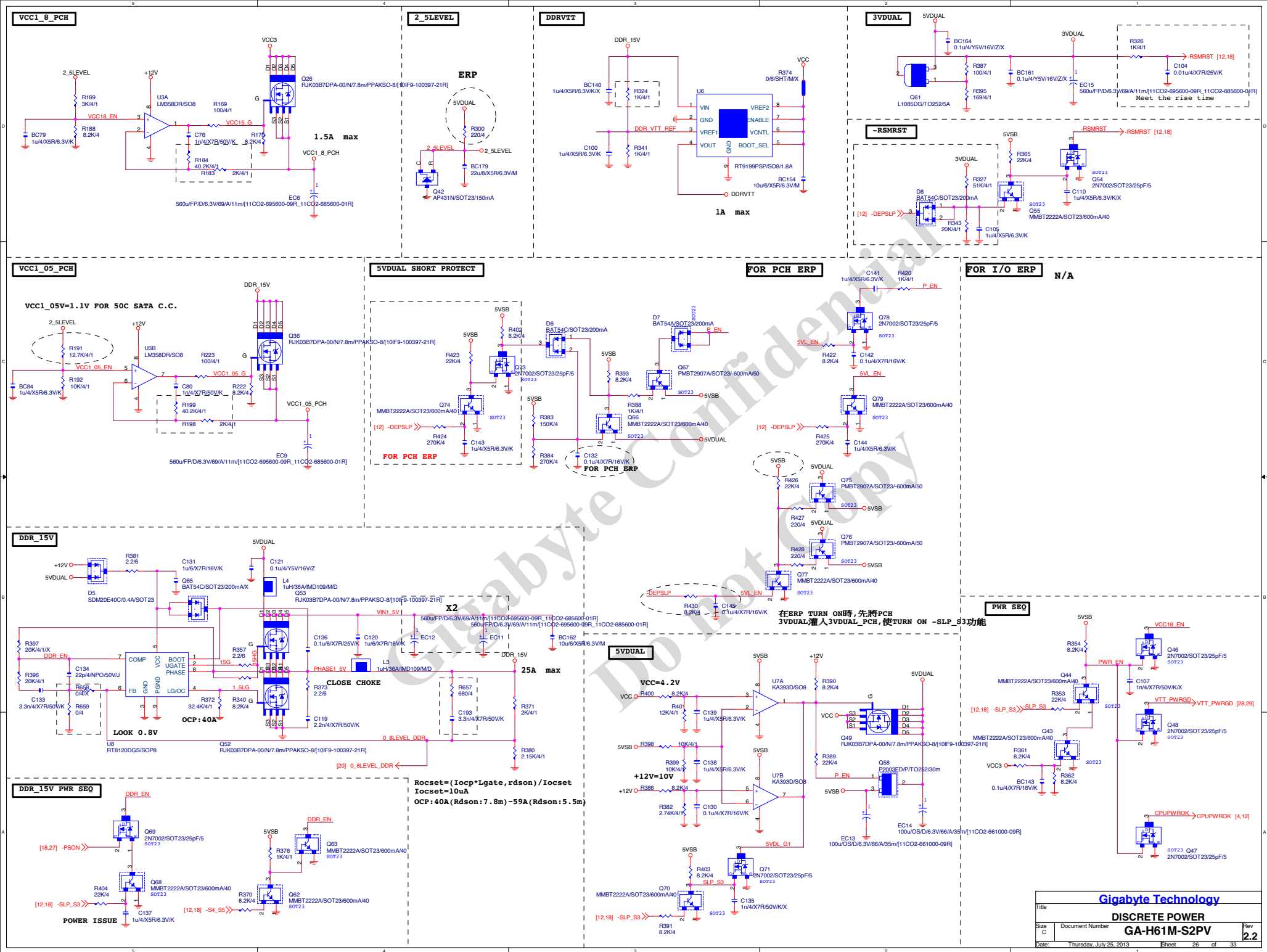
## AUDIO JACK

GA-H61M-S2PV

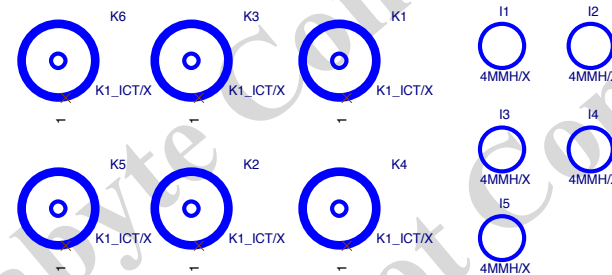
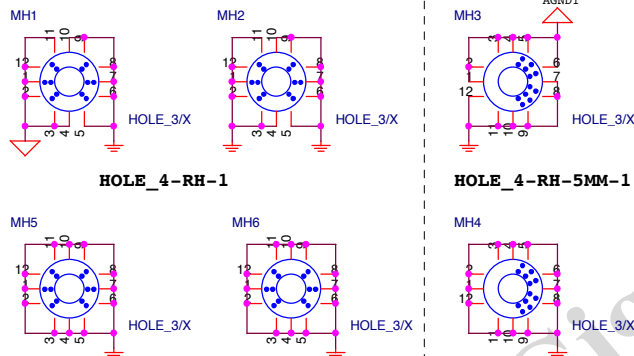
