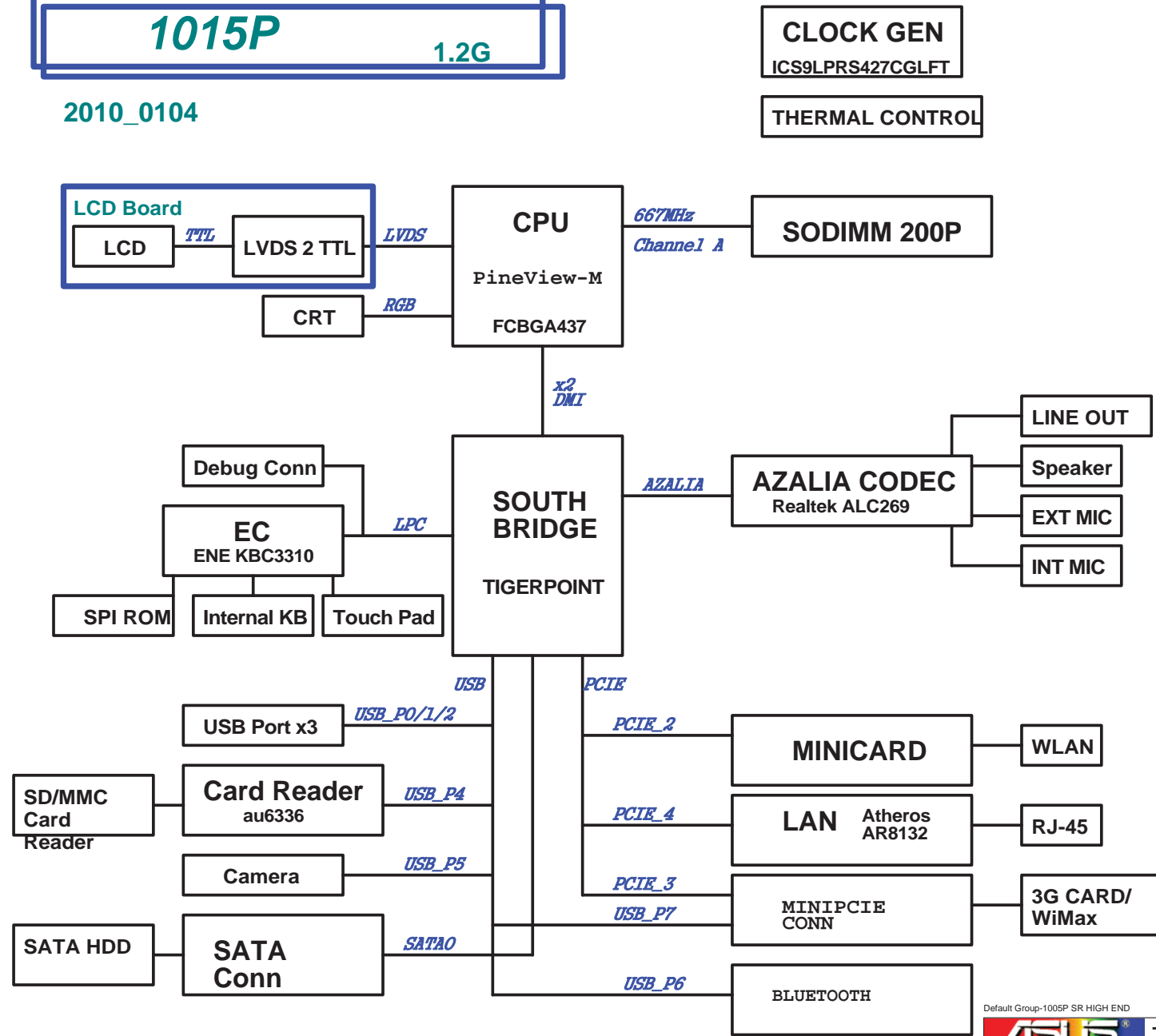


- 01\_Block Diagram
- 02\_Power Sequence
- 03\_Clock Gen\_ICS9LPRS427C
- 04.PineView-M\_1 (LVDS\_DMI\_CPU)
- 05.PineView-M\_2 (DDR2\_XDP\_CRT)
- 06.PineView-M\_3 (PWR&GND)
- 07.XDP
- 08.Tigerpoint\_DMI\_USB
- 09.Tigerpoint\_SYS
- 10.Tigerpoint\_PWR
- 11.DDR2 SODIMM
- 12.DDR2-Termination
- 13.Onboard VGA
- 14.LCD Conn\_LID
- 15.WIFI&SMART33SW
- 16.LAN\_AR8132
- 17.WLAN
- 18.USIN&3G\_CON
- 19.Bluetooth
- 20.HDD\_CON
- 21.
- 22.
- 23.USB Port1
- 24.EC\_ENE KB3310
- 25.KB\_TP
- 26.Fan\_debug
- 27.SPI\_ROM
- 28.DUA\_CON
- 29.PWR Jack
- 30\_Discharge
- 31.
- 32.Srew Hole&EMI
- 33.Power Flow
- 34.Power\_Charger
- 35.Vcore
- 36.Power\_+1.8V&VTTDDR&+1.8VS
- 37.Power\_VCCP
- 38.Power\_+0.89VS
- 39.Power\_+1.5VS
- 40.Power Latch
- 41.Power System
- 42.power switch

# 1015P 1.2G

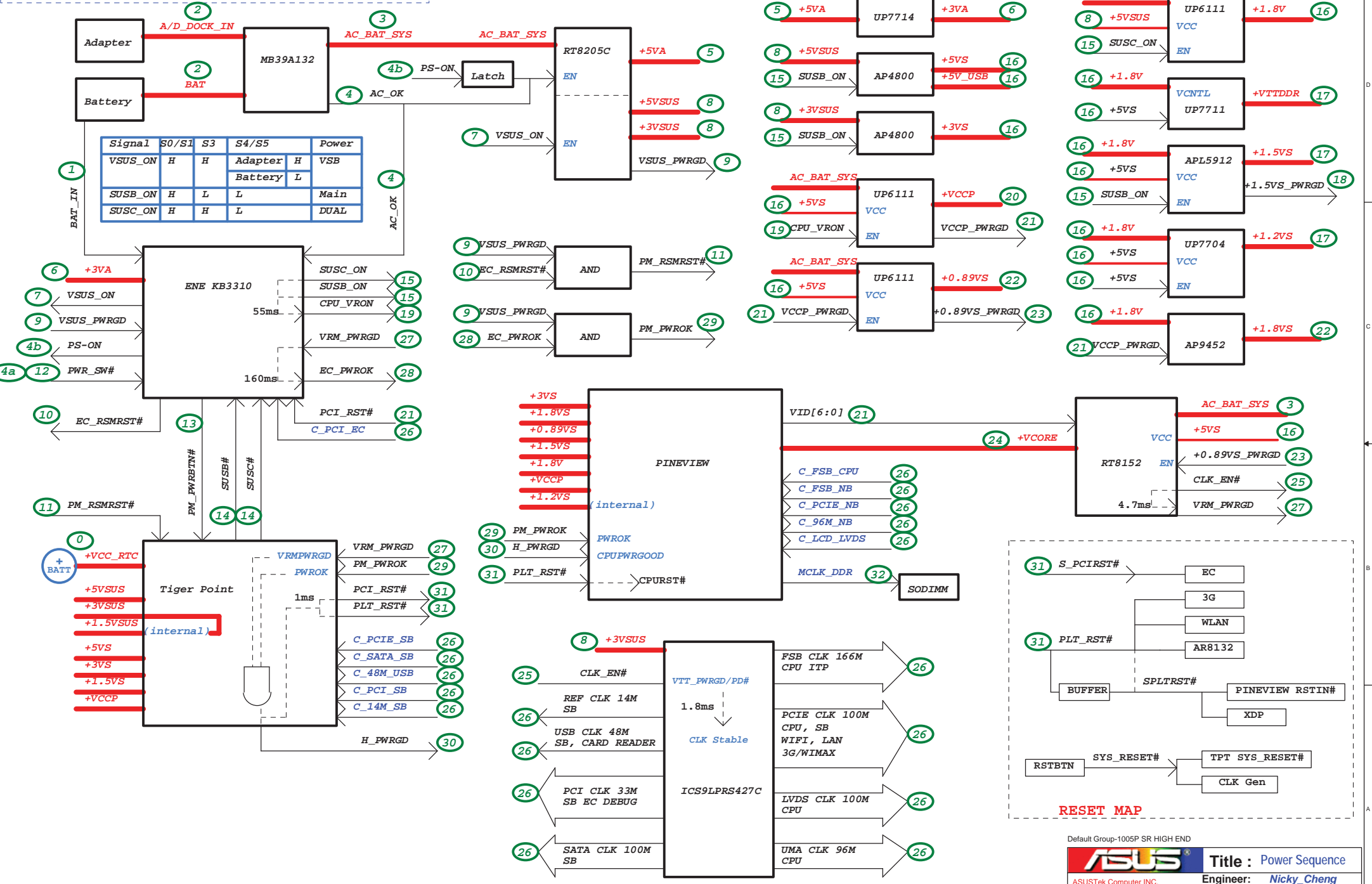
2010\_0104



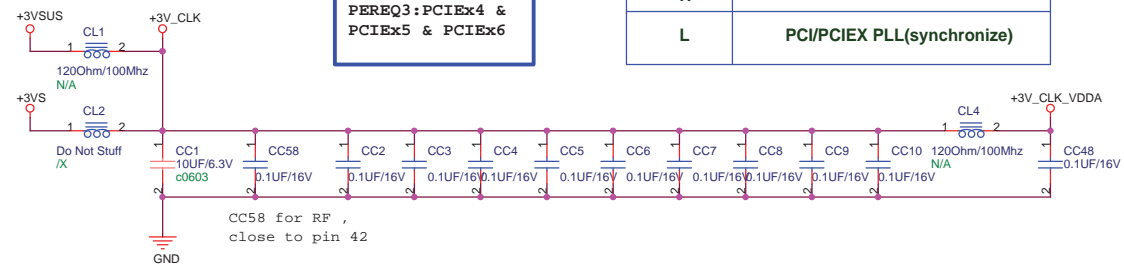
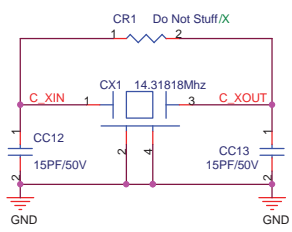
Default Group-1005P SR HIGH END

<b>ASUS</b>		<b>Title : Block Diagram</b>	
ASUSTek Computer INC.		Engineer: <b>Nicky_Cheng</b>	
Size	Project Name	Rev	Rev
Custom	<b>1015P</b>	1.2G	1.2G
Date: Wednesday, February 24, 2010		Sheet 1 of 42	

For Adapter Mode: (1) -> (2) -> (3) -> (4) -> (5) -> ...  
 For Battery Mode: (1) -> (2) -> (3) -> (4) -> (4a) -> (4b) -> (5) -> ...



<http://hobi-elektronika.net>

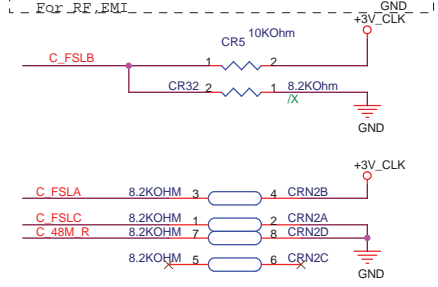
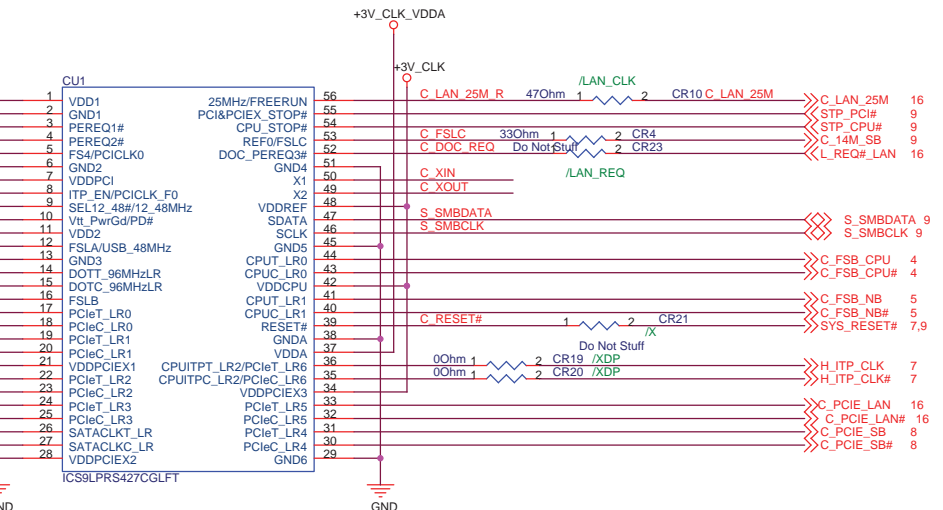
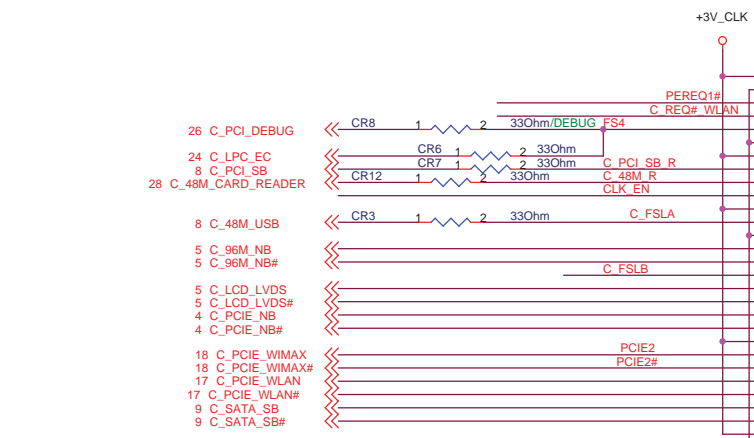


1:Disable  
0:Enable

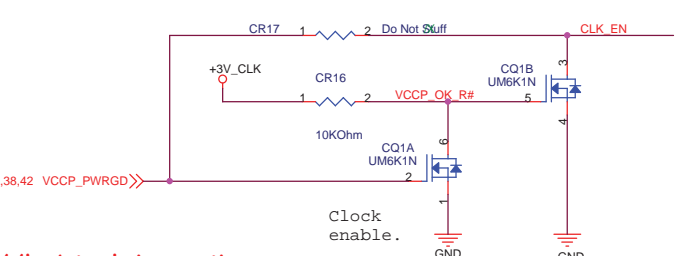
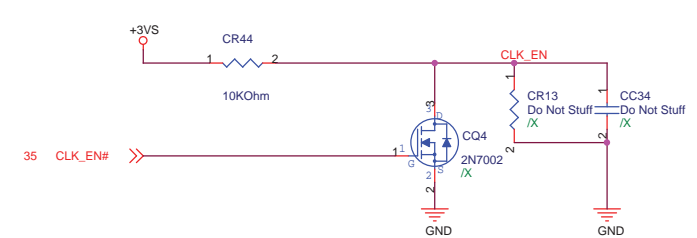
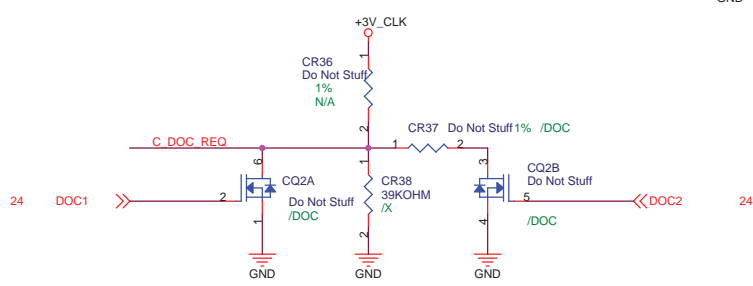
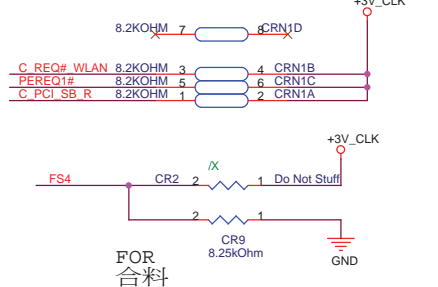
PEREQ1:PCIEx0 &  
PCIEx1  
PEREQ2:PCIEx2 &  
PCIEx3 & SATA  
PEREQ3:PCIEx4 &  
PCIEx5 & PCIEx6

FS4	Function
H	FIXED PLL (Asynchronous)
L	PCI/PCIEX PLL(synchronize)

Component	Value	Function
C SATA_SB	CC50 2	1 Do Not Stuff /X
C SATA_SB#	CC51 2	1 10PF/50V /X
PCIEX2	CC52 2	1 Do Not Stuff /X
PCIEX2#	CC53 2	1 Do Not Stuff /X
C_LCD_LVDS	CC54 2	1 Do Not Stuff /X
C_LCD_LVDS#	CC55 2	1 Do Not Stuff /X
STP_PCI#	EC7 2	1 Do Not Stuff /EMI/X
STP_CPU#	EC10 2	1 Do Not Stuff /EMI/X
C_PCI_SB_R	CC36 2	1 Do Not Stuff /X
FS4	CC37 2	1 Do Not Stuff /X
S_SMBDATA	EC14 2	2 22PF/50V /RF
S_SMBCLK	EC15 2	2 22PF/50V /RF
C_DOC_REQ	EC16 2	1 Do Not Stuff /RF
C_FSLC	CC39 2	2 22PF/50V /RF
C_FSLA	CC40 2	1 Do Not Stuff /RF
C_48M_R	CC35 2	1 Do Not Stuff /RF
C_LAN_25M_R	CC11 2	2 22PF/50V /RF
C_PCIE_LAN	EC17 2	1 10PF/50V /EMI/X
C_PCIE_LAN#	EC18 2	1 10PF/50V /EMI/X
C_PCI_DEBUG	EC19 2	1 10PF/50V /EMI/X
C_LPC_EC	EC20 2	1 10PF/50V /EMI/X
C_14M_SB	EC21 2	1 10PF/50V /EMI/X



FSLC	FSLB	FSLA	CPU(MHZ)
0	1	1	166
0	0	1	133



O_DOC1	O_DOC2	Voltage	Status
L	L	2.4-3.3V	Super
L	H	0.5-2.36V	Normal
H	*	0-0.35V	Power saving

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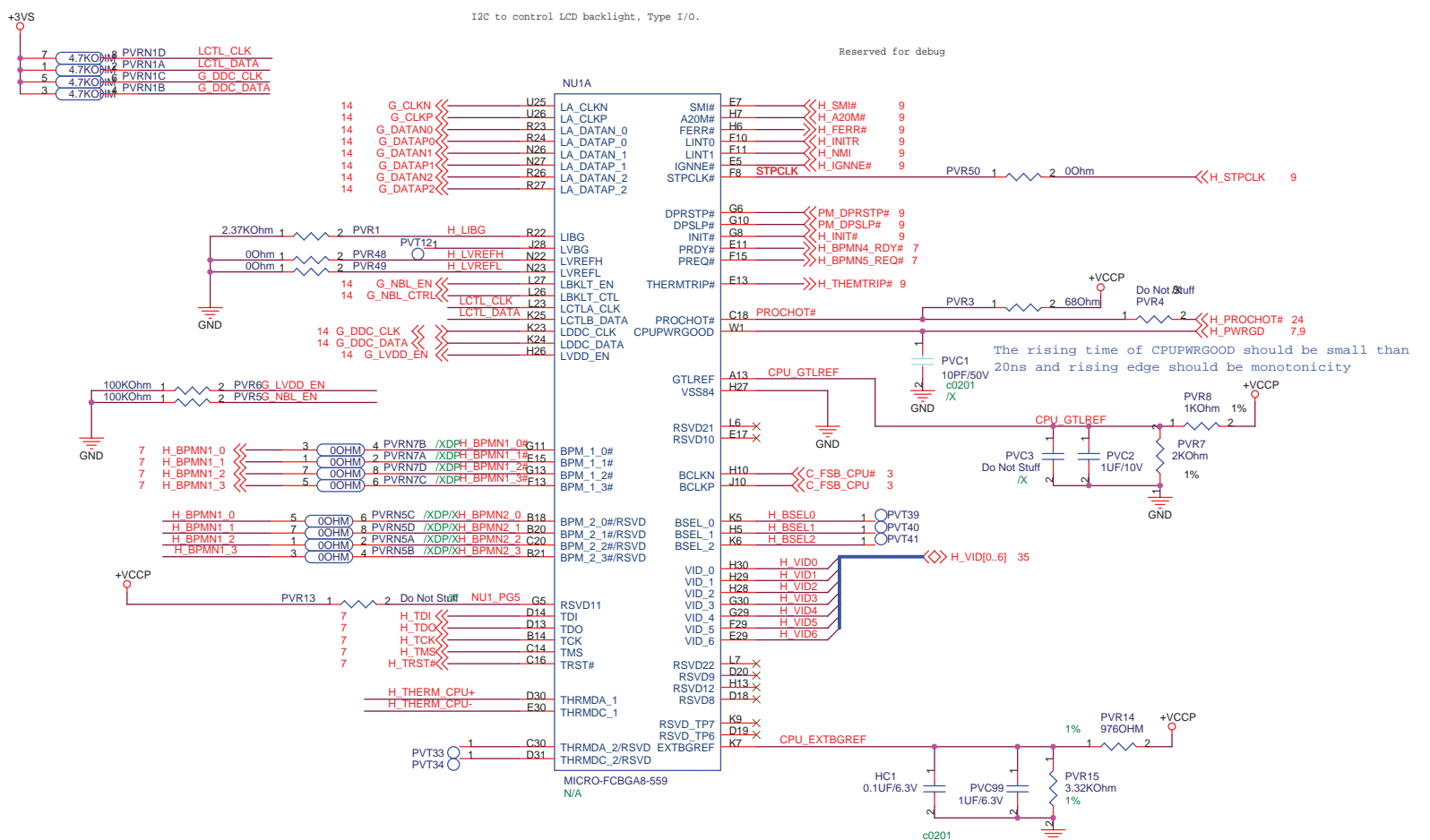
Default Group-1005P SR HIGH END

