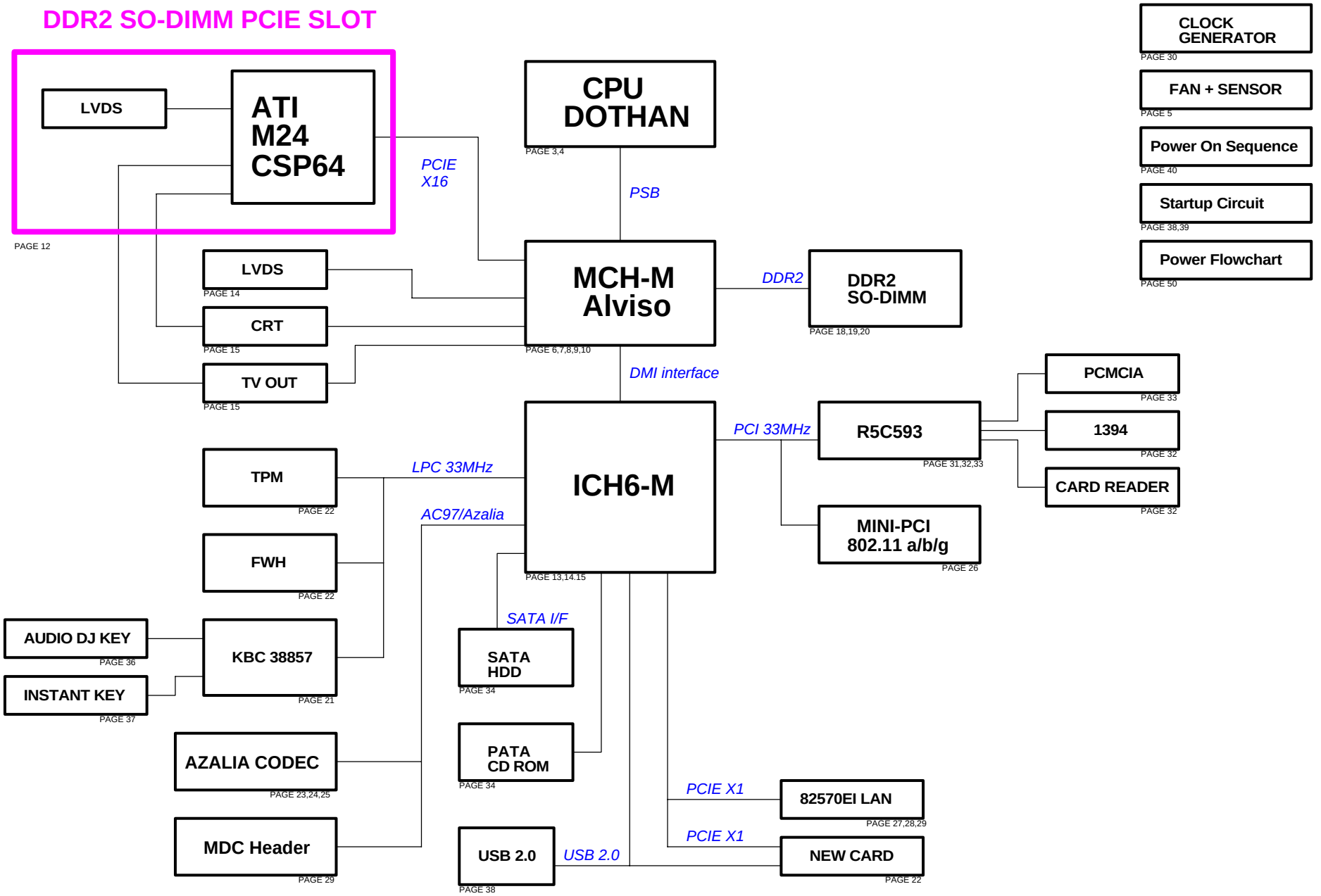

ASUSTeK COMPUTER INC	Title : BLOCK DIAGRAM	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 1 of 51	

REVISION LIST

R0.7	2003/10/13	Only chipset circuit but not including DC to DC power circuit
R0.8	2003/10/31	Add Intel 82570 chipset circuit and TPM socket
R0.9	2003/11/04	Add AZALIA CMI9880 chipset circuit and ALS I/F
R0.95	2003/11/10	Key Board changed to OKI HMB989-C Matrix

POWER INTERFACE

SIGNALS	TYPE	POWER
PM_PSI#	O	+VCCP
VR_VID[5:0]	O	+VCCP
VRON	O	+3.3V
PM_DPRSLPVR	O	+3.3V
CPU_STP#	O	+3.3V
RST_BTN#	O	+3.3V
CLK_EN#	I	+3.3V
DELAY_VR_PWRGD	I	+3.3V
OTP_RESET#	I	+3.3V
SHUT_DOWN#	I	+3.3V
BAT_LEARN	I	+3.3V
BAT_LLOW#_OC	I	+3.3V
BAT1_IN#_OC	I	+3.3V
BAT2_IN#_OC	I	+3.3V
CHG_EN_OC	I	+3.3V
CHG_LED	I	+3.3V
SMCLK_BAT1	IO	+3.3V
SMDATA_BAT1	IO	+3.3V
SMCLK_BAT2	IO	+3.3V
SMDATA_BAT2	IO	+3.3V
SUSB#	O	+3.3V
SUSC#	O	+3.3V
1.8V_PWRGD	I	+3.3V
1.5VS_PWRGD	I	+3.3V
VSUS_ON	O	+3.3V
ACIN_OC	I	+3.3V
ACIN#	I	AC_BAT_SYS
+3VA	PWR	+3.3V
+5VA	PWR	+5V
+5VLCM	PWR	+5VLCM
A/D_DOCK_IN	PWR	DC
AC_BAT_SYS	PWR	DC

POWER PLANE

POWER	VOLTAGE	CURRENT
+VCORE	0.7 - 1.77V	27A
+VCCP	1.05 - 1.2V	3.95A
+VCC_GMCH	1.05V	4.12A
+0.9VS	1.25V	0.5A
+1.5VS	1.5V	4.33A
+1.5V	1.5V	300 mA
+1.5VSUS	1.5V	270 mA
+1.8V	1.8V	6.68A
+2.5VS	2.5V	0.3 A
+3VS	3.3V	1.732A
+3V	3.3V	1.515A
+3VSUS	3.3V	390 mA
+5VS	5V	4.1A
+5V	5V	0.5A
+5VSUS	5V	0.5A
+12V	12V	0.25A
+12VS	12V	0.25A

IMPEDENCE

Single-Ended

27.4 OHM	WIDTH
TOP/BOT	22 mils
IN1/IN3	16 mils

37.5 OHM	WIDTH
TOP/BOT	13.5 mils
IN1/IN3	10 mils

42 OHM	WIDTH
TOP/BOT	11 mils
IN1/IN3	8.5 mils

55 OHM	WIDTH
TOP/BOT	6 mils
IN1/IN3	5 mils

75 OHM	WIDTH
TOP/BOT	2.5 mils
IN1/IN3	2 mils

Differential

70 OHM	WIDTH/SPACE
TOP/BOT	8 mils/ 4 mils
IN1/IN3	8 mils/ 3.5 mils

90 OHM	WIDTH/SPACE
TOP/BOT	5 mils/ 5 mils
IN1/IN3	5 mils/ 5 mils

100 OHM	WIDTH/SPACE
TOP/BOT	4 mils/ 6 mils
IN1/IN3	4.25 mils/ 5.75 mils

PCI INTERFACE

PCI_REQ#

CB&1394	PCI_REQ#1
MINIPCI	PCI_REQ#3

IDSEL

CB&1394	PCI_AD17
MINIPCI	PCI_AD19

PCIE Device

PEG

ATI M24

PCIE Giga NIC

Intel 82570EI

PCB STACK-UP

PCB THICKNESS: 1.2 mm

L1 TOP
L2 GND1
L3 IN1
L4 IN2
L5 VCC
L6 IN3
L7 GND2
L8 BOT

PAGE 41

```
SIGNAL  IN:    VR_VID0 - 5
               PM_DPRSLPVR
               STP_CPU#
               PM_PSI#
               IMVP_VR_ON

        OUT:   DELAY_VR_PWRGD
               VR_PWDGD_CK410#

POWER    IN:   AC_BAT_SYS
               +5VO
               +3VO

        OUT:   +VCORE
```

PAGE 42

```
SIGNAL   IN:   SUSC#_PWR
               VSUS_ON

POWER    IN:   AC_BAT_SYS

        OUT:   +12VO
               +3VO
               +5VO
```

PAGE 43

```
SIGNAL IN: SUSB#_PWR
           SUSC#_PWR

POWER  IN: AC_BAT_SYS
           +3VO

      OUT: +1.8V
           +1.5V
           +2.5V
           +VCC_GMCH_CORE
           +5VALWAYS
           +3VALWAYS
```

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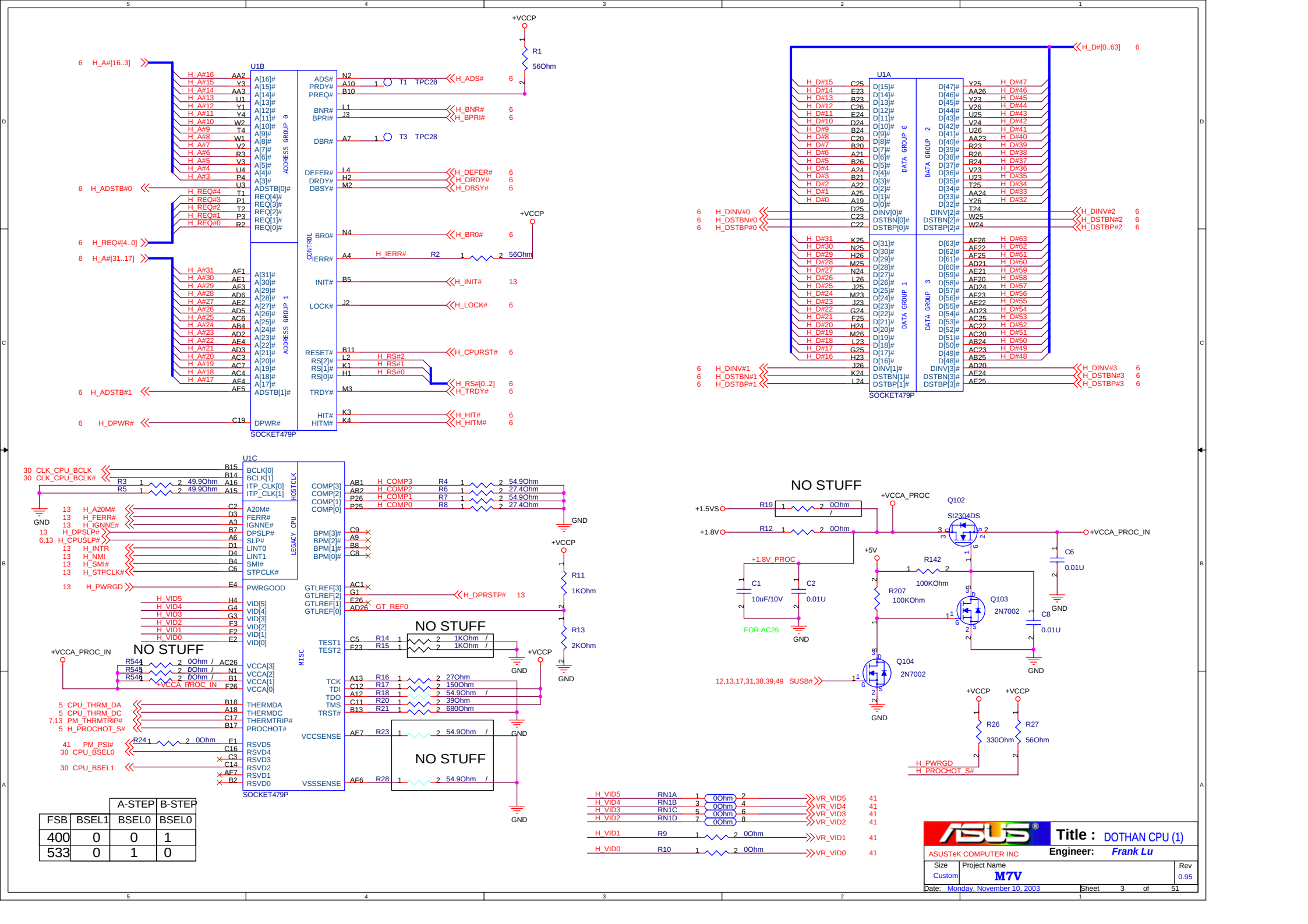
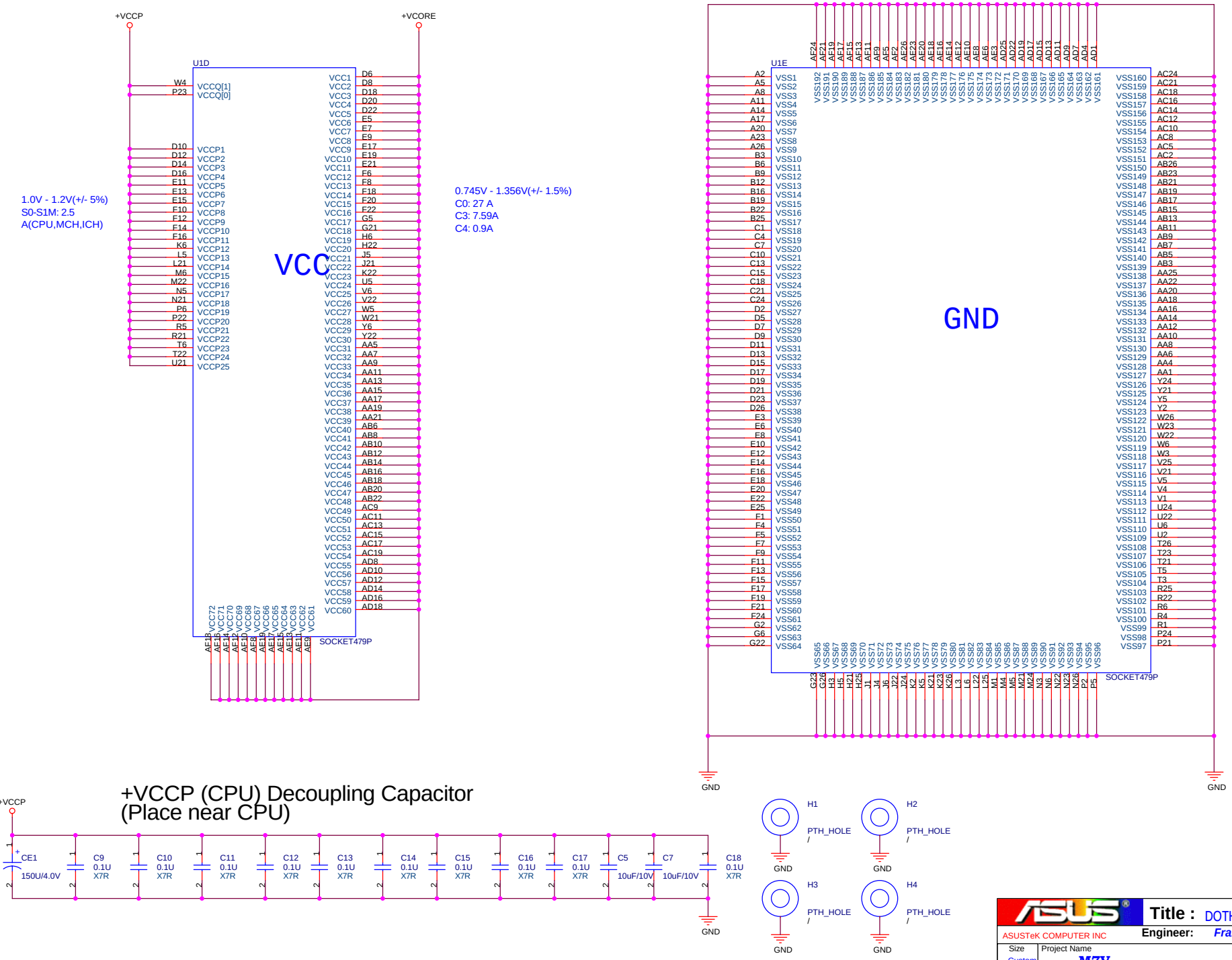
```
  SIGNAL IN: SUSB#_PWR

        OUT: VCC_MCH_VRPWRGD
             IMVP_VR_ON

  POWER  IN: +3VA
             +3V
             +1.8V
             +VCC_GMCH_CORE

        OUT: +0.9VS
             +1.5VA
             +VCCP
```

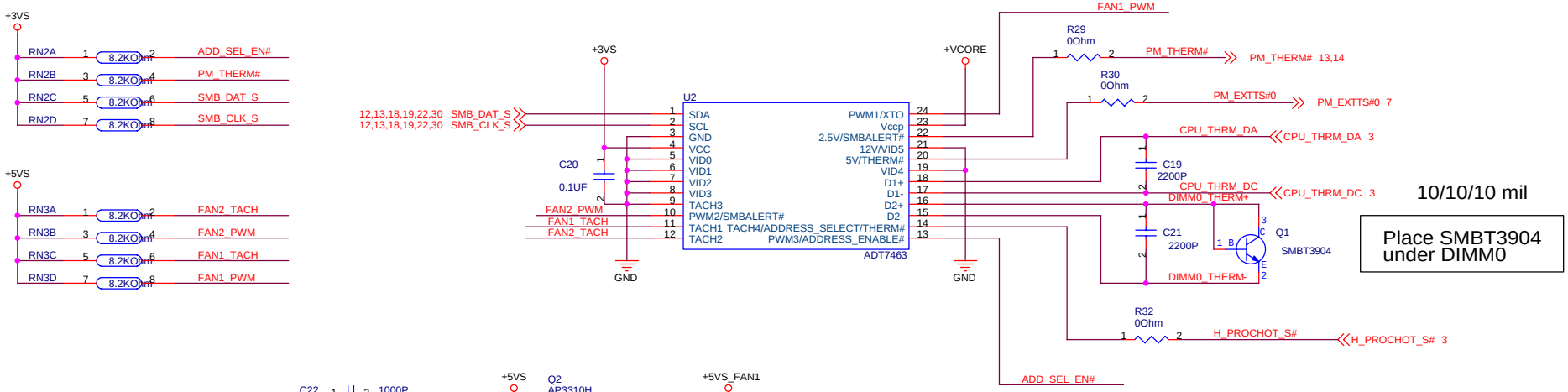
ASUSTeK COMPUTER INC	Title :	REVISION LIST
	Engineer:	Frank Lu
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 2 of 51	



	A-STEP	B-STEP
FSB	BSEL1	BSEL0	BSEL0
400	0	0	1
533	0	1	0

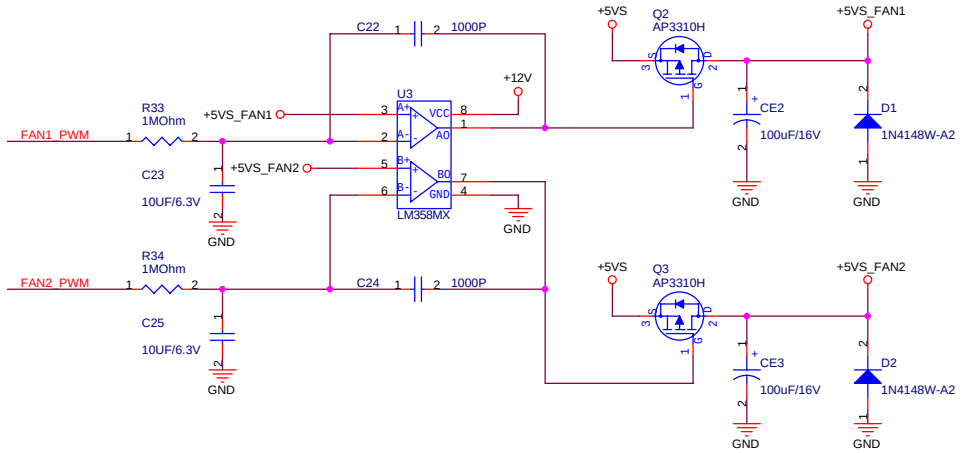
ASUSTeK COMPUTER INC	Title : DOTHAN CPU (1)	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 3 of 51	


+VCCP
+VCORE
U1D
1.0V - 1.2V(+/- 5%)
S0-S1M: 2.5
A(CPU,MCH,ICH)
0.745V - 1.356V(+/- 1.5%)
C0: 27 A
C3: 7.59A
C4: 0.9A
VCC
SOCKET479P
U1E
GND
SOCKET479P
GND
GND
+VCCP (CPU) Decoupling Capacitor
(Place near CPU)
+VCCP
CE1
150U/4.0V
C9 0.1U X7R
C10 0.1U X7R
C11 0.1U X7R
C12 0.1U X7R
C13 0.1U X7R
C14 0.1U X7R
C15 0.1U X7R
C16 0.1U X7R
C17 0.1U X7R
C5 10uF/10V
C7 10uF/10V
C18 0.1U X7R
GND
H1 PTH_HOLE /
H2 PTH_HOLE /
H3 PTH_HOLE /
H4 PTH_HOLE /
GND
GND
GND
GND
Title : DOTHAN CPU (2)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 4 of 51

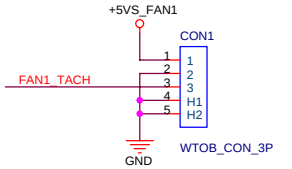


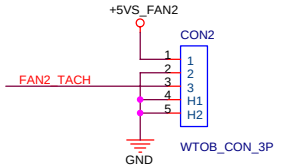
10/10/10 mil

Place SMBT3904 under DIMM0

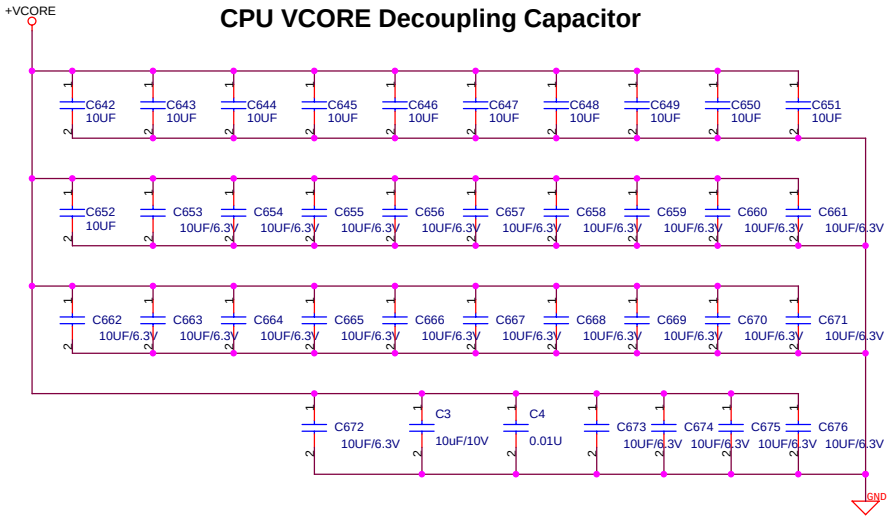


Pin 13	Pin 14	SMB Addr
1	X	5C **
0	1	5A
0	0	58





CPU VCORE Decoupling Capacitor



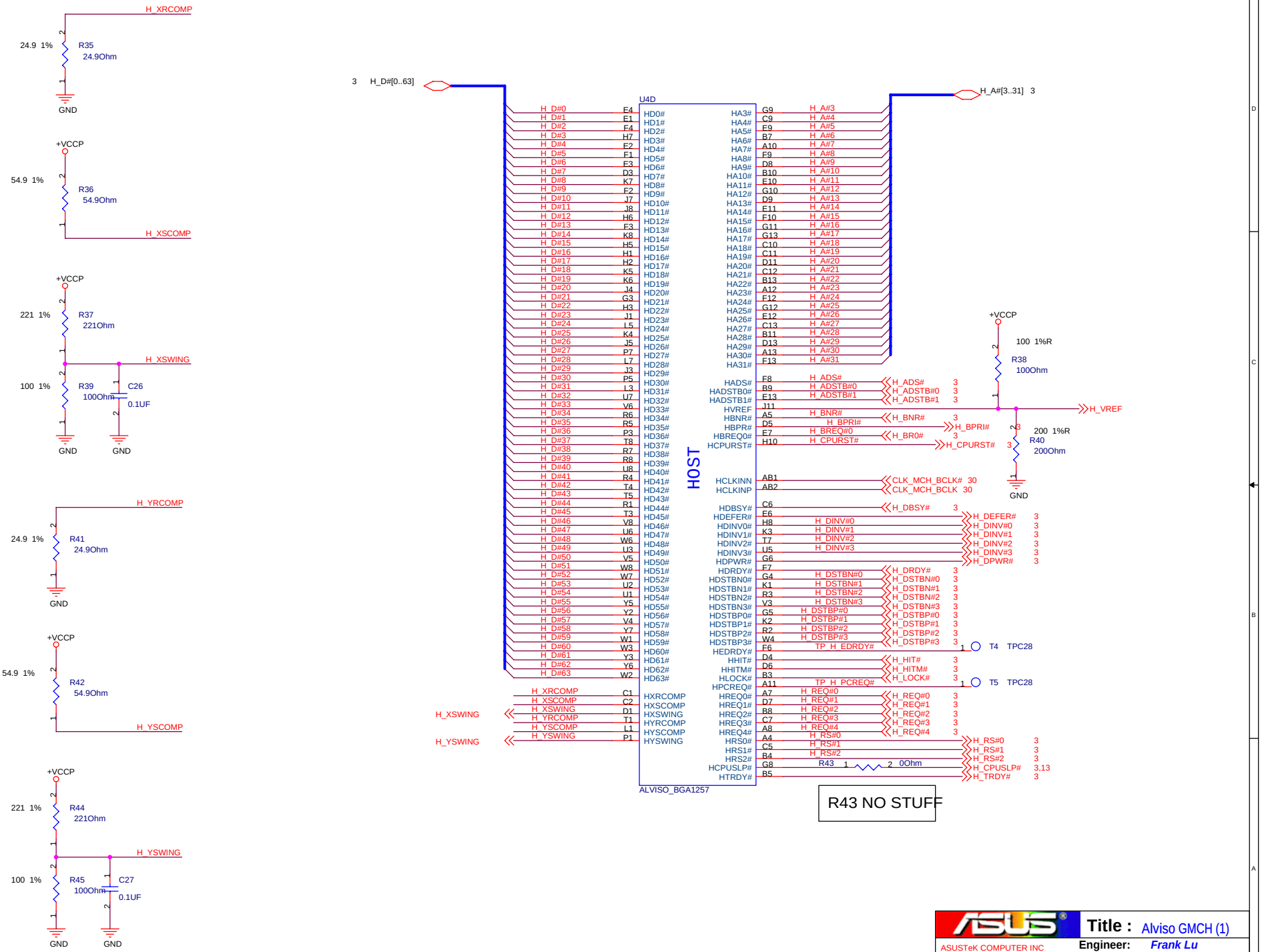
Mid Frequency Decoupling (Place around Processor)

High Frequency Decoupling (Place underneath Processor) using 10uF/6.3V X5R

+VCORE Bulk Decoupling

Four 200 uF are located in IMVP4

ASUSTeK COMPUTER INC	Title : THER-SENSOR,FAN	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 5 of 51	


