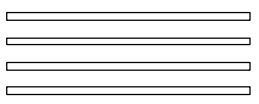
8SKML Schematics

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	SIS650GL (NORTH BRIDGE) HOST; DDR; AGP,HYPER ZIP
11-14	SIS961(B)/962 (SOUTH BIRDGE)
15	CKG(ICS952004) + CKBF (ICS93722)
16,17	DDR SDRAM DIMMS 1,2 & DDR TERMINATION
18	VGA Connector
19	PCI SLOT 1-3
20	IDE,USB
21	Winbond W83697F
22	BIOS
23	COM,PRT,FDD,KB/MS,IR
24	AUDIO AC 97 CODEC
25	AUDIO JACK,GAME PORT
26	RTL8100B & USB CONNECTOR
27	PANEL,STR LED,FANS ,CPU GN
28	VCORE PHASE PWM FAN5093M
29	ALL POWER CIRCUIT
30	ATX & ATX12V CONN
31	GPIO Connecttion
32	TEST POINT



GIGABYTE

Title: COVER SHEET

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Model Name: 8SKML

Version:1.0

Component value change history

AUTOBOM
2002/05/24

Date	Change Item	Reason
07/04	9M8SLML-00-02 --> 9M8SKML-00-01	FIRST RELEASE
07/29	9M8SKML-00-01 --> 9M8SKML-00-10A	PVT
08/5	9M8SKML-00-10A --> 9M8SKML-00-10B	1. PCB COLOR BLUE --> YELLOW
		2. ADD USB CAP CN23,CN24,CN25 8P4C-22P
08/12	9M8SKML-00-10B --> 9M8SKML-00-10C	1.USB CAP CN23,CN24.CN25 8P4C-22P-->47P
		2. VCORE ADD 50mv, R948 1K REMOVE,R950 1K --> 560,R949 10 -->22
		3.AGTLREF=1/2VCORE, R8 100 -->75
08/19	9M8SKML-00-10C --> 9M8SKML-00-10D	1.AUDIO STAC9721 --> ALC101

Circuit or PCB layout change for next version

Date	Change Item	Reason
07/01	8SLML REV0.2 --> 8SKML REV0.1	FIRST RELEASE
07/29	8SKML REV0.1 --> 8SKML REV1.0	PVT

GIGABYTE

Title: BOM & PCB MODIFY HISTORY

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

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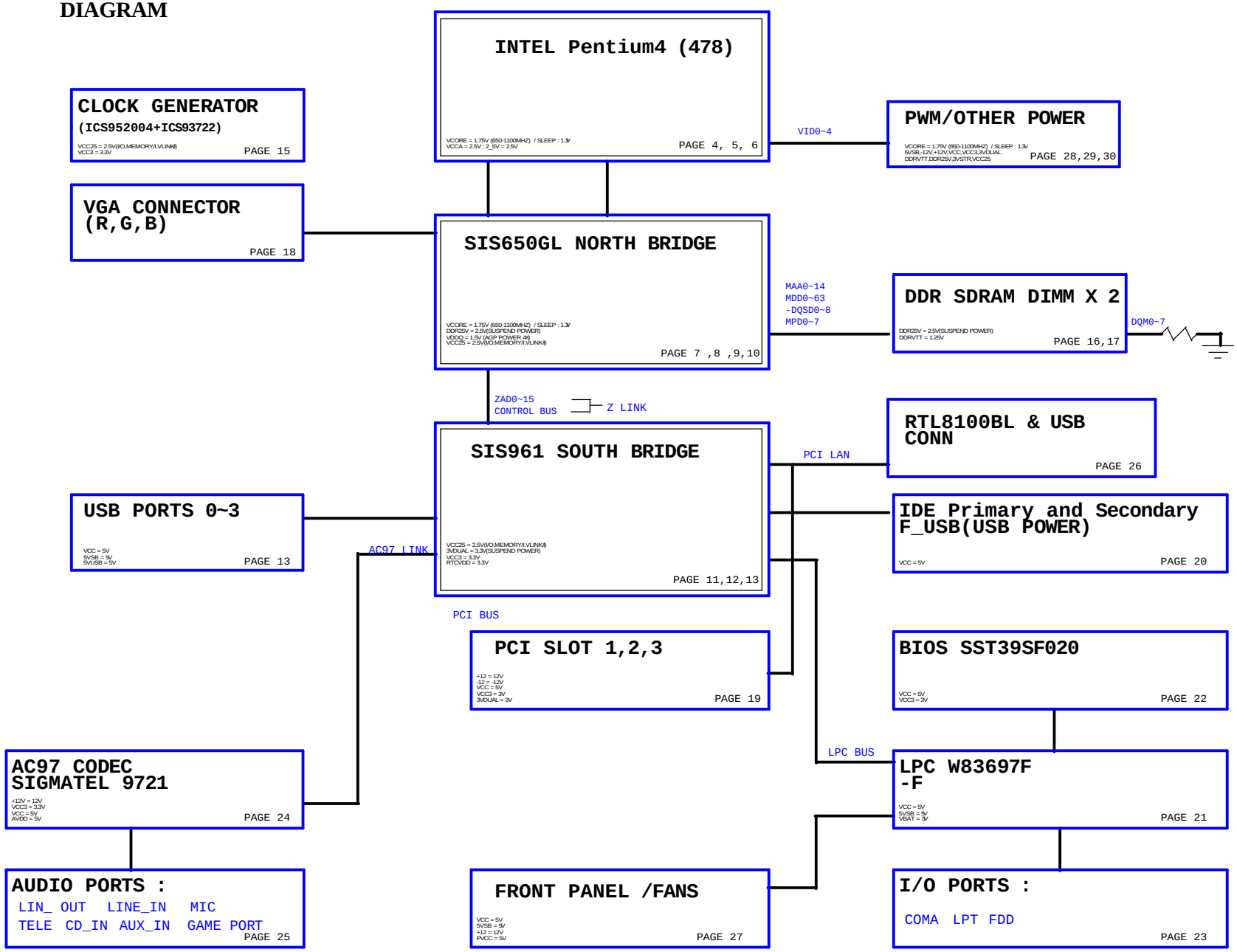
8SLML BLOCK DIAGRAM



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Title: BLOCK DIAGRAM

Size: A3 | Document Number: GA-8SKML | Rev: 1.0

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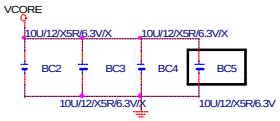
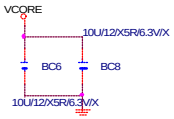
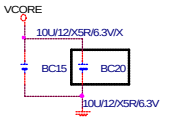
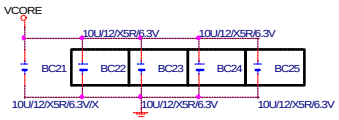
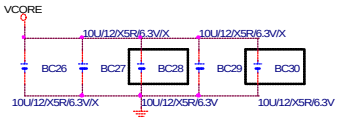
(X5R) X11 1206(10U) NOTE:GIGA

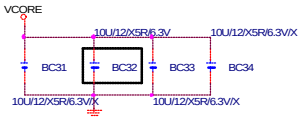


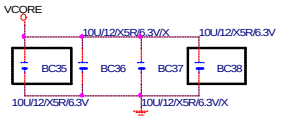


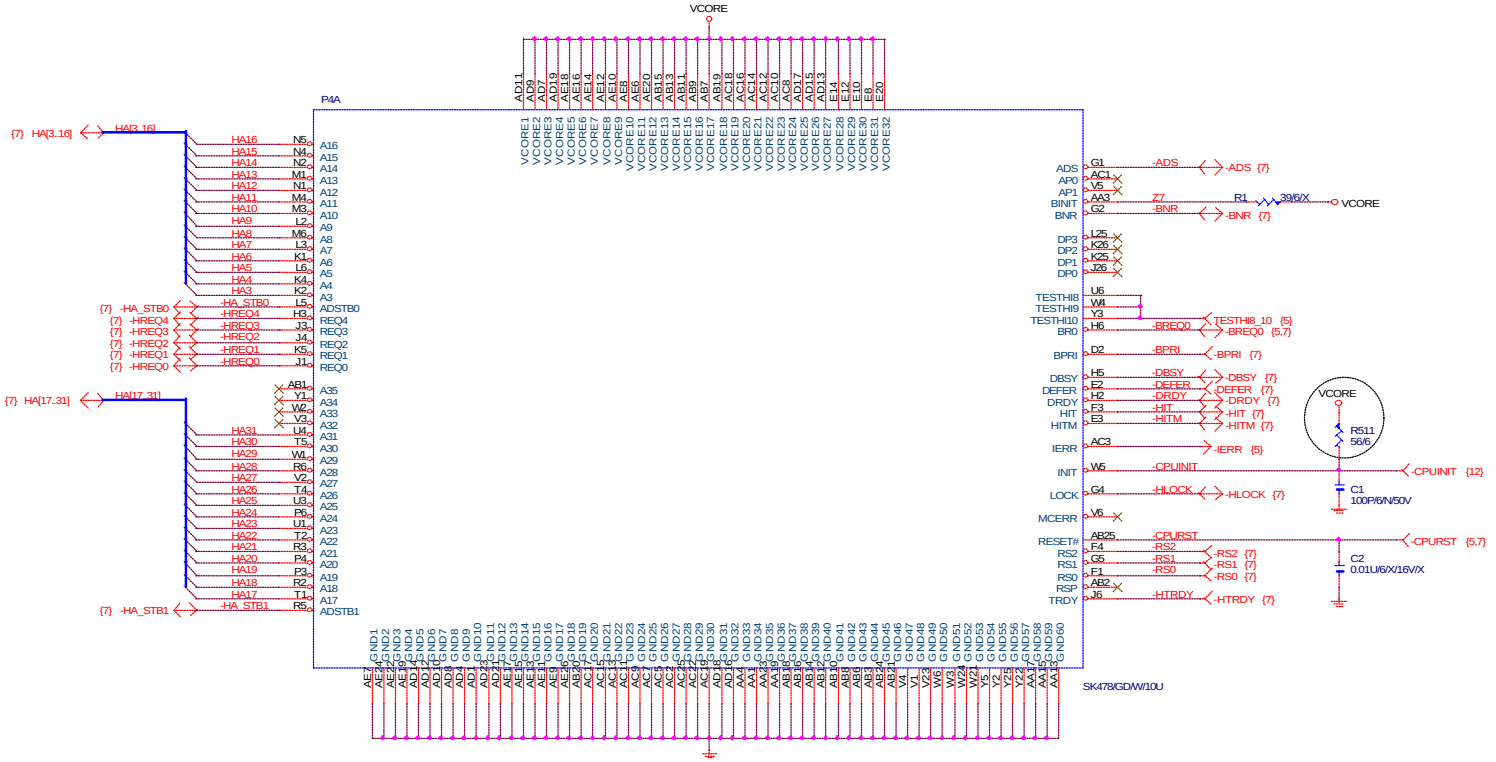












GIGABYTE

Title	WILLIAMATE 478A	
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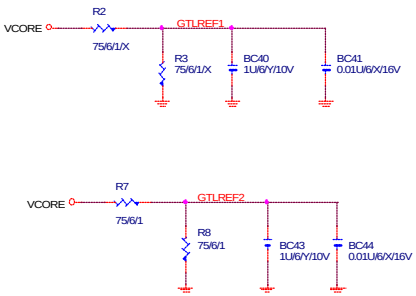
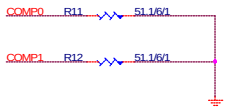
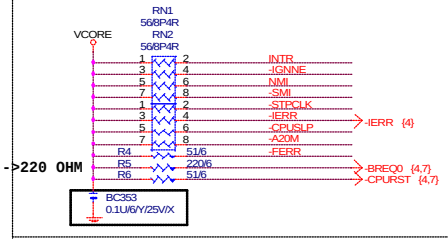
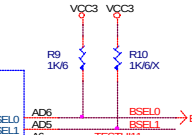
POP ONE GROUP GTLREF







-BREQ0--->220 OHM

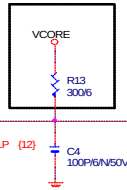


BSEL0 --->100/133

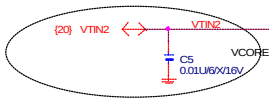
BSEL0 {15}

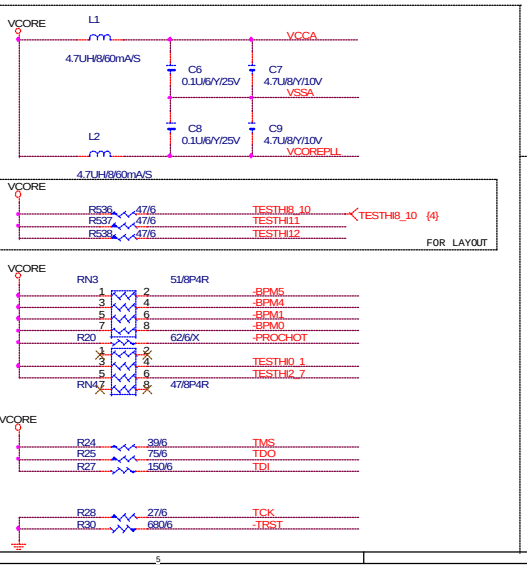
-BPM5
-BPM4
-BPM1
-BPM0
TESTHI0_1
TESTHI2
GTLREF1
GTLREF2
TESTHI2_7
TESTHI0_1
-CPUPWOK
-PROCHOT
-CPUSLP {12}
TCK
TDI
TDO
TMS
-TRST

SIS REQUEST



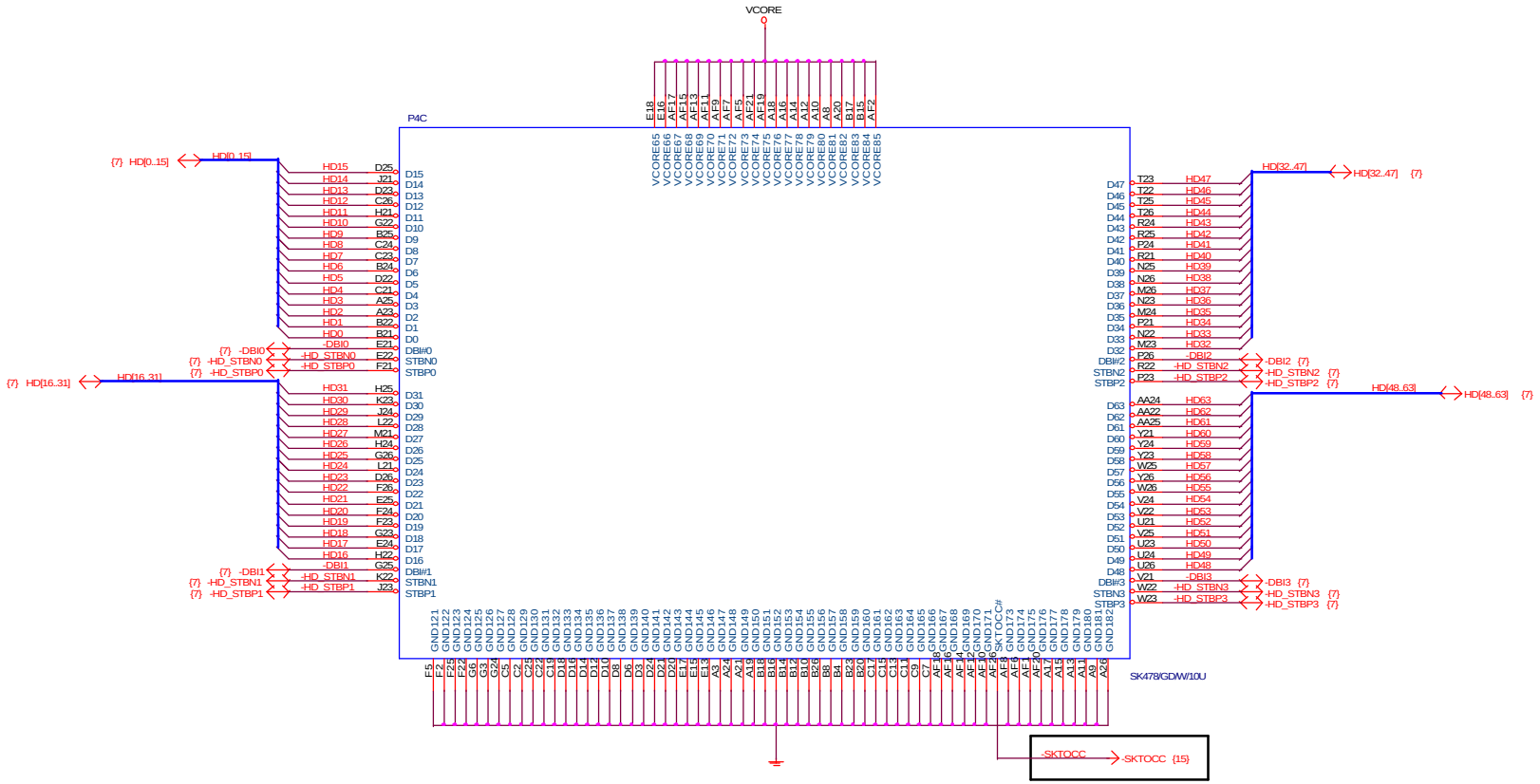
CPUPWOK {7}





(N/A)

