F2J SCHEMATIC R11(ER)

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30	USB PORTS
31	PCI-E--MINI CARD
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33	PCIE--LAN_RTL8111B
34	EC-IT8510E
35	ISA ROM & Touch Pad & KB& FP
36	Debug CON & FAN CONTROL
37	MDC & TPM CON & LAN
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39	Front side LED & BT
40	Card Reader GL817E
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50	50_POWER_VCORE
51	51_POWER_SYSTEM
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57	57_POWER_CHARGER
58	58_POWER_PIC(Empty)
59	59_POWER_DETECT
60	60_POWER_PROTECT
61	61_POWER_LOAD SWITCH
62	62_POWER_FLOWCHART
63	63_POWER_SIGNAL

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Title: **PAGE REF.**

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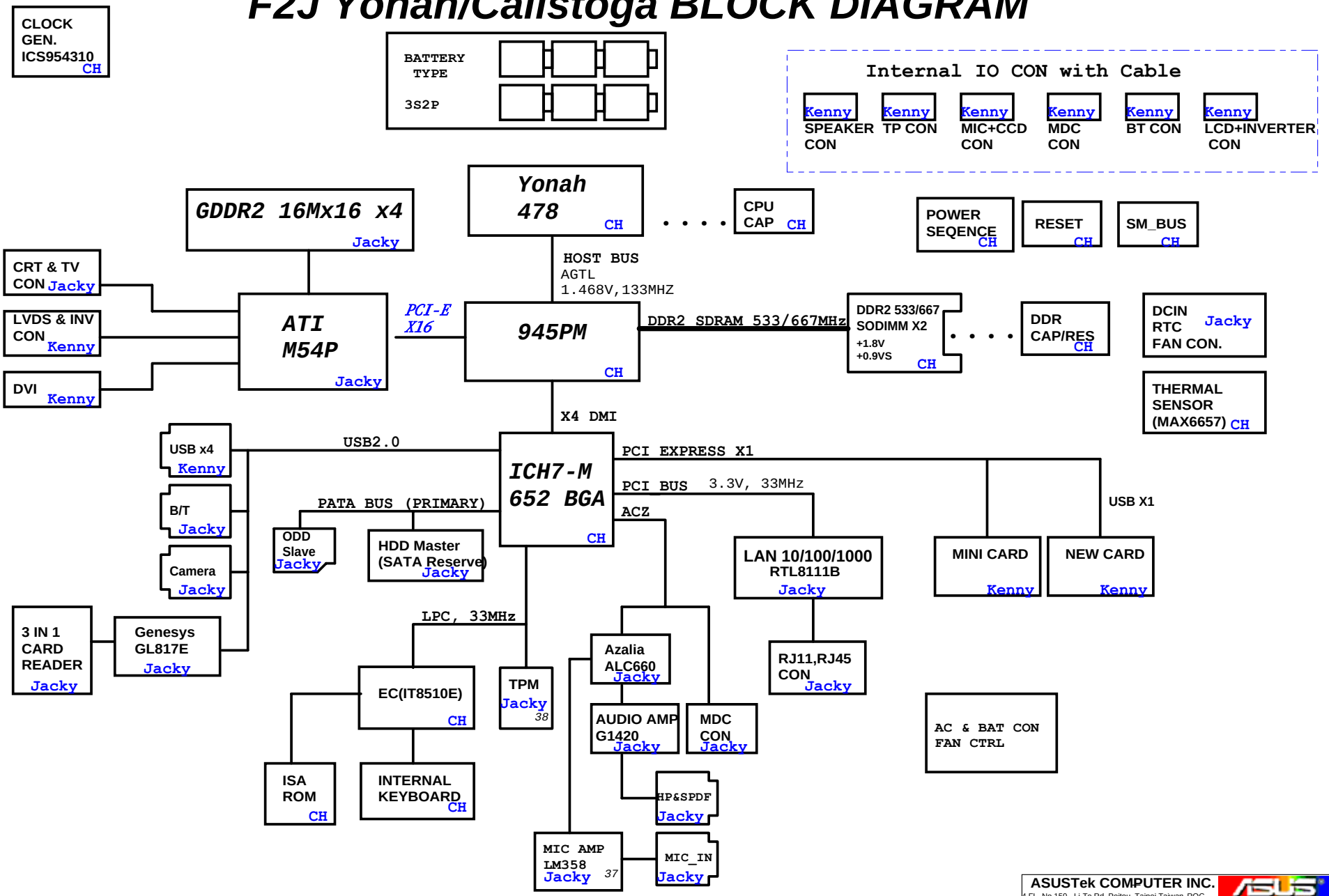
Date: Thursday, April 27, 2006 | Sheet 1 of 22

F2J Yonah/Calistoga BLOCK DIAGRAM



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Title	BLOCK DAIGRAM	
Size: Custom	Document Number: F2J	Rev: 1.1
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EC GPIO SETTING

Pin	Pin Name	Signal Name	Type
32	PWM0/GPA0	BL_PWM	
33	PWM1/GPA1	FAN_PWM	
36	PWM2/GPA2	N/A	I
37	PWM3/GPA3	N/A	
38	PWM4/GPA4	CHG_LED_UP#	O
39	PWM5/GPA5	PWR_LED_UP#	O
40	PWM6/GPA6	BATSEL_3S#	O
43	PWM7/GPA7	LCD_BACKOFF#	O
153	RXD/GPB0	NUM_LED	O
154	TXD/GPB1	CAP_LED	O
162	GPB2	SCRL_LED	O
163	SMCLK0/GPB3	SMB0_CLK	I/0
164	SMDAT0GPB4	SMB0_DAT	I/0
5	GA20/GPB5	A20GATE	O
6	KBRST#/GPB6	RCIN#	O
165	GPB7	N/A	I
47	CLKOUT/GPC0	N/A	O
169	SMCLK1/GPC1	SMB1_CLK	I/0
170	SMDAT1/GPC2	SMB1_DAT	I/0
171	GPC3	N/A	
172	TMRI0/WUI2/GPC4	ACIN_OC#	I
175	GPC5	OP_SD#	O
176	TMRI1/WUI3/GPC6	BAT_IN_OC#	I
1	CK32KOUT/GPC7	EC_IDE_RST#	
26	RI1#/WUI0/GPD0	SUSB#	I
29	RI2#/WUI1/GPD1	SUSC#	I
30	LPCRST#/WUI4//GPD2	BUF_PLT_RST#	I
31	ECSCI#/GPD3	EXT_SCI#	O
41	GPD4	N/A	
42	GINT/GPD5	N/A	
62	TACH0/GPD6	FAN0_TACH	
63	TACH1/GPD7	N/A	
87	ADC4/GPE0	COLOREN#	
88	ADC5/GPE1	INTERNET#	
89	ADC6/GPE2	MARATHON#	
90	ADC7/GPE3	DISTP#	
2	PWRSW/GPE4	PWR_SW#	
44	WUI5/GPE5	N/A	
24	LPCPD#/WUI6/GPE6	LID_EC#	
25	CLKRUN#/WUI7/GPE7	N/A	
110	PS2CLK0/GPF0	/	
111	PS2DAT0/GPF1	/	
114	PS2CLK1/GPF2	/	I/0
115	PS2DAT1/GPF3	/	I/0
116	PS2CLK2/GPF4	TP_CLK	
117	PS2DAT2/GPF5	TP_DAT	
118	PS2CLK3/GPF6	/	
119	PS2DAT3/GPF7	/	I
113	FA16/GPG0	FA16_SWAP	
112	FA17/GPG1	FA17	
104	FA18/GPG2	FA18	
103	FA19/GPG3	/	
3	FA20/GPG4	THRM_CPU#	
4	FA21/GPG5	/	
27	LPC80HL/GPG6	PMTHERM#	
28	LPC80LL/GPG7	AC_APR_UC#	

Pin	Pin Name	Signal Name	Type
48	GPH0	VSUS_ON	O
54	GPH1	VSUS_GD#	O
55	GPH2	CPUPWR_GD#	O
69	GPH3	PM_PWRBTN#	O
70	GPH4	SUSC_ON	O
75	GPH5	SUSB_ON	O
76	GPH6	CPU_VRON	O
105	GPH7	PM_RSMRST#	O
148	GPI0	ICH7_PWROK	O
149	GPI1	WATCH_DOG#	O
152	GPI2	GAIN_AMP#_K	O
155	GPI3	CHG_EN#	O
156	GPI4	/	
168	GPI5	BAT_LL#	O
174	GPI6	BAT_LEARN	O

PCI Device	IDSEL#	REQ/GNT#	Interrupts

SM_BUS ADDRESS :

SM-Bus Device	SM-Bus Address
Clock Generator	1101001x (D2)
SO-DIMM 0	1010000x (A0)
SO-DIMM 1	1010001x (A2)
Thermal Sensor(MAX6657)	1001100x (98)
VGA Thermal IC(G781-1)	1001101x (9A)

ICH7M_GPIO

Pin		Use As	Signal Name	Power
GPIO 00	i	GPI	PM_BMBUSY#	+3VS
GPIO 01	i	GPI	PCI_REQ#5	+3VS
GPIO [5:2]	i	GPI	PCI_INT[E:H]#	+3VS
GPIO 06	i	GPO	BT_LED_EN	+3VS
GPIO 07	i	GPI	RF_ON_SW#	+3VS
GPIO 08	i	GPI	EXTSMI#	+3VSUS
GPIO 09	i	GPI	CPPE#_DET	+3VSUS
GPIO 10	i	GPI	N/A	+3VSUS
GPIO 11	i	Native	SMB_ALERT#	+3VSUS
GPIO 12	i	GPI	KBC_SCI#	+3VSUS
GPIO 13	i	GPI	N/A	+3VSUS
GPIO 14	i	GPI	N/A	+3VSUS
GPIO 15	i	GPO	802_LED_EN	+3VSUS
GPIO 16	O	0 GPO	PM_DPRSLPVR	+3VS
GPIO 17	O	1 GPO	PCI_GNT#5	+3VS
GPIO 18	O	1 GPO	STP_PCI#	+3VS
GPIO 19	i	1 GPI	N/A	+3VS
GPIO 20	O	1 GPO	STP_CPU#	+3VS
GPIO 21	i	1 GPO	N/A	+3VS
GPIO 22	i	1 Native	PCI_REQ#4	+3VS
GPIO 23	i	1 Native	N/A	+3VS
GPIO 24	O	0 GPO	MSK_PCIRST	+3VSUS
GPIO 25	O	1 GPO	RST#_NEWCARD	+3VSUS
GPIO 26	O	0 GPO	CPPE_EN	+3VSUS
GPIO 27	O	0 GPO	WLAN_ON#(Reserved)	+3VSUS
GPIO 28	O	0 GPI	BT_DET#	+3VSUS
GPIO 29	i	0 Native	USB_OC#5	+3VSUS
GPIO 30	i	0 Native	USB_OC#6	+3VSUS
GPIO 31	i	0 Native	USB_OC#7	+3VSUS
GPIO 32	O	1 GPO	PM_CLKRUN#	+3VS
GPIO 33	O	1 GPO	BT_ON#	+3VS
GPIO 34	O	0 GPO	CPU_Select	+3VS
GPIO 35	O	0 GPO	TP_LEDON	+3VS
GPIO 36	i	0 GPO	N/A	+3VS
GPIO 37	i	0 GPI	PCB_ID0	+3VS
GPIO 38	i	0 GPI	PCB_ID1	+3VS

Pin		Use As	Signal Name	Power
GPIO 39	i	0 GPI	PCB_ID2	+3VS
GPIO [40:47]		NA	NA	NA
GPIO 48		Native	PCI_GNT#4	+3VS
GPIO 49		Native	H_PWRGD	+VCORE

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Title: SCHEMATICS REF.

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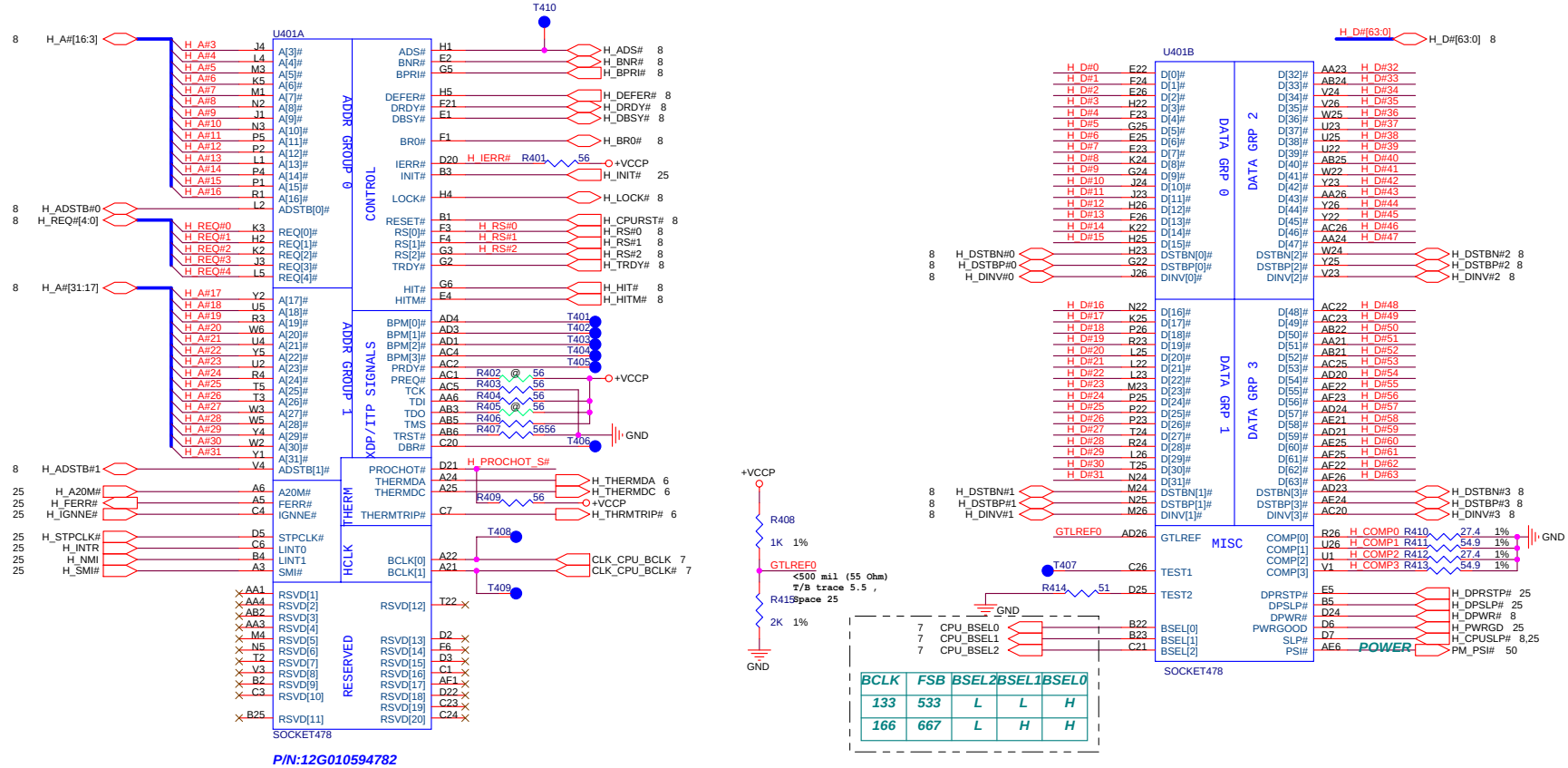
Date: Thursday, April 27, 2006 | Sheet 3 of 22



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

P/N:12G010594782

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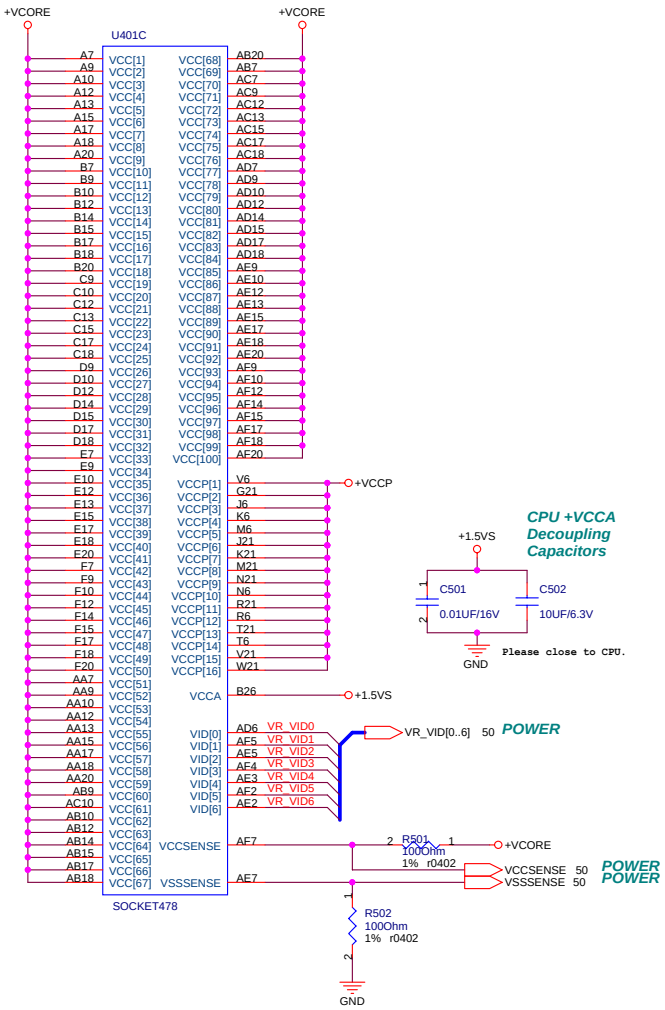
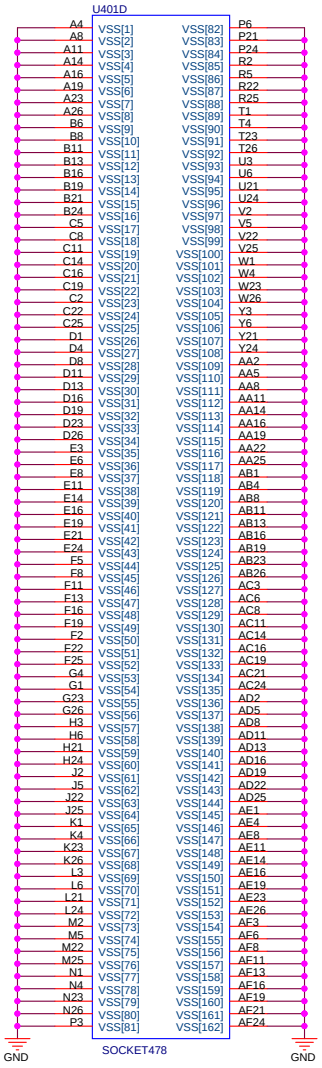
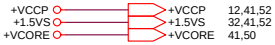
Title: YONAH CPU1			
Size: Custom	Document Number: F2J		Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 4 of 22		







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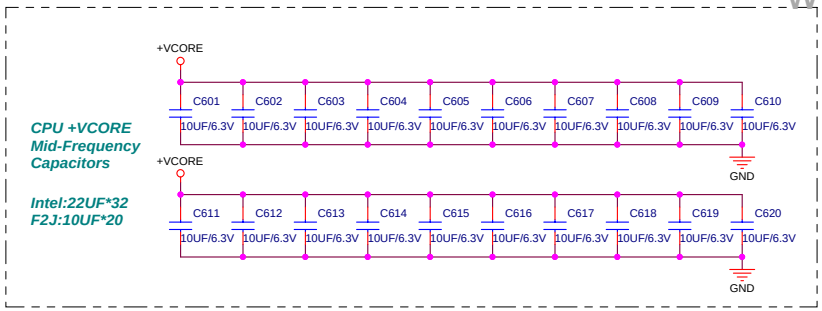
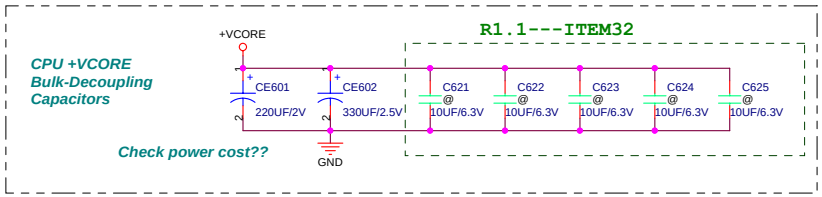
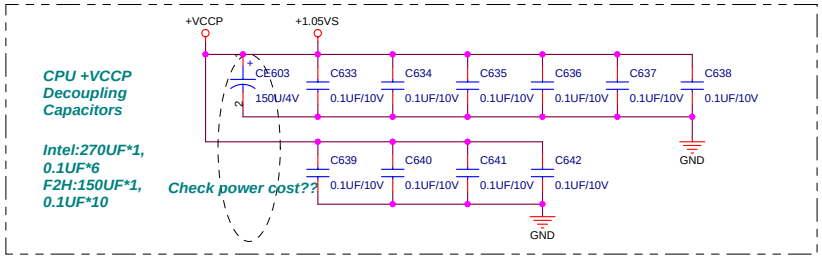
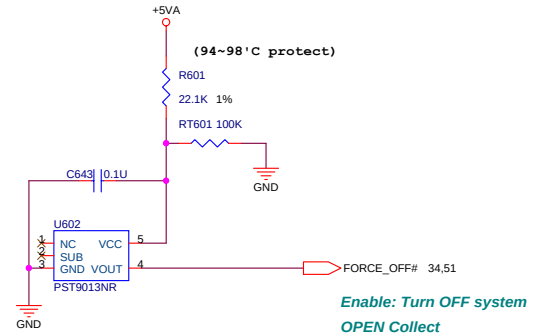
Title: YONAH CPU2		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 5 of 22	

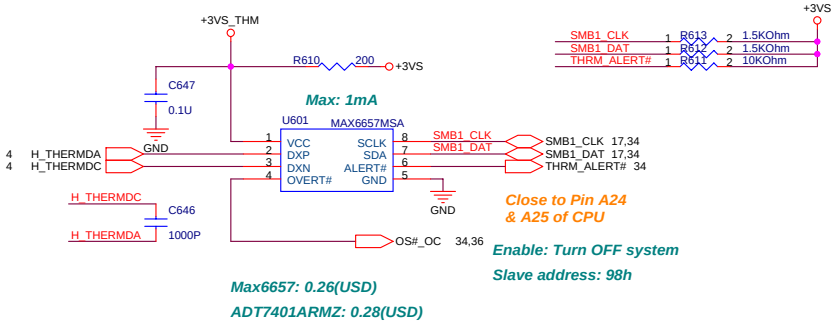




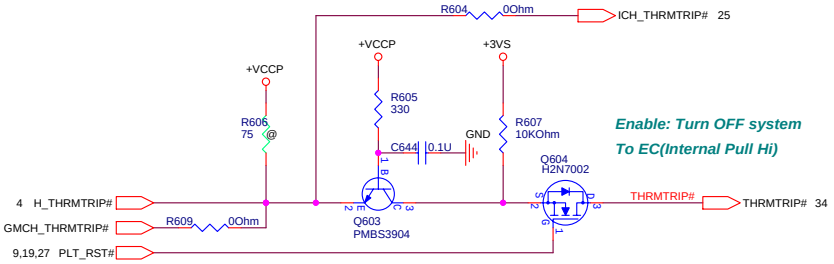




Thermal Sensor



Max6657: 0.26(USD)
ADT7401ARMZ: 0.28(USD)



+VCCP	+VCCP	12,41,52
+VCORE	+VCORE	41,50
+3VS	+3VS	17,20,21,23,32,33,34,35,36,37,39,40,41,42,43,50,52,60,61
+5VA	+5VA	51,54

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Title: CPU CAP,THERMAL SENSOR

Size	Document Number	Rev
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FSLC FSLB FSLA				
BCLK	FSB	BSEL2	BSEL1	BSEL0
133	533	L	L	H
166	667	L	H	H

CPU_BSEL0 R701 1K MCH_BSEL0 9
CPU_BSEL1 R703 1K MCH_BSEL1 9
CPU_BSEL2 R705 1K MCH_BSEL2 9
R710 10K @ PCICLK2
GND

POWERSAVE#
Q701 H2N7002 CPU_Select 26
Q702 H2N7002 ACIN_OC# 59
GND

R1.1---ITEM34

X701 14.318Mhz
C716 27PF C717 27PF
GND

+3VS_CLK
C713 10UF/6.3V C714 0.1U
R713 2.2Ohm
R780 10KOhm
POWERSAVE#
+3VS_VDDA
XIN_CLK
R775 0Ohm XOUT_CLK

To VGA
17 ATI27M_NOSSC
17 ATI27M_SSC
26 CLK_USB48
R726 0Ohm PCIE0
R729 33 PCIE0#
R733 33 FSA
4 CPU_BSEL0
4 CPU_BSEL1
R774 2.2K

R1.1---ITEM11
R1.1---ITEM48

37 CLK_TPMPCI
36 CLK_DBGPCI
34 CLK_ECPCI
32 CLK_DEBUG2
T707
27 CLK_ICHPCI
14,15,26,31,32 SCL_3S
14,15,26,31,32 SDA_3S
CLK_LANPCI
R741 10KOhm PCICLK5
R743 10KOhm
R744 33 PCICLK4
R748 33 PCICLK3
R751 33 PCICLK2
R781 10K @
R755 33
R753 10KOhm
R757 33 PCICLK0
R758 10KOhm
R778 0Ohm
R779 0Ohm
R767 475 1%
C724 10P @ C718 10P @ C719 33P @ C720 10P @ C721 10P @ C722 10P @ C723 10P @
GND

U701 ICS954310CGLFT

21	VDDPCIEX1		
28	VDDPCIEX2		
42	VDDPCIEX3		
34	PWRSAVE#		
50	VDDCPU		
45	VDDA		
46	GNDA		
58	X1		
57	X2		
17	27FIX/LCD_SSCGT/PCIEX0T		
18	27SS/LCD_SSCGC/PCIEX0C		
12	FSLA/USB_48MHz		
16	FSLB/TEST_MODE		
5	SELPCIEX0_LCD#PCICLK5		
4	PCICLK4		
3	PCICLK3		
64	PCICLK2/REQ_SEL		
9	SELLCD_27#/PCICLK_F1		
8	ITP_EN/PCICLK_F0		
54	SCLK		
55	SDATA		
47	IREF		
2	GND1		
6	GND2		
13	GND3		
29	GND4		
37	GND5		
53	GND6		
59	GND7		
11	VDD48		
56	VDDREF		
63	PCI/PCIEX_STOP#	STP_PCI# 26	
62	CPU_STOP#	STP_CPU# 26	
49	CPUCLKT1	CLK_MCH R719 33	CLK_MCH_BCLK 8
48	CPUCLKC1	CLK_MCH# R721 33	CLK_MCH_BCLK# 8
52	CPUCLKT0	CLK_CPU R722 33	CLK_CPU_BCLK 4
51	CPUCLKC0	CLK_CPU# R724 33	CLK_CPU_BCLK# 4
44	CPUCLKT2_ITP/PCIEXT8	PCIE8 T701	
43	CPUCLKC2_ITP/PCIEXC8	PCIE#8 T702	
41	PEREQ1#/PCIEXT7	PEREQ#1	
40	PEREQ2#/PCIEXC7	PEREQ#2	
39	PCIEXT6	PCIE6 R750 33	CLK_MCH_3GPLL 9
38	PCIEXC6	PCIE#6 R752 33	CLK_MCH_3GPLL# 9
36	PCIEXT5	PCIE5 R735 33	CLK_PCIE_MINICARD0 31
35	PCIEXC5	PCIE#5 R736 33	CLK_PCIE_MINICARD#0 31
30	PCIEXT4	PCIE4 R754 33	CLK_PCIE_M56 19
31	PCIEXC4	PCIE#4 R756 33	CLK_PCIE_M56# 19
24	PCIEXT3	PCIE3 R739 33	CLK_PCIE_LAN 33
25	PCIEXC3	PCIE#3 R742 33	CLK_PCIE_LAN# 33
22	PCIEXT2	PCIE2 R777 33	CLK_PCIE_NEWCARD 32
23	PCIEXC2	PCIE#2 R776 33	CLK_PCIE_NEWCARD# 32
19	PCIEXT1	PCIE1 R730 33	CLK_PCIE_ICH 27
20	PCIEXC1	PCIE#1 R731 33	CLK_PCIE_ICH# 27
26	SATACLKT	SATACLKT R760 33	CLK_SATA_ICH 25
27	SATACLKC	SATACLKC R762 33	CLK_SATA_ICH# 25
14	DOTT_96MHz	T703	If SATA no use,
15	DOTC_96MHz	T704	R760, R762 DNI
32	PEREQ3#	PEREQ#3	
33	PEREQ4#	PEREQ#4	
10	Vtt_PwrGd#/PD	R770 10KOhm +3VS	CLK_EN# 50
61	REF1/FSLC/TEST_SEL	REF1 R771 2.2K	CPU_BSEL2 4
60	REF0	REF0 R773 33	CLK_ICH14 26

Int. PU: PIN5, PIN9, PIN32, PIN33, PIN34
Int. PD: PIN64

+3VS_CLK
L702 120Ohm/100Mhz
C711 10UF/6.3V
L703 120Ohm/100Mhz
C704 C705 C706 C707 0.1U
GND

+3VS_VDDPCI
C709 C710 0.1U
R708 2.2Ohm
R709 1
+3VS_VDD48
C712 0.1U
+3VS_VDDREF
C715 0.1U
GND

PLACE termination close to source IC

CLK_MCH_BCLK	R702	49.9	1%
CLK_MCH_BCLK#	R704	49.9	1%
CLK_CPU_BCLK	R706	49.9	1%
CLK_CPU_BCLK#	R707	49.9	1%
CLK_PCIE_MINICARD0	R714	49.9	1%
CLK_PCIE_MINICARD#0	R715	49.9	1%
CLK_MCH_3GPLL	R718	49.9	1%
CLK_MCH_3GPLL#	R720	49.9	1%
CLK_PCIE_ICH	R723	49.9	1%
CLK_PCIE_ICH#	R725	49.9	1%
CLK_PCIE_M56	R728	49.9	1%
CLK_PCIE_M56#	R732	49.9	1%
CLK_PCIE_NEWCARD	R738	49.9	1%
CLK_PCIE_NEWCARD#	R740	49.9	1%
CLK_PCIE_LAN	R745	49.9	1%
CLK_PCIE_LAN#	R747	49.9	1%
CLK_SATA_ICH	R746	49.9	1%
CLK_SATA_ICH#	R749	49.9	1%

0Ω : PATA
49.9Ω : SATA

PEREQ#1
0 = PCIEX6/0 Not Controlled
1 = PCIEX6/0 Controlled
PEREQ#1 R727 10KOhm GND

PEREQ#2
0 = PCIEX8/1 Not Controlled
1 = PCIEX8/1 Controlled
PEREQ#2 R734 10KOhm GND

PEREQ#3
0 = PCIEX4/2 Not Controlled
1 = PCIEX4/2 Controlled (D)
PEREQ#3 R768 @ 10K GND

PEREQ#4
0 = PCIEX7/5/3 Not Controlled
1 = PCIEX7/5/3 Controlled (D)
PEREQ#4 R769 @ 10K GND

From Power

Leakage check!
PEREQ#3 D701 1N4148W CLK_REQ_NEWCARD# 32
PEREQ#4 D702 1N4148W CLK_REQ_MINICARD# 31

Latched Input Select

/	PIN9	PIN5	PIN17	PIN18
*	0	X	27FIX	27SS
	1	0	96MSS_T	96MSS_C
	1	1	PCIEX0_T	PCIEX0_C

ITP_EN/PCICLK_F0 (PIN8)	0 = SRC Pair 1 = CPU_ITP Pair
SELPCIE0_LCD#/PCI_CLK5 (PIN5)	0 = LCD Clock (96MHz) 1 = PCI Express (100MHz) (D)
PCI_CLK2/REQ_SEL (PIN64)	0 = PCICLK(D) 1 = PEREQ#
SELLCD_27#/PCICLK_F1 (PIN9)	0 = 27MHzSS/27MHzSS# Pair 1 = LCD_CLK Pair (D)

+3VS +3VS 17,20,21,23,32,33,34,35,36,37,39,40,41,42,43,50,52,60,61

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Title: CLK ICS954310AGLF
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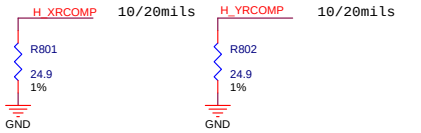
Date: Thursday, April 27, 2006 | Sheet 7 of 22

