

Model Name: GA-B150M-VP

rev 1.0



SHEET

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06	CPU_LGA1151-C
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12	PCH_MISC
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SHEET

TITLE

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Title			
Cover Sheet			
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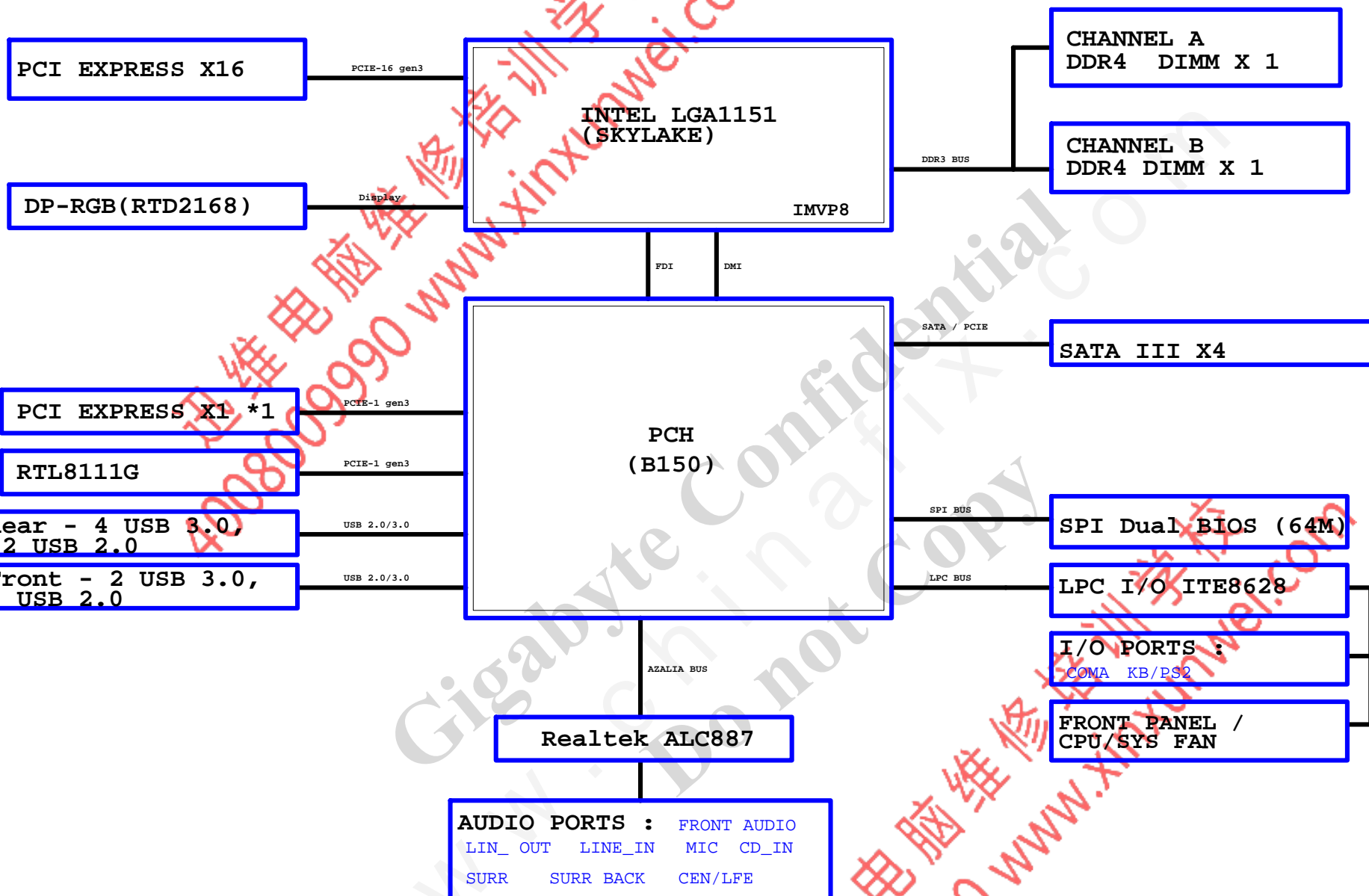
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CHINA FDX

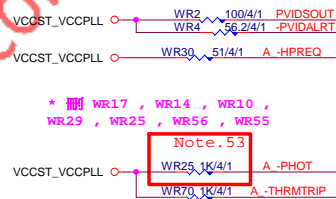
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BLOCK DIAGRAM

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LGA1151E SKT_H4



* 删除 WR17 , WR14 , WR10
WR29 , WR25 , WR56 , WR5

Note.53

VCCST_VCCPLL ○ 

* 删除 WR91

CPU_VCCST_PWOK

12,16 N_PCH_VRMPWRGD 

```
* 删除 net N_CPU_VCCST_PWORK
```

A_TCK	WR11	51/4/1
A_TRST	WR9	51/4/1

13 N_-CPURST N_-CPURST WBC123 1n4/X7R/50V/K

11	A_DMI_0RXP	A_DMI_0RXP	Y3	DMI_RXP[0]	DMI_TXP[0]	AC2	A_DMI_0TXN	A_DMI_0TXN	11
11	A_DMI_0RXN	A_DMI_0RXN	Y3	DMI_RXN[0]	DMI_TXN[0]	AC1	A_DMI_0TXP	A_DMI_0TXP	11
11	A_DMI_1RXP	A_DMI_1RXP	AA5	DMI_RXP[1]	DMI_TXP[1]	AD3	A_DMI_1TXP	A_DMI_1TXP	11
11	A_DMI_1RXN	A_DMI_1RXN	AA5	DMI_RXN[1]	DMI_TXN[1]	AD2	A_DMI_1TXN	A_DMI_1TXN	11
11	A_DMI_2RXP	A_DMI_2RXP	AB4	DMI_RXP[2]	DMI_TXP[2]	AE2	A_DMI_2TXP	A_DMI_2TXP	11
11	A_DMI_2RXN	A_DMI_2RXN	AB4	DMI_RXN[2]	DMI_TXN[2]	AE1	A_DMI_2TXN	A_DMI_2TXN	11
11	A_DMI_3RXP	A_DMI_3RXP	AC4	DMI_RXP[3]	DMI_TXP[3]	AF2	A_DMI_3TXP	A_DMI_3TXP	11
11	A_DMI_3RXN	A_DMI_3RXN	AC4	DMI_RXN[3]	DMI_TXN[3]	AF3	A_DMI_3TXN	A_DMI_3TXN	11

PA_EXP_TXP[0..15] >>> PA_EXP_TXP[0..15] 1
PA_EXP_TXN[0..15] >>> PA_EXP_TXN[0..15] 1
PA_EXP_RXP[0..15] >>> PA_EXP_RXP[0..15] 1
PA_EXP_RXN[0..15] >>> PA_EXP_RXN[0..15] 1

```
4 layer PEG/DMI=====4/4/4//15
6 layer PEG/DMI=====4/5.5/4//15
```

Impedance=85 +- 15%

W=12 mil out of CPU
S=15 mil out of CPU


```
G-15u : (CPU-SK/1151/S/15)
10SC1-F01151-11R / 10SC1-F01151-12R
G-FL : (CPU-SK/1151/S/GF)
10SC1-F01151-21R / 10SC1-F01151-22R
```

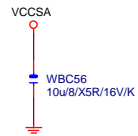
```
4 layer HDMI/DP/eDP/=====4/4/4//15
6 layer HDMI/DP/eDP/=====4/5.5/4//15
```

Impedance=85 +- 15%

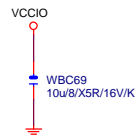
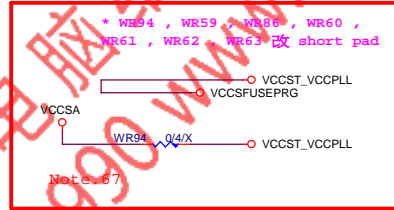
```
CFG[2]:x16 Lane Numbering
Reversal. 1=
NORMAL;0=reversal
CFG[4]: eDP
enable:1:disable/0=enable
CFG[6:5]:PCI Express® bifurcation. 11=
1 x16 PCI Express;10=2x8 PCI Express
CFG[7]: PEG Training:1=(default) PEG Train
immediately following RESET#;0=PEG Wait
for BIOS
```

Bifurcation Config.	Signals Lines		
	CFG[8]	CFG[5]	CFG[2]
1x16	1	1	1
1x16 Reversed	1	1	0
2x8	1	0	1
2x8 Reversed	1	0	0
1x8+2x4	0	0	1
1x8+2x4 Reversed	0	0	0

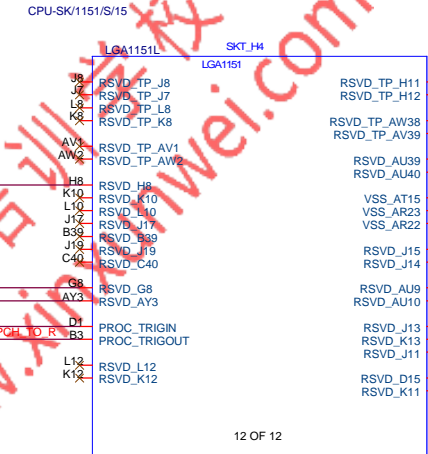
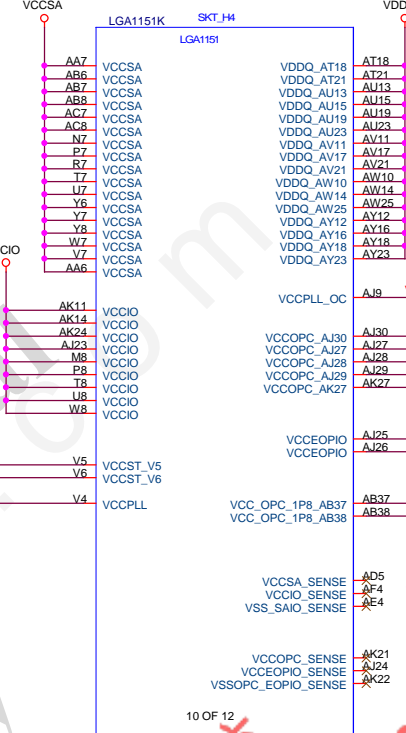
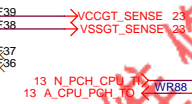
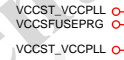
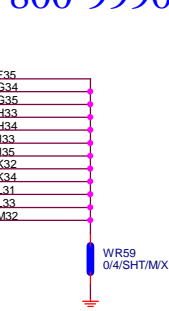
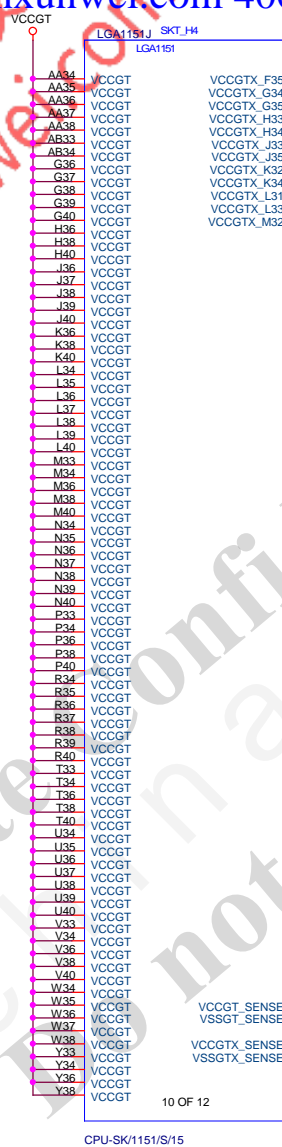
			
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CPU LGA1151-A			
Size Custom	Document Number		Rev 1.0
GA-B150M-VP			
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* 删 WBC124 , WBC125 , WBC126 , WBC127 电容



* 删 VCCGT 电容



VCORE	LGA1151I SKT_H4	VCORE
LGA1151		
A25	VCC_A25	VCC_H32
A26	VCC_A26	VCC_J21
A27	VCC_A27	VCC_F32
A28	VCC_A28	VCC_F33
A29	VCC_A29	VCC_F34
A30	VCC_A30	VCC_G24
B25	VCC_B25	VCC_G25
B27	VCC_B27	VCC_G26
B29	VCC_B29	VCC_G27
B31	VCC_B31	VCC_G28
B32	VCC_B32	VCC_G29
B33	VCC_B33	VCC_J22
B34	VCC_B34	VCC_J23
B35	VCC_B35	VCC_J24
B36	VCC_B36	VCC_J25
B37	VCC_B37	VCC_J26
C25	VCC_C25	VCC_J27
C26	VCC_C26	VCC_J28
C27	VCC_C27	VCC_J29
C28	VCC_C28	VCC_J30
C29	VCC_C29	VCC_J31
C30	VCC_C30	VCC_K16
C32	VCC_C32	VCC_K18
C34	VCC_C34	VCC_K20
C36	VCC_C36	VCC_K21
D25	VCC_D25	VCC_K23
D27	VCC_D27	VCC_K25
D29	VCC_D29	VCC_K27
D31	VCC_D31	VCC_K29
D32	VCC_D32	VCC_K31
D33	VCC_D33	VCC_L14
D34	VCC_D34	VCC_L15
D35	VCC_D35	VCC_L16
D36	VCC_D36	VCC_L17
E24	VCC_E24	VCC_L18
E25	VCC_E25	VCC_L19
E26	VCC_E26	VCC_L20
E27	VCC_E27	VCC_L21
E28	VCC_E28	VCC_L22
E29	VCC_E29	VCC_L23
E30	VCC_E30	VCC_L24
E32	VCC_E32	VCC_L25
E34	VCC_E34	VCC_L26
F36	VCC_F36	VCC_L27
F23	VCC_F23	VCC_L28
F24	VCC_F24	VCC_L29
F25	VCC_F25	VCC_L30
F27	VCC_F27	VCC_M13
F29	VCC_F29	VCC_M14
F31	VCC_F31	VCC_M16
G30	VCC_G30	VCC_M18
G32	VCC_G32	VCC_M20
H22	VCC_H22	VCC_M22
H23	VCC_H23	VCC_M24
H25	VCC_H25	VCC_M26
H27	VCC_H27	VCC_M28
H29	VCC_H29	VCC_M30
H31	VCC_H31	VCC_AJ12
AJ11	VCC_AJ11	VCC_AJ14
AJ13	VCC_AJ13	VCC_AJ16
AJ15	VCC_AJ15	VCC_AJ18
AJ17	VCC_AJ17	VCC_AJ20
AJ19	VCC_AJ19	VCC_AJ22
AJ21	VCC_AJ21	VCC_SENSE
		VCC_VCORE

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CPU-SK/1151/S/15

* 刪 Vcore 電容

LGA1151F SKT_H4	LGA1151
A11	VSS
A13	VSS
A15	VSS
A17	VSS
A24	VSS
A27	VSS
A33	VSS
AA33	VSS
AA8	VSS
AB39	VSS
AB5	VSS
AC3	VSS
AC33	VSS
AC34	VSS
AC65	VSS
AD1	VSS
AD33	VSS
AD36	VSS
AD37	VSS
AD38	VSS
AD39	VSS
AD4	VSS
AD40	VSS
AD6	VSS
AD7	VSS
AD8	VSS
AE3	VSS
AE33	VSS
AE36	VSS
AE5	VSS
AF3	VSS
AF33	VSS
AF36	VSS
AF37	VSS
AF40	VSS
AF5	VSS
AF8	VSS
AG1	VSS
AG2	VSS
AG3	VSS
AG33	VSS
AG36	VSS
AG4	VSS
AG5	VSS
AG8	VSS
AH33	VSS
AH36	VSS
AH37	VSS
AH38	VSS
AH39	VSS
AH40	VSS
AH5	VSS
AH8	VSS
AJ1	VSS
AJ31	VSS
AJ32	VSS
AJ33	VSS
AJ12	VSS
AJ35	VSS
AJ36	VSS
AJ4	VSS
AJ5	VSS
AJ8	VSS
AK10	VSS
AK12	VSS
AK13	VSS
AK15	VSS
AK16	VSS
AK17	VSS
AK18	VSS
AK19	VSS
AK20	VSS
AK23	VSS
AK25	VSS
AK26	VSS
AK28	VSS

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CPU-SK/1151/S/15

LGA1151G SKT_H4	LGA1151
AR24	VSS
AR3	VSS
AR30	VSS
AR31	VSS
AR32	VSS
AR33	VSS
AR34	VSS
AR35	VSS
AR36	VSS
AR4	VSS
AR5	VSS
AT10	VSS
AT11	VSS
AT12	VSS
AT13	VSS
AT14	VSS
AT17	VSS
AT24	VSS
AT25	VSS
AT26	VSS
AT27	VSS
AT28	VSS
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AT31	VSS
AT32	VSS
AT34	VSS
AT36	VSS
AT37	VSS
AT38	VSS
AT39	VSS
AT40	VSS
AT5	VSS
AT6	VSS
AT7	VSS
AT8	VSS
AT9	VSS
AU11	VSS
AU10	VSS
AU11	VSS
AU14	VSS
AU16	VSS
AU19	VSS
AU2	VSS
AU22	VSS
AU23	VSS
AU24	VSS
AU28	VSS
AV30	VSS
AV34	VSS
AV38	VSS
AV5	VSS
AV9	VSS
AW3	VSS
AW30	VSS
AW32	VSS
AW34	VSS
AW36	VSS
AW5	VSS
AW9	VSS
AY27	VSS
AY30	VSS
AY5	VSS
AY7	VSS
AY9	VSS
B24	VSS
B26	VSS
B28	VSS
B30	VSS
B6	VSS
C12	VSS
C14	VSS
C16	VSS
C18	VSS
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C22	VSS
C24	VSS
C31	VSS
C33	VSS
C35	VSS

