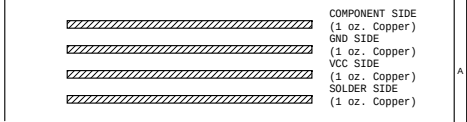
Model Name: GA-8VM800M-775

Revision :1.0

SHEET	TITLE
1	BOM & PCB MODIFY HISTORY
2	COVER SHEET
3	BLOCK DIAGRAM
4,5,6,7	INTEL P4_LGA775 CPU
8,9,10,11	P4M800 (NORTH BRIDGE)
12	CLOCK GENERATOR (RTM 862520)
13,14,15	VT8237R/CD (SOUTH BIRDGE)
16,17	DDR SDRAM DIMMS 1,2 DDR TERMINATION
18	AGP SLOT
19	PCI SLOT 1,2,3
20	BIOS , VGA Connect
21	IDE,USB
22	LPC I/O_W83627EHF
23	COM,PRT,FDD,KB/MS,IR
24	AC 97 CODEC
25	AUDIO JACK,GAME PORT
26	PANEL,STR LED,FANS
27	LAN 8100C & USB CONNECTOR
28	DDR POWER
29	ATX CONN,3VDUAL,VDDQ DC POWER
30	VCORE PHASE PWM FAIRCHILD ISL6556B



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Title		
COVER SHEET		
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 1 of 30	

Model Name: GA-8VM800M-775

Version:1.0

Component value change history

2005/06/29

Date	Change Item	Reason
2005/05/30	New Schematic	Modify from 9M8VPMT-CH1-10D
	NEW BOM 0.1 RELEASE	
2005/07/11	BOM 1.0A RELEASE	
2005/08/10	BOM 1.0B RELEASE	Add PWR_LED ,Package
2005/08/15	BOM 1.0C RELEASE	Improve Loadline

Circuit or PCB layout change for next version

Date	Change Item	Reason
2005/05/30	0.1 GERBER OUT.	
2005/07/06	1.0 GERBER OUT.	

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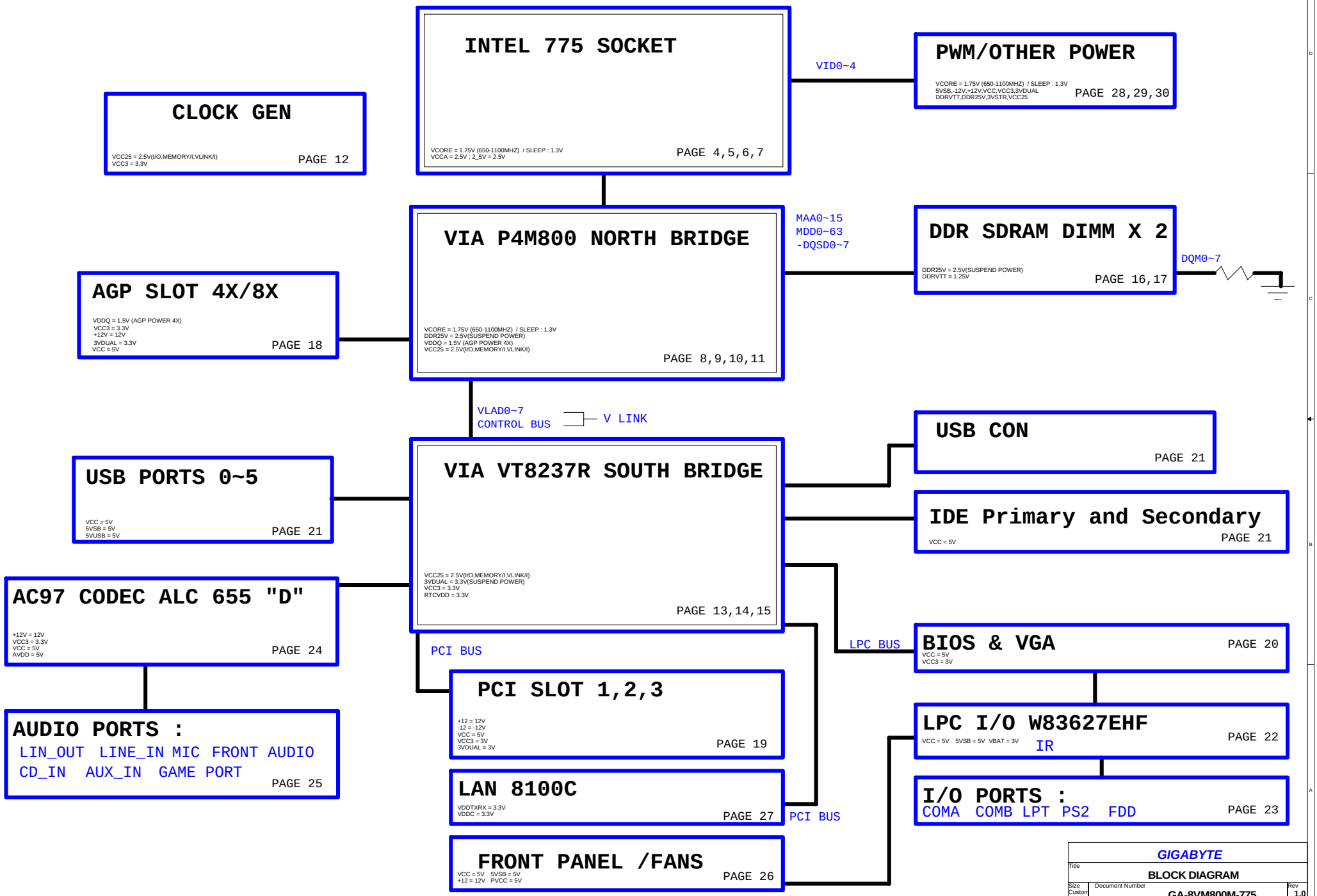
Title: BOM & PCB MODIFY HISTORY

Size: Custom | Document Number: GA-8VM800M-775 | Rev: 1.0

Date: Tuesday, August 16, 2005 | Sheet 2 of 30

GA-8VM800M-775 BLOCK DIAGRAM



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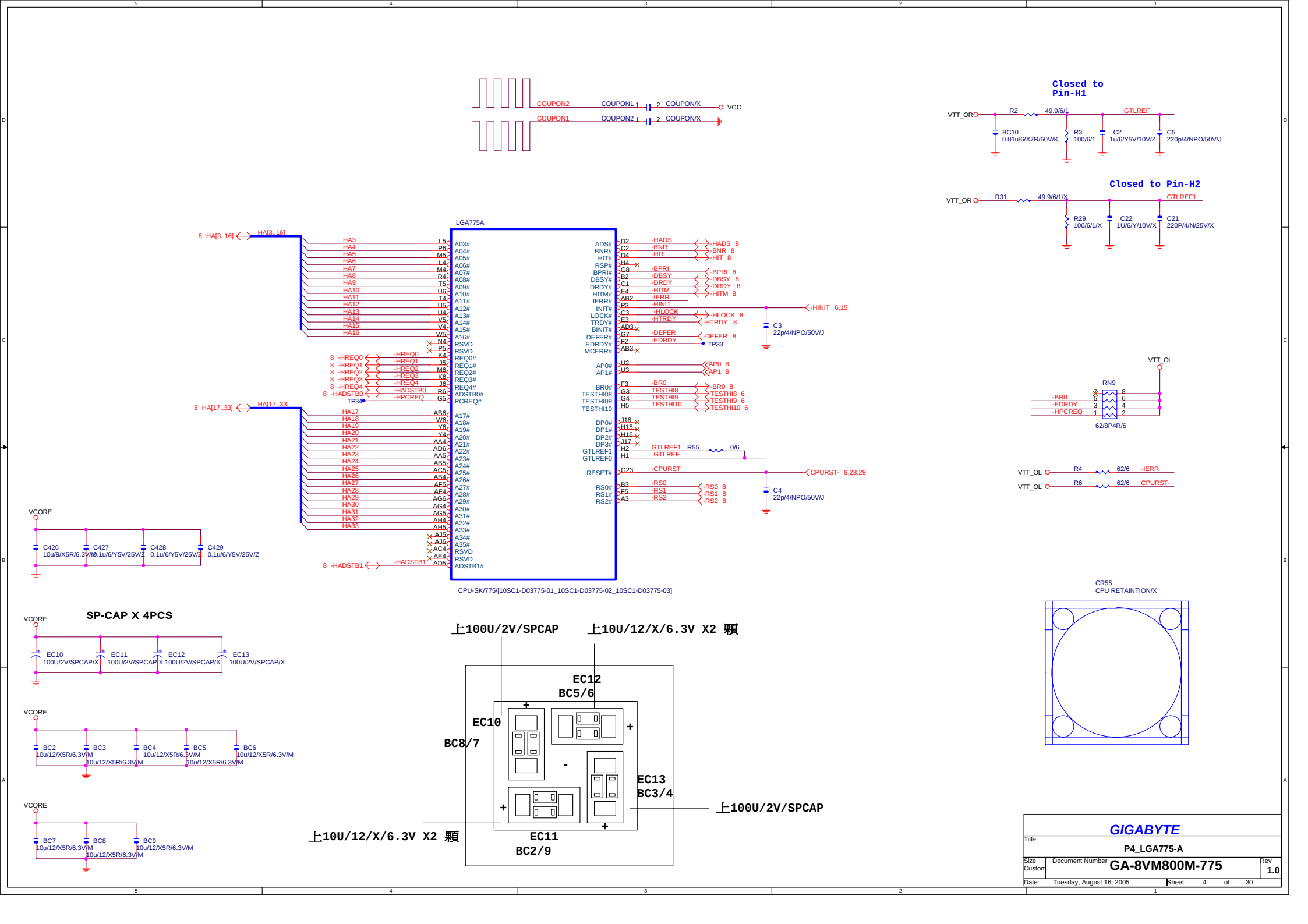
Title	BLOCK DIAGRAM		
Size: Custom	Document Number: GA-8VM800M-775		Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 3 of 30		



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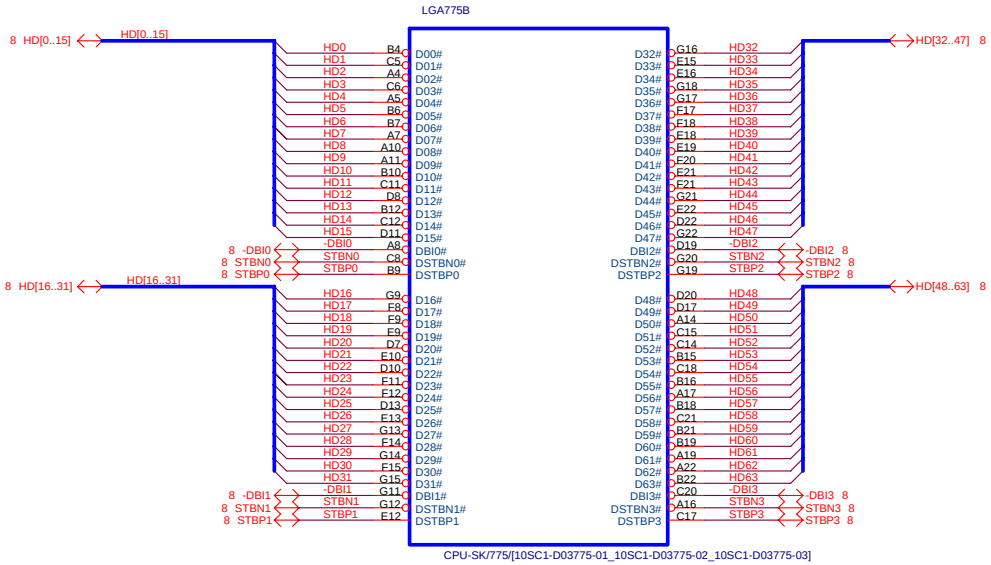
Title	P4_LGA775-A	
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 4 of 30	



Title	P4_LGA775-B
Size	Custom
Document Number	GA-8VM800M-775
Rev	1.0
Date:	Tuesday, August 16, 2005
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Note:

VCCA & VCOREPLL define doesn't same as old P4 design kit

Trace width doesn't less than 12 Mil

As close as possible to CPU socket

Place outside of CPU socket

Locate at ICH6 Side

CPU

NA	FSB	FSA	
FSBSEL3	FSBSEL1	FSBSEL0	Clock
1	0	1	100MHz
0	0	1	133MHz
0	1	1	166MHz
0	1	0	200MHz
0	0	0	266MHz

X

RS2 CLOSE CPU VR MOSFET

PROCESSOR HOT

PRESCOTT

asserted at 130 degree (RS2=720 ohm)

deasserted at 115 degree (RS2=1270 ohm)

Plase at PH4 copper

LGA775C

CPU-SK/775/[10SC1-D03775-01_10SC1-D03775-02_10SC1-D03775-03]

LGA775D

CPU-SK/775/[10SC1-D03775-01_10SC1-D03775-02_10SC1-D03775-03]

Title	P4_LGA775-C
Size: Custom	Document Number: GA-8VM800M-775
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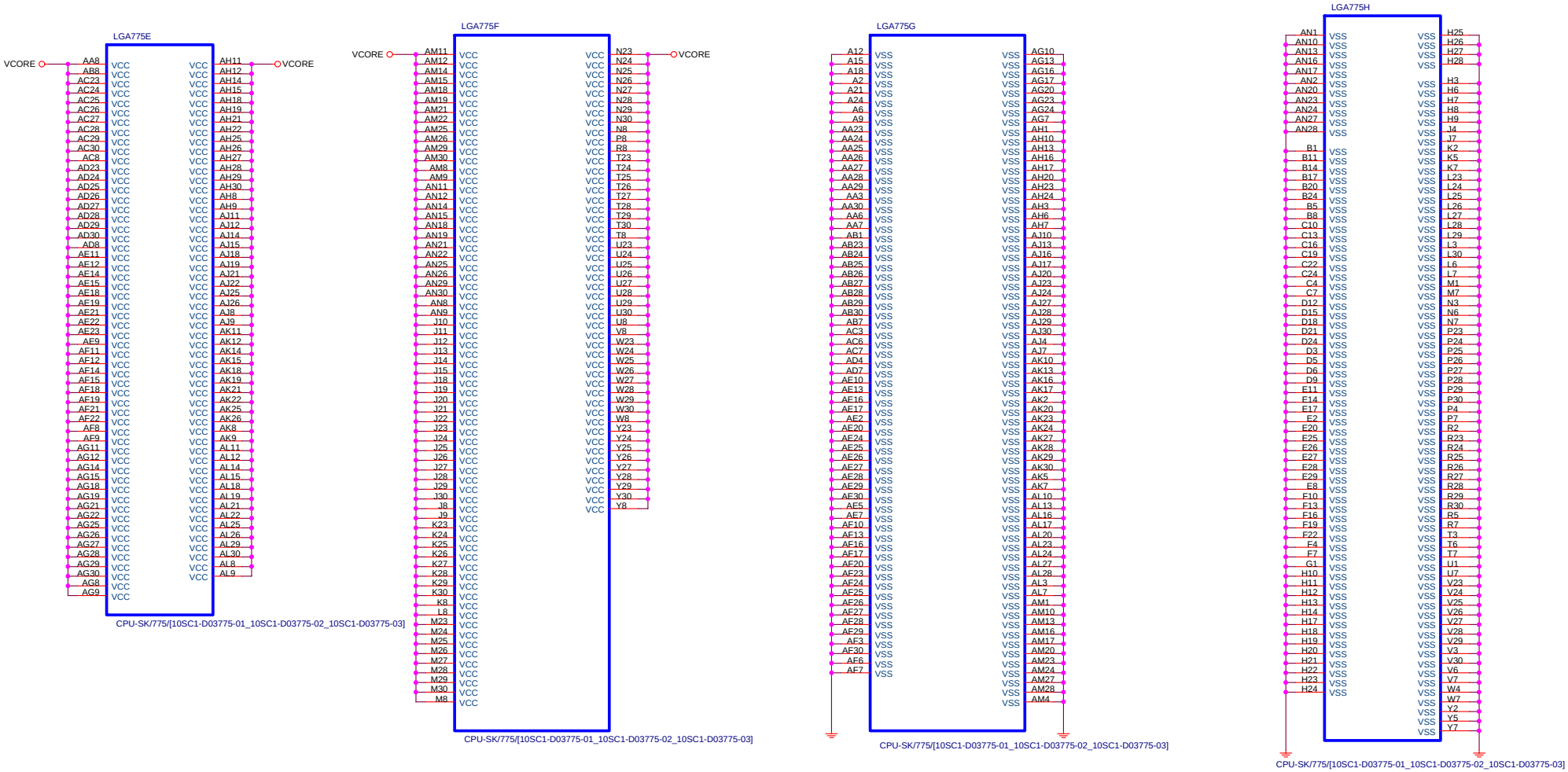

