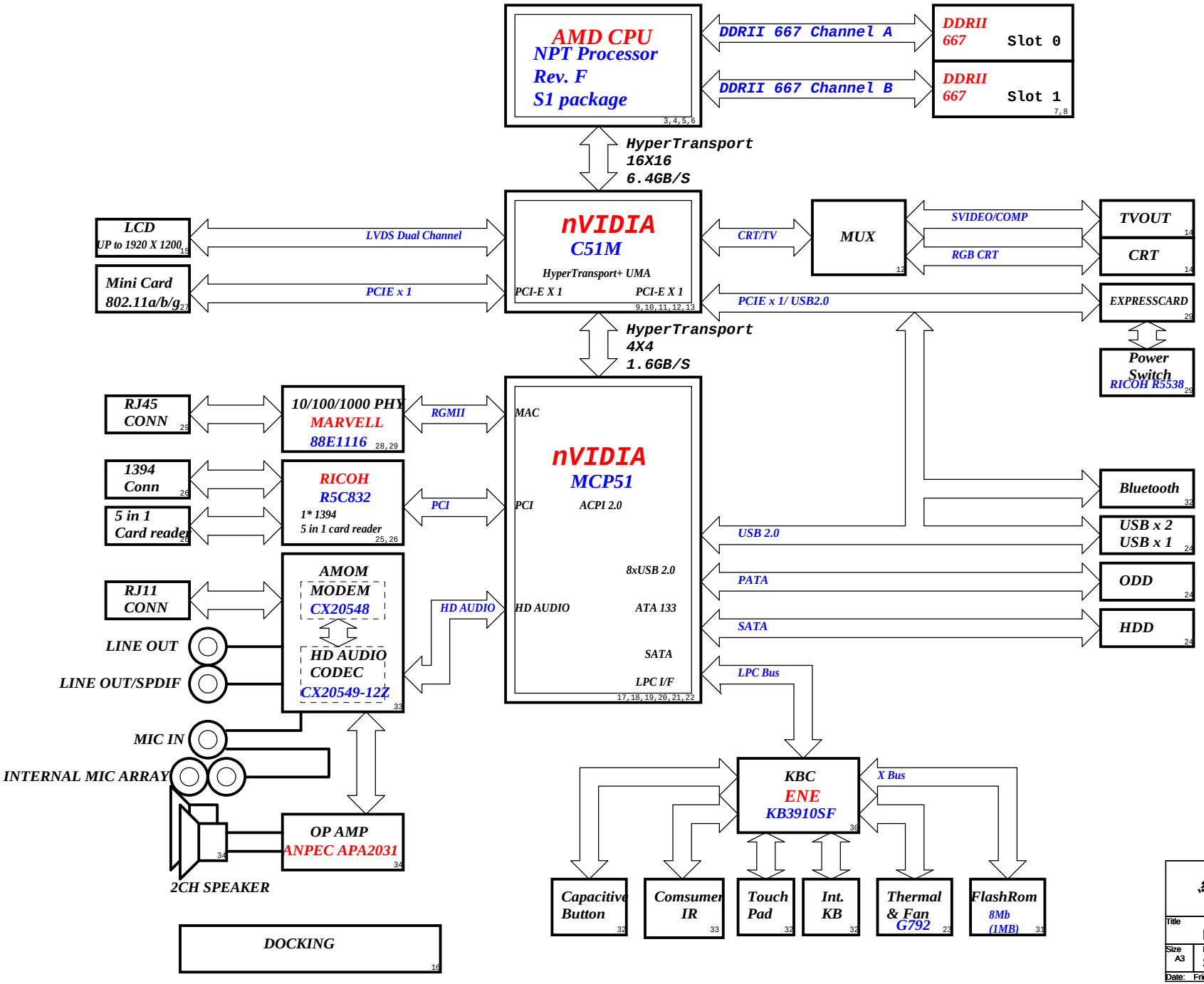
Shiba Block Diagram(FF+)

Project Code: 91.4F701.001
Project Name: Shiba
PCB Number: 05234



SYSTEM DC/DC MAX8734A	
INPUTS	OUTPUTS
DCBATOUT	3D3V_S5 5V_S5

SYSTEM DC/DC MAX8743	
INPUTS	OUTPUTS
DCBATOUT	1D2V_HT_S0 1D2V_CORE_S0

MAXIM CHARGER MAX8725	
INPUTS	OUTPUTS
DCBATOUT	BT+ 18V 3.0A 5V 100mA

CPU DC/DC MAX8760	
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE_S0 1.35V 35A

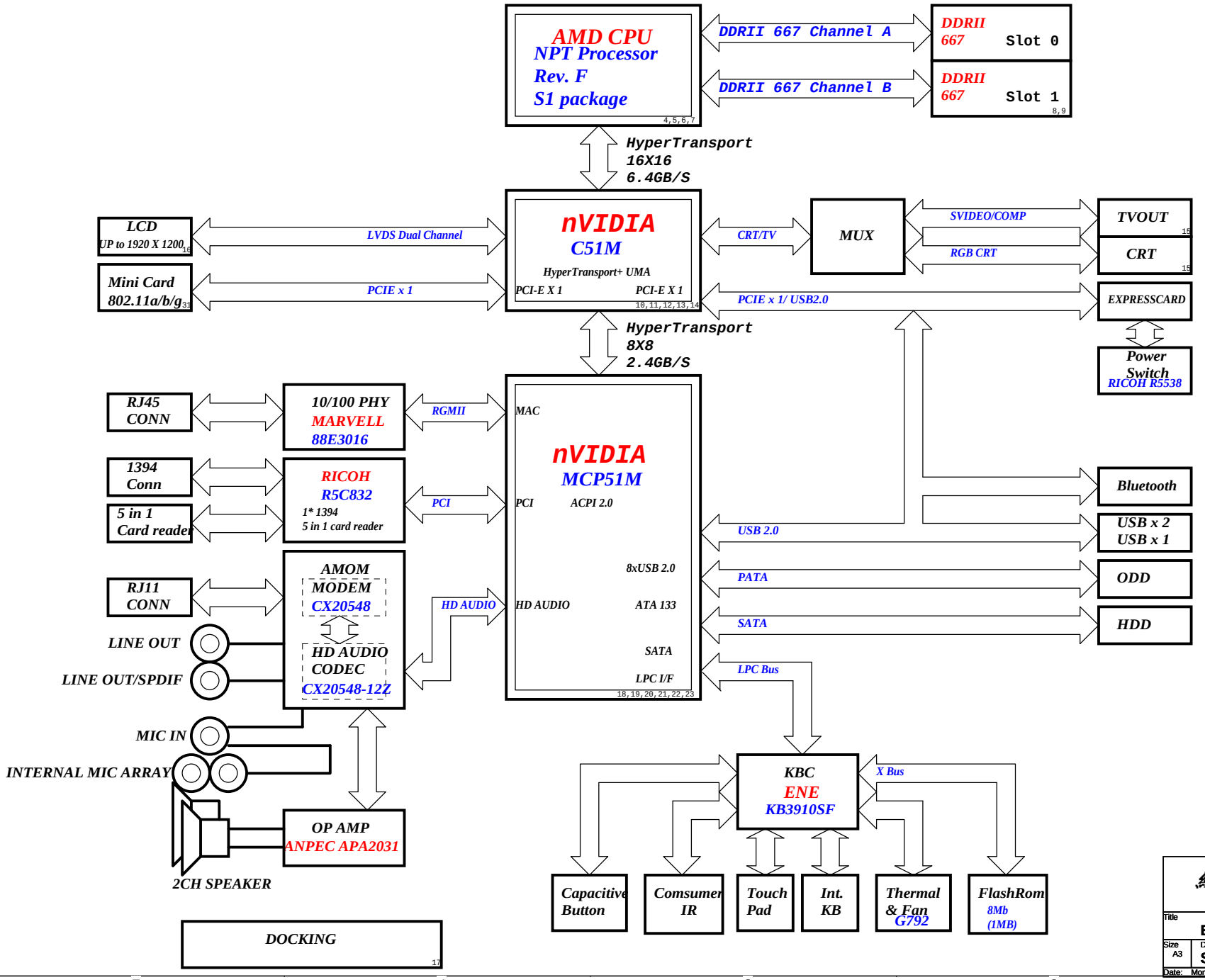
PCB LAYER

L1:SIGNAL 1
L2:GND
L3:SIGNAL 2
L4:SIGNAL 3
L5:VCC
L6:SIGNAL 4

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: Block Diagram(FF+)
Size: A3 | Document Number: SHIBA | Rev: SA
Date: Friday, November 11, 2005 | Sheet 1 of 44

Shiba Block Diagram(DF)



SYSTEM DC/DC MAX8734A	
INPUTS	OUTPUTS
DCBATOUT	3D3V_S5 5V_S5

SYSTEM DC/DC MAX8743	
INPUTS	OUTPUTS
DCBATOUT	1D2V_HT_S0 1D2V_CORE_S0

MAXIM CHARGER MAX8725	
INPUTS	OUTPUTS
DCBATOUT	BT+ 18V 3.0A 5V 100mA

CPU DC/DC MAX8760	
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE_S0 1.35V 35A

PCB LAYER
L1:SIGNAL 1
L2:GND
L3:SIGNAL 2
L4:SIGNAL 3
L5:VCC
L6:SIGNAL 4

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: Block Diagram(FF+)

Size: A3 | Document Number: SHIBA | Rev: SA

Date: Monday, October 31, 2005 | Sheet 2 of 44

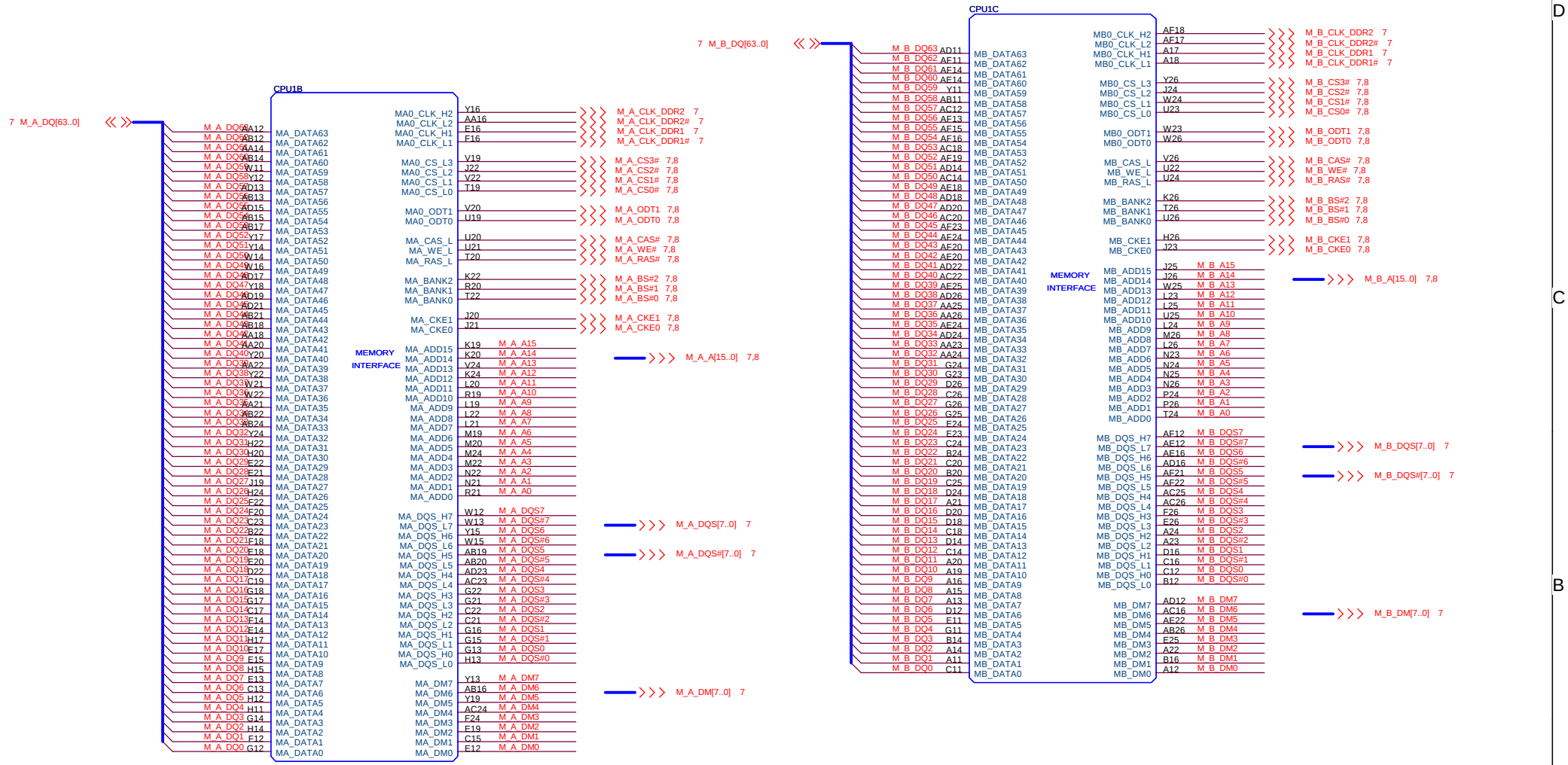
<Variant Name>

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: CPU(1/4) HT

Size: A3 | Document Number: SHIBA | Rev: SC

Date: Friday, February 24, 2006 | Sheet 3 of 44



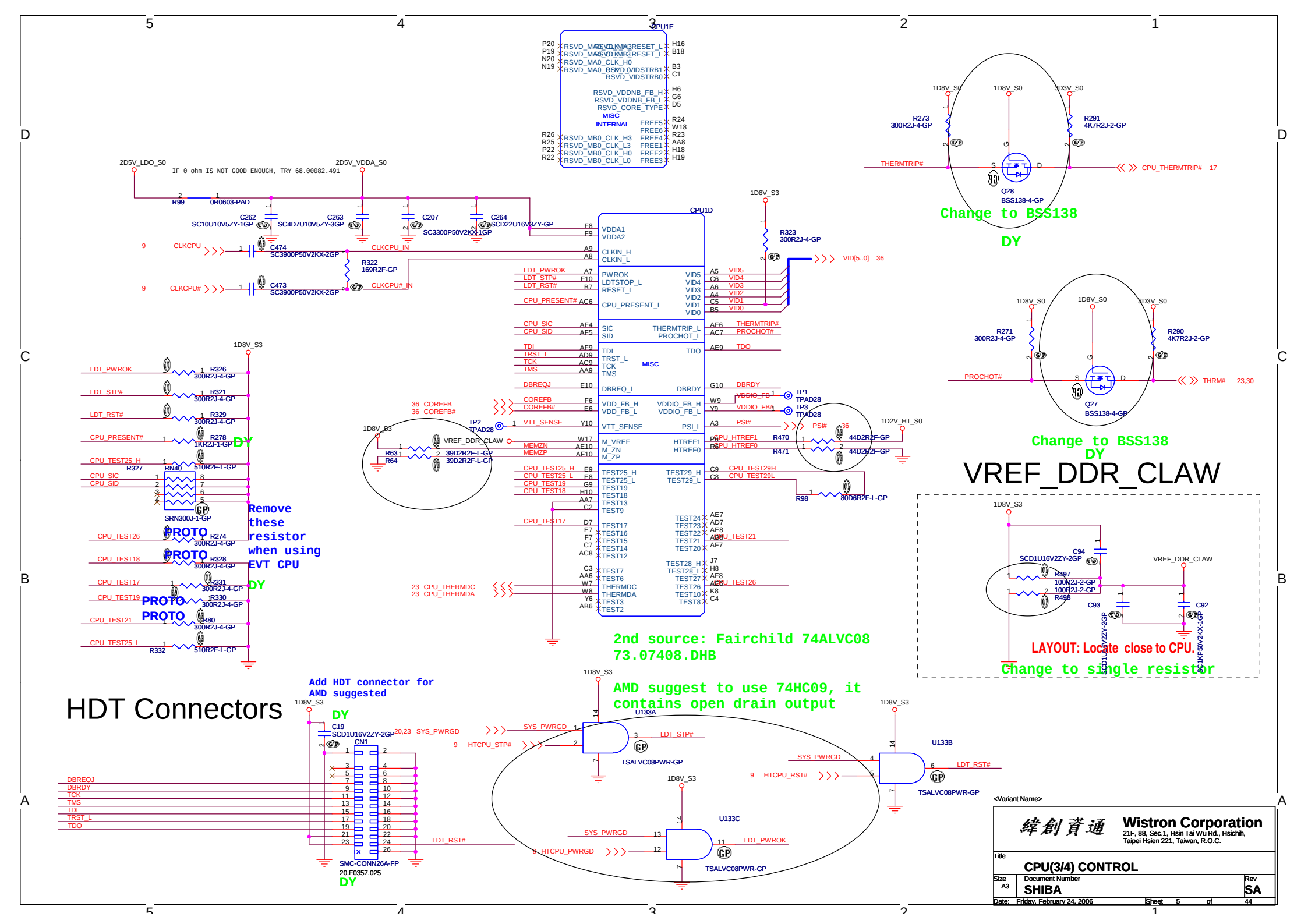
<Variant Name>

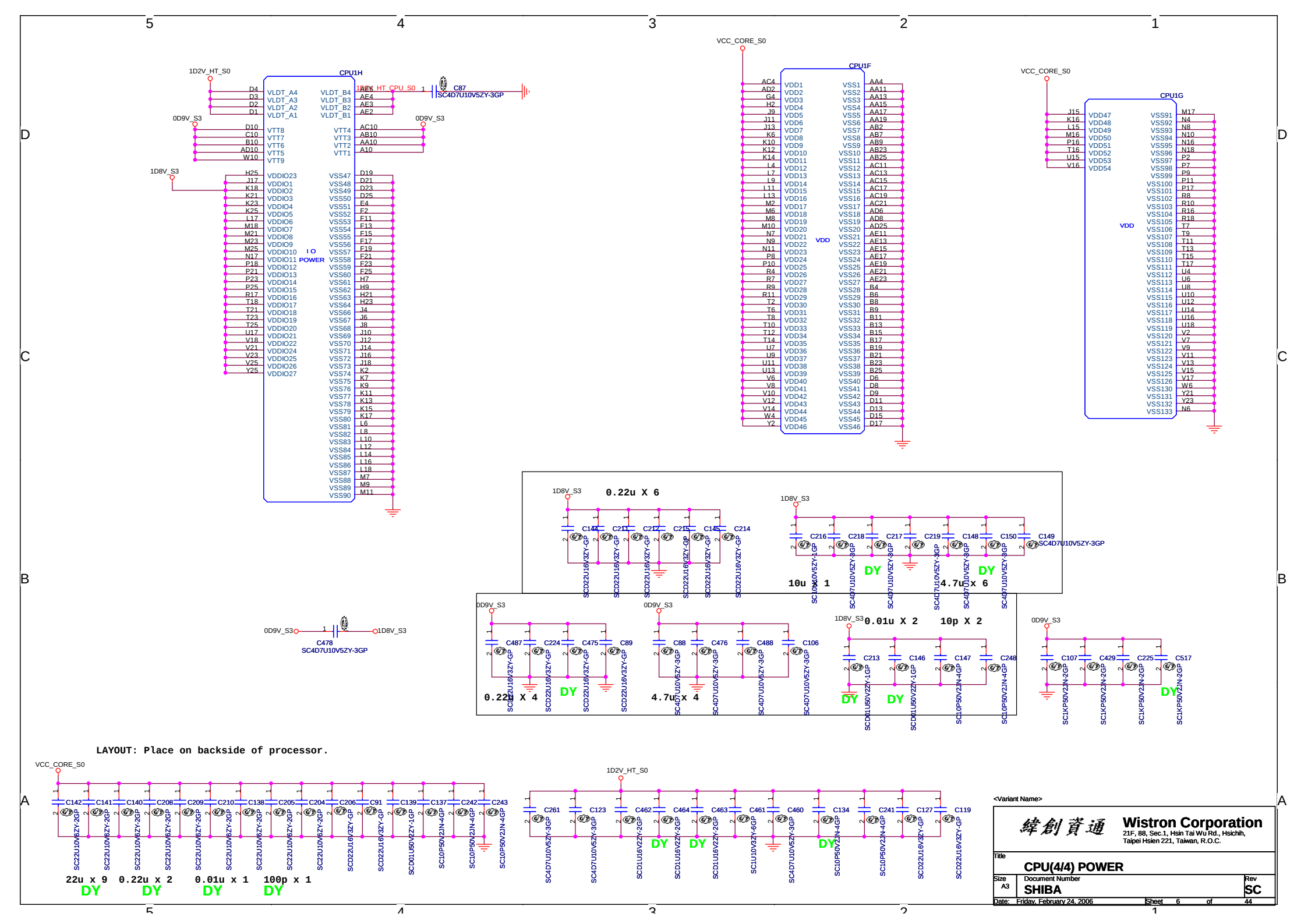
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

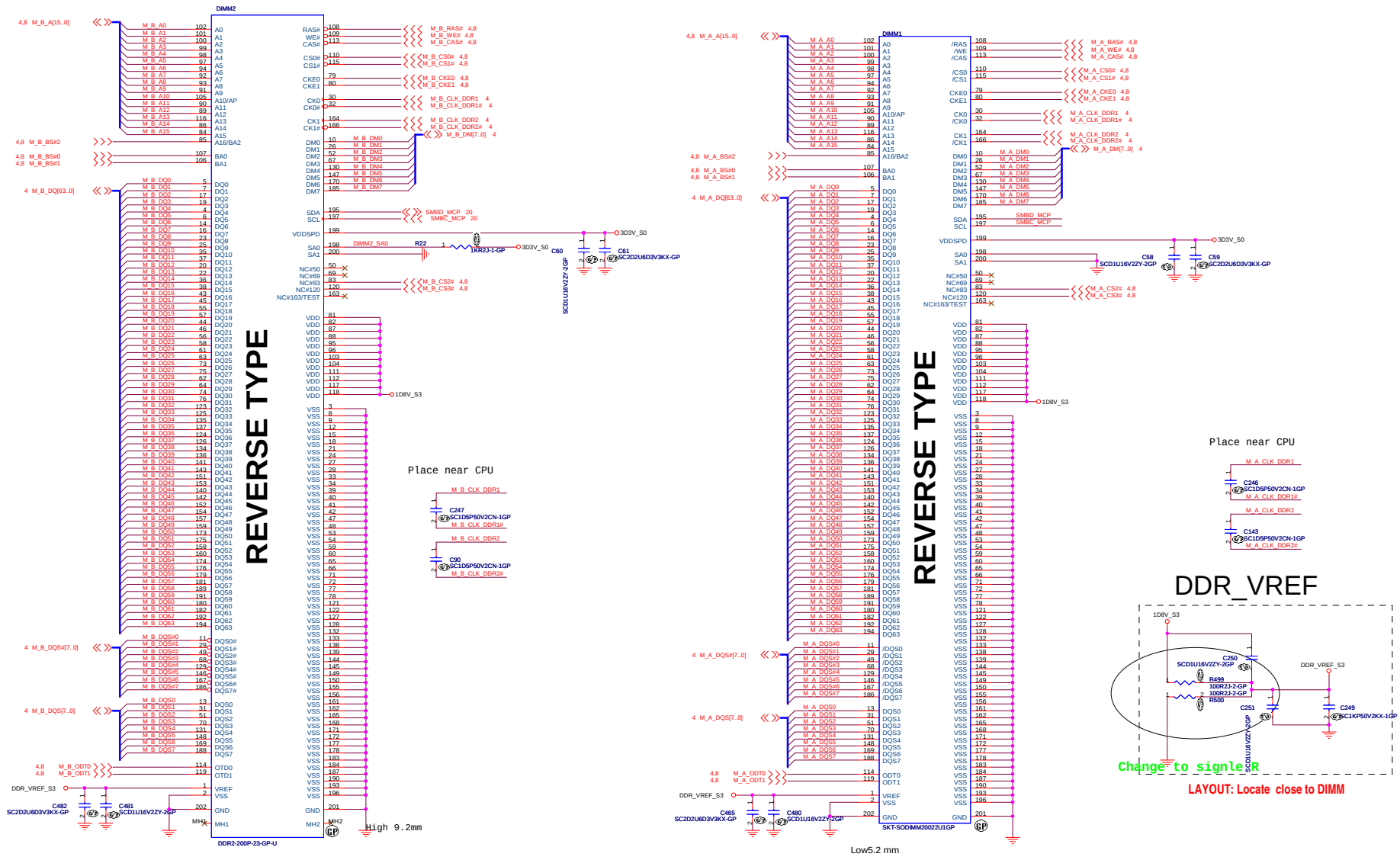
Title: **CPU(2/4) DDR II**

Size	Document Number	Rev
A3	SHIBA	SC

Date: Friday, February 24, 2006 Sheet 4 of 44


CPU1E
CPU1D
2D5V_LDO_S0
2D5V_VDDA_S0
IF 0 ohm IS NOT GOOD ENOUGH, TRY 68.00082.491
R99 0R0603-PAD
C262 SC10U10V5ZY-1GP
C263 SC4D7U10V5ZY-3GP
C207 SC3300P50V2KX-1GP
C264 SCD22U16V3ZY-GP
CLKCPU
CLKCPU#
C474 SC3900P50V2KX-2GP
C473 SC3900P50V2KX-2GP
R322 169R2F-GP
CLKCPU_IN
CLKCPU#_IN
1D8V_S3
R323 300R2J-4-GP
VID[5..0] 36
LDT_PWROK
LDT_STP#
LDT_RST#
CPU_PRESENT#
CPU_SIC
CPU_SID
TDI
TRST_L
TCK
TMS
DBREQJ
DBRDY
COREFB
COREFB#
VTT_SENSE
MEMZN
MEMZP
CPU_TEST25_H
CPU_TEST25_L
CPU_TEST19
CPU_TEST18
CPU_TEST17
THERMTRIP#
PROCHOT#
VDDIO_FB
VDDIO_FB#
PSI#
CPU_HTREF1
CPU_HTREF0
CPU_TEST29H
CPU_TEST29L
CPU_TEST21
CPU_TEST26
23 CPU_THERMDC
23 CPU_THERMDA
1D2V_HT_S0
R470 44D2R2F-GP
R471 44D2R2F-GP
R98 80D6R2F-L-GP
TP1 TPAD28
TP2 TPAD28
TP3 TPAD28
VREF_DDR_CLAW
R63 39D2R2F-L-GP
R64 39D2R2F-L-GP
36 COREFB
36 COREFB#
Q28 BSS138-4-GP
Change to BSS138
DY
Q27 BSS138-4-GP
Change to BSS138
DY
VREF_DDR_CLAW
R273 300R2J-4-GP
R291 4K7R2J-2-GP
R271 300R2J-4-GP
R290 4K7R2J-2-GP
THRM# 23,30
CPU_THERMTRIP# 17
R326 300R2J-4-GP
R321 300R2J-4-GP
R329 300R2J-4-GP
R278 1KR2J-1-GP
DY
R327
RN40 510R2F-L-GP
SRN300J-1-GP
Remove these resistor when using EVT CPU
DY
R274 300R2J-4-GP
PROTO
R328 300R2J-4-GP
PROTO
R331 300R2J-4-GP
R330 300R2J-4-GP
PROTO
PROTO
R80 300R2J-4-GP
R332 510R2F-L-GP
2nd source: Fairchild 74ALVC08
73.07408.DHB
AMD suggest to use 74HC09, it contains open drain output
U133A
U133B
U133C
TSALVC08PWR-GP
SYS_PWRGD
HTCPU_STP#
HTCPU_RST#
HTCPU_PWRGD
LDT_STP#
LDT_RST#
LDT_PWROK
C94 SCD1U16V2ZY-2GP
R497 100R2J-2-GP
R498 100R2J-2-GP
C93
C92
LAYOUT: Locate close to CPU.
Change to single resistor
HDT Connectors
Add HDT connector for AMD suggested
C19 SCD1U16V2ZY-2GP
CN1
SMC-CONN26A-FP
20.F0357.025
DY
DBREQJ
DBRDY
TCK
TMS
TDI
TRST_L
TDO
LDT_RST#
<Variant Name>
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
CPU(3/4) CONTROL
Size A3
Document Number SHIBA
Rev SA
Date: Friday, February 24, 2006
Sheet 5 of 44


