F6Ve SCHEMATIC Revision 1.0

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<Variant Name>

ASUSTeK COMPUTER INC

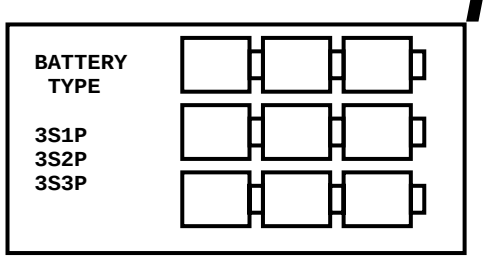
Title : PAGE REF.

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 1 of 64

F6Ve BLOCK DIAGRAM



Internal IO CON with Cable for MB

TP&F/P CON | MDC CON | BT CON | LVDS , inverter and CCD CON

Internal IO CON with Cable for IO Board

SPEAKER | INT. MIC CON

THERMAL SENSOR(G781-1)/ FOR VGA. page41

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DDR2 32M*16-2 1.8V
Qimonda/Hynix page43

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MINI CARD WLAN page20

Azalia ALC662

AUDIO AMP TPA6017A2PWP

HP

MIC_IN

USB x1

MINI CARD 3G/UWB Co-lay

SIM CON

RJ11,RJ45 CON

IO Board

<Variant Name>

ASUSTeK COMPUTER INC

Title : BLOCK DIAGRAM

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 2 of 64

ICH9-M GPIO

ICH9-M GPIO	Use As	Signal Name	Power
GPIO 00	GPI	PMSYNC#(programmed as GPO)	+3VS
GPIO 01	-	DOCKING_DET# EXT PU @	+3VS
GPIO [2:5]	GPI/OD	PCI_INT[E:H]# EXT PU	+3VS
GPIO 06	-	UNDOCKING_BTN# EXT PU @	+3VS
GPIO 07	-	IDE_BAY_IN# EXT PU @	+3VS
GPIO 08	-	EXT_SMI# EXT PU	+3VSUS
GPIO 09	-	WOL_EN EXT PU/PD @	+3VSUS
GPIO 10	GPI	RTLAN_DSM# EXT PU	+3VSUS
GPIO 11	Native	EXT_SCI#(Programmed as GPI	+3VSUS
GPIO 12	-	HDTV_DET# EXT PU @	+3VSUS
GPIO 13	-	CB_SD# (TP)	+3VSUS
GPIO 14	-	AC_PRESENT EXT PU	+3VSUS
GPIO 15(DT)	Native	STP_PCI#(PU to +3VS)	+3VSUS
GPIO 16	Native	PM_DPRSLPVR INT PD	+3VS
GPIO 17	GPO	WLAN_LED EXT PD	+3VS
GPIO 18	-	-	+3VS
GPIO 19	GPI	- EXT PU	+3VS
GPIO 20	GPO	UWB_ON INT PD	+3VS
GPIO 21	GPI	- EXT PU	+3VS
GPIO 22	-	BT_DET# EXT PU @	+3VS
GPIO 23	Native	ICH_LDRQ1# INT PU	+3VS
GPIO 24	-	-	+3VSUS
GPIO 25(DT)	Native	STP_CPU#(PU to +3VS)	+3VSUS
GPIO 26	-	-	+3VSUS
GPIO 27	GPO	BT_ON	+3VSUS
GPIO 28	GPO	BT_LED	+3VSUS
GPIO 29	Native	USB_OC#5	+3VSUS
GPIO 30	Native	USB_OC#6	+3VSUS
GPIO 31	Native	USB_OC#7	+3VSUS
GPIO 32(DT)	Native	PM_CLKRUN#	+3VS
GPIO 33	-	- INT PU	+3VS
GPIO 34	-	-	+3VS
GPIO 35	-	SATACLKREQ# EXT PU @	+3VS
GPIO 36	GPI	- EXT PU	+3VS
GPIO 37	GPI	PCB_ID0	+3VS
GPIO 38	GPI	PCB_ID1	+3VS
GPIO 39	GPI	PCB_ID2	+3VS
GPIO 40	Native	USB_OC1#	+3VSUS
GPIO 41	Native	USB_OC2#	+3VSUS
GPIO 42	Native	USB_OC3#	+3VSUS
GPIO 43	Native	USB_OC4#	+3VSUS
GPIO 44	Native	USB_OC8#	+3VSUS
GPIO 45	Native	USB_OC9#	+3VSUS
GPIO 46	GPO	USB_OC10#/WLAN_ON	+3VSUS
GPIO 47	Native	USB_OC11#	+3VSUS
GPIO 48	GPI	EMAIL_LED EXT PD @	+3VS
GPIO 49	-	- INT PU	+3VS
GPIO 50	Native	PCI_REQ#1	+5VS
GPIO 51	Native	PCI_GNT#1 INT PU	+3VS
GPIO 52	Native	PCI_REQ#2	+5VS
GPIO 53	Native	PCI_GNT#2 INT PU	+3VS
GPIO 54	Native	PCI_REQ#3	+5VS
GPIO 55	Native	PCI_GNT#3 INT PU	+3VS
GPIO 56	-	- EXT PU	+3VSUS
GPIO 57	GPI	MEM_ID1 EXT PU @	+3VSUS
GPIO 58	GPI	SPI_CS#1 INT PU	+3VSUS
GPIO 59	Native	USB_OC0#	+3VSUS
GPIO 60	GPO	RTLAN_DSM_EN/LINKALERT# EXT PU	+3VSUS

GPIO33 Internal Pull High, Go Low= Flash Descriptor Security will be overriden

EC IT8512

EC GPIO	Use As	Signal Name	Power
GPA0	GPO	PWR_LED#	
GPA1	GPO	CHG_LED#	
GPA2	GPO	BATSEL_3S#	
GPA3	-	-	
GPA4	GPO	LCD_BL_PWM	
GPA5	GPO	FAN0_PWM	
GPA6	-	-	
GPA7	-	-	
GPB0	GPO	CHG_EN#	
GPB1	GPO	PRECHG	
GPB2	-	-	
GPB3	ALT	SMB0_CLK Battery	
GPB4	ALT	SMB0_DAT	
GPB5	OD	A20GATE	
GPB6	OD	RCIN#	
GPB7	GPO	PM_RSMRST#	
GPC0	-	-	
GPC1	ALT	SMB1_CLK ThermalSensor	
GPC2	ALT	SMB1_DAT	
GPC3	GPO	PM_PWRBTN#	
GPC4	GPI	AC_IN_OC#	
GPC5	GPO	OP_SD#	
GPC6	GPI	BAT1_IN_OC#	
GPC7	GPI	RFON_SW#	
GPD0	GPI	PWRLIMIT#	
GPD1	GPI	PM_SUSC#	
GPD2	ALT	BUF_PLT_RST#	
GPD3	OD	EXT_SCI#	
GPD4	OD	EXT_SMI#	
GPD5	GPO	LCD_BACKOFF#	
GPD6	GPI	FAN0_TACH	
GPD7	GPO	SD_CD#_EC	
GPE0	GPO	VSUS_ON	
GPE1	GPO	SUSC_EC#	
GPE2	GPO	SUSB_EC#	
GPE3	GPO	CPU_VRON	
GPE4	GPI	PWR_SW#	
GPE5	-	-	
GPE6	GPI	LID_SW#	
GPE7	-	-	
GPF0	-	-	
GPF1	-	-	
GPF2	GPI	MARATHON#	
GPF3	-	-	
GPF4	ALT	TP_CLK	
GPF5	ALT	TP_DAT	
GPF6	GPO	THRO_CPU	
GPF7	-	-	
GPG0	GPO	PM_THERM#_EC	
GPG1	GPI	PM_SUSB#	
GPG2	-	-	
-	-	-	
-	-	-	

EC GPIO	Use As	Signal Name	Power
-	-	-	
GPG6	-	-	
-	-	-	
GPH0	OD	PM_CLKRUN#	
GPH1	GPO	3G_ON#	
GPH2	-	-	
GPH3	GPO	BAT_LEARN	
GPH4	-	-	
GPH5	-	-	
GPH6	GPO/OD	CAP_LED#	
-	-	-	
GPI0	GPI	VGA_ALERT#	
GPI1	GPI	SUS_PWRGD	
GPI2	GPI	ALL_SYSTEM_PWRGD	
GPI3	GPI	VRM_PWRGD	
GPI4	GPI	PWR_MON	
GPI5	-	-	
GPI6	GPI	KB_ID0(NC)	
GPI7	GPI	KB_ID1(NC)	
GPJ0	GPO	EC_CLK_EN	
GPJ1	GPO	PM_PWROK	
GPJ2	GPI	-	
GPJ3	GPO	BATSEL_2P#	
GPJ4	-	-	
GPJ5	-	-	
GPK0	-	-	
GPK1	-	-	
GPK2	-	-	
GPK3	-	-	
GPK4	-	-	
GPK5	-	-	
GPL0	-	-	
GPL1	-	-	
GPL2	-	-	
GPL3	GPO	LAN_RST#	
GPL4	GPO	CL_PWROK	
GPL5	-	-	
GPL6	-	-	
GPL7	-	-	
GPK6	-	-	
GPK7	-	-	

SM_BUS ADDRESS :

SM-Bus Device	SM-Bus Address
Clock Generator	1101001x (D2)
SO-DIMM 0	1010000x (A0)
SO-DIMM 1	1010001x (A2)
Thermal Sensor(G780)	1001100x (98)
VGA Thermal IC(G781-1)	1001101x (9A)

PCIE 1	
PCIE 2	WLAN
PCIE 3	Newcard
PCIE 4	
PCIE 5	UWB(TBD)
PCIE 6	LAN

SATA 0	SATA HDD
SATA1	SATA ODD
SATA4	
SATA5	ESATA

USB 0	USB Conn
USB 1	
USB 2	USB Conn
USB 3	USB Conn
USB 4	CMOS Camera
USB 5	CardReader
USB 6	UWB(TBD)
USB 7	WiMax
USB 8	NewCard
USB 9	3G Card
USB 10	Bluetooth
USB 11	FINGER PRINT

<Variant Name>

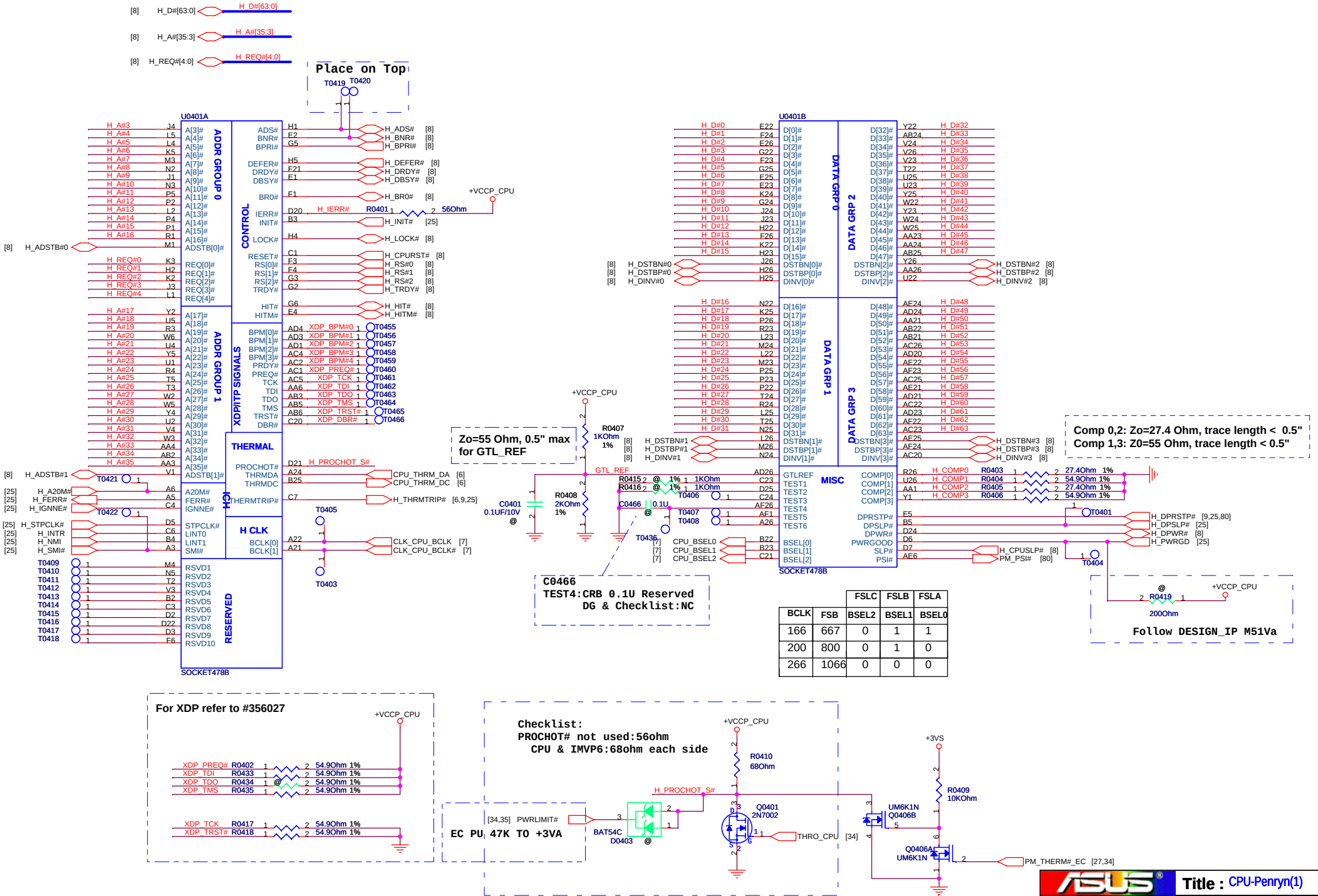
ASUSTeK COMPUTER INC

Title : Schematic Info.

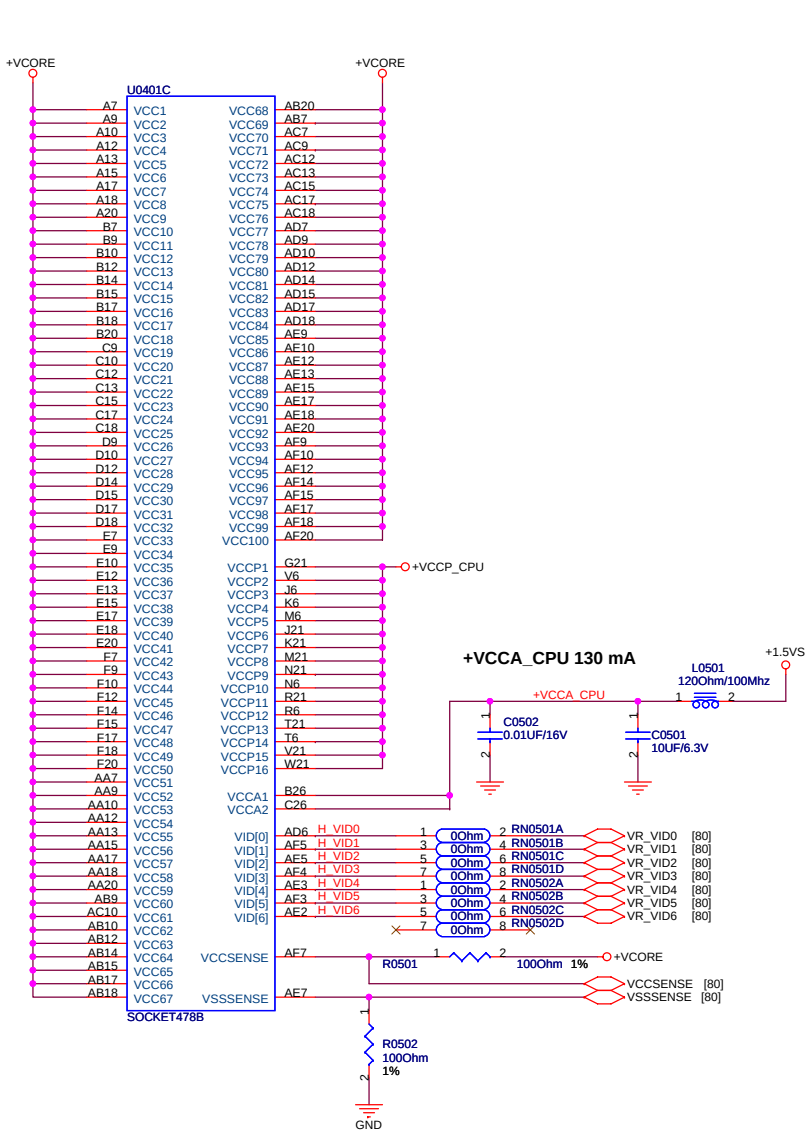
Engineer: Kent Qi

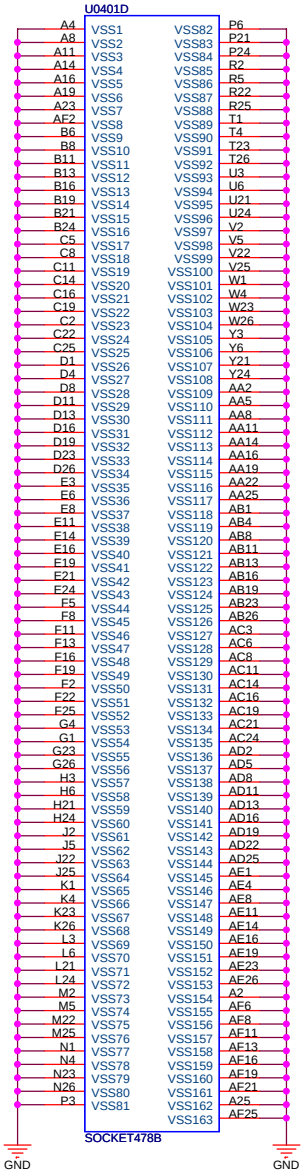
Size: Custom | Project Name: F6Ve | Rev: 1.0

Date: Friday, September 26, 2008 | Sheet 3 of 64



BCLK	FSB	FSLC BSEL2	FSLB BSEL1	FSLA BSEL0
166	667	0	1	1
200	800	0	1	0
266	1066	0	0	0





ASUSTeK COMPUTER INC. NB1	Title : CPU-Penryn(2)	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 5 of 64	

Place on L1/L8, upper/lower side of inside socket. according intel layout suggestion.

Cap Follow DesignIP
22U/6.3V 0805_55:11G235222625320

47A for PENRYN

+VCORE

C0614 10UF/6.3V, C0632 10UF/6.3V, C0621 10UF/6.3V, C0603 10UF/6.3V @, C0625 10UF/6.3V, C0609 10UF/6.3V @, C0631 10UF/6.3V, C0604 10UF/6.3V @, C0622 10UF/6.3V, C0629 10UF/6.3V

C0627 10UF/6.3V @, C0620 10UF/6.3V @, C0626 10UF/6.3V @, C0607 10UF/6.3V, C0624 10UF/6.3V @, C0605 10UF/6.3V, C0623 10UF/6.3V, C0601 10UF/6.3V, C0615 10UF/6.3V, C0602 10UF/6.3V

C0616 10UF/6.3V @, C0639 10UF/6.3V, C0619 10UF/6.3V @, C0610 10UF/6.3V, C0613 10UF/6.3V, C0608 10UF/6.3V @, C0612 10UF/6.3V @, C0617 10UF/6.3V, C0628 10UF/6.3V, C0630 10UF/6.3V

C0611 10UF/6.3V, C0633 10UF/6.3V @

GND

Decoupling guide from INTEL

VCORE	22uF/	* 36pcs
	330uF	* 4pcs
VCCP	0.1uF	* 6pcs for CPU
	150uF	* 1pcs for CPU

+VCCP Decoupling Capacitor (Place near CPU)

+VCCP — JP0601 2MM_OPEN_5MIL @ — +VCCP_CPU

CE0601 100UF/2.5V, C0618 0.1UF/10V X7R, C0606 0.1UF/10V X7R, C0636 0.1UF/10V X7R X7R, C0635 0.1UF/10V X7R, C0638 0.1UF/10V, C0637 0.1UF/10V X7R

GND

Thermal Sensor

Close to Pin A24
& A25 of CPU

+3VS, +3VS_THM

THRM_ALERT# CPU — R0650 10KOhm — +3VS

CPU_THRM_DA — C0651 1000P

CPU_THRM_DC — C0652 0.1U

33Ohm R0602 — +3VS

U0650 G780P11U

VCC, DXP, DXN, THERM#, SMBCLK, SMBDATA, ALERT#, GND

[4] CPU_THRM_DA
[4] CPU_THRM_DC
[34] OS#_OC

SMB1_CLK, SMB1_DAT, THRM_ALERT# CPU

SMB1_CLK [34,41]
SMB1_DAT [34,41]

T0601

GND

Slave address: 98h

+VCCP

R0606 56Ohm

R0652 330

C0650 0.1U @

GND

Q0650 PMBS3904

Q0651 2N7002

Enable: Turn OFF system
To EC(Internal Pull Hi)

[4,9,25] H_THRMTRIP#

THRMTRIP# [34]