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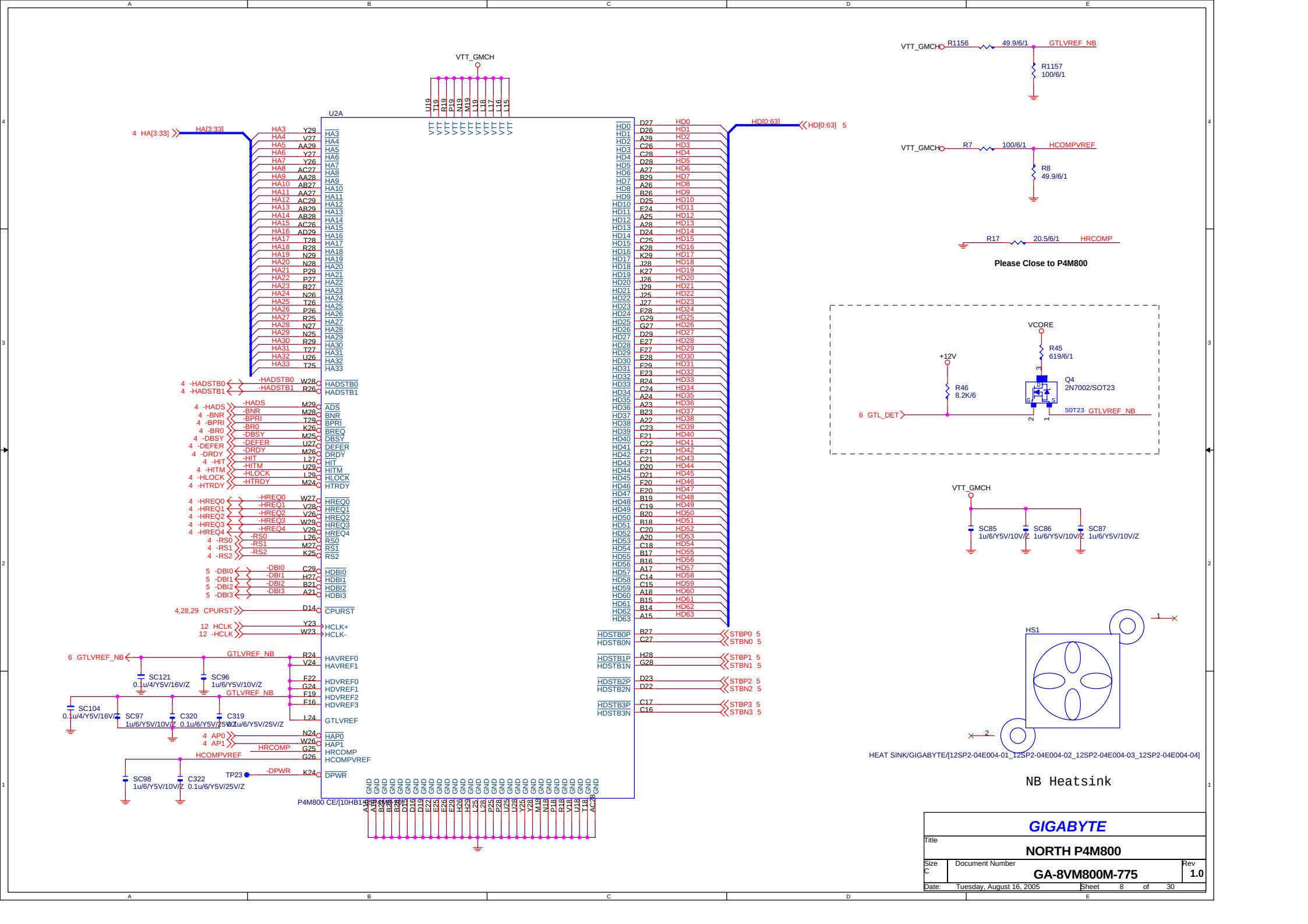
Title	P4_LGA775-D	
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 7 of 30	



GIGABYTE		
Title	NORTH P4M800	
Size C	Document Number GA-8VM800M-775	Rev 1.0
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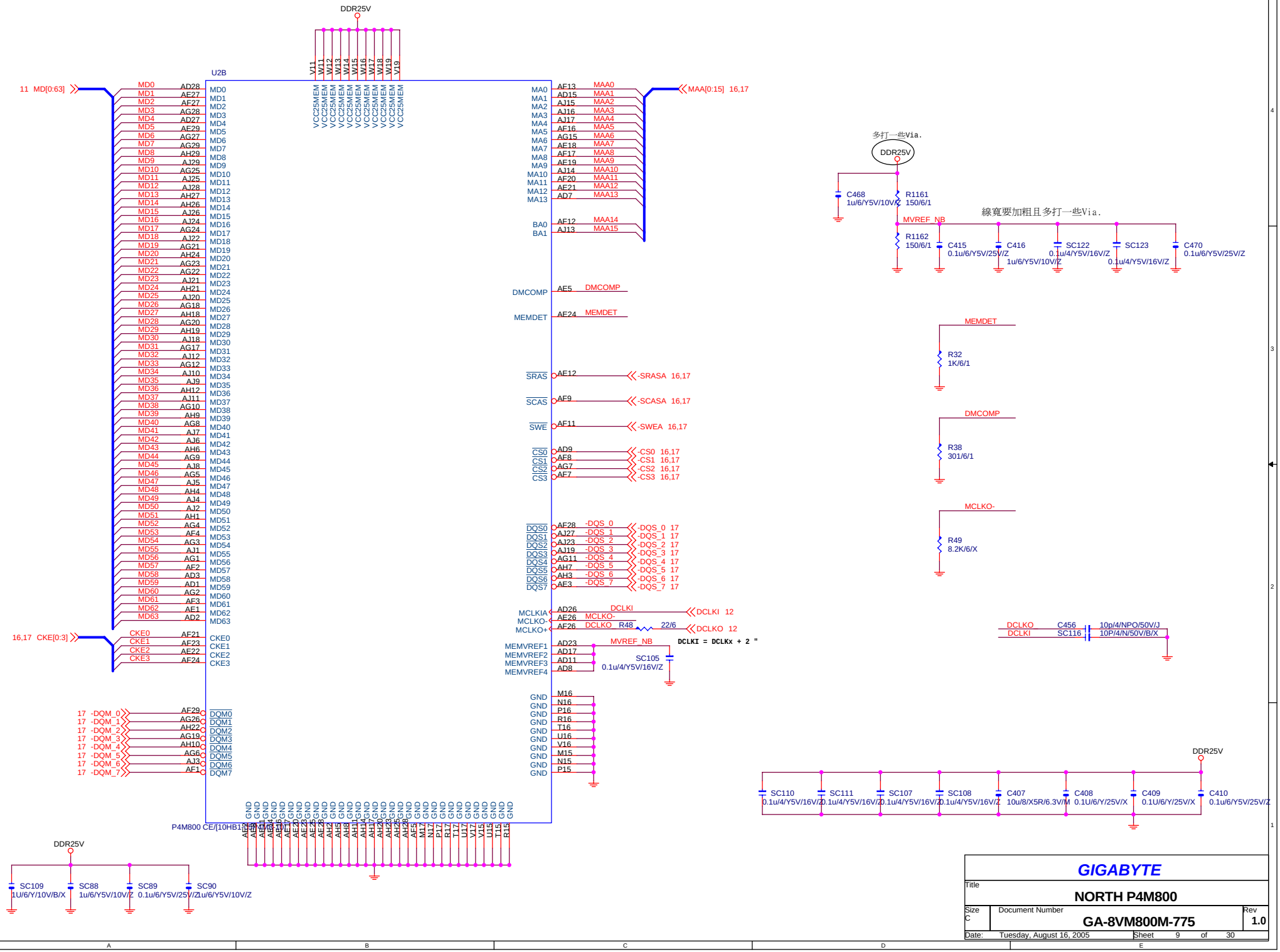
DDR25V
U2B
11 MD[0:63]
MD0 AD28
MD1 AE27
MD2 AF27
MD3 AG28
MD4 AD27
MD5 AE29
MD6 AG27
MD7 AG29
MD8 AH29
MD9 AJ29
MD10 AG25
MD11 AJ25
MD12 AJ28
MD13 AH27
MD14 AH26
MD15 AJ26
MD16 AJ24
MD17 AG24
MD18 AJ22
MD19 AG21
MD20 AH24
MD21 AG23
MD22 AG22
MD23 AJ21
MD24 AH21
MD25 AJ20
MD26 AG18
MD27 AH18
MD28 AG20
MD29 AH19
MD30 AJ18
MD31 AG17
MD32 AJ12
MD33 AG12
MD34 AJ10
MD35 AJ9
MD36 AH12
MD37 AJ11
MD38 AG10
MD39 AH9
MD40 AG8
MD41 AJ7
MD42 AJ6
MD43 AH6
MD44 AG9
MD45 AJ8
MD46 AG5
MD47 AJ5
MD48 AH4
MD49 AJ4
MD50 AJ2
MD51 AH1
MD52 AG4
MD53 AF4
MD54 AG3
MD55 AJ1
MD56 AG1
MD57 AF2
MD58 AD3
MD59 AD1
MD60 AG2
MD61 AF3
MD62 AE1
MD63 AD2
16,17 CKE[0:3]
CKE0 AF21
CKE1 AF23
CKE2 AE22
CKE3 AF24
17 -DQM_0 AF29
17 -DQM_1 AG26
17 -DQM_2 AH22
17 -DQM_3 AG19
17 -DQM_4 AH10
17 -DQM_5 AG6
17 -DQM_6 AJ3
17 -DQM_7 AF1
VCC25MEM V11
VCC25MEM W11
VCC25MEM W12
VCC25MEM W13
VCC25MEM W14
VCC25MEM W15
VCC25MEM W16
VCC25MEM W17
VCC25MEM W18
VCC25MEM W19
VCC25MEM V19
MA0 AE13 MAA0
MA1 AD15 MAA1
MA2 AJ15 MAA2
MA3 AJ16 MAA3
MA4 AJ17 MAA4
MA5 AF16 MAA5
MA6 AG15 MAA6
MA7 AE18 MAA7
MA8 AF17 MAA8
MA9 AF19 MAA9
MA10 AJ14 MAA10
MA11 AF20 MAA11
MA12 AE21 MAA12
MA13 AD7 MAA13
BA0 AF12 MAA14
BA1 AJ13 MAA15
MAA[0:15] 16,17
DMCOMP AE5 DMCOMP
MEMDET AE24 MEMDET
SRAS AE12 -SRASA 16,17
SCAS AF9 -SCASA 16,17
SWE AF11 -SWEA 16,17
CS0 AD9 -CS0 16,17
CS1 AF8 -CS1 16,17
CS2 AG7 -CS2 16,17
CS3 AF7 -CS3 16,17
DQS0 AF28 -DQS_0 -DQS_0 17
DQS1 AJ27 -DQS_1 -DQS_1 17
DQS2 AJ23 -DQS_2 -DQS_2 17
DQS3 AJ19 -DQS_3 -DQS_3 17
DQS4 AG11 -DQS_4 -DQS_4 17
DQS5 AH7 -DQS_5 -DQS_5 17
DQS6 AH3 -DQS_6 -DQS_6 17
DQS7 AF3 -DQS_7 -DQS_7 17
MCLKIA AD26 DCLKI DCLKI 12
MCLKO- AE26 MCLKO-
MCLKO+ AF26 DCLKO R48 22/6 DCLKO 12
DCLKI = DCLKx + 2 "
MEMVREF1 AD23 MVREF_NB
MEMVREF2 AD17
MEMVREF3 AD11
MEMVREF4 AD8
SC105 0.1u/4/Y5V/16V/Z
GND M16
GND N16
GND P16
GND R16
GND T16
GND U16
GND V16
GND M15
GND N15
GND P15
P4M800 CE/[10HB1]
多打一些Via.
DDR25V
C468 1u/6/Y5V/10V/Z
R1161 150/6/1
線寬要加粗且多打一些Via.
MVREF_NB
R1162 150/6/1
C415 0.1u/6/Y5V/25V/Z
C416 1u/6/Y5V/10V/Z
SC122 0.1u/4/Y5V/16V/Z
SC123 0.1u/4/Y5V/16V/Z
C470 0.1u/6/Y5V/25V/Z
MEMDET
R32 1K/6/1
DMCOMP
R38 301/6/1
MCLKO-
R49 8.2K/6/X
DCLKO C456 10p/4/NPO/50V/J
DCLKI SC116 10P/4/N/50V/B/X
DDR25V
SC110 0.1u/4/Y5V/16V/Z
SC111 0.1u/4/Y5V/16V/Z
SC107 0.1u/4/Y5V/16V/Z
SC108 0.1u/4/Y5V/16V/Z
C407 10u/8/X5R/6.3V/M
C408 0.1U/6/Y/25V/X
C409 0.1U/6/Y/25V/X
C410 0.1u/6/Y5V/25V/Z
DDR25V
SC109 1U/6/Y/10V/B/X
SC88 1u/6/Y5V/10V/Z
SC89 0.1u/6/Y5V/25V/Z
SC90 1u/6/Y5V/10V/Z
GIGABYTE
Title
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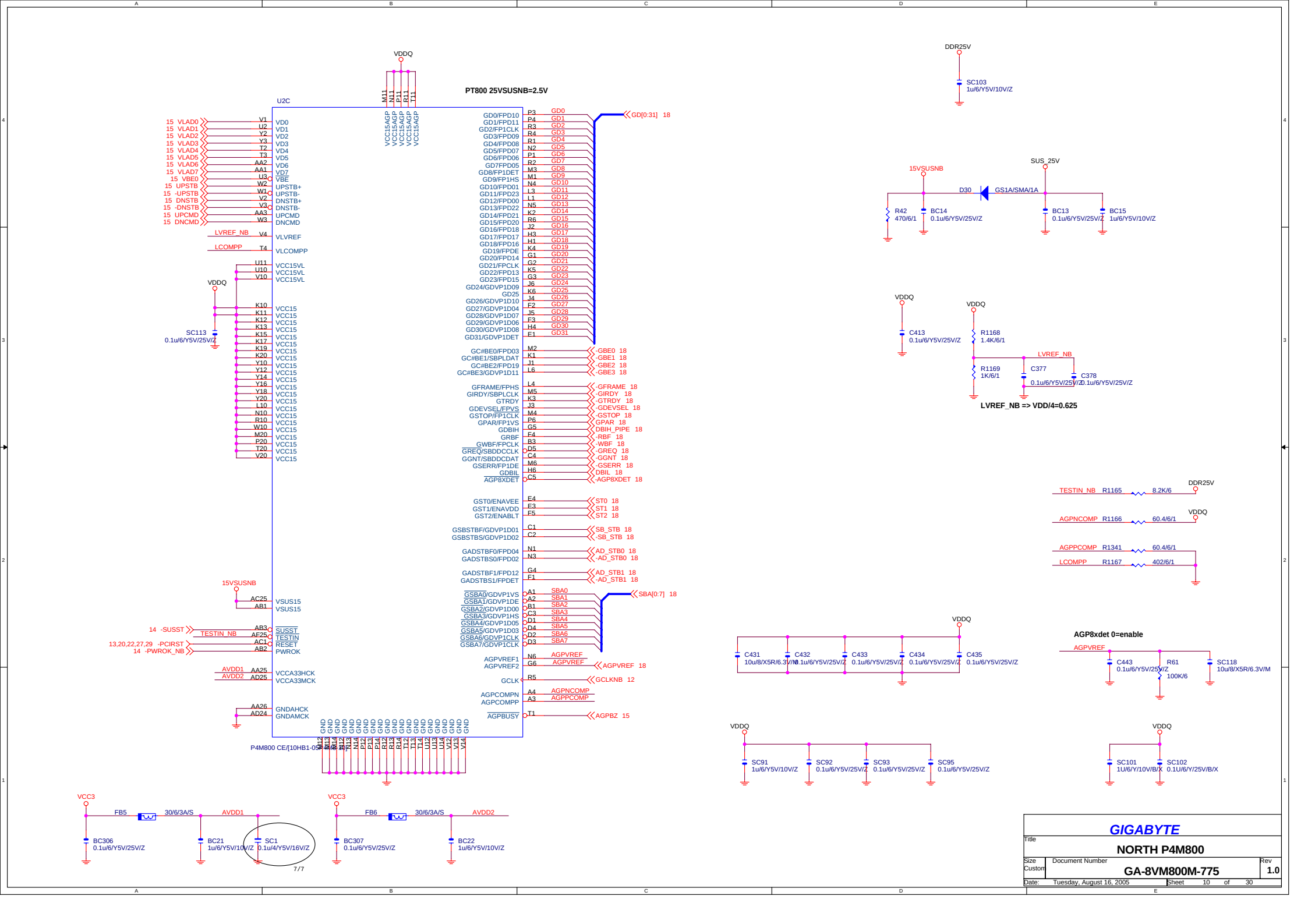
PT800 25VSUSNB=2.5V
U2C
VDDQ
M11
N11
P11
R11
T11
VCC15AGP
15 VLAD0
15 VLAD1
15 VLAD2
15 VLAD3
15 VLAD4
15 VLAD5
15 VLAD6
15 VLAD7
15 VBE0
15 UPSTB
15 -UPSTB
15 DNSTB
15 -DNSTB
15 UPCMD
15 DNCMD
LVREF_NB
LCOMPP
VLVREF
VLCOMPP
VCC15VL
VCC15
SC113
0.1u/6/Y5V/25V/Z
15VSUSNB
AC25
AB1
VSUS15
14 -SUSST
TESTIN_NB
13,20,22,27,29 -PCIRST
14 -PWROK_NB
SUSST
TESTIN
RESET
PWROK
AVDD1
AVDD2
VCCA33HCK
VCCA33MCK
GNDAHCK
GNDAMCK
GND
P4M800 CE/[10HB1-05]
GD0/FPD10
GD1/FPD11
GD2/FP1CLK
GD3/FPD09
GD4/FPD08
GD5/FPD07
GD6/FPD06
GD7FPD05
GD8/FP1DET
GD9/FP1HS
GD10/FPD01
GD11/FPD23
GD12/FPD00
GD13/FPD22
GD14/FPD21
GD15/FPD20
GD16/FPD18
GD17/FPD17
GD18/FPD16
GD19/FPDE
GD20/FPD14
GD21/FPCLK
GD22/FPD13
GD23/FPD15
GD24/GDVP1D09
GD25
GD26/GDVP1D10
GD27/GDVP1D04
GD28/GDVP1D07
GD29/GDVP1D06
GD30/GDVP1D08
GD31/GDVP1DET
GD[0:31] 18
GC#BE0/FPD03
GC#BE1/SBPLDAT
GC#BE2/FPD19
GC#BE3/GDVP1D11
-GBE0 18
-GBE1 18
-GBE2 18
-GBE3 18
GFRAME/FPHS
GIRDY/SBPLCLK
GTRDY
GDEVSEL/FPVS
GSTOP/FP1CLK
GPAR/FP1VS
GDBIH
GRBF
GWBF/FPCLK
GREQ/SBDDCCLK
GGNT/SBDDCDAT
GSERR/FP1DE
GDBIL
AGP8XDET
-GFRAME 18
-GIRDY 18
-GTRDY 18
-GDEVSEL 18
-GSTOP 18
GPAR 18
DBIH_PIPE 18
-RBF 18
-WBF 18
-GREQ 18
-GGNT 18
-GSERR 18
DBIL 18
-AGP8XDET 18
GST0/ENAVEE
GST1/ENAVDD
GST2/ENABLT
ST0 18
ST1 18
ST2 18
GSBSTBF/GDVP1D01
GSBSTBS/GDVP1D02
SB_STB 18
-SB_STB 18
GADSTBF0/FPD04
GADSTBS0/FPD02
AD_STB0 18
-AD_STB0 18
GADSTBF1/FPD12
GADSTBS1/FPDET
AD_STB1 18
-AD_STB1 18
GSBA0/GDVP1VS
GSBA1/GDVP1DE
GSBA2/GDVP1D00
GSBA3/GDVP1HS
GSBA4/GDVP1D05
GSBA5/GDVP1D03
GSBA6/GDVP1CLK
GSBA7/GDVP1CLK
SBA0
SBA1
SBA2
SBA3
SBA4
SBA5
SBA6
SBA7
SBA[0:7] 18
AGPVREF1
AGPVREF2
AGPVREF
AGPVREF 18
GCLK
GCLKNB 12
AGPCOMPN
AGPCOMPP
AGPNCOMP
AGPPCOMP
AGPBUSY
AGPBZ 15
FB5
30/6/3A/S
BC306
0.1u/6/Y5V/25V/Z
BC21
1u/6/Y5V/10V/Z
SC1
0.1u/4/Y5V/16V/Z
FB6
BC307
BC22
1u/6/Y5V/10V/Z
7/7
DDR25V
SC103
1u/6/Y5V/10V/Z
SUS_25V
D30
GS1A/SMA/1A
R42
470/6/1
BC14
BC13
BC15
C413
R1168
1.4K/6/1
R1169
1K/6/1
C377
C378
LVREF_NB => VDD/4=0.625
TESTIN_NB R1165 8.2K/6
AGPNCOMP R1166 60.4/6/1
AGPPCOMP R1341 60.4/6/1
LCOMPP R1167 402/6/1
C431
10u/8/X5R/6.3V/M
C432
C433
C434
C435
AGP8xdet 0=enable
AGPVREF
C443
R61
100K/6
SC118
10u/8/X5R/6.3V/M
SC91
1u/6/Y5V/10V/Z
SC92
SC93
SC95
SC101
1U/6/Y/10V/B/X
SC102
0.1U/6/Y/25V/B/X
GIGABYTE
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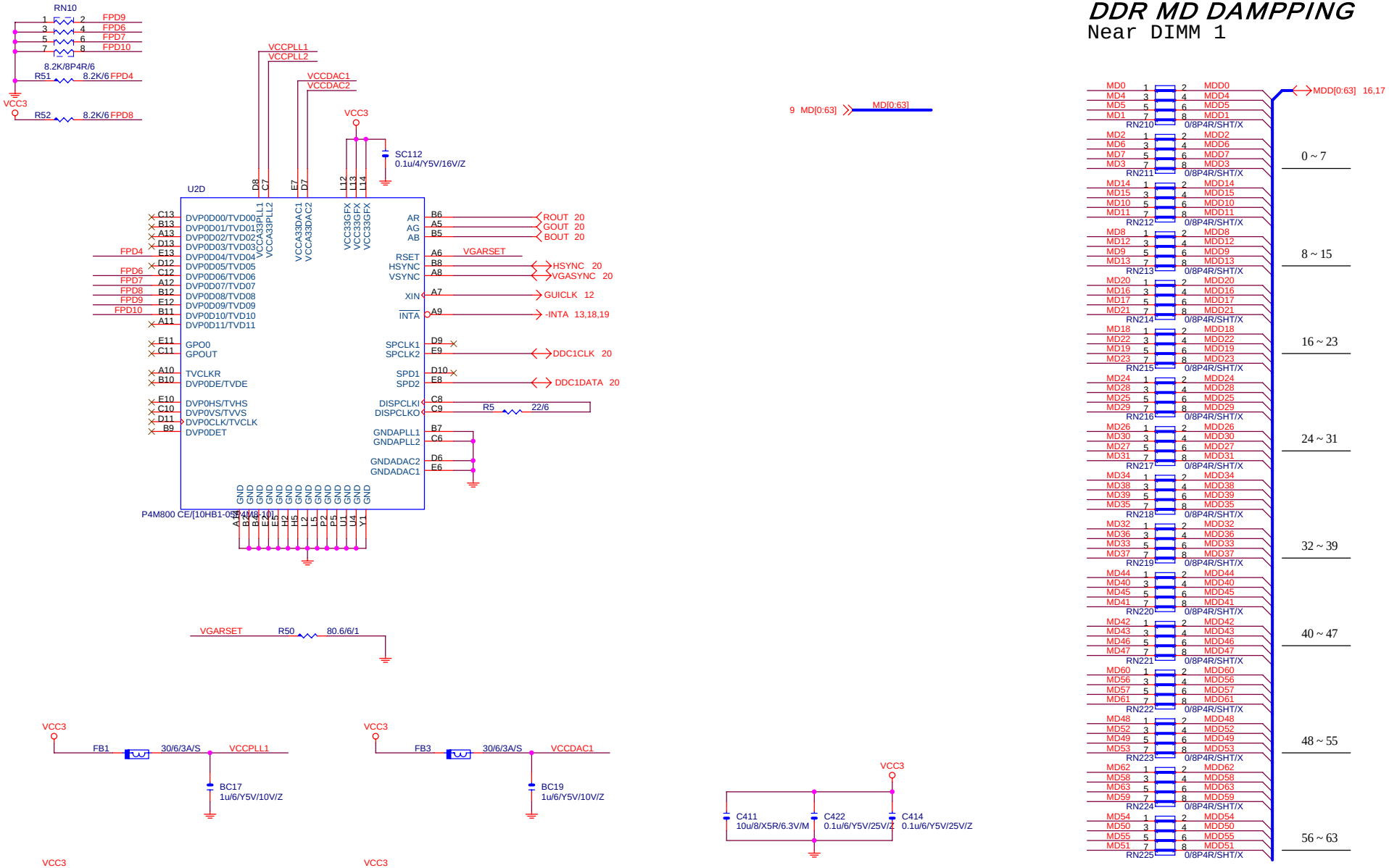
DDR MD DAMPPING

