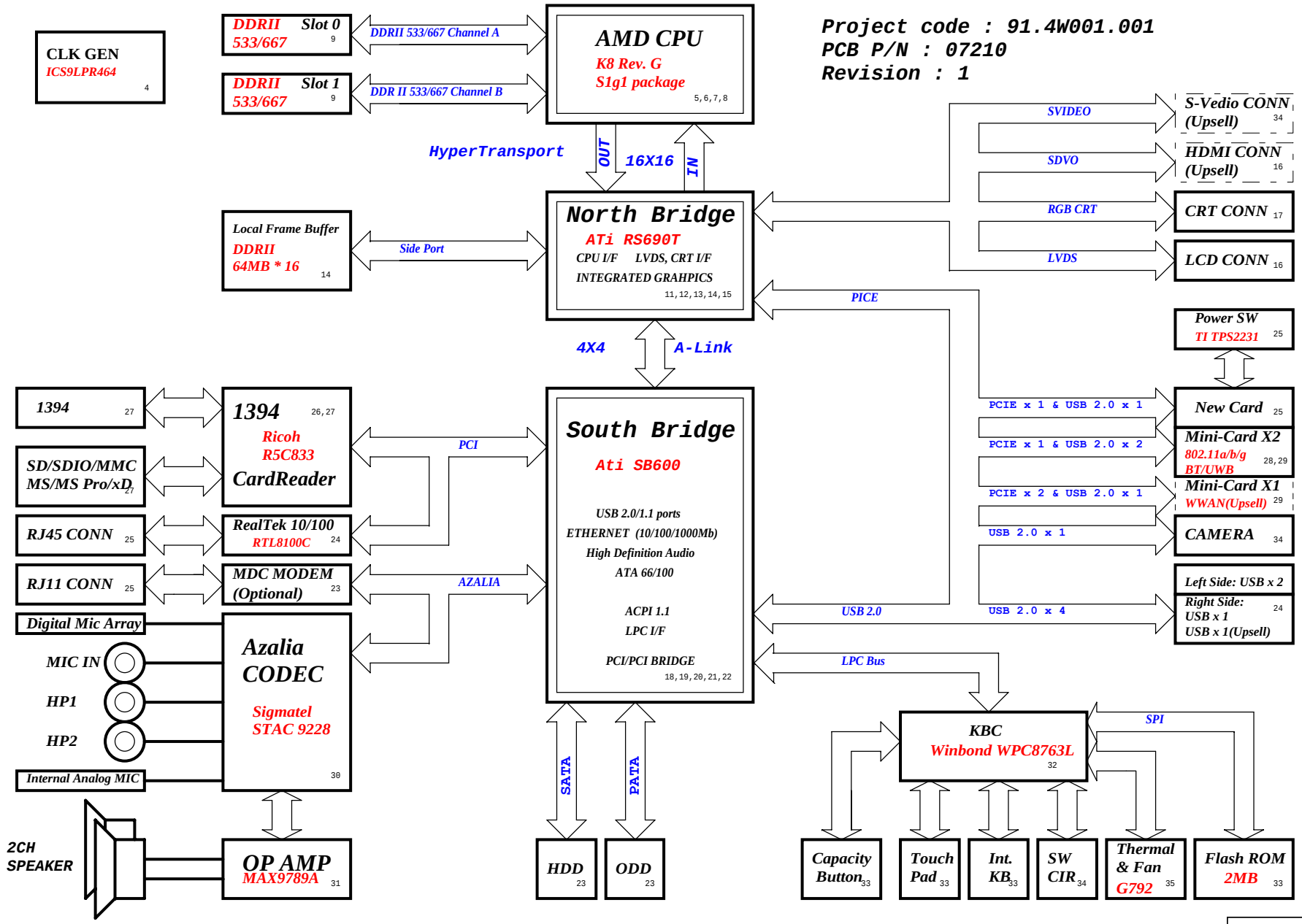
Spears AMD UMA Block Diagram

Project code : 91.4W001.001
PCB P/N : 07210
Revision : 1



CPU V_CORE		39
ISL6264		
INPUTS	OUTPUTS	
DCBATOUT	VCC_CORE	

SYSTEM DC/DC		40,41
TPS51117		
INPUTS	OUTPUTS	
DCBATOUT	1D8V_S3 1D2V_S0	

SYSTEM DC/DC		38
TPS51120		
INPUTS	OUTPUTS	
DCBATOUT	5V_S5 3D3V_S5	

SYSTEM DC/DC		42
LDO		
INPUTS	OUTPUTS	
1D8V_S3 1D8V_S0	0D9V_S3 1D5V_S0	

SYSTEM DC/DC		42
LDO		
INPUTS	OUTPUTS	
3D3V_S5 3D3V_S0	1D2V_S5 2D5V_S0	

SYSTEM DC/DC		38
TPS51120		
INPUTS	OUTPUTS	
DCBATOUT	5V_AUX_S5 3D3V_AUX_S5	

MAXIM CHARGER		37
MAX8731A		
INPUTS	OUTPUTS	
AD+ BT+	DCBATOUT	

緯創資通 Wistron Corporation
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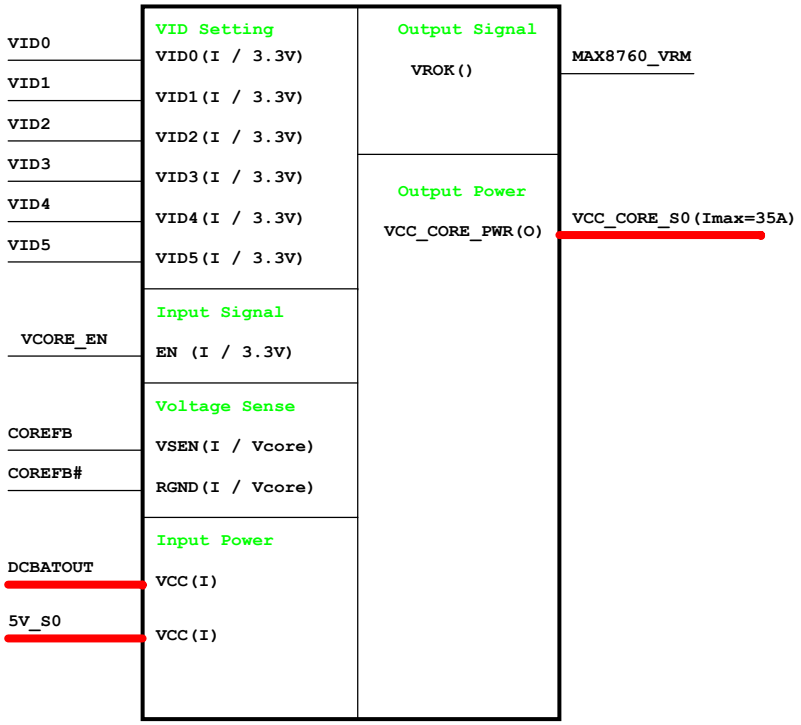
Taipei Hsien 221, Taiwan, R.O.C.

Title: **System Block Diagram**

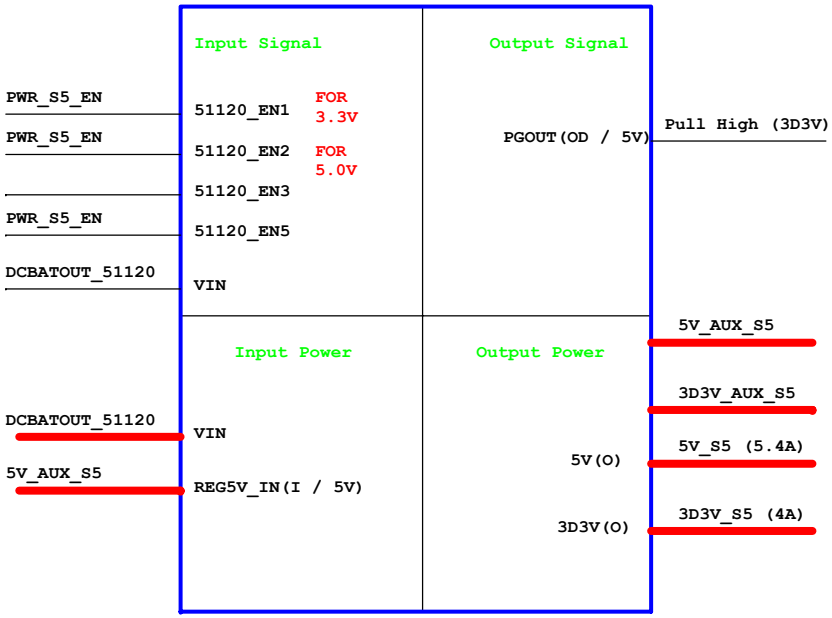
Size	Document Number	Rev
A3	DS2-AMD	1

Date: Monday, September 24, 2007 Sheet 1 of 44

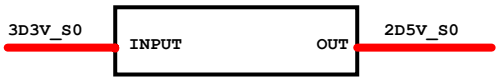
CPU_CORE
ISL6264CRZ



3D3V/5V
TI TPS51120



2D5V_S0

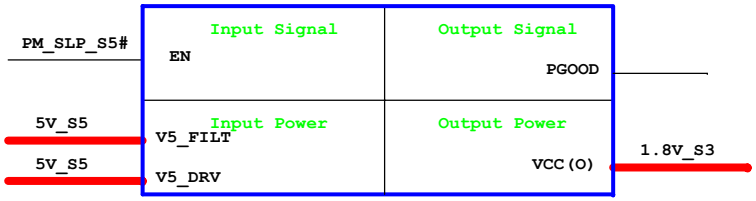


APL5913

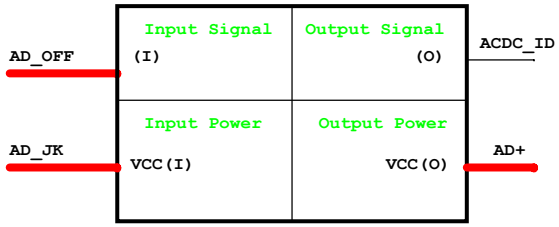
1D8V_S5

APL5332KAC-TRLGP

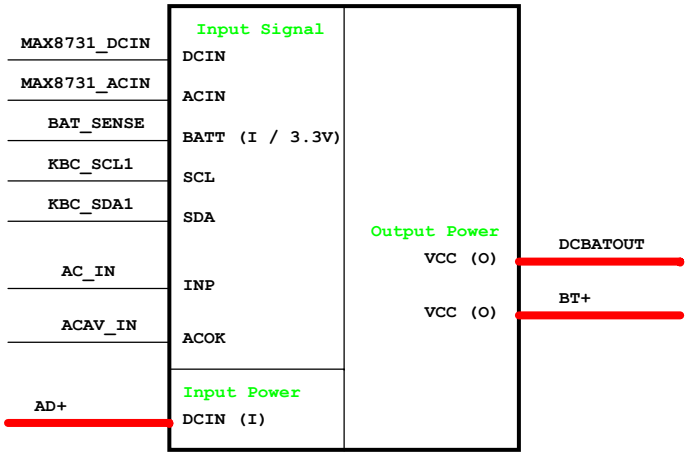
TI TPS51117
1.8V



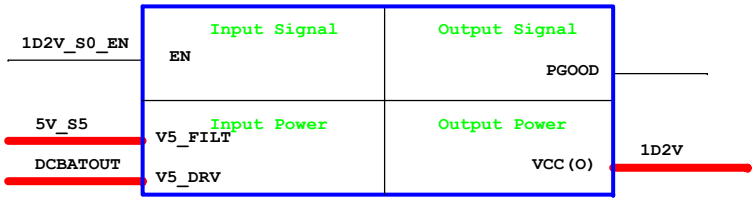
Adapter



Charger_MAX8731AETI



TI TPS51117
1.2V



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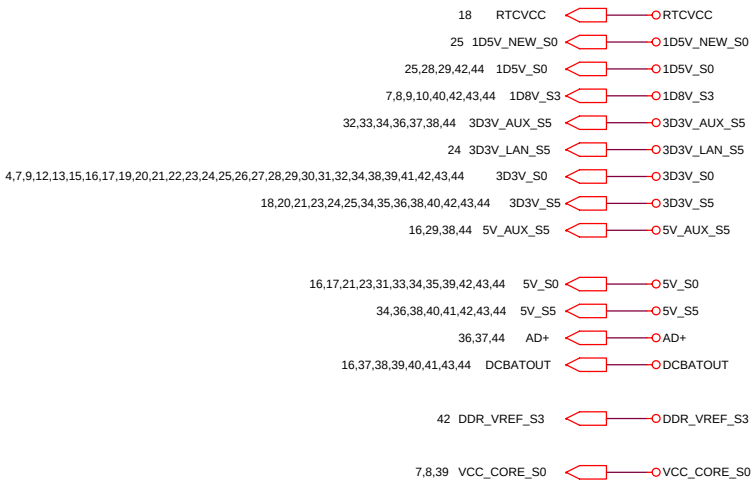
Title: **Power Block Diagram**

Size	Document Number	Rev
A3	DS2-AMD	1

Date: Monday, September 24, 2007 Sheet 2 of 44



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Title: ***Table of Content***

Size	Document Number	Rev
A3	DS2-AMD	1

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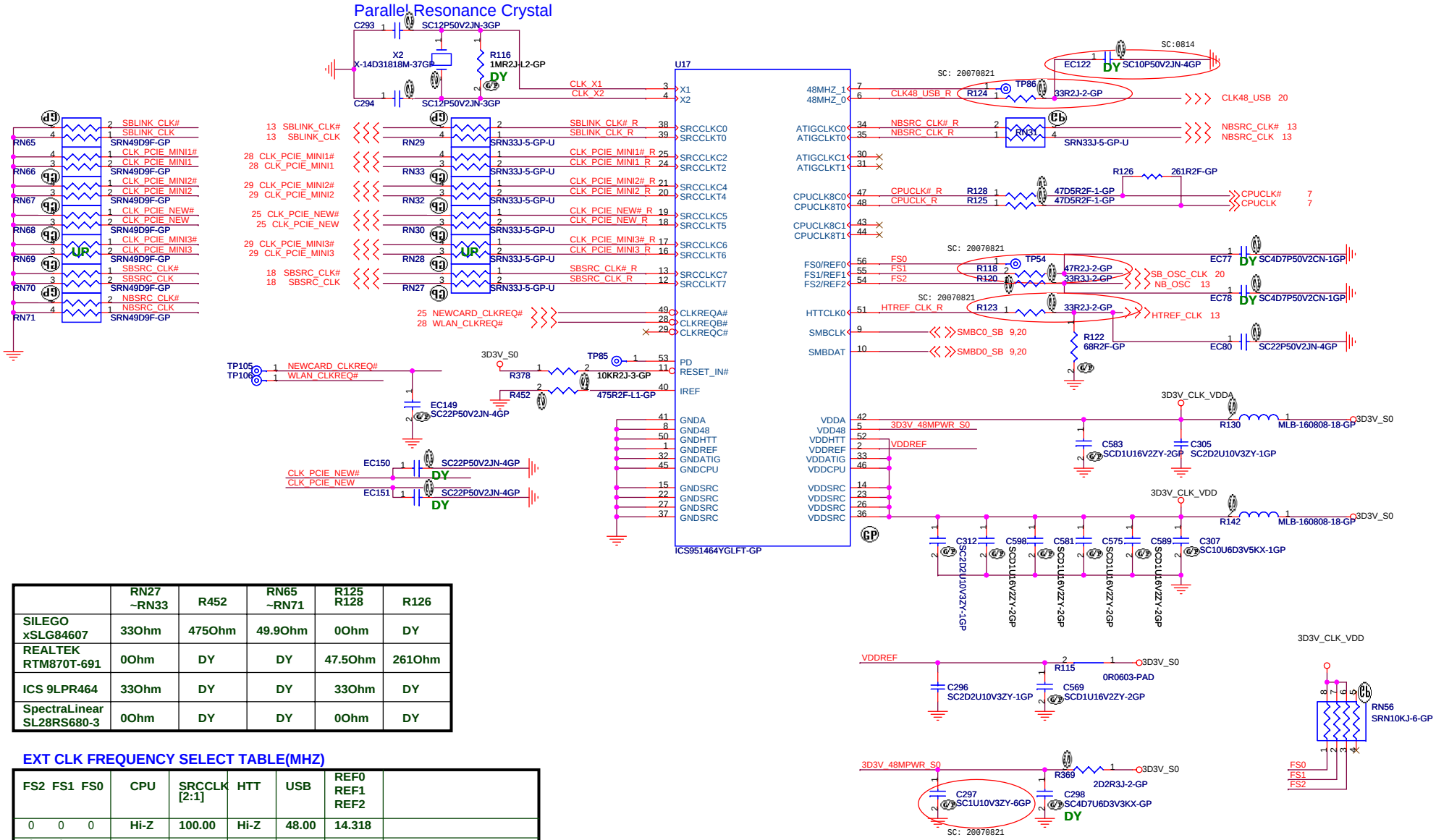

	RN27 ~RN33	R452	RN65 ~RN71	R125 R128	R126
SILEGO xSLG84607	33Ohm	475Ohm	49.9Ohm	0Ohm	DY
REALTEK RTM870T-691	0Ohm	DY	DY	47.5Ohm	261Ohm
ICS 9LPR464	33Ohm	DY	DY	33Ohm	DY
SpectraLinear SL28RS680-3	0Ohm	DY	DY	0Ohm	DY

EXT CLK FREQUENCY SELECT TABLE(MHZ)

FS2	FS1	FS0	CPU	SRCCLK [2:1]	HTT	USB	REF0 REF1 REF2	
0	0	0	Hi-Z	100.00	Hi-Z	48.00	14.318	
0	0	1	X/2	100.00	X/3	48.00	14.318	
0	1	0	230.00	100.00	76.67	48.00	14.318	
0	1	1	240.00	100.00	80.00	48.00	14.318	
1	0	0	100.00	100.00	66.66	48.00	14.318	
1	0	1	133.33	100.00	66.66	48.00	14.318	
1	1	0	166.67	100.00	66.66	48.00	14.318	
1	1	1	200.00	100.00	66.67	48.00	14.318	

<Variant Name>

緯創資通 Wistron Corporation
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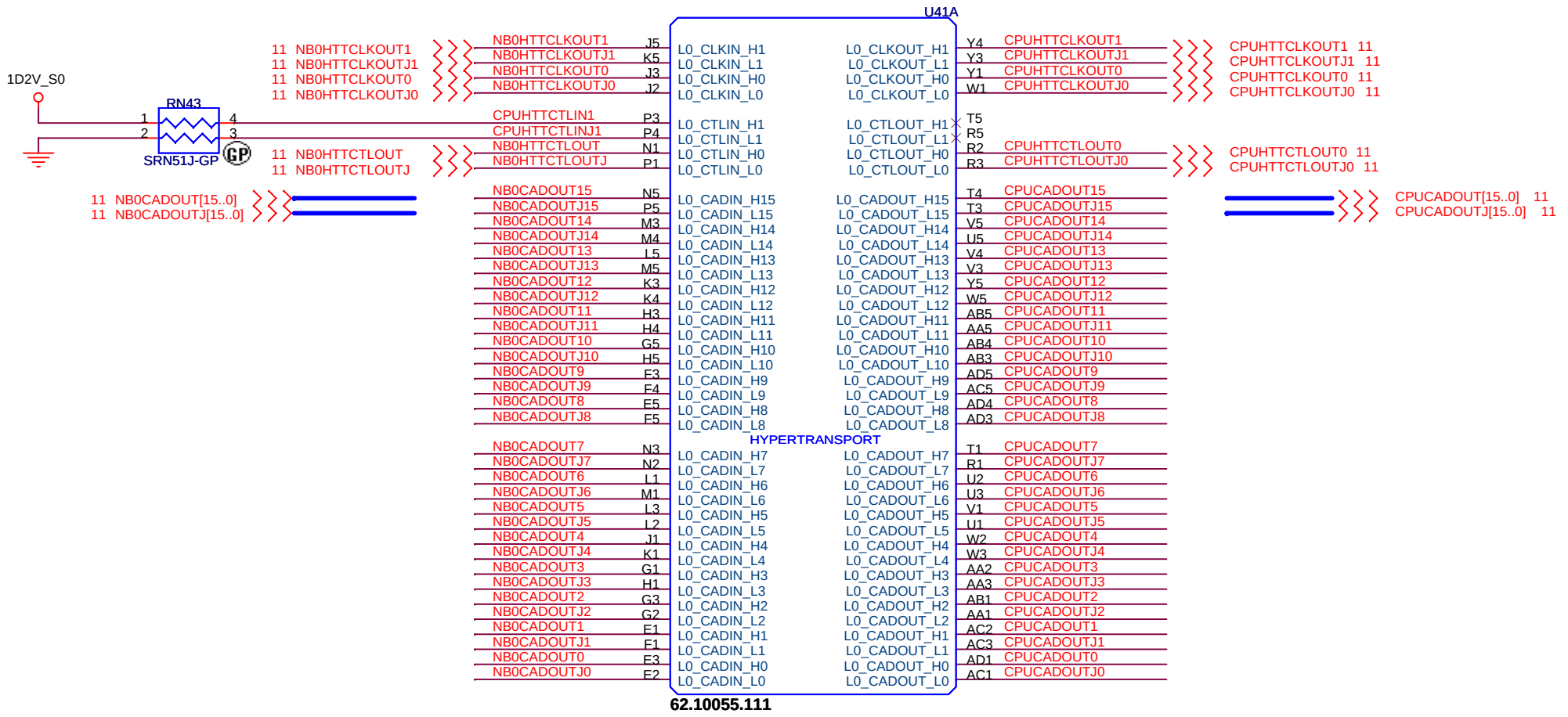
Taipei Hsien 221, Taiwan, R.O.C.

