

BLOCK DIAGRAM

INTEL Pentium4 (478)

VCCORE = 1.75V / SLEEP : 1.3V
VCC3

PAGE 4, 5, 6

CLOCK GENERATOR

CKVDD = 3.3V

PAGE 17

PWM/OTHER POWER

VCCORE = 1.75V (650-1100MHZ) / SLEEP : 1.3V
SVSTR = 12V, +12V, VCC, VCC3, 3VDDUAL
VTT_DDR = 2.5VSTR

PAGE 30, 31, 32

GMCH BROOKDALE-GE-DDR

VCCORE = 1.75V / SLEEP : 1.3V
2.5VSTR = 2.5V(MEMORY, SUSPEND POWER)
VDDQ = 1.5V (AGP POWER 4X, HUBLINK)

PAGE 7, 8, 9

AGP SLOT 4X

VDDQ = 1.5V (AGP POWER 4X)
VCC3 = 3.3V
+12V = 12V
3VDDUAL = 3.3V
VCC = 5V

PAGE 13

DDR SDRAM DIMM X 2

2.5VSTR = 2.5V(MEMORY, SUSPEND POWER)
VTT_DDR = 1.25V

PAGE 10, 11, 12

REAR USB PORTS

VCC = 5V
VSSB = 5V
SVSSB = 5V

PAGE 33

ICH4

VCC25 = 2.5V(I/O, MEMORY, VLINK)
3VDDUAL = 3.3V(SUSPEND POWER)
VCC3 = 3.3V
RTCVDD = 3.3V

PAGE 14, 15

FRONT USB CONN.

PAGE 22

IDE Primary and Secondary

VCC = 5V

PAGE 24

FWH

VCC = 5V
VCC3 = 3V

PAGE 16

PCI SLOT 1,2,3

+12 = 12V
-12 = -12V
VCC = 5V
VCC3 = 3V
3VDDUAL = 3V

PAGE 18, 19, 20

LPC I/O ITE8712

FDD IR/CIR S_IRQ GAME

VCC = 5V
VCC3 = 3V

PAGE 21

REALTEK 8100C LAN

+12 = 12V
-12 = -12V
VCC = 5V
VCC3 = 3V
3VDDUAL = 3V

PAGE 18, 19, 20

I/O PORTS :

COMA COMB LPT PS2

PAGE 26

AC97 CODEC ALC655

+12V = 12V
VCC3 = 3.3V
VCC = 5V
AVDD = 5V

PAGE 27

AUDIO PORTS : FRONT AUDIO
LIN_ OUT LINE_IN MIC CD_IN

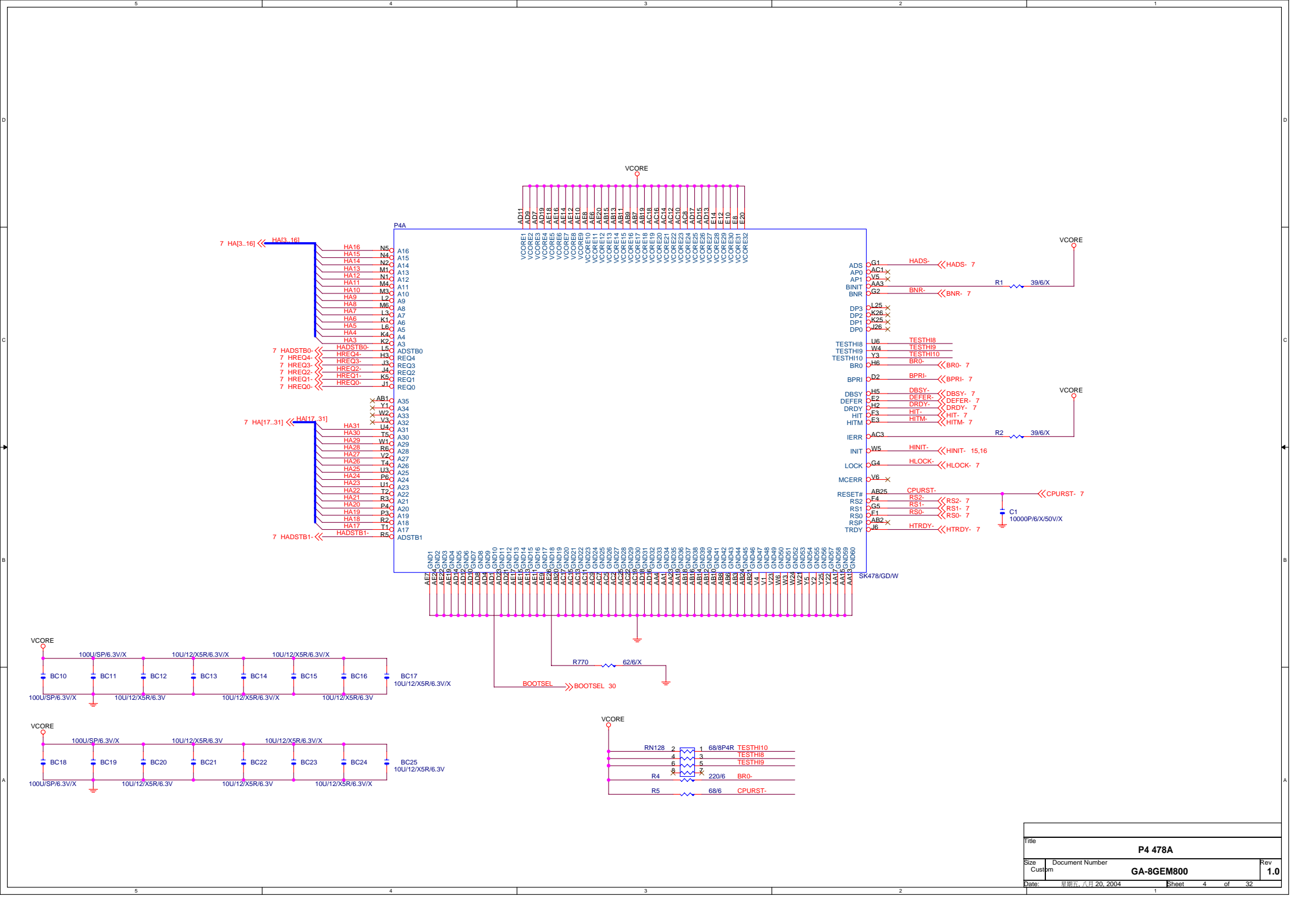
PAGE 28

FRONT PANEL /FANS

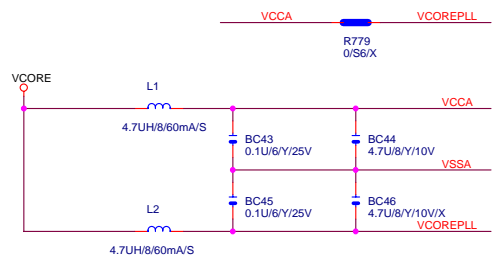
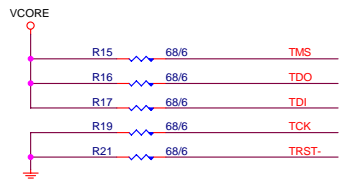
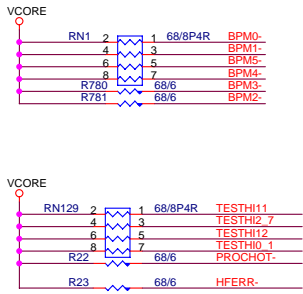
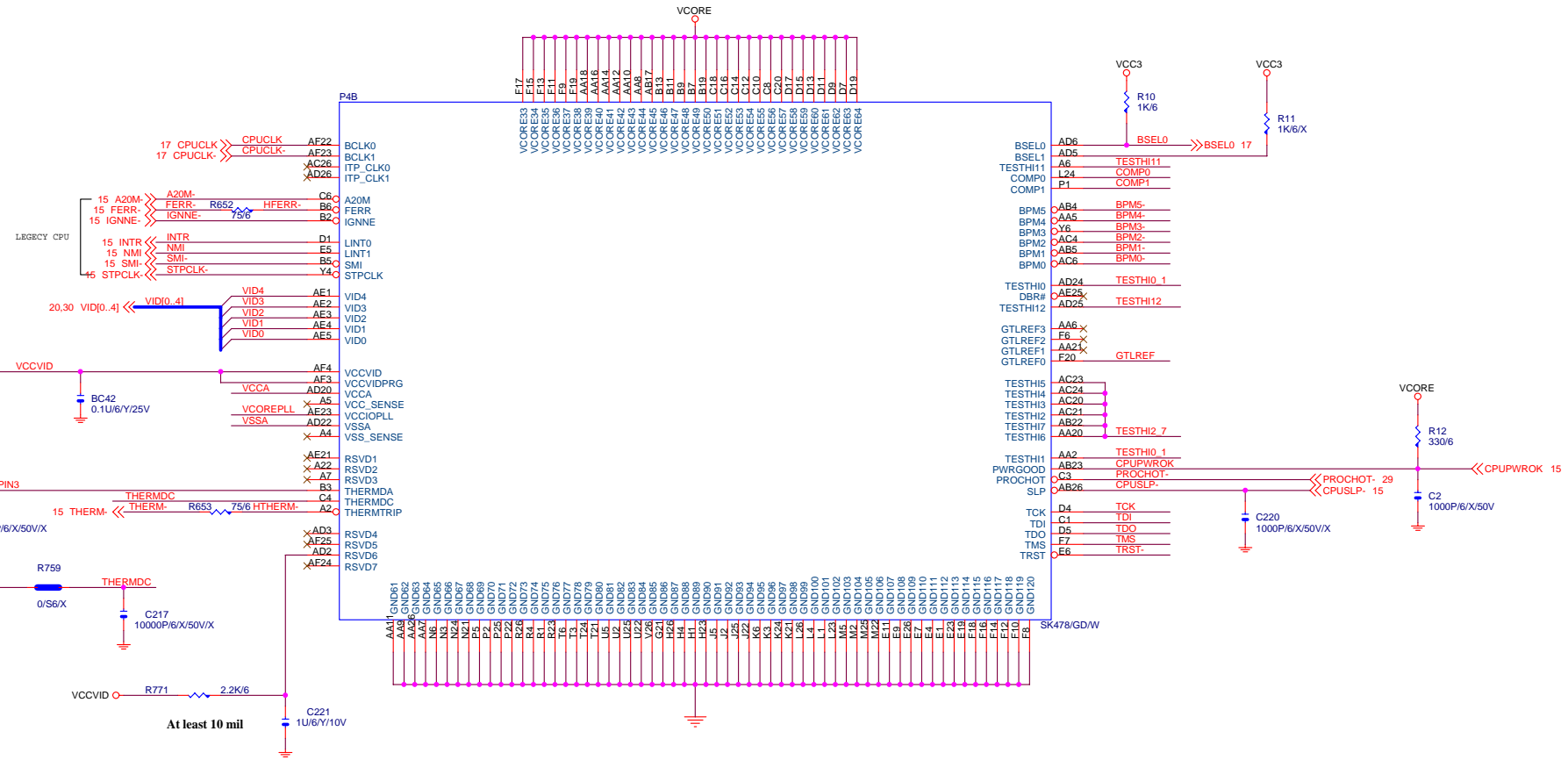
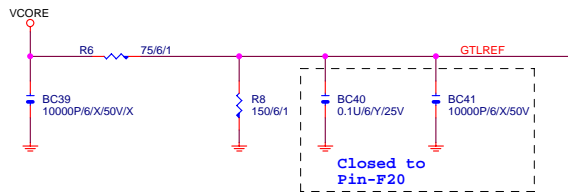
VCC = 5V
SVSSB = 5V
+12 = 12V
SVCC = 5V

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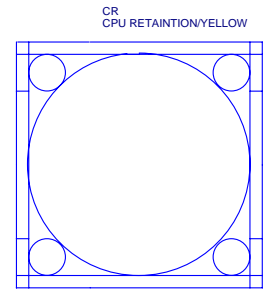
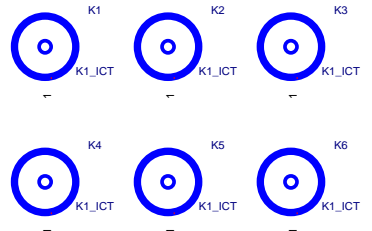
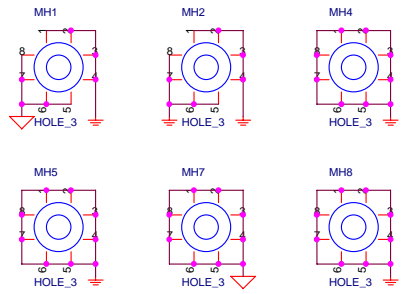
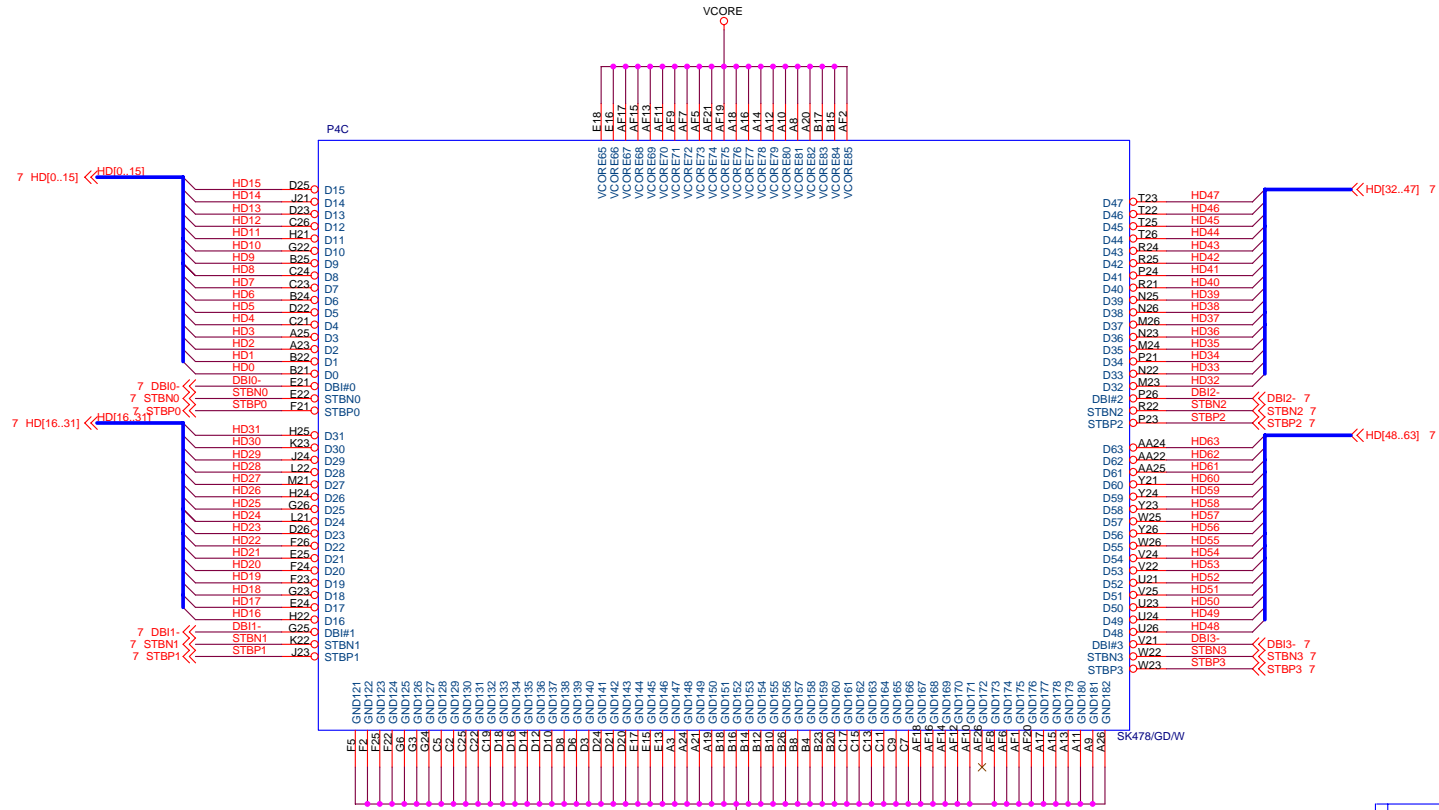
GIGABYTE			
BOM & PCB MODIFY HISTORY			
File	Document Number		Rev
GA-8GEM800	GA-8GEM800		1.0
Date	11/11/2004	Sheet	3 of 32



