8I845GE775-G

Revision 1.0

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SHEET	TITLE
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34	REALTEK8110C
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Title: COVER SHEET		
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Model Name: GA-8I845GE775-G

Version:1.0

Component value change history

293.95x210. 5 mil 60±15% C Type

DATE	Change Item	Reason
2005.01.17	0.1 NEW BOM RELEASE	
2005.03.11	1.0A BOM RELEASE	
	ATX USE: 11NH4-020020-61/-62 CPU RM REMOVE	
	Add EMI solution. ACN1,ACN2=180P	
	Add U12 SST 49LF003B 2nd source	
	Clock Gen change to RTM350-110R	
	Add 9701 for USB Drop Issue	
	Add 0.1u at SLP_S3- but no pop BC9	
	Add VCC E-CAPx2 but pop 1 EC1	
	DL1 change to 11NH2-011507-01 wire.	
2005.03.31	1.0B BOM	Main stream 1.4 or performance
	DU2 change to 10TA1-605019-10	Homer: DC8:150P, DR32:100ohm, DR28:0, DR31:120K, DR6,DR7,DR8:100K
	Add Q28 to minimum Q27 temperature. Only Q27 run 3D will reach 100C	
	Package	

Circuit or PCB layout change for next version

DATE	Change Item	Reason
2005.01.13	0.1 GERBER OUT.	
2005.03.10	1.0 GERBER OUT.	

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Title: BOM & PCB MODIFY HISTORY

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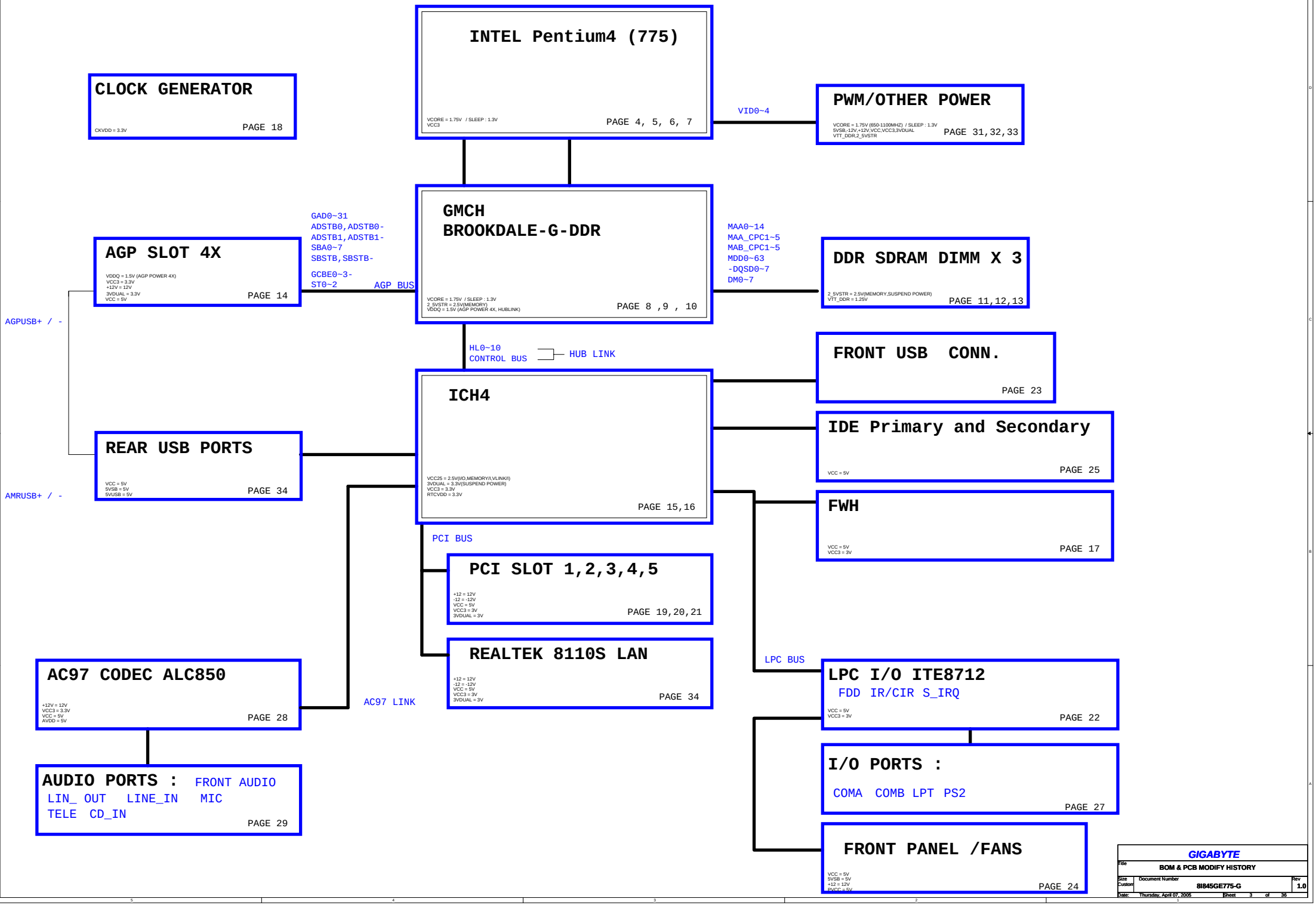
BLOCK DIAGRAM



GIGABYTE

Title	BOM & PCB MODIFY HISTORY	
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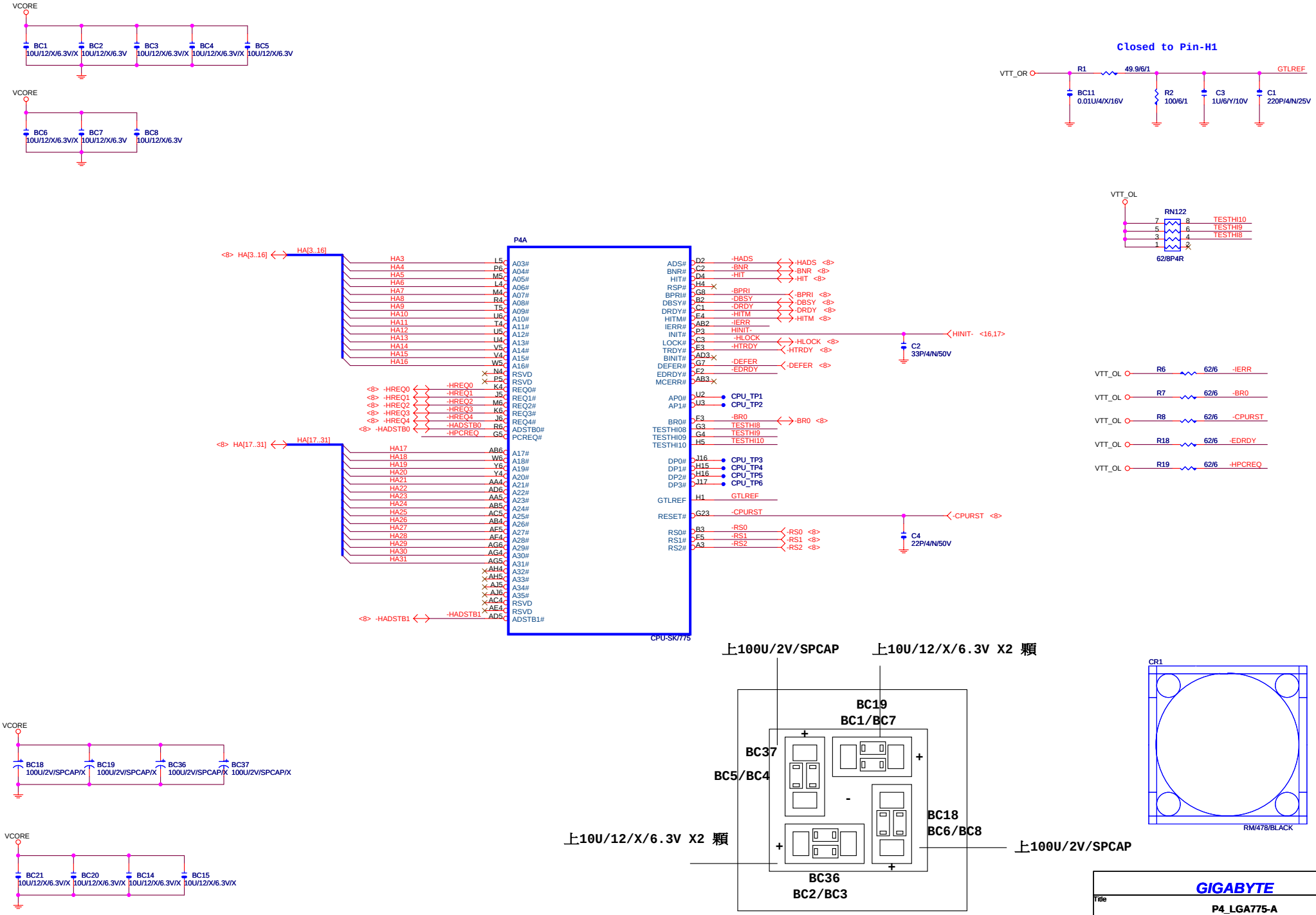
VCORE
BC1 10U/12/X/6.3V/X
BC2 10U/12/X/6.3V
BC3 10U/12/X/6.3V/X
BC4 10U/12/X/6.3V/X
BC5 10U/12/X/6.3V
VCORE
BC6 10U/12/X/6.3V/X
BC7 10U/12/X/6.3V
BC8 10U/12/X/6.3V
Closed to Pin-H1
VTT_OR
R1 49.9/6/1
GTLREF
BC11 0.01U/4/X/16V
R2 100/6/1
C3 1U/6/Y/10V
C1 220P/4/N/25V
VTT_OL
RN122
TESTHI10
TESTHI9
TESTHI8
62/8P4R
P4A
HA[3..16]
HA[17..31]
-HREQ0
-HREQ1
-HREQ2
-HREQ3
-HREQ4
-HADSTB0
-HPCREQ
-HADSTB1
ADS#
BNR#
HIT#
RSP#
BPRI#
DBSY#
DRDY#
HITM#
IERR#
INIT#
LOCK#
TRDY#
BINIT#
DEFER#
EDRDY#
MCERR#
AP0#
AP1#
BR0#
TESTHI08
TESTHI09
TESTHI10
DP0#
DP1#
DP2#
DP3#
GTLREF
RESET#
RS0#
RS1#
RS2#
-HADS
-BNR
-HIT
-BPRI
-DBSY
-DRDY
-HITM
-IERR
HINIT-
-HLOCK
-HTRDY
-DEFER
-EDRDY
CPU_TP1
CPU_TP2
-BR0
TESTHI8
TESTHI9
TESTHI10
CPU_TP3
CPU_TP4
CPU_TP5
CPU_TP6
-CPURST
-RS0
-RS1
-RS2
C2 33P/4/N/50V
C4 22P/4/N/50V
R6 62/6 -IERR
R7 62/6 -BR0
R8 62/6 -CPURST
R18 62/6 -EDRDY
R19 62/6 -HPCREQ
CPU-SK/775
上100U/2V/SPCAP
上10U/12/X/6.3V X2 顆
BC19
BC1/BC7
BC37
BC5/BC4
BC18
BC6/BC8
BC36
BC2/BC3
上10U/12/X/6.3V X2 顆
上100U/2V/SPCAP
CR1
RM/478/BLACK
VCORE
BC18 100U/2V/SPCAP/X
BC19 100U/2V/SPCAP/X
BC36 100U/2V/SPCAP/X
BC37 100U/2V/SPCAP/X
VCORE
BC21 10U/12/X/6.3V/X
BC20 10U/12/X/6.3V/X
BC14 10U/12/X/6.3V/X
BC15 10U/12/X/6.3V/X
GIGABYTE
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P4_LGA775-A
Size Custom
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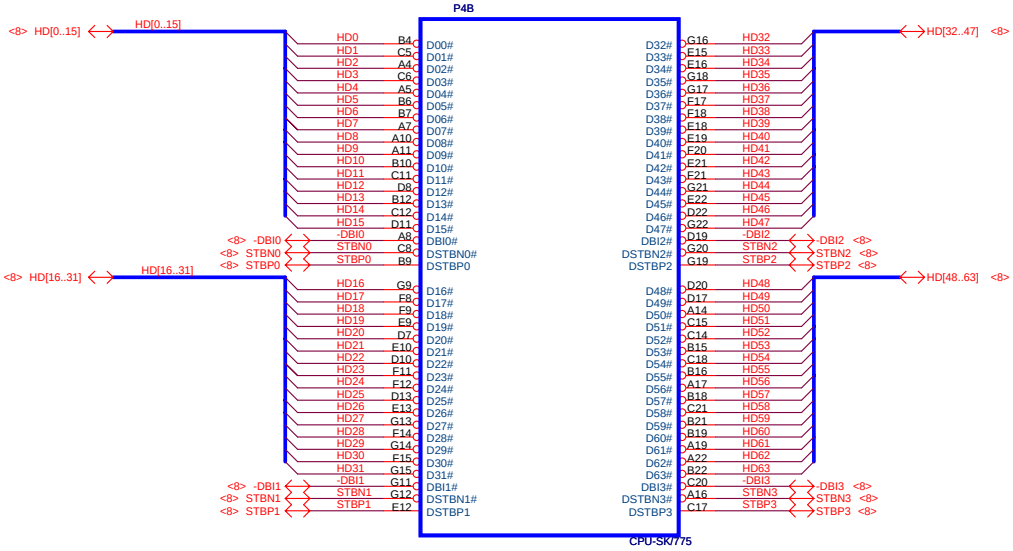

GIGABYTE		
Title	P4_LGA775-C	
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Note:
VCCA & VCOREPLL define doesn't same as old P4 design kit

Trace width doesn't less than 12 Mil

As close as possible to CPU socket

Closed to Pin-H2

Place outside of CPU socket

Locate at ICH6 Side

P4C

CPU-SK/775

P4D

CPU-SK/775

CLOSE TO CPU SIDE

GIGABYTE

Title	P4_LGA775-B	
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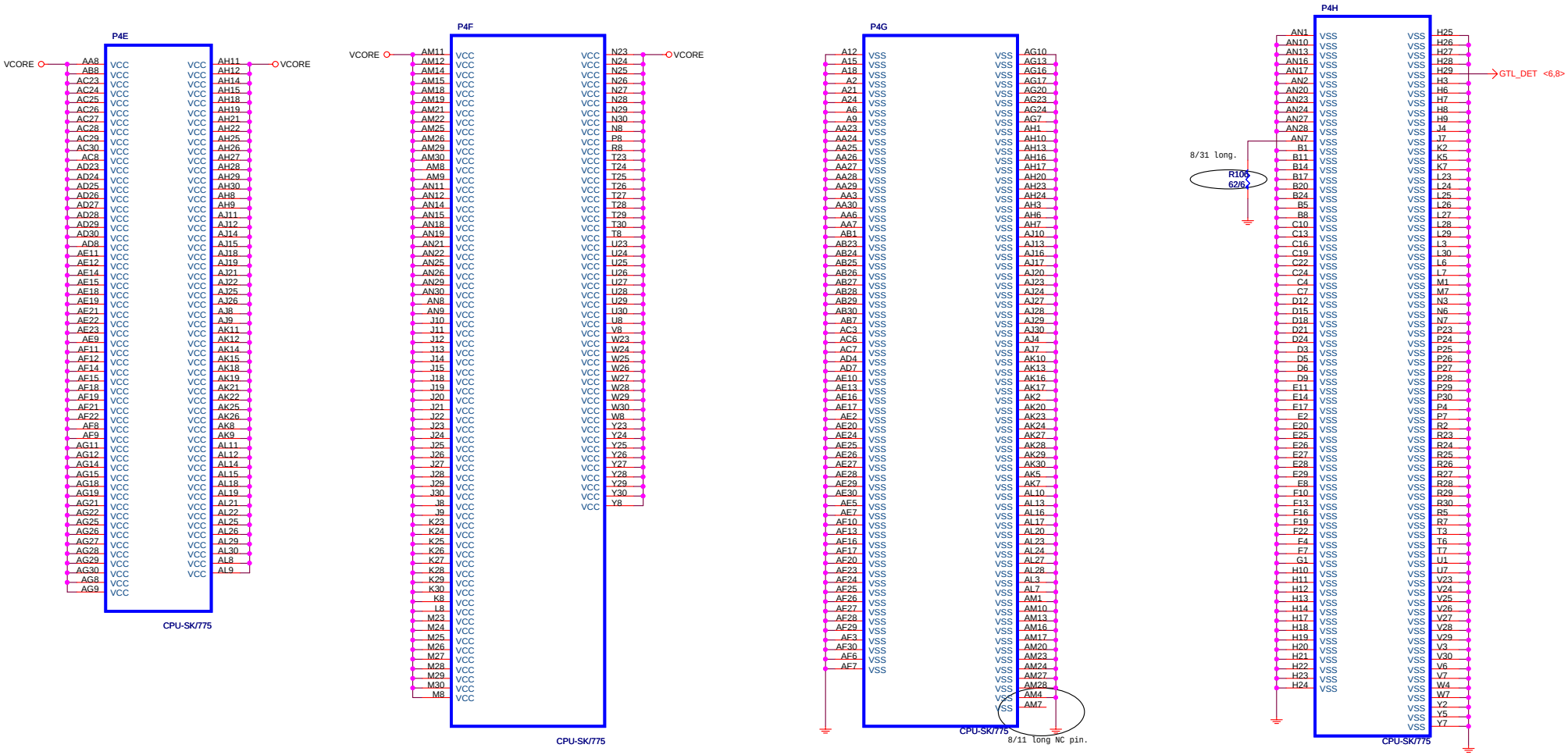