Title: Clock generator ICS9LPR464

Size: A3 | Document Number: DS2-AMD | Rev: 1

Date: Monday, September 24, 2007 | Sheet 4 of 44



緯創資通 Wistron Corporation
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Taipei Hsien 221, Taiwan, R.O.C.

Title
AMD K8 CPU Rev.G

Size	Document Number	Rev
A4	DS2-AMD	1

Date: Monday, September 24, 2007 Sheet 5 of 44

緯創資通 **Wistron Corporation**
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Title: ***AMD K8 CPU Rev.G***

Size	Document Number	Rev
A3	DS2-AMD	1

Date: Monday, September 24, 2007 Sheet 6 of 44

LYAOUT:ROUTE VDDA TRACE APPROX. 50mils WIDE(USE 2X25 mil TRACES TO EXIT BALL FIELD) AND 500 mils LONG.

IF 0 ohm IS NOT GOOD ENOUGH, TRY 68.00082.491

Near To CPU

Remove these resistor when using EVT CPU

LAYOUT: Route FBCLKOUT_H/L differentially impedance 80

VREF_DDR_CLAW

LAYOUT: Locate close to CPU.

JUMP WIRE TO 1D8V_S3 WHEN USE HDT

HDT Connectors

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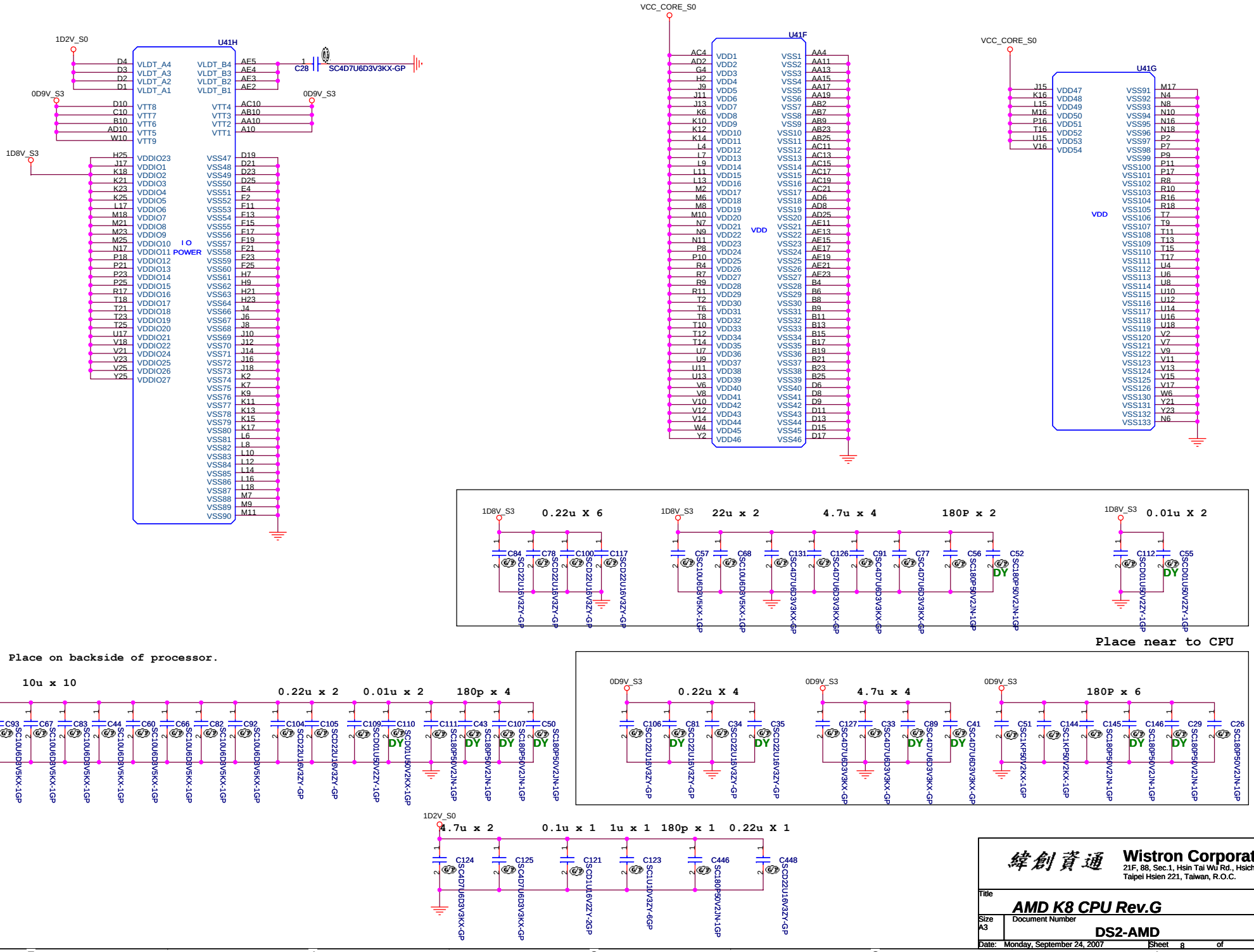
Taipei Hsien 221, Taiwan, R.O.C.

Title: AMD K8 CPU Rev.G

Size: A3 | Document Number: DS2-AMD | Rev: 1

Date: Monday, September 24, 2007 | Sheet 7 of 44

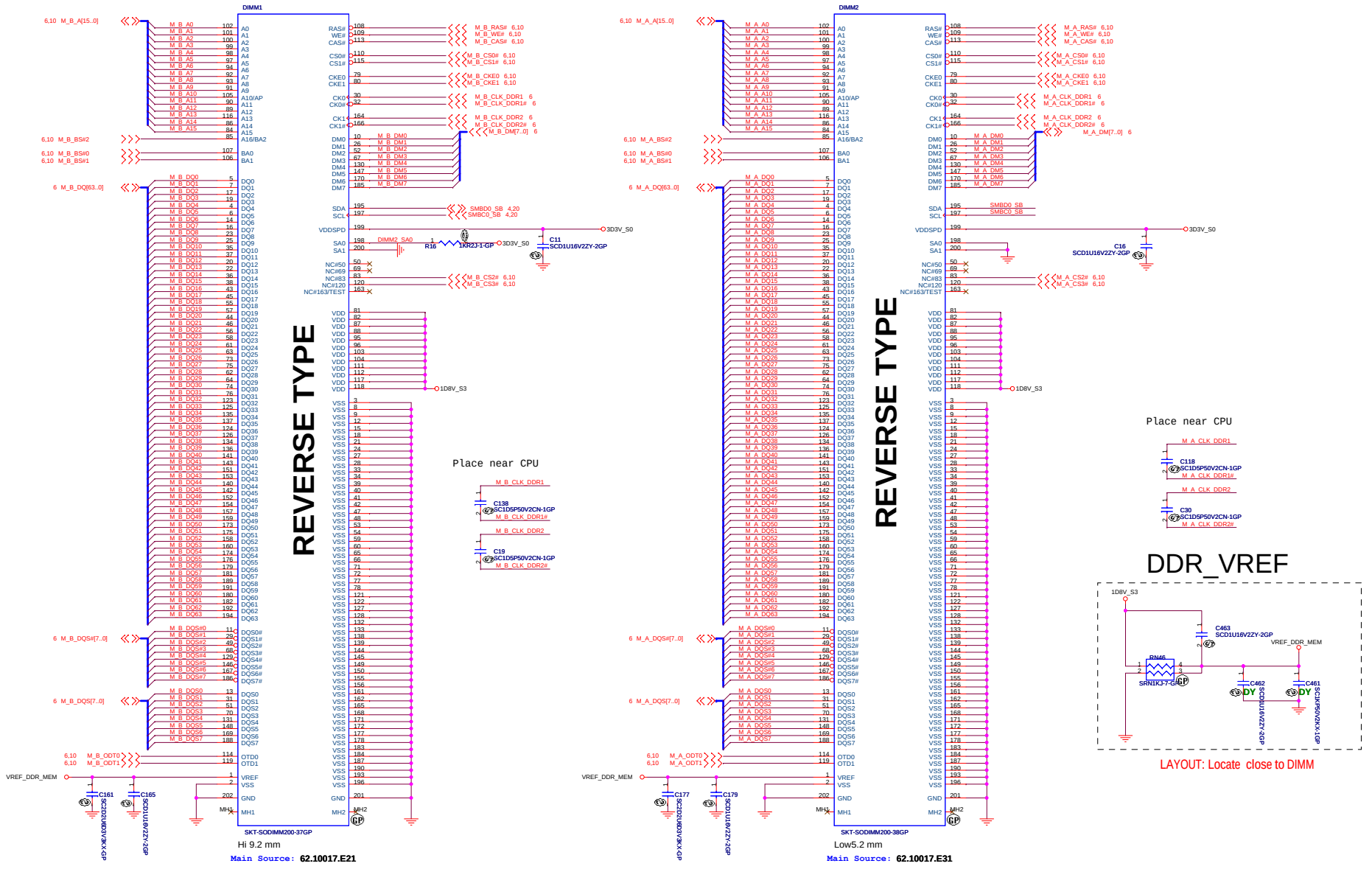


緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: ***AMD K8 CPU Rev.G***

Size	Document Number	Rev
A3	DS2-AMD	1

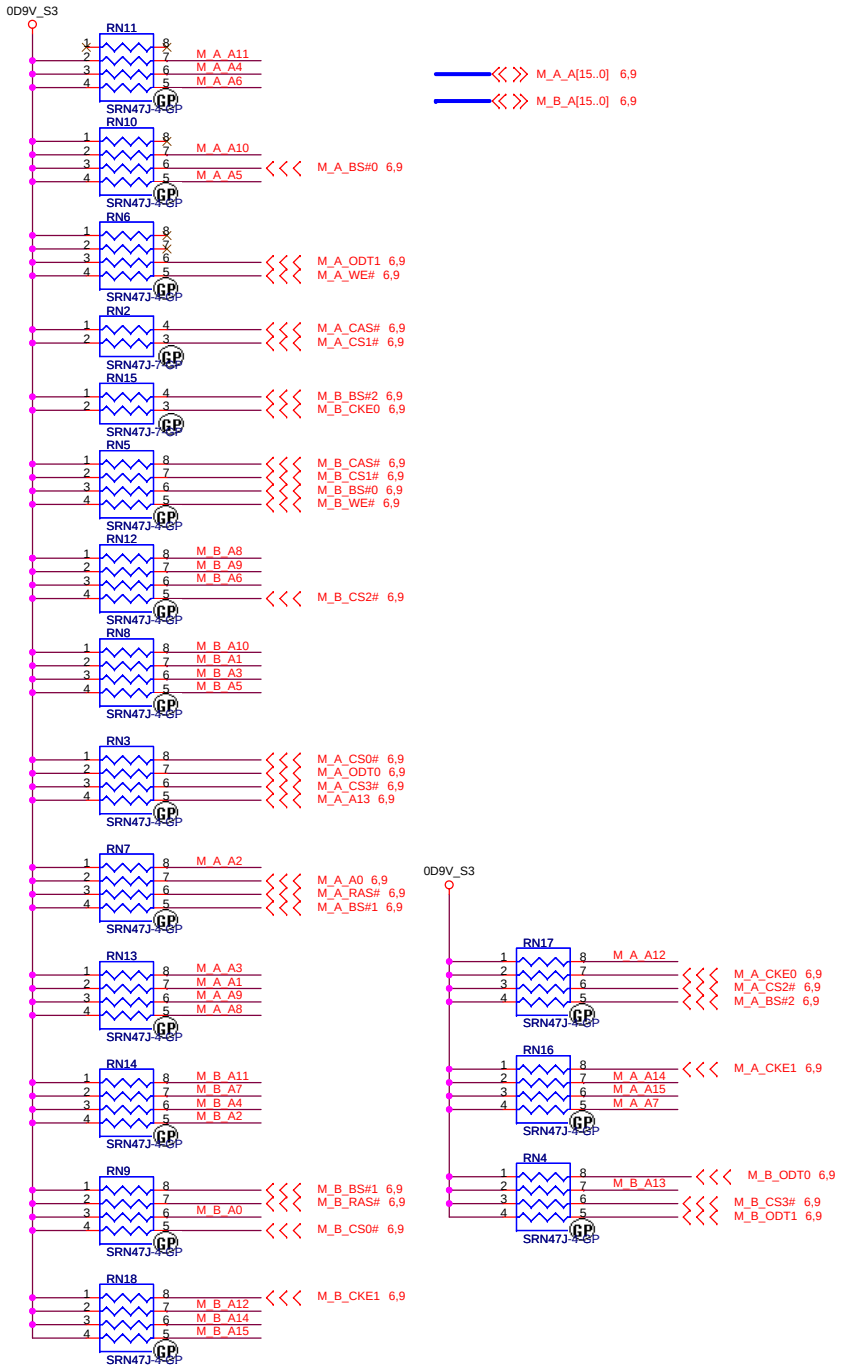
Date: Monday, September 24, 2007 Sheet 8 of 44



緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title	***DDR SO-DIMM SKT***
Size: A2	Document Number: **DS2-AMD** Rev: 1
Date: Monday, September 24, 2007	Sheet 9 of 44

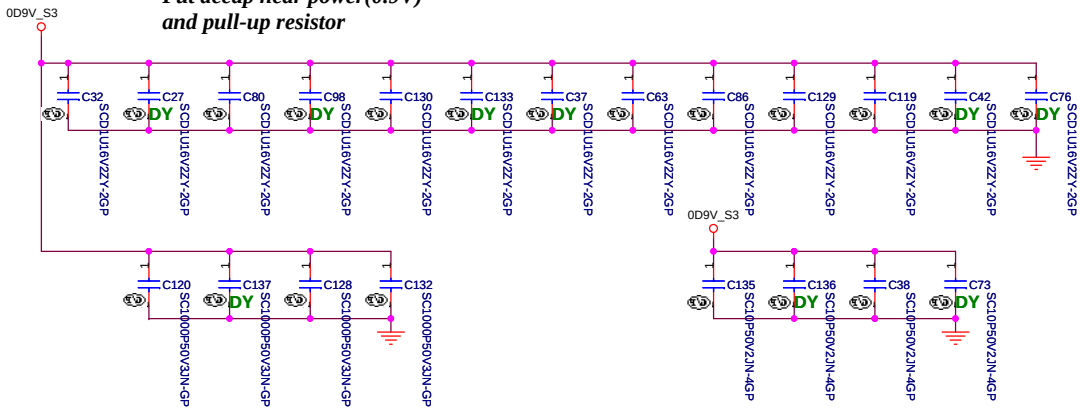
PARALLEL TERMINATION

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

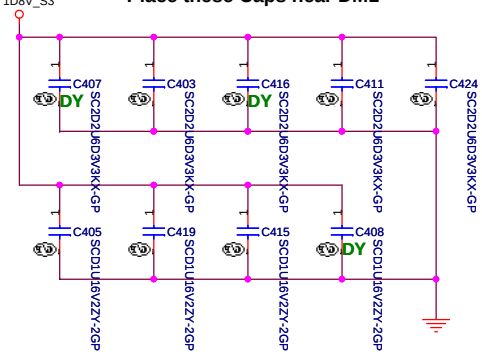


Decoupling Capacitor

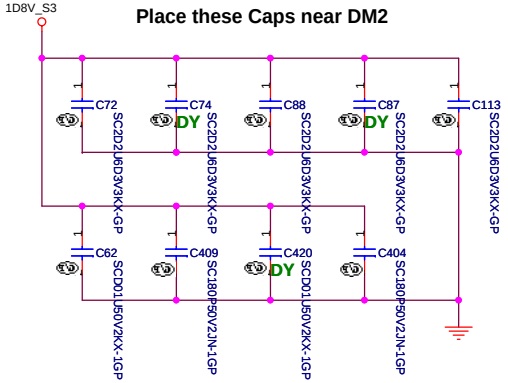
Put decap near power(0.9V) and pull-up resistor



