GIGABYTE GA-8PENXP Schematics

Revision 2.0

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02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	P4_478A
05	P4_478B
06	P4_478C
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08	SPRINGDALE DDR
09	SPRINGDALE AGP, HUB, CSA, VGA
10	SPRINGDALE PWR
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12	DDR4,5 CHANNEL B
13	DDR TERMINATION
14	AGP PRO
15	ICH5 PCI, USB, HUB, LAN
16	ICH5 IDE, GPIO, SATA, CTRL
17	ICH5 VCC, GND
18	DUAL BIOS
19	CY28405/ICS95203 CLOCK GEN
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SHEET	TITLE
26	IDE
27	H/W,FAN
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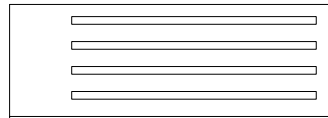
29	FPANEL
30	USB CONN
31	DDRVTT,DDR25V,5VDUAL,VDDQ,VCCVID,3VDUAL
32	VCORE POWER
33	DUAL POWER-1
34	DUAL POWER-2
35	CSA KENAI II+ KINNERITH-1
36	CSA KENAI II+ KINNERITH-2
37	CSA KENAI II+ KINNERITH-3
38	PROMISE PDC20276/ITE8212-1
39	PROMISE PDC20276/ITE8212-2
40	ITE 8712GX
41	ATX , OTHER POWER
42	TI 1394
43	SILICON IMAGE SIL3112 (S-ATA)
44	DDR3,6 CHANNEL B
45	TEST POINT



GIGABYTE CORP.

Title: COVER SHEET

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Model Name: GA-8PENXP

Component history

2.0A版修改下列項目	
	PCB TURN 2.0 CLOCK GEN CHANGE TO ICS952635 CODEC CHANGE TO 658 REMOVE R1143,ADD R1144 8.2K
2.0B版修改下列項目	
	UPDATE ALC658 " C" RESISTOR CHANGE ATXP6 TO ITE8206
2.0B版 ECN 修改下列項目	
	CPU 電容 COST DOWN , PAT ISSUE UPDATE
2.0B版 ECN 修改下列項目	
08/12	8212 CX & ICH5 RESET ISSUE
2.0C版 修改下列項目	
08/29	DUAL BIOS RESET ISSUE & PRESCOTT SOLUTION

GIGABYTE CORP.

Title: BOM & PCB MODIFY HISTORY

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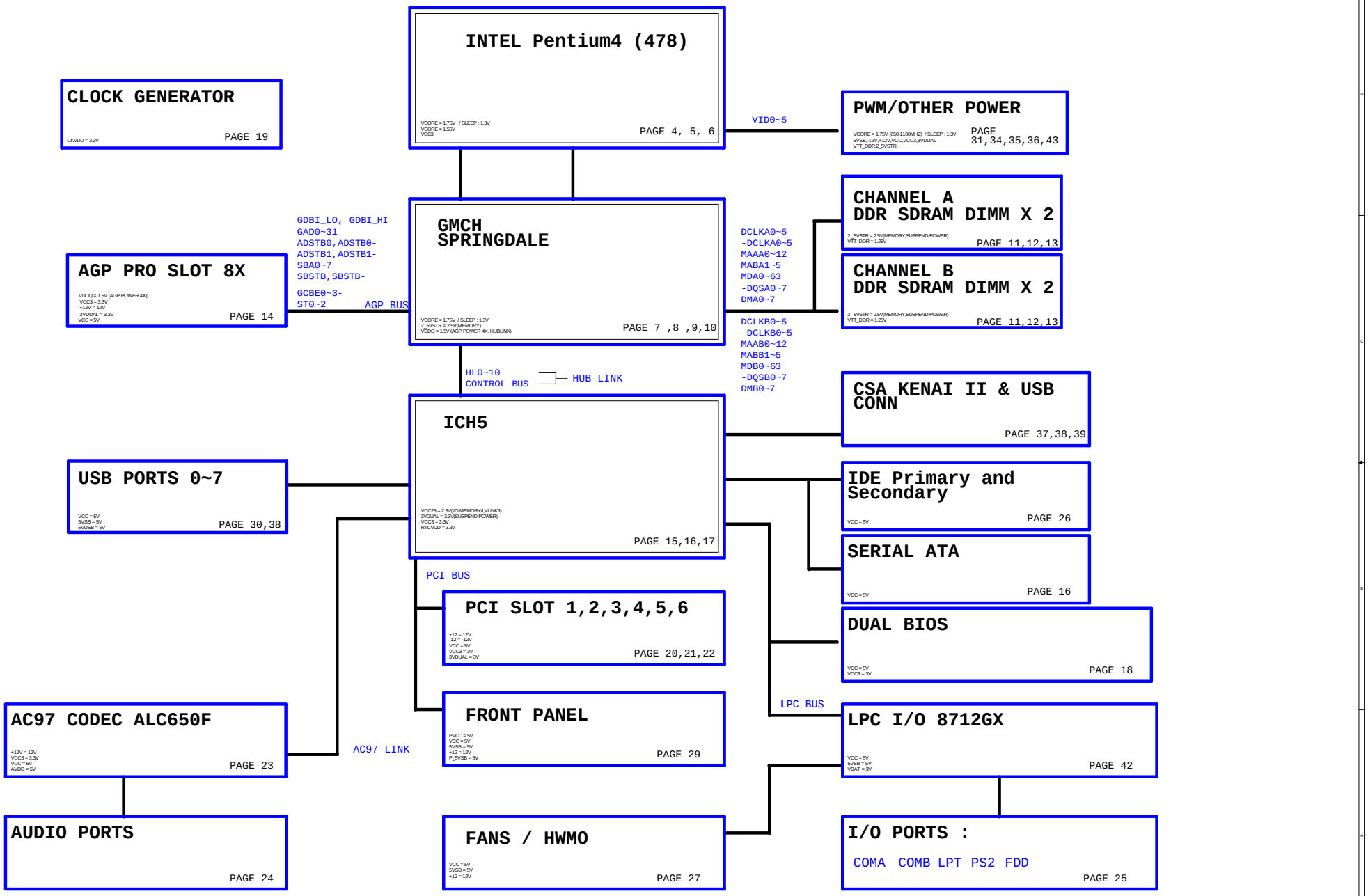
BLOCK DIAGRAM



GIGABYTE CORP.

Title: BOM & PCB MODIFY HISTORY

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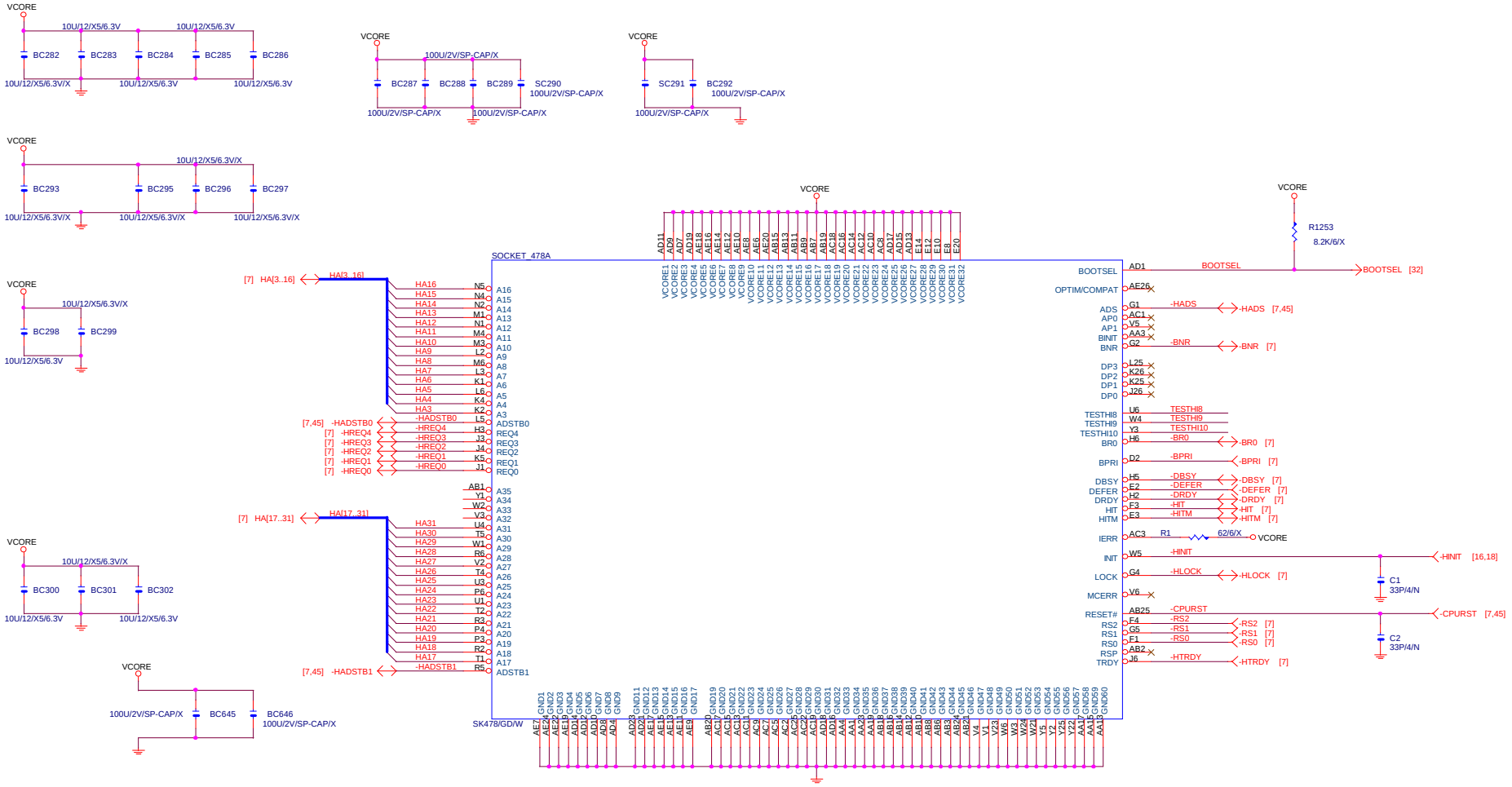
VCORE
10U/12/X5/6.3V
BC282
BC283
BC284
BC285
BC286
10U/12/X5/6.3V/X
100U/2V/SP-CAP/X
BC287
BC288
BC289
SC290
SC291
BC292
BC293
BC295
BC296
BC297
BC298
BC299
BC300
BC301
BC302
BC314
BC315
BC318
BC321
BC322
BC323
BC645
BC646
SOCKET_478A
SK478/GD/W
HA[3..16]
HA[17..31]
HA16
HA15
HA14
HA13
HA12
HA11
HA10
HA9
HA8
HA7
HA6
HA5
HA4
HA3
-HADSTB0
-HREQ4
-HREQ3
-HREQ2
-HREQ1
-HREQ0
HA31
HA30
HA29
HA28
HA27
HA26
HA25
HA24
HA23
HA22
HA21
HA20
HA19
HA18
HA17
-HADSTB1
ADSTB0
ADSTB1
REQ4
REQ3
REQ2
REQ1
REQ0
BOOTSEL
OPTIM/COMPAT
ADS
AP0
AP1
BINIT
BNR
DP3
DP2
DP1
DP0
TESTHI8
TESTHI9
TESTHI10
BR0
BPRI
DBSY
DEFER
DRDY
HIT
HITM
IERR
INIT
LOCK
MCERR
RESET#
RS2
RS1
RS0
RSP
TRDY
-HADS
-BNR
-BPRI
-DBSY
-DEFER
-DRDY
-HIT
-HITM
-HINIT
-HLOCK
-CPURST
-RS2
-RS1
-RS0
-HTRDY
R1253
8.2K/6/X
62/6/X
C1
33P/4/N
C2
RN1
62/8P4R
R2
200/6
R3
62/6
[7]
[7,45]
[16,18]
Title
P4 478A
Size
Custom
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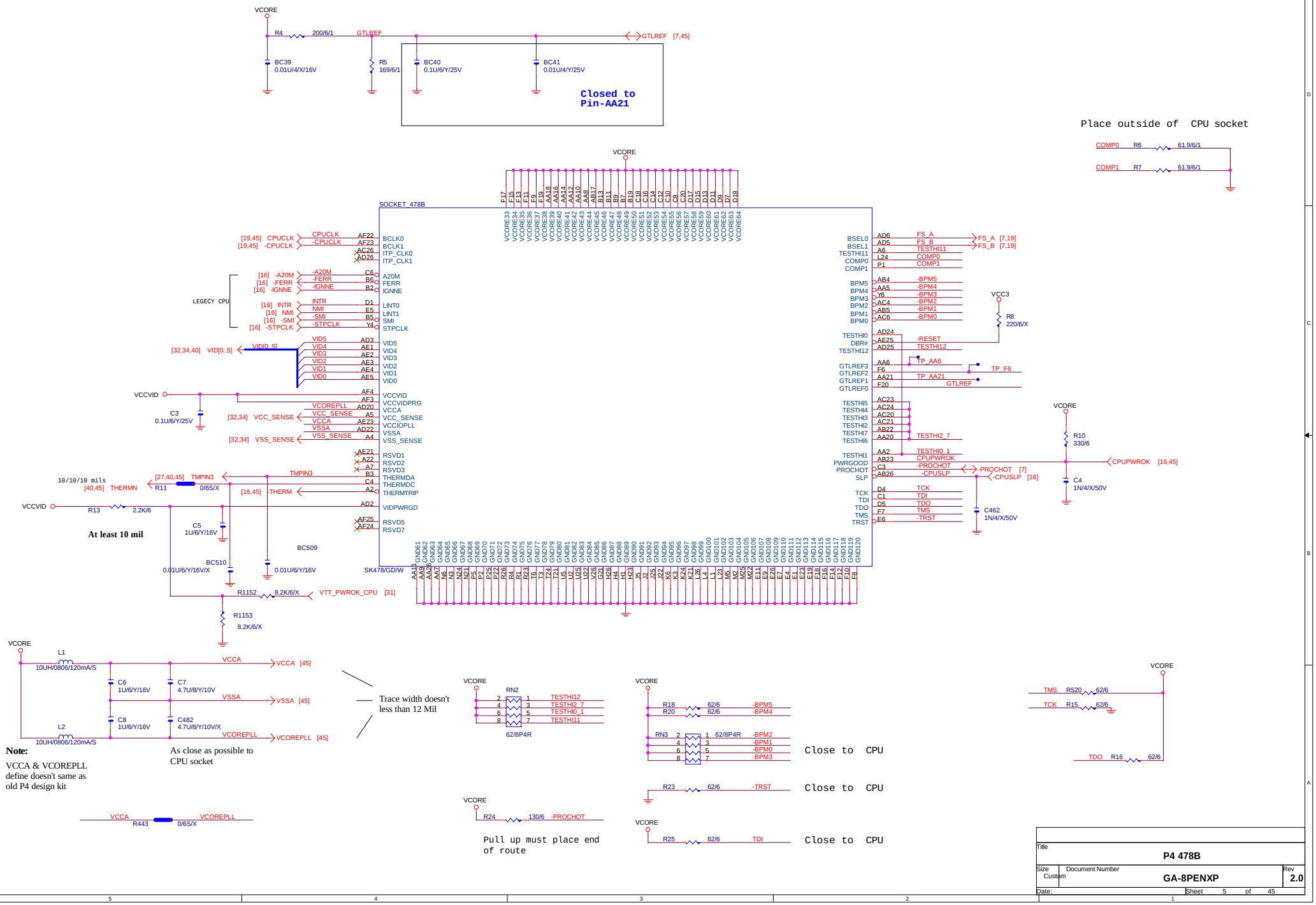
VCORE
R4 200/6/1 GTLREF
GTLREF [7,45]
BC39 0.01U/4/X/16V
R5 169/6/1
BC40 0.1U/6/Y/25V
BC41 0.01U/4/Y/25V
Closed to Pin-AA21
Place outside of CPU socket
COMP0 R6 61.9/6/1
COMP1 R7 61.9/6/1
SOCKET_478B
SK478/GD/W
LEGECY CPU
VCC3
R8 220/6/X
R10 330/6
C4 1N/4/X/50V
C462 1N/4/X/50V
TP_AA6
TP_F6
TP_AA21
GTLREF
CPUPWROK [16,45]
PROCHOT [7]
-CPUSLP [16]
VCCVID
C3 0.1U/6/Y/25V
R13 2.2K/6
C5 1U/6/Y/16V
At least 10 mil
BC509
BC510 0.01U/6/Y/16V/X
0.01U/6/Y/16V
R1152 8.2K/6/X
VTT_PWROK_CPU [31]
R1153 8.2K/6/X
10/10/10 mils
R11 0/6S/X
TMPIN3
THERMN [40,45]
THERM [16,45]
VCC_SENSE [32,34]
VSS_SENSE [32,34]
VID[0..5] [32,34,40]
L1 10UH/0806/120mA/S
L2 10UH/0806/120mA/S
C6 1U/6/Y/16V
C7 4.7U/8/Y/10V
C8 1U/6/Y/16V
C482 4.7U/8/Y/10V/X
VCCA [45]
VSSA [45]
VCOREPLL [45]
Note:
VCCA & VCOREPLL define doesn't same as old P4 design kit
As close as possible to CPU socket
Trace width doesn't less than 12 Mil
RN2 62/8P4R
TESTHI12
TESTHI2_7
TESTHI0_1
TESTHI11
R18 62/6 -BPM5
R20 62/6 -BPM4
RN3 62/8P4R -BPM2 -BPM1 -BPM0 -BPM3
R23 62/6 -TRST
R24 130/6 -PROCHOT
R25 62/6 TDI
Close to CPU
Close to CPU
Close to CPU
Pull up must place end of route
TMS R520 62/6
TCK R15 62/6
TDO R16 62/6
R443 0/6S/X
Title
P4 478B
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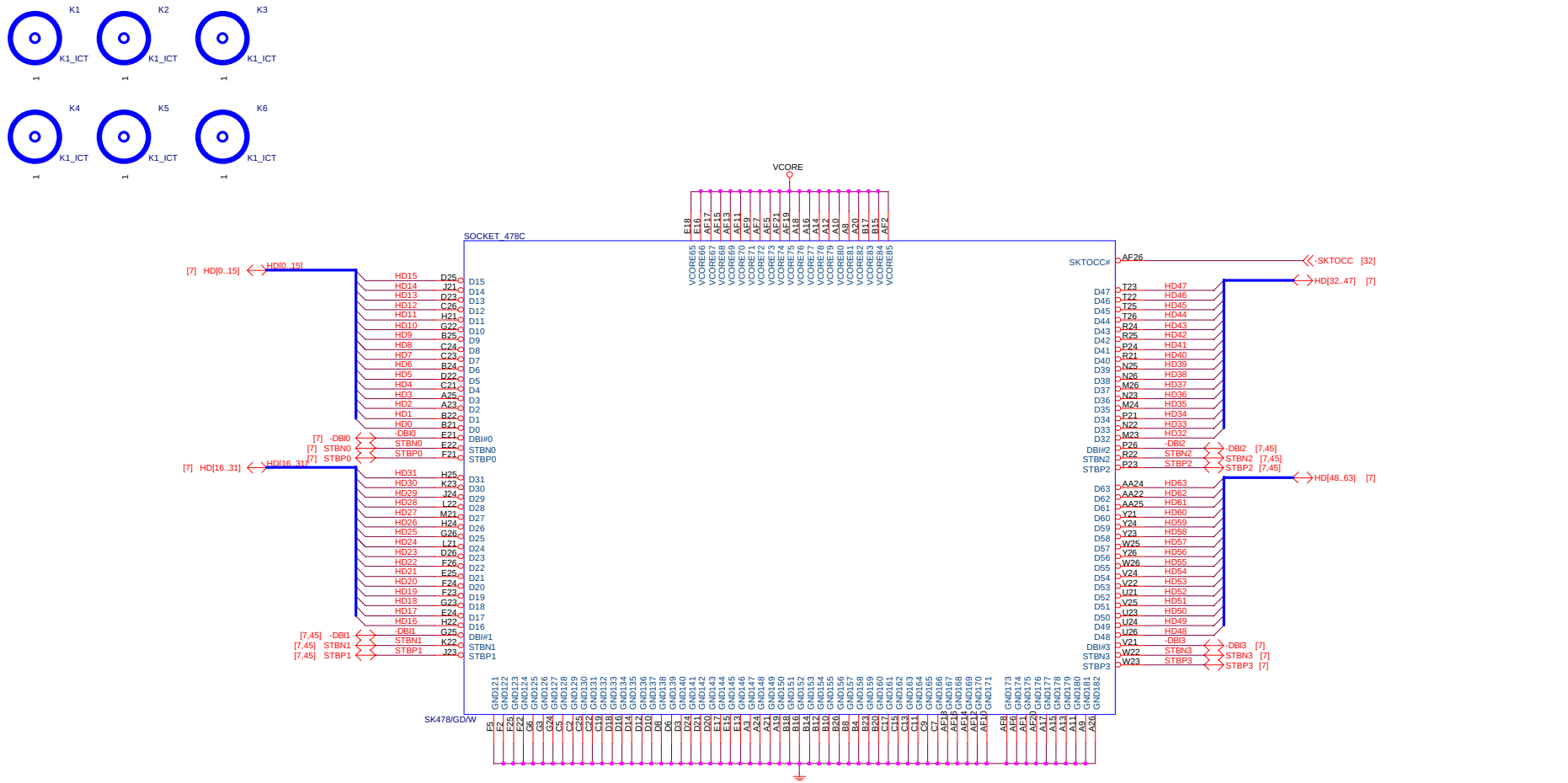
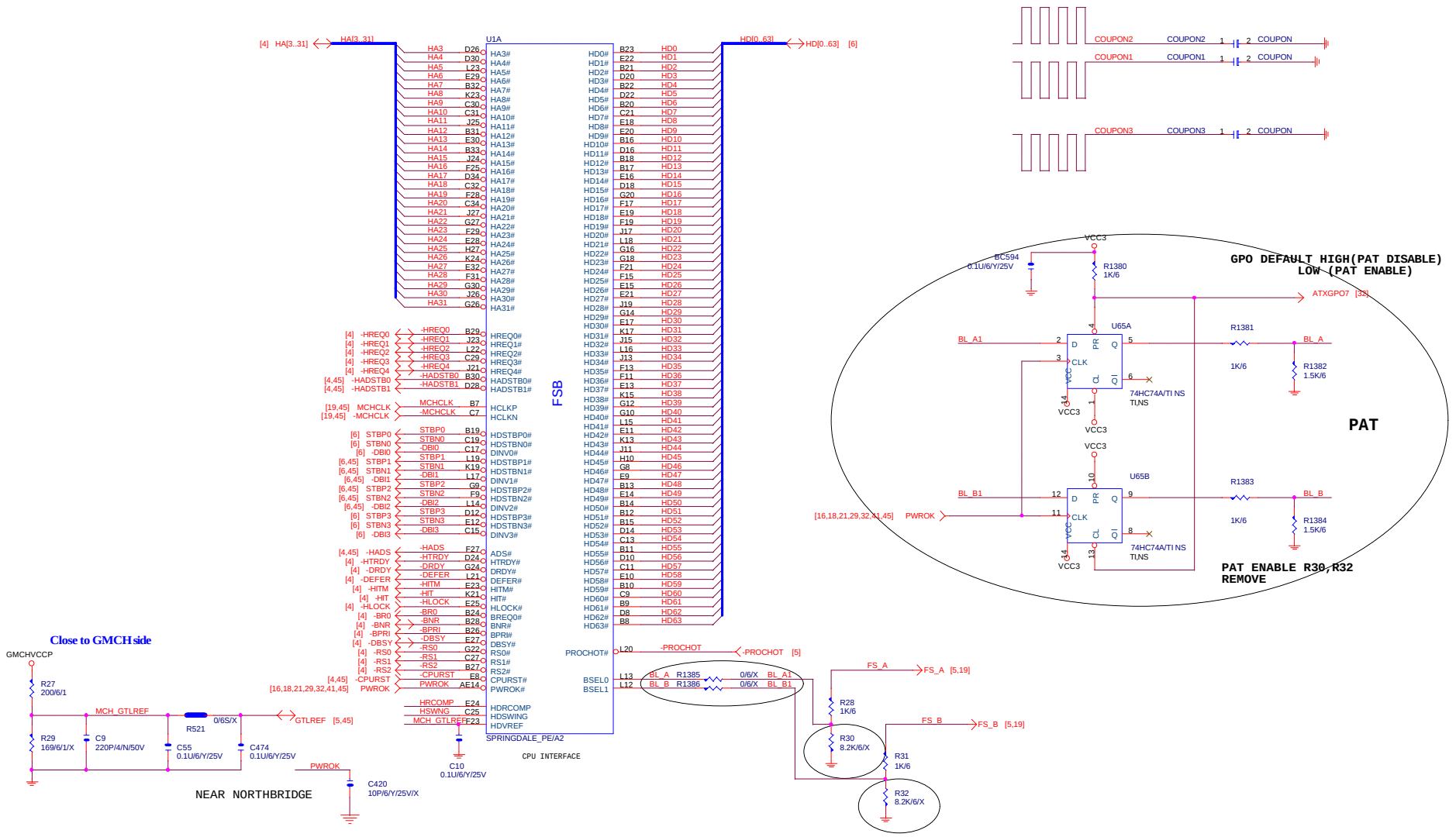
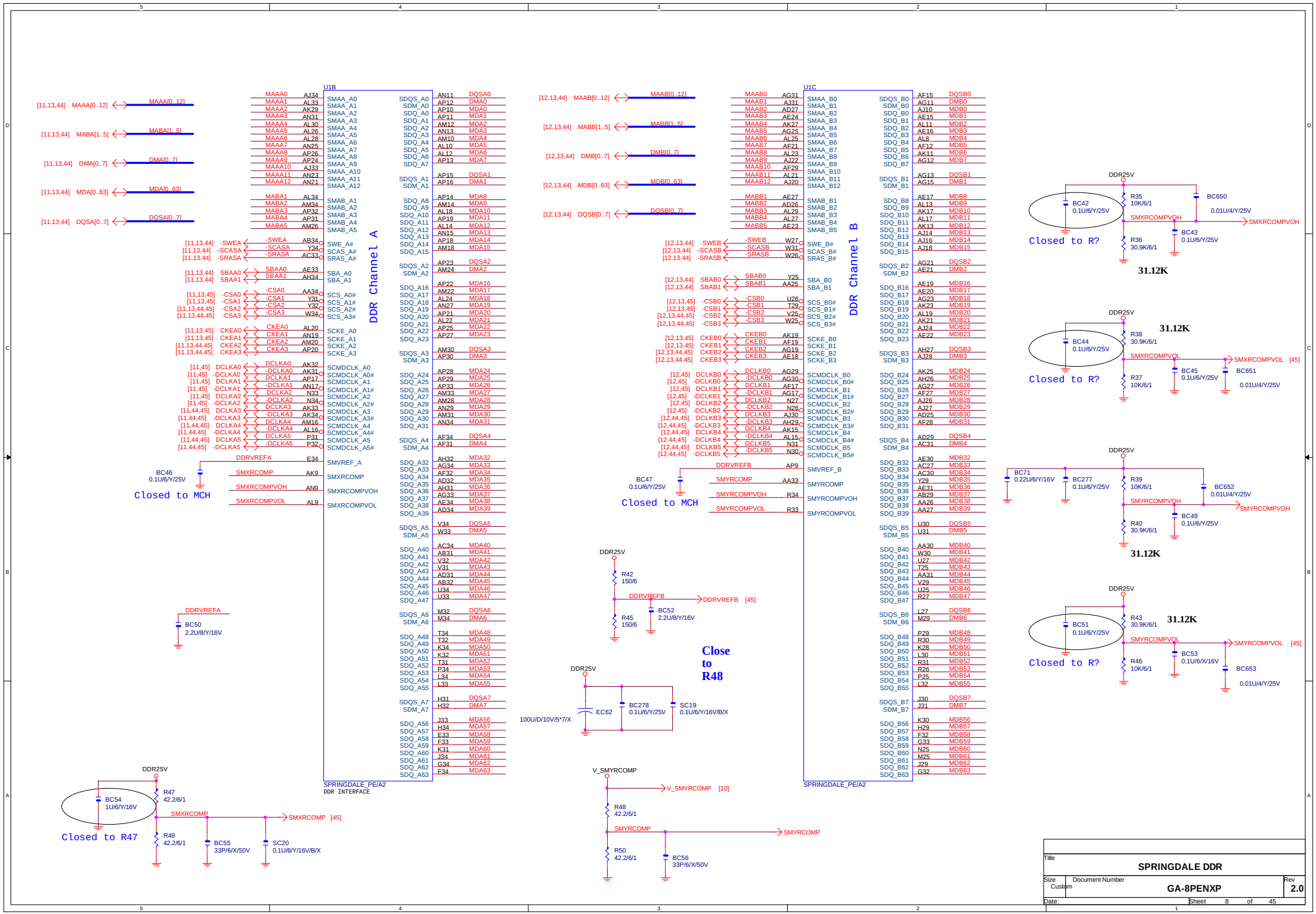


CR1
CPU_RM/IBM_NEW

Title	P4 478C	
Size: Custom	Document Number: GA-8PENXP	Rev: 2.0
Date:	Sheet 6 of 45	