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Size: Custom	Document Number: 8I845GE775-G		Rev: 1.0
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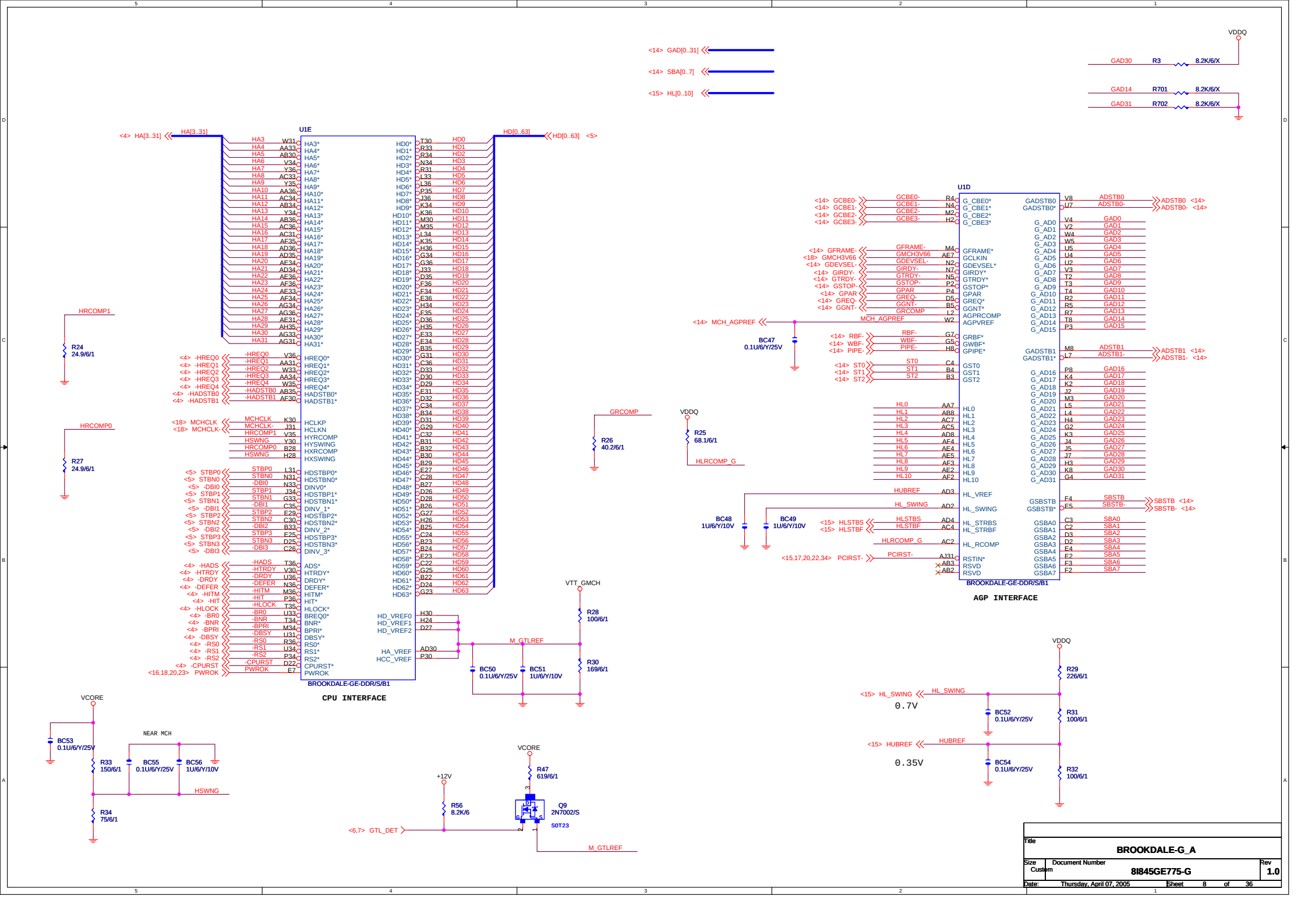
U1E
BROOKDALE-GE-DDR/S/B1
CPU INTERFACE
U1D
BROOKDALE-GE-DDR/S/B1
AGP INTERFACE
VDDQ
R3 8.2K/6/X
R701 8.2K/6/X
R702 8.2K/6/X
R24 24.9/6/1
R27 24.9/6/1
R26 40.2/6/1
R25 68.1/6/1
R28 100/6/1
R30 169/6/1
R29 226/6/1
R31 100/6/1
R32 100/6/1
R33 150/6/1
R34 75/6/1
R56 8.2K/6
R47 619/6/1
Q9 2N7002/S
SOT23
VCORE
VTT_GMCH
+12V
NEAR MCH
0.7V
0.35V
Title
BROOKDALE-G_A
Size Custom
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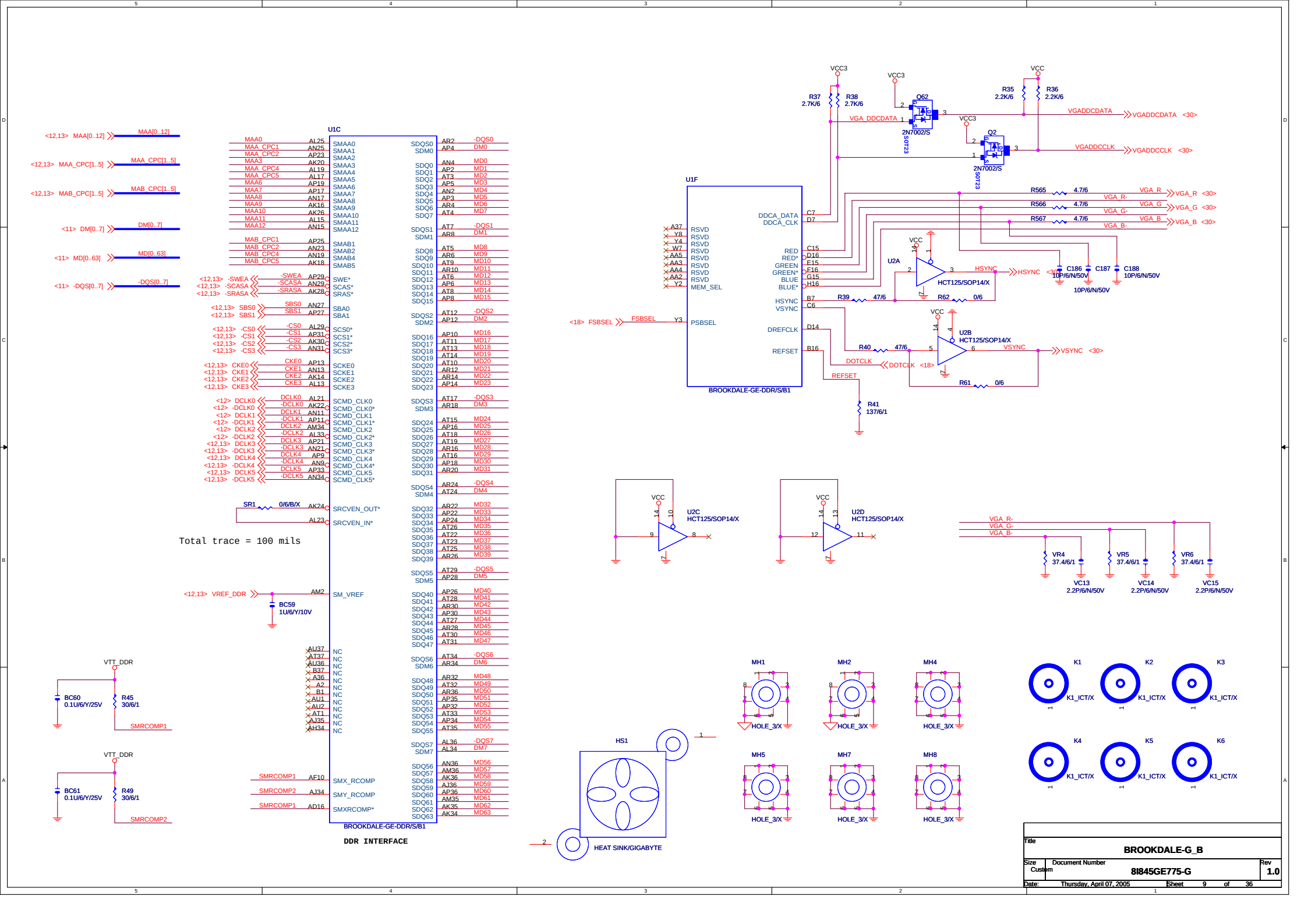

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Size: Custom	Document Number: 81845GE775-G
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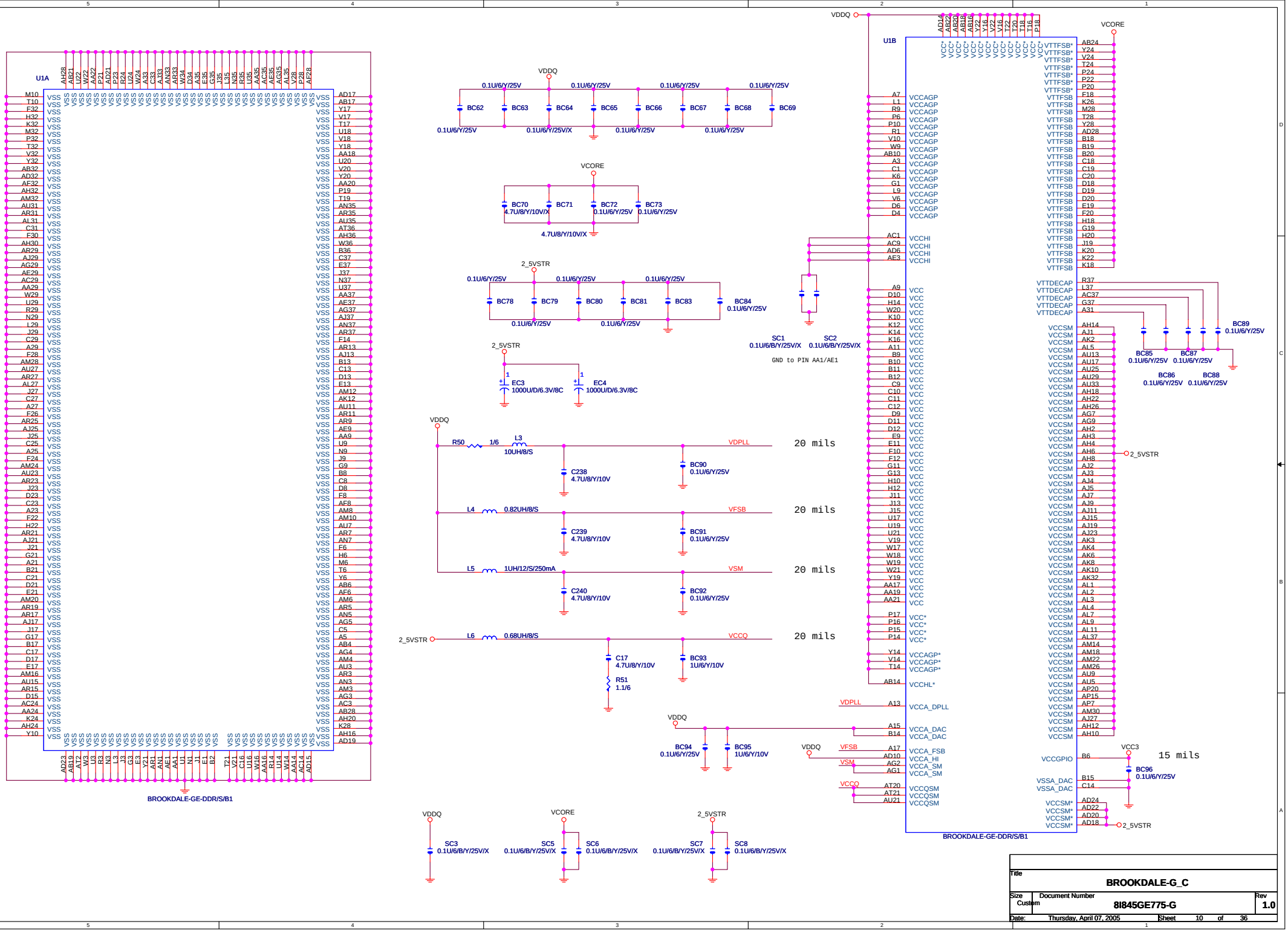

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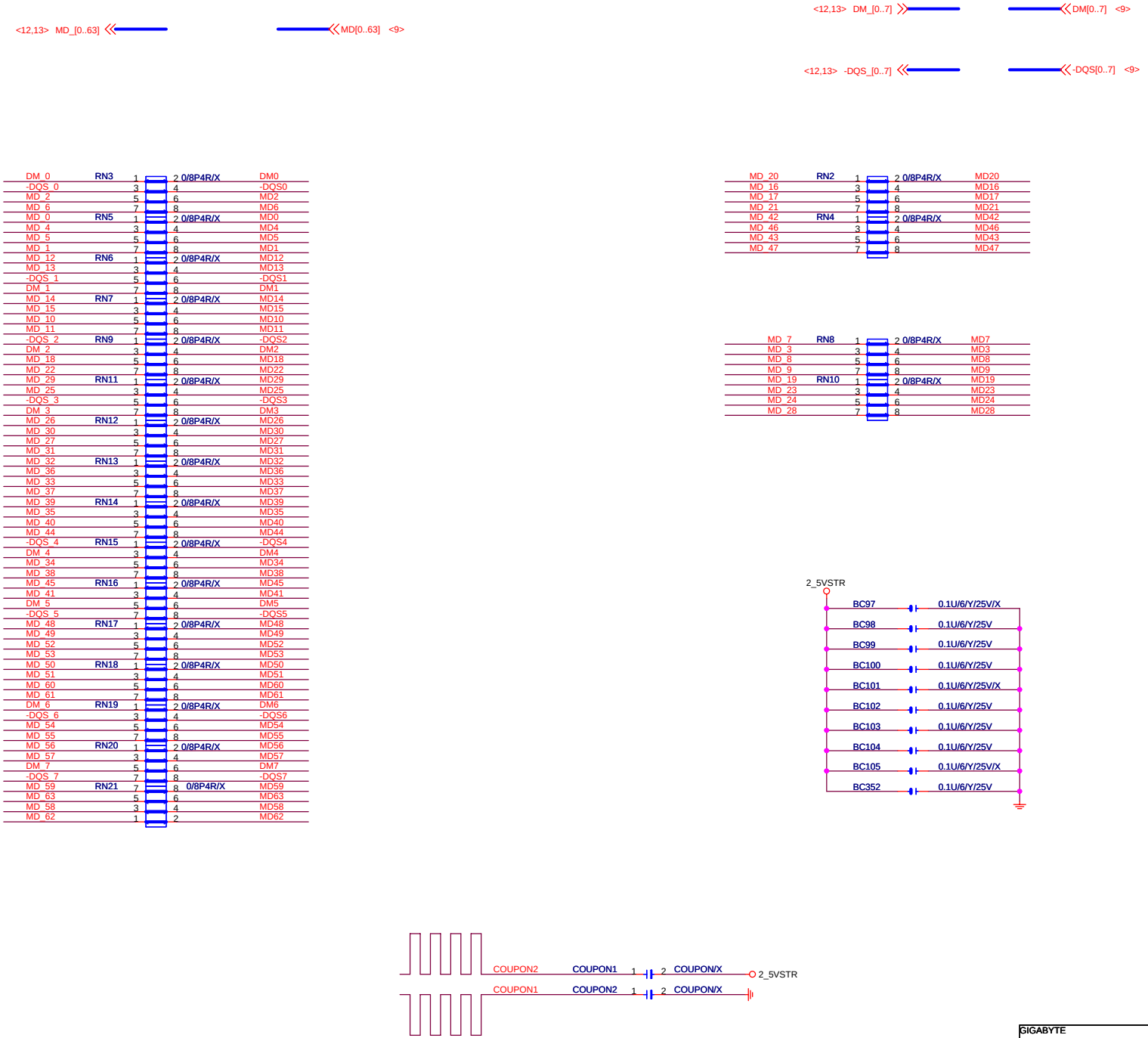