H_XRCOMP
24.9 1%
R35
24.9Ohm
GND
+VCCP
54.9 1%
R36
54.9Ohm
H_XSCOMP
+VCCP
221 1%
R37
221Ohm
H_XSWING
100 1%
R39
100Ohm
C26
0.1UF
GND
GND
H_YRCOMP
24.9 1%
R41
24.9Ohm
GND
+VCCP
54.9 1%
R42
54.9Ohm
H_YSCOMP
+VCCP
221 1%
R44
221Ohm
H_YSWING
100 1%
R45
100Ohm
C27
0.1UF
GND
GND
3 H_D#[0..63]
U4D
HOST
ALVISO_BGA1257
H_A#[3..31] 3
+VCCP
100 1%R
R38
100Ohm
H_VREF
200 1%R
R40
200Ohm
GND
H_ADS# 3
H_ADSTB#0 3
H_ADSTB#1 3
H_BNR# 3
H_BPRI#
H_BR0# 3
H_CPURST#
CLK_MCH_BCLK# 30
CLK_MCH_BCLK 30
H_DBSY# 3
H_DEFER# 3
H_DINV#0 3
H_DINV#1 3
H_DINV#2 3
H_DINV#3 3
H_DPWR# 3
H_DRDY# 3
H_DSTBN#0 3
H_DSTBN#1 3
H_DSTBN#2 3
H_DSTBN#3 3
H_DSTBP#0 3
H_DSTBP#1 3
H_DSTBP#2 3
H_DSTBP#3 3
TP_H_EDRDY#
T4 TPC28
H_HIT# 3
H_HITM# 3
H_LOCK# 3
TP_H_PCREQ#
T5 TPC28
H_REQ#0 3
H_REQ#1 3
H_REQ#2 3
H_REQ#3 3
H_REQ#4 3
H_RS#0 3
H_RS#1 3
H_RS#2 3
R43 1 2 0Ohm
H_CPUSLP# 3,13
H_TRDY# 3
R43 NO STUFF
Title : Alviso GMCH (1)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
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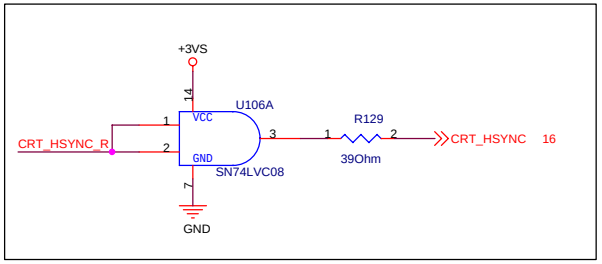
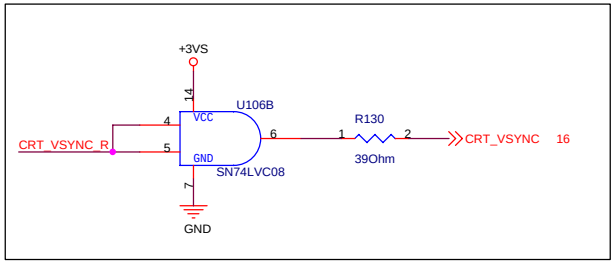
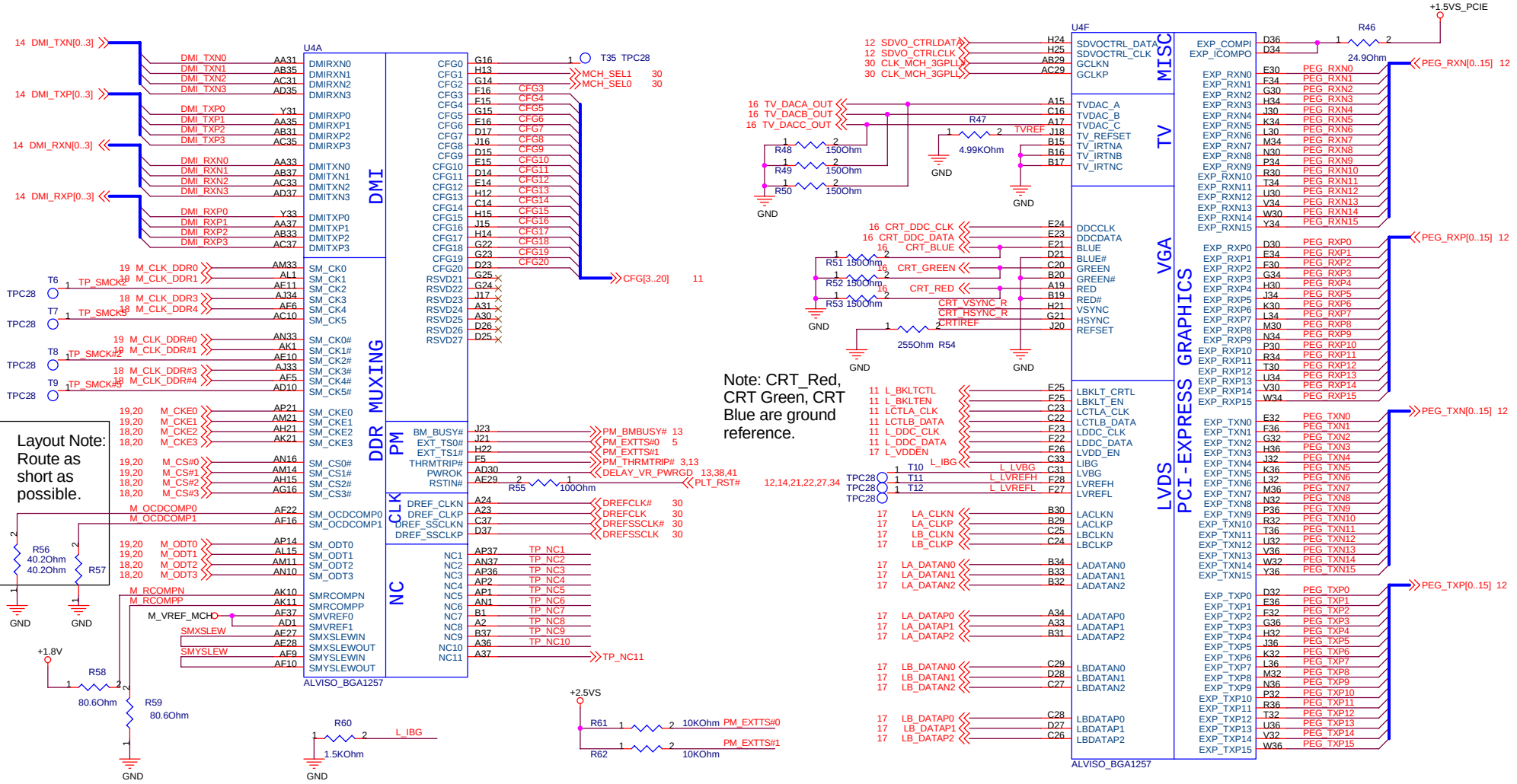
74LVC08 CLOSE to ALVISO

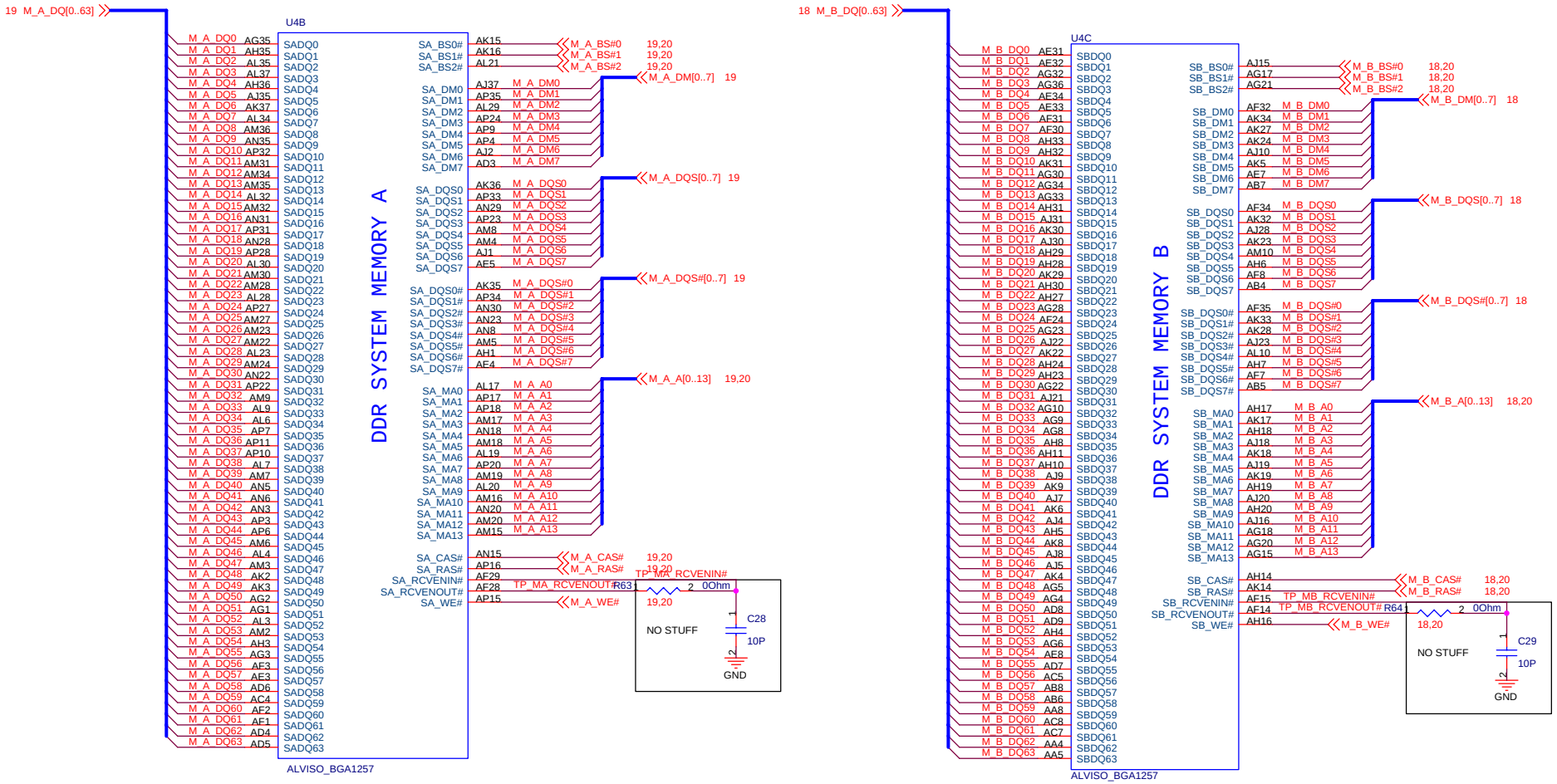


74LVC08 CLOSE to ALVISO

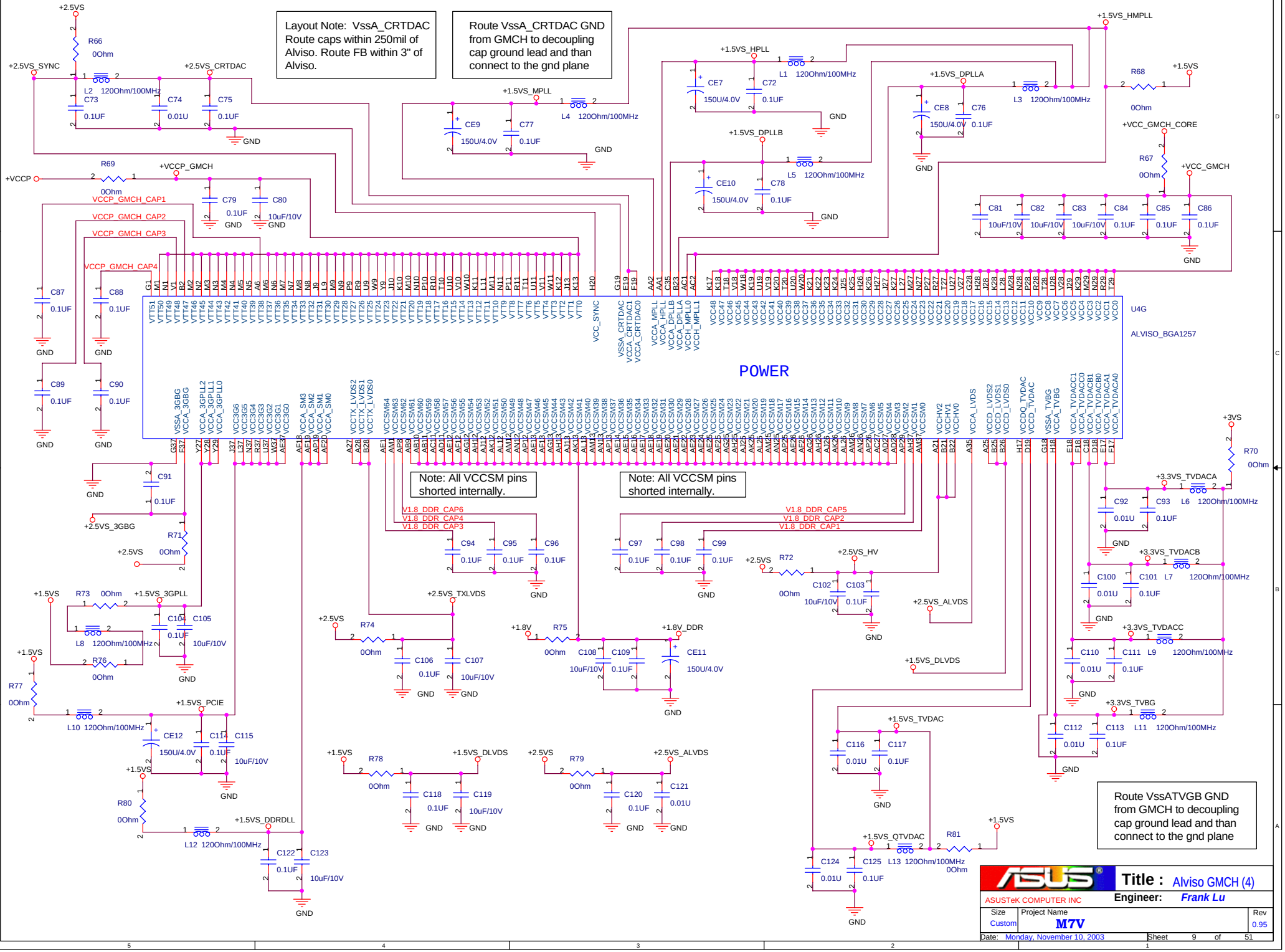


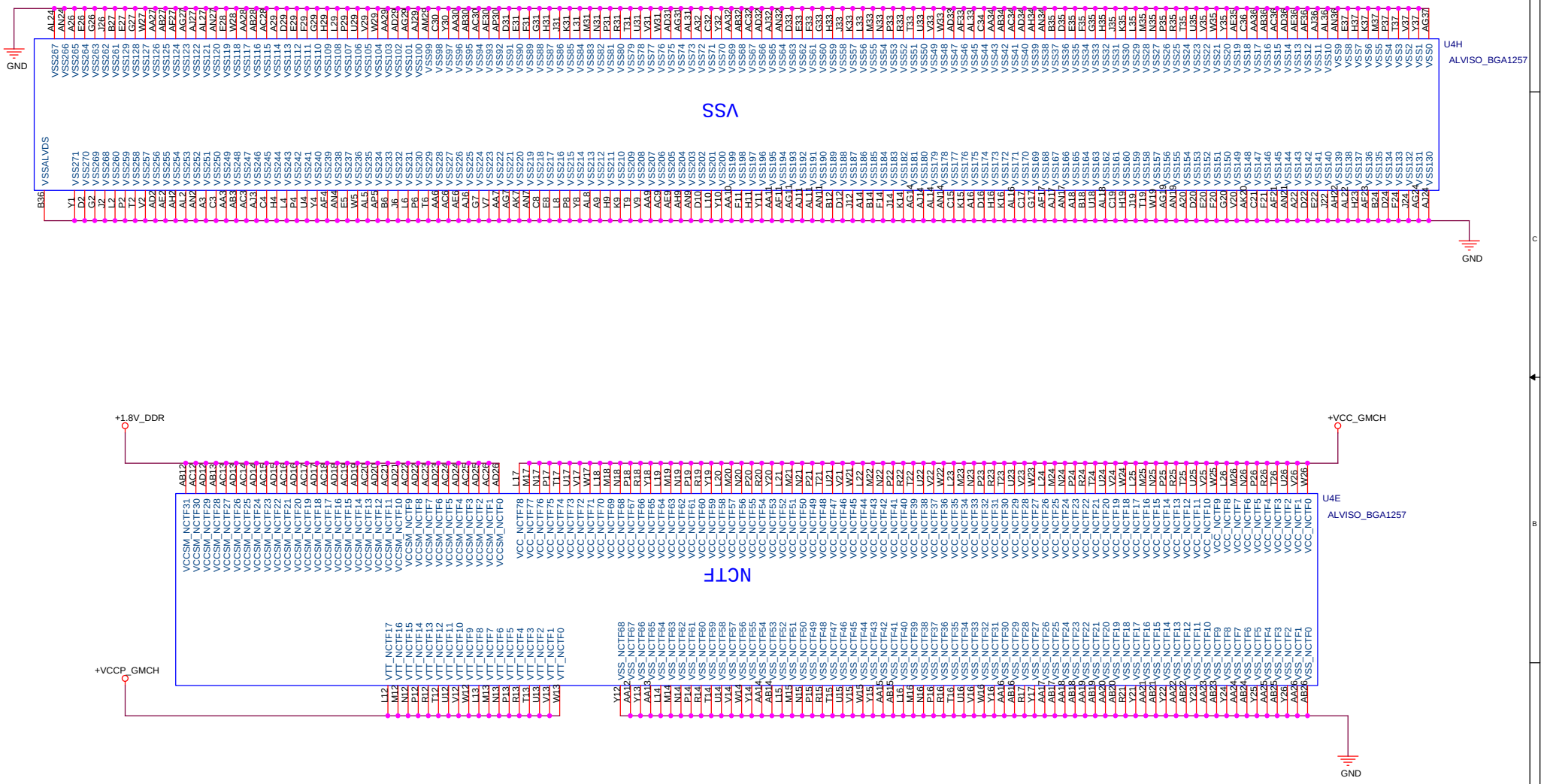


ASUSTeK COMPUTER INC	Title : Alviso GMCH (2)	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 7 of 51	



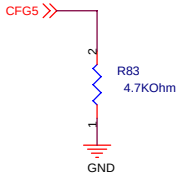
ASUSTeK COMPUTER INC	Title : Alviso GMCH (3)	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 8 of 51	


Layout Note: VssA_CRTDAC Route caps within 250mil of Alviso. Route FB within 3" of Alviso.
Route VssA_CRTDAC GND from GMCH to decoupling cap ground lead and than connect to the gnd plane
POWER
U4G
ALVISO_BGA1257
Note: All VCCSM pins shorted internally.
Note: All VCCSM pins shorted internally.
Route VssATVGB GND from GMCH to decoupling cap ground lead and than connect to the gnd plane
Title : Alviso GMCH (4)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 9 of 51



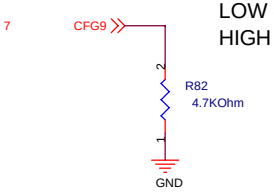
ASUSTeK COMPUTER INC	Title : Alviso GMCH (5)		
	Engineer: Frank Lu		
Size: Custom	Project Name: M7V		Rev: 0.95
Date: Monday, November 10, 2003	Sheet 10 of 51		

CFG5 : LOW = DMI X 2
HIGH = DMI X 4 (Default)

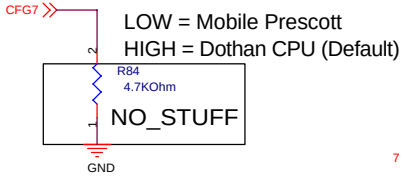


CFG9 : PCIE GRAPHIC LANE

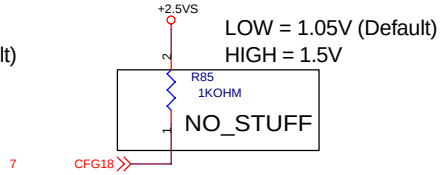
LOW = REVERSE LANE
HIGH = NORMAL OPERATION (Default)



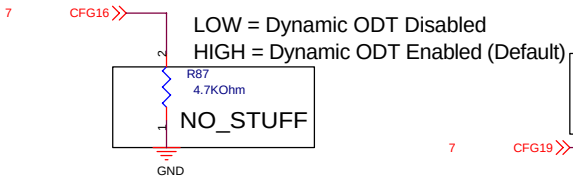
CFG7 : CPU STRAP



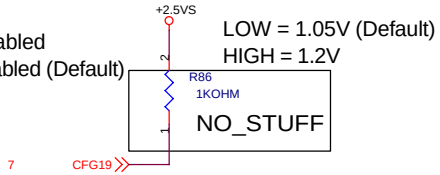
CFG18 : VCC SELECT



CFG16 : FSB DYNAMIC ODT



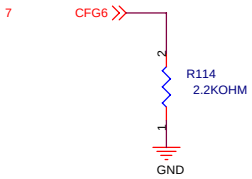
CFG19 : VTT SELECT

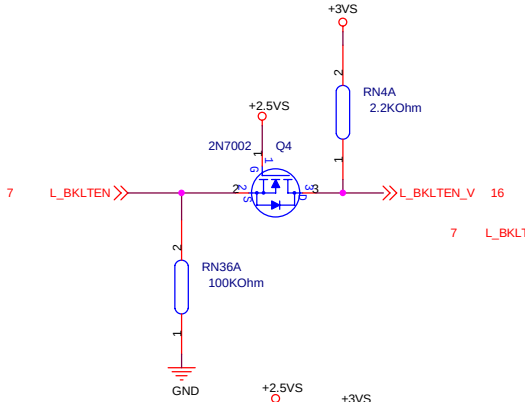


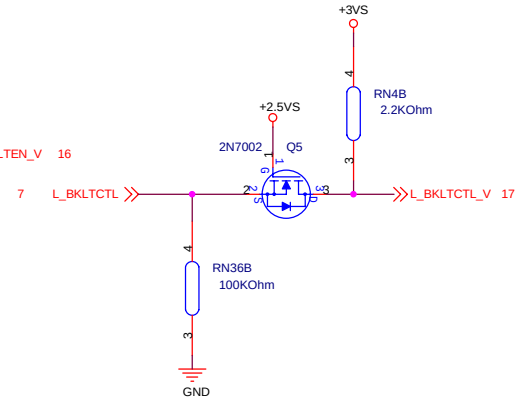
CFG[17..3] have internal pullup resistors.
CFG[19..18] have internal pulldown resistors.

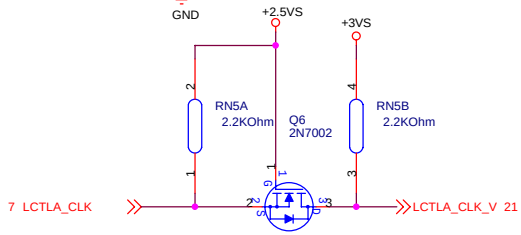
SDVOCRTL_DATA LOW = No SDVO device present (Default)

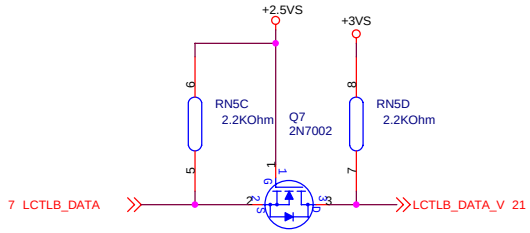
CFG6 : LOW = DDR2 SDRAM
HIGH = DDR SDRAM (Default)