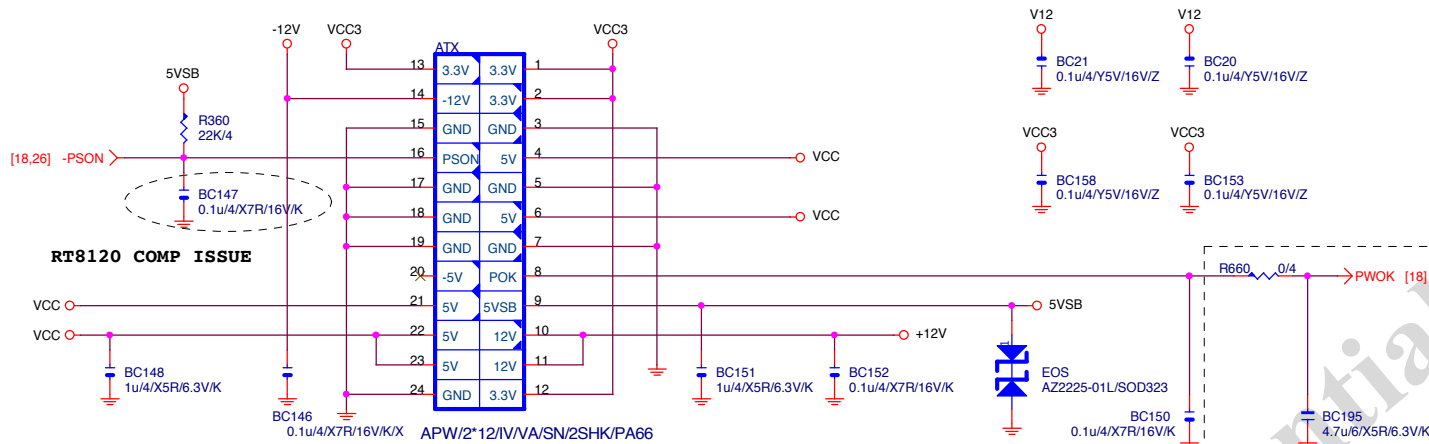
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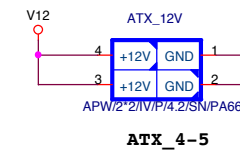


