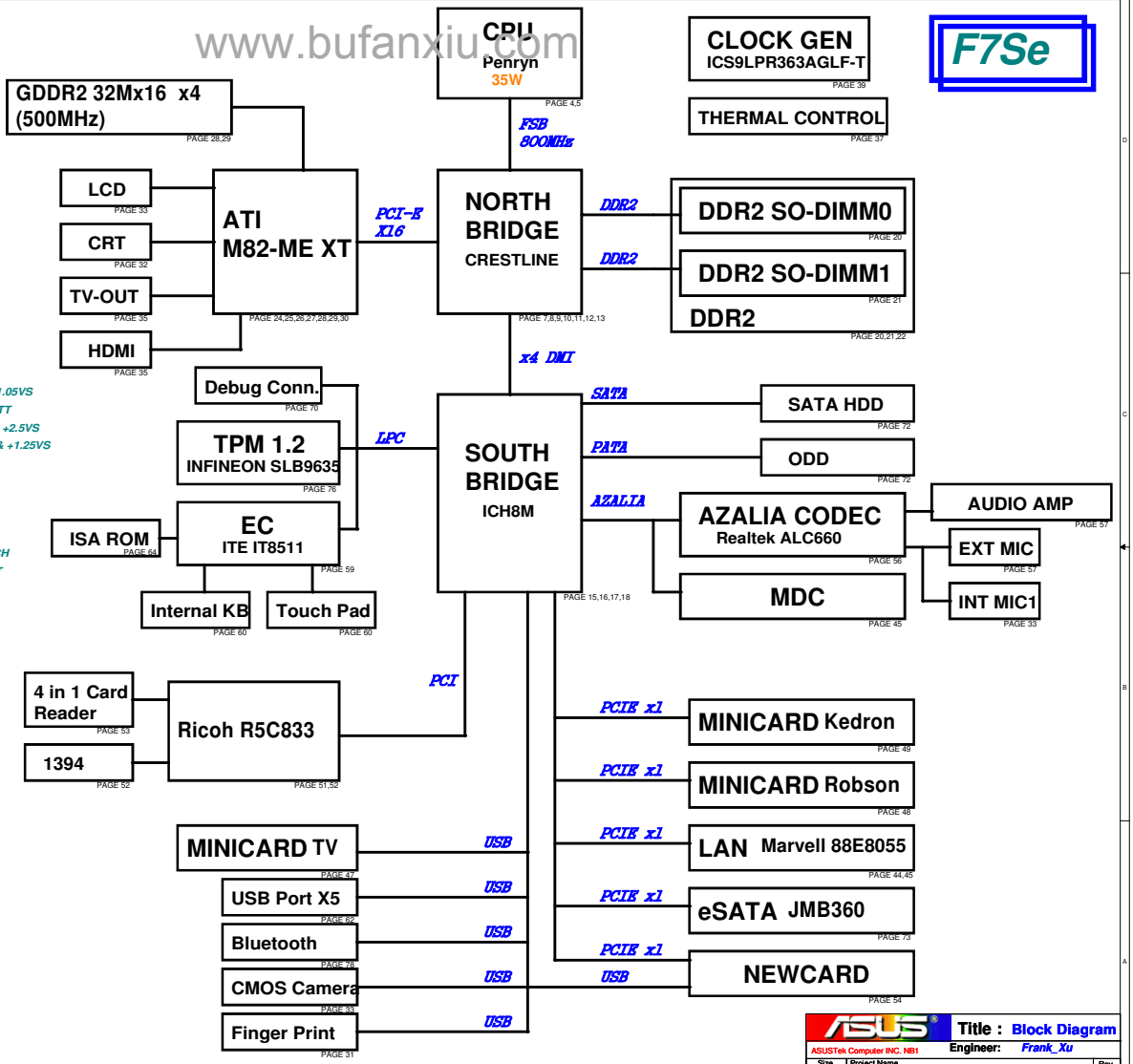


ASUSTek Computer INC. NB1

Title : Block Diagram

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 1 of 95

EC_IT8511TE SETTING

Pin	Pin Name	Signal Name	Type
32	PWM0/GPA0	/	
33	PWM1/GPA1	FAN_PWM	O
36	PWM2/GPA2	/	
37	PWM3/GPA3	/	
38	PWM4/GPA4	CHG_LED_UP#	O
39	PWM5/GPA5	PWR_LED_UP#	O
40	PWM6/GPA6	BATSEL_3S#	O
43	PWM7/GPA7	LCD_BACKOFF#	O
153	RXD/GPB0	NUM_LED	O
154	TXD/GPB1	CAP_LED	O
162	GPB2	SCRL_LED	O
163	SMCLK0/GPB3	SMB0_CLK	I/O
164	SMDAT0GPB4	SMB0_DAT	I/O
5	GA20/GPB5	A20GATE	O
6	KBRST#/GPB6	RC_IN#	O
165	GPB7	THRO_CPU	O
47	CLKOUT/GPC0	/	
169	SMCLK1/GPC1	SMB1_CLK	I/O
170	SMDAT1/GPC2	SMB1_DAT	I/O
171	GPC3	/	
172	TMRI0/WUI2/GPC4	ACIN_OC#	I
175	GPC5	OP_SD#	O
176	TMRI1/WUI3/GPC6	BAT_IN_OC#	I
1	CK32KOUT/GPC7	EC_IDE_RST#	O
26	RI1#/WUI0/GPD0	SUSB#	I
29	RI2#/WUI1/GPD1	SUSC#	I
30	LPCRST#/WUI4//GPD2	BUF_PLT_RST#	I
31	ECSCI#/GPD3	EXT_SCI#	O
41	GPD4	RF_ON_SW#	I
42	GINT/GPD5	/	
62	TACH0/GPD6	FAN0_TACH	I
63	TACH1/GPD7	GAIN_AMP#_K	O
87	ADC4/GPE0	COLOREN#	I
88	ADC5/GPE1	INTERNET#	I
89	ADC6/GPE2	MARATHON#	I
90	ADC7/GPE3	DISTP#	I
2	PWRSW/GPE4	PWR_SW#	I
44	WUI5/GPE5	/	
24	LPCPD#/WUI6/GPE6	LID_EC#	I
25	CLKRUN#/WUI7/GPE7	PM_SLP_M#	
110	PS2CLK0/GPF0	WALN_SW#	
111	PS2DAT0/GPF1	ME_ALERT#	
114	PS2CLK1/GPF2	/	I/O
115	PS2DAT1/GPF3	/	I/O
116	PS2CLK2/GPF4	TP_CLK	
117	PS2DAT2/GPF5	TP_DAT	
118	PS2CLK3/GPF6	/	
119	PS2DAT3/GPF7	INSTANTON#	I
113	FA16/GPG0	FA16	
112	FA17/GPG1	FA17	
104	FA18/GPG2	FA18	
103	FA19/GPG3	FA19	
3	FA20/GPG4	THRM_CPU#	I
4	FA21/GPG5	/	
27	LPC80HL/GPG6	PMTHERM#	O
28	LPC80HL/GPG7	AC_APR_UC#	I

Pin	Pin Name	Signal Name	Type
8	GPL0	PM_S4_STATE#	I
11	GPL1	S3_STATE_ON	O
12	GPL2	SLP_M_ON	O
20	GPL3	EC_WLAN_PWR	O
21	GPL4	MP_PWRGD	I
48	GPH0	VSUS_ON	I
54	GPH1	VSUS_GD#	O
55	GPH2	CPUPWR_GD#	O
69	GPH3	PM_PWRBTN#	O
70	GPH4	SUSC_ON	O
75	GPH5	SUSB_ON	O
76	GPH6	CPU_VRON	O
105	GPH7	PM_RSMRST#	O
148	GPI0	ICH8_PWROK	O
149	GPI1	ALL_SYSTEM_PWRGD	I

Pin	Pin Name	Signal Name	Type
152	GPI2	/	
153	GPI3	CH3_EN#	O
168	GPI5	EC_CLK_EN	O
85	KS016/GPM2	NETDETECT	O

PCI Device	IDSEL#	REQ/GNT#	Interrupts
CARD READER	AD17	0	A
1394	AD17	0	B

PCIE Device	Bus	PCIE Device	Bus
LAN	PE(T/R)(p/n)1	Robson	PE(T/R)(p/n)4
Kedron	PE(T/R)(p/n)2	NEWCARD	PE(T/R)(p/n)5
eSATA	PE(T/R)(p/n)3	GLAN	PE(T/R)(p/n)6

SM-Bus Device	SM-Bus Address
Clock Generator	1101001x (D2)
SO-DIMM 0	1010000x (A0)
SO-DIMM 1	1010001x (A2)
CPU Thermal Sensor(MAX6657)	0100110x (4C)
VGA Thermal Sensor(MAX6657)	0100110x (4C)

ICH8-M GPIO SETTING

Pin	Pin Name	Signal Name	Type
AG12	GPIO0/BM_BUSY#	PM_BMBUSY#	I
AJ8	GPIO1/TACH1	EXTSMI#	I
F8	GPIO2/PIRQE#	PCI_INTE#	I
G11	GPIO3/PIRQF#	PCI_INTF#	I
F12	GPIO4/PIRQG#	PCI_INTG#	I
B3	GPIO5/PIRQH#	PCI_INTH#	I
AJ9	GPIO6/TACH2	BIOS_REC	I/O
AH9	GPIO7/TACH3	WLAN_LED_EN	I
AE16	GPIO8	BT_ON#	I
AG19	GPIO9/WOL_EN	LAN_WOL_EN	I
AJ24	GPIO10/CLGPIO1	ME_ALERT#	O
AG22	GPIO11/SMBALERT#	SMB_ALERT#	I
AC19	GPIO12	KBC_SCI#	I
AH21	GPIO13/GLAN_DOCK#		
AF22	GPIO14/CLGPIO2	NETDETECT	
AE20	GPIO15/STP_PCI#	STP_PCI#	I/O
AJ14	GPIO16/DPRSLPVR	PM_DPRSLPVR	O
AG8	GPIO17/TACH0	WLAN_ON#	O
AH12	GPIO18	TP_LEDON	O
AJ10	GPIO19/SATA1GP	PCB_ID0	I
AE11	GPIO20	BTLED_ON	O
AJ12	GPIO21/SATA0GP	CPU_Select	I
AG10	GPIO22/SCLOCK	3G_ON#	I
E6	GPIO23/LDRQ1#	LPC_DRQ#1	I/O
AJ27	GPIO24/CLGPIO0		
AG18	GPIO25/STP_CPU#	STP_CPU#	
AH27	GPIO26/S4_STATE#	PM_S4_STATE#	
AH25	GPIO27/QRT_STATE0	BT_DET#	I
AD16	GPIO28/QRT_STATE1	CB_SD#	
AG17	GPIO29/OC#5	USB_CON_OC5#	I
AD12	GPIO30/OC#6	USB_OC#6	I
AJ18	GPIO31/OC#7	USB_OC#7	I
AH11	GPIO32/CLKRUN#	PM_CLKRUN#	O
AE10	GPIO33/AZ_DOCK_EN#		O
AG14	GPIO34/AZ_DOCK_RST#		
AG13	GPIO35/SATACLKREQ#	GPO35	O
AF11	GPIO36/SATA2GP	PCB_ID1	
AG11	GPIO37/SATA3GP	PCB_ID2	I/O
AF9	GPIO38/SLOAD	GPI38	I
AJ11	GPIO39/SDATAOUT0	GPI39	I
AD10	GPIO48/SDATAOUT1	PCI_GNT#4	O
AG29	GPIO49/CPUPWRGD	H_PWRGD	O

Pin	Pin Name	Signal Name	Type
AG16	GPIO40/OC#1	USB_CON_OC01#	I
AG15	GPIO41/OC#2	USB_CON_OC23#	I
AE15	GPIO42/OC#3	USB_CON_OC23#	I
E18	GPIO50/REQ1#	PCI_REQ#1	
C18	GPIO51/GNT1#	PCI_GNT#1	
B19	GPIO52/REQ2#	PCI_REQ#2	
F18	GPIO53/GNT2#	PCI_GNT#2	
A11	GPIO54/REQ3#	PCI_REQ#3	
C10	GPIO55/GNT3#	PCI_GNT#3	

ICS9LPR363AGLF-T SETTING

Pins	Pin Name	Device
3	PCICLK1	TPMPCI
4	PCICLK2	CardBus R5C832
5	SELPCIEX0_LCD#PCICLK3	EC IT8511E
8	ITP_EN/PCICLK_F0	ICH8
15	DOTC_96MHzL	X
14	DOTT_96MHzL	X
12	FSLA/USB_48MHz	ICH8
19	PCIeT_L1	eSATA
20	PCIeC_L1	eSATA
36	PCIeT_L5	M82-M XT
35	PCIeC_L5	M82-M XT
39	PCIeT_L6	MiniCard(Rob)
38	PCIeC_L6	MiniCard(Rob)
22	PCIeT_L2	ICH8
23	PCIeC_L2	ICH8
24	PCIeT_L3	MCH
25	PCIeC_L3	MCH
26	SATACLKT_L	ICH8
27	SATACLKC_L	ICH8
44	CPUITPT_L2 / PCIeT_L8	LAN
43	CPUITPC_L2 / PCIeC_L8	LAN
14	27FIX/LCD_SSCGT/PCIeT_L0	M72M
15	DOTC_96MHzL	M72M
41	PEREQ1# / PCIeT_L7	MiniCard
40	PEREQ2# / PCIeC_L7	MiniCard
32	PEREQ3#	NewCard
33	PEREQ4#	MiniCard
30	PCIeT_L4	NewCard
31	PCIeC_L4	NewCard
49	CPUT_L1F	MCH
48	CPUC_L1F	MCH
52	CPUT_L0	CPU
51	CPUC_L0	CPU
57	X2	14.318MHz
58	X1	14.318MHz
60	REF0	ICH8
61	REF1/FSLC/TEST_SEL	X

ASUSTek Computer INC. NB1

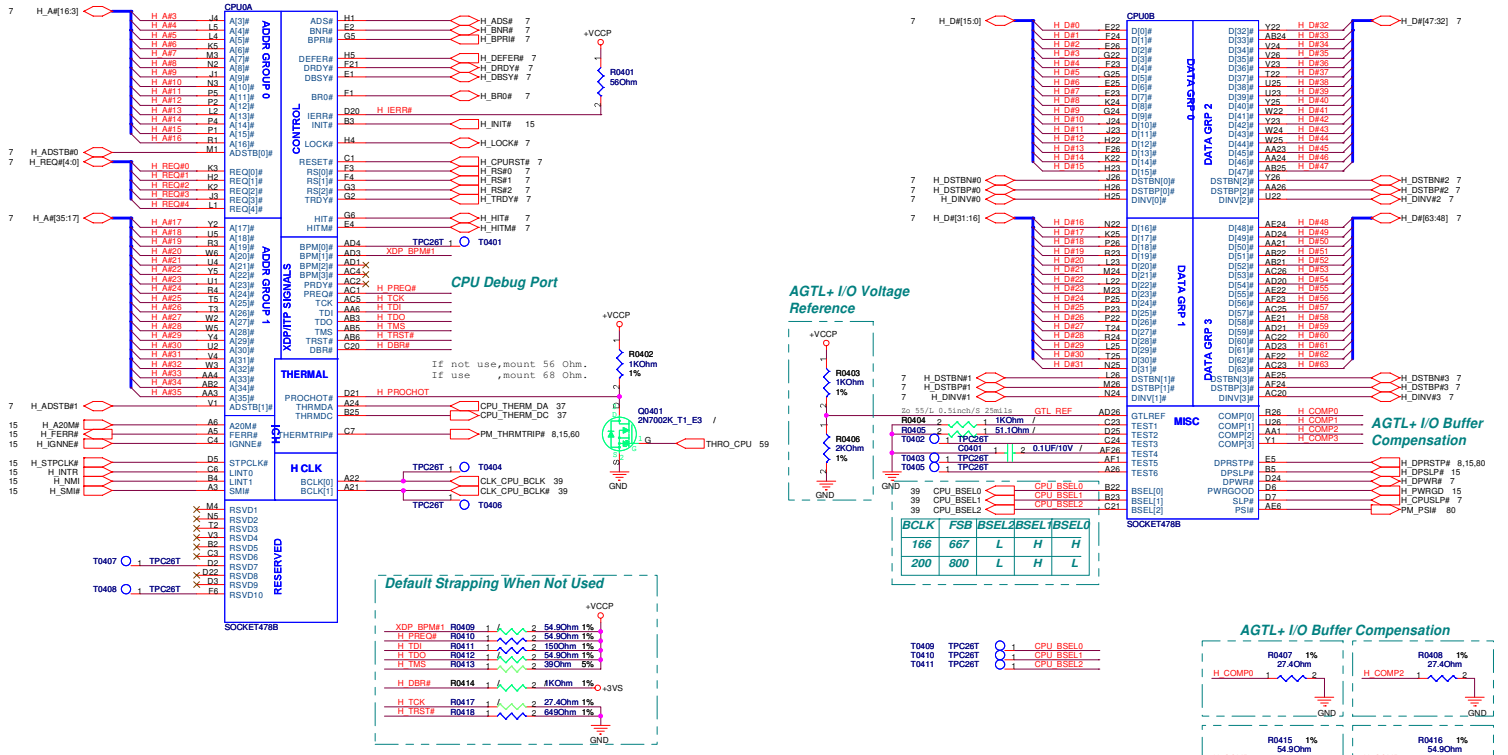
Title : GPIO setting

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

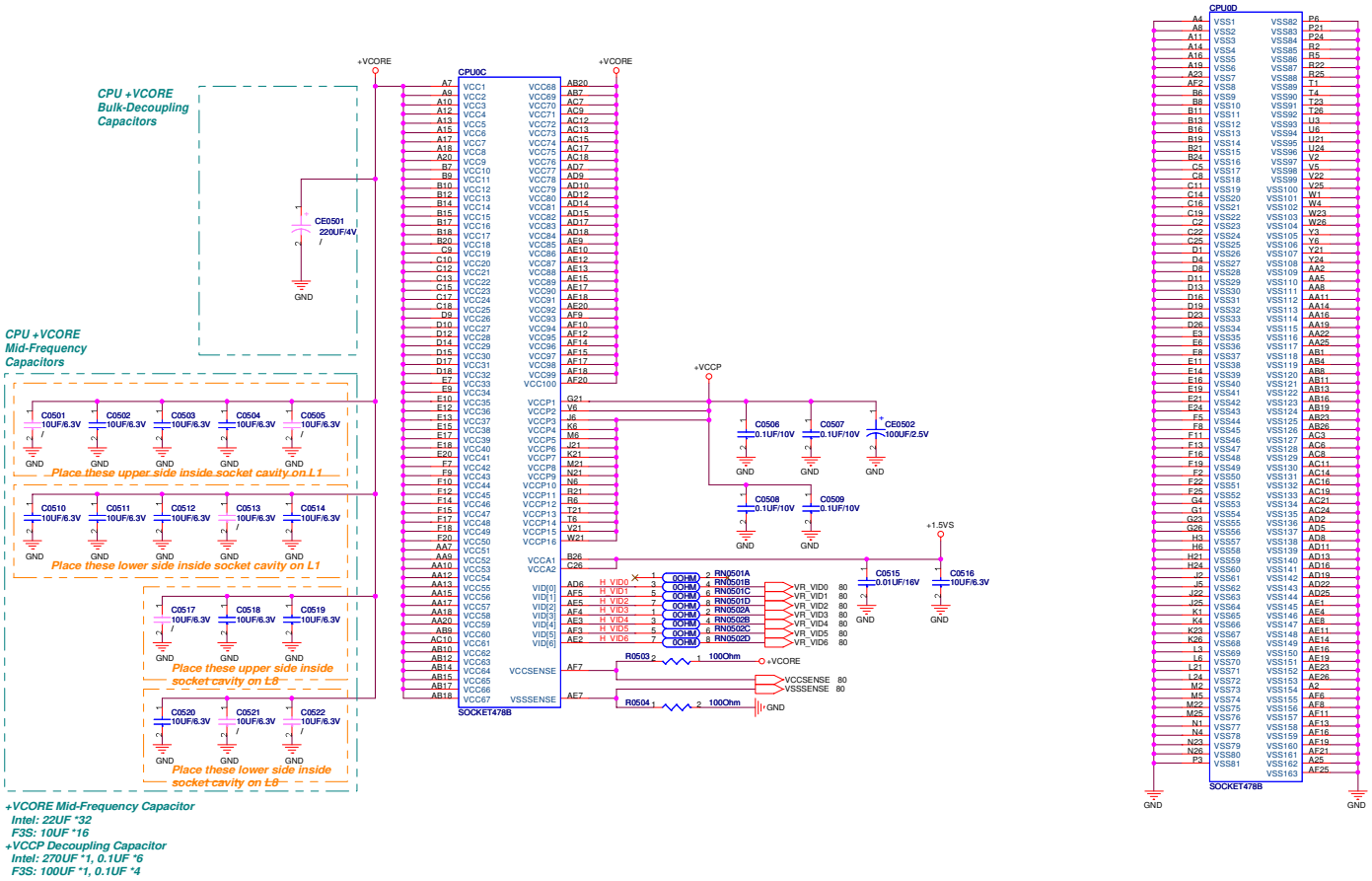
Date: 星期六, 十一月 23, 2007 Sheet 2 of 95

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 3 of 95		



BCLK	FSB	BSEL2	BSEL1	BSEL0
166	667	L	H	H
200	800	L	H	L

ASUSTeK COMPUTER INC. NB1	Title : CPU-Merom(HOST)	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期五, 十一月 23, 2007	Sheet 4 of 95	

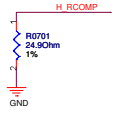


ASUSTeK COMPUTER INC. NB1	Title : CPU_Merom(PWR)		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十 月 23, 2007		Sheet 5 of 95	

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 6 of 95		

RCOMP

For Calibrating the FSB I/O Buffer

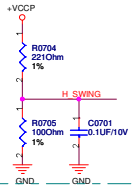


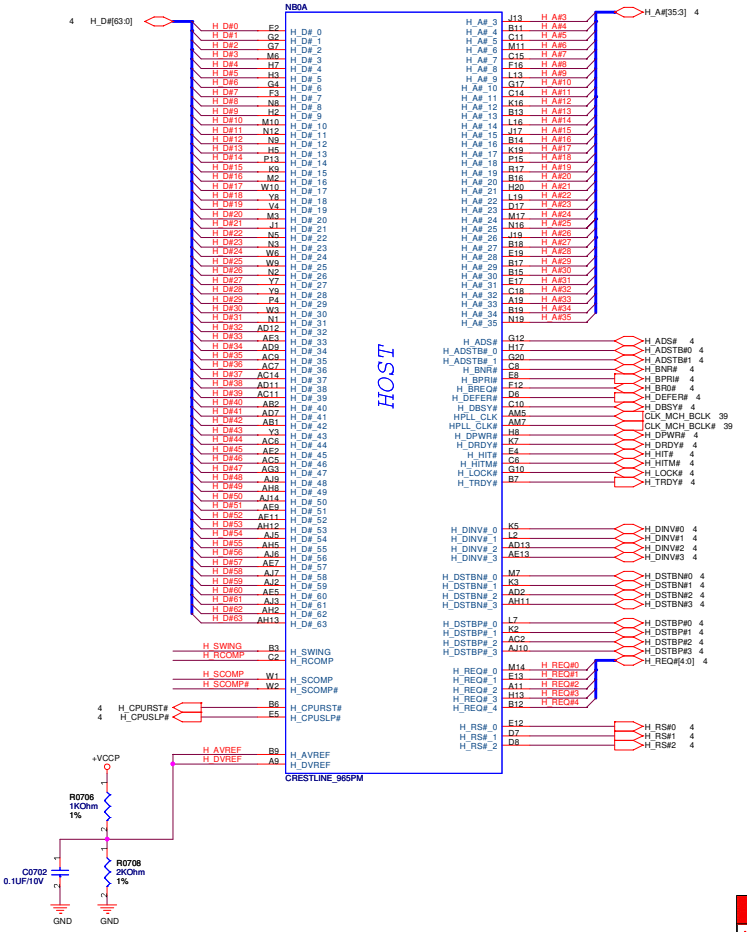
SCOMP

For Slew Rate Compenssation on the FSB

Voltage Swing

For Providing a Reference Voltage to The FSB RCOMP circuits





ASUSTeK COMPUTER INC. NB1	Title : NB-965PM(HOST)	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 7 of 95	

GMCH Strapping

CFG5 : DMI Strap
- 0 = DMI x2
- 1 = DMI x4 (D)

MCH_CFG_5 — T0803 TPC26T

CFG19 : DMI Lane Reversal
- 0 = Normal Operation (D)
- 1 = Lanes Reversed

MCH_CFG_19 — R0802 4.02KOHM — +3VS

CFG[13:12] : GMCH Test Mode
- 00= Partial CLK Gating Disable
- 01 = XOR Mode Enable
- 10 = All Z Mode Enable
- 11 = Normal Operation (D)

MCH_CFG_12 — T0805 TPC26T
MCH_CFG_13 — T0806 TPC26T

CFG8 : Low Power PCI-E
- 0 = Normal mode
- 1 = Low Power Mode (D)

MCH_CFG_8 — T0804 TPC26T

CFG20 : Concurrent SDVO / PCIe
- 0 = Only one is operational (D)
- 1 = operate simultaneous

MCH_CFG_20 — R0808 4.02KOHM — +3VS

CFG9 : PCIE Graphic Lane
- 0 = Reverse Lane
- 1 = Normal Operation (D)

MCH_CFG_9 — R0809 4.02KOHM — GND

SDVO_CTRL_DATA : SDVO Present
- 0 = No SDVO (D)
- 1 = SDVO Present

SDVO_CTRL_DATA — GND

CFG16 : FSB Dynamic ODT
- 0 = Dynamic ODT Disable
- 1 = Dynamic ODT Enable (D)

MCH_CFG_16 — R0811 4.02KOHM — GND

BCLK	FSB	BSEL2	BSEL1	BSEL0
166	667	L	H	H
200	800	L	H	L

39 MCH_BSEL0
39 MCH_BSEL1
39 MCH_BSEL2

MCH_CFG_5 MCH_CFG_8 MCH_CFG_9 MCH_CFG_12 MCH_CFG_13 MCH_CFG_16 MCH_CFG_19 MCH_CFG_20

20 PM_EXTTS#_0
21 PM_EXTTS#_1

17 PM_BMBUSY#
4,15,80 H_DPRSTP#
+3VS — R0815 10KOhm PM_EXTTS#_0 — R0816 10KOhm PM_EXTTS#_1

59,60,80,93 CPU_PWRGD
16,17,26,44,48,49,54,59,66,72,73,76 BUF_PLT_RST#
4,15,60 PM_THRMTRIP#
17,80 PM_DPRSLPVR
R0817 100Ohm RST_IN_MCH#

+1.25VM — R0812 1KOhm 1% — MCH_CLVREF — R0818 392Ohm 1% — C0801 0.1UF/10V — GND

FROM PAGE 83
0.9V_VTT_REF

+1.8V — R0822 1KOhm 1% — R0820 0Ohm — M_VREF_MCH 20,21 — R0826 1KOhm 1% — C0804 0.1UF/10V — GND

+1.8V — R0821 1KOhm 1% — SM_RCOMP_VOH — C0802 1UF/10V — C0803 0.01UF/16V — R0823 3.01KOHM 1% — SM_RCOMP_VOL — R0827 1KOhm 1% — C0805 1UF/10V — C0806 0.01UF/16V — GND

C0807 0.1UF/10V — GND

20,22 M_A_A14
21,22 M_B_A14

NB0B

GMCH
- RSVD1 P36
- RSVD2 P33
- RSVD3 N38
- RSVD4 AR12
- RSVD5 AR13
- RSVD6 AM12
- RSVD7 AN13
- RSVD8 AJ12
- RSVD9 AR37
- RSVD10 AM36
- RSVD11 AL36
- RSVD12 AM37
- RSVD13 D20
- RSVD14

DDR MUXING
- SM_CK_0 AV29 — M_CLK_DDR0 20
- SM_CK_1 BB23 — M_CLK_DDR1 20
- SM_CK_3 BA25 — M_CLK_DDR2 21
- SM_CK_4 AV23 — M_CLK_DDR3 21
- SM_CK#_0 AW30 — M_CLK_DDR#0 20
- SM_CK#_1 BA23 — M_CLK_DDR#1 20
- SM_CK#_3 AW25 — M_CLK_DDR#2 21
- SM_CK#_4 AW23 — M_CLK_DDR#3 21
- SM_CKE_0 BE29 — M_CKE0 20,22
- SM_CKE_1 AY32 — M_CKE1 20,22
- SM_CKE_3 BD39 — M_CKE2 21,22
- SM_CKE_4 BG37 — M_CKE3 21,22
- SM_CS#_0 BG20 — M_CS#0 20,22
- SM_CS#_1 BK16 — M_CS#1 20,22
- SM_CS#_2 BG16 — M_CS#2 21,22
- SM_CS#_3 BE13 — M_CS#3 21,22
- SM_ODT_0 BH18 — M_ODT0 20,22
- SM_ODT_1 BJ15 — M_ODT1 20,22
- SM_ODT_2 BJ14 — M_ODT2 21,22
- SM_ODT_3 BE16 — M_ODT3 21,22
- SM_RCOMP BL15 — R0803 1 2 20Ohm 1% — +1.8V
- SM_RCOMP# BK14 — R0804 1 2 20Ohm 1% — GND
- SM_RCOMP_VOH BK31 — SM_RCOMP_VOH
- SM_RCOMP_VOL BL31 — SM_RCOMP_VOL
- SM_VREF_0 AR49 — M_VREF_MCH
- SM_VREF_1 AW4

For Calero 20 Ohm
For Crestline 80.6 Ohm

- SA_MA_14 BF24
- SB_MA_14 BH39
- RSVD34 AW20
- RSVD35 BK20
- RSVD36 C48
- LVDSA_DATA#_3 D47
- LVDSA_DATA_3 B44
- RSVD39 C44
- RSVD40 A35
- RSVD41 B37
- RSVD42 B36
- RSVD43 B34
- RSVD44 C34
- RSVD45

CLK
- DPLL_REF_CLK B42
- DPLL_REF_CLK# C42
- DPLL_REF_SSCLK H48
- DPLL_REF_SSCLK# H47 — GND
- PEG_CLK K44 — CLK_MCH_3GPLL 39
- PEG_CLK# K45 — CLK_MCH_3GPLL# 39

DMI
- DMI_RXN_0 AN47 — DMI_TXN0
- DMI_RXN_1 AJ38 — DMI_TXN1
- DMI_RXN_2 AN42 — DMI_TXN2
- DMI_RXN_3 AN46 — DMI_TXN3 — DMI_TXN[3:0] 16
- DMI_RXP_0 AM47 — DMI_TXP0
- DMI_RXP_1 AJ39 — DMI_TXP1
- DMI_RXP_2 AN41 — DMI_TXP2
- DMI_RXP_3 AN45 — DMI_TXP3 — DMI_TXP[0..3] 16
- DMI_TXN_0 AJ46 — DMI_RXN0
- DMI_TXN_1 AJ41 — DMI_RXN1
- DMI_TXN_2 AM40 — DMI_RXN2
- DMI_TXN_3 AM44 — DMI_RXN3 — DMI_RXN[0..3] 16
- DMI_TXP_0 AJ47 — DMI_RXP0
- DMI_TXP_1 AJ42 — DMI_RXP1
- DMI_TXP_2 AM39 — DMI_RXP2
- DMI_TXP_3 AM43 — DMI_RXP3 — DMI_RXP[0..3] 16

GRAPHICS VID
- GFX_VID_0 E35
- GFX_VID_1 A39
- GFX_VID_2 C38
- GFX_VID_3 B39
- GFX_VR_EN E36

- PM_BM_BUSY# G41
- PM_DPRSTP# L39
- PM_EXT_TS#_0 L36
- PM_EXT_TS#_1 L38
- PWROK AW49
- RSTIN# AV20
- THERMTRIP# N20
- DPRSLPVR G36