Title			P4 478A		
Size	Document Number				Rev
Custom	GA-8GEM800				1.0
Date:	星期五, 八月 20, 2004	Sheet	4	of	32

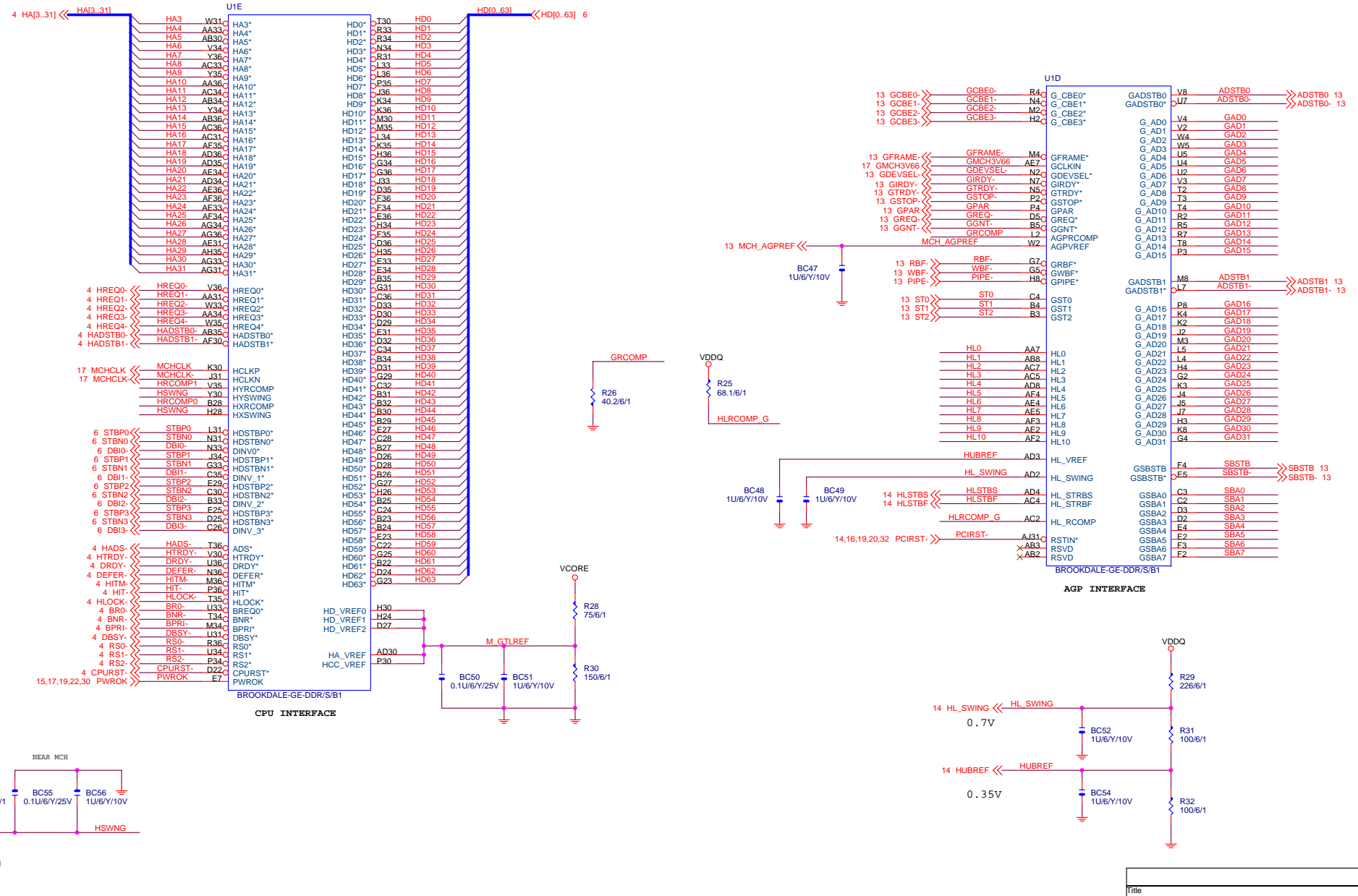


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Title			P4 478C		
Size	Document Number				Rev
Custom	GA-8GEM800				1.0
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13 GAD[0..31] <->
13 SBA[0..7] <->
14 HL[0..10] <->



Title	BROOKDALE-G_A	
Size	Document Number	Rev
Custpm	GA-8GEM800	1.0
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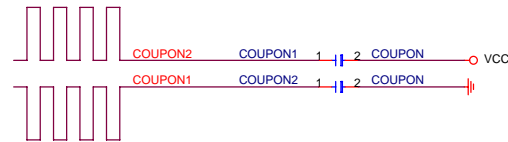
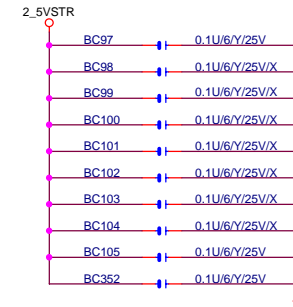
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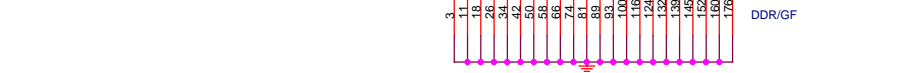
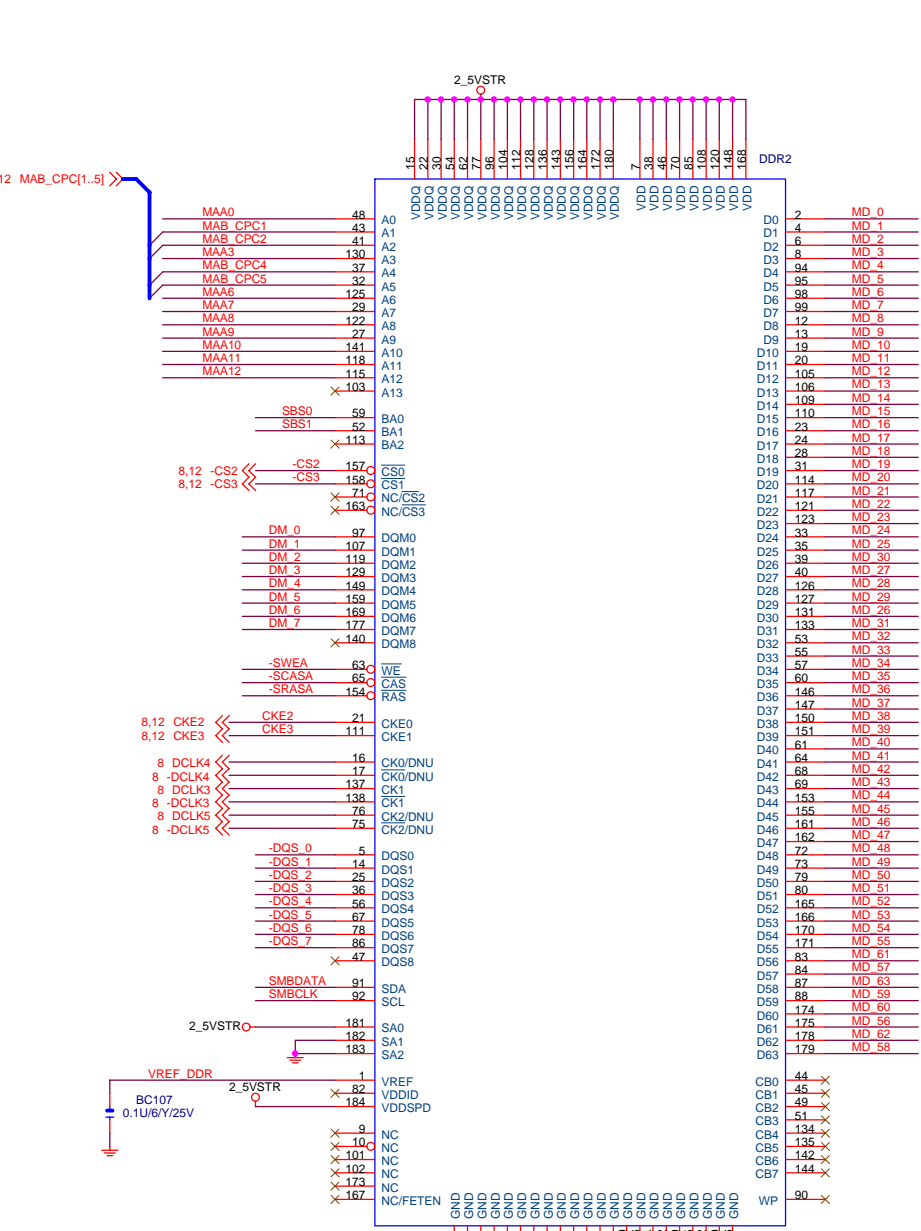
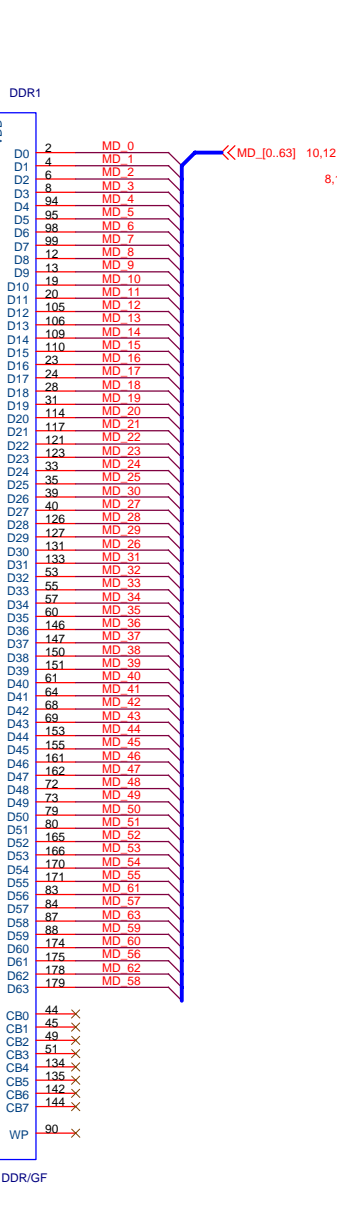
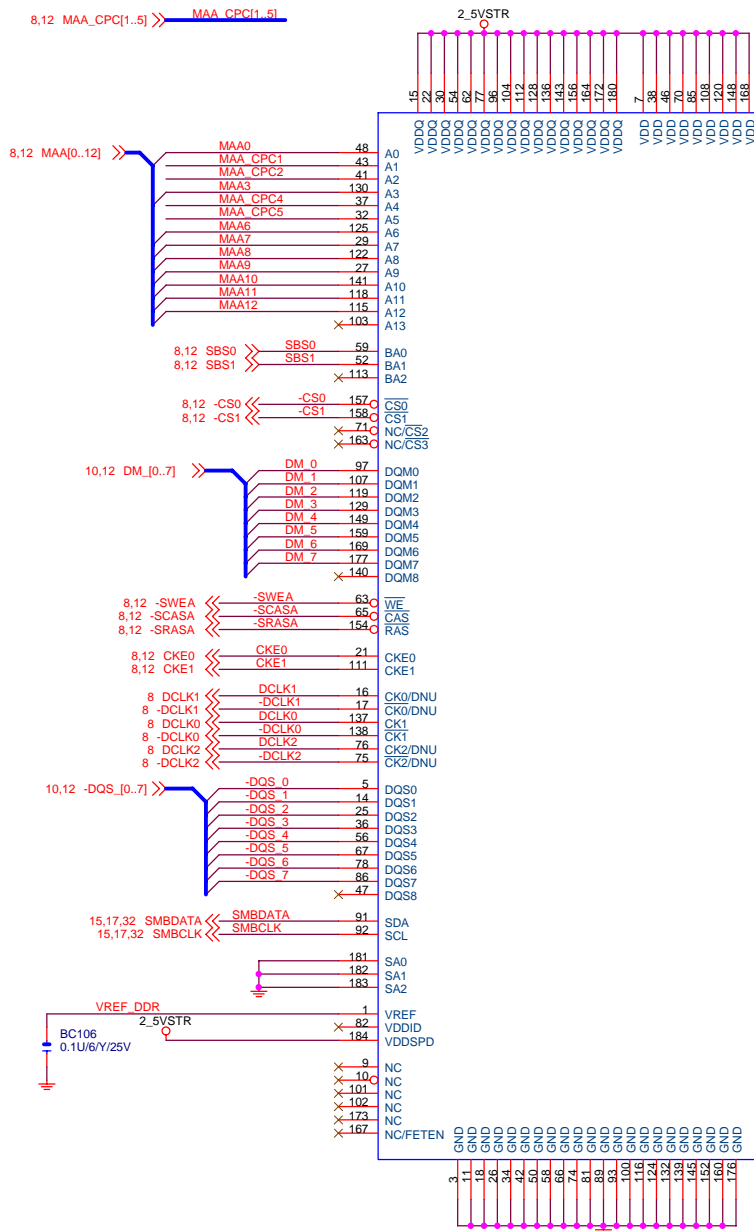
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-DQS 0		3	4	-DQS0
MD 2		5	6	MD2
MD 6		7	8	MD6
MD 0	RN5	1	2 0/8P4R/X	MD0
MD 4		3	4	MD4
MD 5		5	6	MD5
MD 1		7	8	MD1
MD 12	RN6	1	2 0/8P4R/X	MD12
MD 13		3	4	MD13
-DQS 1		5	6	-DQS1
DM 1		7	8	DM1
MD 14	RN7	1	2 0/8P4R/X	MD14
MD 15		3	4	MD15
MD 10		5	6	MD10
MD 11		7	8	MD11
-DQS 2	RN9	1	2 0/8P4R/X	-DQS2
DM 2		3	4	DM2
MD 18		5	6	MD18
MD 22		7	8	MD22
MD 29	RN11	1	2 0/8P4R/X	MD29
MD 25		3	4	MD25
-DQS 3		5	6	-DQS3
DM 3		7	8	DM3
MD 26	RN12	1	2 0/8P4R/X	MD26
MD 30		3	4	MD30
MD 27		5	6	MD27
MD 31		7	8	MD31
MD 32	RN13	1	2 0/8P4R/X	MD32
MD 36		3	4	MD36
MD 33		5	6	MD33
MD 37		7	8	MD37
MD 39	RN14	1	2 0/8P4R/X	MD39
MD 35		3	4	MD35
MD 40		5	6	MD40
MD 44		7	8	MD44
-DQS 4	RN15	1	2 0/8P4R/X	-DQS4
DM 4		3	4	DM4
MD 34		5	6	MD34
MD 38		7	8	MD38
MD 45	RN16	1	2 0/8P4R/X	MD45
MD 41		3	4	MD41
DM 5		5	6	DM5
-DQS 5		7	8	-DQS5
MD 48	RN17	1	2 0/8P4R/X	MD48
MD 49		3	4	MD49
MD 52		5	6	MD52
MD 53		7	8	MD53
MD 50	RN18	1	2 0/8P4R/X	MD50
MD 51		3	4	MD51
MD 60		5	6	MD60
MD 61		7	8	MD61
DM 6	RN19	1	2 0/8P4R/X	DM6
-DQS 6		3	4	-DQS6
MD 54		5	6	MD54
MD 55		7	8	MD55
MD 56	RN20	1	2 0/8P4R/X	MD56
MD 57		3	4	MD57
DM 7		5	6	DM7
-DQS 7		7	8	-DQS7
MD 59	RN21	7	8 0/8P4R/X	MD59
MD 63		5	6	MD63
MD 58		3	4	MD58
MD 62		1	2	MD62