## ATXX24 POWER CONNECTOR

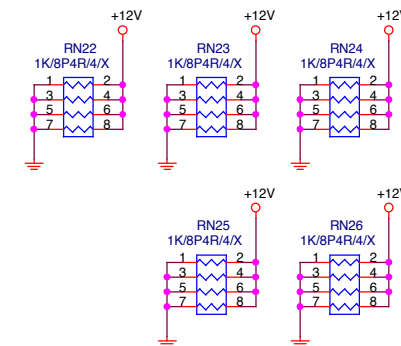


To prevent the 5VSB under loading when boot

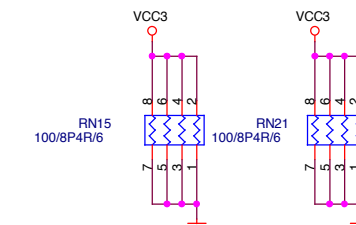
## ATXX4 POWER CONNECTOR



### MIN. LOAD



### FIX PWR MINMUN LOAD

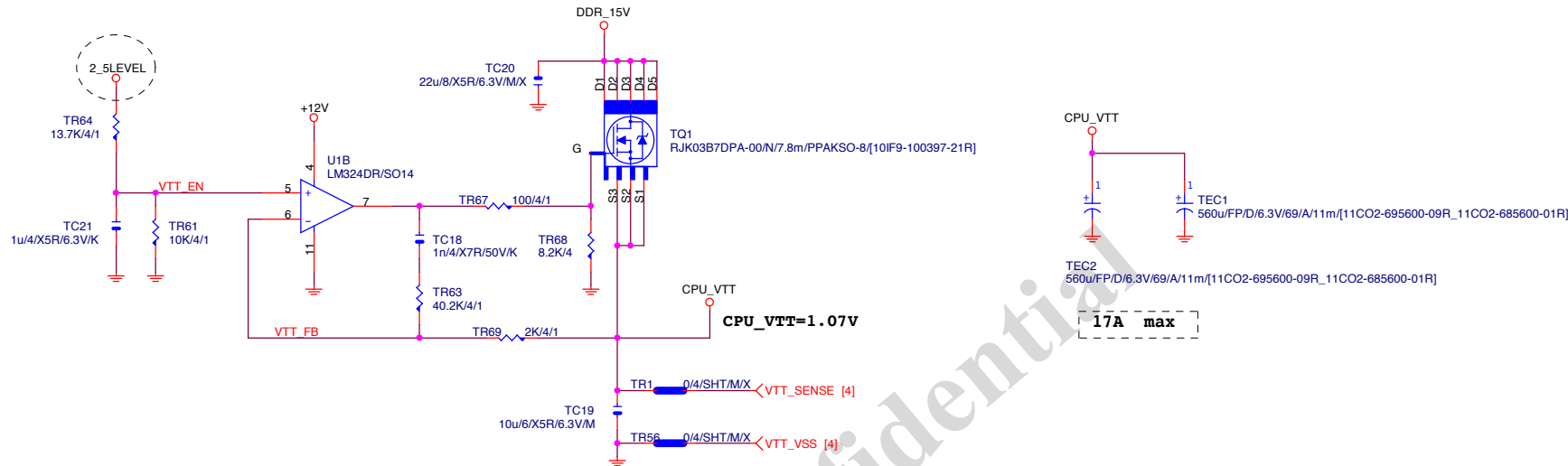


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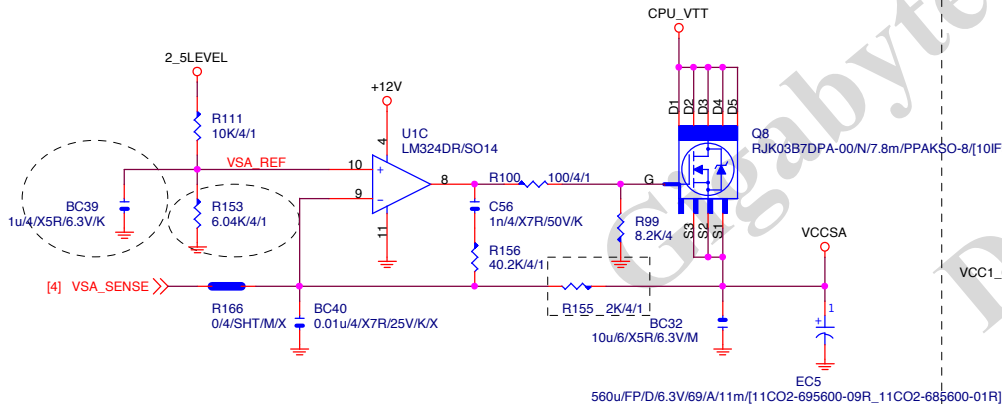
ATX CONNECTOR

