GIGABYTE 8VM800M Schematics

Revision 1.01

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10	P4M800_4_VGA
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12	VTT_DDR TERMMINATOR
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SHEET	TITLE
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25	ALC653 CODEC
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32	GPIO LIST

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Title: COVER SHEET		
Size: Custom	Document Number: 8VM800M	Rev: 1.01
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Model Name: 8VM800M 1.01

243.84mm* 209.98mm,60+/-15%,C Type,Blue

Component value change history

Date	Change Item	Reason
94.09.02_0.3	1'st BOM for pilot run	
94.10.18_1.0A	IT8705 add second source (10HP1-058705-15)	
	BIOS need to disable Clock Turbo function. (byte 0 /	bit 7 = 1)
	DDR25V & DDRVTT add bypass caps.	For DDR burn-in fail.
	8237R+ Strapping resistor change	
	ATX change to 2*10	
	CLR_CMOS add "insert 1-2"	
94.10.31_1.0B	DDR termination change to 47 ohm	Improve memory compatibility
	Add 0.1uF: BC459, BC460, BC463, BC466	Improve memory compatibility
94.11.03_1.0B_ECN	BC104,BC435,BC436,BC491,BC492,BC493, 加替料10CM0-161002-31	加替料
	CR加替料12KRC-040003-3A,3AR	加替料

Circuit or PCB layout change for next version

Date	Change Item	Reason
94.08.31_0.3		Modify from 8VM533MRZ 1.03
94.10.18_1.0	NB & SB 文字面改爲P4M800 & VT8237	
	Add Clock pin 7 external pull-up	
	Q101.2 add pull-down	
	BSEL[0..1] don't connect to 8237R+	BSEL[0..1] don't connect to 8237R+
	VCC add 3pcs 8P4R as dummy load	For 2 types PSU can not boot issue.
	DDR25V cap location re-place.	For EMI issue.
	Bottom of DDR change from DDR25V to GND.	For EMI issue.
94.10.24_1.01	add 6pcs DDRVTT bypass caps.	For memtest fail issue.

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Title: BOM & PCB MODIFY HISTORY

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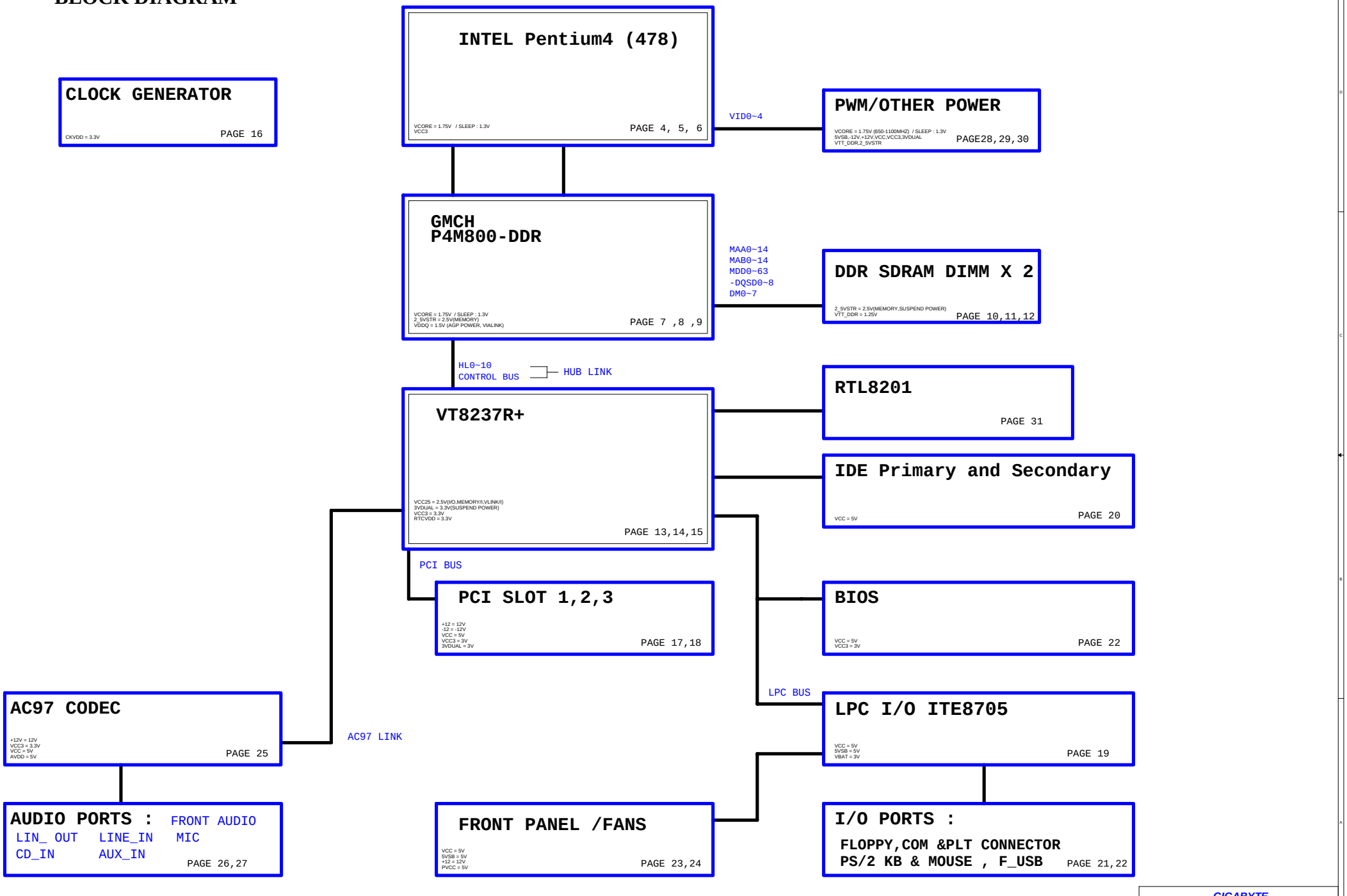
BLOCK DIAGRAM



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Title	BOM & PCB MODIFY HISTORY	
Size: Custom	Document Number: 8VM800M	Rev: 1.01
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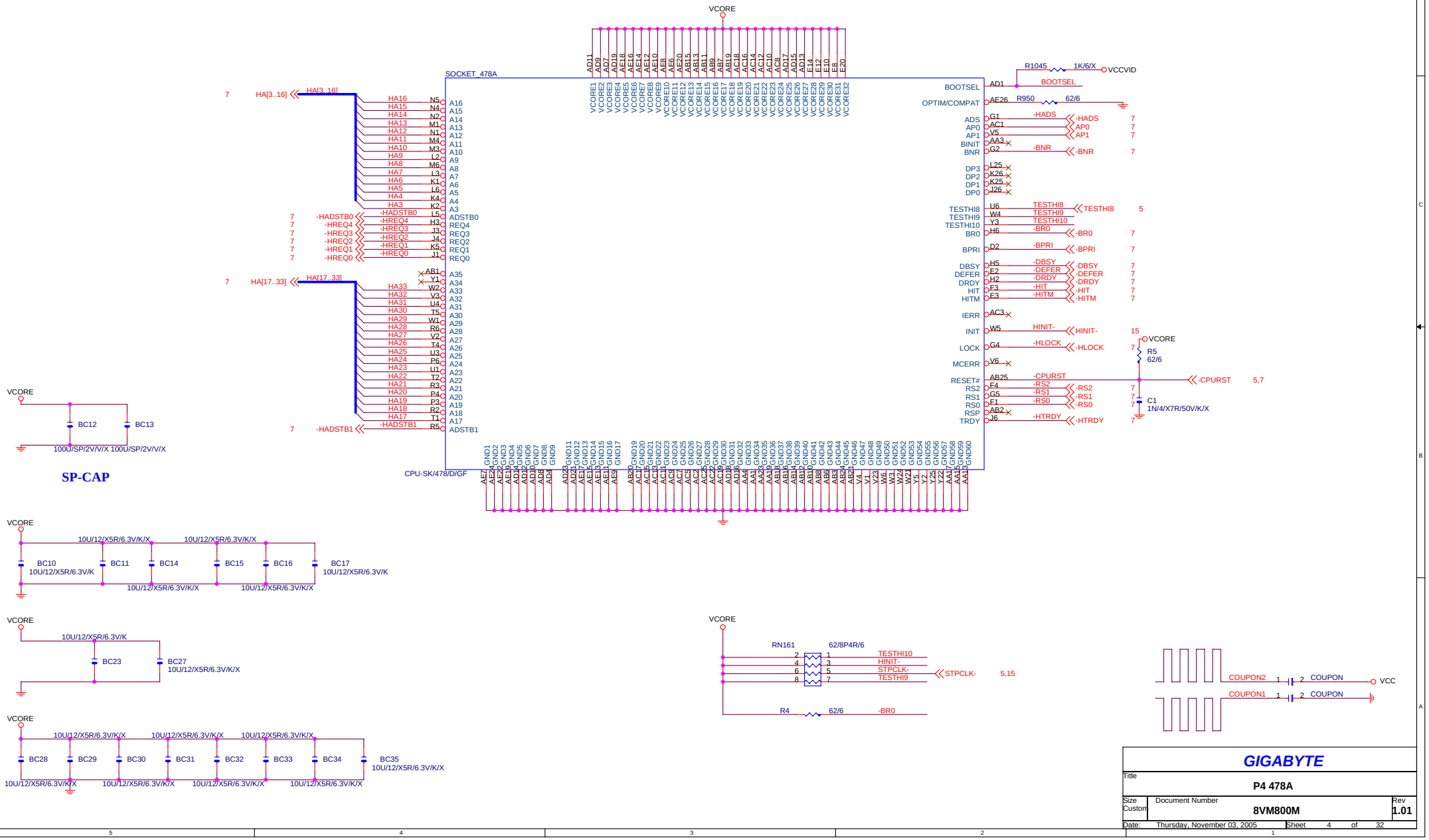

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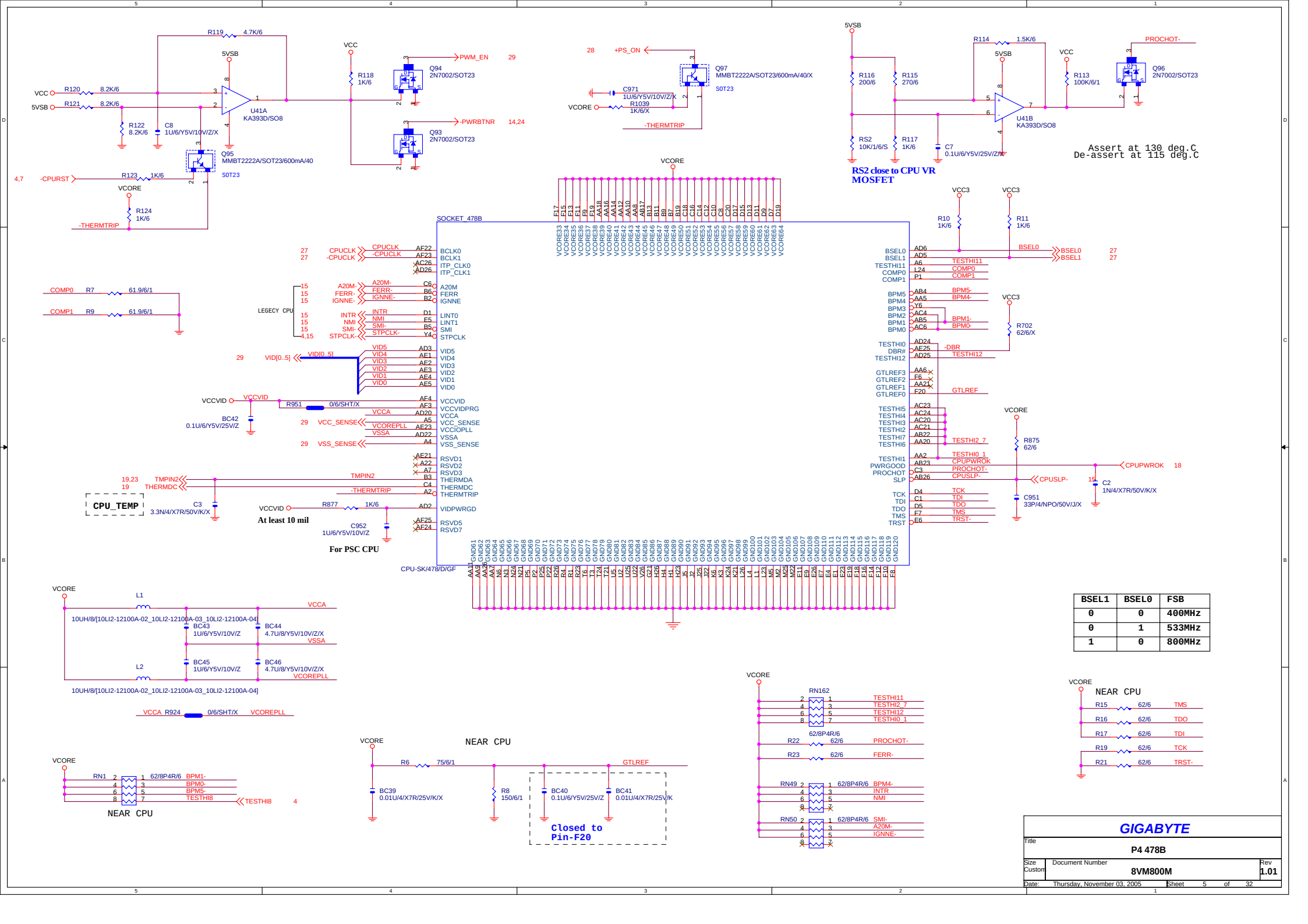
Title	P4 478A	
Size: Custom	Document Number: 8VM800M	Rev: 1.01
Date: Thursday, November 03, 2005	Sheet 4 of 32	