**ASUS** Title: ICS9LPRS427C

ASUSTek Computer INC. Engineer: Nicky\_Cheng

Size	Project Name	Rev
A3	1015P	1.2G

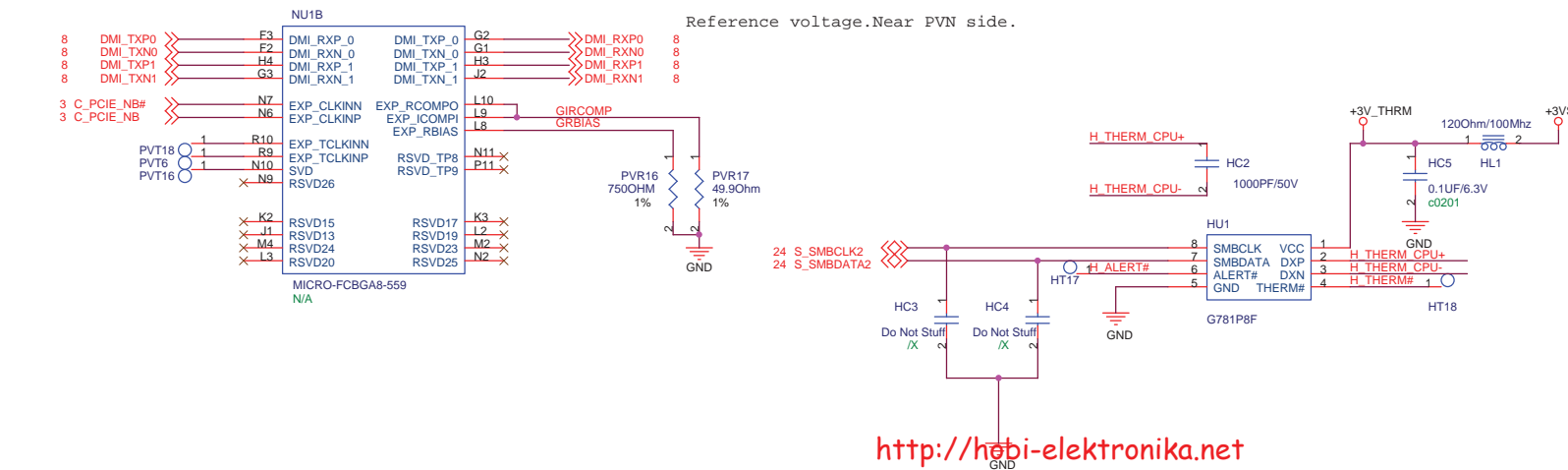
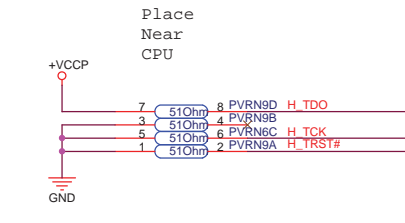
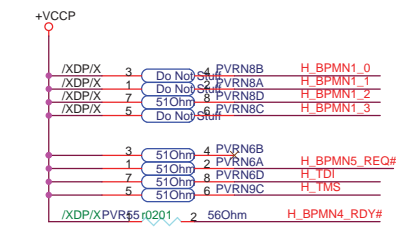
Date: Wednesday, February 24, 2010 Sheet 3 of 42



DDR2 CPU Sample SKU	ASUS P/N
ES1	01G013070000
ES2	01G013200000
QS	01G013200001
PRQ	01G013200002

DDR3 N455 CPU Sample SKU	ASUS P/N
PRE-ES1	01G013070003
ES1	01G013260100

DDR3 N475 CPU Sample SKU	ASUS P/N
ES	01G013260000



<http://hoebi-elektronika.net>

Default Group-1005P SR HIGH END

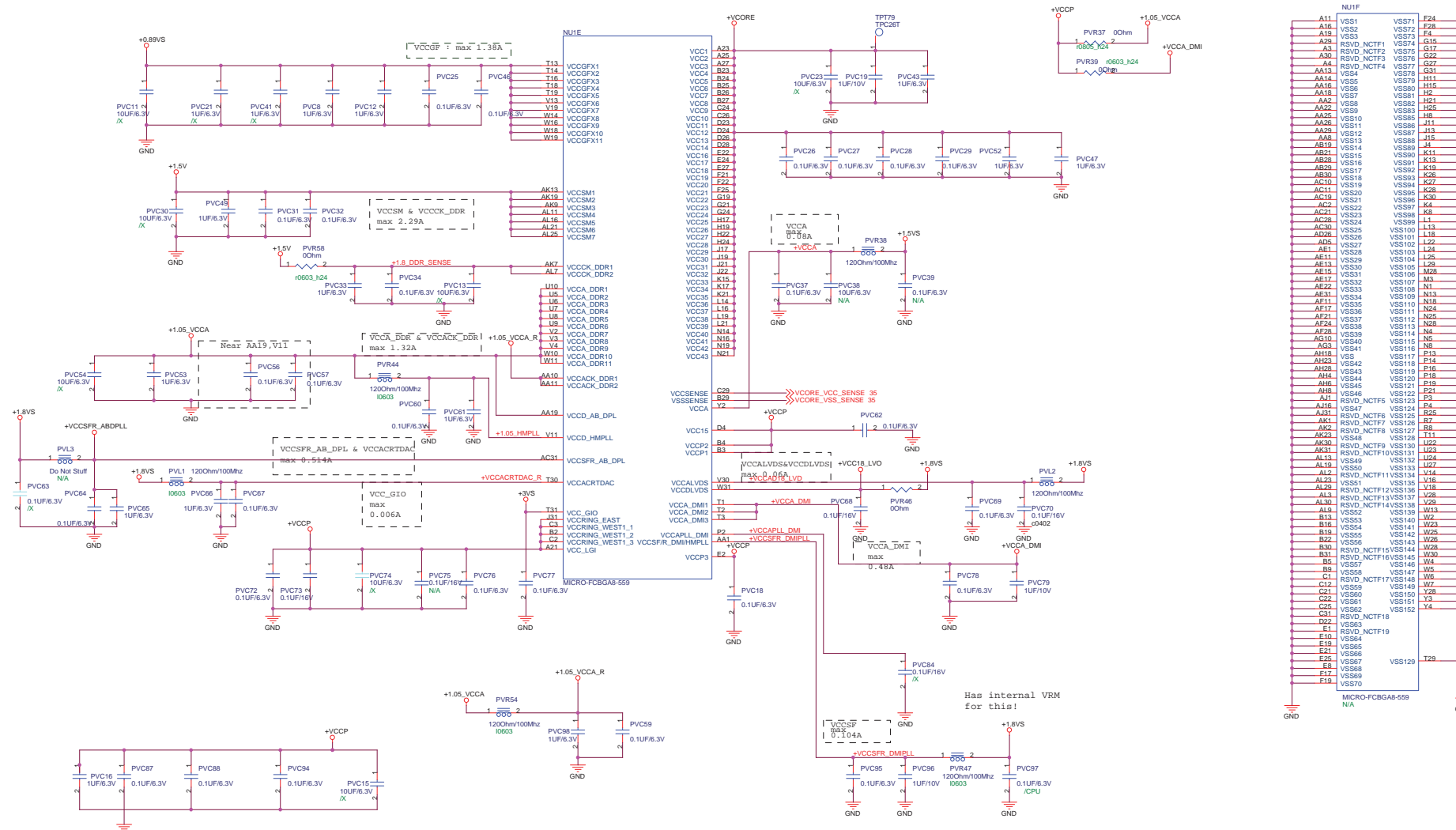
Title : PineView\_1

ASUSTek Computer INC. Engineer: Nicky\_Cheng

Size	Project Name	Rev
A3	1015P	1.2G

Date: Wednesday, February 24, 2010 Sheet 4 of 42



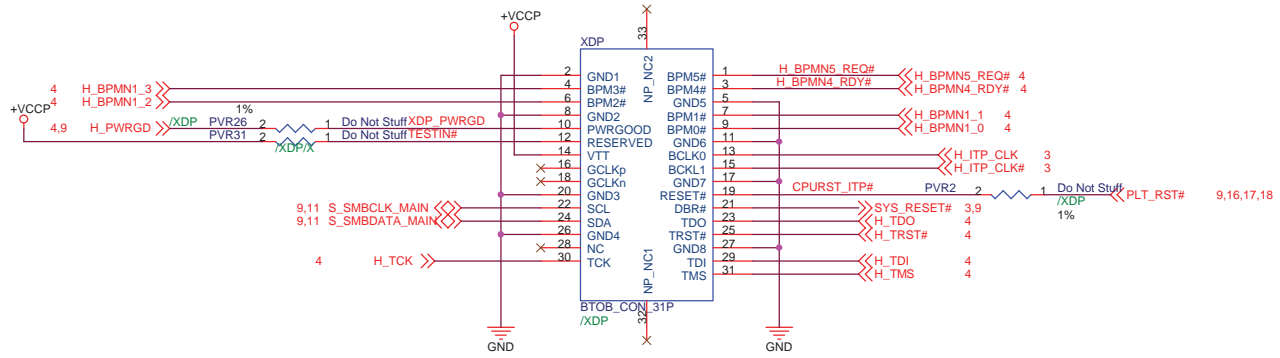


NU1F			
A11	VSS1	VSS71	F24
A16	VSS2	VSS72	F28
A19	VSS3	VSS73	F4
A28	RSVD_NCTF1	VSS74	G15
A3	RSVD_NCTF2	VSS75	G17
A30	RSVD_NCTF3	VSS76	G22
A4	RSVD_NCTF4	VSS77	G31
AA13	VSS4	VSS78	G31
AA1	VSS5	VSS79	H11
AA16	VSS6	VSS80	H15
AA18	VSS7	VSS81	H2
AA2	VSS8	VSS82	H25
AA22	VSS9	VSS83	H6
AA25	VSS10	VSS84	H11
AA28	VSS11	VSS85	H11
AA29	VSS12	VSS86	H11
AA8	VSS13	VSS87	H13
AA8	VSS13	VSS88	H15
AB19	VSS14	VSS89	J1
AB21	VSS15	VSS90	K11
AB28	VSS16	VSS91	K13
AB29	VSS17	VSS92	K19
AB30	VSS18	VSS93	K28
AC10	VSS19	VSS94	K27
AC11	VSS20	VSS95	K28
AC19	VSS21	VSS96	K30
AC2	VSS22	VSS97	K4
AC41	VSS23	VSS98	K4
AC28	VSS24	VSS99	L1
AD26	VSS25	VSS100	L13
AD5	VSS26	VSS101	L18
AE1	VSS27	VSS102	L22
AE1	VSS28	VSS103	L24
AE11	VSS29	VSS104	L25
AE13	VSS30	VSS105	L28
AE15	VSS31	VSS106	L28
AE17	VSS32	VSS107	M3
AE2	VSS33	VSS108	M1
AE31	VSS34	VSS109	N13
AF11	VSS35	VSS110	N24
AF21	VSS36	VSS111	N25
AF24	VSS37	VSS112	N28
AF28	VSS38	VSS113	N28
AF28	VSS39	VSS114	N4
AG3	VSS40	VSS115	N5
AG3	VSS41	VSS116	N8
AH23	VSS	VSS117	P14
AH23	VSS42	VSS118	P16
AH28	VSS43	VSS119	P16
AH4	VSS44	VSS120	P19
AH6	VSS45	VSS121	P19
AH6	VSS46	VSS122	P3
AJ1	RSVD_NCTF5	VSS123	P3
AJ16	VSS47	VSS124	P4
AJ31	RSVD_NCTF6	VSS125	R7
AK1	RSVD_NCTF7	VSS126	R7
AK2	VSS48	VSS127	T11
AK3	RSVD_NCTF8	VSS128	T11
AK30	RSVD_NCTF9	VSS130	U22
AK31	RSVD_NCTF10	VSS131	U23
AL13	VSS49	VSS132	U24
AL19	VSS50	VSS133	U27
AL2	RSVD_NCTF11	VSS134	V14
AL23	VSS51	VSS135	V16
AL28	RSVD_NCTF12	VSS136	V18
AL3	RSVD_NCTF13	VSS137	V29
AL9	RSVD_NCTF14	VSS138	W1
B13	VSS54	VSS139	W2
B16	VSS53	VSS140	W23
B19	VSS55	VSS142	W25
B22	VSS56	VSS143	W26
B30	RSVD_NCTF15	VSS144	W28
B31	RSVD_NCTF16	VSS145	W30
B5	VSS57	VSS146	W4
B9	VSS58	VSS147	W5
C11	RSVD_NCTF17	VSS148	W5
C12	VSS59	VSS149	W7
C21	VSS60	VSS150	Y28
C25	VSS61	VSS151	Y3
C31	RSVD_NCTF18	VSS152	Y4
D22	VSS63	VSS129	T29
E1	VSS64		
E10	RSVD_NCTF19		
E19	VSS65		
E41	VSS66		
E25	VSS67		
F8	VSS68		
F17	VSS69		
F18	VSS70		

VCC = 3.5A  
 VCCA = 0.08A  
 VCCGFX = 1.38A  
 VCCALVDS , VCCDLVDS=0.06A  
 VCCA\_DMI = 0.48A  
 VCCSFR\_DMIIHMPLL = 0.104A  
 VCCA\_DDR and VCCACK\_DDR = 1.32A  
 VCCSM and VCCCK\_DDR = 2.27A  
 VCCRING\_EAST , VCCRING\_EAST\_WEST , VCC\_LGI , VCCD\_AB\_DPL , VCCD\_HMPLL = 0.33A  
 VCC\_GIO = 0.006A  
 VCCSFR\_AB\_DPL , VCCACRTDAC = 0.154A

Current for PineView

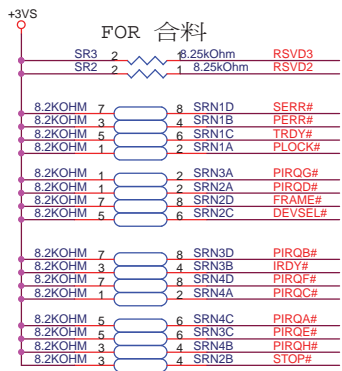
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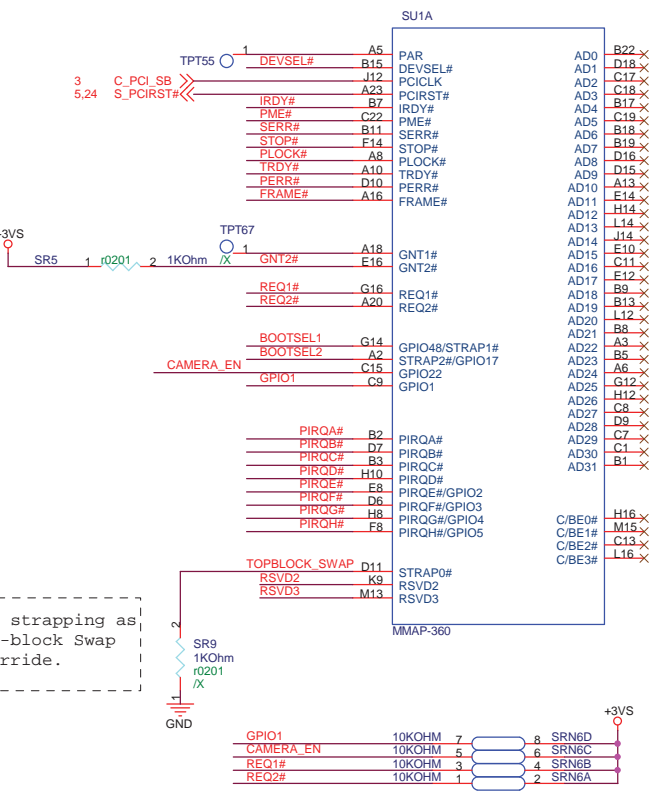
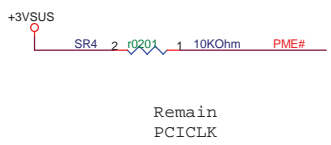
Change Device and PCB footprint of XDP1 to nomask footprint - nomask solution

新 Layout 機種請 XDP Connector 請畫 12G161300311 (w/ 2 through holes)。

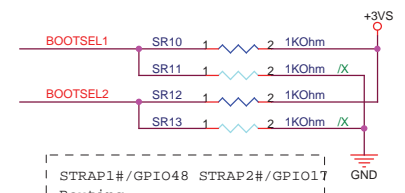
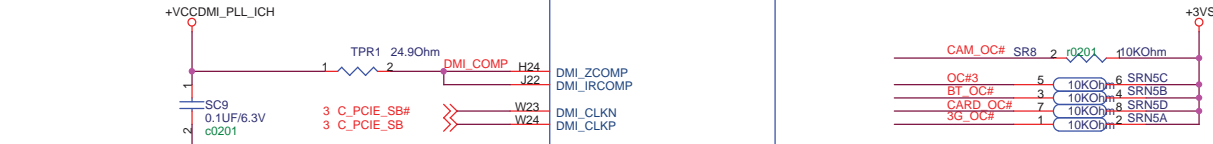
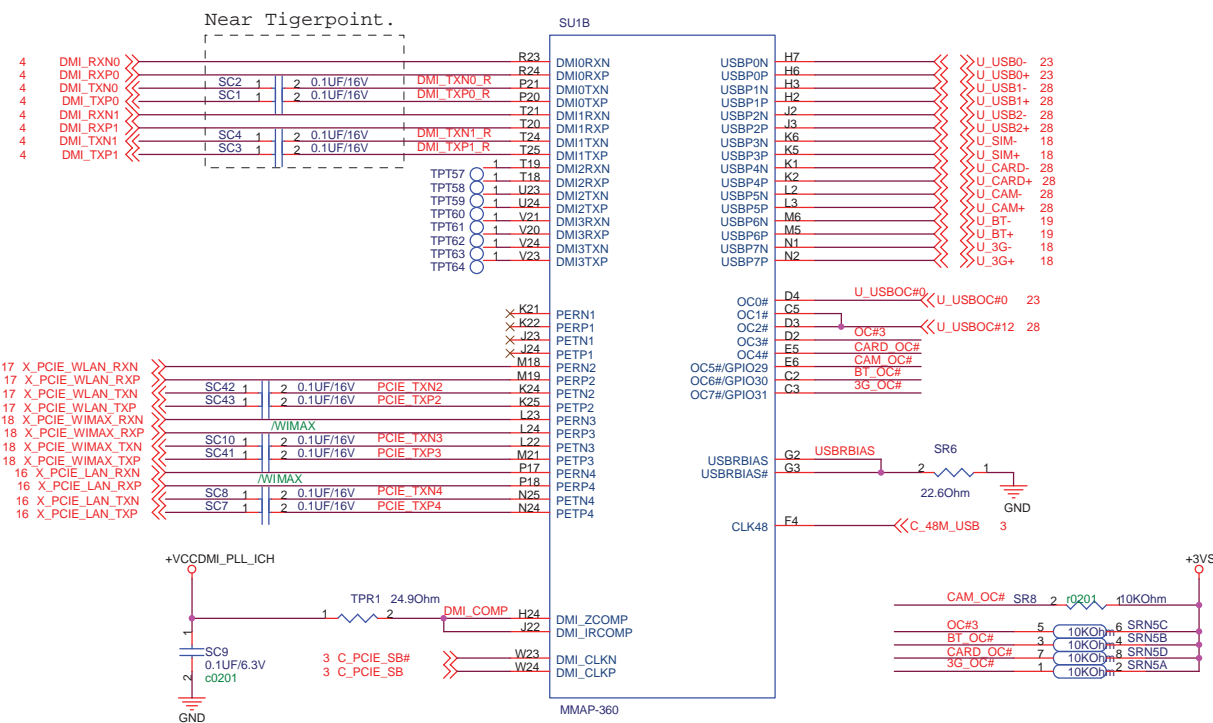




USB0	USB CONN
USB1	USB CONN
USB2	USB CONN
USB3	USIM
USB4	Card Reader
USB5	Camera
USB6	Blue tooth
USB7	3G



For strapping as Top-block Swap override.



