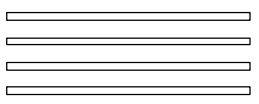
8SG667 Schematics

Revision 1.0

SHEET	TITLE
1	COVER SHEET
2	BOM & PCB MODIFY HISTORY
3	BLOCK DIAGRAM
4,5,6	INTEL CPU_WMT_478
7-10	SIS645 (NORTH BRIDGE) HOST; DDR; AGP,HYPER ZIP
11-14	SIS961 (SOUTH BIRDGE)
15	CLOCK GENERATOR (ICS952001)
16,17	DDR SDRAM DIMMS 1,2,3
18	AGP SLOT
19,20	PCI SLOT 1,2,3,4,5,6
21	IDE,FRONT USB,PCIRST#
22	LPCIO_IT8705
23	BIOS
24	COM,PRT,FDD,KB/MS,IR
25	AUDIO (CT5880)/AC 97
26	AUDIO JACK,GAME PORT
27	FAN, SMB PORT
28	PANEL,STR LED,FANS ,CPU GN
29	VCORE PHASE PWM HIP 6302 + 6602
30	DDR POWER,3VDUAL,VDDQ DC POWER
31	ATX CONN, GPIO LIST
32	RTL8100BL

PCB Size: 304*200 mm



GIGABYTE

Title: COVER SHEET

Size	Document Number	Rev
Custom	GA-8SG667	1.0

Date: Wednesday, September 04, 2002 Sheet 1 of 32

Model Name: 8SG667

Version:1.0

Component value change history

AUTOBOM
91/ /

Date	Change Item	Reason
91/08/21 10B	R73,R475,R802 Change Value (1.0A-->1.0B)	Fix DDR Power control circuit margin
91/08/27 10C	R2 change from 75 ohm to 150 ohm	Fix chamber burn-in fail issue
91/08/28 10D	C229 change from 10n to 1U	Fix some ATI(R300) can't boot issue
91/08/30 10D_ECN1	Add a lebel (12LC2-04R970-00)	增加已經解掉R300不開機問題的辨認貼紙
91/09/02 10E	Add VDDQ Cap. & solder side Cap.	For ATI(R300) chamber burn-in fail issue. Connector改為防斷裂型式. Change color front panel.
91/09/03 10D_ECN2	Remove ATI(R300) compatible lebel	This label only for VIA KT400
91/09/03 10E_ECN1	Change Color Box & Manual	Marketing Request
	Change NE Heatsink to FANsink	For AGP 8X use
	Change AGP 8X Compatible label	For AGP 8X(ATI_R300 & NV18)

Circuit or PCB layout change for next version

Date	Change Item	Reason

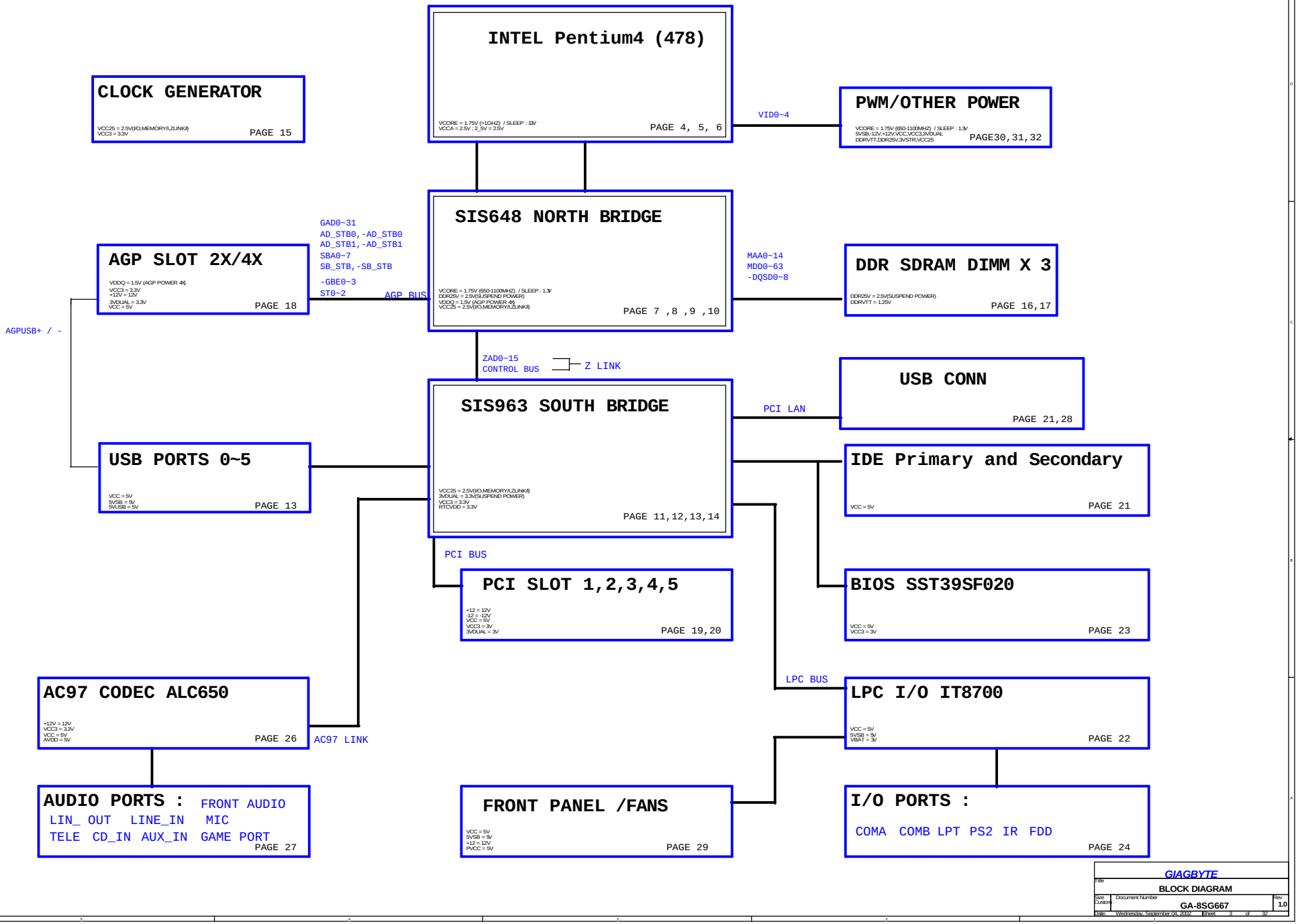
GIGABYTE

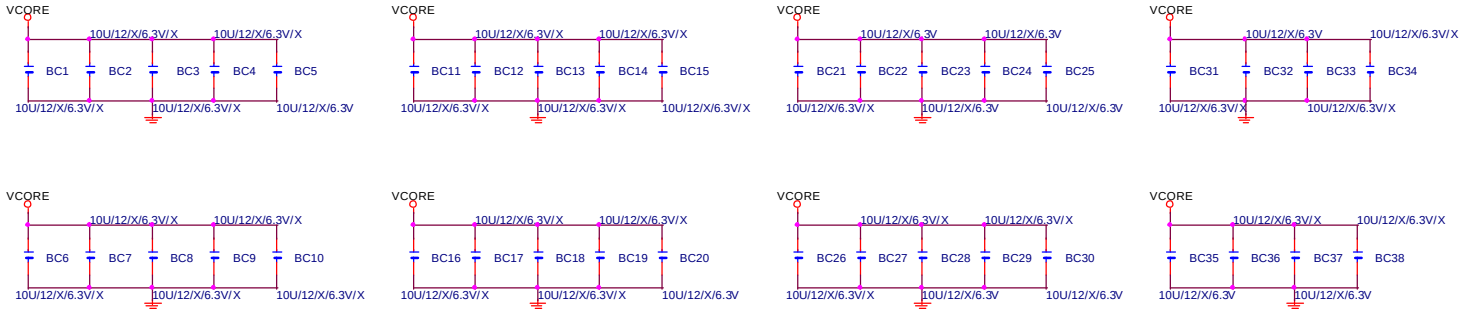
Title: BOM & PCB MODIFY HISTORY

Size: Custom | Document Number: GA-8SG667 | Rev: 1.0

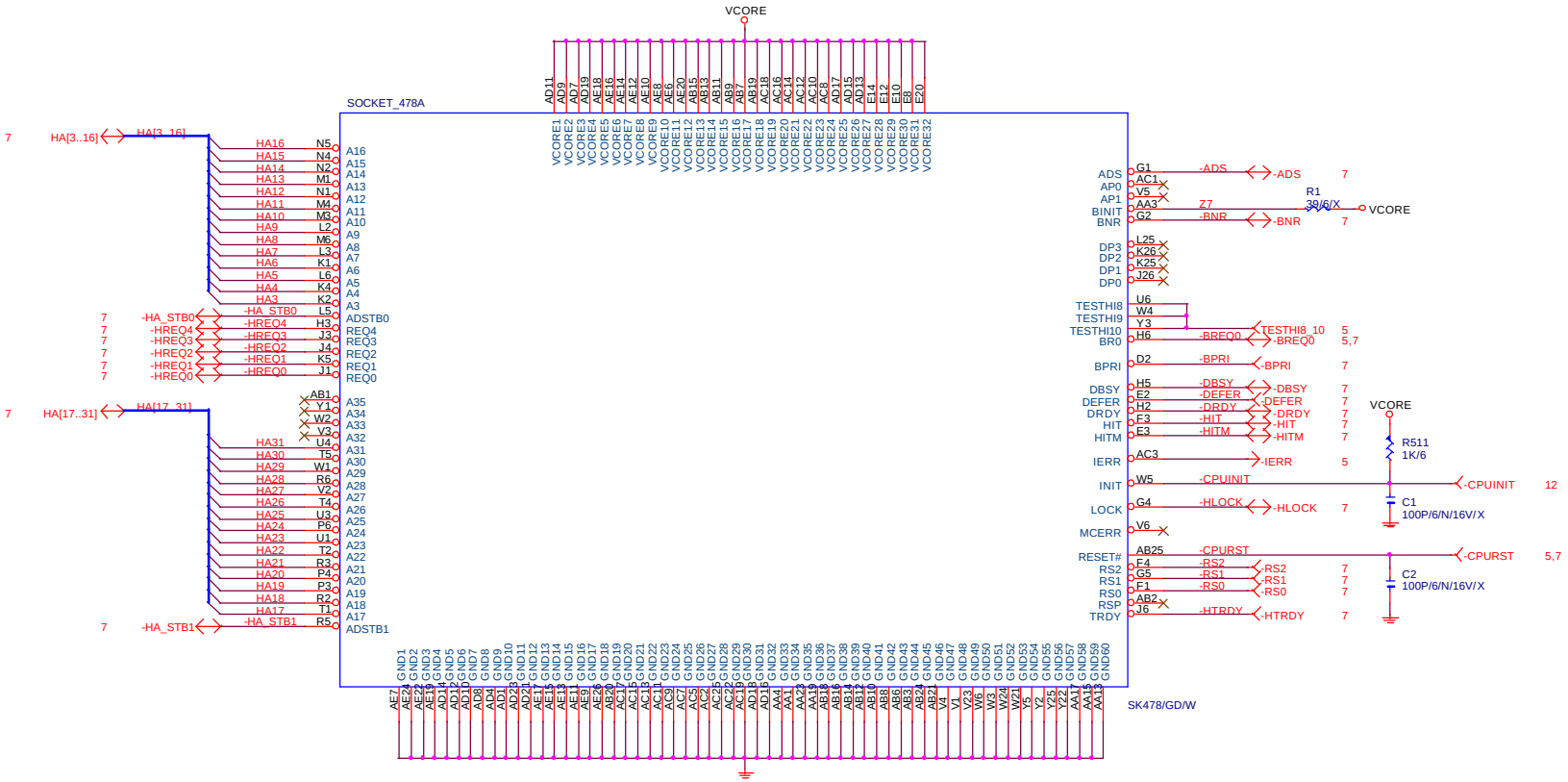
Date: Wednesday, September 04, 2002 | Sheet 2 of 32