U1A
FSB
SPRINGDALE_PE/A2
CPU INTERFACE
Close to GMCH side
NEAR NORTHBRIDGE
NEAR MCH
GPO DEFAULT HIGH(PAT DISABLE)
LOW (PAT ENABLE)
PAT
PAT ENABLE R30,R32
REMOVE
74HC74A/TI NS
TI,NS
SPRINGDALE HOST
GA-8PENXP
2.0


U1B
DDR Channel A
SPRINGDALE_PE/A2
DDR INTERFACE
U1C
DDR Channel B
SPRINGDALE_PE/A2
Closed to MCH
Closed to R47
Close to R48
Closed to R?
31.12K
DDR25V
SMXRCOMPVOH
SMYRCOMPVOH
SMXRCOMP
SMYRCOMP
DDRVREFA
DDRVREFB
V_SMYRCOMP
Title
SPRINGDALE DDR
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[14] GAD[0..31] GAD[0..31]
[14] SBA[0..7] SBA[0..7]
[15,45] HL[0..10] HL[0..10]
CL[0..10] CL[0..10]

U1D

AGP
-GCBE0 Y7 GCBE0
-GCBE1 W5 GCBE1
-GCBE2 AA3 GCBE2
-GCBE3 U2 GCBE3
-GFRAME U6 GFRAME
GMCH3V66 H4 GCLKIN
-GDEVSEL AB4 GDEVSEL
-GIRDY V11 GIRDY
-GTRDY AB5 GTRDY
-GSTOP W11 GSTOP
GPAR AB2 GPAR/ADD_DETECT
-GREQ N6 GREQ
-GGNT M7 GGNT
GRCOMP AC2 GRCOMP
GSWING AC3 GVSWING
MCH_AGPREF AD2 GVREF
-RBF R10 GRBF
-WBF R9 GWBF
-PIPE M4 DBI_HI
GDBI_LO M5 DBI_LO
ST0 N3 GST0
ST1 N5 GST1
ST2 N2 GST2

HUB
HL0 AF5 HI0
HL1 AG3 HI1
HL2 AK2 HI2
HL3 AG5 HI3
HL4 AK5 HI4
HL5 AL3 HI5
HL6 AL2 HI6
HL7 AL4 HI7
HL8 AJ2 HI8
HL9 AH2 HI9
HL10 AJ3 HI10
HLSTBF AH5 HISTRF
HLSTBS AH4 HISTRS

CSA
HLRCOMP_MCH AD4 HI_RCOMP
HL_SWING_MCH AE3 HI_SWING
HL_VREF_MCH AE2 HI_VREF
CI0 AK7 CI0
CI1 AH7 CI1
CI2 AD11 CI2
CI3 AF7 CI3
CI4 AD7 CI4
CI5 AC10 CI5
CI6 AF8 CI6
CI7 AG7 CI7
CI8 AE9 CI8
CI9 AH9 CI9
CI10 AG6 CI10
CISTRF AJ6 CISTRF
CISTRS AJ5 CISTRS
CLRCOMP AG2 CI_RCOMP
CLSWING_SPG AF2 CI_SWING
CLVREF_SPG AF4 CI_VREF
DOTCLK G4 DREFCLK
TP_GMCH_AP8 AP8 EXTTS#
-ICHSYNC AJ8 ICH_SYNC#
-PCIRST AK4 RSTIN#
TP_GMCH_AG10 AG10 RESERVED_1
TP_GMCH_AG9 AG9 RESERVED_2
AN35 RESERVED_3
AP34 RESERVED_4
AR1 RESERVED_5

SPRINGDALE_PE/A2

GADSTBF0 AC6 ADSTB0 → ADSTB0 [14,45]
GADSTBS0 AC5 -ADSTB0 → -ADSTB0 [14,45]
GAD0 AE6 GAD0
GAD1 AC11 GAD1
GAD2 AD5 GAD2
GAD3 AE5 GAD3
GAD4 AA10 GAD4
GAD5 AC9 GAD5
GAD6 AB11 GAD6
GAD7 AB7 GAD7
GAD8 AA9 GAD8
GAD9 AA6 GAD9
GAD10 AA5 GAD10
GAD11 W10 GAD11
GAD12 AA11 GAD12
GAD13 W6 GAD13
GAD14 W9 GAD14
GAD15 V7 GAD15
GADSTBF1 V4 ADSTB1 → ADSTB1 [14,45]
GADSTBS1 V5 -ADSTB1 → -ADSTB1 [14,45]
GAD16 AA2 GAD16
GAD17 Y4 GAD17
GAD18 Y2 GAD18
GAD19 W2 GAD19
GAD20 Y5 GAD20
GAD21 V2 GAD21
GAD22 W3 GAD22
GAD23 U3 GAD23
GAD24 T2 GAD24
GAD25 T4 GAD25
GAD26 T5 GAD26
GAD27 R2 GAD27
GAD28 P2 GAD28
GAD29 P5 GAD29
GAD30 P4 GAD30
GAD31 M2 GAD31
GSBSTBF U11 SBSTB → SBSTB [14,45]
GSBSTBS T11 -SBSTB → -SBSTB [14,45]
GSBA0# R6 SBA0
GSBA1# P7 SBA1
GSBA2# R3 SBA2
GSBA3# R5 SBA3
GSBA4# U9 SBA4
GSBA5# U10 SBA5
GSBA6# U5 SBA6
GSBA7# T7 SBA7

VGA
DDCA_DATA H3
DDCA_CLK F2
RED F4 → VGA_R
RED# E4
GREEN H6 → VGA_G
GREEN# G5
BLUE H7 → VGA_B
BLUE# G6
HSYNC G3
VSYNC E2
REFSET D2 — REFSET R67 0/6S/X

NC_1 A3
NC_2 A33
NC_3 A35
NC_4 AF13
NC_5 AF23
NC_6 AJ12
NC_7 AN1
NC_8 AP2
NC_9 AR3
NC_10 AR33
NC_11 AR35
NC_12 B2
NC_13 B25
NC_14 B34
NC_15 C1
NC_16 C23
NC_17 C35
NC_18 E26
NC_19 M31
NC_20 R25

Close to MCH
[35] CI[10:0]
C27 0.01U/4/X/16V
C28 0.01U/4/X/16V

R1054 0/6
R1055 0/6
R51 0/6S/X
R52 0/6S/X
R53 0/6S/X

[35] CISTBF
[35] CISTBS
[10] CLSWING_SPG
[10] CLVREF_SPG
[16] -ICHSYNC
[15,18,21,22,35,38,40,42,43,45] -PCIRST

VDDQ
R69 52.3/6/1
CLRCOMP

GSWING C34 0.01U/6/Y/25V
MCH_AGPREF C35 0.01U/4/X/16V
CLOSED TO MCH

DOTCLK
R1056 0/6S/X

VDDQ
R74 52.3/6/1
HLRCOMP_MCH
VDDQ
R75 43.2/6/1
GRCOMP

[45] HL_SWING_MCH
[15,45] HL_SWING_ICH
HL_SWING_ICH R71 0/6S/X
0.8V
C36 0.1U/6/Y/25V
[45] HL_VREF_MCH
[15,45] HL_VREF_ICH
HL_VREF_ICH R73 0/6S/X
VDDQ*0.233
C38 0.1U/6/Y/25V

VDDQ
R70 226/6/1
R72 147/6/1
R76 113/6/1

10 mil trace with 7 mil space
Place mid of bus trace

N.B FANSINK

NB_HEATSINK
FAN SINK/12SF2-01A001-11~14

Title	SPRINGDALE AGP,HUB,CSA,VGA		
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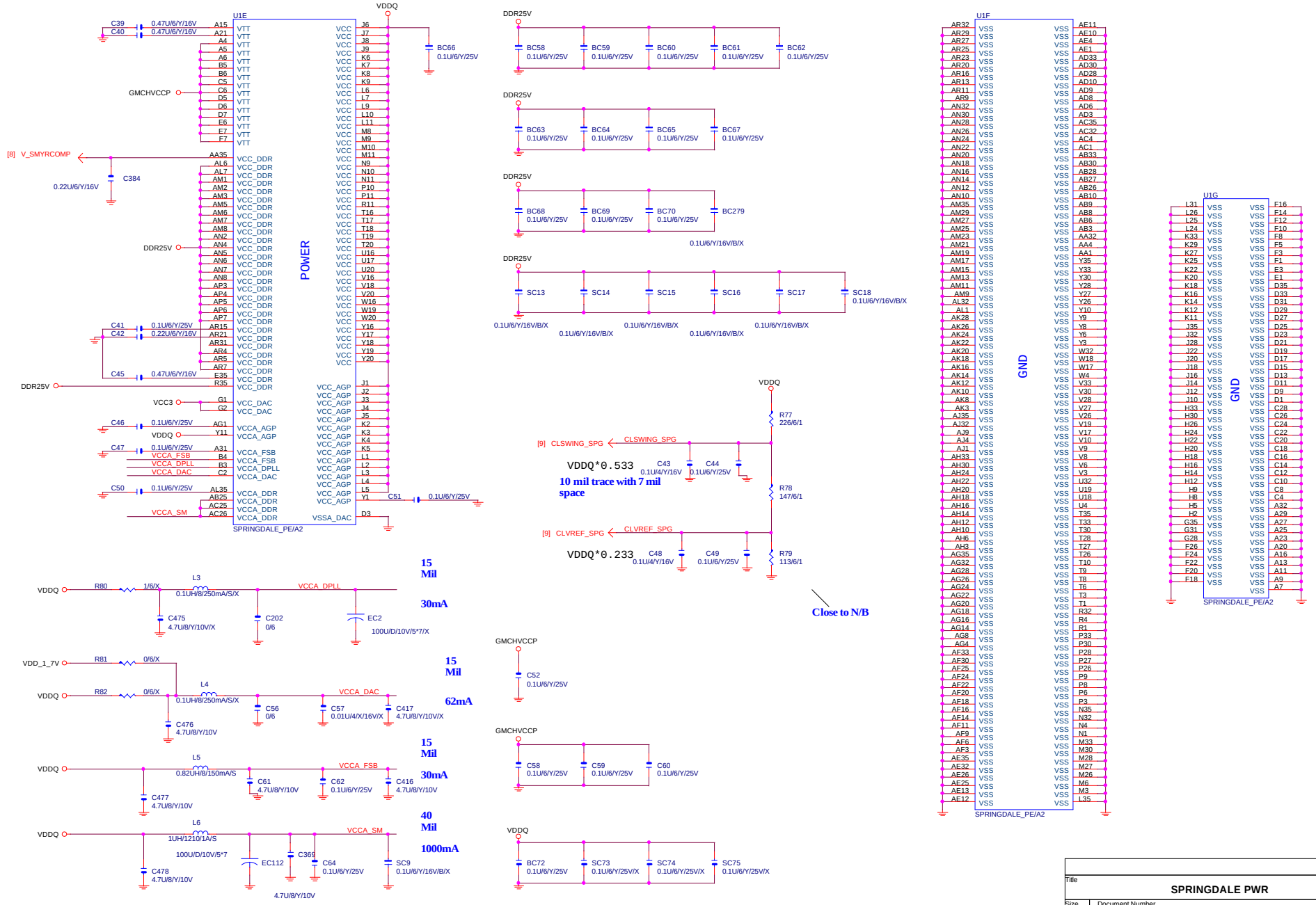
U1E
POWER
SPRINGDALE_PE/A2
VDDQ
GMCHVCCP
DDR25V
VCC3
[8] V_SMYRCOMP
C384
0.22U/6/Y/16V
C39
C40
0.47U/6/Y/16V
C41
C42
0.1U/6/Y/25V
0.22U/6/Y/16V
C45
C46
C47
C50
C51
VCCA_SM
VCCA_FSB
VCCA_DPLL
VCCA_DAC
BC66
0.1U/6/Y/25V
U1F
GND
U1G
BC58
BC59
BC60
BC61
BC62
BC63
BC64
BC65
BC67
BC68
BC69
BC70
BC279
0.1U/6/Y/16V/B/X
SC13
SC14
SC15
SC16
SC17
SC18
0.1U/6/Y/16V/B/X
0.1U/6/Y/16V/B/X
0.1U/6/Y/16V/B/X
0.1U/6/Y/16V/B/X
0.1U/6/Y/16V/B/X
R77
226/6/1
R78
147/6/1
R79
113/6/1
[9] CLSWING_SPG
CLSWING_SPG
VDDQ*0.533
C43
0.1U/4/Y/16V
C44
0.1U/6/Y/25V
10 mil trace with 7 mil space
[9] CLVREF_SPG
CLVREF_SPG
VDDQ*0.233
C48
0.1U/4/Y/16V
C49
0.1U/6/Y/25V
Close to N/B
R80
1/6/X
L3
0.1UH/8/250mA/S/X
VCCA_DPLL
C475
4.7U/8/Y/10V/X
C202
0/6
EC2
100U/D/10V/5*7/X
15 Mil
30mA
VDD_1_7V
R81
0/6/X
R82
0/6/X
L4
0.1UH/8/250mA/S/X
VCCA_DAC
C476
4.7U/8/Y/10V
C56
0/6
C57
0.01U/4/X/16V/X
C417
4.7U/8/Y/10V/X
15 Mil
62mA
L5
0.82UH/8/150mA/S
VCCA_FSB
C477
4.7U/8/Y/10V
C61
4.7U/8/Y/10V
C62
0.1U/6/Y/25V
C416
4.7U/8/Y/10V
15 Mil
30mA
L6
1UH/1210/1A/S
VCCA_SM
C478
4.7U/8/Y/10V
100U/D/10V/5*7
EC112
C369
C64
0.1U/6/Y/25V
SC9
0.1U/6/Y/16V/B/X
4.7U/8/Y/10V
40 Mil
1000mA
GMCHVCCP
C52
0.1U/6/Y/25V
C58
0.1U/6/Y/25V
C59
0.1U/6/Y/25V
C60
0.1U/6/Y/25V
BC72
0.1U/6/Y/25V
SC73
0.1U/6/Y/25V/X
SC74
0.1U/6/Y/25V/X
SC75
0.1U/6/Y/25V/X
Title
SPRINGDALE PWR
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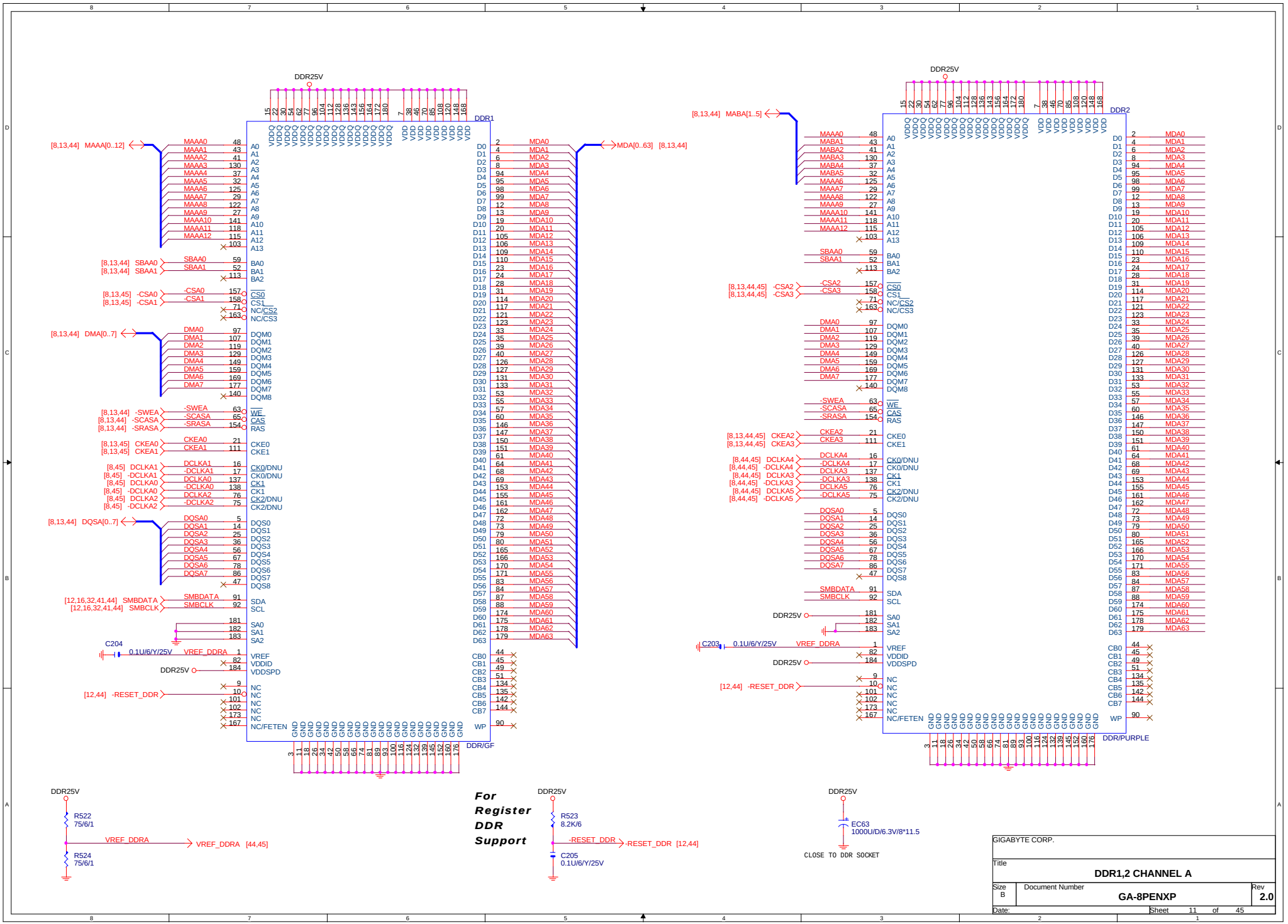
DDR25V
DDR1
DDR/GF
[8,13,44] MAAA[0..12]
[8,13,44] DMA[0..7]
[8,13,44] DQSA[0..7]
MDA[0..63] [8,13,44]
[12,16,32,41,44] SMBDATA
[12,16,32,41,44] SMBCLK
[12,44] -RESET_DDR
C204
0.1U/6/Y/25V
VREF_DDRA
DDR2
DDR/PURPLE
[8,13,44] MABA[1..5]
[8,13,44,45] -CSA2
[8,13,44,45] -CSA3
[8,13,44,45] CKEA2
[8,13,44,45] CKEA3
[8,44,45] DCLKA4
[8,44,45] -DCLKA4
[8,44,45] DCLKA3
[8,44,45] -DCLKA3
[8,44,45] DCLKA5
[8,44,45] -DCLKA5
C203
0.1U/6/Y/25V
VREF_DDRA
For Register DDR Support
R522
75/6/1
R524
75/6/1
VREF_DDRA
VREF_DDRA [44,45]
R523
8.2K/6
C205
0.1U/6/Y/25V
-RESET_DDR
-RESET_DDR [12,44]
EC63
1000U/D/6.3V/8*11.5
CLOSE TO DDR SOCKET
GIGABYTE CORP.
Title
DDR1,2 CHANNEL A
Size B
Document Number
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Date:
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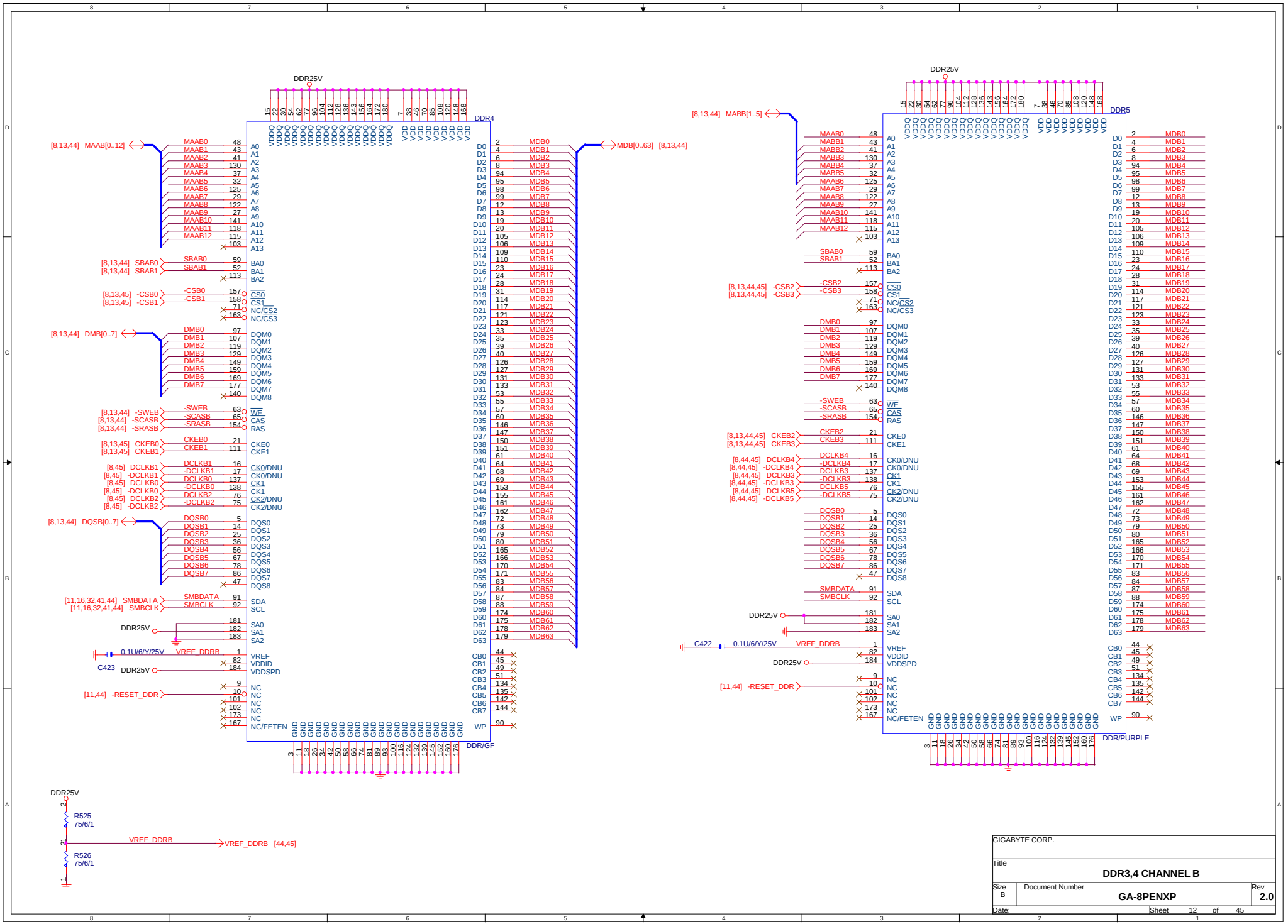
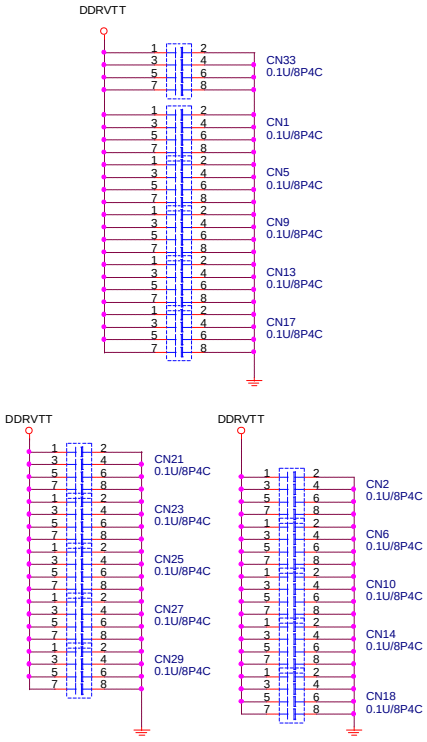
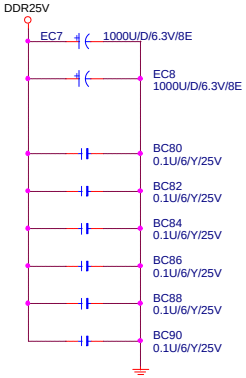

DDR25V
DDR4
DDR/GF
[8,13,44] MAAB[0..12]
MAAB0 MAAB1 MAAB2 MAAB3 MAAB4 MAAB5 MAAB6 MAAB7 MAAB8 MAAB9 MAAB10 MAAB11 MAAB12
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13
[8,13,44] SBAB0
[8,13,44] SBAB1
SBAB0 SBAB1
BA0 BA1 BA2
[8,13,45] -CSB0
[8,13,45] -CSB1
-CSB0 -CSB1
CS0 CS1 NC/CS2 NC/CS3
[8,13,44] DMB[0..7]
DMB0 DMB1 DMB2 DMB3 DMB4 DMB5 DMB6 DMB7
DQM0 DQM1 DQM2 DQM3 DQM4 DQM5 DQM6 DQM7 DQM8
[8,13,44] -SWEB
[8,13,44] -SCASB
[8,13,44] -SRASB
-SWEB -SCASB -SRASB
WE CAS RAS
[8,13,45] CKEB0
[8,13,45] CKEB1
CKEB0 CKEB1
CKE0 CKE1
[8,45] DCLKB1
[8,45] -DCLKB1
[8,45] DCLKB0
[8,45] -DCLKB0
[8,45] DCLKB2
[8,45] -DCLKB2
DCLKB1 -DCLKB1 DCLKB0 -DCLKB0 DCLKB2 -DCLKB2
CK0/DNU CK0/DNU CK1 CK1 CK2/DNU CK2/DNU
[8,13,44] DQSB[0..7]
DQSB0 DQSB1 DQSB2 DQSB3 DQSB4 DQSB5 DQSB6 DQSB7
DQS0 DQS1 DQS2 DQS3 DQS4 DQS5 DQS6 DQS7 DQS8
[11,16,32,41,44] SMBDATA
[11,16,32,41,44] SMBCLK
SMBDATA SMBCLK
SDA SCL
DDR25V
SA0 SA1 SA2
0.1U/6/Y/25V
VREF_DDRB
VREF VDDID VDDSPD
C423
[11,44] -RESET_DDR
NC NC NC NC NC/FETEN
MDB[0..63] [8,13,44]
MDB0 MDB1 MDB2 MDB3 MDB4 MDB5 MDB6 MDB7 MDB8 MDB9 MDB10 MDB11 MDB12 MDB13 MDB14 MDB15 MDB16 MDB17 MDB18 MDB19 MDB20 MDB21 MDB22 MDB23 MDB24 MDB25 MDB26 MDB27 MDB28 MDB29 MDB30 MDB31 MDB32 MDB33 MDB34 MDB35 MDB36 MDB37 MDB38 MDB39 MDB40 MDB41 MDB42 MDB43 MDB44 MDB45 MDB46 MDB47 MDB48 MDB49 MDB50 MDB51 MDB52 MDB53 MDB54 MDB55 MDB56 MDB57 MDB58 MDB59 MDB60 MDB61 MDB62 MDB63
CB0 CB1 CB2 CB3 CB4 CB5 CB6 CB7
WP
DDR25V
R525 75/6/1
R526 75/6/1
VREF_DDRB
VREF_DDRB [44,45]
DDR5
DDR/PURPLE
[8,13,44] MABB[1..5]
MAAB0 MABB1 MABB2 MABB3 MABB4 MABB5 MAAB6 MAAB7 MAAB8 MAAB9 MAAB10 MAAB11 MAAB12
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13
SBAB0 SBAB1
BA0 BA1 BA2
[8,13,44,45] -CSB2
[8,13,44,45] -CSB3
-CSB2 -CSB3
CS0 CS1 NC/CS2 NC/CS3
DMB0 DMB1 DMB2 DMB3 DMB4 DMB5 DMB6 DMB7
DQM0 DQM1 DQM2 DQM3 DQM4 DQM5 DQM6 DQM7 DQM8
-SWEB -SCASB -SRASB
WE CAS RAS
[8,13,44,45] CKEB2
[8,13,44,45] CKEB3
CKEB2 CKEB3
CKE0 CKE1
[8,44,45] DCLKB4
[8,44,45] -DCLKB4
[8,44,45] DCLKB3
[8,44,45] -DCLKB3
[8,44,45] DCLKB5
[8,44,45] -DCLKB5
DCLKB4 -DCLKB4 DCLKB3 -DCLKB3 DCLKB5 -DCLKB5
CK0/DNU CK0/DNU CK1 CK1 CK2/DNU CK2/DNU
DQSB0 DQSB1 DQSB2 DQSB3 DQSB4 DQSB5 DQSB6 DQSB7
DQS0 DQS1 DQS2 DQS3 DQS4 DQS5 DQS6 DQS7 DQS8
SMBDATA SMBCLK
SDA SCL
DDR25V
SA0 SA1 SA2
C422
0.1U/6/Y/25V
VREF_DDRB
VREF VDDID VDDSPD
DDR25V
[11,44] -RESET_DDR
NC NC NC NC NC/FETEN
MDB0 MDB1 MDB2 MDB3 MDB4 MDB5 MDB6 MDB7 MDB8 MDB9 MDB10 MDB11 MDB12 MDB13 MDB14 MDB15 MDB16 MDB17 MDB18 MDB19 MDB20 MDB21 MDB22 MDB23 MDB24 MDB25 MDB26 MDB27 MDB28 MDB29 MDB30 MDB31 MDB32 MDB33 MDB34 MDB35 MDB36 MDB37 MDB38 MDB39 MDB40 MDB41 MDB42 MDB43 MDB44 MDB45 MDB46 MDB47 MDB48 MDB49 MDB50 MDB51 MDB52 MDB53 MDB54 MDB55 MDB56 MDB57 MDB58 MDB59 MDB60 MDB61 MDB62 MDB63
CB0 CB1 CB2 CB3 CB4 CB5 CB6 CB7
WP
GIGABYTE CORP.
Title
DDR3,4 CHANNEL B
Size B
Document Number
GA-8PENXP
Rev 2.0
Date:
Sheet 12 of 45

