

Model Name : 945PL-S3

SHEET

TITLE

SHEET

TITLE

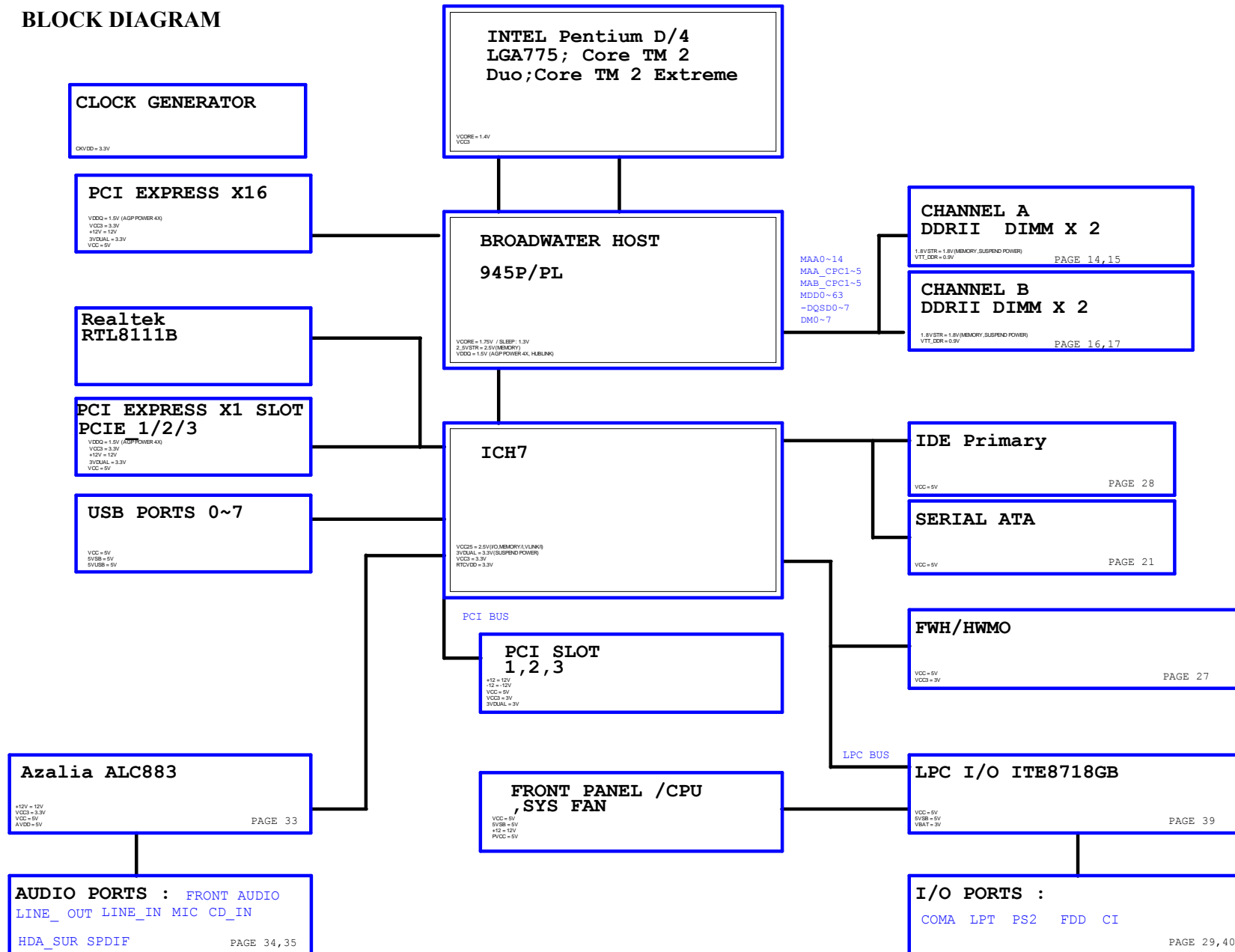
01	COVER SHEET
02	BLOCK DIAGRAM
03	BOM & PCB MODIFY HISTORY
04	L775 A
05	L775 B,D
06	L775 C
07	L775 E,F,G,H
08	BROADWATER HOST
09	BROADWATER DDR
10	BROADWATER PCI EXP 16,DMI
11	BROADWATER VGA,MISC
12	BROADWATER GND
13	BROADWATER PWR
14	DDRII CHANNEL A-SHARE 1,2
15	DDRII CHANNEL B-SHARE 3,4
16	DDRII TERMINATION
17	PCI EXPRESS*16 SLOT
18	ICH7 DMI, PCI, USB
19	ICH7 IDE, GPIO, SATA, CTRL
20	ICH7 VCC, GND
21	ICS954148AF CLOCK.
22	ATX,ATX_12V CONNECT,BIOS
23	PCI EXPRESS*1 SLOT 1,2,3
24	PCI SLOT 1,2,3
25	HWM/ FAN CONTROL
26	IDE/FLOPPY
27	KB_PS2

28	FRONT PANEL
29	FRONT USB,REAL USB CONNECT
30	PROCESSOR HOT
31	ALC883
32	REAR AUDIO JACK
33	FRONT AUDIO CONNECTOR
34	Realtek RTL8111B
35	ITE 8718 F-C
36	COM LPT
37	VCORE PWM
38	DISCRETE POWER
39	GPIO DEFINE
40	GPIO DEFINE
41	
42	
43	
44	

Intel Confidential

Title			Cover Sheet
Size	Document Number	945PL-S3	Rev
Custom			1.0
Date:	Friday, July 07, 2006	Sheet	1 of 40

BLOCK DIAGRAM



Model Name: 945PL-S3
Version:1.01

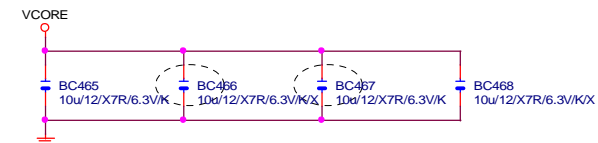
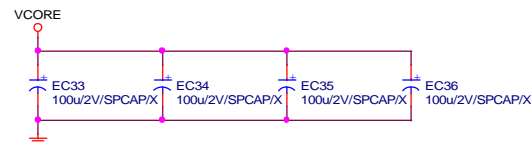
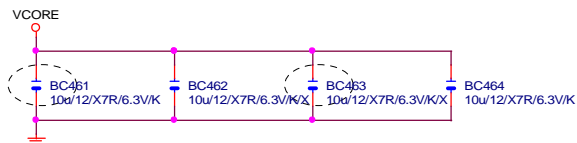
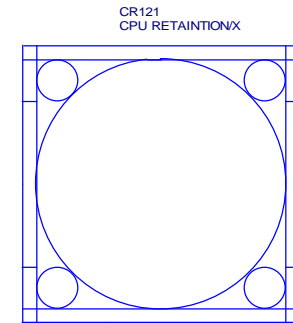
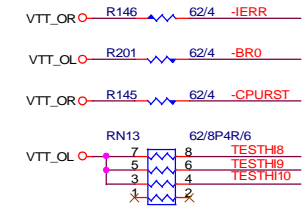
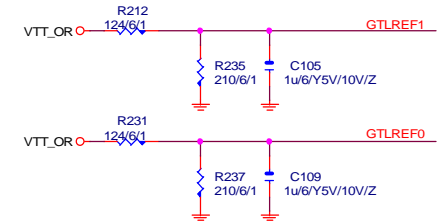
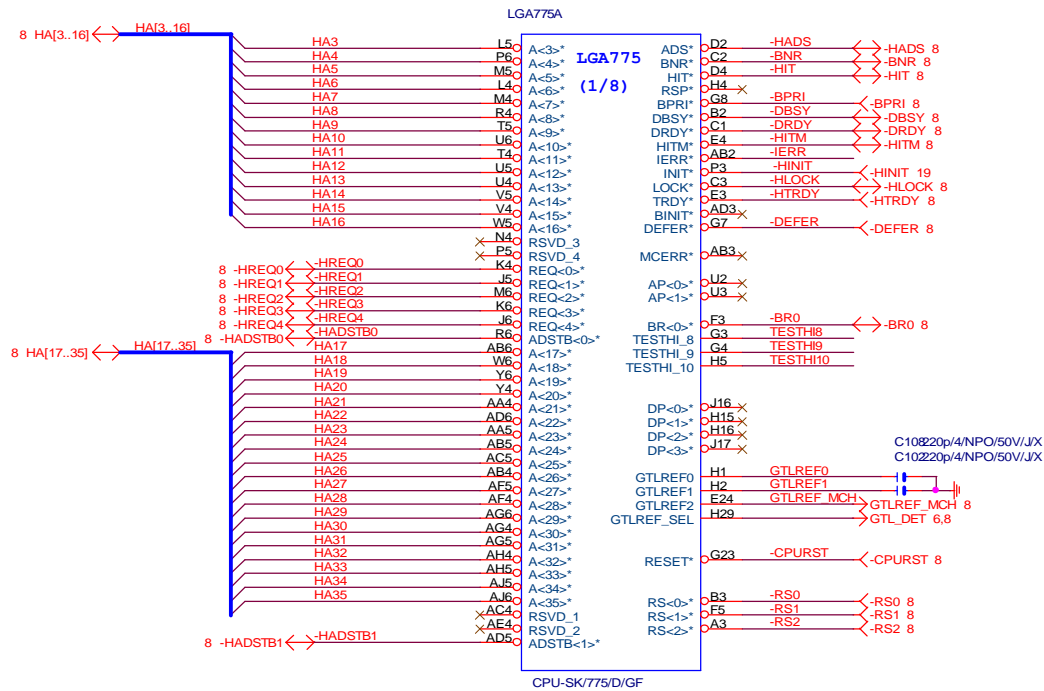
Component value change history

2006

Circuit or PCB layout change
for next version

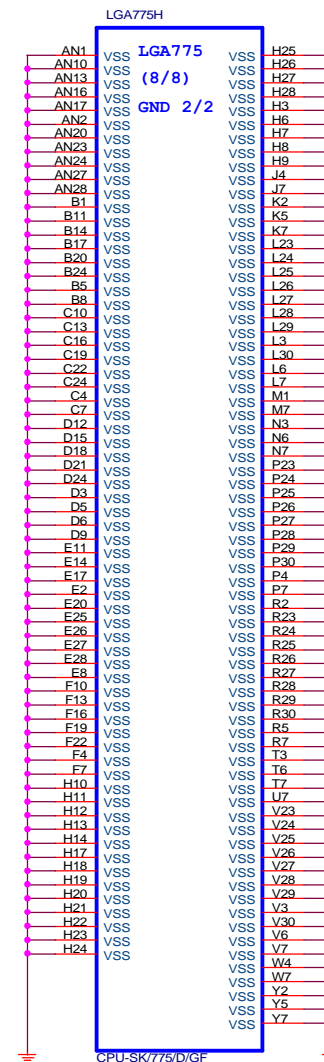
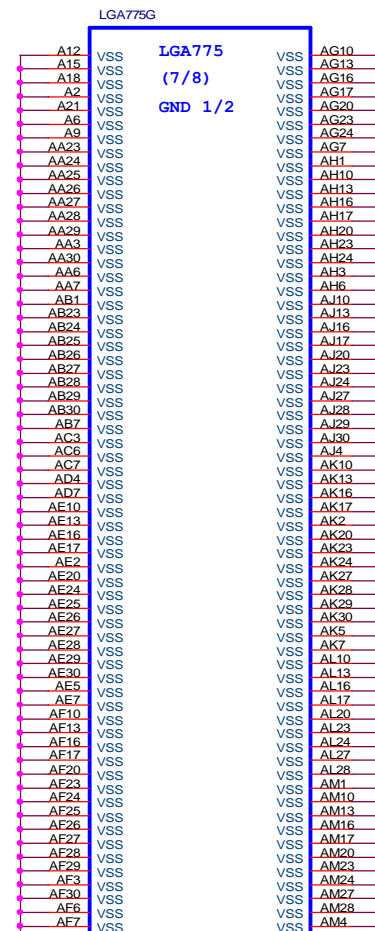
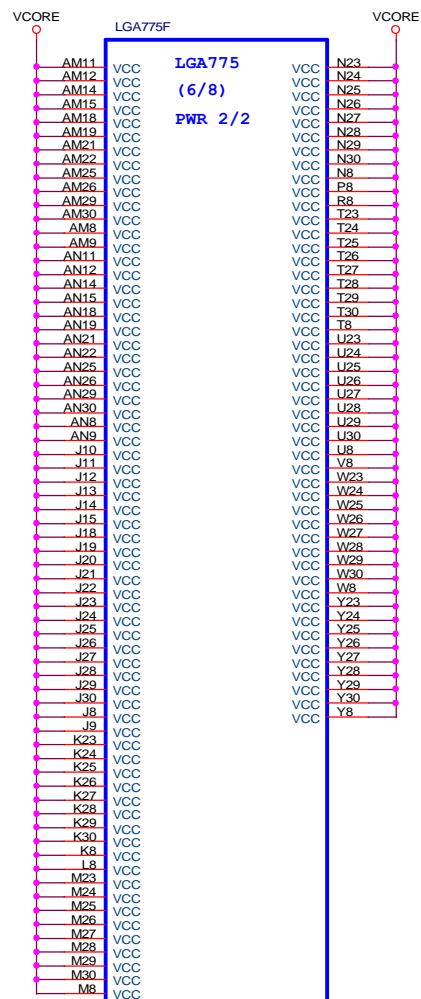
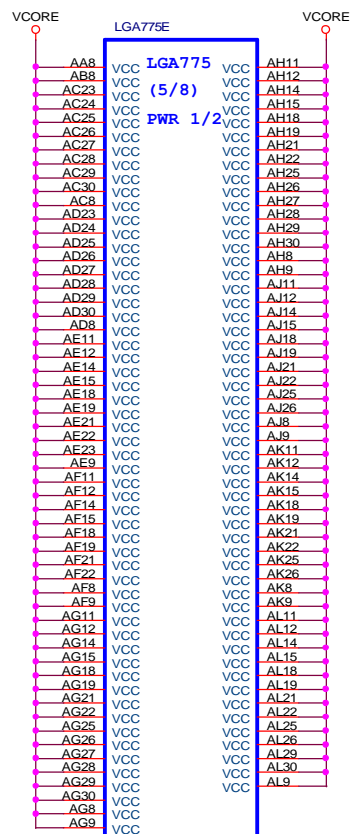
[illegible][illegible]