GIGABYTE			
Title: WILLIAMATE 478B			
Size: Custom	Document Number: GA-8SKML		Rev: 1.0
Date: Tuesday, August 20, 2002	Sheet 5 of 32		



GIGABYTE

Title	WILLIAMATE 478C	
Size: Custom	Document Number: GA-8SKML	Rev: 1.0
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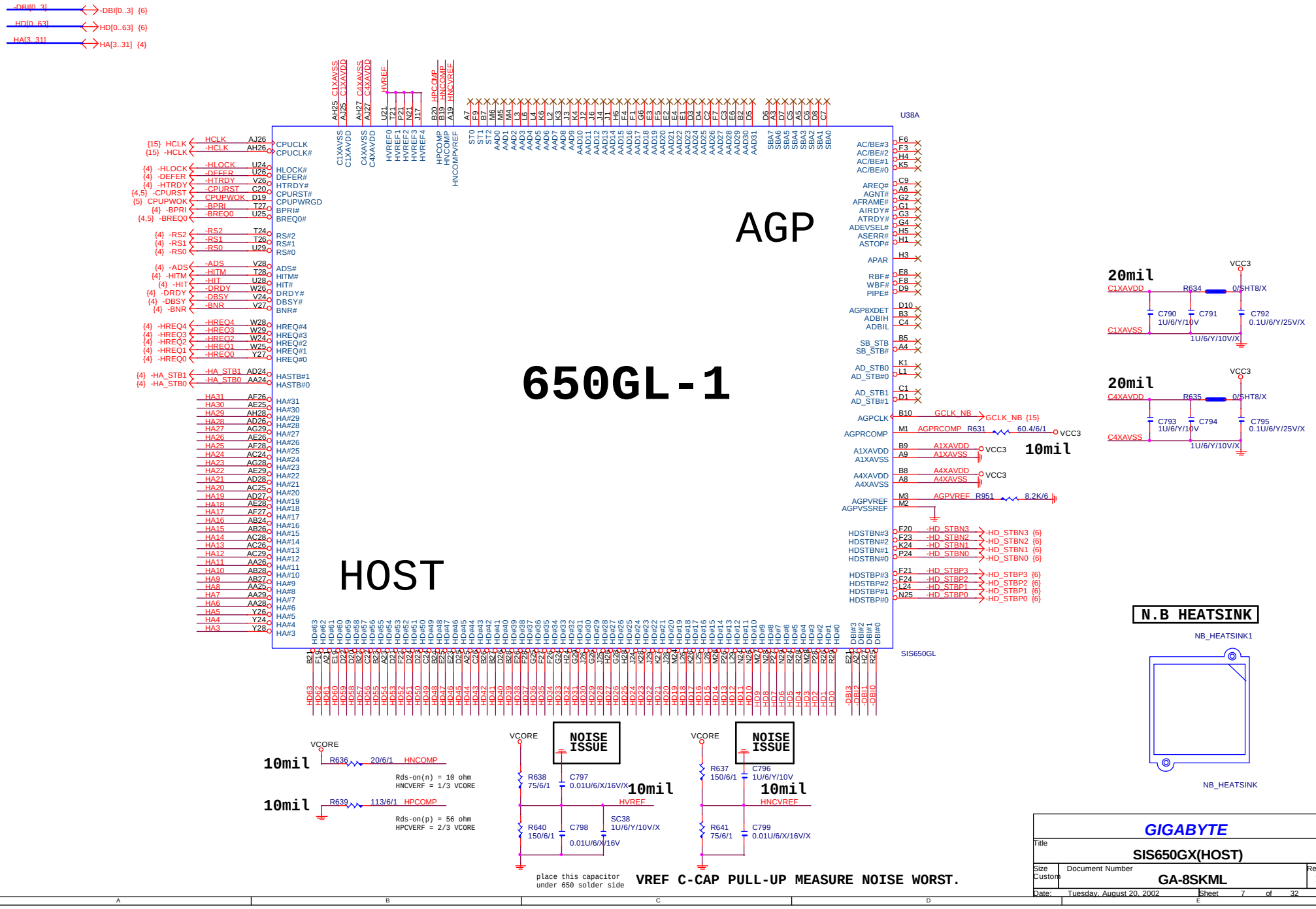
-DBI[0..3] {6}
HD[0..63] {6}
HA[3..31] {4}
650GL-1
HOST
AGP
U38A
SIS650GL
HCLK AJ26
-HCLK AH26
CPUCLK
CPUCLK#
-HLOCK U24
-DEFER U26
-HTRDY V26
-CPURST C20
CPUPWOK D19
-BPRI T27
-BREQ0 U25
HLOCK#
DEFER#
HTRDY#
CPURST#
CPUPWRGD
BPRI#
BREQ0#
-RS2 T24
-RS1 T26
-RS0 U29
RS#2
RS#1
RS#0
-ADS V28
-HITM T28
-HIT U28
-DRDY W26
-DBSY V24
-BNR V27
ADS#
HITM#
HIT#
DRDY#
DBSY#
BNR#
-HREQ4 W28
-HREQ3 W29
-HREQ2 W24
-HREQ1 W25
-HREQ0 Y27
HREQ#4
HREQ#3
HREQ#2
HREQ#1
HREQ#0
-HA_STB1 AD24
-HA_STB0 AA24
HASTB#1
HASTB#0
HA31 AF26
HA30 AE25
HA29 AH28
HA28 AD26
HA27 AG29
HA26 AE26
HA25 AF28
HA24 AC24
HA23 AG28
HA22 AE29
HA21 AD28
HA20 AC25
HA19 AD27
HA18 AE28
HA17 AF27
HA16 AB24
HA15 AB26
HA14 AC28
HA13 AC26
HA12 AC29
HA11 AA26
HA10 AB28
HA9 AB27
HA8 AA25
HA7 AA29
HA6 AA28
HA5 Y26
HA4 Y24
HA3 Y28
HA#31
HA#30
HA#29
HA#28
HA#27
HA#26
HA#25
HA#24
HA#23
HA#22
HA#21
HA#20
HA#19
HA#18
HA#17
HA#16
HA#15
HA#14
HA#13
HA#12
HA#11
HA#10
HA#9
HA#8
HA#7
HA#6
HA#5
HA#4
HA#3
AC/BE#3 F6
AC/BE#2 E3
AC/BE#1 H4
AC/BE#0 K5
AREQ# C9
AGNT# A6
AFRAME# G2
AIRDY# G1
ATRDY# G3
ADEVSEL# G4
ASERR# H5
ASTOP# H1
APAR H3
RBF# E8
WBF# F8
PIPE# D9
AGP8XDET D10
ADBIH B3
ADBIL C4
SB_STB B5
SB_STB# A4
AD_STB0 K1
AD_STB#0 L1
AD_STB1 C1
AD_STB#1 D1
AGPCLK B10 GCLK_NB GCLK_NB {15}
AGPRCOMP M1 AGPRCOMP R631 60.4/6/1 VCC3
A1XAVDD B9 A1XAVDD VCC3
A1XAVSS A9 A1XAVSS
A4XAVDD B8 A4XAVDD VCC3
A4XAVSS A8 A4XAVSS
AGPVREF M3 AGPVREF R951 8.2K/6
AGPVSSREF M2
HDSTBN#3 F20 -HD_STBN3 -HD_STBN3 {6}
HDSTBN#2 F23 -HD_STBN2 -HD_STBN2 {6}
HDSTBN#1 K24 -HD_STBN1 -HD_STBN1 {6}
HDSTBN#0 P24 -HD_STBN0 -HD_STBN0 {6}
HDSTBP#3 F21 -HD_STBP3 -HD_STBP3 {6}
HDSTBP#2 F24 -HD_STBP2 -HD_STBP2 {6}
HDSTBP#1 L24 -HD_STBP1 -HD_STBP1 {6}
HDSTBP#0 N25 -HD_STBP0 -HD_STBP0 {6}
10mil
20mil
C1XAVDD
C1XAVSS
C4XAVDD
C4XAVSS
R634 0/SHT8/X
R635 0/SHT8/X
C790 1U/6/Y/10V
C791
C792 0.1U/6/Y/25V/X
C793 1U/6/Y/10V
C794
C795 0.1U/6/Y/25V/X
1U/6/Y/10V/X
VCC3
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
NOISE ISSUE
R638 75/6/1
C797 0.01U/6/X/16V/X
HVREF
R640 150/6/1
C798 0.01U/6/X/16V
SC38 1U/6/Y/10V/X
R637 150/6/1
C796 1U/6/Y/10V
HNCVREF
R641 75/6/1
C799 0.01U/6/X/16V/X
place this capacitor
under 650 solder side
VREF C-CAP PULL-UP MEASURE NOISE WORST.
GIGABYTE
Title
SIS650GX(HOST)
Size
Custom
Document Number
GA-8SKML
Rev
1.0
Date: Tuesday, August 20, 2002
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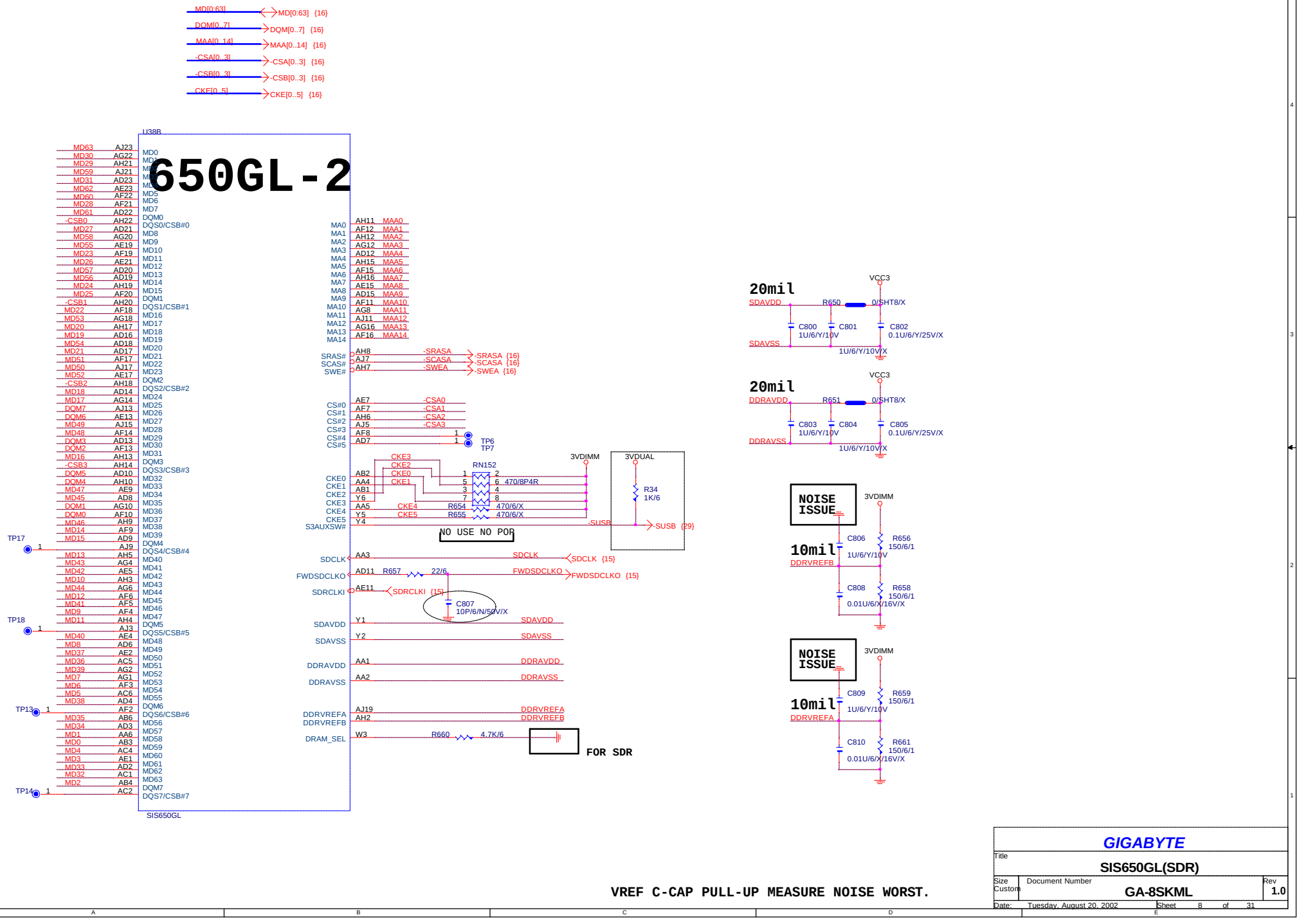
MD[0:63] MD[0:63] {16}
DQM[0..7] DQM[0..7] {16}
MAA[0..14] MAA[0..14] {16}
-CSA[0..3] -CSA[0..3] {16}
-CSB[0..3] -CSB[0..3] {16}
CKE[0..5] CKE[0..5] {16}
U38B
650GL-2
SIS650GL
MD63 AJ23
MD30 AG22
MD29 AH21
MD59 AJ21
MD31 AD23
MD62 AE23
MD60 AF22
MD28 AF21
MD61 AD22
-CSB0 AH22
MD27 AD21
MD58 AG20
MD55 AE19
MD23 AF19
MD26 AE21
MD57 AD20
MD56 AD19
MD24 AH19
MD25 AF20
-CSB1 AH20
MD22 AF18
MD53 AG18
MD20 AH17
MD19 AD16
MD54 AD18
MD21 AD17
MD51 AF17
MD50 AJ17
MD52 AE17
-CSB2 AH18
MD18 AD14
MD17 AG14
DQM7 AJ13
DQM6 AE13
MD49 AJ15
MD48 AF14
DQM3 AD13
DQM2 AF13
MD16 AH13
-CSB3 AH14
DQM5 AD10
DQM4 AH10
MD47 AE9
MD45 AD8
DQM1 AG10
DQM0 AF10
MD46 AH9
MD14 AF9
MD15 AD9
AJ9
MD13 AH5
MD43 AG4
MD42 AE5
MD10 AH3
MD44 AG6
MD12 AF6
MD41 AF5
MD9 AF4
MD11 AH4
AJ3
MD40 AE4
MD8 AD6
MD37 AE2
MD36 AC5
MD39 AG2
MD7 AG1
MD6 AF3
MD5 AC6
MD38 AD4
AF2
MD35 AB6
MD34 AD3
MD1 AA6
MD0 AB3
MD4 AC4
MD3 AE1
MD33 AD2
MD32 AC1
MD2 AB4
AC2
TP17 TP18 TP13 TP14
MD0 MD1 MD2 MD3 MD4 MD5 MD6 MD7 DQM0 DQS0/CSB#0 MD8 MD9 MD10 MD11 MD12 MD13 MD14 MD15 DQM1 DQS1/CSB#1 MD16 MD17 MD18 MD19 MD20 MD21 MD22 MD23 DQM2 DQS2/CSB#2 MD24 MD25 MD26 MD27 MD28 MD29 MD30 MD31 DQM3 DQS3/CSB#3 MD32 MD33 MD34 MD35 MD36 MD37 MD38 MD39 DQM4 DQS4/CSB#4 MD40 MD41 MD42 MD43 MD44 MD45 MD46 MD47 DQM5 DQS5/CSB#5 MD48 MD49 MD50 MD51 MD52 MD53 MD54 MD55 DQM6 DQS6/CSB#6 MD56 MD57 MD58 MD59 MD60 MD61 MD62 MD63 DQM7 DQS7/CSB#7
MA0 AH11 MAA0
MA1 AE12 MAA1
MA2 AH12 MAA2
MA3 AG12 MAA3
MA4 AD12 MAA4
MA5 AH15 MAA5
MA6 AF15 MAA6
MA7 AH16 MAA7
MA8 AE15 MAA8
MA9 AD15 MAA9
MA10 AF11 MAA10
MA11 AG8 MAA11
MA12 AJ11 MAA12
MA13 AG16 MAA13
MA14 AF16 MAA14
SRAS# AH8 -SRASA SRASA {16}
SCAS# AJ7 -SCASA SCASA {16}
SWE# AH7 -SWEA SWEA {16}
CS#0 AE7 -CSA0
CS#1 AE7 -CSA1
CS#2 AH6 -CSA2
CS#3 AJ5 -CSA3
CS#4 AF8
CS#5 AD7
TP6 TP7
CKE3 CKE2 CKE0 CKE1
RN152
CKE0 AB2
CKE1 AA4
CKE2 AB1
CKE3 Y6
CKE4 AA5
CKE5 Y5
S3AUXSW# Y4
470/8P4R
CKE4 R654 470/6/X
CKE5 R655 470/6/X
3VDIMM
3VDUAL
R34 1K/6
-SUSB -SUSB {29}
NO USE NO POR
SDCLK AA3 SDCLK SDCLK {15}
FWDSDCLKO AD11 R657 22/6 FWDSDCLKO FWDSDCLKO {15}
SDRCLKI AE11 SDRCLKI {15}
C807 10P/6/N/50V/X
SDAVDD Y1 SDAVDD
SDAVSS Y2 SDAVSS
DDRAVDD AA1 DDRAVDD
DDRAVSS AA2 DDRAVSS
DDRVREFA AJ19 DDRVREFA
DDRVREFB AH2 DDRVREFB
DRAM_SEL W3 R660 4.7K/6
FOR SDR
20mil
VCC3
SDAVDD R650 0/SHT8/X
C800 1U/6/Y/10V
C801
C802 0.1U/6/Y/25V/X
SDAVSS
1U/6/Y/10V/X
20mil
VCC3
DDRAVDD R651 0/SHT8/X
C803 1U/6/Y/10V
C804
C805 0.1U/6/Y/25V/X
DDRAVSS
1U/6/Y/10V/X
NOISE ISSUE
3VDIMM
10mil
DDRVREFB
C806 1U/6/Y/10V
R656 150/6/1
C808 0.01U/6/X/16V/X
R658 150/6/1
NOISE ISSUE
3VDIMM
10mil
DDRVREFA
C809 1U/6/Y/10V
R659 150/6/1
C810 0.01U/6/X/16V/X
R661 150/6/1
VREF C-CAP PULL-UP MEASURE NOISE WORST.
GIGABYTE
Title
SIS650GL(SDR)
Size Custom
Document Number
GA-8SKML
Rev 1.0
Date: Tuesday, August 20, 2002
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NOTE: This page is for universal PCB design(suitable for both 645 or 650)

