Z94Rp

Rev.1.1

Yonah/RC410ME/IXP450 BLOCK DIAGRAM

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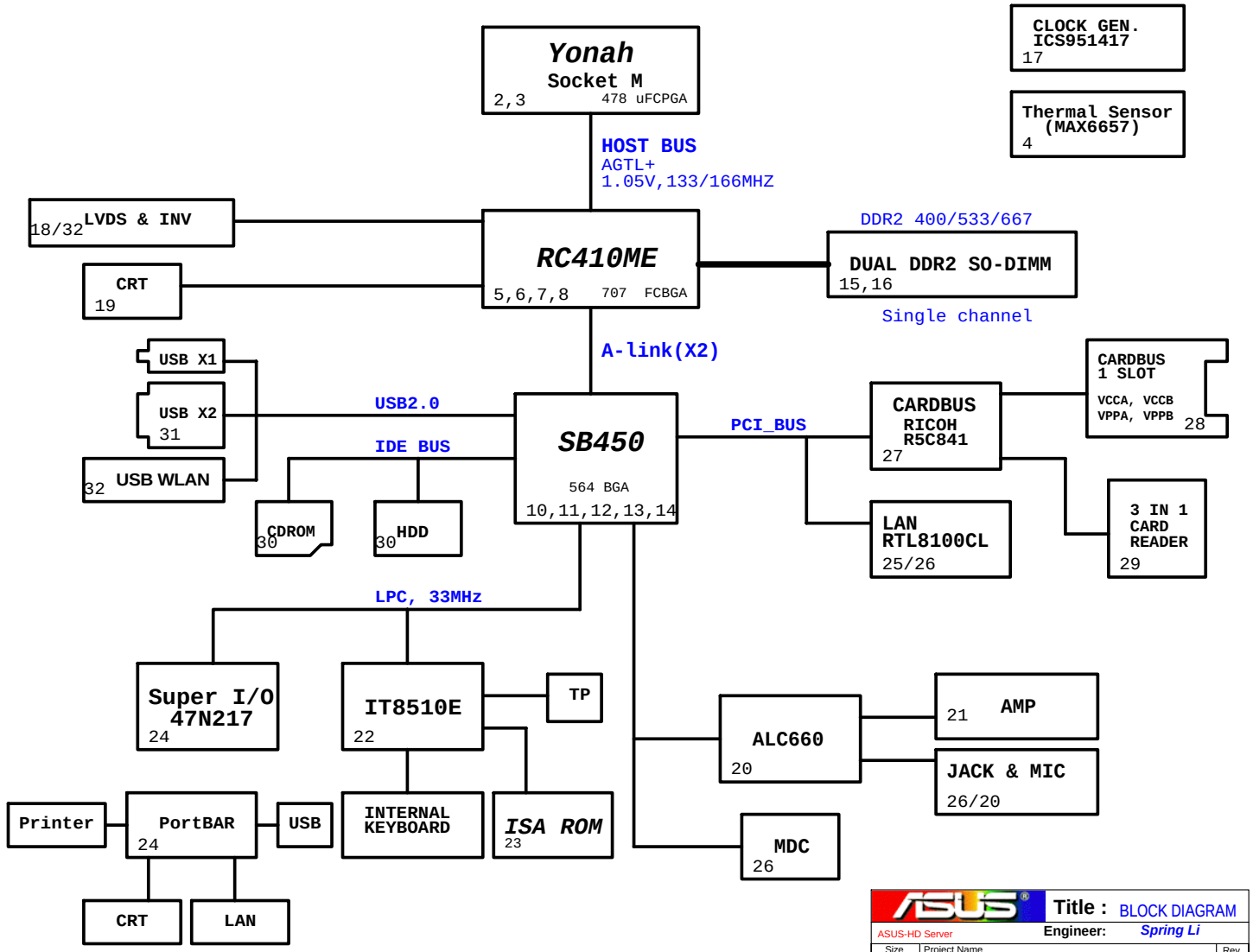
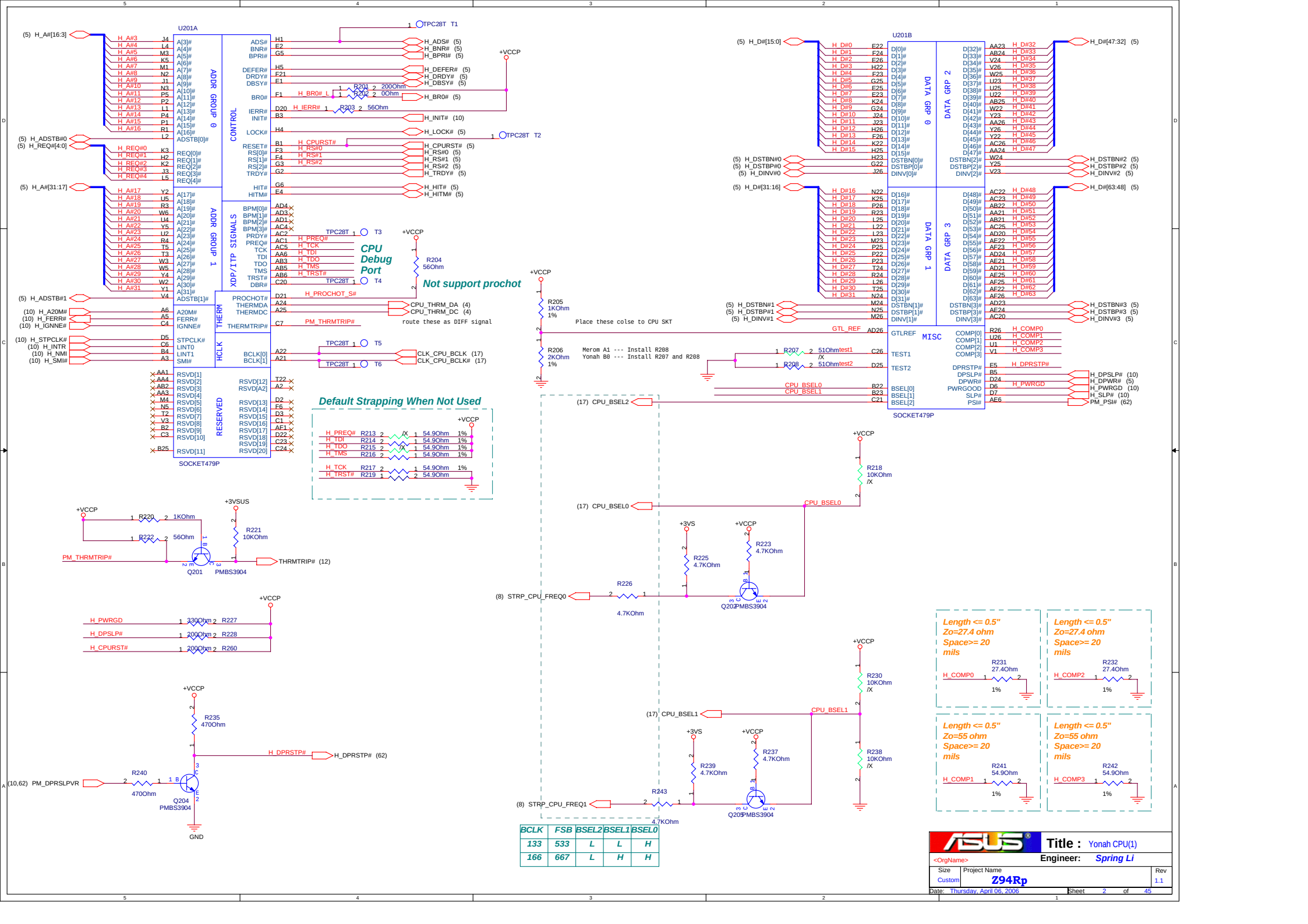
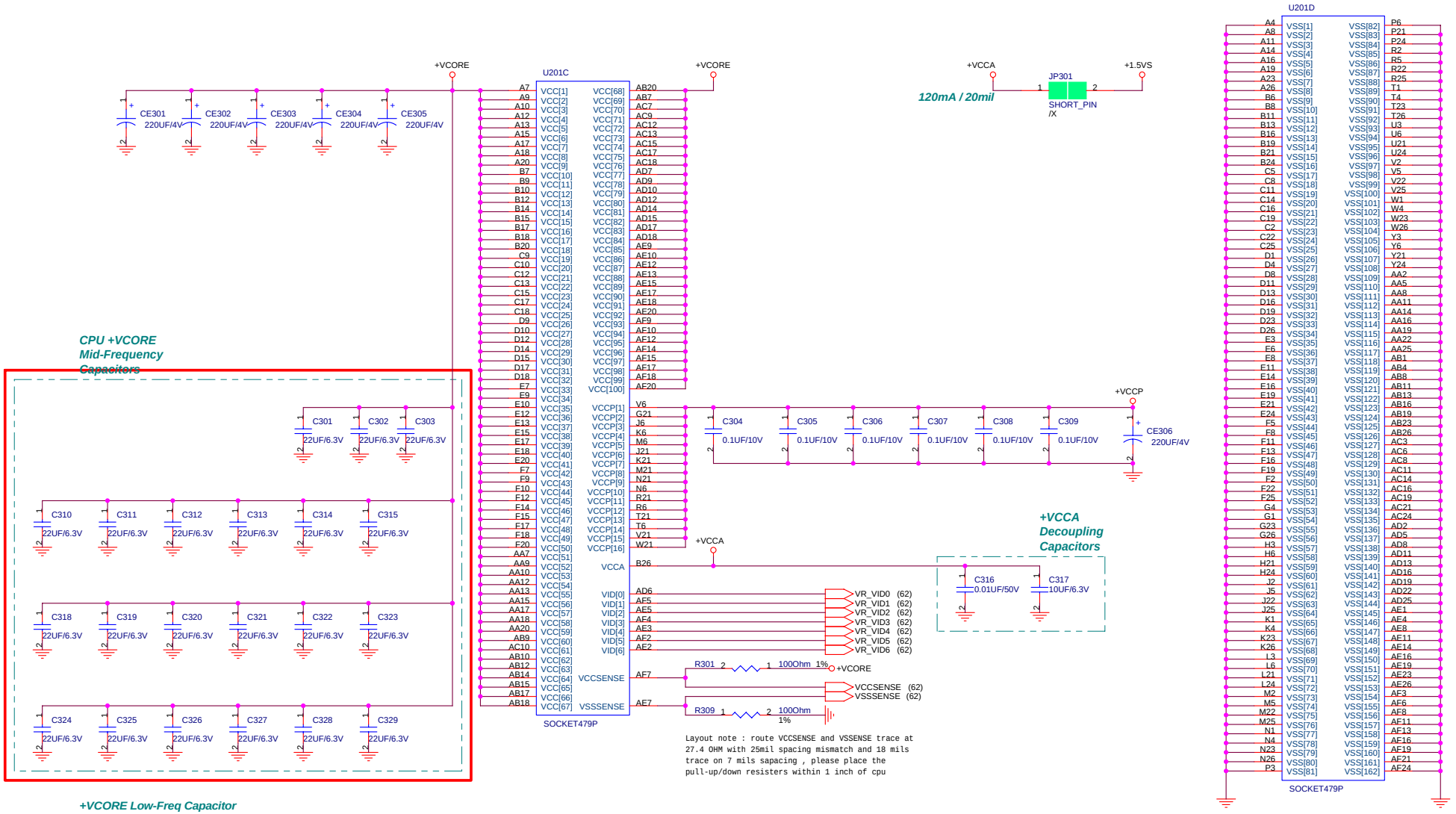
**	
**	



ASUS-HD Server	Title : BLOCK DIAGRAM		
	Engineer: Spring Li		
Size: Custom	Project Name: Z94Rp		Rev: 1.1
Date: Tuesday, April 04, 2006	Sheet 1 of 45		



BCLK	FSB	BSEL2	BSEL1	BSEL0
133	533	L	L	H
166	667	L	H	H



+VCORE Low-Freq Capacitor
- Intel: 330UF *6
- ATI: 330UF *6
- R1F: 330UF *4
- A7J: 330UF *5

+VCORE Mid-Frequency Capacitor
- Intel: 22UF *32
- ATI: 10UF *26
- R1F: 22UF *16
- A7J: 22UF*29 use 19
- A6RF: 22UF*21 use 21

+VCCP Decoupling Capacitor
- Intel: 270UF *1, 0.1UF *6
- R1F: 220UF *1, 0.1UF *4
- A7J: 220UF *1, 0,1UF *6
- A6RF: 220UF *1, 0,1UF *6

<OrgName>	Title : Yonah CPU(2)	
	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
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Fan Speed Control

KBC will issue a analog (a voltage level) signal.

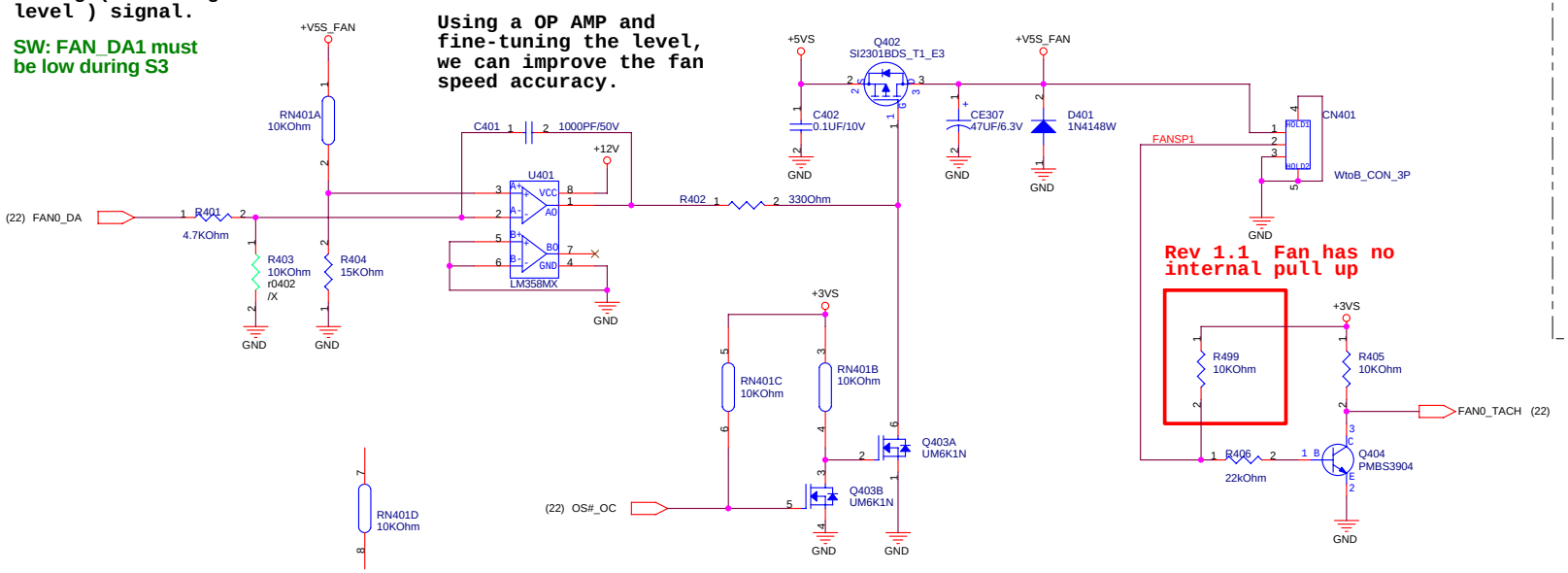
SW: FAN_DA1 must be low during S3

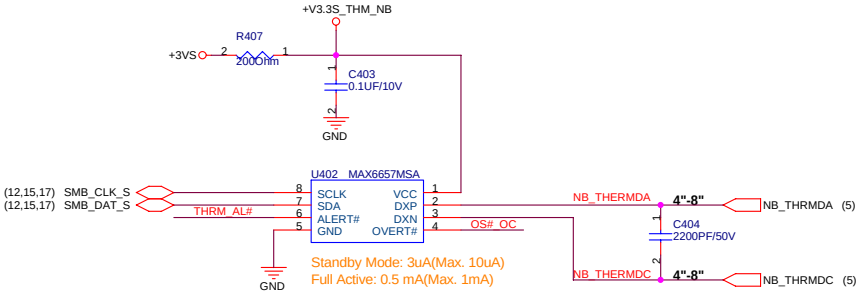
Using a OP AMP and fine-tuning the level, we can improve the fan speed accuracy.

Route H_THERMDA and H_THERMDC on the same layer

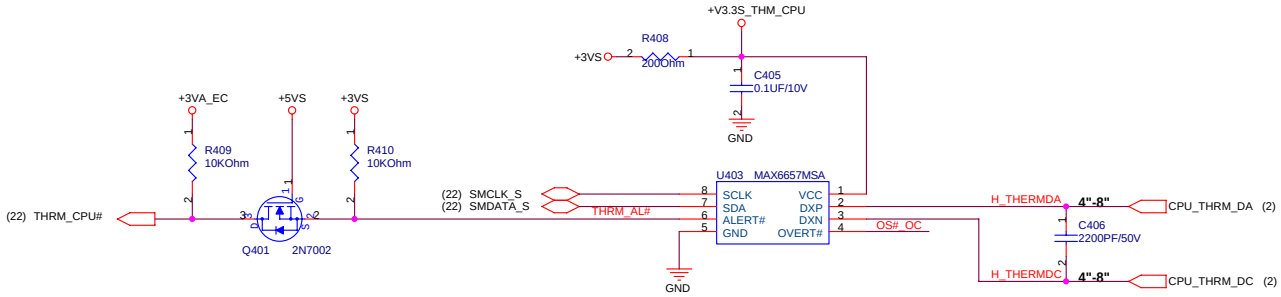
----------OTHER SIGNALS
12 mils
==========GND
10 mils
==========H_THERMDA(10 mils)
10 mils
==========H_THERMDC(10 mils)
10 mils
==========GND
12 mils
----------OTHER SIGNALS

Avoid BPSB,Power



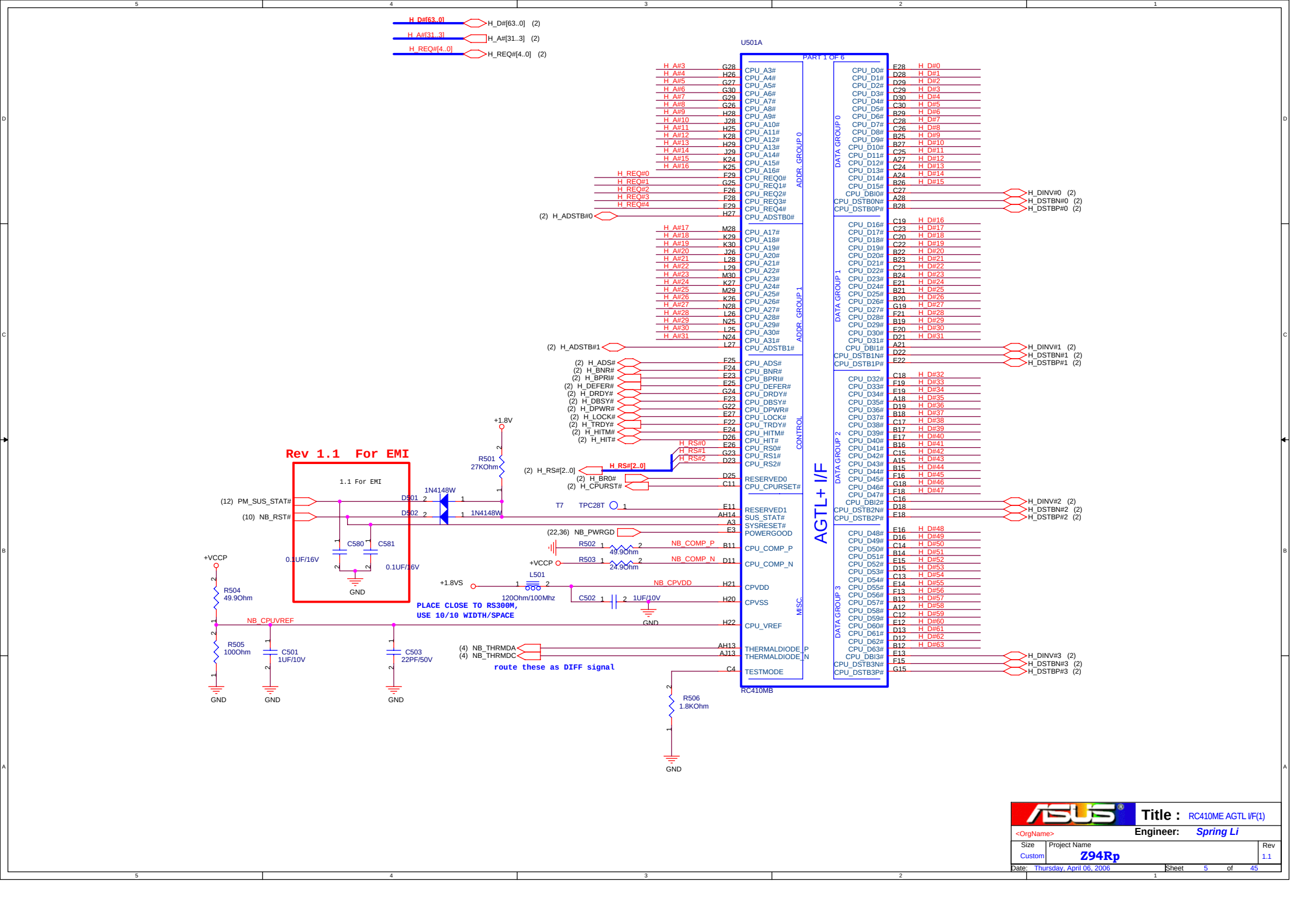


NB Detect



CPU Detect

Title :	THERMAL SERSOR,FAN	
Engineer:	Spring Li	
<OrgName>		
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 4 of 45	