CPU1H
CPU1F
CPU1G
VCC_CORE_S0
1D2V_HT_S0
0D9V_S3
1D8V_S3
C87
SC4D7U10V5ZY-3GP
C478
0.22u X 6
10u x 1
4.7u x 6
0.22u X 4
4.7u x 4
0.01u X 2
10p X 2
LAYOUT: Place on backside of processor.
22u x 9
0.22u x 2
0.01u x 1
100p x 1
DY
<Variant Name>
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
CPU(4/4) POWER
Size
A3
Document Number
SHIBA
Rev
SC
Date: Friday, February 24, 2006
Sheet 6 of 44

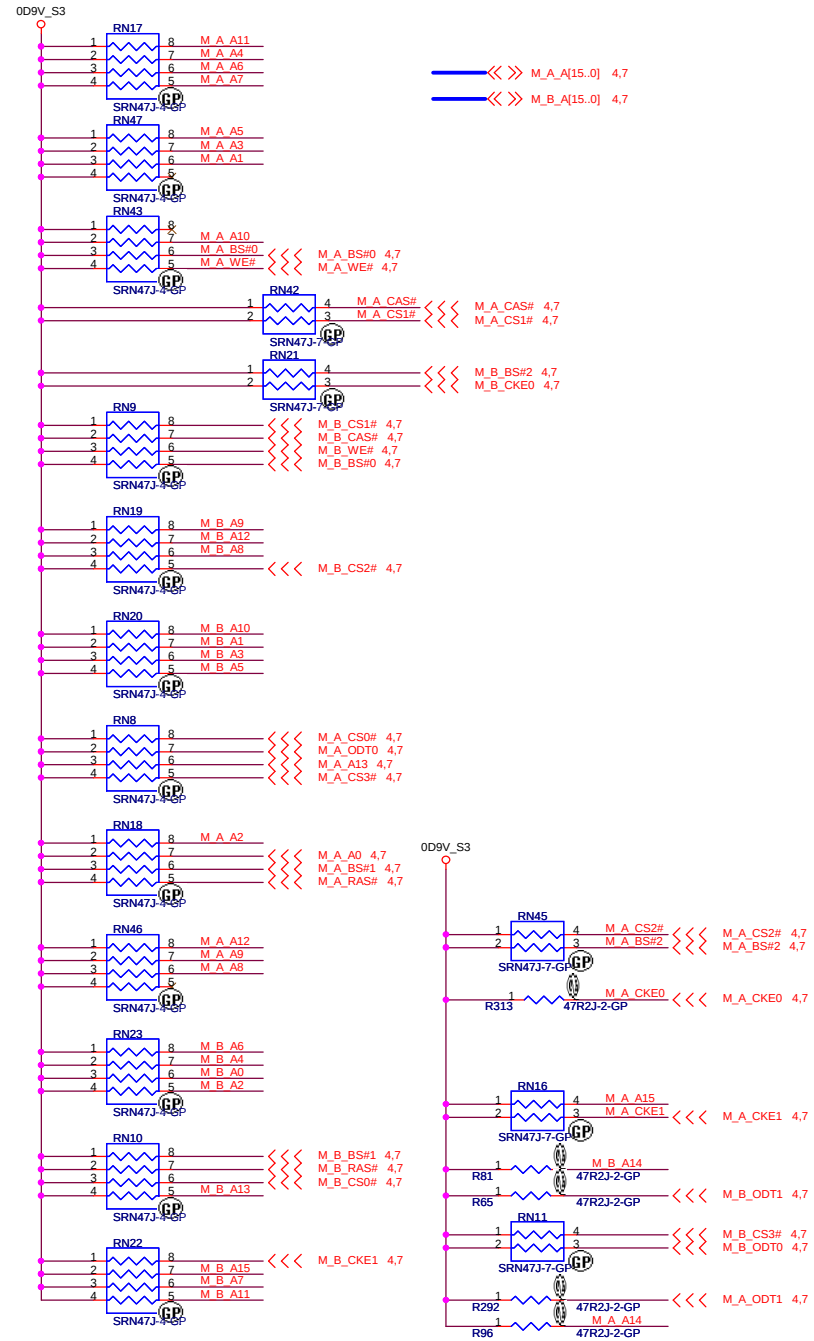


<variant_name>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title: DDR2-SOCKET		
Size: A2	Document Number: SHIBA	Rev: SA
Date: Monday, February 27, 2006	Sheet 7 of 44	

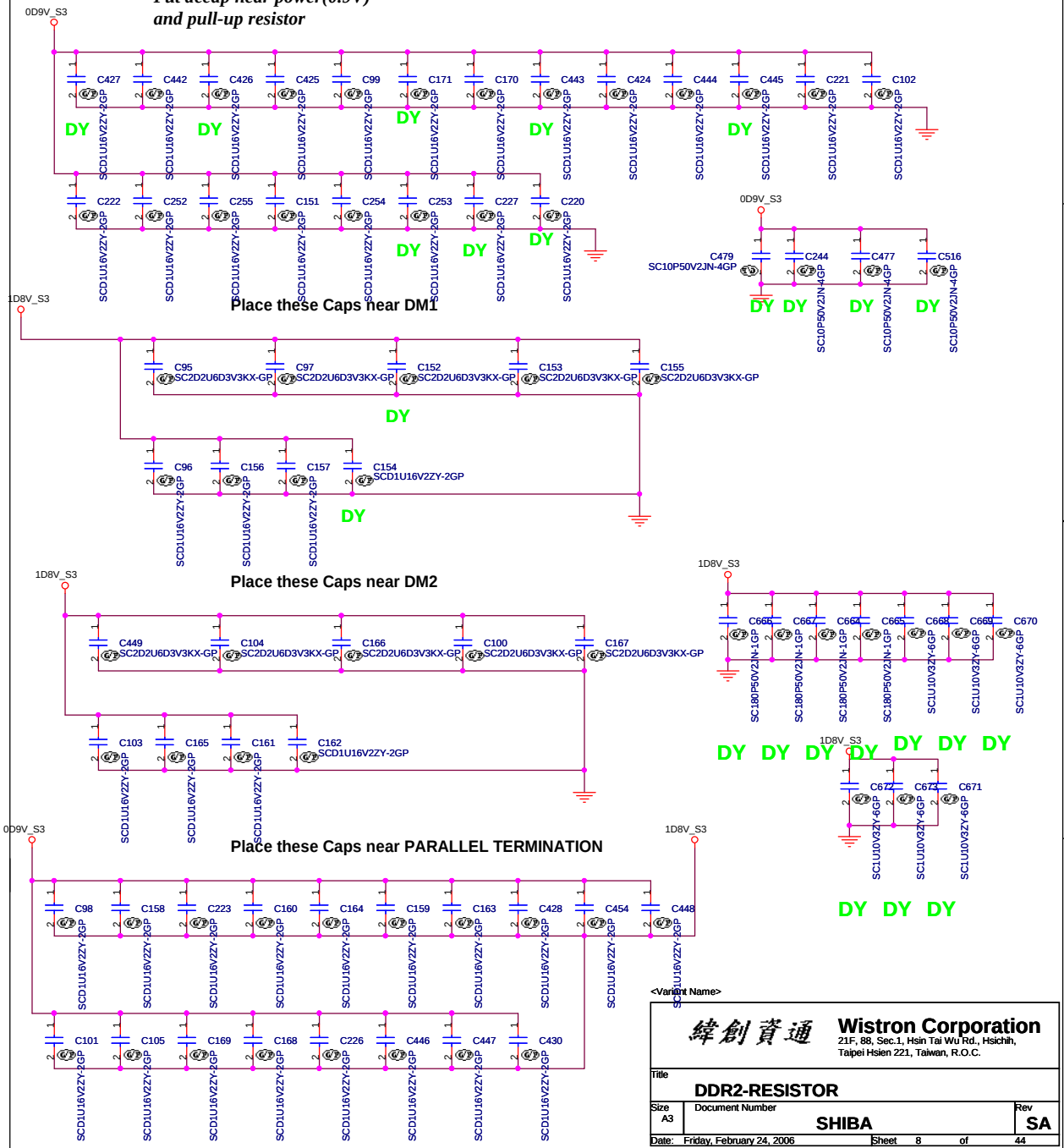
PARALLEL TERMINATION

Put decap near power(0.9V) and pull-up resistor



Decoupling Capacitor

Put decap near power(0.9V) and pull-up resistor



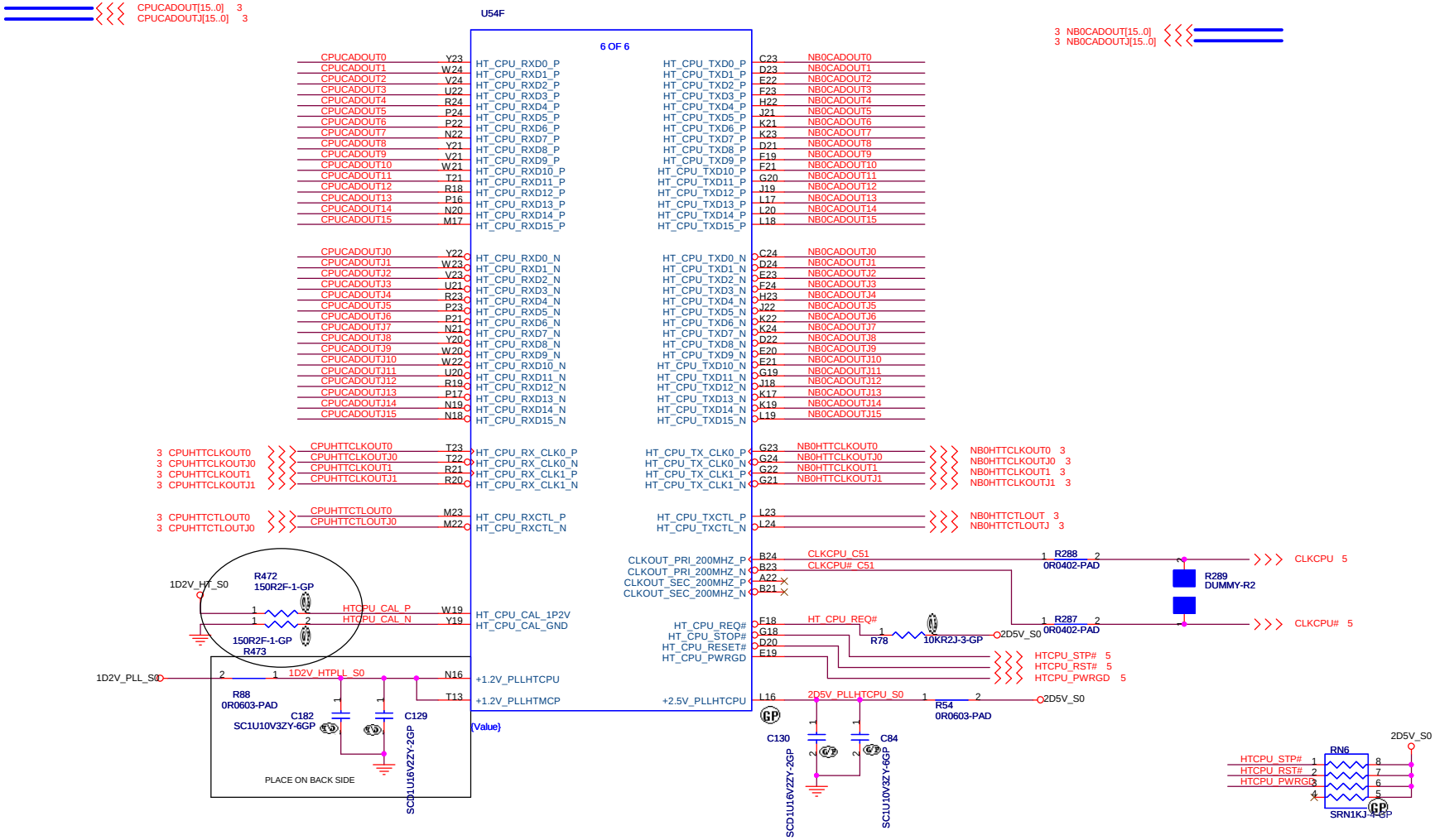
<Variant Name>

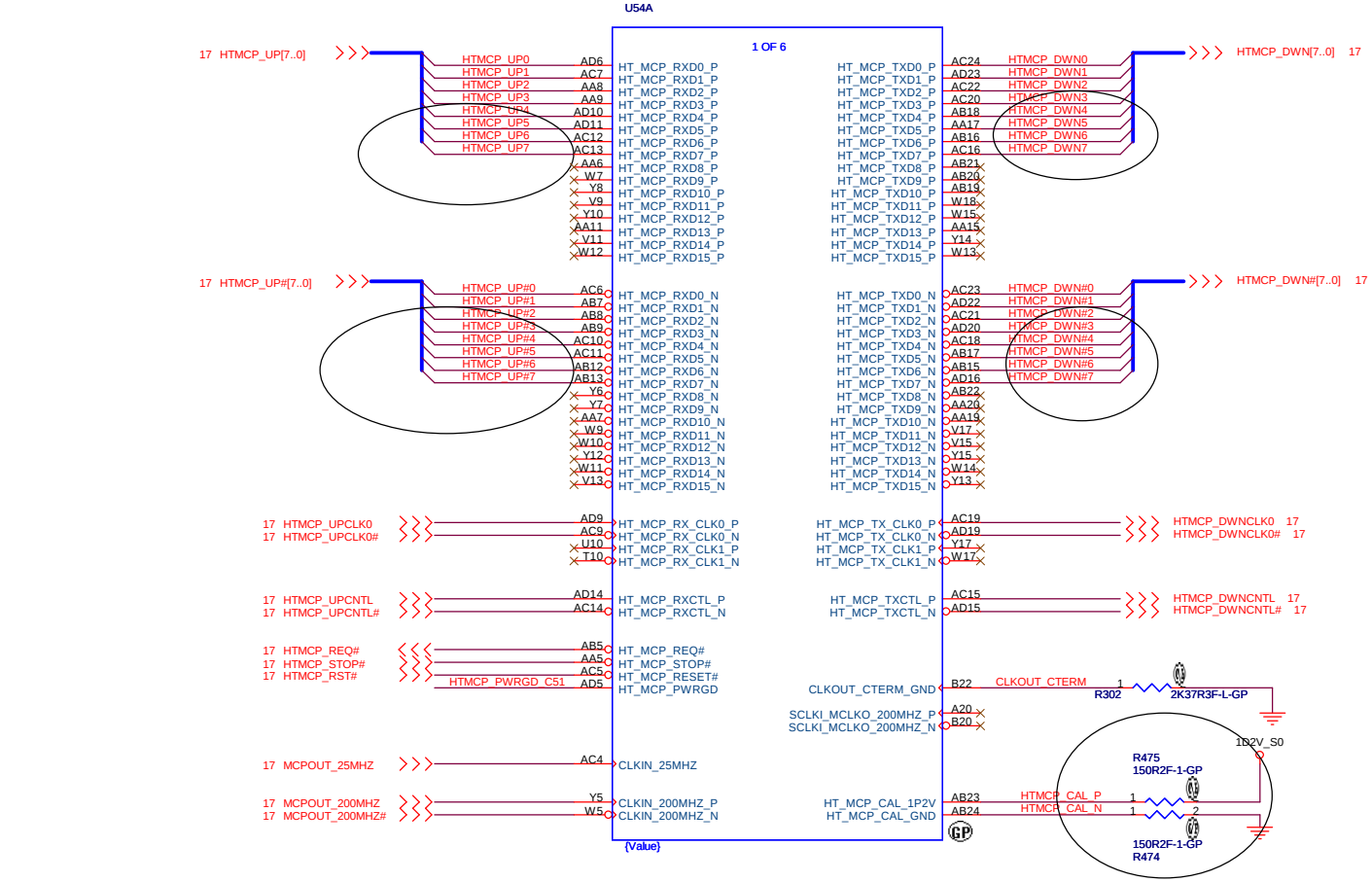
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **DDR2-RESISTOR**

Size	Document Number	Rev
A3	SHIBA	SA

Date: Friday, February 24, 2006 Sheet 8 of 44


CPUCADOUT[15..0] 3
CPUCADOUTJ[15..0] 3
U54F
6 OF 6
3 NB0CADOUT[15..0]
3 NB0CADOUTJ[15..0]
HT_CPU_RXD0_P
HT_CPU_RXD0_N
HT_CPU_TXD0_P
HT_CPU_TXD0_N
HT_CPU_RX_CLK0_P
HT_CPU_RX_CLK0_N
HT_CPU_TX_CLK0_P
HT_CPU_TX_CLK0_N
HT_CPU_RXCTL_P
HT_CPU_RXCTL_N
HT_CPU_TXCTL_P
HT_CPU_TXCTL_N
HT_CPU_CAL_1P2V
HT_CPU_CAL_GND
+1.2V_PLLHTCPU
+1.2V_PLLHTMCP
+2.5V_PLLHTCPU
CLKOUT_PRI_200MHZ_P
CLKOUT_PRI_200MHZ_N
CLKOUT_SEC_200MHZ_P
CLKOUT_SEC_200MHZ_N
HT_CPU_REQ#
HT_CPU_STOP#
HT_CPU_RESET#
HT_CPU_PWRGD
CLKCPU_C51
CLKCPU#_C51
HT_CPU_REQ#
1D2V_HT_S0
1D2V_PLL_S0
1D2V_HTPLL_S0
R472 150R2F-1-GP
150R2F-1-GP R473
R88 0R0603-PAD
C182 SC1U10V3ZY-6GP
C129 SCD1U16V2ZY-2GP
PLACE ON BACK SIDE
R288 0R0402-PAD
R289 DUMMY-R2
R287 0R0402-PAD
R78 10KR2J-3-GP
2D5V_S0
R54 0R0603-PAD
C130 SCD1U16V2ZY-2GP
C84 SC1U10V3ZY-6GP
CLKCPU 5
CLKCPU# 5
HTCPU_STP# 5
HTCPU_RST# 5
HTCPU_PWRGD 5
RN6
HTCPU_STP#
HTCPU_RST#
HTCPU_PWRGD
SRN1KJ-4-GP
<Variant Name>
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
C51M(1/5) HT CPU
Size A3
Document Number SHIBA
Rev SC
Date: Friday, February 24, 2006
Sheet 9 of 44