NB Hardware Trap Table

	0	1	Default	embedded pull-low (30~50K Ohm)
DLLEN#	enable PLL	disable PLL	0	yes
DRAM_SEL	SDR	DDR	1(DDR)	yes
TRAP0	normal	NB debug mode	0	yes
TRAP1	TV selection, NTSC/PAL(0/1)		0	
CSYNC	enable VB		0	
RSYNC	enable VGA interrupt		1	
LSYNC	enable panel link		0	

NOISE ISSUE

VCC18 R662 150/6/1 C811 1U/6/Y/10V/X 10mil ZVREF R663 150/6/1 C812 1U/6/Y/10V

VCC3 R664 0/SHT8/X Z1XAVDD C813 0.1U/6/Y/25V C814 C815 0.01U/6/X/16V/X Z1XAVSS 1U/6/Y/10V 20mil

VCC3 R665 0/SHT8/X Z4XAVDD C816 0.1U/6/Y/25V C817 C818 1U/6/Y/10V Z4XAVSS 1U/6/Y/10V/X 20mil

VCC18 R666 0/SHT8/X C822 0.1U/6/Y/25V C823 C824 1U/6/Y/10V 0.01U/6/X/16V/X R668 56/6/1 ZCMP_N R669 56/6/1 ZCMP_P VDDZCMP VSSZCMP 20mil 10mil 10mil 20mil

U38C

650GL-3

HyperZip

SIS650GL

{15} ZCLK_NB — ZCLK_NB V3 — ZCLK
{11} ZREQ_UP — ZREQ_UP U6 — ZUREQ
{11} ZREQ_DN — ZREQ_DN U1 — ZDREQ
{11} ZSTB0 — ZSTB0 T3 — ZSTB0
{11} -ZSTB0 — -ZSTB0 T1 — ZSTB#0
{11} ZSTB1 — ZSTB1 P1 — ZSTB1
{11} -ZSTB1 — -ZSTB1 P3 — ZSTB#1
{11} ZAD[0..15] — ZAD[0..15] — ZAD0 T4, ZAD1 R3, ZAD2 T5, ZAD3 T6, ZAD4 R2, ZAD5 R6, ZAD6 R1, ZAD7 R4, ZAD8 P4, ZAD9 N3, ZAD10 P5, ZAD11 P6, ZAD12 N1, ZAD13 N6, ZAD14 N2, ZAD15 N4
ZVREF U3 — ZVREF
VDDZCMP V5, ZCMP_N U4, ZCMP_P U2, VSSZCMP V6 — VDDZCMP, ZCMP_N, ZCMP_P, VSSZCMP
Z1XAVDD W1, Z1XAVSS W2 — Z1XAVDD, Z1XAVSS
Z4XAVDD V2, Z4XAVSS V1 — Z4XAVDD, Z4XAVSS

VOSCI C15 — VOSCI — VOSCI {15}
ROUT A12 F_R, GOUT B13 F_G, BOUT A13 F_B — FB25 FB100/8, FB26 FB100/8, FB27 FB100/8 — ROUT, GOUT, BOUT
HSYNC F13, VSYNC E13 — HSYNC {17}, VSYNC {17}
VGPIO0 D13, VGPIO1 D12 — DDC1CLK, DDC1DATA — DDC1CLK {17}, DDC1DATA {17}
INT#A B11 — -INTA — -INTA {11,18}
CSYNC E12, RSYNC A11, LSYNC F12 — CSYNC, RSYNC, LSYNC
VCOMP E14, VRSET D14, VVBWN F14 — VCOMP, VRSET, VVBWN
DACAVDD1 B12, DACAVSS1 C12 — DACAVDD2, DACAVSS2
DACAVDD2 C13, DACAVSS2 C14 — DACAVDD2, DACAVSS2
DCLKAVDD B15, DCLKAVSS A15 — DCLKAVDD, DCLKAVSS
ECLKAVDD B14, ECLKAVSS A14 — ECLKAVDD, ECLKAVSS

REV 0.2 EMI

PCIRST# Y3, PWROK W4, AUXOK W6, TRAP1 D11, TRAP0 E10, TESTMODE2 A10, TESTMODE1 F11, TESTMODE0 C11, DLLEN# E11, ENTEST F10

{11,19,20,26} -PCIRST, {12,15,25,27} PWROK, {12,29} AUXOK — -PCIRST, PWROK, AUXOK
C819 1000P/6/X/50V/X, C820 1000P/6/X/50V/X, C821
TP1 TP2 TP3 TP4 TP5 1U/6/Y/10V
R667 4.7K/6

VCC3 RSYNC R814 8.2K/6
TRAP1 R815 8.2K/6/X, CSYNC R816 8.2K/6/X, LSYNC R817 8.2K/6/X
SIS REQUEST NO POP

VCC3 R818 0/SHT8/X DCLKAVDD C877 1U/6/Y/10V/X C878 C879 0.01U/6/X/16V/X DCLKAVSS 1U/6/Y/10V 20mil

VCC3 R819 0/SHT8/X ECLKAVDD C880 0.1U/6/Y/25V/X C881 C882 ECLKAVSS 1U/6/Y/10V 0.01U/6/X/16V/X 20mil

DACAVDD1(VSS)---->DACAVDD2(VSS)
(SIS AP-02)

C886 0.1U/6/Y/25V VVBWN
C887 0.1U/6/Y/25V VCOMP

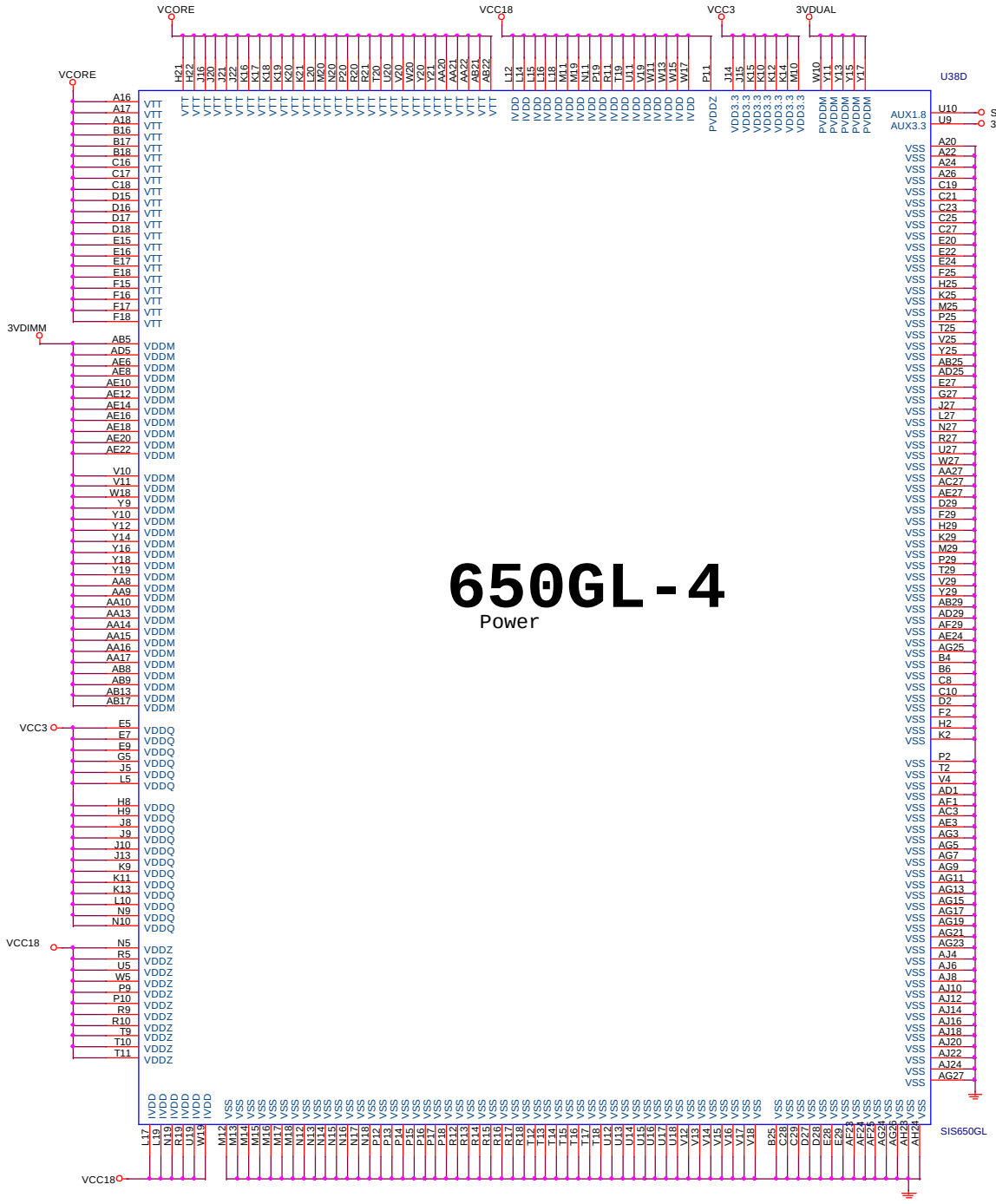
VCC18 R821 0/SHT8/X DACAVDD2 C888 0.1U/6/Y/25V/X C889 C890 DACAVSS2 1U/6/Y/10V 0.01U/6/X/16V/X 20mil
EC54 100U/D/10V/57
REV 0.2 SIS CHECK
R850 130/6/1 VRSET

GIGABYTE

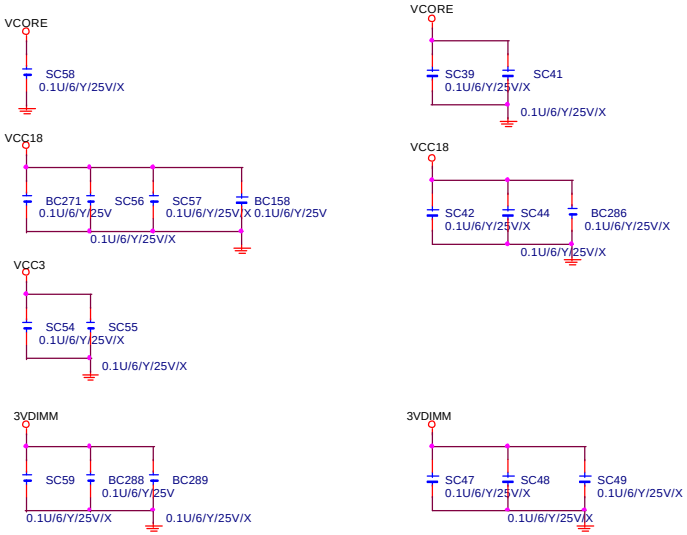
Title: SIS650GX(HYPER ZIP)

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

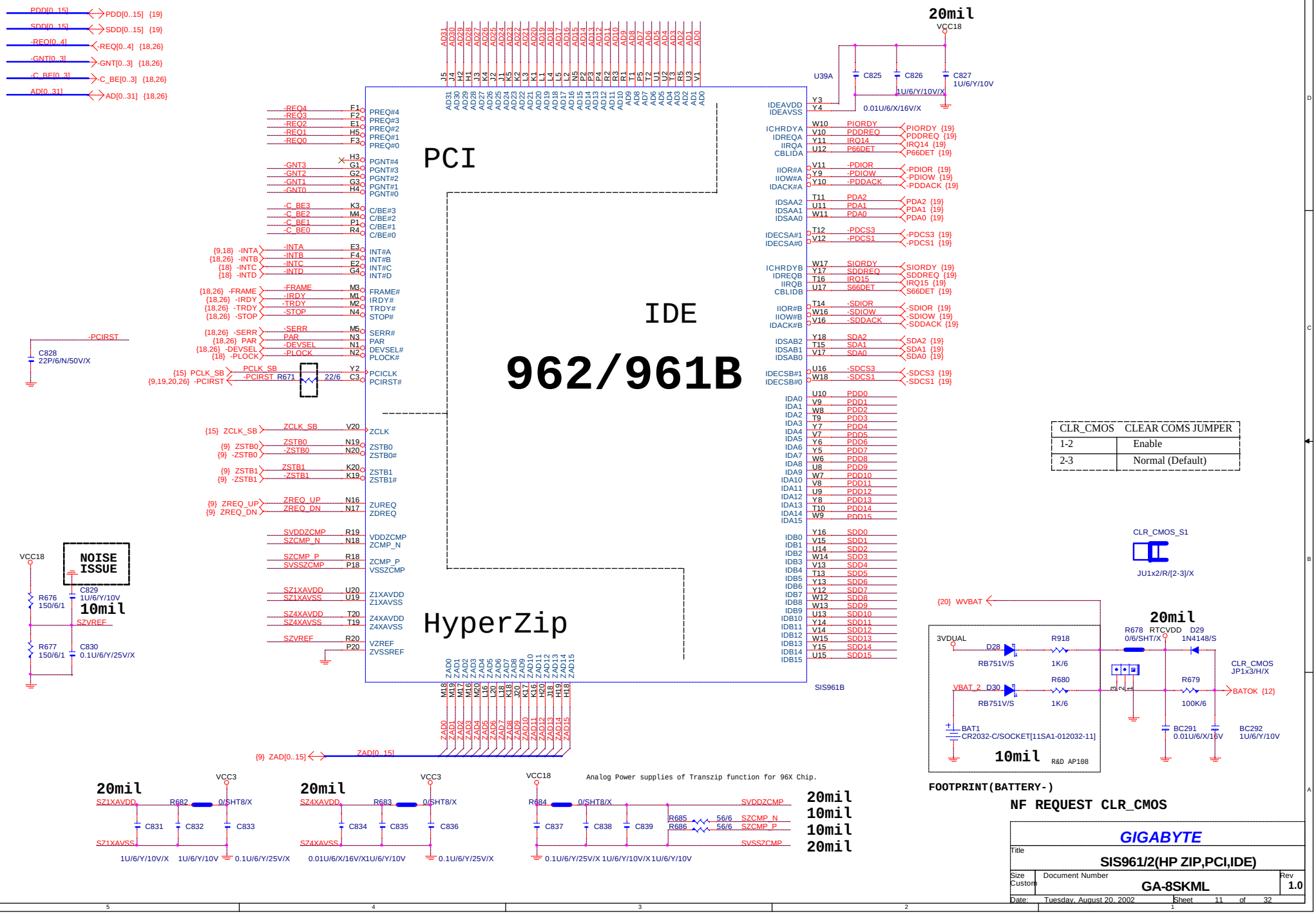
Date: Tuesday, August 20, 2002 | Sheet 9 of 32



Solder Side CAP.