BSEL1	BSEL0	FSB
0	0	400MHz
0	1	533MHz
1	0	800MHz

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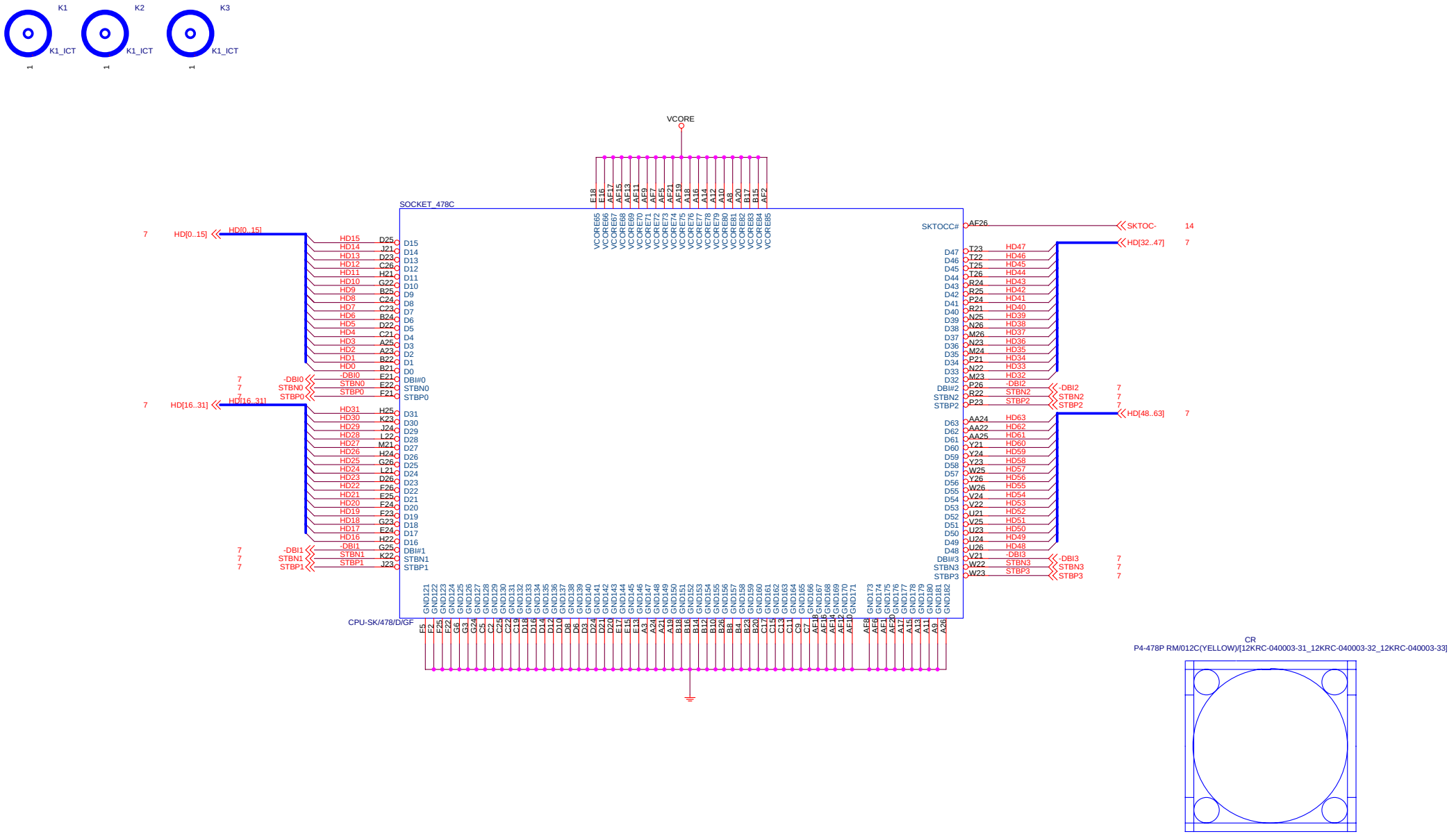
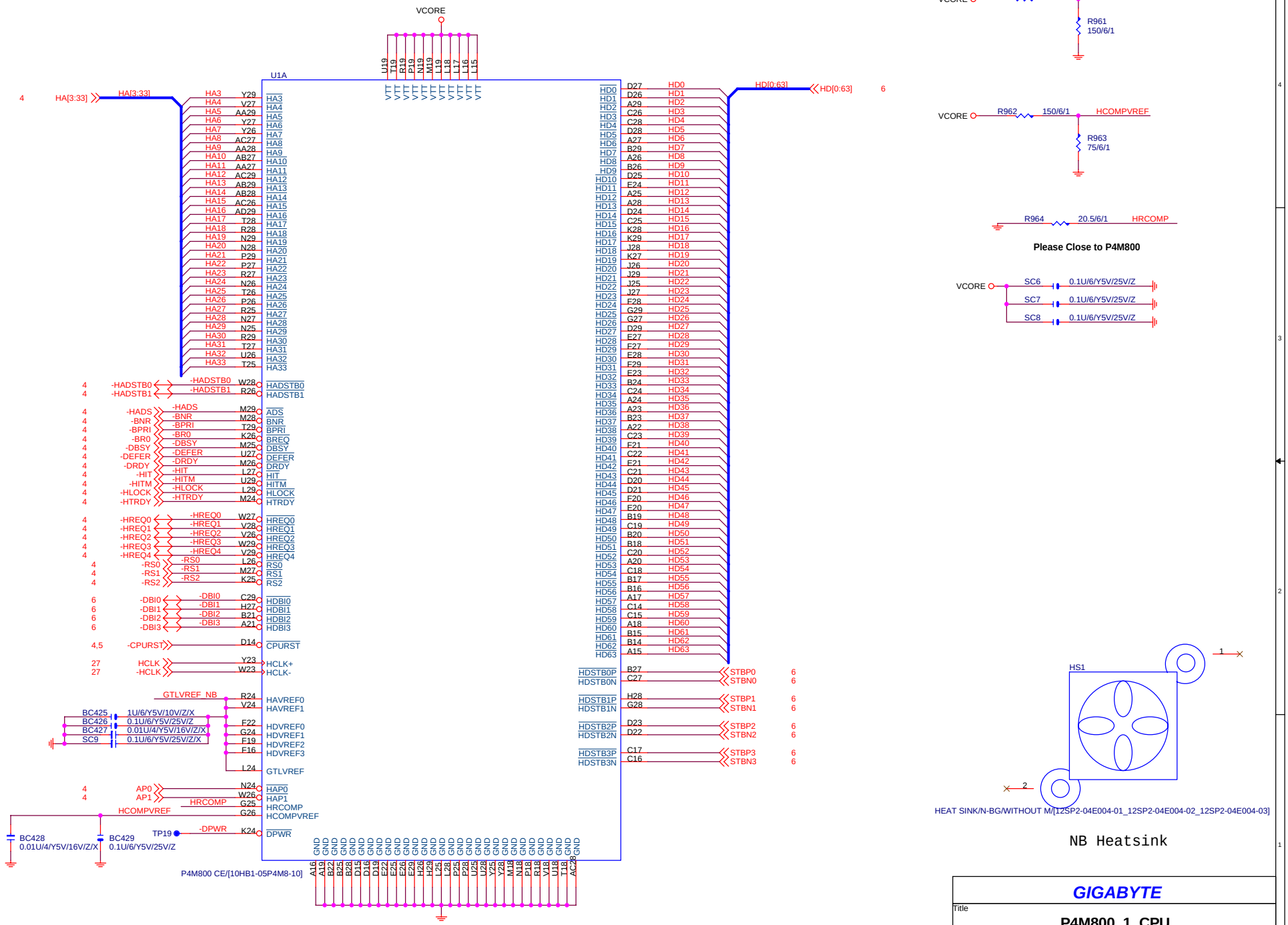
Title	P4 478B	
Size: Custom	Document Number: 8VM800M	Rev: 1.01
Date: Thursday, November 03, 2005	Sheet 5 of 32	



Title	P4 478C		
Size: Custom	Document Number: 8VM800M		Rev: 1.01
Date: Thursday, November 03, 2005	Sheet 6 of 32		


VCORE
U1A
HA[3:33]
HD[0:63]
-HADSTB0
-HADSTB1
-HADS
-BNR
-BPRI
-BR0
-DBSY
-DEFER
-DRDY
-HIT
-HITM
-HLOCK
-HTRDY
-HREQ0
-HREQ1
-HREQ2
-HREQ3
-HREQ4
-RS0
-RS1
-RS2
-DBI0
-DBI1
-DBI2
-DBI3
-CPURST
HCLK
-HCLK
GTLVREF_NB
AP0
AP1
HRCOMP
HCOMPVREF
-DPWR
TP19
BC425
BC426
BC427
SC9
1U/6/Y5V/10V/Z/X
0.1U/6/Y5V/25V/Z
0.01U/4/Y5V/16V/Z/X
0.1U/6/Y5V/25V/Z/X
BC428
0.01U/4/Y5V/16V/Z/X
BC429
0.1U/6/Y5V/25V/Z
P4M800 CE/[10HB1-05P4M8-10]
HDSTB0P
HDSTB0N
HDSTB1P
HDSTB1N
HDSTB2P
HDSTB2N
HDSTB3P
HDSTB3N
STBP0
STBN0
STBP1
STBN1
STBP2
STBN2
STBP3
STBN3
R960
75/6/1
GTLVREF_NB
R961
150/6/1
R962
150/6/1
HCOMPVREF
R963
75/6/1
R964
20.5/6/1
HRCOMP
Please Close to P4M800
SC6
SC7
SC8
0.1U/6/Y5V/25V/Z
HS1
HEAT SINK/N-BG/WITHOUT M/[12SP2-04E004-01_12SP2-04E004-02_12SP2-04E004-03]
NB Heatsink
GIGABYTE
Title
P4M800_1_CPU
Size
C
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8VM800M
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1.01
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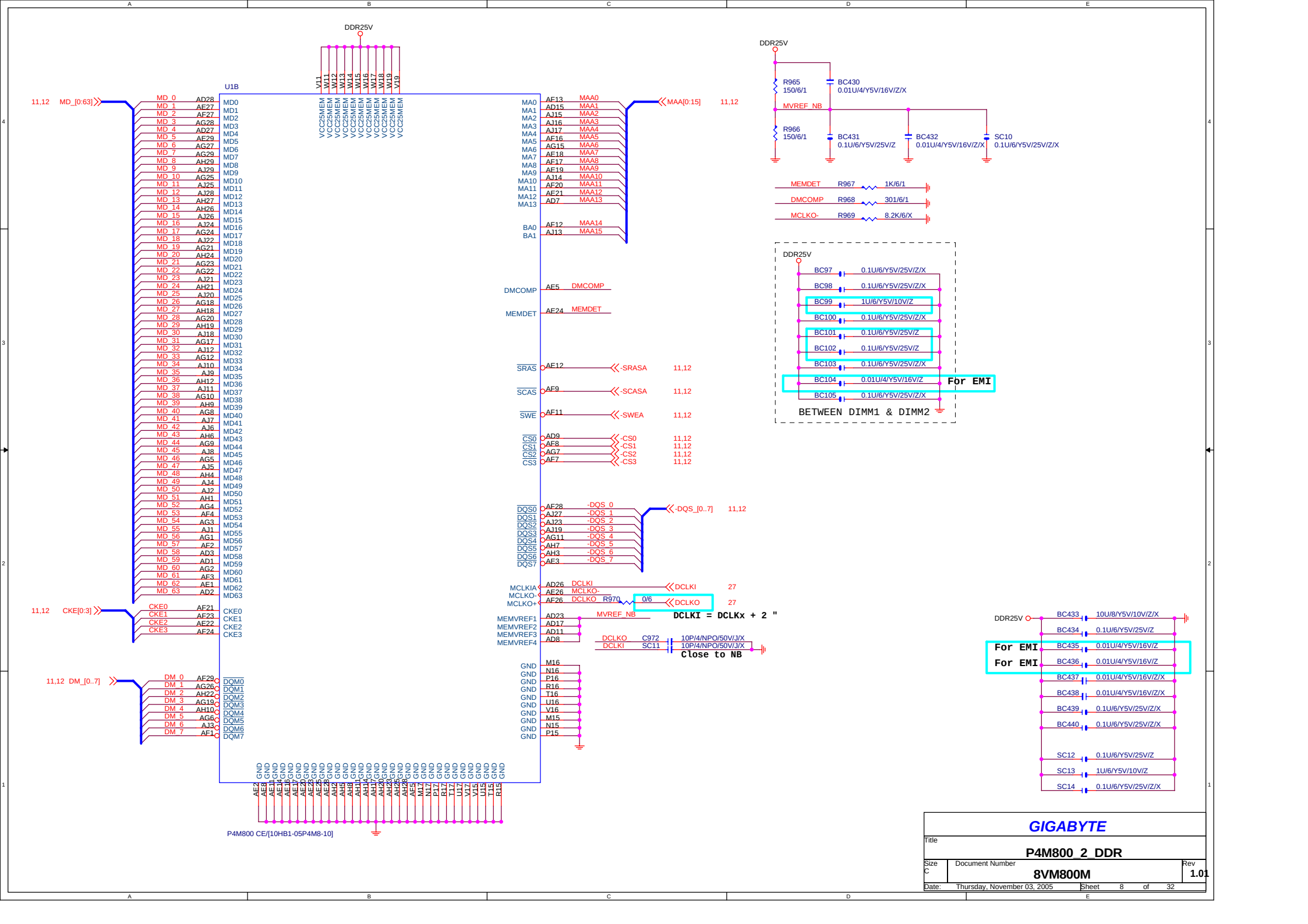
DDR25V
U1B
11,12 MD_[0:63]
MD_0 AD28
MD_1 AE27
MD_2 AF27
MD_3 AG28
MD_4 AD27
MD_5 AE29
MD_6 AG27
MD_7 AG29
MD_8 AH29
MD_9 AJ29
MD_10 AG25
MD_11 AJ25
MD_12 AJ28
MD_13 AH27
MD_14 AH26
MD_15 AJ26
MD_16 AJ24
MD_17 AG24
MD_18 AJ22
MD_19 AG21
MD_20 AH24
MD_21 AG23
MD_22 AG22
MD_23 AJ21
MD_24 AH21
MD_25 AJ20
MD_26 AG18
MD_27 AH18
MD_28 AG20
MD_29 AH19
MD_30 AJ18
MD_31 AG17
MD_32 AJ12
MD_33 AG12
MD_34 AJ10
MD_35 AJ9
MD_36 AH12
MD_37 AJ11
MD_38 AG10
MD_39 AH9
MD_40 AG8
MD_41 AJ7
MD_42 AJ6
MD_43 AH6
MD_44 AG9
MD_45 AJ8
MD_46 AG5
MD_47 AJ5
MD_48 AH4
MD_49 AJ4
MD_50 AJ2
MD_51 AH1
MD_52 AG4
MD_53 AF4
MD_54 AG3
MD_55 AJ1
MD_56 AG1
MD_57 AF2
MD_58 AD3
MD_59 AD1
MD_60 AG2
MD_61 AF3
MD_62 AE1
MD_63 AD2
MD0 MD1 MD2 MD3 MD4 MD5 MD6 MD7 MD8 MD9 MD10 MD11 MD12 MD13 MD14 MD15 MD16 MD17 MD18 MD19 MD20 MD21 MD22 MD23 MD24 MD25 MD26 MD27 MD28 MD29 MD30 MD31 MD32 MD33 MD34 MD35 MD36 MD37 MD38 MD39 MD40 MD41 MD42 MD43 MD44 MD45 MD46 MD47 MD48 MD49 MD50 MD51 MD52 MD53 MD54 MD55 MD56 MD57 MD58 MD59 MD60 MD61 MD62 MD63
11,12 CKE[0:3]
CKE0 AF21
CKE1 AF23
CKE2 AE22
CKE3 AF24
CKE0 CKE1 CKE2 CKE3
11,12 DM_[0..7]
DM_0 AF29
DM_1 AG26
DM_2 AH22
DM_3 AG19
DM_4 AH10
DM_5 AG6
DM_6 AJ3
DM_7 AF1
DQM0 DQM1 DQM2 DQM3 DQM4 DQM5 DQM6 DQM7
V11 W11 W12 W13 W14 W15 W16 W17 W18 W19 V19
VCC25MEM
MA0 AF13 MAA0
MA1 AD15 MAA1
MA2 AJ15 MAA2
MA3 AJ16 MAA3
MA4 AJ17 MAA4
MA5 AF16 MAA5
MA6 AG15 MAA6
MA7 AF18 MAA7
MA8 AF17 MAA8
MA9 AF19 MAA9
MA10 AJ14 MAA10
MA11 AF20 MAA11
MA12 AF21 MAA12
MA13 AD7 MAA13
BA0 AF12 MAA14
BA1 AJ13 MAA15
MAA[0:15] 11,12
DMCOMP AE5 DMCOMP
MEMDET AE24 MEMDET
SRAS AE12 -SRASA 11,12
SCAS AF9 -SCASA 11,12
SWE AF11 -SWEA 11,12
CS0 AD9 -CS0 11,12
CS1 AF8 -CS1 11,12
CS2 AG7 -CS2 11,12
CS3 AF7 -CS3 11,12
DQS0 AF28 -DQS_0
DQS1 AJ27 -DQS_1
DQS2 AJ23 -DQS_2
DQS3 AJ19 -DQS_3
DQS4 AG11 -DQS_4
DQS5 AH7 -DQS_5
DQS6 AH3 -DQS_6
DQS7 AF3 -DQS_7
-DQS_[0..7] 11,12
MCLKIA AD26 DCLKI
MCLKO- AE26 MCLKO-
MCLKO+ AF26 DCLKO R970 0/6
DCLKI 27
DCLKO 27
DCLKI = DCLKx + 2 "
MEMVREF1 AD23
MEMVREF2 AD17
MEMVREF3 AD11
MEMVREF4 AD8
MVREF_NB
DCLKO C972 10P/4/NPO/50V/J/X
DCLKI SC11 10P/4/NPO/50V/J/X
Close to NB
GND M16 N16 P16 R16 T16 U16 V16 M15 N15 P15
AE2 AE8 AE11 AE14 AE16 AE17 AE20 AE23 AE26 AF5 AF8 AF11 AF14 AF17 AG2 AG5 AG8 AG11 AG14 AG17 AG20 AG23 AG26 AH5 AH8 AH11 AH14 AH17 AH20 AH23 AH26 AJ5 M17 N17 P17 R17 T17 U17 V17 V15 U15 T15 R15
P4M800 CE/[10HB1-05P4M8-10]
DDR25V
R965 150/6/1
R966 150/6/1
MVREF_NB
BC430 0.01U/4/Y5V/16V/Z/X
BC431 0.1U/6/Y5V/25V/Z
BC432 0.01U/4/Y5V/16V/Z/X
SC10 0.1U/6/Y5V/25V/Z/X
MEMDET R967 1K/6/1
DMCOMP R968 301/6/1
MCLKO- R969 8.2K/6/X
DDR25V
BC97 0.1U/6/Y5V/25V/Z/X
BC98 0.1U/6/Y5V/25V/Z/X
BC99 1U/6/Y5V/10V/Z
BC100 0.1U/6/Y5V/25V/Z/X
BC101 0.1U/6/Y5V/25V/Z
BC102 0.1U/6/Y5V/25V/Z
BC103 0.1U/6/Y5V/25V/Z/X
BC104 0.01U/4/Y5V/16V/Z
BC105 0.1U/6/Y5V/25V/Z/X
For EMI
BETWEEN DIMM1 & DIMM2
DDR25V
BC433 10U/8/Y5V/10V/Z/X
BC434 0.1U/6/Y5V/25V/Z
For EMI
BC435 0.01U/4/Y5V/16V/Z
For EMI
BC436 0.01U/4/Y5V/16V/Z
BC437 0.01U/4/Y5V/16V/Z/X
BC438 0.01U/4/Y5V/16V/Z/X
BC439 0.1U/6/Y5V/25V/Z/X
BC440 0.1U/6/Y5V/25V/Z/X
SC12 0.1U/6/Y5V/25V/Z
SC13 1U/6/Y5V/10V/Z
SC14 0.1U/6/Y5V/25V/Z/X
GIGABYTE
Title
P4M800_2_DDR
Size C
Document Number
8VM800M
Rev 1.01
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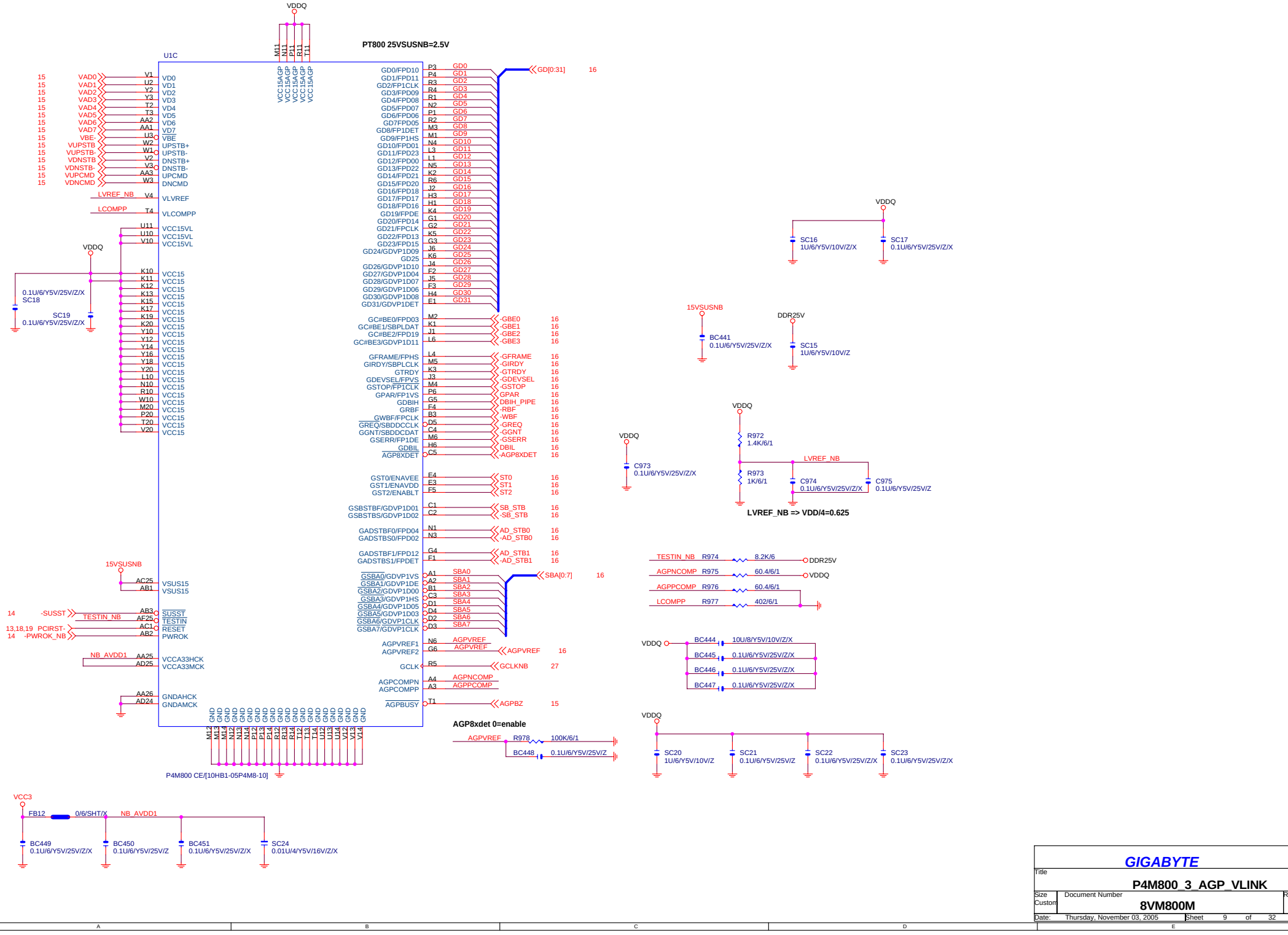