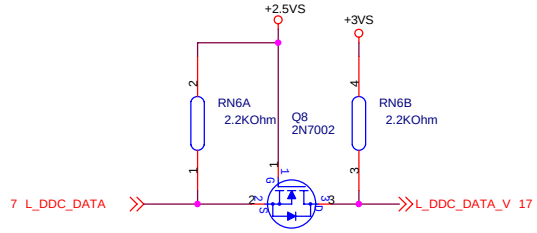


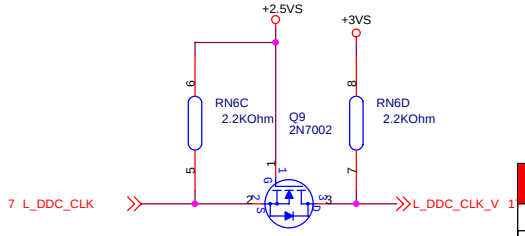












Title : GMCH Strapping
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size: Custom
Project Name: M7V
Rev: 0.95
Date: Monday, November 10, 2003
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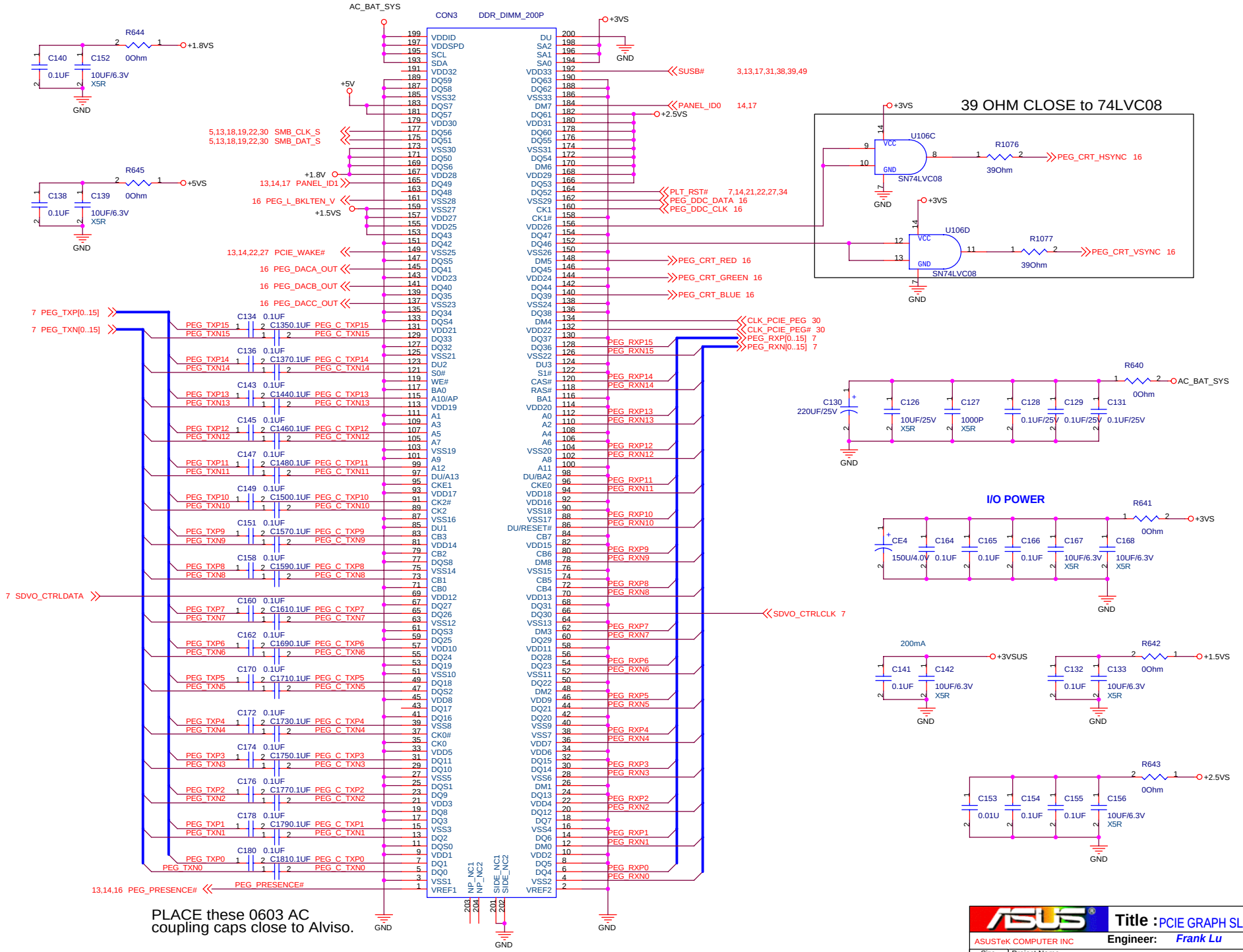
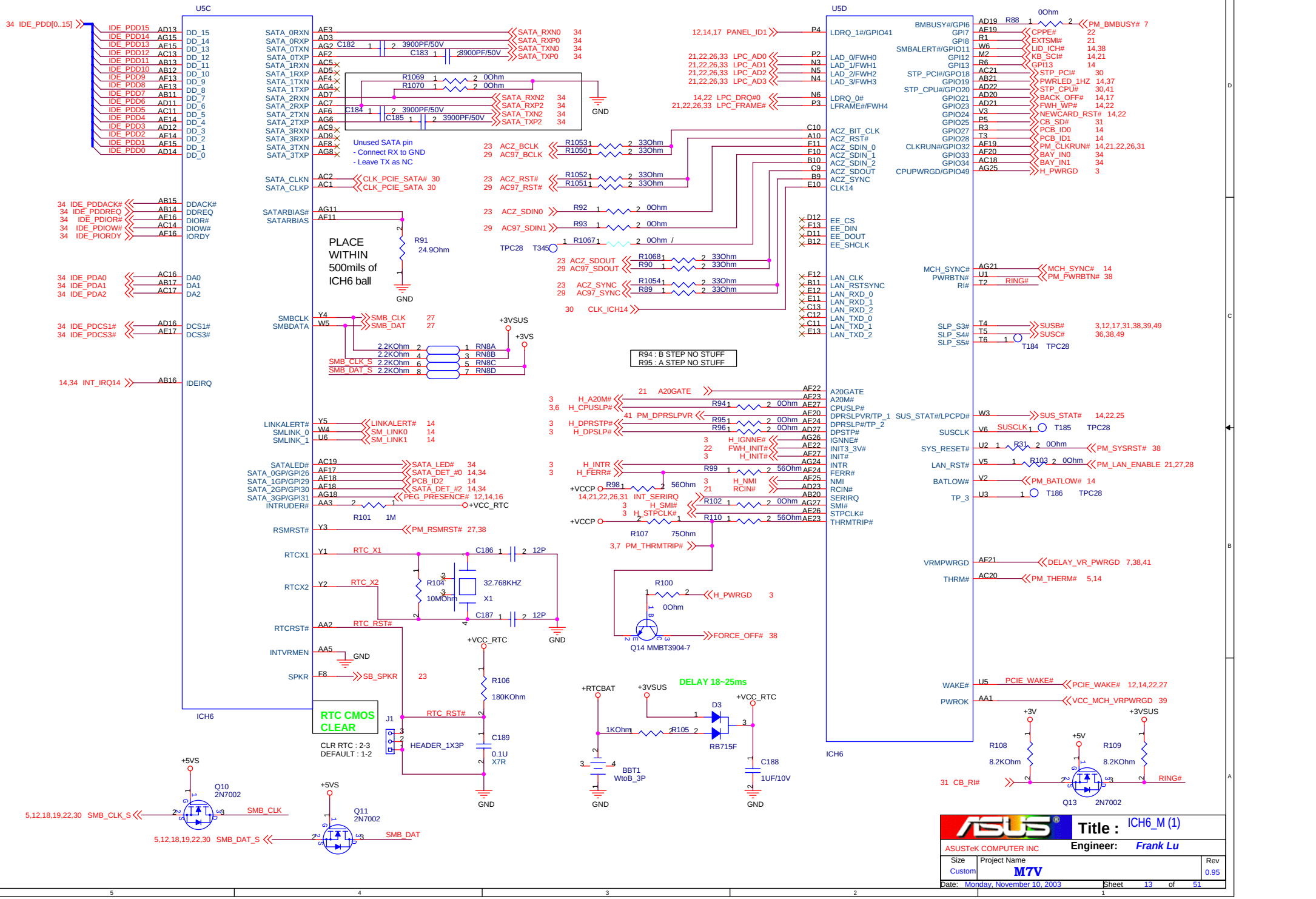
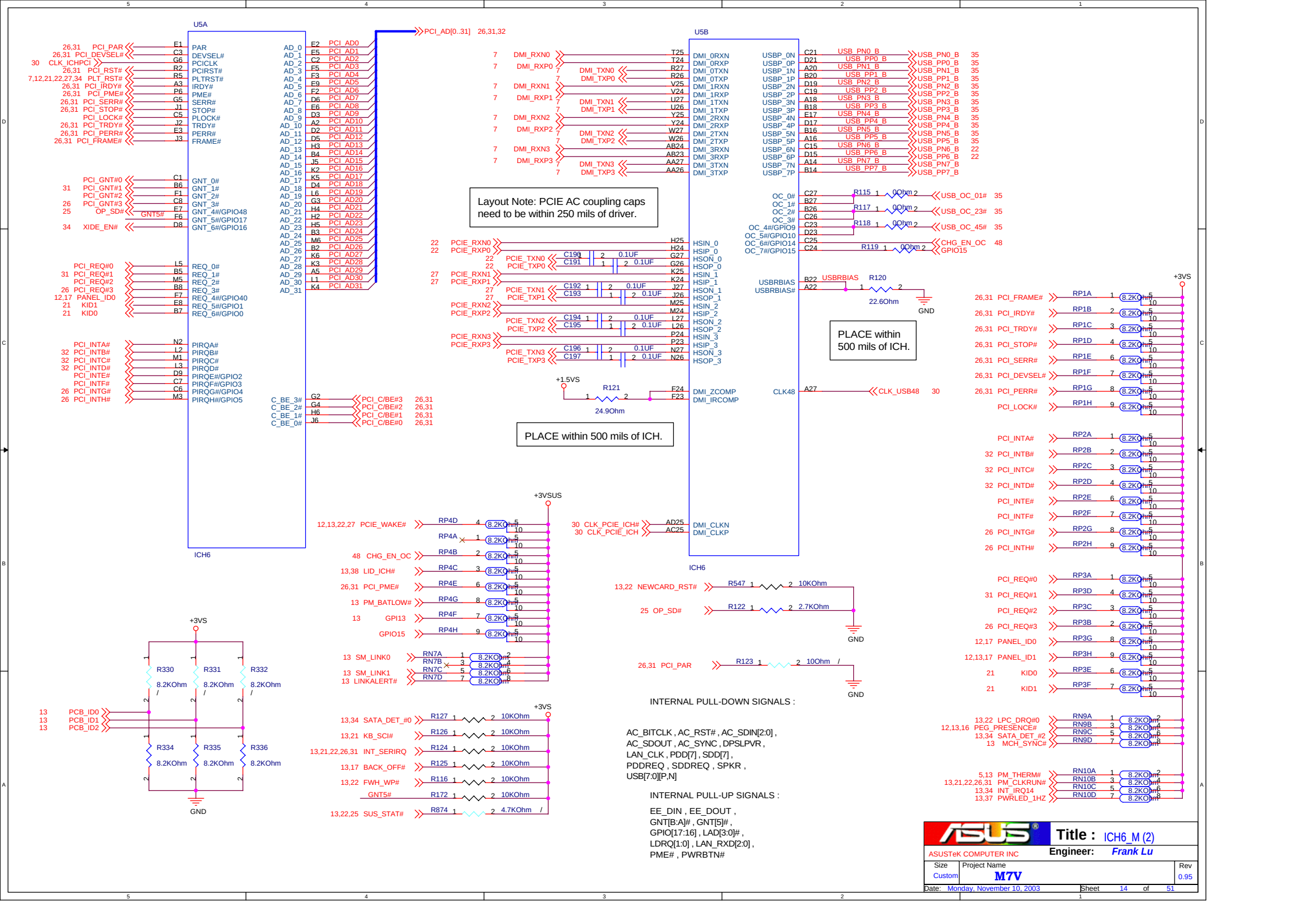
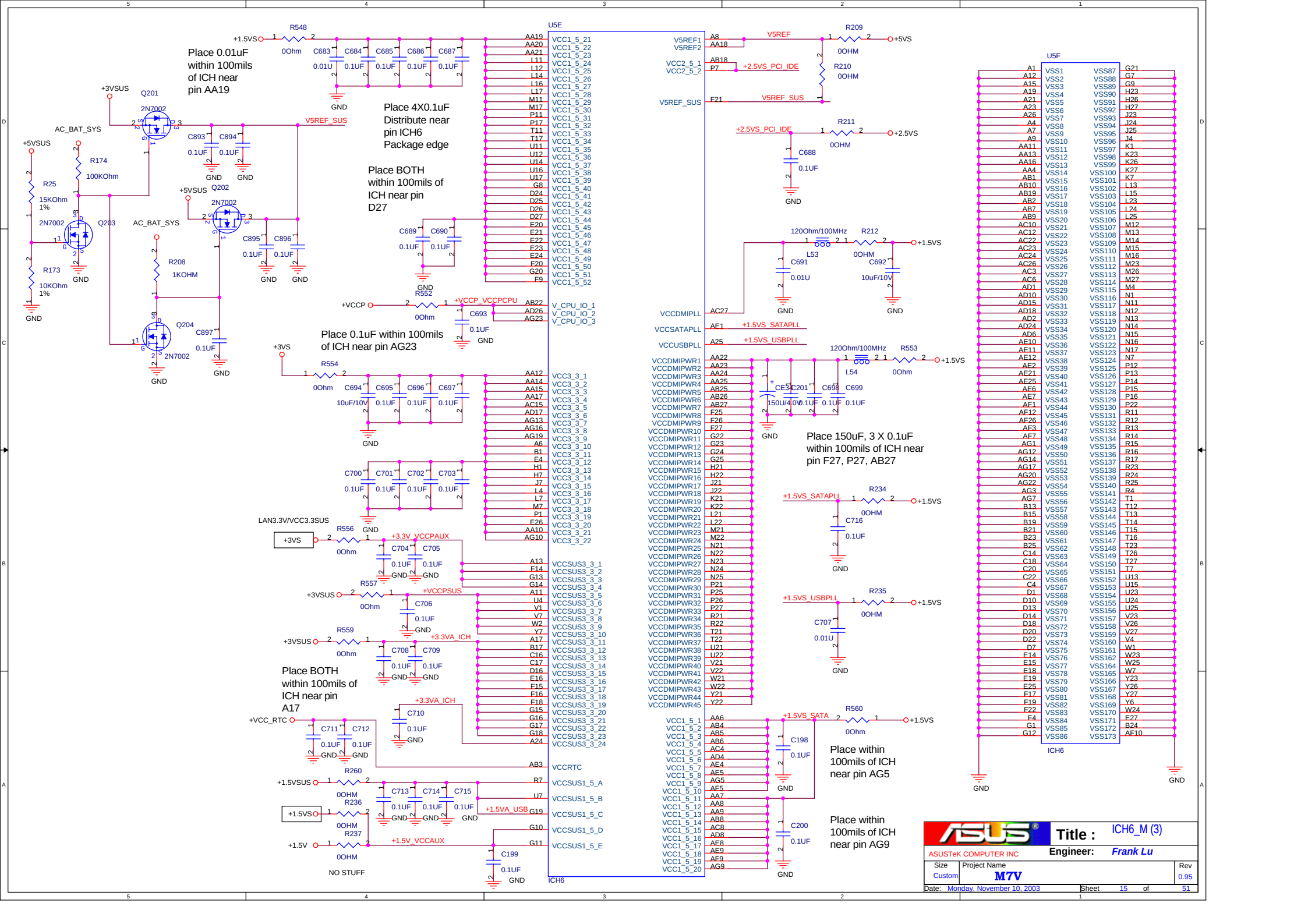
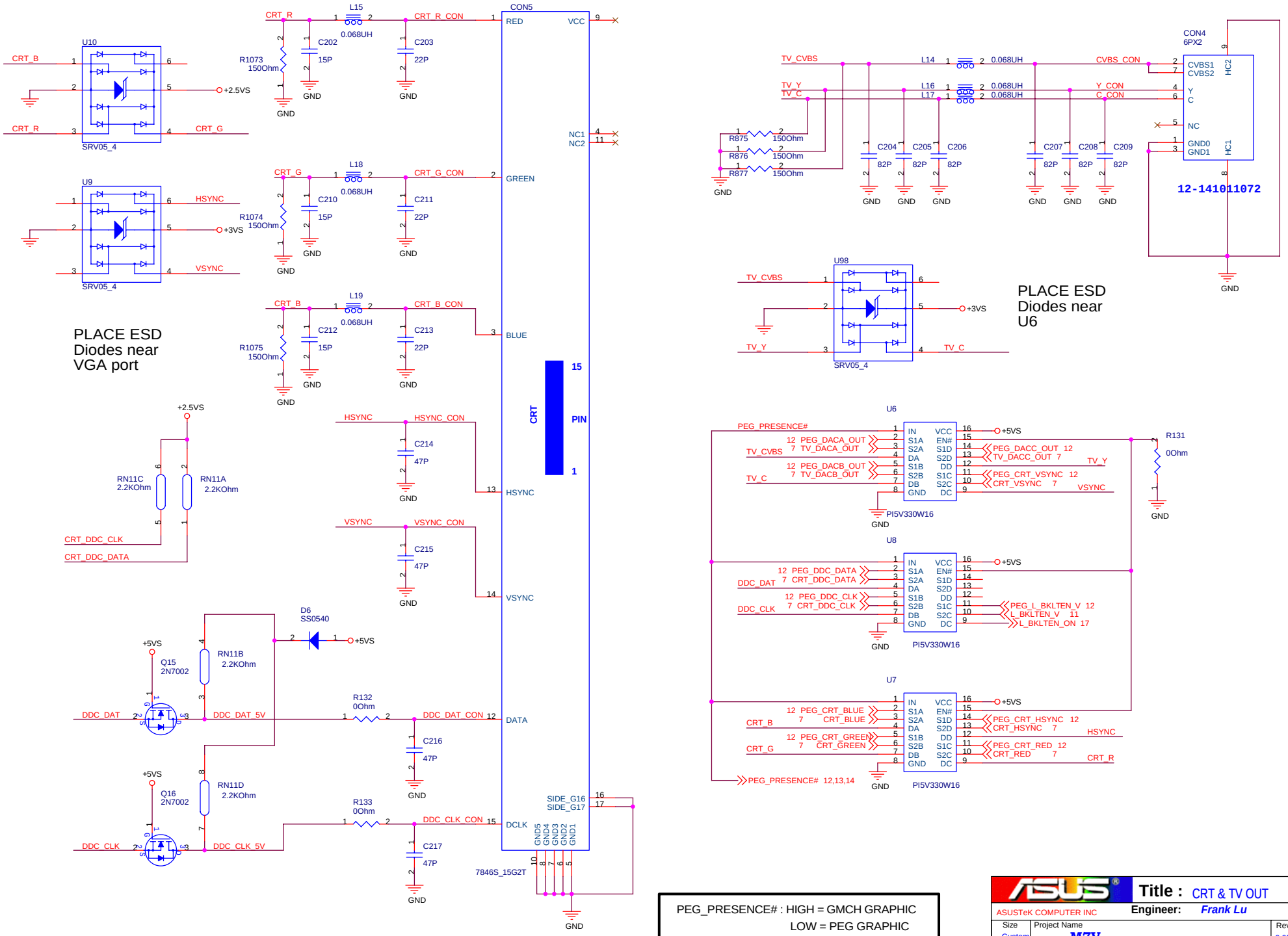

AC_BAT_SYS
CON3
DDR_DIMM_200P
R644
+1.8VS
C140
C152
0Ohm
0.1UF
10UF/6.3V
X5R
GND
R645
+5VS
C138
C139
0Ohm
0.1UF
10UF/6.3V
X5R
GND
+5V
+1.8V
+1.5VS
+3VS
+2.5VS
5,13,18,19,22,30 SMB_CLK_S
5,13,18,19,22,30 SMB_DAT_S
13,14,17 PANEL_ID1
16 PEG_L_BKLTEN_V
13,14,22,27 PCIE_WAKE#
16 PEG_DACA_OUT
16 PEG_DACB_OUT
16 PEG_DACC_OUT
SUSB# 3,13,17,31,38,39,49
PANEL_ID0 14,17
PLT_RST# 7,14,21,22,27,34
PEG_DDC_DATA 16
PEG_DDC_CLK 16
PEG_CRT_RED 16
PEG_CRT_GREEN 16
PEG_CRT_BLUE 16
CLK_PCIE_PEG 30
CLK_PCIE_PEG# 30
PEG_RXP[0..15] 7
PEG_RXN[0..15] 7
SDVO_CTRLCLK 7
7 PEG_TXP[0..15]
7 PEG_TXN[0..15]
7 SDVO_CTRLDATA
13,14,16 PEG_PRESENCE#
39 OHM CLOSE to 74LVC08
U106C
U106D
SN74LVC08
R1076
R1077
39Ohm
PEG_CRT_HSYNC 16
PEG_CRT_VSYNC 16
R640
AC_BAT_SYS
C130
220UF/25V
C126
10UF/25V
C127
1000P
C128
0.1UF/25V
C129
0.1UF/25V
C131
0.1UF/25V
I/O POWER
R641
CE4
150U/4.0V
C164
0.1UF
C165
0.1UF
C166
0.1UF
C167
10UF/6.3V
C168
10UF/6.3V
200mA
+3VSUS
C141
0.1UF
C142
10UF/6.3V
R642
+1.5VS
C132
0.1UF
C133
10UF/6.3V
R643
+2.5VS
C153
0.01U
C154
0.1UF
C155
0.1UF
C156
10UF/6.3V
C134 0.1UF
C136 0.1UF
C143 0.1UF
C145 0.1UF
C147 0.1UF
C149 0.1UF
C151 0.1UF
C158 0.1UF
C160 0.1UF
C162 0.1UF
C170 0.1UF
C172 0.1UF
C174 0.1UF
C176 0.1UF
C178 0.1UF
C180 0.1UF
PLACE these 0603 AC coupling caps close to Alviso.
Title : PCIE GRAPH SLOT
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 12 of 51


U5C
ICH6
U5D
ICH6
PLACE WITHIN 500mils of ICH6 ball
Unused SATA pin
- Connect RX to GND
- Leave TX as NC
R94 : B STEP NO STUFF
R95 : A STEP NO STUFF
RTC CMOS CLEAR
CLR RTC : 2-3
DEFAULT : 1-2
DELAY 18~25ms
Q14 MMBT3904-7
Q10 2N7002
Q11 2N7002
Q13 2N7002
BBT1 WtoB_3P
RB715F
32.768KHZ
HEADER_1X3P
Title : ICH6_M (1)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size: Custom
Project Name: M7V
Rev: 0.95
Date: Monday, November 10, 2003
Sheet 13 of 51


U5A
ICH6
PCI_AD[0..31] 26,31,32
Layout Note: PCIE AC coupling caps need to be within 250 mils of driver.
PLACE within 500 mils of ICH.
PLACE within 500 mils of ICH.
U5B
ICH6
INTERNAL PULL-DOWN SIGNALS :
AC_BITCLK , AC_RST# , AC_SDIN[2:0] , AC_SDOUT , AC_SYNC , DPSLPVR , LAN_CLK , PDD[7] , SDD[7] , PDDREQ , SDDREQ , SPKR , USB[7:0][P,N]
INTERNAL PULL-UP SIGNALS :
EE_DIN , EE_DOUT , GNT[B:A]# , GNT[5]# , GPIO[17:16] , LAD[3:0]# , LDRQ[1:0] , LAN_RXD[2:0] , PME# , PWRBTN#
Title : ICH6_M (2)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 14 of 51


Place 0.01uF within 100mils of ICH near pin AA19
Place 4X0.1uF Distribute near pin ICH6 Package edge
Place BOTH within 100mils of ICH near pin D27
Place 0.1uF within 100mils of ICH near pin AG23
Place BOTH within 100mils of ICH near pin A17
Place 150uF, 3 X 0.1uF within 100mils of ICH near pin F27, P27, AB27
Place within 100mils of ICH near pin AG5
Place within 100mils of ICH near pin AG9
NO STUFF
U5E
ICH6
U5F
ICH6
Title : ICH6_M (3)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 15 of 51

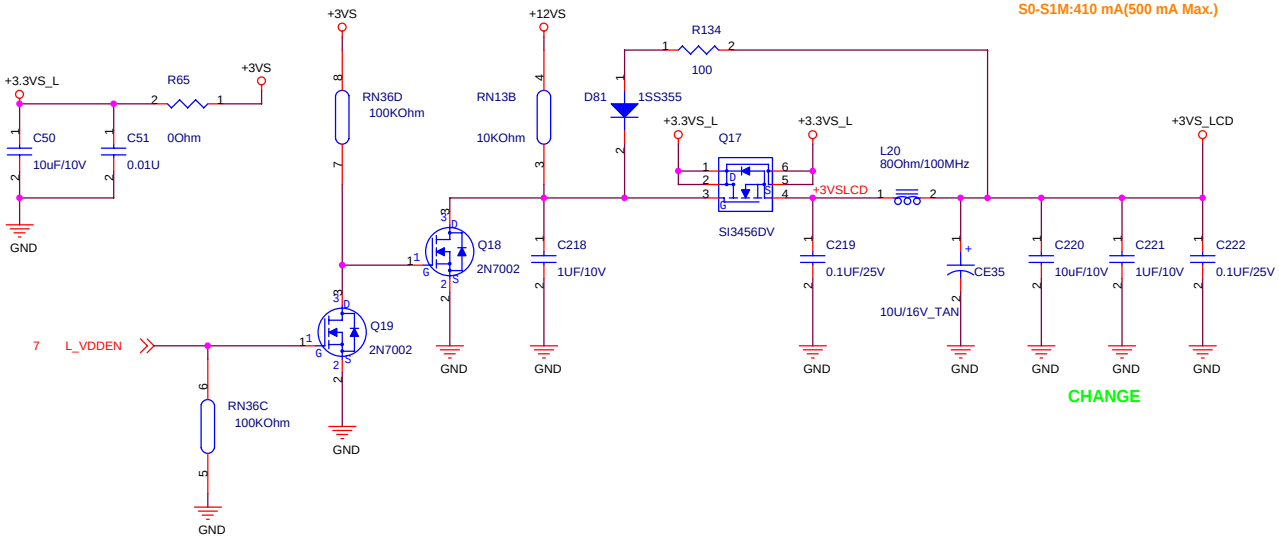


ASUSTeK COMPUTER INC	Title : CRT & TV OUT		
	Engineer: Frank Lu		
Size: Custom	Project Name: M7V		Rev: 0.95
Date: Monday, November 10, 2003	Sheet 16 of 51		

LCD Power

SI3865: US$0.22

3-3.6V
S0-S1M:410 mA(500 mA Max.)

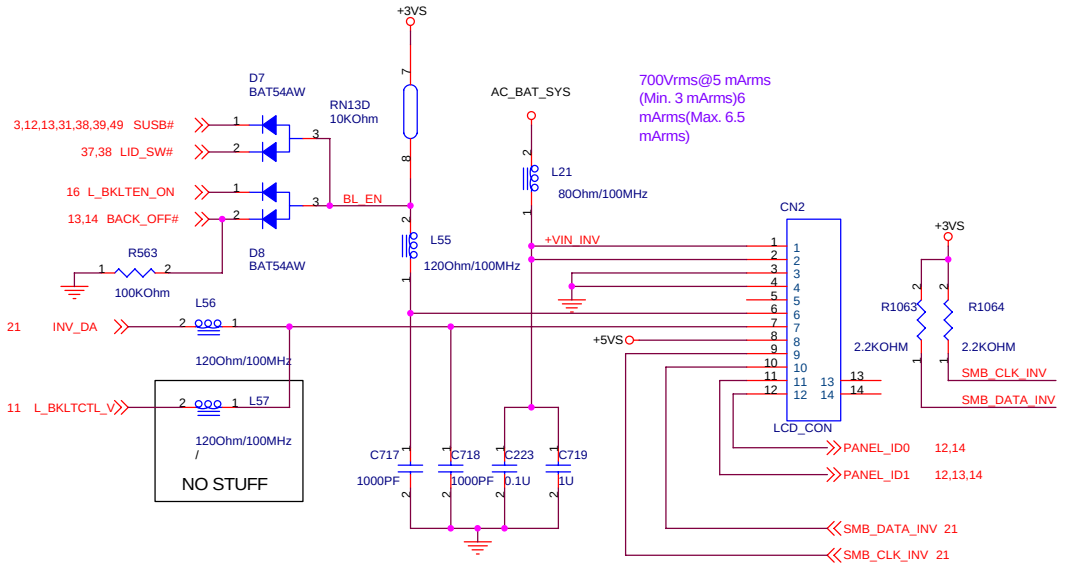


PANEL ID1 = 1 : WSXGA+ 1680x1050
PANEL ID1 = 0 : WXGA 1280x800

PANEL ID0 RESERVE FOR VENDOR

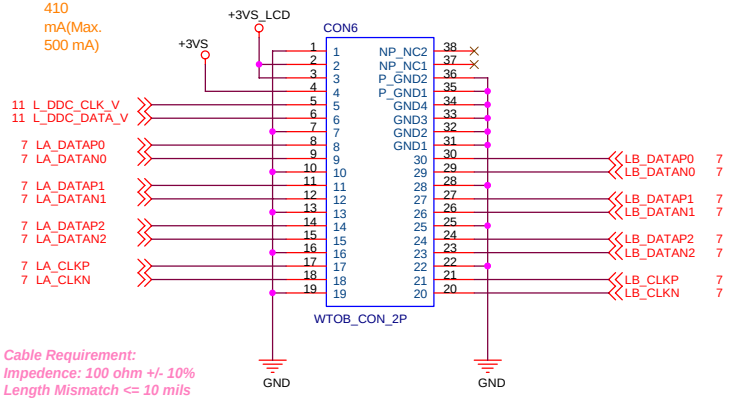
CHANGE

LCD Backlight Control



LCD LVDS Interface

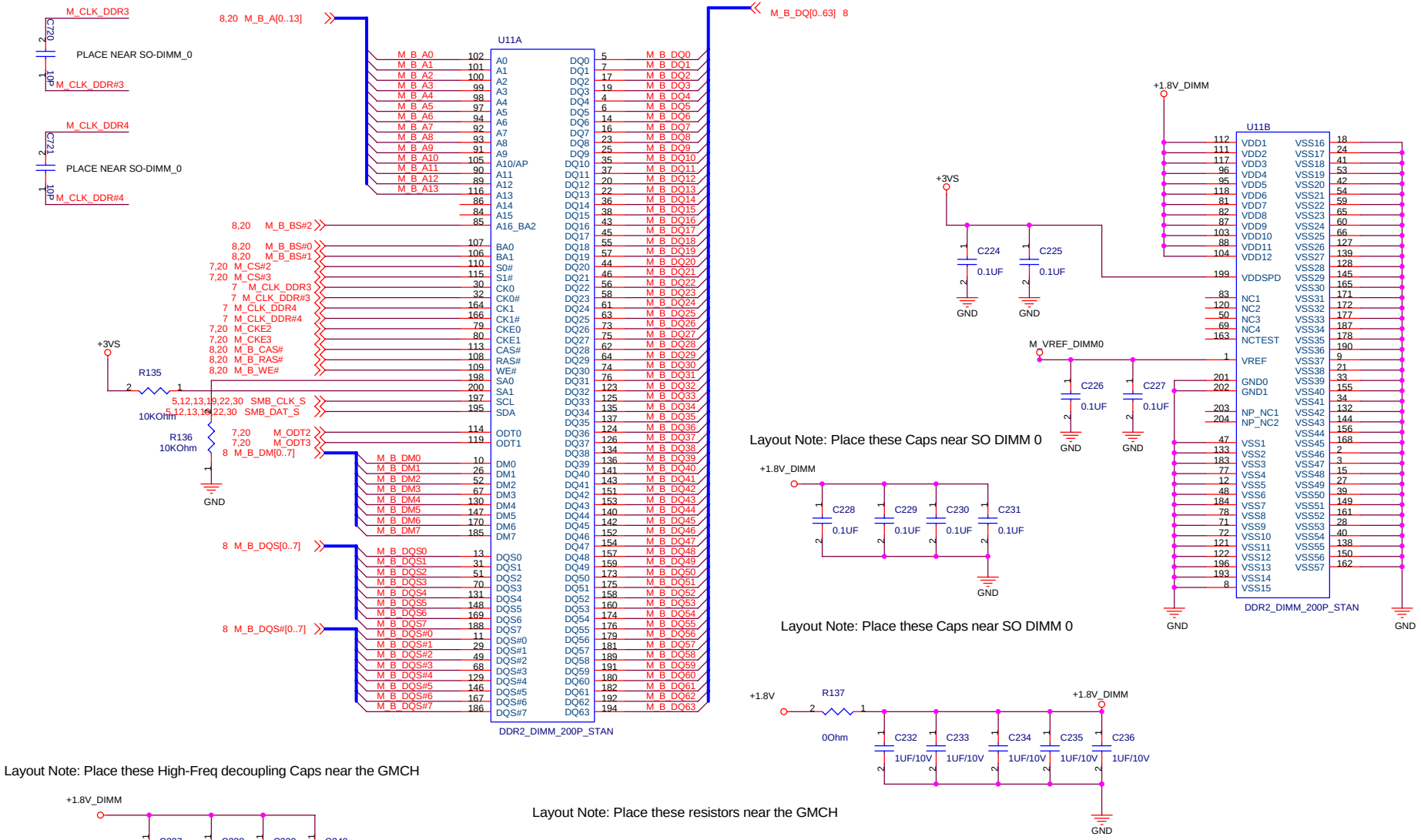
3V-3.6V
Full
Active:
410
mA(Max.
500 mA)



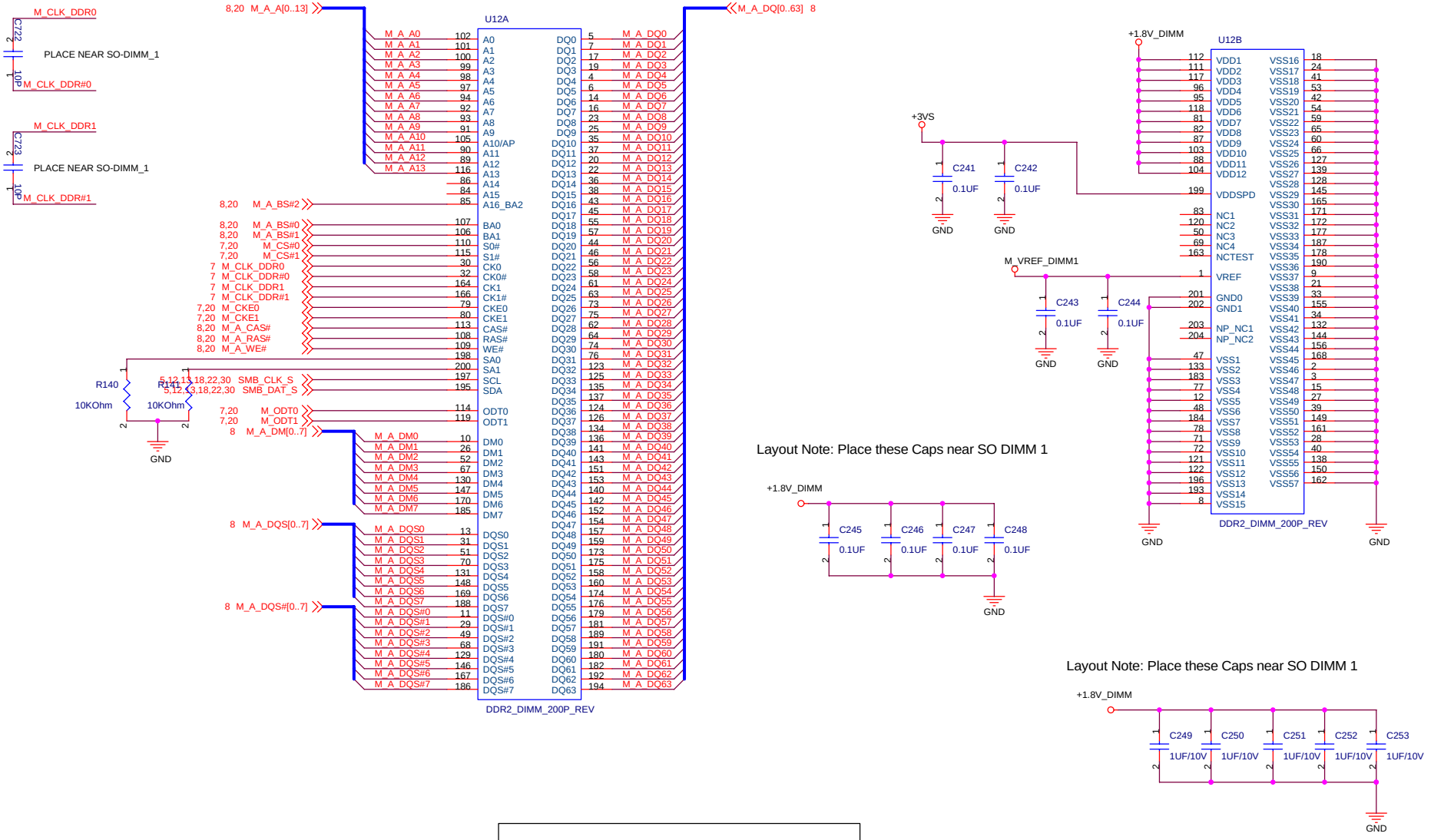
Cable Requirement:
Impedence: 100 ohm +/- 10%
Length Mismatch <= 10 mils
Twisted Pair(Not Ribbon)
Maximum Length <= 16"

ASL (SMB addr : 0x72)
(Ambient Light Sensor)

ASUSTeK COMPUTER INC	Title : LVDS & INVERTER	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 17 of 51	

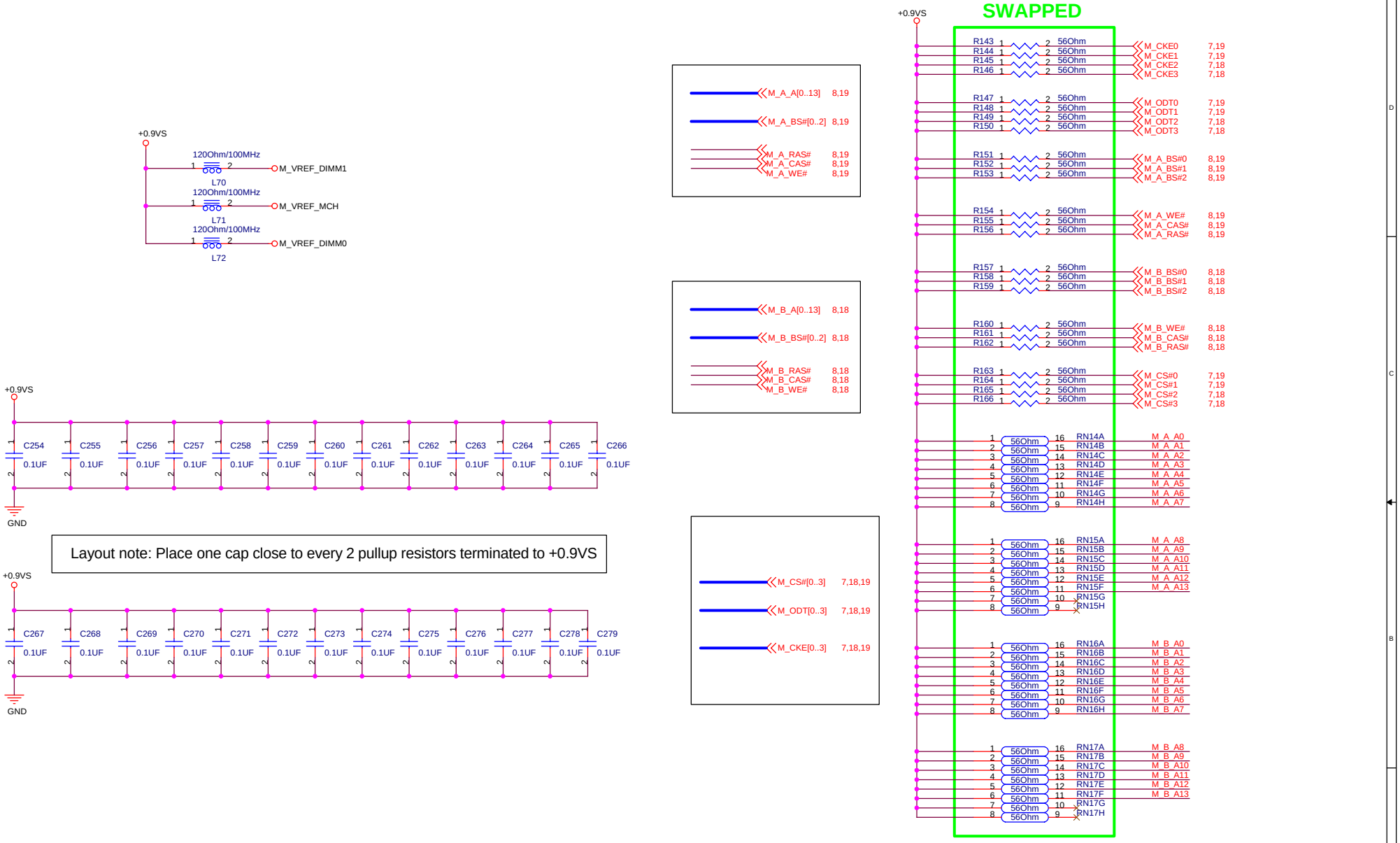


ASUSTeK COMPUTER INC	Title : DDR2_SO-DIMM_0	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 18 of 51	