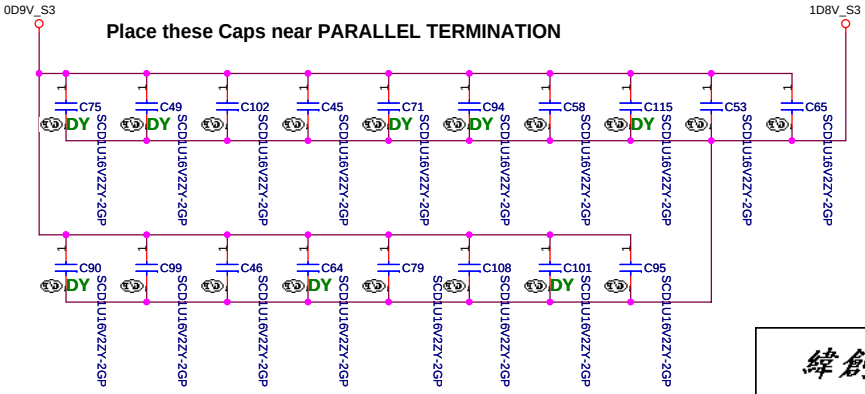
Place these Caps near DM1



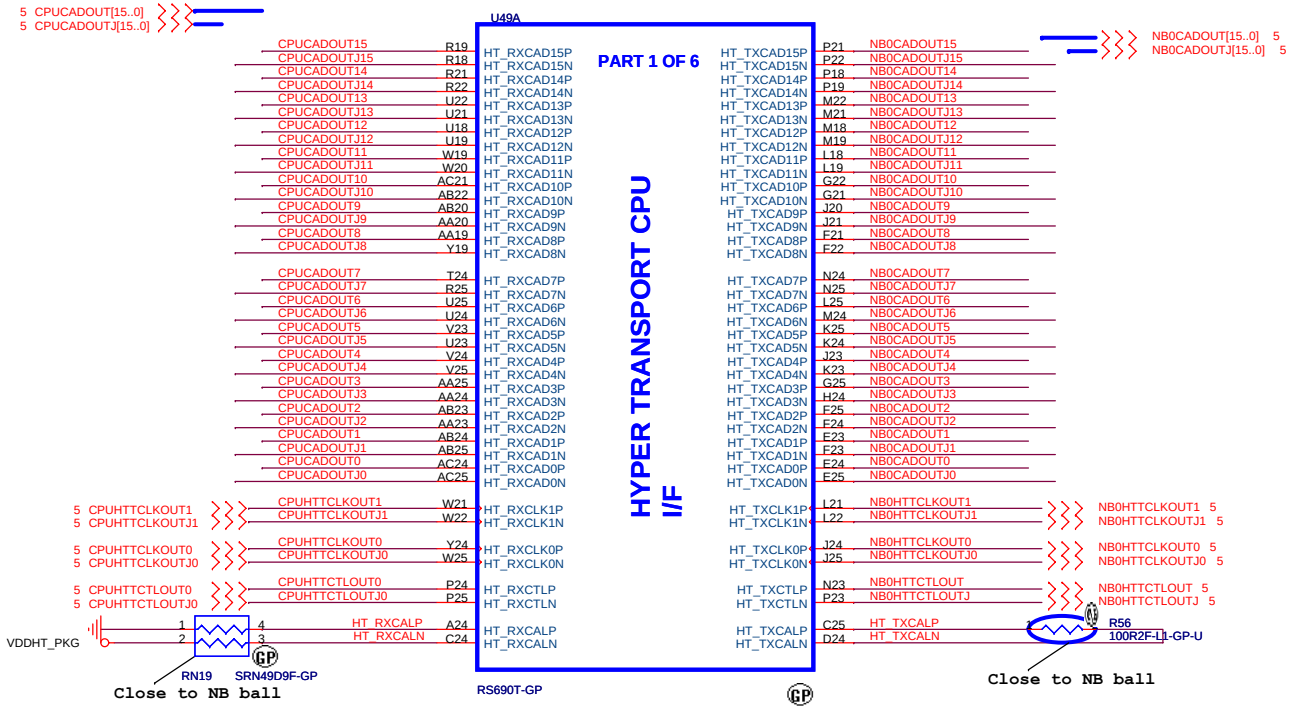
Place these Caps near DM2



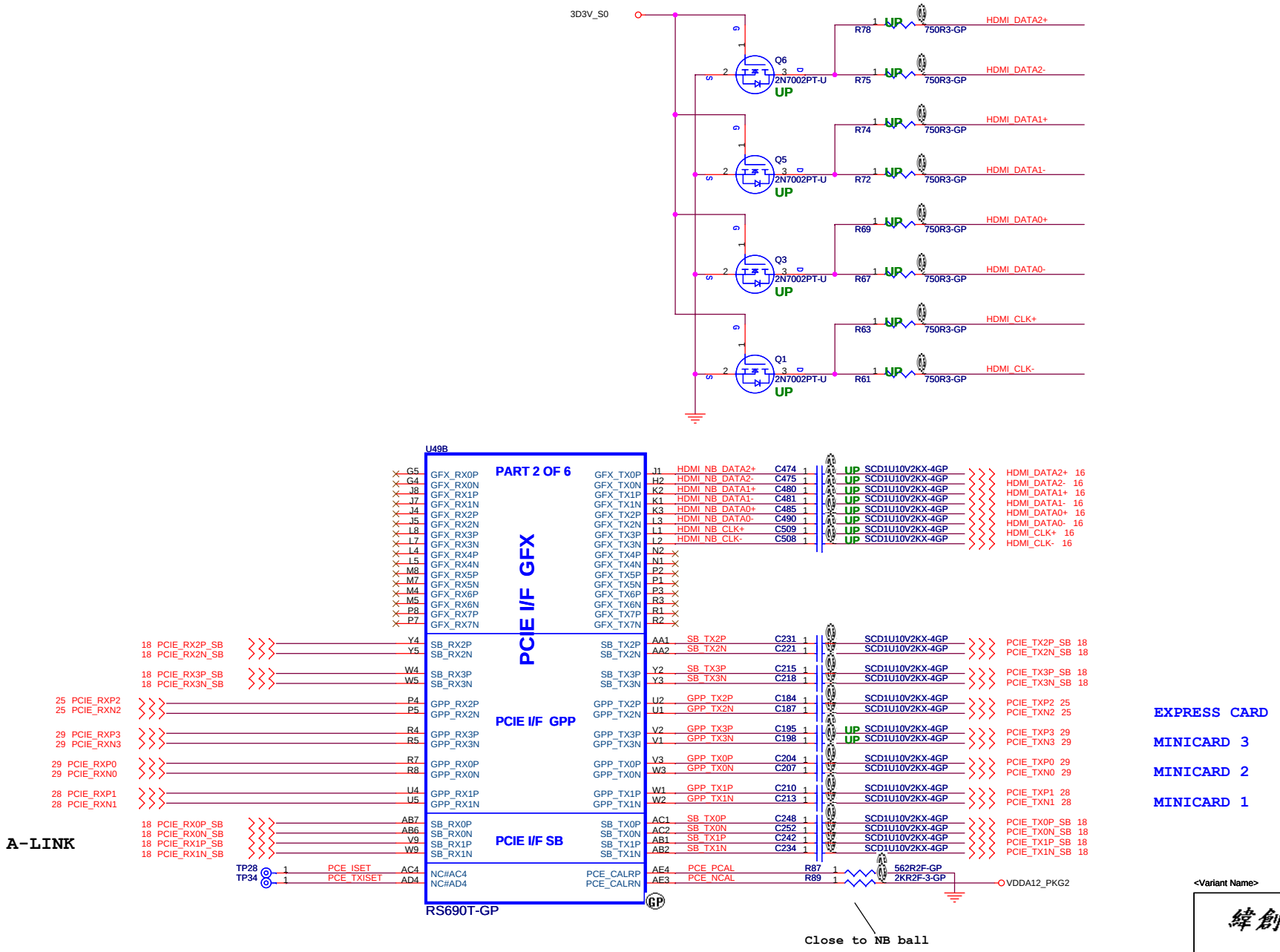
Place these Caps near PARALLEL TERMINATION



緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	***DDR DAMPING & TERMINATION***	
Size A3	Document Number **DS2-AMD**	Rev 1
Date: Monday, September 24, 2007	Sheet 10 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: North Bridge - ATi RS690T		
Size: A3	Document Number: DS2-AMD	Rev: 1
Date: Monday, September 24, 2007	Sheet 11 of 44	



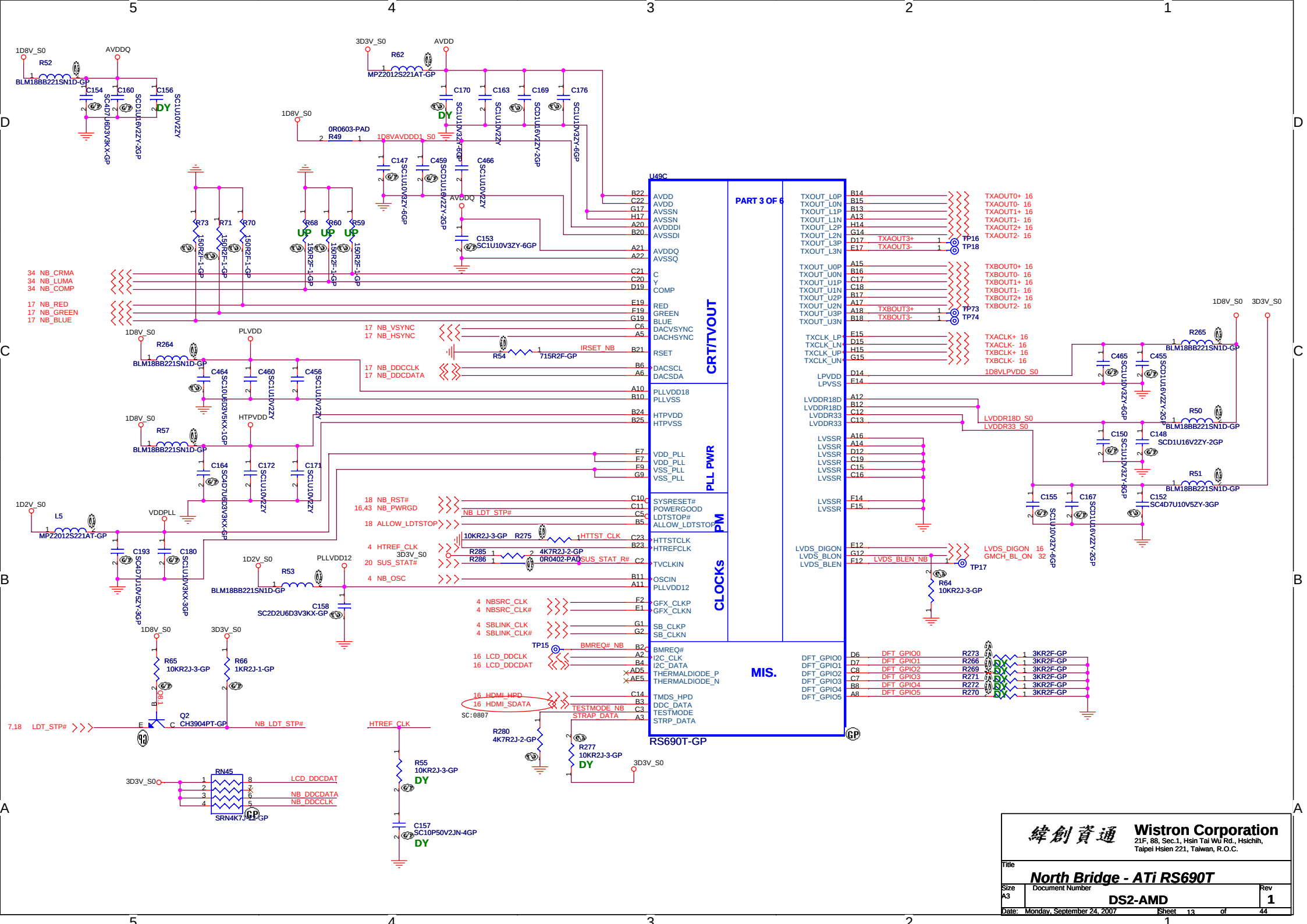
<Variant Name>

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

Title: North Bridge - ATi RS690T

Size: A3 | Document Number: DS2-AMD | Rev: 1

Date: Monday, September 24, 2007 | Sheet 12 of 44

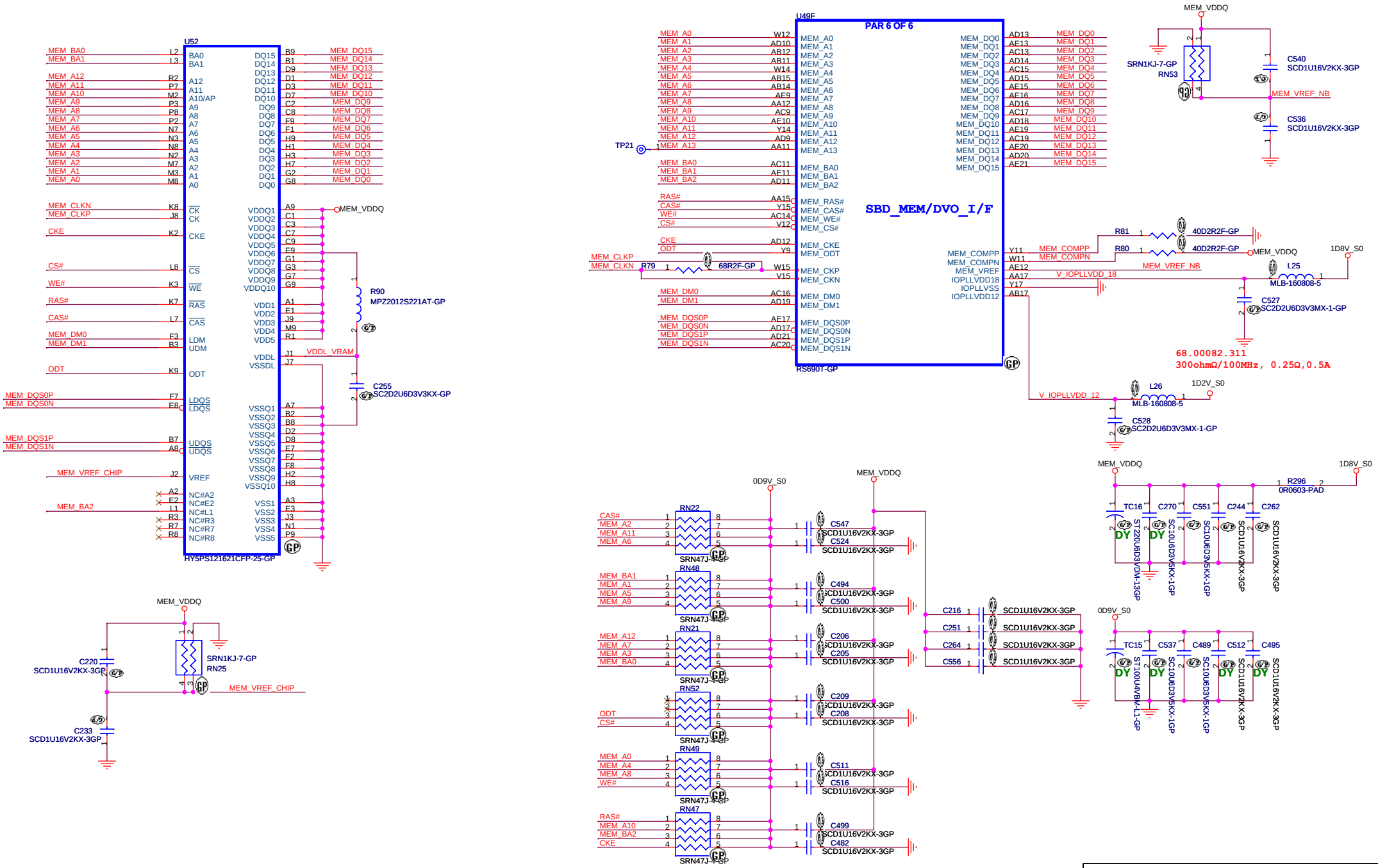


緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **North Bridge - ATi RS690T**

Size: A3 | Document Number: DS2-AMD | Rev: 1

Date: Monday, September 24, 2007 | Sheet 13 of 44

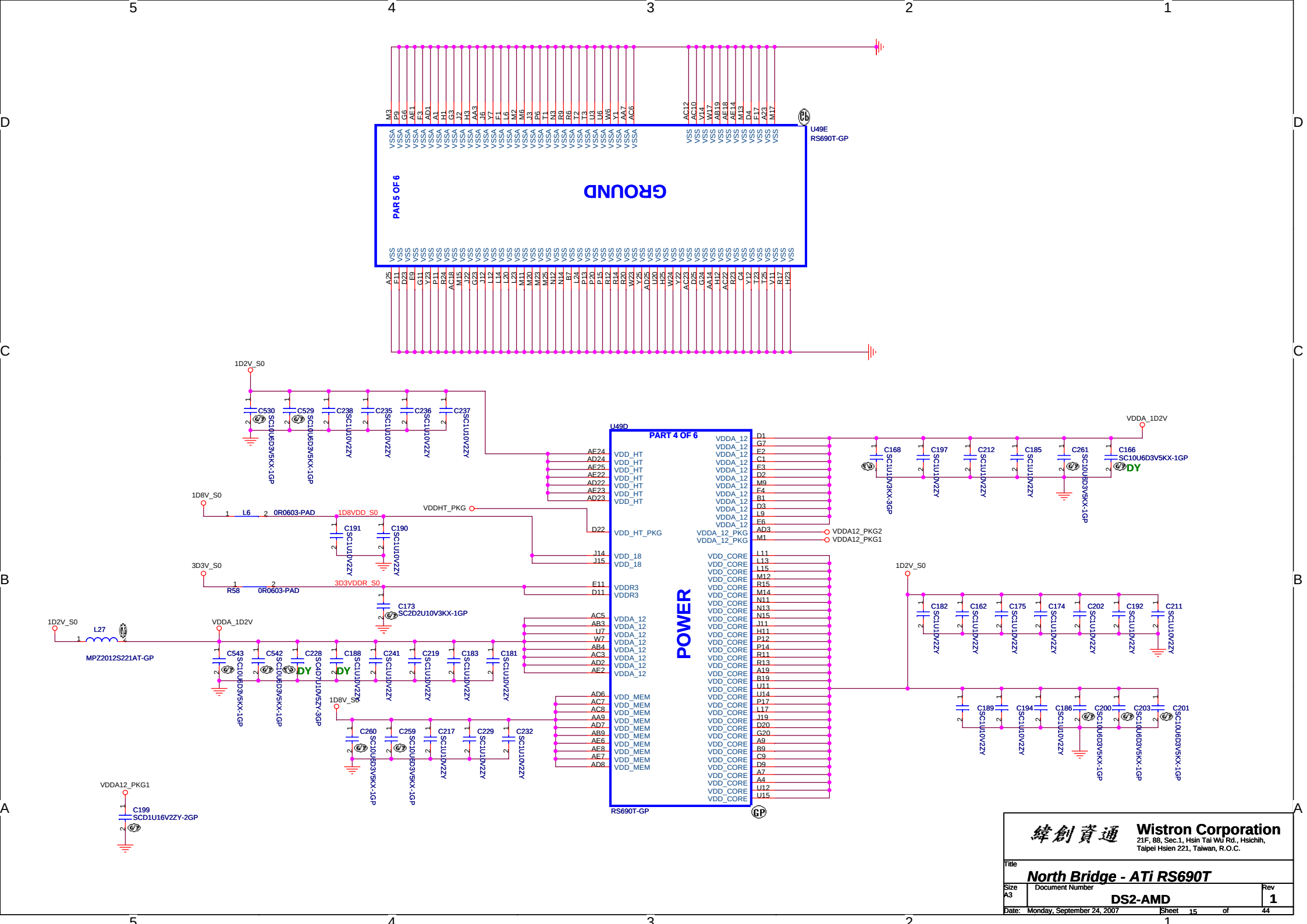


緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **North Brodge - ATi RS690T&LFB**