Near DIMM 1



GIGABYTE			
Title	NORTH P4M800		
Size C	Document Number GA-8VM800M-775		Rev 1.0
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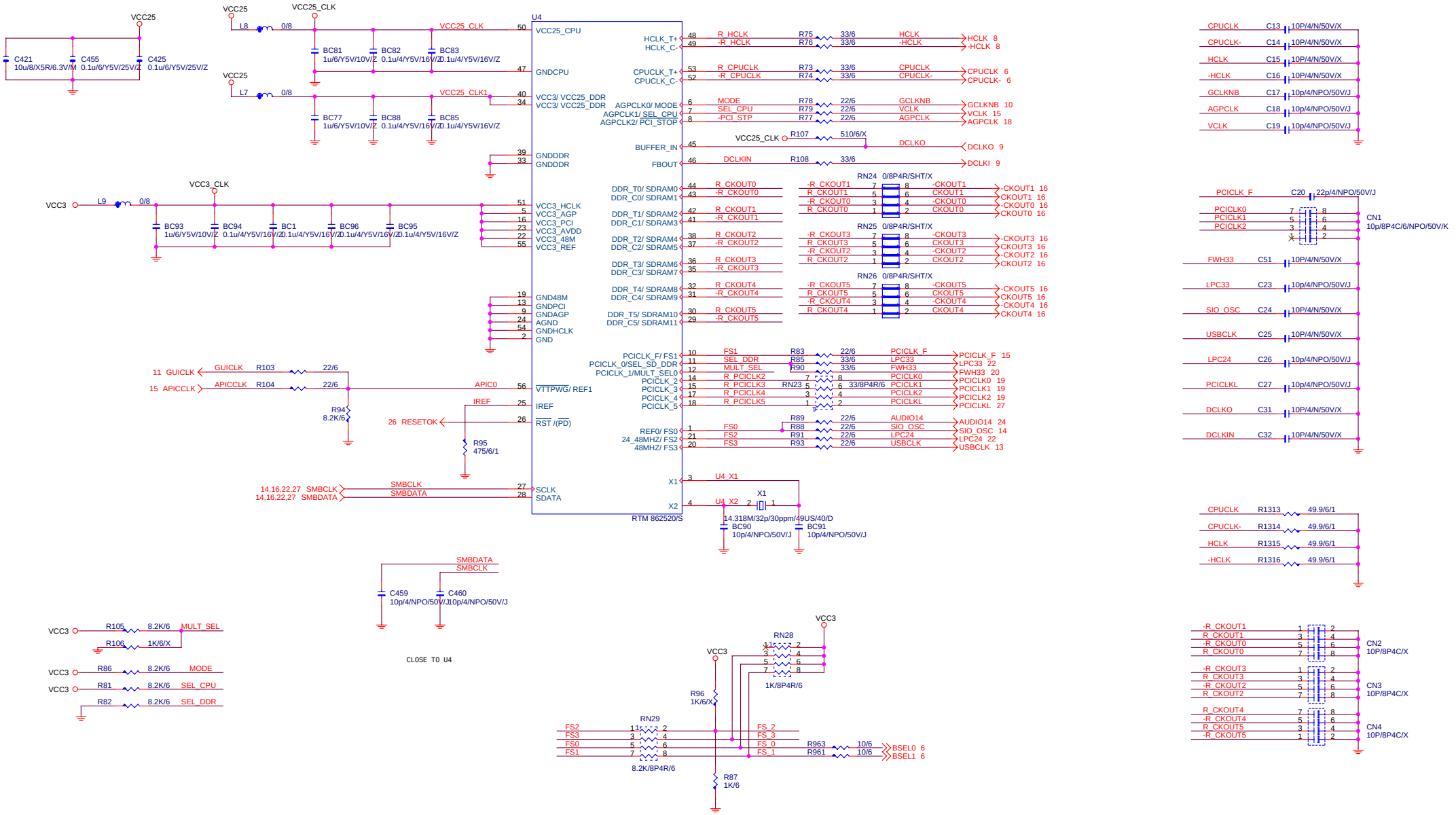
CLOCK GENERATOR



FS3	FS2	FS1	FS0	CPUCLK	AGPCLK	PCICLK
1	0	0	0	266.00	66.67	33.33
1	0	0	1	133.30	66.67	33.33
1	0	1	0	200.00	66.67	33.33
1	0	1	1	166.66	66.67	33.33

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Title	CLOCK GENERATOR	
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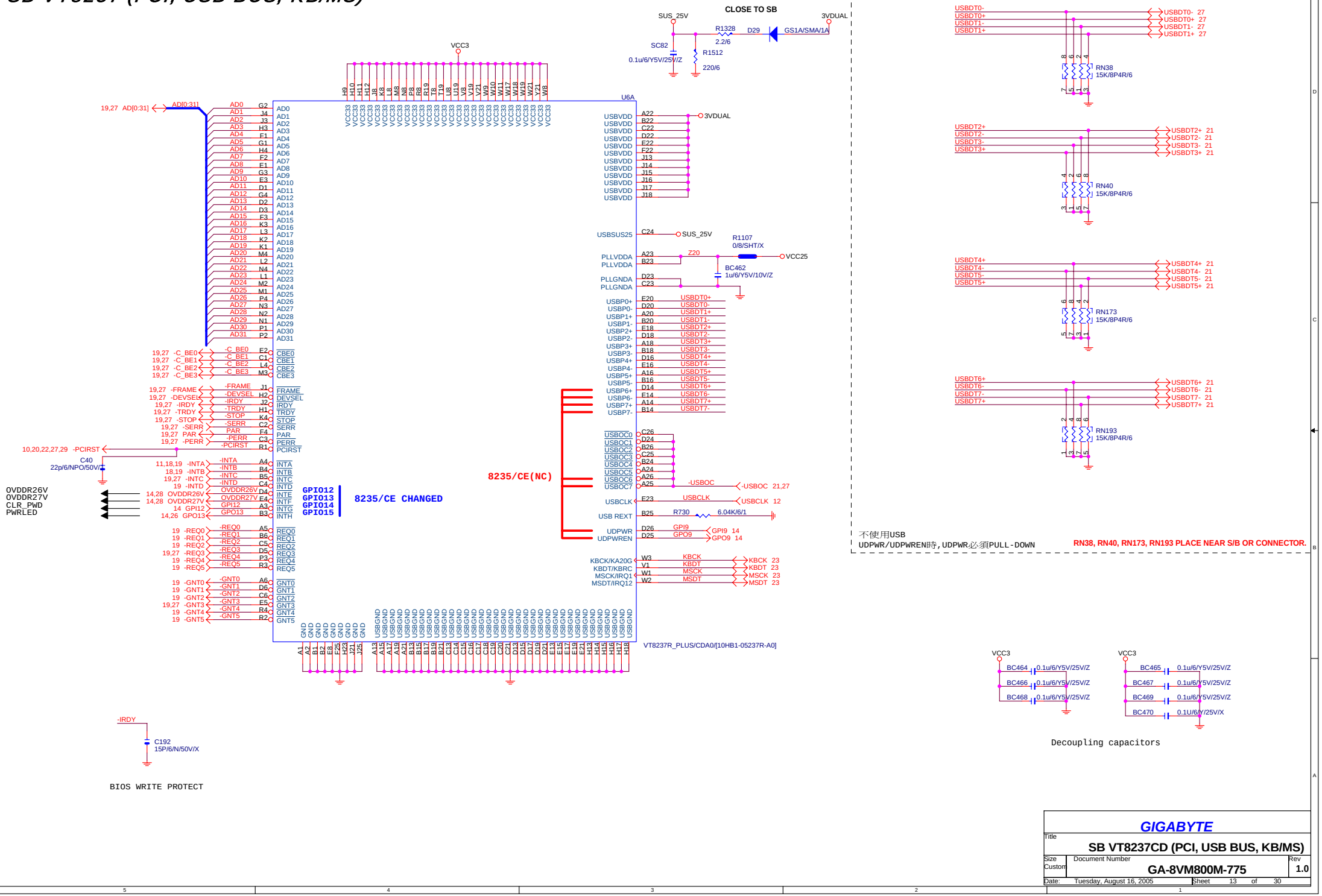
SB VT8237 (PCI, USB BUS, KB/MS)