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CPU-SK/1151/S/15

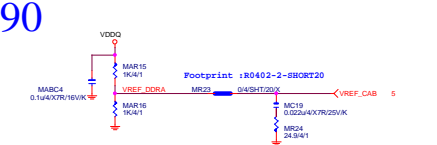
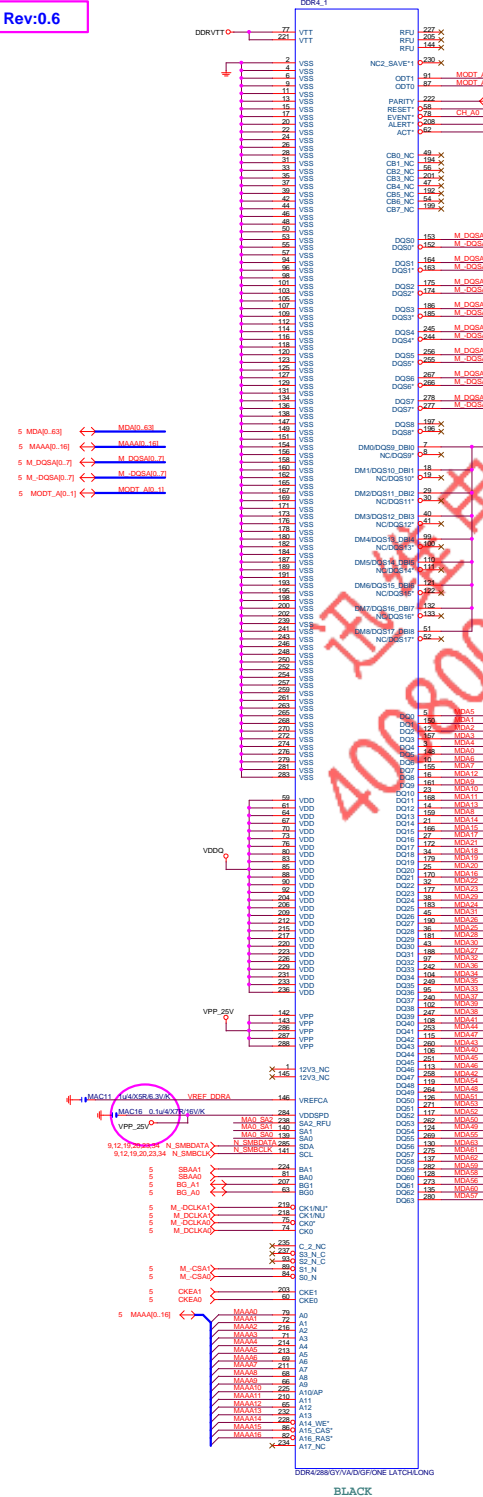
LGA1151H SKT_H4	LGA1151
C37	VSS
C5	VSS
C8	VSS
C10	VSS
D24	VSS
D26	VSS
D28	VSS
D30	VSS
D37	VSS
D39	VSS
D4	VSS
D7	VSS
E110	VSS
E13	VSS
E15	VSS
E17	VSS
E19	VSS
E21	VSS
E23	VSS
E3	VSS
E31	VSS
E33	VSS
E35	VSS
E37	VSS
E6	VSS
E9	VSS
F1	VSS
F10	VSS
F22	VSS
F26	VSS
F28	VSS
F30	VSS
F4	VSS
F40	VSS
F7	VSS
G11	VSS
G13	VSS
G15	VSS
G17	VSS
G19	VSS
G22	VSS
G3	VSS
G31	VSS
G33	VSS
G6	VSS
H1	VSS
H21	VSS
H24	VSS
H26	VSS
H28	VSS
H30	VSS
H35	VSS
H37	VSS
H39	VSS
H4	VSS
H7	VSS
H9	VSS
J10	VSS
J12	VSS
L11	VSS
J16	VSS
J18	VSS
J20	VSS
J3	VSS
J62	VSS
J84	VSS
J6	VSS
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K37	VSS

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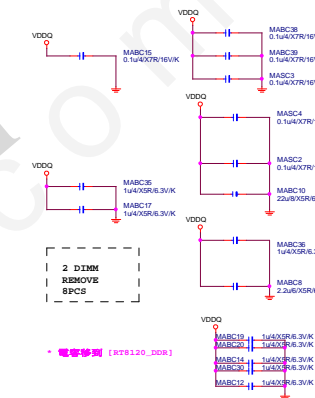
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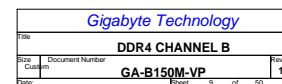
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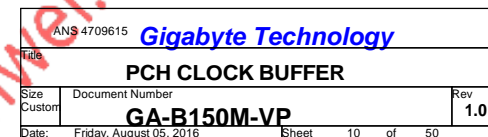
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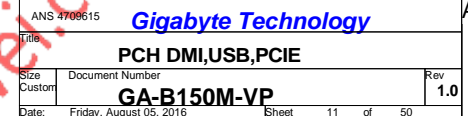
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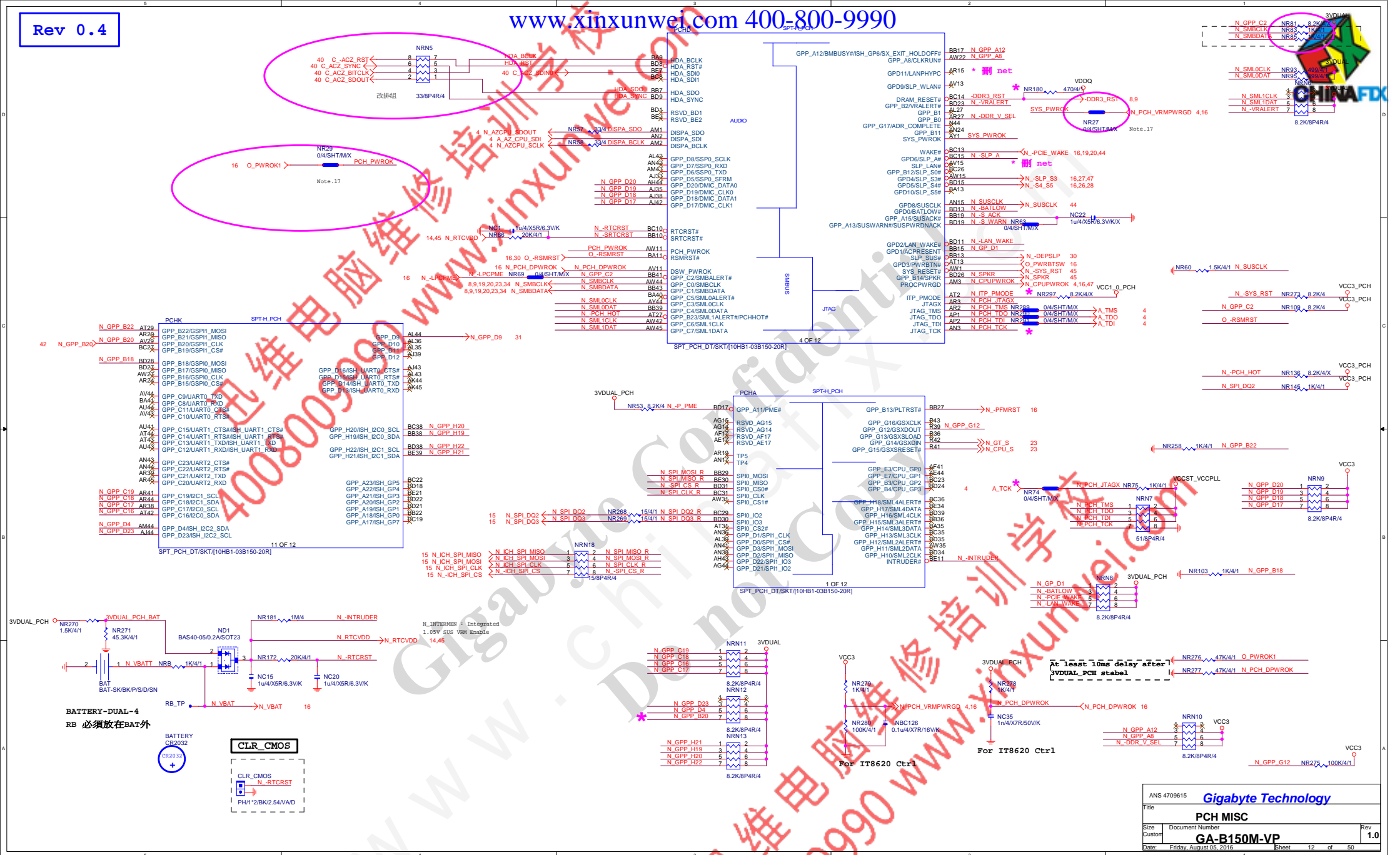
		
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DDR4 CHANNEL A		
Size	Document Number	
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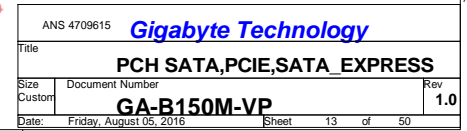


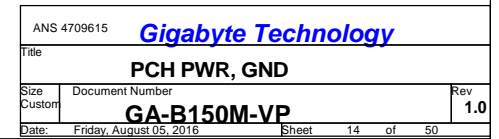
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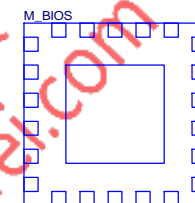
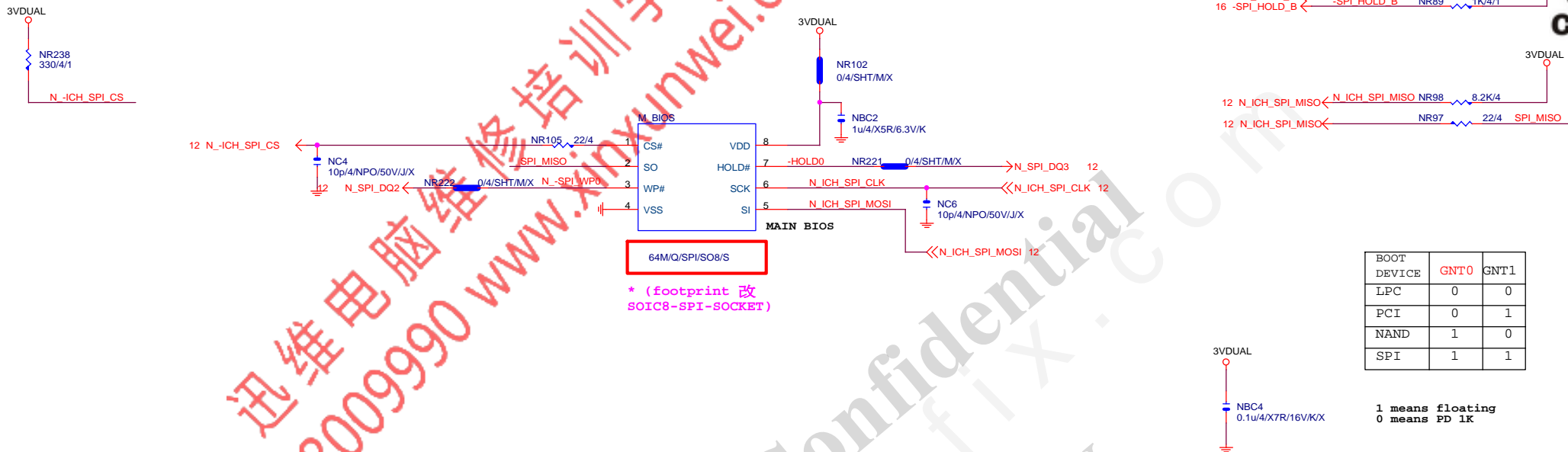


Rev 0.1

BIOS

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MOSI For DMI RX Termination Voltage



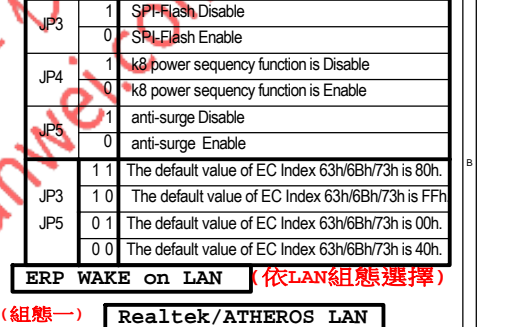
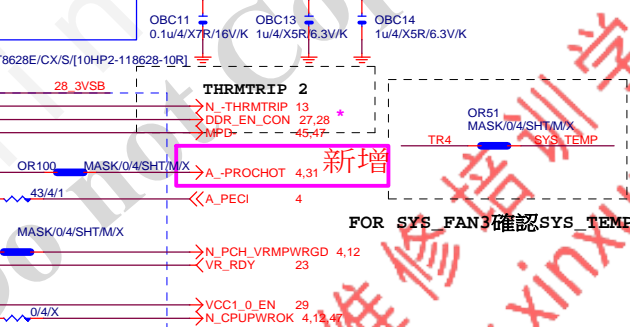
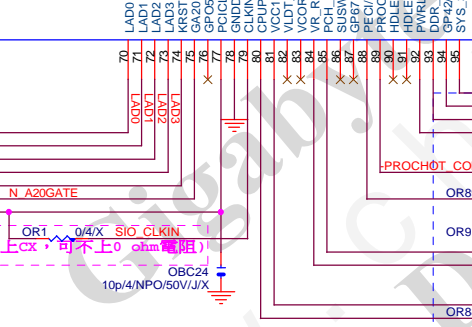
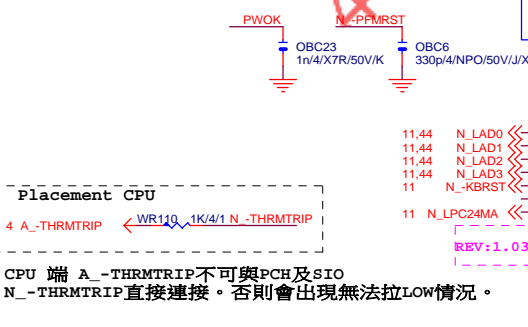
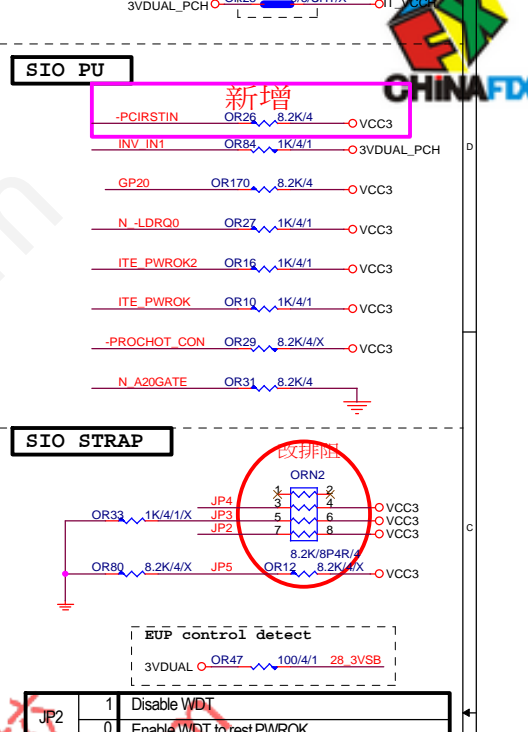
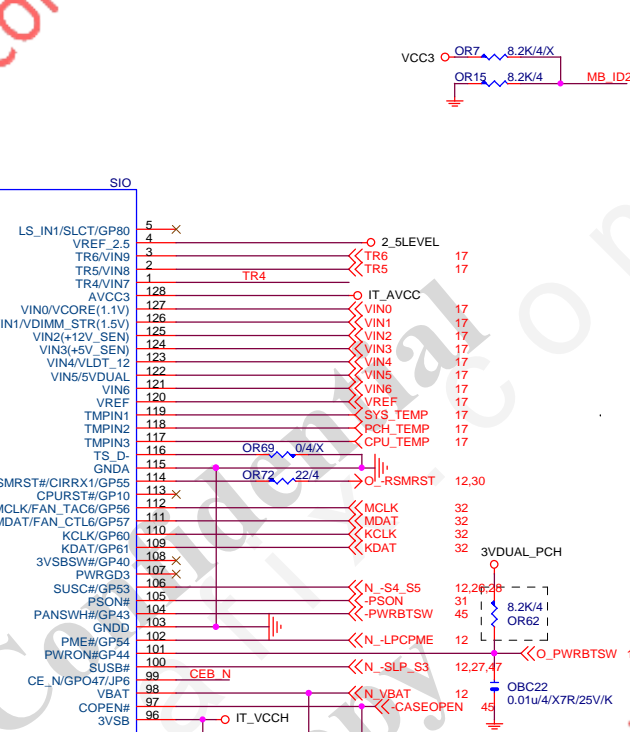
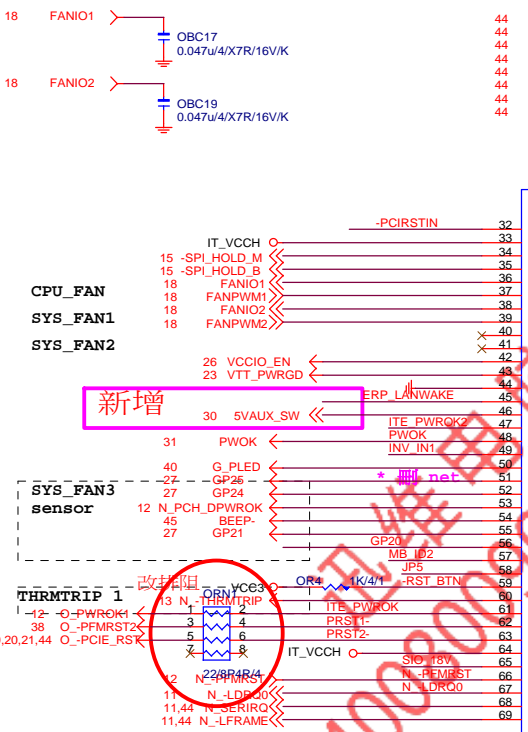
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* 試產先上，PVT 移除