8SG667 BLOCK DIAGRAM

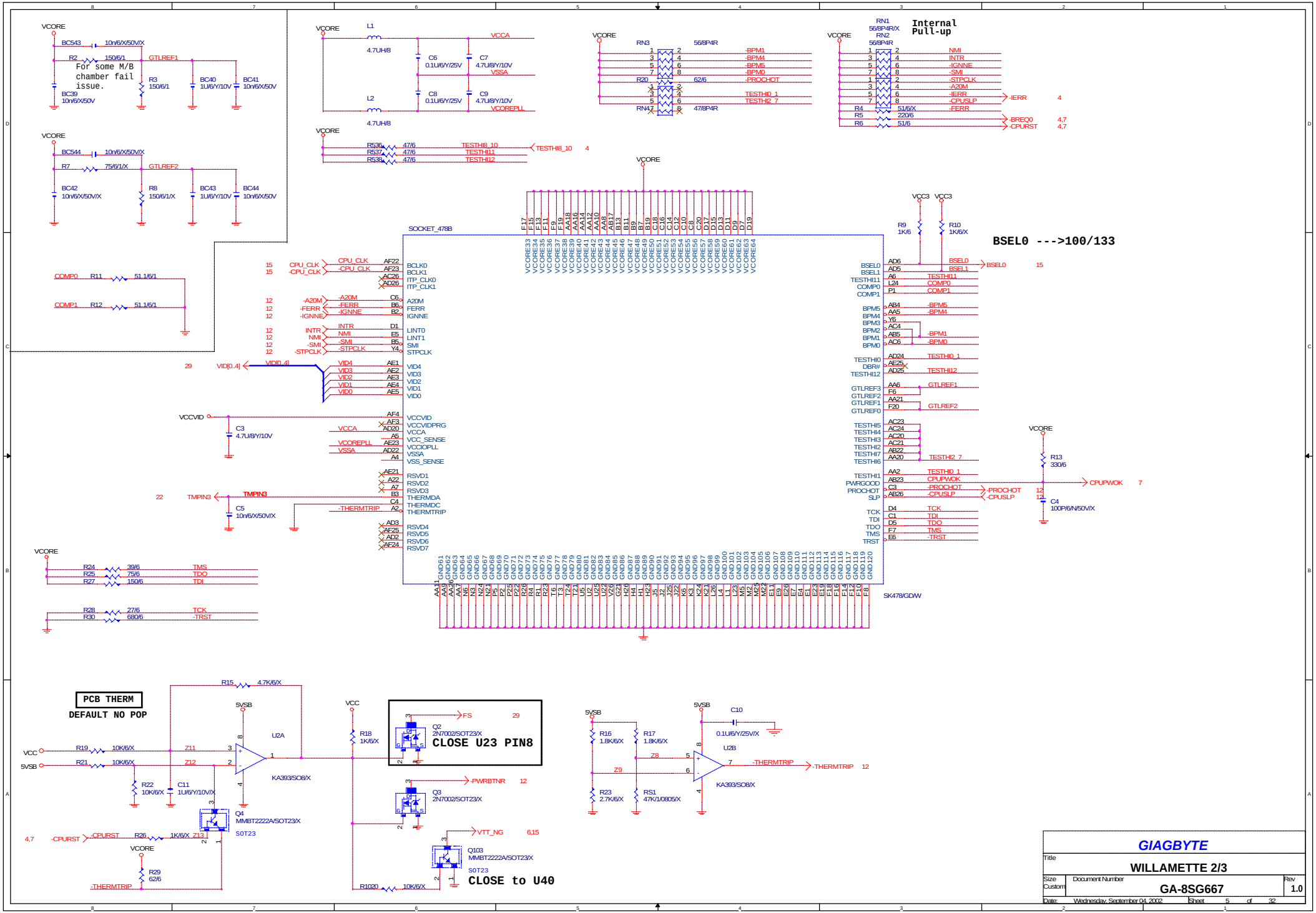


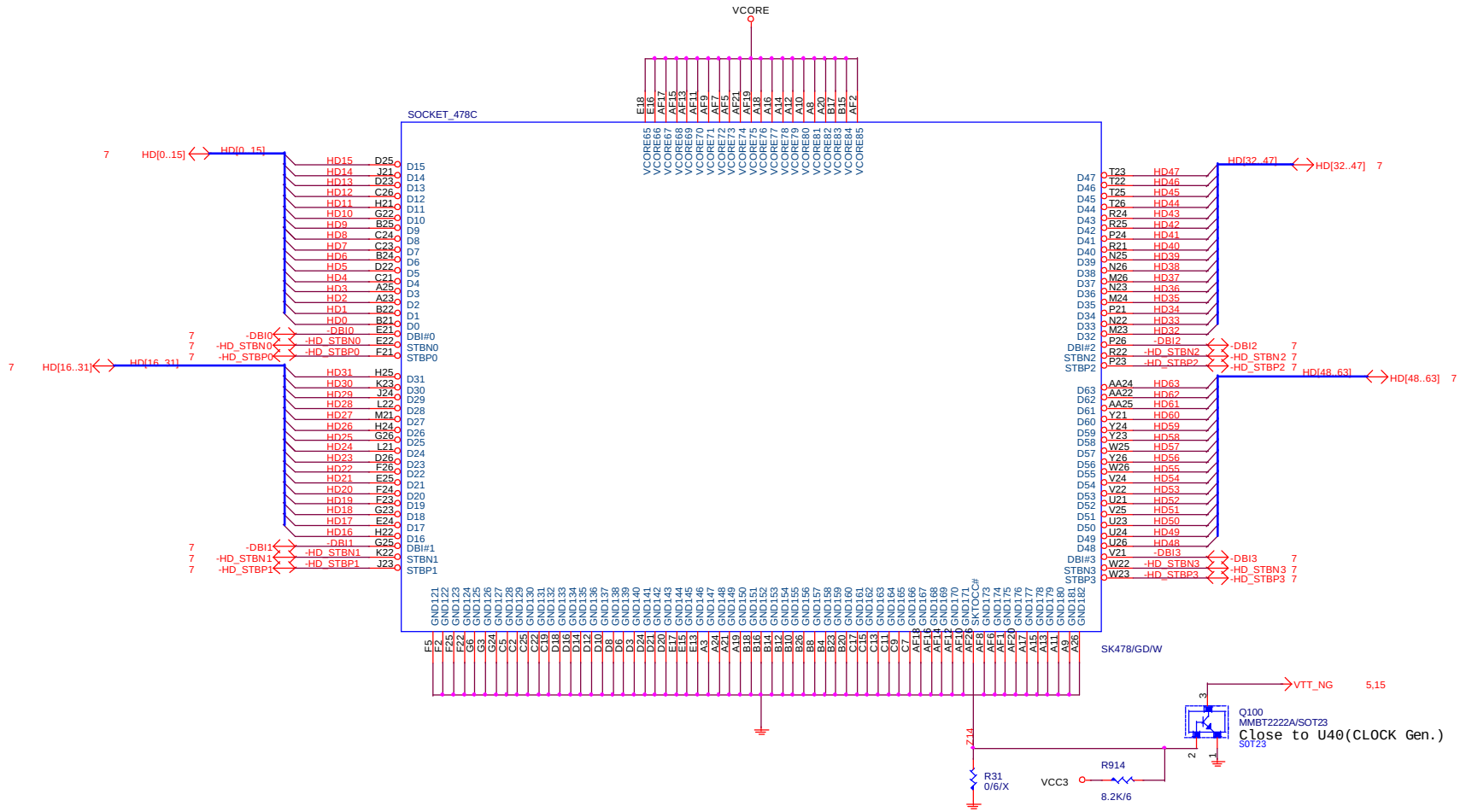


上11顆10U/X5R電容

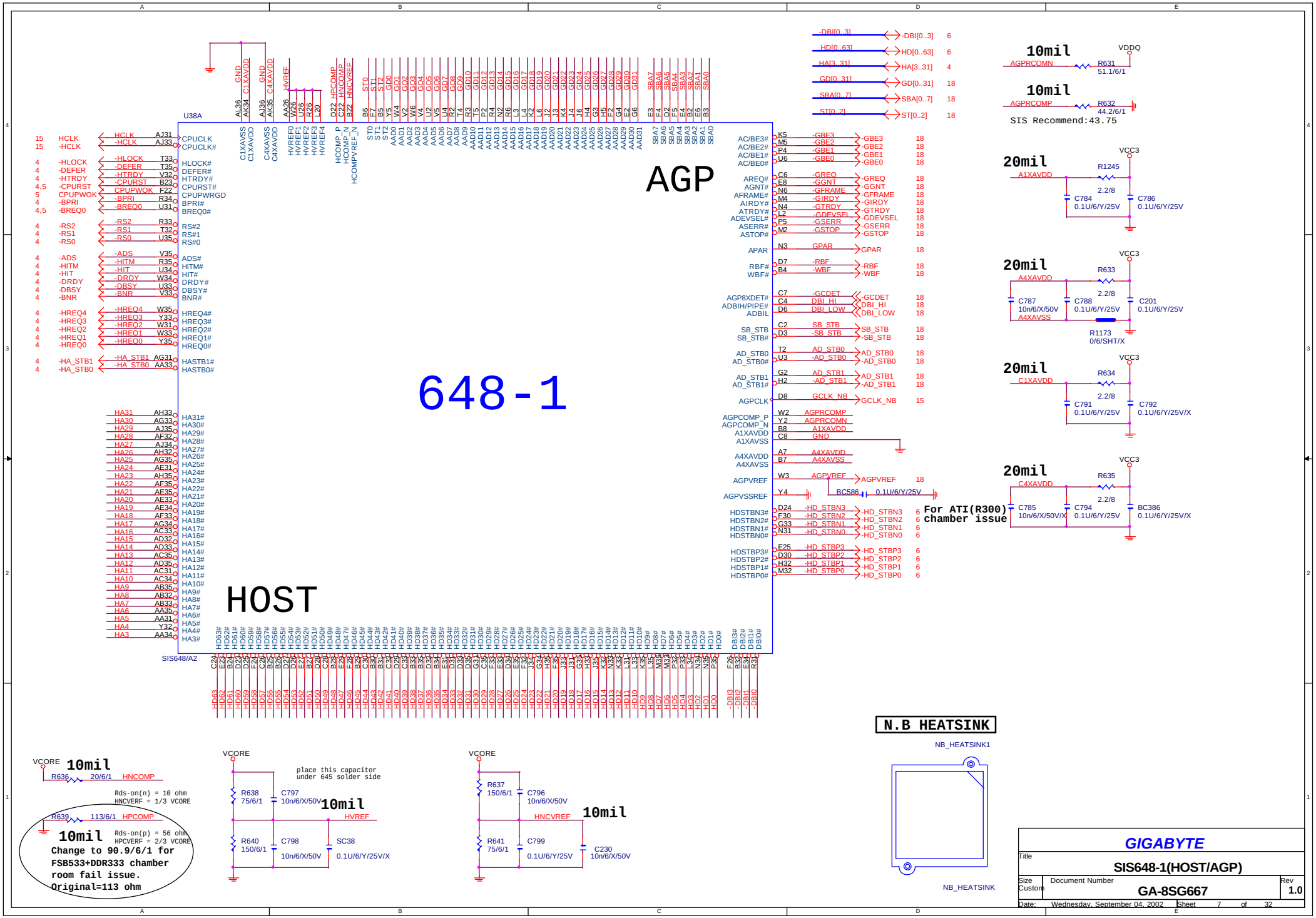


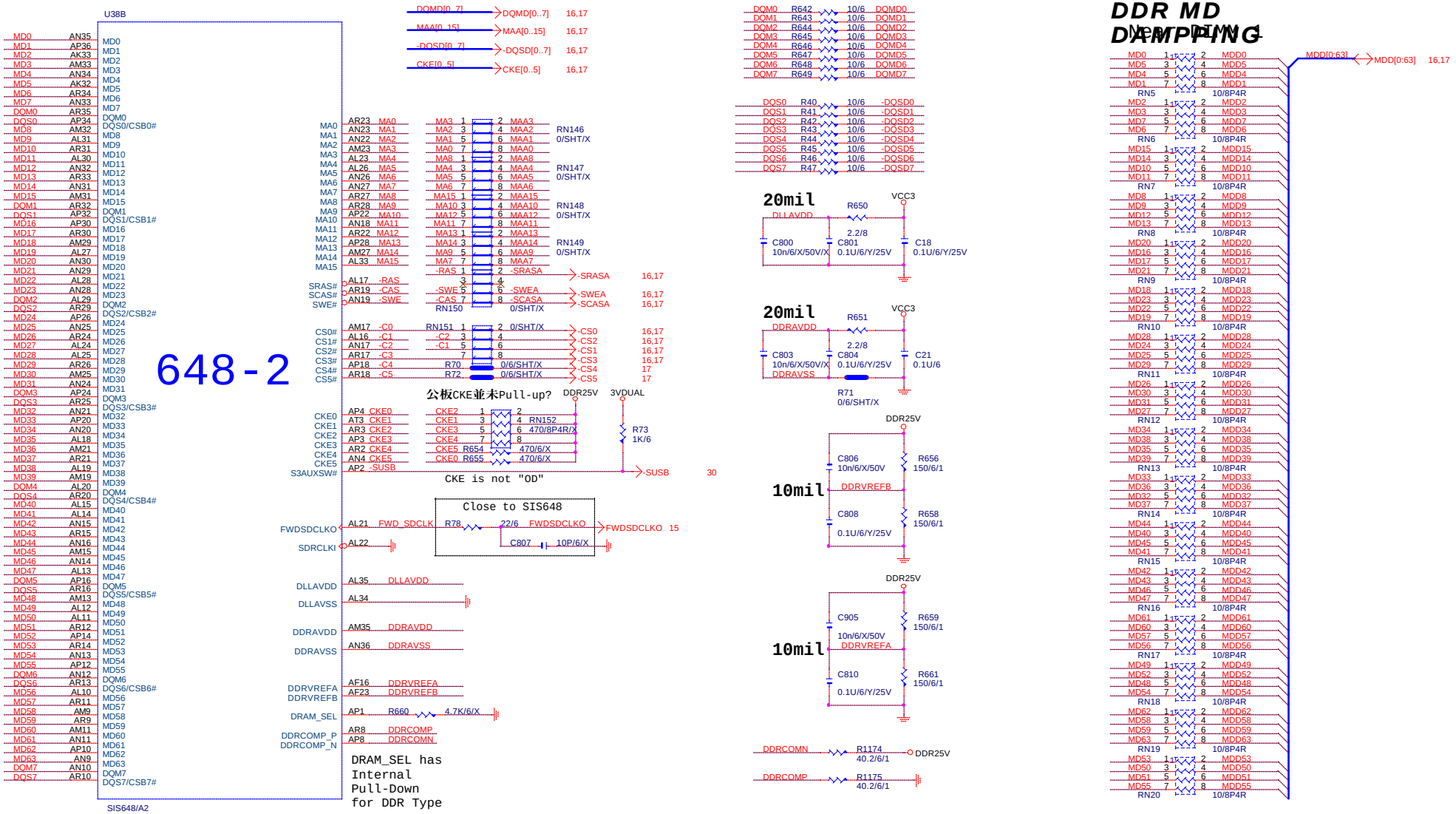
GIAGBYTE			
Title: WILLAMETTE 1/3			
Size: B	Document Number: GA-8SG667		Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 4 of 32		


VCORE
BC543 10n/6/X/50V/X
R2 150/6/1
GTLREF1
For some M/B chamber fail issue.
R3 150/6/1
BC40 1U/6Y/10V
BC41 10n/6X/50V
BC39 10n/6/X/50V
BC544 10n/6/X/50V/X
R7 75/6/1/X
GTLREF2
BC42 10n/6/X/50V/X
R8 150/6/1/X
BC43 1U/6Y/10V
BC44 10n/6X/50V
L1
4.7UH/8
VCCA
C6 0.1U/6Y/25V
C7 4.7U/8Y/10V
VSSA
L2
C8 0.1U/6Y/25V
C9 4.7U/8Y/10V
VCOREPLL
RN3 56/8P4R
R20 62/6
-BPM1
-BPM4
-BPM5
-BPM0
-PROCHOT
TESTHI0_1
TESTHI2_7
RN47 47/8P4R
RN1 56/8P4R/X
RN2 56/8P4R
Internal Pull-up
NMI
INTR
-IGNNE
-SMI
-STPCLK
-A20M
-IERR
-CPUSLP
-FERR
R4 51/6/X
R5 220/6
R6 51/6
-BREQ0
-CPURST
R536 47/6
R537 47/6
R538 47/6
TESTHI8_10
TESTHI11
TESTHI12
SOCKET_478B
VCC3
R9 1K/6
R10 1K/6/X
BSEL0 --->100/133
BCLK0
BCLK1
ITP_CLK0
ITP_CLK1
A20M
FERR
IGNNE
LINT0
LINT1
SMI
STPCLK
VID4
VID3
VID2
VID1
VID0
VCCVID
VCCVIDPRG
VCCA
VCC_SENSE
VCCIOPLL
VSSA
VSS_SENSE
RSVD1
RSVD2
RSVD3
THERMDA
THERMDC
THERMTRIP
RSVD4
RSVD5
RSVD6
RSVD7
BSEL0
BSEL1
COMP0
COMP1
BPM5
BPM4
BPM3
BPM2
BPM1
BPM0
TESTHI0
DBR#
TESTHI12
GTLREF3
GTLREF2
GTLREF1
GTLREF0
TESTHI5
TESTHI4
TESTHI3
TESTHI2
TESTHI7
TESTHI6
TESTHI1
PWRGOOD
PROCHOT
SLP
TCK
TDI
TDO
TMS
TRST
SK478/GDW
R11 51.1/6/1
R12 51.1/6/1
C3 4.7U/8Y/10V
C5 10n/6/X/50V/X
TMPIN3
R24 39/6
R25 75/6
R27 150/6
R28 27/6
R30 680/6
R13 330/6
C4 100P/6/N/50V/X
CPUPWOK
-PROCHOT
-CPUSLP
PCB THERM
DEFAULT NO POP
R15 4.7K/6/X
5VSB
U2A
KA393/SO8/X
R19 10K/6/X
R21 10K/6/X
R22 10K/6/X
C11 1U/6Y/10V/X
Q4 MMBT2222A/SOT23/X
S0T23
R26 1K/6/X
R29 62/6
VCC
R18 1K/6/X
Q2 2N7002/SOT23/X
CLOSE U23 PIN8
Q3 2N7002/SOT23/X
Q103 MMBT2222A/SOT23/X
R1020 10K/6/X
CLOSE to U40
R16 1.8K/6/X
R17 1.8K/6/X
R23 2.7K/6/X
RS1 47K/1/0805/X
C10 0.1U/6Y/25V/X
U2B
-THERMTRIP
GIAGBYTE
Title
WILLAMETTE 2/3
Size Custom
Document Number
GA-8SG667
Rev 1.0
Date: Wednesday, September 04, 2002
Sheet 5 of 32



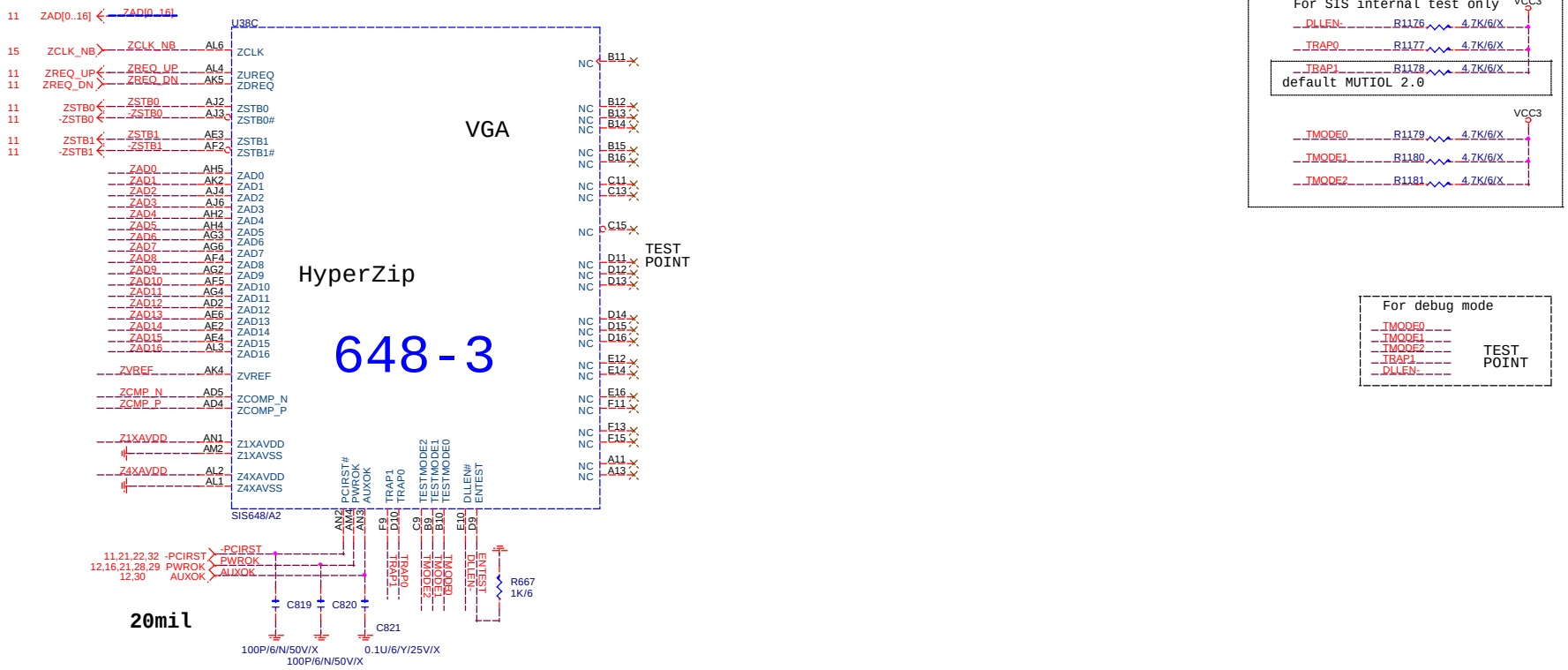
GIGABYTE			
Title	WILLAMETTE 3/3		
Size B	Document Number GA-8SG667		Rev 1.0
Date: Wednesday, September 04, 2002	Sheet 6 of 32		

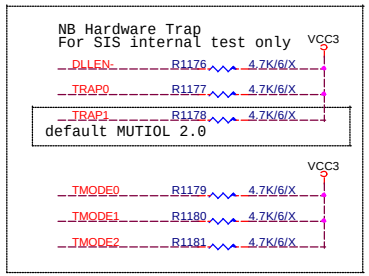

AGP
HOST
648-1
U38A
SIS648/A2
10mil
AGPRCOMN
R631
51.1/6/1
VDDQ
AGPRCOMP
R632
44.2/6/1
SIS Recommend:43.75
20mil
A1XAVDD
R1245
2.2/8
C784
0.1U/6/Y/25V
C786
0.1U/6/Y/25V
VCC3
A4XAVDD
R633
C787
10n/6/X/50V
A4XAVSS
C788
C201
R1173
0/6/SHT/X
C1XAVDD
R634
C791
C792
C4XAVDD
R635
C785
10n/6/X/50V/X
C794
BC386
For ATI(R300)
chamber issue
N.B HEATSINK
NB_HEATSINK1
NB_HEATSINK
VCORE
R636
20/6/1
HNCOMP
Rds-on(n) = 10 ohm
HNCVERF = 1/3 VCORE
R639
113/6/1
HPCOMP
Rds-on(p) = 56 ohm
HPCVERF = 2/3 VCORE
Change to 90.9/6/1 for
FSB533+DDR333 chamber
room fail issue.
Original=113 ohm
place this capacitor
under 645 solder side
R638
75/6/1
C797
10n/6/X/50V
HVREF
R640
150/6/1
C798
SC38
0.1U/6/Y/25V/X
R637
150/6/1
C796
HNCVREF
R641
75/6/1
C799
C230
GIGABYTE
Title
SIS648-1(HOST/AGP)
Size
Custom
Document Number
GA-8SG667
Rev
1.0
Date:
Wednesday, September 04, 2002
Sheet
7
of
32