Title	SB VT8237CD (PCI, USB BUS, KB/MS)
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SB VT8237 (SATA,IDE, AC97, POWER MANAGEMENT, PGIO)

P/SDA1	P/SDA0	GTL Driving Strength
0	0	WEAK
0	1	MIDDLE WEAK
1	0	STRONG
1	1	STRONGEST

GPIOD = GTL Pull
0 --> Enable
1 --> Disable

GPIOB
0-->IOQ=8
1--->IOQ=1

U6B

8235/CE CHANGED
SA17
SA18
SA16
SA19

8235/CE(NC)

PWRLED
AMD TEMP

Width & Space --> 20:5:10:5:20

CLOSE VT8237 CHIPSET

VT8237 INTERNAL IDSEL LIST:
1.AD26:SATA
2.AD27:USB2.0
3.AD28:S.B(USB1.1)
4.AD29:LAN

FOR 8237CD
H: 66/AUTOMODE (GPIOA,C=H) L: 100/133/166/200

PDA0 => GTL Driving Strength

PDA1 => GTL Driving Strength

PDA2 => SB include ROMSIP

SPKR: 0/1 ENABLE/DISABLE CPU FREQ STRAPPING

For 8237CD
-PDCS3: VKCOMP for Vlink at 4x mode
0=>0.75V, 1=>0.9V

SEEDI:1/0:ENABLE/DISABLE 8237CD
SEEDI: AN233 NC IF MII NO POP

GPIO ID SETTING

-PDDACK: 0/1 ENABLE/DISABLE EXTERNAL SATA PHY(FOR 8237CD)

GPO26 H:PHY LAN, LOW:GIGABIT LAN

ASYNC: 0/1 ENABLE/DISABLE LPC FWH COMMAND(FOR 8237CD)

ACSDO: 0/1 ENABLE/DISABLE AUTO REBOOT(FOR 8237CD)

-PCISTP: 0/1 ENABLE/DISABLE 100MHZ VLINK CLK

-PDCS1: 0/1 ENABLE/DISABLE SATA MASTER/SLAVE MODE

Title	SB VT8237CD (SATA,IDE, AC97, POWER , GPIO)
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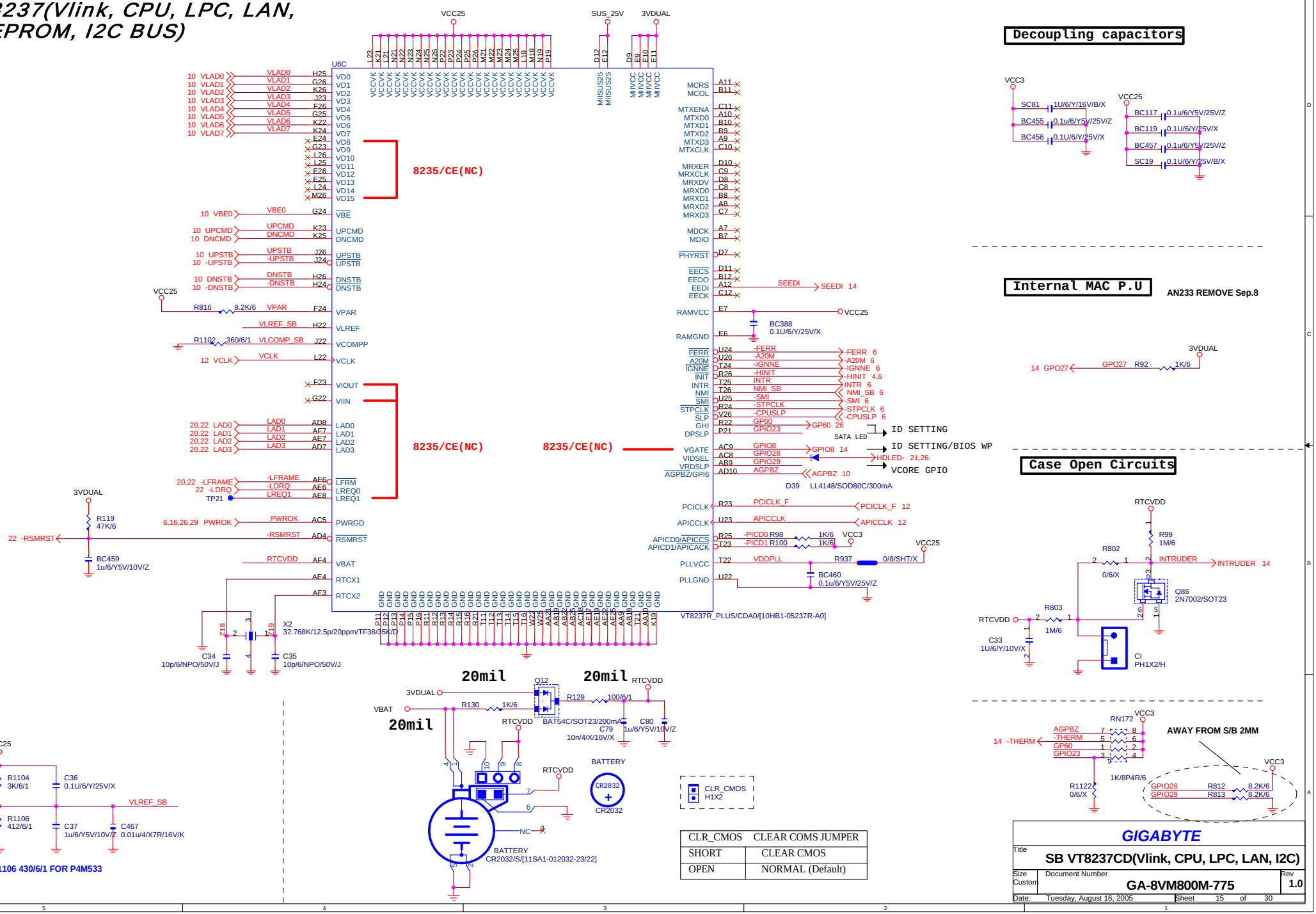
SB VT8237(Vlink, CPU, LPC, LAN, LAN EEPROM, I2C BUS)



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Title	SB VT8237CD(Vlink, CPU, LPC, LAN, I2C)
Size: Custom	Document Number: GA-8VM800M-775
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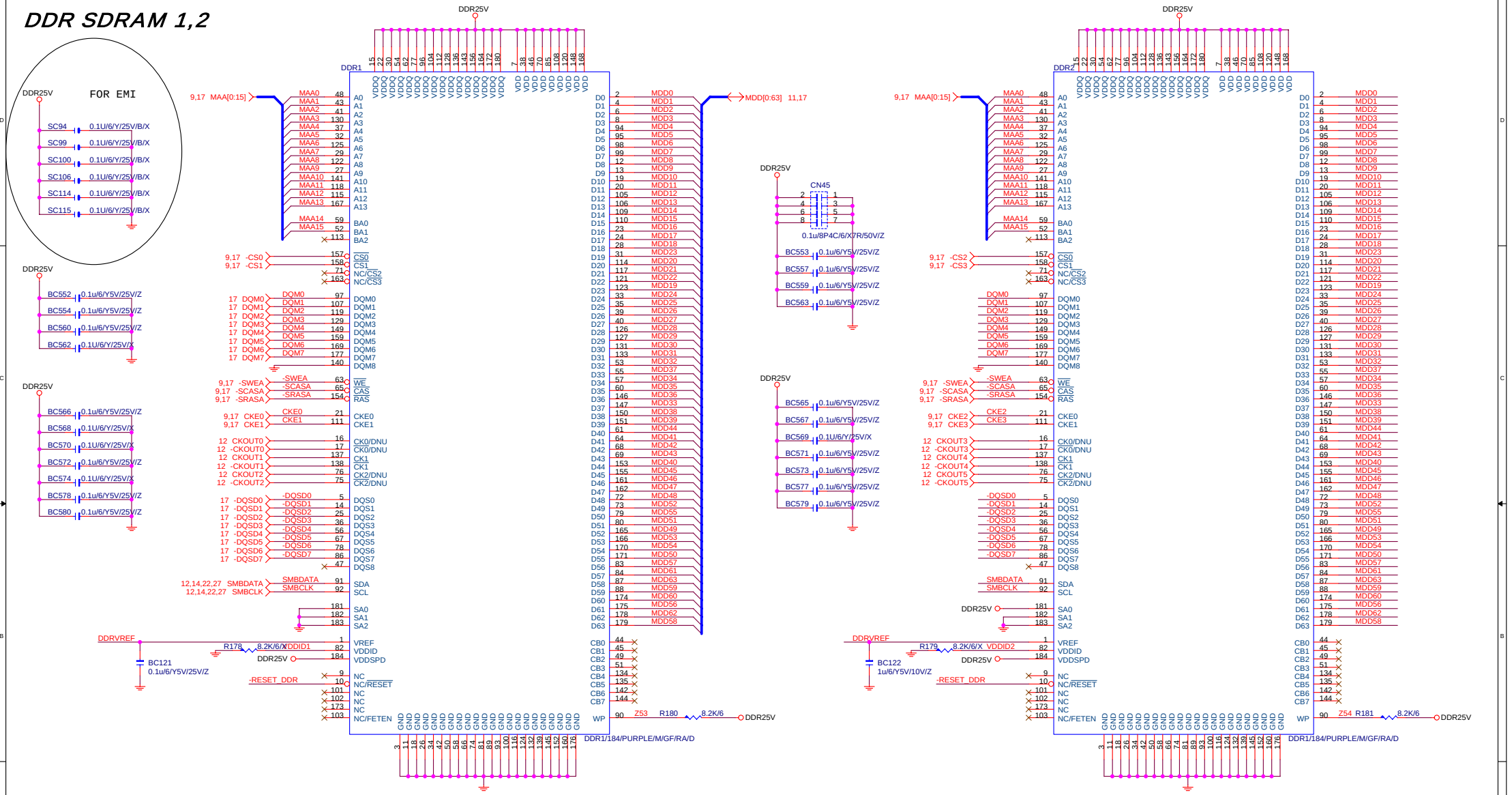
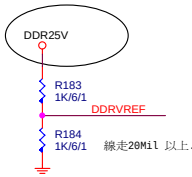
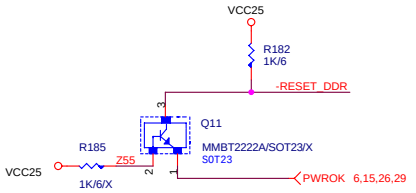
DDR SDRAM 1,2



補銅柏打VIA.