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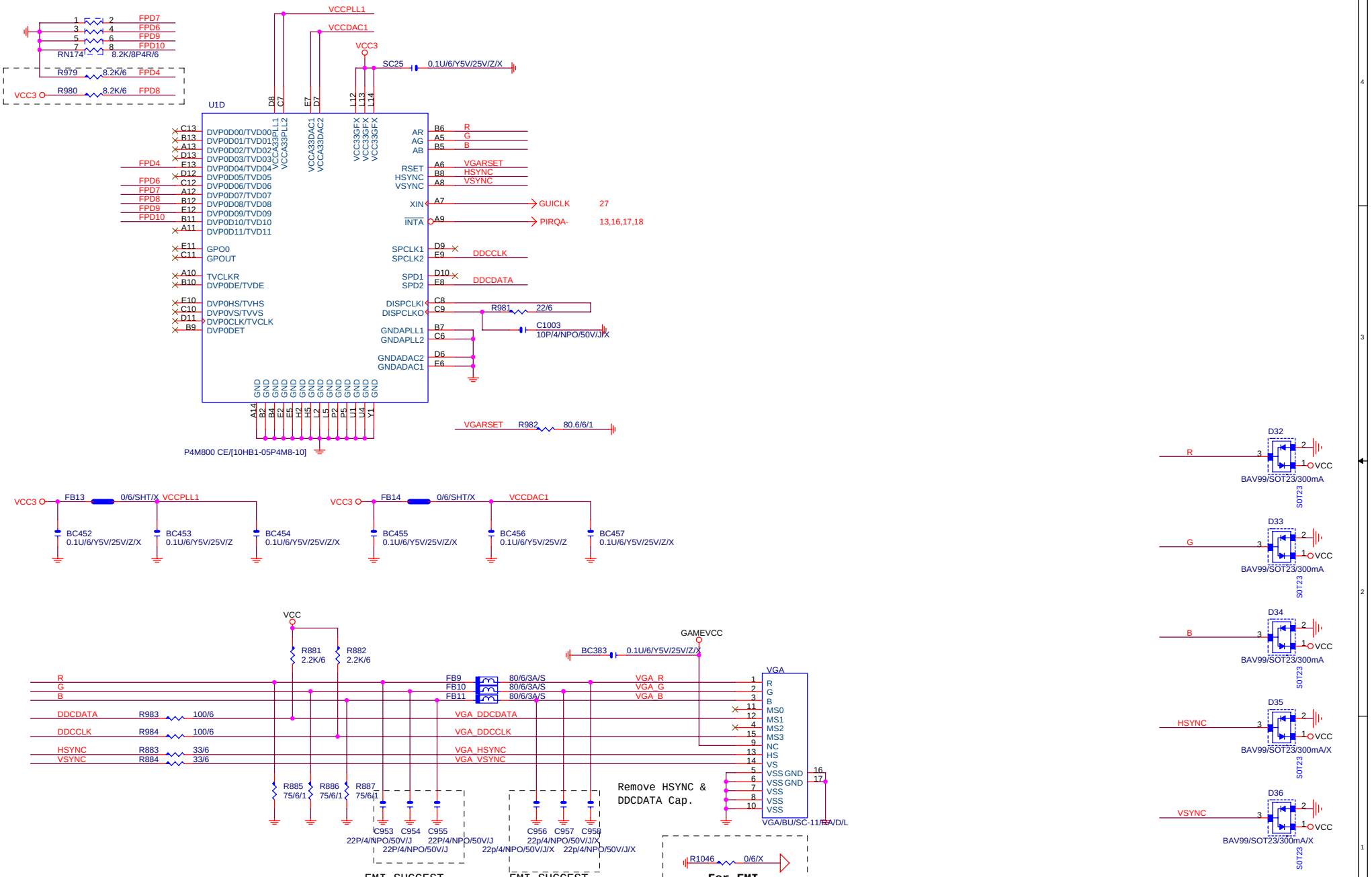
Size: Custom	Document Number: 8VM800M	Rev: 1.01
Date: Thursday, November 03, 2005	Sheet 9 of 32	



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Title	P4M800_4_VGA	
Size C	Document Number 8VM800M	Rev 1.01
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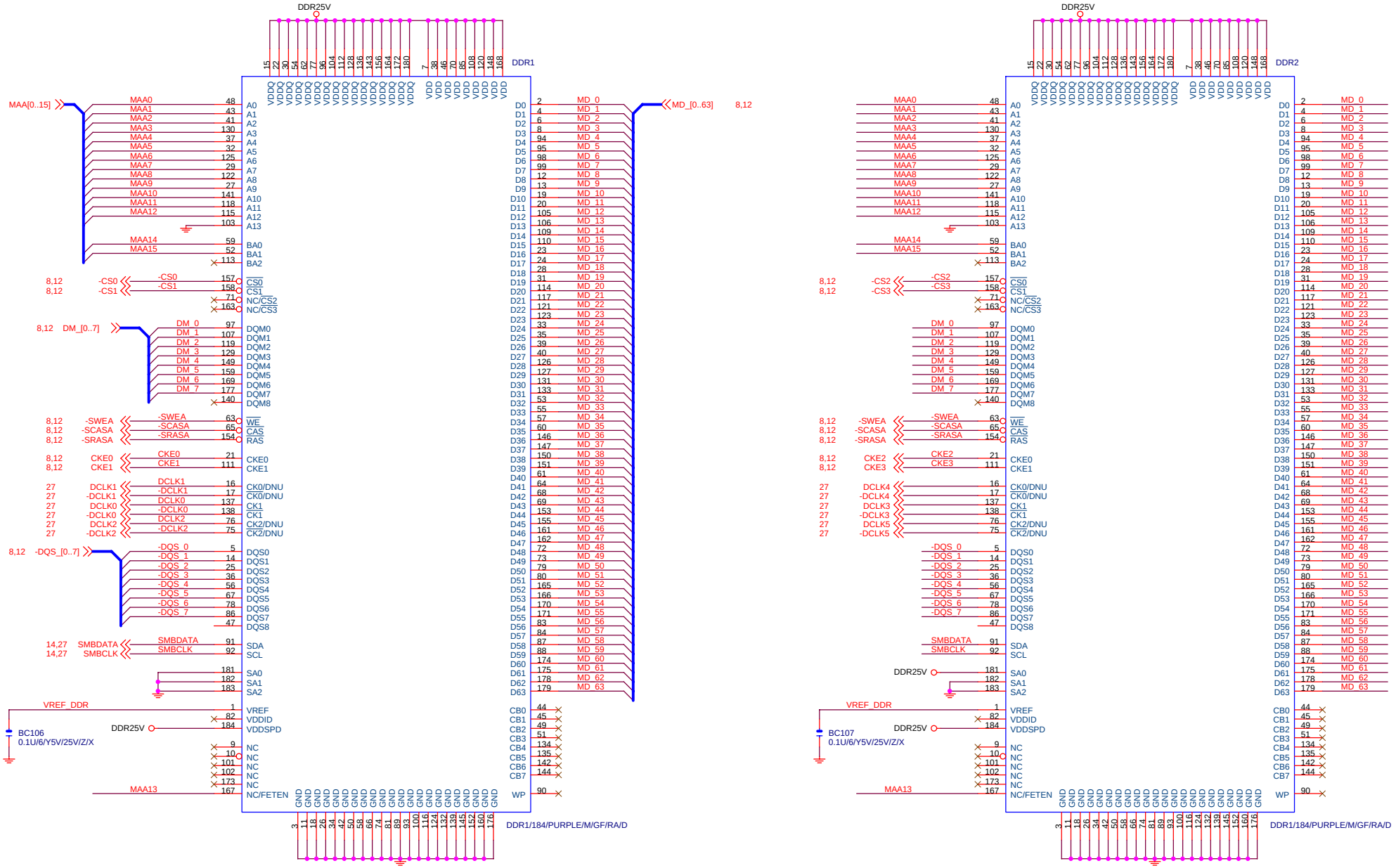

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Title	DDR1,2	
Size B	Document Number 8VM800M	Rev 1.01
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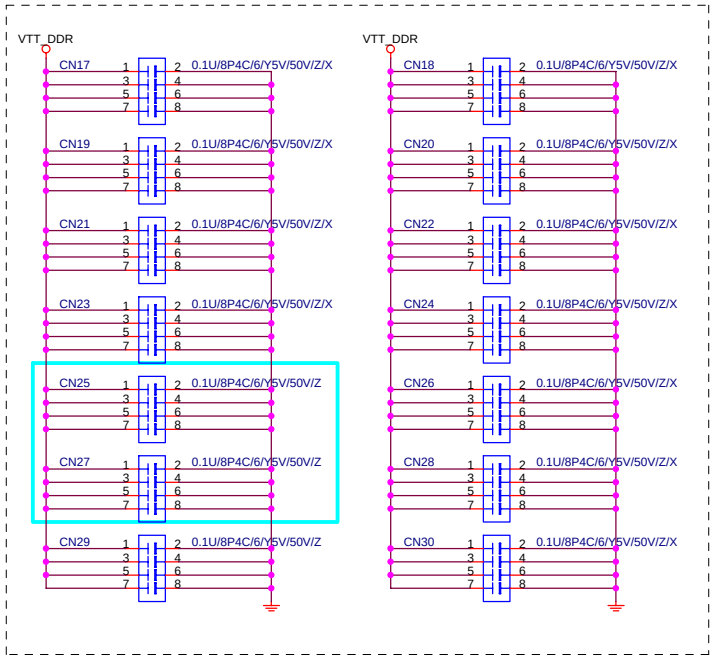

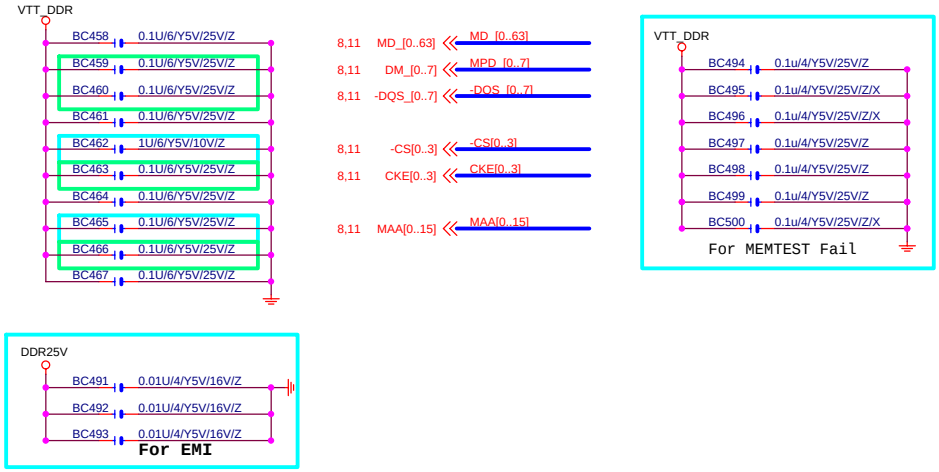

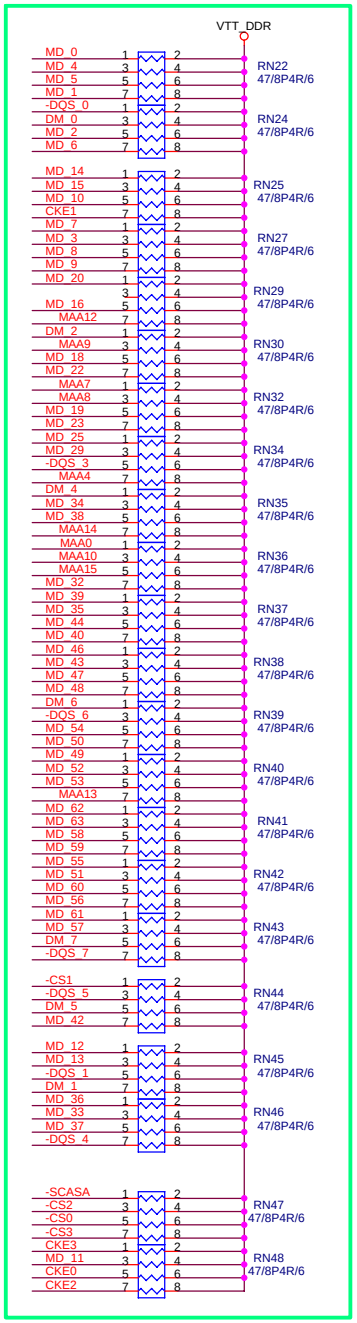

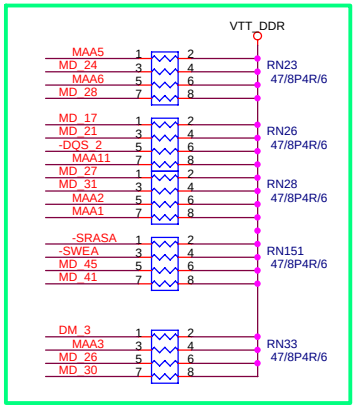

VIA recommend 33 ohm

8,11 -SRASA -SRASA
8,11 -SWEA -SWEA
8,11 -SCASA -SCASA

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Title	DDR TERM.	
Size B	Document Number 8VM800M	Rev 1.01
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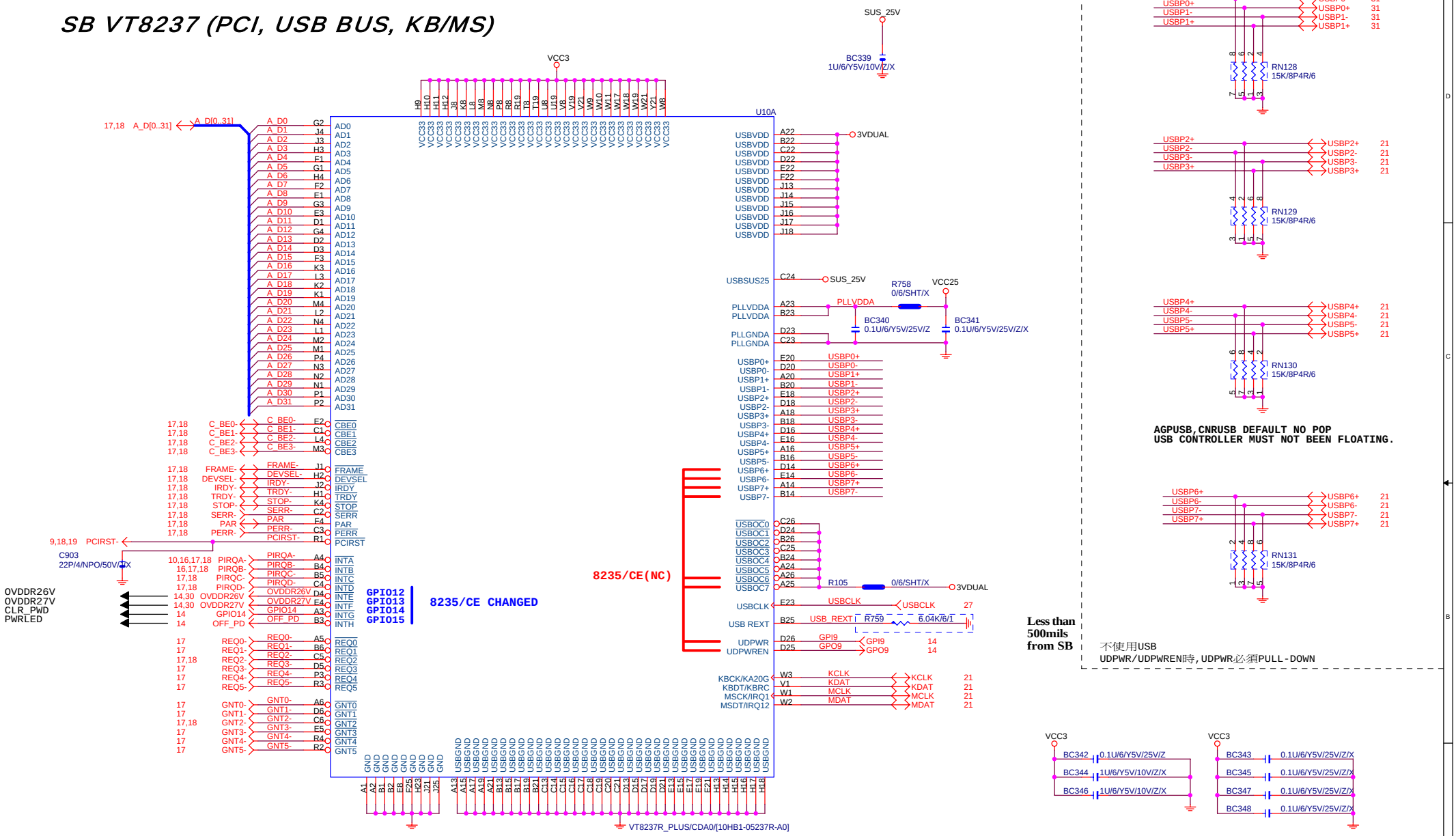
SB VT8237 (PCI, USB BUS, KB/MS)