BIOS PH

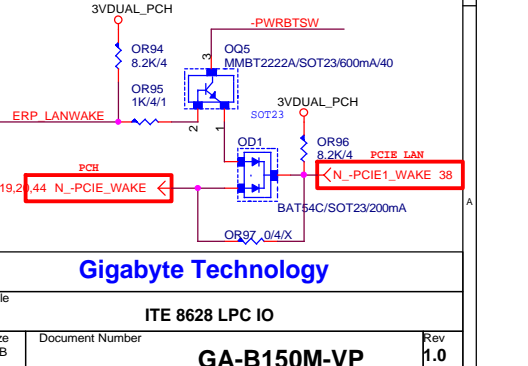
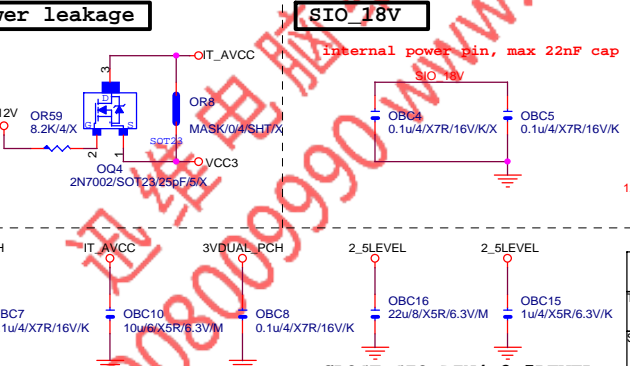
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Size	Document Number	GA-B150M-VP	Rev
Custom			1.0
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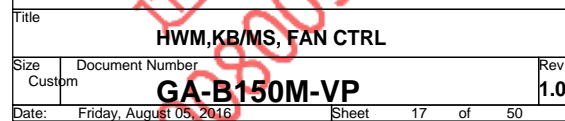


FAN TABLE	
CPU_FAN	FAN_CTL1 FAN_TAC1
SYS_FAN1	FAN_CTL2 FAN_TAC2
SYS_FAN2	FAN_CTL3 FAN_TAC3
SYS_FAN3	FAN_CTL5 FAN_TAC5
OPT_FAN or SYS_FAN4	N/A
THRMTRIP1	YES PIN60
THRMTRIP2	YES PIN94

IT8620E GPIO問題匯整	
PIN 50	GP26-第一次接上POWER時會拉 Lo
PIN 90/91	DEFAULT為HDLed FUNCTION, GP93 BYPASS TO GP92 高溫時 GP92 會被拉Lo(ITE BUG)
PIN 108	GP40--- POWER ON 時會拉 Lo
PIN 111/112	MOUSE 跟FAN6 FUNCTION 擇一使用, 不然會互相干擾
PIN 22	PIN22, 需高於3V, 若低於將部分CON PORT及FET裝置 端漏電會異常動作。



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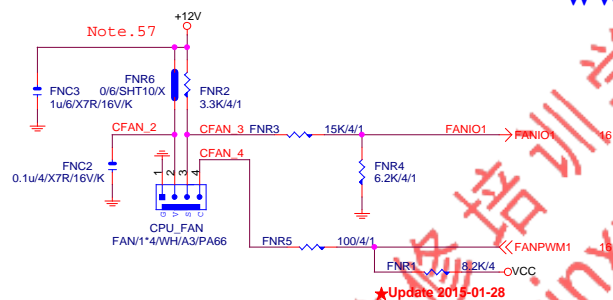




CPU SMART FAN

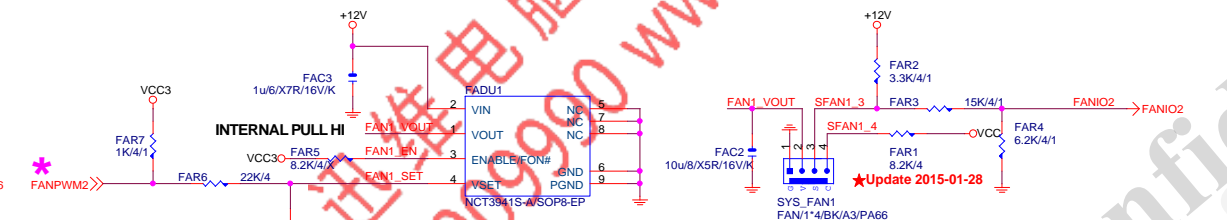
Rev: 0.53

Trace 40mil
Pad 10 mil
Trace 40mil
Pin2



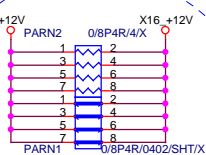
SYSTEM FAN1

A. Linear SYS_FAN
Enable Function (NCT3941S)
Full Turn On Function (NCT3941S-A)





+12V_protect
short-wire test



PA_EXP_RXP0_15I >> PA_EXP_RXP[0..15] 4
PA_EXP_RXN0_15I >> PA_EXP_RXN[0..15] 4
PA_EXP_TXP0_15I >> PA_EXP_TXP[0..15] 4
PA_EXP_TXN0_15I >> PA_EXP_TXN[0..15] 4

PA_EXP_TXP0	PAC5	0.22u/4/X5R/6.3V/K	PA_EXP_TXP0_C
PA_EXP_TXN0	PAC4	0.22u/4/X5R/6.3V/K	PA_EXP_TXN0_C
PA_EXP_TXP1	PAC6	0.22u/4/X5R/6.3V/K	PA_EXP_TXP1_C
PA_EXP_TXN1	PAC7	0.22u/4/X5R/6.3V/K	PA_EXP_TXN1_C
PA_EXP_TXP2	PAC8	0.22u/4/X5R/6.3V/K	PA_EXP_TXP2_C
PA_EXP_TXN2	PAC9	0.22u/4/X5R/6.3V/K	PA_EXP_TXN2_C
PA_EXP_TXP3	PAC10	0.22u/4/X5R/6.3V/K	PA_EXP_TXP3_C
PA_EXP_TXN3	PAC11	0.22u/4/X5R/6.3V/K	PA_EXP_TXN3_C
PA_EXP_TXP4	PAC12	0.22u/4/X5R/6.3V/K	PA_EXP_TXP4_C
PA_EXP_TXN4	PAC13	0.22u/4/X5R/6.3V/K	PA_EXP_TXN4_C
PA_EXP_TXP5	PAC14	0.22u/4/X5R/6.3V/K	PA_EXP_TXP5_C
PA_EXP_TXN5	PAC15	0.22u/4/X5R/6.3V/K	PA_EXP_TXN5_C
PA_EXP_TXP6	PAC16	0.22u/4/X5R/6.3V/K	PA_EXP_TXP6_C
PA_EXP_TXN6	PAC17	0.22u/4/X5R/6.3V/K	PA_EXP_TXN6_C
PA_EXP_TXP7	PAC18	0.22u/4/X5R/6.3V/K	PA_EXP_TXP7_C
PA_EXP_TXN7	PAC19	0.22u/4/X5R/6.3V/K	PA_EXP_TXN7_C
PA_EXP_TXP8	PAC20	0.22u/4/X5R/6.3V/K	PA_EXP_TXP8_C
PA_EXP_TXN8	PAC21	0.22u/4/X5R/6.3V/K	PA_EXP_TXN8_C
PA_EXP_TXP9	PAC22	0.22u/4/X5R/6.3V/K	PA_EXP_TXP9_C
PA_EXP_TXN9	PAC23	0.22u/4/X5R/6.3V/K	PA_EXP_TXN9_C
PA_EXP_TXP10	PAC24	0.22u/4/X5R/6.3V/K	PA_EXP_TXP10_C
PA_EXP_TXN10	PAC25	0.22u/4/X5R/6.3V/K	PA_EXP_TXN10_C
PA_EXP_TXP11	PAC26	0.22u/4/X5R/6.3V/K	PA_EXP_TXP11_C
PA_EXP_TXN11	PAC27	0.22u/4/X5R/6.3V/K	PA_EXP_TXN11_C
PA_EXP_TXP12	PAC28	0.22u/4/X5R/6.3V/K	PA_EXP_TXP12_C
PA_EXP_TXN12	PAC29	0.22u/4/X5R/6.3V/K	PA_EXP_TXN12_C
PA_EXP_TXP13	PAC30	0.22u/4/X5R/6.3V/K	PA_EXP_TXP13_C
PA_EXP_TXN13	PAC31	0.22u/4/X5R/6.3V/K	PA_EXP_TXN13_C
PA_EXP_TXP14	PAC32	0.22u/4/X5R/6.3V/K	PA_EXP_TXP14_C
PA_EXP_TXN14	PAC33	0.22u/4/X5R/6.3V/K	PA_EXP_TXN14_C
PA_EXP_TXP15	PAC34	0.22u/4/X5R/6.3V/K	PA_EXP_TXP15_C
PA_EXP_TXN15	PAC35	0.22u/4/X5R/6.3V/K	PA_EXP_TXN15_C

PCIE16:16/5/5/5/16

PCI-E REV:1.1--> 2.5GHZ

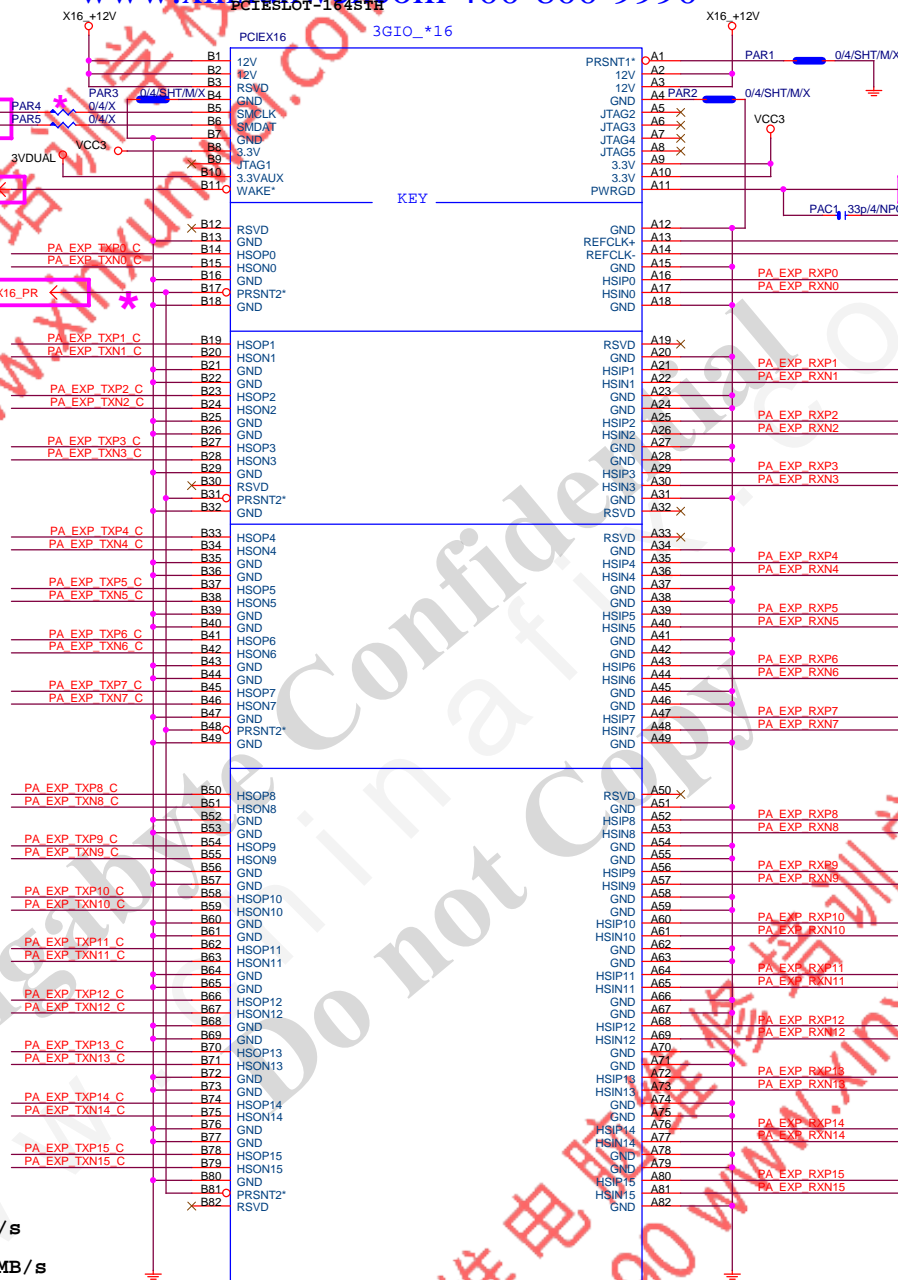
PCE-E X1(單向) BANDWIDTH=2.5GHz*(8b/10b)=2Gb/s=250MB/s

PCE-E X1(雙向) BANDWIDTH=2.5GHz*(8b/10b)X2=4Gb/s=500MB/s

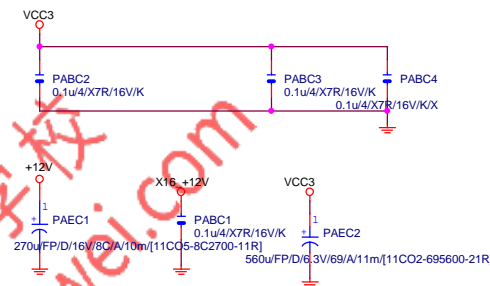
PCE-E X16(單向) BANDWIDTH=2.5GHz*(8b/10b)X16=32Gb/s=4GB/s

PCE-E X16(雙向) BANDWIDTH=2.5GHz*(8b/10b)X16X2=64Gb/s=8GB/s

PCI-E REV:2.0--> 5GHZ

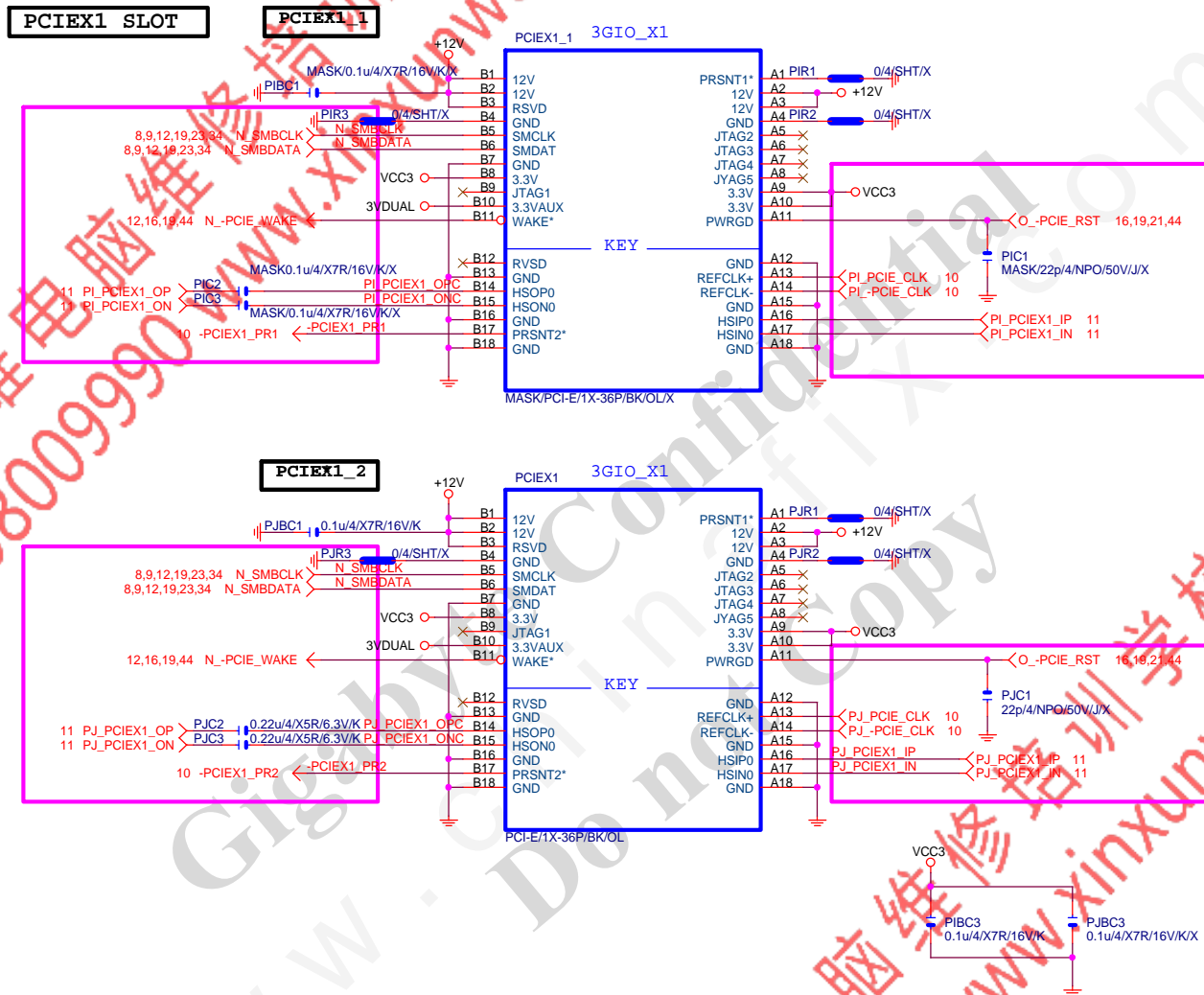


PCI-E/16X-164P/GY/LONG DOUBLE/HK'2



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Gigabyte Technology

Title		PCIE_X1 1,2	
Size	Document Number	GA-B150M-VP	
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M.2 Lane2 from PCH port15

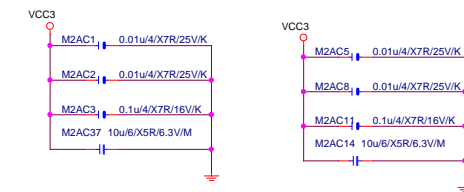
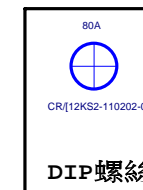



Figure 1-10: M2 card detect circuit diagram. The diagram shows a VCC3 supply connected to a 1K/4/1 resistor (M2AR6) and a 1K/4/1 resistor (M2AR5). The M2AR6 resistor is connected to the M2A_DETECT pin of the M2 card. The M2AR5 resistor is connected to the M2ASSD_IFDET pin of the M2 card. The M2A_DETECT pin is also connected to the M2AR4 pin of the M2 card. The M2ASSD_IFDET pin is also connected to the M2AR1 pin of the M2 card. The M2AR4 pin is connected to the N_GPP_G1 pin of the M2 card. The M2AR1 pin is connected to the N_GPP_G1 pin of the M2 card. The M2 card is shown with the M2A_DETECT pin labeled 'M2插卡時為Low'.