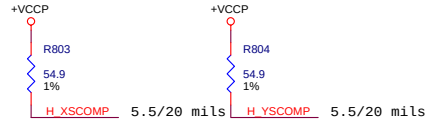
RCOMP

For Calibrating FSB I/O Buffer



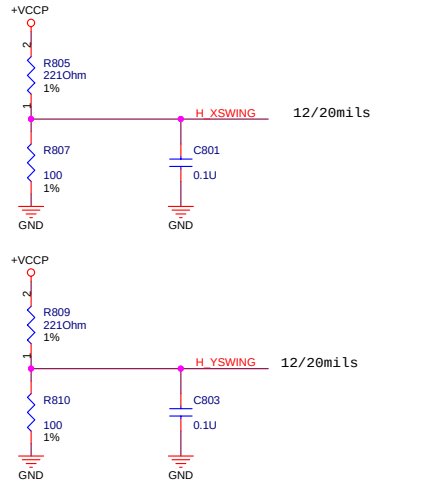
SCOMP

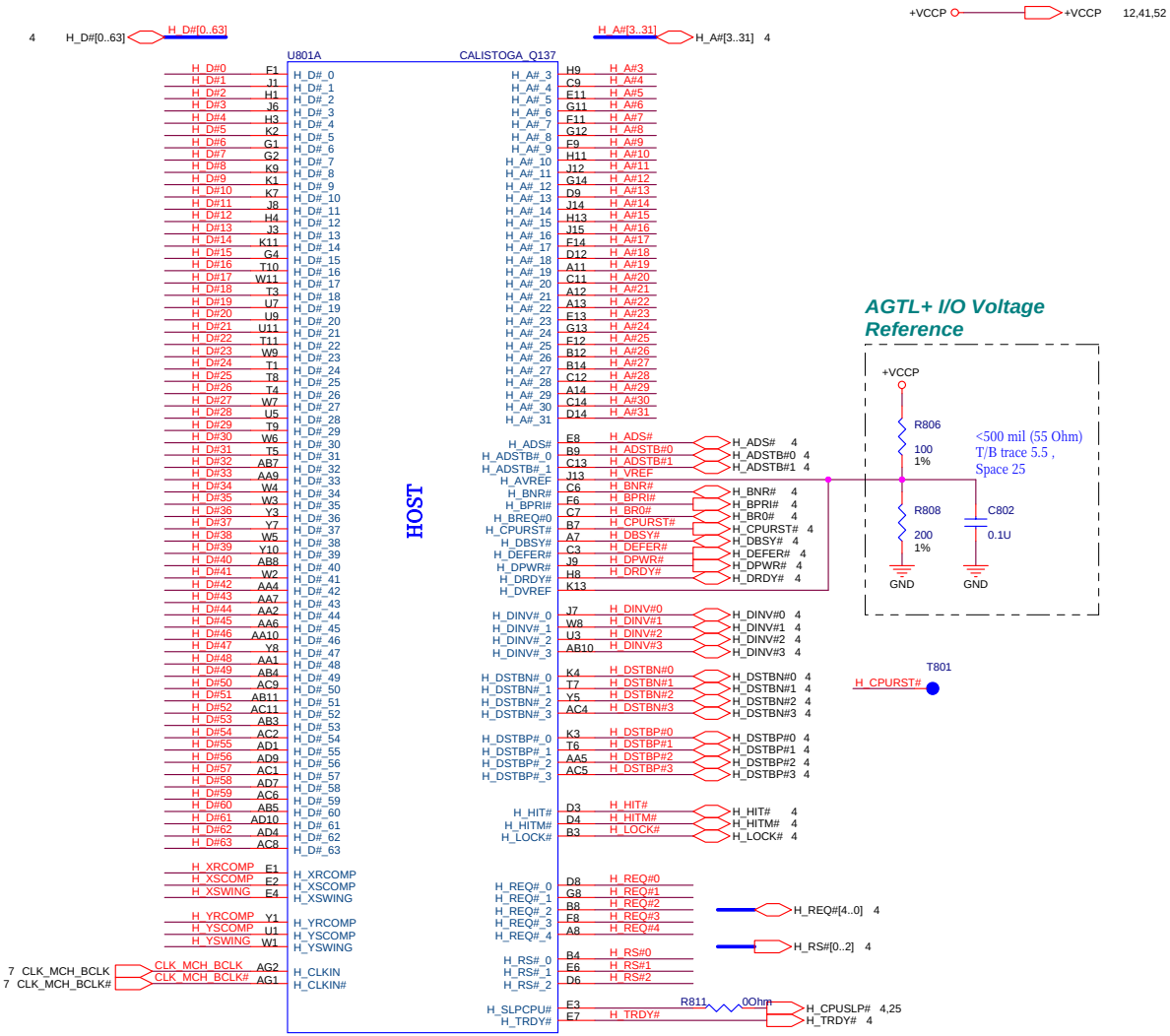
For Slew Rate Compensation on the FSB



Voltage Swing

For Providing a Reference Voltage to The FSB RCOMP Circuit





AGTL+ I/O Voltage Reference

T801
H_CPURST#

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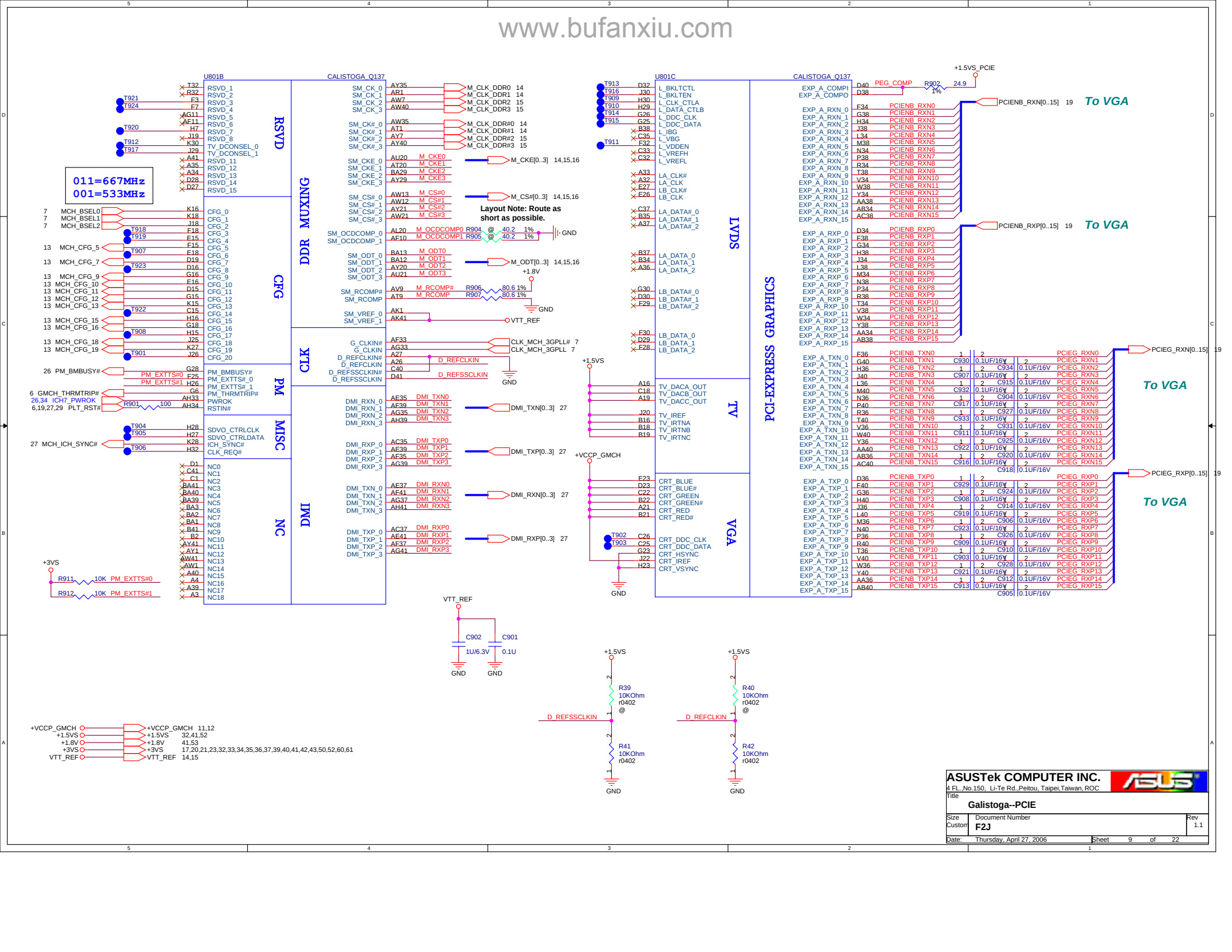
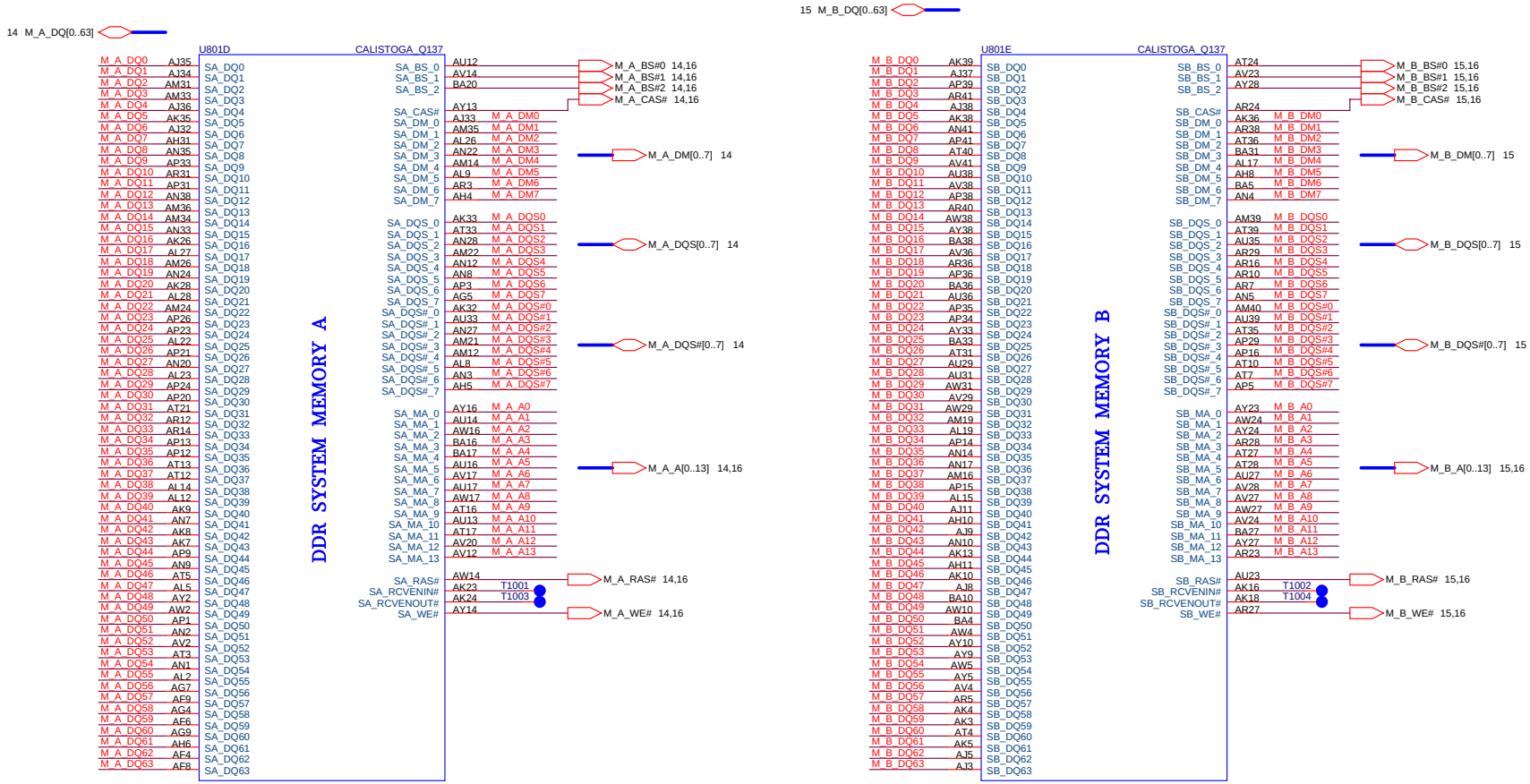
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: Galistoga--CPU		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 8 of 22	





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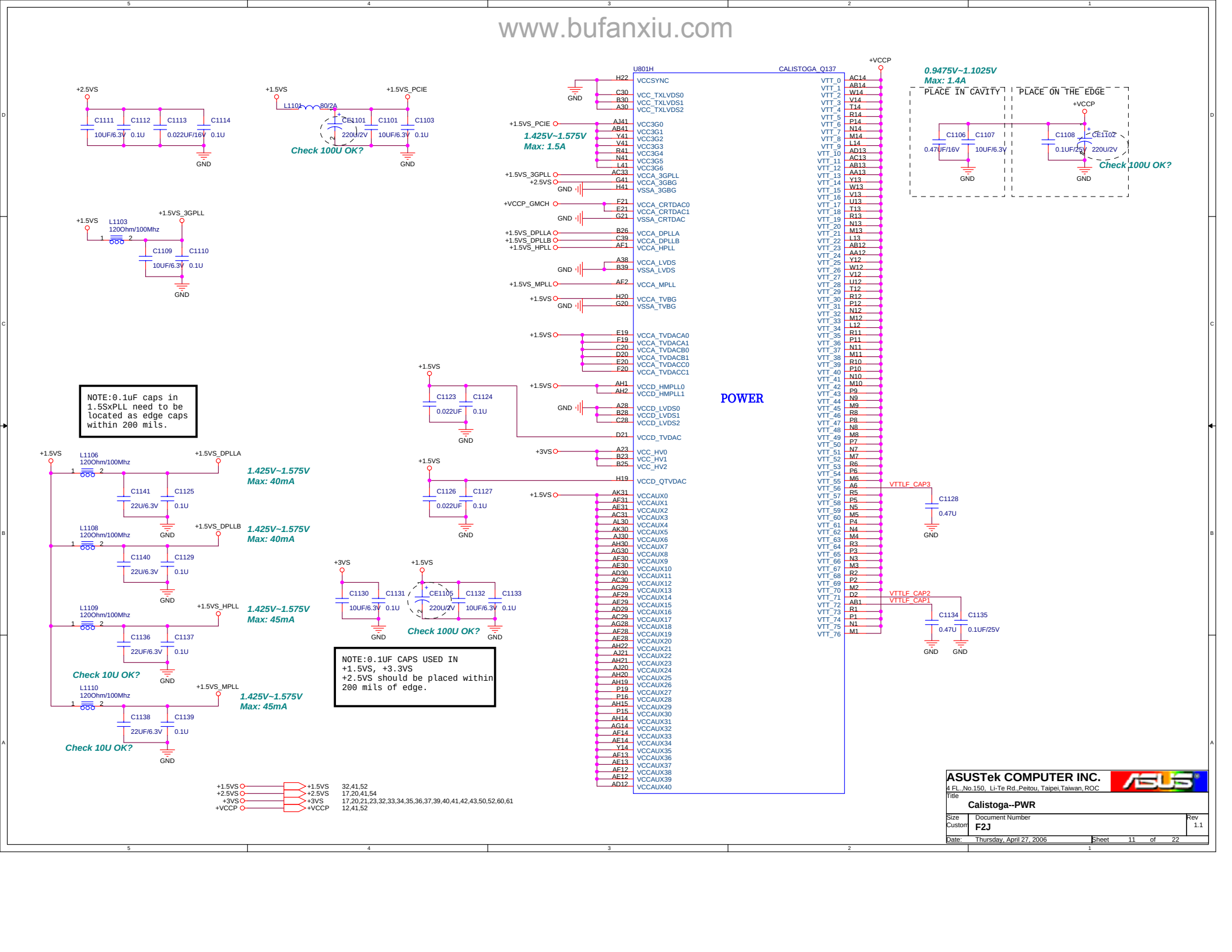
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: Calistoga--DDR2		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 10 of 22	



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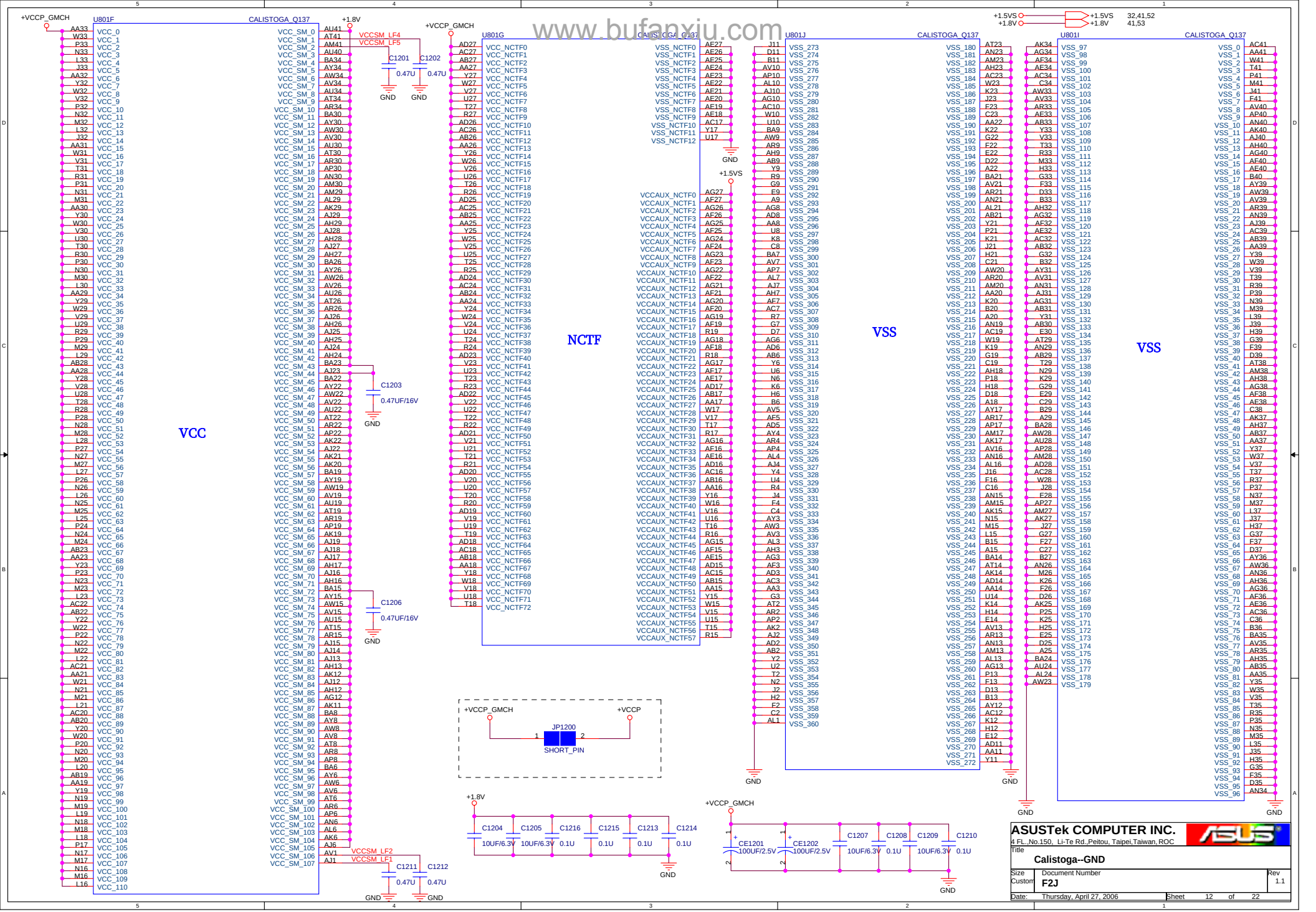
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC	
Title	Calistoga--PWR
Size: Custom	Document Number: F2J
Rev	1.1
Date: Thursday, April 27, 2006	Sheet 11 of 22


www.bufanxiu.com
U801F
CALISTOGA_Q137
VCC
U801G
NCTF
U801J
VSS
U801I
VSS
+VCCP_GMCH
+1.8V
+1.5VS
VCCSM_LF4
VCCSM_LF5
VCCSM_LF2
VCCSM_LF1
C1201
C1202
C1203
C1206
C1211
C1212
0.47U
0.47UF/16V
GND
JP1200
SHORT_PIN
+VCCP
C1204
C1205
C1216
C1215
C1213
C1214
10UF/6.3V
0.1U
CE1201
CE1202
100UF/2.5V
C1207
C1208
C1209
C1210
ASUSTek COMPUTER INC.
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Calistoga--GND
F2J
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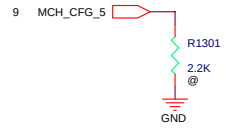
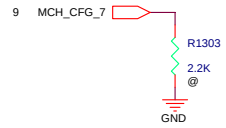
+3VS → +3VS 17,20,21,23,32,33,34,35,36,37,39,40,41,42,43,50,52,60,61



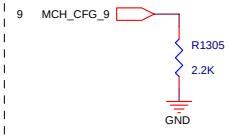
CFG5 : DMI STRAP

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



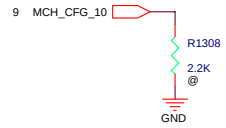
CFG7 : CPU STRAP

LOW = RESERVED
HIGH = Mobile Yonah CPU (Default)



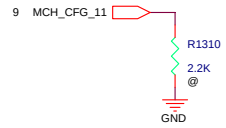
CFG9 : PCIE GRAPHIC LANE

LOW = REVERSE LANE
HIGH = NORMAL OPERATION (Default)



CFG10 : HOST PLL VCO SELECT

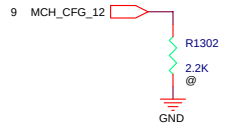
LOW = RESERVED
HIGH = MOBILITY (Default)



CFG11 : PSB 4x CLK ENABLE

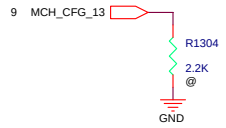
LOW = 4X ENABLED
HIGH = 8X ENABLED (Default)

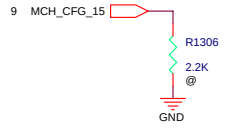
```
CFG[17..3] have internal pullup resistors.
CFG[19..18] have internal pulldown resistors.
SDVOCRTL_DATA has internal pulldown resistors.
```



CFG[13:12] : GMCH TEST MODE SELECT

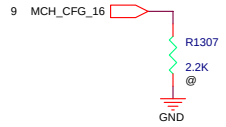
00 = Partial CLK gating disable
01 = XOR Mode Enable
10 = ALL Z Mode Enable
11 = NORMAL OPERATION (Default)





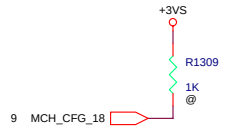
CFG15 : ICH RESET Disable

LOW = ICH RESET Disabled
HIGH = Normal Operation (Default)



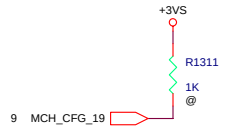
CFG16 : FSB Dynamic ODT

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



CFG18 : GMCH Core Voltage Level

LOW = 1.05V (Default)
HIGH = 1.5V



CFG19 : DMI LANE REVERSAL

LOW = NORMAL (Default)
HIGH = LANES REVERSED

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Title: Galistoga--straps		
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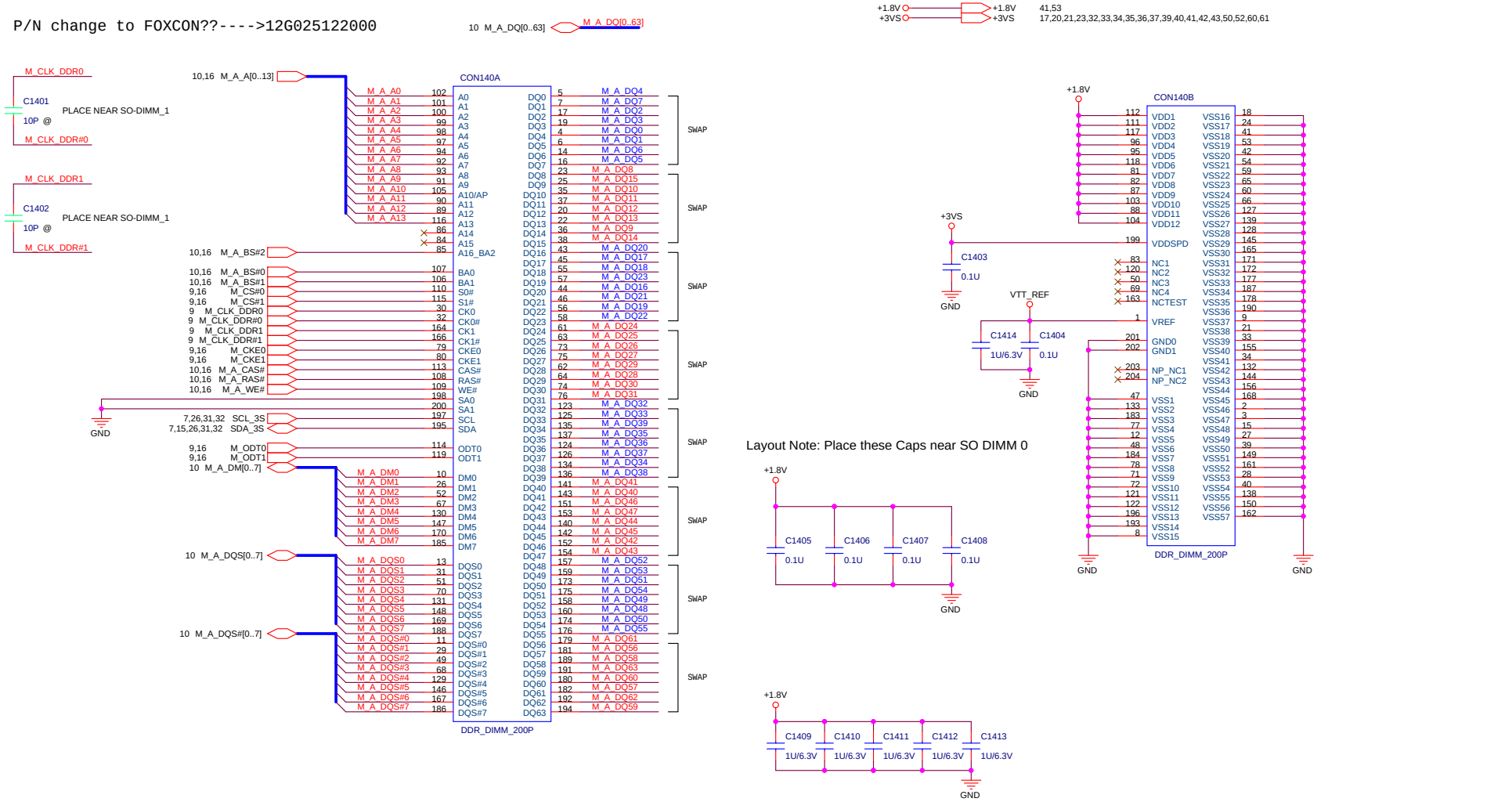
Date: Thursday, April 27, 2006	Sheet 13 of 22	

STANDARD TYPE

P/N change to FOXCON??---->12G025122000



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Title	DDR2 SO-DIMM0
Size: Custom	Document Number: F2J
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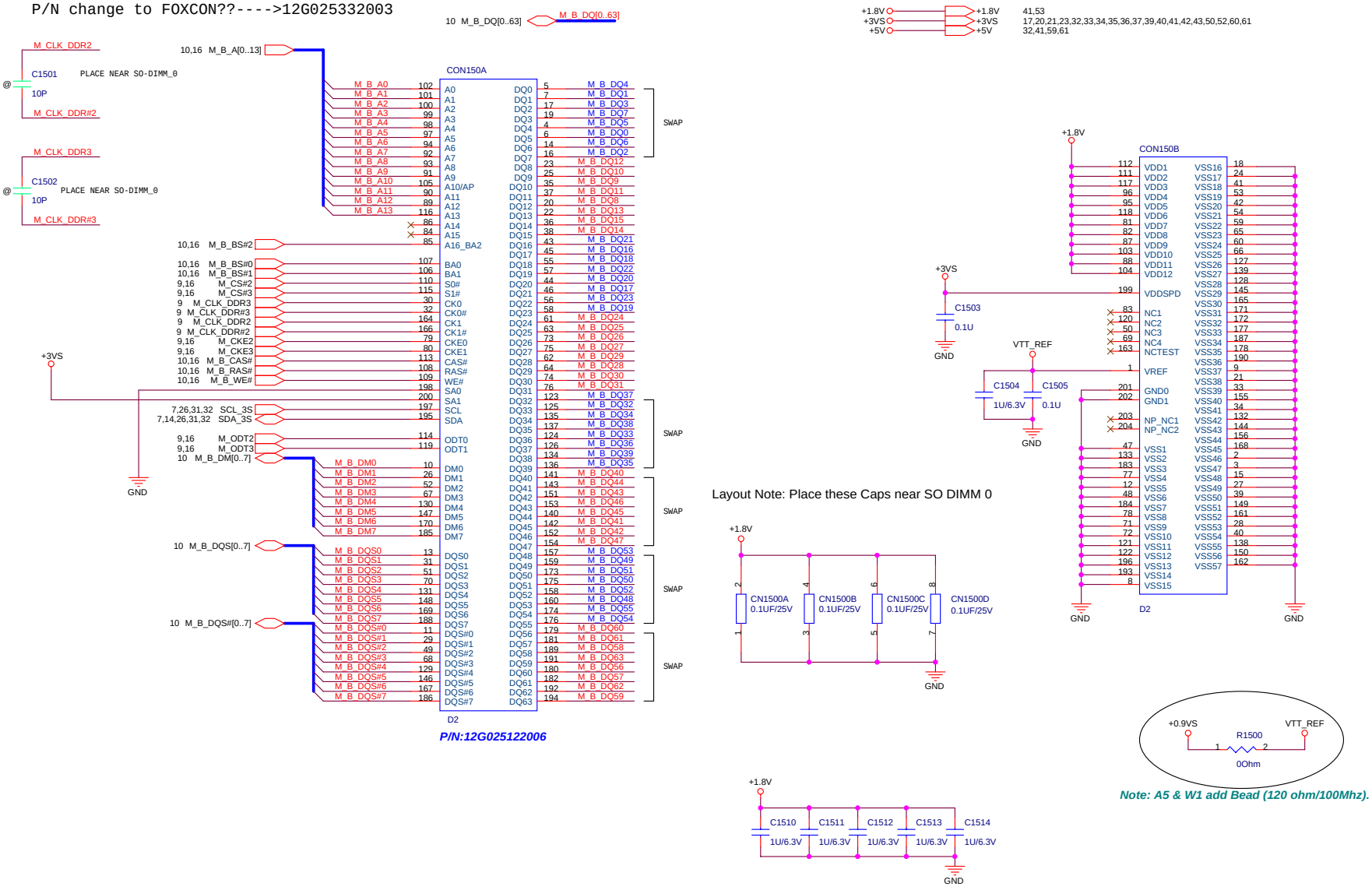
REVERS TYPE

P/N change to FOXCON??---->12G025332003



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4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: DDR2 SO-DIMM1		
Size: Custom	Document Number: F2J	Rev: 1.1
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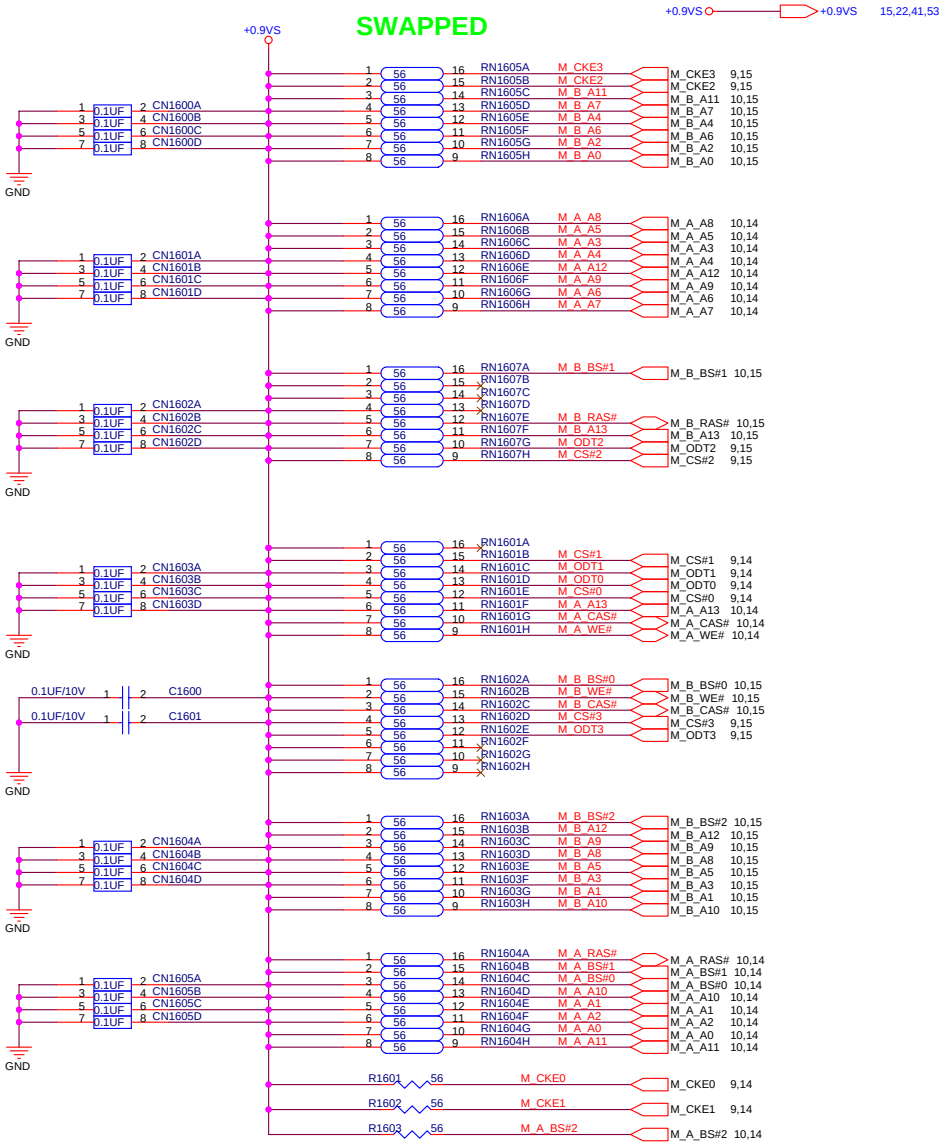
SWAPPED



Layout note: Place array cap close to each pullup resistors terminated to +0.9VS

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Title: **DDR2 ADDRESS TERMINATION**

Size	Document Number	Rev
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GPIO[0]: Tx Power Savings Enable
0: 50% Tx output swing
1: full Tx output swing (recommended)
(default 0, internal pull-down)

GPIO[1]: Tx De-emphasis Enable
0: Tx de-emphasis disbale
1: Tx de-emphasis enable
(default 0, internal pull-down)

R1.1---ITEM42

Slave Address:9A

Max: 1mA

MID / Vendor /SIZE	3	2	1	0
Infineon 128M	0	0	0	0
Samsung 128M	0	0	0	1
Hynix 128M	0	0	1	0
Infineon 256M	0	0	1	1
Samsung 256M	0	1	0	0
Hynix 256M	0	1	0	1
Infineon 64M	0	1	1	0
Samsung 64M	0	1	1	1
Hynix 64M	1	1	1	1

INFINEON/HYB18T256161AFL-28
DDR2 16M*16-2.8 1.8V
03G15123F211

Memory Aperture Size Select:

GPIO[13:12] = 00: 128M memory aperture, same as ROM strap 00
GPIO[13:12] = 01: 256M memory aperture, same as ROM strap 01
GPIO4 Debug Access:
0 = OFF, 1= ON

R1.1---ITEM10

POWER PLAY Don't Switch the VGA CORE

1.65V VREF Divider close to M56

R1.1---ITEM13

DVI CON

FOR M527/M54:DNI,
FOR M56:MOUNTED

LCD CON

PANEL_ID

Can be left unconnect if not used.