GIGABYTE		
Title: **SIS650GX(PWR)**		
Size: Custom	Document Number: **GA-8SKML**	Rev: **1.0**
Date: Tuesday, August 20, 2002	Sheet 10 of 32	


PCI
IDE
962/961B
HyperZip
SIS961B
PDD[0..15] {19}
SDD[0..15] {19}
-REQ[0..4] {18,26}
-GNT[0..3] {18,26}
-C_BE[0..3] {18,26}
AD[0..31] {18,26}
-PCIRST
C828 22P/6/N/50V/X
PREQ#4 PREQ#3 PREQ#2 PREQ#1 PREQ#0
PGNT#4 PGNT#3 PGNT#2 PGNT#1 PGNT#0
C/BE#3 C/BE#2 C/BE#1 C/BE#0
INT#A INT#B INT#C INT#D
FRAME# IRDY# TRDY# STOP#
SERR# PAR DEVSEL# PLOCK#
PCICLK PCIRST#
R671 22/6
ZCLK
ZSTB0 ZSTB0#
ZSTB1 ZSTB1#
ZUREQ ZDREQ
VDDZCMP ZCMP_N
ZCMP_P VSSZCMP
Z1XAVDD Z1XAVSS
Z4XAVDD Z4XAVSS
VZREF ZVSSREF
IDEAVDD IDEAVSS
ICHRDYA IDREQA IIRQA CBLIDA
IIOR#A IIOW#A IDACK#A
IDSAA2 IDSAA1 IDSAA0
IDECSA#1 IDECSA#0
ICHRDYB IDREQB IIRQB CBLIDB
IIOR#B IIOW#B IDACK#B
IDSAB2 IDSAB1 IDSAB0
IDECSB#1 IDECSB#0
IDA0 IDA1 IDA2 IDA3 IDA4 IDA5 IDA6 IDA7 IDA8 IDA9 IDA10 IDA11 IDA12 IDA13 IDA14 IDA15
IDB0 IDB1 IDB2 IDB3 IDB4 IDB5 IDB6 IDB7 IDB8 IDB9 IDB10 IDB11 IDB12 IDB13 IDB14 IDB15
{9} ZAD[0..15]
U39A
C825 C826 C827 1U/6/Y/10V
1U/6/Y/10V/X
0.01U/6/X/16V/X
NOISE ISSUE
R676 150/6/1
R677 150/6/1
C829 1U/6/Y/10V
C830 0.1U/6/Y/25V/X
10mil
SZVREF
20mil
SZ1XAVDD R682 0/5HT8/X
C831 C832 C833
SZ1XAVSS
1U/6/Y/10V/X 1U/6/Y/10V 0.1U/6/Y/25V/X
SZ4XAVDD R683 0/5HT8/X
C834 C835 C836
SZ4XAVSS
0.01U/6/X/16V/X1U/6/Y/10V 0.1U/6/Y/25V/X
Analog Power supplies of Transzip function for 96X Chip.
R684 0/5HT8/X
C837 C838 C839
R685 56/6 SZCMP_N
R686 56/6 SZCMP_P
SVDDZCMP
SVSSZCMP
0.1U/6/Y/25V/X 1U/6/Y/10V/X1U/6/Y/10V
20mil
10mil
10mil
20mil
CLR_CMOS CLEAR COMS JUMPER
1-2 Enable
2-3 Normal (Default)
CLR_CMOS_S1
JU1x2/R/[2-3]/X
{20} WVBAT
3VDUAL
D28 RB751V/S
R918 1K/6
VBAT_2 D30 RB751V/S
R680 1K/6
R678 0/6/SHT/X
D29 1N4148/S
R679 100K/6
CLR_CMOS JP1x3/H/X
BATOK {12}
BAT1 CR2032-C/SOCKET[11SA1-012032-11]
BC291 0.01U/6/X/16V
BC292 1U/6/Y/10V
R&D AP108
FOOTPRINT(BATTERY-)
NF REQUEST CLR_CMOS
GIGABYTE
Title
SIS961/2(HP ZIP,PCI,IDE)
Size Custom
Document Number GA-8SKML
Rev 1.0
Date: Tuesday, August 20, 2002
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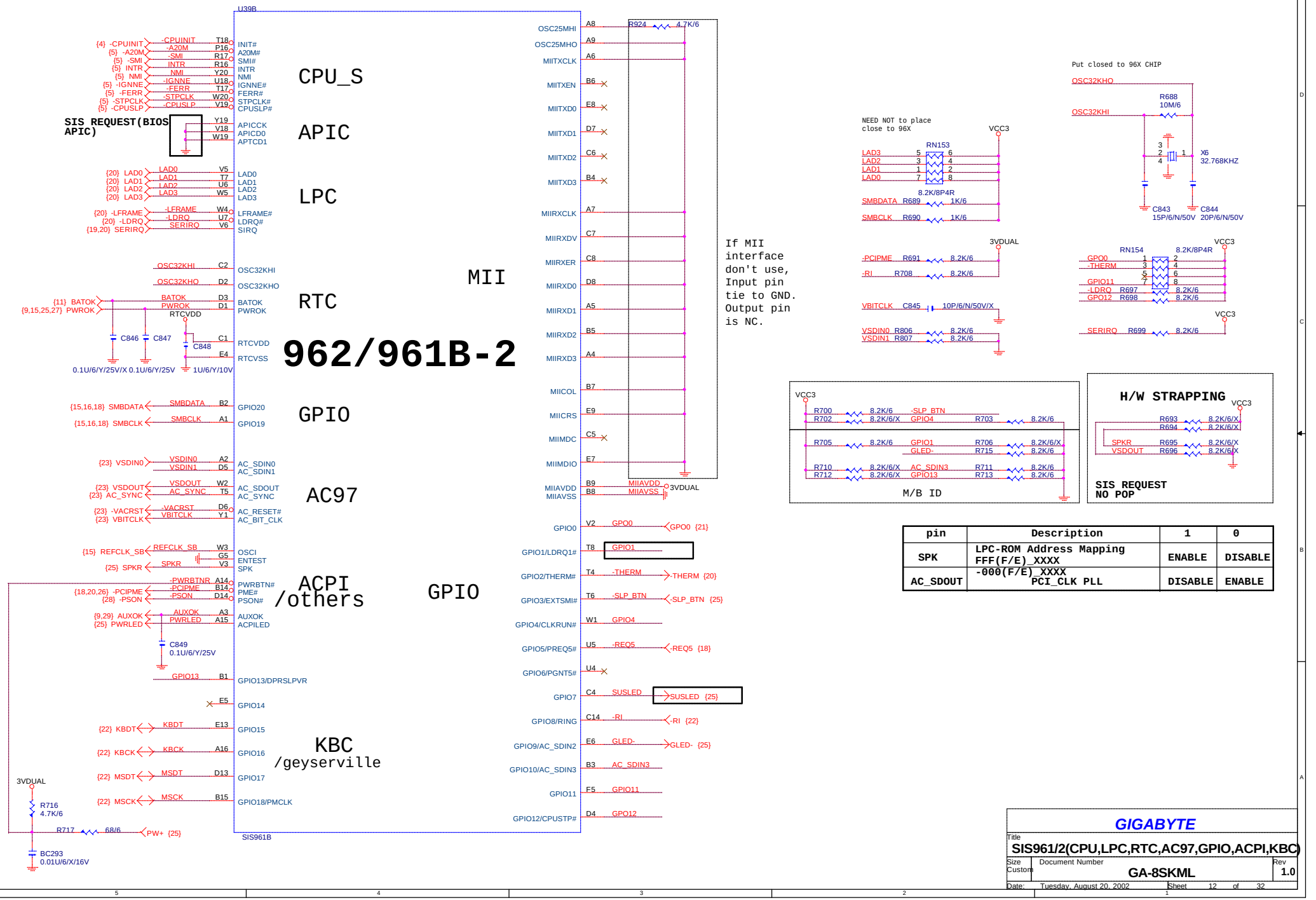


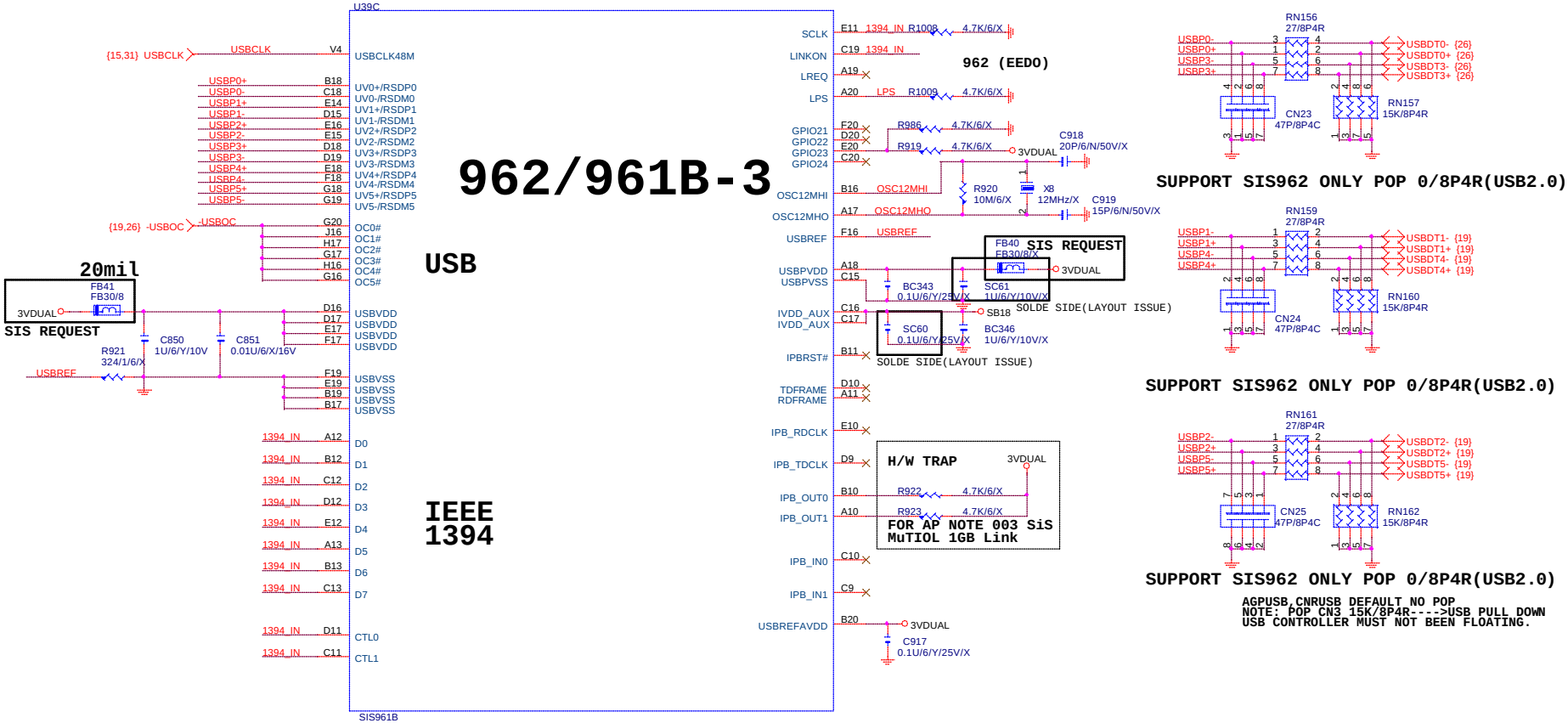
pin	Description	1	0
SPK	LPC-ROM Address Mapping FFF(F/E)_XXXX	ENABLE	DISABLE
AC_SDOUT	-000(F/E)_XXXX PCI_CLK PLL	DISABLE	ENABLE

GIGABYTE

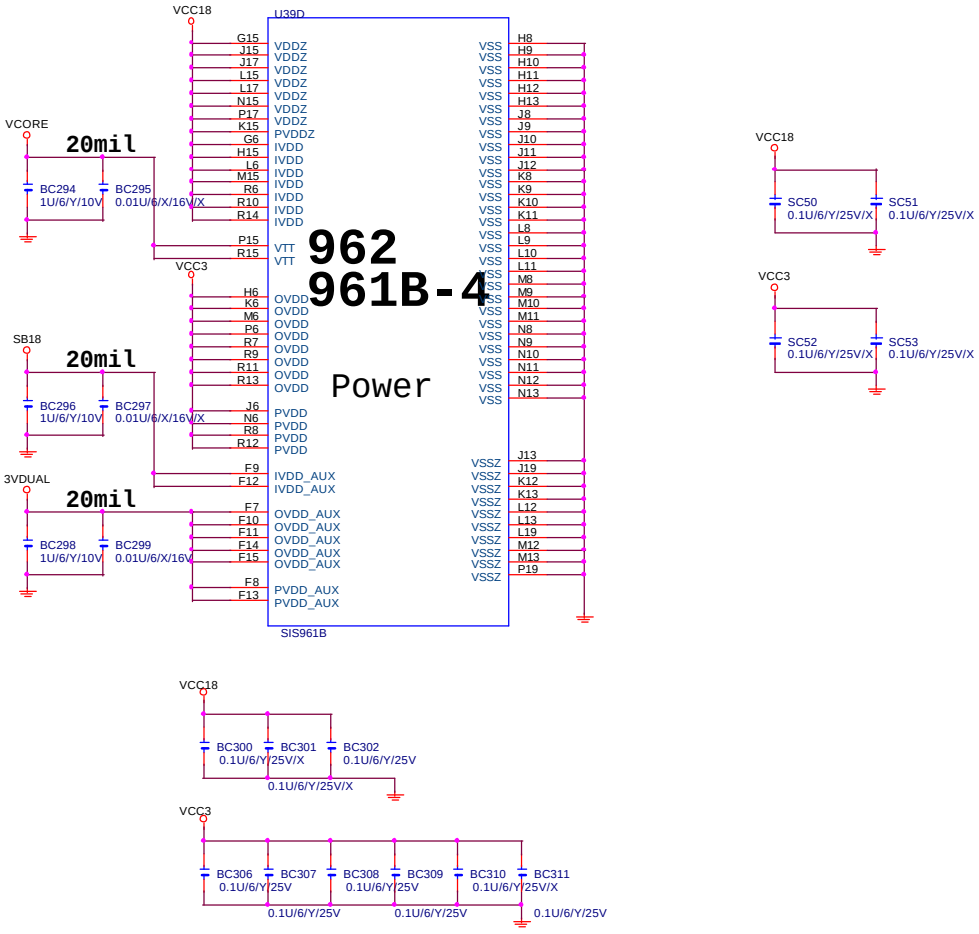
Title: SIS961/2(CPU,LPC,RTC,AC97,GPIO,ACPI,KBC)

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

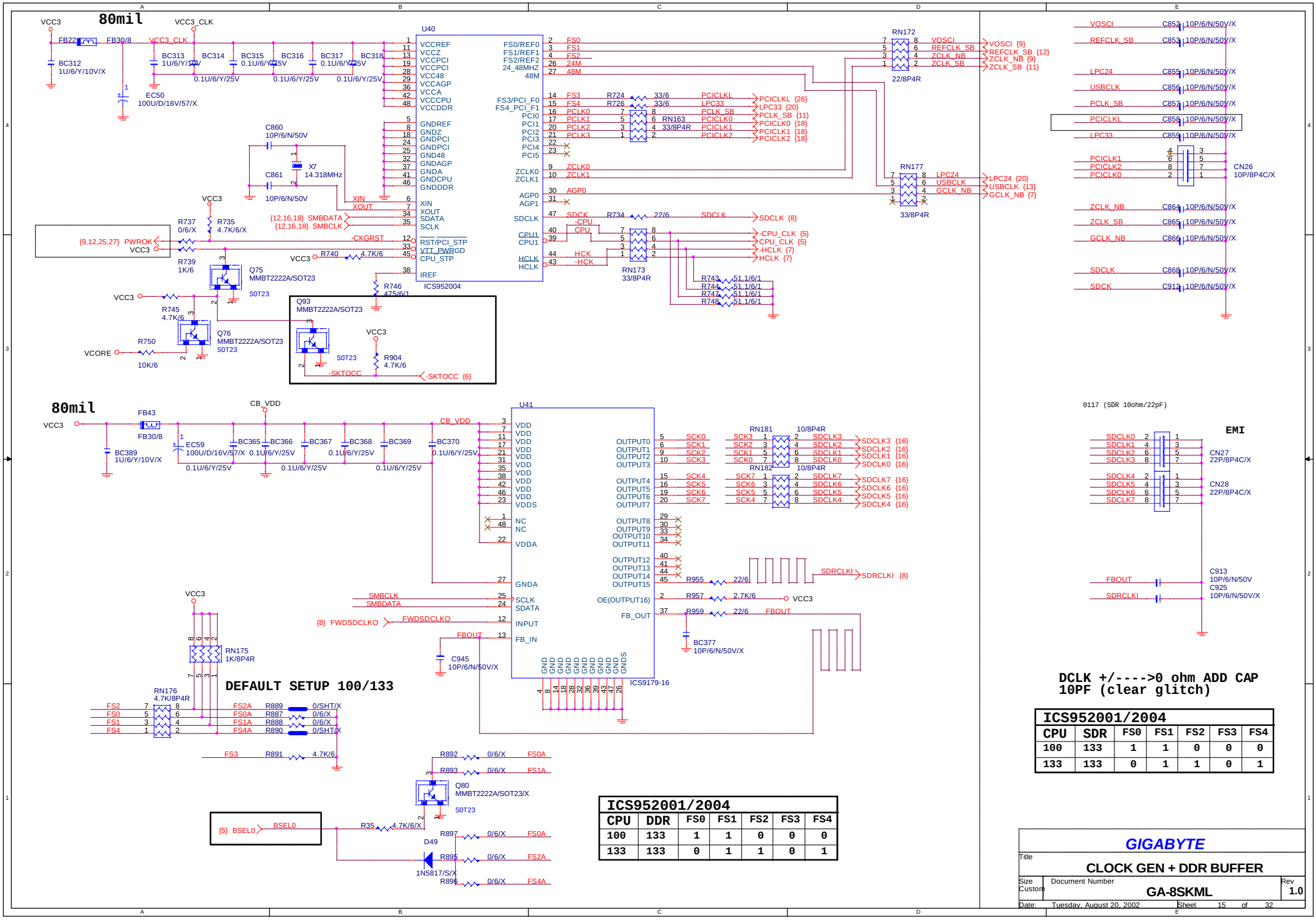
Date: Tuesday, August 20, 2002 | Sheet 12 of 32



