GIGABYTE GA-8IG1000-G Schematics

Revision 3.0

SHEET	TITLE
01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	P4_478A
05	P4_478B
06	P4_478C
07	SPRINGDALE HOST
08	SPRINGDALE DDR
09	SPRINGDALE AGP, HUB, CSA, VGA
10	SPRINGDALE PWR
11	DDR1,2 CHANNEL A
12	DDR3,4 CHANNEL B
13	DDR TERMINATION
14	AGP 8X SLOT
15	ICH5 PCI, USB, HUB, LAN
16	ICH5 IDE, GPIO, SATA, CTRL
17	ICH5 VCC, GND
18	DUAL FWH
19	ICS952635 CLOCK GENERATOR
20	PCI SLOT1/SLOT2
21	PCI SLOT3/SLOT4/RESET BUFFER
22	PCI SLOT5/SLOT6

SHEET	TITLE
23	AC '97 CODEC
24	AUDIO JACK, L_OUT, F_AUDIO
25	ITE 8712/IR_CIR/SCR/S_IRQ
26	COMA/VGA_COMB/LPT
27	IDE1/IDE2/FDD
28	FAN/HW MONITOR
29	KB_MS/GAME/FUSEVCC
30	FRONT PANEL
31	R_USB/F_USB1/F_USB2
32	DDR/VDDQ/5VDUAL/VCCVID POWER
33	VCORE POWER
34	ATX/ATX_12V/FAN1655M
35	MARVELL 88E8001
36	TI TSB43AB23(1394)
37	PCI ROUNTIONG
38	GPIO PIN LIST

Digitally signed by fdsf
DN: cn=fdsf, o=fsdfsd, ou=ffsdf, email=fdfsd@fsdff, c=US
Date: 2009.12.15 20:44:17 +07'00'

PROCESS:C

COMPONENT SIDE (0.5 oz. Copper)
VCC SIDE (1 oz. Copper)
GND SIDE (1 oz. Copper)
SOLDER SIDE (0.5 oz. Copper)

GIGABYTE CORP.

Title: COVER SHEET

Size: Custom | Document Number: GA-8IG1000-G | Rev: 3.0

Date: | Sheet 1 of 38

Model Name: GA-8IG1000-G

Component history

Date	Change Item	Reason
2.0A	RELEASE REV2.0A	
2.0B	PCB 2.01 尺寸304.8X220	
	REMOVE 替料U42 24C02 10HP4-180108-72	
	REMOVE 替料U35 KA393 10TA1-800393-03 FAIRCHILD	
	L1,L2 LIB 變更L0806	
	0.01U,0.047U/6改X7R	
	U11 RTM362-203 CHANGE TO RTM362-205	
	R830 9.31K/6/1 CHANGE TO 47K/6	
	ADD C246 10P/6	
	GAME PORT 改值	
	ADD FOR ALC658 PULL DOWN	
	R1058 1K/6 >3K/6	
	FOR PAT,ICS952635	
2.0C	PCB REV2.01 > REV2.03	
	R1029上8.2K/6	
	R1104 由620/6 改成2K/6	
	R1059 由3.3K/6 改成13K/6	
	R1160 由5.1K/6 改成22K/6	
	C246 10P/6 REMOVE	
	AUDIO1 改成AUDIO	
2.0D	1. CR28,CR29 27K/6 --> 22K/6	
	2. ADD CBC12,CR70 22K/6	
	3. CR67,CR68 100K/6 REMOVE	
	4. IUCD REV2.3 --> REV2.4	
	5. ALC658 REV.C --> REV.C ; REV.B	
2.0D	1. ADD U21 ITE8206 REV.B主料 , REV.A 替料	
	2. C274 1U/6/Y/16V --> 1N/6/X/50V	FOR CMOS CHECKSUM ERROR ISSUE
2.0E-0811	ADD BC522(3VDUAL) & BC336(VCC3) 0.1U/6	FOR EMI
2.0E-0829	COLOR BOX 12BB1-EAI865G-00 --> 12BB1-EAI865GG-00	
2.0F-0904	1. R620 280K/6/1 --> 390K/6/1	FOR DUAL BIOS ISSUE
2.0G-0910	1. R1116 1K/6/1 -> 931/6/1	FOR D-STEPING CELERON CPU
	2. R849 8.2K->22K,R1143 1K->47K,R1141 8.2K->0,R842 1K->22K,R1142 22K REMOVE,Q137 2222->2N7002	Modify Prescott CPU BOOTSEL Control Circuit
2.1A-1013	DDR25 CHANGE LINEAR , VDDQ CHANGE TO252	FOR COST DOWN
2.1B-1028	DDR25V INPUT VCC3 DIODE --> MOSFET	FOR COST DOWN
01-1203	9M8IG1000P-00-21B --> 9M8IG2004P-00-01	FOR COST DOWN
30A-1225	9M8IG2004P-00-01 --> 9M8IG1000PG-00-30A	FOR DVT
30A-1231	9M8IG1000PG-00-30A --> 9M8IG1000G-00-30A	FOR PVT
30B-0113	ADD EC90 3300UF/6.3V	ADD VCORE CAP
	ADD SUR_CEN : INSERT 1-8 PIN	
30B-0205	ADD 替料 LU2 AT24C08AN	

Circuit or PCB layout history

Date	Change Item	Reason
2.0A	RELEASE	
2.0B	FANIO1,2 重新走線	
	USB 8P4R 改8P4R-SHORT	
2.1	DDR25 CHANGE LINEAR , VDDQ CHANGE TO252	
2.11	DDR25V INPUT VCC3 DIODE --> MOSFET	

GIGABYTE CORP.

Title: BOM & PCB MODIFY HISTORY

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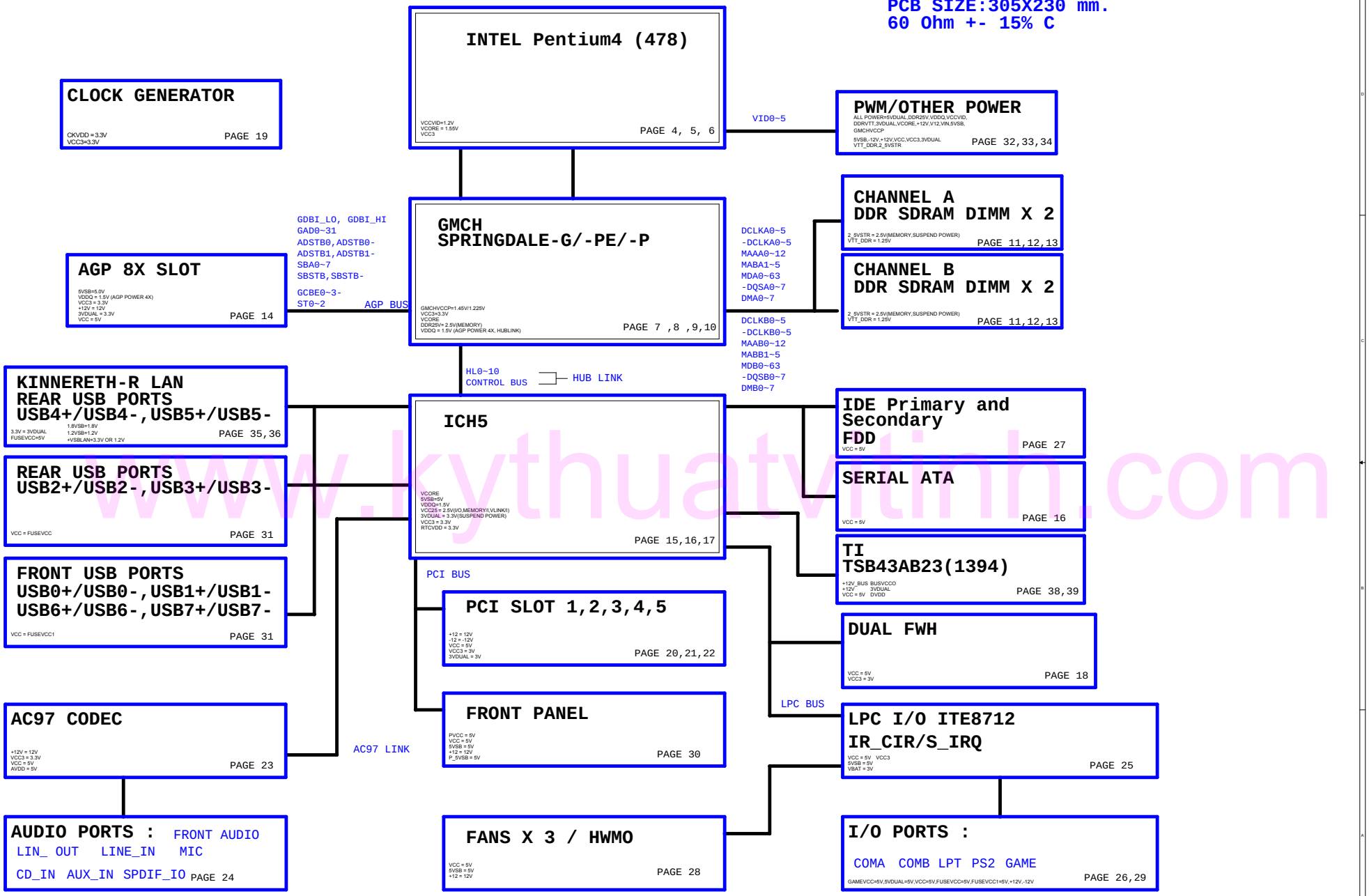
BLOCK DIAGRAM

PCB SIZE:305X230 mm.
60 Ohm +- 15% C



GIGABYTE CORP.

Title: BOM & PCB MODIFY HISTORY

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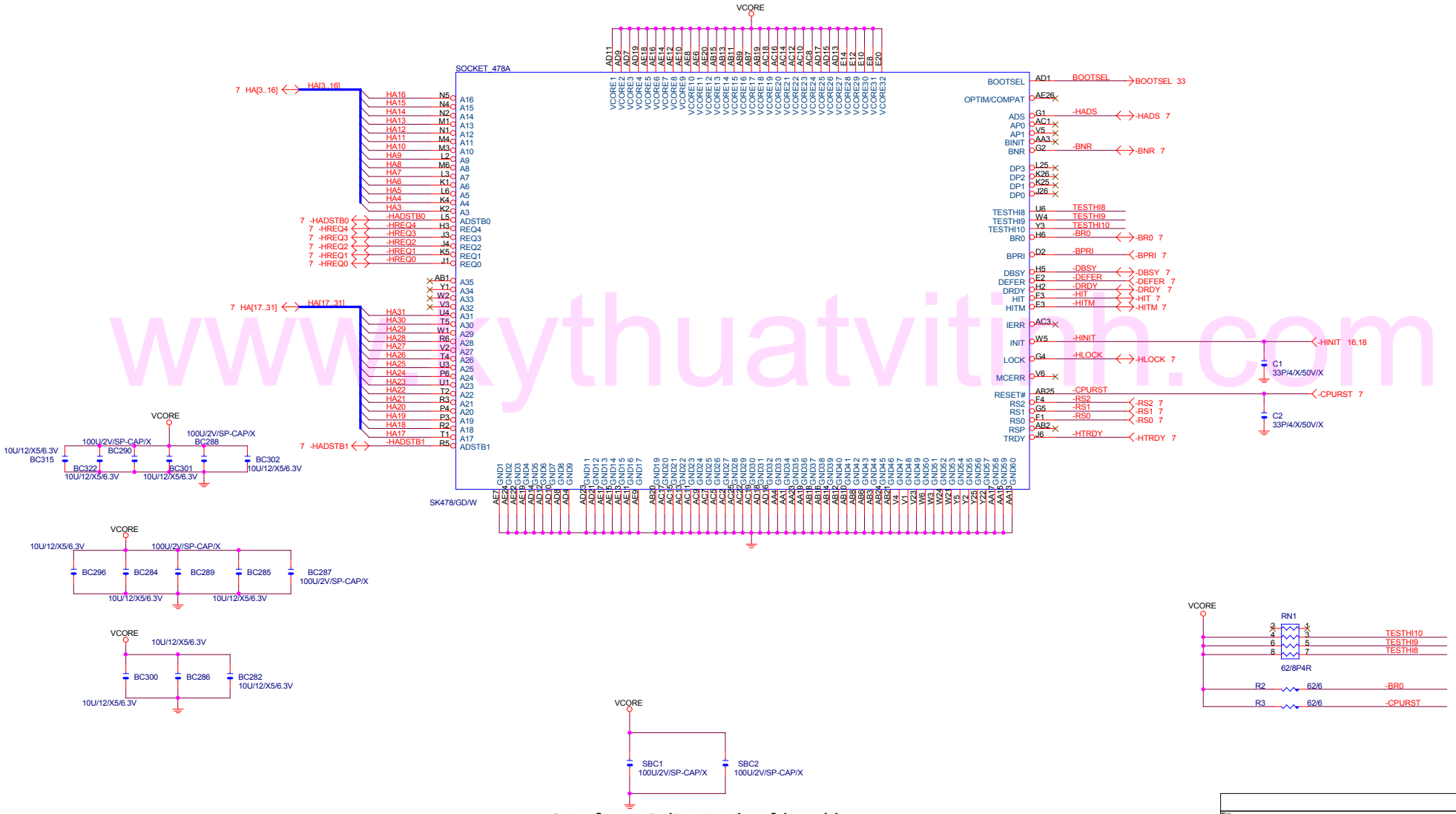

SP-CAP X 4 PCS

CPU SCOKET

CAP place at (D14,D15) solder side

Title	P4 478A	
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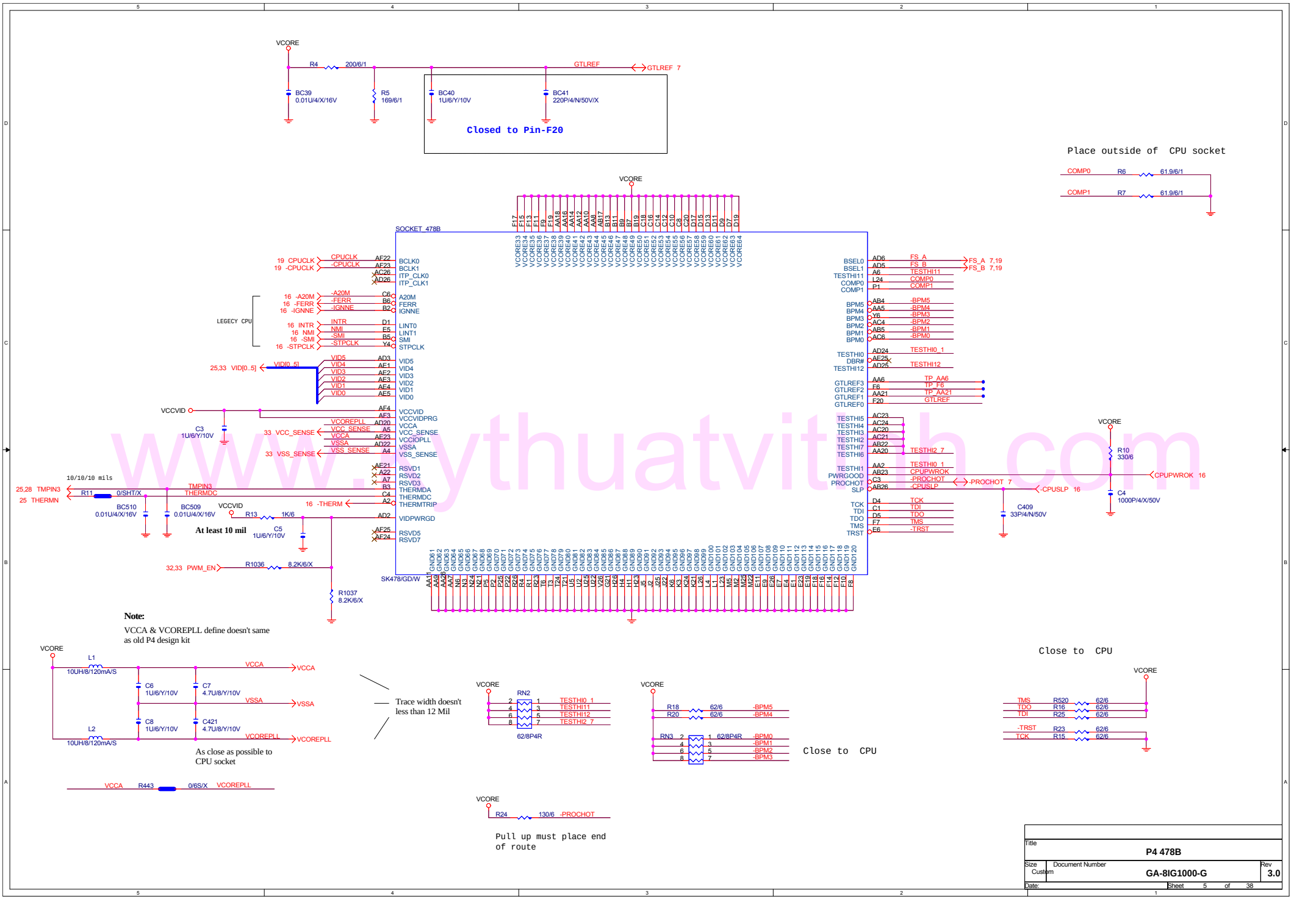

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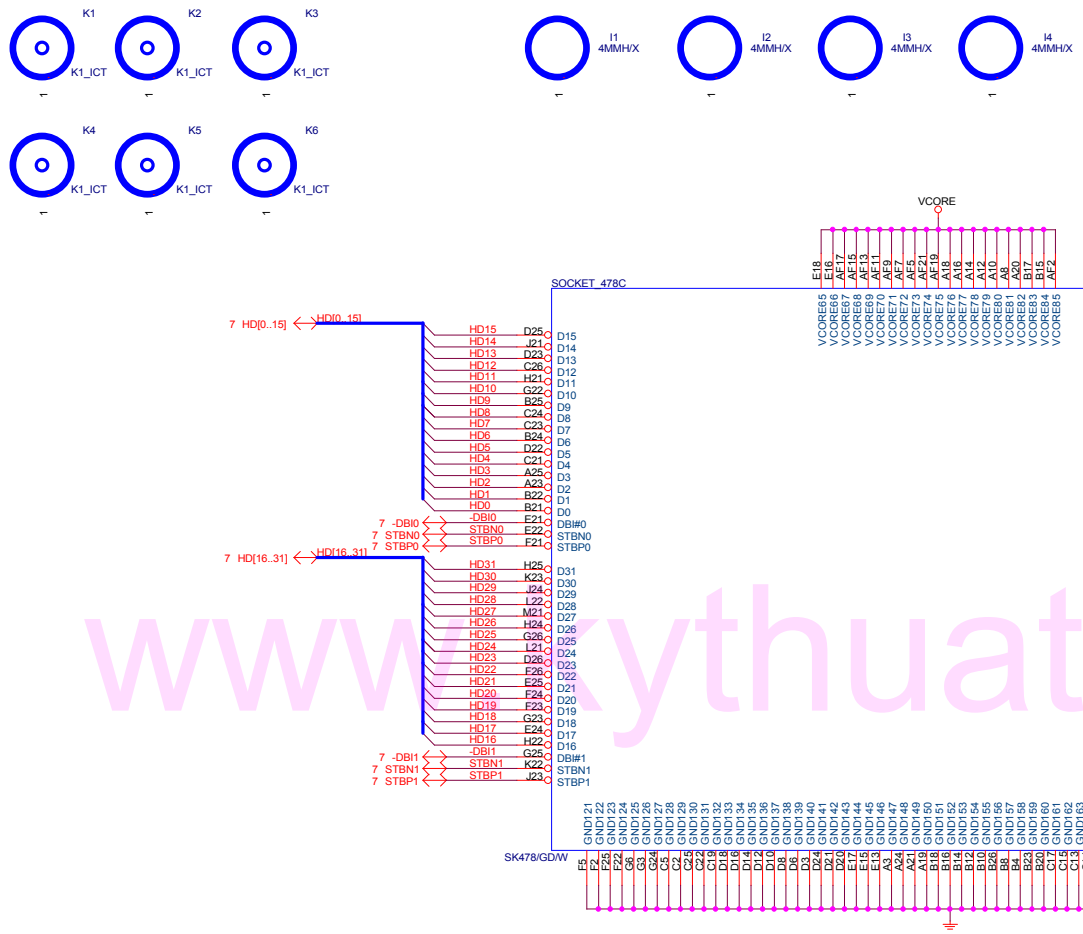
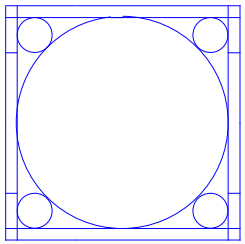
Size: Custom	Document Number: GA-8IG1000-G	Rev: 3.0
Date:	Sheet 5 of 38	