Can be unconnect if not used.

DVI detect

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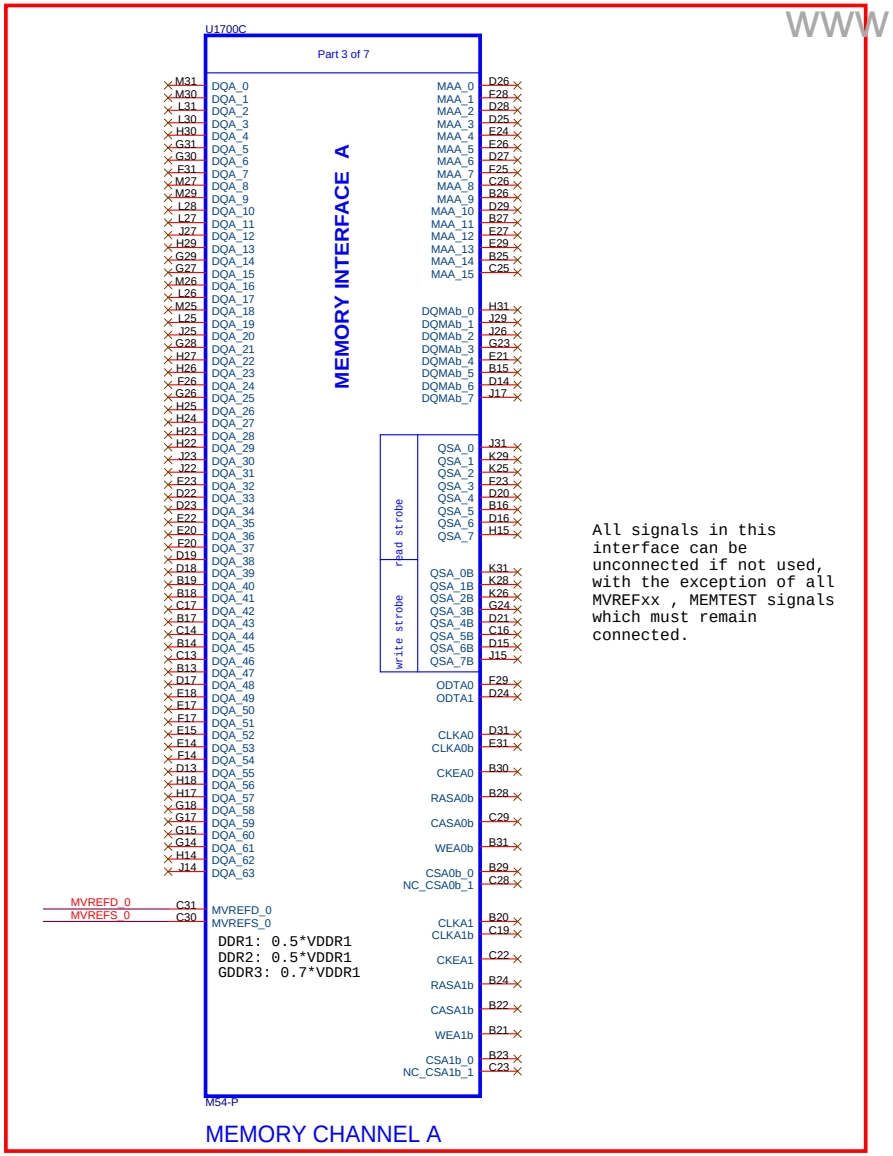
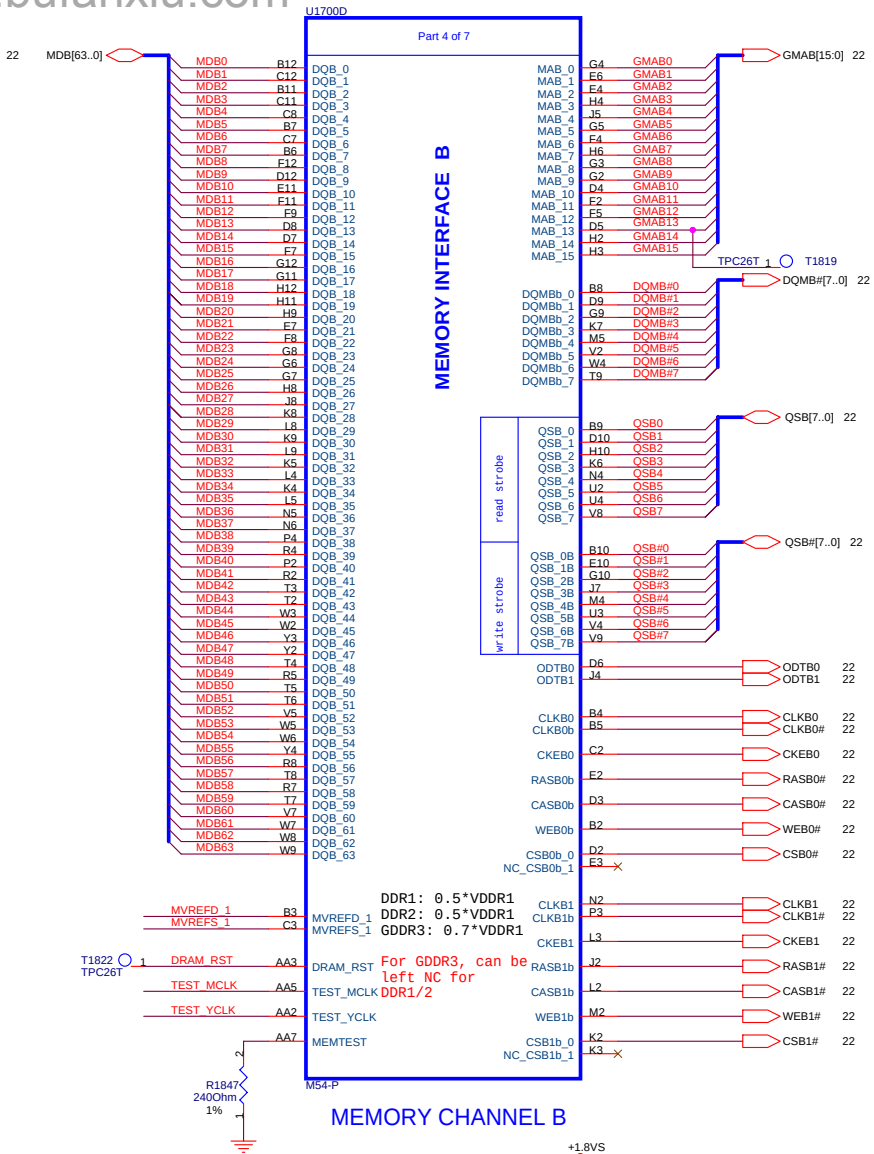
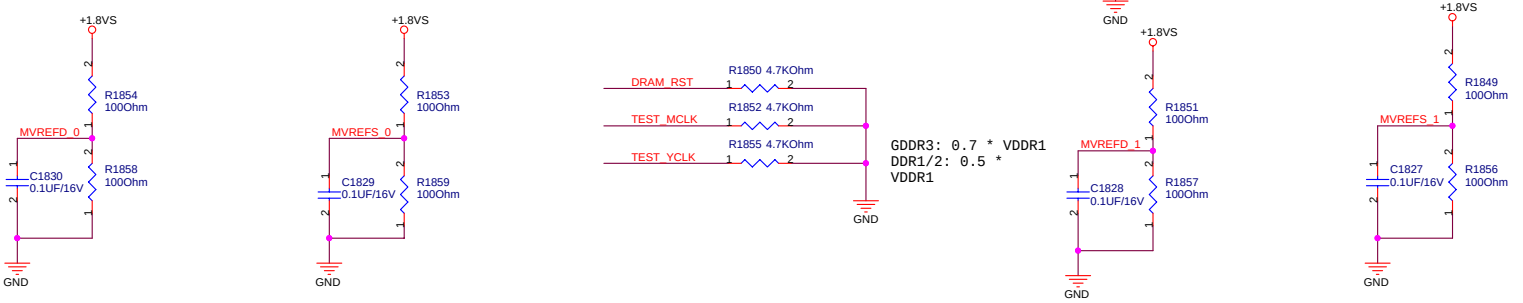


MEMORY CHANNEL A

All signals in this interface can be unconnected if not used, with the exception of all MVREFxx , MEMTEST signals which must remain connected.



MEMORY CHANNEL B



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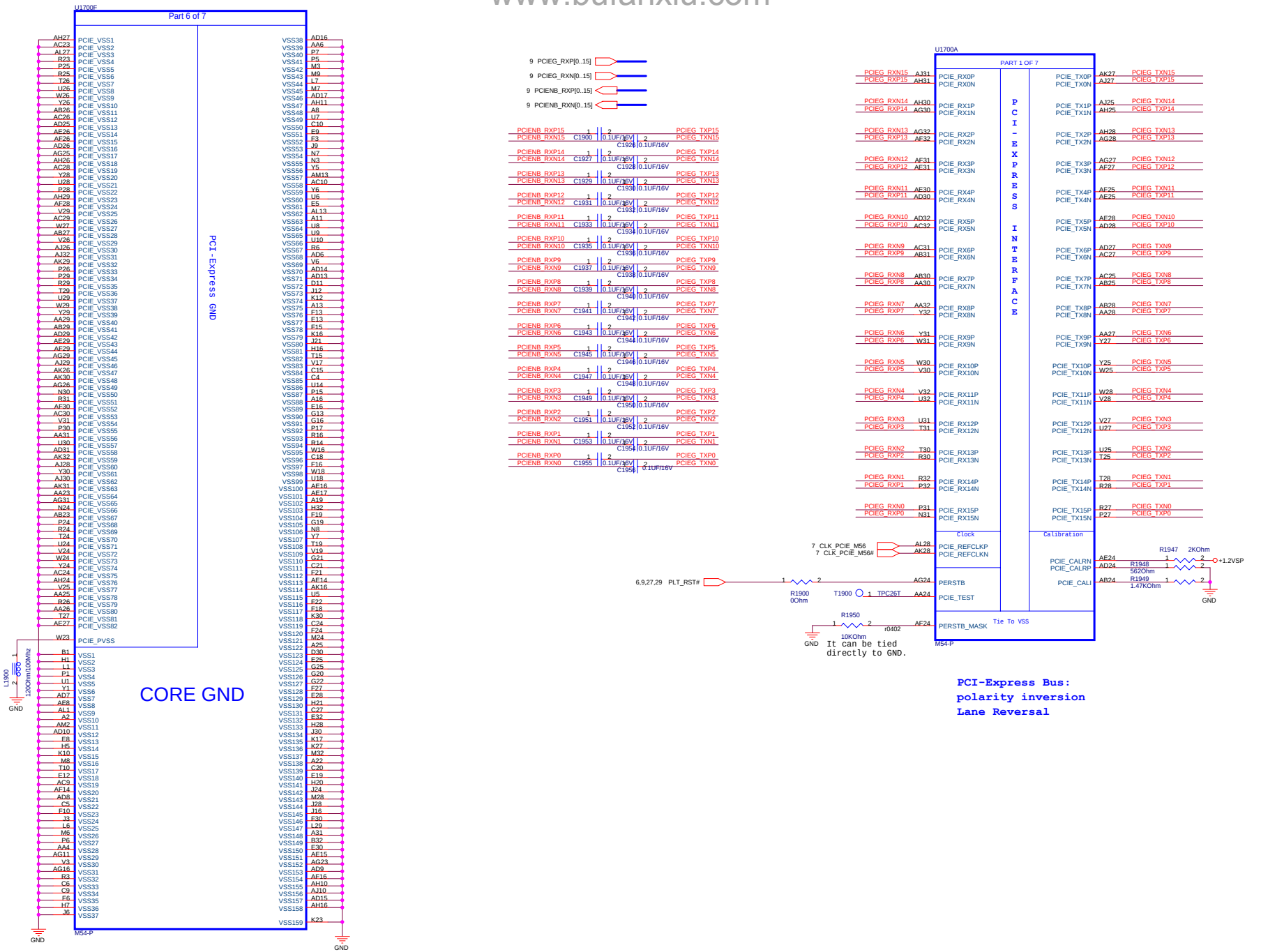
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: ATI_M54P_MAIN(2)		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 18 of 22	



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4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC			
Title	ATI_M54P_MAIN(3)		
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GDDR3/DDR1: 1.8V
DDR2: 1.8 ~ 2 V

GDDR3: 2A
DDR1: 0.8A

+BBP>=VGA_CORE
-BBP<= 0V

BB_EN=0 : -BBN=0V , +BBP =VGA_CORE
BB_EN=1 : -BBN=-0.5V , +BBP = +1.8V (M56 B13:+1.5V)

FOR M52/M54:DNI,
FOR M56:MOUNTED

DEMO SCHEMATIC:
1.5/1.8/2.5 V

Near AF20, AE20, AF19

R1.1---ITEM10

control backlight on/off

BACK BIAS DISABLE

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Title: ATI_M54P_MAIN(4)	
Size: Custom	Document Number: F2J
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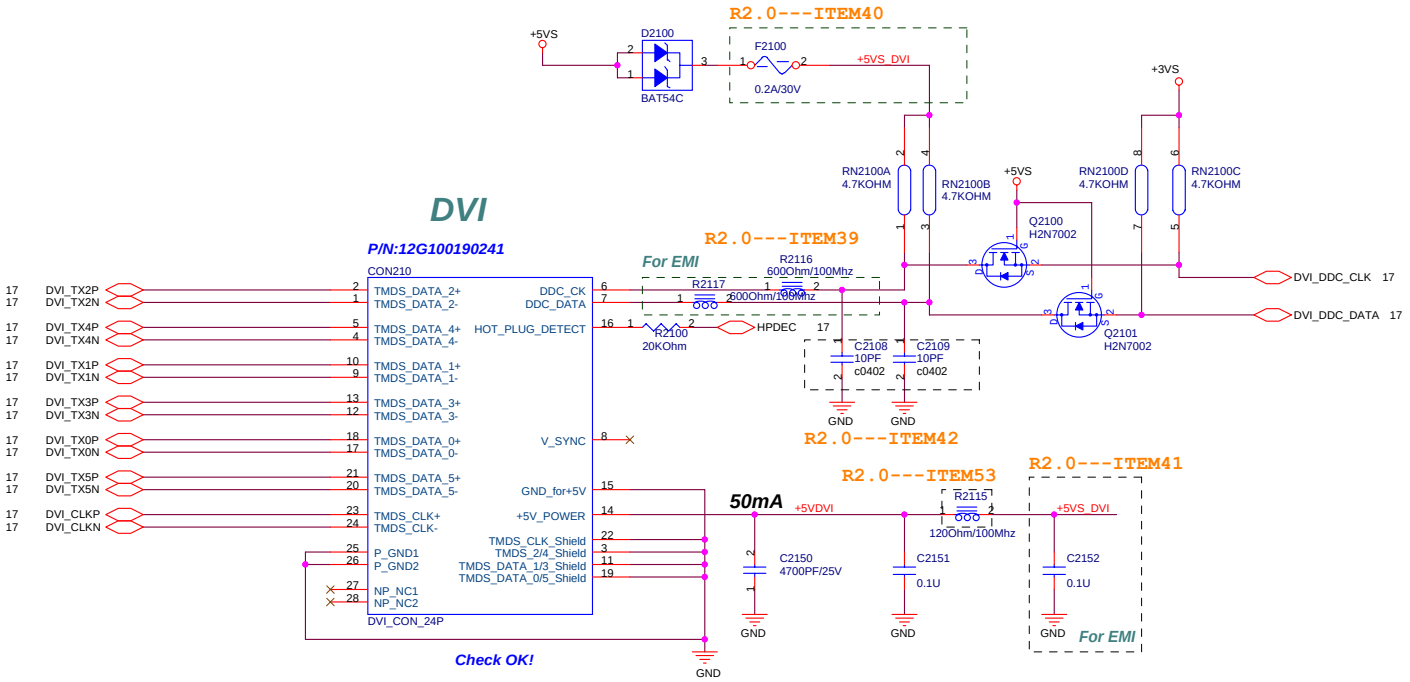

ASUSTek COMPUTER INC.			
4 FL. No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC			
Title: DVI CON			
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18 GMAB[15..0]
18 QSB[7..0]
18 QSB#[7..0]
18 DQMB#[7..0]

MDB[31..0] 18
MDB[63..32] 18

R1.1---ITEM25

18 CLKB0
18 CLKB0#
18 CKEB0
18 RASB0#
18 CASB0#
18 WEB0#
18 CSB0#

U2200
HYB18T256161AFL-25

+1.8VS
R2200 4.99KOhm
VERF5
R2253 4.99KOhm
C2200 0.1UF/16V c0402
GND

L2200 120Ohm/100Mhz
C2234 0.1UF/16V c0402
C2235 1UF/25V c0805_h57
R2251 4.99KOhm
R2252 4.99KOhm
C2244 0.1UF/16V c0402
VERF7
ODTB0 18

18 CLKB1
18 CLKB1#
18 CKEB1
18 RASB1#
18 CASB1#
18 WEB1#
18 CSB1#

U2204
HYB18T256161AFL-25

L2210 120Ohm/100Mhz
C2236 0.1UF/16V c0402
C2237 1UF/25V c0805_h57
R2247 56Ohm
R2248 56Ohm
R2249 56Ohm
R2250 56Ohm
C2226 470PF/50V
C2227 470PF/50V
CLKB0
CLKB0#
CLKB1
CLKB1#

C2228 1000PF/50V
C2229 0.01UF/16V
C2230 10UF/6.3V
C2233 0.1UF/16V
C2231 0.1UF/16V
C2232 0.01UF/16V
C2238 1000PF/50V
C2239 0.01UF/16V
C2240 10UF/6.3V
C2241 0.1UF/16V
C2242 0.1UF/16V
C2243 0.1UF/16V
C2245 1000PF/50V
C2246 0.01UF/16V
C2247 10UF/6.3V
C2248 0.1UF/16V
C2249 0.1UF/16V
C2250 0.01UF/16V
C2251 1000PF/50V
C2252 0.01UF/16V
C2253 10UF/6.3V
C2254 0.1UF/16V
C2255 0.1UF/16V
C2256 0.1UF/16V

U2205
HYB18T256161AFL-25

L2211 120Ohm/100Mhz
C2257 0.1UF/16V c0402
C2258 1UF/25V c0805_h57
R2255 4.99KOhm
R2257 4.99KOhm
C2262 0.1UF/16V c0402
VERF6
R2254 4.99KOhm
R2256 4.99KOhm
C2261 0.1UF/16V c0402
ODTB0

U2206
HYB18T256161AFL-25

L2212 120Ohm/100Mhz
C2259 0.1UF/16V c0402
C2260 1UF/25V c0805_h57
ODTB1

+0.9VS
RN2200A 56Ohm
RN2200B 56Ohm
RN2200C 56Ohm
RN2200D 56Ohm
RN2200E 56Ohm
RN2200F 56Ohm
RN2200G 56Ohm
RN2200H 56Ohm
RN2201A 56Ohm
RN2201B 56Ohm
RN2201C 56Ohm
RN2201D 56Ohm
RN2201E 56Ohm
RN2201F 56Ohm
RN2201G 56Ohm
RN2201H 56Ohm
RN2203A 56Ohm
RN2203B 56Ohm
RN2203C 56Ohm
RN2203D 56Ohm
RN2204A 56Ohm
RN2204B 56Ohm
RN2204C 56Ohm
RN2204D 56Ohm
C2264 0.1UF/16V
C2263 0.1UF/16V

R2261 56Ohm
R2258 56Ohm
R2259 56Ohm
R2260 56Ohm

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Title: ATI_M54P_VRAM_B(6)

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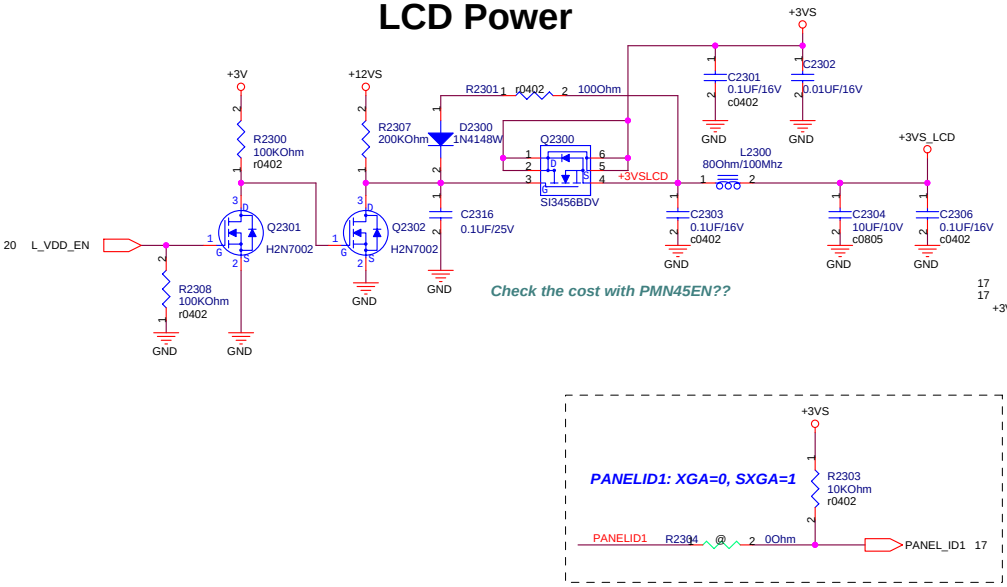
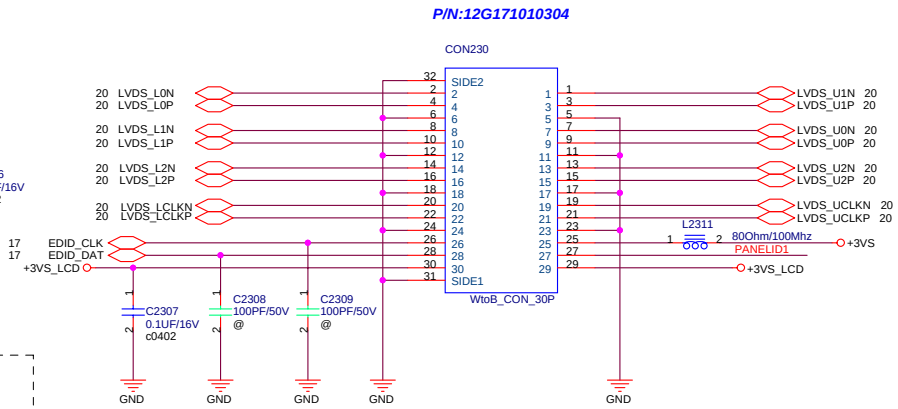
LCD Backlight Control

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

LCD Power



LCD LVDS Interface

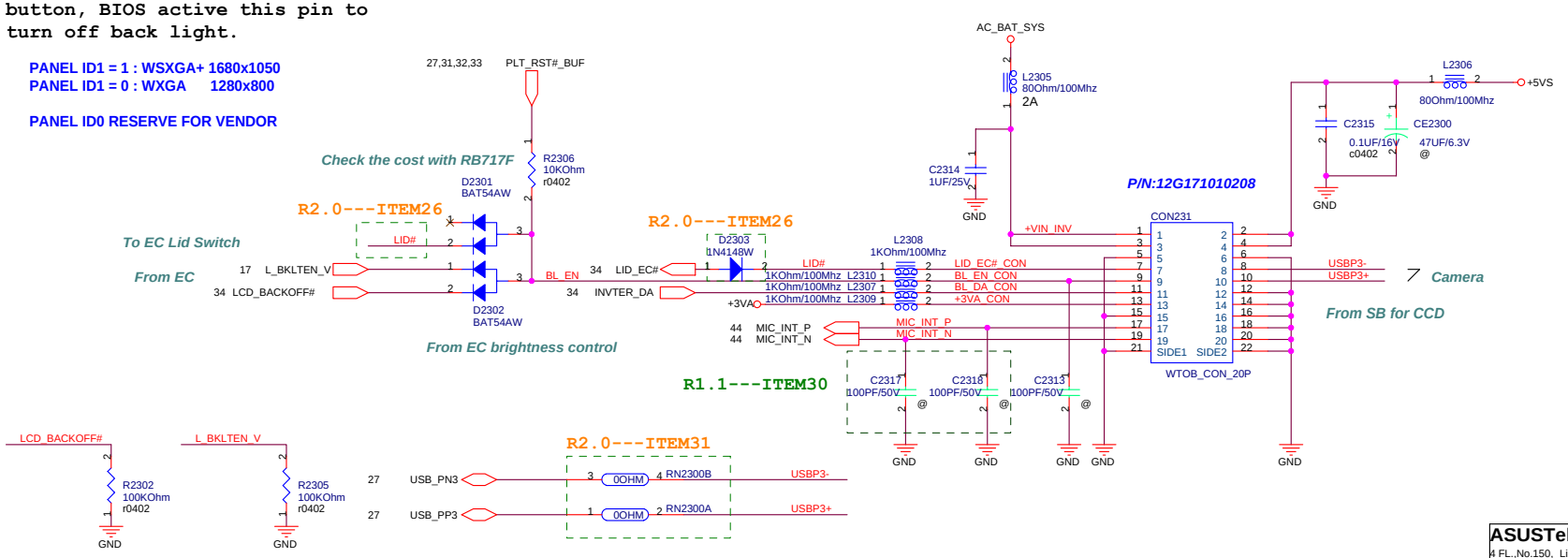


BIOS
BACK_OFF#:When user push "Fn+F7" button, BIOS active this pin to turn off back light.

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

PANEL ID0 RESERVE FOR VENDOR

INVERTER/INTERNAL MIC/CCD CONN



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4 FL. No.150, Li-Te Rd., Peitou, Taipei, Taiwan, ROC		
Title: LVDS & INVERTER		
Size: Custom	Document Number: F2J	Rev: 1.1
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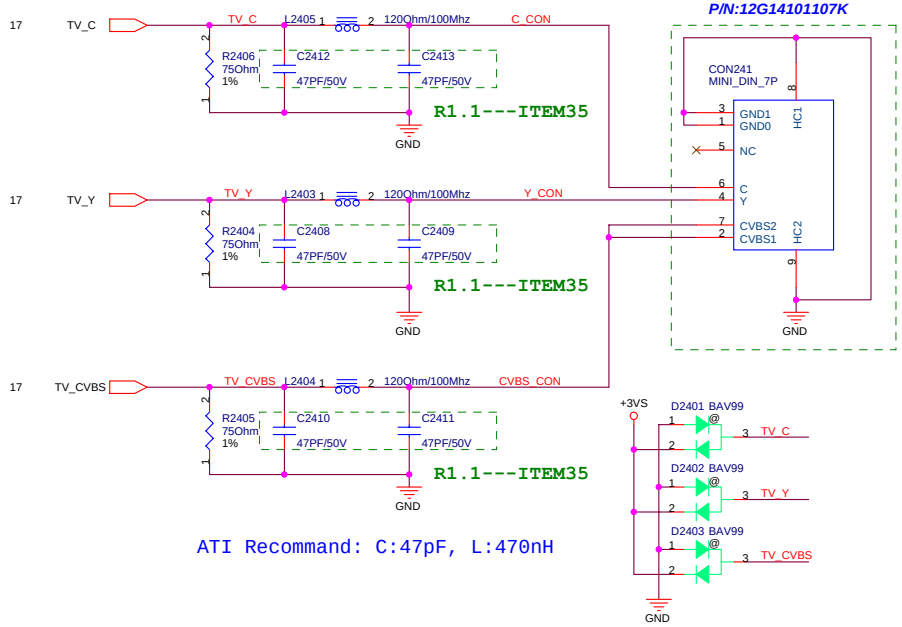
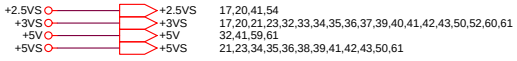
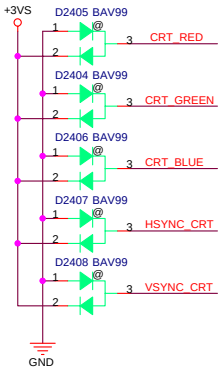
TV

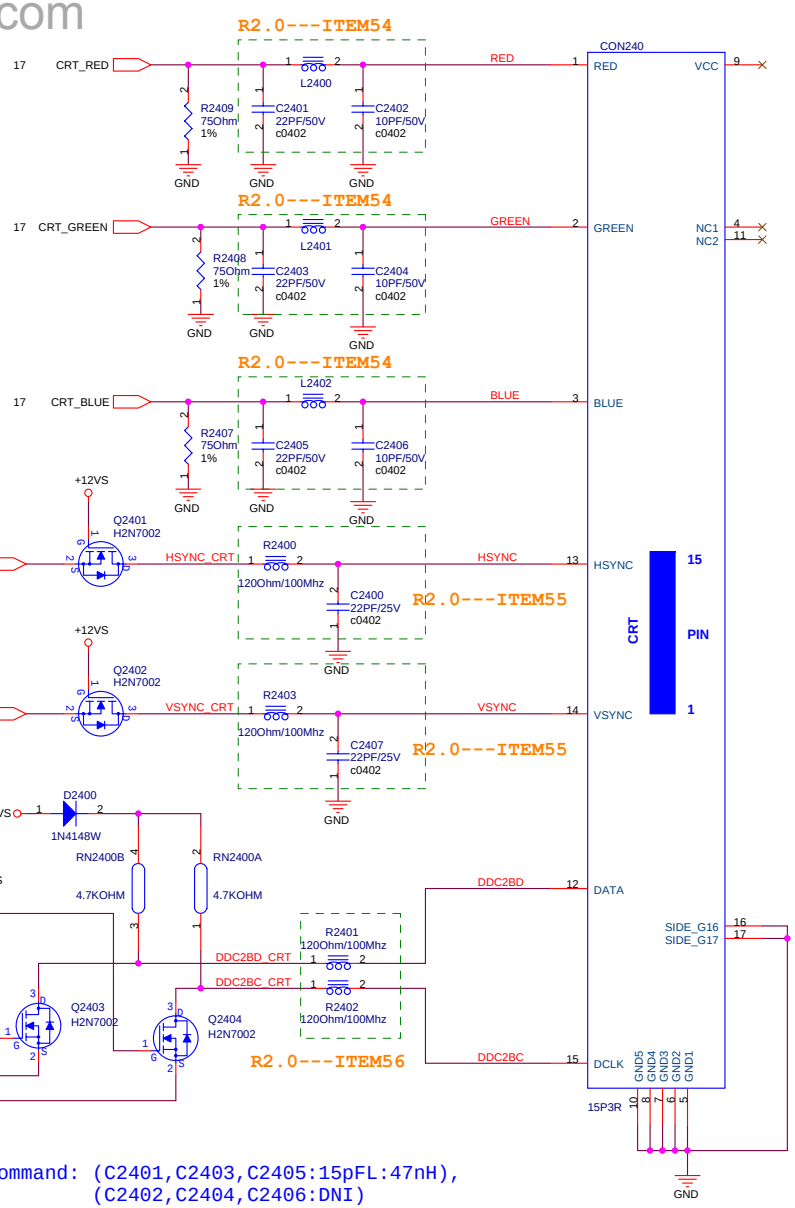


ATI Recommand: C:47pF, L:470nH





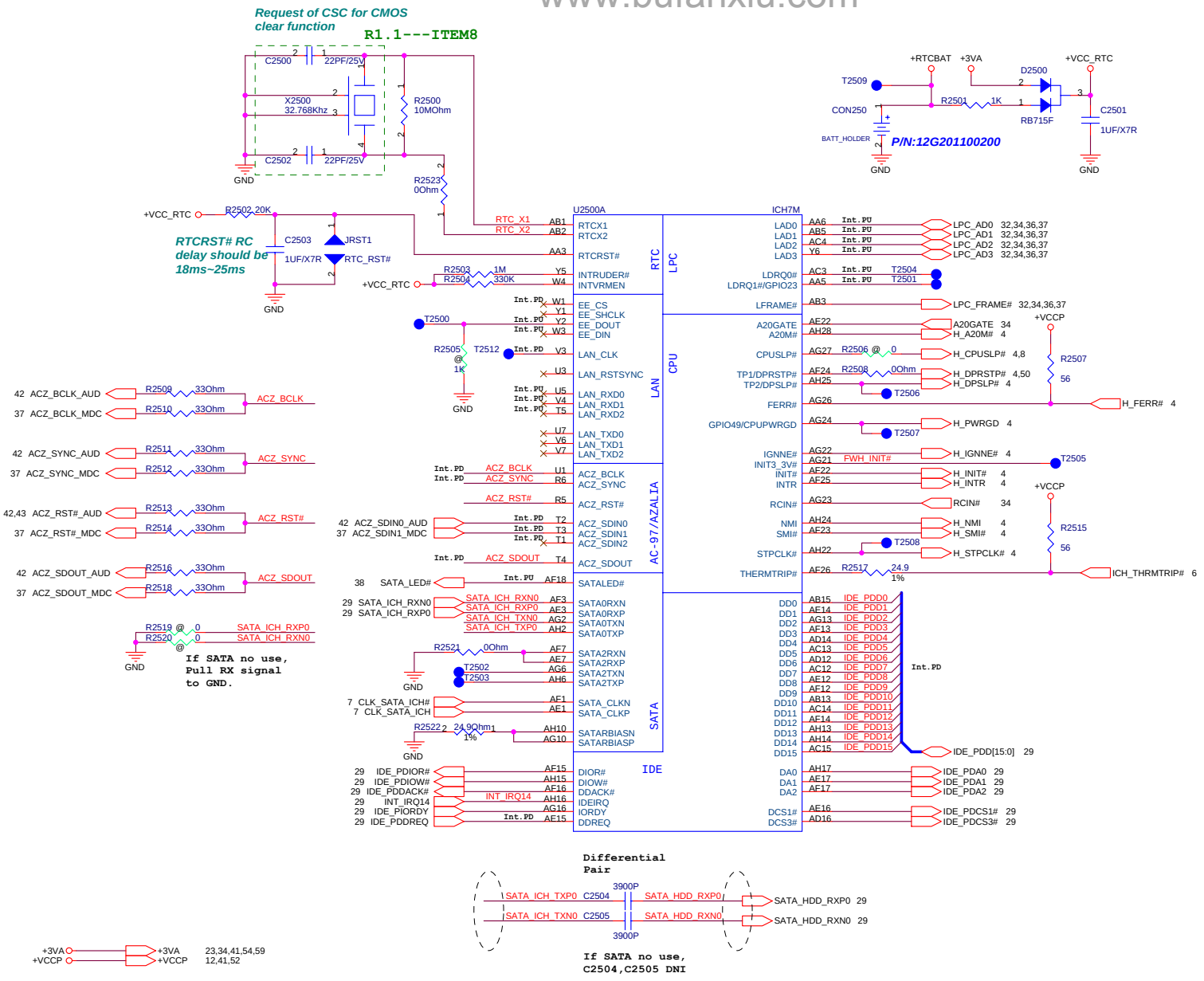
CRT



ATI Recommand: (C2401,C2403,C2405:15pFL:47nH),
(C2402,C2404,C2406:DNI)