To EC

[22,26,29,33,34,38] BUF_PLT_RST#

+5VS_FAN

R0605 0Ohm

C0671 0.1U

C0672 10uF/10V

D0601 1SS355 @

GND

+3VS, +5VS_FAN

2N7002 Q0611 @

R0603 10KOhm @

D0603 BAT54C @

[34] FAN0_PWM

0Ohm R0653

C0654 100PF/50V @

R0659 10KOhm

[34] FAN0_TACH

C0653 100PF/50V @

GND

+5VSFAN

P/N:12G17100004B

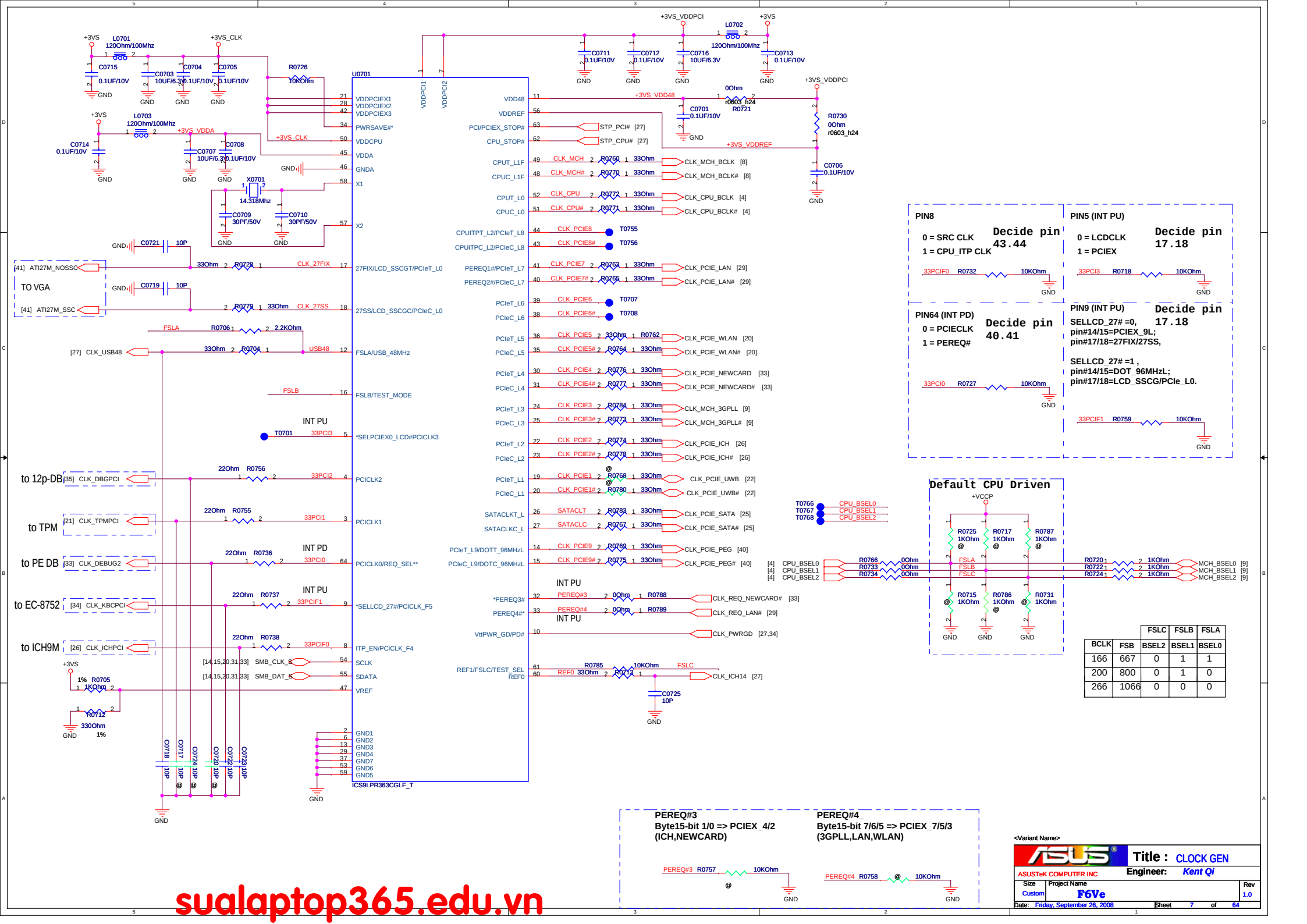
CON601 WtoB_CON_4P_1

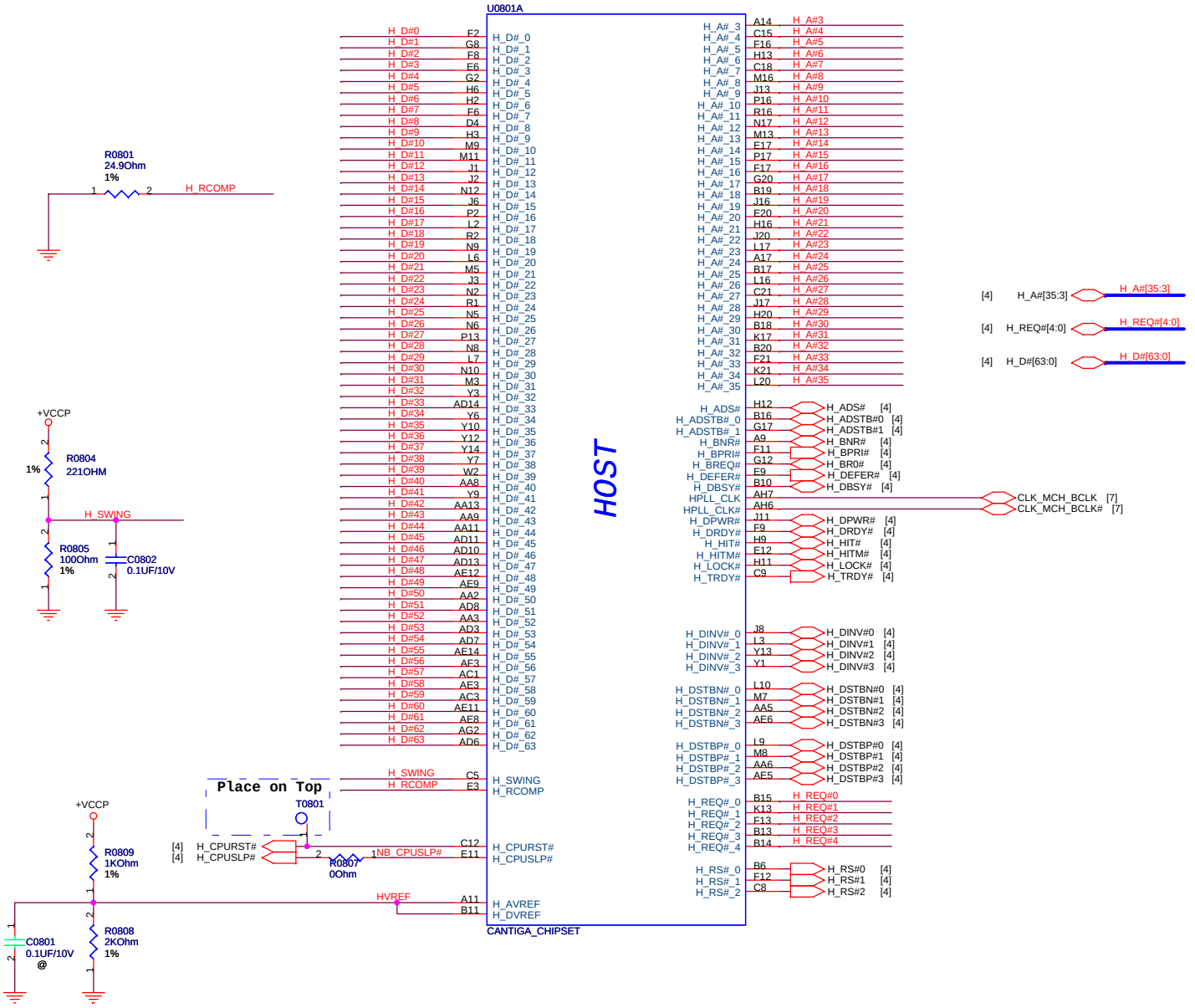
SIDE1, SIDE2

Open-collect

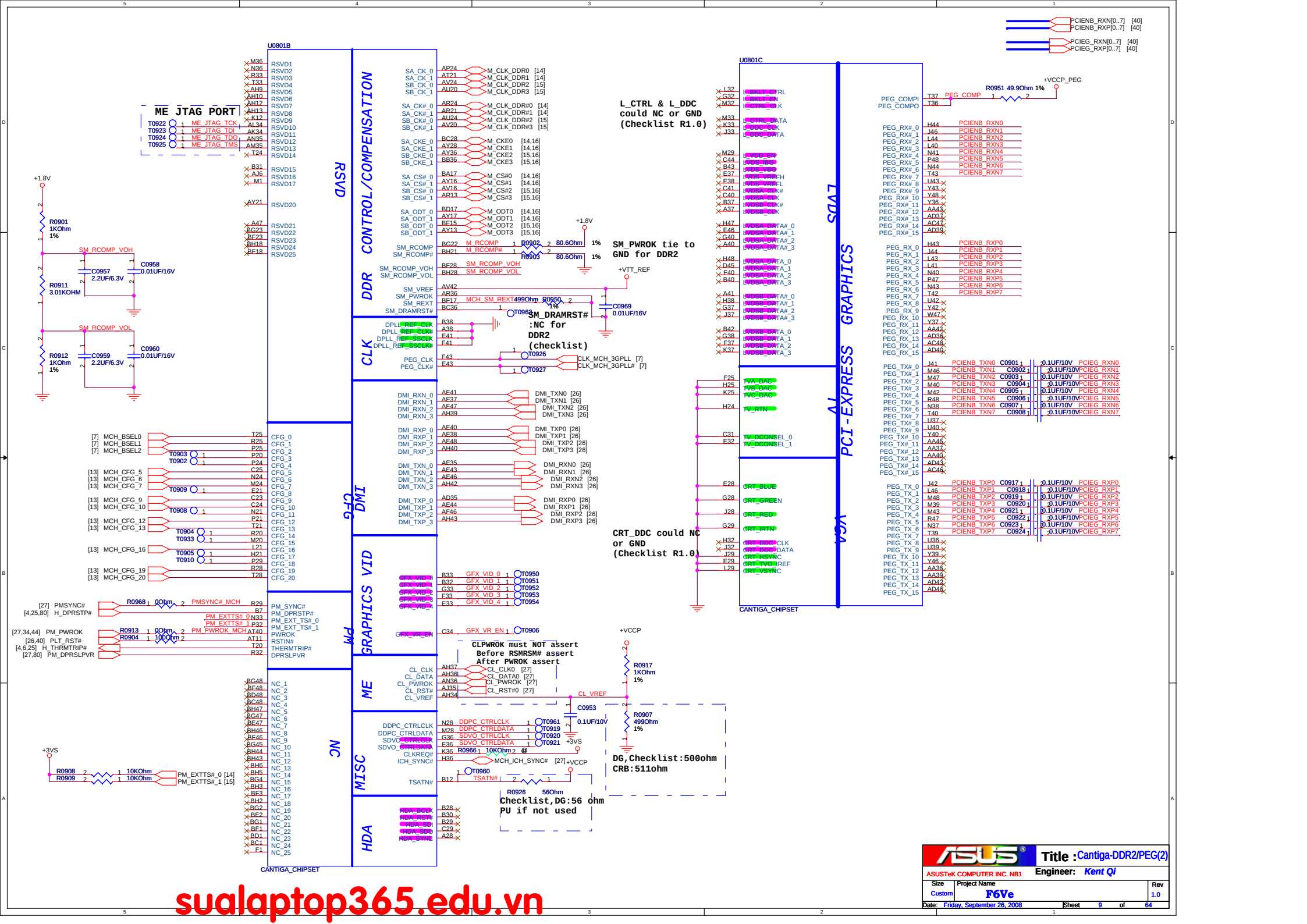
GND

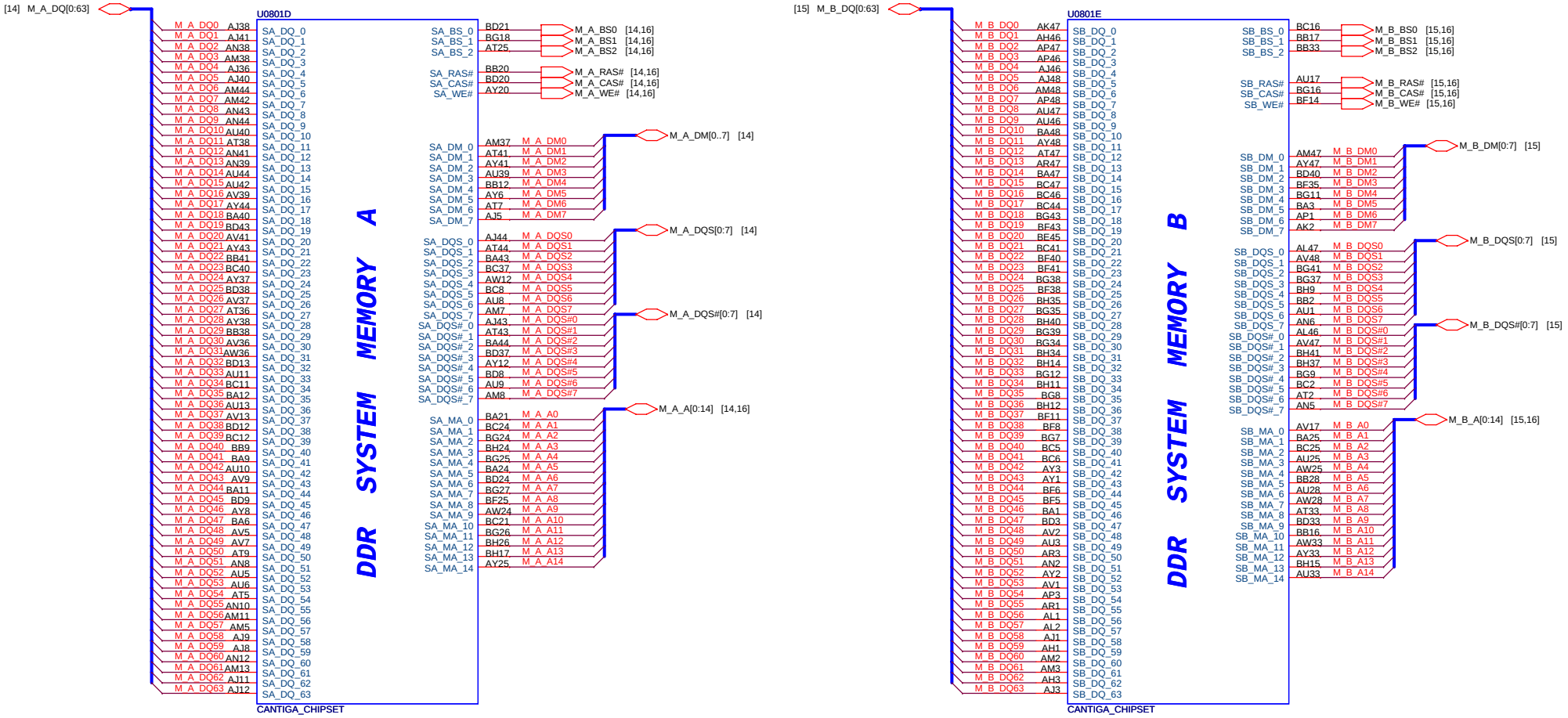
ASUSTeK COMPUTER INC. NB1	Title : CAP,Thermal FAN	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 6 of 64	



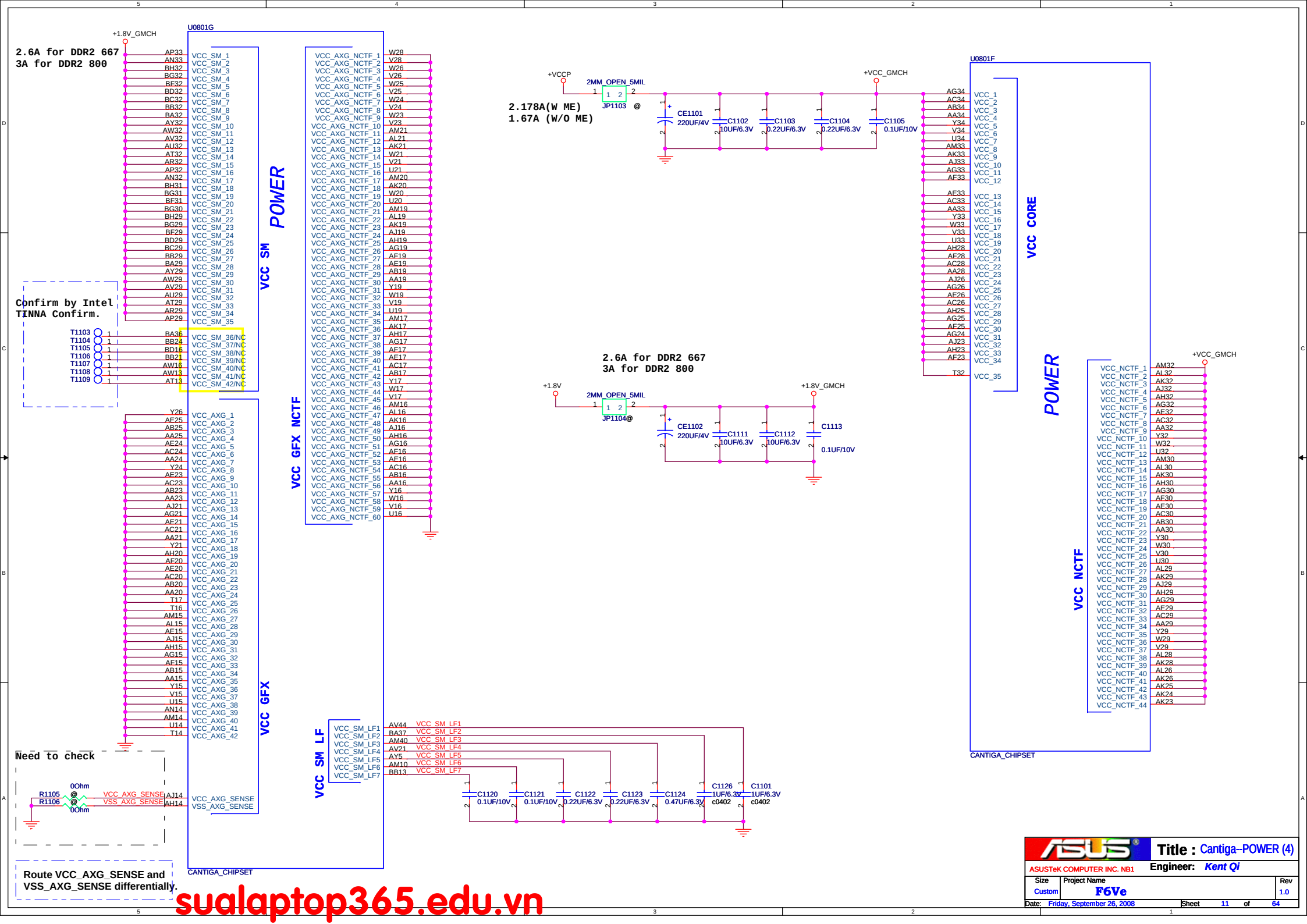


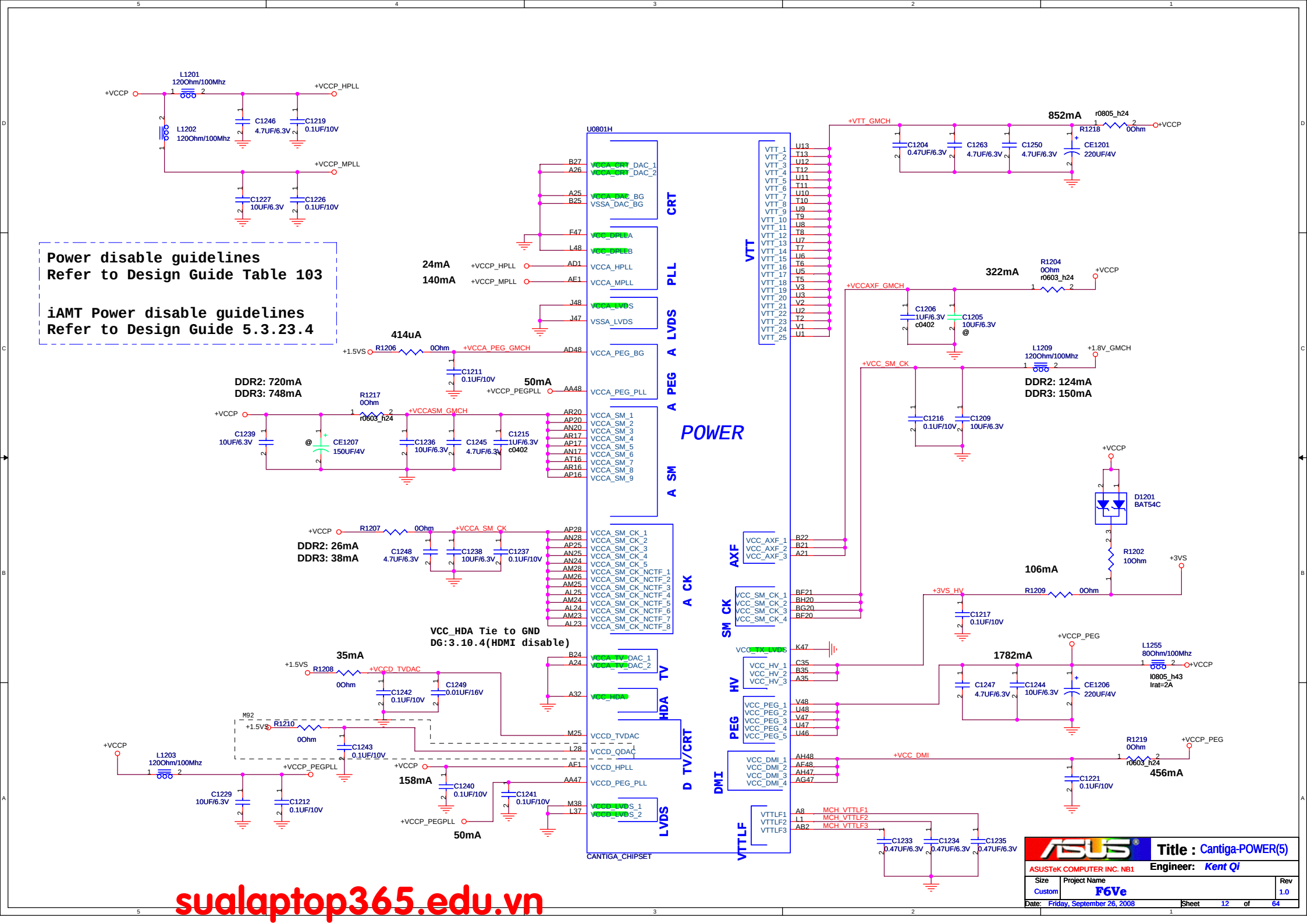
Title : Cantiga -- CPU (1)		
ASUSTeK COMPUTER INC. NB1	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 8 of 64	

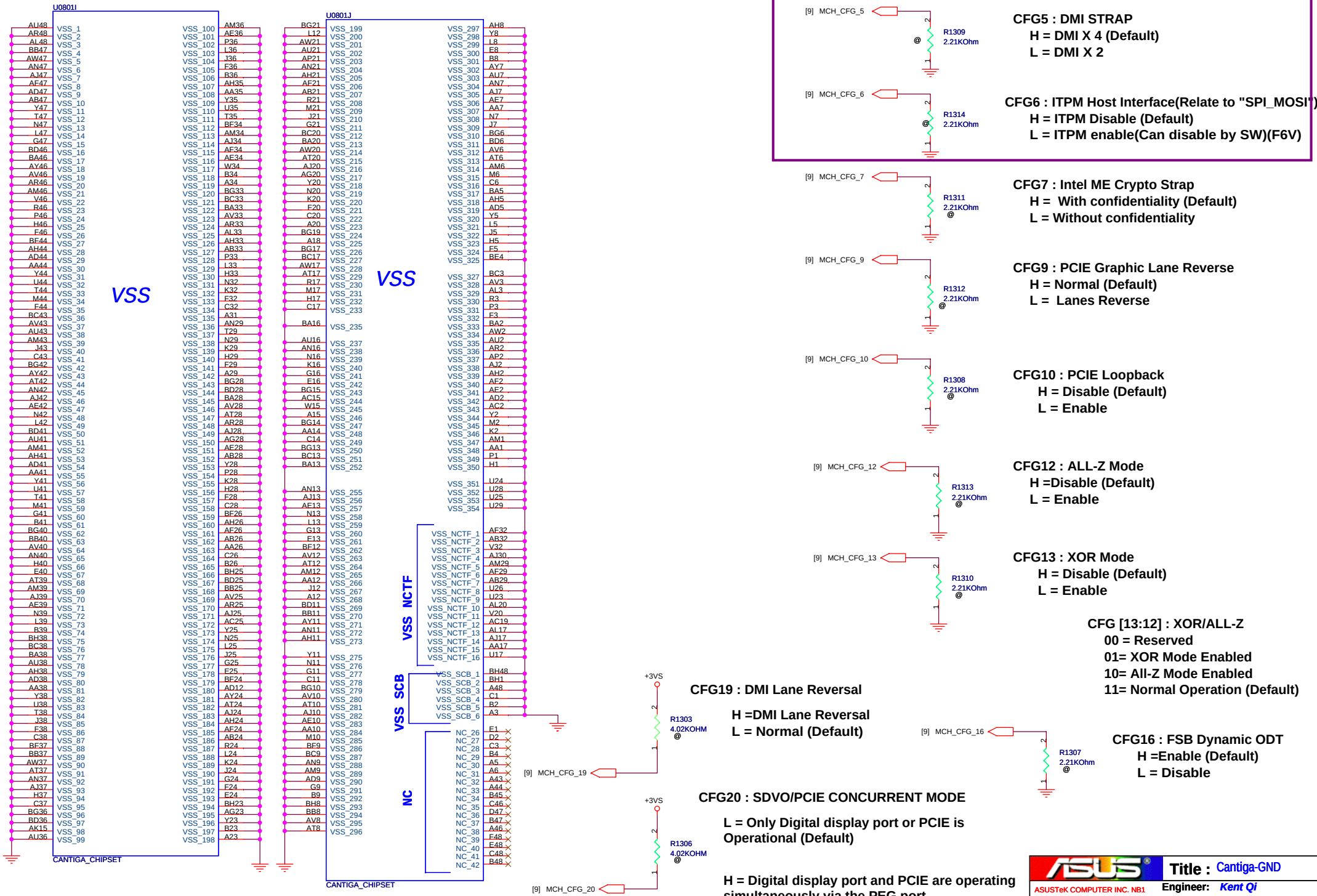




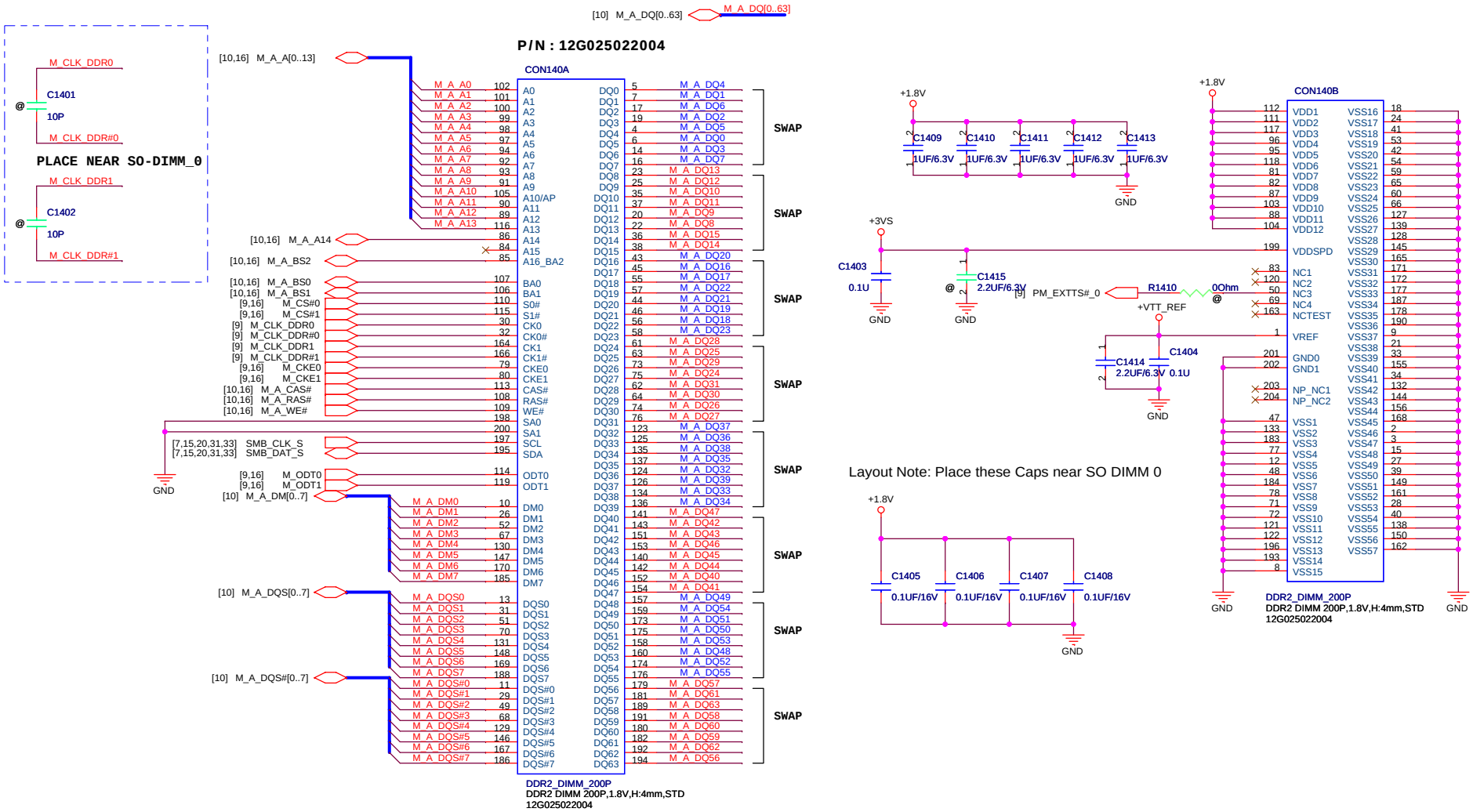
ASUSTeK COMPUTER INC. NB1	Title : Cantiga--DDR2 (3)	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 10 of 64	




Power disable guidelines
Refer to Design Guide Table 103
iAMT Power disable guidelines
Refer to Design Guide 5.3.23.4
POWER
U0801H
CANTIGA_CHIPSET
CRT
PLL
LVDS
A PEG
A SM
A CK
TV
HDA
D TV/CRT
LVDS
VTT
AXF
SM CK
HV
PEG
DMI
VTTLF
DDR2: 720mA
DDR3: 748mA
414uA
24mA
140mA
50mA
DDR2: 26mA
DDR3: 38mA
VCC_HDA Tie to GND
DG:3.10.4(HDMI disable)
35mA
158mA
50mA
852mA
322mA
106mA
1782mA
DDR2: 124mA
DDR3: 150mA
456mA
Title : Cantiga-POWER(5)
ASUSTeK COMPUTER INC. NB1
Engineer: Kent Qi
Size: Custom
Project Name: F6Ve
Rev: 1.0
Date: Friday, September 26, 2008
Sheet 12 of 64
sualaptop365.edu.vn



ASUSTeK COMPUTER INC. NB1	Title : Cantiga-GND	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 13 of 64	



