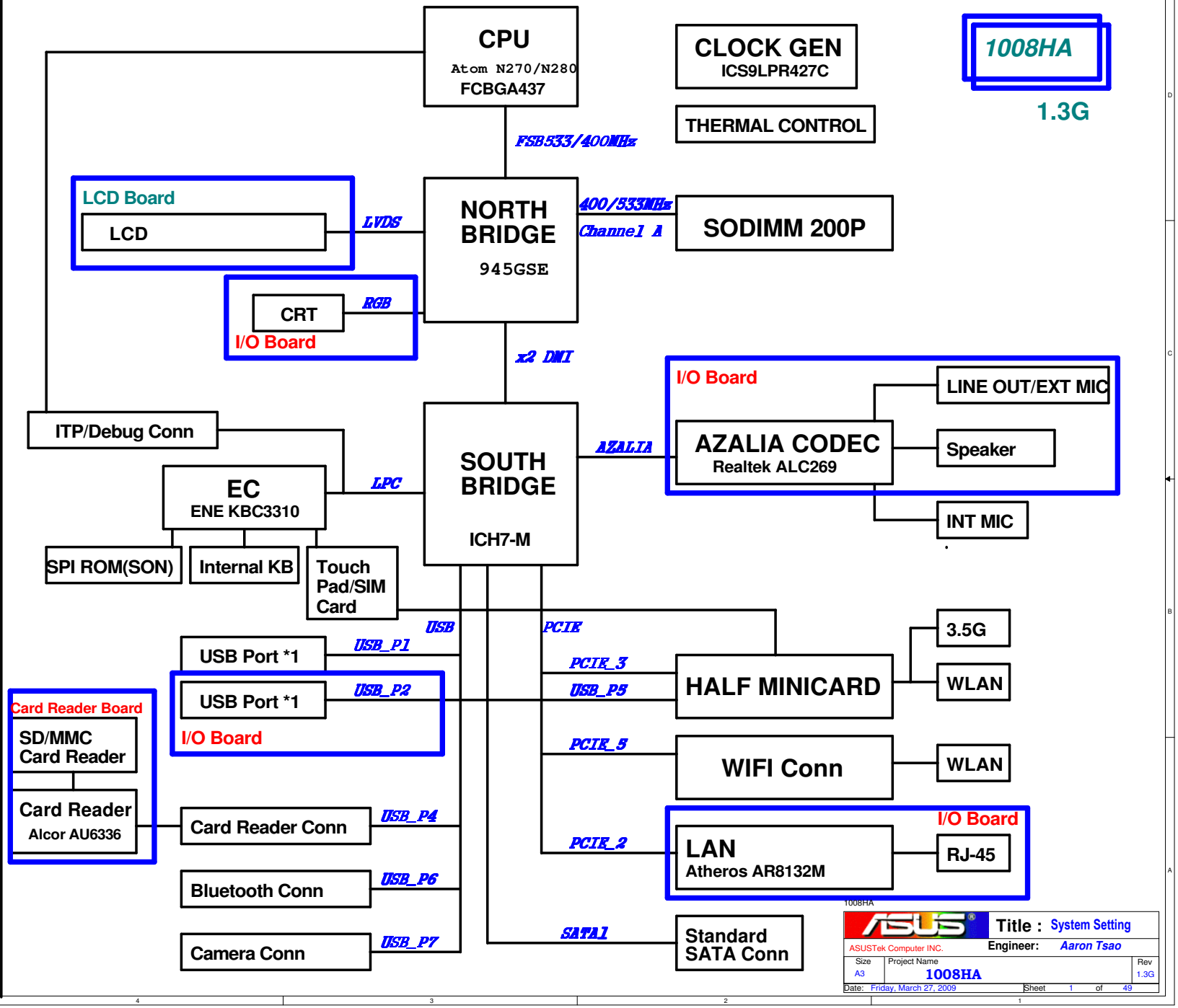


1008HA

ASUSTek Computer INC.

Title : System Setting

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 1 of 49

EEE PC 701 PCB version

GPI37	GPI38	GPI39	PCB version
0	0	0	
0	0	0	
0	0	1	
0	0	1	
0	1	0	
0	1	0	
0	1	1	
0	1	1	
1	0	0	
1	0	0	
1	0	1	
1	0	1	
1	1	0	
1	1	0	
1	1	1	
1	1	1	

USB

USB 0	USB Conn
USB 1	USB Conn
USB 2	NA
USB 3	NA
USB 4	Card Reader
USB 5	Minicard
USB 6	Bluetooth
USB 7	Camera

PCIE

PCIE 1	NC
PCIE 2	LAN
PCIE 3	Minicard
PCIE 4	SSD

Azalia

ACZ_SDIN0	CODEC
ACZ_SDIN1	NC
ACZ_SDIN2	NC

1008HA

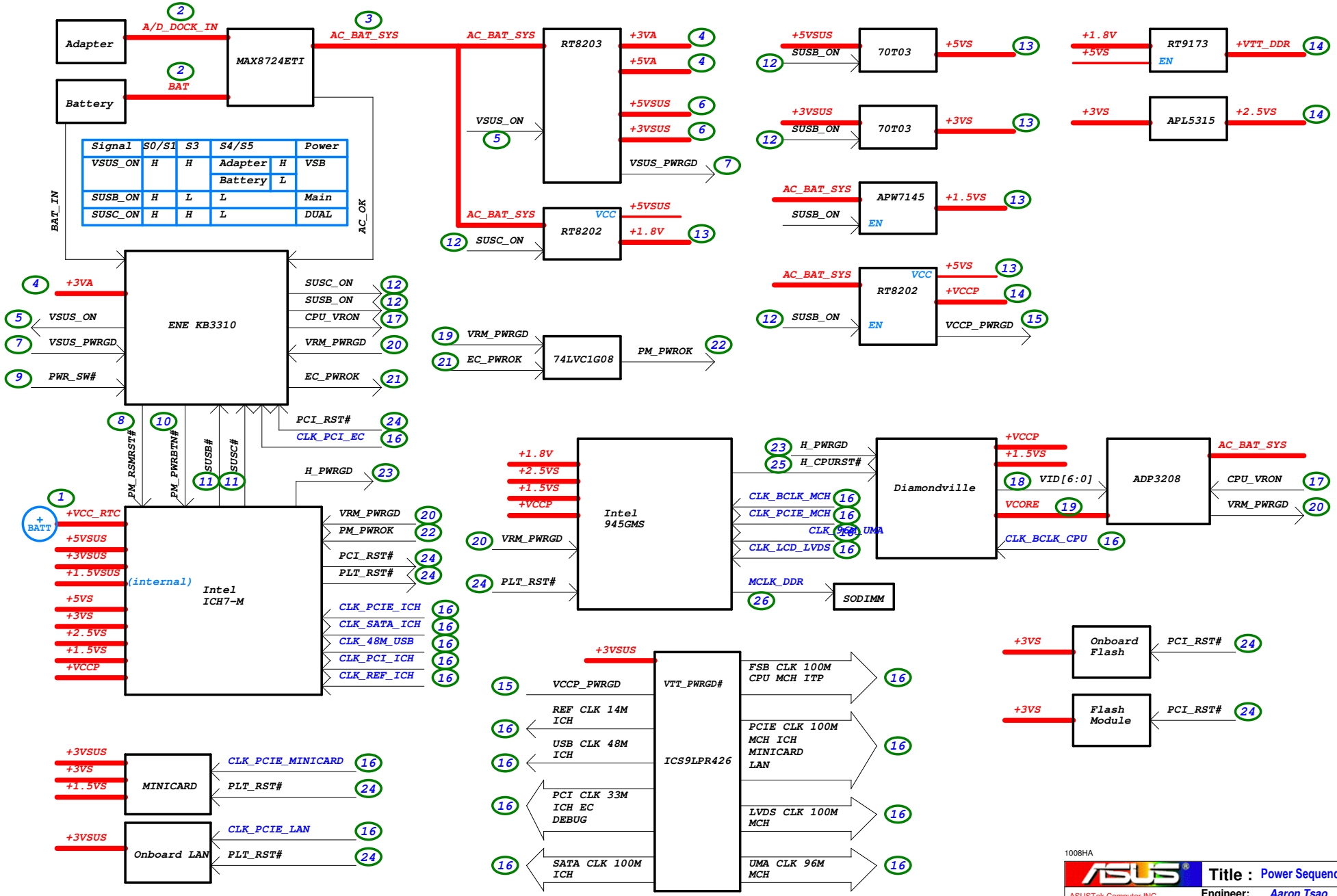
ASUSTek Computer INC.

Title : System Setting

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 2 of 49



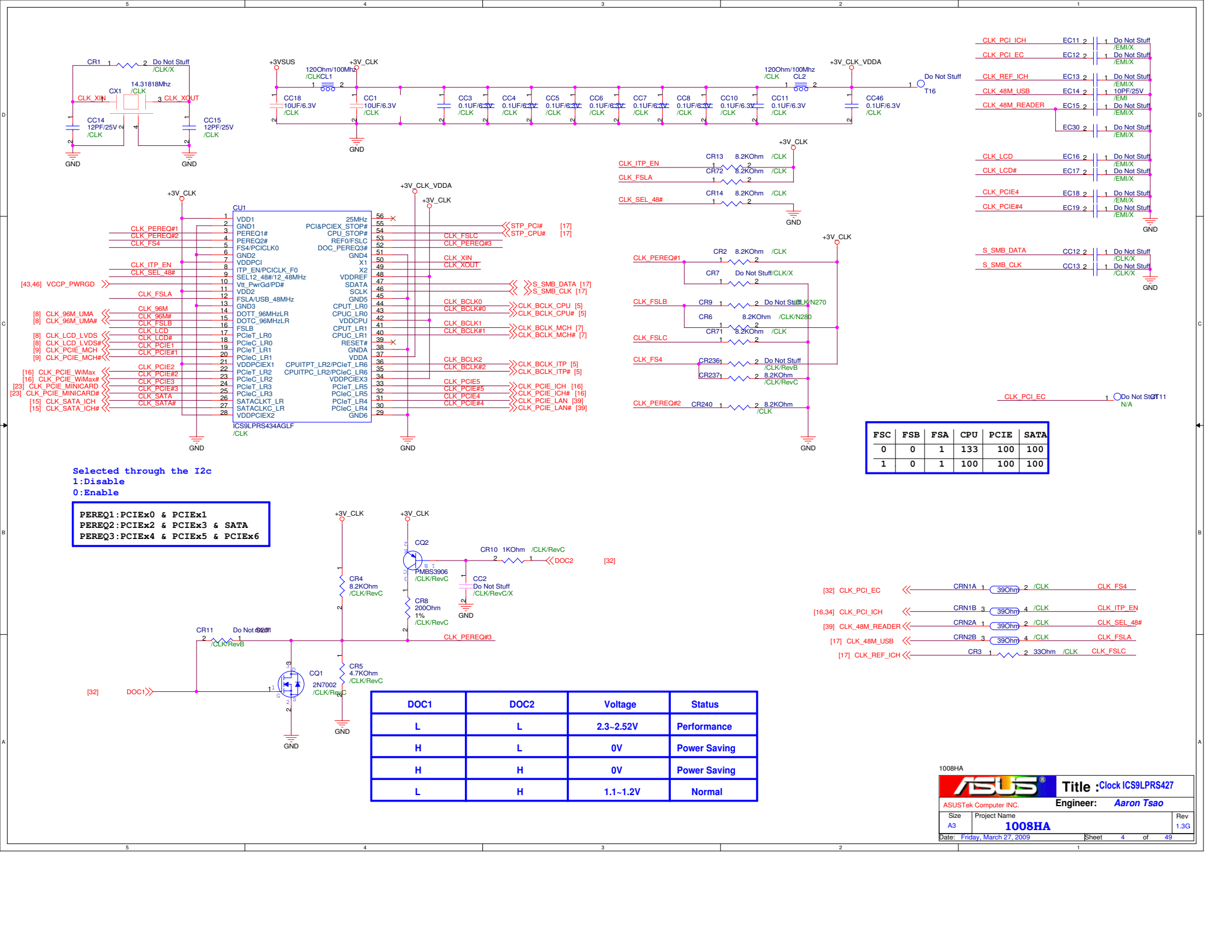
1008HA

Title : Power Sequence

ASUSTek Computer INC. Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 3 of 49



FSC	FSB	FSA	CPU	PCIE	SATA
0	0	1	133	100	100
1	0	1	100	100	100

DOC1	DOC2	Voltage	Status
L	L	2.3~2.52V	Performance
H	L	0V	Power Saving
H	H	0V	Power Saving
L	H	1.1~1.2V	Normal

1008HA

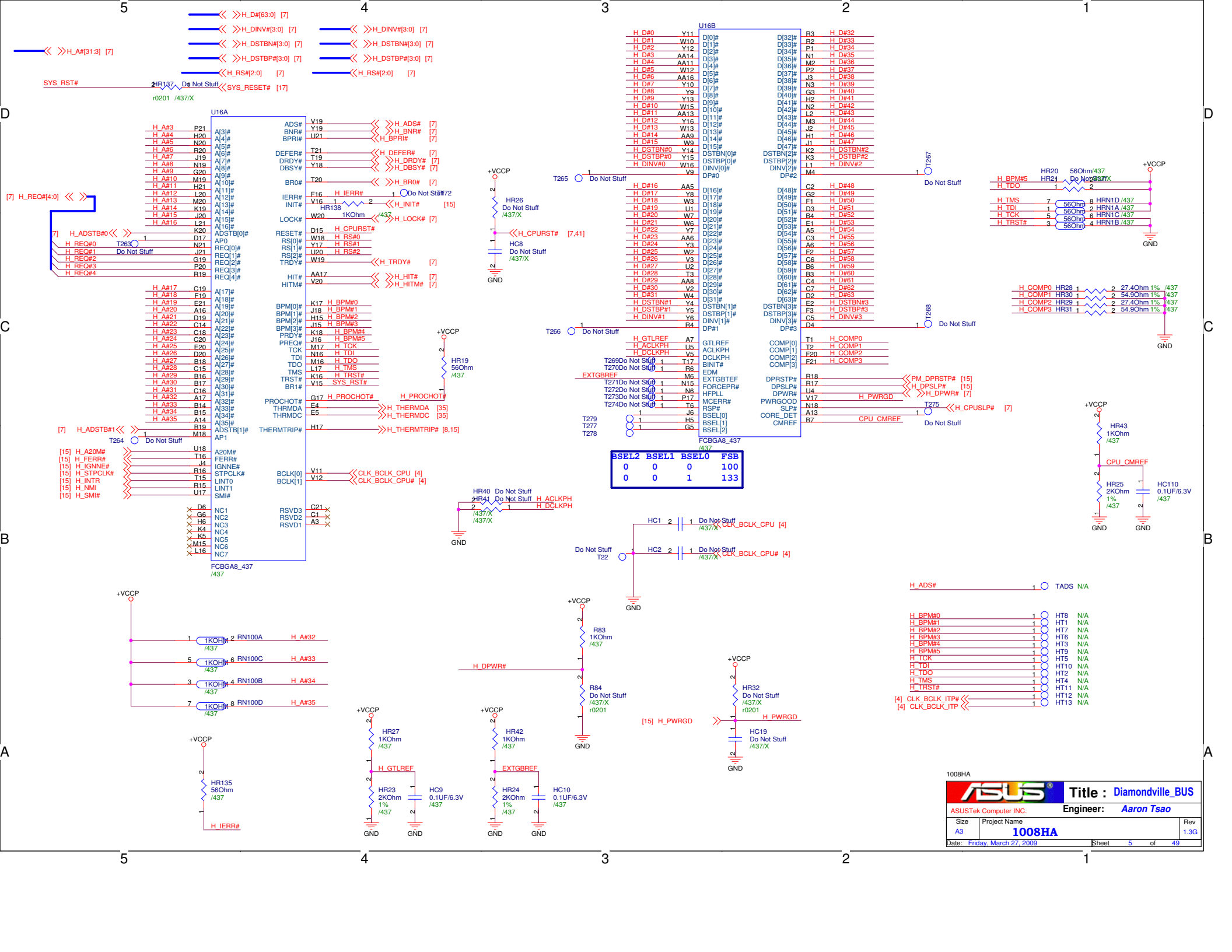
ASUSTek Computer INC.