80A

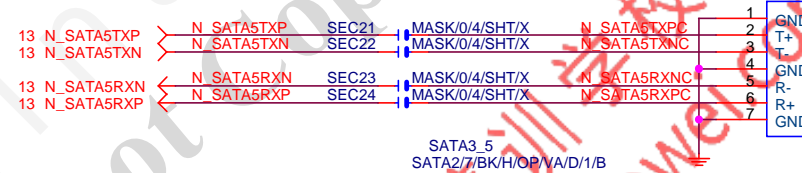
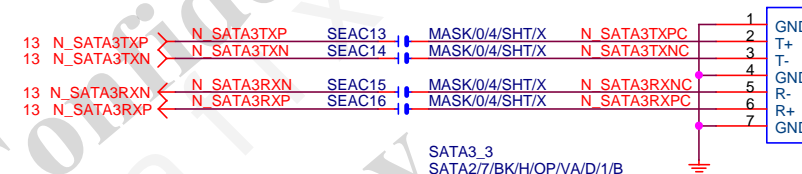
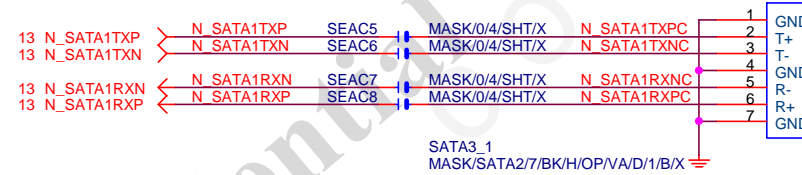
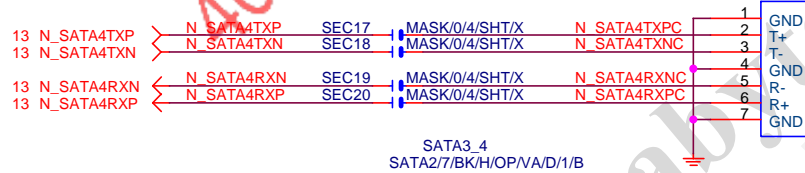
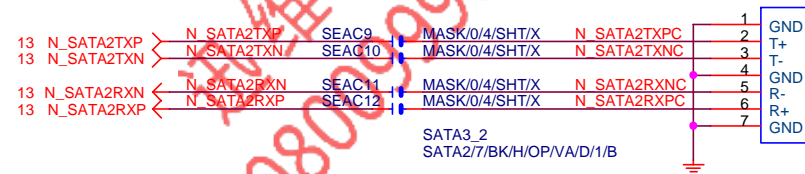


CR/[12KSF-F10303-01]

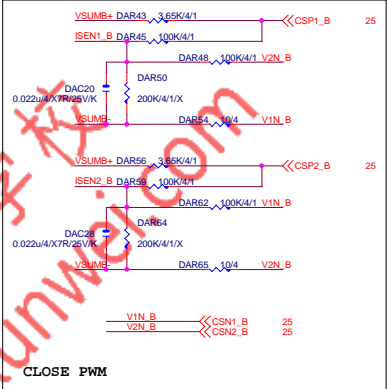
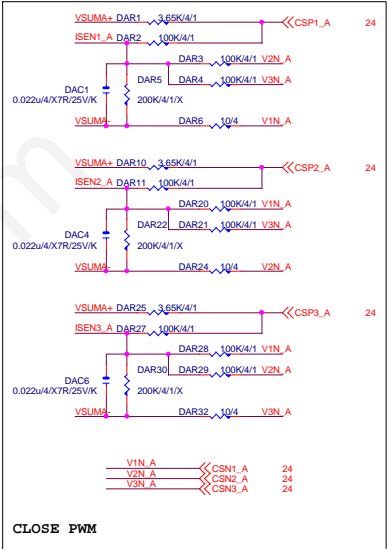
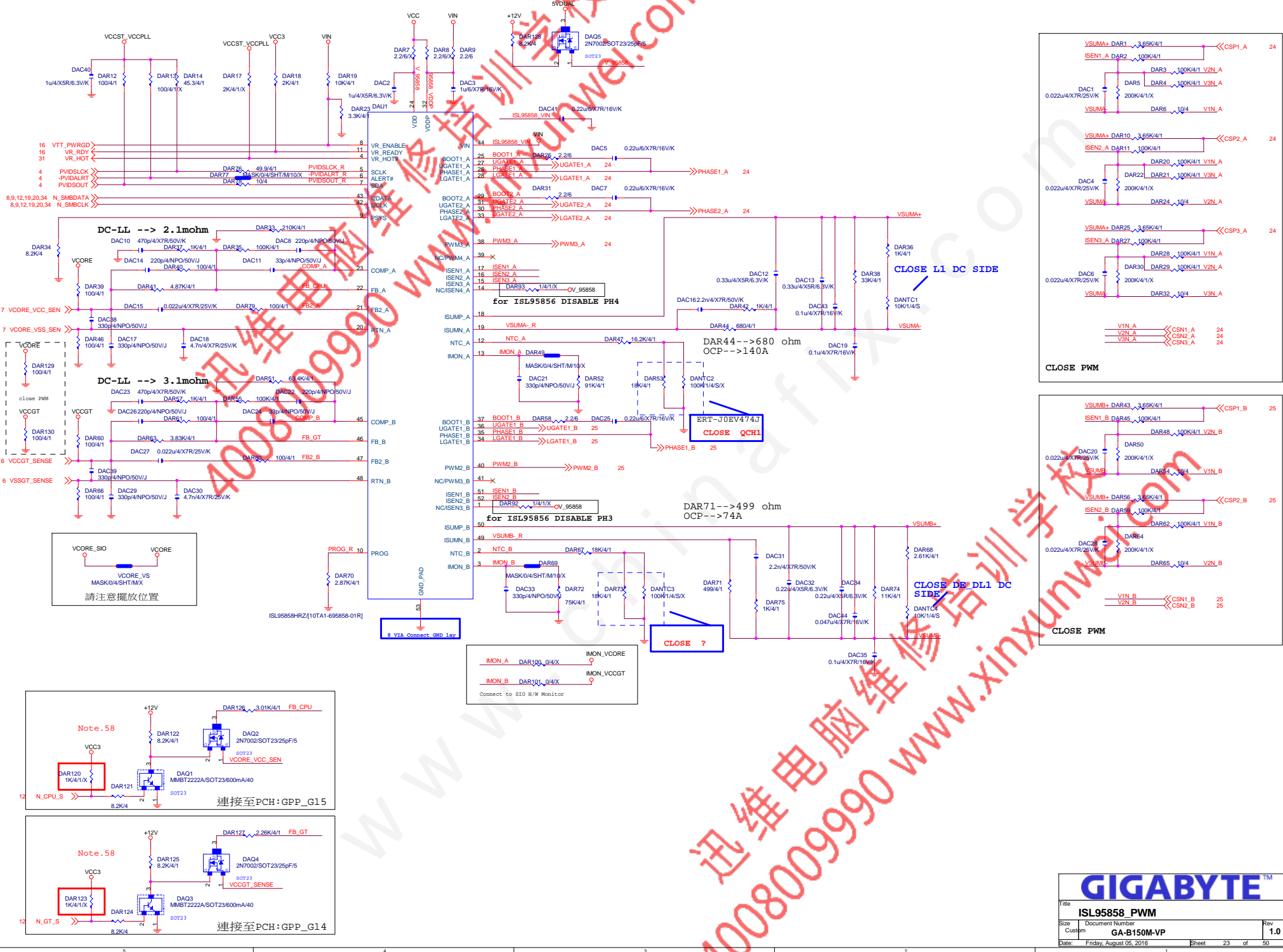
Diagram showing three circular components labeled 42A, 60A, and 80A, each with the part number CR/[11KS2-040002-01R] below it.

M.2 有插卡 /沒插卡 GPP_G0	M.2插何種卡？ GPP_G1	SATA Express 插何種硬碟？ GPP_E0/E2/F1	I015 (S0)	I016 (S1)	I017	I018	I019 (S0)	IP20 (S1)
有插卡 (Low)	SATA Mode (Low)	SATA (Hi)	SATA (M.2)	PCIE x1	PCIE x1	PCIE X1	PCIE x1	SATA
		SATA Express (Low)	SATA (M.2)	PCIE x1	PCIE x1	PCIE x1	SATA Express	
	PCIE Mode (Hi)	SATA (Hi)	PCIE x4 (For M.2)				SATA	SATA
		SATA Express (Low)	PCIE x4 (For M.2)				SATA Express	
沒插卡 (Hi)	Don't Care (Hi)	SATA (Hi)	PCIE x4				SATA	SATA
		SATA Express (Low)	PCIE x4				SATA Express	

Note.40



Gigabyte Technology			
Title			
SATA EXPRESS			
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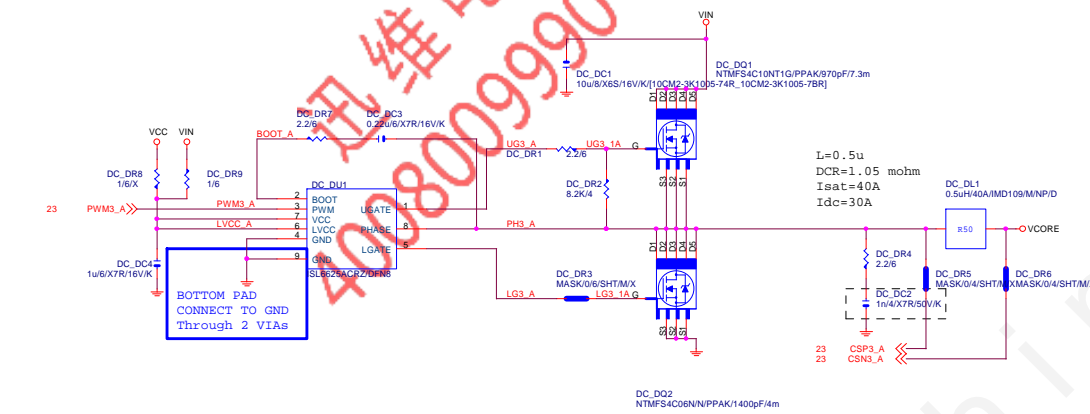
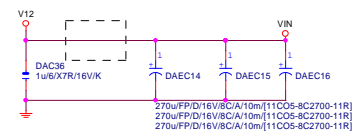
GIGABYTE™		
ISL9585_PWM		
Size	Document Number	Rev
Custom	GA-B150M-VP	1.0
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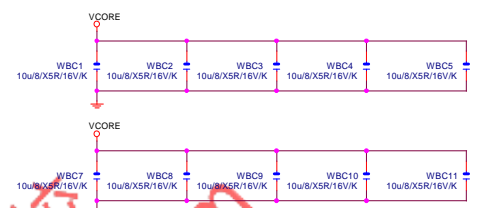
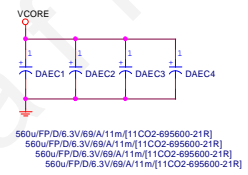
VCORE



VIN CAP 270u*3PCS

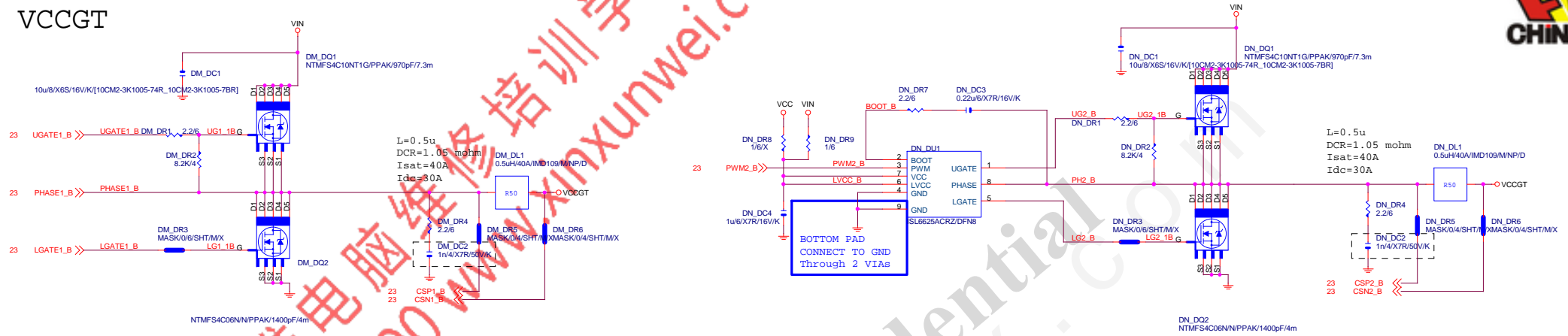


VCORE CAP 560u*4PCS 10u*10PCS

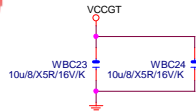
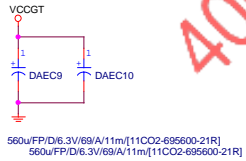


GIGABYTE™			
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Size	Document Number	Rev	
Custm	GA-B150M-VP	1.0	
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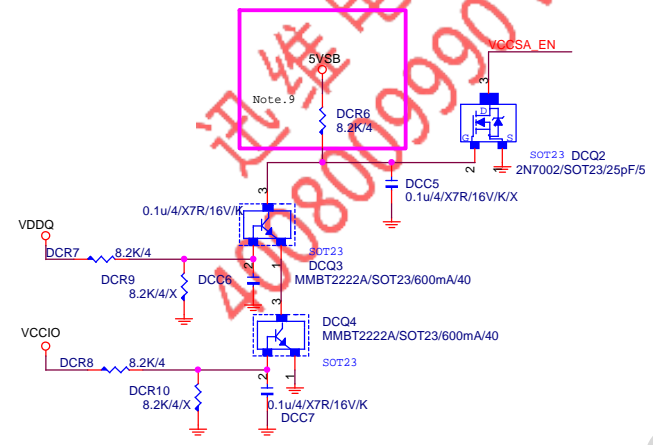
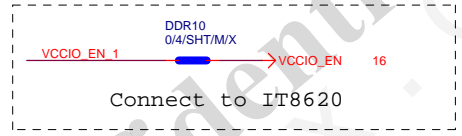
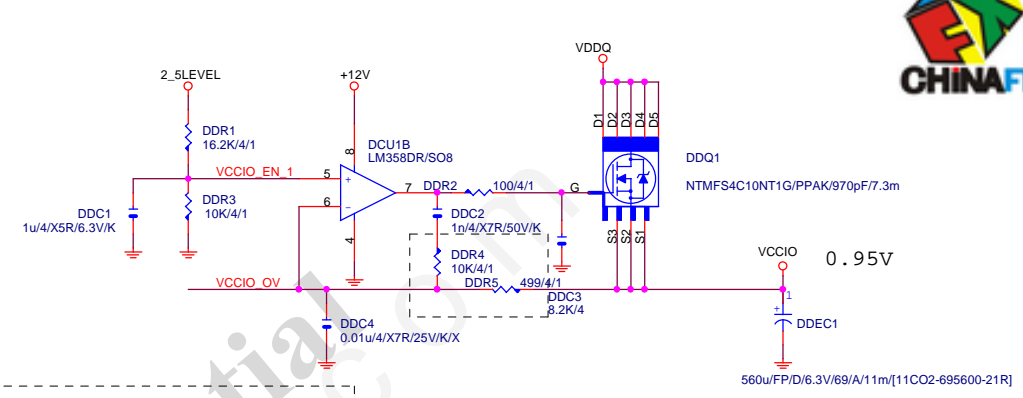
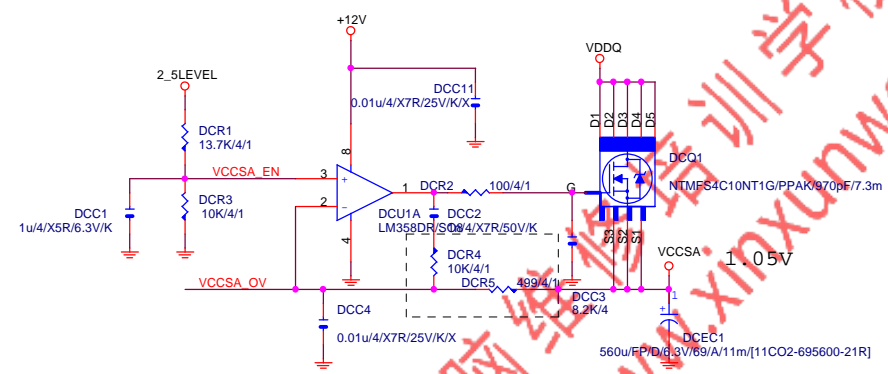
VCCGT