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Title	DDR SERIAL TERM.		
Size B	Document Number 8I845GE775-G		Rev 1.0
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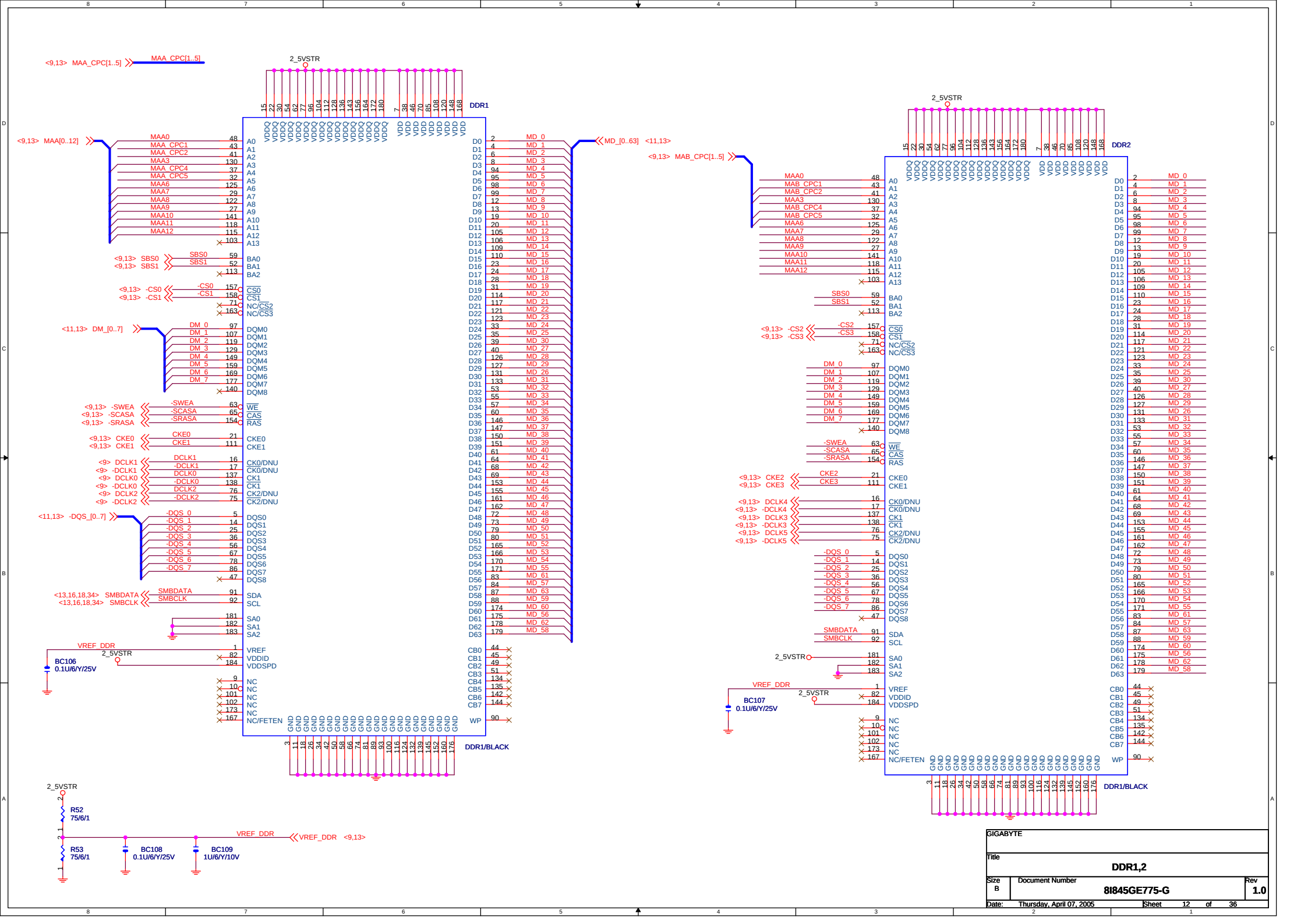
DDR1
DDR2
DDR1/BLACK
2_5VSTR
MAA_CPC[1..5]
MAA[0..12]
MD_[0..63]
MAB_CPC[1..5]
DM_[0..7]
-DQS_[0..7]
SBS0
SBS1
-CS0
-CS1
-CS2
-CS3
-SWEA
-SCASA
-SRASA
CKE0
CKE1
CKE2
CKE3
DCLK0
-DCLK0
DCLK1
-DCLK1
DCLK2
-DCLK2
DCLK3
-DCLK3
DCLK4
-DCLK4
DCLK5
-DCLK5
SMBDATA
SMBCLK
VREF_DDR
BC106
0.1U/6/Y/25V
BC107
0.1U/6/Y/25V
R52
75/6/1
R53
75/6/1
BC108
0.1U/6/Y/25V
BC109
1U/6/Y/10V
GIGABYTE
Title
DDR1,2
Size
B
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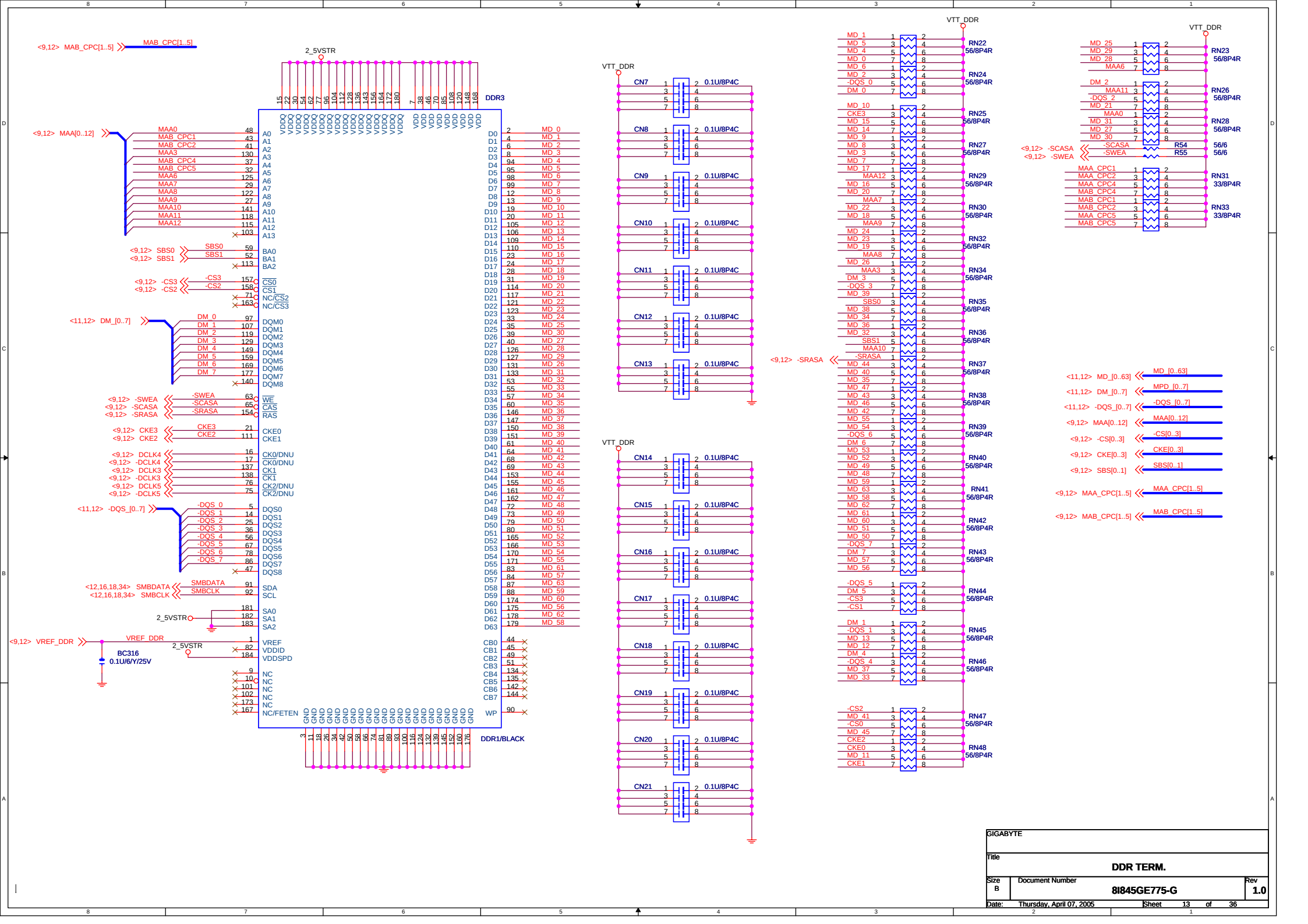

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Title	DDR TERM.	
Size B	Document Number 8I845GE775-G	Rev 1.0
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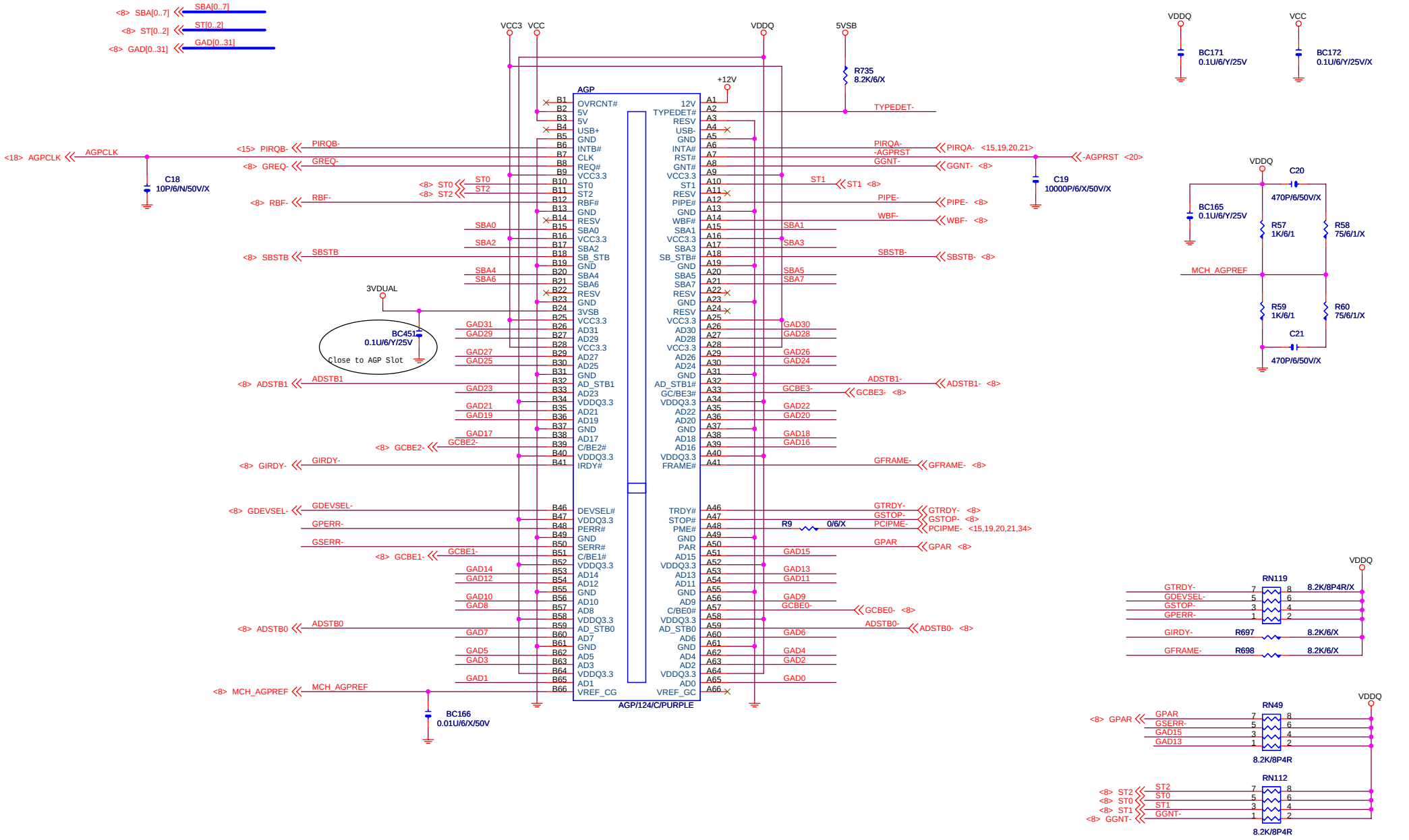
SBA[0..7]
ST[0..2]
GAD[0..31]
AGP
AGP/124/C/PURPLE
VCC3
VCC
VDDQ
5VSB
+12V
R735
8.2K/6/X
TYPEDET-
C18
10P/6/N/50V/X
C19
10000P/6/X/50V/X
BC451
0.1U/6/Y/25V
Close to AGP Slot
3VDUAL
BC166
0.01U/6/X/50V
BC171
0.1U/6/Y/25V
BC172
0.1U/6/Y/25V/X
BC165
0.1U/6/Y/25V
C20
470P/6/50V/X
C21
470P/6/50V/X
R57
1K/6/1
R58
75/6/1/X
R59
1K/6/1
R60
75/6/1/X
MCH_AGPREF
RN119
8.2K/8P4R/X
R697
8.2K/6/X
R698
8.2K/6/X
RN49
8.2K/8P4R
RN112
8.2K/8P4R
R9
0/6/X
AGPCLK
PIRQB-
GREQ-
RBF-
SBSTB
ADSTB1
ADSTB0
GCBE2-
GCBE1-
GIRDY-
GDEVSEL-
GPERR-
GSERR-
PIRQA-
-AGPRST
GGNT-
PIPE-
WBF-
SBSTB-
GCBE3-
GTRDY-
GSTOP-
PCIPME-
GPAR
ST0
ST1
ST2
SBA0
SBA1
SBA2
SBA3
SBA4
SBA5
SBA6
SBA7
GAD31
GAD30
GAD29
GAD28
GAD27
GAD26
GAD25
GAD24
GAD23
GAD22
GAD21
GAD20
GAD19
GAD18
GAD17
GAD16
GAD15
GAD14
GAD13
GAD12
GAD11
GAD10
GAD9
GAD8
GAD7
GAD6
GAD5
GAD4
GAD3
GAD2
GAD1
GAD0
GIGABYTE
Title
AGP SLOT
Size
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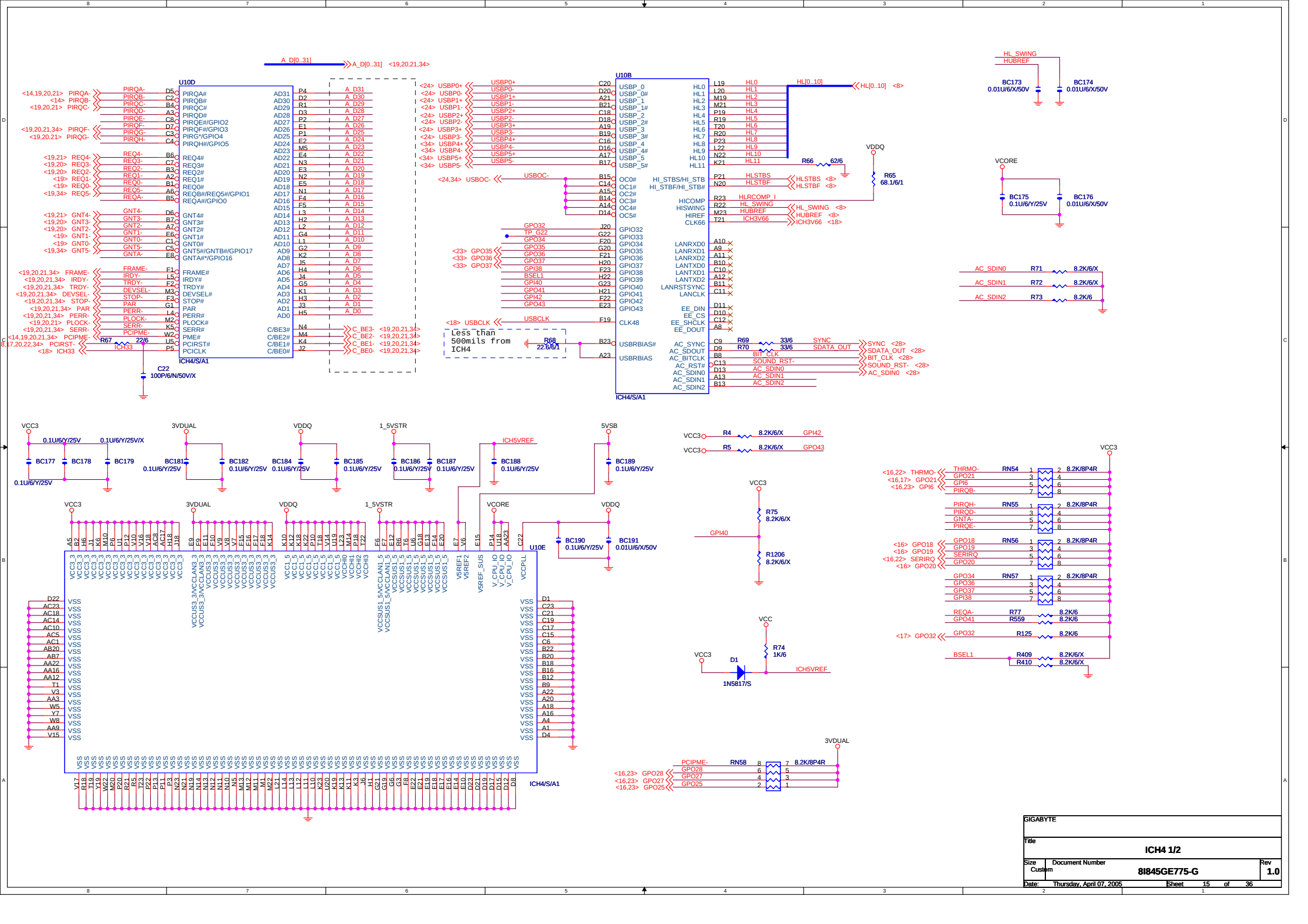
U10D
ICH4/S/A1
U10B
ICH4/S/A1
U10E
ICH4/S/A1
A_D[0..31]
HL[0..10]
HL_SWING
HUBREF
VCORE
VDDQ
VCC3
3VDUAL
1_5VSTR
5VSB
ICH5VREF
Less than 500mils from ICH4
C22 100P/6/N/50V/X
BC173 0.01U/6/X/50V
BC174 0.01U/6/X/50V
BC175 0.1U/6/Y/25V
BC176 0.01U/6/X/50V
R65 68.1/6/1
R66 62/6
R67 22/6
R68 22.6/6/1
R69 33/6
R70 33/6
R71 8.2K/6/X
R72 8.2K/6/X
R73 8.2K/6
R74 1K/6
R75 8.2K/6/X
R77 8.2K/6
R125 8.2K/6
R409 8.2K/6/X
R410 8.2K/6/X
R559 8.2K/6
R1206 8.2K/6/X
RN54 8.2K/8P4R
RN55 8.2K/8P4R
RN56 8.2K/8P4R
RN57 8.2K/8P4R
RN58 8.2K/8P4R
D1 1N5817/S
BC177 0.1U/6/Y/25V
BC178 0.1U/6/Y/25V/X
BC179 0.1U/6/Y/25V
BC181 0.1U/6/Y/25V
BC182 0.1U/6/Y/25V
BC184 0.1U/6/Y/25V
BC185 0.1U/6/Y/25V
BC186 0.1U/6/Y/25V
BC187 0.1U/6/Y/25V
BC188 0.1U/6/Y/25V
BC189 0.1U/6/Y/25V
BC190 0.1U/6/Y/25V
BC191 0.01U/6/X/50V
R4 8.2K/6/X GPI42
R5 8.2K/6/X GPO43
AC_SDIN0 R71 8.2K/6/X
AC_SDIN1 R72 8.2K/6/X
AC_SDIN2 R73 8.2K/6
SYNC <28>
SDATA_OUT <28>
BIT_CLK <28>
SOUND_RST- <28>
AC_SDIN0 <28>
AC_SDIN1
AC_SDIN2
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Title
ICH4 1/2
Size Custom
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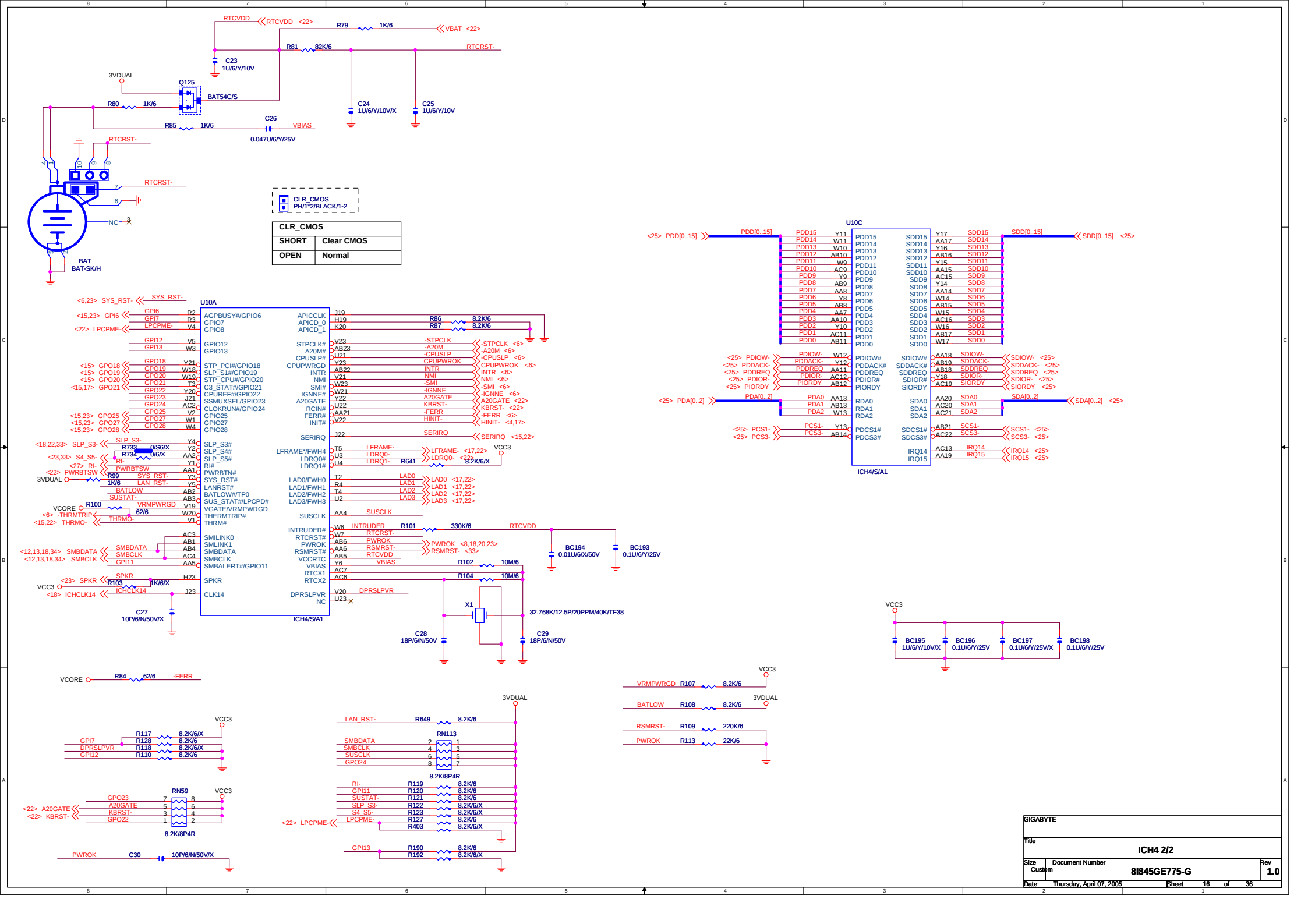