GIGABYTE		
Title	8237R+(PCI, USB BUS, KB/MS)	
Size B	Document Number 8VM800M	Rev 1.01
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SB VT8237 (SATA,IDE, AC97, POWER MANAGEMENT, PGIO)

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

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

GPIOB
0--->IOQ=12
1--->IOQ=1

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

8235/CE CHANGED SA17 SA18 SA16 SA19

8235/CE(NC)

Width & Space --> 20:5:7:5:20

CLOSE SATA Connector

GPIO ID SETTING

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

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

ELIMINATE LAN EEPROM
SEEDI:1/0:ENABLE/DISABLE 8237/CD

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

SXI: 0/1 DISABLE/ENABLE LPC ROM(FOR 8235)

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

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

ELIMINATE LAN EEPROM
-SDCS1:0/1:ENABLE/DISABLE

ELIMINATE LAN EEPROM
SEEDI:1/0:ENABLE/DISABLE

For 8235CE
SDA0 => GTL Driving Strength
SDA1 => GTL Driving Strength
SDA2 => ROMSIP 0=Disable

For 8237 CD
PDA0 => GTL Driving Strength
PDA1 => GTL Driving Strength
PDA2 => ROMSIP 0=Disable

HT Support 1=Enable

SPKR: 0/1 ENABLE/DISABLE CPU FREQ STRAPPING

Title	8237R+ (SATA,IDE, AC97, POWER , GPIO)
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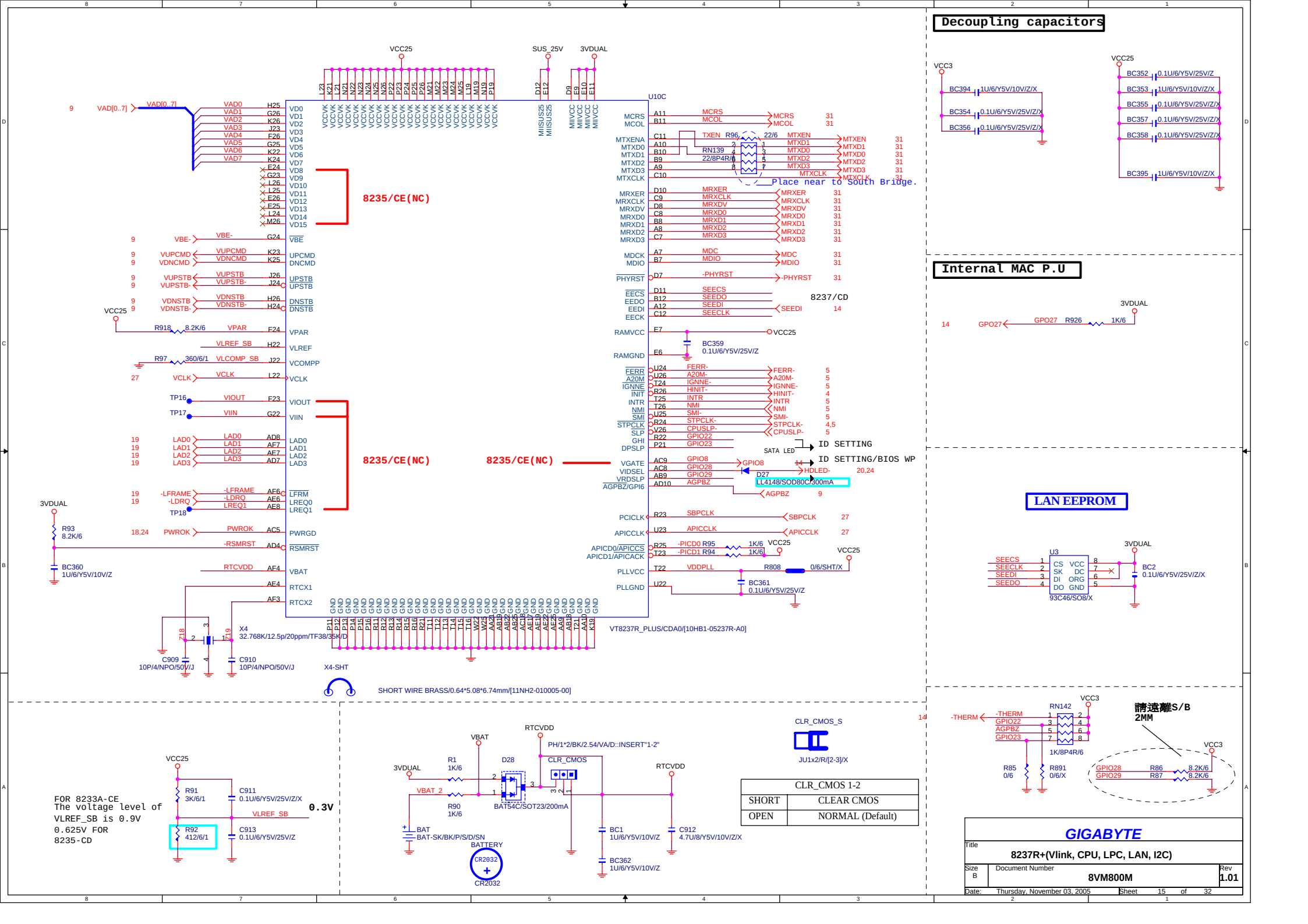
Decoupling capacitors
Internal MAC P.U
LAN EEPROM
8235/CE(NC)
8235/CE(NC)
8235/CE(NC)
8237/CD
Place near to South Bridge.
ID SETTING
ID SETTING/BIOS WP
VT8237R_PLUS/CDA0/[10HB1-05237R-A0]
X4 32.768K/12.5p/20ppm/TF38/35K/D
X4-SHT
SHORT WIRE BRASS/0.64*5.08*6.74mm/[11NH2-010005-00]
FOR 8233A-CE
The voltage level of
VLREF_SB is 0.9V
0.625V FOR
8235-CD
0.3V
CLR_CMOS 1-2
SHORT CLEAR CMOS
OPEN NORMAL (Default)
請遠離S/B 2MM
GIGABYTE
8237R+(Vlink, CPU, LPC, LAN, I2C)
8VM800M
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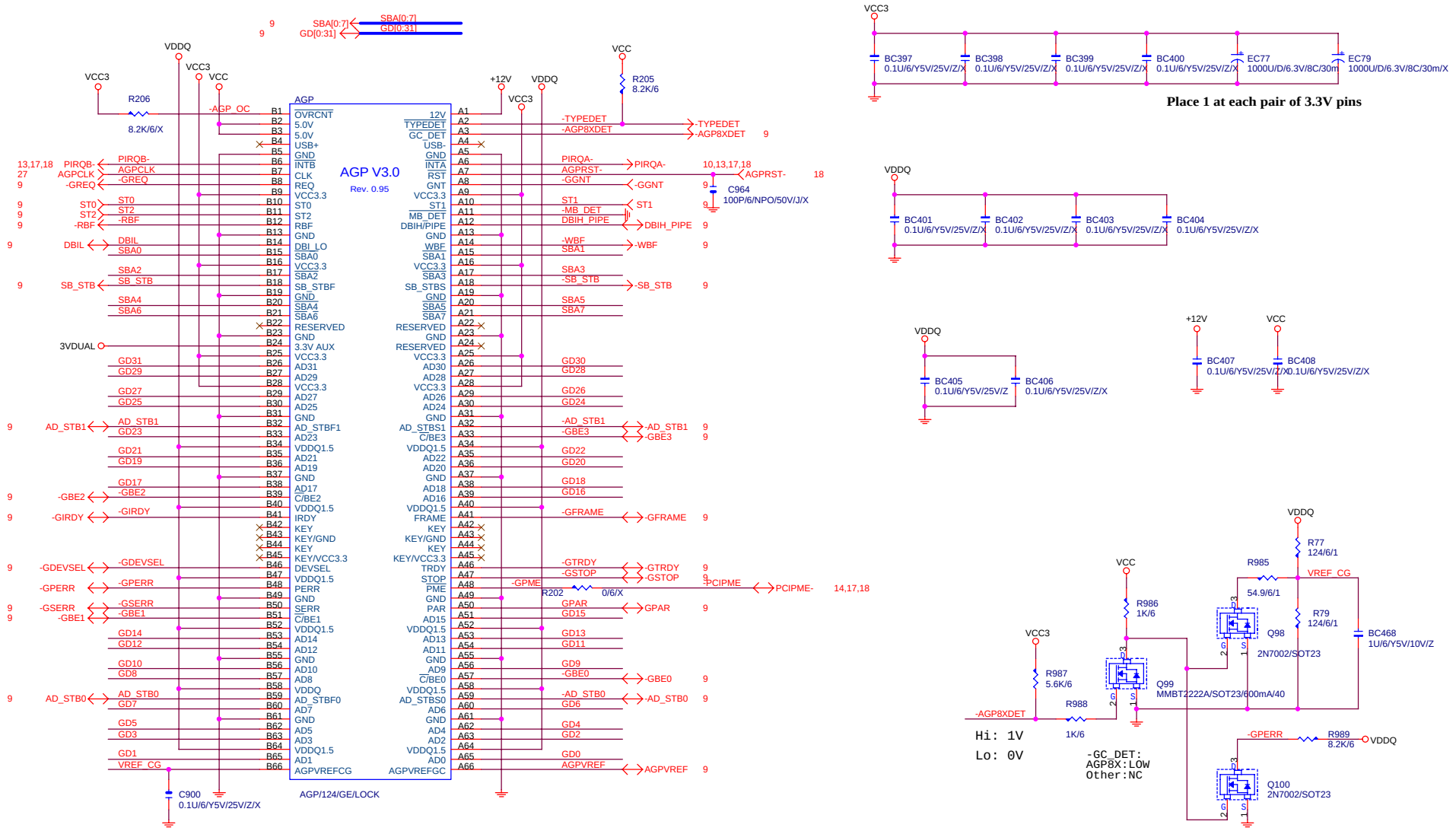