GIGABYTE		
Title	SIS961/2(USB20,1394)	
Size: Custom	Document Number: GA-8SKML	Rev: 1.0
Date: Tuesday, August 20, 2002	Sheet 13 of 32	



GIGABYTE		
Title: SIS961/2(PWR)		
Size: Custom	Document Number: GA-8SKML	Rev: 1.0
Date: Tuesday, August 20, 2002	Sheet 14 of 32	



ICS952001/2004						
CPU	DDR	FS0	FS1	FS2	FS3	FS4
100	133	1	1	0	0	0
133	133	0	1	1	0	1

ICS952001/2004						
CPU	SDR	FS0	FS1	FS2	FS3	FS4
100	133	1	1	0	0	0
133	133	0	1	1	0	1

GIGABYTE

Title: CLOCK GEN + DDR BUFFER

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

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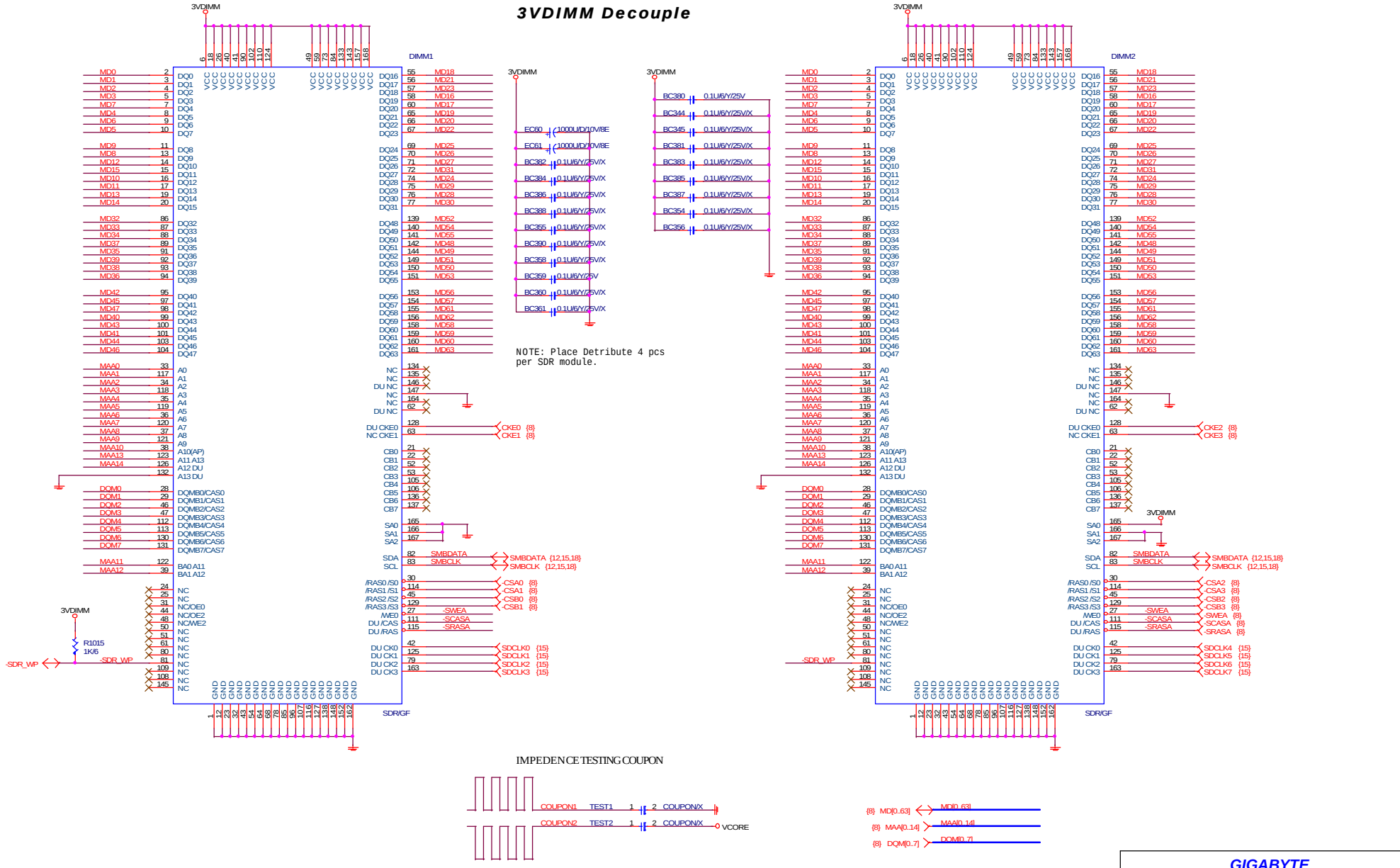
3VDIMM Decouple



GIGABYTE

Title	DDR UNBUFFERED 1,2	
Size: Custom	Document Number: GA-8SKML	Rev: 1.0
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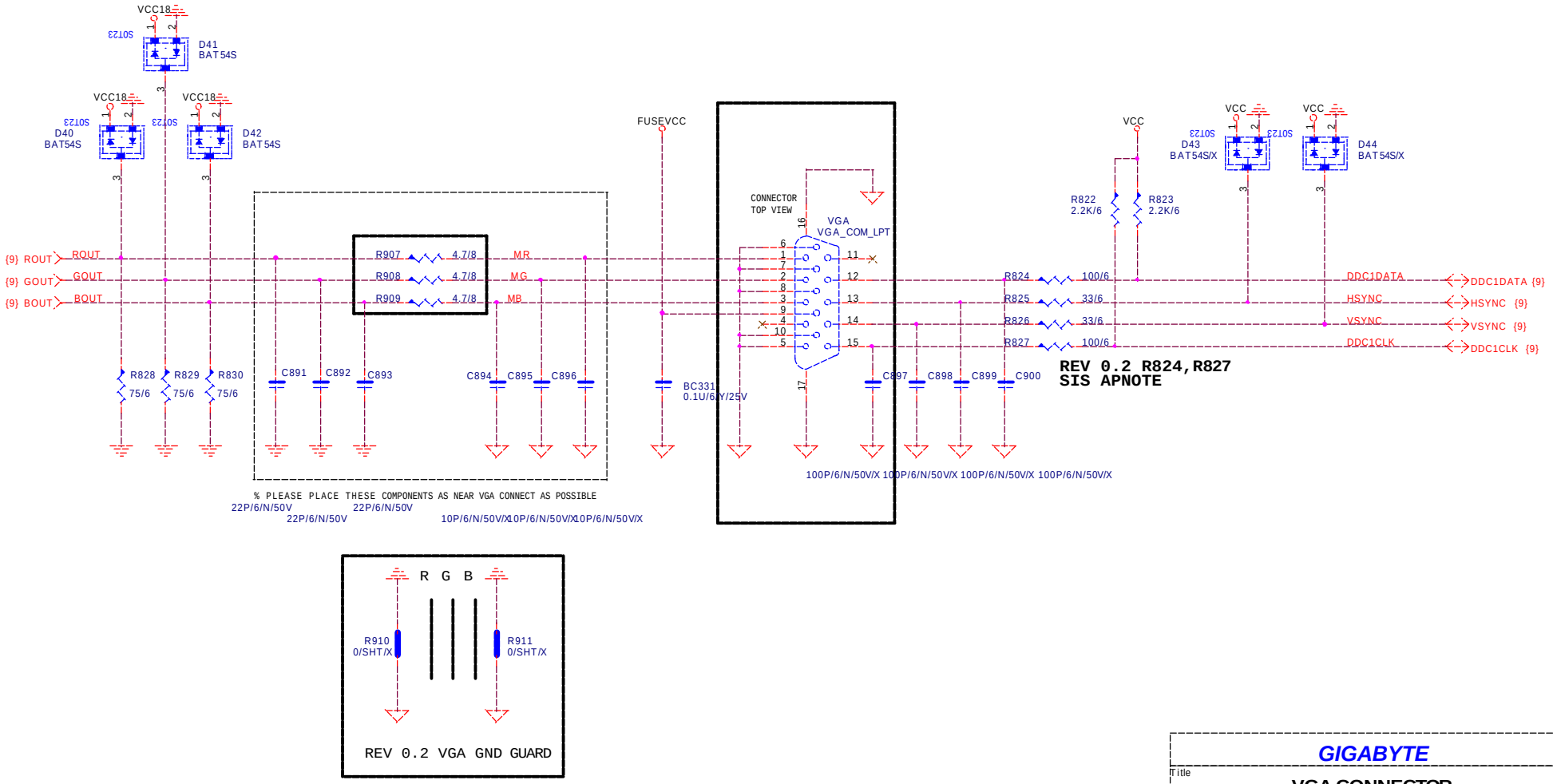
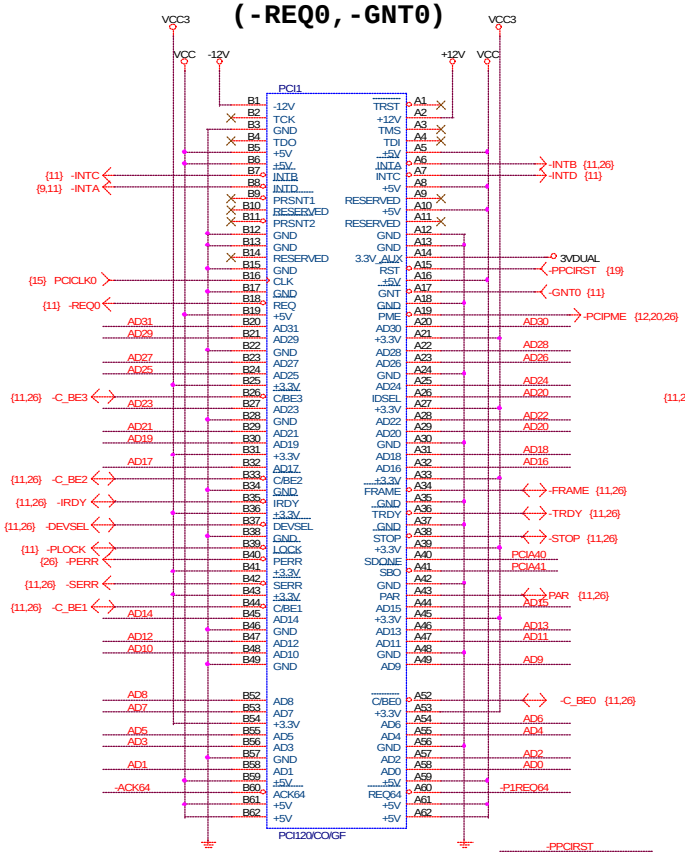
VGA CONNECTOR 1



GIGABYTE		
Title: VGA CONNECTOR		
Size: B	Document Number: GA-8SKML	Rev: 1.0
Date: Tuesday, August 20, 2002	Sheet 17 of 32	

PCI SLOT 1,2,3

PCI SLOT1 (-REQ0,-GNT0)



SIS--IDSEL(A20)

(B)

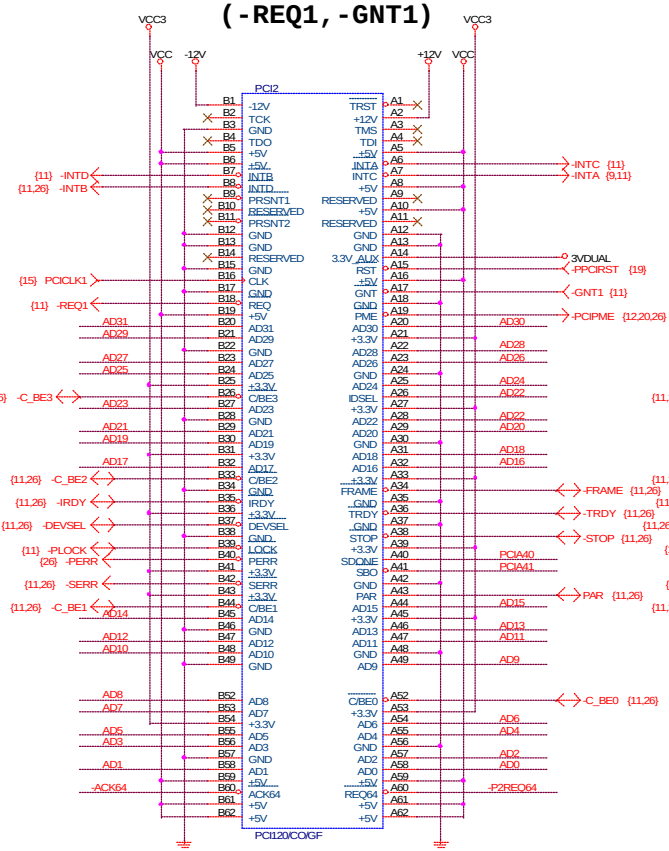
{11,26} AD[0..31]

-PPCIRST

Close PCI Slot1

C39 22P/6/N/50V/X

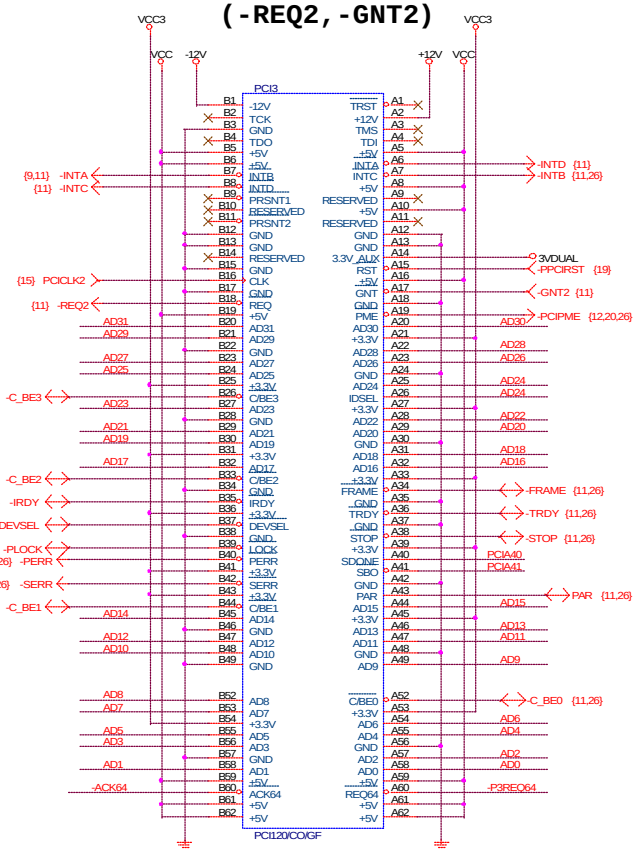
PCI SLOT2 (-REQ1,-GNT1)



SIS--IDSEL(A22)

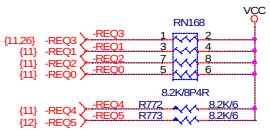
(C)

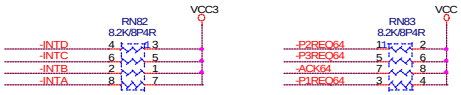
PCI SLOT3 (-REQ2,-GNT2)

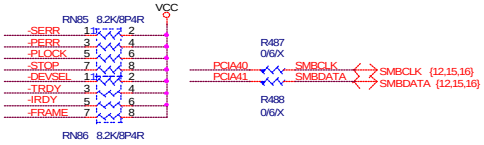


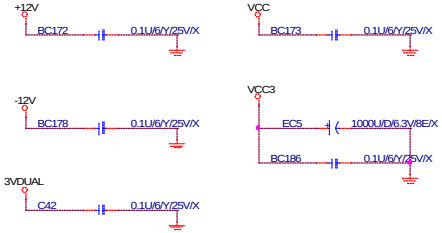
SIS--IDSEL(A24)

(D)