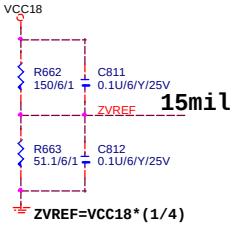


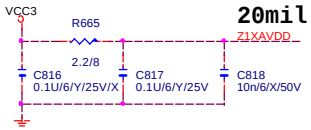
GIGABYTE

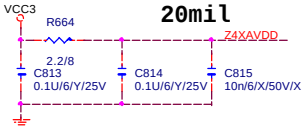
Title	SIS648-2(DDR)	
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 8 of 32	

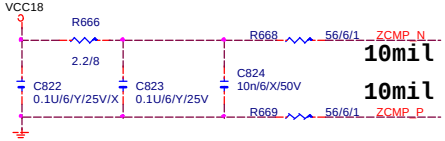






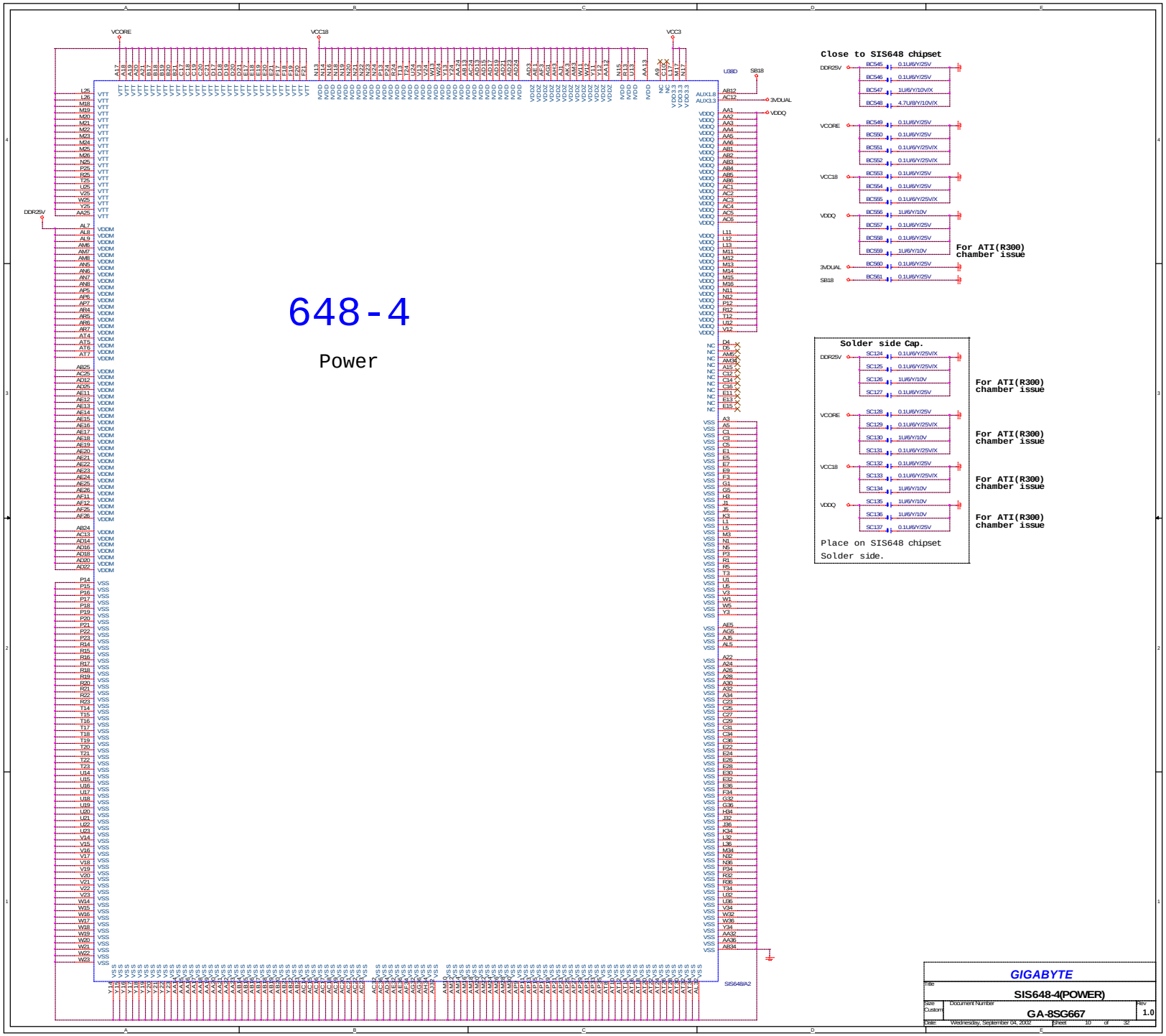


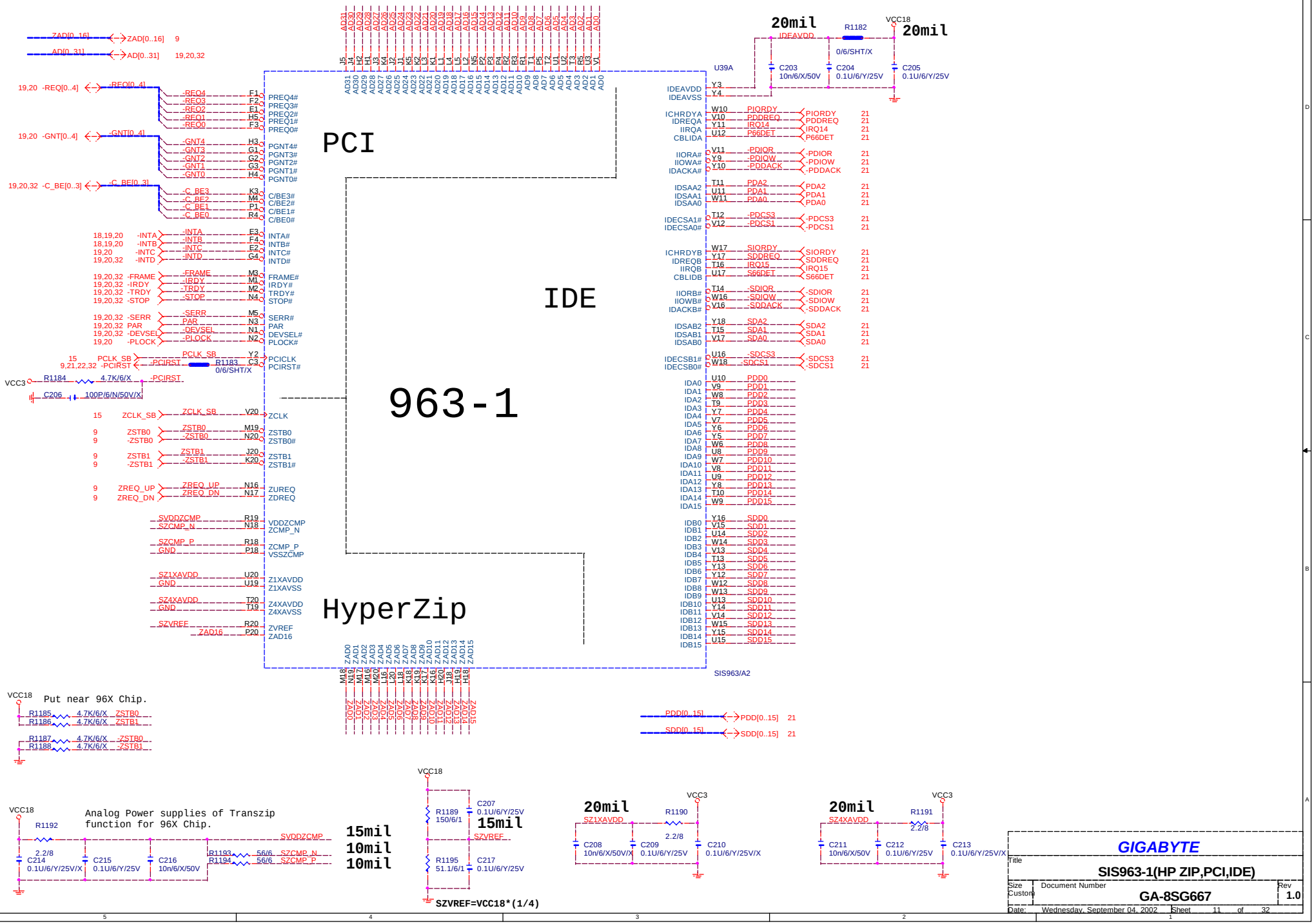


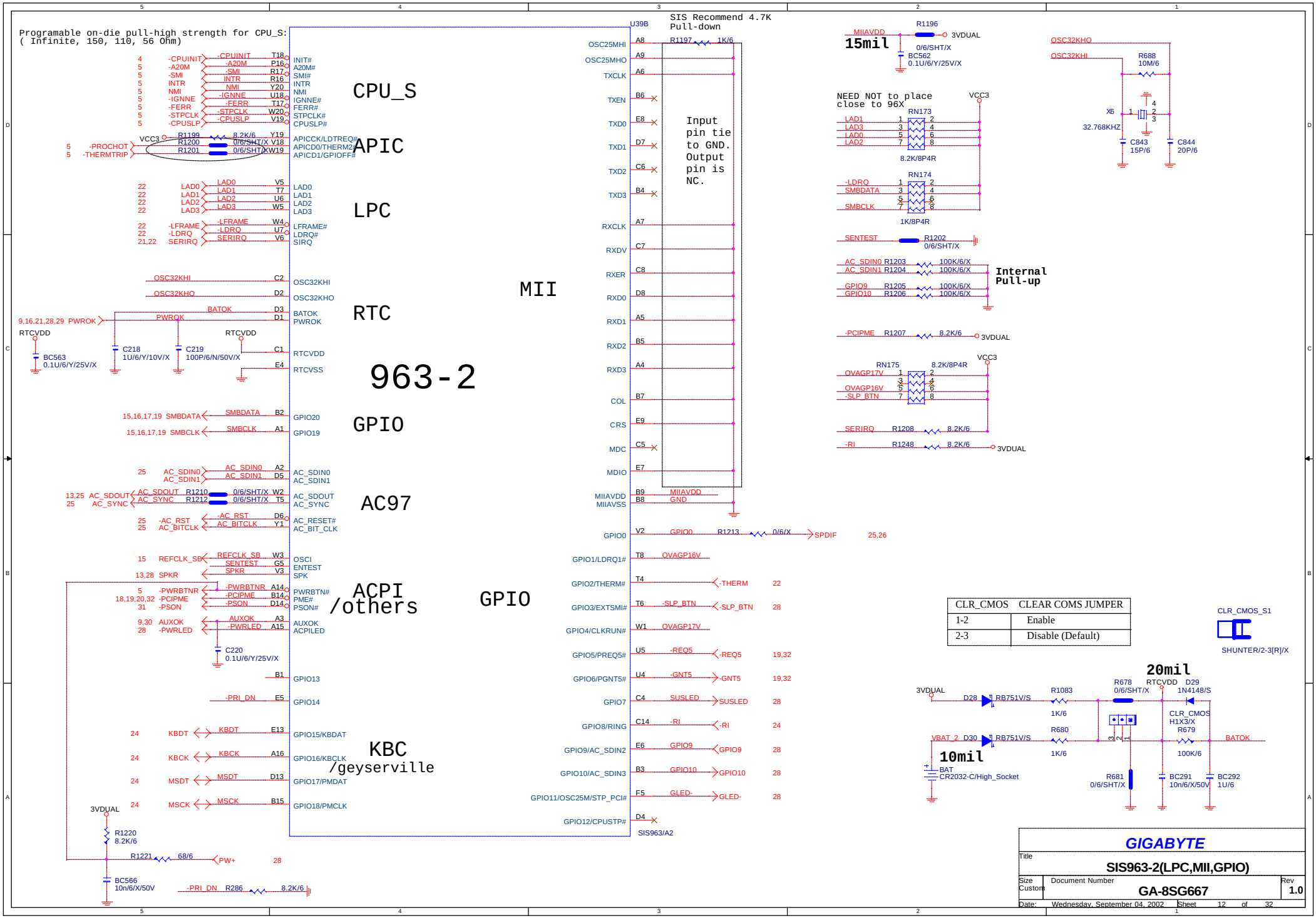


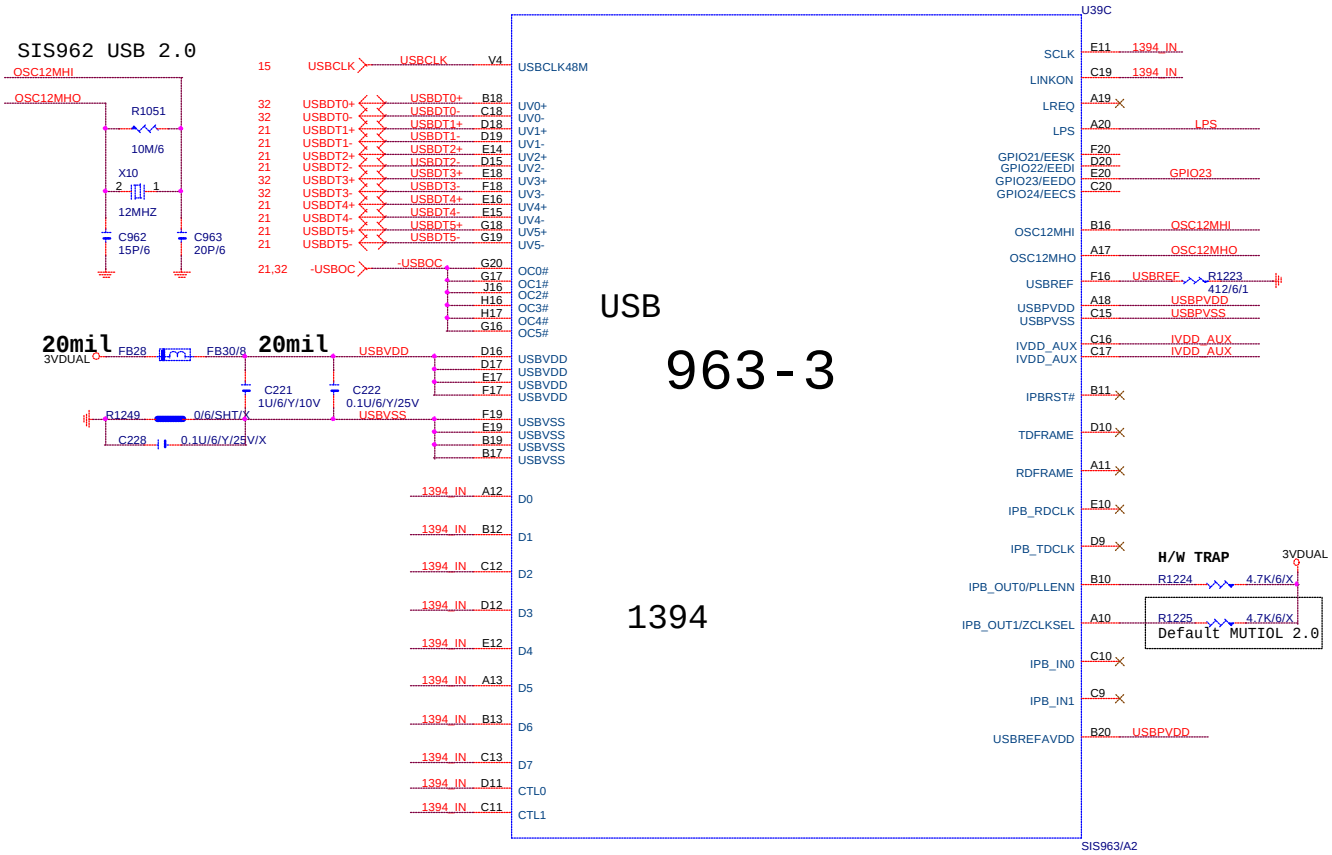
GIGABYTE

Title	SIS648-3(HYPER ZIP)	
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 9 of 32	


VCORE
VCC18
VCC3
U38D
SB18
3VDUAL
VDDQ
DDR25V
SIS648/A2
648-4
Power
Close to SIS648 chipset
DDR25V
VCORE
VCC18
VDDQ
3VDUAL
SB18
BC545 0.1U/6/Y/25V
BC546 0.1U/6/Y/25V
BC547 1U/6/Y/10V/X
BC548 4.7U/8/Y/10V/X
BC549 0.1U/6/Y/25V
BC550 0.1U/6/Y/25V
BC551 0.1U/6/Y/25V/X
BC552 0.1U/6/Y/25V/X
BC553 0.1U/6/Y/25V
BC554 0.1U/6/Y/25V
BC555 0.1U/6/Y/25V/X
BC556 1U/6/Y/10V
BC557 0.1U/6/Y/25V
BC558 0.1U/6/Y/25V
BC559 1U/6/Y/10V
BC560 0.1U/6/Y/25V
BC561 0.1U/6/Y/25V
For ATI(R300) chamber issue
Solder side Cap.
SC124 0.1U/6/Y/25V/X
SC125 0.1U/6/Y/25V/X
SC126 1U/6/Y/10V
SC127 0.1U/6/Y/25V
SC128 0.1U/6/Y/25V
SC129 0.1U/6/Y/25V/X
SC130 1U/6/Y/10V
SC131 0.1U/6/Y/25V/X
SC132 0.1U/6/Y/25V
SC133 0.1U/6/Y/25V/X
SC134 1U/6/Y/10V
SC135 1U/6/Y/10V
SC136 1U/6/Y/10V
SC137 0.1U/6/Y/25V
For ATI(R300) chamber issue
For ATI(R300) chamber issue
For ATI(R300) chamber issue
For ATI(R300) chamber issue
Place on SIS648 chipset
Solder side.
GIGABYTE
Title
SIS648-4(POWER)
Size
Custom
Document Number
GA-8SG667
Rev
1.0
Date: Wednesday, September 04, 2002
Sheet 10 of 32


PCI
IDE
963-1
HyperZip
SIS963/A2
Put near 96X Chip.
Analog Power supplies of Transzip function for 96X Chip.
SZVREF=VCC18*(1/4)
GIGABYTE
SIS963-1(HP ZIP,PCI,IDE)
GA-8SG667
Rev 1.0
Wednesday, September 04, 2002


Programable on-die pull-high strength for CPU_S:
(Infinite, 150, 110, 56 Ohm)
CPU_S
APIC
LPC
RTC
963-2
GPIO
AC97
ACPI
/others
KBC
/geyserville
MII
GPIO
SIS Recommend 4.7K
Pull-down
Input
pin tie
to GND.
Output
pin is
NC.
SIS963/A2
NEED NOT to place
close to 96X
Internal
Pull-up
15mil
20mil
10mil
CLR_CMOS CLEAR COMS JUMPER
1-2 Enable
2-3 Disable (Default)
SHUNTER/2-3[R]/X
GIGABYTE
SIS963-2(LPC,MII,GPIO)
GA-8SG667
1.0
Wednesday, September 04, 2002
Sheet 12 of 32



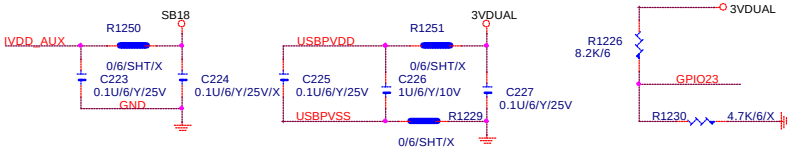
R1154 4.7/6/X LPS

R1064 4.7/6 1394_IN

	0	1	Default	
SPKR(LPC address mapping)	disable	enable	R169 un-stuff	yes
AC_SDOUT(Trap from)	ROM	PCI AD	R170 un-stuff	yes
SB debug mode	enable	disable		

embedded pull-low (30~50K Ohm)

If 1394 do not use:
Output pin(LPS, LREQ) can be open.
All input pin pull-down to gnd.