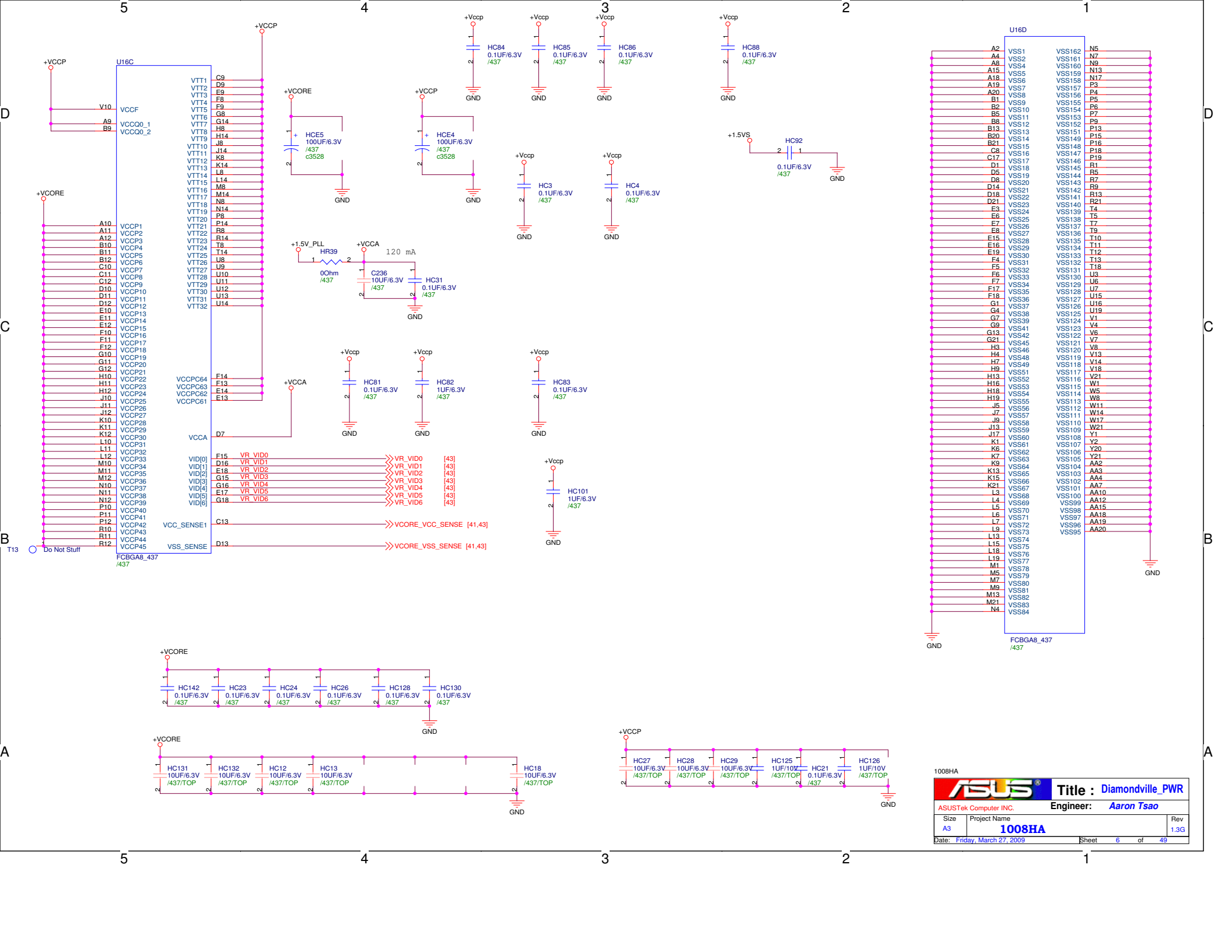
Title : Clock ICS9LPRS427

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 4 of 49

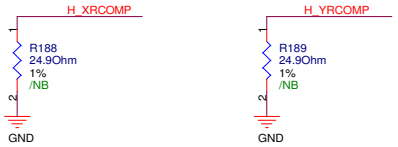

H_D#[63:0] [7]
H_DINV#[3:0] [7]
H_DSTBN#[3:0] [7]
H_DSTBP#[3:0] [7]
H_RS#[2:0] [7]
H_A#[31:3] [7]
SYS_RST#
HR137 Do Not Stuff
r0201 /437/X
SYS_RESET# [17]
U16A
FCBGA8_437
/437
U16B
FCBGA8_437
/437
[7] H_REQ#[4:0]
H_ADSTB#0 [7]
H_REQ#0
H_REQ#1
H_REQ#2
H_REQ#3
H_REQ#4
T263 Do Not Stuff
H_ADSTB#1 [7]
T264 Do Not Stuff
[15] H_A20M#
[15] H_FERR#
[15] H_IGNNE#
[15] H_STPCLK#
[15] H_INTR
[15] H_NMI
[15] H_SMI#
H_ADS# [7]
H_BNR# [7]
H_BPRI# [7]
H_DEFER# [7]
H_DRDY# [7]
H_DBSY# [7]
H_BR0# [7]
H_IERR#
H_INIT# [15]
HR138 1KOhm /437
H_LOCK# [7]
H_CPURST#
H_RS#0
H_RS#1
H_RS#2
H_TRDY# [7]
H_HIT# [7]
H_HITM# [7]
H_BPM#0
H_BPM#1
H_BPM#2
H_BPM#3
H_BPM#4
H_BPM#5
H_TCK
H_TDI
H_TDO
H_TMS
H_TRST#
SYS_RST#
H_PROCHOT#
H_THERMDA [35]
H_THERMDC [35]
H_THERMTRIP# [8,15]
CLK_BCLK_CPU [4]
CLK_BCLK_CPU# [4]
T265 Do Not Stuff
T266 Do Not Stuff
T267 Do Not Stuff
T268 Do Not Stuff
T269 Do Not Stuff
T270 Do Not Stuff
T271 Do Not Stuff
T272 Do Not Stuff
T273 Do Not Stuff
T274 Do Not Stuff
T275 Do Not Stuff
T279
T277
T278
EXTGBREF
H_GTLREF
H_ACLKPH
H_DCLKPH
H_COMP0
H_COMP1
H_COMP2
H_COMP3
PM_DPRSTP# [15]
H_DPSLP# [15]
H_DPWR# [7]
H_PWRGD
CPU_CMREF
H_CPUSLP# [7]
BSEL2 BSEL1 BSEL0 FSB
0 0 0 100
0 0 1 133
HR26 Do Not Stuff /437/X
HC8 Do Not Stuff /437/X
HR19 56Ohm /437
HR40 Do Not Stuff
HR41 Do Not Stuff
/437/X
HC1 Do Not Stuff /437/X
HC2 Do Not Stuff /437/X
T22 Do Not Stuff
HR20 56Ohm/437 Do Not Stuff
HR21 56Ohm/437 Do Not Stuff
H_BPM#5
H_TDO
H_TMS
H_TDI
H_TCK
H_TRST#
56Ohm
HRN1D /437
HRN1A /437
HRN1C /437
HRN1B /437
H_COMP0 HR28 27.4Ohm 1% /437
H_COMP1 HR30 54.9Ohm 1% /437
H_COMP2 HR29 27.4Ohm 1% /437
H_COMP3 HR31 54.9Ohm 1% /437
HR43 1KOhm /437
HR25 2KOhm 1% /437
HC110 0.1UF/6.3V /437
RN100A H_A#32
RN100C H_A#33
RN100B H_A#34
RN100D H_A#35
1KOHM /437
R83 1KOhm /437
R84 Do Not Stuff /437/X r0201
H_DPWR#
HR32 Do Not Stuff /437/X r0201
HC19 Do Not Stuff /437/X
[15] H_PWRGD
HR135 56Ohm /437
H_IERR#
HR27 1KOhm /437
HR23 2KOhm 1% /437
HC9 0.1UF/6.3V /437
HR42 1KOhm /437
HR24 2KOhm 1% /437
HC10 0.1UF/6.3V /437
H_ADS#
TADS N/A
HT8 N/A
HT1 N/A
HT7 N/A
HT6 N/A
HT3 N/A
HT9 N/A
HT5 N/A
HT10 N/A
HT2 N/A
HT4 N/A
HT11 N/A
HT12 N/A
HT13 N/A
[4] CLK_BCLK_ITP#
[4] CLK_BCLK_ITP
+VCCP
GND
1008HA
Title : Diamondville_BUS
ASUSTek Computer INC.
Engineer: Aaron Tsao
Size A3
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 5 of 49


U16C
FCBGA8_437
/437
U16D
FCBGA8_437
/437
+VCCP
+VCORE
+VCCA
+Vccp
+1.5V_PLL
+1.5VS
GND
HC84 0.1UF/6.3V /437
HC85 0.1UF/6.3V /437
HC86 0.1UF/6.3V /437
HC88 0.1UF/6.3V /437
HCE5 100UF/6.3V /437 c3528
HCE4 100UF/6.3V /437 c3528
HC3 0.1UF/6.3V /437
HC4 0.1UF/6.3V /437
HC92 0.1UF/6.3V /437
HR39 0Ohm /437
120 mA
C236 10UF/6.3V /437
HC31 0.1UF/6.3V /437
HC81 0.1UF/6.3V /437
HC82 1UF/6.3V /437
HC83 0.1UF/6.3V /437
HC101 1UF/6.3V /437
T13 Do Not Stuff
VR_VID0 [43]
VR_VID1 [43]
VR_VID2 [43]
VR_VID3 [43]
VR_VID4 [43]
VR_VID5 [43]
VR_VID6 [43]
VCORE_VCC_SENSE [41,43]
VCORE_VSS_SENSE [41,43]
HC142 0.1UF/6.3V /437
HC23 0.1UF/6.3V /437
HC24 0.1UF/6.3V /437
HC26 0.1UF/6.3V /437
HC128 0.1UF/6.3V /437
HC130 0.1UF/6.3V /437
HC131 10UF/6.3V /437/TOP
HC132 10UF/6.3V /437/TOP
HC12 10UF/6.3V /437/TOP
HC13 10UF/6.3V /437/TOP
HC18 10UF/6.3V /437/TOP
HC27 10UF/6.3V /437/TOP
HC28 10UF/6.3V /437/TOP
HC29 10UF/6.3V /437/TOP
HC125 1UF/10V /437/TOP
HC21 0.1UF/6.3V /437
HC126 1UF/10V /437/TOP
1008HA
Title : Diamondville_PWR
ASUSTek Computer INC.
Engineer: Aaron Tsao
Size A3
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 6 of 49

Power:
+VCCP

RCOMP

For Calibrating the FSB I/O Buffer

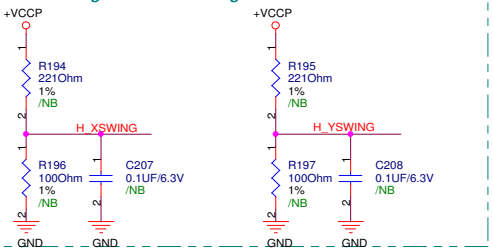


SCOMP

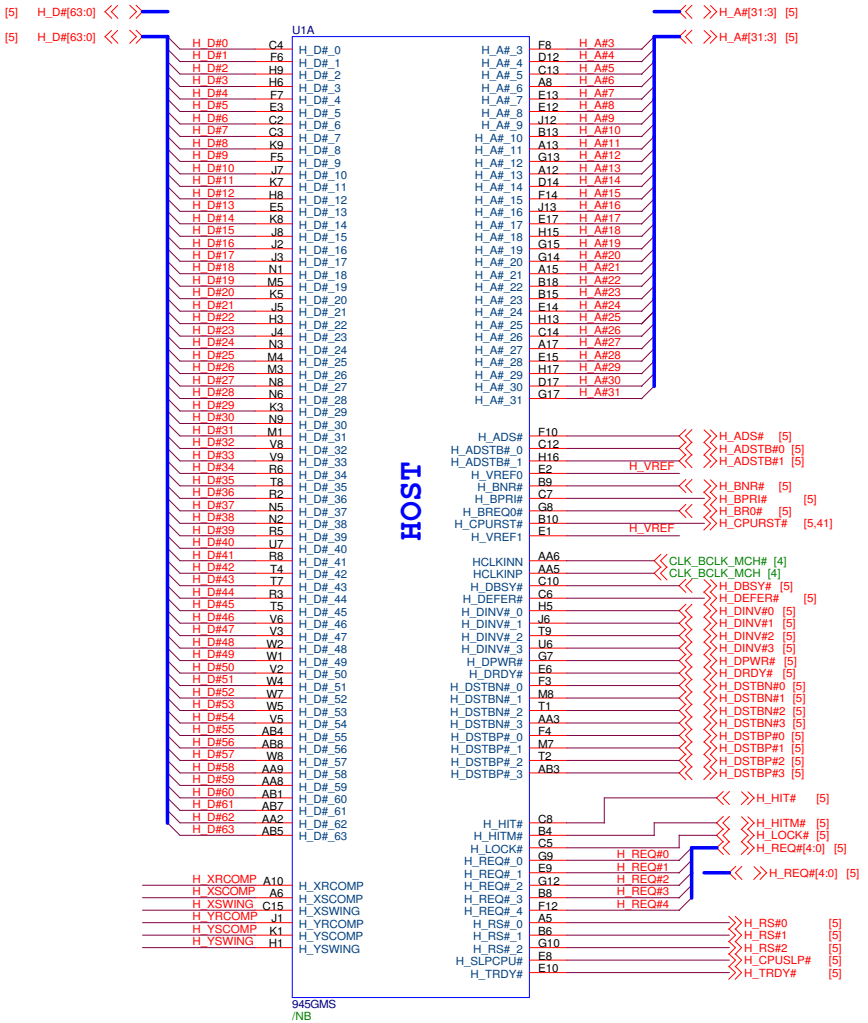
For Slew Rate Compenssation on the FSB

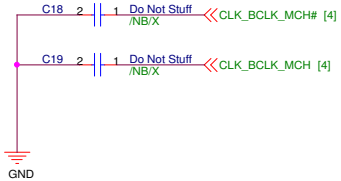
Voltage Swing

For Providing a Reference Voltage to The FSB RCOMP circuits

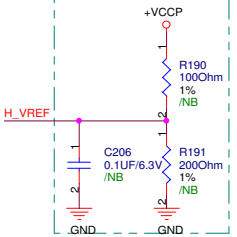


Signal voltage level = 0.3125*VCCP
Trace should be 10 mil wide with 20 mil spacing





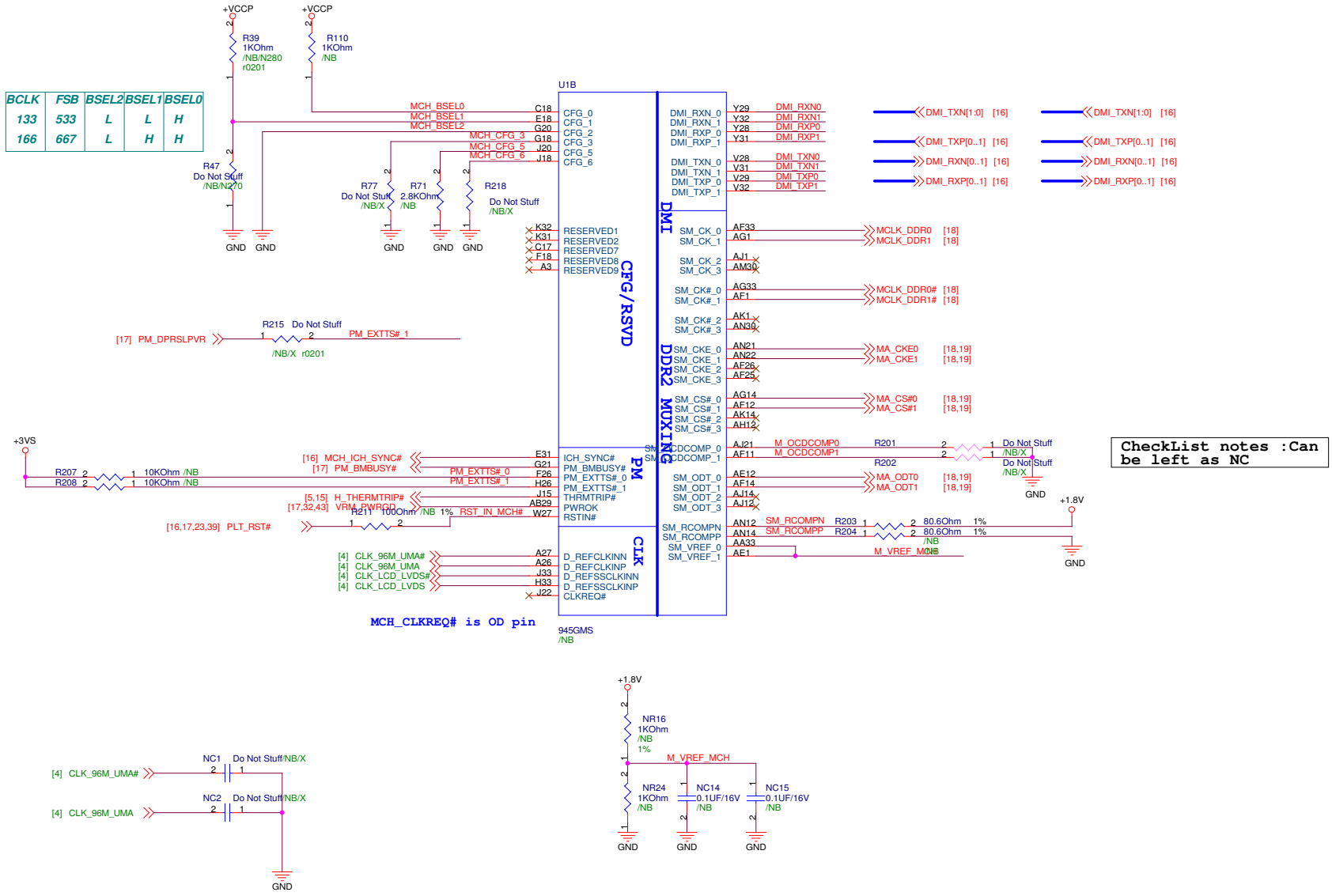
AGTL+ I/O Voltage Reference



Layout Note:
0.1uF should be placed 100mils or less from GMCH pin.

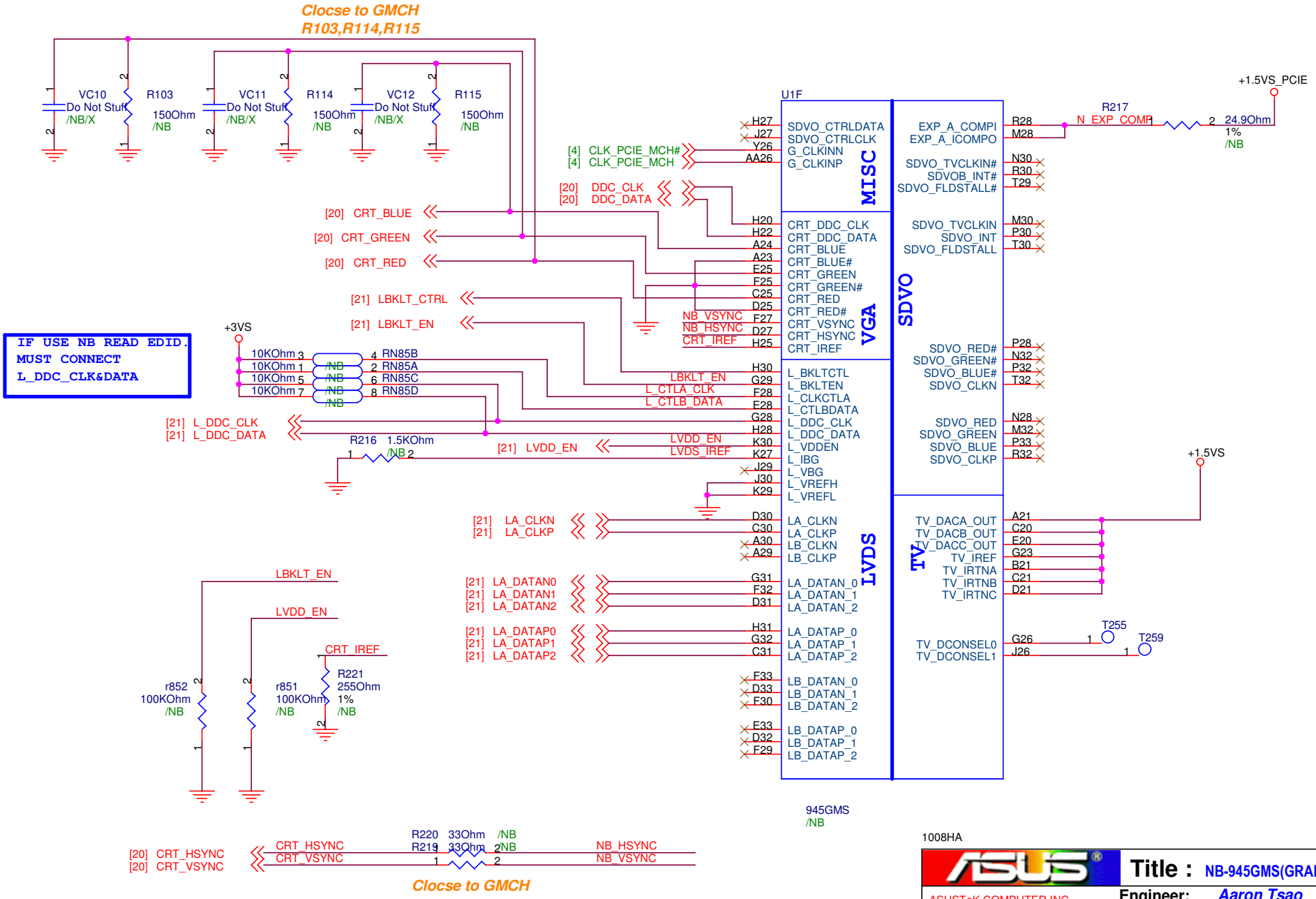
1008HA

ASUSTeK COMPUTER INC.	Title : NB-945GMS(HOST)	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 7 of 49	



1008HA

ASUSTeK COMPUTER INC.	Title : NB-945GMS(DMI & CFG)	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 8 of 49	



1008HA

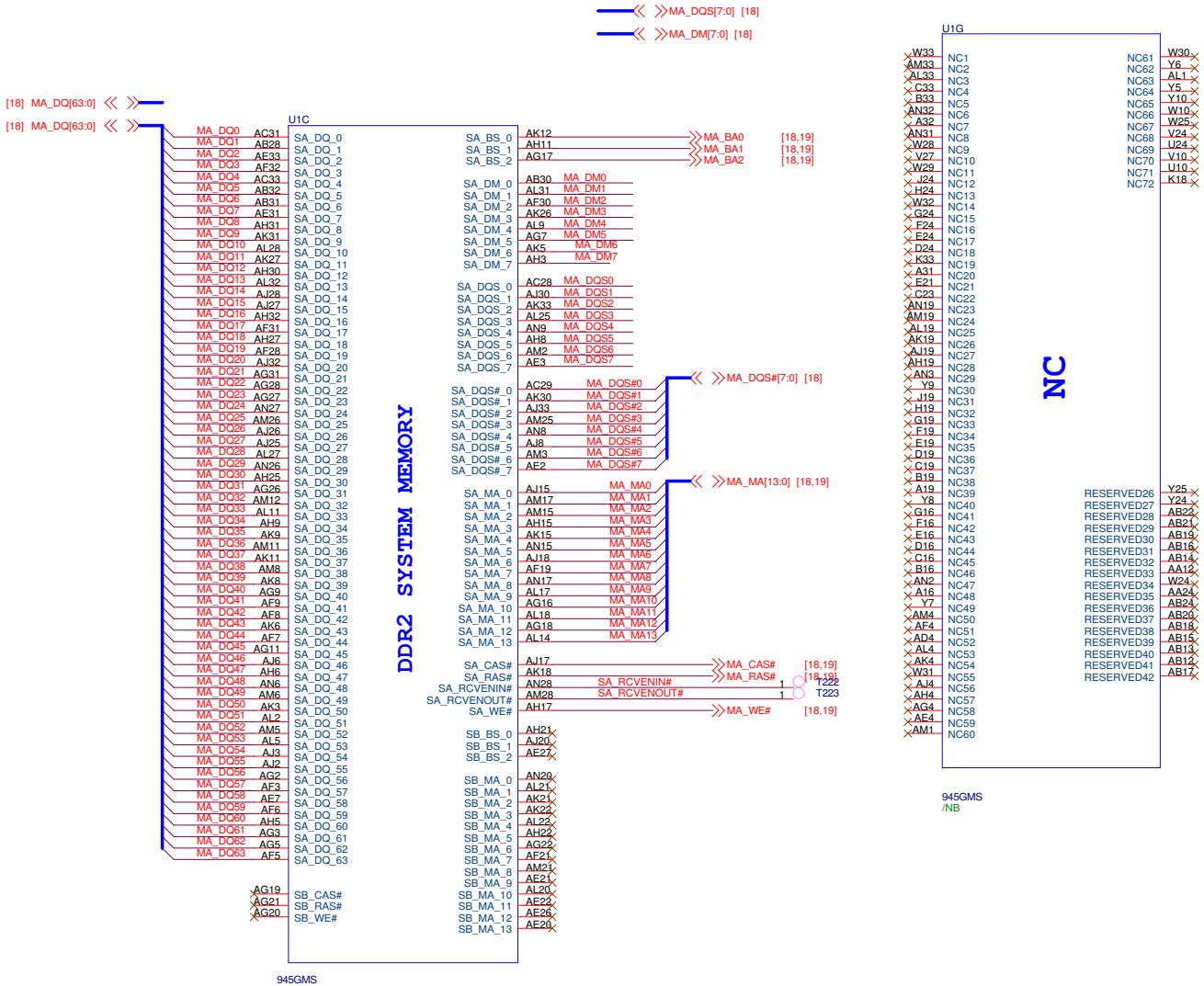
ASUSTeK COMPUTER INC.