MD 20	RN2	1	2 0/8P4R/X	MD20
MD 16		3	4	MD16
MD 17		5	6	MD17
MD 21		7	8	MD21
MD 42	RN4	1	2 0/8P4R/X	MD42
MD 46		3	4	MD46
MD 43		5	6	MD43
MD 47		7	8	MD47

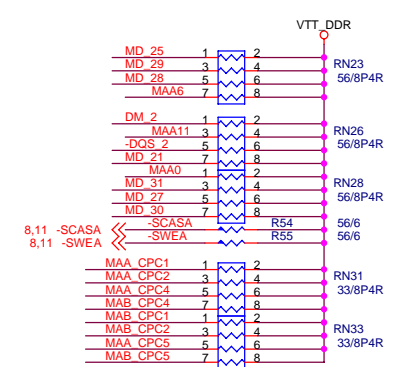
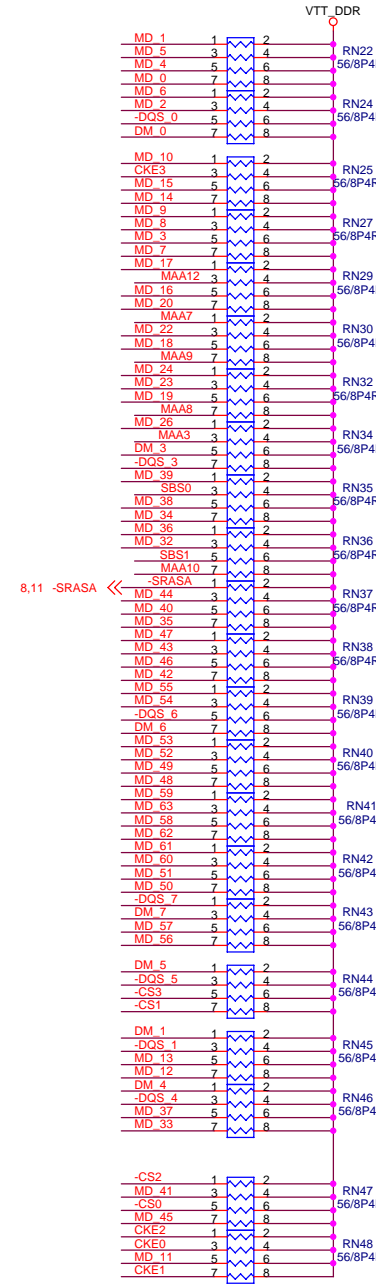
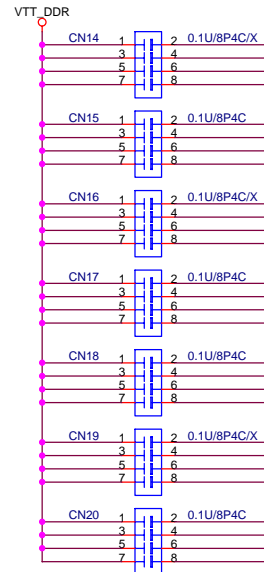
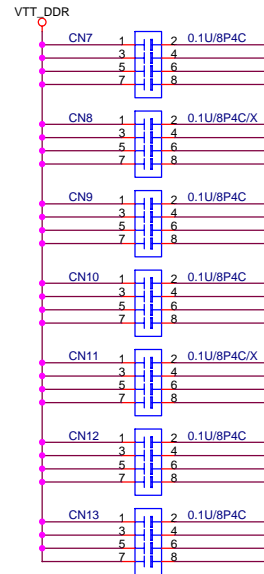
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MD 3		3	4	MD3
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MD 23		3	4	MD23
MD 24		5	6	MD24
MD 28		7	8	MD28



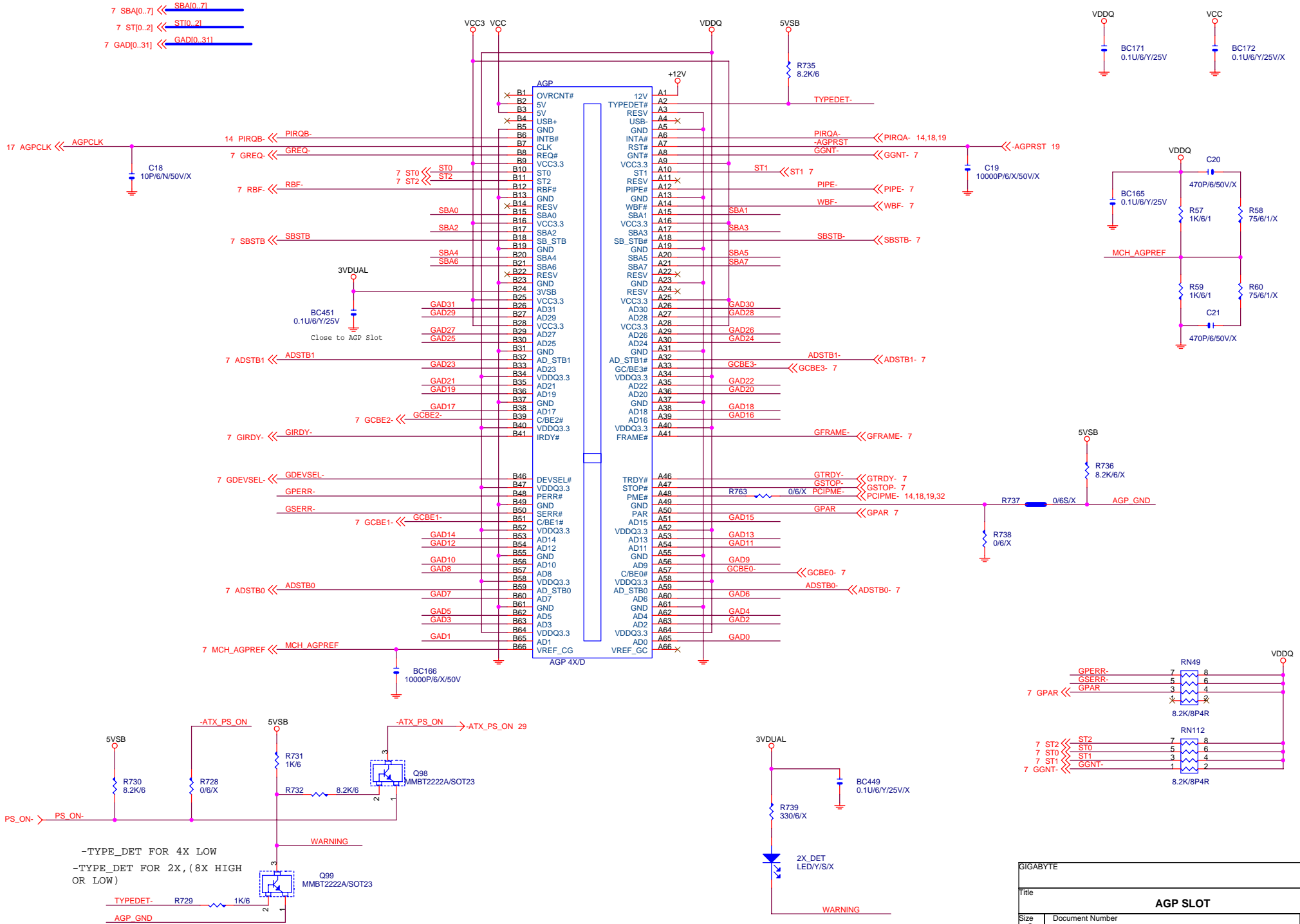
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Size B	Document Number	Rev	
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Size	Document Number	Rev
B	GA-8GEM800	1.0
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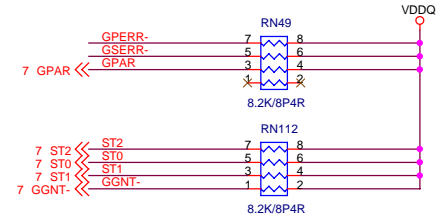
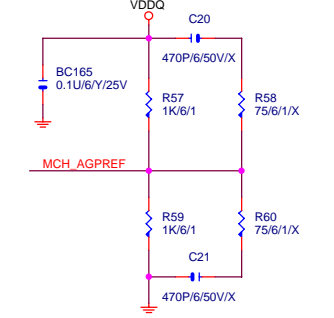


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- 10,11 -DQS_[0..7] <<< -DQS [0..7]
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- 8,11 -CS[0..3] <<< -CS[0..3]
- 8,11 -SBS[0..1] <<< -SBS[0..1]
- 8,11 MAA_CPC[1..5] <<< MAA_CPC[1..5]
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 7 ST[0..2] << ST[0..2]
 7 GAD[0..31] << GAD[0..31]

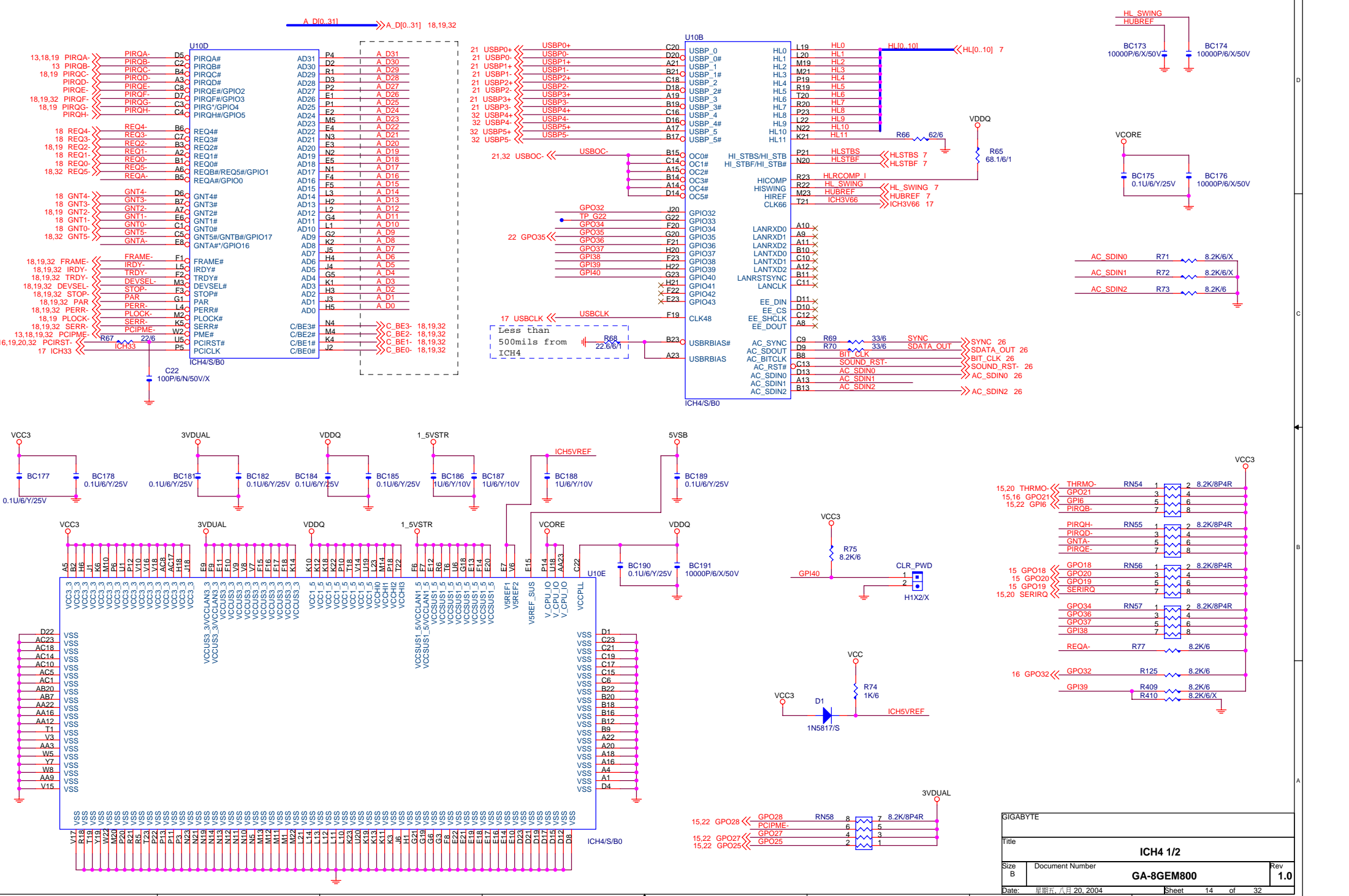
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 VCC BC172 0.1U/6/Y/25V/X



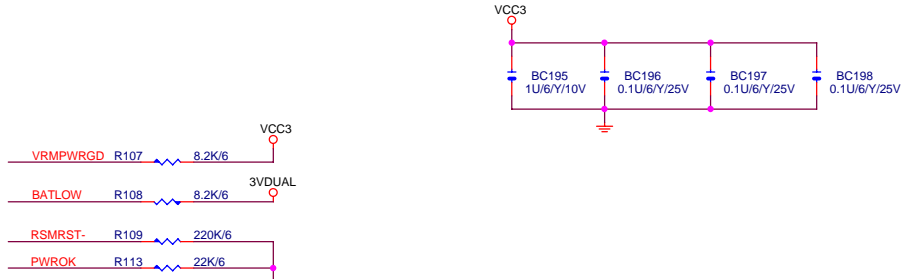
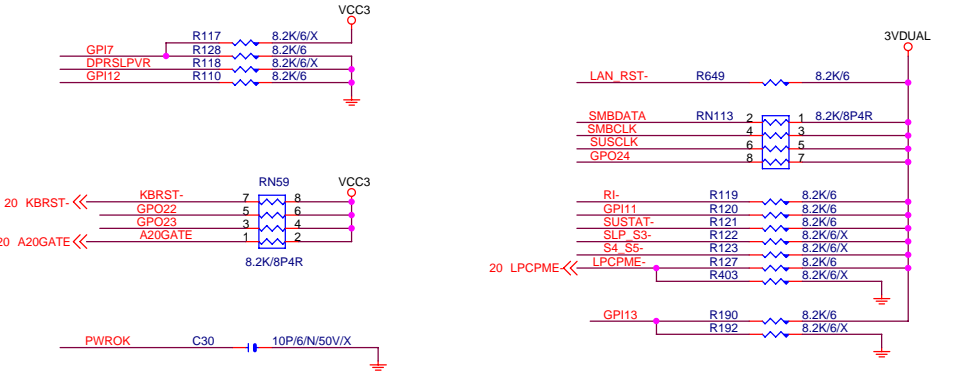
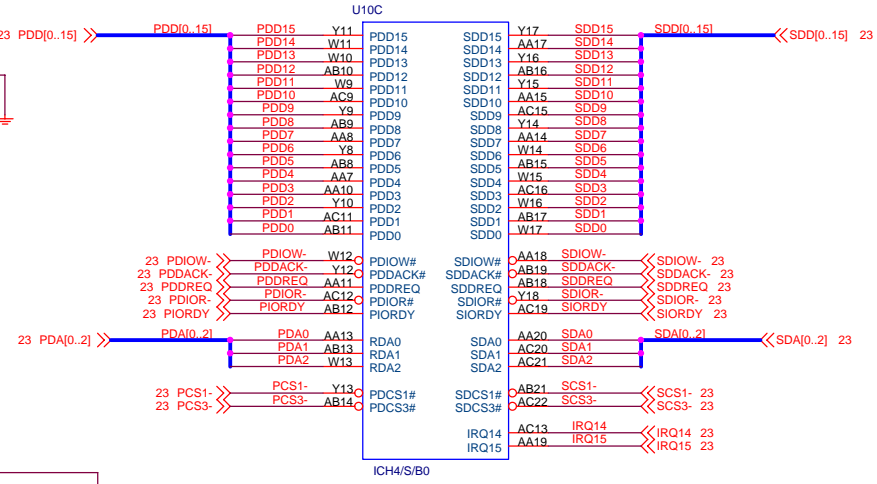
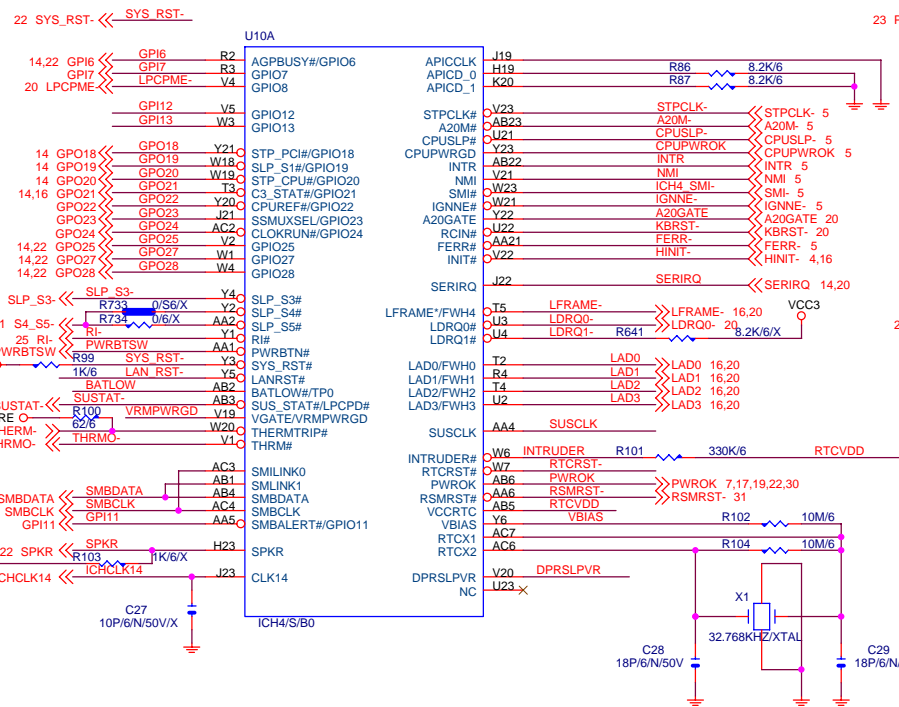
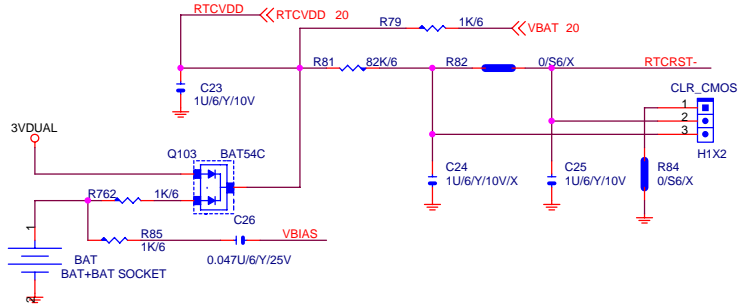
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 -TYPE_DET FOR 2X, (8X HIGH OR LOW)