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Size: Custom	Document Number: 81845GE775-G
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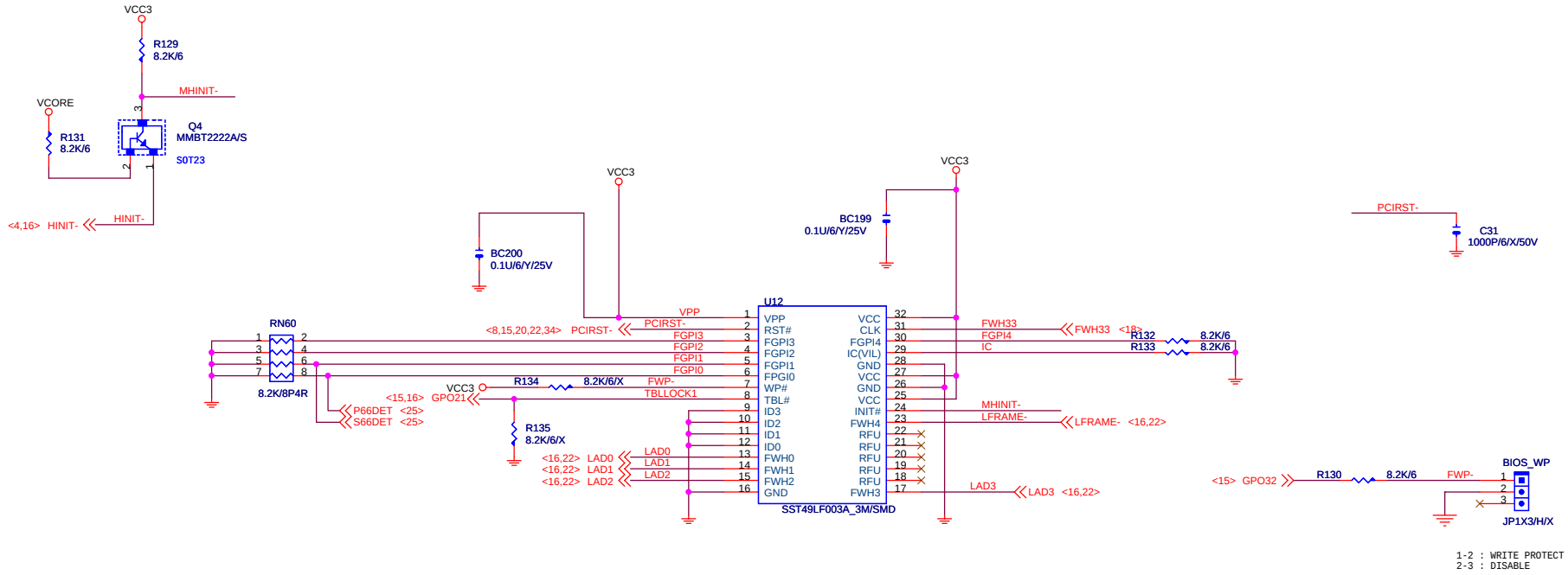

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Title: FWH		
Size: B	Document Number: 81845GE775-G	Rev: 1.0
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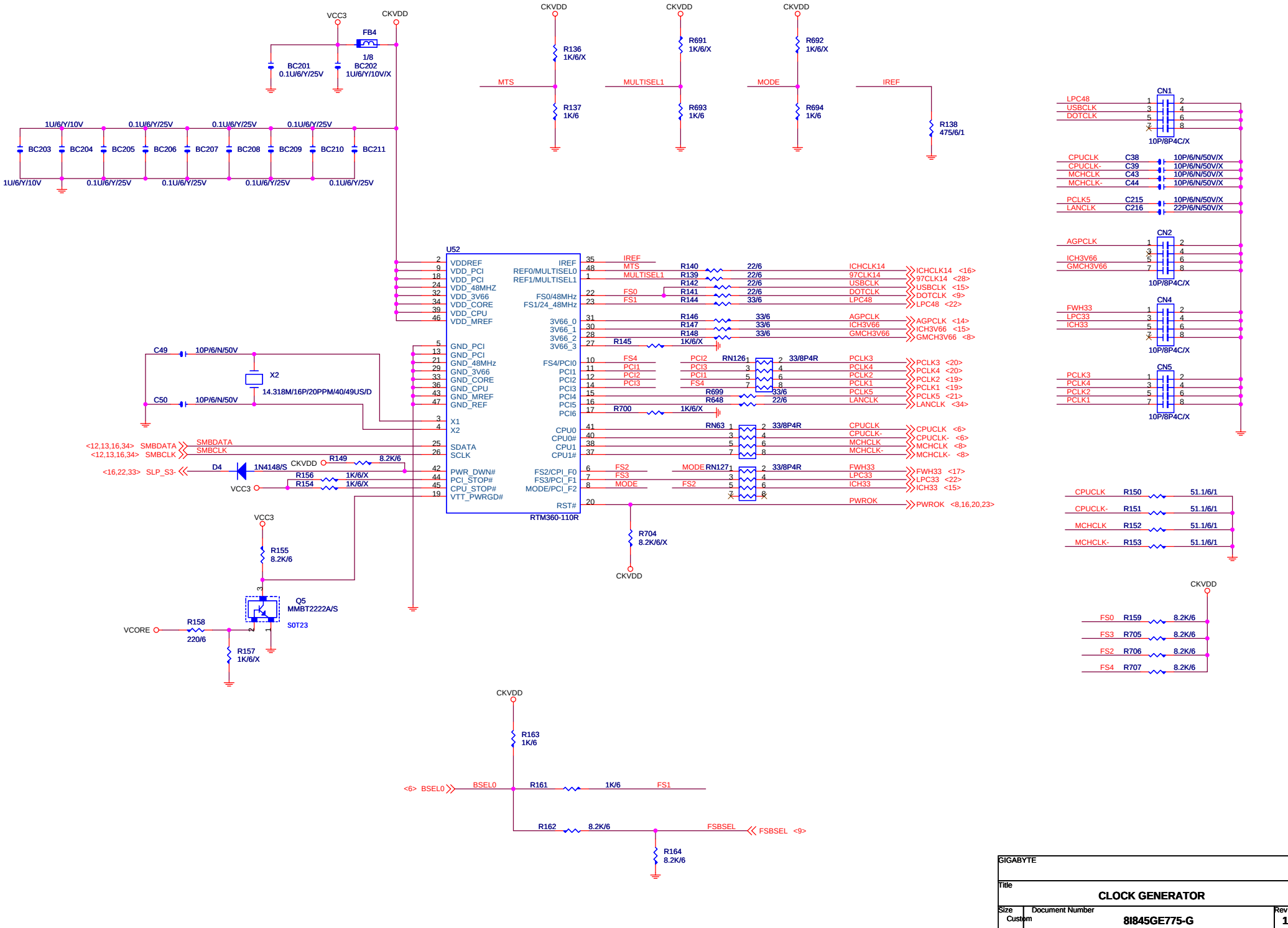

GIGABYTE			
Title	CLOCK GENERATOR		
Size: Custom	Document Number: 8I845GE775-G		Rev: 1.0
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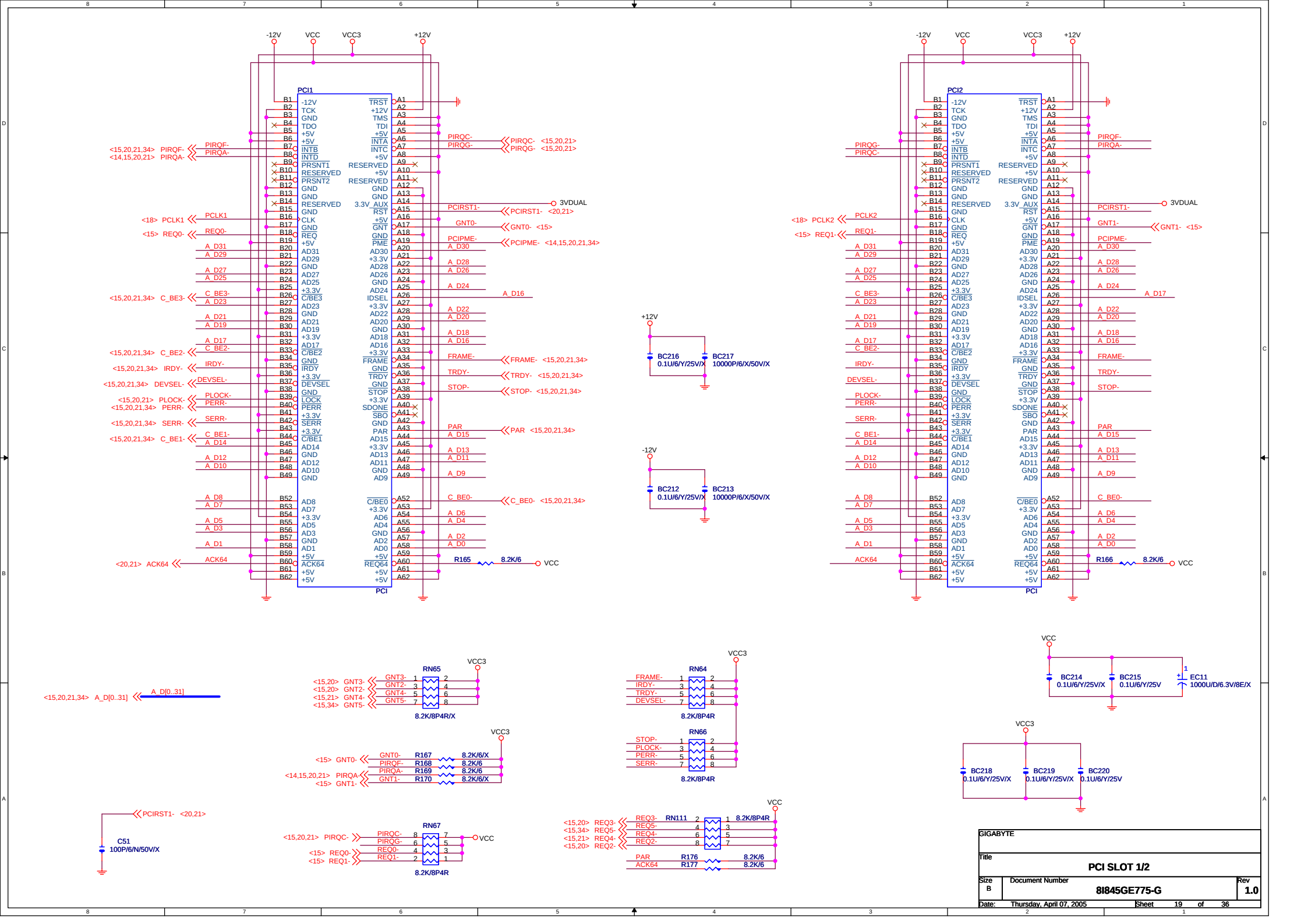
PCI1
PCI2
-12V
VCC
VCC3
+12V
PCI
PIRQF-
PIRQA-
PIRQC-
PIRQG-
PCLK1
REQ0-
PCLK2
REQ1-
3VDUAL
PCIRST1-
GNT0-
GNT1-
PCIPME-
A_D30
A_D31
A_D29
A_D28
A_D26
A_D27
A_D25
A_D24
A_D16
A_D17
C_BE3-
A_D23
A_D22
A_D20
A_D21
A_D19
A_D18
A_D17
C_BE2-
FRAME-
IRDY-
TRDY-
DEVSEL-
STOP-
PLOCK-
PERR-
SERR-
PAR
A_D15
C_BE1-
A_D14
A_D13
A_D12
A_D11
A_D10
A_D9
A_D8
A_D7
C_BE0-
A_D6
A_D5
A_D4
A_D3
A_D2
A_D1
A_D0
ACK64
R165
R166
8.2K/6
BC216
0.1U/6/Y/25V/X
BC217
10000P/6/X/50V/X
BC212
0.1U/6/Y/25V/X
BC213
10000P/6/X/50V/X
A_D[0..31]
RN65
RN64
RN66
RN67
RN111
8.2K/8P4R/X
8.2K/8P4R
R167
R168
R169
R170
8.2K/6/X
BC214
0.1U/6/Y/25V/X
BC215
0.1U/6/Y/25V
EC11
1000U/D/6.3V/8E/X
BC218
0.1U/6/Y/25V/X
BC219
0.1U/6/Y/25V/X
BC220
0.1U/6/Y/25V
C51
100P/6/N/50V/X
GIGABYTE
PCI SLOT 1/2
81845GE775-G
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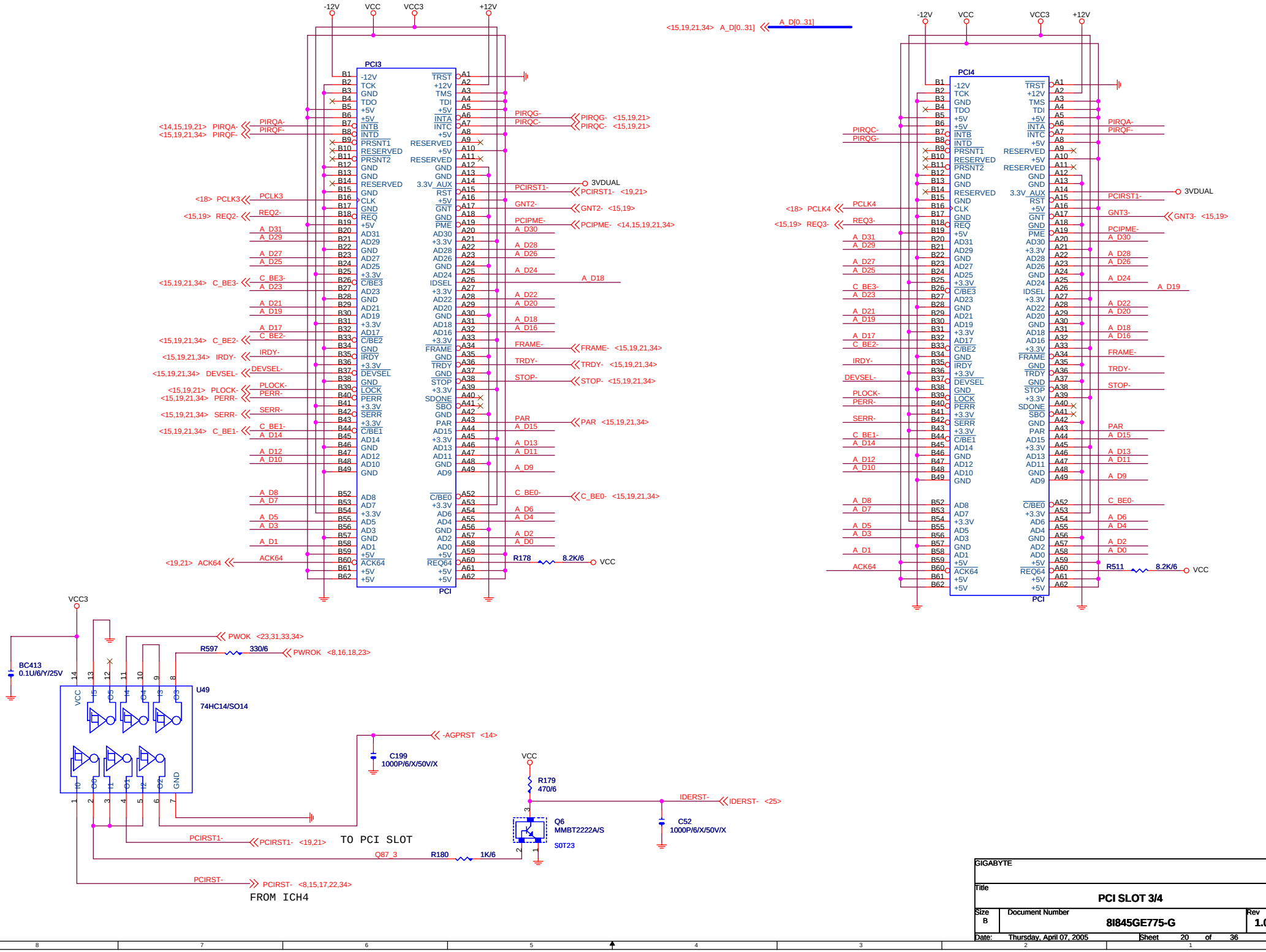