GIGABYTE		
Title	AGP SLOT	
Size B	Document Number 8VM800M	Rev 1.01
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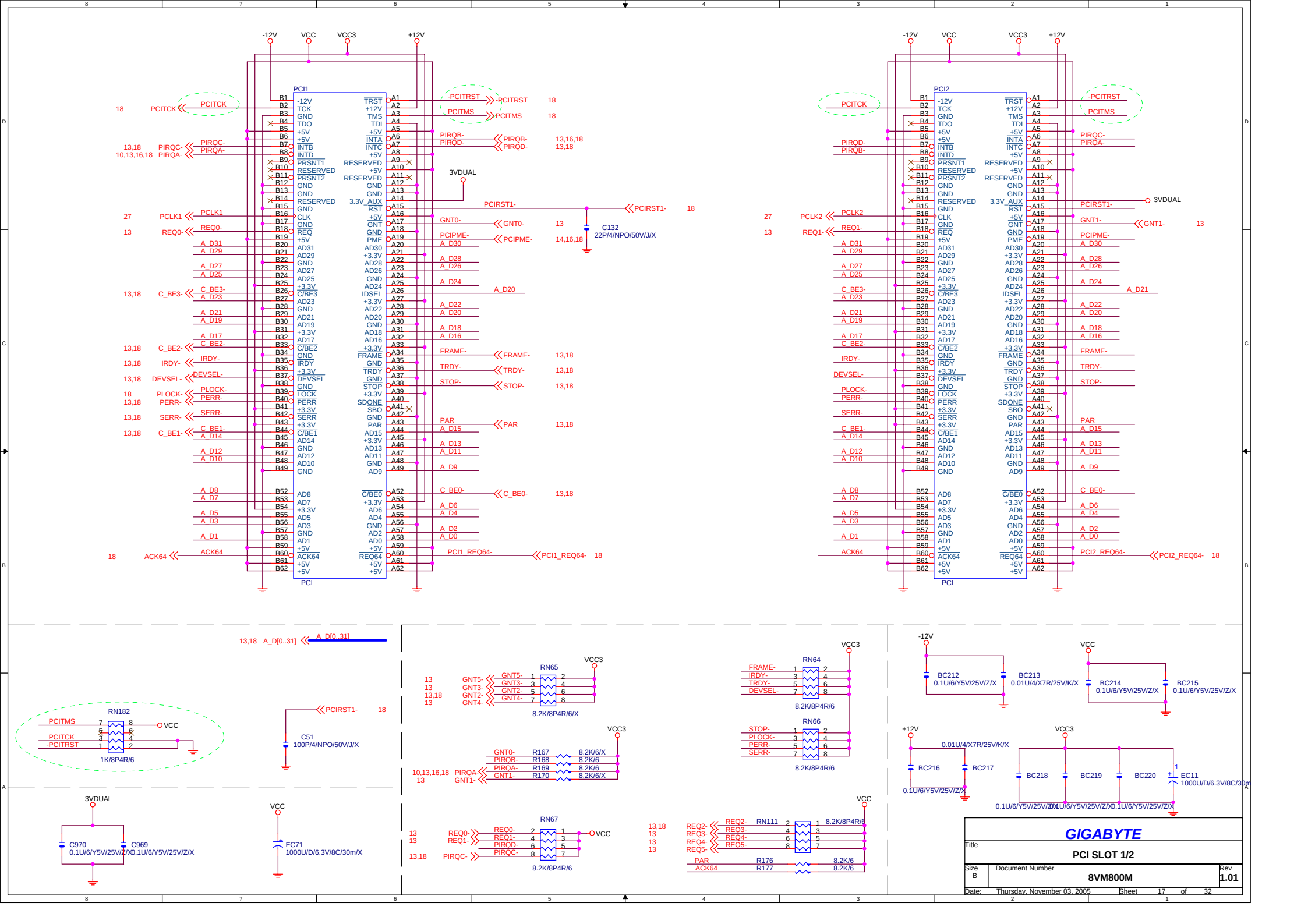
PCI1
PCI2
-12V
VCC
VCC3
+12V
3VDUAL
PCITCK
-PCITRST
PCITMS
PIRQB-
PIRQD-
PIRQC-
PIRQA-
PCLK1
PCLK2
REQ0-
REQ1-
PCIRST1-
GNT0-
GNT1-
PCIPME-
A_D30
A_D20
FRAME-
TRDY-
STOP-
PAR
C_BE0-
PCI1_REQ64-
PCI2_REQ64-
ACK64
C132
22P/4/NPO/50V/J/X
A_D[0..31]
RN182
1K/8P4R/6
C51
100P/4/NPO/50V/J/X
RN65
RN64
RN66
RN67
8.2K/8P4R/6/X
8.2K/8P4R/6
R167
R168
R169
R170
8.2K/6/X
8.2K/6
R176
R177
RN111
BC212
0.1U/6/Y5V/25V/Z/X
BC213
0.01U/4/X7R/25V/K/X
BC214
BC215
BC216
BC217
BC218
BC219
BC220
EC11
1000U/D/6.3V/8C/30m/X
C970
C969
EC71
GIGABYTE
PCI SLOT 1/2
8VM800M
1.01
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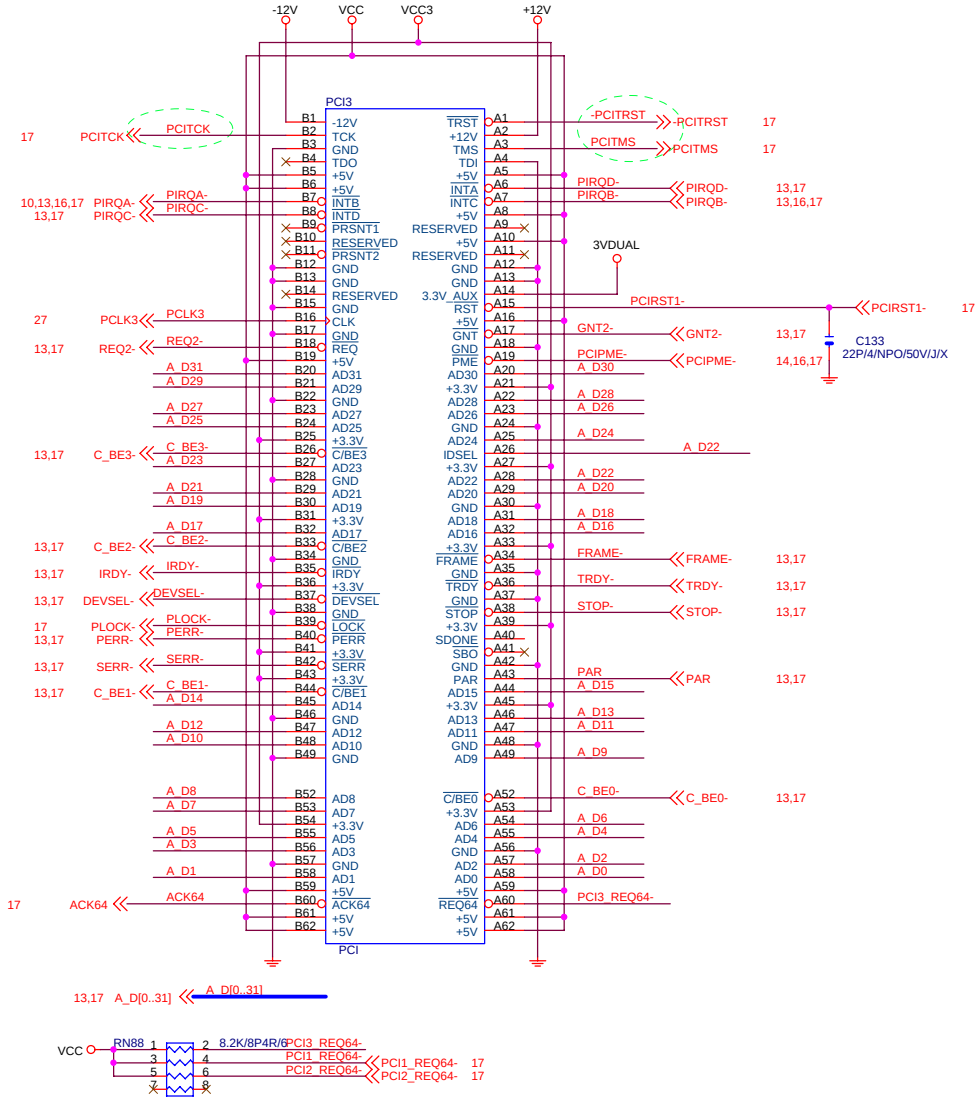
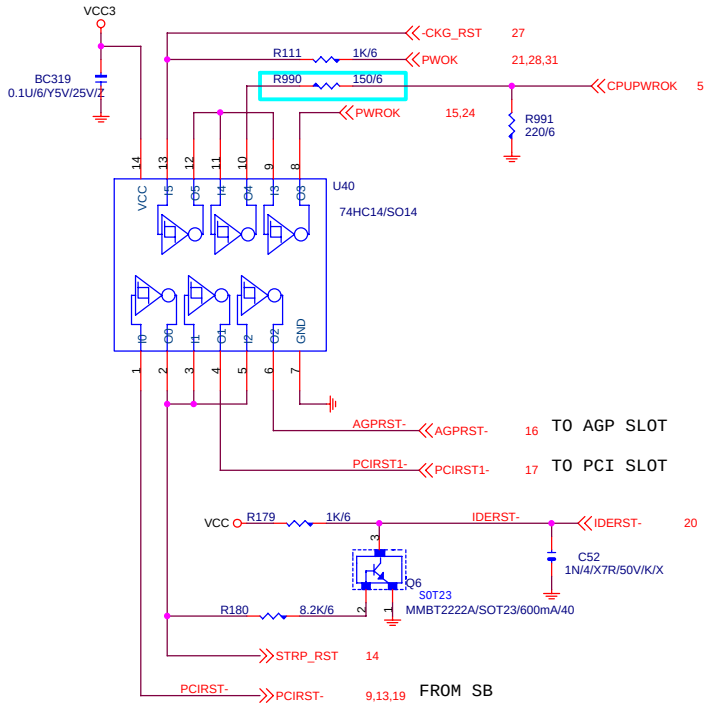
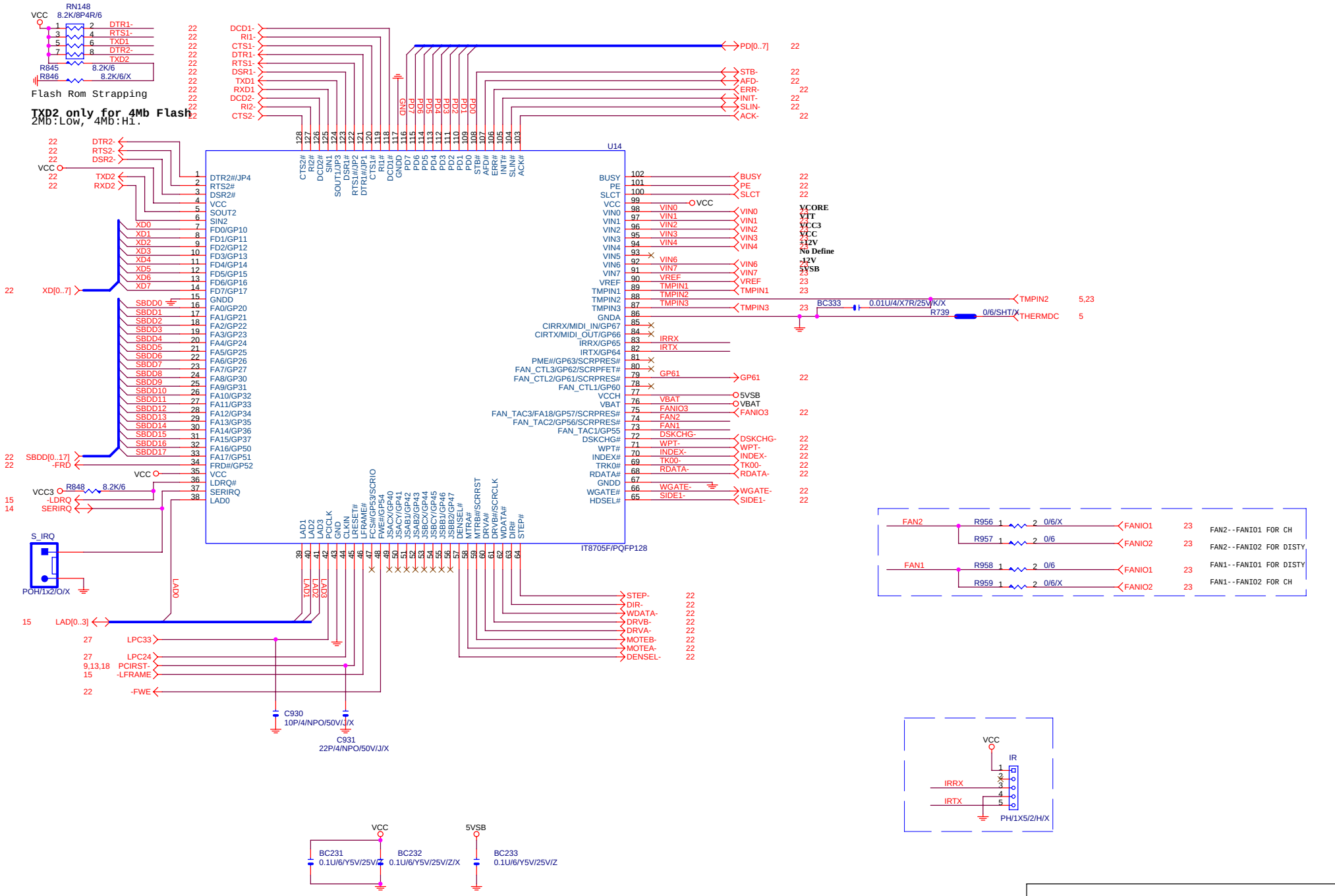
17
32

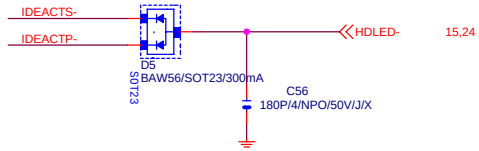


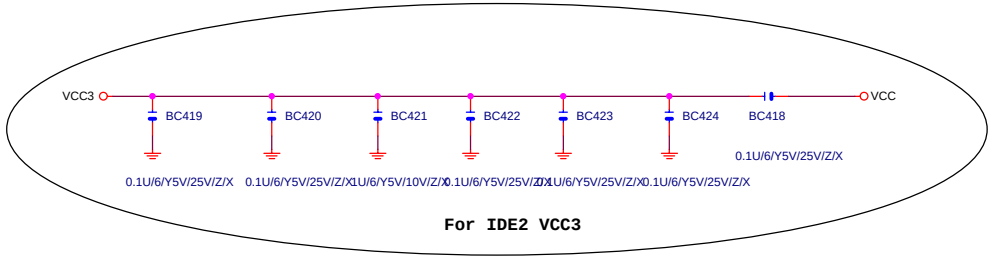


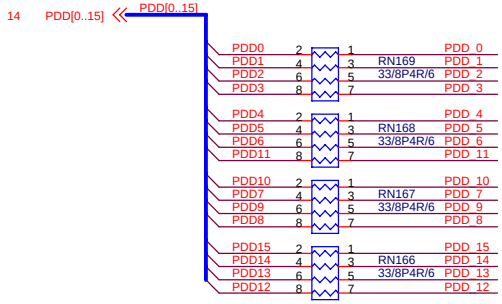
GIGABYTE			
Title	PCI SLOT 3		
Size B	Document Number 8VM800M		Rev 1.01
Date: Thursday, November 03, 2005	Sheet 18 of 32		

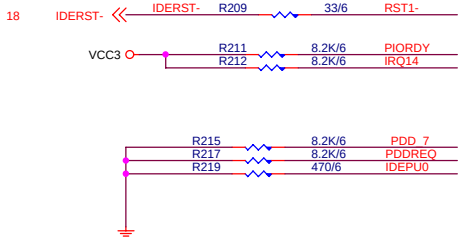


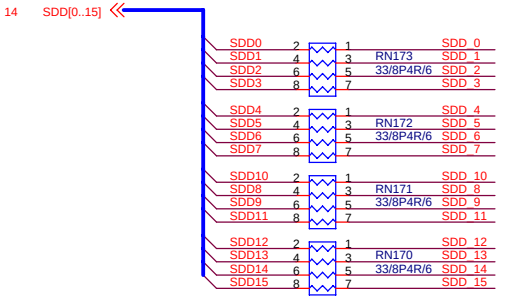
GIGABYTE			
Title	LPC I/O ITE 8705		
Size B	Document Number 8VM800M		Rev 1.01
Date: Thursday, November 03, 2005	Sheet 19 of 32		

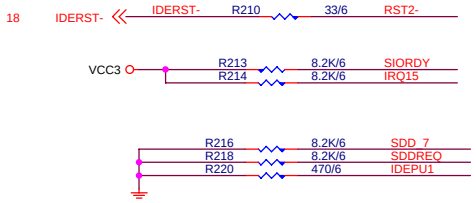




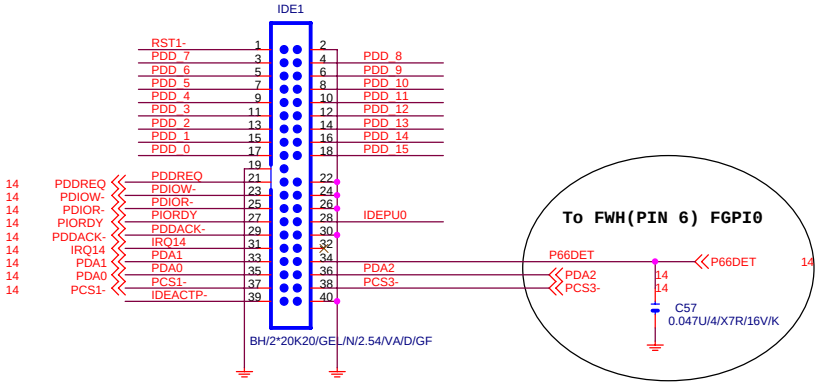




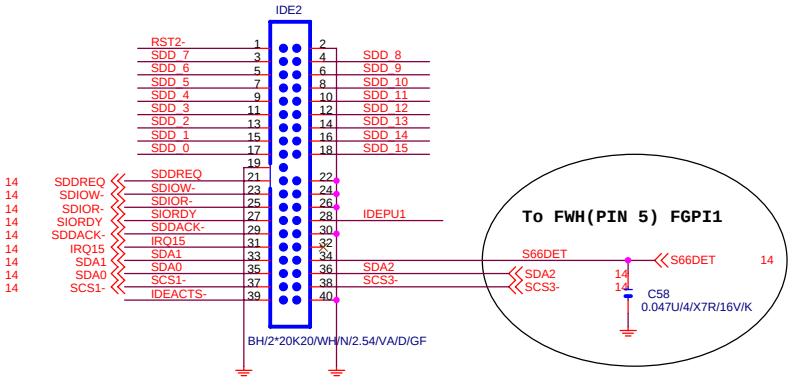




PRIMARY IDE CONNECTOR



SECONDARY IDE CONNECTOR



GIGABYTE

Title	IDE CONNECTOR	
Size B	Document Number 8VM800M	Rev 1.01
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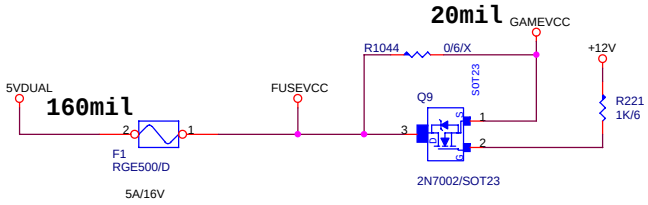
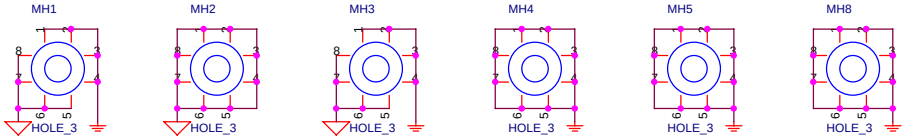
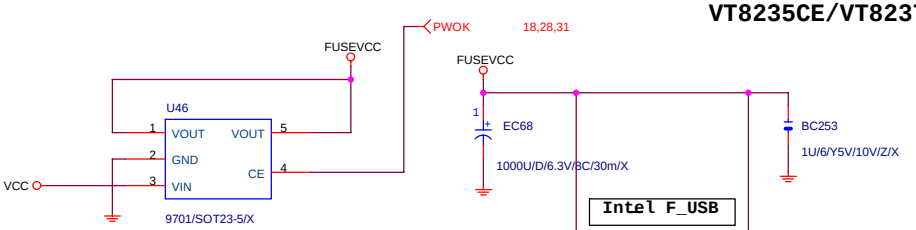
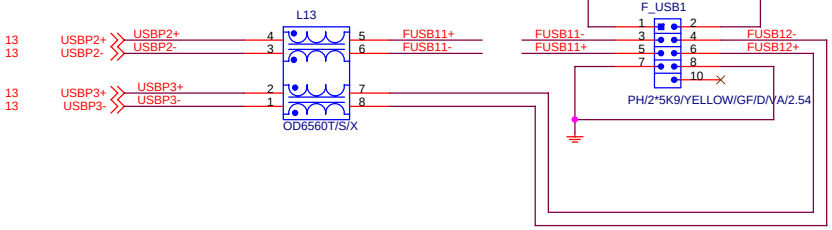