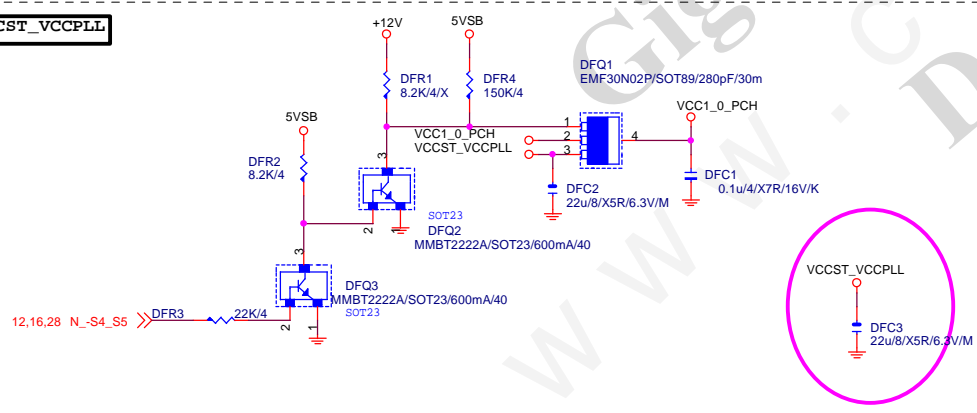
VCCGT CAP

560u*2PCS
10u*2PCS

GIGABYTE™			
Title			
ISL95858_MOS			
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VCCST_VCCPLL



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Title			
VCCSA_VCCIO			
Size			
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REV:0.33

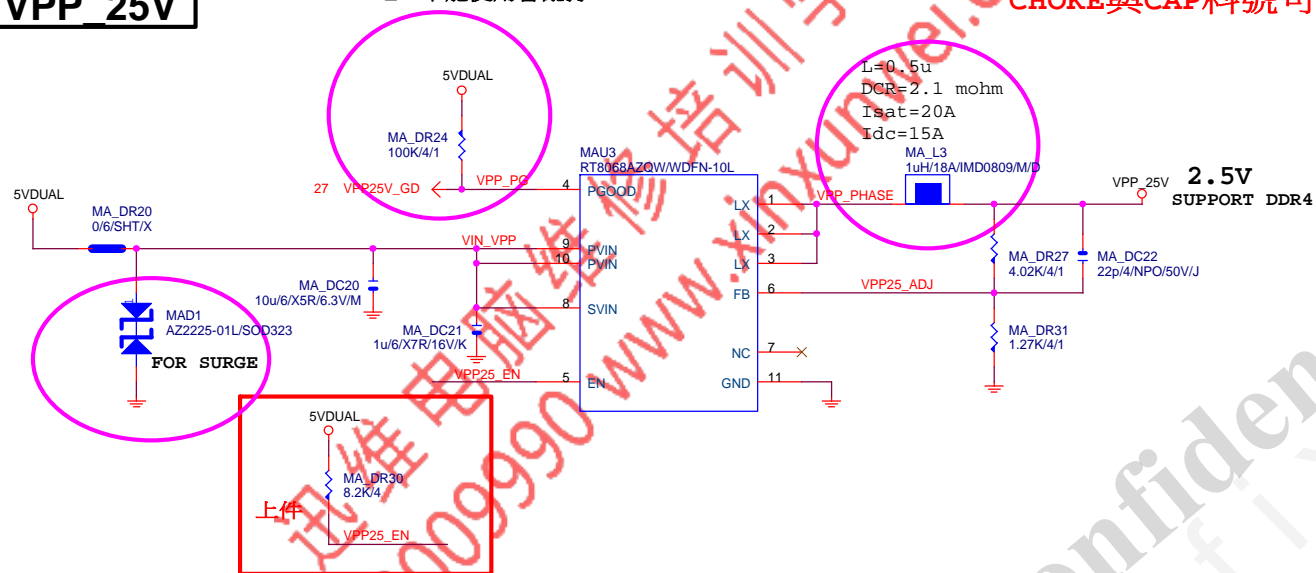
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VPP_25V

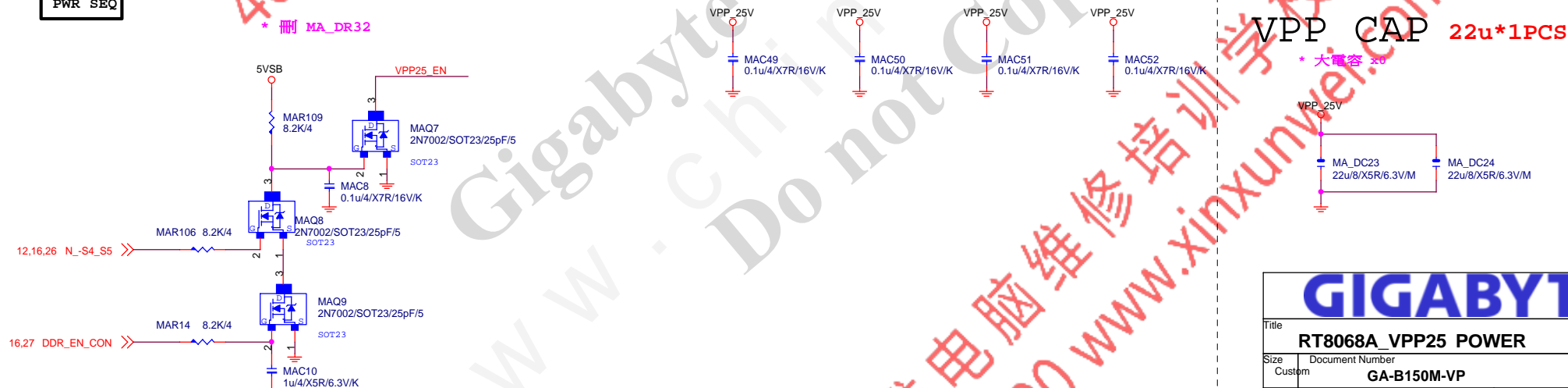
VPP25V_GD不能使用會亂打

CHOKER與CAP料號可變



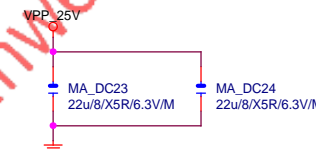
PWR_SEQ

* 刪 MA_DR32



VPP CAP 22u*1PCS

* 大電容 22u



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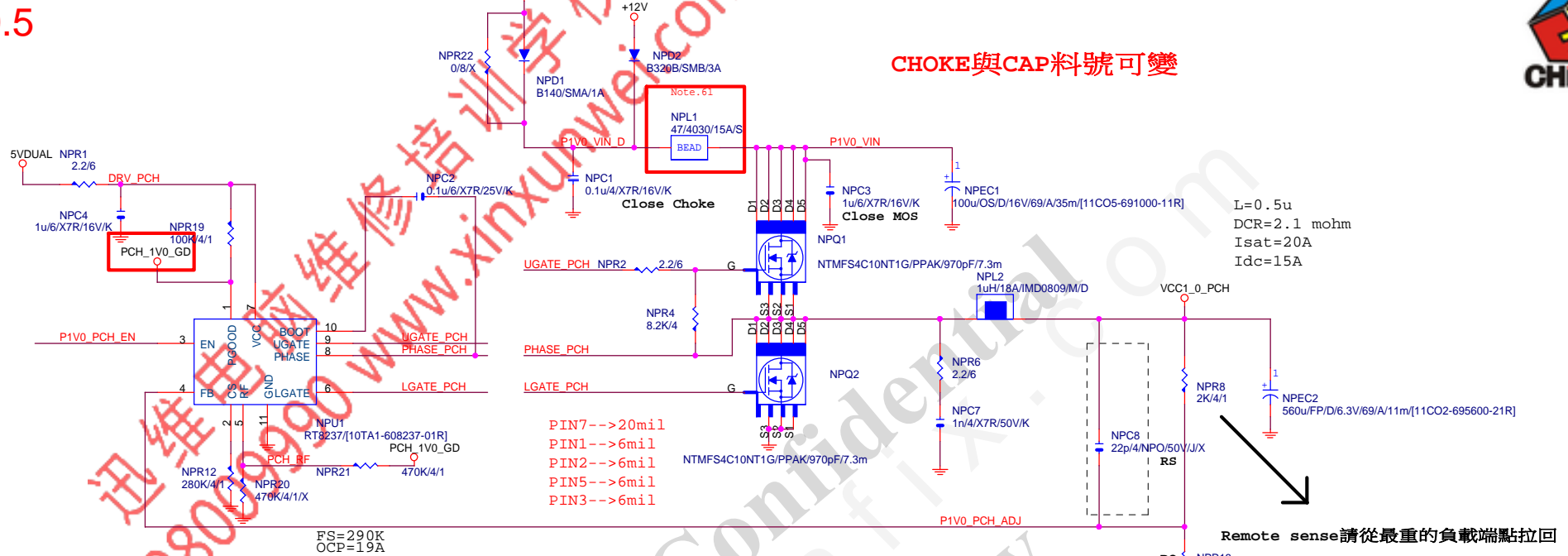
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RT8068A_VPP25 POWER		
Size	Document Number	Rev
Custom	GA-B150M-VP	1.0
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REV:0.5

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CHOKE與CAP料號可變



Remote sense請從最重的負載端點拉回

$$0.704 * (1 + RS/RO) = V_{out}$$

請放置CHOKE一出來的地方

GIGABYTE™

Title
RT8237_PCH POWER

Size Document Number
Custom GA-B150M-VP

Rev
1.0

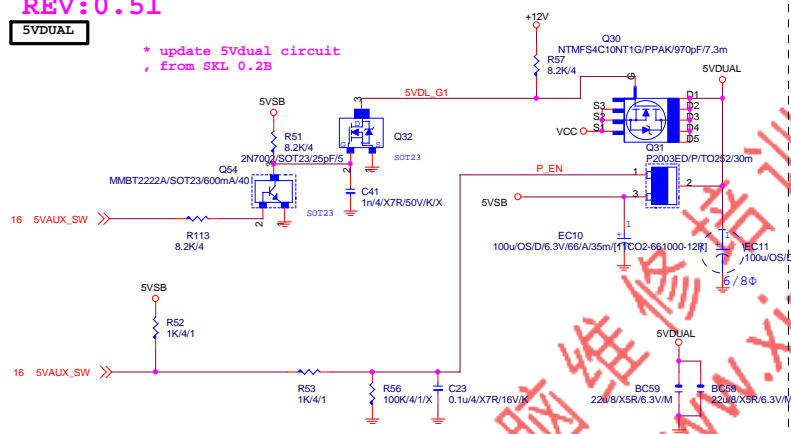
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5VDUAL

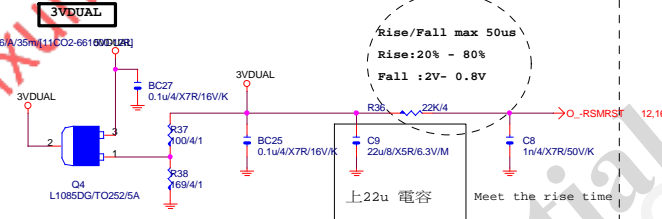
* update 5Vdual circuit
from SKL 0.2B



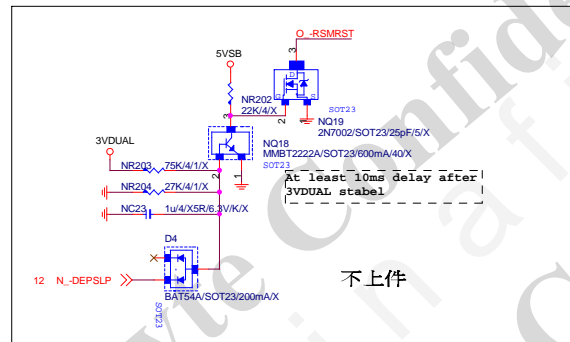
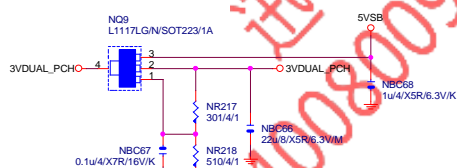
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3VDUAL



3VDUAL_PCH



不上件

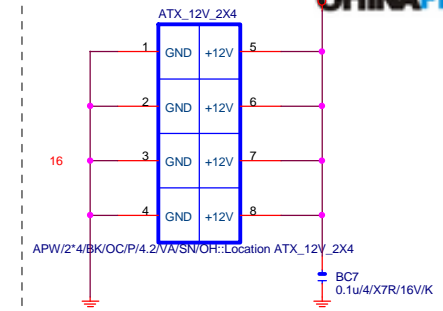
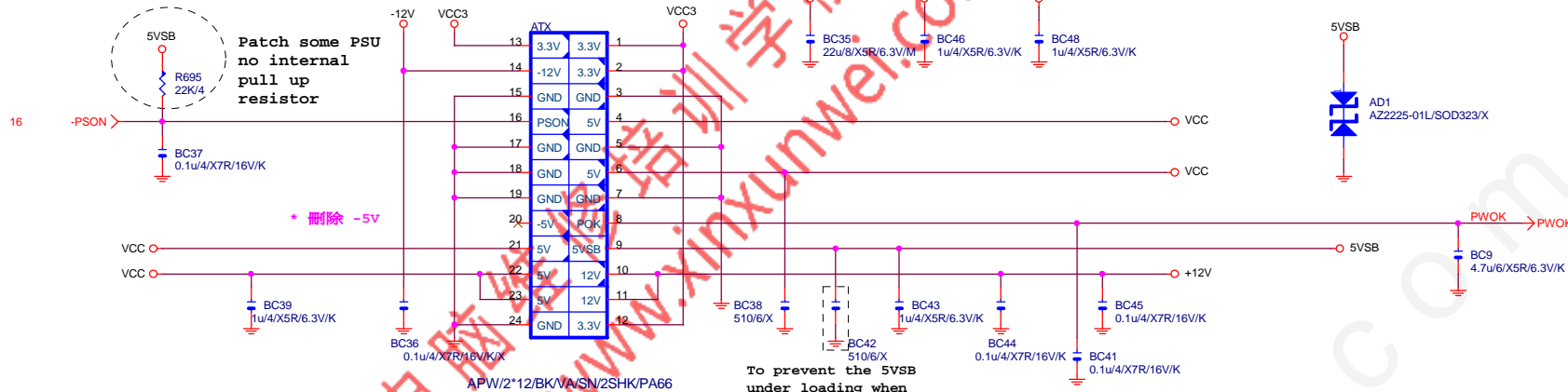
Gigabyte Technology

Title			DISCRETE POWER
Size	Document Number	GA-B150M-VP	
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ATXX24 POWER CONNECTOR

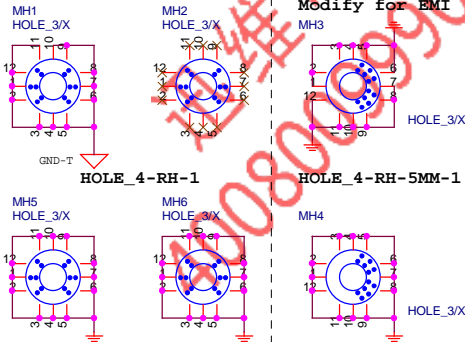
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ATXX4 POWER CONNECTOR

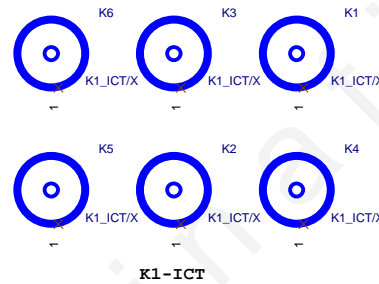


螺絲孔

MH1:GND-T FOR EMI TEST驗證



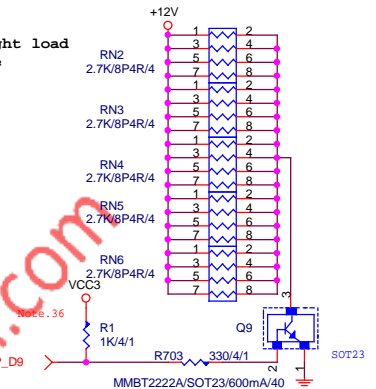
固定孔/光學點



To prevent the 5VSB under loading when boot

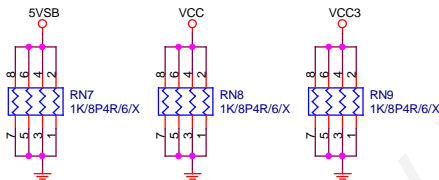
+12V DUMMY LOAD

To fix 12V light load abnormal issue



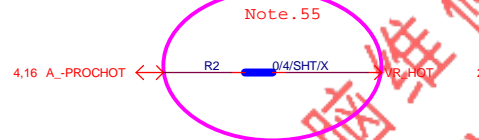
【技術通報R&D技術通報153】

DUMMY LOAD

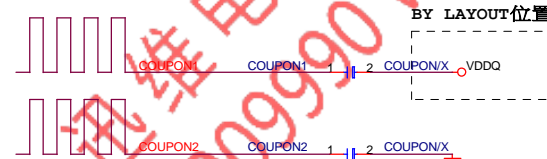


-PROHOT

* 保留 ?