MISC
- CL_CLK AM49 — CL_CLK0 17
- CL_DATA AK50 — CL_DATA0 17
- CL_PWROK AT43 — MP_PWRGD 17,59
- CL_RST# AN49 — CL_RST#0 17
- CL_VREF AM50 — MCH_CLVREF
- SDVO_CTRL_CLK H35 — T0802 TPC26T — INT PD
- SDVO_CTRL_DATA K36 — SDVO_CTRL_DATA — INT PD
- CLK_REQ# G39 — CLK_MCH_OE#
- ICH_SYNC# G40 — MCH_ICH_SYNC# 17
- TEST_1 A37
- TEST_2 R32 — R0825 1 2 22kOhm — GND

+3VS — R0813 10KOhm

- NC_1 BJ51
- NC_2 BK51
- NC_3 BK50
- NC_4 BL50
- NC_5 BL49
- NC_6 BL3
- NC_7 BL2
- NC_8 BK1
- NC_9 BJ1
- NC_10 E1
- NC_11 A5
- NC_12 C51
- NC_13 B50
- NC_14 A50
- NC_15 A49
- NC_16 BK2

CRESTLINE_965PM

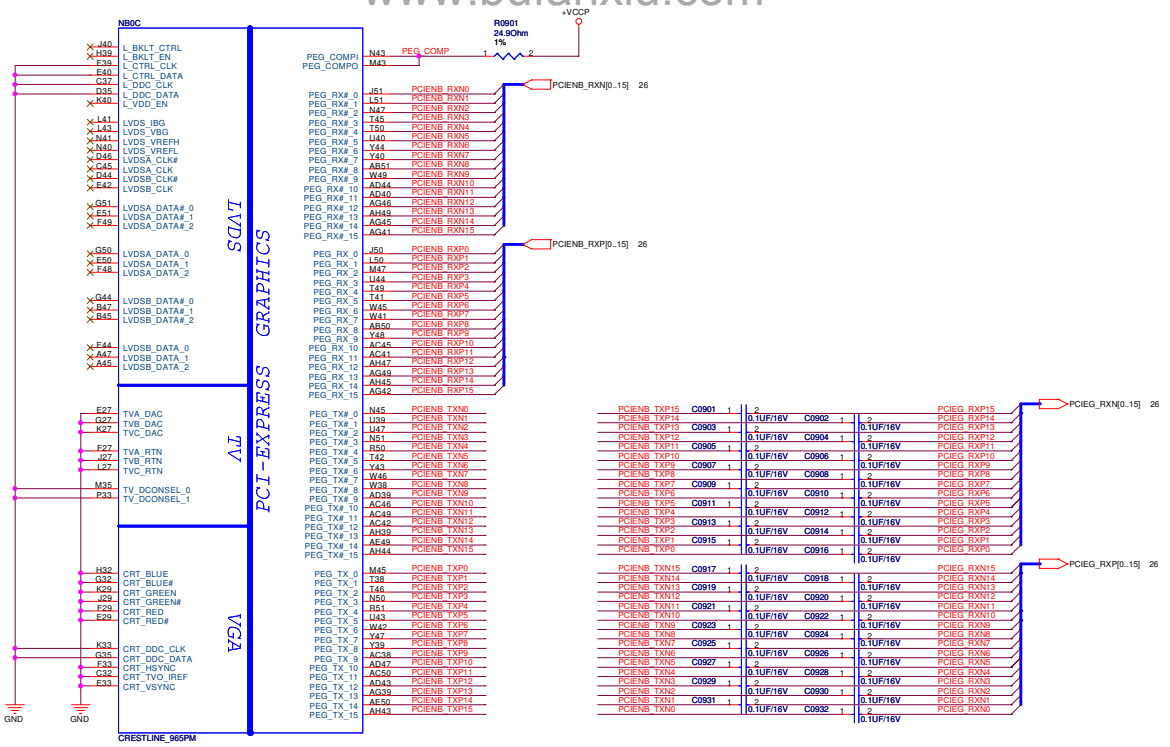
<Variant Name>

ASUSTeK COMPUTER INC. NB1

Title : NB-965PM(DMI & CFG)
Engineer: Frank_Xu

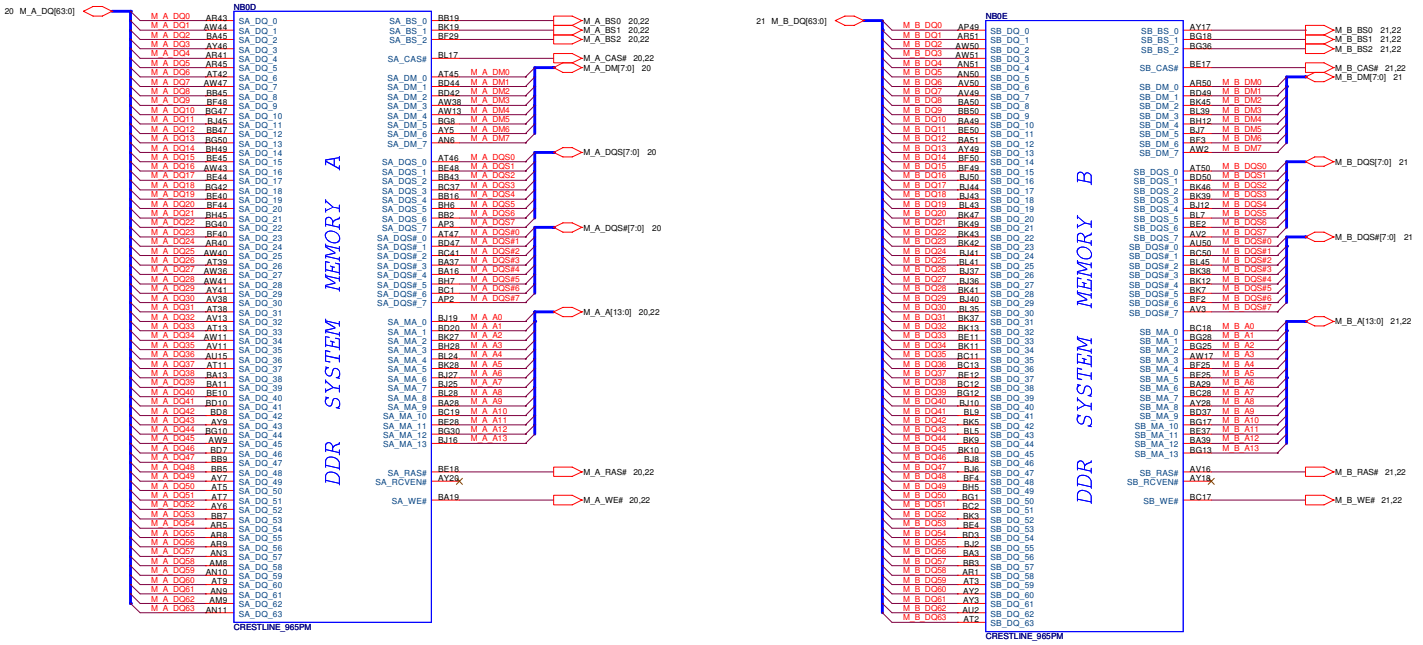
Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 8 of 95



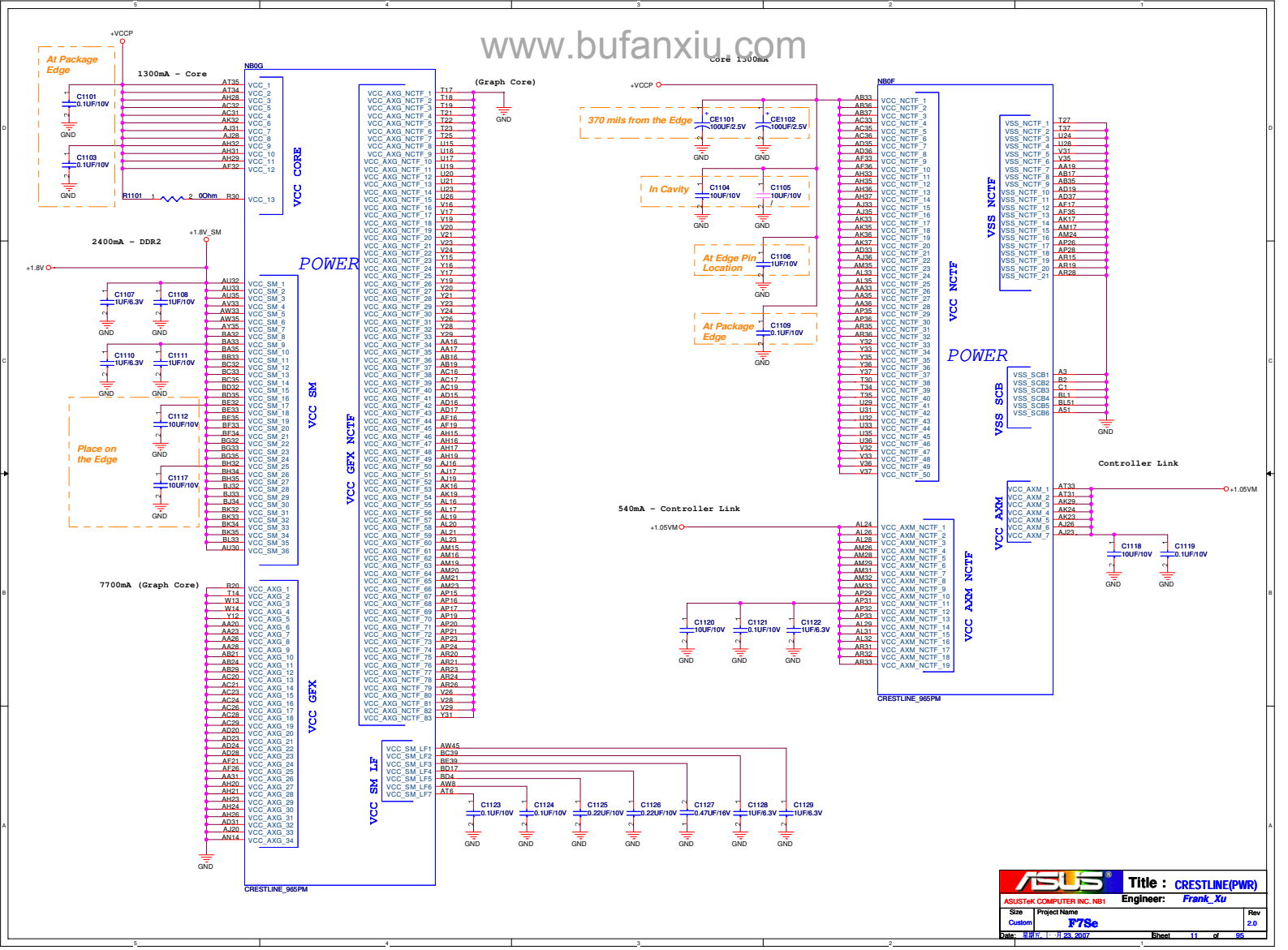
<Variant Name>

ASUSTeK COMPUTER INC. NB1	Title : NB_965PM(GRAPHIC)	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期 一 十月 26, 2007	Sheet 9 of 95	

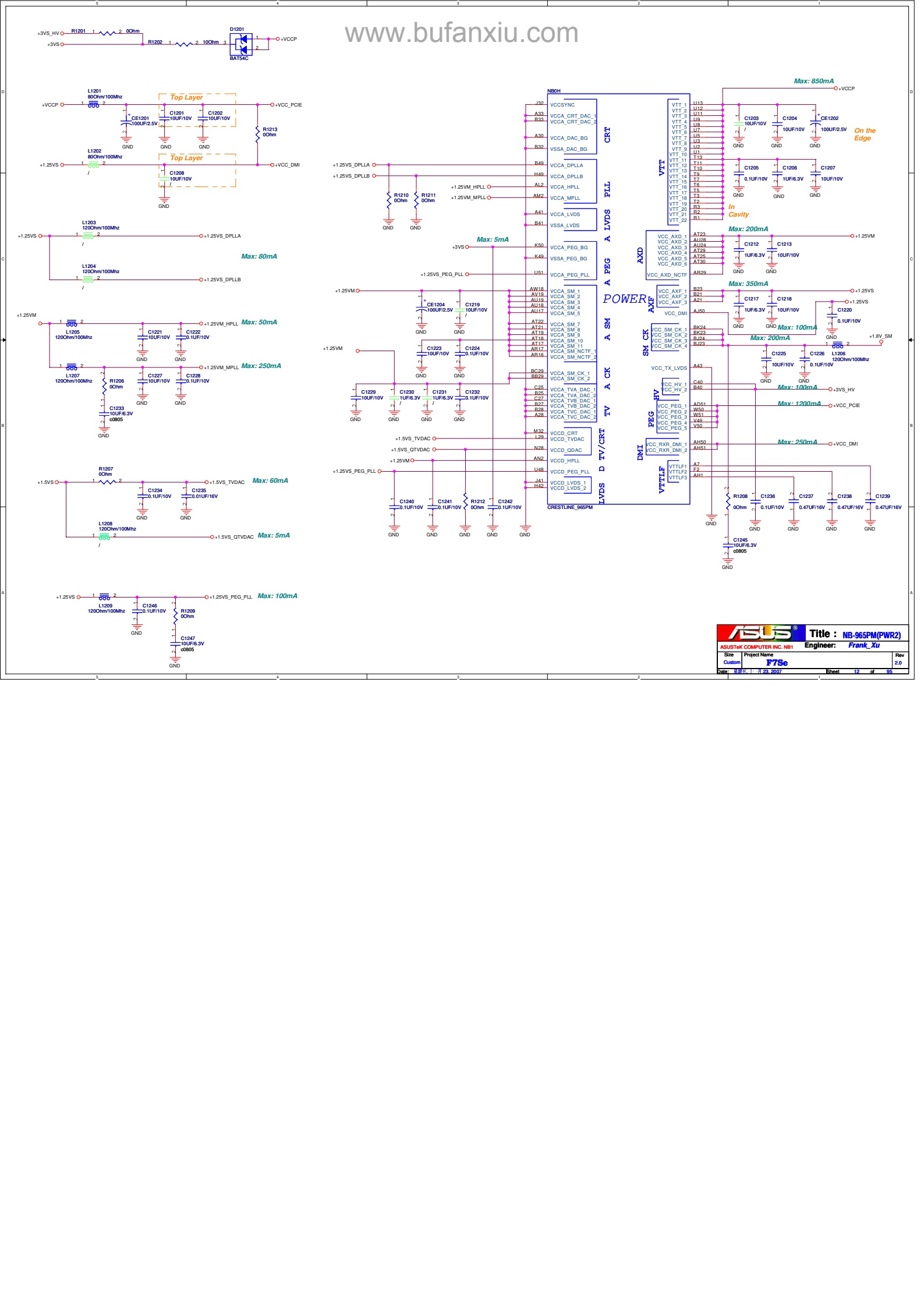


<Variant Name>

ASUSTeK COMPUTER INC. NB1	Title : NB-965PM(DDR2)	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期五, 十一月 23, 2007	Sheet 10 of 95	



ASUSTeK COMPUTER INC. NB1	Title : CRESTLINE(PWR)		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期五, 十一月 23, 2007	Sheet 11 of 95		



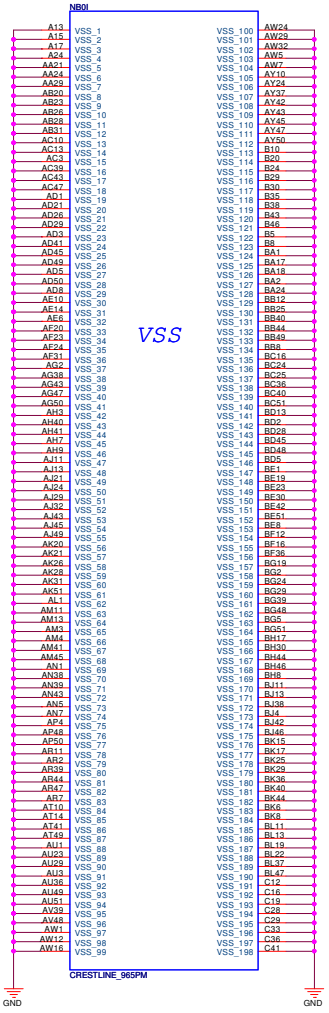
ASUSTeK COMPUTER INC. NB1

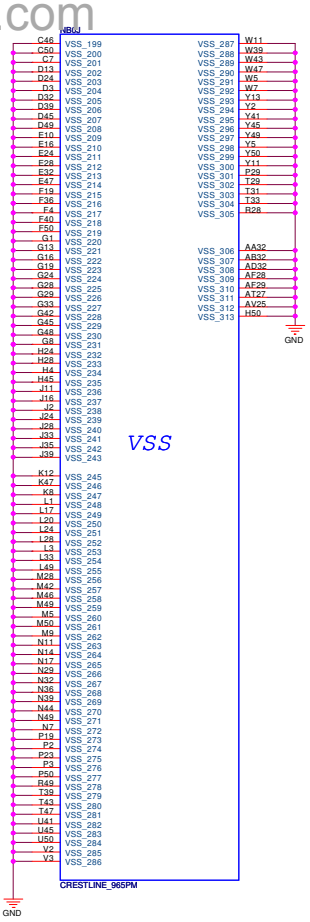
Title : NB-965PM(PWR2)

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

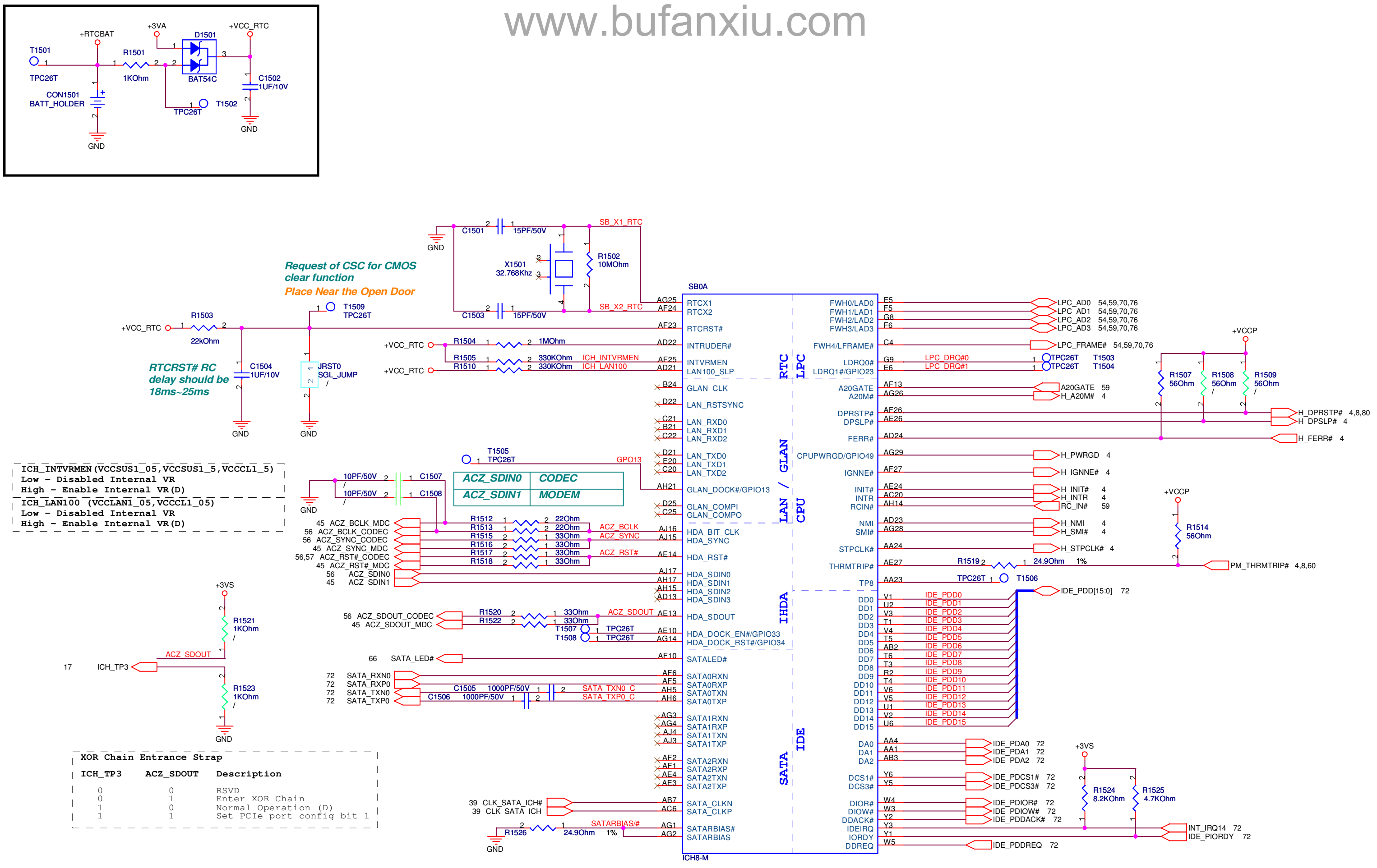
Date: 星期六, 十一月 24, 2007 Sheet 12 of 95





ASUSTeK COMPUTER INC. NB1	Title : CRESTLINE(GND)		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期 一 十月 26, 2007	Sheet 13 of 95		

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: C	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 25, 2007	Sheet 14 of 55		



ICH_INTVRMEN (VCCSUS1_05,VCCSUS1_5,VCCCL1_5)
Low - Disabled Internal VR
High - Enable Internal VR(D)

ICH_LAN100 (VCCLAN1_05,VCCCL1_05)
Low - Disabled Internal VR
High - Enable Internal VR(D)

XOR Chain Entrance Strap

ICH_TP3	ACZ_SDOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal Operation (D)
1	1	Set PCIe port config bit 1

<Variant Name>

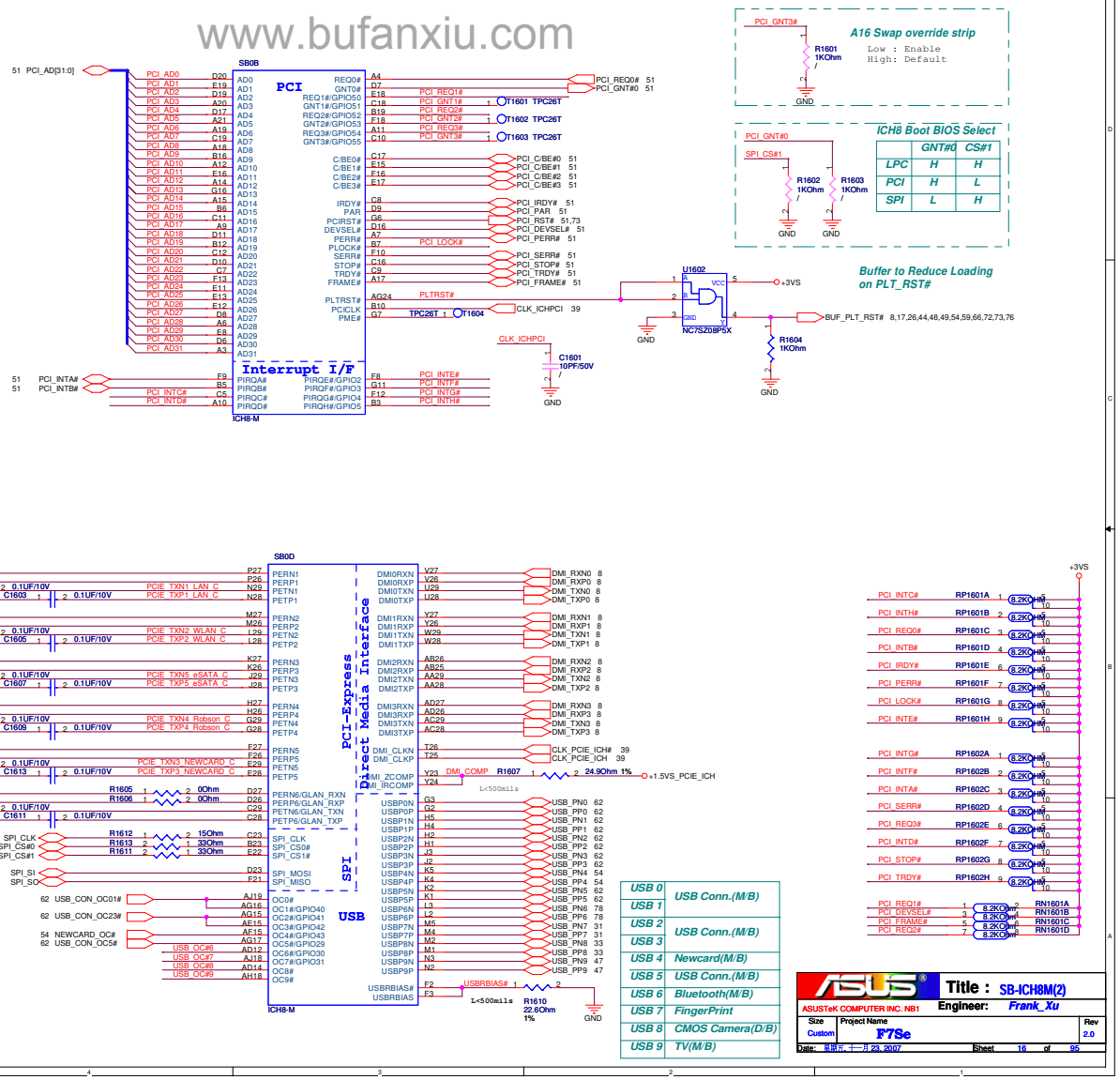
ASUSTeK COMPUTER INC. NB1

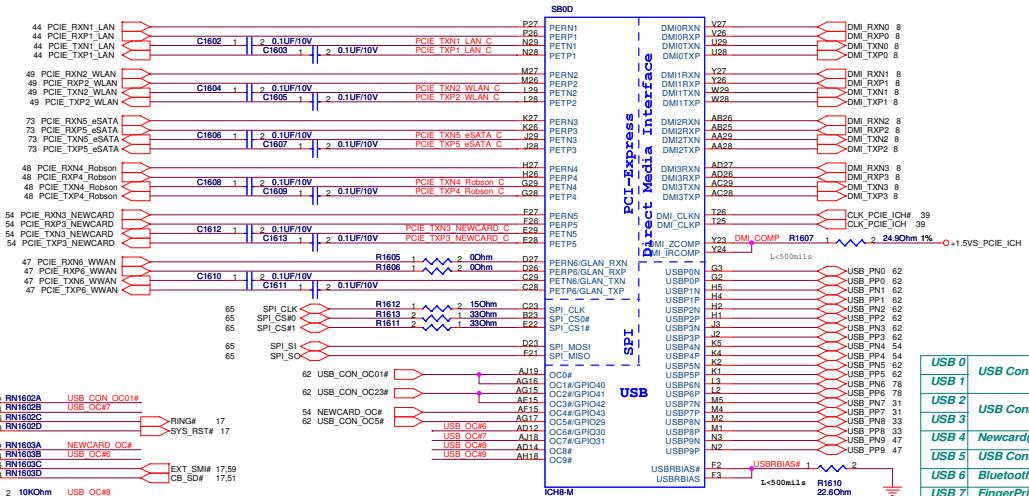
Title : SB-ICH8M(1)

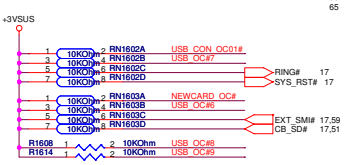
Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期一, 十一月 26, 2007 Sheet 15 of 95







USB 0	USB Conn.(M/B)
USB 1	
USB 2	USB Conn.(M/B)
USB 3	
USB 4	Newcard(M/B)
USB 5	USB Conn.(M/B)
USB 6	Bluetooth(M/B)
USB 7	FingerPrint
USB 8	CMOS Camera(D/B)
USB 9	TV(M/B)

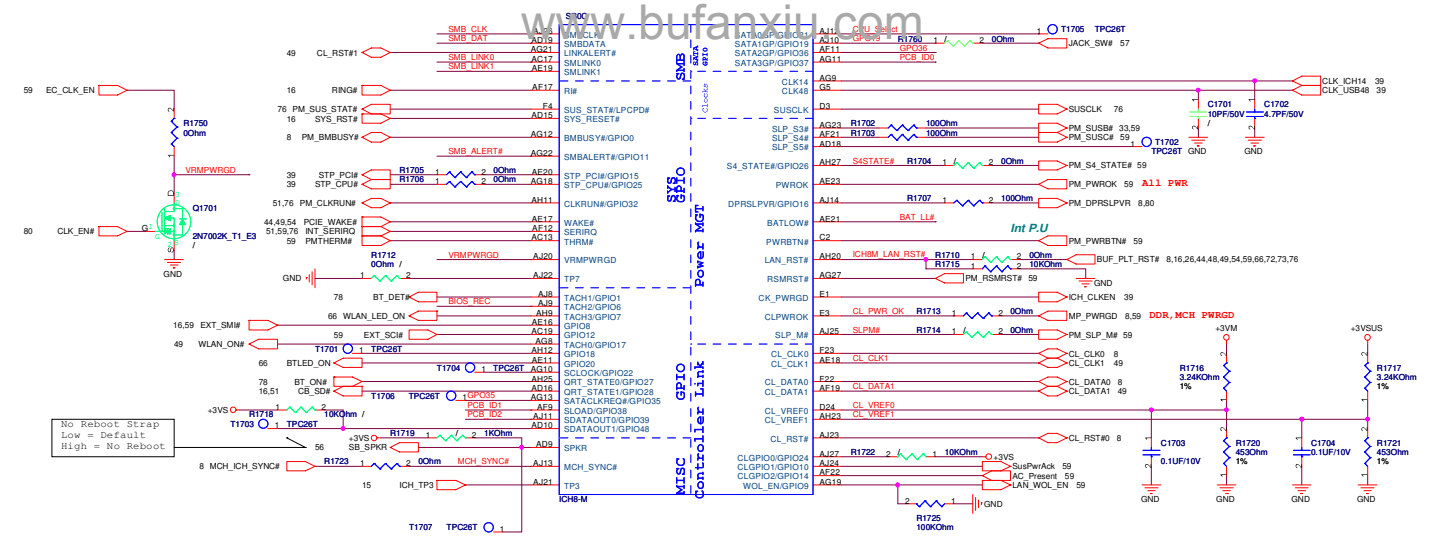
ASUSTeK COMPUTER INC. NB1

Title : SB-ICH8M(2)

Engineer: Frank_Xu

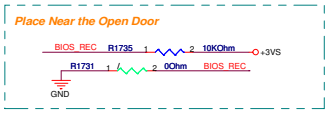
Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期五, 十一月 23, 2007 Sheet 16 of 95

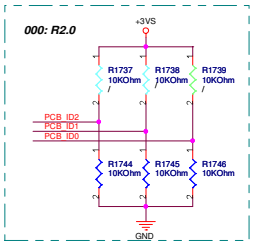


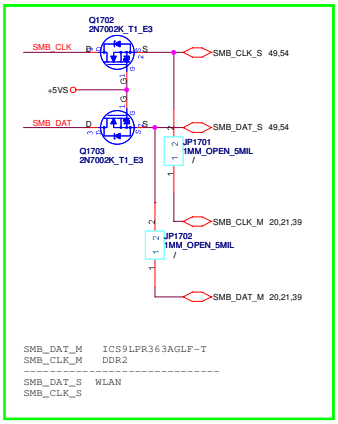
Mount for BIOS Recovery

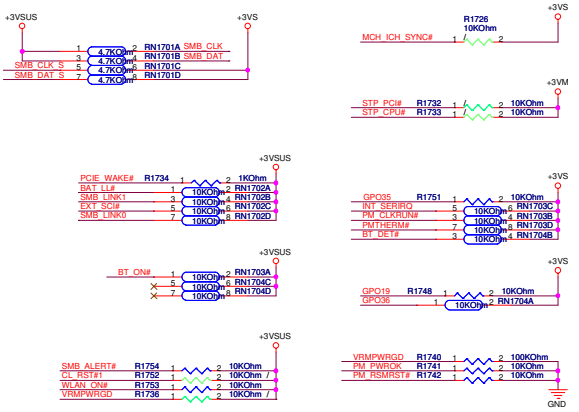
Place Near the Open Door

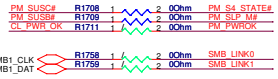


PCB_ID[0:2]