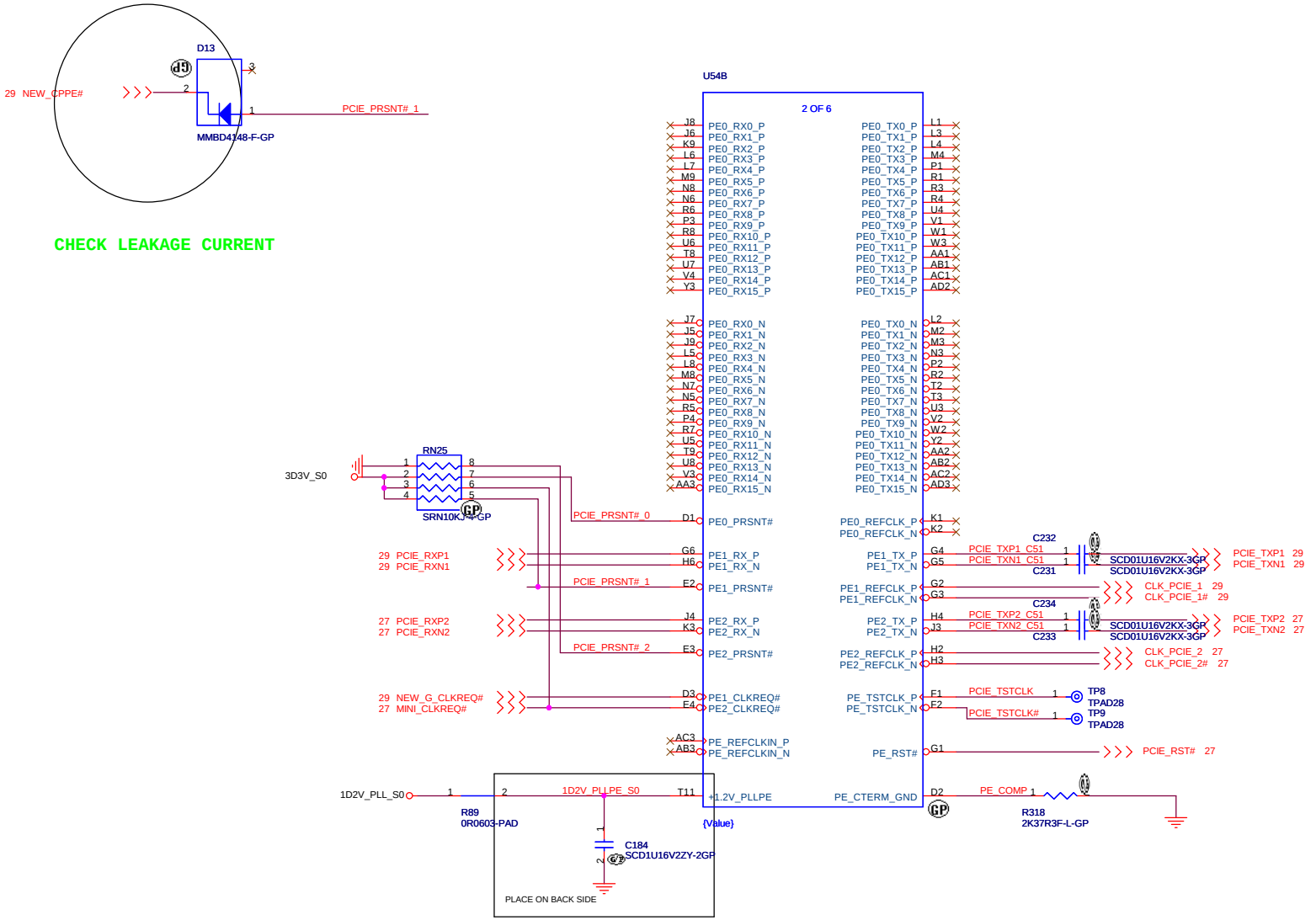
<Variant Name>

緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **C51M(2/5)HT MCP**

Size	Document Number	Rev
A3	SHIBA	SC

Date: Friday, February 24, 2006 Sheet 10 of 44



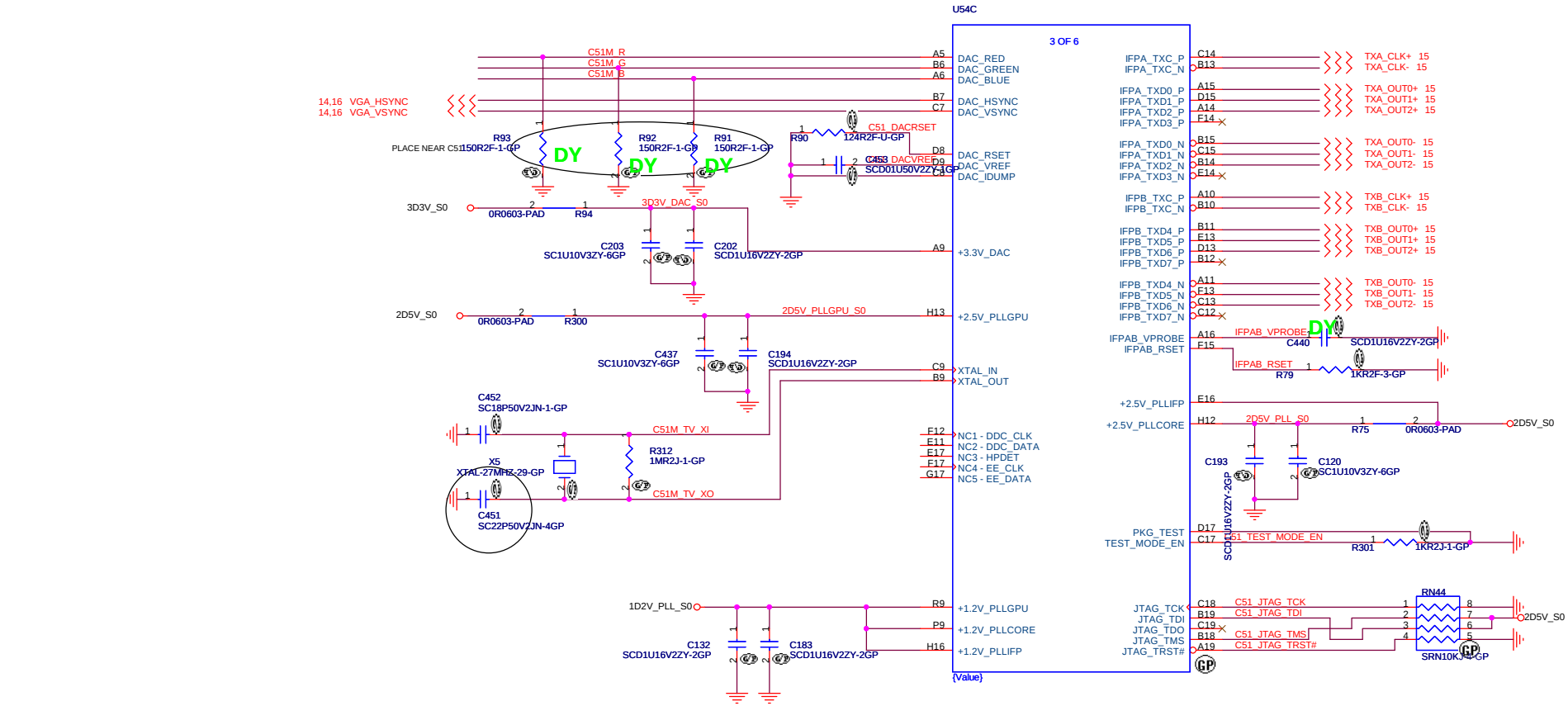
<Variant Name>

緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **C51M(3/5)PCIE**

Size	Document Number	Rev
A3	SHIBA	SA

Date: Monday, February 27, 2006 Sheet 11 of 44



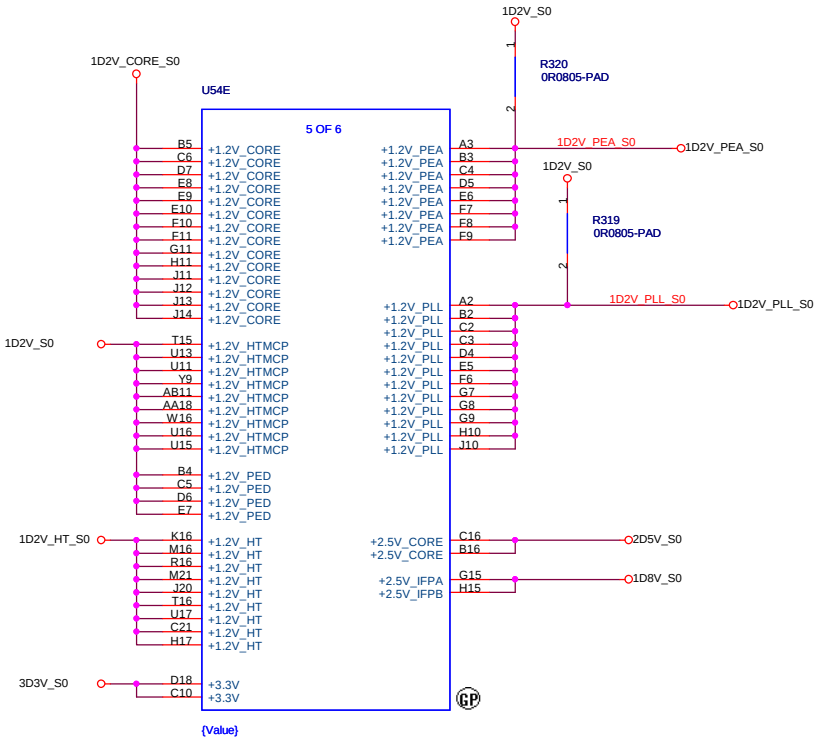
<Variant Name>

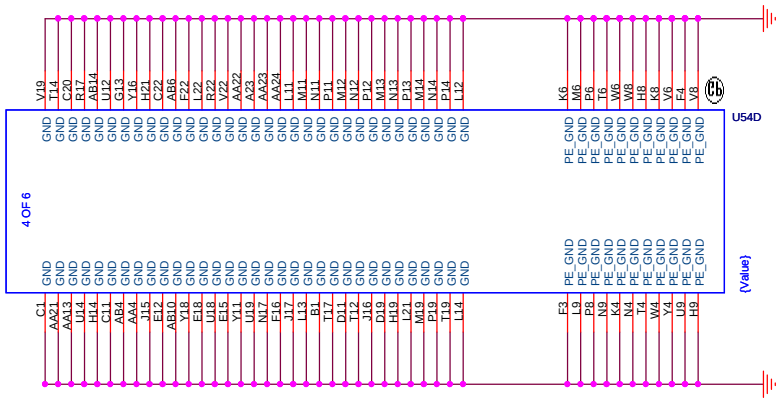
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **C51M(4/5)CRT/LVDS**

Size	Document Number	Rev
A3	SHIBA	SA

Date: Wednesday, March 15, 2006 Sheet 12 of 44





C51 DECOUPLING

PLACE ON BACK SIDE
CENTER OF C51

1D2V_CORE_S0

C199 C229 C192 C188 C201 C200 C198 C190 C230 C228
SCD1U16V2ZY-2GP
SC1U10V3ZY-6GP

PLACE ON BACK SIDE
MCPHT CORE BALLS

1D2V_S0

C179 C121 C125
SCD1U16V2ZY-2GP
DY

1D8V_S0

C85 C135
SC1U10V3ZY-6GP
SCD1U16V2ZY-2GP

1D2V_S0

C181 C238 C180 C236 C122 C467 C468 C471
SCD1U16V2ZY-2GP
SC1U10V3ZY-6GP
SC4D7U10V5ZY-3GP
DY

1D2V_HT_S0

C126 C439 C438 C186 C189 C133 C128 C124 C131 C136
SCD1U16V2ZY-2GP
DY

1D2V_PEA_S0

C195 C237 C196 C235 C458 C240 C470 C457
SCD1U16V2ZY-2GP
SC1U10V3ZY-6GP
SC4D7U10V5ZY-3GP
DY

1D2V_PLL_S0

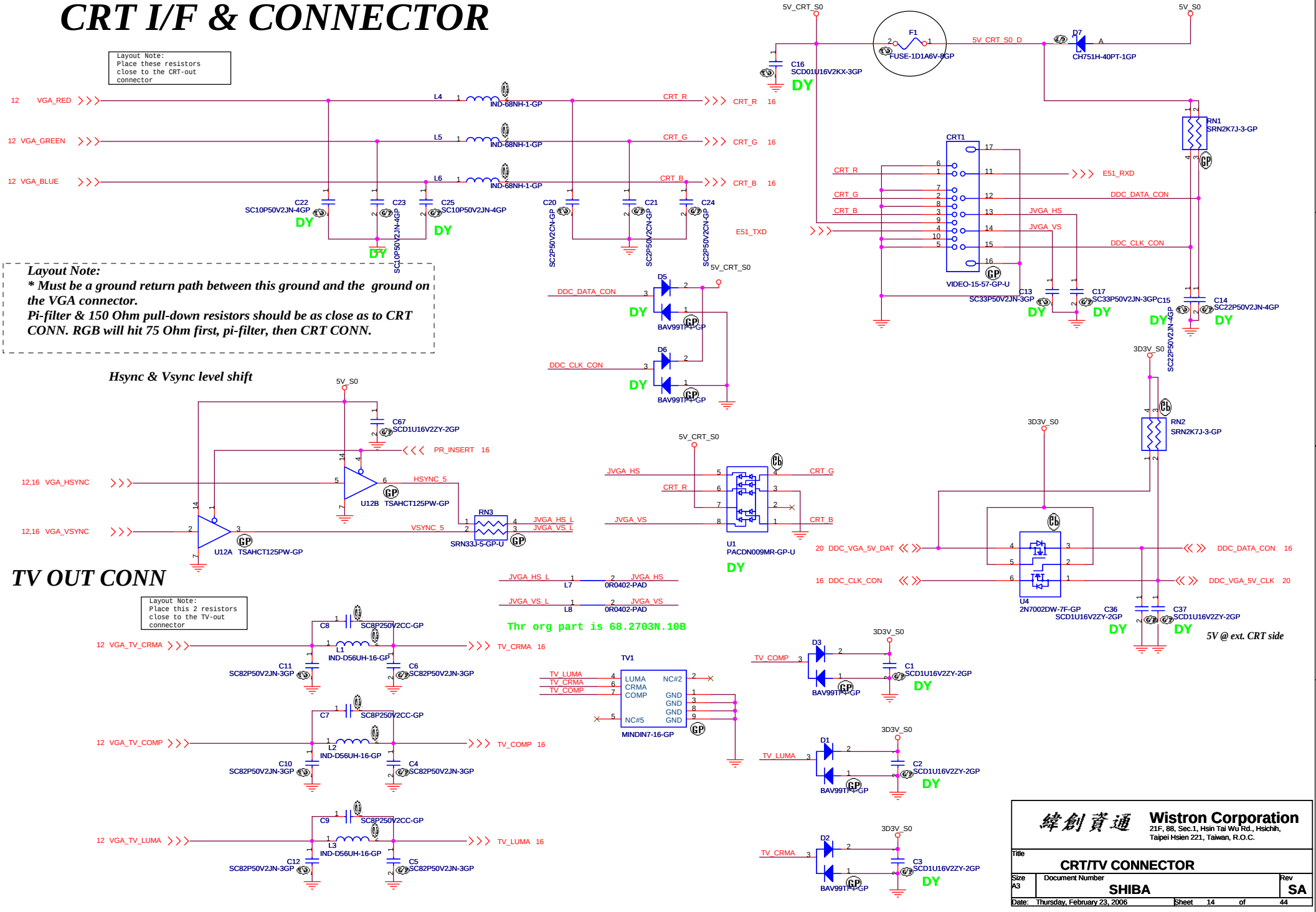
C197 C185 C187 C191 C455 C239 C456 C469
SCD1U16V2ZY-2GP
SC1U10V3ZY-6GP
SC4D7U10V5ZY-3GP
DY

<Variant Name>

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title	C51M(5/5)POWER	
Size A3	Document Number SHIBA	Rev SA
Date: Saturday, February 18, 2006	Sheet 13 of 44	

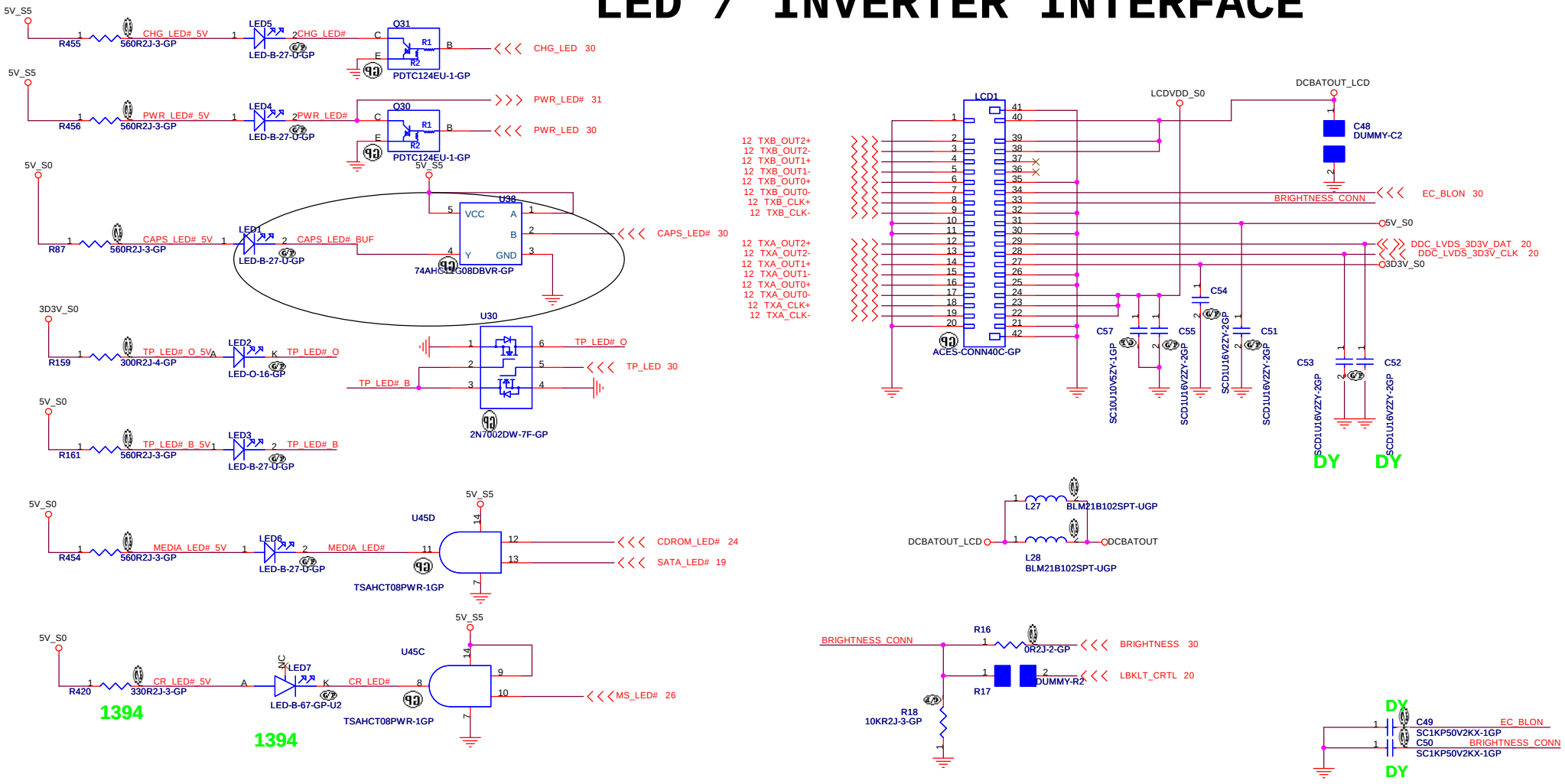
CRT I/F & CONNECTOR



緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

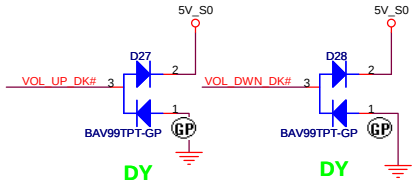
Title	CRT/TV CONNECTOR		
Size A3	Document Number SHIBA		Rev SA
Date: Thursday, February 23, 2006		Sheet 14 of 44	

LED / INVERTER INTERFACE

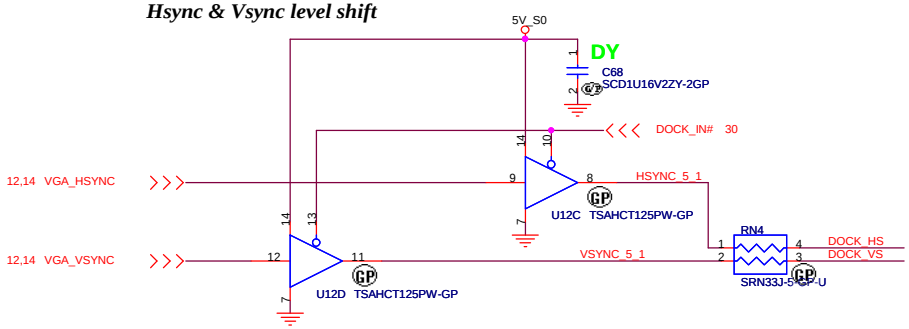


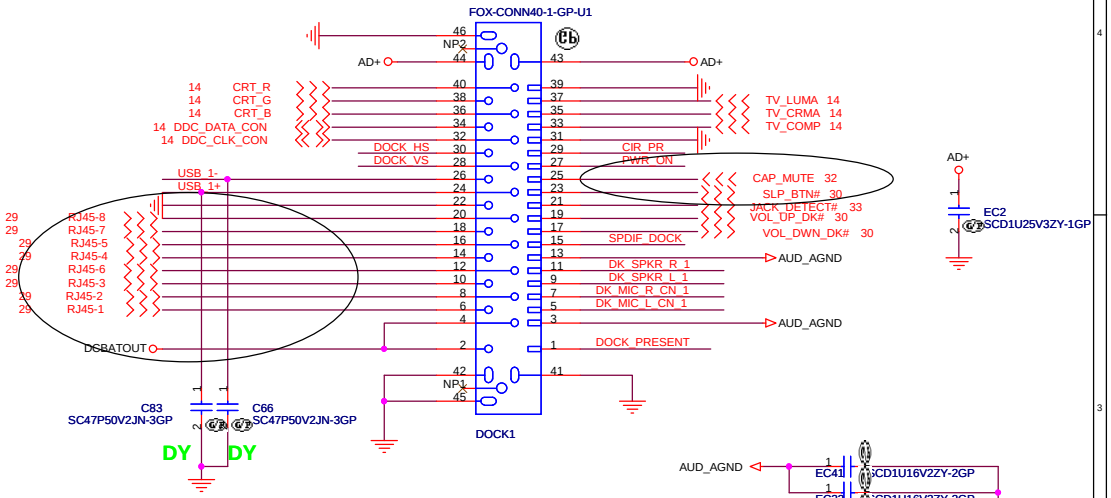
緯創資通	Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title	LCD/Inverter Connector		
Size: Custom	Document Number: SHIBA		Rev: SA
Date: Friday, February 24, 2006	Sheet 15 of 44		