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Size: Custom	Document Number: GA-8IG1000-G	Rev: 3.0
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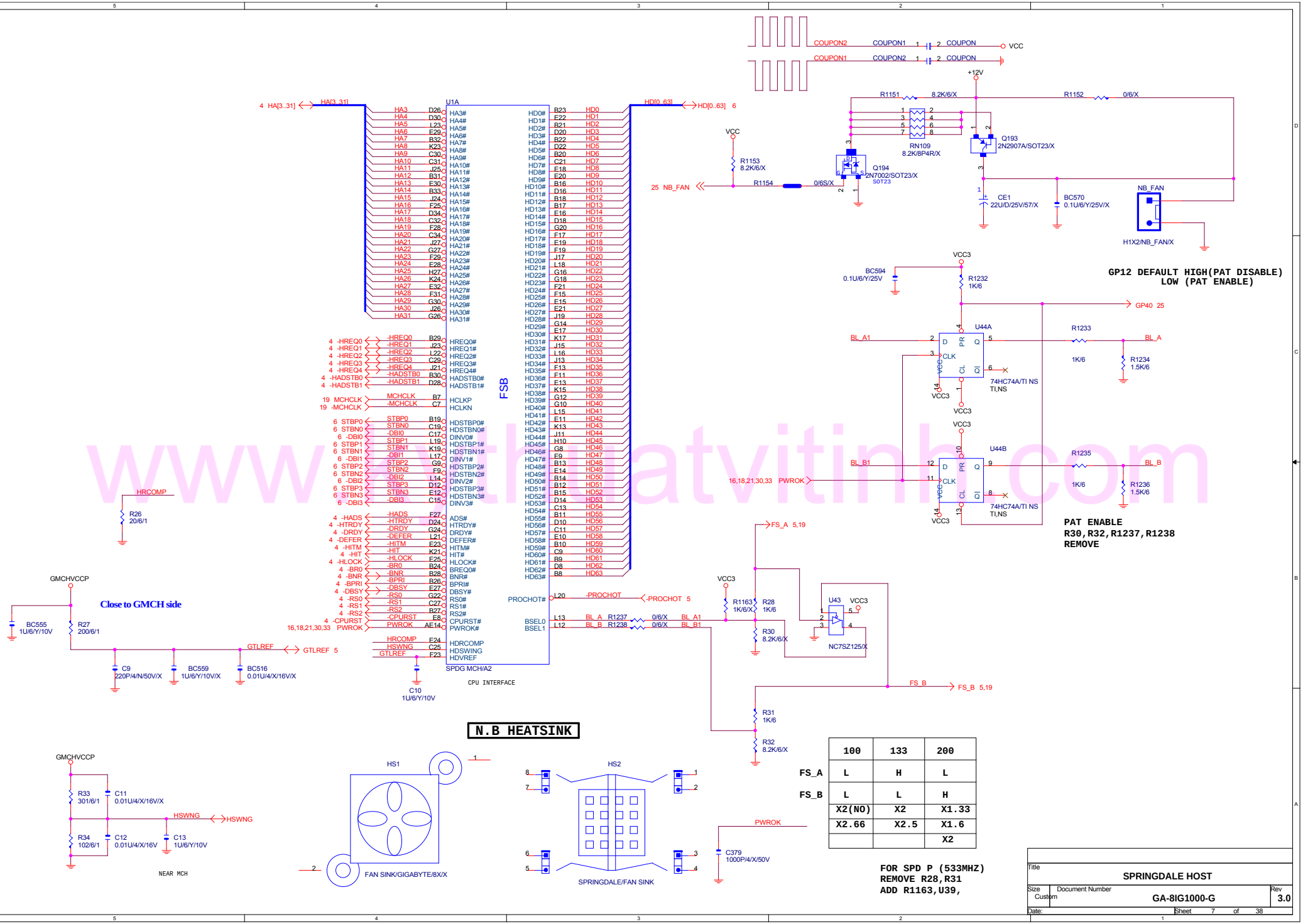
U1A
FSB
SPDG MCH/A2
CPU INTERFACE
HA[3..31]
HD[0..63]
-HREQ0
-HREQ1
-HREQ2
-HREQ3
-HREQ4
-HADSTB0
-HADSTB1
MCHCLK
-MCHCLK
HRCOMP
R26 20/6/1
GMCHVCCP
Close to GMCH side
BC555 1U/6/Y/10V
R27 200/6/1
C9 220P/4/N/50V/X
BC559 1U/6/Y/10V/X
BC516 0.01U/4/X/16V/X
GTLREF
GTLREF 5
C10 1U/6/Y/10V
-PROCHOT
PROCHOT 5
BSEL0
BSEL1
BL_A R1237 0/6/X BL_A1
BL_B R1238 0/6/X BL_B1
16,18,21,30,33 PWROK
-CPURST
-RS0
-RS1
-RS2
-BR0
-BNR
-BPRI
-DBSY
-DRDY
-HIT
-HITM
-HLOCK
-ADS
-HTRDY
-DEFER
-DBI0
-DBI1
-DBI2
-DBI3
HSWNG
HDRCOMP
HDSWING
HDVREF
COUPON2
COUPON1
COUPON
VCC
+12V
R1151 8.2K/6/X
R1152 0/6/X
RN109 8.2K/8P4R/X
Q193 2N2907A/SOT23/X
Q194 2N7002/SOT23/X
R1153 8.2K/6/X
R1154 0/6S/X
25 NB_FAN
CE1 22U/D/25V/57/X
BC570 0.1U/6/Y/25V/X
NB_FAN
H1X2/NB_FAN/X
GP12 DEFAULT HIGH(PAT DISABLE)
LOW (PAT ENABLE)
BC594 0.1U/6/Y/25V
R1232 1K/6
GP40 25
U44A
U44B
74HC74A/TI NS
TI,NS
R1233 1K/6
R1234 1.5K/6
R1235 1K/6
R1236 1.5K/6
PAT ENABLE
R30,R32,R1237,R1238
REMOVE
FS_A 5,19
FS_B 5,19
R1163 1K/6/X
R28 1K/6
R30 8.2K/6/X
U43
NC7SZ125/X
R31 1K/6
R32 8.2K/6/X
N.B HEATSINK
R33 301/6/1
C11 0.01U/4/X/16V/X
R34 102/6/1
C12 0.01U/4/X/16V
C13 1U/6/Y/10V
NEAR MCH
HS1
FAN SINK/GIGABYTE/8X/X
HS2
SPRINGDALE/FAN SINK
PWROK
C379 1000P/4/X/50V
FOR SPD P (533MHZ)
REMOVE R28,R31
ADD R1163,U39,
100 133 200
FS_A L H L
FS_B L L H
X2(NO) X2 X1.33
X2.66 X2.5 X1.6
X2
Title
SPRINGDALE HOST
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DDR 400 1-2-3-4 CPC DISABLE

DDR 333 SIGNAL 1 CPC ENABLE
2 CPC DISABLE
DUAL 2 CPC ENABLE
DUAL 4 CPC DISABLE

11,13 MAAA[0..12] MAAA[0..12]
11,13 MABA[1..5] MABA[1..5]
11,13 DMA[0..7] DMA[0..7]
11,13 MDA[0..63] MDA[0..63]
11,13 DQSA[0..7] DQSA[0..7]

U1B
DDR Channel A
SPDG MCH/A2
DDR INTERFACE

MAAA0	AJ34	SMAA_A0	SDQS_A0	AN11	DQSA0
MAAA1	AL33	SMAA_A1	SDM_A0	AP12	DMA0
MAAA2	AK29	SMAA_A2	SDQ_A0	AP10	MDA0
MAAA3	AN31	SMAA_A3	SDQ_A1	AP11	MDA1
MAAA4	AL30	SMAA_A4	SDQ_A2	AM12	MDA2
MAAA5	AL26	SMAA_A5	SDQ_A3	AN13	MDA3
MAAA6	AL28	SMAA_A6	SDQ_A4	AM10	MDA4
MAAA7	AN25	SMAA_A7	SDQ_A5	AL10	MDA5
MAAA8	AP26	SMAA_A8	SDQ_A6	AL12	MDA6
MAAA9	AP24	SMAA_A9	SDQ_A7	AP13	MDA7
MAAA10	AJ33	SMAA_A10			
MAAA11	AN23	SMAA_A11	SDQS_A1	AP15	DQSA1
MAAA12	AN21	SMAA_A12	SDM_A1	AP16	DMA1
MABA1	AL34	SMAB_A1	SDQ_A8	AP14	MDA8
MABA2	AM34	SMAB_A2	SDQ_A9	AM14	MDA9
MABA3	AP32	SMAB_A3	SDQ_A10	AL18	MDA10
MABA4	AP31	SMAB_A4	SDQ_A11	AP19	MDA11
MABA5	AM26	SMAB_A5	SDQ_A12	AL14	MDA12
			SDQ_A13	AN15	MDA13
11,13 -SWEA	AB34	SWE_A#	SDQ_A14	AP18	MDA14
11,13 -SCASA	Y34	SCAS_A#	SDQ_A15	AM18	MDA15
11,13 -SRASA	AC33	SRAS_A#			
			SDQS_A2	AP23	DQSA2
11,13 SBAA0	AE33		SDM_A2	AM24	DMA2
11,13 SBAA1	AH34	SBA_A0			
		SBA_A1	SDQ_A16	AP22	MDA16
11,13 -CSA0	AA34	SCS_A0#	SDQ_A17	AM22	MDA17
11,13 -CSA1	Y31	SCS_A1#	SDQ_A18	AL24	MDA18
11,13 -CSA2	Y32	SCS_A2#	SDQ_A19	AN27	MDA19
11,13 -CSA3	W34	SCS_A3#	SDQ_A20	AP21	MDA20
			SDQ_A21	AL22	MDA21
11,13 CKEA0	AL20	SCKE_A0	SDQ_A22	AP25	MDA22
11,13 CKEA1	AN19	SCKE_A1	SDQ_A23	AP27	MDA23
11,13 CKEA2	AM20	SCKE_A2			
11,13 CKEA3	AP20	SCKE_A3	SDQS_A3	AM30	DQSA3
			SDM_A3	AP30	DMA3
11 DCLKA0	AK32	SCMDCLK_A0			
11 -DCLKA0	AK31	SCMDCLK_A0#	SDQ_A24	AP28	MDA24
11 DCLKA1	AP17	SCMDCLK_A1	SDQ_A25	AP29	MDA25
11 -DCLKA1	AN17	SCMDCLK_A1#	SDQ_A26	AP33	MDA26
11 DCLKA2	N33	SCMDCLK_A2	SDQ_A27	AM33	MDA27
11 -DCLKA2	N34	SCMDCLK_A2#	SDQ_A28	AM28	MDA28
11 DCLKA3	AK33	SCMDCLK_A3	SDQ_A29	AN29	MDA29
11 -DCLKA3	AK34	SCMDCLK_A3#	SDQ_A30	AM31	MDA30
11 DCLKA4	AM16	SCMDCLK_A4	SDQ_A31	AN34	MDA31
11 -DCLKA4	AL16	SCMDCLK_A4#			
11 DCLKA5	P31	SCMDCLK_A5	SDQS_A4	AF34	DQSA4
11 -DCLKA5	P32	SCMDCLK_A5#	SDM_A4	AF31	DMA4
DDRVREFA	E34	SMVREF_A	SDQ_A32	AH32	MDA32
SMXRCOMP	AK9	SMXRCOMP	SDQ_A33	AG34	MDA33
SMXRCOMPVOH	AN9	SMXRCOMPVOH	SDQ_A34	AF32	MDA34
SMXRCOMPVOL	AL9	SMXRCOMPVOL	SDQ_A35	AD32	MDA35
			SDQ_A36	AH31	MDA36
			SDQ_A37	AG33	MDA37
			SDQ_A38	AE34	MDA38
			SDQ_A39	AD34	MDA39
			SDQS_A5	V34	DQSA5
			SDM_A5	W33	DMA5
			SDQ_A40	AC34	MDA40
			SDQ_A41	AB31	MDA41
			SDQ_A42	V32	MDA42
			SDQ_A43	V31	MDA43
			SDQ_A44	AD31	MDA44
			SDQ_A45	AB32	MDA45
			SDQ_A46	U34	MDA46
			SDQ_A47	U33	MDA47
			SDQS_A6	M32	DQSA6
			SDM_A6	M34	DMA6
			SDQ_A48	T34	MDA48
			SDQ_A49	T32	MDA49
			SDQ_A50	K34	MDA50
			SDQ_A51	K32	MDA51
			SDQ_A52	T31	MDA52
			SDQ_A53	P34	MDA53
			SDQ_A54	L34	MDA54
			SDQ_A55	L33	MDA55
			SDQS_A7	H31	DQSA7
			SDM_A7	H32	DMA7
			SDQ_A56	J33	MDA56
			SDQ_A57	H34	MDA57
			SDQ_A58	E33	MDA58
			SDQ_A59	F33	MDA59
			SDQ_A60	K31	MDA60
			SDQ_A61	J34	MDA61
			SDQ_A62	G34	MDA62
			SDQ_A63	F34	MDA63

BC46 1U/6/Y/10V
Closed to MCH
DDRVREFA
BC50 1U/8/Y/25V/X
DDR25V
BC54 1U/6/Y/10V
R47 42.2/6/1
SMXRCOMP
Closed to R47
R49 42.2/6/1

12,13 MAAB[0..12] MAAB[0..12]
12,13 MABB[1..5] MABB[1..5]
12,13 DMB[0..7] DMB[0..7]
12,13 MDB[0..63] MDB[0..63]
12,13 DQSB[0..7] DQSB[0..7]

U1C
DDR Channel B
SPDG MCH/A2

MAAB0	AG31	SMAA_B0	SDQS_B0	AE15	DQSB0
MAAB1	AJ31	SMAA_B1	SDM_B0	AG11	DMB0
MAAB2	AD27	SMAA_B2	SDQ_B0	AJ10	MDB0
MAAB3	AE24	SMAA_B3	SDQ_B1	AE15	MDB1
MAAB4	AK27	SMAA_B4	SDQ_B2	AL11	MDB2
MAAB5	AG25	SMAA_B5	SDQ_B3	AE16	MDB3
MAAB6	AL25	SMAA_B6	SDQ_B4	AL8	MDB4
MAAB7	AF21	SMAA_B7	SDQ_B5	AF12	MDB5
MAAB8	AL23	SMAA_B8	SDQ_B6	AK11	MDB6
MAAB9	AJ22	SMAA_B9	SDQ_B7	AG12	MDB7
MAAB10	AF29	SMAA_B10			
MAAB11	AL21	SMAA_B11	SDQS_B1	AG13	DQSB1
MAAB12	AJ20	SMAA_B12	SDM_B1	AG15	DMB1
MABB1	AE27	SMAB_B1	SDQ_B8	AE17	MDB8
MABB2	AD26	SMAB_B2	SDQ_B9	AL13	MDB9
MABB3	AL29	SMAB_B3	SDQ_B10	AK17	MDB10
MABB4	AL27	SMAB_B4	SDQ_B11	AL17	MDB11
MABB5	AE23	SMAB_B5	SDQ_B12	AK13	MDB12
			SDQ_B13	AJ14	MDB13
12,13 -SWEB	W27	SWE_B#	SDQ_B14	AJ16	MDB14
12,13 -SCASB	W31	SCAS_B#	SDQ_B15	AJ18	MDB15
12,13 -SRASB	W26	SRAS_B#			
			SDQS_B2	AG21	DQSB2
12,13 SBAB0	Y25		SDM_B2	AE21	DMB2
12,13 SBAB1	AA25	SBA_B0			
		SBA_B1	SDQ_B16	AE19	MDB16
12,13 -CSB0	U26	SCS_B0#	SDQ_B17	AE20	MDB17
12,13 -CSB1	T29	SCS_B1#	SDQ_B18	AG23	MDB18
12,13 -CSB2	V25	SCS_B2#	SDQ_B19	AK23	MDB19
12,13 -CSB3	W25	SCS_B3#	SDQ_B20	AL19	MDB20
			SDQ_B21	AK21	MDB21
12,13 CKEB0	AK19	SCKE_B0	SDQ_B22	AJ24	MDB22
12,13 CKEB1	AF19	SCKE_B1	SDQ_B23	AE22	MDB23
12,13 CKEB2	AG19	SCKE_B2			
12,13 CKEB3	AE18	SCKE_B3	SDQS_B3	AH27	DQSB3
			SDM_B3	AJ28	DMB3
12 DCLKB0	AG29	SCMDCLK_B0	SDQ_B24	AK25	MDB24
12 -DCLKB0	AG30	SCMDCLK_B0#	SDQ_B25	AH26	MDB25
12 DCLKB1	AF17	SCMDCLK_B1	SDQ_B26	AG27	MDB26
12 -DCLKB1	AG17	SCMDCLK_B1#	SDQ_B27	AF27	MDB27
12 DCLKB2	N27	SCMDCLK_B2	SDQ_B28	AJ26	MDB28
12 -DCLKB2	N26	SCMDCLK_B2#	SDQ_B29	AJ27	MDB29
12 DCLKB3	AJ30	SCMDCLK_B3	SDQ_B30	AD25	MDB30
12 -DCLKB3	AH29	SCMDCLK_B3#	SDQ_B31	AF28	MDB31
12 DCLKB4	AK15	SCMDCLK_B4			
12 -DCLKB4	AL15	SCMDCLK_B4#	SDQS_B4	AD29	DQSB4
12 DCLKB5	N31	SCMDCLK_B5	SDM_B4	AC31	DMB4
12 -DCLKB5	N30	SCMDCLK_B5#			
DDRVREFB	AP9	SMVREF_B	SDQ_B32	AE30	MDB32
SMYRCOMP	AA33	SMYRCOMP	SDQ_B33	AC27	MDB33
SMYRCOMPVOH	R34	SMYRCOMPVOH	SDQ_B34	AC30	MDB34
SMYRCOMPVOL	R33	SMYRCOMPVOL	SDQ_B35	Y29	MDB35
			SDQ_B36	AE31	MDB36
			SDQ_B37	AB29	MDB37
			SDQ_B38	AA26	MDB38
			SDQ_B39	AA27	MDB39
			SDQS_B5	U30	DQSB5
			SDM_B5	U31	DMB5
			SDQ_B40	AA30	MDB40
			SDQ_B41	W30	MDB41
			SDQ_B42	U27	MDB42
			SDQ_B43	T25	MDB43
			SDQ_B44	AA31	MDB44
			SDQ_B45	V29	MDB45
			SDQ_B46	U25	MDB46
			SDQ_B47	R27	MDB47
			SDQS_B6	L27	DQSB6
			SDM_B6	M29	DMB6
			SDQ_B48	P29	MDB48
			SDQ_B49	R30	MDB49
			SDQ_B50	K28	MDB50
			SDQ_B51	L30	MDB51
			SDQ_B52	R31	MDB52
			SDQ_B53	R26	MDB53
			SDQ_B54	P25	MDB54
			SDQ_B55	L32	MDB55
			SDQS_B7	J30	DQSB7
			SDM_B7	J31	DMB7
			SDQ_B56	K30	MDB56
			SDQ_B57	H29	MDB57
			SDQ_B58	F32	MDB58
			SDQ_B59	G33	MDB59
			SDQ_B60	N25	MDB60
			SDQ_B61	M25	MDB61
			SDQ_B62	J29	MDB62
			SDQ_B63	G32	MDB63

BC47 1U/6/Y/10V
Closed to MCH
DDR25V
BC279 1U/6/Y/10V
R42 150/6/1
DDRVREFB
R45 150/6/1
BC52 1U/8/Y/25V/X
DDR25V
BC278 1U/6/Y/10V
R48 42.2/6/1
SMYRCOMP
R50 42.2/6/1