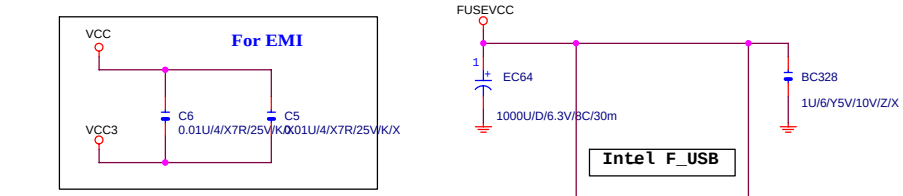


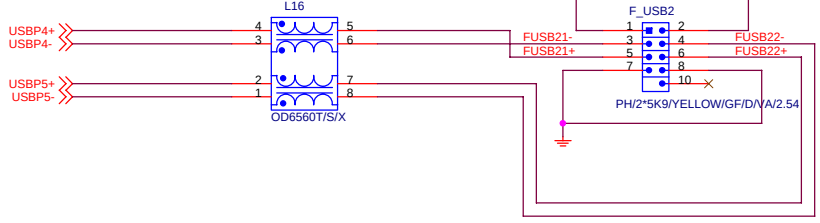
FRONT USB CONN

VT8235CE/VT8237 USB2.0



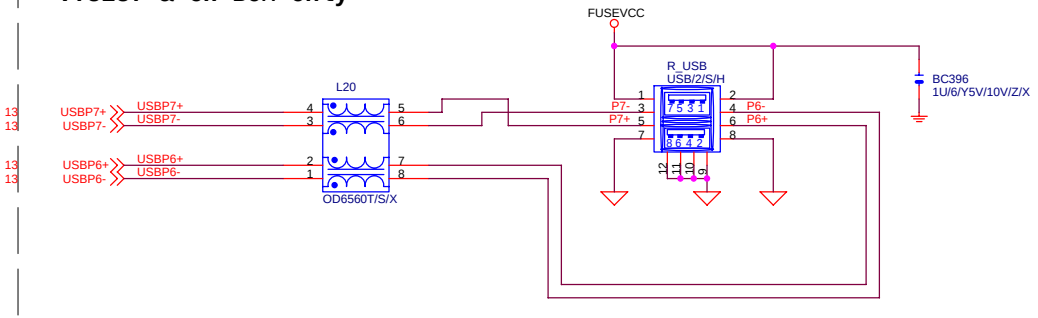


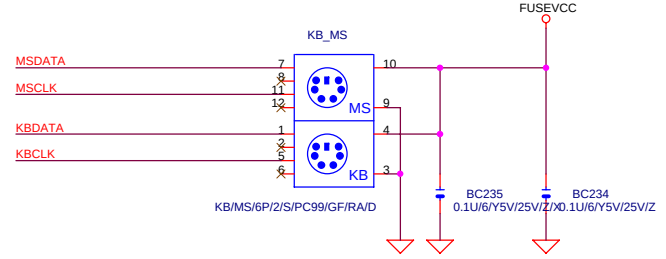


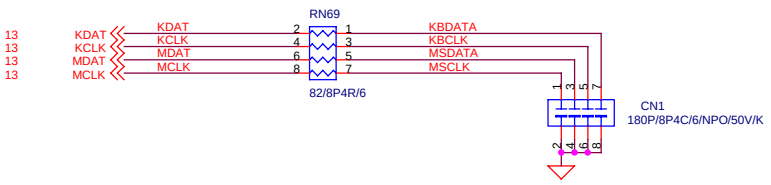


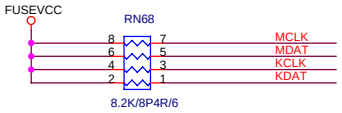
REAR USB CONN

VT8237 & CH BOM Only









GIGABYTE

Title: KB & PS2 MOUSE & IR

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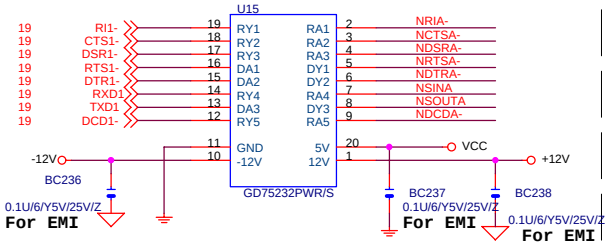
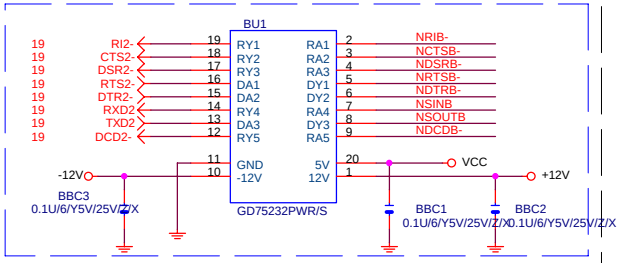
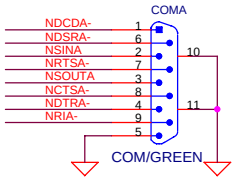
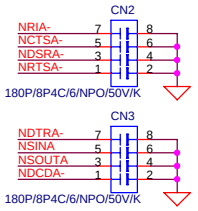
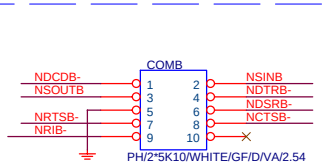
COMA

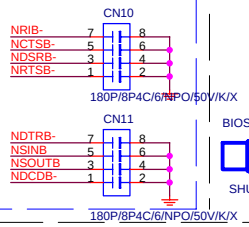




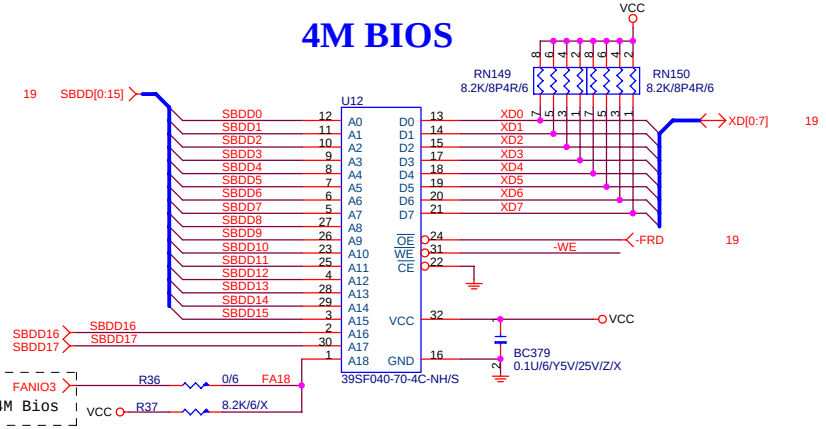






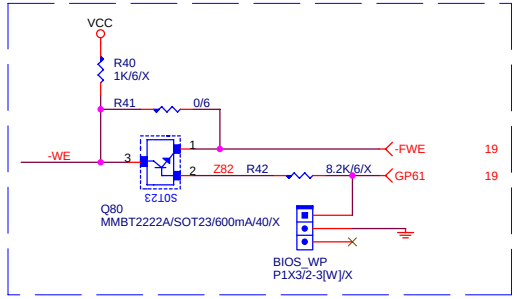


4M BIOS

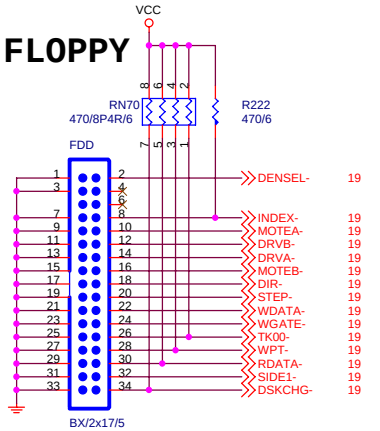


BIOS_WP: BIOS WRITE PROTECT

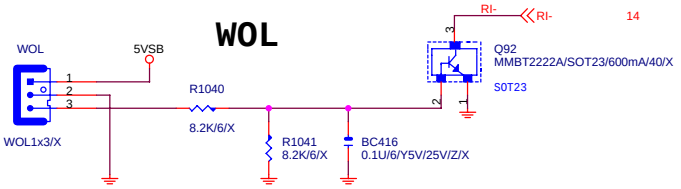
PIN	BIOS_WP	
1-2	WRITE PROTECT	
2-3	WRITE ENABLE	(default)

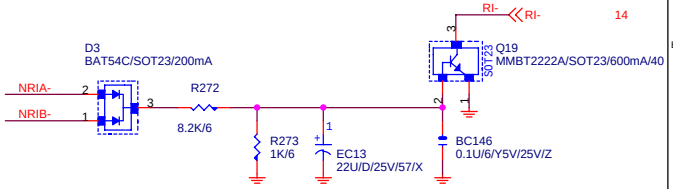


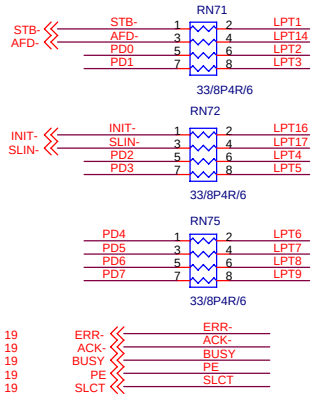
FLOPPY

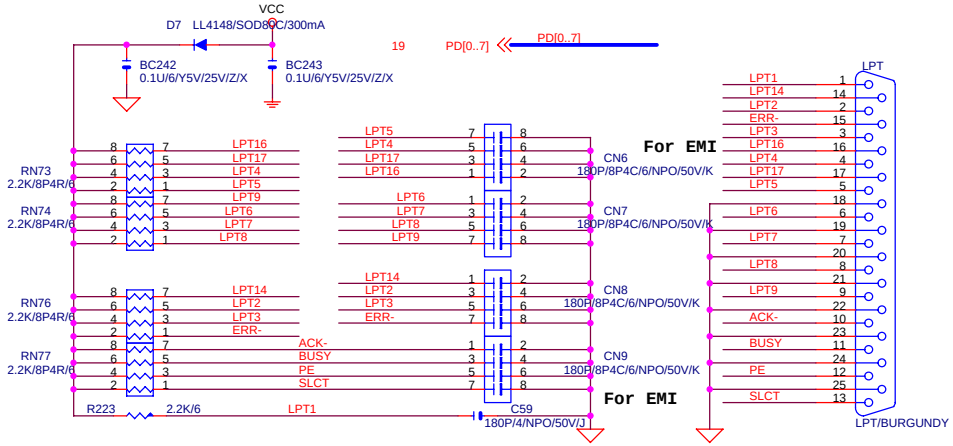


WOL









GIGABYTE			
Title	BIOS, COM, WOR, WOL, LPT, FDD		
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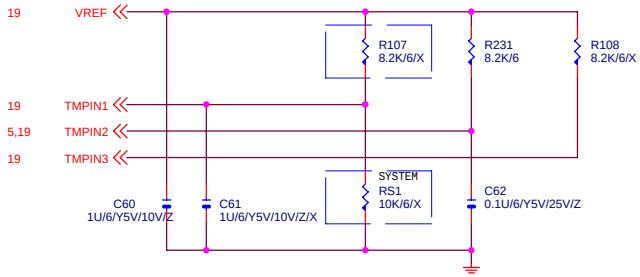
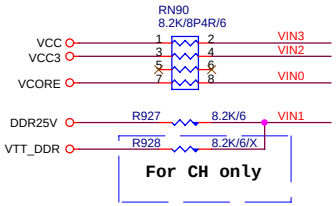
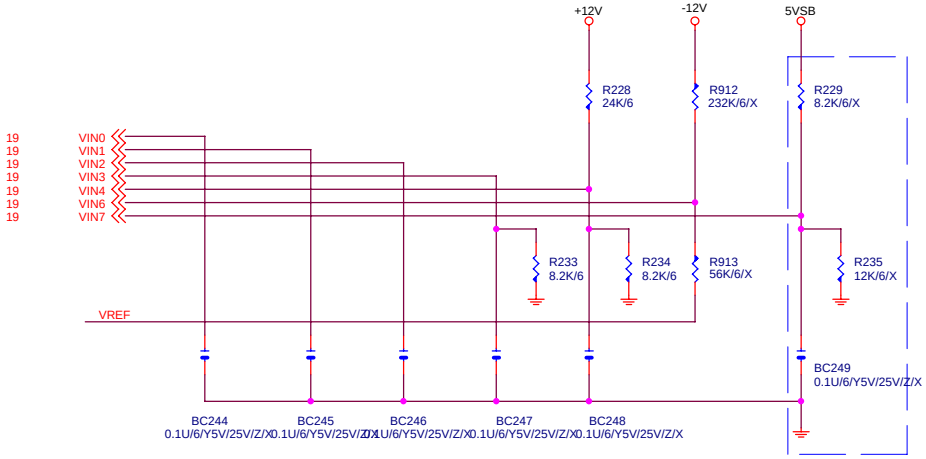
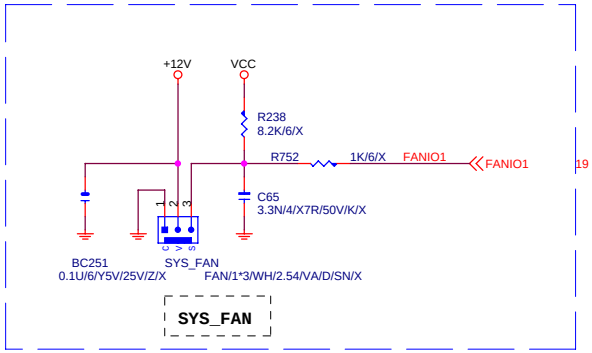
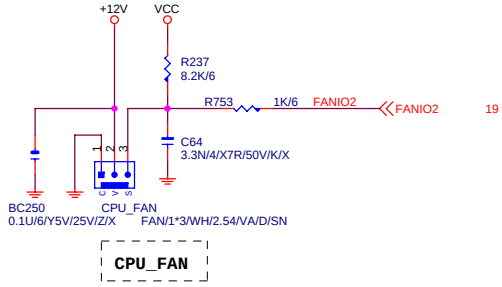
Hardware Monitor circuits











GIGABYTE		
Title: FAN/ HW MONITOR		
Size: B	Document Number: 8VM800M	Rev: 1.01
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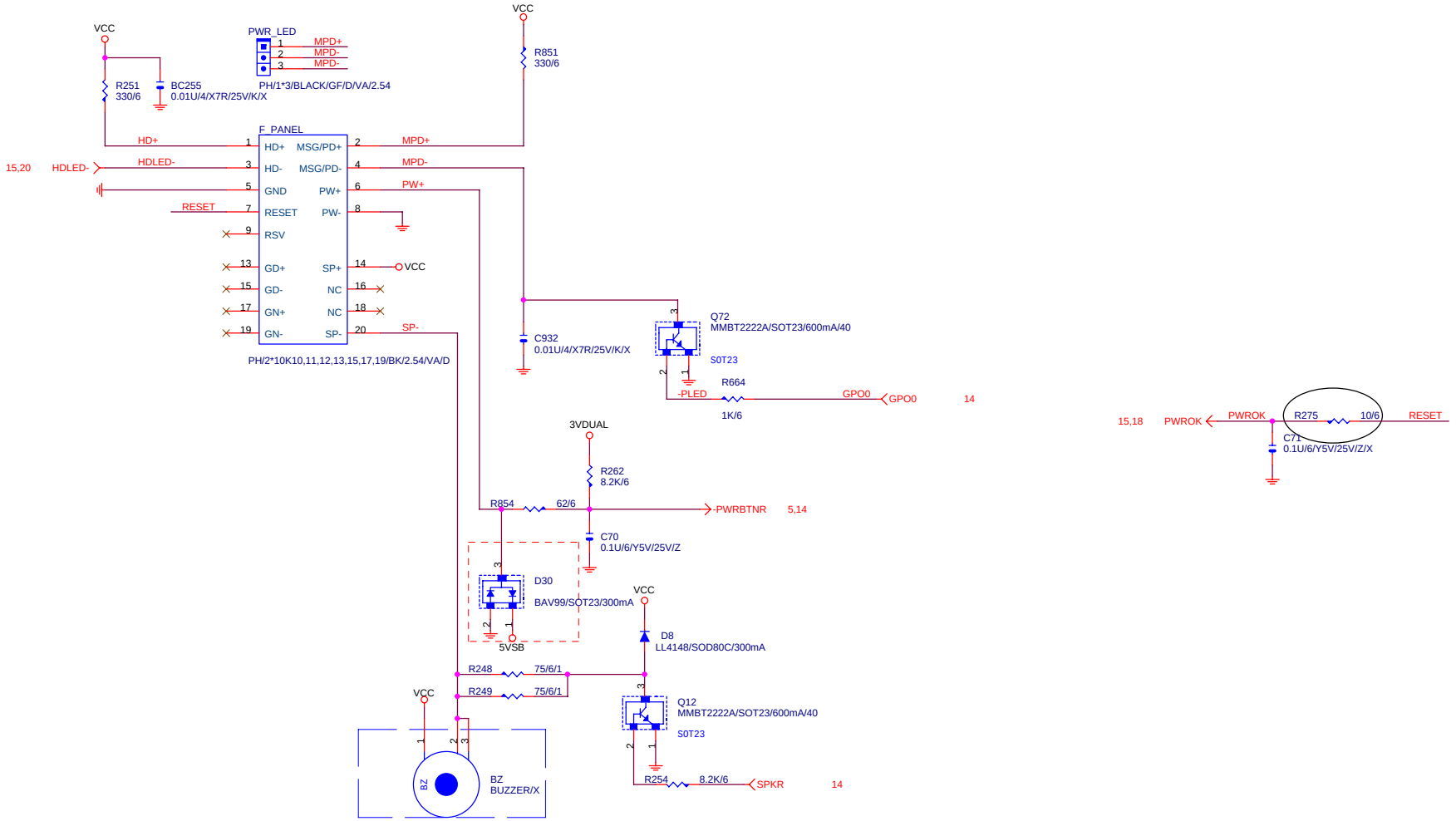

States for a single-color power LED

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

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

(GPO28 DEFAULT HIGH, RESUME WELL)