<Variant Name>

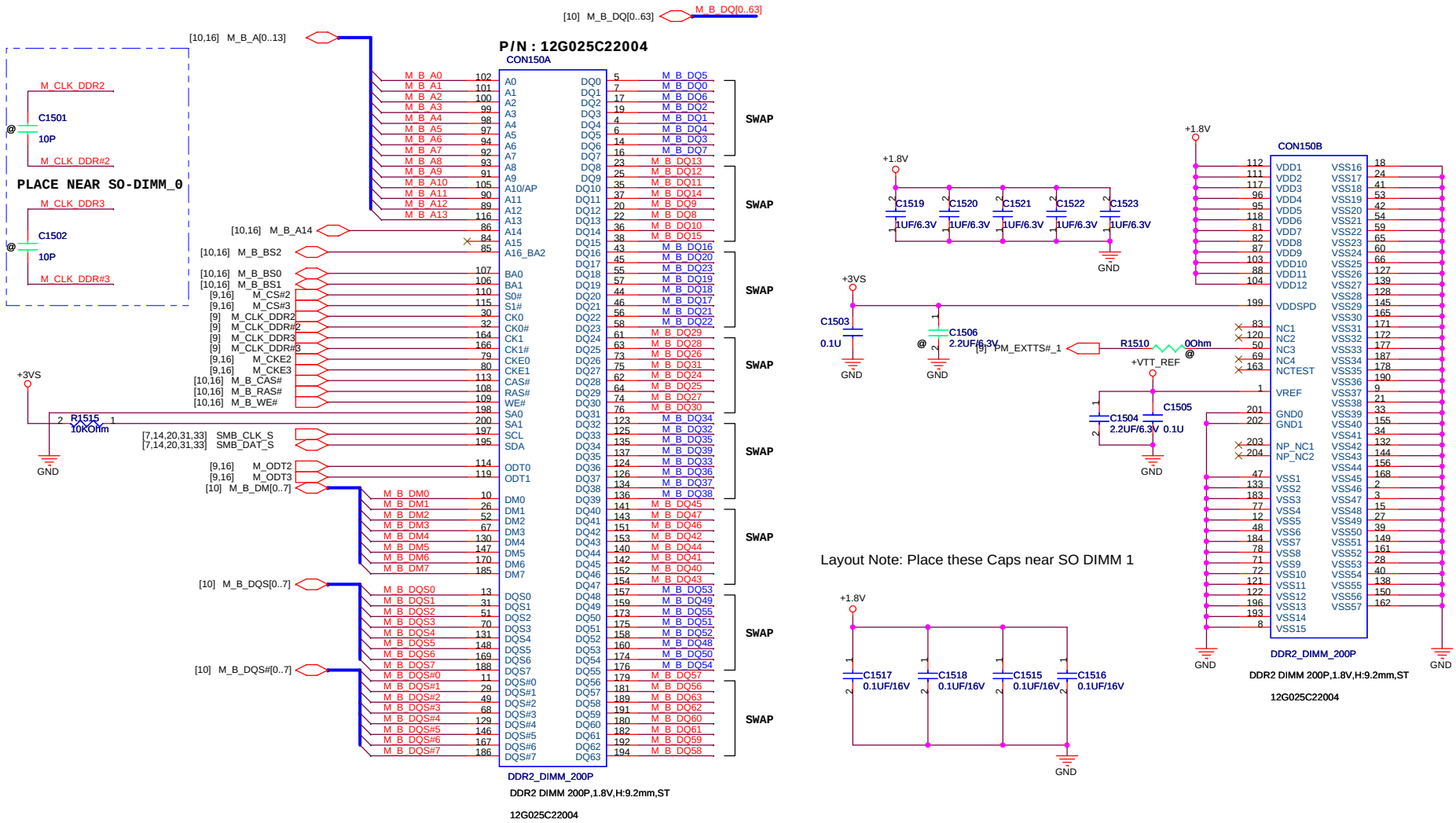
ASUSTeK COMPUTER INC

Title : DDR2 SO-DIMM 0

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 14 of 64



<Variant Name>

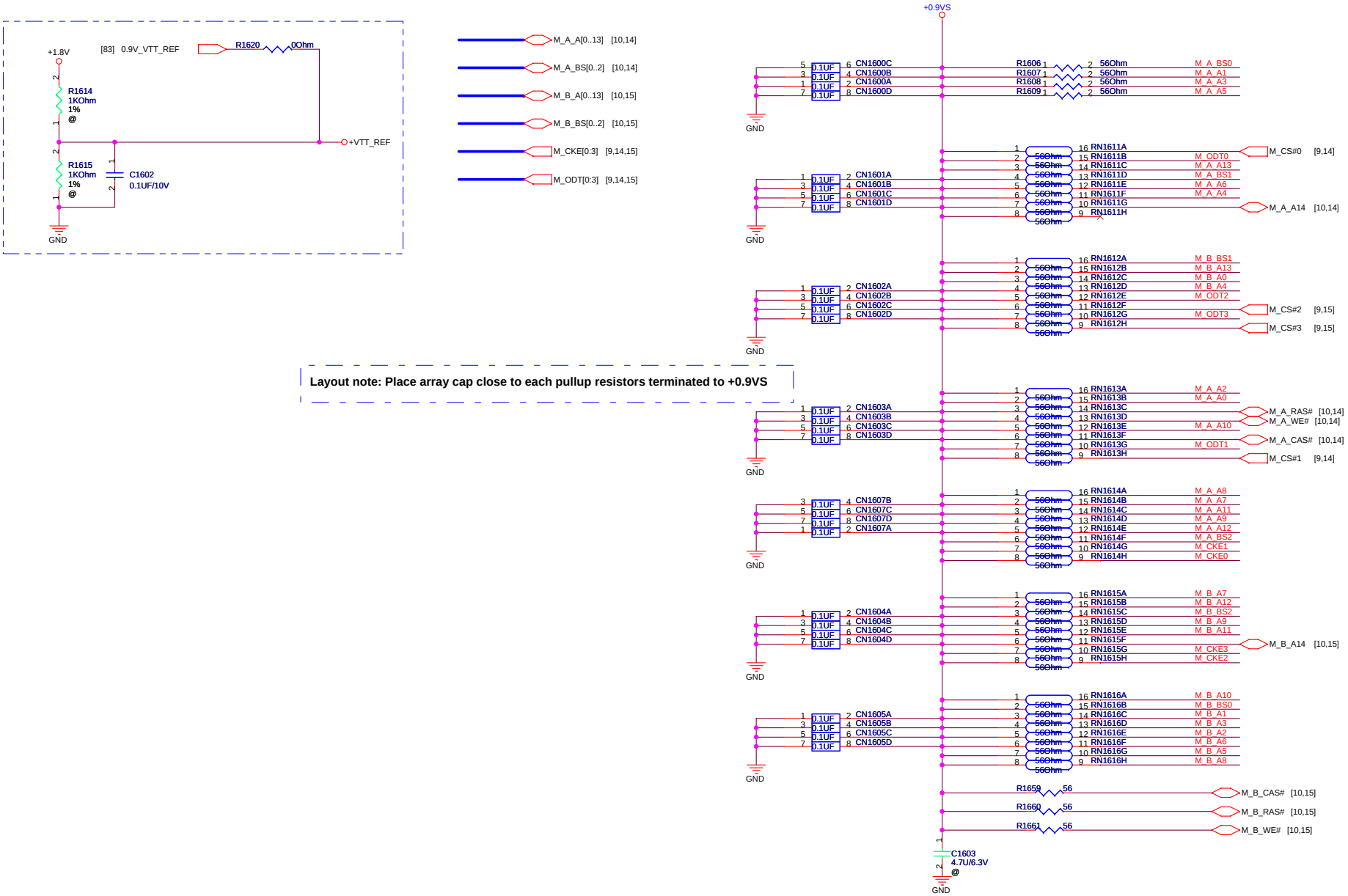
ASUSTeK COMPUTER INC

Title : DDR2 SO-DIMM_1

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 15 of 64



<Variant Name>

ASUSTeK COMPUTER INC

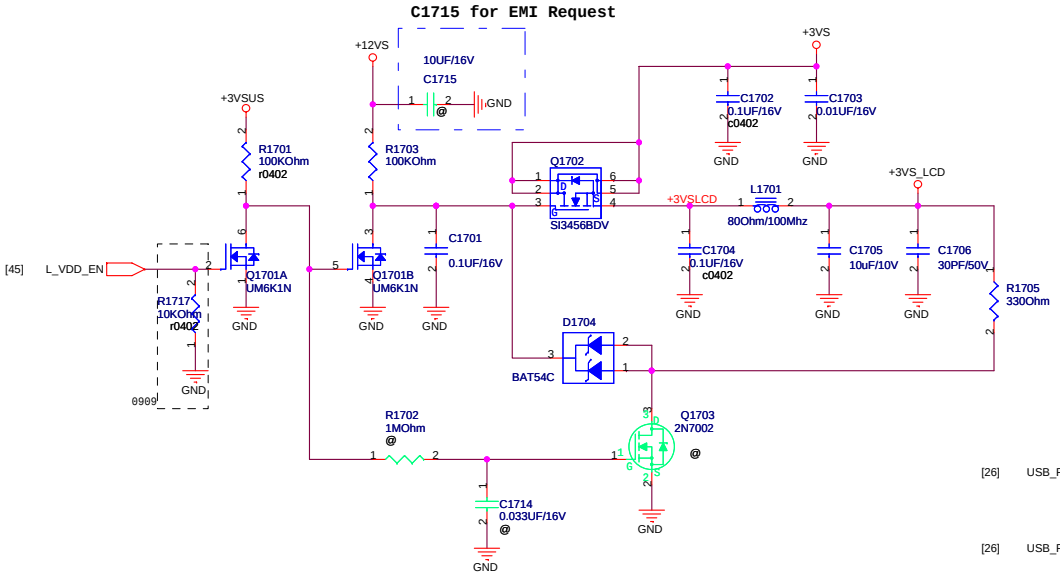
Title : DDR2 ADDR TERM

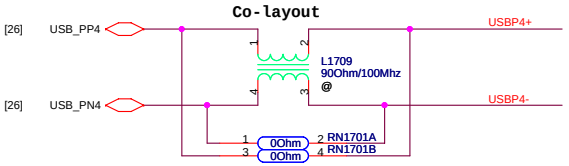
Engineer: Kent Qi

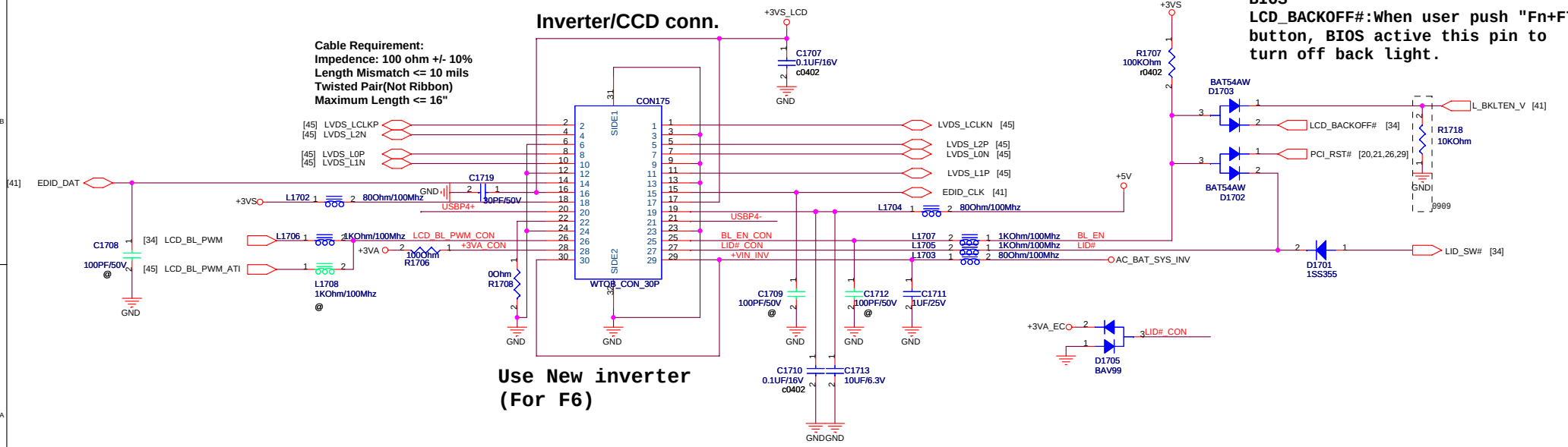
Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 16 of 64

LCD Power







<Variant Name>

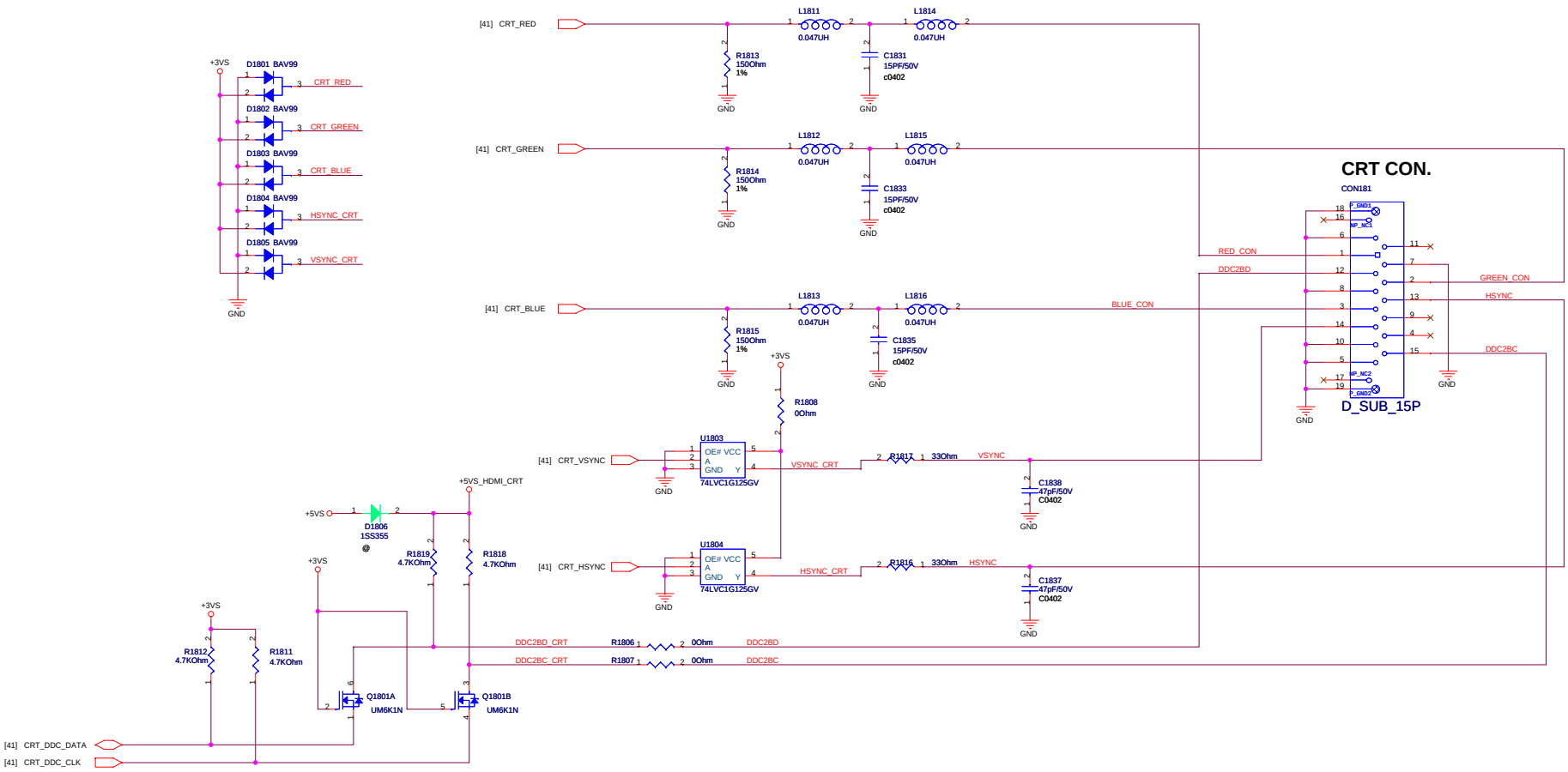
ASUSTeK COMPUTER INC

Title : LVDS & INVERTER

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 17 of 64



<Variant Name>

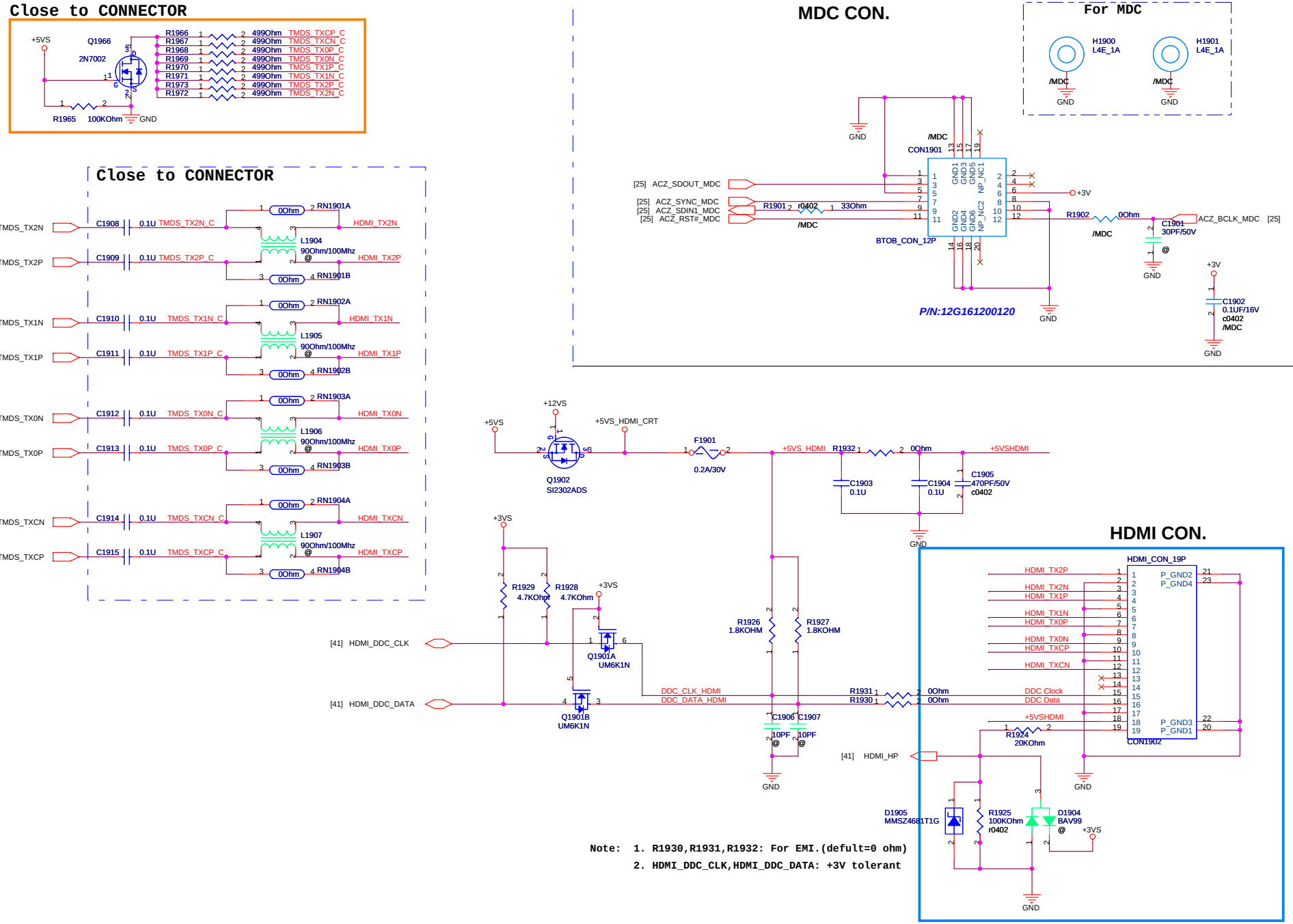
ASUSTeK COMPUTER INC.

Title : CRT

Engineer: Kent Qi

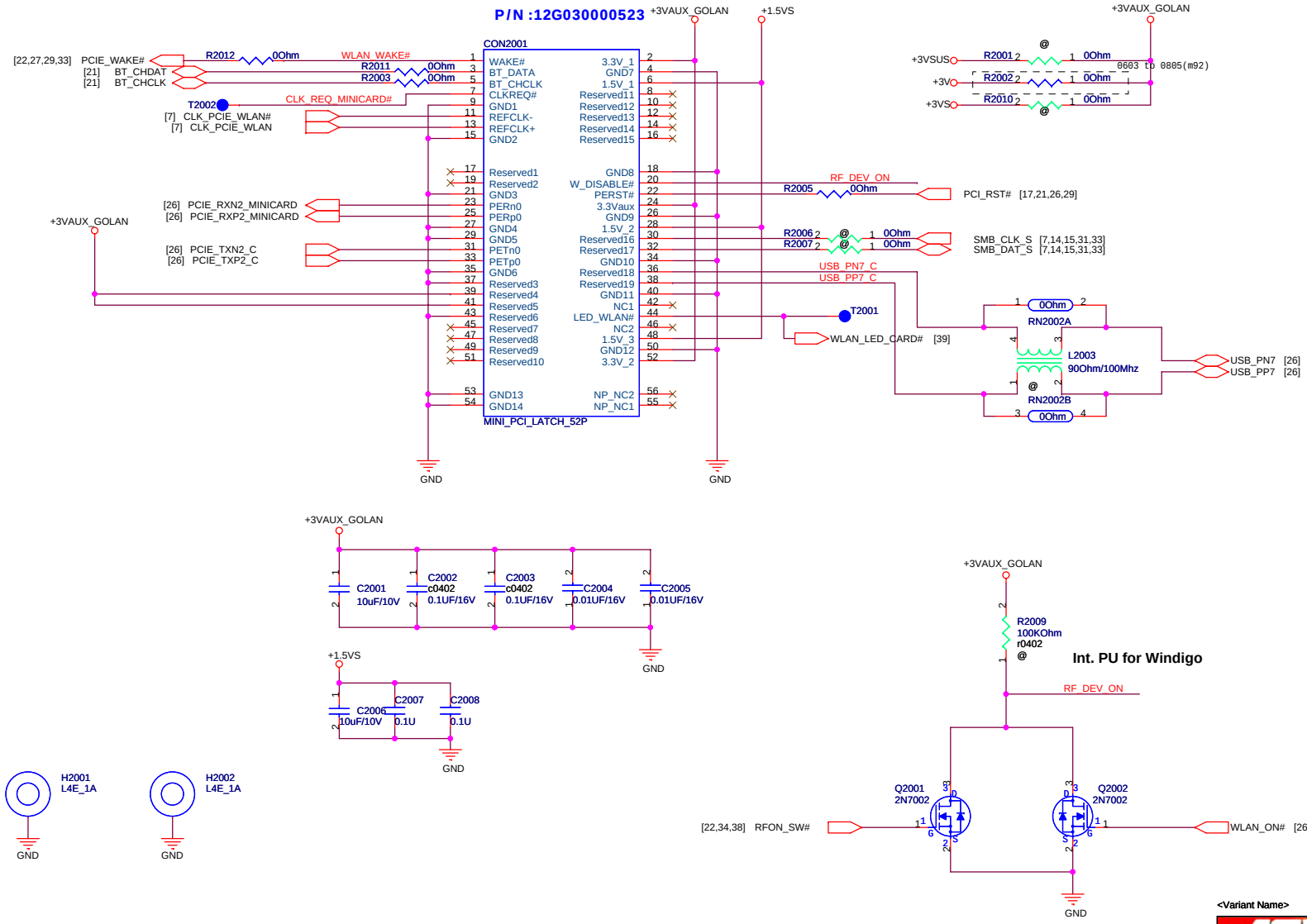
Size	Project Name	Rev
C	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 18 of 64



WLAN/WIMAX

P/N :12G030000523



<Variant Name>

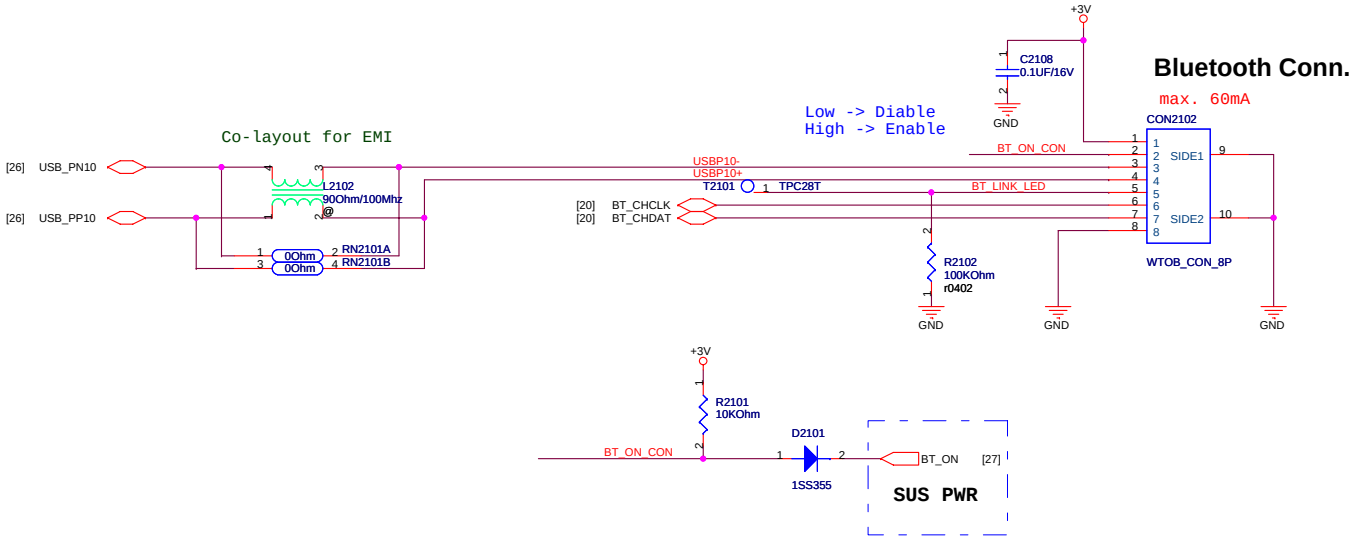
ASUSTeK COMPUTER INC

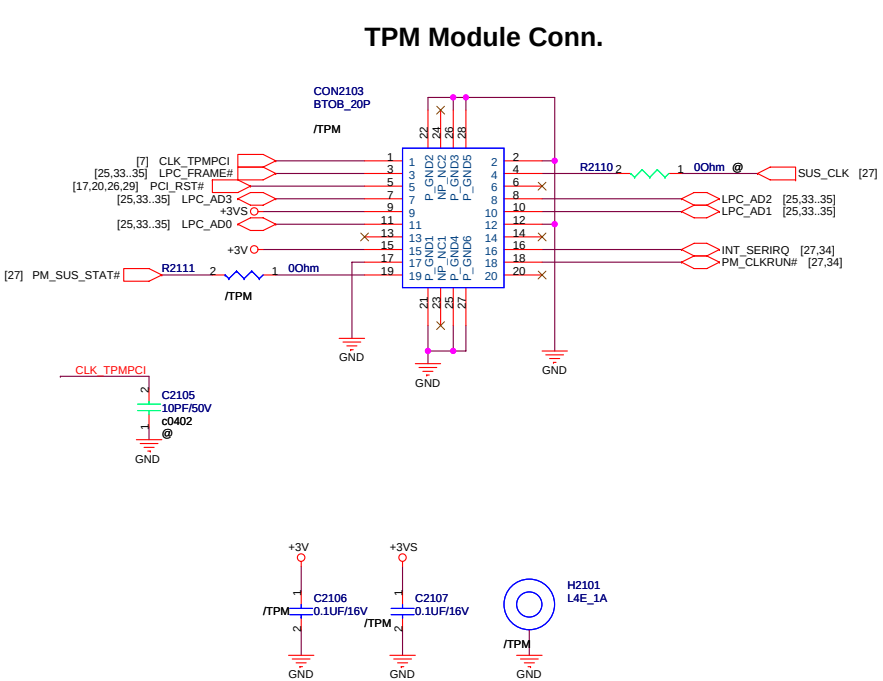
Title : MINI CARD--(1)

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 20 of 64





<Variant Name>

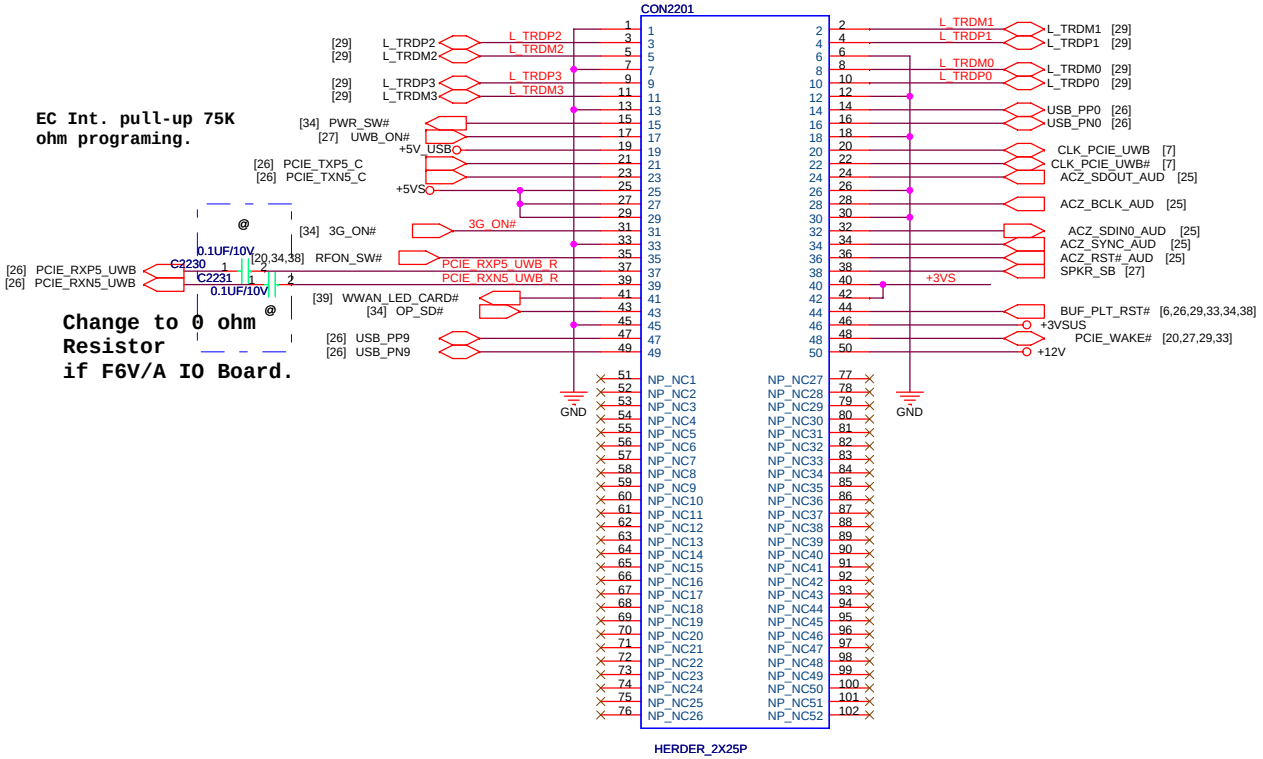
ASUSTeK COMPUTER INC

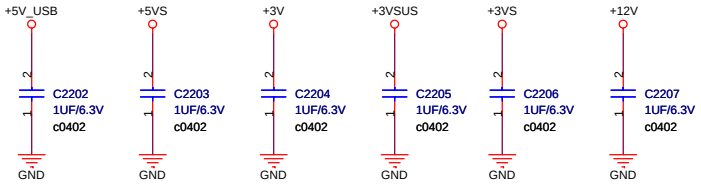
Title : B/T& TPM

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 21 of 64



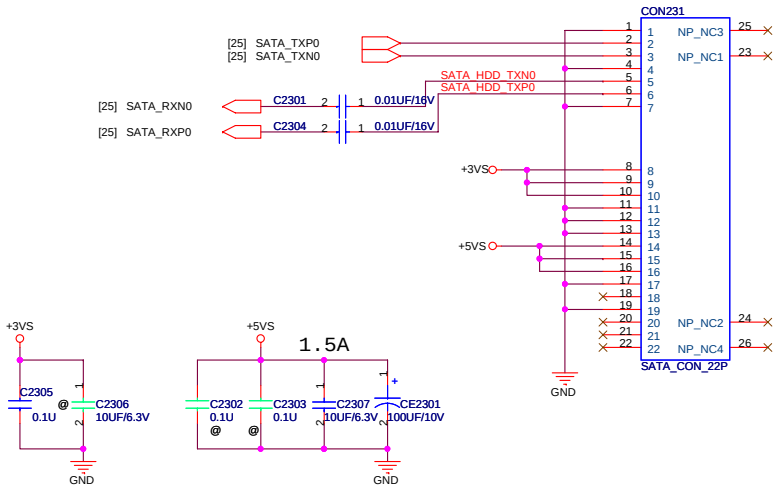


<Variant Name>

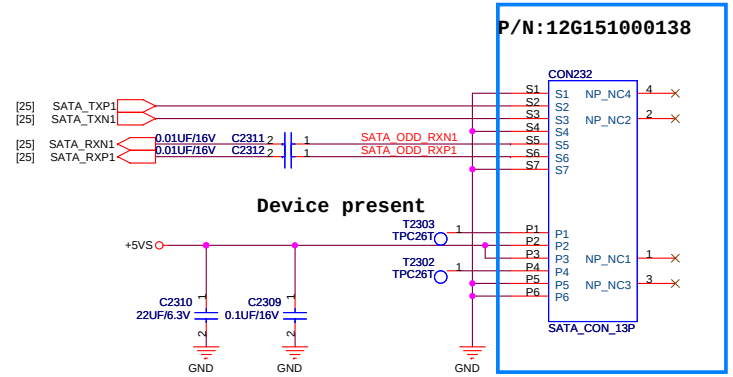
ASUSTeK COMPUTER INC	Title : B TO B CONN(M)	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 22 of 64	