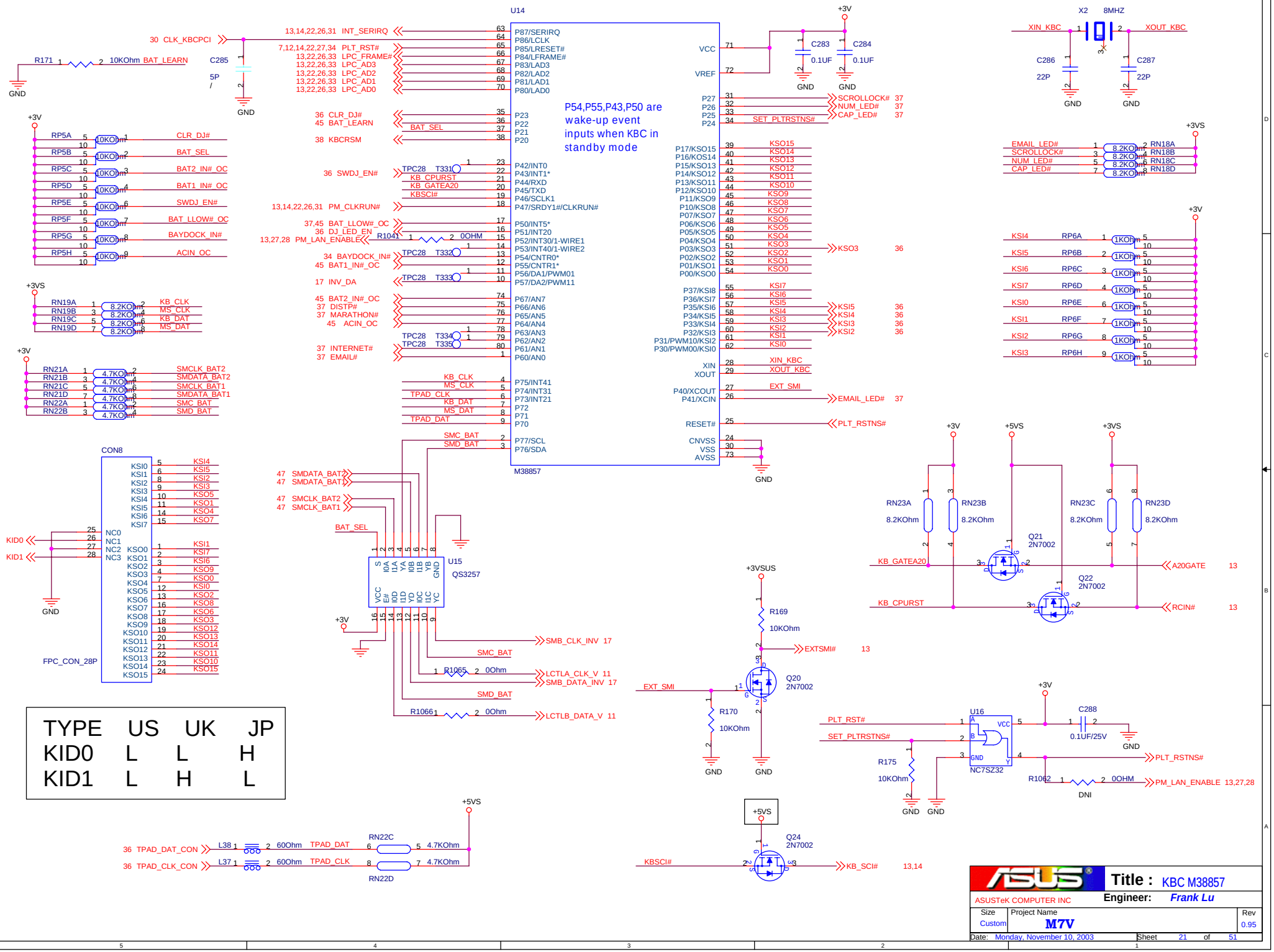


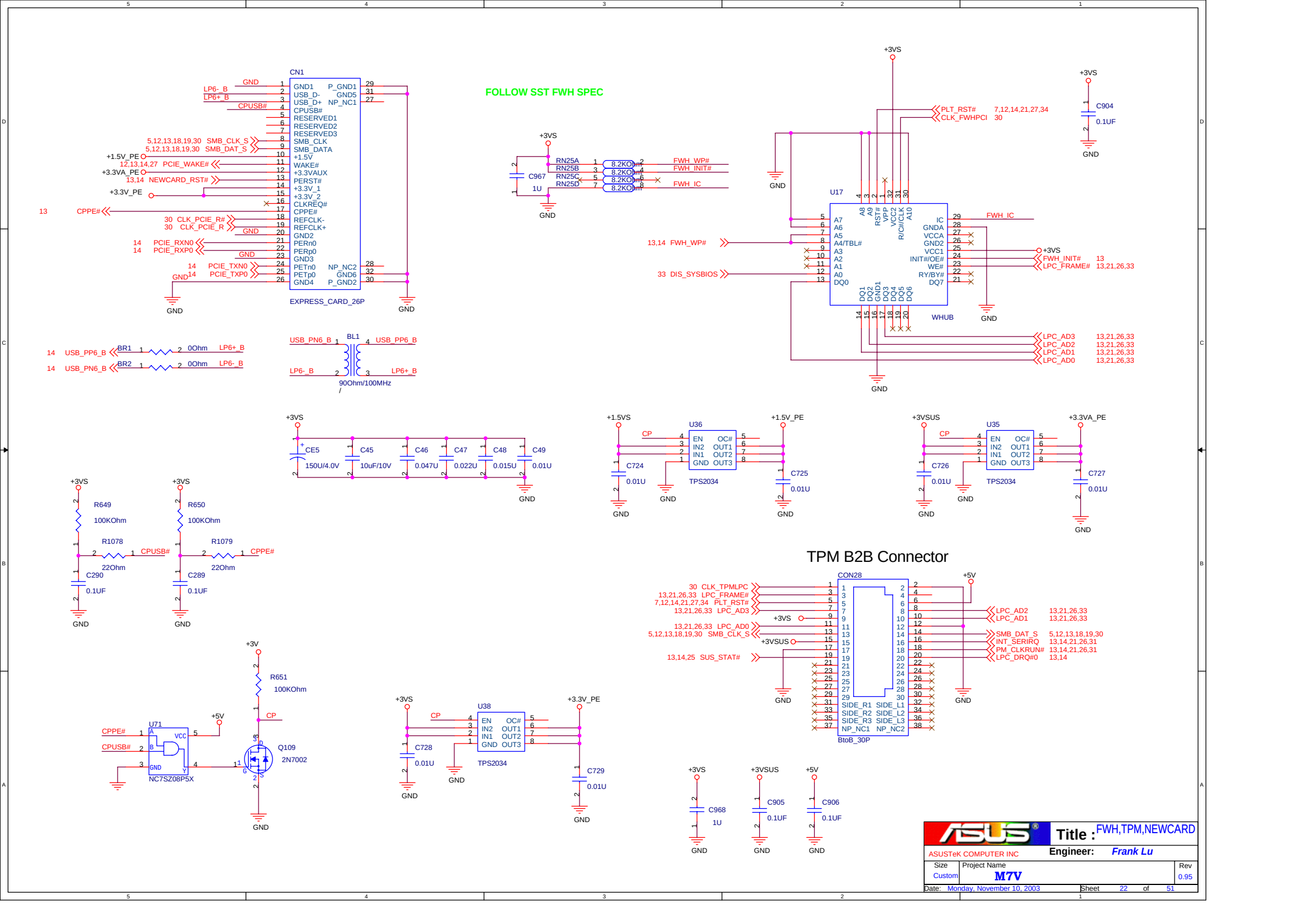
SO-DIMM 1 is placed father from the GMCH than SO-DIMM 0

ASUSTeK COMPUTER INC	Title : DDR2 SO-DIMM_1	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 19 of 51	



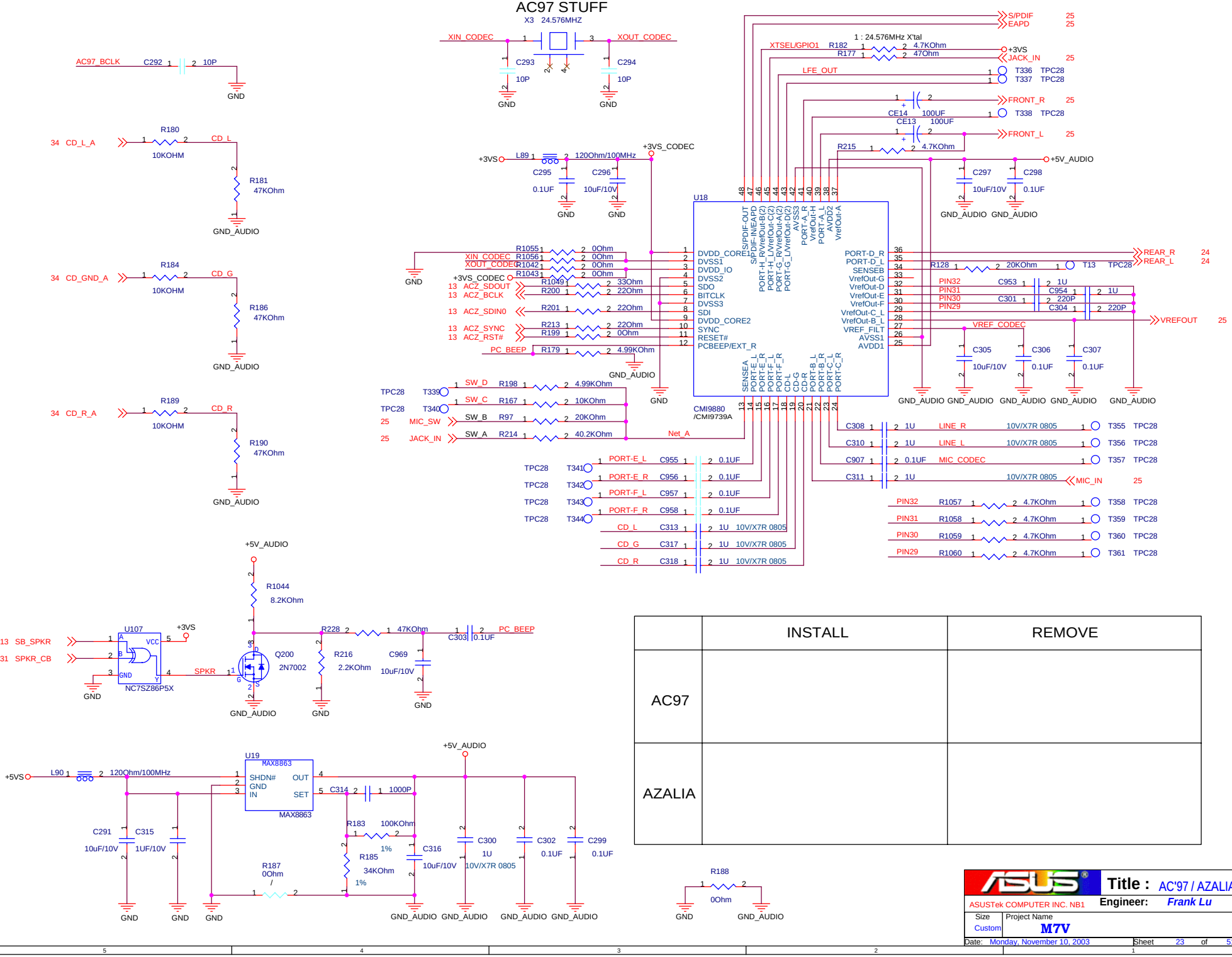
ASUSTeK COMPUTER INC	Title : DDR2 ADDR TERM	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 20 of 51	


U14
M38857
P54,P55,P43,P50 are wake-up event inputs when KBC in standby mode
30 CLK_KBCPCI
R171 10KOhm BAT_LEARN
C285 5P
13,14,22,26,31 INT_SERIRQ
7,12,14,22,27,34 PLT_RST#
13,22,26,33 LPC_FRAME#
13,22,26,33 LPC_AD3
13,22,26,33 LPC_AD2
13,22,26,33 LPC_AD1
13,22,26,33 LPC_AD0
36 CLR_DJ#
45 BAT_LEARN
BAT_SEL
38 KBCRSM
36 SWDJ_EN#
TPC28 T331
KB_CPURST
KB_GATEA20
KBSCI#
13,14,22,26,31 PM_CLKRUN#
37,45 BAT_LLOW#_OC
36 DJ_LED_EN
13,27,28 PM_LAN_ENABLE
R1041 0OHM
34 BAYDOCK_IN#
45 BAT1_IN#_OC
TPC28 T332
17 INV_DA
TPC28 T333
45 BAT2_IN#_OC
37 DISTP#
37 MARATHON#
45 ACIN_OC
TPC28 T334
TPC28 T335
37 INTERNET#
37 EMAIL#
KB_CLK
MS_CLK
TPAD_CLK
KB_DAT
MS_DAT
TPAD_DAT
SMC_BAT
SMD_BAT
P87/SERIRQ
P86/LCLK
P85/LRESET#
P84/LFRAME#
P83/LAD3
P82/LAD2
P81/LAD1
P80/LAD0
P23
P22
P21
P20
P42/INT0
P43/INT1*
P44/RXD
P45/TXD
P46/SCLK1
P47/SRDY1#/CLKRUN#
P50/INT5*
P51/INT20
P52/INT30/1-WIRE1
P53/INT40/1-WIRE2
P54/CNTR0*
P55/CNTR1*
P56/DA1/PWM01
P57/DA2/PWM11
P67/AN7
P66/AN6
P65/AN5
P64/AN4
P63/AN3
P62/AN2
P61/AN1
P60/AN0
P75/INT41
P74/INT31
P73/INT21
P72
P71
P70
P77/SCL
P76/SDA
VCC
VREF
P27
P26
P25
P24
P17/KSO15
P16/KSO14
P15/KSO13
P14/KSO12
P13/KSO11
P12/KSO10
P11/KSO9
P10/KSO8
P07/KSO7
P06/KSO6
P05/KSO5
P04/KSO4
P03/KSO3
P02/KSO2
P01/KSO1
P00/KSO0
P37/KSI8
P36/KSI7
P35/KSI6
P34/KSI5
P33/KSI4
P32/KSI3
P31/PWM10/KSI2
P30/PWM00/KSI0
XIN
XOUT
P40/XCOUT
P41/XCIN
RESET#
CNVSS
VSS
AVSS
SCROLLOCK# 37
NUM_LED# 37
CAP_LED# 37
SET_PLTRSTNS#
KSO15
KSO14
KSO13
KSO12
KSO11
KSO10
KSO9
KSO8
KSO7
KSO6
KSO5
KSO4
KSO3 36
KSO2
KSO1
KSO0
KSI7
KSI6
KSI5 36
KSI4 36
KSI3 36
KSI2 36
KSI1
KSI0
XIN_KBC
XOUT_KBC
EXT_SMI
EMAIL_LED# 37
PLT_RSTNS# 13
C283 0.1UF
C284 0.1UF
X2 8MHZ
C286 22P
C287 22P
EMAIL_LED#
SCROLLOCK#
NUM_LED#
CAP_LED#
RP18A 8.2KOhm
RP18B 8.2KOhm
RP18C 8.2KOhm
RP18D 8.2KOhm
RP5A 10KOhm CLR_DJ#
RP5B 10KOhm BAT_SEL
RP5C 10KOhm BAT2_IN#_OC
RP5D 10KOhm BAT1_IN#_OC
RP5E 10KOhm SWDJ_EN#
RP5F 10KOhm BAT_LLOW#_OC
RP5G 10KOhm BAYDOCK_IN#
RP5H 10KOhm ACIN_OC
RN19A 8.2KOhm KB_CLK
RN19B 8.2KOhm MS_CLK
RN19C 8.2KOhm KB_DAT
RN19D 8.2KOhm MS_DAT
RN21A 4.7KOhm SMCLK_BAT2
RN21B 4.7KOhm SMDATA_BAT2
RN21C 4.7KOhm SMCLK_BAT1
RN21D 4.7KOhm SMDATA_BAT1
RN22A 4.7KOhm SMC_BAT
RN22B 4.7KOhm SMD_BAT
KSI4 RP6A 1KOhm
KSI5 RP6B 1KOhm
KSI6 RP6C 1KOhm
KSI7 RP6D 1KOhm
KSI0 RP6E 1KOhm
KSI1 RP6F 1KOhm
KSI2 RP6G 1KOhm
KSI3 RP6H 1KOhm
CON8
FPC_CON_28P
KID0
KID1
47 SMDATA_BAT2
47 SMDATA_BAT1
47 SMCLK_BAT2
47 SMCLK_BAT1
U15 QS3257
SMB_CLK_INV 17
SMC_BAT
R1065 0Ohm
LCTLA_CLK_V 11
SMB_DATA_INV 17
SMD_BAT
R1066 0Ohm
LCTLB_DATA_V 11
RN23A 8.2KOhm
RN23B 8.2KOhm
RN23C 8.2KOhm
RN23D 8.2KOhm
Q21 2N7002
Q22 2N7002
KB_GATEA20
KB_CPURST
A20GATE 13
RCIN# 13
+3VSUS
R169 10KOhm
EXTSMI# 13
Q20 2N7002
EXT_SMI
R170 10KOhm
U16 NC7SZ32
PLT_RST#
SET_PLTRSTNS#
C288 0.1UF/25V
R175 10KOhm
R1062 0OHM DNI
PM_LAN_ENABLE 13,27,28
RN22C 4.7KOhm
RN22D 4.7KOhm
36 TPAD_DAT_CON
36 TPAD_CLK_CON
L38 60Ohm TPAD_DAT
L37 60Ohm TPAD_CLK
Q24 2N7002
KBSCI#
KB_SCI# 13,14
TYPE US UK JP
KID0 L L H
KID1 L H L
Title : KBC M38857
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 21 of 51



ASUSTeK COMPUTER INC	Title : FWH,TPM,NEWCARD		
	Engineer: Frank Lu		
Size: Custom	Project Name: M7V		Rev: 0.95
Date: Monday, November 10, 2003	Sheet 22 of 51		

AC97 STUFF



	INSTALL	REMOVE
AC97		
AZALIA		

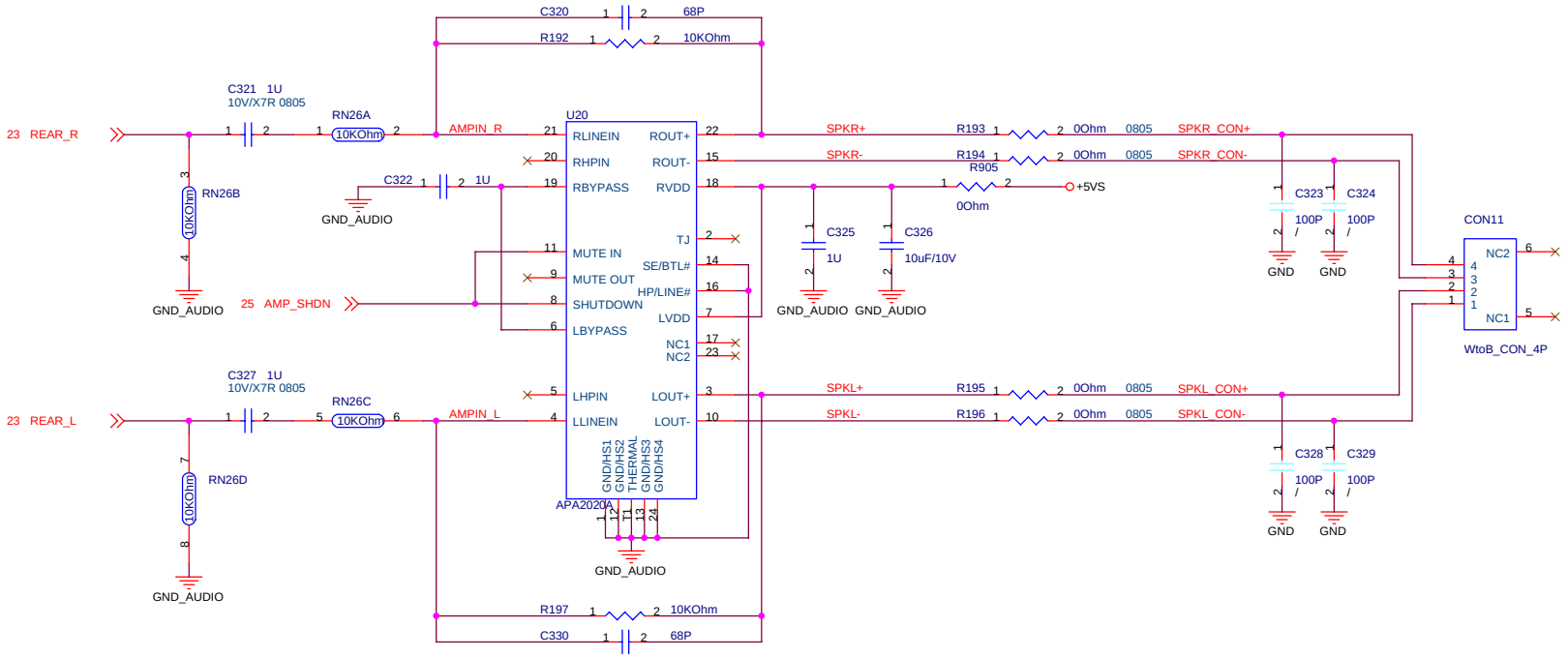
ASUSTek COMPUTER INC. NB1

Title : AC'97 / AZALIA

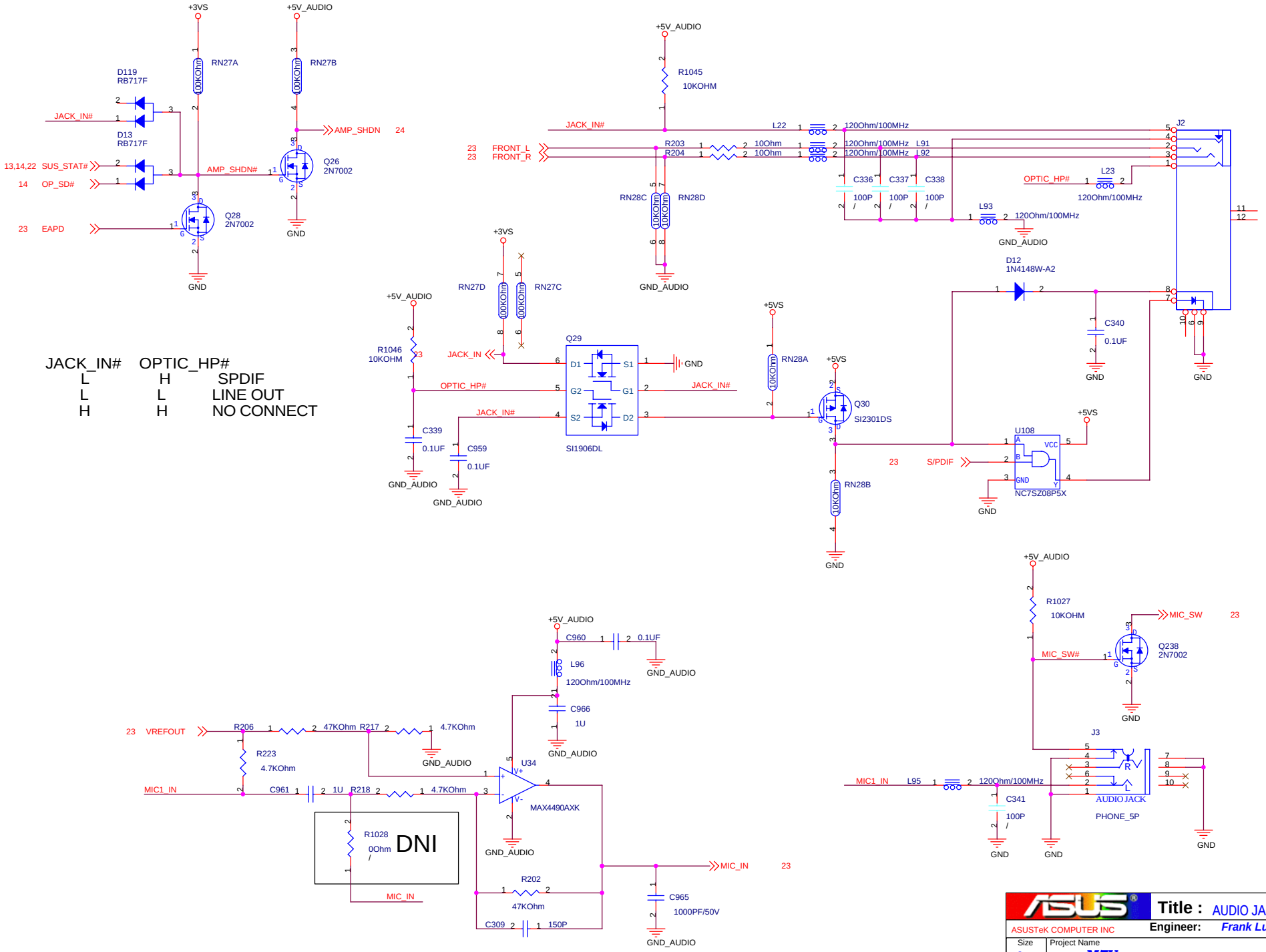
Engineer: Frank Lu

Size	Project Name	Rev
Custom	M7V	0.95

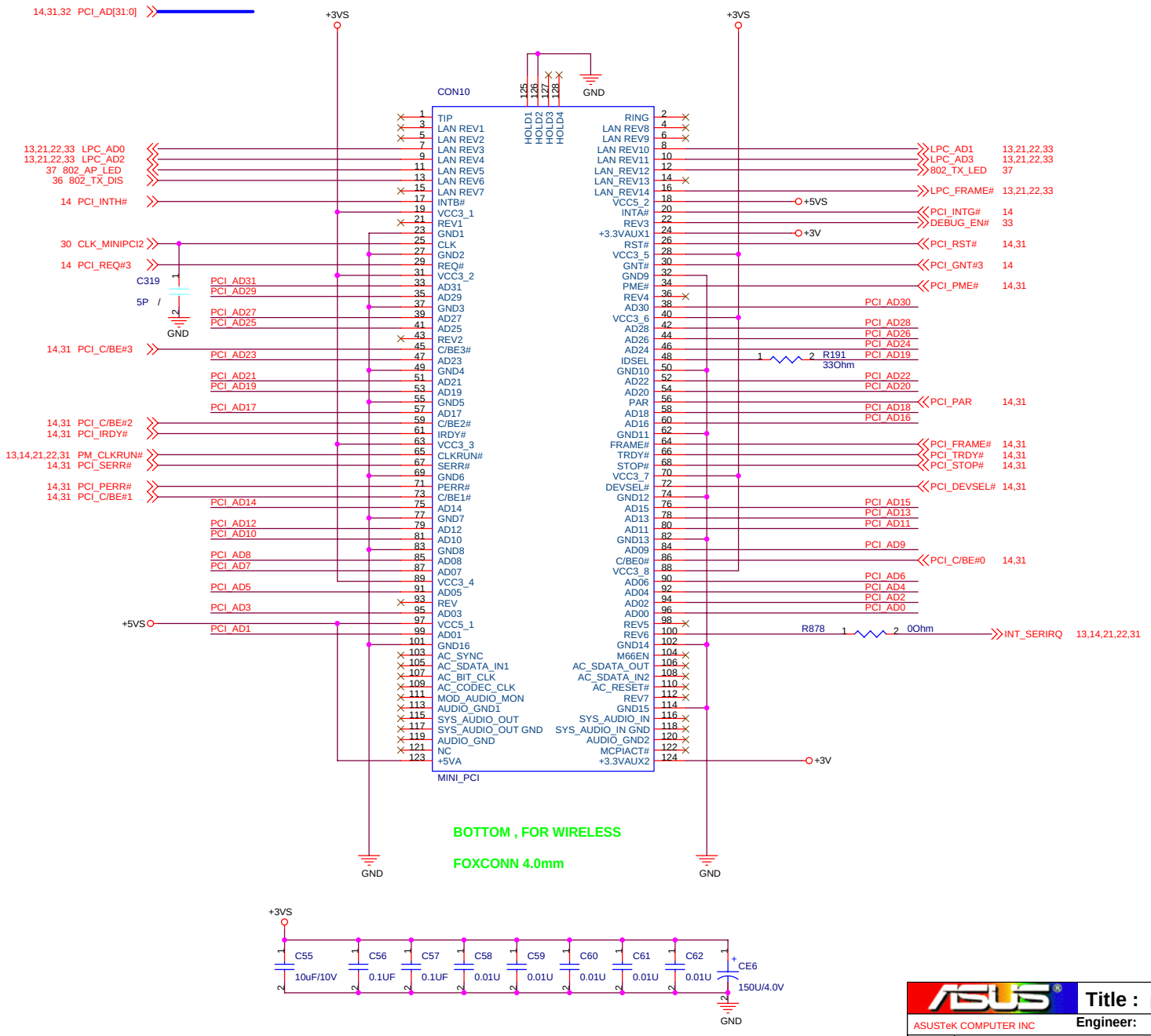
Date: Monday, November 10, 2003 Sheet 23 of 51