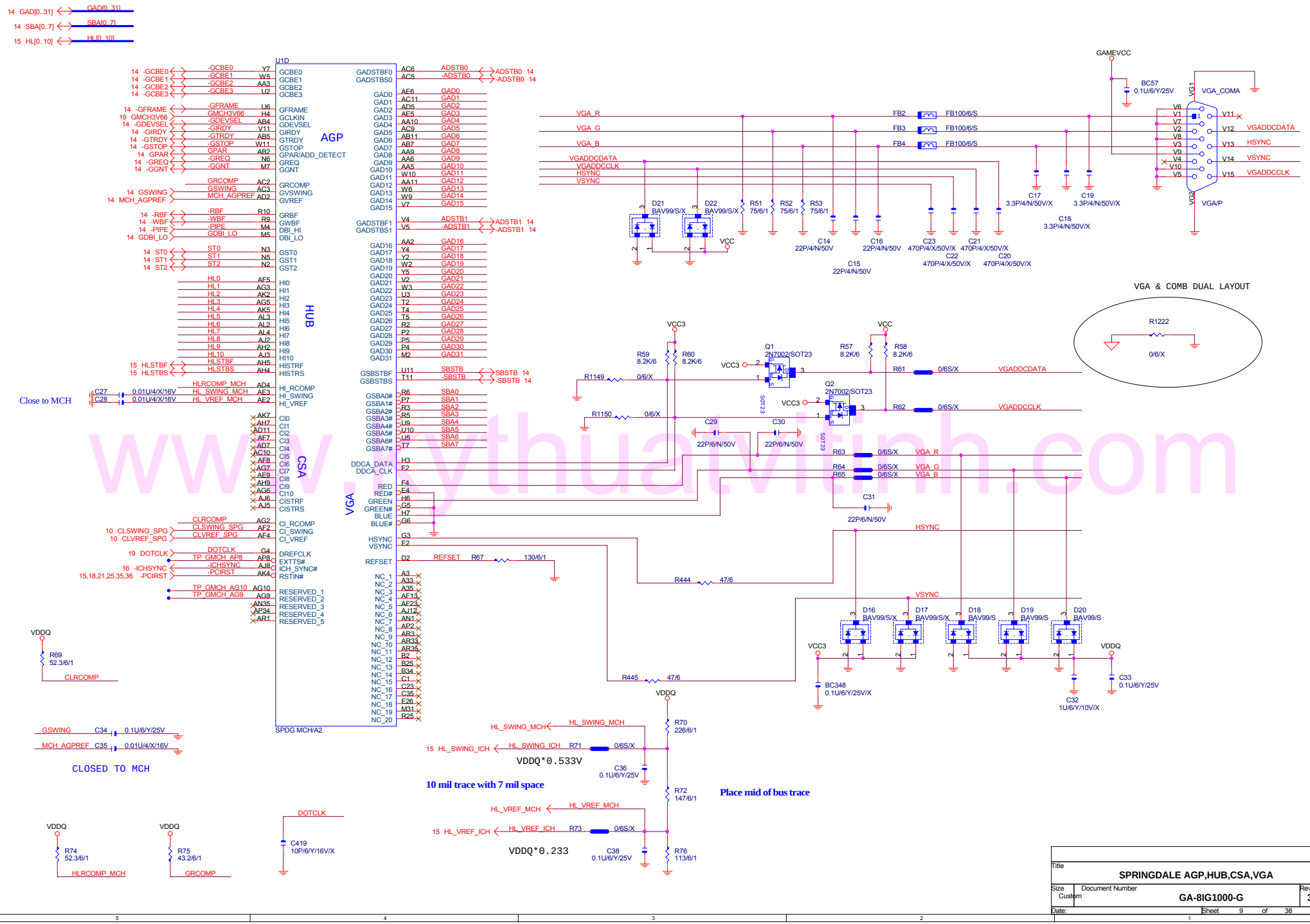
Closed to R35
DDR25V
BC42 1U/6/Y/10V
R35 10K/6/1
BC557 1U/6/Y/10V
SMXRCOMPVOH
R36 30.9K/6/1
BC43 1U/6/Y/10V

Closed to R38
DDR25V
R38 30.9K/6/1
SMXRCOMPVOL
R37 10K/6/1
BC45 1U/6/Y/10V

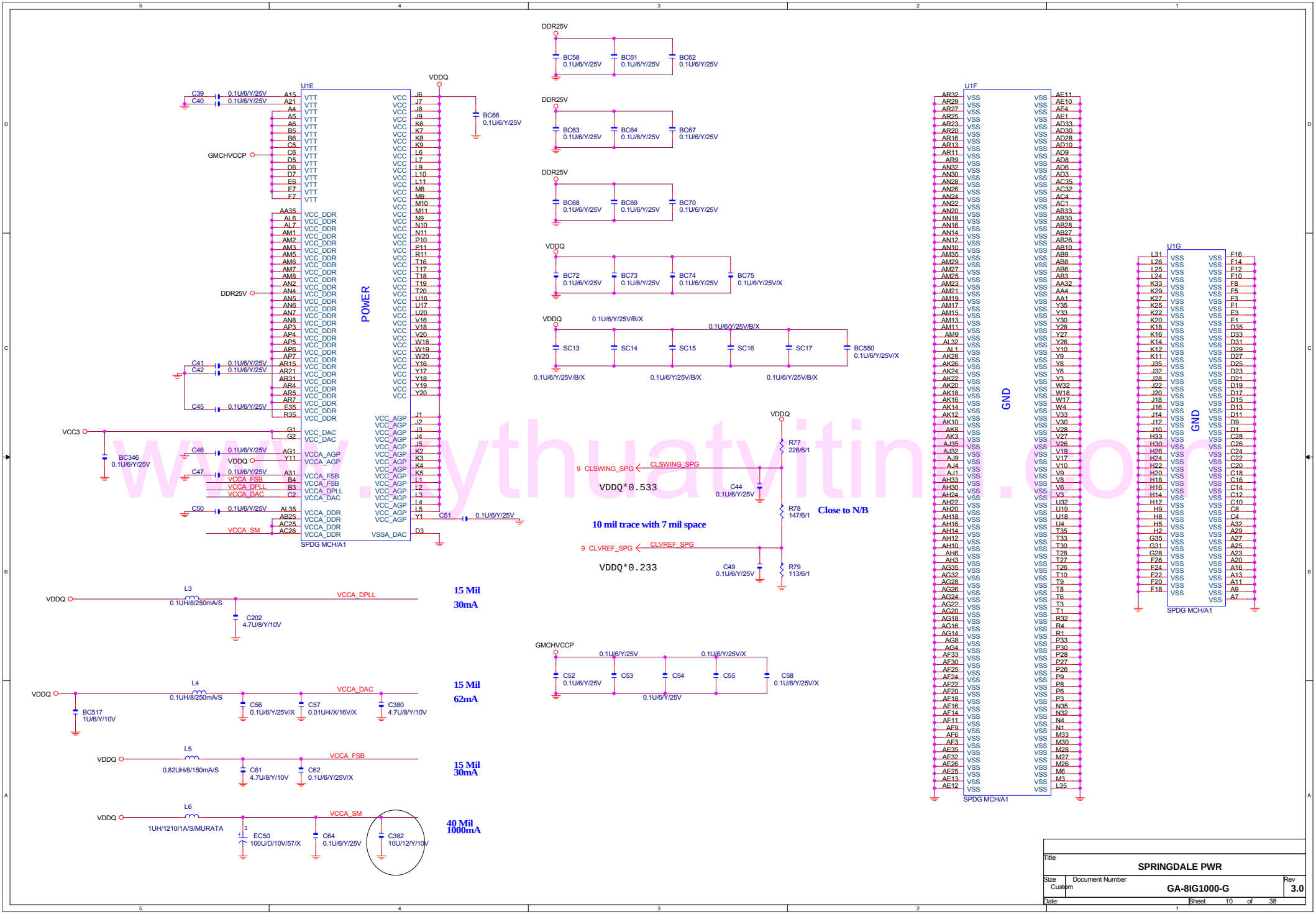
Closed to R39
DDR25V
BC277 1U/6/Y/10V
R39 10K/6/1
BC558 1U/6/Y/10V
SMYRCOMPVOH
R40 30.9K/6/1
BC49 1U/6/Y/10V

Closed to R43
DDR25V
BC51 1U/6/Y/10V/X
R43 30.9K/6/1
SMYRCOMPVOL
R46 10K/6/1
BC53 1U/6/Y/10V

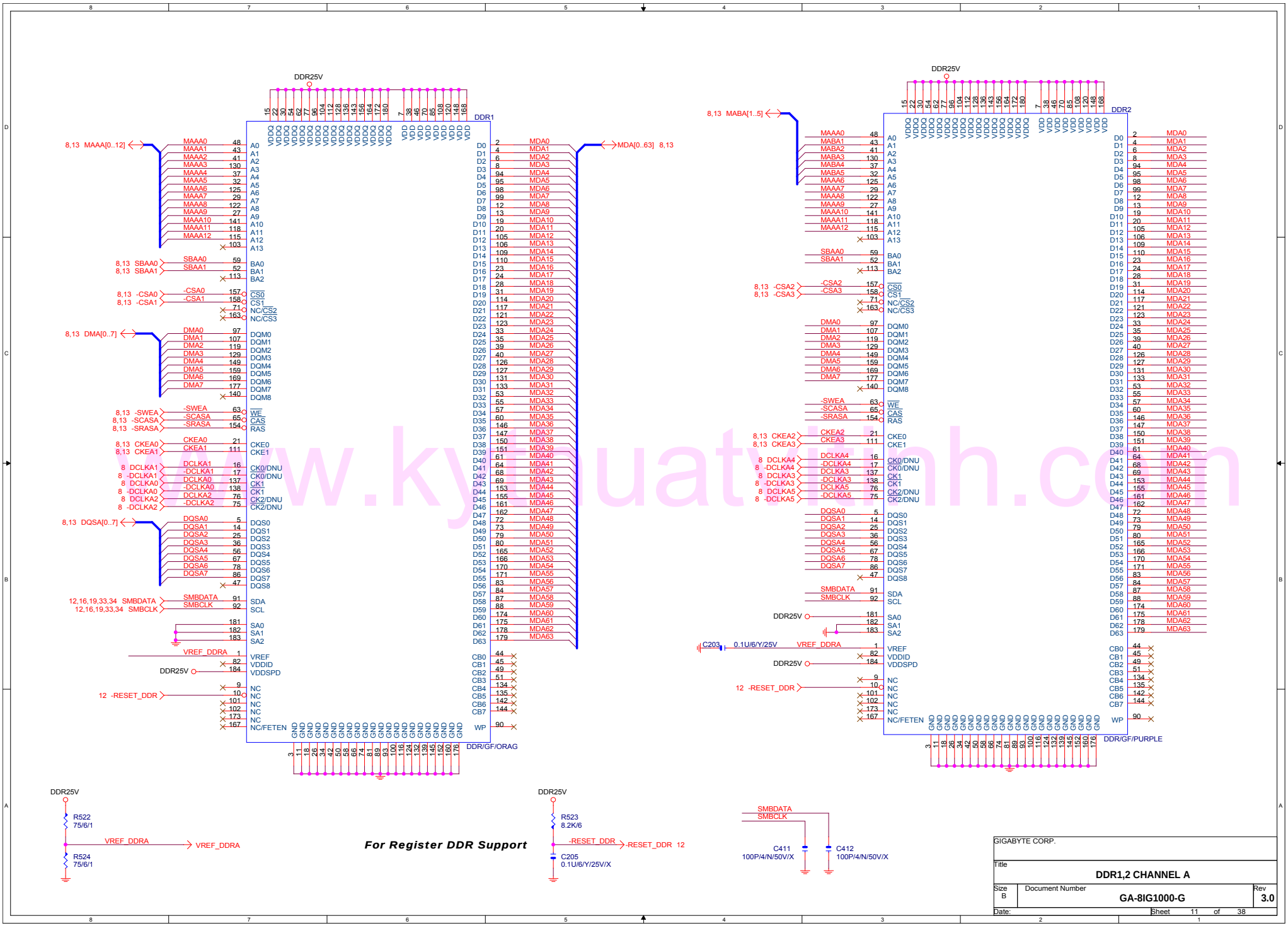
Title	SPRINGDALE DDR		
Size Custom	Document Number GA-8IG1000-G		Rev 3.0
Date:		Sheet 8 of 38	



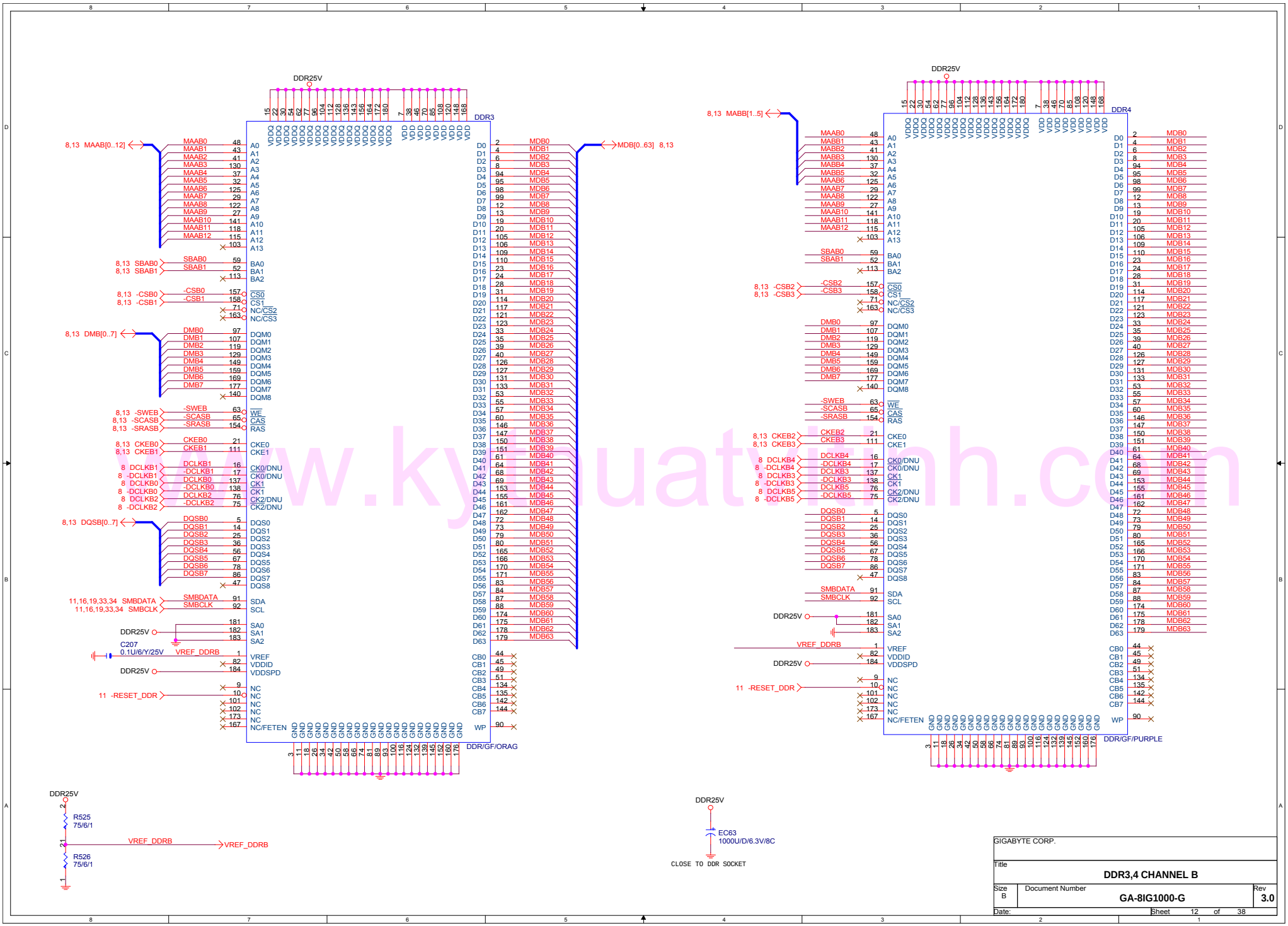
Title	SPRINGDALE AGP,HUB,CSA,VGA
Size	Custom
Document Number	GA-8IG1000-G
Rev	3.0
Date:	Sheet 9 of 38



Title	SPRINGDALE PWR	
Size: Custom	Document Number: GA-8IG1000-G	Rev: 3.0
Date:	Sheet 10 of 38	



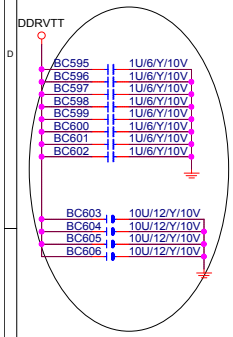
GIGABYTE CORP.	
Title	DDR1,2 CHANNEL A
Size B	Document Number GA-8IG1000-G
Rev	3.0
Date:	Sheet 11 of 38

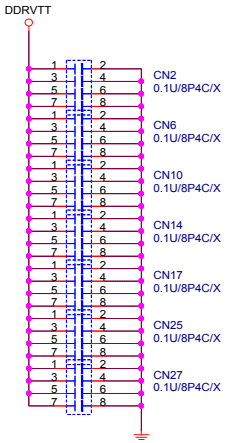

DDR25V
DDR3
DDR4
DDR/GF/ORAG
DDR/GF/PURPLE
MAAB[0..12]
MDB[0..63]
DMB[0..7]
DQSB[0..7]
SBAB0
SBAB1
-CSB0
-CSB1
-CSB2
-CSB3
-SWEB
-SCASB
-SRASB
CKEB0
CKEB1
DCLKB1
-DCLKB1
DCLKB0
-DCLKB0
DCLKB2
-DCLKB2
DCLKB3
-DCLKB3
DCLKB4
-DCLKB4
DCLKB5
-DCLKB5
SMBDATA
SMBCLK
VREF_DDRB
-RESET_DDR
C207
0.1U/6/Y/25V
R525
75/6/1
R526
75/6/1
EC63
1000U/D/6.3V/8C
CLOSE TO DDR SOCKET
GIGABYTE CORP.
Title
DDR3,4 CHANNEL B
Size
B
Document Number
GA-8IG1000-G
Rev
3.0
Date:
Sheet 12 of 38