COUPON



BY LAYOUT位置

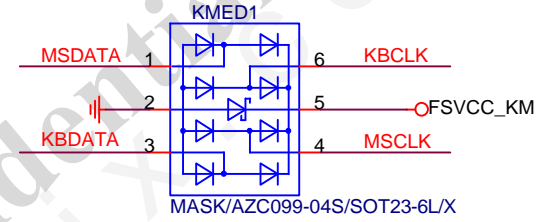
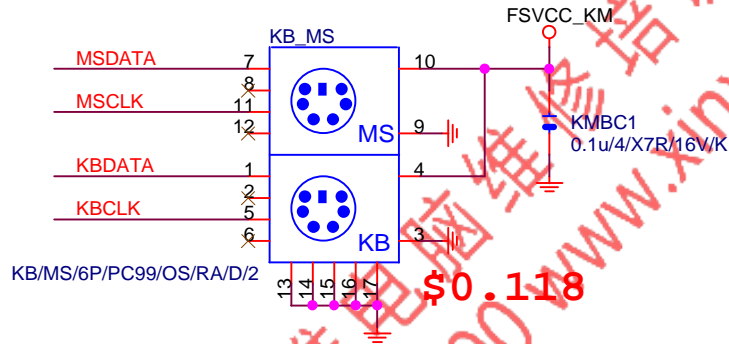
Gigabyte Technology

Title		
ATX POWER CONNECTOR		
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KB_MS_USB

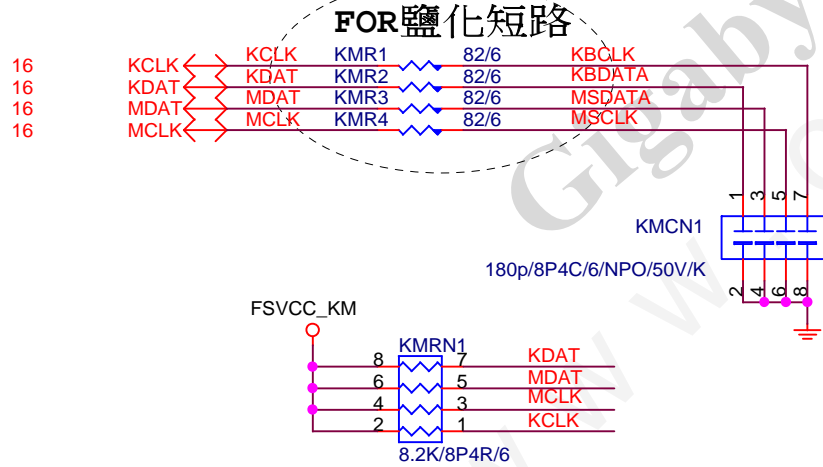
Rev: 0.51

ESD



KB_MS_USB DAMPING/PU

KB_MS_USB PWR



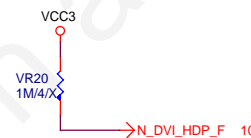
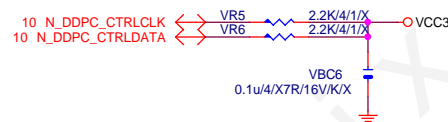
Gigabyte Technology			
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Size	Document Number	Rev	
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DVI

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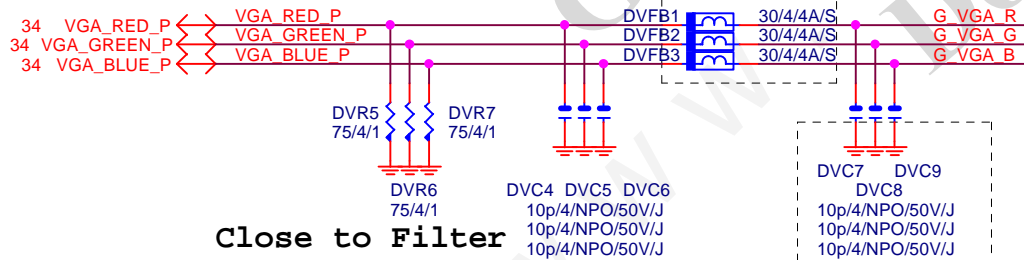
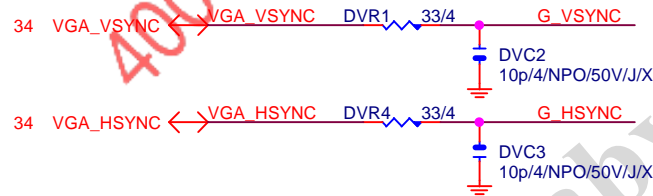
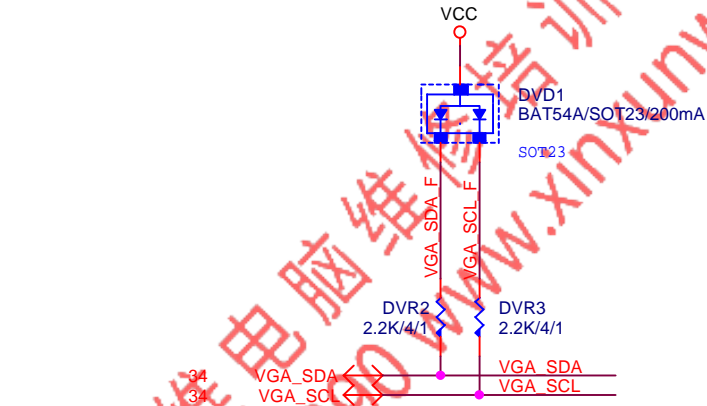
DVI CONN



ESD

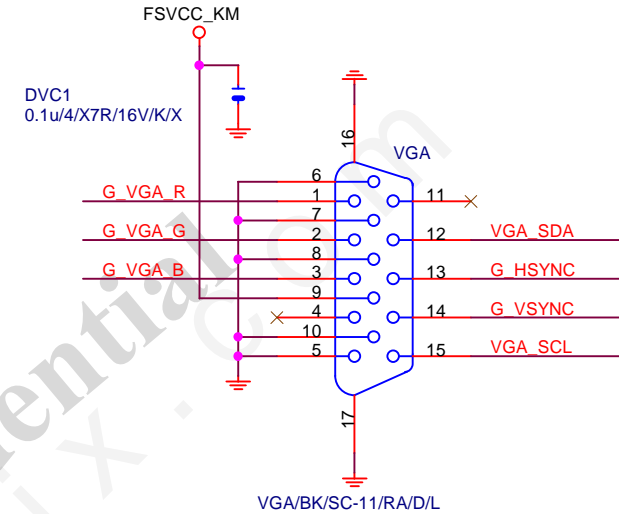
Gigabyte Technology

Title			
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Size Custom	Document Number	GA-B150M-VP	Rev 1.0
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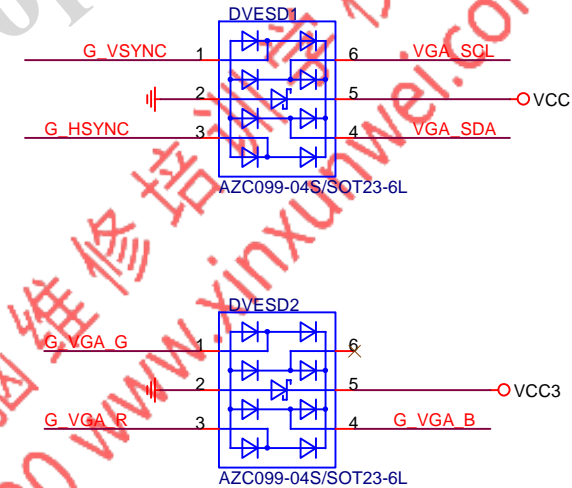


Close to Filter

FOR EMI



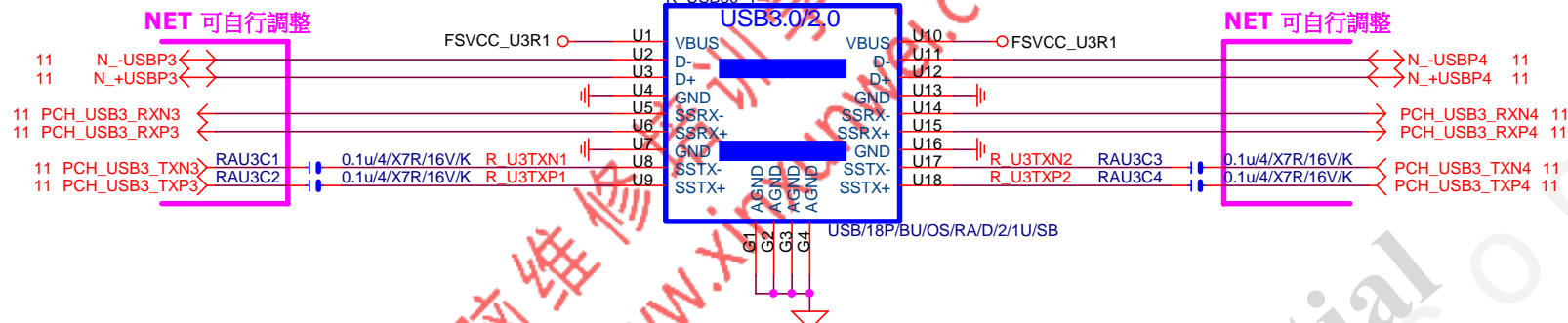
VGA ESD



Gigabyte Technology

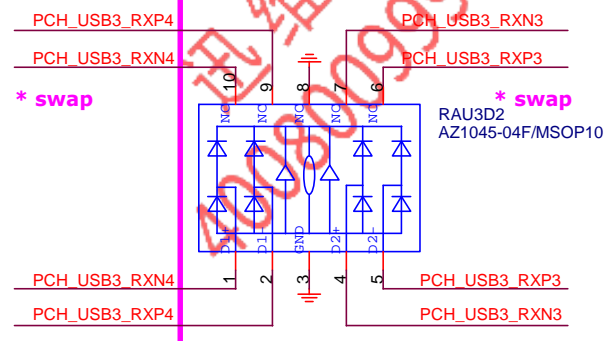
NXP-PTN3356

Title		
Size	Document Number	Rev
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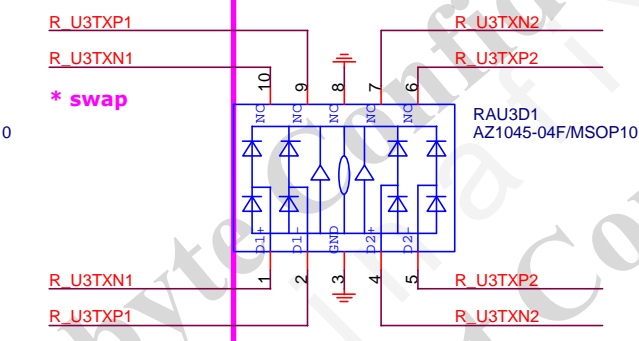


ESD

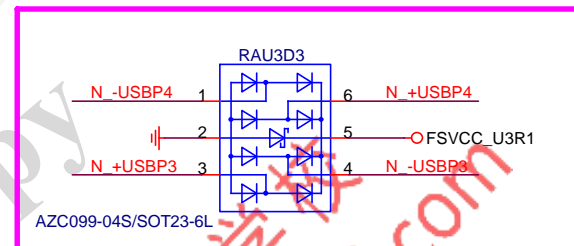
NET 可自行調整



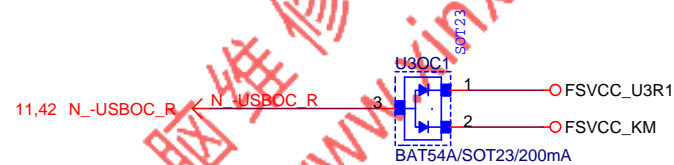
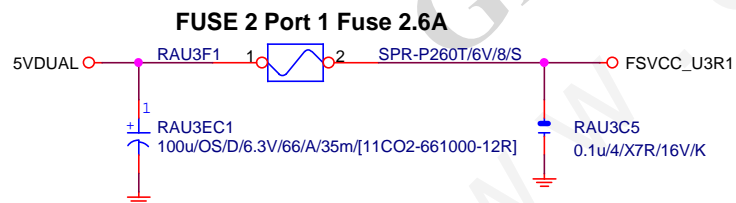
NET 可自行調整



NET 可自行調整

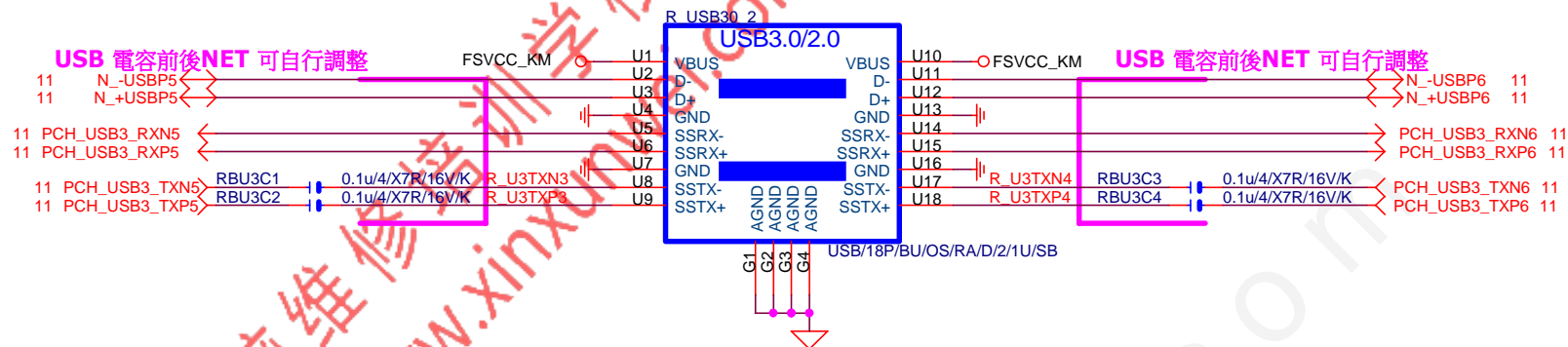


FUSE

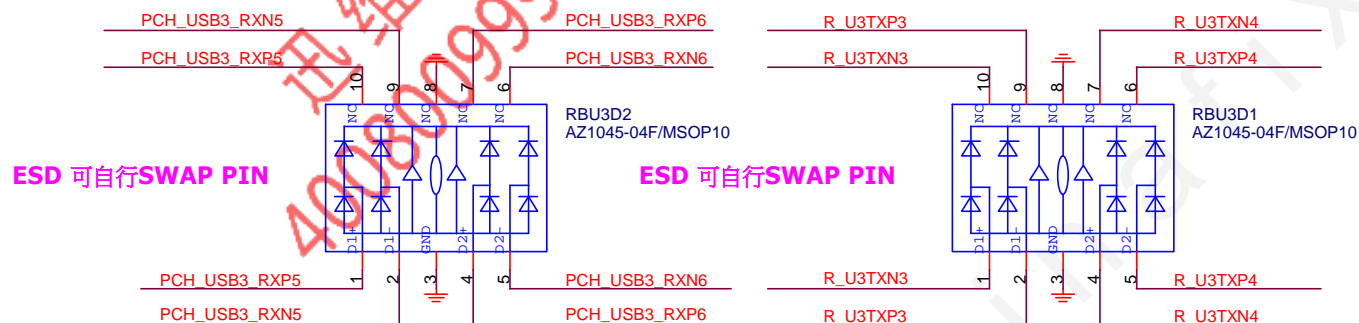


Gigabyte Technology

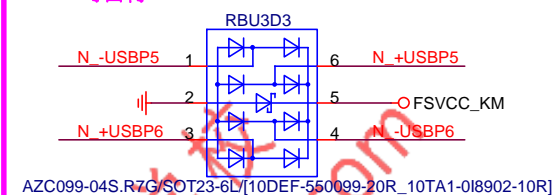
Title			
R_USB30,USB_OC			
Size	Document Number	GA-B150M-VP	
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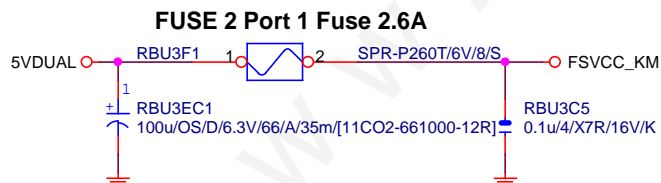
ESD



ESD 可自行SWAP PIN



FUSE



Gigabyte Technology

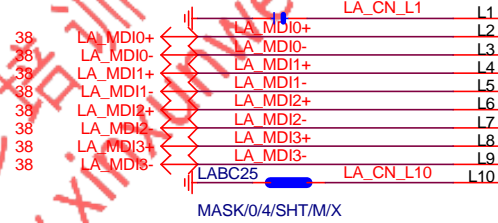
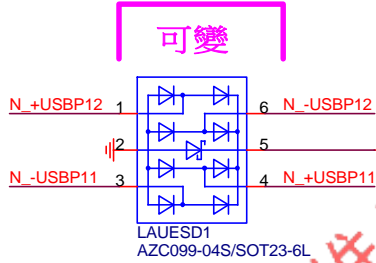
Title			
R_USB30,USB_OC			
Size	Document Number	GA-B150M-VP	
Custom			Rev 1.0
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USB_LAN CONNECTOR R1.06

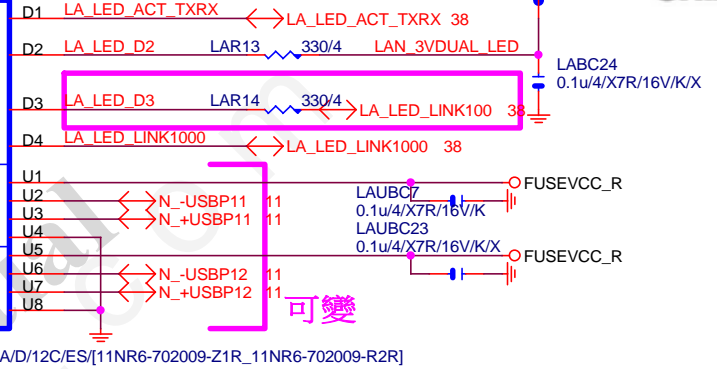
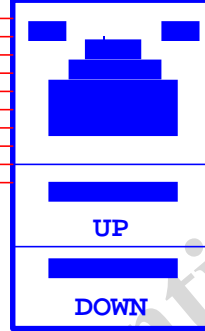
USB_LAN CONNECTOR www.xinxunwei.com 400-800-9990