P/N:12G10110015N

ASUSTek COMPUTER INC.		
4 FL. No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: CRT & TV OUT		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 24 of 63	



ASUSTek COMPUTER INC.		
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: ICH7M--CPU,IDE,AUDIO		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 25 of 63	

+3VS +3VS 17,20,21,23,32,33,34,35,36,37,39,40,41,42,43,50,52,60,61
+5VS +5VS 21,23,34,35,36,38,39,41,42,43,50,61
+3VSUS +3VSUS 31,33,37,43,51

To new card check power plane

U2500C

SMB_CLK_SB C22 SMBCLK
SMB_DAT_SB B22 SMBDATA
LINKALERT# A26 LINKALERT#
SM_LINK0 B25 SMLINK0
SM_LINK1 A25 SMLINK1
SMB

RING# A28 RI#

42 SPKR_ICH A19 SPKR
37 PM_SUS_STAT# PM_SUS_STAT# A27 SUS_STAT#
+3VSUS 10KOhm R2600 A22 SYS_RST#

9 PM_BMBUSY# AB18 GPIO0/BM_BUSY#

SMB_ALERT# B23 SMBALERT#/GPIO11

7 STP_PCI# AC20 GPIO18/STPPCI#
7 STP_CPU# AF21 GPIO20/STPCPU#

32 CPPE_EN CPPE_EN A21 GPIO26

31 WLAN_ON# WLAN_ON# B21 GPIO27
39 BT_DET# E23 GPIO28

37 PM_CLKRUN# AG18 GPIO32/CLKRUN#

39 BT_ON# BT_ON# AC19 GPIO33/AZ_DOCK_EN#
7 CPU_Select U2 GPIO34/AZ_DOCK_RST#

31,32,33 PCIE_WAKE# F20 WAKE#
34,37 INT_SERIRQ AH21 SERIRQ
34 PM_THRM# PM_THRM# AF20 THRM#

T2600 VRMPWRGD
34,50,60 VRM_PWRGD R2603 0Ohm AD22 VRMPWRGD

39 BT_LED_EN BT_LED_EN AC21 GPIO6
31,39 RF_ON_SW# RF_ON_SW# AC18 GPIO7
34 EXTSMI# F21 GPIO8
GPIO

SYS GPIO

ICH7M

SATA GPIO
GPIO21/SATA0GP AF19
GPIO19/SATA1GP AH18
GPIO36/SATA2GP AH19 PCB_ID0 T2605
GPIO37/SATA3GP AF19

Clocks
CLK14 AC1
CLK48 B2 CLK_USB48 CLK_ICH14 7 CLK_USB48 7
SUSCLK C20 SUS_CLK 37

Power MGT
SLP_S3# B24 SUSB# 34
SLP_S4# D23 SUSC# 34
SLP_S5# F22 T2602
PWROK AA4 ICH7_PWROK 9,34
GPIO16/DPRSLPVR AC22 Int.PD POWER PM_DPRSLPVR 50
TP0/BATLOW# C21 BAT_LL# BAT_LL# 34
PWRBTN# C23 Int.PU PM_PWRBTN# 34 T2604
LAN_RST# C19 R2607 0Ohm PM_RSMRST# 34
RSMRST# Y4 PM_RSMRST# 34

C2601 @ 10P
C2600 @ 10P
GND GND
R2601 10KOhm GND

GPIO9 E20 CPPE# DET_L CPPE#_DET 32
GPIO10 A20 KBC_SCI# KBC_SCI# 34
GPIO12 E19 T2603
GPIO13 R4 802_LED_EN 802_LED_EN 39
GPIO14 E22 MSK_PCIRST MSK_PCIRST 27
GPIO15 R3 RST#_NEWCARD Int.PU RST#_NEWCARD 32
GPIO24 D20 TP_LEDON 39
GPIO25 AD21 PCB_ID1
GPIO35 AD20 PCB_ID2
GPIO38
GPIO39 AE20

VRM_PWRGD
Pull Hi 100K
+3Vs at power
circuit

POWER

PCB_VID3 : PROJECT CODE

PCB_VID	0	1	2
MB F2J	0	0	0
MB F2F	0	0	1
MB F2H	0	1	0

ICH7_PWROK R2611 0 @ VRMPWRGD

+3VSUS
SMB_CLK_SB R2604 2.2K
SMB_DAT_SB R2605 2.2K
RING# R2606 10KOhm
SMB_ALERT# RN2600A 1 10K 2
SM_LINK1 RN2600B 3 10K 4
SM_LINK0 RN2600C 5 10K 6
LINKALERT# RN2600D 7 10K 8
BT_DET# R2628 10KOhm
BAT_LL# R2612 10KOhm
WLAN_ON# R2630 10KOhm
PCIE_WAKE# R2629 2.2K
PM_SUS_STAT# R2619 @ 10K
27 PCI_PME# R2623 @ 10K

+3VS
SCL_3S R2620 10KOhm
SDA_3S R2622 10KOhm
PM_THRM# R2626 10KOhm
BT_ON# R2629 10KOhm
TP_LEDON R2637 10KOhm

+3VS
R2608 10K @
R2609 10K @
R2610 10K @
PCB_ID0
PCB_ID1
PCB_ID2
R2615 10KOhm
R2616 10KOhm
R2617 10KOhm
GND GND GND

+3VSUS
CPPE# DET R2632 10KOhm
KBC_SCI# R2633 10KOhm
EXTSMI# R2634 10KOhm

PM_RSMRST# R2636 10KOhm
802_LED_EN R2614 10KOhm
BT_LED_EN R2627 10KOhm
GND

+3VS
SMB_CLK_SB D3 G1 S2 H2N7002 Q2601 SCL_3S SCL_3S 7,14,15,31,32
SMB_DAT_SB D3 G1 S2 H2N7002 Q2602 SDA_3S SDA_3S 7,14,15,31,32

+3VS
27 PCI_SERR# PCI_SERR# RP2600A 1 8.2K 5 10
27 PCI_DEVSEL# PCI_DEVSEL# RP2600B 2 8.2K 5 10
27 PCI_TRDY# PCI_TRDY# RP2600C 3 8.2K 5 10
27 PCI_REQ#4 RP2600D 4 8.2K 5 10
27 PCI_FRAME# PCI_FRAME# RP2600E 6 8.2K 5 10
27 PCI_STOP# PCI_STOP# RP2600F 7 8.2K 5 10
27 PCI_REQ#1 RP2600G 8 8.2K 5 10
27 PCI_REQ#2 RP2600H 9 8.2K 5 10

RP2601A 1 8.2K 5 10
27 PCI_REQ#3 RP2601B 2 8.2K 5 10
27 PCI_LOCK# PCI_LOCK# RP2601C 3 8.2K 5 10
RP2601D 4 8.2K 5 10
27 PCI_INTH# RP2601E 6 8.2K 5 10
27 PCI_INTF# RP2601F 7 8.2K 5 10
27 PCI_INTE# RP2601G 8 8.2K 5 10
27 PCI_INTG# RP2601H 9 8.2K 5 10

27 PCI_INTA# RP2602A 1 8.2K 5 10
27 PCI_INTB# RP2602B 2 8.2K 5 10
27 PCI_INTC# RP2602C 3 8.2K 5 10
27 PCI_INTD# RP2602D 4 8.2K 5 10
27 PCI_REQ#0 RP2602E 6 8.2K 5 10
27 PCI_IRDY# PCI_IRDY# RP2602F 7 8.2K 5 10
27 PCI_REQ#5 RP2602G 8 8.2K 5 10
27 PCI_PERR# PCI_PERR# RP2602H 9 8.2K 5 10

INT_SERIRQ R2613 10KOhm
STP_PCI# R2618 @ 10K
STP_CPU# R2621 @ 10K
PM_CLKRUN# R2624 10KOhm

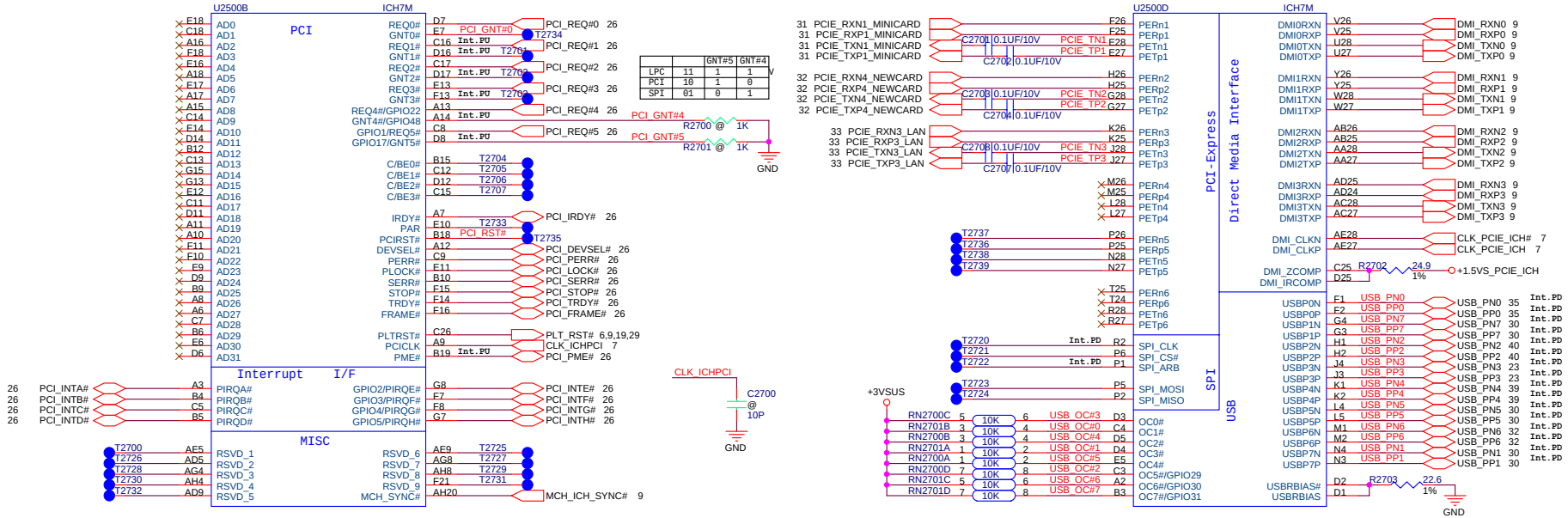
Clock Generator
DDR2 SO-DIMM
Mimi Card
New Card

ASUSTek COMPUTER INC.
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC

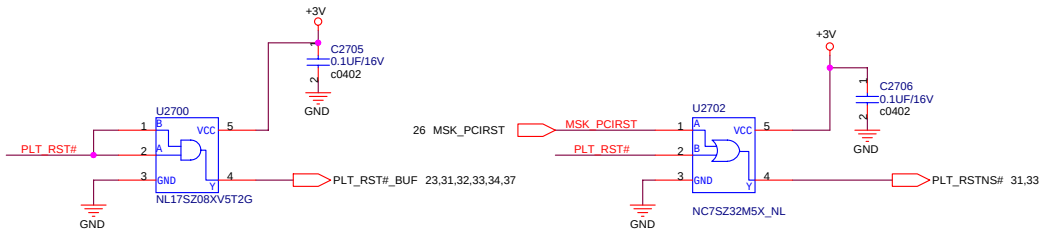
Title: ICH7M--GPIO

Size	Document Number	Rev
Custom	F2J	1.1

Date: Thursday, April 27, 2006 Sheet 26 of 63



		GNT#5	GNT#4
LPC	11	1	1
PCI	10	1	0
SPI	01	0	1



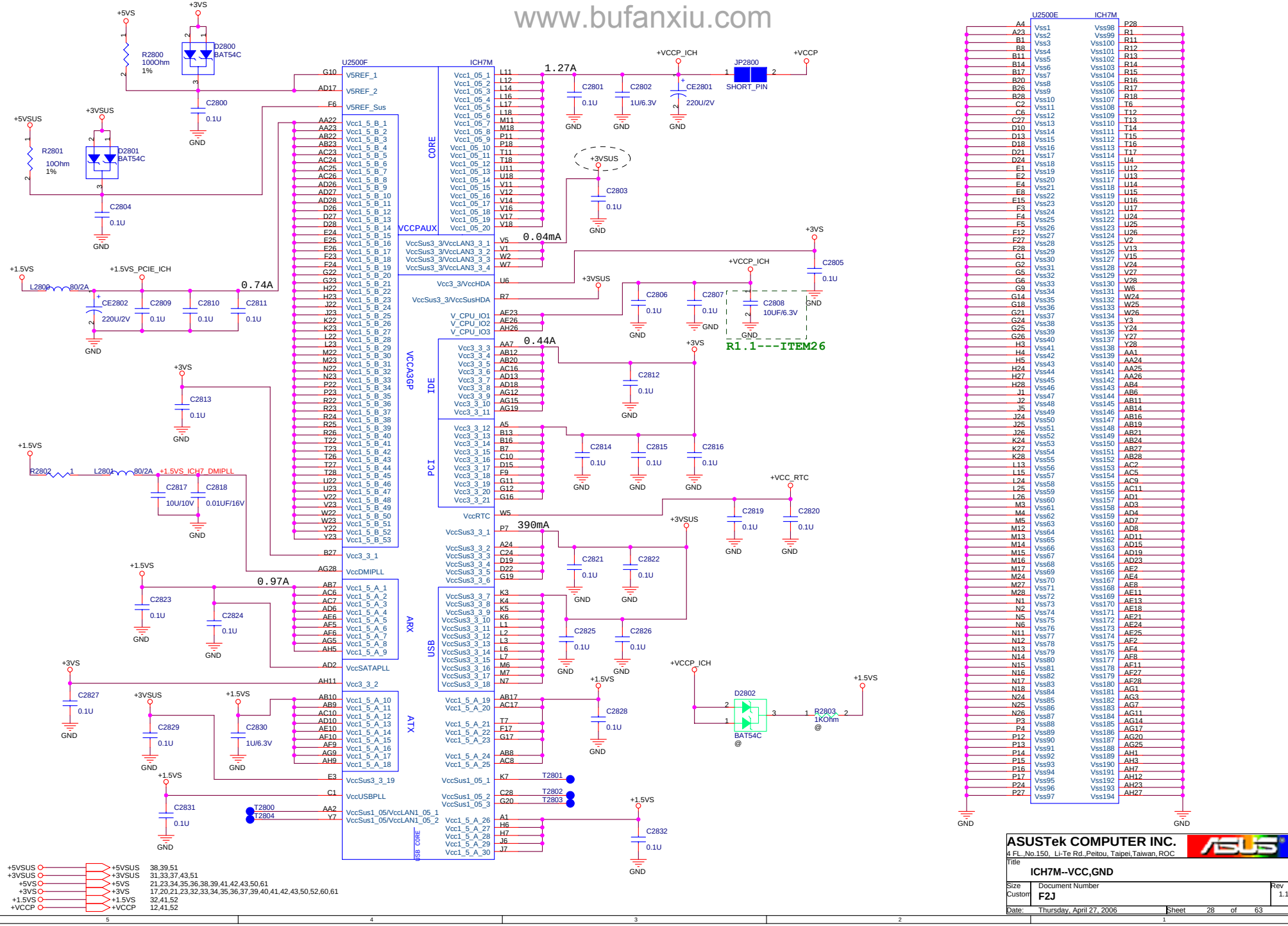
USB 0	Finger Printer
USB 1	USB Conn.
USB 2	Card Reader
USB 3	CMOS Camera
USB 4	Bluetooth
USB 5	USB Conn.
USB 6	Newcard
USB 7	USB Conn.

ASUSTek COMPUTER INC.
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC

Title: ICH7M--PCI,PCI-E,USB

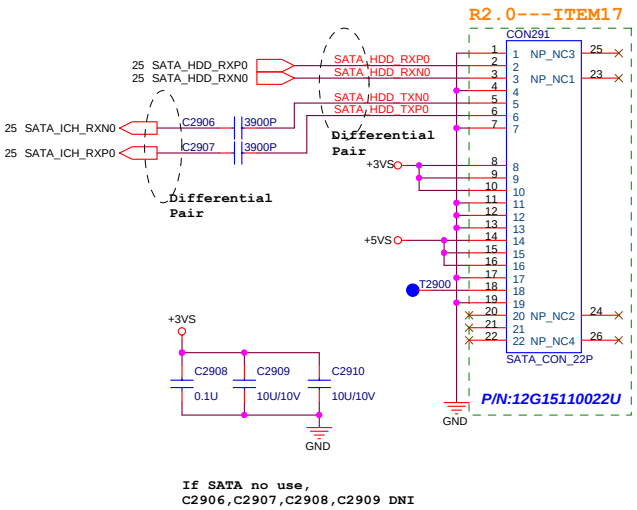
Size	Document Number	Rev
Custom	F2J	1.1

Date: Thursday, April 27, 2006 Sheet 27 of 63

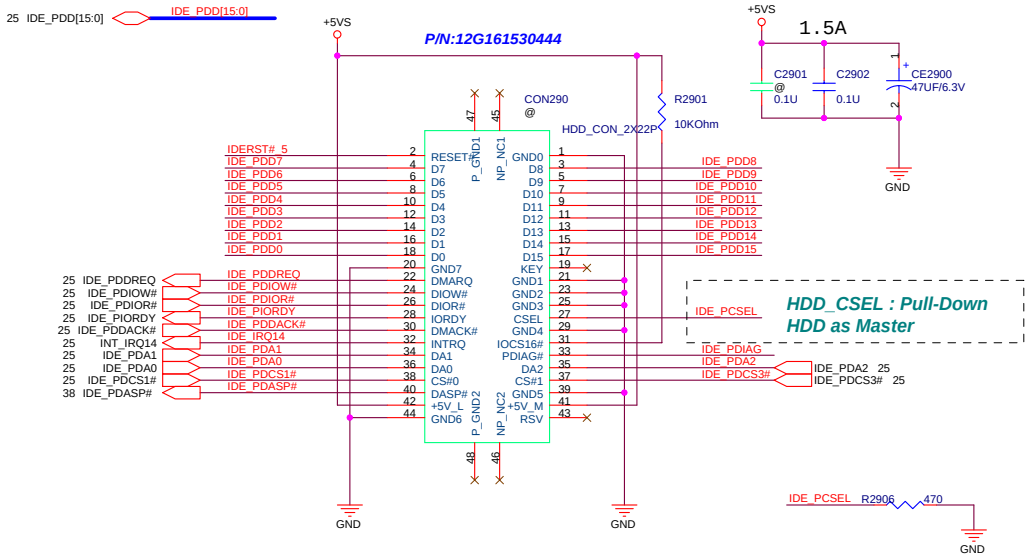


Company	ASUSTek COMPUTER INC.
Address	4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC
Title	ICH7M--VCC,GND
Size	Custom
Document Number	F2J
Rev	1.1
Date	Thursday, April 27, 2006
Sheet	28 of 63

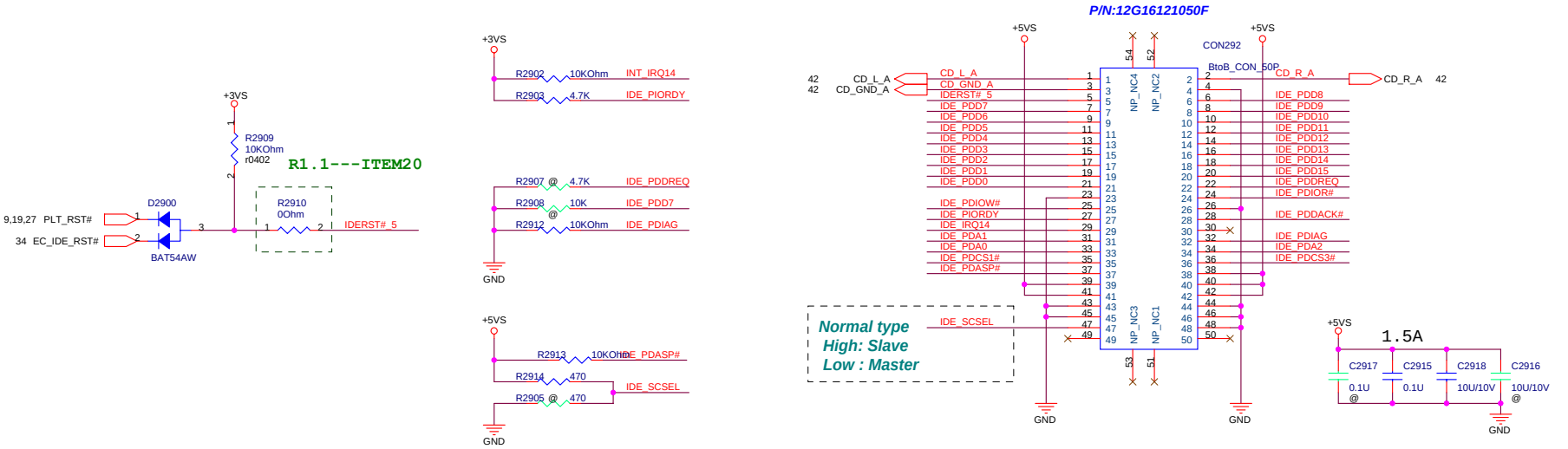
SATA HDD CON



PATA HDD CON

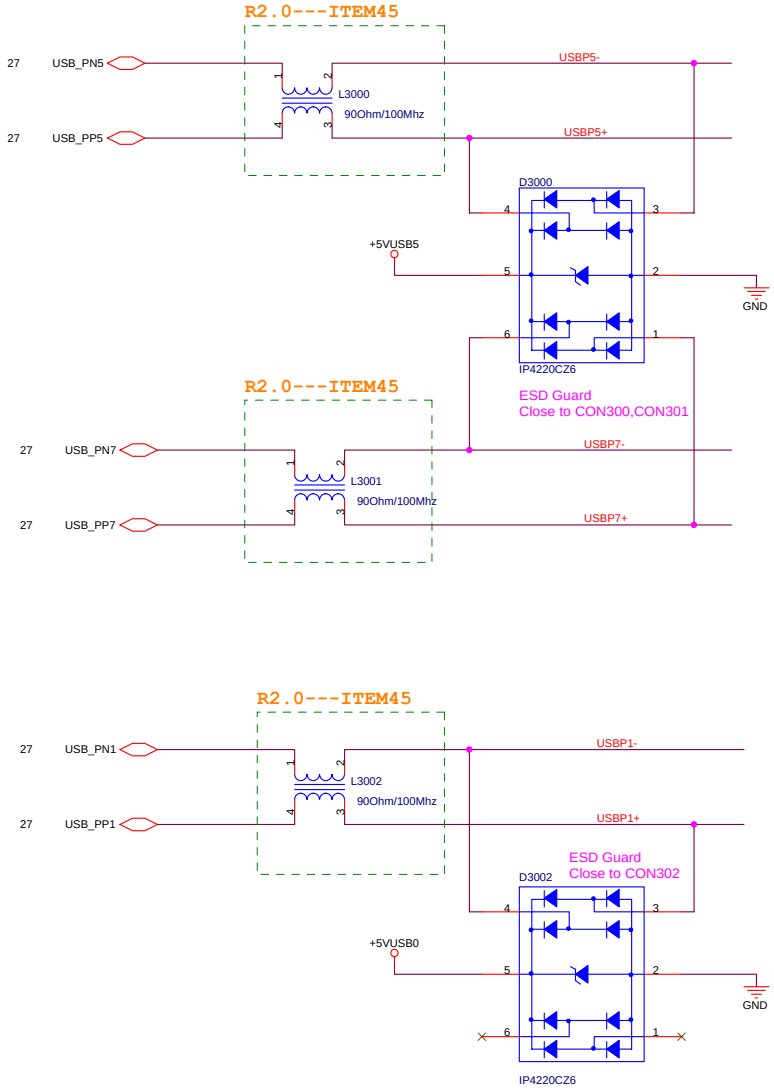


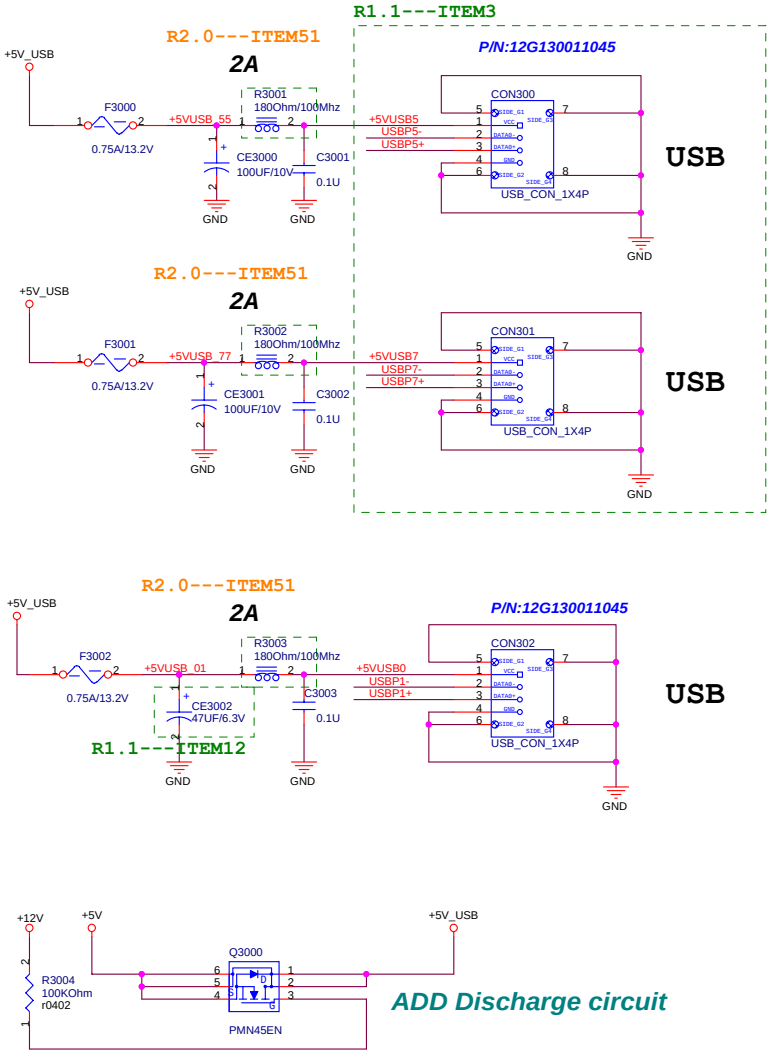
PATA CD-ROM CON



+3VS	+3VS	17,20,21,23,32,33,34,35,36,37,39,40,41,42,43,50,52,60,61
+5VS	+5VS	21,23,34,35,36,38,39,41,42,43,50,61
+5V	+5V	32,41,59,61

ASUSTek COMPUTER INC.	
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC	
Title	HDD & CD-ROM CONN
Size: Custom	Document Number: F2J
Rev	1.1
Date: Thursday, April 27, 2006	Sheet 29 of 63





+5V → +5V 32,41,59,61

+5V_USB → +5V_USB 41

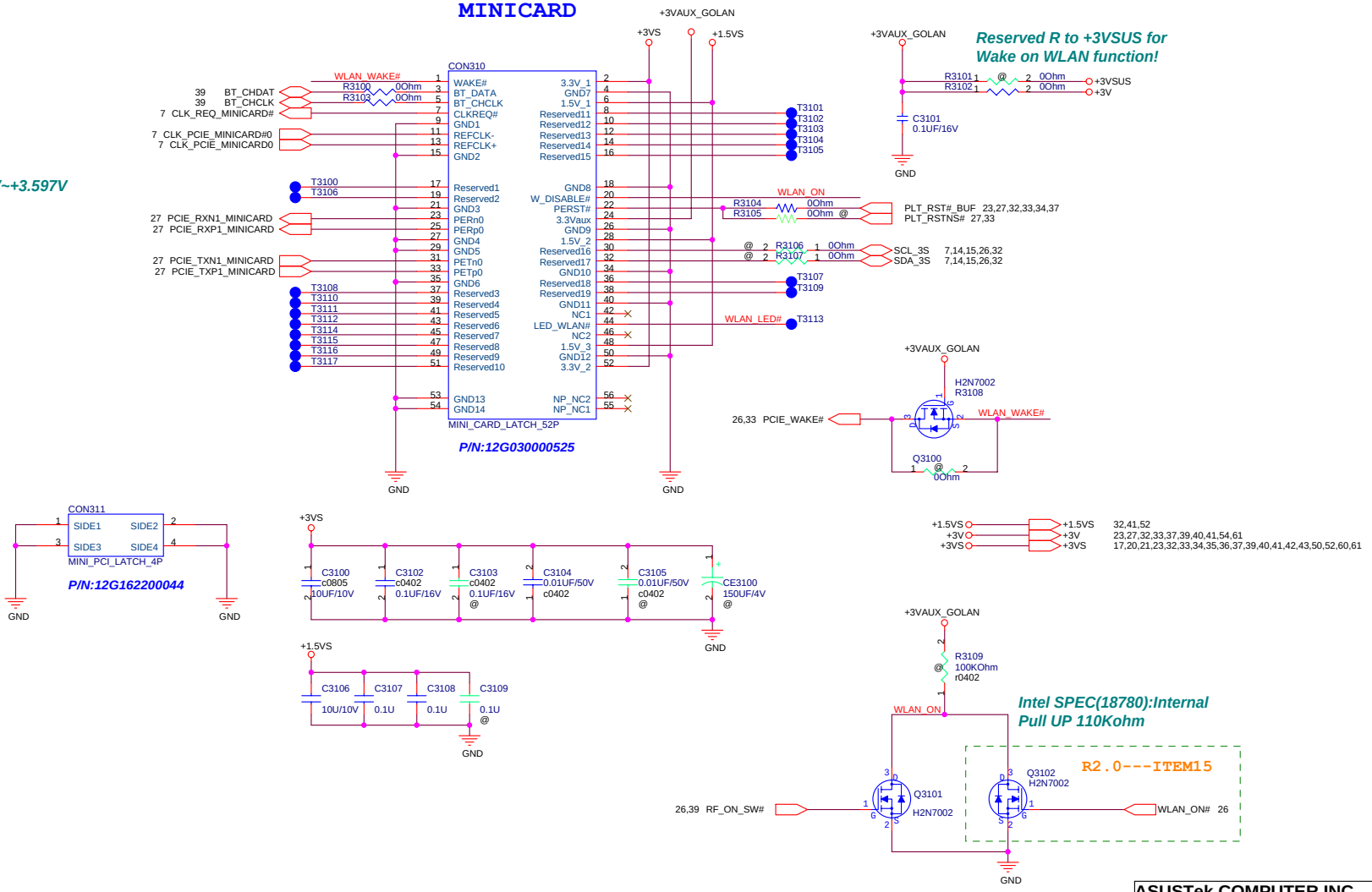
ASUSTek COMPUTER INC.		
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: USB PORTS		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 30 of 63	

