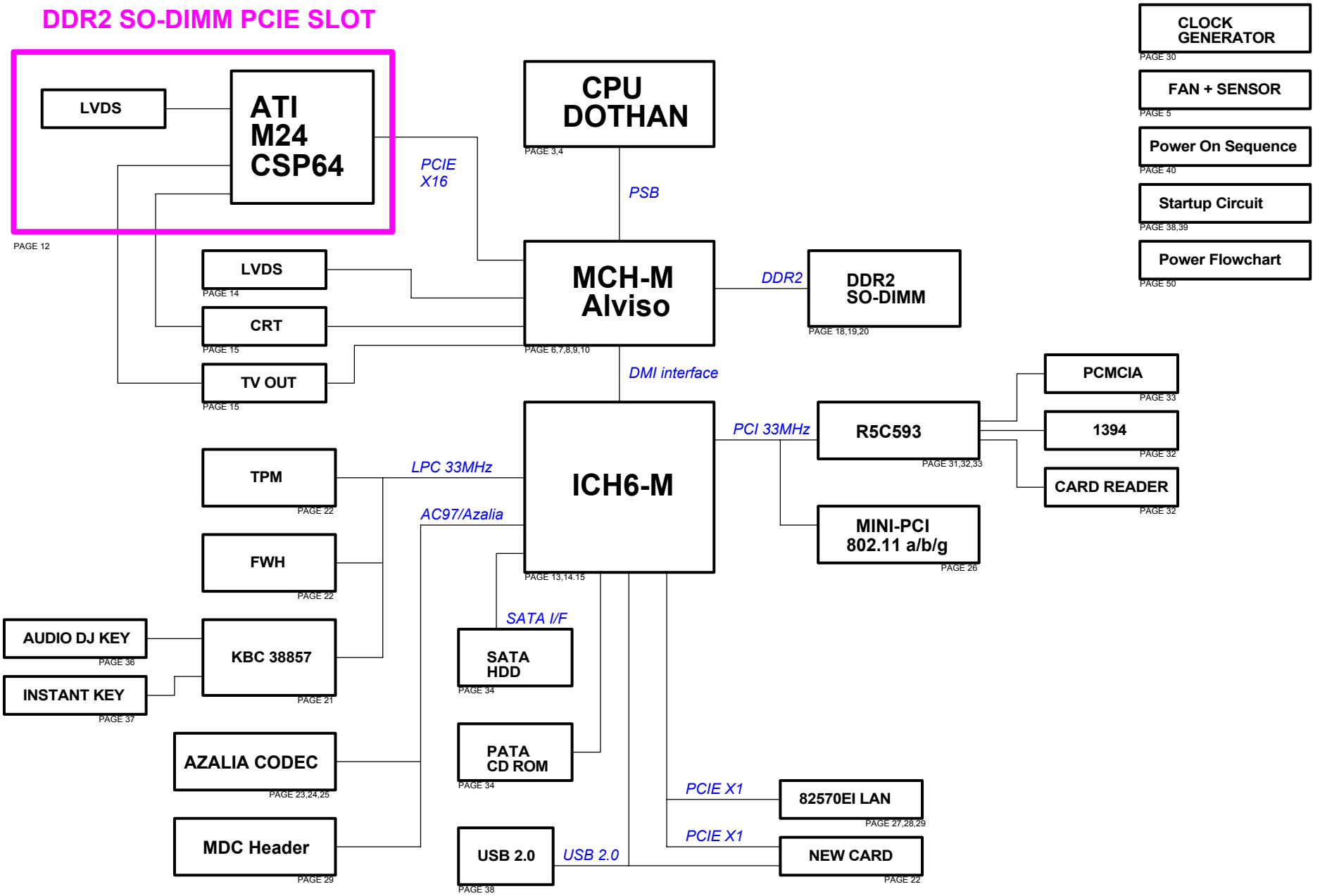


ASUSTeK COMPUTER INC	Title : BLOCK DIAGRAM	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 1 of 51	

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_PWRGD_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
```

PAGE 44

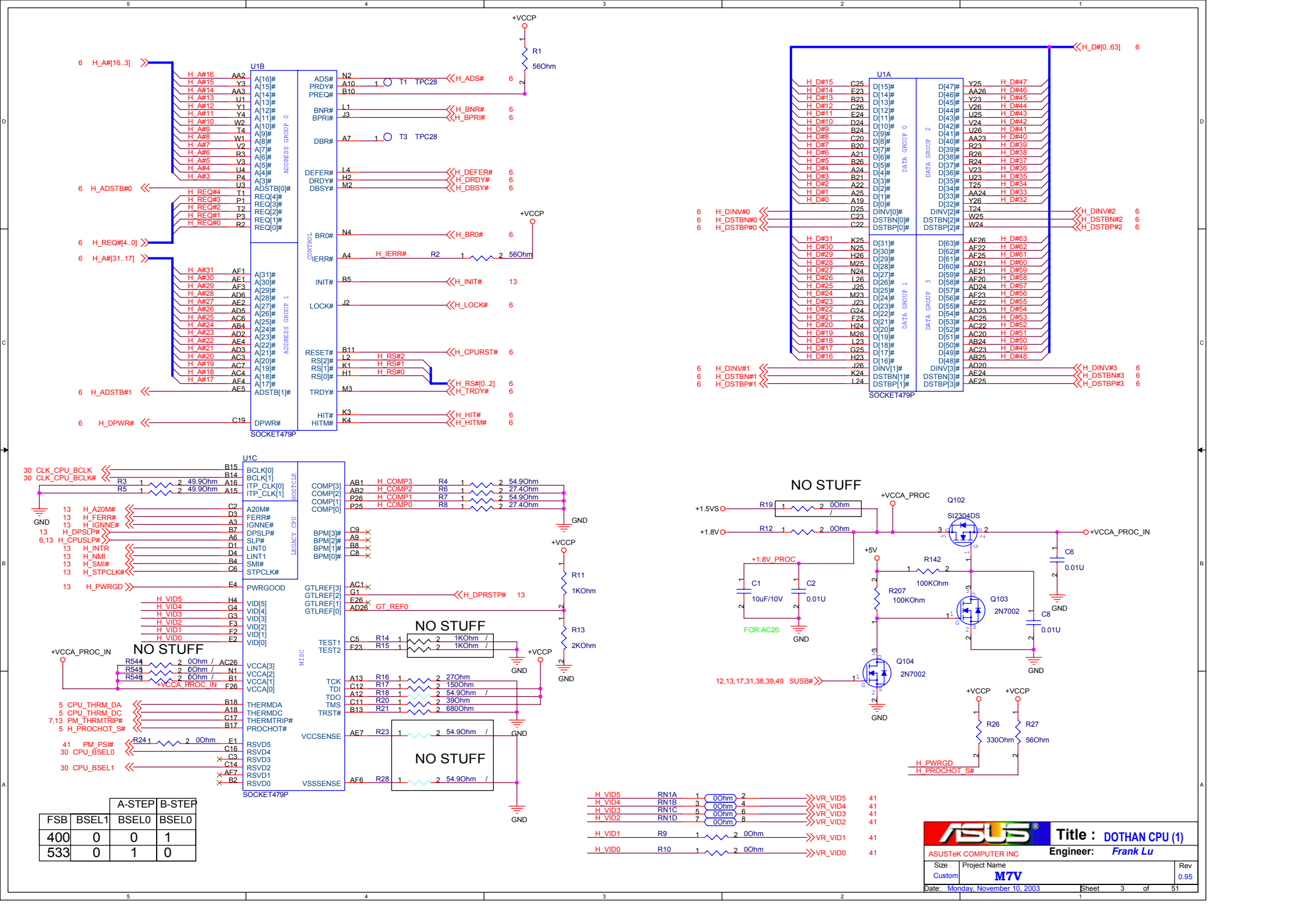
```
  SIGNAL  IN: SUSB#_PWR

        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		



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

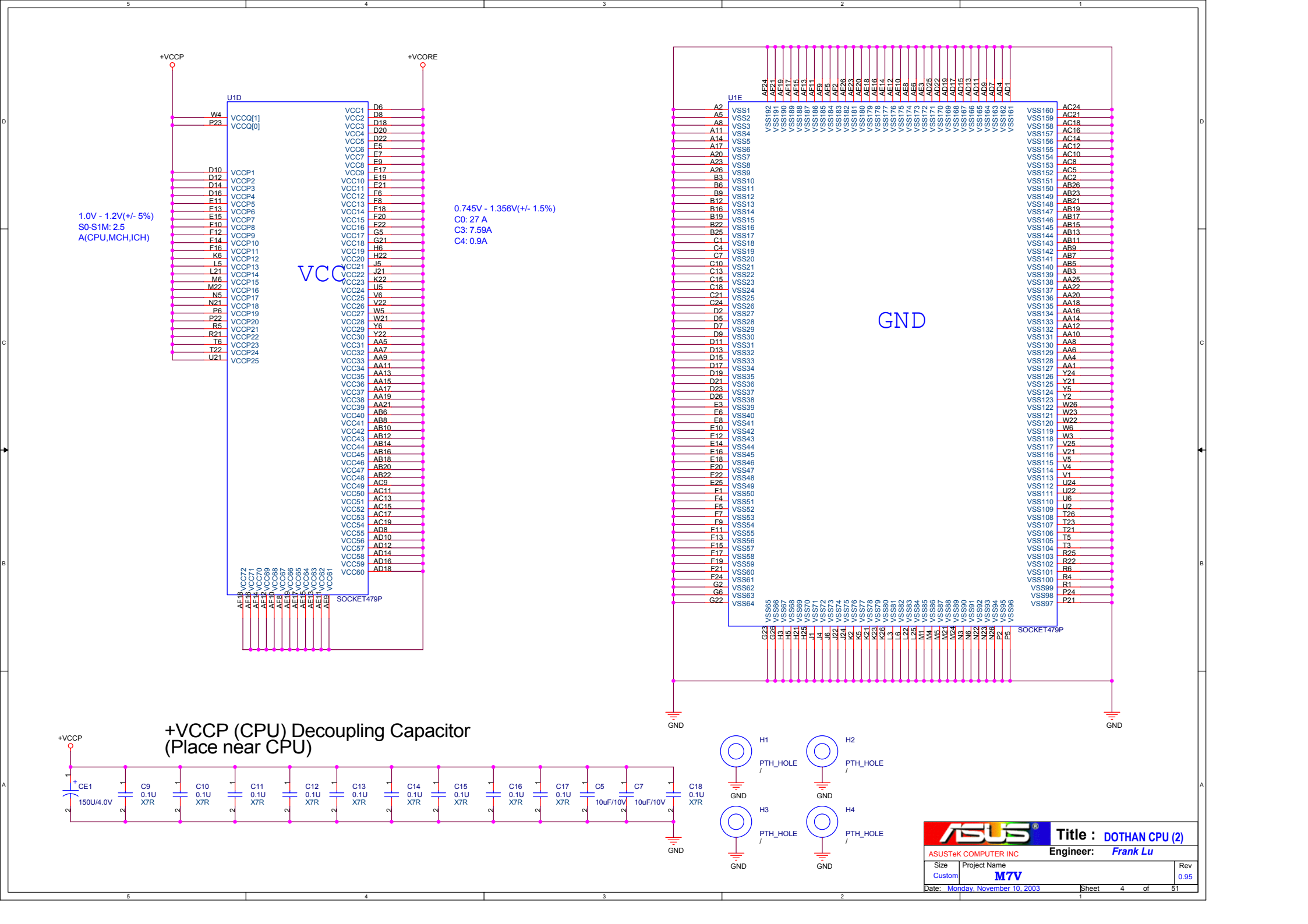
ASUSTeK COMPUTER INC

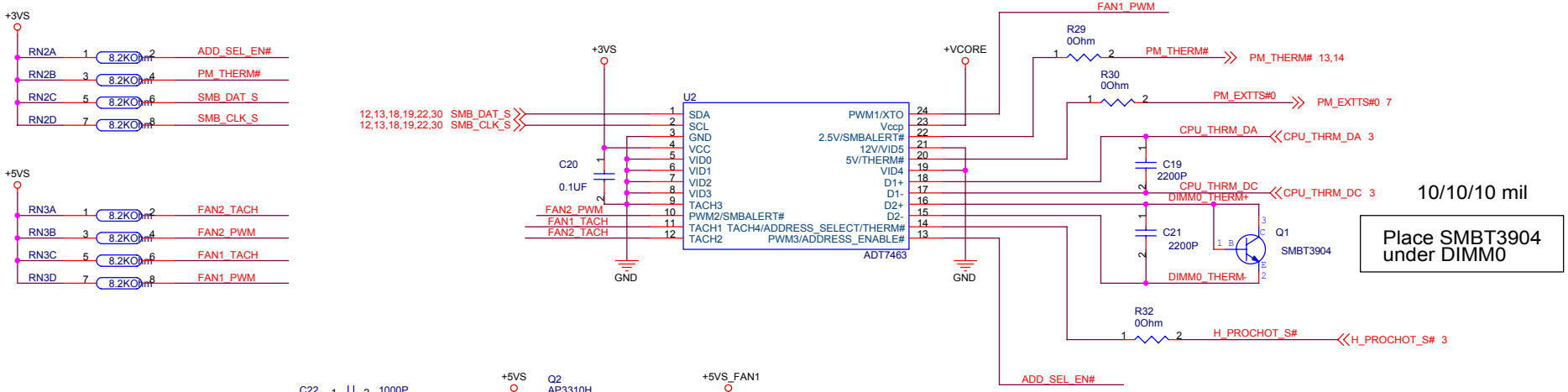
Title : DOTHAN CPU (1)

Engineer: Frank Lu

Size	Project Name	Rev
Custom	M7V	0.95

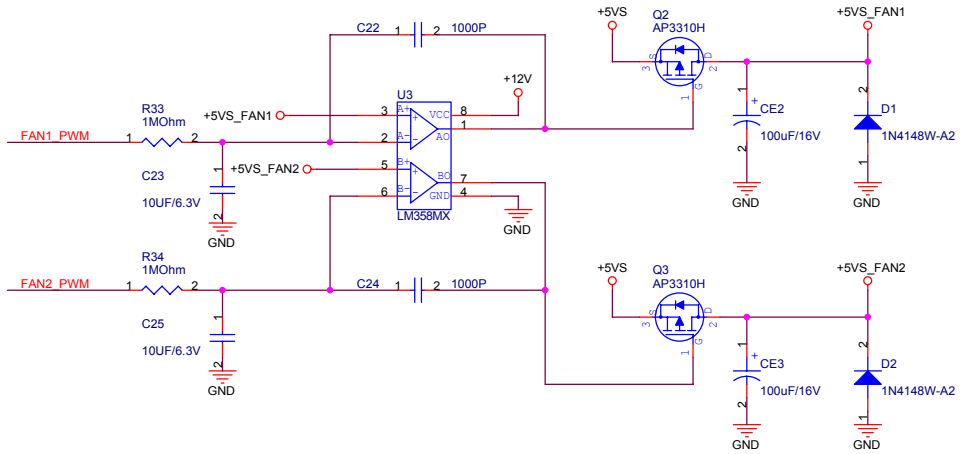
Date: Monday, November 10, 2003 Sheet 3 of 51


+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
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

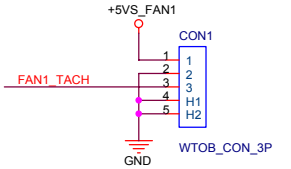


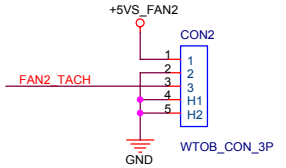
10/10/10 mil

Place SMBT3904 under DIMM0

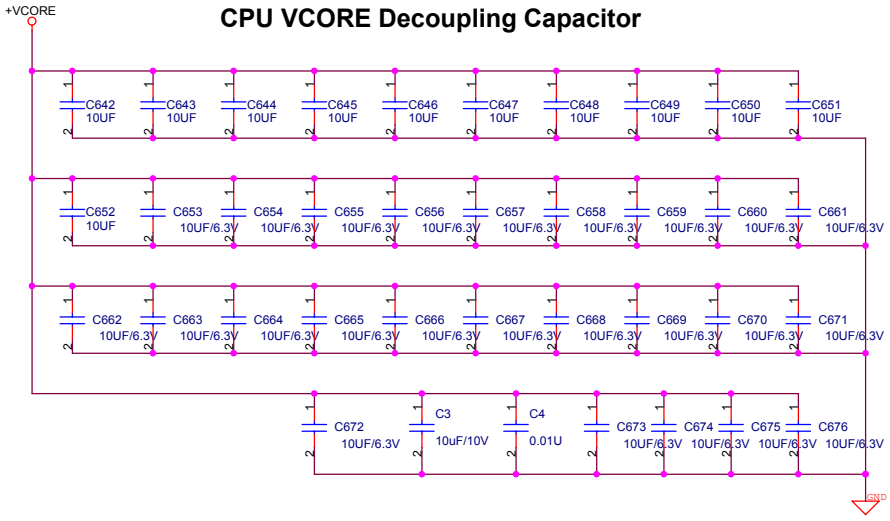


Pin 13	Pin 14	SMB Addr
1	X	5C **
0	1	5A
0	0	58





CPU VCORE Decoupling Capacitor



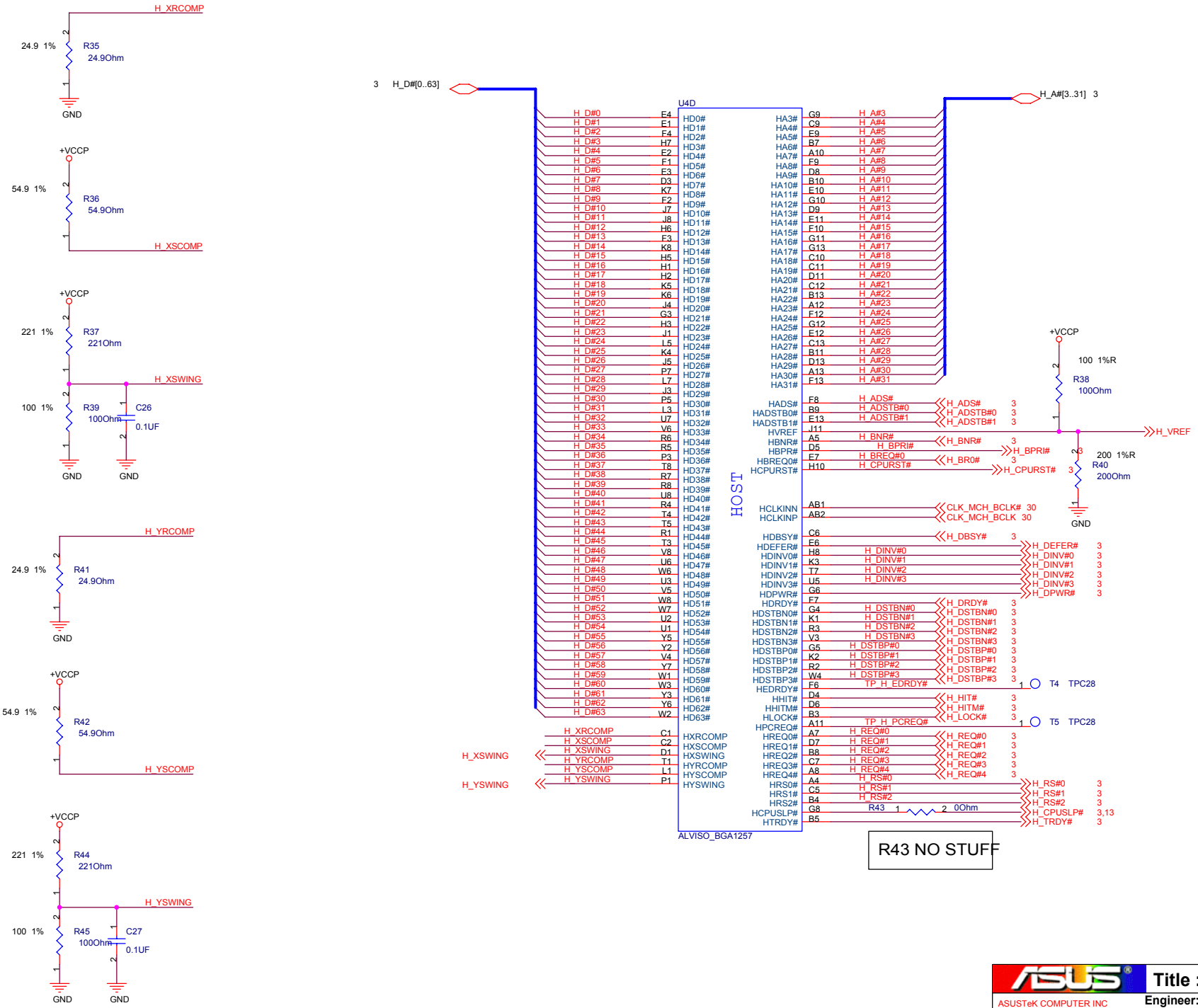
Mid Frequency Decoupling (Place around Processor)

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

+VCORE Bulk Decoupling

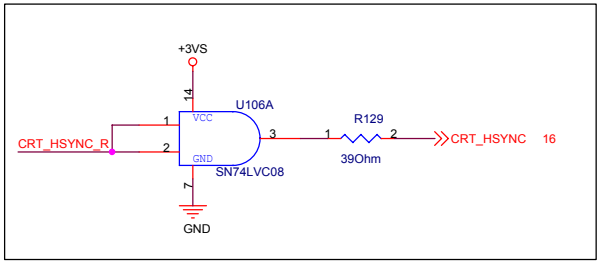
Four 200 uF are located in IMVP4

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	

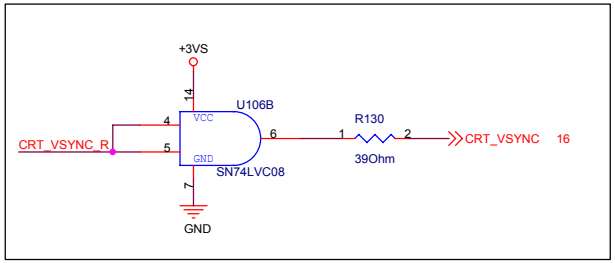


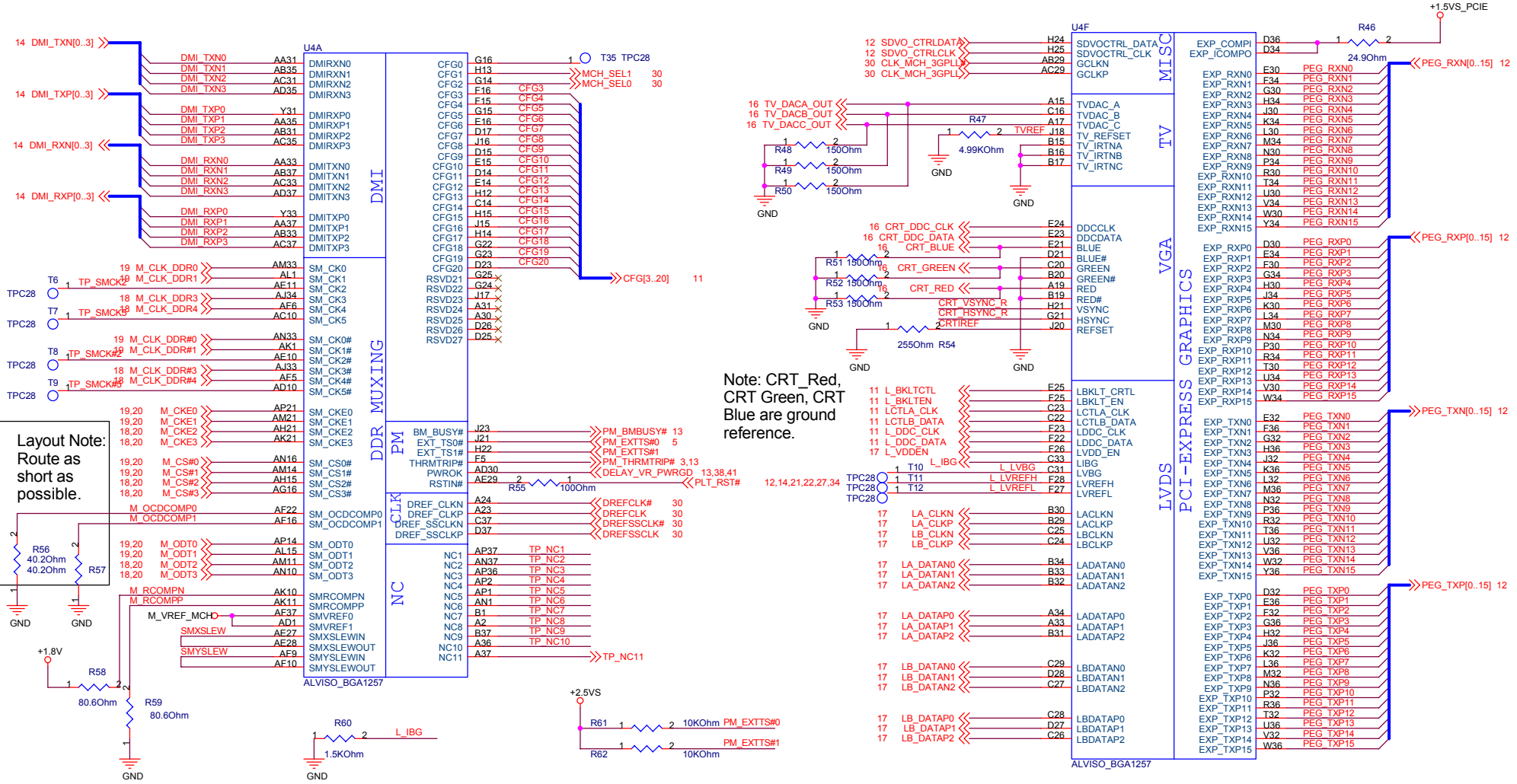
ASUSTeK COMPUTER INC	Title : Alviso GMCH (1)	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 6 of 51	