H_D#[63..0]
H_D#[63..0] (2)
H_A#[31..3]
H_A#[31..3] (2)
H_REQ#[4..0]
H_REQ#[4..0] (2)
U501A
PART 1 OF 6
AGTL+ I/F
ADDR. GROUP 0
ADDR. GROUP 1
CONTROL
MISC.
DATA GROUP 0
DATA GROUP 1
DATA GROUP 2
DATA GROUP 3
RC410MB
(2) H_ADSTB#0
(2) H_ADSTB#1
H_DINV#0 (2)
H_DSTBN#0 (2)
H_DSTBP#0 (2)
H_DINV#1 (2)
H_DSTBN#1 (2)
H_DSTBP#1 (2)
H_DINV#2 (2)
H_DSTBN#2 (2)
H_DSTBP#2 (2)
H_DINV#3 (2)
H_DSTBN#3 (2)
H_DSTBP#3 (2)
(2) H_ADS#
(2) H_BNR#
(2) H_BPRI#
(2) H_DEFER#
(2) H_DRDY#
(2) H_DBSY#
(2) H_DPWR#
(2) H_LOCK#
(2) H_TRDY#
(2) H_HITM#
(2) H_HIT#
(2) H_RS#[2..0]
(2) H_BR0#
(2) H_CPURST#
(4) NB_THRMDA
(4) NB_THRMDC
route these as DIFF signal
Rev 1.1 For EMI
1.1 For EMI
(12) PM_SUS_STAT#
(10) NB_RST#
D501
D502
1N4148W
R501
27KOhm
+1.8V
T7
TPC28T
(22,36) NB_PWRGD
R502
49.9Ohm
NB_COMP_P
R503
24.9Ohm
NB_COMP_N
+VCCP
C580
C581
0.1UF/16V
GND
+1.8VS
L501
120Ohm/100Mhz
NB_CPVDD
C502
1UF/10V
PLACE CLOSE TO RS300M,
USE 10/10 WIDTH/SPACE
NB_CPUVREF
R504
49.9Ohm
R505
100Ohm
C501
1UF/10V
C503
22PF/50V
R506
1.8KOhm
Title : RC410ME AGTL I/F(1)
<OrgName>
Engineer: Spring Li
Size
Custom
Project Name
Z94Rp
Rev
1.1
Date: Thursday, April 06, 2006
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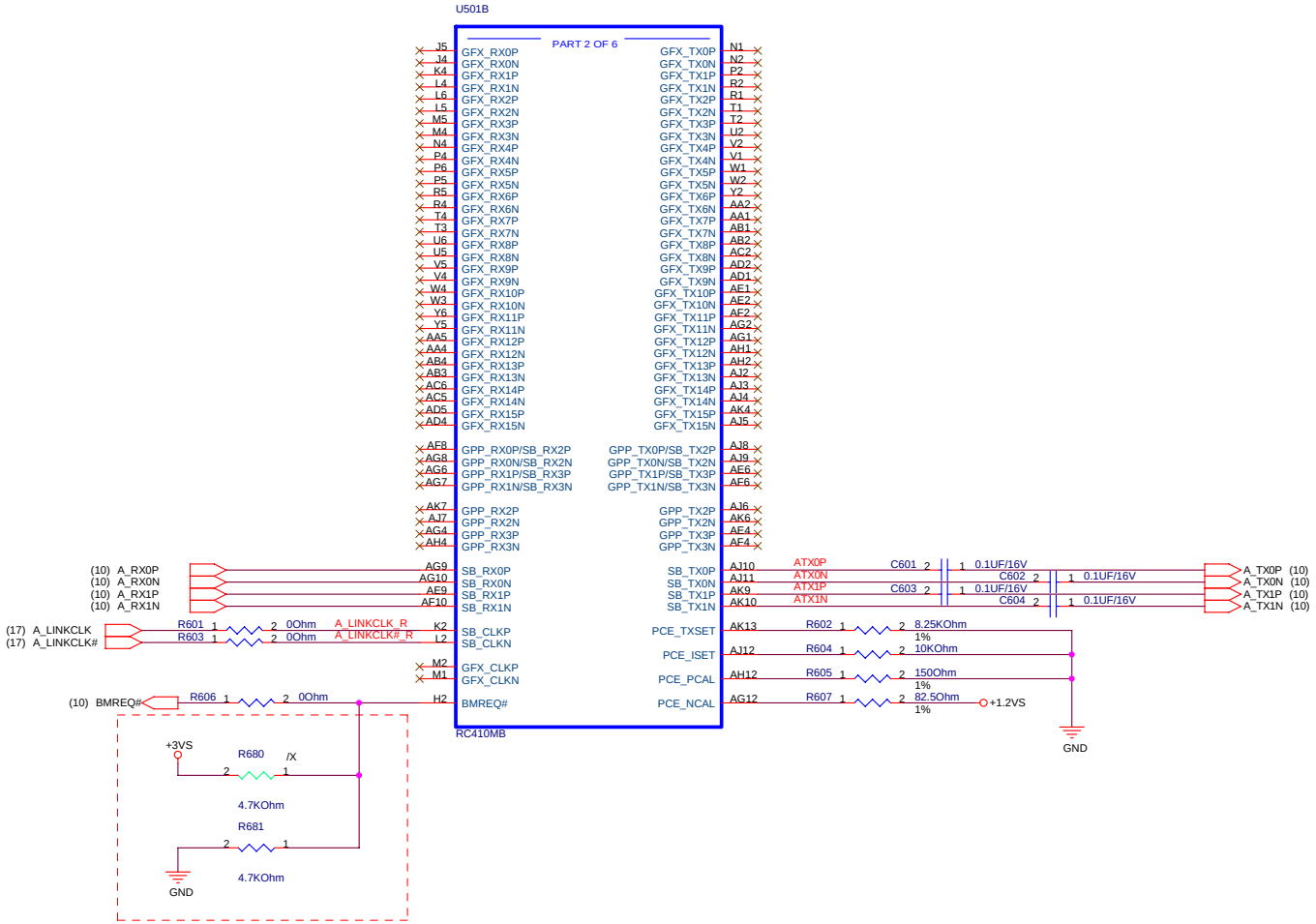
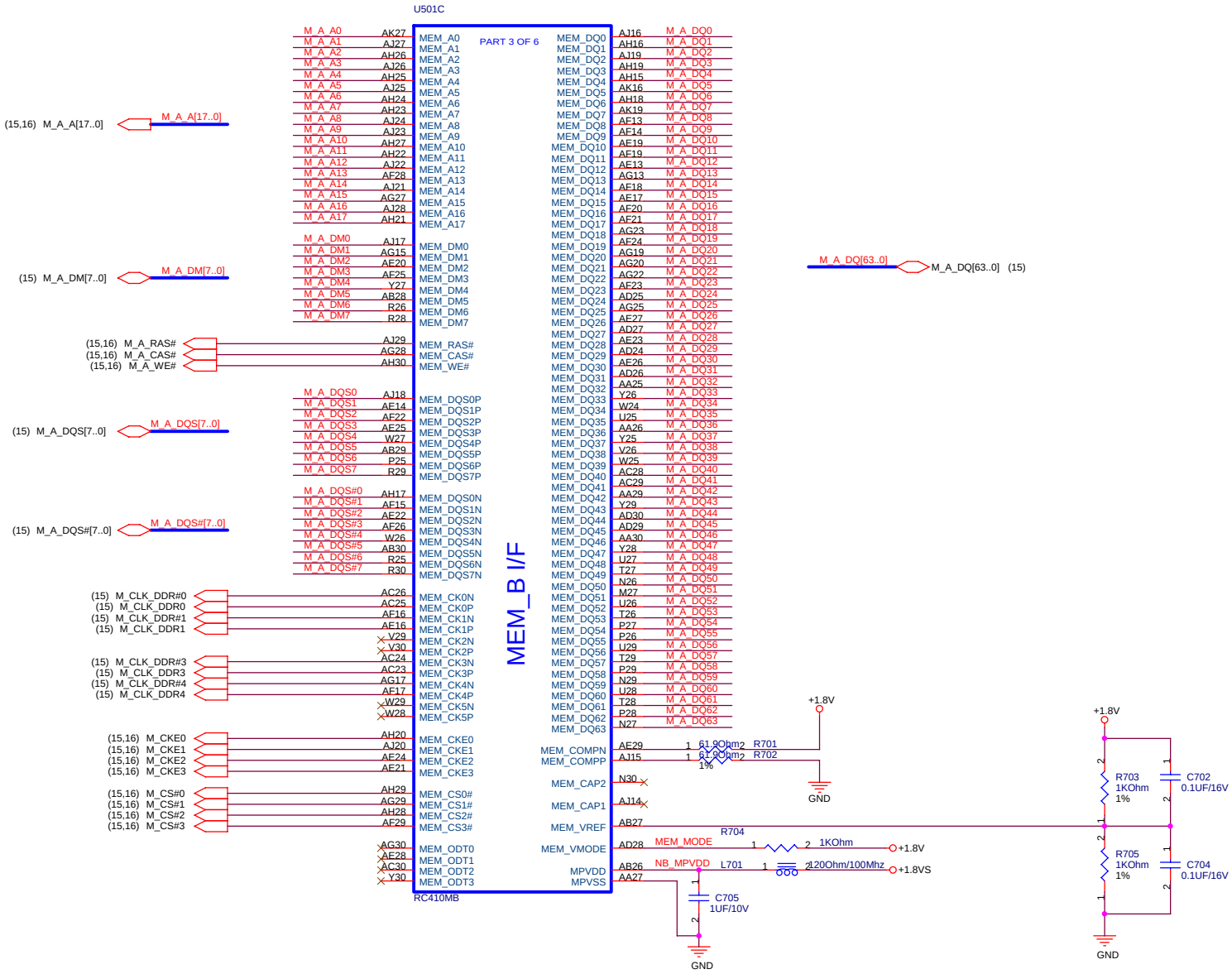
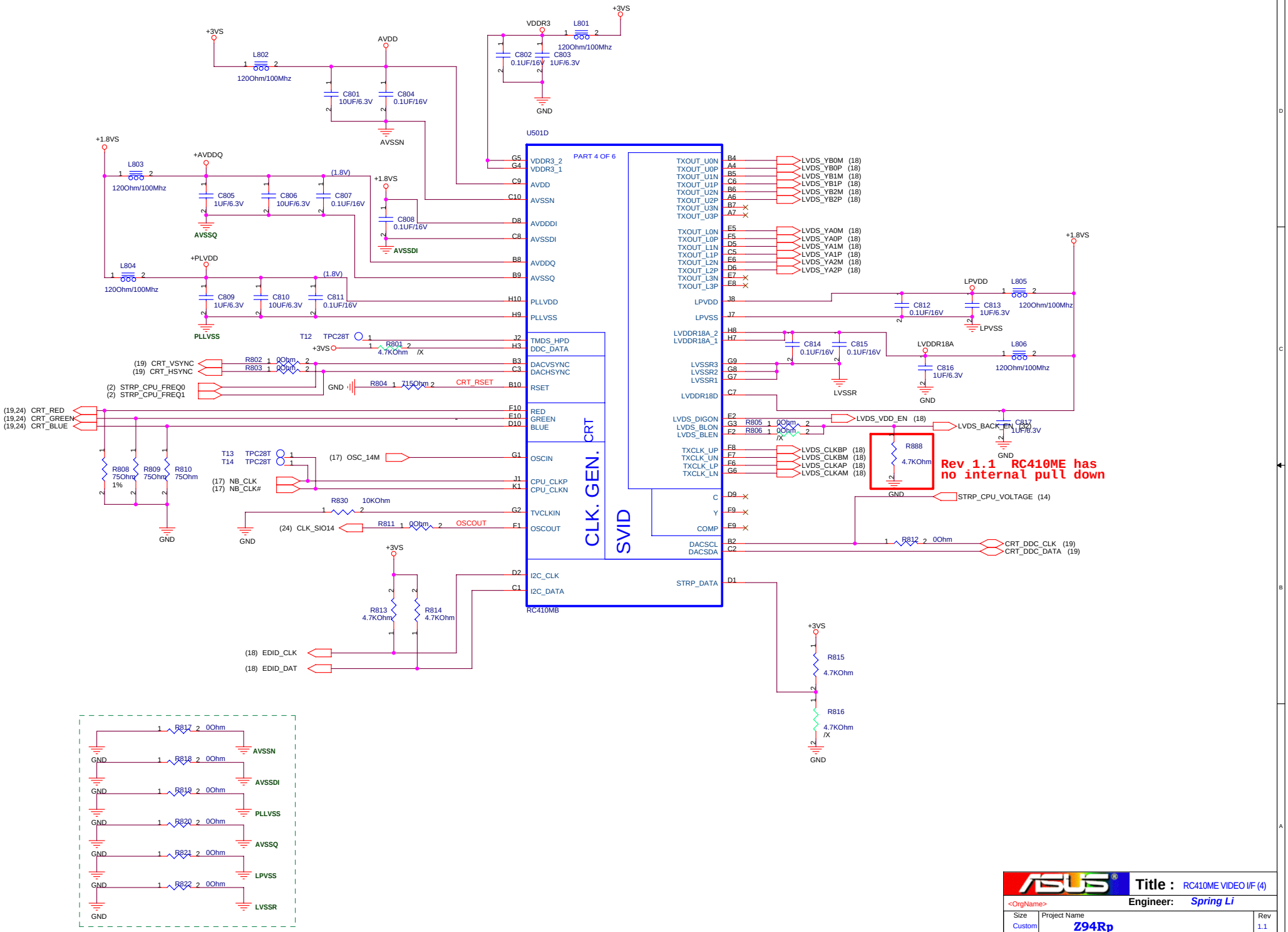


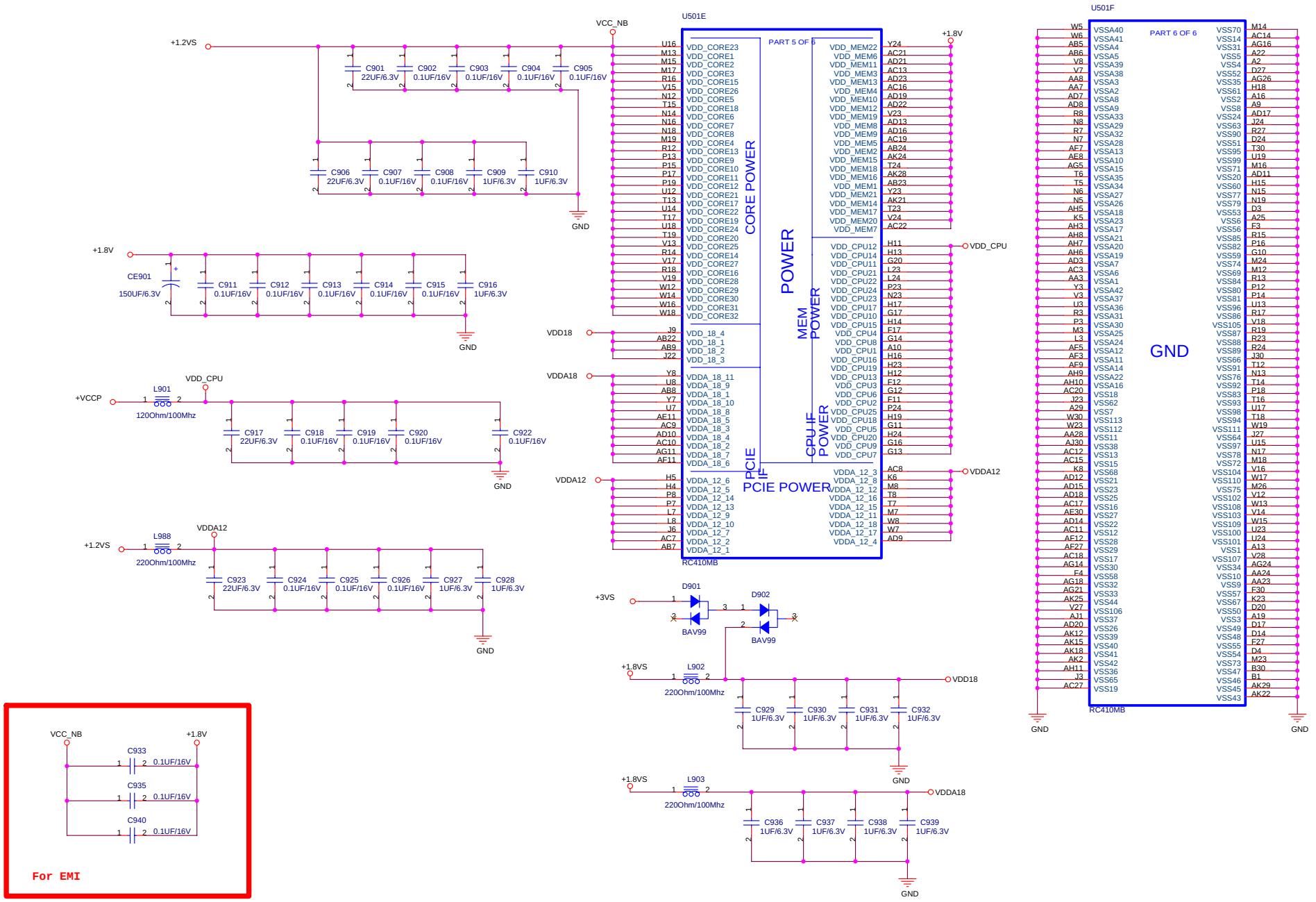
Title : RC410ME PCIE & A-Link(2)			
<OrgName>	Engineer: Spring Li		
Size: Custom	Project Name: Z94Rp		Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 6 of 45		



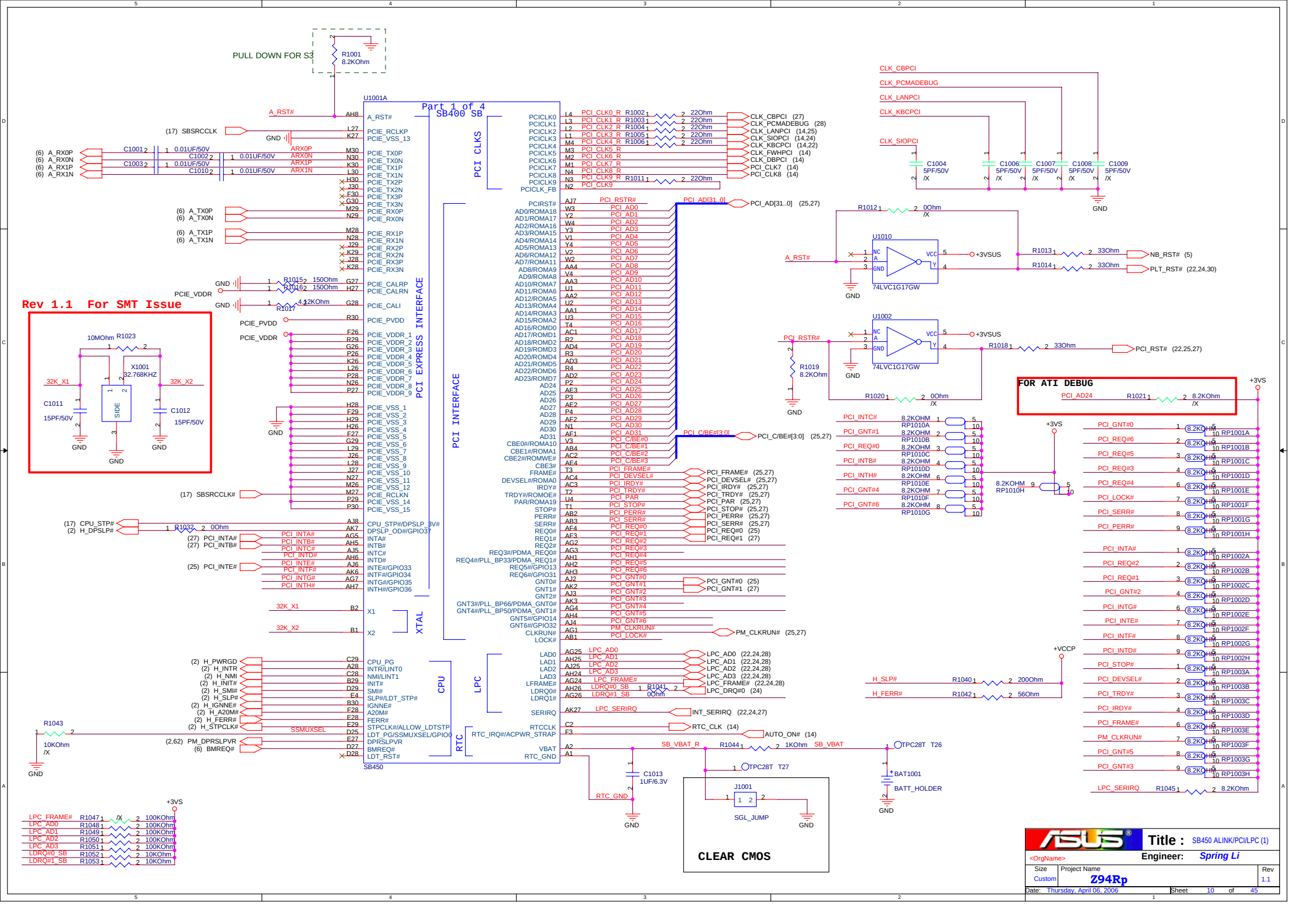
ASUS	Title :	RC410ME DDR2 I/F (3)	
<OrgName>	Engineer:	Spring Li	
Size: Custom	Project Name: Z94Rp		Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 7 of 45		



Title :	RC410ME VIDEO I/F (4)		
<OrgName>	Engineer:	Spring Li	
Size: Custom	Project Name: Z94Rp		Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 8 of 45		



Title :	RC410ME POWER (5)		
<OrgName>	Engineer:	Spring Li	
Size: Custom	Project Name: Z94Rp		Rev: 1.1
Date: Tuesday, April 04, 2006	Sheet 9	of 45	


PULL DOWN FOR S3
R1001
8.2KOhm
U1001A
Part 1 of 4
SB400 SB
SB450
PCI CLKS
PCI EXPRESS INTERFACE
PCI INTERFACE
LPC
CPU
RTC
XTAL
Rev 1.1 For SMT Issue
10MOhm R1023
X1001
32.768KHZ
32K_X1
32K_X2
C1011
C1012
15PF/50V
SIDE
GND
CLK_CBPCI
CLK_PCMADEBUG
CLK_LANPCI
CLK_KBCPCI
CLK_SIOPCI
C1004
C1006
C1007
C1008
C1009
5PF/50V
/X
+3VSUS
74LVC1G17GW
U1010
U1002
NB_RST# (5)
PLT_RST# (22,24,30)
PCI_RST# (22,25,27)
FOR ATI DEBUG
PCI_AD24
+3VS
+VCCP
RP1010A
RP1010B
RP1010C
RP1010D
RP1010E
RP1010F
RP1010G
RP1010H
RP1001A
RP1001B
RP1001C
RP1001D
RP1001E
RP1001F
RP1001G
RP1001H
RP1002A
RP1002B
RP1002C
RP1002D
RP1002E
RP1002F
RP1002G
RP1002H
RP1003A
RP1003B
RP1003C
RP1003D
RP1003E
RP1003F
RP1003G
RP1003H
8.2KOHM
8.2KOHM
RP1010H
H_SLP#
H_FERR#
R1040 200Ohm
R1042 56Ohm
LPC_SERIRQ
R1045 8.2KOhm
SB_VBAT_R
R1044 1KOhm
SB_VBAT
TPC28T T26
TPC28T T27
BAT1001
BATT_HOLDER
RTC_GND
C1013
1UF/6.3V
J1001
SGL_JUMP
CLEAR CMOS
LPC_FRAME# R1047 100KOhm
LPC_AD0 R1048 100KOhm
LPC_AD1 R1049 100KOhm
LPC_AD2 R1050 100KOhm
LPC_AD3 R1051 100KOhm
LDRQ#0_SB R1052 10KOhm
LDRQ#1_SB R1053 10KOhm
Title : SB450 ALINK/PCI/LPC (1)
<OrgName>
Engineer: Spring Li
Size Custom
Project Name Z94Rp
Rev 1.1
Date: Thursday, April 06, 2006
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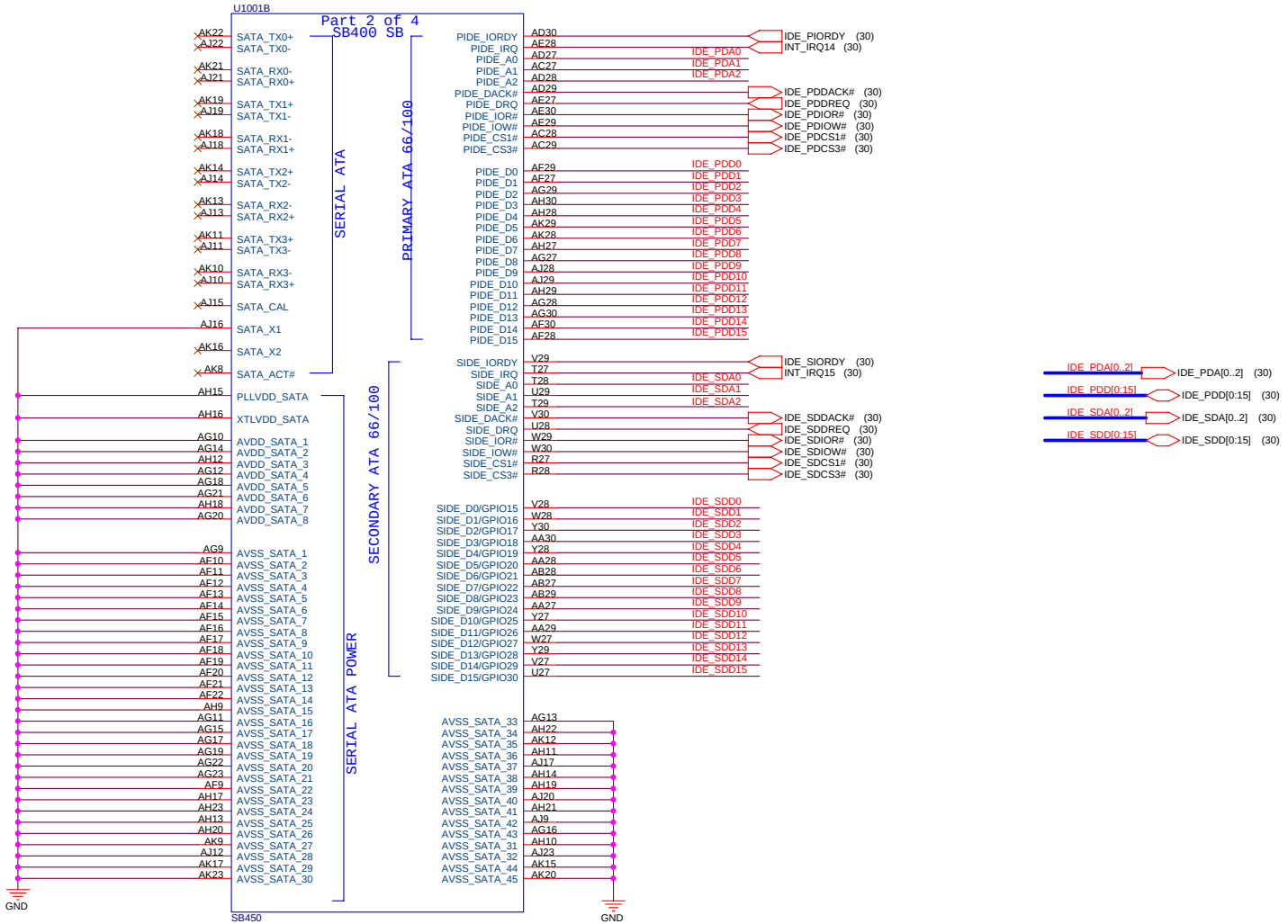
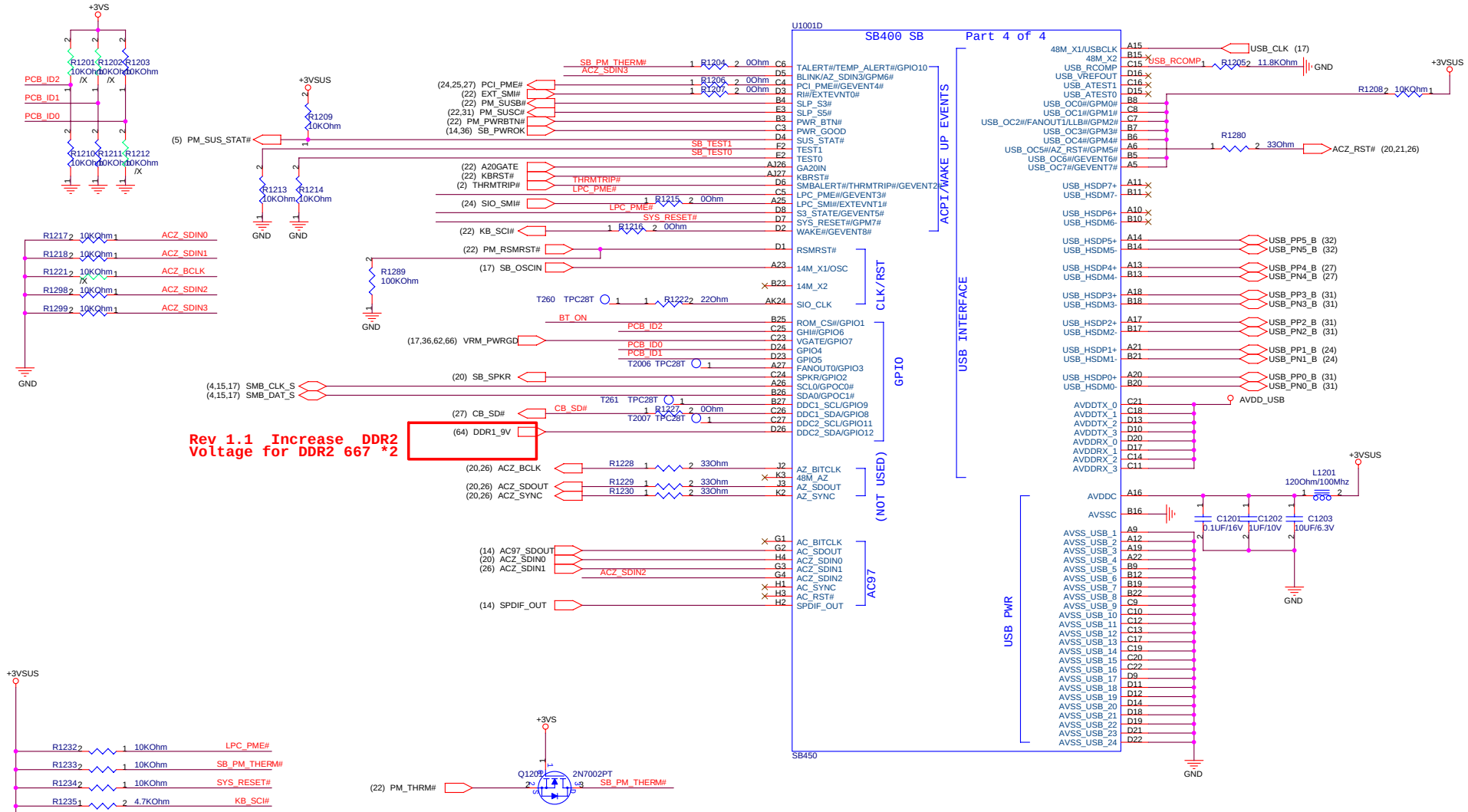
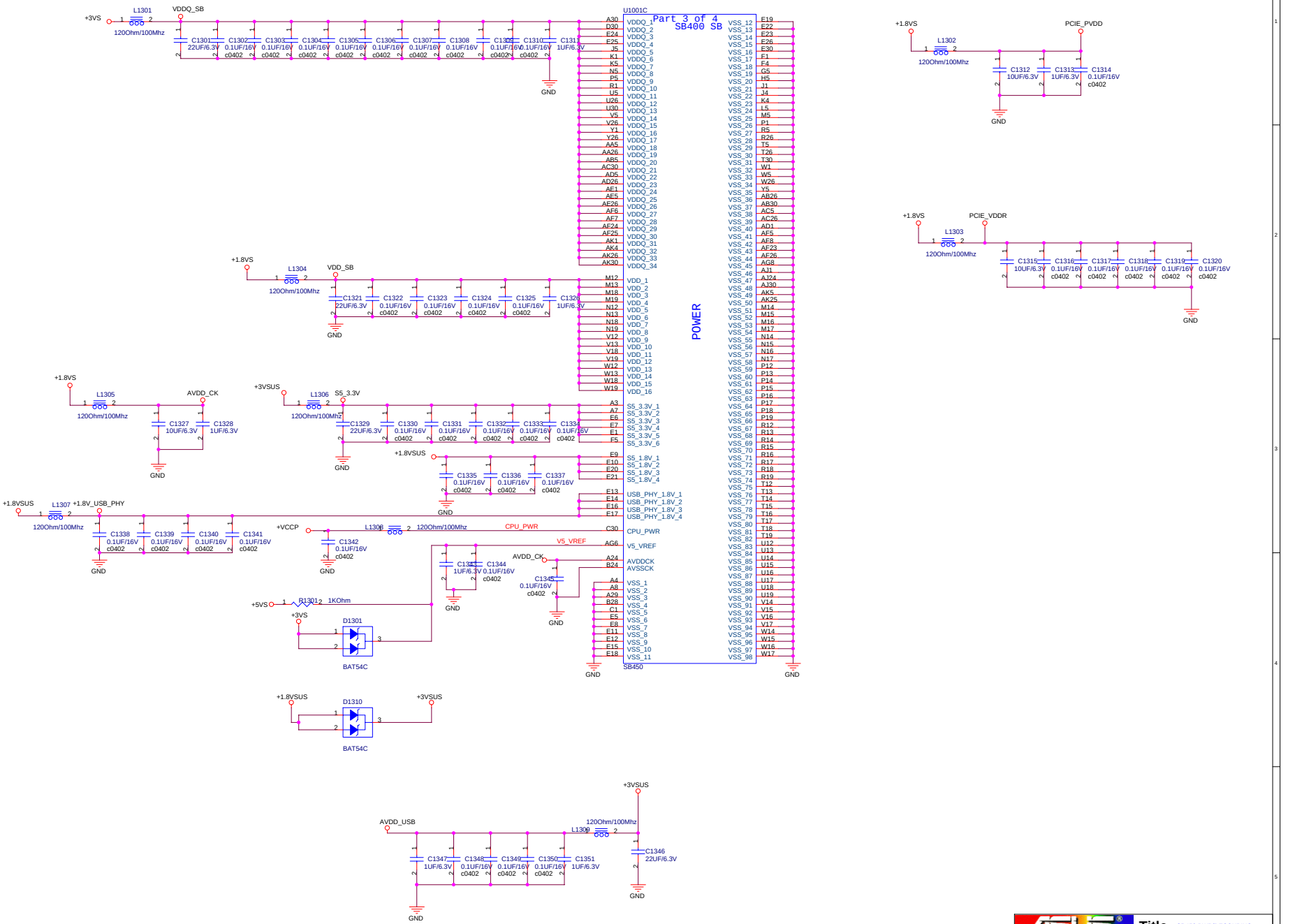