SATA HDD CON

12G15100022K



SATA ODD CON



<Variant Name>

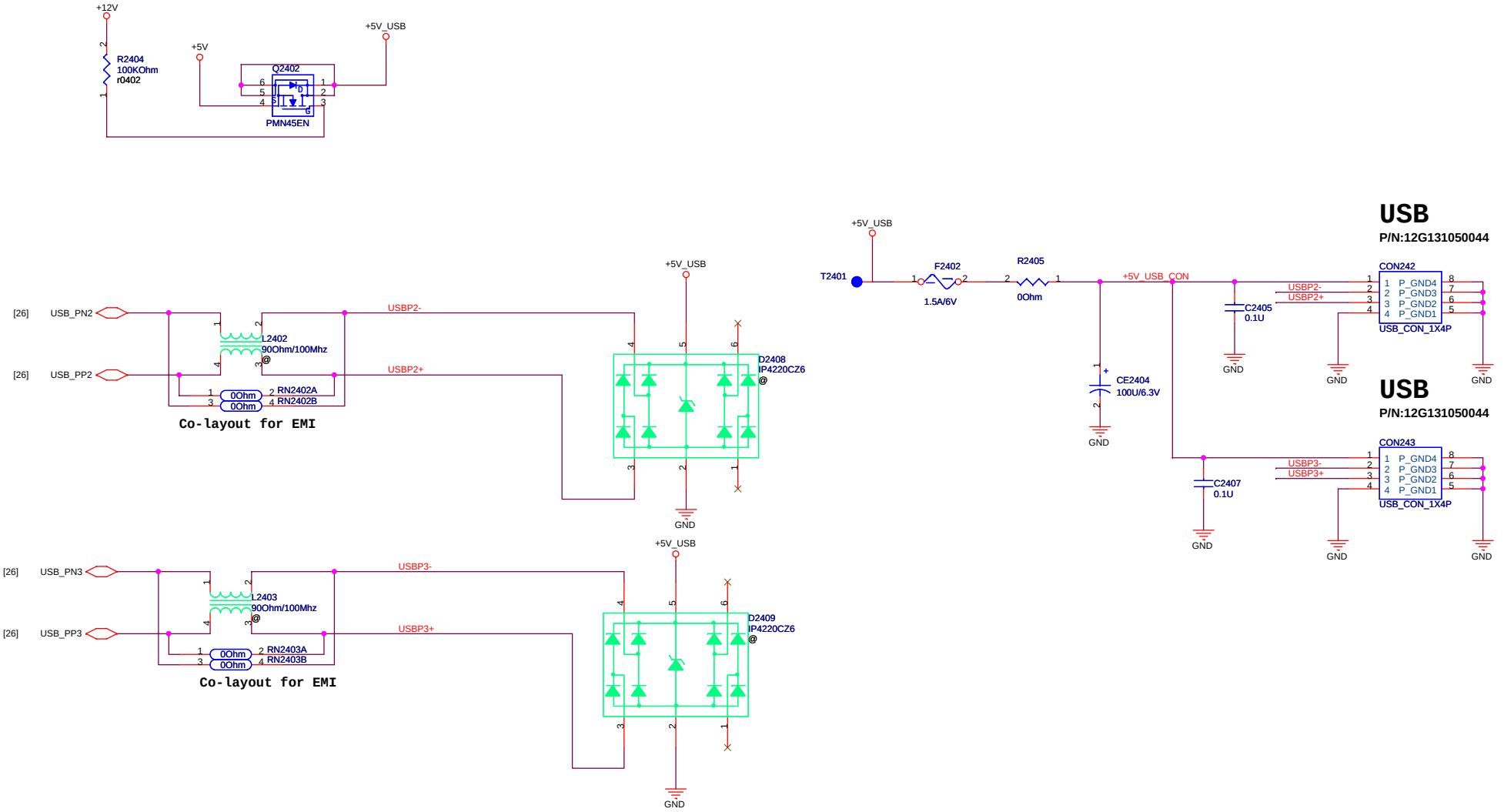
Title : HDD & CDROM

ASUSTeK COMPUTER INC

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 23 of 64



<Variant Name>

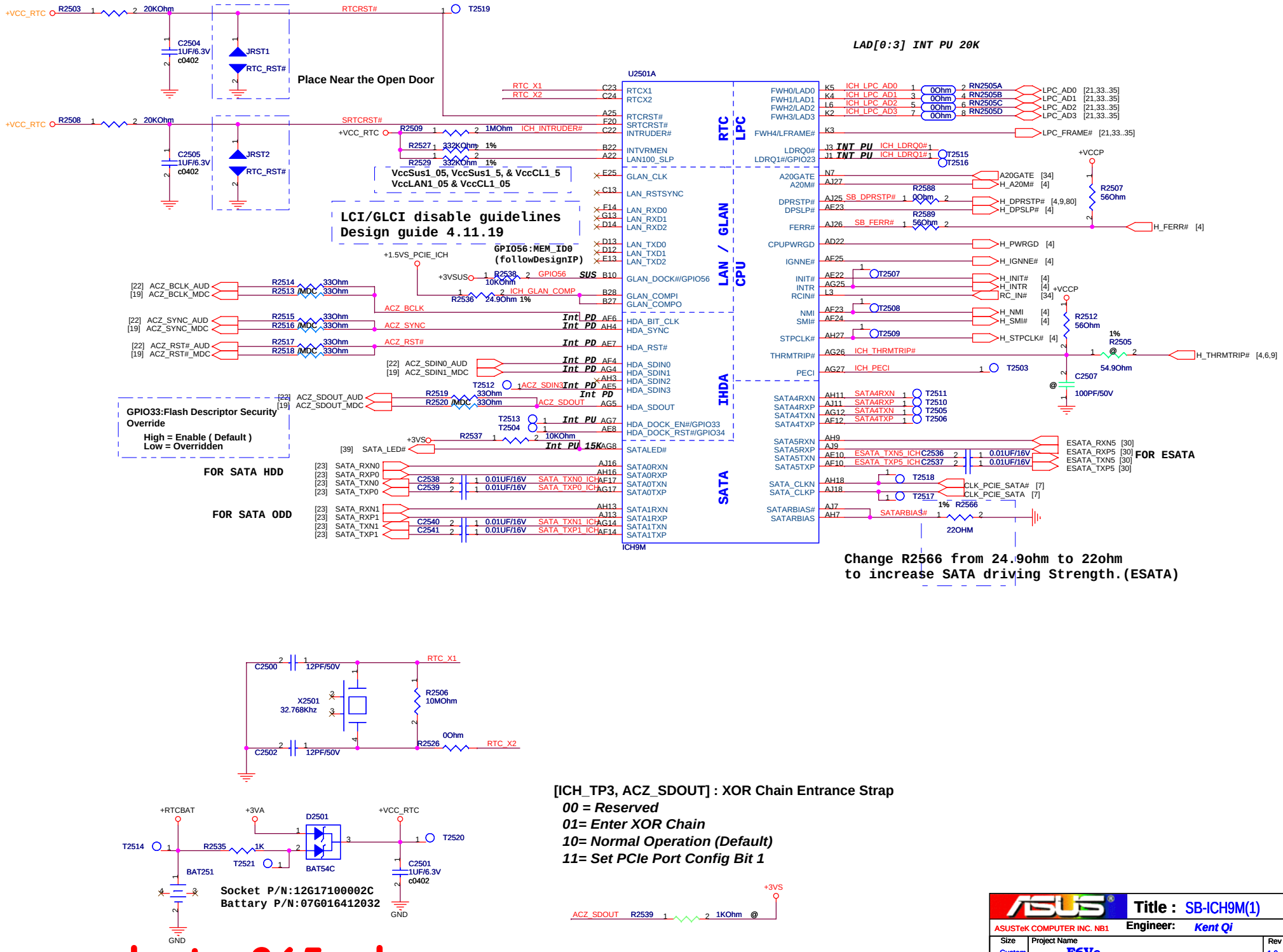
ASUSTeK COMPUTER INC

Title : USB PORTS

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 24 of 64



ICH9 Boot BIOS select

		GNT#0	SPICS#1
LPC	11	1	1 (default)
PCI	10	1	0
SPI	01	0	1

PCIE 1	
PCIE 2	WLAN
PCIE 3	Newcard
PCIE 4	
PCIE 5	UWB
PCIE 6	LAN

PCI_GNT#0 R2601 1 @ 2 1KOhm

SB_SPICS1# R2602 1 @ 2 1KOhm

GNT#[0:3]:INT PU

U2501B

PCI

Interrupt I/F

ICH9M

PCI_REQ#0 [27] PCI_GNT#0 T2604

PCI_REQ#1 [27] T2601

PCI_REQ#2 [27] T2602

PCI_REQ#3 [27] T2603

PCI_IRDY# [27] T2605

PCI_RST# [17,20,21,29]

PCI_DEVSEL# [27]

PCI_PERR# [27]

PCI_LOCK# [27]

PCI_SERR# [27]

PCI_STOP# [27]

PCI_TRDY# [27]

PCI_FRAME# [27]

PLT_RST# [9,40]

CLK_ICHPCI [7]

PCI_PME# INT PU R2609 10KOhm +3VSUS

PCI_INTA# [27] PCI_INTB# [27] PCI_INTC# [27] PCI_INTD# [27]

PCI_INTE# [27] PCI_INTF# [27] PCI_INTG# [27] PCI_INTH# [27]

U2501D

PCI-Express

Direct Media Interface

SPI

USB

ICH9M

[20] PCIE_RXN2_MINICARD [20] PCIE_RXP2_MINICARD [20] PCIE_TXN2_C [20] PCIE_TXP2_C C2643 C2644 0.1UF/10V PCIE_TXN2_MINICARD PCIE_TXP2_MINICARD

[33] PCIE_RXN3_NEWCARD [33] PCIE_RXP3_NEWCARD [33] PCIE_TXN3_C [33] PCIE_TXP3_C C2645 C2646 0.1UF/10V PCIE_TXN3_NEWCARD PCIE_TXP3_NEWCARD

[22] PCIE_RXN5_UWB [22] PCIE_RXP5_UWB [22] PCIE_TXN5_C [22] PCIE_TXP5_C C2650 C2649 0.1UF/10V PCIE_TXN5_UWB PCIE_TXP5_UWB

[29] PCIE_RXN6_GLAN [29] PCIE_RXP6_GLAN [29] PCIE_TXN6_C [29] PCIE_TXP6_C C2648 C2647 0.1UF/10V PCIE_TXN6_GLAN PCIE_TXP6_GLAN

DMI_RXN0 [9] DMI_RXP0 [9] DMI_TXN0 [9] DMI_TXP0 [9]

DMI_RXN1 [9] DMI_RXP1 [9] DMI_TXN1 [9] DMI_TXP1 [9]

DMI_RXN2 [9] DMI_RXP2 [9] DMI_TXN2 [9] DMI_TXP2 [9]

DMI_RXN3 [9] DMI_RXP3 [9] DMI_TXN3 [9] DMI_TXP3 [9]

CLK_PCIE_ICH# [7] CLK_PCIE_ICH [7]

DMI_COMP R2603 1 2 24.9Ohm 1% +1.5VS_PCIE_ICH

L<500mils

SPI_CLK [31] SPI_CS#0 [31] R2612 R2613 15Ohm SB_SPICLK SB_SPICS0# SB_SPICS1# INT PU

SPI_SI [31] R2615 15Ohm SB_SPISI INT PD 20K SPI_SO [31] INT PU

+3VS R2606 1 @ 2 1KOhm 1%

SPI_MOSI (relate to MCH_CFG_6)
iTPM Enable

H: Enable (F6V)

L: Disable(Default)

WLAN_ON R2626 0Ohm

USBRBIAS_PN R2605 22.6Ohm 1%

Place within 500 mils of ICH

USB_PN0 [22] USB_PP0 [22]

USB_PN1 USB_PP1 T2613 T2614

USB_PN2 [24] USB_PP2 [24]

USB_PN3 [24] USB_PP3 [24] USB_PN4 [17] USB_PP4 [17] USB_PN5 [36] USB_PP5 [36]

USB_PN6 USB_PP6 T2611 T2612

USB INT PD 15K

USB_PN7 [20] USB_PP7 [20] USB_PN8 [33] USB_PP8 [33] USB_PN9 [22] USB_PP9 [22] USB_PN10 [21] USB_PP10 [21] USB_PN11 [38] USB_PP11 [38]

USB 0	USB Conn
USB 1	
USB 2	USB Conn
USB 3	USB Conn
USB 4	CMOS Camera
USB 5	CardReader
USB 6	UWB
USB 7	WiMax
USB 8	NewCard
USB 9	3G Card
USB 10	Bluetooth
USB 11	FINGER PRINT

+3V R2611 100KOhm WLAN_ON# [20]

Q2602 2N7002 WLAN_ON

+3V C2605 0.1UF/16V c0402 GND

U2603 @ INB INA GND VCC OUTY 74LVC1G08GW

PLT_RST# BUF_PLT_RST# [6,22,29,33,34,38]

R2608 0Ohm

+3VSUS

RN2606A USB_OC#1 RN2606B USB_OC#6 RN2606C USB_OC#2 RN2606D USB_OC#3

RN2607A USB_OC#4 RN2607B USB_OC#8 RN2607C USB_OC#7 RN2607D USB_OC#0

RN2609A USB_OC#11 RN2609B USB_OC#9 RN2609C USB_OC#10 RN2609D USB_OC#5

10KOhm

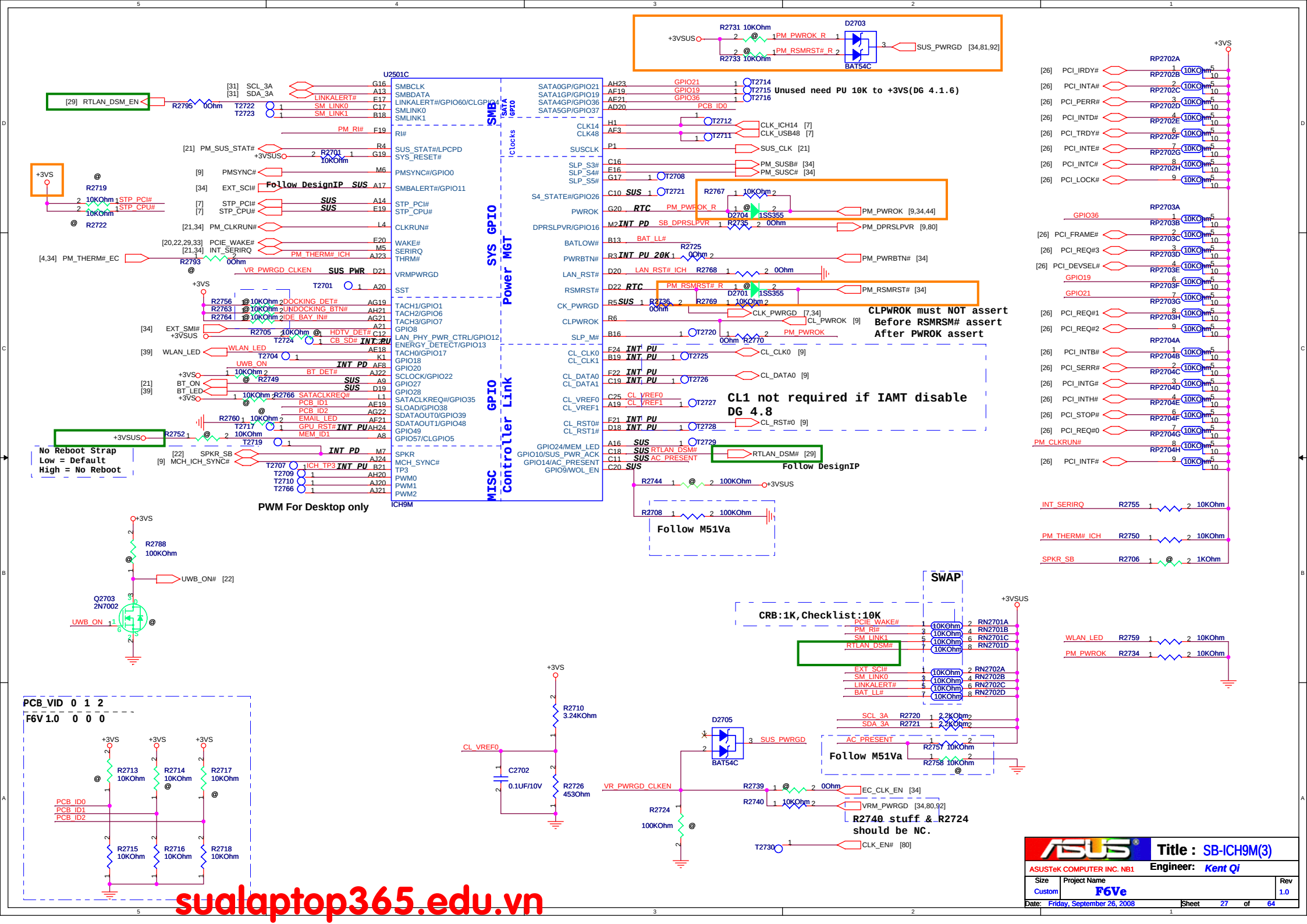
ASUSTeK COMPUTER INC. NB1

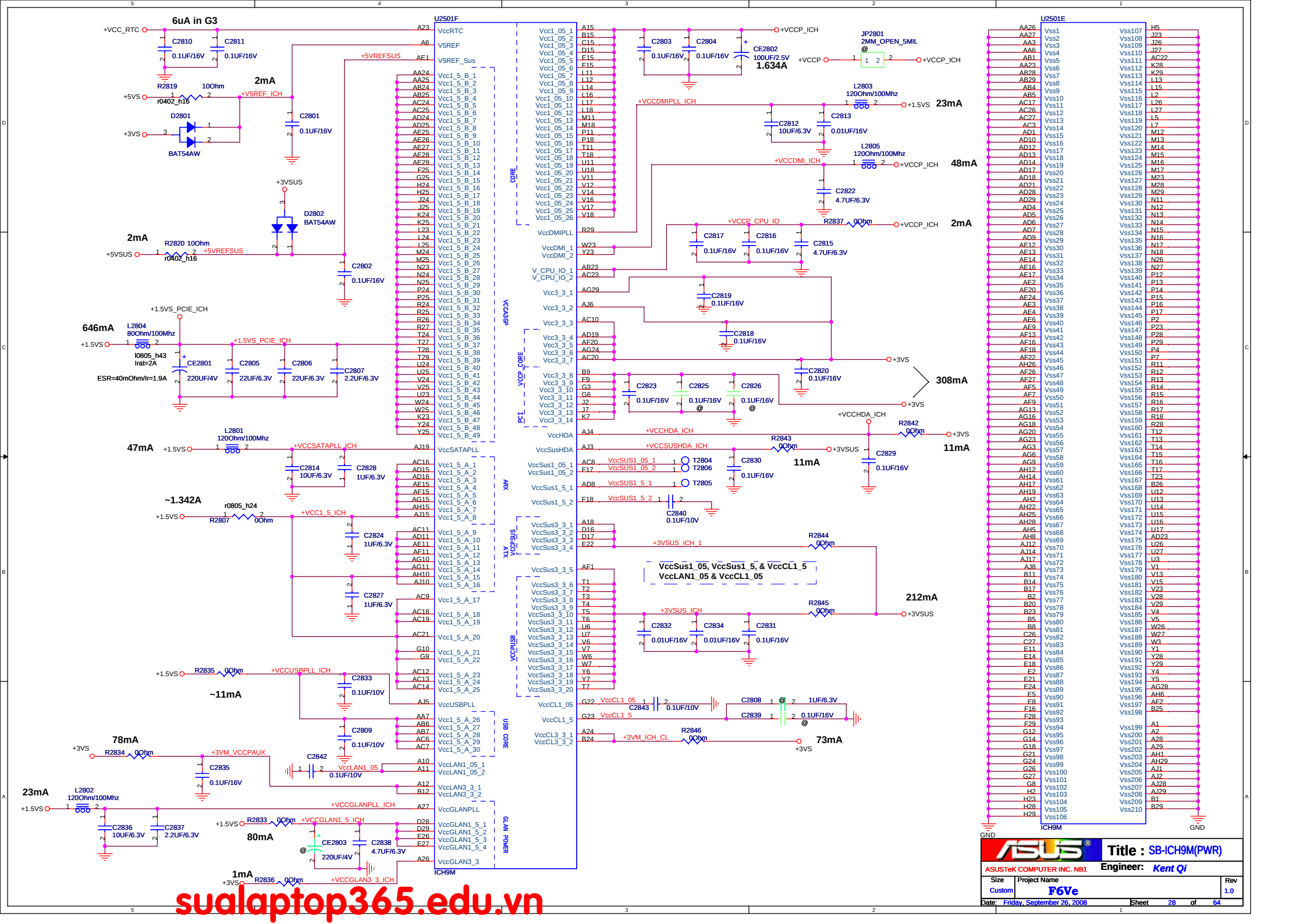
Title : SB-ICH9M(2)

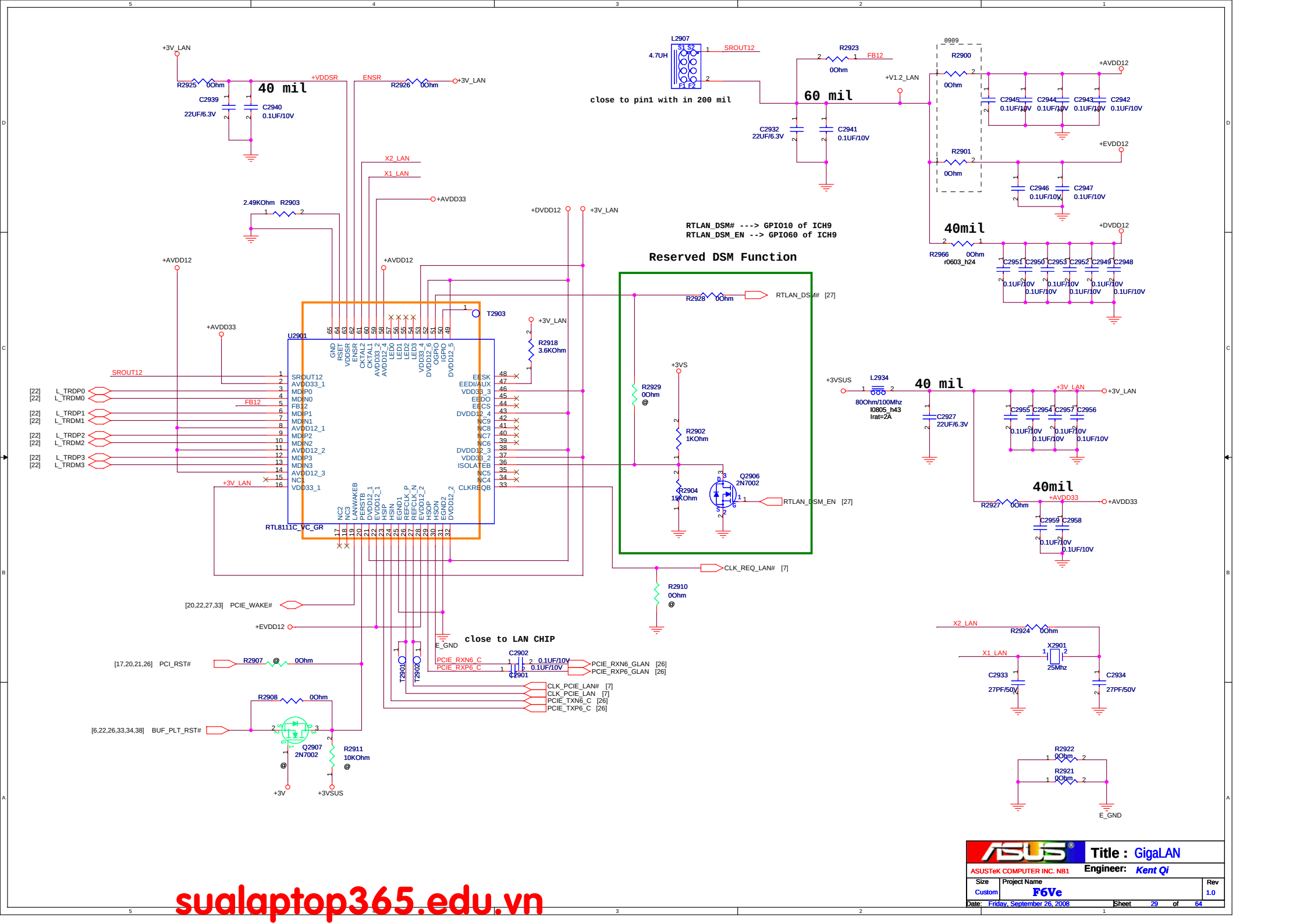
Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

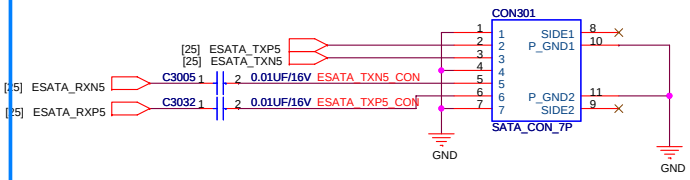
Date: Friday, September 26, 2008 Sheet 26 of 64

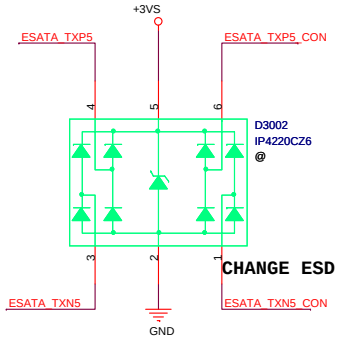



6uA in G3
U2501F
U2501E
2mA
~1.342A
~11mA
78mA
23mA
80mA
1mA
646mA
47mA
11mA
308mA
212mA
48mA
73mA
VccSus1_05, VccSus1_5, & VccCL1_5
VccLAN1_05 & VccCL1_05
ICH9M
Title : SB-ICH9M(PWR)
ASUSTeK COMPUTER INC. NB1
Engineer: Kent Qi
F6Ve
Date: Friday, September 26, 2008
Sheet 28 of 64
sualaptop365.edu.vn