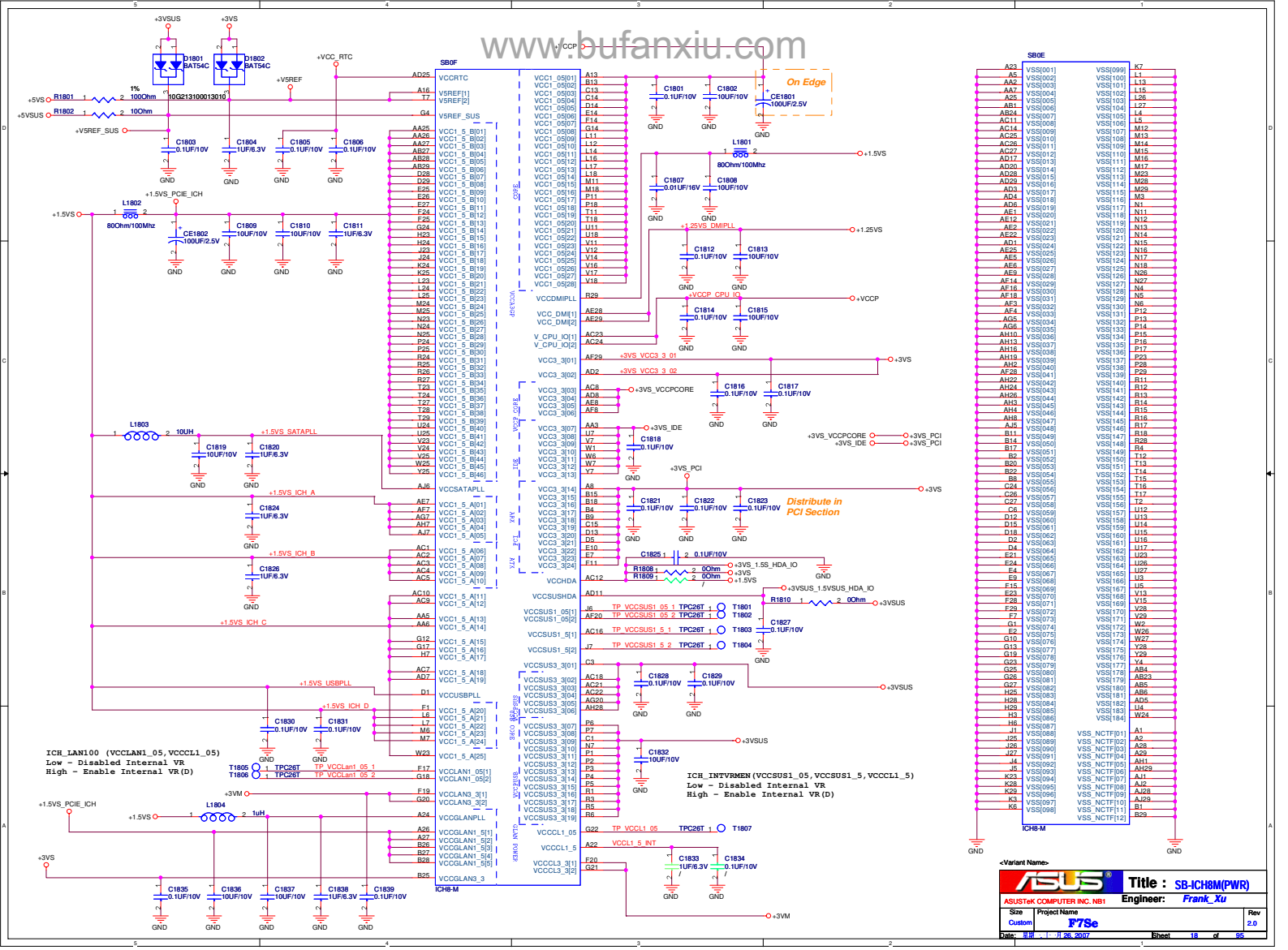






<Variant Name>

ASUSTeK COMPUTER INC. NB1	Title : SB-ICH8M(3)	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 1.0
Date: 星期五, 十一月 23, 2007	Sheet 17 of 95	



Title : Blank Page

ASUSTeK COMPUTER INC

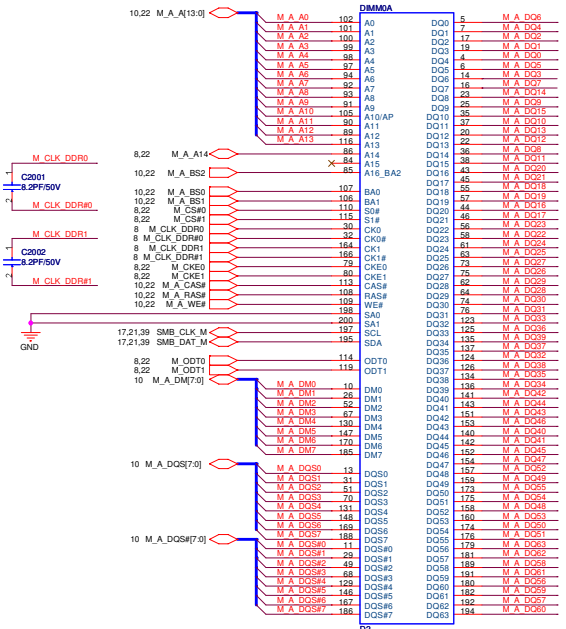
Engineer: Frank_Xu

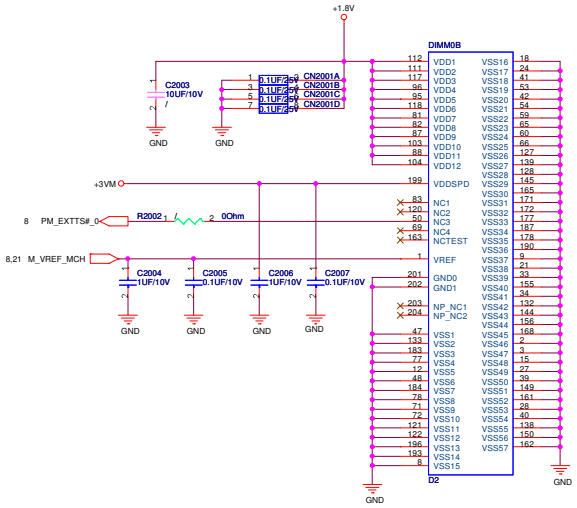
Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 19 of 95

M_A_DQ[63:0] 10

REV Type - 12G025122006
ME - 12G025332003

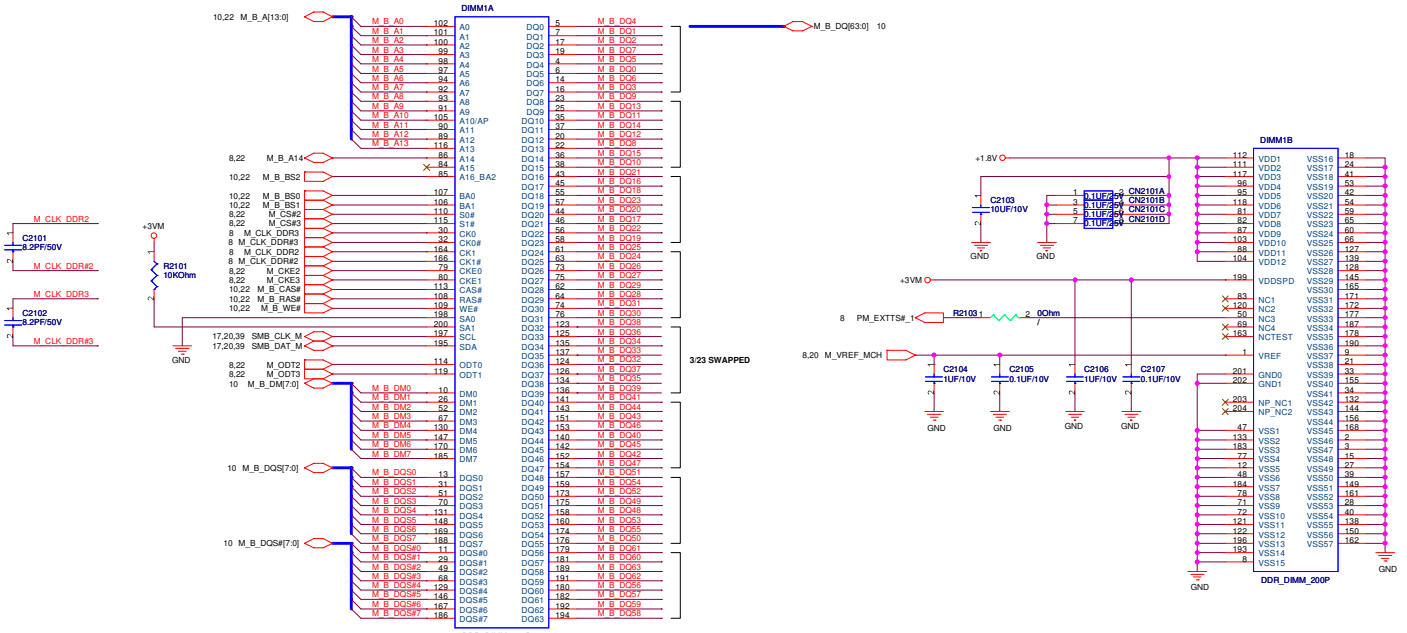




<Variant Name>

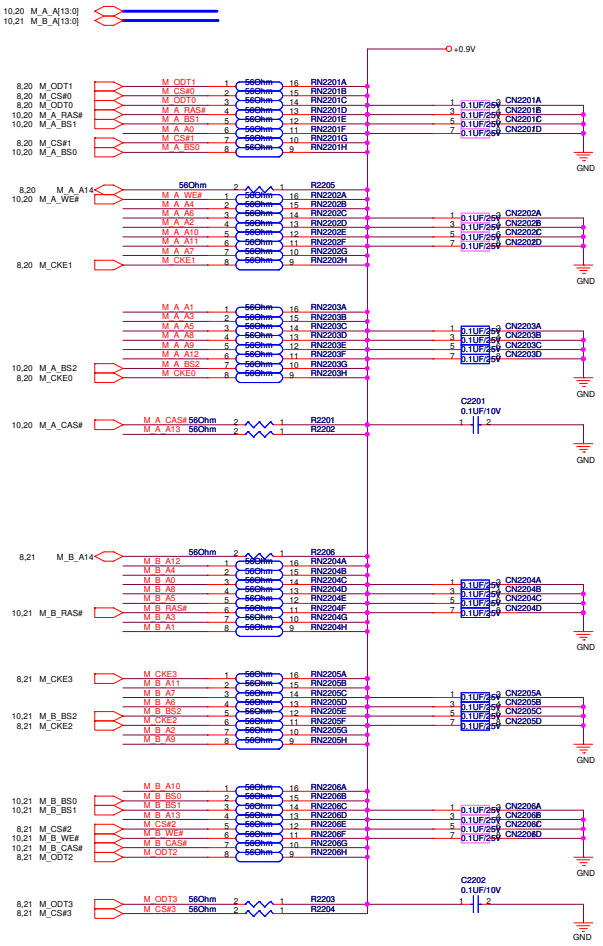
ASUSTeK COMPUTER INC. NB1	Title : DDR2 SO-DIMM0	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 20 of 95	

STD Type - 12G025122000



<Variant Name>

ASUSTeK COMPUTER INC. NB1	Title : DDR2 SO-DIMM1	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 21 of 95	

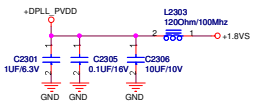


<Variant Name>

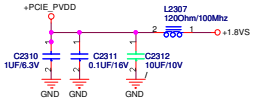
ASUSTeK COMPUTER INC. NB1	Title : DDR2 TERMINATION	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 22 of 95	

M82/M86ME Power

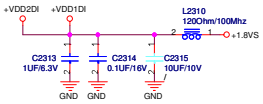
1.8V (? %) @ 120MA DPLL_PVDD M8X-M



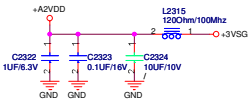
1.8V @ 40mA PCIE_PVDD M8X-M



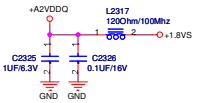
1.8V @ 121MA VDD1DI+VDD2DI FOR M8XM

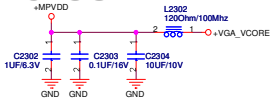


3.3V @ 135MA A2VDD FOR M8XM



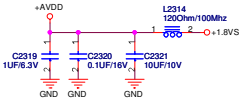
1.8V @ 2MA A2VDDQ FOR M8XM



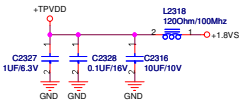


(0.95V~1.1V @ 414MA MPVDD)

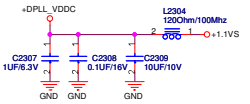
1.8V @ 100MA AVDD FOR M8XM

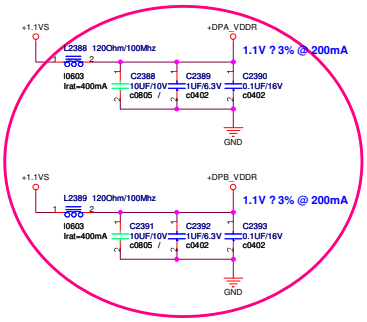


1.8V ? 3% @ 40 mA for M8XM



1.1V @ 300MA DPLL_VDDC FOR M8XM





<Variant Name>

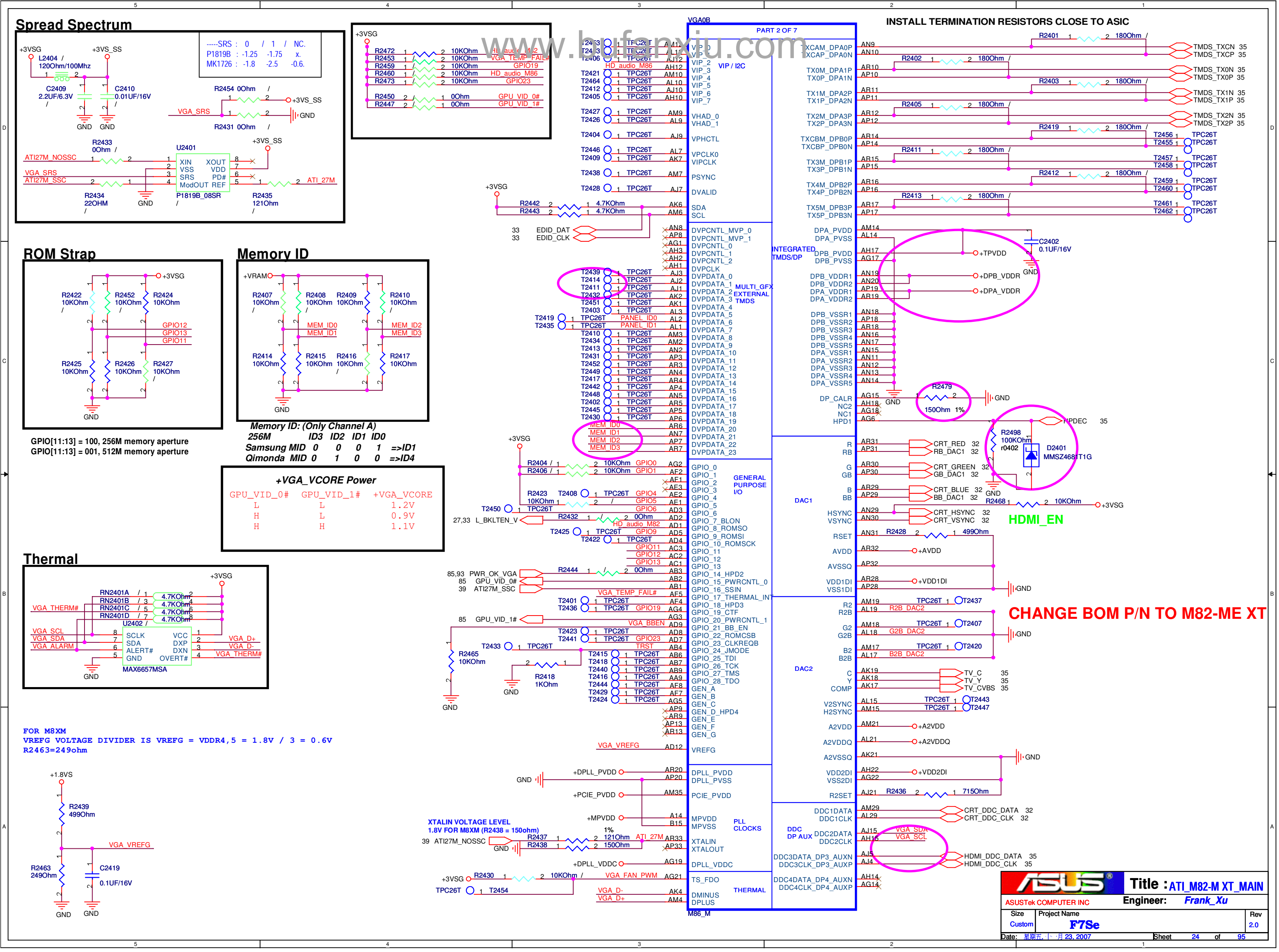
Title : VGA M82-M XT POWER

ASUSTeK COMPUTER INC

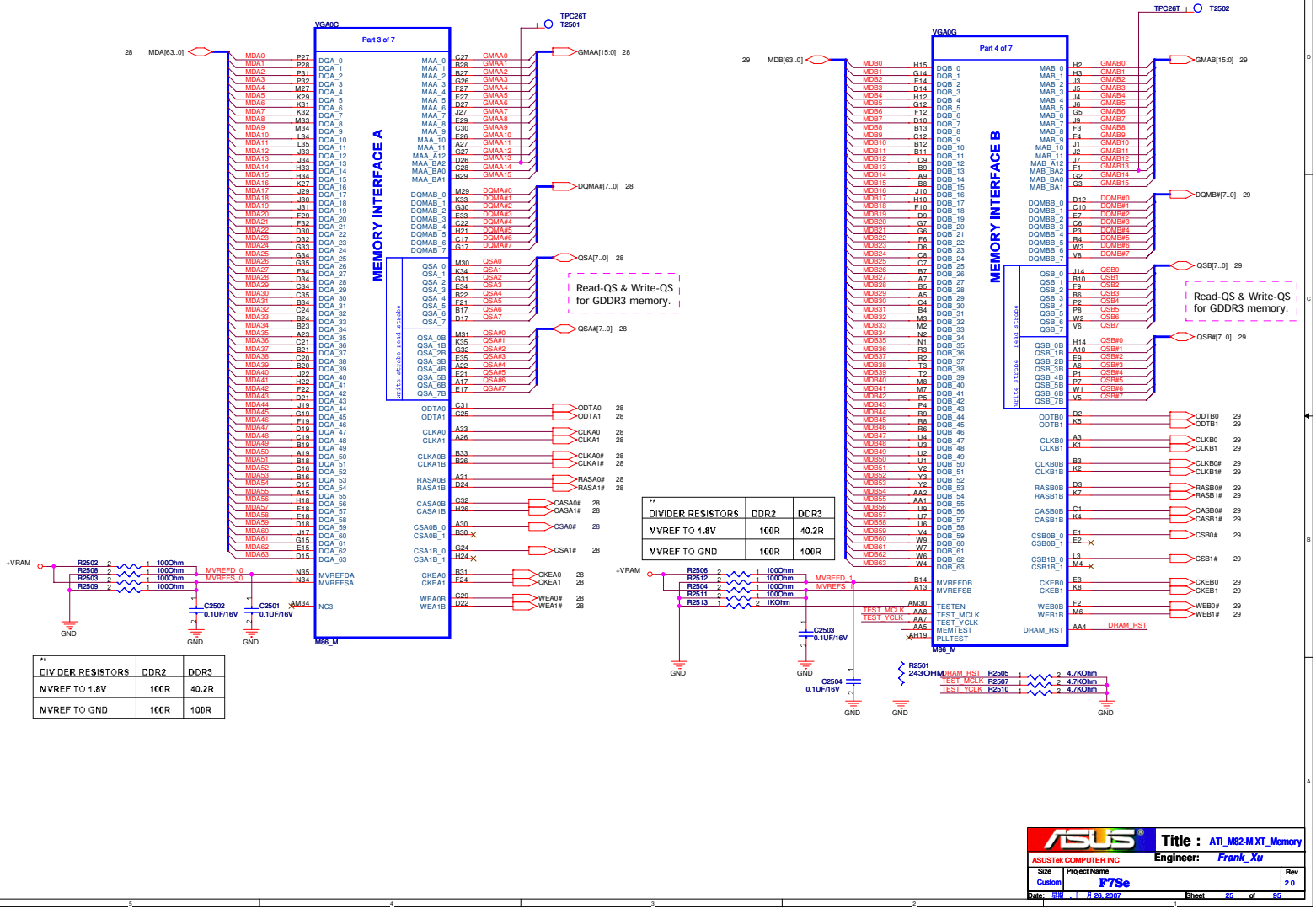
Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 24, 2007 Sheet 23 of 95



Spread Spectrum
ROM Strap
Memory ID
Thermal
INSTALL TERMINATION RESISTORS CLOSE TO ASIC
PART 2 OF 7
M86_M
GPIO[11:13] = 100, 256M memory aperture
GPIO[11:13] = 001, 512M memory aperture
Memory ID: (Only Channel A)
256M ID3 ID2 ID1 ID0
Samsung MID 0 0 0 1 =>ID1
Qimonda MID 0 1 0 0 =>ID4
+VGA_VCORE Power
GPU_VID_0# GPU_VID_1# +VGA_VCORE
L L 1.2V
H L 0.9V
H H 1.1V
FOR M8XM
VREFG VOLTAGE DIVIDER IS VREFG = VDDR4,5 = 1.8V / 3 = 0.6V
R2463=249ohm
XTALIN VOLTAGE LEVEL
1.8V FOR M8XM (R2438 = 150ohm)
HDMI_EN
CHANGE BOM P/N TO M82-ME XT
ASUSTek COMPUTER INC
Title : ATI_M82-M XT_MAIN
Engineer: Frank_Xu
Project Name F7Se
Size Custom
Rev 2.0
Sheet 24 of 95



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

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

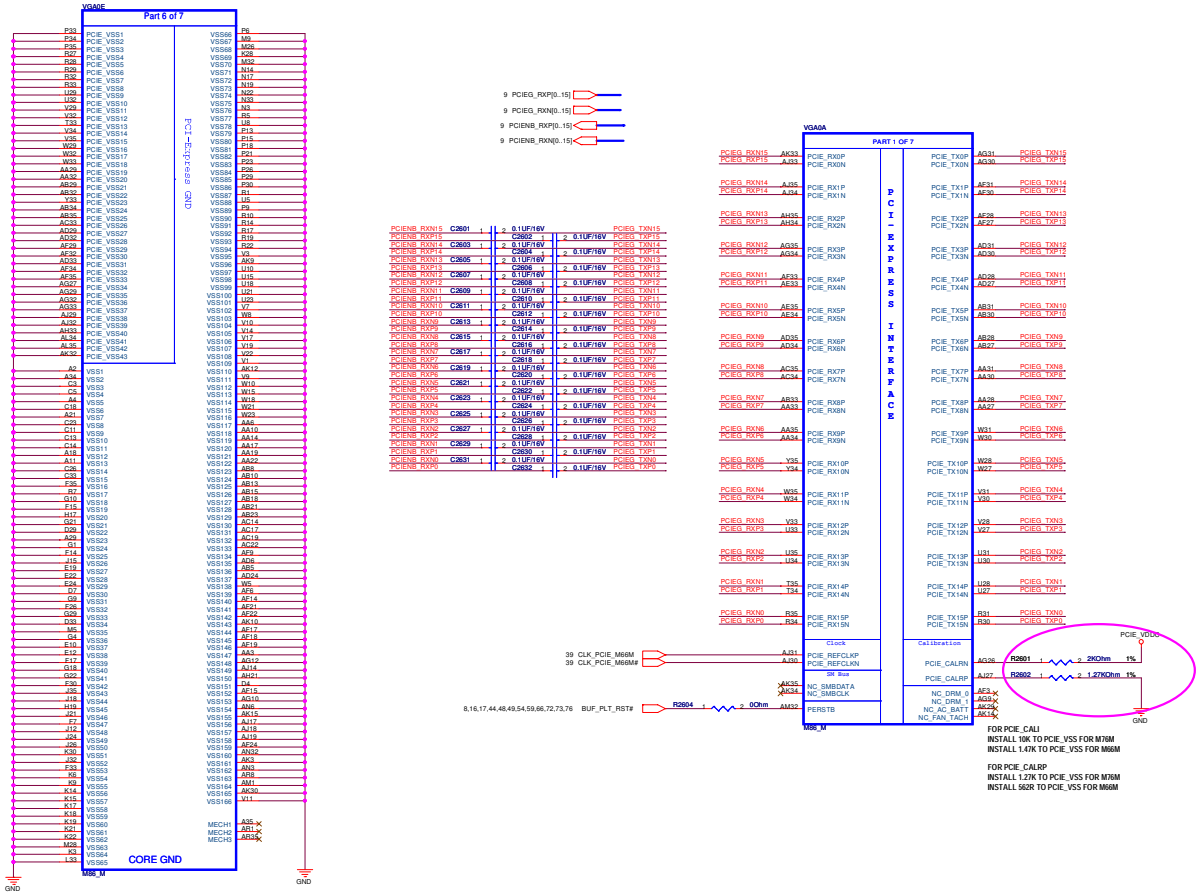
ASUSTeK COMPUTER INC

Title : ATI_M82-M XT_Memory

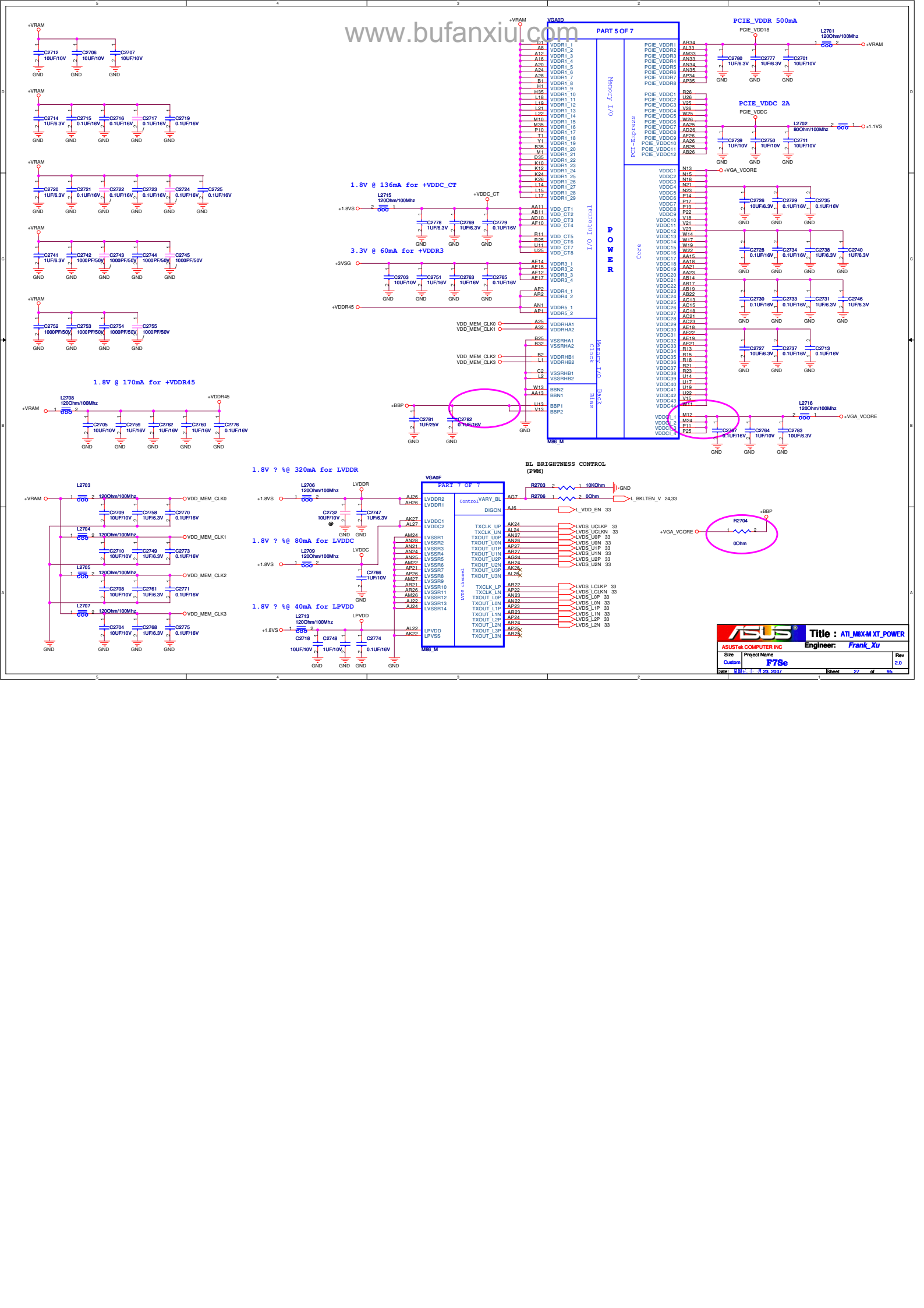
Engineer: Frank_Xu

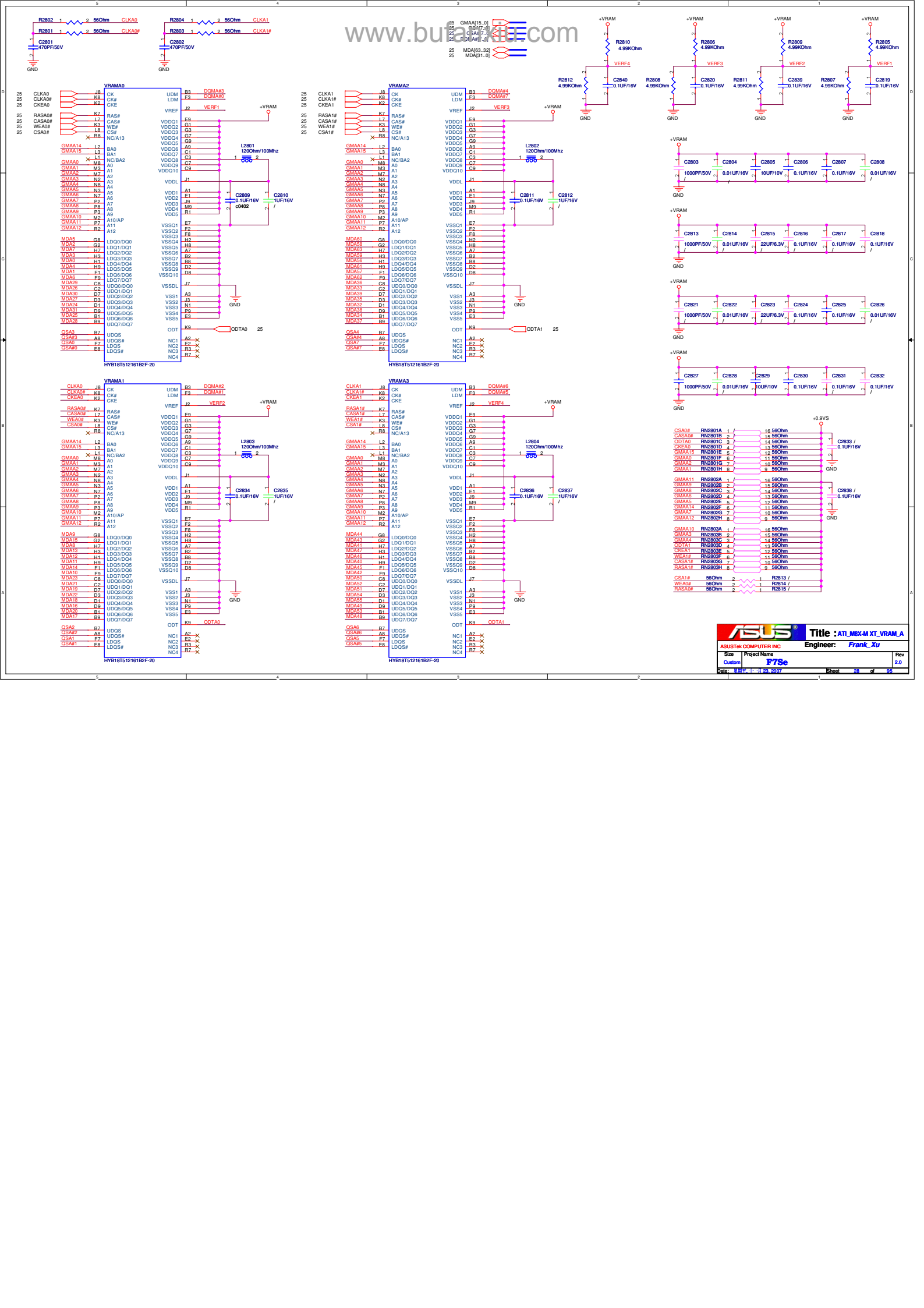
Size	Project Name	Rev
Custom	F7Se	2.0

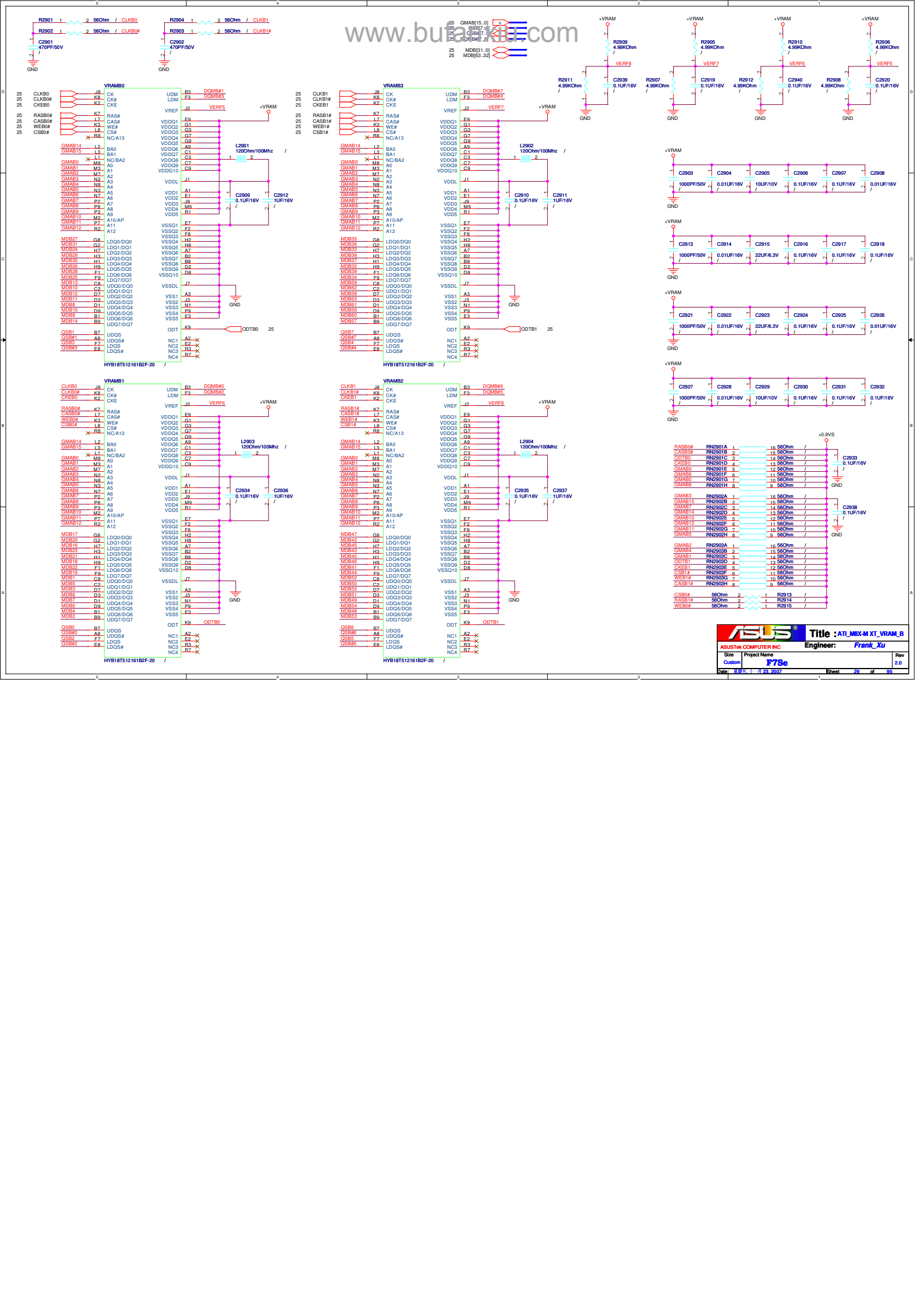
Date: 星期 二 十月 26, 2007 Sheet 25 of 55



ASUSTeK COMPUTER INC	Title : ATI_M8X-M XT_PCI-E		
	Engineer: Frank_Xu		
Size: C	Project Name: F7Sc		Rev: 2.0
Date: Mon, Jul 23, 2007	Sheet 26 of 55		