HA/REQ: 5/13
ADSTB: 5/17



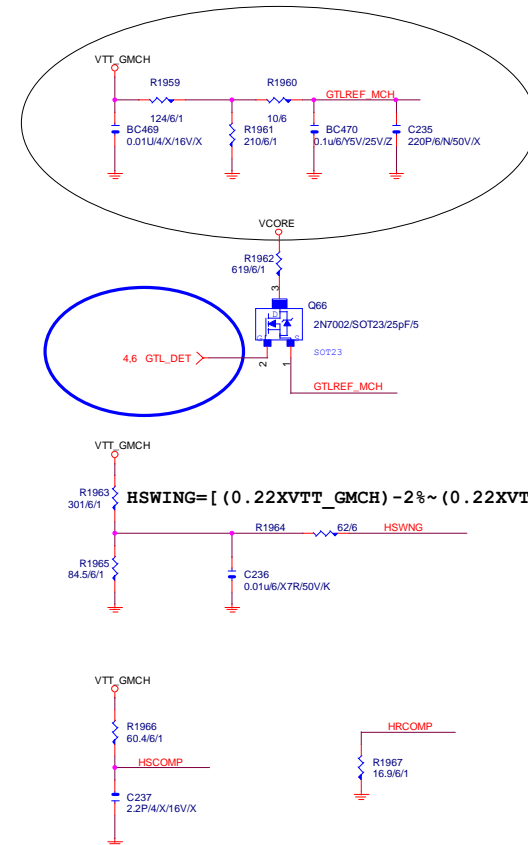
Gigabyte Technology			
Title			
P4_LGA775-A			
Size	Document Number	Rev	
B	945PL-S3	1.01	
Date:	Friday, July 07, 2006	Sheet	4 of 40





Gigabyte Technology

Title			P4_LGA775-E,F,G,H	
Size			945PL-S3	
Date:			Friday, July 07, 2006	Sheet 7 of 40
Rev			1.01	

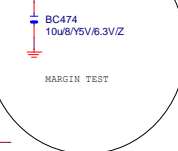


100歐姆 : [20/5/7/5/20]

100歐姆 : [20/5/7/5/20]

SPEC: 1.5A

VCC1_5 R1975 0/12/SHTX VCC1_5PCIEX 13



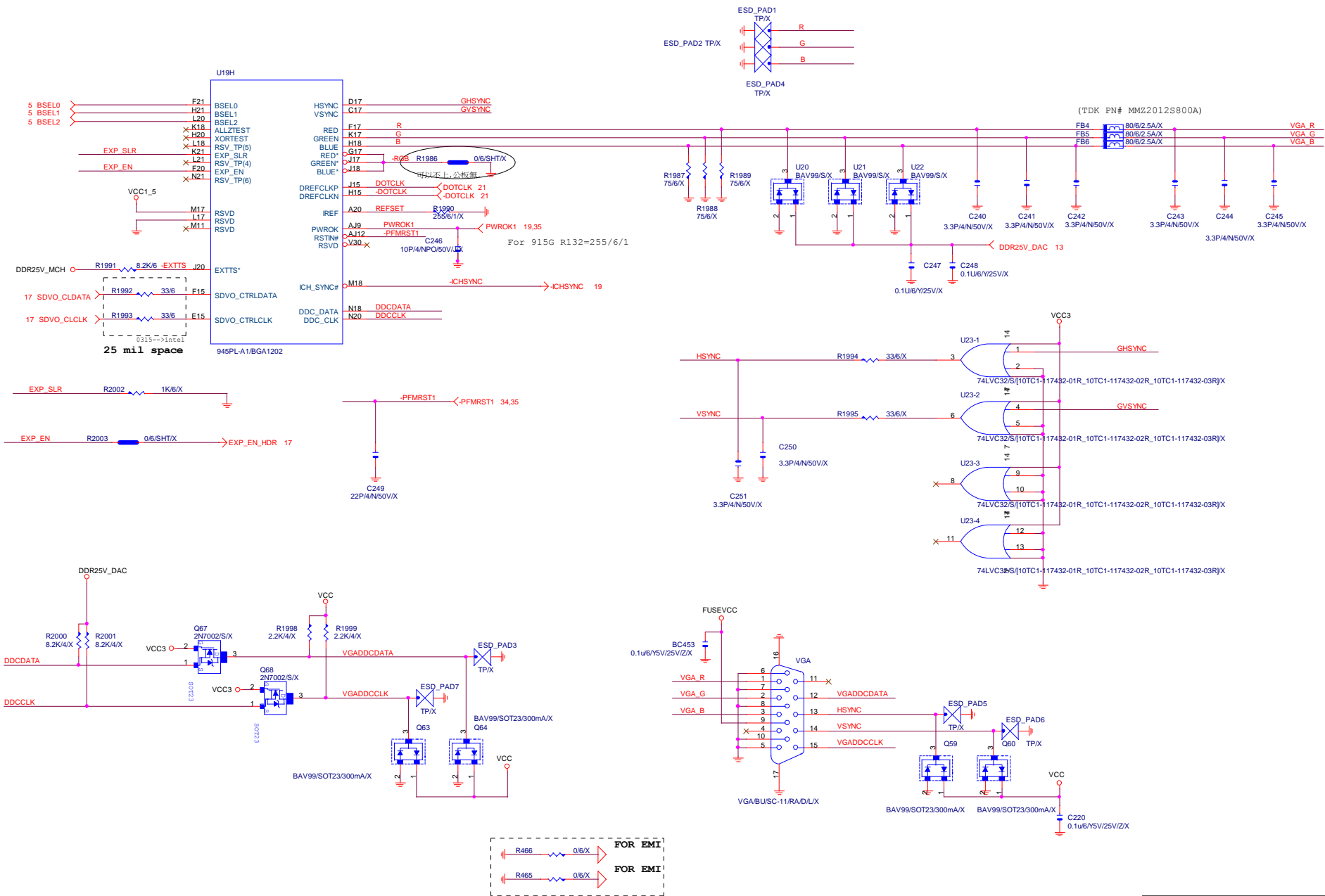
VCC1_5PCIEX
R1976
24.9/6/1
GRCOMP

21 -SRCLK_MCH
21 -SRCLK_MCH

945PL-A1/BGA1202

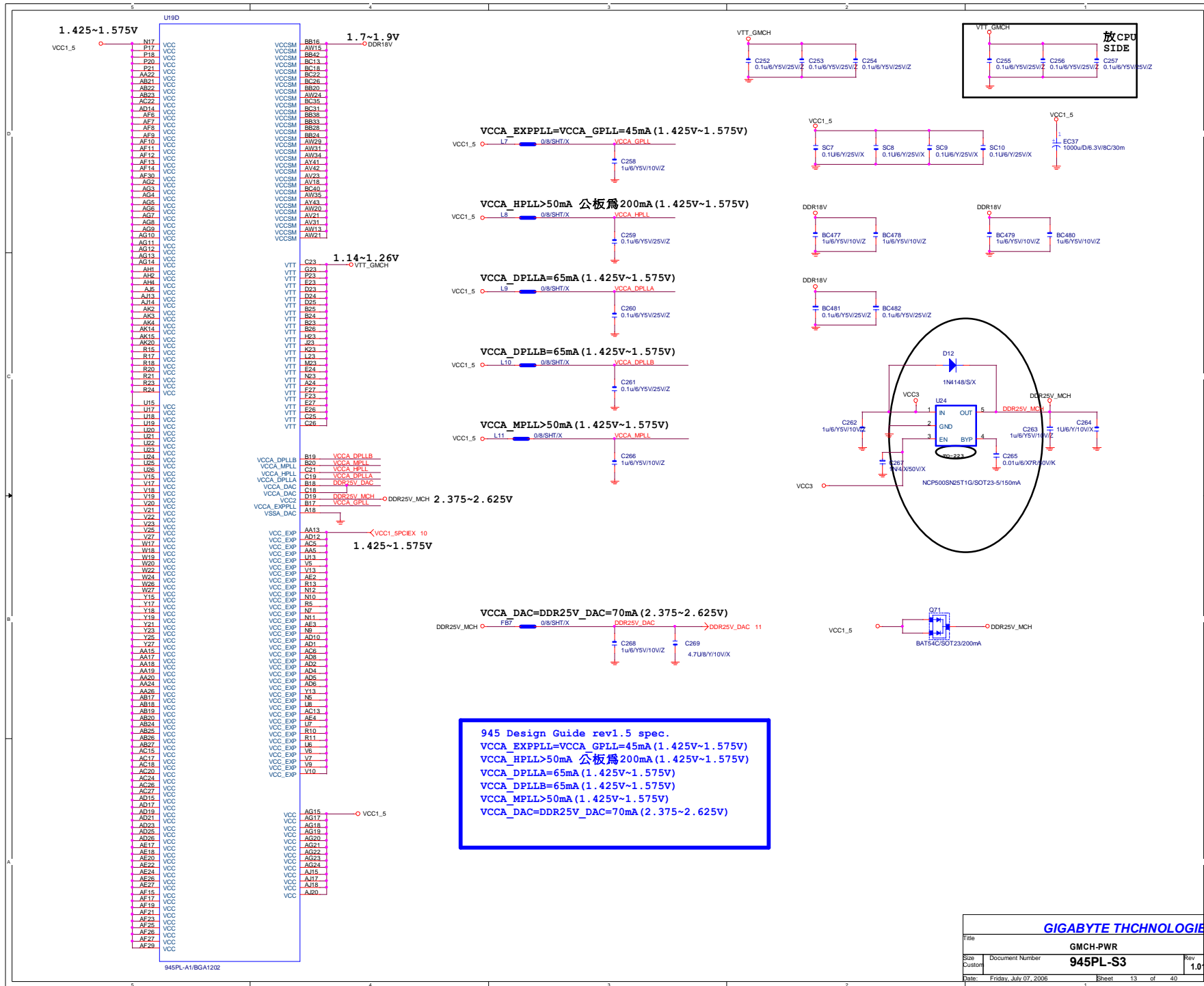
100歐姆 : [20/5/7/5/20]

GIGABYTE THCHNOLOGIES, INC.			
Title			
GMCH-PCI E & DMI			
Size	Document Number	945PL-S3	Rev
Custom			1.01
Date:	Friday, July 07, 2006	Sheet	10 of 40