P/N:12G15110007V





CHANGE ESD diode for ESATA

<Variant Name>

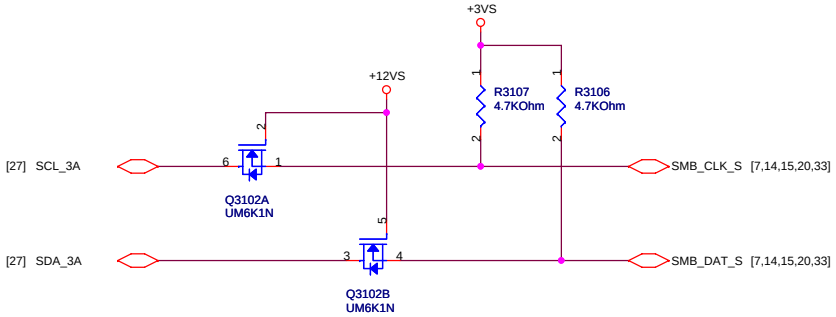
Title : ESATA

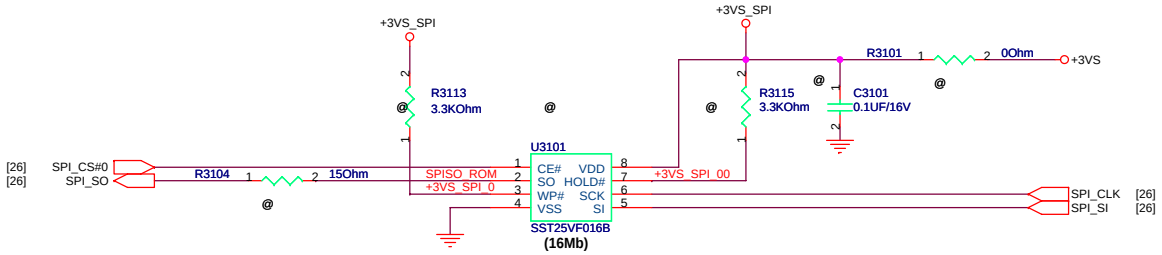
ASUSTeK COMPUTER INC

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 30 of 64





FOR iTPM

ASUSTeK COMPUTER INC. NB1	Title : ICH9M-Other	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 31 of 64	

<Variant Name>

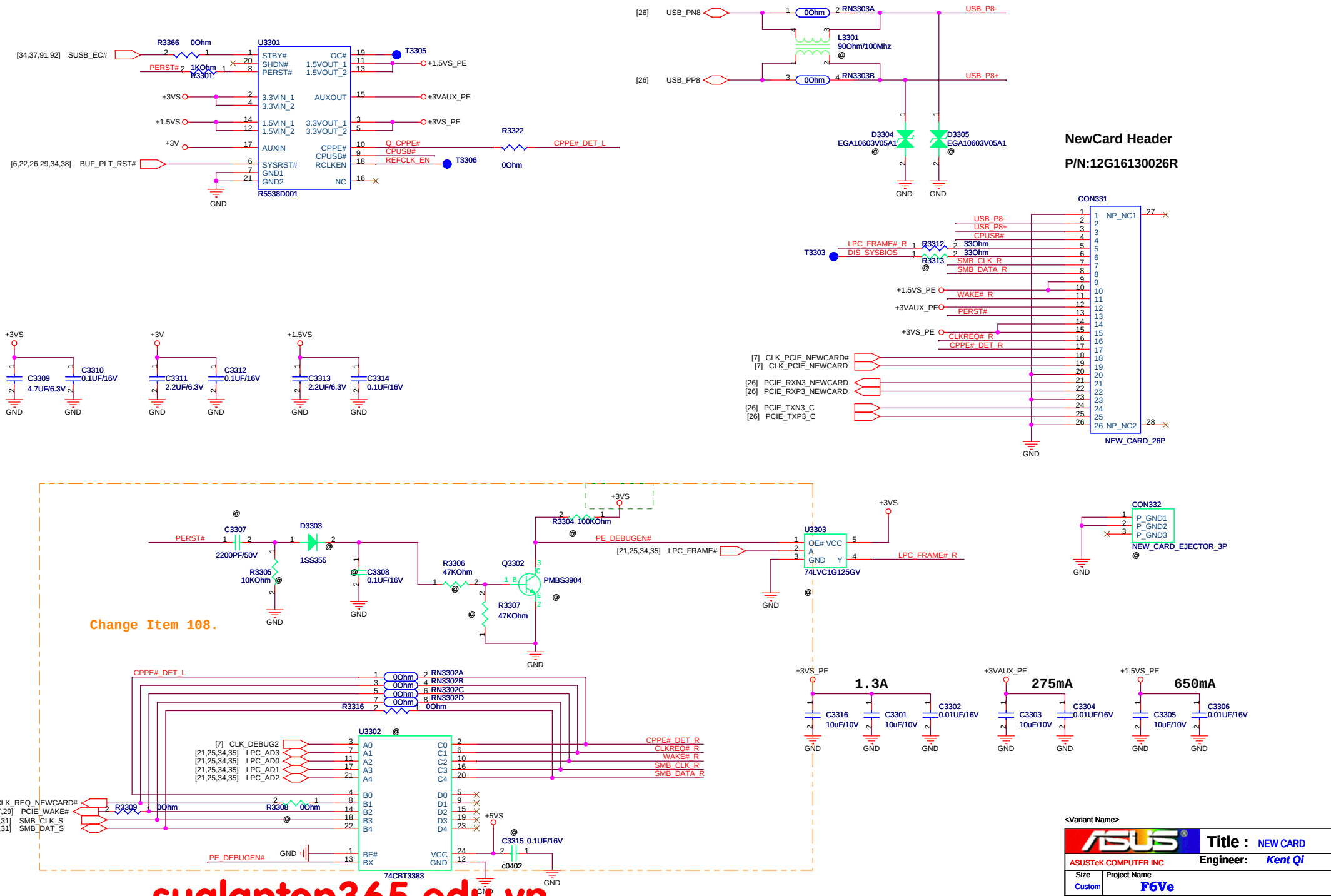
Title : EMPTY

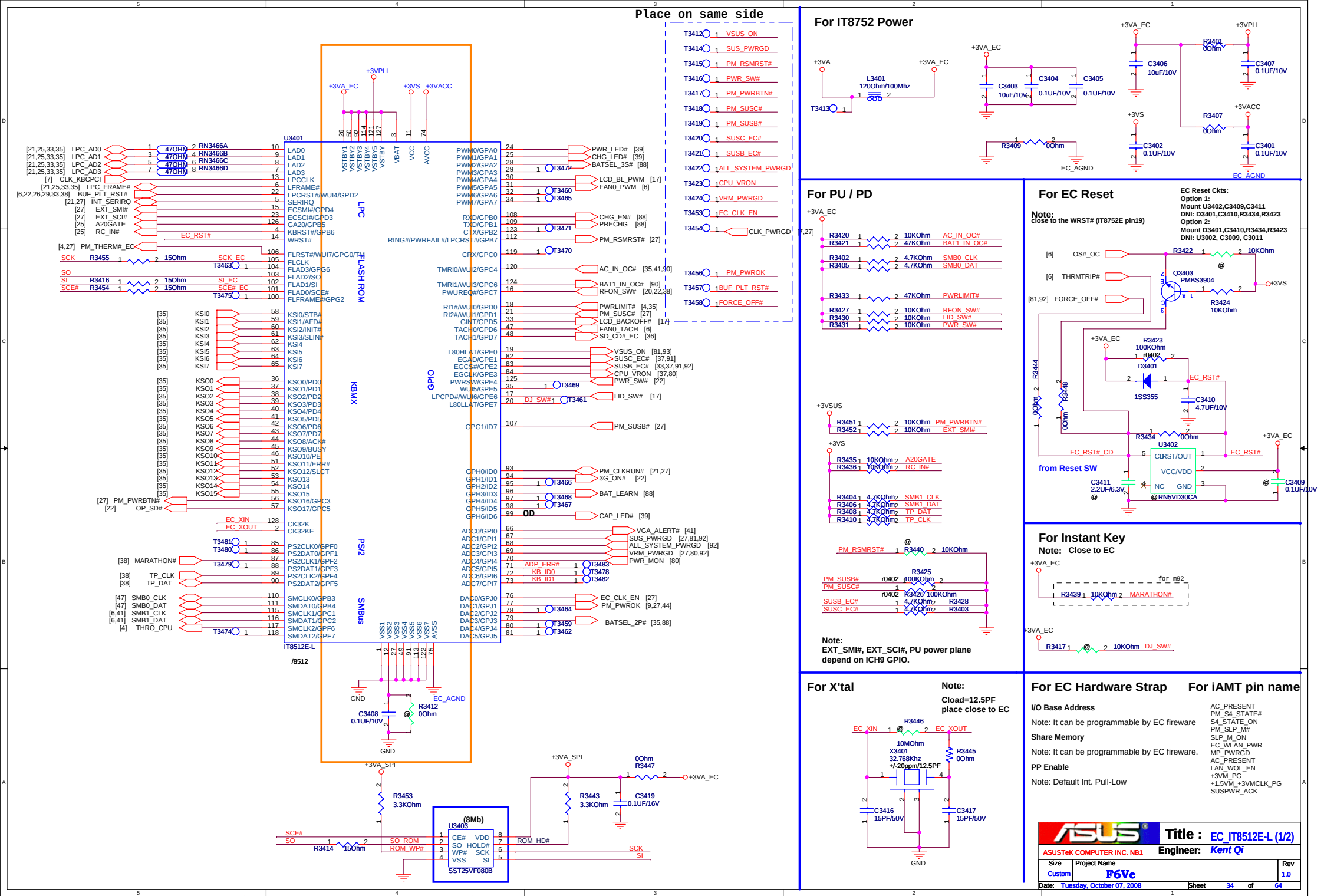
ASUSTeK COMPUTER INC

Engineer:

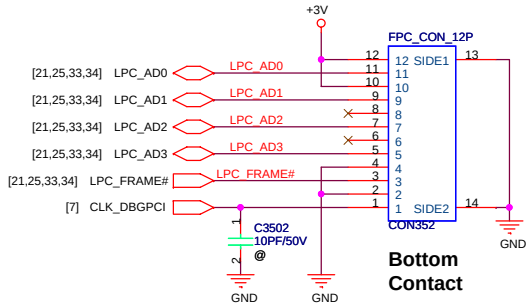
Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 32 of 64

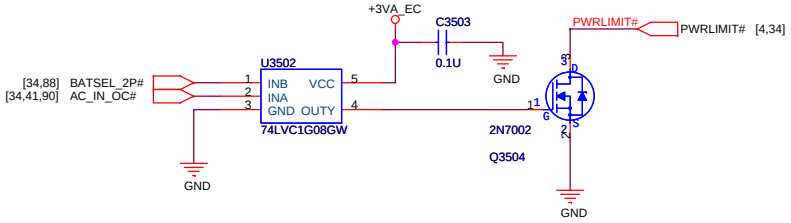




For Debug

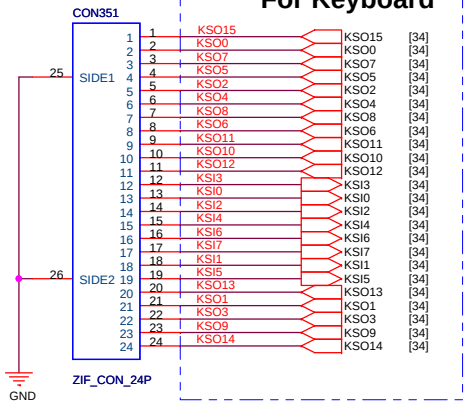


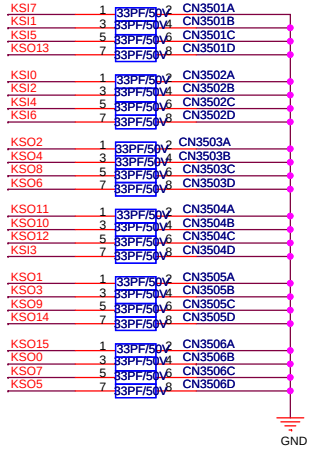
PWRLMT Circuit: For Battery 1P



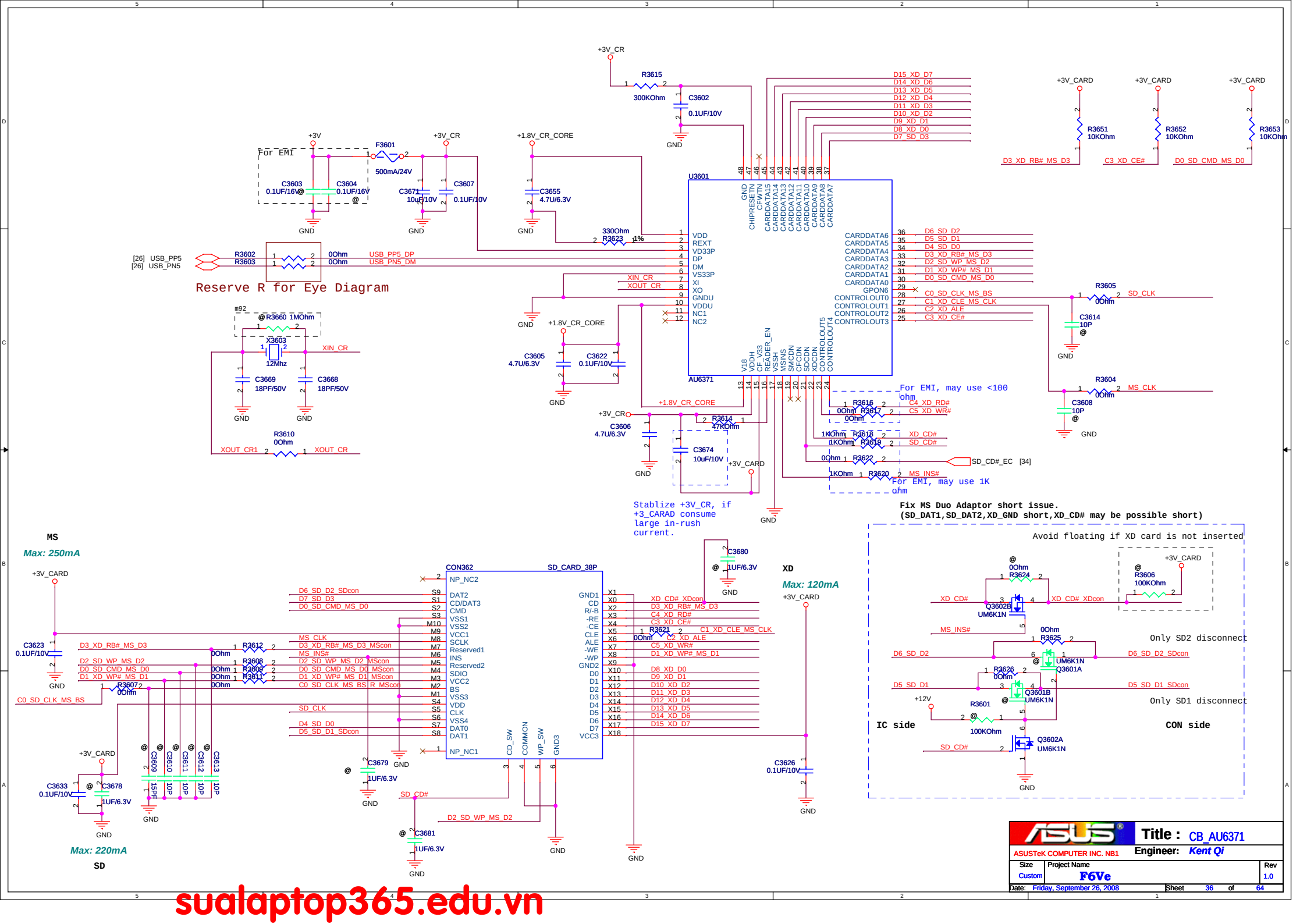
P/N:12G182402404

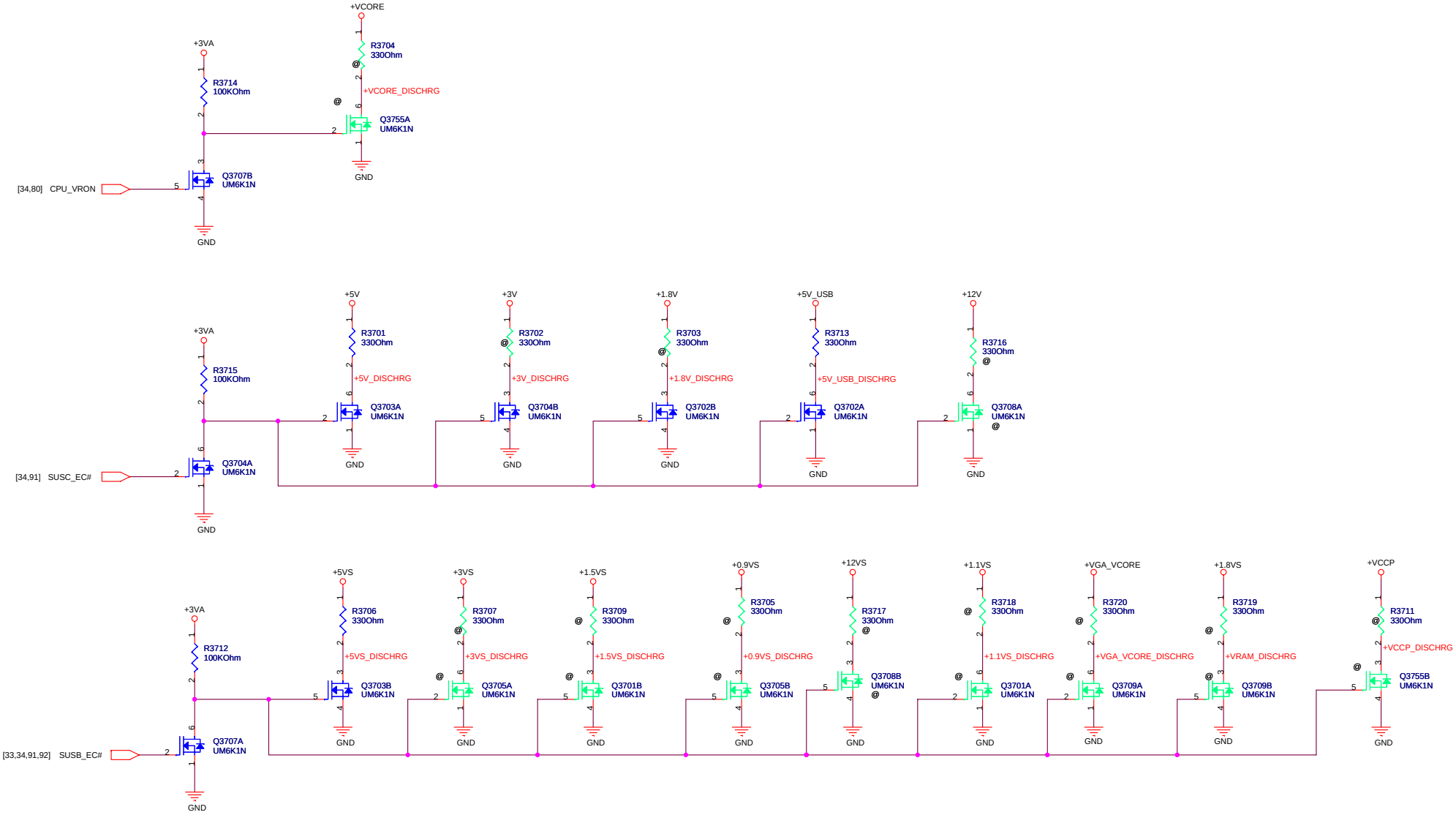
For Keyboard





ASUSTeK COMPUTER INC. NB1	Title : EC_IT8752 (2/2)	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 35 of 64	





<Variant Name>

ASUSTeK COMPUTER INC

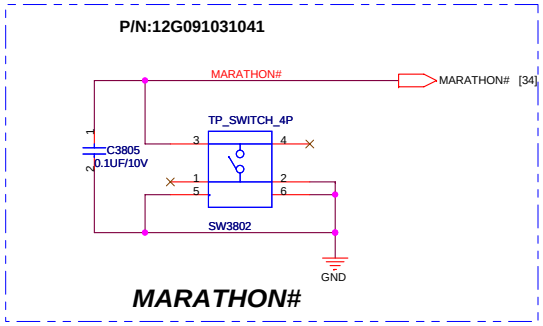
Title : DISCHARGE

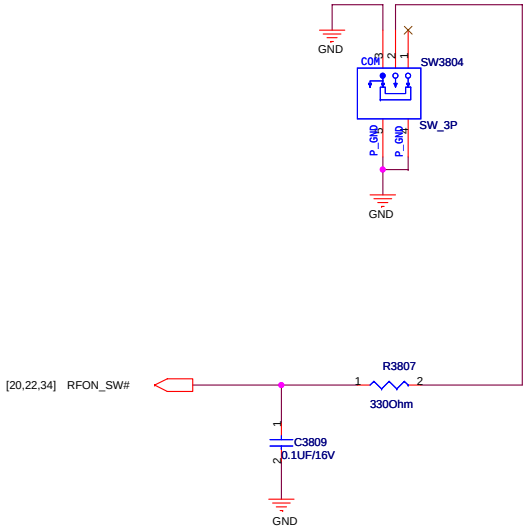
Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

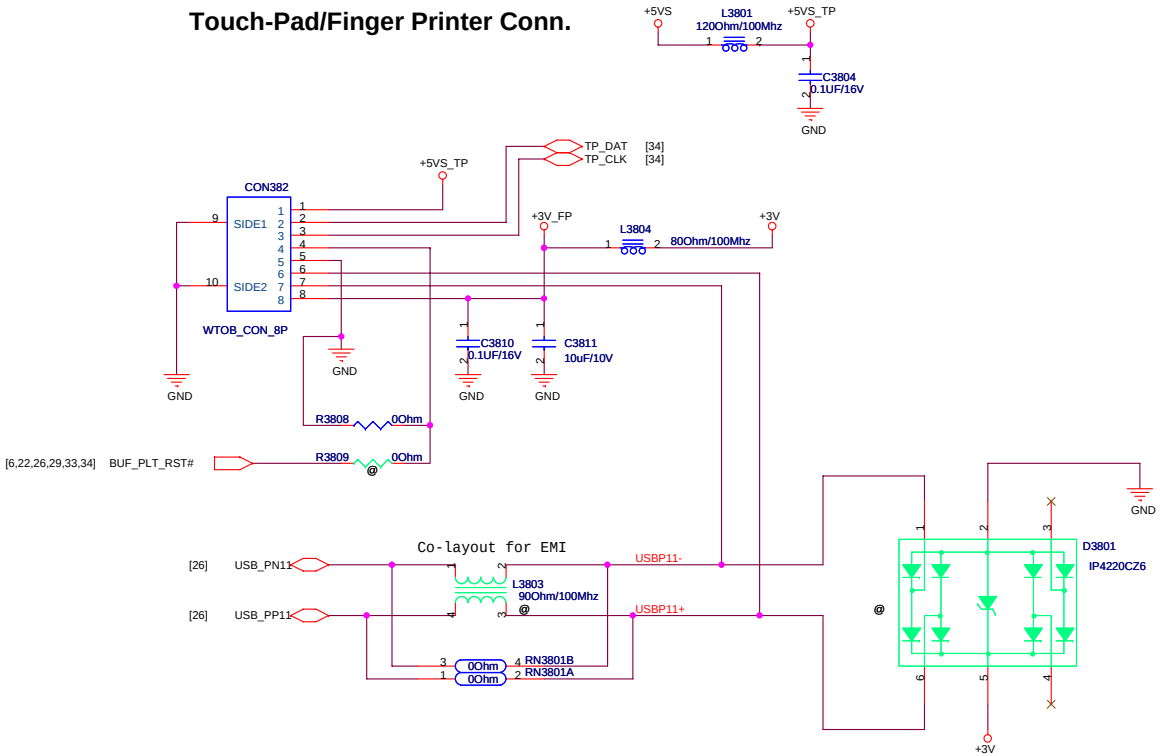
Date: Friday, September 26, 2008 Sheet 37 of 64

BT/WLAN SW





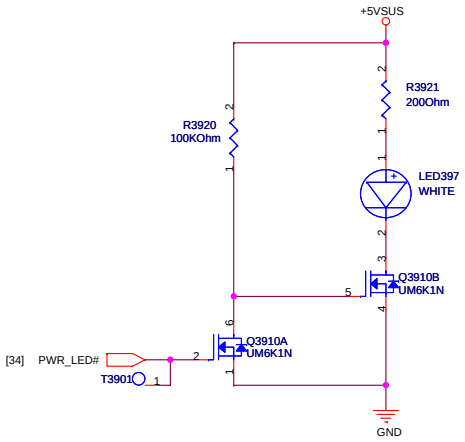
Touch-Pad/Finger Printer Conn.