For Register DDR Support



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Title	DDR UNBUFFERED 1,2	
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
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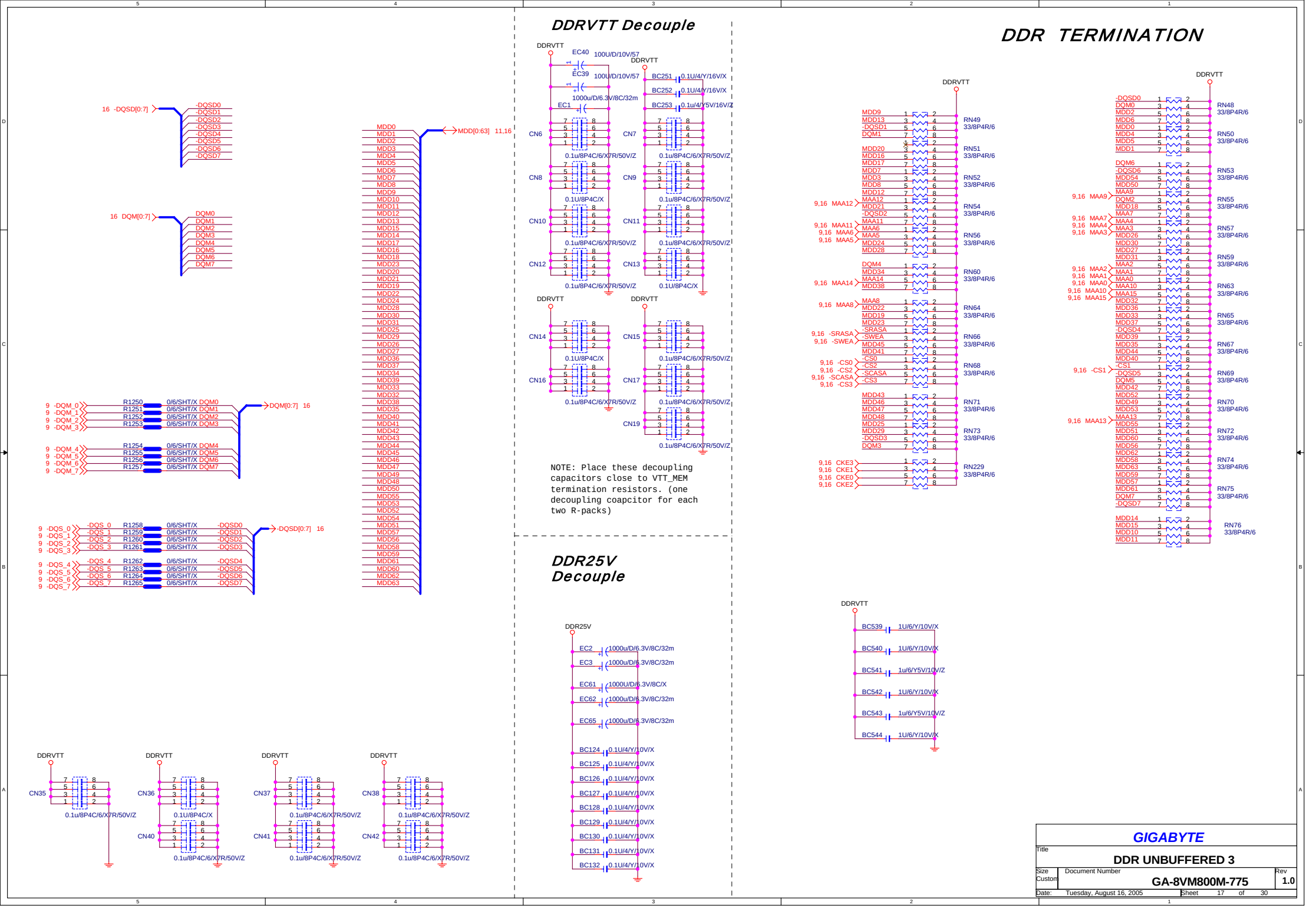
DDRVTT Decouple
DDR TERMINATION
DDR25V Decouple
NOTE: Place these decoupling capacitors close to VTT_MEM termination resistors. (one decoupling coapcitor for each two R-packs)
GIGABYTE
DDR UNBUFFERED 3
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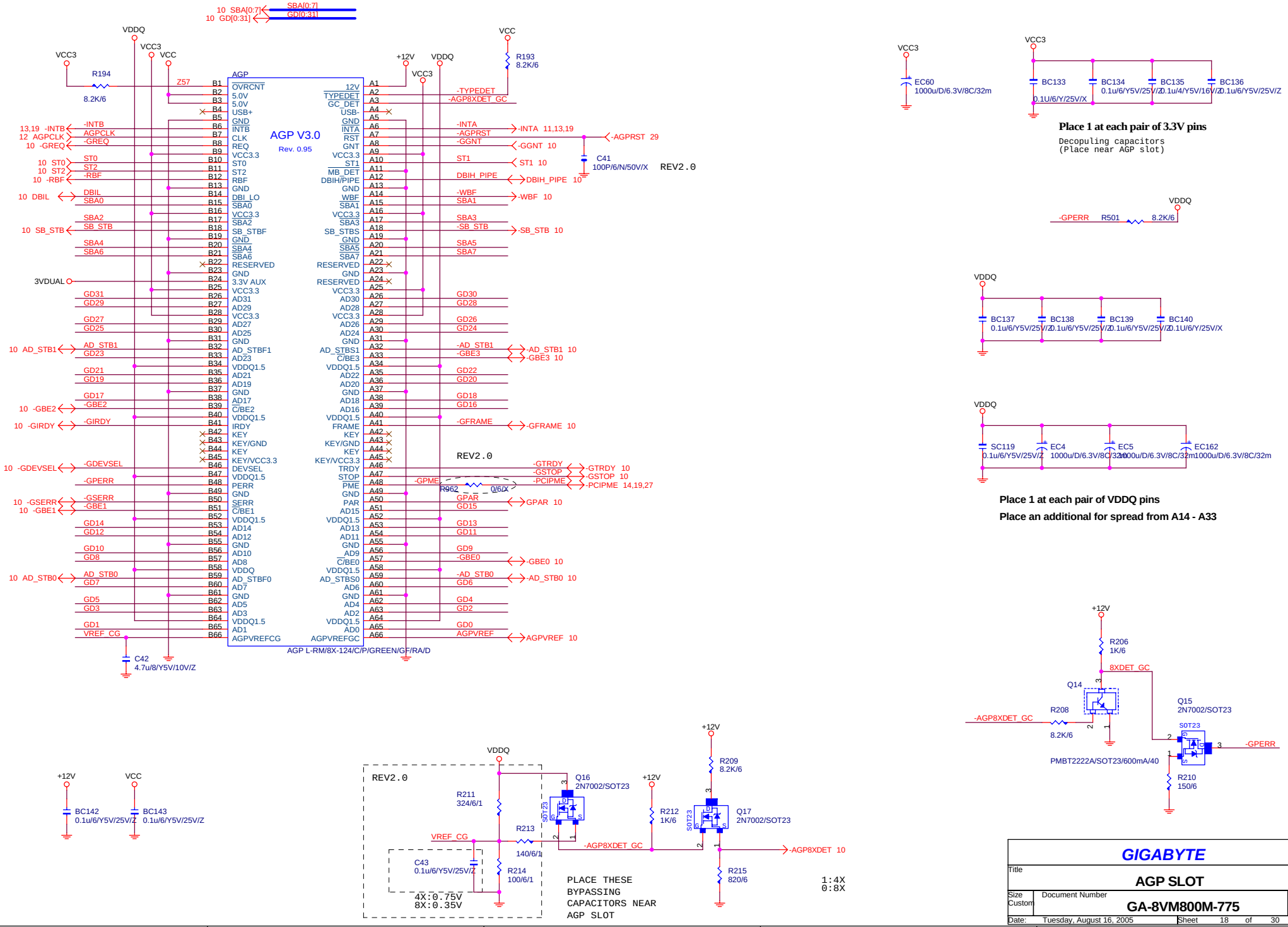
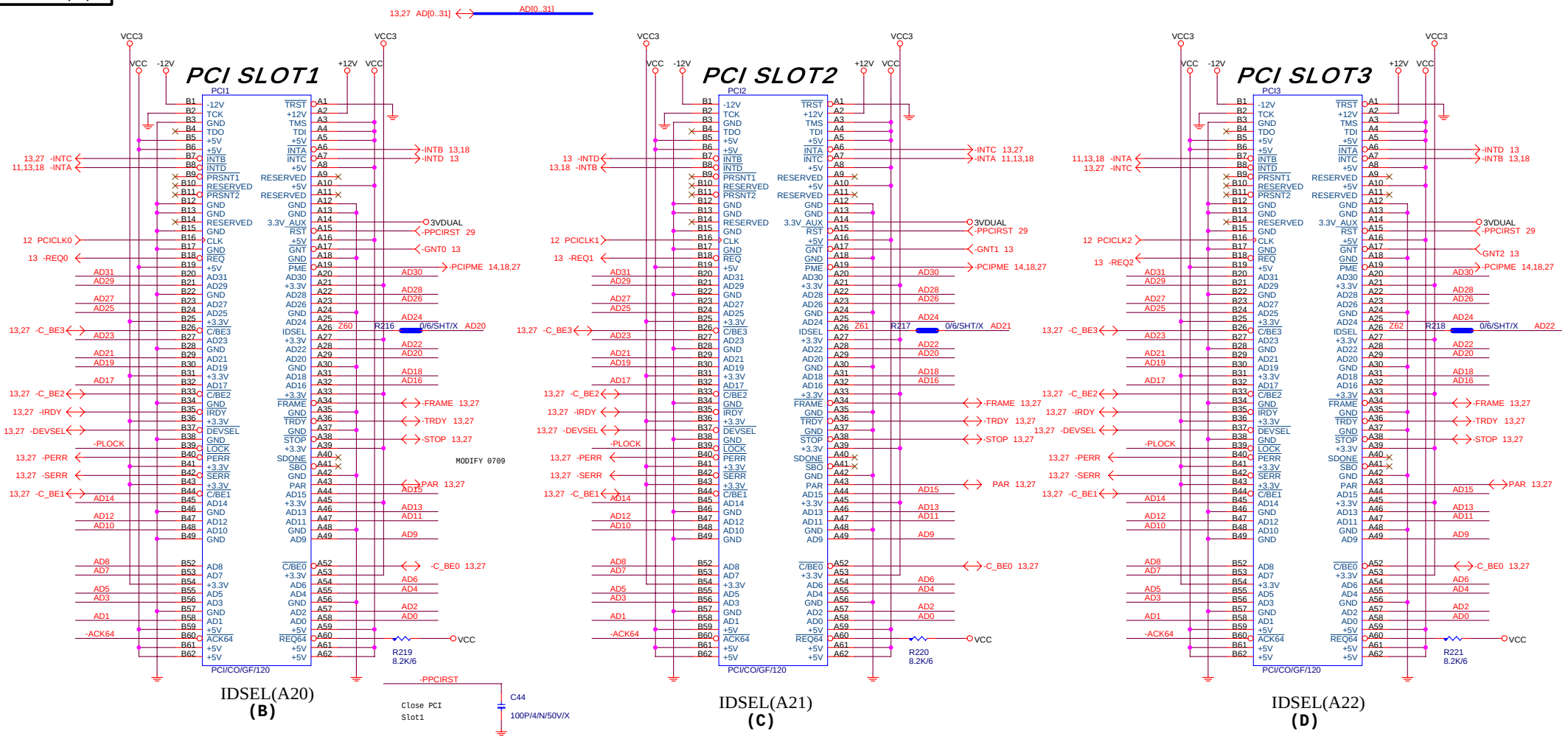
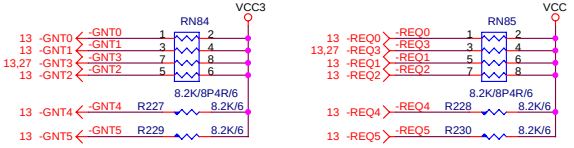
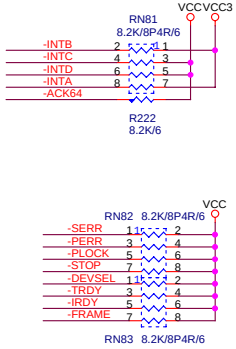
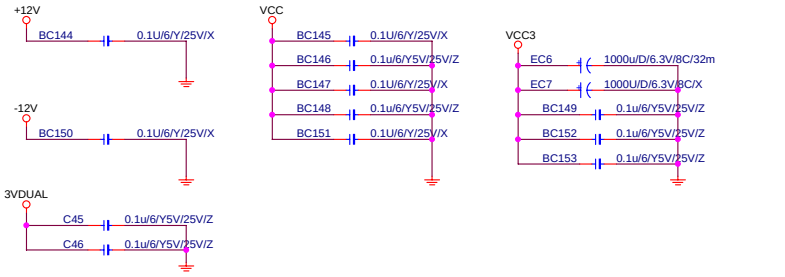

AGP V3.0
Rev. 0.95
AGP L-RM/8X-124/C/P/GREEN/GF/RA/D
REV2.0
Place 1 at each pair of 3.3V pins
Decoupling capacitors
(Place near AGP slot)
Place 1 at each pair of VDDQ pins
Place an additional for spread from A14 - A33
PLACE THESE
BYPASSING
CAPACITORS NEAR
AGP SLOT
4X:0.75V
8X:0.35V
1:4X
0:8X
PMBT2222A/SOT23/600mA/40
GIGABYTE
AGP SLOT
GA-8VM800M-775
1.0
Tuesday, August 16, 2005
Sheet 18 of 30

PCI SLOT 1,2,3



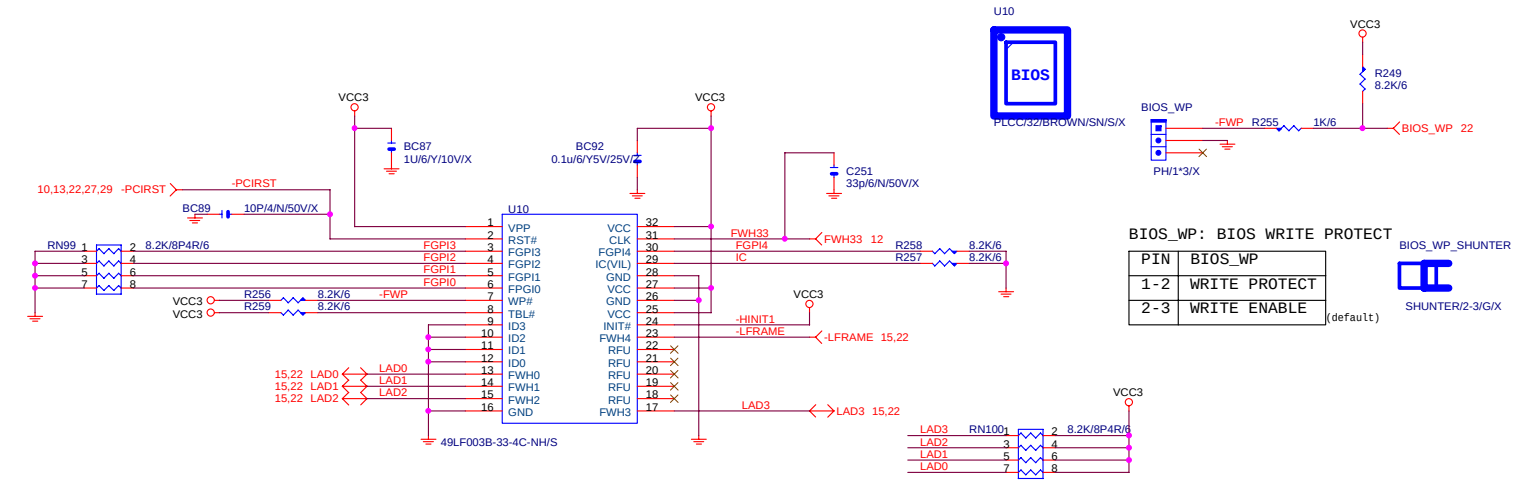


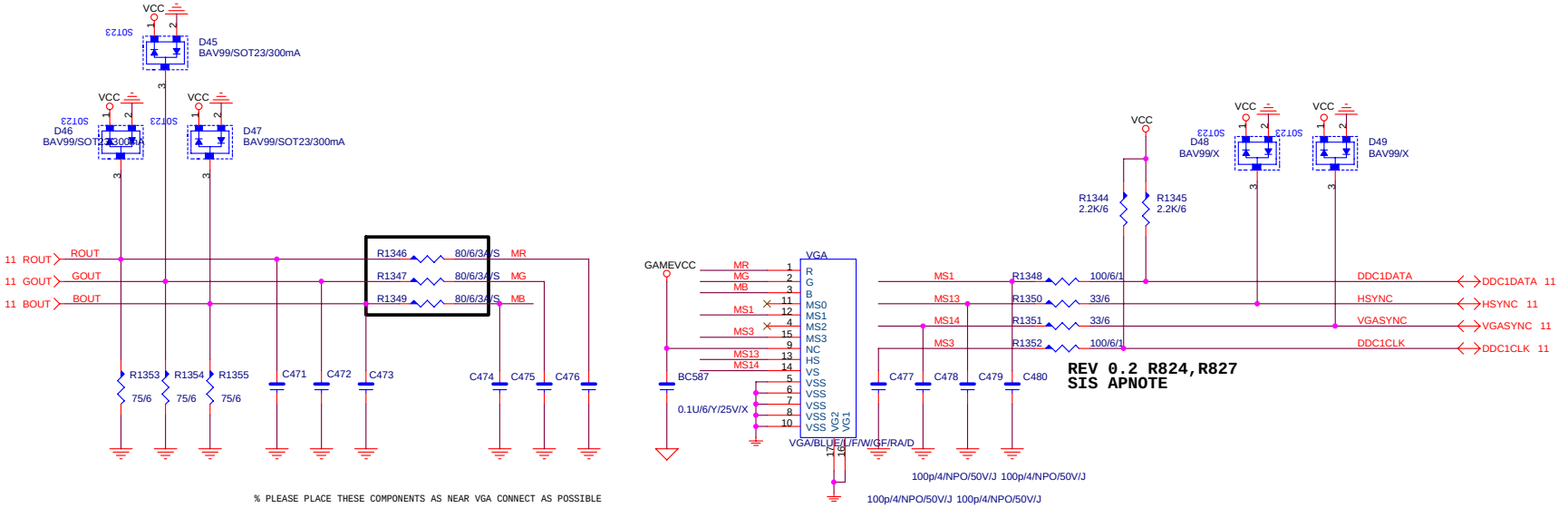




GIGABYTE

Title	PCI SLOT 1,2,3	
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 19 of 30	

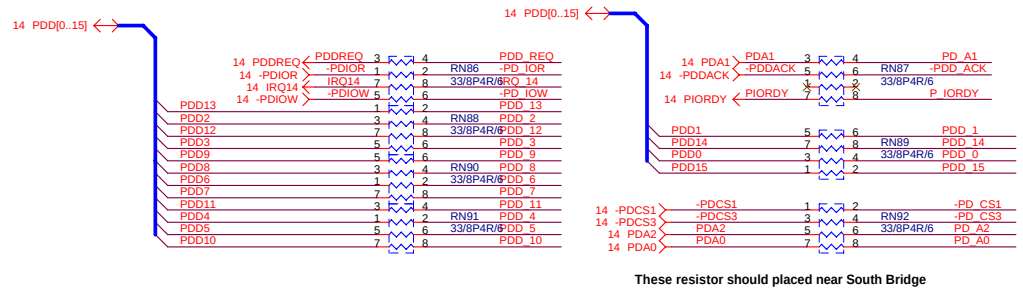




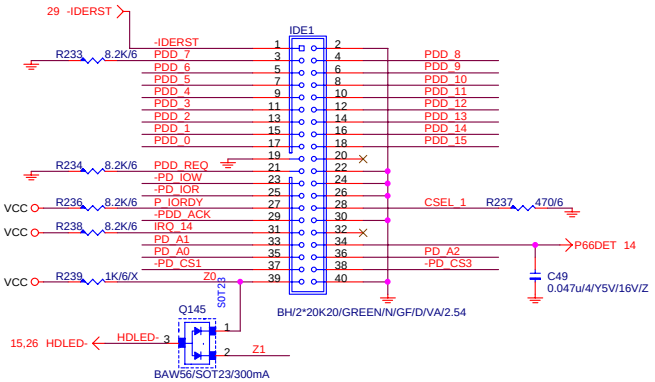
GIGABYTE

Title	BIOS & VGA CONN	
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 20 of 30	