RMA ESD PROTECT

note: 可變更 USB NAME

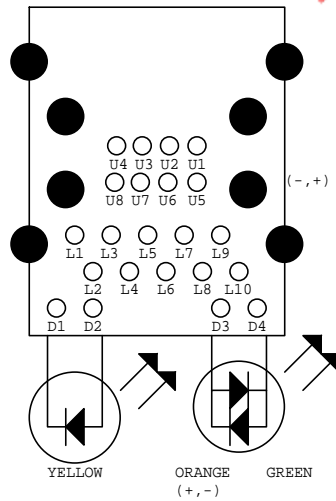


[RTL8111G]
USB_LAN

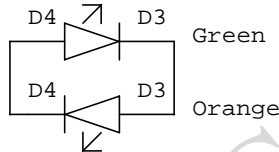


LA_MDI-->100歐姆:[20/4/8/4/20]

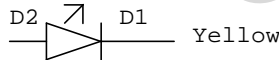
USB_LAN LAYOUT示意圖



Dual Color LED

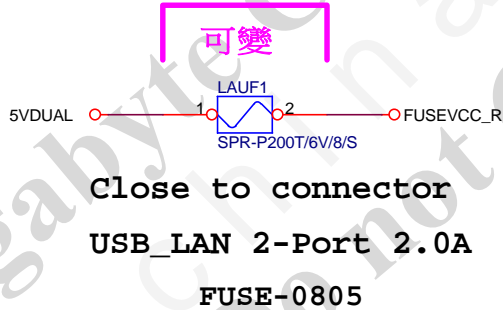


Single Color LED



USB POWER

note: 可變更 FUSE



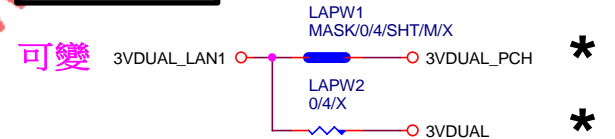
EMI SHORT PAD

PS: 視EMI需求



LAN POWER

note: lan power連接及電流



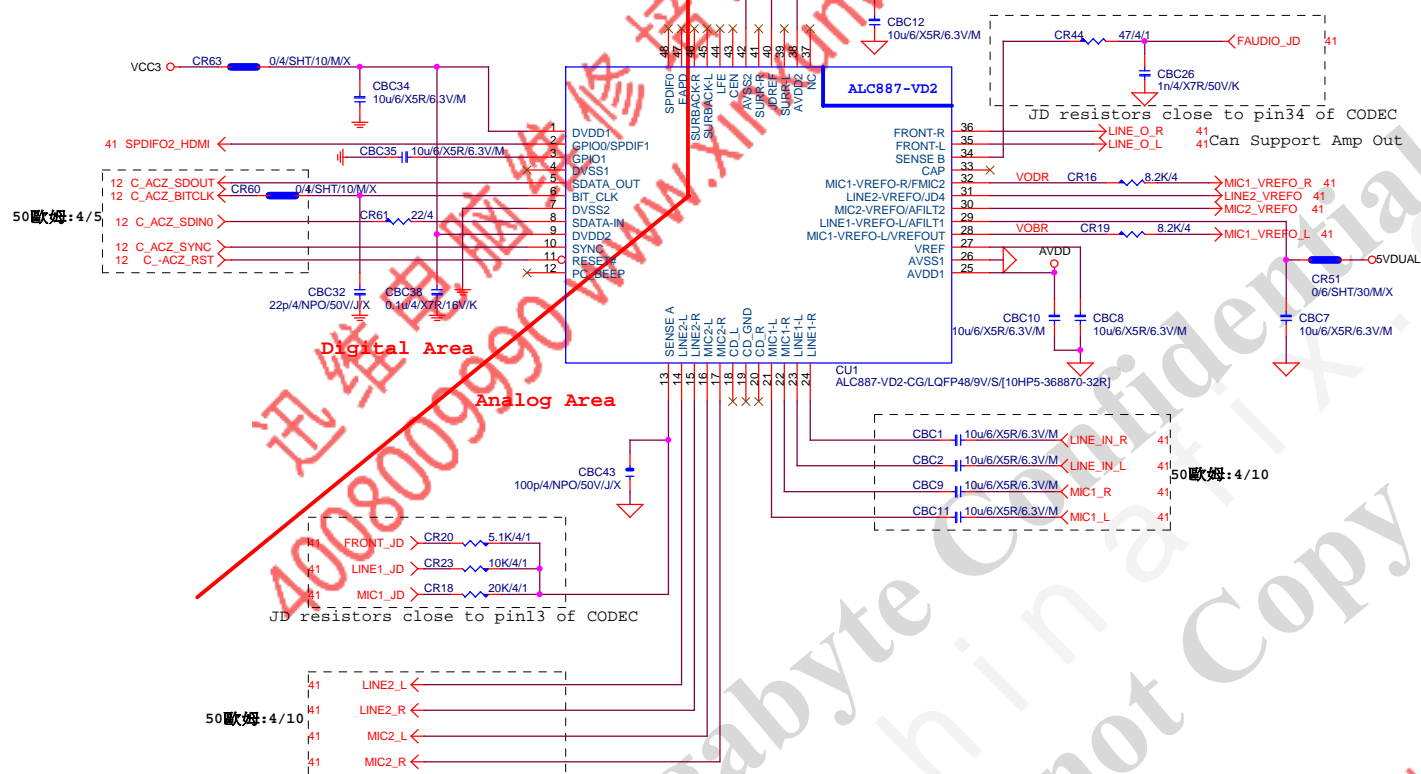
Gigabyte Technology

Title
LAN CONNECTOR-RTL8111G

Size Document Number
Custom GA-B150M-VP

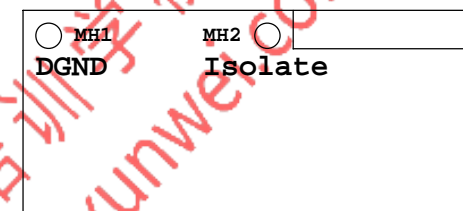
Date: Friday, August 05, 2016 Sheet 39 of 50

ALC887 三孔 AUDIO JACK

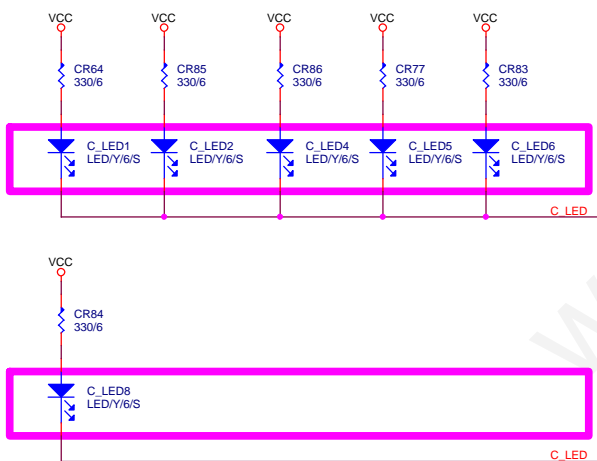


LAYOUT注意:螺絲孔下GND方式

1. MH1空間夠,下DGND
空間不夠,改為Isolate
2. MH2一律改為Isolate



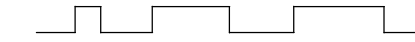
VALUE可變,LED顏色請自行修改
(預設:低亮度黃色LED:LED/Y/6/S)



BOM OPTION : 1. Chemicon音效電容
2. 金屬外罩 Reserve (上件與否,依照各Model spec)
3. LED Reserve (上件與否和LED顏色,依照各Model spec)

LAYOUT注意:要加

GND切割線



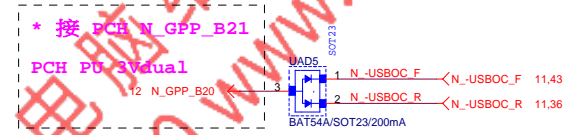
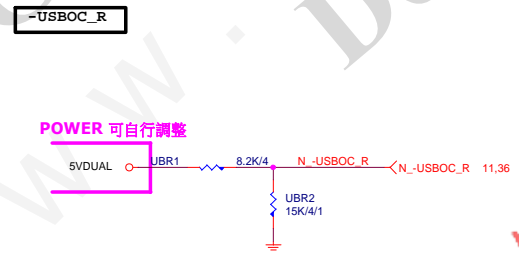
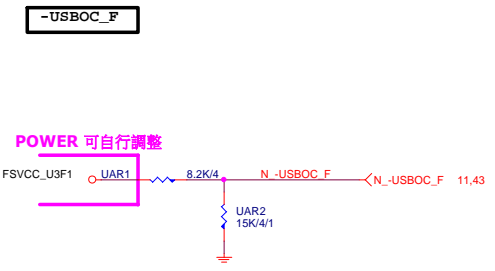
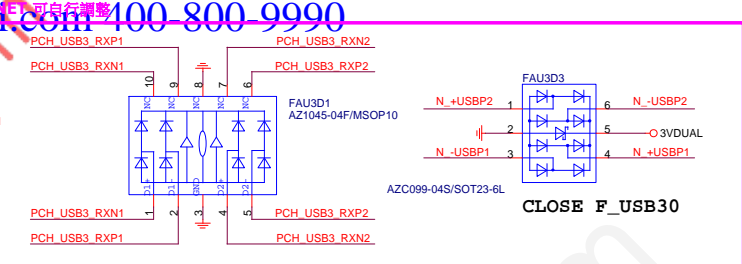
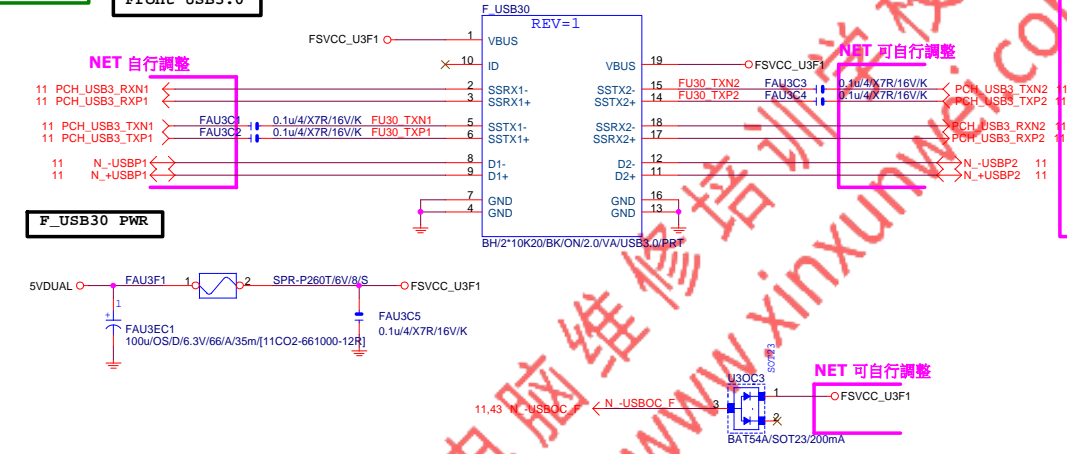
音效區域印刷



<div style="text-align: center;">  </div>			
<div style="text-align: center;"> HD AUDIO ALC887 </div>			
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	GA-B150M-VP		1.0
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Front USB3.0



FUSE 4081

Fuse 2A

FRONT USB1

FRONT USB2

NET 可變

FUSB2X5-HS

NET 可變

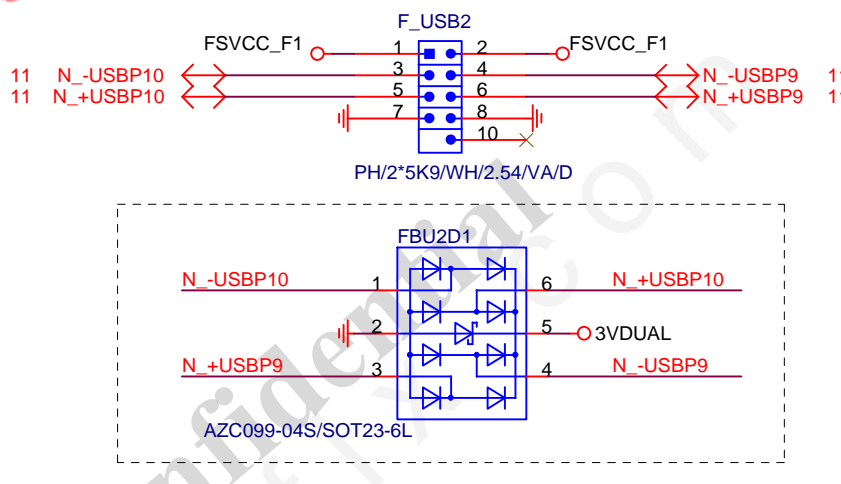
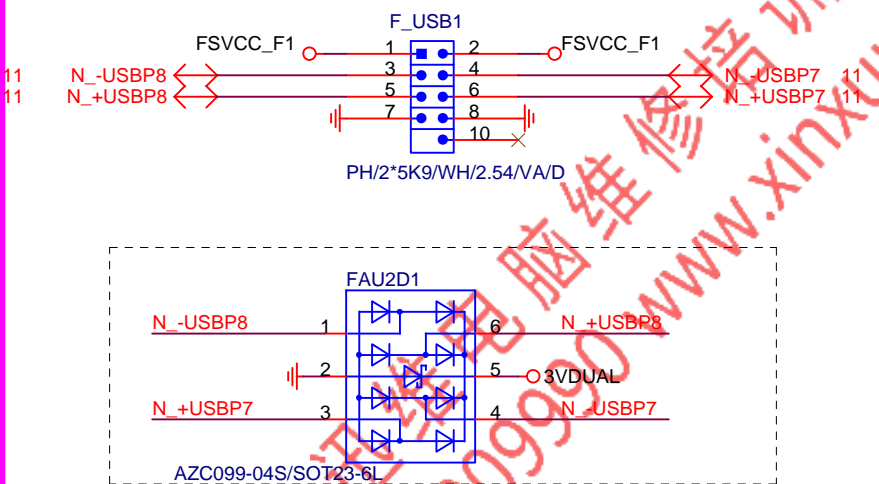
FUSB2X5-HS

D

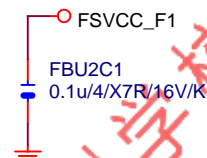
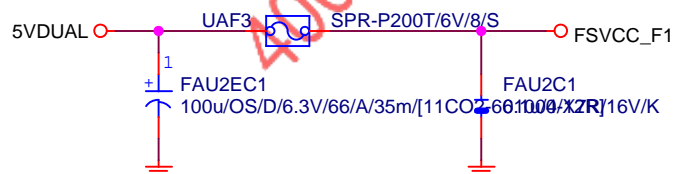
C

B

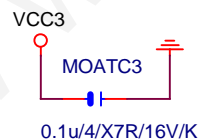
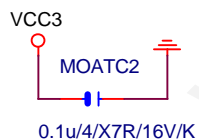
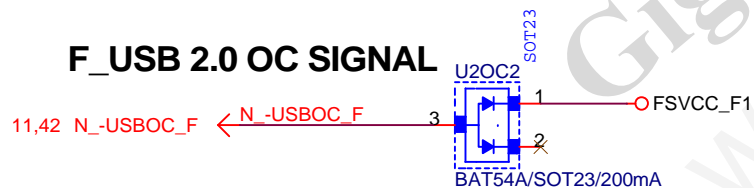
A