Title : SB450 IDE (2)		
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 11 of 45	

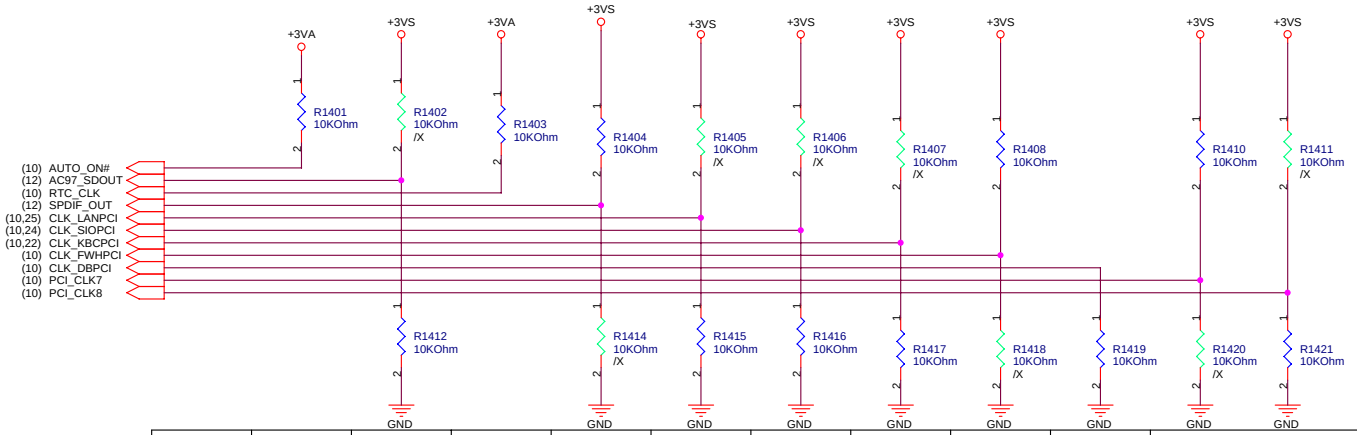


Title : SB450 GPIO/AC97(3)		
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 12 of 45	



Title : SB450 PWR/DECOUPING		
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Tuesday, April 04, 2006	Sheet 13 of 45	

REQUIRED STRAPS



	AUTO_ON#	AC_SDOUT	RTC_CLK	SPDIF_OUT	CLK_LANPCI	CLK_SIOPCI	CLK_KBCPCI	CLK_FWHPCI	CLK_DBPCI	PCI_CLK7 PCI_CLK8
PULL HIGH	MANUAL PWR ON	USE DEBUG STRAPS	INTERNAL RTC	SIO 24MHz	SEE NOTE1	USB PHY PWRDOWN DISABLE	USE USB PLL	SEE NOTE2	CPU I/F = K8	ROM TYPE H,H = PCI ROM H,L = LPC ROM I DEFAULT LPC Address Mapped below 1M L,H = LPC ROM II LPC Address Mapped to top 4G L,L = FWH ROM
PULL LOW	AUTO PWR ON	IGNORE DEBUG STRAPS	EXTERNAL RTC (NOT SUPPORTED W/ IT8712)	SIO 48MHz		USB PHY PWRDOWN ENABLE	BYPASS USB PLL		CPU I/F = P4	

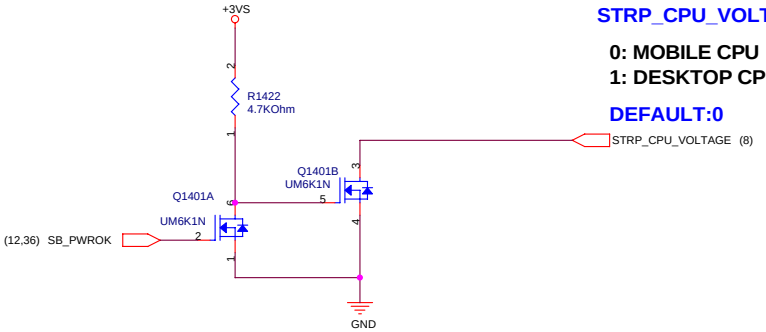
NOTE

1. USB CLK STRAPPING CHANGE

	A21,A22,A23	A31 AND NEWER
10K PULL UP	OSC/CLOCK BUFFER	CRYSTAL PAD
10K PULL DOWN	CRYSTAL PAD	OSC/CLOCK BUFFER

2. 14MHz CLOCK TYPE STRAPPING

	A11~A31	A32 AND ABOVE
	14MHz CLOCK PAD IS CRYSTAL PAD	PCIE COMMON MODE SETTING
10K PULL UP	CLOCK INPUT BUFFER	PCIE CM_SET LOW
10K PULL DOWN	CRYSTAL PAD	PCIE CM_SET HIGH

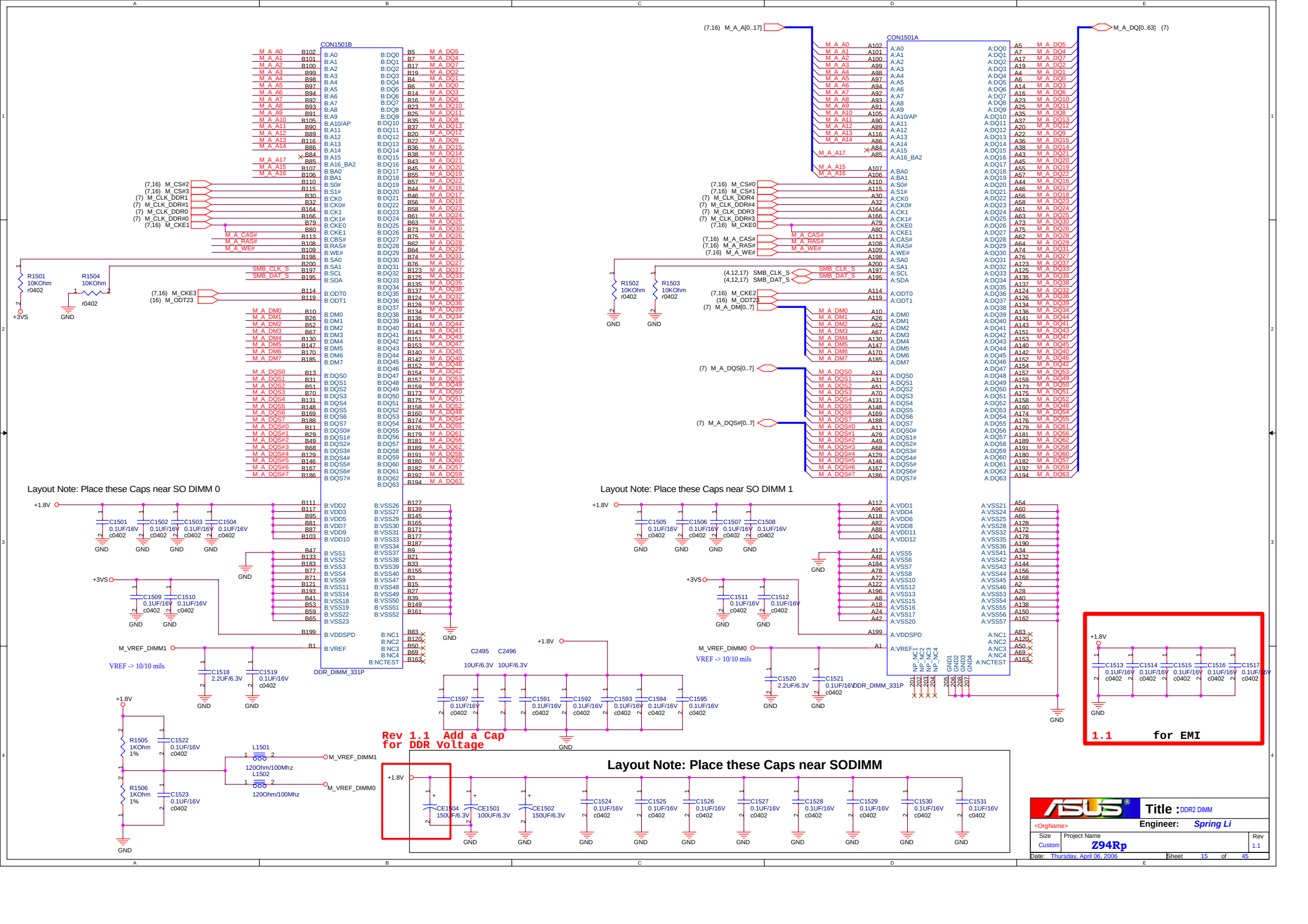


STRP_CPU_VOLTAGE: CPU VCC

0: MOBILE CPU
1: DESKTOP CPU

DEFAULT:0

<OrgName>	Title : SB450 STRAPS(5)	
	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 14 of 45	


CON1501B
CON1501A
DDR_DIMM_331P
Layout Note: Place these Caps near SO DIMM 0
Layout Note: Place these Caps near SO DIMM 1
Layout Note: Place these Caps near SODIMM
Rev 1.1 Add a Cap for DDR Voltage
1.1 for EMI
VREF -> 10/10 mils
Title : DDR2 DIMM
Engineer: Spring Li
Project Name Z94Rp
Size Custom
Rev 1.1
Date: Thursday, April 06, 2006
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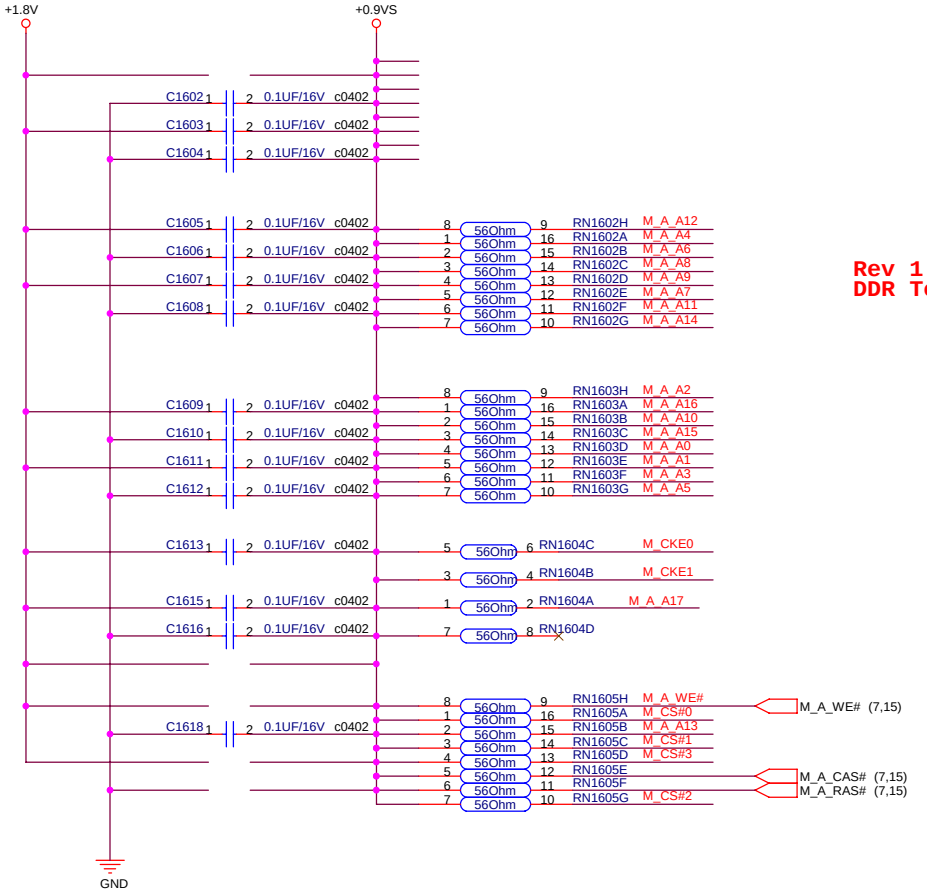
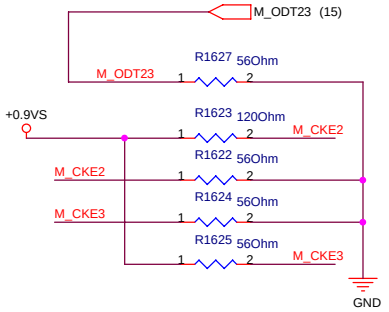


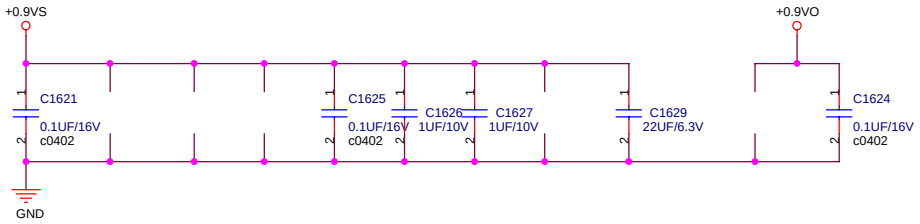
Rev 1.1 swap for DDR Termination

M_CS#[0..3] (7,15)

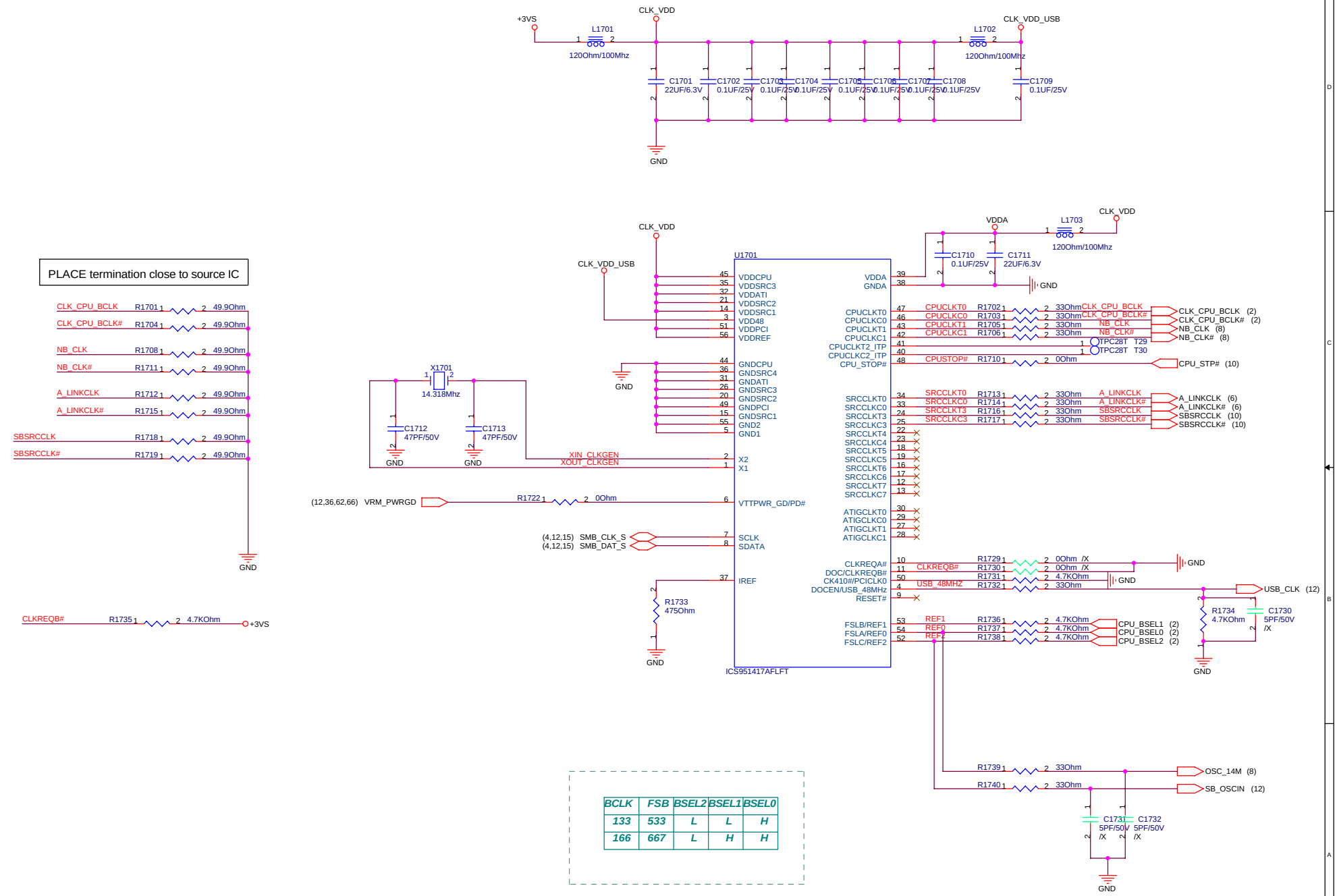
M_CKE[0..3] (7,15)

M_A_A[0..17] (7,15)





ASUS	Title : DDR2 Termination	
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 16 of 45	



BCLK	FSB	BSEL2	BSEL1	BSEL0
133	533	L	L	H
166	667	L	H	H

Title : CLOCK GENERATOR

<OrgName>

Engineer: Spring Li

Size	Project Name	Rev
Custom	Z94Rp	1.1

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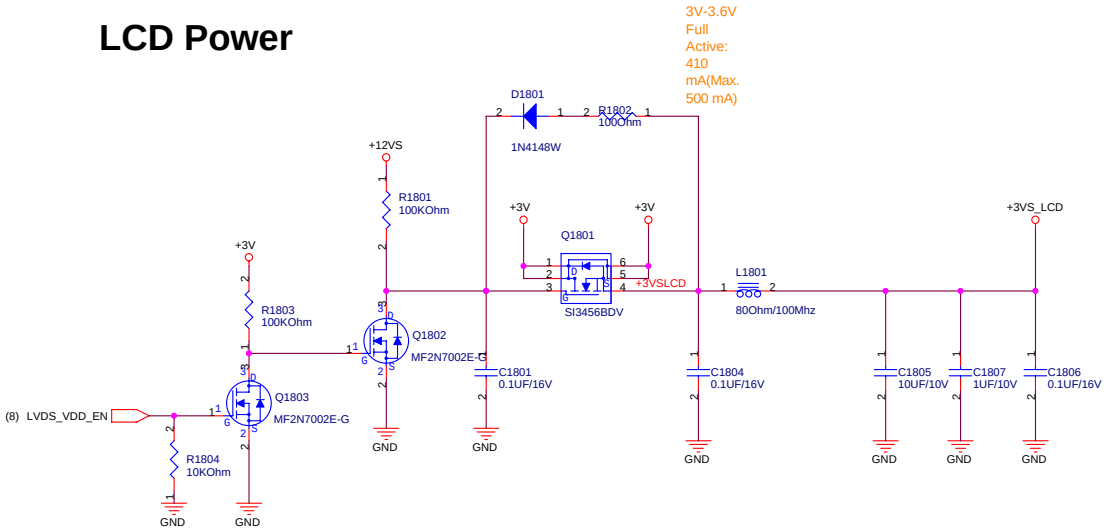
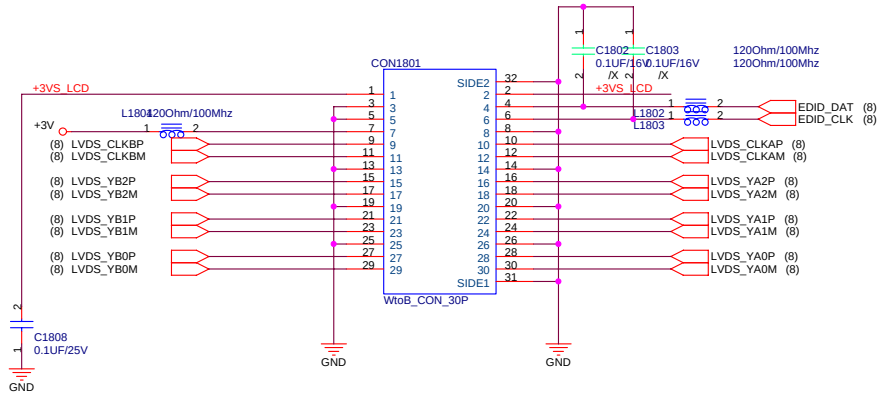
LCD Power

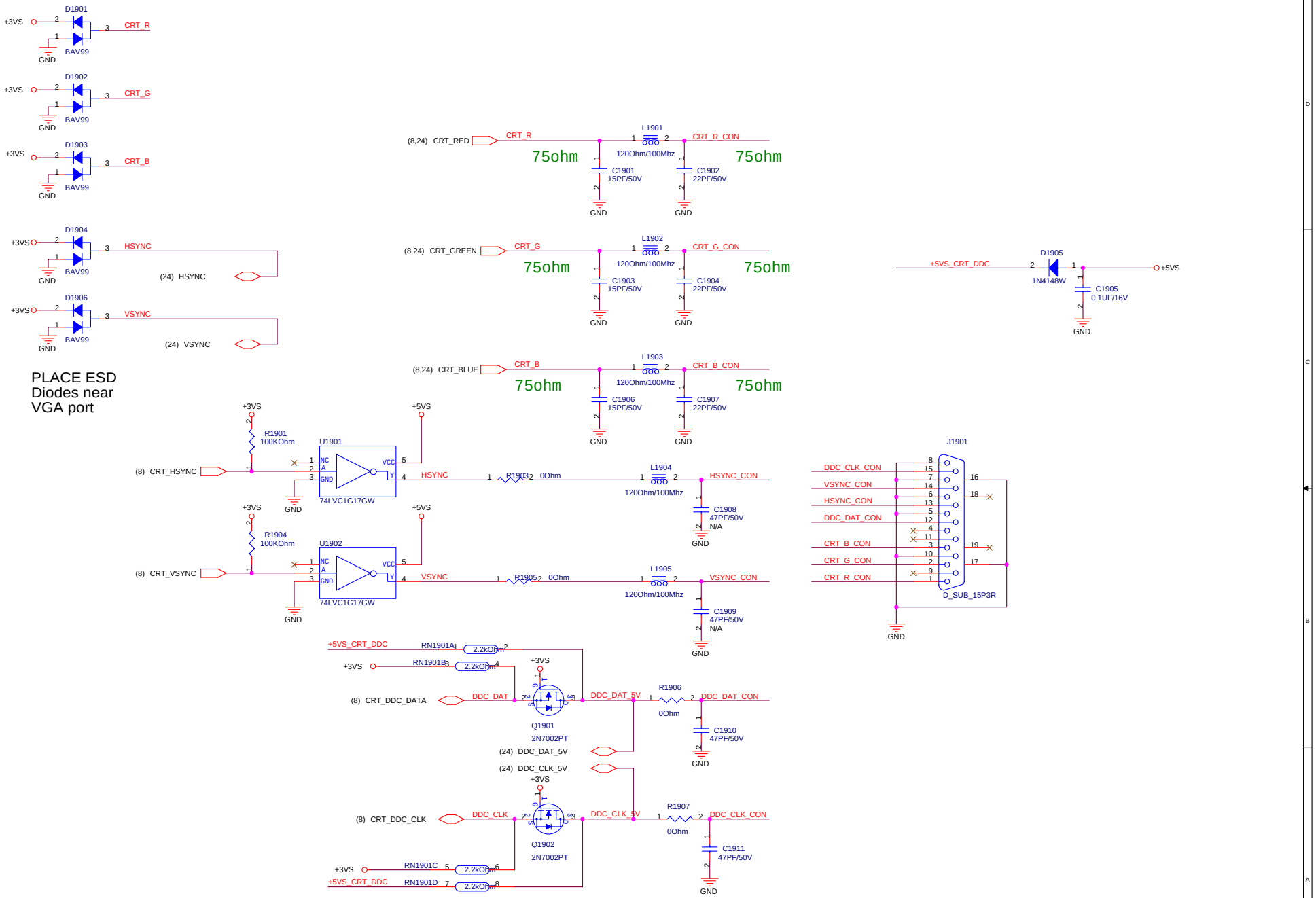




Cable Requirement:
Impedence: 100 ohm +/- 10%
Length Mismatch <= 10 mils
Twisted Pair(Not Ribbon)
Maximum Length <= 16"

LCD LVDS Interface

<OrgName>		Title :	LVDS & INVERTER (CAMERA)
		Engineer:	Spring Li
Size: Custom	Project Name: Z94Rp		Rev: 1.1
Date: Thursday, April 06, 2006		Sheet 18 of 45	