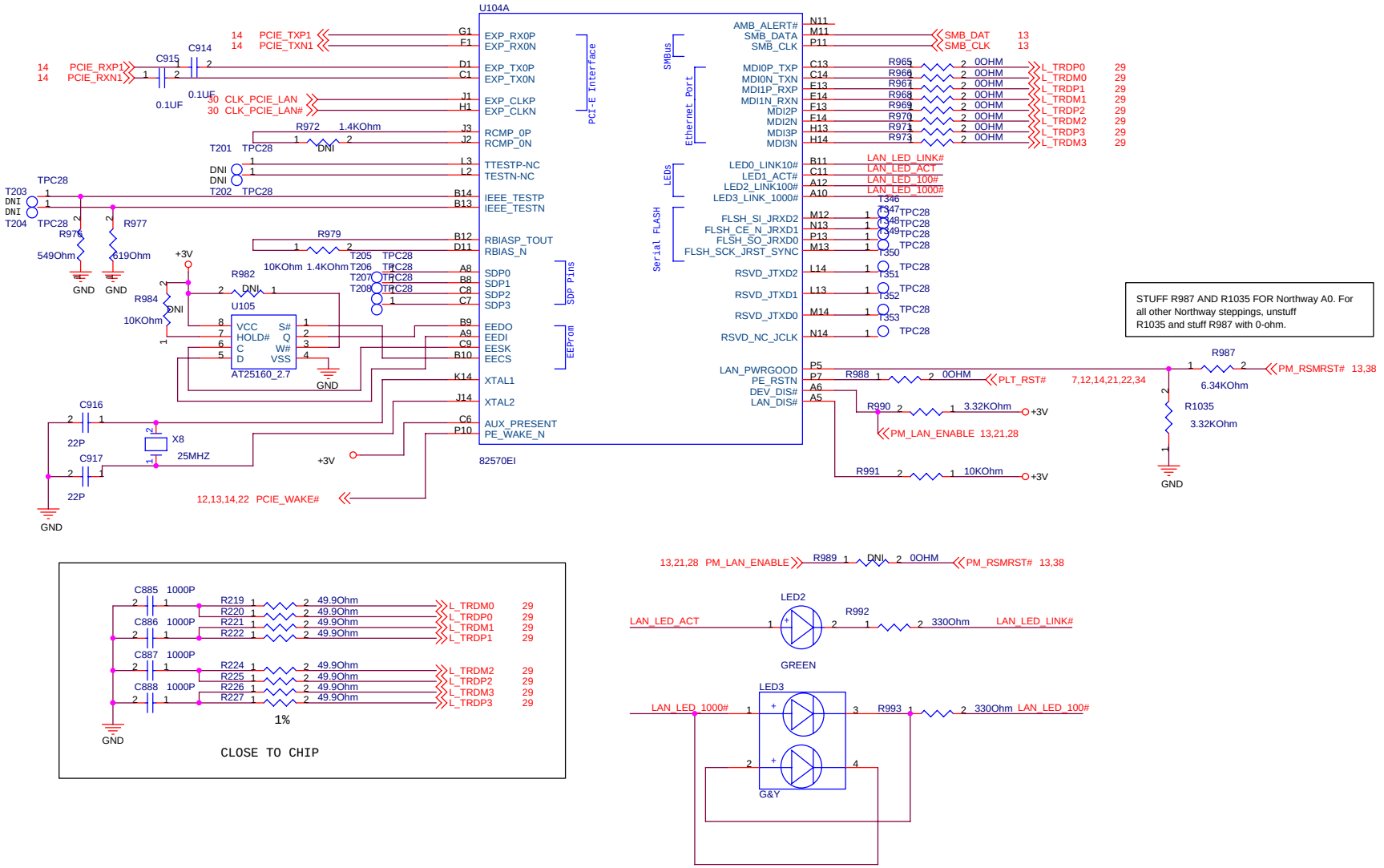
ASUSTeK COMPUTER INC	Title : 2.1 CHANNEL AMP	
	Engineer: *Frank Lu*	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 24 of 51	



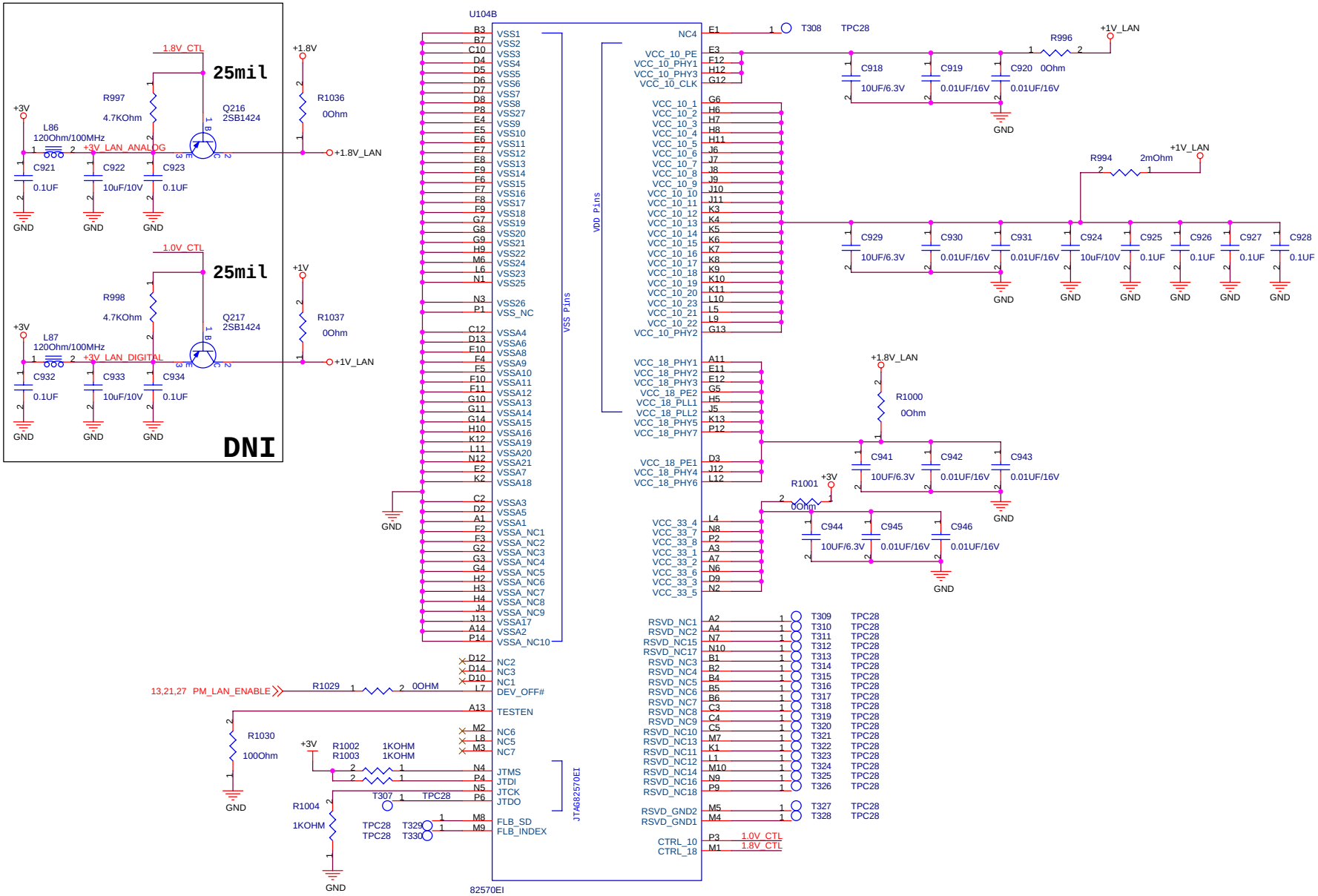
Title :	AUDIO JACKS
ASUSTeK COMPUTER INC	Engineer: Frank Lu
Size: Custom	Project Name: M7V
Rev: 0.95	
Date: Monday, November 10, 2003	Sheet 25 of 51



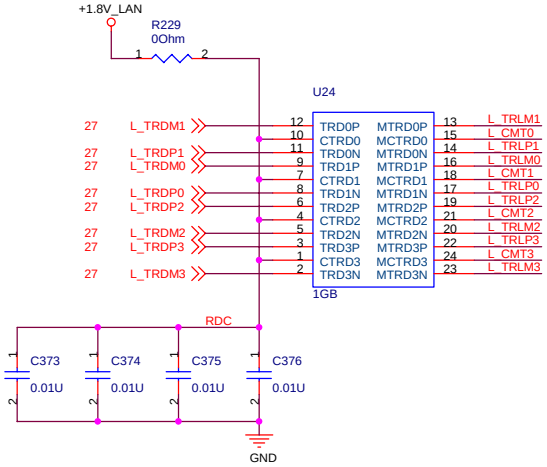
ASUSTeK COMPUTER INC	Title : MINIPCI (802.11)	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 26 of 51	

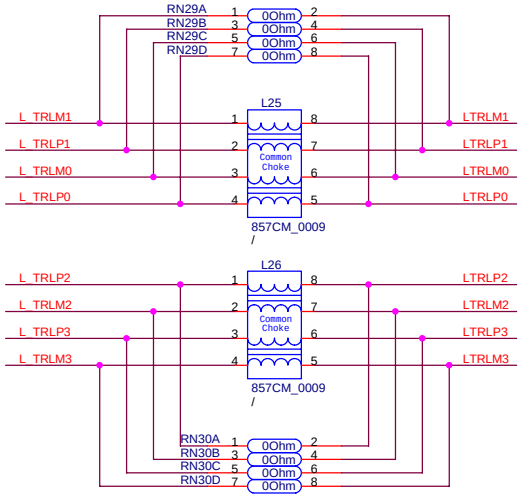


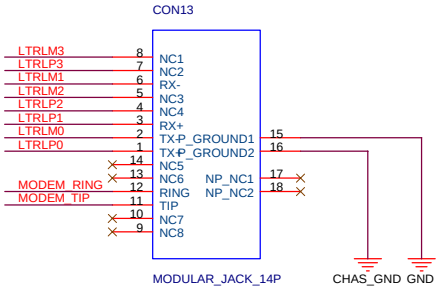
ASUSTeK COMPUTER INC	Title : 82570EI-1	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 27 of 51	

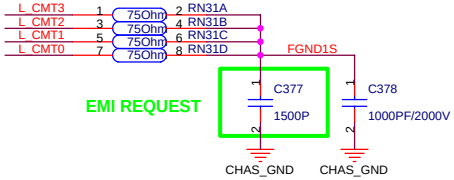


ASUSTeK COMPUTER INC	Title : 82570EI-2	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 28 of 51	

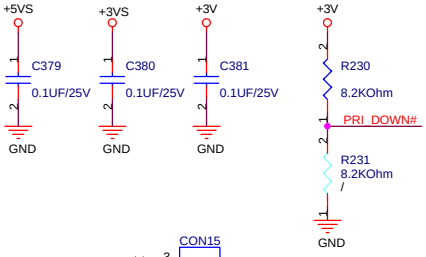


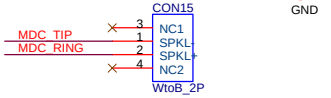


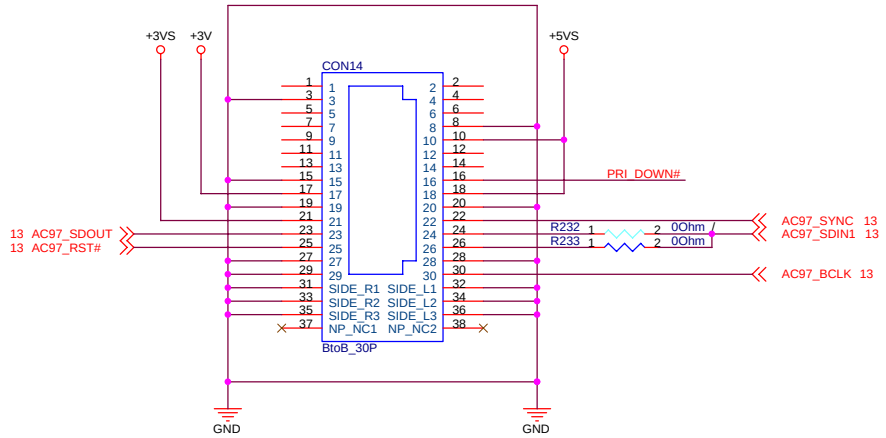


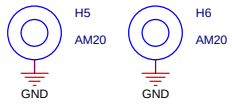


MDC









ASUSTeK COMPUTER INC

Title : RJ11+45 , MDC

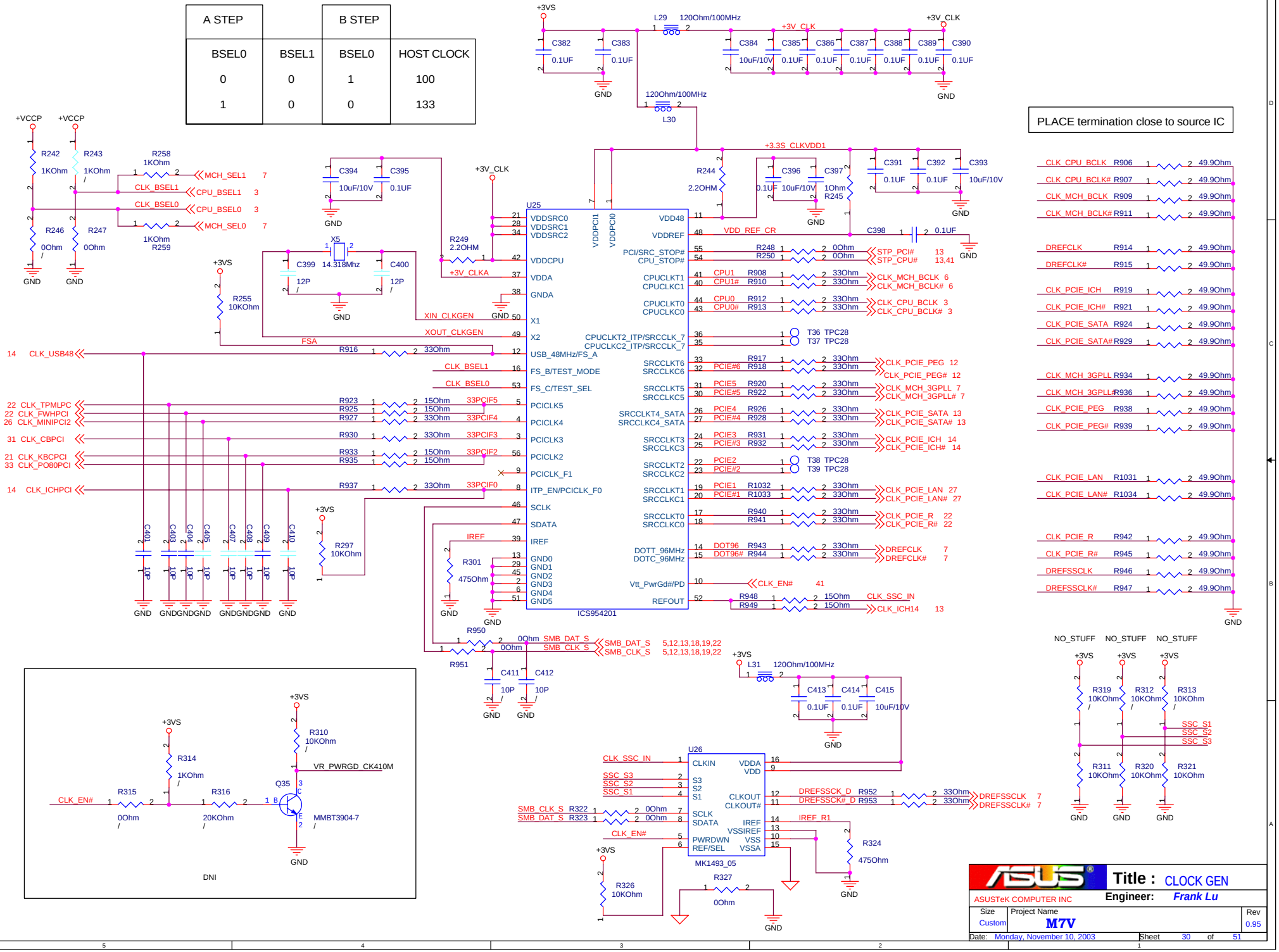
Engineer: Frank Lu

Size	Project Name	Rev
Custom	M7V	0.95

Date: Monday, November 10, 2003 Sheet 29 of 51

A STEP		B STEP	
BSEL0	BSEL1	BSEL0	HOST CLOCK
0	0	1	100
1	0	0	133

PLACE termination close to source IC



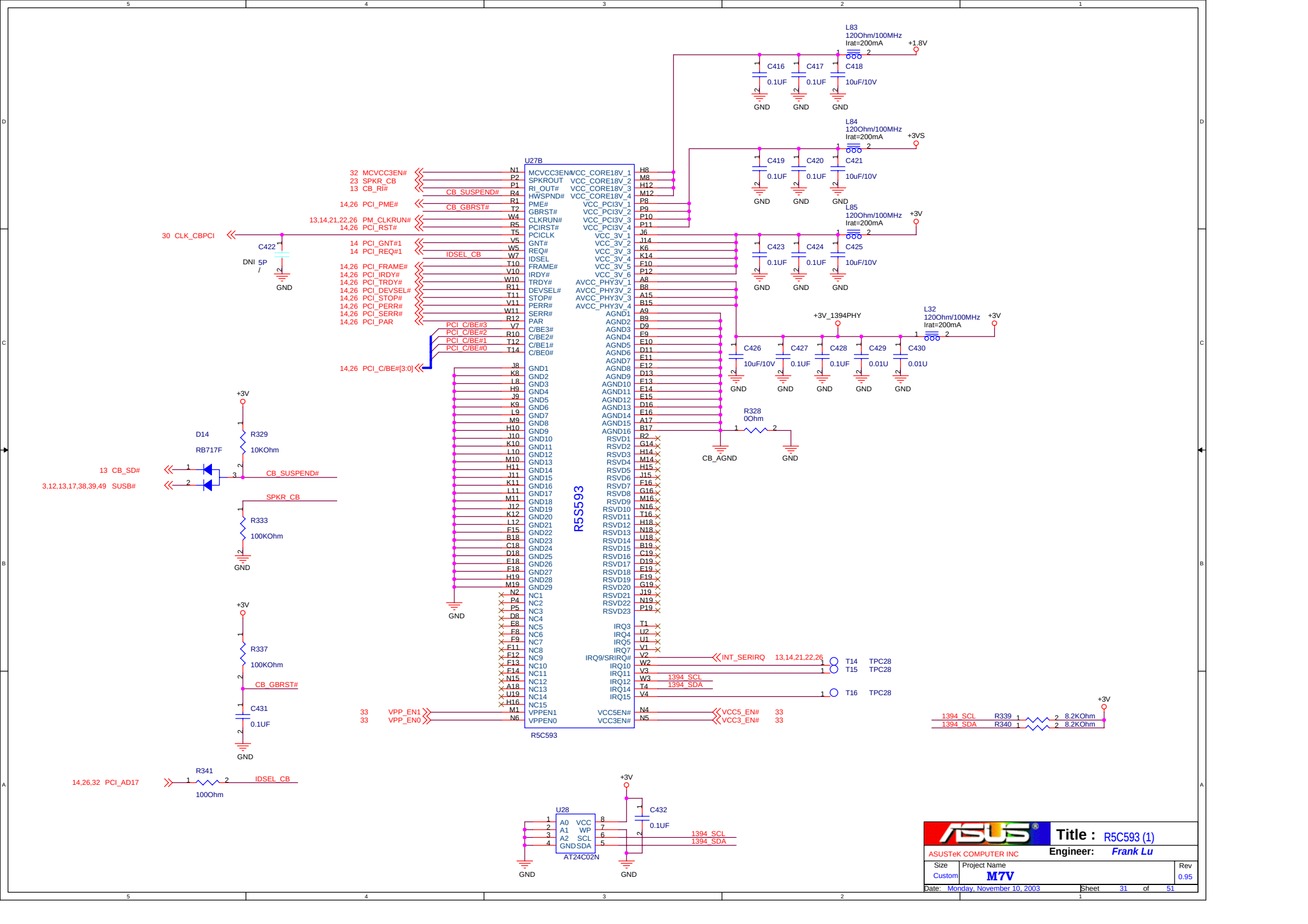
ASUSTeK COMPUTER INC

Engineer: Frank Lu

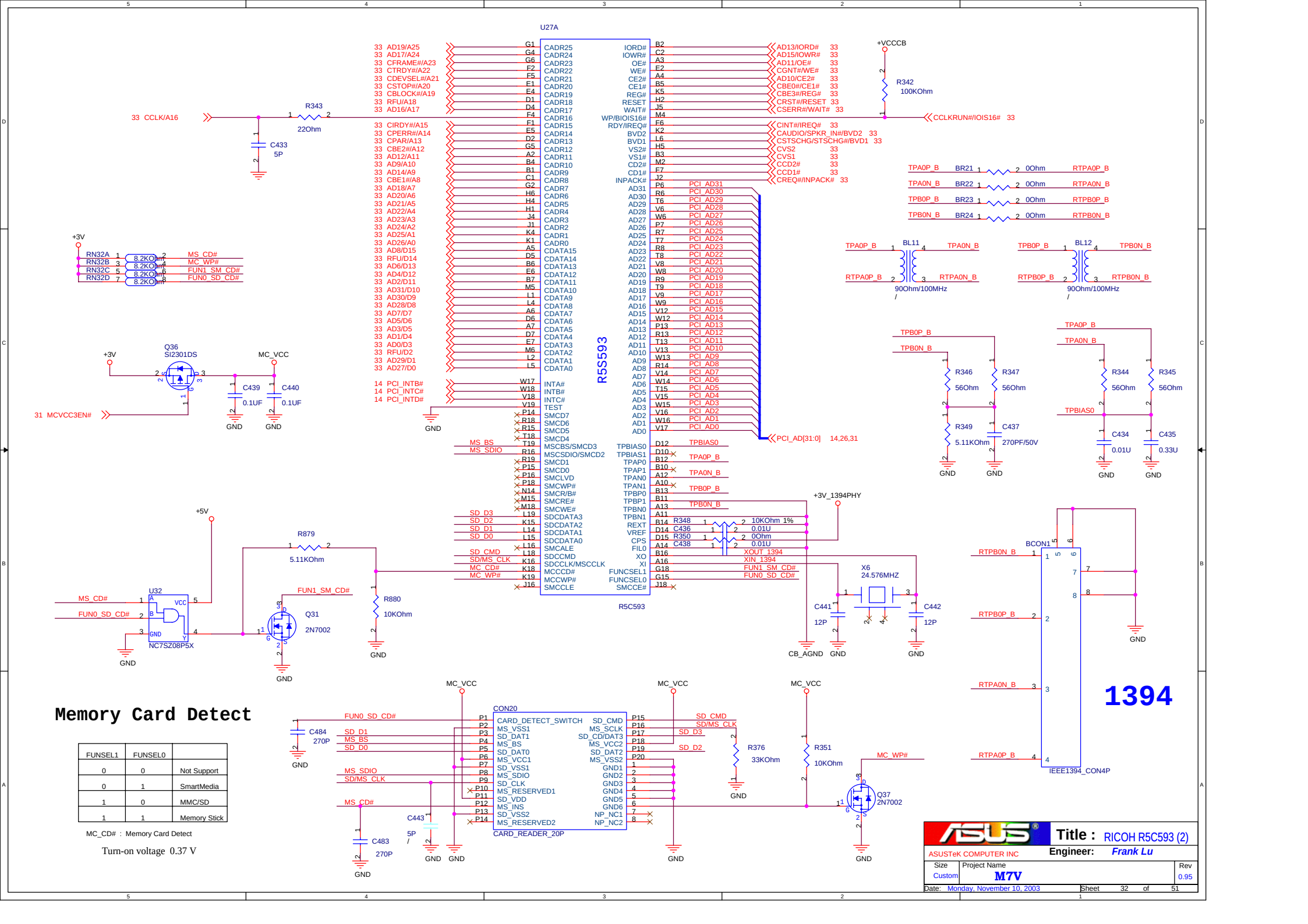
Title : CLOCK GEN

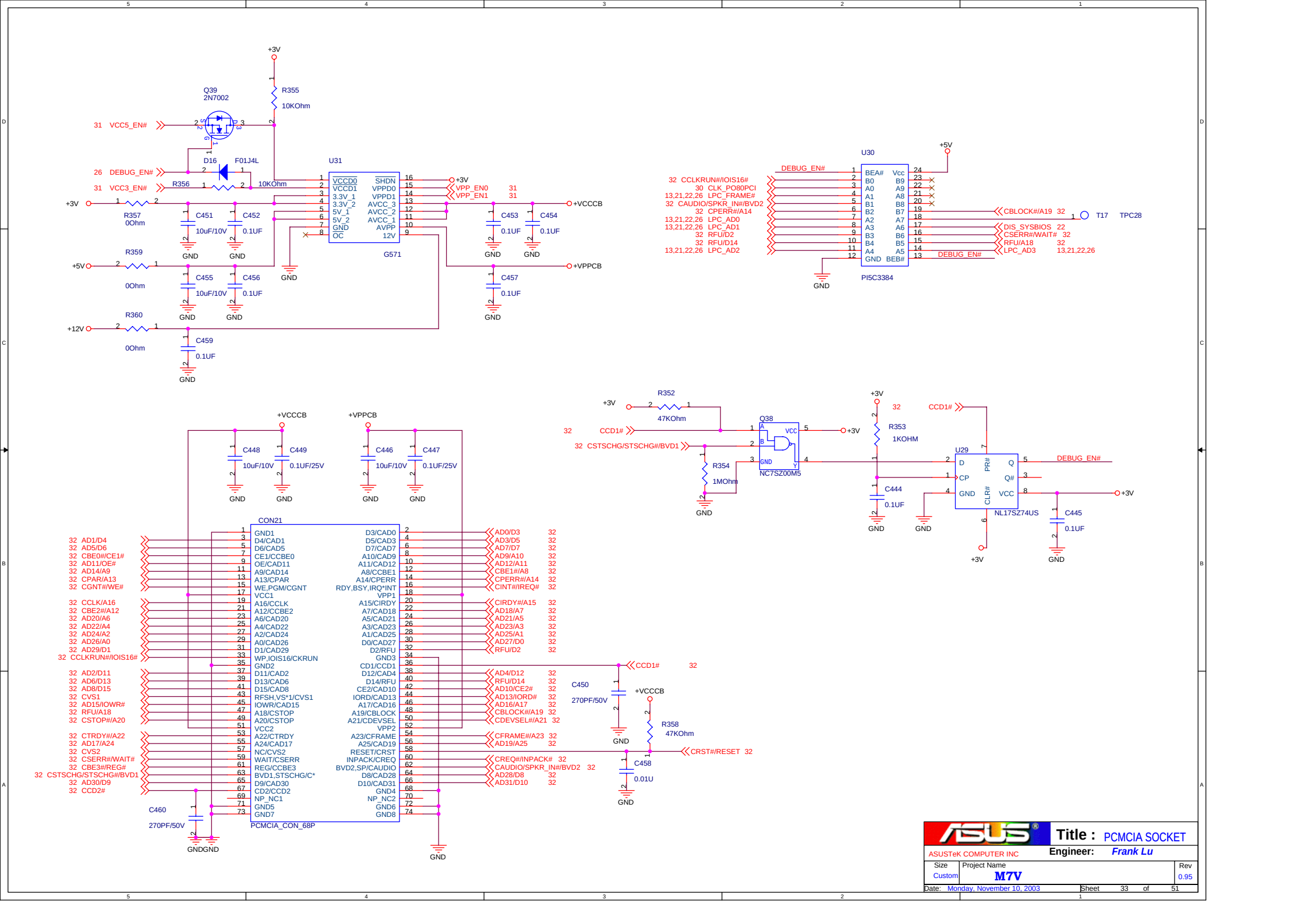
Size	Project Name	Rev
Custom	M7V	0.95

Date: Monday, November 10, 2003 Sheet 30 of 51

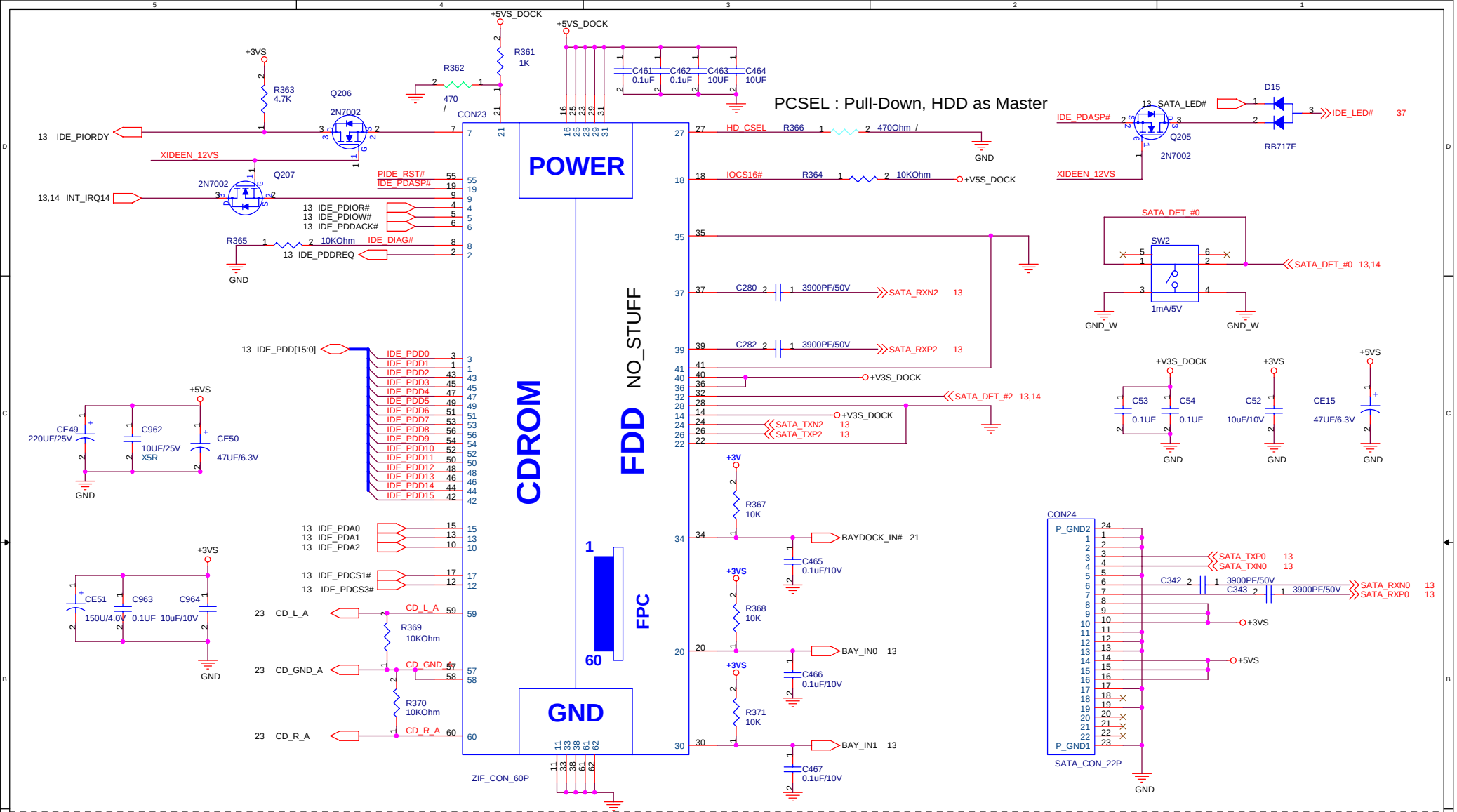


ASUSTeK COMPUTER INC	Title : R5C593 (1)	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 31 of 51	