Title : NB-945GMS(GRAPHIC)

Engineer: Aaron Tsao

Size	Project Name	Rev
A4	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 9 of 49



1008HA

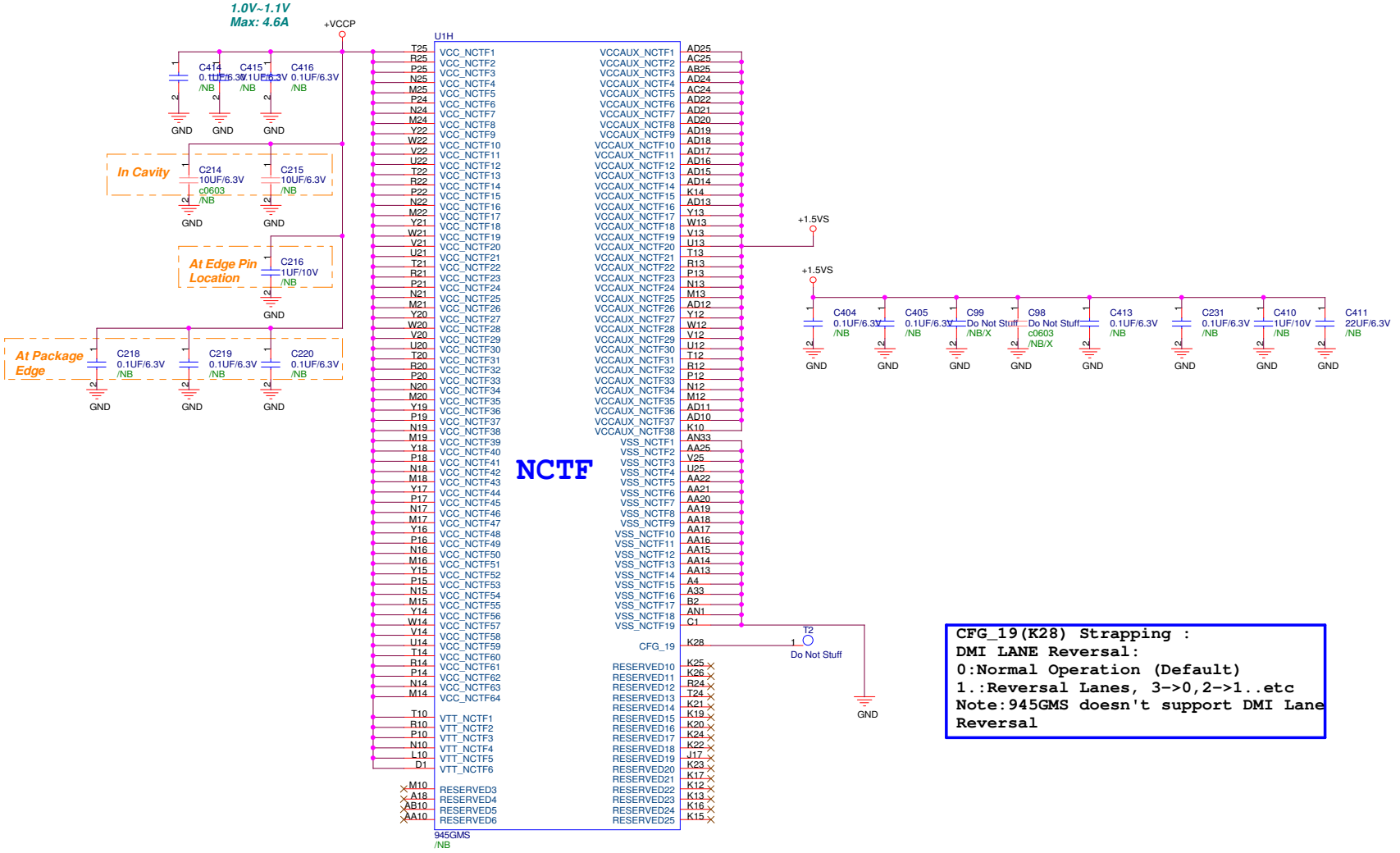
ASUSTeK COMPUTER INC.

Title : NB-945GMS(DDR2)

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 10 of 49



1008HA

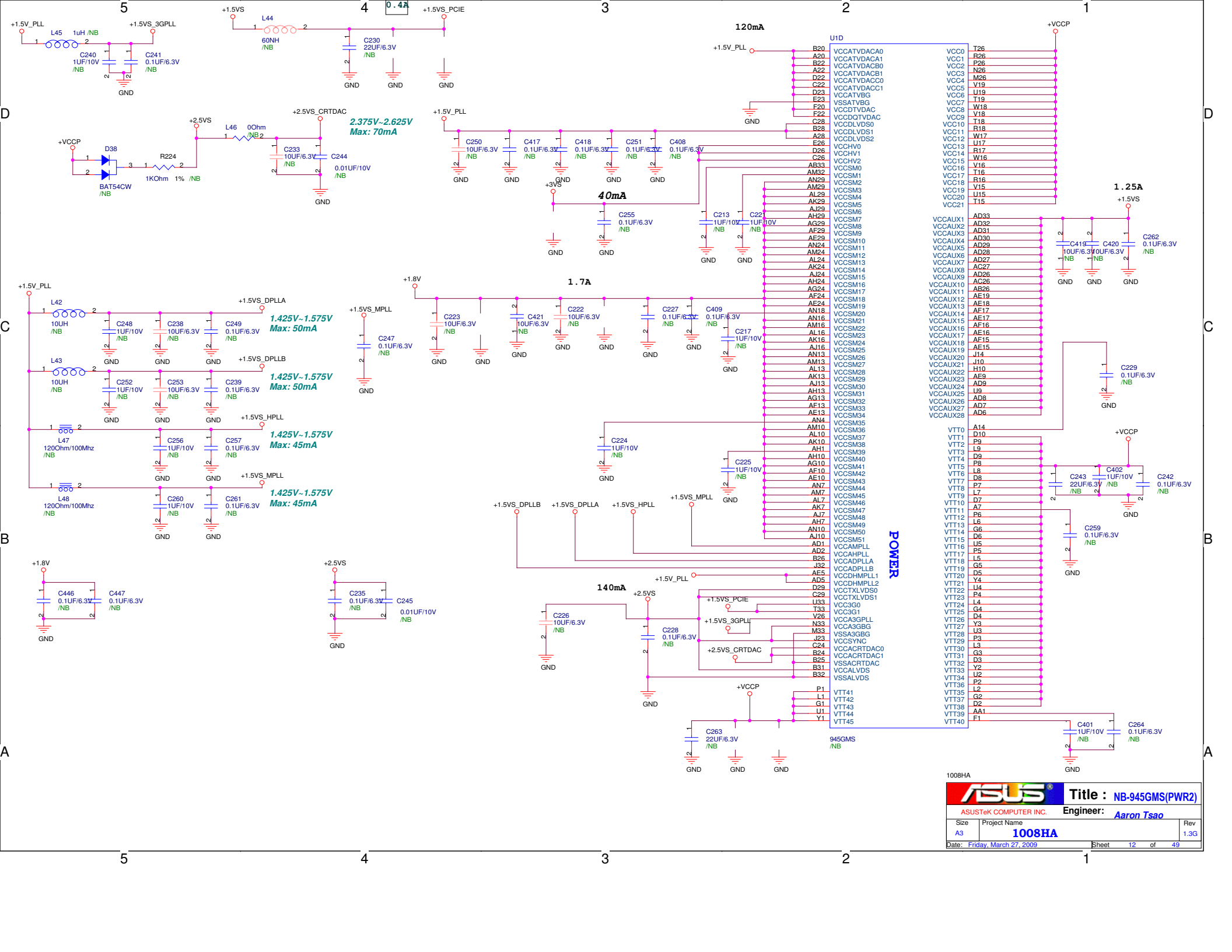
ASUSTeK COMPUTER INC.

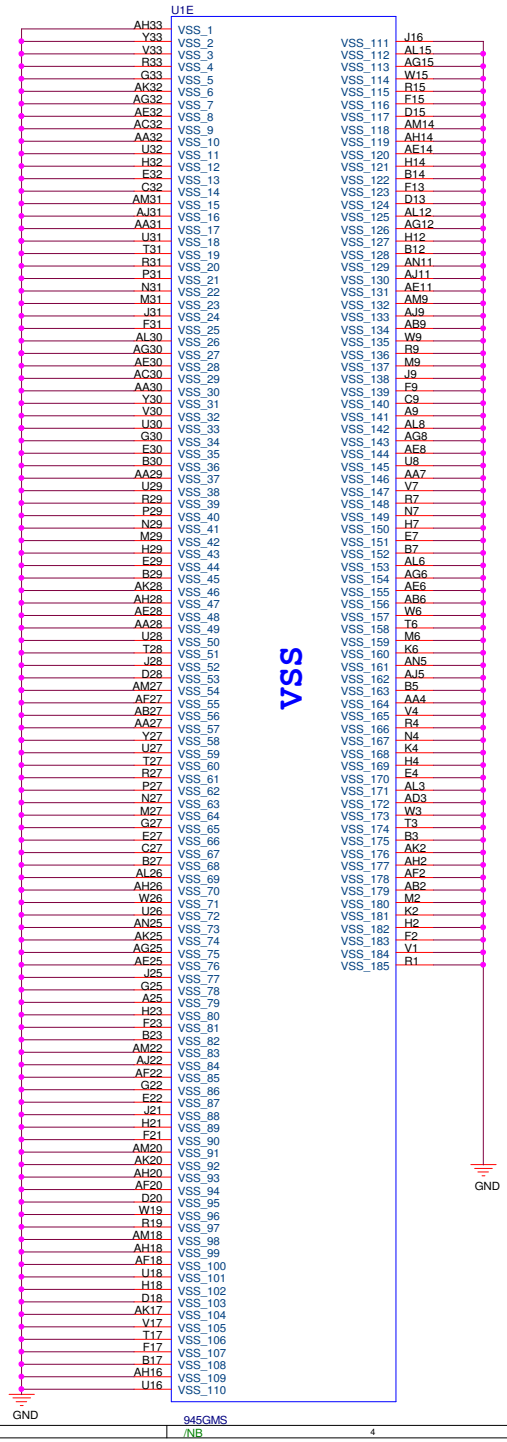
Title : NB-945GMs(PWR)

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

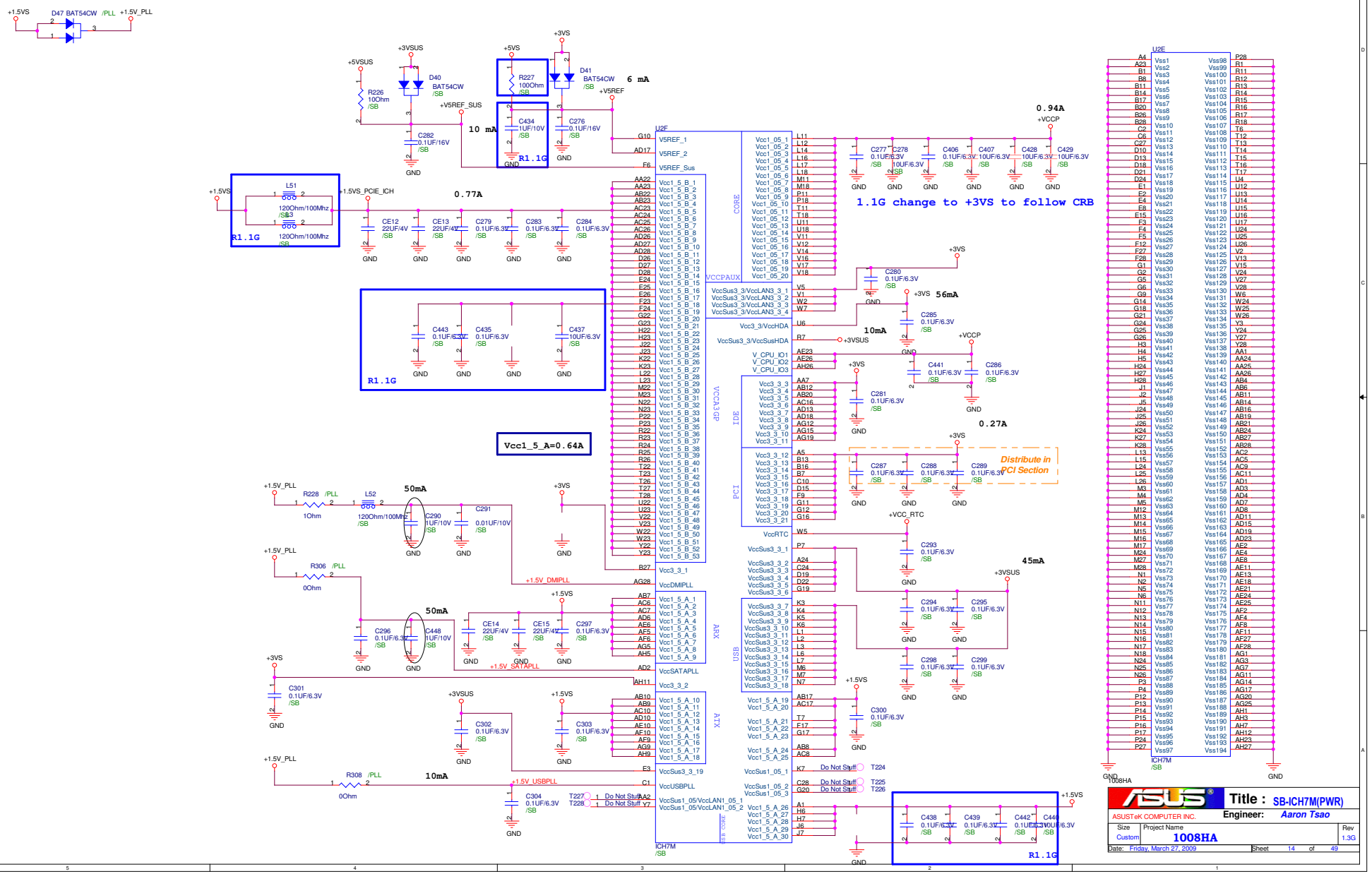
Date: Friday, March 27, 2009 Sheet 11 of 49


+1.5V_PLL
L45 1uH /NB
+1.5VS_3GPLL
C240 1UF/10V /NB
C241 0.1UF/6.3V /NB
GND
+1.5VS
L44 60NH /NB
C230 22UF/6.3V /NB
+1.5VS_PCIE
+2.5VS
L46 0Ohm /NB
+2.5VS_CRTDAC
2.375V~2.625V
Max: 70mA
+VCCP
D38 BAT54CW /NB
R224 1KOhm 1% /NB
C233 10UF/6.3V /NB
C244 0.01UF/10V /NB
120mA
U1D
+1.5V_PLL
C250 10UF/6.3V /NB
C417 0.1UF/6.3V /NB
C418 0.1UF/6.3V /NB
C251 0.1UF/6.3V /NB
C408 0.1UF/6.3V /NB
+3VS
40mA
C255 0.1UF/6.3V /NB
C213 1UF/10V /NB
C221 1UF/10V /NB
1.25A
+1.5VS
C419 10UF/6.3V /NB
C420 10UF/6.3V /NB
C262 0.1UF/6.3V /NB
+1.8V
1.7A
+1.5VS_MPLL
C247 0.1UF/6.3V /NB
C223 10UF/6.3V /NB
C421 10UF/6.3V /NB
C222 10UF/6.3V /NB
C227 0.1UF/6.3V /NB
C409 0.1UF/6.3V /NB
C217 1UF/10V /NB
C229 0.1UF/6.3V /NB
+1.5V_PLL
L42 10UH /NB
+1.5VS_DPLLA
1.425V~1.575V
Max: 50mA
C248 1UF/10V /NB
C238 10UF/6.3V /NB
C249 0.1UF/6.3V /NB
L43 10UH /NB
+1.5VS_DPLLB
1.425V~1.575V
Max: 50mA
C252 1UF/10V /NB
C253 10UF/6.3V /NB
C239 0.1UF/6.3V /NB
L47 120Ohm/100Mhz /NB
+1.5VS_HPLL
1.425V~1.575V
Max: 45mA
C256 1UF/10V /NB
C257 0.1UF/6.3V /NB
L48 120Ohm/100Mhz /NB
+1.5VS_MPLL
1.425V~1.575V
Max: 45mA
C260 1UF/10V /NB
C261 0.1UF/6.3V /NB
C224 1UF/10V /NB
C225 1UF/10V /NB
C402 1UF/10V /NB
C243 22UF/6.3V /NB
C242 0.1UF/6.3V /NB
C259 0.1UF/6.3V /NB
+1.5VS_DPLLB
+1.5VS_DPLLA
+1.5VS_HPLL
+1.5VS_MPLL
140mA
+1.5V_PLL
+2.5VS
C226 10UF/6.3V /NB
C228 0.1UF/6.3V /NB
+1.5VS_PCIE
+1.5VS_3GPLL
+2.5VS_CRTDAC
+VCCP
C263 22UF/6.3V /NB
945GMS /NB
C401 1UF/10V /NB
C264 0.1UF/6.3V /NB
+1.8V
C446 0.1UF/6.3V /NB
C447 0.1UF/6.3V /NB
+2.5VS
C235 0.1UF/6.3V /NB
C245 0.01UF/10V /NB
POWER
1008HA
Title : NB-945GMS(PWR2)
ASUSTeK COMPUTER INC.
Engineer: Aaron Tsao
Size A3
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 12 of 49



1008HA

ASUSTeK COMPUTER INC.	Title : NB-945PMS(GND)	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 13 of 49	


D47 BAT54CW /PLL
+1.5VS
+1.5V_PLL
D40 BAT54CW /SB
D41 BAT54CW /SB
6 mA
10 mA
0.77A
0.94A
0.27A
56mA
10mA
45mA
50mA
1.1G change to +3VS to follow CRB
Vcc1_5_A=0.64A
Distribute in PCI Section
R1.1G
U2F
U2E
ICH7M /SB
Title : SB-ICH7M(PWR)
ASUSTeK COMPUTER INC.
Engineer: Aaron Tsao
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 14 of 49