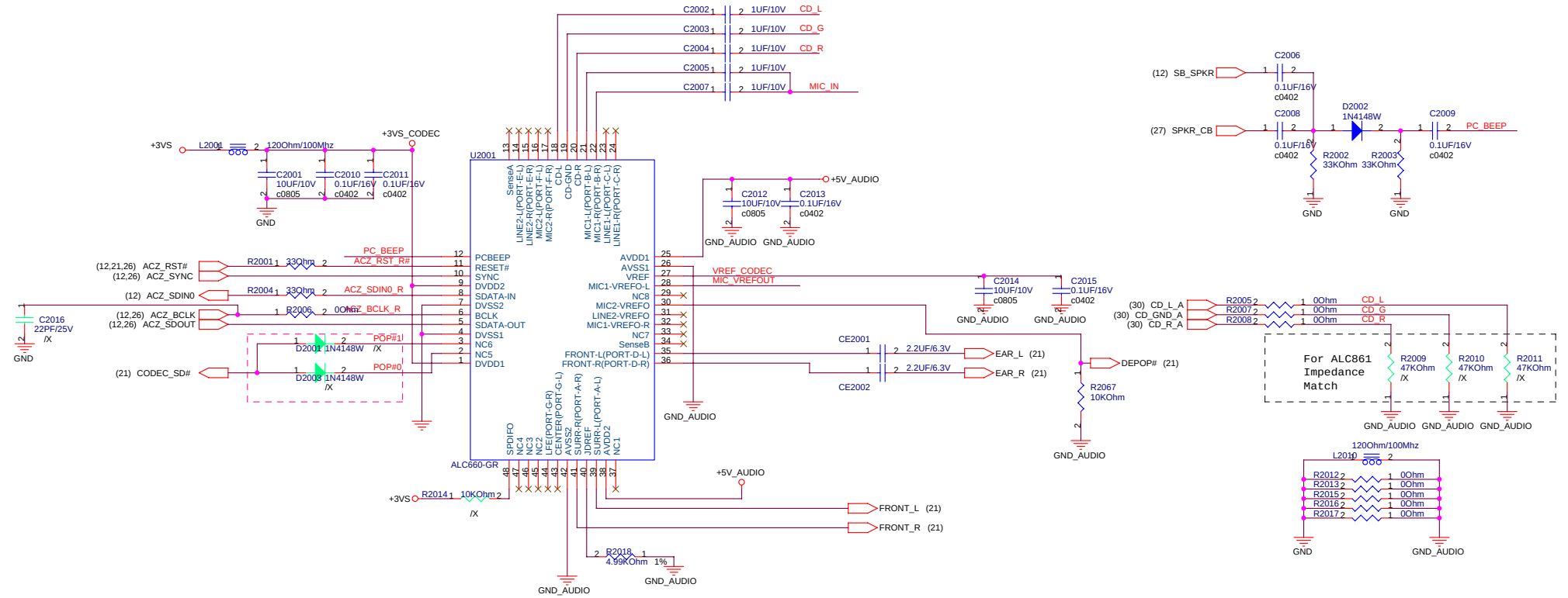
Title : CRT CONNECTOR

<OrgName>

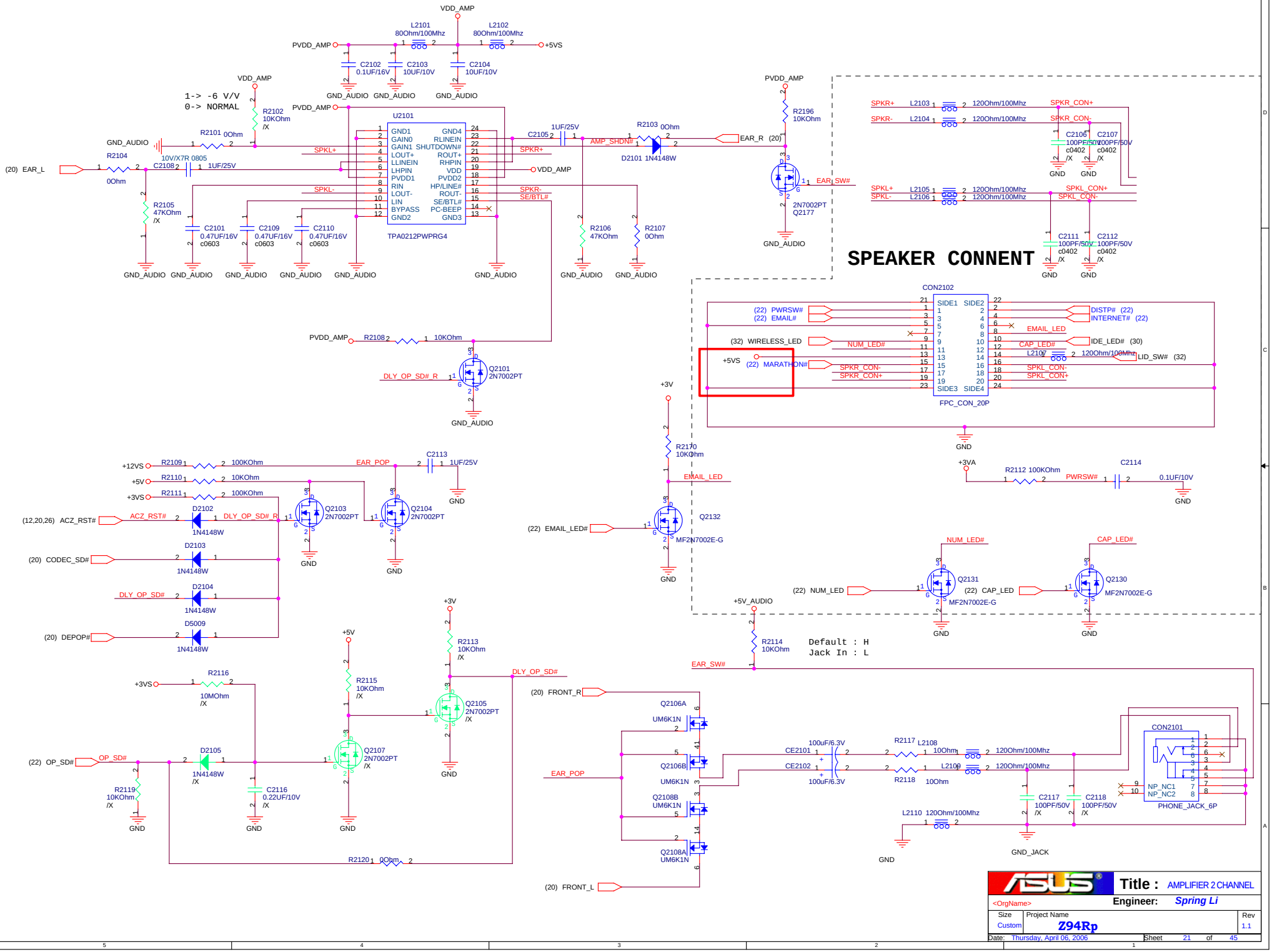
Engineer: Spring Li

Size	Project Name	Rev
Custom	Z94Rp	1.1

Date: Thursday, April 06, 2006 Sheet 19 of 45



ASUS	Title : AZALIA	
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 20 of 45	


SPEAKER CONNENT
U2101
TPA0212PWPRG4
1-> -6 V/V
0-> NORMAL
CON2102
FPC_CON_20P
CON2101
PHONE_JACK_6P
Default : H
Jack In : L
Title : AMPLIFIER 2 CHANNEL
Engineer: Spring Li
Project Name Z94Rp
Rev 1.1
Date: Thursday, April 06, 2006
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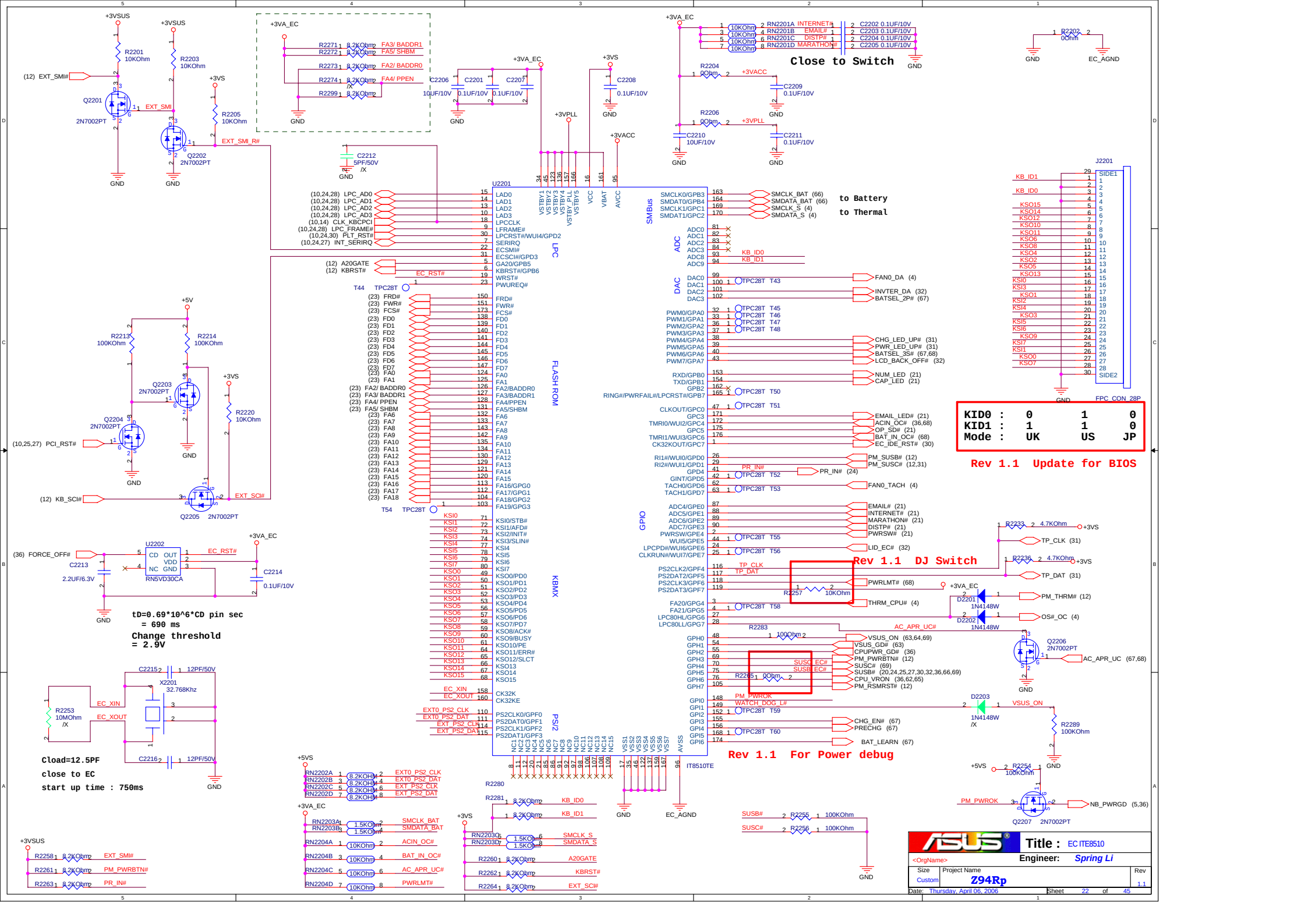
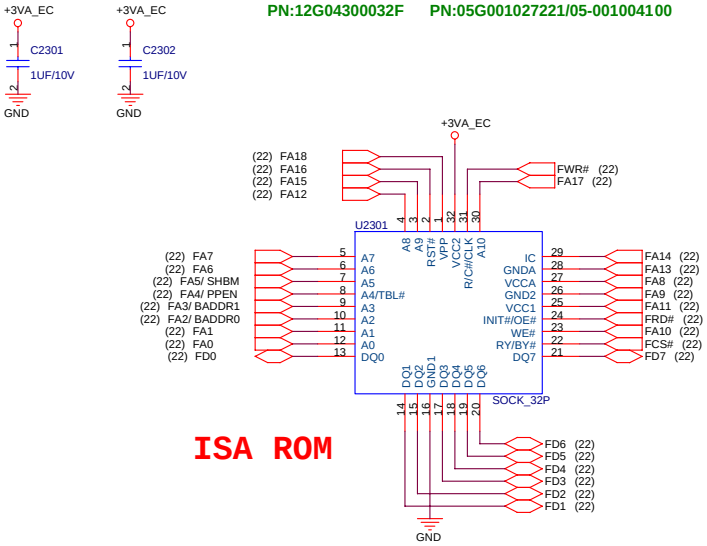

Close to Switch
to Battery
to Thermal
Rev 1.1 Update for BIOS
KID0 : 0 1 0
KID1 : 1 1 0
Mode : UK US JP
Rev 1.1 DJ Switch
Rev 1.1 For Power debug
tD=0.69*10^6*CD pin sec
= 690 ms
Change threshold
= 2.9V
Cload=12.5PF
close to EC
start up time : 750ms
U2201
IT8510TE
J2201
FPC_CON_28P
U2202
RN5VD30CA
Title : EC ITE8510
Engineer: Spring Li
Project Name
Z94Rp
Rev
1.1
Date: Thursday, April 06, 2006
Sheet 22 of 45

PLCC32 Socket
PN:12G04300032F

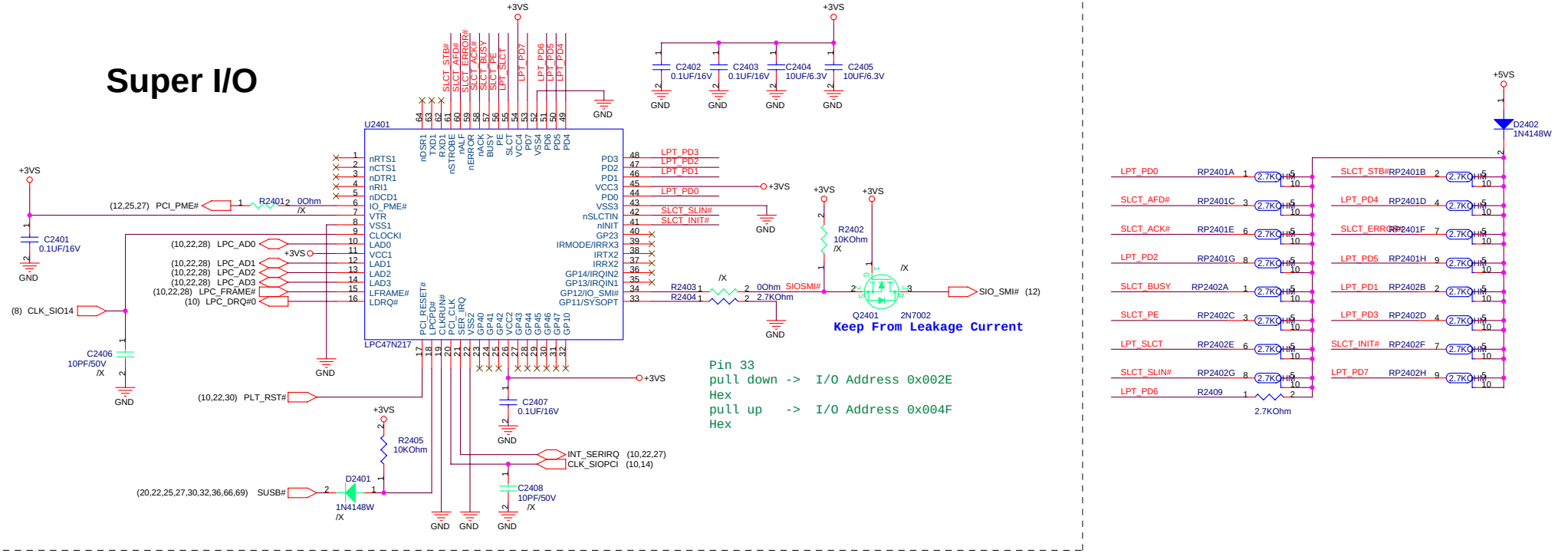
SST-PLCC32 4Mbits Flash ROM
PN:05G001027221/05-001004100

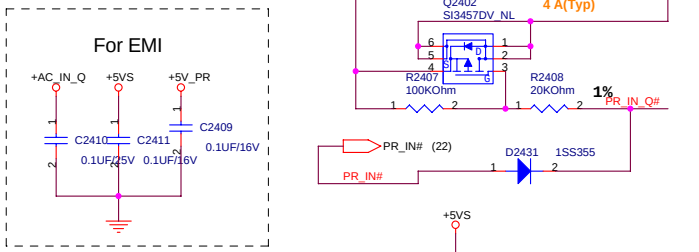


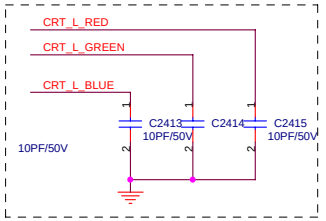
ISA ROM

Title : ISA ROM & SPI ROM		
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 23 of 45	

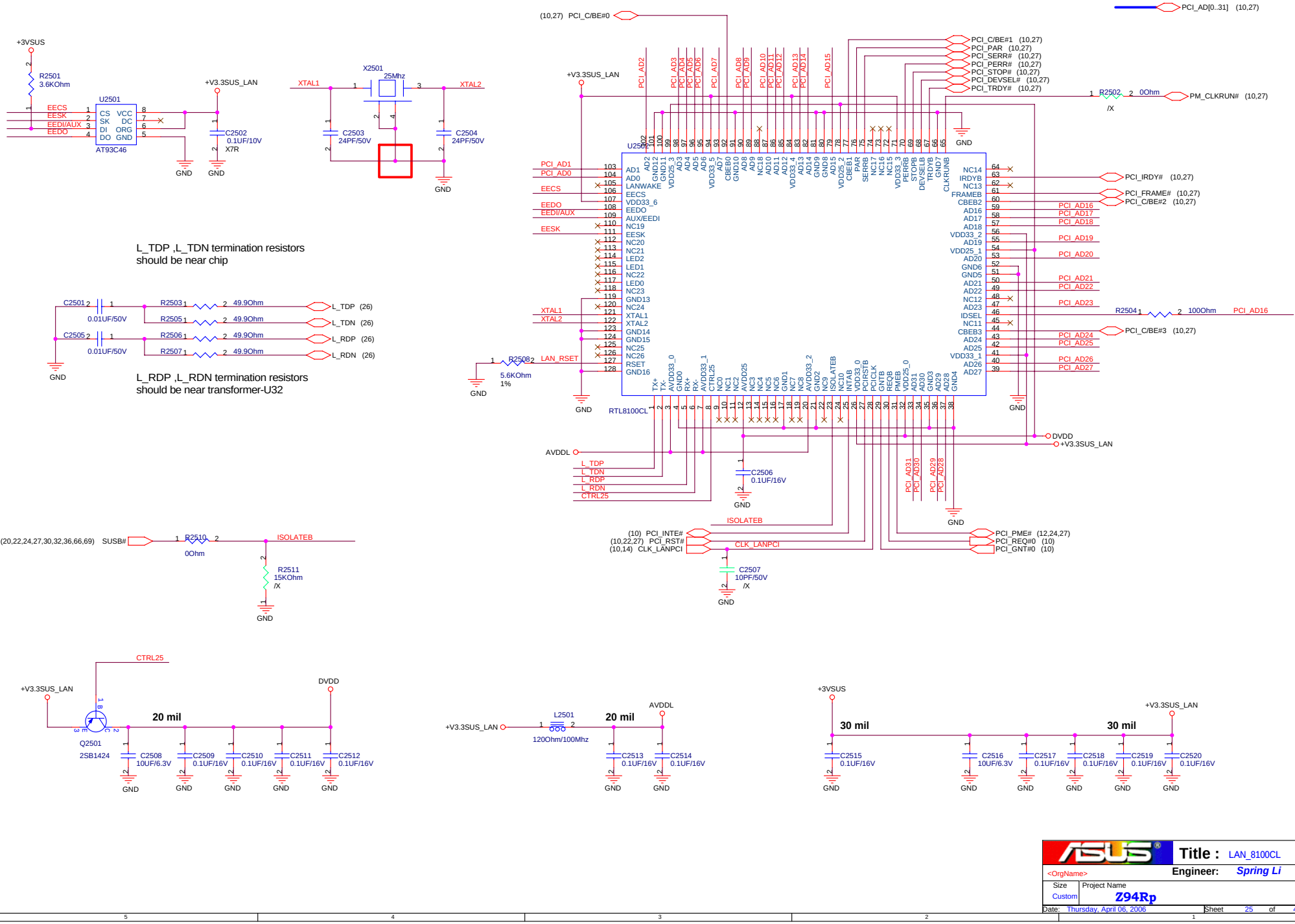
Super I/O



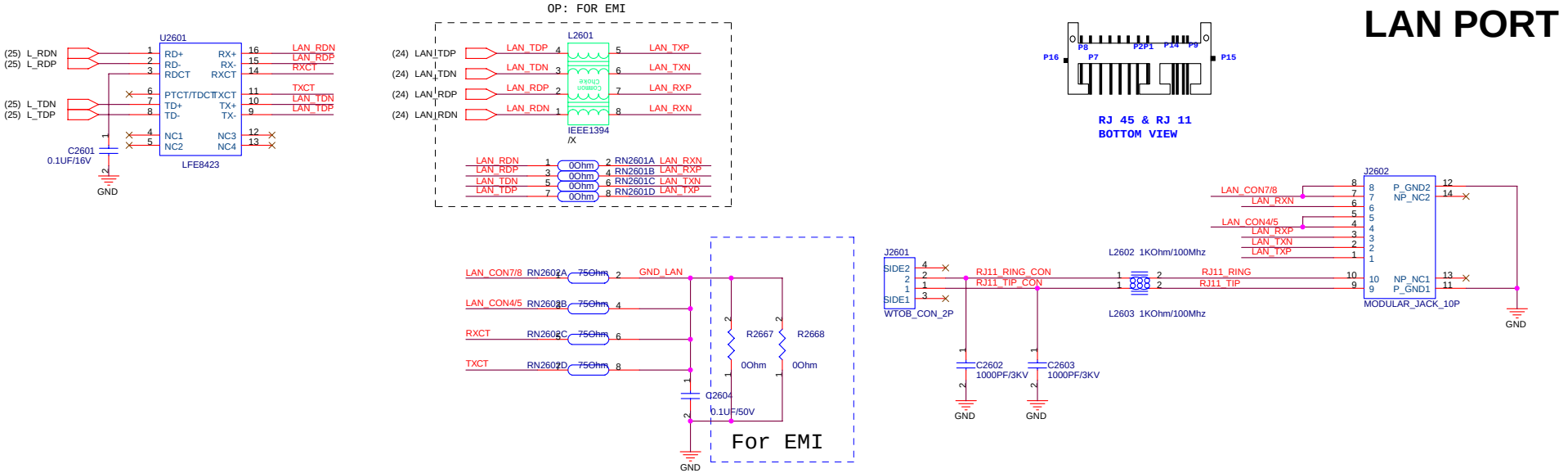




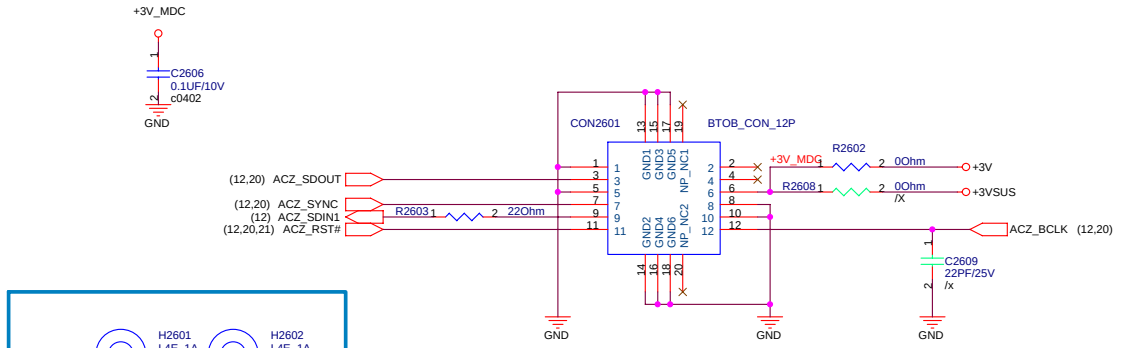
ASUS	Title : Blank		
<OrgName>	Engineer: Spring Li		
Size: Custom	Project Name: Z94Rp		Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 24 of 45		

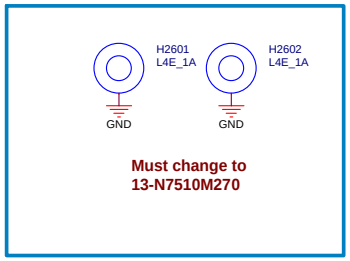

+3VSUS
R2501
3.6KOhm
U2501
EECS
EESK
EEDI/AUX
EEDO
CS
SK
DI
DO
VCC
DC
ORG
GND
AT93C46
+V3.3SUS_LAN
C2502
0.1UF/10V
X7R
GND
X2501
25Mhz
XTAL1
XTAL2
C2503
24PF/50V
C2504
24PF/50V
L_TDP ,L_TDN termination resistors
should be near chip
C2501
0.01UF/50V
C2505
0.01UF/50V
R2503
R2505
R2506
R2507
49.9Ohm
L_TDP (26)
L_TDN (26)
L_RDP (26)
L_RDN (26)
L_RDP ,L_RDN termination resistors
should be near transformer-U32
(10,27) PCI_C/BE#0
PCI_AD[0..31] (10,27)
PCI_C/BE#1 (10,27)
PCI_PAR (10,27)
PCI_SERR# (10,27)
PCI_PERR# (10,27)
PCI_STOP# (10,27)
PCI_DEVSEL# (10,27)
PCI_TRDY# (10,27)
R2502
0Ohm
/X
PM_CLKRUN# (10,27)
U2501
RTL8100CL
PCI_IRDY# (10,27)
PCI_FRAME# (10,27)
PCI_C/BE#2 (10,27)
PCI_C/BE#3 (10,27)
R2504
100Ohm
R2508
5.6KOhm
1%
LAN_RSET
AVDDL
DVDD
L_TDP
L_TDN
L_RDP
L_RDN
CTRL25
C2506
0.1UF/16V
ISOLATEB
(20,22,24,27,30,32,36,66,69) SUSB#
R2510
0Ohm
R2511
15KOhm
/X
(10) PCI_INTE#
(10,22,27) PCI_RST#
(10,14) CLK_LANPCI
CLK_LANPCI
C2507
10PF/50V
/X
PCI_PME# (12,24,27)
PCI_REQ#0 (10)
PCI_GNT#0 (10)
CTRL25
+V3.3SUS_LAN
DVDD
20 mil
Q2501
2SB1424
C2508
10UF/6.3V
C2509
0.1UF/16V
C2510
0.1UF/16V
C2511
0.1UF/16V
C2512
0.1UF/16V
L2501
120Ohm/100Mhz
AVDDL
C2513
0.1UF/16V
C2514
0.1UF/16V
+3VSUS
30 mil
C2515
0.1UF/16V
C2516
10UF/6.3V
C2517
0.1UF/16V
C2518
0.1UF/16V
C2519
0.1UF/16V
C2520
0.1UF/16V
GND
Title : LAN_8100CL
<OrgName>
Engineer: Spring Li
Size
Custom
Project Name
Z94Rp
Rev
1.1
Date: Thursday, April 06, 2006
Sheet 25 of 45