GIGABYTE		
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Size B	Document Number 8I845GE775-G	Rev 1.0
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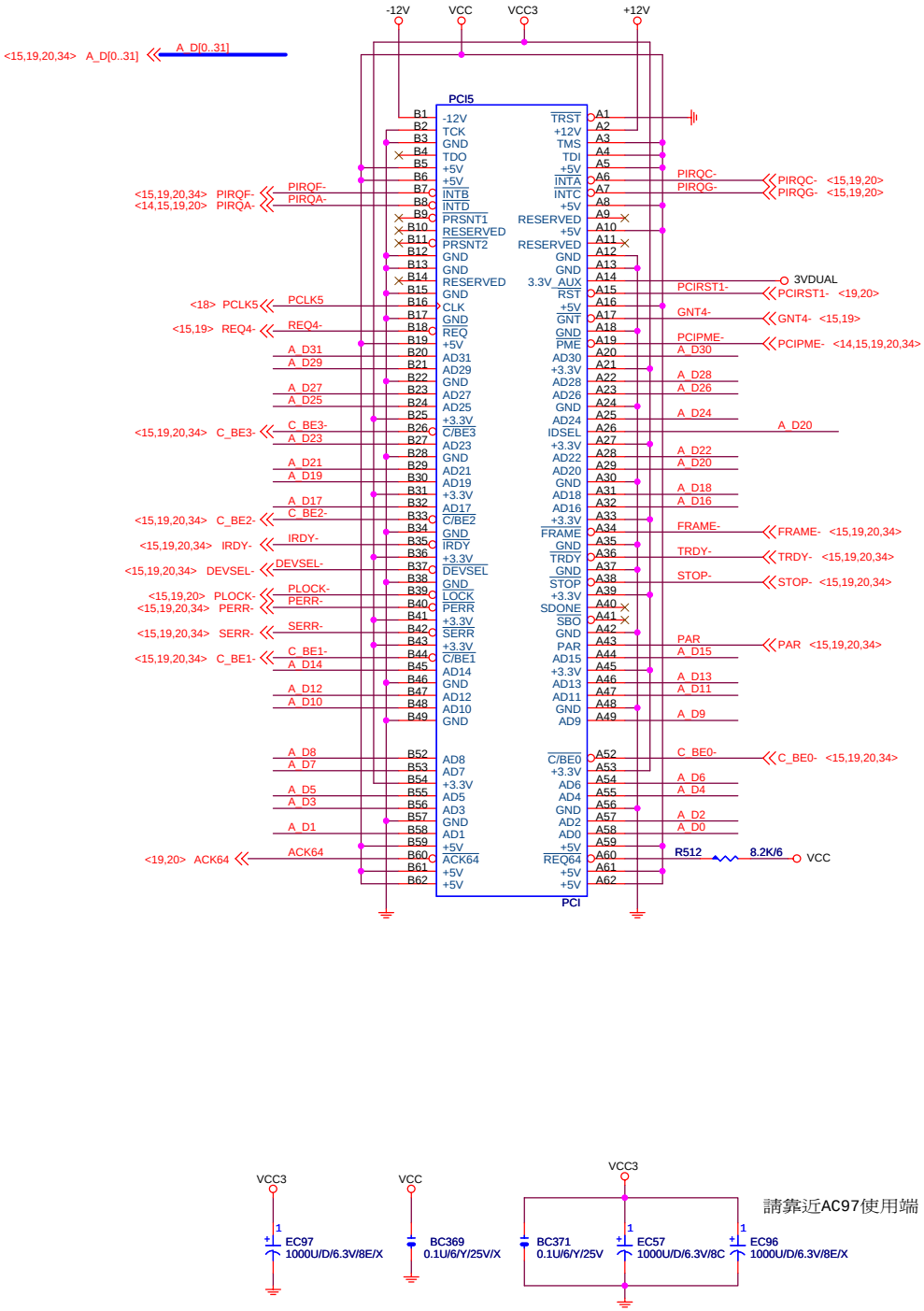

GIGABYTE		
Title	PCI SLOT 5	
Size B	Document Number 81845GE775-G	Rev 1.0
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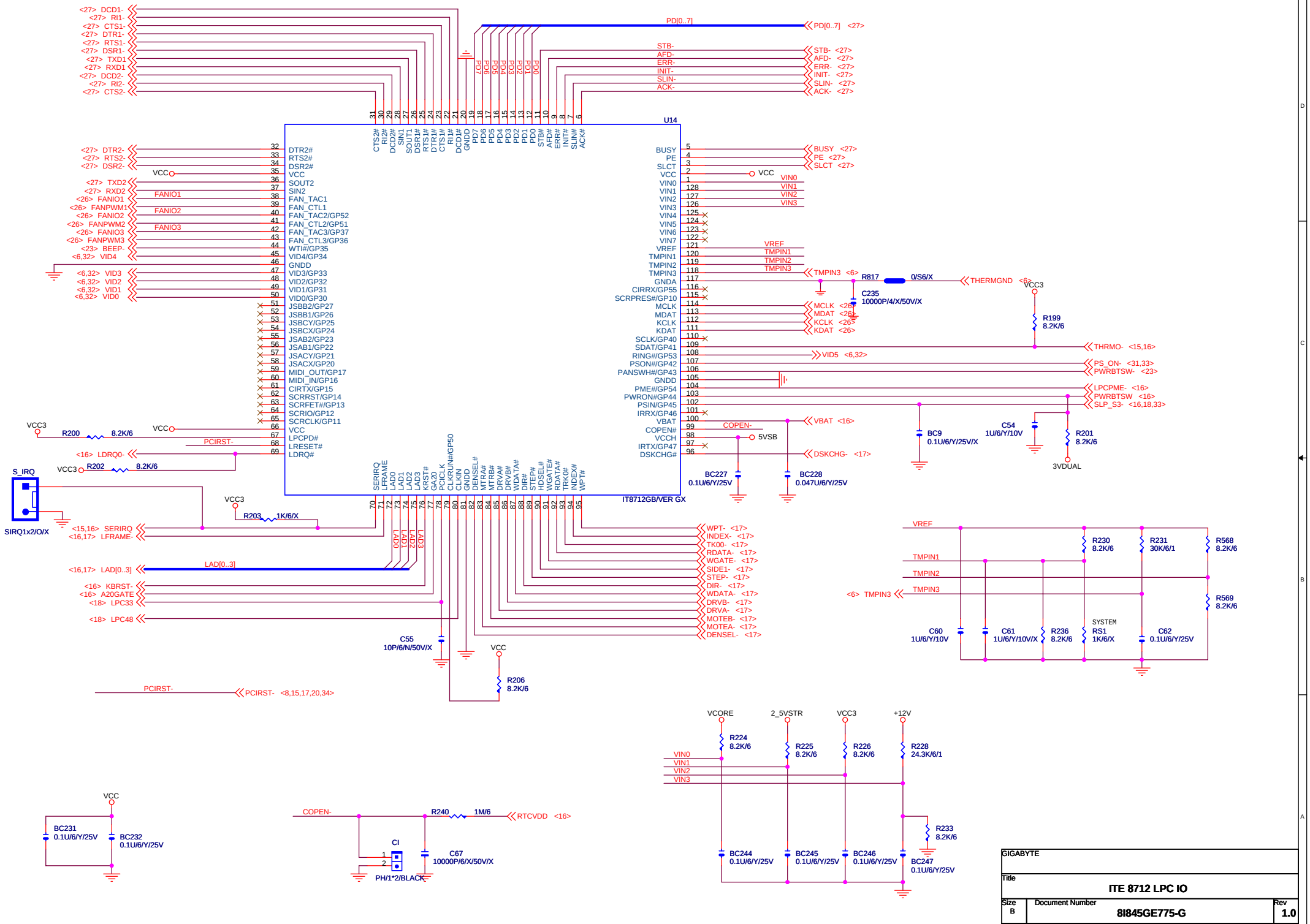
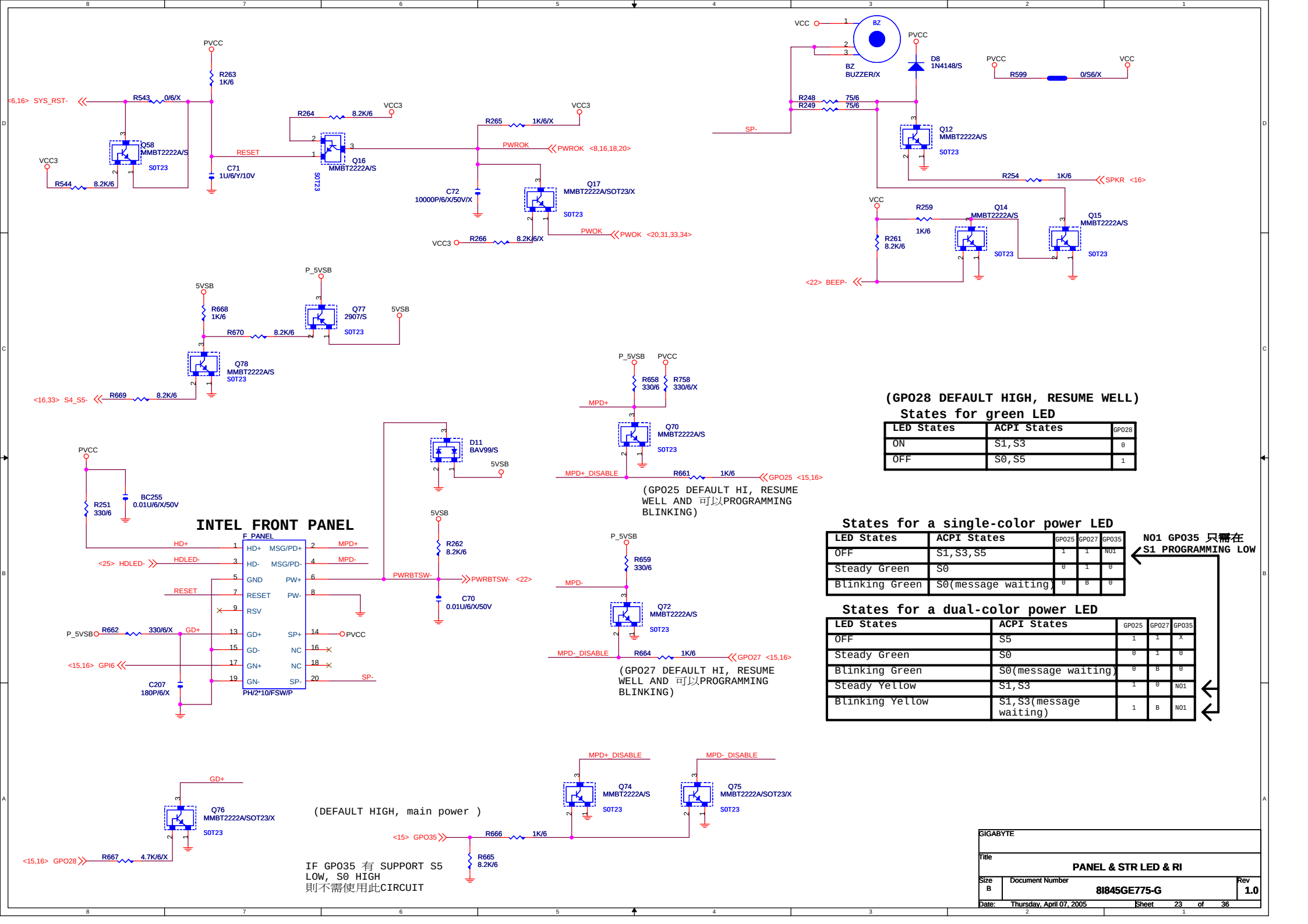


GIGABYTE		
Title	ITE 8712 LPC IO	
Size B	Document Number 81845GE775-G	Rev 1.0
Date: Thursday, April 07, 2005	Sheet 22 of 36	


PVCC
R263 1K/6
<6,16> SYS_RST-
R543 0/6/X
Q58 MMBT2222A/S SOT23
VCC3
R544 8.2K/6
C71 1U/6/Y/10V
RESET
R264 8.2K/6
Q16 MMBT2222A/S SOT23
R265 1K/6/X
PWROK
PWROK <8,16,18,20>
C72 10000P/6/X/50V/X
Q17 MMBT2222A/SOT23/X SOT23
PWOK
PWOK <20,31,33,34>
R266 8.2K/6/X
VCC
BZ
BZ BUZZER/X
D8 1N4148/S
R599 0/S6/X
R248 75/6
R249 75/6
SP-
Q12 MMBT2222A/S SOT23
R254 1K/6
SPKR <16>
R259 1K/6
Q14 MMBT2222A/S
Q15 MMBT2222A/S
R261 8.2K/6
<22> BEEP-
5VSB
R668 1K/6
R670 8.2K/6
Q77 2907/S SOT23
Q78 MMBT2222A/S SOT23
<16,33> S4_S5-
R669 8.2K/6
P_5VSB
R658 330/6
R758 330/6/X
MPD+
Q70 MMBT2222A/S SOT23
MPD+_DISABLE
R661 1K/6
GPO25 <15,16>
D11 BAV99/S
R251 330/6
BC255 0.01U/6/X/50V
INTEL FRONT PANEL
F_PANEL
HD+
HDLED-
<25> HDLED-
RESET
P_5VSB
R662 330/6/X
GD+
<15,16> GPI6
C207 180P/6/X
PH/2*10/FSW/P
HD+ MSG/PD+ MPD+
HD- MSG/PD- MPD-
GND PW+
RESET PW-
RSV
GD+ SP+
GD- NC
GN+ NC
GN- SP-
R262 8.2K/6
PWRBTSW-
PWRBTSW- <22>
C70 0.01U/6/X/50V
R659 330/6
MPD-
Q72 MMBT2222A/S SOT23
MPD-_DISABLE
R664 1K/6
GPO27 <15,16>
(GPO28 DEFAULT HIGH, RESUME WELL)
States for green LED
LED States | ACPI States | GPO28
ON | S1,S3 | 0
OFF | S0,S5 | 1
(GPO25 DEFAULT HI, RESUME WELL AND 可以PROGRAMMING BLINKING)
States for a single-color power LED
LED States | ACPI States | GPO25 | GPO27 | GPO35
OFF | S1,S3,S5 | 1 | 1 | NO1
Steady Green | S0 | 0 | 1 | 0
Blinking Green | S0(message waiting) | 0 | B | 0
NO1 GPO35 只需在 S1 PROGRAMMING LOW
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
(GPO27 DEFAULT HI, RESUME WELL AND 可以PROGRAMMING BLINKING)
GD+
Q76 MMBT2222A/SOT23/X SOT23
<15,16> GPO28
R667 4.7K/6/X
(DEFAULT HIGH, main power)
MPD+_DISABLE
MPD-_DISABLE
Q74 MMBT2222A/S SOT23
Q75 MMBT2222A/SOT23/X SOT23
<15> GPO35
R666 1K/6
R665 8.2K/6
IF GPO35 有 SUPPORT S5 LOW, S0 HIGH
則不需使用此CIRCUIT
GIGABYTE
Title
PANEL & STR LED & RI
Size B
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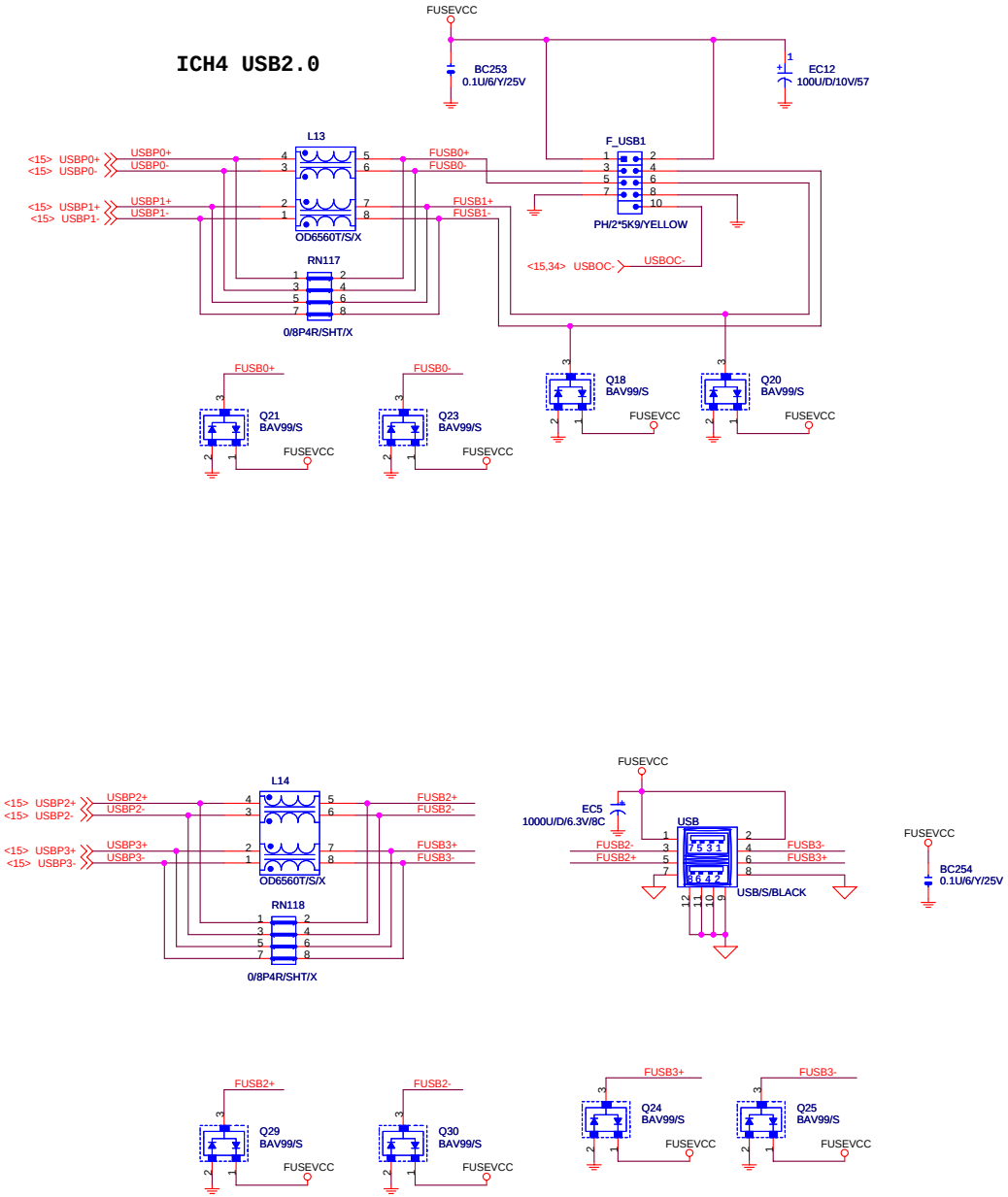