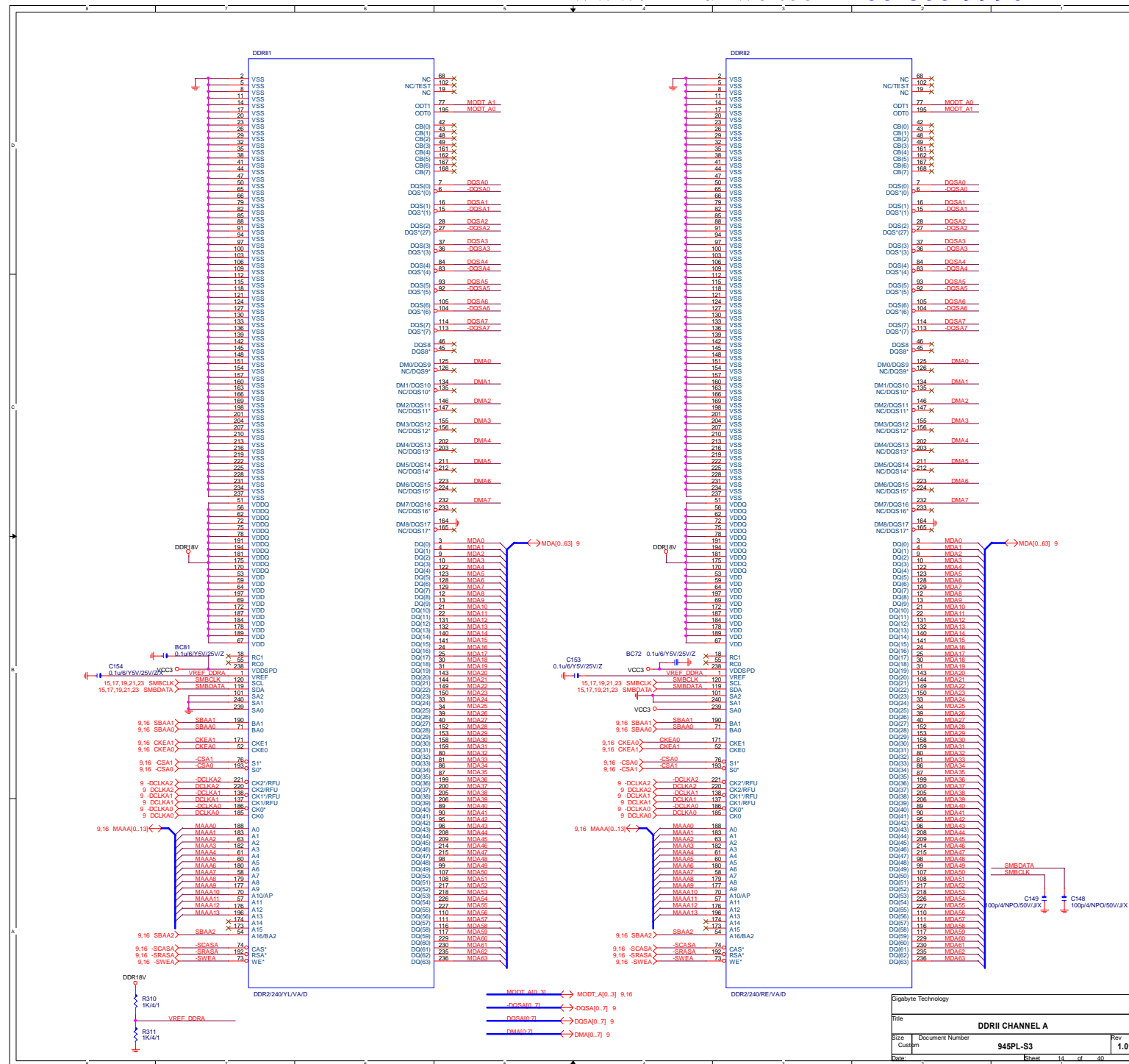


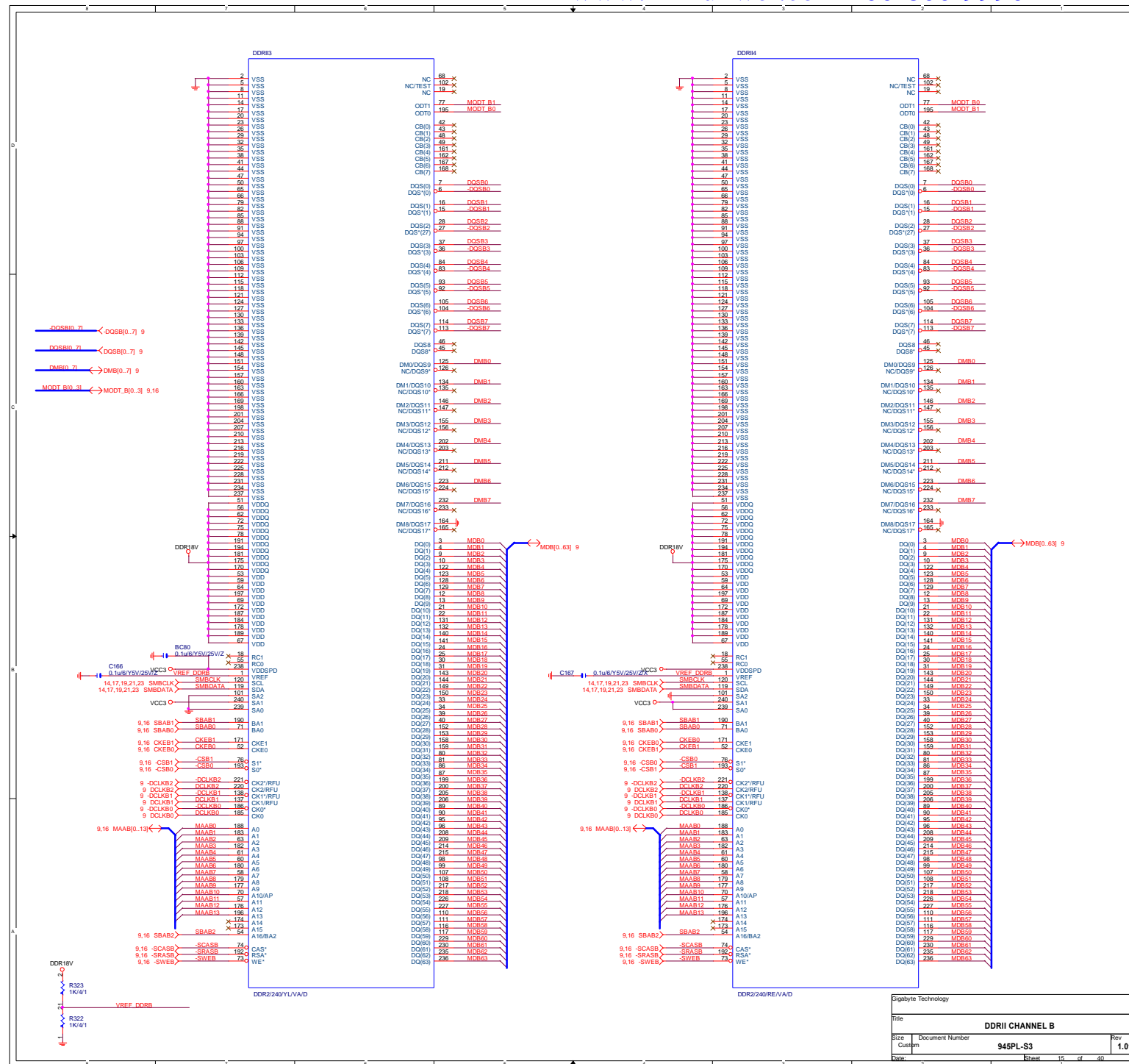
GIGABYTE THCHNOLOGIES, INC

Title		
GMCH-INTERNAL VGA		
Size	Document Number	Rev
Custom	945PL-S3	1.01
Date	Friday, July 07, 2006	Sheet 11 of 40



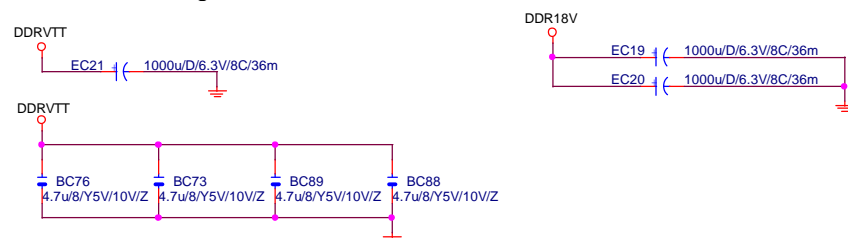
GIGABYTE TECHNOLOGIES			
Title			
GMCH-PWR			
Size	Document Number		Rev
Custom	945PL-S3		1.01
Date:	Friday, July 07, 2006	Sheet	13 of 40





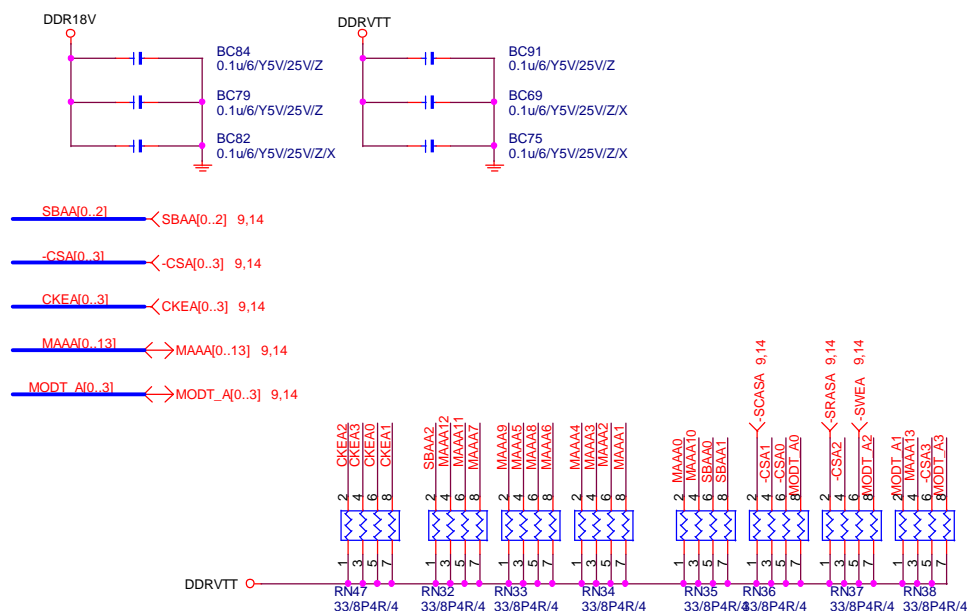
DDR TERMINATION CHANNEL A

DDRVTT Decouple



DDR18V Decouple

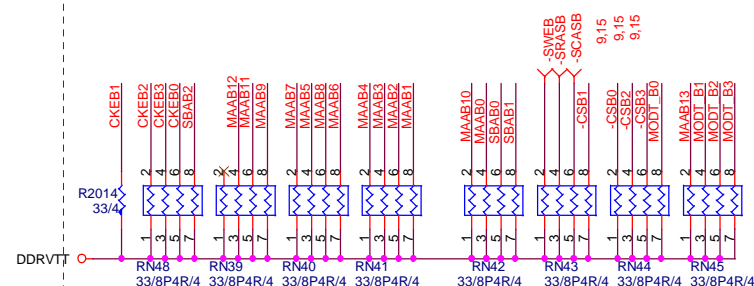
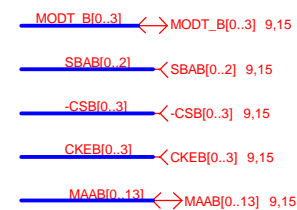
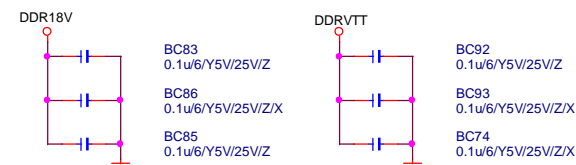
DDRVTT Decouple



DDR TERMINATION CHANNEL B

DDR18V Decouple

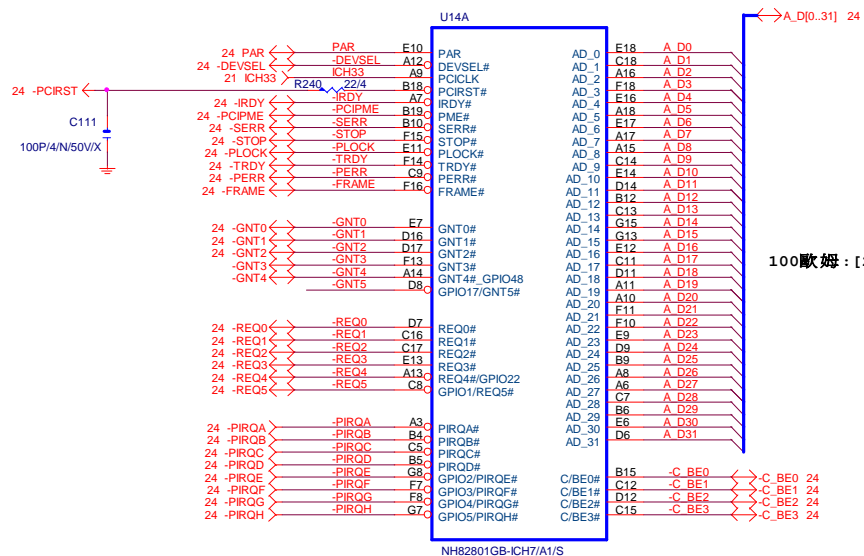
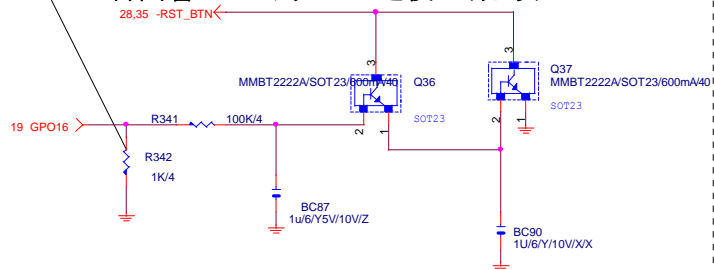
DDRVTT Decouple



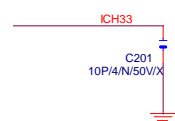
Gigabyte Technology

Title			DDRII TERMINATOR
Size	Document Number	945PL-S3	
Custom		Rev	1.01
Date:	Friday, July 07, 2006	Sheet	16 of 40