Size	Document Number	Rev
A3	DS2-AMD	1

Date: Monday, September 24, 2007 Sheet 14 of 44


GROUND
PAR 5 OF 6
U49E
RS690T-GP
POWER
PART 4 OF 6
U49D
RS690T-GP
1D2V_S0
1D8V_S0
3D3V_S0
VDDA_1D2V
VDDA12_PKG1
VDDHT_PKG
1D8VDD_S0
3D3VDDR_S0
L6
0R0603-PAD
R58
L27
MPZ2012S221AT-GP
C199
SCD1U16V2ZY-2GP
VDDA12_PKG2
VDDA12_PKG1
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
North Bridge - ATi RS690T
DS2-AMD
Rev 1
Date: Monday, September 24, 2007
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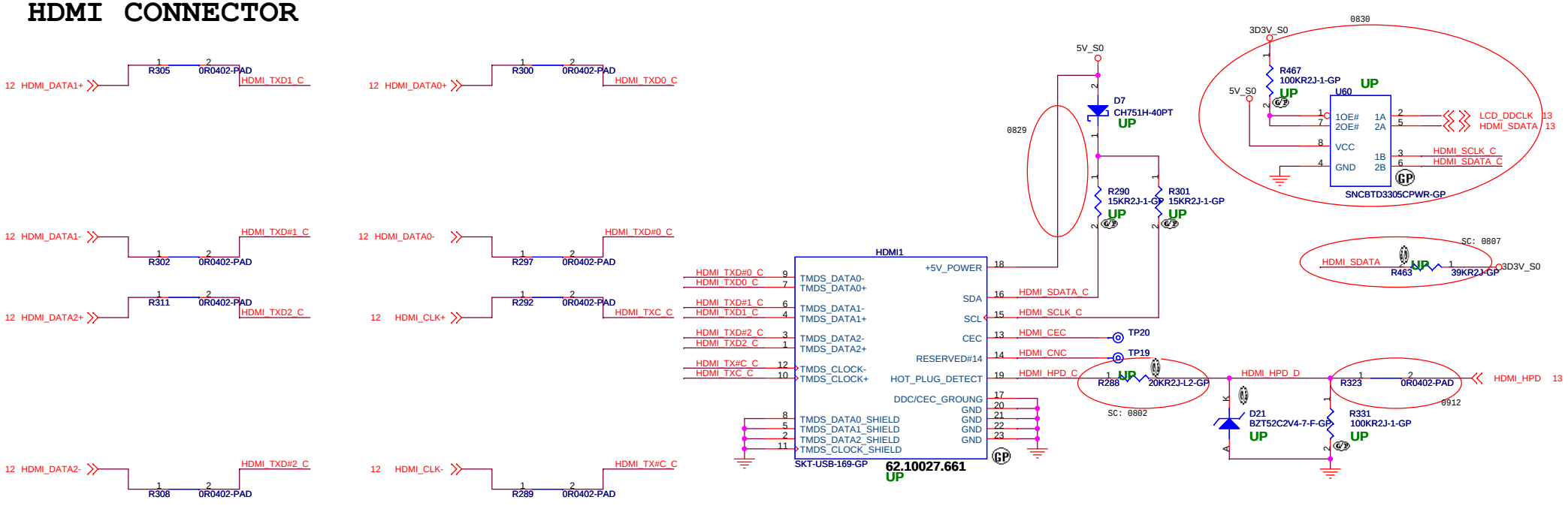
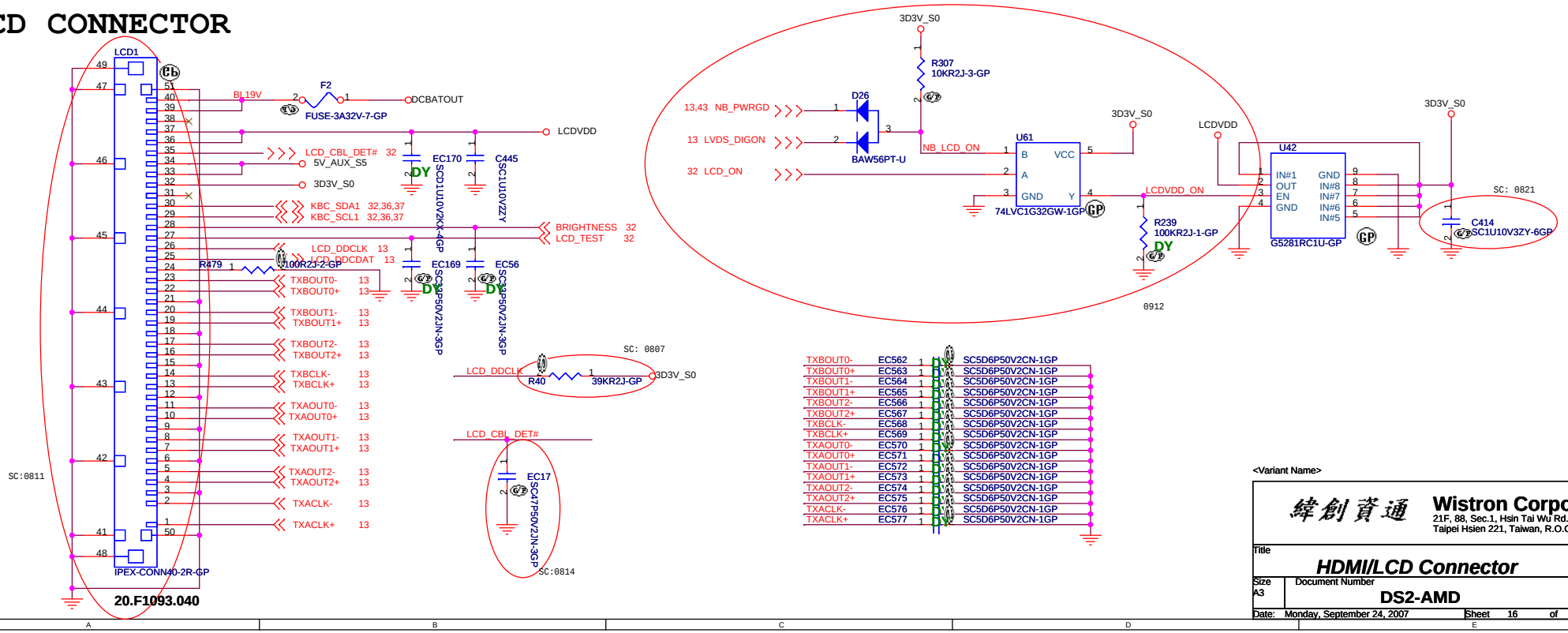
HDMI CONNECTOR



LCD CONNECTOR



<Variant Name>

緯創資通 **Wistron Corporation**
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Taipei Hsien 221, Taiwan, R.O.C.

Title: **HDMI/LCD Connector**

Size	Document Number	Rev
A3	DS2-AMD	1

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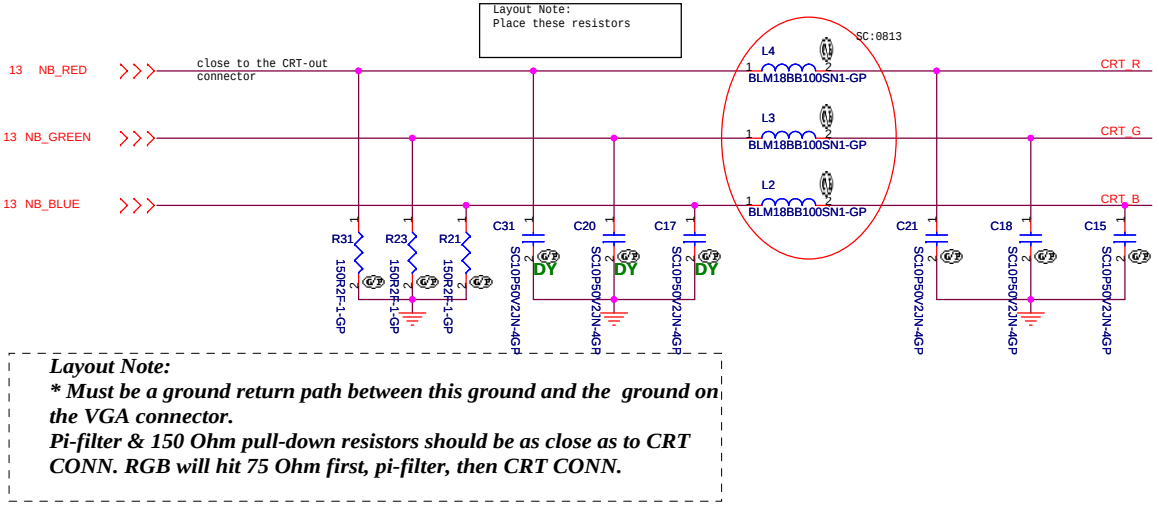
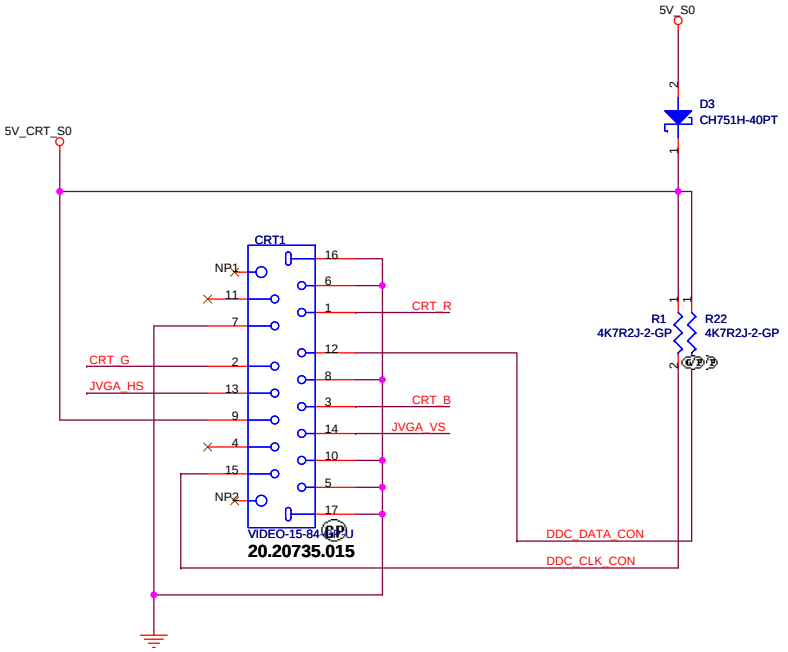
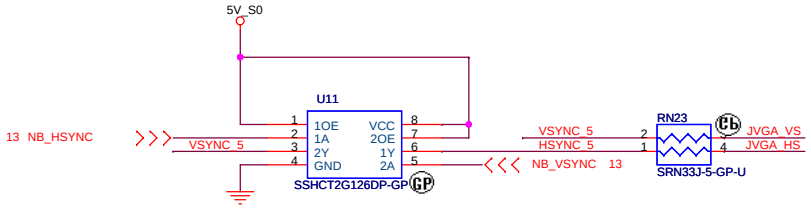
CRT I/F & CONNECTOR

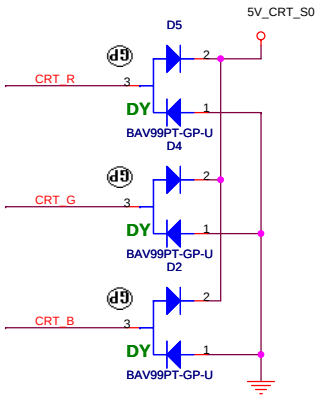


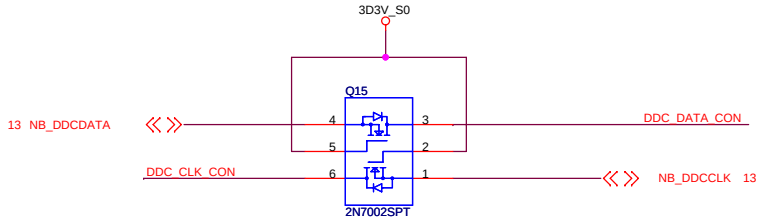
Layout Note:
**** Must be a ground return path between this ground and the ground on the VGA connector.***
Pi-filter & 150 Ohm pull-down resistors should be as close as to CRT CONN. RGB will hit 75 Ohm first, pi-filter, then CRT CONN.



Hsync & Vsync level shift







5V @ ext. CRT side

<Variant Name>

緯創資通 **Wistron Corporation**
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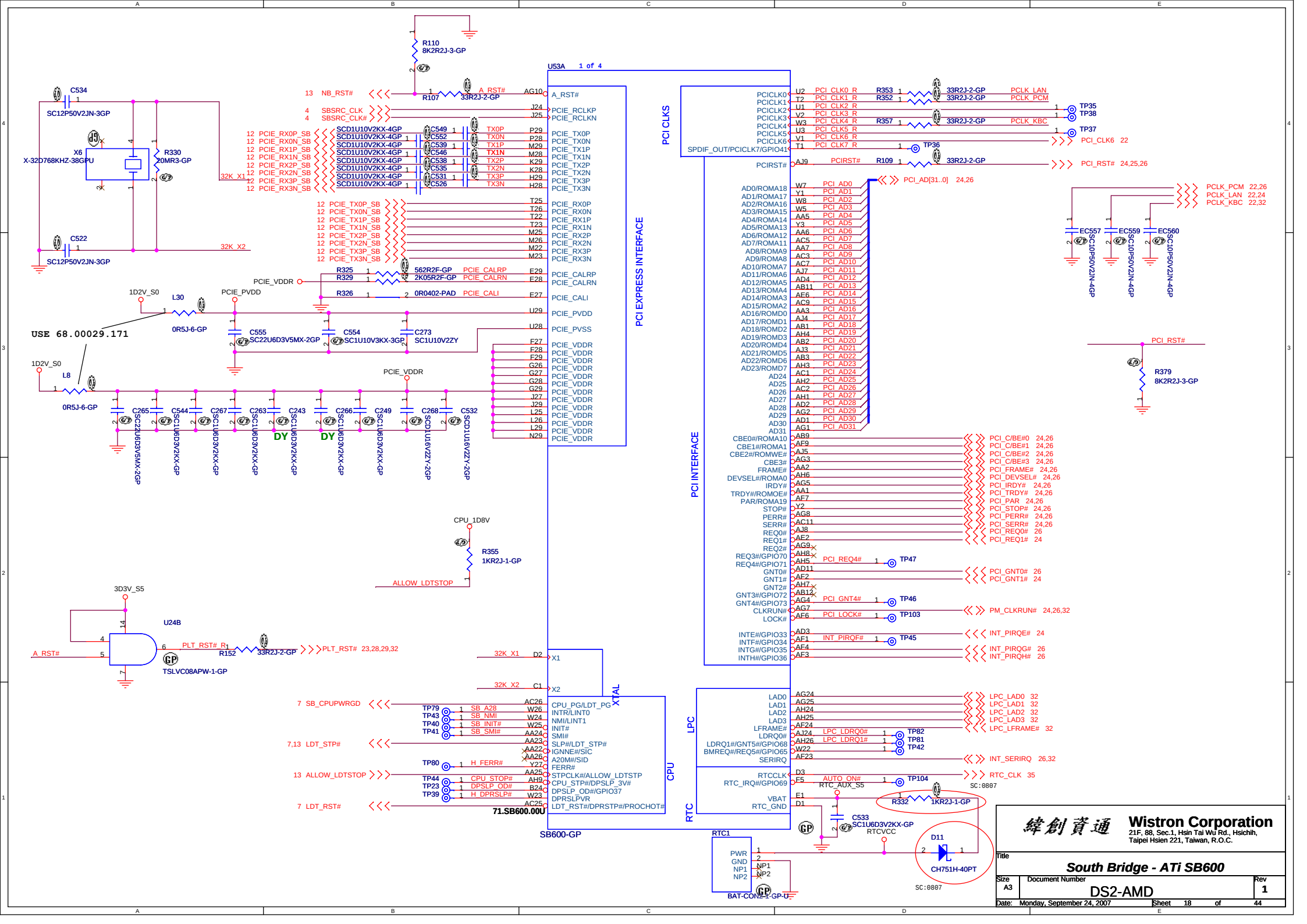
Title: ***CRT Connector***		
Size: A3	Document Number: **DS2-AMD**	Rev: **1**
Date: Monday, September 24, 2007	Sheet 17 of 44	



緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title	***South Bridge - ATi SB600***		
Size A3	Document Number DS2-AMD		Rev 1
Date: Monday, September 24, 2007	Sheet 18 of 44		

PLACE SATA AC DECOUPLING
CAPS CLOSE TO SB600

U53B 2 of 4

23 SATA_TXP
23 SATA_TXN
C562 SCD01U50V2KX-1GP SATA_TXP_SB AH21
C561 SCD01U50V2KX-1GP SATA_TXN_SB AJ21
SATA_TX0+
SATA_TX0-

23 SATA_RXN_SB AH20
23 SATA_RXP_SB AJ20
SATA_RX0-
SATA_RX0+

AH18 SATA_TX1+
AJ18 SATA_TX1-

AH17 SATA_RX1-
AJ17 SATA_RX1+

AH13 SATA_TX2+
AH14 SATA_TX2-

AH16 SATA_RX2-
AJ16 SATA_RX2+

AJ11 SATA_TX3+
AH11 SATA_TX3-

AH12 SATA_RX3-
AJ13 SATA_RX3+

SERIAL ATA

SATA_X1
R112 1MR2J-L2-GP
SATA_X2
X1 XTAL-25MHZ-96GP
C287 SC12P50V2JN-3GP
C286 SC12P50V2JN-3GP

R103 1KR2F-3-GP
SATA_CAL AF12 SATA_CAL
SATA_X1 AD16 SATA_X1
SATA_X2 AD18 SATA_X2

34 SATA_LED#_R AC12 SATA_ACT#/GPIO67

PLLVDD_ATA AD14 PLLVDD_SATA
AJ10 PLLVDD_SATA

XTLVDD_ATA AC16 XTLVDD_SATA

AVDD_SATA AE14 AVDD_SATA
AE16 AVDD_SATA
AE18 AVDD_SATA
AE19 AVDD_SATA
AF19 AVDD_SATA
AF21 AVDD_SATA
AG22 AVDD_SATA
AG23 AVDD_SATA
AH22 AVDD_SATA
AH23 AVDD_SATA
AJ12 AVDD_SATA
AJ14 AVDD_SATA
AJ19 AVDD_SATA
AJ22 AVDD_SATA
AJ23 AVDD_SATA

SERIAL ATA POWER

AB14 AVSS_SATA
AB16 AVSS_SATA
AB18 AVSS_SATA
AC14 AVSS_SATA
AC18 AVSS_SATA
AC19 AVSS_SATA
AD12 AVSS_SATA
AD19 AVSS_SATA
AD21 AVSS_SATA
AE12 AVSS_SATA
AE21 AVSS_SATA
AF11 AVSS_SATA
AF14 AVSS_SATA
AF16 AVSS_SATA
AF18 AVSS_SATA
AG11 AVSS_SATA
AG12 AVSS_SATA
AG13 AVSS_SATA
AG14 AVSS_SATA
AG16 AVSS_SATA
AG17 AVSS_SATA
AG18 AVSS_SATA
AG19 AVSS_SATA
AG20 AVSS_SATA
AG21 AVSS_SATA
AH10 AVSS_SATA
AH19 AVSS_SATA

SB600-GP 71.SB600.00U

ATA 66/100

IDE_IORDY AB29 IDE_PDIORDY 23
IDE_IRQ AA28 INT_IRQ14 23
IDE_A0 AA29 IDE_PDA0 23
IDE_A1 AB27 IDE_PDA1 23
IDE_A2 Y28 IDE_PDA2 23
IDE_DACK# AB28 IDE_PDDACK# 23
IDE_DRQ AC27 IDE_PDDREQ 23
IDE_IOR# AC29 IDE_PDIOR# 23
IDE_IOW# AC28 IDE_PDIOW# 23
IDE_CS1# W28 IDE_PDCS1# 23
IDE_CS3# W27 IDE_PDCS3# 23

IDE_D0/GPIO15 AD28 IDE_PDD0 23
IDE_D1/GPIO16 AD26 IDE_PDD1 23
IDE_D2/GPIO17 AE29 IDE_PDD2 23
IDE_D3/GPIO18 AF27 IDE_PDD3 23
IDE_D4/GPIO19 AG29 IDE_PDD4 23
IDE_D5/GPIO20 AH28 IDE_PDD5 23
IDE_D6/GPIO21 AJ28 IDE_PDD6 23
IDE_D7/GPIO22 AJ27 IDE_PDD7 23
IDE_D8/GPIO23 AH27 IDE_PDD8 23
IDE_D9/GPIO24 AG27 IDE_PDD9 23
IDE_D10/GPIO25 AG28 IDE_PDD10 23
IDE_D11/GPIO26 AF28 IDE_PDD11 23
IDE_D12/GPIO27 AF29 IDE_PDD12 23
IDE_D13/GPIO28 AE28 IDE_PDD13 23
IDE_D14/GPIO29 AD25 IDE_PDD14 23
IDE_D15/GPIO30 AD29 IDE_PDD15 23

SPI ROM

SPI_DI/GPIO12 J3
SPI_DO/GPIO11 J6
SPI_CLK/GPIO47 G3
SPI_HOLD#/GPIO31 G2
SPI_CS#/GPIO32 G6

LAN_RST#/GPIO13 C23
ROM_RST#/GPIO14 G5

HW MONITOR

FANOUT0/GPIO3 M4
FANOUT1/GPIO48 T3
FANOUT2/GPIO49 V4

FANIN0/GPIO50 N3
FANIN1/GPIO51 P2
FANIN2/GPIO52 W4

TEMP_COMM P5
TEMPIN0/GPIO61 P7
TEMPIN1/GPIO62 P8
TEMPIN2/GPIO63 T8
TEMPIN3/TALERT#/GPIO64 T7 ALERT# 7,35

VIN0/GPIO53 V5
VIN1/GPIO54 L7
VIN2/GPIO55 M8 VRAM_ID0
VIN3/GPIO56 V6 VRAM_ID1
VIN4/GPIO57 M6 VRAM_SIZE
VIN5/GPIO58 P4
VIN6/GPIO59 M7
VIN7/GPIO60 V7