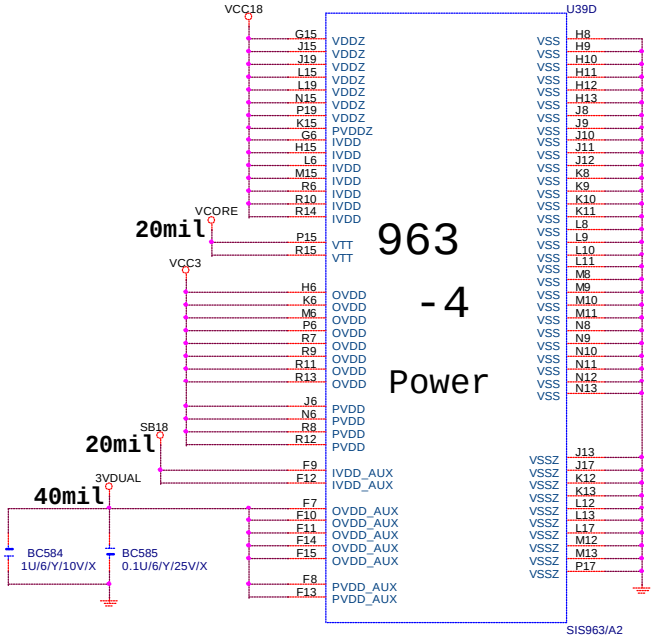


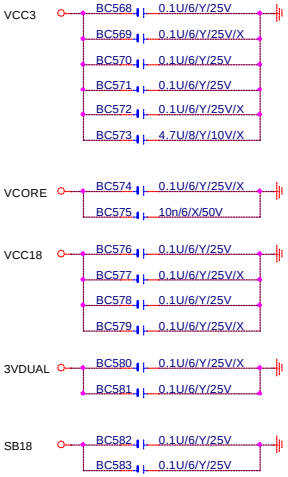
GIGABYTE

Title: SIS963-3(USB2.0)

Size: Custom | Document Number: GA-8SG667 | Rev: 1.0

Date: Wednesday, September 04, 2002 | Sheet 13 of 32





Close to SIS963 chipset

Solder side Cap.

3VDUAL	SC138	0.1U/6/Y/25V/X
SB18	SC139	0.1U/6/Y/25V/X
VCC18	SC140	0.1U/6/Y/25V/X
VCC3	SC141	0.1U/6/Y/25V/X

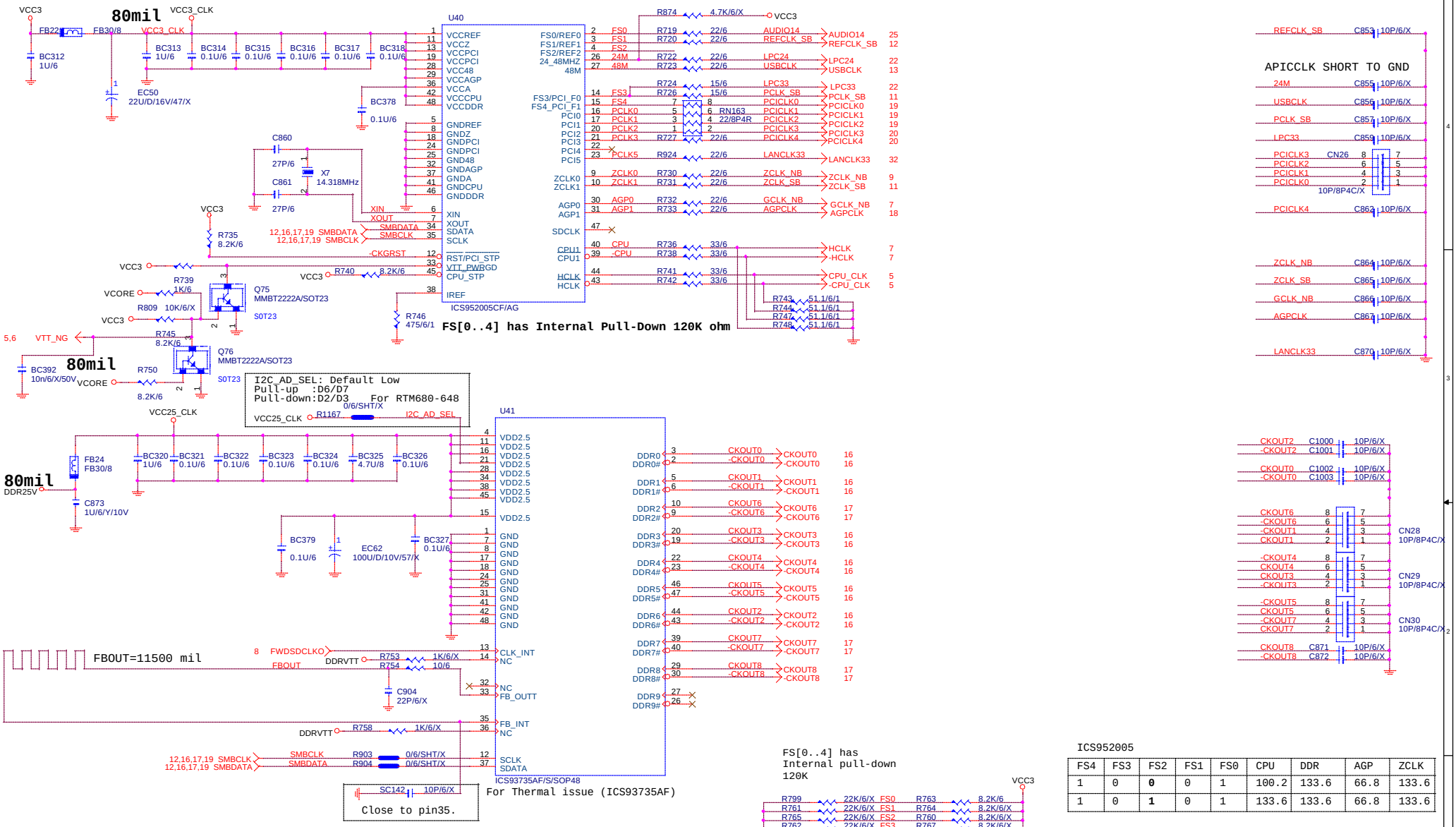
Place on SIS963 chipset
Solder side.

GIGABYTE

Title: SIS963-4(POWER)

Size: Custom | Document Number: GA-8SG667 | Rev: 1.0

Date: Wednesday, September 04, 2002 | Sheet 14 of 32



ICS952005/CY28370 CLOCK BOM OPTION TABLE

H/W Strap	R763	R767	R873	R801	R35	Q80	R795
ICS952005 100.2/133.6	8.2K	N/A	8.2K	1K	N/A	N/A	N/A
CY28370 100.0/133.9	8.2K	8.2K	N/A	1K	8.2K	MMBT 2222	1K

ICS952005

FS4	FS3	FS2	FS1	FS0	CPU	DDR	AGP	ZCLK
1	0	**0**	0	1	100.2	133.6	66.8	133.6
1	0	**1**	0	1	133.6	133.6	66.8	133.6

CY28370

FS4	FS3	FS2	FS1	FS0	CPU	DDR	AGP	ZCLK
0	**1**	**0**	0	1	100.0	133.33	66.67	133.3
0	**0**	**1**	0	1	133.9	133.9	66.95	133.9

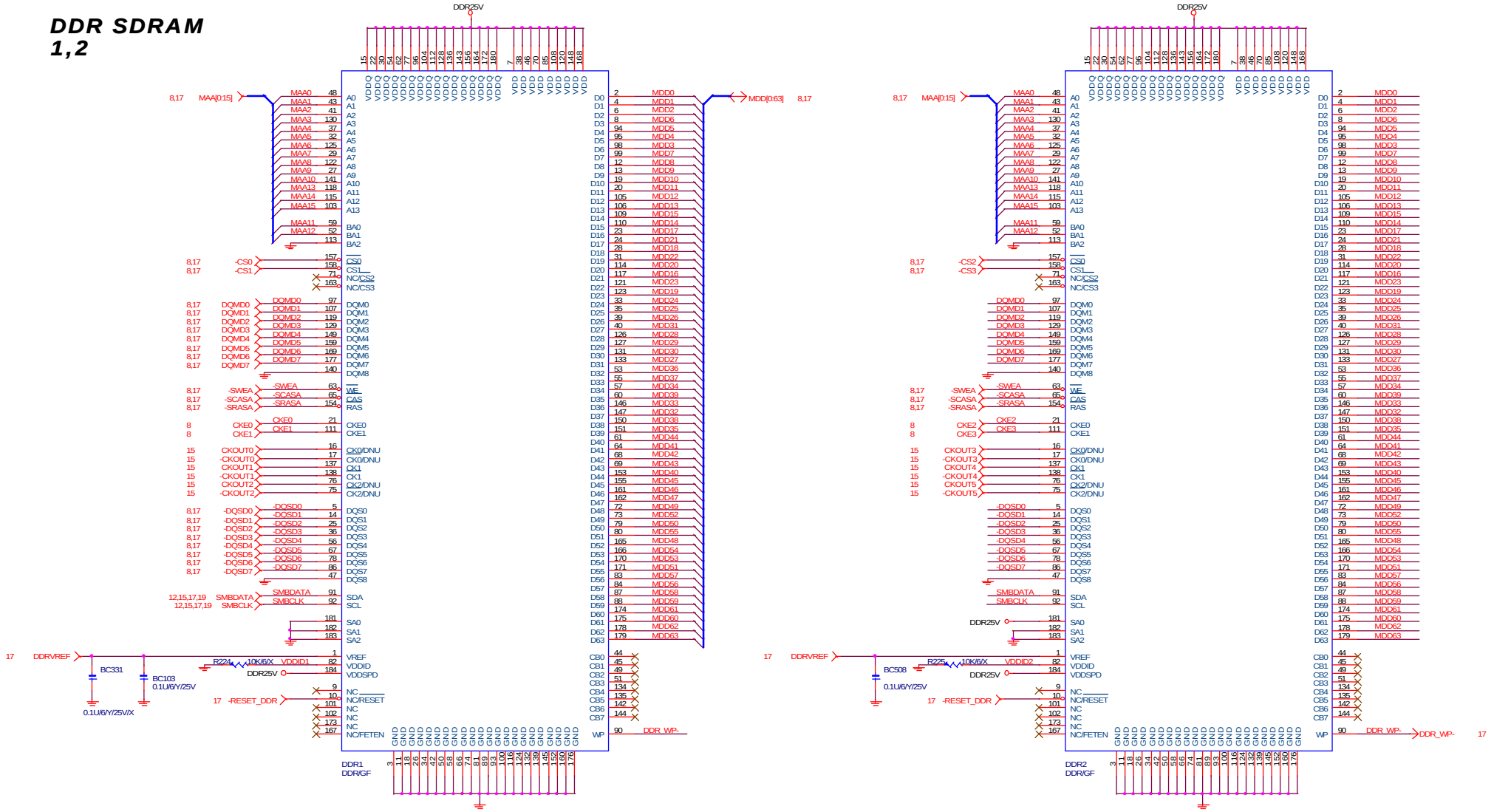
GIGABYTE

Title: CLOCK GEN + SDR BUFFER

Size: Custom | Document Number: GA-8SG667 | Rev: 1.0

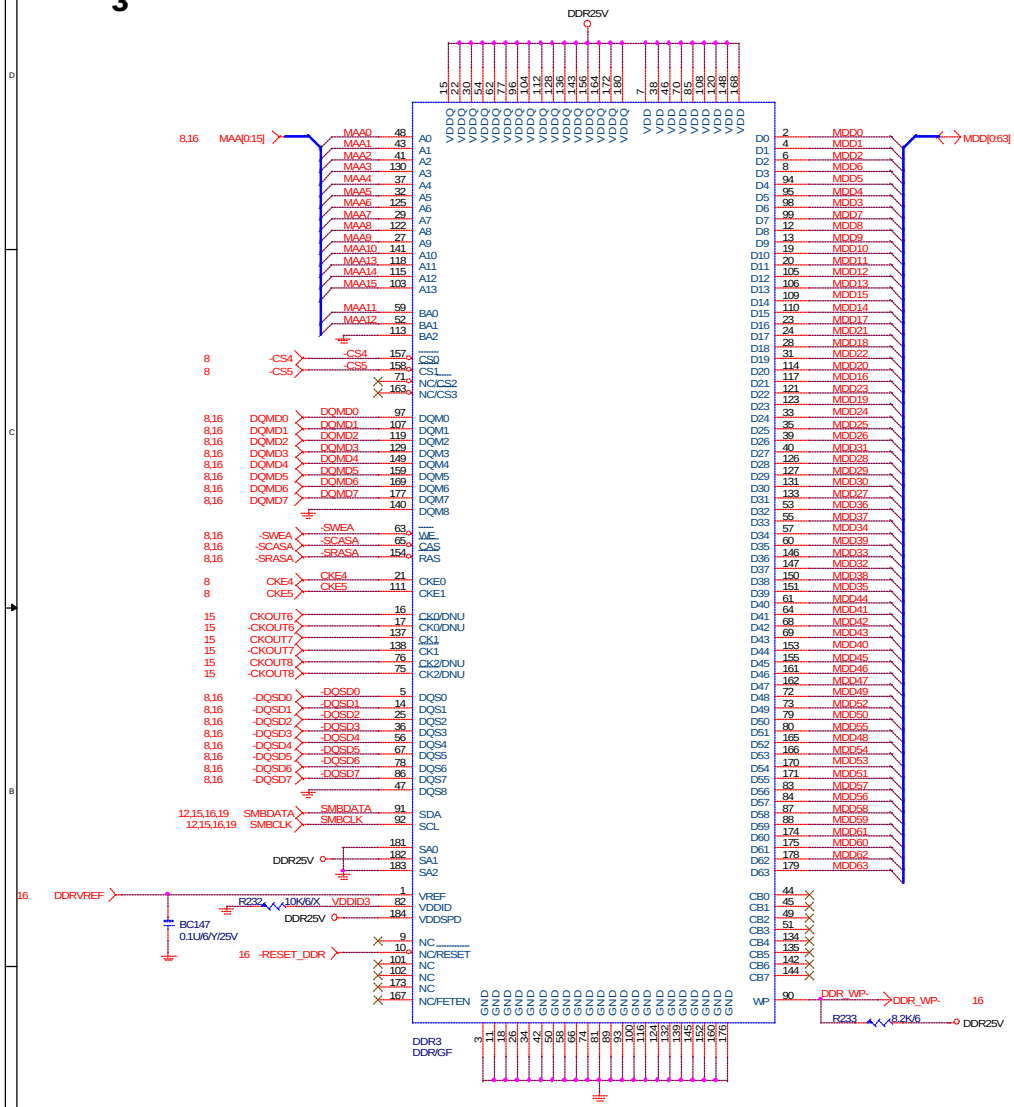
Date: Wednesday, September 04, 2002 | Sheet 15 of 32

DDR SDRAM 1,2

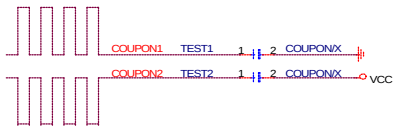


GIGABYTE		
Title	DDR UNBUFFERED 1,2	
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 16 of 32	

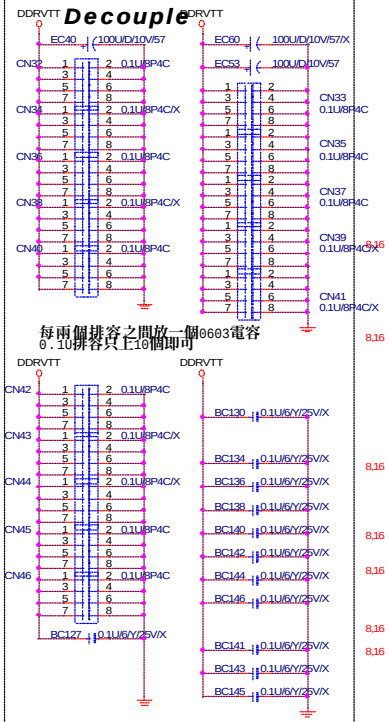
DDR SDRAM 3



IMPEDENCE TESTING COUPON

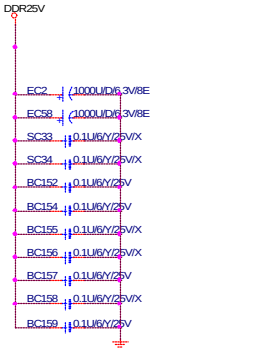


DDRVTT Decouple



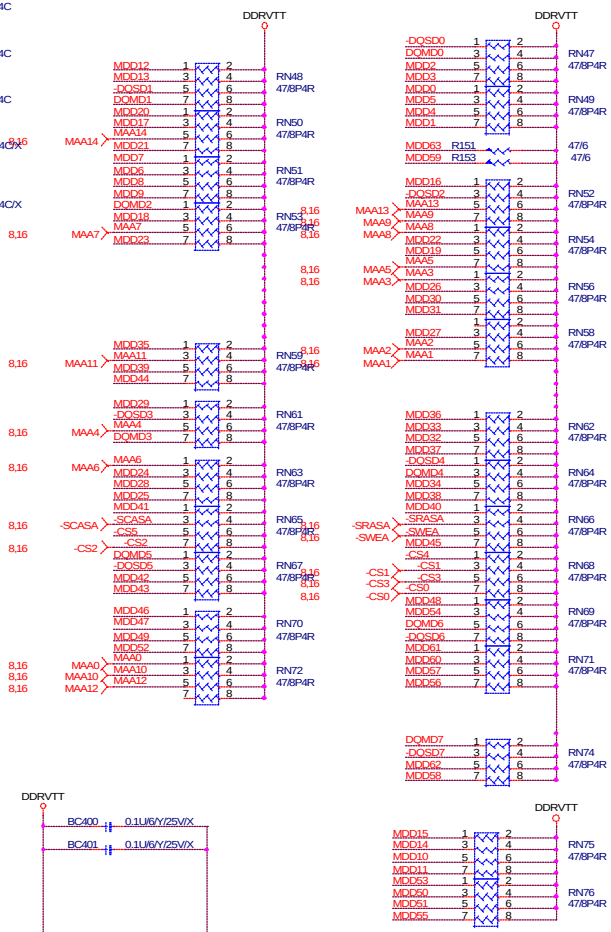
NOTE: Place these decoupling capacitors close to VTT_MEM termination resistors. (one decoupling coapcitor for each two R-packs)

DDR25V Decouple



HCLK & -HCLK Decoupling Cap.