H/W RESET	
--------------	--

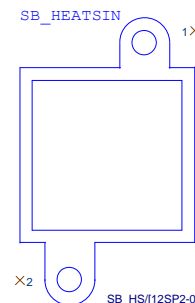
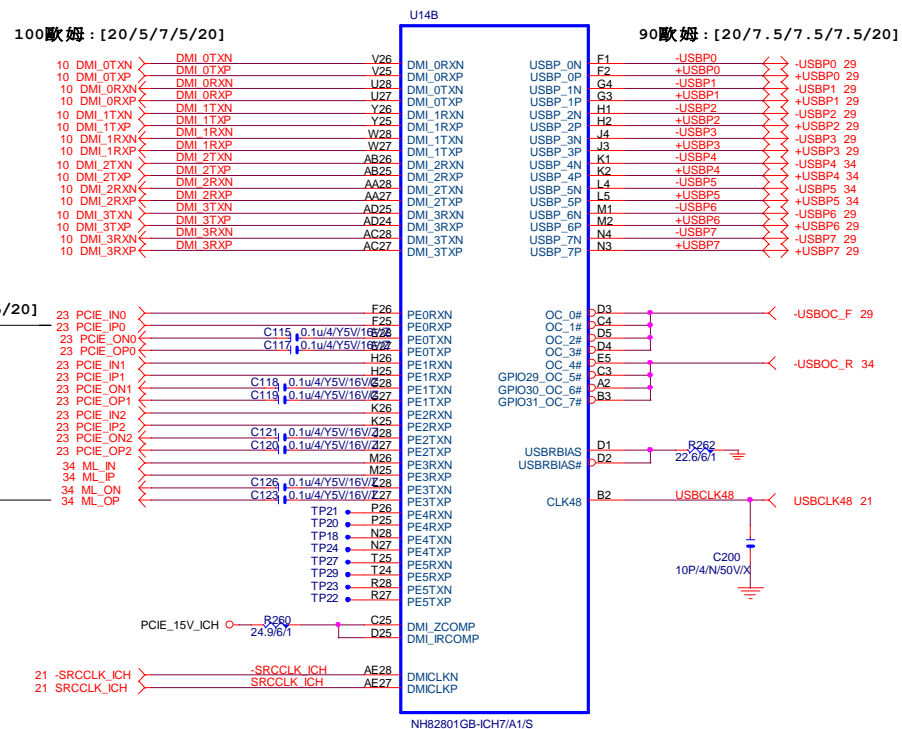
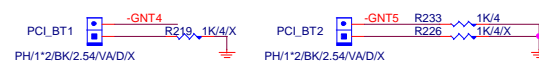


10HB1-032801-M1 REV:NON



JP/1*2/BU/OH/O::[1-2]CLOSE/X

	GNT4#	GNT5#
SPI=	1	0
PCI=	0	1
LPC=	1	1

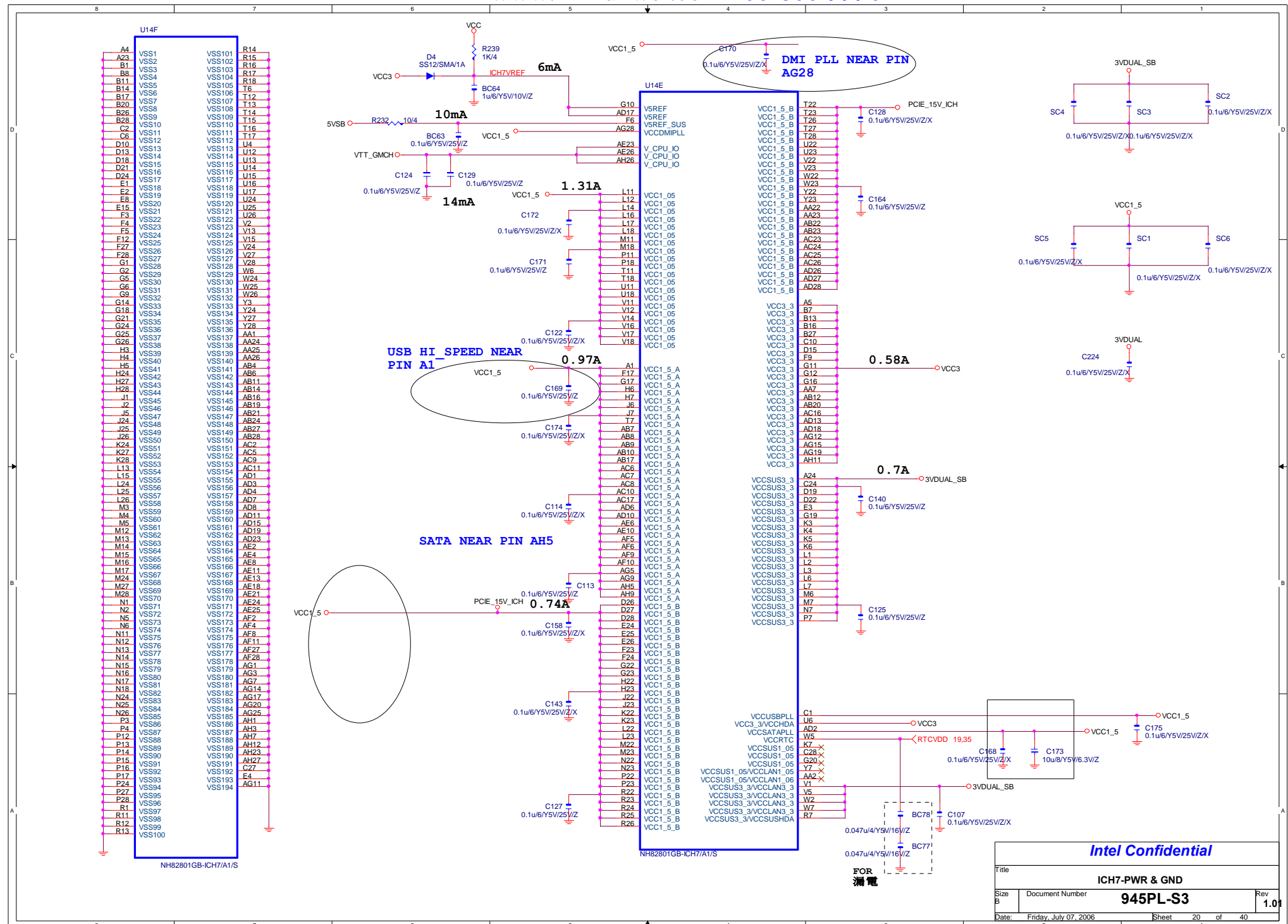


SB_HS/[12SP2-030010-21R_12SP2-030010-22R]/X

Intel Confidential

Title			
ICH7-PCI, DMI, LAN, USB			
Size B	Document Number	945PL-S3	Rev 1.0
Date:	Friday, July 07, 2006	Sheet	18 of 40

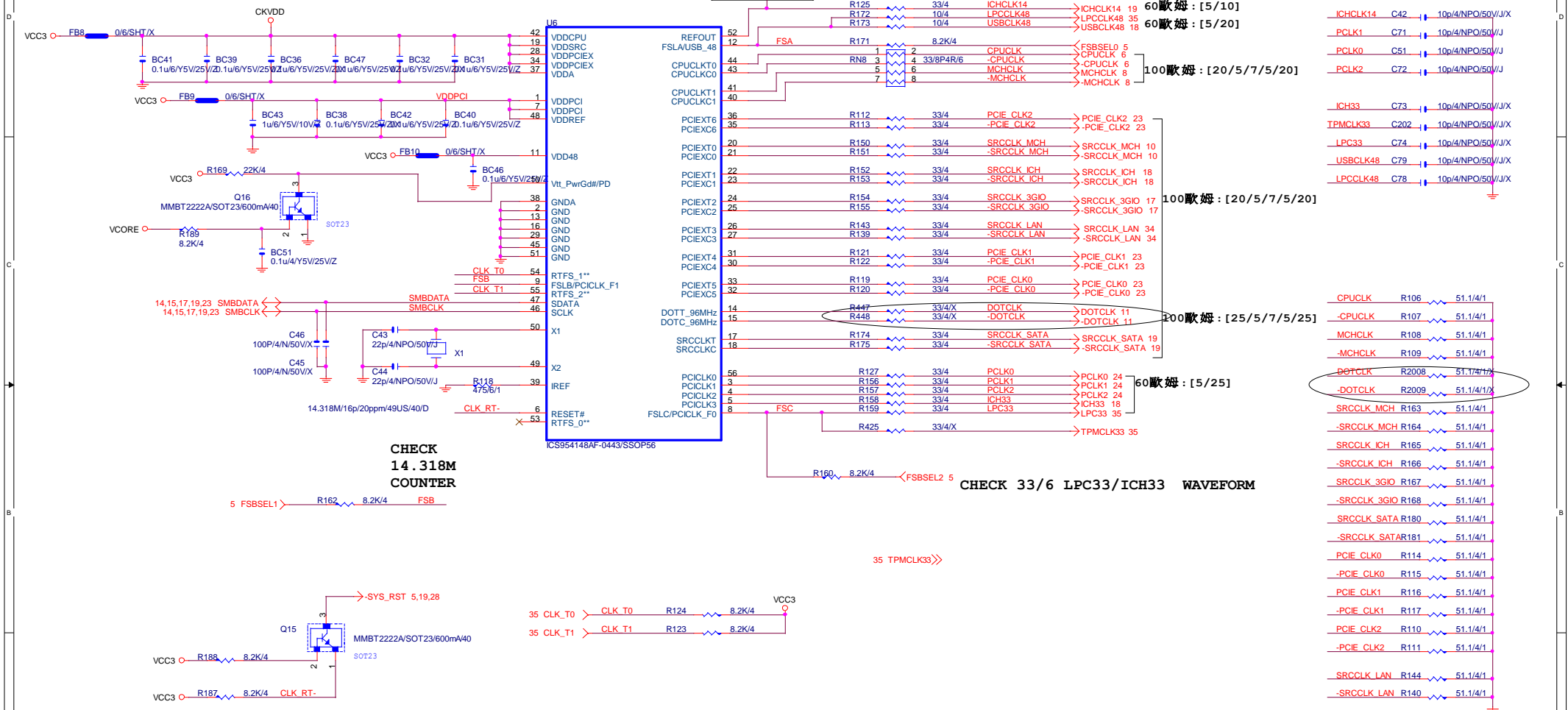




100MHZ

8.2K/4

R126

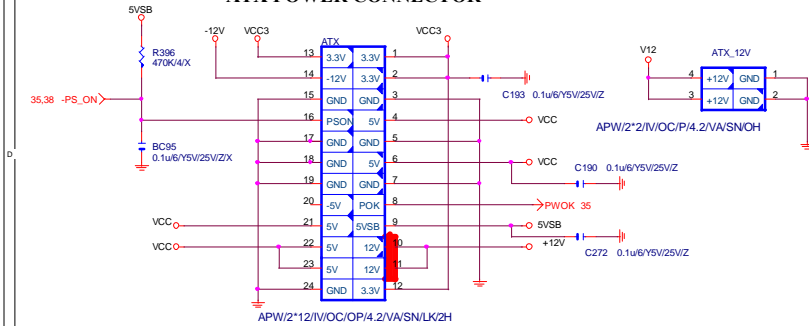


5 CHECK 33/6 LPC33/ICH33 WAVEFORM

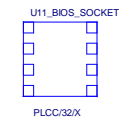
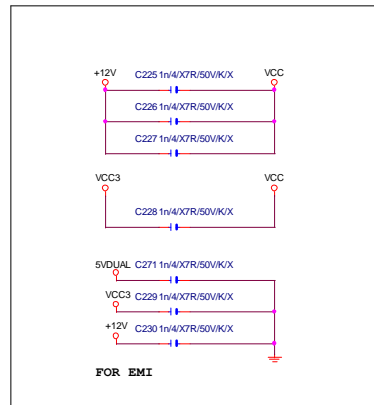
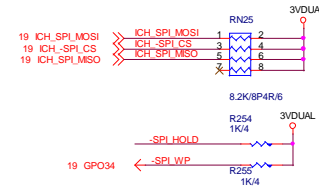
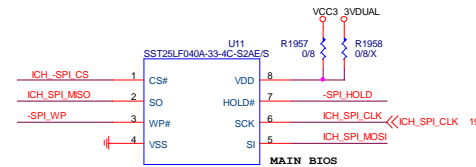
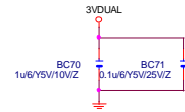
35 TPMCLK33>>

Title			
ICS954148AF CLK GEN			
Size	Document Number		Rev
Custom	945PL-S3		1.01
Date:	Friday, July 07, 2006	Sheet	21 of 40