Change to
rechargeable RTC battery

R1.1G change +3VA net to +3VA_AEC

Height : 3.4 mm

RTCRST# RC
delay
18~25ms

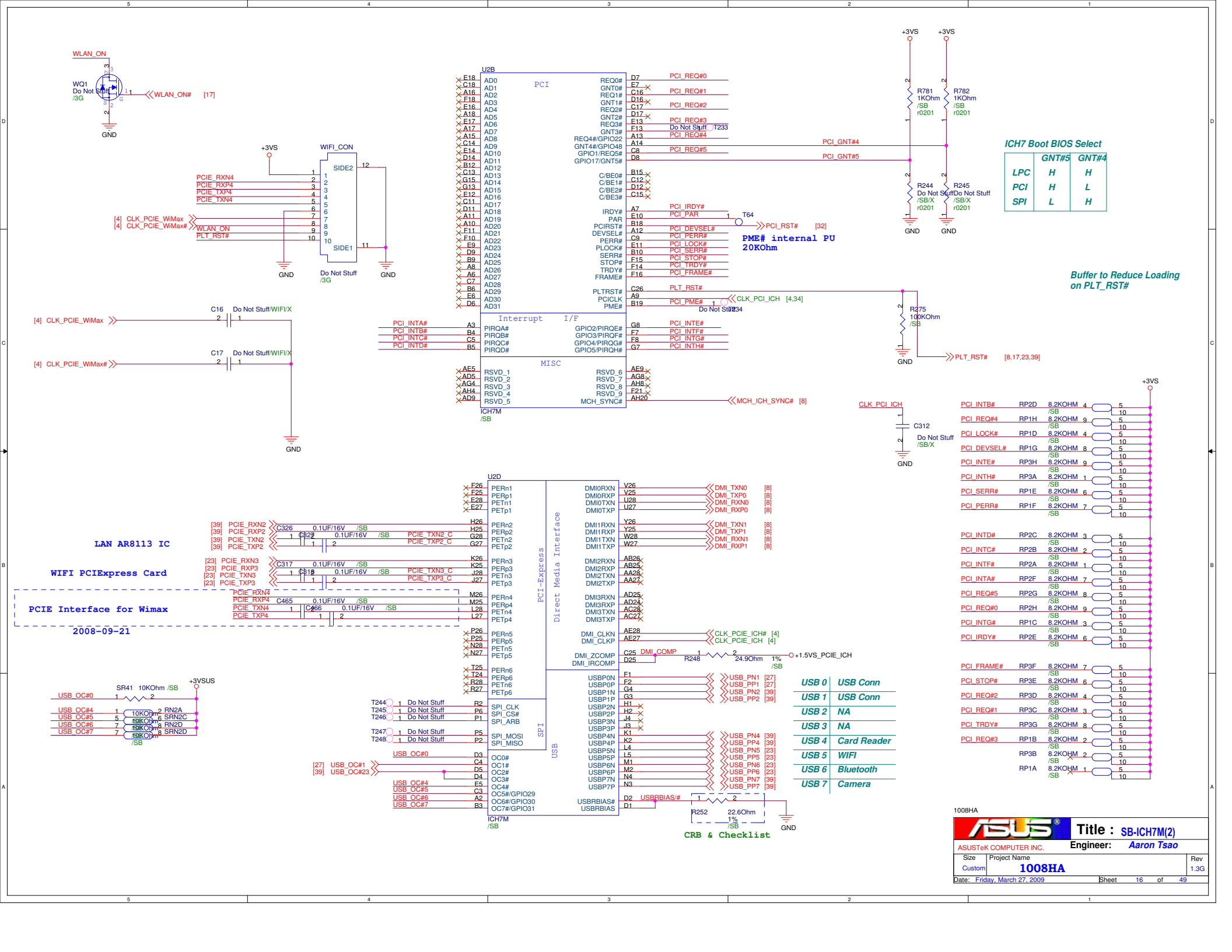
Place Near
Open Door

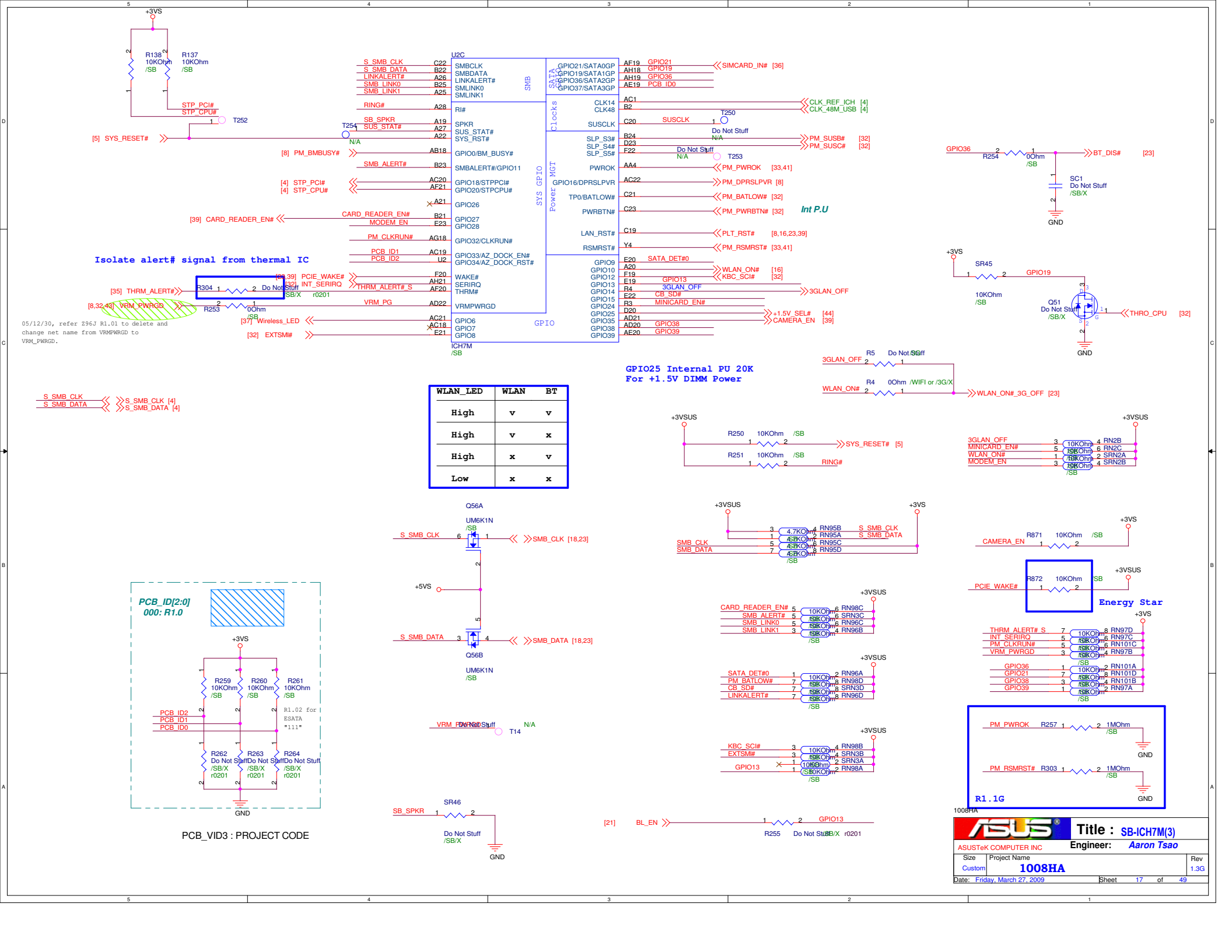
NO STUFF R107.CPUSLP# ONLY USE IN DESTOP

ACZ_SDIN0	CODEC
ACZ_SDIN1	NA

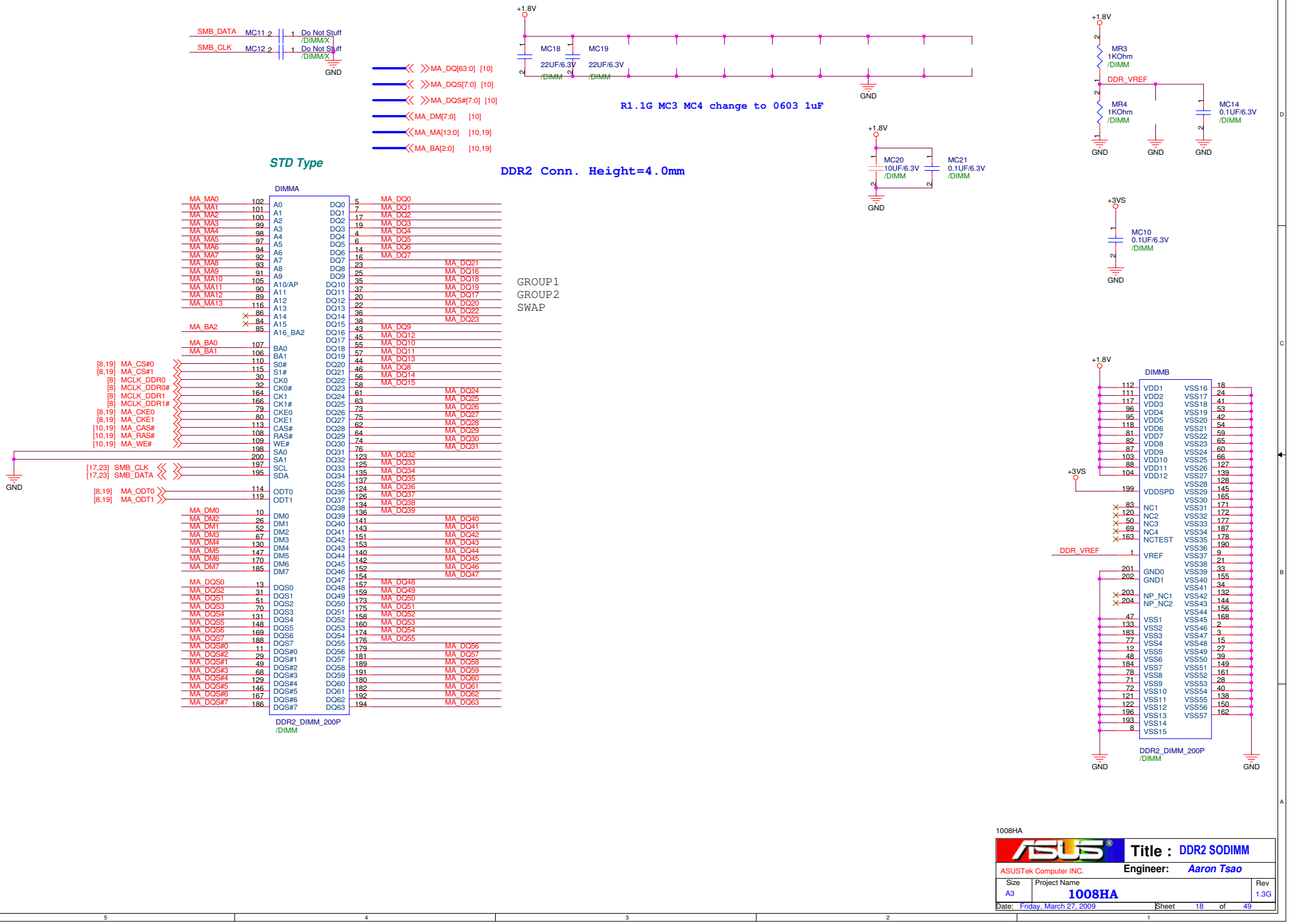
1008HA

ASUSTeK COMPUTER INC.	Title : SB-ICH7-M(1)	
	Engineer: Aaron Tsao	
Size: Custom	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 15 of 49	


WLAN_ON
WQ1
Do Not Stuff
/3G
WLAN_ON# [17]
GND
+3VS
WIFI_CON
SIDE2
SIDE1
Do Not Stuff
/3G
PCIE_RXN4
PCIE_RXP4
PCIE_TXP4
PCIE_TXN4
[4] CLK_PCIE_WiMax
[4] CLK_PCIE_WiMax#
WLAN_ON
PLT_RST#
C16 Do Not Stuff/WIFI/X
C17 Do Not Stuff/WIFI/X
U2B
PCI
Interrupt I/F
MISC
ICH7M
/SB
PCI_REQ#0
PCI_REQ#1
PCI_REQ#2
PCI_REQ#3
PCI_REQ#4
PCI_REQ#5
PCI_GNT#4
PCI_GNT#5
PCI_IRDY#
PCI_PAR
PCI_RST# [32]
PCI_DEVSEL#
PCI_PERR#
PCI_LOCK#
PCI_SERR#
PCI_STOP#
PCI_TRDY#
PCI_FRAME#
PCI_INTA#
PCI_INTB#
PCI_INTC#
PCI_INTD#
PCI_INTE#
PCI_INTF#
PCI_INTG#
PCI_INTH#
PLT_RST#
CLK_PCI_ICH [4,34]
MCH_ICH_SYNC# [8]
R781 1KOhm /SB r0201
R782 1KOhm /SB r0201
R244 Do Not Stuff /SB/X r0201
R245 Do Not Stuff /SB/X r0201
R275 100KOhm /SB
PME# internal PU 20KOhm
Buffer to Reduce Loading on PLT_RST#
ICH7 Boot BIOS Select
LPC H H
PCI H L
SPI L H
C312 Do Not Stuff /SB/X
U2D
PCI-Express
Direct Media Interface
SPI
USB
LAN AR8113 IC
WIFI PCIExpress Card
PCIE Interface for Wimax
2008-09-21
DMI_TXN0 [8]
DMI_TXP0 [8]
DMI_RXN0 [8]
DMI_RXP0 [8]
DMI_TXN1 [8]
DMI_TXP1 [8]
DMI_RXN1 [8]
DMI_RXP1 [8]
CLK_PCIE_ICH# [4]
CLK_PCIE_ICH [4]
DMI_COMP
R248 24.9Ohm 1% /SB
+1.5VS_PCIE_ICH
USBRBIAS/#
R252 22.6Ohm 1% /SB
SR41 10KOhm /SB
+3VSUS
USB_OC#0
USB_OC#4
USB_OC#5
USB_OC#6
USB_OC#7
RN2A
RN2C
RN2D
RN2B
USB 0 USB Conn
USB 1 USB Conn
USB 2 NA
USB 3 NA
USB 4 Card Reader
USB 5 WIFI
USB 6 Bluetooth
USB 7 Camera
CRB & Checklist
RP2D 8.2KOHM /SB
RP1H 8.2KOHM /SB
RP1D 8.2KOHM /SB
RP1G 8.2KOHM /SB
RP3H 8.2KOHM /SB
RP3A 8.2KOHM /SB
RP1E 8.2KOHM /SB
RP1F 8.2KOHM /SB
RP2C 8.2KOHM /SB
RP2B 8.2KOHM /SB
RP2A 8.2KOHM /SB
RP2F 8.2KOHM /SB
RP2G 8.2KOHM /SB
RP2H 8.2KOHM /SB
RP1C 8.2KOHM /SB
RP2E 8.2KOHM /SB
RP3F 8.2KOHM /SB
RP3E 8.2KOHM /SB
RP3D 8.2KOHM /SB
RP3C 8.2KOHM /SB
RP3G 8.2KOHM /SB
RP1B 8.2KOHM /SB
RP3B 8.2KOHM /SB
RP1A 8.2KOHM /SB
1008HA
Title : SB-ICH7M(2)
ASUSTeK COMPUTER INC.
Engineer: Aaron Tsao
Size Custom
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 16 of 49

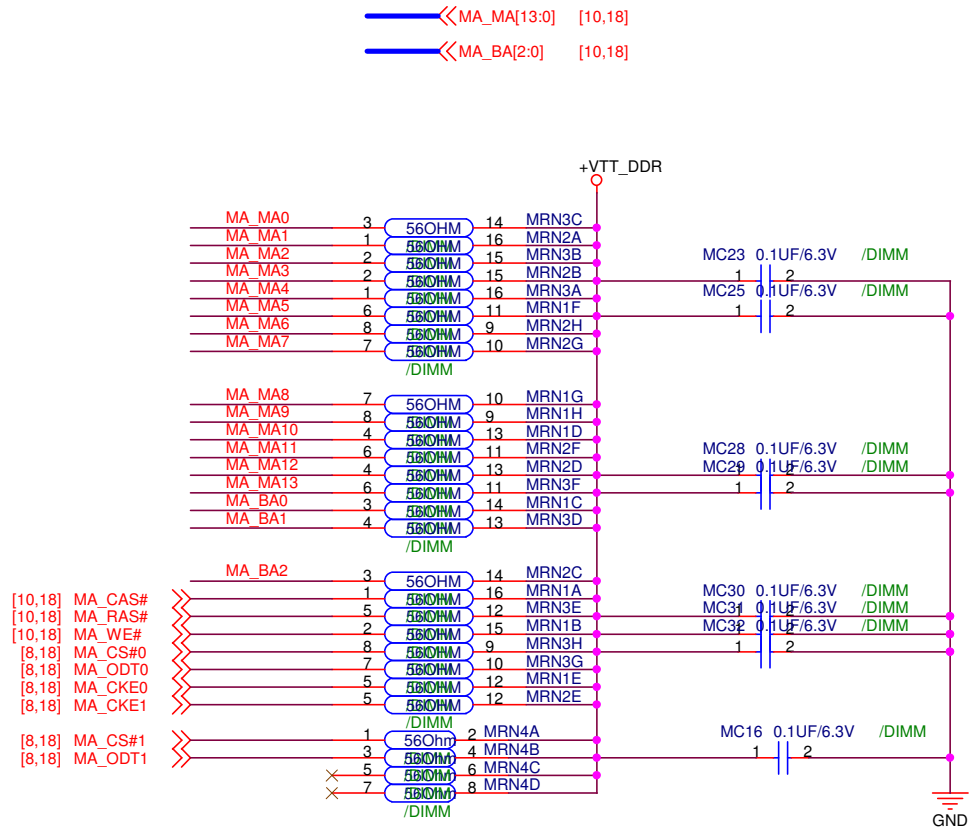


WLAN_LED	WLAN	BT
High	v	v
High	v	x
High	x	v
Low	x	x



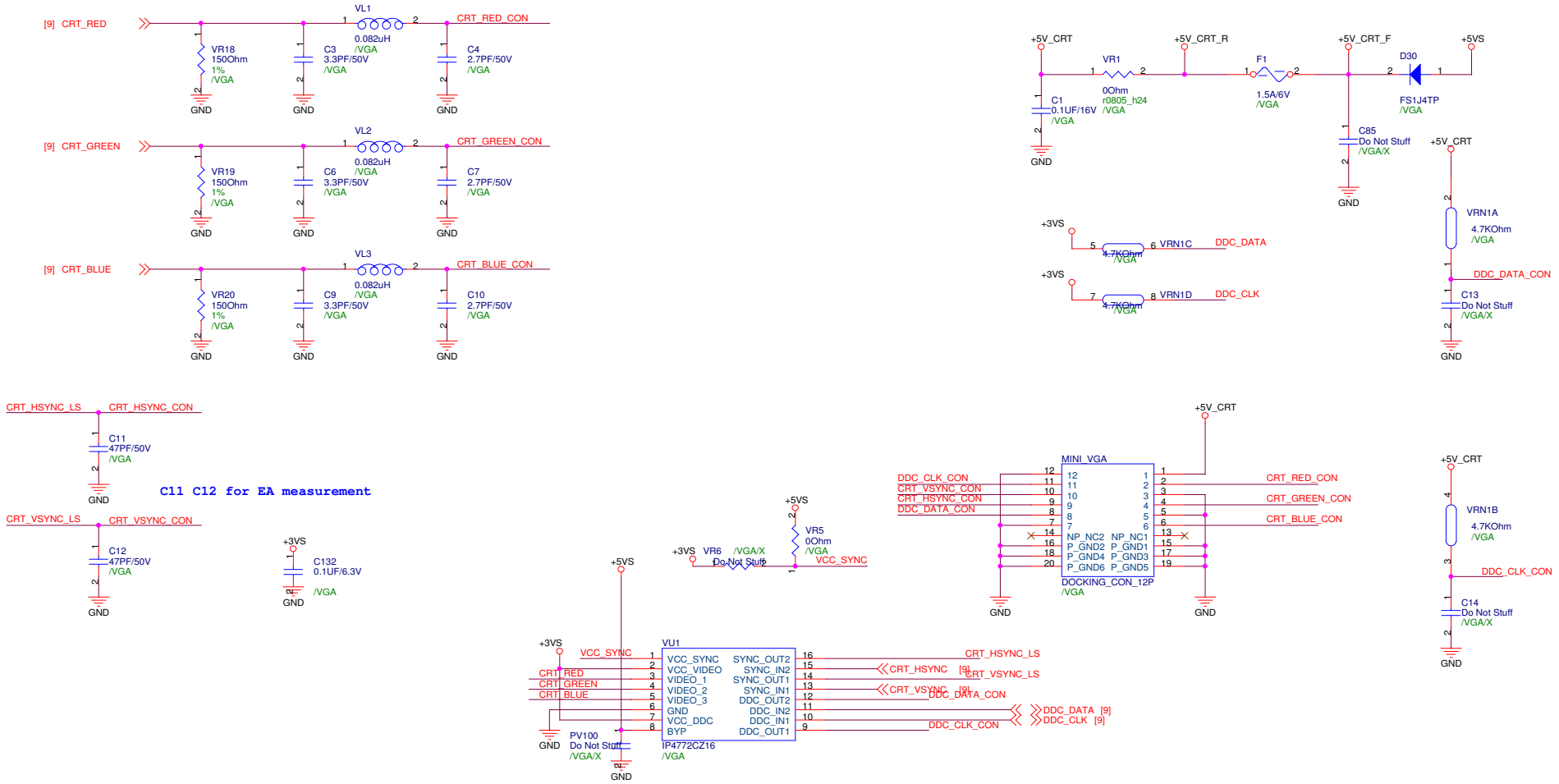
1008HA

ASUSTek Computer INC.	Title : DDR2 SODIMM	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 18 of 49	



1008HA

ASUSTek Computer INC.	Title : DDR2_Termination	
	Engineer: Aaron Tsao	
Size: A4	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 19 of 49	



1008HA

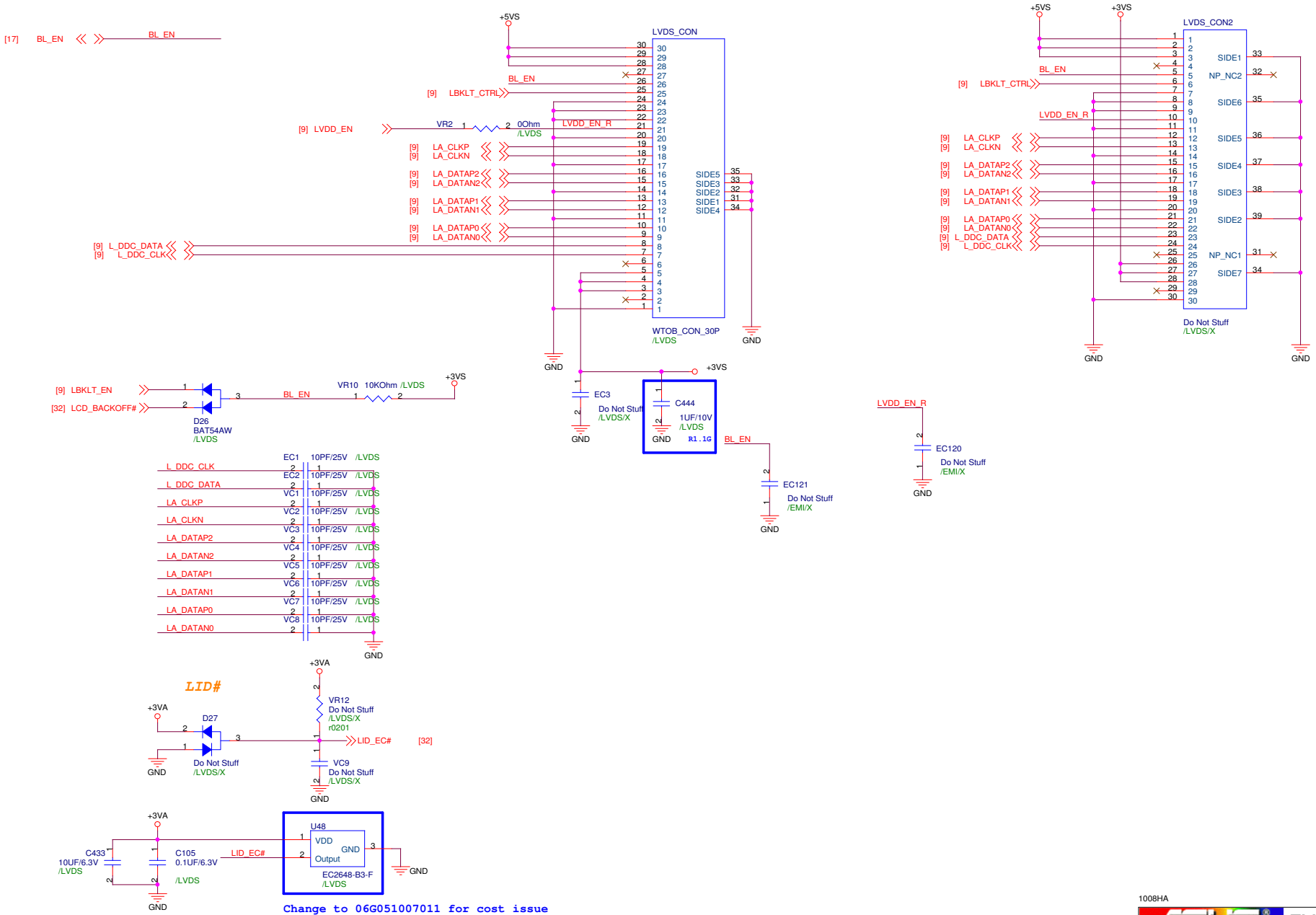
ASUSTek Computer INC.