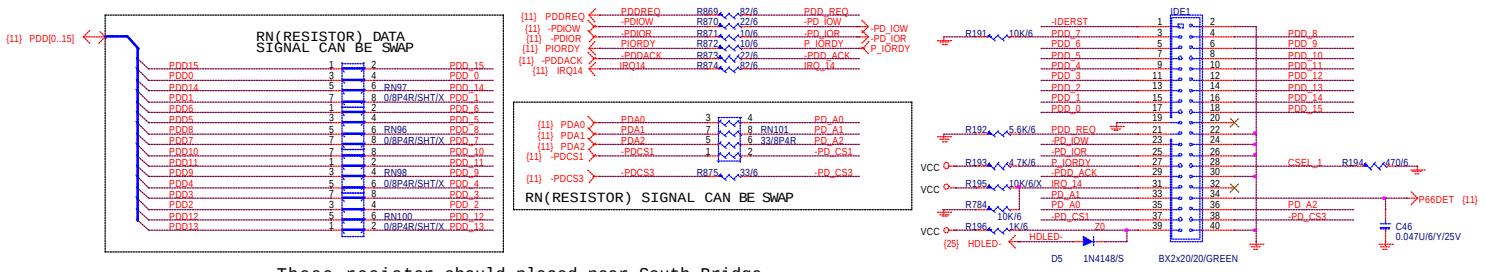




GIGABYTE

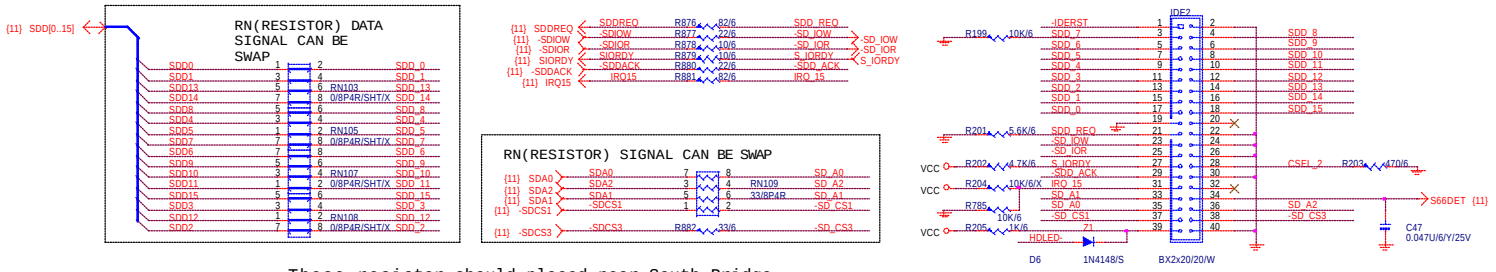
Title	PCI SLOT 1,2,3	
Size: Custom	Document Number: GA-8SKML	Rev: 1.0
Date: Tuesday, August 20, 2002	Sheet 18 of 32	

PRIMARY IDE



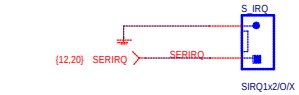
These resistor should placed near South Bridge

SECONDARY IDE



These resistor should placed near South Bridge

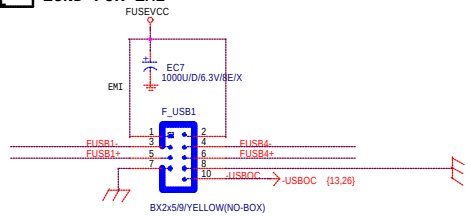
SIRQ



FRONT SIDE USB1

EGND FOR EMI

USB2.0



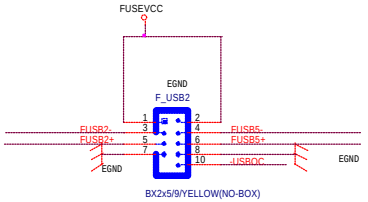
INTEL F_USB

FRONT SIDE USB2

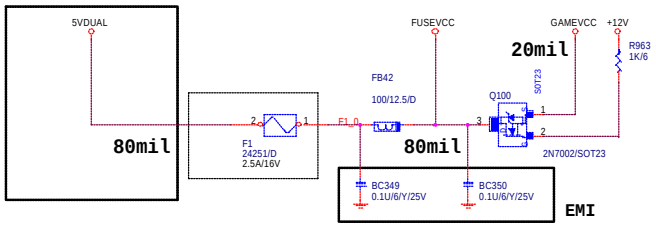
EGND FOR EMI

USB2.0

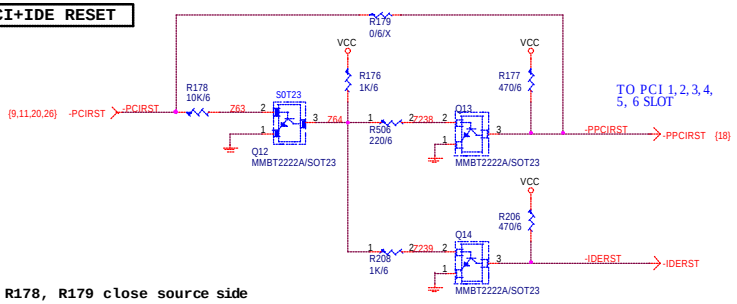
INTEL CONN F_USB



FUSEVCC,GAMEVCC



PCI+IDE RESET



R178, R179 close source side

GIGABYTE

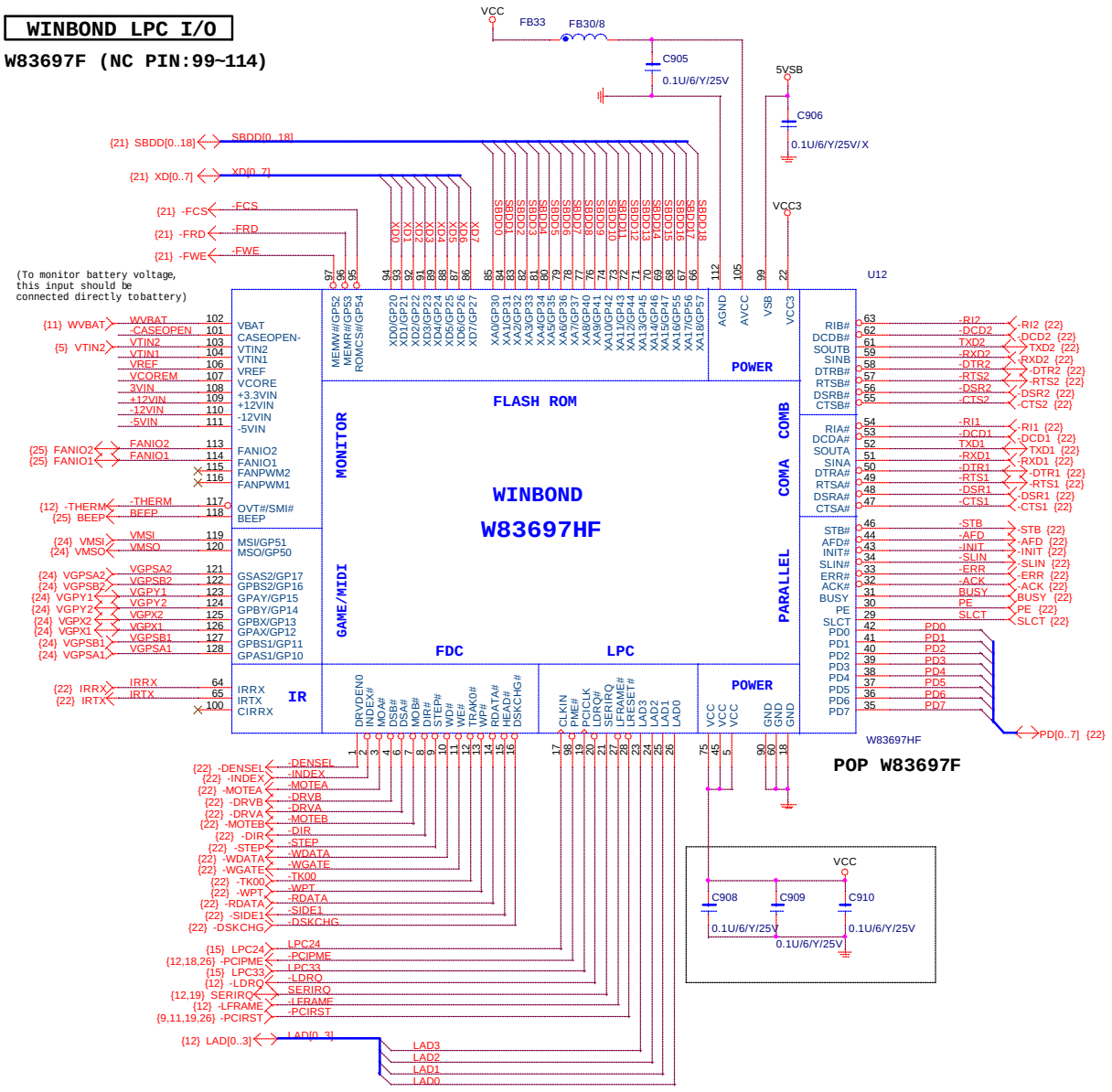
Title: IDE, USB

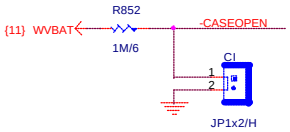
Size: Custom | Document Number: GA-8SKML | Rev: 1.0

Date: Tuesday, August 20, 2002 | Sheet 19 of 32

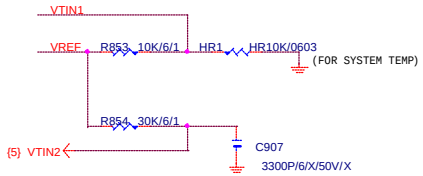
WINBOND LPC I/O

W83697F (NC PIN:99~114)

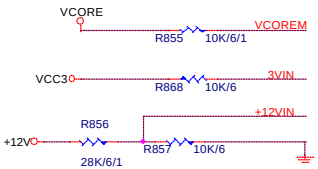


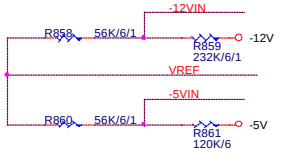


Case Open Circuits



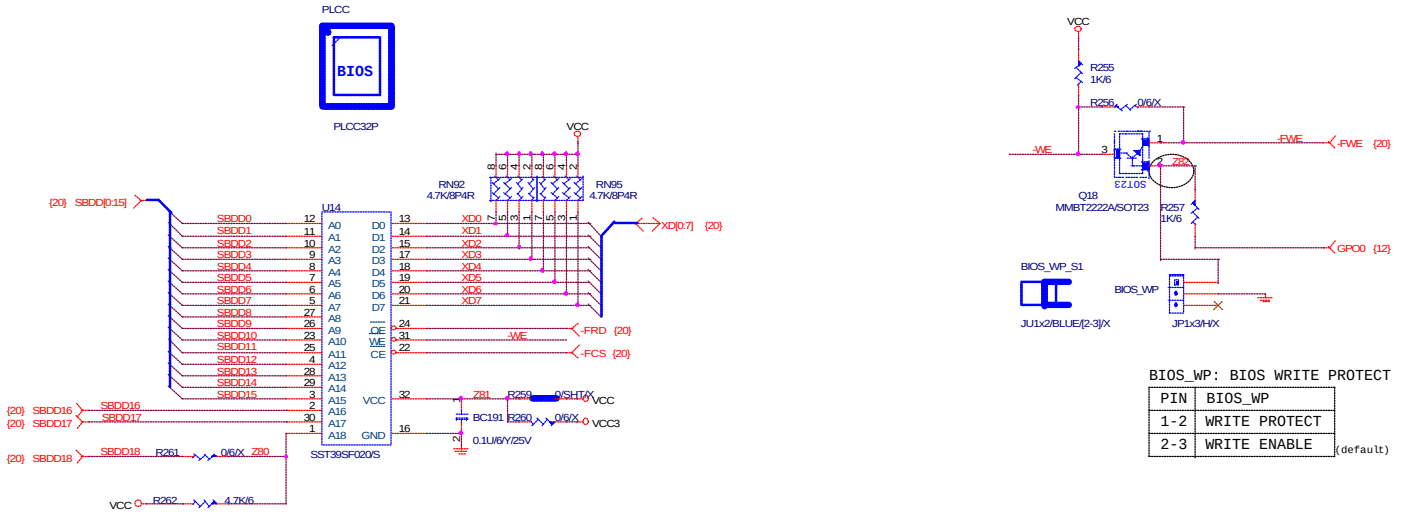
Thermal Monitoring





Voltage Monitoring

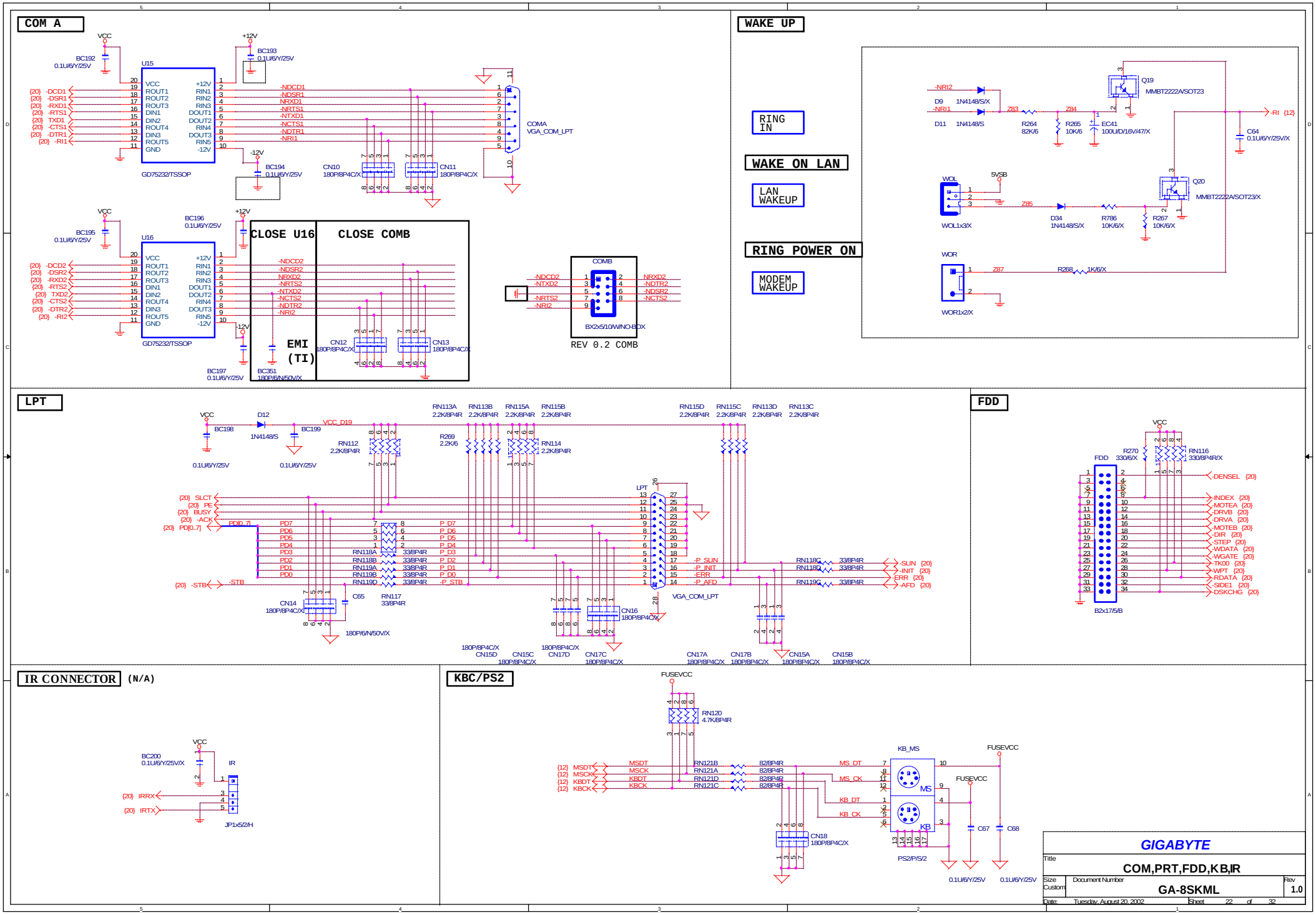
GIGABYTE			
Title: LPC W83697			
Size: Custom	Document Number: GA-8SKML		Rev: 1.0
Date: Tuesday, August 20, 2002		Sheet 20 of 32	