Close to connector

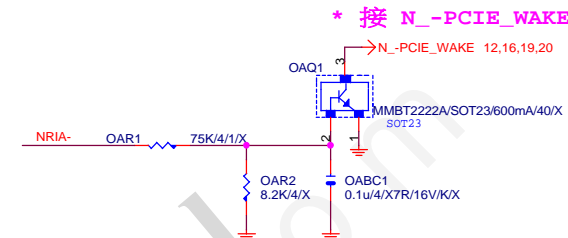


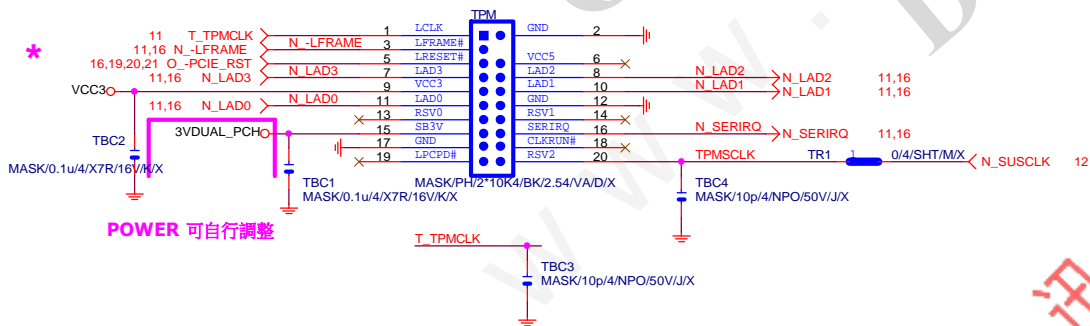
F_USB 2.0 OC SIGNAL



Gigabyte Technology

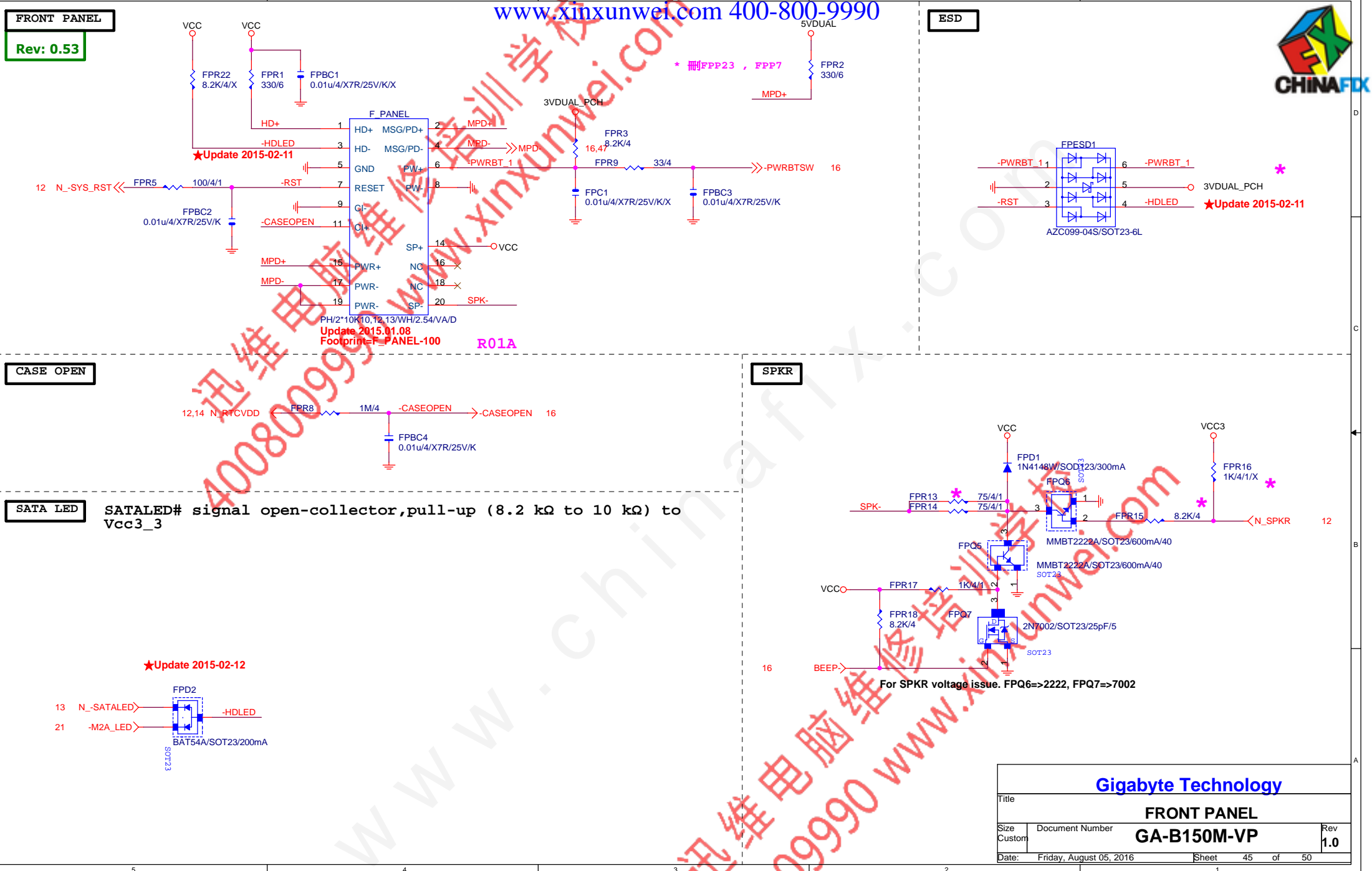
Title		
USB2.0		
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TPM CONNECT

●

Gigabyte Technology			
Title			
FP,F_USB,USB PWR,BZ			
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Title			
FRONT PANEL			
Size	Document Number	Rev	
Custom	GA-B150M-VP	1.0	
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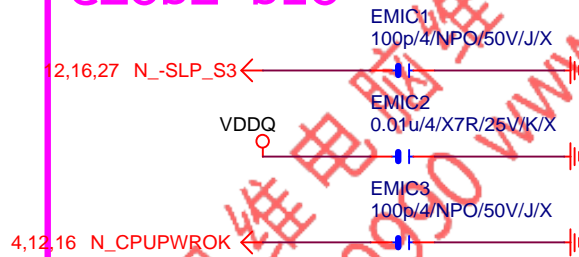
OVER VOLTAGE



NCT3933	0X2A	0X20	0X22
VREF1	DDRVTT	VREF_DDRA_DQ	PCH Core
VREF2	VREF_DDRA_CA	N/A	VCC1_5_PCH
VREF3	VREF_DDRA_CA	VREF_DDRB_DQ	SMREF

Gigabyte Technology		
Title		
CPU CORE VR-2		
Size	Document Number	Rev
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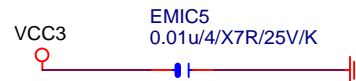
CLOSE SIO



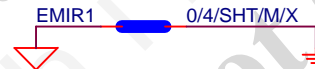
CLOSE PCH



close to PCH (NR17)



R_USB30_2 & DVI 之間

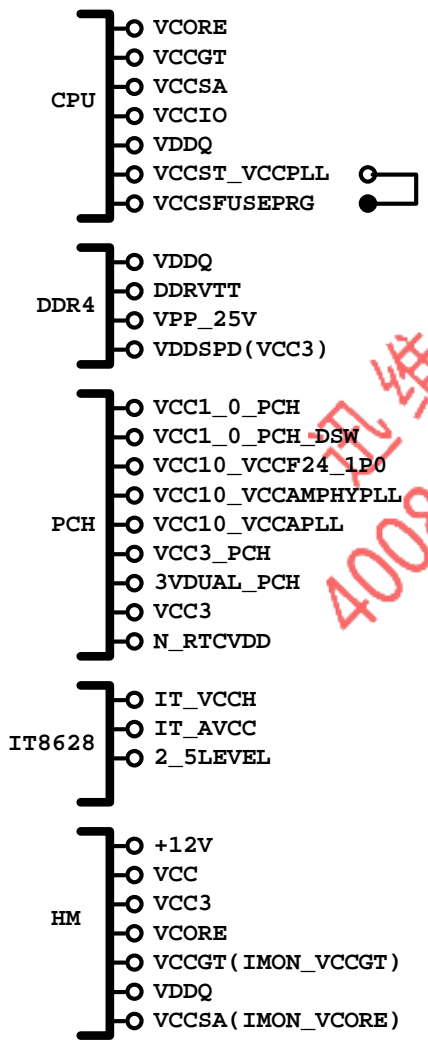


close to FRONT PANEL

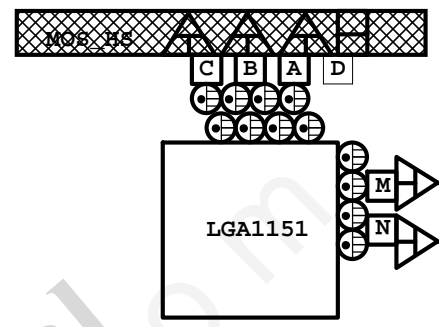
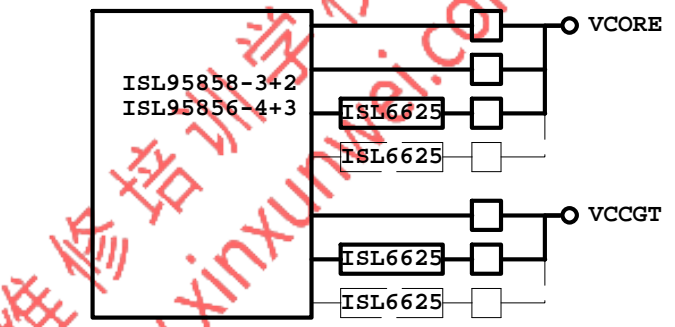
**GIGABYTE™**

Title EMI/ESD		
Size A	Document Number GA-B150M-VP	Rev 1.0
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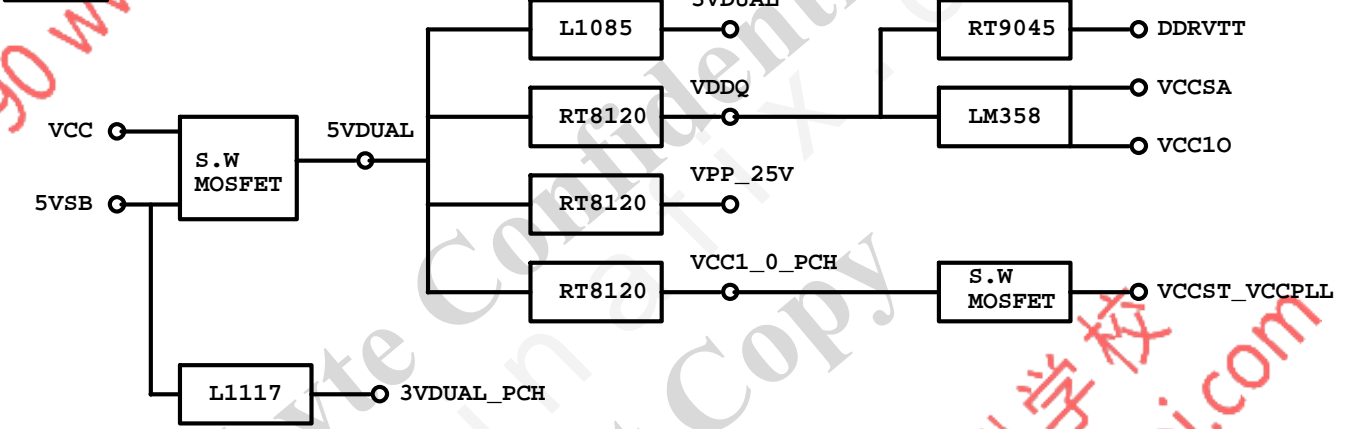
POWER BLOCK MAP



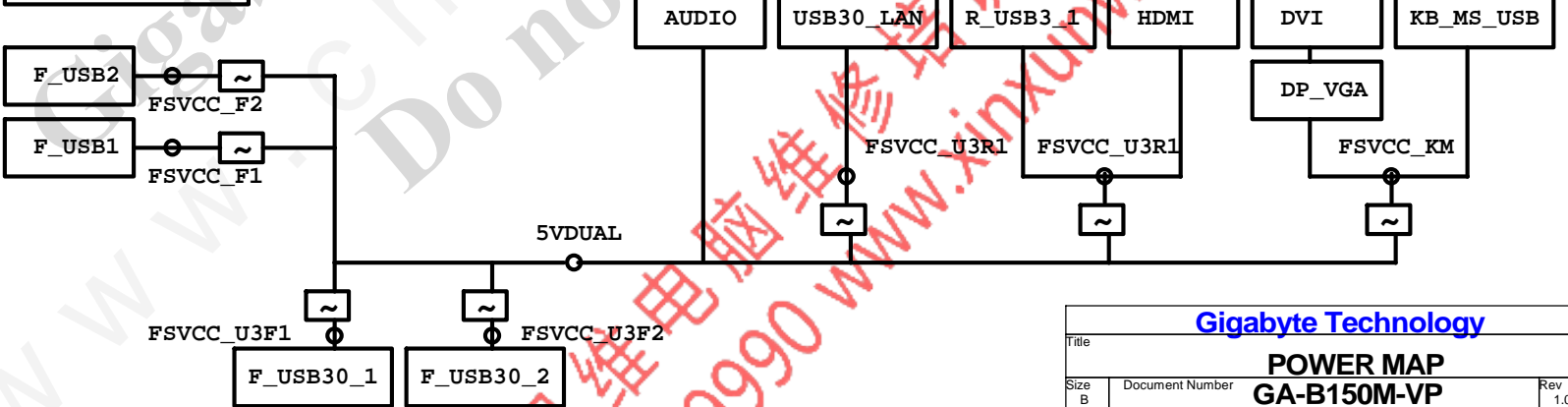
VCORE/VCCGT



POWER



FUSE POWER F/R



Gigabyte Technology			
Title			
POWER MAP			
Size	Document Number	Rev	
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固態電容料號.請自行修改

日系黑色固態	Capture Value
11C02-C85600-01R	560u/FP/D/6.3V/68/C/8m
11C05-C82700-01R	270u/FP/D/16V/88/C/12m
11C05-C61000-01R	100u/OS/D/16V/66/C/30m
11C02-C51000-01R	100u/FP/D/6.3V/65/C/13m

日系一般固態	Capture Value
11C02-685600-01R	560u/FP/D/6.3V/68/8m
11C05-882700-01R	270u/FP/D/16V/88/12m
11C05-661000-03R	100u/OS/D/16V/66/30m
11C02-651000-02R	100u/OS/D/6.3V/66/30m

台系固態	Capture Value
11C02-661000-09R	100u/OS/D/6.3V/66/A/35m
11C05-691000-09R	100u/OS/D/16V/69/A/35m
11C05-8C2700-09R	270u/FP/D/16V/8C/A/10m
11C02-695600-09R	560u/FP/D/6.3V/69/A/11m

IRON CHOKE

	料號	Capture Value	SIZE	Footprint
DIP	11LC5-M4500C-01R	0.5uH/40A/IMD109/M/D	10*10	CHOKE05U-40A-1PQ-3
DIP	11LC5-M2500C-01R	0.5uH/20A/IMD0809/M/D	8*8	CHOKE1U-R50M-IF

Ferrite

	料號	Capture Value	SIZE	Footprint
DIP	11LC5-F3500C-11R	0.5uH/32A/INCG109/FSI/D	10*10	CHOKE05U-40A-1PQ-3
DIP	11LC5-F2500C-11R	0.5uH/25A/INC0809/F/D	8*8	CHOKE1U-R50M-IF
SMD	未建(SIUC1007-R30M-JJ1W)		10*7	CHOKE11X8MM-SMD

BEAD

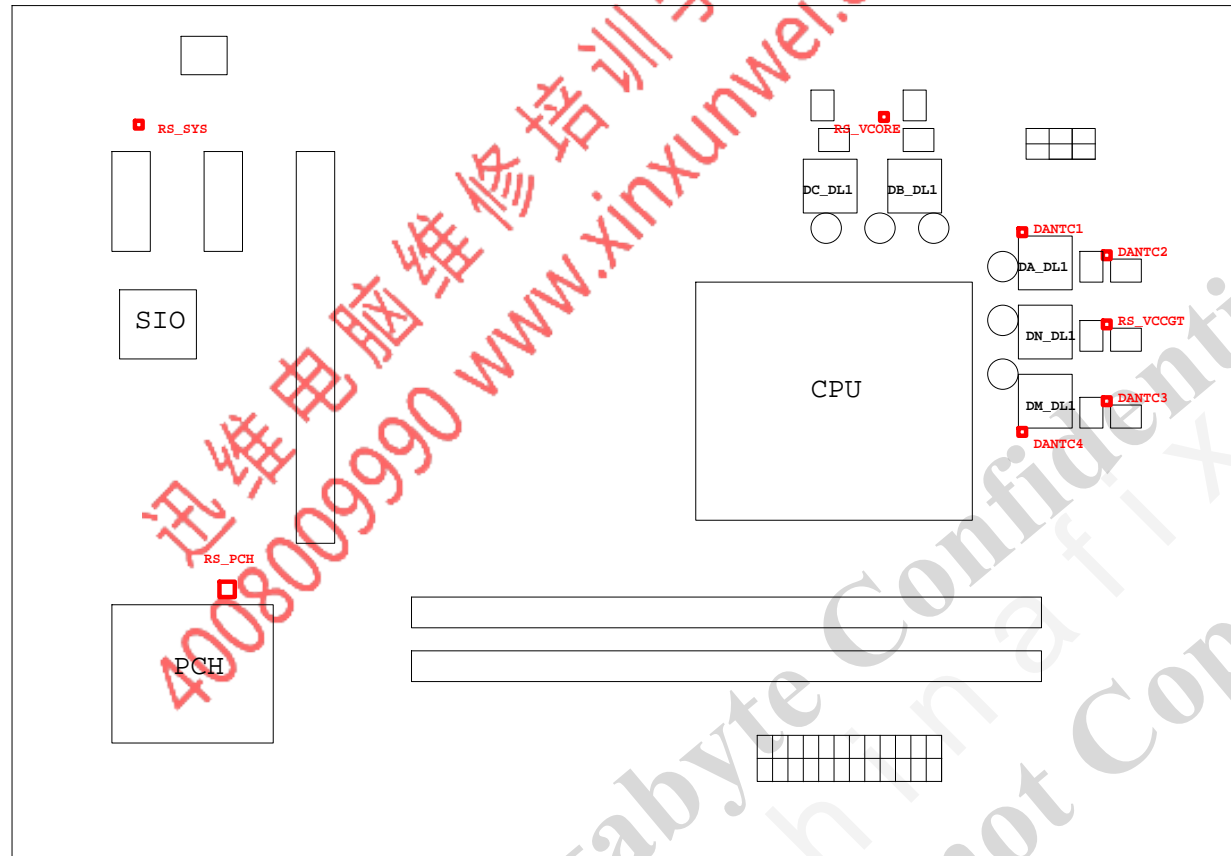
	料號	Capture Value	SIZE	Footprint
DIP	10LFB-15470A-01R	47/4030/15A/S	4*3	BEADC8B-BPH_SMD

PWM料號

		料號	Capture Value	Footprint
PWM	ISL95856	10TA1-695856-01R		IC52QFN-6x6-G
PWM	ISL95858	10TA1-695858-01R		IC52QFN-6x6-G
PWM	IR35201	10TA1-635201-00R		IC56QFN-9VRS4339
PWM	IR3570	10TA1-603570-00R		IC40MLFP-ISL95835

GIGABYTE™			
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熱敏電阻	擺放靠近位置	走線方式
DANTC4	DM_DL1	Differential
DANTC1	DA_DL1	Differential
DANTC3	DM_DQ1	Differential
DANTC2	DA_DQ1	Differential
RS_VCORE	DC_DQ1	N/A
RS_VCCGT	DM_DQ1	N/A
RS_PCH	PCH	N/A
RS_SYS	CUL	N/A