LAN PORT

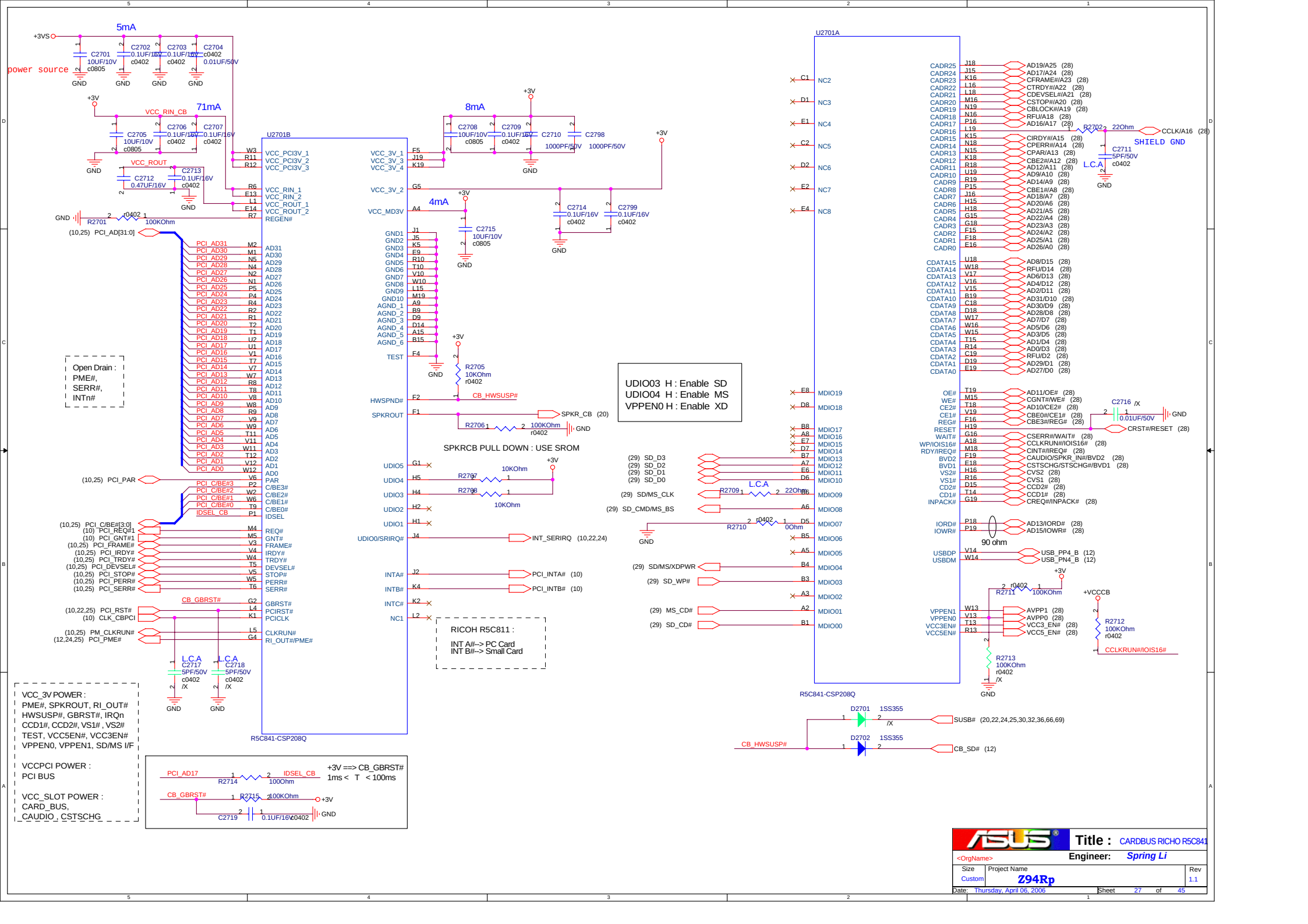


MDC





Title : RJ11+45 & MDC		
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 26 of 45	

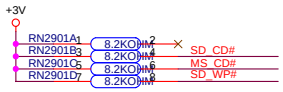

5mA
power source
C2701 10UF/10V c0805
C2702 0.1UF/16V c0402
C2703 0.1UF/16V c0402
C2704 0.01UF/50V c0402
71mA
VCC_RIN_CB
C2705 10UF/10V c0805
C2706 0.1UF/16V c0402
C2707 0.1UF/16V c0402
VCC_ROUT
C2712 0.47UF/16V
C2713 0.1UF/16V c0402
R2701 100KOhm r0402
U2701B
VCC_PCI3V_1
VCC_PCI3V_2
VCC_PCI3V_3
VCC_RIN_1
VCC_RIN_2
VCC_ROUT_1
VCC_ROUT_2
REGEN#
8mA
C2708 10UF/10V c0805
C2709 0.1UF/16V c0402
C2710 1000PF/50V
C2798 1000PF/50V
VCC_3V_1
VCC_3V_3
VCC_3V_4
VCC_3V_2
4mA
VCC_MD3V
C2715 10UF/10V c0805
C2714 0.1UF/16V c0402
C2799 0.1UF/16V c0402
GND1
GND2
GND3
GND4
GND5
GND6
GND7
GND8
GND9
GND10
AGND_1
AGND_2
AGND_3
AGND_4
AGND_5
AGND_6
TEST
R2705 10KOhm r0402
HWSPND#
CB_HWSUSP#
SPKROUT
SPKR_CB (20)
R2706 100KOhm r0402
SPKRCB PULL DOWN : USE SROM
UDIO5
UDIO4
UDIO3
UDIO2
UDIO1
UDIO0/SRIRQ#
R2707 10KOhm
R2708 10KOhm
INT_SERIRQ (10,22,24)
INTA#
INTB#
INTC#
NC1
PCI_INTA# (10)
PCI_INTB# (10)
(10,25) PCI_AD[31:0]
PCI_AD31
PCI_AD30
PCI_AD29
PCI_AD28
PCI_AD27
PCI_AD26
PCI_AD25
PCI_AD24
PCI_AD23
PCI_AD22
PCI_AD21
PCI_AD20
PCI_AD19
PCI_AD18
PCI_AD17
PCI_AD16
PCI_AD15
PCI_AD14
PCI_AD13
PCI_AD12
PCI_AD11
PCI_AD10
PCI_AD9
PCI_AD8
PCI_AD7
PCI_AD6
PCI_AD5
PCI_AD4
PCI_AD3
PCI_AD2
PCI_AD1
PCI_AD0
AD31
AD30
AD29
AD28
AD27
AD26
AD25
AD24
AD23
AD22
AD21
AD20
AD19
AD18
AD17
AD16
AD15
AD14
AD13
AD12
AD11
AD10
AD9
AD8
AD7
AD6
AD5
AD4
AD3
AD2
AD1
AD0
(10,25) PCI_PAR
PAR
PCI_C/BE#3
PCI_C/BE#2
PCI_C/BE#1
PCI_C/BE#0
IDSEL_CB
C/BE3#
C/BE2#
C/BE1#
C/BE0#
IDSEL
(10,25) PCI_C/BE#[3:0]
(10) PCI_REQ#1
(10) PCI_GNT#1
(10,25) PCI_FRAME#
(10,25) PCI_IRDY#
(10,25) PCI_TRDY#
(10,25) PCI_DEVSEL#
(10,25) PCI_STOP#
(10,25) PCI_PERR#
(10,25) PCI_SERR#
REQ#
GNT#
FRAME#
IRDY#
TRDY#
DEVSEL#
STOP#
PERR#
SERR#
CB_GBRST#
(10,22,25) PCI_RST#
(10) CLK_CBPCI
GBRST#
PCIRST#
PCICLK
(10,25) PM_CLKRUN#
(12,24,25) PCI_PME#
CLKRUN#
RI_OUT#/PME#
L.C.A C2717 5PF/50V c0402 /X
L.C.A C2718 5PF/50V c0402 /X
R5C841-CSP208Q
Open Drain :
PME#,
SERR#,
INTn#
UDIO03 H : Enable SD
UDIO04 H : Enable MS
VPPEN0 H : Enable XD
RICOH R5C811 :
INT A#--> PC Card
INT B#--> Small Card
VCC_3V POWER :
PME#, SPKROUT, RI_OUT#
HWSUSP#, GBRST#, IRQn
CCD1#, CCD2#, VS1# , VS2#
TEST, VCC5EN#, VCC3EN#
VPPEN0, VPPEN1, SD/MS I/F
VCCPCI POWER :
PCI BUS
VCC_SLOT POWER :
CARD_BUS,
CAUDIO , CSTSCHG
PCI_AD17
R2714 100Ohm
IDSEL_CB
CB_GBRST#
R2715 100KOhm
C2719 0.1UF/16V c0402
+3V ==> CB_GBRST#
1ms < T < 100ms
U2701A
NC2
NC3
NC4
NC5
NC6
NC7
NC8
MDIO19
MDIO18
MDIO17
MDIO16
MDIO15
MDIO14
MDIO13
MDIO12
MDIO11
MDIO10
MDIO09
MDIO08
MDIO07
MDIO06
MDIO05
MDIO04
MDIO03
MDIO02
MDIO01
MDIO00
(29) SD_D3
(29) SD_D2
(29) SD_D1
(29) SD_D0
(29) SD/MS_CLK
(29) SD_CMD/MS_BS
(29) SD/MS/XDPWR
(29) SD_WP#
(29) MS_CD#
(29) SD_CD#
R2709 22Ohm
R2710 0Ohm
CADR25
CADR24
CADR23
CADR22
CADR21
CADR20
CADR19
CADR18
CADR17
CADR16
CADR15
CADR14
CADR13
CADR12
CADR11
CADR10
CADR9
CADR8
CADR7
CADR6
CADR5
CADR4
CADR3
CADR2
CADR1
CADR0
AD19/A25 (28)
AD17/A24 (28)
CFRAME#/A23 (28)
CTRDY#/A22 (28)
CDEVSEL#/A21 (28)
CSTOP#/A20 (28)
CBLOCK#/A19 (28)
RFU/A18 (28)
AD16/A17 (28)
CIRDY#/A15 (28)
CPERR#/A14 (28)
CPAR/A13 (28)
CBE2#/A12 (28)
AD12/A11 (28)
AD9/A10 (28)
AD14/A9 (28)
CBE1#/A8 (28)
AD18/A7 (28)
AD20/A6 (28)
AD21/A5 (28)
AD22/A4 (28)
AD23/A3 (28)
AD24/A2 (28)
AD25/A1 (28)
AD26/A0 (28)
R2702 22Ohm
CCLK/A16 (28)
SHIELD GND
C2711 5PF/50V c0402
L.C.A
CDATA15
CDATA14
CDATA13
CDATA12
CDATA11
CDATA10
CDATA9
CDATA8
CDATA7
CDATA6
CDATA5
CDATA4
CDATA3
CDATA2
CDATA1
CDATA0
AD8/D15 (28)
RFU/D14 (28)
AD6/D13 (28)
AD4/D12 (28)
AD2/D11 (28)
AD31/D10 (28)
AD30/D9 (28)
AD28/D8 (28)
AD7/D7 (28)
AD5/D6 (28)
AD3/D5 (28)
AD1/D4 (28)
AD0/D3 (28)
RFU/D2 (28)
AD29/D1 (28)
AD27/D0 (28)
OE#
WE#
CE2#
CE1#
REG#
RESET
WAIT#
WP/IOIS16#
RDY/IREQ#
BVD2
BVD1
VS2#
VS1#
CD2#
CD1#
INPACK#
AD11/OE# (28)
CGNT#/WE# (28)
AD10/CE2# (28)
CBE0#/CE1# (28)
CBE3#/REG# (28)
CRST#/RESET (28)
CSERR#/WAIT# (28)
CCLKRUN#/IOIS16# (28)
CINT#/IREQ# (28)
CAUDIO/SPKR_IN#/BVD2 (28)
CSTSCHG/STSCHG#/BVD1 (28)
CVS2 (28)
CVS1 (28)
CCD2# (28)
CCD1# (28)
CREQ#/INPACK# (28)
C2716 /X 0.01UF/50V
IORD#
IOWR#
AD13/IORD# (28)
AD15/IOWR# (28)
90 ohm
USBDP
USBDM
USB_PP4_B (12)
USB_PN4_B (12)
VPPEN1
VPPEN0
VCC3EN#
VCC5EN#
AVPP1 (28)
AVPP0 (28)
VCC3_EN# (28)
VCC5_EN# (28)
R2711 100KOhm r0402
+VCCCB
R2712 100KOhm r0402
CCLKRUN#/IOIS16#
R2713 100KOhm r0402 /X
R5C841-CSP208Q
D2701 1SS355 /X
D2702 1SS355
SUSB# (20,22,24,25,30,32,36,66,69)
CB_SD# (12)
Title : CARDBUS RICHO R5C841
<OrgName>
Engineer: Spring Li
Size Custom
Project Name Z94Rp
Rev 1.1
Date: Thursday, April 06, 2006
Sheet 27 of 45

PCMCIA Socket

PMCIA Debug Port

U2701C
R5C841-CSP208Q
CPS
XI
XO
FIL0
REXT
VREF
NC9
AVCC_PHY_1
AVCC_PHY_2
AVCC_PHY_3
AVCC_PHY_4
TPBIAS0
TPBN0
TPBP0
TPAN0
TPAP0
TPBIAS1
TPBN1
TPBP1
TPAN1
TPAP1
R2801 1MOhm r0603_h24
R2802 100KOhm r0402
C2801 0.1UF/16V c0402
C2806 0.1UF/16V c0402
U2801
74SZ74
CSTSCHG/STSCHG#/BVD1
CBDEBUGEN#
CCD1#
U2802
PI5C3384
C2808 0.1UF/16V c0402
(10) CLK_PCMADEBUG
(10,22,24) LPC_FRAME#
(10,22,24) LPC_AD0
(10,22,24) LPC_AD1
(10,22,24) LPC_AD2
(10,22,24) LPC_AD3
CCLKRUN#/IOIS16#
CAUDIO/SPKR_IN#/BVD2
CPERR#/A14
RFU/D2
RFU/D14
RFU/A18
CSERR#/WAIT#
BEA#
BEB#
Q2801 2N7002
(27) VCC5_EN#
10KOhm RN2803A
(27) VCC3_EN#
10KOhm RN2803B
D2801 1SS355
U2803
R5531V002
(27) AVPP0
(27) AVPP1
+VPPCB
C2812 10UF/10V c0805
C2813 0.1UF/16V c0402
C2814 10UF/10V c0805
C2815 0.1UF/16V c0402
C2816 0.1UF/16V c0402
C2817 0.1UF/16V
C2818 0.1UF/16V c0402
+VCCCB
+5V
+3V
GND
C2802 0.1UF/16V
C2803 10UF/6.3V
C2804 10UF/6.3V
C2805 0.1UF/16V
J2801
PCMIA_CON_84P
(27) CCLK/A16
C2807 5PF/50V
(27) CRST#/RESET
R2803 47KOhm r0402_h16 /X
C2809 0.01UF/50V c0402
C2810 270PF/50V
C2811 270PF/50V
(27) AD19/A25
(27) AD17/A24
(27) CFRAME#/A23
(27) CTRDY#/A22
(27) CDEVSEL#/A21
(27) CSTOP#/A20
(27) CBLOCK#/A19
(27) RFU/A18
(27) AD16/A17
(27) CIRDY#/A15
(27) CPERR#/A14
(27) CPAR/A13
(27) CBE2#/A12
(27) AD12/A11
(27) AD9/A10
(27) AD14/A9
(27) CBE1#/A8
(27) AD18/A7
(27) AD20/A6
(27) AD21/A5
(27) AD22/A4
(27) AD23/A3
(27) AD24/A2
(27) AD25/A1
(27) AD26/A0
(27) AD8/D15
(27) RFU/D14
(27) AD6/D13
(27) AD4/D12
(27) AD2/D11
(27) AD31/D10
(27) AD30/D9
(27) AD28/D8
(27) AD7/D7
(27) AD5/D6
(27) AD3/D5
(27) AD1/D4
(27) AD0/D3
(27) RFU/D2
(27) AD29/D1
(27) AD27/D0
(27) AD13/IORD#
(27) AD15/IOWR#
(27) AD11/OE#
(27) CGNT#/WE#
(27) AD10/CE2#
(27) CBE0#/CE1#
(27) CBE3#/REG#
(27) CSERR#/WAIT#
(27) CCLKRUN#/IOIS16#
(27) CINT#/IREQ#
(27) CAUDIO/SPKR_IN#/BVD2
(27) CSTSCHG/STSCHG#/BVD1
(27) CVS2
(27) CVS1
(27) CCD2#
(27) CCD1#
(27) CREQ#/INPACK#
CCD1# CCD2#
L L 16bit
OTHER 32bit

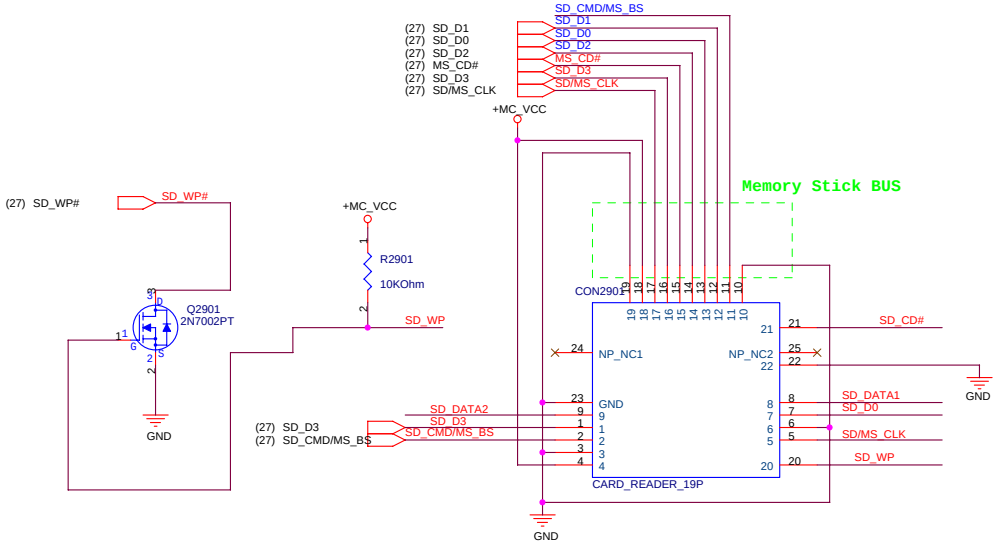
Title : PCMCIA SOCKET		
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 28 of 45	

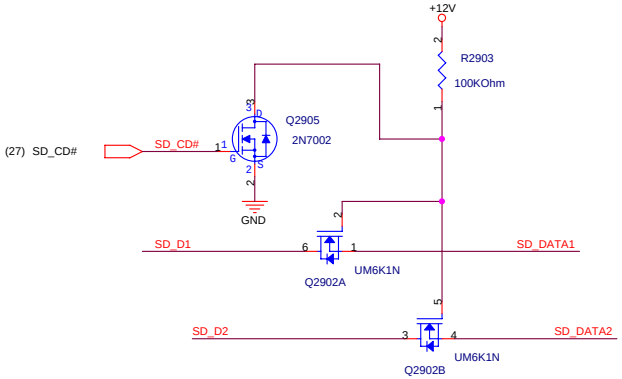


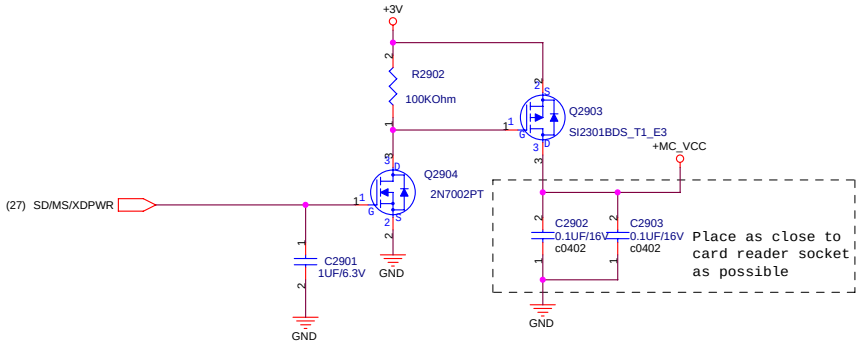
Memory Card Detect

MS_CD#	SD_CD#	
0	0	Not Support
1	0	Small Card
1	1	Memory Stick

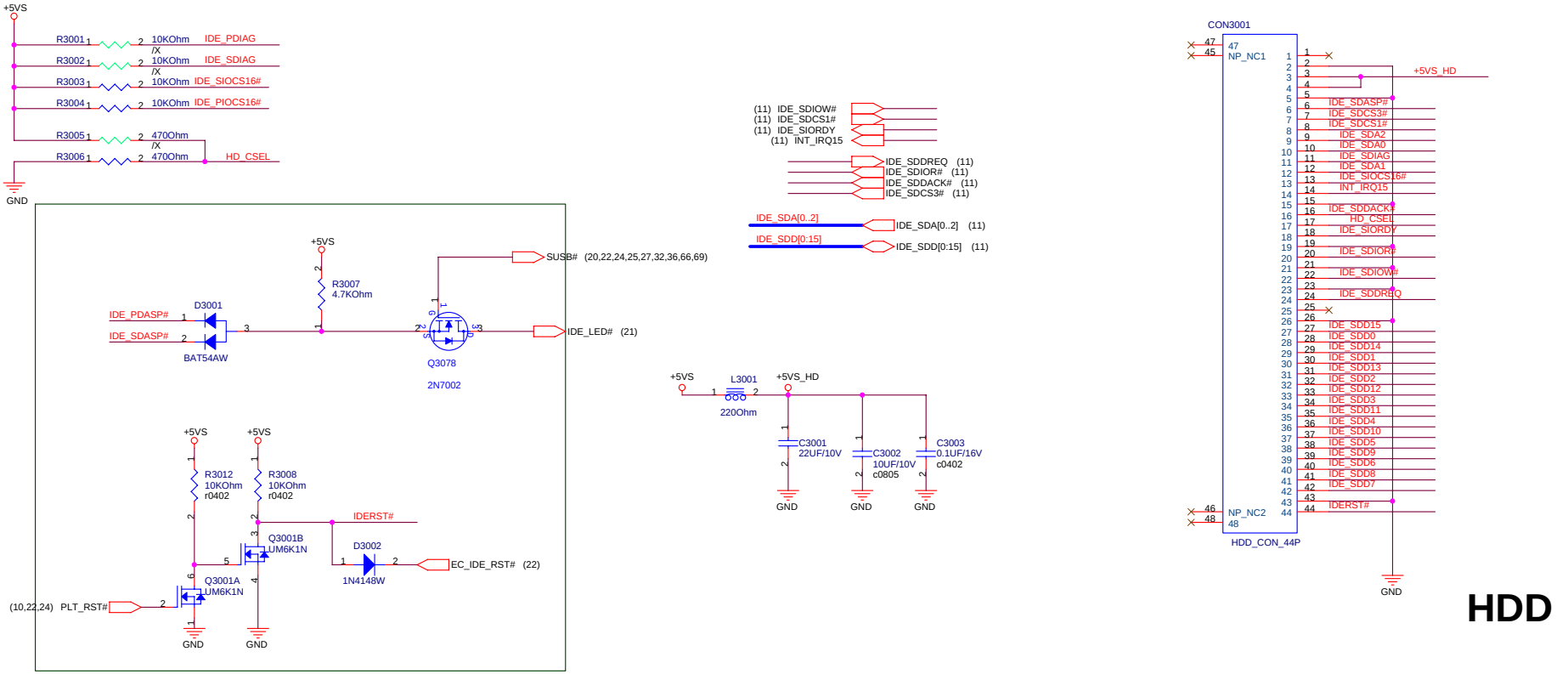
MC_CD# : Memory Card Detect



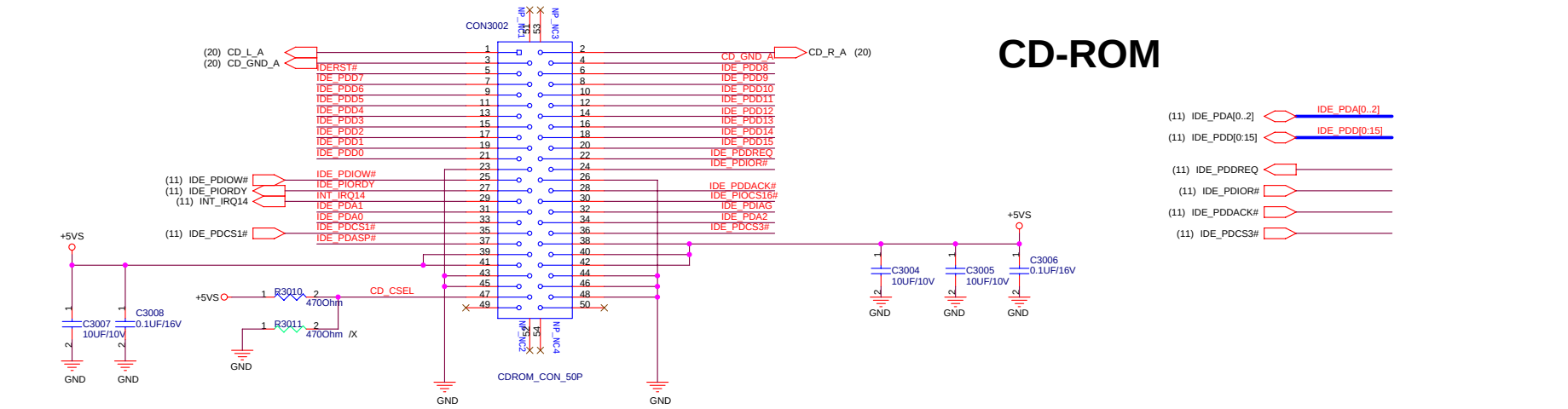




ASUS	Title : 4 IN 1 CON	
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 29 of 45	