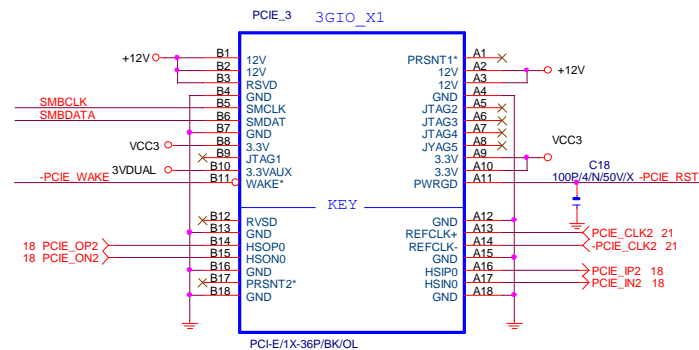
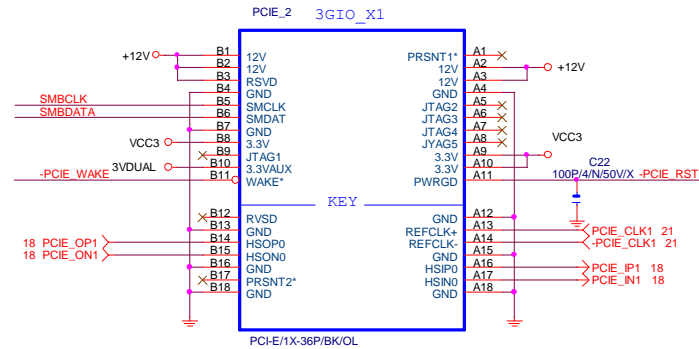
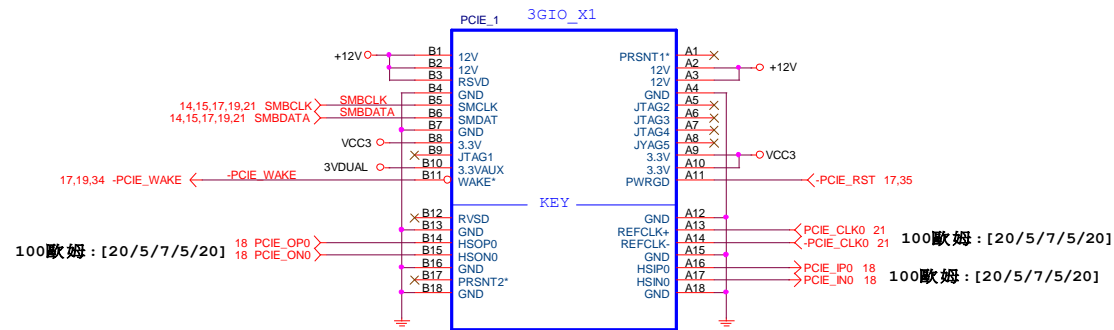
ATX POWER CONNECTOR



APW/Z*12/IV/OC/OP/4.2/VA/SN/LK/2H

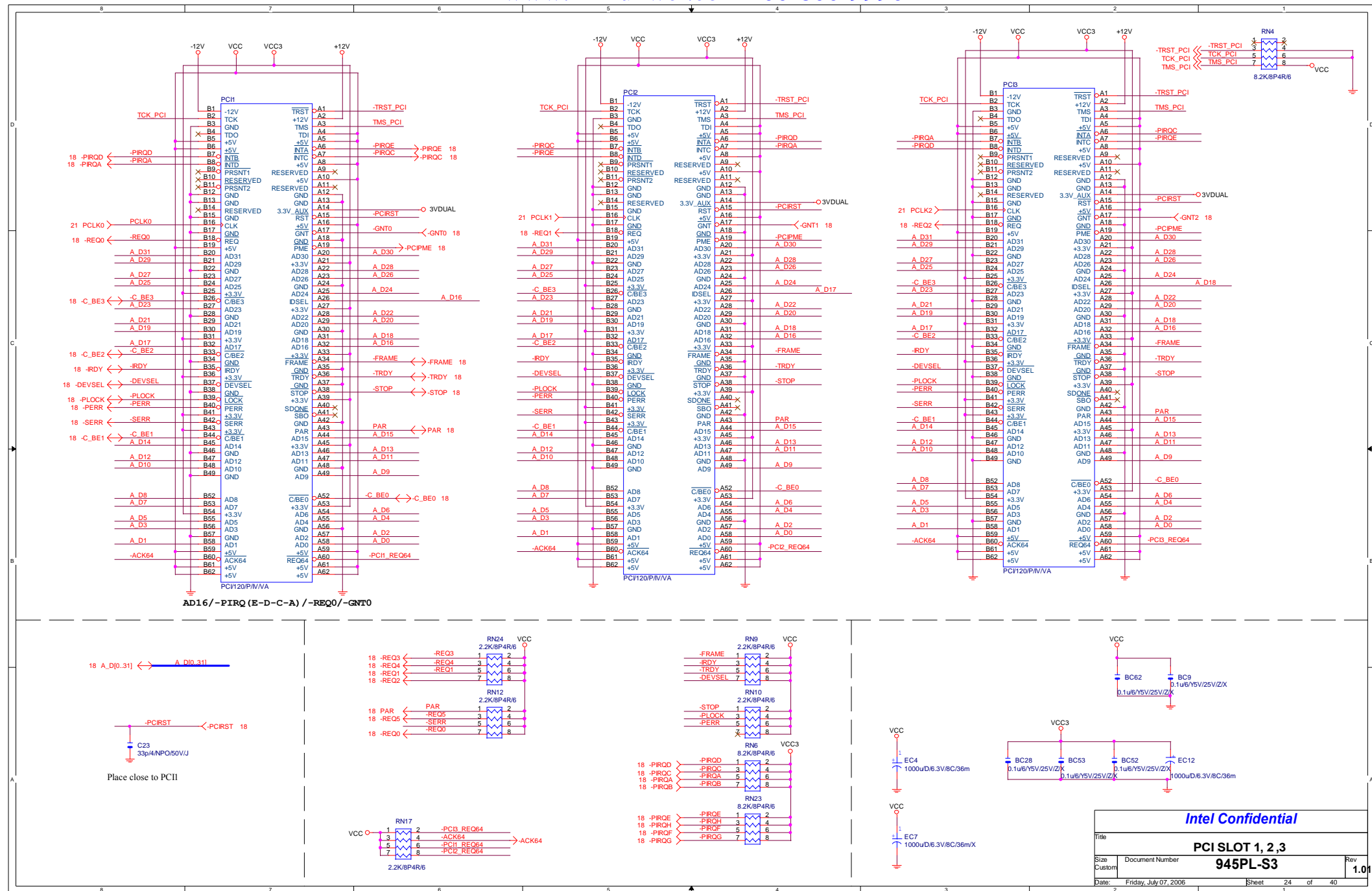


GIGABYTE			
Title	ATX POWER CONNECTOR,SPI BIOS		
Size	Document Number	945PL-S3	Rev
Custom			1.01
Date:	Friday, July 07, 2006	Sheet	22 of 40

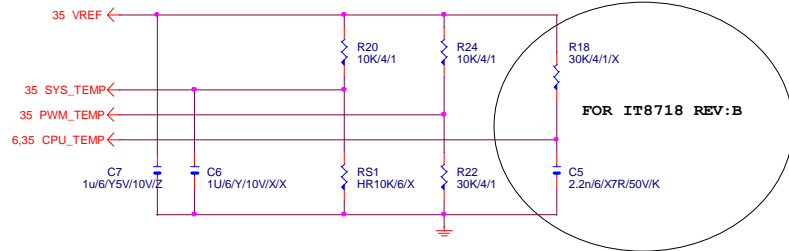


Intel Confidential

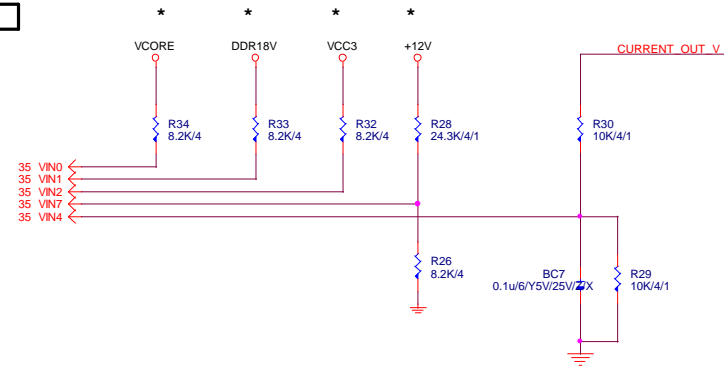
Title			PCI E SLOT 1, 2, 3
Size	Document Number	945PL-S3	
B		Rev	1.01
Date:	Friday, July 07, 2006	Sheet	23 of 40



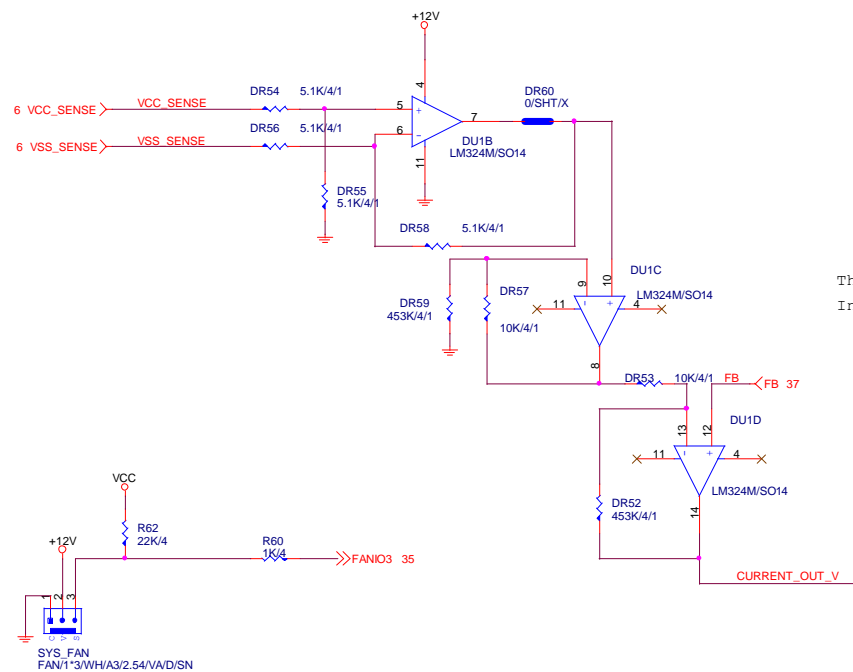
TEMP. SENSE



VOLTAGE SENSE



DUAL POWER

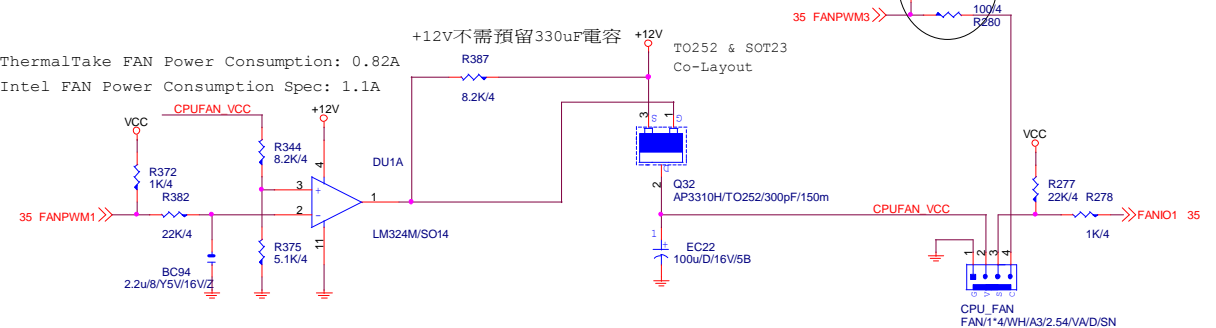


CPU/SYS FAN

If use PBSS5240 1pcs : (non airflow) If use PBSS5240 1pcs : (with airflow)

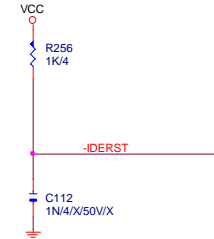
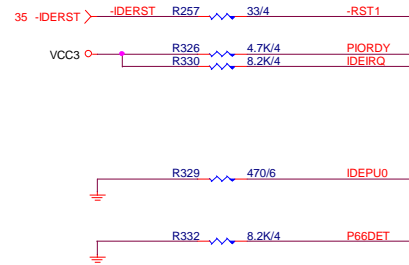
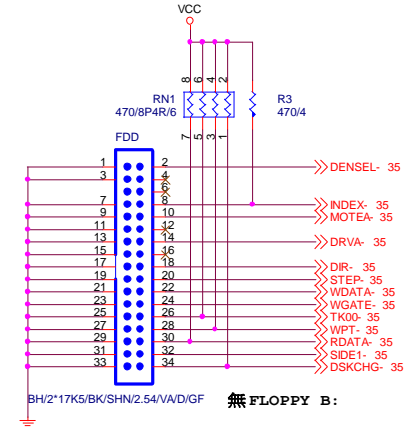
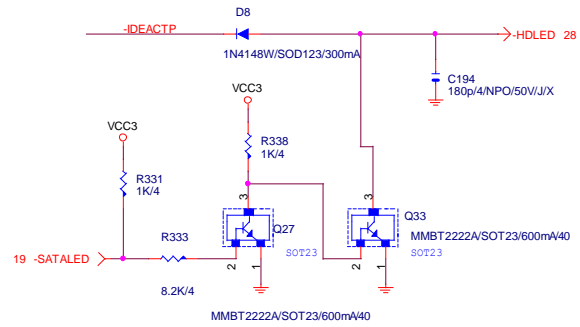
CPUFAN_VCC=12V: Temp=40 deg	CPUFAN_VCC=12V: Temp=33 deg
CPUFAN_VCC=11V: Temp=82 deg	CPUFAN_VCC=11V: Temp=62 deg
CPUFAN_VCC=10V: Temp=70 deg	CPUFAN_VCC=10V: Temp=86 deg
CPUFAN_VCC= 9V: Temp=110 deg	CPUFAN_VCC= 9V: Temp=117 deg
CPUFAN_VCC= 8V: Temp>200 deg	CPUFAN_VCC= 8V: Temp>122 deg