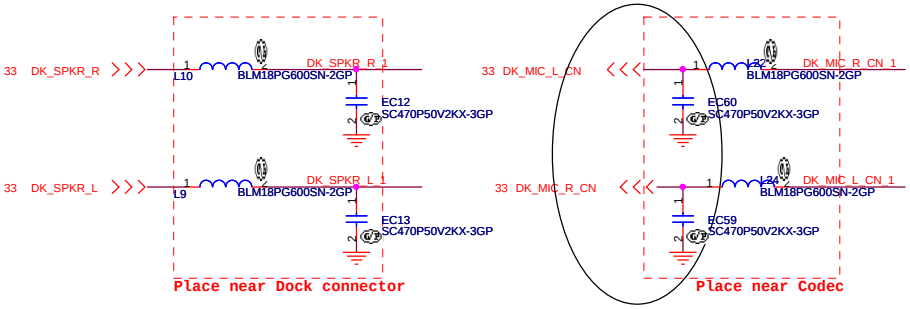
Docking Connector

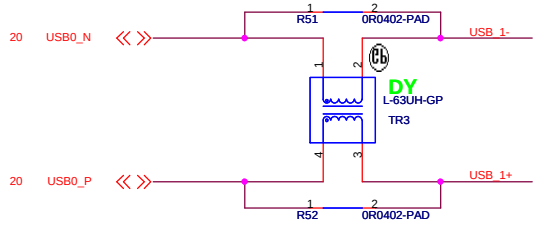


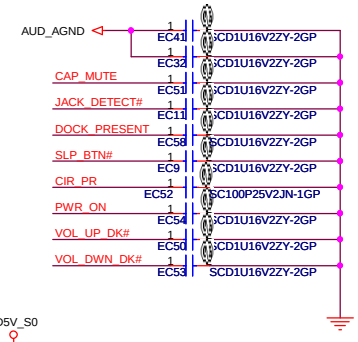
Hsync & Vsync level shift

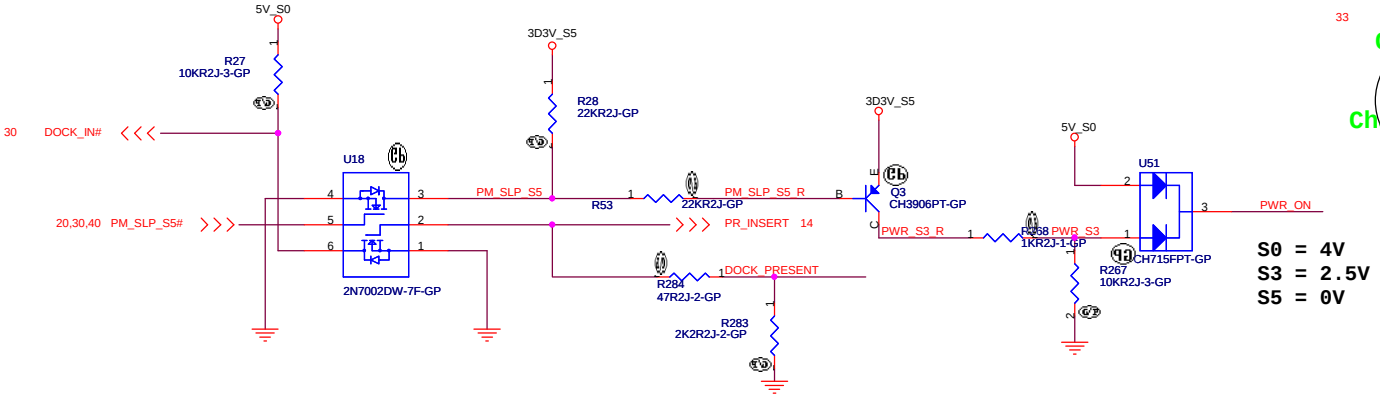


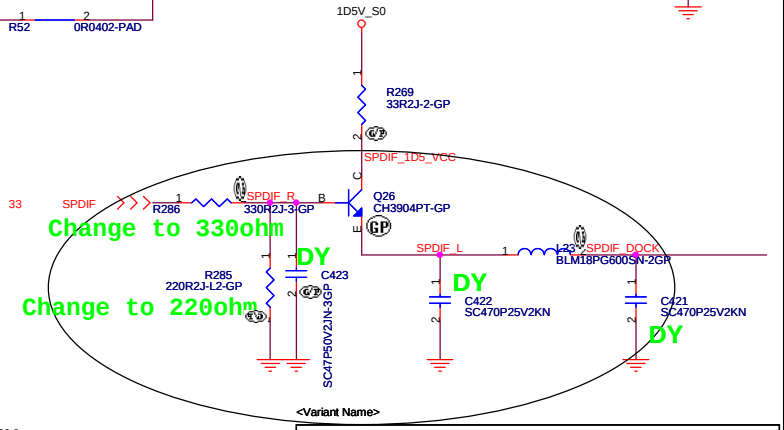






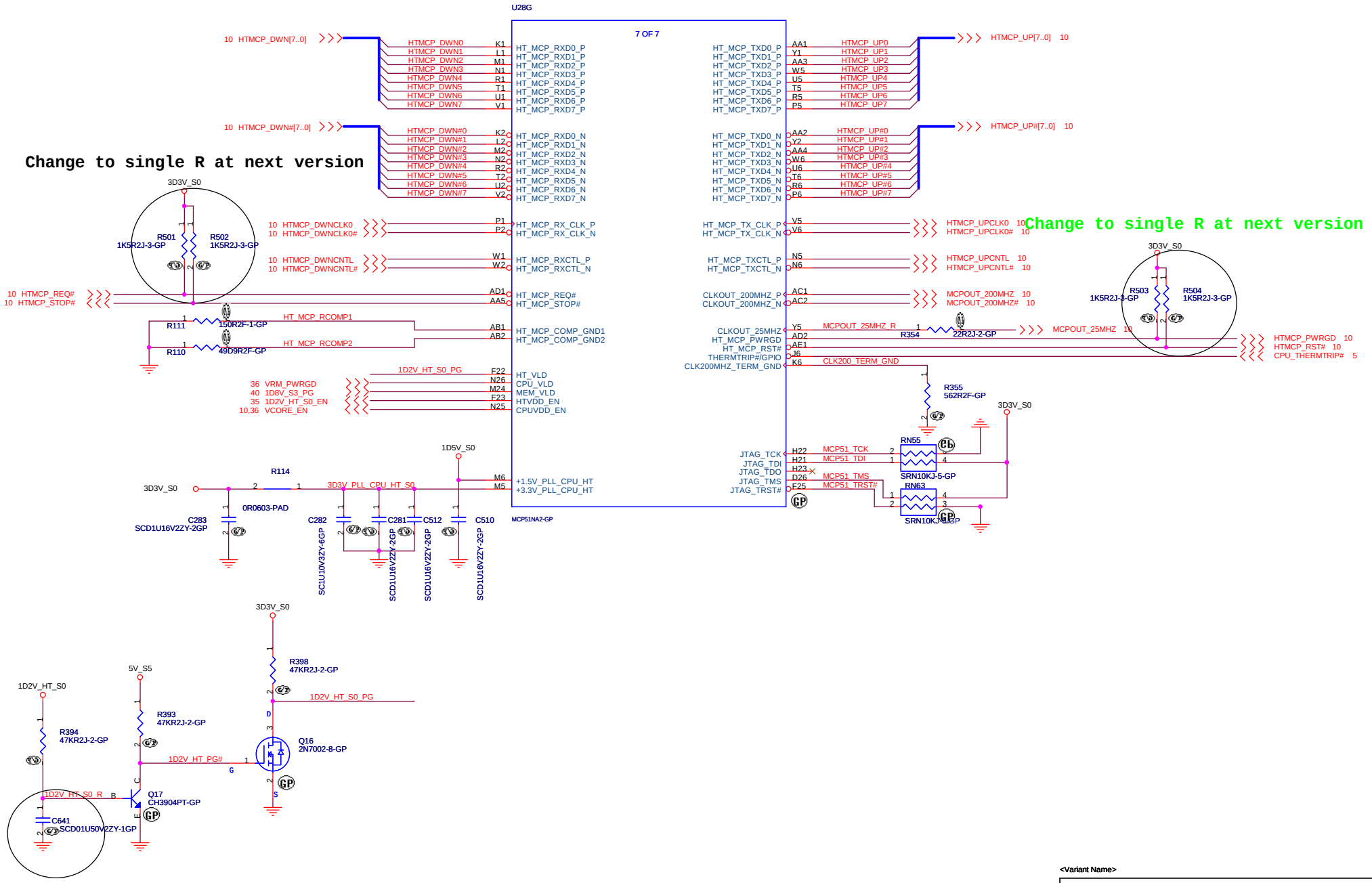






緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

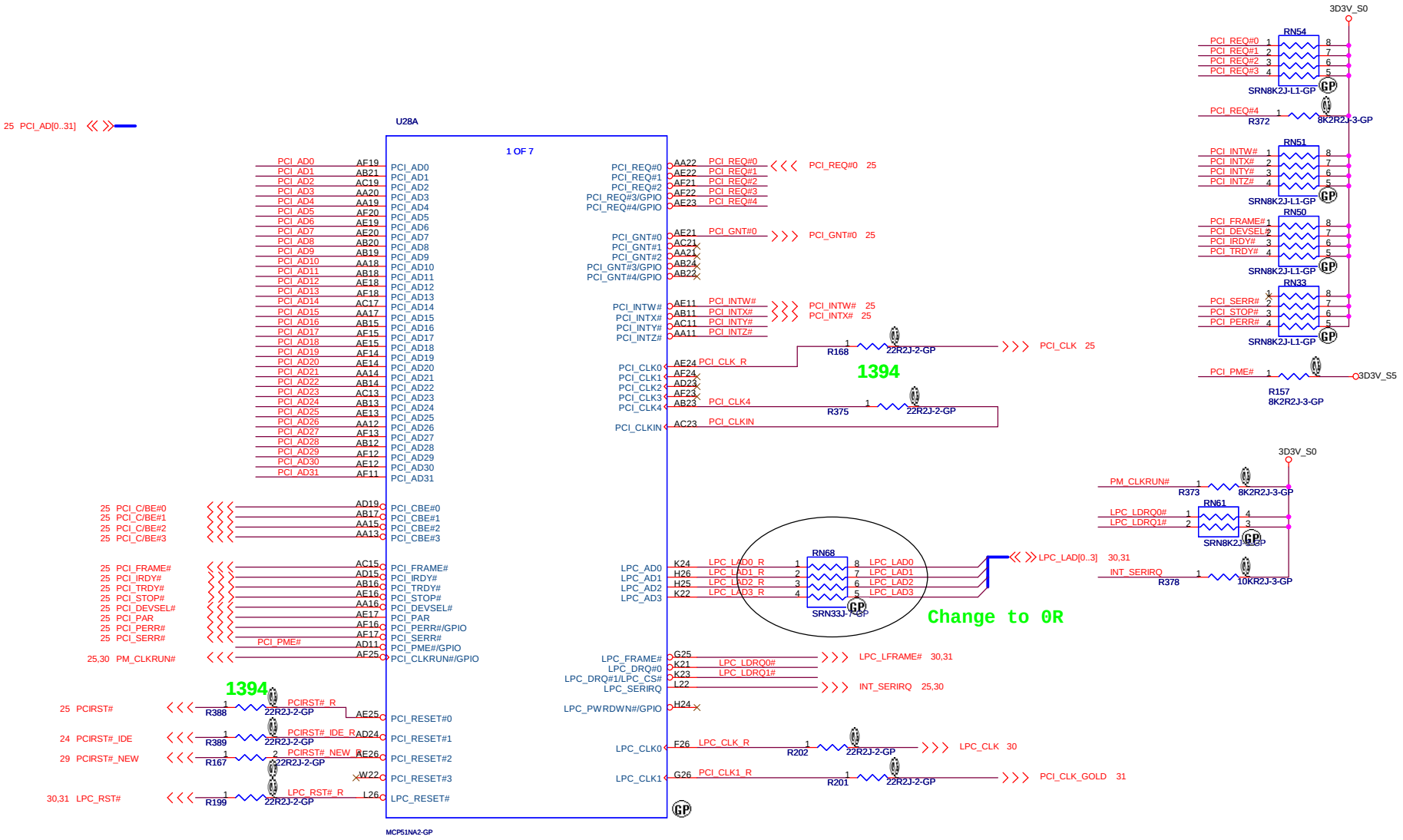
Title	Board to board conn/ Docking	
Size A3	Document Number SHIBA	Rev SA
Date: Monday, February 27, 2006	Sheet 16 of 44	



<Variant Name>

緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title	MCP51(1/6)HT	
Size A3	Document Number SHIBA	Rev SA
Date: Monday, February 20, 2006	Sheet 17 of 44	



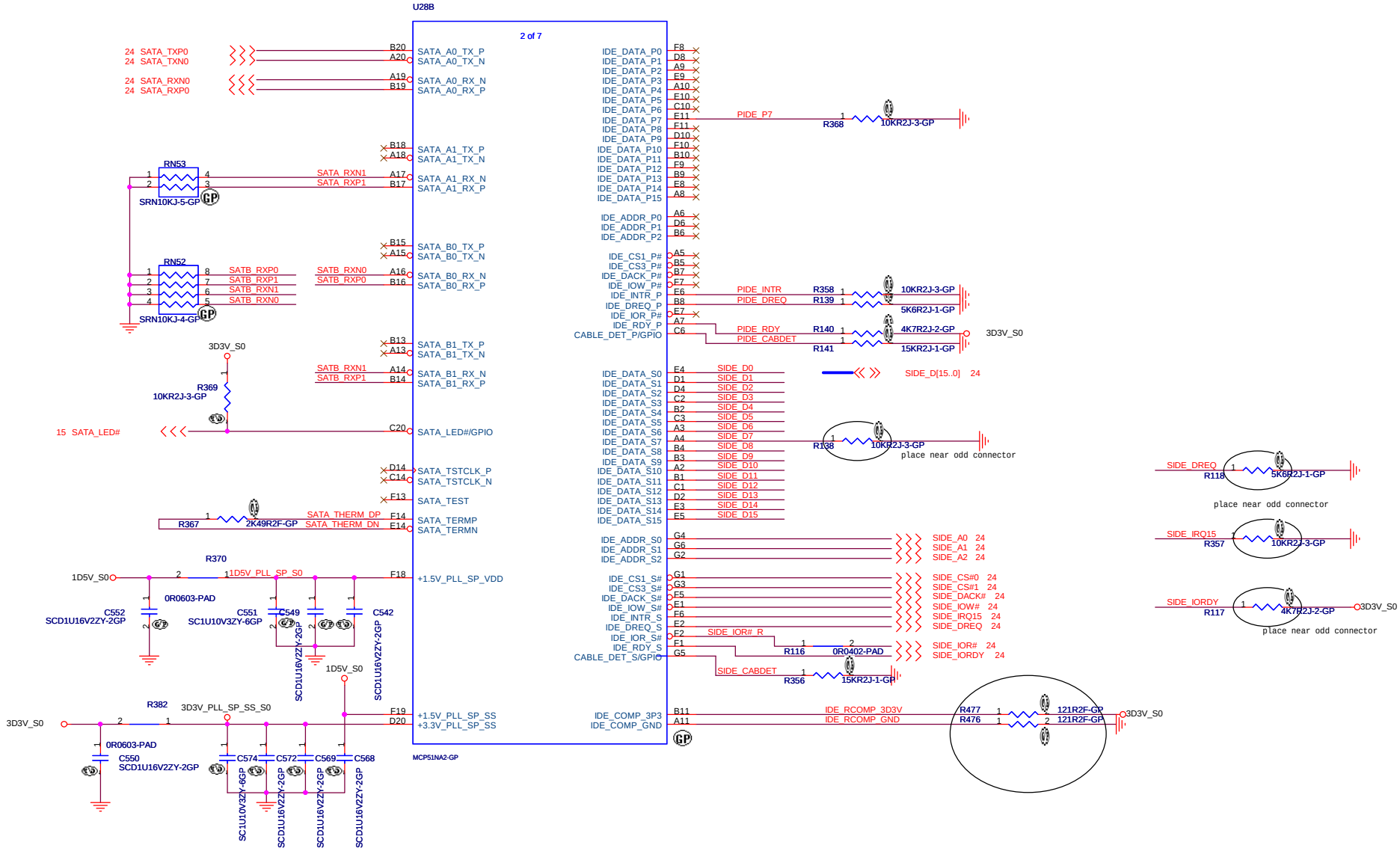
<Variant Name>

緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **MCP51(2/6)PCI**

Size	Document Number	Rev
A3	SHIBA	SA

Date: Monday, February 20, 2006 Sheet 18 of 44



<Variant Name>

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: MCP51(3/6)SATA/PATA

Size	Document Number	Rev
A3	SHIBA	SA

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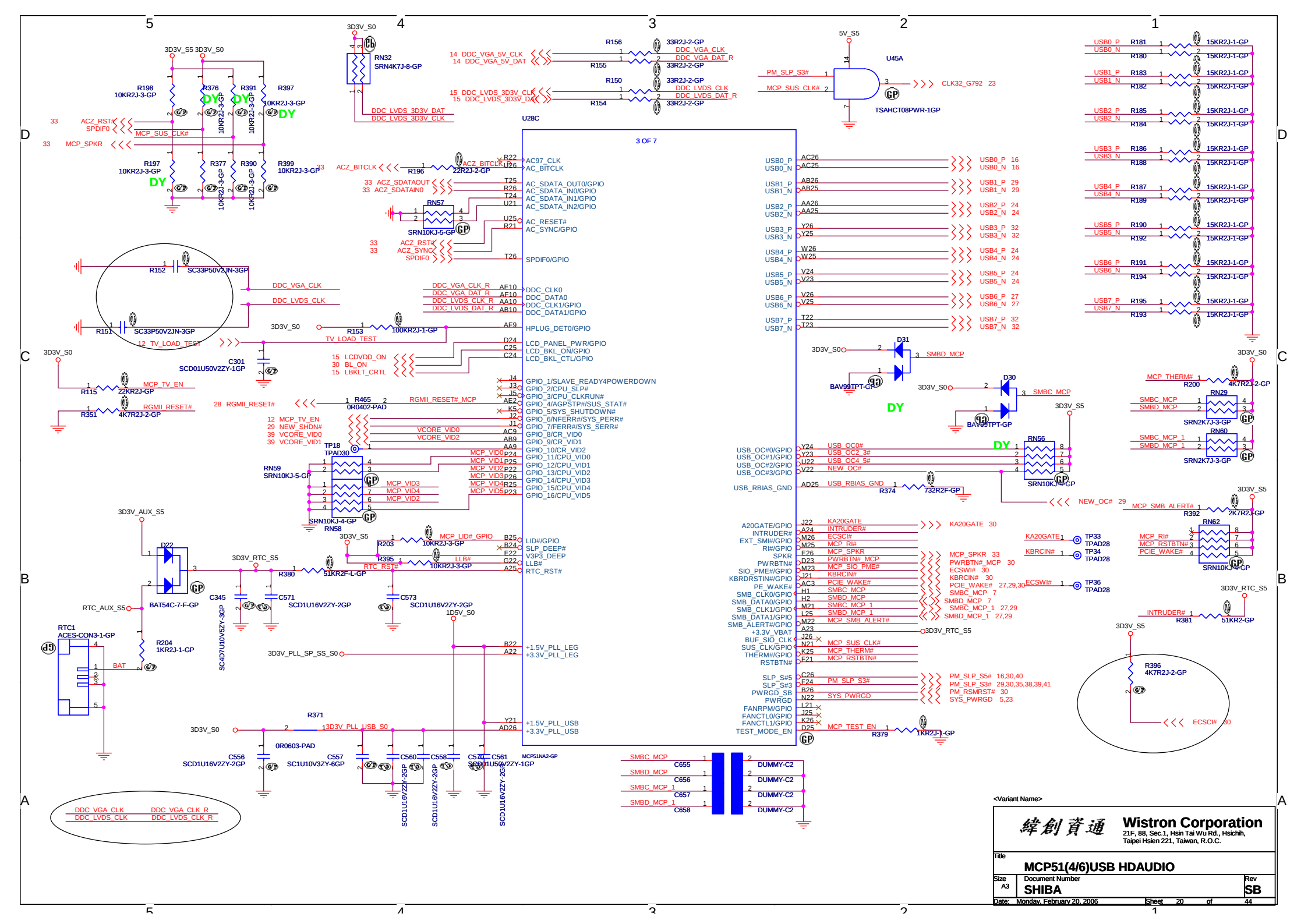
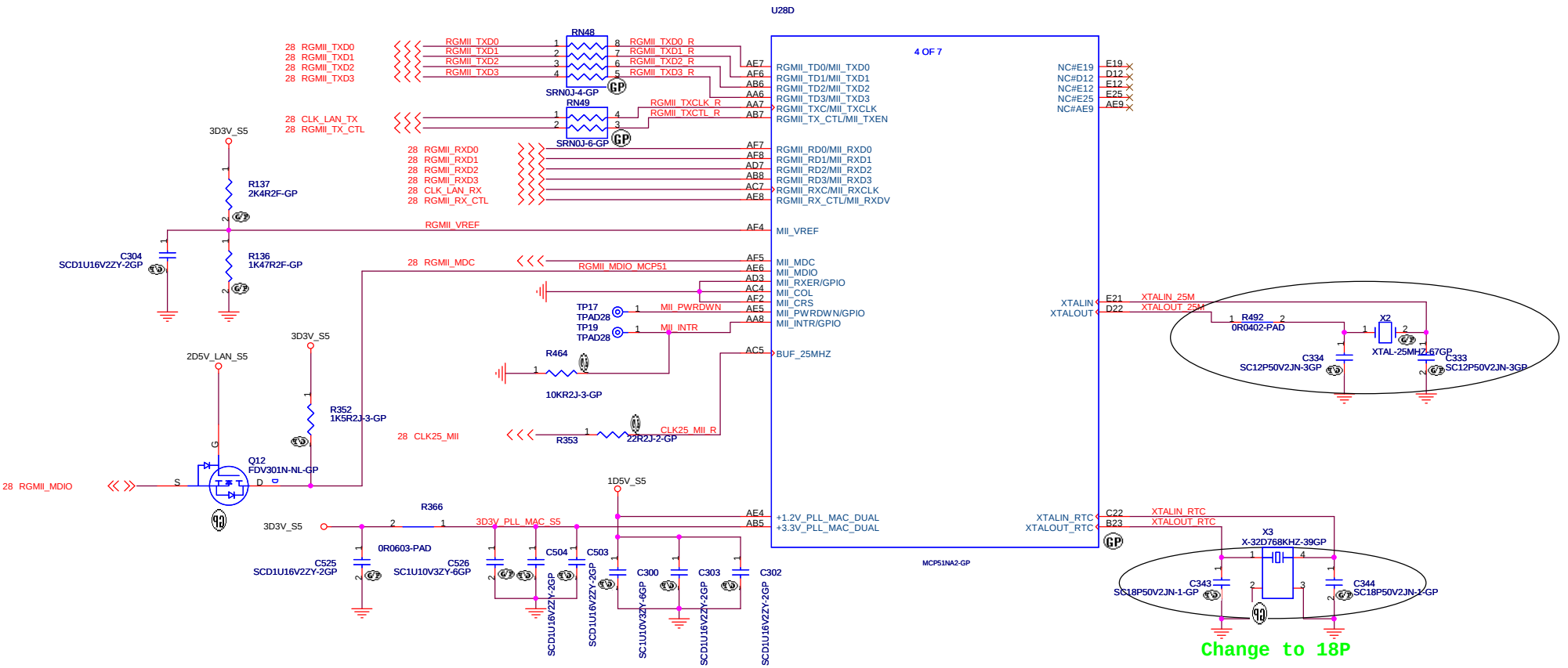

U28C
3 OF 7
MCP51NA2-GP
U45A
TSAHCT08PWR-1GP
RN32 SRN4K7J-8-GP
RN57 SRN10KJ-5-GP
RN59 SRN10KJ-5-GP
RN58 SRN10KJ-4-GP
RN56 SRN10KJ-4-GP
RN29 SRN2K7J-3-GP
RN60 SRN2K7J-3-GP
RN62 SRN10KJ-4-GP
RTC1 ACES-CON3-1-GP
D22 BAT54C-7-F-GP
D31 BAV99TPT-GP
D30 BAV99TPT-GP
TP18 TPAD30
TP33 TPAD28
TP34 TPAD28
TP36 TPAD28
R152 SC33P50V2JN-3GP
R151 SC33P50V2JN-3GP
R153 100KR2J-1-GP
R115 22KR2J-GP
R351 4K7R2J-2-GP
R465 0R0402-PAD
R380 51KR2F-L-GP
R203 10KR2J-3-GP
R395 10KR2J-3-GP
R204 1KR2J-1-GP
R371 0R0603-PAD
R374 732R2F-GP
R379 1KR2J-1-GP
R392 2K7R2J-GP
R381 51KR2-GP
R396 4K7R2J-2-GP
R200 4K7R2J-2-GP
C301 SCD01U50V2ZY-1GP
C345 SC4D7U10V5ZY-3GP
C571 SCD1U16V2ZY-2GP
C573 SCD1U16V2ZY-2GP
C556 SCD01U16V2ZY-2GP
C557 SC1U10V3ZY-6GP
C560 SCD1U16V2ZY-2GP
C558 SCD1U16V2ZY-2GP
C570 SCD01U50V2ZY-1GP
C561 SCD1U16V2ZY-2GP
C655 DUMMY-C2
C656 DUMMY-C2
C657 DUMMY-C2
C658 DUMMY-C2
DY
3D3V_S0
3D3V_S5
3D3V_AUX_S5
3D3V_RTC_S5
1D5V_S0
3D3V_PLL_SP_SS_S0
3D3V_PLL_USB_S0
5V_S5
BAT
DDC_VGA_CLK
DDC_LVDS_CLK
DDC_VGA_CLK_R
DDC_LVDS_CLK_R
MCP_SPKR
MCP_TV_EN
RGMII_RESET#
MCP_LID#_GPIO
MCP_VID0
MCP_VID1
MCP_VID2
MCP_VID3
MCP_VID4
MCP_VID5
VCORE_VID0
VCORE_VID2
NEW_SHDN#
NEW_OC#
KA20GATE
MCP_SMB_ALERT#
MCP_SUS_CLK#
MCP_THERM#
MCP_RSTBTN#
PM_SLP_S3#
SYS_PWRGD
MCP_TEST_EN
ECSCI#
ECSWI#
INTRUDER#
SMBC_MCP
SMBD_MCP
SMBC_MCP_1
SMBD_MCP_1
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
<Variant Name>
Title
MCP51(4/6)USB HDAUDIO
Size A3
Document Number SHIBA
Rev SB
Date: Monday, February 20, 2006
Sheet 20 of 44