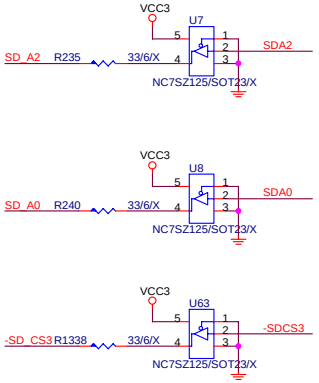
PRIMARY IDE



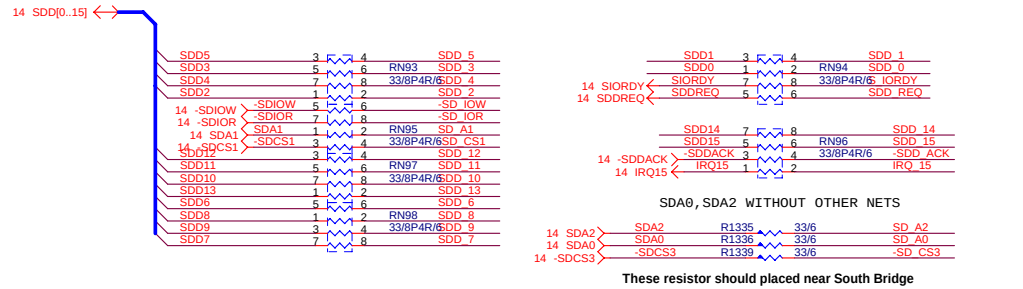
These resistor should placed near South Bridge



CD,DVD ROM STRAPPING ISSUE

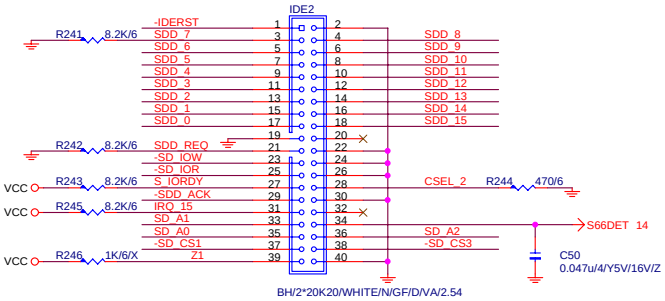


SECONDARY IDE



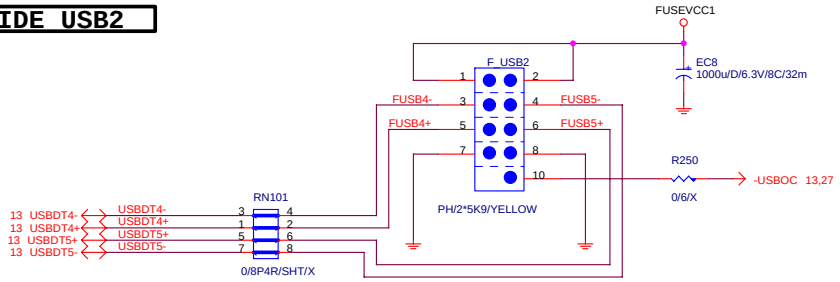
SDA0,SDA2 WITHOUT OTHER NETS

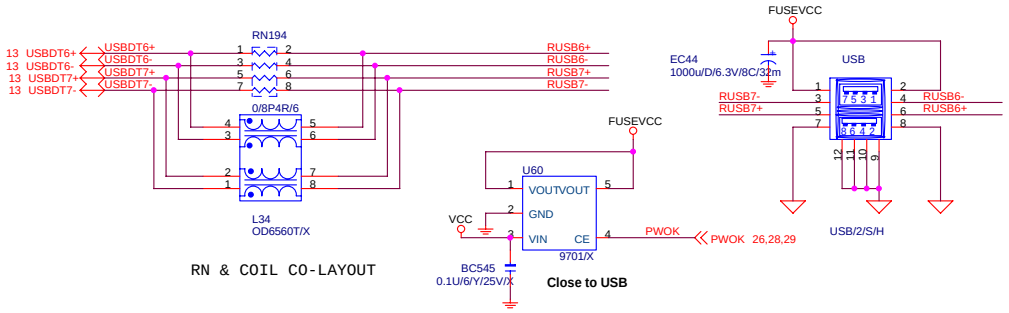
These resistor should placed near South Bridge