ThermalTake FAN Power Consumption: 0.82A
Intel FAN Power Consumption Spec: 1.1A

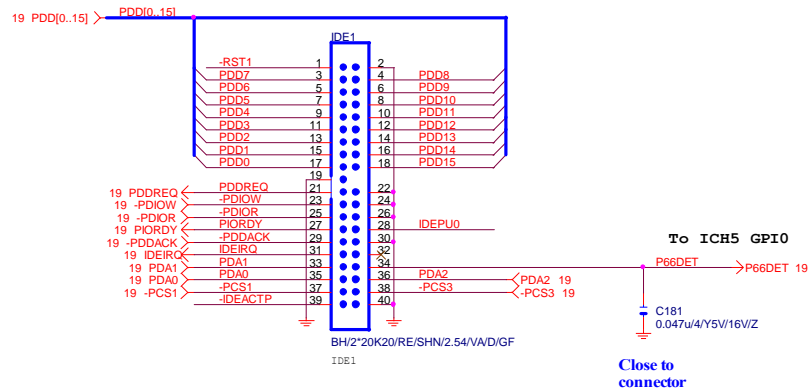


GIGABYTE

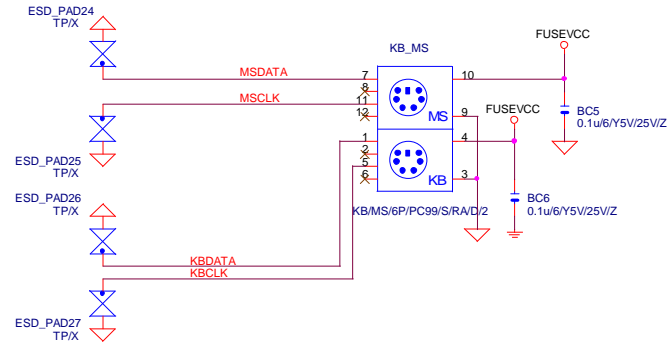
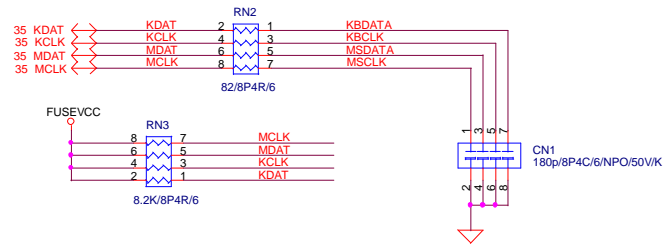
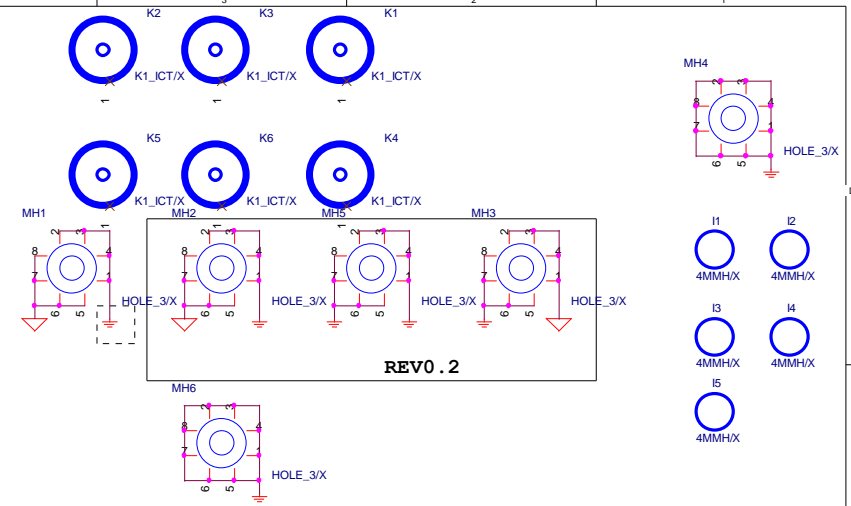
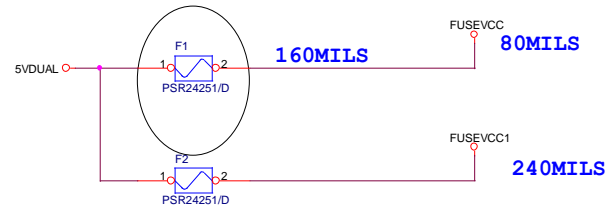
Title			HWM/FAN	
Size	Document Number	945PL-S3		Rev
Custom				1.01
Date:	Friday, July 07, 2006	Sheet	25	of 40



Default 不上,由IT8712 OUTPUT,REV0.2 驗證



Intel Confidential			
Title			
IDE , FDD			
Size			
Document Number			
945PL-S3			
Rev			
1.01			
Date:			
Friday, July 07, 2006			
Sheet			
26 of 40			

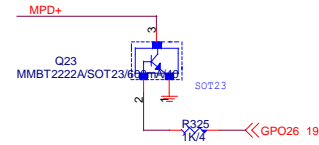
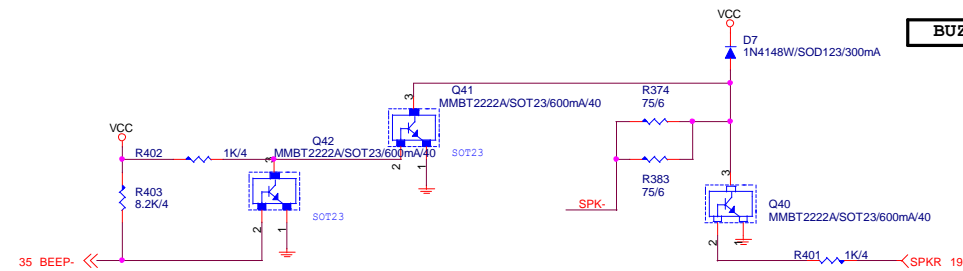
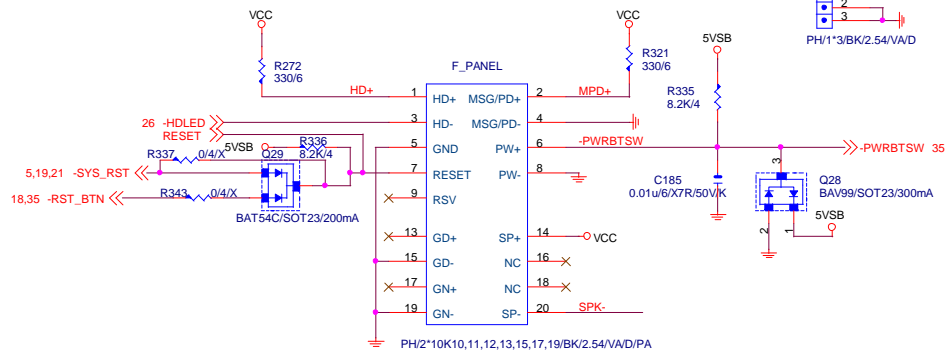


GIGABYTE CORP.			
Title			
KB & PS2 MOUSE			
Size	Document Number	Rev	
B	945PL-S3	1.01	
Date:	Sheet	27	of 40

INTEL FRONT PANEL

3 PIN POWER LED
LAYOUT PLACE CLOSE
TO F_PANEL

PWR_LED
1 MPD+
2
3 PH/1*3/BK/2.54/V/D

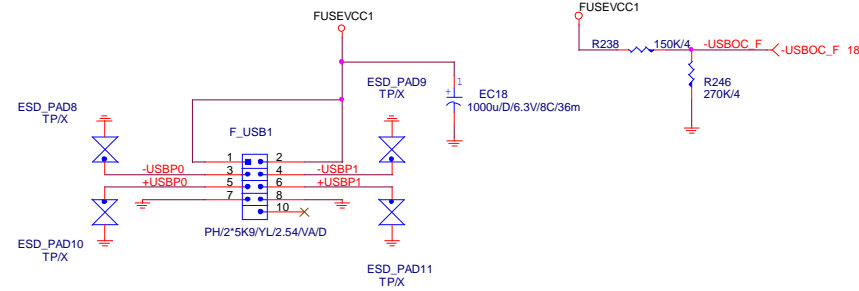


Intel Confidential

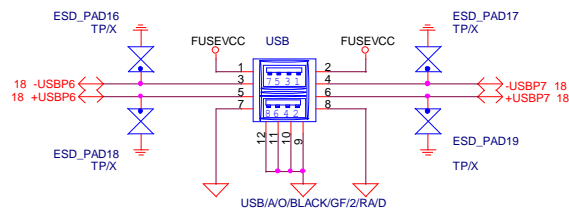
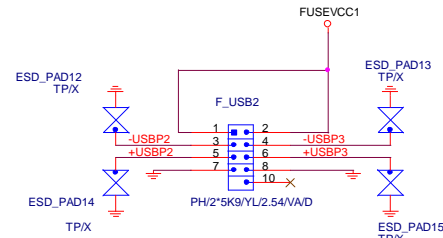
Title		
FRONT PANEL		
Size	Document Number	Rev
Custom	945PL-S3	1.01
Date:	Friday, July 07, 2006	Sheet 28 of 40

FRONT USB

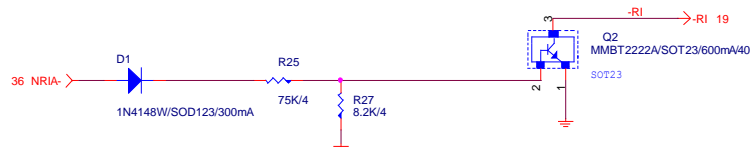
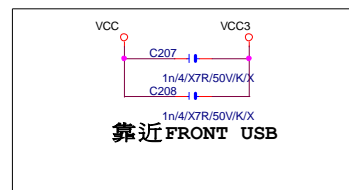
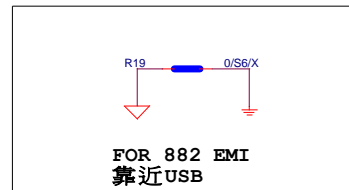
90欧姆 : [20/7.5/7.5/7.5/20]



90欧姆 : [20/7.5/7.5/7.5/20]

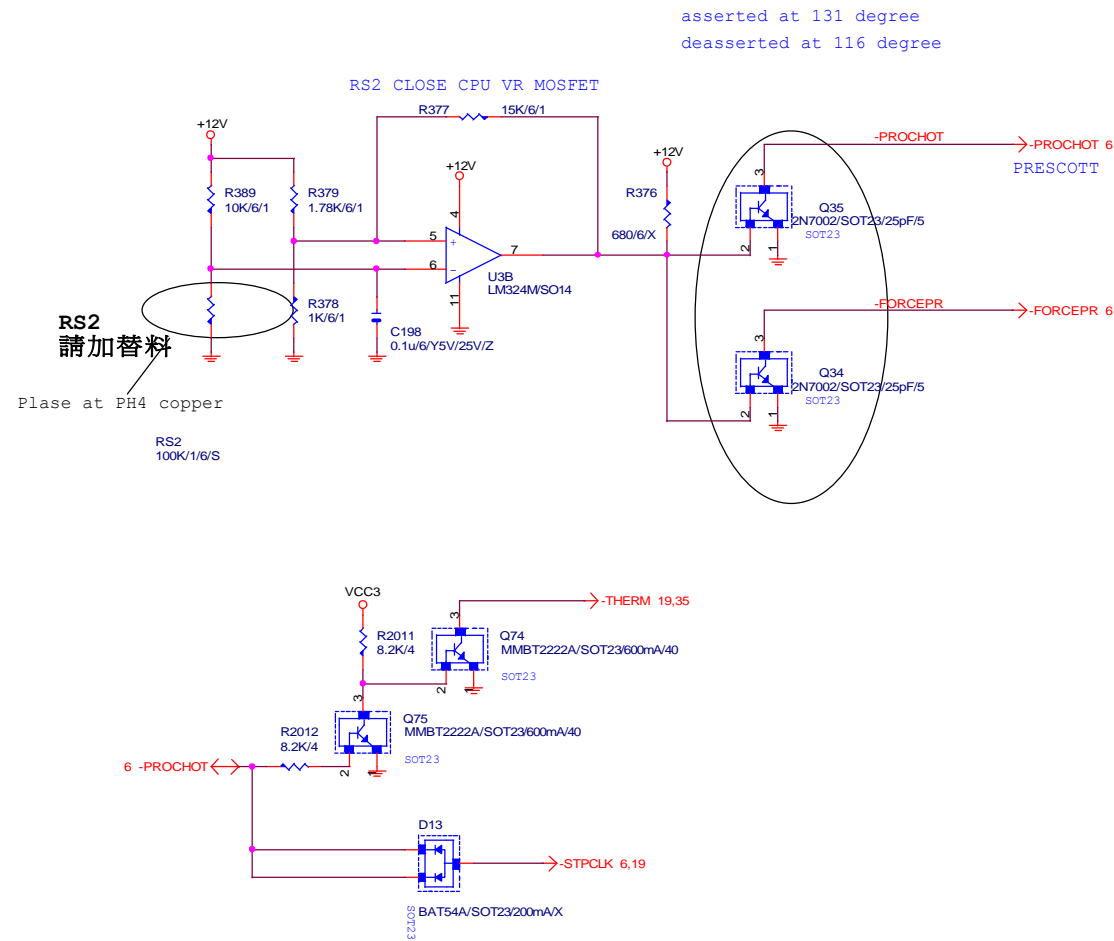


90欧姆 : [20/7.5/7.5/7.5/20]