MINICARD

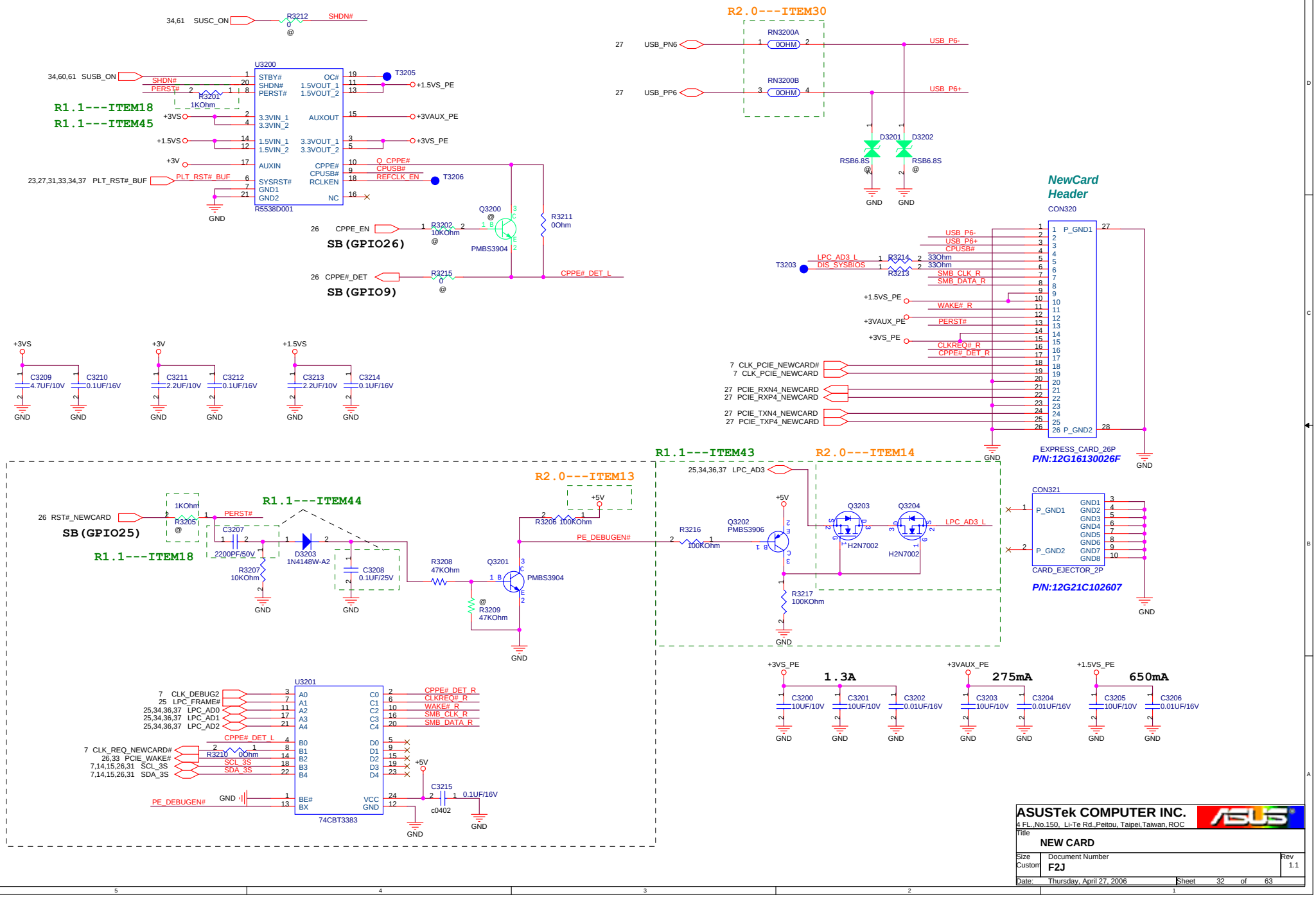
POWER CONSUMPTION:
+3VS: +3.003V~+3.597V
Max= 750 mA

+1.5VS:+1.425V~+1.575V
Max= 375 mA

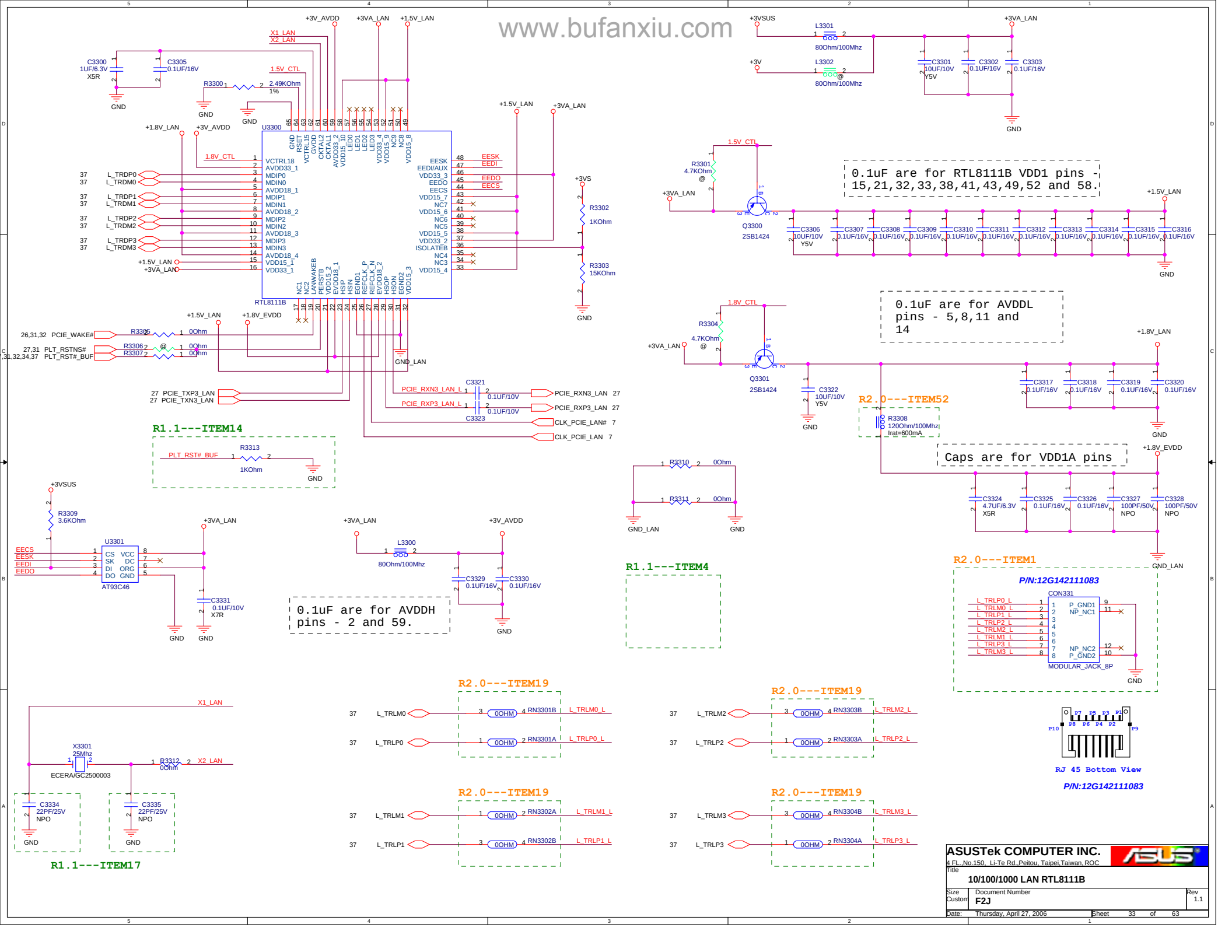
+3VAUX_GOLAN:+3.003V~+3.597V
Max= 250 mA



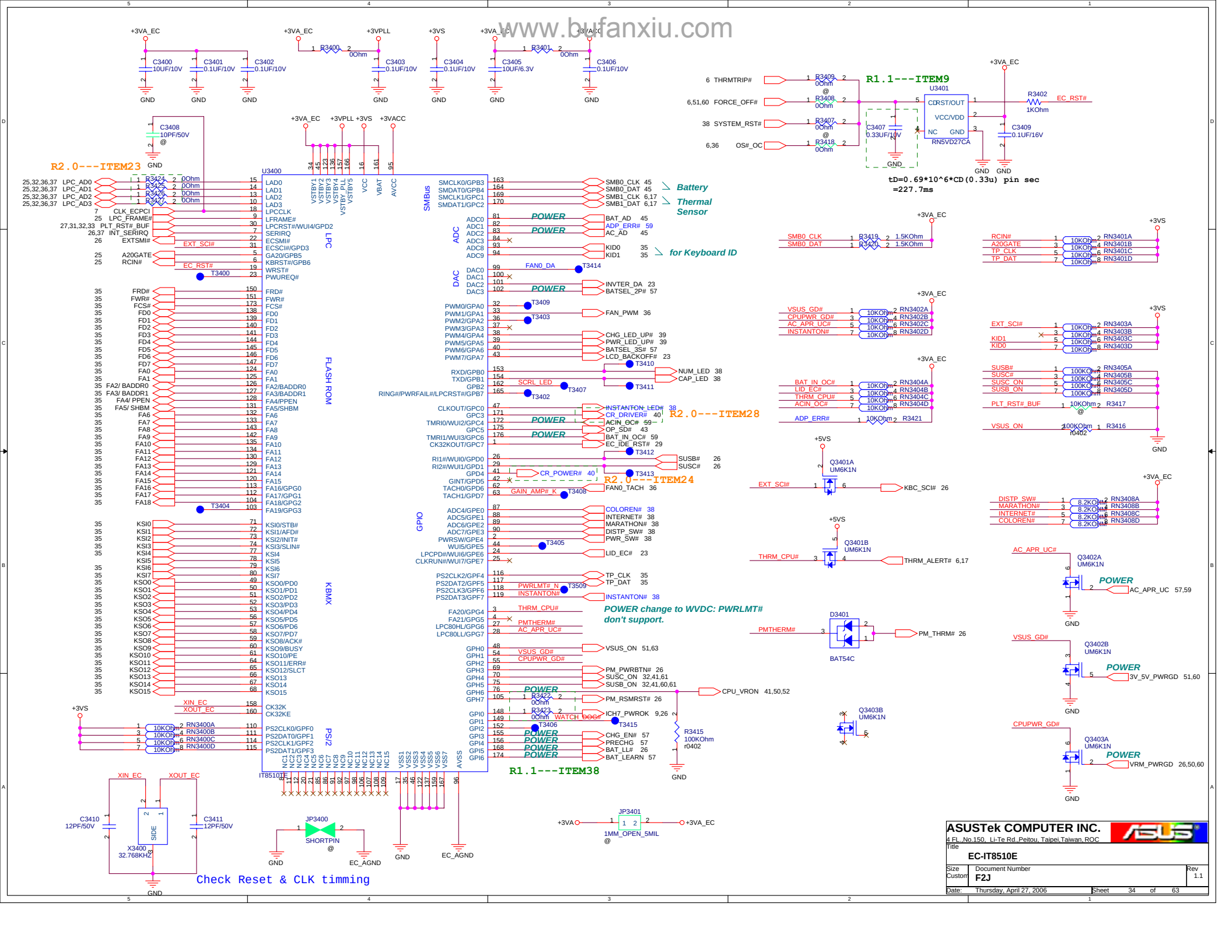
Company	ASUSTek COMPUTER INC.
Address	4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC
Title	MINI CARD
Size	Custom
Document Number	F2J
Rev	1.1
Date	Thursday, April 27, 2006
Sheet	31 of 63



ASUSTek COMPUTER INC.		
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: NEW CARD		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 32 of 63	



ASUSTek COMPUTER INC.		
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: 10/100/1000 LAN RTL8111B		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 33 of 63	



EC Hardware Strapping

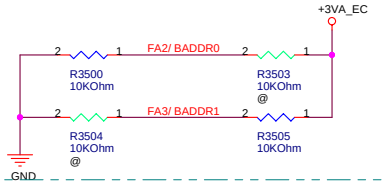
FA2/ BADDR0 & FA3/ BADDR1

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

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

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

11: Reserved

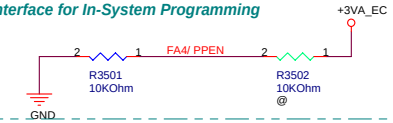


Note: Sampled at VSTBY Power Up Reset

FA4/ PPEN

0: Normal

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

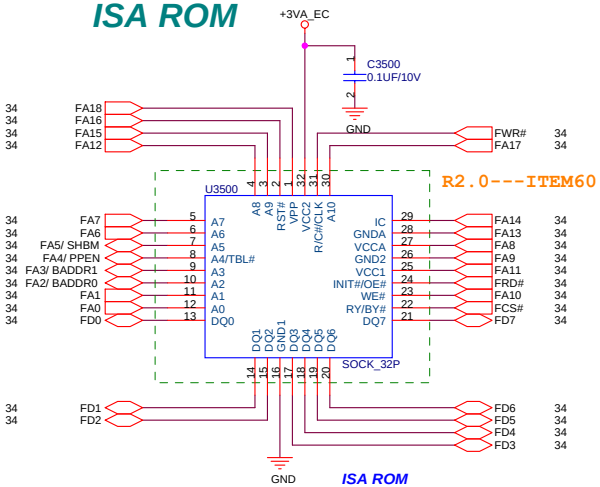


FA5/ SHBM

0: Disable Shared Memory with Host BIOS

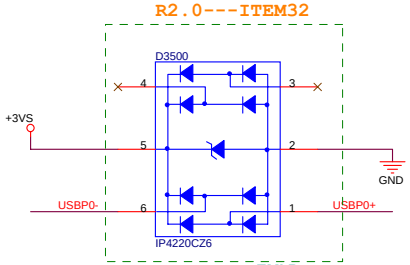
1: Enable Shared Memory with Host BIOS

ISA ROM



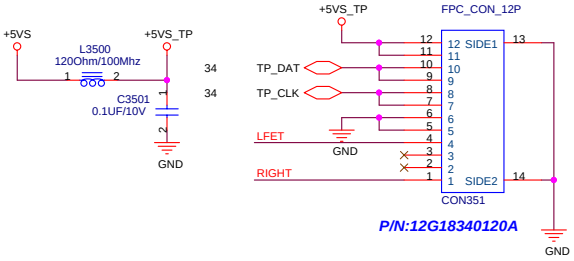
ISA ROM
P/N:05G001014110

R2.0---ITEM32



EMI Request

For Touch-Pad



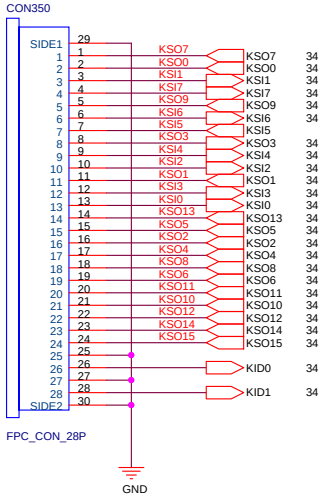
P/N:12G18340120A

Double Check TP pin define

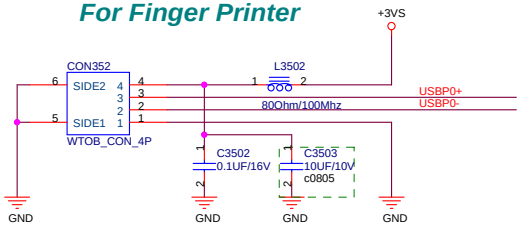
For Keyboard

P/N:12G182402806

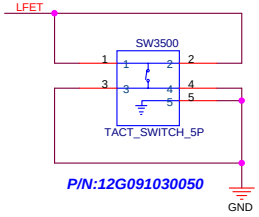
keyboard Matrix follow A7



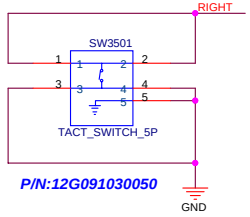
For Finger Printer



R2.0---ITEM32

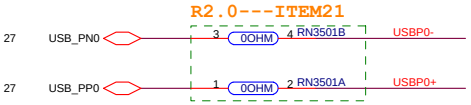


P/N:12G091030050

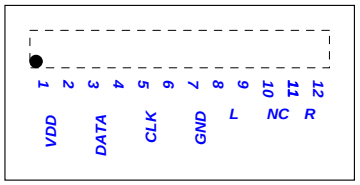


P/N:12G091030050

R2.0---ITEM21

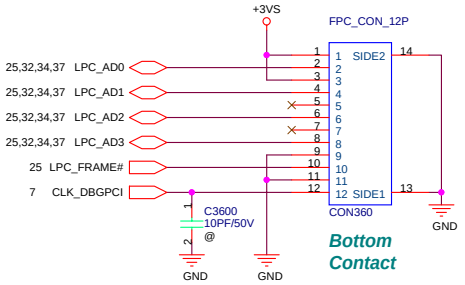


TM42PU-351 (UP)----4:3



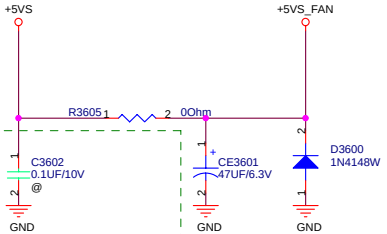
ASUSTek COMPUTER INC.		
4 FL. No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: ISA ROM & TP & KB CON& FP		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 35 of 63	

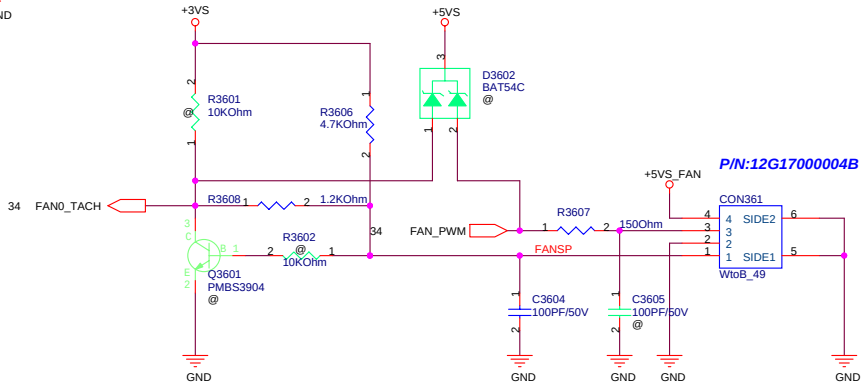
For Debug



R2.0---ITEM46

DC FAN Control

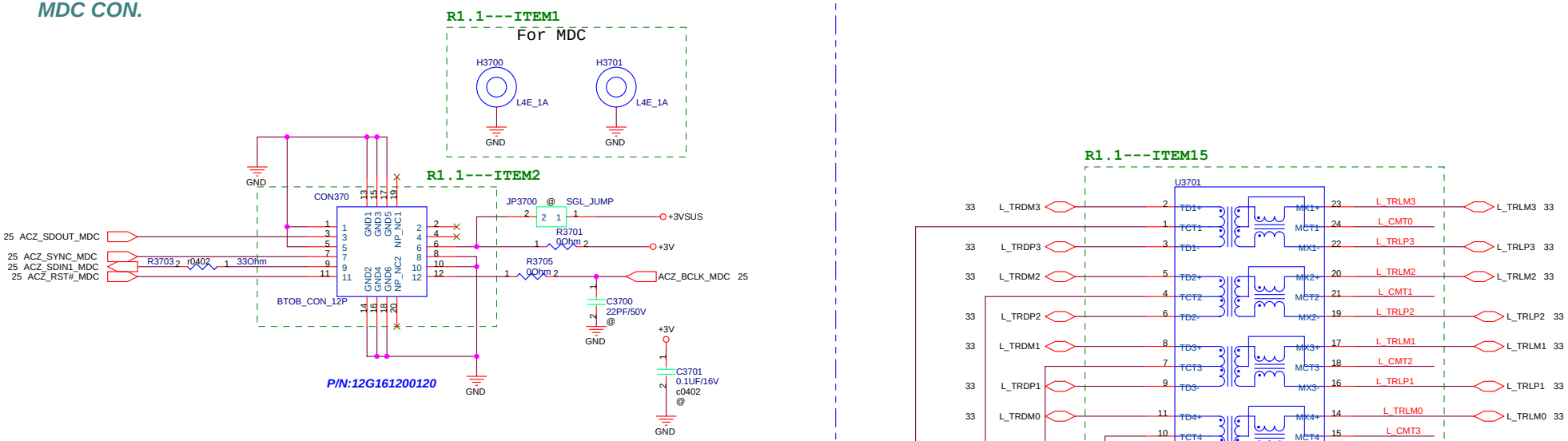




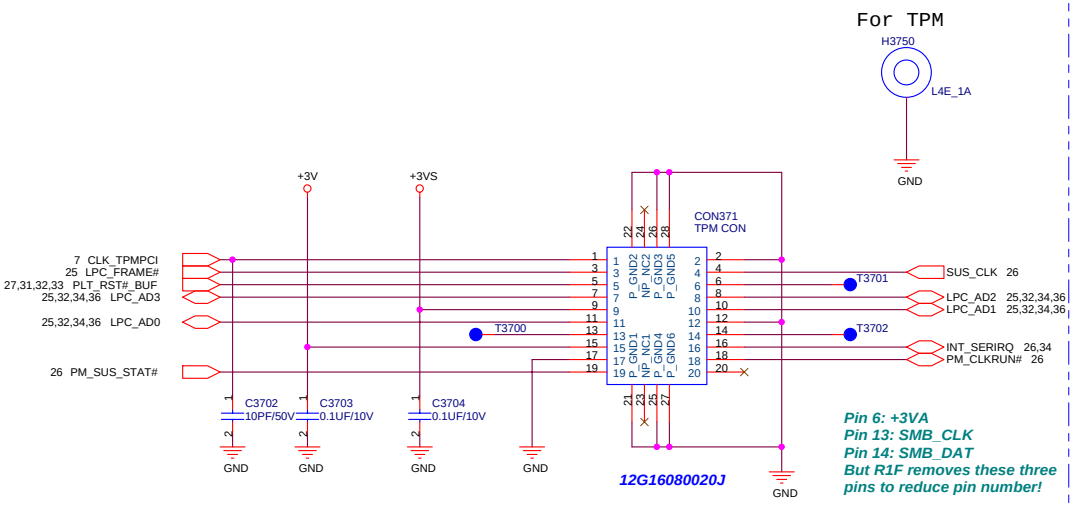
CPU FAN will be forced on:
1) Thermal Sensor Over-temperture
2) WATCHDOG asserted by EC

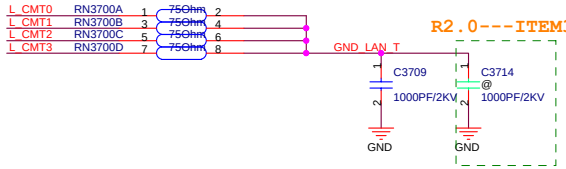
ASUSTek COMPUTER INC.		
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: Debug CON & Fan		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 36 of 63	

MDC CON.



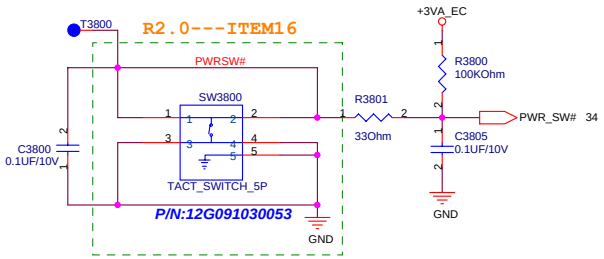
TPM CON.



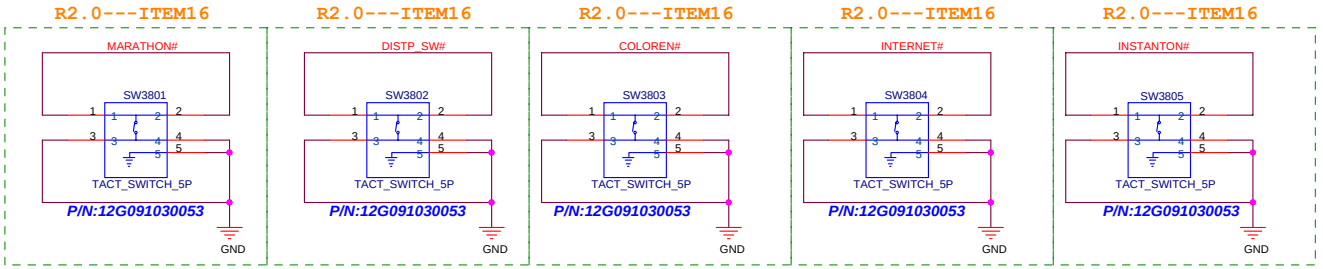


ASUSTek COMPUTER INC.		
4 FL. No.150, Li-Te Rd., Peitou, Taipei, Taiwan, ROC		
Title: MDC & TPM CON		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 37 of 63	

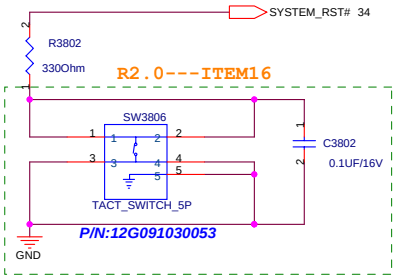
INSTANT KEY



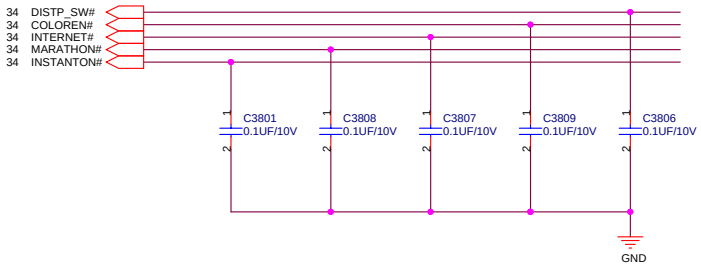
Power Button



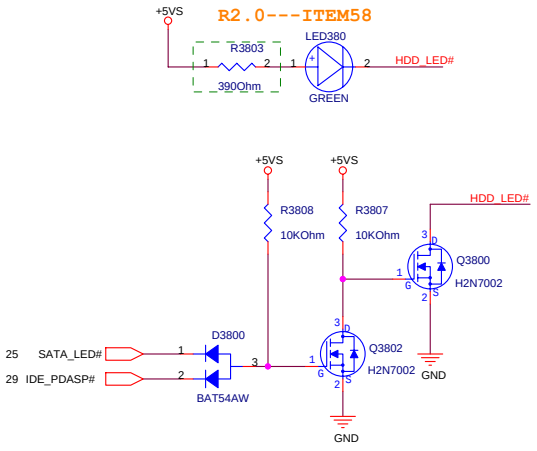
Power4 gear | PAD Lock | Splen-did | INTERNET | INSTANTON#



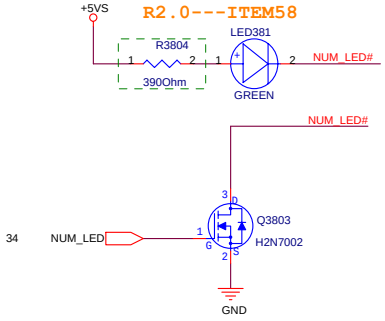
SHUT_DOWN#



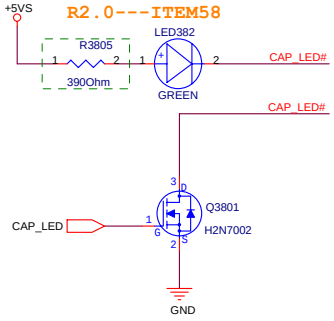
4 LED ABOVE INSTANT KEY



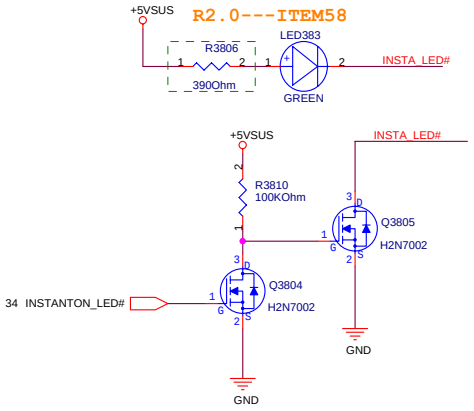
For SATA/IDE LED



For Num Lock



For Cap. Lock



For INSTANTON LED

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4 FL., No.150, Li-Te Rd., Peitou, Taipei, Taiwan, ROC			
Title: Instant Key & LED			
Size: Custom	Document Number: F2J		Rev: 1.1
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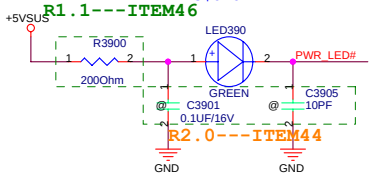
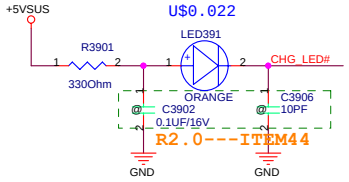
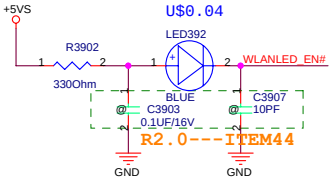
For POWER LED