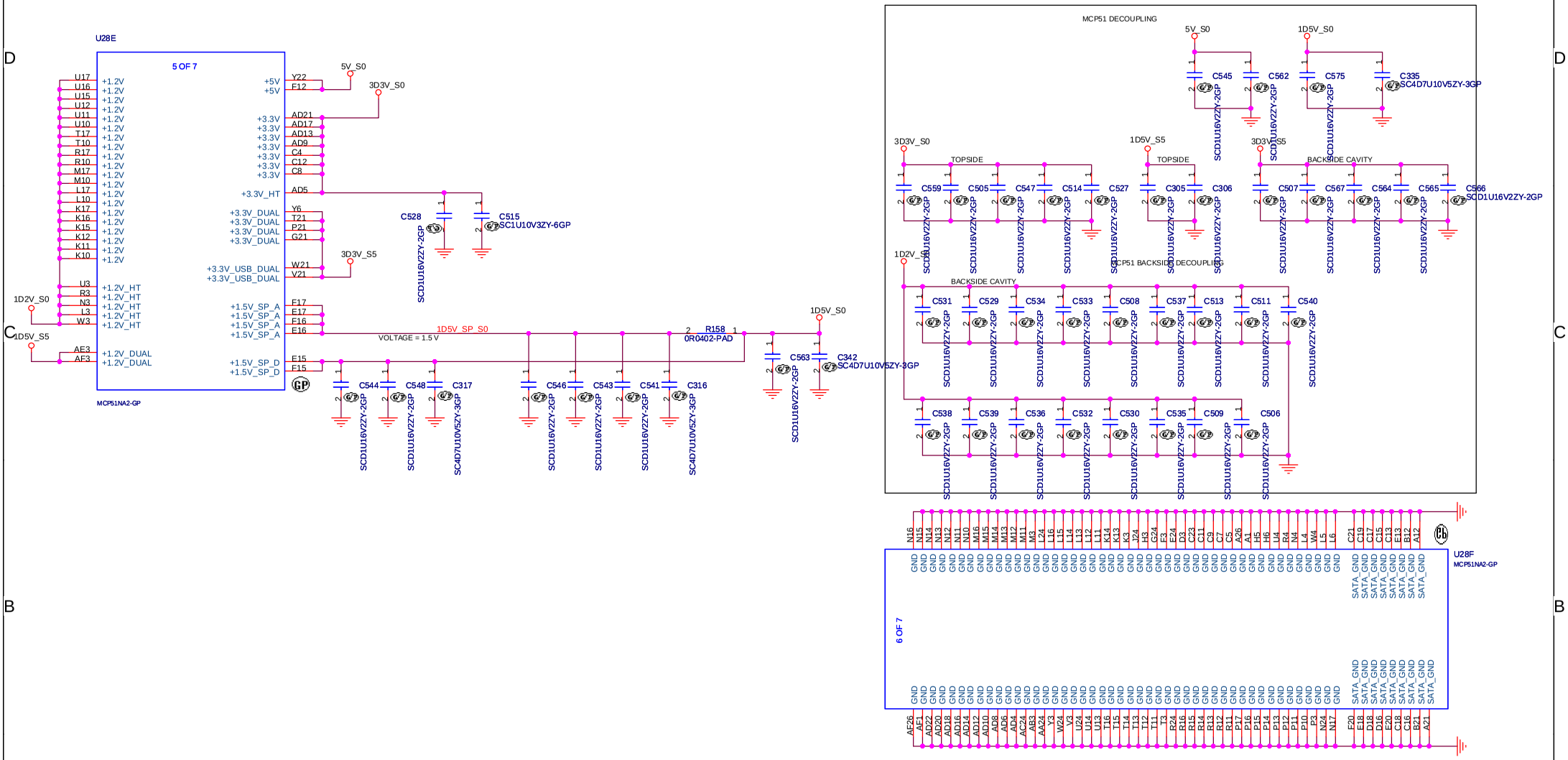
<Variant Name>

Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: MCP51(5/6)RGMII

Size	Document Number	Rev
A3	SHIBA	SB

Date: Monday, February 20, 2006 Sheet 21 of 44



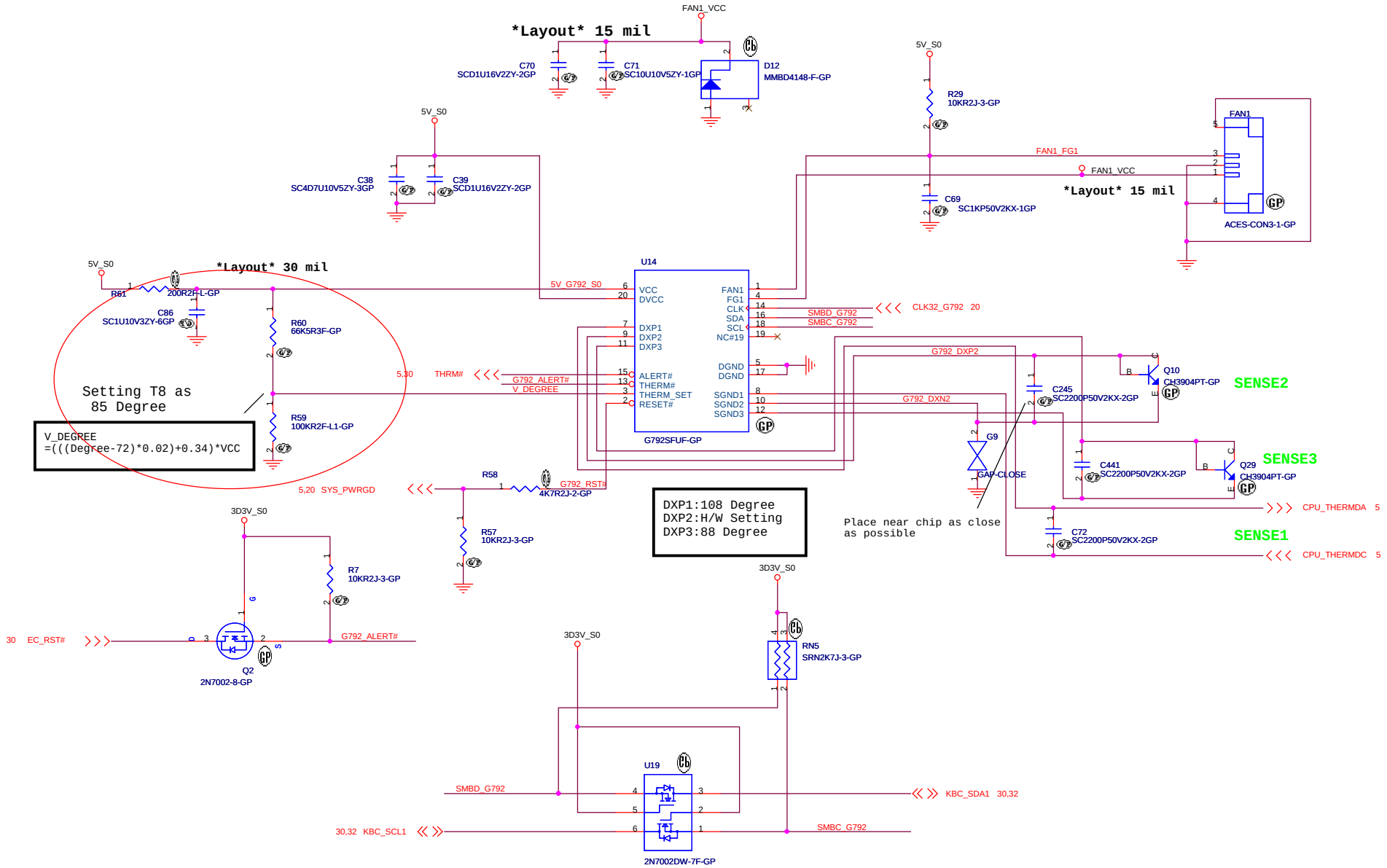
<Variant Name>

緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **MCP51(6/6)POWER**

Size	Document Number	Rev
A3	SHIBA	SB

Date: Monday, February 20, 2006 Sheet 22 of 44



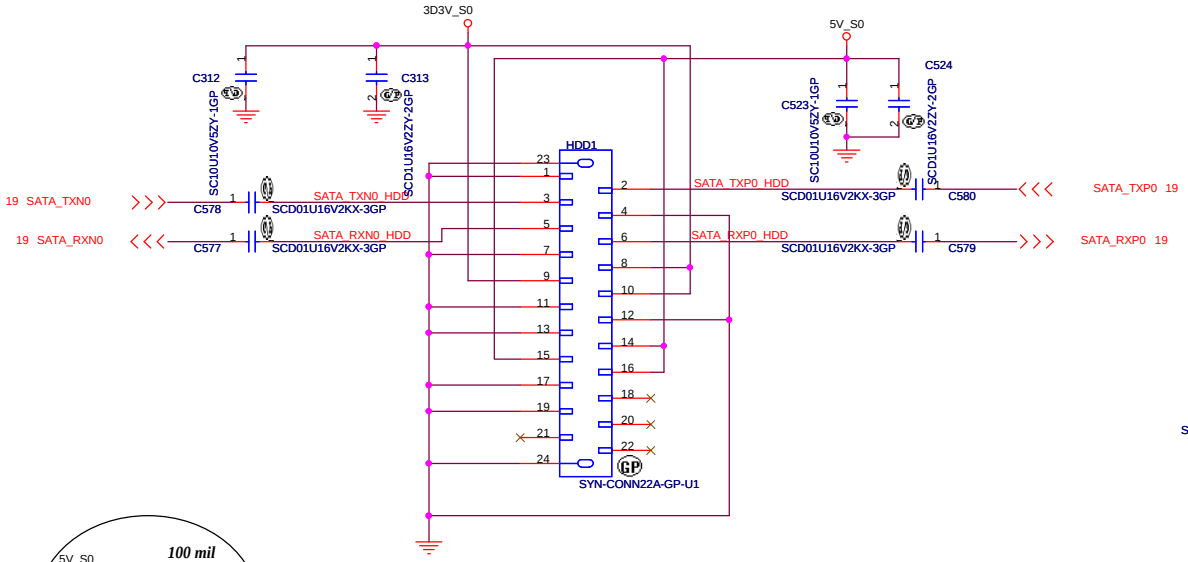
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **Thermal/Fan Controllor**

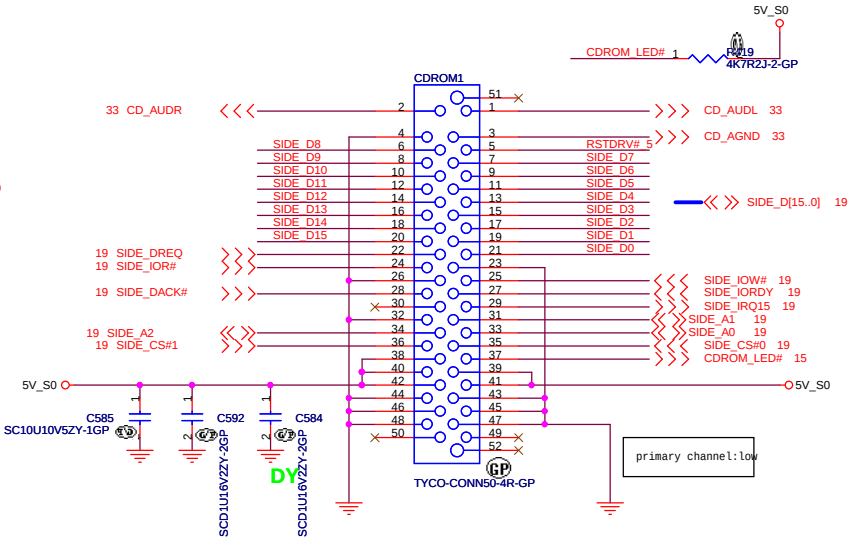
Size	Document Number	Rev
Custom	SHIBA	SA

Date: Monday, February 20, 2006 Sheet 23 of 44

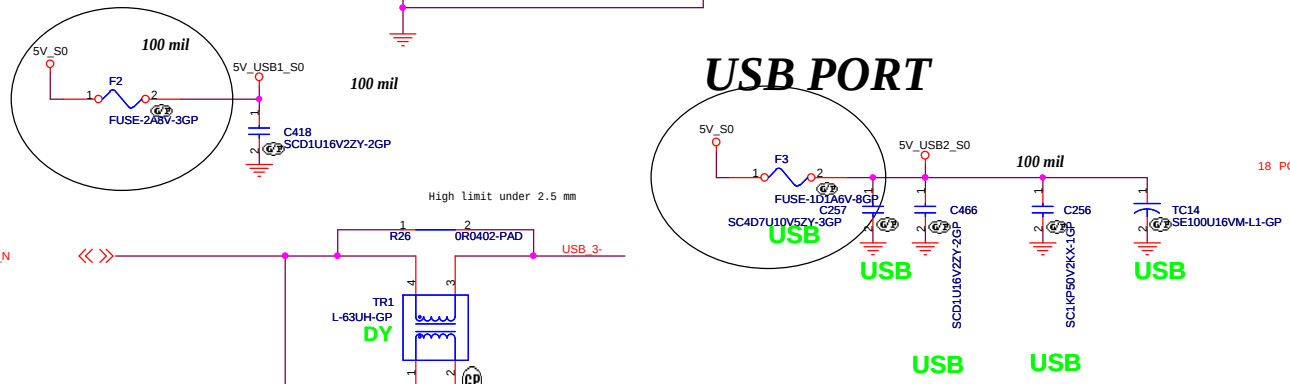
SATA HD Connector

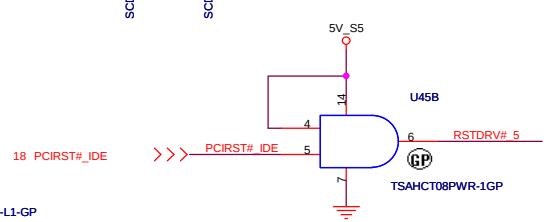


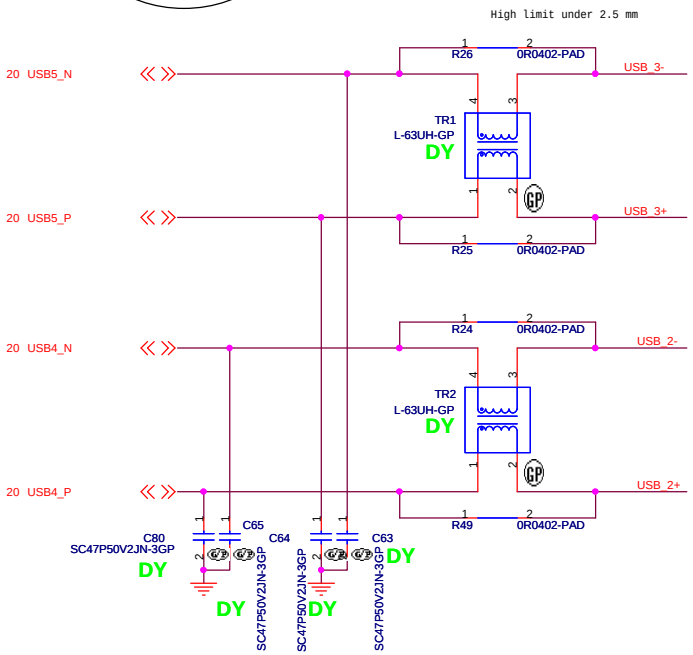
CD-ROM CONNECTOR

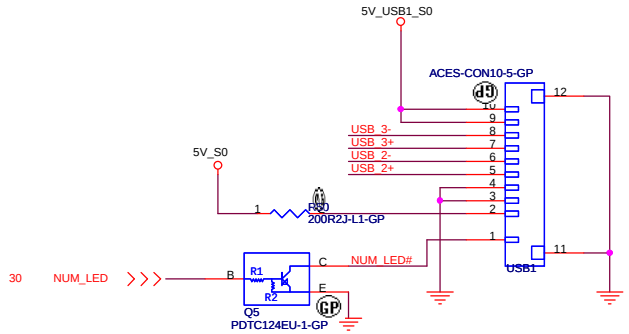


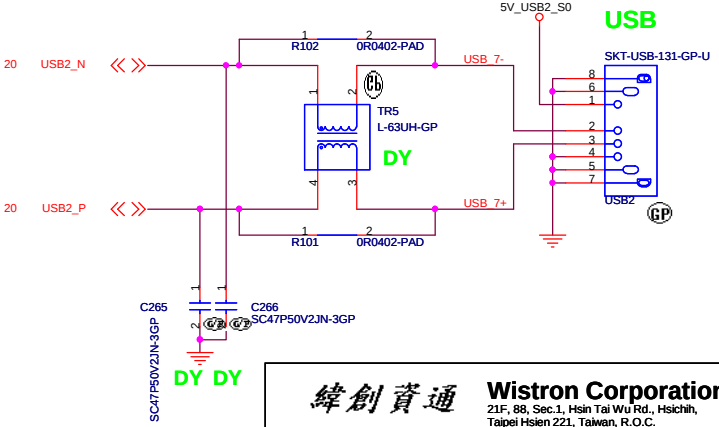
USB PORT





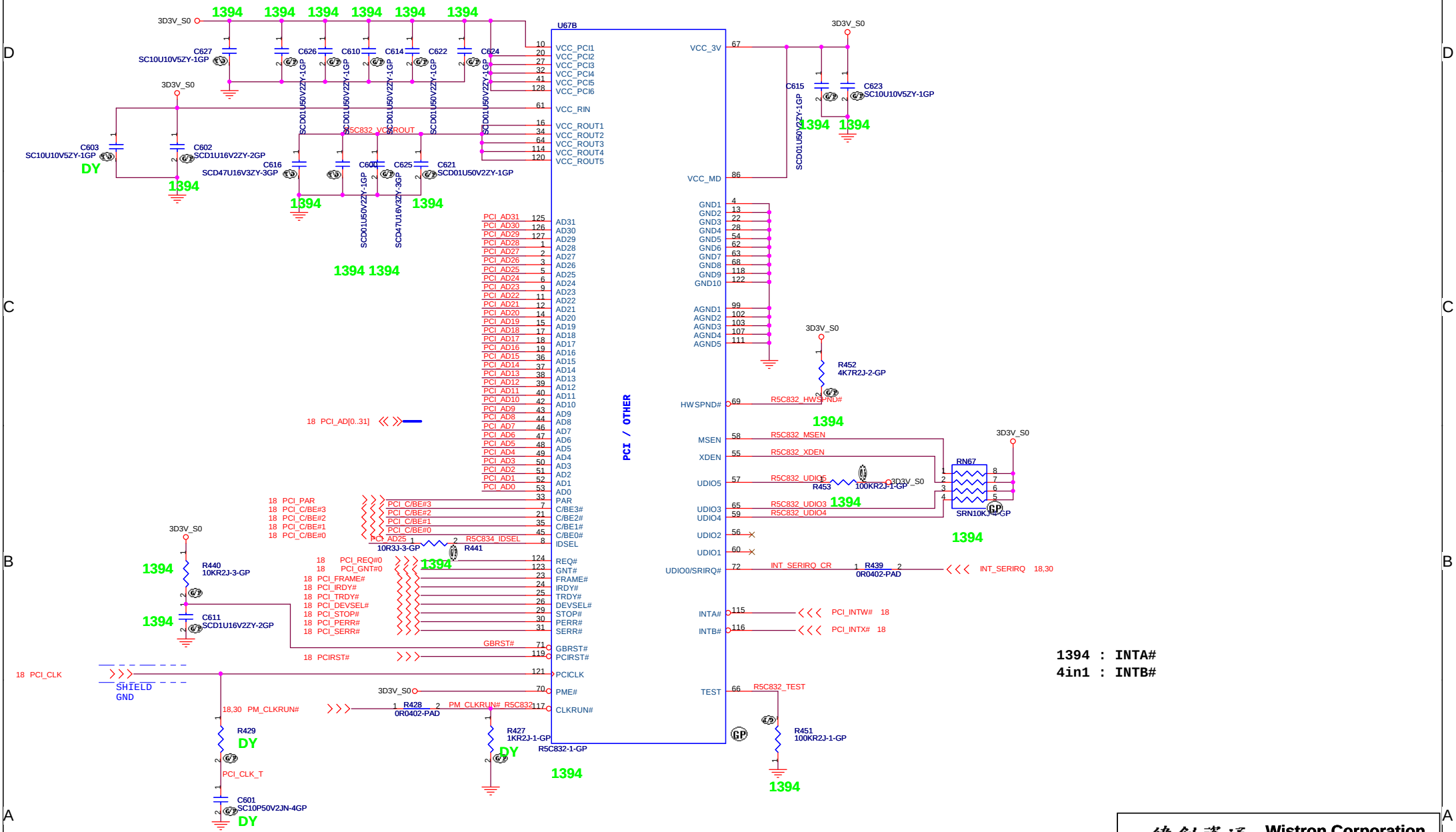


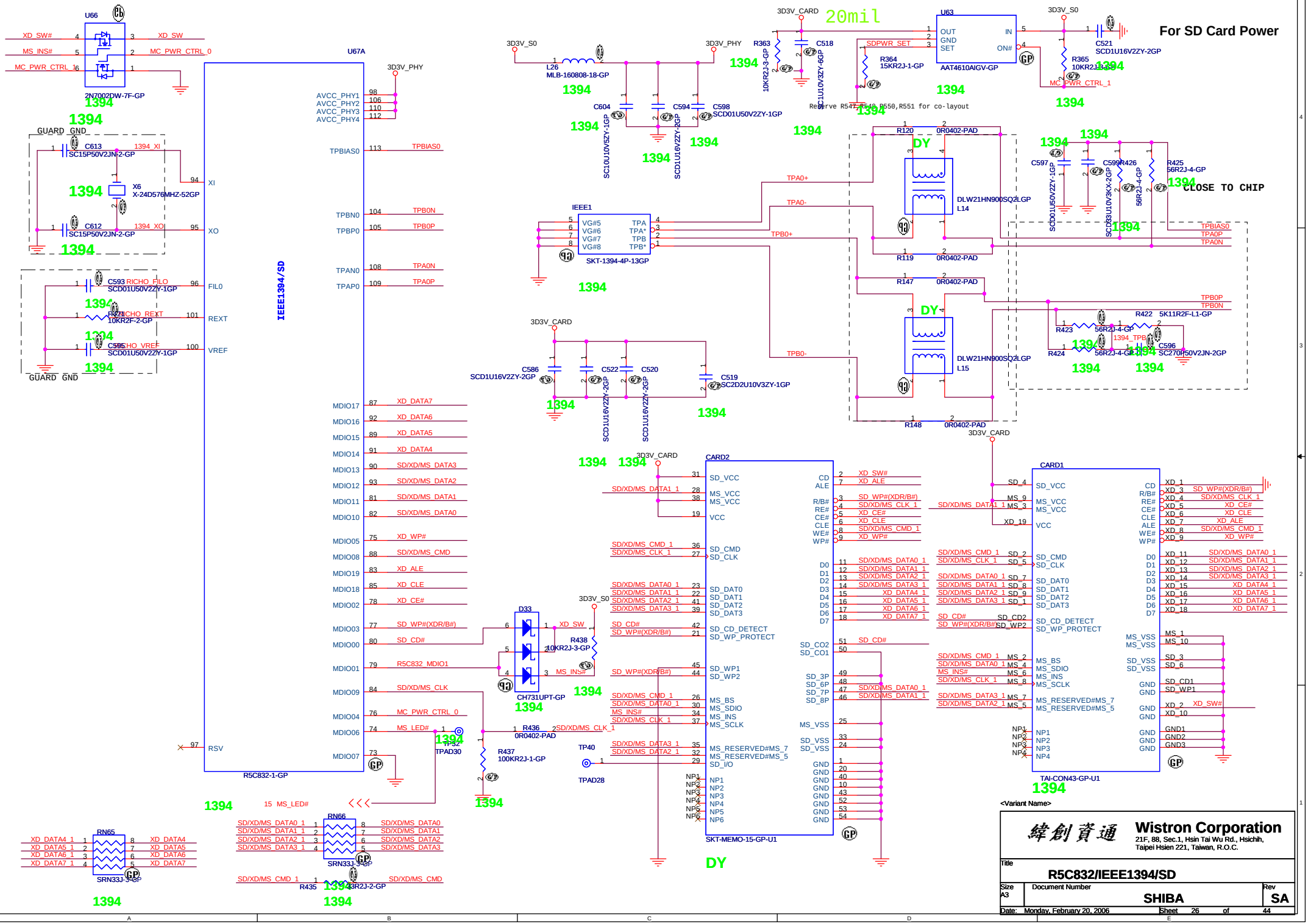




緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

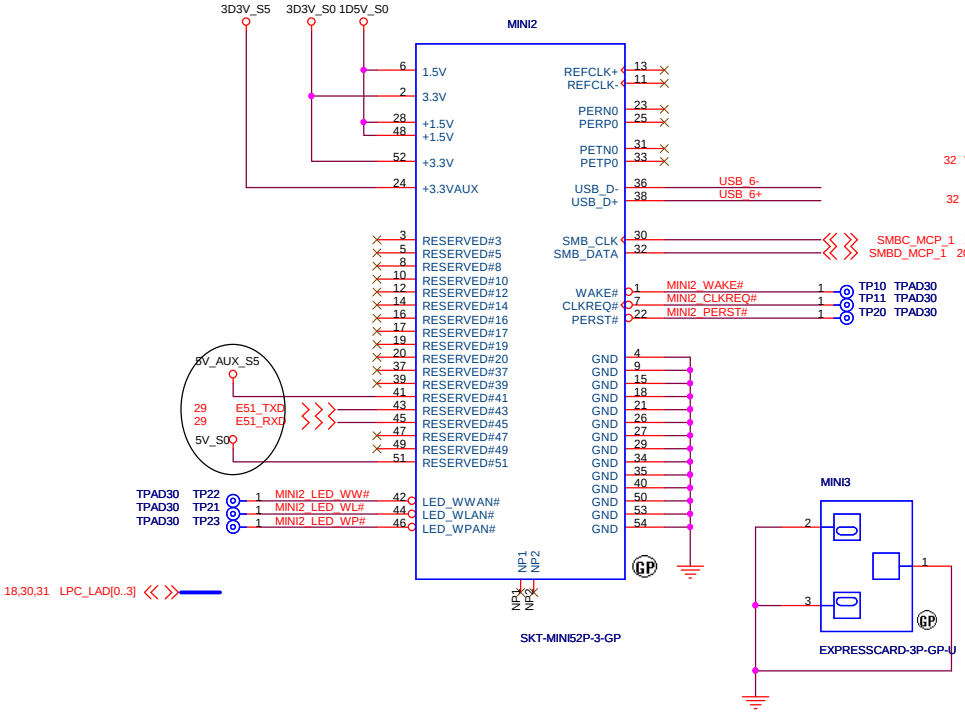
Title	HD/CDROM	
Size A3	Document Number SHIBA	Rev SA
Date: Saturday, March 04, 2006	Sheet 24 of 44	

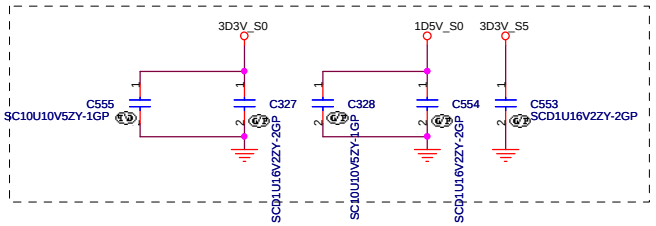

U67B
PCI / OTHER
1394 : INTA#
4in1 : INTB#
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
R5C832/PCI
Size A3
Document Number
SHIBA
Rev
SA
Date: Monday, February 20, 2006
Sheet 25 of 44


For SD Card Power
20mil
CLOSE TO CHIP
U66
2N7002DW-7F-GP
U67A
IEEE1394/SD
R5C832-1-GP
U63
AAT4610AIGV-GP
IEEE1
SKT-1394-4P-13GP
DLW21HN900SQ2LGP
L14
L15
CARD2
SKT-MEMO-15-GP-U1
CARD1
TAI-CON43-GP-U1
CH731UPT-GP
D33
RN65
RN66
SRN33J-3-GP
SRN2J-2-GP
Reserve R547,R548,R550,R551 for co-layout
<Variant Name>
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
R5C832/IEEE1394/SD
Size A3
Document Number
SHIBA
Rev SA
Date: Monday, February 20, 2006
Sheet 26 of 44

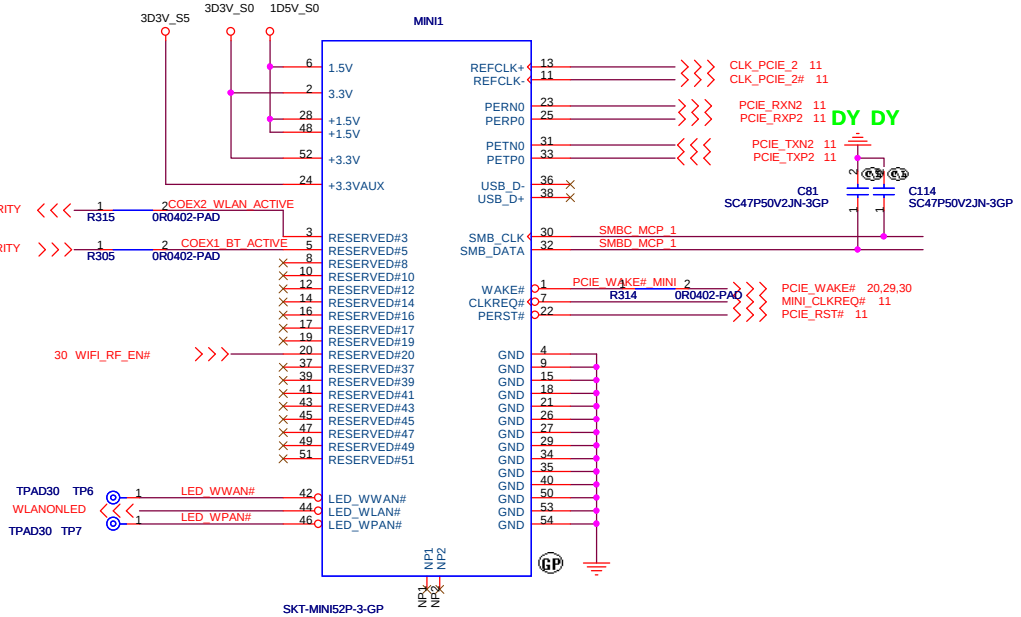
Mini Card Connector

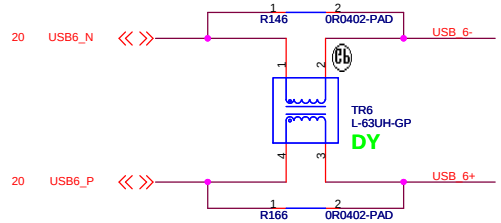
Mini Card Connector 1

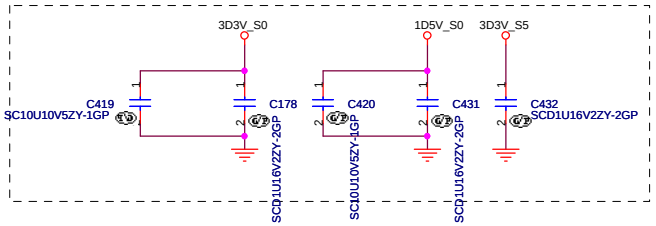




Mini Card Connector 2







緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

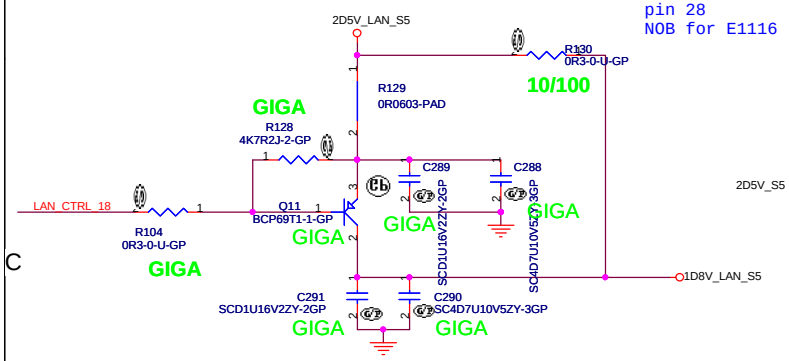
Title	MINI CARD CONN .	
Size A3	Document Number SHIBA	Rev SA
Date: Thursday, February 23, 2006	Sheet 27 of 44	

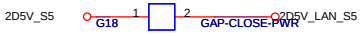
Hardware Configuration: See config _0:4

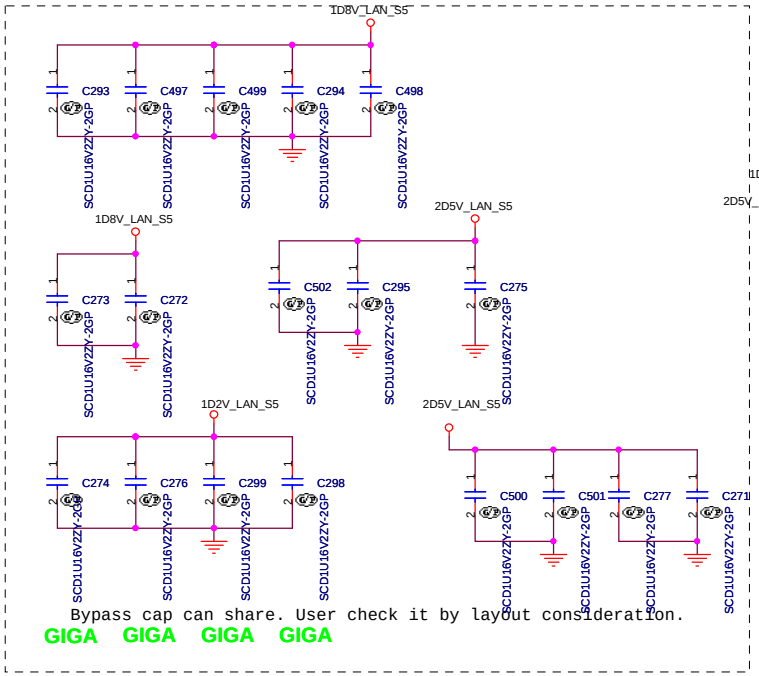
1. PHY address:00001
2. ENA_XC:Enable Auto-Crossover
3. RGMII_TX:Transmit clock not internally delayed
4. RGMII_RX:Receive clock transition when data transitions
5. Advertise all capabilities

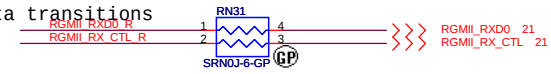
E1116 use external 2.5V single power supply.
1.8V create by PNP and 1.2V use internal reg.