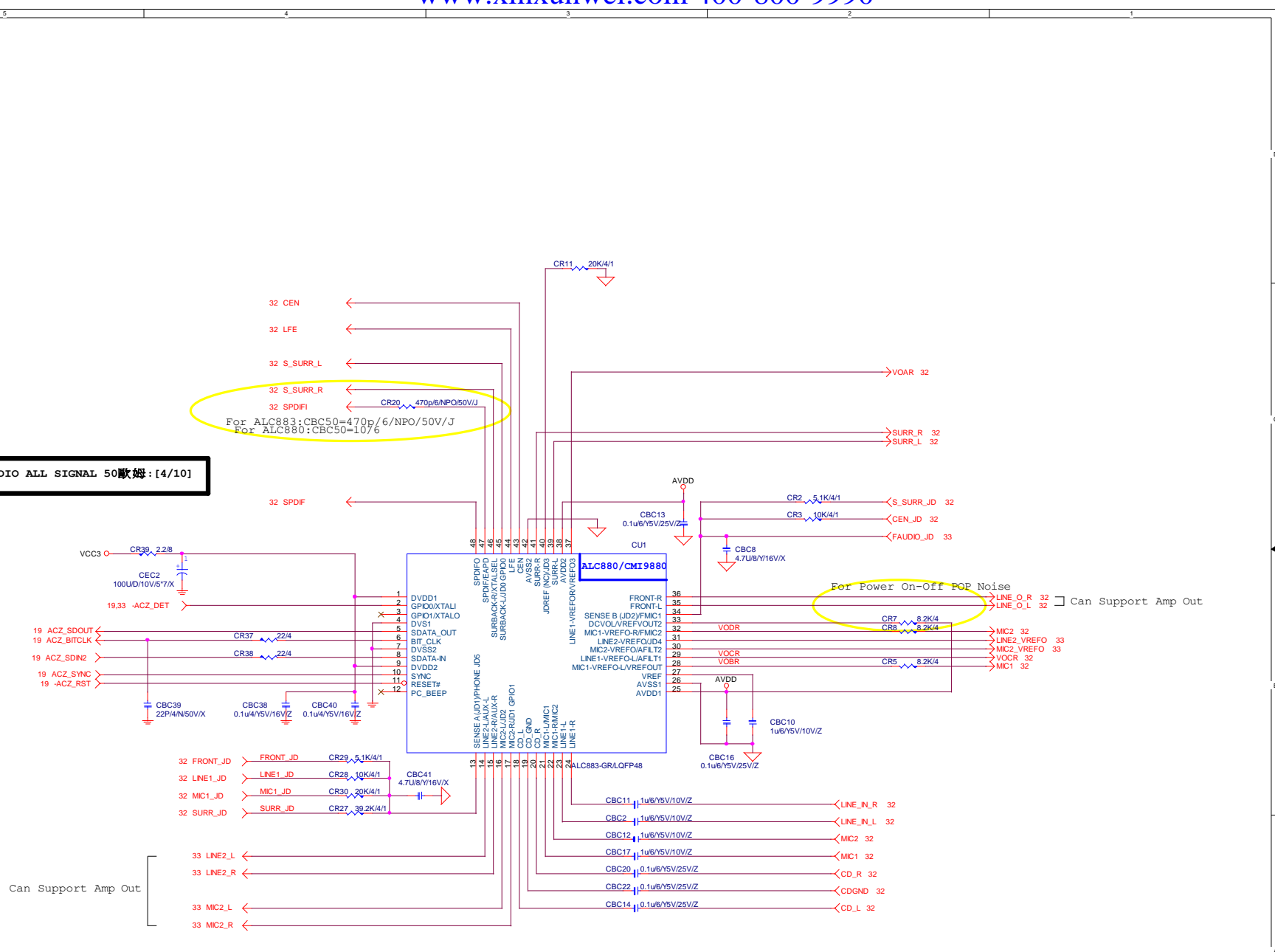
Intel Confidential

Title		
FRONT USB CONNECTOR& RING		
Size	Document Number	Rev
B	945PL-S3	1.01
Date:	Friday, July 07, 2006	Sheet 29 of 40

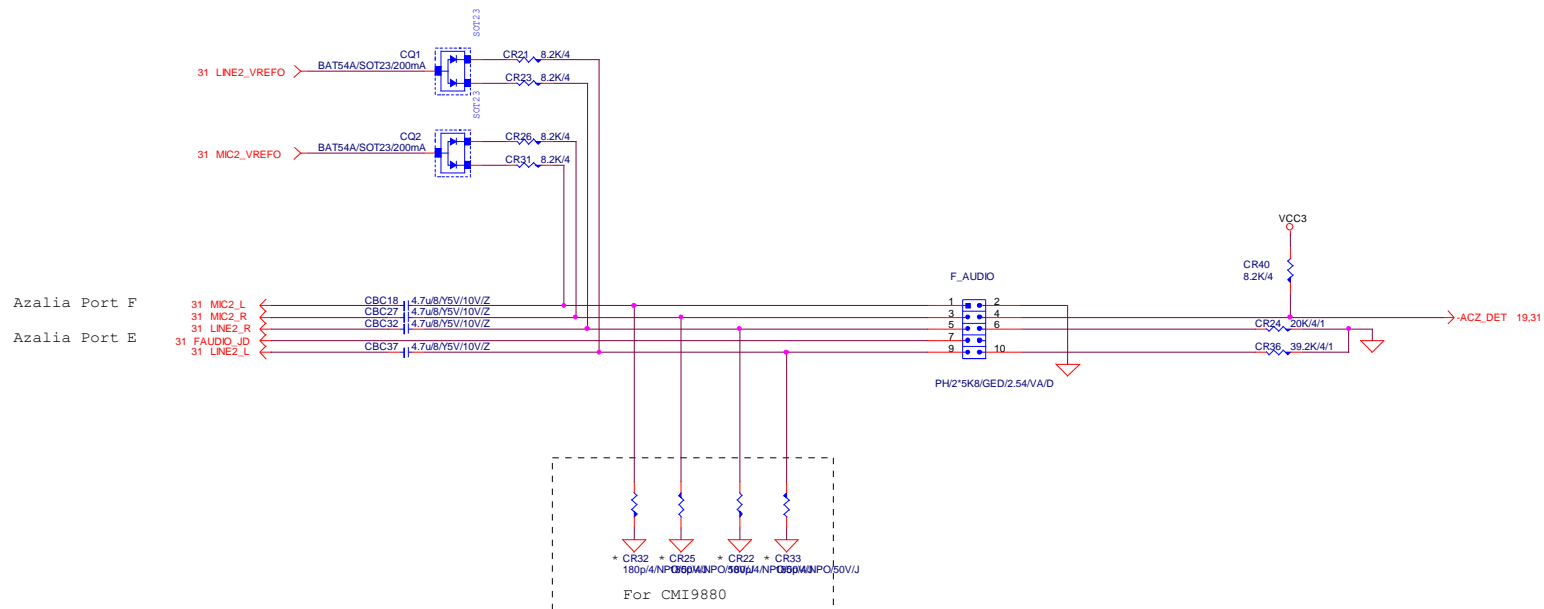


Intel Confidential

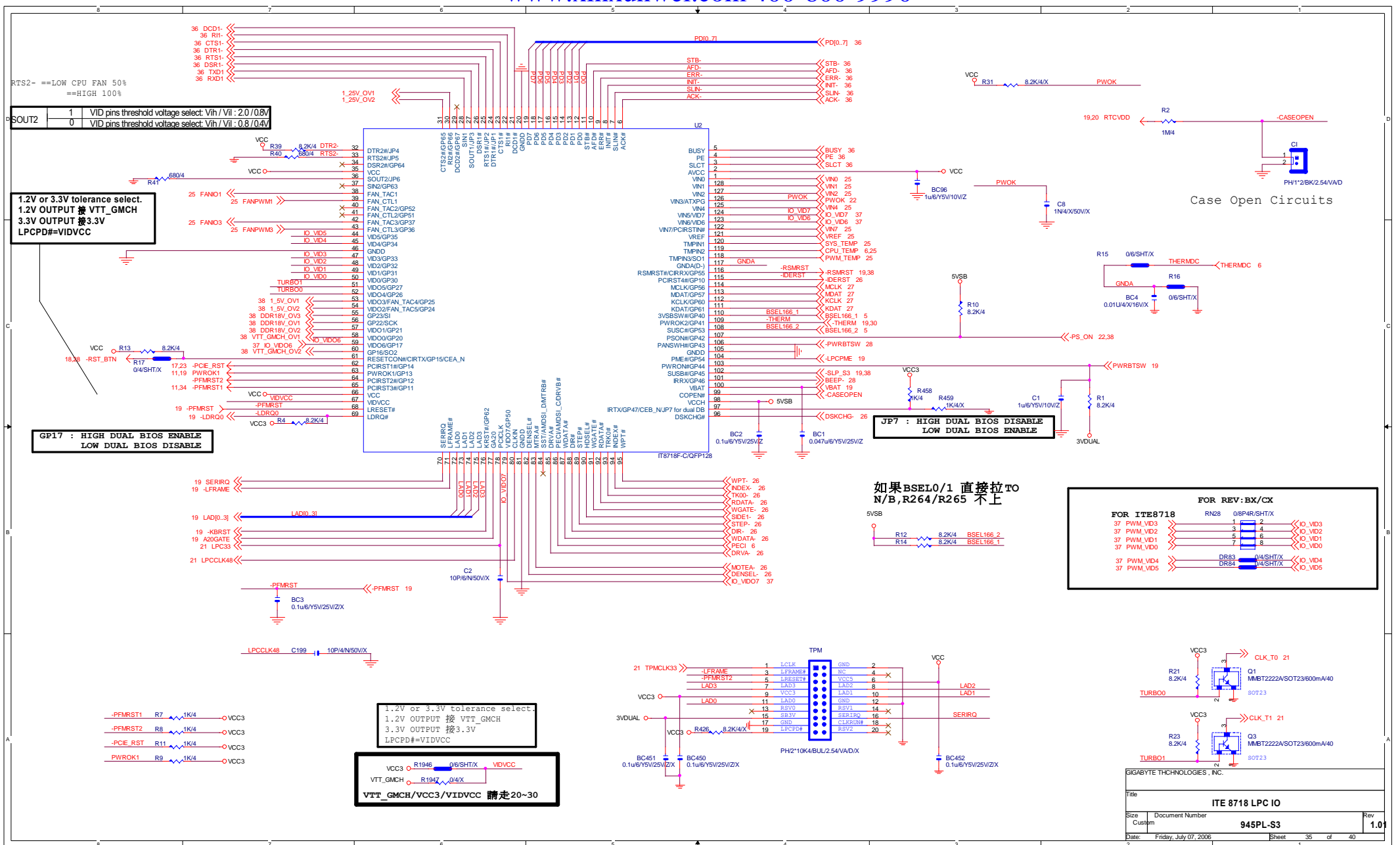
Title			FAN CONTROL
Size B	Document Number	945PL-S3	
Date:	Friday, July 07, 2006	Sheet	30 of 40
		1	Rev 1.01

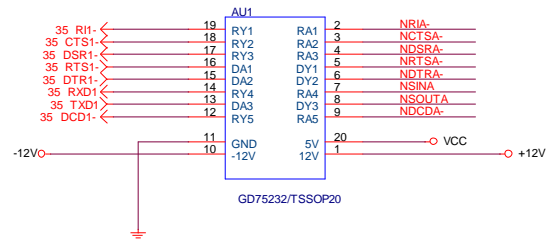


Intel Confidential			
Title			
ALC883			
Size	Document Number	945PL-S3	
Custom			Rev 1.01
Date:	Friday, July 07, 2006	Sheet	31 of 40

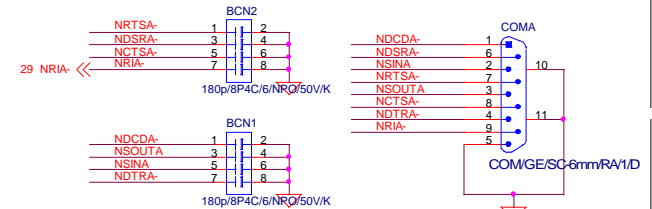
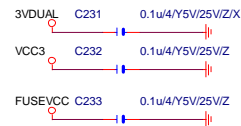


Intel Confidential			
Title			
FRONT AUDIO CONNECTOR			
Size	Document Number	945PL-S3	Rev
Custom			1.01
Date:	Friday, July 07, 2006	Sheet	33 of 40