R2802 56Ohm CLKA0
R2801 56Ohm CLKA0#
C2801 470PF/50V
R2804 56Ohm CLKA1
R2803 56Ohm CLKA1#
C2802 470PF/50V
GND
VRAMA0
VRAMA2
VRAMA1
VRAMA3
HYB18T512161B2F-20
L2801 120Ohm/100Mhz
L2802 120Ohm/100Mhz
L2803 120Ohm/100Mhz
L2804 120Ohm/100Mhz
C2809 0.1UF/16V c0402
C2810 1UF/16V
C2811 0.1UF/16V
C2812 1UF/16V
C2834 0.1UF/16V
C2835 1UF/16V
C2836 0.1UF/16V
C2837 1UF/16V
+VRAM
R2810 4.99KOhm VERF4
R2806 4.99KOhm VERF3
R2809 4.99KOhm VERF2
R2805 4.99KOhm VERF1
R2812 4.99KOhm C2840 0.1UF/16V
R2808 4.99KOhm C2820 0.1UF/16V
R2811 4.99KOhm C2839 0.1UF/16V
R2807 4.99KOhm C2819 0.1UF/16V
C2803 1000PF/50V C2804 0.01UF/16V C2805 10UF/10V C2806 0.1UF/16V C2807 0.1UF/16V C2808 0.01UF/16V
C2813 1000PF/50V C2814 0.01UF/16V C2815 22UF/6.3V C2816 0.1UF/16V C2817 0.1UF/16V C2818 0.1UF/16V
C2821 1000PF/50V C2822 0.01UF/16V C2823 22UF/6.3V C2824 0.1UF/16V C2825 0.1UF/16V C2826 0.01UF/16V
C2827 1000PF/50V C2828 0.01UF/16V C2829 10UF/10V C2830 0.1UF/16V C2831 0.1UF/16V C2832 0.1UF/16V
+0.9VS
RN2801A RN2801B RN2801C RN2801D RN2801E RN2801F RN2801G RN2801H 56Ohm C2833 / 0.1UF/16V
RN2802A RN2802B RN2802C RN2802D RN2802E RN2802F RN2802G RN2802H 56Ohm C2838 / 0.1UF/16V
RN2803A RN2803B RN2803C RN2803D RN2803E RN2803F RN2803G RN2803H 56Ohm
R2813 / R2814 / R2815 /
ASUSTeK COMPUTER INC
Title : ATI_M8X-M XT_VRAM_A
Engineer: Frank_Xu
Project Name F7Se
Size Custom
Rev 2.0
Date: 星期五, 十一月 23, 2007
Sheet 28 of 95


R2901 56Ohm / CLKB0
R2902 56Ohm / CLKB0#
C2901 470PF/50V
R2904 56Ohm / CLKB1
R2903 56Ohm / CLKB1#
C2902 470PF/50V
GND
GMAB[15..0]
GMAB[7..0]
GMAB[7..0]
MDB[31..0]
MDB[63..32]
VRAMB0
VRAMB3
VRAMB1
VRAMB2
HYB18T512161B2F-20
+VRAM
+0.9VS
L2901 120Ohm/100Mhz
L2902 120Ohm/100Mhz
L2903 120Ohm/100Mhz
L2904 120Ohm/100Mhz
R2909 4.99KOhm
R2905 4.99KOhm
R2910 4.99KOhm
R2906 4.99KOhm
R2911 4.99KOhm
R2907 4.99KOhm
R2912 4.99KOhm
R2908 4.99KOhm
VERF8
VERF7
VERF6
VERF5
C2939 0.1UF/16V
C2919 0.1UF/16V
C2940 0.1UF/16V
C2920 0.1UF/16V
C2903 C2904 C2905 C2906 C2907 C2908
C2913 C2914 C2915 C2916 C2917 C2918
C2921 C2922 C2923 C2924 C2925 C2926
C2927 C2928 C2929 C2930 C2931 C2932
1000PF/50V
0.01UF/16V
10UF/10V
0.1UF/16V
22UF/6.3V
RN2901A RN2901B RN2901C RN2901D RN2901E RN2901F RN2901G RN2901H
RN2902A RN2902B RN2902C RN2902D RN2902E RN2902F RN2902G RN2902H
RN2903A RN2903B RN2903C RN2903D RN2903E RN2903F RN2903G RN2903H
56Ohm
C2933 0.1UF/16V
C2938 0.1UF/16V
R2913 R2914 R2915
ODTB0
ODTB1
Title : ATI_MBX-M XT_VRAM_B
ASUSTek COMPUTER INC
Engineer: Frank_Xu
Size Custom
Project Name F7Se
Rev 2.0
Date: 星期六, 十一月 23, 2007
Sheet 29 of 95

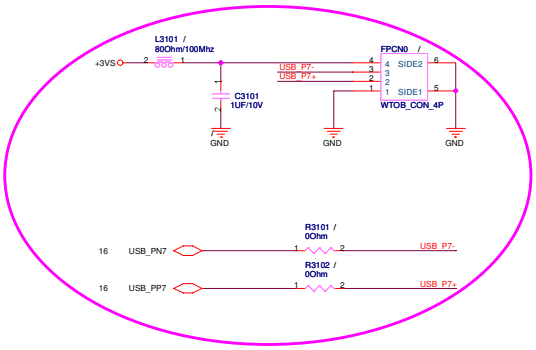
Title : Blank Page

ASUSTeK COMPUTER INC

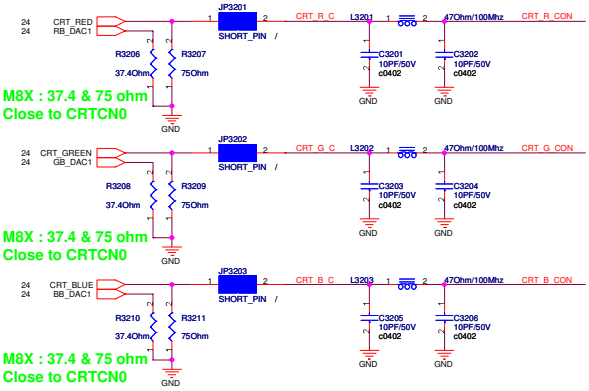
Engineer: Frank_Xu

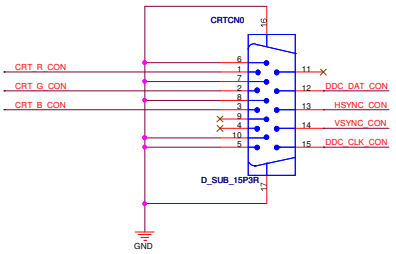
Size	Project Name	Rev
Custom	F7Se	2.0

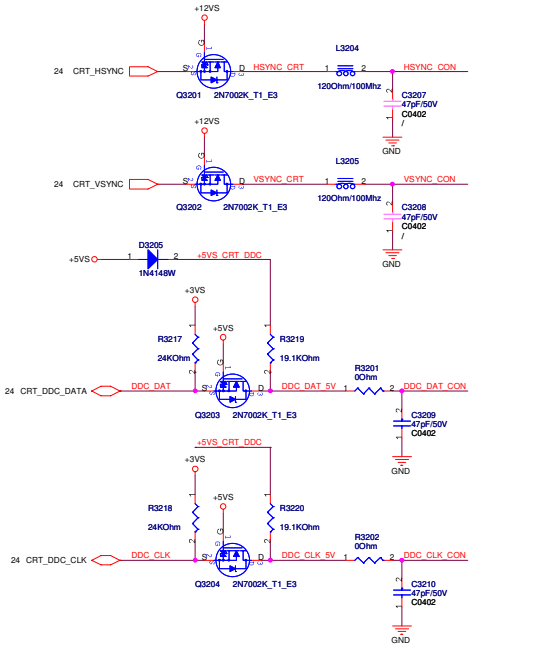
Date: 星期六, 十一月 23, 2007 Sheet 30 of 95



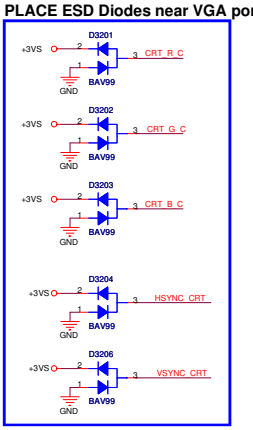
ASUSTeK COMPUTER INC	Title : FINGER PRINT		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期 一, 十一月 26, 2007	Sheet 31 of 95		







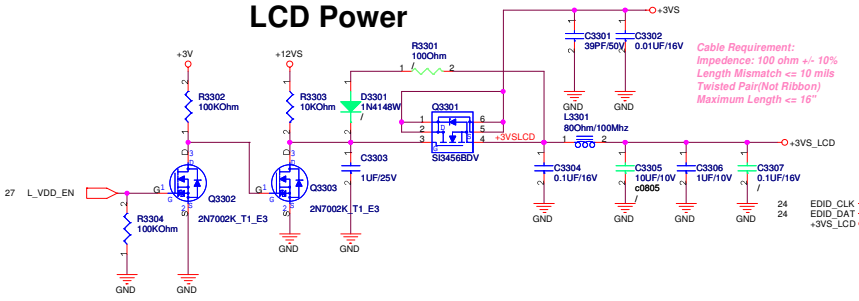
PLACE ESD Diodes near VGA port



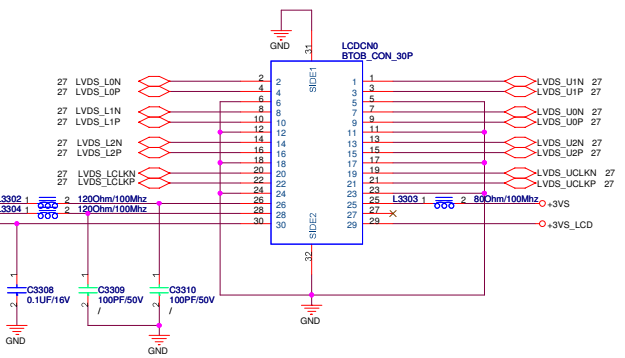
ASUSTeK COMPUTER INC	Title : CRT		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 32 of 95		

LCD Backlight Control

LCD Power

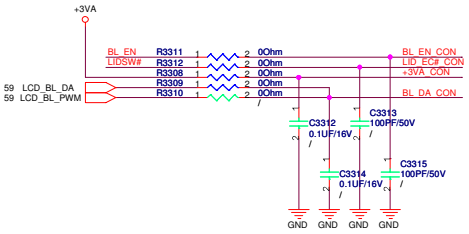


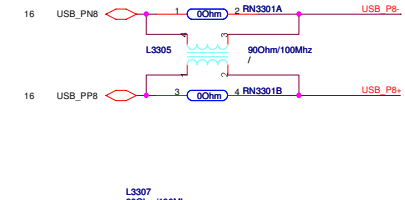
LCD LVDS Interface

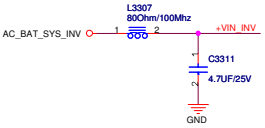


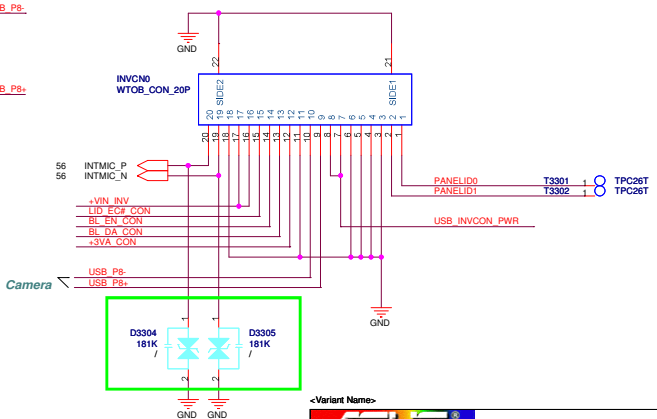
INVERTER

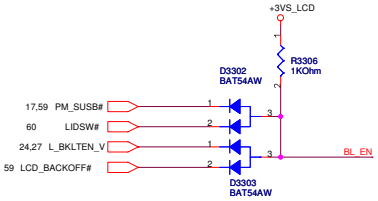
Interface/Speaker CONN.

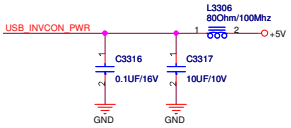












EMI REQUEST

<variant_name>

ASUSTeK COMPUTER INC

Title : LVDS & INVERTER

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 33 of 95

Title : Blank Page

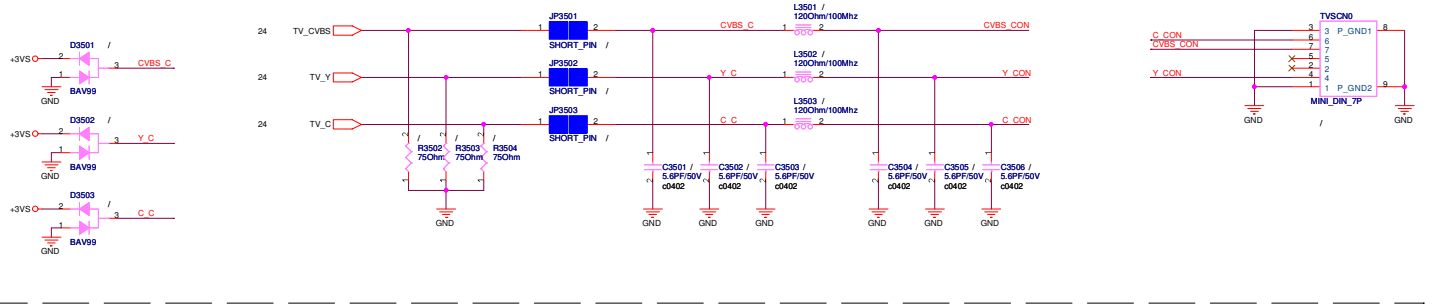
ASUSTeK COMPUTER INC

Engineer: Frank_Xu

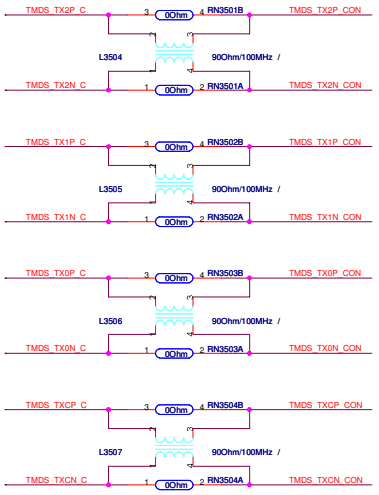
Size	Project Name	Rev
Custom	F7Se	2.0

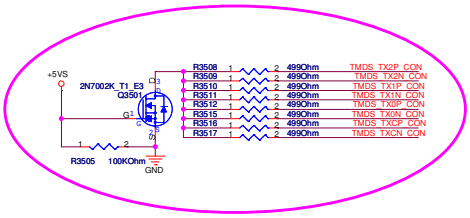
Date: 星期六, 十一月 23, 2007 Sheet 34 of 95

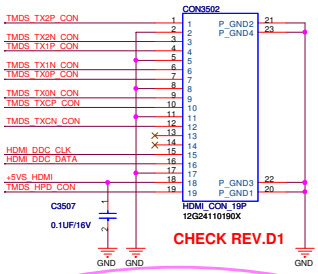
TV OUT

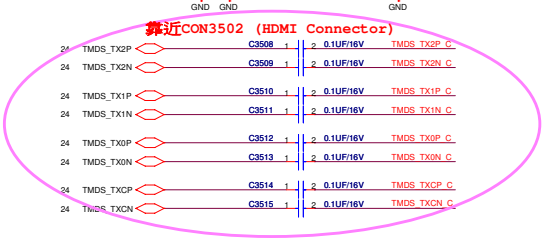


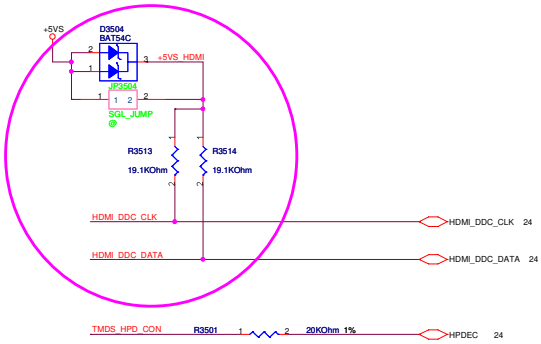
HDMI











ASUSTeK COMPUTER INC

Title : TV & HDMI

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 35 of 95

Title : Blank Page

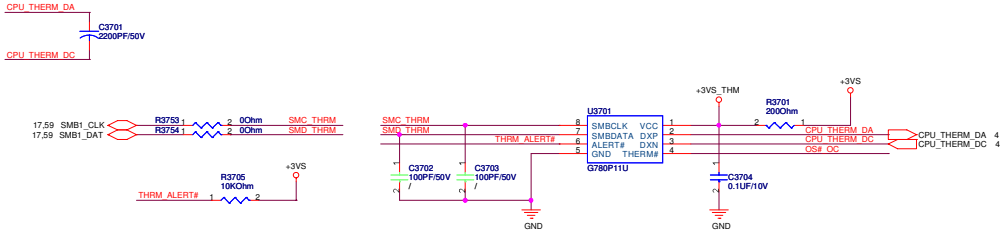
ASUSTeK COMPUTER INC

Engineer: Frank_Xu

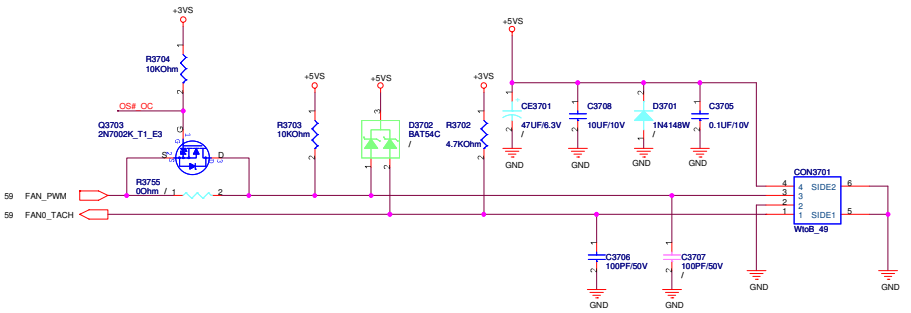
Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 38 of 95

Thermal Sensor



DC FAN Control



ASUSTeK COMPUTER INC. NB1	Title : THER SENSOR & FAN	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 37 of 95	

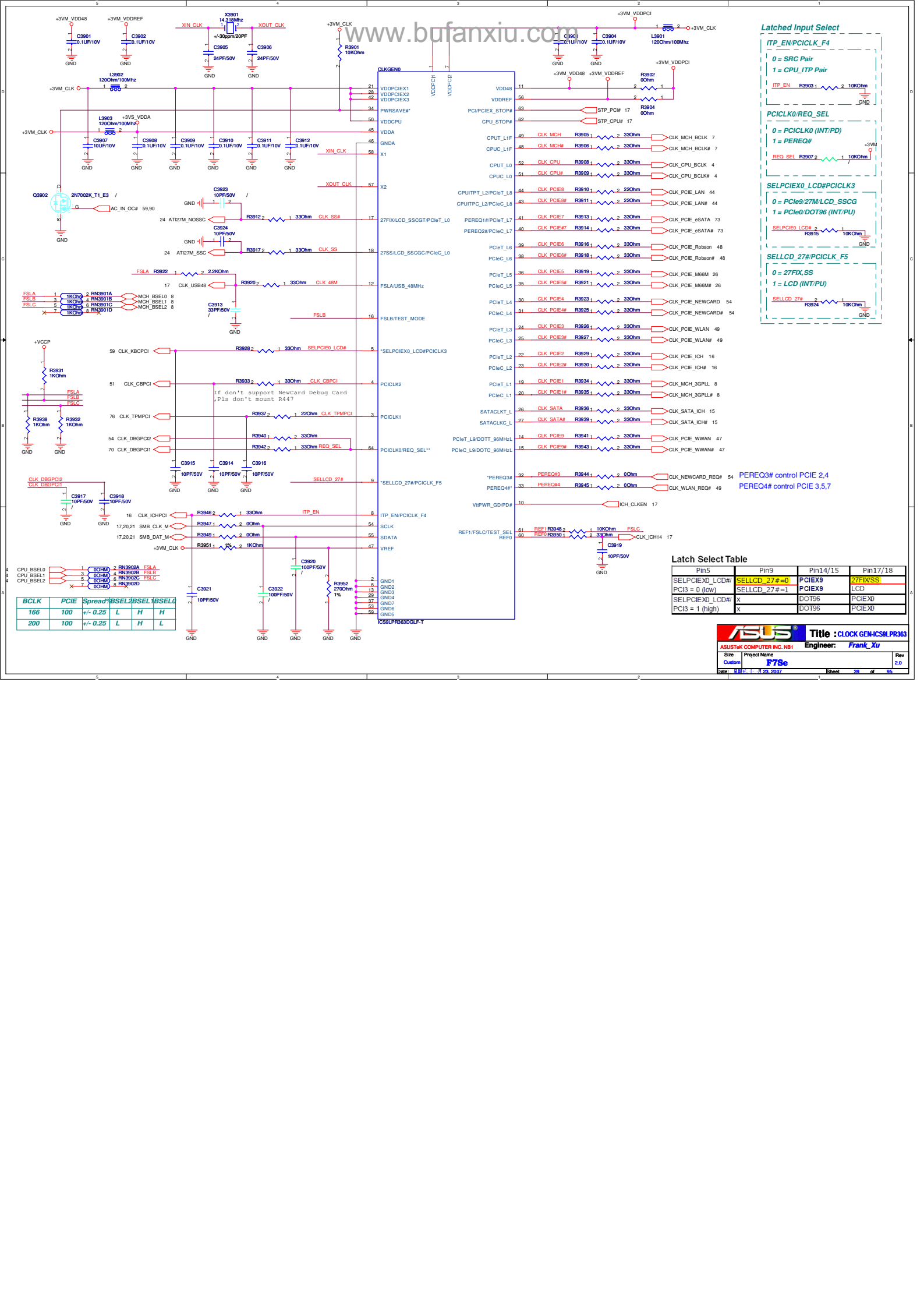
Title : Blank Page

ASUSTeK COMPUTER INC

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 38 of 95



BCLK	PCIE	Spread%	BSEL2	BSEL1	BSEL0
166	100	+/- 0.25	L	H	H
200	100	+/- 0.25	L	H	L

Latch Select Table

Pin5	Pin9	Pin14/15	Pin17/18
SELPCIEX0_LCD#/ PCI3 = 0 (low)	SELLCD_27#=0	PCIEX9	27FIX/SS
	SELLCD_27#=1	PCIEX9	LCD
SELPCIEX0_LCD#/ PCI3 = 1 (high)	X	DOT96	PCIEX0
	X	DOT96	PCIEX0

ASUSTeK COMPUTER INC. NB1

Title : CLOCK GEN-ICS9LPR363

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 39 of 95

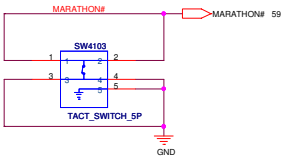
Title : Blank Page

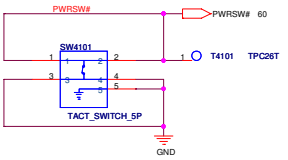
ASUSTeK COMPUTER INC

Engineer: Frank_Xu

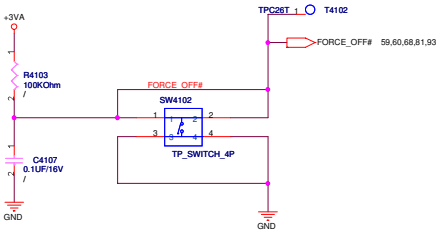
Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 40 of 95

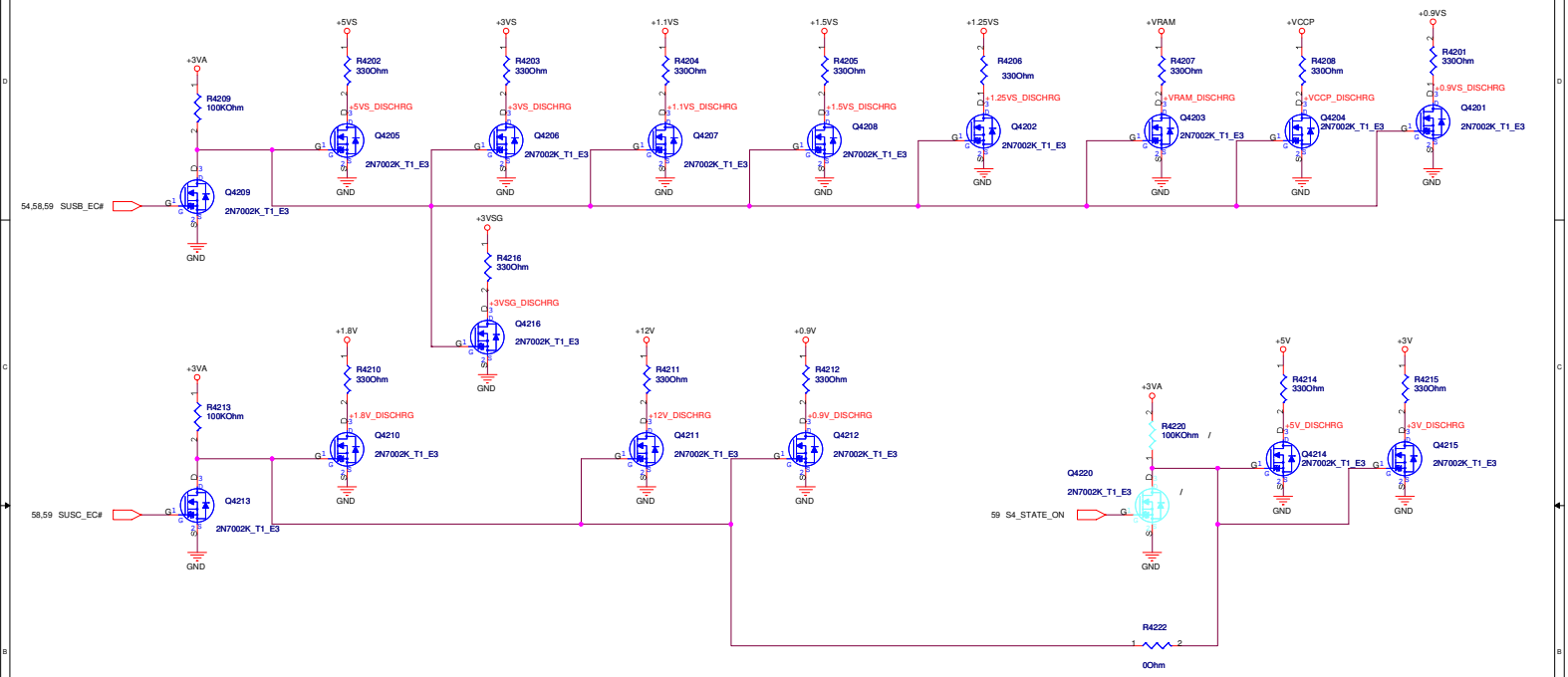




SHUT_DOWN#



ASUSTeK COMPUTER INC	Title : Power on & Res Freq		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 41 of 95		



<Variant Name>

ASUSTeK COMPUTER INC. NB1	Title : DISCHARGE & EMI CAP	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 42 of 95	