Title : Onboard VGA

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

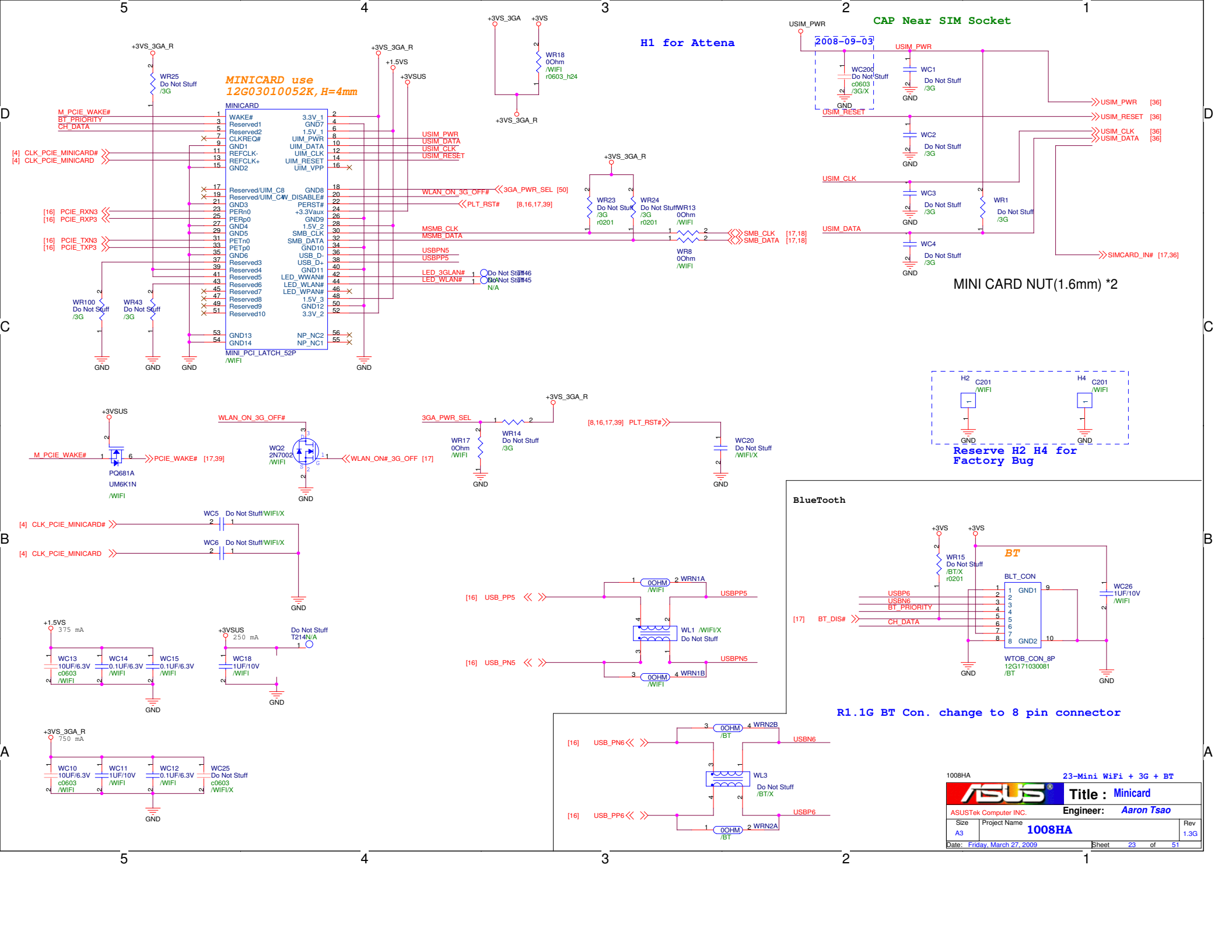
Date: Friday, March 27, 2009 Sheet 20 of 49


[17] BL_EN
BL_EN
+5VS
LVDS_CON
[9] LBKLT_CTRL
[9] LVDD_EN
VR2 0Ohm /LVDS
LVDD_EN_R
[9] LA_CLKP
[9] LA_CLKN
[9] LA_DATAP2
[9] LA_DATAN2
[9] LA_DATAP1
[9] LA_DATAN1
[9] LA_DATAP0
[9] LA_DATAN0
[9] L_DDC_DATA
[9] L_DDC_CLK
SIDE5 SIDE3 SIDE2 SIDE1 SIDE4
WTOB_CON_30P /LVDS
GND
+3VS
EC3 Do Not Stuff /LVDS/X
C444 1UF/10V /LVDS
R1.1G
BL_EN
EC121 Do Not Stuff /EMI/X
LVDD_EN_R
EC120 Do Not Stuff /EMI/X
LVDS_CON2
SIDE1 NP_NC2 SIDE6 SIDE5 SIDE4 SIDE3 SIDE2 NP_NC1 SIDE7
Do Not Stuff /LVDS/X
[9] LBKLT_EN
[32] LCD_BACKOFF#
D26 BAT54AW /LVDS
VR10 10KOhm /LVDS
EC1 10PF/25V /LVDS
L_DDC_CLK
L_DDC_DATA
LA_CLKP
LA_CLKN
LA_DATAP2
LA_DATAN2
LA_DATAP1
LA_DATAN1
LA_DATAP0
LA_DATAN0
LID#
+3VA
D27 Do Not Stuff /LVDS/X
VR12 Do Not Stuff /LVDS/X r0201
LID_EC# [32]
VC9 Do Not Stuff /LVDS/X
C433 10UF/6.3V /LVDS
C105 0.1UF/6.3V /LVDS
U48 VDD GND Output EC2648-B3-F /LVDS
Change to 06G051007011 for cost issue
1008HA
Title : LVDS Conn_LID
ASUSTek Computer INC.
Engineer: Aaron Tsao
Size A3
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 21 of 49
LID_EC#

1008HA

3.5G Module & External Antenna

ASUSTek Computer INC.	Title :	
	Engineer:	Aaron Tsao
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 22 of 49	


MINICARD use 12G03010052K, H=4mm
MINICARD
MINI_PCI_LATCH_52P
/WIFI
H1 for Attena
CAP Near SIM Socket
2008-09-03
MINI CARD NUT(1.6mm) *2
Reserve H2 H4 for Factory Bug
BlueTooth
BT
R1.1G BT Con. change to 8 pin connector
1008HA
23-Mini WiFi + 3G + BT
Title : Minicard
ASUSTek Computer INC.
Engineer: Aaron Tsao
Project Name 1008HA
Date: Friday, March 27, 2009
Sheet 23 of 51

1008HA

Title : AR8132

ASUSTek Computer INC

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 24 of 49

1008HA

ASUSTek Computer INC.	Title : RJ45	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 25 of 49	

Naming Rule:
IC:IU?
R:IR?
C:IC?
L:IL?

1008HA

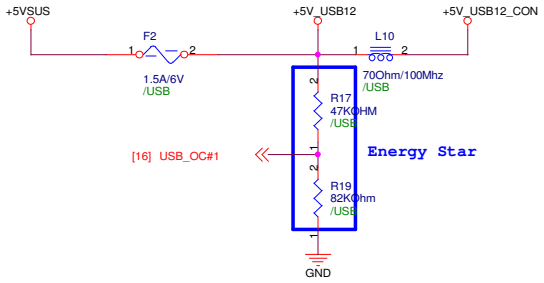
Title : G-Sensor

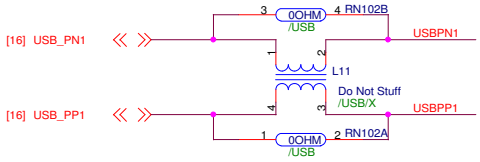
ASUSTek Computer INC.

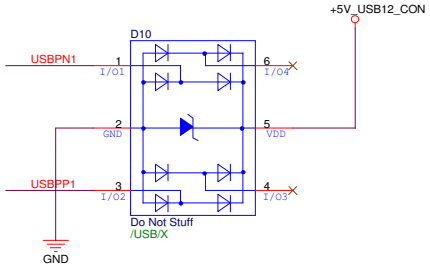
Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

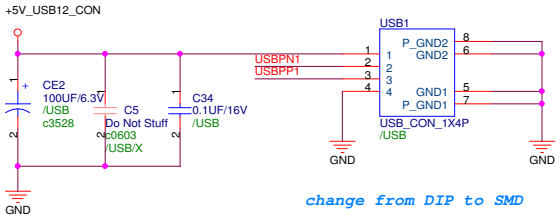
Date: Friday, March 27, 2009 Sheet 26 of 49





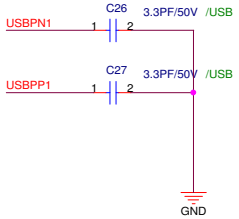


1.1G change USB con. to 12G131030042



change from DIP to SMD

1.1G change CE2 CE3 CE4 to POSCAP, 100uF/6.3V



1008HA

ASUSTek Computer INC.	Title : USB Port	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 27 of 49	

1008HA

Title : Camera Power

ASUSTek Computer INC.

Engineer: Aaron Tsao

Size	Project Name	Rev
A4	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 28 of 49

1008HA

ASUSTek Computer Inc.	Title : AU6336-C52	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 29 of 49	

1008HA

Title : ALC269-1

ASUSTek Computer Inc.

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 30 of 49

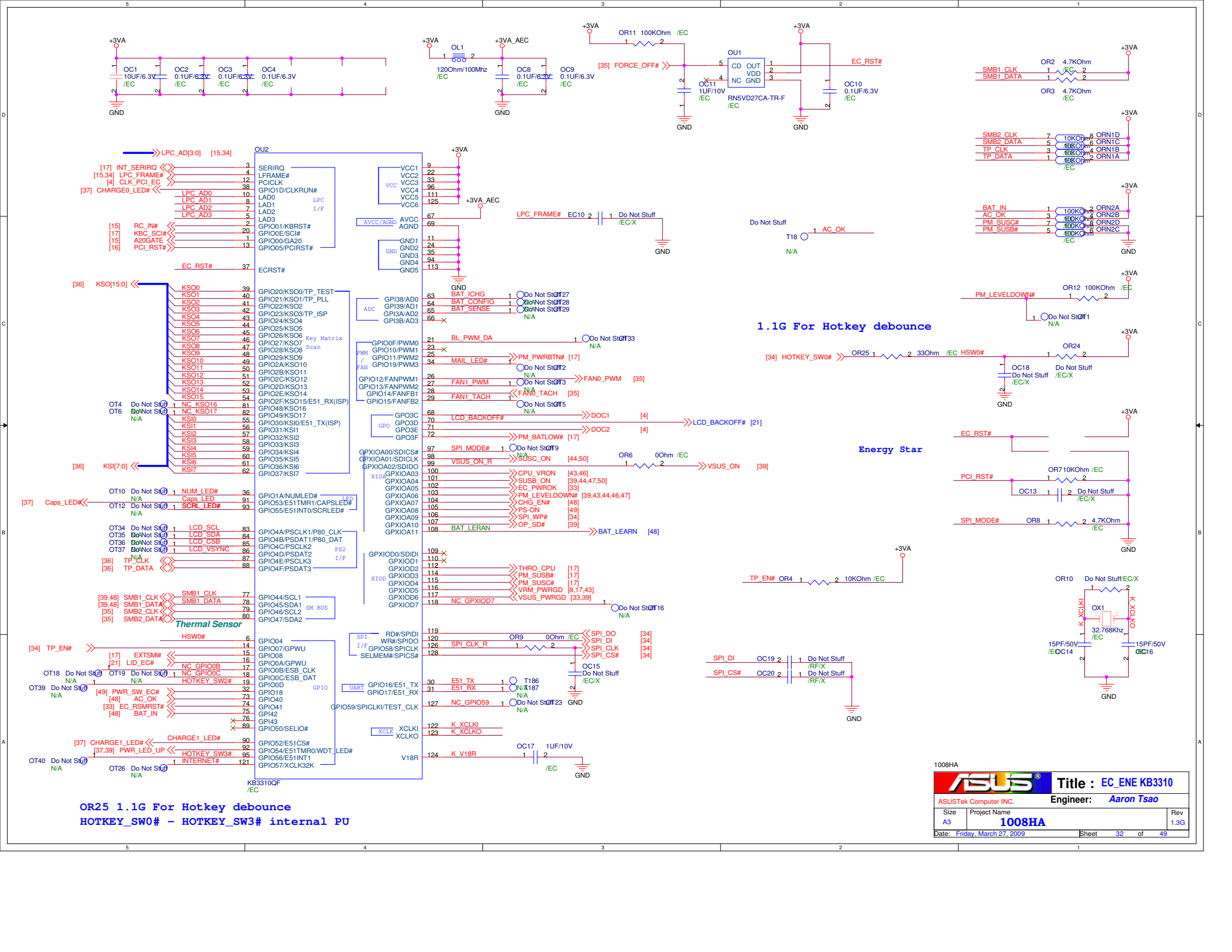
1.1G add PWR LED and Charge LED

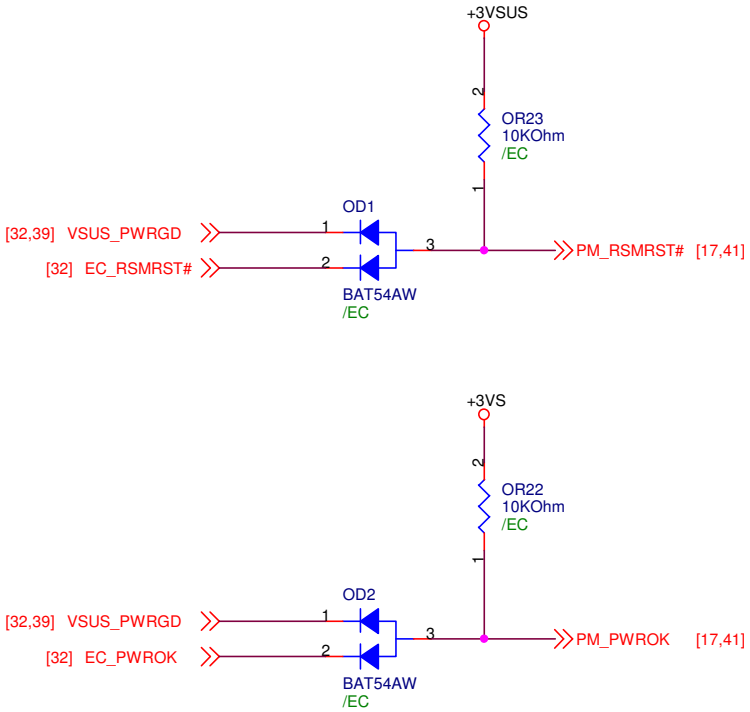
DMIC Cable length should be less 30cm

Change R291 R292 R293 to 510 Ohm

1008HA

ASUSTek Computer Inc.	Title : ALC269-2		
	Engineer: Aaron Tsao		
Size: A3	Project Name: 1008HA		Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 31 of 49		


OU2
KB3310QF
/EC
Thermal Sensor
1.1G For Hotkey debounce
Energy Star
OR25 1.1G For Hotkey debounce
HOTKEY_SW0# - HOTKEY_SW3# internal PU
1008HA
Title : EC_ENE KB3310
ASUSTek Computer INC.
Engineer: Aaron Tsao
Size A3
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 32 of 49



1008HA

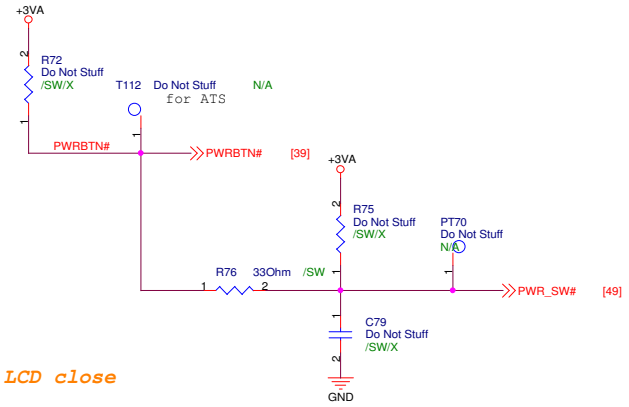
ASUSTek Computer INC.

Title : EC

Engineer: Aaron Tsao

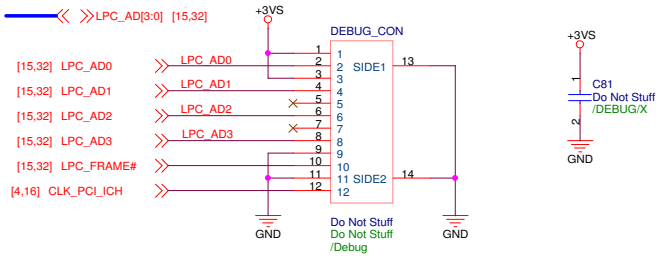
Size	Project Name	Rev
A4	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 33 of 49

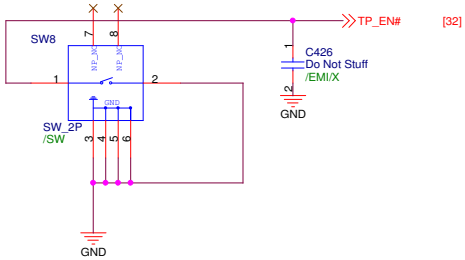


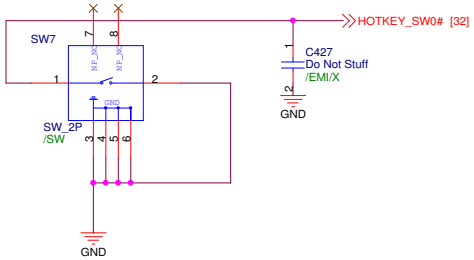
prevent system power on when LCD close

For Debug

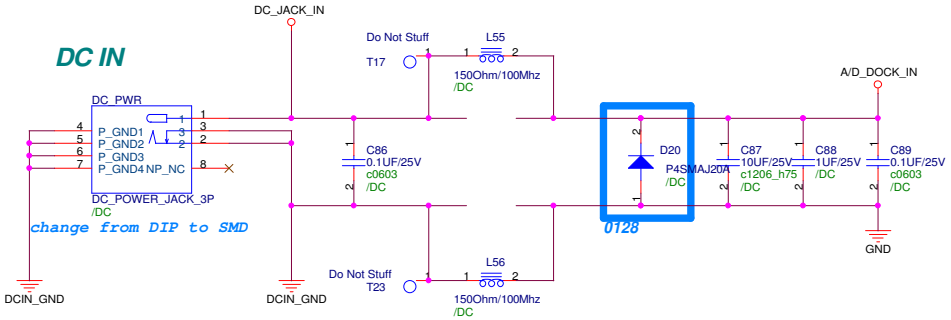


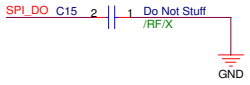
Debug Card cable use Z96 Touch Pad cable, P/N:
14G124110126, 14G124110120, 14G124110121
14G124110124, 14G124110125

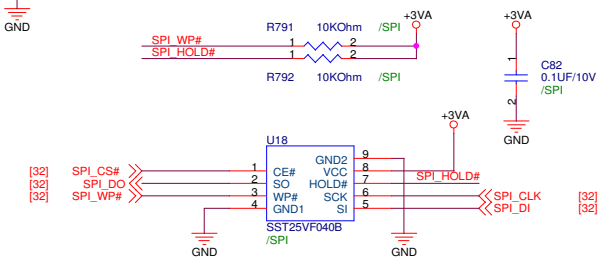




DC IN







1008HA

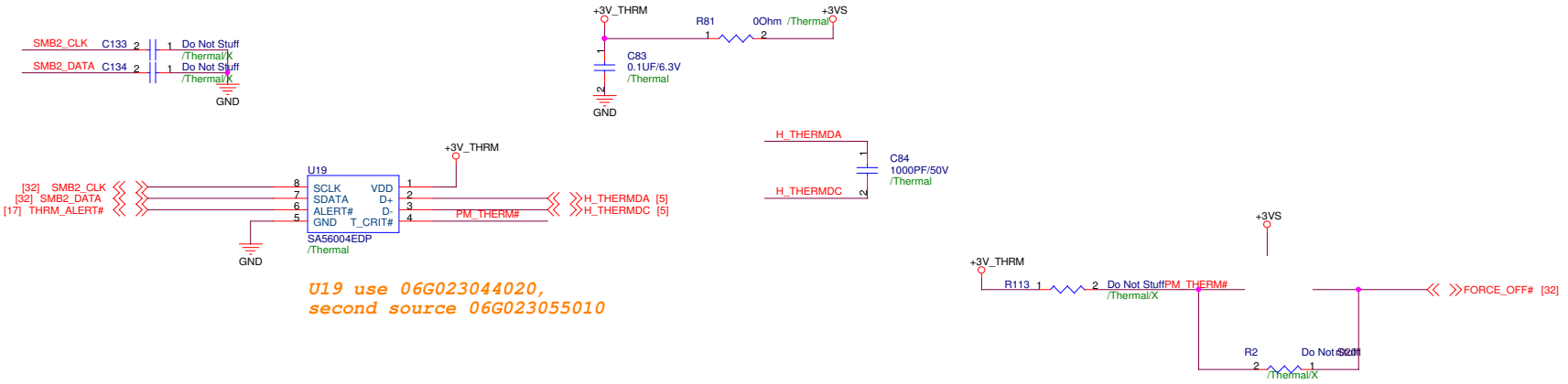
ASUSTek Computer INC.