DDR TERMINATION

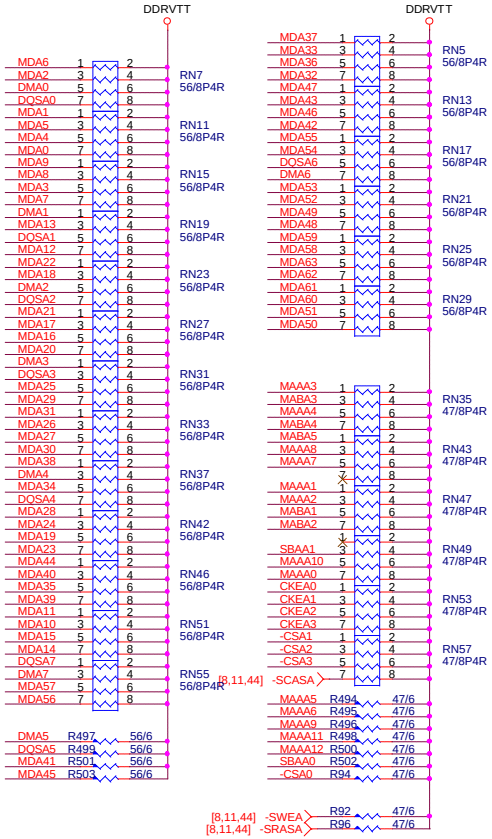
DDRVTT Decouple



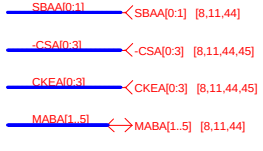
DDR25V Decouple



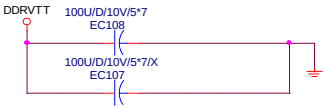
DDR TERMINATION CHANNEL A



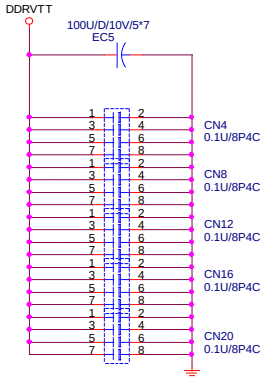
47 Ohms

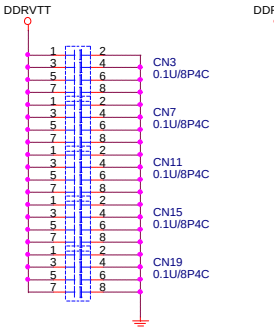


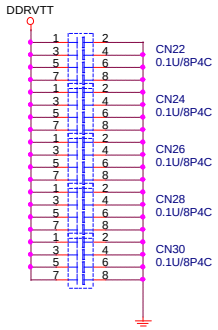
56 Ohms



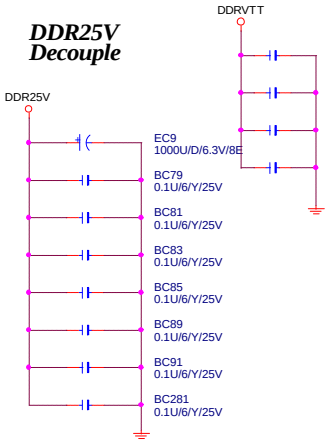
DDRVTT Decouple



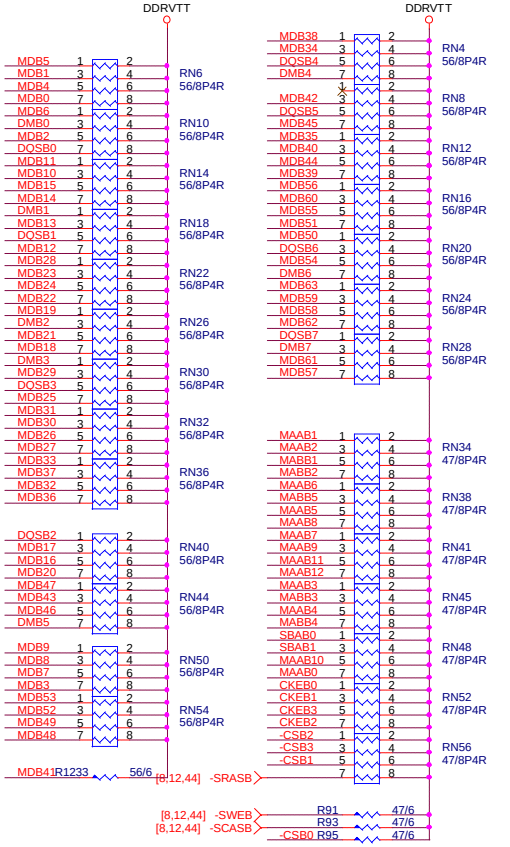




DDR25V Decouple



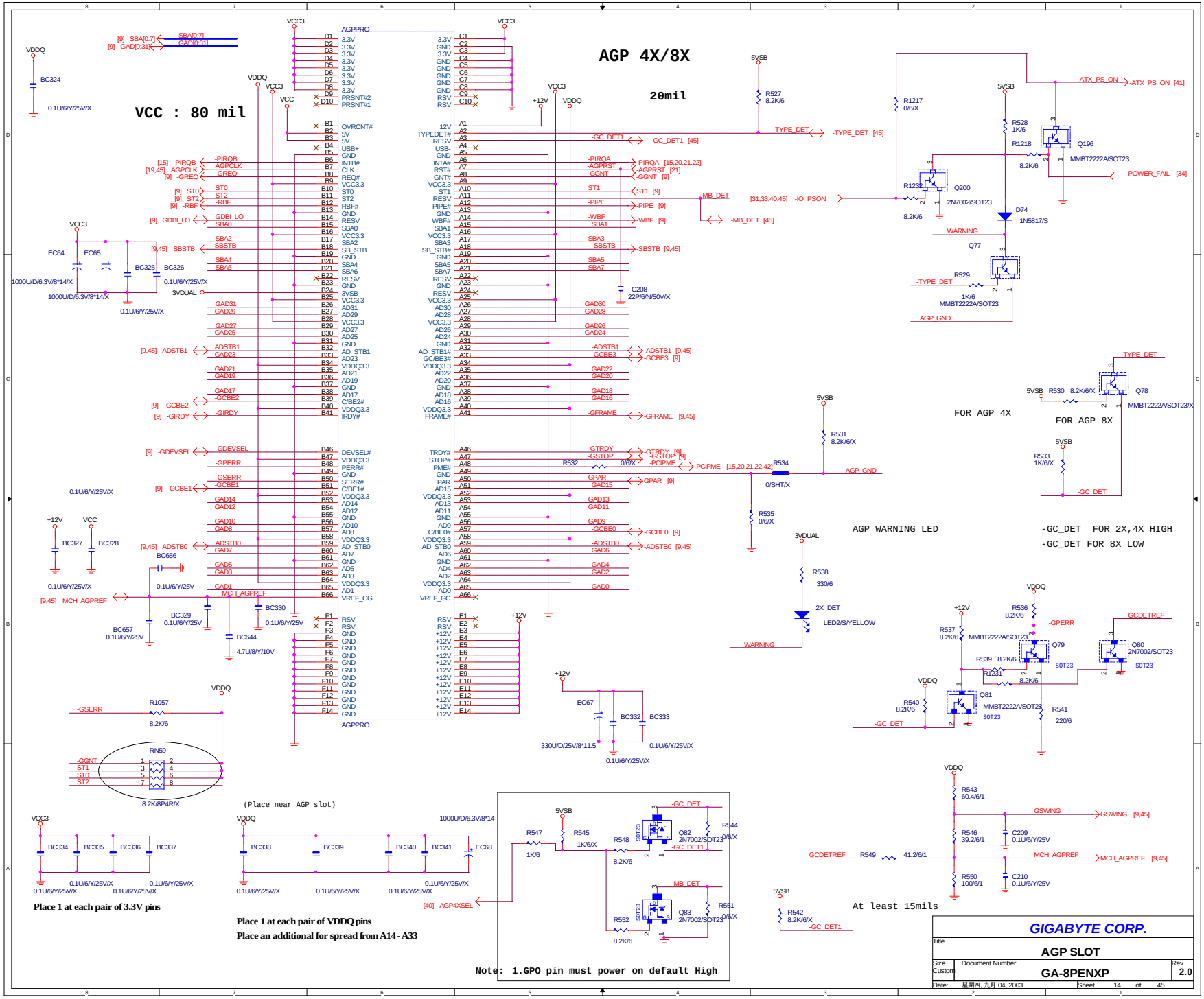
CHANNEL B

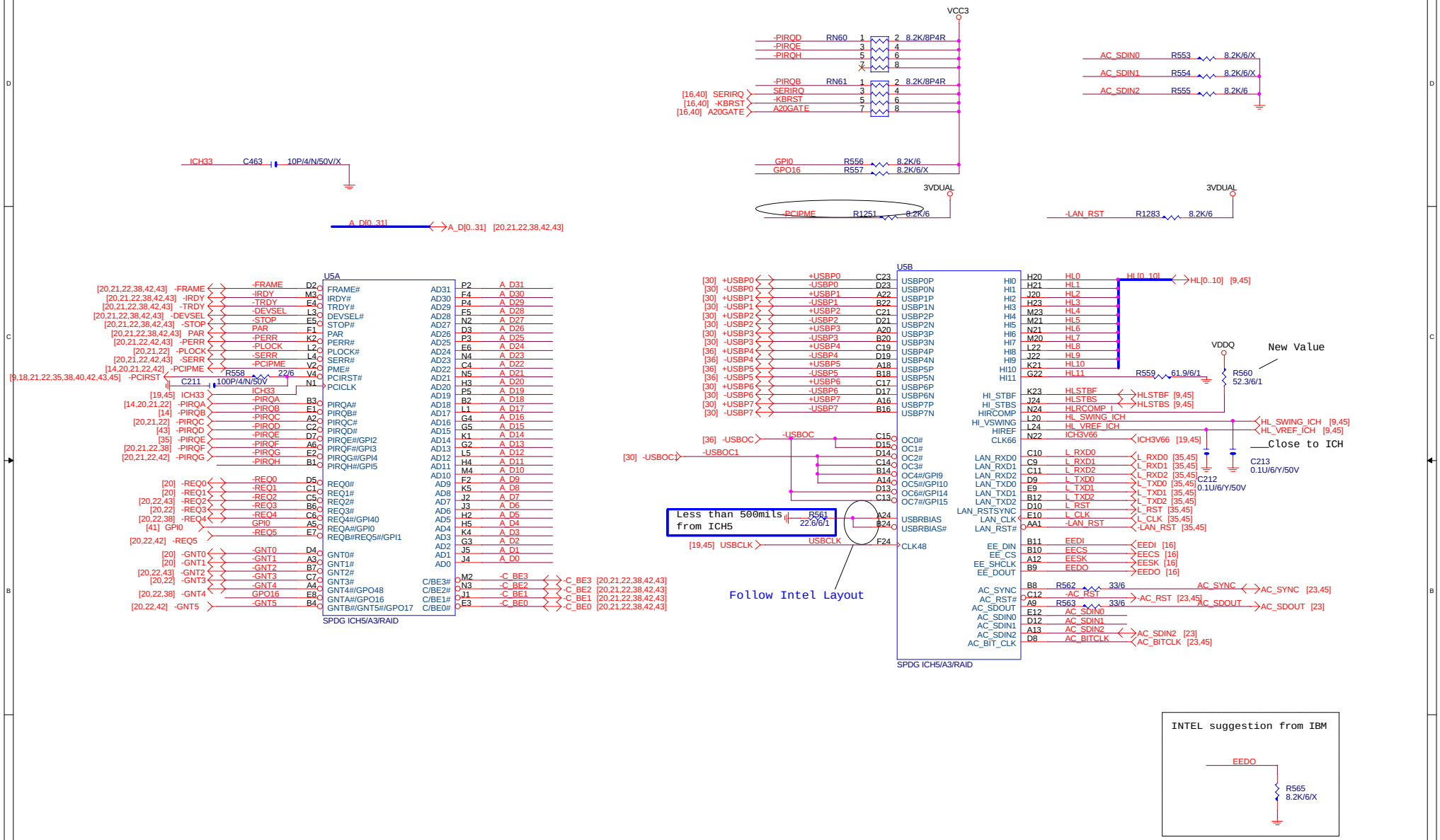


47 Ohms

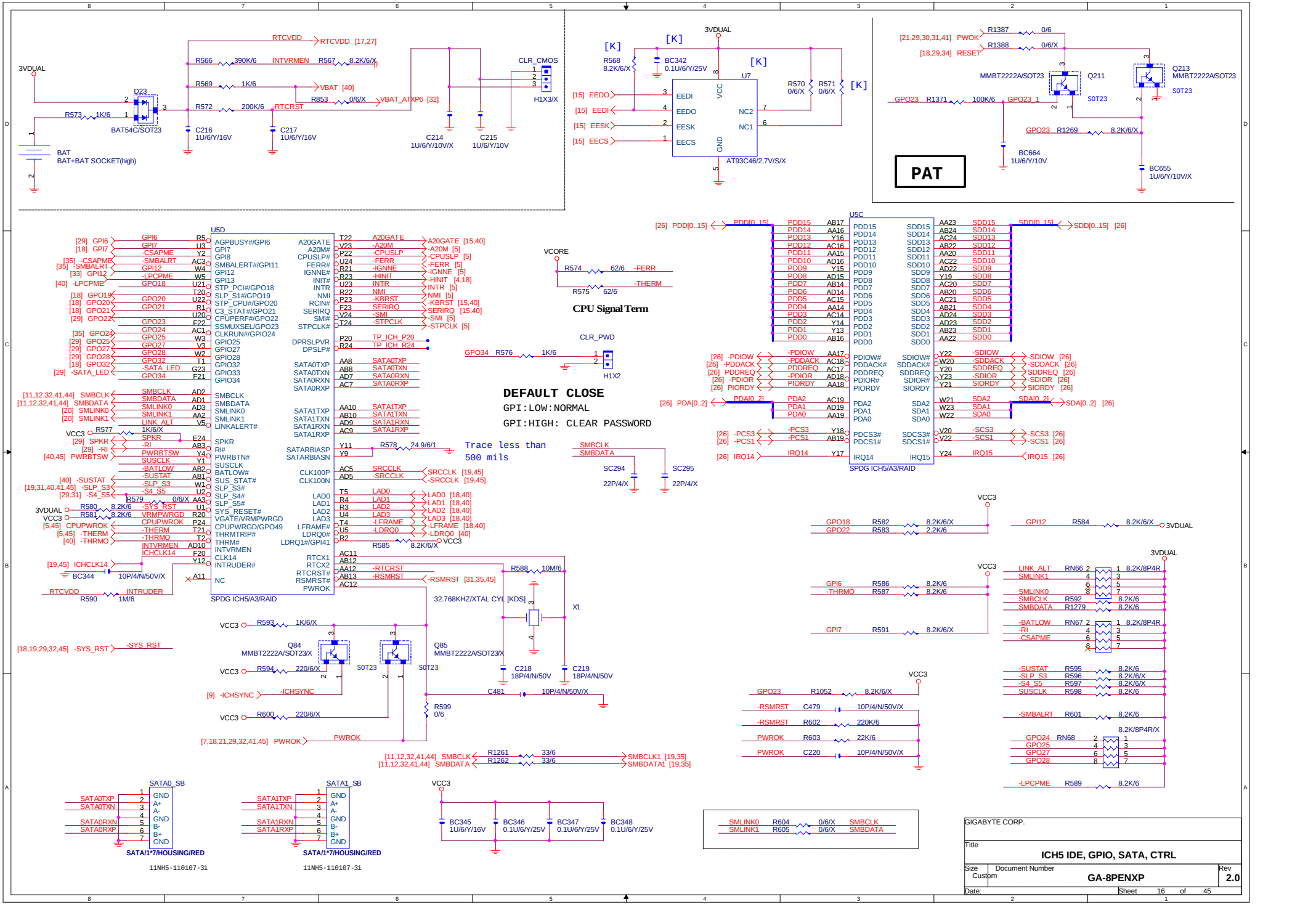
56 Ohms

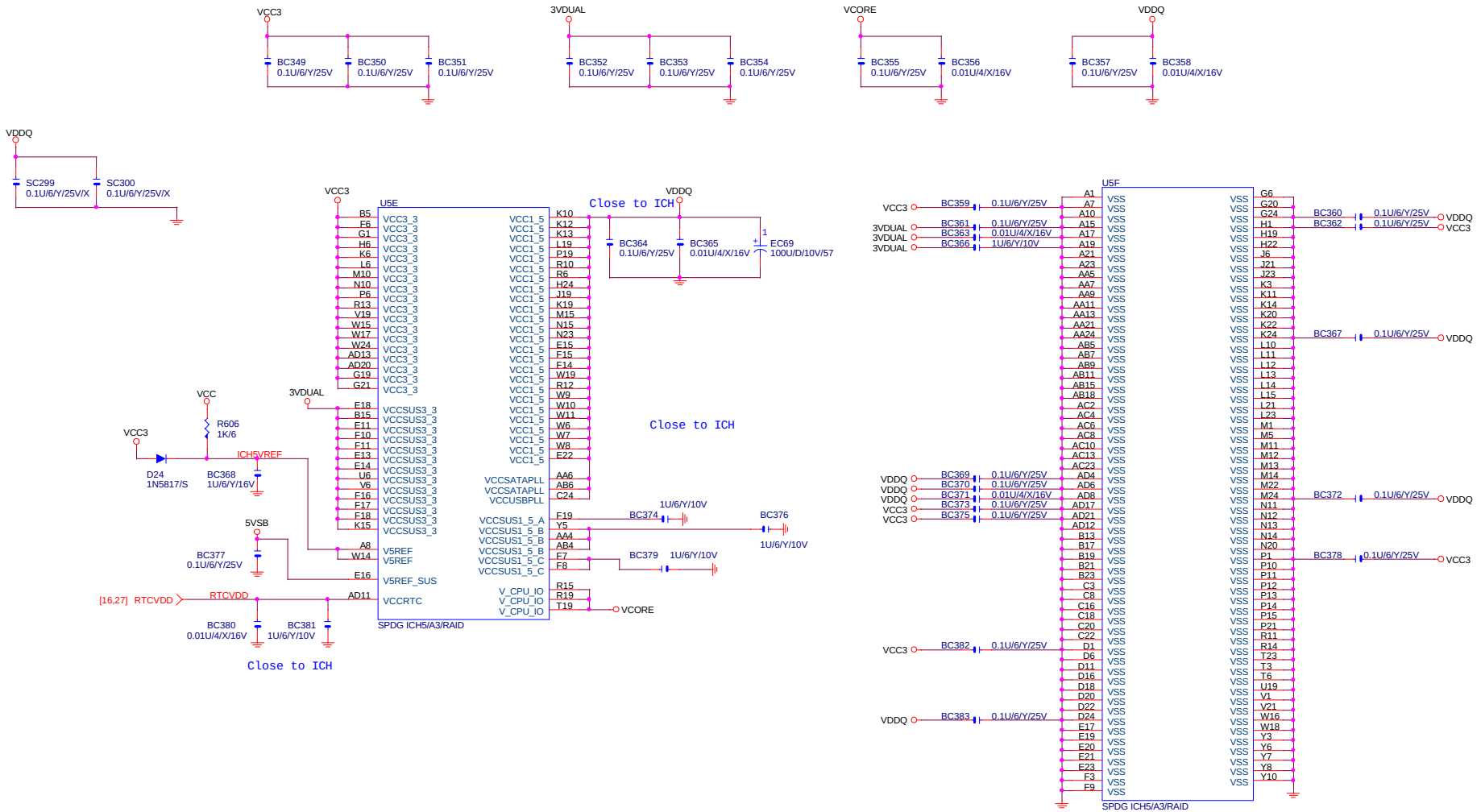
GIGABYTE CORP.		
Title: DDR TERMINATION		
Size: B	Document Number: GA-8PENXP	Rev: 2.0
Date:	Sheet 13 of 45	


AGP 4X/8X
20mil
VCC : 80 mil
AGPPRO
FOR AGP 4X
FOR AGP 8X
AGP WARNING LED
-GC_DET FOR 2X,4X HIGH
-GC_DET FOR 8X LOW
(Place near AGP slot)
Place 1 at each pair of 3.3V pins
Place 1 at each pair of VDDQ pins
Place an additional for spread from A14 - A33
Note: 1.GPO pin must power on default High
At least 15mils
GIGABYTE CORP.
AGP SLOT
GA-8PENXP
2.0

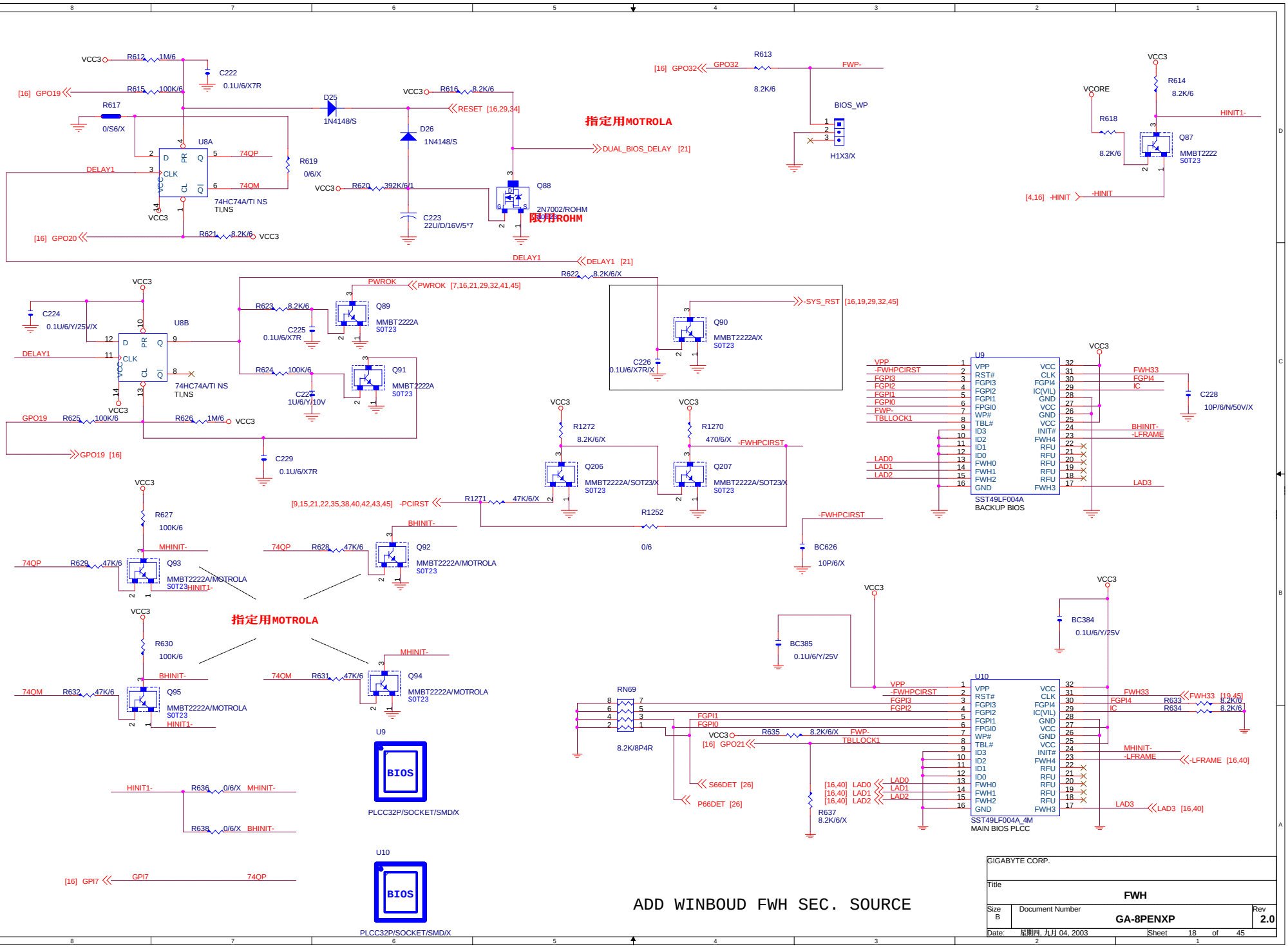


GIGABYTE CORP.		
Title	ICH5 PCI, USB, HUB, LAN	
Size B	Document Number GA-8PENXP	Rev 2.0
Date:	Sheet 15 of 45	


3VDUAL
BAT
BAT+BAT SOCKET(high)
D23
BAT54C/SOT23
R573 1K/6
R566 390K/6
R569 1K/6
R572 200K/6
R567 8.2K/6/X
R853 0/6/X
RTCVDD
RTCVDD [17,27]
INTVRMEN
VBAT [40]
VBAT_ATXP6 [32]
RTCRST
CLR_CMOS
H1X3/X
C216 1U/6/Y/16V
C217 1U/6/Y/16V
C214 1U/6/Y/10V/X
C215 1U/6/Y/10V
[K]
R568 8.2K/6/X
BC342 0.1U/6/Y/25V
U7
EEDI
EEDO
EESK
EECS
VCC
NC2
NC1
GND
R570 0/6/X
R571 0/6/X
[15] EEDO
[15] EEDI
[15] EESK
[15] EECS
AT93C46/2.7V/S/X
[21,29,30,31,41] PWOK
[18,29,34] RESET
R1387 0/6
R1388 0/6/X
MMBT2222A/SOT23
Q211
Q213
MMBT2222A/SOT23
SOT23
GPO23 R1371 100K/6 GPO23_1
GPO23 R1269 8.2K/6/X
BC664 1U/6/Y/10V
BC655 1U/6/Y/10V/X
PAT
U5D
SPDG ICH5/A3/RAID
GPI6 GPI7 -CSAPME -SMBALRT GPI12 -LPCPME GPO18
GPO20 GPO21 GPO22 GPO23 GPO24 GPO25 GPO27 GPO28 GPO32 -SATA_LED GPO34
SMBCLK SMBDATA SMLINK0 SMLINK1 LINK_ALT
SPKR -RI PWRBTSW SUSCLK -BATLOW -SUSTAT -SLP_S3 -S4_S5
-SYS_RST VRMPWRGD CPUPWROK -THERM -THRMO INTVRMEN ICHCLK14
INTRUDER
A20GATE A20M -CPUSLP -FERR -IGNNE -HINIT INTR NMI -KBRST SERIRQ -SMI -STPCLK
TP_ICH_P20 TP_ICH_R24
SATA0TXP SATA0TXN SATA0RXN SATA0RXP
SATA1TXP SATA1TXN SATA1RXN SATA1RXP
SATARBIASP SATARBIASN
CLK100P CLK100N
LAD0 LAD1 LAD2 LAD3 -LFRAME -LDRQ0
RTCX1 RTCX2 -RTCRST -RSMRST PWROK
R577 1K/6/X
R579 0/6/X
R580 8.2K/6
R581 8.2K/6
R590 1M/6
R585 8.2K/6/X
BC344 10P/4/N/50V/X
R578 24.9/6/1
Trace less than 500 mils
DEFAULT CLOSE
GPI:LOW:NORMAL
GPI:HIGH: CLEAR PASSWORD
VCORE
R574 62/6 -FERR
R575 62/6 -THERM
CPU Signal Term
CLR_PWD
GPO34 R576 1K/6
H1X2
SMBCLK SMBDATA
SC294 22P/4/X
SC295 22P/4/X
U5C
SPDG ICH5/A3/RAID
PDD[0..15]
SDD[0..15]
-PDIOW -PDDACK PDDREQ -PDIOR PIORDY
-SDIOW -SDDACK SDDREQ -SDIOR SIORDY
PDA[0..2]
SDA[0..2]
-PCS3 -PCS1 IRQ14 IRQ15
-SCS3 -SCS1
32.768KHZ/XTAL CYL [KDS]
X1
Q84 MMBT2222A/SOT23/X
Q85 MMBT2222A/SOT23/X
C218 18P/4/N/50V
C219 18P/4/N/50V
C481 10P/4/N/50V/X
R588 10M/6
R599 0/6
R593 1K/6/X
R594 220/6/X
R600 220/6/X
[18,19,29,32,45] -SYS_RST
[9] -ICHSYNC
[7,18,21,29,32,41,45] PWROK
[11,12,32,41,44] SMBCLK
[11,12,32,41,44] SMBDATA
R1261 33/6
R1262 33/6
SMBCLK1 [19,35]
SMBDATA1 [19,35]
SATA0_SB
SATA1_SB
SATA/1*7/HOUSING/RED
11NH5-110107-31
BC345 1U/6/Y/16V
BC346 0.1U/6/Y/25V
BC347 0.1U/6/Y/25V
BC348 0.1U/6/Y/25V
GPO18 R582 8.2K/6/X
GPO22 R583 2.2K/6
GPI12 R584 8.2K/6/X
GPI6 R586 8.2K/6
-THRMO R587 8.2K/6
GPI7 R591 8.2K/6/X
LINK_ALT SMLINK1 SMLINK0 SMBCLK SMBDATA -BATLOW -RI -CSAPME
RN66 8.2K/8P4R
RN67 8.2K/8P4R
-SUSTAT -SLP_S3 -S4_S5 SUSCLK -SMBALRT -LPCPME
R592 8.2K/6
R1279 8.2K/6
R595 8.2K/6
R596 8.2K/6/X
R597 8.2K/6/X
R598 8.2K/6
R601 8.2K/6
R589 8.2K/6
8.2K/8P4R/X
RN68 GPO24 GPO25 GPO27 GPO28
GPO23 R1052 8.2K/6/X
-RSMRST C479 10P/4/N/50V/X
-RSMRST R602 220K/6
PWROK R603 22K/6
PWROK C220 10P/4/N/50V/X
SMLINK0 R604 0/6/X SMBCLK
SMLINK1 R605 0/6/X SMBDATA
GIGABYTE CORP.
Title
ICH5 IDE, GPIO, SATA, CTRL
Size Custom
Document Number GA-8PENXP
Rev 2.0
Date:
Sheet 16 of 45