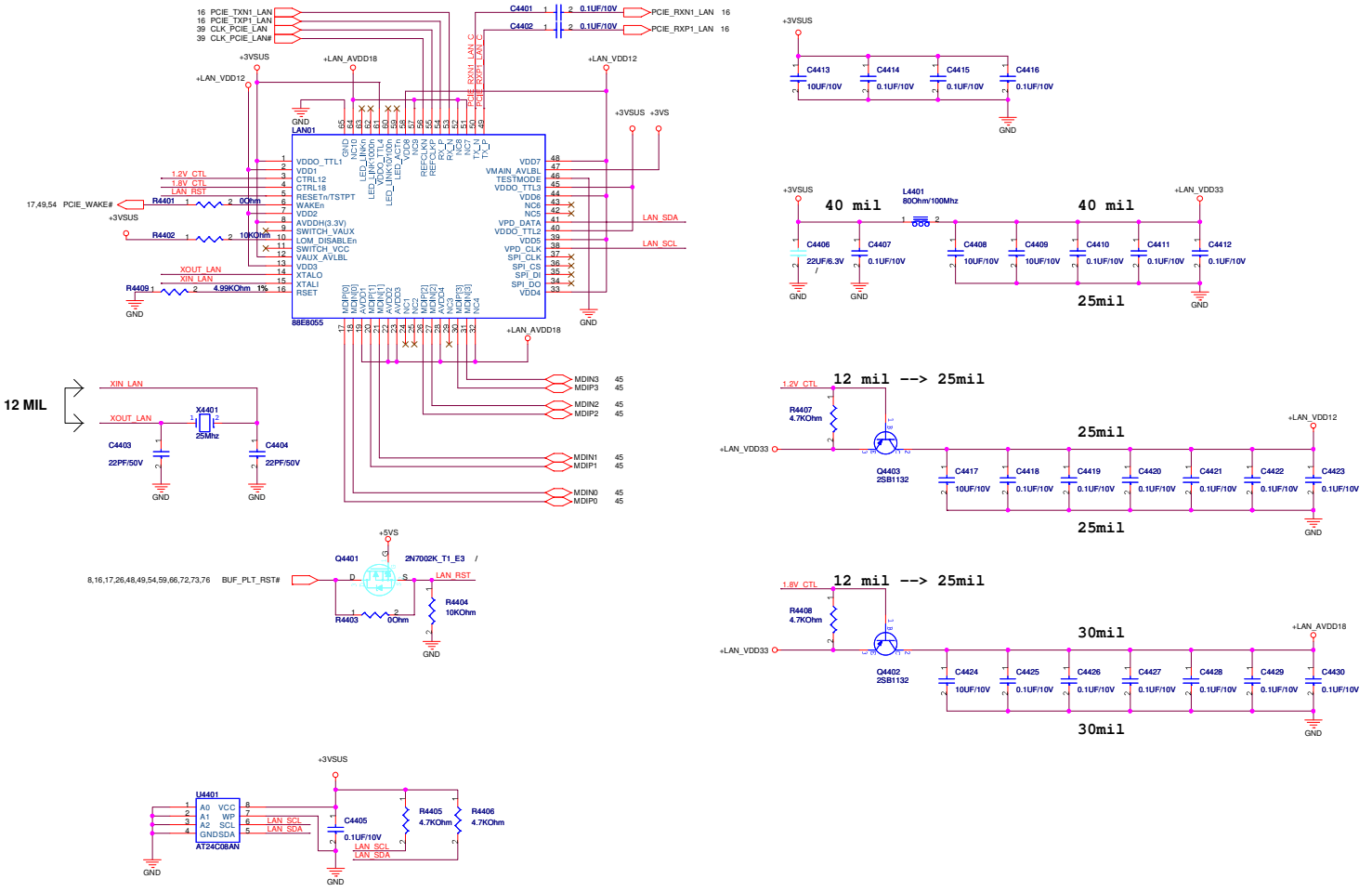
Title : Blank Page

ASUSTeK COMPUTER INC

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 43 of 95



ASUSTeK COMPUTER INC. NB1

Title : MARVELL 88E8055

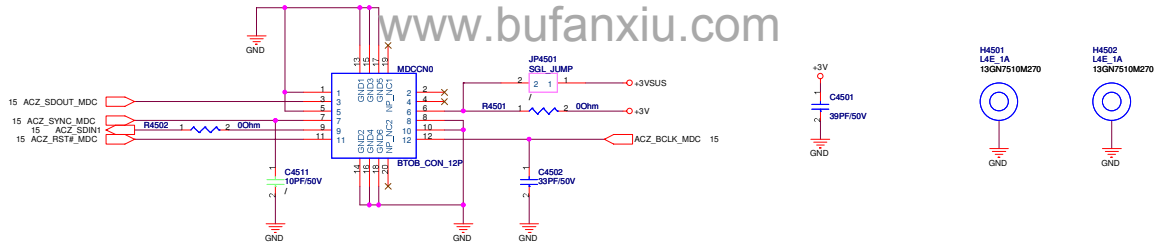
Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

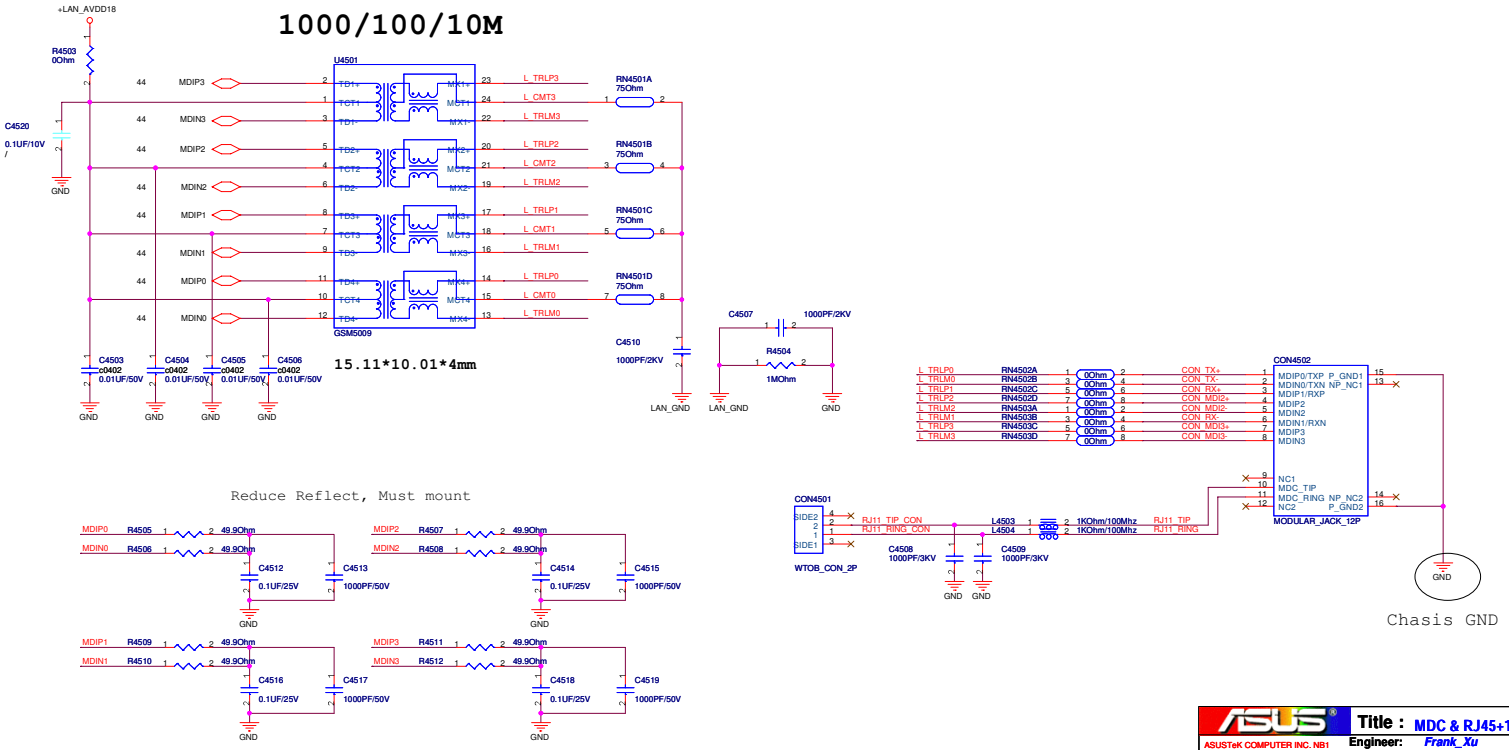
Date: 星期五, 十一月 23, 2007 Sheet 44 of 95

Change to
13GN7510M270

MDC CONN.



LAN CONN.



ASUSTeK COMPUTER INC. NB1		Title :	MDC & RJ45+11
		Engineer:	Frank_Xu
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期五, 十一月 23, 2007		Sheet 45 of 95	

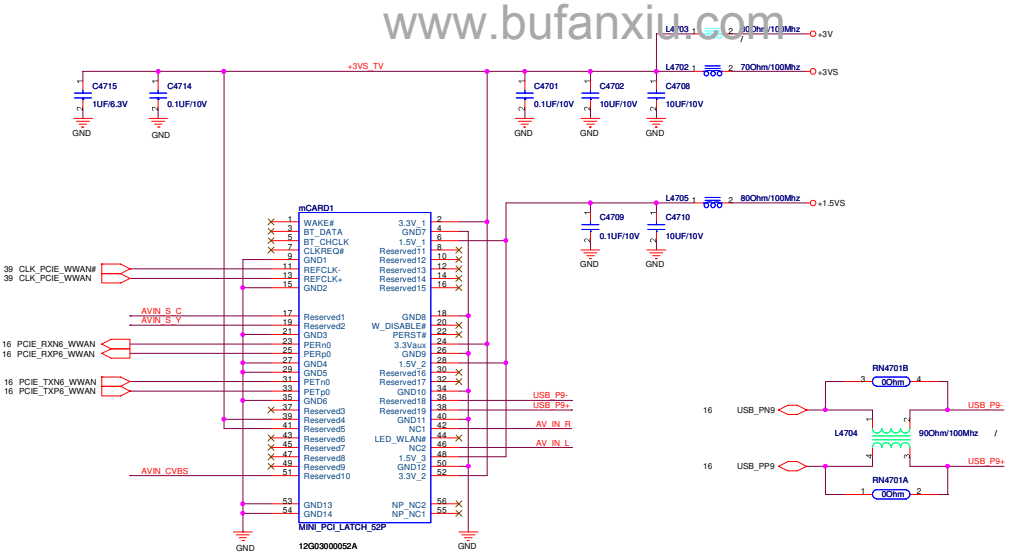
Title : Blank Page

ASUSTeK COMPUTER INC

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 23, 2007 Sheet 46 of 95

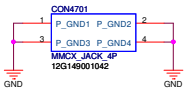


H = 5.2mm

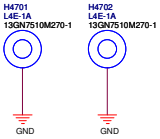
FOR TV TUNER

(UWB OPTION)

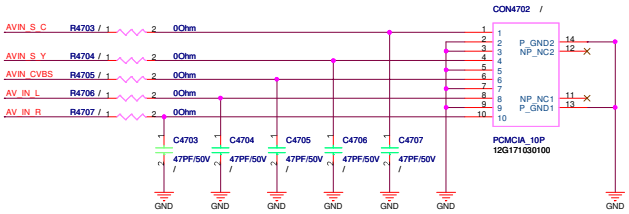
TV Conn.



ME P/N : 14G152075000



H = 3.0mm



<Variant Name>

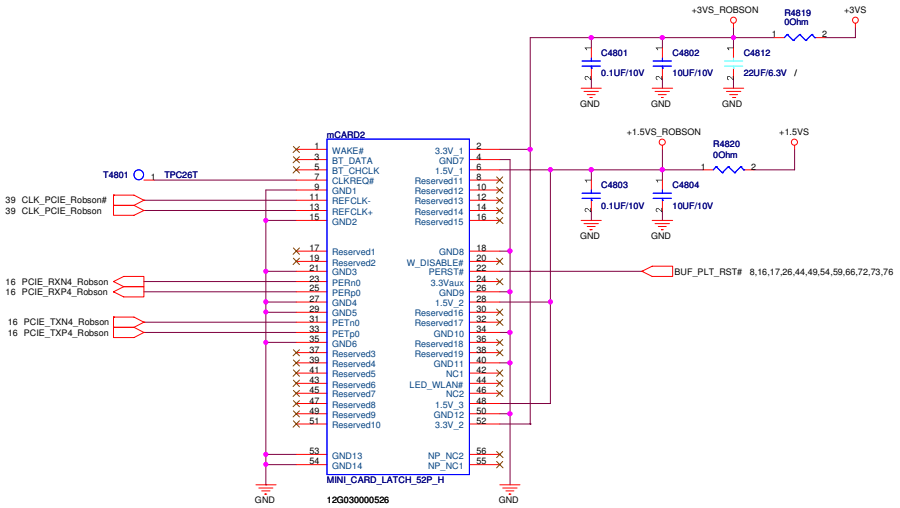
ASUSTeK COMPUTER INC. NB1

Title : MINI CARD (TV)

Engineer: Frank_Xu

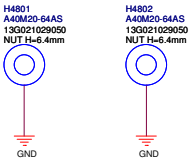
Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期 二 十月 26, 2007 Sheet 47 of 95

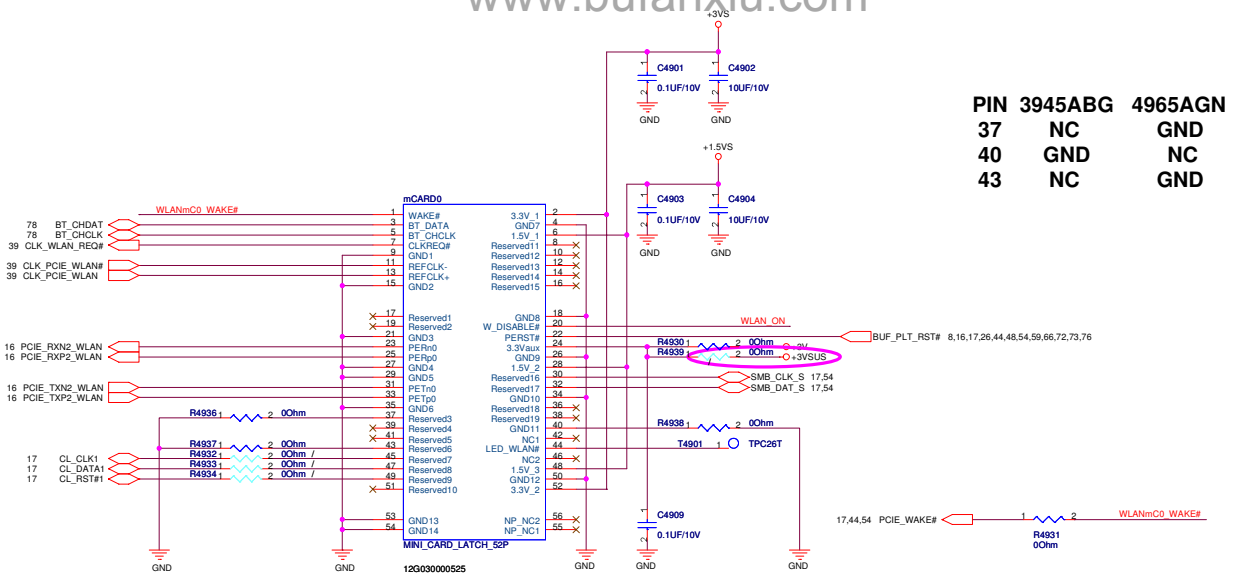


FOR ROBSON

H=9.0mm



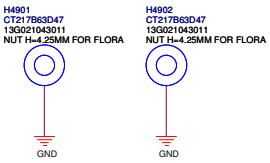
ASUSTeK COMPUTER INC. NB1	Title : MINI CARD-Robson	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 48 of 95	

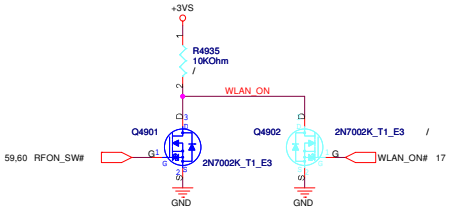


PIN	3945ABG	4965AGN
37	NC	GND
40	GND	NC
43	NC	GND

H = 6.75mm

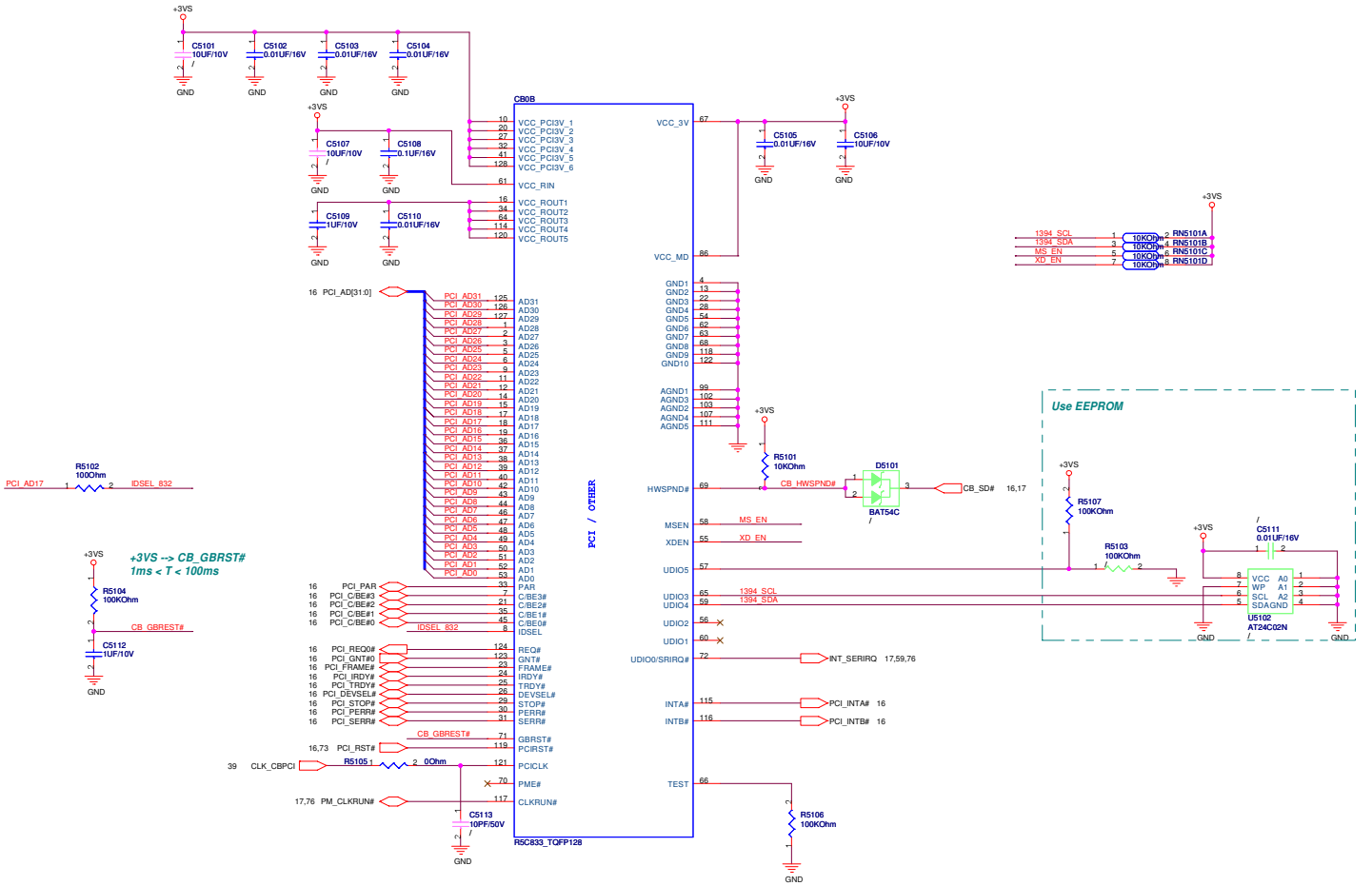
FOR WLAN





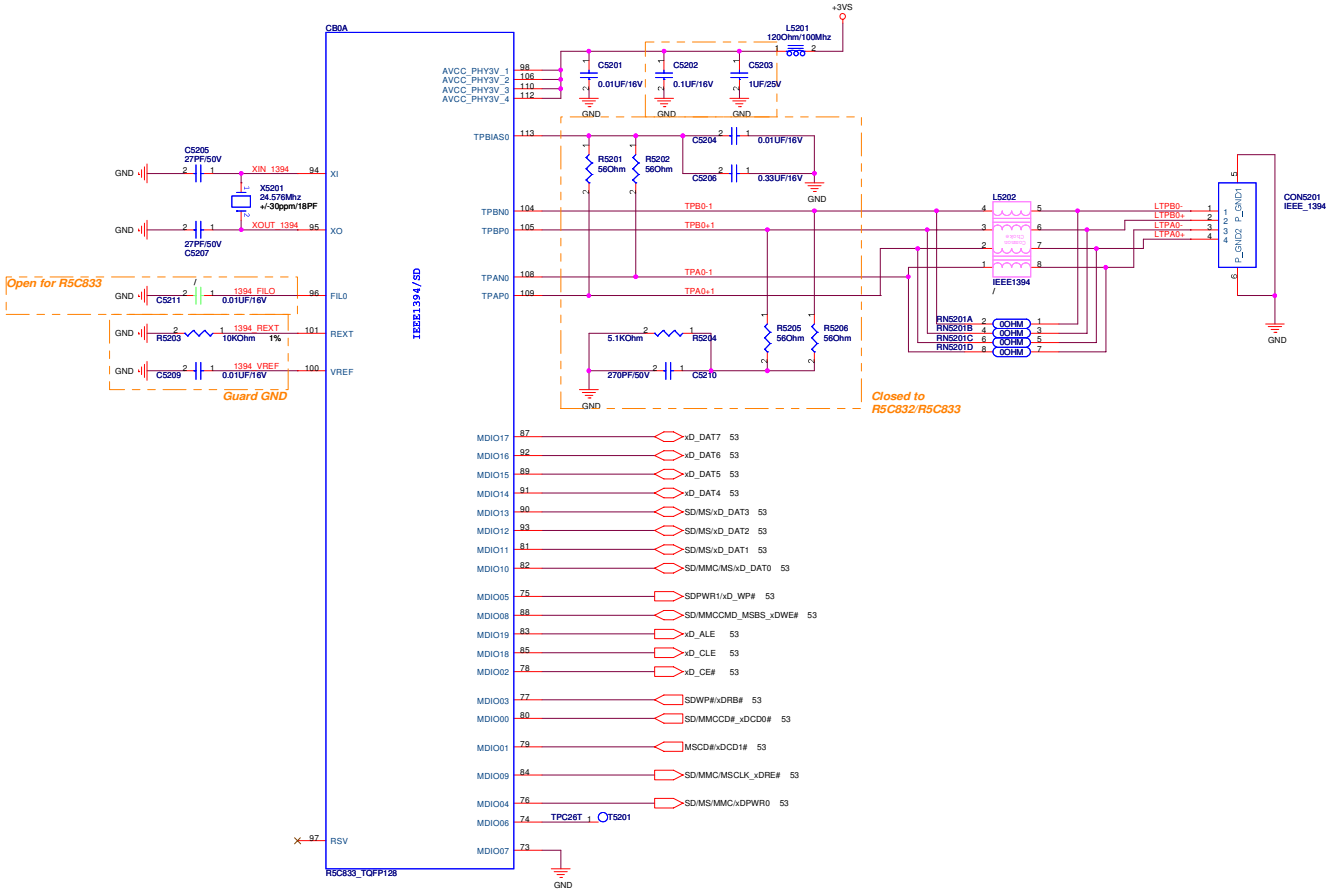
ASUSTeK COMPUTER INC. NB1	Title : MINI CARD-Kedron		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 49 of 95		

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 50 of 95		



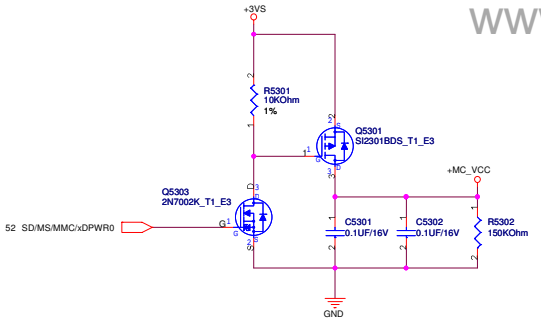
<Variant Name>

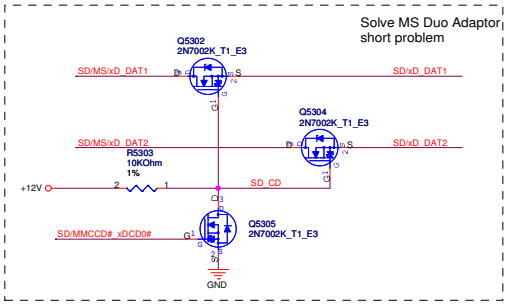
ASUSTeK COMPUTER INC. NB1	Title : CARD1394-R5C833(1)	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 51 of 95	

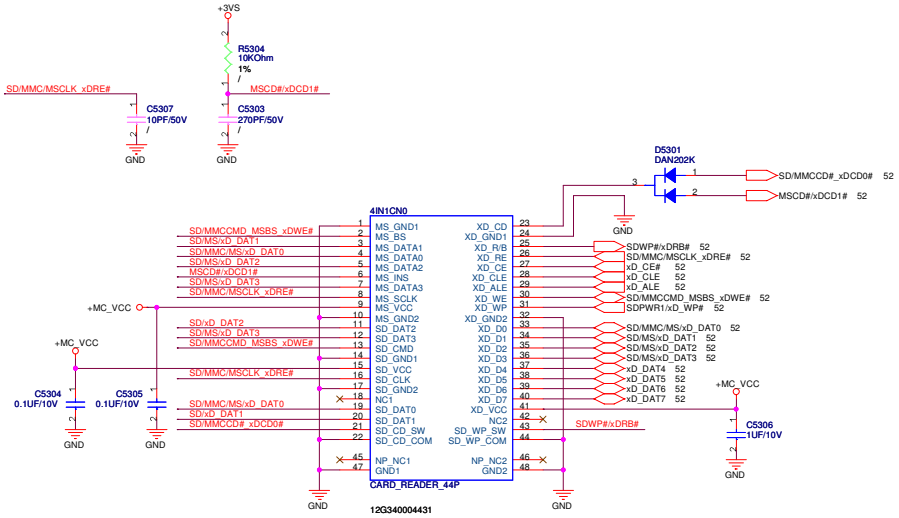


<Variant Name>

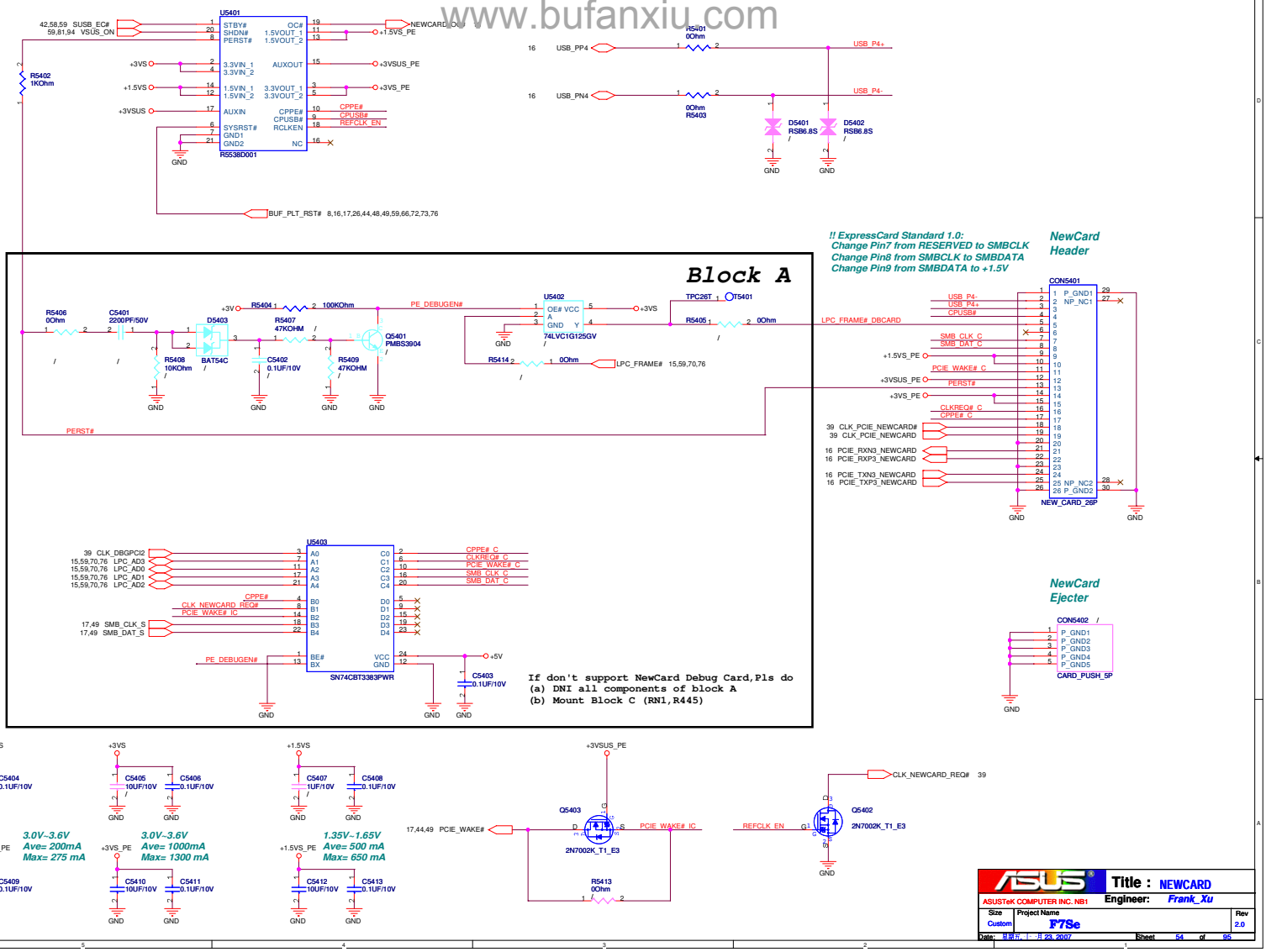
ASUSTeK COMPUTER INC. NB1	Title : CARD1394-R5C833(2)	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 52 of 95	







ASUSTeK COMPUTER INC	Title: 4 in 1 CARD READER	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 53 of 95	



ASUSTeK COMPUTER INC. NB1	Title : NEWCARD		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 54 of 95		