74LVC08 CLOSE to ALVISO

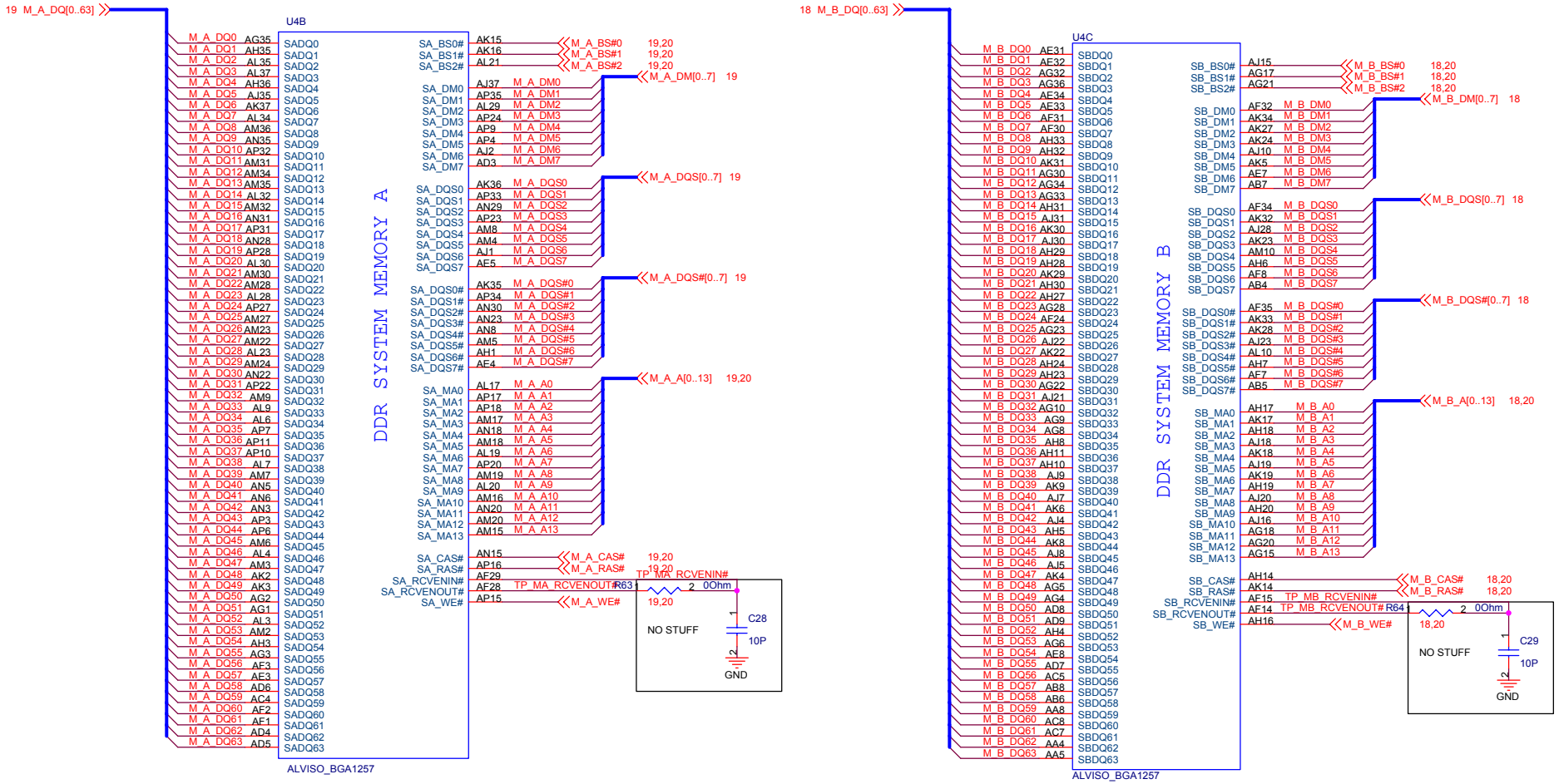


74LVC08 CLOSE to ALVISO

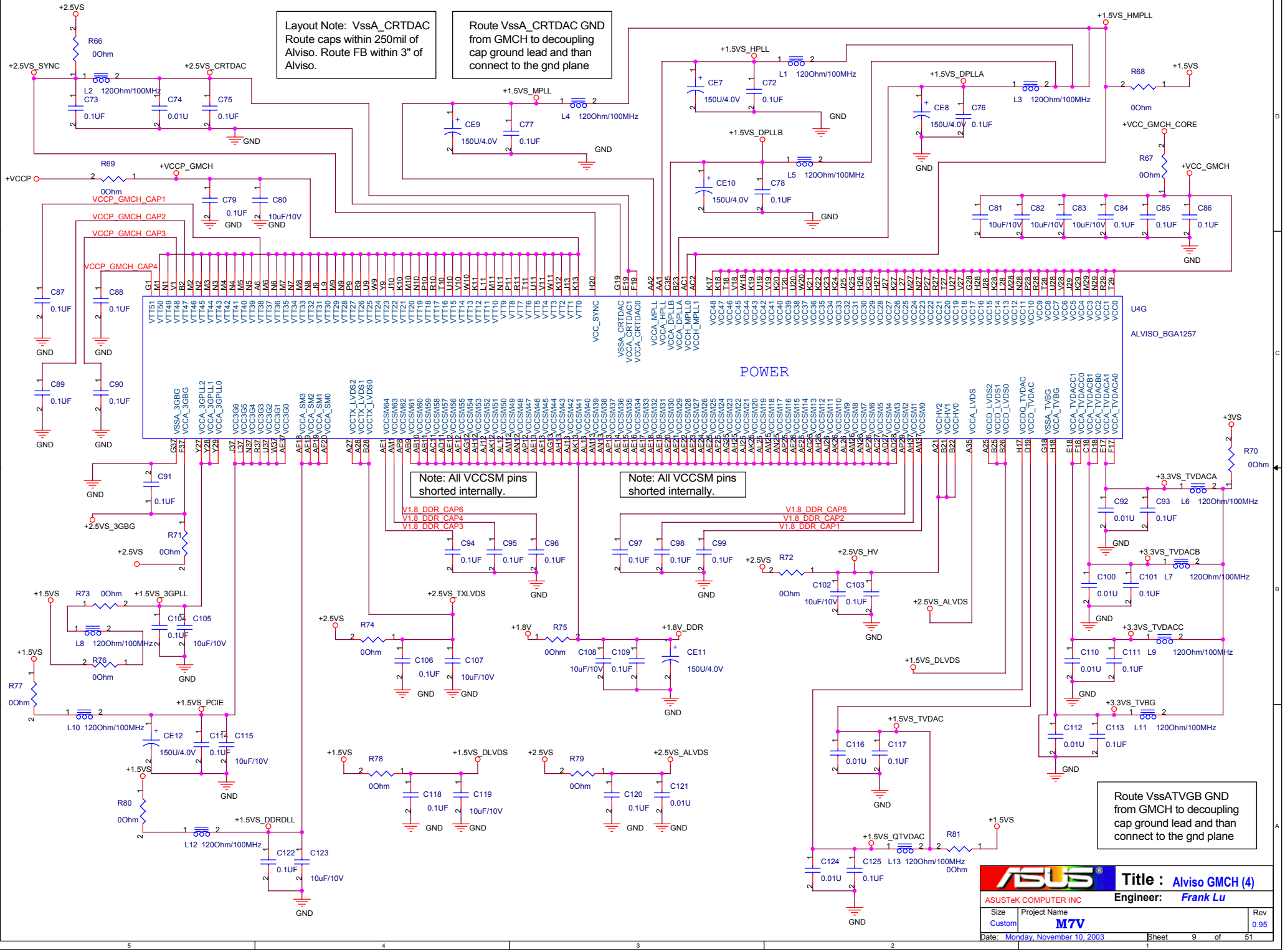




ASUSTeK COMPUTER INC	Title : Alviso GMCH (2)	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 7 of 51	



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
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
POWER
U4G
ALVISO_BGA1257
Title : Alviso GMCH (4)
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
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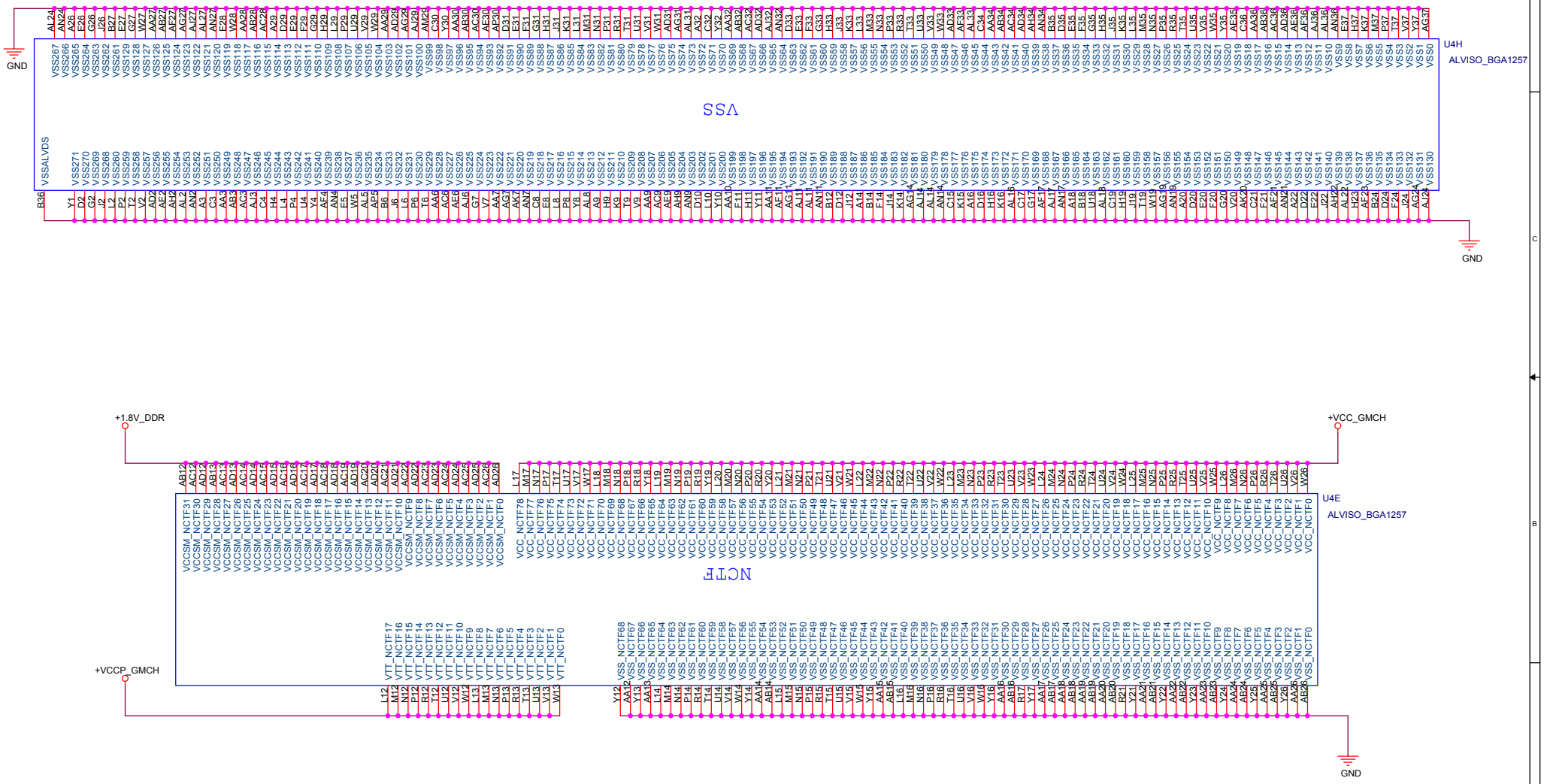
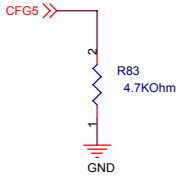


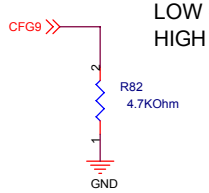
ASUSTeK COMPUTER INC	Title : Alviso GMCH (5)		
	Engineer: Frank Lu		
Size: Custom	Project Name: M7V		Rev: 0.95
Date: Monday, November 10, 2003	Sheet 10 of 51		

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



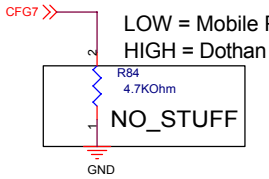
CFG9 : PCIE GRAPHIC LANE

LOW = REVERSE LANE
HIGH = NORMAL OPERATION (Default)



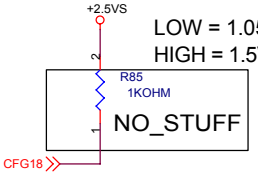
CFG7 : CPU STRAP

LOW = Mobile Prescott
HIGH = Dothan CPU (Default)



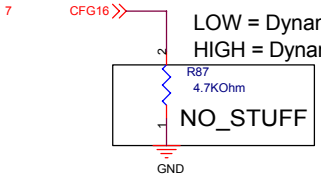
CFG18 : VCC SELECT

LOW = 1.05V (Default)
HIGH = 1.5V



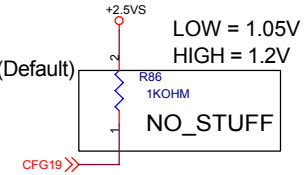
CFG16 : FSB DYNAMIC ODT

LOW = Dynamic ODT Disabled
HIGH = Dynamic ODT Enabled (Default)



CFG19 : VTT SELECT

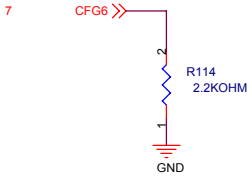
LOW = 1.05V (Default)
HIGH = 1.2V

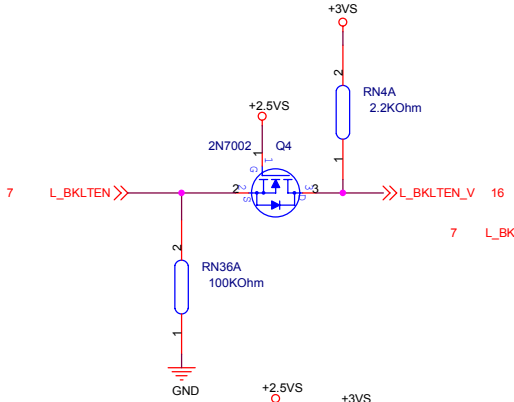


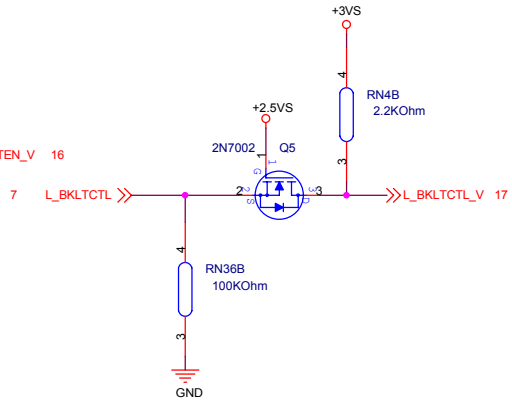
CFG[17..3] have internal pullup resistors.
CFG[19..18] have internal pulldown resistors.

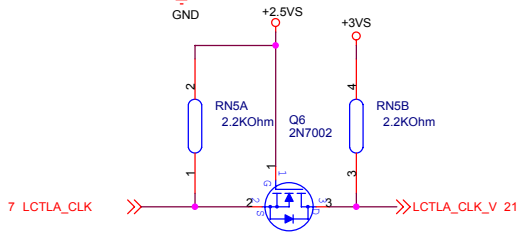
SDVOCRTL_DATA LOW = No SDVO device present (Default)

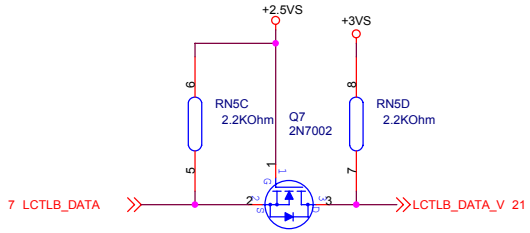
CFG6 : LOW = DDR2 SDRAM
HIGH = DDR SDRAM (Default)

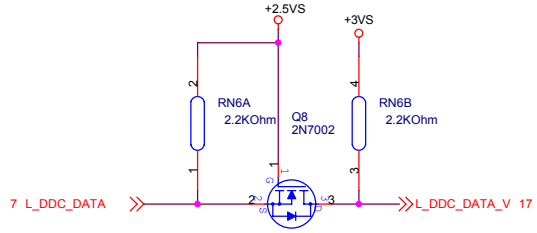


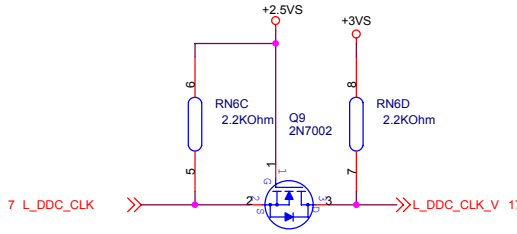












Title : GMCH Strapping
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size: Custom
Project Name: M7V
Rev: 0.95
Date: Monday, November 10, 2003
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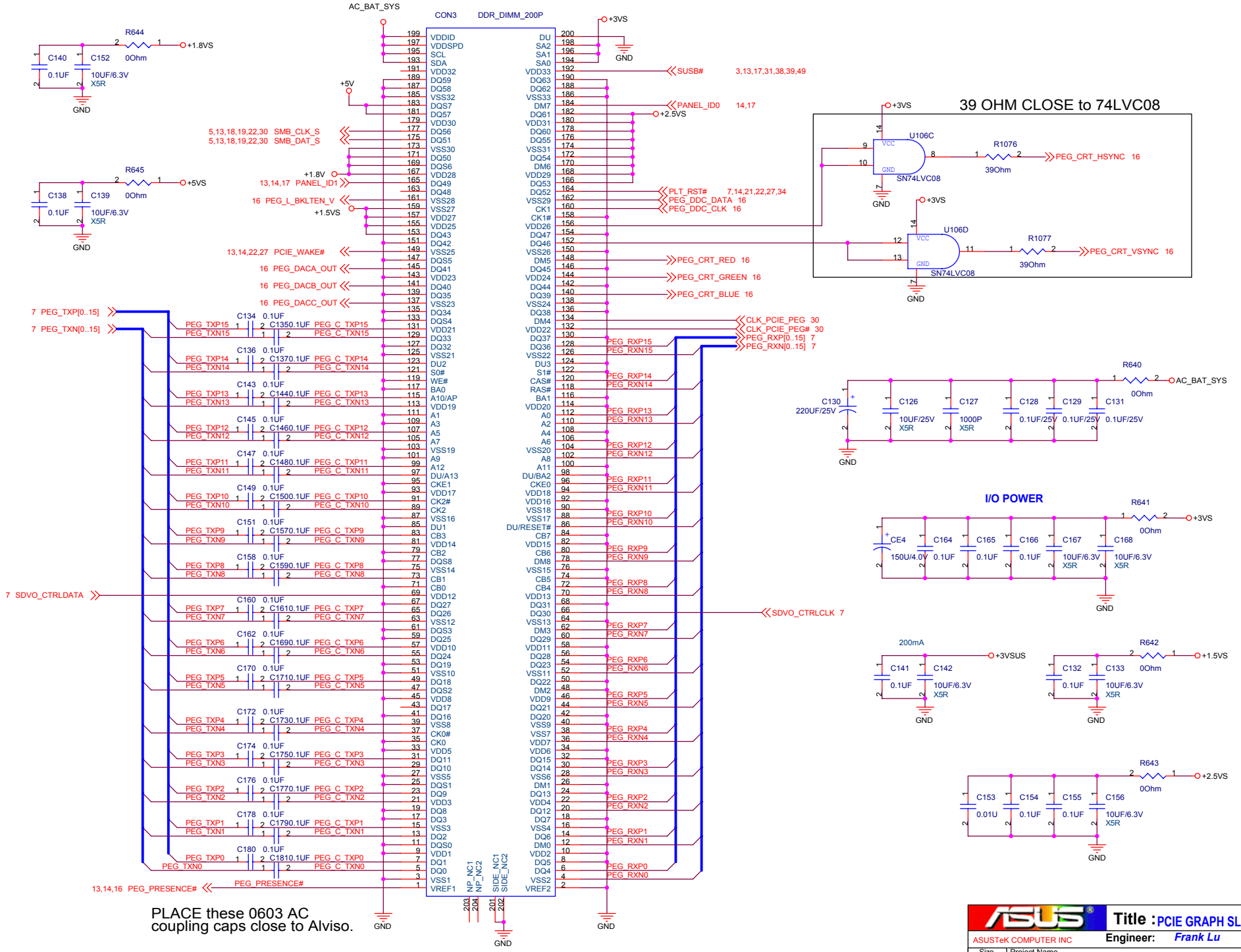
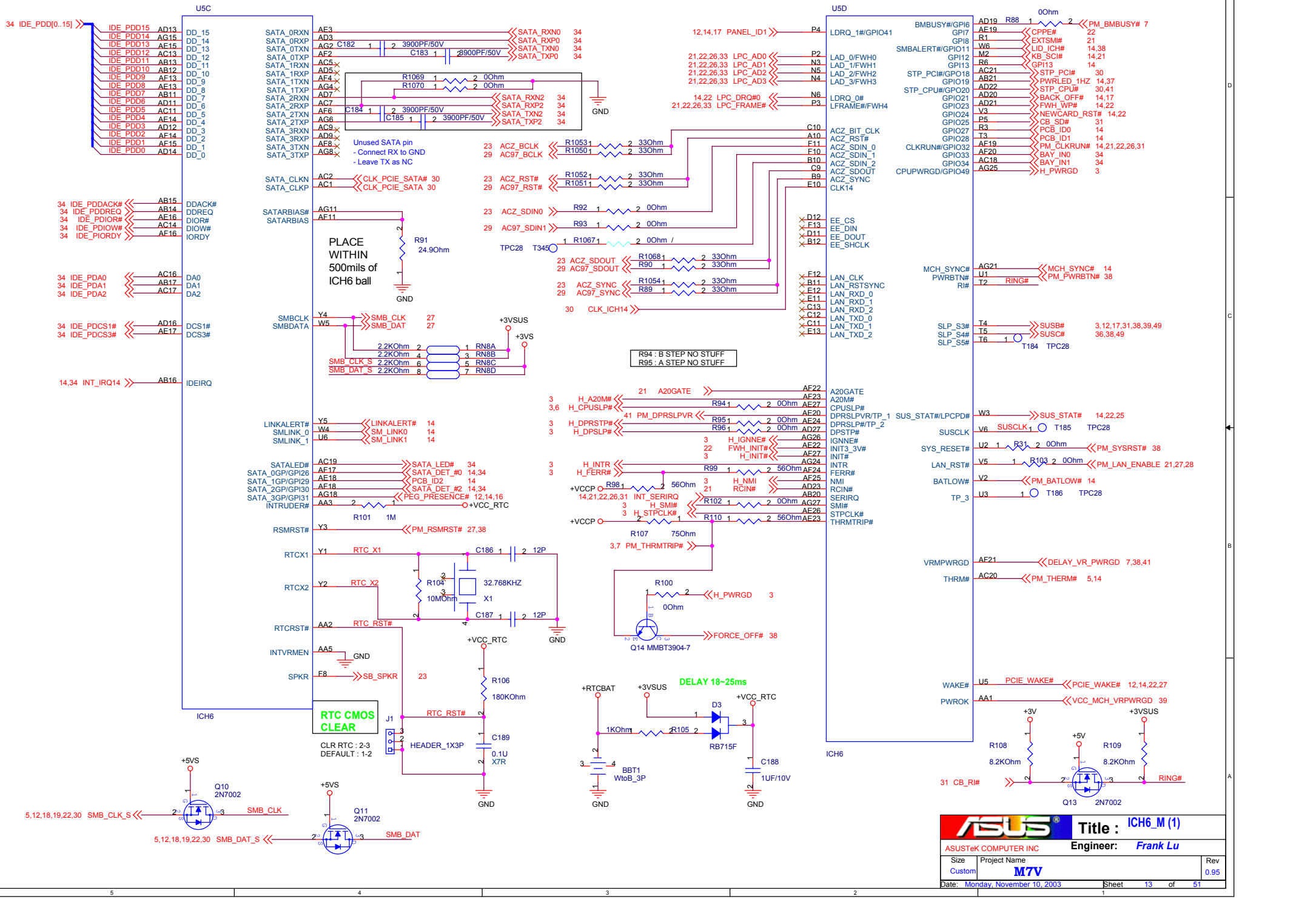
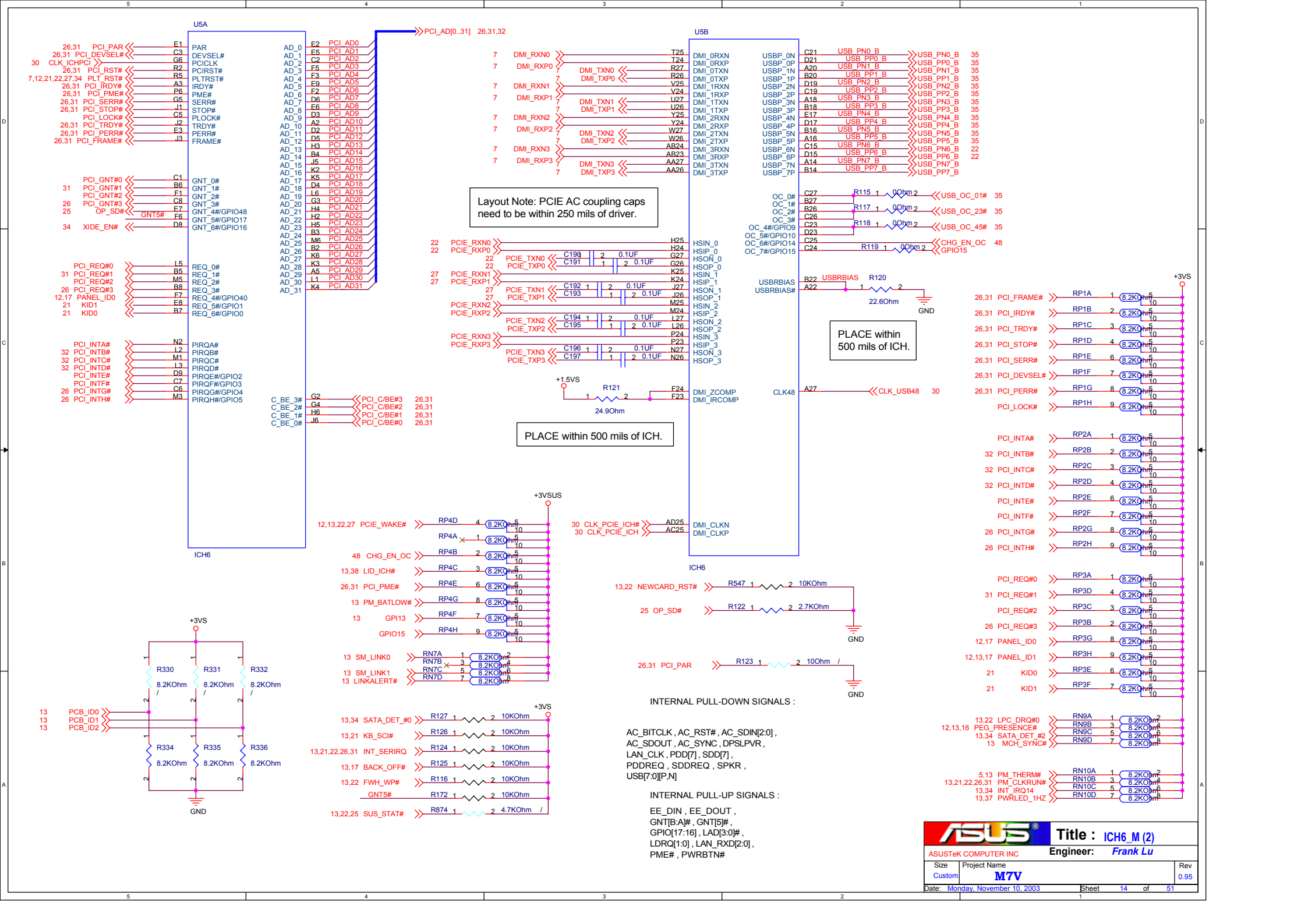
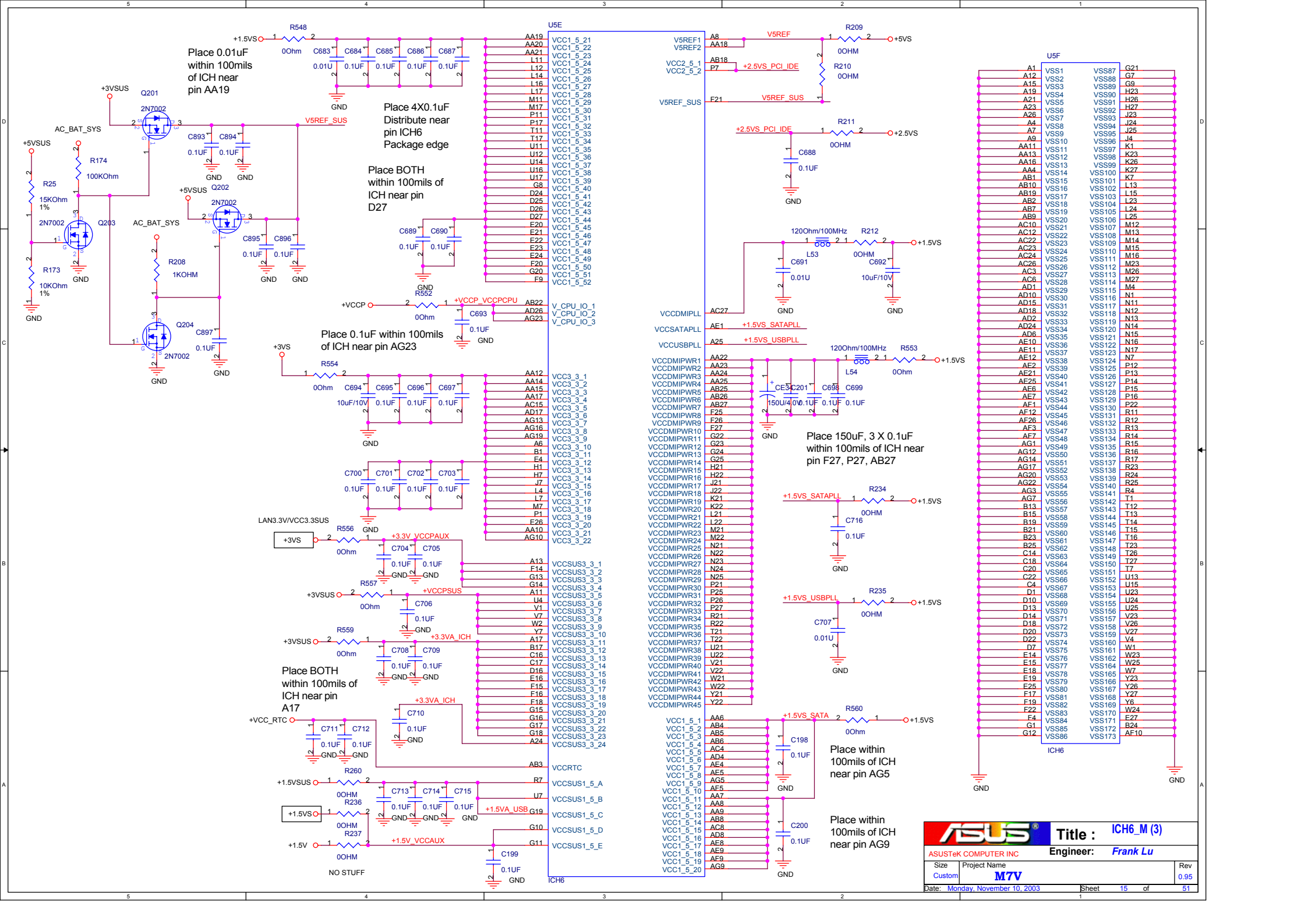
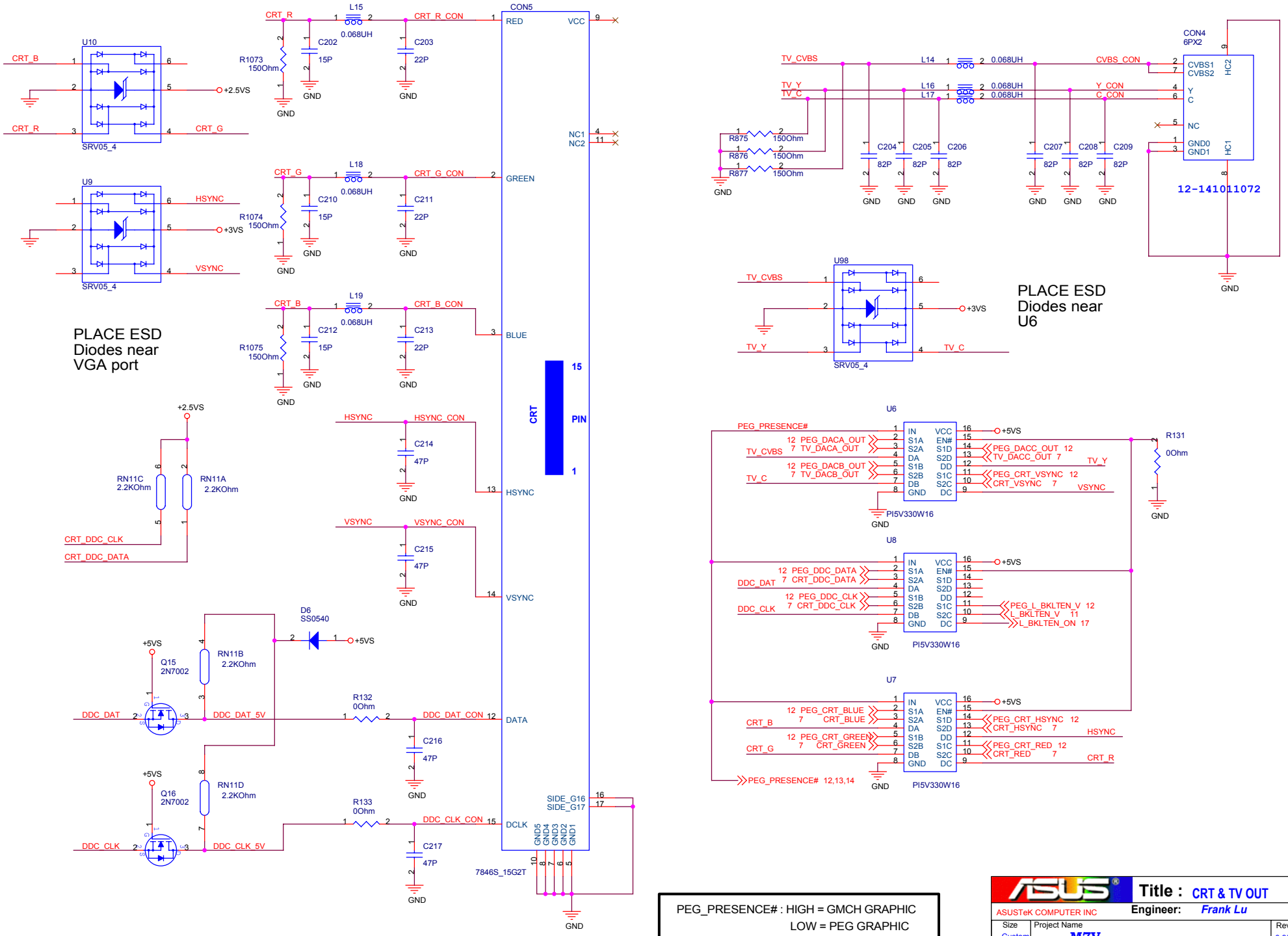