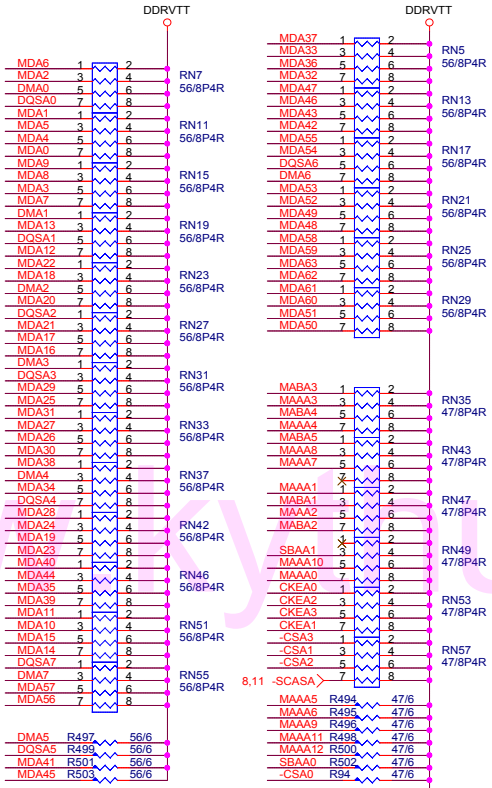
DDR TERMINATION

CHANNEL A

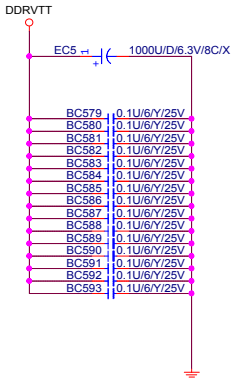
DDRVTT Decouple



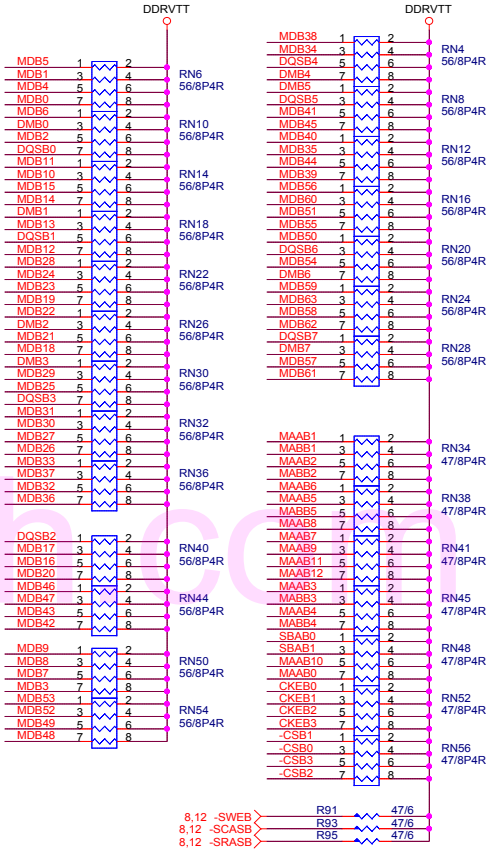




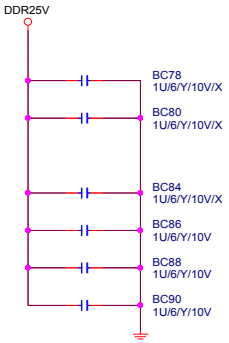
DDRVTT Decouple



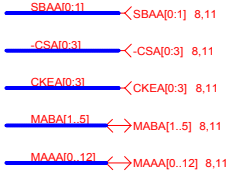
CHANNEL B



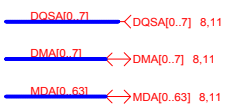
DDR25V Decouple



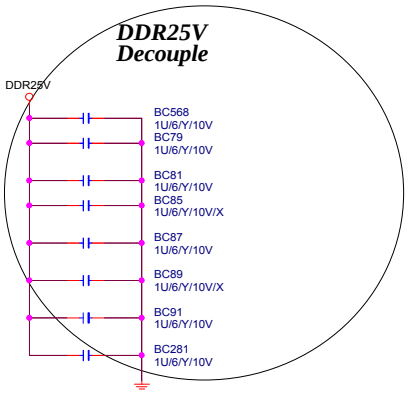
47 Ohms



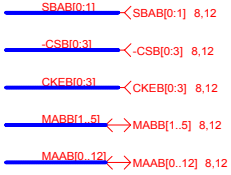
56 Ohms



DDR25V Decouple

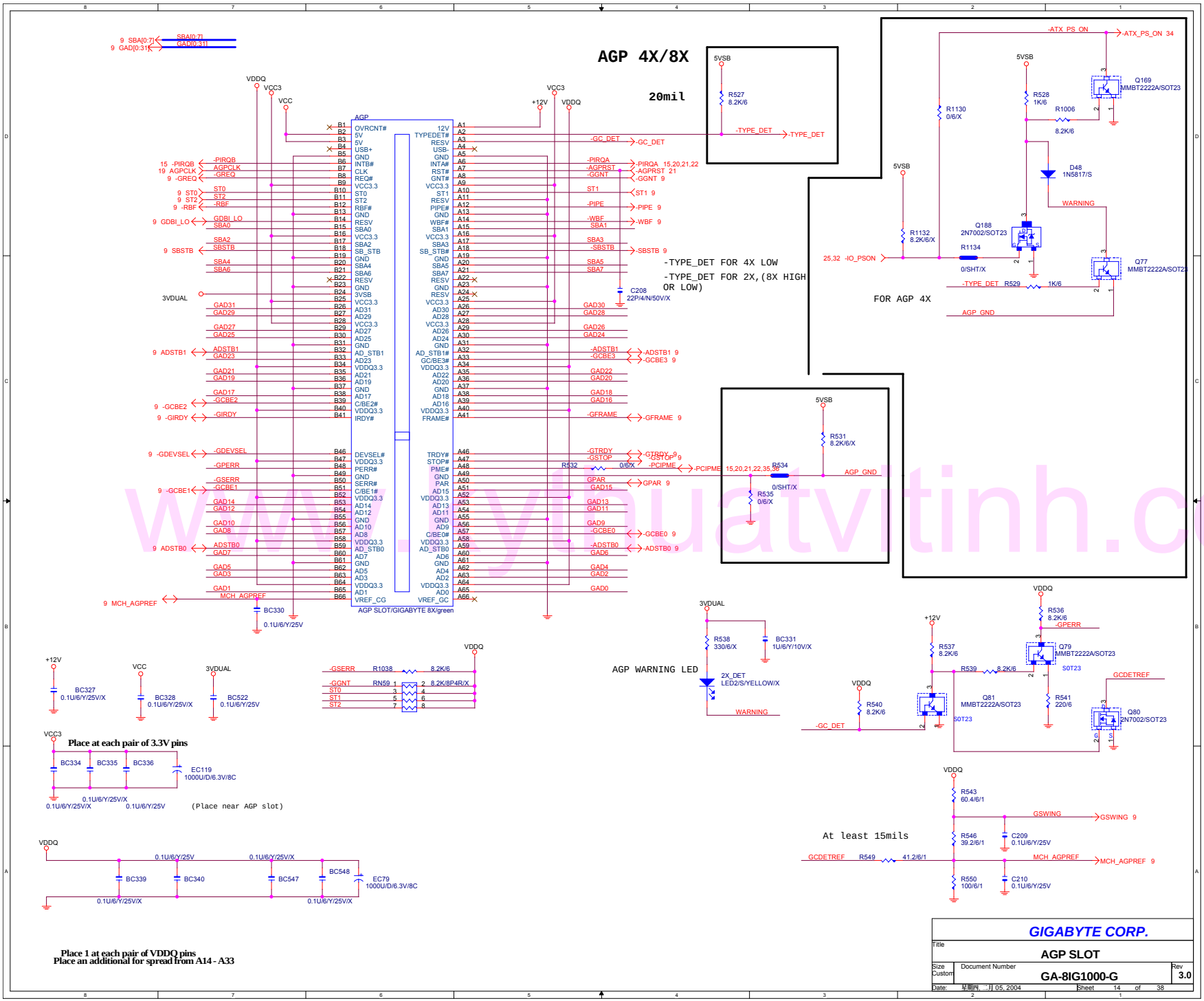


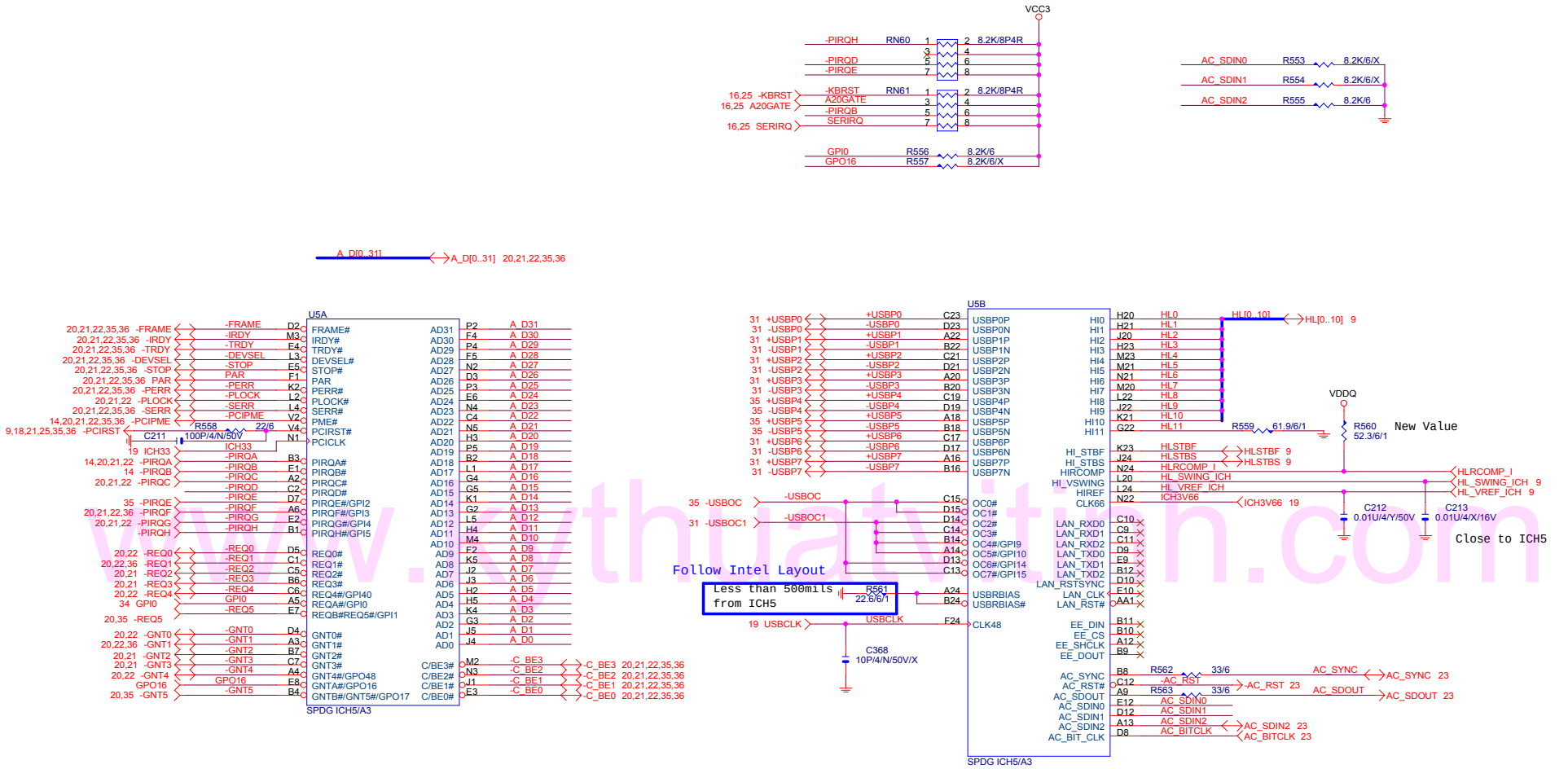
47 Ohms



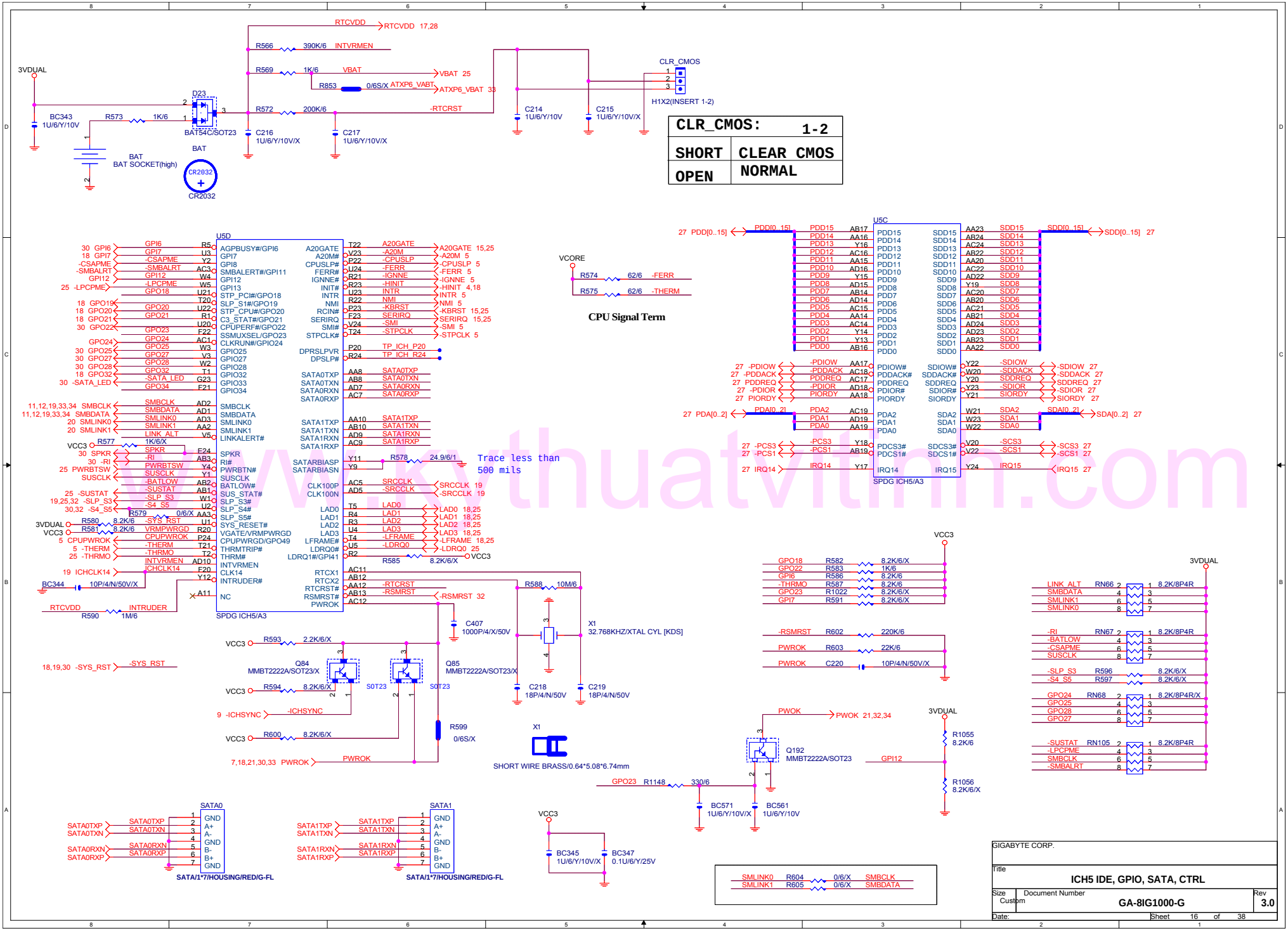
56 Ohms

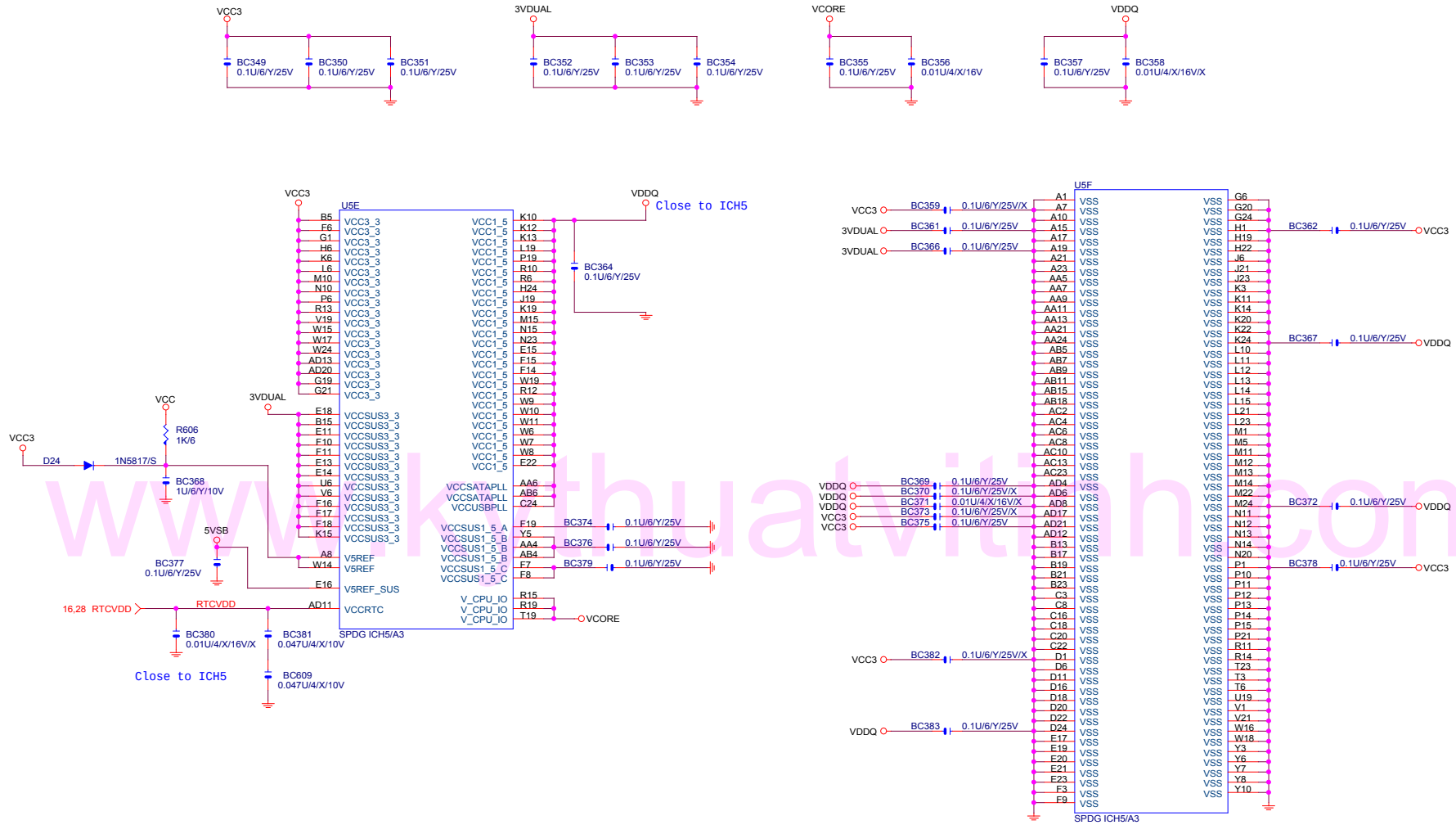
GIGABYTE CORP.		
Title: DDR TERMINATION		
Size: B	Document Number: GA-8IG1000-G	Rev: 3.0
Date:	Sheet 13 of 38	