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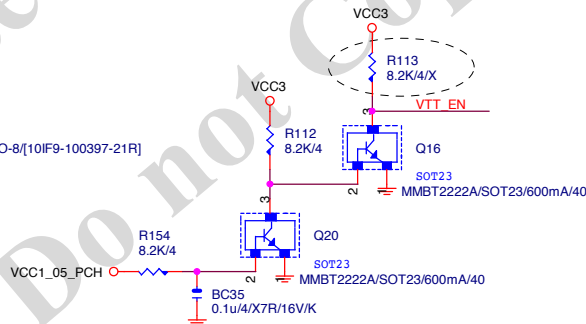
# CPU\_VTT



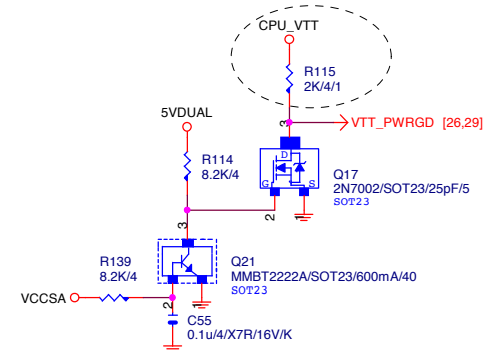
# VCCSA



# CPU\_VTT PWR SEQ



# VTT\_PWRGD



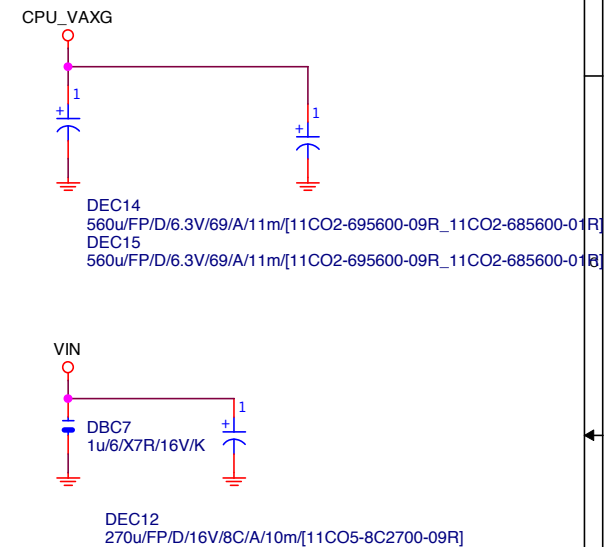