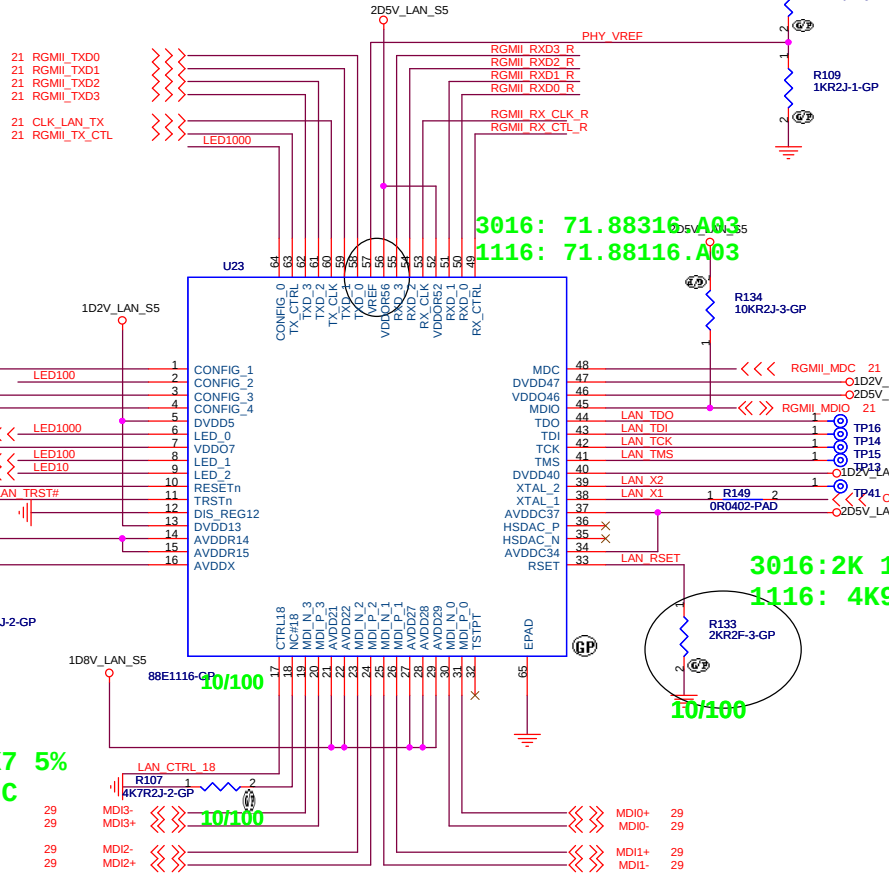
Put L10 for E3016 application since pin 28 NOB for E1116

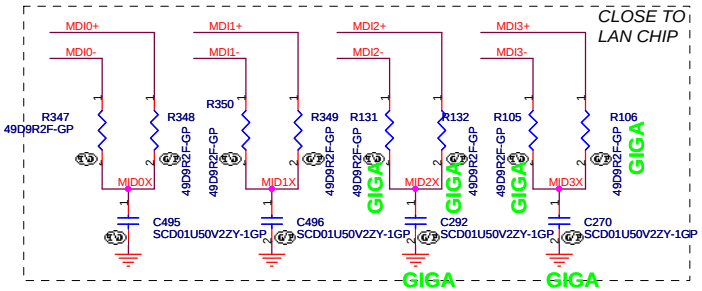












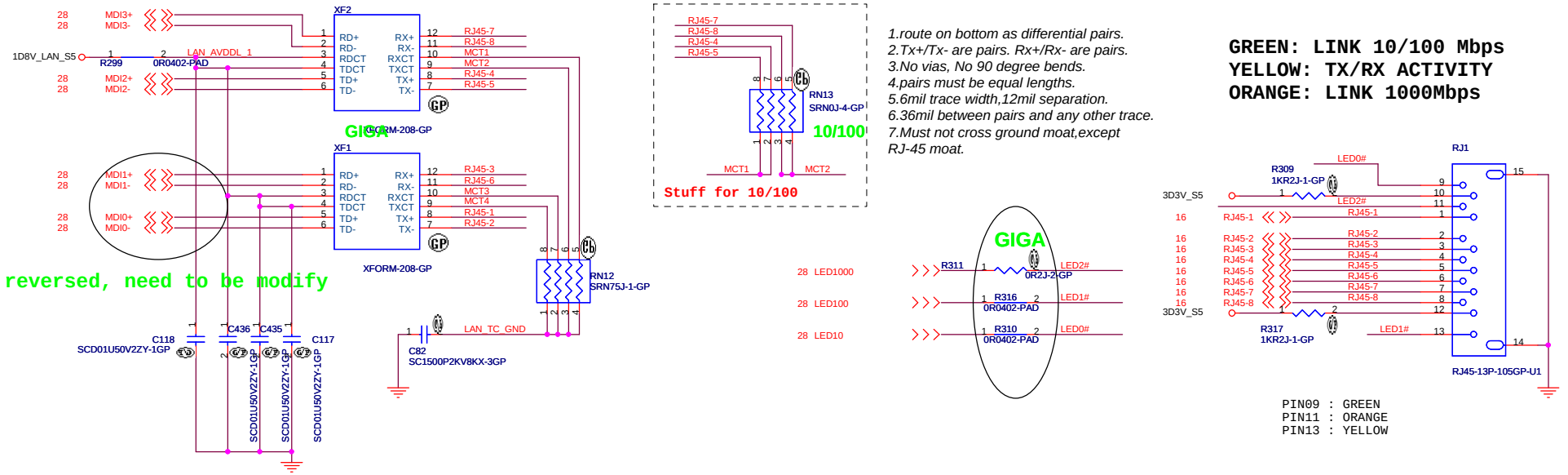
<variant_name>

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: LAN MARVELL 88E1116

Size	Document Number	Rev
A3	SHIBA	SA

Date: Friday, February 24, 2006 Sheet 28 of 44

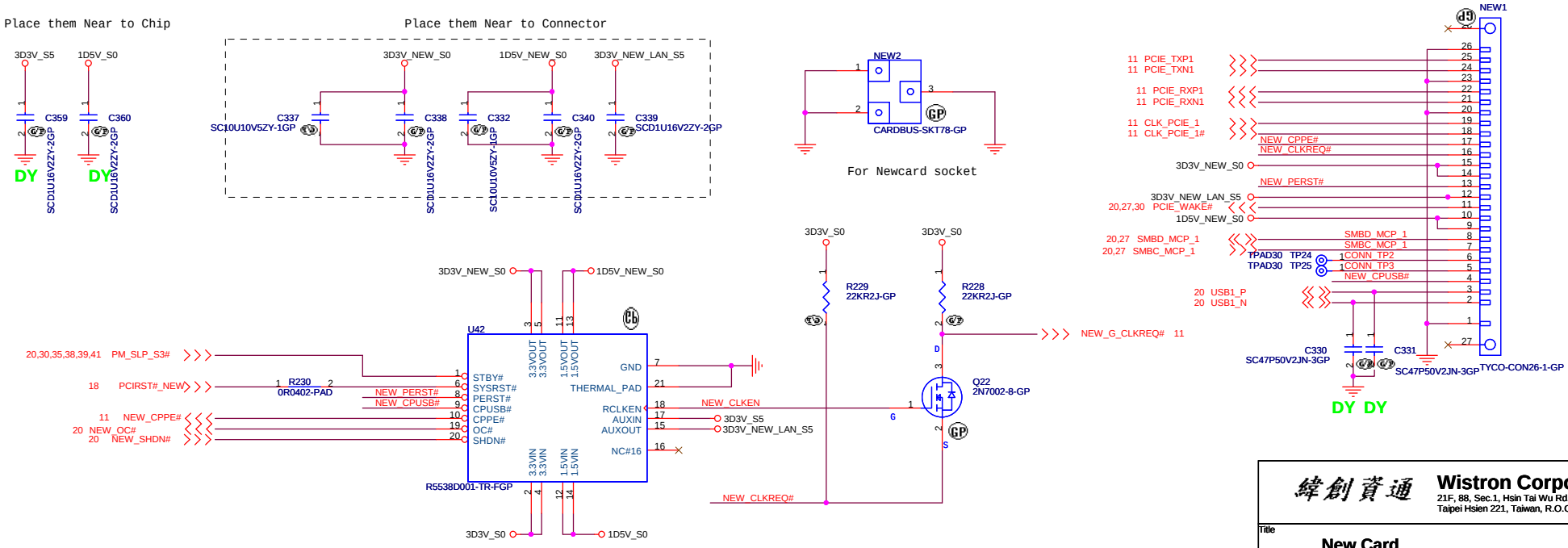


1.route on bottom as differential pairs.
2.Tx+/Tx- are pairs. Rx+/Rx- are pairs.
3.No vias, No 90 degree bends.
4.pairs must be equal lengths.
5.6mil trace width,12mil separation.
6.36mil between pairs and any other trace.
7.Must not cross ground moat,except RJ-45 moat.

GREEN: LINK 10/100 Mbps
YELLOW: TX/RX ACTIVITY
ORANGE: LINK 1000Mbps

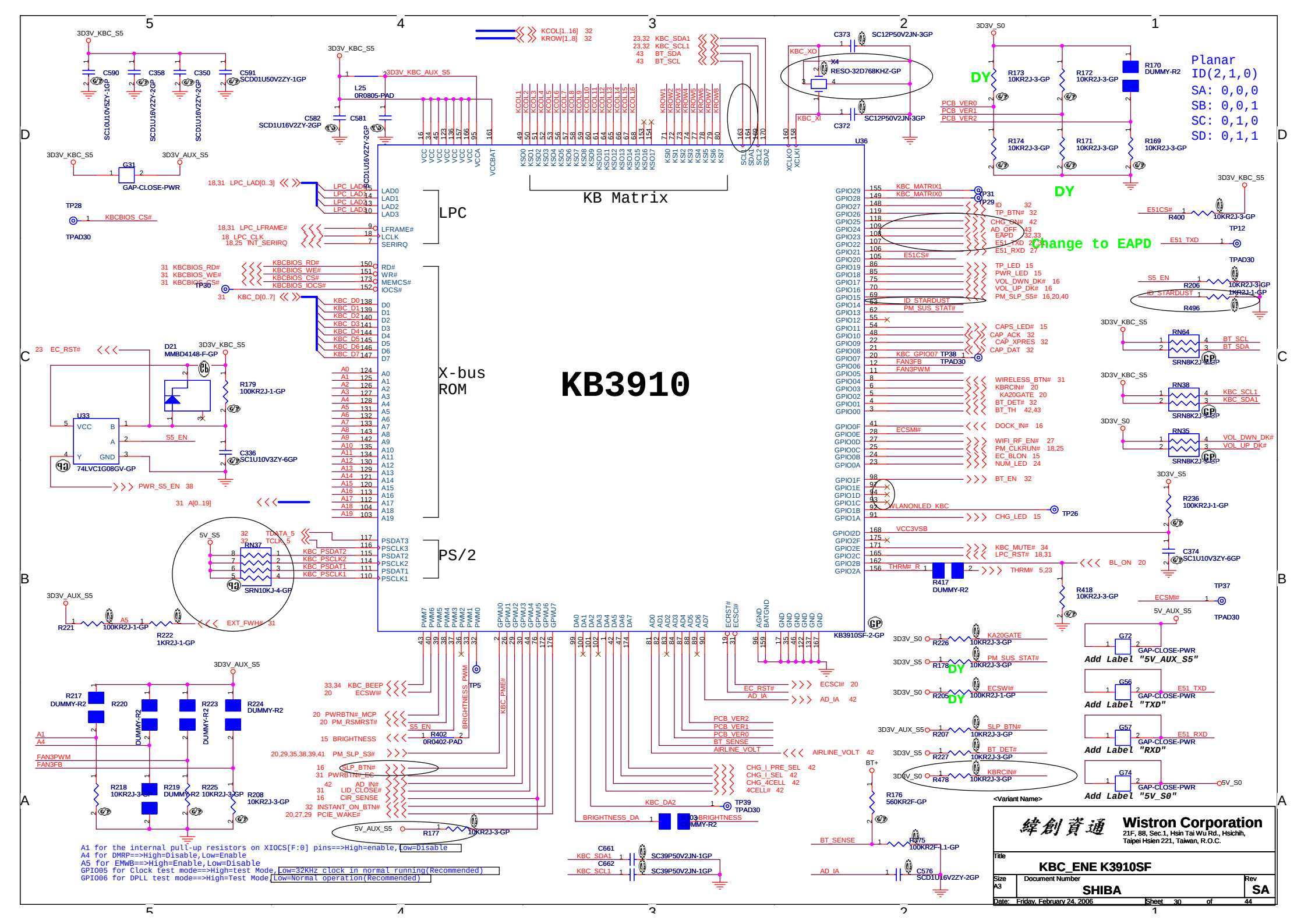
PIN09 : GREEN
PIN11 : ORANGE
PIN13 : YELLOW

NEWCARD Connector



緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: New Card		
Size: A3	Document Number: SHIBA	Rev: SA
Date: Monday, February 20, 2006	Sheet 29 of 44	


KB3910
KB3910SF-2-GP
LPC
X-bus ROM
PS/2
KB Matrix
U36
U33
74LVC1G08GV-GP
SRN10KJ-4-GP
Planar
ID(2,1,0)
SA: 0,0,0
SB: 0,0,1
SC: 0,1,0
SD: 0,1,1
DY
Change to EAPD
Add Label "5V_AUX_S5"
Add Label "TXD"
Add Label "RXD"
Add Label "5V_S0"
A1 for the internal pull-up resistors on XIOCS[F:0] pins==>High=enable,Low=Disable
A4 for DMRP==>High=Disable,Low=Enable
A5 for EMWB==>High=Enable,Low=Disable
GPIO05 for Clock test mode==>High=test Mode, Low=32KHz clock in normal running(Recommended)
GPIO06 for DPLL test mode==>High=Test Mode, Low=Normal operation(Recommended)
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
KBC_ENE K3910SF
SHIBA
Size A3
Rev SA
Date: Friday, February 24, 2006
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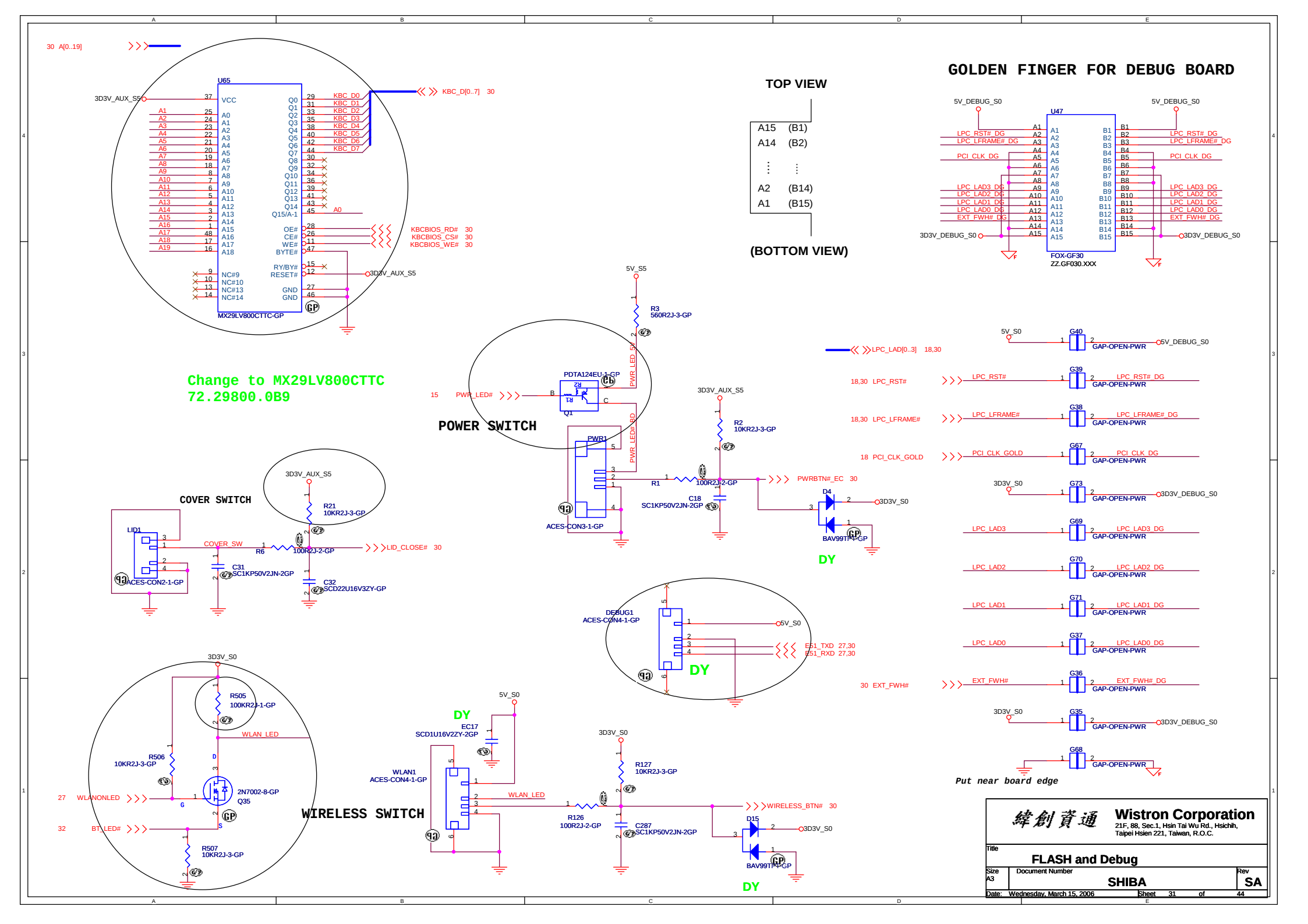
30 A[0..19]
U65
3D3V_AUX_S5
VCC
MX29LV800CTTC-GP
KBC_D[0..7] 30
KBCBIOS_RD# 30
KBCBIOS_CS# 30
KBCBIOS_WE# 30
3D3V_AUX_S5
Change to MX29LV800CTTC
72.29800.0B9
TOP VIEW
A15 (B1)
A14 (B2)
A2 (B14)
A1 (B15)
(BOTTOM VIEW)
GOLDEN FINGER FOR DEBUG BOARD
5V_DEBUG_S0
U47
FOX-GF30
ZZ.GF030.XXX
3D3V_DEBUG_S0
POWER SWITCH
5V_S5
R3
560R2J-3-GP
PDTA124EU-1-GP
PWR_LED_5V
PWR_LED_3D
15 PWR_LED#
Q1
PWR1
ACES-CON3-1-GP
3D3V_AUX_S5
R2
10KR2J-3-GP
R1
100R2J-2-GP
C18
SC1KP50V2JN-2GP
PWRBTN#_EC 30
D4
BAV99TP-1-GP
3D3V_S0
DY
COVER SWITCH
3D3V_AUX_S5
R21
10KR2J-3-GP
LID1
ACES-CON2-1-GP
COVER_SW
R6
100R2J-2-GP
LID_CLOSE# 30
C31
SC1KP50V2JN-2GP
C32
SCD22U16V3ZY-GP
DEBUG1
ACES-CON4-1-GP
5V_S0
E51_TXD 27,30
E51_RXD 27,30
DY
LPC_LAD[0..3] 18,30
18,30 LPC_RST#
18,30 LPC_LFRAME#
18 PCI_CLK_GOLD
30 EXT_FWH#
G40
G39
G38
G67
G73
G69
G70
G71
G37
G36
G35
G68
GAP-OPEN-PWR
Put near board edge
3D3V_S0
R505
100KR2J-1-GP
WLAN_LED
R506
10KR2J-3-GP
2N7002-8-GP
Q35
27 WLANONLED
32 BT_LED#
R507
10KR2J-3-GP
WIRELESS SWITCH
5V_S0
DY
EC17
SCD1U16V2ZY-2GP
WLAN1
ACES-CON4-1-GP
WLAN_LED
R126
100R2J-2-GP
R127
10KR2J-3-GP
C287
SC1KP50V2JN-2GP
WIRELESS_BTN# 30
D15
BAV99TP-1-GP
3D3V_S0
DY
緯創資通
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
FLASH and Debug
Size A3
Document Number
SHIBA
Rev SA
Date: Wednesday, March 15, 2006
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CAMERA

Blue thumb

Internal KeyBoard Connector

30 KROW[1..8]

30 KCOL[1..16]

Keyboard matrix (from vendor)