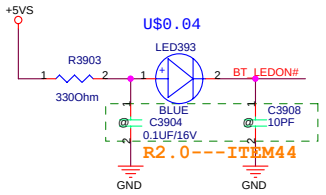
For BATTERY LED



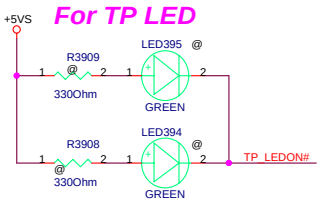
For WireLess LED



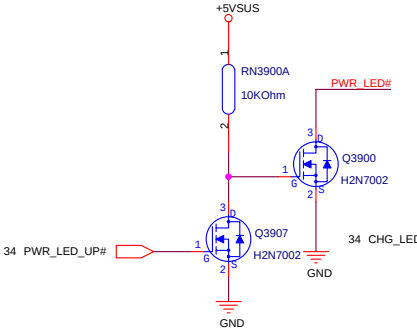
For BT LED

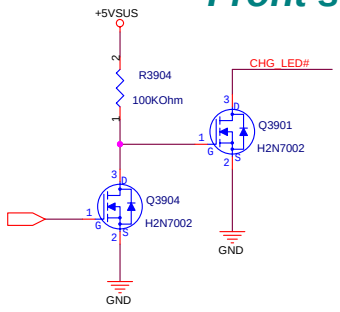


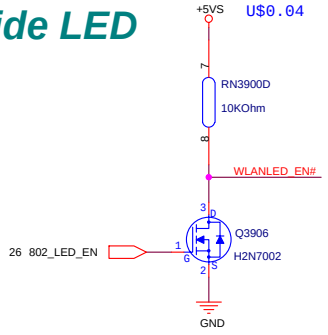
For TP LED

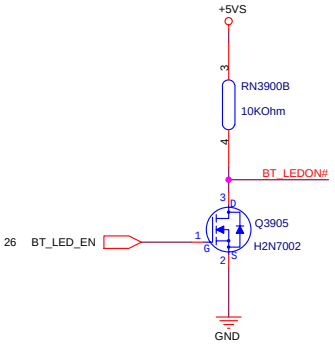


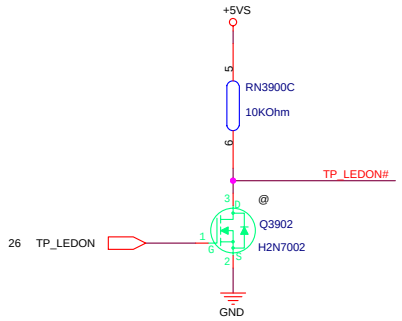
Front side LED

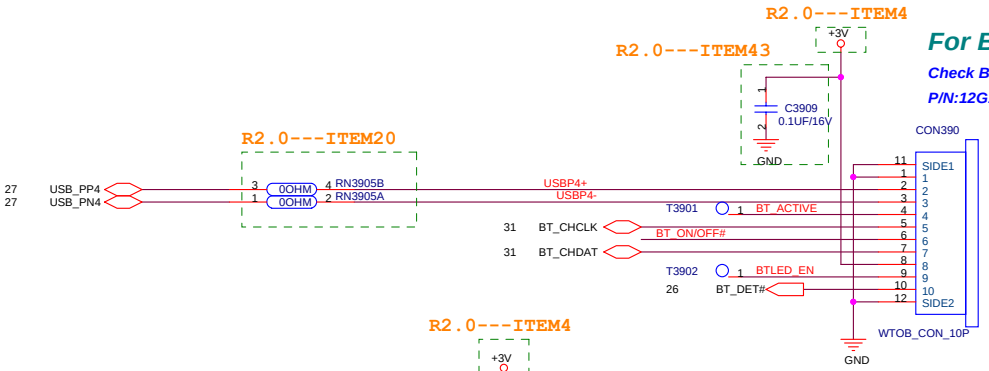


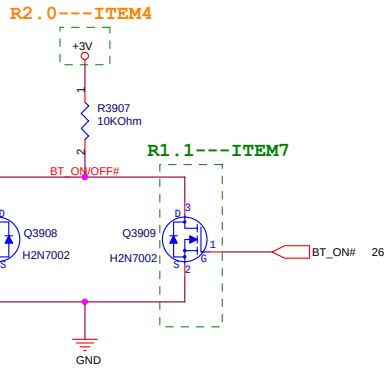


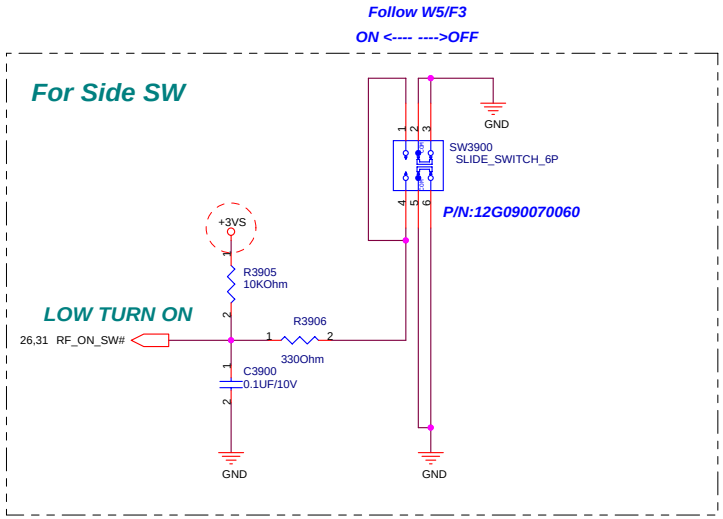












ASUSTek COMPUTER INC.		
4 FL. No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: Front side LED & BT		
Size: Custom	Document Number: F2J	Rev: 1.1
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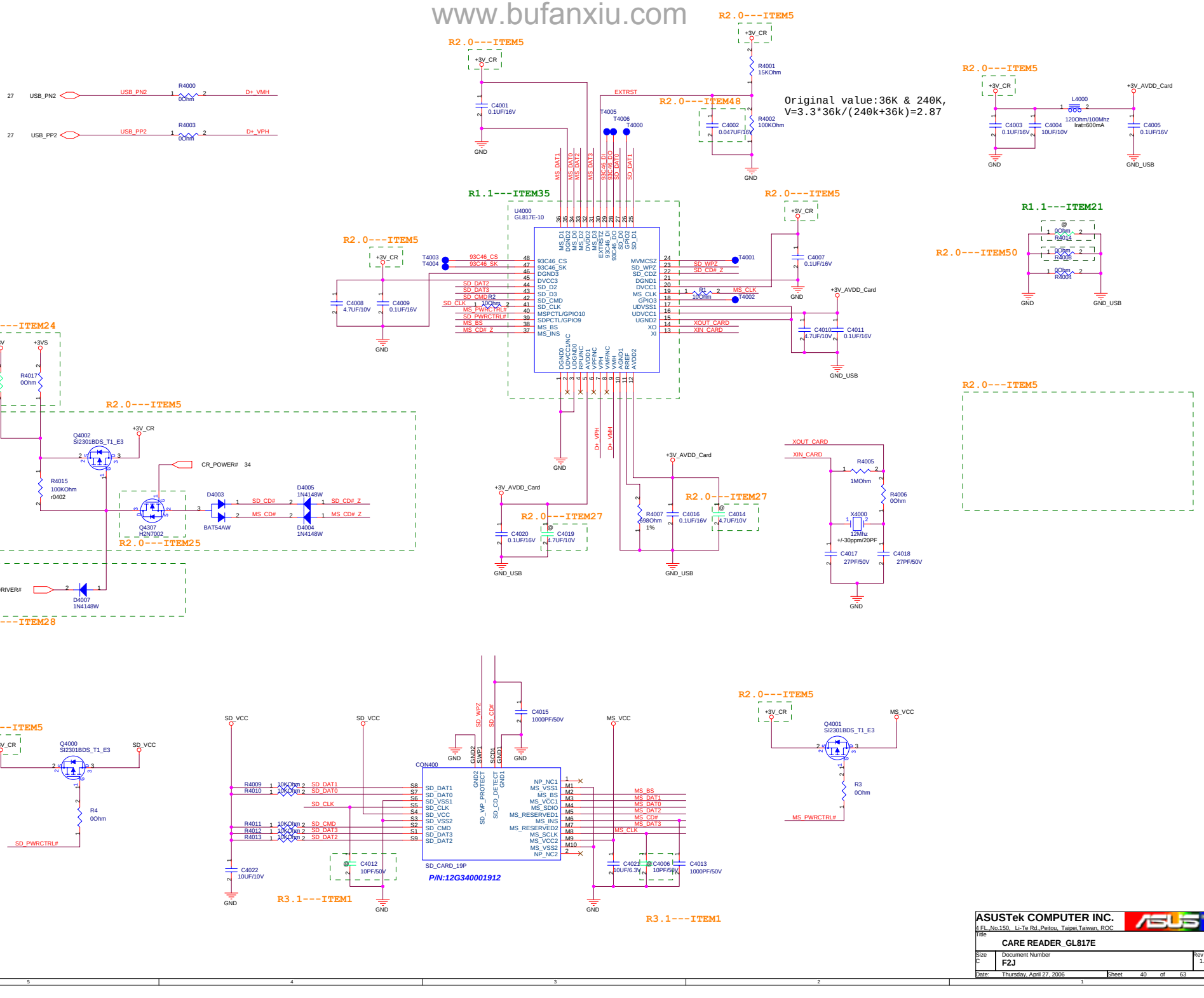
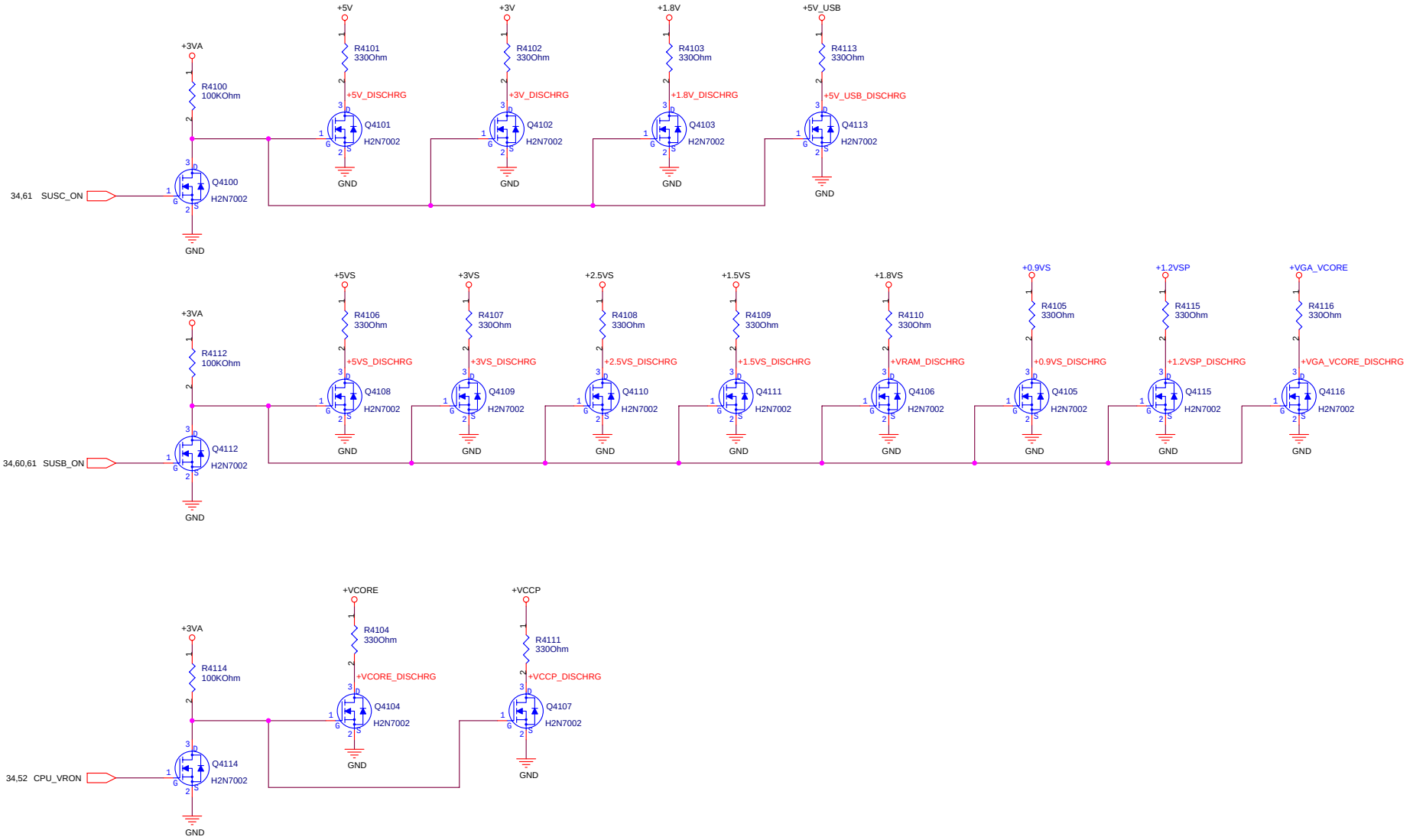
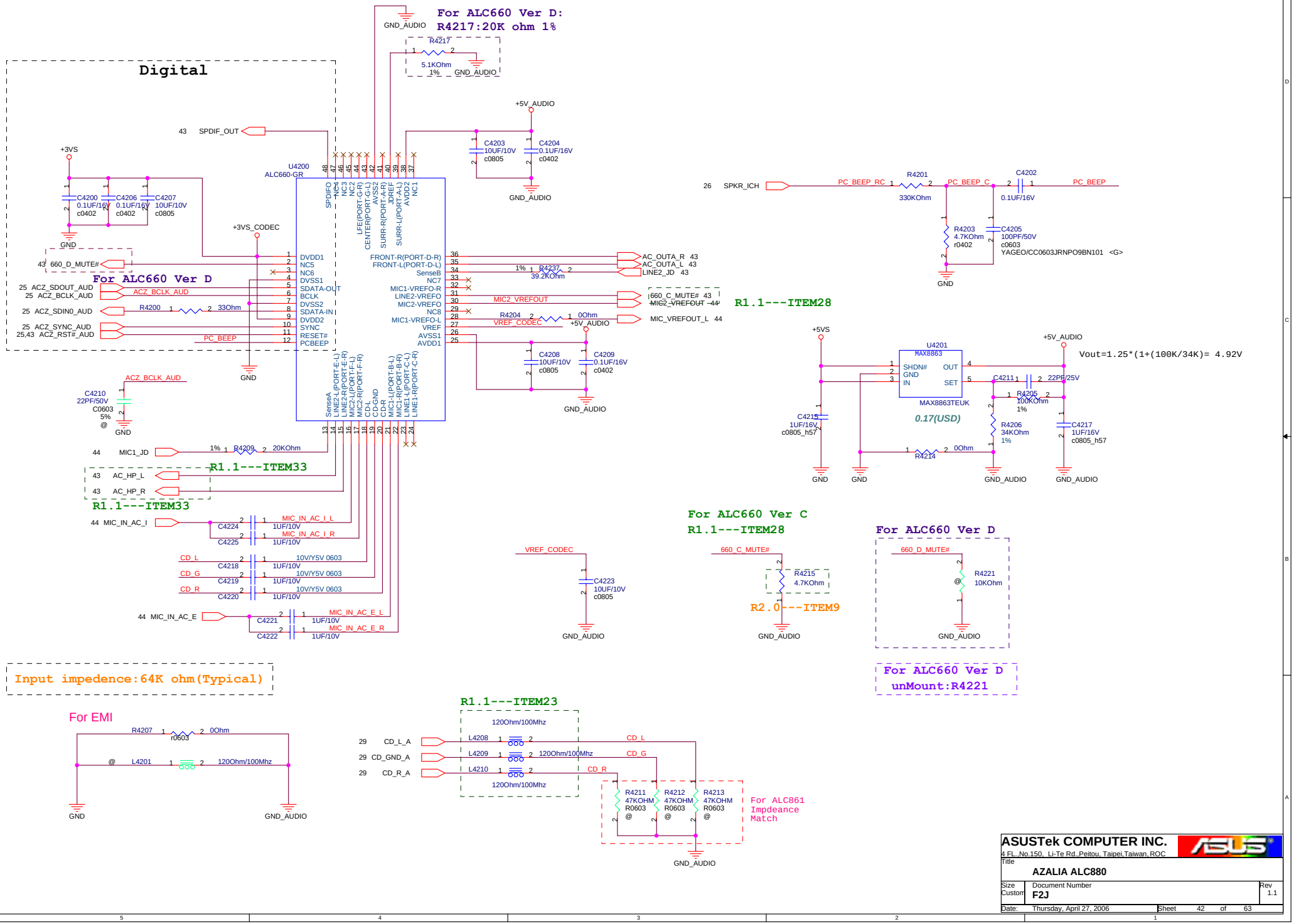




ASUSTek COMPUTER INC.		
4 FL., No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: **DISCHARGE & EMI CAP**		
Size: Custom	Document Number: **F2J**	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 41 of 63	



ASUSTek COMPUTER INC.	
4 FL. No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC	
Title	AZALIA ALC880
Size: Custom	Document Number: F2J
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(Linein)FL = 28.2Hz
(Linein)FH = 23.4K Hz

Check HP & SPEAKER GAIN with VERB Table

R2.0---ITEM47

R1.1---ITEM33

U4300
RLINEIN ROUT+ H_SPKR+
RHPIN ROUT- H_SPKR-
RBYPASS RVDD +5VS_AMP
TJ
MUTE IN SE/BTL# SE/BTL#
MUTE OUT HP/LINE# HP/LINE#
SHUTDOWN LVDD +5VS_AMP
LBYPASS
NC1 NC2
LHPIN LOUT+ H_SPKL+
LLINEIN LOUT- H_SPKL-
GND/HS1 GND/HS2 THERMAL GND/HS3 GND/HS4
G1420F31UF

42 AC_OUTA_R
42 AC_OUTA_L

(Headphone Mode) FL = 15.9Hz
(Headphone Mode) FH = 23.4K Hz

R2.0---ITEM12

L4304 120Ohm/100Mhz H_SPKR+ H_SPKR+_CON
L4307 120Ohm/100Mhz H_SPKR- H_SPKR-_CON
L4305 120Ohm/100Mhz H_SPKL+ H_SPKL+_CON
L4306 120Ohm/100Mhz H_SPKL- H_SPKL-_CON
C4302 10PF c0402
C4303 10PF c0402
C4307 10PF c0402
C4308 10PF c0402
GND
CON430 WtoB_CON_4P NC1 NC2
P/N:12G171000047

Fix POP of the internal speaker when power-off

R1.1---ITEM33
@ R4308 0Ohm SE/BTL#
R4310 0Ohm HP/LINE#
GND_AUDIO

R1.1---ITEM27
D4300 1SS355
JACK_IN#
ACZ_RST#_AUD R4313 100KOhm r0402
+5VS_AMP
R4309 10KOhm r0402
R2.0---ITEM6
10Ohm R4312 SE/BTL#
C4312 1UF/10V
Q4301 H2N7002

R2.0---ITEM7
42 660_C_MUTE# R4334 0Ohm R0603
OP_SD# D4306 BAT54AW
R4315 1KOhm
C4313 2.2UF/10V
For ALC660 Ver D
42 660_D_MUTE# R4339 @ 0Ohm R0603

For ALC660 Ver C
unmount: R4338,R4339
mount: R4325,R4334
CE4300/CE4301:47uF

For ALC660 Ver D
mount: R4338,R4339
Unmount:R4325,,R4334
CE4300/CE4301:100uF

+5VS_AMP L4300 80Ohm/100Mhz +5VS
C4314 10UF/10V c0805
C4315 1UF/10V c0603
C4325 0.1UF/16V c0402
R2.0---ITEM32

Headphone & SPDIF JACK

	SE/BTL#	SPDIF_DET
SPDIF Mode	H	Hi-Z
HP Mode	H	L
SPK Mode	L	X

R2.0---ITEM8
D4301 DF5A6.8FU
GND_JACK
LINE2_JD 42
SPDIF_DET
CON431 PHONE_JACK_8P
P/N:12G140001089

R1.1---ITEM33
42 AC_HP_R
42 AC_HP_L

Q4300 H2N7002
CE4301 47UF/6.3V
CE4300 47UF/6.3V
R4318 33Ohm
R4321 33Ohm
120Ohm/100Mhz L4301 L4302 L4303
C4318 100PF c0402
C4319 100PF c0402
C4320 100PF c0402
JACK_IN#
R4322 10KOhm
R4323 10KOhm
Q4302 H2N7002
MUTE_POP#
GND_AUDIO

R2.0---ITEM59
VCC_SPDIF
R4326 0Ohm R0603
C4322 0.1UF/16V c0402
GND_JACK

For ALC660 Ver D
42 660_D_MUTE# R4338 @ 0Ohm R0603
42 660_C_MUTE# R4325 0Ohm R0603
34 OP_SD# R4333 0Ohm R0603
D4302 BAT54AW
R2.0---ITEM10
25,42 ACZ_RST#_AUD R4324 100KOhm r0402

+3VSUS +12V
R4319 10KOhm r0402
R4320 2.2MOhm
R4331 10KOhm
MUTE_POP#
Q4303 H2N7002
Q4306 H2N7002
C4321 0.1UF/16V c0603
GND

Fix POP of the internal speaker when power-on

+5VS_AMP +5VS_AMP
R4327 100KOhm r0402
R4328 100KOhm r0402
Q4305 PMBS3904
C4324 0.1UF/16V c0402
JACK_IN#

+3VS
R4329 10KOhm r0402
Q4304 PMBS3906
VCC_SPDIF

42 SPDIF_OUT
R4330 0Ohm
SPDIF_VIN

R2.0---ITEM59
C4323 100PF c0402
EMI Request
R4332 0Ohm
GND_JACK

ASUSTek COMPUTER INC.
4 FL. No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC

Title: Audio AMP

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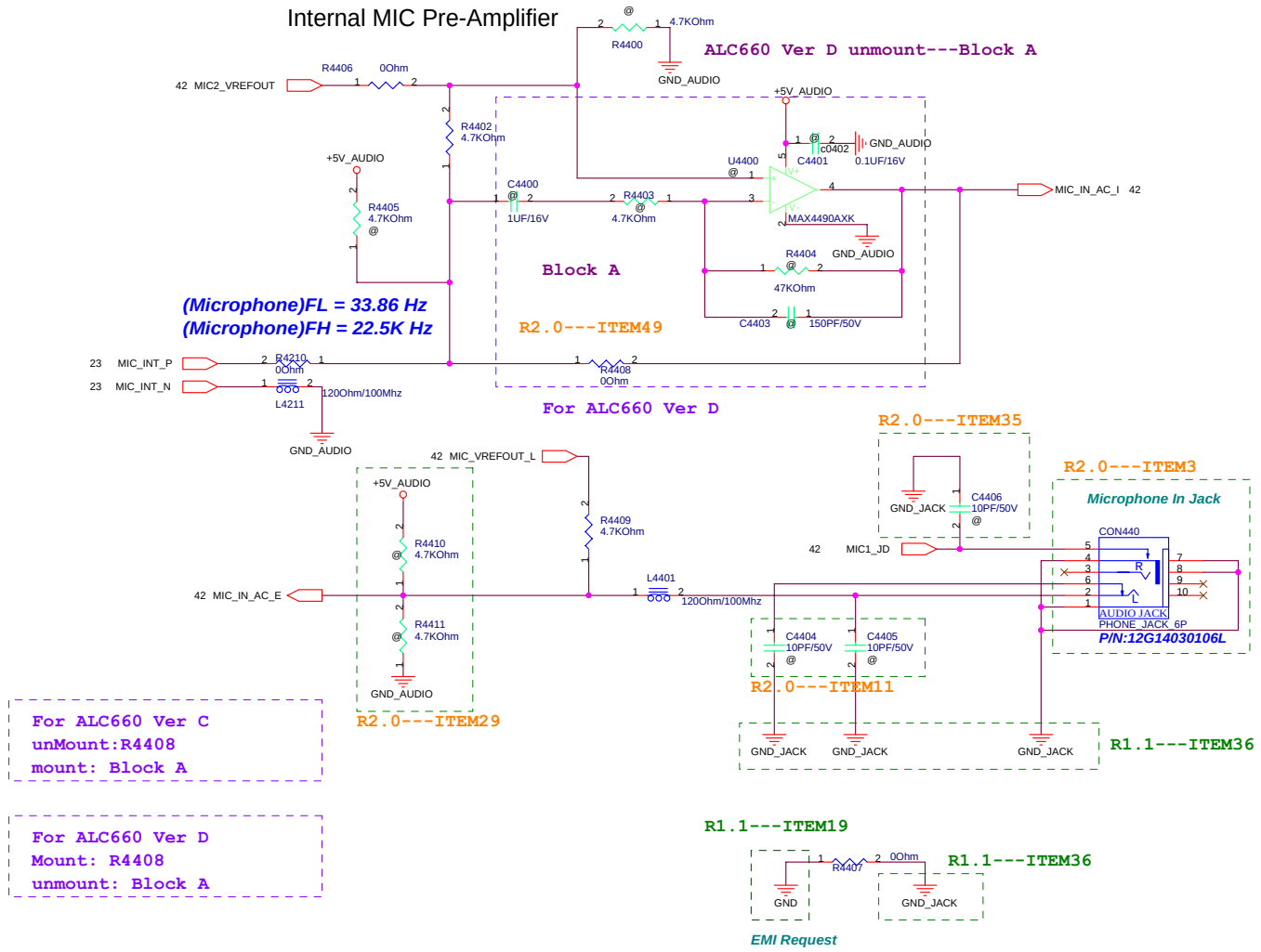

ASUSTek COMPUTER INC.		
4 FL. No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: MIC		
Size: Custom	Document Number: F2J	Rev: 1.1
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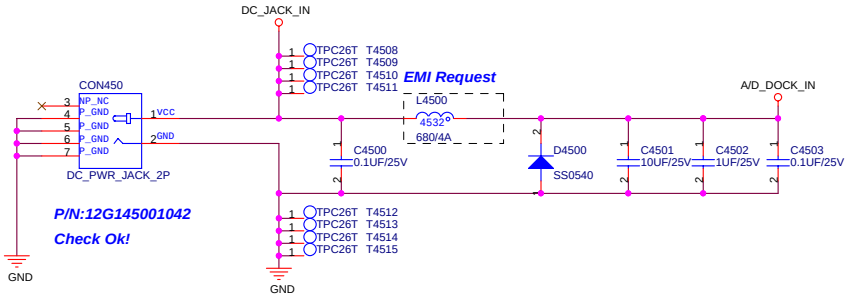
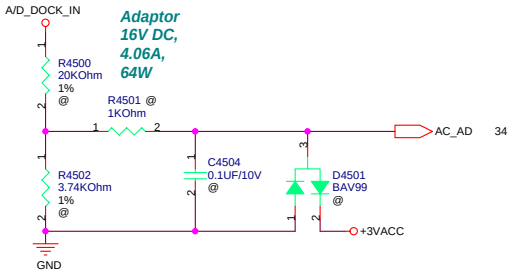
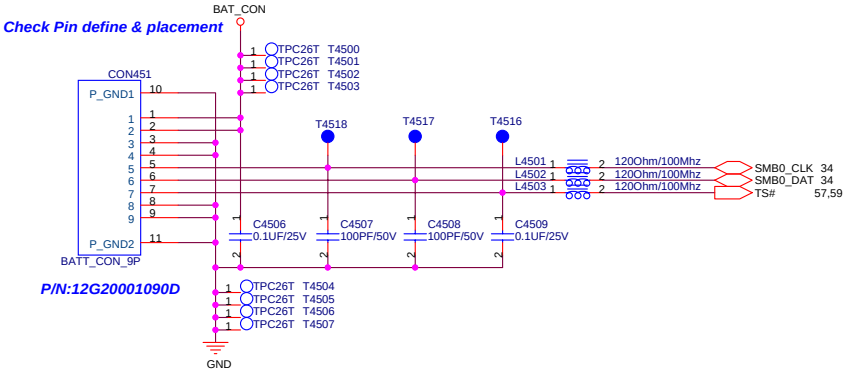
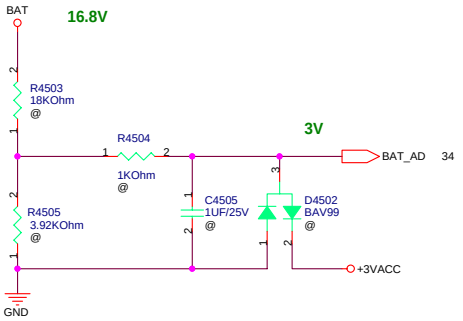
DC IN





BAT IN





ASUSTek COMPUTER INC.		
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: DC & BAT IN		
Size: Custom	Document Number: F2J	Rev: 1.1
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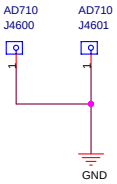
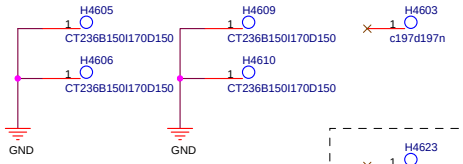
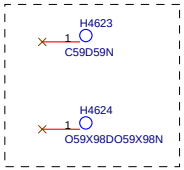
EMI SPRING

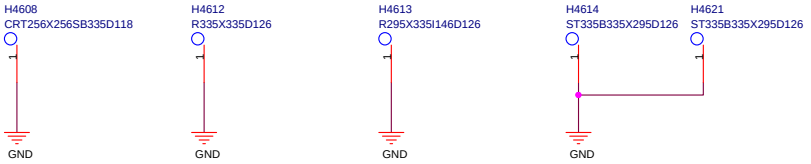


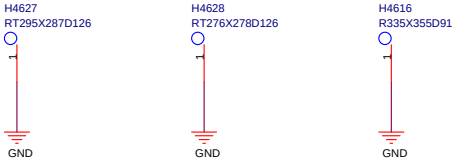
CPU(PTH)



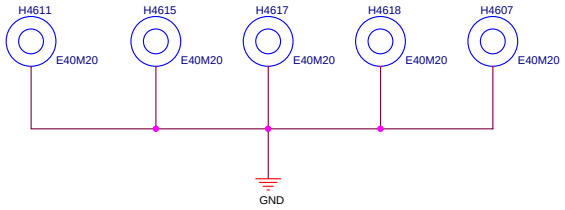


PTH

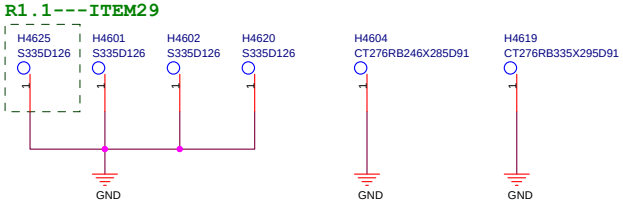


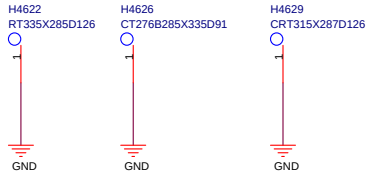


VGA & FAN(NUT)

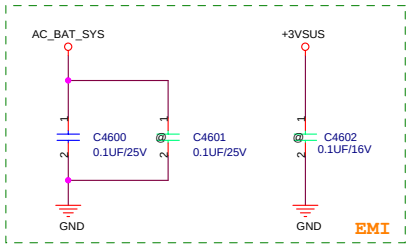


R1.1---ITEM29

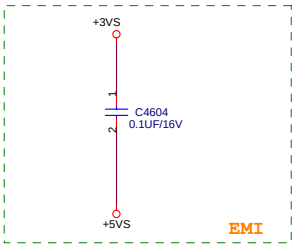




R2.0---ITEM36



R2.0---ITEM37



ASUSTek COMPUTER INC.		
4 FL.,No.150, Li-Te Rd.,Peitou, Taipei,Taiwan, ROC		
Title: SREW HOLE		
Size: Custom	Document Number: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 46 of 63	

F2J SR_0309(R1.0---->R1.1)

(1)MDC NUT(H3700, H3701) change to 13GN7510M270(H:3mm).---Page37

(2)MDC CON change the mating height to 3mm(12G161200120).---Page37

(3)Change USB CON(CON300,CON301) to 12G130011045 for ID request.---Page30

(4)Del (2pin MDC CON,CON332) ,C3336,C3337---Page33

(5)Change DVI CON(CON210) to black type.(P/N:12G100190241)---Page21

(6)Change LAN CON(CON331) to 12G142111081 for ID change---Page33

(7)Mount Q3909(2N7002) to fix BT can't turn off with Hot key(FN+F2) issue.---Page39

(8)Change SB crystal X2500(32.768kHz) source.NOTE:C2500/C2502 change to 22pF.---Page25

(9)Change C3407 from 0.1uF to 0.33uF to meet EC EC_RST# & CLK timming.---Page34

(10)Mount R2048(0ohm), uumount R1731 to fix the LCD screen show white color Background during the boot beginning.---Page17, Page20.

(11)Mount R729(33ohm) to support M54 27MHz spread spectrum(down spread -0.5%) for EMI request.---Page7

(12)USB CAP(CE3002) change to Niobium Oxide Capacitor(47uF) for ESD issue.---Page30

(13)Reserved HDCP (High-Bandwidth Digital Content Protection) for DVI: Reserved R1741-R1743(10K ohm), U1702(M25P10_AVMN6TP)---Page17

(14)Add pull low RES R3313(1Kohn) to PLT_RST#_BUF. NOTE:RTL8111B(pin20,PERSTB) has leakage current problem(about 0.6V).---Page33

(15)Change 1000 BASE-T TRANSFORMER(U3701) to BOTHHAND/GSM5009.---Page37

(16)Change Microphone In Jack CON440 to 12G140001067 for EMI request.(Without metal ring)---Page44

(17)Change X3301 External capacitance(C3335,C3334) from 27pF to 22pF.---Page33

(18)Express card reset signal control by R5538D001:

a.R3205 Mark DNI.
b Mount R3201& change from 1K ohm to 2.2K ohm.(For ASUS Debug card issue)

(19)MIC CON GND R4407 tie to digital GND for EMI request.---Page44

(20)Add R2910 0ohm to IDERST for EMI request.---Page29

(21)GND_USB Reserved RES 0 ohm(R4008, R4014) to GND for ESD issue.--- Page40.

(22)Speaker signal R4301,R4303,R4305,R4306 change to 120 ohm bead/600mA(L4304,L4307,L4305,L4306) & Mount 100pF Cap:C4302,C4303,C4307,C4308 for EMI request.---Page43

(23)R4208,R4209,R4210 change to 120 ohm bead for EMI request.---Page42

(24)Add Poly Fulse(F2100,0.2A) to +5VS_DVI for safety request..---Page21

(25)Change VRAM(U2200,U2204,U2205,U2206) to INFINEON HYB18T256161AFL-25---Page22

(26)Change C2808 to 11G233210625361(10uF/0603/X5R) for high limitation(under moden module).---Page28

(27)Change D4300 to 1SS355 for space limitation.---page43

(28)Add depop signal 660_C_MUTE# for Reltek recommand.---Page42,43.

(29)Add H4625 for EMI request.---Page46

F2J SR_0225(R1.0---->R1.1)

(30)Reserved C2317, C2318(100pF) for EMI request.---Page23

(31)R4304, R4314 change from 10K to 11K to meet speaker(1W). (Note: about 0.84W)---Page43

(32)Reserved C621-C625 to Vcore power for EMI request.---Page6

(33)Reserved audio co-layout schematic for vista(ALC861-VD) in the future.---Page42-Page44
a. Every codec port must connect to one and only audio jack. No shared-port thing is allowed in vista---internal MIC & external MIC separated, HP & speaker separated.

b.Internal MIC: Version C---Add per AMP, Version D---Del per AMP.

F2J SR_0227(R1.0---->R1.1)

(34)Changed external cap C716 & C717 of X701(xtal=14.317893 MHz) from 22 PF to 27pF. (To solve TV Burst frequency fail issue)---Page7

(35)Card Reader Control(U4000, GL817E) change to version 10.P/N update to 02G730000410.---Page40

(36)GND_MIC change to GND_JACK.

(37)Mount C4404,C4405, reserved C4406 to solve MIC CON ESD issue---Page44.

F2J SR_0306(R1.0---->R1.1)

(38)Add R3422,R3423(0ohm) for ICT test.---Page34

(39)Change the MIC CON--CON440(pin5,pin4) to normal open type to meet vista request.---Page44

(40)SWAP RN3320,L3306 for layout request.---Page33

(41)Change SATA CON(CON291) to 12G15110022R for SMT issue.---Page29

(42)Change VGA thermal sensor (U1701) to G781-1(SLAVE address:9A) & connect SMBUS to EC.----Page17.

(43)Add Q3202-Q3204, R3216,R3217,T3207 for newcard debug card.