GIGABYTE		
Title	ICH USB+LAN PORT	
Size: Custom	Document Number: 8I845GE775-G	Rev: 1.0
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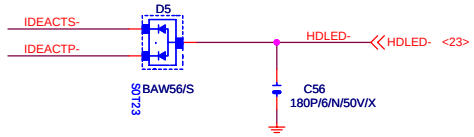
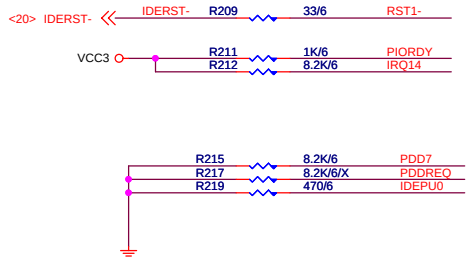
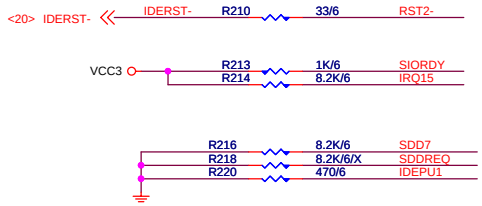
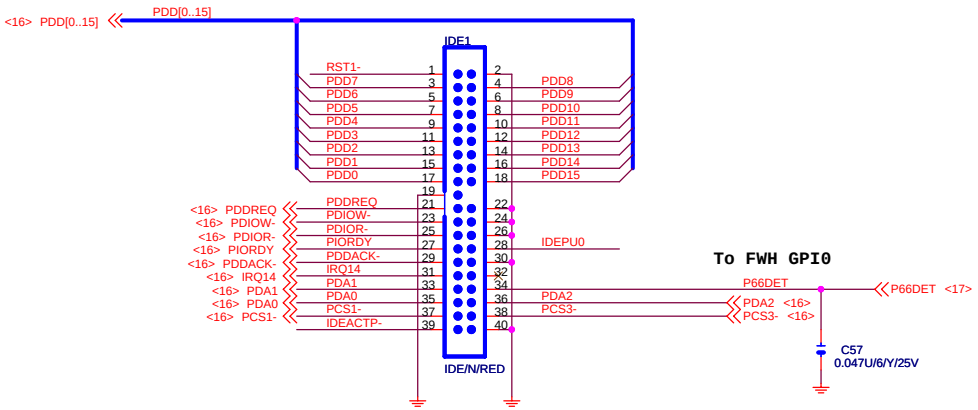


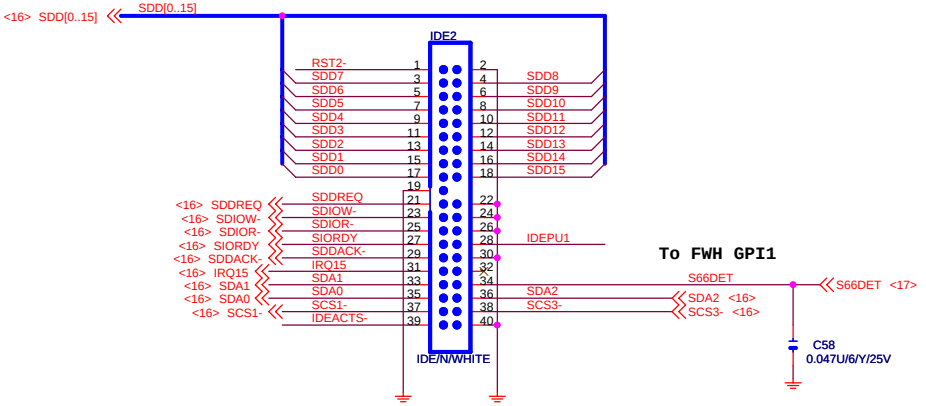




PRIMARY IDE CONNECTOR



SECONDARY IDE CONNECTOR



GIGABYTE		
Title	IDE CONNECTOR	
Size B	Document Number 81845GE775-G	Rev 1.0
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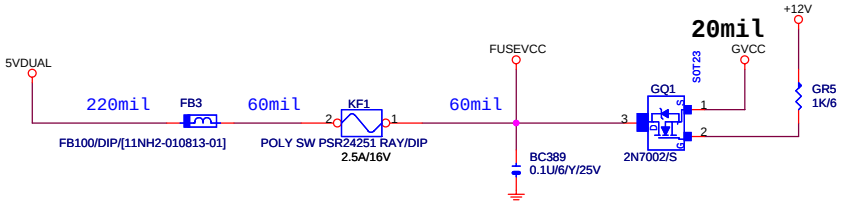
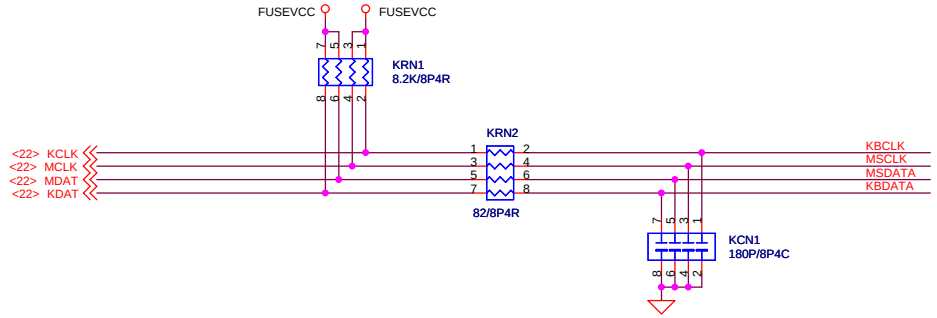
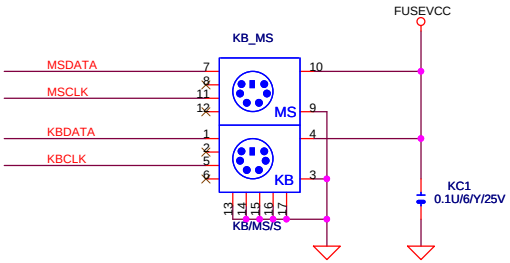
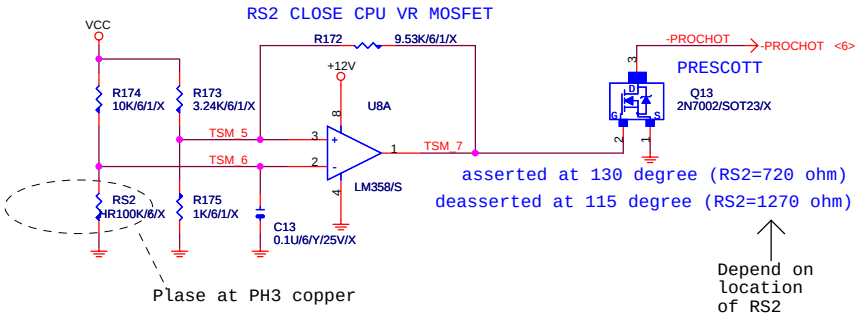






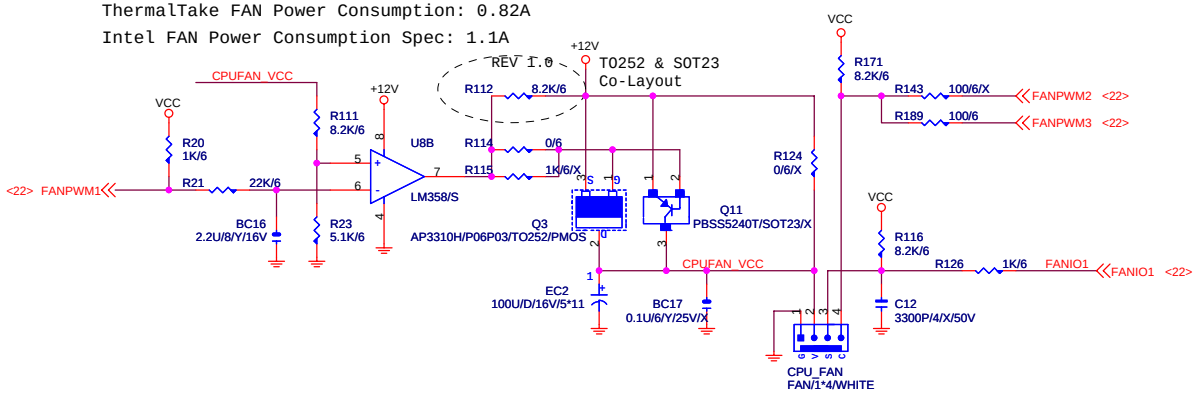
PROCESSOR HOT

U-ATX PROCESSOR HOT NO POP

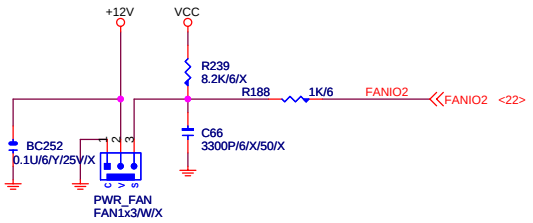


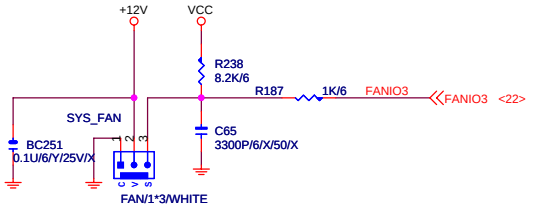
ThermalTake FAN Power Consumption: 0.82A

Intel FAN Power Consumption Spec: 1.1A



CPU_FAN PIN3,4 CO-LAYOUT





GIGABYTE		
Title: KB & PS2 MOUSE & IR		
Size: B	Document Number: 81845GE775-G	Rev: 1.0
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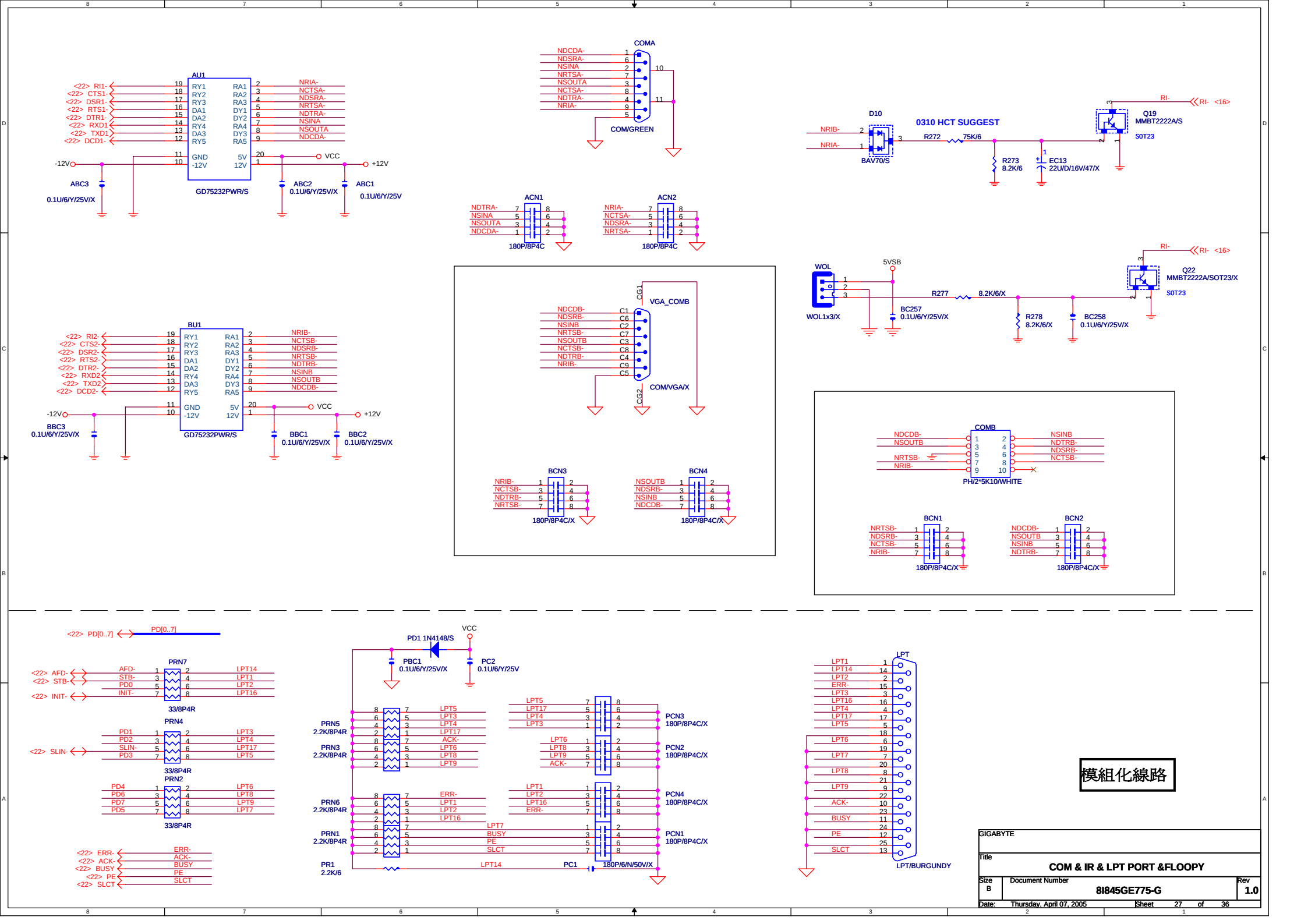
AU1
<22> RI1-
<22> CTS1-
<22> DSR1-
<22> RTS1-
<22> DTR1-
<22> RXD1
<22> TXD1
<22> DCD1-
RY1
RY2
RY3
DA1
DA2
RY4
DA3
RY5
GND
-12V
RA1
RA2
RA3
DY1
DY2
RA4
DY3
RA5
5V
12V
NRIA-
NCTSA-
NDSRA-
NRTSA-
NDTRA-
NSINA
NSOUTA
NDCDA-
-12V
VCC
+12V
ABC3
0.1U/6Y/25V/X
ABC2
0.1U/6/Y/25V/X
ABC1
0.1U/6/Y/25V
GD75232PWR/S
COMA
NDCDA-
NDSRA-
NSINA
NRTSA-
NSOUTA
NCTSA-
NDTRA-
NRIA-
COM/GREEN
ACN1
NDTRA-
NSINA
NSOUTA
NDCDA-
180P/8P4C
ACN2
NRIA-
NCTSA-
NDSRA-
NRTSA-
180P/8P4C
D10
NRIB-
NRIA-
BAV70/S
0310 HCT SUGGEST
R272
75K/6
R273
8.2K/6
EC13
22U/D/16V/47/X
Q19
MMBT2222A/S
S0T23
RI-
<16>
BU1
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<22> DTR2-
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<22> TXD2
<22> DCD2-
NRIB-
NCTSB-
NDSRB-
NRTSB-
NDTRB-
NSINB
NSOUTB
NDCDB-
BBC3
0.1U/6/Y/25V/X
BBC1
0.1U/6/Y/25V/X
BBC2
0.1U/6/Y/25V/X
GD75232PWR/S
CG1
VGA_COMB
NDCDB-
NDSRB-
NSINB
NRTSB-
NSOUTB
NCTSB-
NDTRB-
NRIB-
C1
C6
C2
C7
C3
C8
C4
C9
C5
COM/VGA/X
CG2
BCN3
NRIB-
NCTSB-
NDTRB-
NRTSB-
180P/8P4C/X
BCN4
NSOUTB
NDSRB-
NSINB
NDCDB-
180P/8P4C/X
WOL
WOL1x3/X
5VSB
BC257
0.1U/6/Y/25V/X
R277
8.2K/6/X
R278
8.2K/6/X
BC258
0.1U/6/Y/25V/X
Q22
MMBT2222A/SOT23/X
S0T23
RI-
<16>
COMB
NDCDB-
NSOUTB
NRTSB-
NRIB-
NSINB
NDTRB-
NDSRB-
NCTSB-
PH/2*5K10/WHITE
BCN1
NRTSB-
NDSRB-
NCTSB-
NRIB-
180P/8P4C/X
BCN2
NDCDB-
NSOUTB
NSINB
NDTRB-
180P/8P4C/X
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PD[0..7]
PRN7
<22> AFD-
<22> STB-
<22> INIT-
AFD-
STB-
PD0
INIT-
LPT14
LPT1
LPT2
LPT16
33/8P4R
PRN4
<22> SLIN-
PD1
PD2
SLIN-
PD3
LPT3
LPT4
LPT17
LPT5
33/8P4R
PRN2
PD4
PD6
PD7
PD5
LPT6
LPT8
LPT9
LPT7
33/8P4R
<22> ERR-
<22> ACK-
<22> BUSY
<22> PE
<22> SLCT
ERR-
ACK-
BUSY
PE
SLCT
PD1 1N4148/S
VCC
PBC1
0.1U/6/Y/25V/X
PC2
0.1U/6/Y25V
PRN5
2.2K/8P4R
PRN3
2.2K/8P4R
PRN6
2.2K/8P4R
PRN1
2.2K/8P4R
PR1
2.2K/6
LPT5
LPT3
LPT4
LPT17
ACK-
LPT6
LPT8
LPT9
ERR-
LPT1
LPT16
LPT7
BUSY
PE
SLCT
LPT14
PC1
180P/6/N/50V/X
PCN3
180P/8P4C/X
PCN2
180P/8P4C/X
PCN4
180P/8P4C/X
PCN1
180P/8P4C/X
LPT
LPT1
LPT14
LPT2
ERR-
LPT3
LPT16
LPT4
LPT17
LPT5
LPT6
LPT7
LPT8
LPT9
ACK-
BUSY
PE
SLCT
LPT/BURGUNDY
模組化線路
GIGABYTE
Title
COM & IR & LPT PORT &FLOOPY
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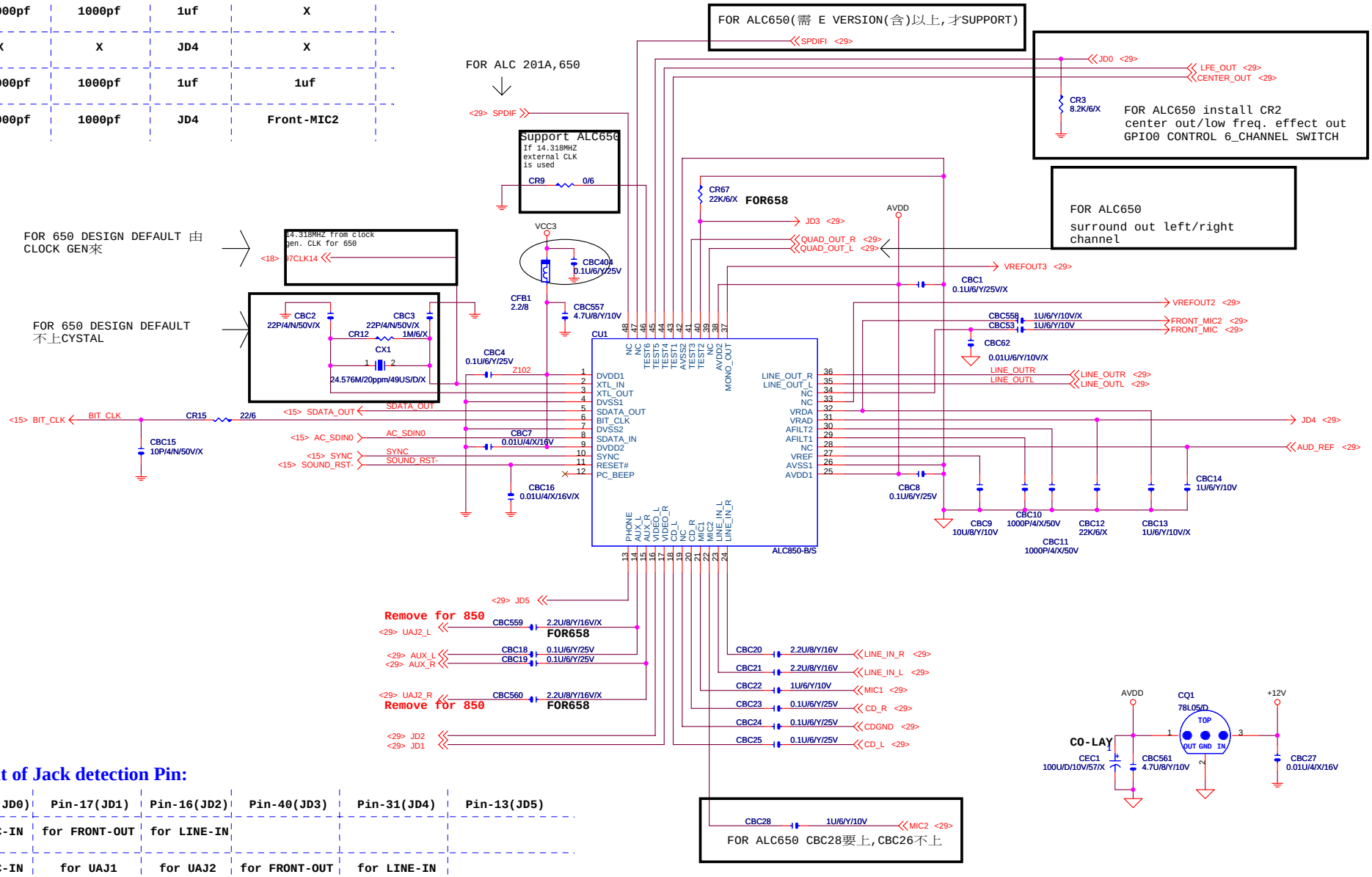
Filter Cap design:

	Pin-29	Pin-30	Pin-31	Pin-32
ALC655 Rev D	1000pf	1000pf	1uf	Front-MIC2
ALC655 Rev C	1000pf	1000pf	1uf	X
ALC658	X	X	JD4	X
ALC650	1000pf	1000pf	1uf	1uf
ALC850	1000pf	1000pf	JD4	Front-MIC2



Arrangement of Jack detection Pin:

	Pin-45(JD0)	Pin-17(JD1)	Pin-16(JD2)	Pin-40(JD3)	Pin-31(JD4)	Pin-13(JD5)
ALC655	for MIC-IN	for FRONT-OUT	for LINE-IN			
ALC658	for MIC-IN	for UAJ1	for UAJ2	for FRONT-OUT Exernal pull high is needed	for LINE-IN Exernal pull high is needed	
ALC850	for MIC-IN	for Front Pannel OUT	for Front Pannel IN	for FRONT-OUT	for LINE-IN	for SurrBack Out

GIGABYTE		
Title	AC97 ALC850	
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JDO,JD2,GPIO0 爲偵測DEVICE INPUT 時由LOW
TO HIGH Edge trigger(pop manual)

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

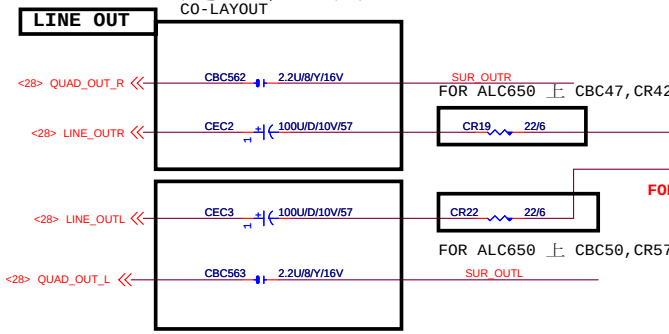
2x5 header for 850

For 850 if JD5 = low AUX-In is configued as input

For 850 if JD5 = high AUX-In is configued as output, Surr-Back out

LINE OUT

注意CBC47,CBC48不可
CO-LAYOUT

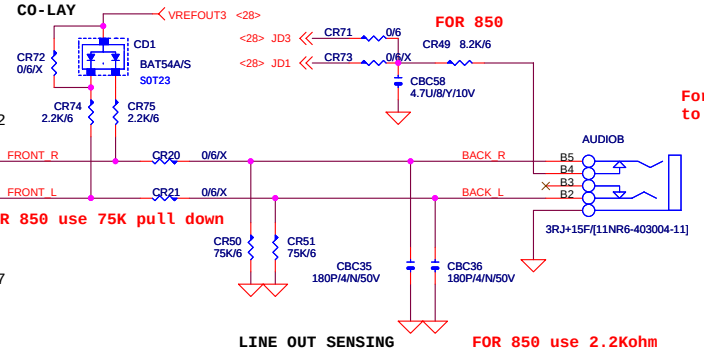


FOR ALC650 上 CBC47,CR42

FOR ALC650 上 CBC50,CR57

注意CBC49,CBC50不可
CO-LAYOUT

CO-LAY



FOR 850

FOR 850 use 75K pull down

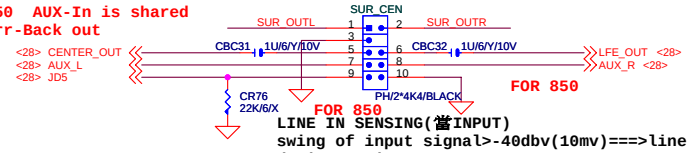
FOR 850 use 2.2Kohm

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

FOR SUPPORT 6 CHANNEL,
SURROUND OUT

CENTER OUT,LOW
FREQUENCY
EFFECT OUT

For 850 AUX-In is shared to Surr-Back out

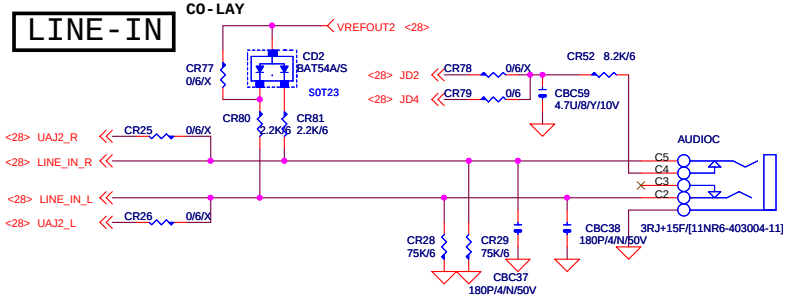


FOR 850

LINE IN SENSING(當INPUT)
swing of input signal>-40dbv(10mv)===>line in device active
swing of input signal<-40dbv(10mv)===>unknown line in device

LINE-IN

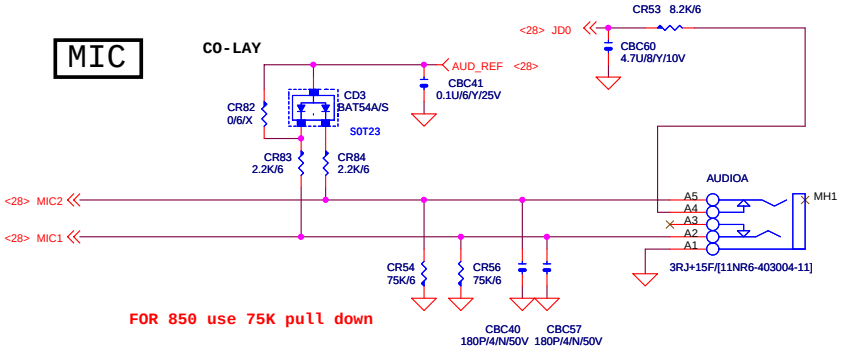
CO-LAY



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

MIC

CO-LAY

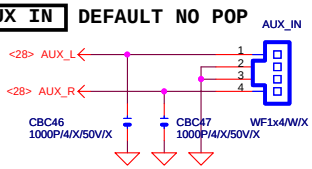


FOR 850 use 75K pull down

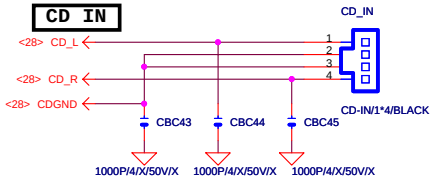
MICROPHONE IN SENSING(當INPUT)(利用vref 偏壓與CR43,CR32 並聯求出阻抗)
7.1k ohm>R>2.3k ohm===>microphone in
R<2.3k ohm or R>7.1k ohm===>unknown device

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

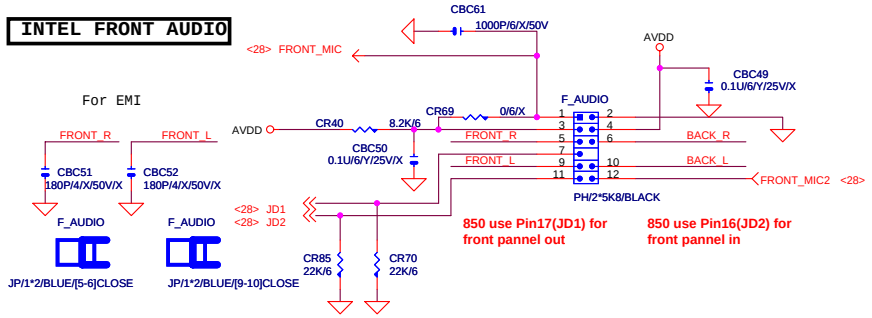
AUX IN DEFAULT NO POP



CD IN



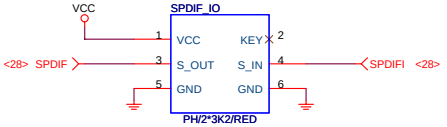
INTEL FRONT AUDIO

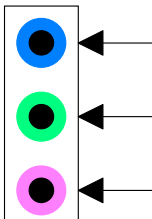


850 use Pin17(JD1) for front pannel out

850 use Pin16(JD2) for front pannel in

SPDIF





AUDIO PANEL

GIGABYTE

Title: AC97 OUTPUT,GAME PORT

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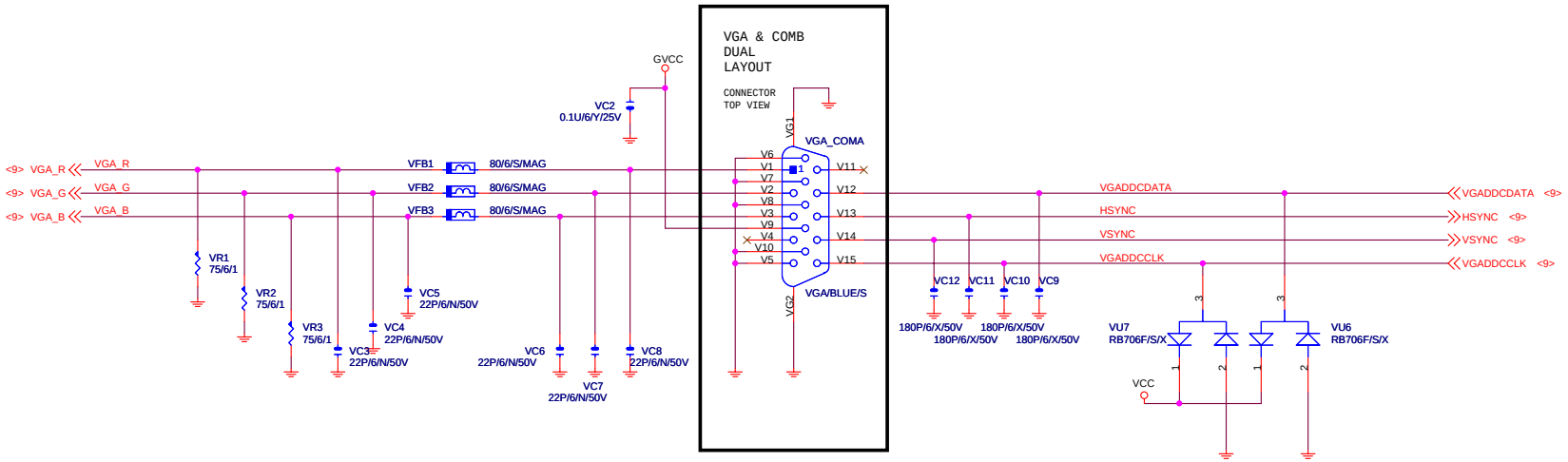

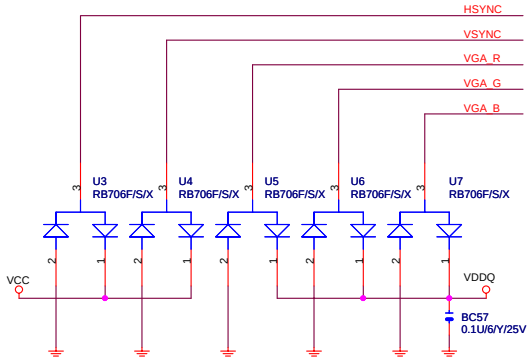

模組化線路

Title	VGA CONNECTOR	
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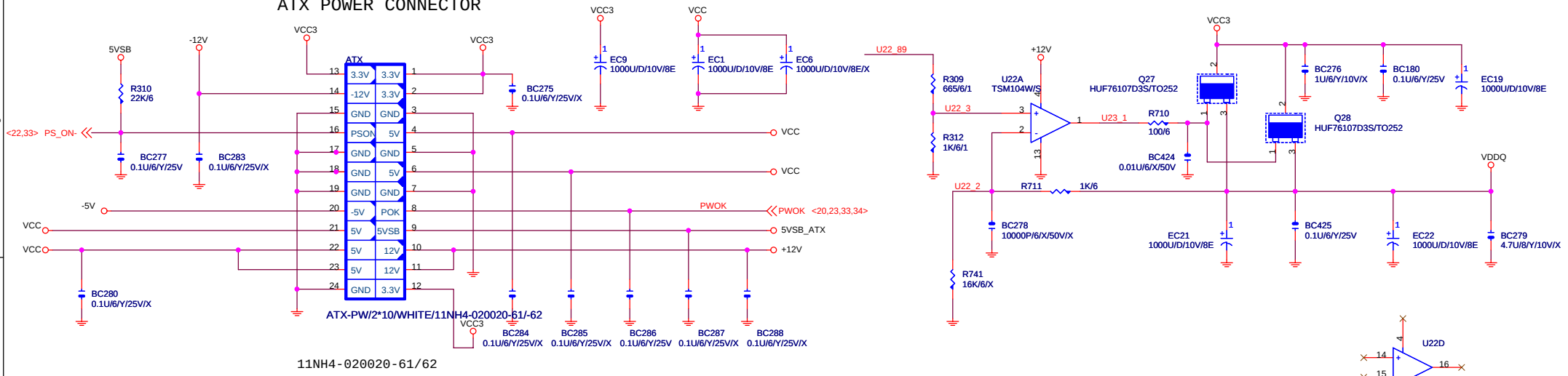
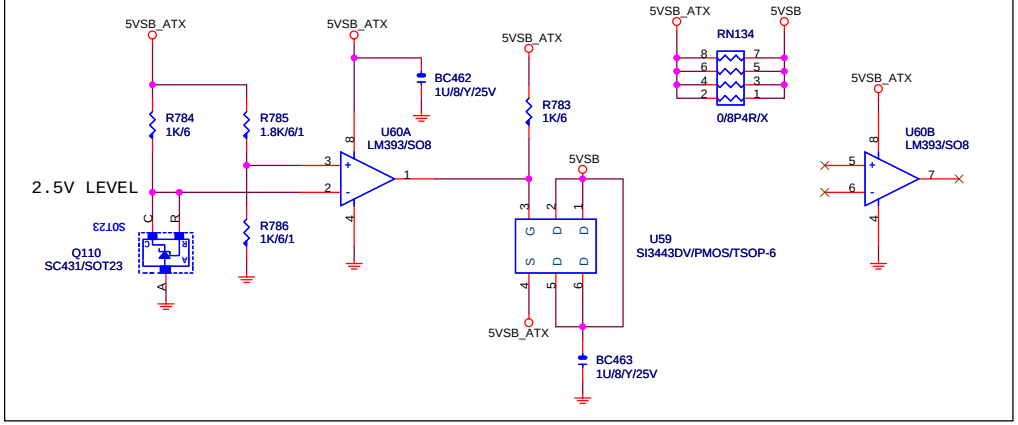
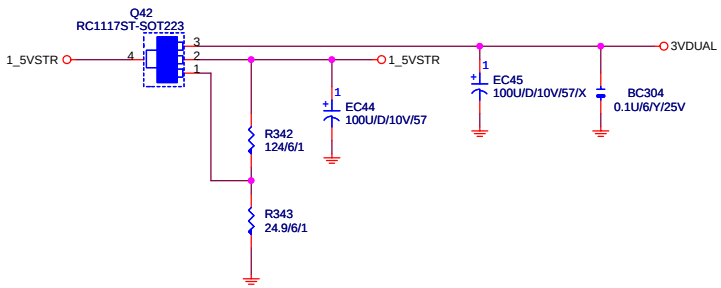
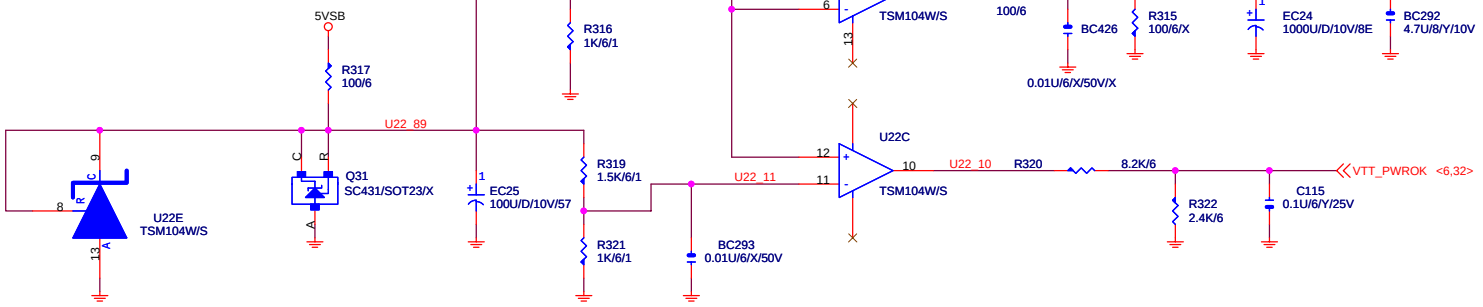
ATX POWER CONNECTOR