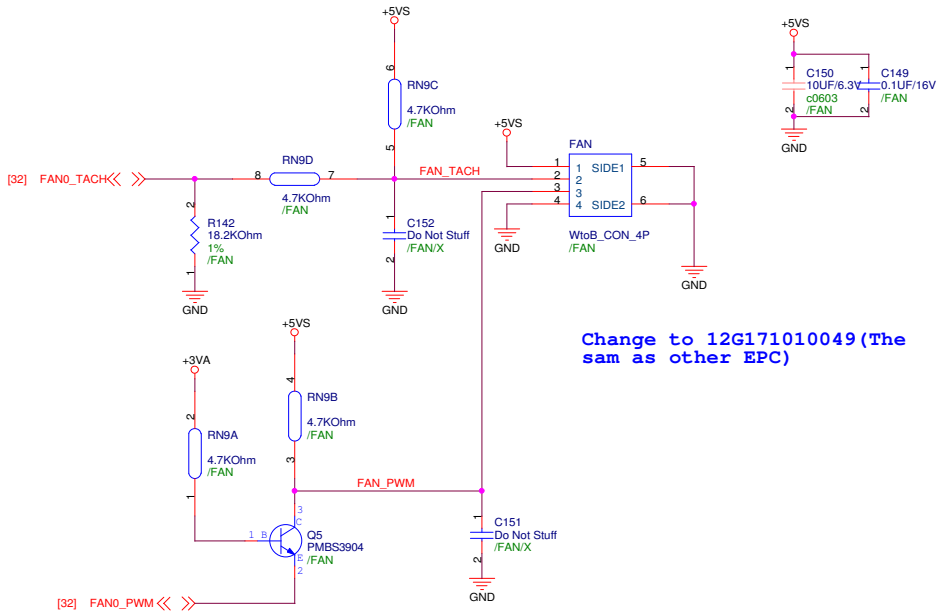
Title : 34_Switch_SPI _ITP_Debug

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

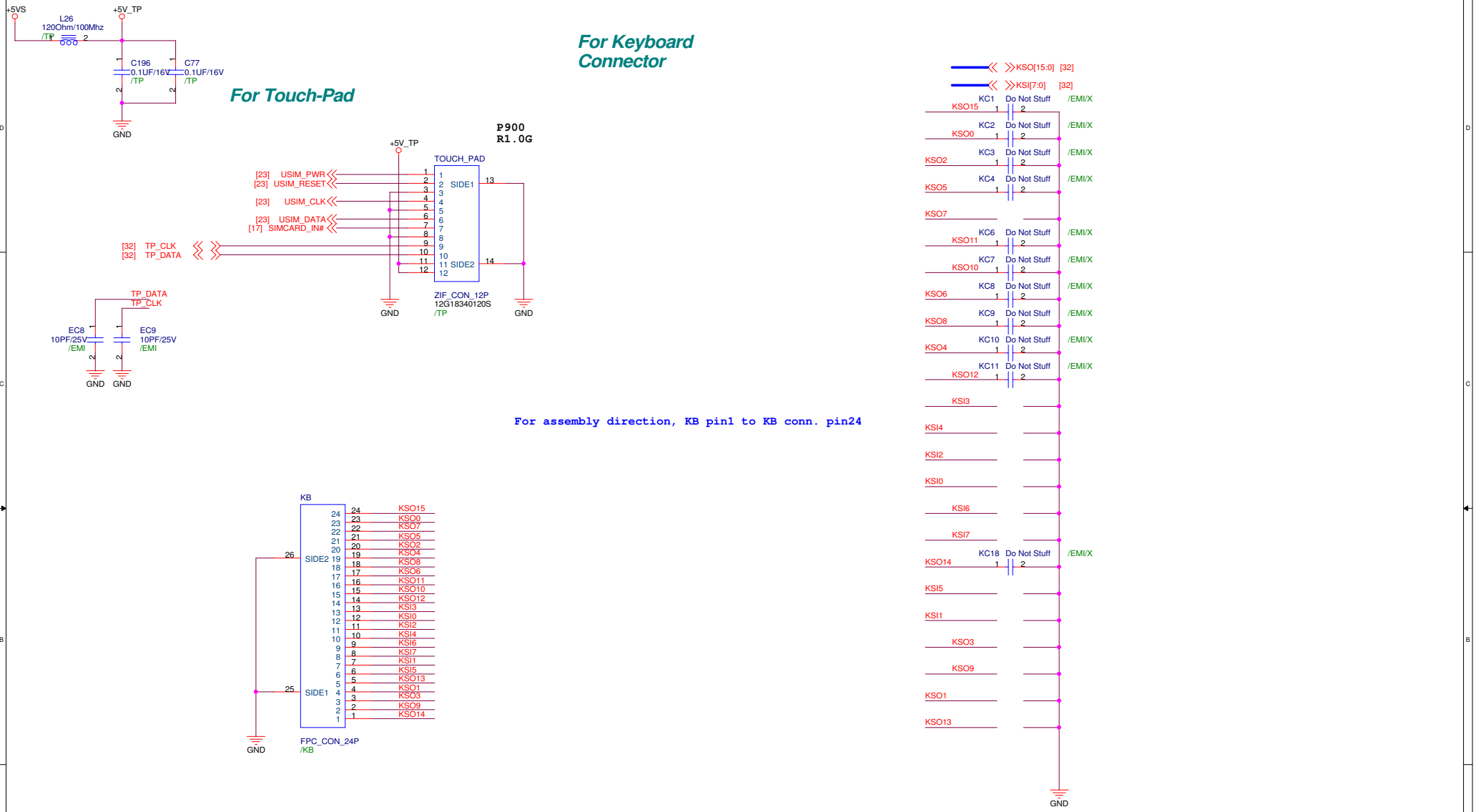
Date: Friday, March 27, 2009 Sheet 34 of 49





1008HA

ASUSTek Computer INC.	Title : Thermal Sensor_FAN	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 35 of 49	



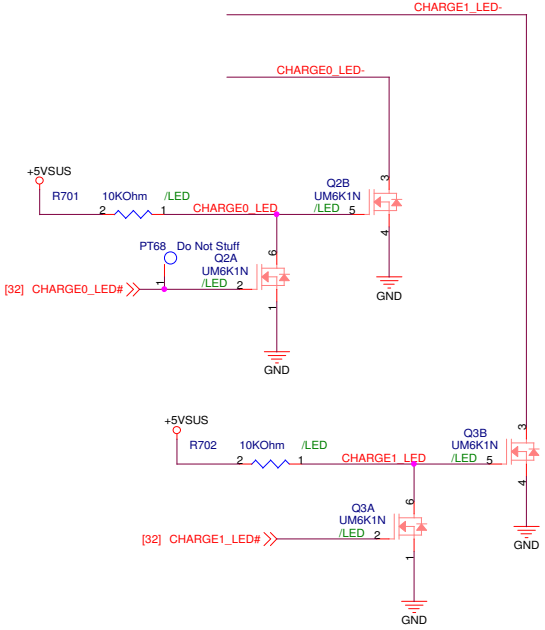
For assembly direction, KB pin1 to KB conn. pin24

1008HA

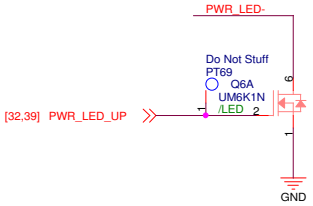
ASUSTek Computer INC.	Title : KB_Touch Pad	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 36 of 49	

1.1G change to EVERLIGHT

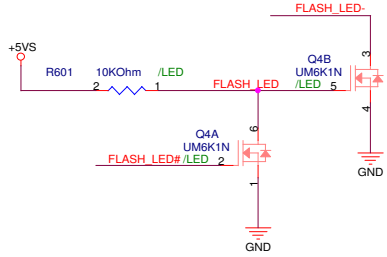
for CHARGE LED
Height : 0.55mm



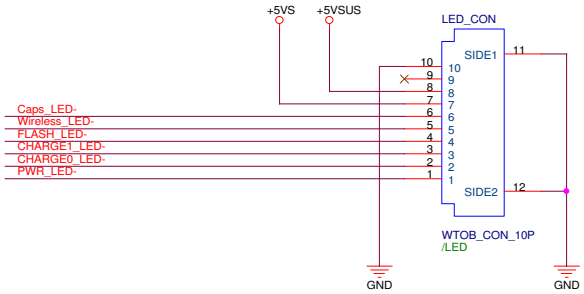
for POWER LED
White



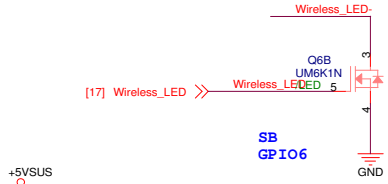
for FLASH LED
White

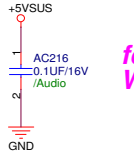


Change LED resistor to 510 Ohm, about 4mA

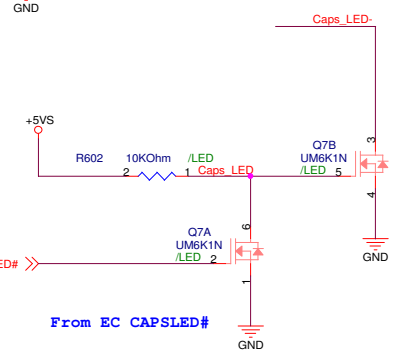


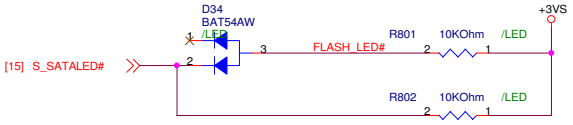
for WIFI/BlueTooth LED
White





for Caps Lock LED
White





1008HA

ASUSTek Computer INC.	Title : LED	
	Engineer: Kenneth_Hung	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 37 of 50	

1008HA

Title : Discharge

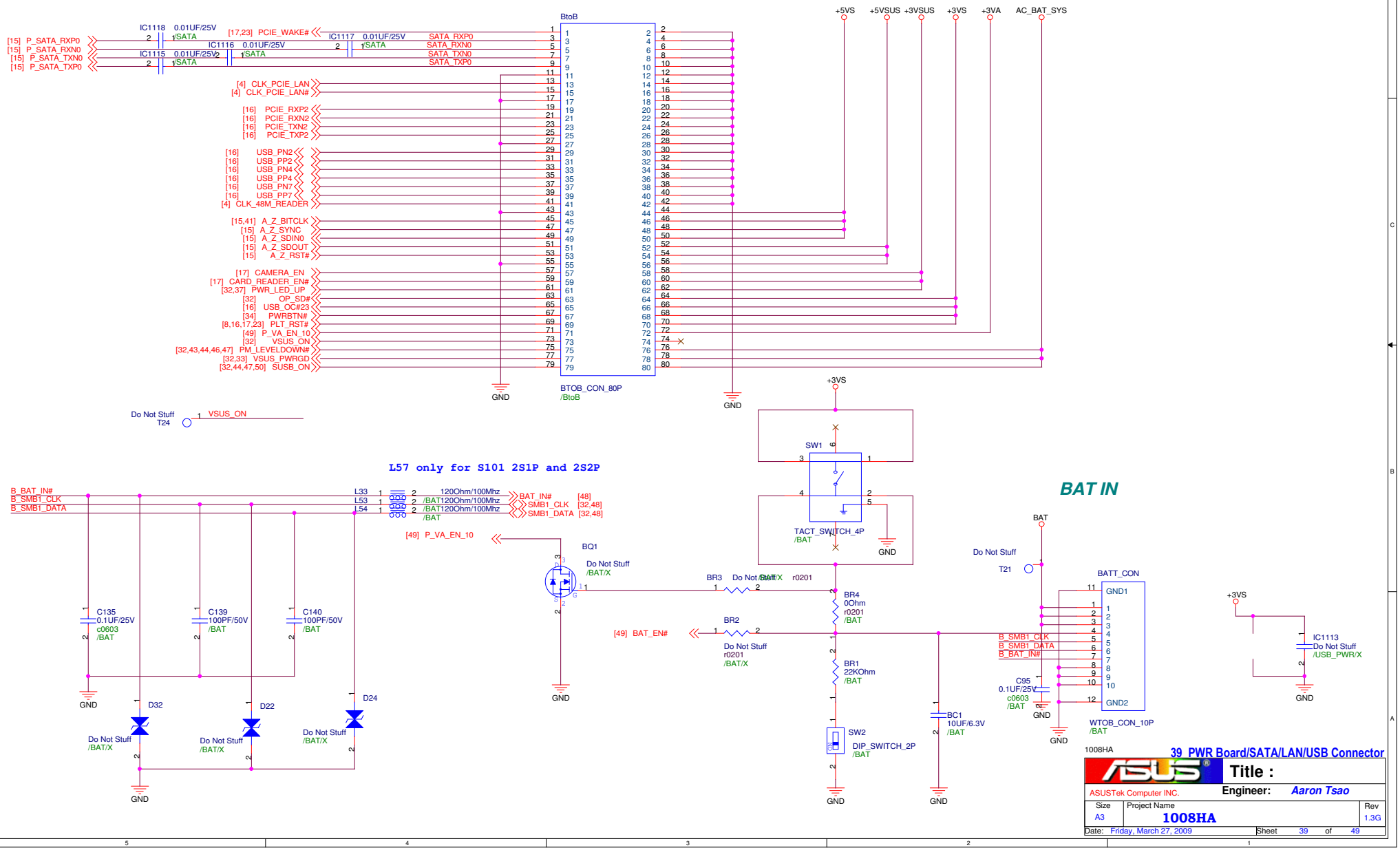
ASUSTek Computer INC.

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 38 of 49

PWR Board/SATA/LAN/USB Connector



1008HA

39 PWR Board/SATA/LAN/USB Connector

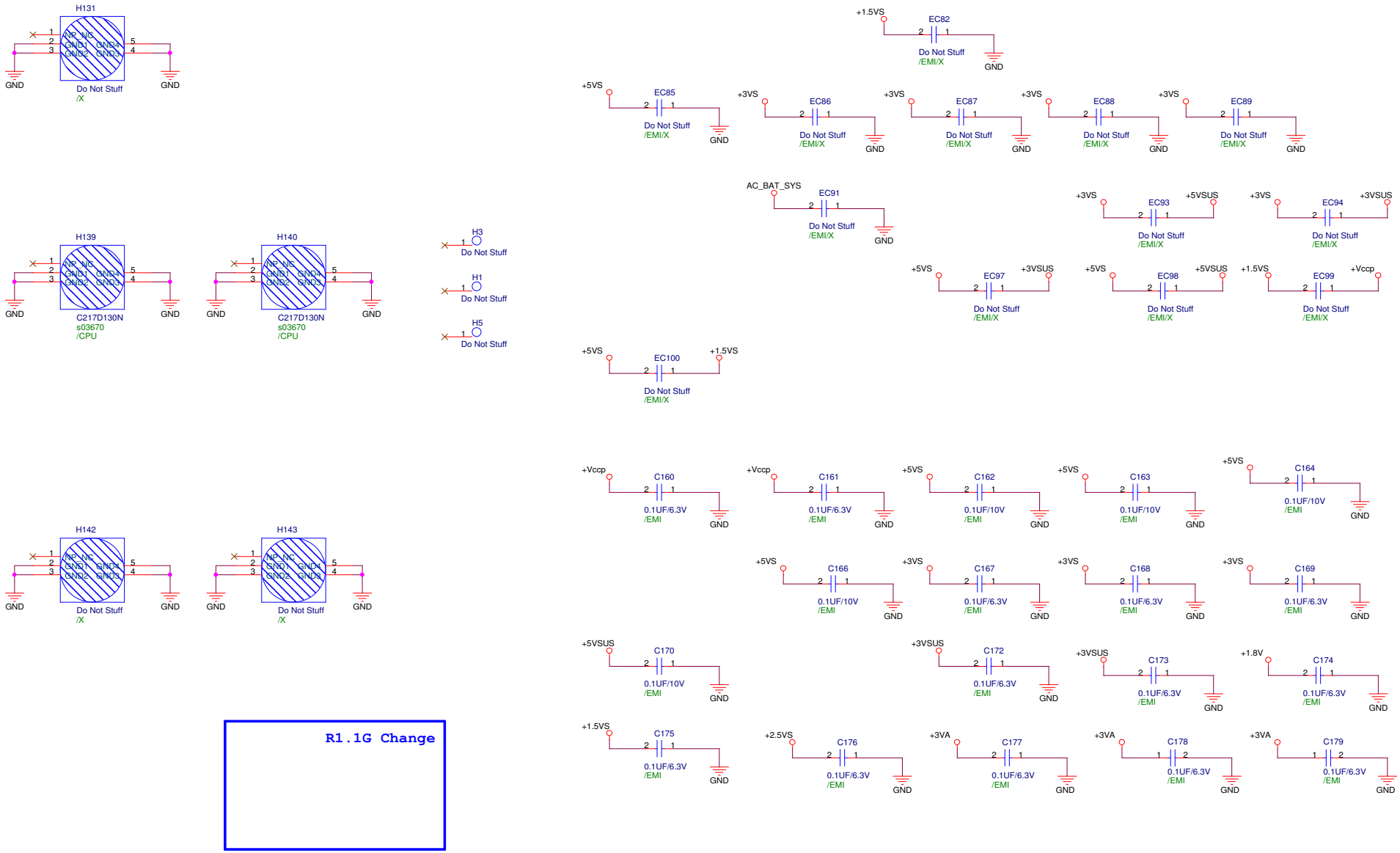
ASUSTek Computer INC.