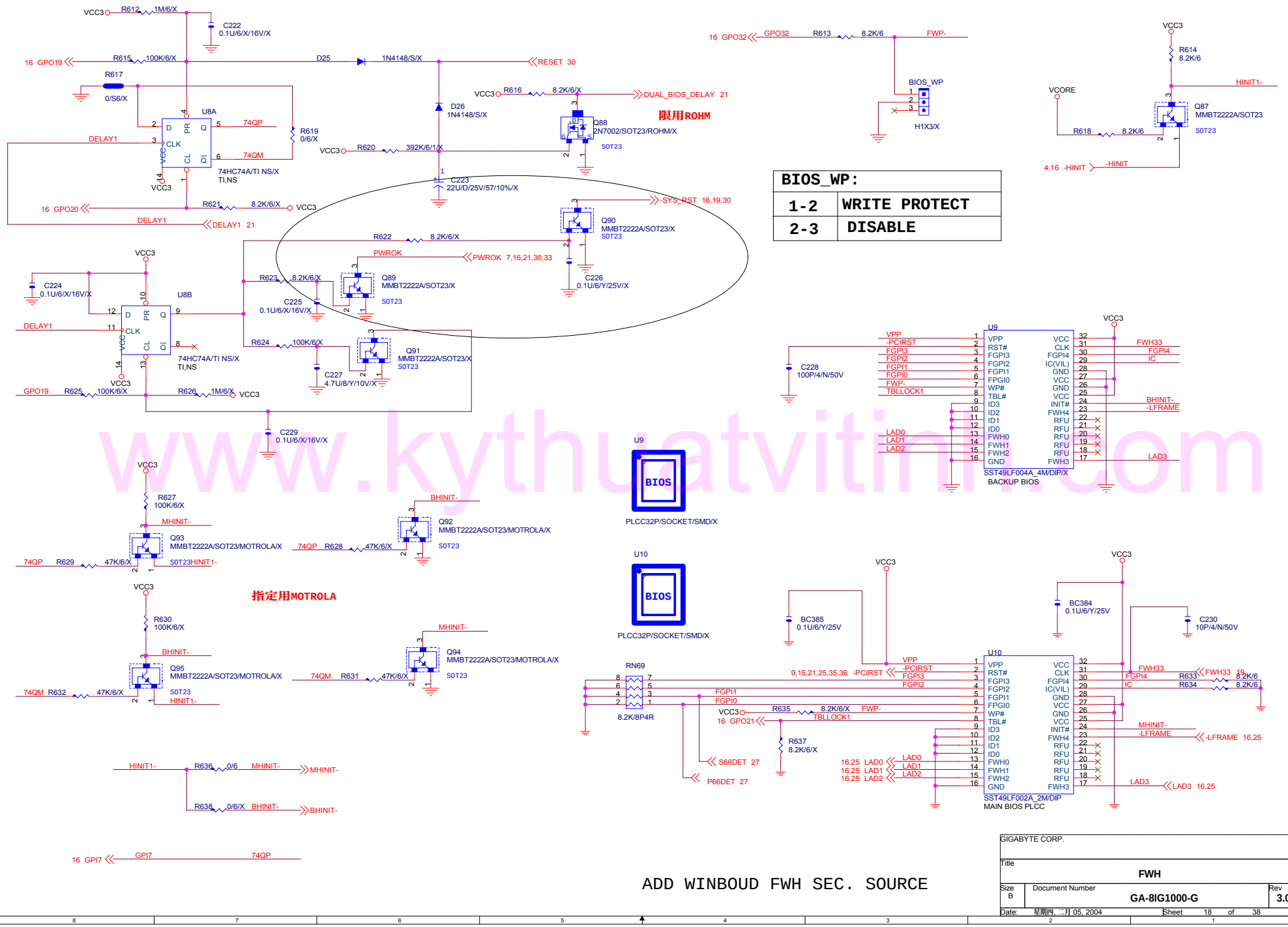


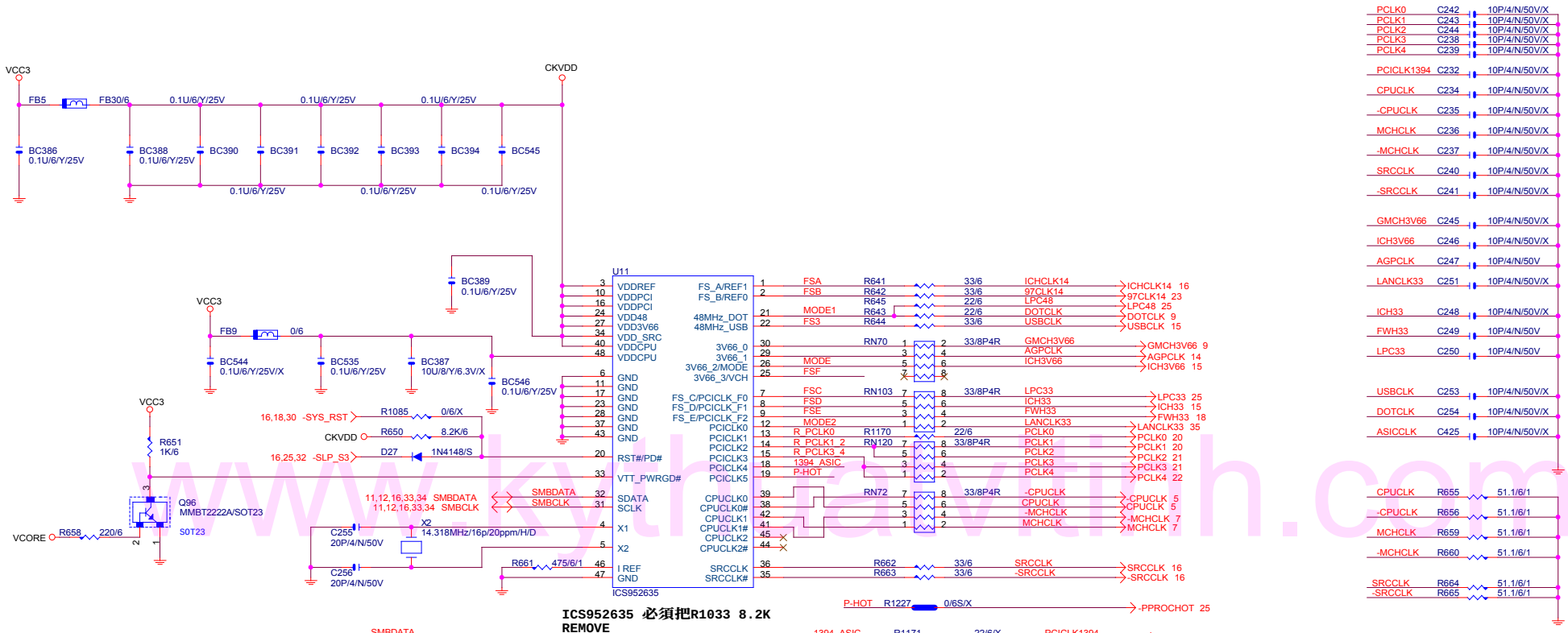
GIGABYTE CORP.		
Title: ICH5 PCI, USB, HUB, LAN		
Size: B	Document Number: GA-8IG1000-G	Rev: 3.0
Date:	Sheet 15 of 38	





GIGABYTE CORP.		
Title: ICH5 VCC, GND		
Size: B	Document Number: GA-8IG1000-G	Rev: 3.0
Date:	Sheet 17 of 38	





ICS952635 必须把R1033 8.2K REMOVE

For Pin 20 PD# MODE

ICS + CYPRESS CO-LAYOUT

CYPRESS CY28405

FS_E	FS_D	FS_C	FS_B	FS_A	Clock
1	1	0	0	0	100.9MHz
1	1	0	0	1	133.9MHz
1	1	0	1	1	166.9MHz
1	1	0	1	0	200.9MHz

ICS952616

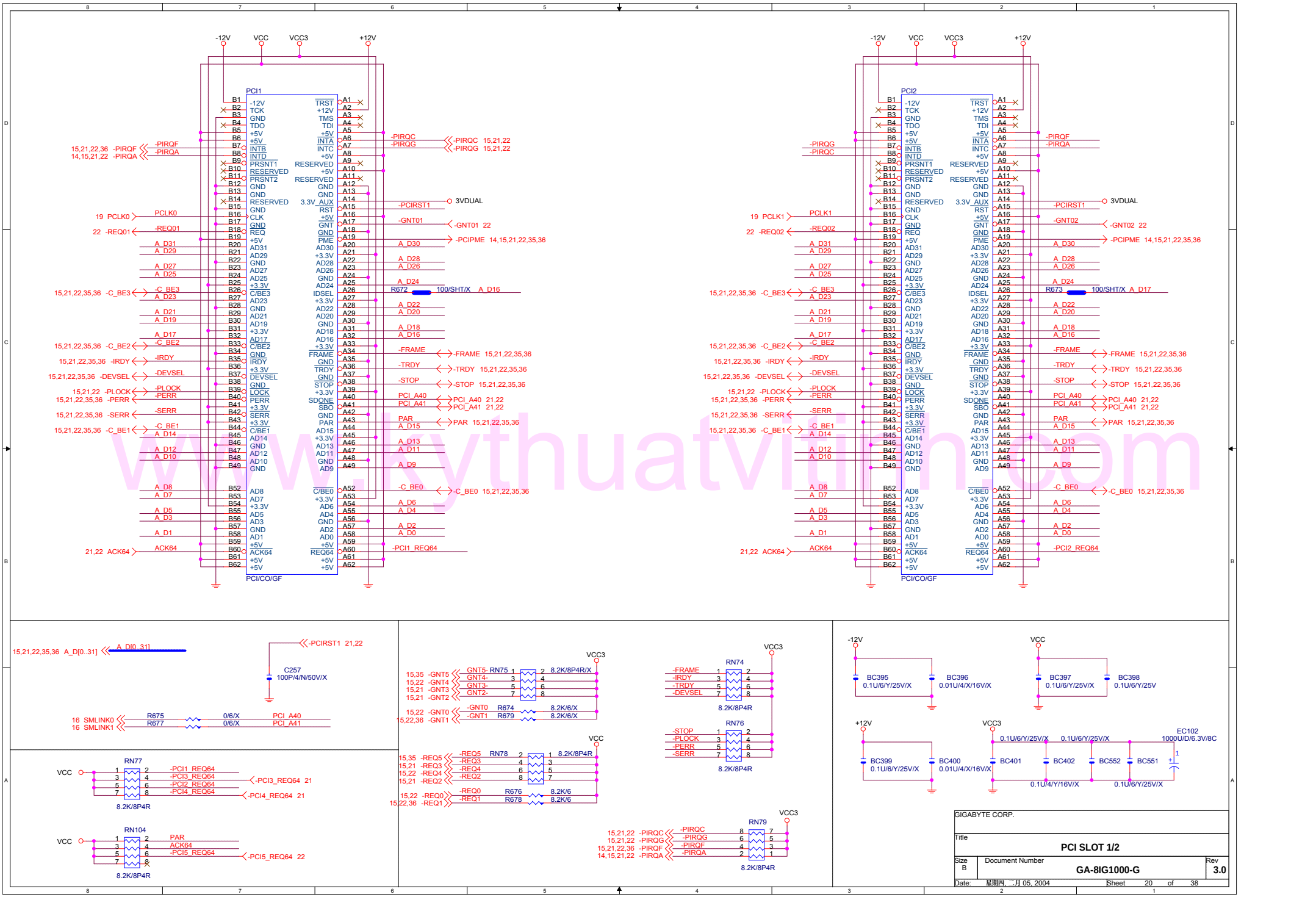
FS_E	FS_3	FS_C	FS_B	FS_A	Clock
1	0	0	0	0	100MHz
1	0	0	0	1	133MHz
1	0	0	1	1	166MHz
1	0	0	1	0	200MHz

GIGABYTE CORP.

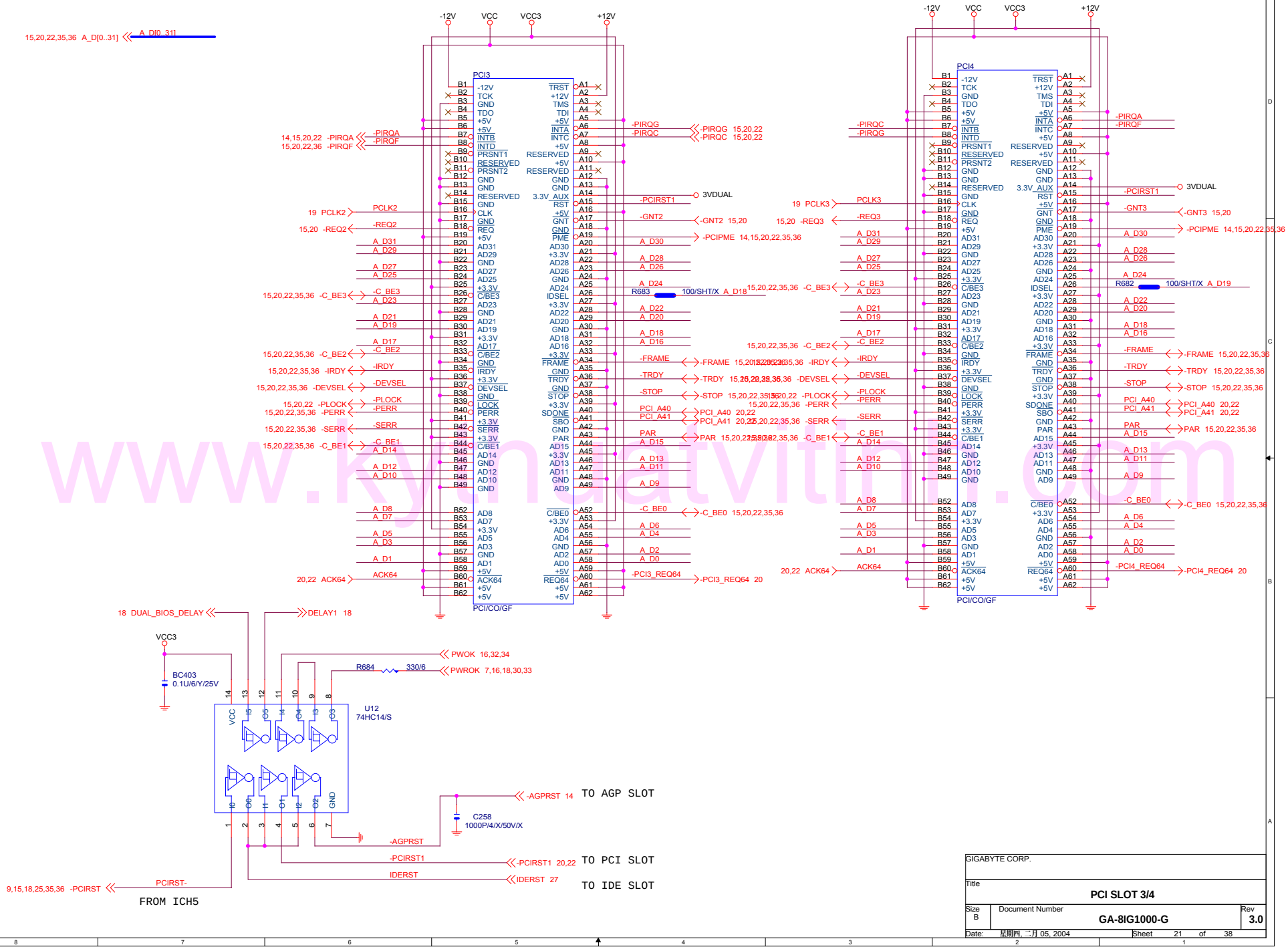
Title: CLOCK GENERATOR

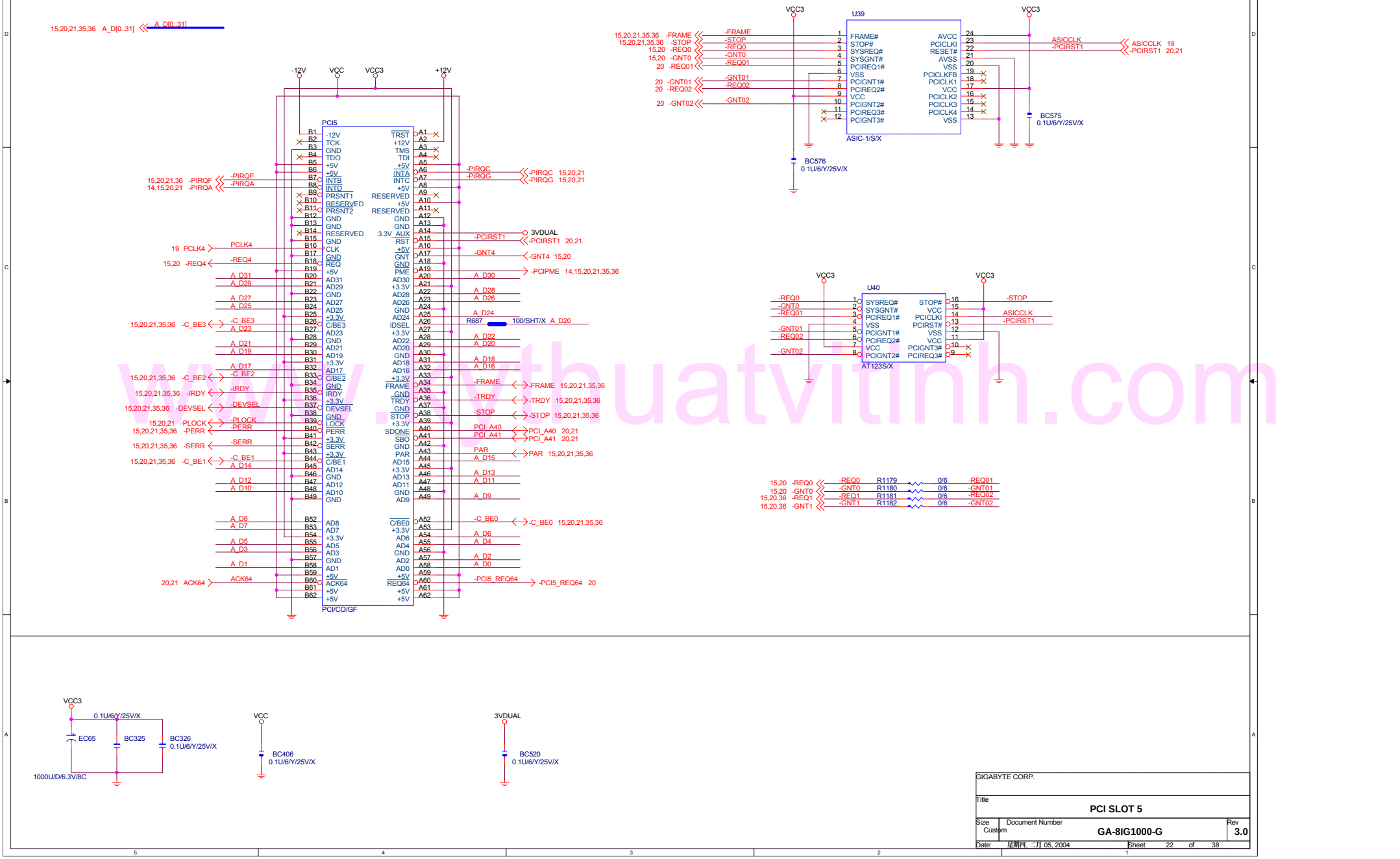
Size: Custom | Document Number: GA-8IG1000-G | Rev: 3.0

Date: | Sheet 19 of 38



GIGABYTE CORP.		
Title: PCI SLOT 1/2		
Size: B	Document Number: GA-8IG1000-G	Rev: 3.0
Date: 星期四, 二月 05, 2004	Sheet 20 of 38	

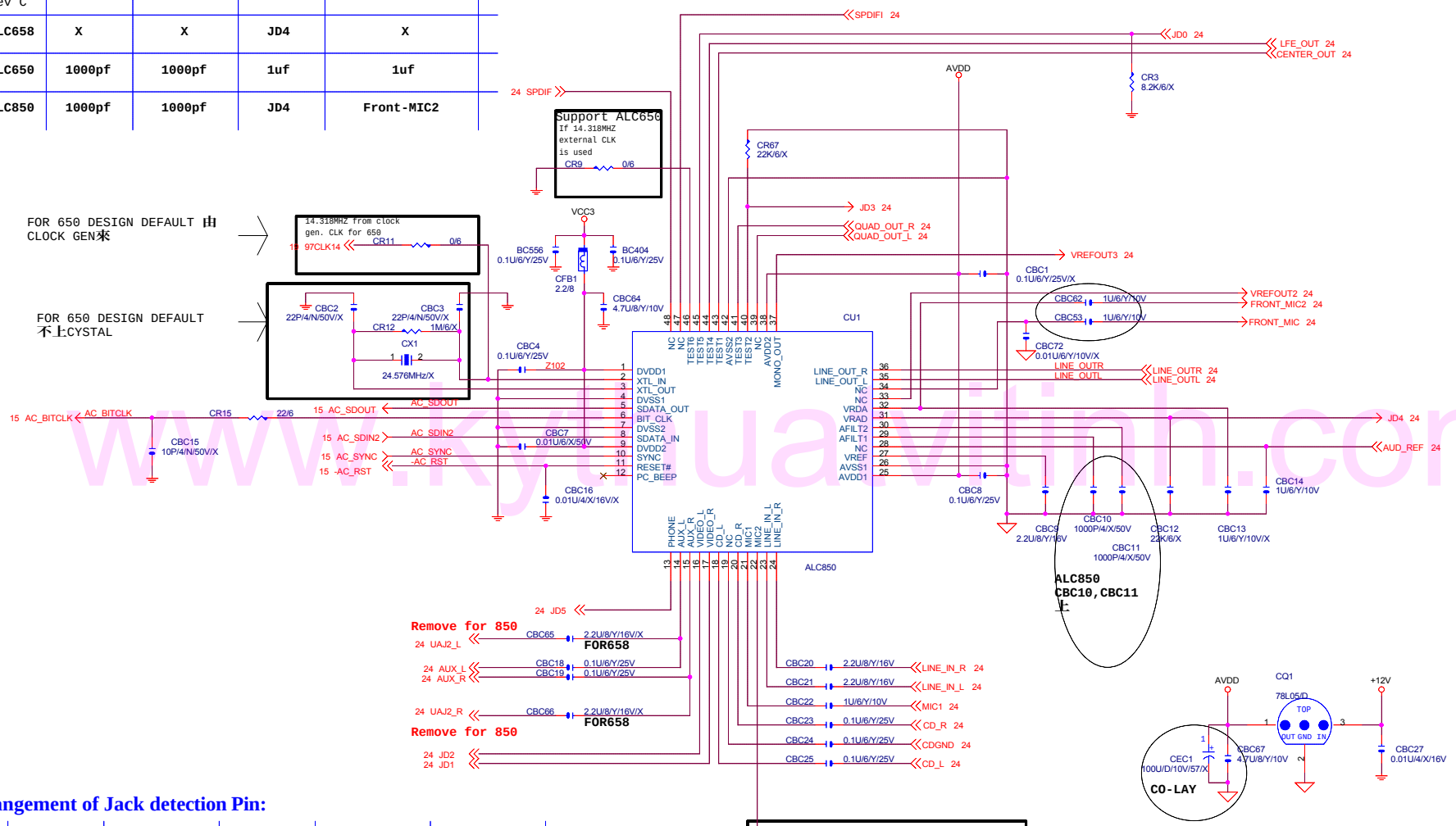

PCI3
PCI4
PCI/CO/GF
-12V
VCC
VCC3
+12V
A_D[0..31]
15,20,22,35,36 A_D[0..31]
-PIRQA
-PIRQF
-PIRQG
-PIRQC
-PIRQG 15,20,22
-PIRQC 15,20,22
14,15,20,22 -PIRQA
15,20,22,36 -PIRQF
3VDUAL
-PCIRST1
-GNT2
-GNT2 15,20
-PCIPME 14,15,20,22,35,36
-GNT3
-GNT3 15,20
-PCIPME 14,15,20,22,35,36
PCLK2
PCLK3
19 PCLK2
19 PCLK3
-REQ2
-REQ3
15,20 -REQ2
15,20 -REQ3
A_D31
A_D29
A_D27
A_D25
A_D23
A_D21
A_D19
A_D17
A_D15
A_D13
A_D11
A_D9
A_D8
A_D7
A_D6
A_D5
A_D4
A_D3
A_D2
A_D1
A_D0
A_D30
A_D28
A_D26
A_D24
A_D22
A_D20
A_D18
A_D16
R683
R682
100/SHT/X A_D18
100/SHT/X A_D19
-C_BE3
-C_BE2
-C_BE1
-C_BE0
15,20,22,35,36 -C_BE3
15,20,22,35,36 -C_BE2
15,20,22,35,36 -C_BE1
-C_BE0 15,20,22,35,36
-IRDY
-DEVSEL
-PLOCK
-PERR
-SERR
15,20,22,35,36 -IRDY
15,20,22,35,36 -DEVSEL
15,20,22 -PLOCK
15,20,22,35,36 -PERR
15,20,22,35,36 -SERR
-FRAME
-TRDY
-STOP
-FRAME 15,20,22,35,36
-TRDY 15,20,22,35,36
-STOP 15,20,22,35,36
PCI_A40
PCI_A41
PAR
PCI_A40 20,22
PCI_A41 20,22
PAR 15,20,22,35,36
-PCIRST1 20,22
-PCI3_REQ64
-PCI3_REQ64 20
-PCI4_REQ64
-PCI4_REQ64 20
ACK64
20,22 ACK64
-PIRQC
-PIRQG
-PIRQA
-PIRQF
18 DUAL_BIOS_DELAY
DELAY1 18
PWOK 16,32,34
PWROK 7,16,18,30,33
R684
330/6
BC403
0.1U/6/Y/25V
U12
74HC14/S
C258
1000P/4/X/50V/X
-AGPRST 14
TO AGP SLOT
-AGPRST
-PCIRST1
TO PCI SLOT
IDERST
IDERST 27
TO IDE SLOT
9,15,18,25,35,36 -PCIRST
PCIRST-
FROM ICH5
GIGABYTE CORP.
Title
PCI SLOT 3/4
Size
B
Document Number
GA-8IG1000-G
Rev
3.0
Date: 星期四, 二月 05, 2004
Sheet 21 of 38