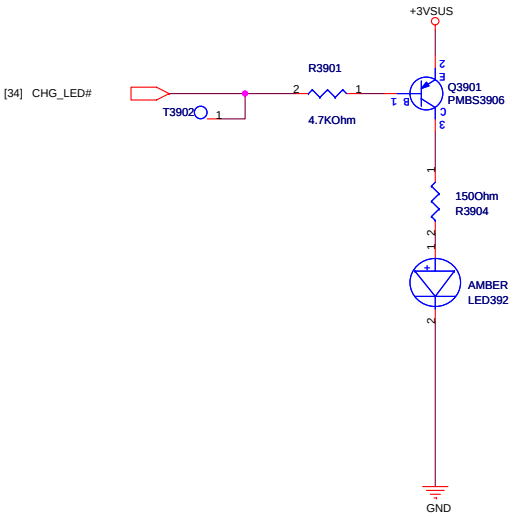
<Variant Name>

ASUSTeK COMPUTER INC	Title : KEY & LED	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 38 of 64	

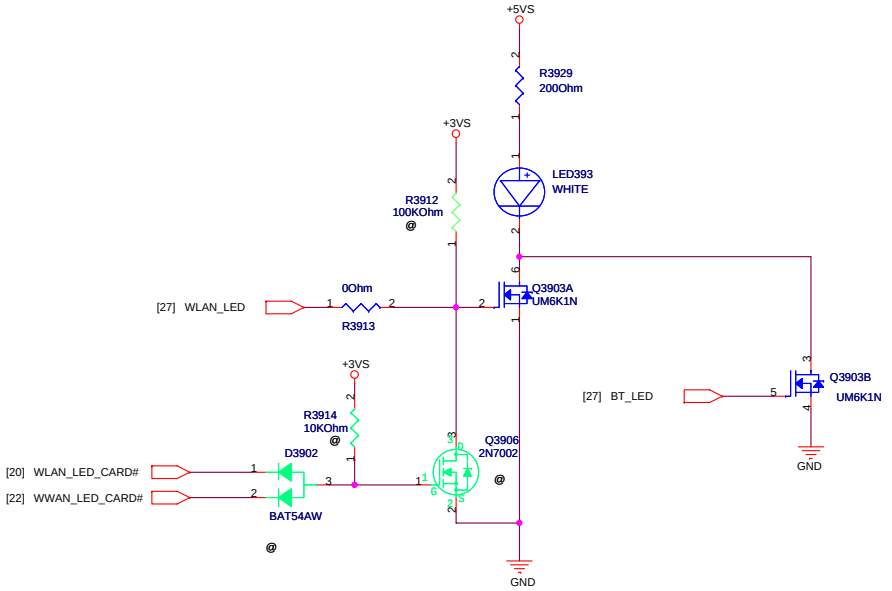
PWR LED



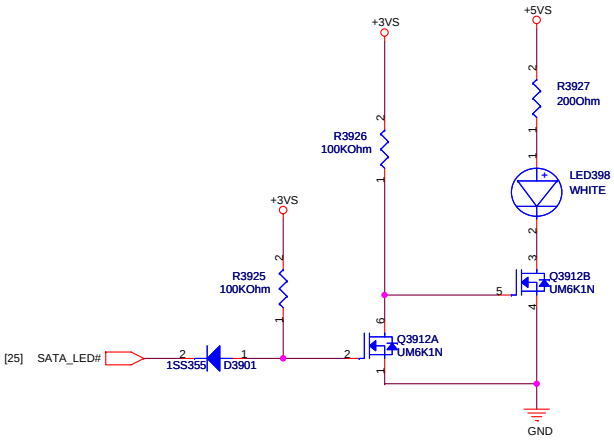
BATTERY LED



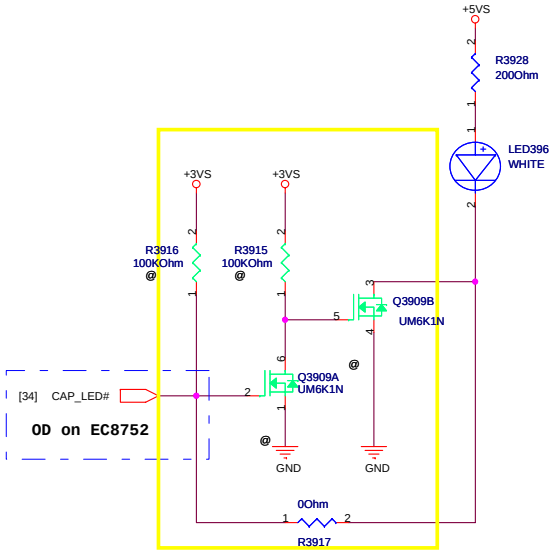
WireLess/BT LED



SATA LED



Cap. Lock



<Variant Name>

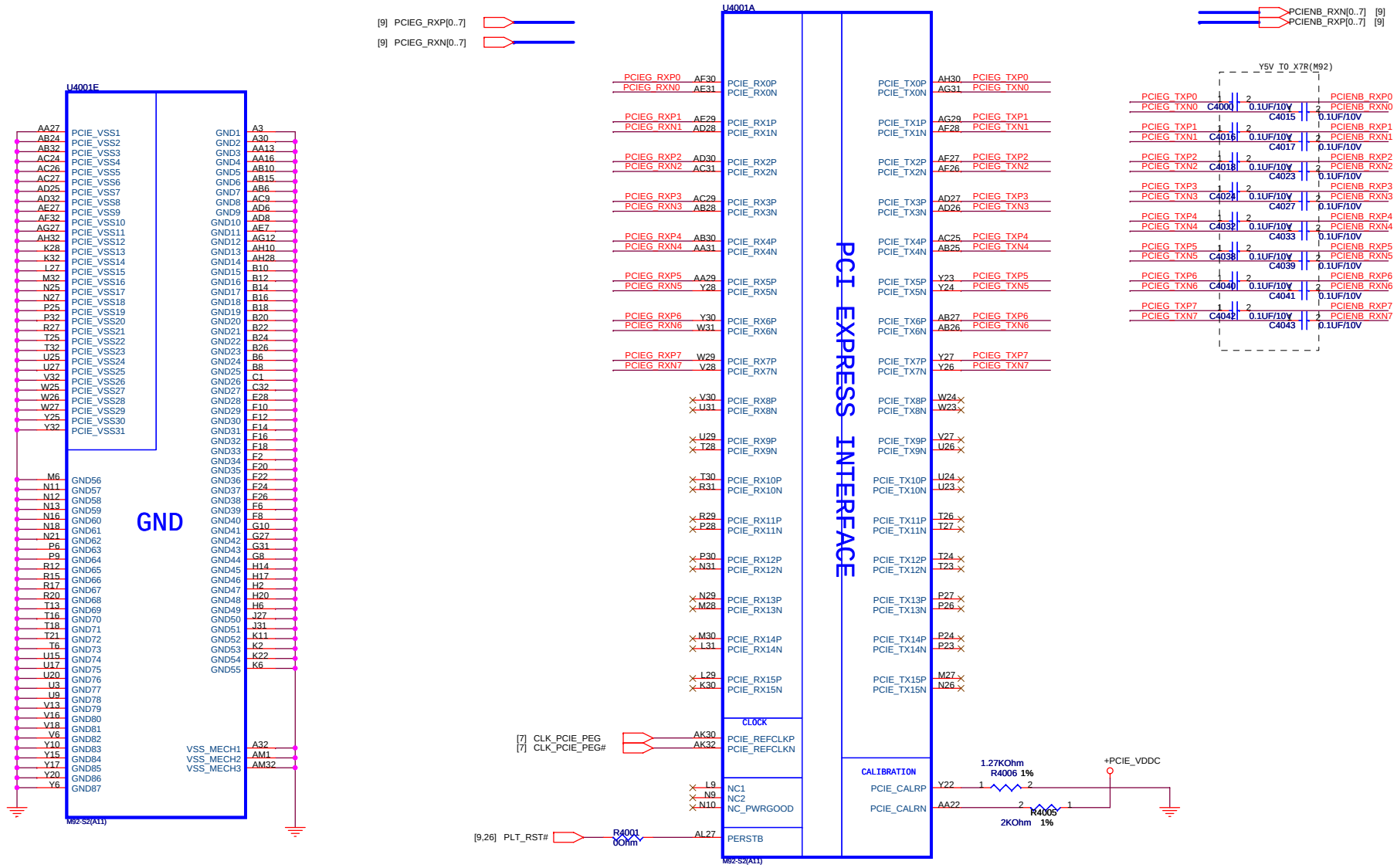
Title : LEDs

ASUSTeK COMPUTER INC

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 39 of 64



<Variant Name>

Title : M92S2-PCIE(1)

ASUSTeK COMPUTER INC

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 40 of 64

Close to U4001

37.5 ohm

55 ohm

CRT_M92_RED_S — @ JP4101 SHORT_PIN — CRT_RED [18]

CRT_M92_GREEN_S — @ JP4102 SHORT_PIN — 150Ohm R4170 1% — CRT_GREEN [18]

CRT_M92_BLUE_S — @ JP4103 SHORT_PIN — 150Ohm R4171 1% — CRT_BLUE [18]

150Ohm R4172 1% — GND

VRAM SIZE

+3VSG_DELAY

R4125 10KOhm r0402 — R4133 10KOhm r0402 @ — R4131 10KOhm r0402

VGA_GPIO13
VGA_GPIO12
VGA_GPIO11

R4132 10KOhm r0402 — R4126 10KOhm r0402 — R4169 10KOhm r0402

GND

GPIO[13:11] = 001, 256M memory aperture(default)
GPIO[13:11] = 100, 512M memory aperture

Memory ID

+1.8VS — R4188 0Ohm

R4127 10KOhm r0402 @ — R4128 10KOhm r0402 @ — R4129 10KOhm r0402 @ — R4130 10KOhm r0402 @

VGAMEM_ID0 — VGAMEM_ID2
VGAMEM_ID1 — VGAMEM_ID3

R4134 10KOhm r0402 — R4135 10KOhm r0402 @ — R4136 10KOhm r0402 @ — R4137 10KOhm r0402

GND

ID 0: Qimonda 64Mx16 A Channel(512M)
ID 8: SAMSUNG 64Mx16 A Channel(512M)

GPIO[0]: Tx Power Savings Enable
0: 50% Tx output swing (INT PD)
1: full Tx output swing

GPIO[1]: Tx De-emphasis Enable
0: Tx de-emphasis disbale(INT PD)
1: Tx de-emphasis enable.

GPIO2 for PCIE 2.5G/5G select.(L:2.5G default)

GPIO6 for Power control signals
GPIO8&GPIO9 for Serial ROM

GPIO19 VGA Thermtrip out(110 degree active)

+3VSG_DELAY — m92

R4140 10KOhm VGA_GPIO
R4142 10KOhm VGA_GPIO
PCIE_GPIO2
R4143 @ 10KOhm
R4145 @ 10KOhm VGA_GPIO6
R4156 @ 10KOhm VGA_GPIO8
R4146 @ 10KOhm VGA_GPIO9
R4147 @ 10KOhm PWRCNTL_0
R4148 @ 10KOhm PWRCNTL_1
R4149 @ 10KOhm VGA_GPIO19
R4158 @ 10KOhm GPIO_TRSTB
R4161 @ 10KOhm GPIO_23_CLKREQB
0918

R4150 10KOhm VGA_BBEN
R4159 10KOhm GPIO_TRSTB
R4160 10KOhm PCIE_GPIO2
0916

GND

PWRCNTL_0	PWRCNTL_1	+VGA_VCORE_O
L	L	1.20V
H	L	1.10V
L	H	1.00V
H	H	0.90V

[17] EDID_CLK — +3VSG — 2.2KOhm R4115 — R1 SCL
[17] EDID_DAT — +3VSG — 2.2KOhm R4116 — R3 SDA

[47] L_BKLTEN_V — R4153 0Ohm

[85,92] VGA_PWRGD
[85] PWRCNTL_0
[7] ATI27M_SSC
VGA_ALERT# — @ 0Ohm — VGA_THERM# — @ 0Ohm — VGA_TEMP_FAIL#
R4120 — LVGA_GPIO19
[85] PWRCNTL_1
[44] VGA_BBEN — VGA_BBEN — R4119

T4131 INT_PD

T4136 GPIO_TDI
T4137 GPIO_TCK
T4138 GPIO_TMS
T4139 GPIO_TDO

GND — 1KOhm R4151

T4141 GEN_B INT_PD
T4143 GEN_D_HPD4
[19] HDMI_HP

+1.8VS — R4152 499Ohm 1% r0402 — VGA_VREFG — R4154 249Ohm 1% r0402 — C4103 0.1UF/16V c0402 — GND

+DPLL_PVDD — GND — R4155 1% — +DPLL_VDDC 150Ohm 1% — R4196 121Ohm — [7] ATI27M_NOSSC — ATI_27M — T4146

VGA_THERM_DA — T4
VGA_THERM_DC — T2
+TSVDD — R5 — AD17 — AC17 — GND

U4001B

MUTI GFX

DPA
TXCAP_DPA3P — AF2
TXCAM_DPA3N — AF4
TX0P_DPA2P — AG3
TX0M_DPA2N — AG5
TX1P_DPA1P — AH3
TX1M_DPA1N — AH1
TX2P_DPA0P — AK3
TX2M_DPA0N — AK1

DPB
TXCBP_DPB3P — AK5
TXCBM_DPB3N — AM3
TX3P_DPB2P — AK6
TX3M_DPB2N — AM5
TX4P_DPB1P — AJ7
TX4M_DPB1N — AH6
TX5P_DPB0P — AK8
TX5M_DPB0N — AL7

DVPCNTL_MVP_0 — AA1
DVPCNTL_MVP_1 — Y4
DVPCNTL_0 — AC7
DVPCNTL_1 — Y2
DVPCNTL_2 — U5
DVPCLK — U1
DVPDATA_0 — Y1
DVPDATA_1 — V2
DVPDATA_2 — Y3
DVPDATA_3 — V4
DVPDATA_4 — AB7
DVPDATA_5 — W1
DVPDATA_6 — AB8
DVPDATA_7 — W3
DVPDATA_8 — AB9
DVPDATA_9 — W5
DVPDATA_10 — AC6
DVPDATA_11 — W6
DVPDATA_12 — AD7
DVPDATA_13 — AA3
DVPDATA_14 — AC8
DVPDATA_15 — AA5
DVPDATA_16 — AE8
DVPDATA_17 — AA6
DVPDATA_18 — AE9
DVPDATA_19 — AB4
DVPDATA_20 — AD9
DVPDATA_21 — AB2
DVPDATA_22 — AC10
DVPDATA_23 — AC5

T4105 T4106 T4103 T4107 T4104 T4108

T4110 PANEL_ID0
T4111 PANEL_ID1

0908
VGAMEM_ID0
VGAMEM_ID1
VGAMEM_ID2
VGAMEM_ID3

I2C
SCL
SDA

GENERAL PURPOSE I/O
GPIO_0 — U6
GPIO_1 — U10
GPIO_2 — T10
GPIO_3_SMBDATA — U8
GPIO_4_SMBCLK — U7
GPIO_5_AC_BATT — T9
GPIO_6 — T8
GPIO_7_BLON — T7
GPIO_8_ROMSO — P10
GPIO_9_ROMSI — P4
GPIO_10_ROMSCK — P2
GPIO_11 — N6
GPIO_12 — N5
GPIO_13 — N3
GPIO_14_HPD2 — Y9
GPIO_15_PWRCNTL_0 — N1
GPIO_16_SSIN — M4
GPIO_17_THERMAL_INT — R6
GPIO_18_HPD3 — W10
GPIO_19_CTF — M2
GPIO_20_PWRCNTL_1 — P8
GPIO_21_BB_EN — P7
GPIO_22_ROMCSB — N8
GPIO_23_CLKREQB — N7
GPIO_29_DRM_0 — T11
GPIO_30_DRM_1 — R11
GPIO_TRSTB — L6
JTAG_TRSTB — L5
JTAG_TDI — L3
JTAG_TCK — L1
JTAG_TMS — K4
JTAG_TDO — AF24
TESTEN — AB13
GENERICA — W8
GENERICB — W9
GENERICC — W7
GENERICD — AD10
GENERICE_HPD4 — AC14
HPD1

VREFG — AC16

PLL/CLOCK
DPLL_PVDD — AF14
DPLL_PVSS — AE14
DPLL_VDDC — AD14
XTALIN — AM28
XTALOUT — AK28

THERMAL
DPLUS — T4
DMINUS — T2
TS_FDO — R5
TSVDD — AD17
TSVSS — AC17

DAC1
R — AM26 CRT_M92_RED_S — R4103 0Ohm — GND
RB
G — AL25 CRT_M92_GREEN_S — R4104 0Ohm — GND
GB
B — AH24 CRT_M92_BLUE_S — R4105 0Ohm — GND
BB
HSYNC — AH26 — CRT_HSYNC [18] — 10KOhm @ R4110 — +3VSG_DELAY
VSYNC — AJ27 — CRT_VSYNC [18] — 10KOhm R4108
RSET — AD22 — DAC_RSET — R4109 1% 499Ohm — GND
AVDD — AG24 — +1.8VS_AVDD — GND
AVSSQ — AE22
VDD1DI — AE23 — +1.8VS_VDD1DI — GND
VSS1DI — AD23

DAC2
R2 — AM12
R2B — AK13
G2 — AL11
G2B — AJ11
B2 — AK10
B2B — AL9
C — AH12
Y — AM10
COMP — AJ9
H2SYNC — AL13 — 10KOhm @ R4112 — +3VSG_DELAY
V2SYNC — AJ13
VDD2DI — AD19 — +1.8VS_VDD2DI — GND
VSS2DI — AC19
A2VDD — AE20 — +3VSG_A2VDD
A2VDDQ — AE17 — +1.8VS_A2VDDQ
A2VSSQ — AE19 — GND
R2SET — AG13 — R4111 1% 715Ohm — GND

DDC/AUX
DDC1CLK — AE6 — CRT_DDC_CLK [18]
DDC1DATA — AE5 — CRT_DDC_DATA [18]
AUX1P — AD2
AUX1N — AD4
DDC2CLK — AC11 — HDMI_DDC_CLK [19]
DDC2DATA — AC13 — HDMI_DDC_DATA [19]
AUX2P — AD13
AUX2N — AD11
RSVD2 — AB22
RSVD3 — AC22
DDCCLK_AUX5P — AE16
DDCDATA_AUX5N — AD16
DDC5CLK — AC1
DDC5DATA — AC3
NC_DDCCLK_AUX7P — AD20
NC_DDCDATA_AUX7N — AC20

M92-S0(A11)

Shunt R 180ohm for M7X

HSYNC	VSYNC	Function
L	L	No audio Function
L	H	Displayport and HDMI if adapter is detected
H	L	Displayport only
H	H	Both Displayport and HDMI

+1.8VS — L4101 120Ohm/100Mhz — 70mA — +1.8VS_AVDD — C4145 0.1UF/10V — C4144 1UF/6.3V — C4141 10uF/10V — GND

+1.8VS_VDD2DI — R4106 0Ohm — +1.8VS_VDD1DI — L4102 120Ohm/100Mhz — 40mA — +1.8VS — C4147 0.1UF/10V — C4146 1UF/6.3V — C4142 10uF/10V — GND

+3VSG — L4103 120Ohm/100Mhz — 65mA — +3VSG_A2VDD — C4149 0.1UF/10V — C4148 1UF/6.3V — C4143 10uF/10V — GND

+1.8VS — L4104 120Ohm/100Mhz — 1mA — +1.8VS_A2VDDQ — C4152 0.1UF/10V — C4150 1UF/6.3V — C4151 10uF/10V — GND

+1.8VS — L4105 120Ohm/100Mhz — 40mA/120mA — +DPLL_PVDD — C4160 10uF/10V — C4154 1UF/6.3V — C4155 0.1UF/10V — GND

+3VSG_DELAY — R4157 10KOhm — AC_BATT_Detect — Q4103 2N7002 — [34,35,90] AC_IN_OC# — GND

+1.8VS — L4107 120Ohm/100Mhz — 20mA — +TSVDD — C4156 10uF/10V — C4175 1UF/6.3V — C4161 0.1UF/10V — GND

+1.1VS — L4108 120Ohm/100Mhz — 100mA/300mA — +DPLL_VDDC — C4153 10uF/10V — C4176 1UF/6.3V — C4164 0.1UF/10V — GND

Spread Spectrum

+3VSG — L4133 120Ohm/100Mhz — +3VS_SS — C4101 2.2UF/6.3V — C4102 0.01UF/16V — GND

R4101 0Ohm r0402 — +3VS_SS — VGA_SRS — GND — R4107 0Ohm r0402

R4114 0Ohm r0402 — U4102 P1819B_08SR — +3VS_SS

ATI27M_NOSSC — XIN XOUT — VGA_SRS — VSS VDD — ATI27M_SSC — SRS PDI# — ModOUT REF — ATI_27M

R4117 22OHM r0603_h24 — GND — R4119 121Ohm r0603_h24

+3VSG_VGTM — R4166 200 — +3VSG — C4162 0.1UF/10V — GND

VGA_THERM_DA — @ C4118 1000P — VGA_THERM_DC

not enable — [34] VGA_ALERT# — +3VSG — 4.7KOhm R4198

Slave Address:9A

U4105 G781-1 — VCC SCLK — DXP SDA — DXN ALERT# — OVERT# GND — OD

VGA_THERM_DA — VGA_THERM_DC — SMB1_CLK [6,34] — SMB1_DAT [6,34] — VGA_THERM# — R4189 4.7KOhm — +3VSG — GND

<Variant Name>

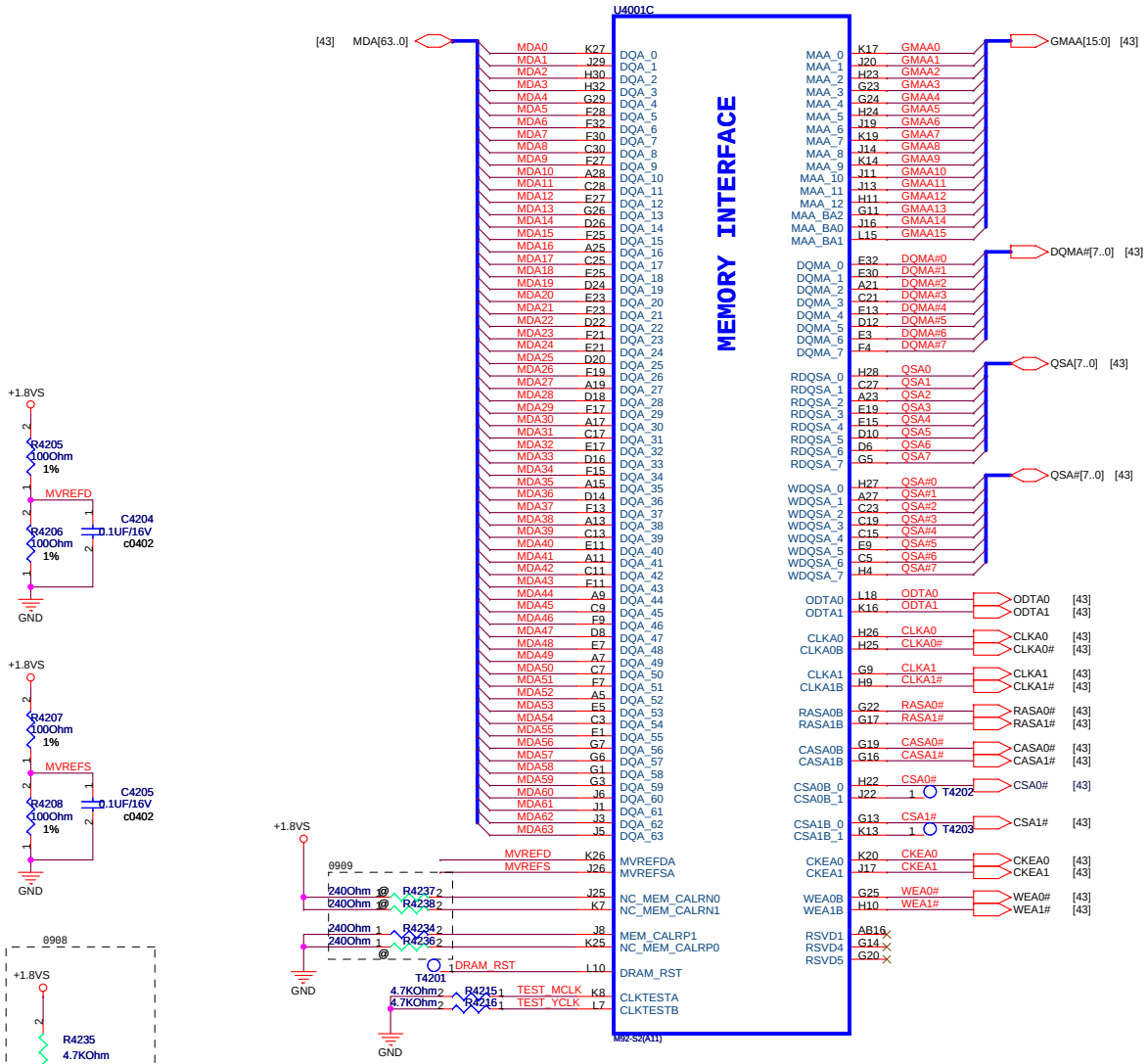
ASUSTeK COMPUTER INC

Title : M92S2-Main(2)

Engineer: Kent Qi

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 41 of 64



DRAM_RST NC for DDR2

DIVIDER RESISTORS	DDR2	DDR3
MVREF TO 1.8V	100R	40.2R
MVREF TO GND	100R	100R

<Variant Name>

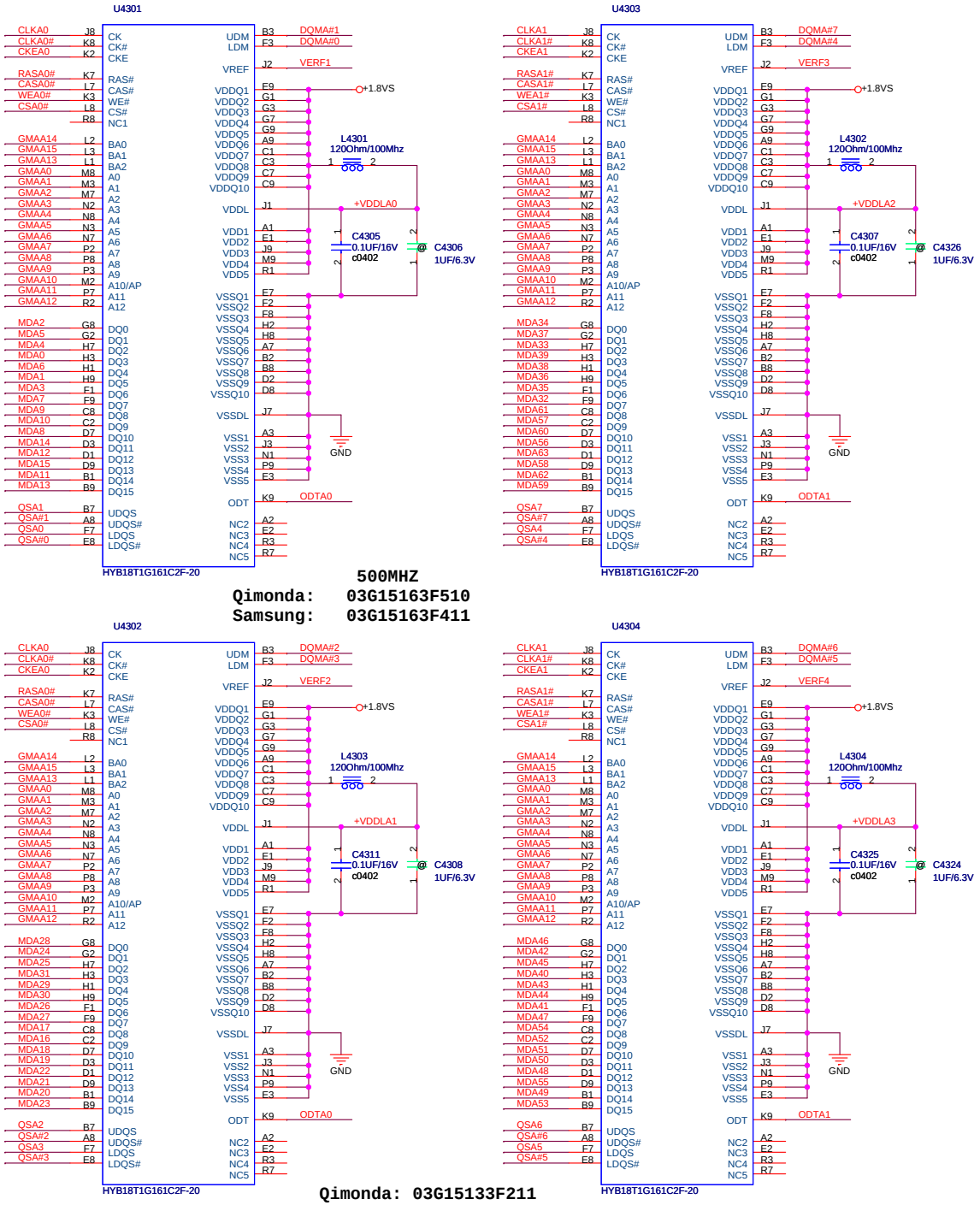
ASUSTeK COMPUTER INC

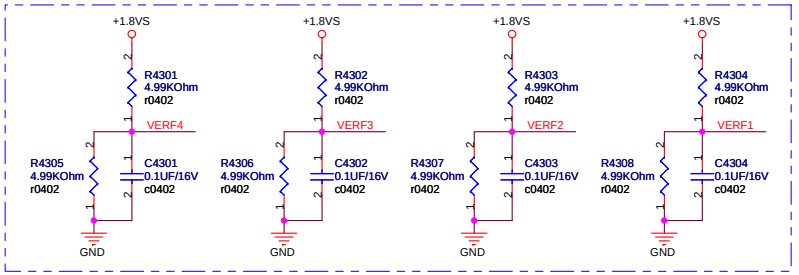
Title : M92S2-MEM CTRL(3)

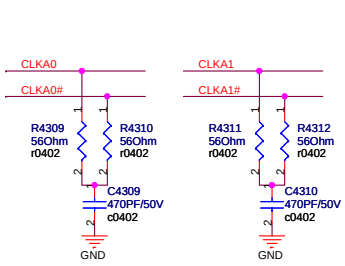
Engineer: Kent Qi

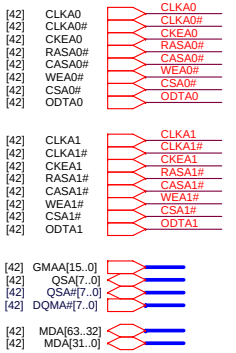
Size	Project Name	Rev
Custom	F6Ve	1.0

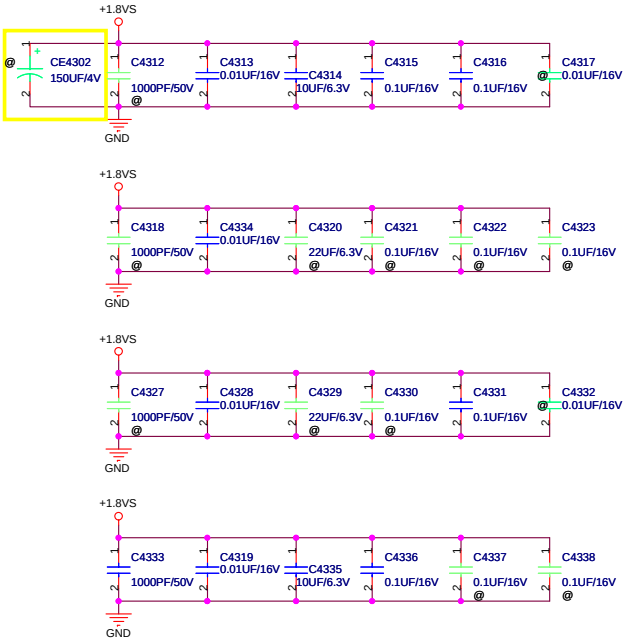
Date: Friday, September 26, 2008 Sheet 42 of 64