AVDD N1
AVSS M1

AVDD_HWM
R335 0R0603-PAD
3D3V_S0
C545 SCD1U16V2ZY-2GP DY

3D3V_S0 3D3V_S0 3D3V_S0
R91 10KR2J-3-GP DY
R94 10KR2J-3-GP DY
R348 10KR2J-3-GP DY
R92 10KR2J-3-GP
R93 10KR2J-3-GP
R350 10KR2J-3-GP DY
VRAM_ID0
VRAM_ID1
VRAM_SIZE

	GPIO56	GPIO55
	ID1	ID0
HYNIX	0	0
QIMONDA	0	1

SATA

3D3V_S0 R102 0R0603-PAD XTLVDD_ATA
EC66 SCD1U16V2ZY-2GP
C279 SC2D2U6D3V3KX-GP

1D2V_S0 R105 0R0603-PAD PLLVDD_ATA
EC69 SCD1U16V2ZY-2GP
C283 SC2D2U6D3V3KX-GP

1D2V_S0 R104 0R0603-PAD AVDD_SATA
SCD1U16V2ZY-2GP EC65
SC10U6D3V5KX-1GP C285
SCD1U16V2ZY-2GP EC61
SCD1U16V2ZY-2GP EC63
SC1U6D3V2KX-GP EC58
SC1U6D3V2KX-GP EC59

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

Title: South Bridge - ATi SB600
Size: A3
Document Number: DS2-AMD
Rev: 1
Date: Monday, September 24, 2007
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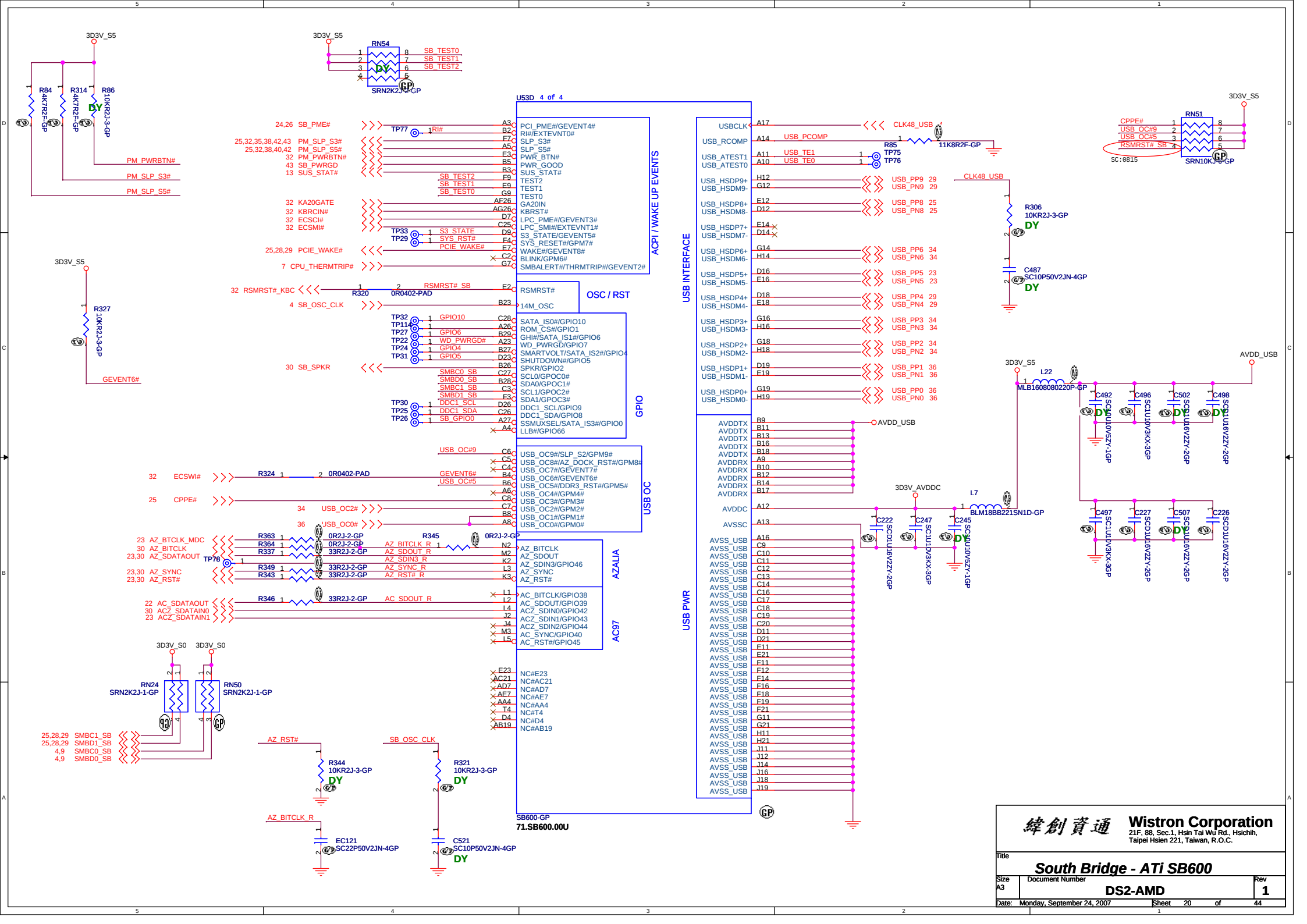
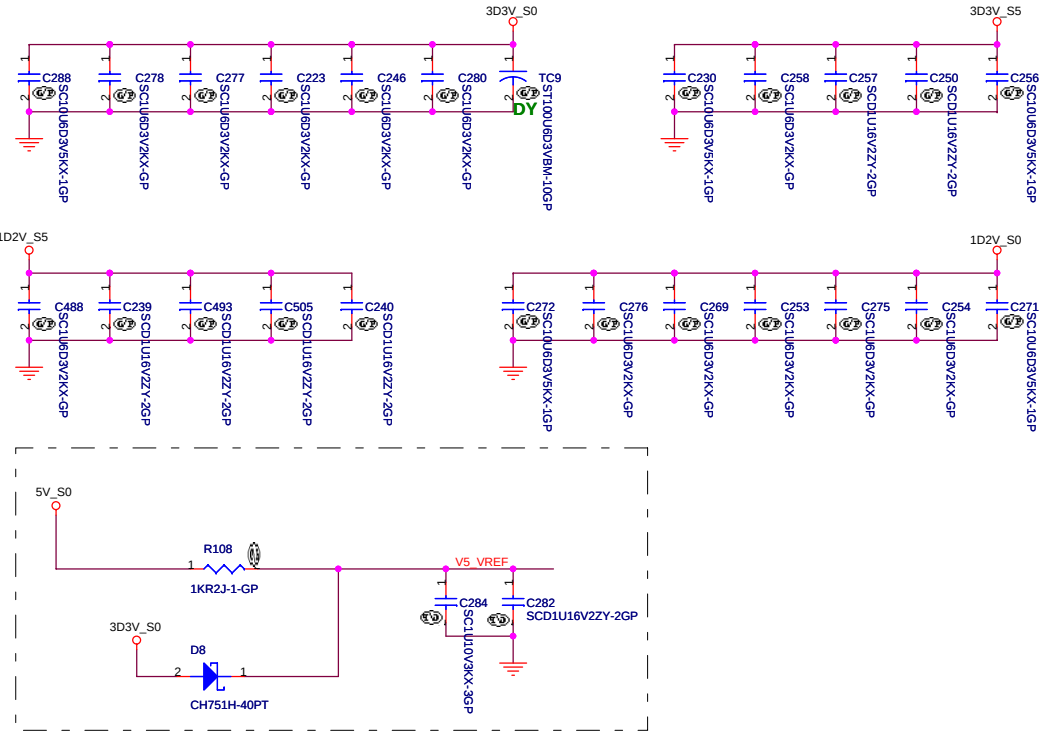
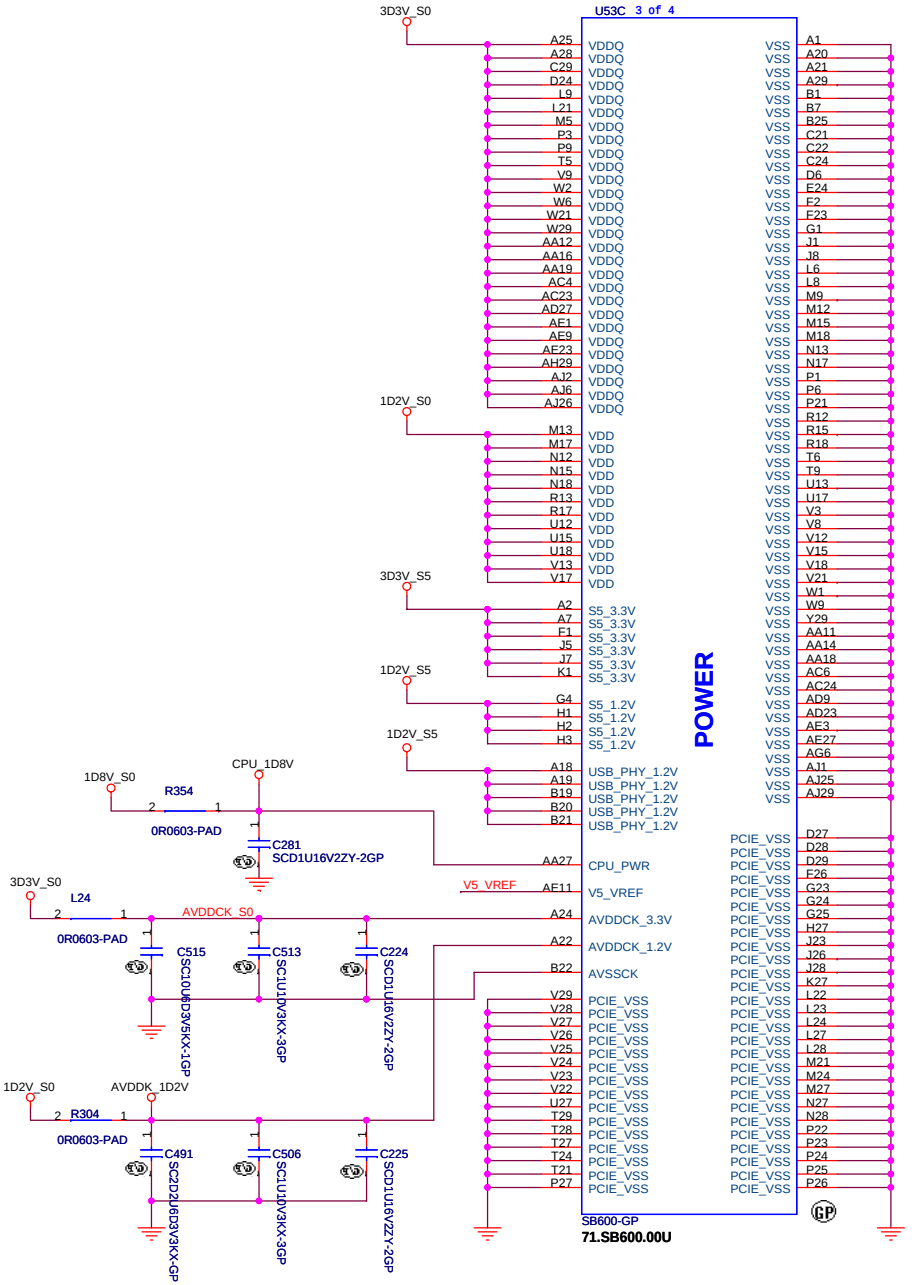


緯創資通 Wistron Corporation			
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title: South Bridge - ATi SB600			
Size: A3	Document Number: DS2-AMD	Rev: 1	
Date: Monday, September 24, 2007	Sheet 20 of 44		





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

Title: **South Bridge - ATi SB600**

Size	Document Number	Rev
A3	DS2-AMD	1

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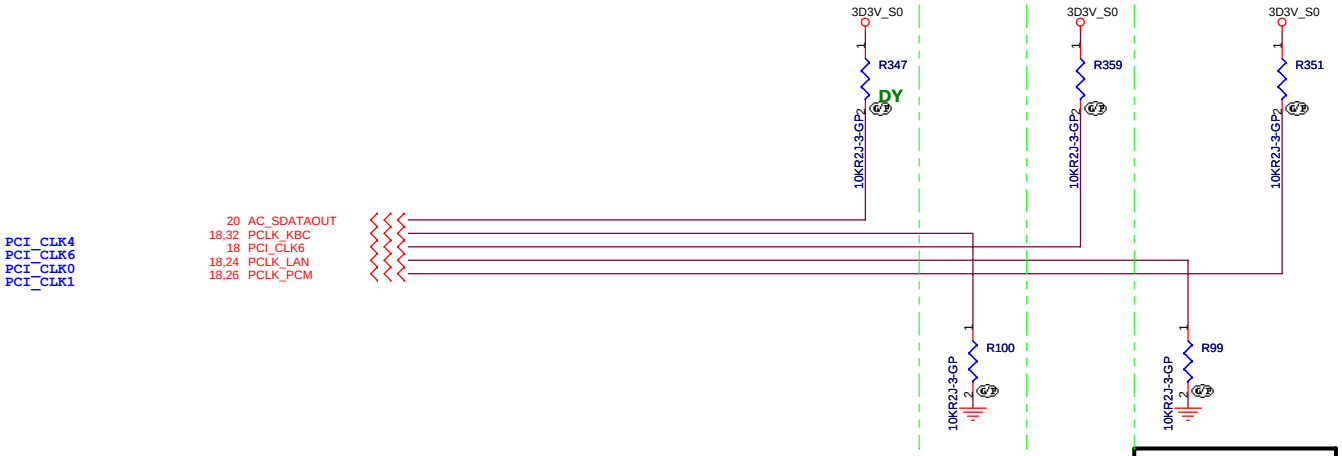

REQUIRED SYSTEM STRAPS

	SB600				
	AC_SDOUT	PCI_CLK4	PCI_CLK6	PCI_CLK0	PCI_CLK1
PULL HIGH	USE DEBUG STRAPS	USE INT. PLL48	CPU IF=K8 DEFAULT	ROM TYPE: H, H = PCI ROM H, L = SPI ROM L, H = LPC ROM DEFAULT L, L = FWH ROM	
PULL LOW	IGNORE DEBUG STRAPS DEFAULT	USE EXT. 48MHZ DEFAULT	CPU IF=P4		

SB600 HAS 15K INTERNAL PU FOR PCI_AD[23..28]

DEBUG STRAPS

		PCI_AD31	PCI_AD30	PCI_AD29	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
STRAP HIGH		RESERVED	RESERVED	RESERVED	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	BOOT FAIL TIMER DISABLE DEFAULT
STRAP LOW					USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	BOOT FAIL TIMER ENABLE

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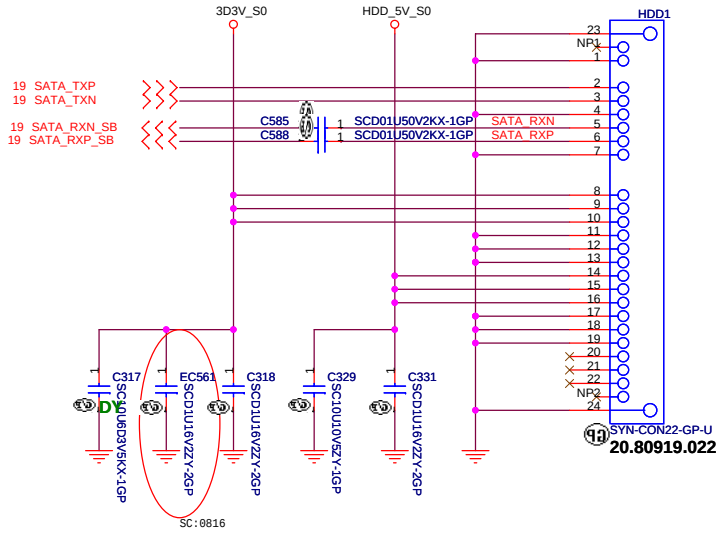
Taipei Hsien 221, Taiwan, R.O.C.

Title: South Bridge - Strapping

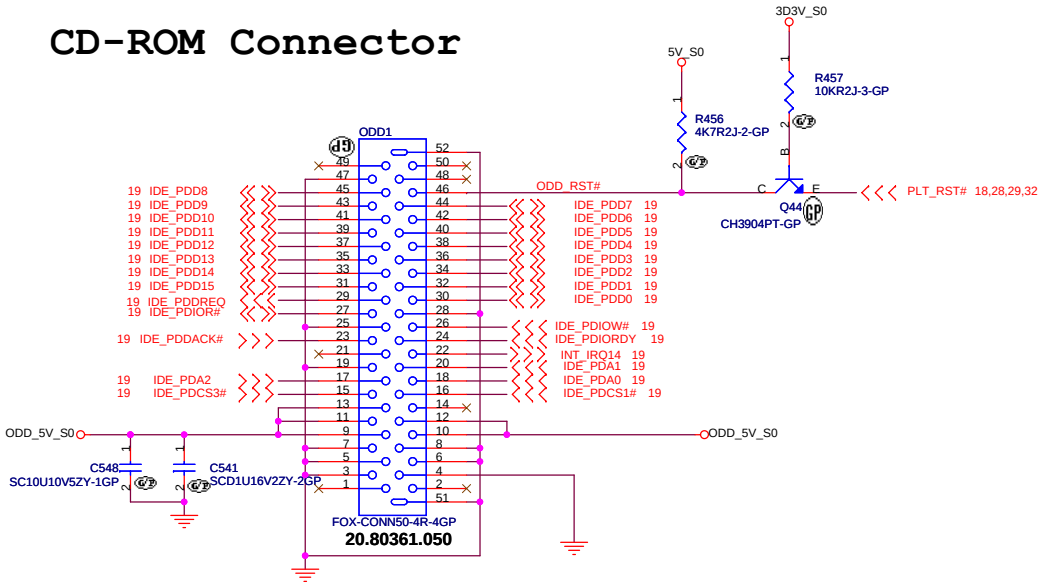
Size: A3 | Document Number: DS2-AMD | Rev: 1