AC_BAT_SYS
CON3
DDR_DIMM_200P
R644
C140
C152
0Ohm
0.1UF
10UF/6.3V
X5R
+1.8VS
GND
R645
C138
C139
0Ohm
0.1UF
10UF/6.3V
X5R
+5VS
GND
+5V
+1.8V
+1.5VS
+3VS
+2.5VS
5,13,18,19,22,30 SMB_CLK_S
5,13,18,19,22,30 SMB_DAT_S
13,14,17 PANEL_ID1
16 PEG_L_BKLTEN_V
13,14,22,27 PCIE_WAKE#
16 PEG_DACA_OUT
16 PEG_DACB_OUT
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
X5R
C127
1000P
X5R
C128
0.1UF/25V
C129
0.1UF/25V
C131
0.1UF/25V
I/O POWER
R641
+3VS
CE4
150U/4.0V
C164
0.1UF
C165
0.1UF
C166
0.1UF
C167
10UF/6.3V
X5R
C168
10UF/6.3V
X5R
200mA
+3VSUS
C141
0.1UF
C142
10UF/6.3V
X5R
R642
+1.5VS
C132
0.1UF
C133
10UF/6.3V
X5R
R643
+2.5VS
C153
0.01U
C154
0.1UF
C155
0.1UF
C156
10UF/6.3V
X5R
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
IDE_PDD[0..15]
DD_15
DD_14
DD_13
DD_12
DD_11
DD_10
DD_9
DD_8
DD_7
DD_6
DD_5
DD_4
DD_3
DD_2
DD_1
DD_0
SATA_0RXN
SATA_0RXP
SATA_0TXN
SATA_0TXP
SATA_1RXN
SATA_1RXP
SATA_1TXN
SATA_1TXP
SATA_2RXN
SATA_2RXP
SATA_2TXN
SATA_2TXP
SATA_3RXN
SATA_3RXP
SATA_3TXN
SATA_3TXP
SATA_RXN0
SATA_RXP0
SATA_TXN0
SATA_TXP0
SATA_RXN2
SATA_RXP2
SATA_TXN2
SATA_TXP2
3900PF/50V
C182
C183
C184
C185
R1069
R1070
0Ohm
GND
Unused SATA pin
- Connect RX to GND
- Leave TX as NC
SATA_CLKN
SATA_CLKP
CLK_PCIE_SATA#
CLK_PCIE_SATA
SATARBIAS#
SATARBIAS
PLACE
WITHIN
500mils of
ICH6 ball
R91
24.9Ohm
IDE_PDDACK#
IDE_PDDREQ
IDE_PDIOR#
IDE_PDIOW#
IDE_PIORDY
DDACK#
DDREQ
DIOR#
DIOW#
IORDY
IDE_PDA0
IDE_PDA1
IDE_PDA2
DA0
DA1
DA2
IDE_PDCS1#
IDE_PDCS3#
DCS1#
DCS3#
INT_IRQ14
IDEIRQ
SMBCLK
SMBDATA
SMB_CLK
SMB_DAT
+3VSUS
+3VS
2.2KOhm
RN8A
RN8B
RN8C
RN8D
SMB_CLK_S
SMB_DAT_S
LINKALERT#
SMLINK_0
SMLINK_1
LINKALERT#
SM_LINK0
SM_LINK1
SATALED#
SATA_0GP/GPI26
SATA_1GP/GPI29
SATA_2GP/GPI30
SATA_3GP/GPI31
INTRUDER#
SATA_LED#
SATA_DET_#0
PCB_ID2
SATA_DET_#2
PEG_PRESENCE#
+VCC_RTC
R101
1M
RSMRST#
PM_RSMRST#
RTCX1
RTCX2
RTC_X1
RTC_X2
C186
C187
12P
R104
10MOhm
32.768KHZ
X1
RTCRST#
RTC_RST#
INTVRMEN
SPKR
SB_SPKR
RTC CMOS
CLEAR
CLR RTC : 2-3
DEFAULT : 1-2
J1
HEADER_1X3P
R106
180KOhm
C189
0.1U
X7R
Q10
2N7002
Q11
2N7002
5,12,18,19,22,30 SMB_CLK_S
5,12,18,19,22,30 SMB_DAT_S
SMB_CLK
SMB_DAT
12,14,17 PANEL_ID1
LDRQ_1#/GPIO41
LAD_0/FWH0
LAD_1/FWH1
LAD_2/FWH2
LAD_3/FWH3
LDRQ_0#
LFRAME#/FWH4
21,22,26,33 LPC_AD0
21,22,26,33 LPC_AD1
21,22,26,33 LPC_AD2
21,22,26,33 LPC_AD3
14,22 LPC_DRQ#0
21,22,26,33 LPC_FRAME#
ACZ_BIT_CLK
ACZ_RST#
ACZ_SDIN_0
ACZ_SDIN_1
ACZ_SDIN_2
ACZ_SDOUT
ACZ_SYNC
CLK14
ACZ_BCLK
AC97_BCLK
ACZ_RST#
AC97_RST#
ACZ_SDIN0
AC97_SDIN1
ACZ_SDOUT
AC97_SDOUT
ACZ_SYNC
AC97_SYNC
CLK_ICH14
R1053
R1050
R1052
R1051
R92
R93
R1067
R1068
R90
R1054
R89
33Ohm
TPC28
T345
EE_CS
EE_DIN
EE_DOUT
EE_SHCLK
LAN_CLK
LAN_RSTSYNC
LAN_RXD_0
LAN_RXD_1
LAN_RXD_2
LAN_TXD_0
LAN_TXD_1
LAN_TXD_2
R94 : B STEP NO STUFF
R95 : A STEP NO STUFF
A20GATE
H_A20M#
H_CPUSLP#
PM_DPRSLPVR
H_DPRSTP#
H_DPSLP#
A20GATE
A20M#
CPUSLP#
DPRSLPVR/TP_1
DPRSLP#/TP_2
DPSTP#
IGNNE#
INIT3_3V#
INIT#
INTR
FERR#
NMI
RCIN#
SERIRQ
SMI#
STPCLK#
THRMTRIP#
R94
R95
R96
R99
R98
R102
R110
56Ohm
H_IGNNE#
FWH_INIT#
H_INIT#
H_INTR
H_FERR#
H_NMI
RCIN#
INT_SERIRQ
H_SMI#
H_STPCLK#
+VCCP
R107
75Ohm
3,7 PM_THRMTRIP#
R100
H_PWRGD
FORCE_OFF#
Q14 MMBT3904-7
DELAY 18~25ms
+RTCBAT
+3VSUS
+VCC_RTC
D3
RB715F
R105
1KOhm
BBT1
WtoB_3P
C188
1UF/10V
GND
BMBUSY#/GPI6
GPI7
GPI8
SMBALERT#/GPIO11
GPI12
GPI13
STP_PCI#/GPO18
GPIO19
STP_CPU#/GPO20
GPIO21
GPIO23
GPIO24
GPIO25
GPIO27
GPIO28
CLKRUN#/GPIO32
GPIO33
GPIO34
CPUPWRGD/GPIO49
R88
PM_BMBUSY#
CPPE#
EXTSMI#
LID_ICH#
KB_SCI#
GPI13
STP_PCI#
PWRLED_1HZ
STP_CPU#
BACK_OFF#
FWH_WP#
NEWCARD_RST#
CB_SD#
PCB_ID0
PCB_ID1
PM_CLKRUN#
BAY_IN0
BAY_IN1
H_PWRGD
MCH_SYNC#
PWRBTN#
RI#
MCH_SYNC#
PM_PWRBTN#
RING#
SLP_S3#
SLP_S4#
SLP_S5#
SUSB#
SUSC#
T184
TPC28
SUS_STAT#/LPCPD#
SUSCLK
SYS_RESET#
LAN_RST#
BATLOW#
TP_3
SUS_STAT#
SUSCLK
T185
PM_SYSRST#
PM_LAN_ENABLE
PM_BATLOW#
T186
VRMPWRGD
THRM#
DELAY_VR_PWRGD
PM_THERM#
WAKE#
PWROK
PCIE_WAKE#
VCC_MCH_VRPWRGD
R108
R109
8.2KOhm
CB_RI#
RING#
Q13
2N7002
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
26,31 PCI_PAR
26,31 PCI_DEVSEL#
30 CLK_ICHPCI
26,31 PCI_RST#
7,12,21,22,27,34 PLT_RST#
26,31 PCI_IRDY#
26,31 PCI_PME#
26,31 PCI_SERR#
26,31 PCI_STOP#
PCI_LOCK#
26,31 PCI_TRDY#
26,31 PCI_PERR#
26,31 PCI_FRAME#
PCI_GNT#0
31 PCI_GNT#1
PCI_GNT#2
26 PCI_GNT#3
25 OP_SD#
GNT5#
34 XIDE_EN#
PCI_REQ#0
31 PCI_REQ#1
PCI_REQ#2
26 PCI_REQ#3
12,17 PANEL_ID0
21 KID1
21 KID0
PCI_INTA#
32 PCI_INTB#
32 PCI_INTC#
32 PCI_INTD#
PCI_INTE#
PCI_INTF#
26 PCI_INTG#
26 PCI_INTH#
C_BE_3#
C_BE_2#
C_BE_1#
C_BE_0#
PCI_C/BE#3 26,31
PCI_C/BE#2 26,31
PCI_C/BE#1 26,31
PCI_C/BE#0 26,31
U5B
ICH6
7 DMI_RXN0
7 DMI_RXP0
DMI_TXN0
DMI_TXP0
7 DMI_RXN1
7 DMI_RXP1
DMI_TXN1
DMI_TXP1
7 DMI_RXN2
7 DMI_RXP2
DMI_TXN2
DMI_TXP2
7 DMI_RXN3
7 DMI_RXP3
DMI_TXN3
DMI_TXP3
Layout Note: PCIE AC coupling caps need to be within 250 mils of driver.
22 PCIE_RXN0
22 PCIE_RXP0
PCIE_TXN0
PCIE_TXP0
27 PCIE_RXN1
27 PCIE_RXP1
PCIE_TXN1
PCIE_TXP1
PCIE_RXN2
PCIE_RXP2
PCIE_TXN2
PCIE_TXP2
PCIE_RXN3
PCIE_RXP3
PCIE_TXN3
PCIE_TXP3
C190
C191
C192
C193
C194
C195
C196
C197
0.1UF
+1.5VS
R121
24.9Ohm
PLACE within 500 mils of ICH.
USBP_0N
USBP_0P
USBP_1N
USBP_1P
USBP_2N
USBP_2P
USBP_3N
USBP_3P
USBP_4N
USBP_4P
USBP_5N
USBP_5P
USBP_6N
USBP_6P
USBP_7N
USBP_7P
USB_PN0_B
USB_PP0_B
USB_PN1_B
USB_PP1_B
USB_PN2_B
USB_PP2_B
USB_PN3_B
USB_PP3_B
USB_PN4_B
USB_PP4_B
USB_PN5_B
USB_PP5_B
USB_PN6_B
USB_PP6_B
USB_PN7_B
USB_PP7_B
OC_0#
OC_1#
OC_2#
OC_3#
OC_4#/GPIO9
OC_5#/GPIO10
OC_6#/GPIO14
OC_7#/GPIO15
R115 0Ohm
R117 0Ohm
R118 0Ohm
R119 0Ohm
USB_OC_01#
USB_OC_23#
USB_OC_45#
CHG_EN_OC
GPIO15
USBRBIAS
USBRBIAS#
R120
22.6Ohm
GND
PLACE within 500 mils of ICH.
CLK48
CLK_USB48 30
DMI_ZCOMP
DMI_IRCOMP
30 CLK_PCIE_ICH#
30 CLK_PCIE_ICH
DMI_CLKN
DMI_CLKP
+3VS
RP1A
RP1B
RP1C
RP1D
RP1E
RP1F
RP1G
RP1H
8.2KOhm
26,31 PCI_FRAME#
26,31 PCI_IRDY#
26,31 PCI_TRDY#
26,31 PCI_STOP#
26,31 PCI_SERR#
26,31 PCI_DEVSEL#
26,31 PCI_PERR#
PCI_LOCK#
RP2A
RP2B
RP2C
RP2D
RP2E
RP2F
RP2G
RP2H
PCI_INTA#
32 PCI_INTB#
32 PCI_INTC#
32 PCI_INTD#
PCI_INTE#
PCI_INTF#
26 PCI_INTG#
26 PCI_INTH#
RP3A
RP3D
RP3C
RP3B
RP3G
RP3H
RP3E
RP3F
PCI_REQ#0
31 PCI_REQ#1
PCI_REQ#2
26 PCI_REQ#3
12,17 PANEL_ID0
12,13,17 PANEL_ID1
21 KID0
21 KID1
RN9A
RN9B
RN9C
RN9D
13,22 LPC_DRQ#0
12,13,16 PEG_PRESENCE#
13,34 SATA_DET_#2
13 MCH_SYNC#
RN10A
RN10B
RN10C
RN10D
5,13 PM_THERM#
13,21,22,26,31 PM_CLKRUN#
13,34 INT_IRQ14
13,37 PWRLED_1HZ
+3VSUS
12,13,22,27 PCIE_WAKE#
48 CHG_EN_OC
13,38 LID_ICH#
26,31 PCI_PME#
13 PM_BATLOW#
13 GPI13
GPIO15
RP4D
RP4A
RP4B
RP4C
RP4E
RP4G
RP4F
RP4H
13 SM_LINK0
13 SM_LINK1
13 LINKALERT#
RN7A
RN7B
RN7C
RN7D
+3VS
13,34 SATA_DET_#0
13,21 KB_SCI#
13,21,22,26,31 INT_SERIRQ
13,17 BACK_OFF#
13,22 FWH_WP#
GNT5#
13,22,25 SUS_STAT#
R127 10KOhm
R126 10KOhm
R124 10KOhm
R125 10KOhm
R116 10KOhm
R172 10KOhm
R874 4.7KOhm
+3VS
R330
R331
R332
R334
R335
R336
8.2KOhm
13 PCB_ID0
13 PCB_ID1
13 PCB_ID2
GND
13,22 NEWCARD_RST#
25 OP_SD#
R547 10KOhm
R122 2.7KOhm
GND
26,31 PCI_PAR
R123 10Ohm
GND
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#
ASUSTeK COMPUTER INC
Title : ICH6_M (2)
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
Engineer: Frank Lu

Title : CRT & TV OUT

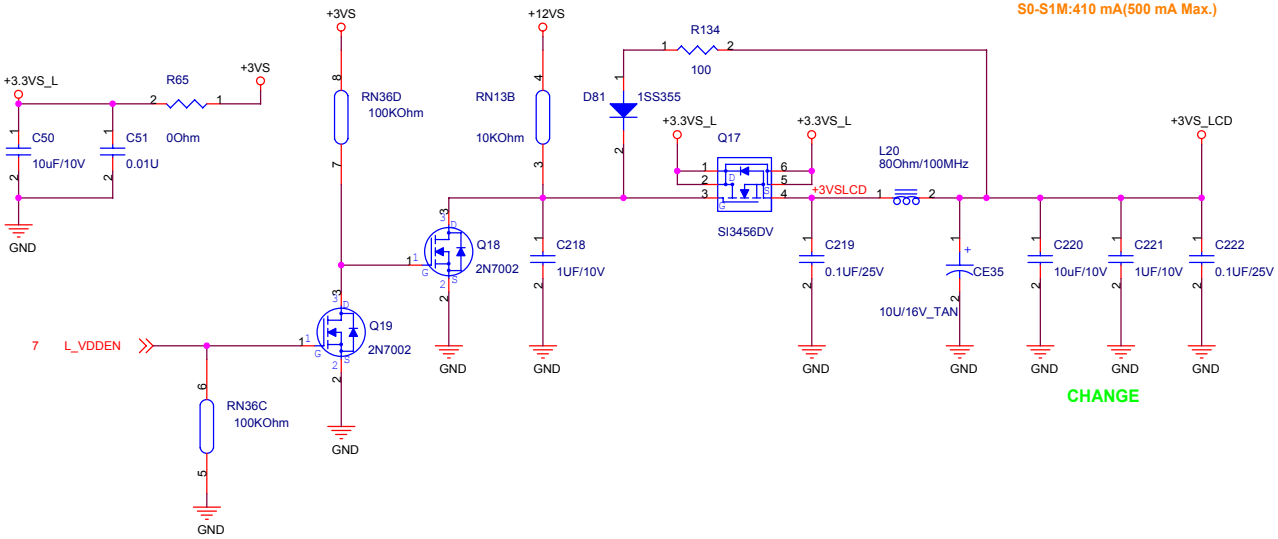
Size	Project Name	Rev
Custom	M7V	0.95

Date: Monday, November 10, 2003 Sheet 16 of 51

LCD Power

SI3865: US$0.22

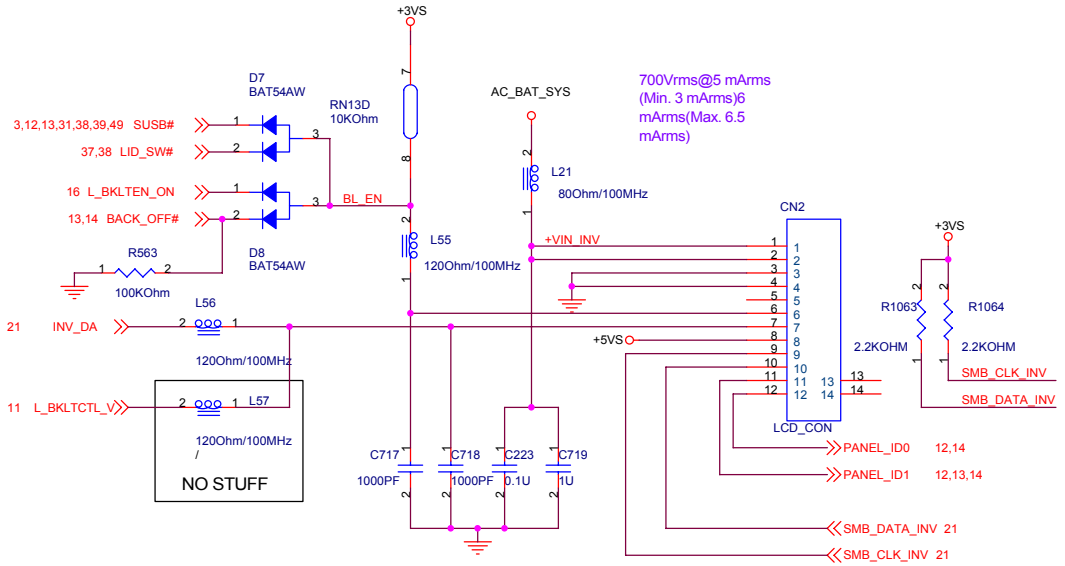
3-3.6V
S0-S1M:410 mA(500 mA Max.)