	US	Eur	Jap
MATRIXID1#	0	1	0
MATRIXID2#	0	0	1

TouchPad Connector

CAPACITY BUTTON

TOUCH-PAD SWITCH

PLACE NEAR CAP1

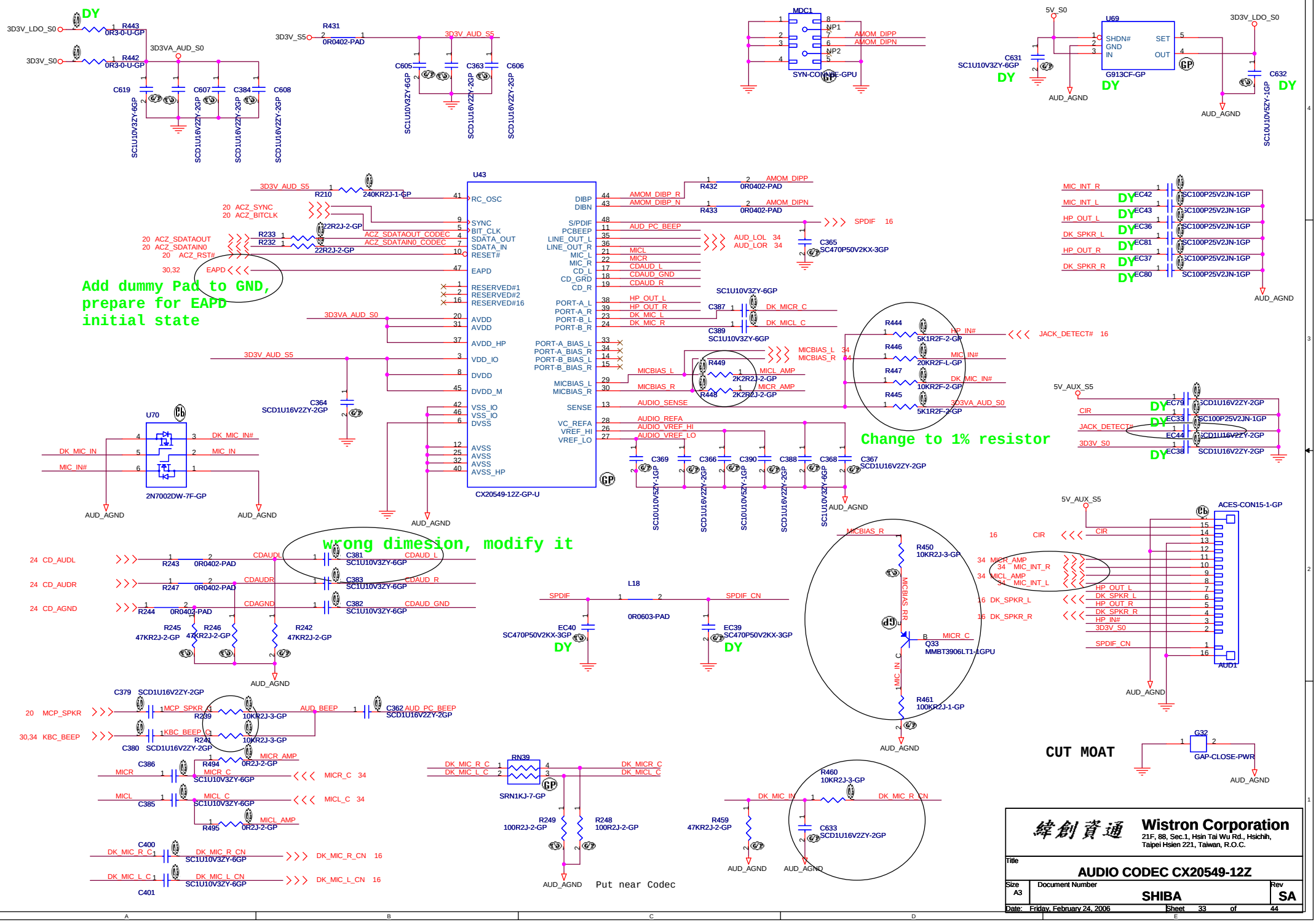
for EMI

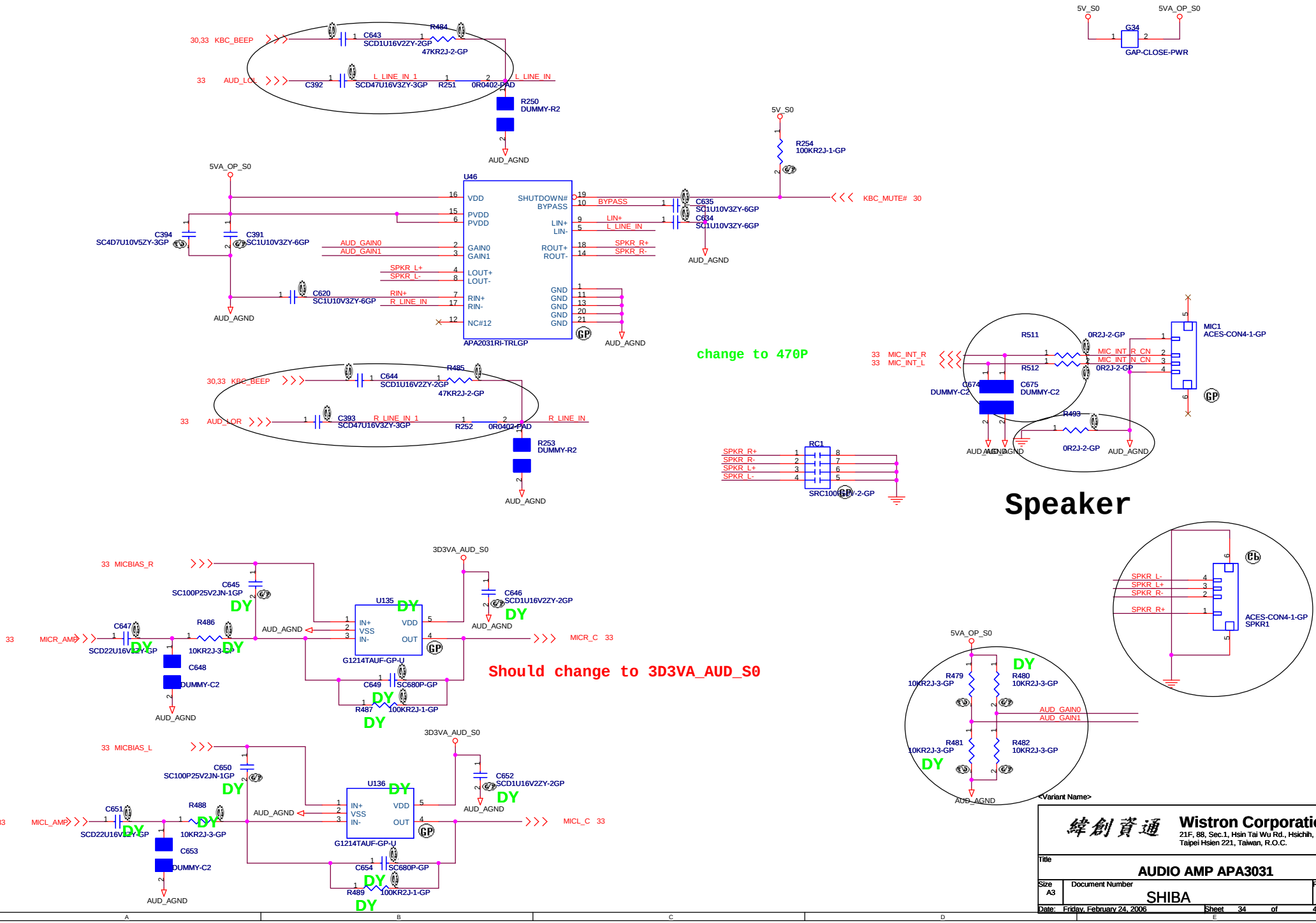
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: KeyBoard-CONN

Size: A3 | Document Number: SHIBA | Rev: SA

Date: Sunday, February 26, 2006 | Sheet 32 of 44


Add dummy Pad to GND, prepare for EAPD initial state
wrong dimension, modify it
Change to 1% resistor
CUT MOAT
Put near Codec
U43
CX20549-12Z-GP-U
U70
2N7002DW-7F-GP
MDC1
SYN-CONN-F-GPU
U69
G913CF-GP
ACES-CON15-1-GP
Q33
MMBT3906LT1-1GPU
SRN1KJ-7-GP
GAP-CLOSE-PWR
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
AUDIO CODEC CX20549-12Z
SHIBA
Size A3
Rev SA
Date: Friday, February 24, 2006
Sheet 33 of 44



緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: AUDIO AMP APA3031

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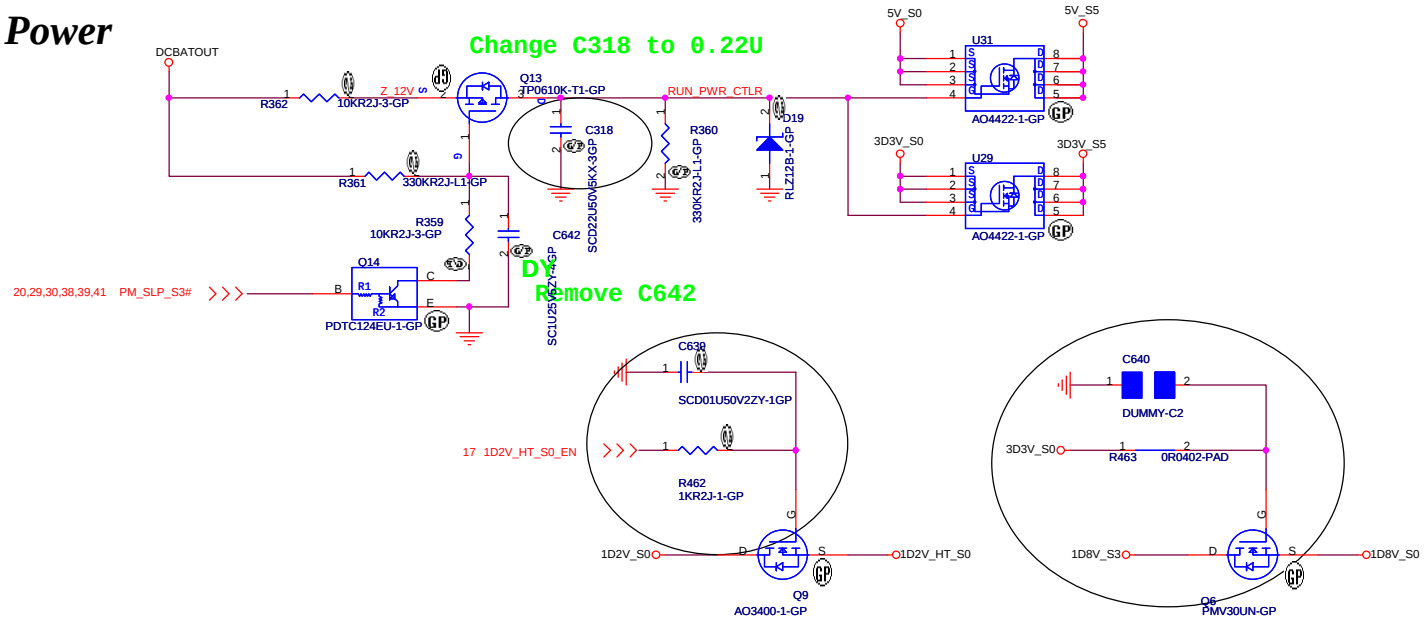
Date: Friday, February 24, 2006 | Sheet 34 of 44

<Variant Name>

Suspend Power

Remove Dummy PAD

Run Power



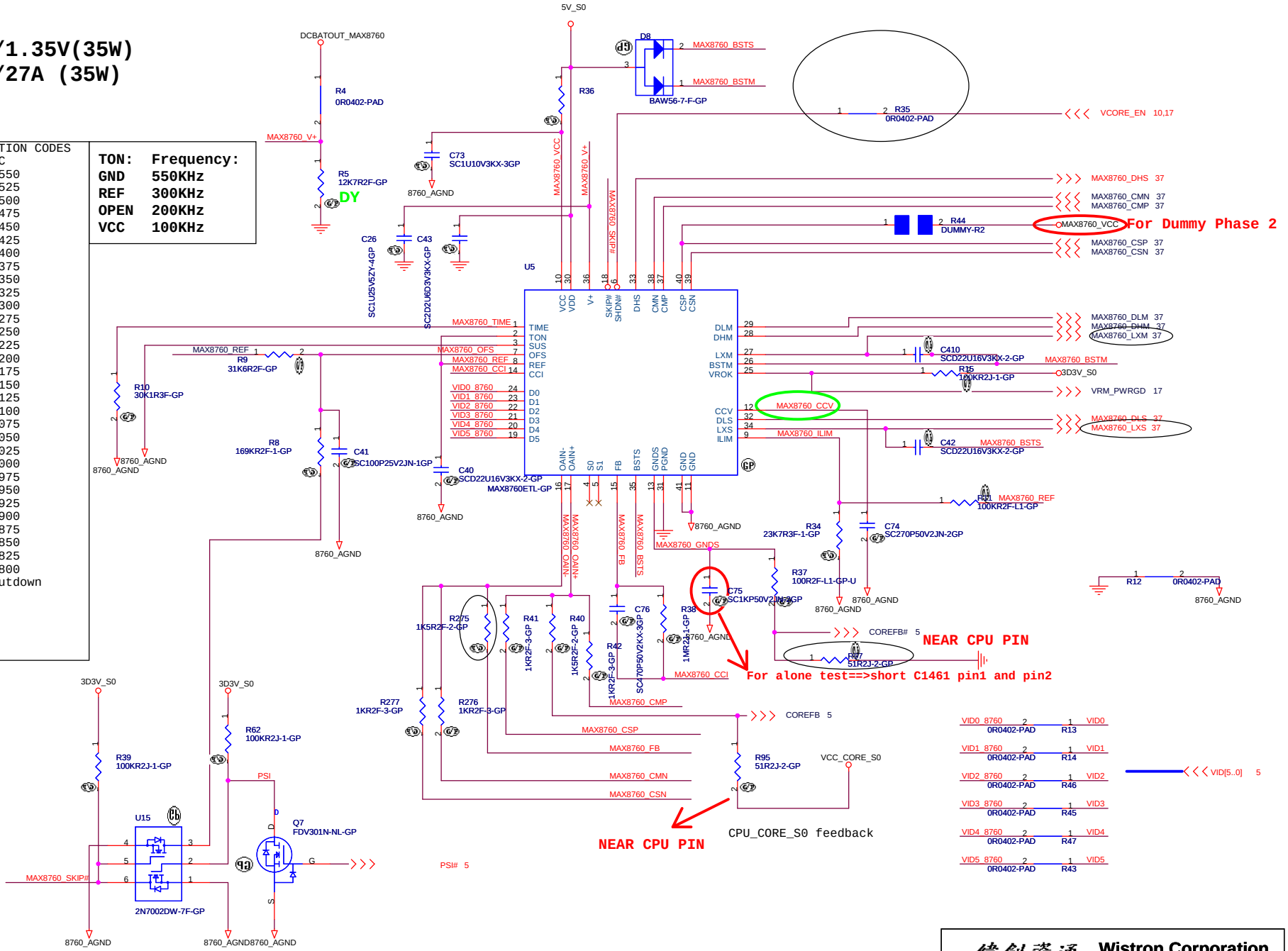
緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title: PWRPLANE&RESETLOGIC		
Size: A3	Document Number: SHIBA	Rev: SA
Date: Monday, February 20, 2006	Sheet 35 of 44	

CPU_VCORE
VID=1.20V(25W)/1.35V(35W)
Iomax=21A(25W)/27A (35W)
OCP=40A~45A

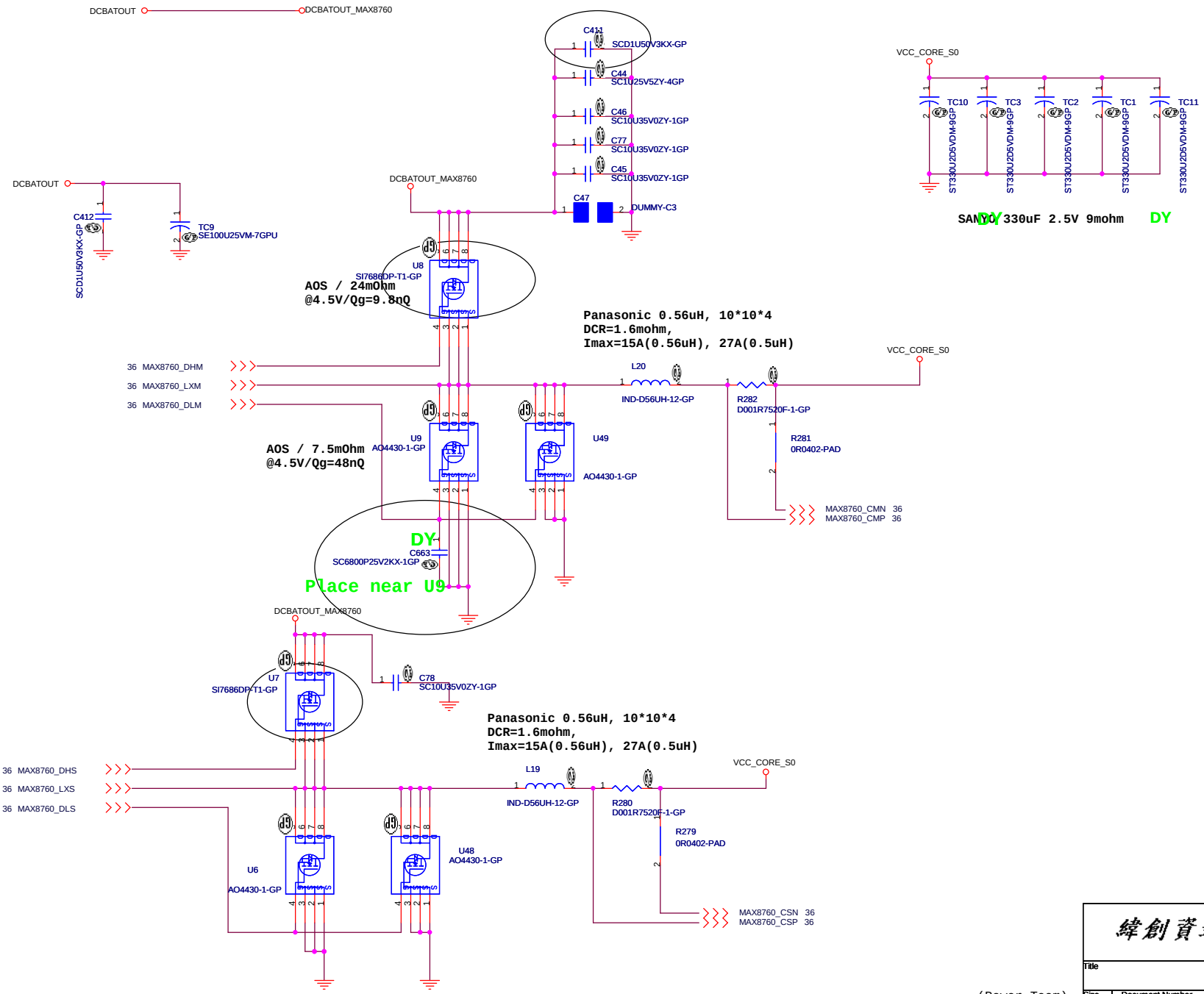
TABLE 1. VOLTAGE IDENTIFICATION CODES

VID4	VID3	VID2	VID1	VID0	DAC
0	0	0	0	0	1.550
0	0	0	0	1	1.525
0	0	0	1	0	1.500
0	0	0	1	1	1.475
0	0	1	0	0	1.450
0	0	1	0	1	1.425
0	0	1	1	0	1.400
0	0	1	1	1	1.375
0	1	0	0	0	1.350
0	1	0	0	1	1.325
0	1	0	1	0	1.300
0	1	0	1	1	1.275
0	1	1	0	0	1.250
0	1	1	0	1	1.225
0	1	1	1	0	1.200
0	1	1	1	1	1.175
1	0	0	0	0	1.150
1	0	0	0	1	1.125
1	0	0	1	0	1.100
1	0	0	1	1	1.075
1	0	1	0	0	1.050
1	0	1	0	1	1.025
1	0	1	1	0	1.000
1	0	1	1	1	0.975
1	1	0	0	0	0.950
1	1	0	0	1	0.925
1	1	0	1	0	0.900
1	1	0	1	1	0.875
1	1	1	0	0	0.850
1	1	1	0	1	0.825
1	1	1	1	0	0.800
1	1	1	1	1	Shutdown

TON:	Frequency:
GND	550KHz
REF	300KHz
OPEN	200KHz
VCC	100KHz

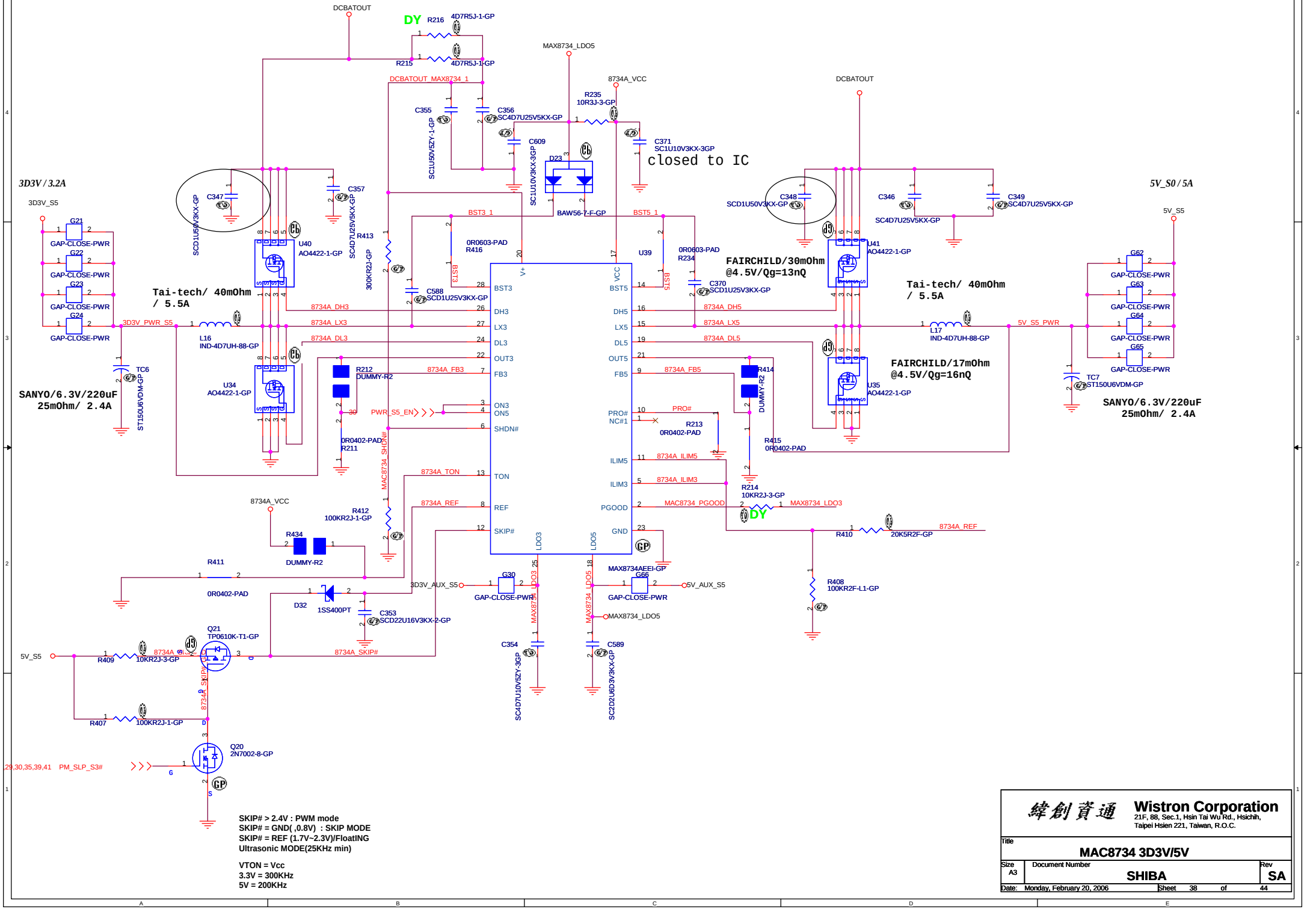


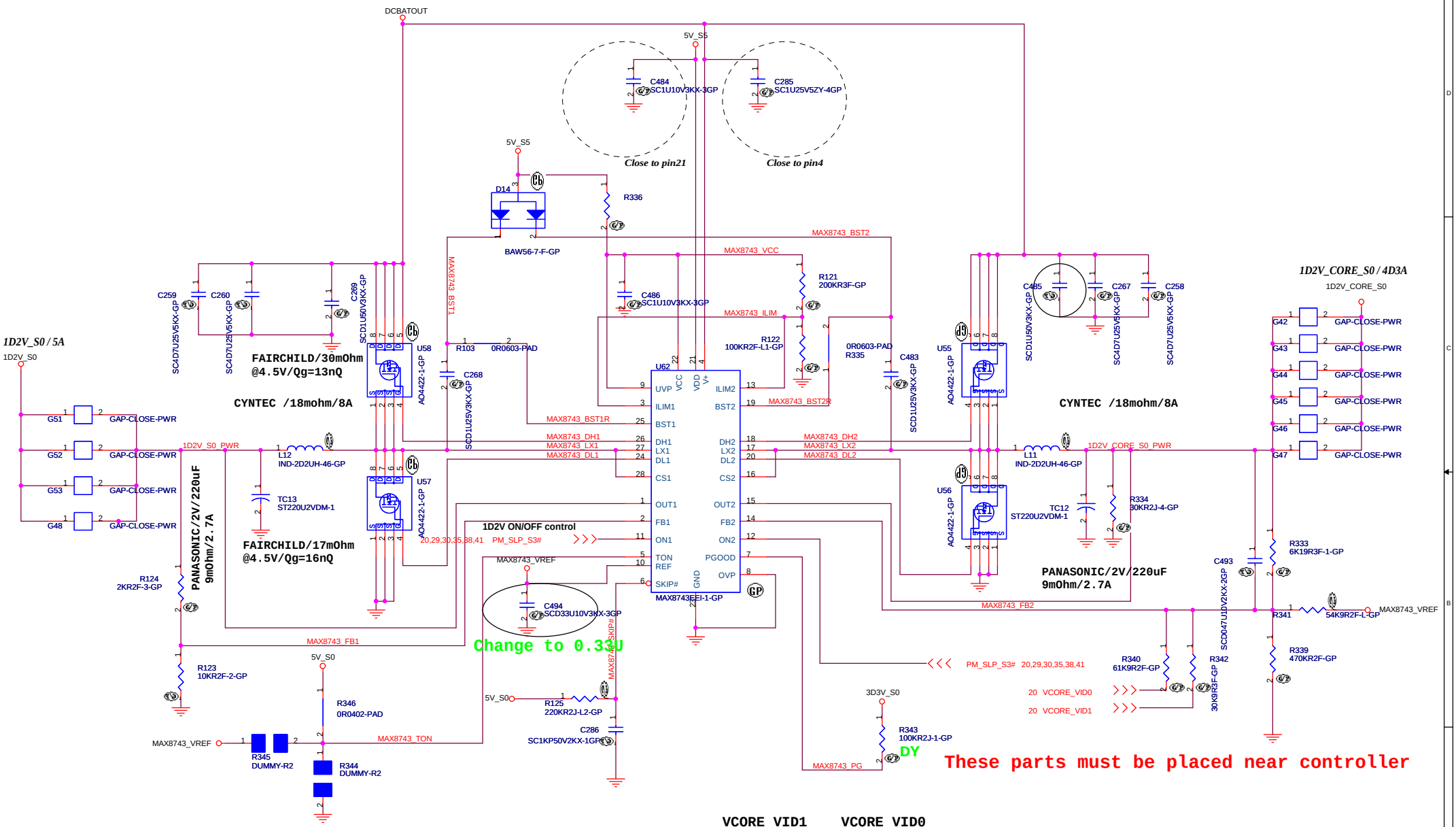
緯創資通	Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	CPU CORE MAX8760(1/2)	
Size: A3	Document Number: SHIBA	Rev: SA
Date: Wednesday, February 22, 2006	Sheet 36 of 44	