STRAP1#/GPIO48 STRAP2#/GPIO17 Routing  
 0 1: Flash Cycles Routed to SPI  
 1 0: Flash Cycles Routed to PCI  
 1 1: Flash Cycles Routed to LPC

<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END

**ASUS** Title : **DMI&USB**

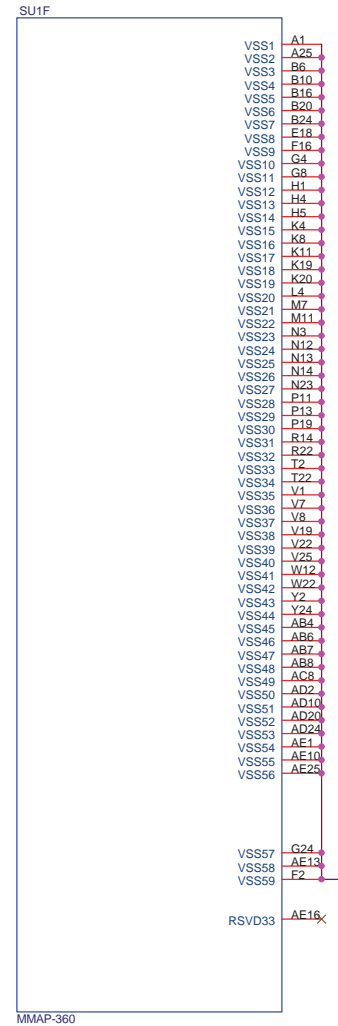
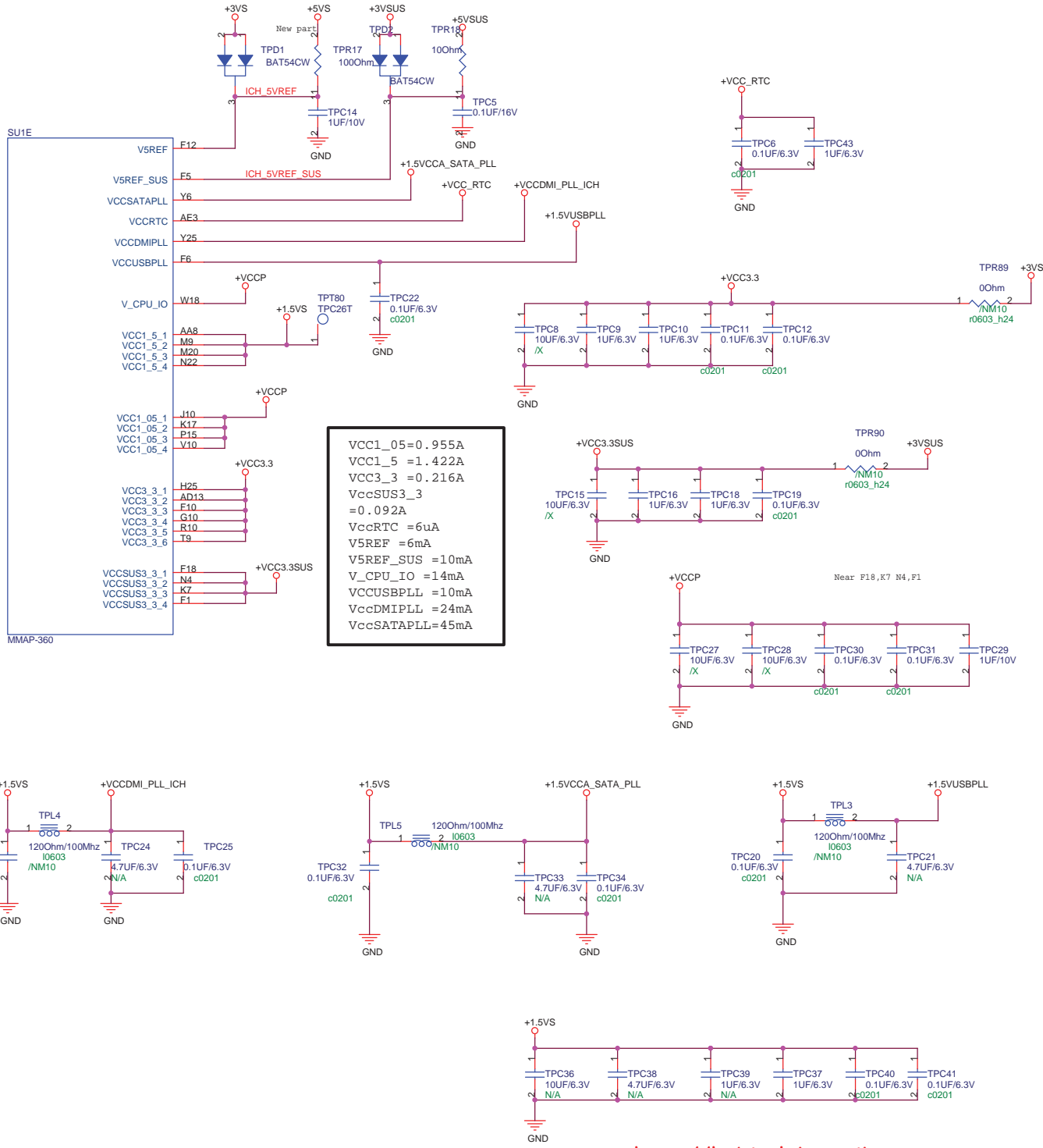
ASUSTek Computer INC. Engineer: **Nicky\_Cheng**

Size	Project Name	<b>1015P</b>	Rev
A3			1.2G

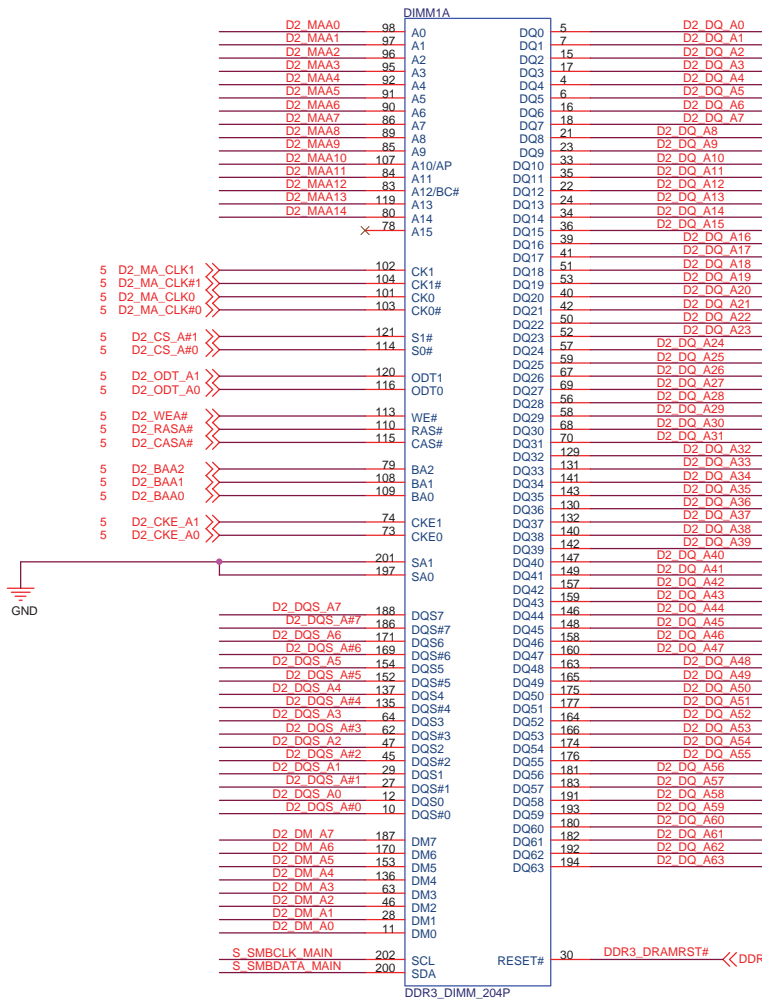
Date: Wednesday, February 24, 2010 Sheet 8 of 42








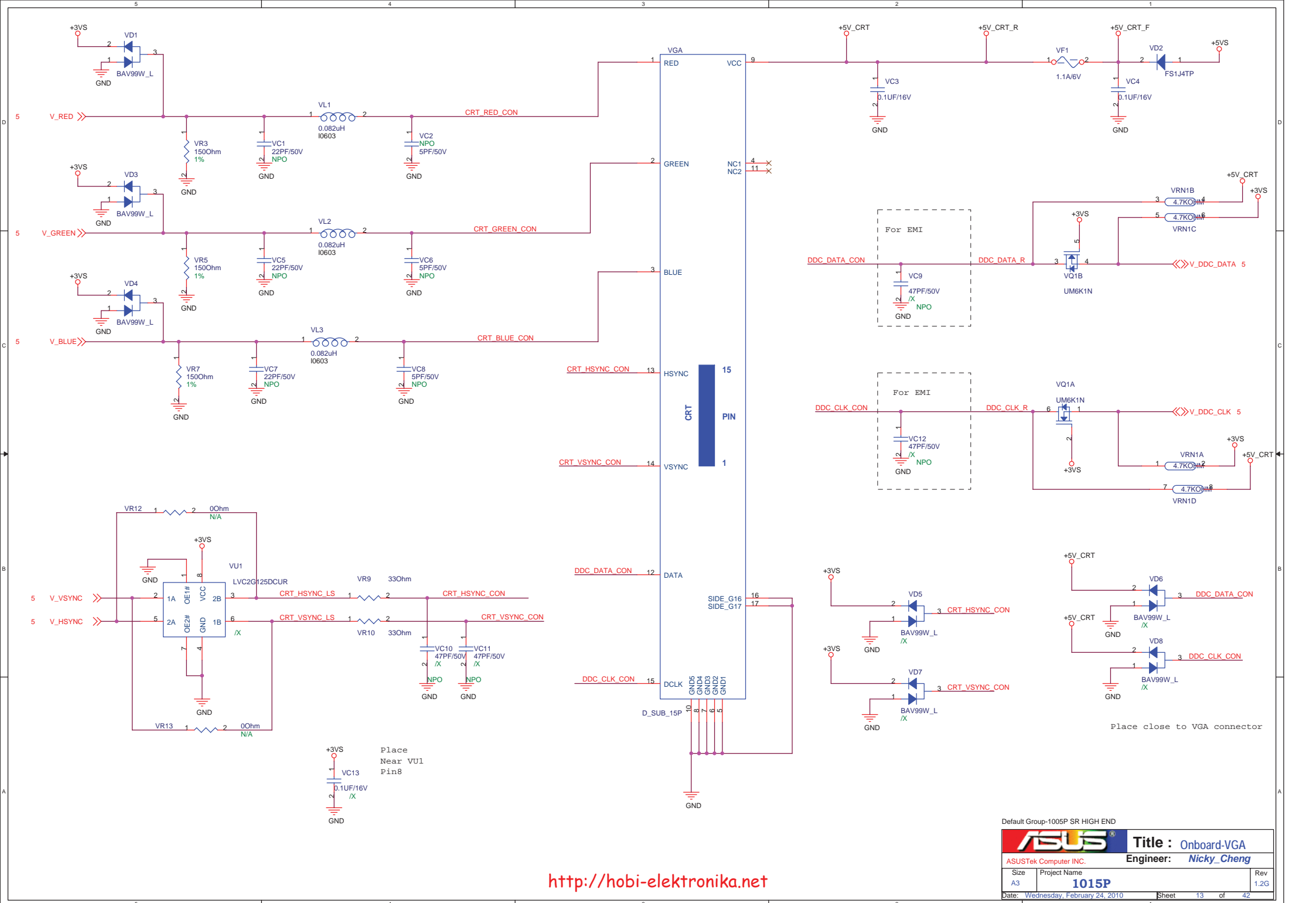
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 << >>D2\_DQS\_A[7:0] 5  
 << >>D2\_DQS\_A#[7:0] 5  
 << >>D2\_DM\_A[7:0] 5  
 << >>D2\_MAA[14:0] 5



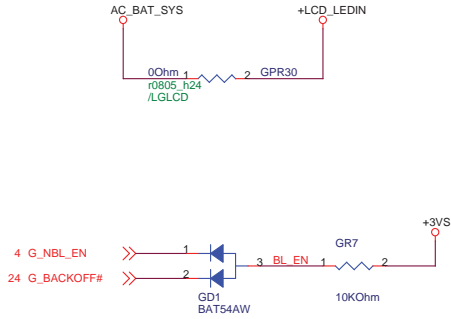
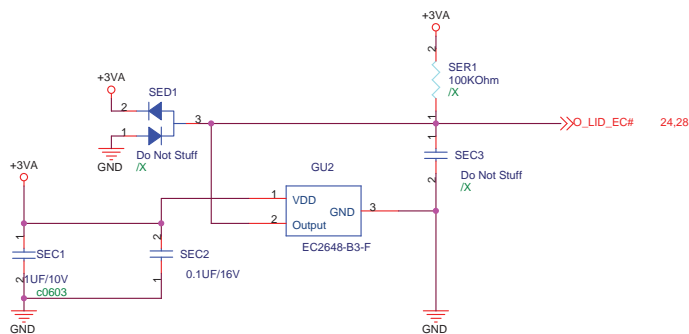
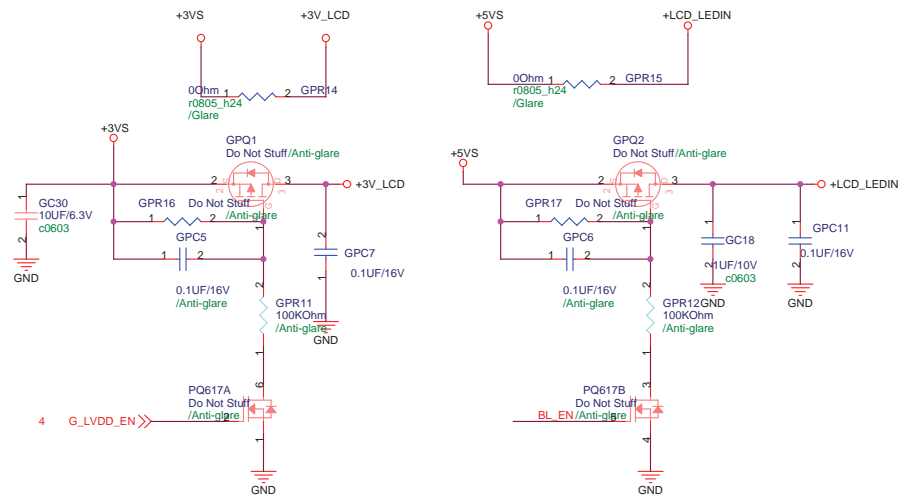
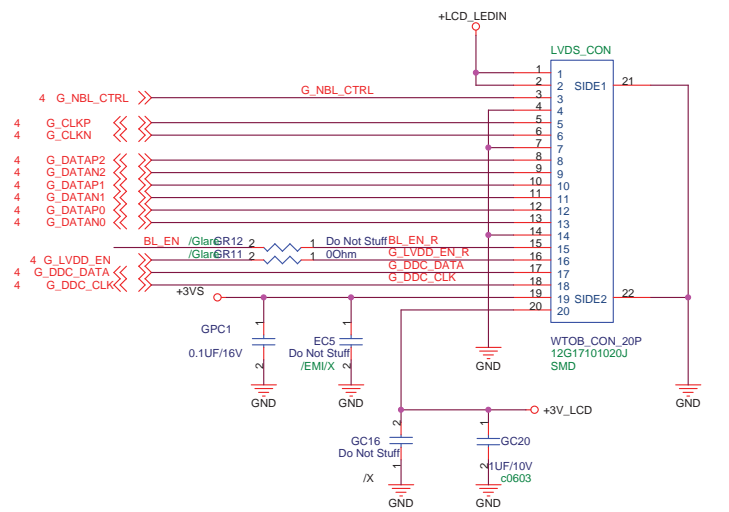
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Default Group-1005P SR HIGH END

		<b>Title :</b> DDR3
ASUSTek Computer INC.		<b>Engineer:</b> Nicky_Cheng
Size A3	Project Name <b>1015P</b>	Rev 1.2G
Date: Wednesday, February 24, 2010	Sheet 12	of 42



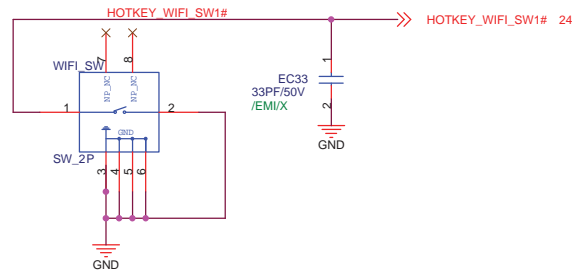
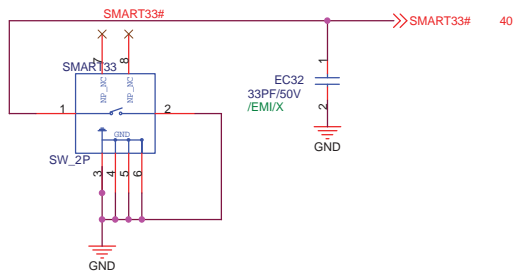
<http://hobi-elektronika.net>



G_DDC_CLK	GC1	2	1	Do Not Stuff	/X
G_DDC_DATA	GC2	2	1	Do Not Stuff	/X
G_CLKP	GC3	2	1	10PF/50V	EMI
G_CLKN	GC4	2	1	10PF/50V	EMI
G_DATAP2	GC5	2	1	10PF/50V	EMI
G_DATAN2	GC6	2	1	10PF/50V	EMI
G_DATAP1	GC7	2	1	10PF/50V	EMI
G_DATAN1	GC8	2	1	10PF/50V	EMI
G_DATAP0	GC9	2	1	10PF/50V	EMI
G_DATAN0	GC10	2	1	10PF/50V	EMI
G_NBL_CTRL	GC12	2	1	Do Not Stuff	/X
BL_EN	EC11	2	1	Do Not Stuff	EMI/X
G_LVDD_EN	EC12	2	1	Do Not Stuff	EMI/X

Default Group-1005P SR HIGH END

		<b>Title :</b> LVDS Conn_LID	
ASUSTek Computer INC.		Engineer: <i>Nicky_Cheng</i>	
Size	Project Name	Rev	
Custom	1015P	1.2G	
Date: Wednesday, February 24, 2010	Sheet	14	of 42



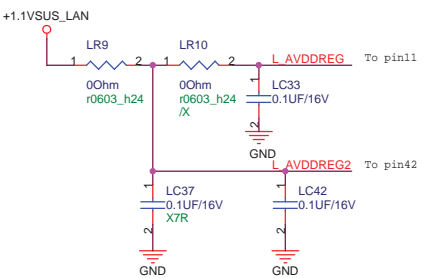
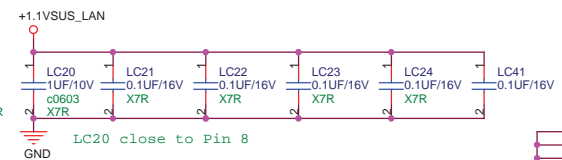
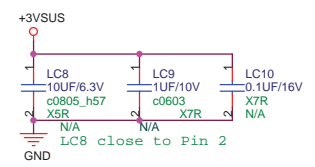
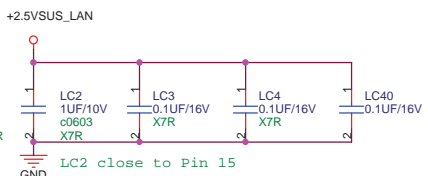
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Default Group-1005P SR HIGH END