Date: Monday, September 24, 2007 | Sheet 22 of 44

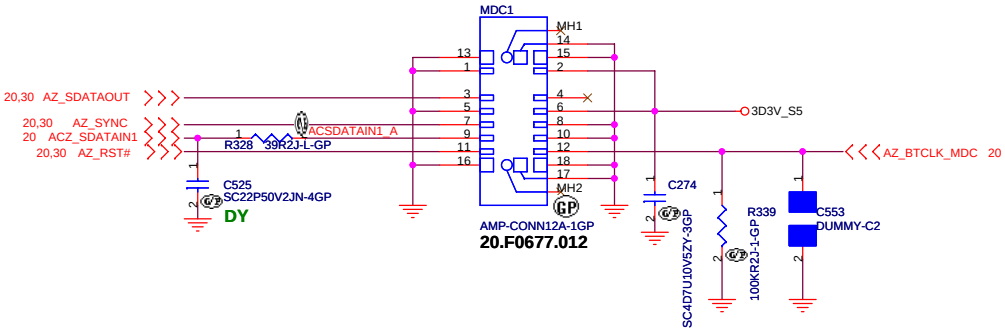
SATA HD Connector



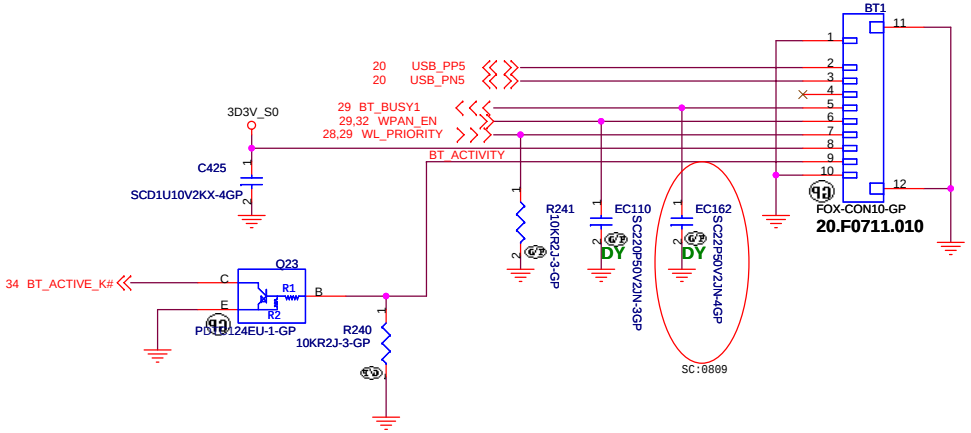
CD-ROM Connector



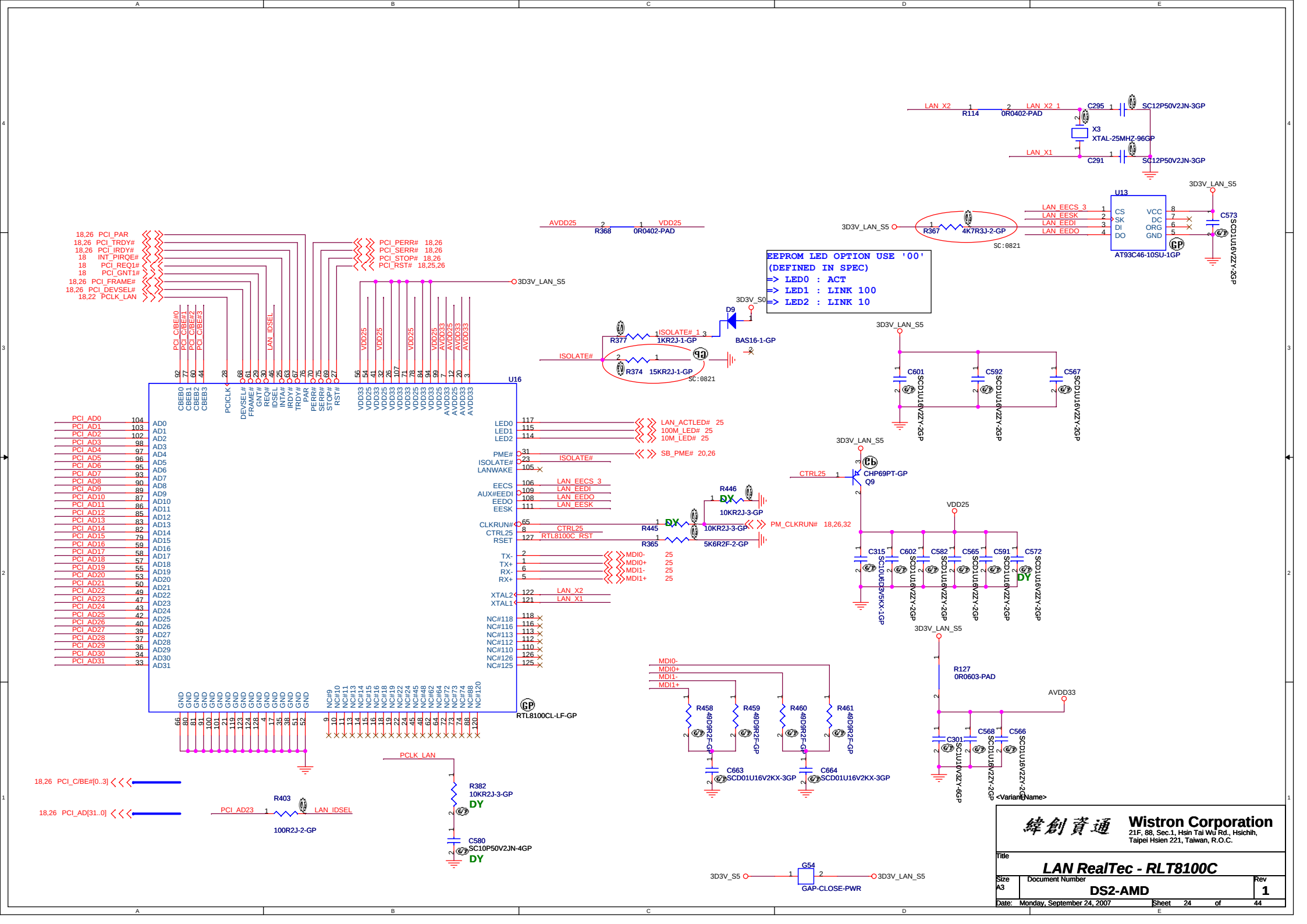
MDC 1.5 Connector



BT Module Connector



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/MDC/BT*		
Size: A3	Document Number: DS2-AMD	Rev: 1
Date: Monday, September 24, 2007	Sheet 23 of 44	


EEPROM LED OPTION USE '00'
(DEFINED IN SPEC)
=> LED0 : ACT
=> LED1 : LINK 100
=> LED2 : LINK 10
U16
RTL8100CL-LF-GP
U13
AT93C46-10SU-1GP
Q9
CHP69PT-GP
X3
XTAL-25MHZ-96GP
D9
BAS16-1-GP
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
LAN RealTec - RLT8100C
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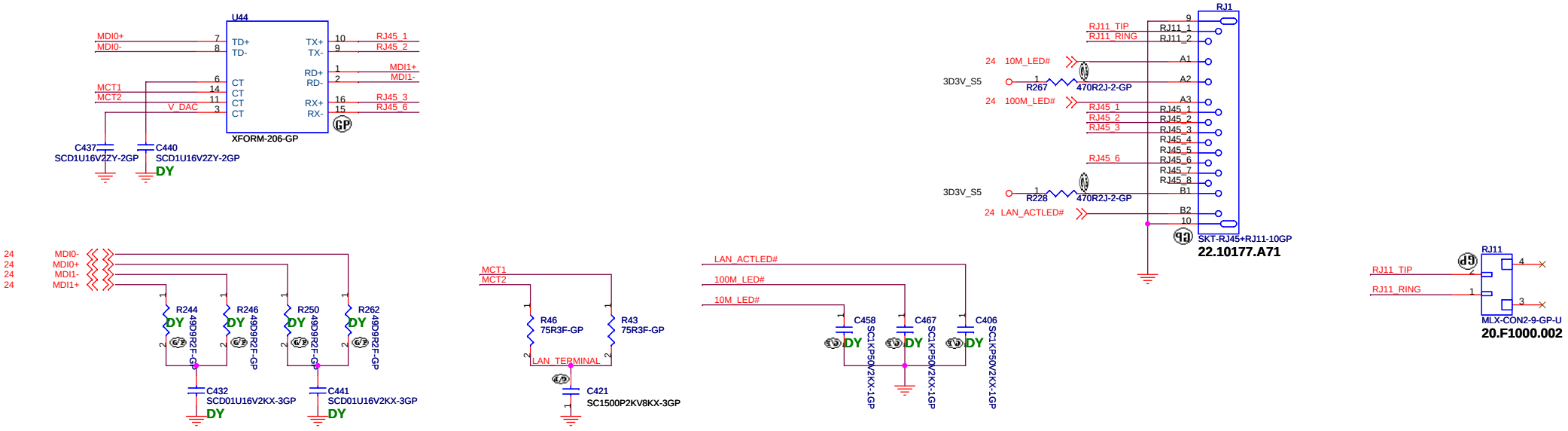
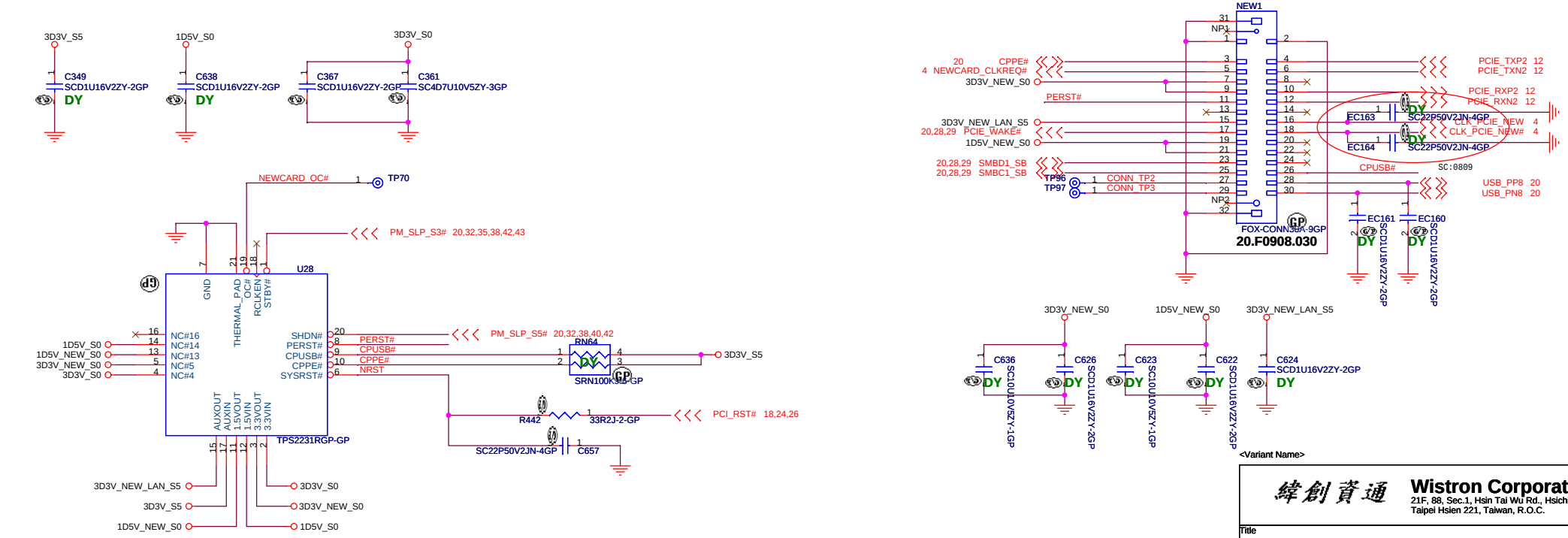


New card connector



<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 connector/NEW CARD/SIM***

Size	Document Number	Rev
A3	DS2-AMD	1

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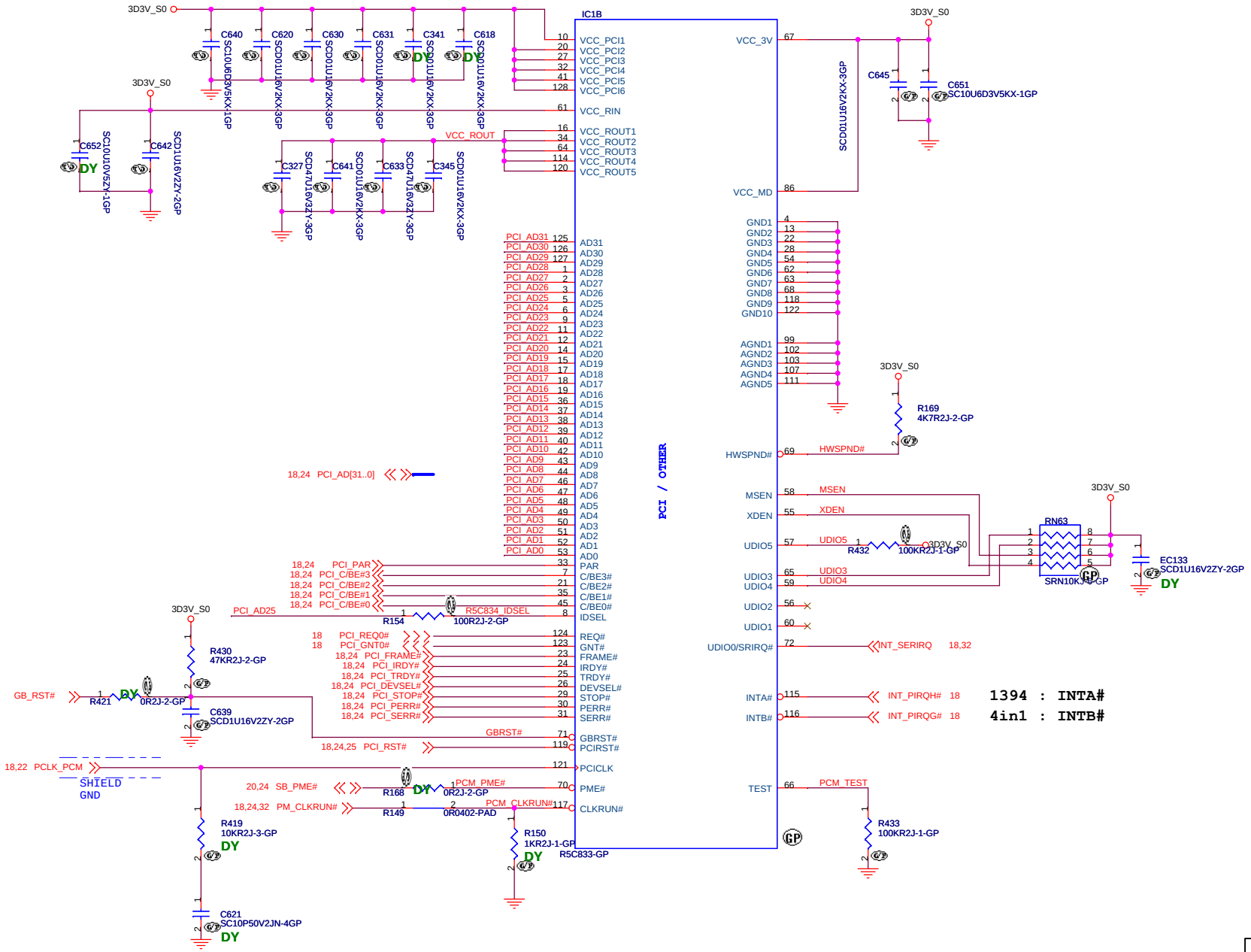

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: R5C832/PCI

Size: A3 | Document Number: DS2-AMD | Rev: 1

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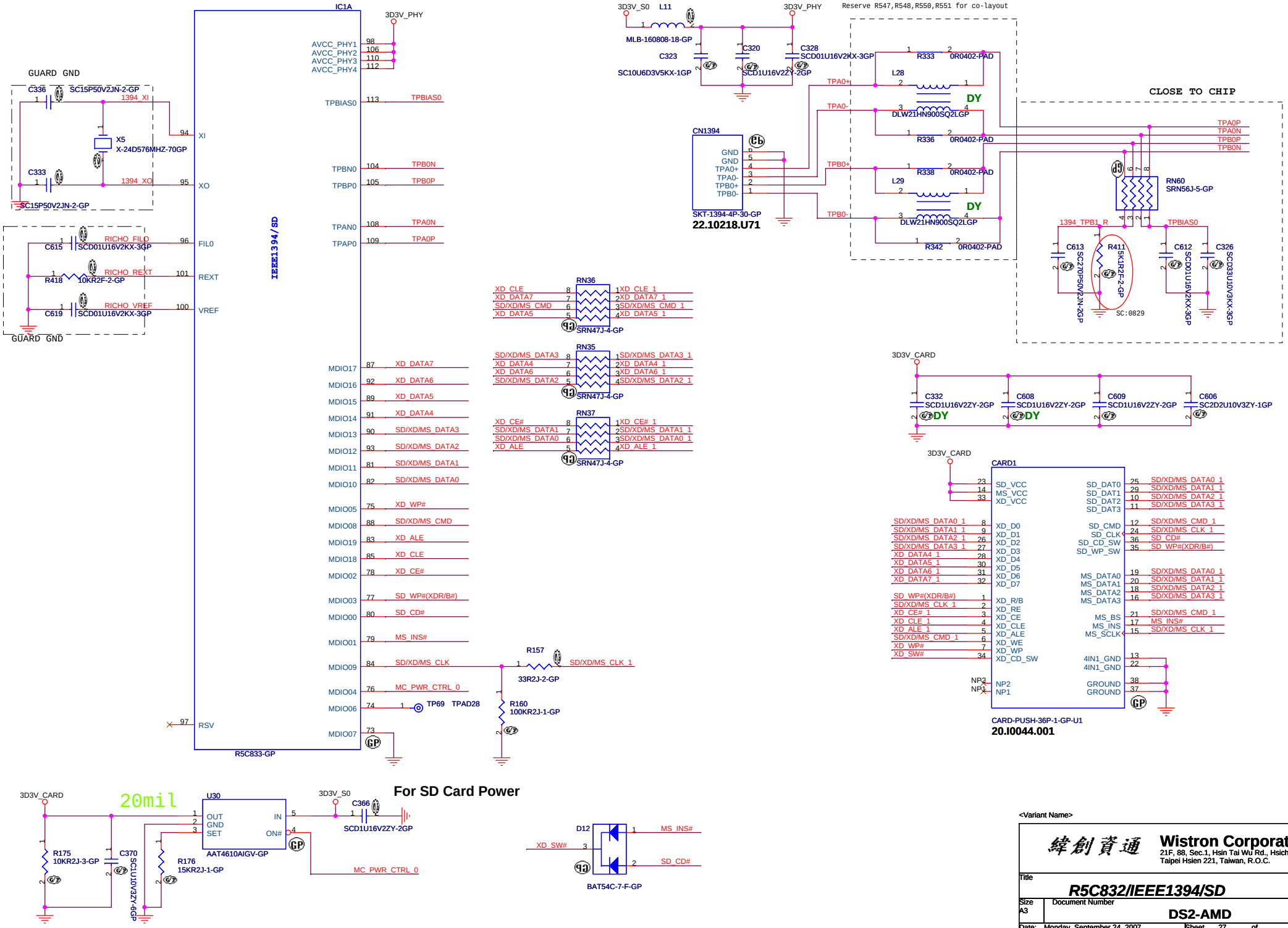
IC1A
R5C833-GP
IEEE1394/SD
3D3V_PHY
AVCC_PHY1
AVCC_PHY2
AVCC_PHY3
AVCC_PHY4
TPBIAS0
TPBN0
TPBP0
TPAN0
TPAP0
XI
XO
FIL0
REXT
VREF
RSV
GUARD GND
C336 SC15P50V2JN-2-GP
1394_XI
X5
X-24D576MHZ-70GP
C333
1394_XO
SC15P50V2JN-2-GP
RICHO_FILO
C615 SCD01U16V2KX-3GP
RICHO_REXT
R418 10KR2F-2-GP
RICHO_VREF
C619 SCD01U16V2KX-3GP
MDIO17 XD_DATA7
MDIO16 XD_DATA6
MDIO15 XD_DATA5
MDIO14 XD_DATA4
MDIO13 SD/XD/MS_DATA3
MDIO12 SD/XD/MS_DATA2
MDIO11 SD/XD/MS_DATA1
MDIO10 SD/XD/MS_DATA0
MDIO05 XD_WP#
MDIO08 SD/XD/MS_CMD
MDIO19 XD_ALE
MDIO18 XD_CLE
MDIO02 XD_CE#
MDIO03 SD_WP#(XDR/B#)
MDIO00 SD_CD#
MDIO01 MS_INS#
MDIO09 SD/XD/MS_CLK
MDIO04 MC_PWR_CTRL_0
MDIO06 TP69 TPAD28
MDIO07
R157 33R2J-2-GP
SD/XD/MS_CLK_1
R160 100KR2J-1-GP
RN36 SRN47J-4-GP
XD_CLE
XD_DATA7
SD/XD/MS_CMD
XD_DATA5
XD_CLE_1
XD_DATA7_1
SD/XD/MS_CMD_1
XD_DATA5_1
RN35 SRN47J-4-GP
SD/XD/MS_DATA3
XD_DATA4
XD_DATA6
SD/XD/MS_DATA2
SD/XD/MS_DATA3_1
XD_DATA4_1
XD_DATA6_1
SD/XD/MS_DATA2_1
RN37 SRN47J-4-GP
XD_CE#
SD/XD/MS_DATA1
SD/XD/MS_DATA0
XD_ALE
XD_CE#_1
SD/XD/MS_DATA1_1
SD/XD/MS_DATA0_1
XD_ALE_1
3D3V_S0
L11 MLB-160808-18-GP
C323 SC10U6D3V5KX-1GP
C320
C328 SCD01U16V2KX-3GP
SCD1U16V2ZY-2GP
Reserve R547,R548,R550,R551 for co-layout
TPA0+
TPA0-
TPB0+
TPB0-
R333 0R0402-PAD
L28 DLW21HN900SQ2LGP
DY
R336 0R0402-PAD
R338 0R0402-PAD
L29 DLW21HN900SQ2LGP
DY
R342 0R0402-PAD
CN1394
GND
GND
TPA0+
TPA0-
TPB0+
TPB0-
SKT-1394-4P-30-GP
22.10218.U71
CLOSE TO CHIP
TPA0P
TPA0N
TPB0P
TPB0N
RN60 SRN56J-5-GP
1394_TPB1_R
TPBIAS0
C613 SC270P50V2JN-2GP
R411 5K1R2F-2-GP
SC:0829
C612 SCD01U16V2KX-3GP
C326 SCD33U10V3KX-3GP
3D3V_CARD
C332 SCD1U16V2ZY-2GP
DY
C608 SCD1U16V2ZY-2GP
DY
C609 SCD1U16V2ZY-2GP
C606 SC2D2U10V3ZY-1GP
CARD1
SD_VCC
MS_VCC
XD_VCC
XD_D0
XD_D1
XD_D2
XD_D3
XD_D4
XD_D5
XD_D6
XD_D7
XD_R/B
XD_RE
XD_CE
XD_CLE
XD_ALE
XD_WE
XD_WP
XD_CD_SW
SD_DAT0
SD_DAT1
SD_DAT2
SD_DAT3
SD_CMD
SD_CLK
SD_CD_SW
SD_WP_SW
MS_DATA0
MS_DATA1
MS_DATA2
MS_DATA3
MS_BS
MS_INS
MS_SCLK
4IN1_GND
GROUND
NP2
NP1
CARD-PUSH-36P-1-GP-U1
20.I0044.001
For SD Card Power
3D3V_CARD
20mil
U30
OUT
GND
SET
IN
ON#
AAT4610AIGV-GP
3D3V_S0
C366 SCD1U16V2ZY-2GP
R175 10KR2J-3-GP
C370 SCD1U10V3ZY-6GP
R176 15KR2J-1-GP
MC_PWR_CTRL_0
D12
XD_SW#
MS_INS#
SD_CD#
BAT54C-7-F-GP
<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
R5C832/IEEE1394/SD
Size A3
Document Number
DS2-AMD
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Date: Monday, September 24, 2007
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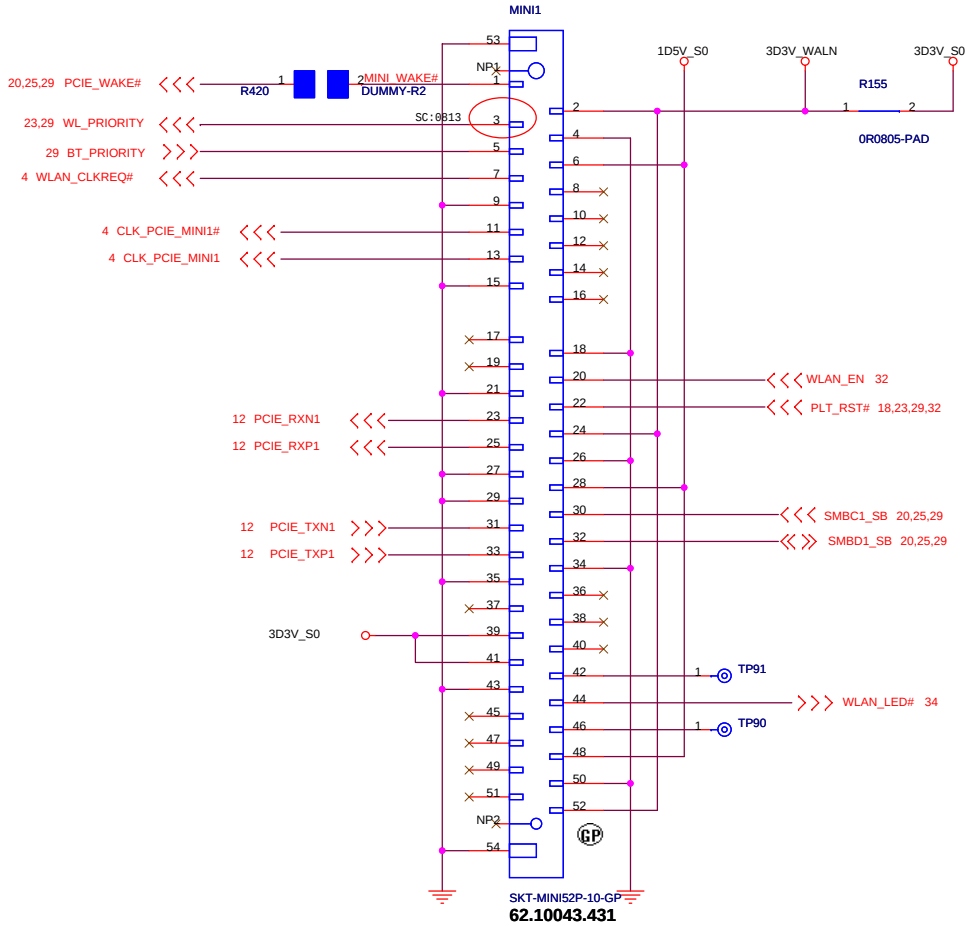
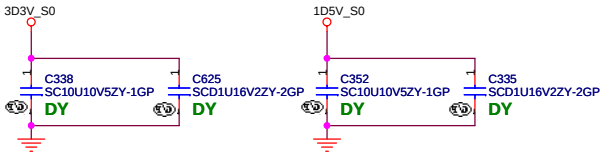
Mini Card Connector 1(802.11a/b/g)