GIGABYTE CORP.		
Title: ICH5 VCC, GND		
Size: B	Document Number: GA-8PENXP	Rev: 2.0
Date:	Sheet 17 of 45	


VCC3
R612 1M/6
C222 0.1U/6/X7R
[16] GPO19
R615 100K/6
R617 0/S6/X
D25 1N4148/S
U8A
74HC74A/TI NS TI,NS
DELAY1
74QP
74QM
R619 0/6/X
R620 392K/6/1
C223 22U/D/16V/5*7
R621 8.2K/6
[16] GPO20
R616 8.2K/6
RESET [16,29,34]
D26 1N4148/S
Q88 2N7002/ROHM
限用ROHM
指定用MOTROLA
DUAL_BIOS_DELAY [21]
[16] GPO32
GPO32
R613 8.2K/6
FWP-
BIOS_WP
H1X3/X
VCORE
R614 8.2K/6
R618 8.2K/6
Q87 MMBT2222 S0T23
HINIT1-
[4,16] -HINIT
-HINIT
DELAY1 [21]
R622 8.2K/6/X
PWROK [7,16,21,29,32,41,45]
C224 0.1U/6/Y/25V/X
U8B
74HC74A/TI NS TI,NS
R623 8.2K/6
C225 0.1U/6/X7R
Q89 MMBT2222A S0T23
R624 100K/6
C227 1U/6/Y/10V
Q91 MMBT2222A S0T23
GPO19
R625 100K/6
R626 1M/6
C229 0.1U/6/X7R
GPO19 [16]
Q90 MMBT2222A/X S0T23
C226 0.1U/6/X7R/X
-SYS_RST [16,19,29,32,45]
U9
SST49LF004A BACKUP BIOS
VPP
-FWHPCIRST
FGPI3
FGPI2
FGPI1
FGPI0
WP#
TBL#
TBLLOCK1
ID3
ID2
ID1
ID0
FWH0
FWH1
FWH2
GND
VCC
CLK
FGPI4
IC(VIL)
INIT#
FWH4
RFU
FWH3
FWH33
FGPI4
IC
BHINIT-
-LFRAME
LAD0
LAD1
LAD2
LAD3
C228 10P/6/N/50V/X
R1272 8.2K/6/X
R1270 470/6/X
-FWHPCIRST
Q206 MMBT2222A/SOT23/X S0T23
Q207 MMBT2222A/SOT23/X S0T23
[9,15,21,22,35,38,40,42,43,45] -PCIRST
R1271 47K/6/X
R1252 0/6
BC626 10P/6/X
R627 100K/6
MHINIT-
74QP
R629 47K/6
Q93 MMBT2222A/MOTROLA S0T23
HINIT1-
R628 47K/6
Q92 MMBT2222A/MOTROLA S0T23
指定用MOTROLA
R630 100K/6
BHINIT-
74QM
R632 47K/6
Q95 MMBT2222A/MOTROLA S0T23
HINIT1-
R631 47K/6
Q94 MMBT2222A/MOTROLA S0T23
U9
BIOS
PLCC32P/SOCKET/SMD/X
HINIT1-
R636 0/6/X MHINIT-
R638 0/6/X BHINIT-
U10
BIOS
PLCC32P/SOCKET/SMD/X
[16] GPI7
GPI7
74QP
BC385 0.1U/6/Y/25V
BC384 0.1U/6/Y/25V
RN69
8.2K/8P4R
FGPI1
FGPI0
[16] GPO21
R635 8.2K/6/X
S66DET [26]
P66DET [26]
R637 8.2K/6/X
[16,40] LAD0
[16,40] LAD1
[16,40] LAD2
SST49LF004A_4M MAIN BIOS PLCC
FWH33 [19,45]
R633 8.2K/6
R634 8.2K/6
MHINIT-
-LFRAME [16,40]
LAD3 [16,40]
ADD WINBOUD FWH SEC. SOURCE
GIGABYTE CORP.
Title
FWH
Size B
Document Number
GA-8PENXP
Rev 2.0
Date: 星期四, 九月 04, 2003
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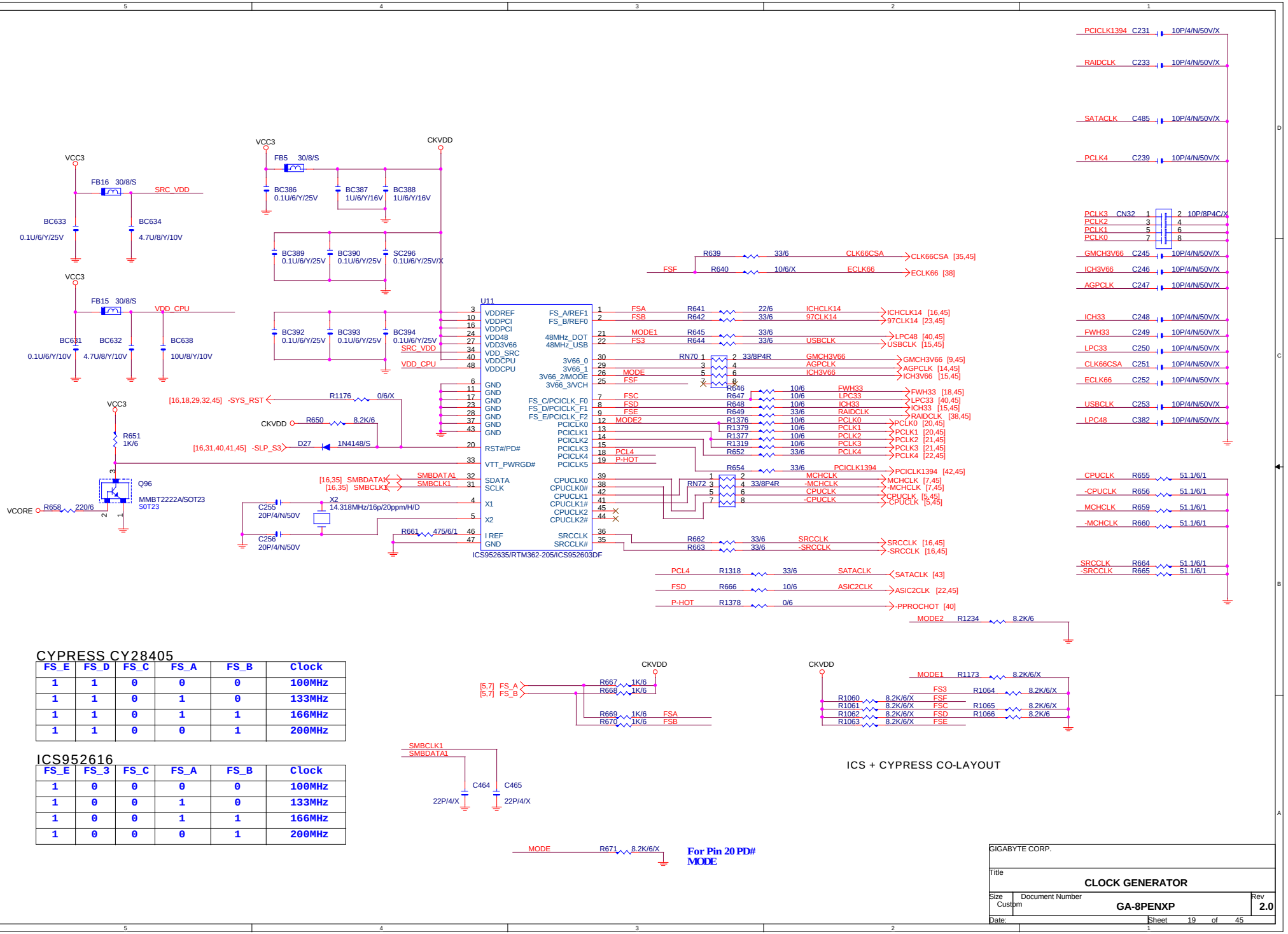


CYPRESS CY28405

FS_E	FS_D	FS_C	FS_A	FS_B	Clock
1	1	0	0	0	100MHz
1	1	0	1	0	133MHz
1	1	0	1	1	166MHz
1	1	0	0	1	200MHz

ICS952616

FS_E	FS_3	FS_C	FS_A	FS_B	Clock
1	0	0	0	0	100MHz
1	0	0	1	0	133MHz
1	0	0	1	1	166MHz
1	0	0	0	1	200MHz

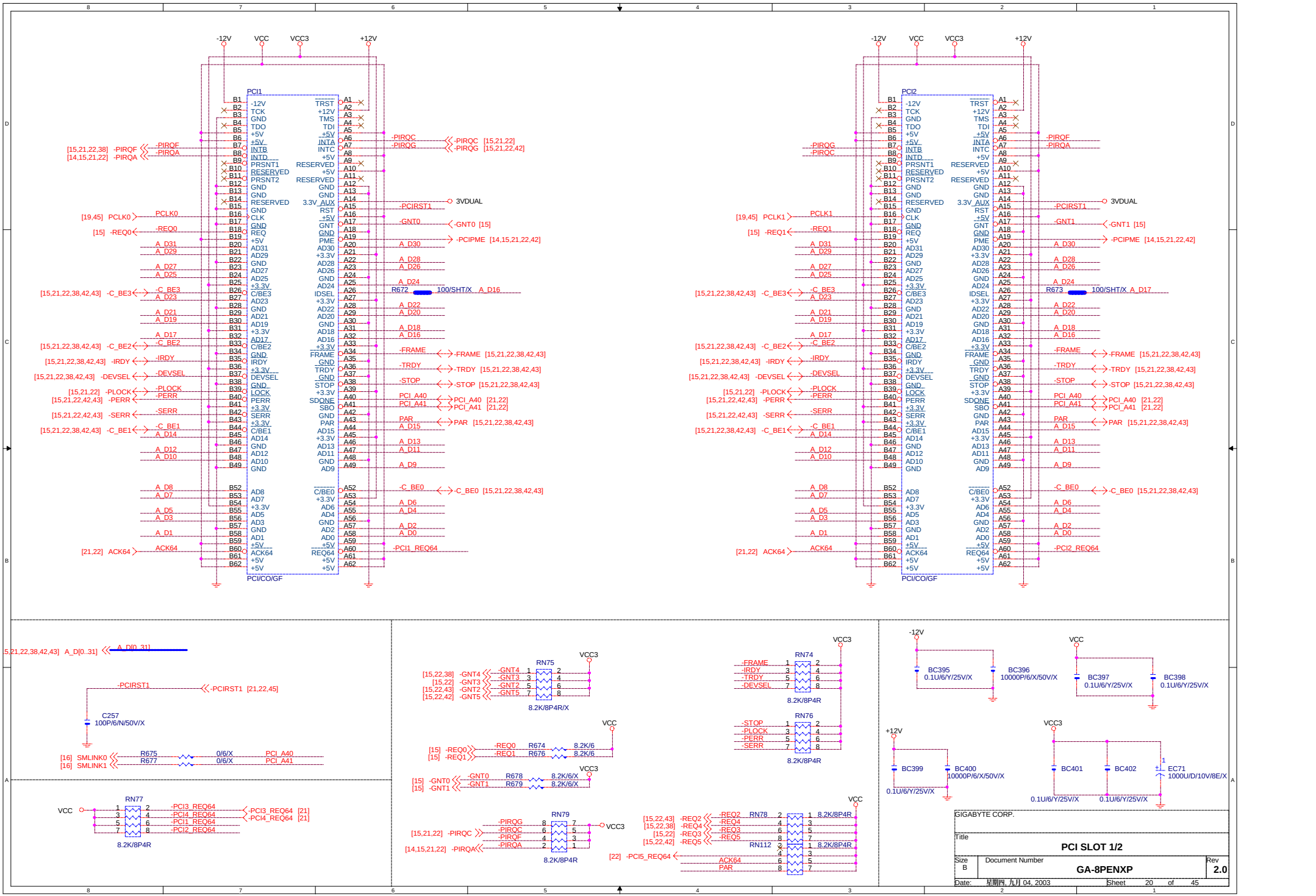
ICS + CYPRESS CO-LAYOUT

GIGABYTE CORP.

Title: CLOCK GENERATOR

Size: Custom | Document Number: GA-8PENXP | Rev: 2.0

Date: | Sheet 19 of 45


PCI1
PCI2
PCI/CO/GF
-12V
VCC
VCC3
+12V
3VDUAL
-PIRQF
-PIRQA
-PIRQC
-PIRQG
-PCIRST1
-GNT0
-PCIPME
A_D30
A_D28
A_D26
A_D24
R672 100/SHT/X A_D16
R673 100/SHT/X A_D17
A_D22
A_D20
A_D18
A_D16
-FRAME
-TRDY
-STOP
PCI_A40
PCI_A41
PAR
A_D15
A_D13
A_D11
A_D9
-C_BE0
A_D6
A_D4
A_D2
A_D0
-PCI1_REQ64
-PCI2_REQ64
PCLK0
PCLK1
-REQ0
-REQ1
-C_BE3
-C_BE2
-IRDY
-DEVSEL
-PLOCK
-PERR
-SERR
-C_BE1
A_D31
A_D29
A_D27
A_D25
A_D23
A_D21
A_D19
A_D17
A_D14
A_D12
A_D10
A_D8
A_D7
A_D5
A_D3
A_D1
ACK64
A_D[0..31]
-PCIRST1
C257
100P/6/N/50V/X
SMLINK0
SMLINK1
R675
R677
0/6/X
PCI_A40
PCI_A41
RN77
-PCI3_REQ64
-PCI4_REQ64
-PCI1_REQ64
-PCI2_REQ64
8.2K/8P4R
RN75
-GNT4
-GNT3
-GNT2
-GNT5
8.2K/8P4R/X
R674
R676
8.2K/6
R678
R679
8.2K/6/X
RN79
-PIRQG
-PIRQC
-PIRQF
-PIRQA
RN74
-FRAME
-IRDY
-TRDY
-DEVSEL
RN76
-STOP
-PLOCK
-PERR
-SERR
RN78
RN112
-REQ2
-REQ4
-REQ3
-REQ5
ACK64
PAR
BC395
0.1U/6/Y/25V/X
BC396
10000P/6/X/50V/X
BC397
BC398
BC399
BC400
BC401
BC402
EC71
1000U/D/10V/8E/X
GIGABYTE CORP.
Title
PCI SLOT 1/2
Size
B
Document Number
GA-8PENXP
Rev
2.0
Date:
星期四, 九月 04, 2003
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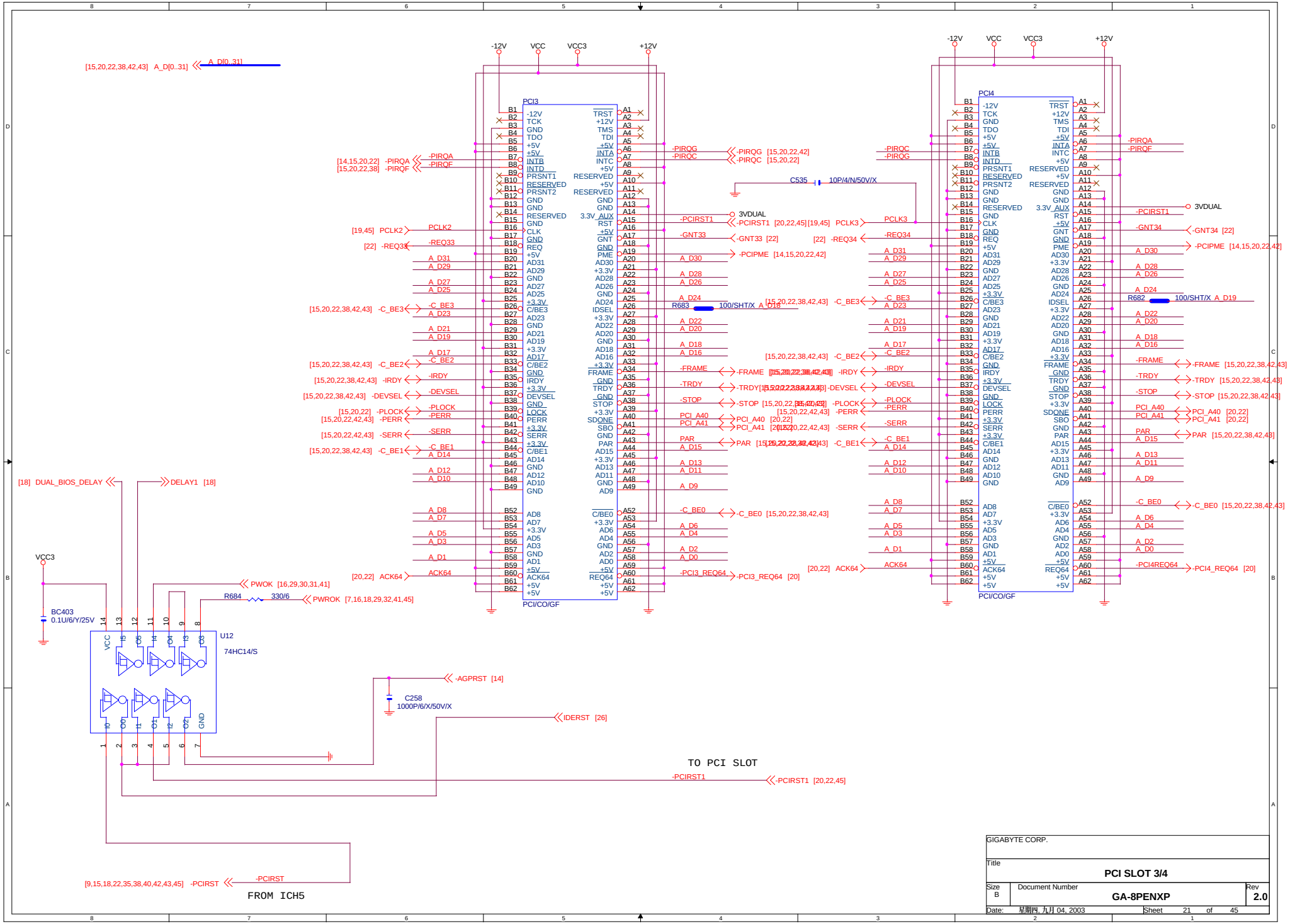
45


PCI3
PCI4
PCI/CO/GF
-12V
VCC
VCC3
+12V
3VDUAL
A_D[0..31]
[15,20,22,38,42,43] A_D[0..31]
C535 10P/4/N/50V/X
R683 100/SHT/X A_D16
R682 100/SHT/X A_D19
[19,45] PCLK2
[22] -REQ33
[14,15,20,22] -PIRQA
[15,20,22,38] -PIRQF
-PIRQG [15,20,22,42]
-PIRQC [15,20,22]
-PCIRST1 [20,22,45]
[19,45] PCLK3
[22] -REQ34
-GNT33 [22]
-PCIPME [14,15,20,22,42]
[15,20,22,38,42,43] -C_BE3
[15,20,22,38,42,43] -C_BE2
[15,20,22,38,42,43] -IRDY
[15,20,22,38,42,43] -DEVSEL
[15,20,22] -PLOCK
[15,20,22,42,43] -PERR
[15,20,22,42,43] -SERR
[15,20,22,38,42,43] -C_BE1
-C_BE0 [15,20,22,38,42,43]
PCI_A40 [20,22]
PCI_A41 [20,22]
PAR [15,20,22,38,42,43]
[20,22] ACK64
-PCI3_REQ64 [20]
-PCI4REQ64 [20]
-FRAME [15,20,22,38,42,43]
-TRDY [15,20,22,38,42,43]
-STOP [15,20,22,38,42,43]
[18] DUAL_BIOS_DELAY
DELAY1 [18]
PWOK [16,29,30,31,41]
PWROK [7,16,18,29,32,41,45]
R684 330/6
VCC3
BC403
0.1U/6/Y/25V
U12
74HC14/S
-AGPRST [14]
C258
1000P/6/X/50V/X
IDERST [26]
TO PCI SLOT
-PCIRST1 [20,22,45]
[9,15,18,22,35,38,40,42,43,45] -PCIRST
-PCIRST
FROM ICH5
GIGABYTE CORP.
Title
PCI SLOT 3/4
Size B
Document Number
GA-8PENXP
Rev 2.0
Date: 星期四, 九月 04, 2003
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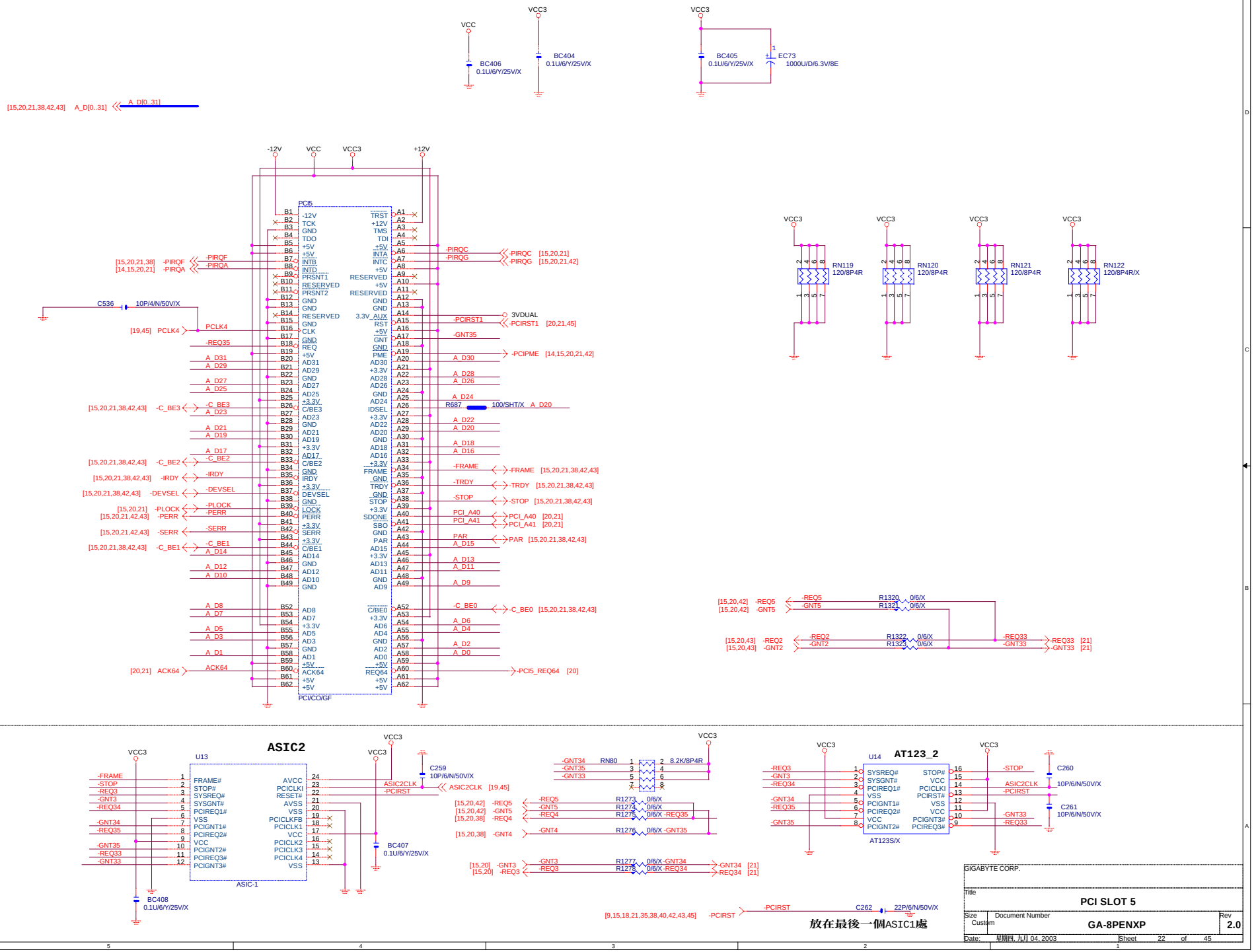
VCC
VCC3
BC406
0.1U/6/Y/25V/X
BC404
0.1U/6/Y/25V/X
BC405
0.1U/6/Y/25V/X
EC73
1000U/D/6.3V/8E
[15,20,21,38,42,43] A_D[0..31]
A_D[0..31]
-12V
VCC
VCC3
+12V
PCI5
PCI/CO/GF
C536
10P/4/N/50V/X
[19,45] PCLK4
PCLK4
-REQ35
[15,20,21,38] -PIRQF
[14,15,20,21] -PIRQA
-PIRQF
-PIRQA
-PIRQC
-PIRQG
[15,20,21]
[15,20,21,42]
-PCIRST1
3VDUAL
[20,21,45]
-GNT35
-PCIPME [14,15,20,21,42]
A_D30
A_D28
A_D26
A_D24
R687 100/SHT/X A_D20
A_D22
A_D20
A_D18
A_D16
-FRAME
-TRDY
-STOP
PCI_A40 [20,21]
PCI_A41 [20,21]
PAR
A_D15
A_D13
A_D11
A_D9
-C_BE0
A_D6
A_D4
A_D2
A_D0
-PCI5_REQ64 [20]
[15,20,21,38,42,43] -C_BE3
A_D23
A_D21
A_D19
A_D17
-C_BE2
-IRDY
-DEVSEL
-PLOCK
-PERR
-SERR
-C_BE1
A_D14
A_D12
A_D10
A_D8
A_D7
A_D5
A_D3
A_D1
[20,21] ACK64
ACK64
RN119 120/8P4R
RN120 120/8P4R
RN121 120/8P4R
RN122 120/8P4R/X
[15,20,42] -REQ5
[15,20,42] -GNT5
R1320 0/6/X
R1321 0/6/X
[15,20,43] -REQ2
[15,20,43] -GNT2
R1322 0/6/X
R1323 0/6/X
-REQ33 [21]
-GNT33 [21]
ASIC2
U13
ASIC-1
-FRAME
-STOP
-REQ3
-GNT3
-REQ34
-GNT34
-REQ35
-GNT35
-REQ33
-GNT33
FRAME#
STOP#
SYSREQ#
SYSGNT#
PCIREQ1#
PCIREQ2#
PCIGNT1#
PCIGNT2#
PCIREQ3#
PCIGNT3#
AVCC
PCICLKI
RESET#
AVSS
PCICLKFB
PCICLK1
PCICLK2
PCICLK3
PCICLK4
ASIC2CLK
-PCIRST
C259
10P/6/N/50V/X
ASIC2CLK [19,45]
BC407
0.1U/6/Y/25V/X
BC408
0.1U/6/Y/25V/X
RN80 8.2K/8P4R
R1273 0/6/X
R1274 0/6/X
R1275 0/6/X
R1276 0/6/X
R1277 0/6/X
R1278 0/6/X
[15,20,42] -REQ5
[15,20,42] -GNT5
[15,20,38] -REQ4
[15,20,38] -GNT4
[15,20] -GNT3
[15,20] -REQ3
-REQ35
-GNT35
-GNT34 [21]
-REQ34 [21]
U14
AT123_2
AT123S/X
SYSREQ#
SYSGNT#
PCIREQ1#
VSS
PCIGNT1#
PCIREQ2#
VCC
PCIGNT2#
STOP#
PCICLKI
PCIRST#
PCIGNT3#
PCIREQ3#
C260
C261
10P/6/N/50V/X
[9,15,18,21,35,38,40,42,43,45] -PCIRST
C262
22P/6/N/50V/X
放在最後一個ASIC1處
GIGABYTE CORP.
Title
PCI SLOT 5
Size
Custom
Document Number
GA-8PENXP
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2.0
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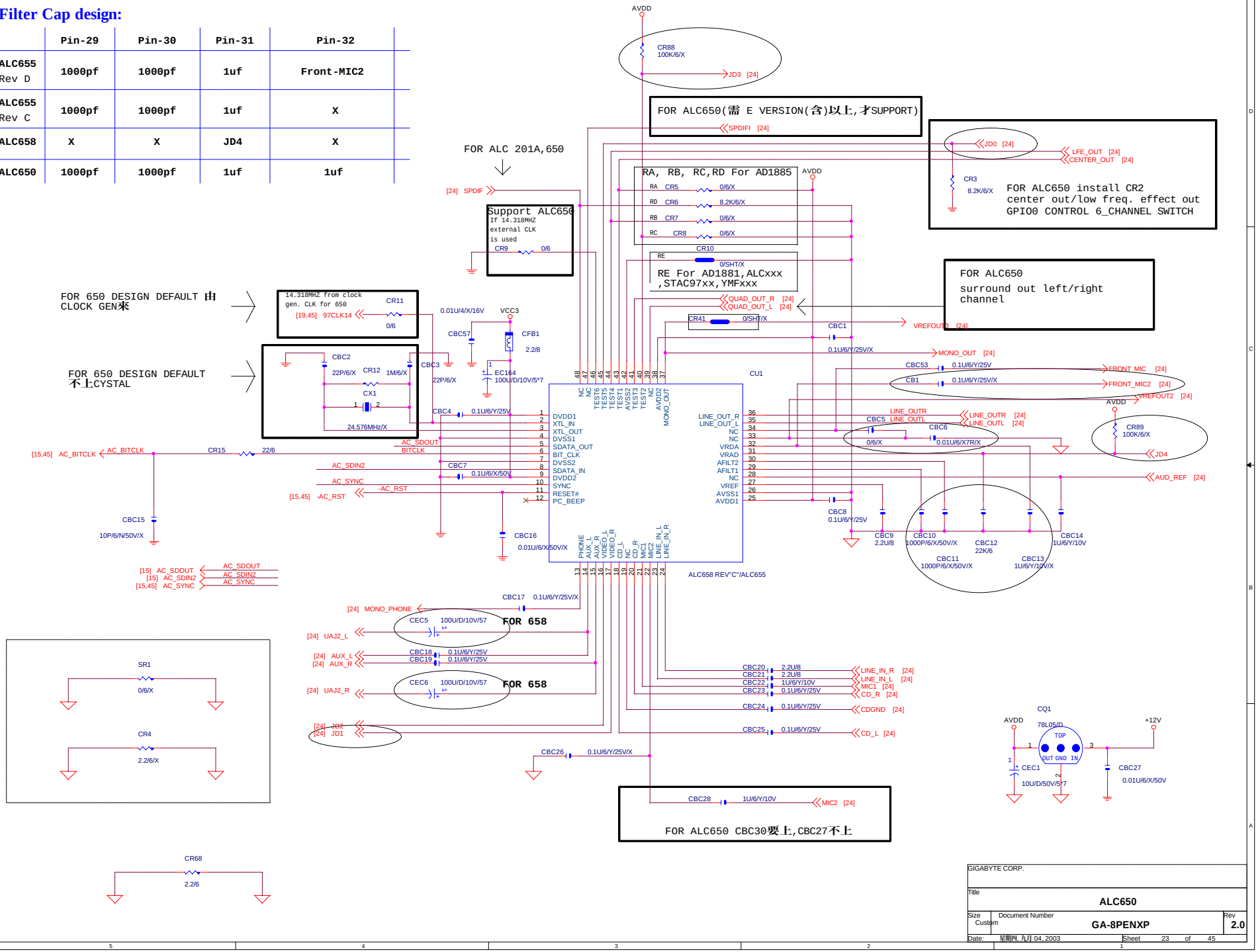
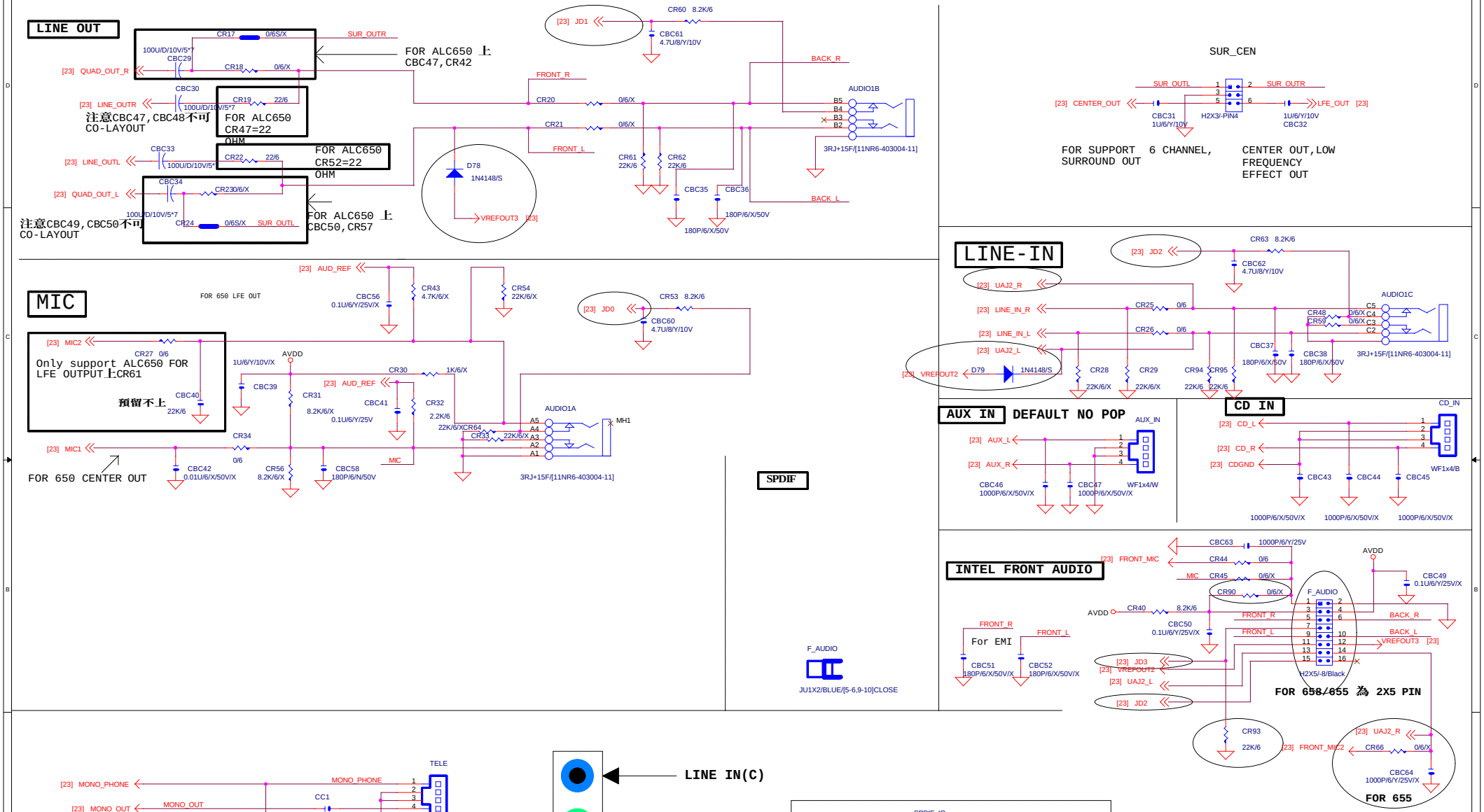
Filter Cap design:

	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



GIGABYTE CORP.			
Title: ALC650			
Size: Custom	Document Number: GA-8PENXP		Rev: 2.0
Date: 星期四, 九月 04, 2003	Sheet 23 of 45		



Title	AUDIO OUTPUT,GAME PORT
Size	Custom
Document Number	GA-8PENXP
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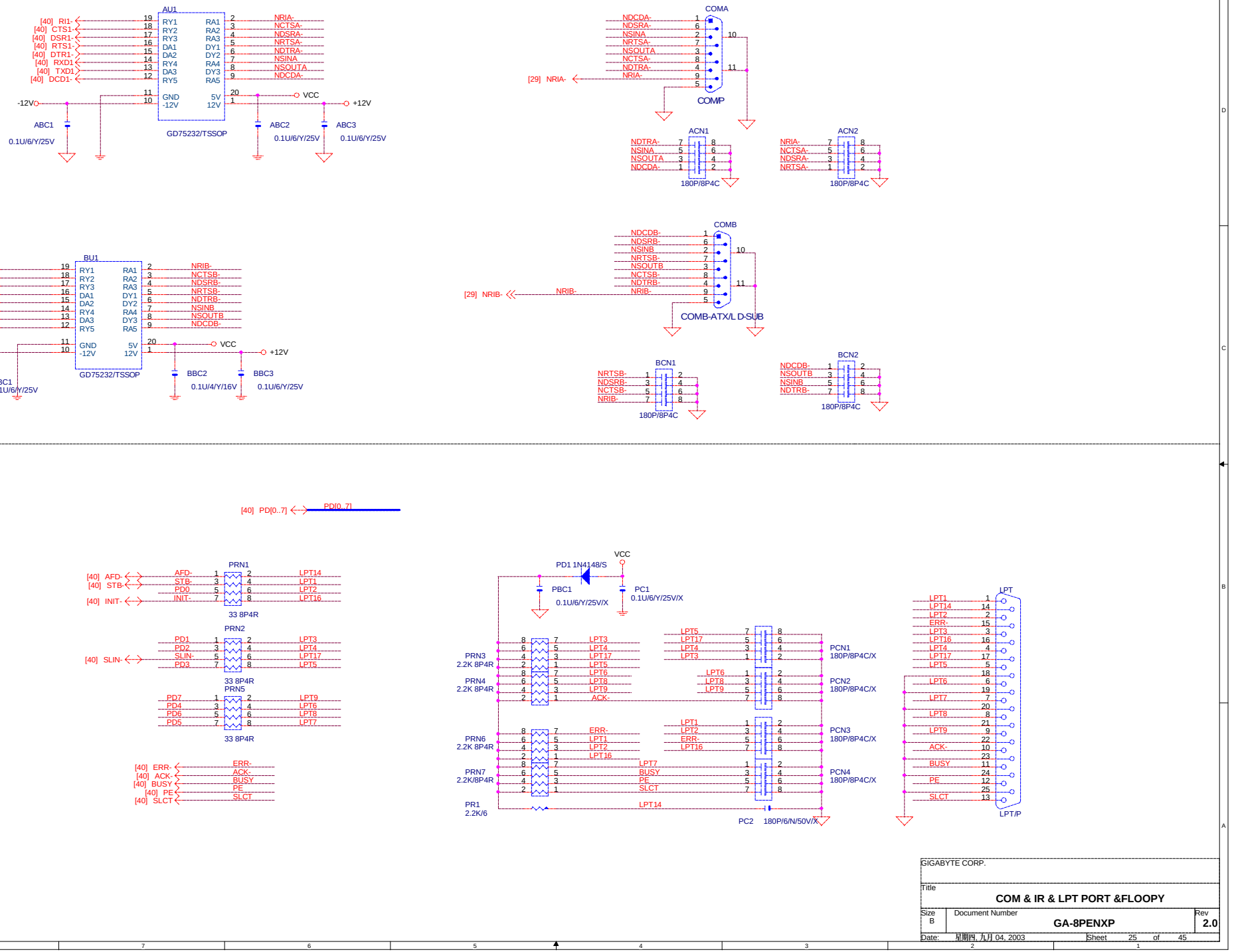
GIGABYTE CORP.



GIGABYTE CORP.

Title: **COM & IR & LPT PORT &FLOOPY**

Size	Document Number	Rev
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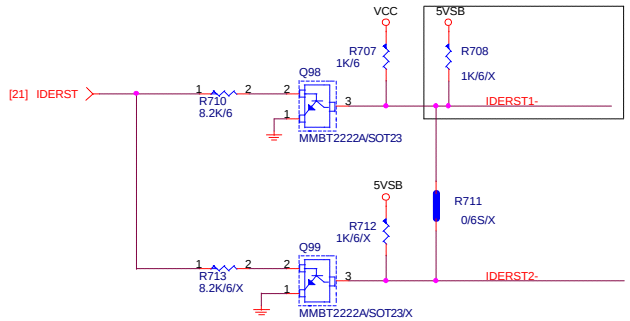
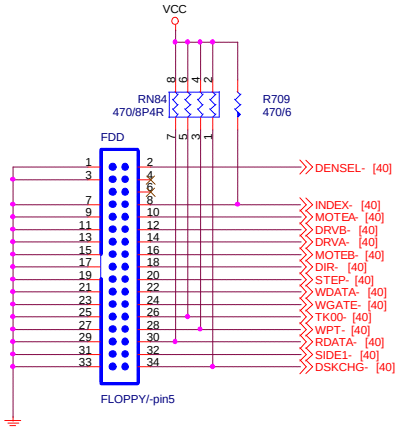
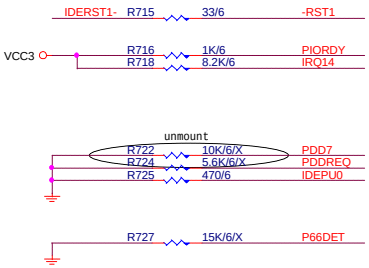
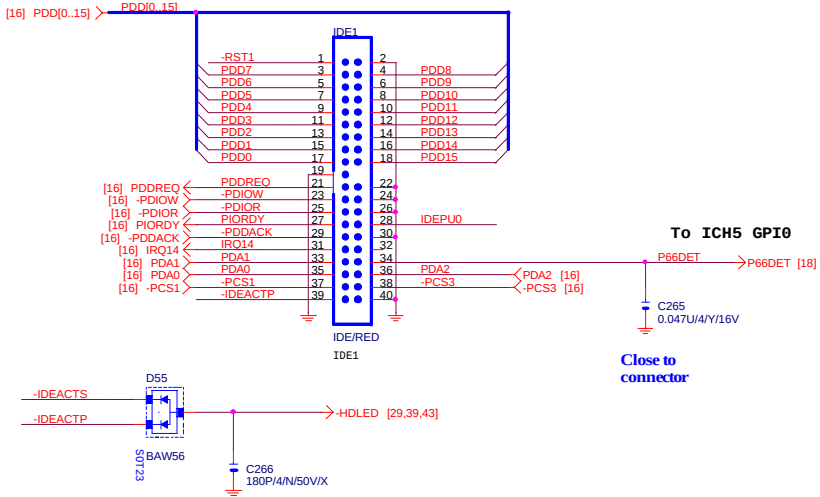


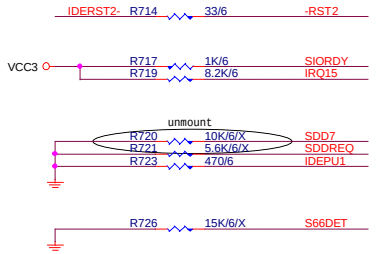
SUPPORT POWER OFF PLAY CD



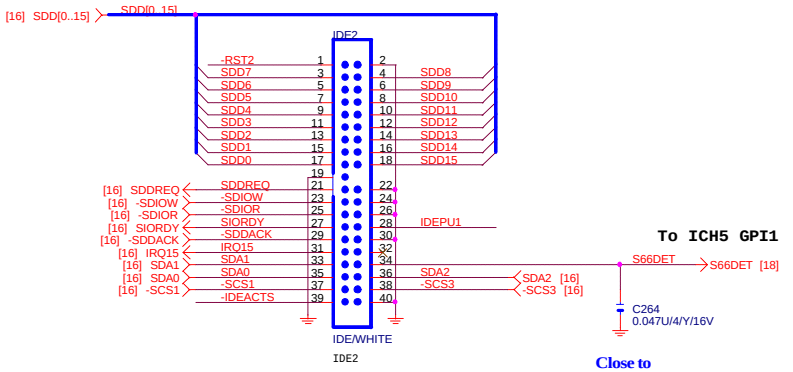


PRIMARY IDE CONNECTOR





SECONDARY IDE CONNECTOR



GIGABYTE CORP.		
Title: IDE CONNECTOR		
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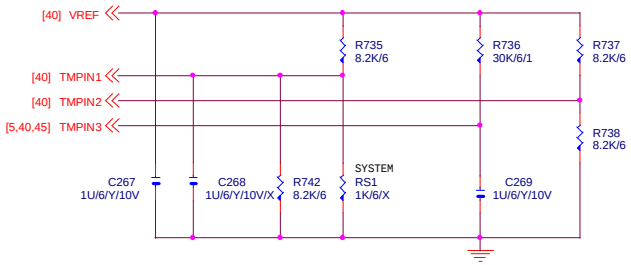
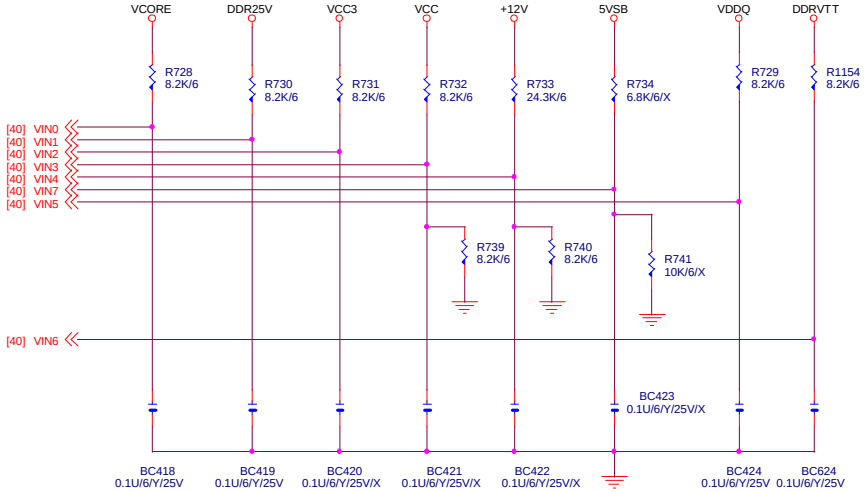
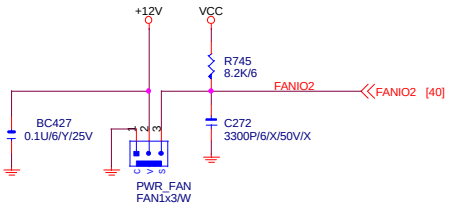
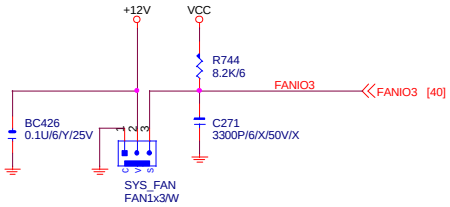
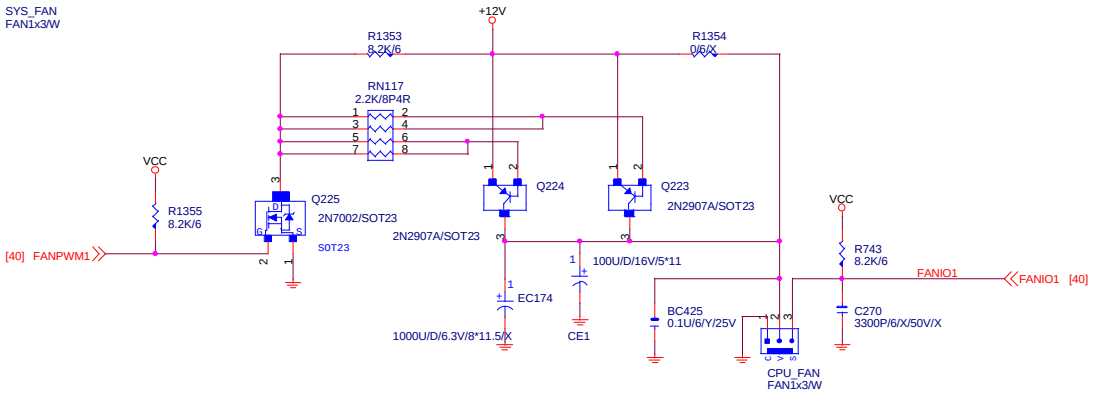
Hardware Monitor circuits

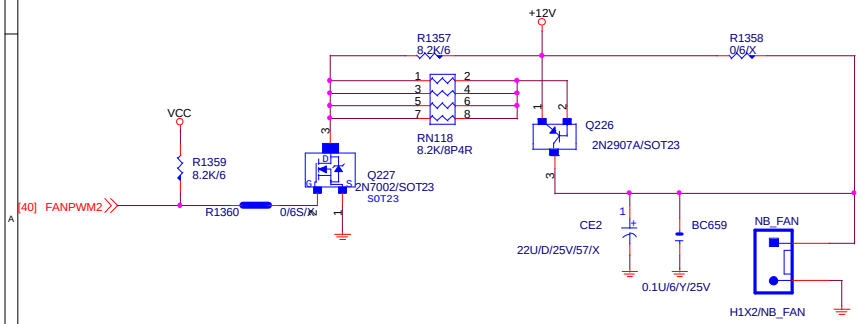


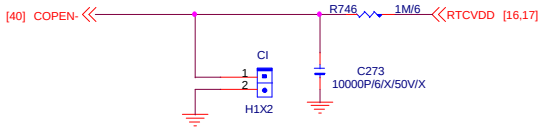












GIGABYTE CORP.		
Title: FAN/HWMO		
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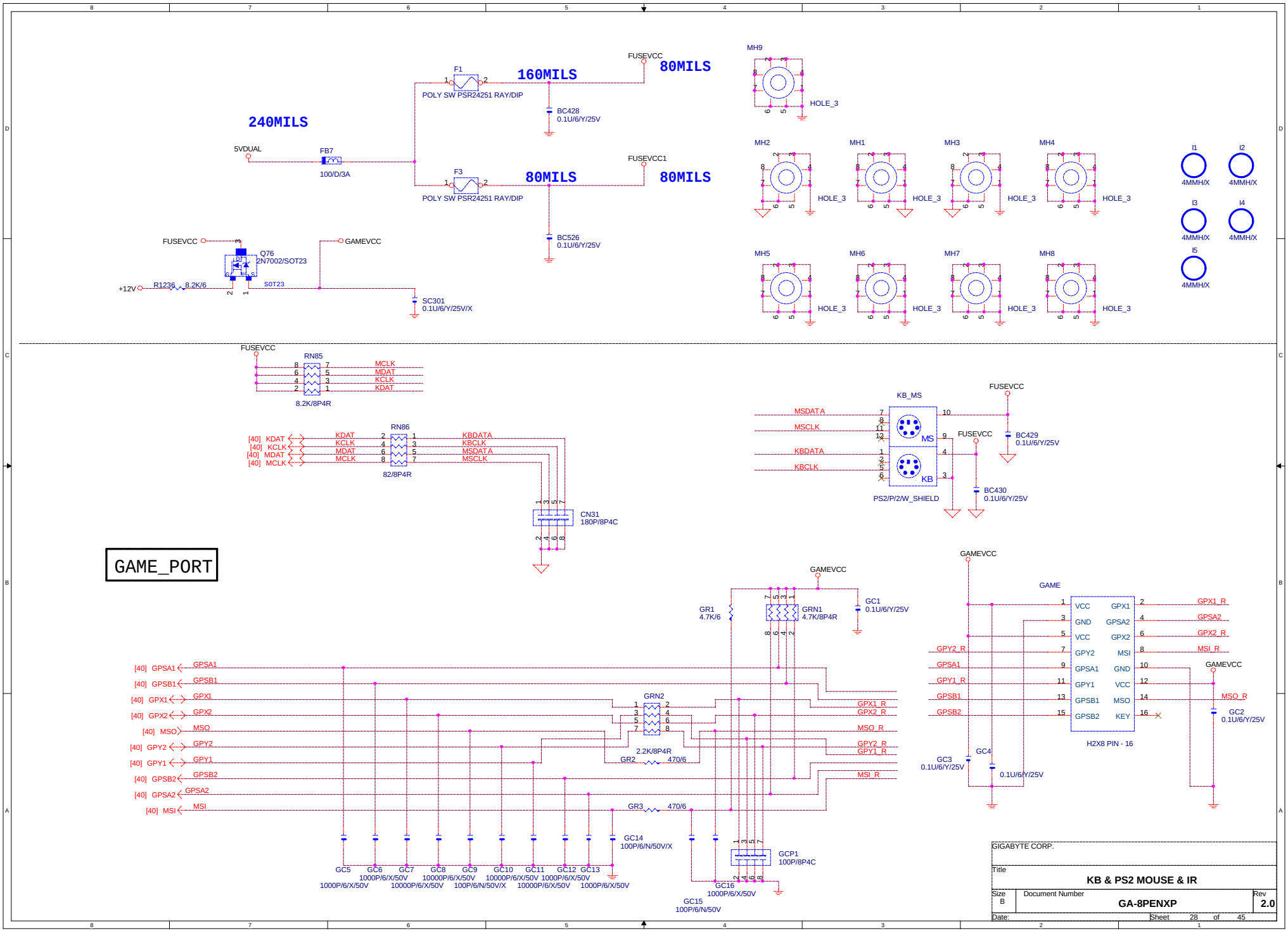
240MILS
160MILS
80MILS
80MILS
80MILS
5VDUAL
FB7
100/D/3A
F1
POLY SW PSR24251 RAY/DIP
F3
POLY SW PSR24251 RAY/DIP
FUSEVCC
FUSEVCC1
BC428
0.1U/6/Y/25V
BC526
0.1U/6/Y/25V
FUSEVCC
Q76
2N7002/SOT23
GAMEVCC
+12V
R1236
8.2K/6
S0T23
SC301
0.1U/6/Y/25V/X
MH9
HOLE_3
MH2
MH1
MH3
MH4
MH5
MH6
MH7
MH8
I1
I2
I3
I4
I5
4MMH/X
RN85
MCLK
MDAT
KCLK
KDAT
8.2K/8P4R
RN86
[40] KDAT
[40] KCLK
[40] MDAT
[40] MCLK
KBDATA
KBCLK
MSDATA
MSCLK
82/8P4R
CN31
180P/8P4C
KB_MS
MSDATA
MSCLK
KBDATA
KBCLK
MS
KB
PS2/P/2/W_SHIELD
FUSEVCC
BC429
0.1U/6/Y/25V
BC430
0.1U/6/Y/25V
GAME_PORT
GAMEVCC
GR1
4.7K/6
GRN1
4.7K/8P4R
GC1
0.1U/6/Y/25V
[40] GPSA1
[40] GPSB1
[40] GPX1
[40] GPX2
[40] MSO
[40] GPY2
[40] GPY1
[40] GPSB2
[40] GPSA2
[40] MSI
GRN2
2.2K/8P4R
GR2
470/6
GR3
470/6
GPX1_R
GPX2_R
MSO_R
GPY2_R
GPY1_R
MSI_R
GC14
100P/6/N/50V/X
GC5
1000P/6/X/50V
GC6
1000P/6/X/50V
GC7
10000P/6/X/50V
GC8
10000P/6/X/50V
GC9
100P/6/N/50V/X
GC10
10000P/6/X/50V
GC11
10000P/6/X/50V
GC12
1000P/6/X/50V
GC13
1000P/6/X/50V
GCP1
100P/8P4C
GC16
1000P/6/X/50V
GC15
100P/6/N/50V
GAMEVCC
GAME
VCC
GND
VCC
GPY2
GPSA1
GPY1
GPSB1
GPSB2
GPX1
GPSA2
GPX2
MSI
GND
VCC
MSO
KEY
GPX1_R
GPSA2
GPX2_R
MSI_R
GAMEVCC
MSO_R
GC2
0.1U/6/Y/25V
H2X8 PIN - 16
GC3
0.1U/6/Y/25V
GC4
0.1U/6/Y/25V
GIGABYTE CORP.
Title
KB & PS2 MOUSE & IR
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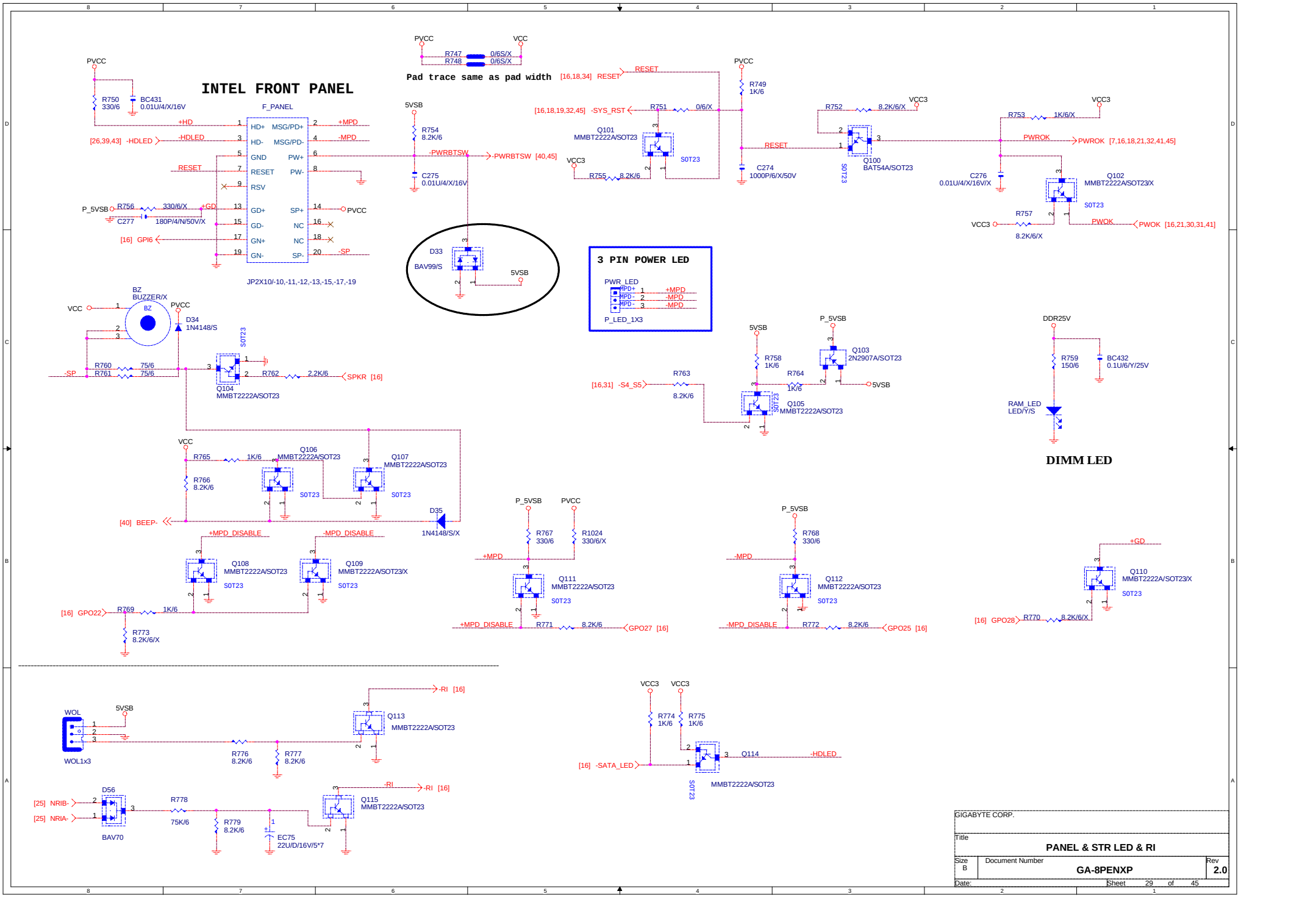
INTEL FRONT PANEL
F_PANEL
JP2X10/-10,-11,-12,-13,-15,-17,-19
Pad trace same as pad width
3 PIN POWER LED
PWR_LED
P_LED_1X3
DIMM LED
PANEL & STR LED & RI
GIGABYTE CORP.
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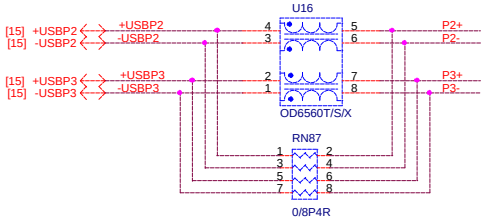
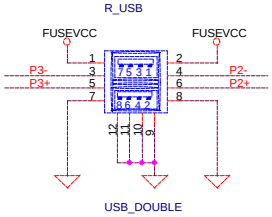
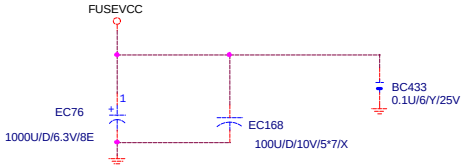
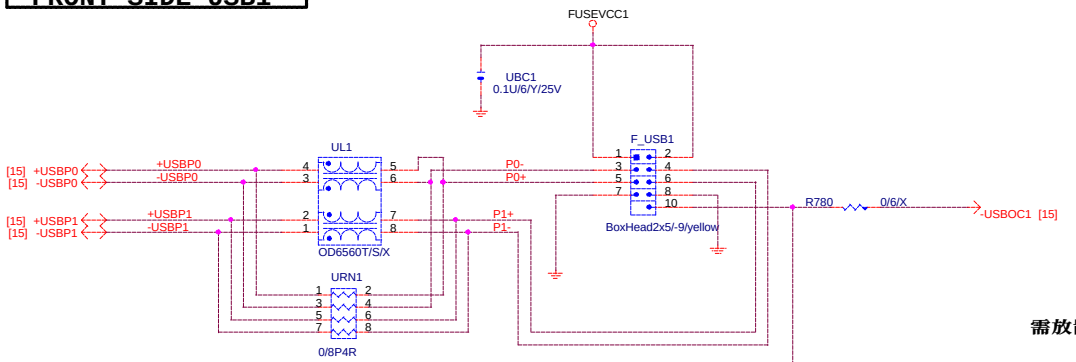
REAR USB