F2J SR_0313(R1.0---->R1.1)

(44)Component change for debug-card detection circuit:C3207(1000p) to 2200p and C3208(2200p) to 0.1u.---Page32

(45)R3201 change from 2.2K to 1K.(New card debug card will modify 11KHz CLK dammping RES).---Page32

(46)R3900 change from 330ohm to 200ohm to enhance power LED luminance for ME request.---Page39

F2J SR_0315(R1.0---->R1.1)

(47)C4404,C4405 change from 1000pF to 100pF for EMI request.---Page44

(48)TPMCLK: Mount C719(33pF), R741 changed from 33ohm to 10ohm for EMI request.---Page7

(49)CRT filter:L2401-L2402 change to 56NH, C2402,C2404,C2406 mark DNI.---Page24

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F2J ER_0309(R1.1---->R3.0)

(1)con331 change to P/N:12G142111083.(防呆)--Page33

(2)Add TP for ATS test: +RTCBAT--R2501(pin2), PWRSW#--SW3800(pin1), L4501(pin1),L4502(pin1) ,L4503(pin1)

(3)MIC JACK(CON440) change to 12G14030106L(no metal ring) for ID request.--page44

(4)To solve S3 resume time too long issue: Blue Tooth power change from +3VS to +3V: CON390(pin8),R3907(pin1).---Page39

(5)Modify Card Reader circuit to solve can't into C3/C4 & S3 aging fail issue:---Page40

a.Del EEPROM(U4001), C4014. It's not necessary.

b.Add PMOS(Q4002), R4015, D4003, D4004, D4005.(Use card detect pin to turn on chip power)

c. Rename +3V power change to +3V_CR.

(6)To solve system shutdown "speaker POP" noise issue: C4312 chnage from 2.2uF to 1uF/10V,R4312 change from 100K to 10 ohm.--Page43

(7)To solve system into S3/S4 "speaker POP" noise issue: Add R4334(0ohm), D4306 & Reserved R4339(0ohm), R4315 change from 10K to 1K ohm.--Page43

(8)Mount D4301 for ESD issue.

(9)R4215 change to 4.7K to make sure 660_C_MUTE# low DC leve about 0.4V at Q4306(pin1), Q4313(pin1).

(10)To solve HP "pop" noise: Mount R4333(0ohm), R4325(0ohm).

(11)MIC CON change to no metal ring(Don't have ESD issue): Mark C4404,C4405 to DNI.--Page44

(12)C4302,C4303,C4307,C4308 change from 100pF to 10pF/50V for ESD.--Page43

(13)R3206 pull Hi change to +5V---Page32

(14)Modify LPC_AD3_L Q3204 circuit for new card debug card.---Page32

(15)Mount Q3102 to solve Aragon wireless lan module can't turn off with hot key(Fn+F2) issue.---Page31

(16)Change the materia of SW3800-SW3806 to stainless steel to improve the yield rate.---Page38

(17)Change SATA CON(CON291) to 12G15110022U.更改魚叉長度(改短)---Page29

(18)Del L3000, L3001, L3002 EMI co-lay common chock.---Page30.

(19)Del L3303.L3304.L3305.L3306 EMI co-lay common chock.---Page33.

(20)Del L3900 EMI co-lay common chock.---Page39.

(21)Del L3501 EMI co-lay common chock.---Page35.

(22)Chang S-vedio(CON241) from 12G141011077 to 12G14101107K to improve the yield rate.---Page24

(23)Reserved R3424-R347(0ohm) for new card debug card.---Page34

(24)Card Reader POWER change from +3V to +3VS(Mount :R4017, 0603 0ohm, Reserved:R4016)---Page40(Fix S3 device disappear issue)

(25)Add CR_POWER# signal to fix reboot card reader disappear issue. (Add Q4307, EC(pin41,GPD4)---Page34,40

(26)Modify LID signal circuit(Add D2303) to avoide the LID signal to damage the EC(pin24).---Page23

(27)Reserved Cap C4014,C4019(4.7uF) for card reader AVDD power.

(28)Add CR_DRIVER# signal & D4007 to solve install card reader driver issue.---Page40,34

(29)Reserved R4410 & R4411 for external MIC VREF.---Page44.

(30)Del L3200 EMI co-lay common chock.---Page32

(31)Del L2320 EMI co-lay common chock.---Page23

(32)Add C4325(0.1u) to +5VS for EMI request.---Page43

(33)Mount D3500 & C3503(10uF) for finger printer ESD issue.---Page35

(34)Reserved PC5025(0.1uF) to VR_PWRGD for ESD.---Page50---check power.

(35)Reserved C4406(10pF) to MIC1_JD for ESD issue.---Page44

(36)Add C4600,C4601(0.1uF/25V) to AC_BAT_SYS & C4602(0.1uF/16V) to +3VSUS for EMI request.---Page46

(37)Add moat cap C4604(0.1uF) for EMI request. (+3VS & +5VS).---Page46

(38)Reserved C3714(1000pF) for EMI request.---Page37(Check LAN eye patten).

(39)R2116,R2117 change to 600ohm/bead for DVI EMI issue.---Page39.

(40)DVI polyfuse F2100 change to 07G0140200L.(It has TUV/UL)---Page21.

(41)Add C2152(0.1uF) to +5VS_DVI for EMI request.---Page21

(42)Mount C2108 & C2109(10pF) to DVI DDC CLK/DAT for EMI request.---Page21.

(43)Add C3909(0.1uF/16V) to BT power(+3VS) for EMI request.---Page39

(44)Rerved C3901-C3904(0.1uF) & C3905-C3908(10pF) for EMI request.---Page39

(45)USB external port add common mode chock L3000-L3002 for EMI request. ---Page30

(46)Del FAN DA circuit(It's not necessary) ---Page36

(47)R4304 change from 11K ohn to 12K ohm to meet speaker 1W(1KHz, about 0.857 W).

(48)C4002 change from 330pF to 0.047uF to meet card reader reset timming.(1.03ms)

(49)Del internal MIC PRE-AMP.(Audio dirver continue using F3J,It's not necessary)---Page4
Del:C4400,R4403,U4400,R4400,C4403,C4401
Mount:R4408

(50)Mount R4008 for EMI request.(card reader ESD issue).

(51)USB power R3001-R3003 change to 180 ohm/bead.(2A) for EMI request.

(52)R3308 change to 120 ohm/bead (600mA) for EMI request.---Page33.

(53)R2115 change from 0ohm to bead (120ohm/600mA) for DVI EMI issue.---Page21

(54)For CRT EMI issue:(EE check R,G,B signal quality "OK".)---Page24
Mount C2402,C2404,C2406 10pF,
Change L2400,L2401,L2402 from 56nH to 82nH.
Change C2401,C2403,C2405 from 15pF to 22pF.

(55)For CRT EMI issue:(HSYC,VSYC)---Page24
Change R2400,R2403 from 0ohm to bead/120hm/600mA.
Mount C2400,C2407 22pF.---EE must check signal quility.

(56)For CRT EMI issue:(DDC)---Page24
Change R2401,R2402 from 0ohm to bead/120hm/600mA.

(58)Change R3803-R3806 from 330ohm to 390ohm for ID request.(Reduce the LED illumination)

(59)Mount C4323, C4319, C4318(100pF) for EMI request.---Page43

(60)ISA ROM(U3500) P/N change to 05G001014110.(Del socket)---Page35

F2J PR_0501(R3.0---->R3.1)

(1)C4002,C4016 change the package from 0805 to 0402(10pF).---Page40.

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F2J SR_0309 (R1.0---->R1.1) PWR

(1)Modify +1.8V OCP, PL5300 change to 3.8UH, PR5308 change to 0 Ohm, PR5309 change to 14K Ohm, PR5310 change to 100K Ohm---Page53

(2)Change +VGA_VCORE_O to 1.1V, PR5504 chanhe to 1.05K Ohm/1%.---Page55

(3)Charger circuit modify PC5704 change to 1U/25V/0805, Add PQ5714 to fix bug---Page57

(4)Disable PWRLMT# function, Unmount PR5725, PR5726, PC5717, PU5701, PC5718, PD5703, PR5724 ,PC5719, PC5720, PQ5712---Page57

(5)Disable adapter error function, Unmount PR5905, PC5908, PR5907, PU5902, PC5906, PD5901, PR5906, PC5907, PR5908, PU5903, PQ5903---Page59

(6)Modify BAT OVP circuit PR6010 change to 316K ohm /0.1%, PR6013 change to 75K Ohm/0.1%, unmount PR6015---Page60

(7)Change PQ6106 to FDW2501 for VGS issue---Page61

(8)Change input capacity, delete PCE5000 & PCE5001 15UF/25V, add PCE5000 27UF/25V,---Page50

(9)Change capacity, PCE5701 & PCE5700 change to 27UF/25V,---Page57

(10)Change Vcore OCP, PR5030 change to 11.5K Ohm--Page50

(11)Vcore IC issue, PR5031 change to 4.42K Ohm & PC5012 change to 47PF ---Page50

(12)Modify net name, change MAX1909_REF to MAX8725_REF ---Page57

(13)Change input capacity, PC5903 change to 4.7UF/25V ---Page59

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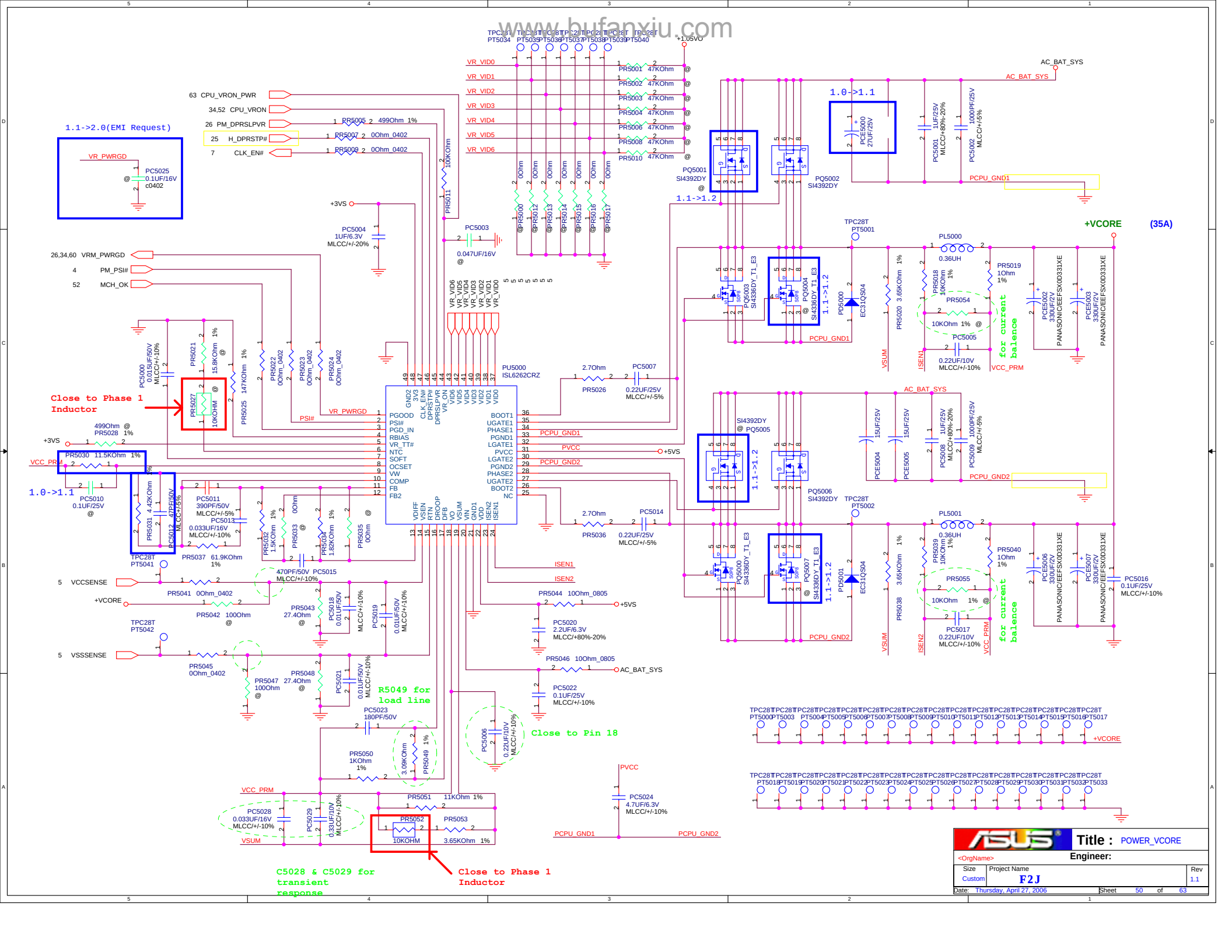
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1.1->2.0(EMI Request)
VR_PWRGD
PC5025 0.1UF/16V c0402
63 CPU_VRON_PWR
34,52 CPU_VRON
26 PM_DPRSLPVR
25 H_DPRSTP#
7 CLK_EN#
PR5005 499Ohm 1%
PR5007 0Ohm_0402
PR5009 0Ohm_0402
100KOhm
PR5011
+3VS
PC5004 1UF/6.3V MLCC/+/-20%
PC5003 0.047UF/16V @
+1.05VO
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VR_VID2
VR_VID3
VR_VID4
VR_VID5
VR_VID6
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PR5015 0Ohm
PR5016 0Ohm
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PQ5002 SI4392DY
1.1->1.2
1.0->1.1
PCE5000 27UF/25V
PC5001 1UF/25V MLCC/+80%-20%
PC5002 1000PF/25V MLCC/+/-5%
AC_BAT_SYS
PCPU_GND1
+VCORE (35A)
TPC28T PT5001
PL5000 0.36UH
PR5019 1Ohm 1%
PR5054 10KOhm 1% @
PC5005 0.22UF/10V MLCC/+/-10%
PR5018 10KOhm 1%
PR5020 3.65KOhm 1%
PQ5003 SI4336DY_T1_E3
PQ5004 SI4336DY_T1_E3 @
PD5000 EC31QS04
PCE5002 330UF/2V PANASONIC/EEFSX0D331XE
PCE5003 330UF/2V PANASONIC/EEFSX0D331XE
for current balence
VSUM
ISEN1
VCC_PRM
26,34,60 VRM_PWRGD
4 PM_PSI#
52 MCH_OK
PC5000 0.015UF/50V MLCC/+/-10%
PR5021 15.8KOhm 1% @
PR5022 0Ohm_0402
PR5023 0Ohm_0402
PR5024 0Ohm_0402
PR5025 147KOhm 1%
PR5027 10KOHM
Close to Phase 1 Inductor
PSI#
VR_PWRGD
PU5000 ISL6262CRZ
PGOOD
PSI#
PGD_IN
RBIAS
VR_TT#
NTC
SOFT
OCSET
VW
COMP
FB
FB2
GND2
3V2
CLK_EN#
DPRSTP#
DPRSLPVR
VR_ON
VID6
VID5
VID4
VID3
VID2
VID1
VID0
BOOT1
UGATE1
PHASE1
PGND1
LGATE1
PVCC
LGATE2
PGND2
PHASE2
UGATE2
BOOT2
NC
VDIFF
VSEN
RTN
DROOP
DFB
VO
VSUM
VIN
GND
ISEN2
ISEN1
PCPU_GND1
PCPU_GND2
PVCC
+5VS
2.7Ohm
PR5026
PC5007 0.22UF/25V MLCC/+/-5%
PR5036
PC5014 0.22UF/25V MLCC/+/-5%
SI4392DY @ PQ5005
PQ5006 SI4392DY
PCE5004 15UF/25V
PCE5005 15UF/25V
PC5008 1UF/25V MLCC/+80%-20%
PC5009 1000PF/25V MLCC/+/-5%
TPC28T PT5002
PL5001 0.36UH
PR5040 1Ohm 1%
PR5055 10KOhm 1% @
PC5017 0.22UF/10V MLCC/+/-10%
PR5039 10KOhm 1%
PR5038 3.65KOhm 1%
PQ5007 SI4336DY_T1_E3
PD5001 EC31QS04
PCE5006 330UF/2V PANASONIC/EEFSX0D331XE
PCE5007 330UF/2V PANASONIC/EEFSX0D331XE
PC5016 0.1UF/25V MLCC/+/-10%
499Ohm @ PR5028 1%
+3VS
PR5030 11.5KOhm 1%
VCC_PRM
1.0->1.1
PC5010 0.1UF/25V @
PR5031 4.42KOhm 1%
PC5012 47PF/50V MLCC/+/-5%
PC5011 390PF/50V MLCC/+/-5%
PC5013 0.033UF/16V MLCC/+/-10%
PR5032 1.5KOhm 1%
PR5033 0Ohm @
PR5034 1.82KOhm 1%
PR5035 0Ohm @
PR5037 61.9KOhm 1%
TPC28T PT5041
470PF/50V PC5015 MLCC/+/-10%
5 VCCSENSE
PR5041 0Ohm_0402
+VCORE
PR5042 100Ohm @
TPC28T PT5042
5 VSSSENSE
PR5045 0Ohm_0402
PR5047 100Ohm @
PR5048 27.4Ohm @
PC5021 0.01UF/50V MLCC/+/-10%
PR5043 27.4Ohm @
PC5018 0.01UF/50V MLCC/+/-10%
PC5019 0.01UF/50V MLCC/+/-10%
PR5044 10Ohm_0805
PC5020 2.2UF/6.3V MLCC/+80%-20%
PR5046 10Ohm_0805
PC5022 0.1UF/25V MLCC/+/-10%
R5049 for load line
PC5023 180PF/50V
PR5050 1KOhm 1%
3.09KOhm
PR5049 1%
PC5006 0.22UF/10V MLCC/+/-10%
Close to Pin 18
PR5051 11KOhm 1%
PR5052 10KOHM
PR5053 3.65KOhm 1%
PC5028 0.033UF/16V MLCC/+/-10%
PC5029 0.33UF/10V MLCC/+/-10%
C5028 & C5029 for transient response
Close to Phase 1 Inductor
PC5024 4.7UF/6.3V MLCC/+/-10%
TPC28T PT5000 PT5003 PT5004 PT5005 PT5006 PT5007 PT5008 PT5009 PT5010 PT5011 PT5012 PT5013 PT5014 PT5015 PT5016 PT5017
TPC28T PT5018 PT5019 PT5020 PT5021 PT5022 PT5023 PT5024 PT5025 PT5026 PT5027 PT5028 PT5029 PT5030 PT5031 PT5032 PT5033
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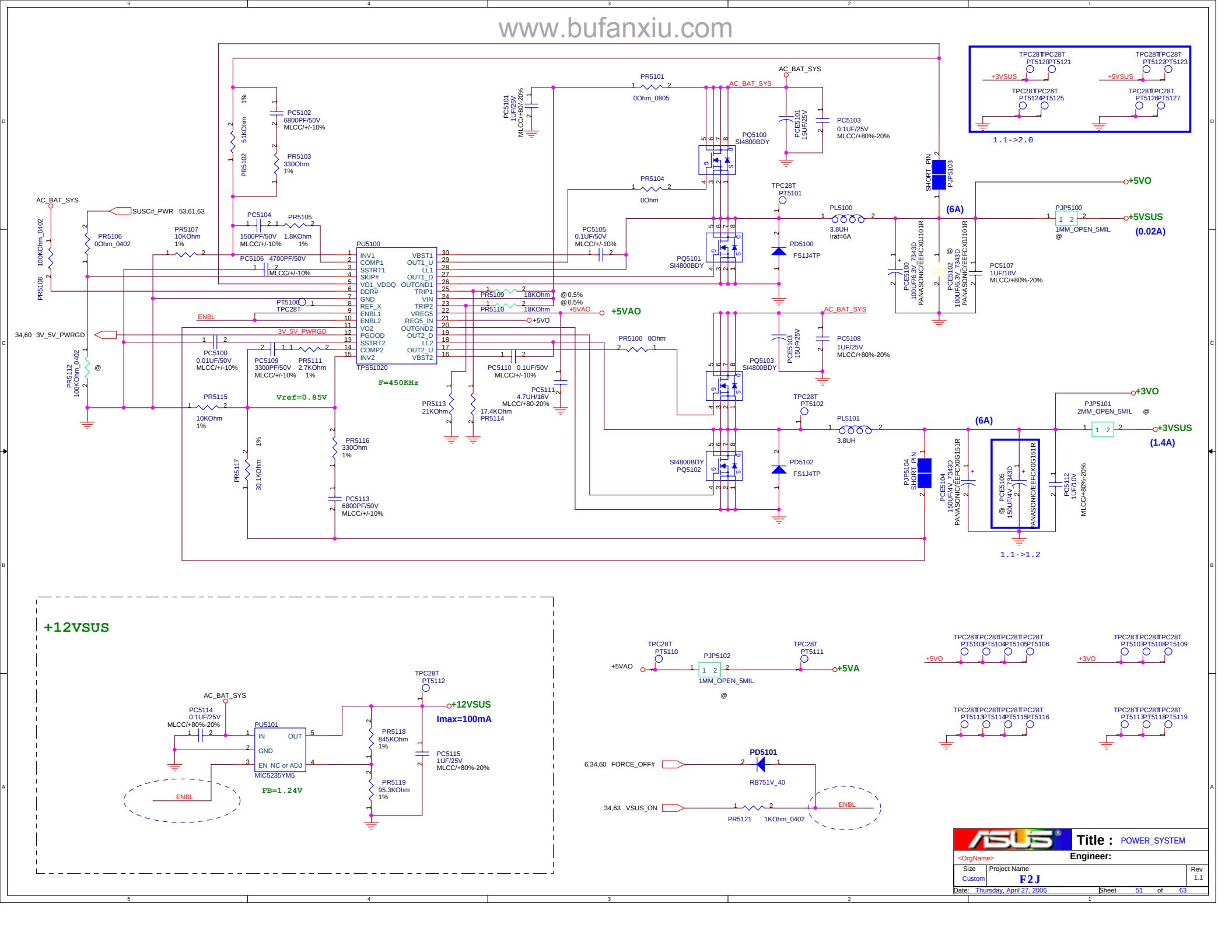

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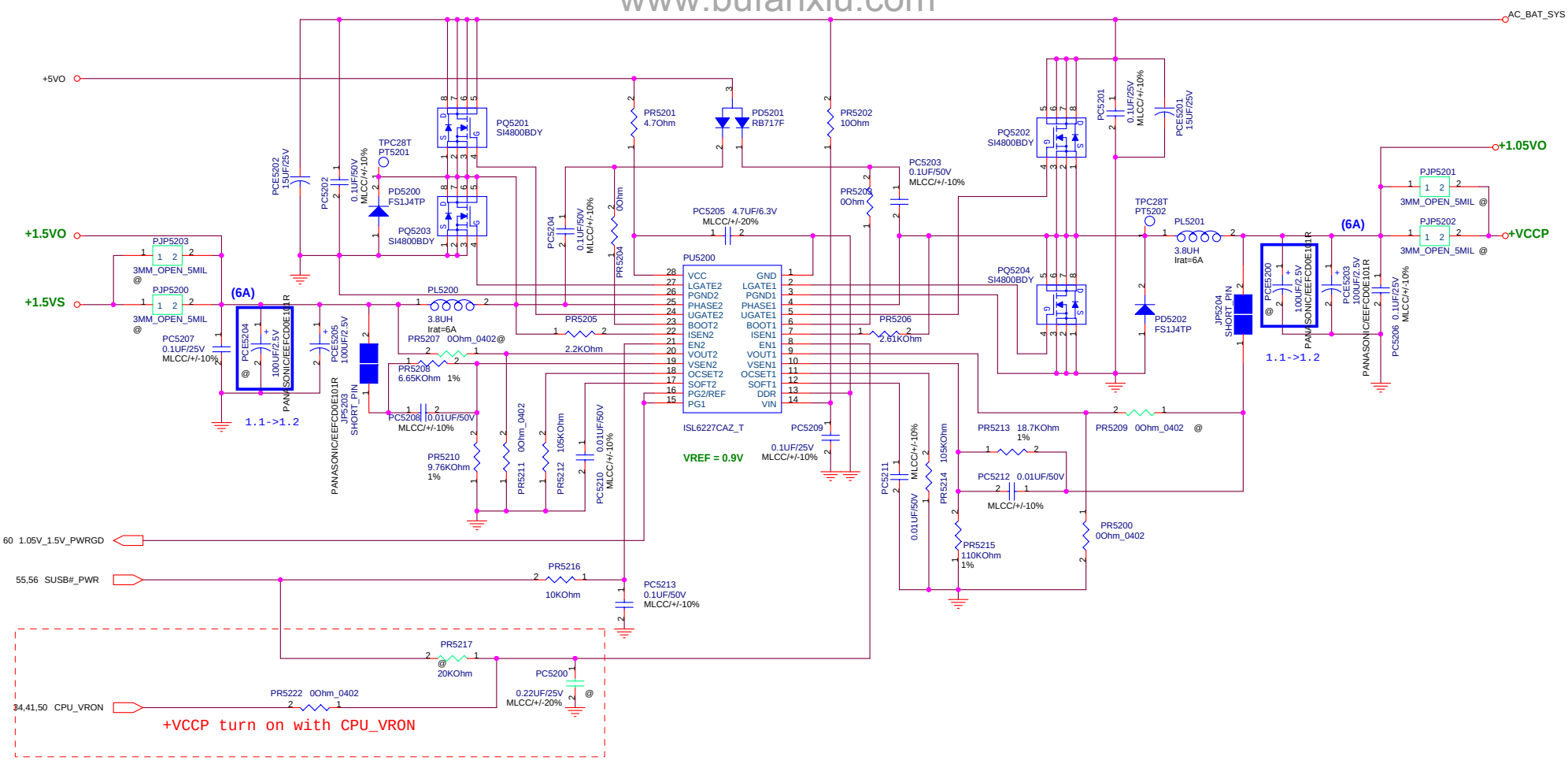

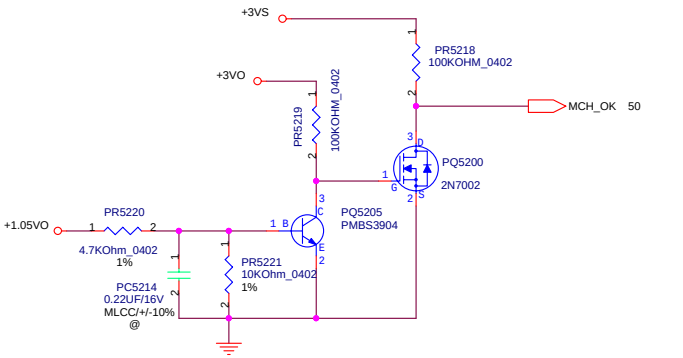

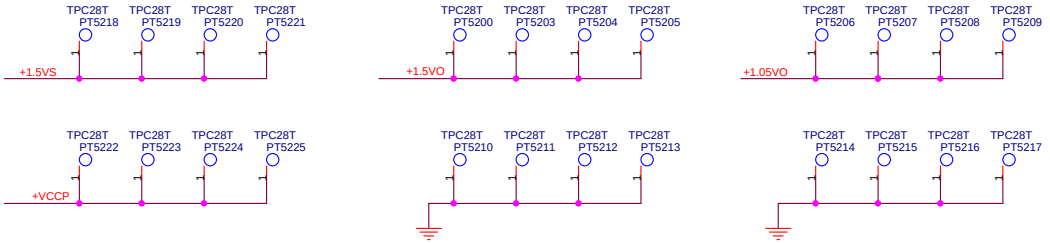

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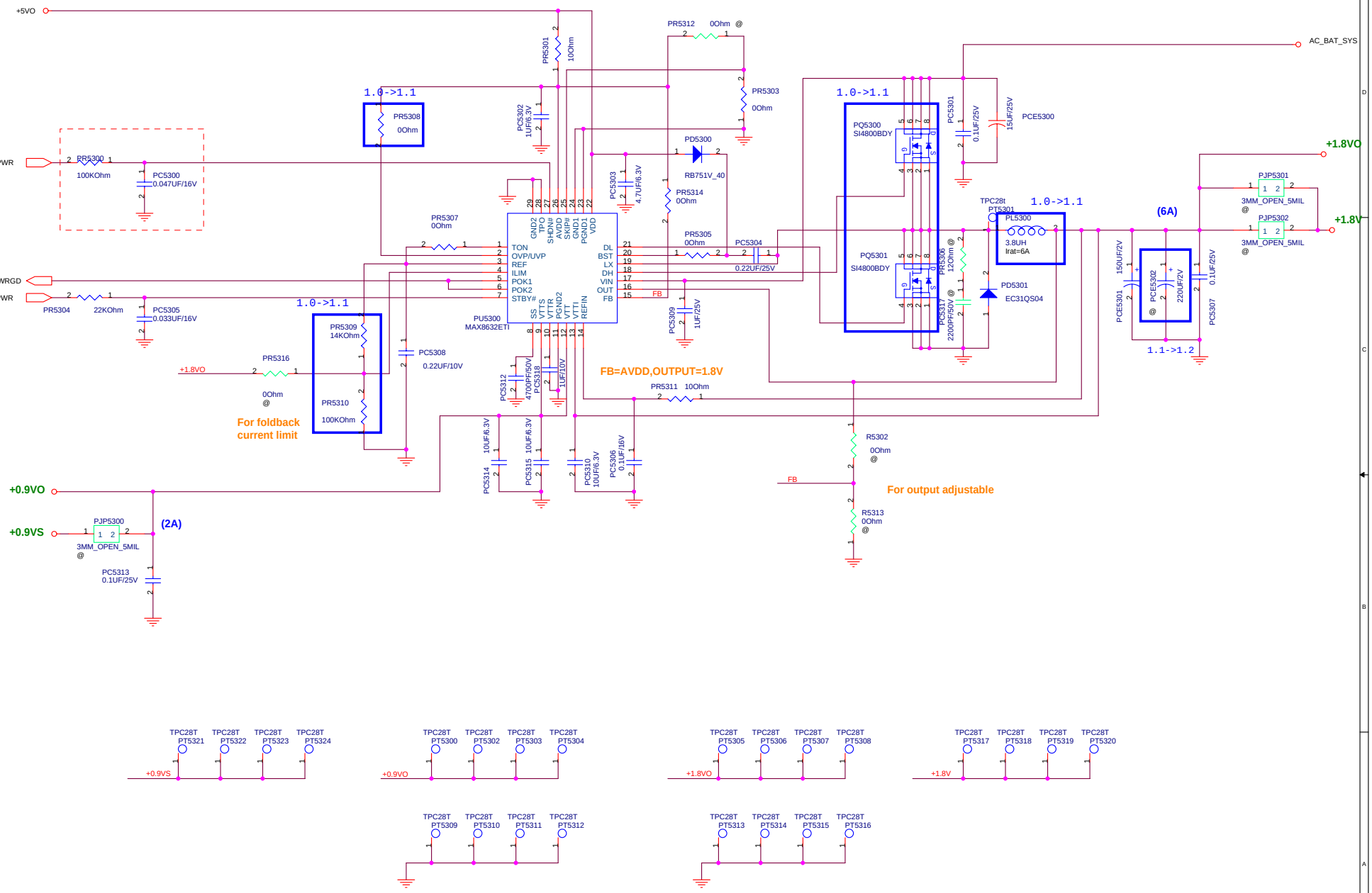

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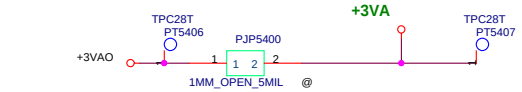
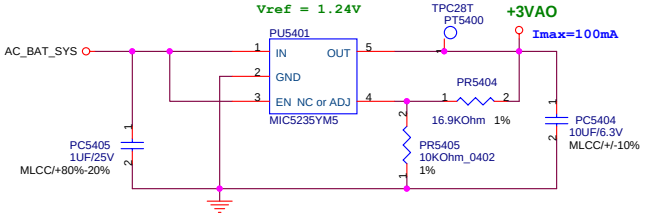
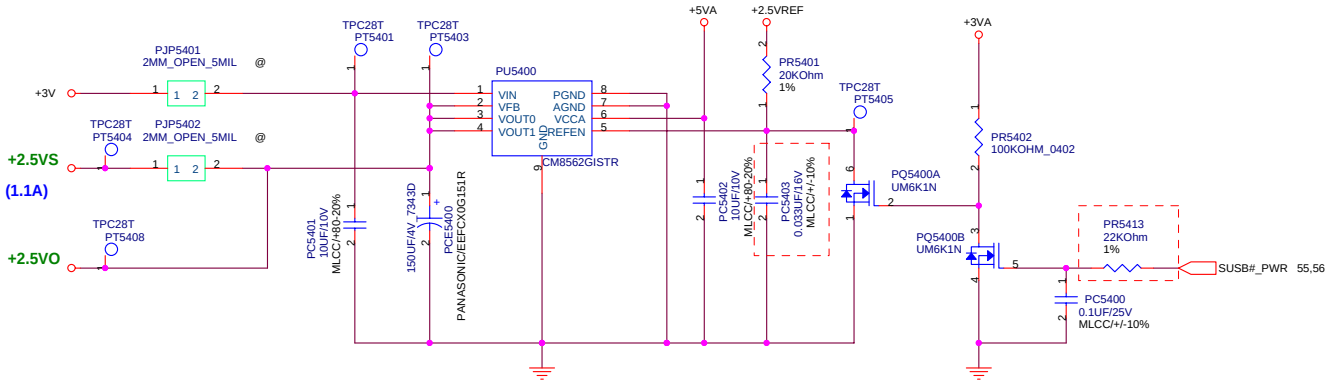
+3VAO