SIRQ

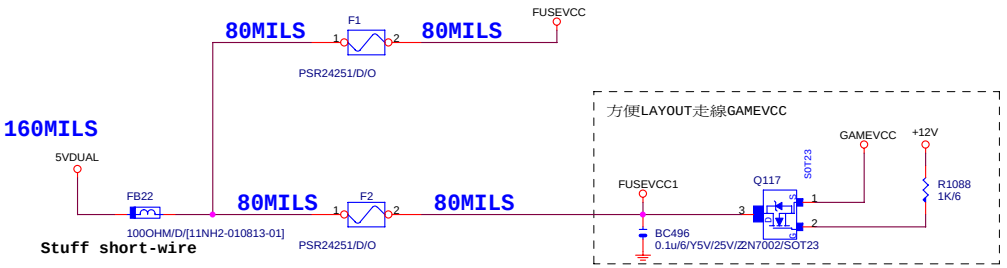
FRONT SIDE USB2



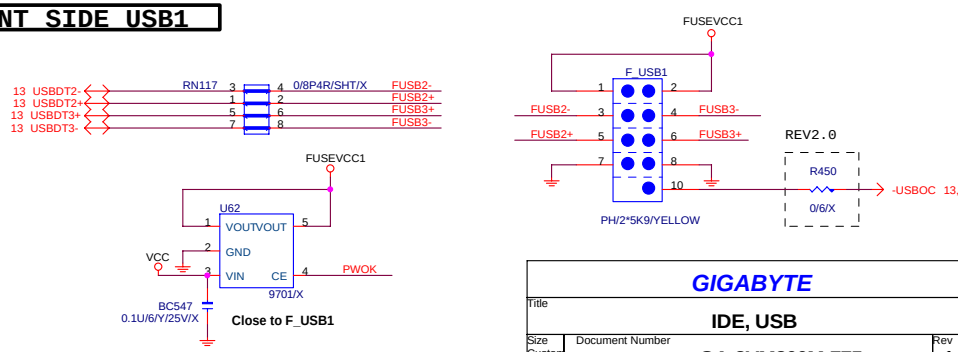


RN & COIL CO-LAYOUT

FUSEVCC,GAMEVCC



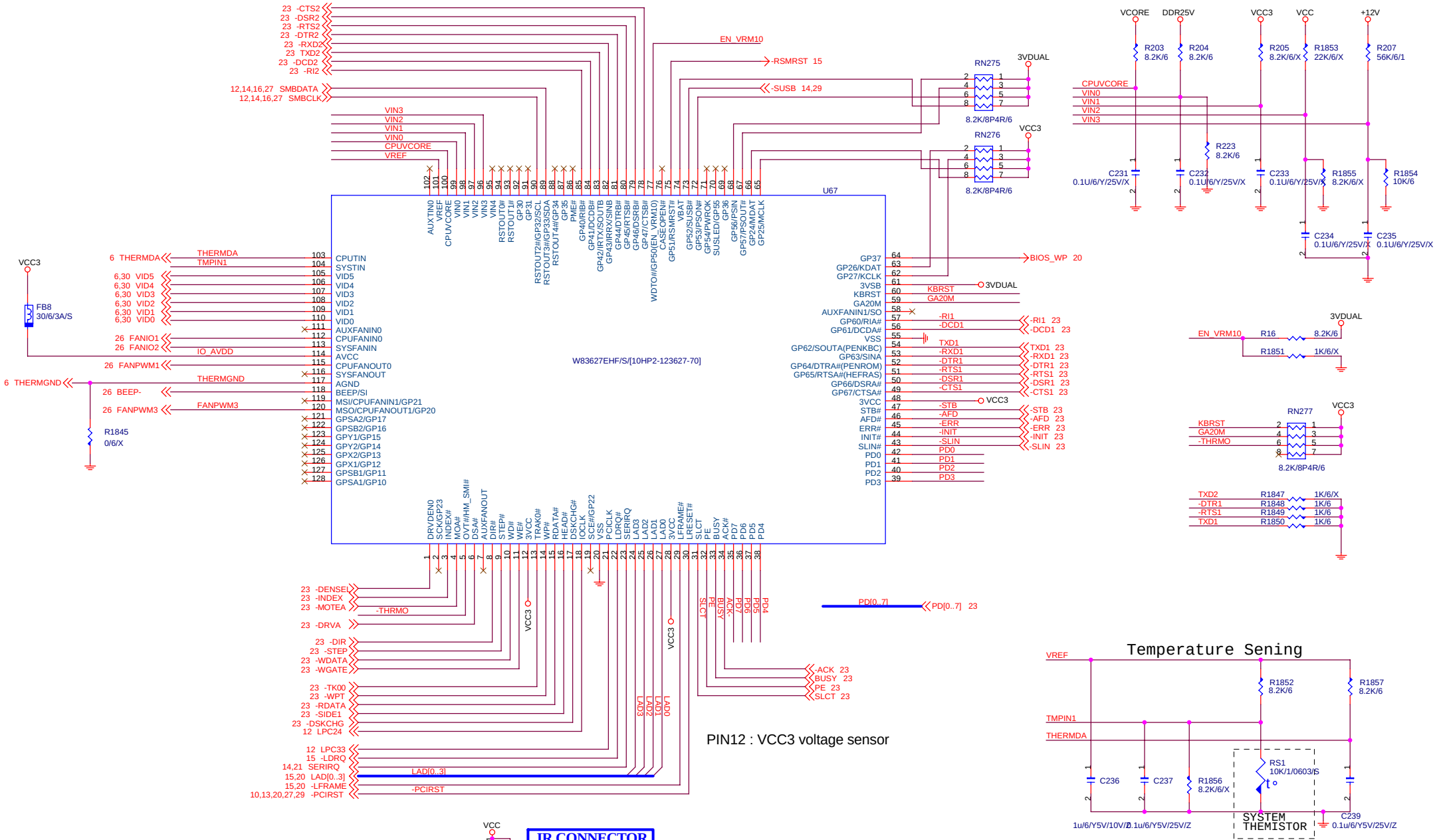
FRONT SIDE USB1



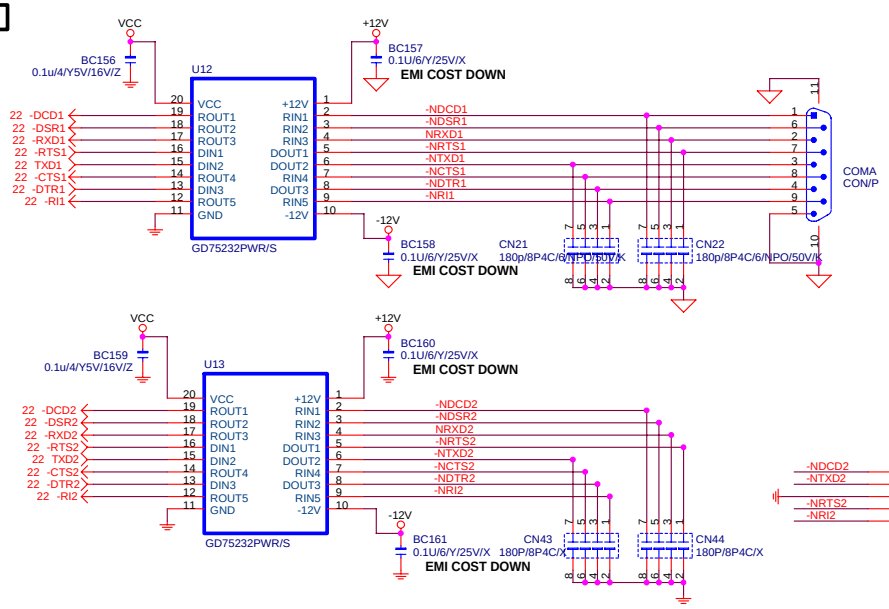
GIGABYTE

Title	IDE, USB	
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 21 of 30	

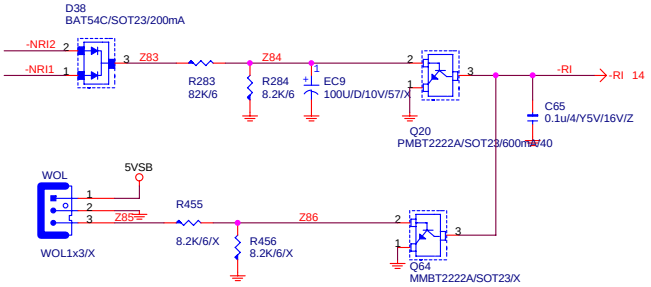
Voltage Sensing



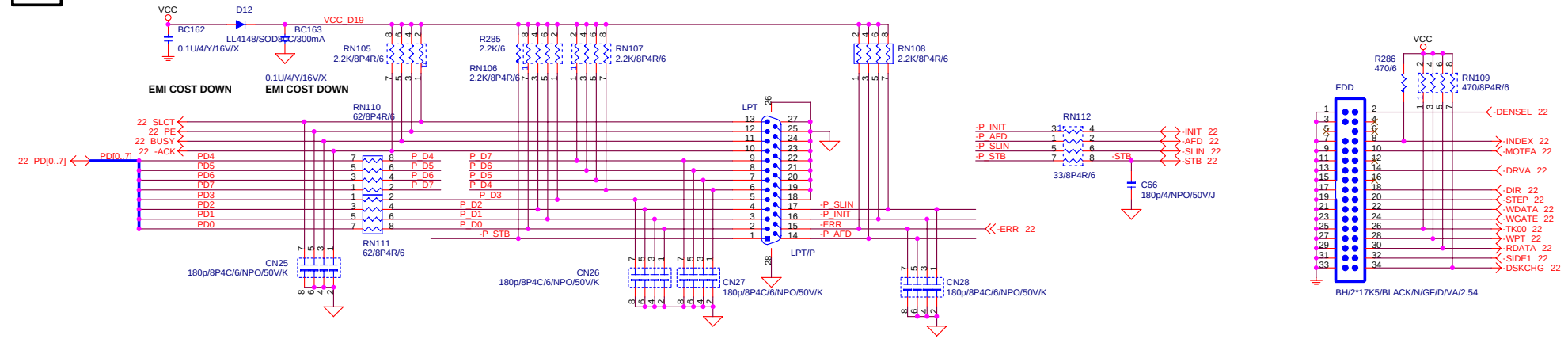
COM A,B



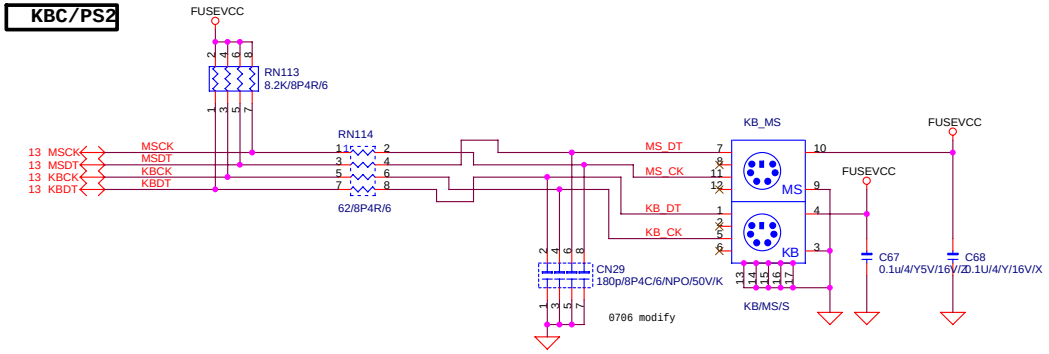
WAKE UP



LPT



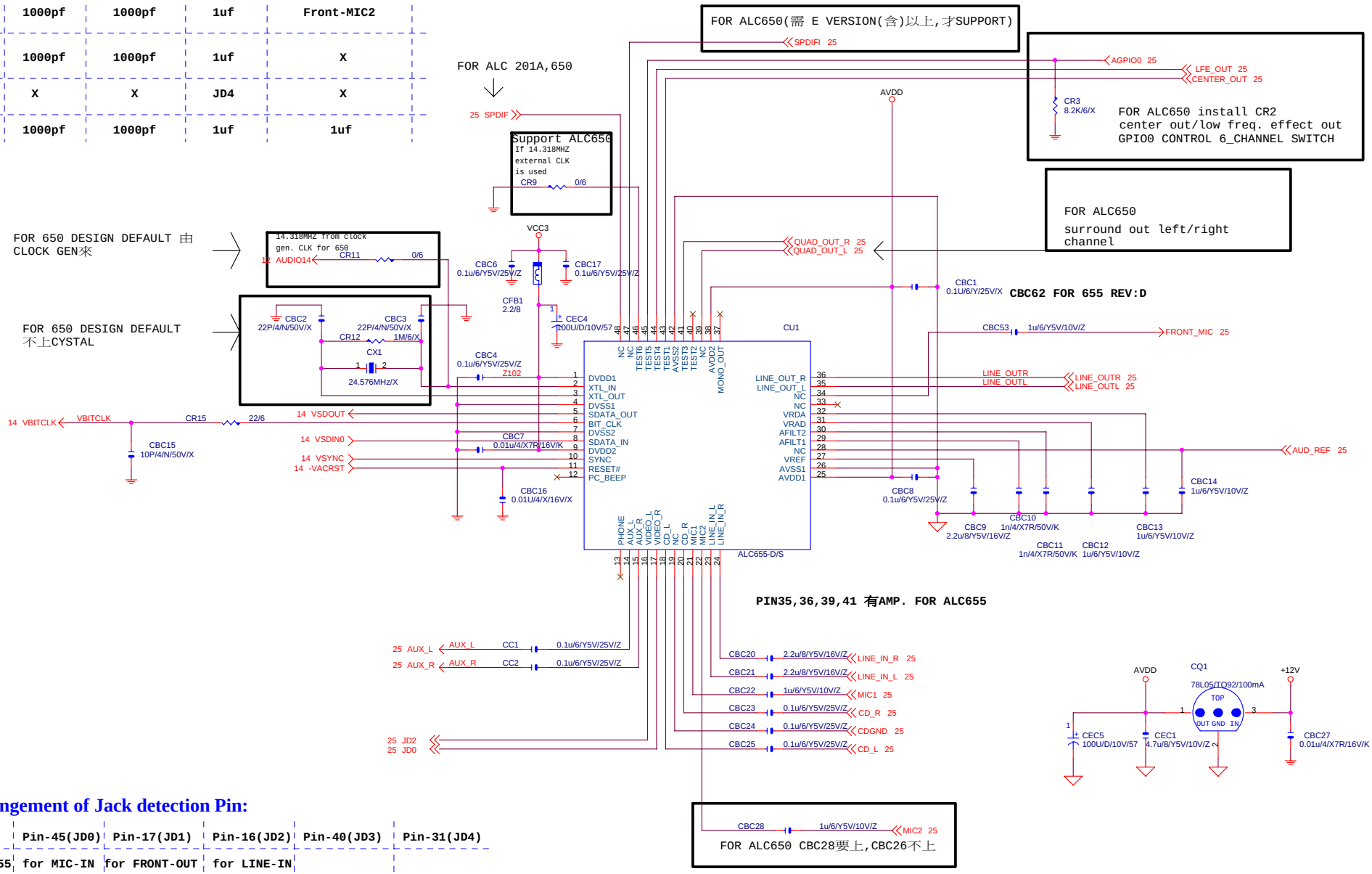
KBC/PS2



GIGABYTE		
Title: COM,PRT,FDD,KB,IR		
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 23 of 30	

Filter Cap design:

	Pin-29	Pin-30	Pin-31	Pin-32
ALC655 Rev D	1000pf	1000pf	1uf	Front-MIC2
ALC655 Rev C	1000pf	1000pf	1uf	X
ALC658	X	X	JD4	X
ALC650	1000pf	1000pf	1uf	1uf



Arrangement of Jack detection Pin:

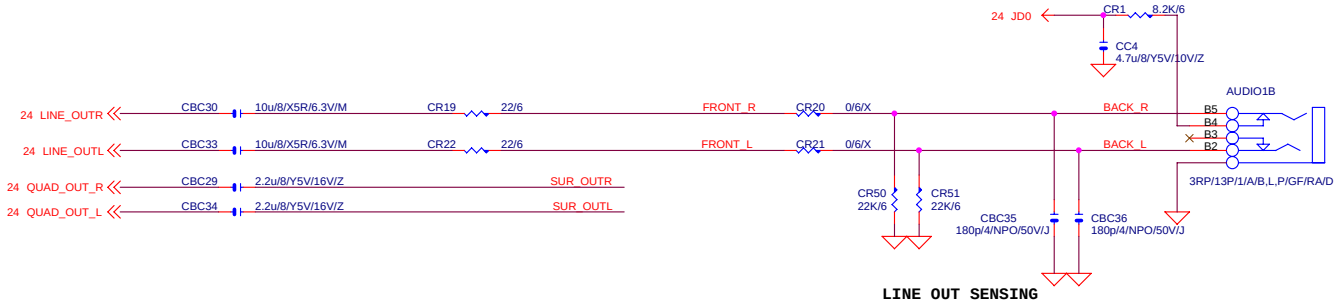
	Pin-45(JD0)	Pin-17(JD1)	Pin-16(JD2)	Pin-40(JD3)	Pin-31(JD4)
ALC655	for MIC-IN	for FRONT-OUT	for LINE-IN		
ALC658	for MIC-IN	for UAJ1	for UAJ2	for FRONT-OUT Exernal pull high is needed	for LINE-IN Exernal pull high is needed

GIGABYTE CORP.	
Title	ALC655
Size: Custom	Document Number: GA-8VM800M-775
Rev	1.0
Date: Tuesday, August 16, 2005	Sheet 24 of 30

LINE OUT

JDO,JD2,GPIO0 爲偵測DEVICE INPUT 時由LOW TO HIGH Edge trigger(pop manual)

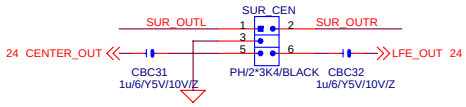
1/2(3.14)RC=1/2(3.14)8.2K*4.7U=4.3HZ以上AC 信號全部衰減 TO 0V 不會造成JDO 誤動作(無device 時play wav)



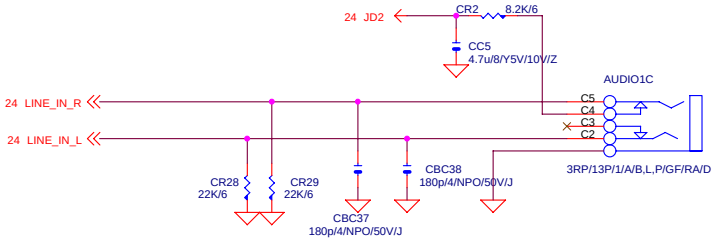
LINE OUT SENSING
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

FOR SUPPORT 6 CHANNEL, SURROUND OUT

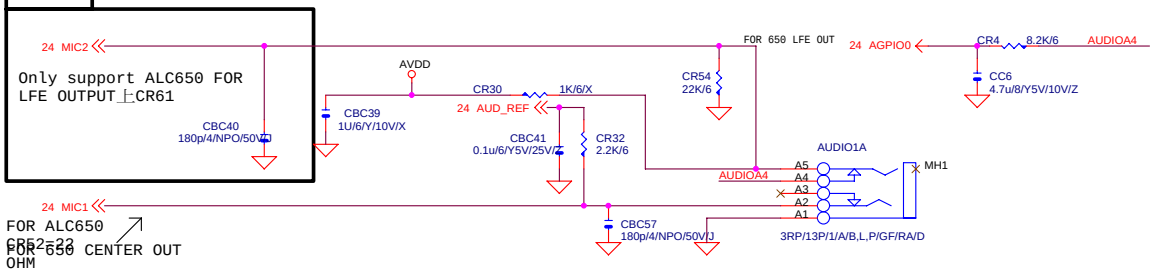
CENTER OUT,LOW FREQUENCY EFFECT OUT



LINE-IN



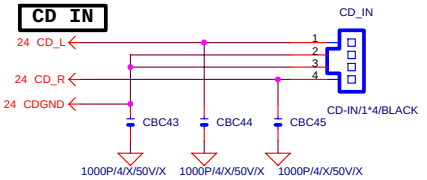
MIC



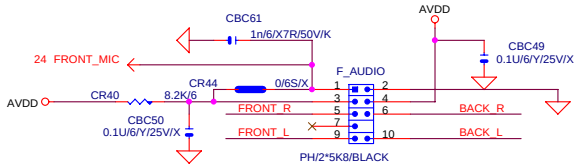
MICROPHONE IN SENSING(當INPUT)(利用vref 偏壓與CR43,CR32 並聯求出阻抗)
7.1k ohm>R>2.3k ohm===>microphone in
R<2.3k ohm or R>7.1k ohm===>unknown device

MICROPHONE IN SENSING(當OUTPUT)
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

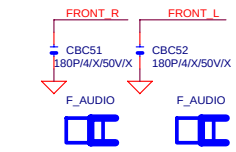
CD IN

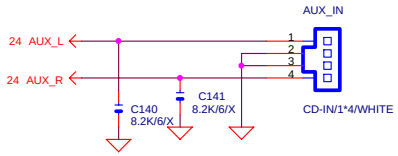


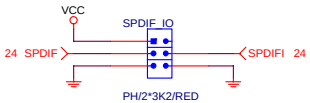
INTEL FRONT AUDIO

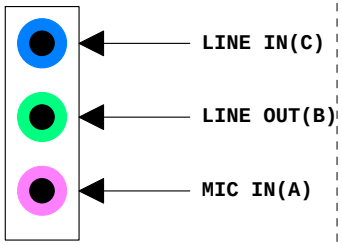


For EMI



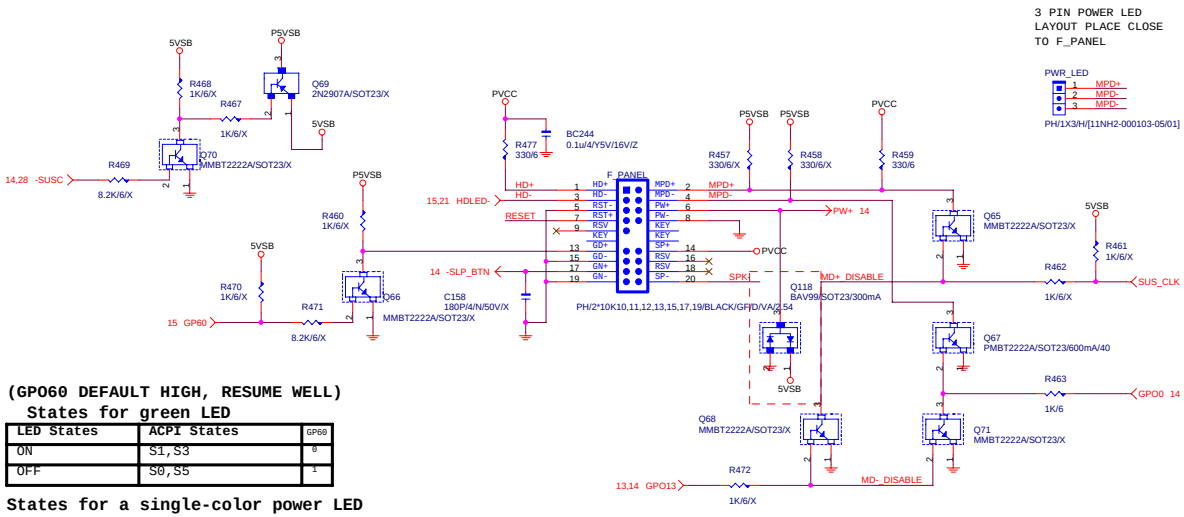






AUDIO PANEL

GIGABYTE CORP.		
Title: AUDIO OUTPUT,GAME PORT		
Size: Custom	Document Number: GA-8VM800M-775	Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 25 of 30	



(GPO60 DEFAULT HIGH, RESUME WELL)

States for green LED

LED States	ACPI States	GP60
ON	S1,S3	0
OFF	S0,S5	1

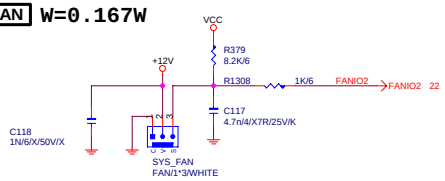
States for a single-color power LED

LED States	ACPI States			
OFF	S1,S3,S5			
Steady Green	S0			
Blinking Green	S0(message waiting)			

States for a dual-color power LED

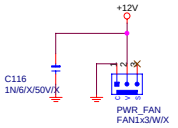
LED States	ACPI States			
OFF	S5			
Steady Green	S0			
Blinking Green	S0(message waiting)			
Steady Yellow	S1,S3			
Blinking Yellow	S1,S3(message waiting)			

SYSTEM FAN W=0.167W



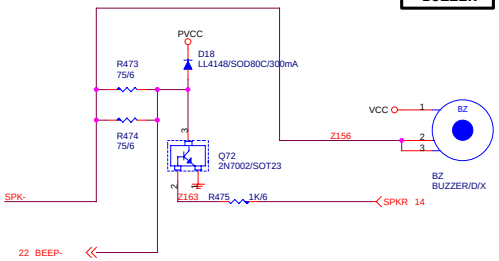
[防呆]

POWER FAN



[防呆]

BUZZER

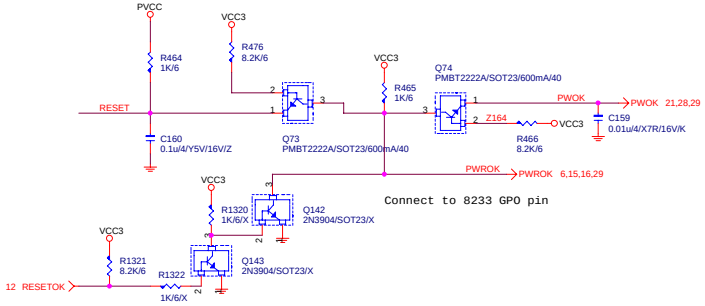


PVCC 在VCC PLANE 切割互連

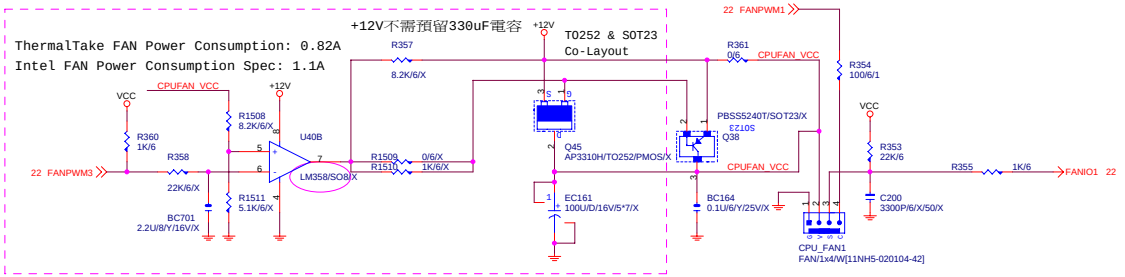
NOTE:ALLEGRO use NET connect.

Note 115

RESET



CPU FAN



GIGABYTE			
Title	PANEL, STR LED & FANS		
Size Custom	Document Number GA-8VM800M-775		Rev 1.0
Date: Tuesday, August 16, 2005		Sheet 26 of 30	

	10/100 8100C	Giga 8110S	Giga 8110SB
AVDDH	N/A	3.3V	3.3V
V_12P	2.5V	N/A	3.3V
AVDDL	3.3V	2.5V	2.5V
V_DAC	N/A	2.5V	2.5V
DVDD	2.5V	1.8V	1.3V
DVDD_A	2.5V	1.8V	1.3V

		Dual Color LED	
	Yellow	Green	Orange
10Mb	---	OFF	OFF
100Mb	---	ON	OFF
1Gb	---	OFF	ON
Link	ON	---	---
Active	Blink	---	---

LU1:
100M:RTL8100C
1G:RTL8110S

LR4:
93C46:N/A
93C56:8.2K/6

LR15:
100M:5.9K/6/1
1G:2.49K/6/1

LR35:
100M:N/A
1G:0/6

FOR EMI

RTL8100C/S

IDESEL 30
-REQ/-GNT(5)
-INTC

LR26~LR29: **100M:N/A** **1G:49.9/6/1**

LBC28, LBC29: **100M:N/A** **1G:0.01U/6**

LBC23: **100M:N/A** **1G:N/A**

LR17: **100M:N/A** **1G:0/6**

Spacing : at least 50 mils between each differential pair

LBC25:
100M:0.1U/6
1G:0.01U/6

USB/LAN[11NR6-LU0001-01]

FOR 1G:P35-152-19W9

FOR 100M:P35-152-11Z9

LR22, LR23, LBC26 Close to Lan Chip
Realtek suggestion (TX+, TX-).

LR24, LR25, LBC27 Close to Lan Chip
Realtek Suggestion (RX+, RX-).