U27A
R5S593
R5C593
33 AD19/A25
33 AD17/A24
33 CFRAME#/A23
33 CTRDY#/A22
33 CDEVSEL#/A21
33 CSTOP#/A20
33 CBLOCK#/A19
33 RFU/A18
33 AD16/A17
33 CCLK/A16
R343
22Ohm
C433
5P
33 CIRDY#/A15
33 CPERR#/A14
33 CPAR/A13
33 CBE2#/A12
33 AD12/A11
33 AD9/A10
33 AD14/A9
33 CBE1#/A8
33 AD18/A7
33 AD20/A6
33 AD21/A5
33 AD22/A4
33 AD23/A3
33 AD24/A2
33 AD25/A1
33 AD26/A0
33 AD8/D15
33 RFU/D14
33 AD6/D13
33 AD4/D12
33 AD2/D11
33 AD31/D10
33 AD30/D9
33 AD28/D8
33 AD7/D7
33 AD5/D6
33 AD3/D5
33 AD1/D4
33 AD0/D3
33 RFU/D2
33 AD29/D1
33 AD27/D0
14 PCI_INTB#
14 PCI_INTC#
14 PCI_INTD#
INTA#
INTB#
INTC#
TEST
SMCD7
SMCD6
SMCD5
SMCD4
MSCBS/SMCD3
MSCSDIO/SMCD2
SMCD1
SMCD0
SMCLVD
SMCWP#
SMCR/B#
SMCRE#
SMCWE#
SDCDATA3
SDCDATA2
SDCDATA1
SDCDATA0
SMCALE
SDCCMD
SDCCLK/MSCCLK
MCCCD#
MCCWP#
SMCCLE
IORD#
IOWR#
OE#
WE#
CE2#
CE1#
REG#
RESET
WAIT#
WP/BIOIS16#
RDY/IREQ#
BVD2
BVD1
VS2#
VS1#
CD2#
CD1#
INPACK#
AD13/IORD# 33
AD15/IOWR# 33
AD11/OE# 33
CGNT#/WE# 33
AD10/CE2# 33
CBE0#/CE1# 33
CBE3#/REG# 33
CRST#/RESET 33
CSERR#/WAIT# 33
CINT#/IREQ# 33
CAUDIO/SPKR_IN#/BVD2 33
CSTSCHG/STSCHG#/BVD1 33
CVS2 33
CVS1 33
CCD2# 33
CCD1# 33
CREQ#/INPACK# 33
PCI_AD[31:0] 14,26,31
TPBIAS0
TPBIAS1
TPAP0
TPAN1
TPBP0
TPBP1
TPBN0
TPBN1
REXT
VREF
CPS
FIL0
XO
XI
FUNCSEL1
FUNCSEL0
SMCCE#
+VCCCB
R342
100KOhm
CCLKRUN#/IOIS16# 33
TPA0P_B
TPA0N_B
TPB0P_B
TPB0N_B
BR21 0Ohm
BR22 0Ohm
BR23 0Ohm
BR24 0Ohm
RTPA0P_B
RTPA0N_B
RTPB0P_B
RTPB0N_B
BL11
BL12
90Ohm/100MHz
+3V
RN32A 8.2KOhm MS_CD#
RN32B 8.2KOhm MC_WP#
RN32C 8.2KOhm FUN1_SM_CD#
RN32D 8.2KOhm FUN0_SD_CD#
Q36
SI2301DS
MC_VCC
C439 0.1UF
C440 0.1UF
31 MCVCC3EN#
GND
R346 56Ohm
R347 56Ohm
R349 5.11KOhm
C437 270PF/50V
R344 56Ohm
R345 56Ohm
TPBIAS0
C434 0.01U
C435 0.33U
+5V
R879
5.11KOhm
U32
NC7SZ08P5X
MS_CD#
FUN0_SD_CD#
FUN1_SM_CD#
Q31
2N7002
R880
10KOhm
SD_D3
SD_D2
SD_D1
SD_D0
SD_CMD
SD/MS_CLK
MC_CD#
MC_WP#
+3V_1394PHY
R348 10KOhm 1%
C436 0.01U
R350 0Ohm
C438 0.01U
XOUT_1394
XIN_1394
X6
24.576MHZ
C441 12P
C442 12P
CB_AGND
BCON1
IEEE1394_CON4P
1394
Memory Card Detect
FUNSEL1 FUNSEL0
0 0 Not Support
0 1 SmartMedia
1 0 MMC/SD
1 1 Memory Stick
MC_CD# : Memory Card Detect
Turn-on voltage 0.37 V
CON20
CARD_DETECT_SWITCH
MS_VSS1
SD_DAT1
MS_BS
SD_DAT0
MS_VCC1
SD_VSS1
MS_SDIO
SD_CLK
MS_RESERVED1
SD_VDD
MS_INS
SD_VSS2
MS_RESERVED2
SD_CD/DAT3
MS_VCC2
SD_DAT2
MS_VSS2
GND1
GND2
GND3
GND4
GND5
GND6
NP_NC1
NP_NC2
CARD_READER_20P
C484 270P
C443 5P
C483 270P
R376 33KOhm
R351 10KOhm
Q37
2N7002
Title : RICOH R5C593 (2)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 32 of 51



ASUSTeK COMPUTER INC	Title : PCMCIA SOCKET	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 33 of 51	


PCSEL : Pull-Down, HDD as Master
POWER
CDROM
FDD
NO_STUFF
FPC
GND
ZIF_CON_60P
CON23
CON24
SATA_CON_22P
+5VS_DOCK
+3VS
+5VS
+V3VS_DOCK
+V5S_DOCK
+3V
+12VS
R361 1K
R362 470 /
R363 4.7K
Q206 2N7002
Q207 2N7002
R365 10KOhm
IDE_PIORDY
XIDEEN_12VS
INT_IRQ14
IDE_PDIOR#
IDE_PDIOW#
IDE_PDDACK#
IDE_PDDREQ
PIDE_RST#
IDE_PDASP#
IDE_DIAG#
IDE_PDD[15:0]
IDE_PDA0
IDE_PDA1
IDE_PDA2
IDE_PDCS1#
IDE_PDCS3#
CD_L_A
CD_GND_A
CD_R_A
R369 10KOhm
R370 10KOhm
HD_CSEL
IOCS16#
R366 470Ohm /
R364 10KOhm
C280 3900PF/50V
C282 3900PF/50V
SATA_RXN2
SATA_RXP2
SATA_TXN2
SATA_TXP2
SATA_DET_#2
R367 10K
R368 10K
R371 10K
BAYDOCK_IN#
BAY_IN0
BAY_IN1
C465 0.1uF/10V
C466 0.1uF/10V
C467 0.1uF/10V
CE49 220UF/25V
C962 10UF/25V X5R
CE50 47UF/6.3V
CE51 150U/4.0V
C963 0.1UF
C964 10uF/10V
C461 0.1uF
C462 0.1uF
C463 10UF
C464 10UF
D15 RB717F
Q205 2N7002
SATA_LED#
IDE_LED#
SATA_DET_#0
SW2
1mA/5V
GND_W
C53 0.1UF
C54 0.1UF
C52 10uF/10V
CE15 47UF/6.3V
C342 3900PF/50V
C343 3900PF/50V
SATA_TXP0
SATA_TXN0
SATA_RXN0
SATA_RXP0
P_GND2
P_GND1
R372 100K
Q40 SI3456DV
Q197 SI3456DV
R373 10K
Q41 2N7002
C468 0.1U
C472 1U
D17 F01J2E
XIDE_EN#
R375 100K
C469 0.1UF
C470 0.1UF
C471 0.1uF
R374 1K
7,12,14,21,22,27 PLT_RST#
U33 NC7SZ08P5X
PIDE_RST#
CD-ROM RESET
4.75-5.25V
S0-S1M:1.3A(Typ)1.5A(Max.) Eject
S0-S1M:0.7A(Typ)0.8A(Max.)
Read
Title : CDROM
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 34 of 51

USB

14 USB_PP0_B — R886 1 2 0Ohm — LP0+_B
14 USB_PN0_B — R887 1 2 0Ohm — LP0-_B
14 USB_PP1_B — R889 1 2 0Ohm — LP1+_B
14 USB_PN1_B — R890 1 2 0Ohm — LP1-_B

L75: USB_PN0_B 1 / 4 USB_PP0_B; LP0-_B 2 / 3 LP0+_B; 90Ohm/100MHz
L76: USB_PN1_B 1 / 4 USB_PP1_B; LP1-_B 2 / 3 LP1+_B; 90Ohm/100MHz

14 USB_PP2_B — R892 1 2 0Ohm — LP2+_B
14 USB_PN2_B — R893 1 2 0Ohm — LP2-_B
14 USB_PP3_B — R894 1 2 0Ohm — LP3+_B
14 USB_PN3_B — R895 1 2 0Ohm — LP3-_B

L78: USB_PN2_B 1 / 4 USB_PP2_B; LP2-_B 2 / 3 LP2+_B; 90Ohm/100MHz
L79: USB_PN3_B 1 / 4 USB_PP3_B; LP3-_B 2 / 3 LP3+_B; 90Ohm/100MHz

14 USB_PP4_B — R898 1 2 0Ohm — LP4+_B
14 USB_PN4_B — R899 1 2 0Ohm — LP4-_B
14 USB_PP5_B — R900 1 2 0Ohm — LP5+_B
14 USB_PN5_B — R901 1 2 0Ohm — LP5-_B

L81: USB_PN4_B 1 / 4 USB_PP4_B; LP4-_B 2 / 3 LP4+_B; 90Ohm/100MHz
L82: USB_PN5_B 1 / 4 USB_PP5_B; LP5-_B 2 / 3 LP5+_B; 90Ohm/100MHz

+5V — F1 1.6A/6V — V2USB_B — L74 400Ohm/100Mhz Irat=2A — V2_USB_B
V2USB_B — R888 2.7KOhm — 14 USB_OC_23# — R891 8.2KOhm — GND
V2USB_B — CE46 220UF/6.3V — GND

V1_USB_B — C890 0.1UF/25V — GND
V1_USB_B — LP0-_B, LP0+_B, LP1-_B, LP1+_B — CON17 USB_CON_2X4P
CON17: 9 GND3; 1 VCC1; 2 1P-; 3 1P+; 4 GND1; 5 VCC2; 6 0P-; 7 0P+; 8 GND2; GND4; 10

+5V — F2 1.6A/6V — VIUSB_B — L77 400Ohm/100Mhz Irat=2A — V1_USB_B
VIUSB_B — R896 2.7KOhm — 14 USB_OC_01# — R897 8.2KOhm — GND
VIUSB_B — CE47 220UF/6.3V — GND

V2_USB_B — C891 0.1UF/25V — GND
V2_USB_B — LP2-_B, LP2+_B, LP3-_B, LP3+_B — CON18 USB_CON_2X4P
CON18: 9 GND3; 1 VCC1; 2 1P-; 3 1P+; 4 GND1; 5 VCC2; 6 0P-; 7 0P+; 8 GND2; GND4; 10

+5V — F3 1.6A/6V — V3USB_B — L80 400Ohm/100Mhz Irat=2A — V3_USB_B
V3USB_B — R902 2.7KOhm — 14 USB_OC_45# — R903 8.2KOhm — GND
V3USB_B — CE48 220UF/6.3V — GND

L88: 400Ohm/100Mhz Irat=2A — GND

V3_USB_B — C892 0.1UF/25V — GND
V3_USB_B — LP4-_B, LP4+_B, LP5-_B, LP5+_B — CON19 USB_CON_2X4P
CON19: 9 GND3; 1 VCC1; 2 1P-; 3 1P+; 4 GND1; 5 VCC2; 6 0P-; 7 0P+; 8 GND2; GND4; 10

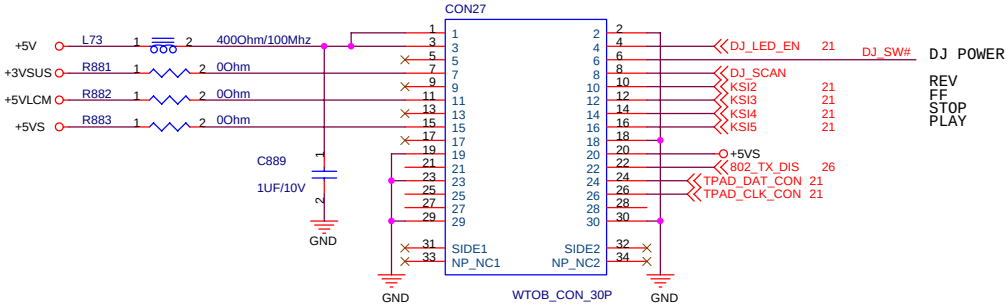
ASUSTeK COMPUTER INC

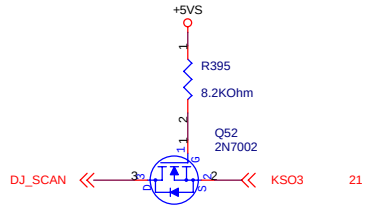
Title : USB connector

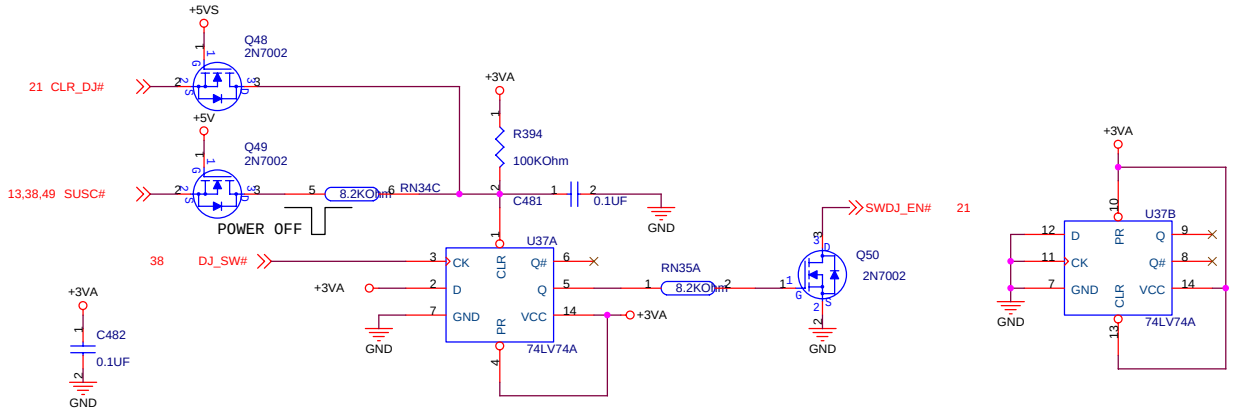
Engineer: Frank Lu

Size	Project Name	Rev
Custom	M7V	0.95

Date: Monday, November 10, 2003 Sheet 35 of 51



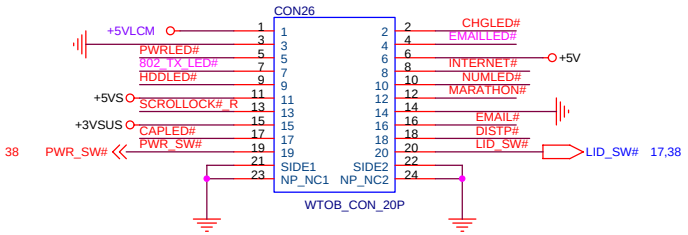




ASUSTeK COMPUTER INC	Title : DJ Board Connector	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 36 of 51	

LED

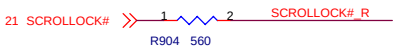
Indicator Connector



Scrollock LED(GREEN)

LED BOARD

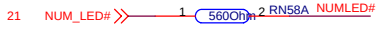
+5VS | GREEN LED |



NUM LED(GREEN)

LED BOARD

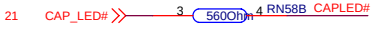
+5VS | GREEN LED |



CAP LED(GREEN)

LED BOARD

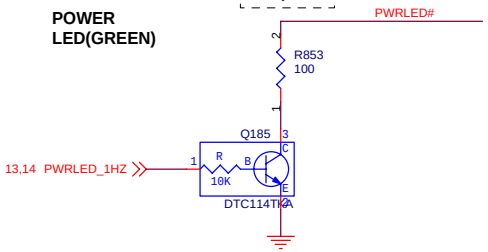
+5VS | GREEN LED |



POWER LED(GREEN)

LED BOARD

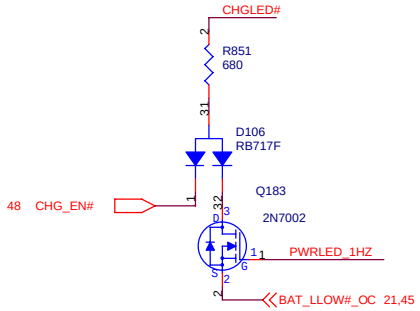
+5V | GREEN LED |



CHARGE LED(ORANGE)

+5VLCM | ORANGE LED |

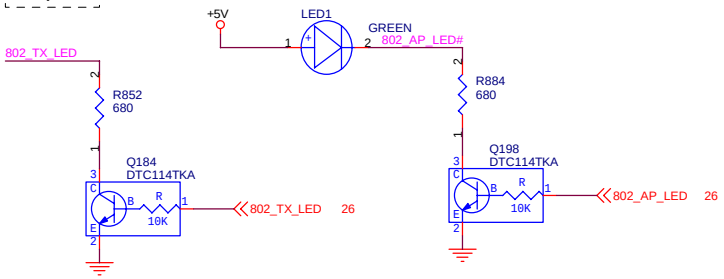
LED BOARD



WIRELESS LED(BLUE)

+5V | GREEN LED |

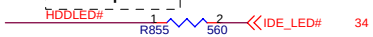
LED BOARD



HDD LED

+5VS | GREEN LED |

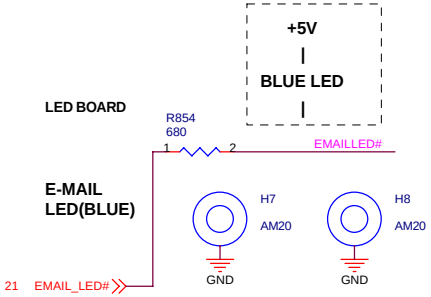
LED BOARD



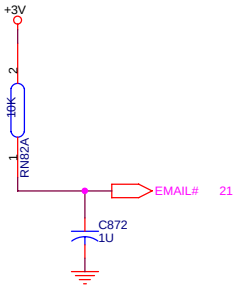
E-MAIL LED(BLUE)

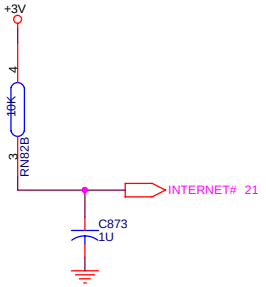
+5V | BLUE LED |

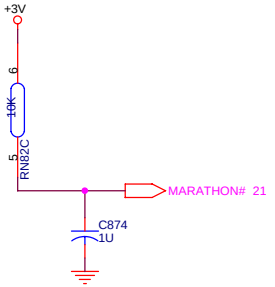
LED BOARD

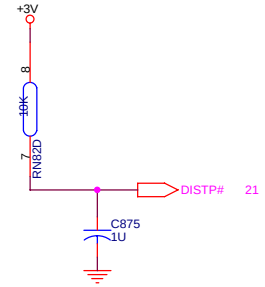


INSTANT KEY

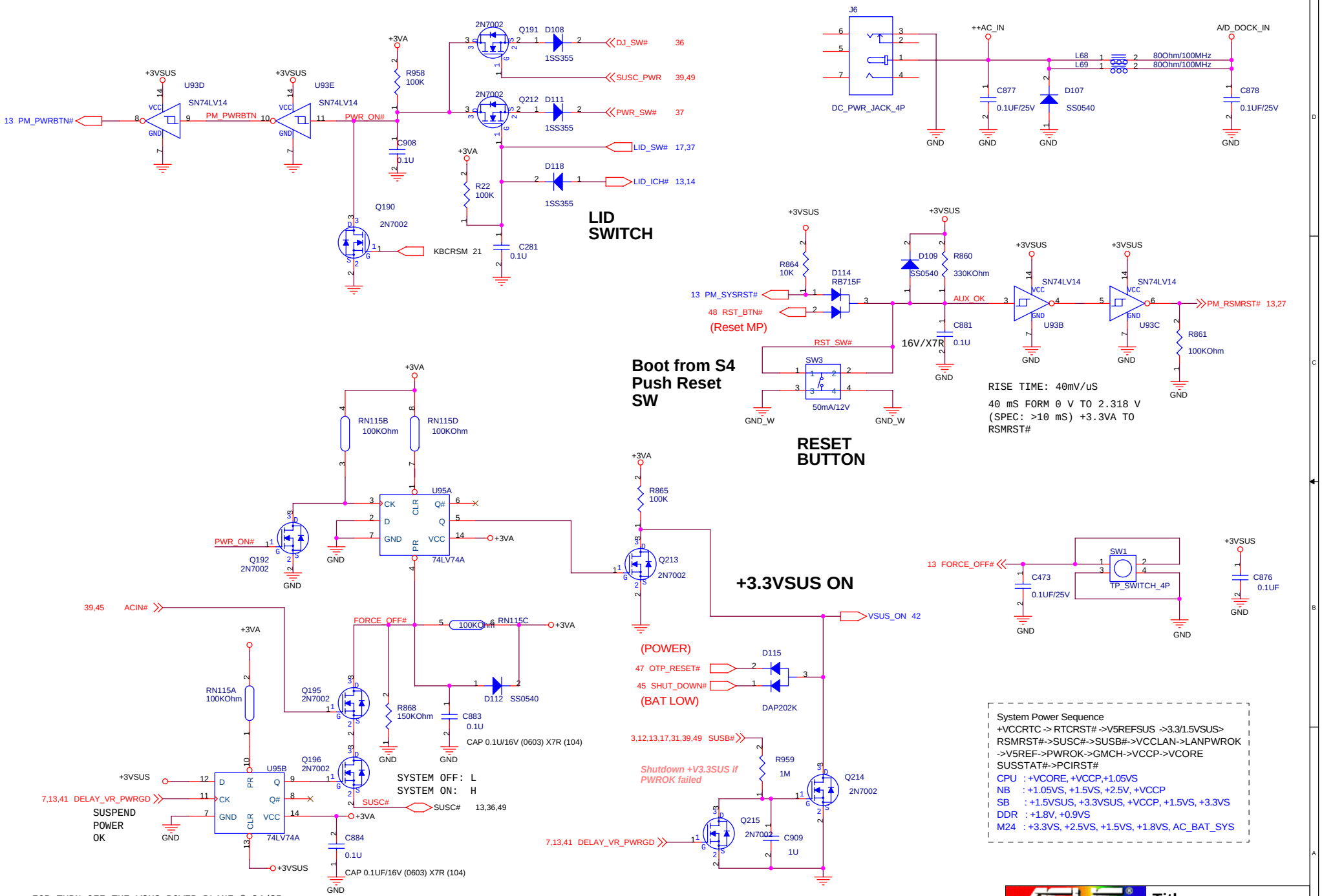


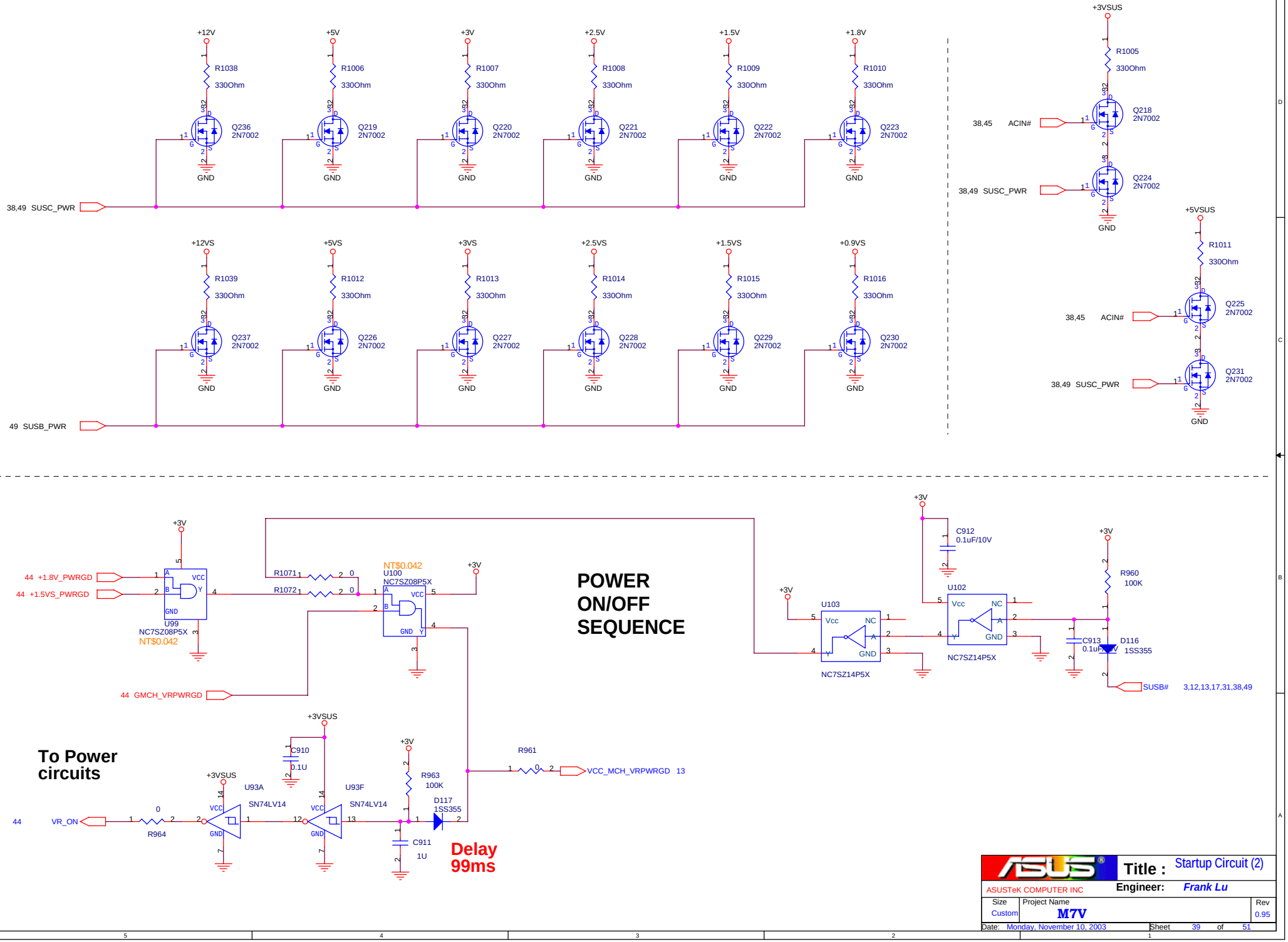






ASUSTeK COMPUTER INC	Title : LED BOARD	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 37 of 51	


LID SWITCH
Boot from S4
Push Reset
SW
RESET
BUTTON
+3.3VSUS ON
RISE TIME: 40mV/uS
40 mS FORM 0 V TO 2.318 V
(SPEC: >10 mS) +3.3VA TO
RSMRST#
(Reset MP)
(POWER)
(BAT LOW)
SYSTEM OFF: L
SYSTEM ON: H
SUSPEND
POWER
OK
Shutdown +V3.3SUS if
PWROK failed
FOR TURN OFF THE VSUS POWER PLANE @ S4/S5
STATUS WHEN BATTERY ONLY
System Power Sequence
+VCCRTC -> RTCRST# ->V5REFSUS ->3.3/1.5VSUS>
RSMRST#->SUSC#->SUSB#->VCCLAN->LANPWROK
->V5REF->PWROK->GMCH->VCCP->VCORE
SUSSTAT#->PCIRST#
CPU : +VCORE, +VCCP,+1.05VS
NB : +1.05VS, +1.5VS, +2.5V, +VCCP
SB : +1.5VSUS, +3.3VSUS, +VCCP, +1.5VS, +3.3VS
DDR : +1.8V, +0.9VS
M24 : +3.3VS, +2.5VS, +1.5VS, +1.8VS, AC_BAT_SYS
Title : Startup Circuit (1)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 38 of 51