DDR TERMINATION



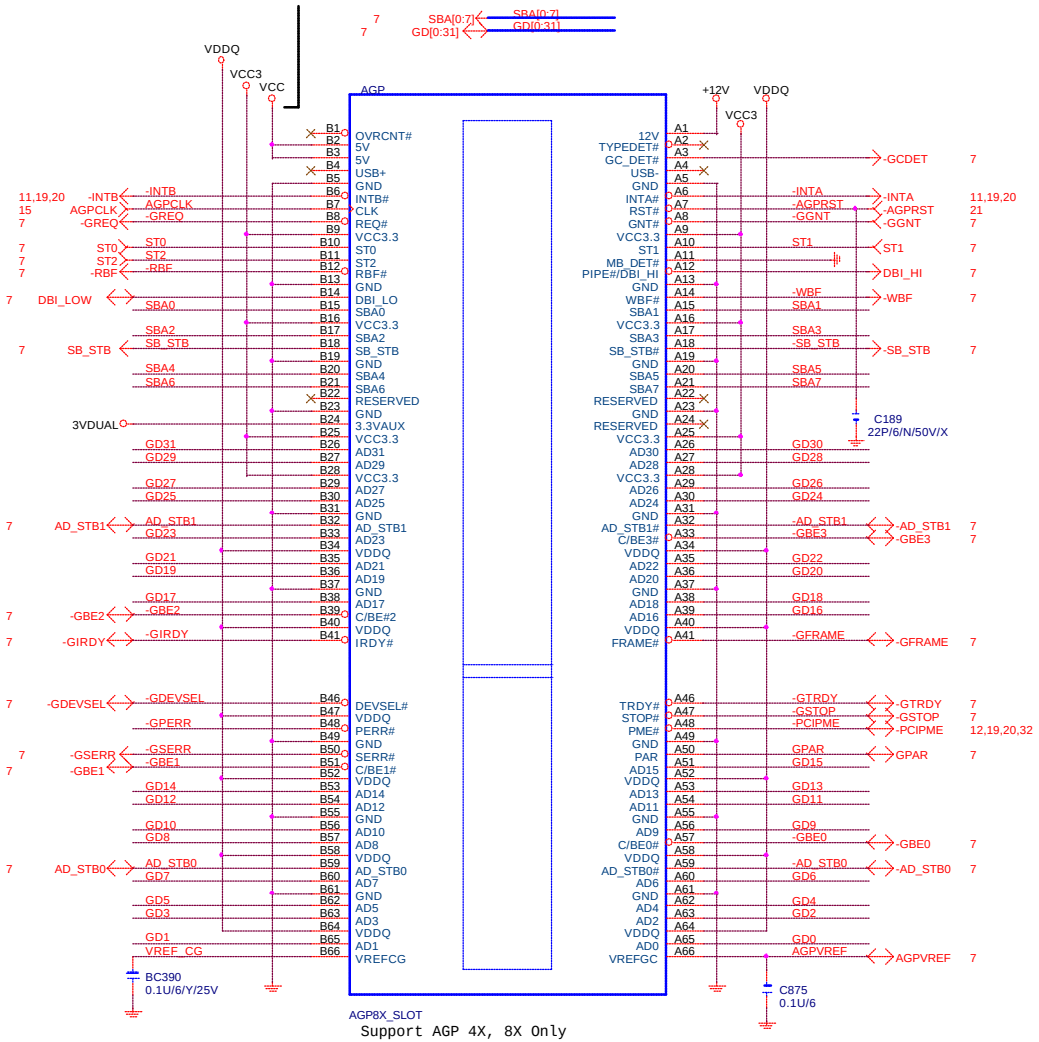
GIGABYTE

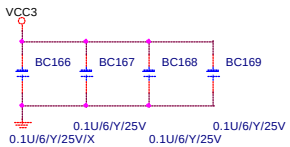
Title: DDR UNBUFFERED 3

Size: Custom | Document Number: GA-8SG667 | Rev: 1.0

Date: Wednesday, September 04, 2002 | Sheet 17 of 32

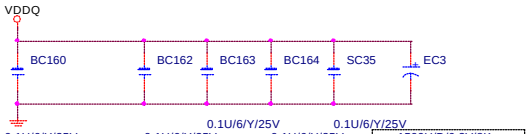
VCC : 80 mil





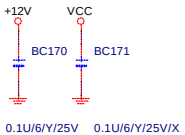
Place 1 at each pair of 3.3V pins

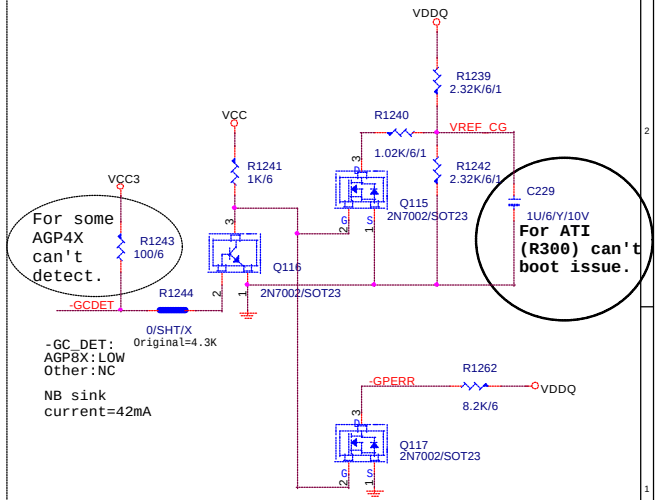
Decoupling capacitors
(Place near AGP slot)



Place 1 at each pair of VDDQ pins

Place an additional for spread from A14 - A33

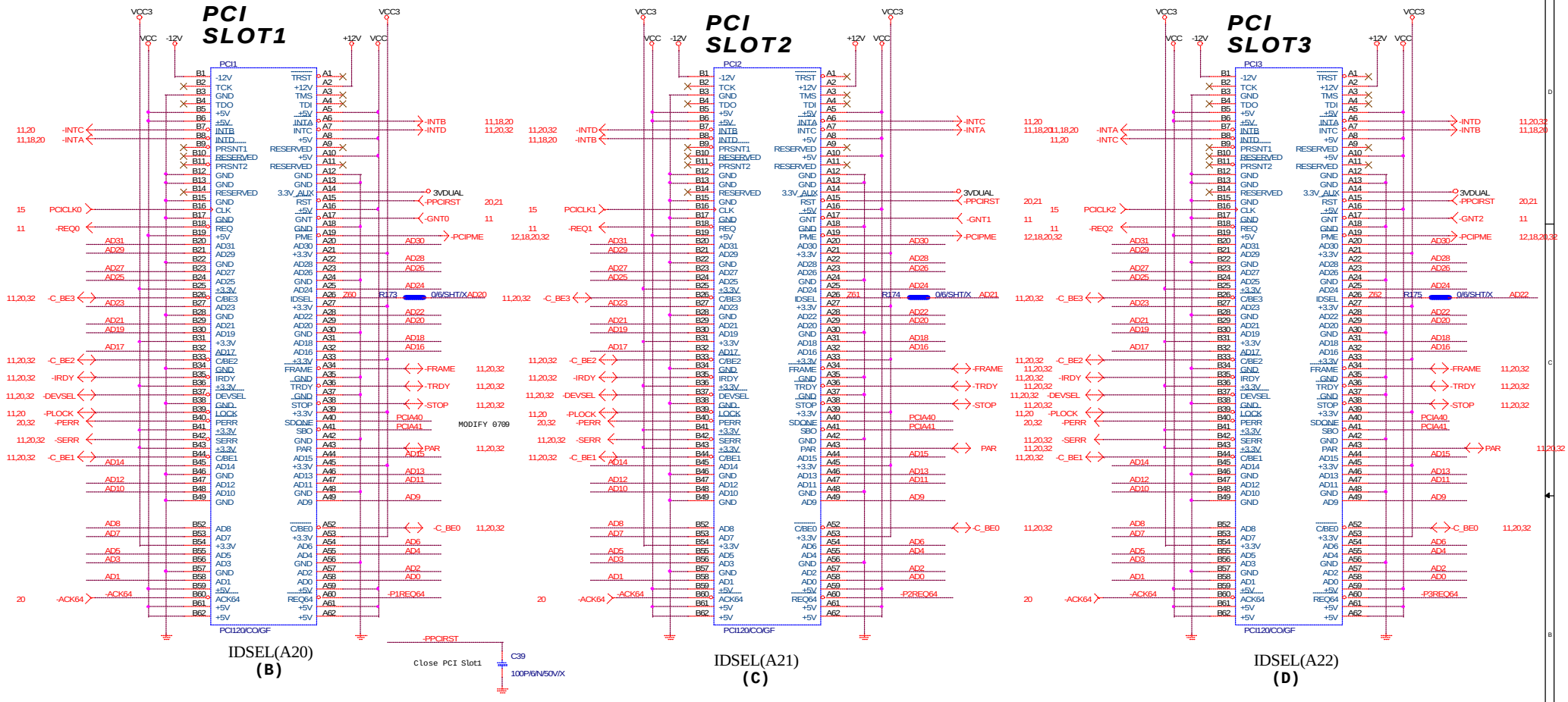


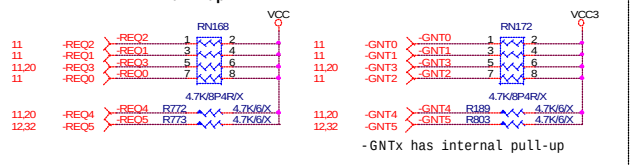


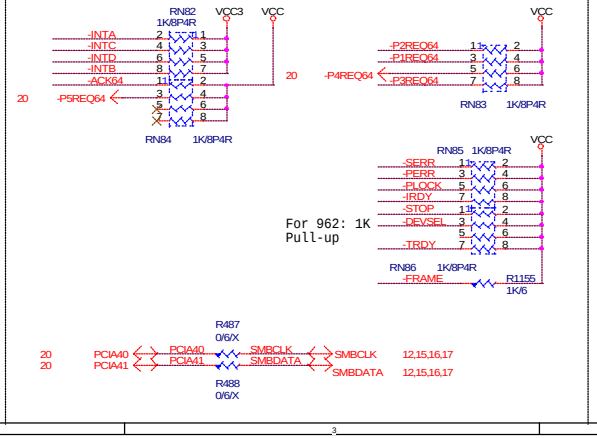
GIGABYTE

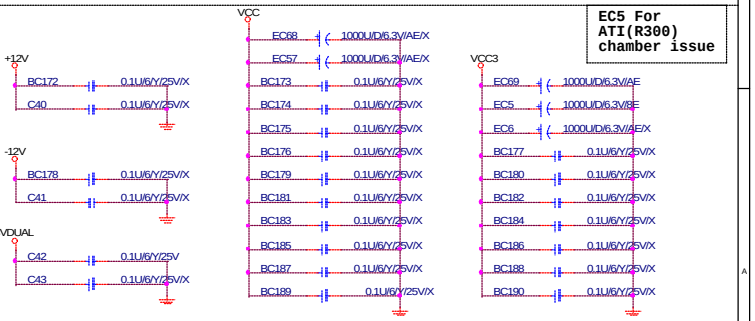
Title	AGP SLOT	
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 18 of 32	

PCI SLOT 1,2,3





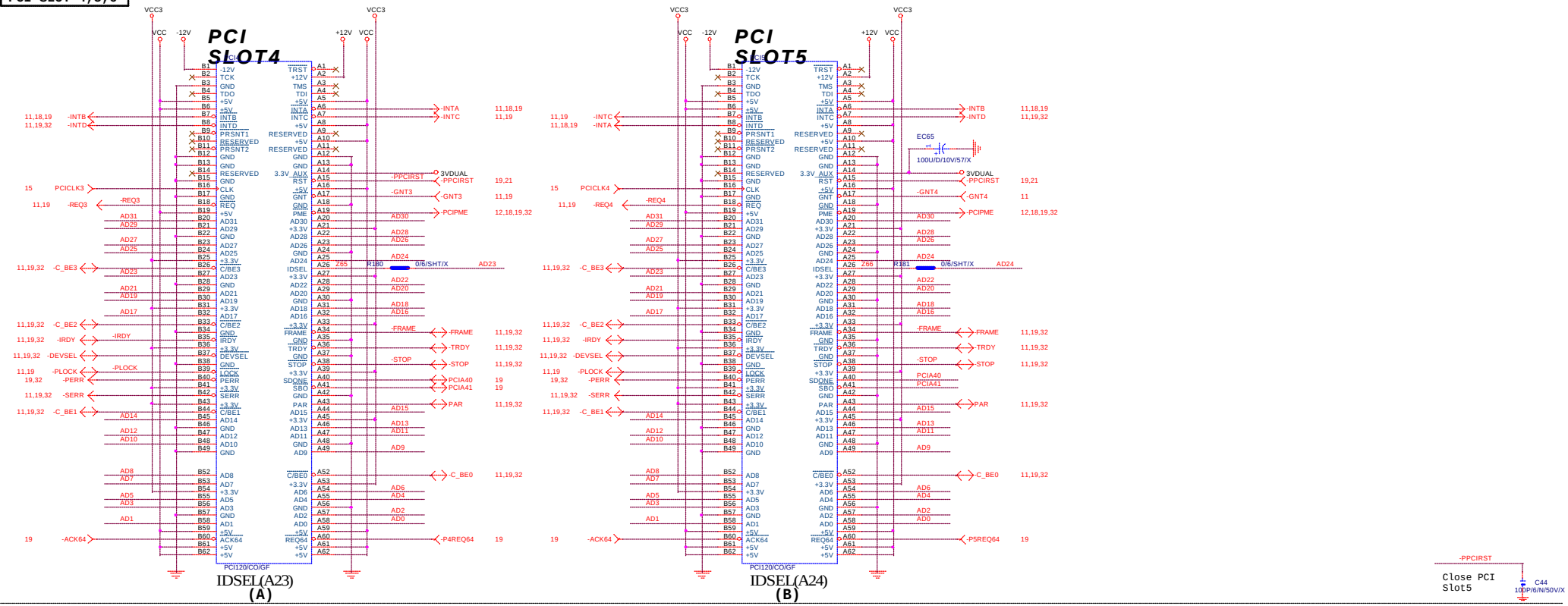




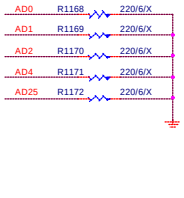
GIGABYTE

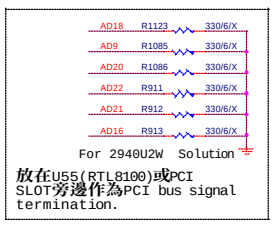
Title	PCI SLOT 1,2,3	
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 19 of 32	

PCI SLOT 4,5,6



PCI的走線要盡量 避免走"T"型。



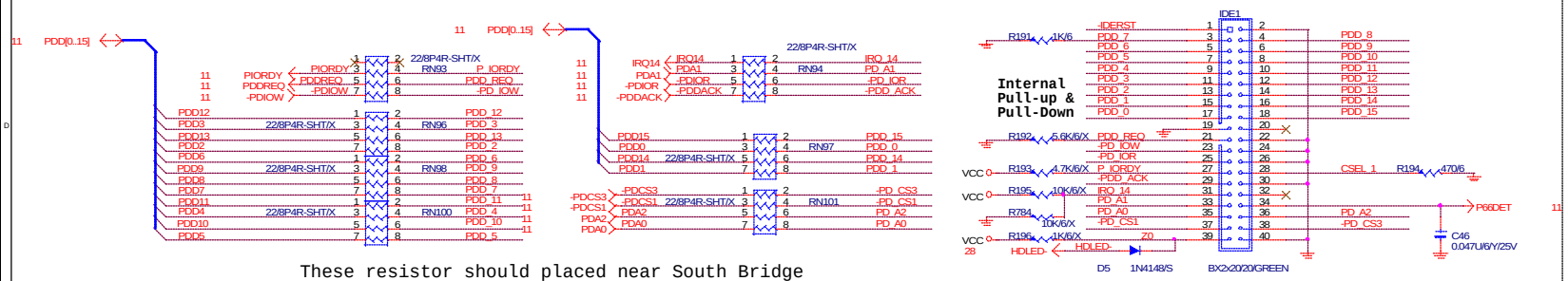


	INTA#	IDSEL	REQx-
PCI1	BCDA	AD20	REQ0
PCI2	CDAB	AD21	REQ1
PCI3	DABC	AD22	REQ2
PCI4	ABCD	AD23	REQ3
PCI5	BCDA	AD24	REQ4
RTL8100	D	AD26	REQ5