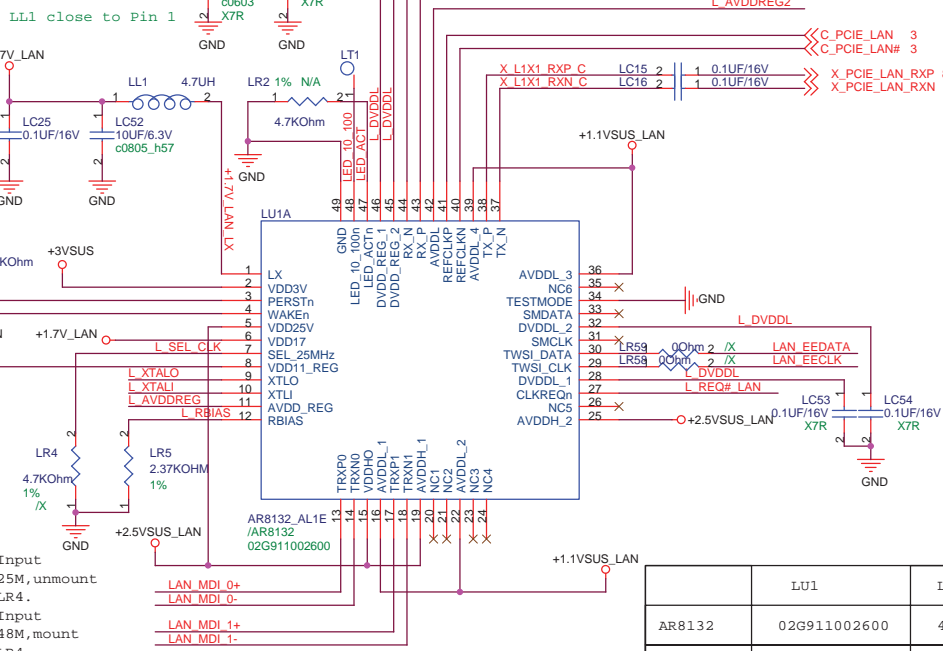
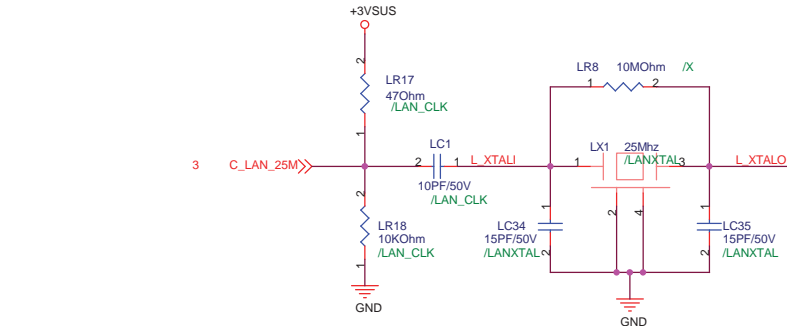
		<b>Title :</b> WIFI_SAMRT33	
ASUSTek Computer INC.		Engineer: Nicky_Cheng	
Size	Project Name	Rev	
A3	1015P	1.2G	
Date: Wednesday, February 24, 2010		Sheet	15 of 42

**LAN AR8132M**  
**Symbol 02G911002600**  
**BOM 02G911002601**

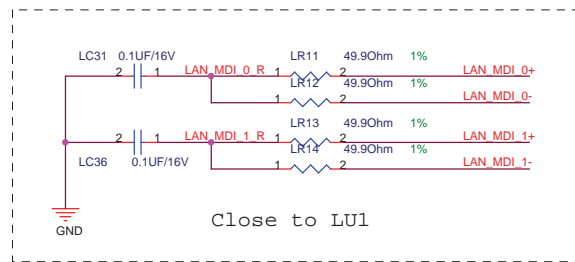
	LR2
Normal	N/A
Overclocking	/X



	LR9	LR10
Normal	N/A	/X
Overclocking	/X	N/A



	LU1	LR59	LR58	LC51	LU2	LC49	LC50
AR8132	02G911002600	4.7K	N/A	N/A	N/A	/X	/X
AR8132M	02G911002601	0 ohm	/X	/X	/X	/X	N/A



<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END

**ASUS** Title: LAN\_AR8132

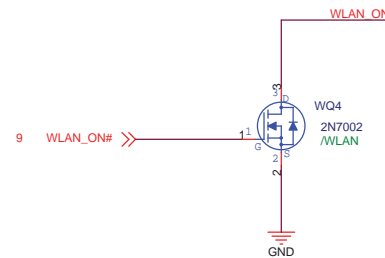
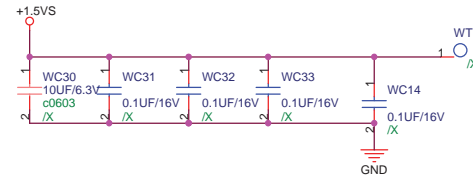
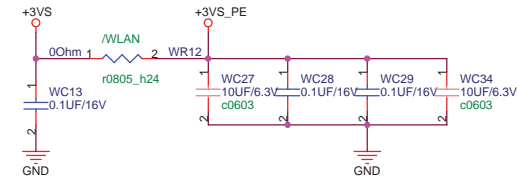
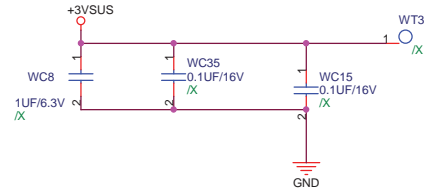
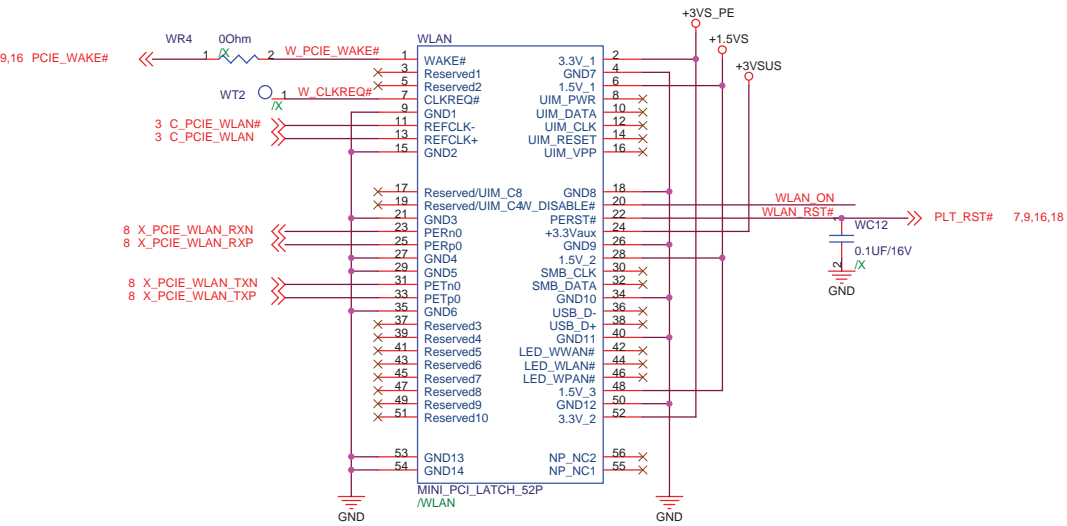
ASUSTek Computer INC. Engineer: Nicky\_Cheng

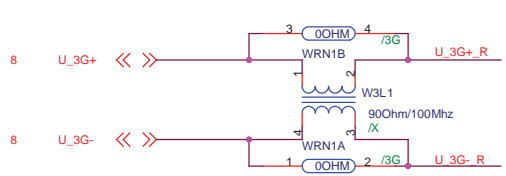
Size	Project Name	Rev
A3	1015P	1.2G

Date: Wednesday, February 24, 2010 Sheet 16 of 41

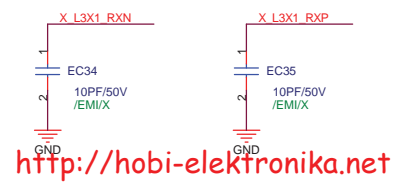
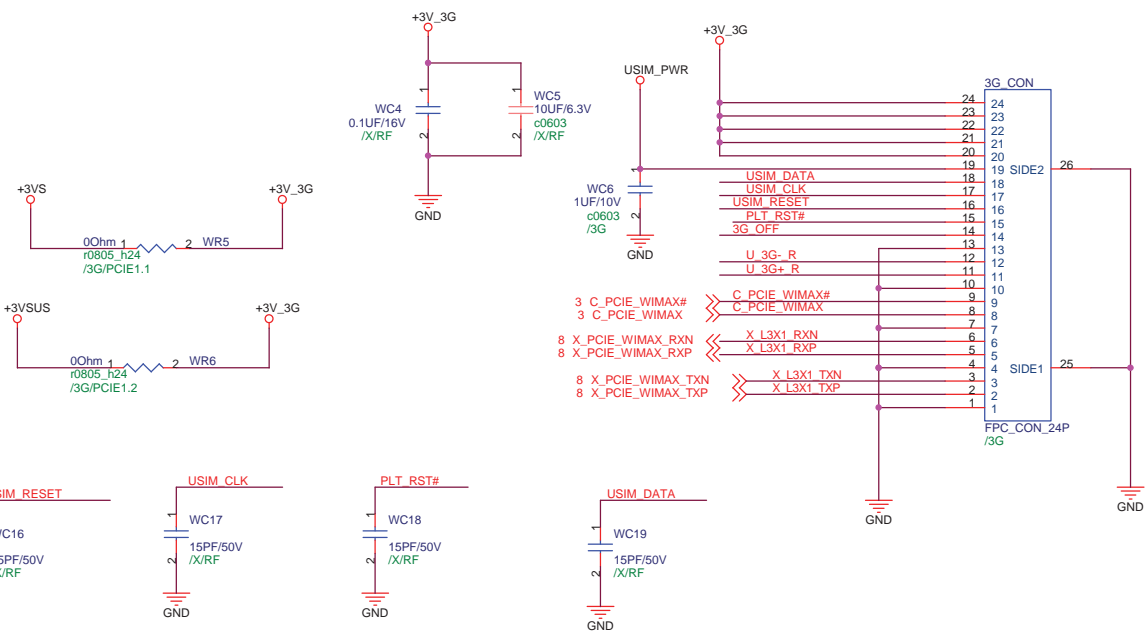
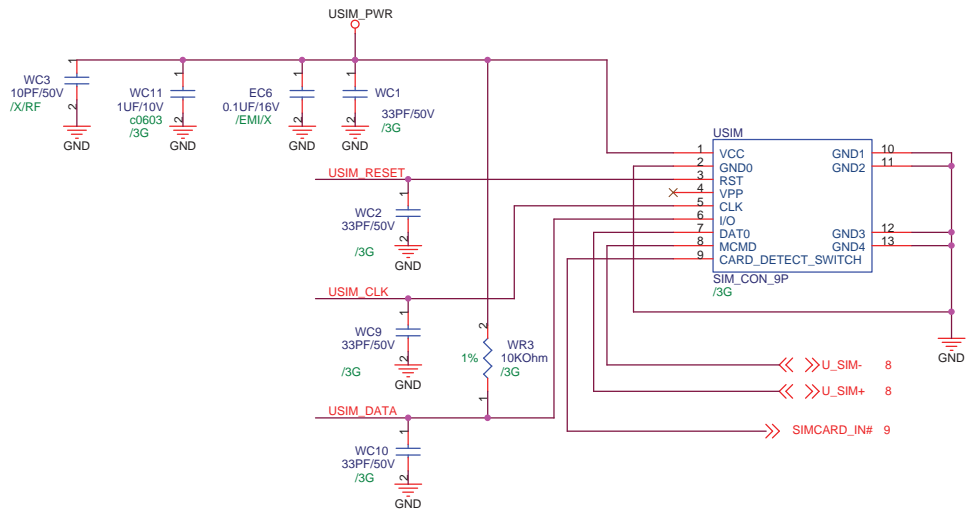


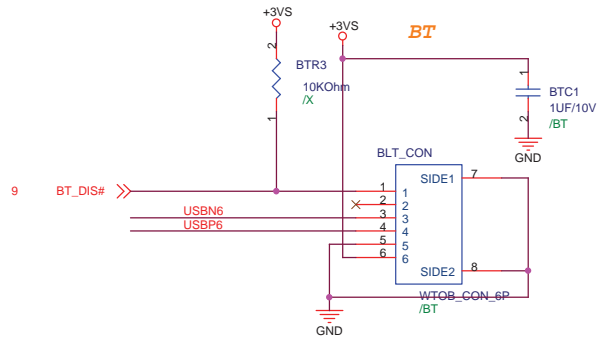
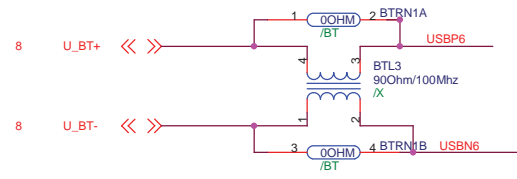
**WIFI use PCIE 1.1 Spec**  
**+3VS = 1.0A peak / 0.75A Normal**  
**+1.5VS = 0.5A peak / 0.375A Normal**  
**+3VSUS = 0.375A peak / 0.25A Normal**





7,9,16,17 PLT\_RST# >>>  
 9 3G\_OFF >>>



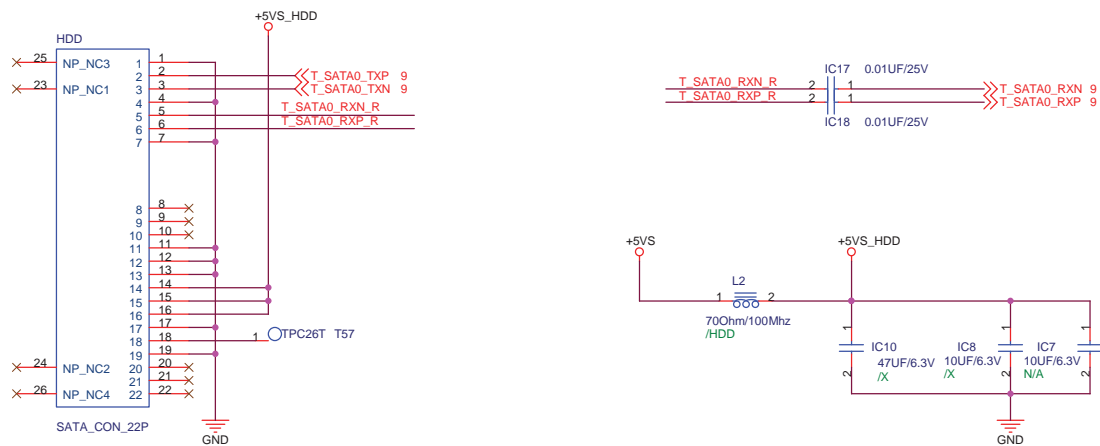


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Default Group-1005P SR HIGH END


<b>ASUS</b>		<b>Title : Bluetooth</b>	
ASUSTek Computer INC.		Engineer: <i>Nicky_Cheng</i>	
Size A3	Project Name <b>1015P</b>	Rev 1.2G	
Date: Wednesday, February 24, 2010		Sheet	19 of 42

# SATA HDD Connector






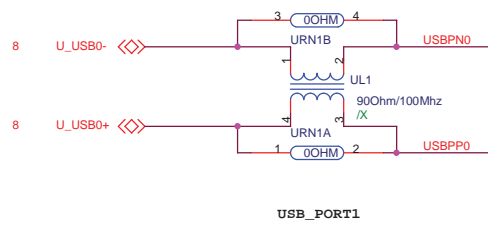
<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END		
		Title : USB3.0
ASUSTek Computer INC.		Engineer:
Size C	Project Name <b>1015P</b>	Rev 1.2G
Date: Wednesday, February 24, 2010		Sheet 21 of 42

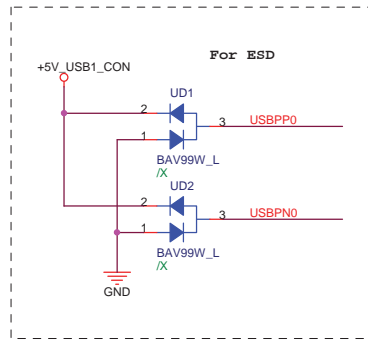
<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END

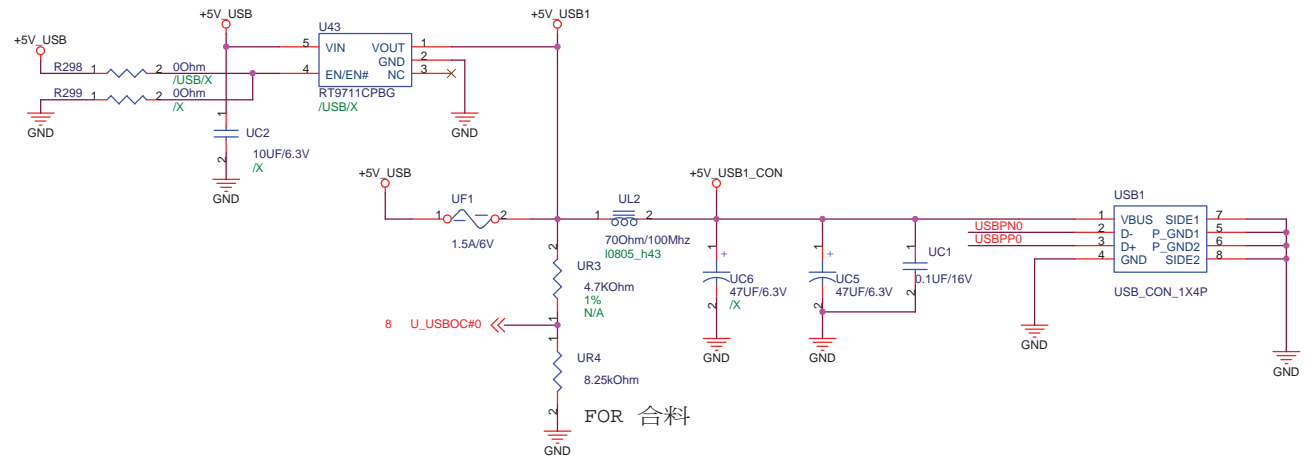
		<b>Title :</b> USB 3.0
ASUSTek Computer INC.		<b>Engineer:</b> <i>Nicky_Cheng</i>
Size A3	Project Name <b>1015P</b>	Rev 1.2G
Date: Wednesday, February 24, 2010		Sheet 22 of 42