HDD

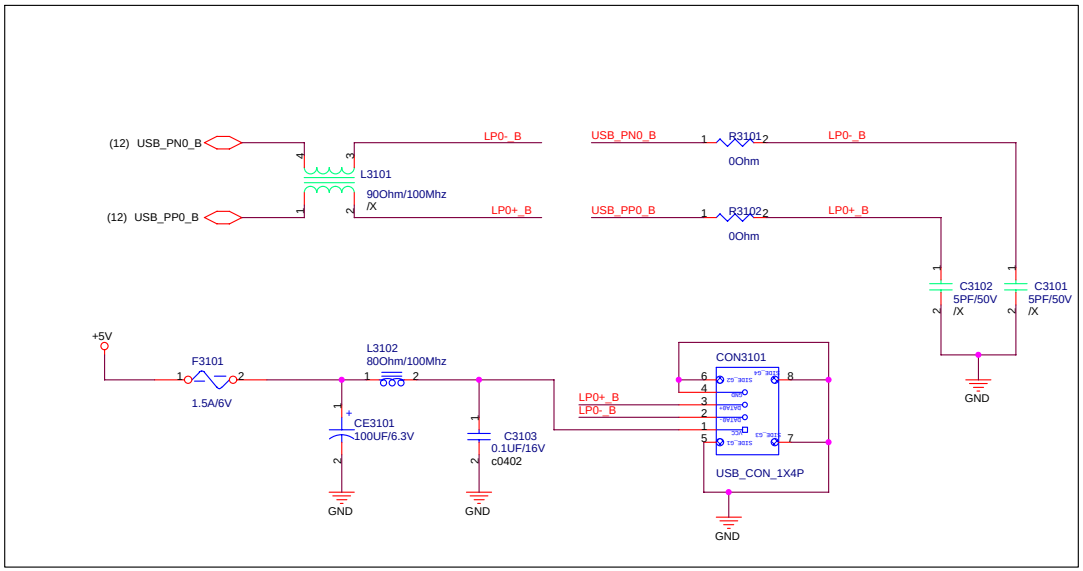


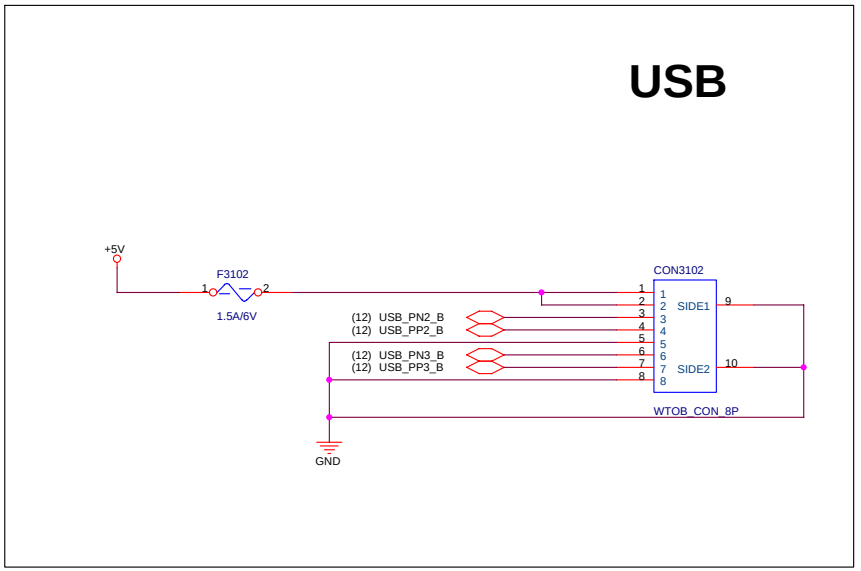
CD-ROM

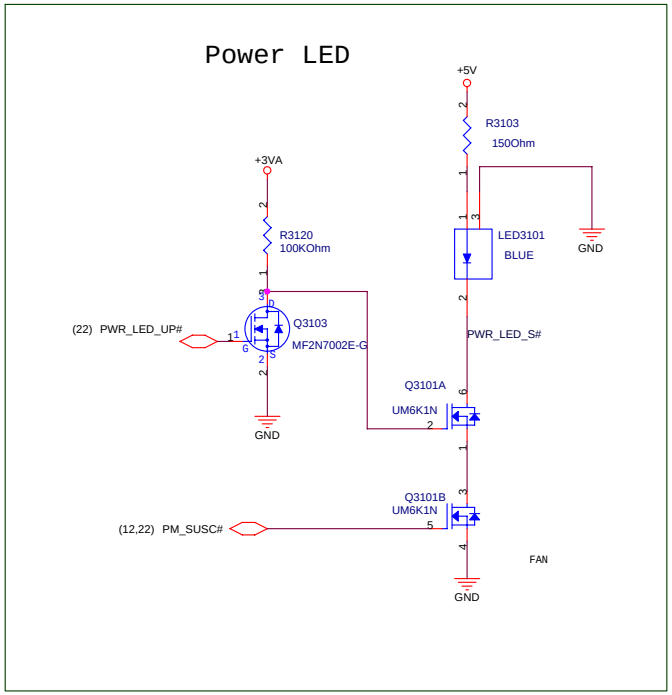
(11) IDE_PDA[0..2] IDE_PDA[0..2]
(11) IDE_PDD[0:15] IDE_PDD[0:15]
(11) IDE_PDDREQ
(11) IDE_PDIOR#
(11) IDE_PDDACK#
(11) IDE_PDCS3#

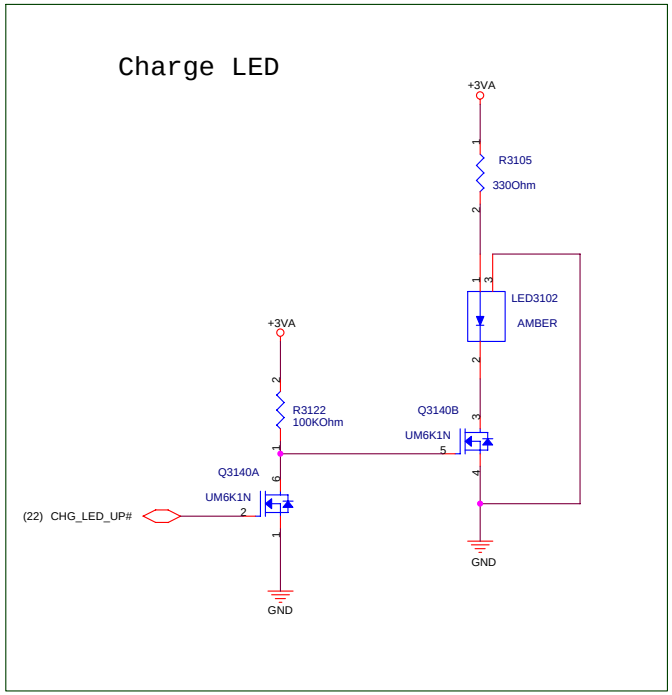
ODD_CSEL : Pull-Up, CDROM as Slave,
Pull-Down, CDROM as Master

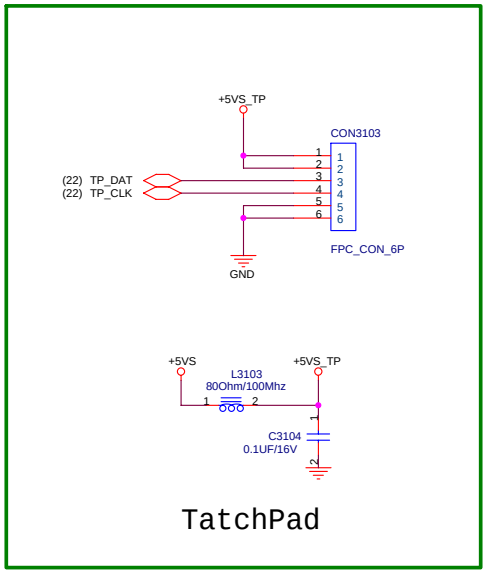
ASUS	Title : HDD & CD-ROM	
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 30 of 45	



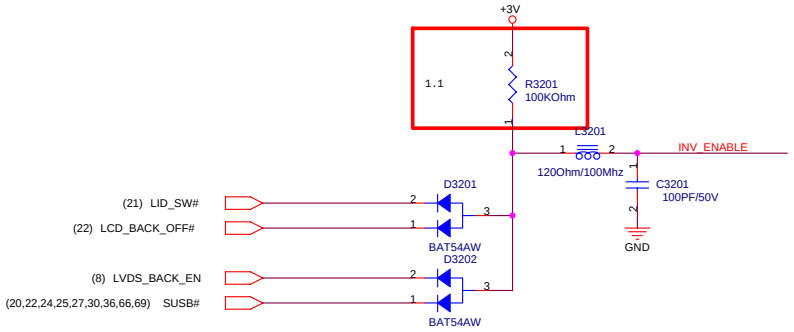




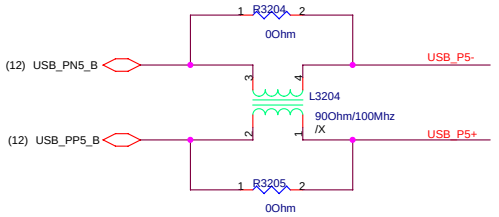


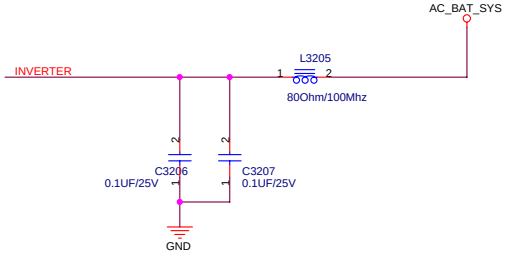


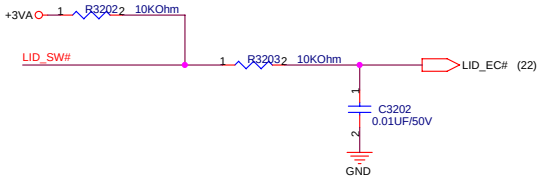
Title : USB / LED / TP		
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 31 of 45	

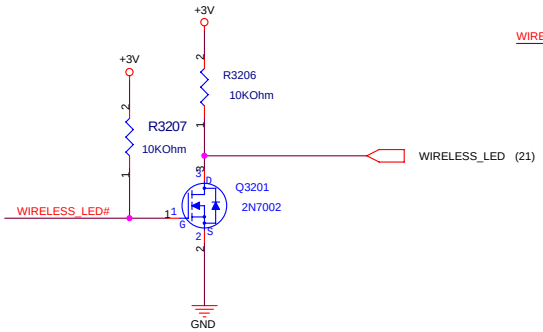


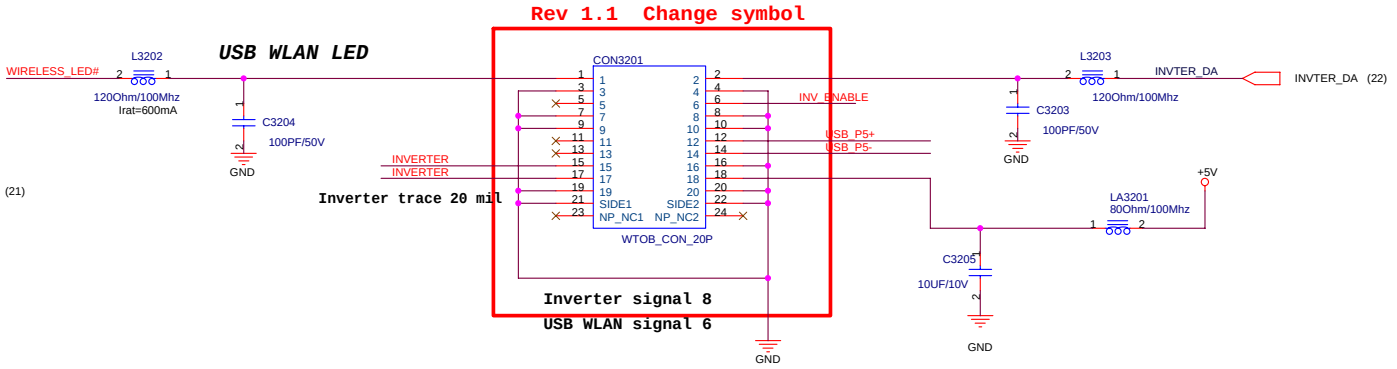
USB WIRESSLEE LAN



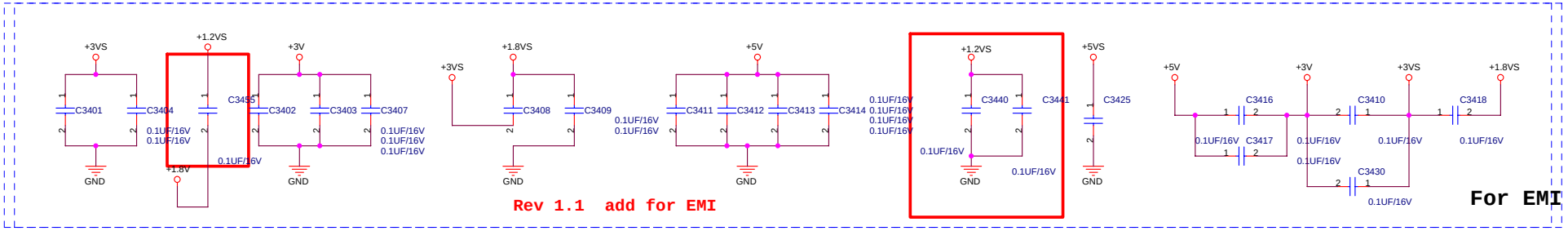




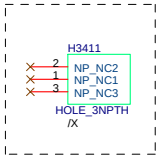




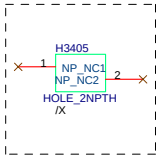
ASUS	Title :	FUNCTION KEY & BT
<OrgName>	Engineer:	Spring Li
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 32 of 45	



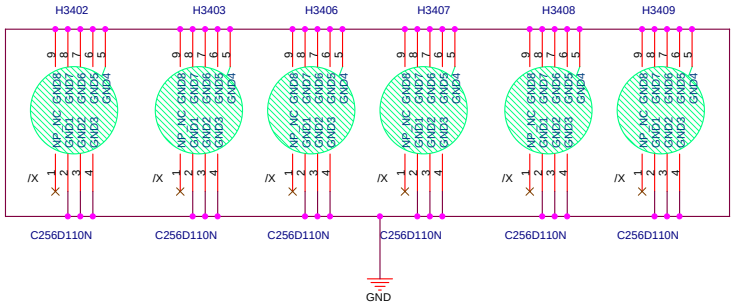
ODD



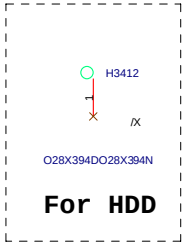
PAD Hole (2hole)--- E

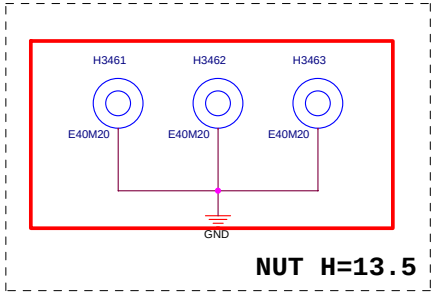


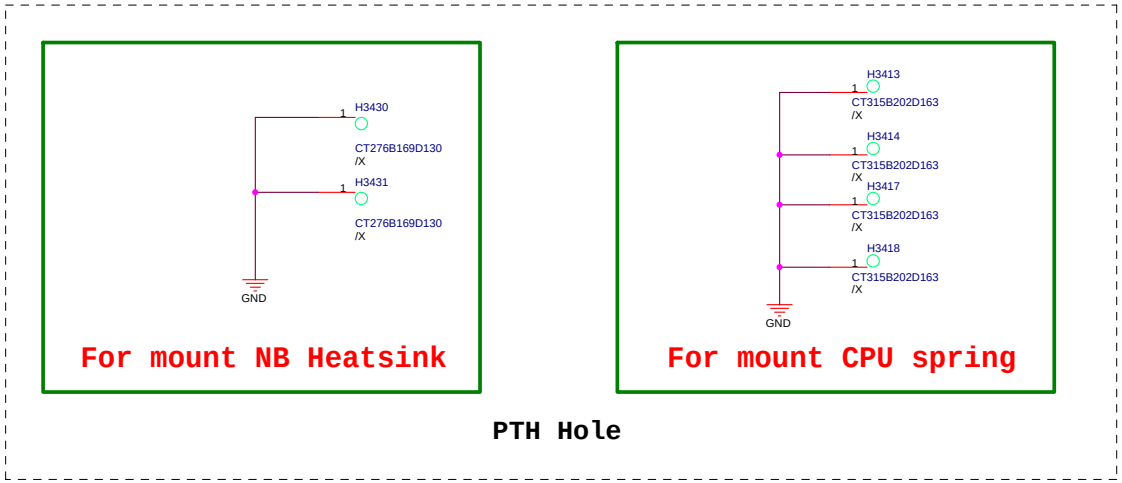
Hole no GND --- A

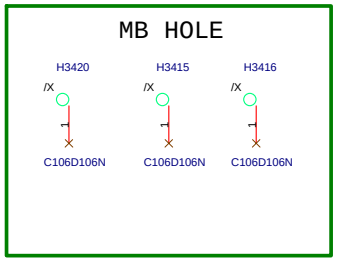


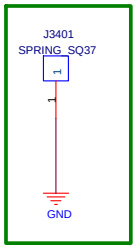
Oblong drill hole



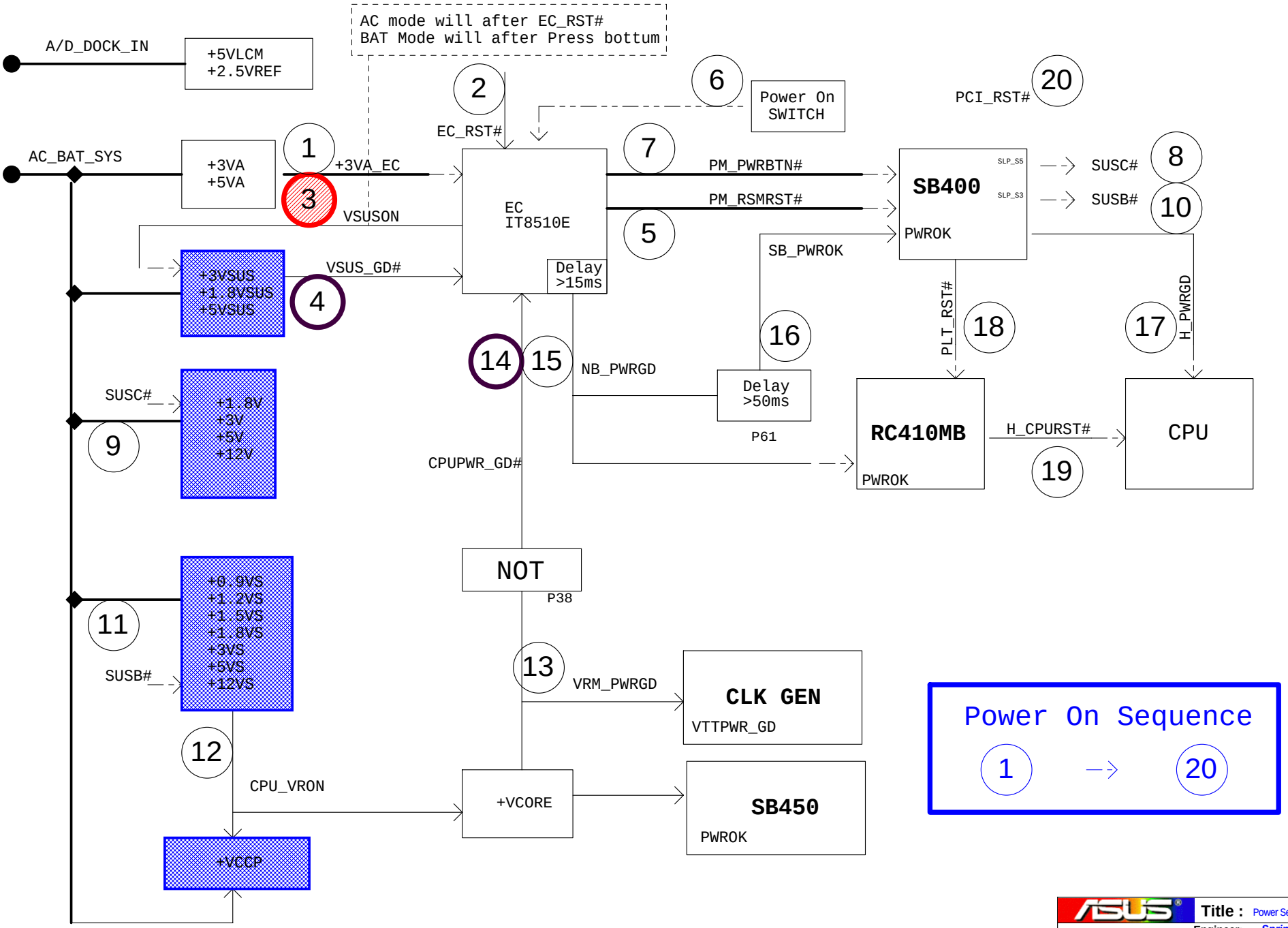








ASUS	Title : Hole	
<OrgName>	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Tuesday, April 04, 2006	Sheet 33 of 45	



ASUS	Title : Power Sequence		
<OrgName>	Engineer: Spring Li		
Size: Custom	Project Name: Z94Rp		Rev: 1.1
Date: Tuesday, April 04, 2006	Sheet 34 of 45		

PCI Device	IDSEL#	REQ/GNT#	Interrupts
10/100 LAN	AD16	0	E
CARD READER	AD17	1	B
CARDBUS	AD17	1	A

SM-Bus Device	SM-Bus Address
Clock Generator	1101001x (D2)
SO-DIMM 0	1010000x (A0)
SO-DIMM 1	1010001x (A2)
Thermal Sensor	0101110x (5C)

SB400 GPIO TABLE

GPIO	TYPE	POWER DOMAIN	FUNCTION
GPIO 0	I/OD	S0	
GPIO 1	I/O	S0	
GPIO 2	I/O	S0	SB_SPKR
GPIO 3	I/O	S0	
GPIO 4	I/O	S0	PCB_ID0
GPIO 5	I/O	S0	PCB_ID1
GPIO 6	I/OD	S0	PCB_ID2
GPIO 7	I/O	S0	VRM_PWRGD
GPIO 8	I/O	S0	CB_SD#
GPIO 9	I/O	S0	BACK_OFF#
GPIO 10	I/O	S5	SB_PM_THERM#
GPIO 11	I/O	S0	
GPIO 12	I/O	S0	
GPIO 13	I/O	S0	
GPIO 14	I/O	S0	PCI_GNT#5
GPIO 31	I/O	S0	
GPIO 32	I/O	S0	PCI_GNT#6
GPIO 33	I/O	S0	PCI_INTE#
GPIO 34	I/O	S0	PCI_INTF#
GPIO 35	I/O	S0	PCI_INTG#
GPIO 36	I/O	S0	PCI_INTH#
GPM 0	I	S5	
GPM 1	I	S5	
GPM 2	I/O	S5	
GPM 3	I	S5	
GPM 4	I	S5	
GPM 5	I	S5	
GPM 6	I/OD	S5	PWRLED_1HZ
GPM 7	I	S5	SYS_RESET#
GEVENT 0	I	S5	
GEVENT 1	I	S0	
GEVENT 2	I	S5	THRMTRIP#
GEVENT 3	I	S5	LPC_PME#
GEVENT 4	I	S5	PCI_PME#
GEVENT 5	I	S5	H_PROCHOT#
GEVENT 6	I	S5	
GEVENT 7	I	S5	
GEVENT 8			KB_SCI
EXTEVENT#0			EXT_SMI#
EXTEVENT#1			SIO_SMI#

KBC GPIO	W1V	Note
P23(Pin 35)	CHG_FULL_OC	
P22(Pin 36)	BAT_LEARN	
P21(Pin 37)	LID_EC#	
P20(Pin 38)	KBCRSM	
P42(Pin 23)		
P43(Pin 22)	OP_SD#	
P44(Pin 21)	KB_CPURST	
P45(Pin 20)	KB_GATEA20	
P46(Pin 19)	KBCSCI#	
P47(Pin 18)	PM_CLKRUN#	
P50(Pin 17)	BAT_LLOW#_OC	
P51(Pin 16)	KID0	
P52(Pin 15)	KID1	
P53(Pin 14)		
P54(Pin 13)	BAT_SEL#	
P55(Pin 12)	BAT1_IN#_OC	
P56(Pin 11)		
P57(Pin 10)	INV_DA	
P67(Pin 74)		
P66(Pin 75)		
P65(Pin 76)	GAIN_AMP_K#	0->-6 V/V 1->NORMAL
P64(Pin 77)	ACIN_OC	
P63(Pin 78)	DISTP#	
P62(Pin 79)	MARATHON#	
P61(Pin 80)	INTERNET#	
P60(Pin 1)	EMAIL#	
P75(Pin 4)	KB_CLK	
P74(Pin 5)	MS_CLK	
P73(Pin 6)	TPAD_CLK	
P72(Pin 7)	KB_DAT	
P71(Pin 8)	MS_DAT	
P70(Pin 9)	TPAD_DAT	
P77(Pin 2)	SMC_BAT	
P76(Pin 3)	SMD_BAT	
P27(Pin 31)		
P26(Pin 32)	NUM_LED#	
P25(Pin 33)	CAP_LED#	
P24(Pin 34)	SET_PLTRSTNS#	
P40(Pin 27)	EXT_SMI	
P41(Pin 26)	EMAIL_LED#	