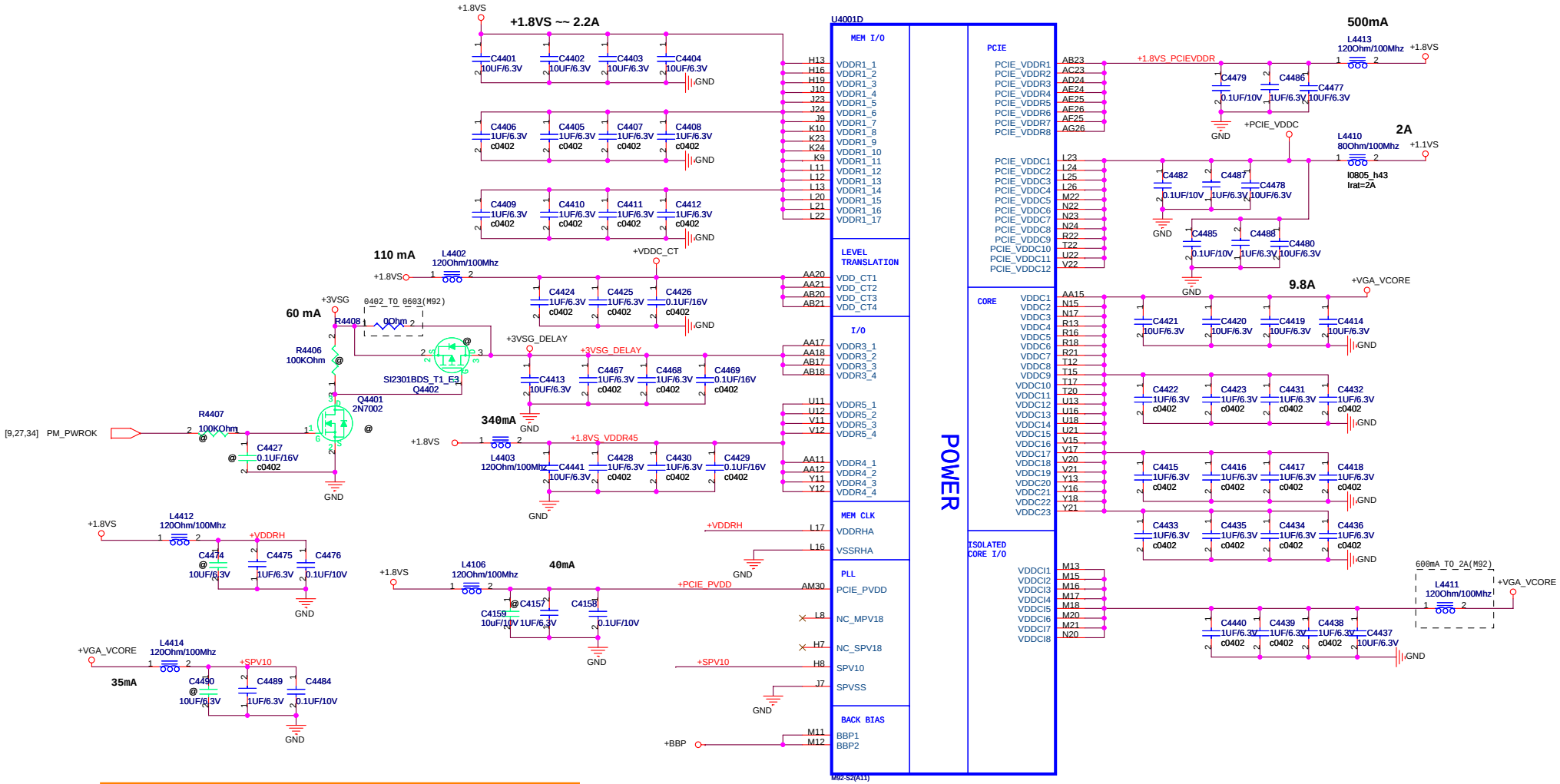


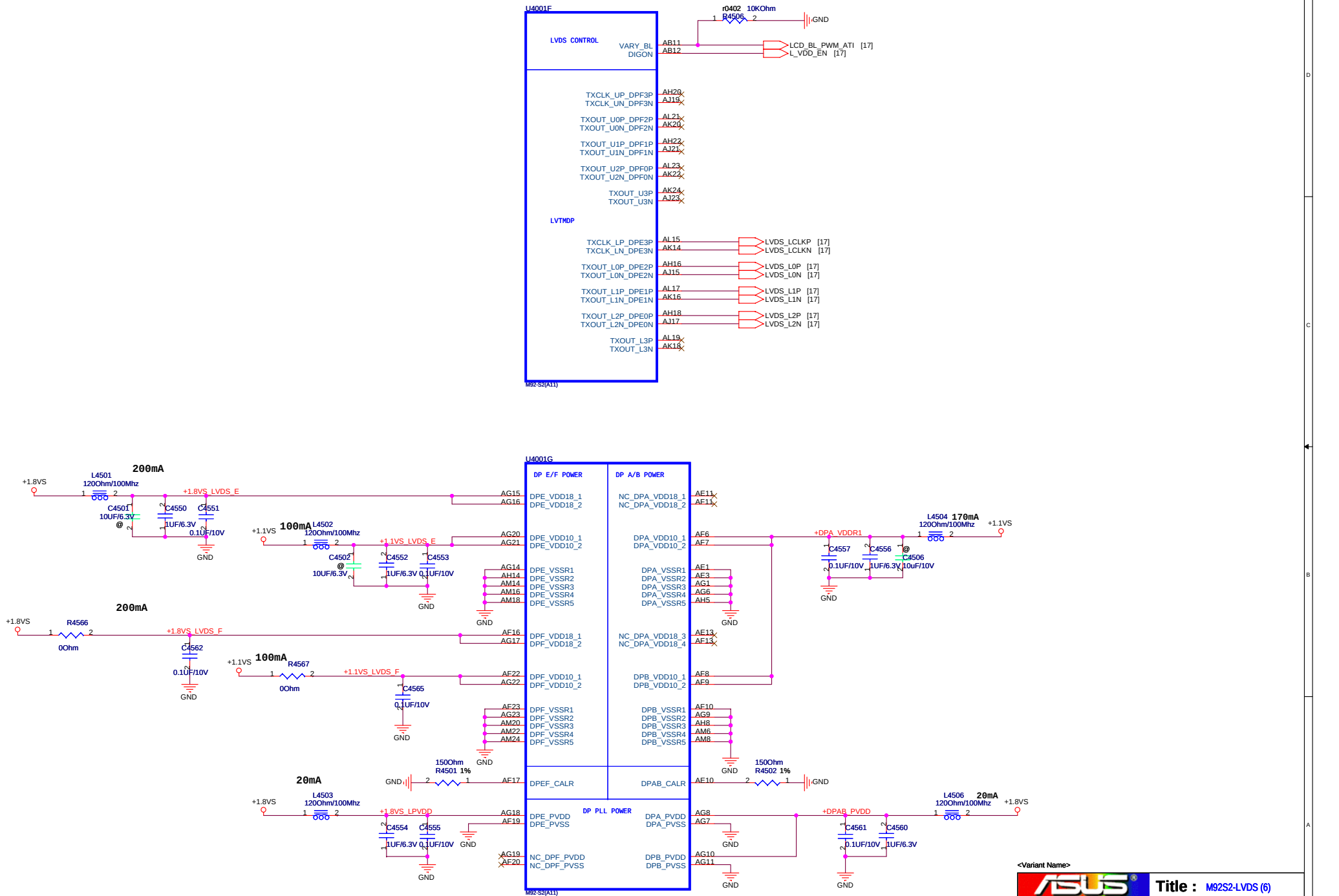


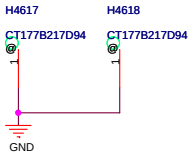


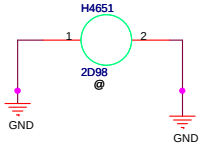
<Variant Name>

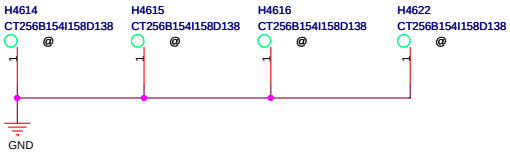
ASUSTeK COMPUTER INC	Title : M92S2-MEM VRAM(4)	
	Engineer: Kent Qi	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 43 of 64	





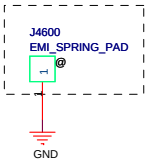


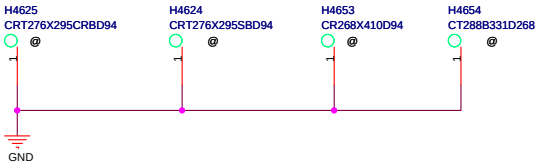


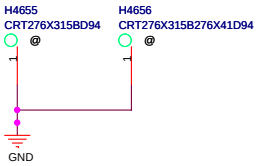


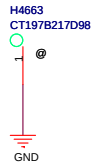
EMI SPRING

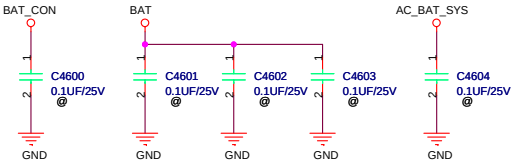
F2J SPRING(H:4.7mm)

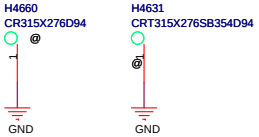


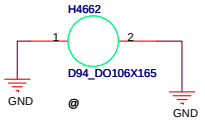


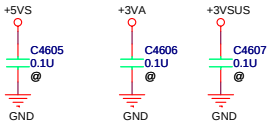


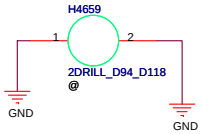


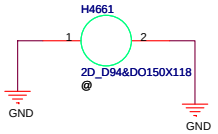


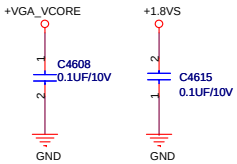


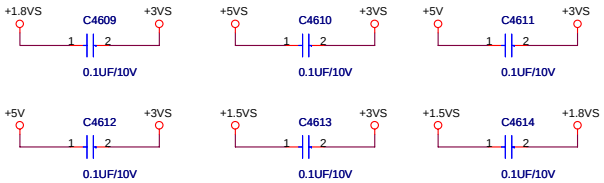












<Variant Name>

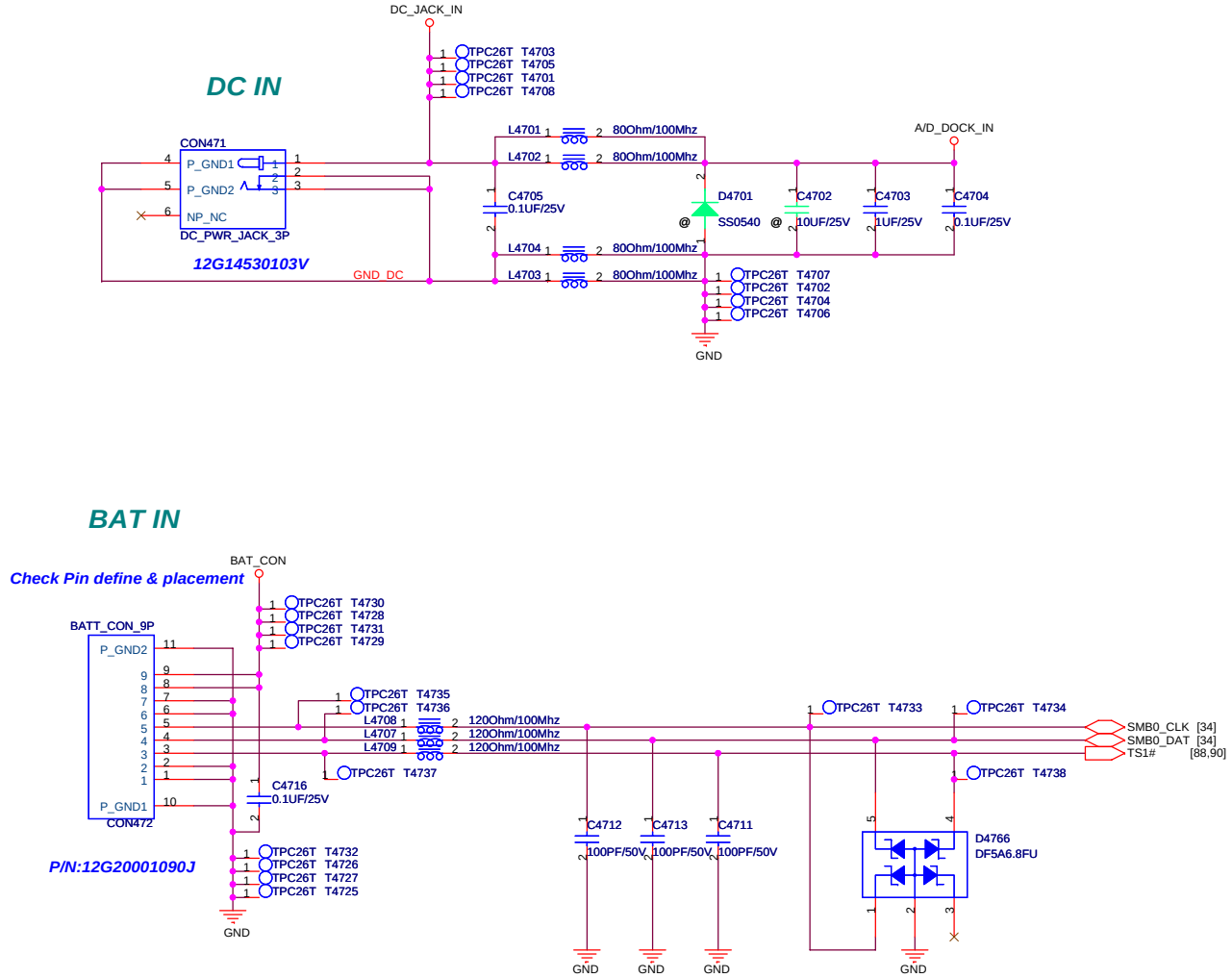
Title : SCREW HOLE

ASUSTeK COMPUTER INC

Engineer:

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 46 of 64



<Variant Name>

ASUSTeK COMPUTER INC

Title : DC & BAT IN

Engineer:

Size	Project Name	Rev
Custom	F6Ve	1.0

Date: Friday, September 26, 2008 Sheet 47 of 64

F6V-->F6Ve modify

9.1.1,Page40~45:Change GPU M82_SE to M92-S2

9.1.2,Page40:change PCIE series capacitance from Y5V to X7Y

9.1.3,Page44:change R4408 R4410 from 0402 to 0603 and change L4411 from 600mA to 2A for current

9.1.4,Page22:change R2002 from 0603 to 0805 for current

9.1.5,Page22:remove R2201 for current

9.2.1,Page36:reserved R3660 for crystal X3603

9.2.2,Page34:place R3439 for MARATHON# pull up +3VA_EC

9.2.3,Page17:remove F1702(INVERTER Pin19) for cost down

9.2.4,Page12:add R1210 and C1243 for VCCD_QDAC to 1.5VS

9.2.5,Page33:add R3309 for PCIE_WAKE

9.4.1,Page43:change same net name to divided different name, +1.8Vs_LVDS-->+1.8Vs_LVDS_E
and +1.8Vs_LVDS_F, +1.1Vs_LVDS-->+1.1Vs_LVDS_E and +1.1Vs_LVDS_F

9.4.2,Page41:change R4188 to 0603 for current

9.5.1,Page40:remove PCIE_[8..15] for layout

9.5.2,Page41:Place R4140 R4142 prevent can not link

9.5.3,Page41:reserved Q4103 R4157 for AC_BATT_Detect

9.8.1,Page41:move memory ID from DPVDATA[0..3] to DPVDATA[20..23]

9.8.2,Page41:reserved R4235 for DRAM_RST pull up

9.8.3,Page41:reserved R4120,connect GPIO_17_thermal to EC for thermal protect.

9.9.1,Page29:change L2904 L2903 to R2900 R2901

9.9.2,Page17:change R1717 from 100K to 10K,change R1718 from 1M to 10K

9.9.3,Page42:reserved R4237 R4238 for pull up NC_MEM_CALRN0 and NC_MEM_CALRN1 to +1.8VS,
reserved R4236 for pull down NC_MEM_CALRP0 to ground

9.9.4,Page17:reserved R4159 R4160 for GPIO_TRSTB and PCIE_GPIO2 pull down

9.18.1,Page41:reserved R4161 for GPIO_23_CLKREQB pull up.

ASUSTeK COMPUTER INC	Title : History(1)	
	Engineer:	
Size: Custom	Project Name: F6Ve	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 48 of 64	

<Variant Name>

Title : History(2)

ASUSTeK COMPUTER INC

Engineer:

Size	Project Name	Rev
Custom	F6Ve	1.0

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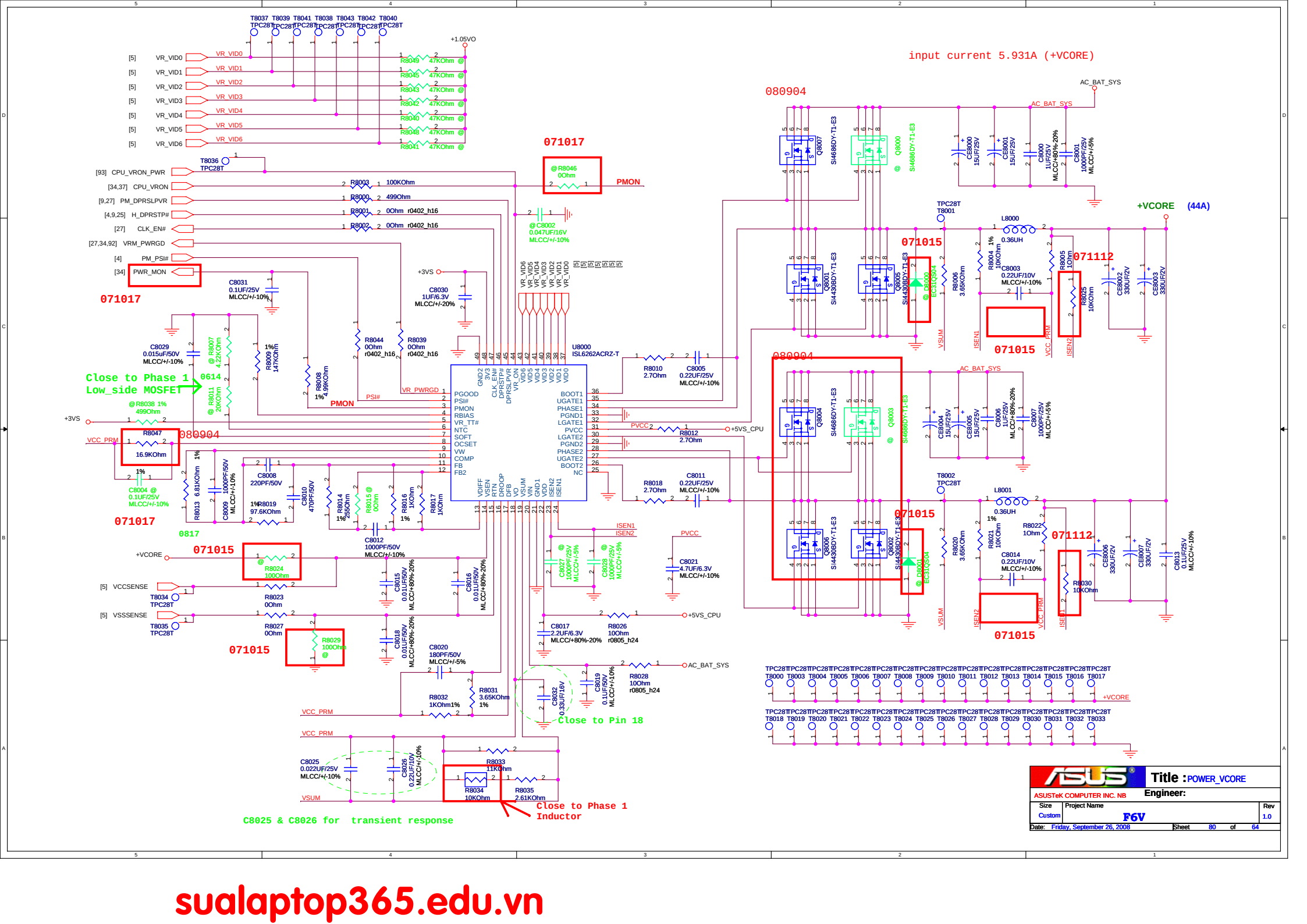

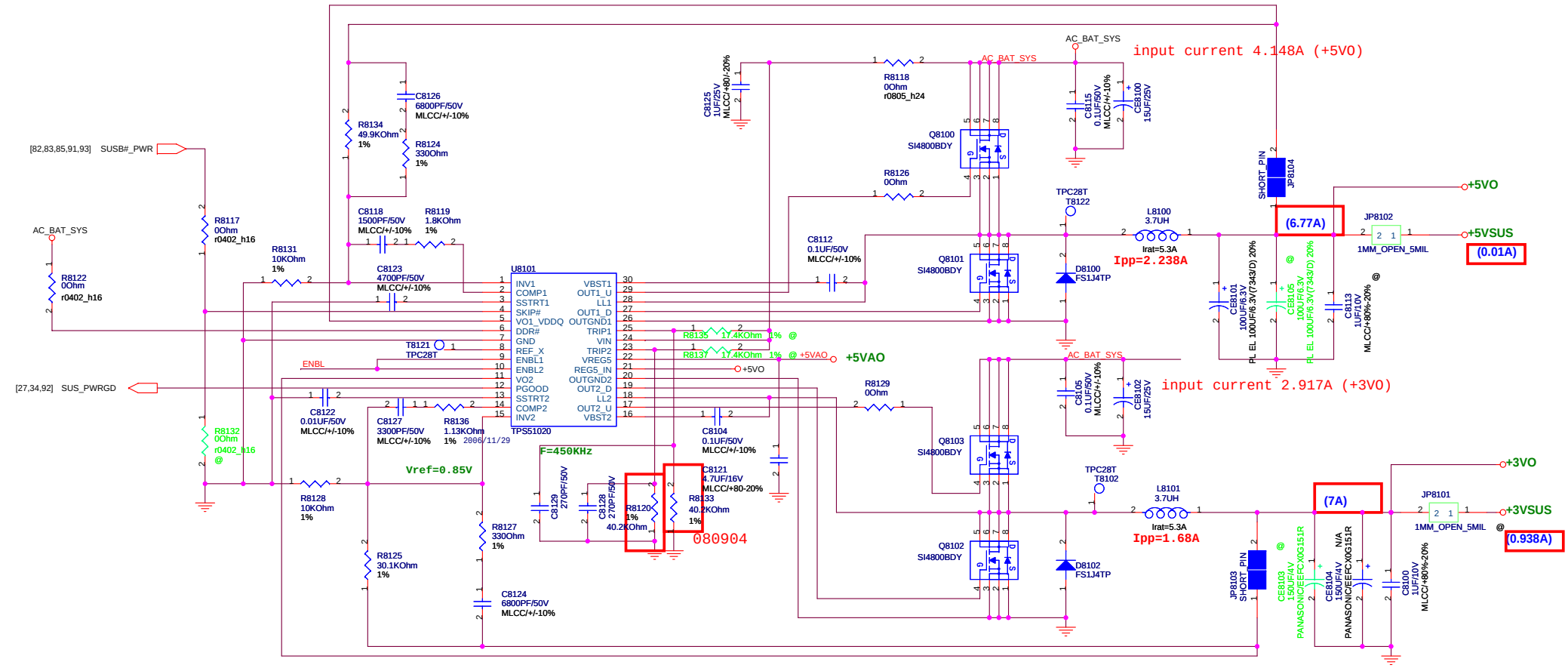

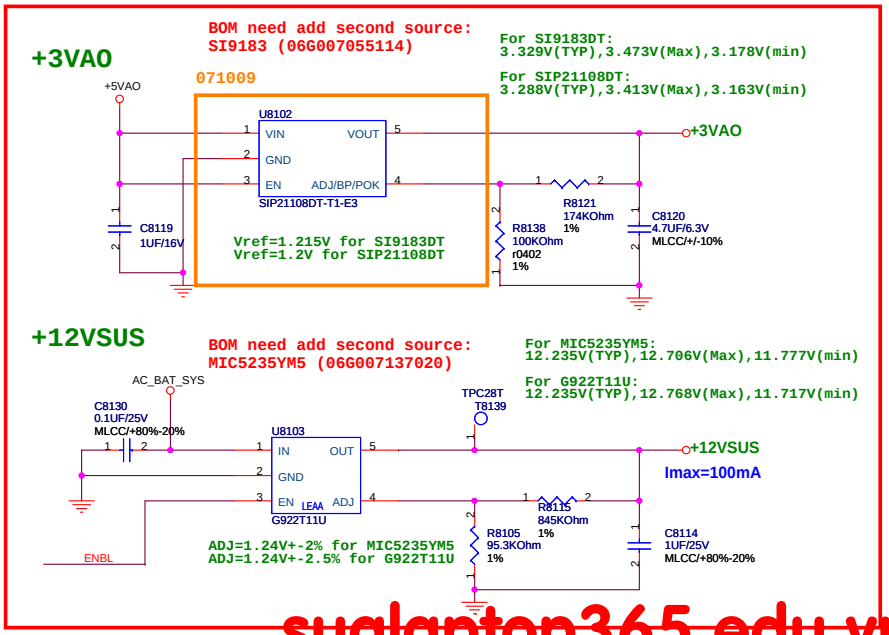

Variant Name	
Title	POWER_SYSTEM
OrgName	Engineer:
Size	Custom
Project Name	F6V
Rev	1.0
Date	Friday, September 26, 2008
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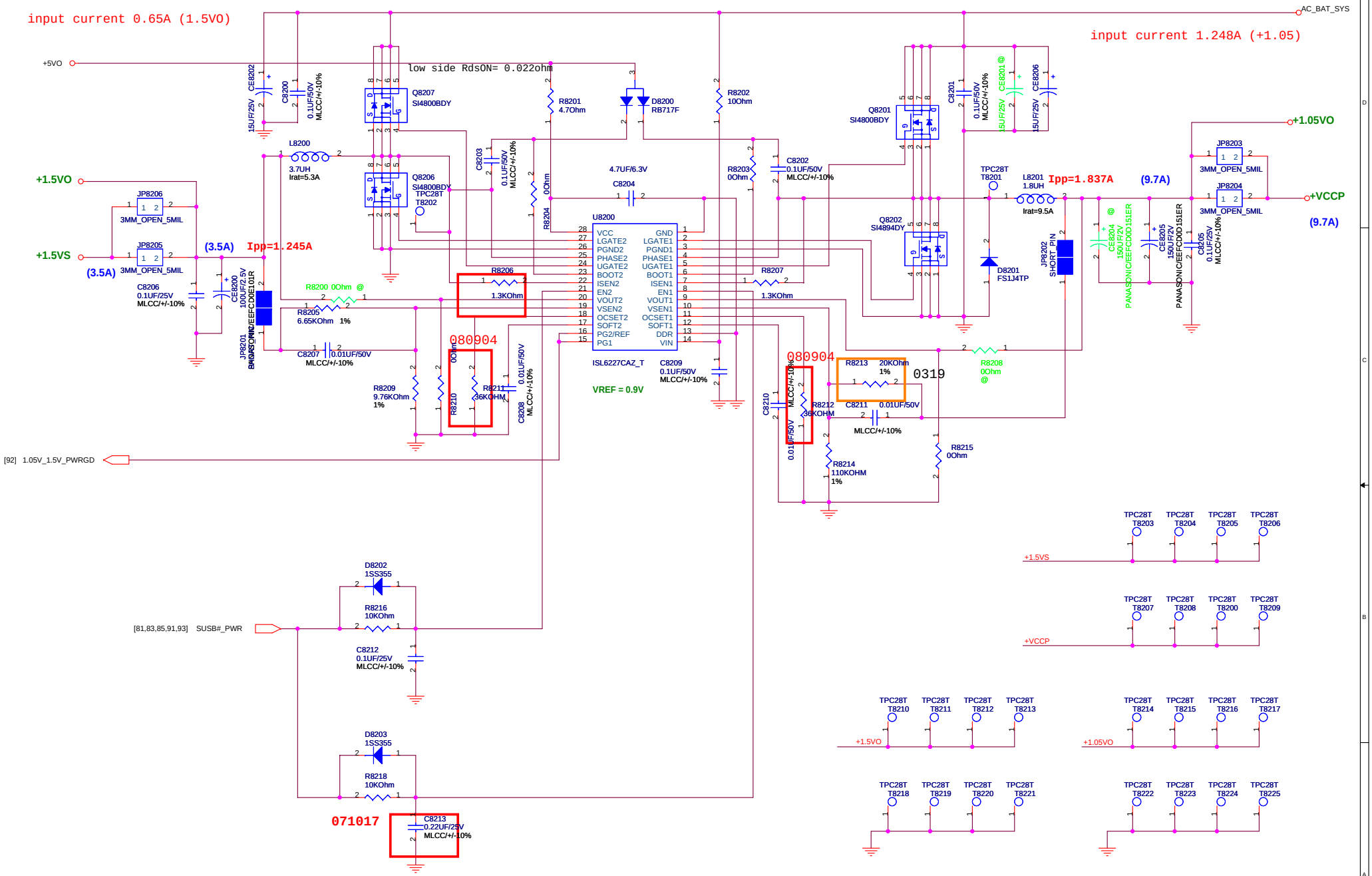