Layout 時整組線路均需靠近 AGP SLOT

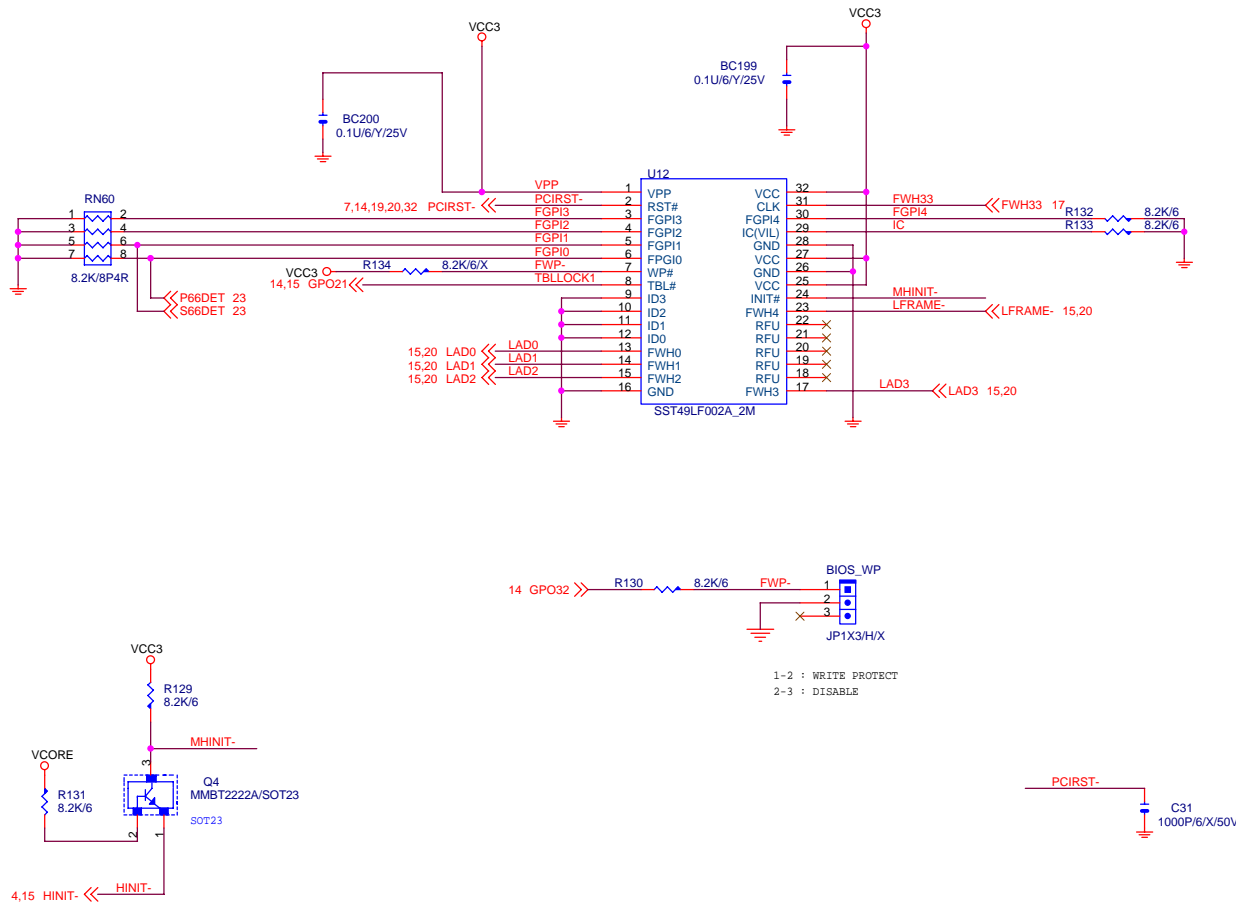
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Size	Document Number	Rev
Custom	GA-8GEM800	1.0
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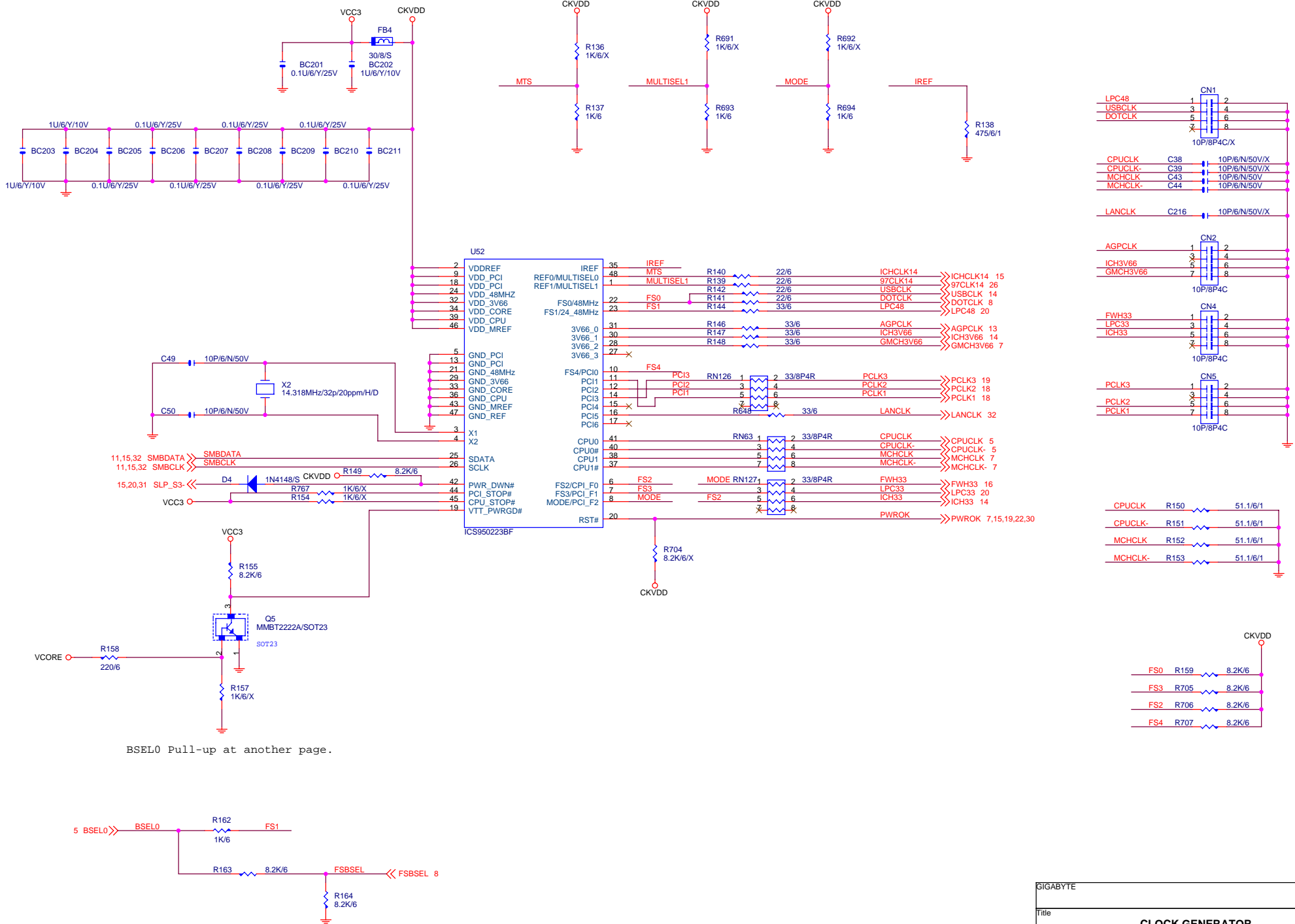
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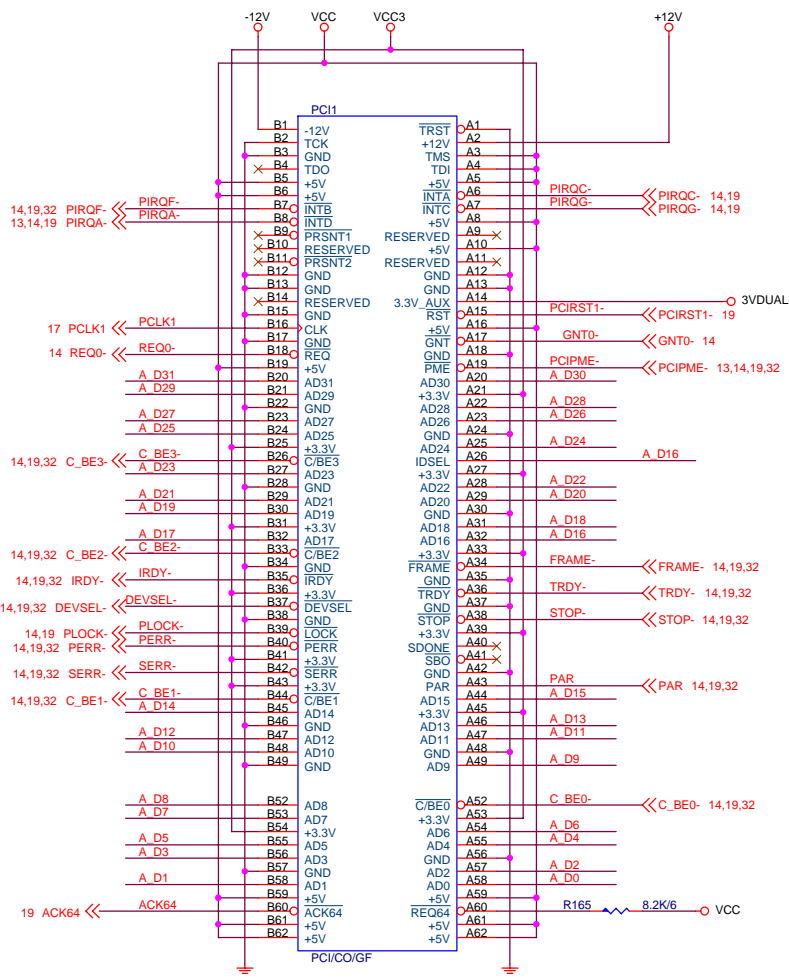


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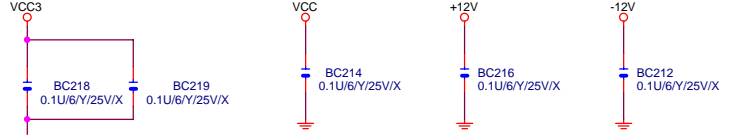
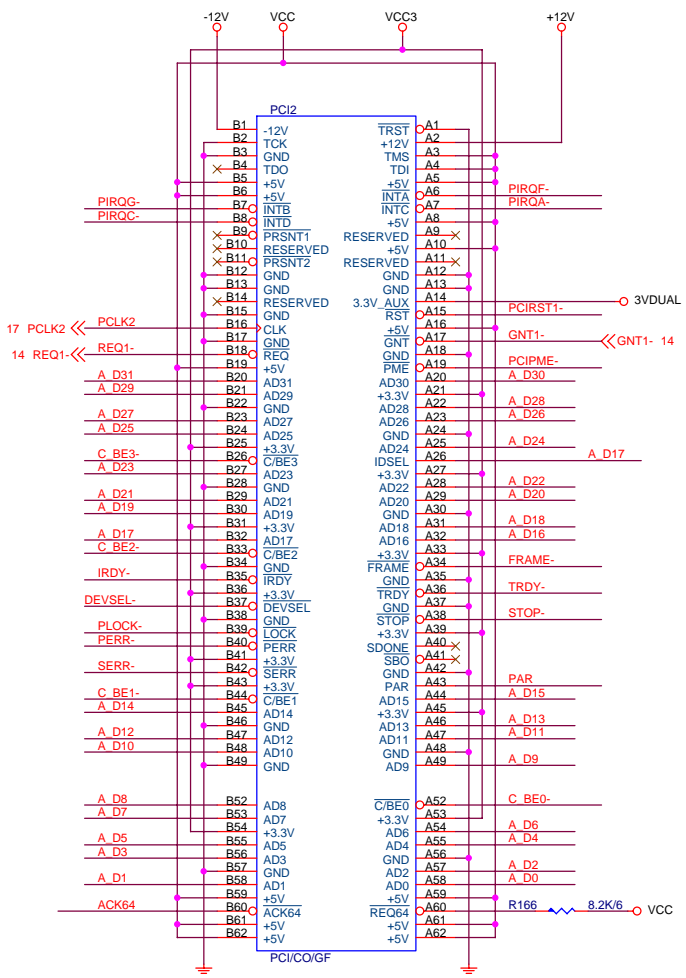
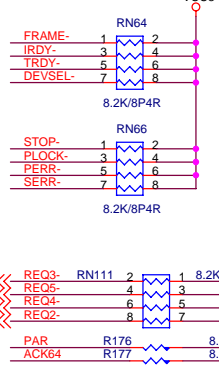
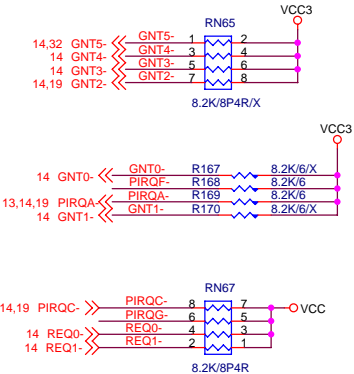
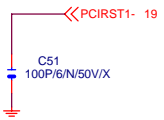