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 **DS2-AMD**	Rev **1**
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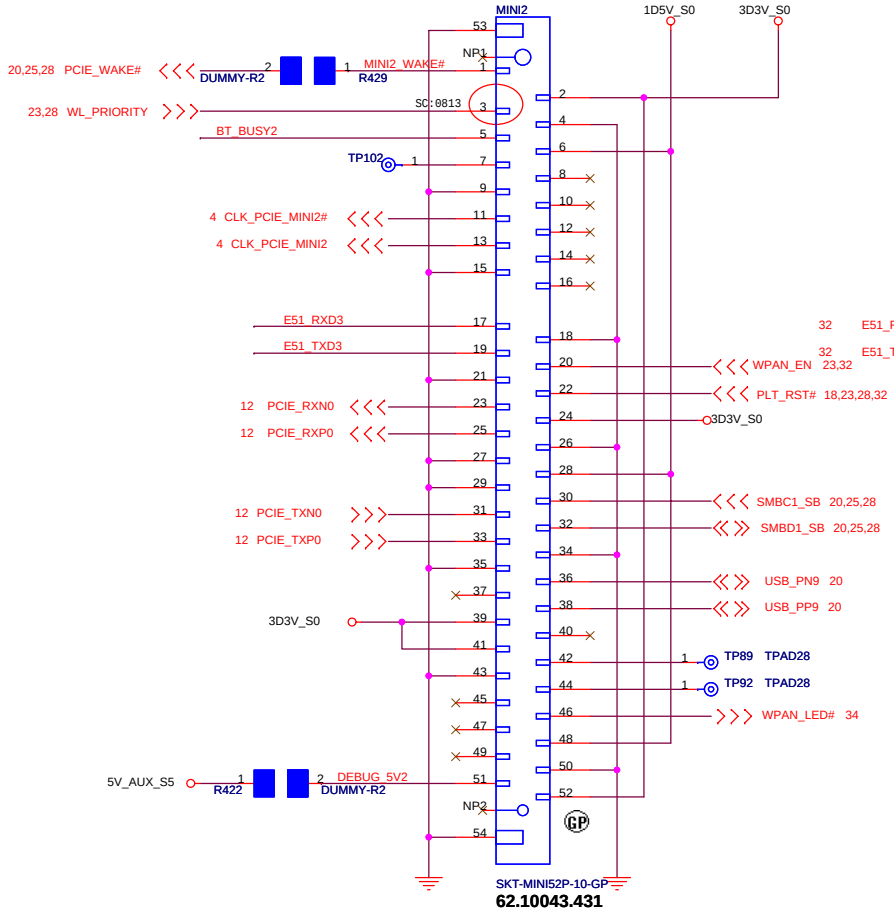
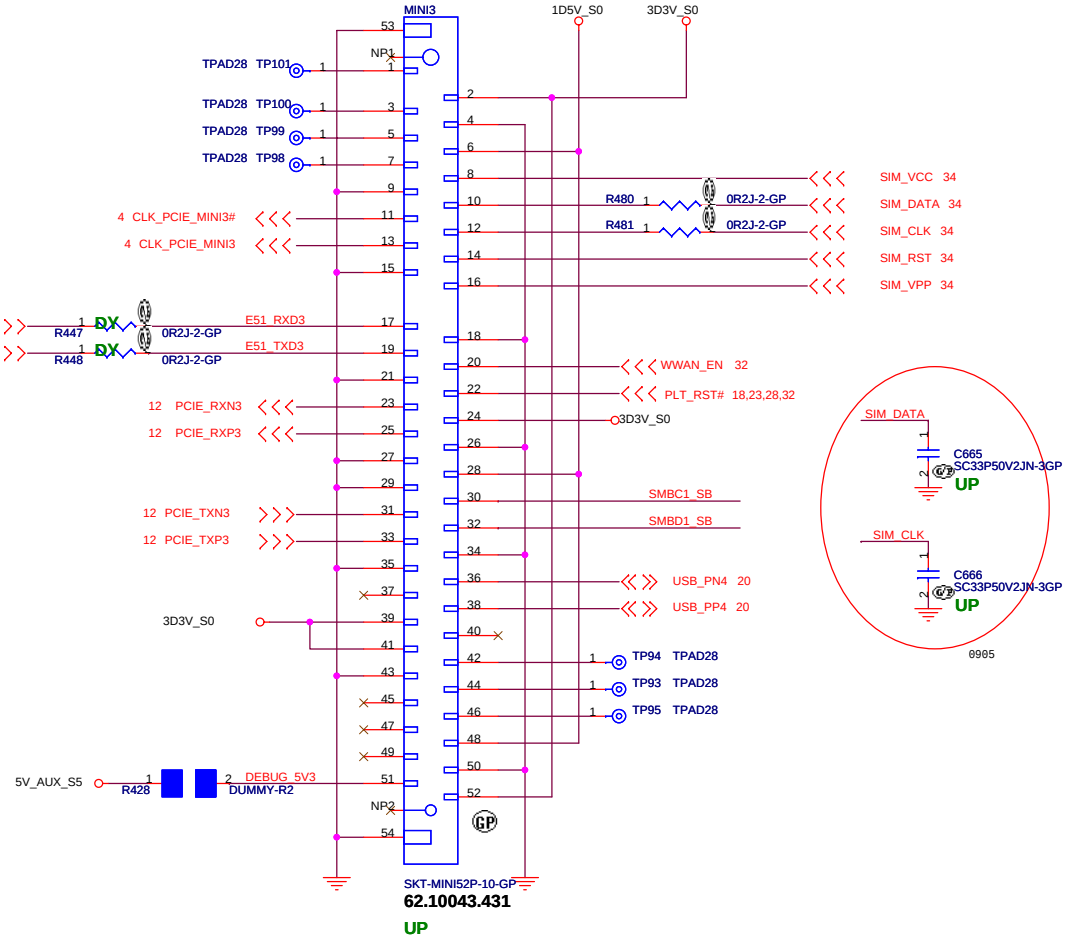
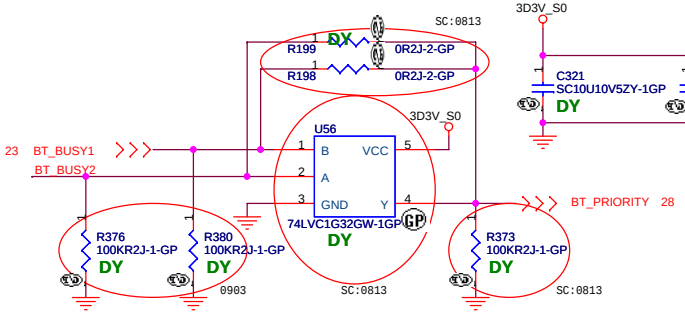
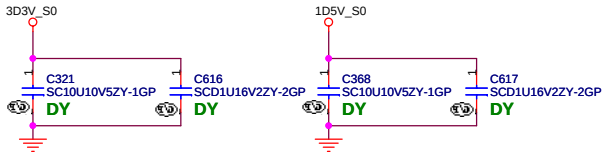
Mini Card Connector 2(UWB)

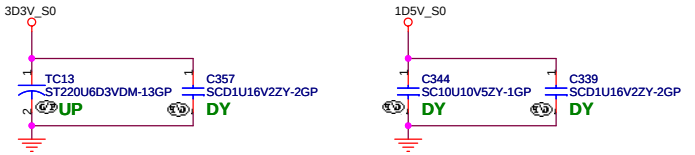


Mini Card Connector 3(WWAN)









<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: **MINI CARD CONN .**

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60ohm 100MHz
3000mA 0.05ohm DC

3D3V_S0

C360 SCD1U10V2KX-4GP
C362 SCD1U10V2KX-4GP
C365 SC1U6D3V2KX-GP

R162 100KR2J-1-GP
+3V_RUN_DVDD_CORE3
C350 SC1KP50V2KX-1GP

U32

DVDD_CORE
DVDD_CORE
DVDD
BIT_CLK
SDATA_IN
SDATA_OUT
SYNC
RESET#
VOLUME UP/DMIC_0/GPIO1
VOLUME DN/DMIC_1/GPIO2
SPDIF_IN/GPIO0/DMIC_CLK
SPDIF_OUT
DVSS1
DVSS2

AVDD1
AVDD2
SENSE_A
SENSE_B
PORT_A_L
PORT_A_R
VREFOUT_A
PORT_B_L
PORT_B_R
VREFOUT_B
PORT_C_L
PORT_C_R
VREFOUT_C
PORT_D_L
PORT_D_R
VREFOUT_D
PORTE_L
PORTE_R
VREFOUT_E
PORTF_L
PORTF_R
VREFOUT_F
PORTG_L
PORTG_R
PORTH_L
PORTH_R
CD_L
CD_GND
CD_R
PC_BEEP
CAP2
VREFFILT
AVSS1
AVSS2

STAC9228X5TAEA2-GP 71.09228.00G

+VDDA
C373 SCD1U10V2KX-4GP
C374 SC1U10V3KX-3GP

20 AZ_BITCLK
20 ACZ_SDATAIN0
20,23 AZ_SDATAOUT
20,23 AZ_SYNC
20,23 AZ_RST#

R165 33R2J-2-GP
ACZ_SDIN0_R

AUD_SENSE_A
AUD_SENSE_B

TO Audio OP
AUD_HP1_OUT_L
AUD_HP1_OUT_R
AUD_HP1_OUT_L 31
AUD_HP1_OUT_R 31

AUD_INT_MIC_L
AUD_INT_MIC_R
AUD_VREFOUT_B
C375 SC1U10V3KX-3GP
C376 SC1U10V3KX-3GP
INT_MIC
R179 4K7R2J-2-GP

AUD_LINE_OUT_L
AUD_LINE_OUT_R
AUD_LINE_OUT_L 31
AUD_LINE_OUT_R 31
TO Audio OP

AUD_EXT_MIC_L
AUD_EXT_MIC_R
AUD_VREFOUT_E

AUD_HP2_OUT_L 31
AUD_HP2_OUT_R 31

Port A---> HP1
Port E---> Ext Mic
Port D---> Speaker
Port F---> HP2
Port C---> Int Mic

+VDDA
R178 5K1R2F-2-GP
R177 39K2R2F-L-GP
AUD_HP1_JD# 31

+VDDA
R180 5K1R2F-2-GP
R181 20KR2J-L2-GP
AUD_HP2_JD# 31
R182 39K2R2F-L-GP
EXT_MIC_JD#

3D3V_S0
U31 DY
74LVC1G125DC-GP
34 AUD_DMIC_CLK_G
EC152 SC33P50V2JN-3GP
R174 22R2J-2-GP
AUD_DMIC_CLK

34 AUD_DMIC_IN0
AUD_EAPD#
3D3V_S0
R167 DY 10KR2J-3-GP
AUD_DMIC_CLK
AUD_SPDIF_OUT_R
34 AUD_SPDIF_OUT
R462 200R2F-L-GP
TP71

PC BEEP
AUD_PC_BEEP
AUD_CAP2
AUD_VREFFLT
+AUD_BEEP
C369 SCD1U10V2KX-4GP
R170 20KR2J-L2-GP
AUD_SYS_BEEP
C377 SC1U10V5KX-2GP
C378 SC1U10V5KX-2GP
R173 10KR2J-3-GP

+VDDA
U27 DY
74AHC1G86GW-GP
From SB
SB_SPKR 20
From EC
KBC_BEEP 32
XOR gate
RN38 SRN47K-2-GP-U
SB_SPKR_1
KBC_BEEP_1
C364 SCD47U16V3ZY-3GP
C363 SCD47U16V3ZY-3GP

Azalia I/F EMI
AZ_SDATAOUT
R163 47R2J-2-GP DY
AZ_SDOUT1
C359 SCD1U10V2KX-4GP DY

Azalia I/F EMI
AZ_BITCLK
R166 47R2J-2-GP DY
AZ_BITCLK1
C358 SCD1U10V2KX-4GP DY

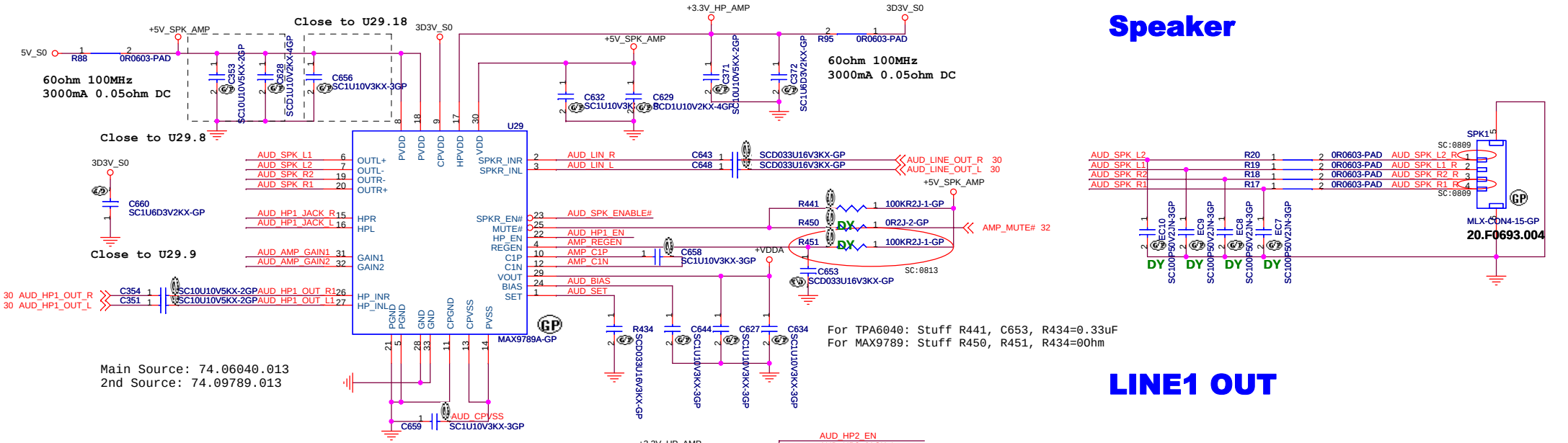
MIC IN
AUD_VREFOUT_E
R437 4K7R2J-2-GP
R440 4K7R2J-2-GP
C655 SC1U10V3KX-3GP
AUD_EXT_MIC_L
C647 SC1U10V3KX-3GP
MIC_IN_L_2
R438 0R2J-2-GP
AUD_EXT_MIC_R
C649 SC1U10V3KX-3GP
MIC_IN_R_2
R439 0R2J-2-GP
EXT_MIC_JD#
MIC_IN_L_C
MIC_IN_R_C
C138 SC100P50V2JN-3GP
C140 SC100P50V2JN-3GP
MIC2
AUDIO-JK89-GP-U
600ohm 100MHz
200mA 0.5ohm DC