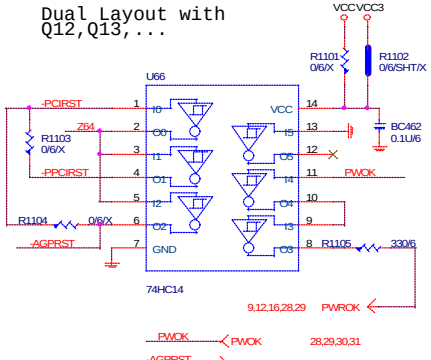
GIGABYTE

Title	PCI SLOT 4,5	
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 20 of 32	

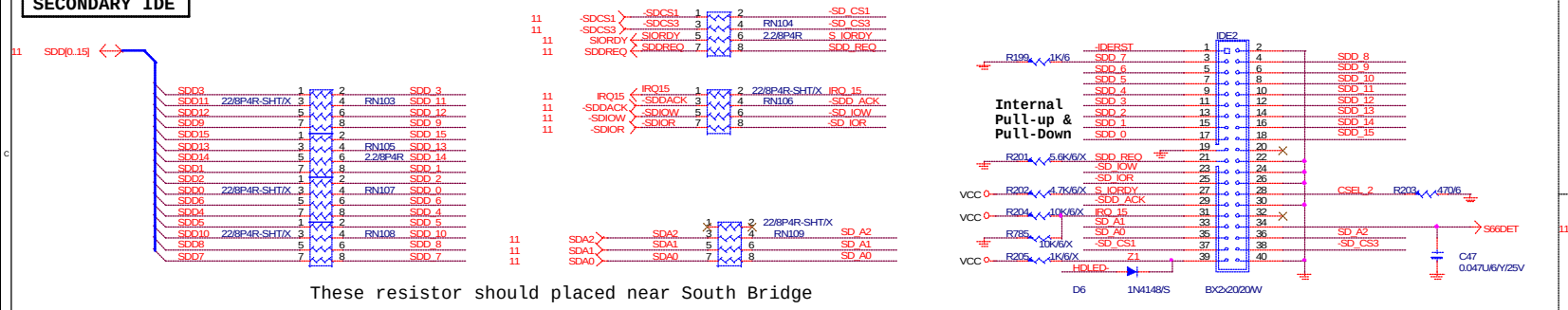
PRIMARY IDE



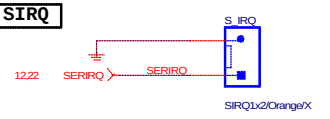
Dual Layout with
Q12,Q13,...



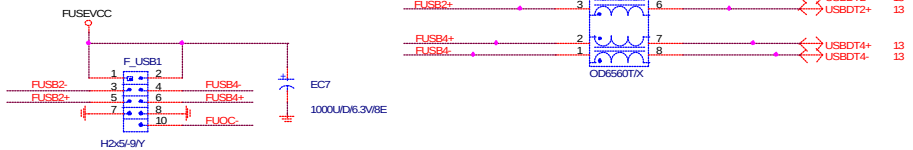
SECONDARY IDE



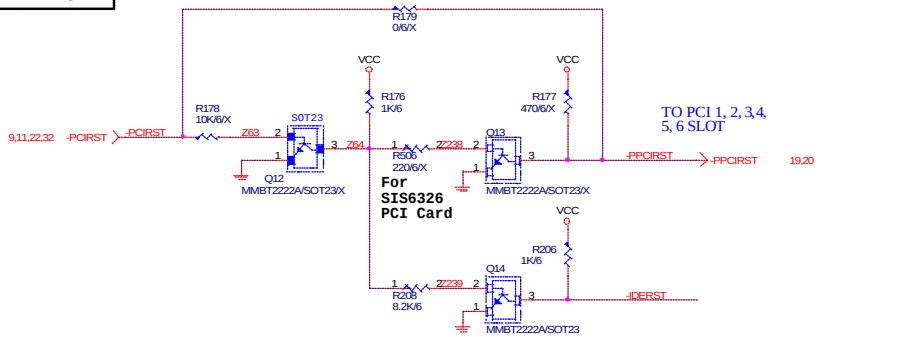
SIRQ



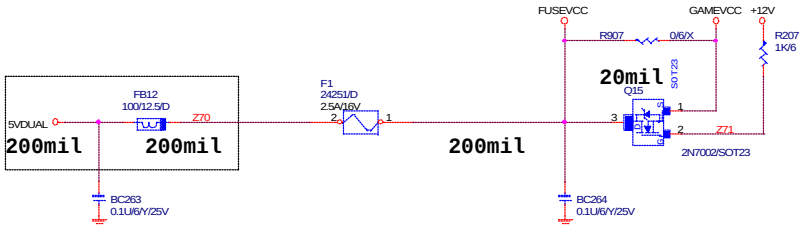
FRONT SIDE USB1

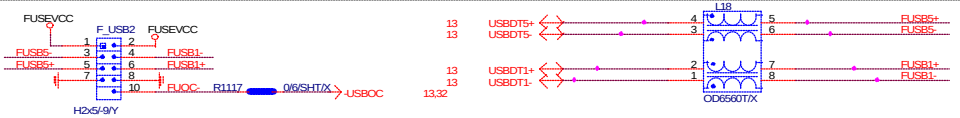


PCI+IDE RESET

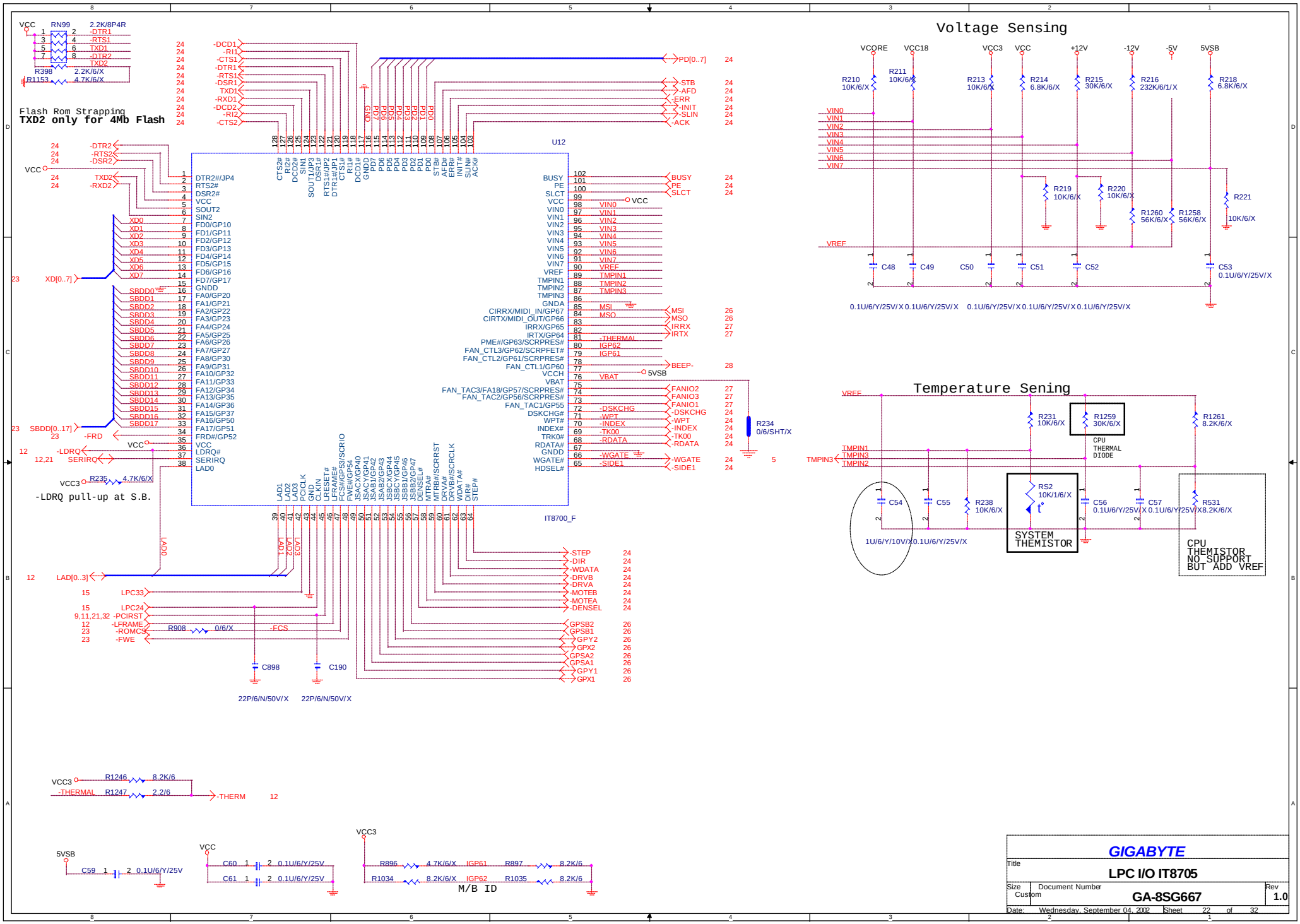


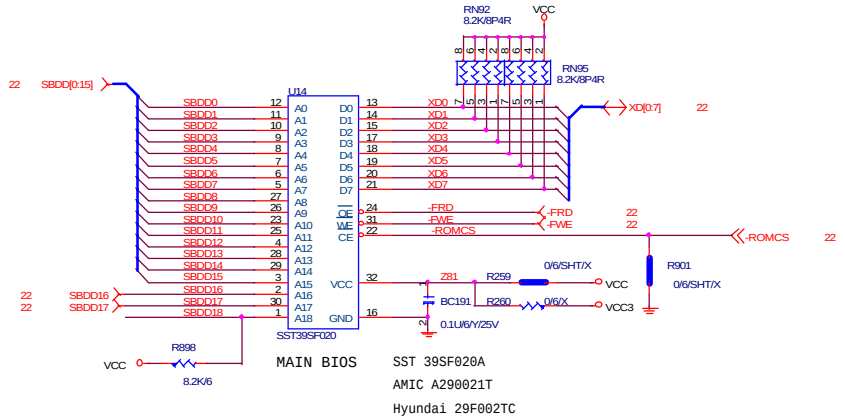
FUSEVCC,GAMEVCC



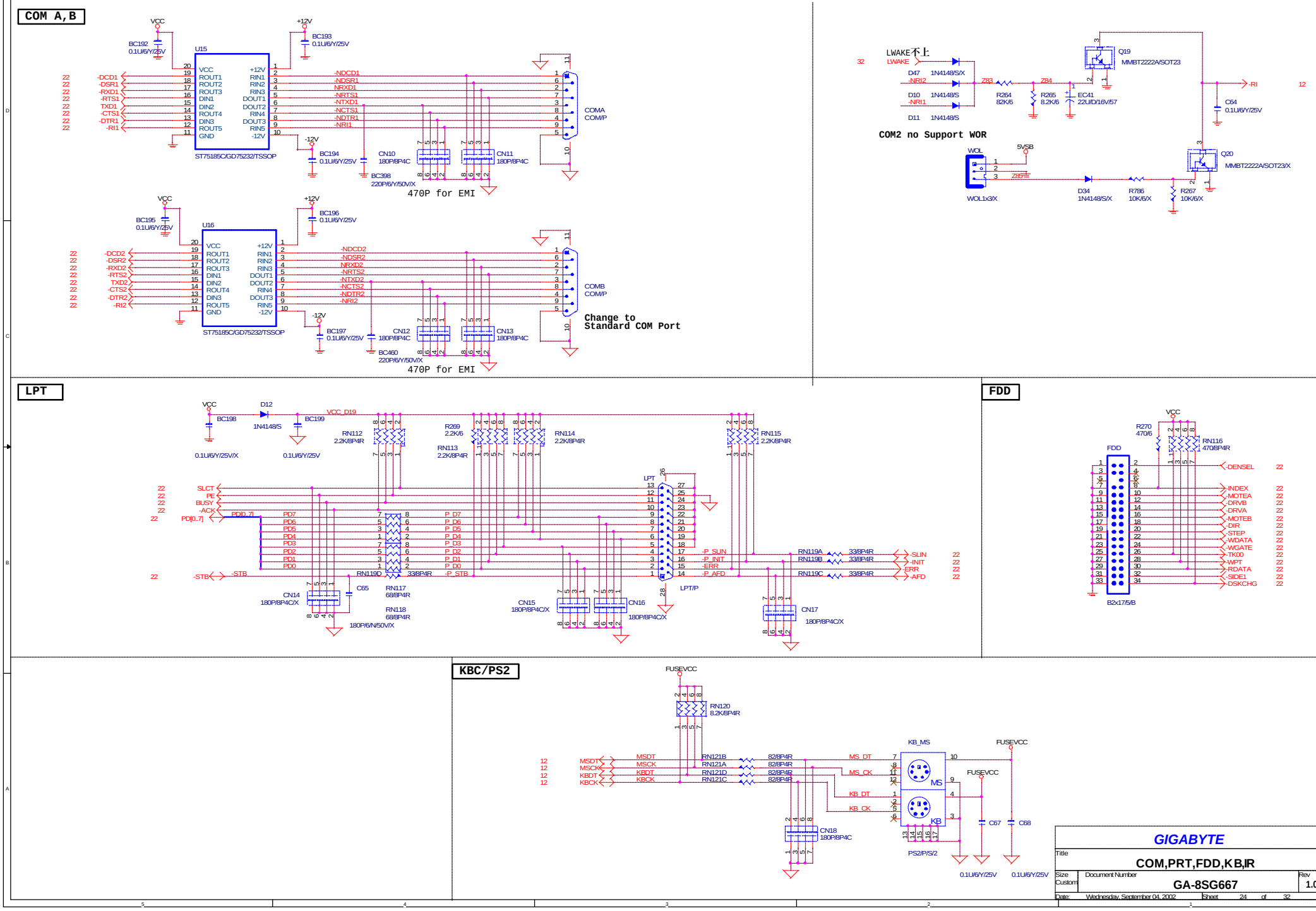


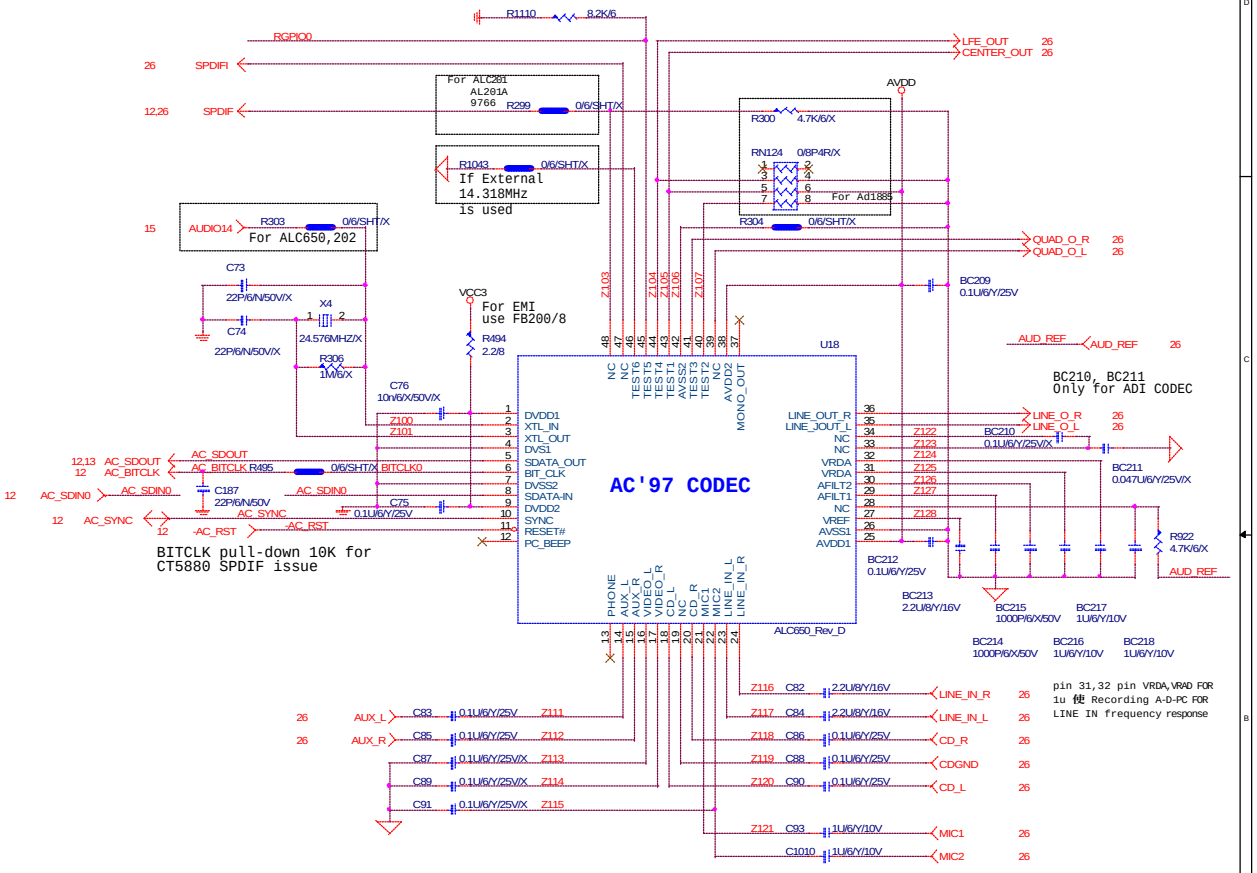
GIGABYTE		
Title: IDE, USB		
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 21 of 32	


Flash Rom Strapping
TXD2 only for 4Mb Flash
U12
IT8700_F
-LDRQ pull-up at S.B.
Voltage Sensing
VCORE
VCC18
VCC3
VCC
+12V
-12V
-5V
5VSB
VREF
Temperature Sening
TMPIN1
TMPIN2
TMPIN3
CPU THERMAL DIODE
SYSTEM THEMISTOR
CPU THEMISTOR NO_SUPPORT BUT ADD VREF
M/B ID
GIGABYTE
LPC I/O IT8705
GA-8SG667
Wednesday, September 04, 2002