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

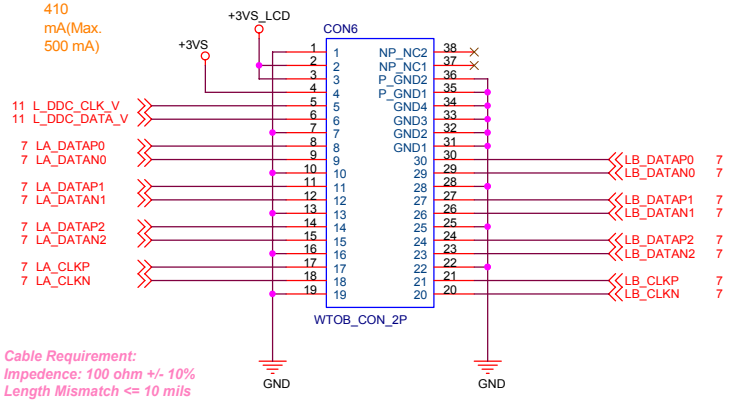
PANEL ID0 RESERVE FOR VENDOR

LCD Backlight Control



LCD LVDS Interface

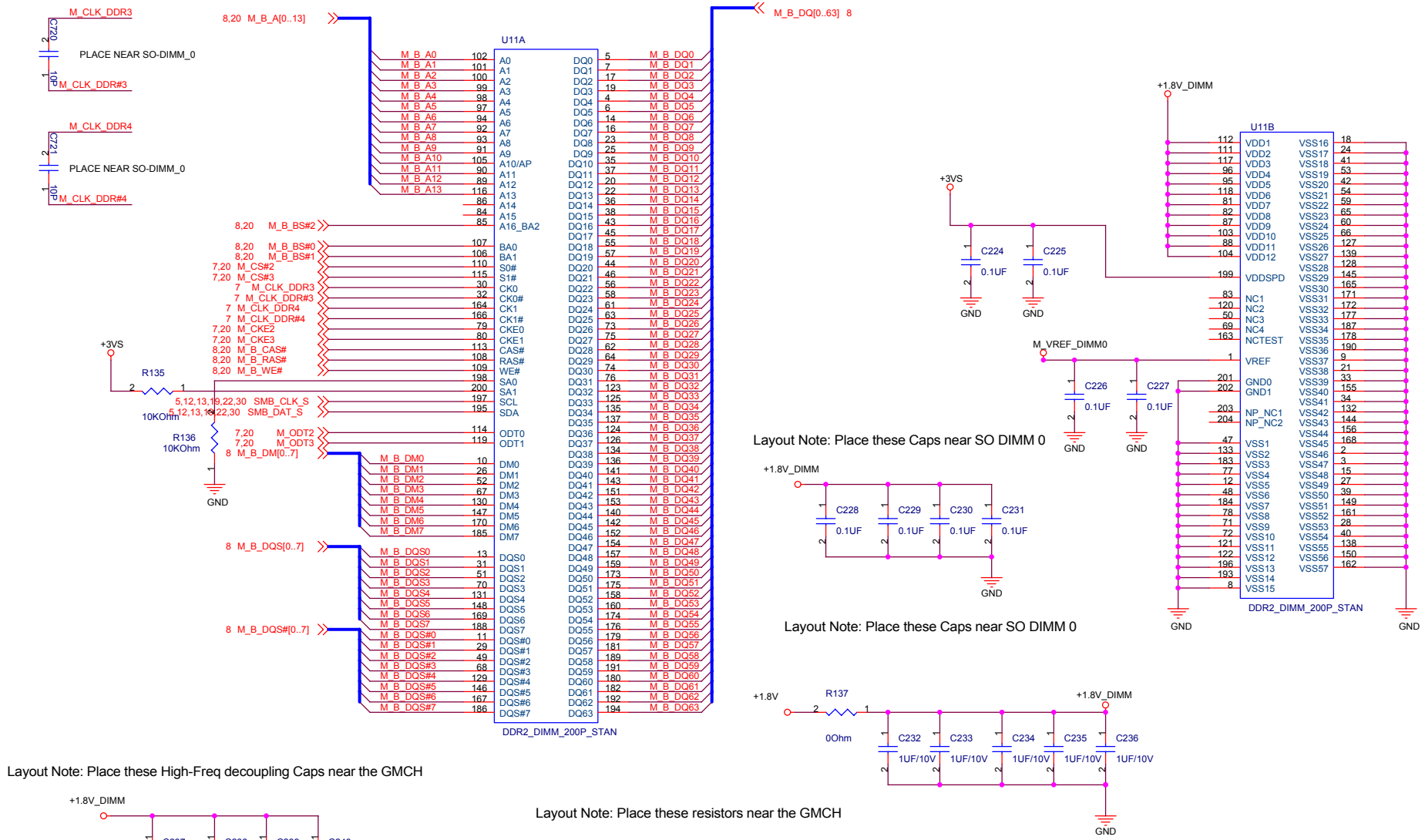
3V-3.6V
Full
Active:
410
mA(Max.
500 mA)



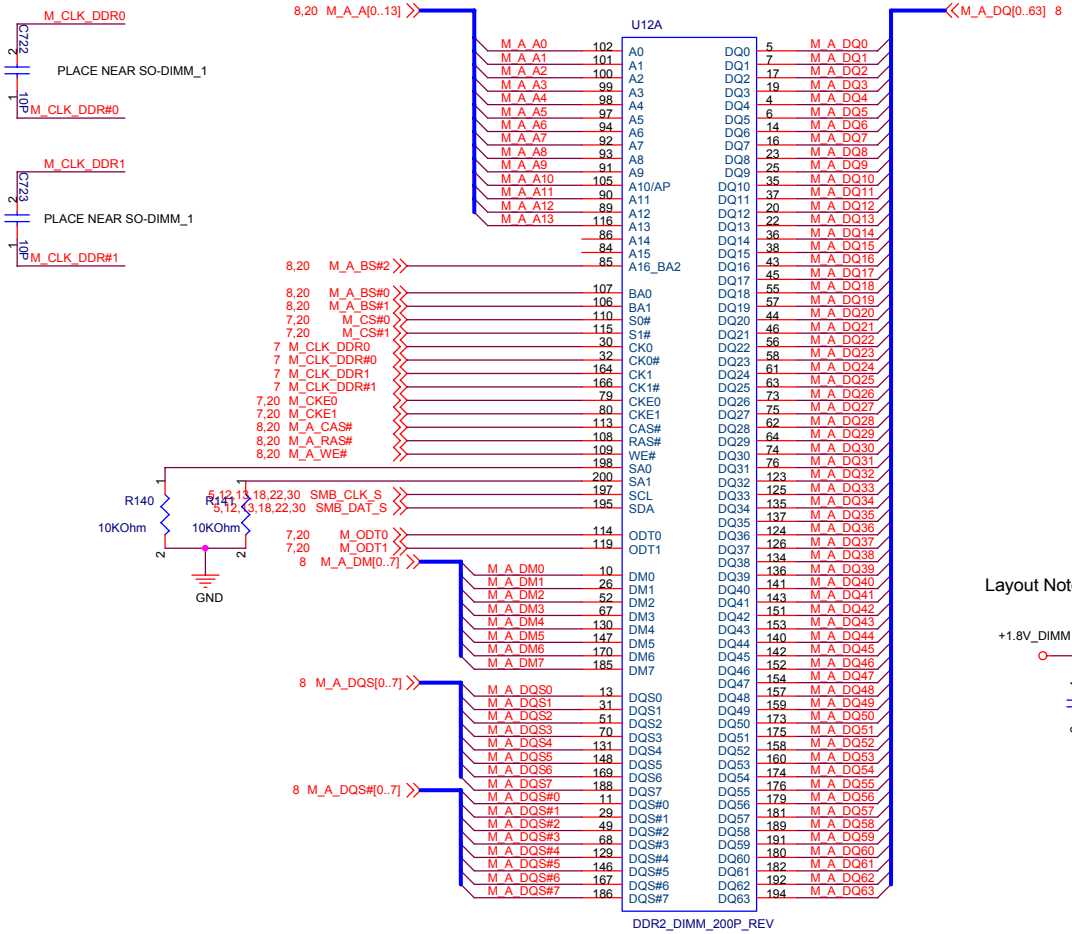
Cable Requirement:
Impedence: 100 ohm +/- 10%
Length Mismatch <= 10 mils
Twisted Pair(Not Ribbon)
Maximum Length <= 16"

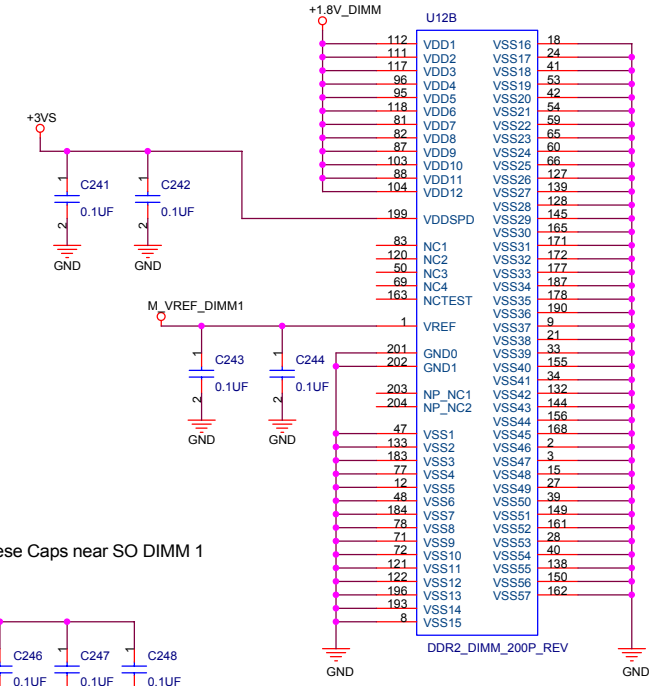
ASL (SMB addr : 0x72)
(Ambient Light Sensor)

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	

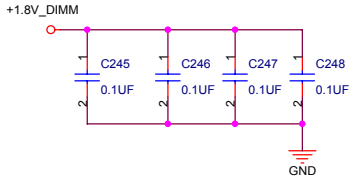


ASUSTeK COMPUTER INC	Title : DDR2_SO-DIMM_0	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 18 of 51	

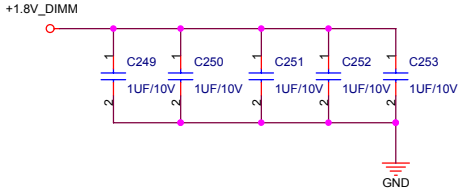




Layout Note: Place these Caps near SO DIMM 1

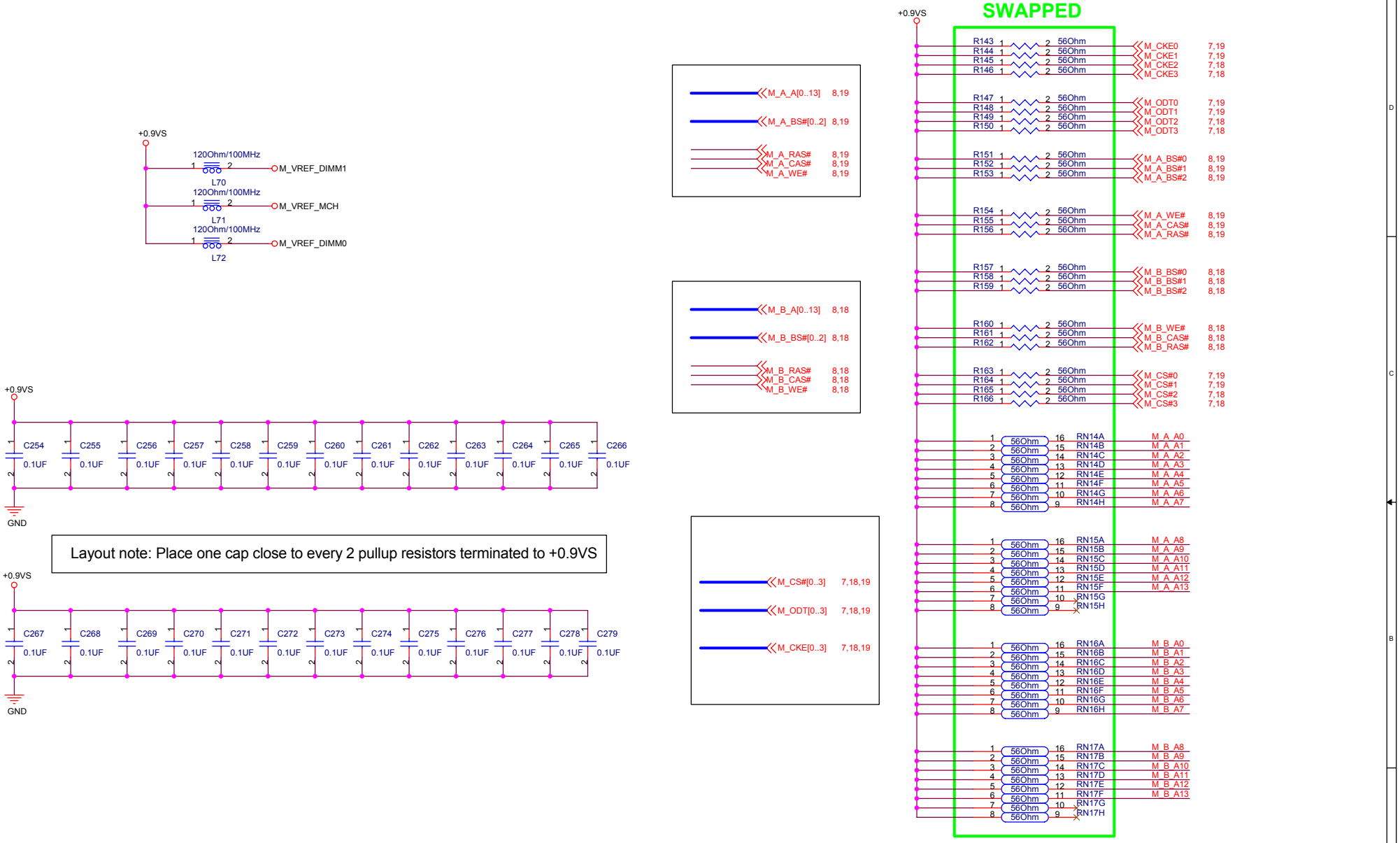


Layout Note: Place these Caps near SO DIMM 1

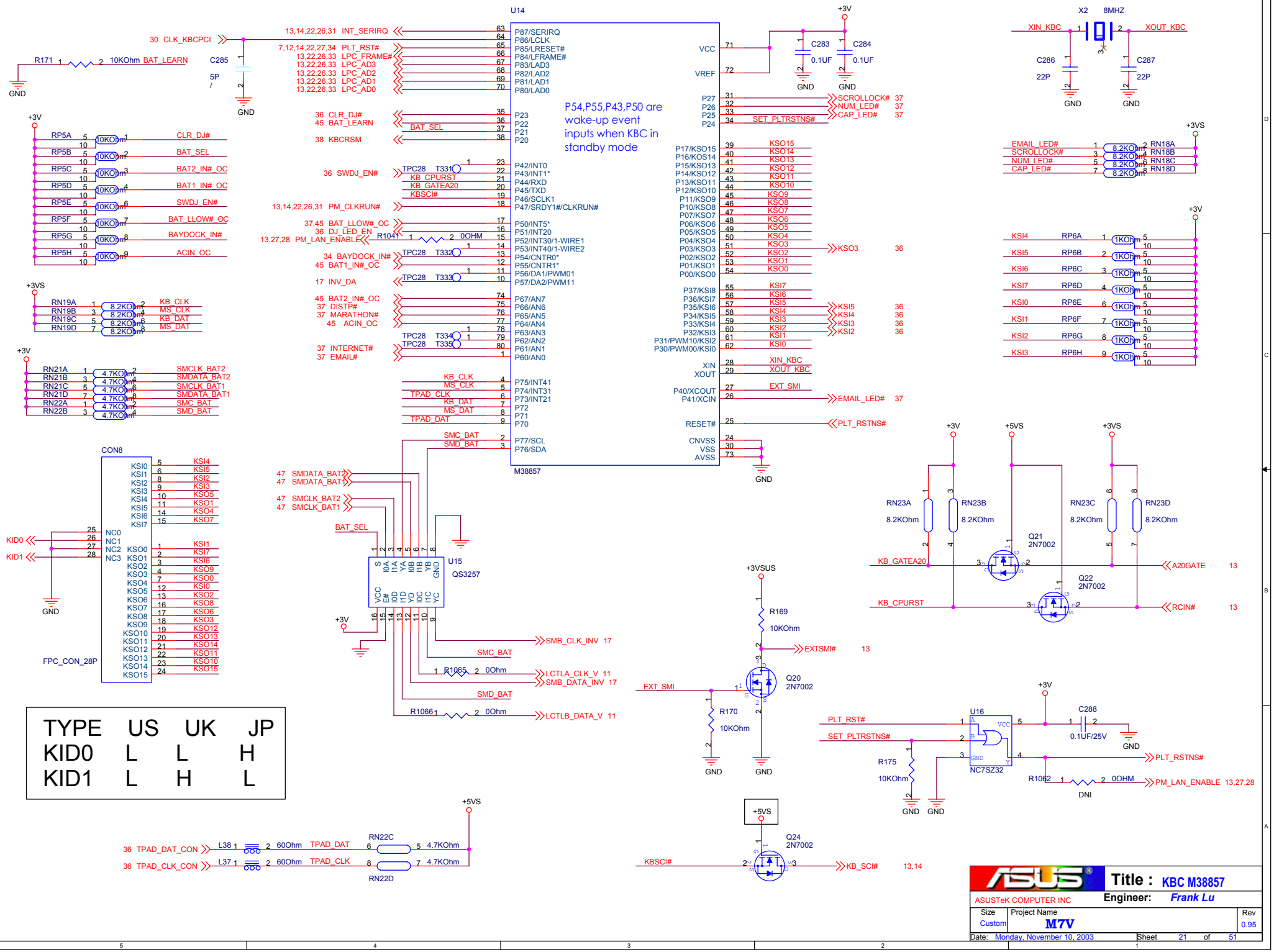


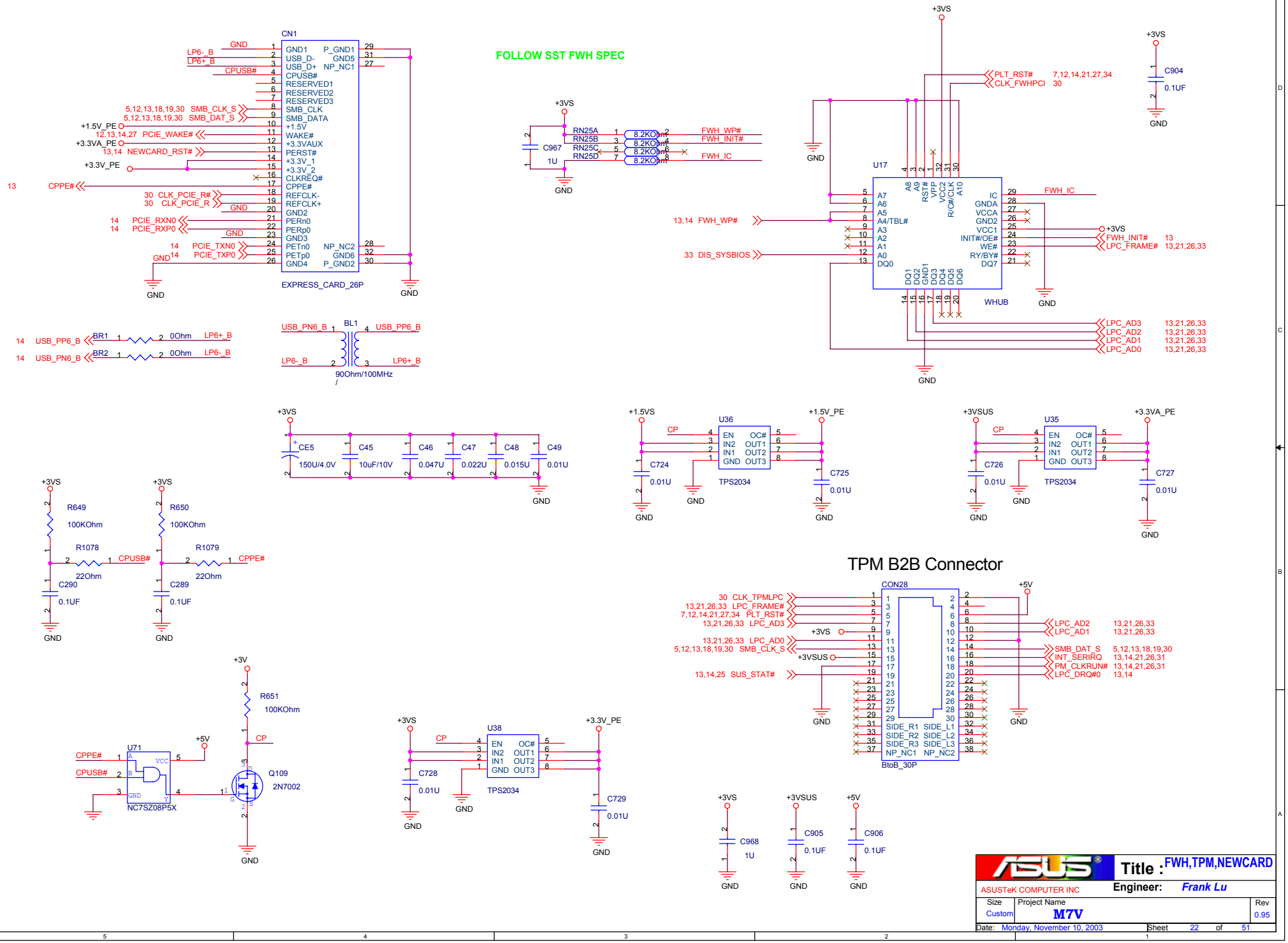
SO-DIMM 1 is placed father from the GMCH than SO-DIMM 0

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	

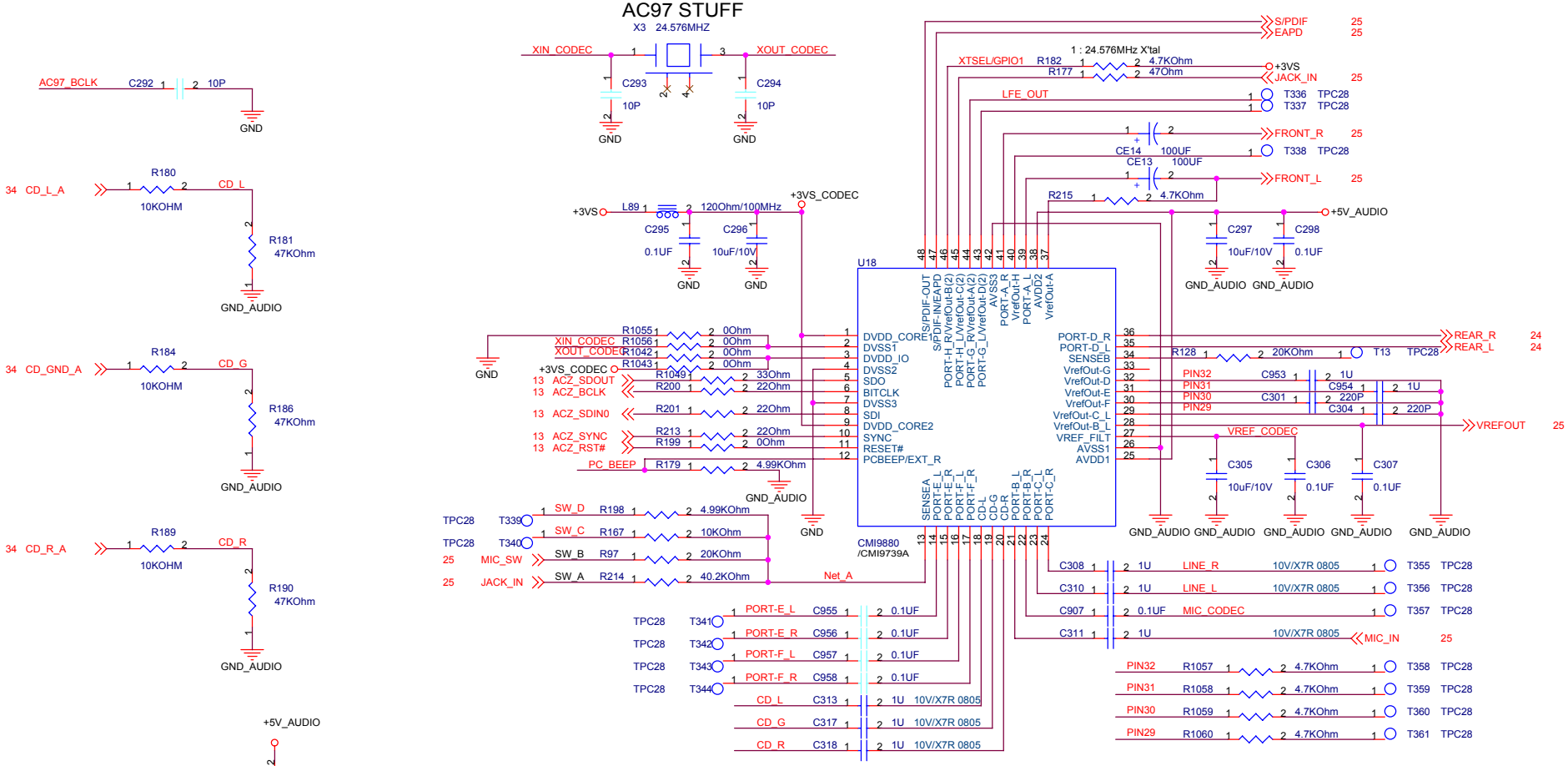


ASUSTeK COMPUTER INC	Title : DDR2 ADDR TERM	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 20 of 51	


U14
M38857
P54,P55,P43,P50 are wake-up event inputs when KBC in standby mode
CON8
FPC_CON_28P
U15
QS3257
Q20 2N7002
Q21 2N7002
Q22 2N7002
Q24 2N7002
U16
NC7SZ32
X2 8MHZ
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


CN1
EXPRESS_CARD_26P
FOLLOW SST FWH SPEC
U17
WHUB
BL1
90Ohm/100MHz
U36
U35
TPS2034
U38
U71
NC7SZ08P5X
Q109
2N7002
CON28
BtoB_30P
TPM B2B Connector
Title : FWH,TPM,NEWCARD
ASUSTeK COMPUTER INC
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		