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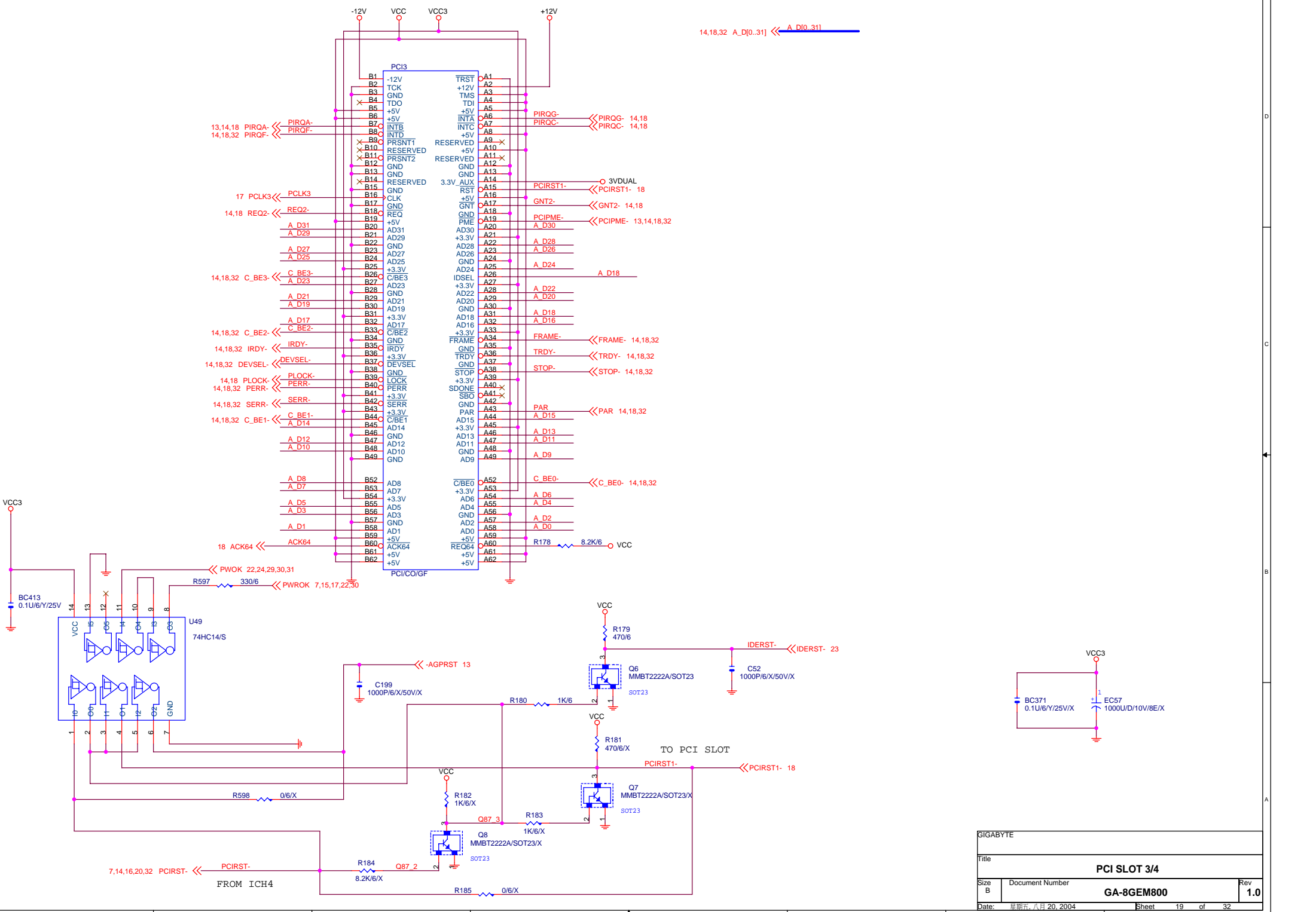
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CLOCK GENERATOR		
Size	Document Number	Rev
Custom	GA-8GEM800	1.0
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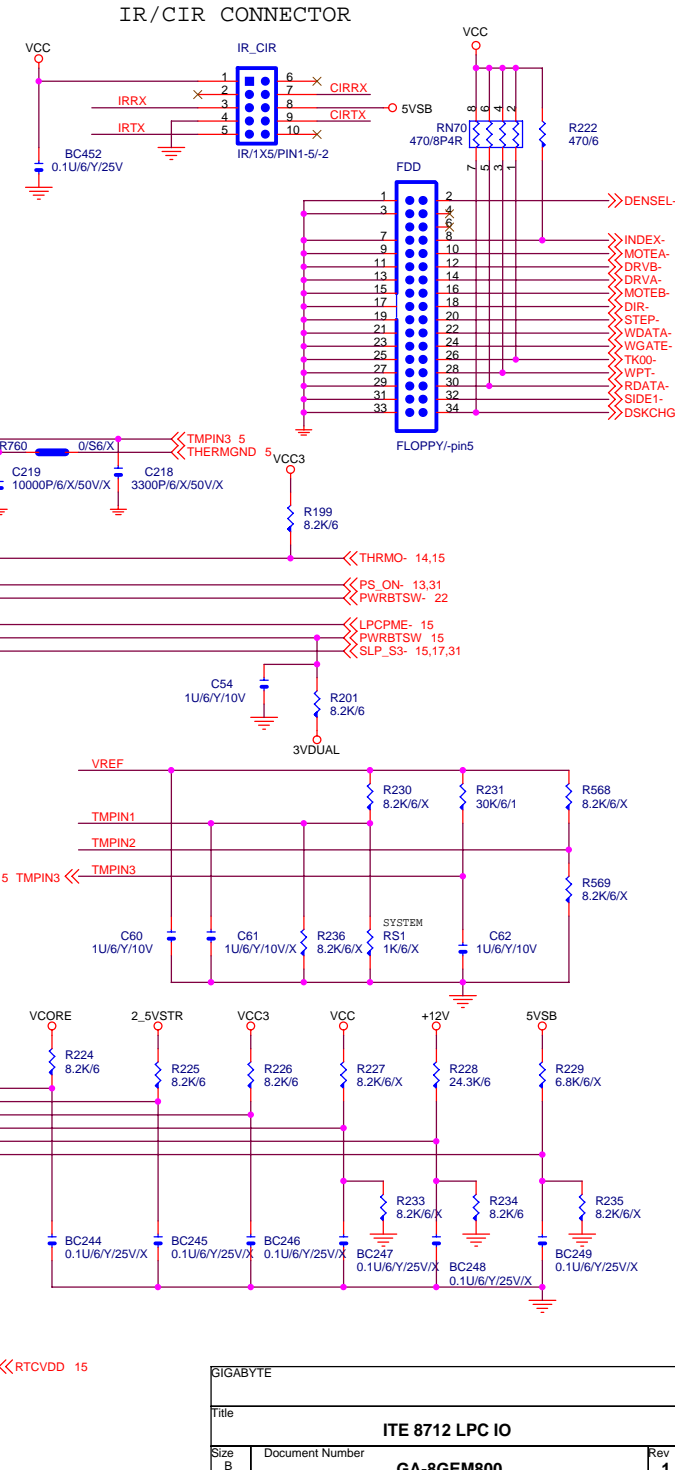
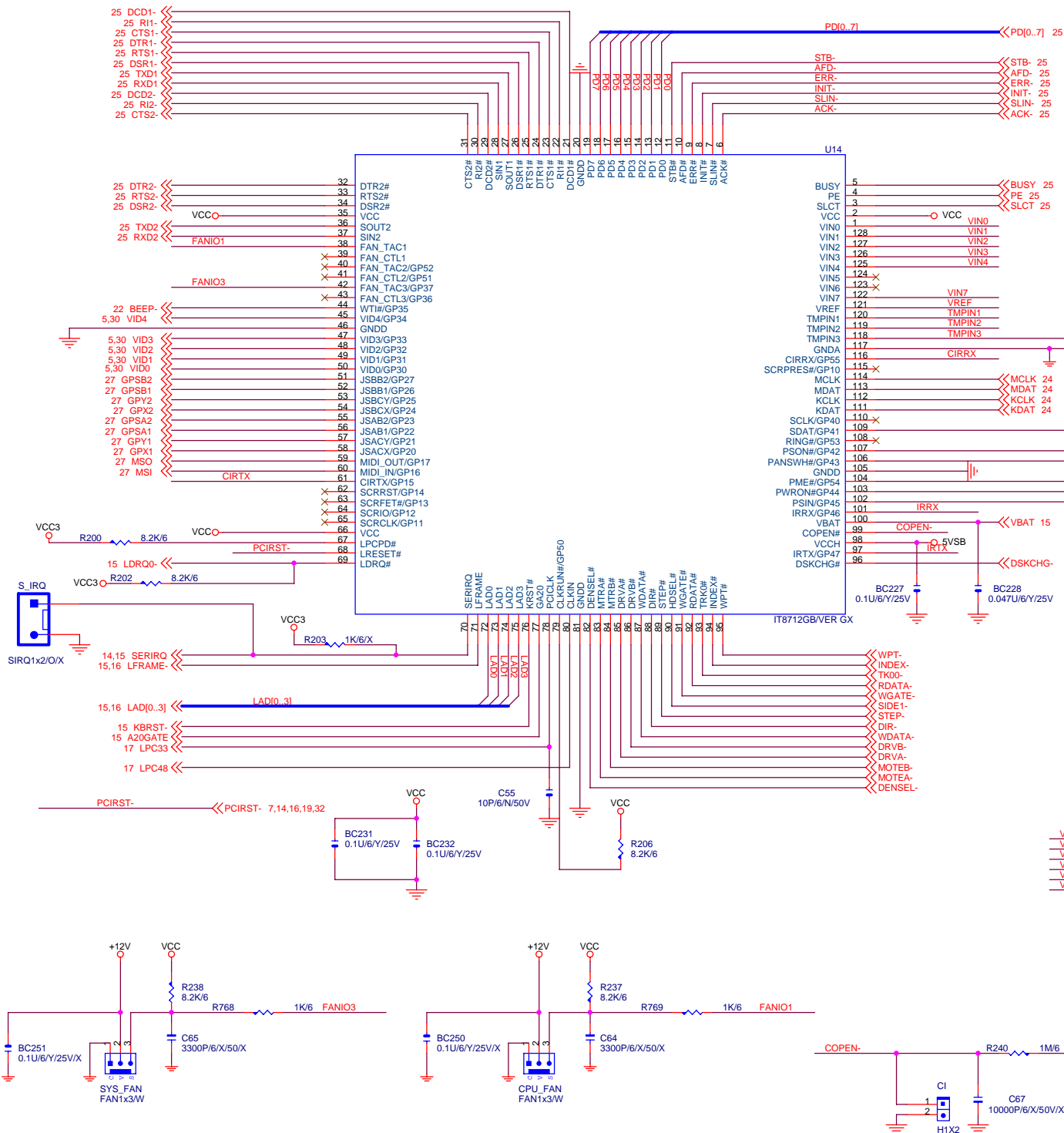
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Size B	Document Number GA-8GEM800
Date: 星期五, 八月 20, 2004	Rev 1.0
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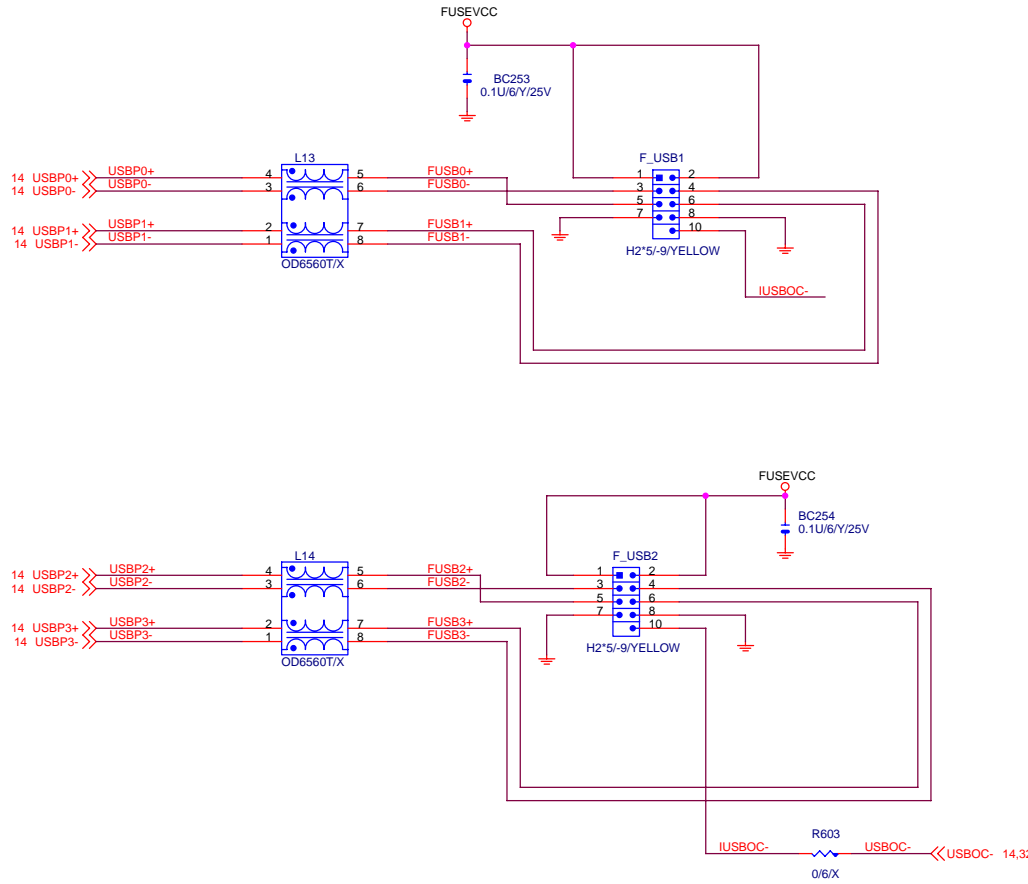


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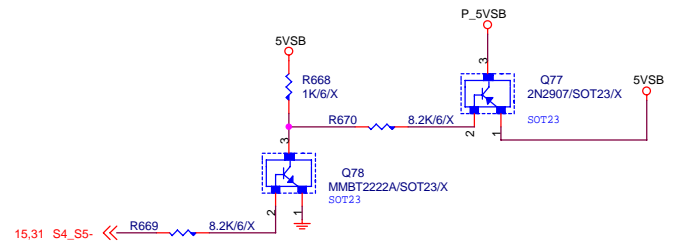
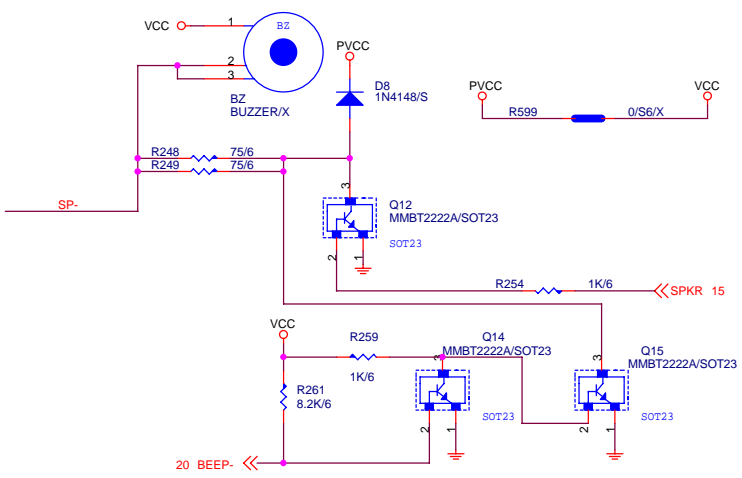
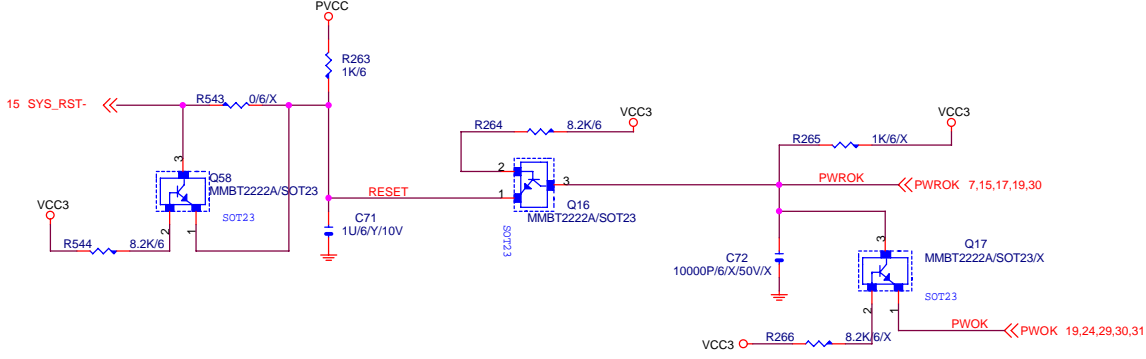