<Variant Name>

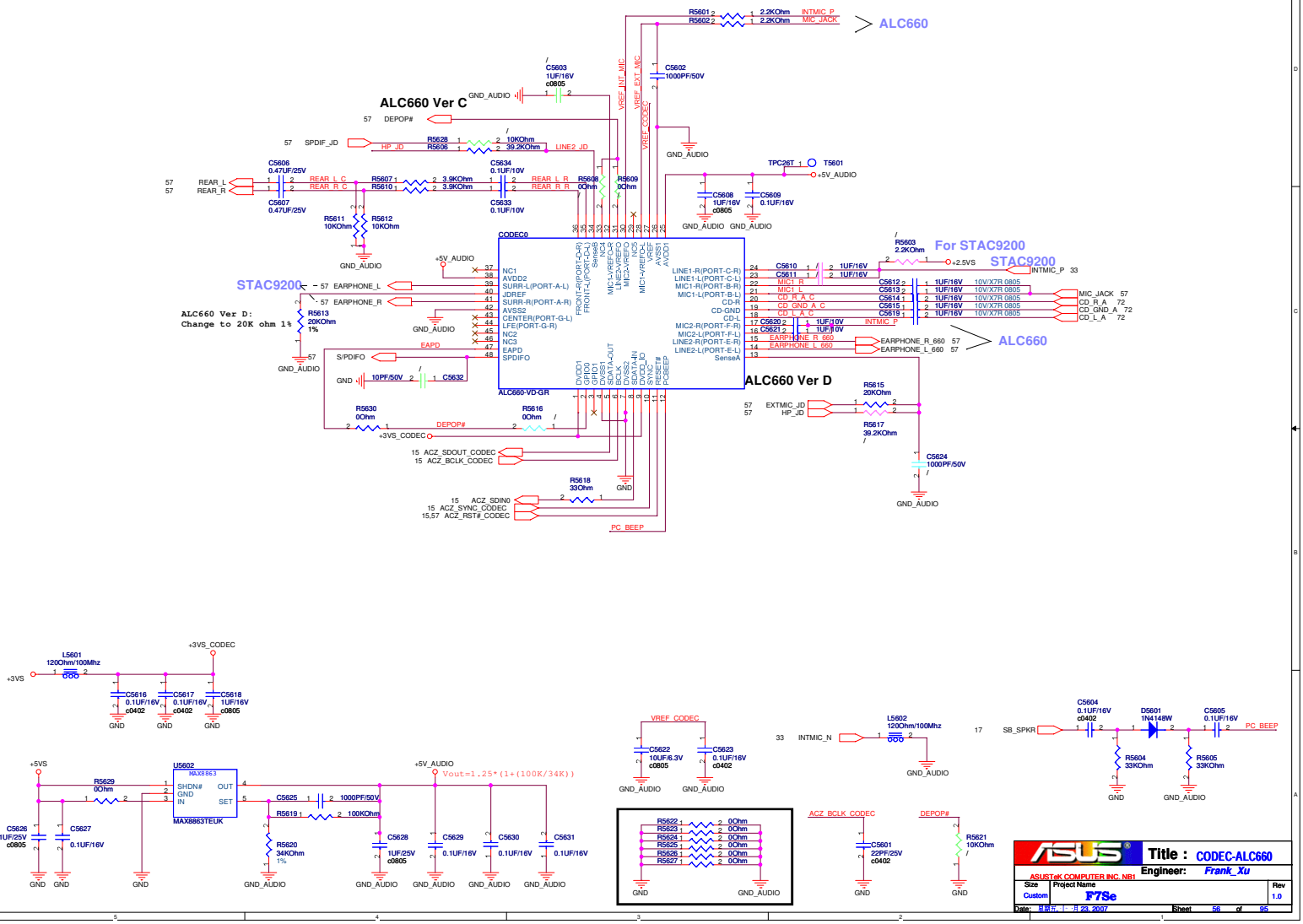
Title : Blank Page

ASUSTeK COMPUTER INC

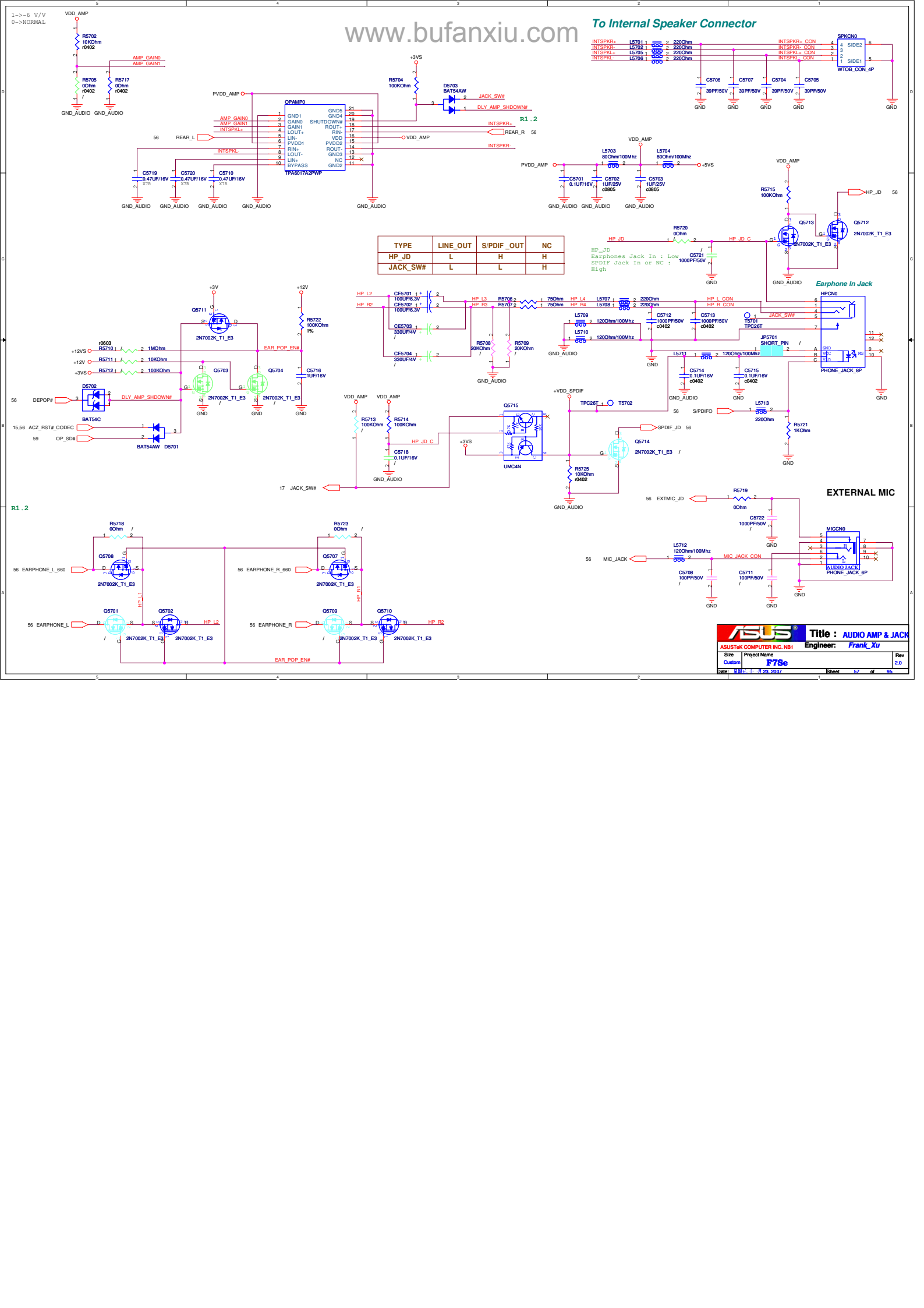
Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

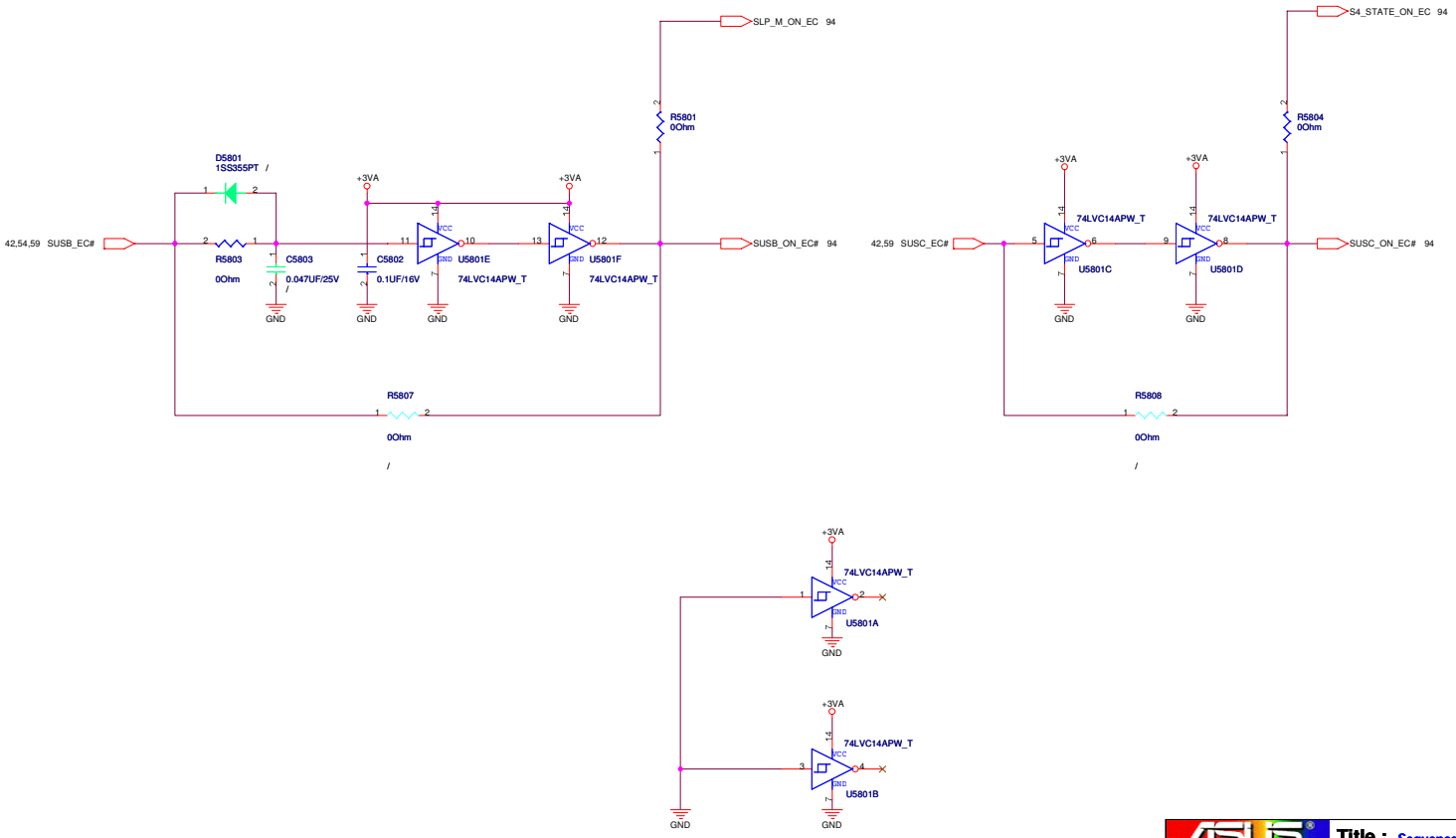
Date: 星期六, 十一月 23, 2007 Sheet 55 of 95



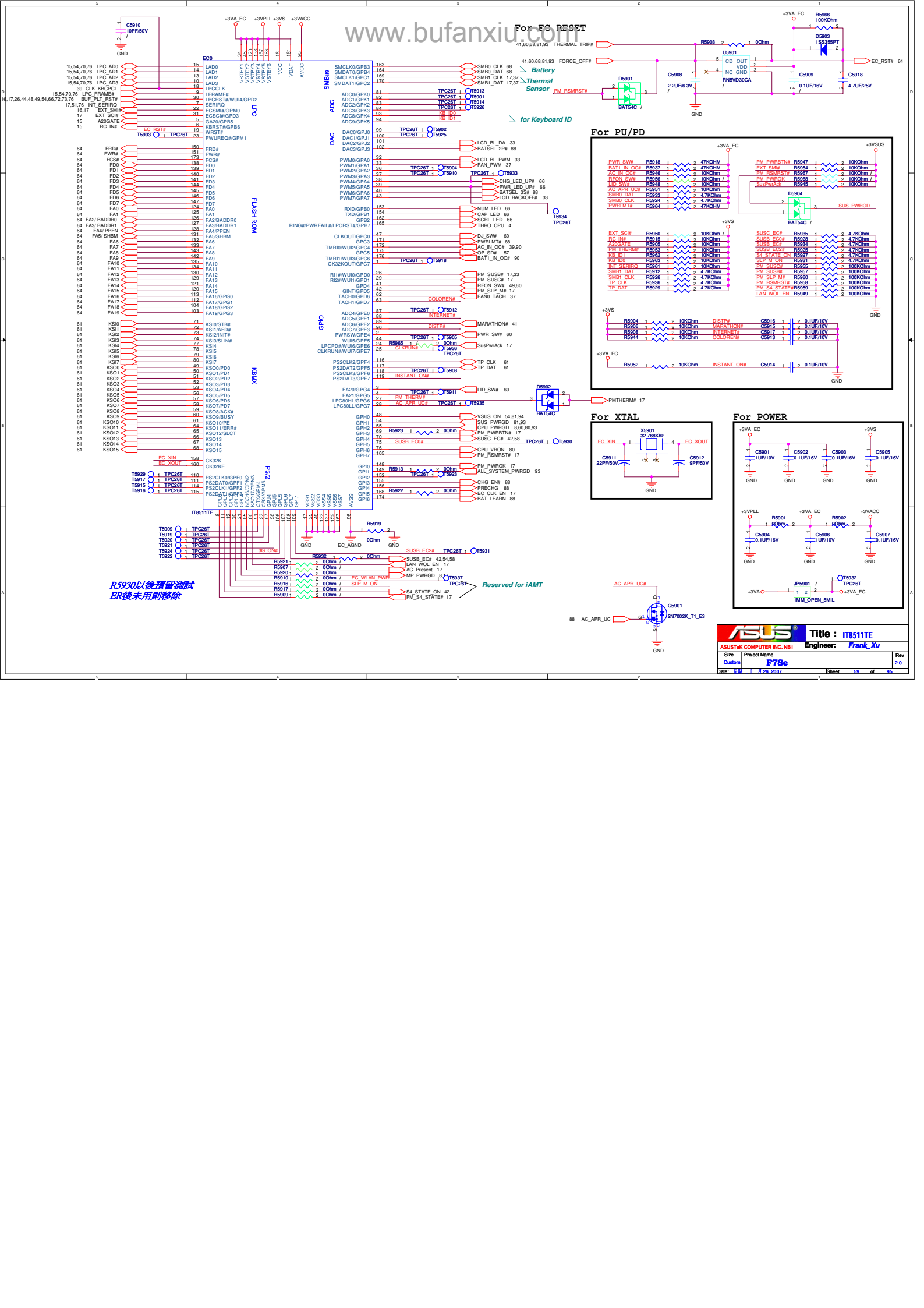
ASUSTeK COMPUTER INC. NB1	Title : CODEC-ALC660		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 1.0
Date: 星期六, 十一月 23, 2007	Sheet 56 of 95		



TYPE	LINE_OUT	S/PDIF _OUT	NC
HP_JD	L	H	H
JACK_SW#	L	L	H

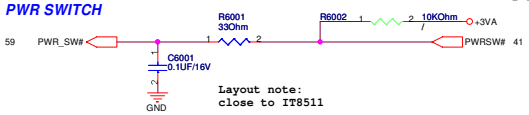


ASUSTeK COMPUTER INC	Title : Sequence Control	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 58 of 95	



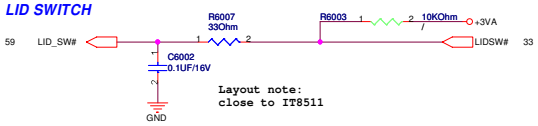
For Switch

PWR SWITCH



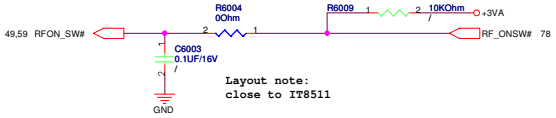
Layout note:
close to IT8511

LID SWITCH



Layout note:
close to IT8511

RF ON SWITCH

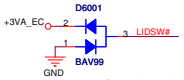


Layout note:
close to IT8511

If you don't use Audio DJ function, please use this schematics

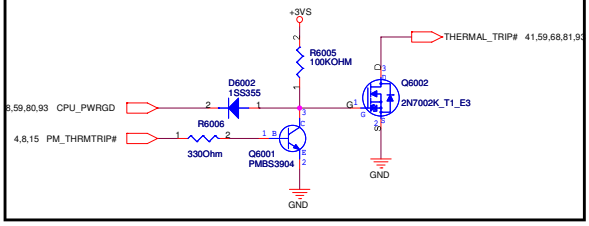
Note:

This LID_EC# is a signal from inverter board, it is easy to cause high voltage damage when plugging inverter board connector to M/B with AC present. It needed to add bidirectional diode to protect this pin.



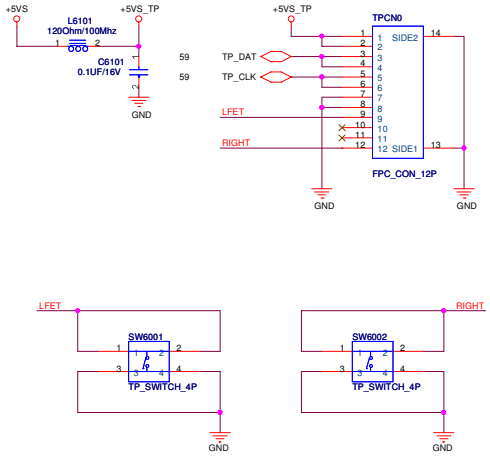
Layout note:
close to connector

For Thermal Control Method

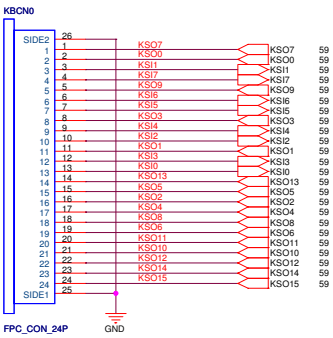


ASUSTeK COMPUTER INC	Title : Switches	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期五, 十一月 23, 2007	Sheet 60 of 95	

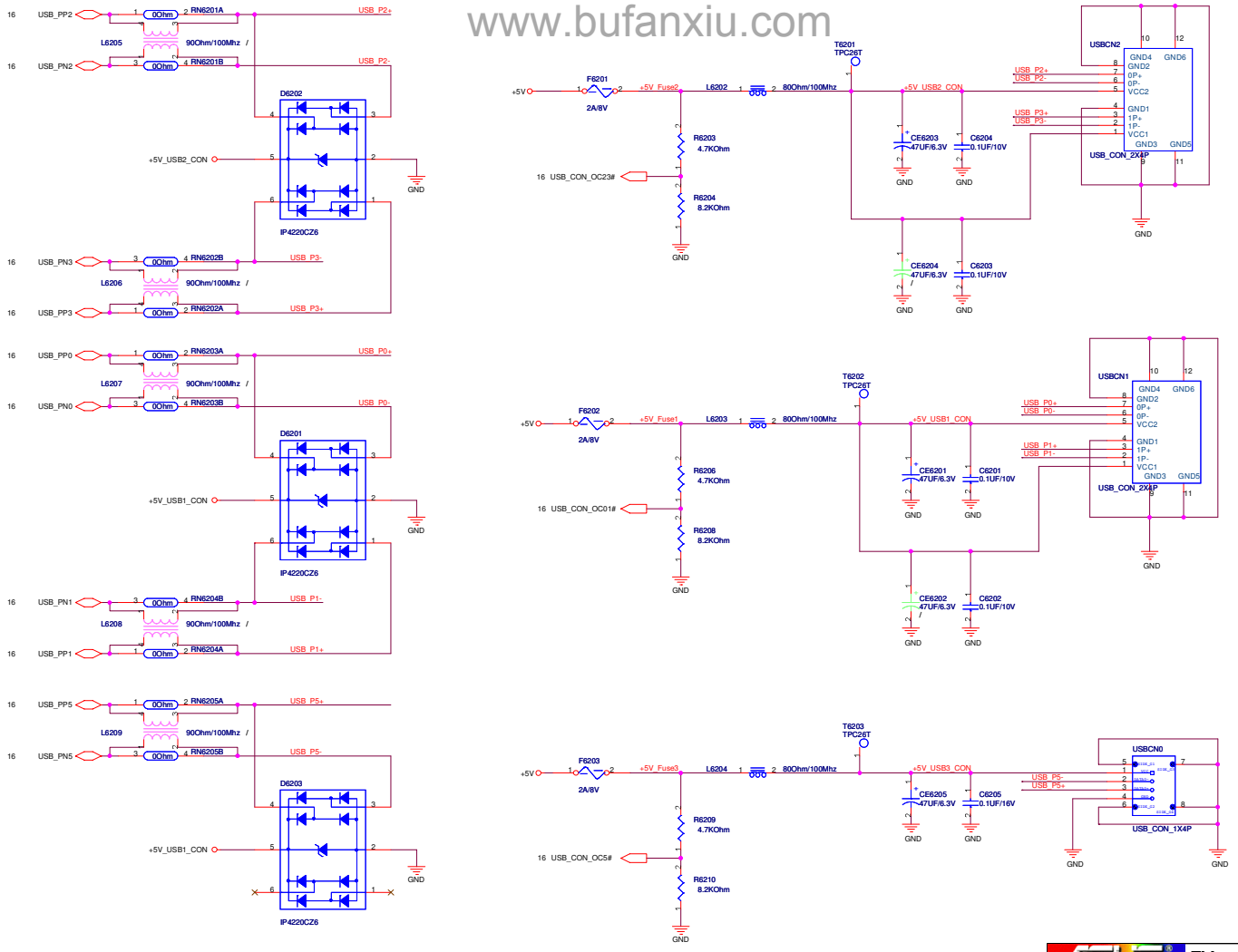
For Touch-Pad



FOR A7 K/B , Matrix B



ASUSTeK COMPUTER INC. NB1	Title : Touch Pad & KB		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 61 of 95		



ASUSTeK COMPUTER INC	Title : USB CONN		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 62 of 95		

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 63 of 95		

ISA ROM

EC Hardware Strapping

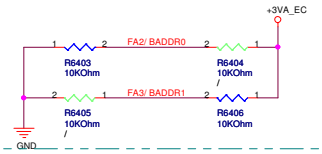
FA2/ BADDR0 & FA3/ BADDR1

00: PNPCNG Access Register Pair Are 002Eh and 002Fh

10: PNPCNG Access Register Pair Are 004Eh and 004Fh

01: PNPCNG Access Register Pair Are Determined by EC Domain Registers SWCBALR and SWCBAHR.

11: Reserved



Note: Sampled at VSTBY Power Up Reset

FA4/ PPEN

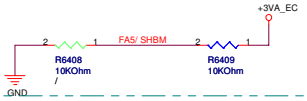
0: Normal

1: KBS Interface Pins Are Switched to Parallel Port Interface for In-System Programming

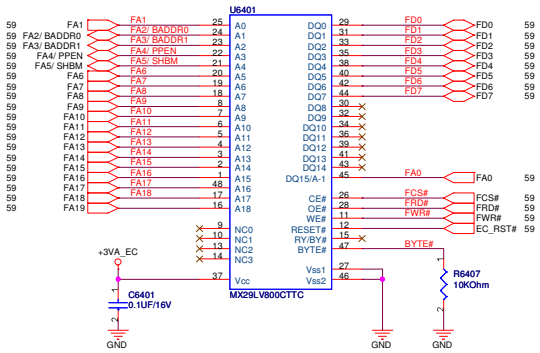
FA5/ SHBM

0: Disable Shared Memory with Host BIOS

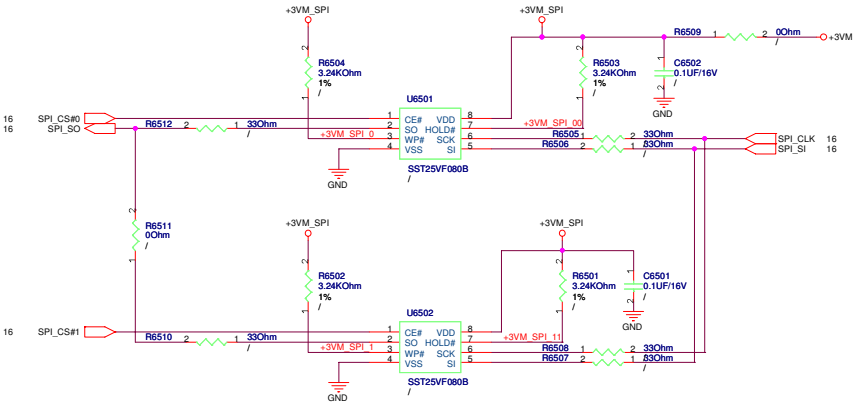
1: Enable Shared Memory with Host BIOS



8M TSOP

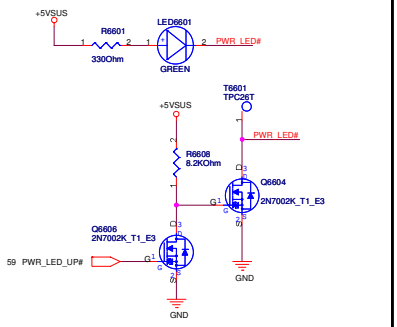


Title	ISA ROM
ASUSTeK COMPUTER INC. NB1	Engineer: Frank_Xu
Size: Custom	Project Name: F7Se
Rev: 2.0	
Date: 星期五, 十一月 23, 2007	Sheet 64 of 95

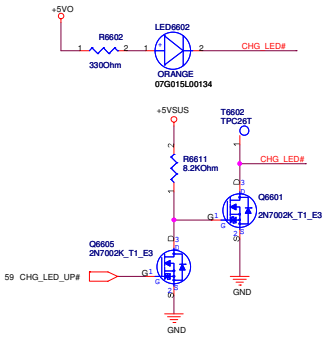


ASUSTeK COMPUTER INC. NB1	Title : SPI ROM	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 65 of 95	

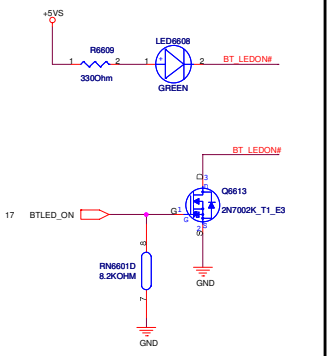
For Power LED



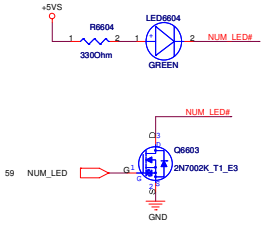
For Battery LED



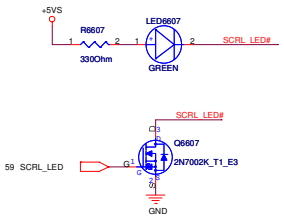
For BT LED



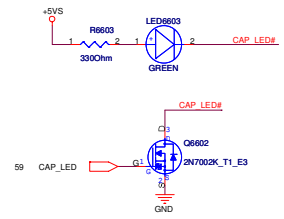
For Number Lock



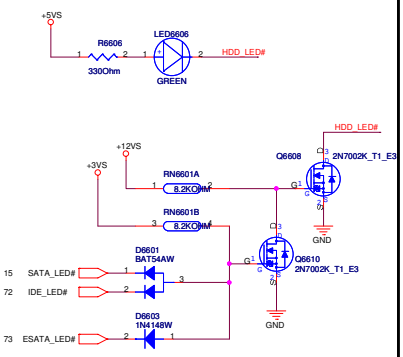
For Scroll Lock



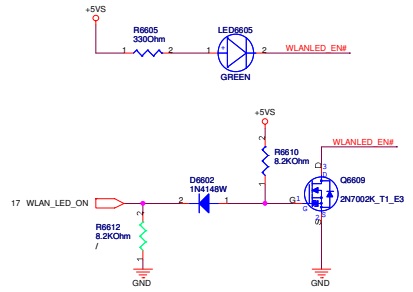
For Caps. Lock



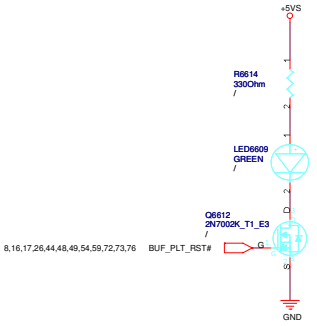
For SATA/IDE LED



For WireLess LED



Reserved LED

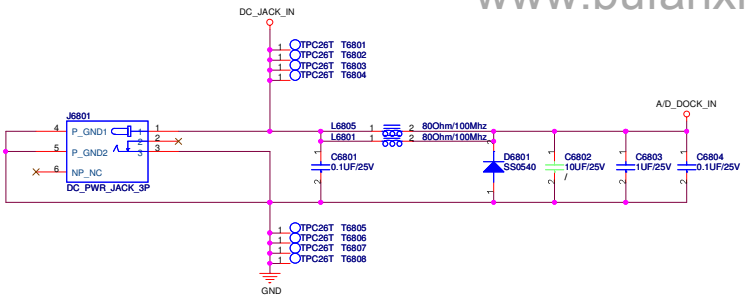


RN6601C
8.2KOhm

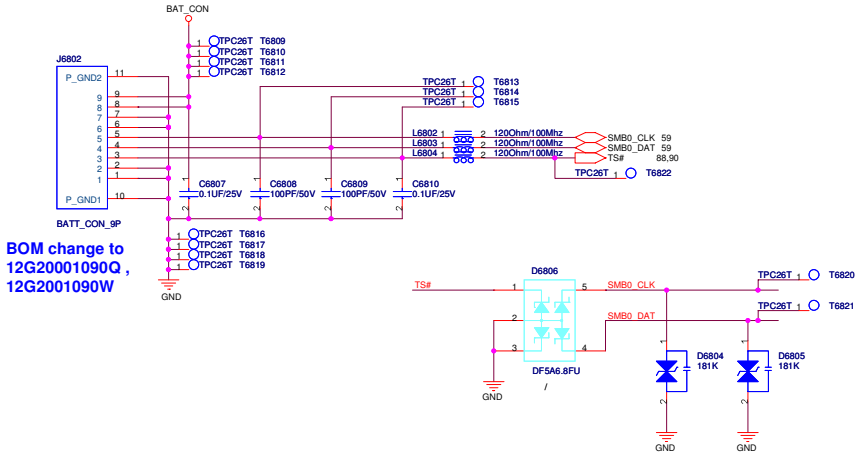
ASUSTeK COMPUTER INC	Title : LED		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 1.0
Date: 星期六, 十一月 23, 2007	Sheet 66 of 95		

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 67 of 95		

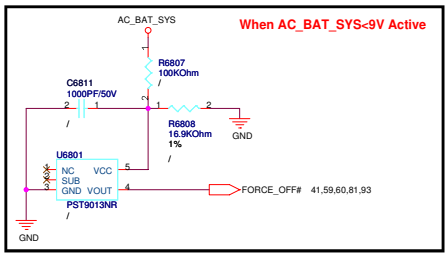
DC IN



BAT IN



Without Battery & Pull out Adapter

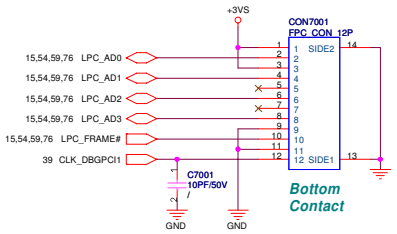


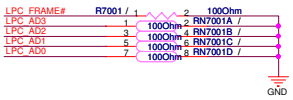
ASUSTeK COMPUTER INC. NB1	Title : DC & BAT IN	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 68 of 95	

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 69 of 95		

For Debug

If support NewCard Debug Card,
Pls don't mount all components.