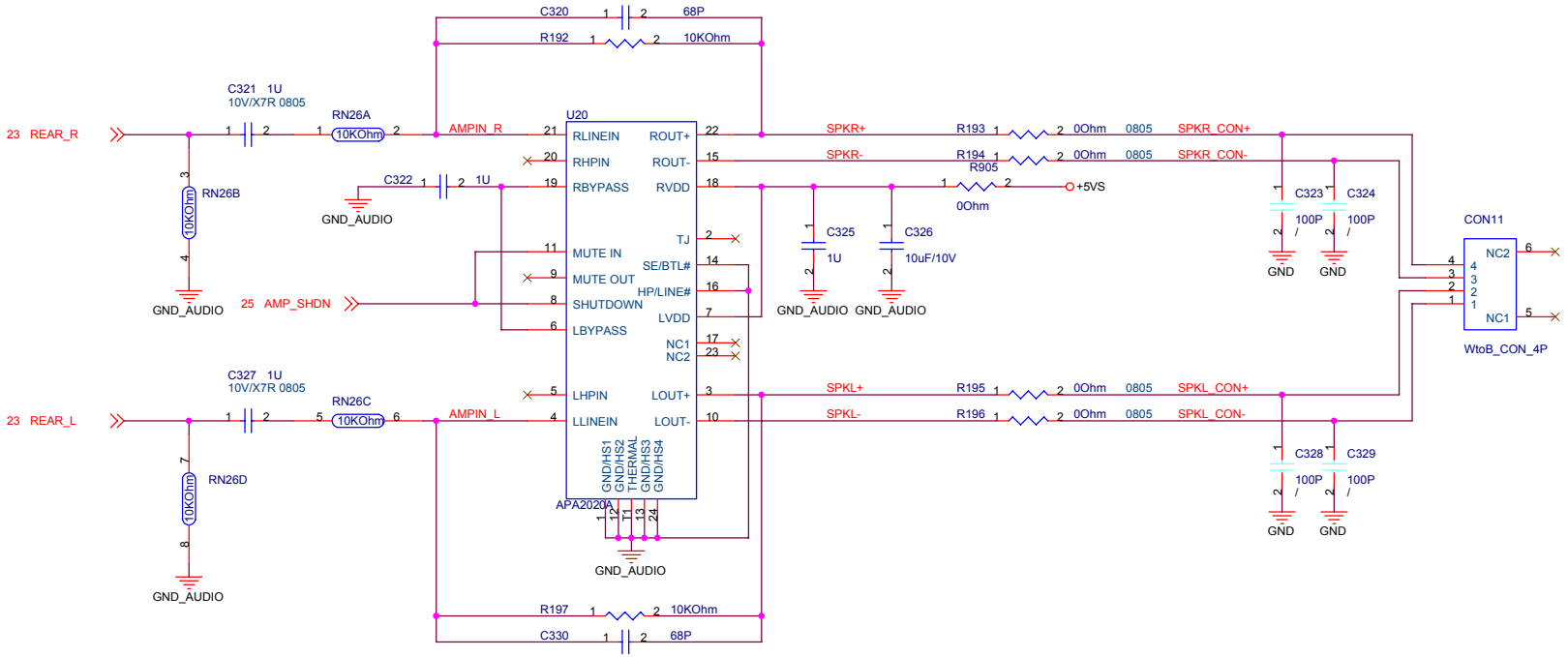
ASUSTek COMPUTER INC. NB1

Title : AC'97 / AZALIA

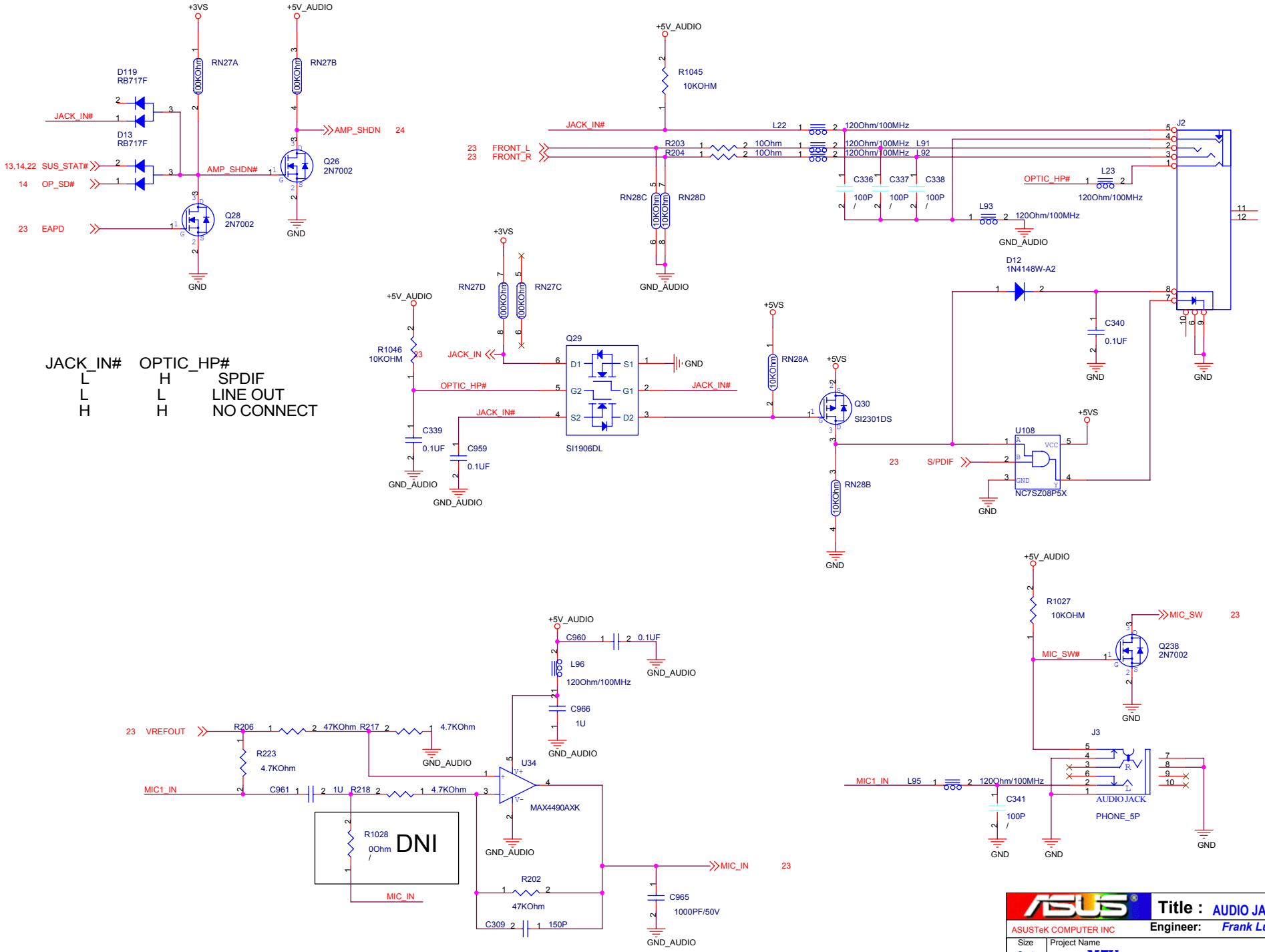
Engineer: Frank Lu

Size	Project Name	Rev
Custom	M7V	0.95

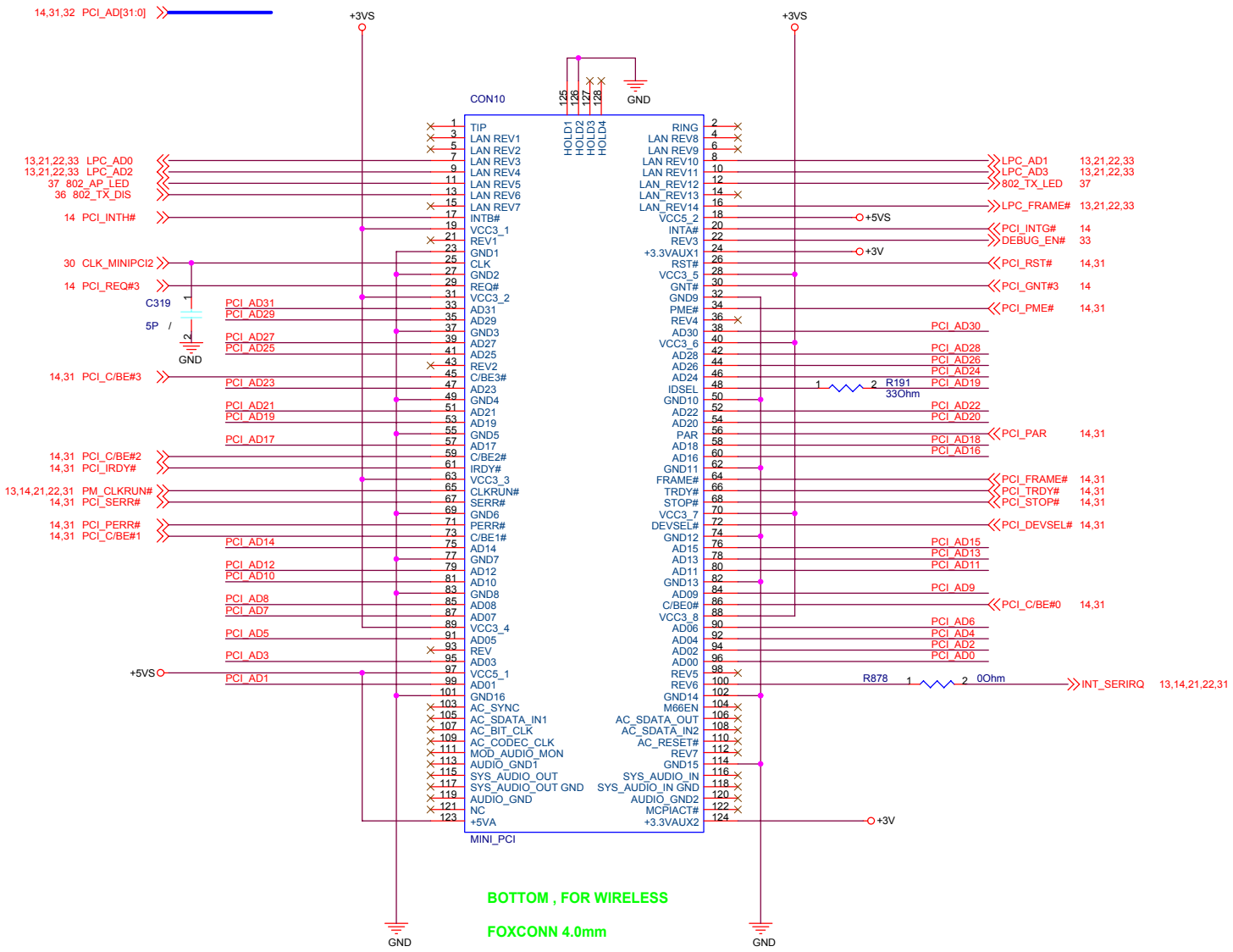
Date: Monday, November 10, 2003 Sheet 23 of 51



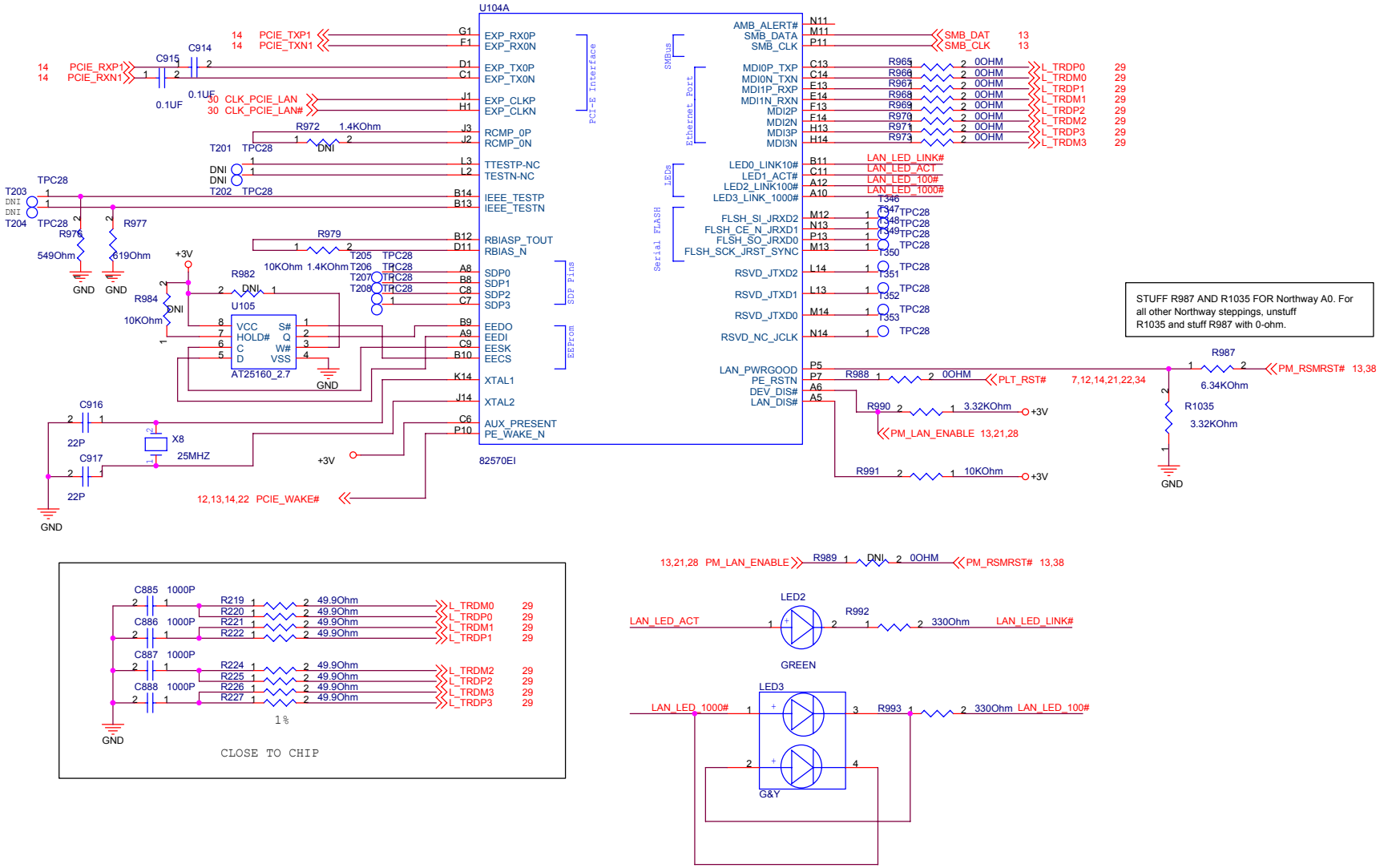
ASUSTeK COMPUTER INC	Title : 2.1 CHANNEL AMP	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 24 of 51	



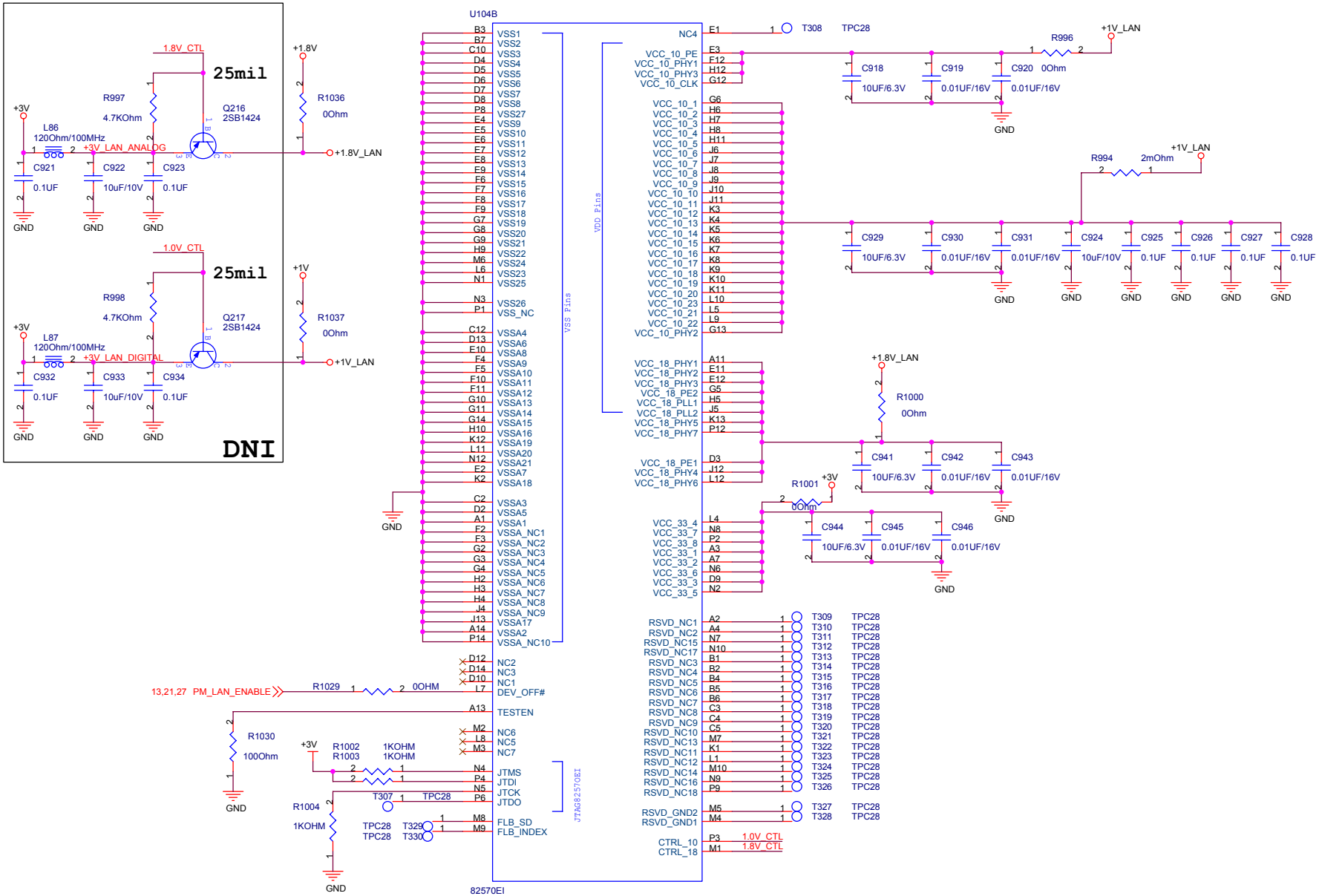
Title :	AUDIO JACKS
ASUSTeK COMPUTER INC	Engineer: Frank Lu
Size: Custom	Project Name: M7V
Rev: 0.95	
Date: Monday, November 10, 2003	Sheet 25 of 51



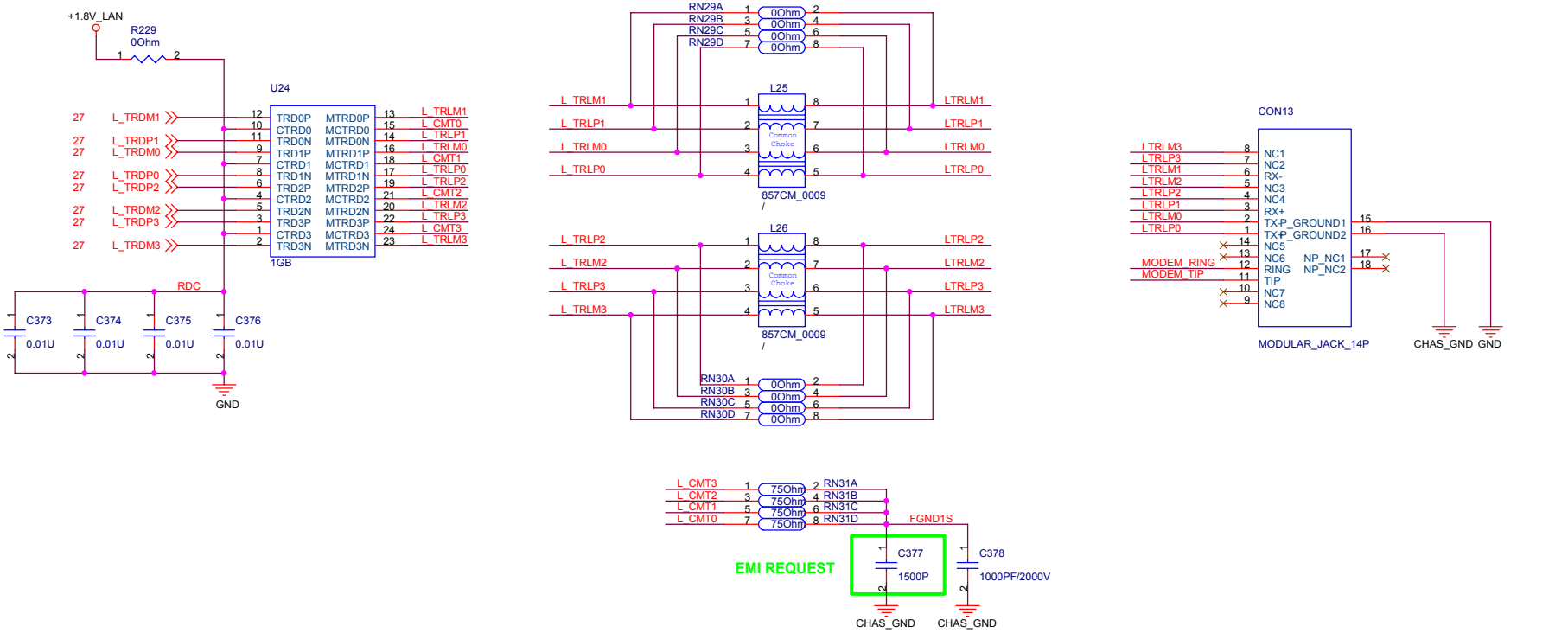
ASUSTeK COMPUTER INC	Title : MINIPCI (802.11)	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 26 of 51	



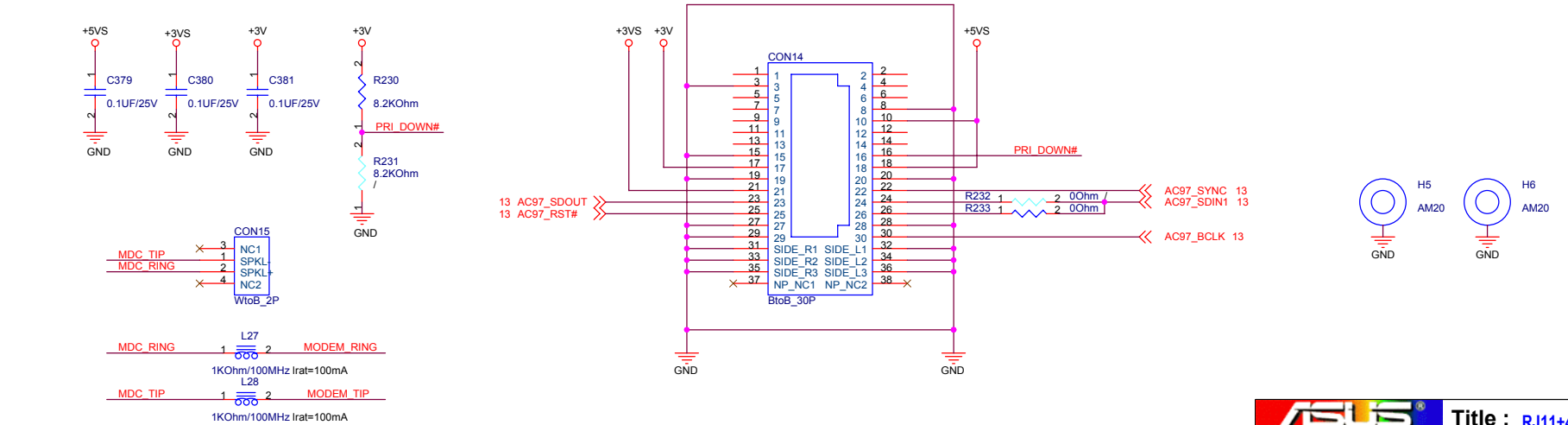
ASUSTeK COMPUTER INC		Title : 82570EI-1	
		Engineer: Frank Lu	
Size: Custom	Project Name: M7V		Rev: 0.95
Date: Monday, November 10, 2003		Sheet 27 of 51	



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: Custom	Project Name: M7V	Rev: 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