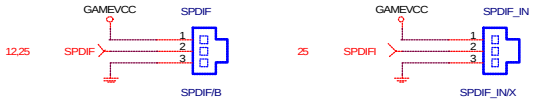


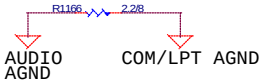
GIGABYTE		
Title	Flash ROM	
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 23 of 32	


COM A,B
U15
ST75185C/GD75232/TSSOP
U16
ST75185C/GD75232/TSSOP
COMA
COMB
470P for EMI
470P for EMI
Change to
Standard COM Port
LWAKE不上
COM2 no Support WOR
WOL1x3/X
MMBT2222A/SOT23
MMBT2222A/SOT23/X
LPT
LPT/P
FDD
B2x17/5/B
KBC/PS2
PS2/P/S2
GIGABYTE
Title
COM,PRT,FDD,KB,IR
Size
Custom
Document Number
GA-8SG667
Rev
1.0
Date: Wednesday, September 04, 2002
Sheet 24 of 32

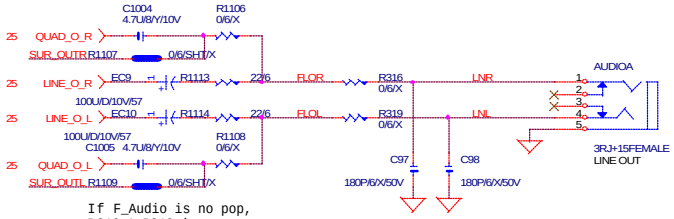

AC'97 CODEC
U18
ALC650_Rev_D
R1110 8.2K/6
RGPIO0
SPDIFI
SPDIF
For ALC281
AL201A
9766 R299 0/6/SHT/X
R1043 0/6/SHT/X
If External
14.318MHz
is used
AUDIO14 R303 0/6/SHT/X
For ALC650,202
C73 22P/6/N/50V/X
X4
C74 22P/6/N/50V/X
24.576MHZ/X
R306 1M/6/X
VCC3
For EMI
use FB200/8
R494 2.2/8
C76 10n/6/X/50V/X
AC_SDOUT
AC_BITCLK R495 0/6/SHT/X
C187 22P/6/N/50V
AC_SYNC
AC_RST
BITCLK pull-down 10K for
CT5880 SPDIF issue
AVDD
R300 4.7K/6/X
RN124 0/8P4R/X
For Ad1885
R304 0/6/SHT/X
LFE_OUT
CENTER_OUT
QUAD_O_R
QUAD_O_L
BC209 0.1U/6/Y/25V
AUD_REF
BC210, BC211
Only for ADI CODEC
LINE_O_R
LINE_O_L
BC210 0.1U/6/Y/25V/X
BC211 0.047U/6/Y/25V/X
R922 4.7K/6/X
BC212 0.1U/6/Y/25V
BC213 2.2U/8/Y/16V
BC215 1000P/6/X/50V
BC217 1U/6/Y/10V
BC214 1000P/6/X/50V
BC216 1U/6/Y/10V
BC218 1U/6/Y/10V
pin 31,32 pin VRDA,VRAD FOR
1u 供 Recording A-D-PC FOR
LINE IN frequency response
AUX_L C83 0.1U/6/Y/25V
AUX_R C85 0.1U/6/Y/25V
C87 0.1U/6/Y/25V/X
C89 0.1U/6/Y/25V/X
C91 0.1U/6/Y/25V/X
C82 2.2U/8/Y/16V LINE_IN_R
C84 2.2U/8/Y/16V LINE_IN_L
C86 0.1U/6/Y/25V CD_R
C88 0.1U/6/Y/25V CDGND
C90 0.1U/6/Y/25V CD_L
C93 1U/6/Y/10V MIC1
C1010 1U/6/Y/10V MIC2
+12V
R1118 100K/6
Q108 2N7002/SOT23
R1111 8.2K/6 MIC
C1008 1U/6/Y/10V
Q109 MMBT2222A/SOT23
SOT23
R1119 8.2K/6
RGPIO0 R1115 100/6
R1158 0/6/X N/A
EC67 22U/D/16V/47
Q21 78L05/D
TOP
OUTGND IN
EC42 22U/D/16V/47
BC224 0.1U/6/Y/25V
GIGABYTE
Title
AUDIO (CREATIVE CT5880)
Size Custom
Document Number
GA-8SG667
Rev 1.0
Date: Wednesday, September 04, 2002
Sheet 25 of 32

SPDIF



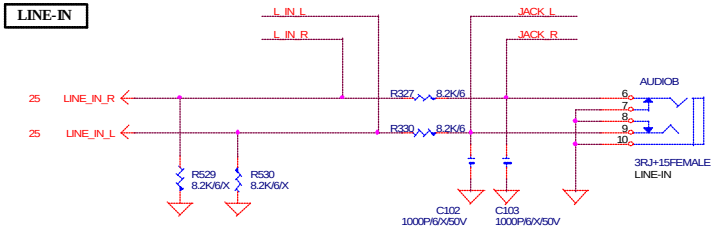


LINE OUT

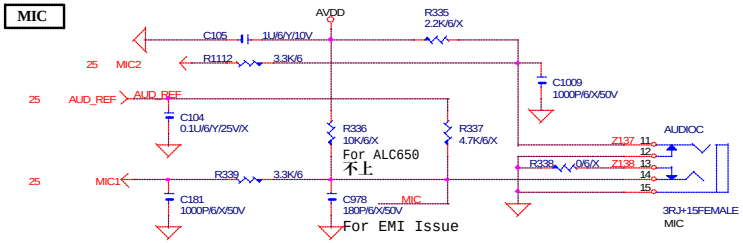


If F_Audio is no pop,
R316 & R319 is pop.

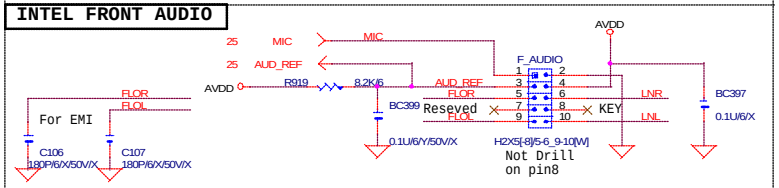
LINE-IN



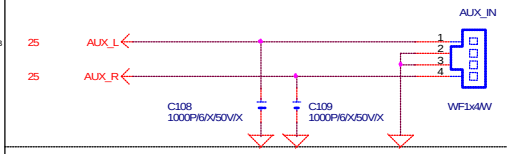
MIC



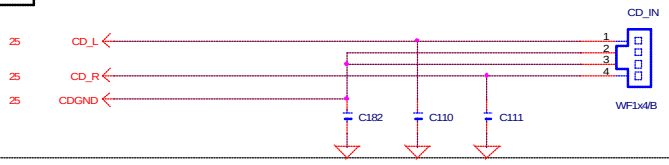
INTEL FRONT AUDIO

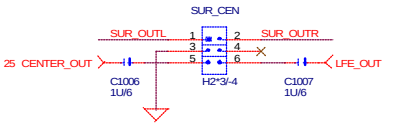


AUX IN DEFAULT NO POP

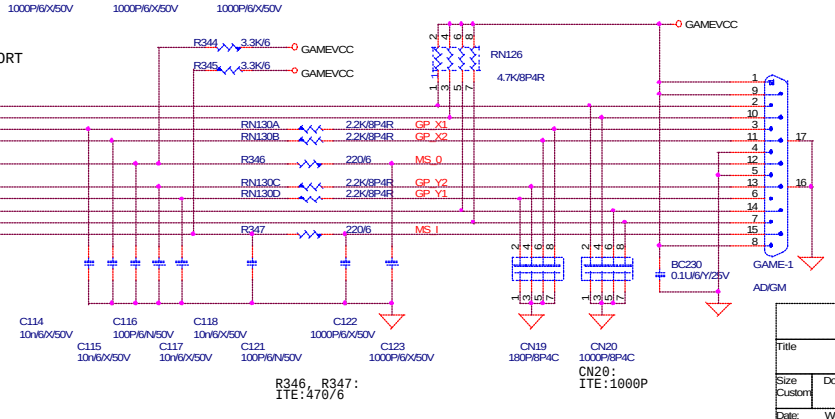


CD IN





GAME PORT



GIGABYTE

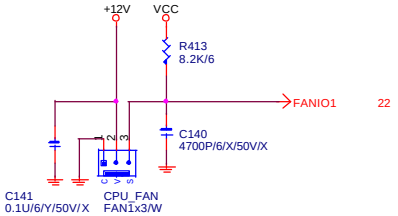
Title: AUDIO OUTPUT,GAME PORT

Size: Custom | Document Number: GA-8SG667 | Rev: 1.0

Date: Wednesday, September 04, 2002 | Sheet 26 of 32

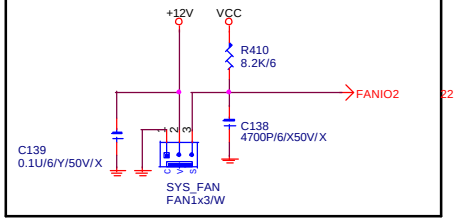
CPU FAN

+12V -->40 mils



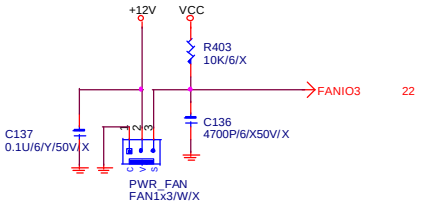
SYSTEM FAN W=0.167W

+12V -->40 mils

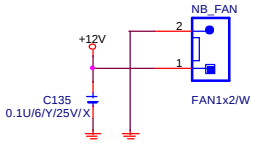


POWER FAN W=0.167W

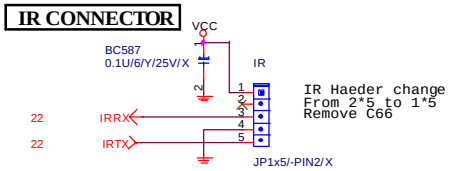
+12V -->40 mils



NB HEAT SINK FAN

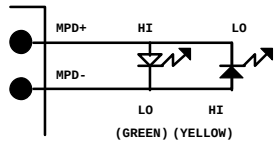


IR CONNECTOR



GIGABYTE		
Title: FAN		
Size: Custom	Document Number: GA-8SG667	Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 27 of 32	

FRONT PANEL



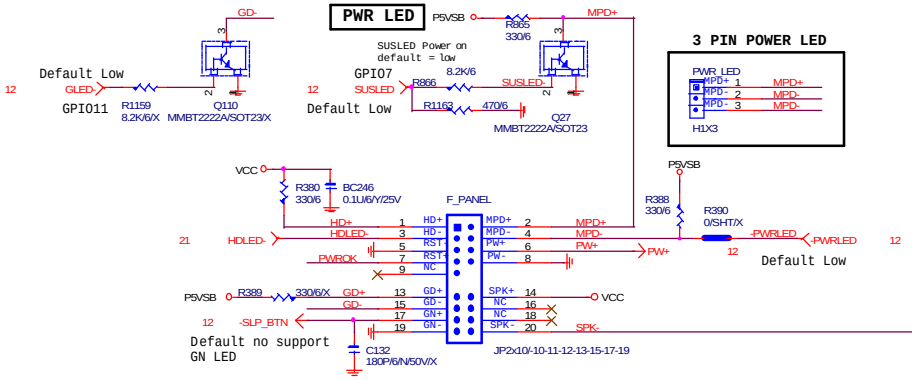
States for a single-color power LED

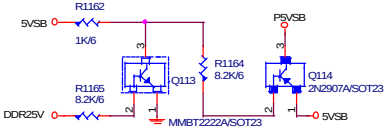
LED States	ACPI States	MPD+	MPD-
OFF	S1,S3,S5	HI	HI
Steady Green	S0	HI	LO
Blinking Green	S0(message waiting)	HI	BLINKING

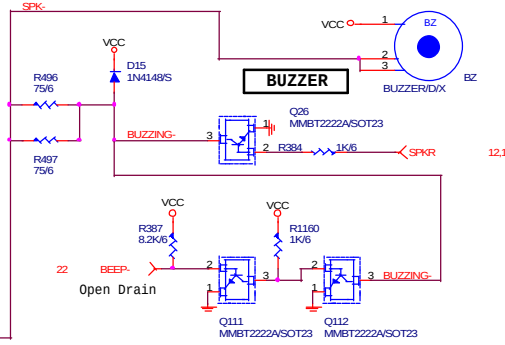
States for a dual-color power LED

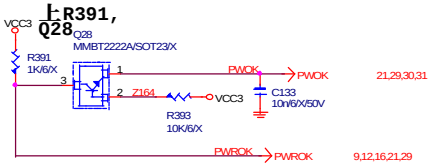
LED States	ACPI States	MPD+	MPD-
OFF	S5	HI	HI
Steady Green	S0	HI	LO
Blinking Green	S0(message waiting)	HI	BLINKING
Steady Yellow	S1,S3	LO	HI
Blinking Yellow	S1,S3(message waiting)	LO	BLINKING

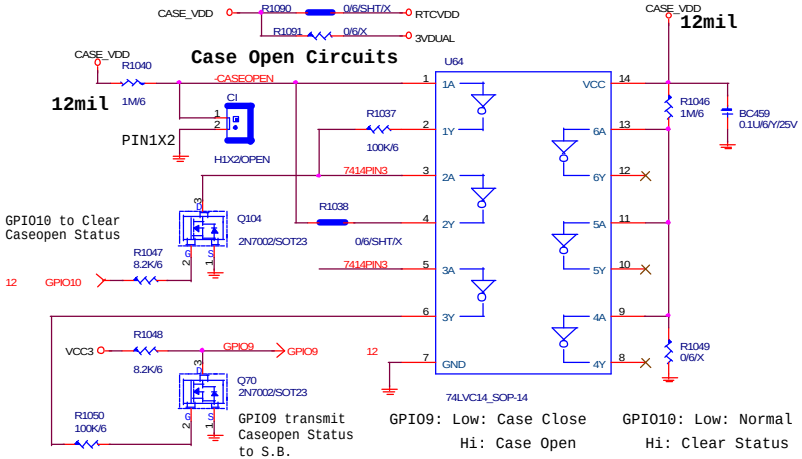
	S0	S1	S3	S5
GPIO11(GLED-)	0	1	1	0
GPIO7(SUSLED)	0	B	B	0
ACPILED(Pin A15)	0	0	0	1

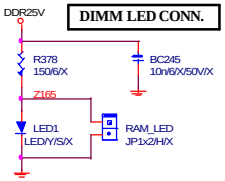






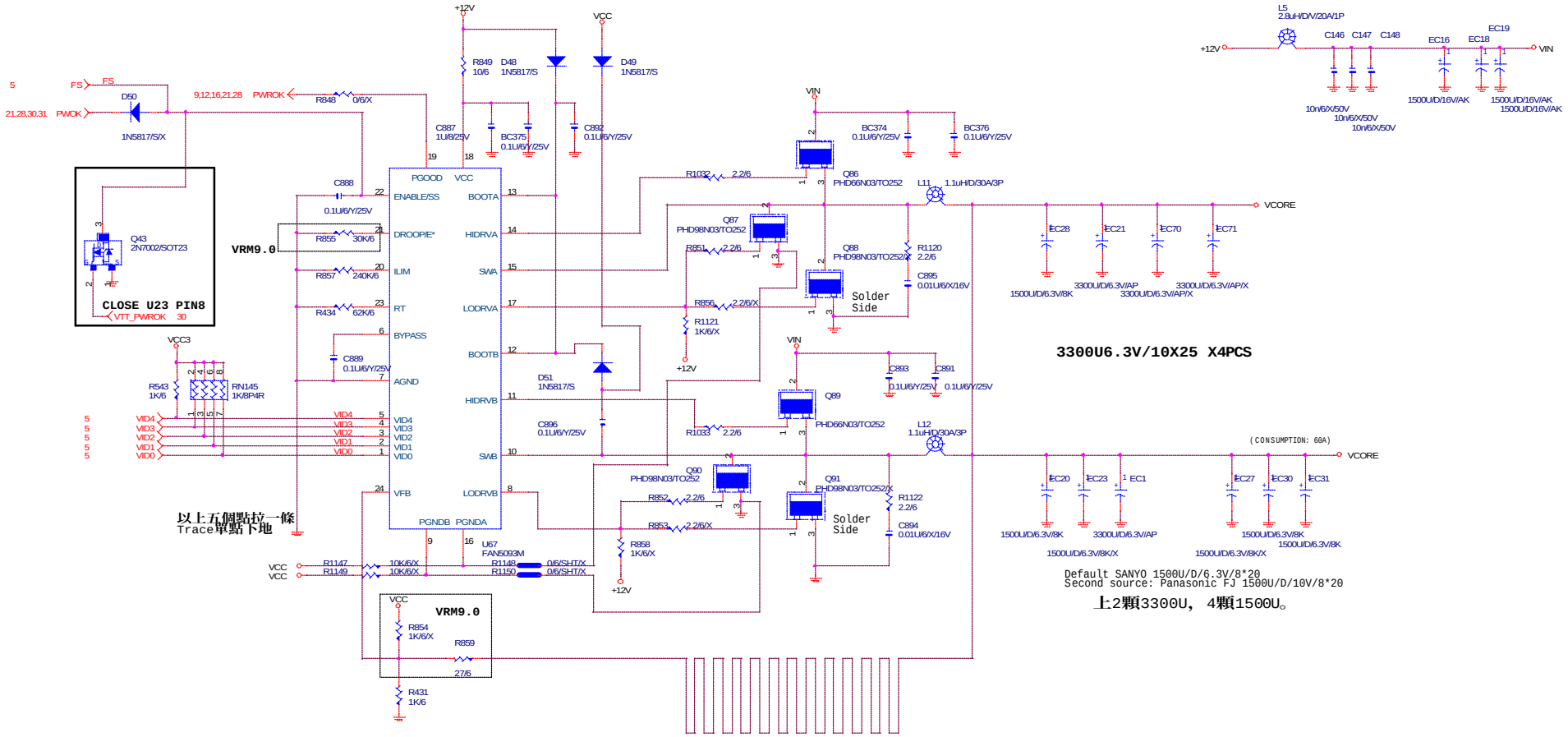






74LVC14:
10TC1-140014-01
10TC1-120014-01
10TC1-120014-02

GIGABYTE			
Title: PANEL, STR LED			
Size: Custom	Document Number: GA-8SG667		Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 28 of 32		