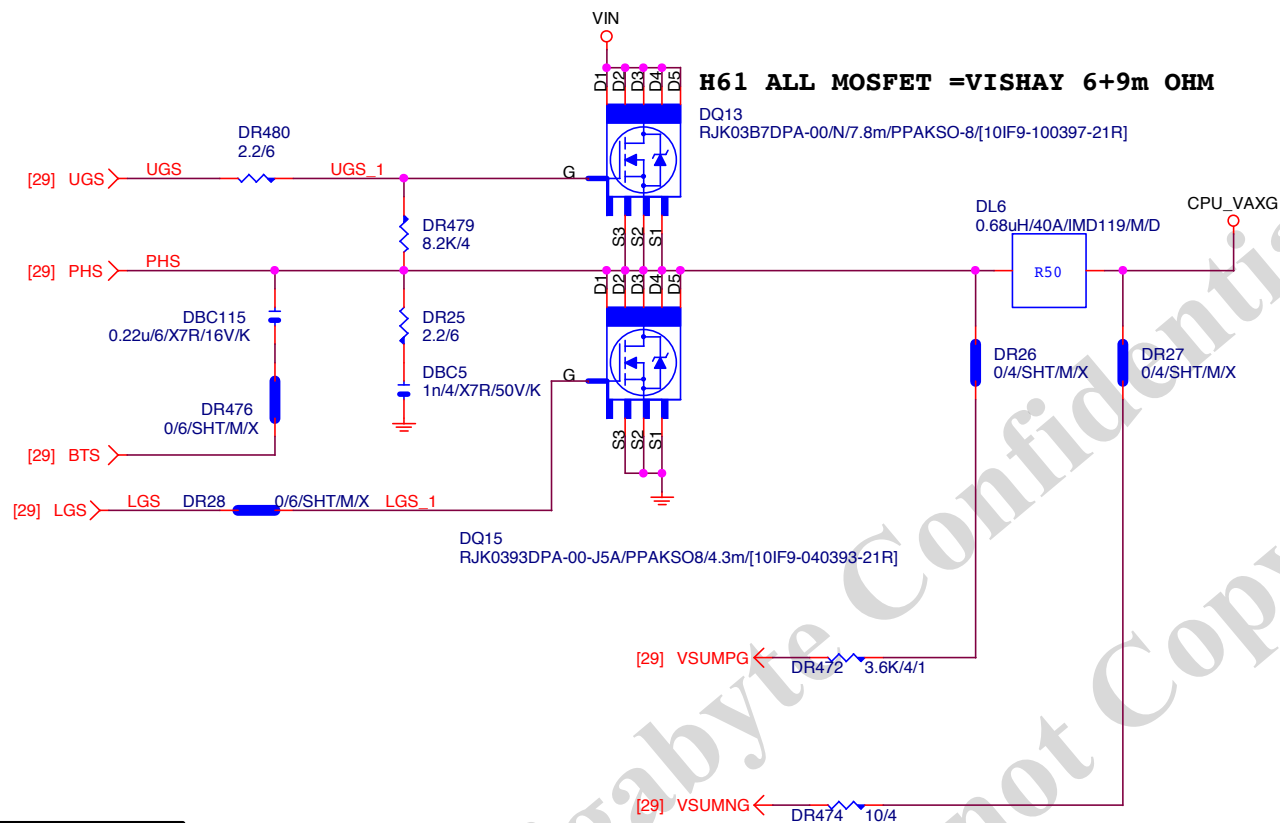
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VAXG

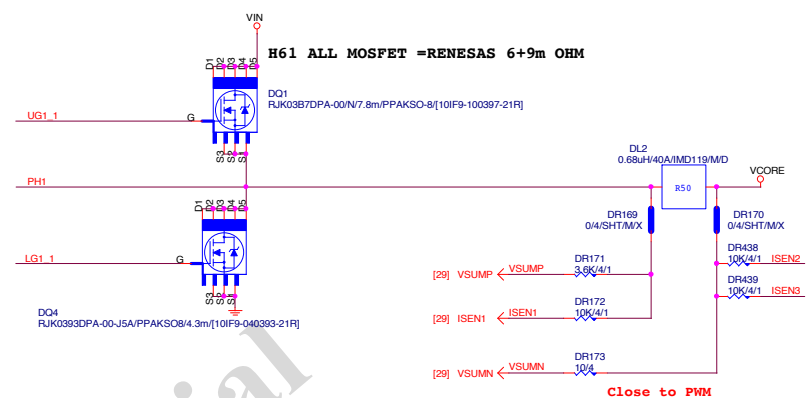
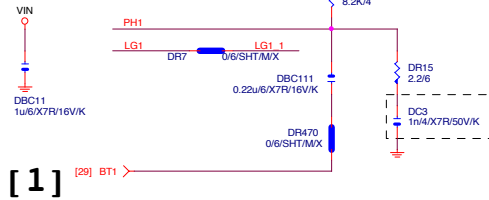