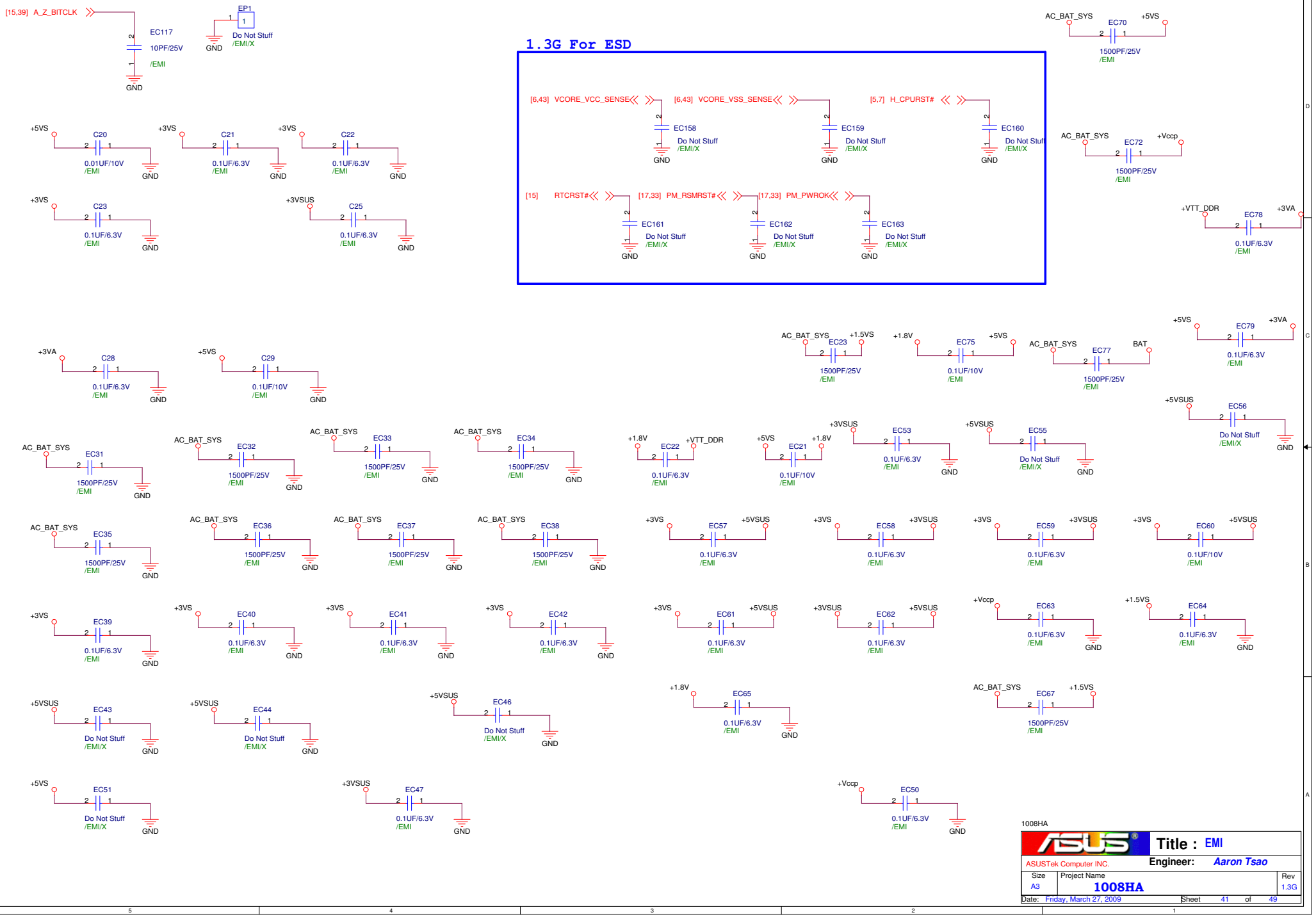
Title :

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

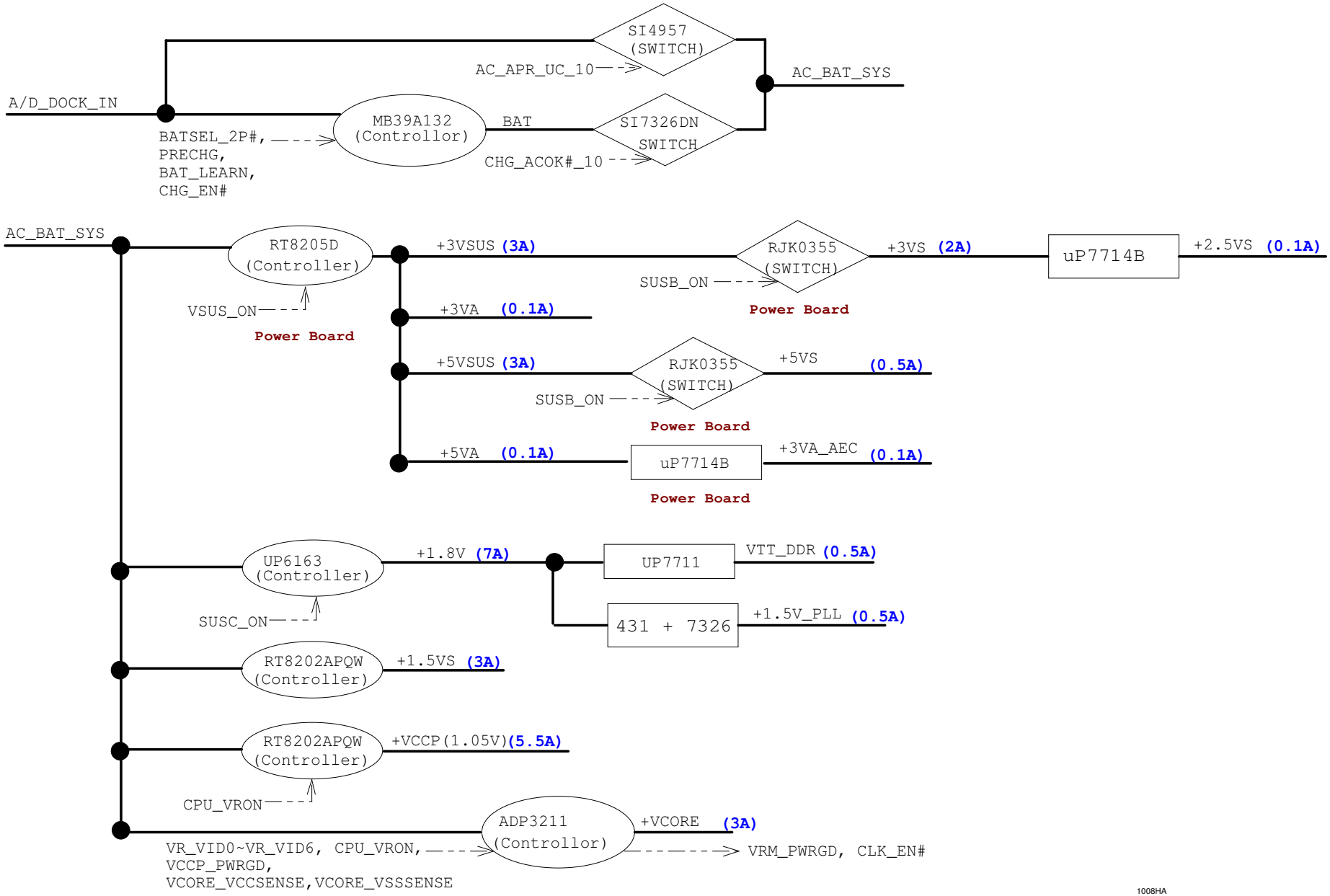
Date: Friday, March 27, 2009 Sheet 39 of 49


H131
NP_NC
GND1
GND2
GND4
GND3
Do Not Stuff
/X
H139
C217D130N
s03670
/CPU
H140
C217D130N
s03670
/CPU
H3
H1
H5
Do Not Stuff
H142
H143
Do Not Stuff
/X
GND
+1.5VS
EC82
Do Not Stuff
/EMI/X
+5VS
EC85
+3VS
EC86
EC87
EC88
EC89
AC_BAT_SYS
EC91
+5VSUS
EC93
+3VSUS
EC94
EC97
EC98
+1.5VS
EC99
+Vccp
EC100
C160
0.1UF/6.3V
/EMI
C161
C162
0.1UF/10V
/EMI
C163
C164
C166
C167
C168
C169
+5VSUS
C170
+3VSUS
C172
C173
+1.8V
C174
C175
+2.5VS
C176
+3VA
C177
C178
C179
R1.1G Change
1008HA
ASUSTek Computer INC.
Title : Srew Hole
Engineer: Aaron Tsao
Size A3
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 40 of 49



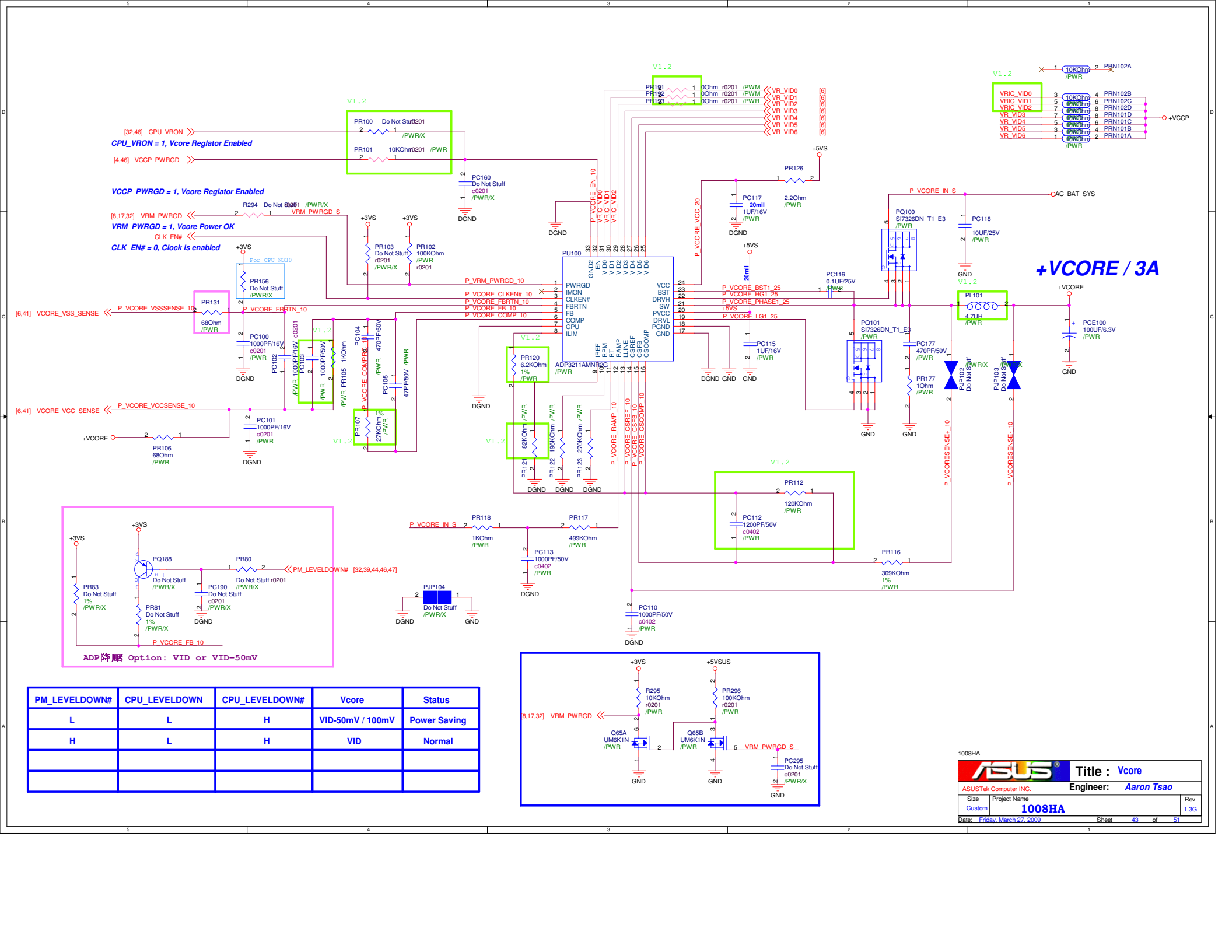
1008HA

ASUSTek Computer INC.	Title : EMI	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 41 of 49	



1008HA

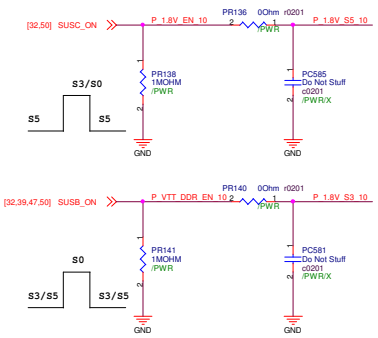
ASUSTek Computer INC.	Title : Power Flow	
	Engineer: Aaron Tsao	
Size: A3	Project Name: 1008HA	Rev: 1.3G
Date: Friday, March 27, 2009	Sheet 42 of 49	


+VCORE / 3A
CPU_VRON = 1, Vcore Reglator Enabled
VCCP_PWRGD = 1, Vcore Regulator Enabled
VRM_PWRGD = 1, Vcore Power OK
CLK_EN# = 0, Clock is enabled
ADP降壓 Option: VID or VID-50mV
PU100
ADP3211AMNR2G
PQ100 SI7326DN_T1_E3
PQ101 SI7326DN_T1_E3
PQ188
PJP104
PL101 4.7UH
PCE100 100UF/6.3V
PC110 1000PF/50V
PC112 1200PF/50V
PC113 1000PF/50V
PR112 120KOhm
PR116 309KOhm 1%
PR118 1KOhm
PR117 499KOhm
PR120 6.2KOhm 1%
PR121 82KOhm
PR122 196KOhm
PR123 270KOhm
PR126 2.2Ohm
PR177 1Ohm
PC177 470PF/50V
PC115 1UF/16V
PC116 0.1UF/25V
PC117 1UF/16V
PC118 10UF/25V
PR80 Do Not Stuff r0201
PR83 Do Not Stuff 1%
PR81 Do Not Stuff 1%
PC190 Do Not Stuff c0201
PR295 10KOhm r0201
PR296 100KOhm r0201
Q65A UM6K1N
Q65B UM6K1N
PC295 Do Not Stuff c0201
PRN102A 10KOhm
PRN102B 10KOhm
PRN102C 10KOhm
PRN102D 10KOhm
PRN101D 10KOhm
PRN101C 10KOhm
PRN101B 10KOhm
PRN101A 10KOhm
+VCCP
AC_BAT_SYS
P_VCORE_IN_S
P_VCORESENSE+_10
P_VCORESENSE-_10
P_VCORE_VCC_20
P_VRM_PWRGD_10
P_VCORE_CLKEN#_10
P_VCORE_FBRTN_10
P_VCORE_FB_10
P_VCORE_COMP_10
P_VCORE_BST1_25
P_VCORE_HGT_25
P_VCORE_PHASE1_25
P_VCORE_LG1_25
P_VCORE_CSREF_10
P_VCORE_CSFB_10
P_VCORE_CSCOMP_10
P_VCORE_RAMP_10
P_VCORE_VSSSENSE_10
P_VCORE_VCCSENSE_10
VR_VID0
VR_VID1
VR_VID2
VR_VID3
VR_VID4
VR_VID5
VR_VID6
PM_LEVELDOWN# [32,39,44,46,47]
[32,46] CPU_VRON
[4,46] VCCP_PWRGD
[8,17,32] VRM_PWRGD
[6,41] VCORE_VSS_SENSE
[6,41] VCORE_VCC_SENSE
CLK_EN#
VRM_PWRGD_S
+VCORE
+3VS
+5VS
+5VSUS
DGND
GND
PM_LEVELDOWN# | CPU_LEVELDOWN | CPU_LEVELDOWN# | Vcore | Status
L | L | H | VID-50mV / 100mV | Power Saving
H | L | H | VID | Normal
1008HA
Title : Vcore
ASUSTek Computer INC.
Engineer: Aaron Tsao
Size: Custom
Project Name: 1008HA
Rev: 1.3G
Date: Friday, March 27, 2009
Sheet 43 of 51

S3 And S5 Truth Table

State	S3	S5	VDDQ
S0	Hi	Hi	On
S3	Low	Hi	On
S4/S5	Low	Low	Off (Discharge)

State	VTTREF	VTT
S0	On	On
S3	On	Off(Hi-Z)
S4/S5	Off (Discharge)	Off (Discharge)



Controller

1. Voltage & Current:
   +1.8V@3A
2. Frequency:
   PR127=1Mohm Fosc=250KHz
3. OCP:
   PR181=22Kohm ->10A
4. POR:
   POR Hysteresis =20mV
   V on =3.9-4.5V
5. UVP:
   Vout*70%
6. OVP:
   Vout*115%
7. Enable Voltage:
   V rising = 2 V
   V falling = 0.8V
8. Soft start time:
   Tss=512us
9. Phase selection:
   /X
10. Inrush Current:
    C total = 110 uF
    I inrush= 0.39 A

Power stage

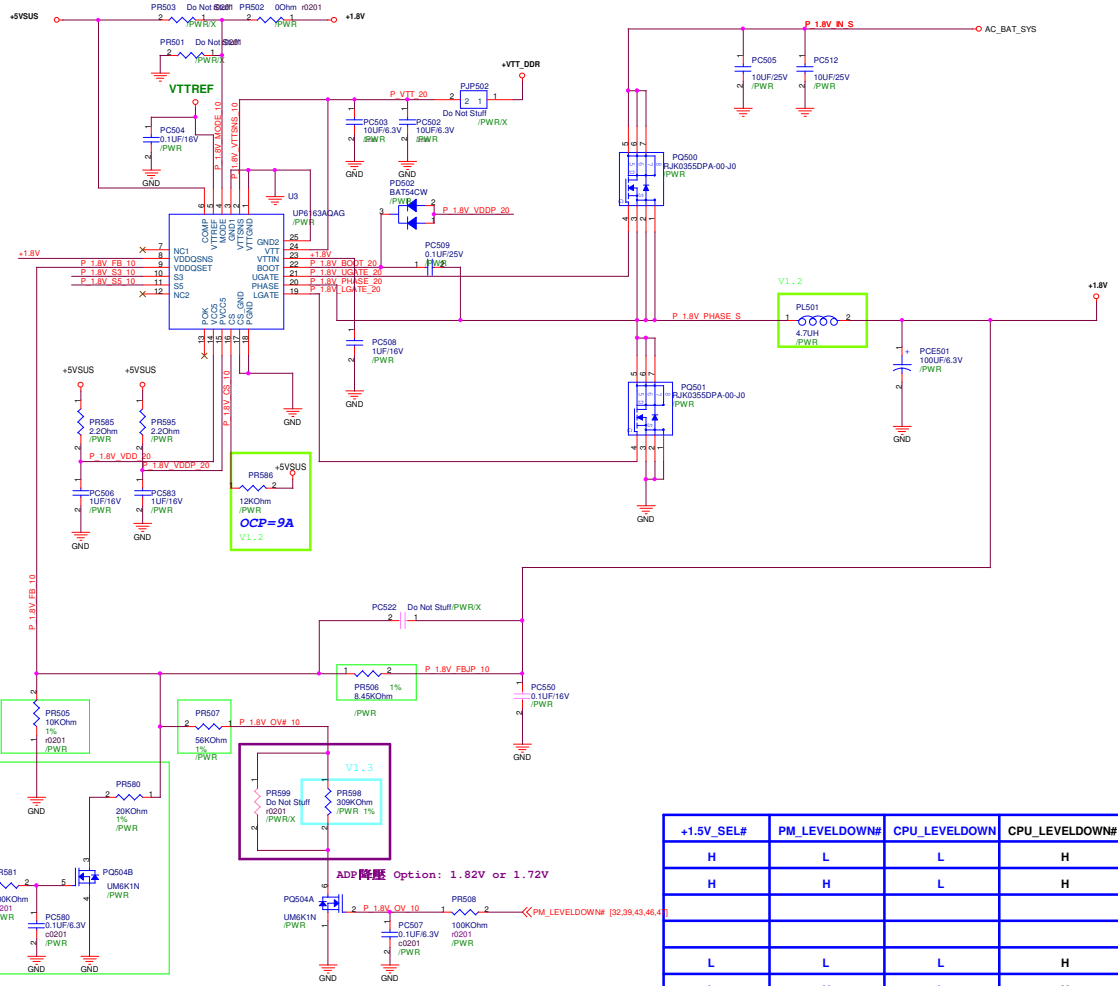
1. I/P Current:
   I in = Vo*Io/(0.8 * Vin) =0.94A
2. Ripple Current:
   I rip= 1.78A
   I spec=2A ×1 pcs
3. Dynamic:
   I peak=5 A
   ESR =18 mohm
   △V =90mV
4. Inductor Spec:
   I sat=10 A
   I dc =5.5 A
   DCR=37 mohm
5. MOSFET Spec:

   H-side MOSFET: AP4800AGM

   Rds(ON)= 21 mohm (Vgs=4.5 V)
   I cont = 9.6 A (T =25 ℃)
   I peak = 40 A

   L-side MOSFET: RAP4800AGM

   Rds(ON)= 21 mohm (Vgs=4.5 V)
   I cont = 9.6 A (T =25 ℃)
   I peak = 40 A



+1.5V_SEL#	PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Voltage	Status
H	L	L	H	1.72V	Power Saving
H	H	L	H	1.82V	Normal
L	L	L	H	1.4V	Power Saving
L	H	L	H	1.5V	Normal

1008HA

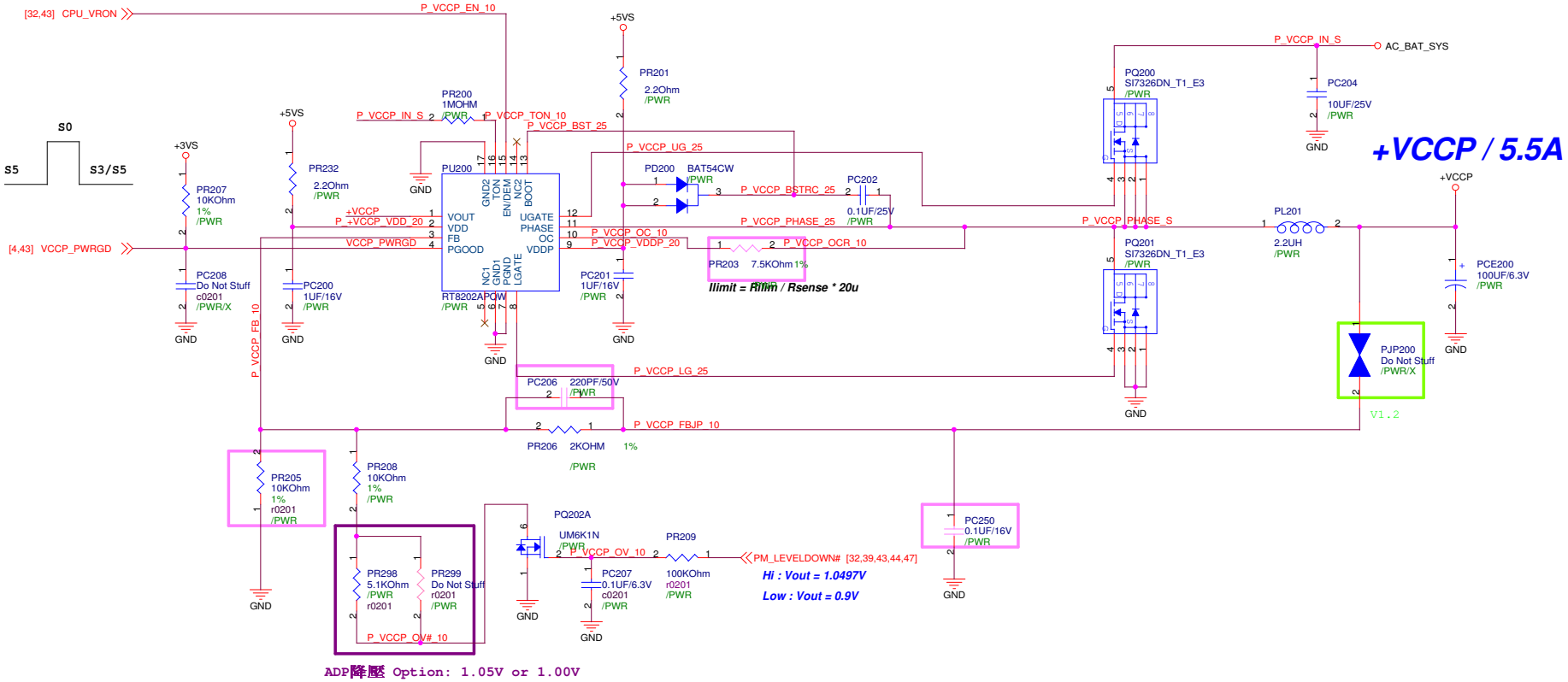
ASUSTek Computer INC.