TO-252 Hi-Side	TO-252 Lo-Side
PHD66N03(m ohm)	PHD98N03(m ohm)
IPD09N03LA(8.6m ohm)	IPD06N03LA(5.7m ohm)
2SK3638(8.5m ohm)	2SK3639(5.5m ohm)

GIGABYTE

Title: VCORE (PWM FAN5093M)

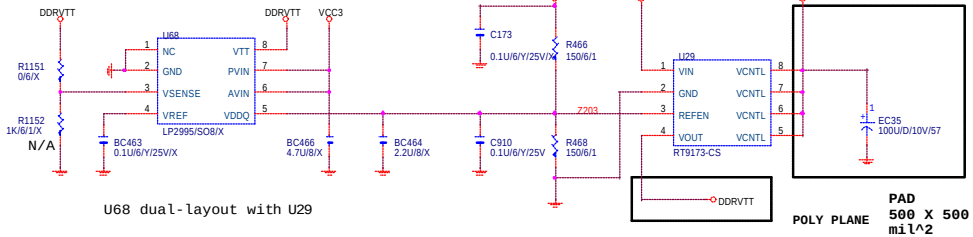
Size	Document Number	Rev
Custom	GA-8SG667	1.0

Date: Wednesday, September 04, 2002 Sheet 29 of 32

1.25V DDRVTT LINEAR SOLUTION

	RT9173	LP2995
R466	150/6/1	0/6
R468	150/6/1	N/A

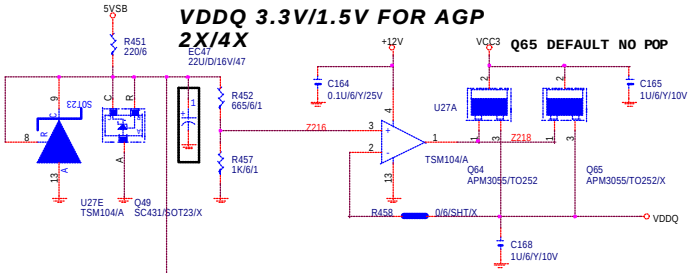
1.25V DDRV(NS)



1.25V_1.5A DDRVTT

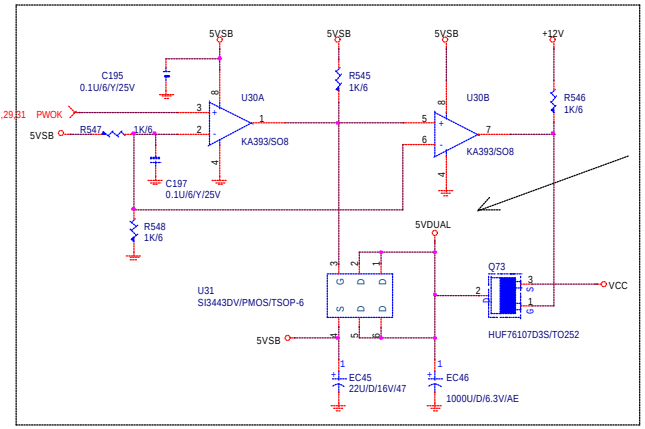
U68 dual-layout with U29

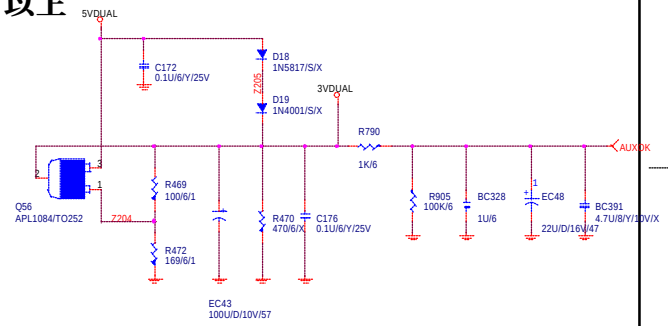
VDDQ 3.3V/1.5V FOR AGP 2X/4X



5VDUAL TRANS TO 3VDUAL(3.3V)

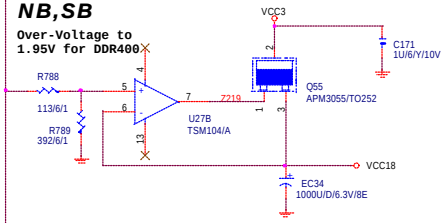
5VDUAL 80 mils 以上



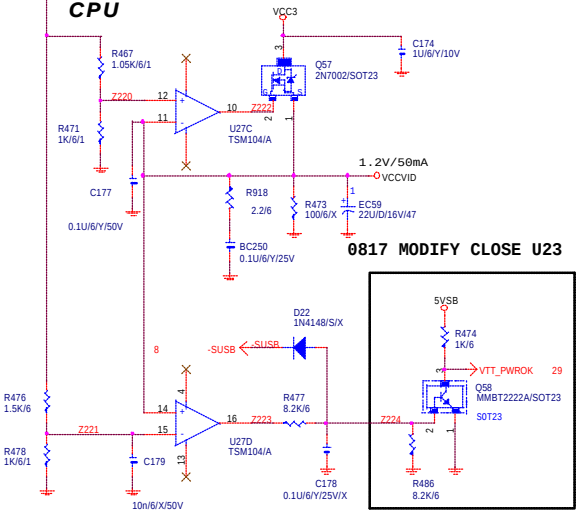


VCC18 FOR NB,SB

Over-Voltage to 1.95V for DDR400

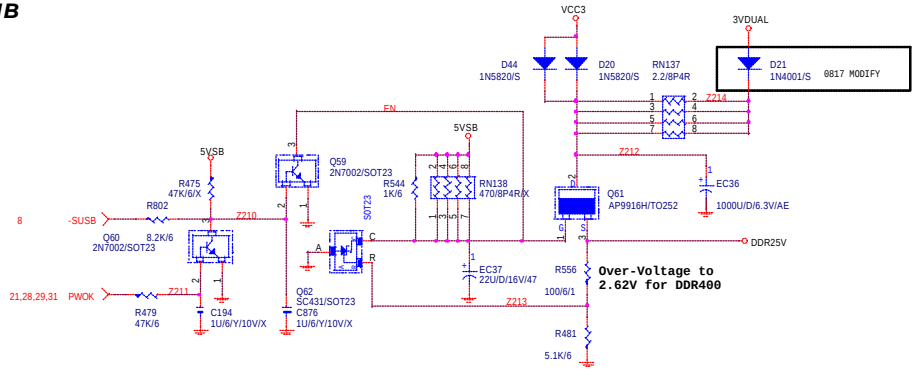


VCCVID FOR NORTHWOOD CPU

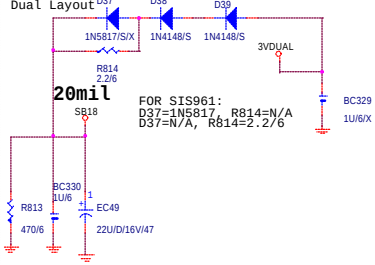


DDR25V FOR DDR DIMM & NB

AP9916 layout TO-263 package for thermal issue

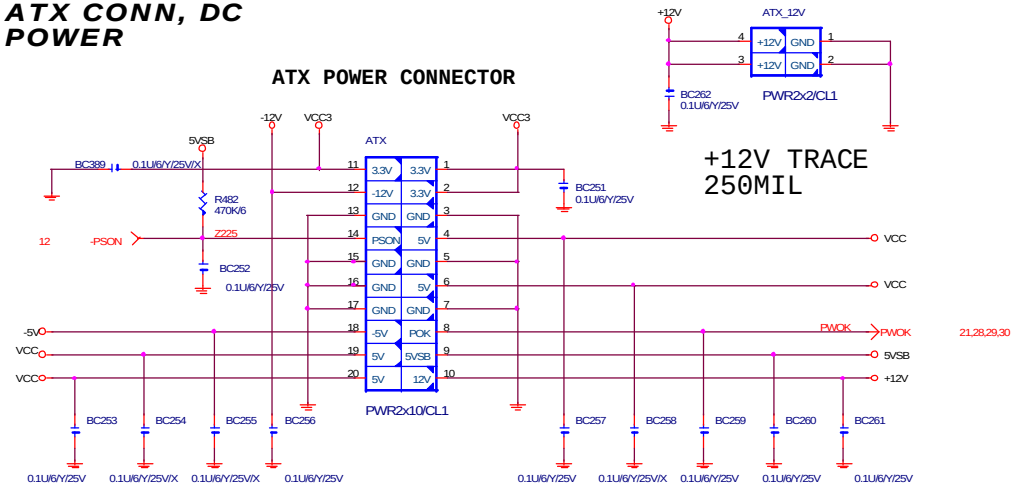


SB18 FOR SB



GIGABYTE			
Title	DDR POWER, VDDQ, VCCVID, 3VDUAL		
Size: Custom	Document Number: GA-8SG667		Rev: 1.0
Date: Wednesday, September 04, 2002	Sheet 30 of 32		

ATX CONN, DC POWER



8SRXL South Bridge GPIO LIST			
ITEM	DESCRIPTION	STATUS	Default
GPO0	Non Use		Hi
GPO1	Non Use		Hi
GPO4	Non Use		Hi
GPO2	Non Use		Hi
GPO3	Green Button	Hi:Normal, Lo:Into Green mode	Hi
GPIO5	REQ5		
GPIO6	GNT5		
GPO7	Non Use		Hi
GPO11	Non Use		Hi
GPI8	Wake On Ring	Hi:Normal, Lo:Ring Power On	Hi
GPI9	Case Open	Hi:Case Open , Lo:Normal	Lo
GPI10	Clear Caseopen status	Hi:Clear Caseopen Status, Lo:Normal	Lo
GPI13	Non Use		Hi
GPO12	Non Use		Hi
GPI14	Primary Down	Lo:CODEC Only	Lo
GPIO15	KB Data		Hi
GPIO16	KB Clk		Hi
GPIO17	MS Data		Hi
GPIO18	MS Clk		Hi

States for a single-color power LED

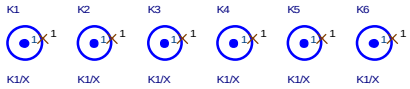
LED States	ACPI States	MPD+	MPD-	BIOS GPIO7	BIOS ACPILED
OFF	S5	HI	HI	LO	HI/NC
Steady Green	S0	HI	LO	LO	LO
Blinking Green	S0(message waiting)	HI	BLINKING	LO	BLINKING

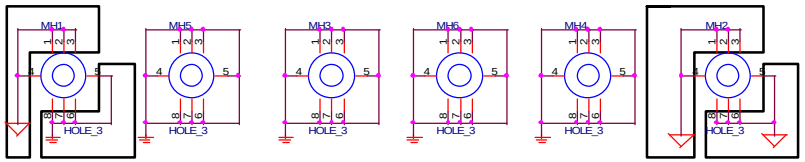
States for a dual-color power LED

LED States	ACPI States	MPD+	MPD-	BIOS GPIO7	BIOS ACPILED
OFF	S5	HI	HI	LO	HI/NC
Steady Green	S0	HI	LO	LO	LO
Blinking Green	S0(message waiting)	HI	BLINKING	LO	BLINKING
Steady Yellow	S1,S3	LO	HI	HI	HI
Blinking Yellow	S1,S3(message waiting)	LO	BLINKING	HI	BLINKING

States for green LED

LED States	ACPI States	GLED-	BIOS GPIO11
ON	S1,S3	HI	HI
OFF	S0,S5	LO	LO





EMI (VCC.GND CUT HOLE PLANE)

EMI (VCC.LGND CUT HOLE PLANE)

BIOS REQUEST

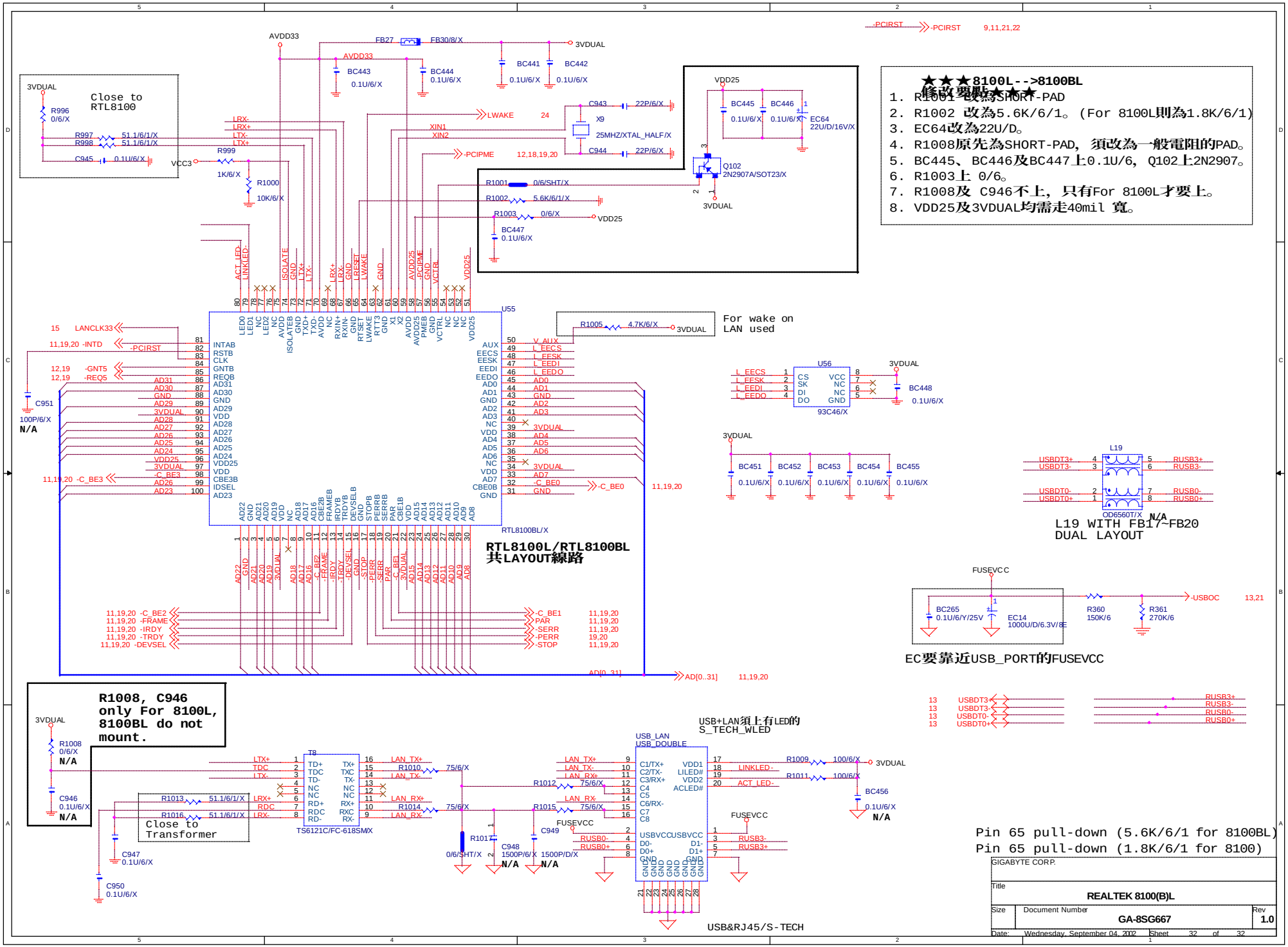
INTEL LED DEFINED SINGLE	INTEL LED DEFINED DUAL		INTEL LED DEFINED GPIO7	INTEL LED DEFINED ACPILED	INTEL LED DEFINED GPIO11	GIGABYTE LED DEFINED	GIGABYTE LED DEFINED GPIO7	GIGABYTE LED DEFINED ACPILED	GIGABYTE LED DEFINED GPIO11	GIGABYTE LED DEFINED SINGLE	GIGABYTE LED DEFINED DUAL
GREEN	GREEN	S0	LO	LO	LO	S0	LO	LO	LO	GREEN	GREEN
OFF	YELLOW	S1	HI	HI	HI	S1	LO	BLINKING	HI	G(BLINK)	G(BLINK)
OFF	YELLOW	S3	HI	HI	HI	S3	HI	HI	HI	OFF	YELLOW
OFF	OFF	S4/S5	LO	HI/NC	LO	S4/S5	LO	HI/NC	LO	OFF	OFF

GIGABYTE

Title: ATX, GPIO LIST

Size: Custom | Document Number: GA-8SG667 | Rev: 1.0

Date: Wednesday, September 04, 2002 | Sheet 31 of 32


★★★8100L-->8100BL
修改要點★★★
1. R1001改為SHORT-PAD
2. R1002 改為5.6K/6/1。(For 8100L則為1.8K/6/1)
3. EC64改為22U/D。
4. R1008原先為SHORT-PAD，須改為一般電阻的PAD。
5. BC445、BC446及BC447上0.1U/6，Q102上2N2907。
6. R1003上 0/6。
7. R1008及 C946不上，只有For 8100L才要上。
8. VDD25及3VDUAL均需走40mil 寬。
Close to RTL8100
For wake on LAN used
RTL8100L/RTL8100BL 共LAYOUT線路
L19 WITH FB17~FB20 DUAL LAYOUT
EC要靠近USB_PORT的FUSEVCC
R1008, C946 only For 8100L, 8100BL do not mount.
Close to Transformer
USB+LAN須上有LED的 S_TECH_WLED
USB&RJ45/S-TECH
Pin 65 pull-down (5.6K/6/1 for 8100BL)
Pin 65 pull-down (1.8K/6/1 for 8100)
GIGABYTE CORP.
Title
REALTEK 8100(B)L
Size
Document Number
GA-8SG667
Rev
1.0
Date: Wednesday, September 04, 2002
Sheet 32 of 32