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Size B	Document Number	Rev 1.0
GA-8GEM800		
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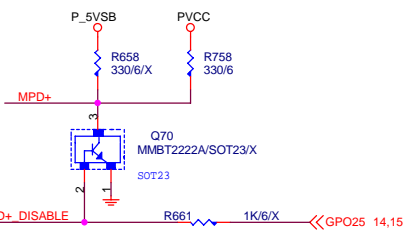
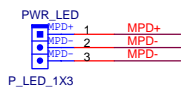
ICH4 USB2.0



GIGABYTE			
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ICH USB+LAN PORT			
Size	Document Number	Rev	
B	GA-8GEM800	1.0	
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	2		1



3 PIN POWER LED



(GPO28 DEFAULT HIGH, RESUME WELL)

States for green LED

LED States	ACPI States	GPO28
ON	S1,S3	0
OFF	S0,S5	1

(GPO25 DEFAULT HI, RESUME WELL AND 可以PROGRAMMING BLINKING)

States for a single-color power LED

LED States	ACPI States	GPO25	GPO27	GPO35
OFF	S1,S3,S5	1	1	NO1
Steady Green	S0	0	1	0
Blinking Green	S0(message waiting)	0	B	0

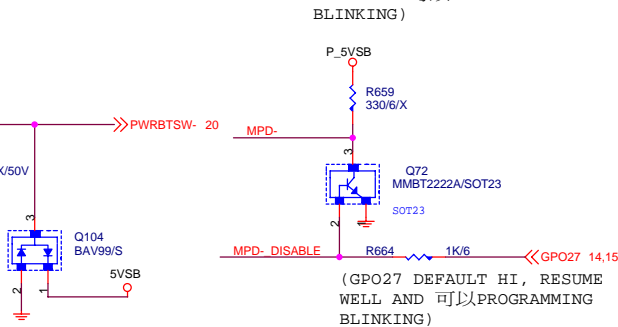
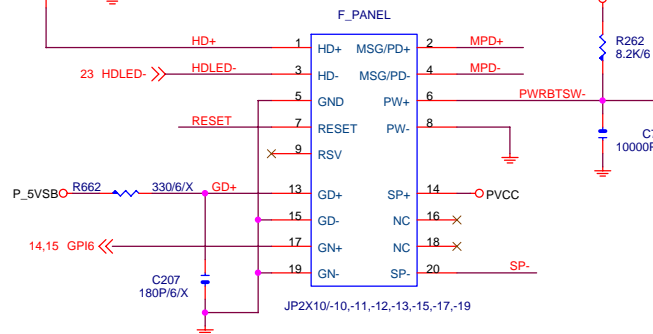
NO1 GPO35 只需在 S1 PROGRAMMING LOW

(GPO27 DEFAULT HI, RESUME WELL AND 可以PROGRAMMING BLINKING)

States for a dual-color power LED

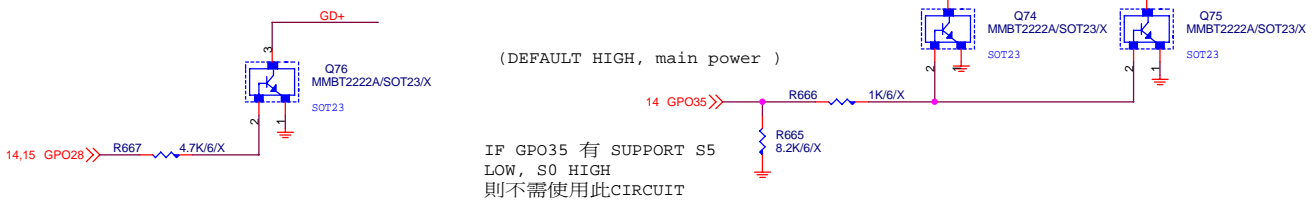
LED States	ACPI States	GPO25	GPO27	GPO35
OFF	S5	1	1	X
Steady Green	S0	0	1	0
Blinking Green	S0(message waiting)	0	B	0
Steady Yellow	S1,S3	1	0	NO1
Blinking Yellow	S1,S3(message waiting)	1	B	NO1

INTEL FRONT PANEL

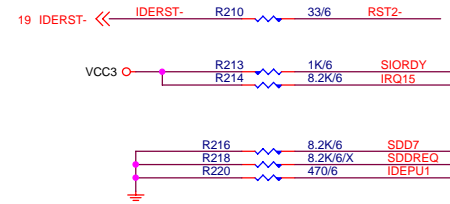
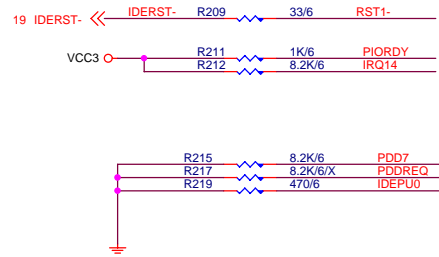
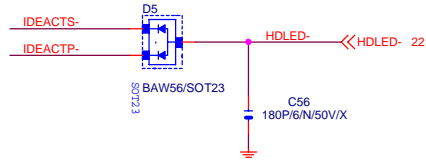


(GPO27 DEFAULT HI, RESUME WELL AND 可以PROGRAMMING BLINKING)

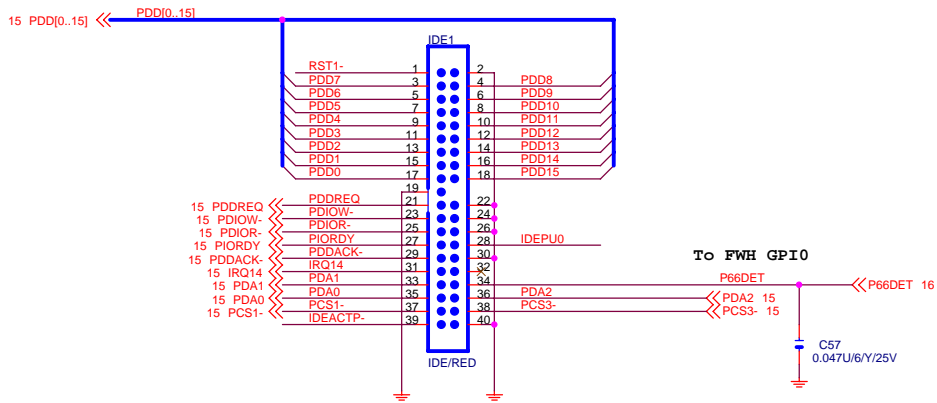
(DEFAULT HIGH, main power)



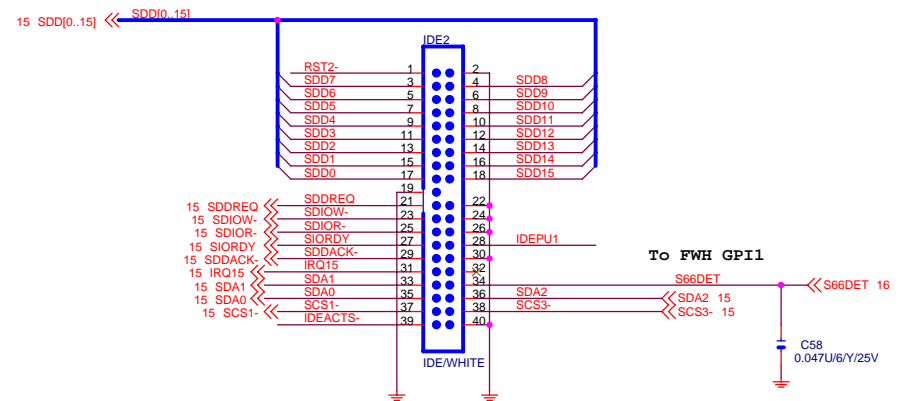
IF GPO35 有 SUPPORT S5 LOW, S0 HIGH 則不需使用此CIRCUIT



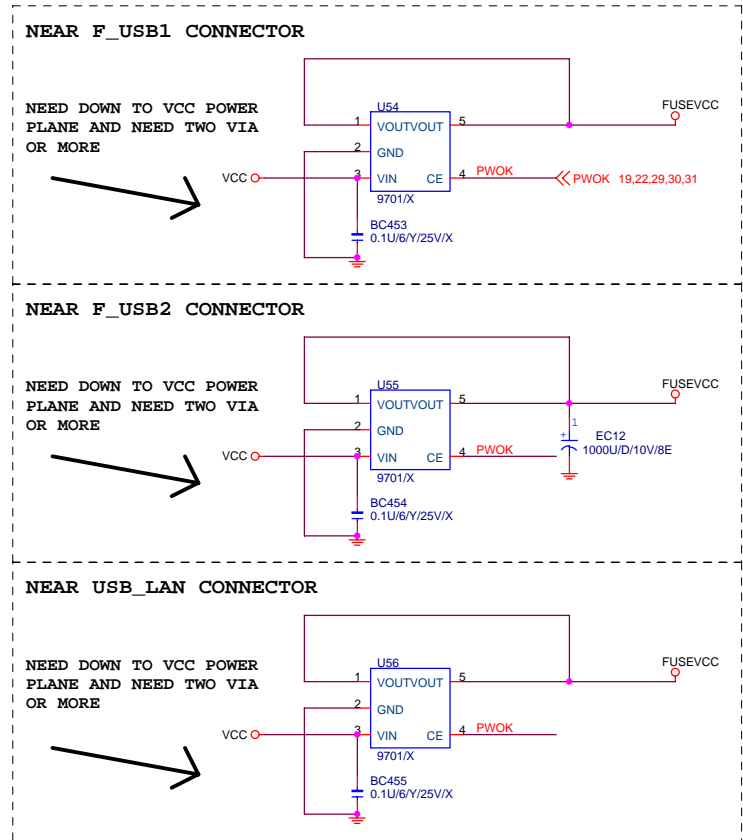
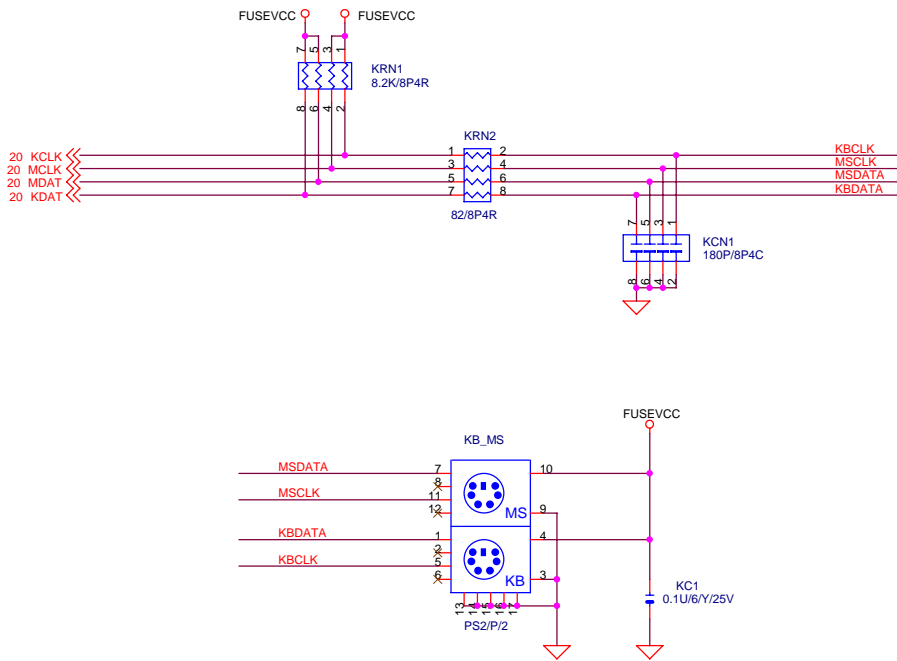
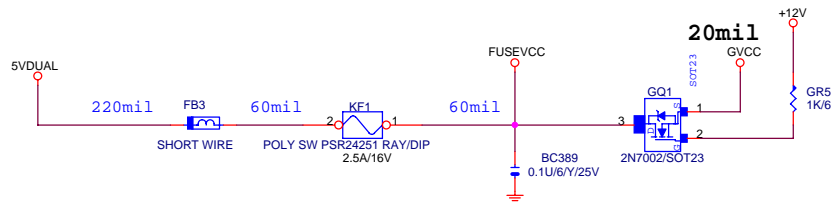
PRIMARY IDE CONNECTOR