MOS HEATSINK

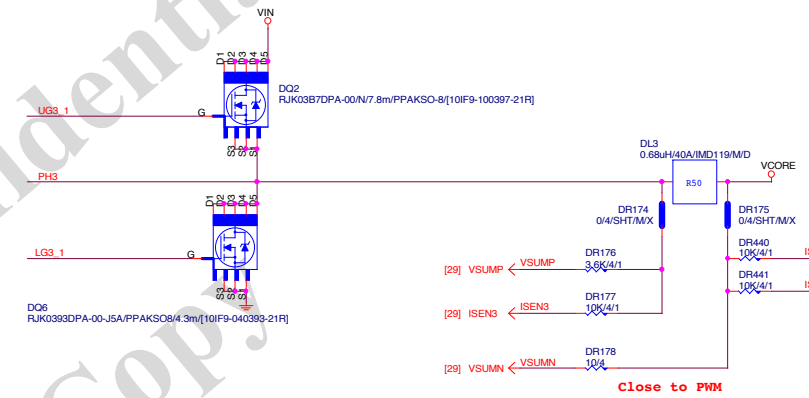
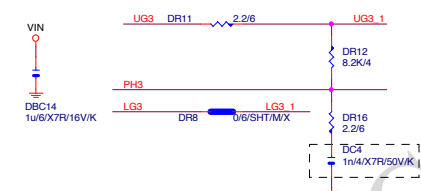
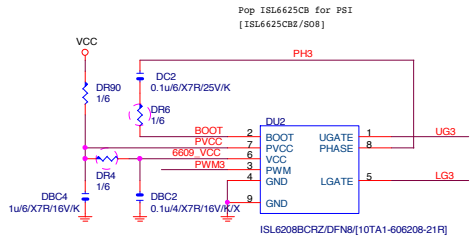
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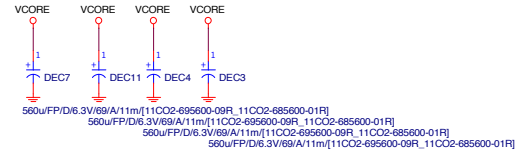
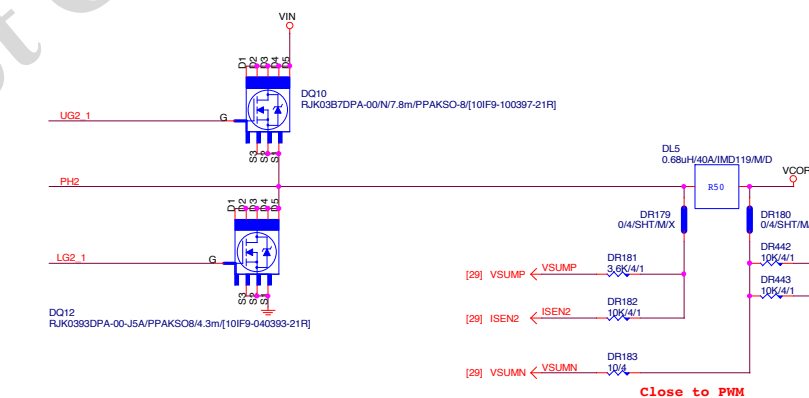
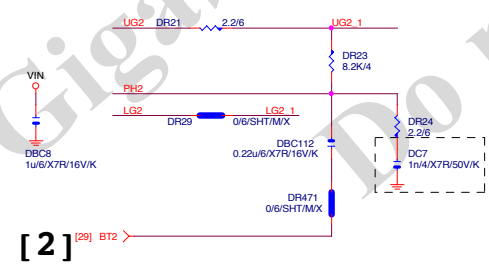
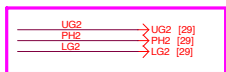
# PHASE 1