<Variant Name>

Title : POWER_I/O_1.5VS & 1.05VS

<OrgName>

Engineer:

Size	Project Name	Rev
Custom	F6V	1.0

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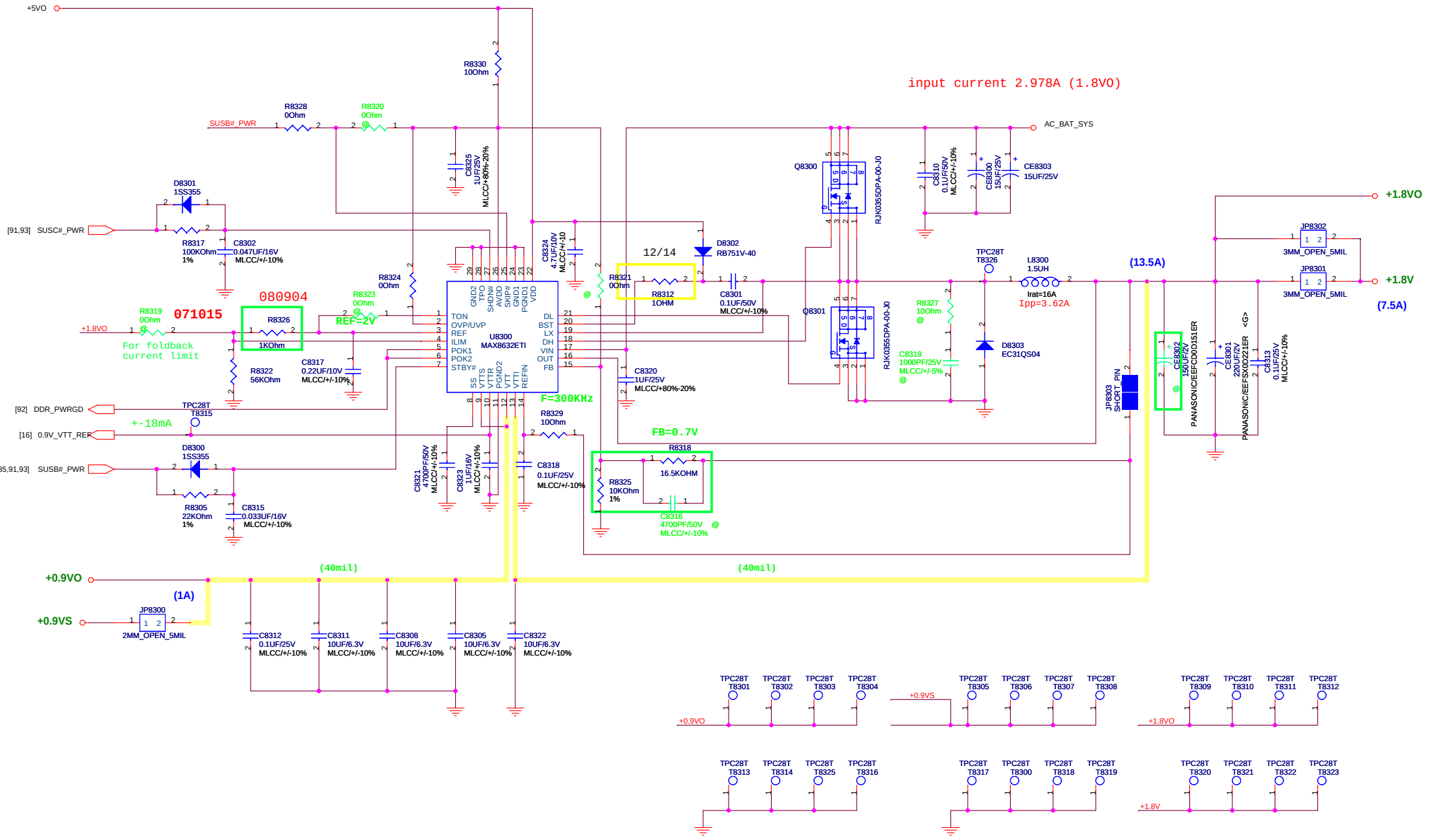

<Variant Name>

ASUSTeK COMPUTER INC. NB

Title : POWER_I/O_DDR & VTT

Engineer:

Size	Project Name	Rev
Custom	F6V	1.0

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<Variant Name>

Title : POWER_I/O_+3VAO

ASUSTeK COMPUTER INC. NB

Engineer:

Size	Project Name	Rev
Custom	F6V	1.0

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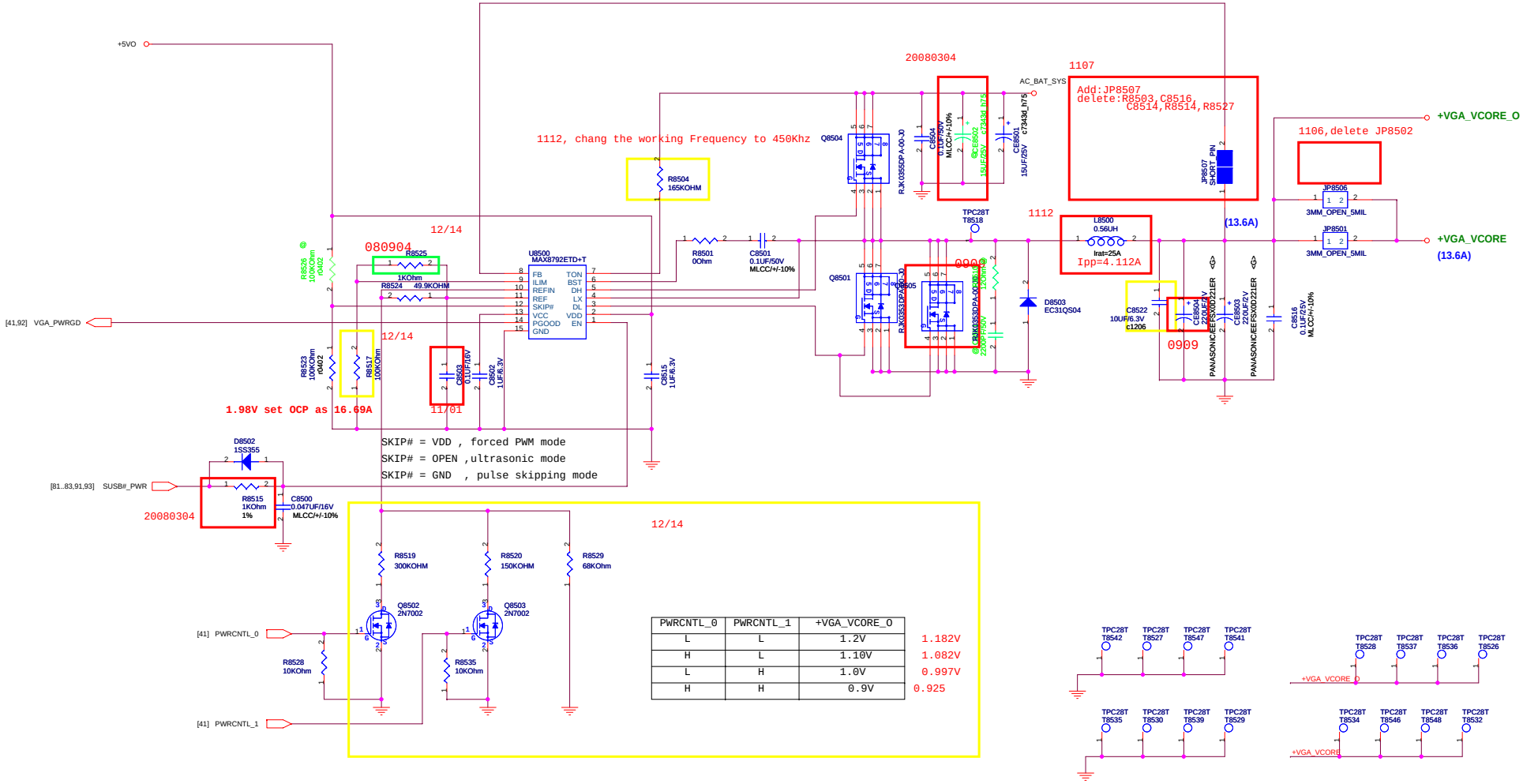
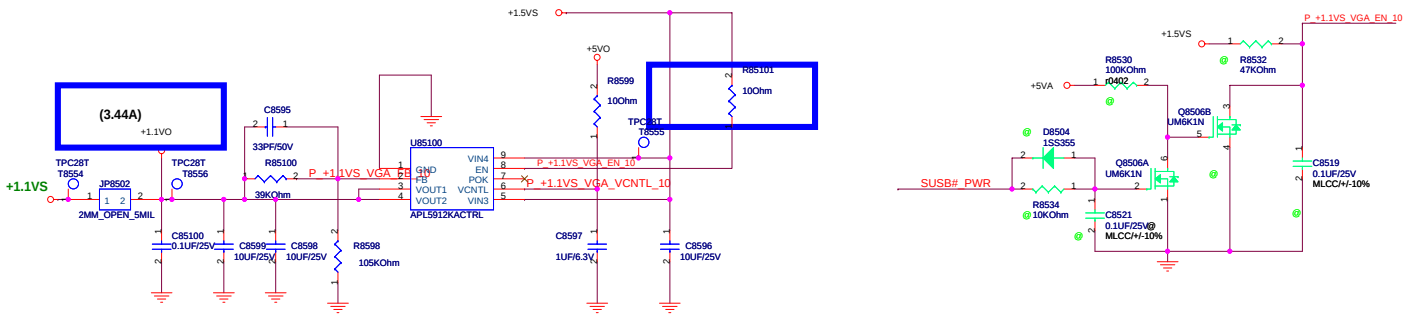
071017



(2.5A)



Title :	POWER_VGACORE_1.1VO	
ASUSTECH	Engineer:	
Size: C	Project Name: F6V	Rev: 1.0
Date: Friday, September 26, 2008	Sheet 85 of 64	

<Variant Name>

Title : N/A

ASUSTeK COMPUTER INC. NB

Engineer: Ray

Size	Project Name	Rev
B	F6V	1.0

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<Variant Name>

ASUSTeK COMPUTER INC. NB	Title : POWER_SHUTDOWN#
	Engineer: Ray
Size: Custom	Project Name: F6V
Rev: 1.0	
Date: Friday, September 26, 2008	Sheet 87 of 64

POWER PATH & BAT_LEARN

90 WATT

071015

070115

0614

0319

AC_IN Threshold 2.048Vmax A/D_DOCK_IN
> 17.44V active

Adapter Iin(max) = [0.075V/Rsense(ADin)]*[VCLS/VREF]
Rsense(ADin)=0.010ohm
VCLS=2.5341V
=> Iin(max)=4.5A
=> Constant Power = 19 * 4.5 = 85.5W
=> R5710=20K,R5715=30K

Charge Current Ichg = [0.075V/Rsense(CHG)]*[VICTL/3.6V]
Rsense(CHG)=0.025 ohm
VICTL= 3V => Ichg = 2.5A
VICTL= 1.68V => Ichg = 1.4A

Vbatt = Cell * { Vref +[(VCTL- 1.8V) / 9.52] }
VCTL= 1.588V
=> Vbatt = 4.2V

Mode pin : Vmode > 2.8V (trie to LDO pin) ----> 4 Cells
2.0 > Vmode > 1.6V (floating) ----> 3 Cells
0.8 > Vmode (trie to GND) ----> Learning mode

VICTL< 0.8V or DCIN < 7V -->Charger Disable

Precgarge current=150mA

LDO : 5.4V
REF : 4.2235V

90W->10m Ohm
65W->20m Ohm

90W->30K Ohm
65W->137K Ohm

AC_BAT_SYS_INV to Inverter connect,
Power trace =60mil(min),
Put JP8805 close to Q8800

4S: Mount R8808 only
3S: Unmount all components
3S/4S: Unmount R8808, and mount others

Title :	POWER_CHARGER
ASUSTeK COMPUTER INC. NB	Engineer:
Size: Custom	Project Name: F6V
Rev:	1.0
Date: Friday, September 26, 2008	Sheet 88 of 64

<Variant Name>

Title : N/A

ASUSTeK COMPUTER INC. NB

Engineer: Ehong-Ping

Size	Project Name	Rev
Custom	F6V	1.0

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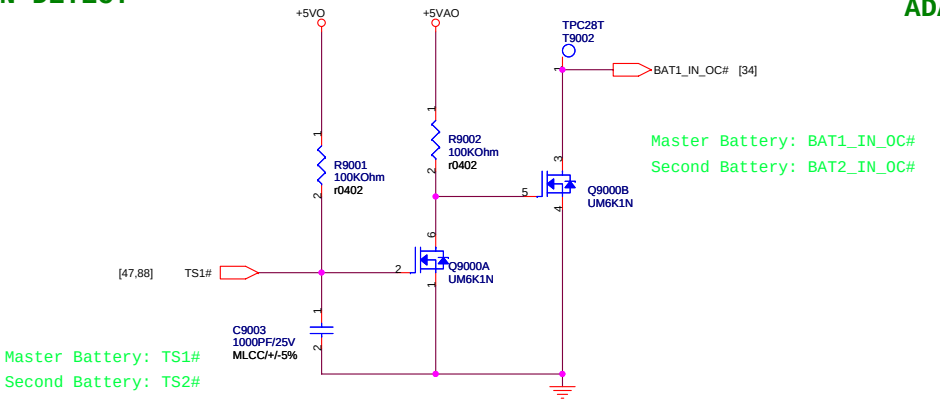
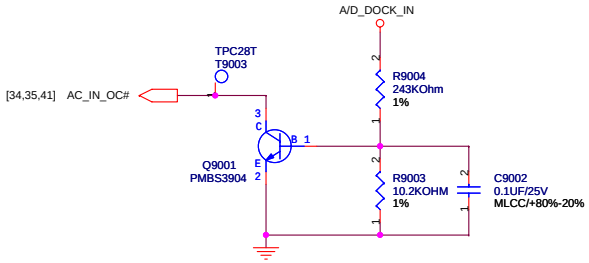
BATTERY IN DETECT



Master Battery: BAT1_IN_OC#
Second Battery: BAT2_IN_OC#

Master Battery: TS1#
Second Battery: TS2#

ADAPTER IN DETECT



+2.5VREF

<Variant Name>

Title : POWER_DETECT

ASUSTeK COMPUTER INC. NB

Engineer: Ray

Size	Project Name	Rev
Custom	F6V	1.0

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SUSB#_PWR POWER

20080304

TPC28T T9125, TPC28T T9110
+1.8VO
Q9100 FDW2501NZ_NL
DRAIN_1, DRAIN_2, SOURCE_1, SOURCE_3, SOURCE_2, SOURCE_4, GATE_1, GATE_2
TPC28T T9100, TPC28T T9122
+1.8VS (5.1A)
R9111 1KOhm 1%
C9111 0.1UF/25V MLCC/+/-10%

20080326

C9100 0.22UF/16V MLCC/+/-10%

071015

TPC28T T9104, TPC28T T9118
+3VO
Q9108 SI4800BDY
TPC28T T9109, TPC28T T9114
+3VS (4.2A)
R9108 47KOhm r0402_h16
C9104 0.1UF/25V MLCC/+/-10%
C9102 0.1UF/25V MLCC/+/-10%

TPC28T T9105, TPC28T T9115
+5VO
Q9106 FDW2501NZ_NL
DRAIN_1, DRAIN_2, SOURCE_1, SOURCE_3, SOURCE_2, SOURCE_4, GATE_1, GATE_2
TPC28T T9101, TPC28T T9127
+5VS (4.65A)
R9107 47KOhm r0402_h16
C9109 0.033UF/16V MLCC/+/-10%
C9107 0.1UF/25V MLCC/+/-10%
JP9100 SHORT_PIN
+5VS_FAN
JP9101 SHORT_PIN
+5VS_CPU
R9112 47KOhm 1%
0607
0607

TPC28T T9128
TPC28T T9129
+12VSUS
SUSB#_PWR
Q9105 UMC4N
TPC28T T9102
+12VS
R9102 100KOhm 1%

SUSC#_PWR POWER

071015

TPC28T T9111, TPC28T T9133
+3VO
Q9103 SI4800BDY
TPC28T T9126, TPC28T T9108
+3V (2A)
R9109 22KOhm 1%
C9106 0.1UF/25V MLCC/+/-10%
C9110 0.1UF/25V MLCC/+/-10%

TPC28T T9117, TPC28T T9132
+5VO
Q9101 FDW2501NZ_NL
DRAIN_1, DRAIN_2, SOURCE_1, SOURCE_3, SOURCE_2, SOURCE_4, GATE_1, GATE_2
TPC28T T9124, TPC28T T9113
+5V (2.1A)
R9110 22KOhm 1%
C9113 0.1UF/25V MLCC/+/-10%
C9105 0.033UF/16V MLCC/+/-10%
R9106 22KOhm 1%

TPC28T T9120
+12VSUS
Q9107 UMC4N
TPC28T T9112
+12V
TPC28T T9119
SUSC#_PWR
1% R9103 100KOhm

071015

[33,34,37,92] SUSB_EC#
TPC28T T9131
R9105 1KOhm
TPC28T T9135
[81..83,85,93] SUSB#_PWR

[34,37] SUSC_EC#
TPC28T T9121
R9104 1KOhm
TPC28T T9134
[83,93] SUSC#_PWR

ASUSTeK COMPUTER INC. NB
Title : POWER_LOAD SWITCH
Engineer:
Size: Custom
Project Name: F6V
Rev: 1.0
Date: Friday, September 26, 2008
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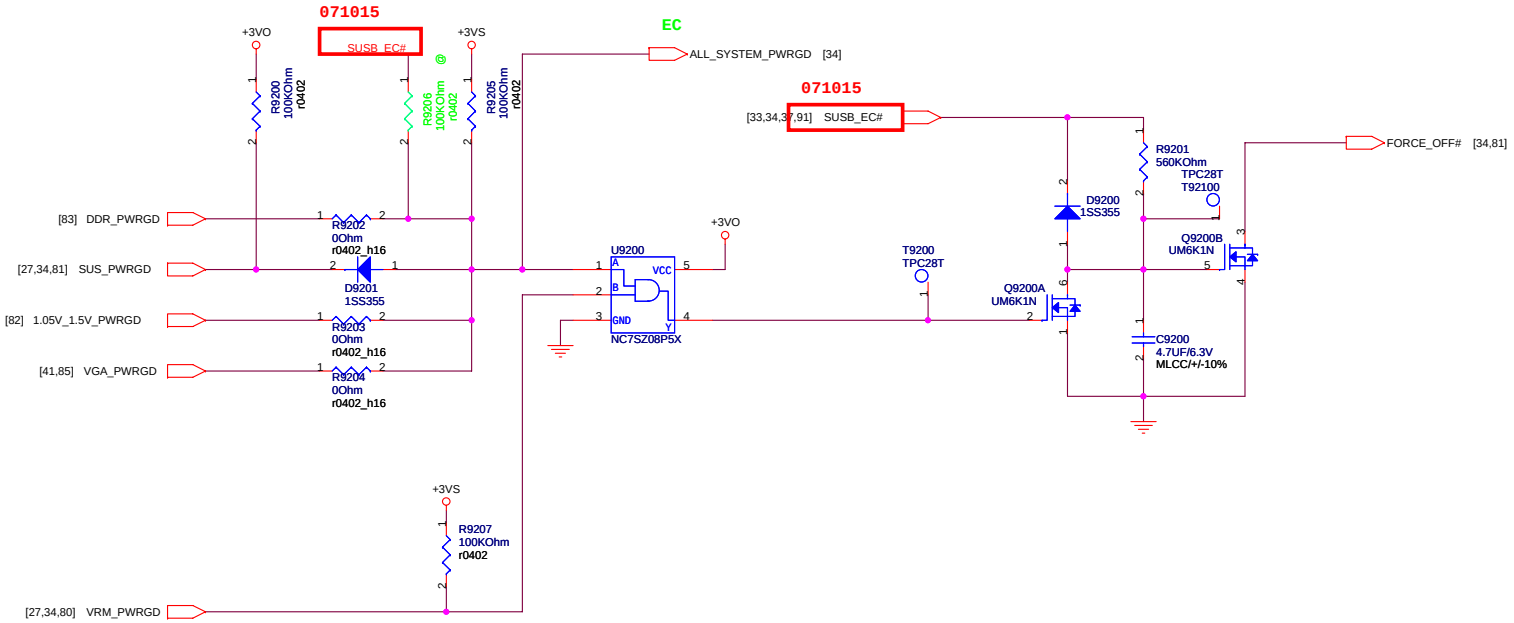
POWER GOOD DETECTER



<Variant Name>

Title : POWER_PROTECT

ASUSTeK COMPUTER INC. NB

Engineer:

Size	Project Name	Rev
Custom	F6V	1.0

Date: Friday, September 26, 2008 Sheet 92 of 64

AC_BAT_SYS — AC_BAT_SYS [46,80..83,85,88]
BAT — BAT [46,88]
BAT_CON — BAT_CON [46,47,88]

+3VA — +3VA [17,25,34,37,46,81]
+5VAO — +5VAO [81,90]
+5VO — +5VO [81..83,85,90,91]
+5VSUS — +5VSUS [28,39,81]
+5V — +5V [17,24,37,91]
+5VS — +5VS [18,19,22,23,28,33,37..39,46,91]
+3VO — +3VO [81,91,92]
+3VSUS — +3VSUS [17,20,22,25..29,34,39,46,81]
+3V — +3V [19..22,26,29,33,35..38,91]
+3VS — +3VS [4,6,7,9,12..15,17..23,25..31,33,34,37,39,44,80,91,92]

+12VSUS — +12VSUS [81,91]
+12V — +12V [22,24,36,37,91]
+12VS — +12VS [17,19,31,37,44,91]

+1.8VO — +1.8VO [83,91]
+1.8V — +1.8V [9,11,14..16,37,83]

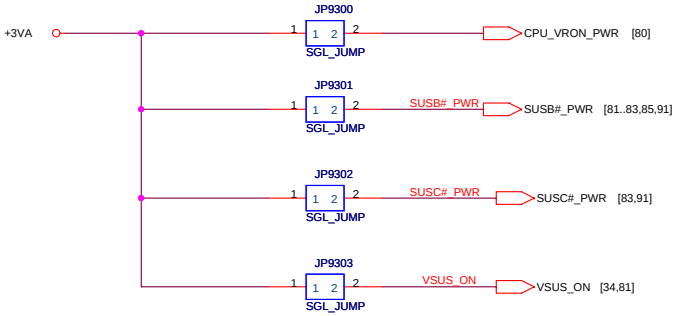
+0.9VS — +0.9VS [16,37,83]
+0.9VO — +0.9VO [83]

+1.05VO — +1.05VO [80,82]
+VCCP — +VCCP [6..9,11,12,25,28,37,82]
+1.5VO — +1.5VO [82]
+1.5VS — +1.5VS [5,12,20,28,33,37,82,85]

+VCORE — +VCORE [5,6,37,80]

+VGA_VCORE — +VGA_VCORE [37,44,85]
+1.8VS — +1.8VS [37,41..45,91]
+1.1VS — +1.1VS [37,41,44,45,85]

FOR POWER TEST



<Variant Name>

ASUSTeK COMPUTER INC. NB

Title : POWER_SIGNAL

Engineer:

Size	Project Name	Rev
Custom	F6V	1.0

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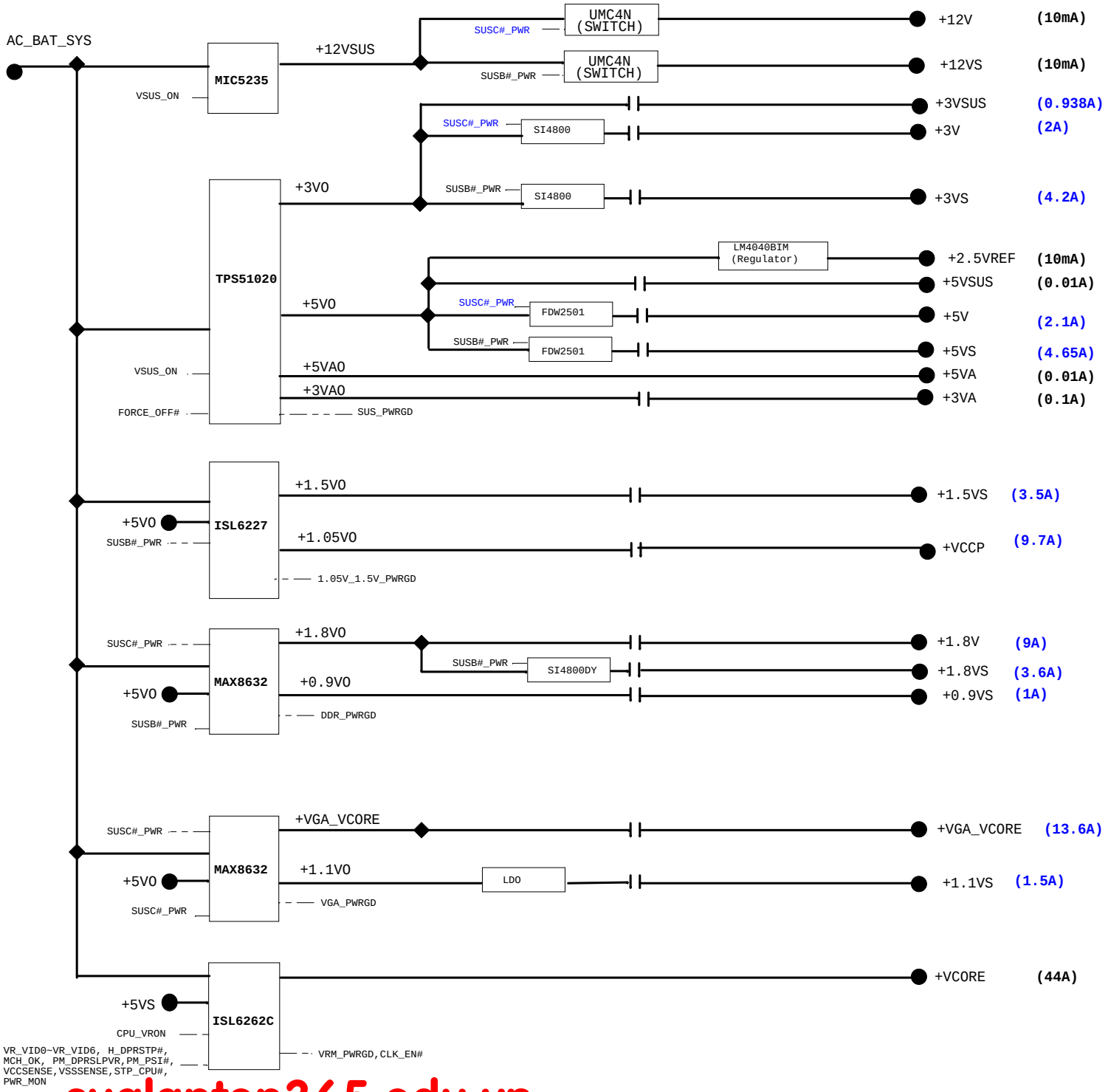

<Variant Name>

Title : POWER_FLOWCHART

ASUSTeK COMPUTER INC. NB

Engineer:

Size	Project Name	Rev
Custom	F6V	1.0

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