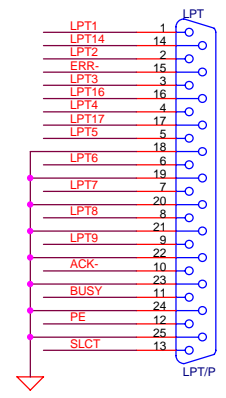
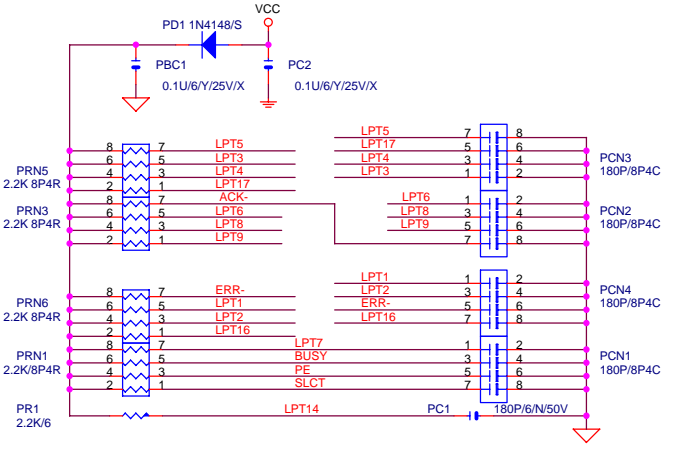
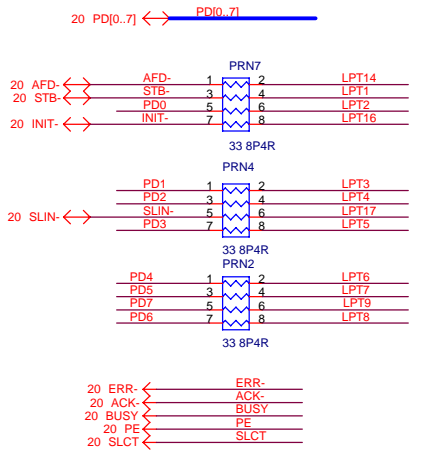
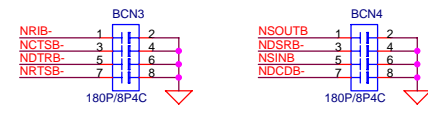
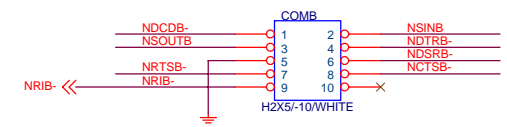
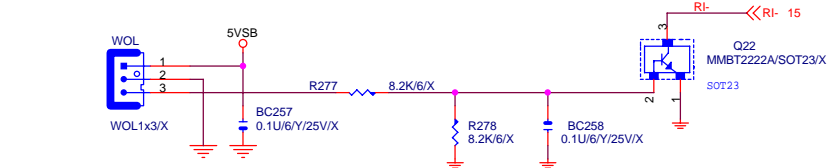
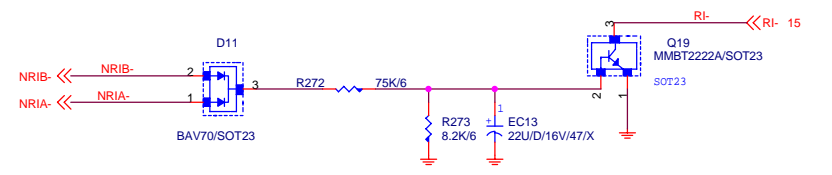
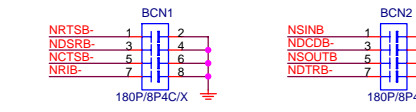
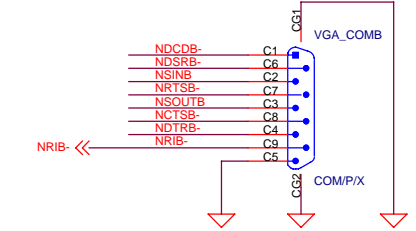
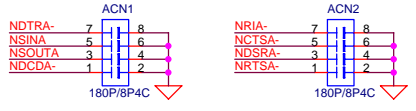
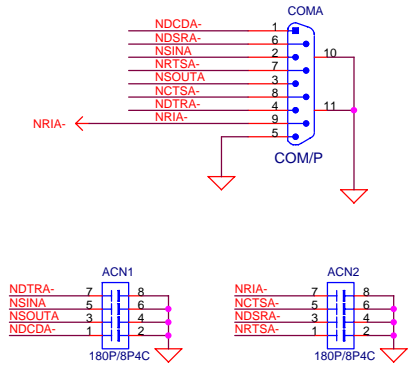
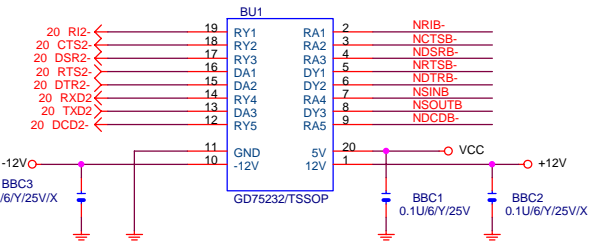
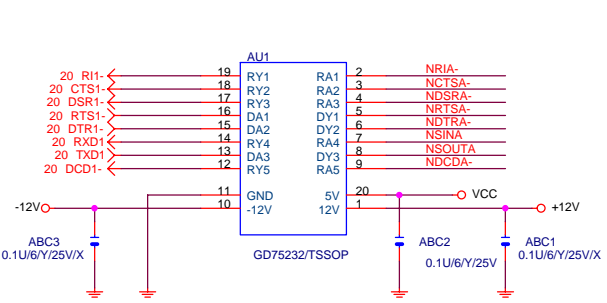


SECONDARY IDE CONNECTOR

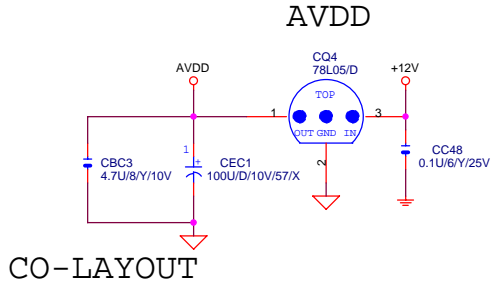
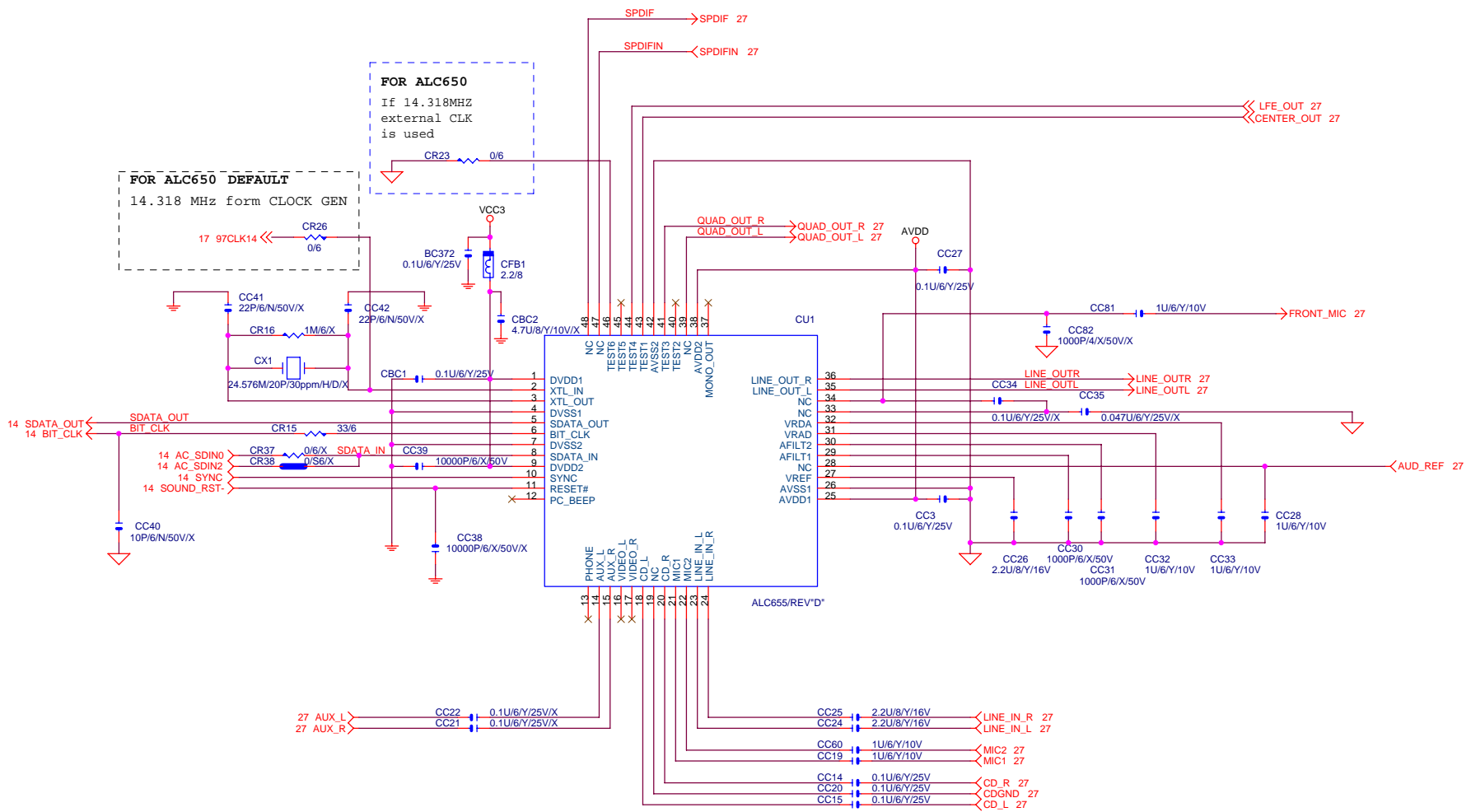


GIGABYTE		
Title IDE CONNECTOR		
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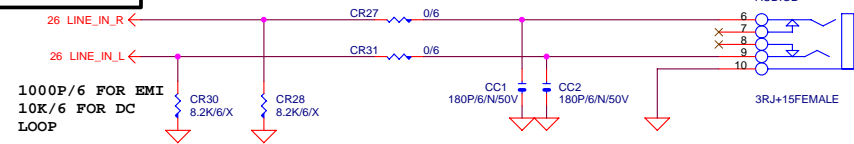


GIGABYTE CORP.		
Title COM & IR & LPT PORT & FLOOPY		
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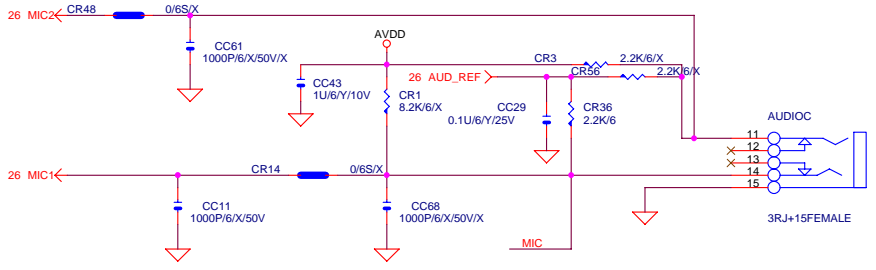


GIGABYTE CORP.		
Title		
AC97		
Size	Document Number	Rev
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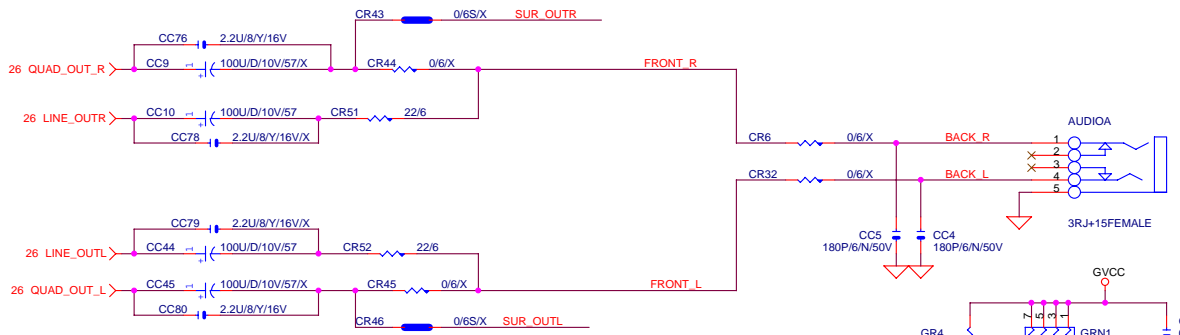
LINE-IN



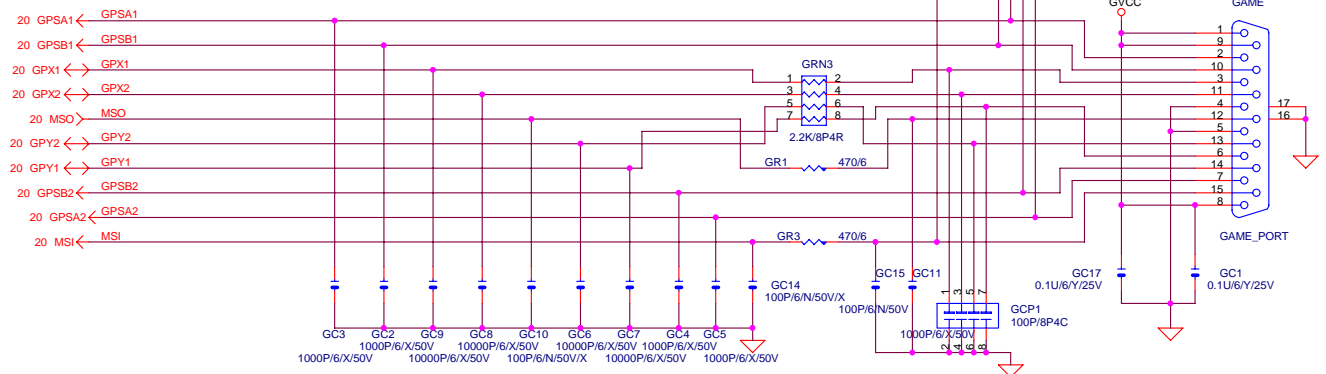
MIC



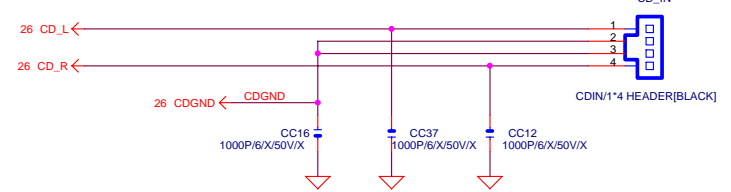
LINE OUT



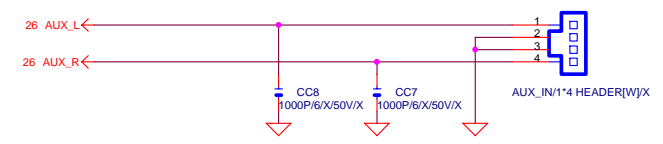
GAME_PORT



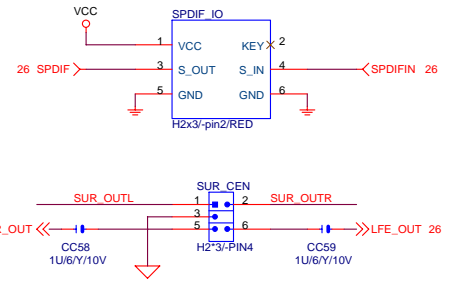
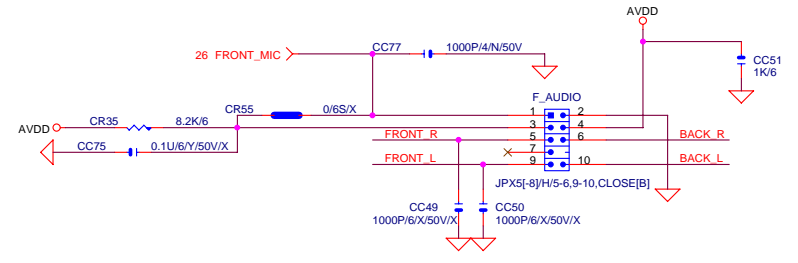
CDIN



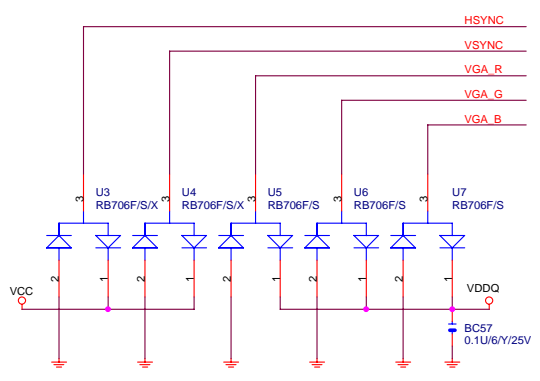
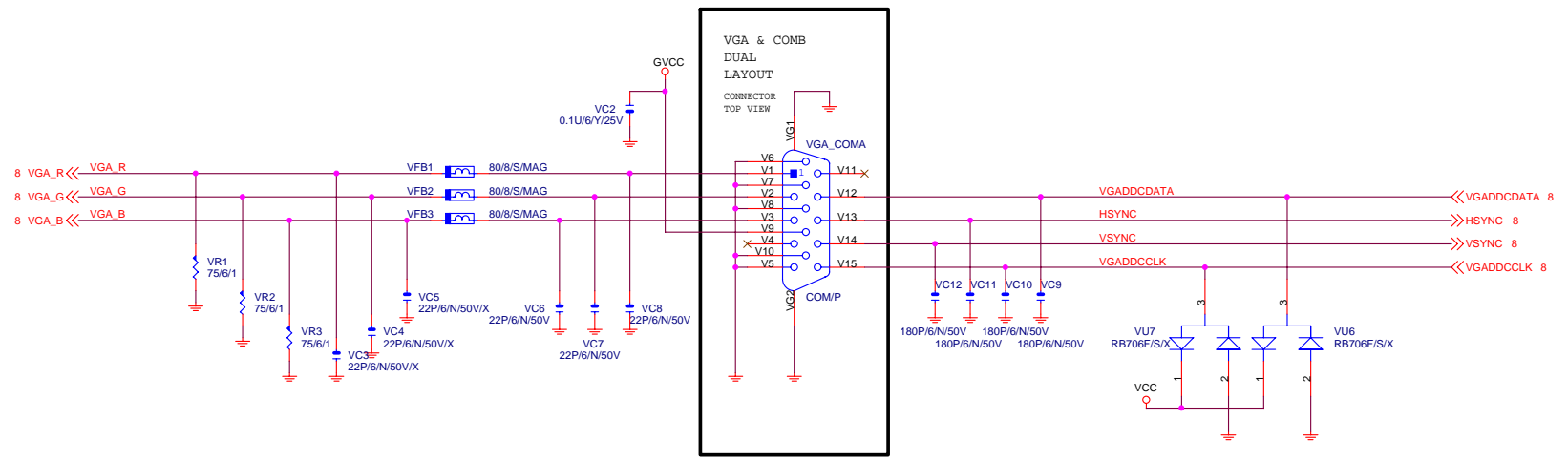
AUX_IN