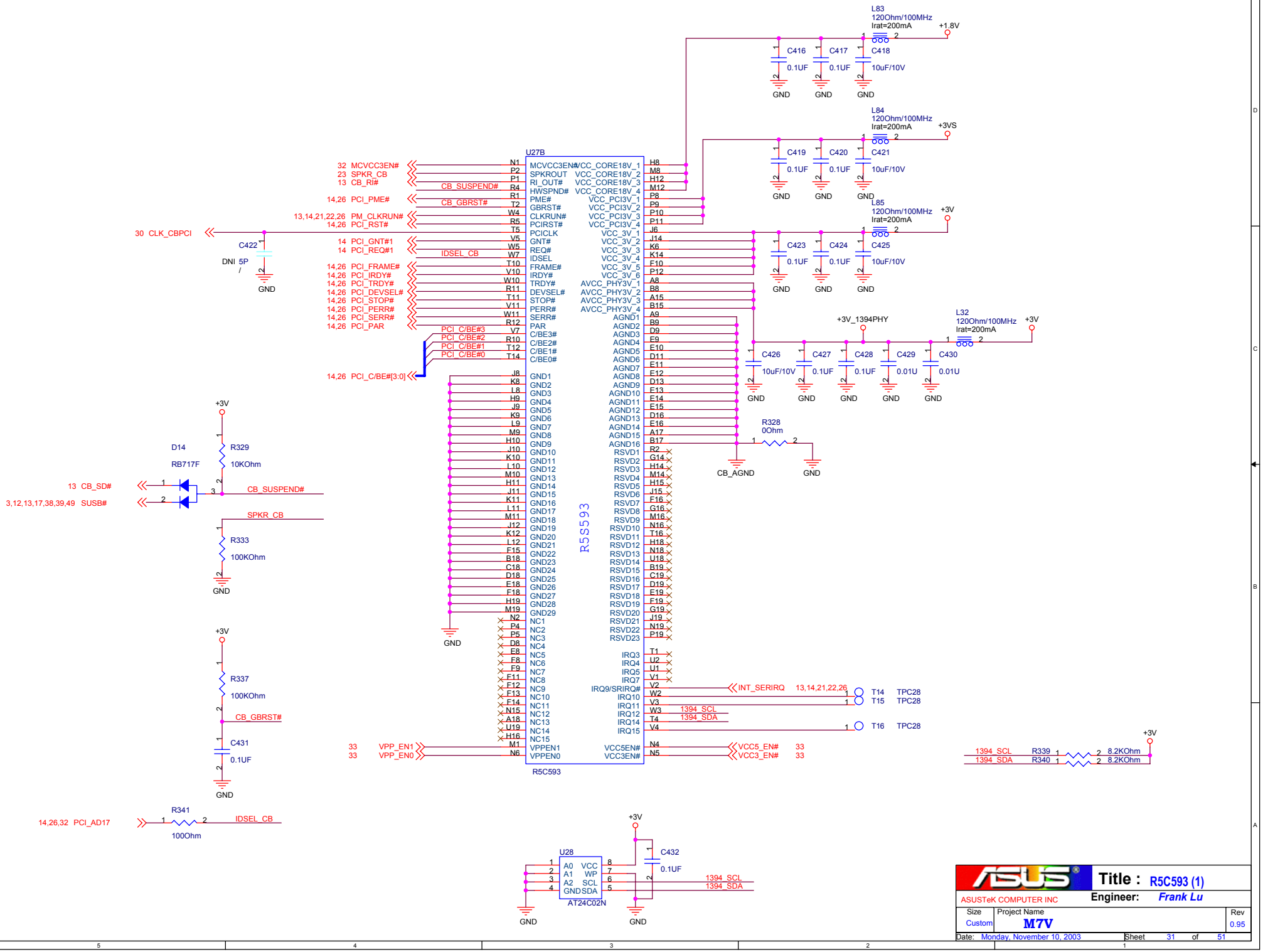
PLACE termination close to source IC

U25 ICS954201

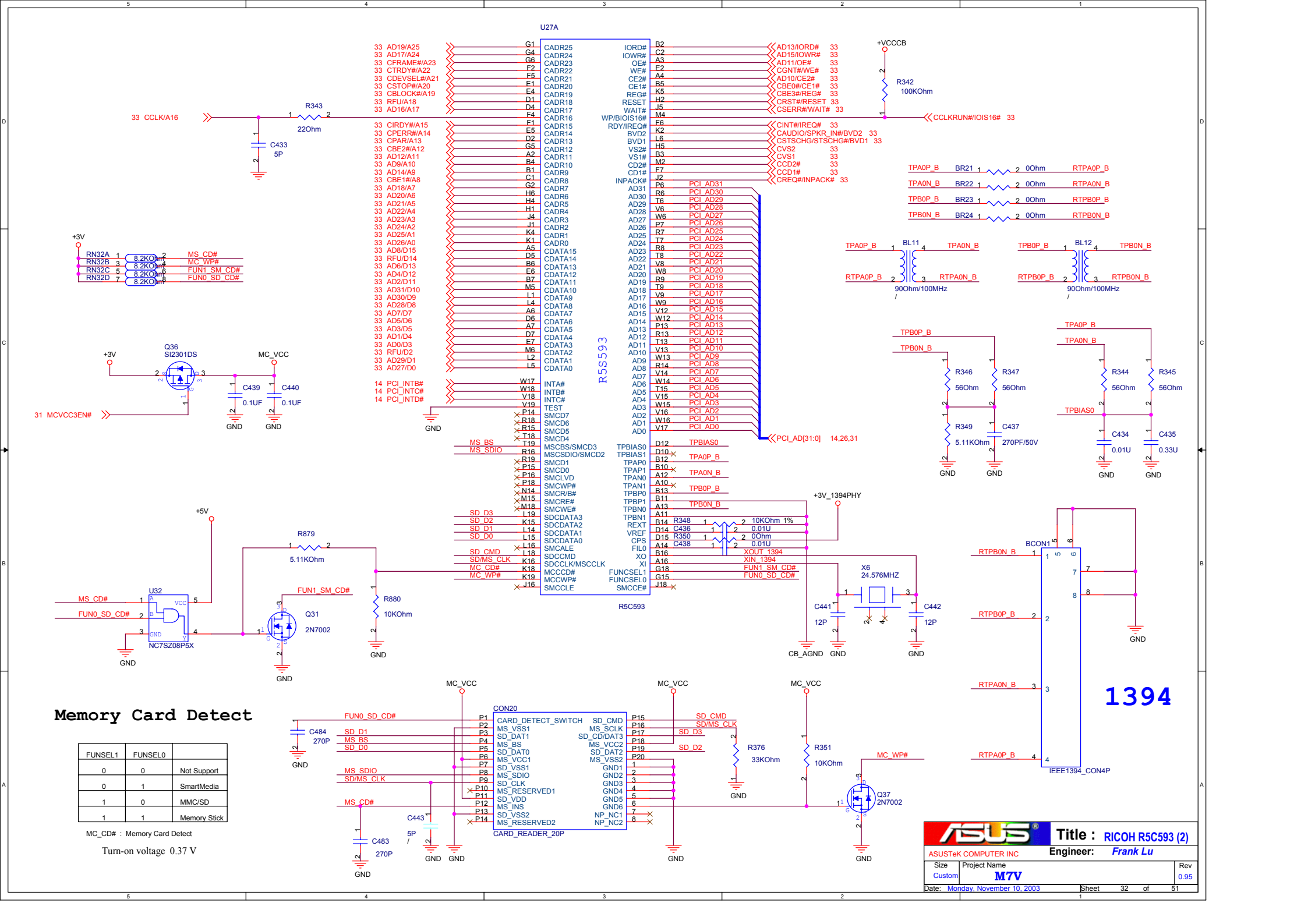
U26 MK1493_05

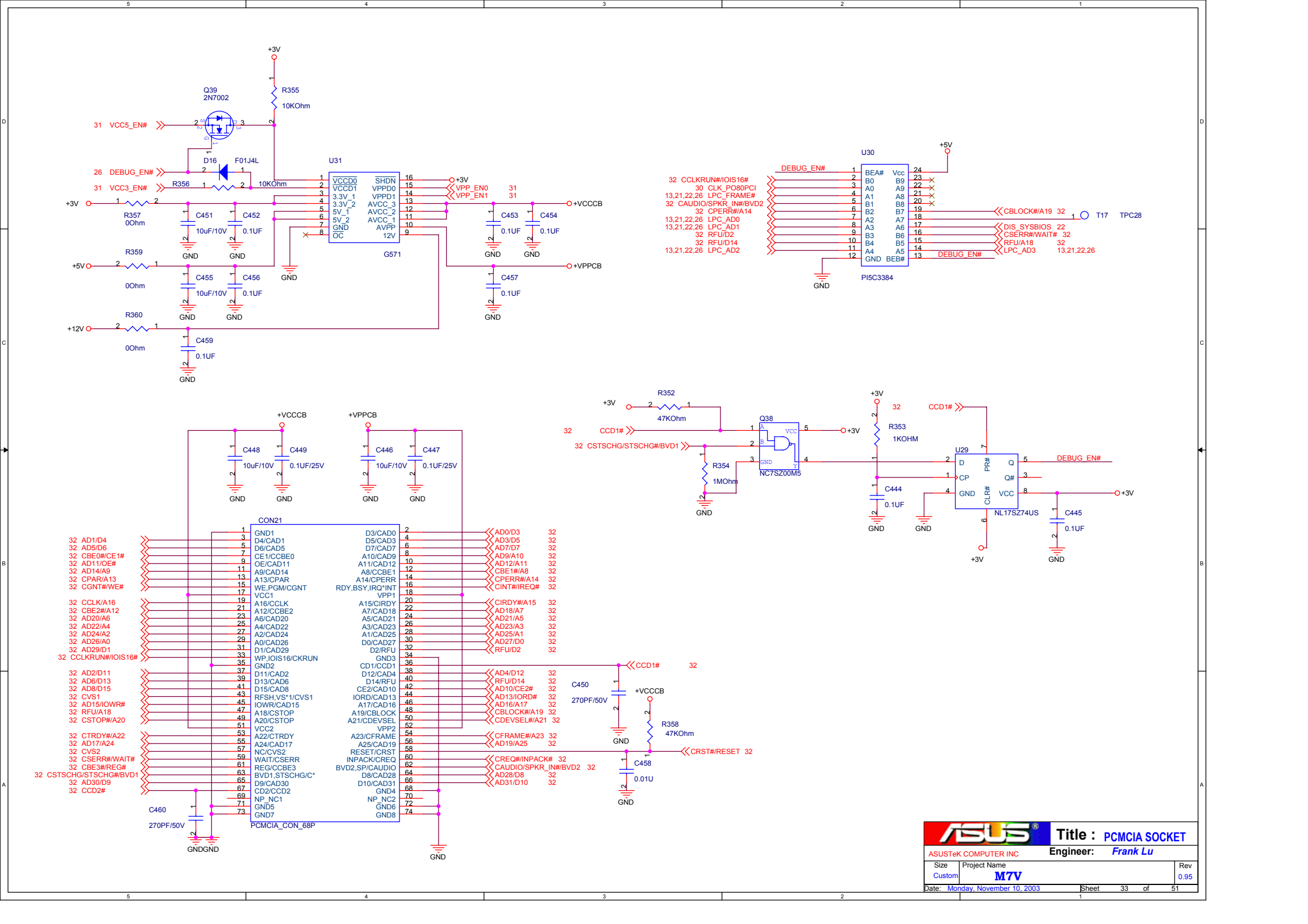
DNI

Title :	CLOCK GEN
ASUSTeK COMPUTER INC	Engineer: Frank Lu
Size: Custom	Project Name: M7V
Rev: 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
R5C593
33 CCLK/A16
R343
22Ohm
C433
5P
R342
100KOhm
+VCCCB
CCLKRUN#/IOIS16# 33
PCI_AD[31:0] 14,26,31
TPA0P_B
TPA0N_B
TPB0P_B
TPB0N_B
BR21 0Ohm RTPA0P_B
BR22 0Ohm RTPA0N_B
BR23 0Ohm RTPB0P_B
BR24 0Ohm 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#
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
Q31
2N7002
R880
10KOhm
R348 10KOhm 1%
C436 0.01U
R350 0Ohm
C438 0.01U
+3V_1394PHY
X6
24.576MHZ
C441 12P
C442 12P
CB_AGND
XOUT_1394
XIN_1394
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_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



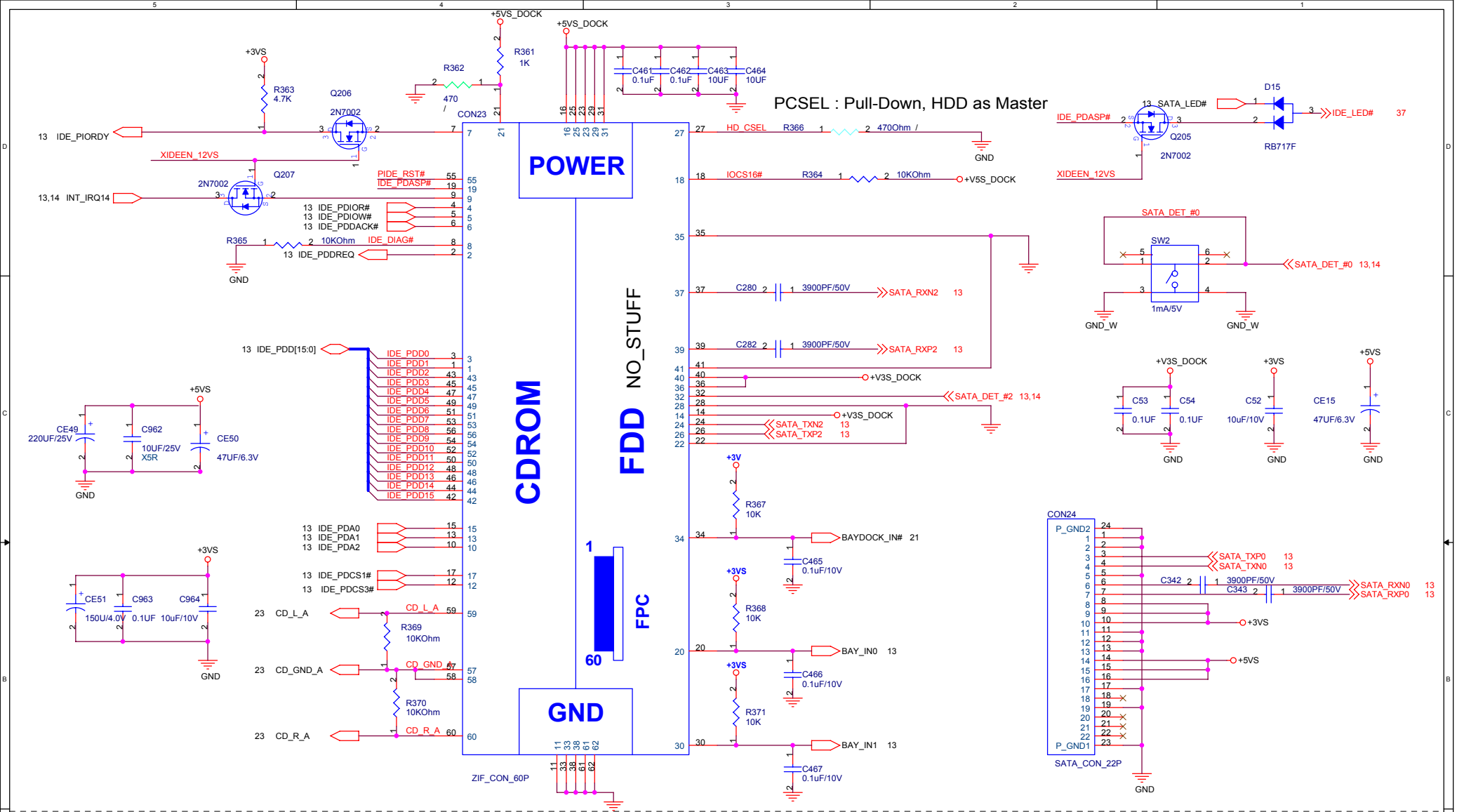
ASUSTeK COMPUTER INC

Title : PCMCIA SOCKET

Engineer: Frank Lu

Size	Project Name	Rev
Custom	M7V	0.95

Date: Monday, November 10, 2003 Sheet 33 of 51



CD-ROM RESET

ASUSTeK COMPUTER INC	Title : CDROM		
	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, USB_PP0_B 4, LP0-_B 2, LP0+_B 3 — 90Ohm/100MHz
L76: USB_PN1_B 1, USB_PP1_B 4, LP1-_B 2, LP1+_B 3 — 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, USB_PP2_B 4, LP2-_B 2, LP2+_B 3 — 90Ohm/100MHz
L79: USB_PN3_B 1, USB_PP3_B 4, LP3-_B 2, LP3+_B 3 — 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, USB_PP4_B 4, LP4-_B 2, LP4+_B 3 — 90Ohm/100MHz
L82: USB_PN5_B 1, USB_PP5_B 4, LP5-_B 2, LP5+_B 3 — 90Ohm/100MHz

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

+5V — F2 1.6A/6V — V1USB_B — L77 400Ohm/100Mhz Irat=2A — V1_USB_B
R896 2.7KOhm, CE47 220UF/6.3V, GND
14 USB_OC_01# — R897 8.2KOhm — GND

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

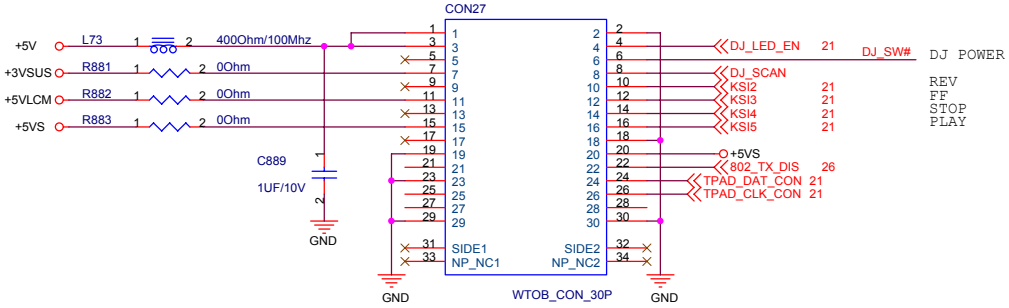
L88 400Ohm/100Mhz Irat=2A — GND

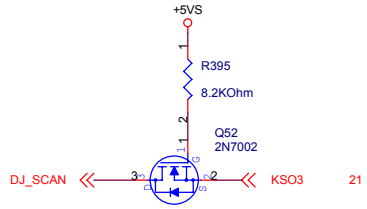
V1_USB_B — C890 0.1UF/25V — GND
CON17 USB_CON_2X4P: GND3, VCC1, 1P-, 1P+, GND1, VCC2, 0P-, 0P+, GND2, GND4
LP0-_B, LP0+_B, LP1-_B, LP1+_B

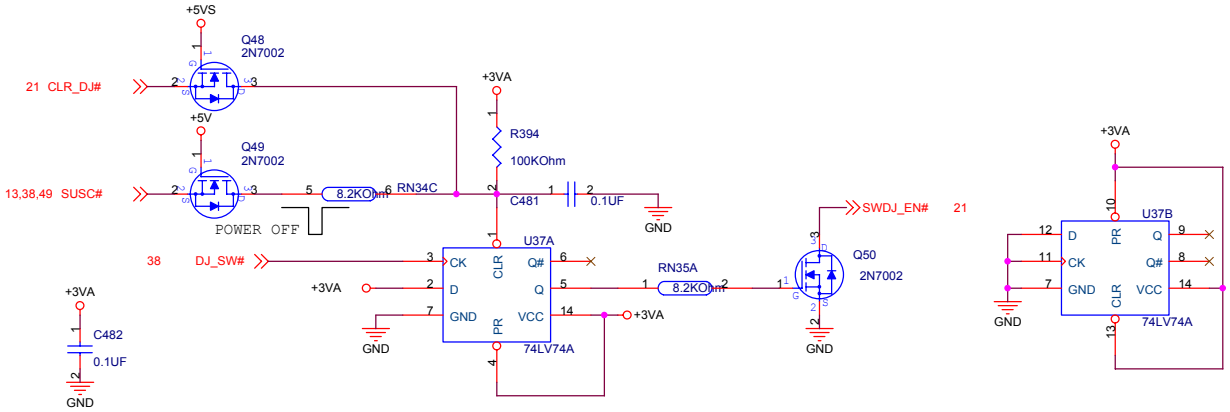
V2_USB_B — C891 0.1UF/25V — GND
CON18 USB_CON_2X4P: GND3, VCC1, 1P-, 1P+, GND1, VCC2, 0P-, 0P+, GND2, GND4
LP2-_B, LP2+_B, LP3-_B, LP3+_B

V3_USB_B — C892 0.1UF/25V — GND
CON19 USB_CON_2X4P: GND3, VCC1, 1P-, 1P+, GND1, VCC2, 0P-, 0P+, GND2, GND4
LP4-_B, LP4+_B, LP5-_B, LP5+_B

Title : USB connector
ASUSTeK COMPUTER INC
Engineer: Frank Lu
Size: Custom | Project Name: M7V | Rev: 0.95
Date: Monday, November 10, 2003 | Sheet 35 of 51



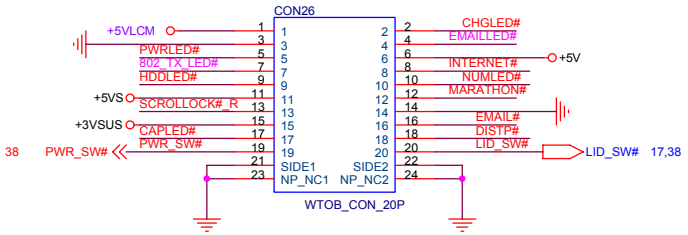




ASUSTeK COMPUTER INC	Title : DJ Board Connector	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 36 of 51	

LED

Indicator Connector

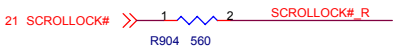


Scrollock LED(GREEN)

LED BOARD

+5VS

GREEN LED

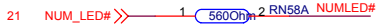


NUM LED(GREEN)

LED BOARD

+5VS

GREEN LED

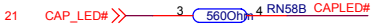


CAP LED(GREEN)

LED BOARD

+5VS

GREEN LED

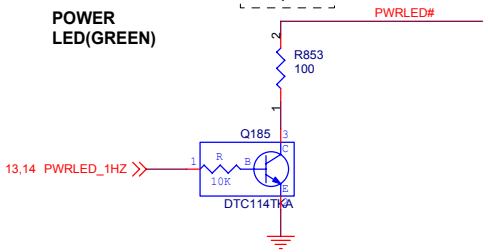


POWER LED(GREEN)

LED BOARD

+5V

GREEN LED

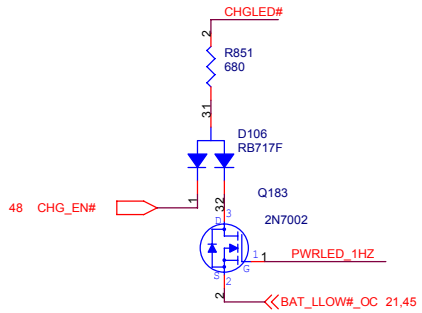


CHARGE LED(ORANGE)

+5VLCM

ORANGE LED

LED BOARD

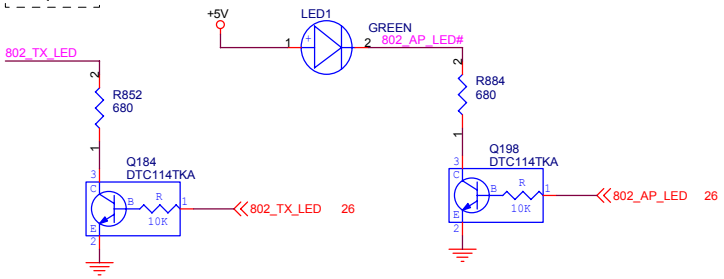


WIRELESS LED(BLUE)

LED BOARD

+5V

GREEN LED

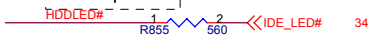


HDD LED

+5VS

GREEN LED

LED BOARD

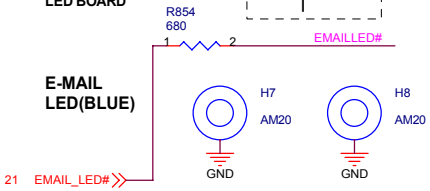


E-MAIL LED(BLUE)