(Power Team)

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title: CPU CORE MAX8760(2/2)		
Size: A3	Document Number: SHIBA	Rev: SA
Date: Wednesday, February 22, 2006	Sheet 37 of 44	


3D3V / 3.2A
5V_S0 / 5A
closed to IC
Tai-tech/ 40mOhm / 5.5A
SANYO/6.3V/220uF 25mOhm/ 2.4A
FAIRCHILD/30mOhm @4.5V/Qg=13nQ
FAIRCHILD/17mOhm @4.5V/Qg=16nQ
MAX8734_LDO5
8734A_VCC
DCBATOUT
DCBATOUT_MAX8734_1
3D3V_S5
5V_S5
3D3V_PWR_S5
5V_S5_PWR
BST3_1
BST5_1
8734A_DH3
8734A_LX3
8734A_DL3
8734A_DH5
8734A_LX5
8734A_DL5
8734A_FB3
8734A_FB5
PWR_S5_EN
PRO#
8734A_ILIM5
8734A_ILIM3
MAC8734_PGOOD
MAX8734_LDO3
8734A_REF
8734A_TON
8734A_SKIP#
MAC8734_SHD#
3D3V_AUX_S5
5V_AUX_S5
PM_SLP_S3#
U40 AO4422-1-GP
U34 AO4422-1-GP
U41 AO4422-1-GP
U35 AO4422-1-GP
U39
L16 IND-4D7UH-88-GP
L17 IND-4D7UH-88-GP
TC6 ST150U6VDM-GP
TC7 ST150U6VDM-GP
D23 BAW56-7-F-GP
D32 1SS400PT
Q21 TP0610K-T1-GP
Q20 2N7002-8-GP
MAX8734AEEI-GP
SKIP# > 2.4V : PWM mode
SKIP# = GND(,0.8V) : SKIP MODE
SKIP# = REF (1.7V~2.3V)/FloatING
Ultrasonic MODE(25KHz min)
VTON = Vcc
3.3V = 300KHz
5V = 200KHz
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
MAC8734 3D3V/5V
Size A3
Document Number
SHIBA
Rev SA
Date: Monday, February 20, 2006
Sheet 38 of 44

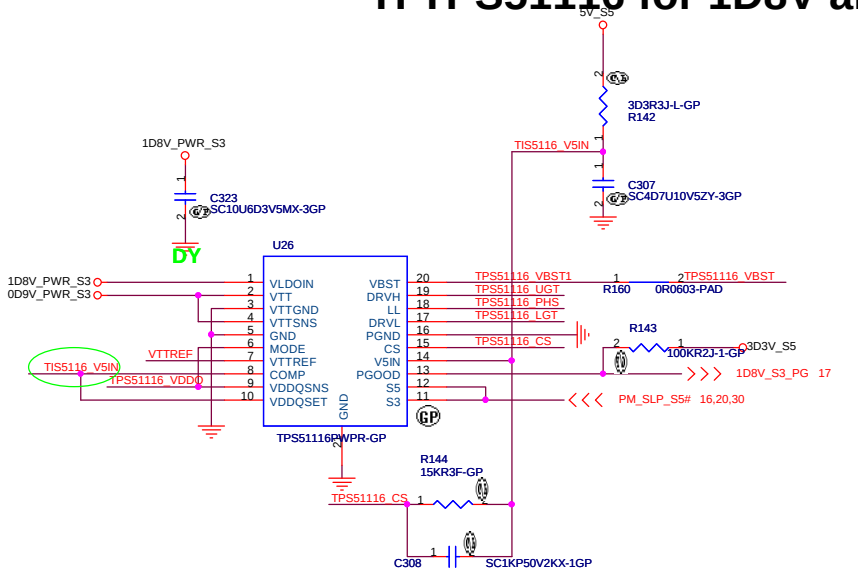


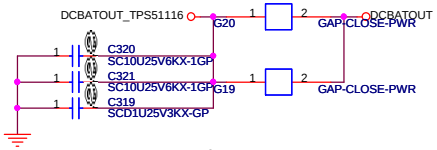
VCORE_VID1	VCORE_VID0	
L	L	1.2V
L	Z	1.1V
Z	L	1.0V
Z	Z	Reserved

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

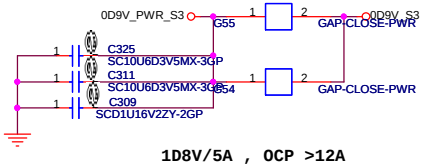
Title	MAX8743 1D2V/1D2V_CORE	
Size A3	Document Number SHIBA	Rev SA
Date: Monday, February 20, 2006	Sheet 39 of 44	

TI TPS51116 for 1D8V and 0D9V

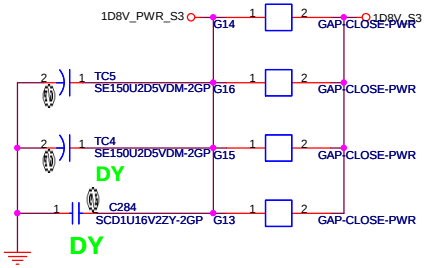


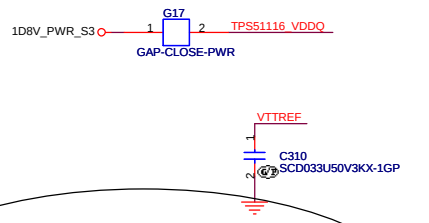


0D9V/2A , OCP >3A

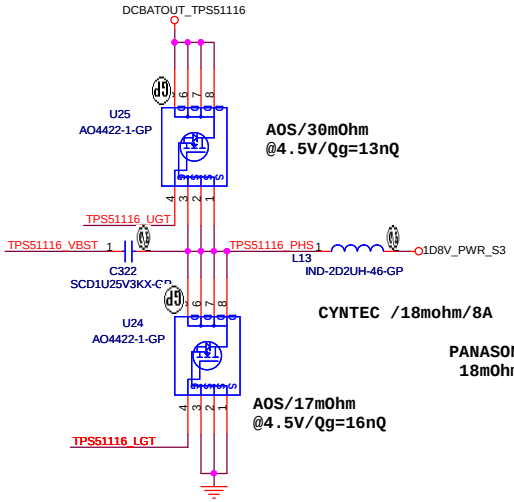


1D8V/5A , OCP >12A

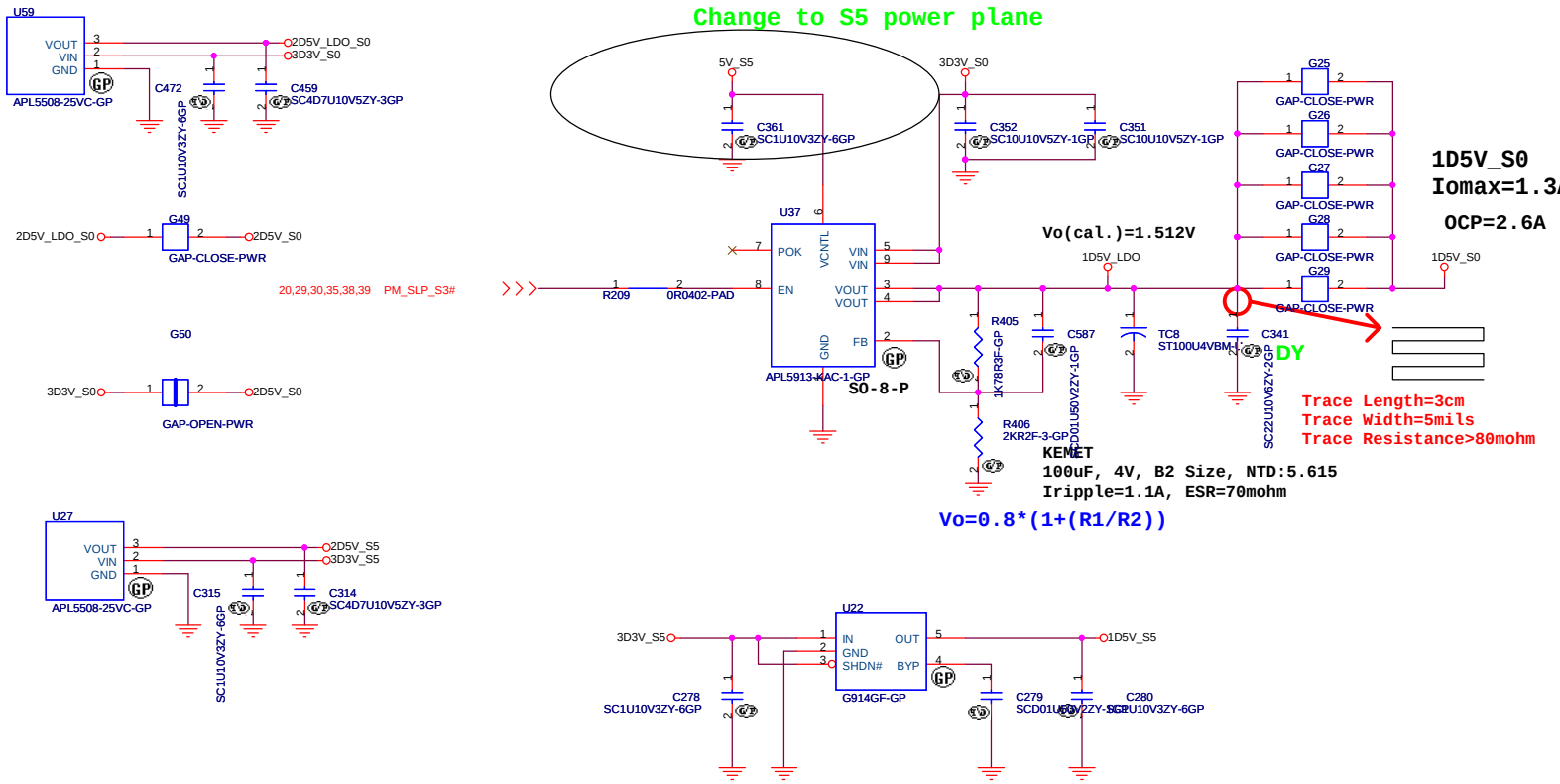




State	S3	S5	VDDR	VTTREF	VTT
S0	Hi	Hi	On	On	On
S3	Lo	Hi	On	On	Off(Hi-Z)
S4/S5	Lo	Lo	Off	Off	Off



緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title	**TPS51116 1D8V/0D9V**
Size A3	Document Number: **SHIBA**
Rev	**SA**
Date: Monday, February 20, 2006	Sheet 40 of 44



緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title: *1D5V/2D5V/3D3V/5V_AUX*		
Size: A3	Document Number: SHIBA	Rev: SA
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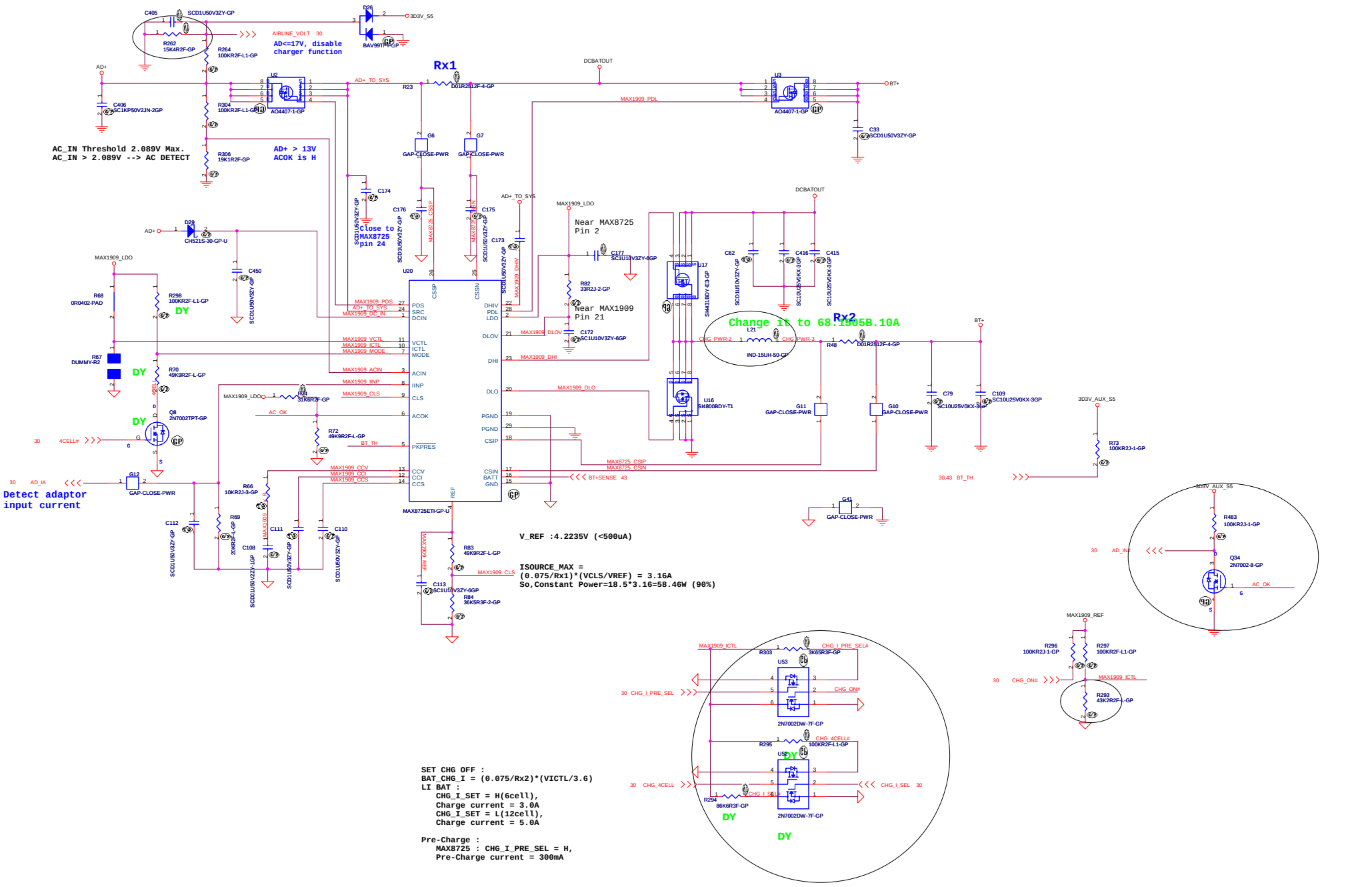
AC_IN Threshold 2.089V Max.
AC_IN > 2.089V --> AC DETECT
AD+ > 13V
ACOK is H
AD<=17V, disable
charger function
Rx1
Near MAX8725
Pin 2
Near MAX1909
Pin 21
Close to
MAX8725
pin 24
Change it to 68.1505B.10A
Rx2
Detect adaptor
input current
V_REF :4.2235V (<500uA)
ISOURCE_MAX =
(0.075/Rx1)*(VCLS/VREF) = 3.16A
So,Constant Power=18.5*3.16=58.46W (90%)
SET CHG OFF :
BAT_CHG_I = (0.075/Rx2)*(VICTL/3.6)
LI BAT :
CHG_I_SET = H(6cell),
Charge current = 3.0A
CHG_I_SET = L(12cell),
Charge current = 5.0A
Pre-Charge :
MAX8725 : CHG_I_PRE_SEL = H,
Pre-Charge current = 300mA
MAX8725ETI-GP-U
IND-15UH-50-GP
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
CHARGER MAX8725
SHIBA
Tuesday, February 21, 2006
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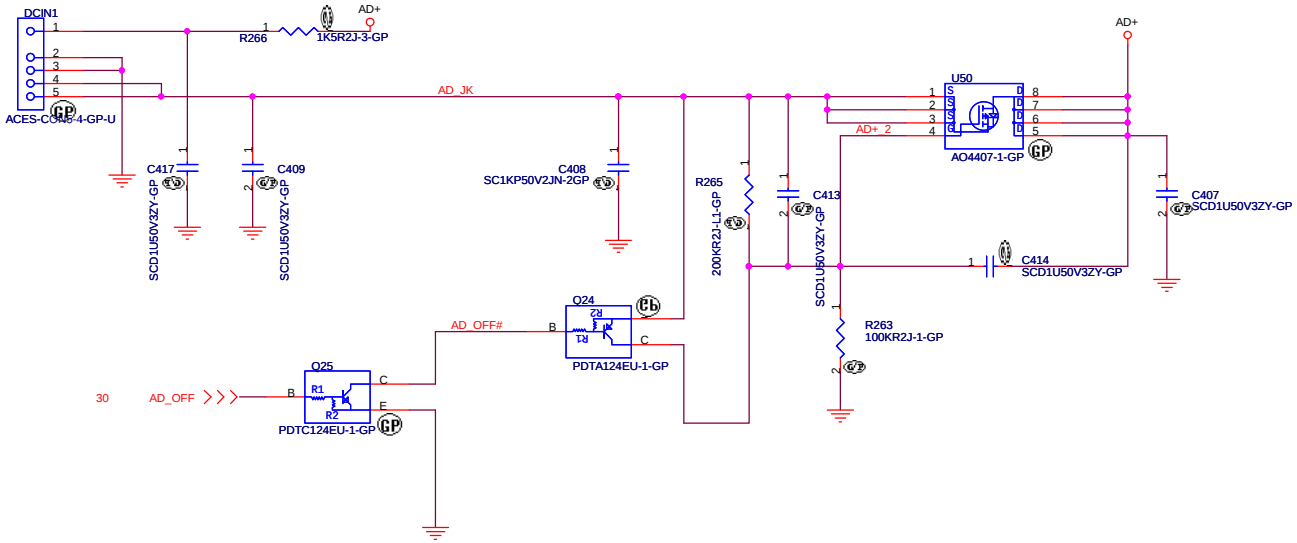
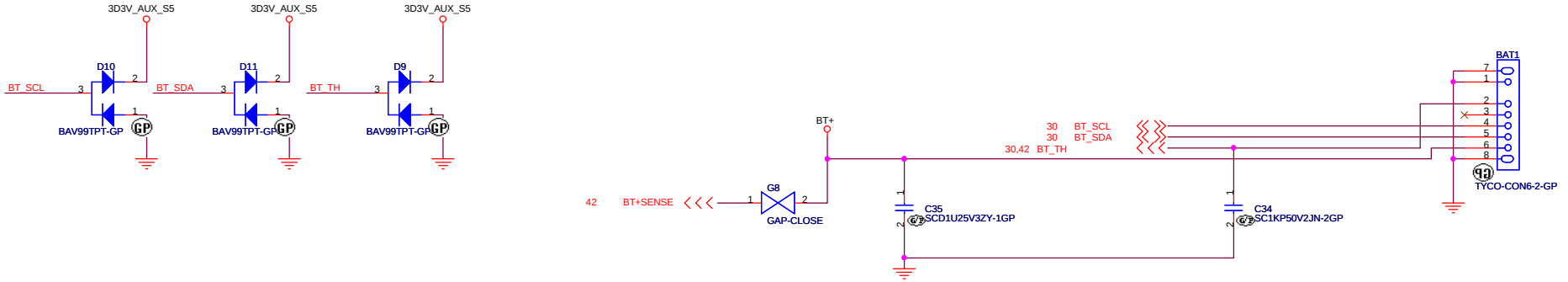
Adaptor in to generate DCBATOUT



BATTERY CONNECTOR



緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title: AD/BATT CONN		
Size: A3	Document Number: SHIBA	Rev: SA
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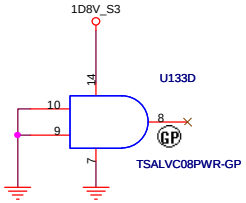
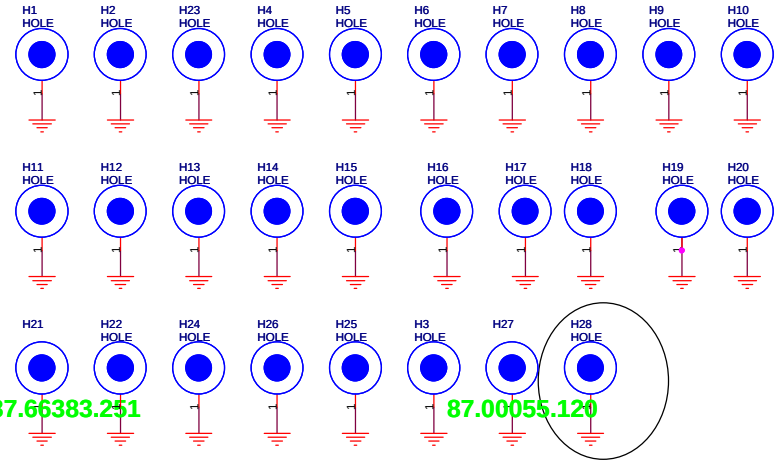
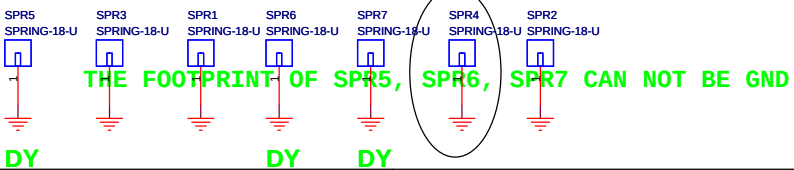
	FF	DF
CAMERA	○	X
LAN	10/100	10/100
1394/5 IN 1	○	X
EXTRA USB	○	X
MIC	○	X
CR LED	○	X



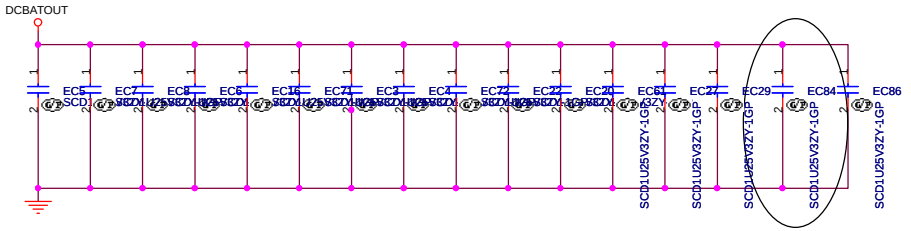


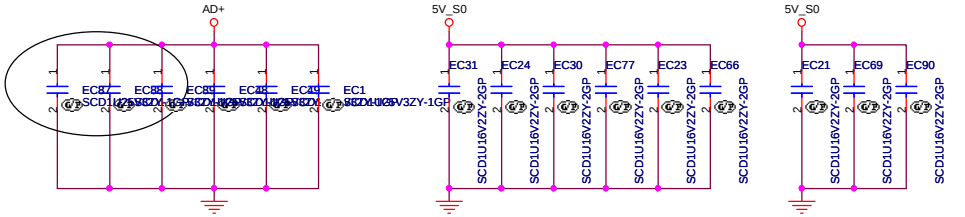
87.66383.251 87.00055.120



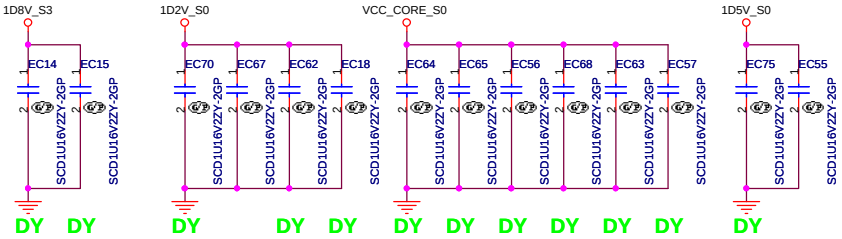
THE FOOTPRINT OF SPR5, SPR6, SPR7 CAN NOT BE GND

DY DY DY

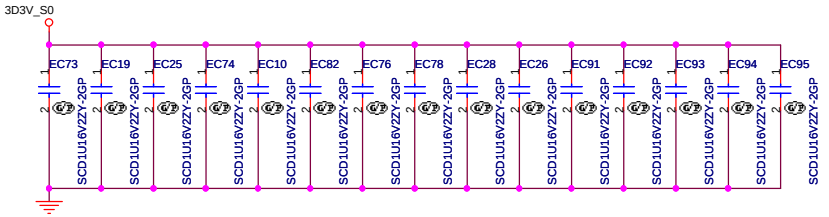




DY DY DY DY DY DY DY DY DY



DY DY DY DY DY DY DY DY DY DY DY



緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: MISC		
Size: A3	Document Number: SHIBA	Rev: SA
Date: Saturday, March 04, 2006	Sheet 44 of 44	