USB\_PORT1



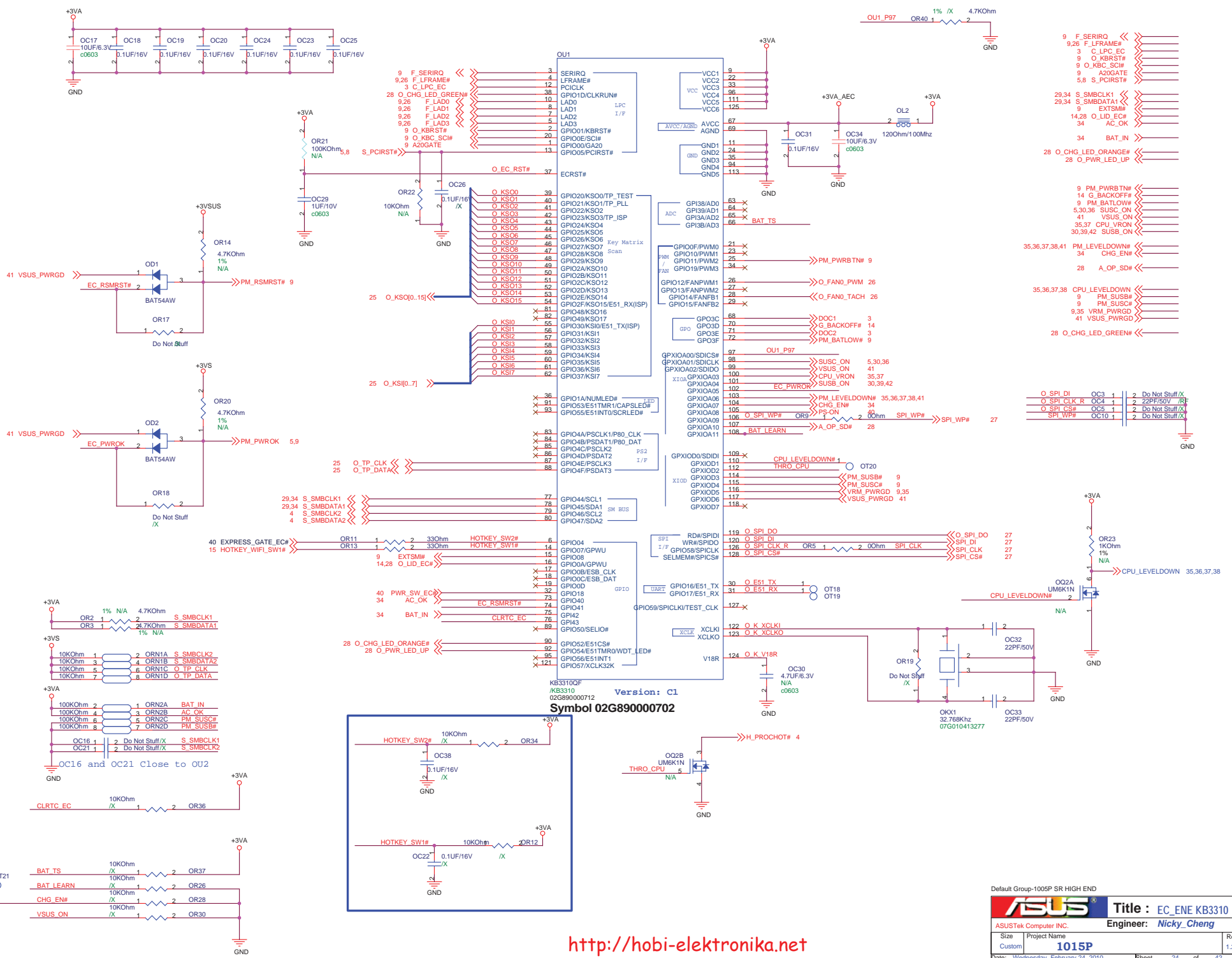
For ESD



FOR 合料

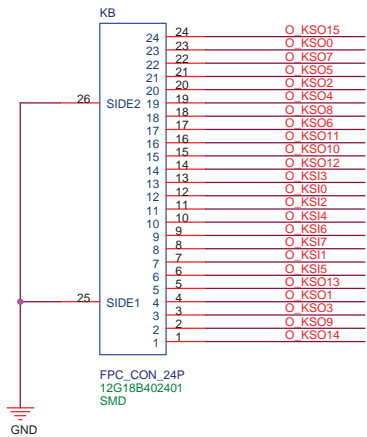
<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END		Title : USB Port1	
ASUSTek Computer INC.		Engineer: Nicky_Cheng	
Size	Project Name	Rev	
A3	1015P	1,2G	
Date: Wednesday, February 24, 2010	Sheet 23 of 42		

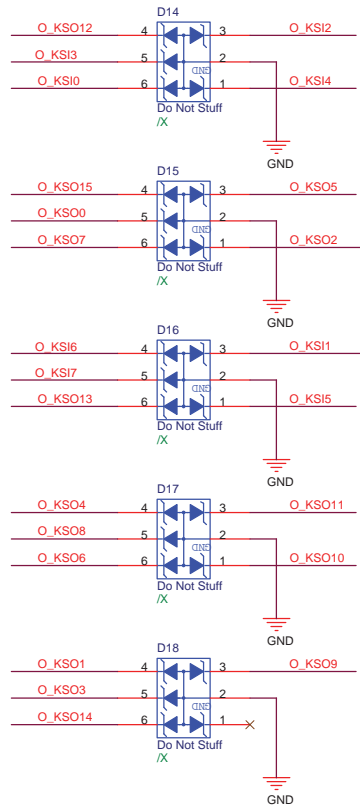




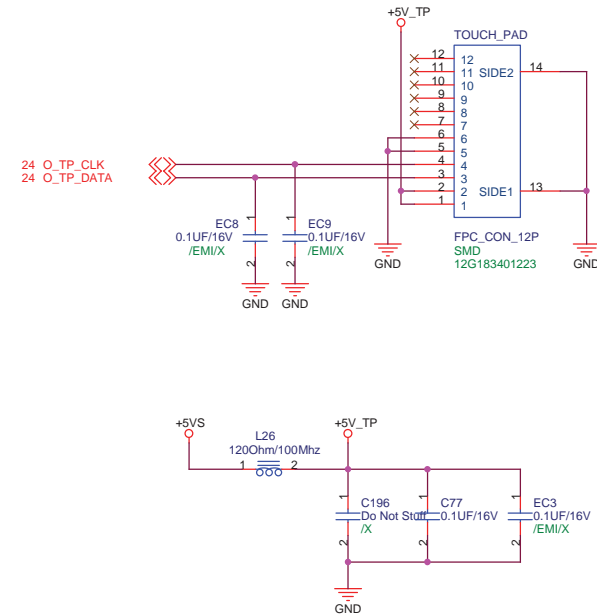
## For Keyboard Connector



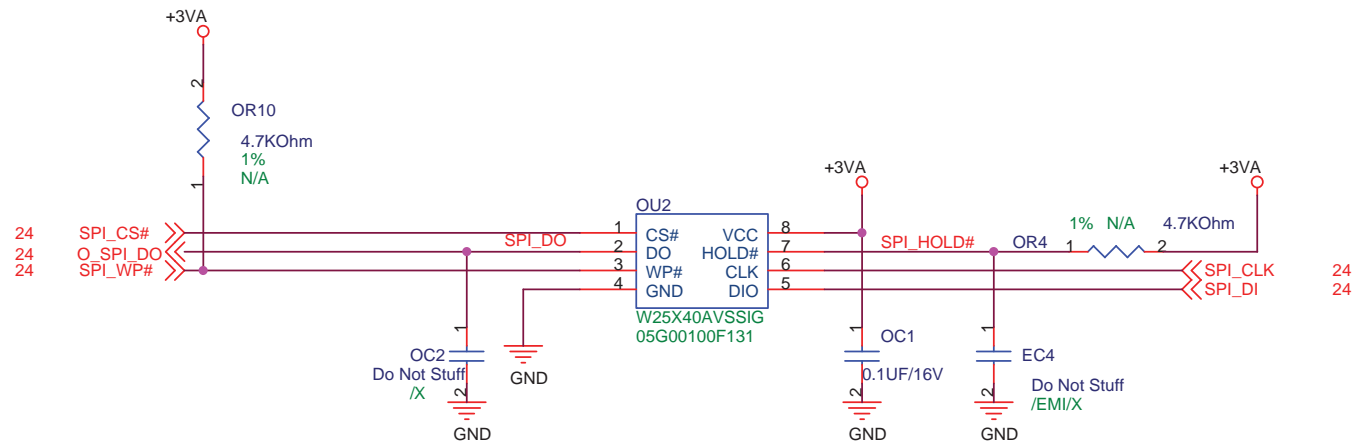
24 O\_KSO[0..15]   
 24 O\_KSI[0..7] 



## For Touch-Pad



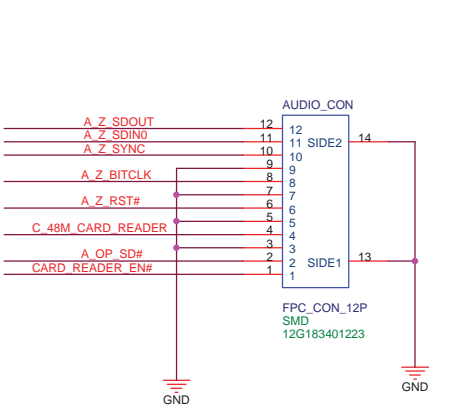
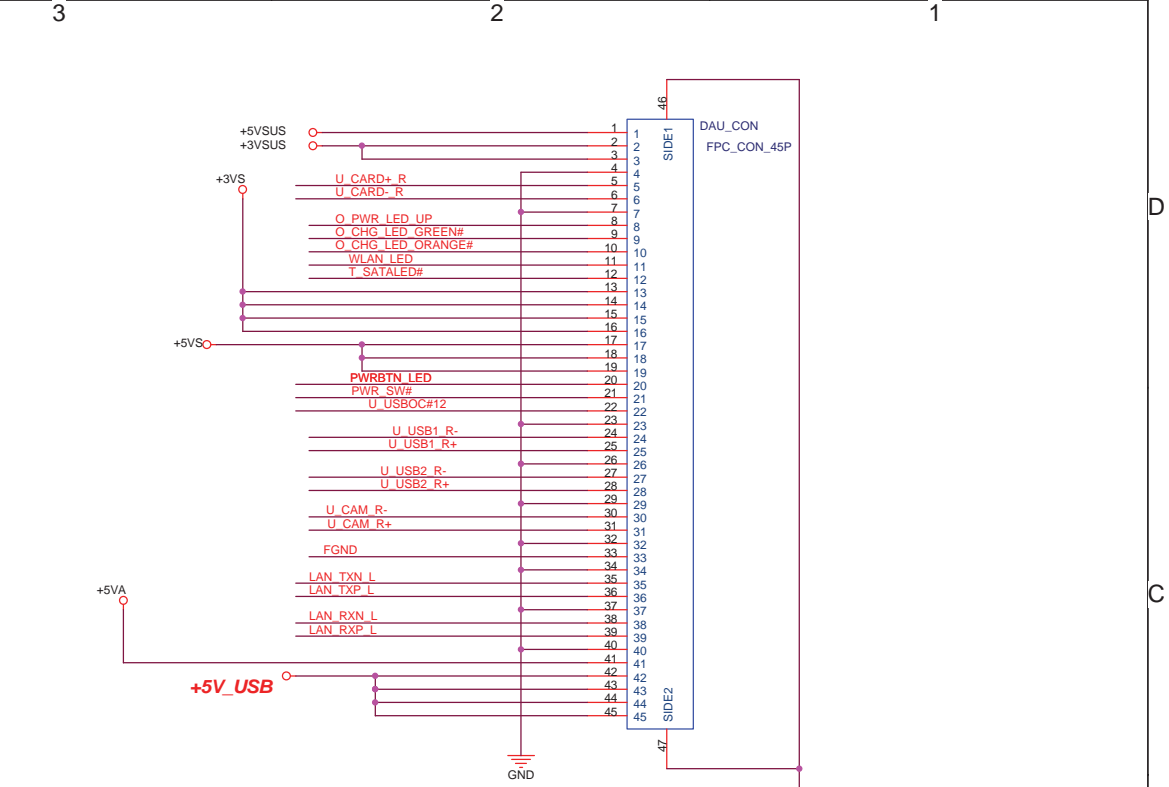
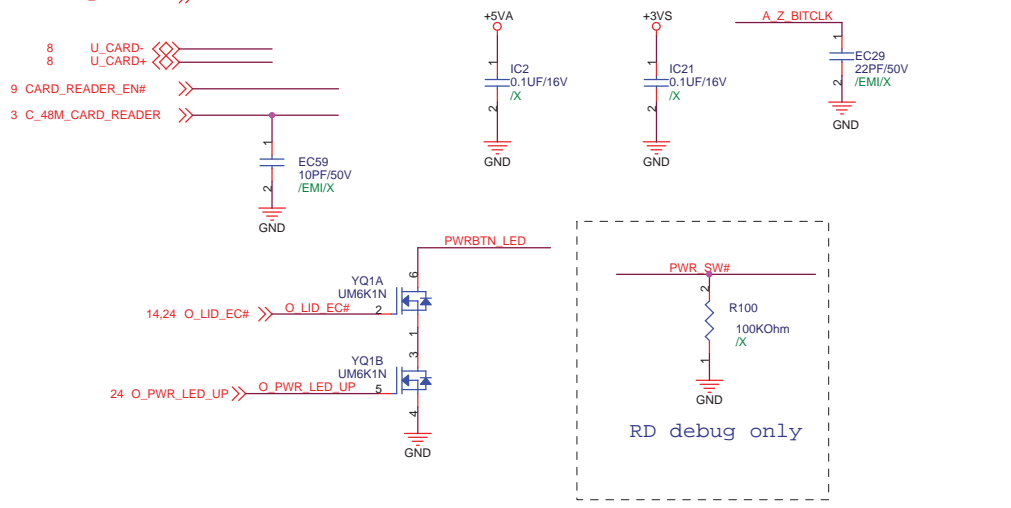
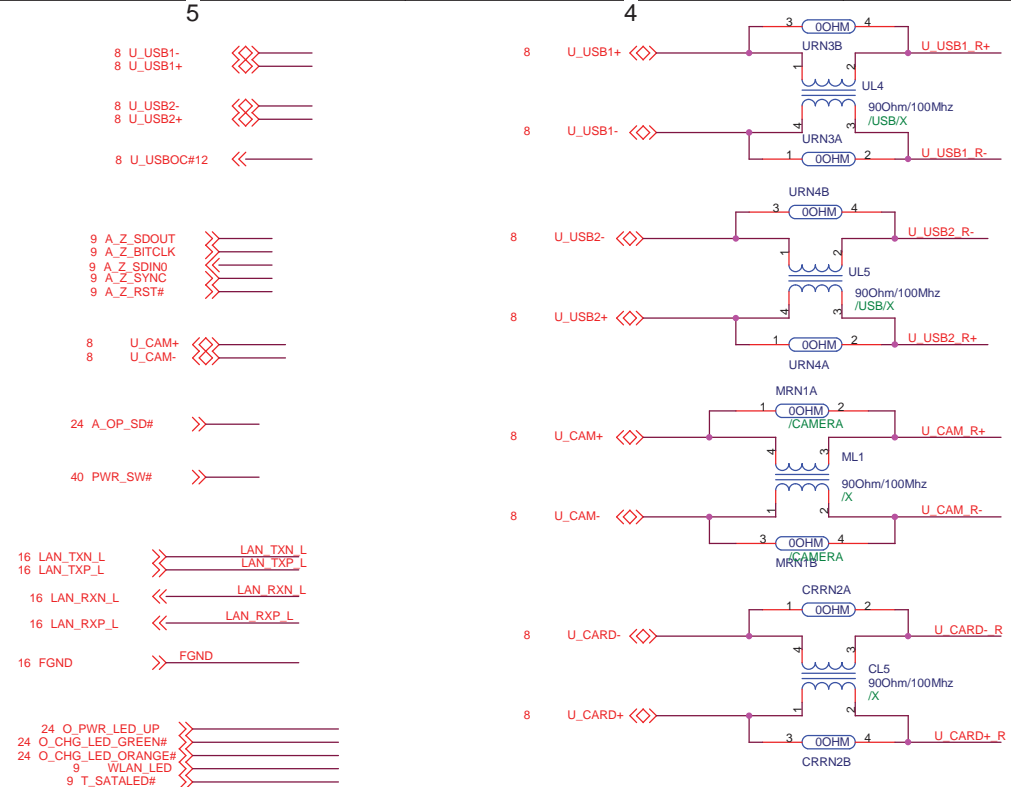




<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END

		<b>Title :</b> SPI_ROM
ASUSTek Computer INC.		<b>Engineer:</b> Nicky_Cheng
Size A4	Project Name <b>1015P</b>	Rev 1.2G
Date: Wednesday, February 24, 2010		Sheet 27 of 42



Mode	Adapater Mode	Battery Mode
Scenario		
Battery power is between 100%~40%	Orange ON	Green ON
Battery power is between 40%~10%	Orange Blinking Slowly	Green Blinking Slowly
Battery power is less than 10%	Orange Blinking Quickly	Green Blinking Quickly
S3/S5 Mode	Scenario the same as above	OFF

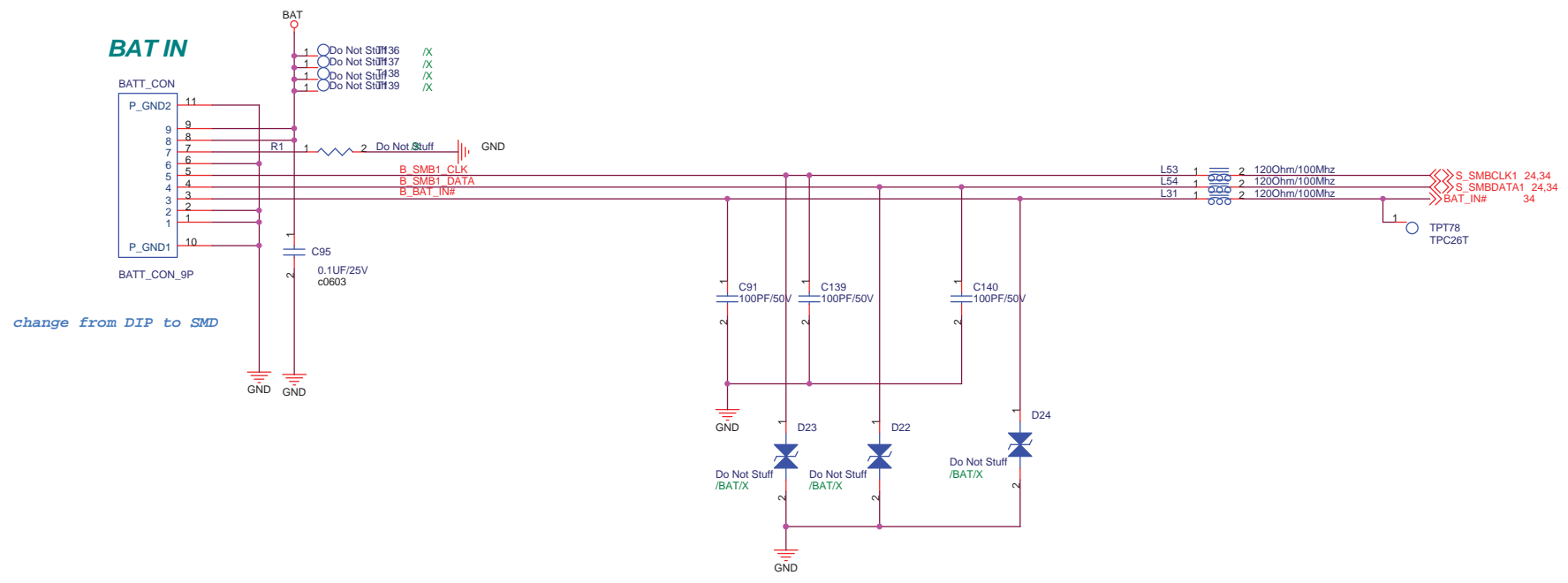
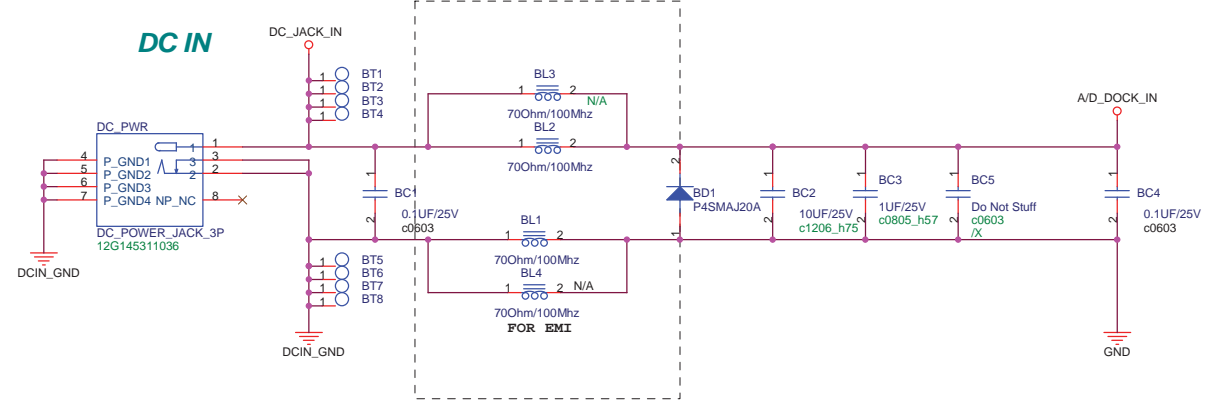
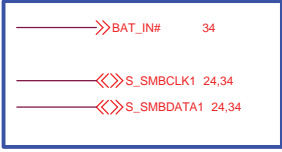
<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END