+12V
R1038
330Ohm
Q236
2N7002
GND
+5V
R1006
330Ohm
Q219
2N7002
GND
+3V
R1007
330Ohm
Q220
2N7002
GND
+2.5V
R1008
330Ohm
Q221
2N7002
GND
+1.5V
R1009
330Ohm
Q222
2N7002
GND
+1.8V
R1010
330Ohm
Q223
2N7002
GND
38,49 SUSC_PWR
+12VS
R1039
330Ohm
Q237
2N7002
GND
+5VS
R1012
330Ohm
Q226
2N7002
GND
+3VS
R1013
330Ohm
Q227
2N7002
GND
+2.5VS
R1014
330Ohm
Q228
2N7002
GND
+1.5VS
R1015
330Ohm
Q229
2N7002
GND
+0.9VS
R1016
330Ohm
Q230
2N7002
GND
49 SUSB_PWR
+3VSUS
R1005
330Ohm
Q218
2N7002
38,45 ACIN#
Q224
2N7002
38,49 SUSC_PWR
GND
+5VSUS
R1011
330Ohm
Q225
2N7002
38,45 ACIN#
Q231
2N7002
38,49 SUSC_PWR
GND
POWER
ON/OFF
SEQUENCE
+3V
44 +1.8V_PWRGD
44 +1.5VS_PWRGD
U99
NC7SZ08P5X
NT$0.042
R1071
R1072
NT$0.042
U100
NC7SZ08P5X
+3V
44 GMCH_VRPWRGD
+3V
C912
0.1uF/10V
U103
NC7SZ14P5X
U102
NC7SZ14P5X
+3V
R960
100K
C913
0.1uF/10V
D116
1SS355
SUSB# 3,12,13,17,31,38,49
To Power
circuits
+3VSUS
C910
0.1U
U93A
SN74LV14
U93F
SN74LV14
+3V
R963
100K
D117
1SS355
R961
VCC_MCH_VRPWRGD 13
44 VR_ON
R964
C911
1U
Delay
99ms
Title : Startup Circuit (2)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
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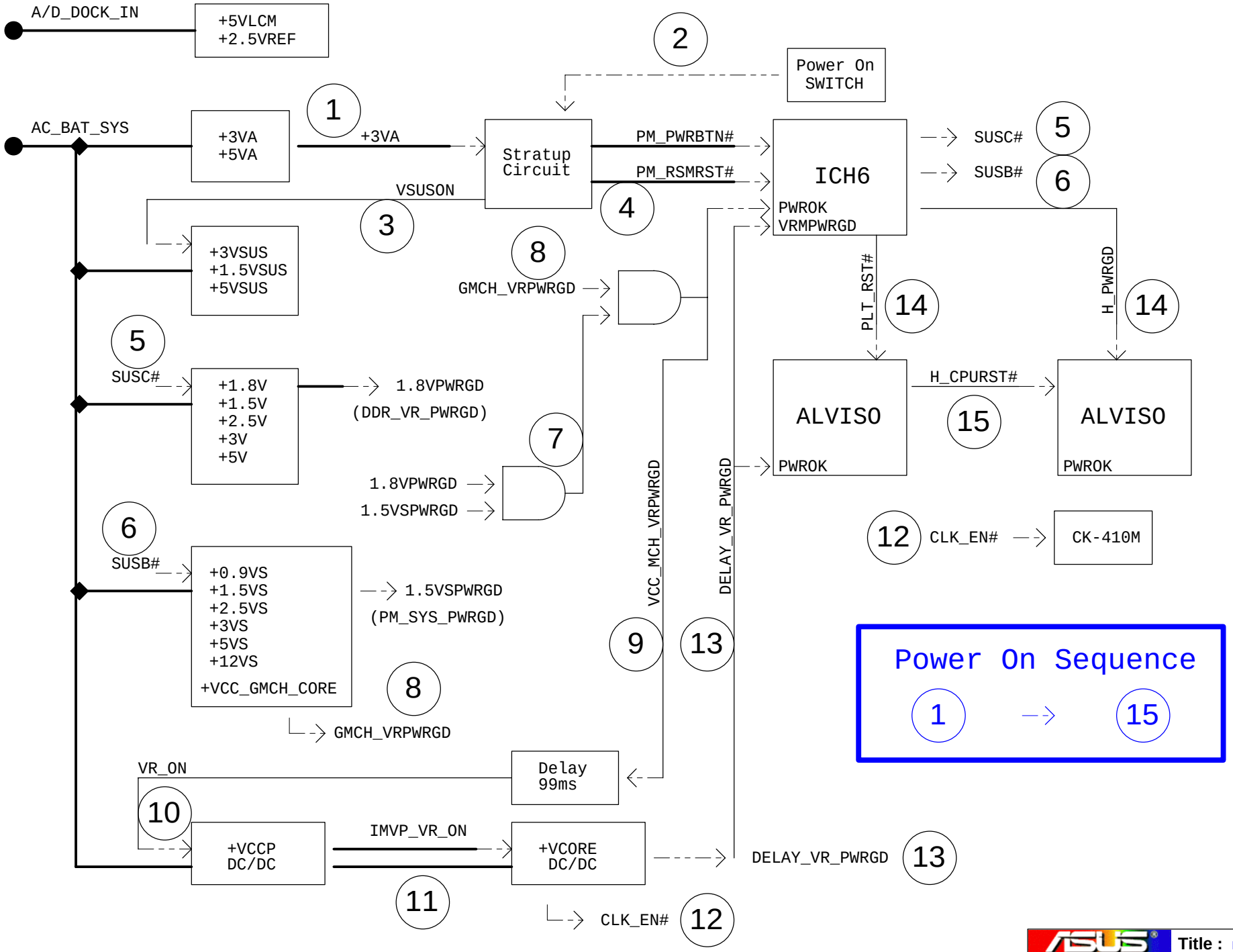
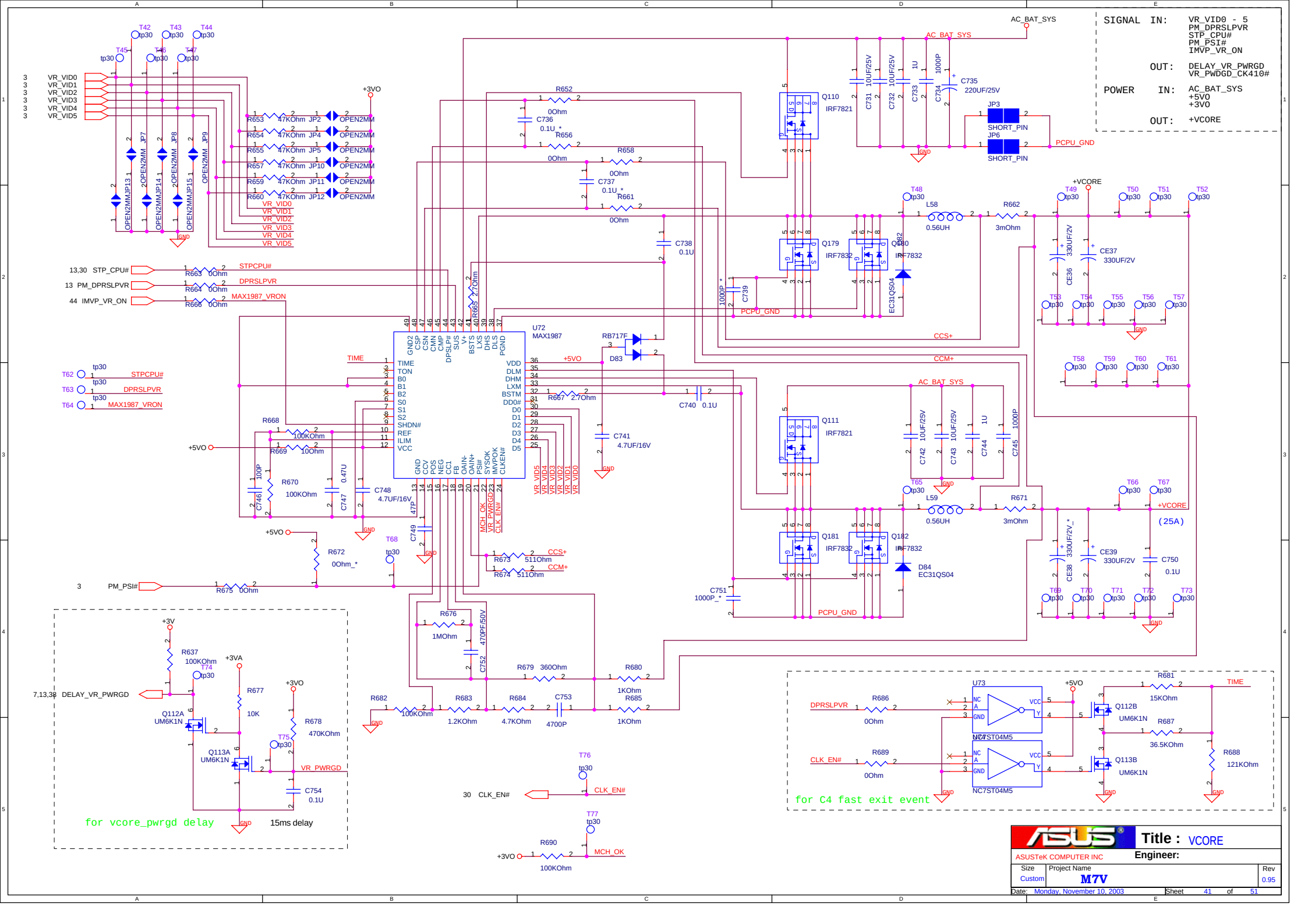
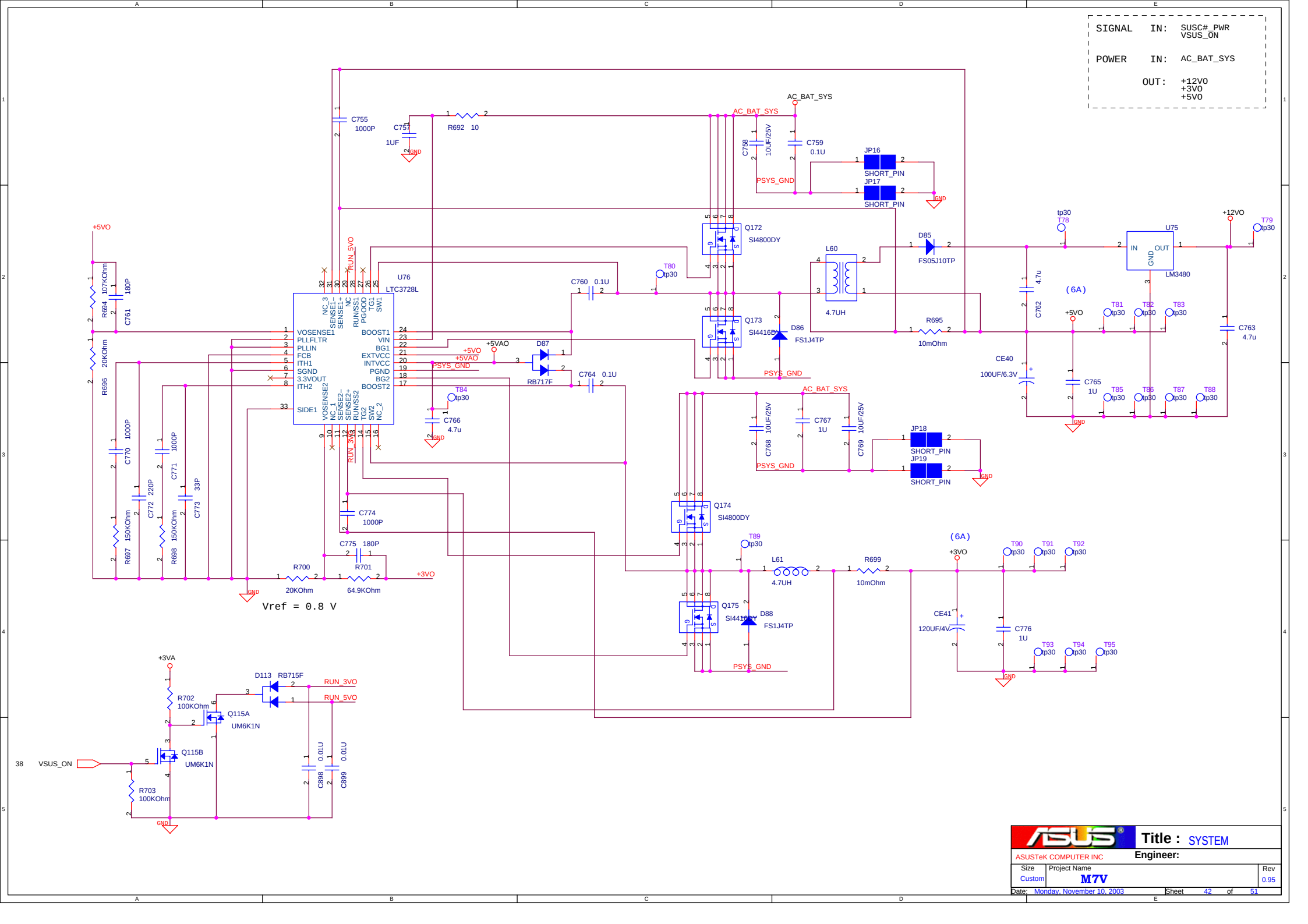
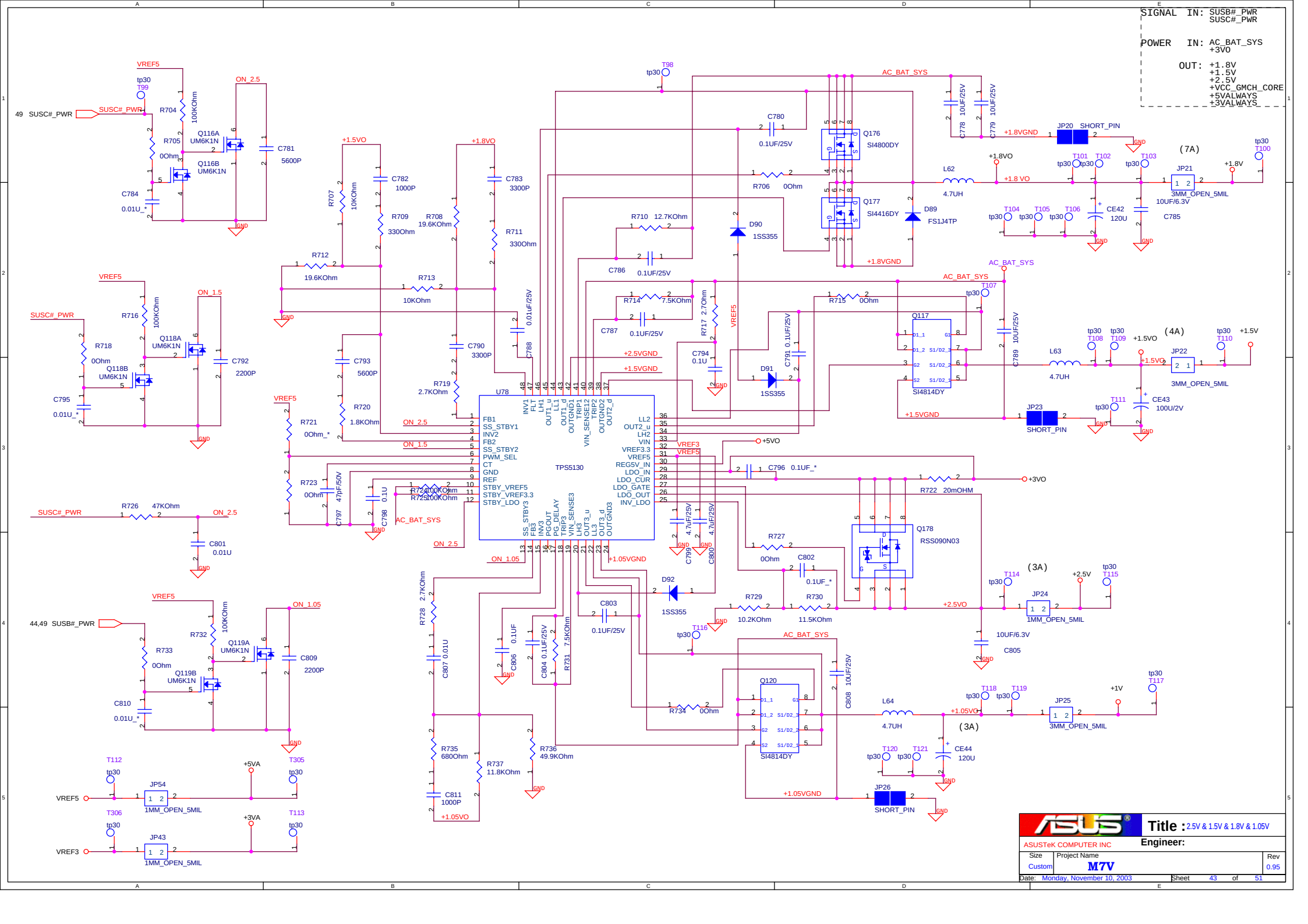
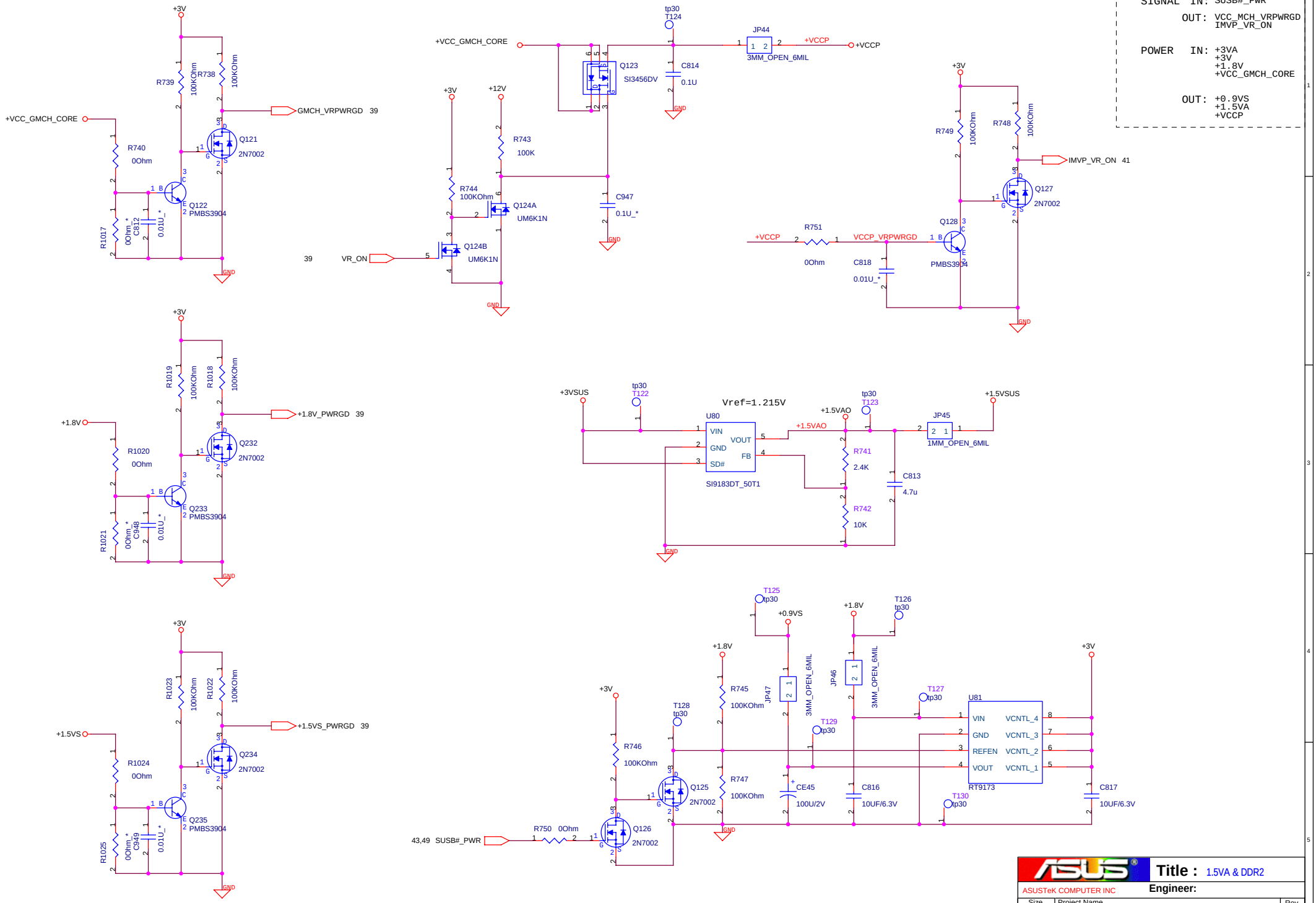


ASUSTeK COMPUTER INC	Title : Power On Sequence	
	Engineer:	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 40 of 51	


SIGNAL IN: VR_VID0 - 5
PM_DPRSLPVR
STP_CPU#
PM_PSI#
IMVP_VR_ON
OUT: DELAY_VR_PWRGD
VR_PWDGD_CK410#
POWER IN: AC_BAT_SYS
+5VO
+3VO
OUT: +VCORE
U72
MAX1987
Q110 IRF7821
Q111 IRF7821
Q179 IRF7832
Q180 IRF7832
Q181 IRF7832
Q182 IRF7832
D83 RB717F
D84 EC31QS04
L58 0.56UH
L59 0.56UH
JP3 SHORT_PIN
JP6 SHORT_PIN
U73 NC7ST04M5
Q112A UM6K1N
Q112B UM6K1N
Q113A UM6K1N
Q113B UM6K1N
for vcore_pwrgd delay
15ms delay
for C4 fast exit event
Title : VCORE
ASUSTeK COMPUTER INC
Engineer:
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 41 of 51


SIGNAL IN: SUSC#_PWR
VSUS_ON
POWER IN: AC_BAT_SYS
OUT: +12VO
+3VO
+5VO
U76
LTC3728L
Q172
SI4800DY
Q173
SI4416DY
Q174
SI4800DY
Q175
SI4416DY
D85
FS05J10TP
D86
FS1J4TP
D87
RB717F
D88
FS1J4TP
D113
RB715F
L60
4.7UH
L61
4.7UH
U75
LM3480
JP16
SHORT_PIN
JP17
SHORT_PIN
JP18
SHORT_PIN
JP19
SHORT_PIN
R695
10mOhm
R699
10mOhm
R692 10
R700
20KOhm
R701
64.9KOhm
Vref = 0.8 V
(6A)
(6A)
CE40
100UF/6.3V
CE41
120UF/4V
Q115A
UM6K1N
Q115B
UM6K1N
VSUS_ON
Title : SYSTEM
ASUSTeK COMPUTER INC
Engineer:
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
Sheet 42 of 51


SIGNAL IN: SUSB#_PWR
SUSC#_PWR
POWER IN: AC_BAT_SYS
+3VO
OUT: +1.8V
+1.5V
+2.5V
+VCC_GMCH_CORE
+5VALWAYS
+3VALWAYS
TPS5130
SI4800DY
SI4416DY
SI4814DY
RSS090N03
FS1J4TP
1SS355
SHORT_PIN
3MM_OPEN_5MIL
1MM_OPEN_5MIL
ASUSTeK COMPUTER INC
Engineer:
Title : 2.5V & 1.5V & 1.8V & 1.05V
Project Name
M7V
Size
Custom
Rev
0.95
Date: Monday, November 10, 2003
Sheet 43 of 51


SIGNAL IN: SUSB#_PWR
OUT: VCC_MCH_VRPWRGD
IMVP_VR_ON
POWER IN: +3VA
+3V
+1.8V
+VCC_GMCH_CORE
OUT: +0.9VS
+1.5VA
+VCCP
+3V
+VCC_GMCH_CORE
R739 100KOhm
R738 100KOhm
GMCH_VRPWRGD 39
R740 0Ohm
Q121 2N7002
Q122 PMBS3904
R1017 0Ohm_*
C812 0.01U_*
GND
tp30 T124
Q123 SI3456DV
C814 0.1U
JP44 3MM_OPEN_6MIL
+VCCP
+12V
R743 100K
R744 100KOhm
Q124A UM6K1N
Q124B UM6K1N
C947 0.1U_*
39 VR_ON
R749 100KOhm
R748 100KOhm
IMVP_VR_ON 41
Q127 2N7002
Q128 PMBS3904
R751 0Ohm
C818 0.01U_*
VCCP_VRPWRGD
+1.8V
R1019 100KOhm
R1018 100KOhm
+1.8V_PWRGD 39
R1020 0Ohm
Q232 2N7002
Q233 PMBS3904
R1021 0Ohm_*
C948 0.01U_*
+3VSUS
tp30 T122
Vref=1.215V
U80
VIN
GND
SD#
VOUT
FB
SI9183DT_50T1
+1.5VAO
tp30 T123
JP45 1MM_OPEN_6MIL
+1.5VSUS
R741 2.4K
R742 10K
C813 4.7u
+1.5VS
R1023 100KOhm
R1022 100KOhm
+1.5VS_PWRGD 39
R1024 0Ohm
Q234 2N7002
Q235 PMBS3904
R1025 0Ohm_*
C949 0.01U_*
T125 tp30
+0.9VS
+1.8V
T126 tp30
T127 tp30
T128 tp30
T129 tp30
T130 tp30
JP47 3MM_OPEN_6MIL
JP46 3MM_OPEN_6MIL
R745 100KOhm
R746 100KOhm
R747 100KOhm
Q125 2N7002
Q126 2N7002
R750 0Ohm
43,49 SUSB#_PWR
CE45 100U/2V
C816 10UF/6.3V
C817 10UF/6.3V
U81
VIN
GND
REFEN
VOUT
VCNTL_4
VCNTL_3
VCNTL_2
VCNTL_1
RT9173
Title : 1.5VA & DDR2
ASUSTeK COMPUTER INC
Engineer:
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
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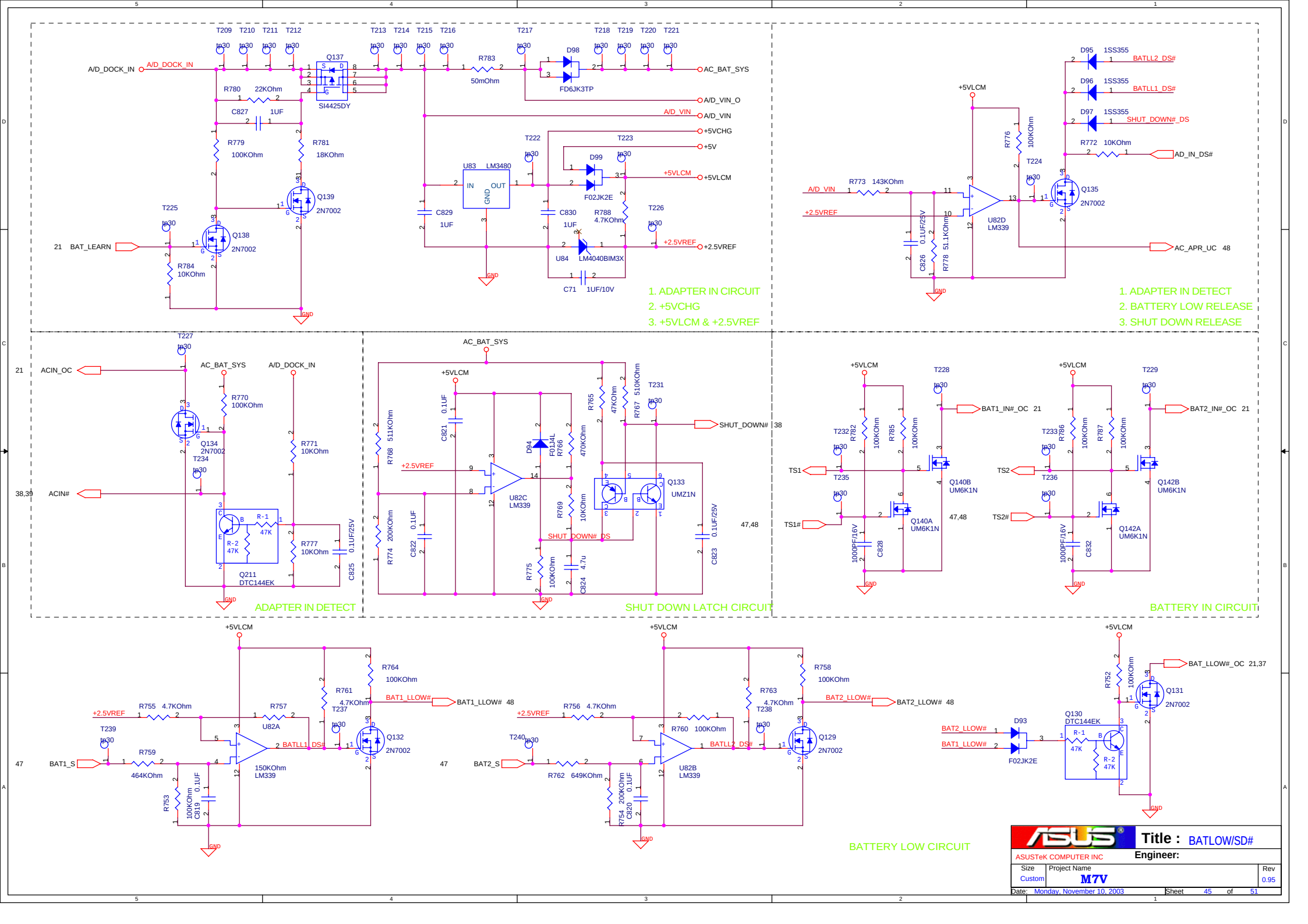
A/D_DOCK_IN
Q137
SI4425DY
R780 22KOhm
C827 1UF
R779 100KOhm
R781 18KOhm
Q139 2N7002
Q138 2N7002
R784 10KOhm
21 BAT_LEARN
R783 50mOhm
D98 FD6JK3TP
AC_BAT_SYS
A/D_VIN_O
A/D_VIN
+5VCHG
+5V
+5VLCM
+2.5VREF
U83 LM3480
C829 1UF
C830 1UF
R788 4.7KOhm
U84 LM4040BIM3X
C71 1UF/10V
1. ADAPTER IN CIRCUIT
2. +5VCHG
3. +5VLCM & +2.5VREF
D95 1SS355
D96 1SS355
D97 1SS355
BATLL2_DS#
BATLL1_DS#
SHUT_DOWN#_DS
R772 10KOhm
AD_IN_DS#
R773 143KOhm
+2.5VREF
R776 100KOhm
R778 51.1KOhm
C826 0.1UF/25V
U82D LM339
Q135 2N7002
AC_APR_UC 48
1. ADAPTER IN DETECT
2. BATTERY LOW RELEASE
3. SHUT DOWN RELEASE
21 ACIN_OC
Q134 2N7002
R770 100KOhm
R771 10KOhm
38,39 ACIN#
R777 10KOhm
C825 0.1UF/25V
Q211 DTC144EK
ADAPTER IN DETECT
R768 511KOhm
R774 200KOhm
C821 0.1UF
C822 0.1UF
D94 F01J4L
R766 470KOhm
R765 47KOhm
R767 510KOhm
SHUT_DOWN# 38
R769 10KOhm
R775 100KOhm
C824 4.7u
C823 0.1UF/25V
47,48
U82C LM339
Q133 UMZ1N
SHUT_DOWN#_DS
SHUT DOWN LATCH CIRCUIT
R782 100KOhm
R785 100KOhm
BAT1_IN#_OC 21
TS1
TS1#
Q140B UM6K1N
Q140A UM6K1N
C828 1000PF/16V
R786 100KOhm
R787 100KOhm
BAT2_IN#_OC 21
TS2
TS2#
Q142B UM6K1N
Q142A UM6K1N
C832 1000PF/16V
BATTERY IN CIRCUIT
47 BAT1_S
R755 4.7KOhm
R757
R759 464KOhm
R753 100KOhm
C819 0.1UF
U82A
150KOhm LM339
R761 4.7KOhm
R764 100KOhm
BAT1_LLOW# 48
Q132 2N7002
47 BAT2_S
R756 4.7KOhm
R762 649KOhm
R754 200KOhm
C820 0.1UF
U82B LM339
R763 4.7KOhm
R758 100KOhm
BAT2_LLOW# 48
Q129 2N7002
BATTERY LOW CIRCUIT
R752 100KOhm
BAT_LLOW#_OC 21,37
Q131 2N7002
Q130 DTC144EK
D93 F02JK2E
ASUSTeK COMPUTER INC
Engineer:
Title : BATLOW/SD#
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
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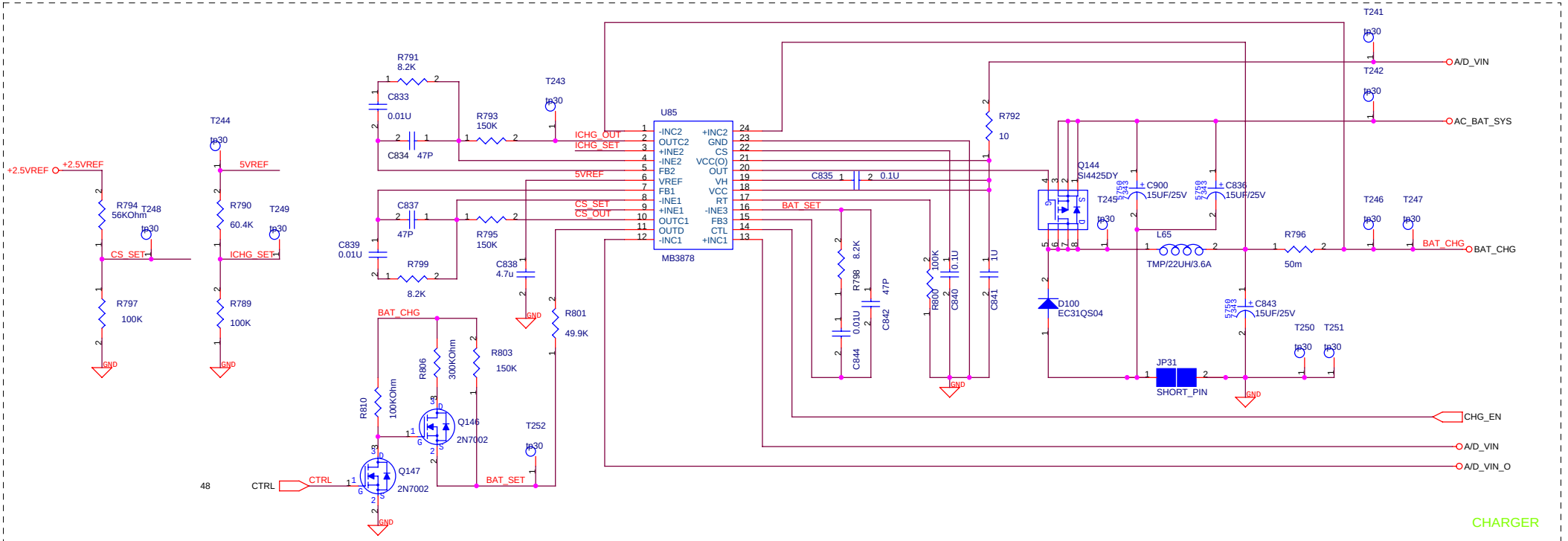