Title : +1.8V & VTTDDR

Engineer: Aaron Tsao

Size	Project Name	Rev
A2	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 44 of 47



PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Voltage	Status
L	L	H	0.9V	Power Saving
H	L	H	1.05V	Normal

1008HA

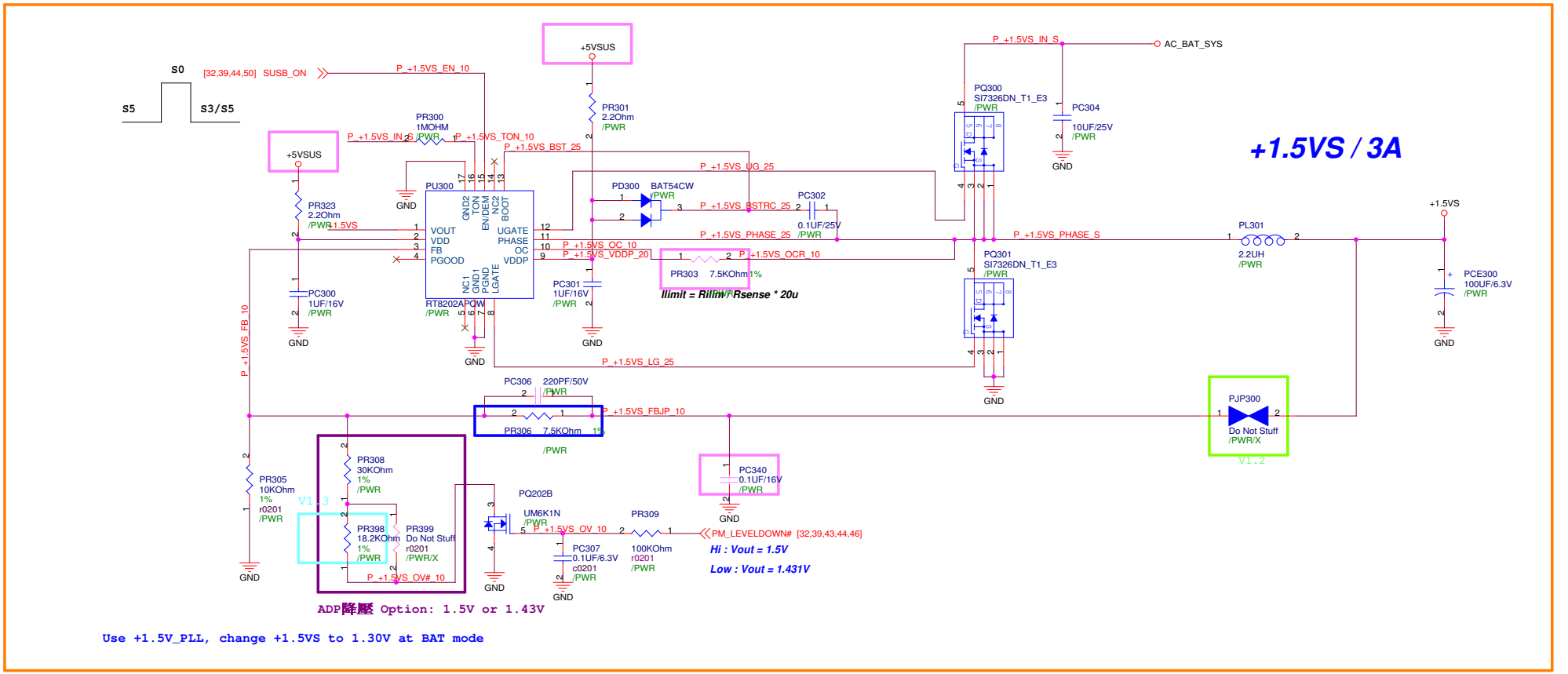
ASUSTek Computer INC.

Title : VCCP

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 46 of 51



1008HA

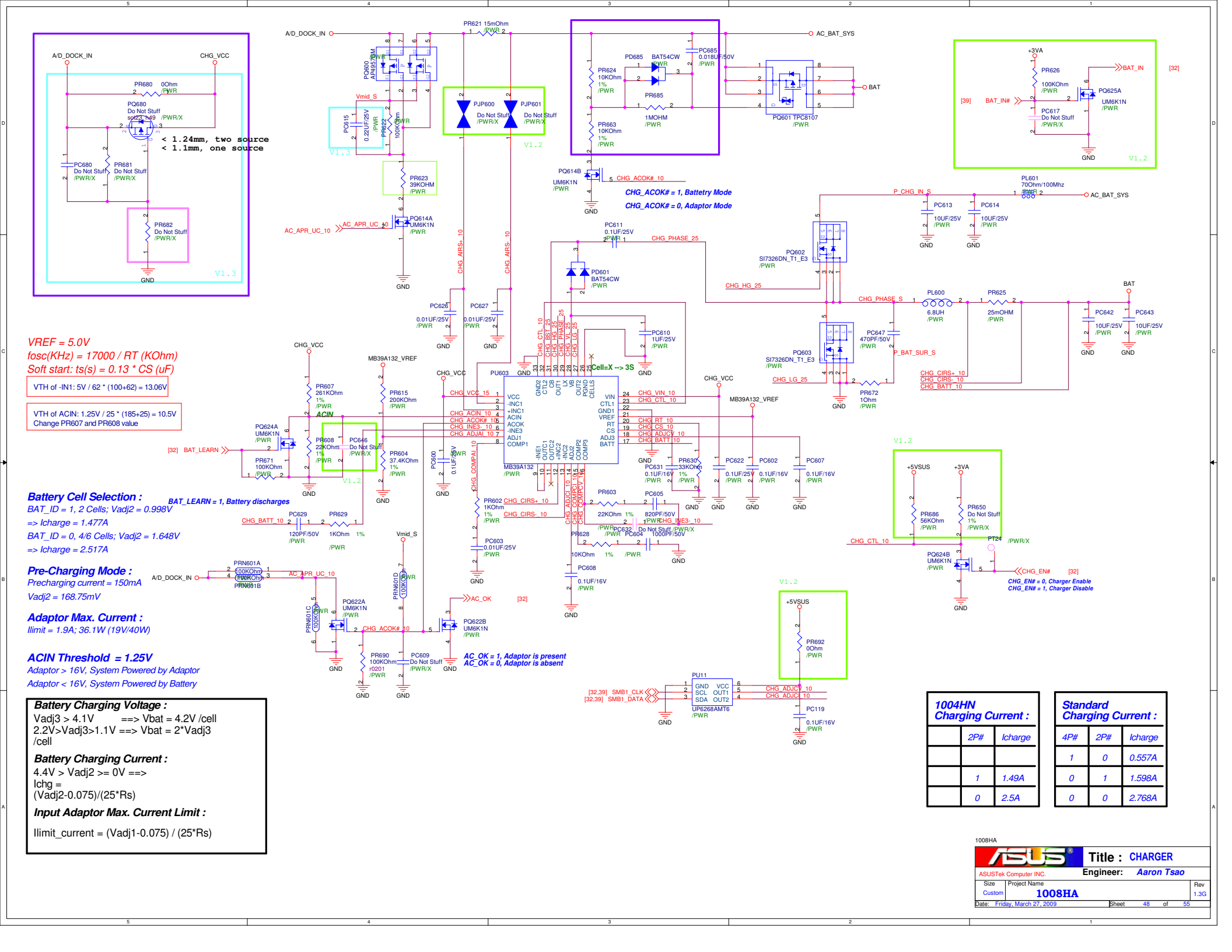
ASUSTek Computer INC.

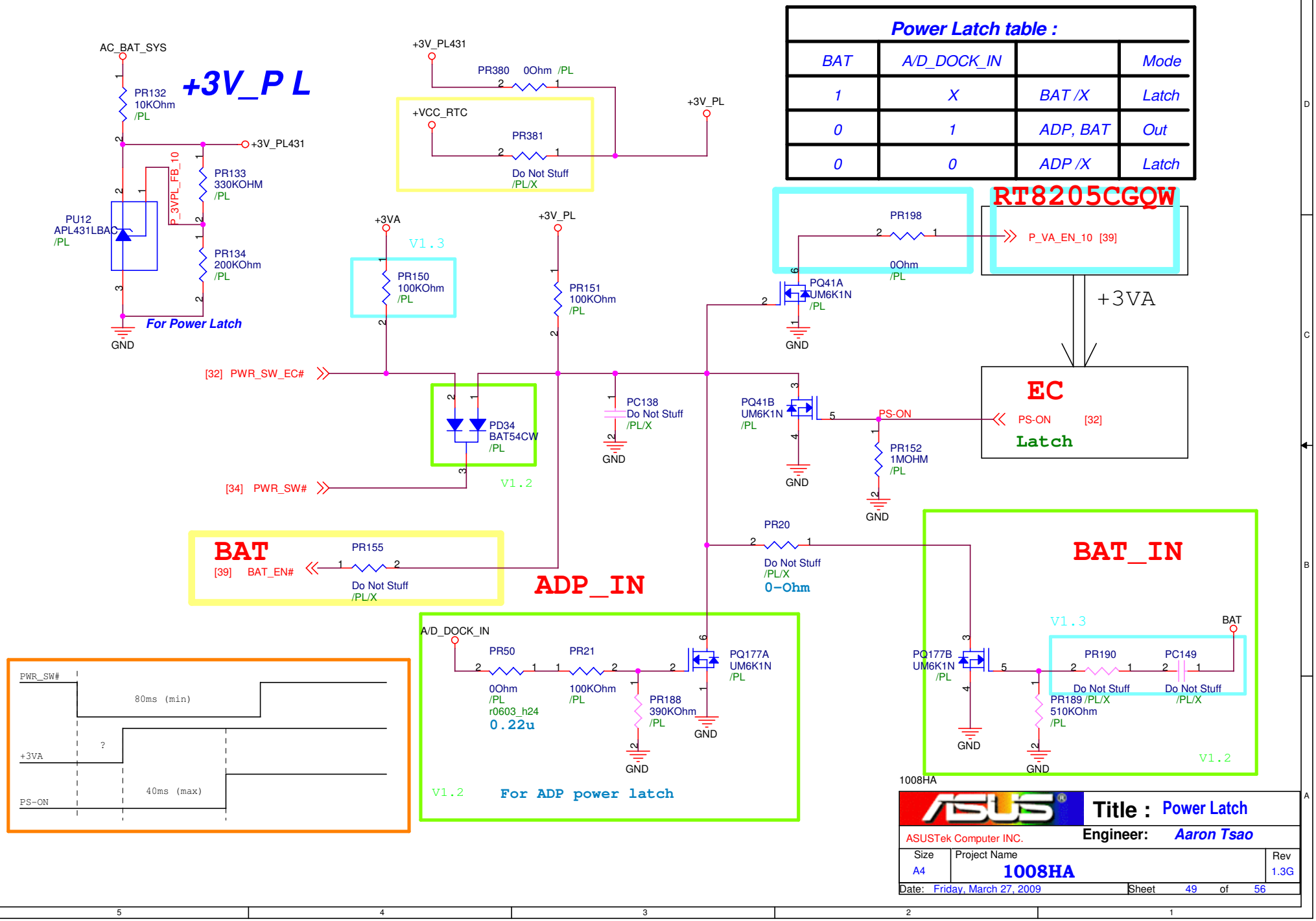
Title : +1.5VS & +2.5VS

Engineer: Aaron Tsao

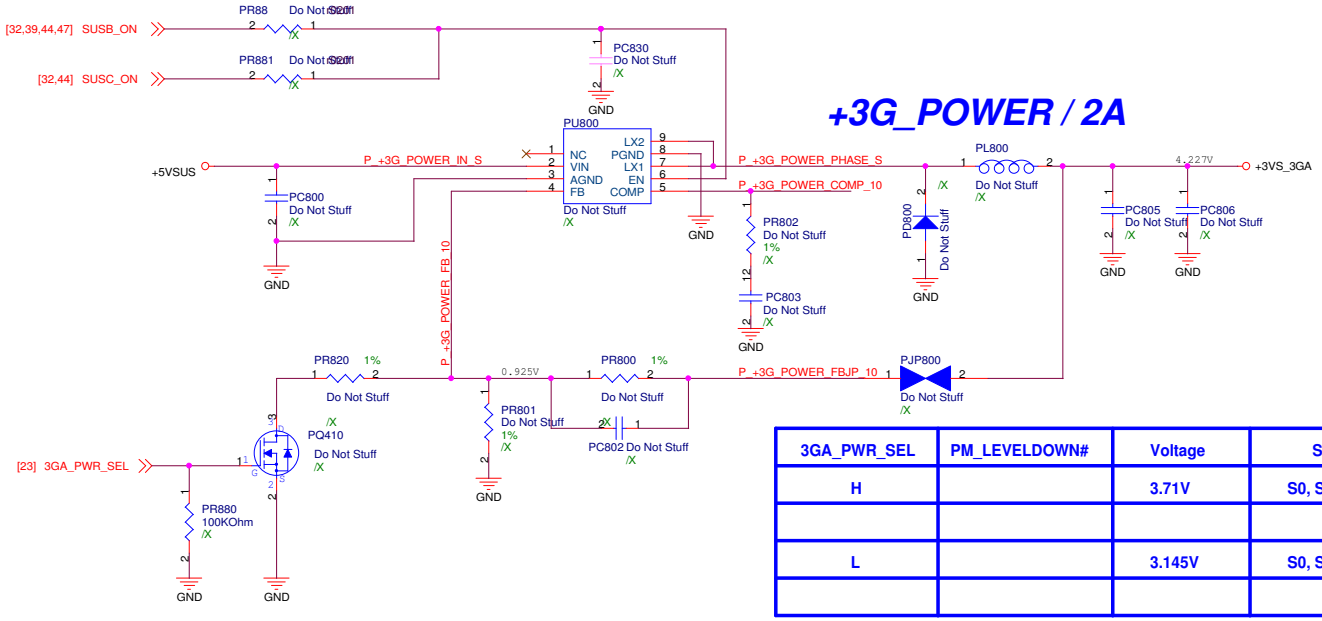
Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 47 of 51


VREF = 5.0V
fosc(KHz) = 17000 / RT (KOhm)
Soft start: ts(s) = 0.13 * CS (uF)
VTH of -IN1: 5V / 62 * (100+62) = 13.06V
VTH of ACIN: 1.25V / 25 * (185+25) = 10.5V
Change PR607 and PR608 value
Battery Cell Selection :
BAT_LEARN = 1, Battery discharges
BAT_ID = 1, 2 Cells; Vadj2 = 0.998V
=> Icharge = 1.477A
BAT_ID = 0, 4/6 Cells; Vadj2 = 1.648V
=> Icharge = 2.517A
Pre-Charging Mode :
Precharging current = 150mA
Vadj2 = 168.75mV
Adaptor Max. Current :
Ilimit = 1.9A; 36.1W (19V/40W)
ACIN Threshold = 1.25V
Adaptor > 16V, System Powered by Adaptor
Adaptor < 16V, System Powered by Battery
Battery Charging Voltage :
Vadj3 > 4.1V ==> Vbat = 4.2V /cell
2.2V>Vadj3>1.1V ==> Vbat = 2*Vadj3 /cell
Battery Charging Current :
4.4V > Vadj2 >= 0V ==>
Ichg = (Vadj2-0.075)/(25*Rs)
Input Adaptor Max. Current Limit :
Ilimit_current = (Vadj1-0.075) / (25*Rs)
< 1.24mm, two source
< 1.1mm, one source
CHG_ACOK# = 1, Battetry Mode
CHG_ACOK# = 0, Adaptor Mode
Cell=X --> 3S
CHG_EN# = 0, Charger Enable
CHG_EN# = 1, Charger Disable
AC_OK = 1, Adaptor is present
AC_OK = 0, Adaptor is absent
1004HN Charging Current :
2P# Icharge
1 1.49A
0 2.5A
Standard Charging Current :
4P# 2P# Icharge
1 0 0.557A
0 1 1.598A
0 0 2.768A
1008HA
Title : CHARGER
ASUSTek Computer INC.
Engineer: Aaron Tsao
Size Custom
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 48 of 55


Power Latch table :
BAT | A/D_DOCK_IN | | Mode
1 | X | BAT /X | Latch
0 | 1 | ADP, BAT | Out
0 | 0 | ADP /X | Latch
+3V_P L
AC_BAT_SYS
PR132 10KOhm /PL
+3V_PL431
PR133 330KOHM /PL
P_3VPL_FB_10
PU12 APL431LBAC /PL
PR134 200KOhm /PL
For Power Latch
GND
+3V_PL431
PR380 0Ohm /PL
+VCC_RTC
PR381
Do Not Stuff /PL/X
+3V_PL
RT8205CGQW
PR198
0Ohm /PL
P_VA_EN_10 [39]
PQ41A UM6K1N /PL
+3VA
+3VA
V1.3
PR150 100KOhm /PL
+3V_PL
PR151 100KOhm /PL
[32] PWR_SW_EC#
PD34 BAT54CW /PL
V1.2
[34] PWR_SW#
PC138 Do Not Stuff /PL/X
PQ41B UM6K1N /PL
PS-ON
PR152 1MOHM /PL
EC
PS-ON [32]
Latch
BAT
[39] BAT_EN#
PR155
Do Not Stuff /PL/X
ADP_IN
PR20
Do Not Stuff /PL/X
0-Ohm
BAT_IN
A/D_DOCK_IN
PR50 0Ohm /PL r0603_h24 0.22u
PR21 100KOhm /PL
PR188 390KOhm /PL
PQ177A UM6K1N /PL
V1.3
BAT
PQ177B UM6K1N /PL
PR190
PC149
Do Not Stuff
Do Not Stuff /PL/X
PR189 /PL/X 510KOhm /PL
V1.2
V1.2
For ADP power latch
PWR_SW#
80ms (min)
+3VA
?
40ms (max)
PS-ON
1008HA
Title : Power Latch
ASUSTek Computer INC.
Engineer: Aaron Tsao
Size A4
Project Name 1008HA
Rev 1.3G
Date: Friday, March 27, 2009
Sheet 49 of 56

+3G_POWER / 2A



3GA_PWR_SEL	PM_LEVELDOWN#	Voltage	Status
H		3.71V	S0, S3
L		3.145V	S0, S3

1008HA

ASUSTek Computer INC.

Title : History

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 50 of 51

Rev0.7	Initial release	2008/10/22
Rev0.71	Remove hotkey switch(R2, C427, SW6, OR25)	2008/10/22
	Remove White LED (LED4, R86, Q17, SB_GPIO7)	
	Add 40 pin FPC connector	
	Change netname from BT_LED to Wireless_LED	
	Change NMOS from 2N7002 to UM6K1N(Q25, 23, Q18, Q15, Q58, Q19, Q16, Q19)	
	Change 3G power name to +3VS_3GA	
	Add dual-core support (not ready)	
Rev0.72	Change the part for LAN connector	2008/10/23
	Change the SPEAKER connector (same as FAN)	
Rev0.73	Remove CC36-40, CC45, CC24-25, CC16-17 for layout space	2008/10/27
	Remove HC32, 33 for Layout space	
	Remove HC14-16, HC125 (stuff HC126) for Layout space	
	Remove C422, 212, 232 (stuff C223) for Layout space	
	Remove C436, 292, 305 for Layout space	
	Change U47 to /X and sutff R265	
	Remove MC5, 6, 7, 9, 15, 17, 22, 24, 26, 27, 33 for Layout space	
	Remove WIFI & 3G RSV component	

1008HA

ASUSTek Computer INC.

Title : History

Engineer: Aaron Tsao

Size	Project Name	Rev
A3	1008HA	1.3G

Date: Friday, March 27, 2009 Sheet 51 of 49