ASUS

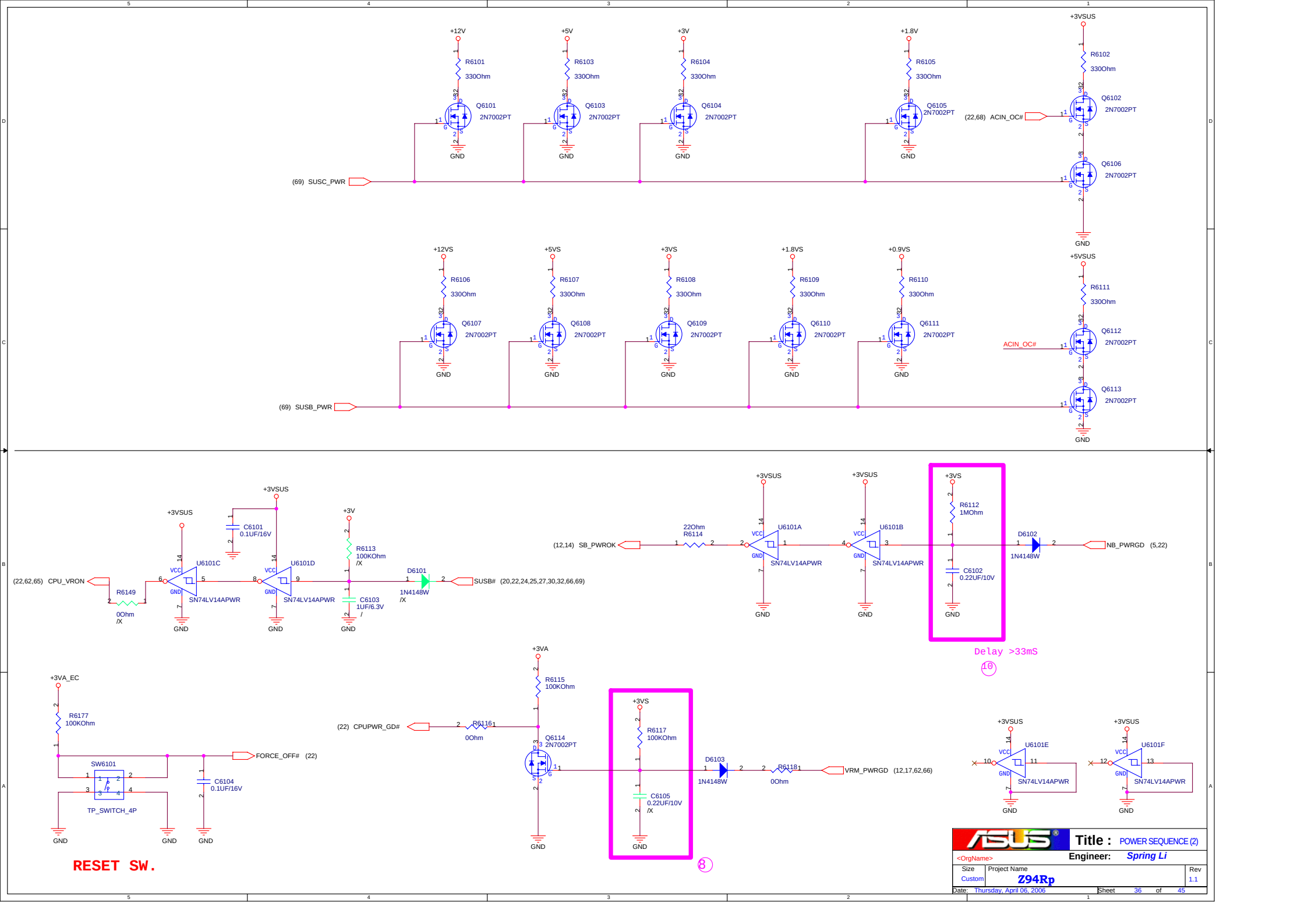
Title : SYSTEM RESOURCE

<OrgName>

Engineer: Spring Li

Size	Project Name	Rev
Custom	Z94Rp	1.1

Date: Tuesday, April 04, 2006 Sheet 35 of 45


+12V
R6101
330Ohm
Q6101
2N7002PT
+5V
R6103
330Ohm
Q6103
2N7002PT
+3V
R6104
330Ohm
Q6104
2N7002PT
+1.8V
R6105
330Ohm
Q6105
2N7002PT
+3VSUS
R6102
330Ohm
Q6102
2N7002PT
(22,68) ACIN_OC#
Q6106
2N7002PT
GND
(69) SUSC_PWR
+12VS
R6106
330Ohm
Q6107
2N7002PT
+5VS
R6107
330Ohm
Q6108
2N7002PT
+3VS
R6108
330Ohm
Q6109
2N7002PT
+1.8VS
R6109
330Ohm
Q6110
2N7002PT
+0.9VS
R6110
330Ohm
Q6111
2N7002PT
+5VSUS
R6111
330Ohm
Q6112
2N7002PT
ACIN_OC#
Q6113
2N7002PT
(69) SUSB_PWR
+3VSUS
+3VSUS
C6101
0.1UF/16V
+3V
R6113
100KOhm
/X
D6101
1N4148W
/X
C6103
1UF/6.3V
/
(22,62,65) CPU_VRON
R6149
0Ohm
/X
U6101C
U6101D
SN74LV14APWR
SUSB# (20,22,24,25,27,30,32,66,69)
(12,14) SB_PWROK
22Ohm
R6114
U6101A
U6101B
SN74LV14APWR
+3VSUS
+3VSUS
+3VS
R6112
1MOhm
C6102
0.22UF/10V
D6102
1N4148W
NB_PWRGD (5,22)
Delay >33mS
10
+3VA_EC
R6177
100KOhm
SW6101
TP_SWITCH_4P
C6104
0.1UF/16V
FORCE_OFF# (22)
+3VA
R6115
100KOhm
(22) CPUPWR_GD#
R6116
0Ohm
Q6114
2N7002PT
+3VS
R6117
100KOhm
C6105
0.22UF/10V
/X
D6103
1N4148W
R6118
0Ohm
VRM_PWRGD (12,17,62,66)
+3VSUS
+3VSUS
U6101E
U6101F
SN74LV14APWR
GND
RESET SW.
8
Title : POWER SEQUENCE (2)
<OrgName>
Engineer: Spring Li
Size
Custom
Project Name
Z94Rp
Rev
1.1
Date: Thursday, April 06, 2006
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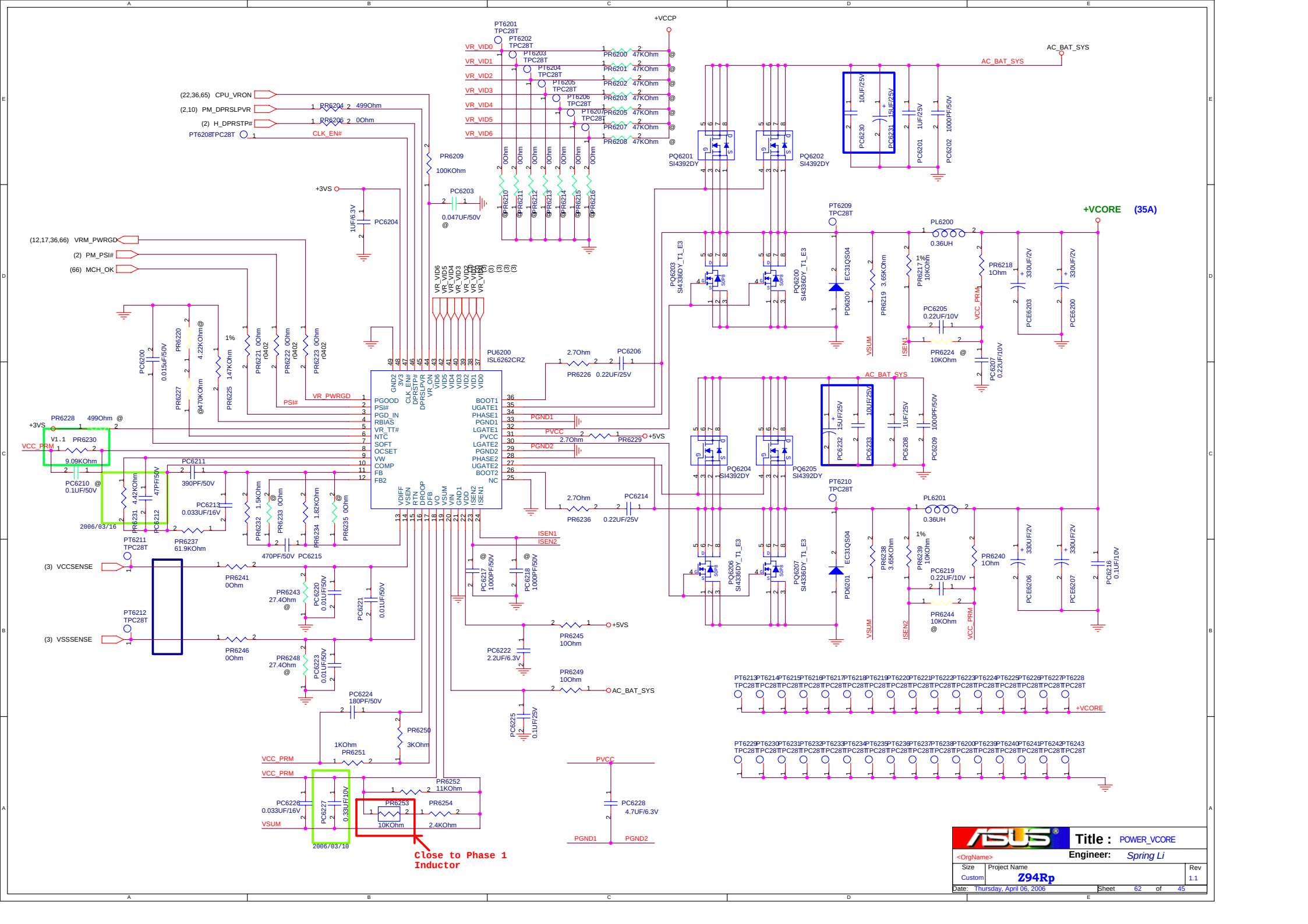
+VCCP
AC_BAT_SYS
+VCORE (35A)
PU6200 ISL6262CRZ
PQ6201 SI4392DY
PQ6202 SI4392DY
PQ6203 SI4336DY_T1_E3
PQ6200 SI4336DY_T1_E3
PQ6204 SI4392DY
PQ6205 SI4392DY
PQ6206 SI4336DY_T1_E3
PQ6207 SI4336DY_T1_E3
PD6200 EC31QS04
PD6201 EC31QS04
PL6200 0.36UH
PL6201 0.36UH
PT6209 TPC28T
PT6210 TPC28T
PT6211 TPC28T
PT6212 TPC28T
PT6213 PT6214 PT6215 PT6216 PT6217 PT6218 PT6219 PT6220 PT6221 PT6222 PT6223 PT6224 PT6225 PT6226 PT6227 PT6228 TPC28T
PT6229 PT6230 PT6231 PT6232 PT6233 PT6234 PT6235 PT6236 PT6237 PT6238 PT6200 PT6239 PT6240 PT6241 PT6242 PT6243 TPC28T
(22,36,65) CPU_VRON
(2,10) PM_DPRSLPVR
(2) H_DPRSTP#
PT6208TPC28T
CLK_EN#
(12,17,36,66) VRM_PWRGD
(2) PM_PSI#
(66) MCH_OK
VR_VID0
VR_VID1
VR_VID2
VR_VID3
VR_VID4
VR_VID5
VR_VID6
PR6200 47KOhm
PR6201 47KOhm
PR6202 47KOhm
PR6203 47KOhm
PR6204 499Ohm
PR6205 47KOhm
PR6206 0Ohm
PR6207 47KOhm
PR6208 47KOhm
PR6209 100KOhm
PR6210 0Ohm
PR6211 0Ohm
PR6212 0Ohm
PR6213 0Ohm
PR6214 0Ohm
PR6215 0Ohm
PR6216 0Ohm
PC6203 0.047UF/50V
PC6204 1UF/6.3V
PC6205 0.22UF/10V
PC6206 0.22UF/25V
PC6207 0.22UF/10V
PC6208 1UF/25V
PC6209 1000PF/50V
PC6210 0.1UF/50V
PC6211 390PF/50V
PC6213 0.033UF/16V
PC6214 0.22UF/25V
PC6215 470PF/50V
PC6216 0.1UF/10V
PC6217 1000PF/50V
PC6218 1000PF/50V
PC6219 0.22UF/10V
PC6220 0.01UF/50V
PC6221 0.01UF/50V
PC6222 2.2UF/6.3V
PC6223 0.01UF/50V
PC6224 180PF/50V
PC6225 0.1UF/25V
PC6226 0.033UF/16V
PC6227 0.33UF/10V
PC6228 4.7UF/6.3V
PC6230 10UF/25V
PC6231 15UF/25V
PC6232 15UF/25V
PC6233 10UF/25V
PC6234 1UF/25V
PC6235 1000PF/50V
PC6236 0.1UF/10V
PC6238 3.65KOhm
PC6239 10KOhm
PC6240 1Ohm
PC6241 330UF/2V
PC6242 330UF/2V
PC6243 330UF/2V
PC6244 10KOhm
PR6217 10KOhm
PR6218 1Ohm
PR6219 3.65KOhm
PR6220 4.22KOhm
PR6221 0Ohm
PR6222 0Ohm
PR6223 0Ohm
PR6224 10KOhm
PR6225 147KOhm
PR6226 2.7Ohm
PR6227 470KOhm
PR6228 499Ohm
PR6229 2.7Ohm
PR6230 9.09KOhm
PR6231 4.42KOhm
PR6232 1.5KOhm
PR6233 0Ohm
PR6234 1.82KOhm
PR6235 0Ohm
PR6236 2.7Ohm
PR6237 61.9KOhm
PR6238 3.65KOhm
PR6239 10KOhm
PR6240 1Ohm
PR6241 0Ohm
PR6243 27.4Ohm
PR6244 10KOhm
PR6245 10Ohm
PR6246 0Ohm
PR6248 27.4Ohm
PR6249 10Ohm
PR6250 3KOhm
PR6251 1KOhm
PR6252 11KOhm
PR6253 10KOhm
PR6254 2.4KOhm
(3) VCCSENSE
(3) VSSSENSE
+3VS
+5VS
VCC_PRM
VSUM
PVCC
PGND1
PGND2
PSI#
VR_PWRGD
ISEN1
ISEN2
2006/03/16
2006/03/10
Close to Phase 1 Inductor
Title : POWER_VCORE
Engineer: Spring Li
<OrgName>
Size Custom
Project Name Z94Rp
Rev 1.1
Date: Thursday, April 06, 2006
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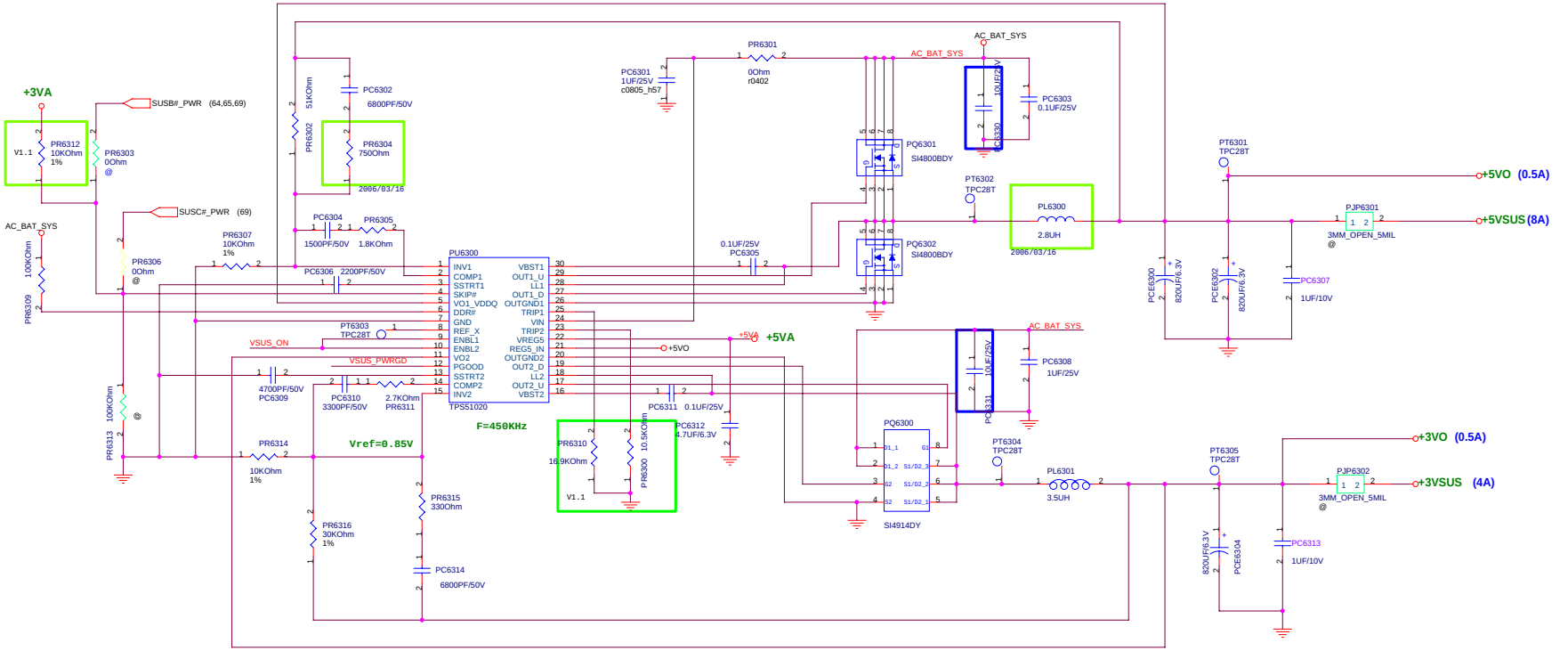
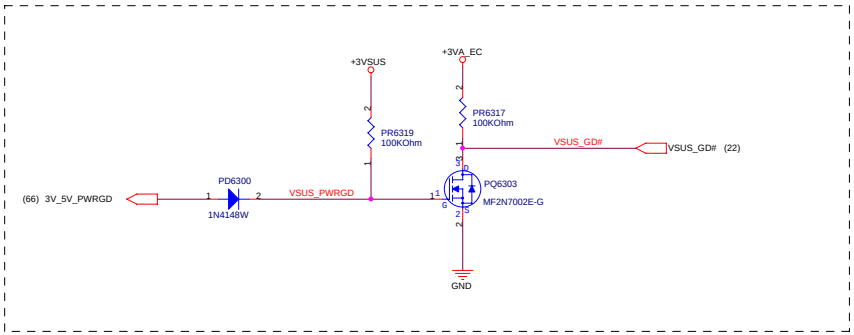
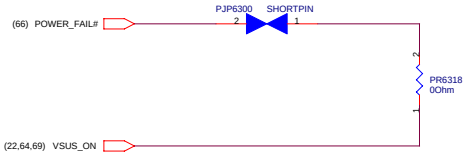
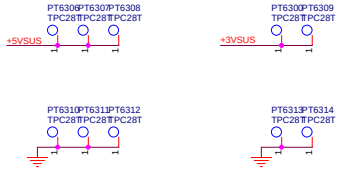
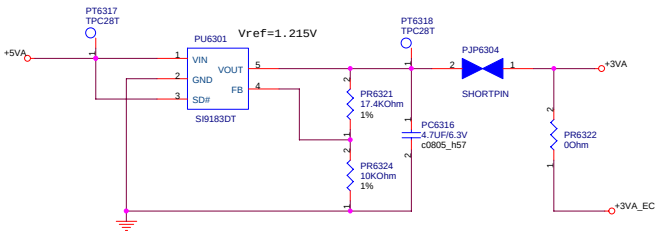
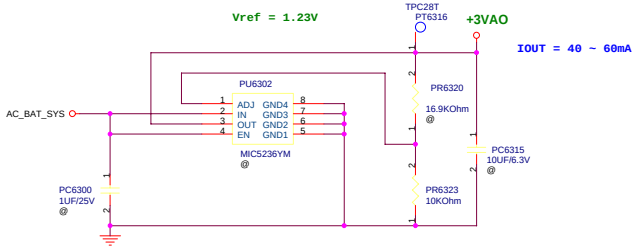




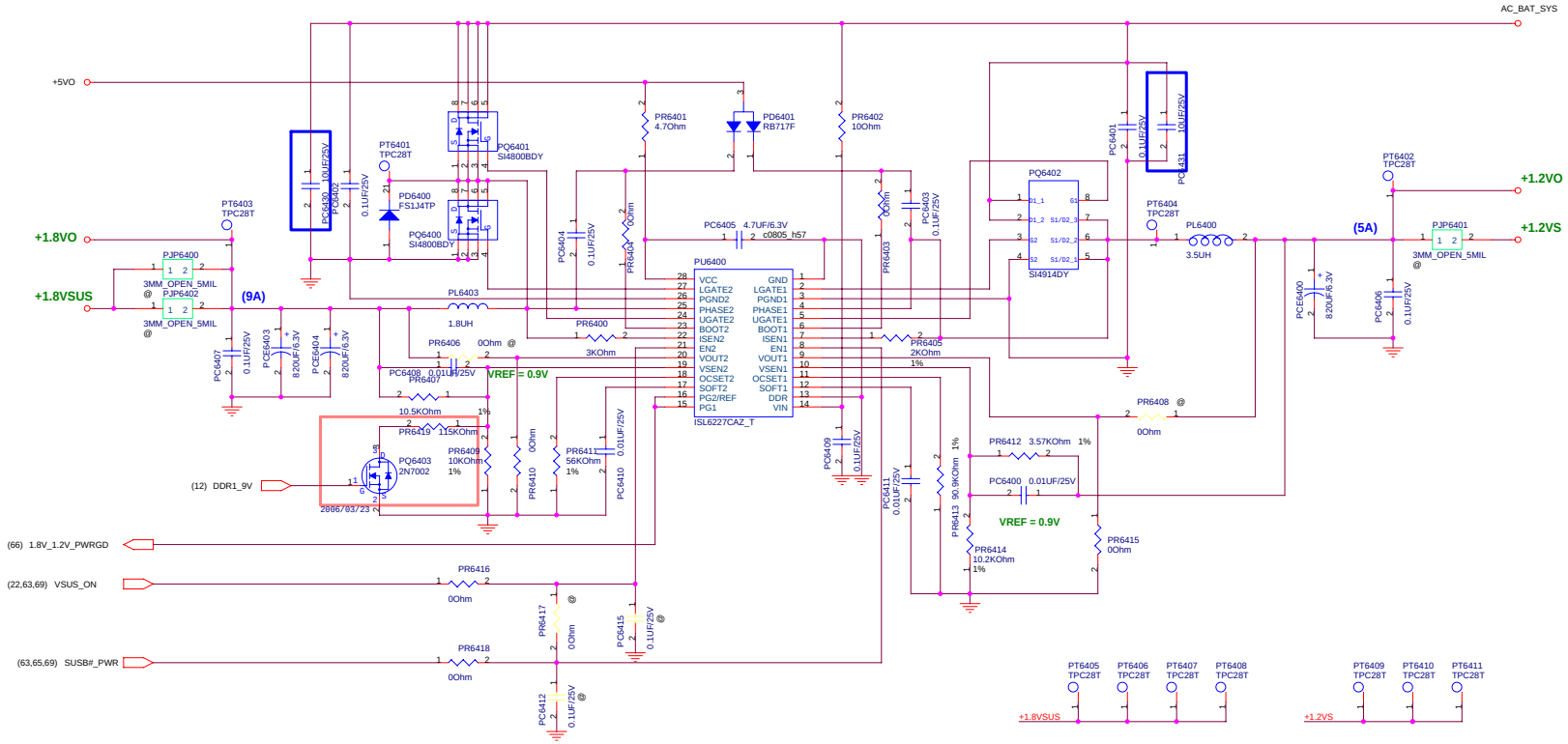


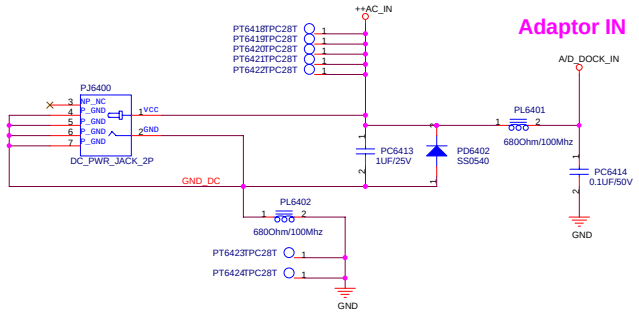




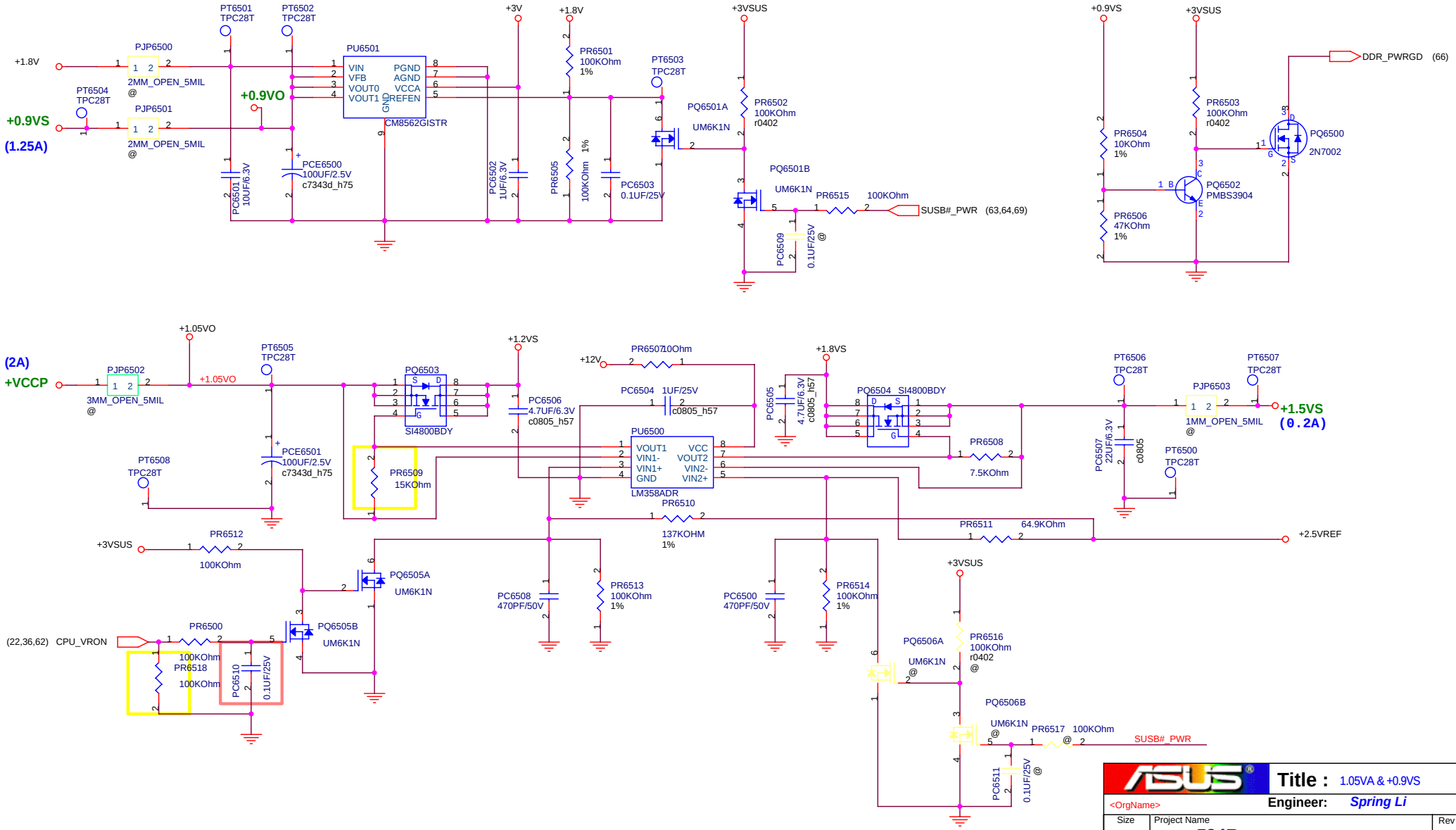


ASUS	Title : SYSTEM_+5VA & +3VA	
<OrgName>	Engineer: Spring Li	
Size: C	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 63 of 45	