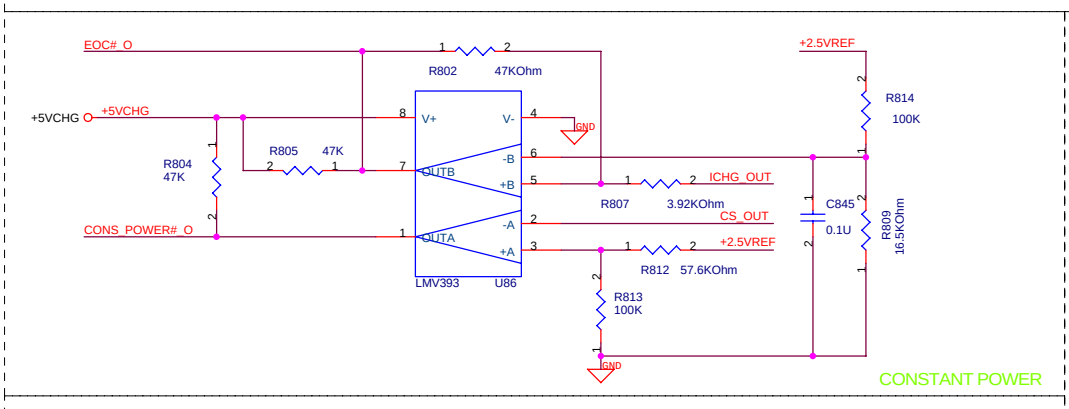

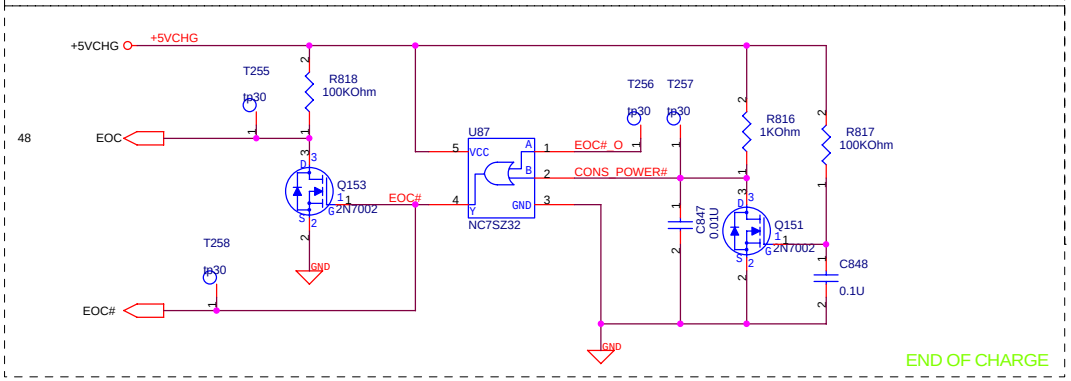

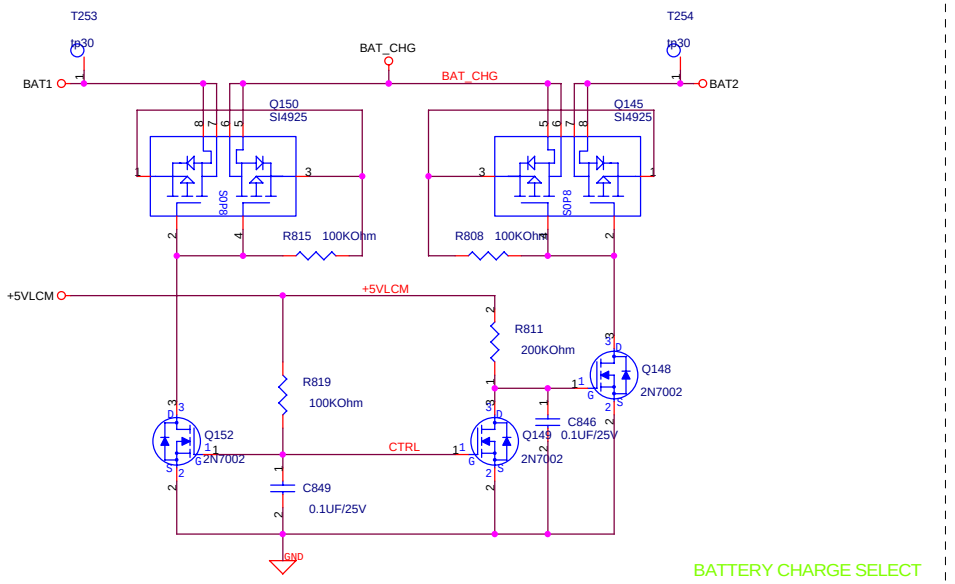

ASUSTeK COMPUTER INC

Title : CHARGE

Engineer:

Size	Project Name	Rev
Custom	M7V	0.95

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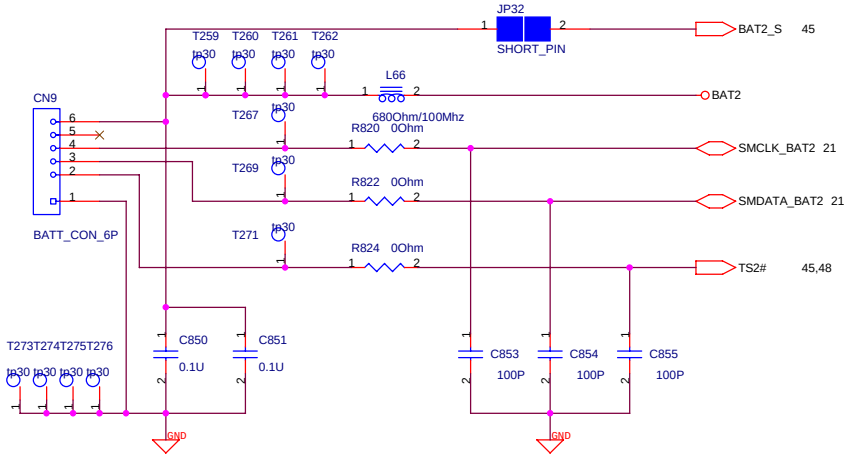
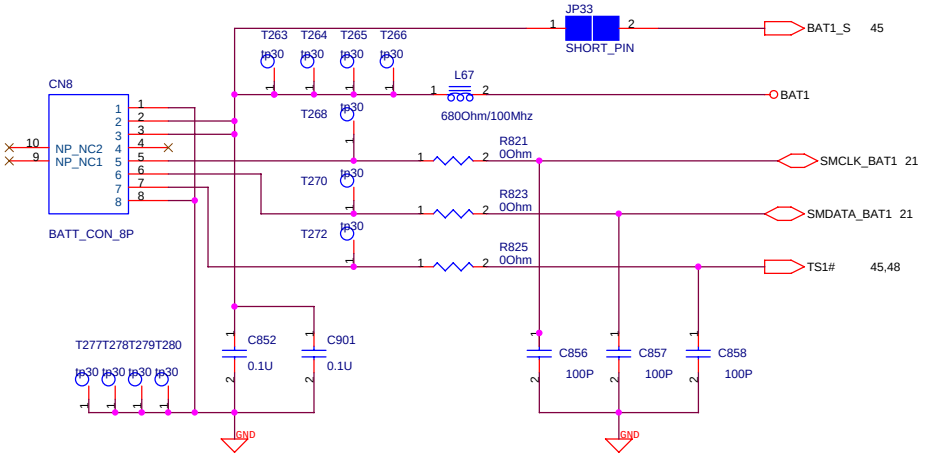
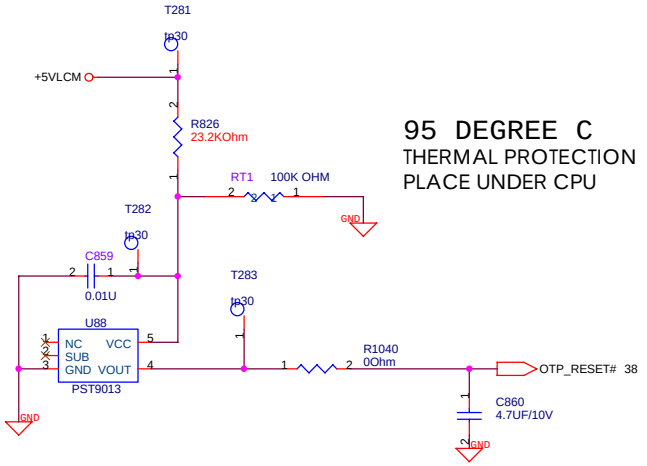
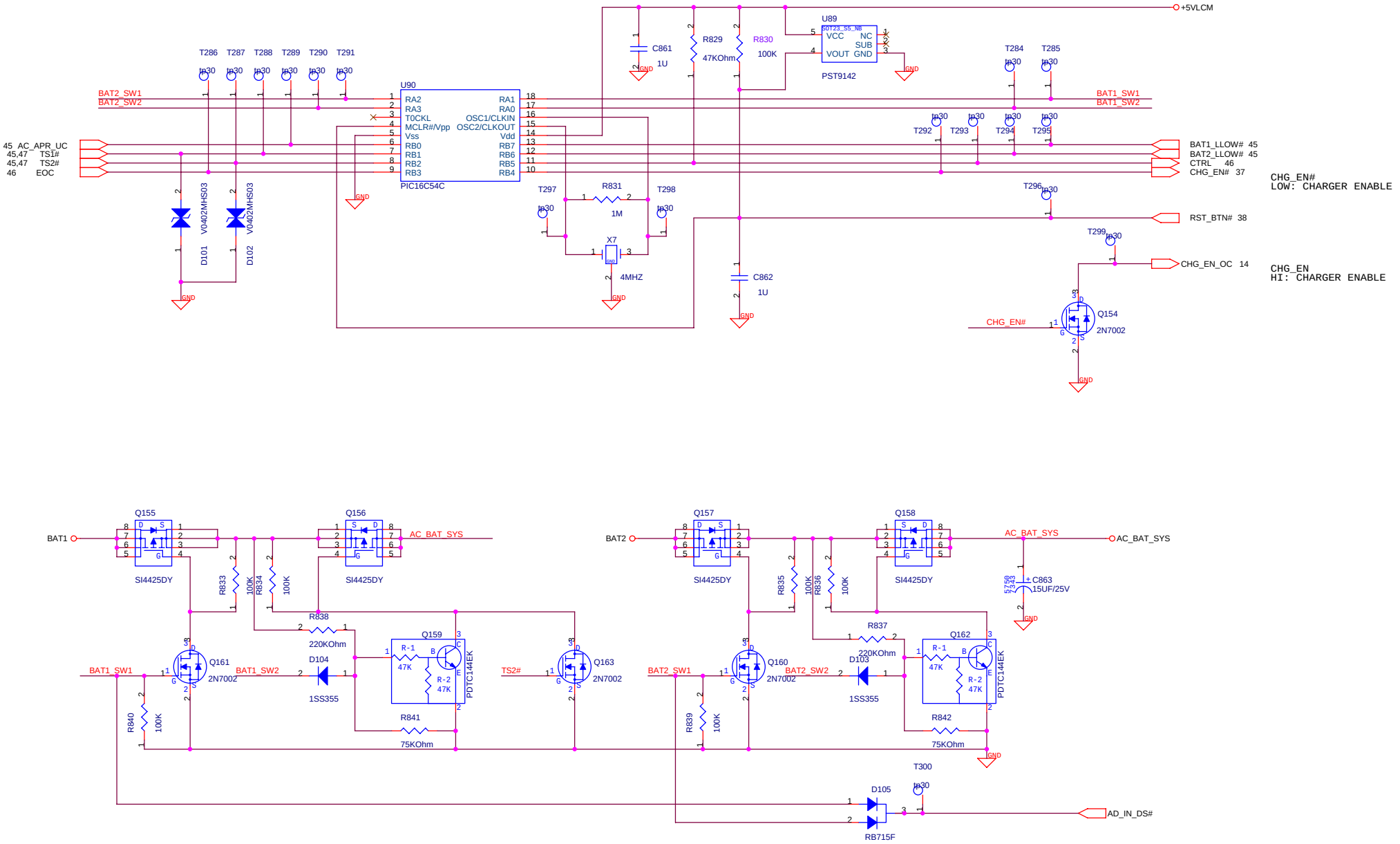




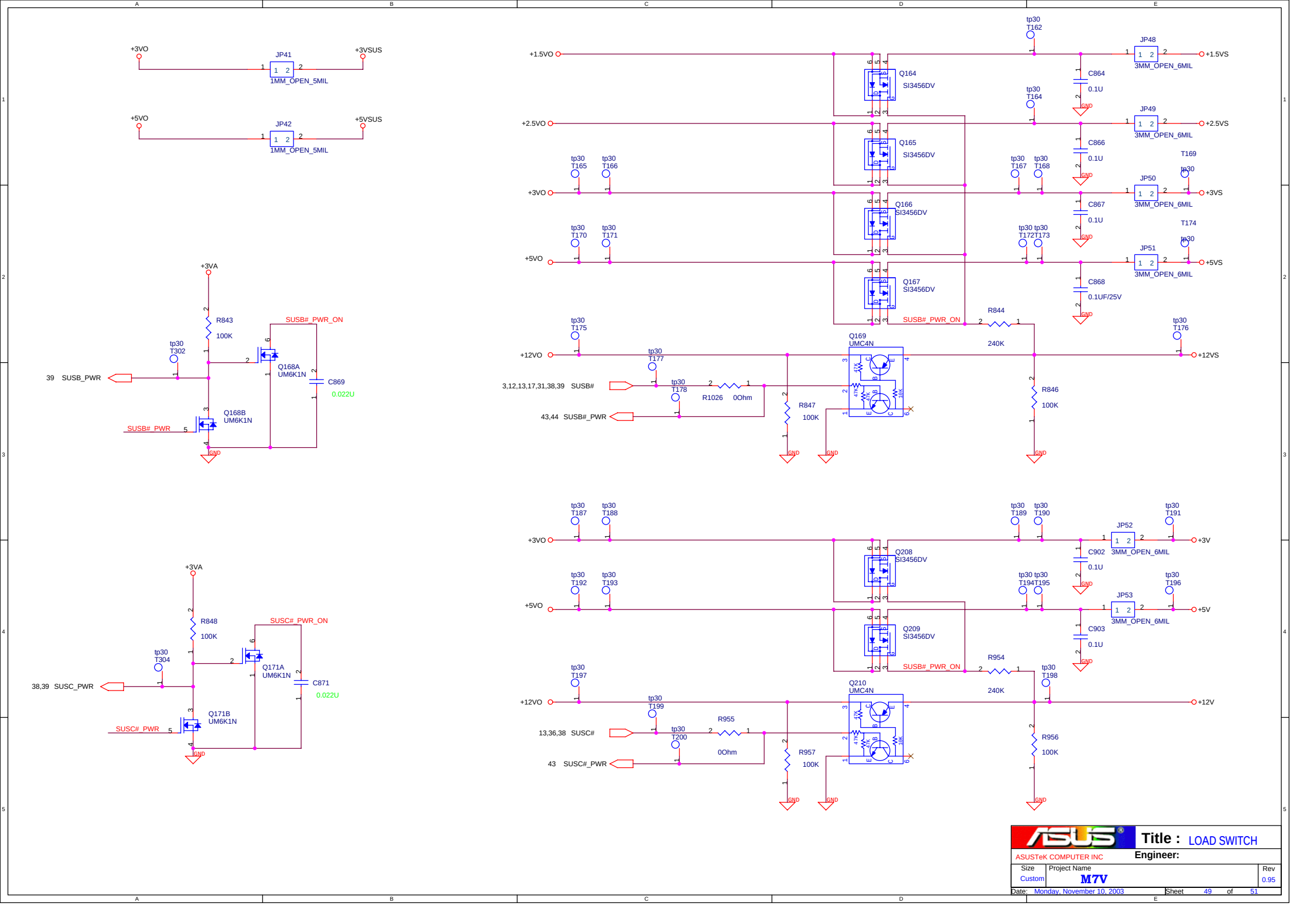


95 DEGREE C
THERMAL PROTECTION
PLACE UNDER CPU

ASUSTeK COMPUTER INC	Title : BAT CONNECT	
	Engineer:	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 47 of 51	



ASUSTeK COMPUTER INC	Title : PIC16C54_DISCHARGE	
	Engineer:	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 48 of 51	


+3VO
JP41
+3VSUS
1MM_OPEN_5MIL
+5VO
JP42
+5VSUS
1MM_OPEN_5MIL
+3VA
R843
100K
SUSB#_PWR_ON
tp30 T302
Q168A UM6K1N
C869
0.022U
39 SUSB_PWR
Q168B UM6K1N
SUSB#_PWR
GND
+3VA
R848
100K
SUSC#_PWR_ON
tp30 T304
Q171A UM6K1N
C871
0.022U
38,39 SUSC_PWR
Q171B UM6K1N
SUSC#_PWR
GND
+1.5VO
+2.5VO
+3VO
+5VO
+12VO
tp30 T162
tp30 T164
tp30 T165
tp30 T166
tp30 T167
tp30 T168
tp30 T169
tp30 T170
tp30 T171
tp30 T172
tp30 T173
tp30 T174
tp30 T175
tp30 T176
tp30 T177
tp30 T178
Q164 SI3456DV
Q165 SI3456DV
Q166 SI3456DV
Q167 SI3456DV
Q169 UMC4N
R1026 0Ohm
R844 240K
R846 100K
R847 100K
3,12,13,17,31,38,39 SUSB#
43,44 SUSB#_PWR
JP48
JP49
JP50
JP51
3MM_OPEN_6MIL
C864 0.1U
C866 0.1U
C867 0.1U
C868 0.1UF/25V
+1.5VS
+2.5VS
+3VS
+5VS
+12VS
tp30 T187
tp30 T188
tp30 T189
tp30 T190
tp30 T191
tp30 T192
tp30 T193
tp30 T194
tp30 T195
tp30 T196
tp30 T197
tp30 T198
tp30 T199
tp30 T200
Q208 SI3456DV
Q209 SI3456DV
Q210 UMC4N
R955 0Ohm
R954 240K
R956 100K
R957 100K
13,36,38 SUSC#
43 SUSC#_PWR
JP52
JP53
C902 0.1U
C903 0.1U
+3V
+5V
+12V
Title : LOAD SWITCH
ASUSTeK COMPUTER INC
Engineer:
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
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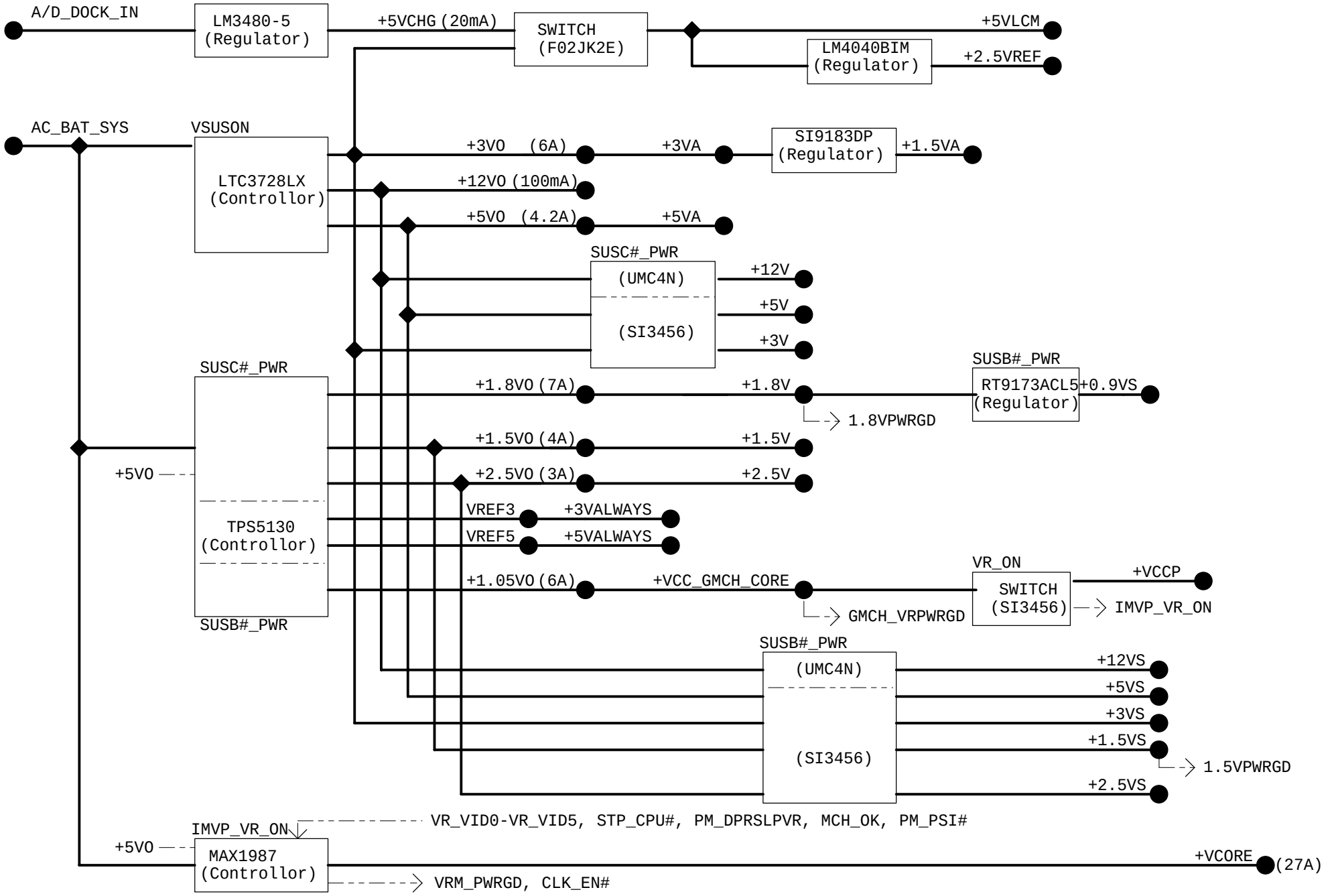

ASUSTeK COMPUTER INC	Title : POWER FLOWCHART	
	Engineer:	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 50 of 51	

PCI Device	IDSEL#	REQ/GNT#	Interrupts
CARD READER	AD17	1	B
CARDBUS	AD17	1	C
1394	AD17	1	D
MINIPCI (802.11a/b/g)	AD19	3	G,H

SM-Bus Device	SM-Bus Address
Clock Generator	1101001x (D2)
SO-DIMM 0	1010000x (A0)
SO-DIMM 1	1010001x (A2)
Thermal Sensor	0101110x (5C)
PIC	1001001x (92)
Ambient Light Sensor	0111001x (72)

ICH6-M GPIO	M7V	W2	Volt
GPI 0	KID0	KID0	5VREF
GPI 1	KID1	KID1	5VREF
GPI 2			5VREF
GPI 3			5VREF
GPI 4			5VREF
GPI 5			5VREF
GPI 7	CPPE# (NEWCARD)		3V
GPI 8	EXTSMI#	EXTSMI#	3VSUS
GPI 11	LID_ICH#	LID_ICH#	3VSUS
GPI 12	KB_SCI#	KB_SCI#	3V
GPI 13			3VSUS
GPI 14	CHG_EN_OC	CHG_EN_OC	3VSUS
GPI 15			3VSUS
GPO 16	XIDE_EN#		3V
GPO 17			3V
GPO 19	PWRLED_1HZ	PWRLED_1HZ	3V
GPO 21	BACK_OFF#	BACK_OFF#	3V
GPO 23	FWH_WP#	FWH_WP#	3V
GPIO 24	NEWCARD_RST#		3VSUS
GPI 26	SATA_DET#0	SATA_DET#0	3V
GPIO 27	PCB_ID0	PCB_ID0	3VSUS
GPIO 28	PCB_ID1	PCB_ID1	3VSUS
GPI 29	PCB_ID2	PCB_ID2	3V
GPI 30			3V
GPI 31	PEG_PRESENT#		3V
GPIO 33	BAY_IN0		3V
GPIO 34	BAY_IN1		3V
GPI 40	PANEL_ID0	PANEL_ID0	5VREF
GPI 41	PANEL_ID1	PANEL_ID1	3V
GPO 48	OP_SD#	OP_SD#	3V
			3V
GPIO 25	CB_SD#	CB_SD#	3VSUS

KBC GPIO	M7V	W2
P23	CLR_DJ#	MSK_INSTKEY#
P22	BAT_LEARN	BAT_LEARN
P21	BAT_SEL	
P20	KBCRSM	KBCRSM
P42		(WATCHDOG)
P43	SWDJ_EN#	SWDJ_EN#
P44	KB_CPURST	KB_CPURST
P45	KB_GATEA20	KB_GATEA20
P46	KBCSCI	KBCSCI
P47	PM_CLKRUN#	PM_CLKRUN#
P50	BAT_LLOW#_OC	BAT_LLOW#_OC
P51	SWDJ_LED	SWDJ_LED
P52	PM_LAN_ENABLE **	PM_LAN_ENABLE **
P53		
P54	BAYDOCK_IN#	
P55	BAT1_IN#_OC	BAT1_IN_OC#
P56		(FAN_DA1)
P57	INV_DA	ADJ_BL
P67	BAT2_IN#_OC	
P66	PADLOCK#	PADLOCK#
P65	MARATHON#	MARATHON#
P64	ACIN_OC	ACIN_OC
P63		
P62		
P61	INTERNET#	INTERNET#
P60	EMAIL#	EMAIL#
P75		(KB_CLK)
P74		(MS_CLK)
P73	TPAD_CLK	TPAD_CLK
P72		(KB_DAT)
P71		(MS_DAT)
P70	TPAD_DAT	TPAD_DAT
P77	BAT_SMC	BAT_SMC
P76	BAT_SMD	BAT_SMD
P27	SCROLL_LED#	SCROLLLOCK#
P26	NUM_LED#	NUM_LED#
P25	CAP_LED#	CAP_LED#
P24	SET_PLTRSTNS#	SET_PLTRSTNS#
P40	EXT_SMI	KBC_EXTSMI
P41	EMAIL_LED#	EMAIL_LED#

ASUSTeK COMPUTER INC

Title : System Resource

Engineer: Frank Lu

Size	Project Name	Rev
Custom	M7V	0.95

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