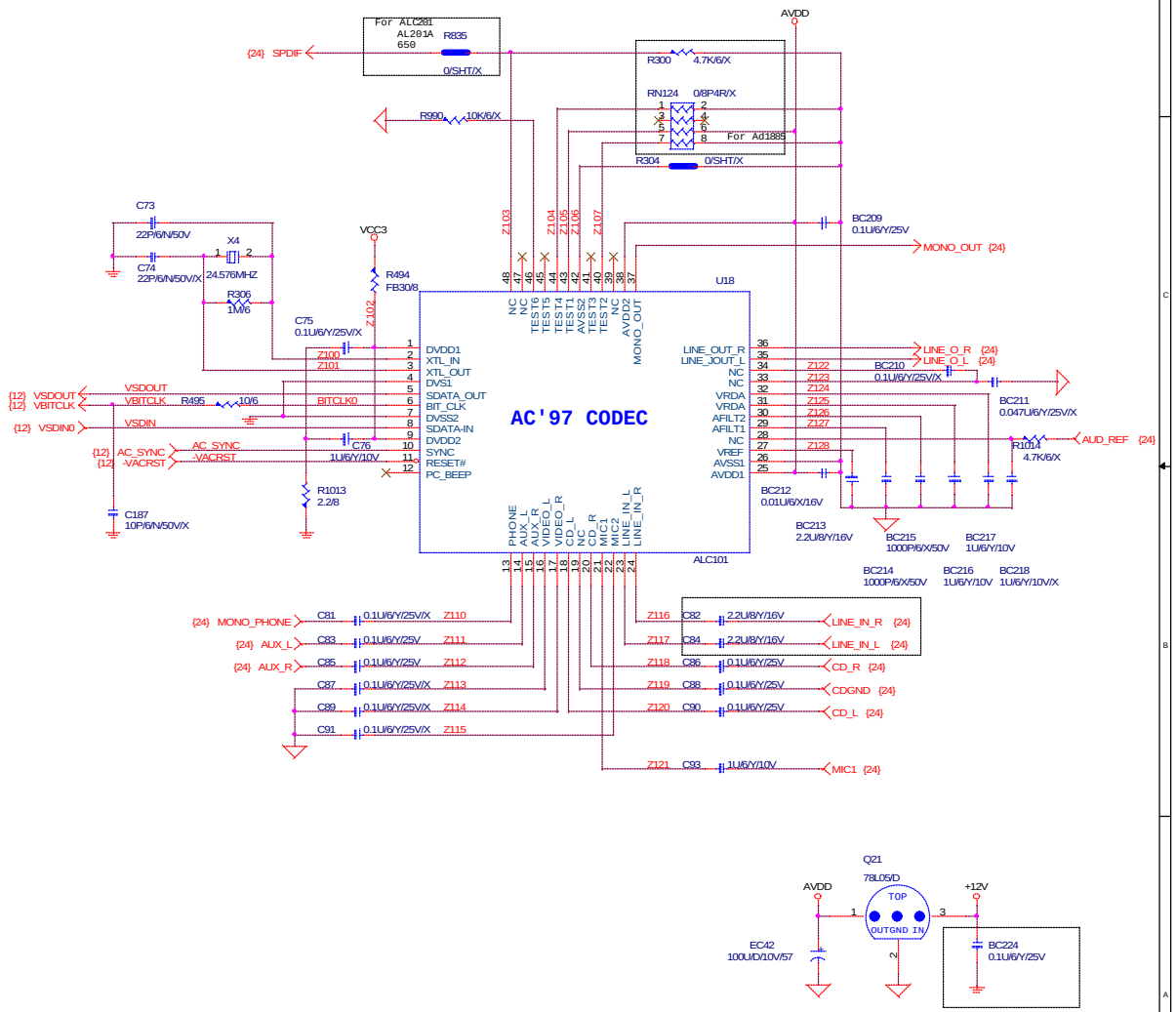


BIOS_WP: BIOS WRITE PROTECT

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

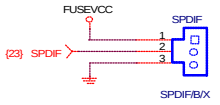
GIGABYTE			
Title: Flash ROM			
Size: Custom	Document Number: GA-8SKML		Rev: 1.0
Date: Tuesday, August 20, 2002	Sheet 21 of 32		


COM A
WAKE UP
RING IN
WAKE ON LAN
LAN WAKEUP
RING POWER ON
MODEM WAKEUP
LPT
FDD
IR CONNECTOR (N/A)
KBC/PS2
CLOSE U16
CLOSE COMB
EMI (TI)
REV 0.2 COMB
GD75232/TSSOP
VGA_COM_LPT
COMA
COMB
BX2x5/10W/NO-BOX
B2x17/5/B
JP1x5/2/H
PS2/P/S2
GIGABYTE
Title
COM,PRT,FDD,KB,IR
Size
Custom
Document Number
GA-8SKML
Rev
1.0
Date:
Tuesday, August 20, 2002
Sheet
22
of
32



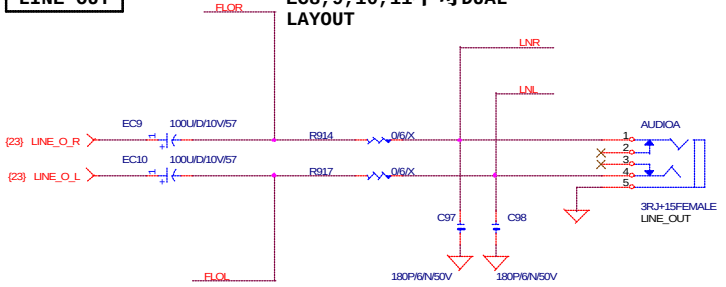
GIGABYTE		
Title: AUDIO (ALC650)		
Size: Custom	Document Number: GA-8SKML	Rev: 1.0
Date: Tuesday, August 20, 2002	Sheet 23 of 32	

SPDIF

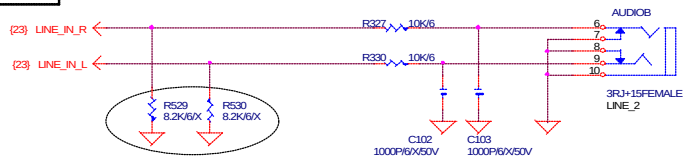


LINE OUT

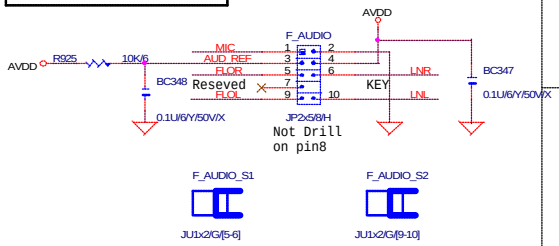
EC8,9,10,11不可DUAL LAYOUT



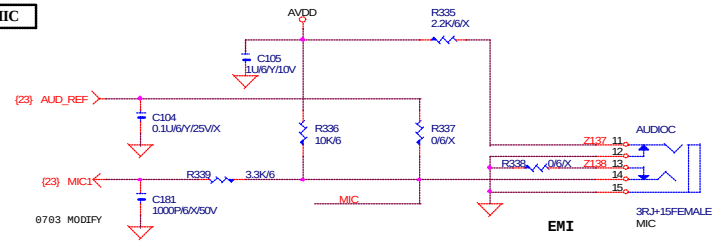
LINE-IN



INTEL FRONT AUDIO

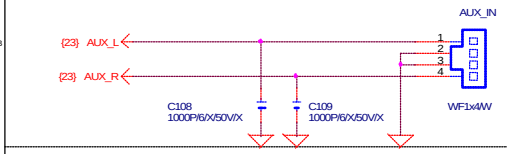


MIC

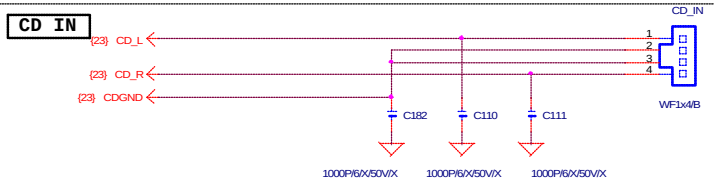


AUX IN

DISTI DEFAULT NO POP

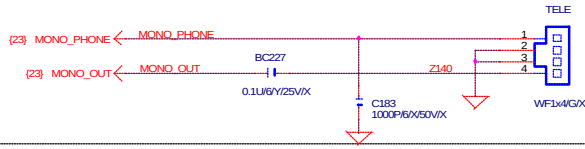


CD IN

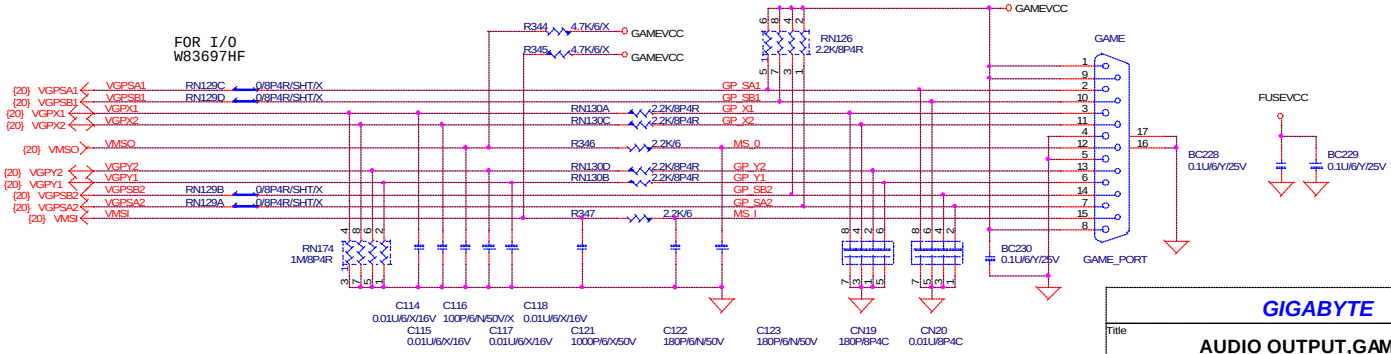


TELE

DISTI DEFAULT NO POP



GAME PORT



GIGABYTE

Title	AUDIO OUTPUT,GAME PORT	
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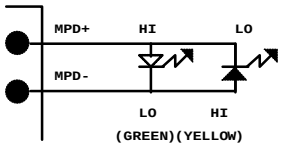
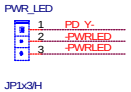
FRONT PANEL



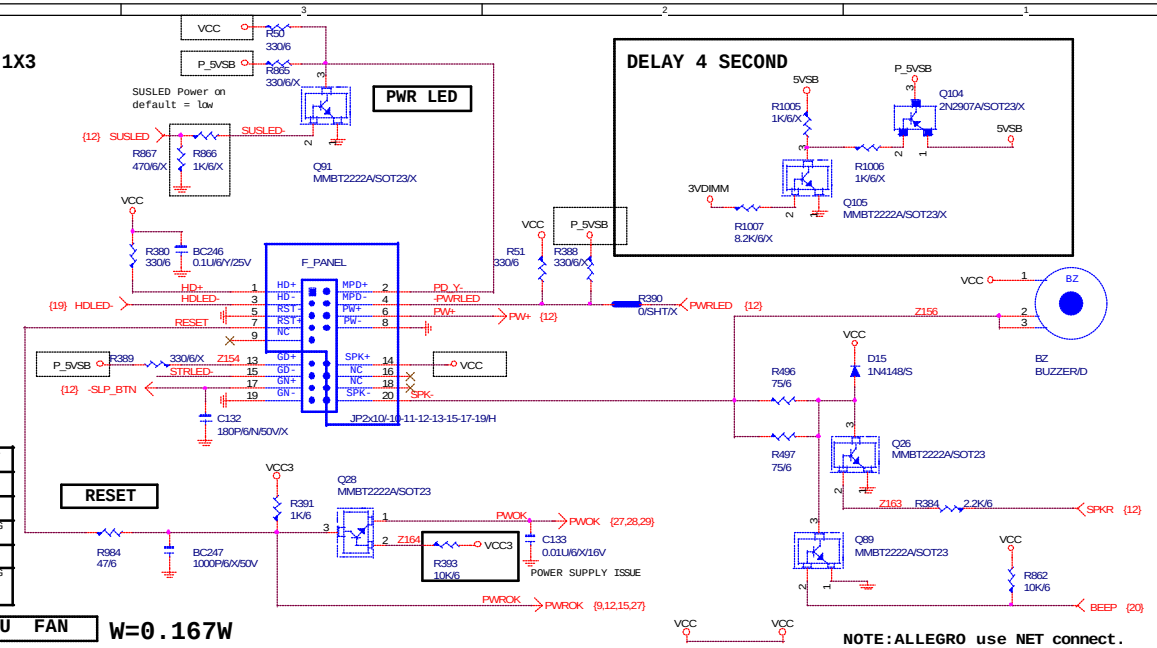
PWR_LED FOR DISTI PIN 1X3 LED USED



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

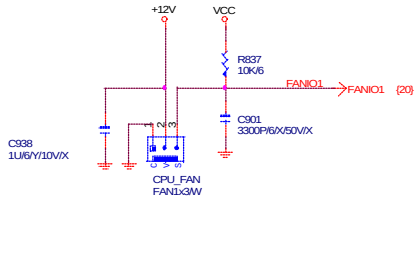
States for a dual-color power LED

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

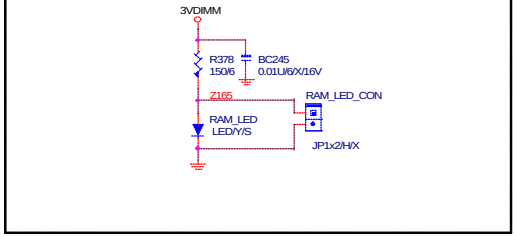


NOTE:ALLEGRO use NET connect.

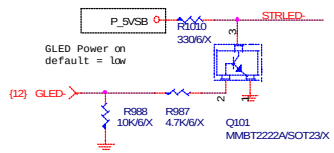
CPU FAN W=0.167W



DIMM LED CONN.



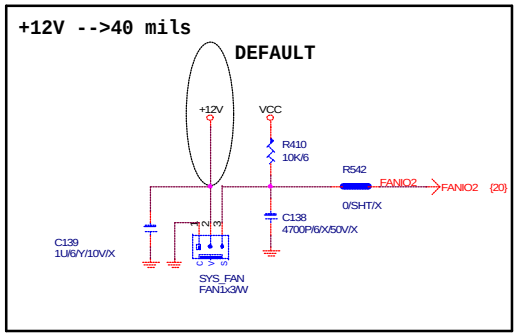
GLED (S3)-->HI



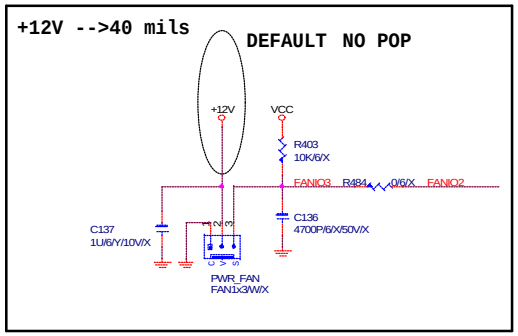
States for green LED

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

SYSTEM FAN W=0.167W



POWER FAN W=0.167W



GIGABYTE		
Title: PANEL, STR LED & FANS		
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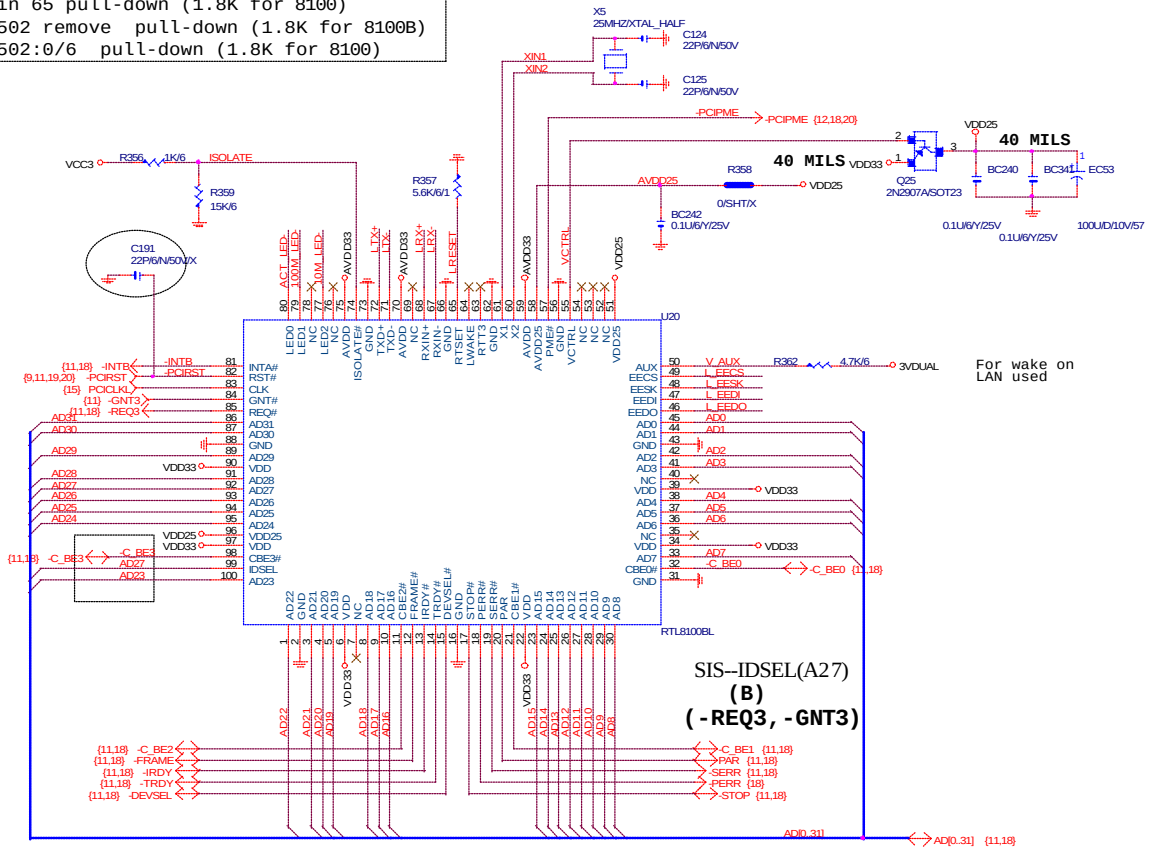
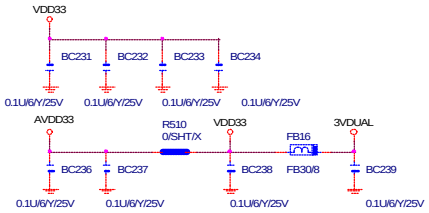
LAN RTL8100 (REALTEK)

8100/8100B NOTE:
Pin 65 pull-down (5.6K for 8100B)
Pin 65 pull-down (1.8K for 8100)
R502 remove pull-down (1.8K for 8100B)
R502:0/6 pull-down (1.8K for 8100)

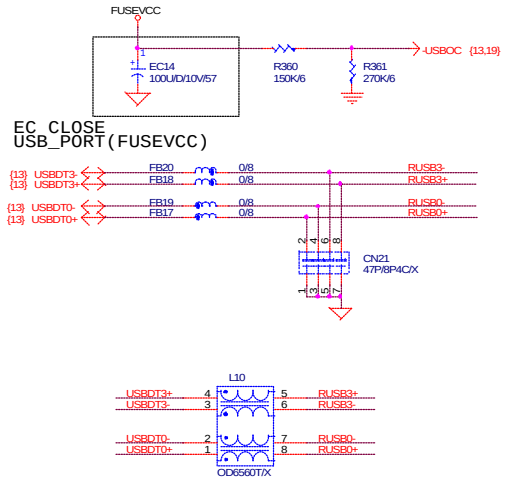


POWER DECOUPLING CAP.