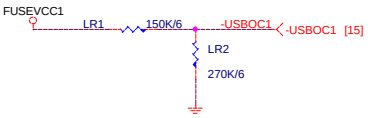




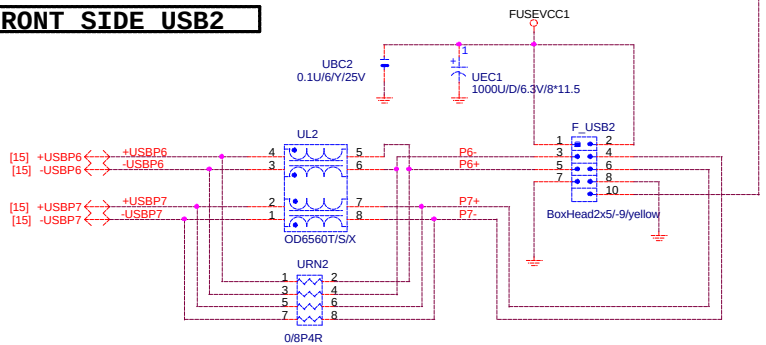


FRONT SIDE USB1

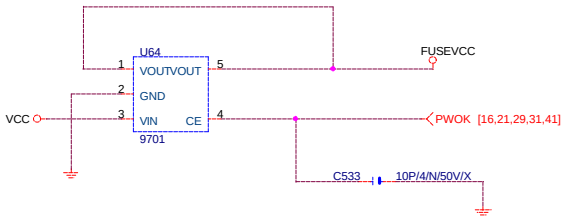




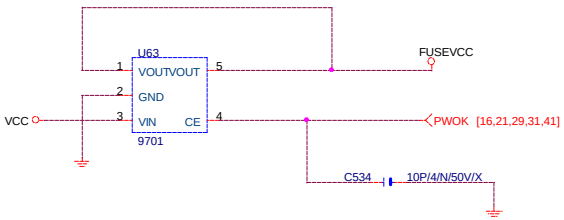
FRONT SIDE USB2



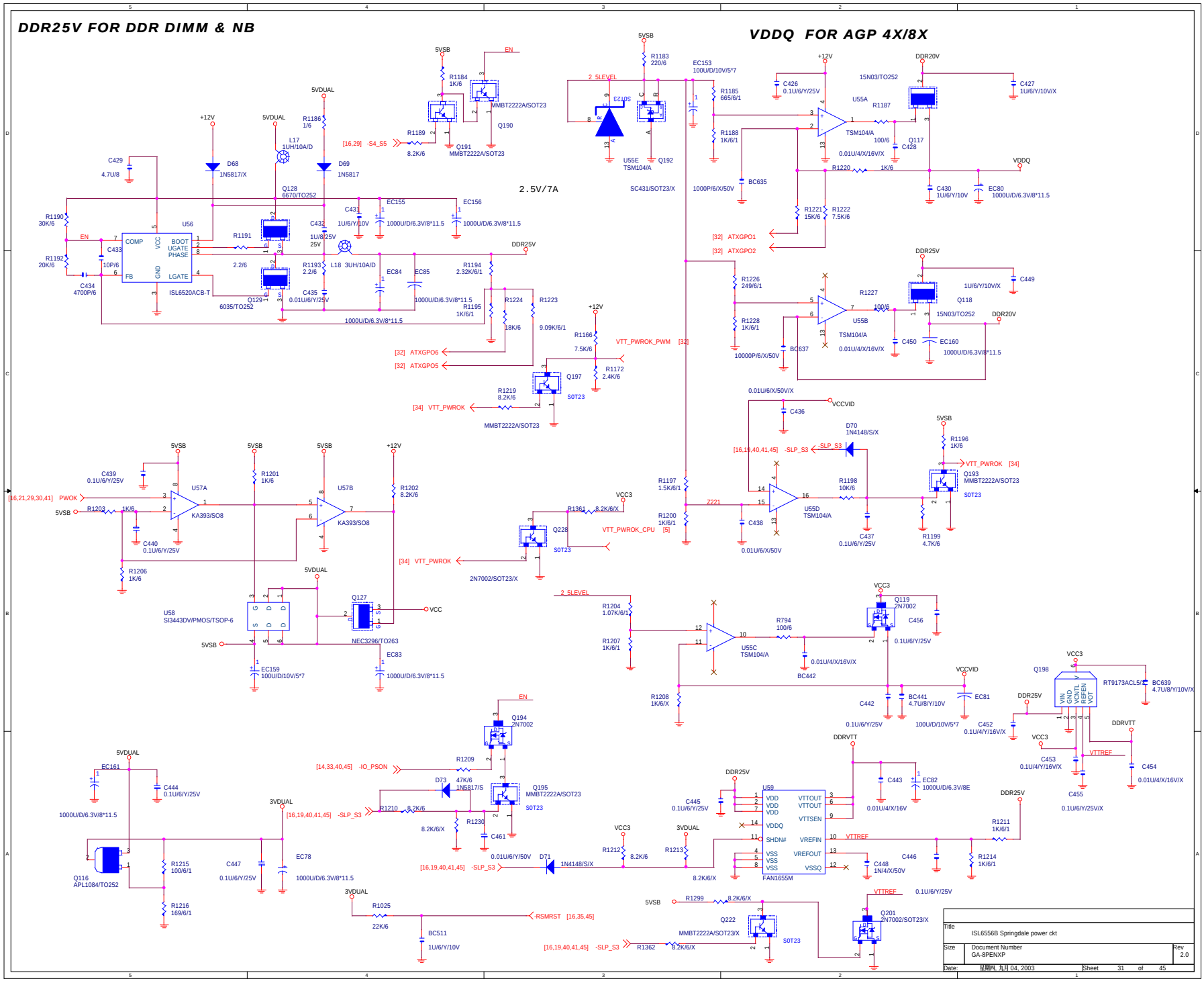
需放置在 REAR USB

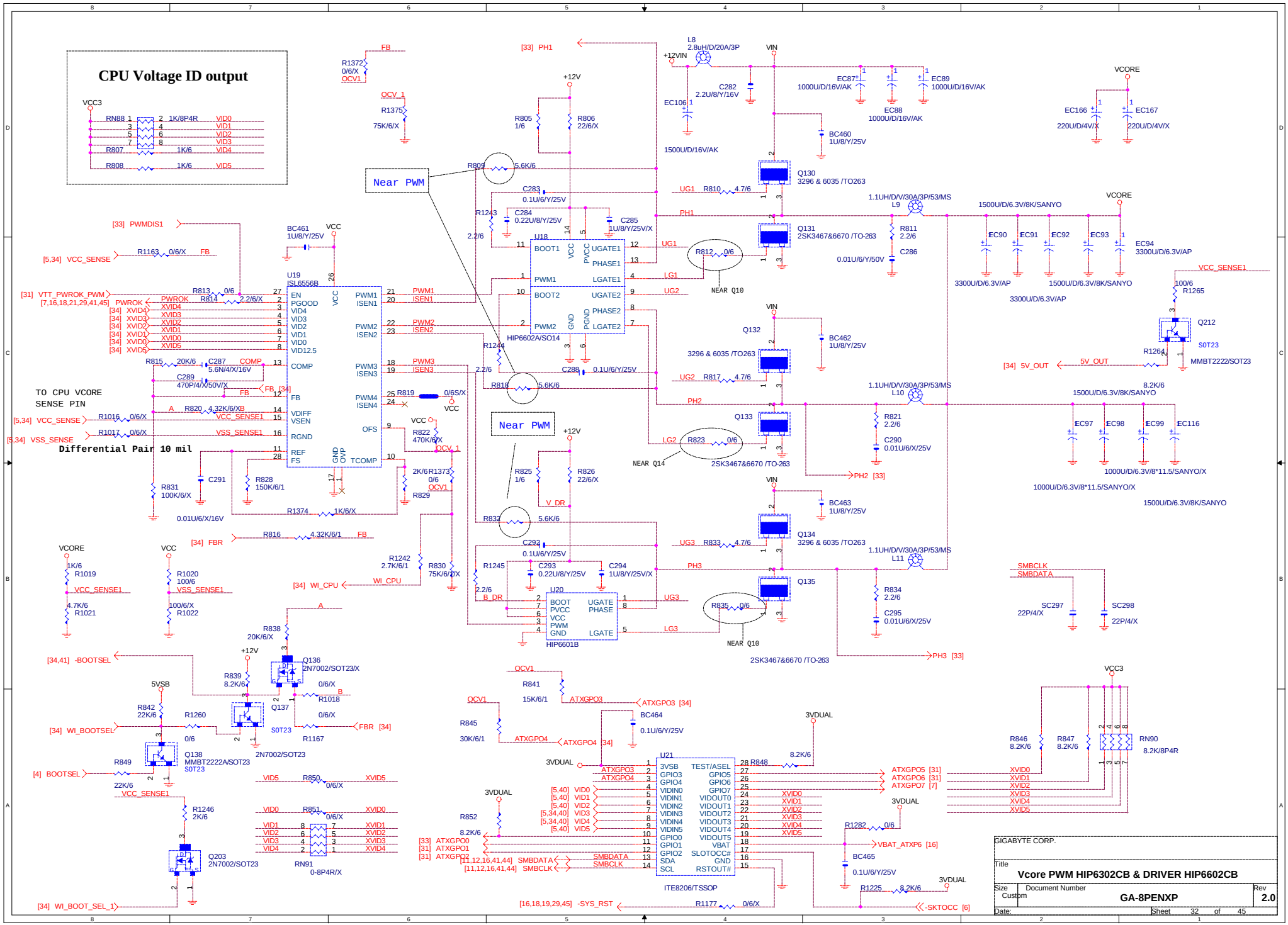


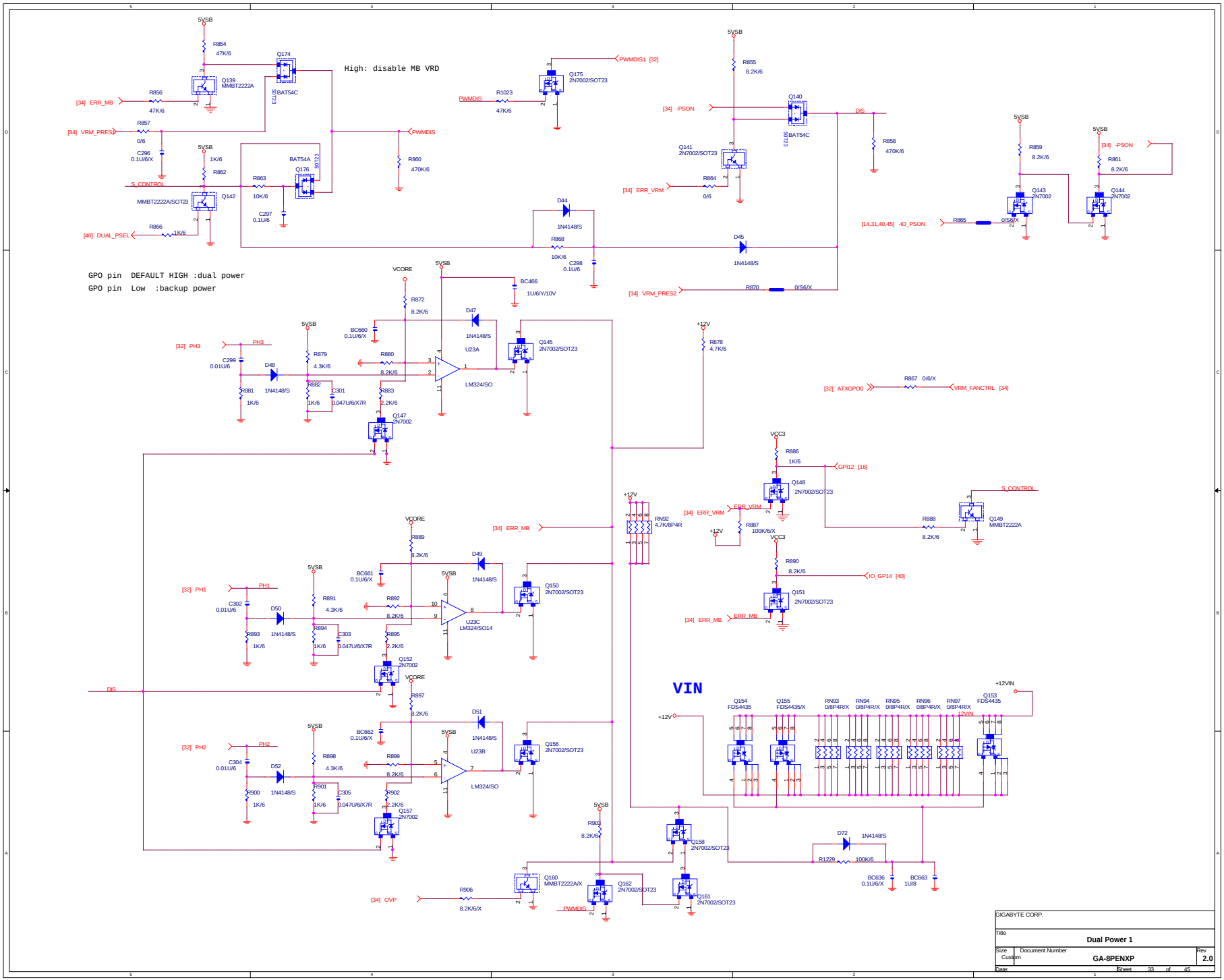
需放置在 REAR USB



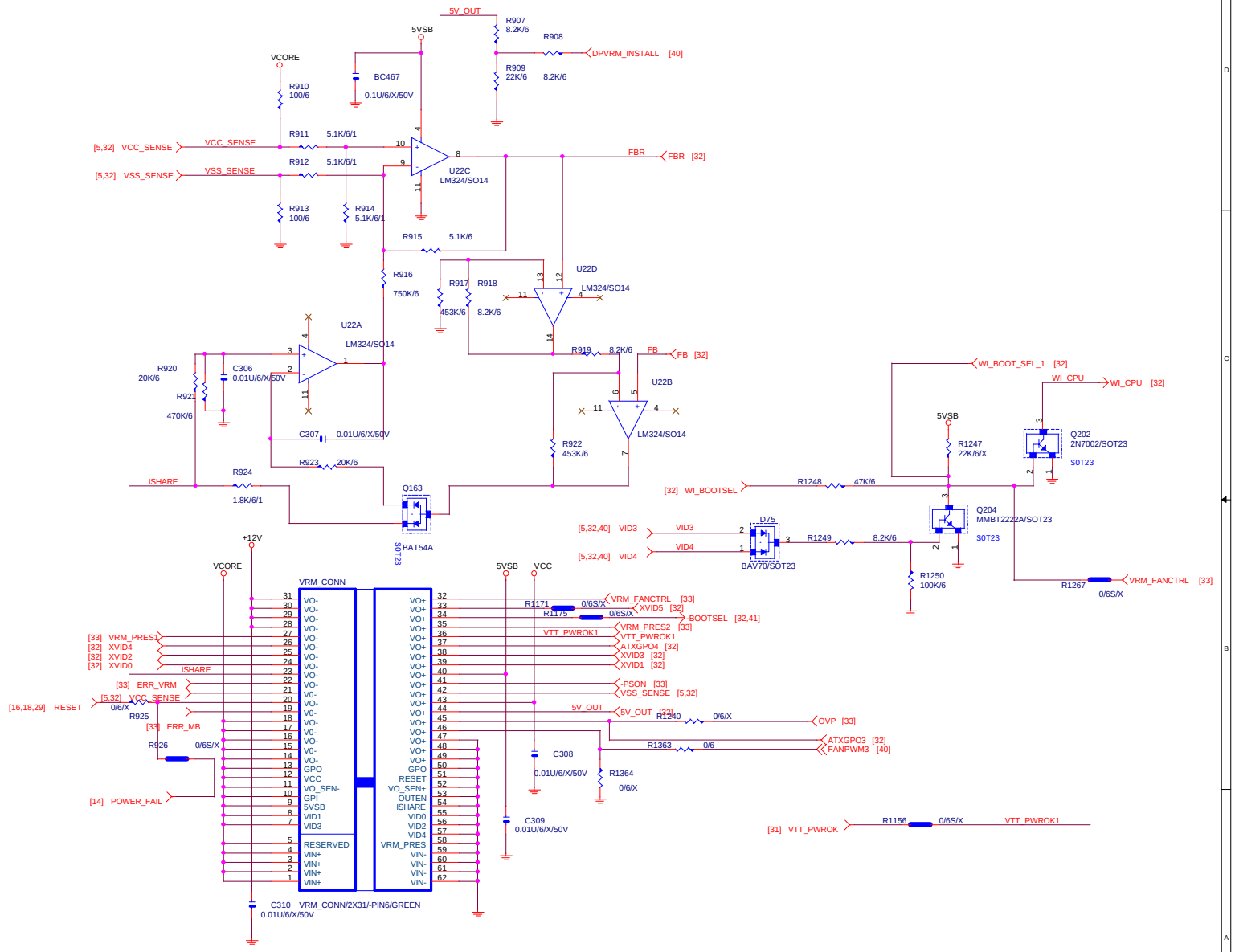
GIGABYTE CORP.		
Title: ICH USB PORT		
Size: B	Document Number: GA-8PENXP	Rev: 2.0
Date:	Sheet 30 of 45	


DDR25V FOR DDR DIMM & NB
VDDQ FOR AGP 4X/8X
2.5V/7A
ISL6520ACB-T
SC431/SOT23/X
TSM104A
KA393/SO8
SI3443DV/PMOS/TSOP-6
NEC3296/TO263
FAN1655M
RT9173ACLS/X
Title
ISL6556B Springdale power ckt
Size
Document Number
GA-8PENXP
Rev
2.0
Date:
Sheet
31
of
45

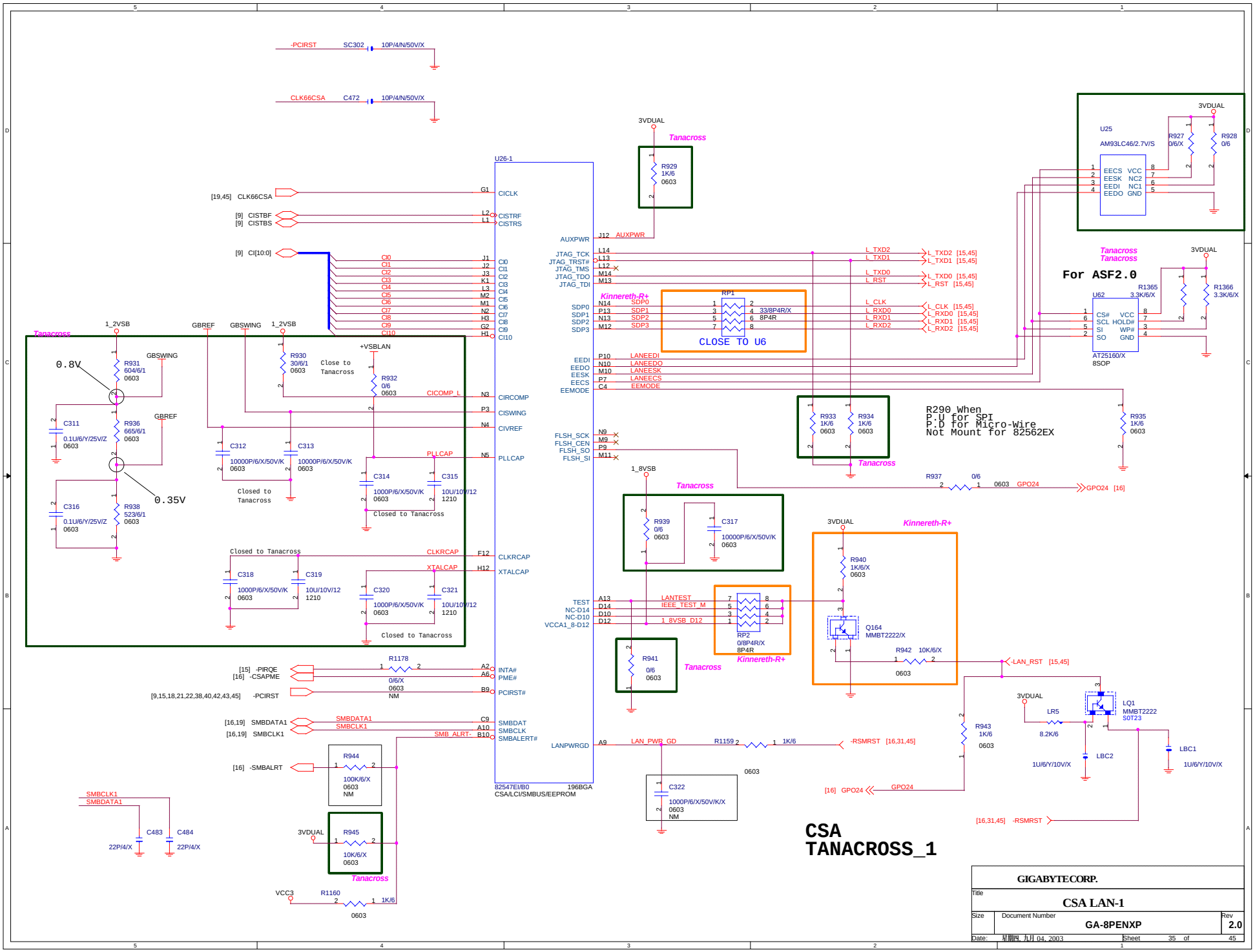

CPU Voltage ID output
VCC3
RN88
1K/8P4R
VID0
VID1
VID2
VID3
VID4
R807
1K/6
R808
1K/6
VID5
Near PWM
Near PWM
TO CPU VCORE SENSE PIN
Differential Pair 10 mil
U19
ISL6556B
U18
HIP6602A/SO14
U20
HIP6601B
U21
ITE8206/TSSOP
RN91
0-8P4R/X
RN90
8.2K/8P4R
Q130
3296 & 6035 /TO263
Q131
2SK3467&6670 /TO-263
Q132
3296 & 6035 /TO263
Q133
2SK3467&6670 /TO-263
Q134
3296 & 6035 /TO263
Q135
2SK3467&6670 /TO-263
Q136
2N7002/SOT23/X
Q137
S0T23
Q138
MMBT2222A/SOT23
S0T23
Q203
2N7002/SOT23
Q212
S0T23
MMBT2222/SOT23
NEAR Q10
NEAR Q14
NEAR Q10
L8
2.8uH/D/20A/3P
L9
1.1UH/D/V/30A/3P/53/MS
L10
1.1UH/D/V/30A/3P/53/MS
L11
1.1UH/D/V/30A/3P/53/MS
1500U/D/16V/AK
1000U/D/16V/AK
1500U/D/6.3V/8K/SANYO
3300U/D/6.3V/AP
1000U/D/6.3V/8*11.5/SANYO/X
220U/D/4V/X
0.01U/6/Y/50V
0.01U/6/X/16V
0.01U/6/X/25V
0.1U/6/Y/25V
22P/4/X
GIGABYTE CORP.
Vcore PWM HIP6302CB & DRIVER HIP6602CB
GA-8PENXP
Rev 2.0
Sheet 32 of 45

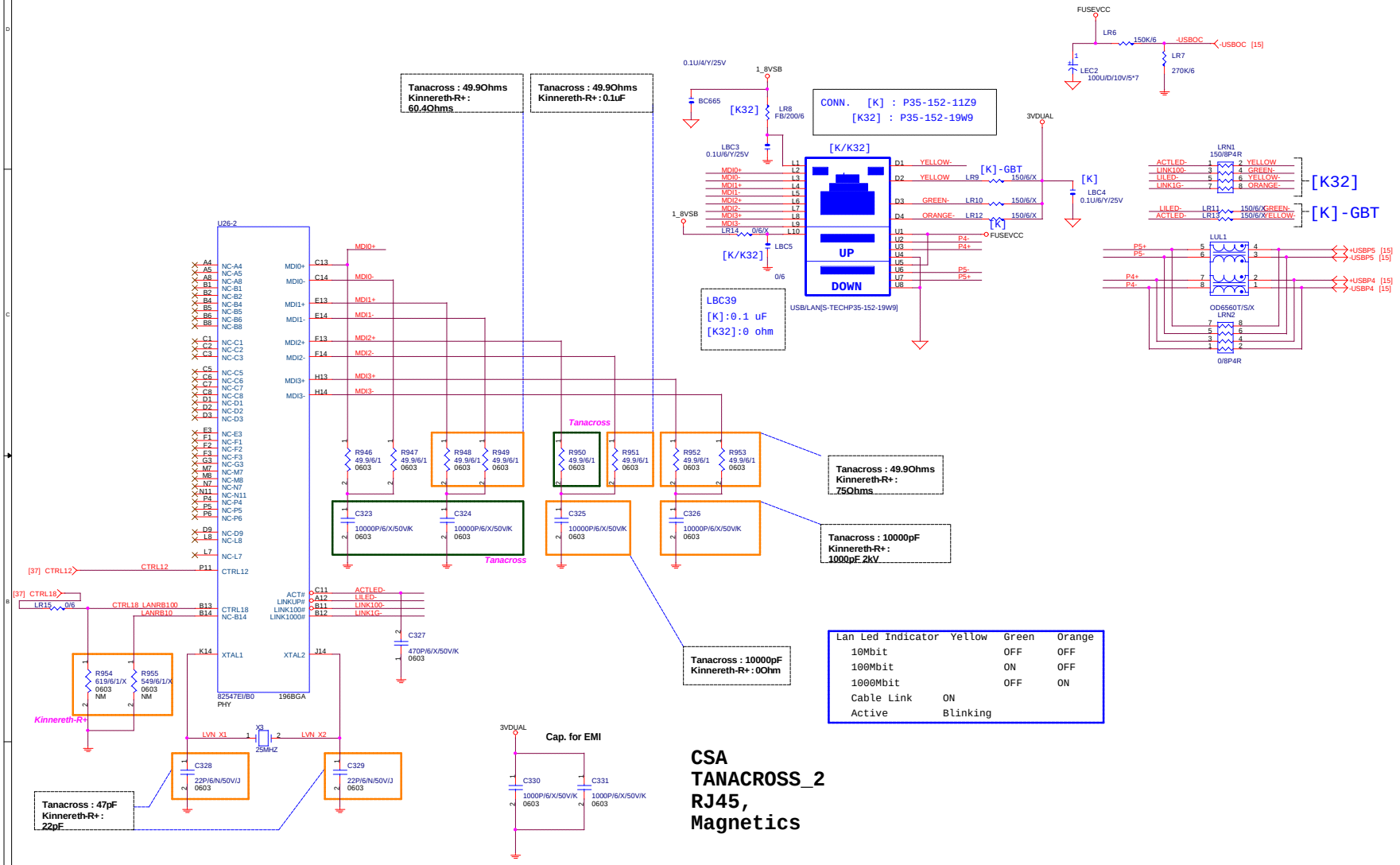

High: disable MB VRD
GPO pin DEFAULT HIGH :dual power
GPO pin Low :backup power
VIN
Dual Power 1
GIGABYTE CORP.
GA-8PENXP
Rev 2.0
Sheet 33 of 45