GIGABYTE CORP.		
Title	PCI SLOT 5	
Size: Custom	Document Number: GA-8IG1000-G	Rev: 3.0
Date: 星期四, 二月 05, 2004	Sheet 22 of 38	

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:

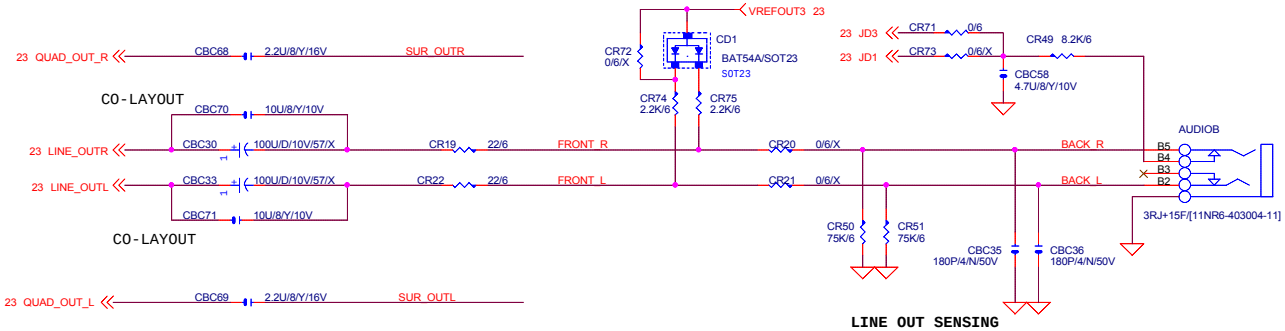
	Pin-45(JD0)	Pin-17(JD1)	Pin-16(JD2)	Pin-40(JD3)	Pin-31(JD4)	Pin-13(JD5)
ALC655	for MIC-IN	for FRONT-OUT	for LINE-IN			
ALC658	for MIC-IN	for UAJ1	for UAJ2	for FRONT-OUT Exernal pull high is needed	for LINE-IN Exernal pull high is needed	
ALC850	for MIC-IN	for Front Pannel OUT	for Front Pannel IN	for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

GIGABYTE CORP.			
Title	ALC850		
Size: Custom	Document Number: GA-8IG1000-G		Rev: 3.0
Date: 星期四, 二月 05, 2004	Sheet 23 of 38		

LINE OUT

JDO,JD2,GPIO0 為偵測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)



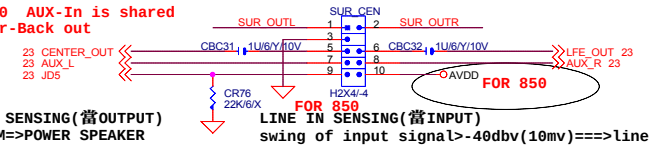
LINE OUT SENSING
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

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

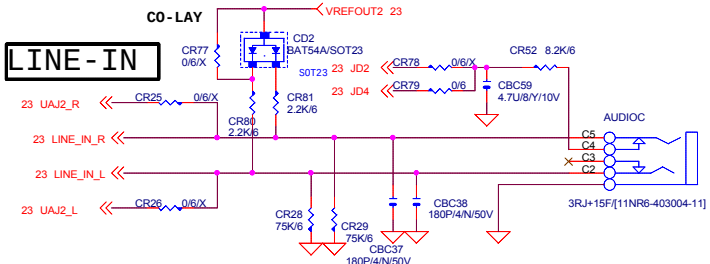
For 850 AUX-In is shared to Surr-Back out



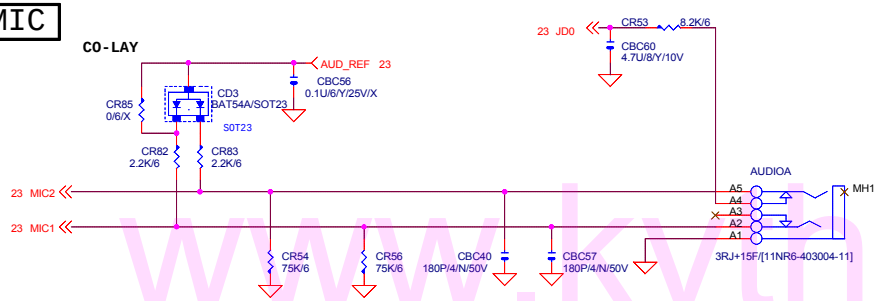
LINE IN SENSING(當OUTPUT)
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

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



MIC

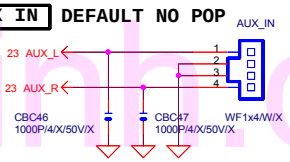


MICROPHONE IN SENSING(當INPUT)(利用vref 偏壓與CR43,CR32 並聯求出阻抗)
7.1k ohm>R>2.3k ohm===>microphone in
R<2.3k ohm or R>7.1k ohm===>unknown device

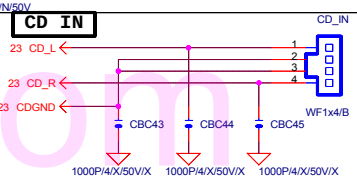
MICROPHONE IN SENSING(當OUTPUT)
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

AUX IN

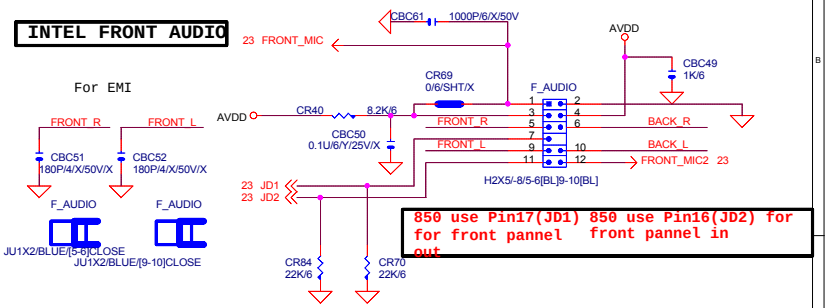
DEFAULT NO POP



CD IN

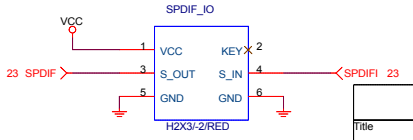


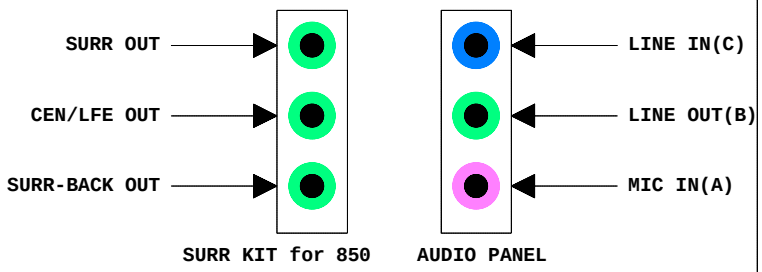
INTEL FRONT AUDIO



850 use Pin17(JD1) 850 use Pin16(JD2) for front pannel
for front pannel out

SPDIF_IO



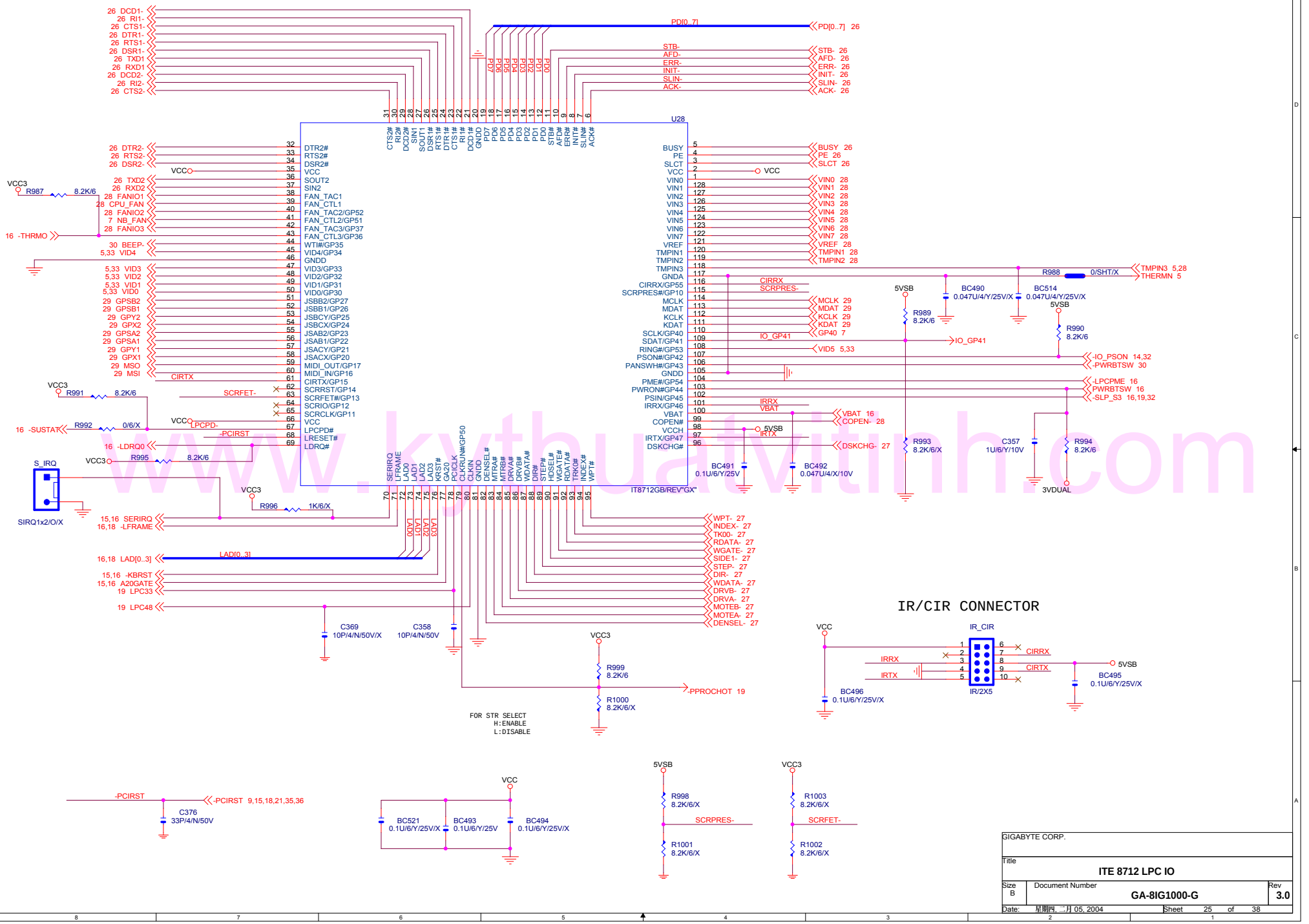


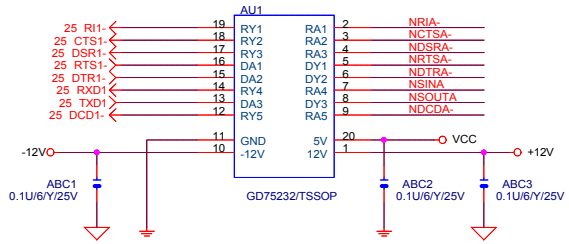
GIGABYTE CORP.

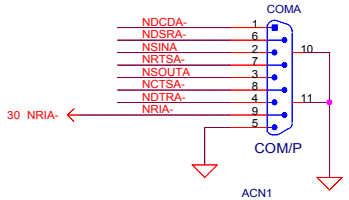
Title: AUDIO OUTPUT,GAME PORT

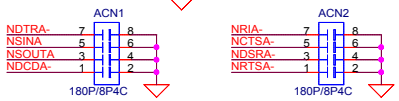
Size: Custom | Document Number: GA-8IG1000-G | Rev: 3.0

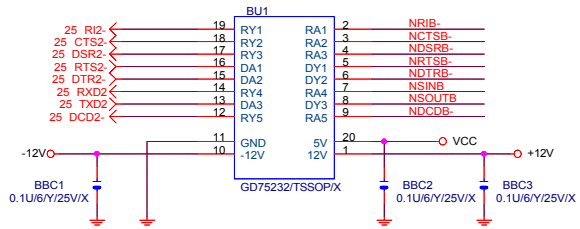
Date: 星期四, 二月 05, 2004 | Sheet 24 of 37

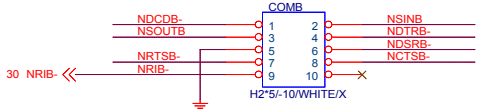


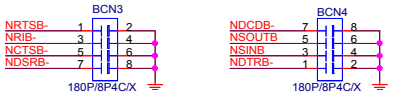


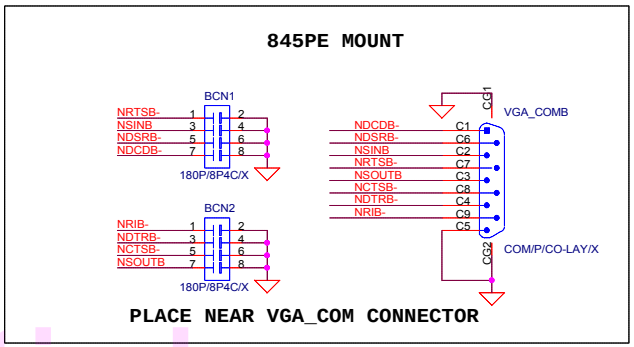


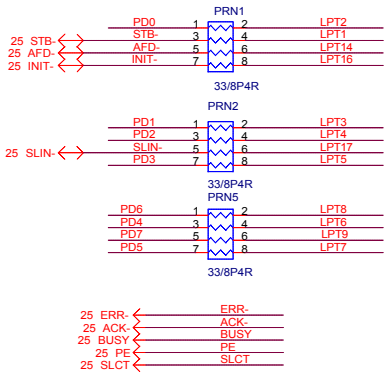


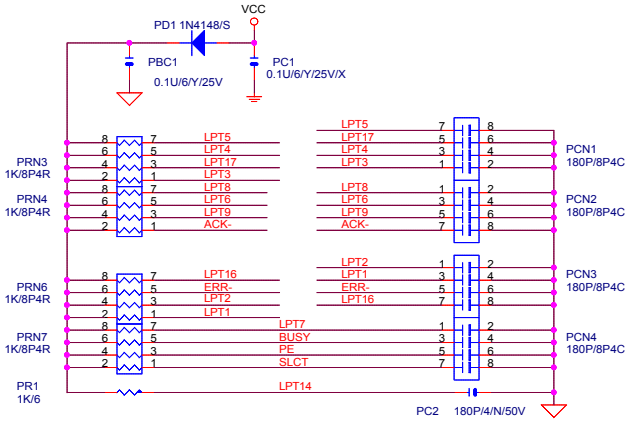


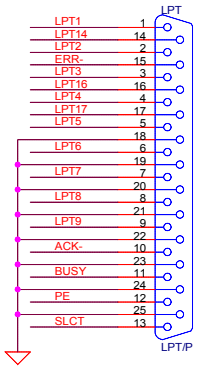












GIGABYTE CORP.		
Title: COM & IR & LPT PORT &FLOOPY		
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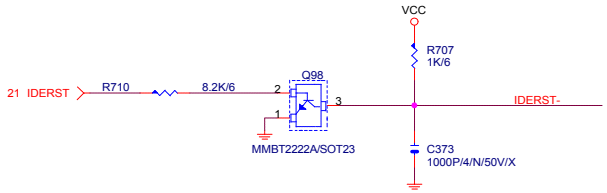
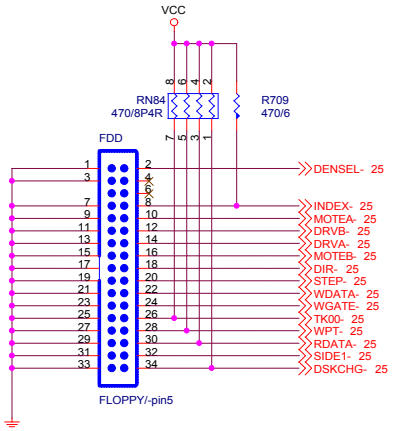
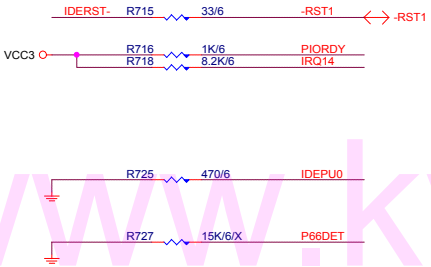
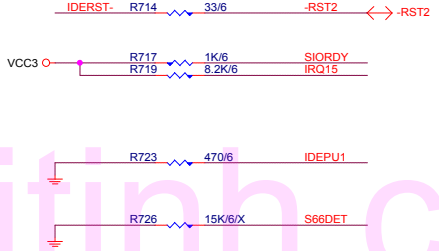
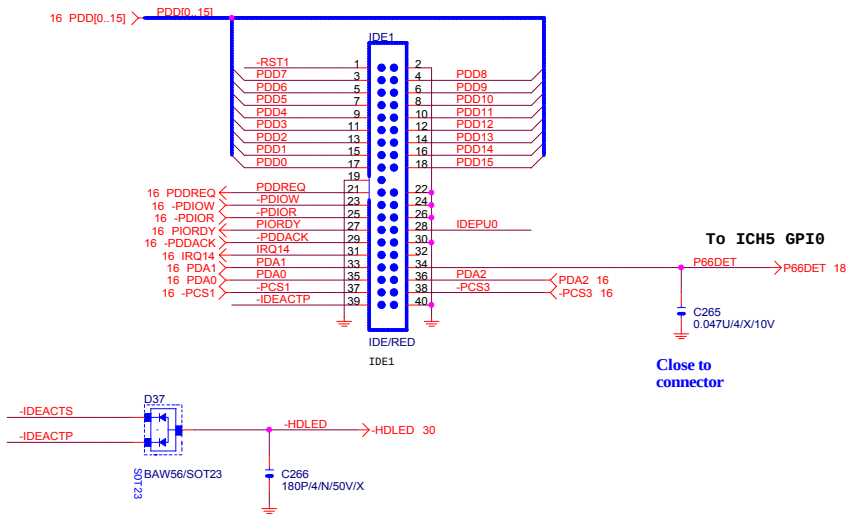