+2.5VS



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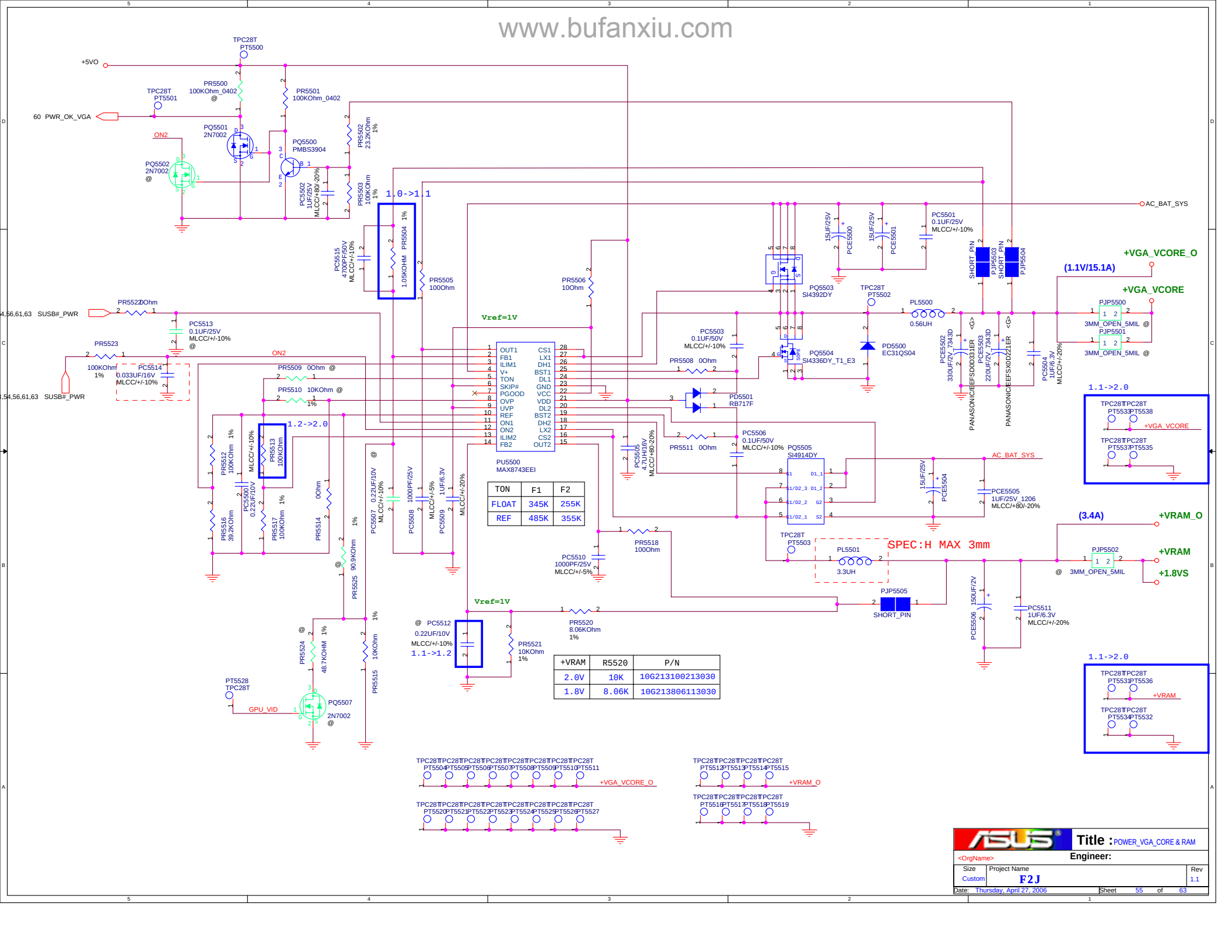
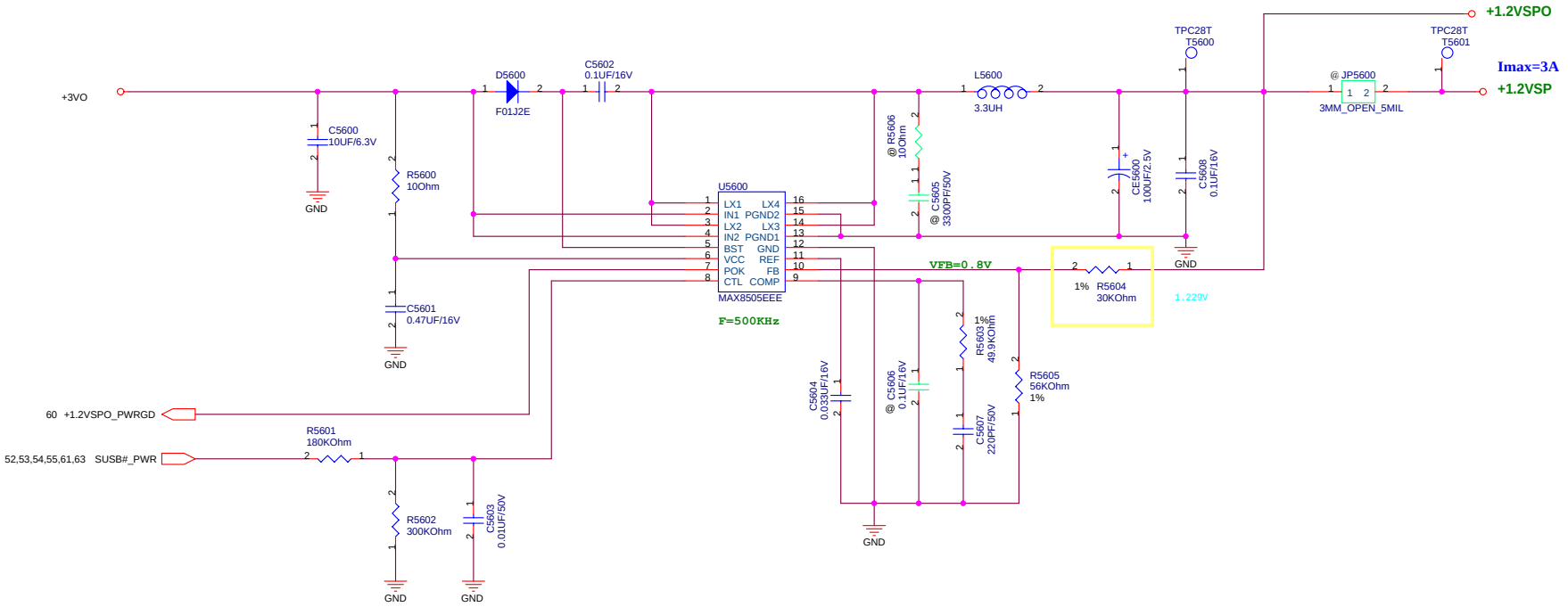


TON	F1	F2
FLOAT	345K	255K
REF	485K	355K

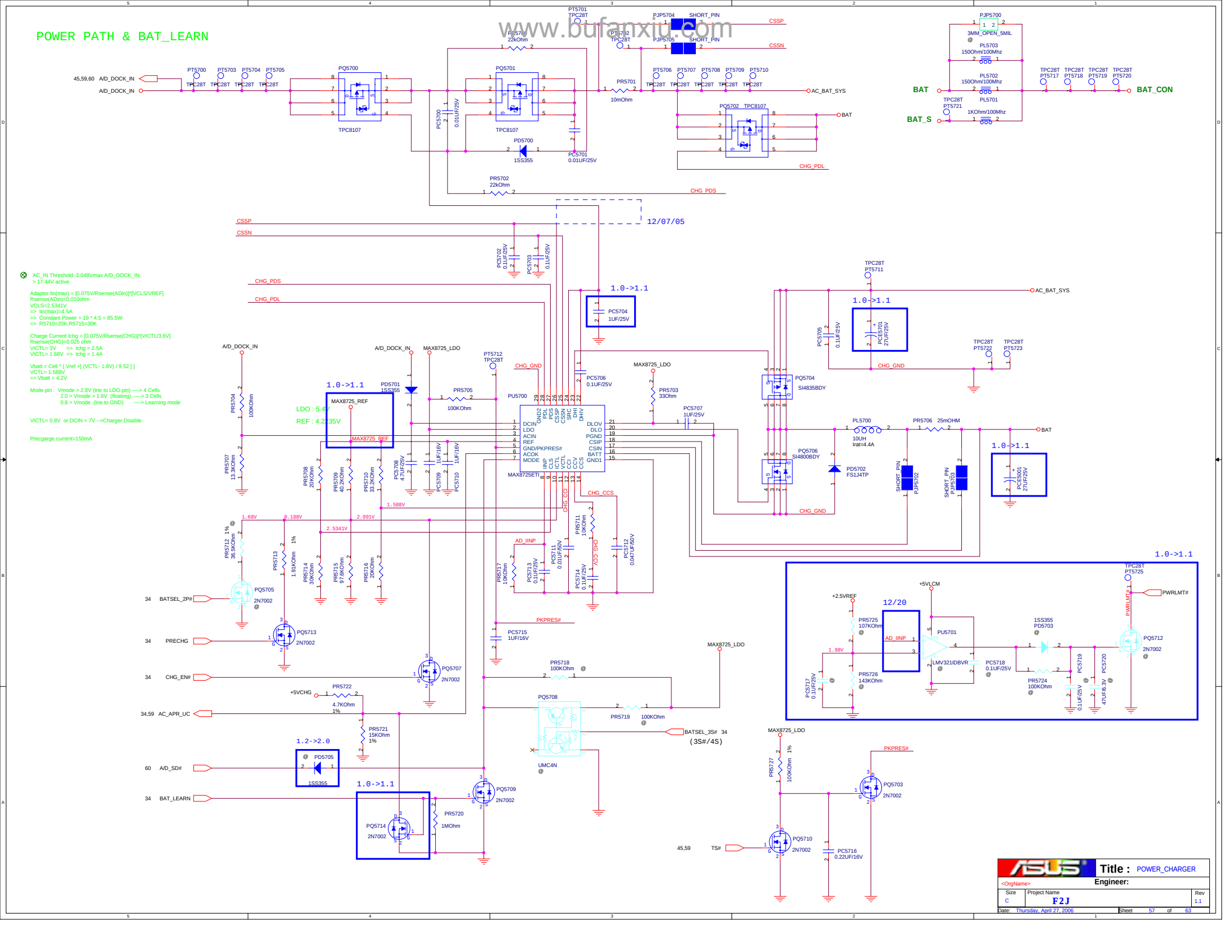
+VRAM	R5520	P/N
2.0V	10K	10G213100213030
1.8V	8.06K	10G213806113030

ASUS	Title : POWER_VGA_CORE & RAM		
<OrgName>	Engineer:		
Size: Custom	Project Name: F2J		Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 55 of 63		

+1.2VSP



ASUS	Title :	POWER_VGA_+1.2VSP
<OrgName>	Engineer:	
Size: Custom	Project Name: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 56 of 63	


POWER PATH & BAT_LEARN
www.bufanxiu.com
12/07/05
AC_IN Threshold 2.048Vmax A/D_DOCK_IN
> 17.44V active
Adapter Iin(max) = [0.075V/Rsense(ADin)]*[VCLS/VREF]
Rsense(ADin)=0.010ohm
VCLS=2.5341V
=> Iin(max)=4.5A
=> Constant Power = 19 * 4.5 = 85.5W
=> R5710=20K,R5715=30K
Charge Current Ichg = [0.075V/Rsense(CHG)]*[VICTL/3.6V]
Rsense(CHG)=0.025 ohm
VICTL= 3V => Ichg = 2.5A
VICTL= 1.68V => Ichg = 1.4A
Vbatt = Cell * [Vref +[(VCTL- 1.8V) / 9.52]]
VCTL= 1.588V
=> Vbatt = 4.2V
Mode pin : Vmode > 2.8V (trie to LDO pin) ----> 4 Cells
2.0 > Vmode > 1.6V (floating) ----> 3 Cells
0.8 > Vmode (trie to GND) ----> Learning mode
VICTL< 0.8V or DCIN < 7V -->Charger Disable
Precgarge current=150mA
A/D_DOCK_IN
MAX8725_LDO
MAX8725_REF
LDO : 5.4V
REF : 4.235V
1.0->1.1
1.2->2.0
PU5700
MAX8725ETI
PQ5704 SI4835BDY
PQ5706 SI4800BDY
PD5702 FS1J4TP
PL5700 10UH Irat=4.4A
PR5706 25mOHM
BAT
AC_BAT_SYS
CHG_PDS
CHG_PDL
CHG_GND
CHG_CCS
CHG_CCI
AD_IINP
PKPRES#
BATSEL_2P#
PRECHG
CHG_EN#
+5VCHG
AC_APR_UC
A/D_SD#
BAT_LEARN
BATSEL_3S# (3S#/4S)
UMC4N
TS#
+2.5VREF
+5VLCM
PWRLMT#
12/20
LMV321IDBVR
1SS355 PD5703
PQ5712 2N7002
PQ5713 2N7002
PQ5707 2N7002
PQ5709 2N7002
PQ5714 2N7002
PQ5703 2N7002
PQ5710 2N7002
PD5705 1SS355
PJP5704 SHORT_PIN
PJP5705 SHORT_PIN
PJP5700 3MM_OPEN_5MIL
PL5703 150Ohm/100Mhz
PL5702 150Ohm/100Mhz
PL5701 1KOhm/100Mhz
BAT_CON
BAT_S
ASUS
Title : POWER_CHARGER
Engineer:
<OrgName>
Size C
Project Name F2J
Rev 1.1
Date: Thursday, April 27, 2006
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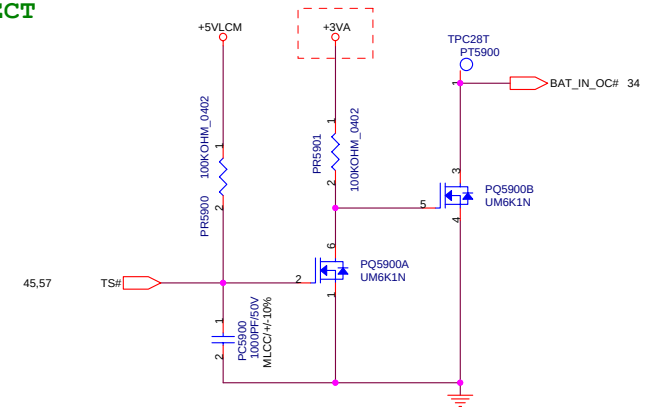
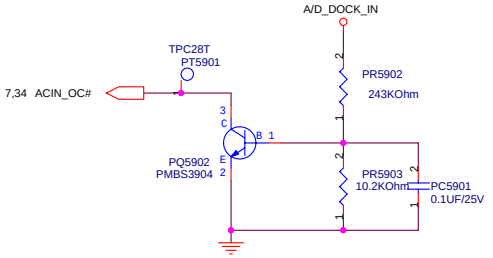
Title :	POWER_PIC		
<OrgName>	Engineer:		
Size: Custom	Project Name: F2J		Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 58 of 63		

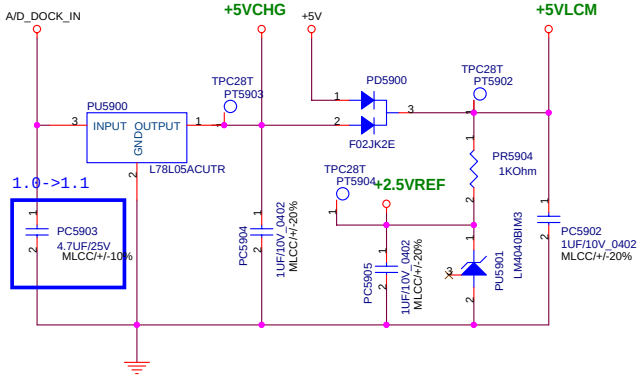
BATTERY IN DETECT



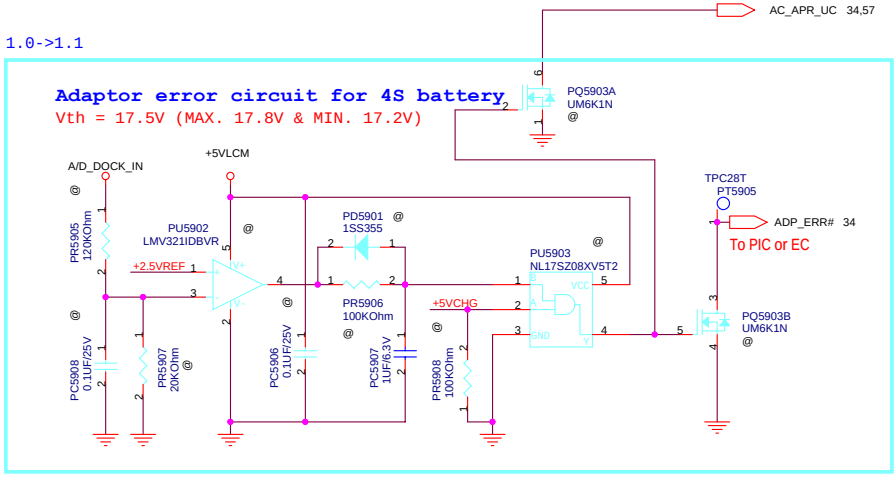
ADAPTER IN DETECT



+5VLCM, +5VCHG & +2.5VREF

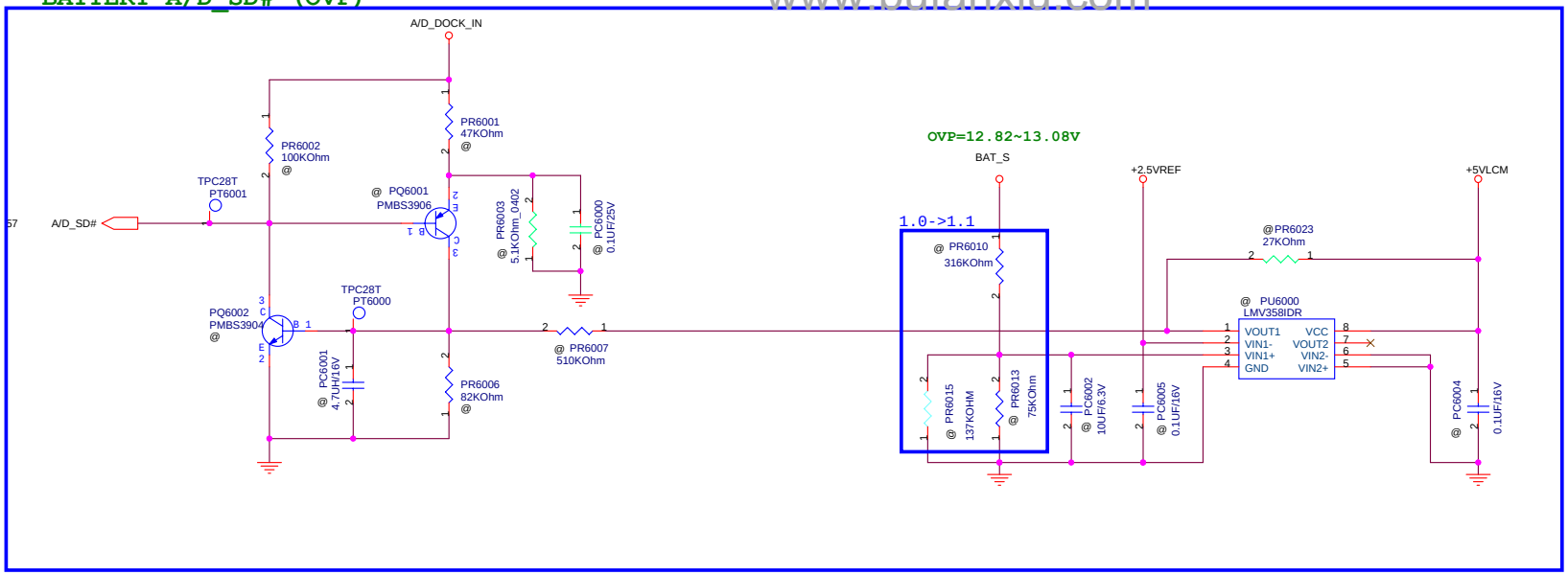


1.0->1.1



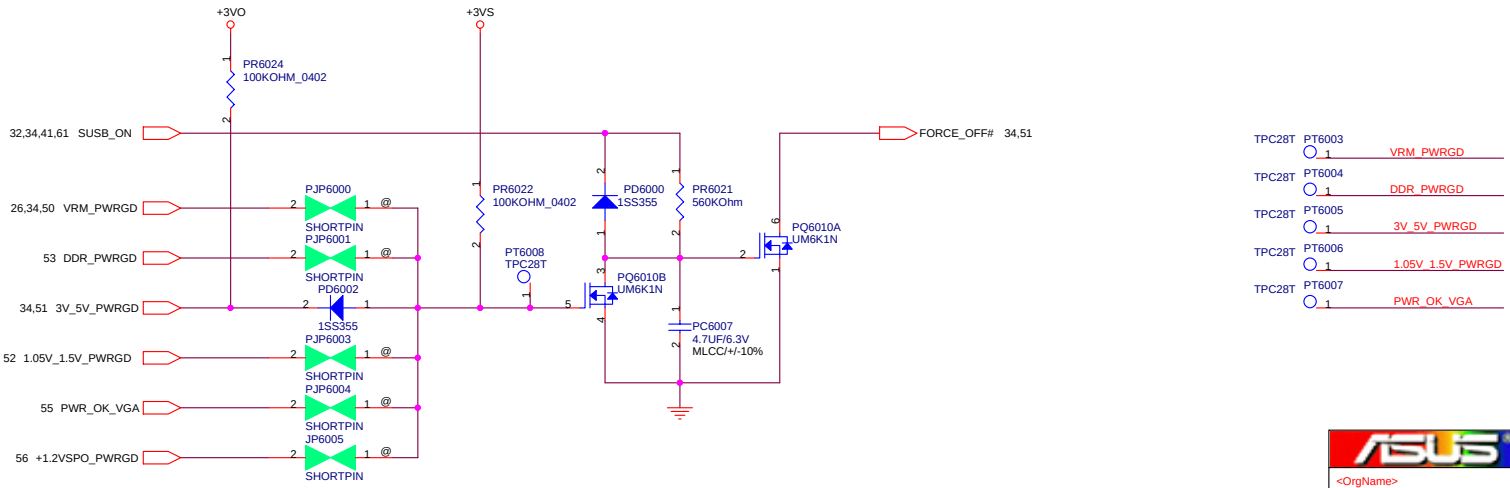
ASUS	Title : POWER_DETECT	
<OrgName>	Engineer:	
Size: Custom	Project Name: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 59 of 63	

BATTERY A/D_SD# (OVP)



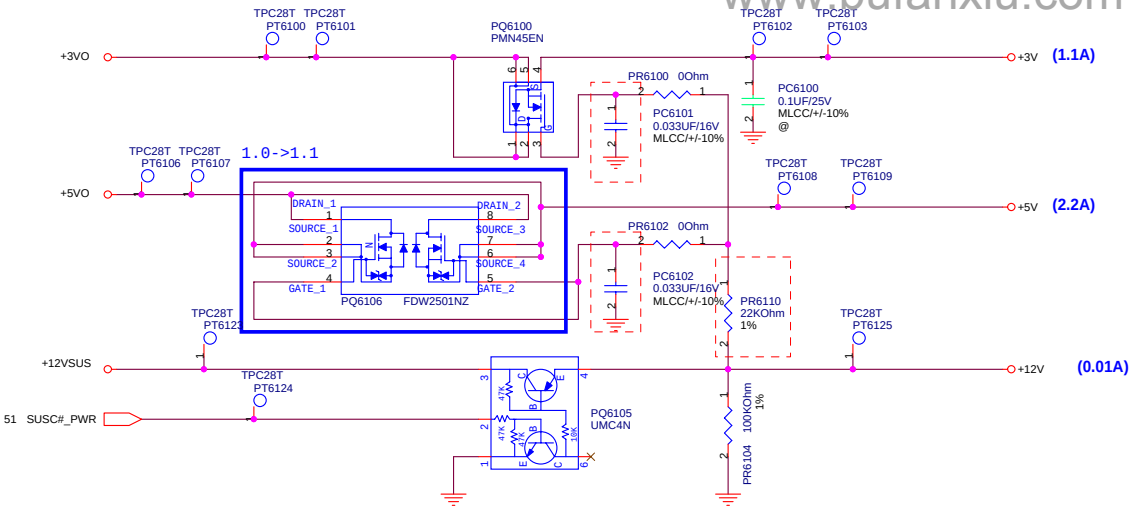
1.2->2.0

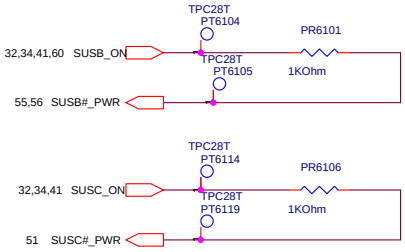
POWER GOOD DETECTER



Title : POWER_PROTECT		
<OrgName>	Engineer:	
Size: Custom	Project Name: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 60 of 63	

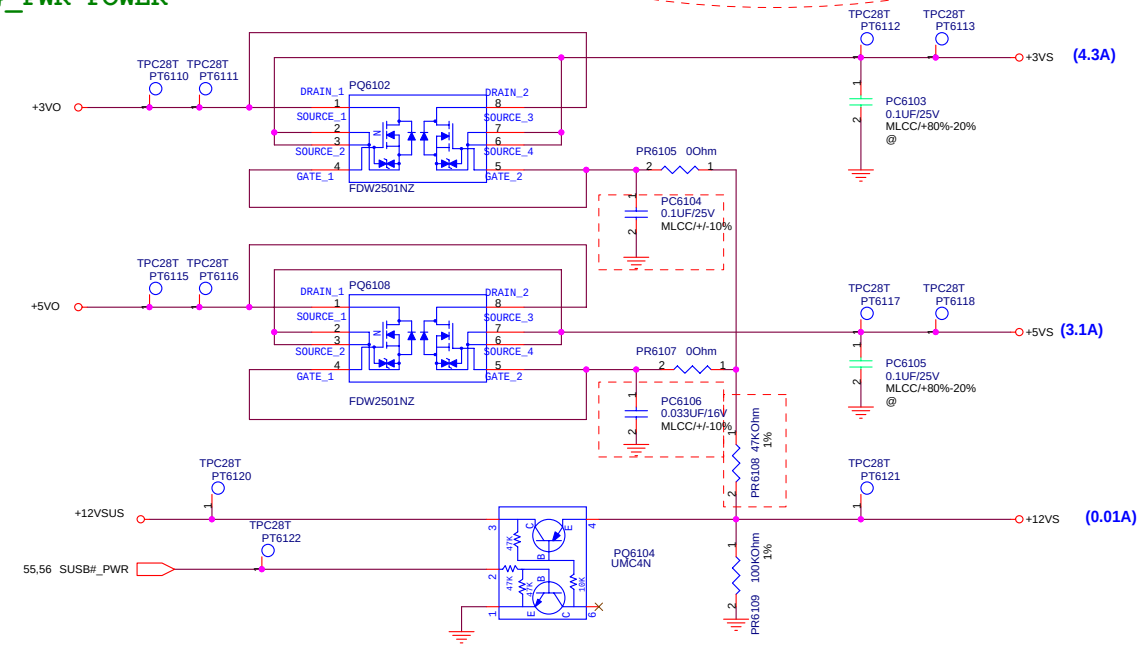
SUSC#_PWR POWER



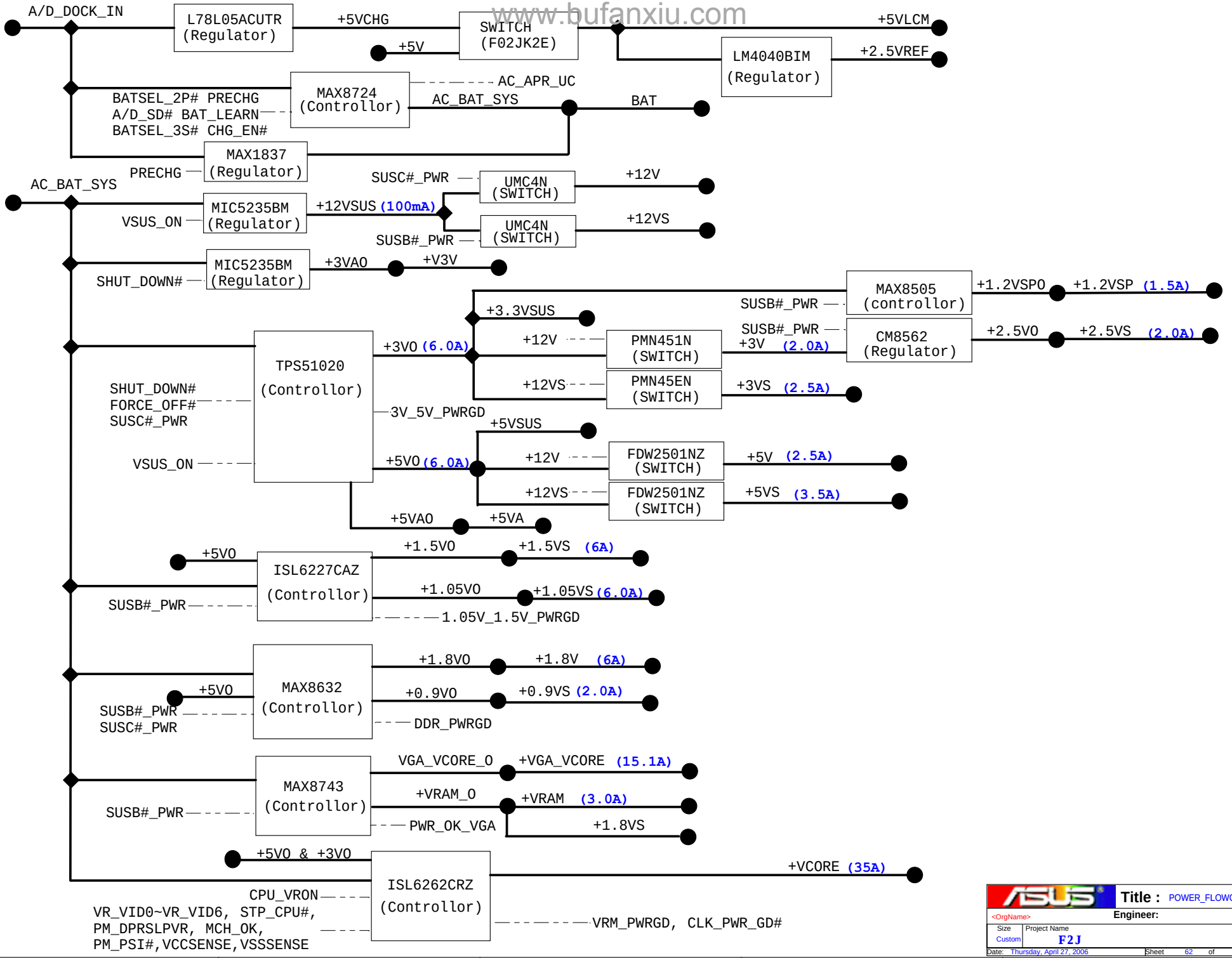


DEL +3VSG MOS

SUSB#_PWR POWER



Title : POWER_LOAD SWITCH		
<OrgName>	Engineer:	
Size: Custom	Project Name: F2J	Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 61 of 63	



Title : POWER_FLOWCHART		
<OrgName>	Engineer:	
Size: Custom	Project Name: F2J	Rev: 1.1
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AC_BAT_SYS → AC_BAT_SYS 23,50,51,52,53,54,55,57

+3VA → +3VA 23,34,41,54,59

+5VA → +5VA 51,54

+5VO → +5VO 51,52,53,55,61

+3VO → +3VO 51,52,56,60,61

+3VSUS → +3VSUS 31,33,37,43,51

+5VSUS → +5VSUS 38,39,51

+3V → +3V 23,27,32,33,37,39,40,41,54,61

+3VS → +3VS 17,20,21,23,32,33,34,35,36,37,39,40,41,42,43,50,52,60,61

+12VSUS → +12VSUS 51,61

+12V → +12V 30,36,43,61

+12VS → +12VS 23,24,61

+5V → +5V 32,41,59,61

+5VS → +5VS 21,23,34,35,36,38,39,41,42,43,50,61

+2.5VO → +2.5VO 54

+2.5VS → +2.5VS 17,20,41,54

+1.8VO → +1.8VO 53

+1.8V → +1.8V 41,53

+1.8VS → +1.8VS 18,20,22,41,55

+VCCP → +VCCP 12,41,52

+0.9VS → +0.9VS 15,22,41,53

BAT → BAT 45,57

+5VCHG → +5VCHG 57,59

+5VLCM → +5VLCM 57,59,60

+2.5VREF → +2.5VREF 54,57,59,60

+VCORE → +VCORE 41,50

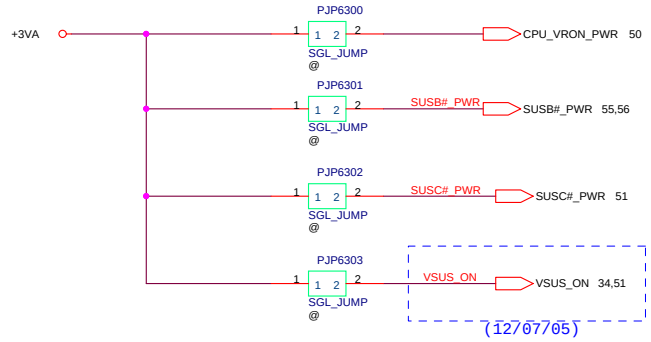
+VGA_VCORE → +VGA_VCORE 17,20,41,55

+VRAM → +VRAM 18,20,22,41,55

+1.2VSP → +1.2VSP 19,20,41,56

BAT_CON → BAT_CON 45,57

FOR POWER TEST



ASUS	Title : POWER_SIGNAL		
<OrgName>	Engineer:		
Size: Custom	Project Name: F2J		Rev: 1.1
Date: Thursday, April 27, 2006	Sheet 63 of 63		