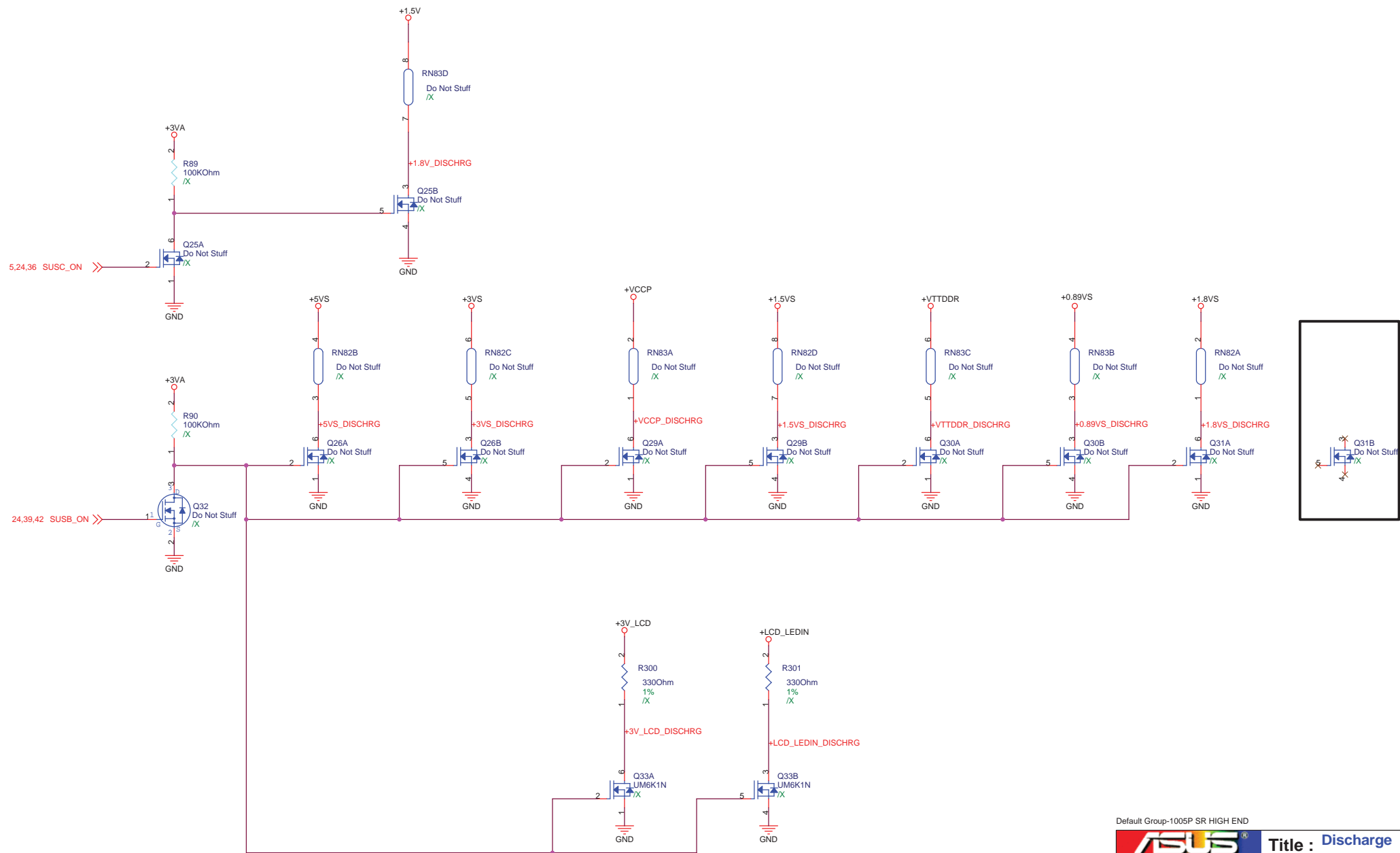
**Title :** DUA\_CON  
**ASUSTek Computer INC. Engineer:** Nicky\_Cheng

Size	Project Name	Rev
A3	1015P	1.2G

Date: Wednesday, February 24, 2010 Sheet 25 of 42



change from DIP to SMD




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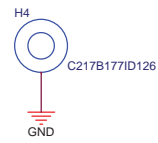
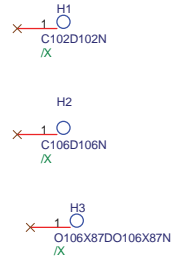
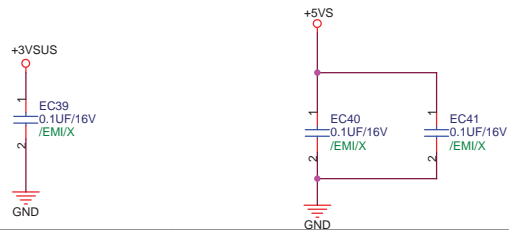
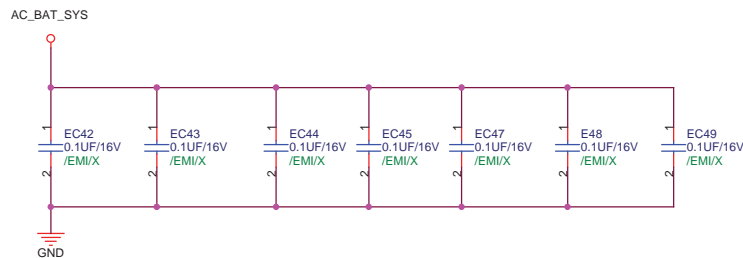
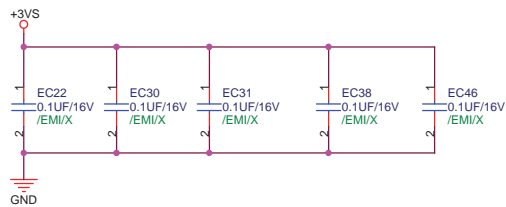
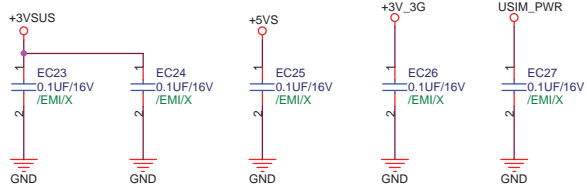
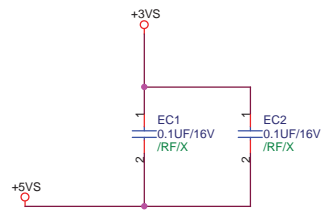
Default Group-1005P SR HIGH END

		Title : Discharge	
ASUSTek Computer INC.		Engineer: Nicky_Cheng	
Size A3	Project Name 1015P	Rev 1.2G	
Date: Wednesday, February 24, 2010	Sheet	30	of 42

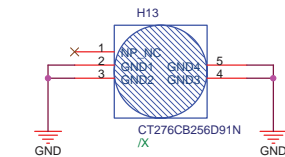
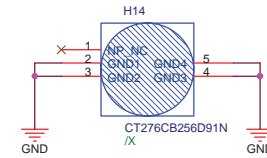
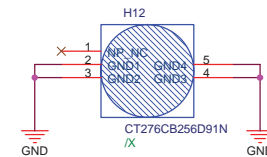
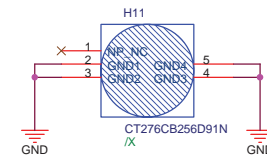
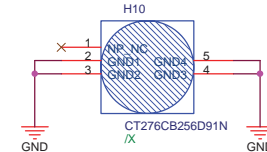
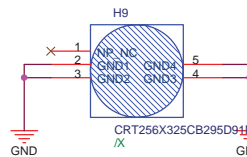
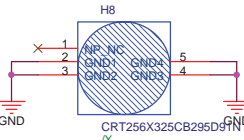
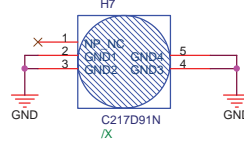
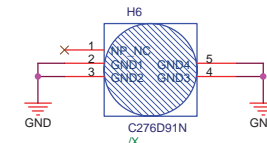
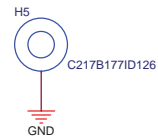
<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END

		Title : SD_CON	
ASUSTek Computer INC.		Engineer: Nicky_Cheng	
Size	Project Name		Rev
A3	1015P		1.2G
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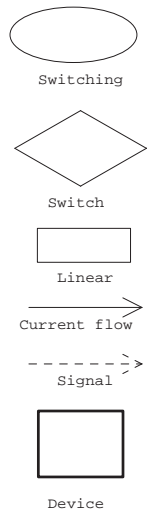
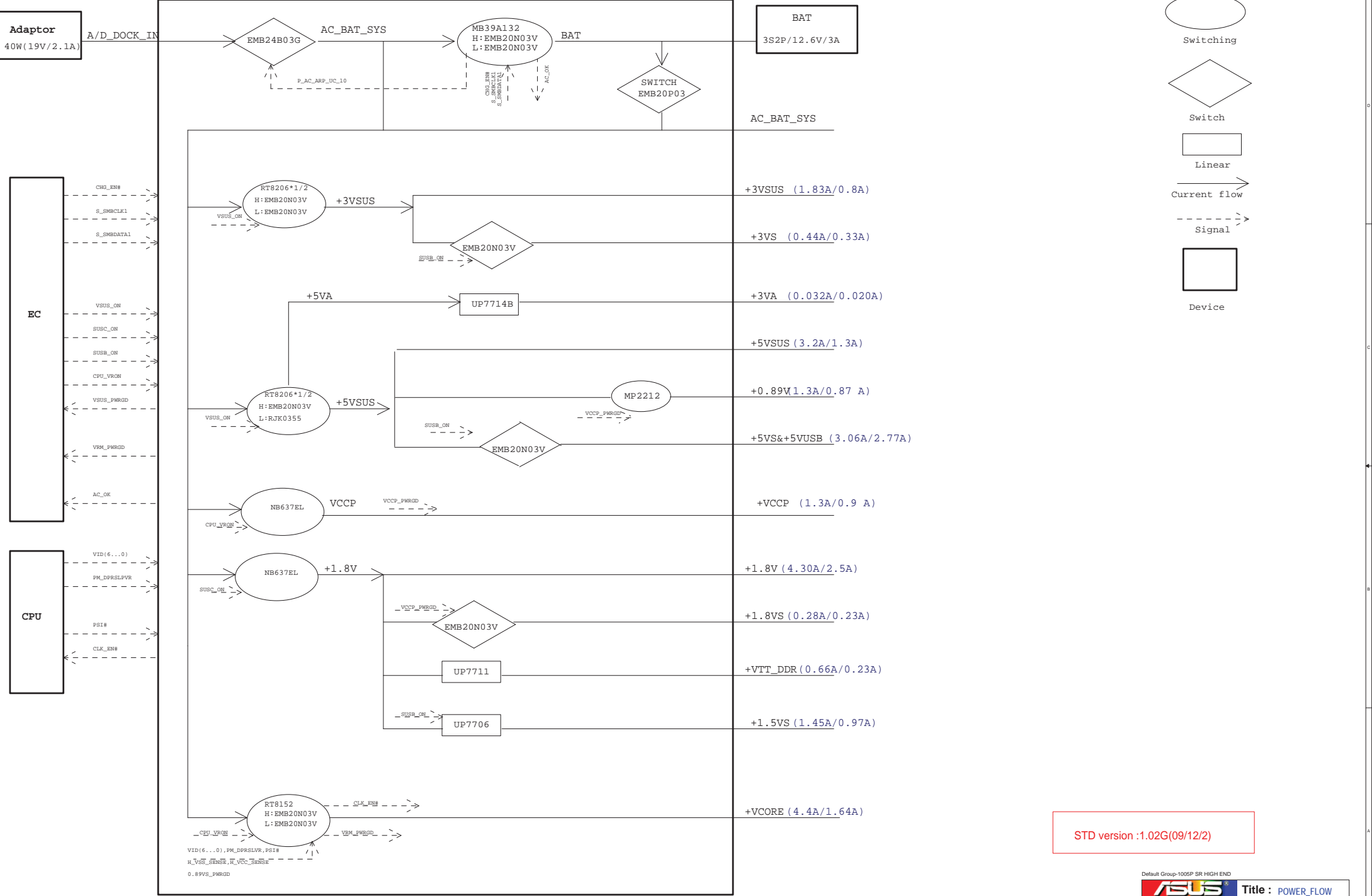
CPU Thermal HOLD



<http://hobi-elektronika.net>

Default Group-1005P SR HIGH END		
<b>ASUS</b>		<b>Title : SREW HOLE&amp;EMI</b>
ASUSTek Computer INC.		Engineer: <i>Nicky Cheng</i>
Size	Project Name	Rev
A3	<b>1015P</b>	1.2G
Date: Wednesday, February 24, 2010		Sheet 32 of 42

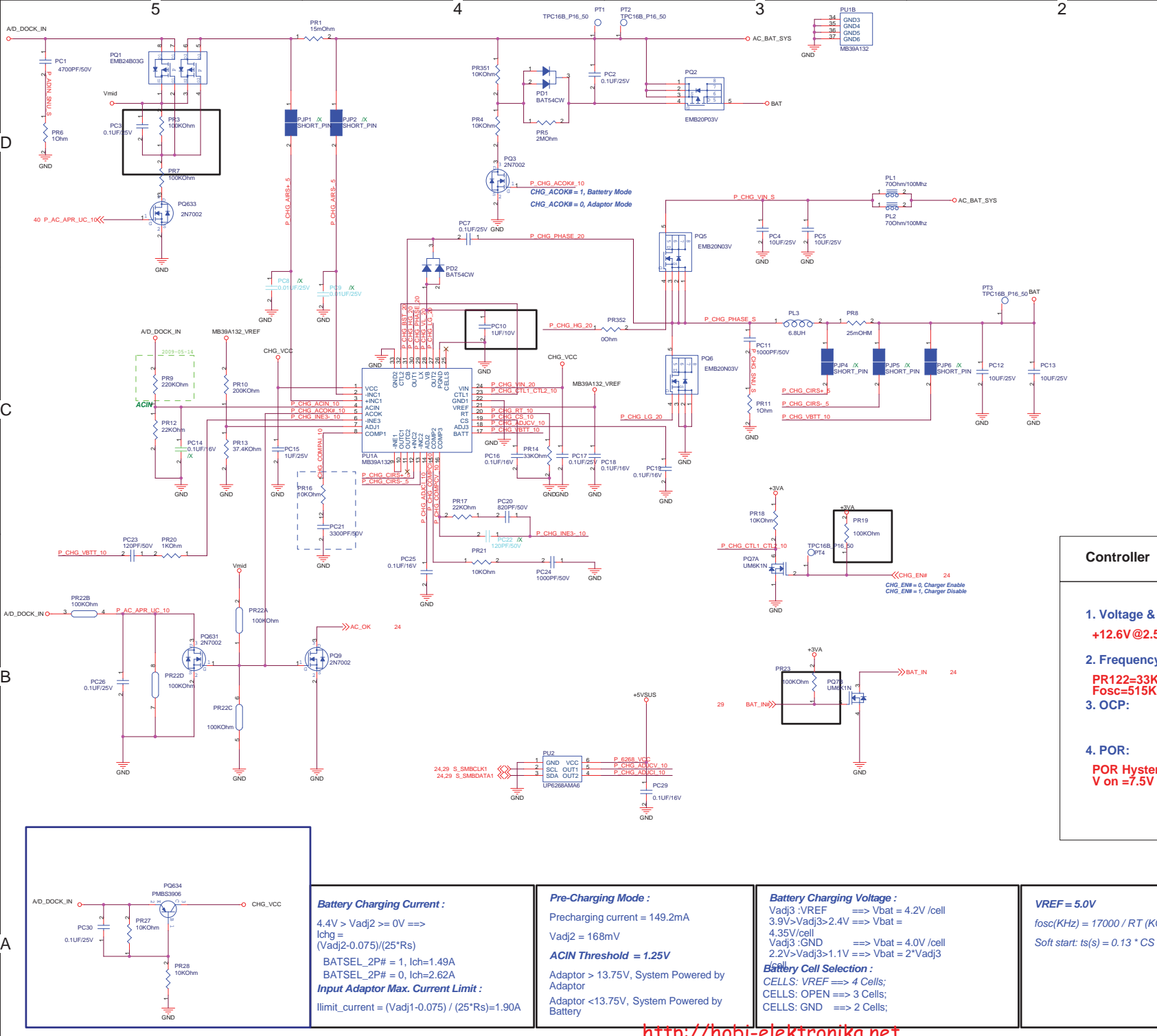




STD version :1.02G(09/12/2)

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Default Group-1005P SR HIGH END		Title : POWER_FLOW	
ASUSTek Computer INC		Engineer:	
Size	Project Name	Rev	
A2	1015P	1.0	
Date: Wednesday, February 24, 2010	Sheet	33	of 42

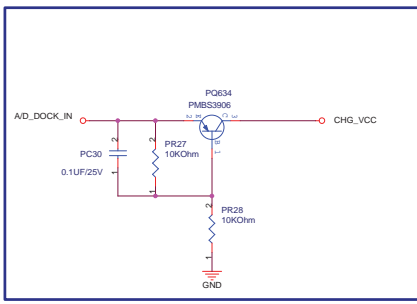


**Power stage**

- I/P Current:**  
 $I_{in} = V_o \cdot I_o / (0.8 \cdot V_{in}) = 1.64A$
- Ripple Current:**  
 $I_{rip} = 1.18A$   
 $I_{spec} = 2A \times 1 pcs$
- Inductor Spec:**  
 $I_{sat} = 10A$   
 $I_{dc} = 5.5A$   
 $DCR = 37mohm$
- MOSFET Spec:**  
**H-side MOSFET: SI7326DN\_T1\_E3**  
 $R_{ds(ON)} = 22mohm$  ( $V_{gs} = 4.5V$ )  
 $I_{cont} = 6.5A$  ( $T = 25^\circ C$ )  
 $I_{peak} = 40A$  (Pause < 10 us)  
**L-side MOSFET: SI7326DN\_T1\_E3**  
 $R_{ds(ON)} = 22mohm$  ( $V_{gs} = 4.5V$ )  
 $I_{cont} = 6.5A$  ( $T = 25^\circ C$ )  
 $I_{peak} = 40A$  (Pause < 10 us)

**Controller**

- Voltage & Current:**  
**+12.6V@2.5A**
- Frequency:**  
**PR122=33KOHM,**  
**Fosc=515KHz**
- OCF:**
- POR:**  
**POR Hysteresis = 0.1V**  
**V on = 7.5V**
- Enable Voltage:**  
**V = 2.9V**
- Soft start time:**  
**Tss=23ms**
- Phase selection:**  
**N/A**
- Inrush Current:**  
**C total = 20uF**  
**I inrush = 0.01A**



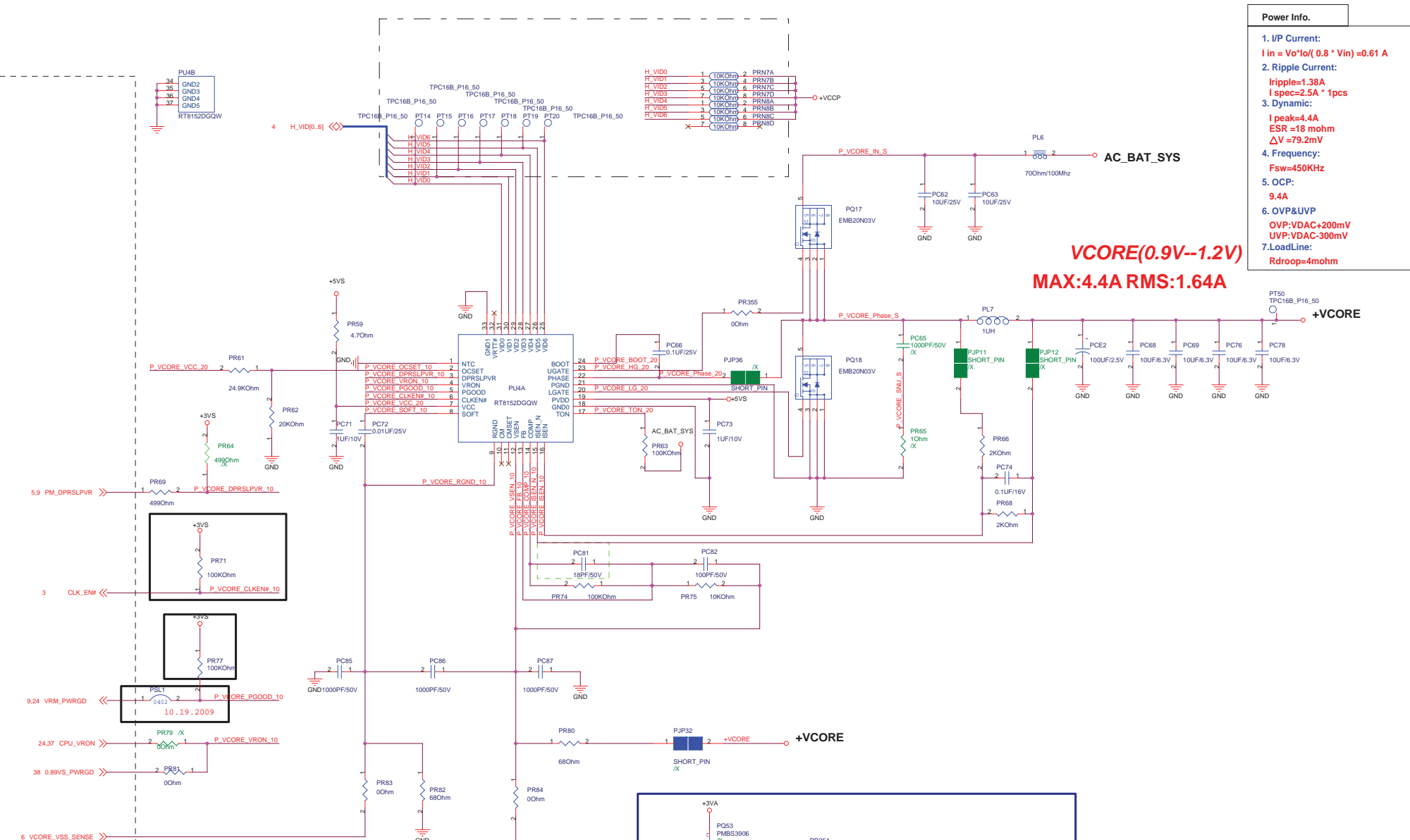
**Battery Charging Current :**  
 $4.4V > V_{adj2} >= 0V \implies$   
 $I_{chg} = (V_{adj2} - 0.075) / (25 \cdot R_s)$   
 BATSEL\_2P# = 1,  $I_{ch} = 1.49A$   
 BATSEL\_2P# = 0,  $I_{ch} = 2.62A$   
**Input Adaptor Max. Current Limit :**  
 $I_{limit\_current} = (V_{adj1} - 0.075) / (25 \cdot R_s) = 1.90A$