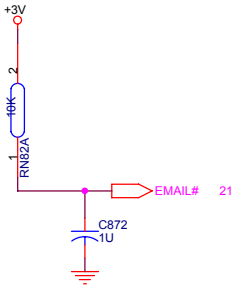
LED BOARD

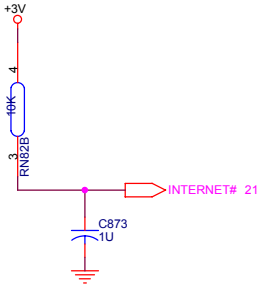
+5V

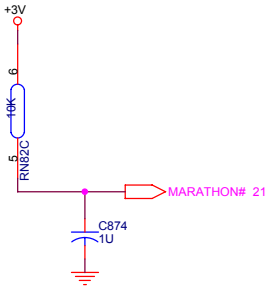
BLUE LED

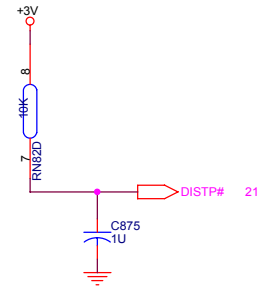


INSTANT KEY

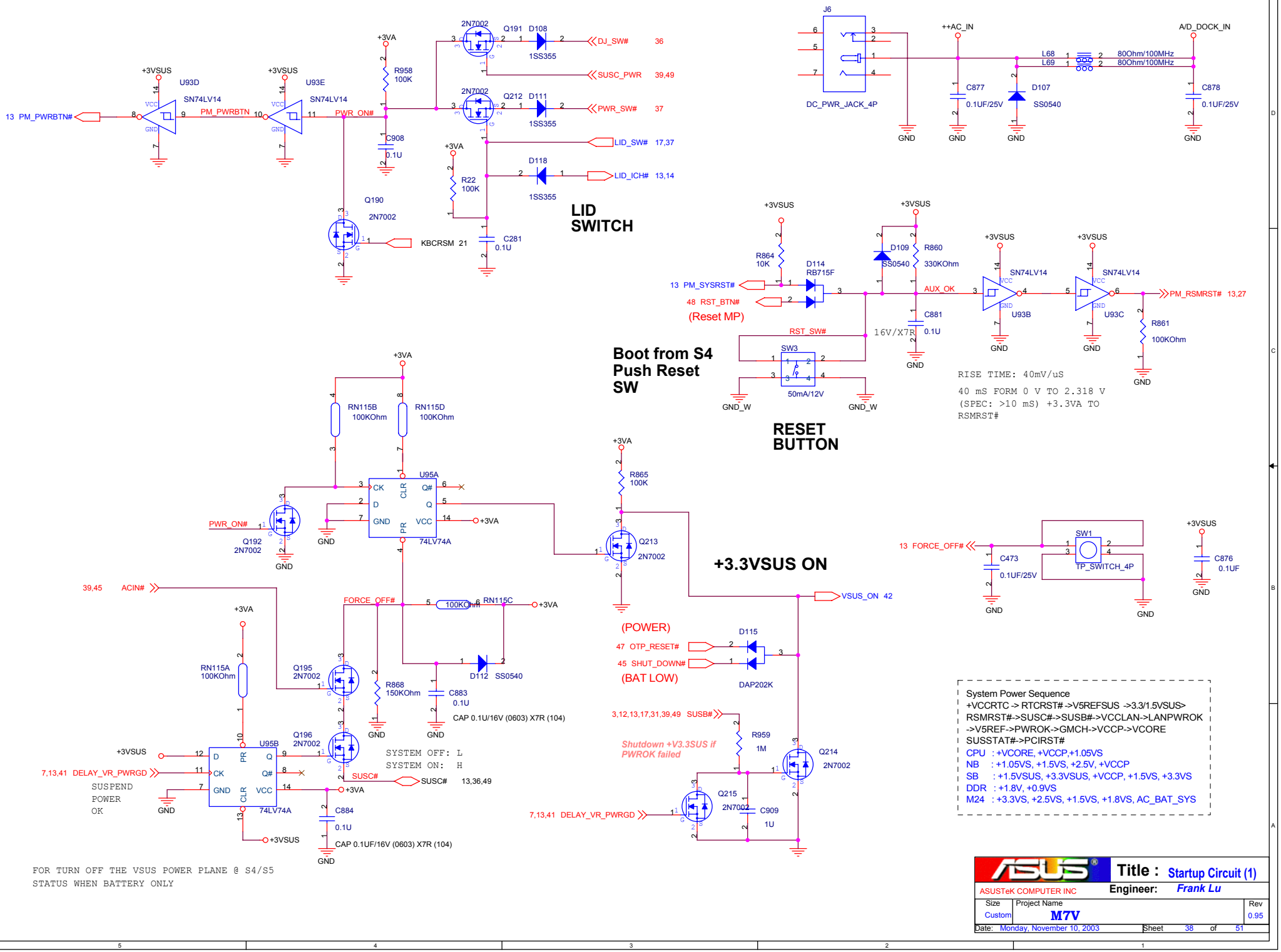


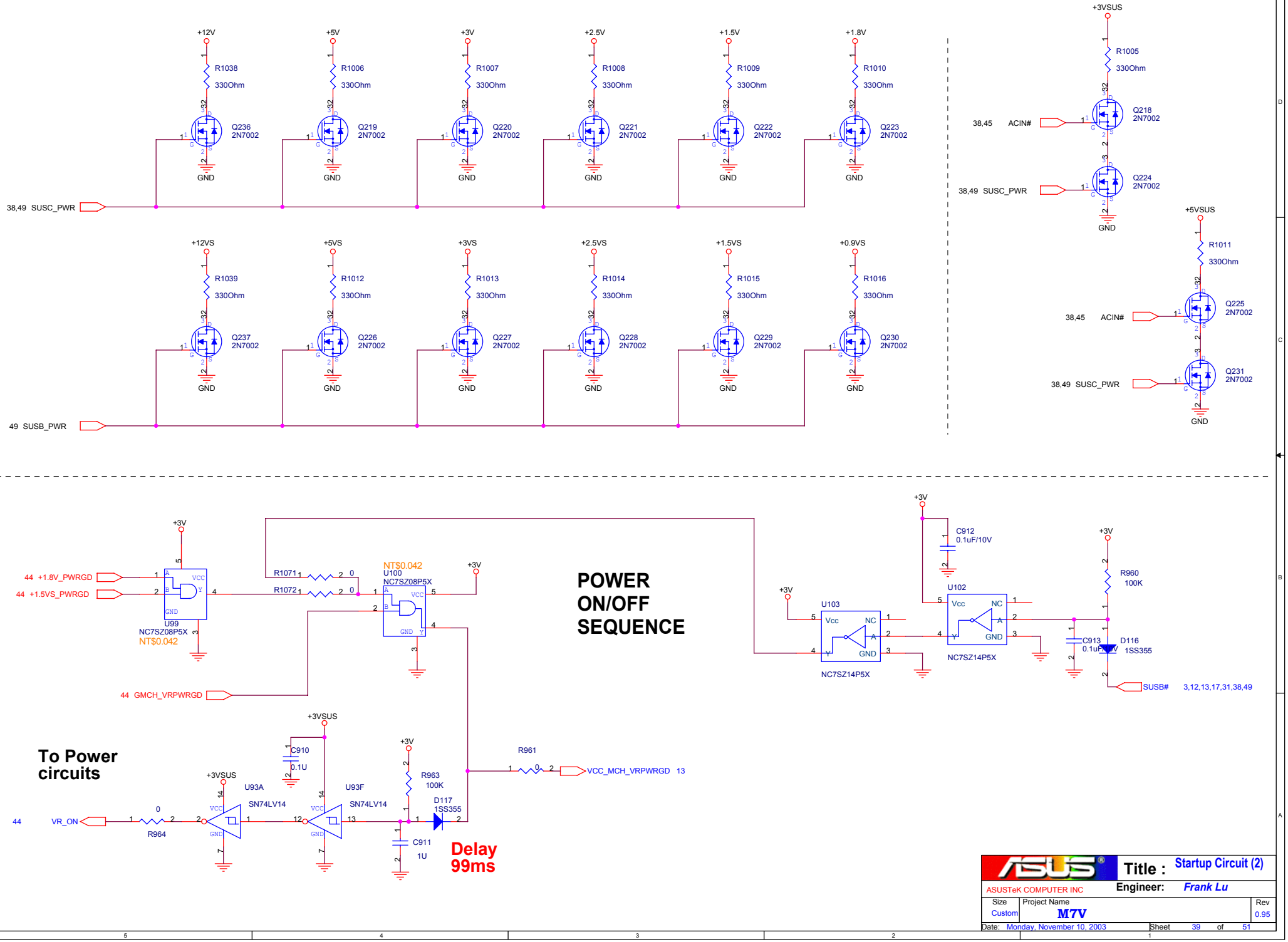


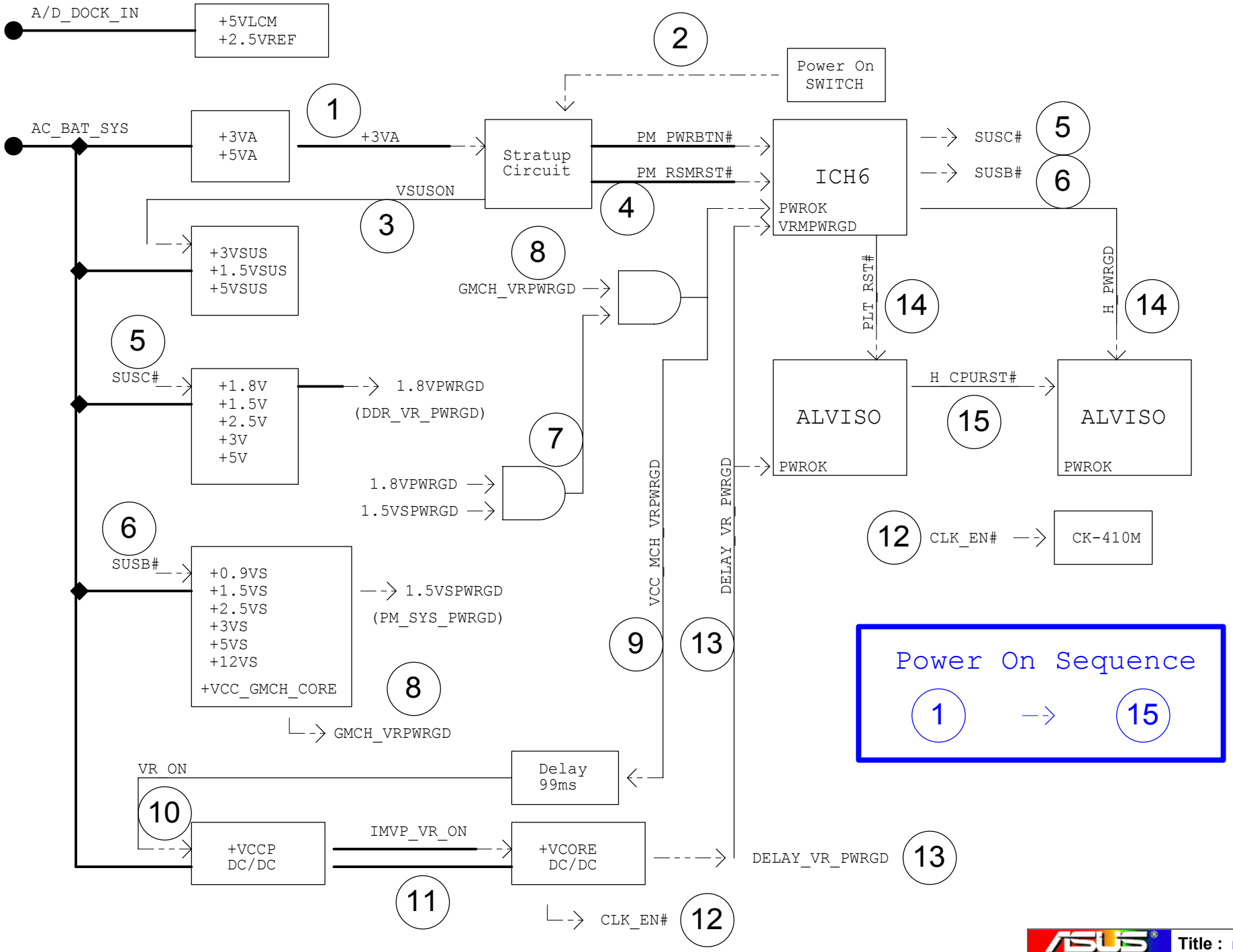




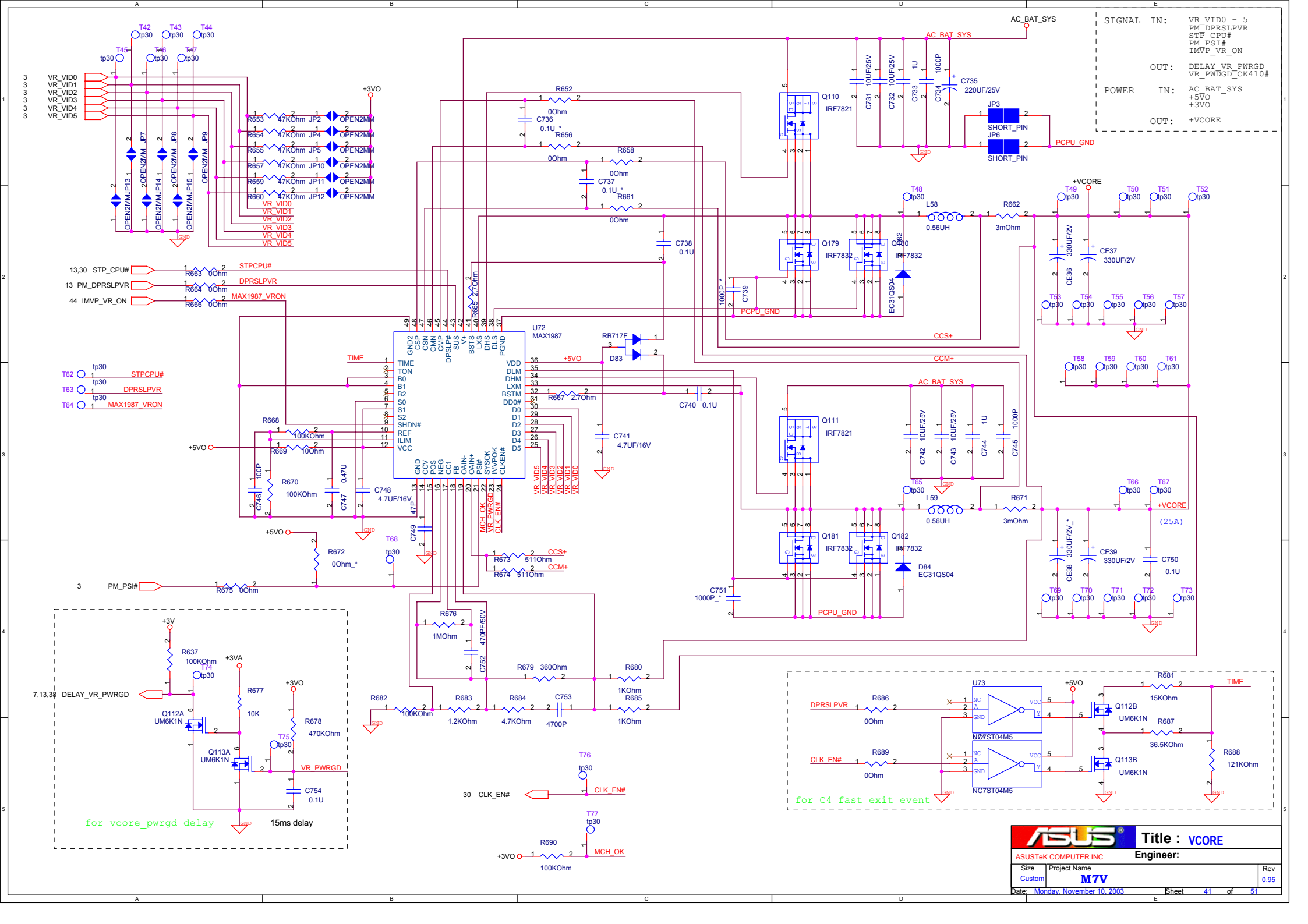
ASUSTeK COMPUTER INC	Title : LED BOARD	
	Engineer: Frank Lu	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 37 of 51	

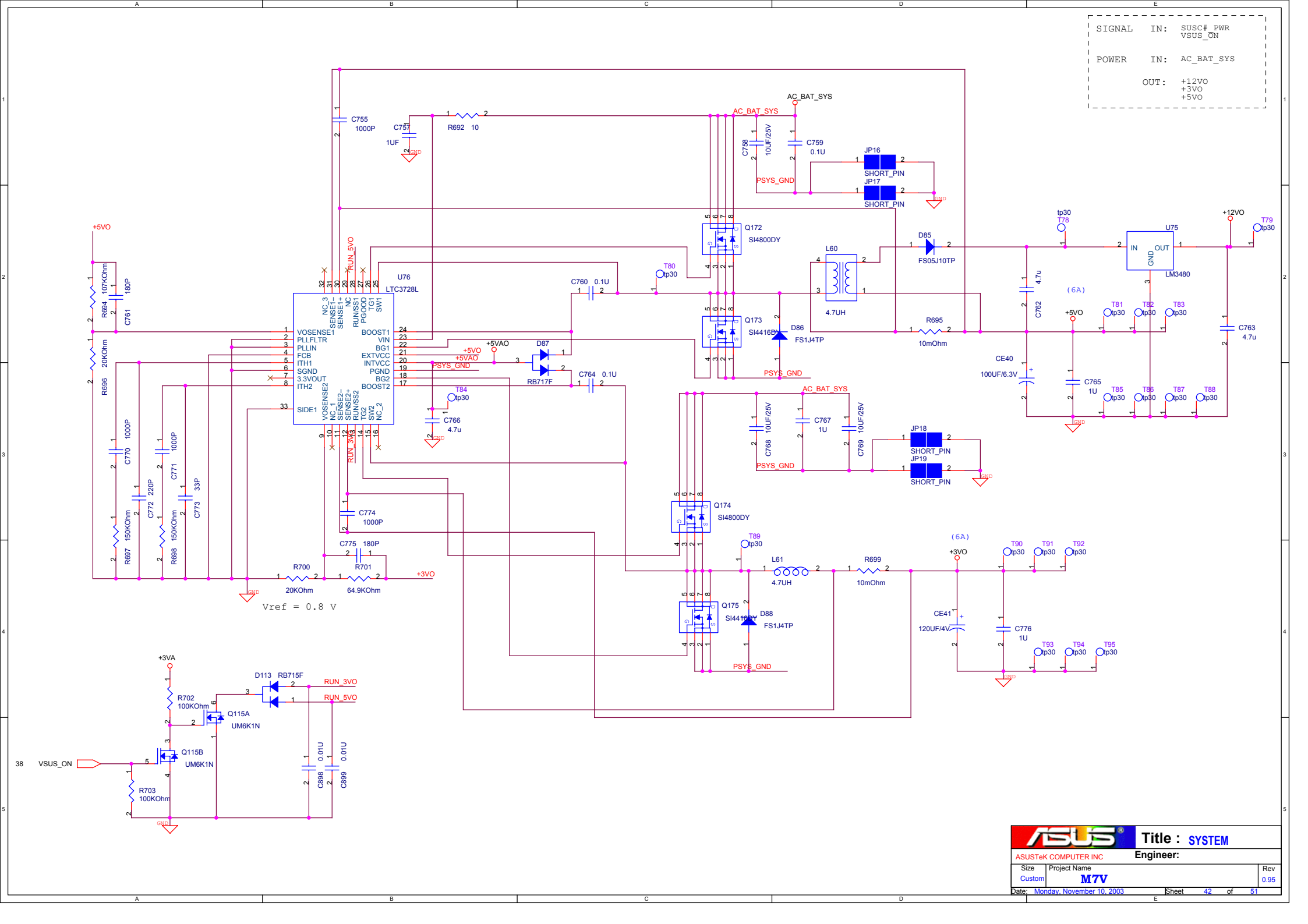

LID SWITCH
Boot from S4 Push Reset SW
RESET BUTTON
+3.3VSUS ON
(POWER)
(BAT LOW)
(Reset MP)
RISE TIME: 40mV/uS
40 mS FORM 0 V TO 2.318 V
(SPEC: >10 mS) +3.3VA TO RSMRST#
System Power Sequence
+VCCRTC -> RTCRST# ->V5REFSUS ->3.3/1.5VSUS>
RSMRST#->SUSC#->SUSB#->VCCLAN->LANPWROK
->V5REF->PWROK->GMCH->VCCP->VCORE
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
SYSTEM OFF: L
SYSTEM ON: H
Shutdown +V3.3SUS if PWROK failed
FOR TURN OFF THE VSUS POWER PLANE @ S4/S5
STATUS WHEN BATTERY ONLY
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
+3VSUS
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
Sheet 39 of 51



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_PWRGD_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
R662 3mOhm
R671 3mOhm
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
R695
10mOhm
R699
10mOhm
U75
LM3480
JP16
SHORT_PIN
JP17
SHORT_PIN
JP18
SHORT_PIN
JP19
SHORT_PIN
Vref = 0.8 V
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
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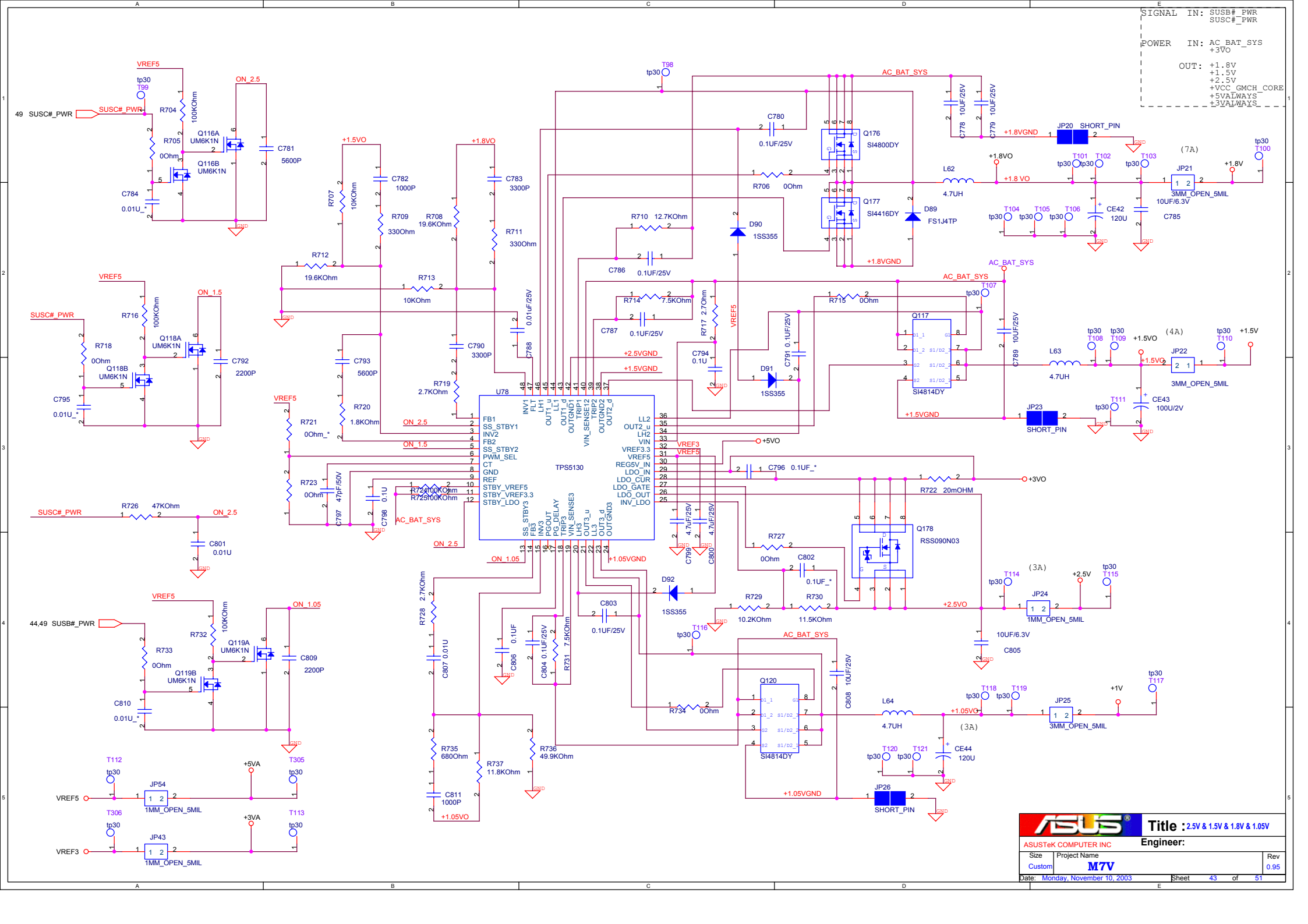
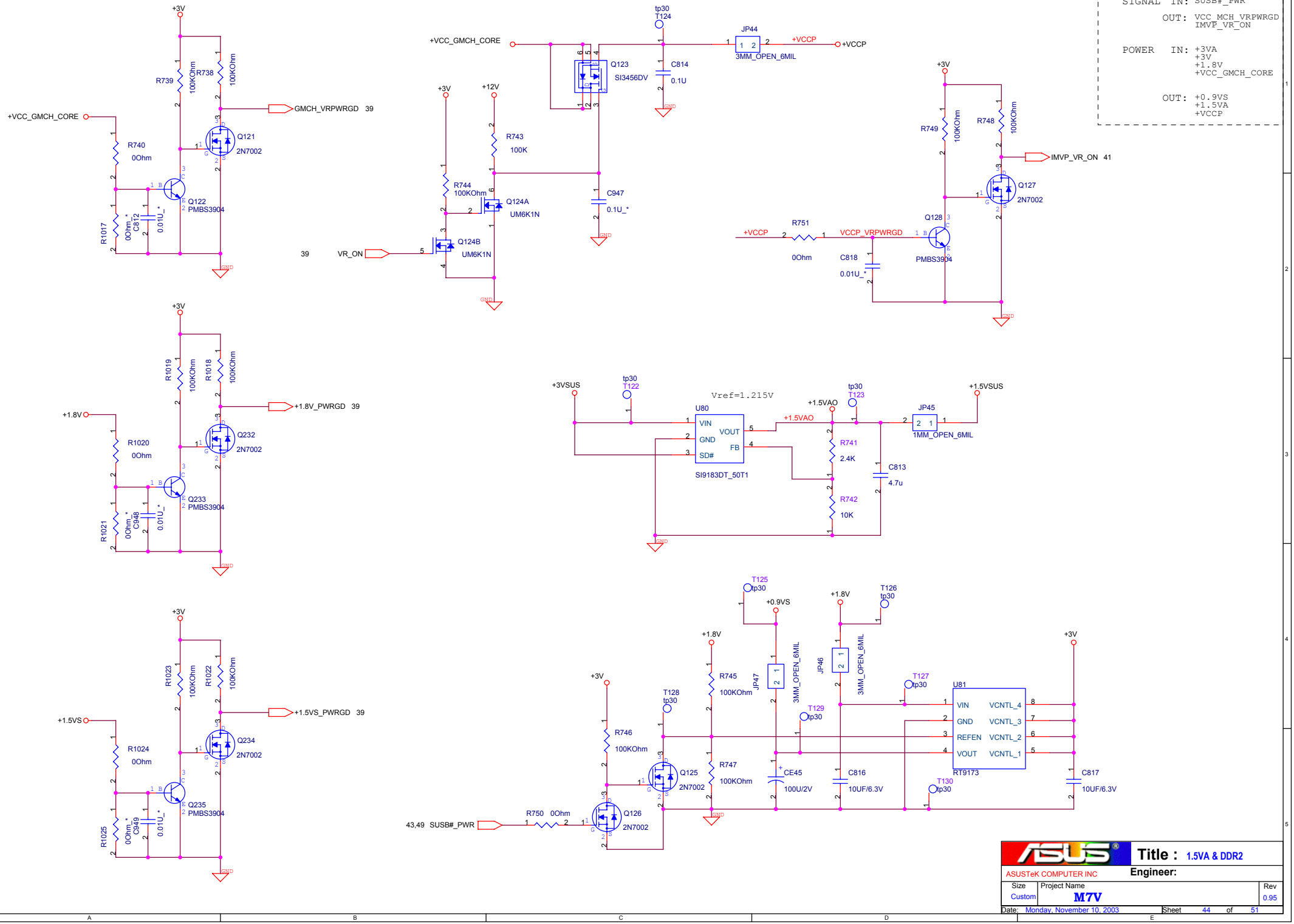