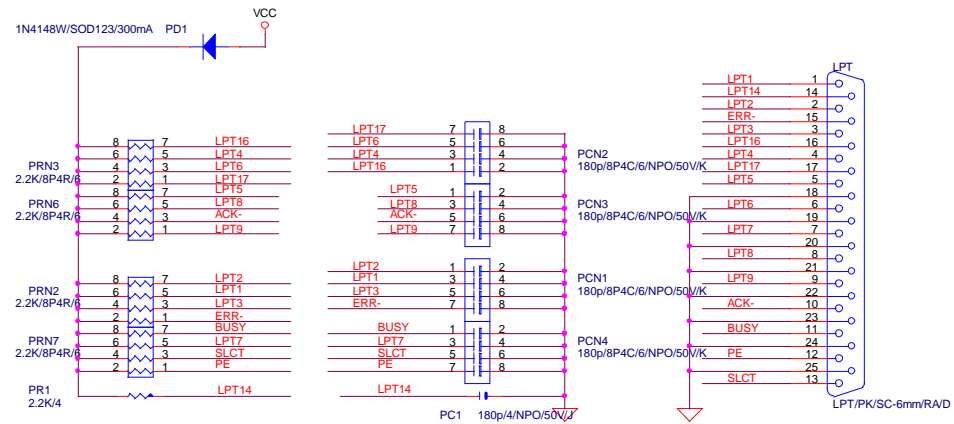
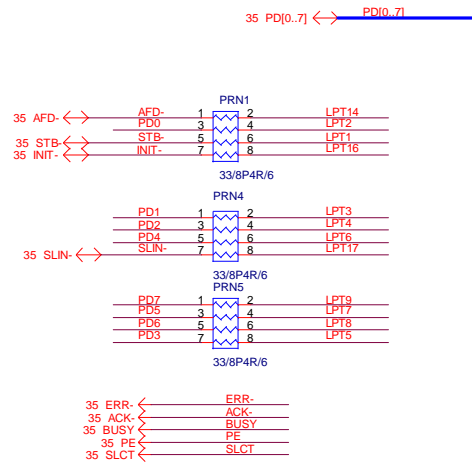




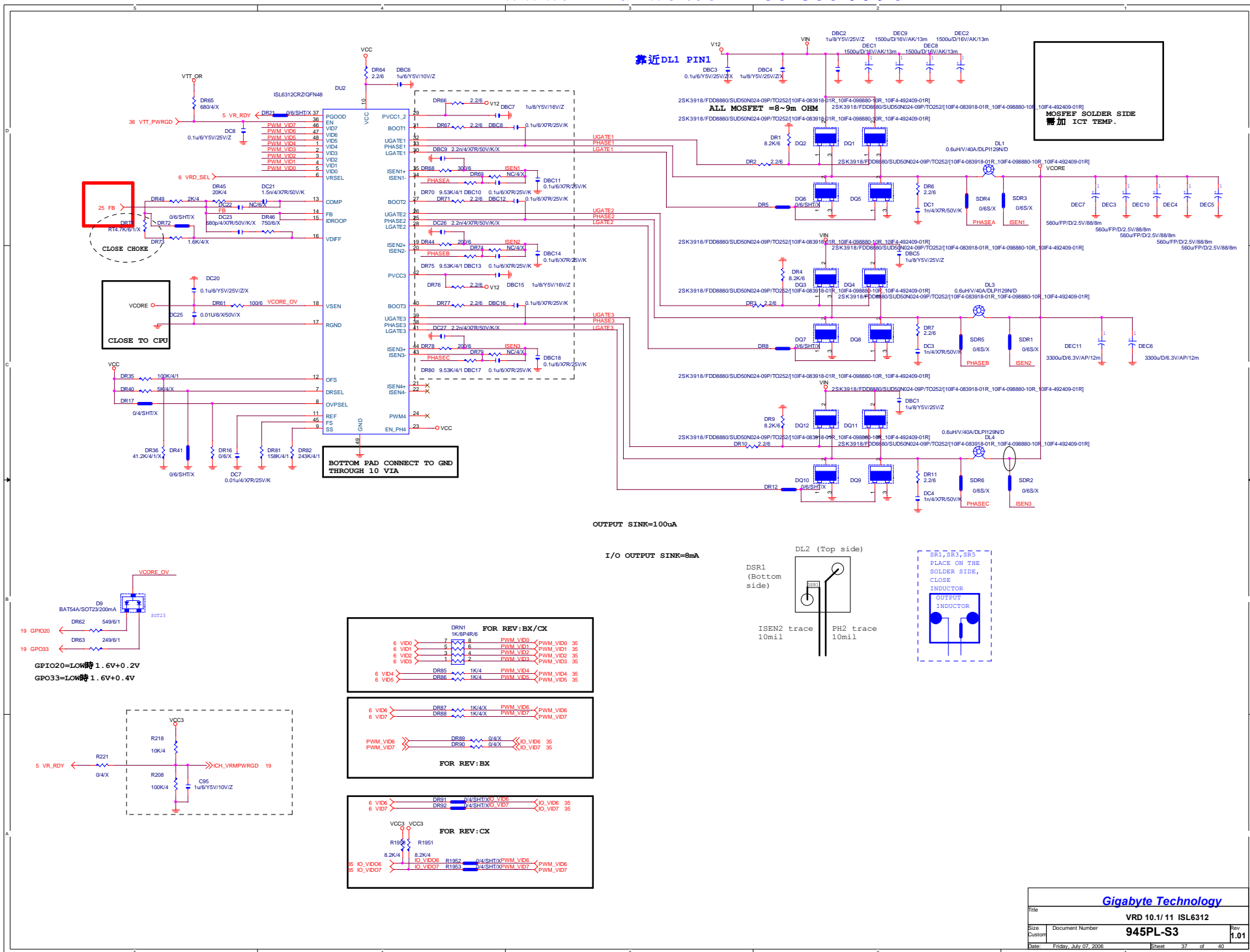
FOR EMI

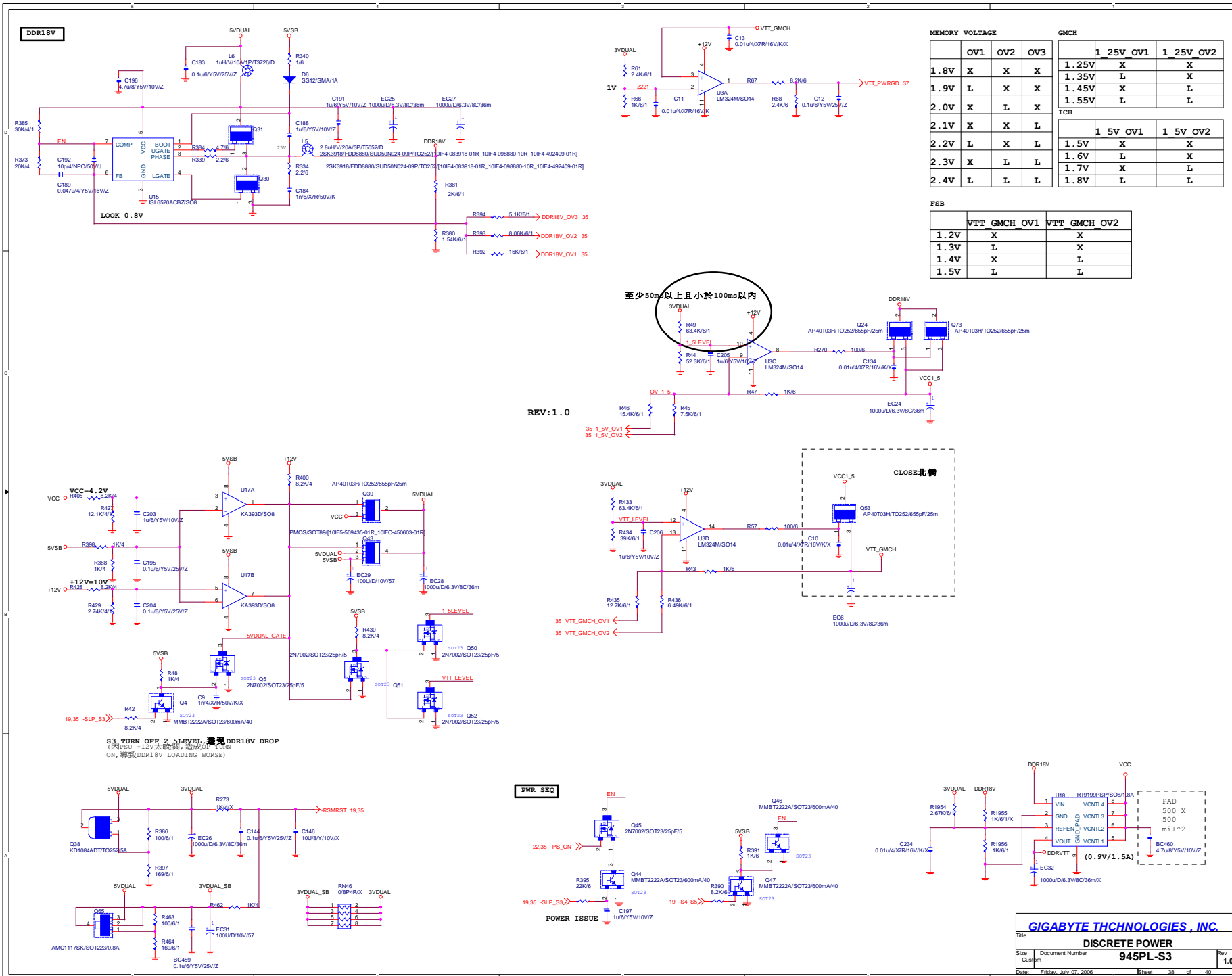


PLACE NEAR VGA_COM CONNECTOR



GIGABYTE THCNOLOGIES, INC.			
Title			
COM & LPT PORT &FLOOPY			
Size	Document Number	Rev	
B	945PL-S3	1.01	
Date:	Friday, July 07, 2006	Sheet	36 of 40





紅字表示CPI/O 同PIN

GPO PIN

Pin Name	Pin Number	Power Well	Pin Type	GPIO Application	
GPIO[38]	I/O	VCC3	GPI	(NA)	(NA)
GPIO[39]	I/O	VCC3	GPI	(NA)	(NA)
GPIO[40:47]		NOT IMPLEMENTED		NOT IMPLEMENTED	
GPIO[48]	I/O	VCC3	-GNT[4]	(NA)	-GNT[4]
GPIO[49]	I/O	VTT	GMCHCPUPWRGD	(P.U VTT_OL)	CPUPWROK
PCI1	PCLK0	-PCIRST	-REQ0-GNT0-PIRQE		A_D16
PCI2	PCLK1	-PCIRST	-REQ1-GNT1-PIRQD		A_D17
PCI3	PCLK2	-PCIRST	-REQ2-GNT2-PIRQC		A_D18

[illegible]

ICH7 GPIO Table:

NAME	PWR LANE	USAGE	NAME	PWR LANE	USAGE
GPI0	V5REF	M/B ID (-REQ6)	GPI41	VCC3	M/B ID
GPI1	V5REF	-REQ5	GPO48	VCC3	-GNT4
GPI2	V5REF	-PIRQE	GPO49	V-CPUIO	CPUPWOK
GPI3	V5REF	-PIRQF			
GPI4	V5REF	-PIRQG			
GPI5	V5REF	-PIRQH			
GPI6	VCC3	-SLP_BTN			
GPI7	VCC3	DUAL BIOS			
GPI8	3VDAUL	-LANWAKE			
GPI9	3VDAUL	-USBOC4			
GPI10	3VDAUL	-USBOC5			
GPI11	3VDAUL	-SMBALT			
GPI12	VCC3	ATX_DET			
GPI13	3VDAUL	-LPCPME			
GPI14	3VDAUL	-USBOC6			
GPI15	3VDAUL	-USBOC7			
GPO16	VCC3	CPU OV1 (-GNT6)			
GPO17	VCC3	-GNT5			
GPO18	VCC3	CPU OV2			
GPO19	VCC3	DUAL BIOS			
GPO20	VCC3	BIOS T-BLOCK			
GPO21	VCC3	DUAL BIOS			
GPO23	VCC3	DDR OV0			
GPIO24	3VDAUL	GREEN LED			
GPIO25	3VDAUL	DDR OV1			
GPI26	VCC3	SATA_GP0			
GPIO27	3VDAUL	+PWRLED			
GPIO28	3VDAUL	-PWRLED			
GPI29	VCC3	SATA GP1			
GPI30	VCC3	SATA GP2			
GPI31	VCC3	SATA GP3			
GPIO32	VCC3	BIOS WP			
GPIO33	VCC3	AZALIA DET			
GPIO34	VCC3	PWRLED			
GPI40	V5REF	-REQ4			

PWROK/RESET Table:

ITE8718F-C PIN	NET NAME	TARGET
PIN62/-PCIRST1	-PCIE_RST	1. PCI-E * 1 Slot1 2. PCI-E * 1 Slot2 3. PCI-E * 1 Slot3 4. PCI-E * 16 Slot
PIN63/PWROK1	PWROK1	1. GMCH 2. ICH7
PIN64/-PCIRST2	-PFMRST2	1. Reserved For TPM
PIN65/-PCIRST3	-PFMRST1	1. GMCH 2. Onboard PCIE Lan
PIN68/LRESET#	-PFMRST	1. ICH7
PIN109/PWROK2	-THERM	1. ICH7
PIN115/-PCIRST4	-IDERST	1. IDE

GIGABYTE THCHNOLOGIES , INC.

Title			GPIO/RESET TABLE	
Size	Document Number	945PL-S3		Rev
Custom				1.01
Date:	Friday, July 07, 2006	Sheet	40	of 40