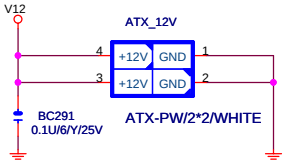


S.P.R Circuit









GIGABYTE

Title	Misc. PWR & ATX CONN.	
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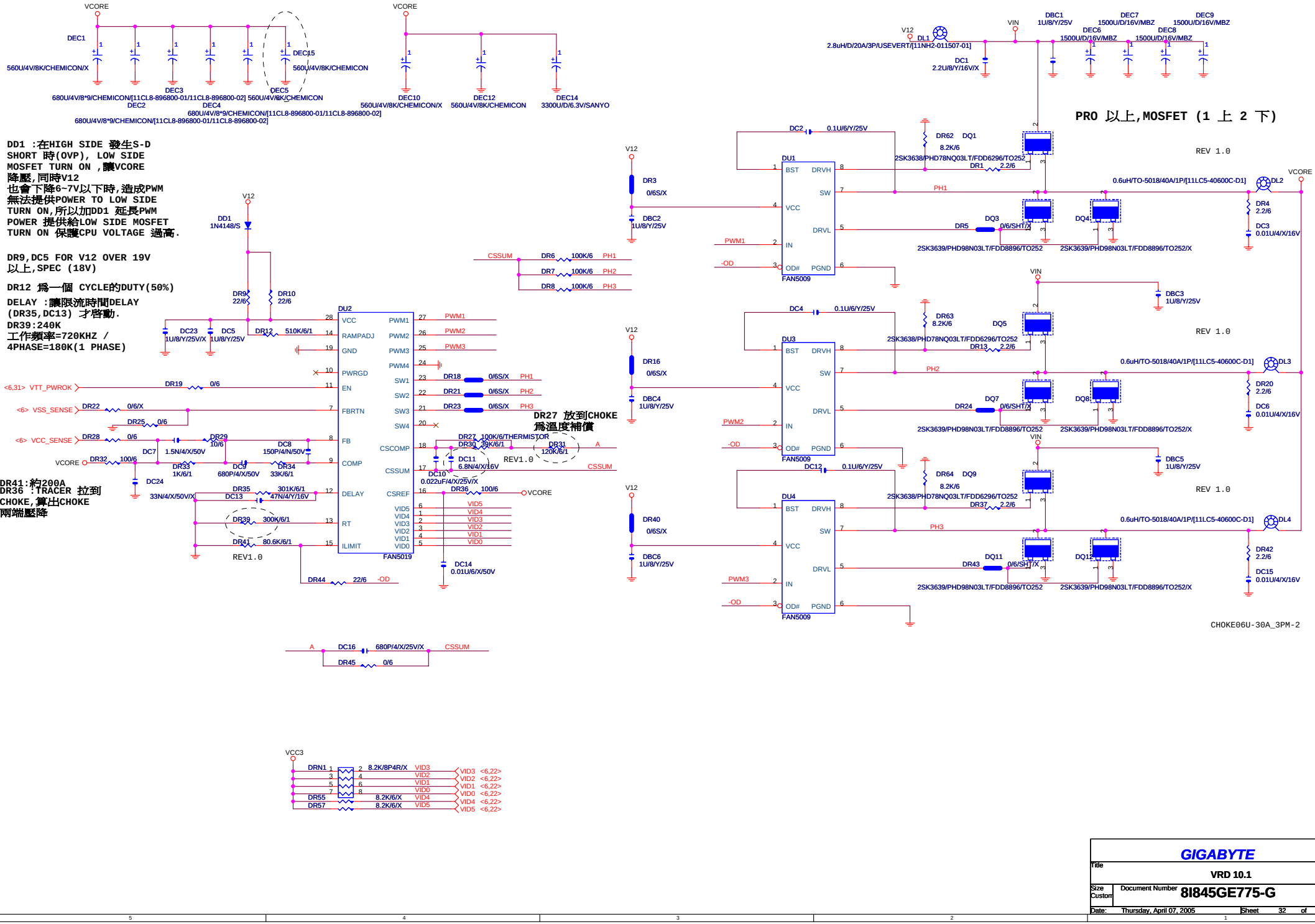
VCORE
DEC1
560U/4V/8K/CHEMICON/X
DEC2
DEC3
680U/4V/8*9/CHEMICON/[11CL8-896800-01/11CL8-896800-02]
DEC4
680U/4V/8*9/CHEMICON/[11CL8-896800-01/11CL8-896800-02]
DEC5
560U/4V/8K/CHEMICON
DEC15
560U/4V/8K/CHEMICON
DEC10
560U/4V/8K/CHEMICON/X
DEC12
560U/4V/8K/CHEMICON
DEC14
3300U/D/6.3V/SANYO
V12
VIN
DL1
2.8uH/D/20A/3P/USEVERT/[11NH2-011507-01]
DBC1
1U/8/Y/25V
DEC7
1500U/D/16V/MBZ
DEC6
1500U/D/16V/MBZ
DEC8
1500U/D/16V/MBZ
DEC9
1500U/D/16V/MBZ
DC1
2.2U/8/Y/16V/X
PRO 以上,MOSFET (1 上 2 下)
REV 1.0
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
DD1
1N4148/S
DR9
22/6
DR10
22/6
DU2
FAN5019
DC23
1U/8/Y/25V/X
DC5
1U/8/Y/25V
DR12
510K/6/1
DR19
0/6
DR22
0/6/X
DR25
0/6
DR28
0/6
DR29
10/6
DC7
1.5N/4/X/50V
DC8
150P/4/N/50V
DR32
100/6
DC24
DR33
1K/6/1
DC9
680P/4/X/50V
DR34
33K/6/1
DR35
301K/6/1
33N/4/X/50V/X
DC13
47N/4/Y/16V
DR39
300K/6/1
DR41
80.6K/6/1
REV1.0
DR44
22/6
-OD
CSSUM
DR6
100K/6
PH1
DR7
100K/6
PH2
DR8
100K/6
PH3
DR18
0/6S/X
DR21
0/6S/X
DR23
0/6S/X
DR27
100K/6/THERMISTOR
DR30
39K/6/1
DR31
120K/6/1
DC11
6.8N/4/X/16V
DC10
0.022uF/4/X/25V/X
DR36
100/6
DC14
0.01U/6/X/50V
DR27 放到CHOKE 爲溫度補償
DC16
680P/4/X/25V/X
DR45
0/6
DR3
0/6S/X
DBC2
1U/8/Y/25V
DR16
0/6S/X
DBC4
1U/8/Y/25V
DR40
0/6S/X
DBC6
1U/8/Y/25V
DU1
DU3
DU4
FAN5009
DC2
0.1U/6/Y/25V
DC4
0.1U/6/Y/25V
DC12
0.1U/6/Y/25V
DR62
8.2K/6
DQ1
2SK3638/PHD78NQ03LT/FDD6296/TO252
DR1
2.2/6
0.6uH/TO-5018/40A/1P/[11LC5-40600C-D1]
DL2
DR4
2.2/6
DC3
0.01U/4/X/16V
DR3
0/6/SHT/X
DQ4
2SK3639/PHD98N03LT/FDD8896/TO252
2SK3639/PHD98N03LT/FDD8896/TO252/X
DBC3
1U/8/Y/25V
DR63
8.2K/6
DQ5
DR13
2.2/6
DL3
DR20
2.2/6
DC6
0.01U/4/X/16V
DR24
DQ7
DQ8
DBC5
1U/8/Y/25V
DR64
8.2K/6
DQ9
DR37
2.2/6
DL4
DR42
2.2/6
DC15
0.01U/4/X/16V
DR43
DQ11
DQ12
CHOKE06U-30A_3PM-2
VCC3
DRN1
8.2K/8P4R/X
DR55
8.2K/6/X
DR57
8.2K/6/X
VID0
VID1
VID2
VID3
VID4
VID5
<6,22>
<6,31> VTT_PWROK
<6> VSS_SENSE
<6> VCC_SENSE
PWM1
PWM2
PWM3
PWM4
PH1
PH2
PH3
-OD
GIGABYTE
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VRD 10.1
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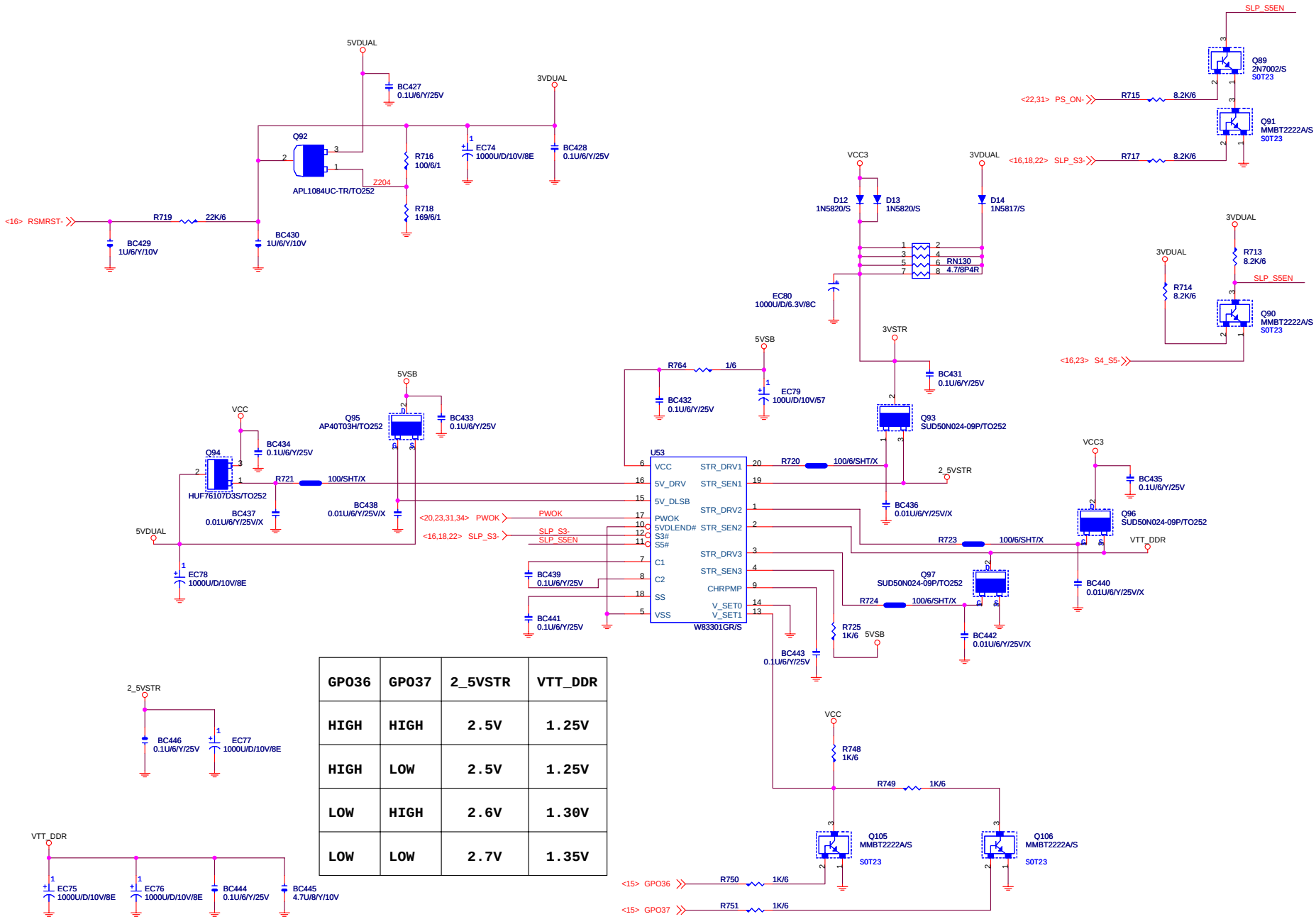

GPO36	GPO37	2_5VSTR	VTT_DDR
HIGH	HIGH	2.5V	1.25V
HIGH	LOW	2.5V	1.25V
LOW	HIGH	2.6V	1.30V
LOW	LOW	2.7V	1.35V

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

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

LU1:
100M:RTL8100C
1G:RTL8110SB

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

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

FOR EMI

RTL8110S/S

LAN EEPROM

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

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

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

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

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

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

Spacing : at least 50 mils between each differential pair

Trace 8:7:8

LBC25:
100M:0.1U/6
1G:0/6

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

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

FOR 1G:P35-152-19W9
FOR 100M:P35-152-11Z9

POWER DECOUPLING CAP.

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

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

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

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

LQ1:
100M:N/A
1G:2SB1132

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

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

SOT89
Package

For RTL8100S

For RTL8100SB

USB

UEC1 要靠近USB_PORT的FUSEVCC

For 8100C

For 8110S

Close to USB_Lan

GIGABYTE			
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Revision : 0.1

GIGABYTE GA-8I845GE775-G PCI ROUNTING LIST

PCI DEVICE	IDSEL	INT	CLOCK	REQ	GNT	
PCI SLOT1	16	C,F,G,A	PCLK1	REQ0-	GNT0-	
PCI SLOT2	17	F,G,A,C	PCLK2	REQ1-	GNT1-	
PCI SLOT3	18	G,A,C,F	PCLK3	REQ2-	GNT2-	
PCI SLOT4	19	A,C,F,G	PCLK4	REQ3-	GNT3-	
PCI SLOT5	20	C,F,G,A	PCLK5	REQ4-	GNT4-	
LAN	21	F	LANCLK	REQ5-	GNT5-	

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Title: PCI ROUNT LIST

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Revision 1.0

GIGABYTE GA-8I845GE775-G GPIO LIST

SHEET	TITLE
GPI	

GPI		
GPI0/REQA-		PULL DOWN 15K, detect IDE1 connector type.
GPI1/REQ5-		PULL DOWN 15K, detect IDE2 connector type.
GPI2/PIRQE-		PULL 8.2K TO VCC3
GPI3/PIRQF-		PULL 8.2K TO VCC3
GPI4/PIRQG-		PULL 8.2K TO VCC3
GPI5/PIRQH-		PULL 8.2K TO VCC3
GPI6		PULL 8.2K TO VCC3 (GREEN_BUTTON)
GPI7		NOT IMPLEMENTED
GPI8		PULL 8.2K TO 3VDUAL, LPC PME.
GPI9	NA	NOT IMPLEMENTED
GPI10	NA	NOT IMPLEMENTED
GPI11		PULL 4.7K TO 3VDUAL (SMBALERT)
GPI12		PULL DOWN 10K.
GPI13		PULL DOWN 10K, CNR_PRIMARY
GPI14	NA	NOT IMPLEMENTED
GPI15	NA	NOT IMPLEMENTED

SHEET	TITLE
GPO	

GPO		
GPO16		PULL 8.2K TO VCC3
GPO17		PULL 8.2K TO VCC3 (GNT5-)
GPO18		PULL 8.2K TO VCC3
GPO19		PULL 8.2K TO VCC3
GPO20		PULL 8.2K TO VCC3
GPO21		PULL 8.2K TO VCC3
GPO22		PULL 8.2K TO VCC3
GPO23		PULL 8.2K TO VCC3
GPO24		PULL 1K TO 3VDUAL (TOP BLOCK)
GPO25		PULL 4.7K TO 3VDUAL, POWER LED CONTROL.
GPO26		NOT IMPLEMENTED
GPO27		PULL 8.2K TO 3VDUAL, POWER LED CONTROL.
GPO28		PULL 8.2K TO 3VDUAL,GREEN LED.
GPO32		PULL 8.2K TO 3VDUAL,BIOS WRITE PROTECT.
GPO35		PULL DOWN 10K, POWER LED CONTROL.

GIGABYTE

Title		
GPIO LIST		
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