**Pre-Charging Mode :**  
 Precharging current = 149.2mA  
 $V_{adj2} = 168mV$   
**ACIN Threshold = 1.25V**  
 Adaptor > 13.75V, System Powered by Adaptor  
 Adaptor < 13.75V, System Powered by Battery

**Battery Charging Voltage :**  
 $V_{adj3} : V_{REF} \implies V_{bat} = 4.2V / cell$   
 $3.9V > V_{adj3} > 2.4V \implies V_{bat} = 4.35V / cell$   
 $V_{adj3} : GND \implies V_{bat} = 4.0V / cell$   
 $2.2V > V_{adj3} > 1.1V \implies V_{bat} = 2 \cdot V_{adj3}$   
**Battery Cell Selection :**  
 CELLS: VREF  $\implies 4$  Cells;  
 CELLS: OPEN  $\implies 3$  Cells;  
 CELLS: GND  $\implies 2$  Cells;

**VREF = 5.0V**  
 $f_{osc}(KHz) = 17000 / RT (KOhm)$   
 Soft start:  $t_s(s) = 0.13 \cdot CS(uF)$

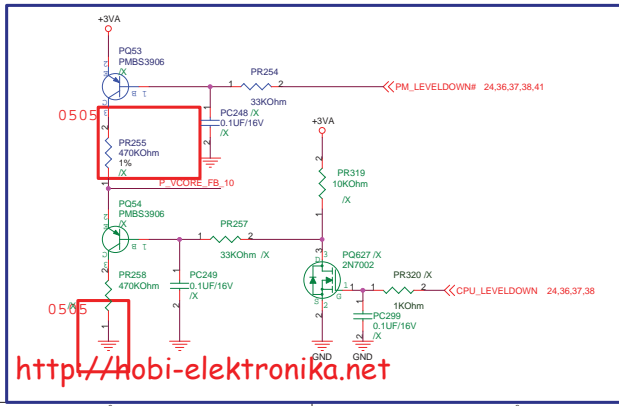
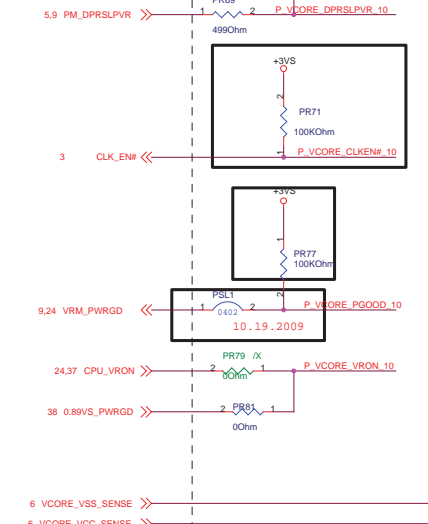
<http://hobi-elektronika.net>



**Power Info.**

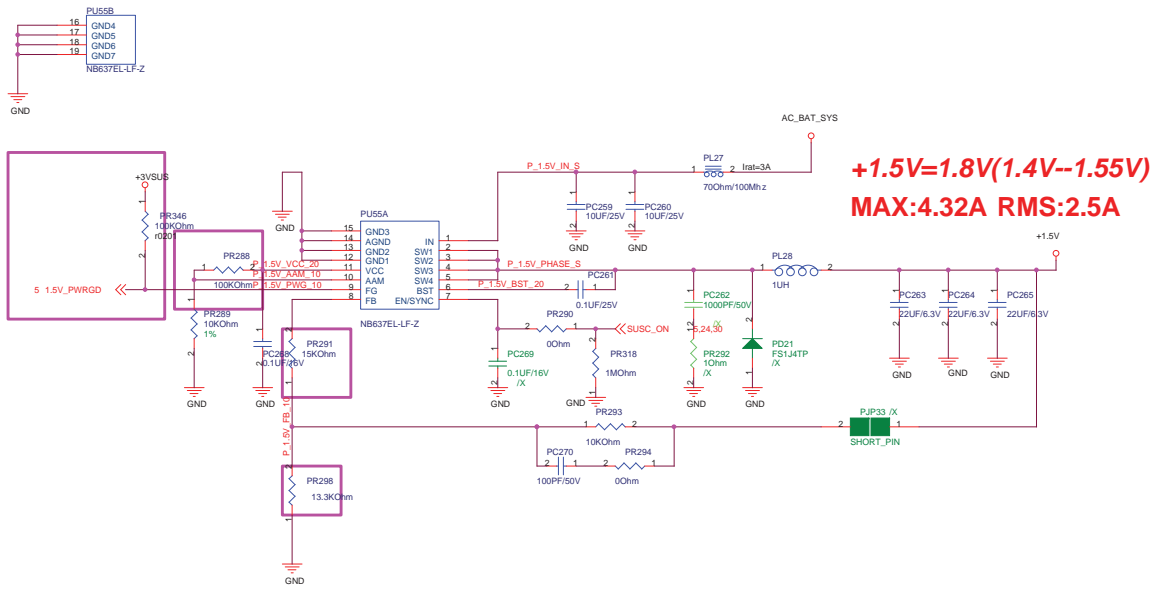
- I/P Current:  
 $I_{in} = V_o \cdot I_o / (0.8 \cdot V_{in}) = 0.61 \text{ A}$
- Ripple Current:  
 $I_{ripple} = 1.38 \text{ A}$   
 $I_{spec} = 2.5 \text{ A} \cdot 1 \text{ pcs}$
- Dynamic:  
 $I_{peak} = 4.4 \text{ A}$   
 $ESR = 18 \text{ mohm}$   
 $\Delta V = 79.2 \text{ mV}$
- Frequency:  
 $F_{sw} = 450 \text{ KHz}$
- OCP:  
**9.4A**
- OVP&UVP  
**OVP: VDAC+200mV**  
**UVP: VDAC-300mV**
- LoadLine:  
 $R_{droop} = 4 \text{ mohm}$

**Vcore(0.9V--1.2V)**  
**MAX:4.4A RMS:1.64A**



PM_LEVELDOWN#	CPU_LEVELDOWN	Voltage	Status
L	L	VID-50mV	Power Saving
H	L	VID	Normal
H	H	VID+50mV	Performance
L	H		N/A

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**Power Info.**

- I/P Current:**  
 $I_{in} = V_o \cdot I_o / (0.8 \cdot V_{in}) = 1.08A$
- Ripple Current:**  
 $I_{rip} = 1A$
- Frequency:**  
 $F_{osc} = 600KHz$
- Current Limit:**  
**6A**

**0.9VS@IA**

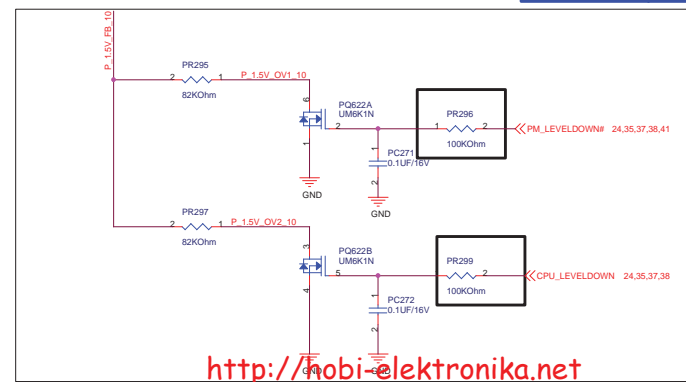
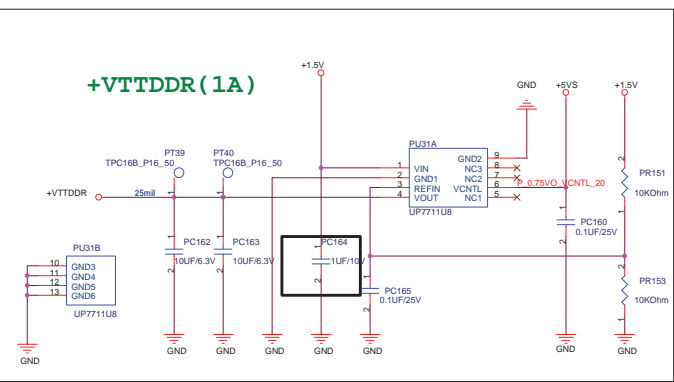
- Dropout Voltage:**  
 $\Delta V = 0.3V (I_o = 2A)$
- Current Limit:**  
 $I_{limit} = 4A$
- Continue Current:**  
 $I_{cont} = 3A$
- Power Dissipation:**  
 $R_{thjc} = 52 \text{ }^\circ C/W$   
 $P_d = 1.9W$

2009.11.27

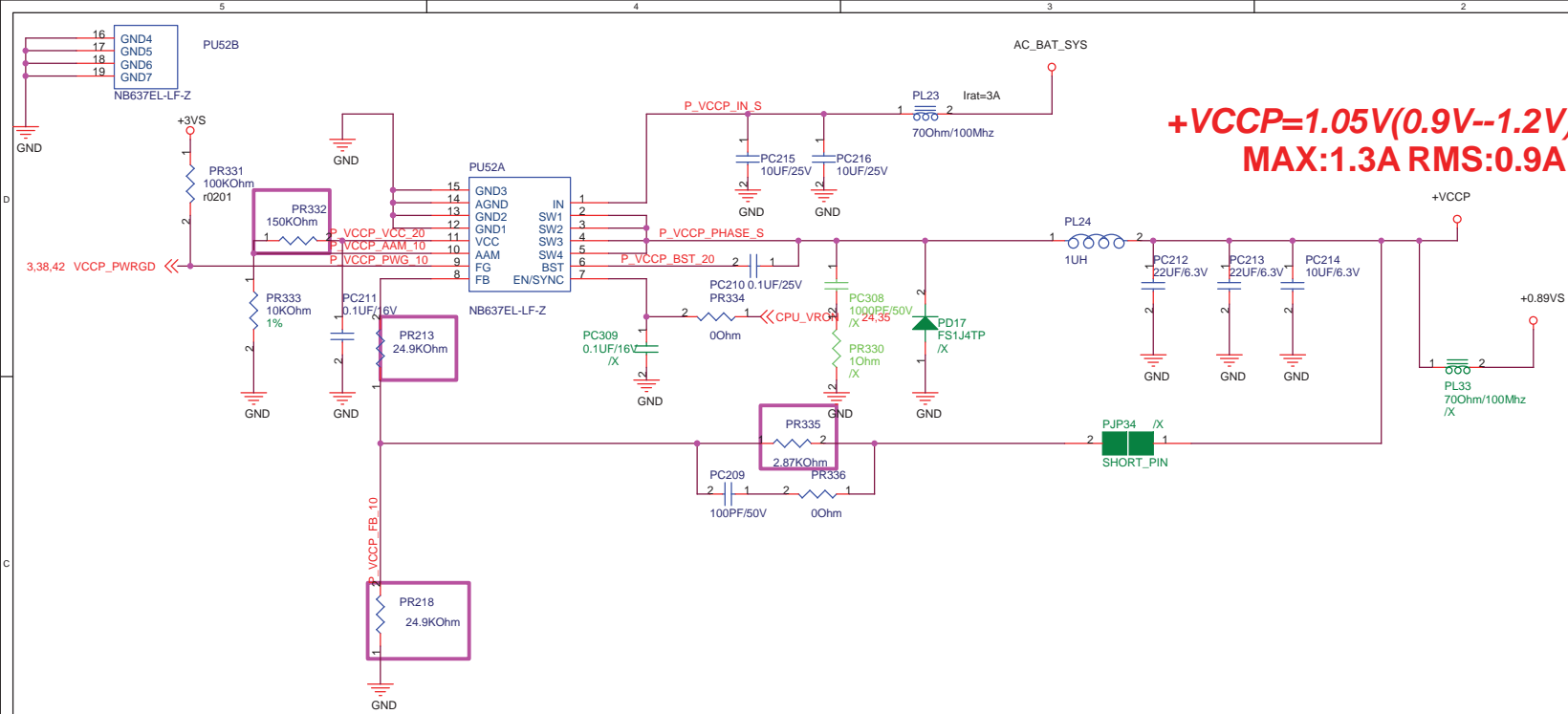
- ←SUSC\_ON 5.24.30
- ←PM\_LEVELDOWN# 24.35.37.38.41
- ←CPU\_LEVELDOWN 24.35.37.38

PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Voltage	Status
L	L	H	1.670V	Power Saving
H	L	H	1.800V	Normal
H	H	L	1.912V	Performance
L	H	L		

**+VTTDDR (1A)**



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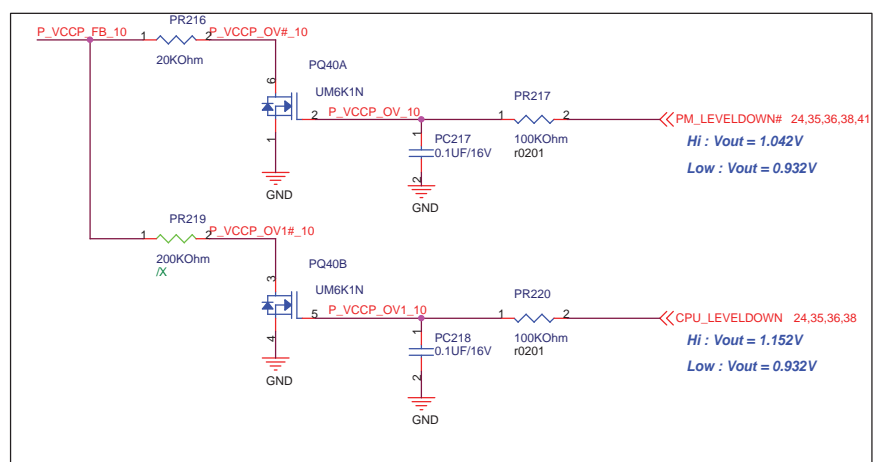
**Power Info.**

- I/P Current:**  
 $I_{in} = V_o * I_o / (0.8 * V_{in}) = 0.7A$
- Ripple Current:**  
 $I_{rip} = 1.08A$   
 $I_{spec} = 2.5A \times 1 \text{ pcs}$
- Frequency:**  
 $F_{osc} = 600KHz$
- Current Limit:**  
**6A**

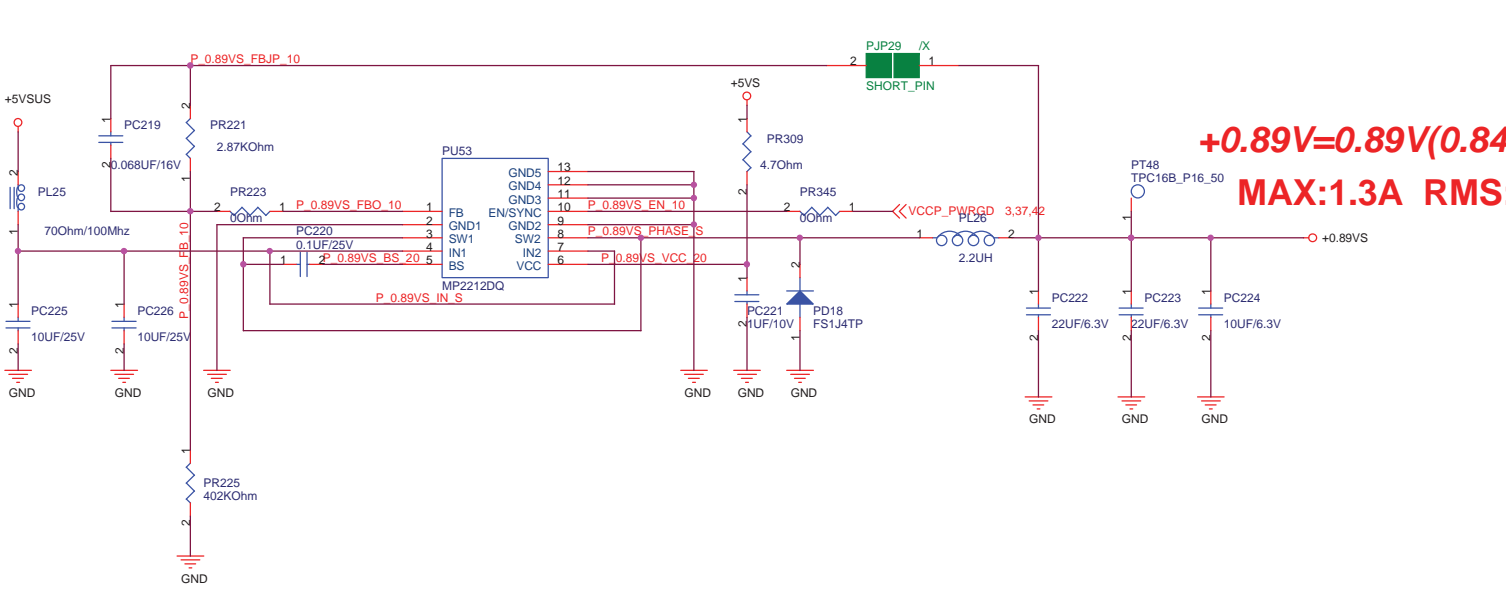
2009.11.27

- ← CPU\_VRON 24,35
- ← PM\_LEVELDOWN# 24,35,36,38,41
- ← CPU\_LEVELDOWN 24,35,36,38

PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Voltage	Status
L	L	H	0.932V	Power Saving
H	L	H	1.042V	Normal
H	H	L	1.127V	Performance
L	H	L		N/A



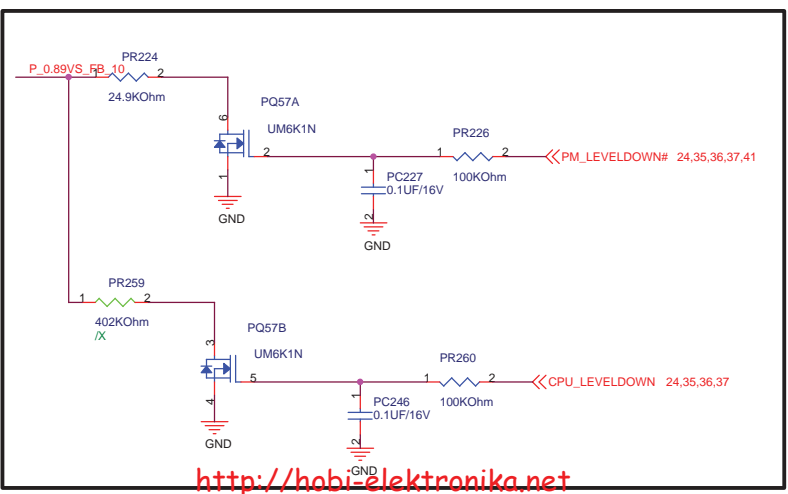
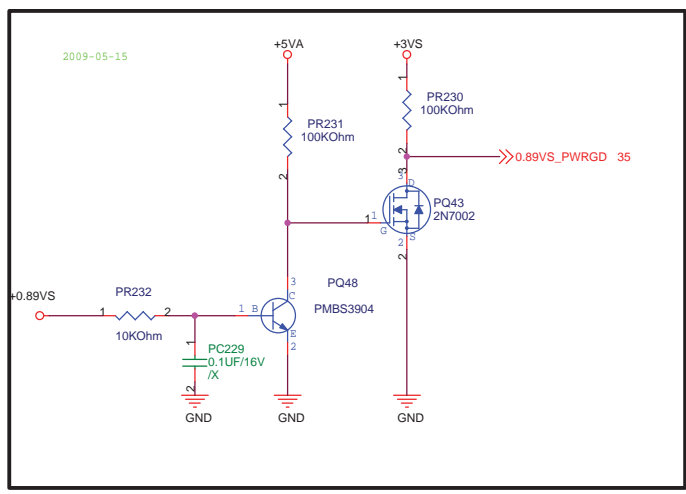
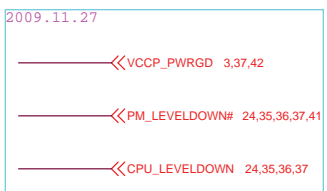
<http://hobi-elektronika.net>