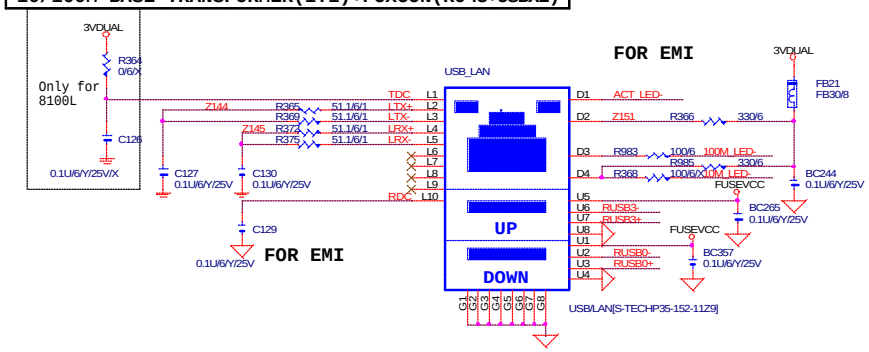


REAR USBX2

USB2.0

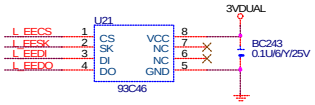


10/100M BASE TRANSFORMER(1:1)+FOXCON(RJ45+USBX2)



10/100M DUAL LED(NECCI)
GREEN:100M ORANGE:10M

LAN EEPROM



GIGABYTE		
Title: LAN RTL8100BL		
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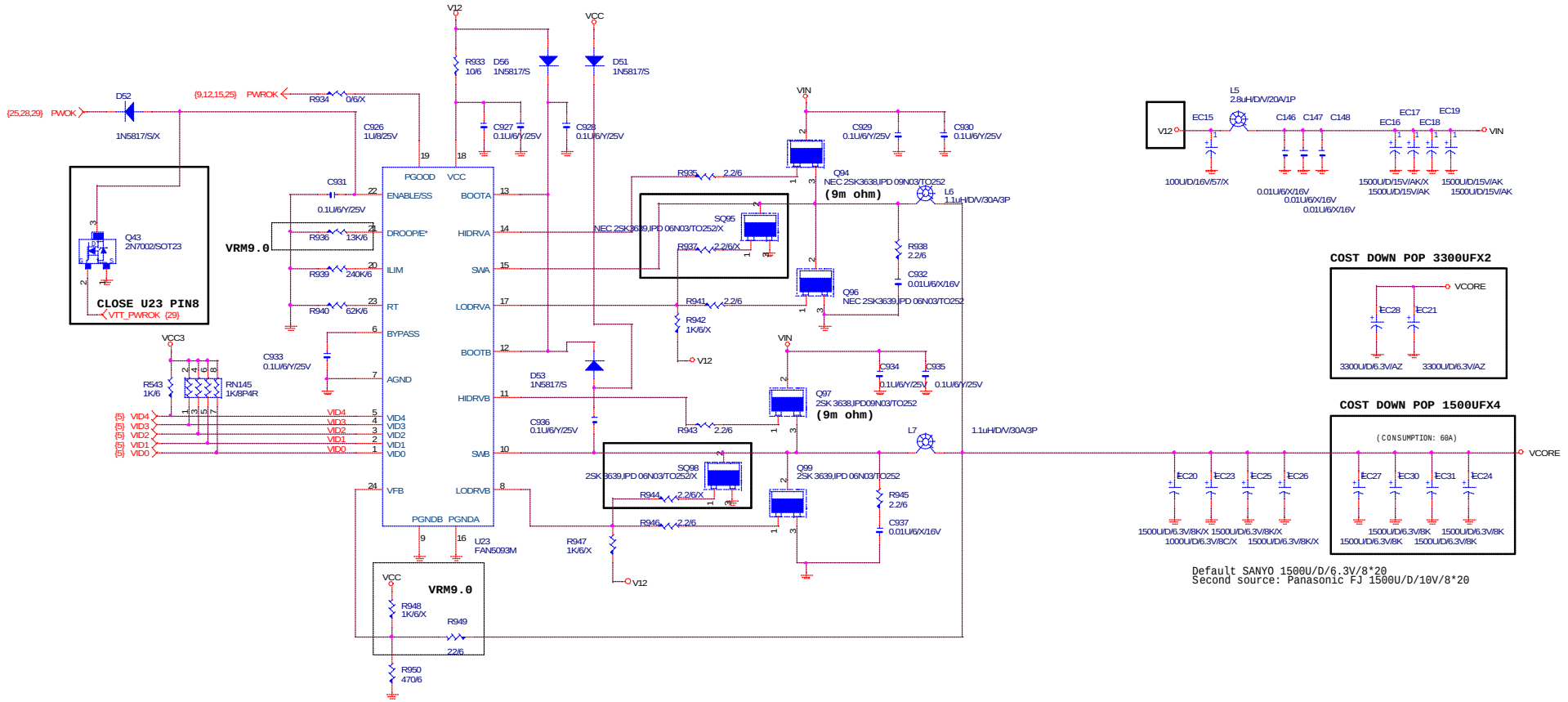

GIGABYTE

Title	VCORE (PWM FAN5093M)	
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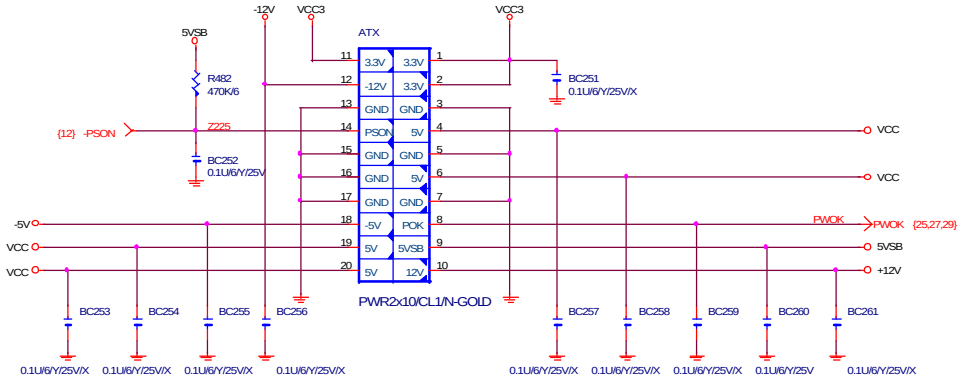
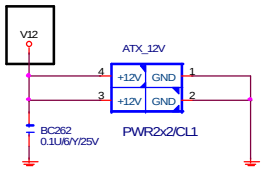
ATX CONN, DC POWER

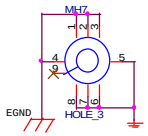
ATX POWER CONNECTOR

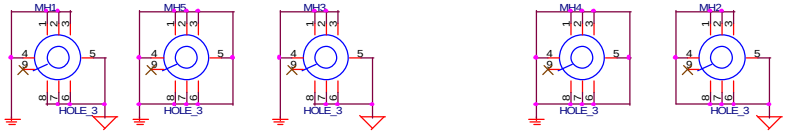




PB REQUEST V12

+12V TRACE
250MIL





GIGABYTE		
Title: ATX, DC POWER		
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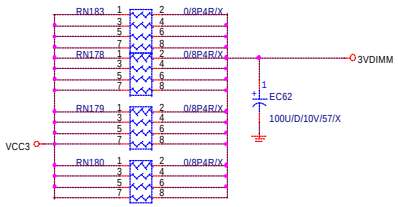
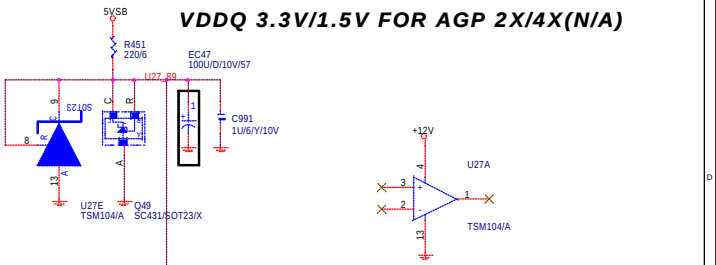
3VDIMM FOR SDR

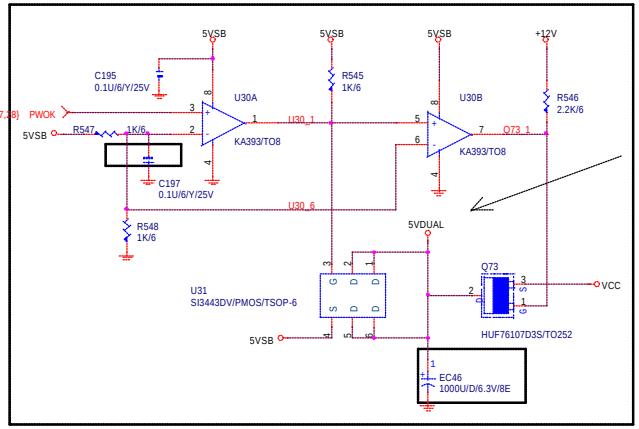


VDDQ 3.3V/1.5V FOR AGP 2X/4X(N/A)

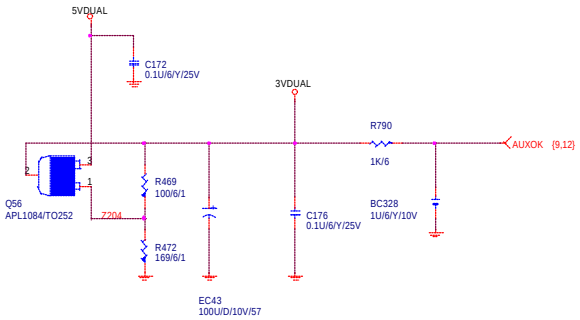


5VDUAL TRANS TO 3VDUAL(3.3V)

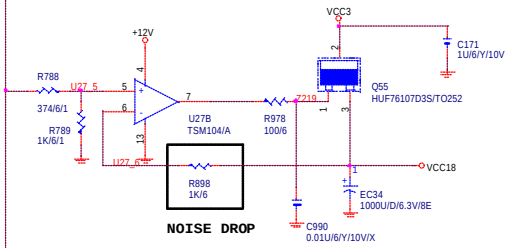
5VDUAL 80 mils ABOVE



NF REQUEST 10X12

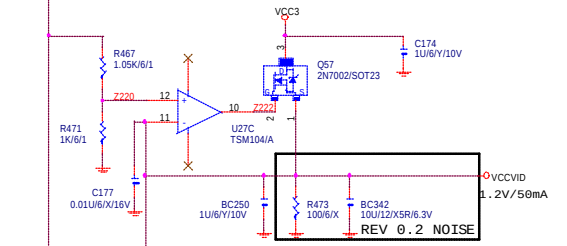


VCC18 FOR NB,SB



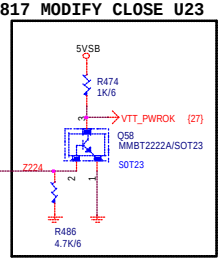
NOISE DROP

VCCVID FOR NORTHWOOD CPU



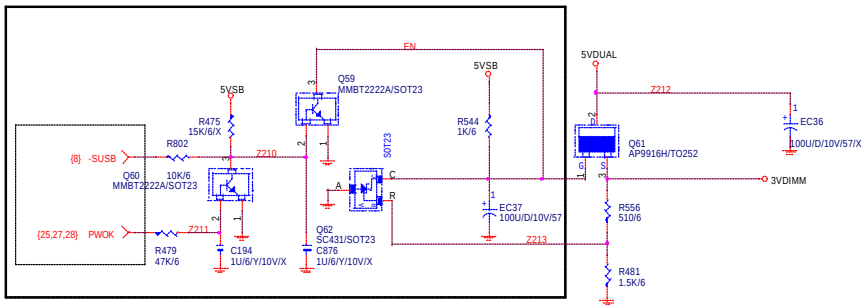
REV 0.2 NOISE

0817 MODIFY CLOSE U23



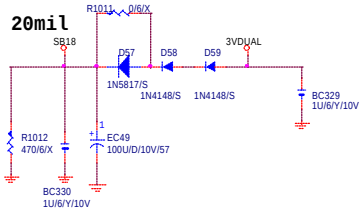
DDR25V FOR DDR DIMM & NB

AP9916 layout
TO-252 package
for thermal
issue



SB18 FOR SB

20mil



GIGABYTE		
Title: DDR POWER		
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RTL8100L ON-BOARD		
	-REQ0 PCI1	**IDSEL(A20)--B**
	-REQ1 PCI2	**IDSEL(A22)--C**
	-REQ2 PCI3	**IDSEL(A24)--D**
	-REQ3 RTL8100L	**IDSEL(A27)--B**

8SRXL South Bridge GPIO LIST				
ITEM	DESCRIPTION	I/O	STATUS	Default
GPIO0	Bios Write Protect	O	Hi:Write Enable, Lo:Write Protect	Hi
GPIO1	N/A		PULL-UP	Hi
GPIO2	THERM#			Hi
GPIO3	Green Button	O	Hi:Normal, Lo:Into Green mode	Hi
GPIO4	CLKRUN#		PULL-DOWN	Lo
GPIO5	N/A		PULL-UP	Hi
GPIO6	CPU OVER VOLTAGE	O	Hi:Normal	Hi
GPIO7	SUSLED	O	S0('0'),S1/S3('1'),S5('0')	Lo
GPIO8	Wake On Ring	I	Hi:Normal, Lo:Ring Power On	Hi
GPIO9	SAFE MODE	I	1-2:LO-->NORMAL,2-3:HI-->SAFE MODE	Lo
GPIO10	Mother Board ID	I	SIS DEMO B/D PULL-DOWN	Lo
GPIO11	N/A		PULL-UP	Hi
GPIO12	N/A		PULL-UP	Hi
GPIO13	Mother Board ID	I	SIS DEMO B/D PULL-DOWN	Lo
GPIO14	Primary Down	I	Lo:CODEC Only	Lo
GPIO15	KB Data	I/OD		
GPIO16	KB Clk	I/OD		
GPIO17	MS Data	I/OD		
GPIO18	MS Clk	I/OD		

GIGABYTE

Title: **GPIO, REQ/GNT Table**

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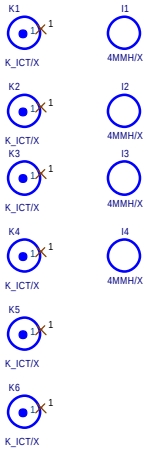

GIGABYTE		
Title: ***8SKML***		
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