PRIMARY IDE CONNECTOR



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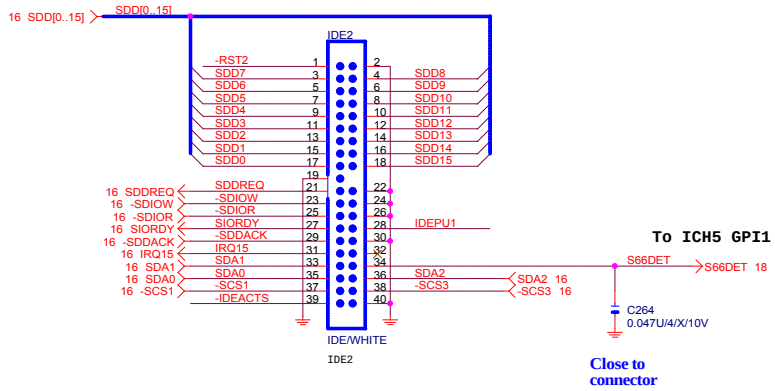

GIGABYTE CORP.		
Title: IDE CONNECTOR		
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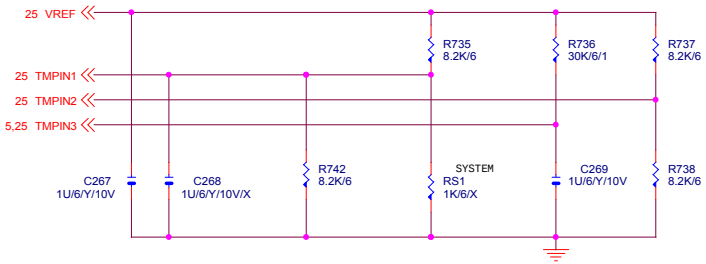
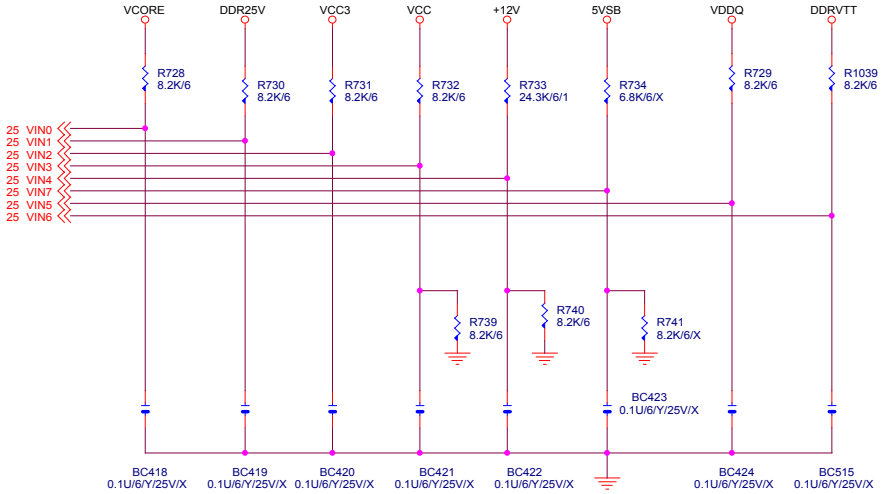
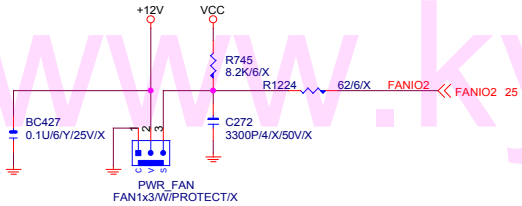
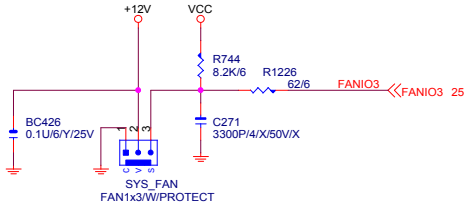
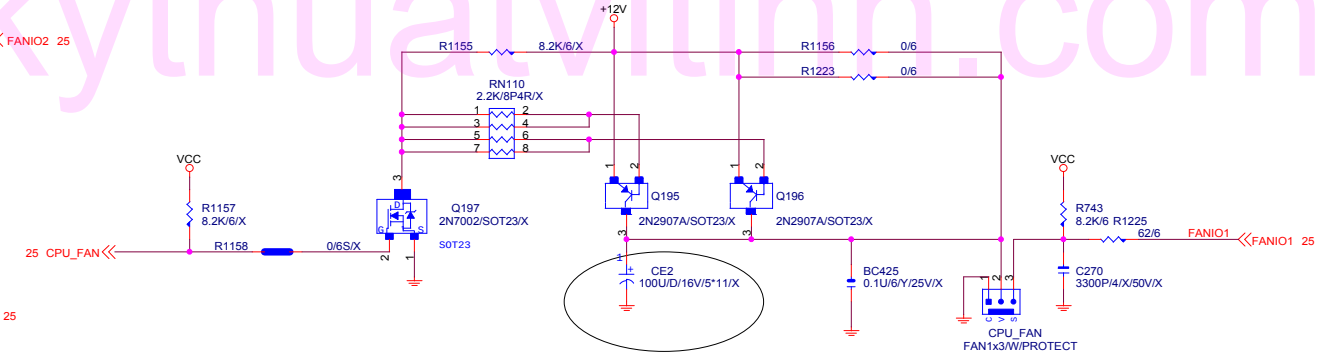
Hardware Monitor circuits

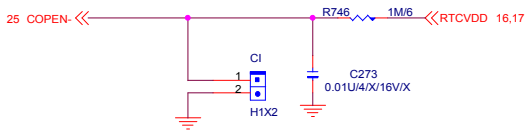












GIGABYTE CORP.		
Title	FAN/HWMO	
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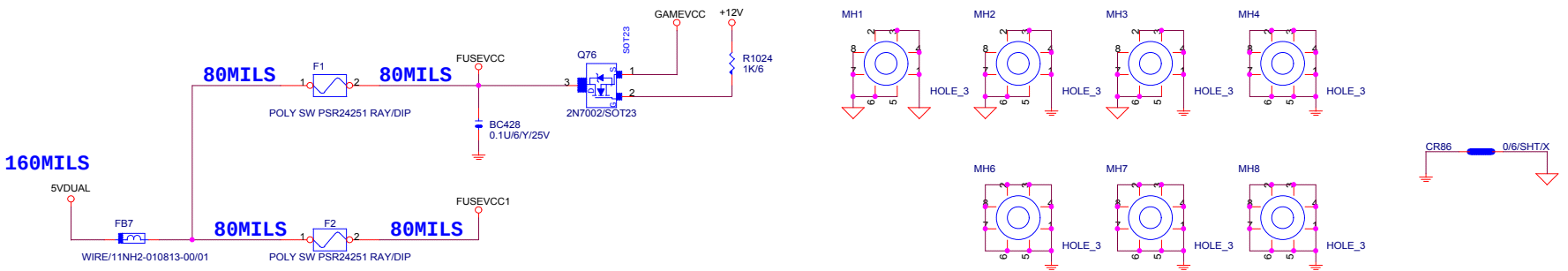

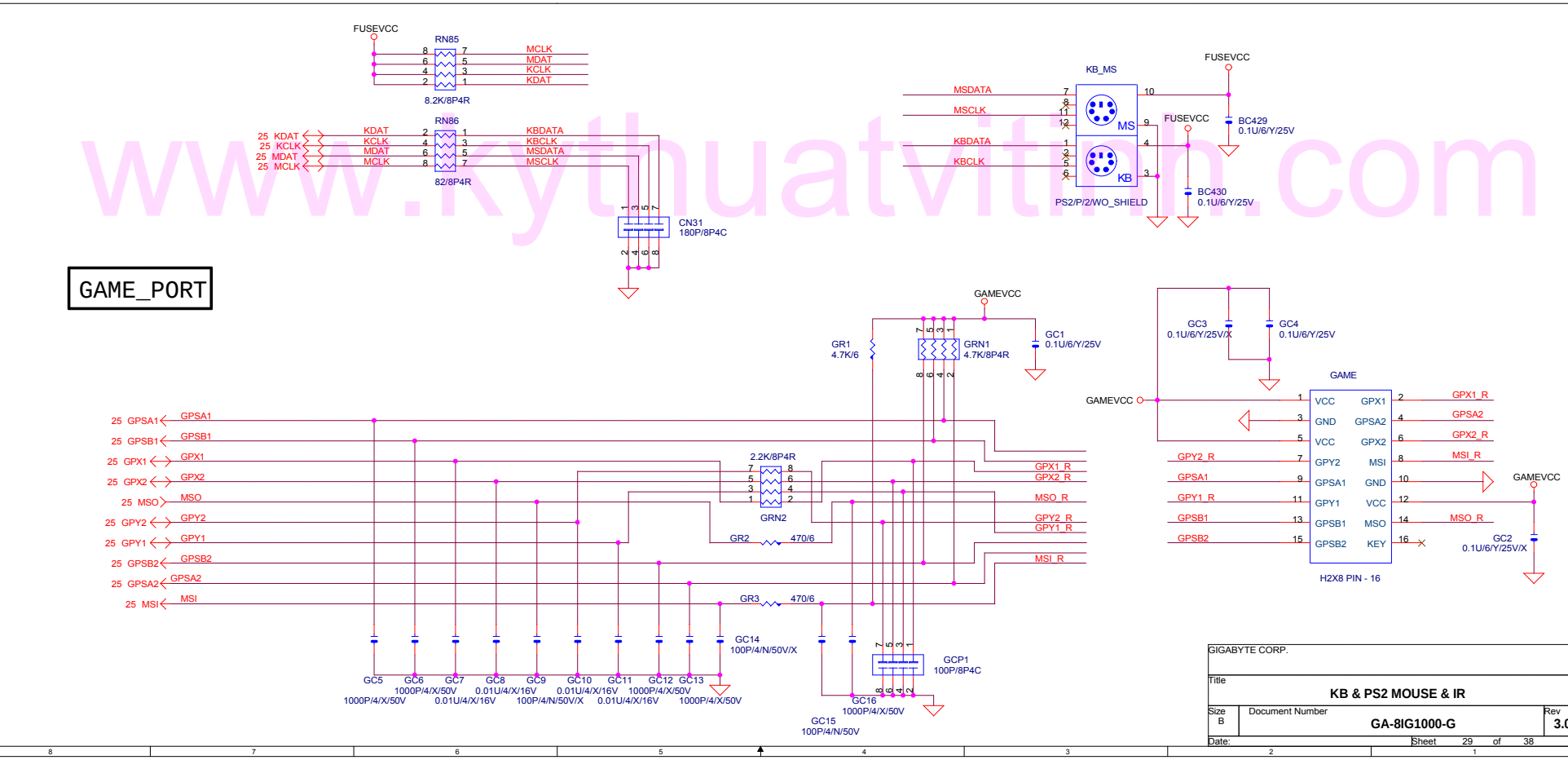

GIGABYTE CORP.		
Title	KB & PS2 MOUSE & IR	
Size B	Document Number GA-8IG1000-G	Rev 3.0
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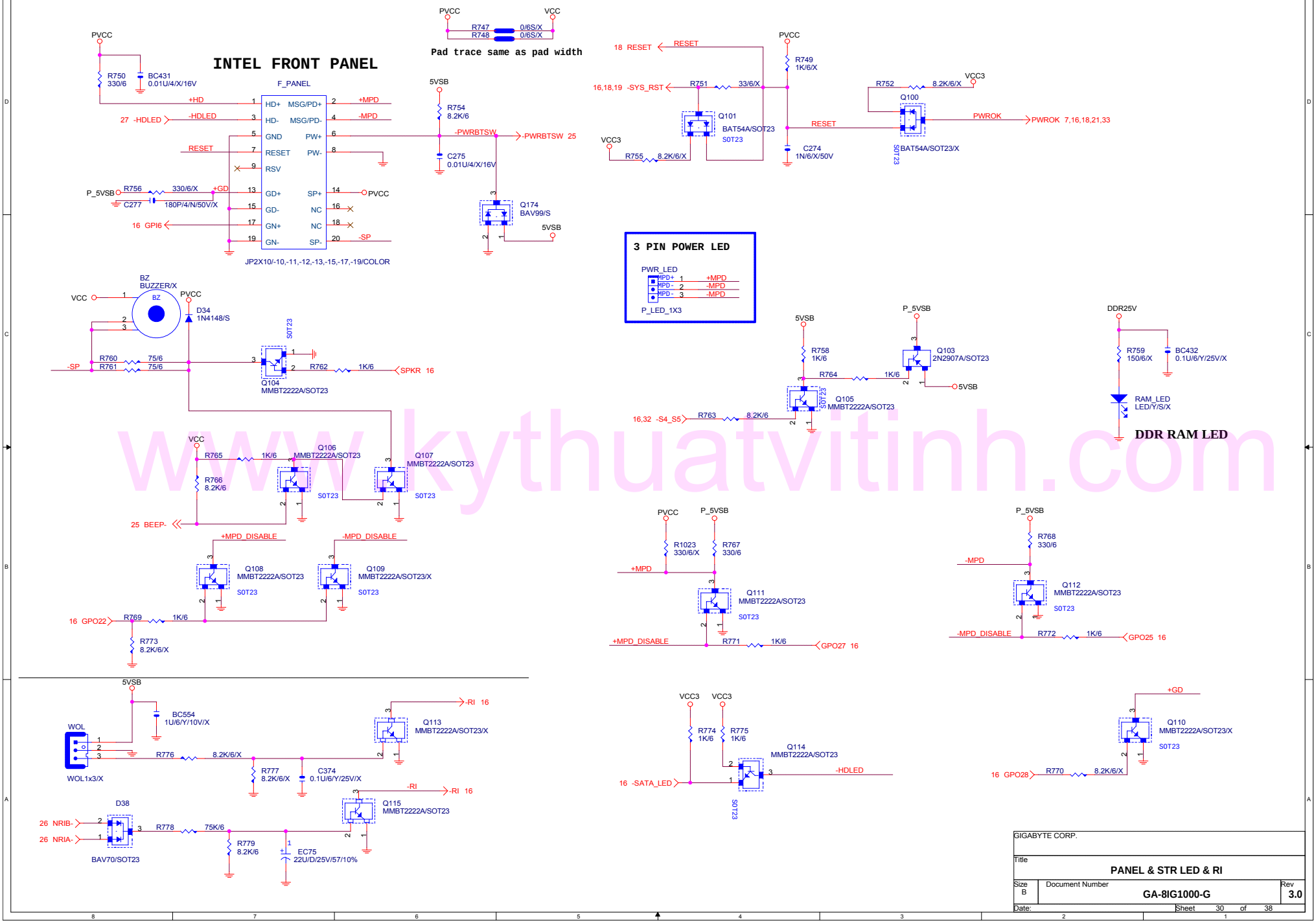
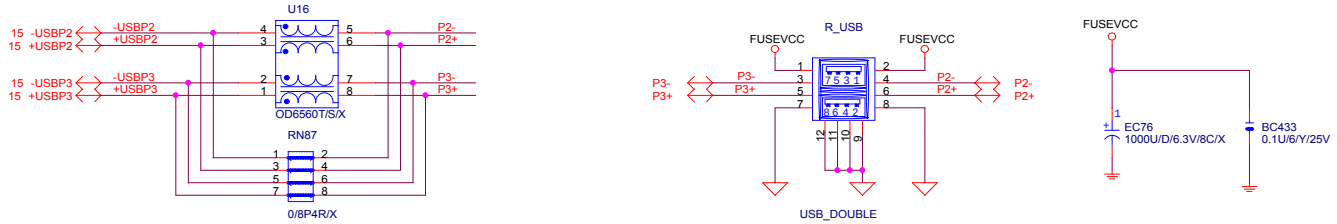
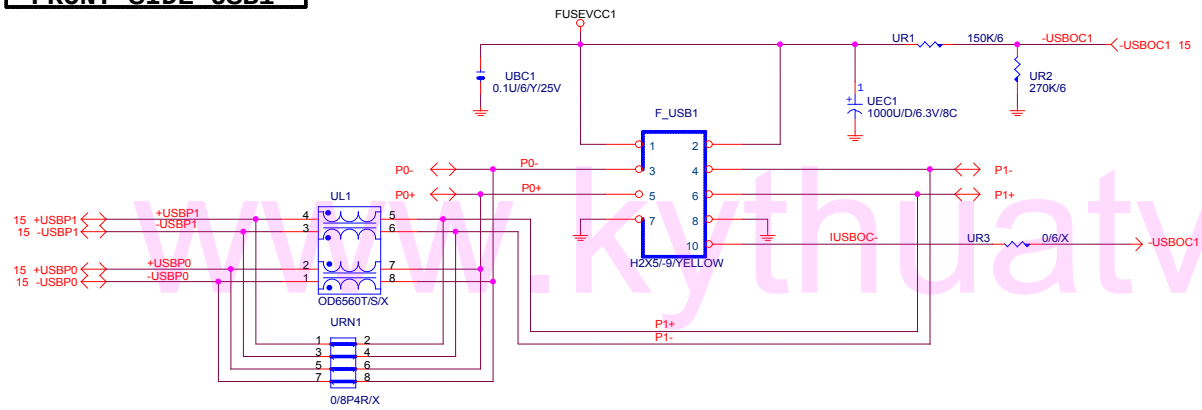


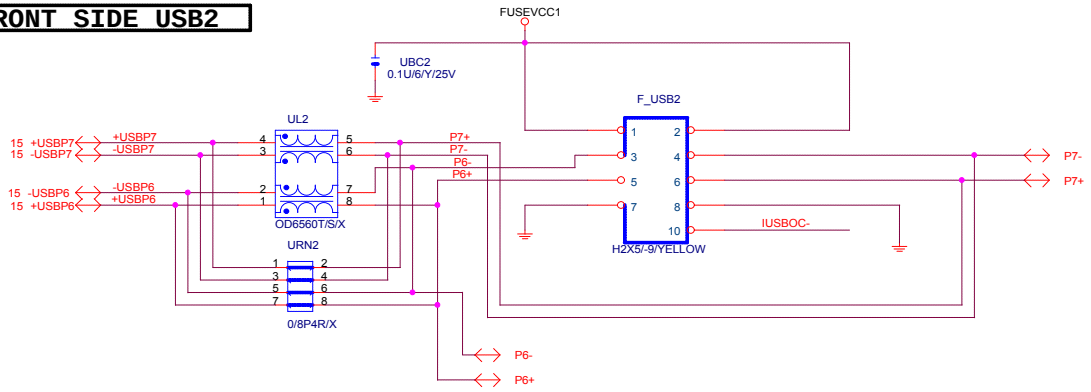
REAR USB



FRONT SIDE USB1



FRONT SIDE USB2



GIGABYTE CORP.		
Title: ICH USB PORT		
Size: B	Document Number: GA-8IG1000-G	Rev: 3.0
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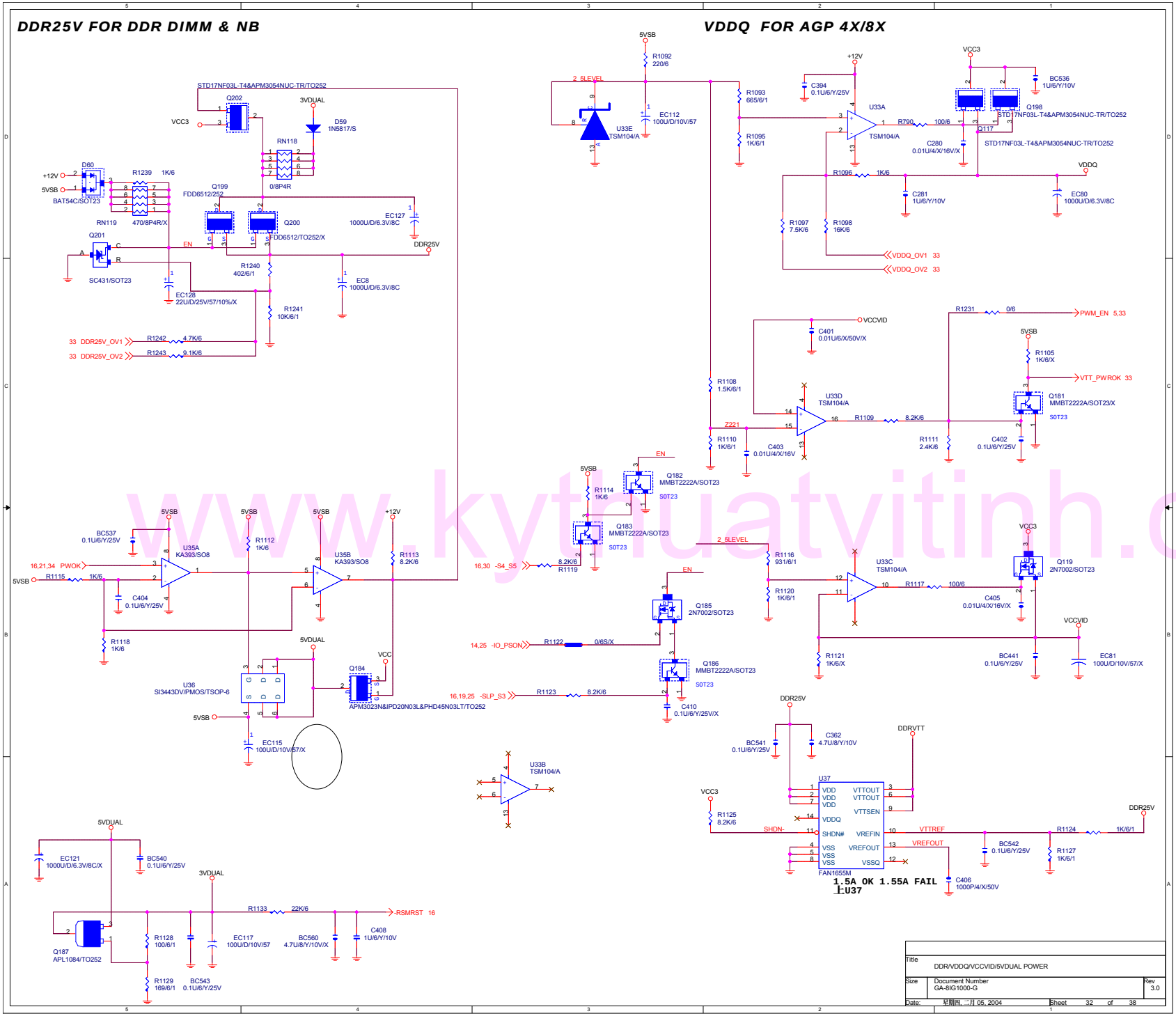