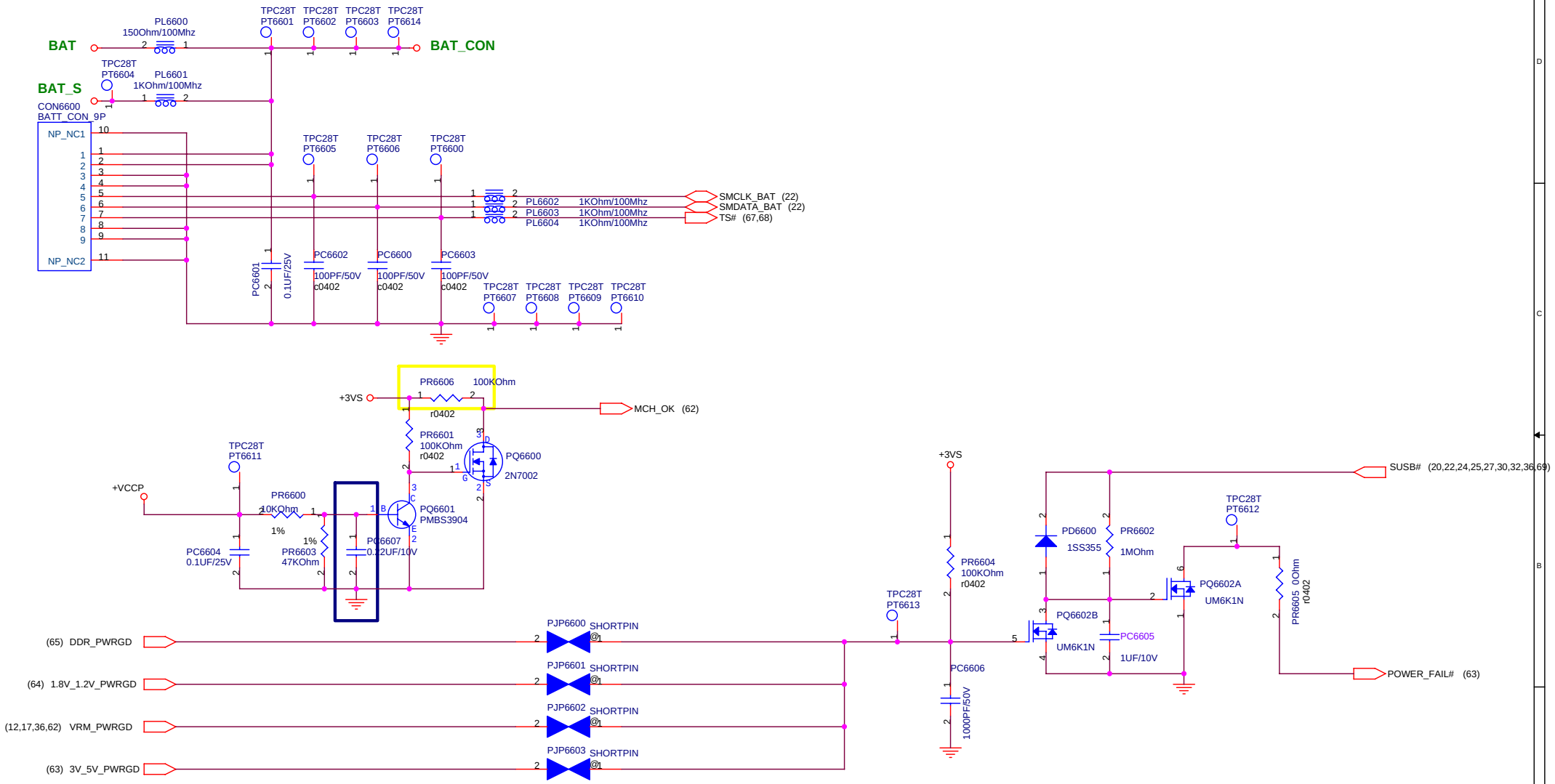




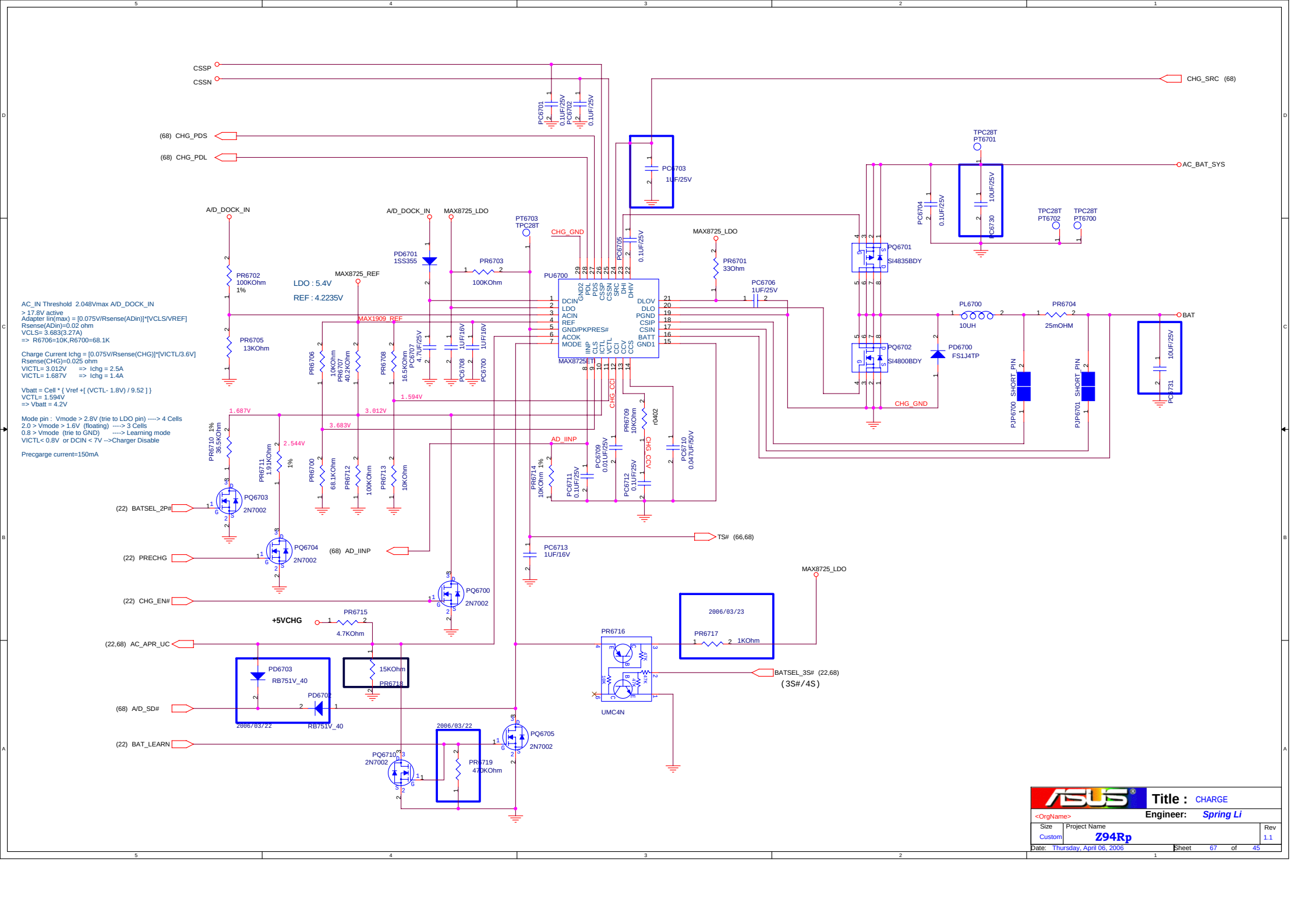
Title : 1.8V&1.2VS		
<OrgName>	Engineer: Spring Li	
Size: C	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 64 of 45	



ASUS	Title : 1.05VA & +0.9VS	
<OrgName>	Engineer: Spring Li	
Size: B	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 65 of 45	



Title :	BAT CON/PWOK	
<OrgName>	Engineer:	Spring Li
Size: B	Project Name: Z94Rp	Rev: 1.1
Date: Thursday, April 06, 2006	Sheet 66 of 45	


CSSP
CSSN
(68) CHG_PDS
(68) CHG_PDL
CHG_SRC (68)
AC_BAT_SYS
BAT
A/D_DOCK_IN
MAX8725_LDO
MAX8725_REF
LDO : 5.4V
REF : 4.2235V
MAX1909_REF
CHG_GND
CHG_CCI
CHG_CCV
AD_IINP
PU6700
MAX8725ETI
PT6703 TPC28T
PD6701 1SS355
PR6703 100KOhm
PR6702 100KOhm 1%
PR6705 13KOhm
PR6706 10KOhm
PR6707 40.2KOhm
PR6708 16.5KOhm
PC6707 4.7UF/25V
PC6708 1UF/16V
PC6700 1UF/16V
PC6705 0.1UF/25V
PR6701 33Ohm
PC6706 1UF/25V
PC6703 1UF/25V
PC6701 0.1UF/25V
PC6702 0.1UF/25V
PQ6701 SI4835BDY
PQ6702 SI4800BDY
PD6700 FS1J4TP
PL6700 10UH
PR6704 25mOHM
PJP6700 SHORT_PIN
PJP6701 SHORT_PIN
PC6704 0.1UF/25V
PC6730 10UF/25V
PC6731 10UF/25V
TPC28T PT6701
TPC28T PT6702
TPC28T PT6700
1.687V
3.012V
3.683V
2.544V
1.594V
PR6710 1% 36.5KOhm
PR6711 1.91KOhm 1%
PR6700 68.1KOhm
PR6712 100KOhm
PR6713 10KOhm
PR6714 10KOhm 1%
PC6711 0.1UF/25V
PC6709 0.01UF/25V
PR6709 10KOhm
r402
PC6712 0.1UF/25V
PC6710 0.047UF/50V
PC6713 1UF/16V
PQ6703 2N7002
PQ6704 2N7002
PQ6700 2N7002
PQ6705 2N7002
PQ6710 2N7002
(22) BATSEL_2P#
(22) PRECHG
(22) CHG_EN#
(22) BAT_LEARN
(68) AD_IINP
TS# (66,68)
+5VCHG
PR6715 4.7KOhm
(22,68) AC_APR_UC
PD6703 RB751V_40
PD6702 RB751V_40
15KOhm PR6718
(68) A/D_SD#
2006/03/22
PR6719 470KOhm
PR6716
UMC4N
2006/03/23
PR6717 1KOhm
BATSEL_3S# (22,68)
(3S#/4S)
AC_IN Threshold 2.048Vmax A/D_DOCK_IN
> 17.8V active
Adapter Iin(max) = [0.075V/Rsense(ADin)]*[VCLS/VREF]
Rsense(ADin)=0.02 ohm
VCLS= 3.683(3.27A)
=> R6706=10K,R6700=68.1K
Charge Current Ichg = [0.075V/Rsense(CHG)]*[VICTL/3.6V]
Rsense(CHG)=0.025 ohm
VICTL= 3.012V => Ichg = 2.5A
VICTL= 1.687V => Ichg = 1.4A
Vbatt = Cell * { Vref +[(VCTL- 1.8V) / 9.52] }
VCTL= 1.594V
=> Vbatt = 4.2V
Mode pin : Vmode > 2.8V (trie to LDO pin) ----> 4 Cells
2.0 > Vmode > 1.6V (floating) ----> 3 Cells
0.8 > Vmode (trie to GND) ----> Learning mode
VICTL< 0.8V or DCIN < 7V -->Charger Disable
Precgarge current=150mA
Title : CHARGE
<OrgName>
Engineer: Spring Li
Size Custom
Project Name Z94Rp
Rev 1.1
Date: Thursday, April 06, 2006
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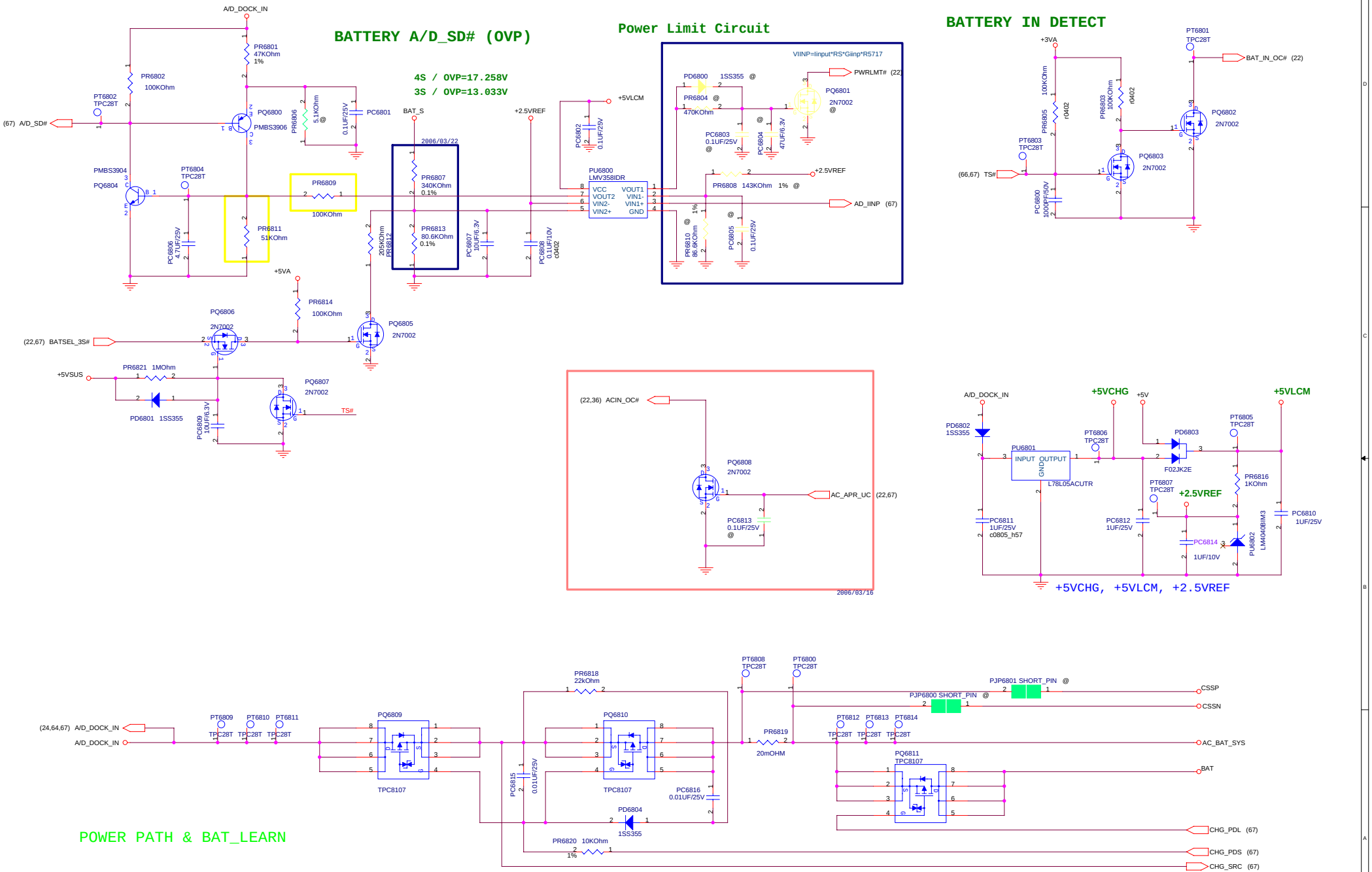
BATTERY A/D_SD# (OVP)
4S / OVP=17.258V
3S / OVP=13.033V
Power Limit Circuit
VIINP=Iinput*RS*Giinp*R5717
BATTERY IN DETECT
A/D_DOCK_IN
(67) A/D_SD#
PR6801 47KOhm 1%
PR6802 100KOhm
PT6802 TPC28T
PQ6800 PMBS3906
PR6806 5.1KOhm @
PC6801 0.1UF/25V
BAT_S
2006/03/22
PR6807 340KOhm 0.1%
PR6813 80.6KOhm 0.1%
PR6809 100KOhm
PR6811 51KOhm
PMBS3904 PQ6804
PT6804 TPC28T
PC6806 4.7UF/25V
205KOhm PR6812
PC6807 10UF/6.3V
PC6809 0.1UF/10V c0402
+2.5VREF
+5VLCM
PC6802 0.1UF/25V
PU6800 LMV358IDR
VCC VOUT1 VOUT2 VIN1- VIN2- VIN1+ VIN2+ GND
PD6800 1SS355 @
PR6804 @ 470KOhm
PC6803 0.1UF/25V @
PC6804 47UF/6.3V
PQ6801 2N7002 @
PWRLMT# (22)
PR6808 143KOhm 1% @
PR6810 86.6KOhm 1% @
PC6805 0.1UF/25V @
AD_IINP (67)
+5VA
PR6814 100KOhm
PQ6806 2N7002
PQ6805 2N7002
(22,67) BATSEL_3S#
+5VSUS
PR6821 1MOhm
PD6801 1SS355
PC6809 10UF/6.3V
PQ6807 2N7002
TS#
+3VA
PR6805 100KOhm r0402
PR6803 100KOhm r0402
PT6803 TPC28T
(66,67) TS#
PC6800 1000PF/50V
PT6801 TPC28T
BAT_IN_OC# (22)
PQ6802 2N7002
PQ6803 2N7002
(22,36) ACIN_OC#
PQ6808 2N7002
PC6813 0.1UF/25V @
AC_APR_UC (22,67)
2006/03/16
A/D_DOCK_IN
PD6802 1SS355
PU6801 INPUT OUTPUT GND L78L05ACUTR
PT6806 TPC28T
+5VCHG
+5V
PD6803 F02JK2E
PT6805 TPC28T
+5VLCM
PR6816 1KOhm
PT6807 TPC28T
+2.5VREF
PC6811 1UF/25V c0805_h57
PC6812 1UF/25V
PC6814 1UF/10V
PC6810 1UF/25V
PU6802 LM4040BIM3
+5VCHG, +5VLCM, +2.5VREF
(24,64,67) A/D_DOCK_IN
A/D_DOCK_IN
PT6809 TPC28T
PT6810 TPC28T
PT6811 TPC28T
PQ6809
TPC8107
PR6818 22kOhm
PQ6810
TPC8107
PC6815 0.01UF/25V
PC6816 0.01UF/25V
PD6804 1SS355
PR6820 10KOhm 1%
PT6808 TPC28T
PT6800 TPC28T
PJP6801 SHORT_PIN @
PJP6800 SHORT_PIN @
CSSP
CSSN
PR6819 20mOHM
PT6812 TPC28T
PT6813 TPC28T
PT6814 TPC28T
AC_BAT_SYS
PQ6811 TPC8107
BAT
CHG_PDL (67)
CHG_PDS (67)
CHG_SRC (67)
POWER PATH & BAT_LEARN
Title : PROTECTION/SD#
<OrgName>
Engineer: Spring Li
Size Custom
Project Name Z94Rp
Rev 1.1
Date: Thursday, April 06, 2006
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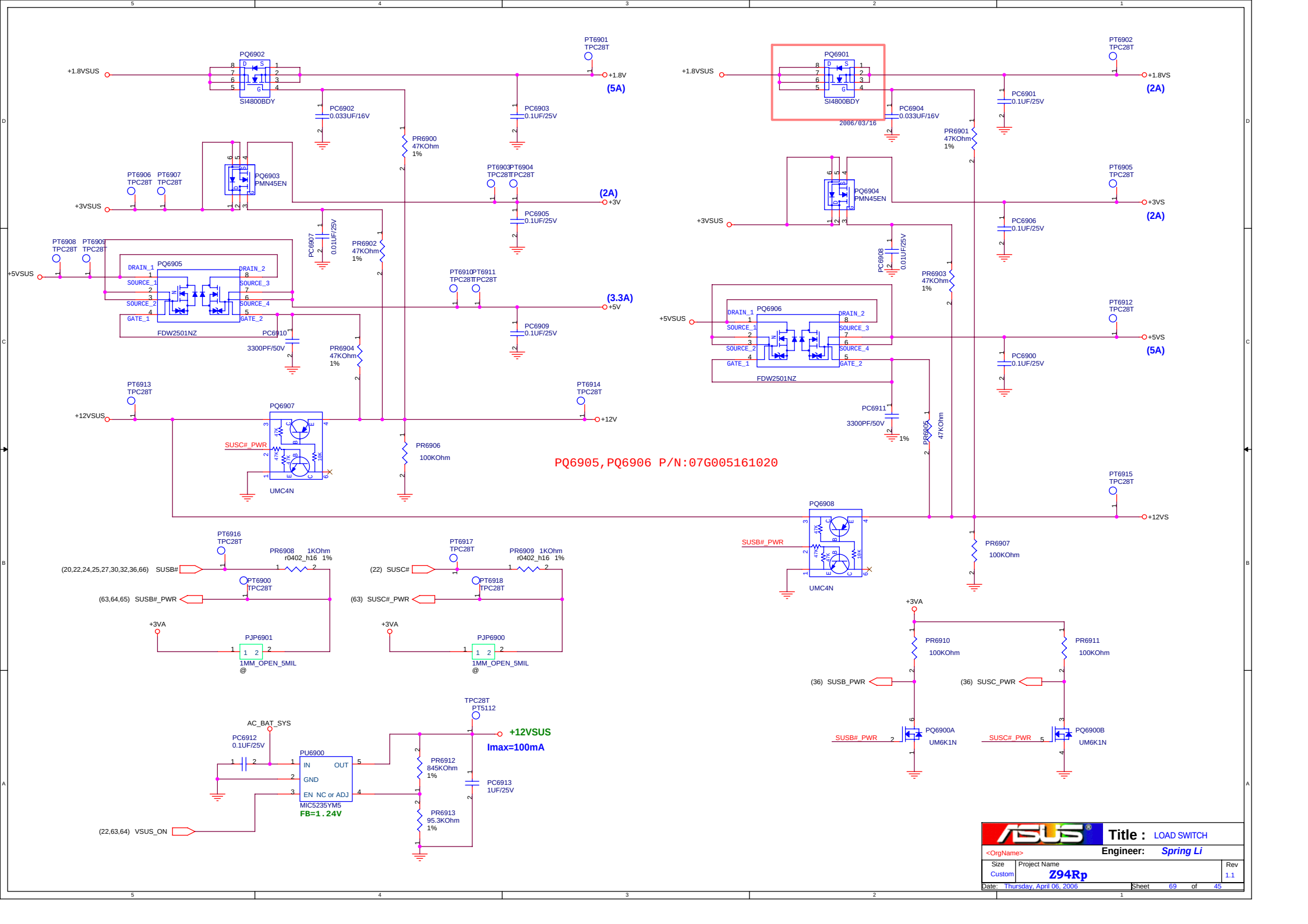
+1.8VSUS
PQ6902
SI4800BDY
PT6901 TPC28T
+1.8V
(5A)
PC6902 0.033UF/16V
PC6903 0.1UF/25V
PR6900 47KOhm 1%
PT6906 TPC28T
PT6907 TPC28T
PQ6903 PMN45EN
+3VSUS
PT6903 TPC28T
PT6904 TPC28T
(2A)
+3V
PC6905 0.1UF/25V
PC6907 0.01UF/25V
PR6902 47KOhm 1%
PT6908 TPC28T
PT6909 TPC28T
+5VSUS
PQ6905
DRAIN_1
DRAIN_2
SOURCE_1
SOURCE_3
SOURCE_2
SOURCE_4
GATE_1
GATE_2
FDW2501NZ
PC6910 3300PF/50V
PT6910 TPC28T
PT6911 TPC28T
(3.3A)
+5V
PC6909 0.1UF/25V
PR6904 47KOhm 1%
PT6913 TPC28T
+12VSUS
PQ6907
SUSC#_PWR
UMC4N
PR6906 100KOhm
PT6914 TPC28T
+12V
PQ6905,PQ6906 P/N:07G005161020
PQ6901
SI4800BDY
2006/03/16
PC6904 0.033UF/16V
PR6901 47KOhm 1%
PT6902 TPC28T
+1.8VS
(2A)
PC6901 0.1UF/25V
PQ6904 PMN45EN
PT6905 TPC28T
+3VS
(2A)
PC6906 0.1UF/25V
PC6908 0.01UF/25V
PR6903 47KOhm 1%
PQ6906
PT6912 TPC28T
+5VS
(5A)
PC6900 0.1UF/25V
PC6911 3300PF/50V
1%
PR6905 47KOhm
PT6915 TPC28T
+12VS
PQ6908
SUSB#_PWR
UMC4N
PR6907 100KOhm
PT6916 TPC28T
PR6908 1KOhm r0402_h16 1%
(20,22,24,25,27,30,32,36,66) SUSB#
PT6900 TPC28T
(63,64,65) SUSB#_PWR
+3VA
PJP6901
1MM_OPEN_5MIL
@
PT6917 TPC28T
PR6909 1KOhm r0402_h16 1%
(22) SUSC#
PT6918 TPC28T
(63) SUSC#_PWR
+3VA
PJP6900
1MM_OPEN_5MIL
@
+3VA
PR6910 100KOhm
PR6911 100KOhm
(36) SUSB_PWR
(36) SUSC_PWR
SUSB#_PWR
PQ6900A UM6K1N
SUSC#_PWR
PQ6900B UM6K1N
TPC28T PT5112
+12VSUS
Imax=100mA
AC_BAT_SYS
PC6912 0.1UF/25V
PU6900
IN
OUT
GND
EN NC or ADJ
MIC5235YM5
FB=1.24V
PR6912 845KOhm 1%
PC6913 1UF/25V
PR6913 95.3KOhm 1%
(22,63,64) VSUS_ON
Title : LOAD SWITCH
<OrgName>
Engineer: Spring Li
Size Custom
Project Name Z94Rp
Rev 1.1
Date: Thursday, April 06, 2006
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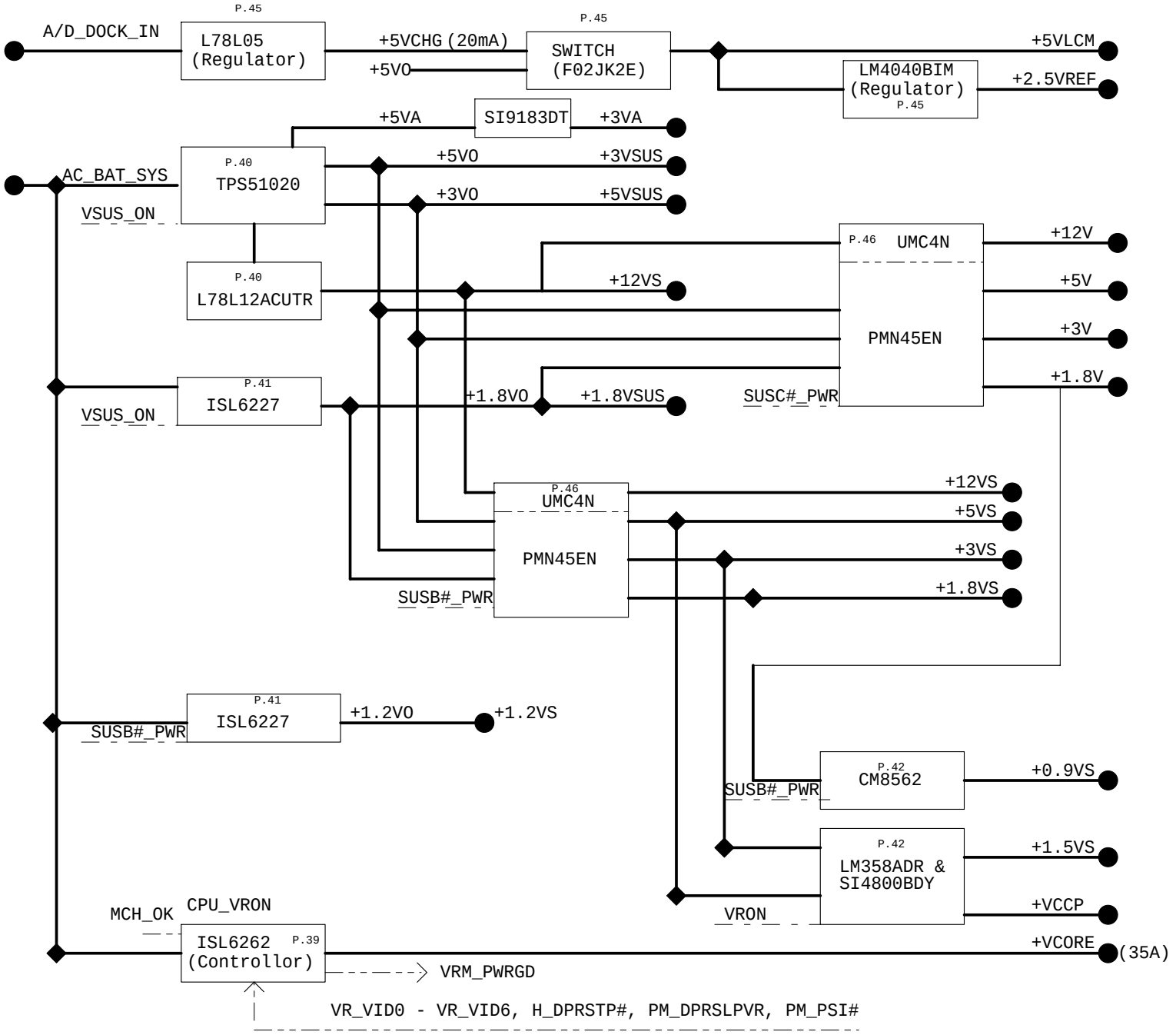

<OrgName>	Title : POWER BLOCK DIAGRAM	
	Engineer: Spring Li	
Size: Custom	Project Name: Z94Rp	Rev: 1.1
Date: Tuesday, April 04, 2006	Sheet 70 of 45	