**+0.89V=0.89V(0.844V--0.95V)**  
**MAX:1.3A RMS:0.87A**

**Power Info.**

1. I/P Current:  
 $I_{in} = V_o * I_o / (0.8 * V_{in}) = 0.36A$
2. Ripple Current:  
 $I_{rip} = 0.61A$   
 $I_{spec} = 2.5A * 1pcs$
3. Dynamic:  
 $I_{peak} = 1.6A$   
 $ESR = 18\text{ mohm}$   
 $\Delta V = 28.8mV$
4. Frequency:  
 $F_{osc} = 600KHz$
5. Current Limit:  
**6A**



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PM_LEVELDOWN#	CPU_LEVELDOWN	Voltage	Status
L	L	0.844V	Power Saving
H	L	0.897V	Normal
H	H	0.950V	Performance
L	H		N/A

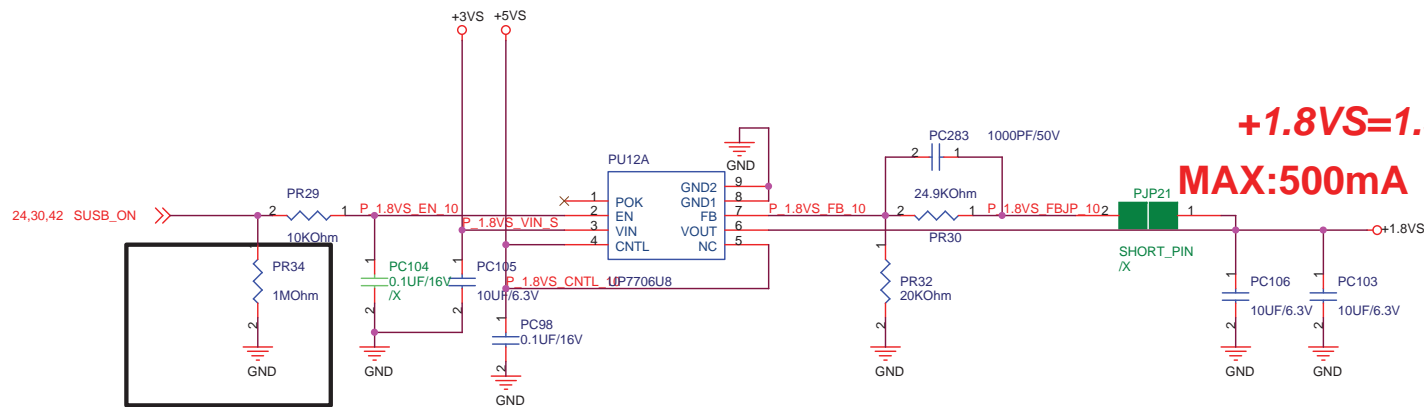
Default Group-1005P SR HIGH END

**ASUS** Title : +1.5VS & +2.5VS

ASUSTek Computer INC Engineer: Joy\_Zhou

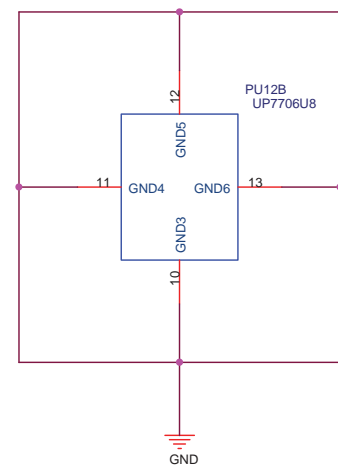
Size	Project Name	Rev
A3	1015P	1.0

Date: Wednesday, February 24, 2010 Sheet 38 of 42



**+1.8VS=1.5V(1.8V--1.78V)**  
**MAX:500mA RMS:350mA**

1. Dropout Voltage:  
 $V = 300 \text{ mV} (I_o=2A)$
2. Current Limit:  
 $I \text{ limit} = 2.8A$
3. Pd:  
 $R_{thjc} = 5 \text{ C/W}$   
 $P_d = 1.9W$

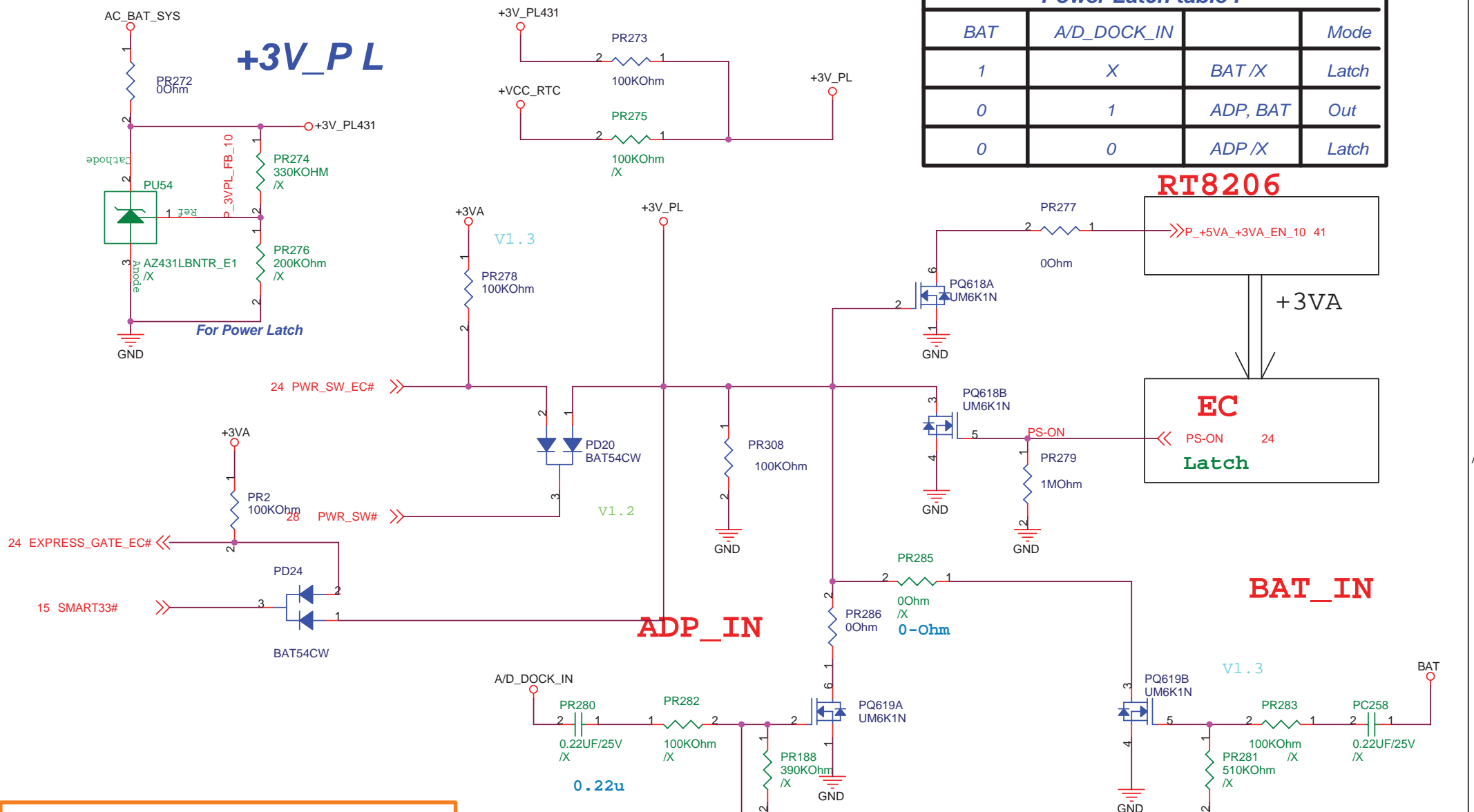


Default Group-1005P SR HIGH END

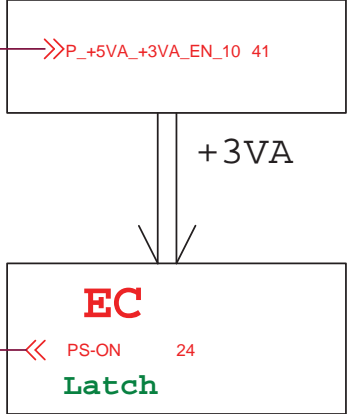
<b>ASUS</b>		<b>Title :</b> +1.5VS & +2.5VS
ASUSTek Computer INC		<b>Engineer:</b> Joy Zhou
Size B	Project Name <b>1015P</b>	Rev 1.0
Date: Wednesday, February 24, 2010		Sheet 39 of 42

**Power Latch table :**

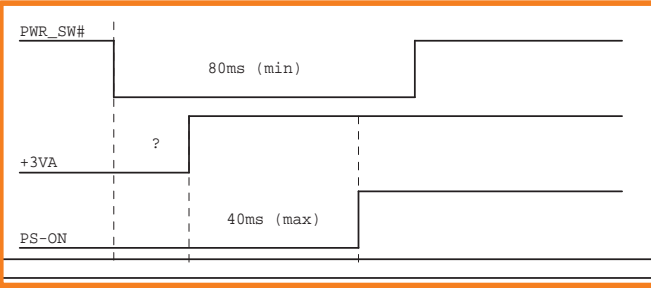
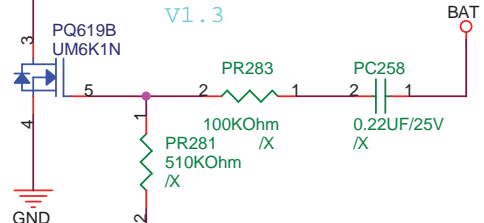
BAT	A/D_DOCK_IN		Mode
1	X	BAT /X	Latch
0	1	ADP, BAT	Out
0	0	ADP /X	Latch



**RT8206**



**BAT\_IN**



V1.2 For ADP power latch

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Default Group-1005P SR HIGH END

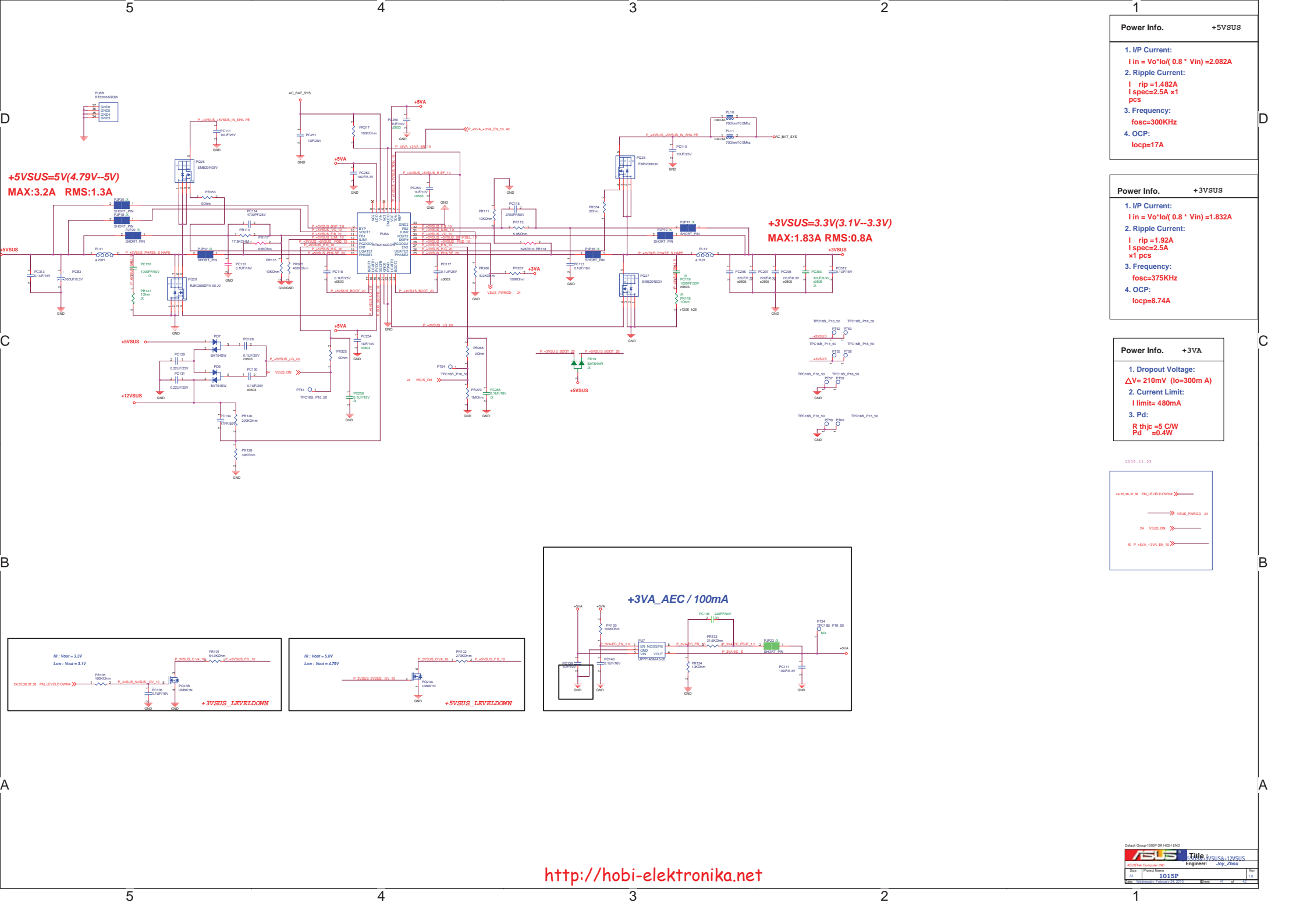
**ASUS** Title : Power Latch

ASUSTek Computer INC. Engineer: River\_Hsu

Size	Project Name	Rev
A4	1015P	1.0G

Date: Wednesday, February 24, 2010 Sheet 40 of 42





**Power Info. +5VSUS**

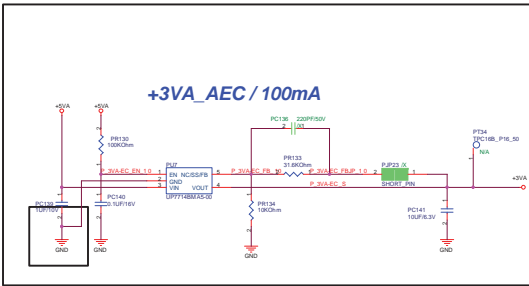
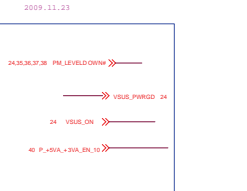
- 1. I/P Current:**  
 $I_{in} = V_o \cdot I_o / (0.8 \cdot V_{in}) = 2.082A$
- 2. Ripple Current:**  
 $I_{rip} = 1.482A$   
 $I_{spec} = 2.5A \times 1$   
 $\times 1$  pcs
- 3. Frequency:**  
 $f_{osc} = 300KHz$
- 4. OCP:**  
 $I_{ocp} = 17A$

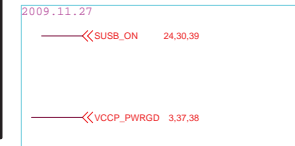
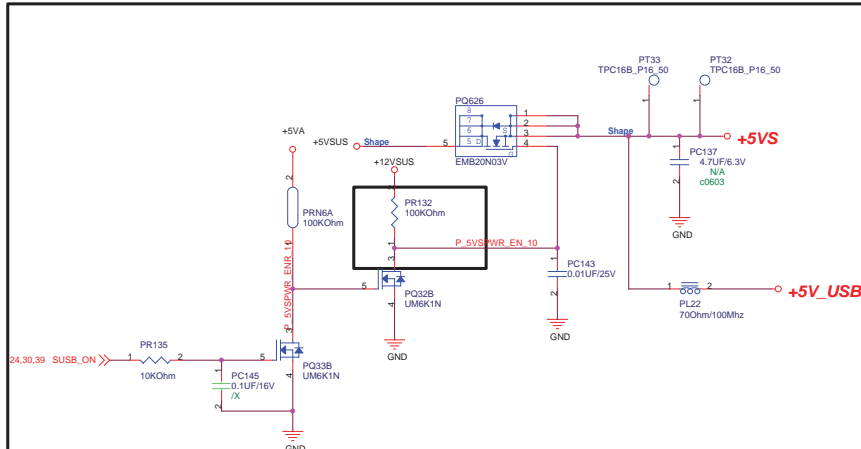
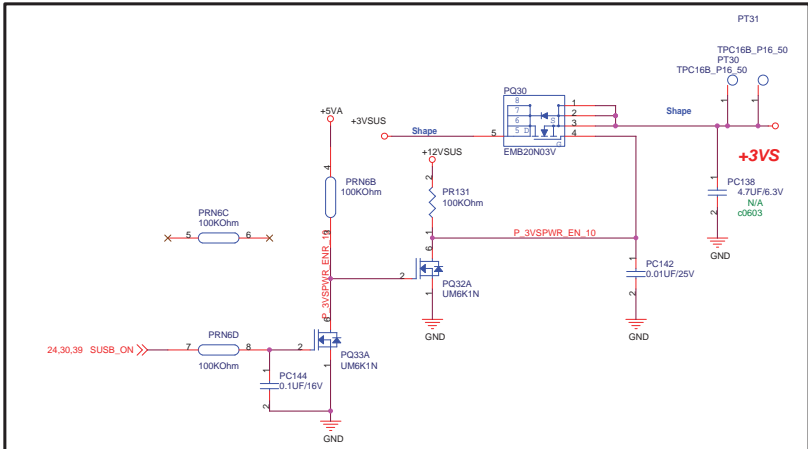
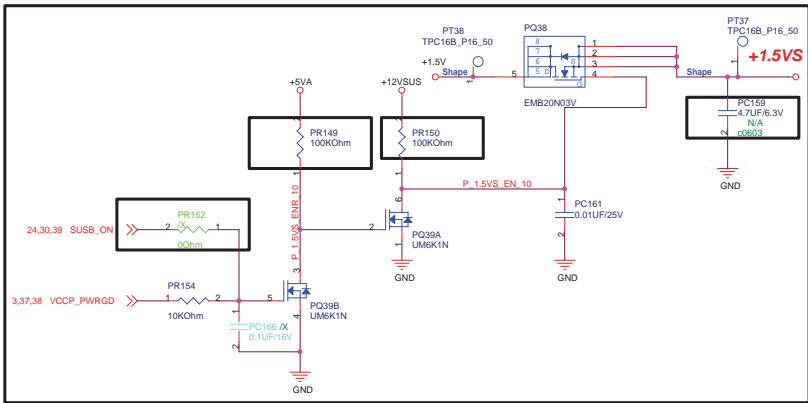
**Power Info. +3VSUS**

- 1. I/P Current:**  
 $I_{in} = V_o \cdot I_o / (0.8 \cdot V_{in}) = 1.832A$
- 2. Ripple Current:**  
 $I_{rip} = 1.92A$   
 $I_{spec} = 2.5A$   
 $\times 1$  pcs
- 3. Frequency:**  
 $f_{osc} = 375KHz$
- 4. OCP:**  
 $I_{ocp} = 8.74A$

**Power Info. +3VA**

- 1. Dropout Voltage:**  
 $\Delta V = 210mV$  ( $I_o = 300m A$ )
- 2. Current Limit:**  
 $I_{limit} = 480mA$
- 3. Pd:**  
 $R_{thjc} = 5 \text{ } ^\circ C/W$   
 $P_d = 0.4W$





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Default Group-1005P-SR HIGH END

<b>ASUS</b>		<b>Title : load switch</b>	
ASUSTek Computer INC		Engineer: Joy_Zhou	
Size	Project Name	Rev	
C	1015P	1.0	
Date: Wednesday, February 24, 2010		Sheet 42 of 42	