States for green LED

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

GIGABYTE

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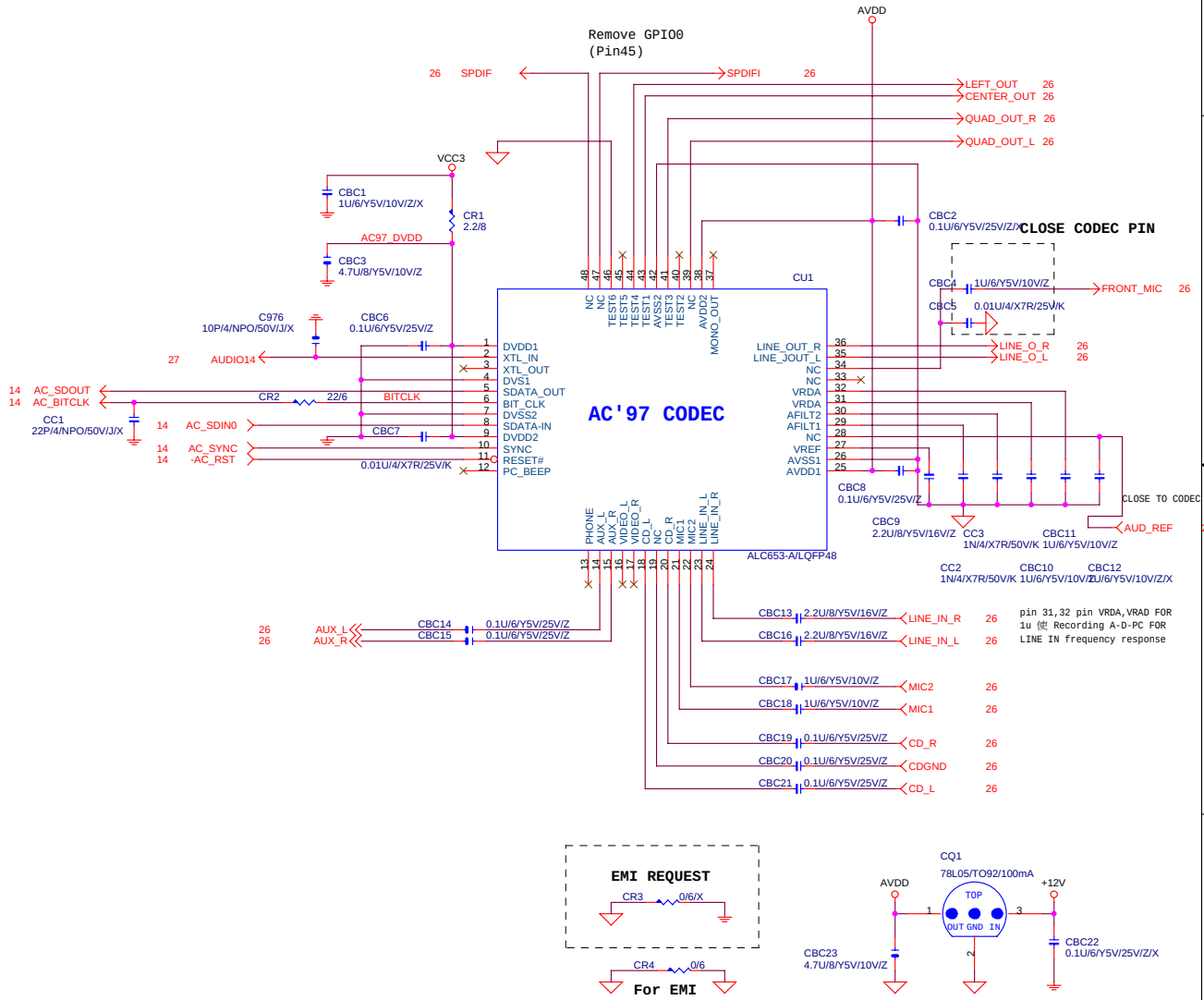

GIGABYTE		
Title: AUDIO (ALC655)		
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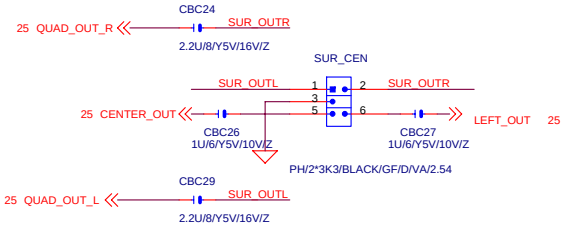
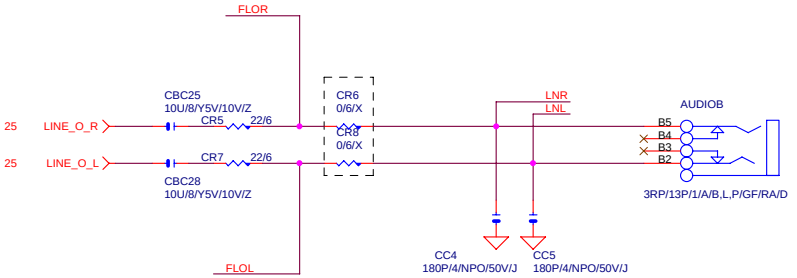
SUR_CEN

FOR SUPPORT 6 CHANNEL, SURROUND OUT

CENTER OUT,LOW FREQUENCY EFFECT OUT

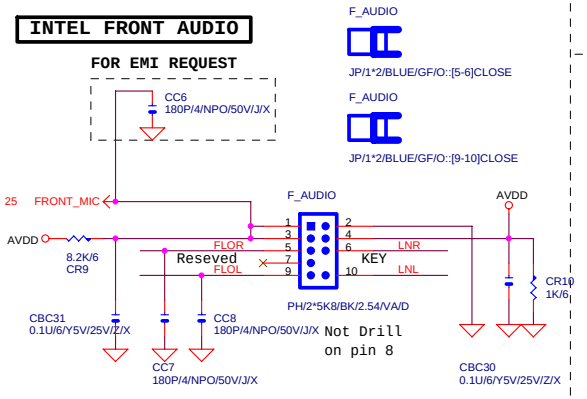


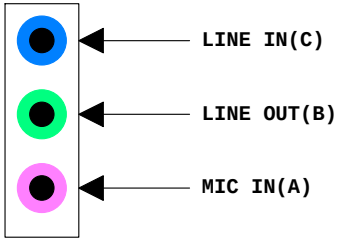
LINE OUT



INTEL FRONT AUDIO

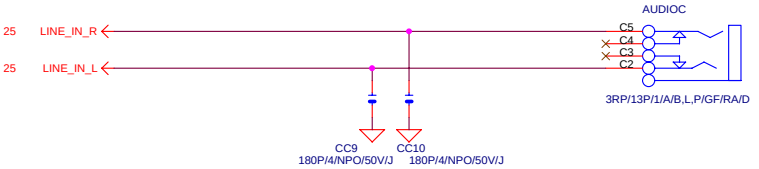
FOR EMI REQUEST



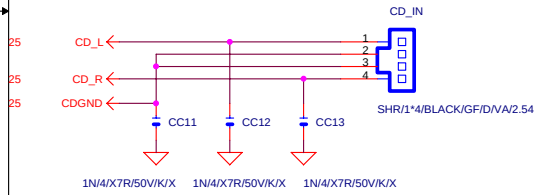


AUDIO PANEL

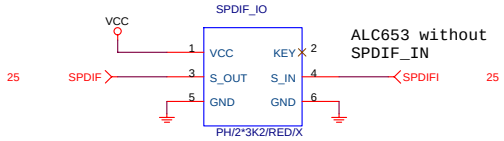
LINE-IN



CD IN

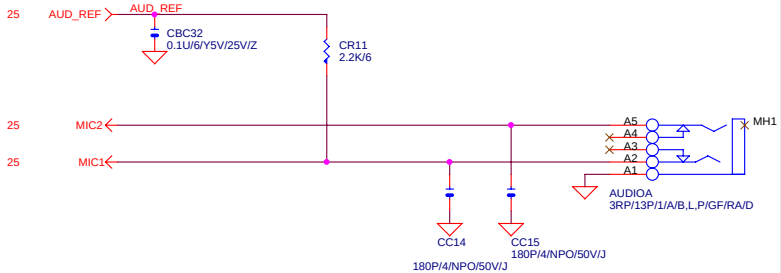


SPDIF_IO

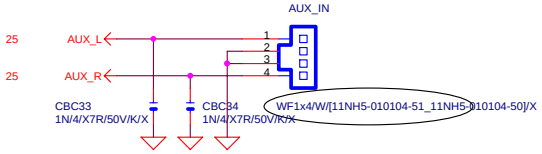


ALC653 without SPDIF_IN

MIC



AUX IN



GIGABYTE

Title	AUDIO OUTPUT	
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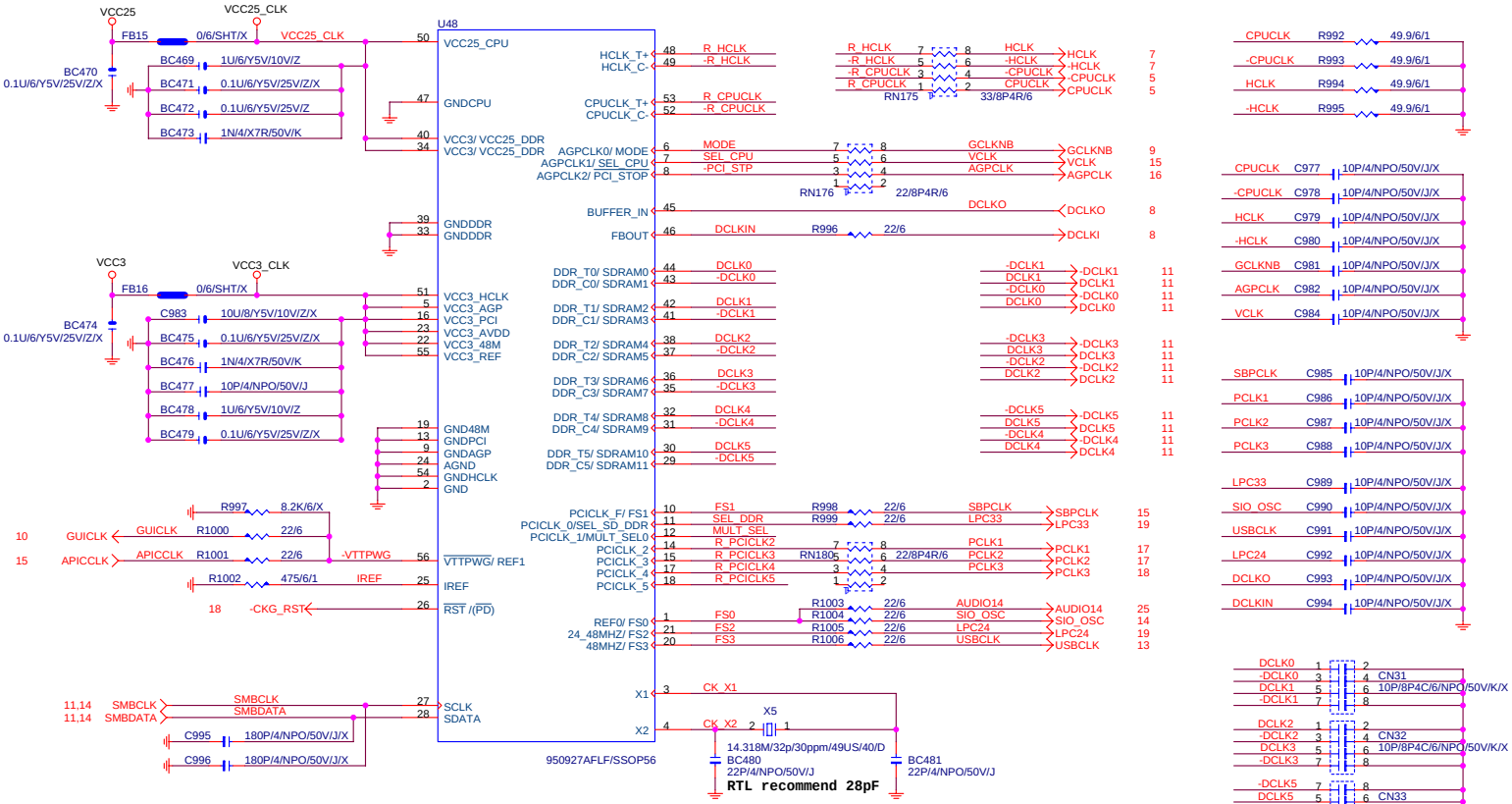
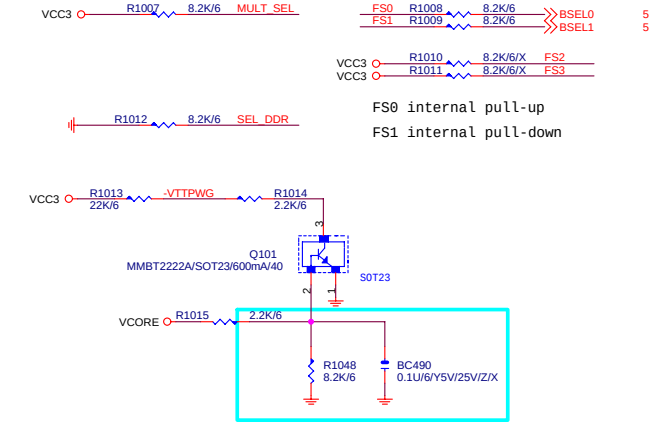
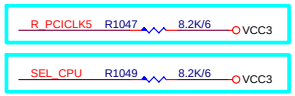
CLOCK GENERATOR





Frequency table for RTM 862-520 (P4: 478 Pin)

FS3	FS2	FS1	FS0	CPUCLK	AGPCLK	
1	1	0	0	100.00	66.67	33.33
1	1	0	1	133.30	66.67	33.33
1	1	1	0	200.00	66.67	33.33
1	1	0	0	266.00	66.67	33.33



GIGABYTE

Title	CLOCK GENERATOR	
Size: Custom	Document Number: 8VM800M	Rev: 1.01
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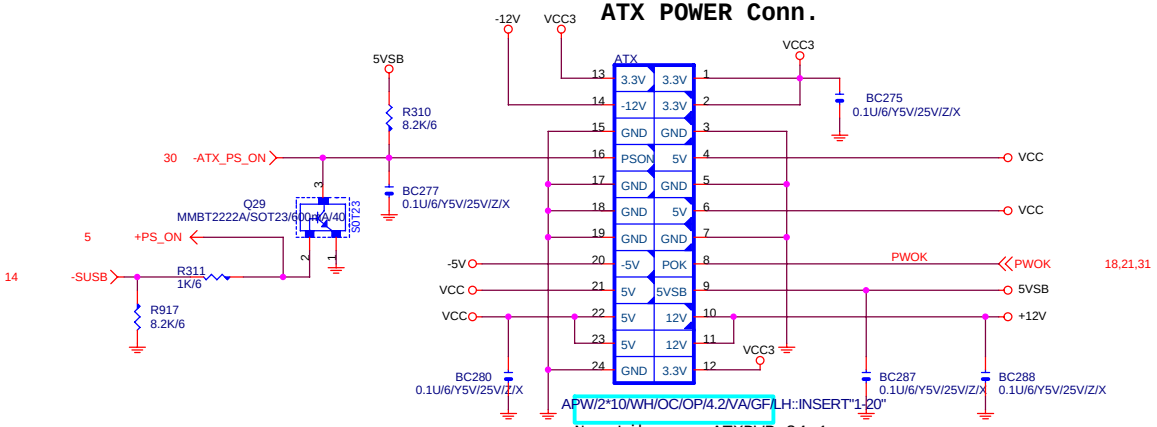
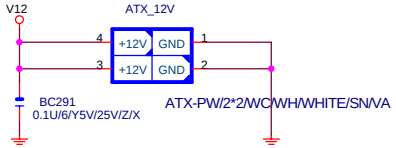
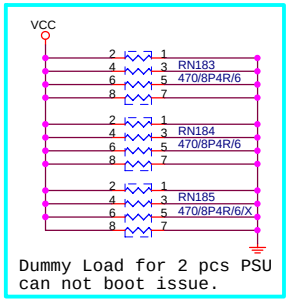
ATX POWER Conn.



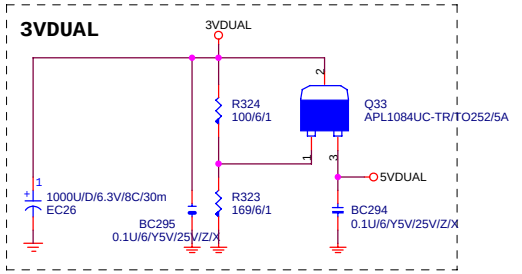
New Library: ATXPWR_24-1

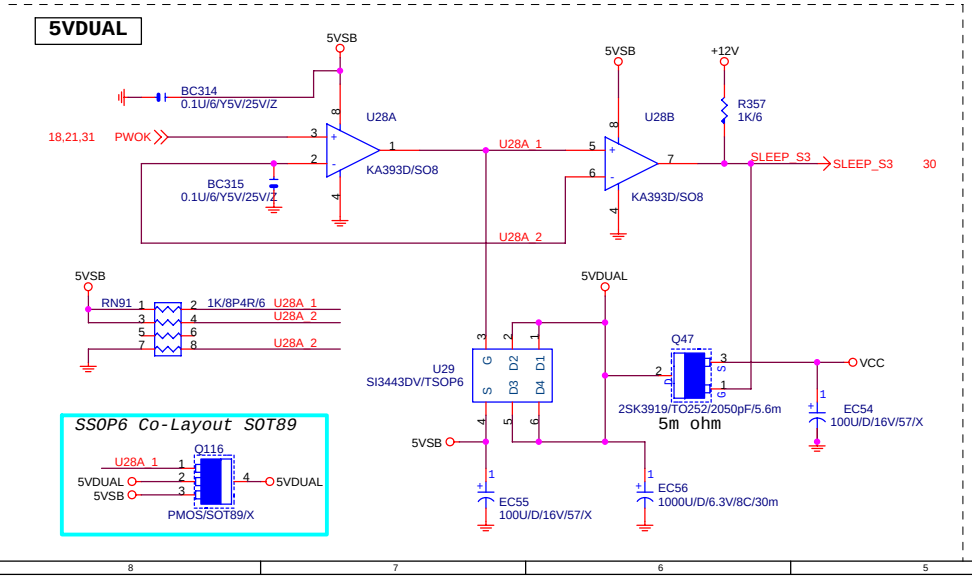
ATX_2x10/11NH4-020020-31_33/Insert1-20





Dummy Load for 2 pcs PSU
can not boot issue.