# PHASE 3



# PHASE 2



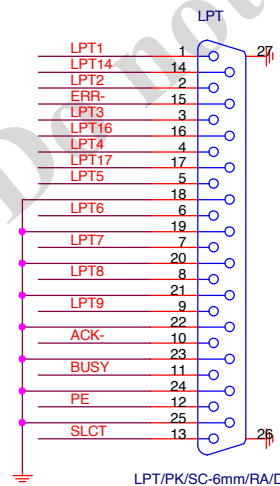
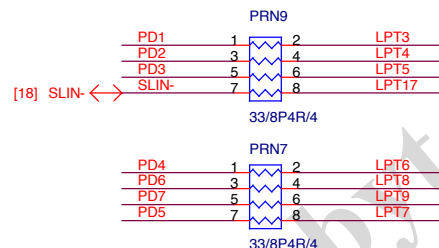
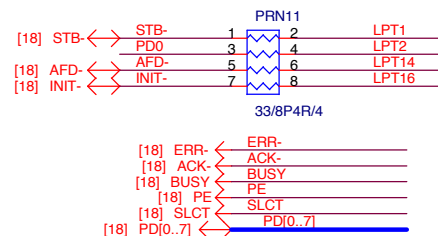
TPM

N/A

LPT PORT

COMB

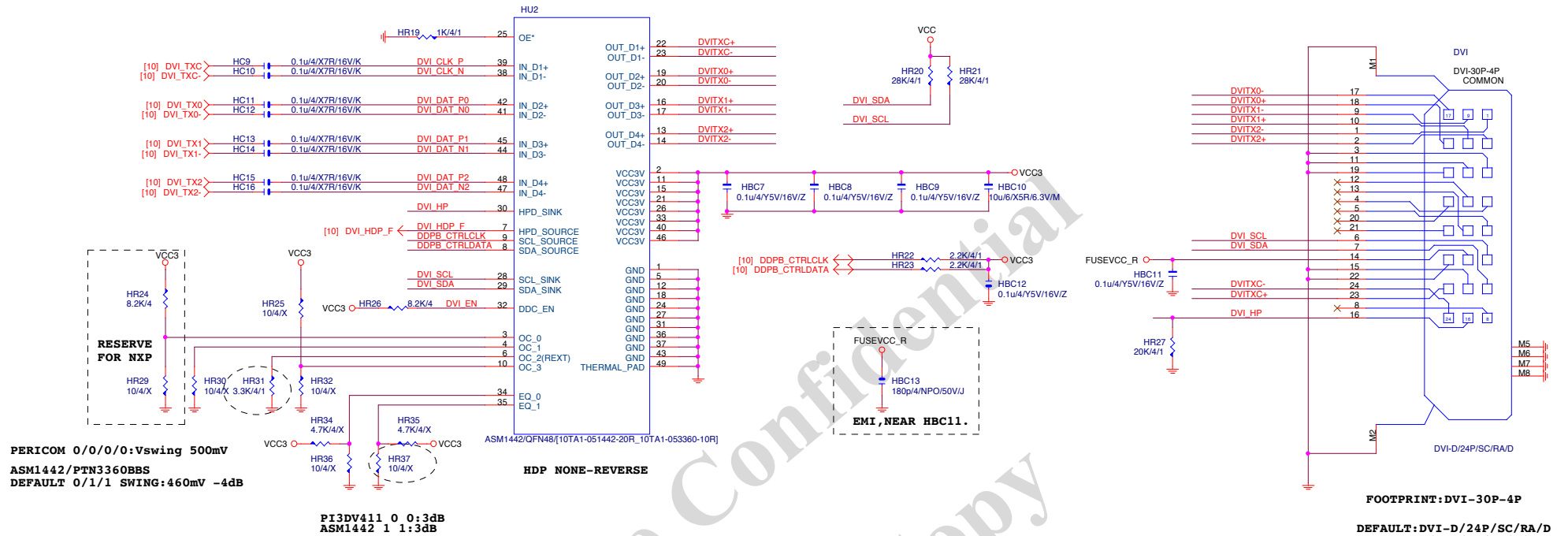
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# DVI LEVEL SHIFT



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