DUAL POWER



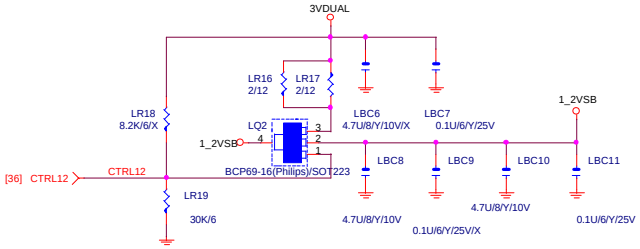
GIGABYTE CORP.		
Title	Vcore PWM HIP6301+6601	
Size: Custom	Document Number: GA-8PENXP	Rev: 2.0
Date: 星期四, 九月 04, 2003	Sheet 34 of 45	


-PCIRST SC302 10P/4/N/50V/X
CLK66CSA C472 10P/4/N/50V/X
U26-1
CICLK
CISTRF
CISTRS
CI0
CI1
CI2
CI3
CI4
CI5
CI6
CI7
CI8
CI9
CI10
AUXPWR
JTAG_TCK
JTAG_TRST#
JTAG_TMS
JTAG_TDO
JTAG_TDI
SDP0
SDP1
SDP2
SDP3
EEDI
EEDO
EESK
EECS
EEMODE
FLSH_SCK
FLSH_CEN
FLSH_SO
FLSH_SI
CIRCOMP
CISWING
CIVREF
PLLCAP
CLKRCAP
XTALCAP
INTA#
PME#
PCIRST#
SMBDAT
SMBCLK
SMBALERT#
TEST
NC-D14
NC-D10
VCCA1_8-D12
LANPWRGD
82547EI/B0 196BGA
CSA/LCI/SMBUS/EEPROM
3VDUAL
Tanacross
R929 1K/6 0603
L_TXD2 [15,45]
L_TXD1 [15,45]
L_TXD0 [15,45]
L_RST [15,45]
L_CLK [15,45]
L_RXD0 [15,45]
L_RXD1 [15,45]
L_RXD2 [15,45]
RP1 33/8P4R/X 8P4R
CLOSE TO U6
U25 AM93LC46/2.7V/S
R927 0/6/X
R928 0/6
Kinnereth-R+
For ASF2.0
U62 AT25160/X 8SOP
R1365 3.3K/6/X
R1366 3.3K/6/X
R290 When
P.U for SPI
P.D for Micro-Wire
Not Mount for 82562EX
R933 1K/6 0603
R934 1K/6 0603
R935 1K/6 0603
R937 0/6 0603 GPO24
GPO24 [16]
1_2VSB
1_8VSB
0.8V
0.35V
GBSWING
GBREF
R931 604/6/1 0603
R936 665/6/1 0603
R938 523/6/1 0603
C311 0.1U/6/Y/25V/Z 0603
C316 0.1U/6/Y/25V/Z 0603
R930 30/6/1 0603
Close to Tanacross
+VSBLAN
R932 0/6 0603
C312 10000P/6/X/50V/K 0603
C313 10000P/6/X/50V/K 0603
Closed to Tanacross
C314 1000P/6/X/50V/K 0603
C315 10U/10Y/12 1210
C318 1000P/6/X/50V/K 0603
C319 10U/10V/12 1210
C320 1000P/6/X/50V/K 0603
C321 10U/10Y/12 1210
R939 0/6 0603
C317 10000P/6/X/50V/K 0603
R940 1K/6/X 0603
Q164 MMBT2222/X
R942 10K/6/X 0603
R941 0/6 0603
RP2 0/8P4R/X 8P4R
LANTEST
IEEE_TEST_M
1_8VSB_D12
-LAN_RST [15,45]
-RSMRST [16,31,45]
R1159 1K/6 0603
R943 1K/6 0603
LR5 8.2K/6
LQ1 MMBT2222 S0T23
LBC1 1U/6/Y/10V/X
LBC2 1U/6/Y/10V/X
GPO24
[16] GPO24
[16,31,45] -RSMRST
R1178 0/6/X 0603 NM
[15] -PIRQE
[16] -CSAPME
[9,15,18,21,22,38,40,42,43,45] -PCIRST
[16,19] SMBDATA1
[16,19] SMBCLK1
SMB_ALRT-
[16] -SMBALRT
R944 100K/6/X 0603 NM
R945 10K/6/X 0603
Tanacross
SMBCLK1
SMBDATA1
C483 22P/4/X
C484 22P/4/X
VCC3
R1160 1K/6 0603
C322 1000P/6/X/50V/K/X 0603 NM
CSA
TANACROSS_1
GIGABYTE CORP.
Title
CSA LAN-1
Size
Document Number
GA-8PENXP
Rev
2.0
Date: 星期四, 九月 04, 2003
Sheet 35 of 45

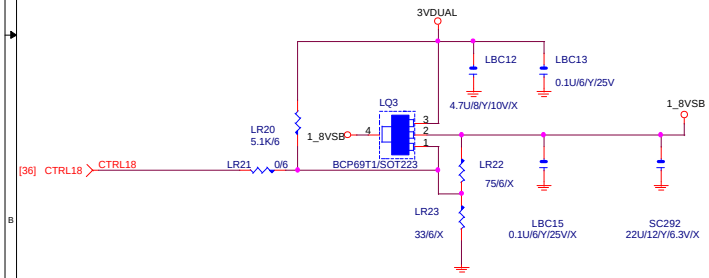


GIGABYTE CORP.	
Title	CSA LAN-2
Size	Document Number: GA-8PENXP
Rev	2.0
Date: 星期四, 九月 04, 2003	Sheet 36 of 45

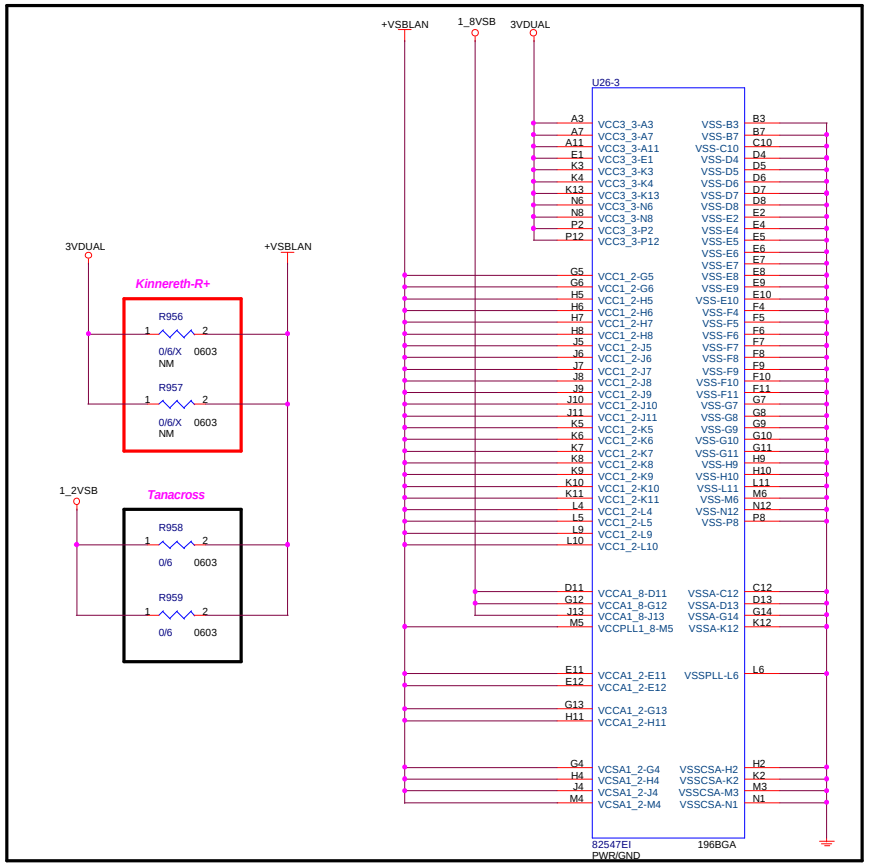
+1.2VSB
Max800mA
Typ500mA



+1.8VSB
Max500mA
Typ250mA

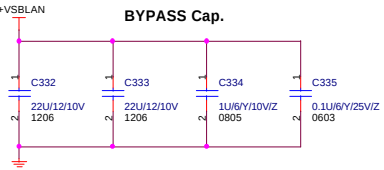


Tanacross



+VSBLAN

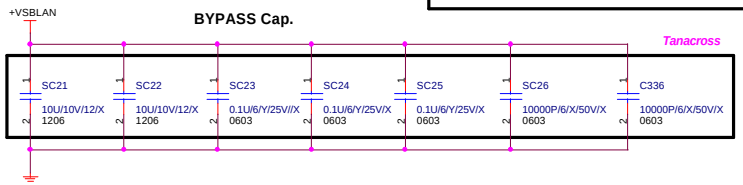
BYPASS Cap.



+VSBLAN

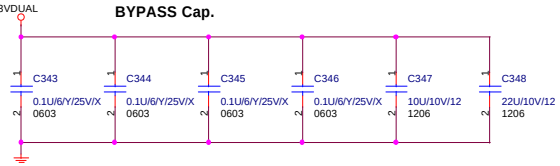
BYPASS Cap.

Tanacross



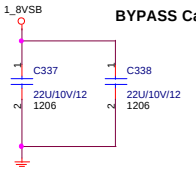
3VDUAL

BYPASS Cap.



1_8VSB

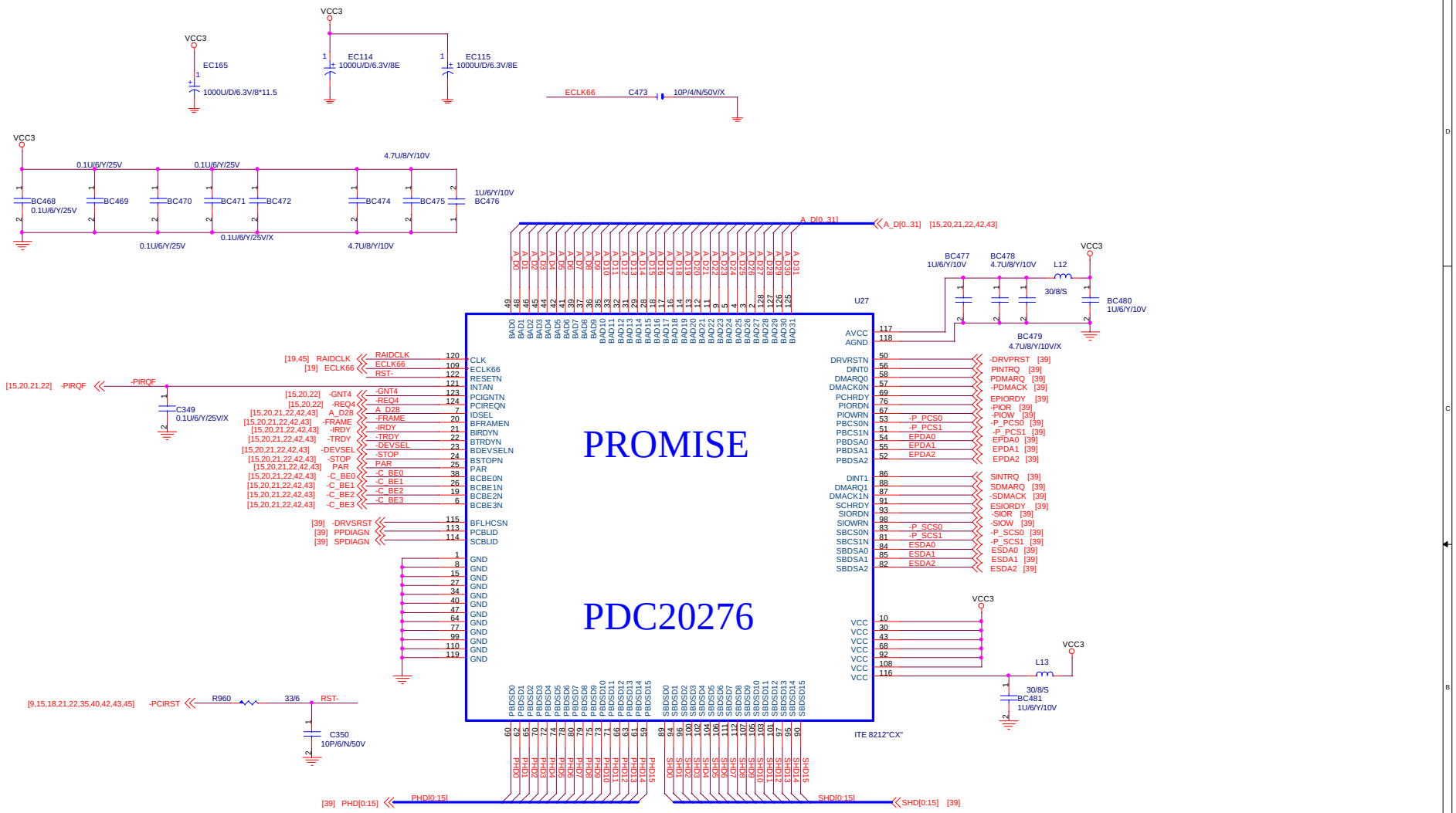
BYPASS Cap.



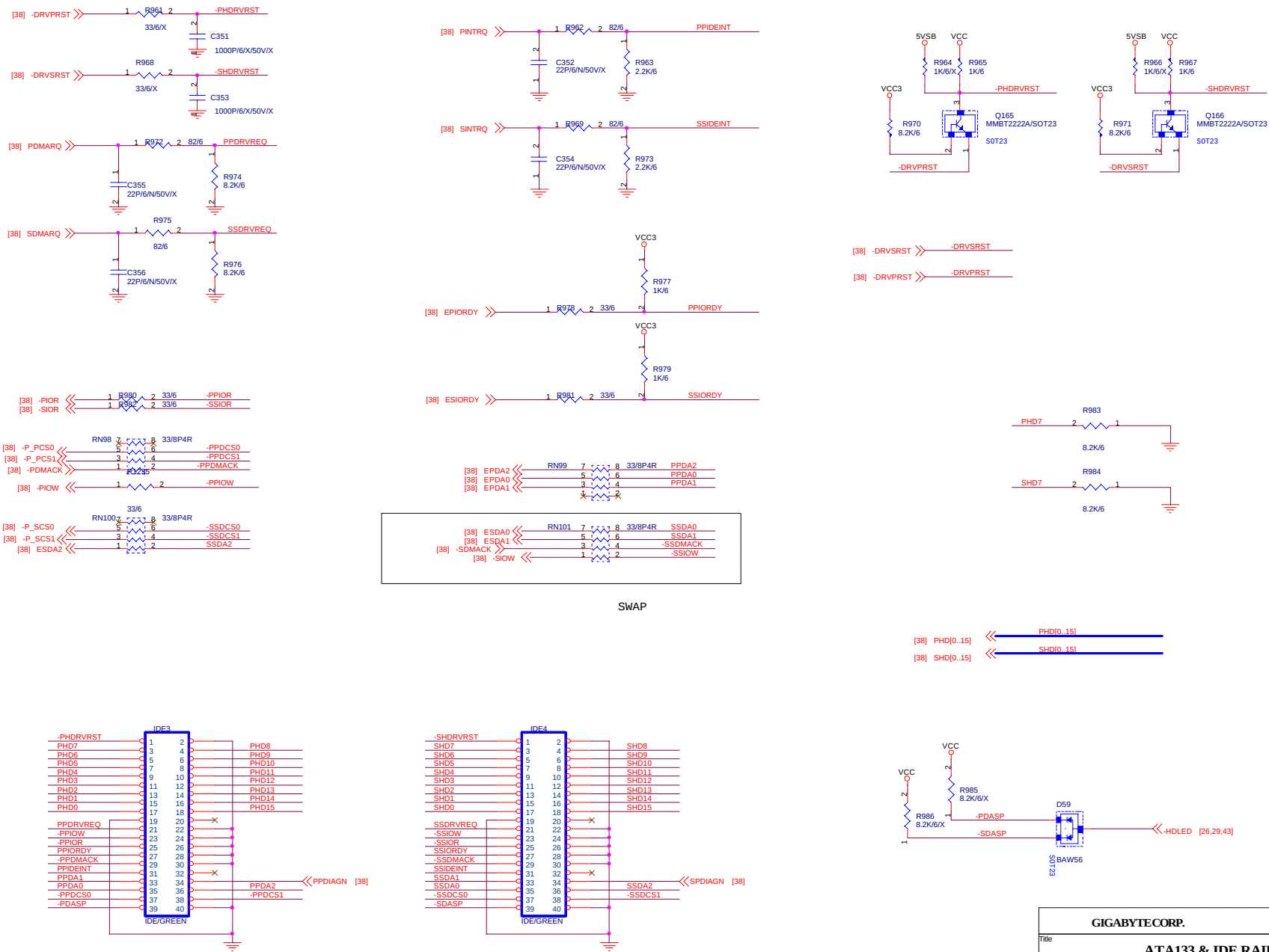
Tanacross

CSA
TANACROSS_3

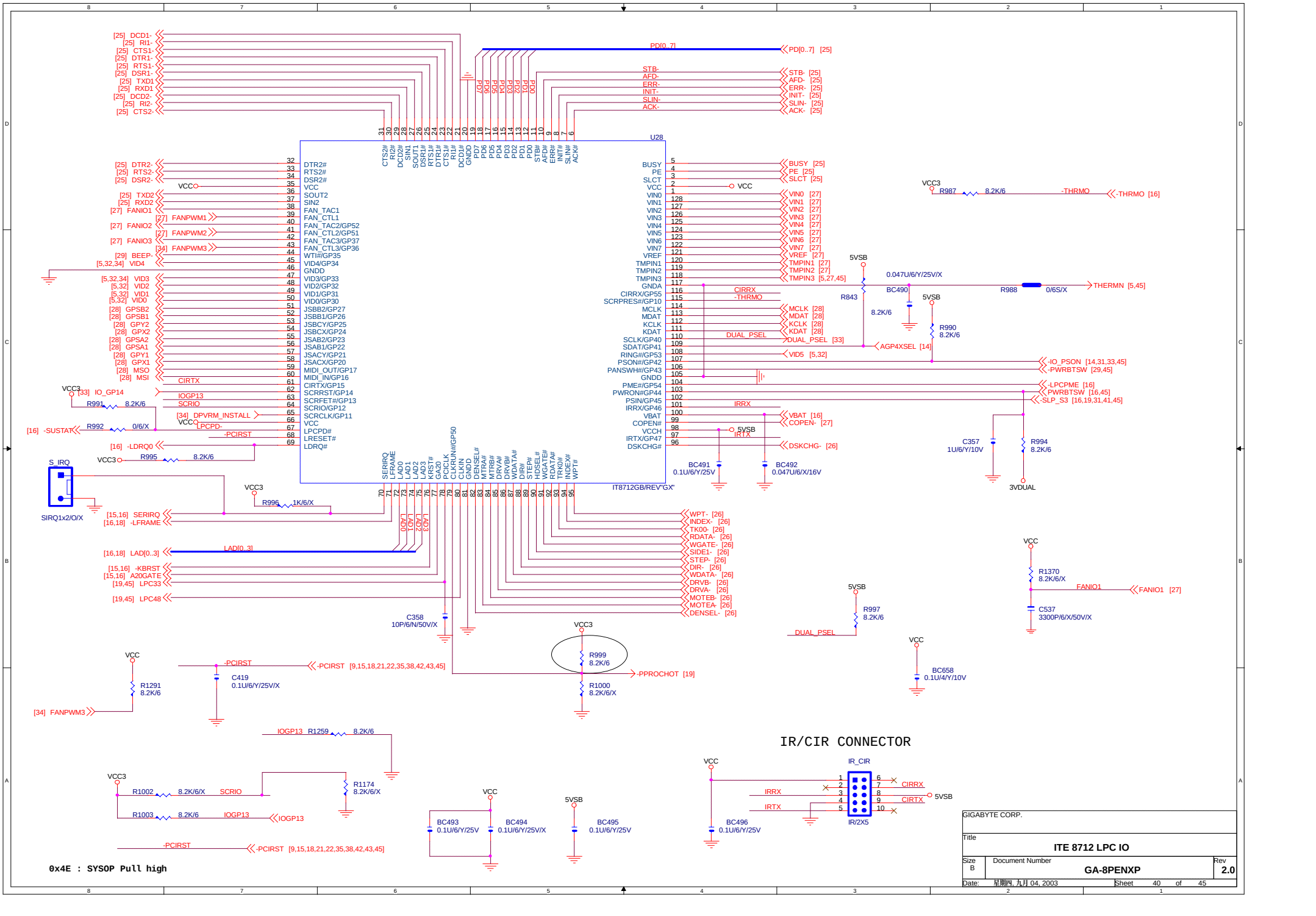
GIGABYTE CORP.		
Title: CSA LAN-3		
Size	Document Number: GA-8PENXP	Rev: 2.0
Date: 星期四, 九月 04, 2003	Sheet 37 of 45	



GIGABYTECORP.		
Title	ATA133 & IDE RAID	
Size	Document Number GA-8PENXP	Rev 2.0
Date: 星期四, 九月 04, 2003	Sheet 38 of 45	



GIGABYTE CORP.		
Title	ATA133 & IDE RAID	
Size	Document Number GA-8PENXP	Rev 2.0
Date: 星期四, 九月 04, 2003	Sheet 39 of 45	


U28
IT8712GB/REV"GX"
PD[0..7]
PD[0..7] [25]
STB- [25]
AFD- [25]
ERR- [25]
INIT- [25]
SLIN- [25]
ACK- [25]
BUSY [25]
PE [25]
SLCT [25]
VIN0 [27]
VIN1 [27]
VIN2 [27]
VIN3 [27]
VIN4 [27]
VIN5 [27]
VIN6 [27]
VIN7 [27]
VREF [27]
TMPIN1 [27]
TMPIN2 [27]
TMPIN3 [5,27,45]
MCLK [28]
MDAT [28]
KCLK [28]
KDAT [28]
DUAL_PSEL [33]
VID5 [5,32]
AGP4XSEL [14]
-IO_PSON [14,31,33,45]
-PWRBTSW [29,45]
-LPCPME [16]
PWRBTSW [16,45]
-SLP_S3 [16,19,31,41,45]
VBAT [16]
COPEN- [27]
DSKCHG- [26]
THERMN [5,45]
-THRMO [16]
WPT- [26]
INDEX- [26]
TK00- [26]
RDATA- [26]
WGATE- [26]
SIDE1- [26]
STEP- [26]
DIR- [26]
WDATA- [26]
DRVB- [26]
DRVA- [26]
MOTEB- [26]
MOTEA- [26]
DENSEL- [26]
-PPROCHOT [19]
FANIO1 [27]
-PCIRST [9,15,18,21,22,35,38,42,43,45]
IOGP13
SCRIO
LPCPD-
-PCIRST
CIRTX
IRRX
IRTX
CIRRX
-THRMO
DUAL_PSEL
LAD[0..3]
SERIRQ
-LFRAME
-KBRST
A20GATE
LPC33
LPC48
IR/CIR CONNECTOR
IR_CIR
IR/2X5
0x4E : SYSOP Pull high
GIGABYTE CORP.
ITE 8712 LPC IO
GA-8PENXP
2.0
Date: 星期四, 九月 04, 2003
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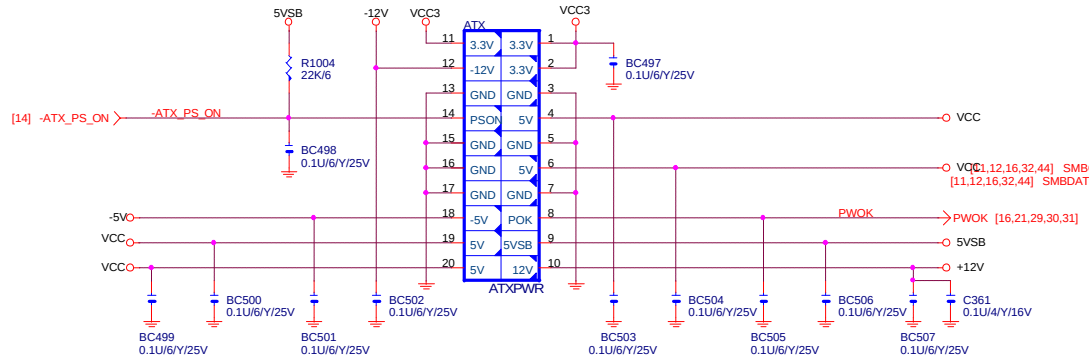
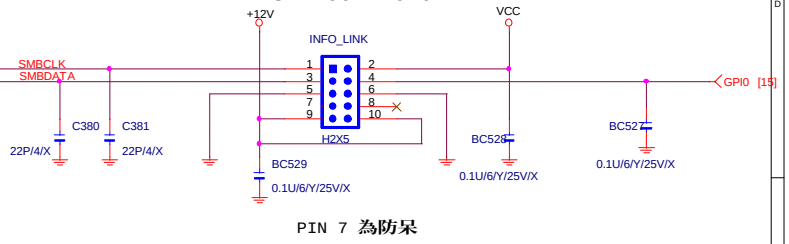
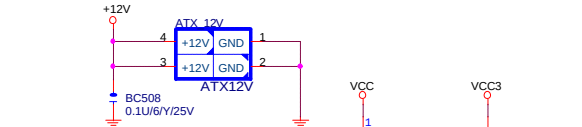
ATX POWER CONNECTOR

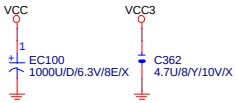


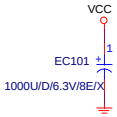
SMBUS CONN.