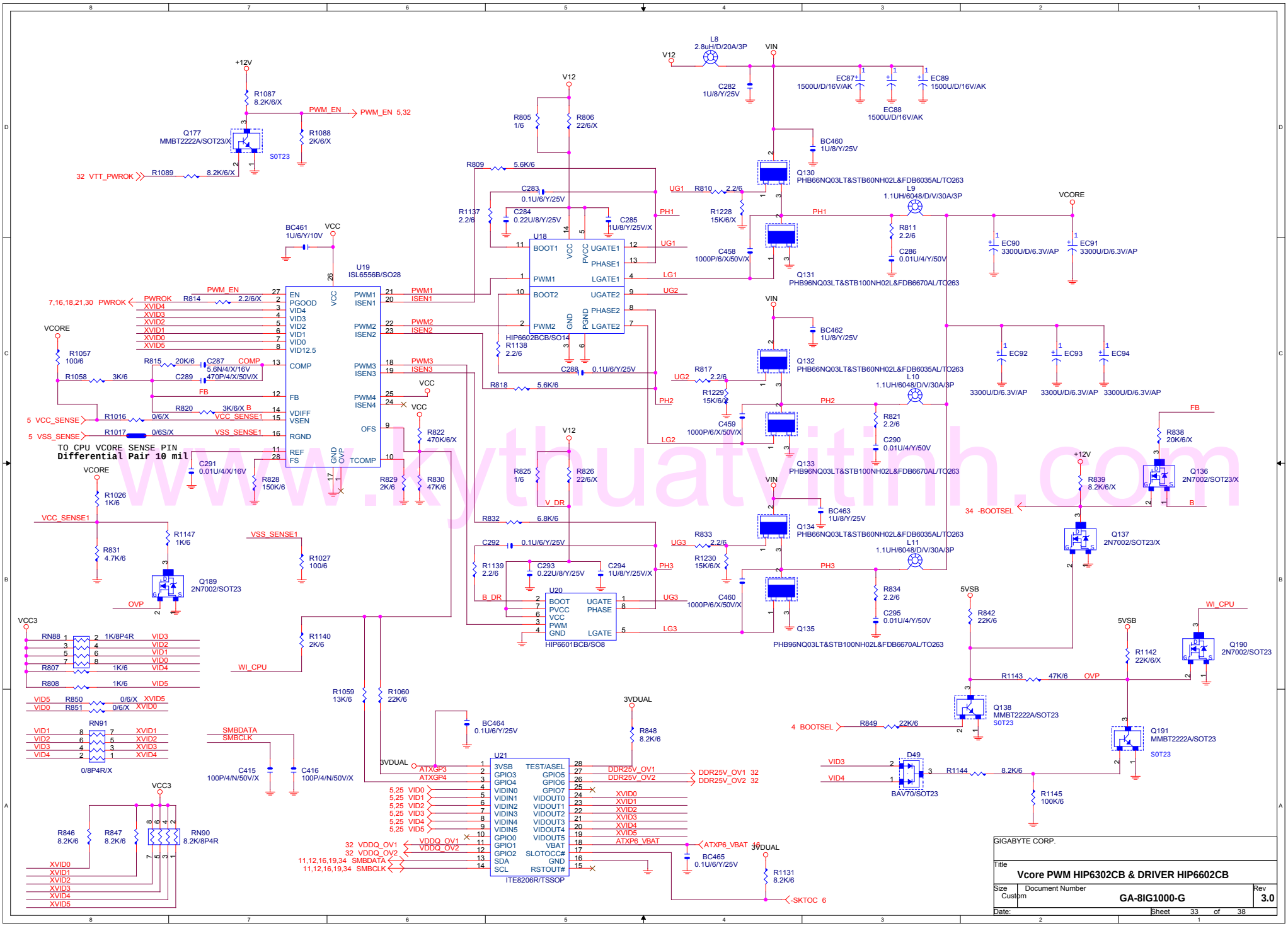

GIGABYTE CORP.	
Title	Vcore PWM HIP6302CB & DRIVER HIP6602CB
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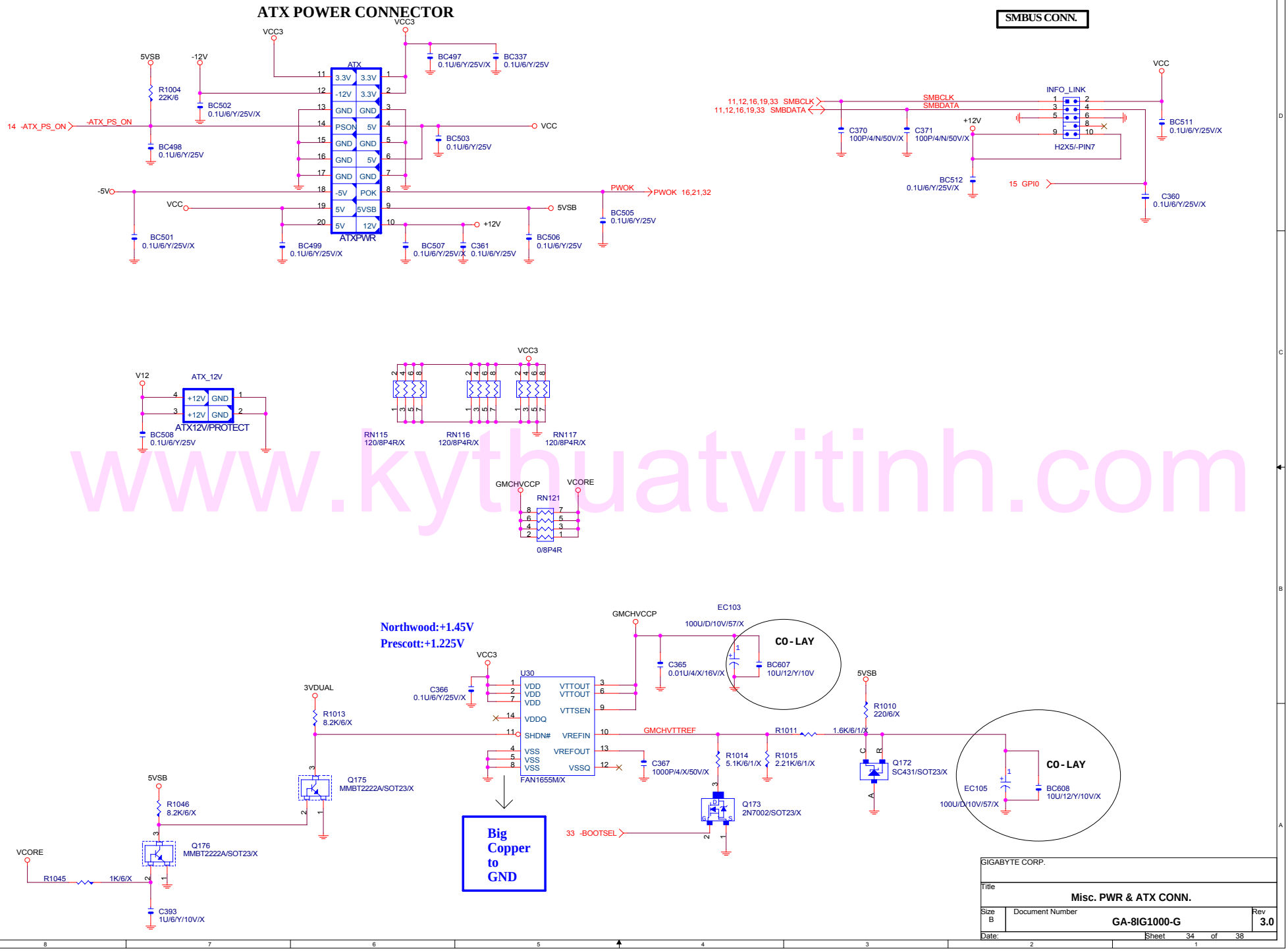

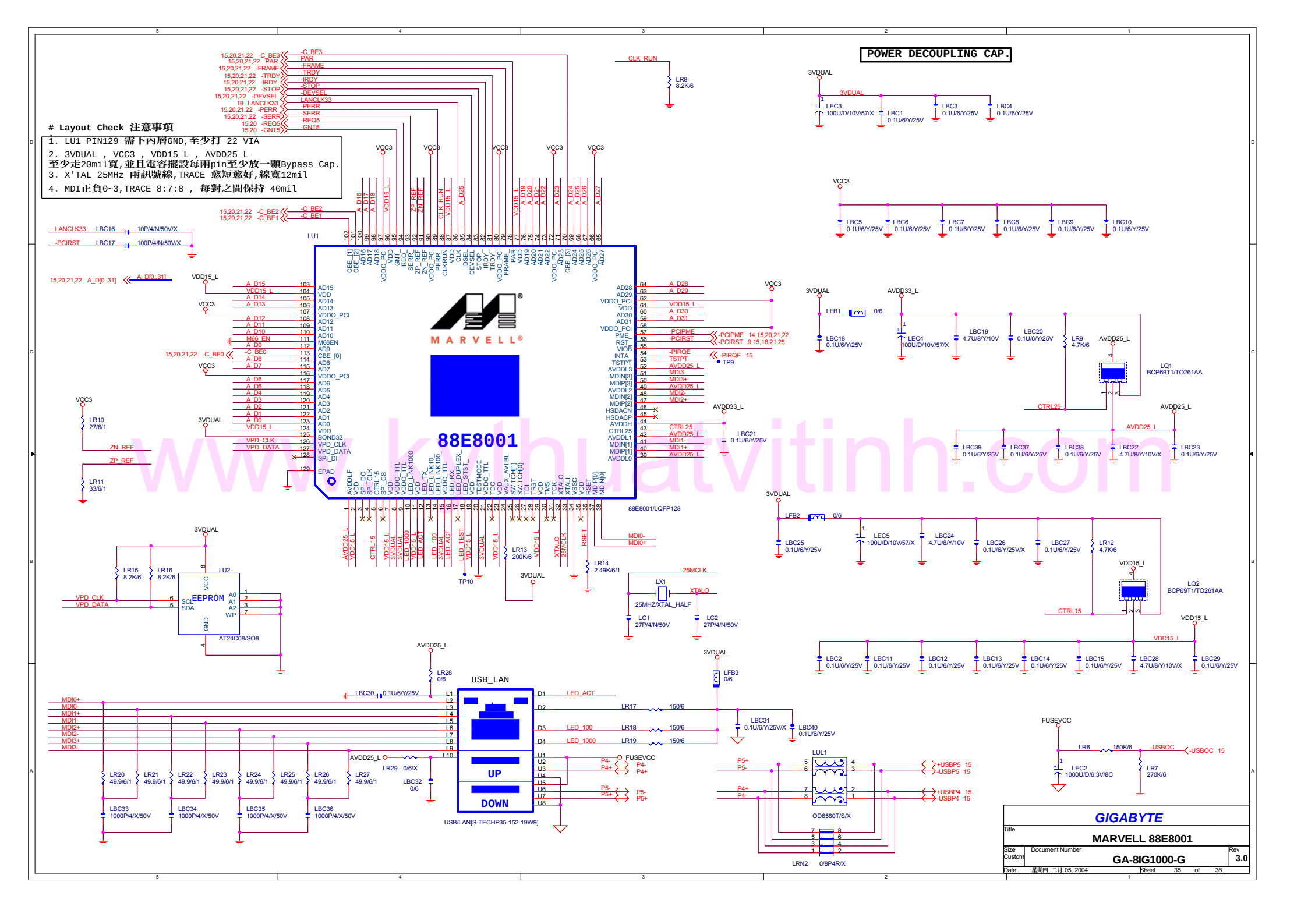

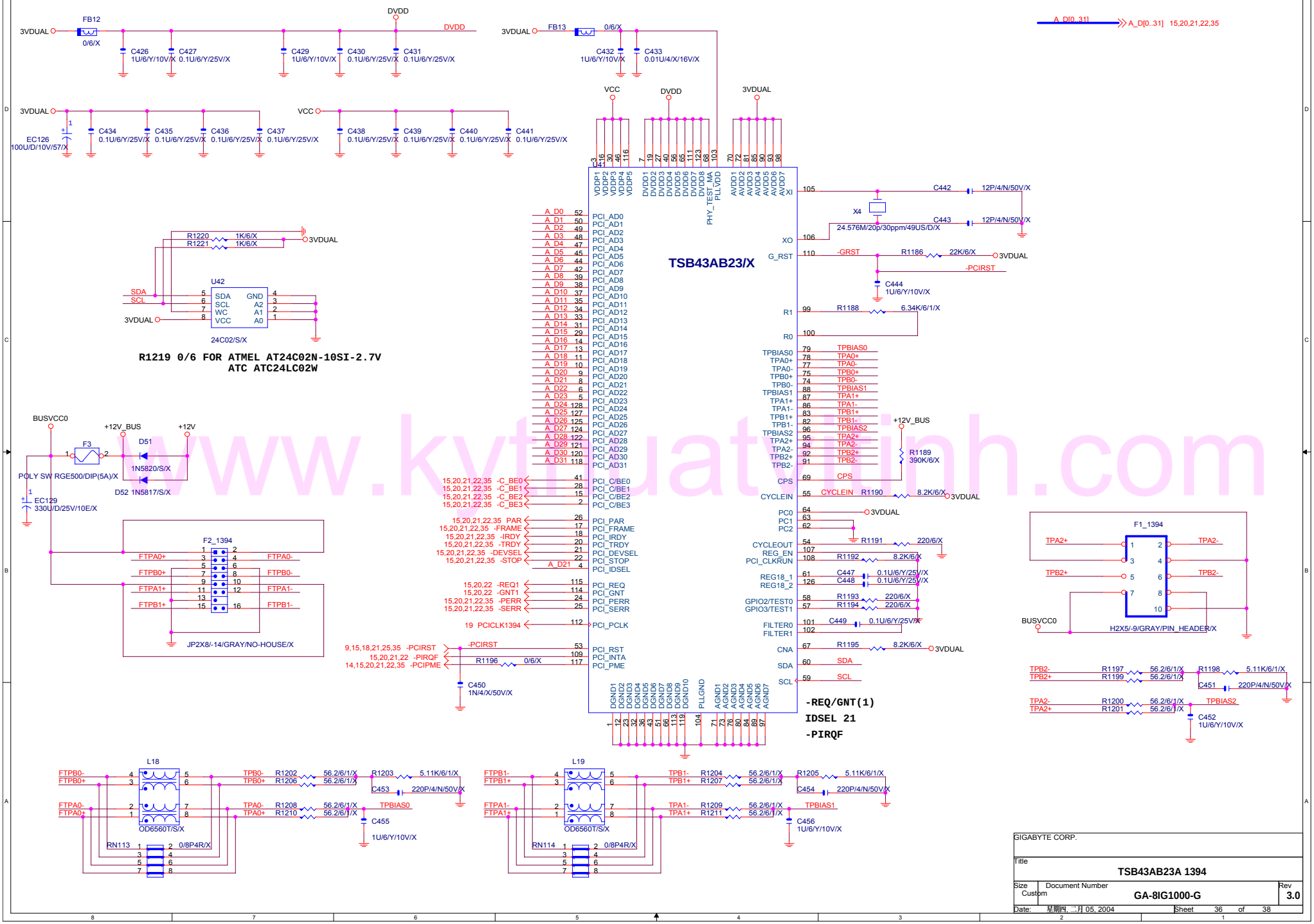

GIGABYTE GA-8IG1000-G PCI ROUNTING LIST

PCI DEVICE	IDSEL	INT	CLOCK	REQ	GNT	
PCI SLOT1	16	C,F,G,A	PCLK0	-REQ01	-GNT01	
PCI SLOT2	17	F,G,A,C	PCLK1	-REQ02	-GNT02	
PCI SLOT3	18	G,A,C,F	PCLK2	-REQ2	-GNT2	
PCI SLOT4	19	A,C,F,G	PCLK3	-REQ3	-GNT3	
PCI SLOT5	20	C,F,G,A	PCLK4	-REQ4	-GNT4	
TI 1394	21	F	PCICLK1394	-REQ1	-GNT1	
LAN (Marvell)	25	E	LANCLK33	-REQ5(REQB#)	-GNT5(GNTB#)	

GIGABYTE

Title: PCI ROUNT LIST

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GIGABYTE GA-8IG1000-G GPIO LIST

SHEET TITLE

GPIP	I/O	FUNCTION
GPI0/REQA-	I	PULL HIGH 8.2K to VCC3, SMB connector.
GPI1/REQ5-		PULL HIGH 8.2K to VCC, REQ5-.
GPI2/PIRQE-		PULL HIGH 8.2K to VCC3, PIRQE-.
GPI3/PIRQF-		PULL HIGH 8.2K to VCC3, PIRQF-.
GPI4/PIRQG-		PULL HIGH 8.2K to VCC, PIRQG-.
GPI5/PIRQH-	NA	PULL HIGH 8.2K to VCC
GPI6/AGPBUSY-	I	PULL 8.2K TO VCC3, PANEL GREEN_BUTTON
GPI7	I	DUAL BIOS FIRST BOOT SELECT.
GPI8	I	PULL 8.2K TO 3VDUAL, -CASPME.
GPI9/OC4-	NA	USB OC4-.
GPI10/OC5-	NA	USB OC5-.
GPI11/-SMBALRT	NA	PULL 8.2K TO 3VDUAL,-SMBALERT.
GPI12	I	PULL 8.2K TO VCC3,M/B REVERSION ID.
GPI13	I	LPC PME.
GPI14/OC6-	NA	USB OC6-.
GPI15/OC7-	NA	USB OC7-.
GPO16/GNTA-	NA	GPO16.
GPO17/GNT5-		GNT5-.
GPO18/STP_PCI-	NA	GPO18.
GPO19/SLP_S1-	O	DUAL BIOS.
GPO20/SLP_CPU-	O	DUAL BIOS.
GPO21/C3_SATA-	O	BLOCK TOP TABLE.
GPO22/CPUPERF-	O	PULL 8.2K TO VCC3,PANEL S3 POWER LED.

SHEET TITLE

GPIP	I/O	FUNCTION
GPO23	NA	PULL 8.2K TO VCC3
GPO24	O	INTEL LAN ENABLE/DISABLE.
GPO25	O	FRONT PANEL -MPD.
GPO27	O	FRONT PANEL +MPD.
GPO28	O	GREEN LED
GPO32	O	BIOS WRITE PROTECT.
GPO33	O	SATA LED.
GPO34	I	CLEAR PASSWORD.

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Title: GPIO LIST

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