INTEL FRONT AUDIO

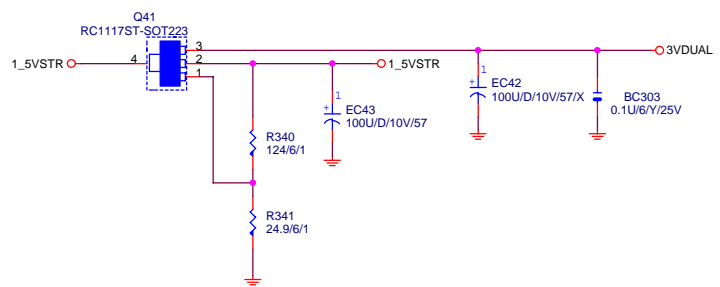
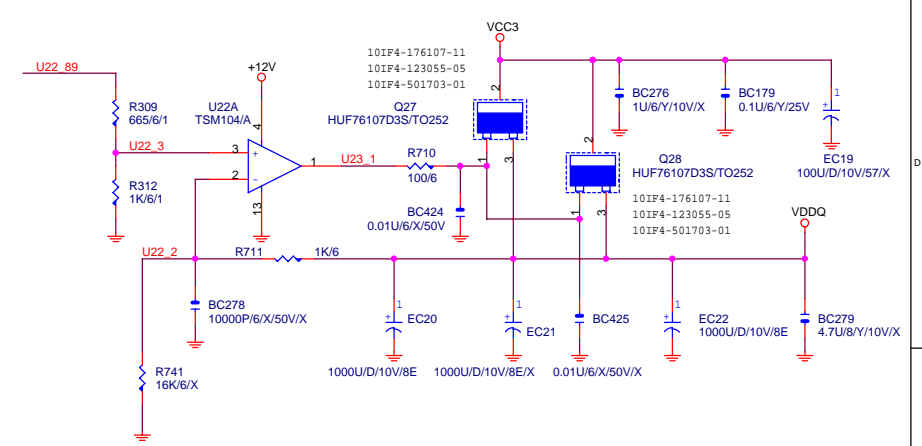
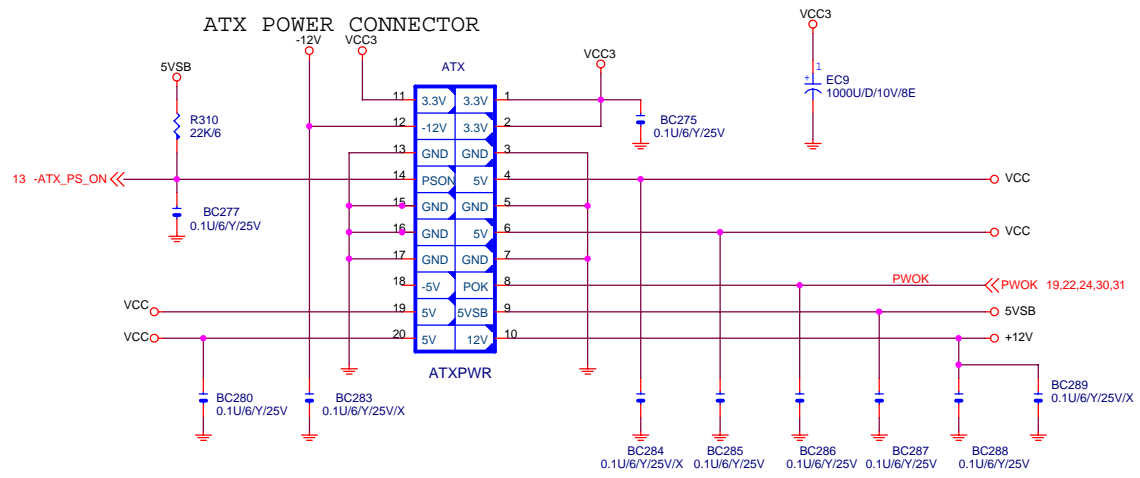


GIGABYTE CORP.			
Title PHONE JACK, GAME PORT			
Size	Document Number	Rev	
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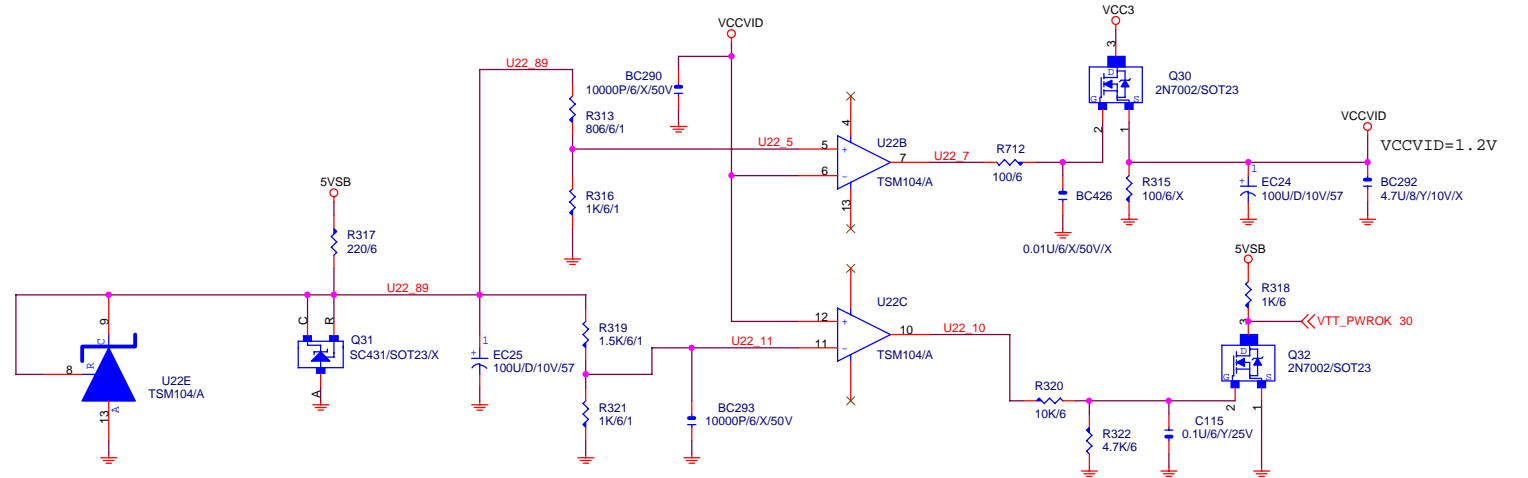
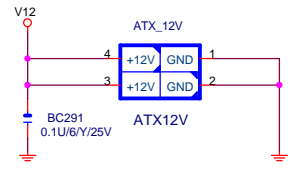
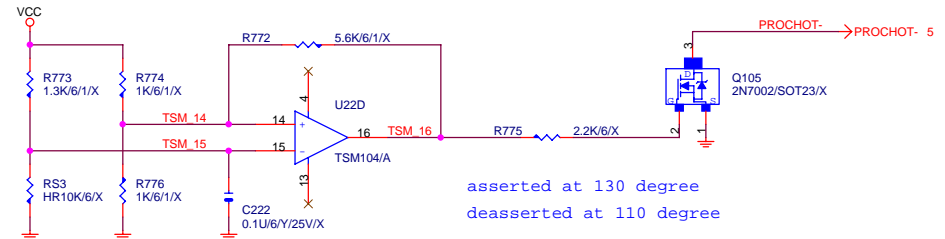


Title			VGA CONNECTOR		
Size	Document Number				Rev
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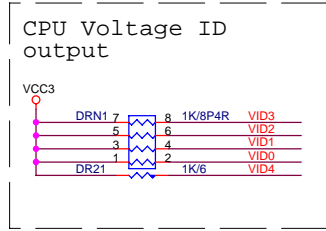
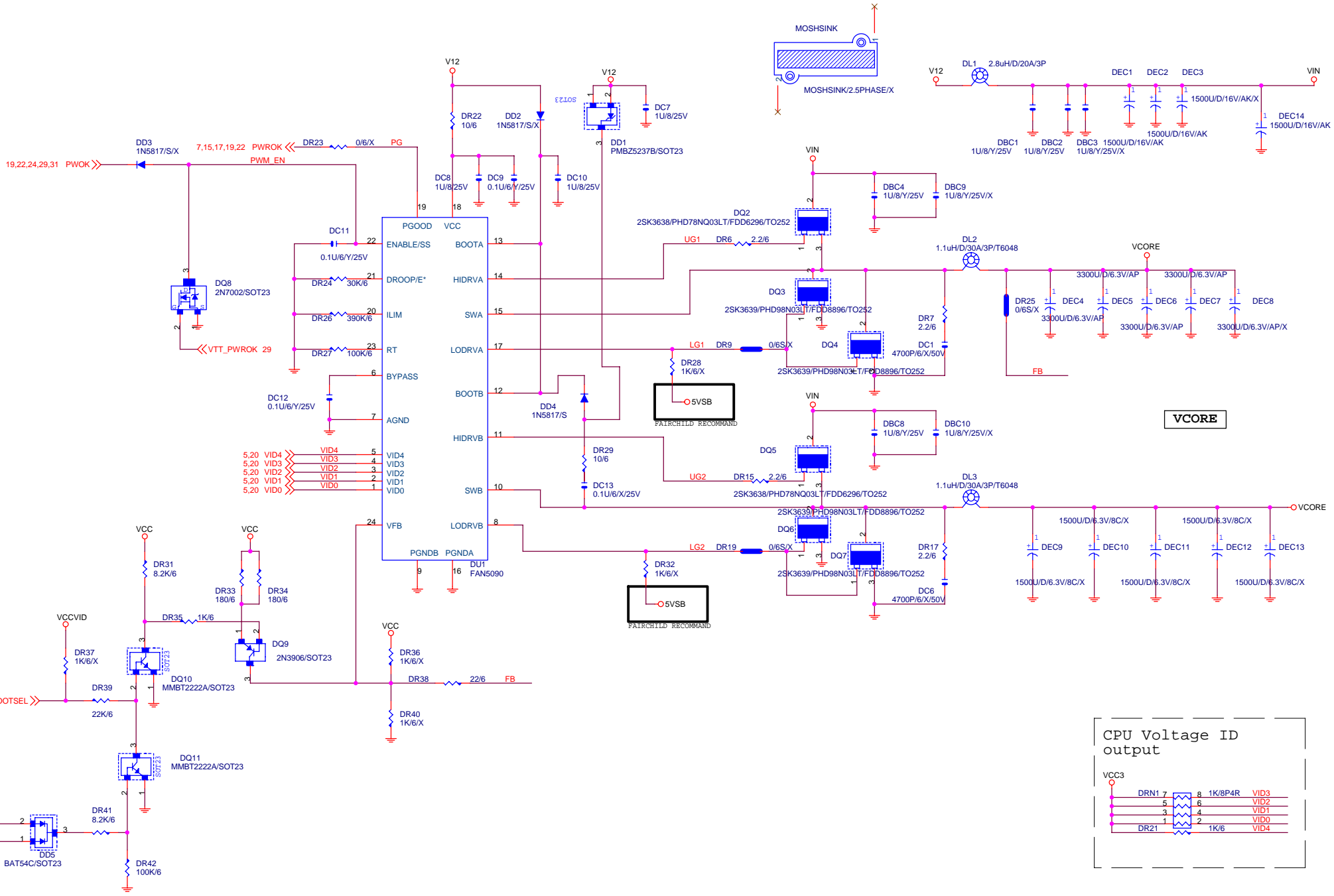
ATX POWER CONNECTOR



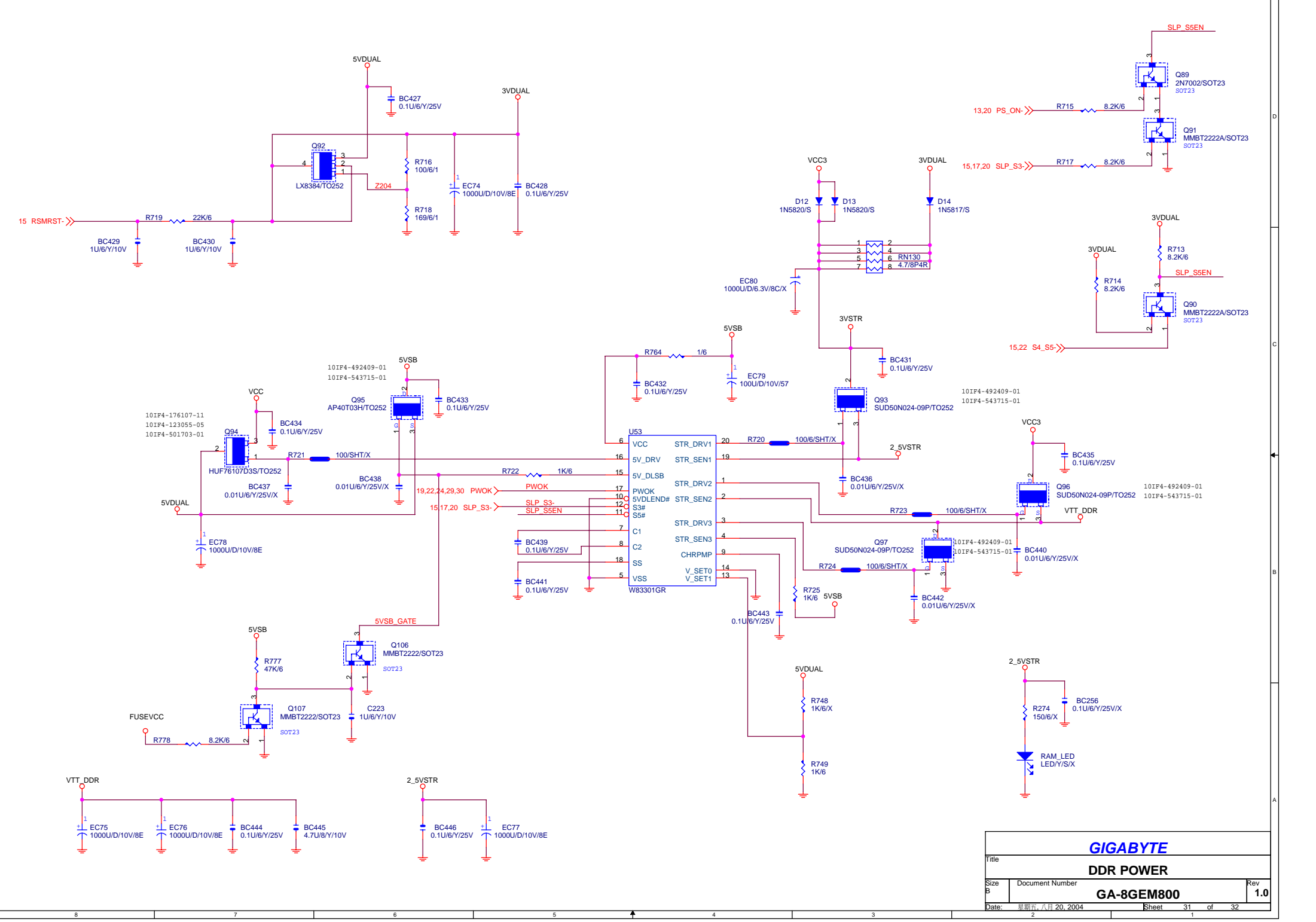
RS3 CLOSE CPU VR MOSFET



GIGABYTE			
Title			
Misc. PWR & ATX CONN.			
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Vcore PWM HIP6301/6302CB			
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DDR POWER		
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