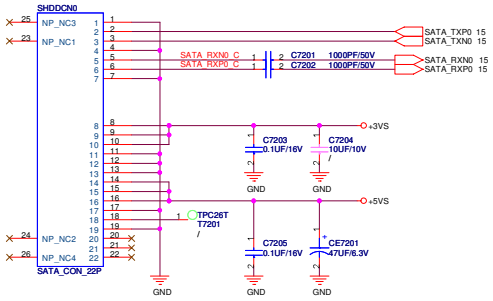




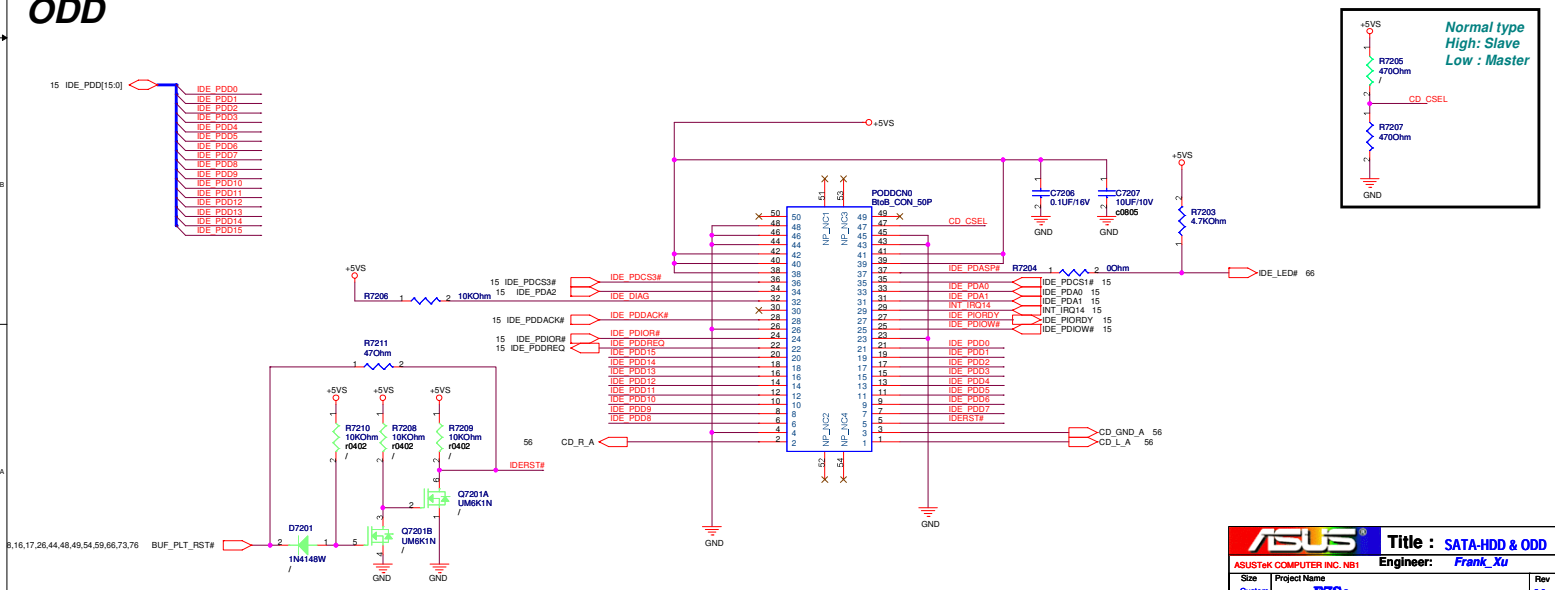
ASUSTeK COMPUTER INC	Title : Debug CONN.		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 70 of 95		

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 71 of 95		

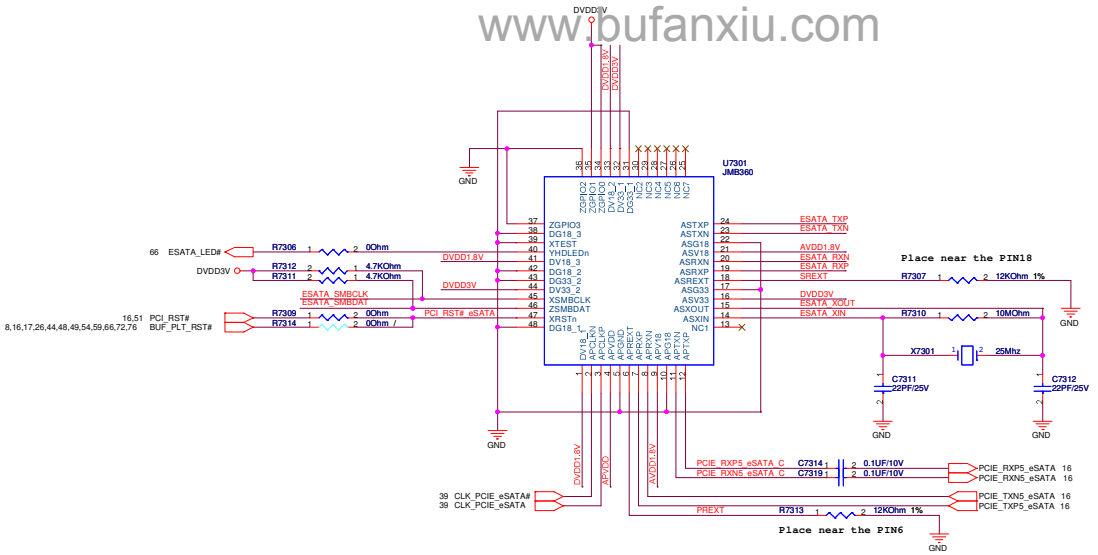
SATA HDD



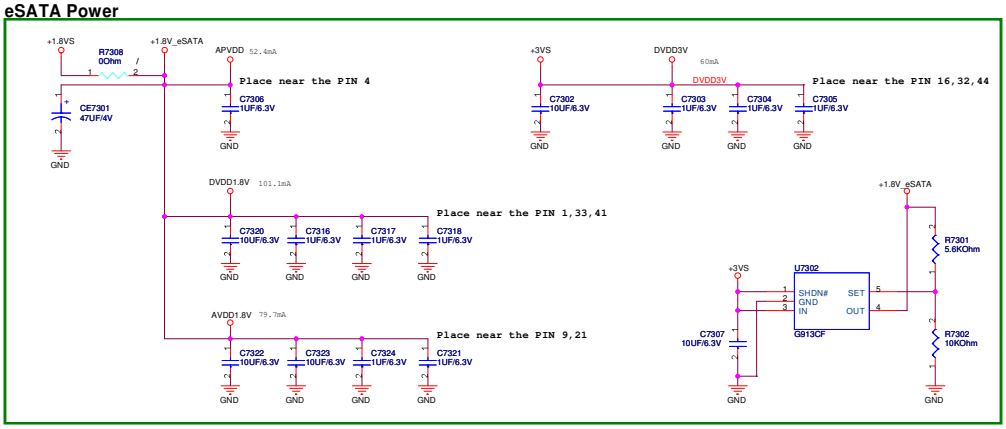
ODD



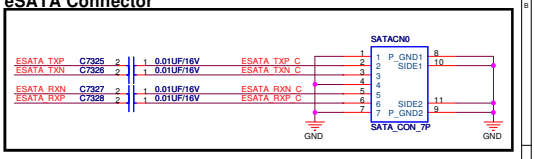
ASUSTeK COMPUTER INC. NB1	Title : SATA-HDD & ODD		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 72 of 95		



eSATA Power



eSATA Connector



ASUSTeK COMPUTER INC. NB1

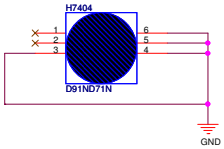
Title : eSATA

Engineer: Frank_Xu

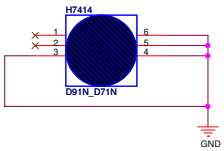
Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期五, 十一月 23, 2007 Sheet 73 of 95

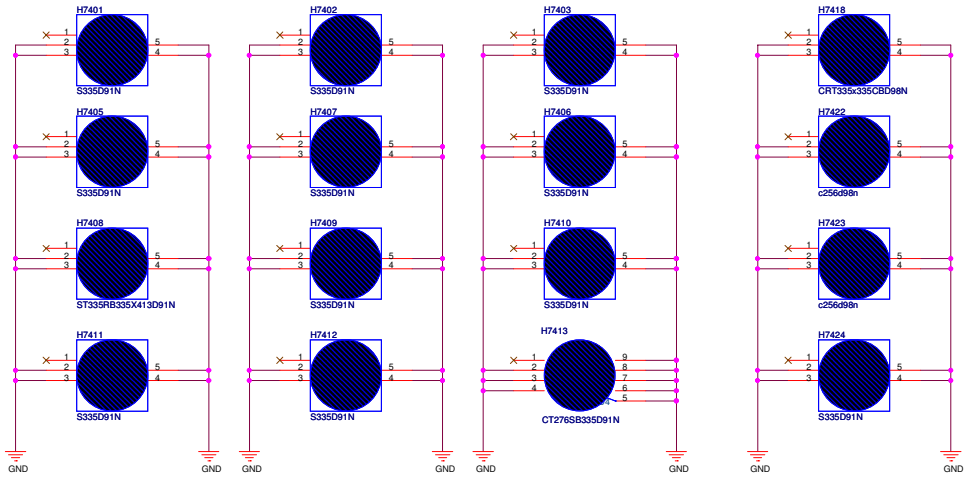
FOR LEFT UNDER



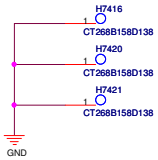
FOR RIGHT UP



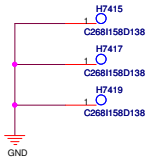
FOR SCREW HOLE

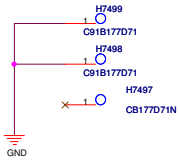


FOR CPU



FOR VGA

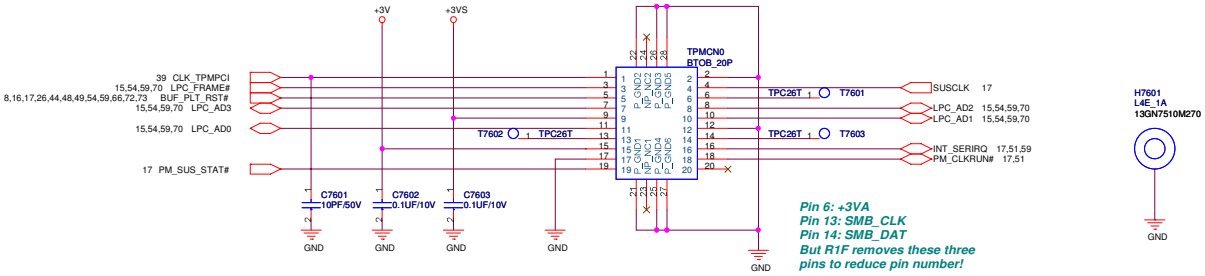




ASUSTeK COMPUTER INC	Title : SCREW HOLE	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 74 of 95	

ASUSTeK COMPUTER INC	Title : Blank Page		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 75 of 95		

For TPM module



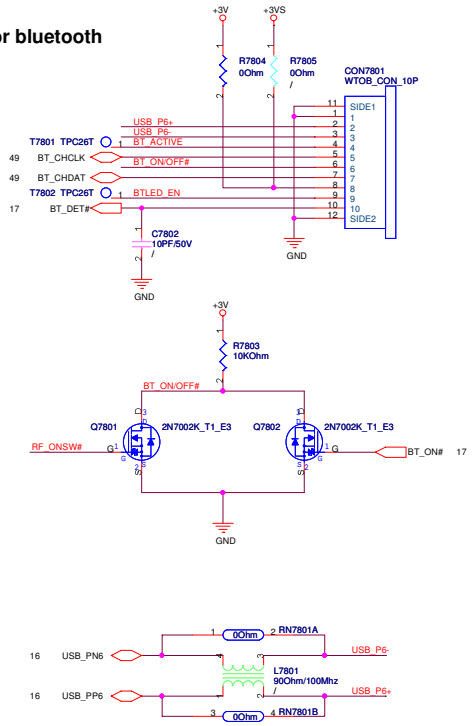
H7601
L4E_1A
13GN7510M270

Pin 6: +3VA
Pin 13: SMB_CLK
Pin 14: SMB_DAT
But R1F removes these three pins to reduce pin number!

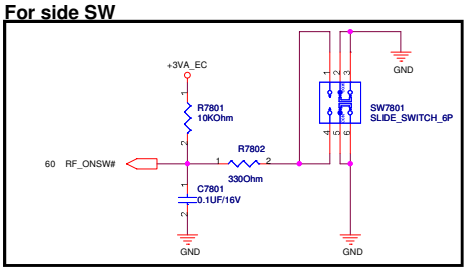
ASUSTeK COMPUTER INC	Title : TPM	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 76 of 95	

ASUSTeK COMPUTER INC	Title : SPRING		
	Engineer: Frank_Xu		
Size: Custom	Project Name: F7Se		Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 77 of 95		

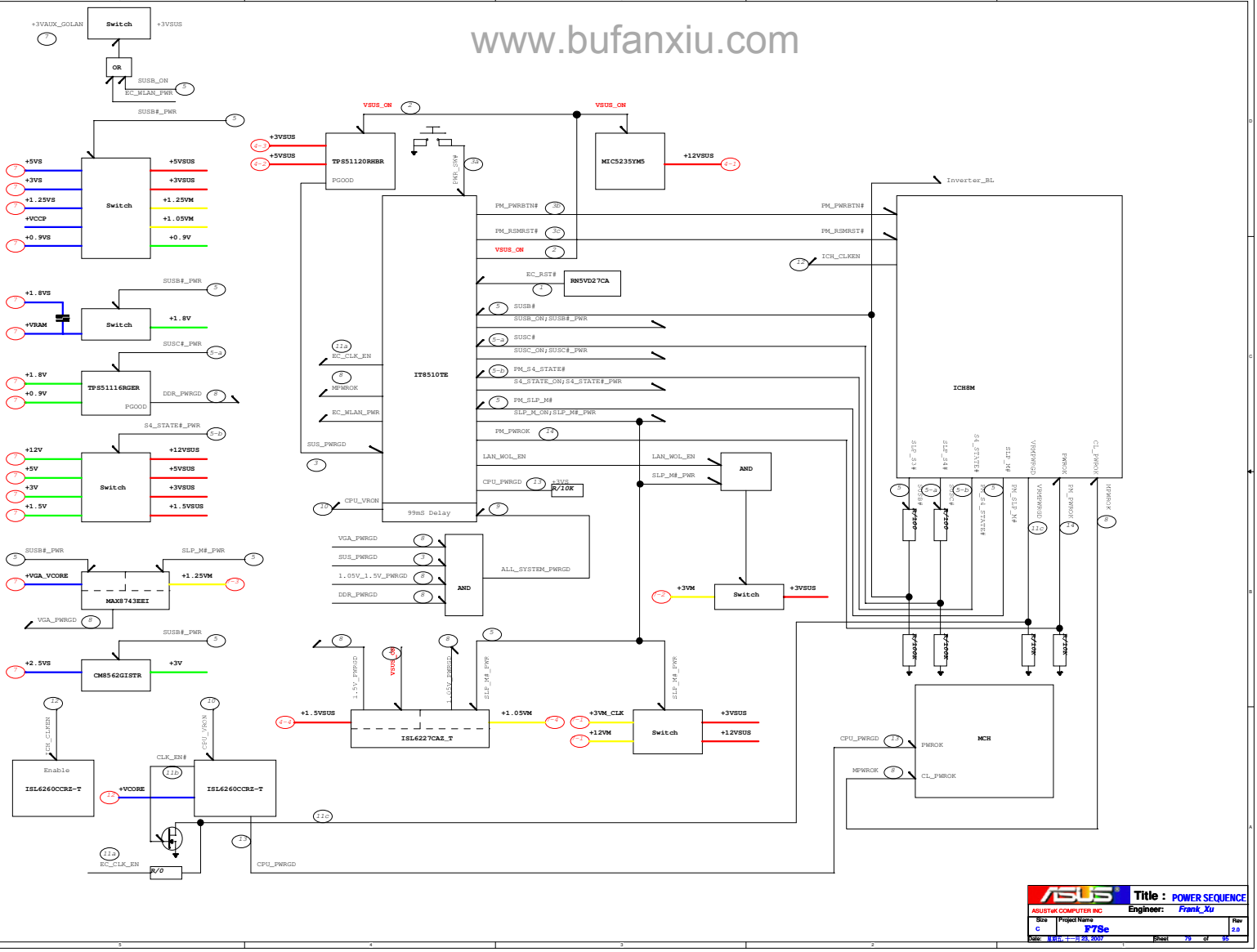
For bluetooth



For side SW



ASUSTeK COMPUTER INC	Title : Bluetooth	
	Engineer: Frank_Xu	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 78 of 95	



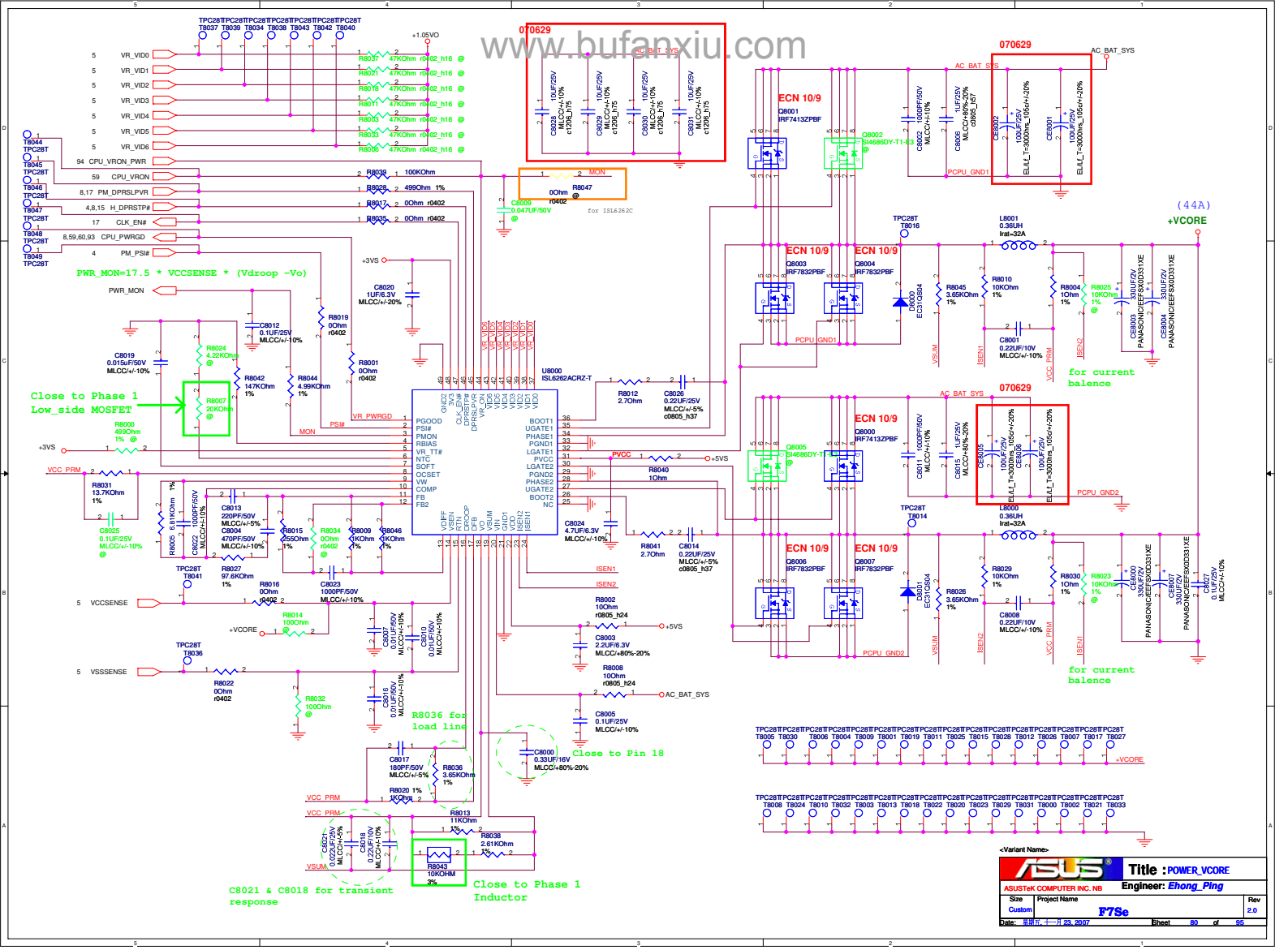
ASUSTeK COMPUTER INC

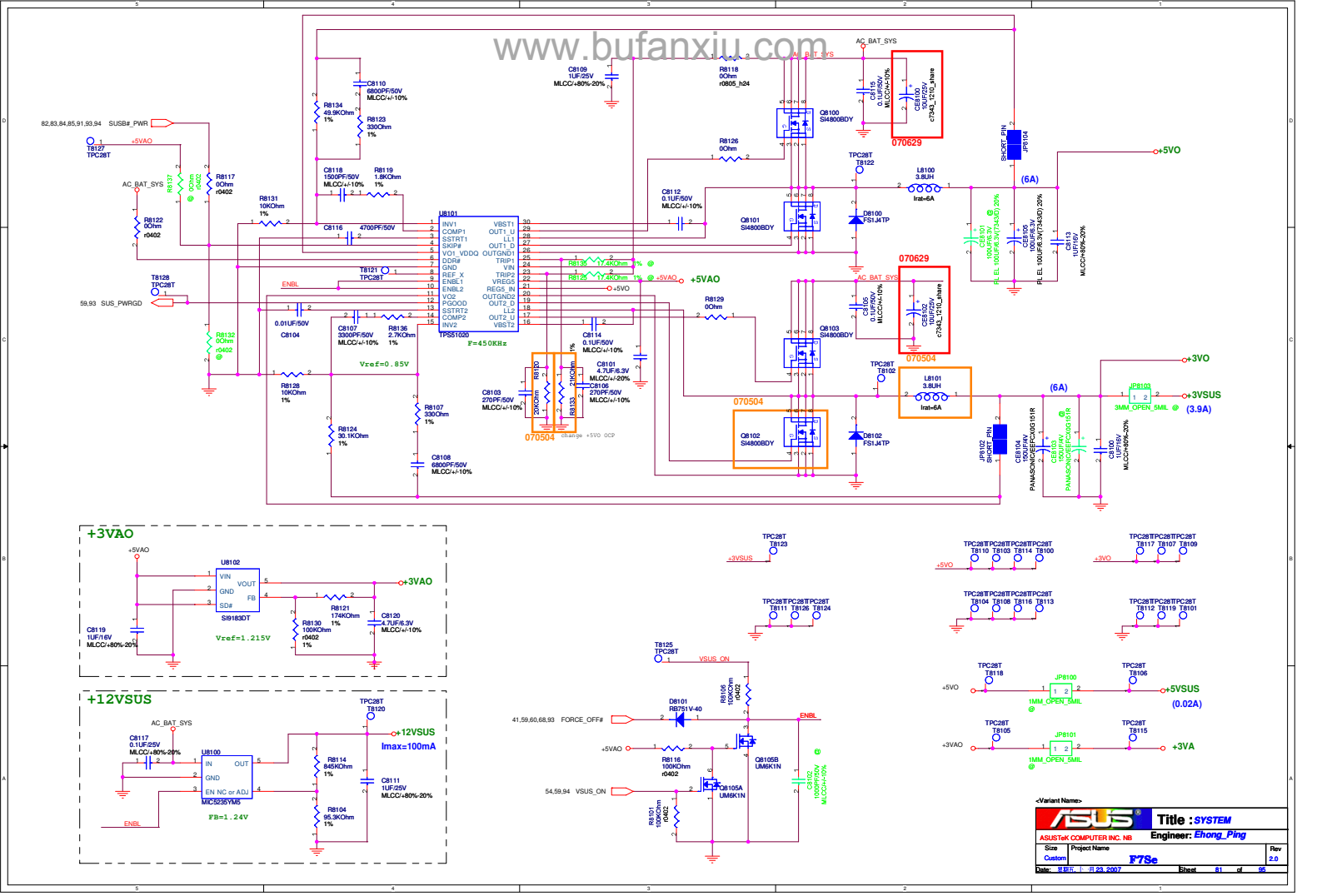
Title : POWER SEQUENCE

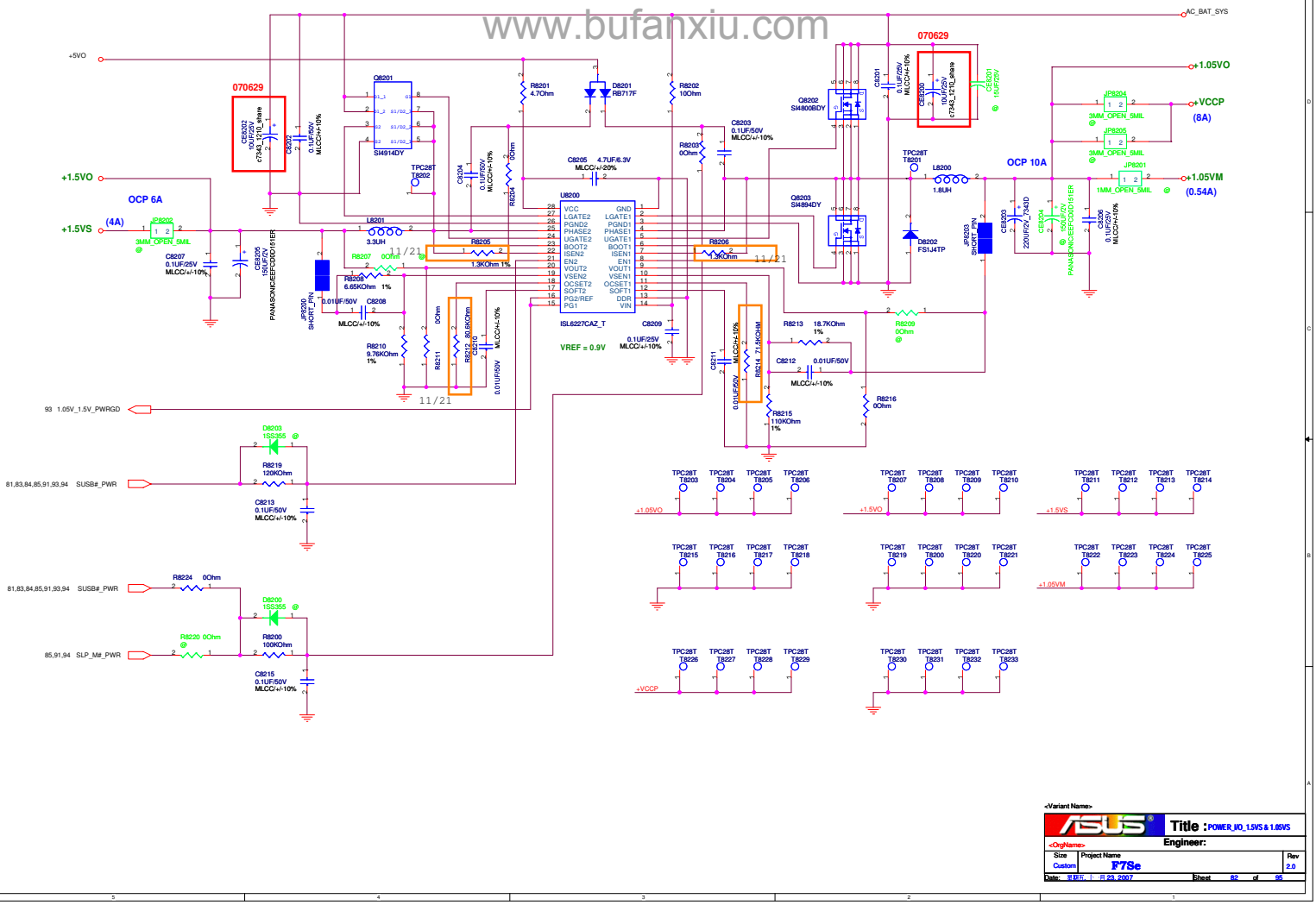
Engineer: Frank_Xu

Size	Project Name	Rev
C	F7Se	2.0

Date: Wed, Jan 24, 2007 Sheet 79 of 95


www.bufanxiu.com
PWR_MON=17.5 * VCCSENSE * (Vdroop -Vo)
Close to Phase 1
Low_side MOSFET
R8036 for
load line
Close to Pin 18
C8021 & C8018 for transient
response
Close to Phase 1
Inductor
for current
balence
for current
balence
ECN 10/9
+VCORE
(44A)
Title : POWER_VCORE
Engineer: Ehong_Ping
ASUSTeK COMPUTER INC. NB
F7Se





<Variant Name>

ASUS

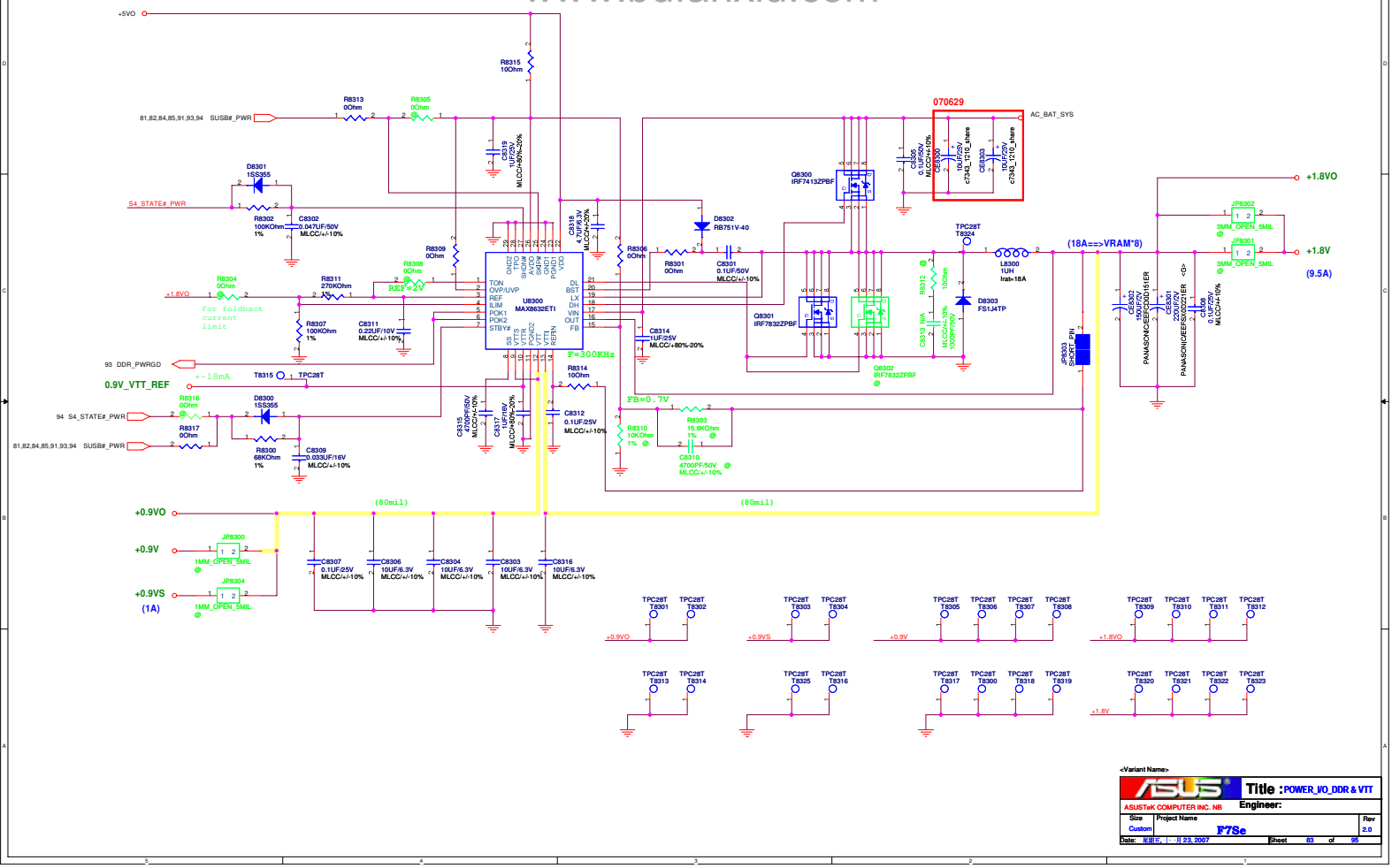
Title : POWER_I/O_1.5VS & 1.05VS

<OrgName>

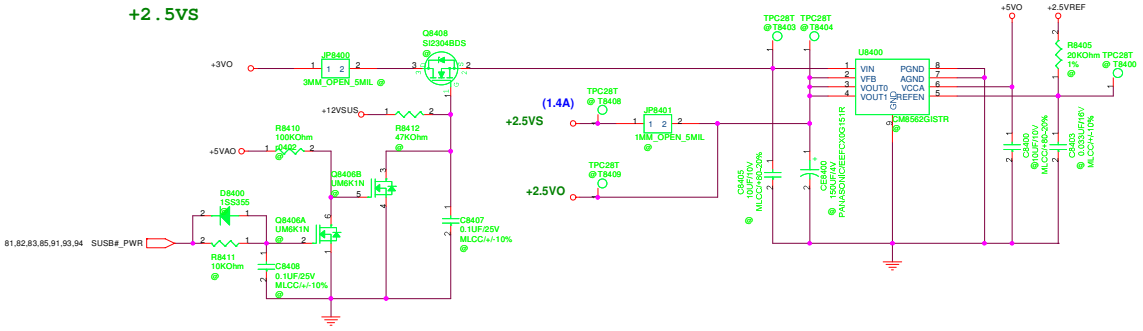
Engineer:

Size	Project Name	Rev
Custom	F7Se	2.0

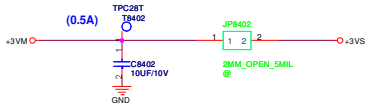
Date: March 23, 2007 Sheet 82 of 95



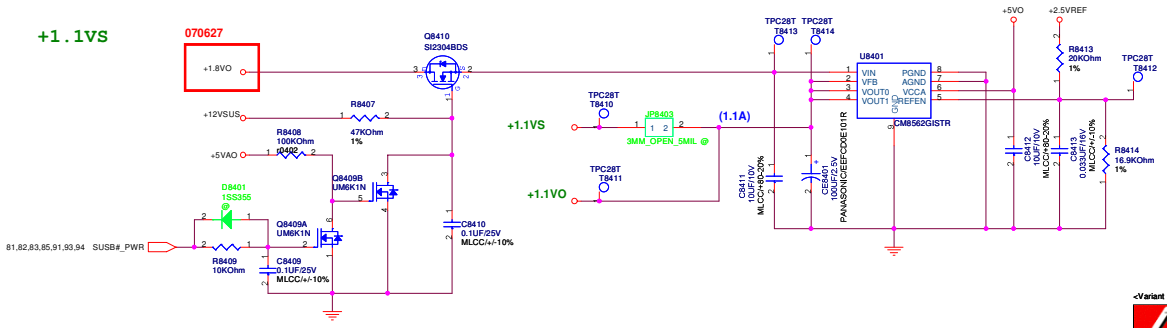
+2.5VS



+3VM

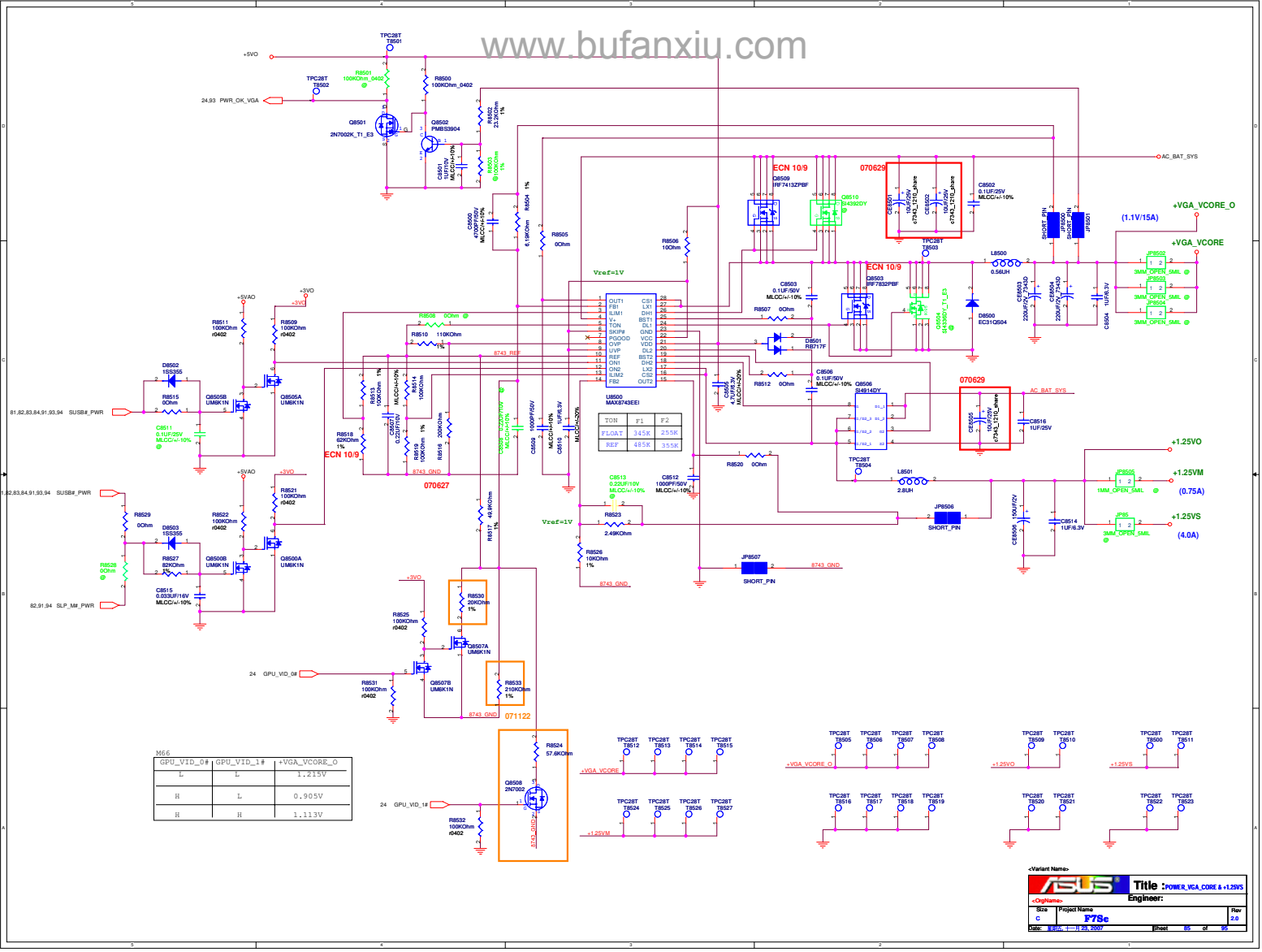


+1.1VS



<Variant Name>

<OrgName>	Title: POWER_I/O_+3VM & +2.5VS	
	Engineer:	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十月 28, 2007	Sheet 84 of 95	



<Variant Name>

Title : N/A

<OrgName>

Engineer:

Size	Project Name	Rev
A	F7Se	2.0

Date: 星期五, 十一月 23, 2007 Sheet 86 of 95

<Variant Name>

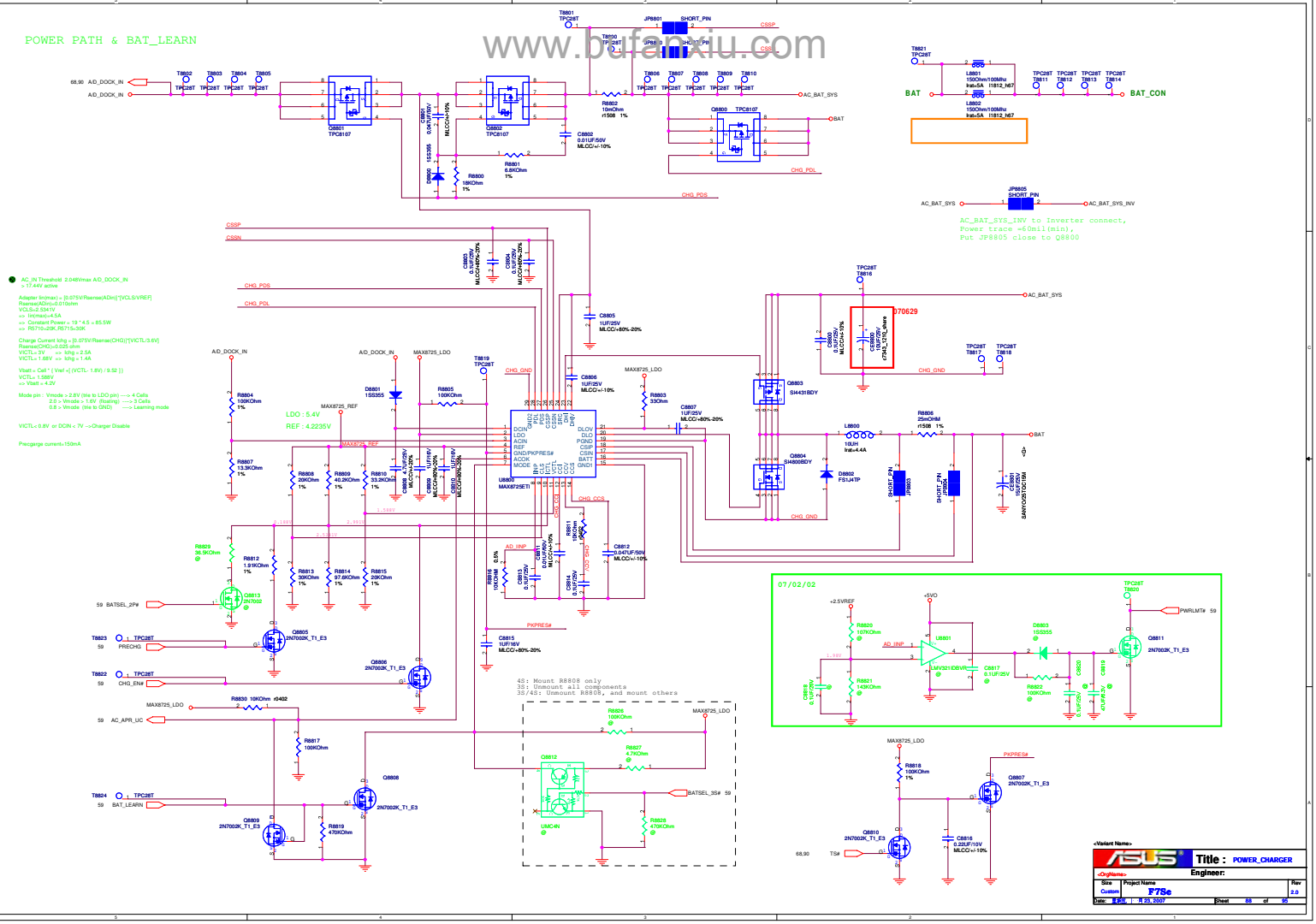
Title : N/A

<OrgName> Engineer:

Size	Project Name	Rev
C	F7Sc	2.0

Date: 星期, 十一月 29, 2007 Sheet 87 of 95

POWER PATH & BAT_LEARN



<Variant Name>
Title : POWER_CHARGER
Engineer:
<OrgName>
Size: Custom | Project Name: F7Se | Rev: 2.0
Date: [illegible] 23, 2007 | Sheet 88 of 95

<Variant Name>

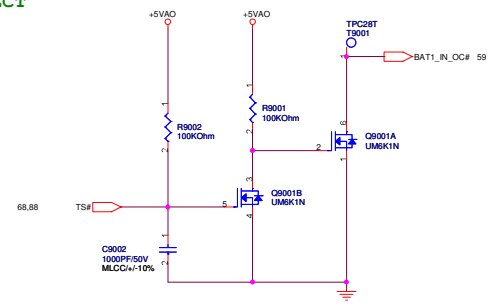
Title : N/A

<OrgName> Engineer:

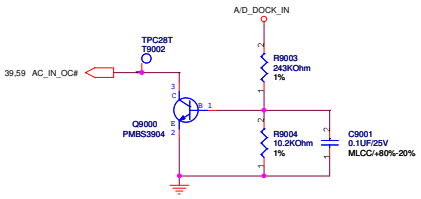
Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期五, 十一月 23, 2007 Sheet 89 of 95

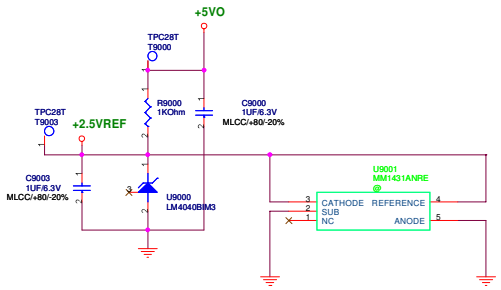
BATTERY IN DETECT



ADAPTER IN DETECT



+2.5VREF

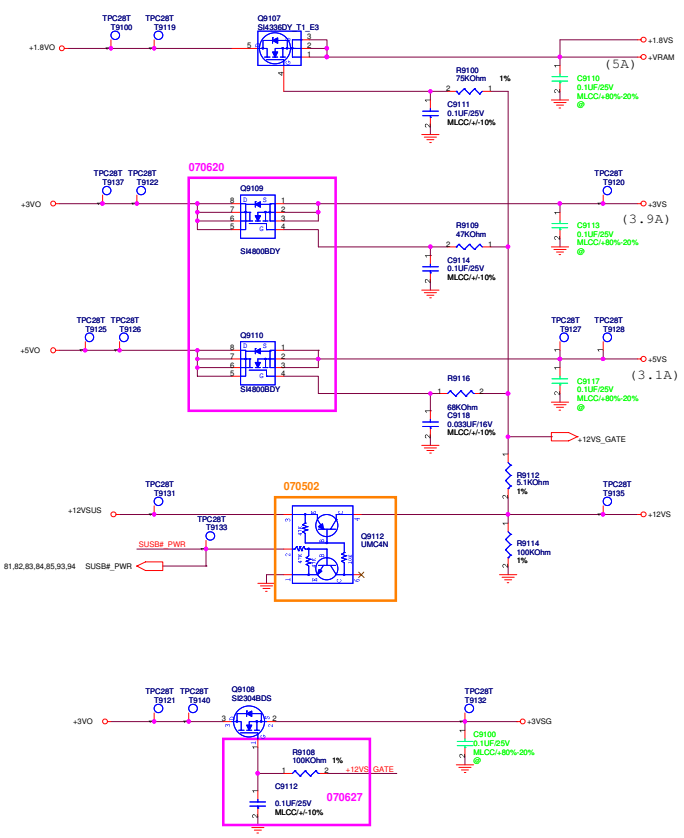


U9000 & U9001 colay

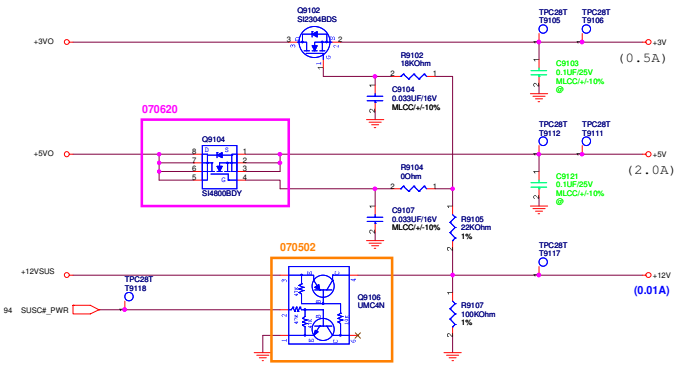
<Variant Name>

<OrgName>	Title : POWER_DETECT	
	Engineer:	
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期五, 十一月 23, 2007	Sheet 90 of 95	

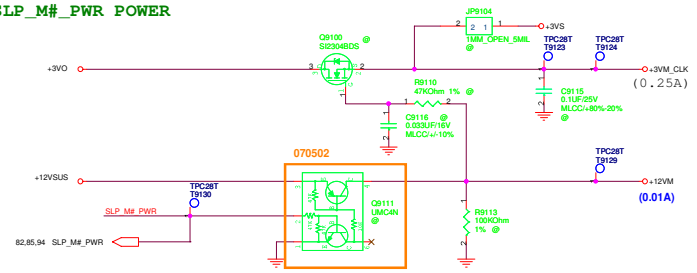
SUSB#_PWR POWER



SUSC#_PWR POWER



SLP_M#_PWR POWER



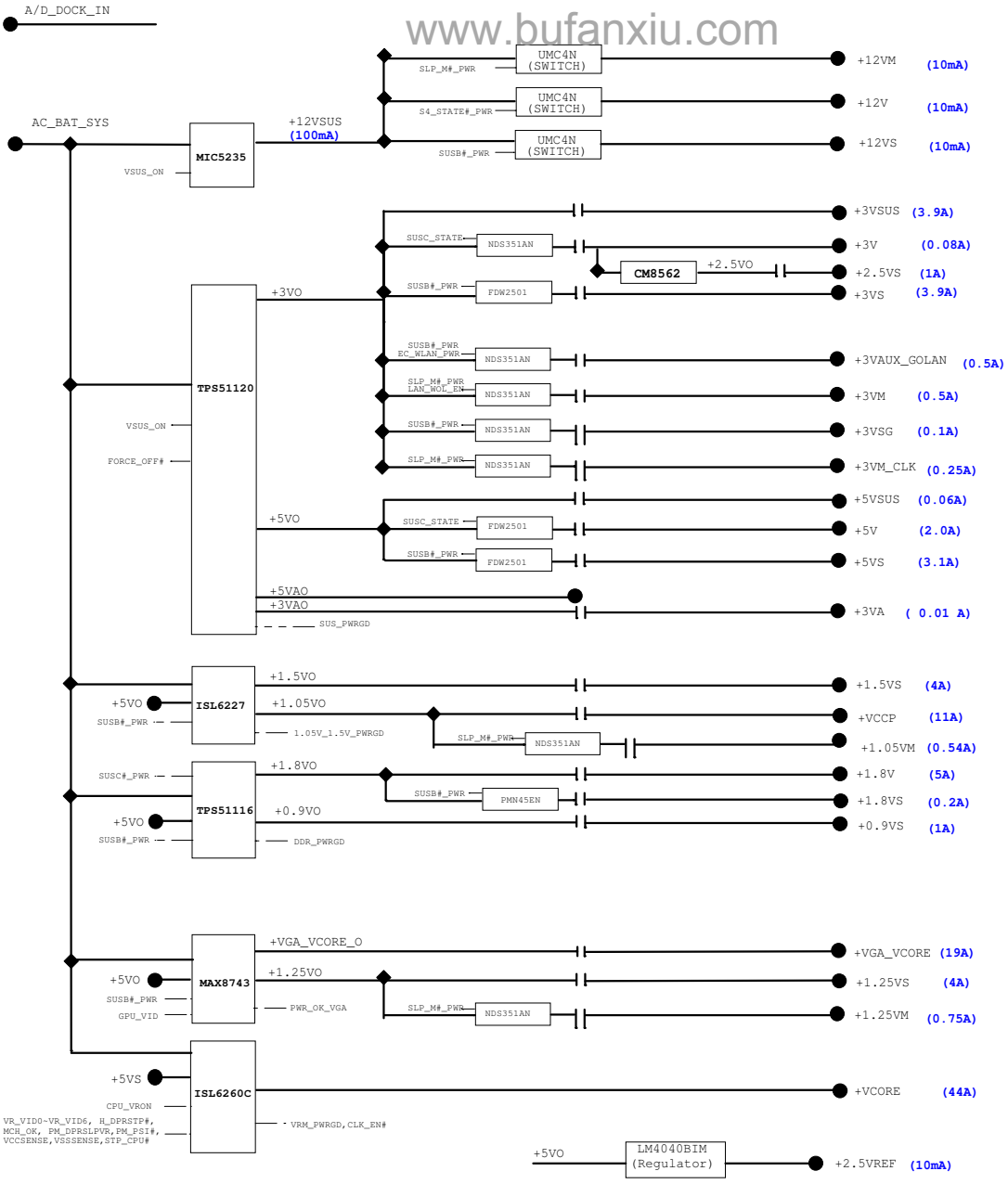
<Variant Name>

Title : POWER_LOAD SWITCH

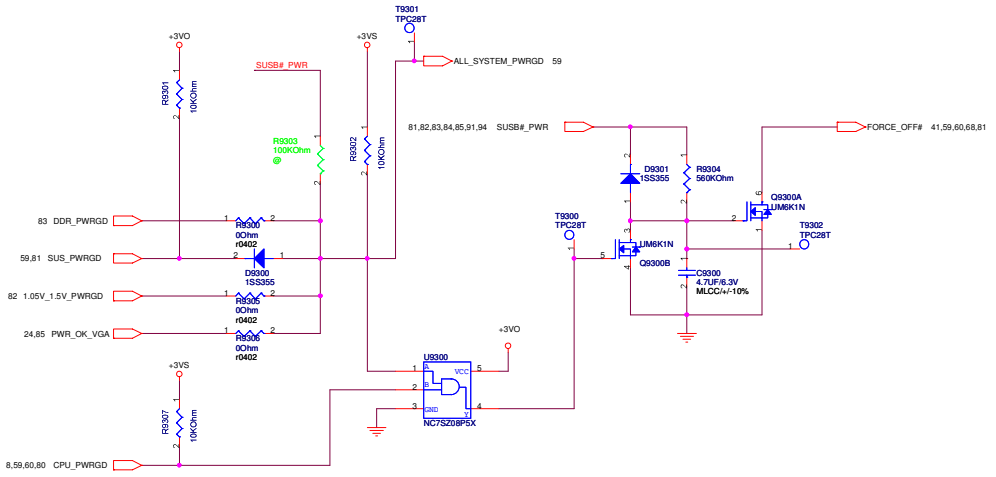
<OrgName> Engineer:

Size	Project Name	Rev
Custom	F7Se	2.0

Date: MON, FEB 23, 2007 Sheet 91 of 95



POWER GOOD DETECTER



<Variant Name>

Title : POWER_PROTECT		
Engineer:		
<OrgName>		
Size: Custom	Project Name: F7Se	Rev: 2.0
Date: 星期六, 十一月 23, 2007	Sheet 83 of 85	

FOR POWER TEST

AC_BAT_SYS	AC_BAT_SYS	68,80,81,82,83,85,88	
+3VA	+3VA	15,33,41,42,58,59,60,81	
+5VO	+5VO	66,81,82,83,84,85,88,90,91	
+3VO	+3VO	81,84,85,91,93	
+3VSUS	+3VSUS	16,17,18,44,45,49,54,59,81	
+5VSUS	+5VSUS	18,66,81	
+3V	+3V	33,42,45,47,49,54,57,76,78,91	
+3VS	+3VS	4,8,12,15,16,17,18,31,32,33,35,37,42,44,47,48,49,51,52,53,54,56,57,59,60,66,70,72,73,76,78,80,84,91,93	
+3VM	+3VM	17,18,20,21,39,65,84	
+3VM_CLK	+3VM_CLK	39,91	
+12VSUS	+12VSUS	81,84,91	
+12V	+12V	42,53,57,91	
+12VS	+12VS	32,33,57,66,91	
+5V	+5V	33,42,54,62,91	
+5VS	+5VS	17,18,32,35,37,42,44,56,57,61,66,72,80,91	
+2.5VO	+2.5VO	84	
+2.5VS	+2.5VS	56,84	
+1.8VO	+1.8VO	83,84,91	
+1.8V	+1.8V	8,11,12,20,21,42,83	
+VCCP	+VCCP	4,5,7,9,11,12,15,18,39,42,82	
+1.05VM	+1.05VM	11,82	
+0.9VO	+0.9VO	83	
+0.9V	+0.9V	22,42,83	
+0.9VS	+0.9VS	28,29,42,83	
BAT	BAT	88	
+2.5VREF	+2.5VREF	84,88,90	
+VCORE	+VCORE	5,80	
+VGA_VCORE	+VGA_VCORE	23,27,85	
+VRAM	+VRAM	23,24,25,27,28,29,42,73,91	
+1.25VS	+1.25VS	12,18,42,85	
+1.25VM	+1.25VM	8,12,85	
BAT_CON	BAT_CON	68,88	
+1.1VS	+1.1VS	23,27,42,84	

+3VAO

JP9401 — SGL_JUMP @ — CPU_VRON_PWR → CPU_VRON_PWR 80

JP9402 — SGL_JUMP @ — SUSB#_PWR → SUSB#_PWR 81,82,83,84,85,91,93

JP9403 — SGL_JUMP @ — SUSC#_PWR → SUSC#_PWR 91

JP9404 — SGL_JUMP @ — VSUS_ON → VSUS_ON 54,59,81

JP9400 — SGL_JUMP @ — S4_STATE#_PWR → S4_STATE#_PWR 83

58 S4_STATE_ON_EC — TPC28T T9400 — R9400 1KOhm — TPC28T T9401 — 83 S4_STATE#_PWR

58 SUSB_ON_EC# — TPC28T T9404 — R9401 1KOhm — TPC28T T9405 — 81,82,83,84,85,91,93 SUSB#_PWR

58 SUSC_ON_EC# — TPC28T T9402 — R9402 1KOhm — TPC28T T9403 — 91 SUSC#_PWR

58 SLP_M_ON_EC — TPC28T T9406 — R9403 1KOhm — TPC28T T9407 — 82,85,91 SLP_M#_PWR

<Variant Name>

Title : POWER_SIGNAL

<OrgName> Engineer:

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期五, 十一月 23, 2007 Sheet 94 of 95

Sub system	Reference Circuit	Reason for Change if Any	Page	BOM change	
				Description	Add	Delete
CPU	F7SR R1.1		4-5			
FAN	F7SR R1.1	1. Change Q3701 , Q3702 to R3753 , R3754 for cost down 2. Change RN3701 to R3705 for unnecessary pull-ups 3. Modify FAN circuit for cost down	37	1. Change Q3701 , Q3702 to R3753 , R3754 2. Change RN3701 to R3705 3. DNI CE3701 , D3701 , add C3708 , R3703 , R3704 , Q3703	R3753 R3754 R3705 R3704 Q3703 R3703 C3708	Q3701 Q3702 RN3701 CE3701 D3701
NB_	F7SR R1.1		7-13			
SB_	F7SR R1.1	P15 : change C1501 , C1503 value for XTAL accuracy P16 : exchange USB port 4 & port 6 connection for bluetooth and USB wake-up device issue. P17 : change PCB_ID P17 : Delete SM-Bus related components which is not used any more P18 : change V5REF bypass	15-18	P15 : change C1501 , C1503 from 12pF to 15pF. P17 : change PCB_ID from 001 to 011 P17 : delete Q1704 , Q1706 , R1728 , R1729 , R1730 P18 : change C1804 from 0.1uF to 1uF	C1501 C1503 R1738 C1804	C1501 C1503 R1745 R1728 R1729 R1730 C1804
TV_	F7SR R1.1	Change USB 0 ohm resistor to 2R4P	35	Change R3505~R3512 to RN3501~RN3504	RN3501 RN3502 RN3503 RN3504	RN3505 RN3506 RN3507 RN3508 RN3509 RN3510 RN3511 RN3512
LVDS	F7SR R1.1	1. Change LVDS connector 2. Change USB 0 ohm resistor to 2R4P	33	1. Change LVDS connctor 2. Change R3313 , R3314 to RN3301	LCDCN0 RN3301	LCDCN0 R3313 R3314
MEM	F7SR R1.1		20-22			
CLK	F7SR R1.1	1. Change C3905 , C3906 to 24pF for XTAL accuracy 2. DNI Q3902 for cost down	39	1. Change C3905 , C3906 from 22pF to 24pF 2. DNI Q3902	C3905 C3906	C3905 C3906 Q3902
KBC	F7SR R1.1	1. Add R5967 , R5968 , D5904 (reserved) to follow ASUS IT8511 EC Common Pin Assignment V2.03 2. Change C5911 , C5912 value for XTAL accuracy 3. Rename Q3001 to Q5901 for design rule	59	1. Change C5911 , C5912 from 5pF to 15pF 2. Delete Q3001 and add Q5901	C5911 C5912 Q5901	C5911 C5912 Q3001
ROM	F7SR R1.1		64			
AUD	F7SR R1.1	1. DNI R5718 , R5723 , Q5701 , Q5709 , mount Q5708 , Q5707 for POP noise 2. Change L5713 from 330 to 220 ohm for single source issue	56-57	1. DNI R5718 , R5723 , Q5701 , Q5709 , mount Q5708 , Q5707 2. Change L5713 from 330 to 220 ohm	Q5708 Q5707 L5713	R5718 R5723 Q5701 Q5709
LAN_SIO	F7SR R1.1	1. Change C4403 , C4404 value for XTAL accuracy 2. Change R4504 to 1% for single source issue 3. Change CON4502 P/N for manufacture request	44-45	1. Change C4403 , C4404 from 27pF to 22pF 2. Change R4504 from 5% to 1% 3. Change CON4502 P/N to 12G142121120	C4403 C4404 R4504 CON4502	C4403 C4404 R4504 CON4502
HUB	F7SR R1.1					
CB_	F7SR R1.1	Page 52 : Change C5205 , C5207 for XTAL accuracy Page 54 : DNI all debug card related components	51 54	Page 52 : Change C5205 , C5207 from 30pF to 27pF Page 54 : DNI R5406 , C5401 , R5408 , D5403 , C5402 , R5407 , R5409 , R5404 , Q5401 , U5402 , R5414 , R5405 , U5403 , C5403	C5205 C5207	C5205 C5207 R5406 C5401 R5408 D5403 C5402 R5407 R5404 R5409 Q5401 U5402 R5414 R5405 U5403 C5403
XDD	F7SR R1.1		72			
USB		1. Change USB 0 ohm resistors to 2R4P 2. Change polyswitch for droop fail 3. Change CE6205 to 3528 type for cost down.	62	1. Change R6211 , R6214 , R6212 , R6213 , R6201 , R6202 , R6205 , R6207 , R6215 , R6218 to RN6201~RN6205 2. Change F6201~F6203 to 1812 type (2A/8V) 3. Change CE6205 to 3528 type.	RN6201 RN6202 RN6203 RN6204 RN6205 F6201 F6202 F6203 CE6205	R6211 R6214 R6212 R6213 R6201 R6202 R6205 R6207 R6215 R6218 F6201 F6202 F6203 CE6205
SW			41			
DSG						
TP			61			
LED		Change LED6602 P/N for light issue	66	Change LED6602 P/N	LED6602	LED6602
OTH		Page 48 : DNI R4817 , R4818 for cost down Page 49 : mount R4931 for WLAN wake-up function Page 74 : change H7499 , H7498 to PTH	48 49 74	Page 48 : DNI R4817 , R4818 Page 49 : mount R4931	R4931	R4817 R4818
PB						
CRT		Modify CRT DDC pull-up values for ATI suggestion (M72 Revision A13 Errata)	32	Change RN3201 to R3217 , R3218 , R3219 , R3220	R3217 R3218 R3219 R3220	RN3201
DC_		1. Remove L6806 , L6807 , C6805 , C6806 for mechanical issue and cost down 2. Change J6802 P/N for manufacture request 3. Add D6806 (reserved) to follow ASUS IT8511 EC Common Pin Assignment V2.03 4. DNI U6801 related components for cost down	68	1. Delete L6806 , L6807 , C6805 , C6806 2. Change J6802 P/N 3. DNI R6807 , C6811 , R6808 , U6801	J6802	L6806 L6807 C6805 C6806 J6802 R6807 C6811 R6808 U6801
BT_		Change USB 0 ohm resistor to 2R4P	78	Change R7804 , R7805 to RN7801	RN7801	R7804 R7805
TPM			76			
FP_						
TUN		Change USB 0 ohm resistor to 2R4P	47	Change R4729 , R4720 to RN4701	RN4701	R4729 R4720
ME_						
ESA			73			
VGA		P23 : add C2306 , C2304 , C2309 back for ATI suggestion P23 : change L2302 from 400mA to 600mA rating for ATI suggestion P23 : add C2321 back for CRT NIR fail P24 : change memory ID to 0000 for 32M*16 500MHz VRAM P24 : add R2469 for VGA BBEN option	23-24	P23 : add C2306 , C2304 , C2309 P23 : change L2302 from 400mA to 600mA P23 : add C2321 P24 : DNI R2408 , mount R2415	C2306 C2304 C2309 L2302 C2321 R2415	L2302 R2408 R2603
VGA		DNI PCIE_CALI pull-down resistor for ATI suggestion	25-26	DNI R2603		R2603
VGA		P27 : mount 5 capacitors for +VRAM power P27 : add two 1uF capacitors for +VGA_VCORE power P27 : add 10uF on LPVDD power for ATI suggestion P27 : connect +3VSG and +3VSG_DELAY with 0 ohm , DNI +3VSG_DELAY related components	27-30	1. Mount C2715 , C2721 , C2723 , C2742 , C2753 2. Add C2740 , C2746 3. Add C2718 4. Add R2709 , DNI Q2705 , D2701 , R2705 , R2710 , Q2704 , C2772	C2715 C2721 C2723 C2742 C2753 C2740 C2746 C2718 R2709	Q2705 D2701 R2705 R2710 Q2704 C2772

ECN : 7/30 - Remove R5914 to solve system can not power on

ECN : 8/2 - Add U5403 , C5403 , R5404 back to solve new card didn't work

ECN : 10/9 - change main source of CPU and VGA core power.

1. H-side si4392 change to IRF7413
2. L-side si4336 change to IRF7832
3. Change R8518 form 49.9K to 62K

<Variant Name>

ASUSTek COMPUTER INC

Title : History

Engineer: Frank_Xu

Size	Project Name	Rev
Custom	F7Se	2.0

Date: 星期六, 十一月 03, 2007 Sheet 95 of 95