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Title	Misc. PWR & ATX CONN.	
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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%)

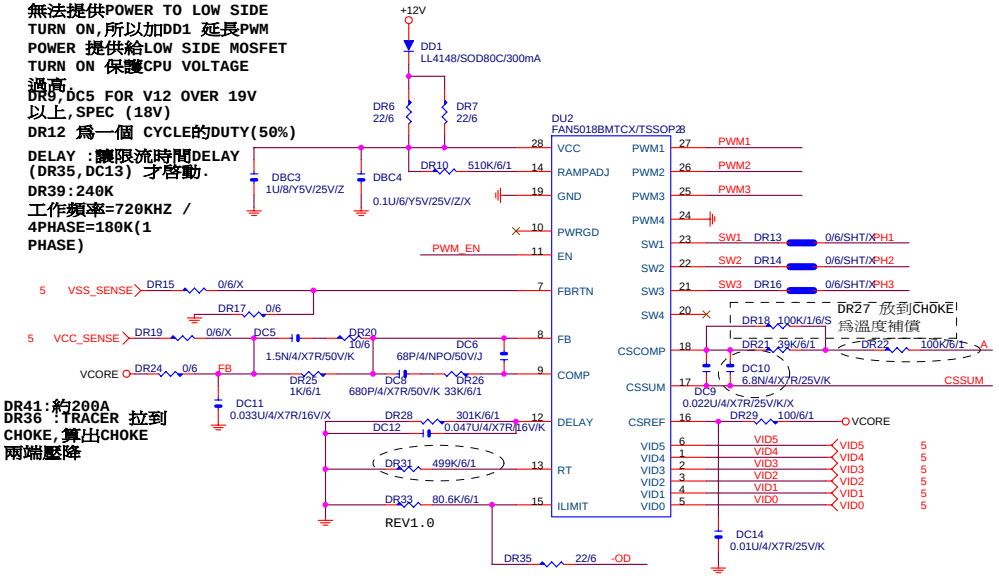
DELAY :讓限流時間DELAY (DR35,DC13) 才啓動.

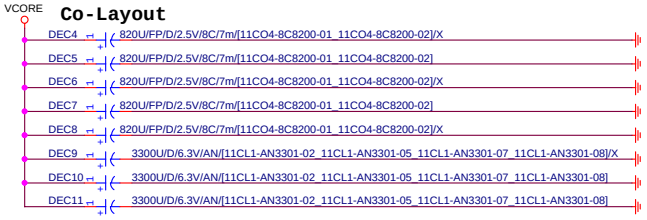
DR39:240K

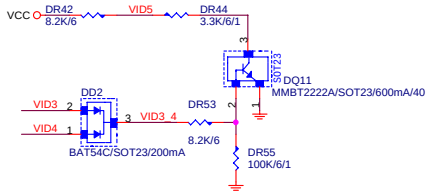
工作頻率=720KHZ / 4PHASE=180K(1 PHASE)

DR41:約200A

DR36 :TRACER 拉到 CHOKE,算出CHOKE 兩端壓降

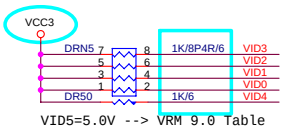






	VID3+VID4	BOOTSEL
Willamette	0	0
Northwood	1	0
Prescott	1	1

FAN5018B VID[0..4] internal pull-up

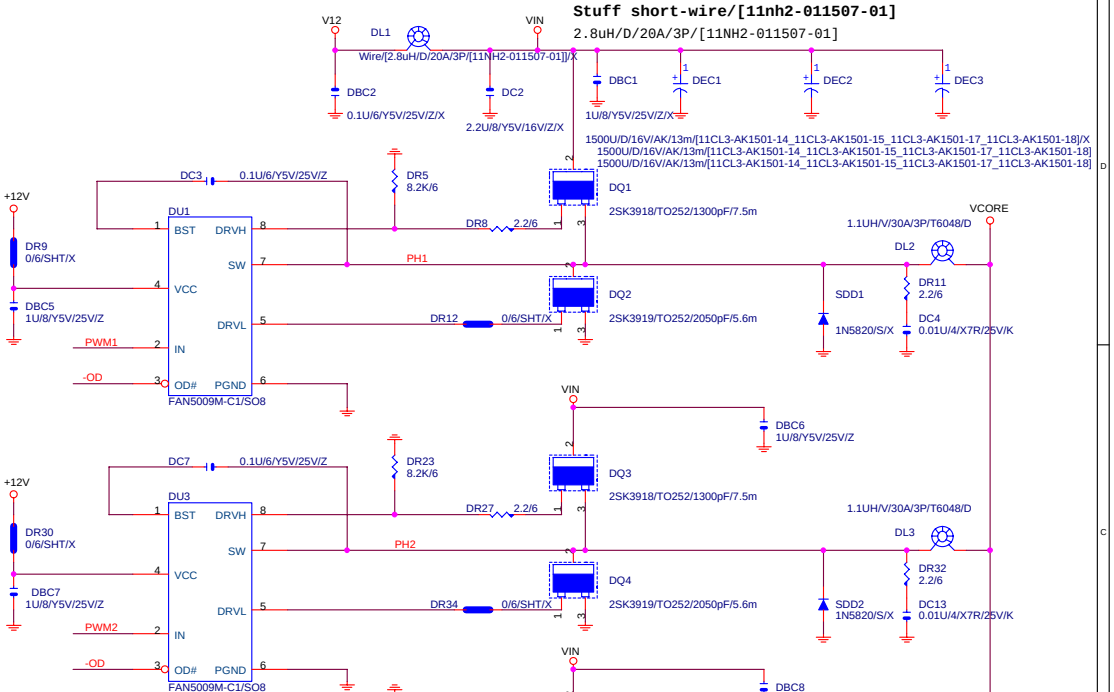


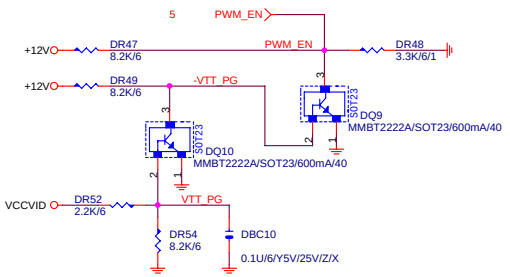
VID5=5.0V --> VRM 9.0 Table

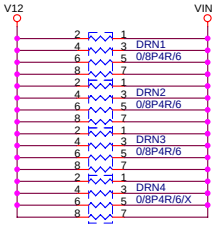
VID5=1.2V --> VRD 10 Table

Stuff short-wire/[11nh2-011507-01]

2.8uH/D/20A/3P/[11NH2-011507-01]







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Title: VRD 10.1

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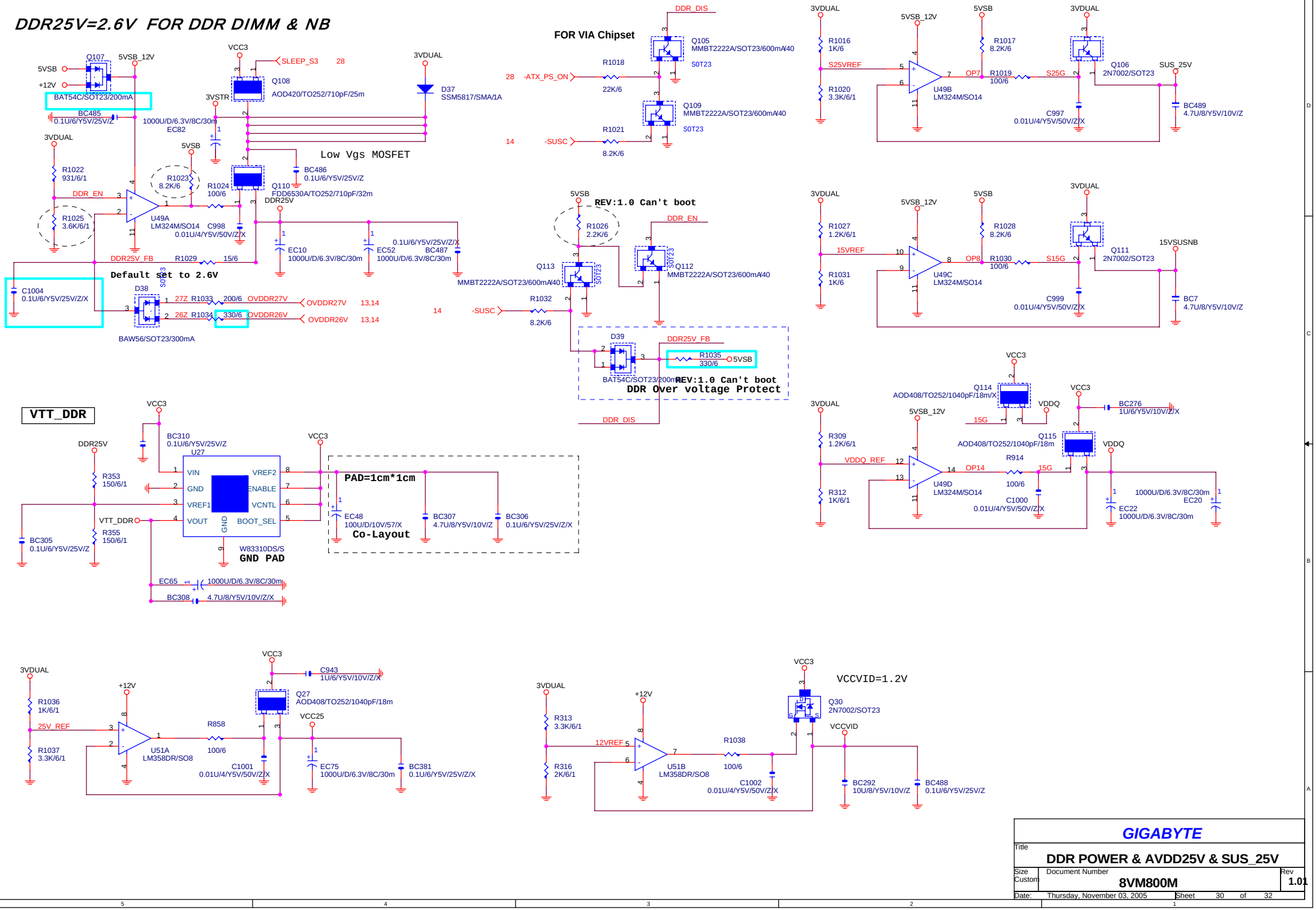
DDR25V=2.6V FOR DDR DIMM & NB



MDIO nvidia recommend
pull-up to VCC3

VCC3 — LR1 1K/6/X
AVDD33 — LR2 1K/6

LU1

RTL8201

15 MDC — MDC
15 MDIO — MDIO
15 MTXD0 — MTXD0
15 MTXD1 — MTXD1
15 MTXD2 — MTXD2
15 MTXD3 — MTXD3
15 MTXEN — MTXEN
15 MTXCLK — LR3 22/6 TXCK — TXC
15 MRXDV — MRXDV
15 MRXD0 — MRXD0
15 MRXD1 — MRXD1
15 MRXD2 — MRXD2
15 MRXD3 — MRXD3
15 MRXCLK — LR6 22/6 RXCK — RXC
15 MCOL — MCOL
15 MCRS — MCRS
15 MRXER — MRXER

LX1 25M/20p/30ppm/49US/20/D
LC2 10P/4/NPO/50V/J
LC3 10P/4/NPO/50V/J

LINKLED- — LED0/PHYAD0
PHY_AD1 — LED1/PHYAD1
PHY_AD2 — LED2/PHYAD2
ACT_LED+ — LED3/PHYAD3
PHY_AD4 — LED4/PHYAD4

AVDD25 — AVDD25
3VDUAL — 3VDUAL

PWFBIN
DVDD33
DVDD33
DGND
DGND
DGND

PWFBOUT — DVDD0
AVDD33 — AVDD33

AGND
AGND

NC

TPRX+ — LRX+
TPRX- — LRX-
TPTX- — LTX-
TPTX+ — LTX+

RTSET — LR9 2K/6/1
ISOLATE — L_ISOLATE
RPTR — L_RPTR
SPEED — L_SPEED
DUPLEX — L_DUPLEX
ANE — L_ANE
LDPS — L_LDPS
MII/SNIB/RTT3 — L_SNIB
RESETB — -MII_RST

Close to RTL8201
LR7 49.9/6/1
LR8 49.9/6/1
LC1 0.1U/6/Y5V/25V/Z

LR10 1K/6
LR11 1K/6

RTL8201CL/S

RTSET PIN PULL DOWN
RTL8201BL:5.9K/6/1
RTL8201CL:2.0K/6/1

Enable: N-way, Full duplex, 100Mbps, Link Down Power Saving
Disable: Isolate, Repeater Mode

PHY address set to 01h

PHY Addr --> 00001

LINKLED- — LR12 8.2K/6 — LRN1 8.2K/8P4R/6
PHY_AD1
PHY_AD2
PHY_AD4
ACT_LED+

RTL8139C+ should configure to MDux = 0, MLink=1
MDupActiveState = 0 MLinkActiveState = 1

LRN2 1K/8P4R/6
LR13 1K/6
3VDUAL

3VDUAL — BC483 0.1U/6/Y5V/25V/Z/X
BC484 0.1U/6/Y5V/25V/Z/X

AVDD33 — LFB1 0/6/SHT/X — 3VDUAL
LBC1 0.1U/6/Y5V/25V/Z/X
LBC2 0.1U/6/Y5V/25V/Z
LBC3 0.1U/6/Y5V/25V/Z

AVDD33 — LR4 8.2K/6/X — -MII_RST
15 -PHYRST — LR5 0/6
LBC4 1U/6/Y5V/10V/Z/X

VCC — U47 VOUTVOUT, GND, VIN, CE — FUSEVCC
PWOK — 18,21,28
BC482 9701/X 0.1U/6/Y5V/25V/Z
For EMI
Close to USB_LAN

DVDD0 — LBC5 0.1U/6/Y5V/25V/Z — LBC6 10U/8/Y5V/10V/Z — LFB2 0/6/SHT/X — AVDD25
Co-Layout
LEC1 100U/D/10V/57/X
LBC7 0.1U/6/Y5V/25V/Z

P35-152-11Z9

U4 U3 U2 U1
U8 U7 U6 U5
L1 L3 L5 L7 L9
L2 L4 L6 L8 L10
D1 D2 D3 D4
YELLOW ORANGE (+,-) GREEN (-,+)

	Link(Speed) (Link to Hub)	Active (Data Transmit)
10Mb	Green(ON)	Yellow(Blink)
100Mb	Green(ON)	Yellow(Blink)
1Gb	--	--

Dual Color LED
D4 D3 Green
D4 D3 Orange

Single Color LED
D2 D1 Yellow

3VDUAL — CL: 不上反相線路
LR14 330/6/X
LR15 0/6/SHT/X — ACT_LED+
Q102 MMBT2222A/SOT23/600mA/40/X SOT23
ACT_LED+ — Q103
PHY_AD2
LR16 1K/6/X
SOT23 BAT54C/SOT23/200mA

ACT_LED+ — Q104 2N7002/SOT23
LINKLED-

L21 OD6560T/X
USBDT0- — USBP0- 13
USBDT0+ — USBP0+ 13
USBDT1- — USBP1- 13
USBDT1+ — USBP1+ 13

FUSEVCC — UR1 150K/6 — -USBOC
UR2 270K/6
EC81 1000U/D/6.3V/8C/30m

DVDD0 — LR17 0/6 — TDCT
LC4 0.1U/6/Y5V/25V/Z
LR18 49.9/6/1 — TDC — LTX+
LR19 49.9/6/1 — LTX- — LRX+ — LRX-
LC5 0.1U/6/Y5V/25V/Z
DVDD0 — LR21 0/6 — RDC — RDCT
LC6 0.1U/6/Y5V/25V/Z

USB_LAN1
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10
UP
DOWN
USB/LAN/100

FOR EMI
D1
D2 — ACT_LEDD+
D3 — LINKLED-
D4 — LED_A — LR20 — 150/6/1LED_3V3
U1 — USBDT0-
U2 — USBDT0+
U3 — FUSEVCC
U4
U5 — USBDT1-
U6 — USBDT1+
U7
U8
UBC1 0.1U/6/Y5V/25V/Z
For EMI

3VDUAL — LFB3 0/6/SHT/X
LBC8 0.1U/6/Y5V/25V/Z/X

LR22 0/6
For EMI

RTL8201	BL	CL
TDCT	NC	PULL HIGH 0 OHM & 0.1uF TO GND
RDCT	0.1uF to GND	PULL HIGH 0 OHM & 0.1uF TO GND

Place decoupling capacitor DC1~DC5 as close as possible to each power pin

BLOCK A : The components inside BLOCK A are reserved for RTL8201B(.25u version). In RTL8201B, DVDD0 and AVDD0 will be fed 2.5V produced by BLOCK A which is functional as linear regulator and L3, R6 will be removed. In order to be layout-compatible between RTL8201 and RTL8201B, please reserve the component space and pads in your layout for future extension.

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8VM800M GPIO LIST

Revision 1.01

SHEET		TITLE
GPI		
PIRQA-		PULL 8.2K TO VCC3
PIRQB-		PULL 8.2K TO VCC3
PIRQC-		PULL 8.2K TO VCC3
PIRQD-		PULL 8.2K TO VCC3
GPI1		P66DET (PRIMARY IDE DETECT)
GPI4		S66DET (SECONDARY IDE DETECT)
GPI8		GPIO8 (ID SETTING)
GPI14		GPIO14 (CLR_PWD)
GPI22		GPIO22 (ID SETTING)
GPI23		GPIO23 (ID SETTING)
GP62		INFO_LINK (LPC)

SHEET		TITLE
GPO		
GPO0		POWER LED CONTROL (MAIN)
GPO1		POWER LED CONTROL
GPO15		OFF_PD (PWR LED ON/OFF)
GP60		GREEN LED (LPC)
GP61		BIOS_WP (LPC)

PCI DEVICE	IDSEL	INT	CLOCK	REQ	GNT
PCI SLOT1	20	B,C,D,A	PCLK1	REQ0-	GNT0-
PCI SLOT2	21	C,D,A,B	PCLK2	REQ1-	GNT1-
PCI SLOT3	22	D,A,B,C	PCLK3	REQ2-	GNT2-

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Title: GPIO LIST		
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