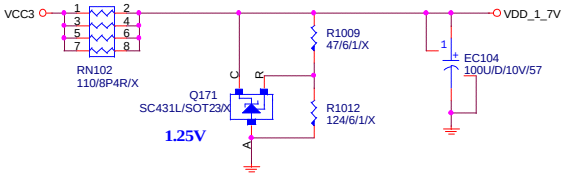
PIN 7 為防呆



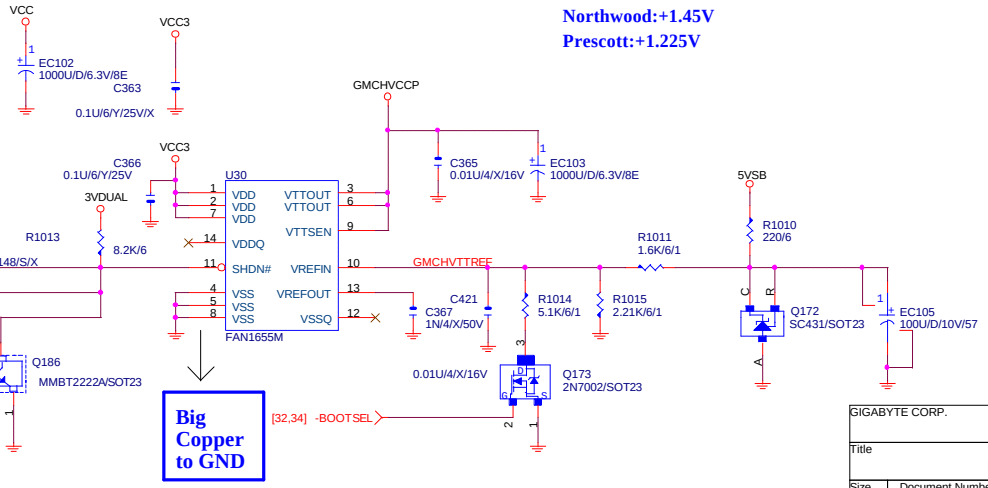




Check Value for 1.7V



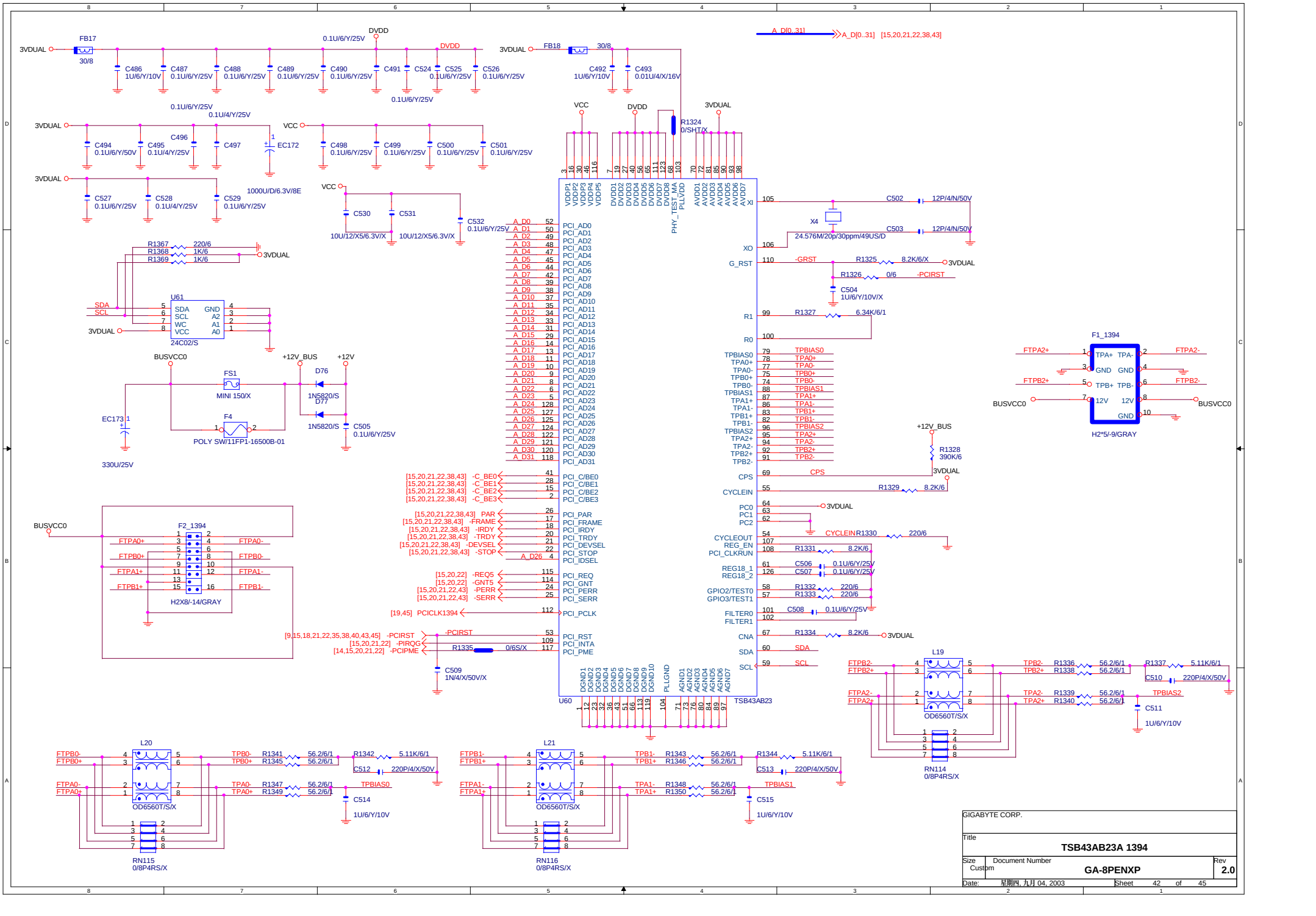
Close to U38

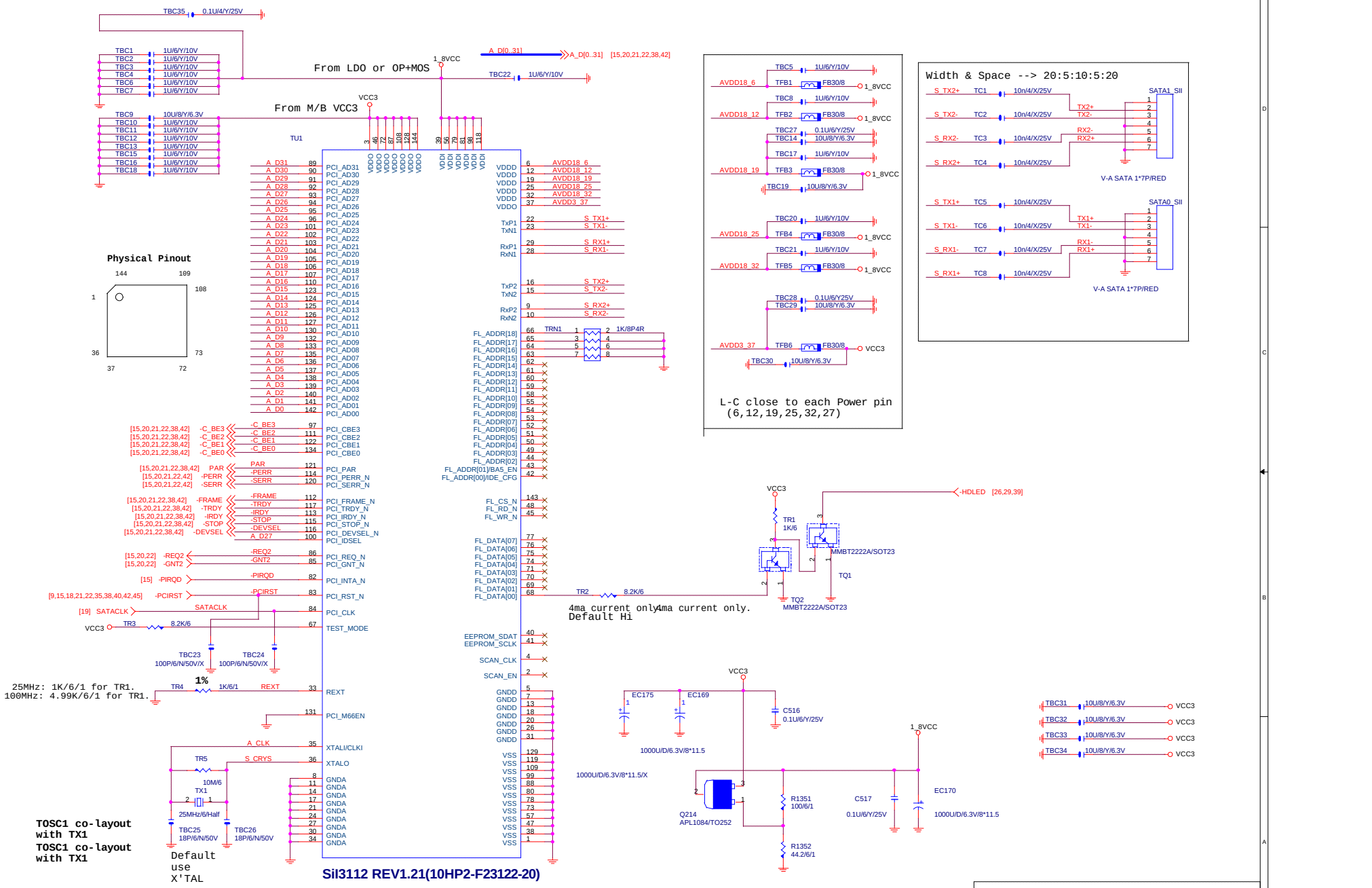


Northwood:+1.45V
Prescott:+1.225V

Big Copper to GND

GIGABYTE CORP.		
Title: Misc. PWR & ATX CONN.		
Size: B	Document Number: GA-8PENXP	Rev: 2.0
Date:	Sheet 41 of 45	


A_D[0..31]
A_D[0..31] [15,20,21,22,38,43]
U60
TSB43AB23
PCI_AD0
PCI_AD1
PCI_AD2
PCI_AD3
PCI_AD4
PCI_AD5
PCI_AD6
PCI_AD7
PCI_AD8
PCI_AD9
PCI_AD10
PCI_AD11
PCI_AD12
PCI_AD13
PCI_AD14
PCI_AD15
PCI_AD16
PCI_AD17
PCI_AD18
PCI_AD19
PCI_AD20
PCI_AD21
PCI_AD22
PCI_AD23
PCI_AD24
PCI_AD25
PCI_AD26
PCI_AD27
PCI_AD28
PCI_AD29
PCI_AD30
PCI_AD31
PCI_C/BE0
PCI_C/BE1
PCI_C/BE2
PCI_C/BE3
PCI_PAR
PCI_FRAME
PCI_IRDY
PCI_TRDY
PCI_DEVSEL
PCI_STOP
PCI_IDSEL
PCI_REQ
PCI_GNT
PCI_PERR
PCI_SERR
PCI_PCLK
PCI_RST
PCI_INTA
PCI_PME
XI
XO
G_RST
R1
R0
CPS
CYCLEIN
CYCLEOUT
REG_EN
PCI_CLKRUN
REG18_1
REG18_2
GPIO2/TEST0
GPIO3/TEST1
FILTER0
FILTER1
CNA
SDA
SCL
PHY_TEST_MA
PLLVDD
TPBIAS0
TPA0+
TPA0-
TPB0+
TPB0-
TPBIAS1
TPA1+
TPA1-
TPB1+
TPB1-
TPBIAS2
TPA2+
TPA2-
TPB2+
TPB2-
3VDUAL
VCC
DVDD
FB17
FB18
30/8
DVDD
0.1U/6/Y/25V
0.1U/4/Y/25V
0.01U/4/X/16V
1U/6/Y/10V
R1324
0/SHT/X
1000U/D/6.3V/8E
10U/12/X5/6.3V/X
C502
C503
12P/4/N/50V
X4
24.576M/20p/30ppm/49US/D
R1325
8.2K/6/X
-GRST
R1326
0/6
-PCIRST
C504
1U/6/Y/10V/X
R1327
6.34K/6/1
R1328
390K/6
R1329
8.2K/6
R1330
220/6
R1331
8.2K/6
R1332
220/6
R1333
220/6
R1334
8.2K/6
C506
C507
C508
0.1U/6/Y/25V
R1335
0/6S/X
C509
1N/4/X/50V/X
R1336
R1337
R1338
R1339
R1340
56.2/6/1
5.11K/6/1
C510
220P/4/X/50V
TPBIAS2
C511
1U/6/Y/10V
L19
OD6560T/S/X
RN114
0/8P4RS/X
L20
L21
R1341
R1342
R1343
R1344
R1345
R1346
R1347
R1348
R1349
R1350
C512
C513
C514
C515
TPBIAS0
TPBIAS1
RN115
RN116
U61
24C02/S
SDA
SCL
R1367
R1368
R1369
220/6
1K/6
BUSVCC0
+12V_BUS
+12V
FS1
MINI 150/X
D76
D77
1N5820/S
F4
POLY SW/11FP1-16500B-01
EC173
330U/25V
C505
F1_1394
H2*5/-9/GRAY
F2_1394
H2X8/-14/GRAY
FTPA0+
FTPA0-
FTPB0+
FTPB0-
FTPA1+
FTPA1-
FTPB1+
FTPB1-
FTPA2+
FTPA2-
FTPB2+
FTPB2-
[15,20,21,22,38,43] -C_BE0
[15,20,21,22,38,43] -C_BE1
[15,20,21,22,38,43] -C_BE2
[15,20,21,22,38,43] -C_BE3
[15,20,21,22,38,43] PAR
[15,20,21,22,38,43] -FRAME
[15,20,21,22,38,43] -IRDY
[15,20,21,22,38,43] -TRDY
[15,20,21,22,38,43] -DEVSEL
[15,20,21,22,38,43] -STOP
[15,20,22] -REQ5
[15,20,22] -GNT5
[15,20,21,22,43] -PERR
[15,20,21,22,43] -SERR
[19,45] PCICLK1394
[9,15,18,21,22,35,38,40,43,45] -PCIRST
[15,20,21,22] -PIRQG
[14,15,20,21,22] -PCIPME
GIGABYTE CORP.
Title
TSB43AB23A 1394
Size
Custom
Document Number
GA-8PENXP
Rev
2.0
Date: 星期四, 九月 04, 2003
Sheet 42 of 45


From LDO or OP+MOS
From M/B VCC3
A_D[0..31]
1_8VCC
VCC3
TU1
Physical Pinout
Width & Space --> 20:5:10:5:20
SATA1_SII
SATA0_SII
V-A SATA 1*7P/RED
L-C close to each Power pin
(6,12,19,25,32,27)
4ma current only
Default Hi
4ma current only.
MMBT2222A/SOT23
25MHz: 1K/6/1 for TR1.
100MHz: 4.99K/6/1 for TR1.
TOSC1 co-layout
with TX1
TOSC1 co-layout
with TX1
Default
use
X'TAL
Sil3112 REV1.21(10HP2-F23122-20)
GND via
GND via
1. TX+/- & RX+/- 儘可能Reference GND, 換層時須在其Via hole旁5mil處左右各打一個GND Via。
1. TX+/- & RX+/-兩旁最好能包地。
GIGABYTE
Silicon Image Sil3112(S-ATA)
GA-8PENXP
2.0
星期四, 九月 04, 2003
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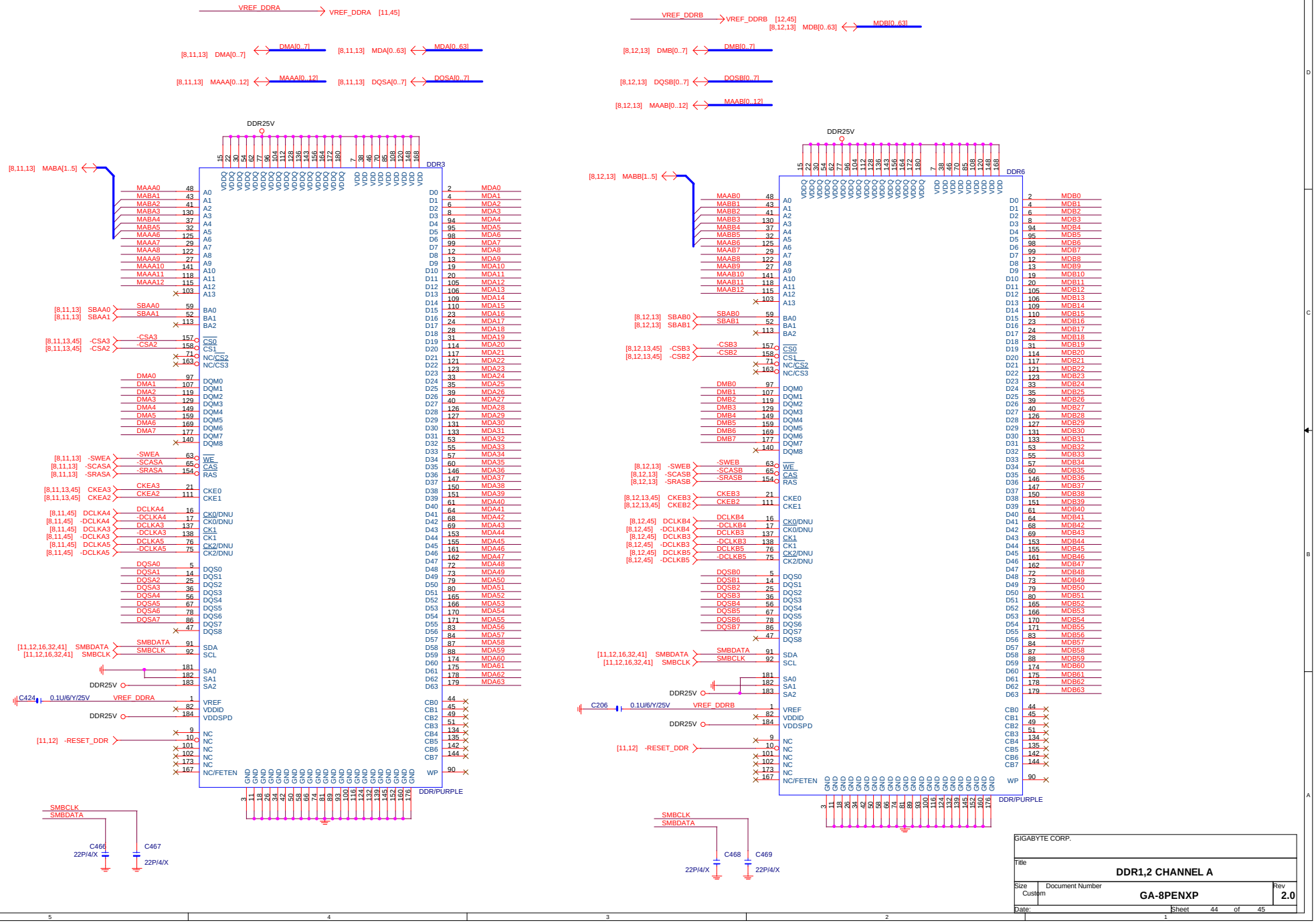
VREF_DDRA
VREF_DDRA [11,45]
[8,11,13] DMA[0..7]
DMA[0..7]
[8,11,13] MDA[0..63]
MDA[0..63]
[8,11,13] MAAA[0..12]
MAAA[0..12]
[8,11,13] DQSA[0..7]
DQSA[0..7]
DDR25V
[8,11,13] MABA[1..5]
DDR3
MAAA0
MABA1
MABA2
MABA3
MABA4
MABA5
MAAA6
MAAA7
MAAA8
MAAA9
MAAA10
MAAA11
MAAA12
[8,11,13] SBAA0
[8,11,13] SBAA1
SBAA0
SBAA1
[8,11,13,45] -CSA3
[8,11,13,45] -CSA2
-CSA3
-CSA2
DMA0
DMA1
DMA2
DMA3
DMA4
DMA5
DMA6
DMA7
[8,11,13] -SWEA
[8,11,13] -SCASA
[8,11,13] -SRASA
-SWEA
-SCASA
-SRASA
[8,11,13,45] CKEA3
[8,11,13,45] CKEA2
CKEA3
CKEA2
[8,11,45] DCLKA4
[8,11,45] -DCLKA4
[8,11,45] DCLKA3
[8,11,45] -DCLKA3
[8,11,45] DCLKA5
[8,11,45] -DCLKA5
DCLKA4
-DCLKA4
DCLKA3
-DCLKA3
DCLKA5
-DCLKA5
DQSA0
DQSA1
DQSA2
DQSA3
DQSA4
DQSA5
DQSA6
DQSA7
[11,12,16,32,41] SMBDATA
[11,12,16,32,41] SMBCLK
SMBDATA
SMBCLK
DDR25V
C424
0.1U/6/Y/25V
VREF_DDRA
DDR25V
[11,12] -RESET_DDR
SMBCLK
SMBDATA
C466
22P/4/X
C467
22P/4/X
DDR/PURPLE
VREF_DDRB
VREF_DDRB [12,45]
[8,12,13] MDB[0..63]
MDB[0..63]
[8,12,13] DMB[0..7]
DMB[0..7]
[8,12,13] DQSB[0..7]
DQSB[0..7]
[8,12,13] MAAB[0..12]
MAAB[0..12]
DDR25V
[8,12,13] MABB[1..5]
DDR6
MAAB0
MABB1
MABB2
MABB3
MABB4
MABB5
MAAB6
MAAB7
MAAB8
MAAB9
MAAB10
MAAB11
MAAB12
[8,12,13] SBAB0
[8,12,13] SBAB1
SBAB0
SBAB1
[8,12,13,45] -CSB3
[8,12,13,45] -CSB2
-CSB3
-CSB2
DMB0
DMB1
DMB2
DMB3
DMB4
DMB5
DMB6
DMB7
[8,12,13] -SWEB
[8,12,13] -SCASB
[8,12,13] -SRASB
-SWEB
-SCASB
-SRASB
[8,12,13,45] CKEB3
[8,12,13,45] CKEB2
CKEB3
CKEB2
[8,12,45] DCLKB4
[8,12,45] -DCLKB4
[8,12,45] DCLKB3
[8,12,45] -DCLKB3
[8,12,45] DCLKB5
[8,12,45] -DCLKB5
DCLKB4
-DCLKB4
DCLKB3
-DCLKB3
DCLKB5
-DCLKB5
DQSB0
DQSB1
DQSB2
DQSB3
DQSB4
DQSB5
DQSB6
DQSB7
[11,12,16,32,41] SMBDATA
[11,12,16,32,41] SMBCLK
SMBDATA
SMBCLK
DDR25V
C206
0.1U/6/Y/25V
VREF_DDRB
DDR25V
[11,12] -RESET_DDR
SMBCLK
SMBDATA
C468
22P/4/X
C469
22P/4/X
DDR/PURPLE
GIGABYTE CORP.
Title
DDR1,2 CHANNEL A
Size
Custom
Document Number
GA-8PENXP
Rev
2.0
Date:
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CPU TEST POINT

-CPURST_0 — -CPURST [4,7]

GTLREF_0 — GTLREF [5,7]

CPUCLK — CPUCLK [5,19]

-CPUCLK — -CPUCLK [5,19]

CPUPWROK_0 — CPUPWROK [5,16]

STBN1_1 — STBN1 [6,7]

STBP1_1 — STBP1 [6,7]

STBN2_1 — STBN2 [6,7]

STBP2_1 — STBP2 [6,7]

-DBI1_1 — -DBI1 [6,7]

-DBI2_1 — -DBI2 [6,7]

VCOREPLL — VCOREPLL [5]

VCCA — VCCA [5]

VSSA — VSSA [5]

VCORE_0 — VCORE

AGP TEST POINT

AGPCLK — AGPCLK [14,19]

-PCIRST_1 — -PCIRST [9,15,18,21,22,35,38,40,42,43]

-ADSTB0 — -ADSTB0 [9,14]

ADSTB0 — ADSTB0 [9,14]

-ADSTB1 — -ADSTB1 [9,14]

ADSTB1 — ADSTB1 [9,14]

SBSTB — SBSTB [9,14]

-SBSTB — -SBSTB [9,14]

MCH_AGPREF_1 — MCH_AGPREF [9,14]

VCC3_1 — VCC3

VDDQ_1 — VDDQ

VCC_0 — VCC

-TYPE_DET — -TYPE_DET [14]

-GC_DET1 — -GC_DET1 [14]

-MB_DET — -MB_DET [14]

-GFRAME — -GFRAME [9,14]

SPDG MCH TEST POINT

-CPURST_1 — -CPURST [4,7]

-HADS_0 — -HADS [4,7]

-HADSTB0_1 — -HADSTB0 [4,7]

-HADSTB1_1 — -HADSTB1 [4,7]

GTLREF_1 — GTLREF [5,7]

MCHCLK — MCHCLK [7,19]

-MCHCLK — -MCHCLK [7,19]

STBN1_0 — STBN1 [6,7]

STBP1_0 — STBP1 [6,7]

STBN2_0 — STBN2 [6,7]

STBP2_0 — STBP2 [6,7]

-DBI1_0 — -DBI1 [6,7]

-DBI2_0 — -DBI2 [6,7]

HSWNG — HSWNG [7]

PWROK_0 — PWROK [7,16,18,21,29,32,41]

SMYRCOMP — SMXRCOMP [8]

DDRVREFB — DDRVREFB [8]

SMXRCOMPVOL — SMXRCOMPVOL [8]

SMYRCOMPVOL — SMYRCOMPVOL [8]

GMCH3V66 — GMCH3V66 [9,19]

GSWING_0 — GSWING [9,14]

MCH_AGPREF_0 — MCH_AGPREF [9,14]

VDD_1_7V — VDD_1_7V

-PCIRST_0 — -PCIRST [9,15,18,21,22,35,38,40,42,43]

HL_SWING_MCH — HL_SWING_MCH [9]

HL_VREF_MCH — HL_VREF_MCH [9]

VDDQ_0 — VDDQ

GMCHVCCP — GMCHVCCP

DDR25V_0 — DDR25V

VCC3_0 — VCC3

VCORE_1 — VCORE

DDR TEST POINT

DCLKA0 — DCLKA0 [8,11]

-DCLKA0 — -DCLKA0 [8,11]

DCLKA1 — DCLKA1 [8,11]

-DCLKA1 — -DCLKA1 [8,11]

DCLKA2 — DCLKA2 [8,11]

-DCLKA2 — -DCLKA2 [8,11]

DCLKA3 — DCLKA3 [8,11,44]

-DCLKA3 — -DCLKA3 [8,11,44]

DCLKA4 — DCLKA4 [8,11,44]

-DCLKA4 — -DCLKA4 [8,11,44]

DCLKA5 — DCLKA5 [8,11,44]

-DCLKA5 — -DCLKA5 [8,11,44]

DCLKB0 — DCLKB0 [8,12]

-DCLKB0 — -DCLKB0 [8,12]

DCLKB1 — DCLKB1 [8,12]

-DCLKB1 — -DCLKB1 [8,12]

DCLKB2 — DCLKB2 [8,12]

-DCLKB2 — -DCLKB2 [8,12]

DCLKB3 — DCLKB3 [8,12,44]

-DCLKB3 — -DCLKB3 [8,12,44]

DCLKB4 — DCLKB4 [8,12,44]

-DCLKB4 — -DCLKB4 [8,12,44]

DCLKB5 — DCLKB5 [8,12,44]

-DCLKB5 — -DCLKB5 [8,12,44]

CKEA0 — CKEA0 [8,11,13]

CKEA1 — CKEA1 [8,11,13]

CKEA2 — CKEA2 [8,11,13,44]

CKEA3 — CKEA3 [8,11,13,44]

CKEB0 — CKEB0 [8,12,13]

CKEB1 — CKEB1 [8,12,13]

CKEB2 — CKEB2 [8,12,13,44]

CKEB3 — CKEB3 [8,12,13,44]

-CSA0 — -CSA0 [8,11,13]

-CSA1 — -CSA1 [8,11,13]

-CSA2 — -CSA2 [8,11,13,44]

-CSA3 — -CSA3 [8,11,13,44]

-CSB0 — -CSB0 [8,12,13]

-CSB1 — -CSB1 [8,12,13]

-CSB2 — -CSB2 [8,12,13,44]

-CSB3 — -CSB3 [8,12,13,44]

VREF_DDRA — VREF_DDRA [11,44]

VREF_DDRB — VREF_DDRB [12,44]

DDR25V_DDR1 — DDR25V

DDR25V_DDR4

DDRVTT_DDR1 — DDRVTT

DDRVTT_DDR4

ICH5 TEST POINT

ICH33 — ICH33 [15,19]

-PCIRST_2 — -PCIRST [9,15,18,21,22,35,38,40,42,43]

USBCLK — USBCLK [15,19]

ICH3V66 — ICH3V66 [15,19]

HL_VREF_ICH — HL_VREF_ICH [9,15]

HL_SWING_ICH — HL_SWING_ICH [9,15]

ICHCLK14 — ICHCLK14 [16,19]

CPUPWROK_1 — CPUPWROK [5,16]

-THERM — -THERM [5,16]

-SYS_RST — -SYS_RST [16,18,19,29,32]

SRCCLK — SRCCLK [16,19]

-SRCCLK — -SRCCLK [16,19]

-RSMRST — -RSMRST [16,31,35]

PWROK_1 — PWROK [7,16,18,21,29,32,41]

VDDQ_2 — VDDQ

VCC3_2 — VCC3

3VDUAL_0 — 3VDUAL

VCORE_2 — VCORE

5VSB_ICH5 — 5VSB

FWH TEST POINT

FWH33 — FWH33 [18,19]

-PCIRST_3 — -PCIRST [9,15,18,21,22,35,38,40,42,43]

CLOCK GEN TEST POINT

CKVDD — CKVDD

ASIC2 TEST POINT

ASIC2CLK — ASIC2CLK [19,22]

1394 TEST POINT

PCICLK1394 — PCICLK1394 [19,42]

RAID TEST POINT

RAIDCLK — RAIDCLK [19,38]

PCI TEST POINT

-PCIRST1_0 — -PCIRST1 [20,21,22]

-PCIRST1_1 — -PCIRST1 [20,21,22]

-PCIRST1_2 — -PCIRST1 [20,21,22]

PCICLK0 — PCLK0 [19,20]

PCICLK1 — PCLK1 [19,20]

PCICLK2 — PCLK2 [19,21]

PCICLK3 — PCLK3 [19,21]

PCICLK4 — PCLK4 [19,22]

VCC_1, VCC_2, VCC_3 — VCC

VCC3_6, VCC3_3, VCC3_4 — VCC3

-PCIRST1_3 — -PCIRST1 [20,21,22]

-PCIRST1_4 — -PCIRST1 [20,21,22]

-PCIRST1_5 — -PCIRST1 [20,21,22]

IO TEST POINT

-PCIRST_8 — -PCIRST [9,15,18,21,22,35,38,40,42,43]

LPC33 — LPC33 [19,40]

LPC48 — LPC48 [19,40]

TMPIN3 — TMPIN3 [5,27,40]

THERMN — THERMN [5,40]

VCC3_5 — VCC3

-IO_PSON — -IO_PSON [14,31,33,40]

-PWRBTSW — -PWRBTSW [29,40]

PWRBTSW — PWRBTSW [16,40]

-SLP_S3 — -SLP_S3 [16,19,31,40,41]

VCC3_IO — VCC3

5VSB_IO — 5VSB

LAN TEST POINT

-PCIRST_4 — -PCIRST [9,15,18,21,22,35,38,40,42,43]

CLK66CSA — CLK66CSA [19,35]

-LAN_RST — -LAN_RST [15,35]

L_RXD2 — L_RXD2 [15,35]

L_RXD1 — L_RXD1 [15,35]

L_RXD0 — L_RXD0 [15,35]

L_CLK — L_CLK [15,35]

L_TXD2 — L_TXD2 [15,35]

L_TXD1 — L_TXD1 [15,35]

L_TXD0 — L_TXD0 [15,35]

L_RST — L_RST [15,35]

VCC18_1 — 1_8VSB

VCC12_1 — 1_2VSB

3VDUAL_1 — 3VDUAL

+VSBLAN — +VSBLAN

HL TEST POINT

HLSTBF — HLSTBF [9,15]

HLSTBS — HLSTBS [9,15]

HL0 — HL0 [9,15]

HL5 — HL5 [9,15]

HL10 — HL10 [9,15]

CODEC TEST POINT

97CLK14 — 97CLK14 [19,23]

AC_BITCLK — AC_BITCLK [15,23]

-AC_RST — -AC_RST [15,23]

AC_SYNC — AC_SYNC [15,23]

AVDD — AVDD

VCC3_7 — VCC3

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