POWER DECOUPLING CAP.

LFB1:
100M:N/A
1G:0/8

LR16:
100M:N/A
1G:0/8

LFB2:
100M:0/8
1G:N/A

LFB3:
100M:0/8
1G:N/A

LQ1:
100M:N/A
2SB1132

For : Gigabyte LAN

LQ3:
100M:2N2907A
1G:N/A

DVDD:
100M:2.5V
1G:1.8V

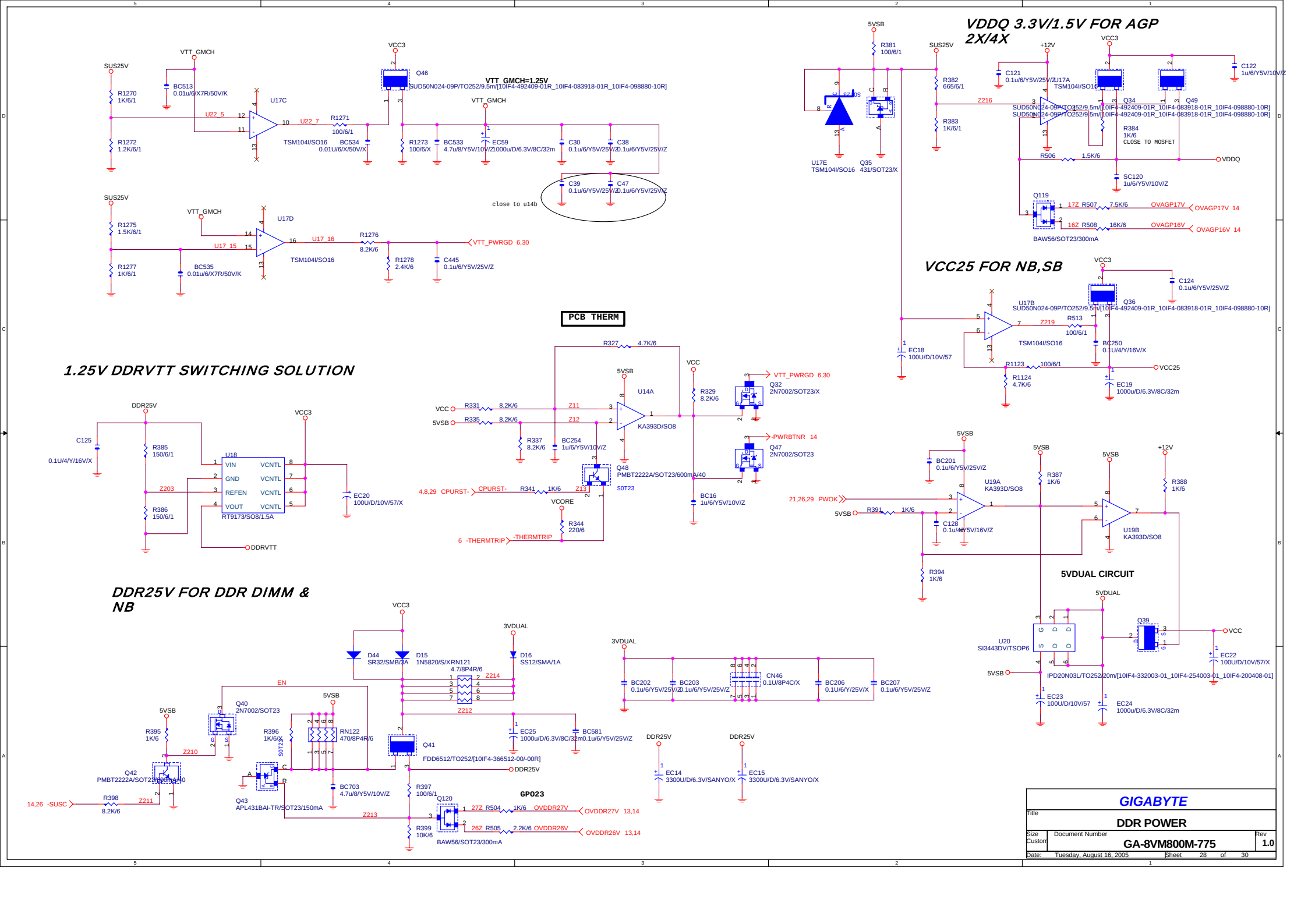
USB

LAN EEPROM

For 8100C

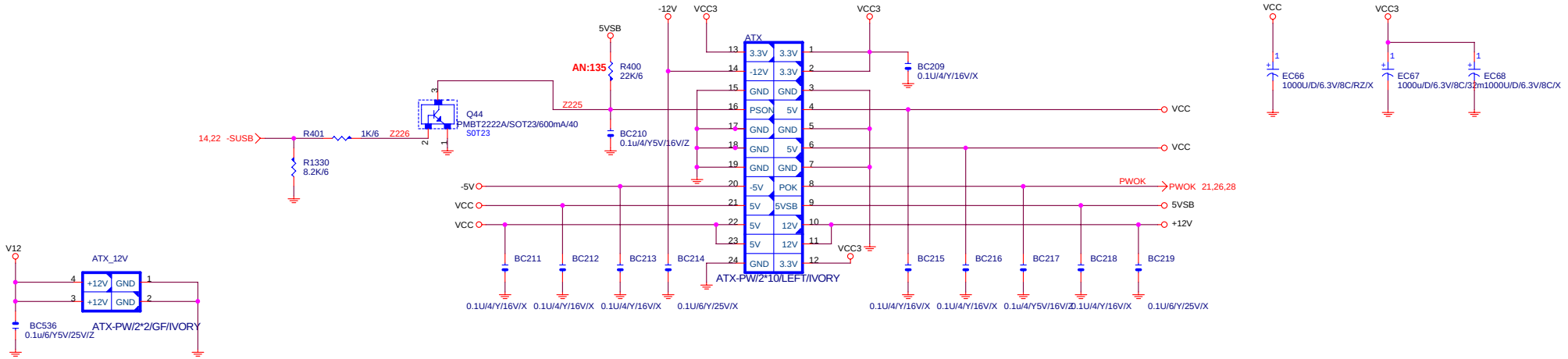
For 8110S

Title	LAN RTL8110C		
Size: Custom	Document Number: GA-8VM800M-775		Rev: 1.0
Date: Tuesday, August 16, 2005	Sheet 27 of 30		


VTT_GMCH=1.25V
SUD50N024-09P/TO252/9.5m/[10IF4-492409-01R_10IF4-083918-01R_10IF4-098880-10R]
TSM104I/SO16
close to u14b
VDDQ 3.3V/1.5V FOR AGP 2X/4X
VDDQ
SC120 1u/6/Y5V/10V/Z
CLOSE TO MOSFET
BAW56/SOT23/300mA
VCC25 FOR NB,SB
VCC25
TSM104I/SO16
1.25V DDRVTT SWITCHING SOLUTION
RT9173/SO8/1.5A
DDRVTT
PCB THERM
KA393D/SO8
SOT23
DDR25V FOR DDR DIMM & NB
APL431BAI-TR/SOT23/150mA
BAW56/SOT23/300mA
5VDUAL CIRCUIT
IPD20N03L/TO252/20m/[10IF4-332003-01_10IF4-254003-01_10IF4-200408-01]
GP023
GIGABYTE
DDR POWER
GA-8VM800M-775
Rev 1.0
Tuesday, August 16, 2005
Sheet 28 of 30

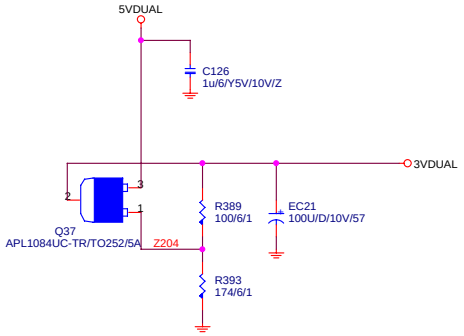
ATX CONN, DC POWER

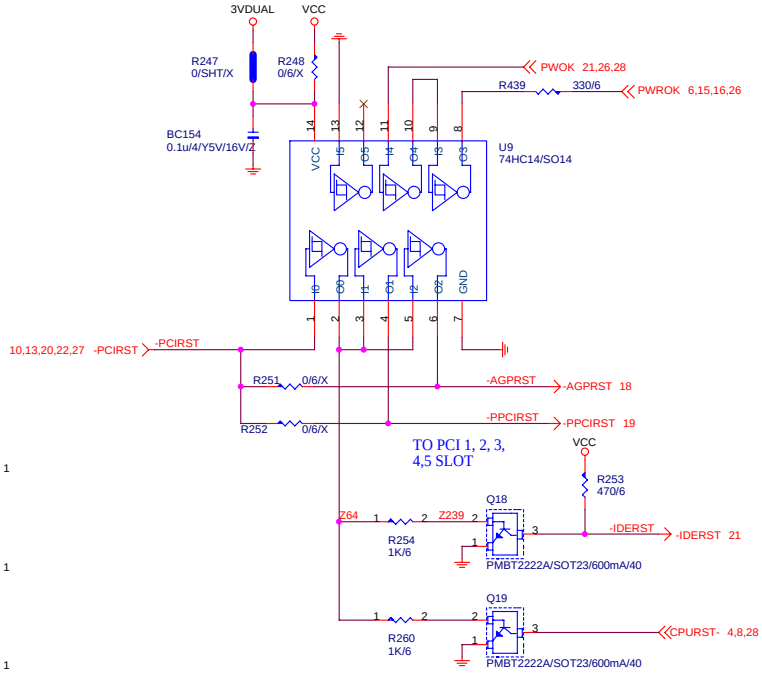
ATX POWER CONNECTOR

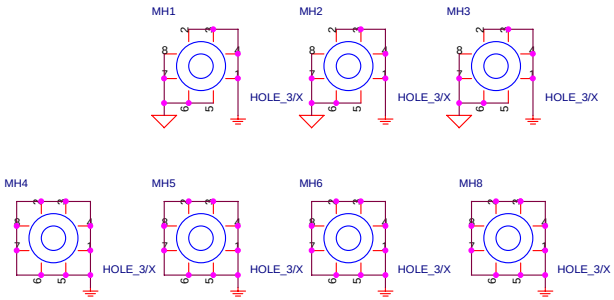


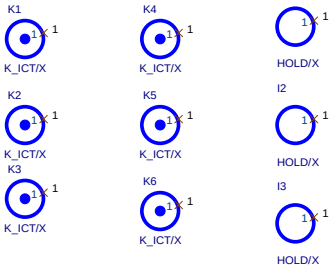
PCI+IDE RESET

5VDUAL TRANS TO 3VDUAL(3.3V)









(08/12) HOLE_3-2

GIGABYTE

Title	ATX, DC POWER	
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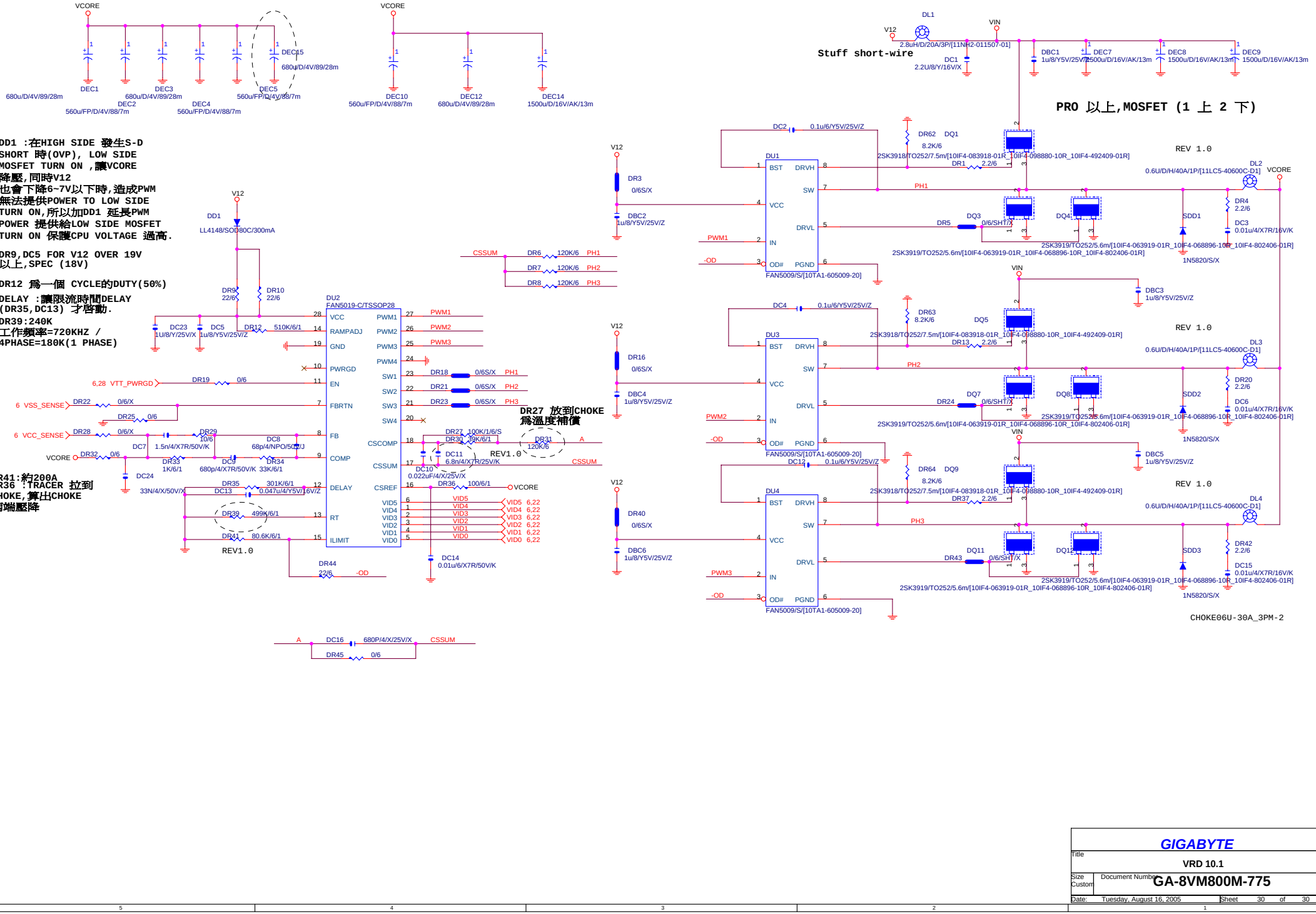
VCORE
DEC1 680u/D/4V/89/28m
DEC2 560u/FP/D/4V/88/7m
DEC3 680u/D/4V/89/28m
DEC4 560u/FP/D/4V/88/7m
DEC5 560u/FP/D/4V/88/7m
DEC15 680u/D/4V/89/28m
DEC10 560u/FP/D/4V/88/7m
DEC12 680u/D/4V/89/28m
DEC14 1500u/D/16V/AK/13m
Stuff short-wire
PRO 以上,MOSFET (1 上 2 下)
DD1 :在HIGH SIDE 發生S-D SHORT 時(OVP), LOW SIDE MOSFET TURN ON ,讓VCORE 降壓,同時V12 也會下降6~7V以下時,造成PWM 無法提供POWER TO LOW SIDE TURN ON,所以加DD1 延長PWM POWER 提供給LOW SIDE MOSFET TURN ON 保護CPU VOLTAGE 過高.
DR9,DC5 FOR V12 OVER 19V 以上,SPEC (18V)
DR12 爲一個 CYCLE的DUTY(50%)
DELAY :讓限流時間DELAY (DR35,DC13) 才啓動.
DR39:240K
工作頻率=720KHZ / 4PHASE=180K(1 PHASE)
DR41:約200A
DR36 :TRACER 拉到 CHOKE,算出CHOKE 兩端壓降
DR27 放到CHOKE 爲溫度補償
FAN5019-C/TSSOP28
FAN5009/S/[10TA1-605009-20]
2SK3918/TO252/7.5m/[10IF4-083918-01R_10IF4-098880-10R_10IF4-492409-01R]
2SK3919/TO252/5.6m/[10IF4-063919-01R_10IF4-068896-10R_10IF4-802406-01R]
CHOKE06U-30A_3PM-2
REV1.0
REV 1.0
GIGABYTE
VRD 10.1
GA-8VM800M-775
Rev 1.0
Tuesday, August 16, 2005