SIGNAL IN: SUSB#_PWR
SUSC#_PWR
POWER IN: AC_BAT_SYS
+3VO
OUT: +1.8V
+1.5V
+2.5V
+VCC_GMCH_CORE
+5VALWAYS
+3VALWAYS
TPS5130
SI4800DY
SI4416DY
SI4814DY
RSS090N03
1SS355
FS1J4TP
SHORT_PIN
3MM_OPEN_5MIL
1MM_OPEN_5MIL
ASUSTeK COMPUTER INC
Engineer:
Title : 2.5V & 1.5V & 1.8V & 1.05V
Project Name
M7V
Size
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_*
tp30 T124
JP44 3MM_OPEN_6MIL
+VCCP
Q123 SI3456DV
C814 0.1U
+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
C813 4.7u
R742 10K
+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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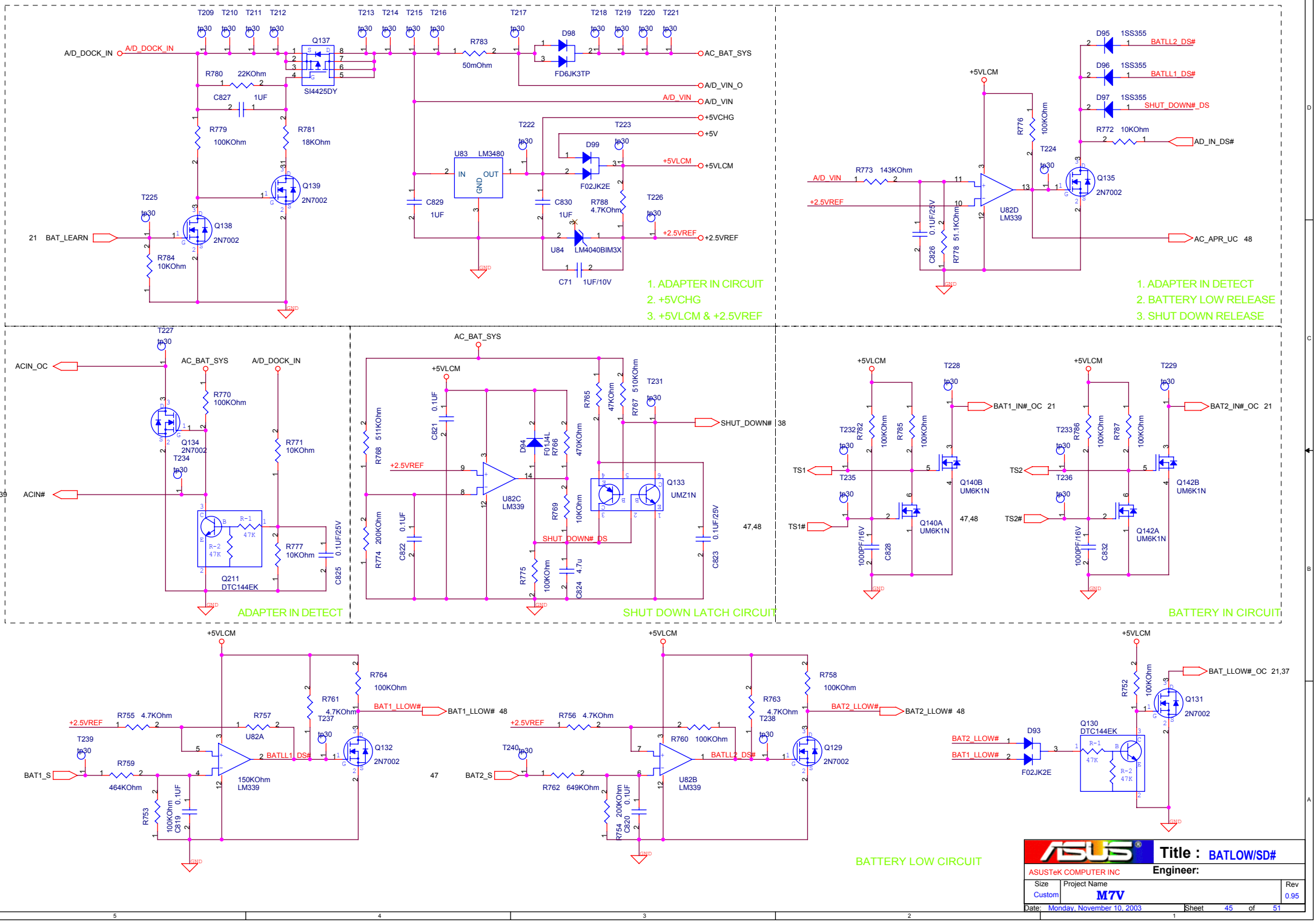
A/D_DOCK_IN
Q137
SI4425DY
R780 22KOhm
C827 1UF
R779 100KOhm
R781 18KOhm
Q139 2N7002
Q138 2N7002
BAT_LEARN
R784 10KOhm
R783 50mOhm
D98 FD6JK3TP
AC_BAT_SYS
A/D_VIN_O
A/D_VIN
+5VCHG
+5V
+5VLCM
+2.5VREF
U83 LM3480
C829 1UF
C830 1UF
R788 4.7KOhm
U84 LM4040BIM3X
C71 1UF/10V
1. ADAPTER IN CIRCUIT
2. +5VCHG
3. +5VLCM & +2.5VREF
D95 1SS355
D96 1SS355
D97 1SS355
BATLL2_DS#
BATLL1_DS#
SHUT_DOWN#_DS
AD_IN_DS#
R772 10KOhm
R776 100KOhm
R773 143KOhm
C826 0.1UF/25V
R778 51.1KOhm
U82D LM339
Q135 2N7002
AC_APR_UC 48
1. ADAPTER IN DETECT
2. BATTERY LOW RELEASE
3. SHUT DOWN RELEASE
ACIN_OC
ACIN#
R770 100KOhm
Q134 2N7002
R771 10KOhm
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
R769 10KOhm
R775 100KOhm
C824 4.7u
C823 0.1UF/25V
U82C LM339
Q133 UMZ1N
SHUT_DOWN# 38
SHUT_DOWN_DS
47,48
SHUT DOWN LATCH CIRCUIT
TS1
TS1#
TS2
TS2#
R782 100KOhm
R785 100KOhm
R786 100KOhm
R787 100KOhm
C828 1000PF/16V
C832 1000PF/16V
Q140B UM6K1N
Q140A UM6K1N
Q142B UM6K1N
Q142A UM6K1N
BAT1_IN#_OC 21
BAT2_IN#_OC 21
47,48
BATTERY IN CIRCUIT
BAT1_S
BAT2_S
R755 4.7KOhm
R756 4.7KOhm
R757
R759 464KOhm
R753 100KOhm
C819 0.1UF
R754 200KOhm
C820 0.1UF
U82A
U82B LM339
150KOhm
R761 4.7KOhm
R763 4.7KOhm
R764 100KOhm
R758 100KOhm
R760 100KOhm
R762 649KOhm
BAT1_LLOW#
BAT2_LLOW#
BAT1_LLOW# 48
BAT2_LLOW# 48
Q132 2N7002
Q129 2N7002
BATLL1_DS#
BATLL2_DS#
D93 F02JK2E
R752 100KOhm
Q131 2N7002
Q130 DTC144EK
BAT_LLOW#_OC 21,37
BATTERY LOW CIRCUIT
Title : BATLOW/SD#
ASUSTeK COMPUTER INC
Engineer:
Size Custom
Project Name M7V
Rev 0.95
Date: Monday, November 10, 2003
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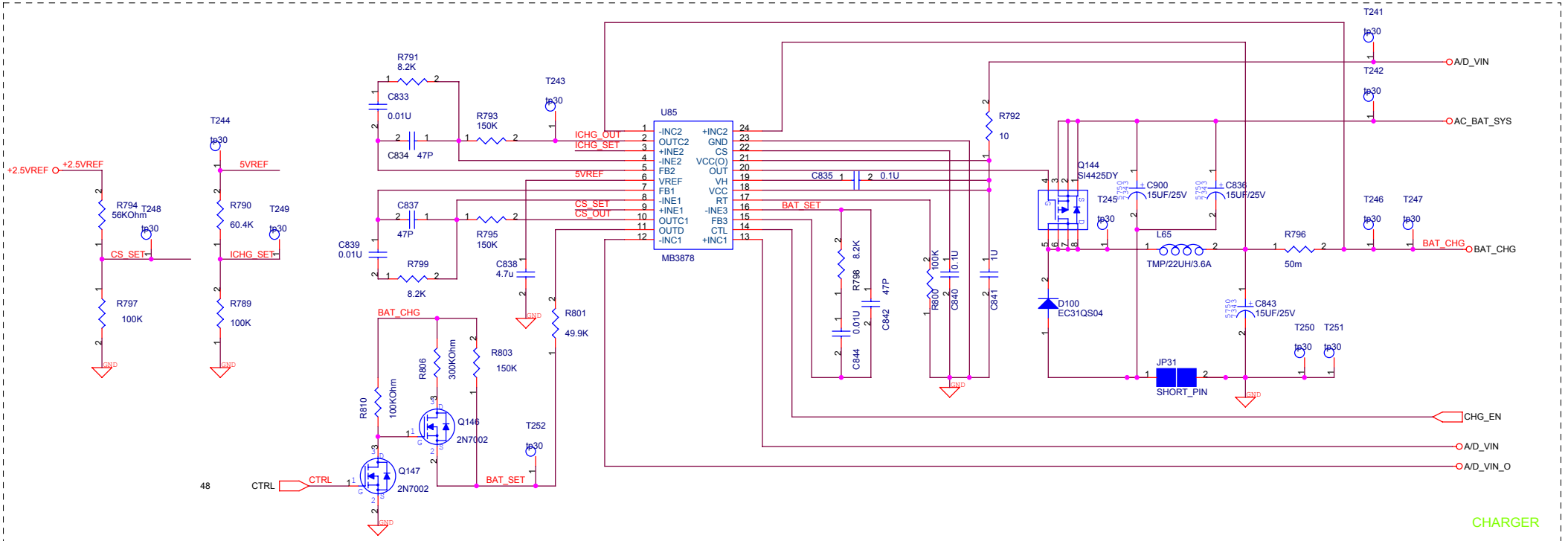

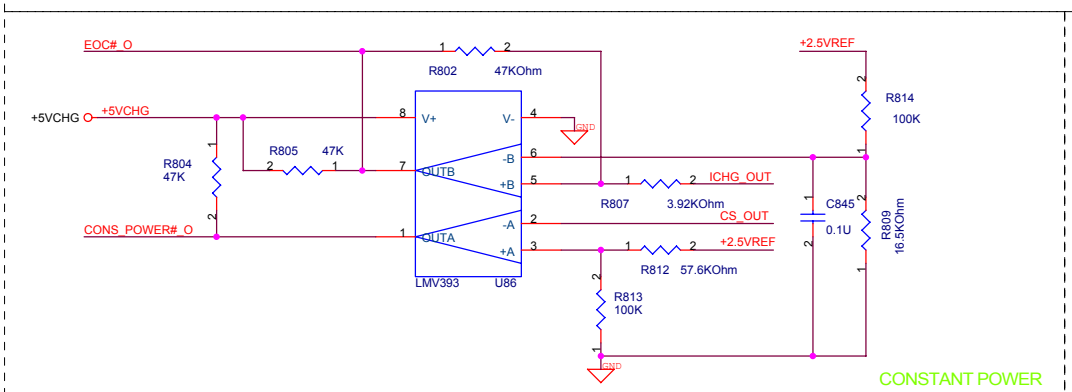

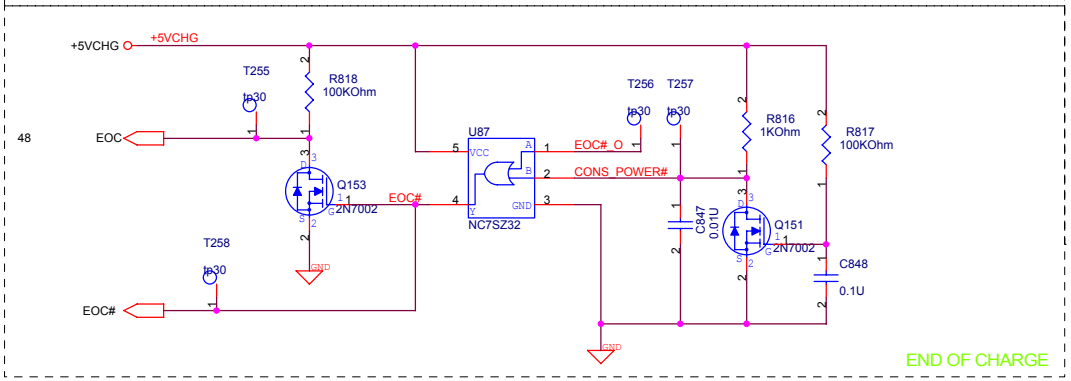

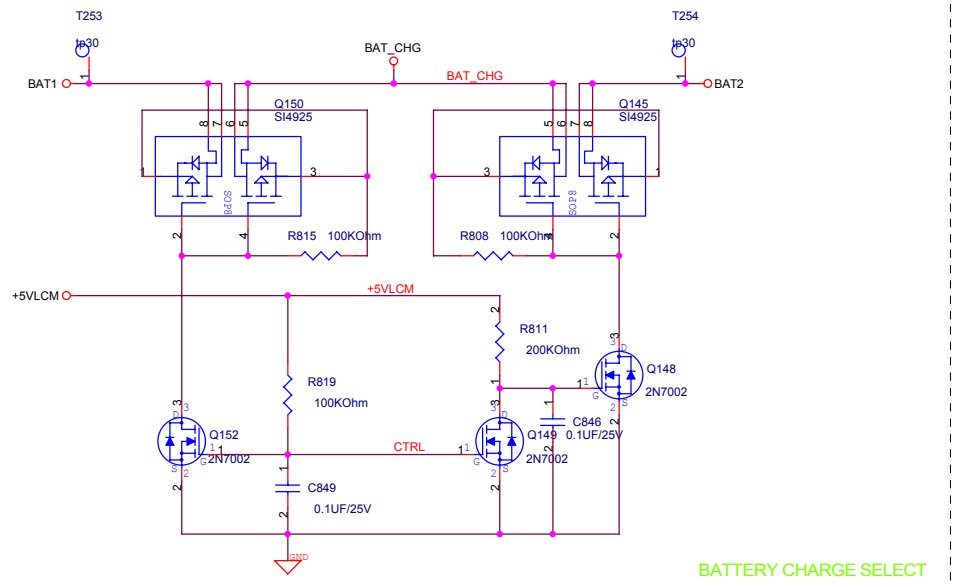

ASUSTeK COMPUTER INC

Title : CHARGE

Engineer:

Size	Project Name	Rev
Custom	M7V	0.95

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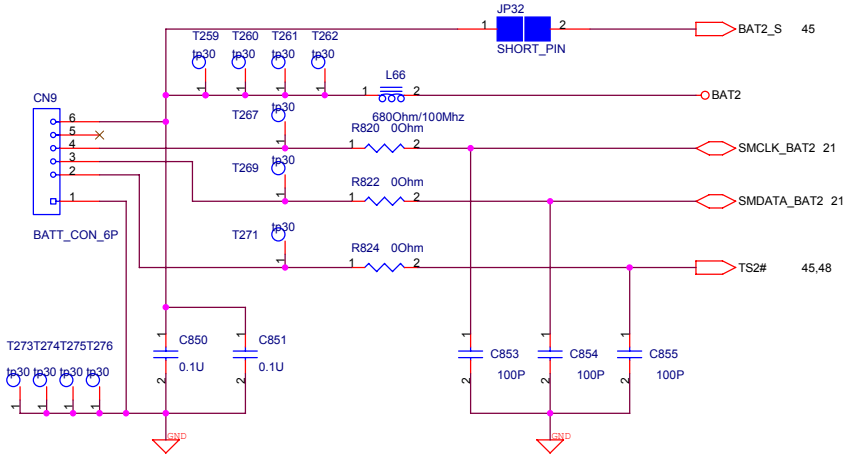
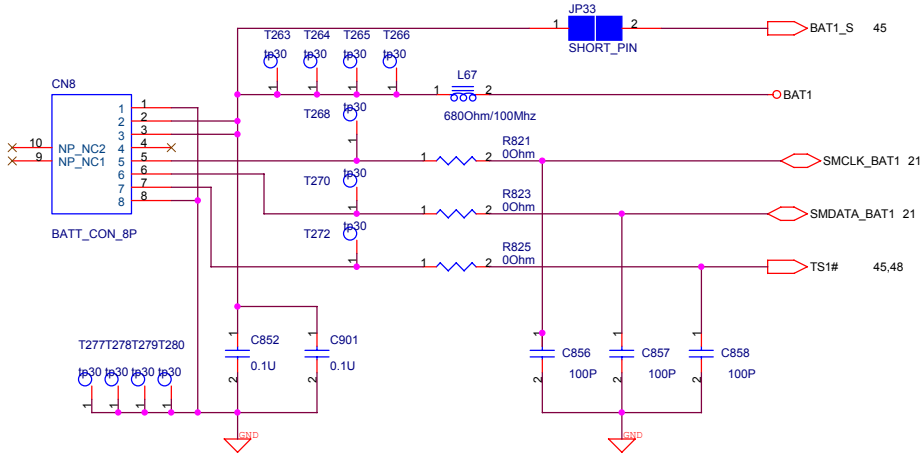
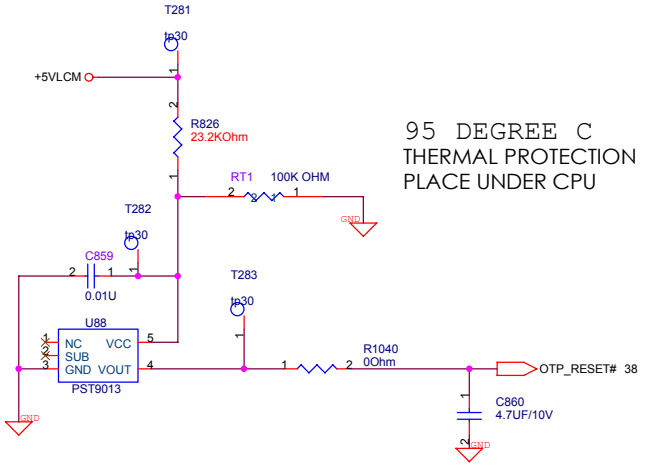
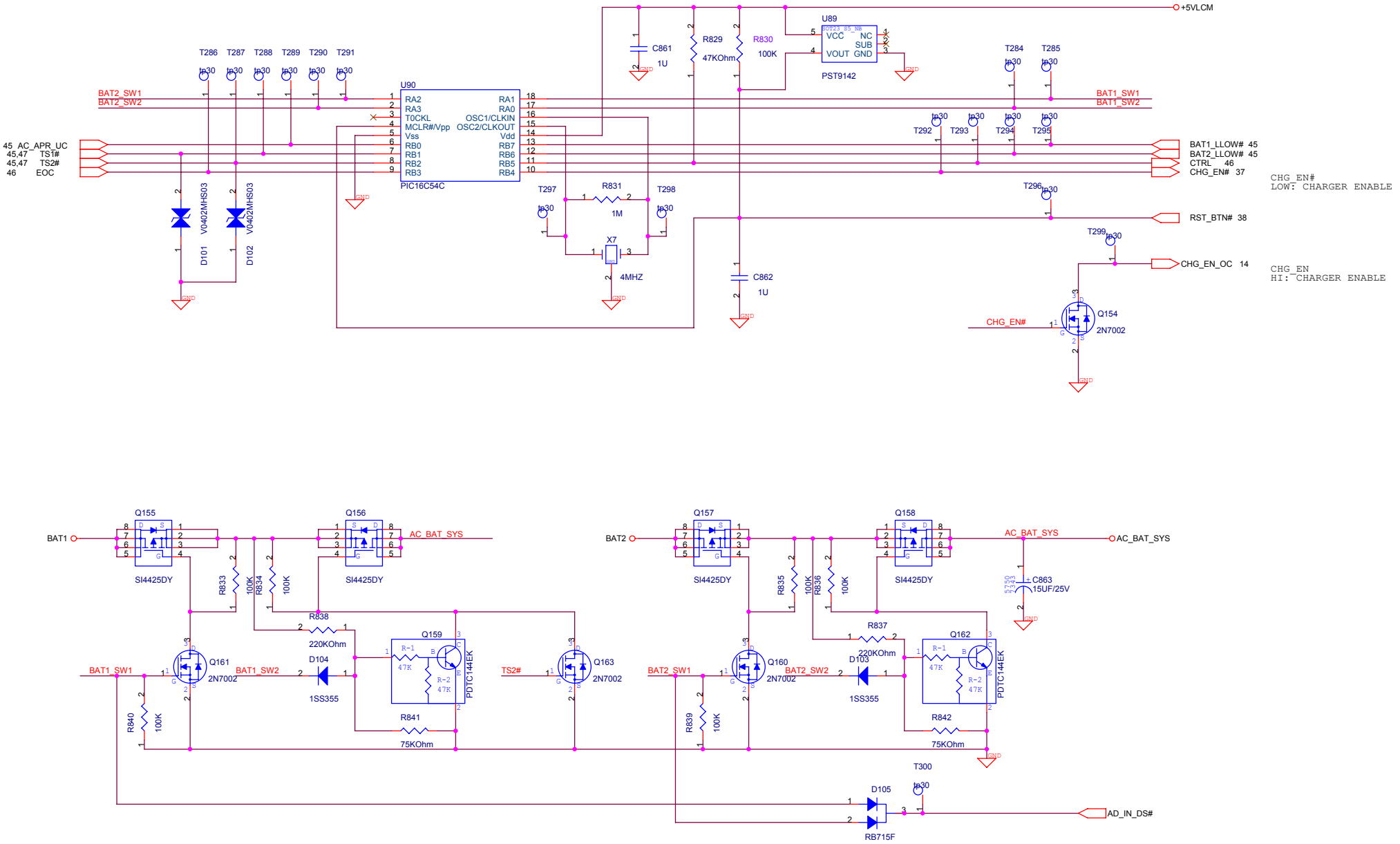






95 DEGREE C
THERMAL PROTECTION
PLACE UNDER CPU

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	Project Name	Rev
Custom	M7V	0.95

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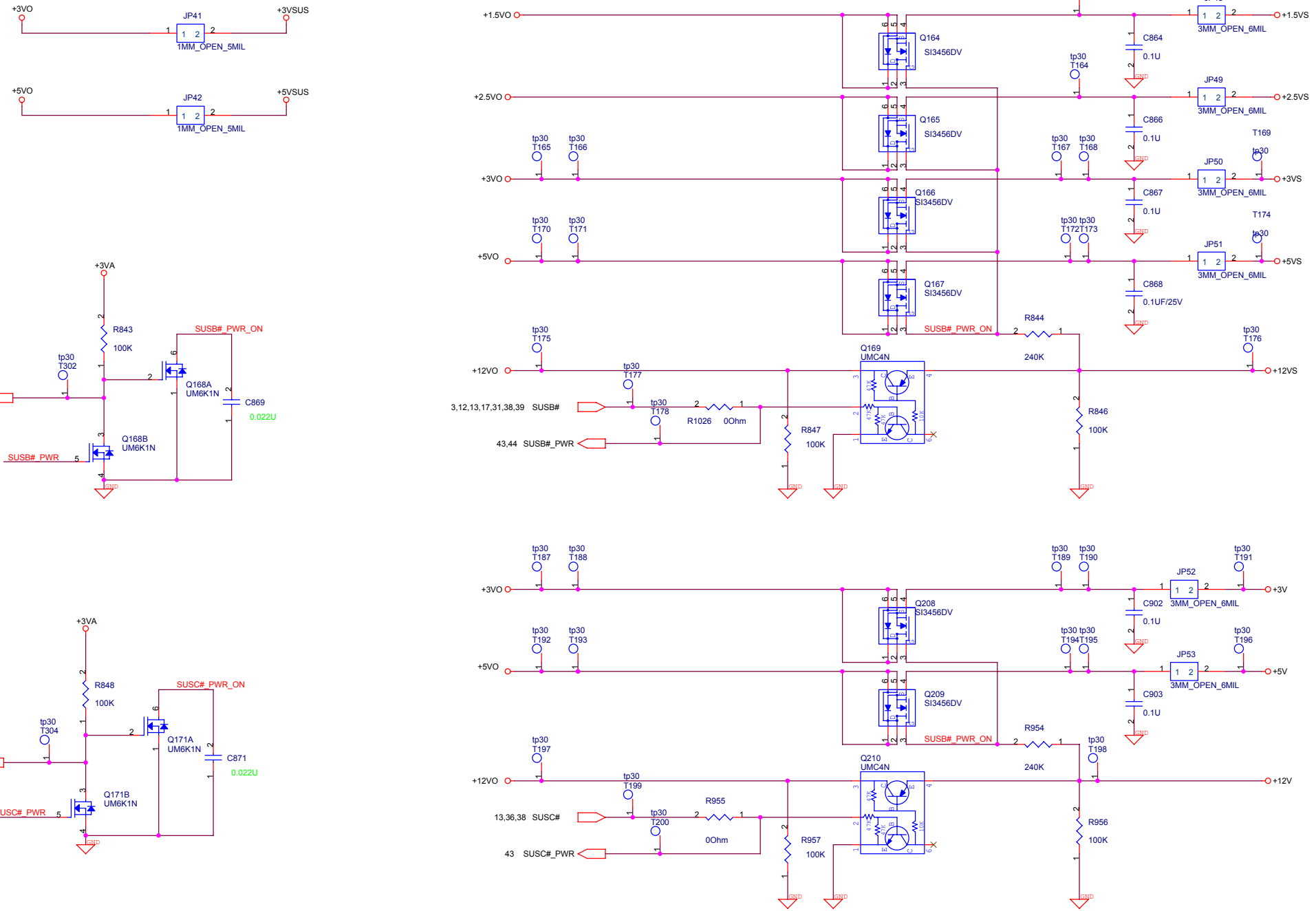

ASUSTeK COMPUTER INC

Title : LOAD SWITCH

Engineer:

Size	Project Name	Rev
Custom	M7V	0.95

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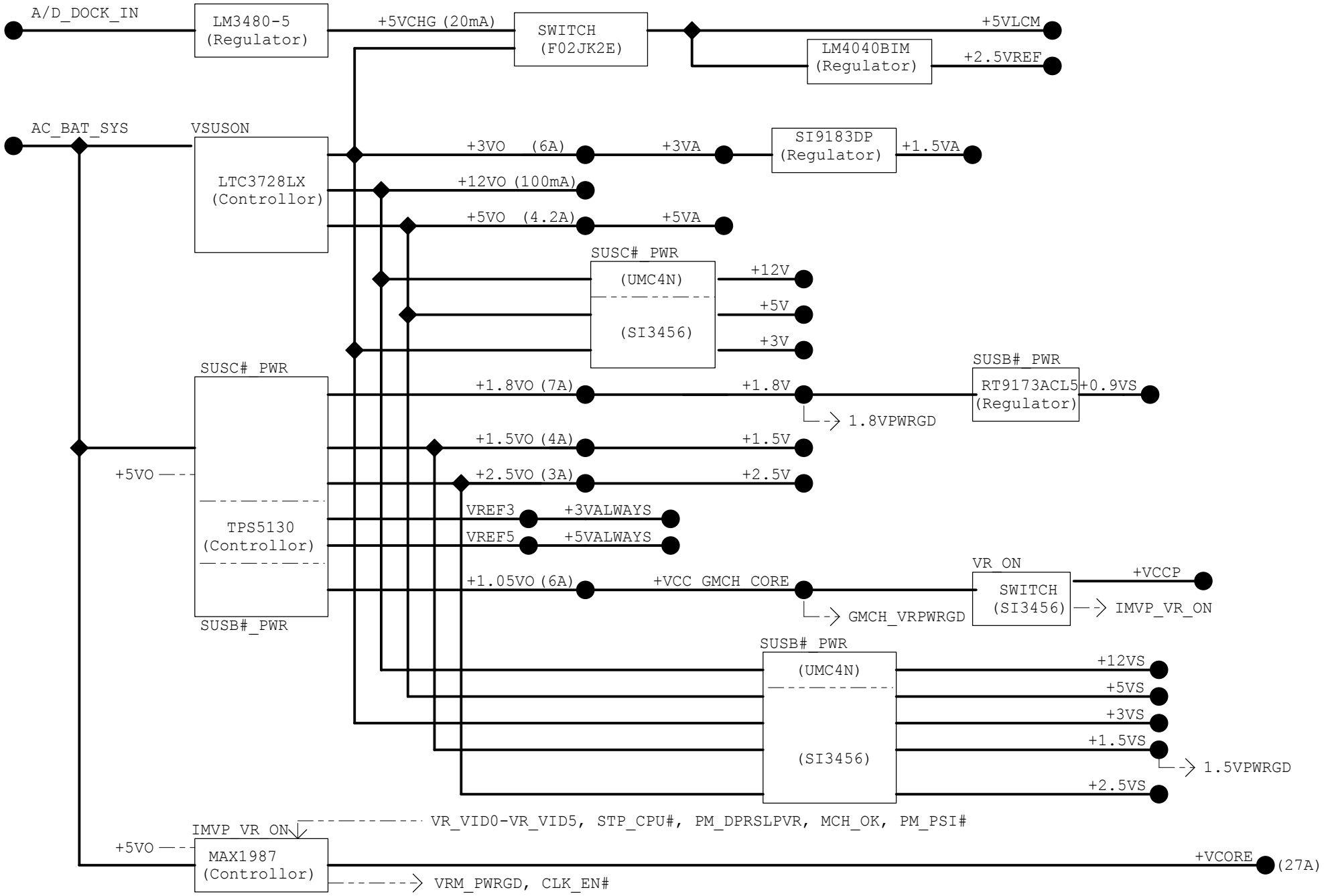

ASUSTeK COMPUTER INC	Title : POWER FLOWCHART	
	Engineer:	
Size: Custom	Project Name: M7V	Rev: 0.95
Date: Monday, November 10, 2003	Sheet 50 of 51	

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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