Internal Microphone
INT_MIC
EC93 SC1KP50V2KX-1GP DY
MIC1 MICROPHONE-40-GP-U

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

Title: AUDIO CODEC STAC9228
Size: A3
Document Number: DS2-AMD
Rev: 1
Date: Monday, September 24, 2007
Sheet 30 of 44

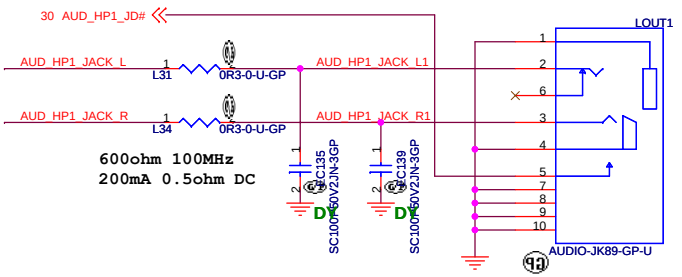
Speaker



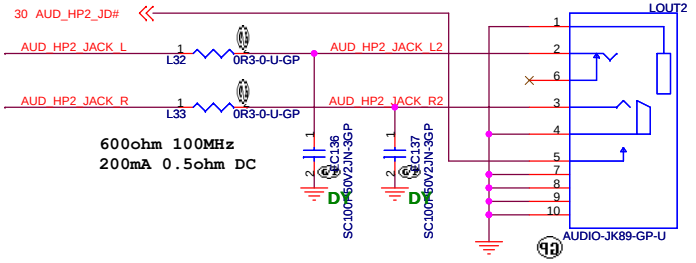
Main Source: 74.06040.013
2nd Source: 74.09789.013

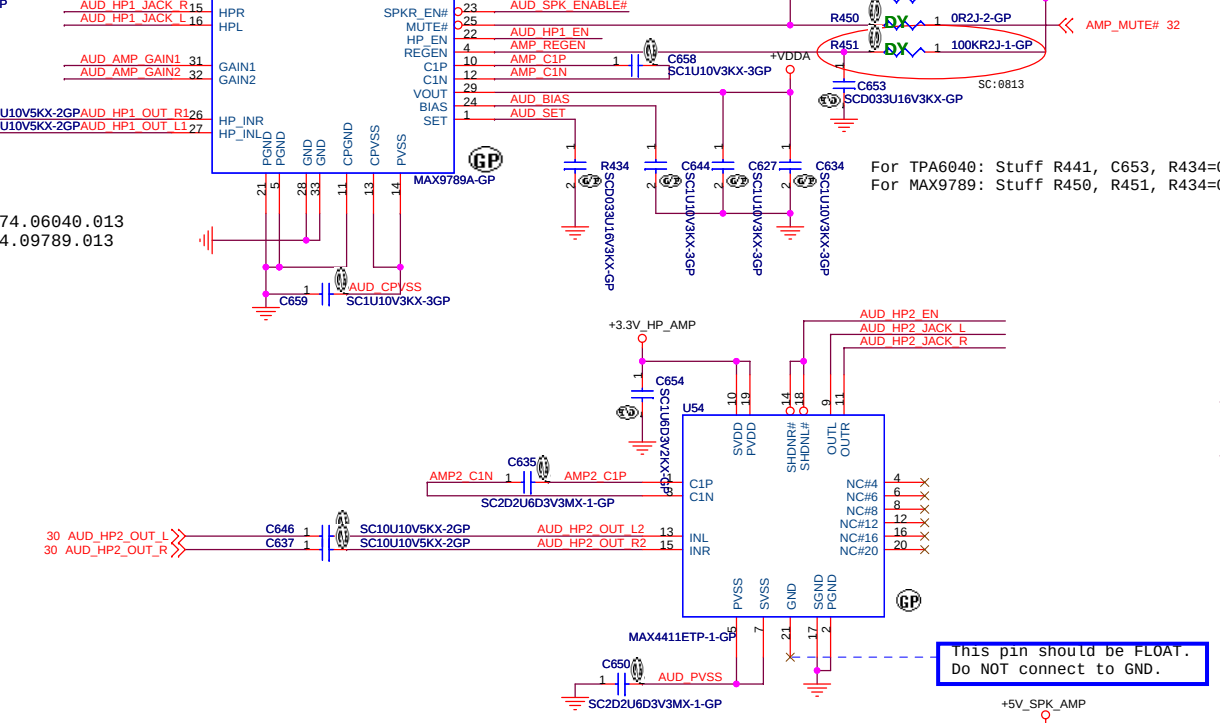
For TPA6040: Stuff R441, C653, R434=0.33uF
For MAX9789: Stuff R450, R451, R434=0Ohm

LINE1 OUT

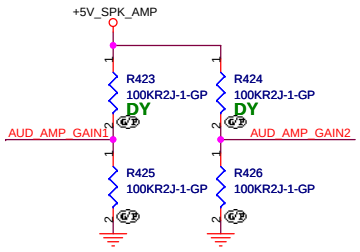


LINE2 OUT



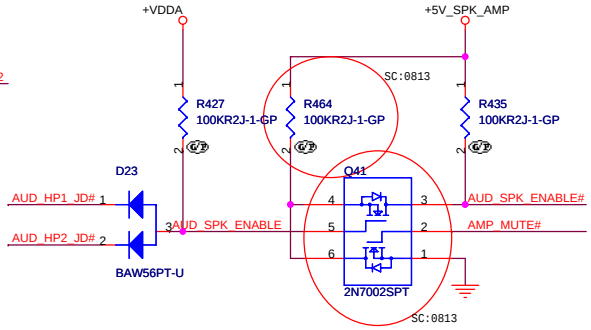


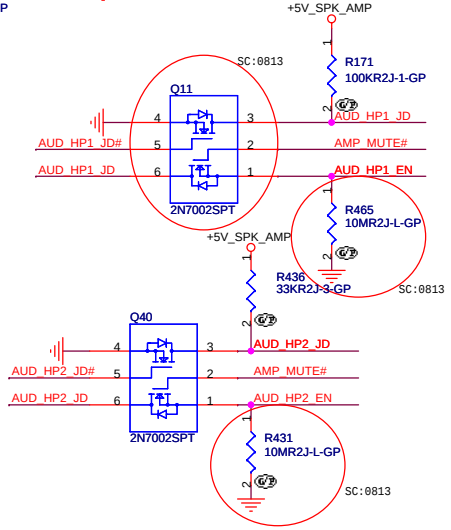
GAIN SETTING



GAIN1	GAIN2	GAIN
0	0	6dB
0	1	10dB
1	0	15.6dB
1	1	21.6dB

Signal inverter for speaker shutdown





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Taipei Hsien 221, Taiwan, R.O.C.

Title: AUDIO AMP/SPEAKER

Size	Document Number	Rev
A3	DS2-AMD	1

Date: Monday, September 24, 2007 Sheet 31 of 44

WPC8763L STRAP PIN

JEN0 (Pin 24)	JENK (Pin 53)	Functionality of Pins 17, 20, 21, 23 25, 27	Functionality of Pins 47, 48, 50, 51, 52
NO PD RES		GPIO Port	Keyboard Scan
10K PD	NO PD	JTAG signals	Keyboard Scan
NO PD	10K PD	GPIO Port	JTAG signals

TRIS#(Pin 110) TRI-STATE

Forces the device to float all its output and I/O pins,if an external 10 KΩ pull-down resistor is conected.

BADDR1-0 (PIN 111, 112) I/O Base Address.

10KΩ external pull-down resistor on BADDR1: Core defined

SHBM PIPN83 Shared Host BIOS Memory.

HIGH:NO SHARED(internal resistor)

LOW:SHARED BIOS memory.

PLACE CAP NEAR PIN46,19,115,76,88

PLACE CAP Close to Pin 4

MB VERSION ID	VER0	VER1
SA	0	0
SB	0	1
SC	1	0
SD	1	1

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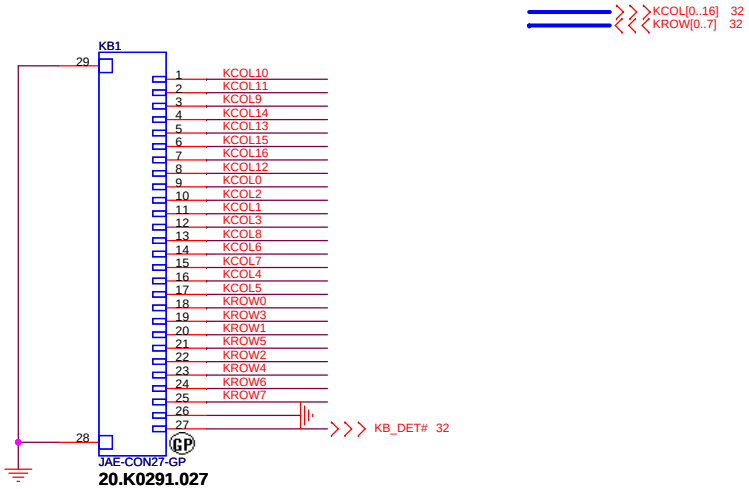
Taipei Hsien 221, Taiwan, R.O.C.

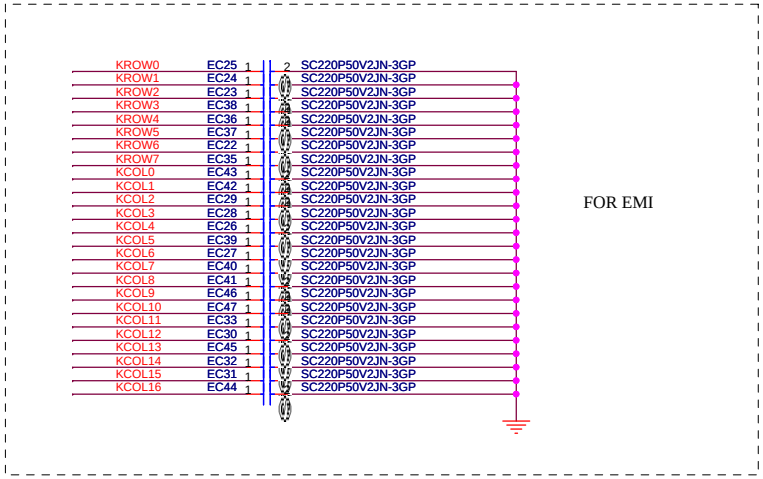
Title: KBC_Winbond WPC8763L

Size: A2 | Document Number: DS2-AMD | Rev: 1

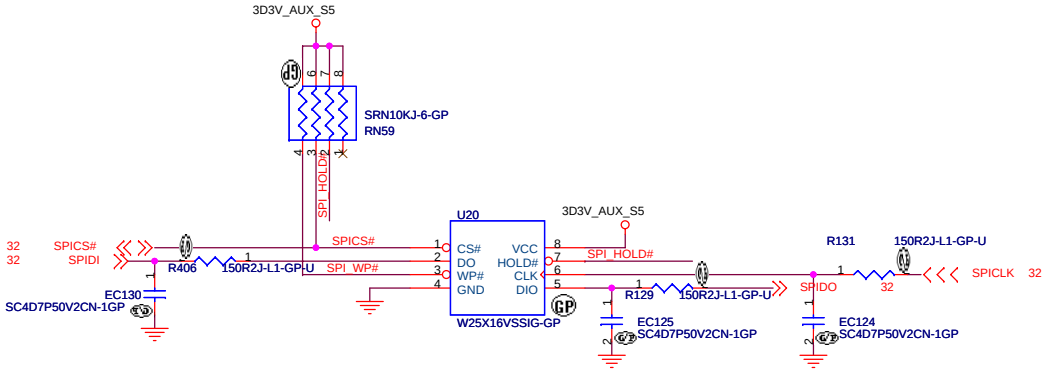
Date: Wednesday, September 26, 2007 | Sheet 32 of 44

Internal KeyBoard Connector

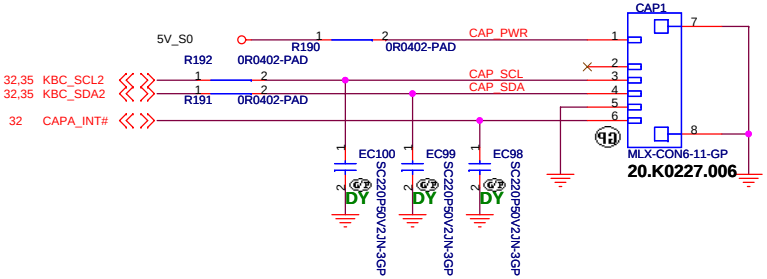




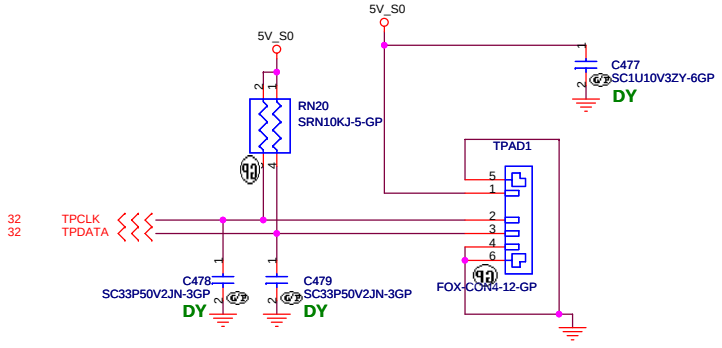
SPI ROM



CAPACITY BUTTON

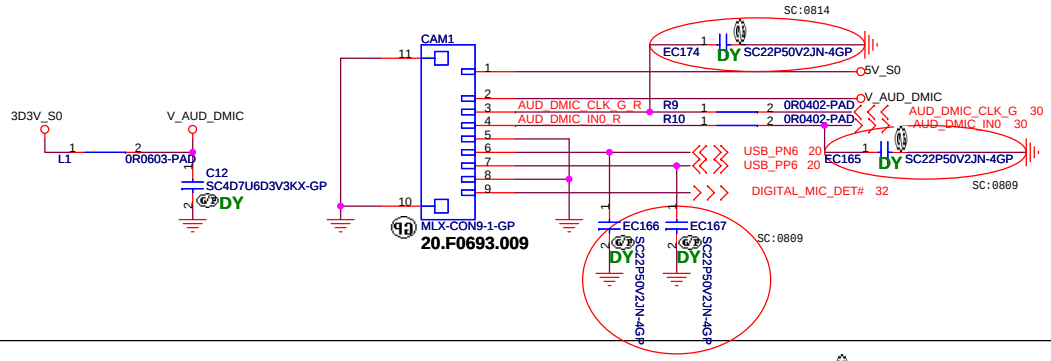


TouchPad Connector

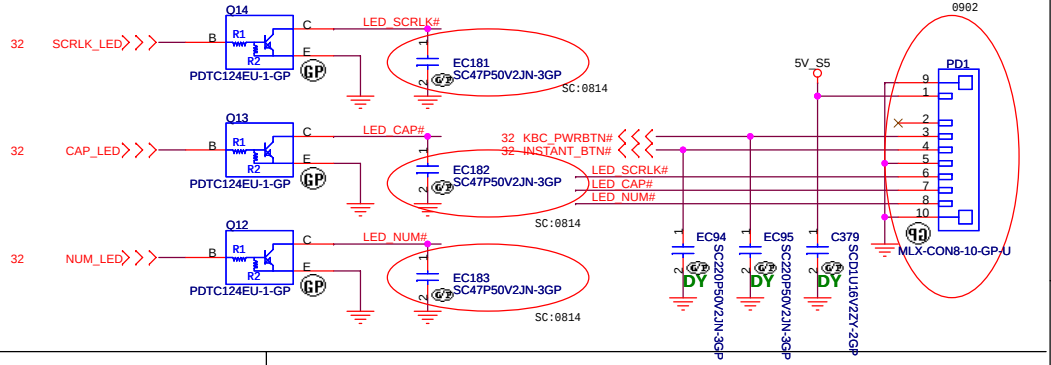


緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	***KeyBoard-CONN***	
Size A3	Document Number **DS2-AMD**	Rev **1**
Date: Wednesday, September 26, 2007	Sheet 33 of 44	

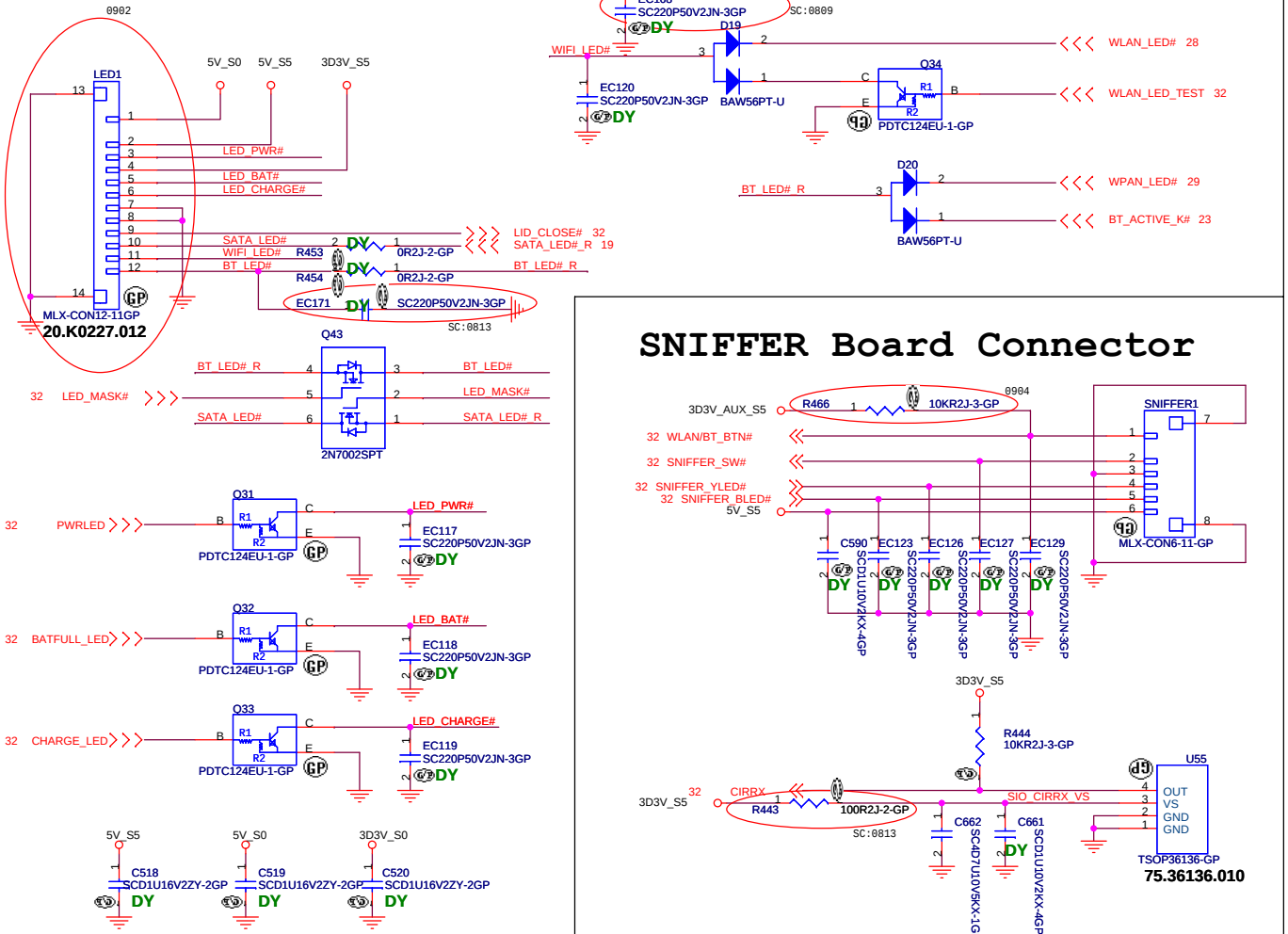
CAMERA/D.MIC Connector



Power Dash Board Connector

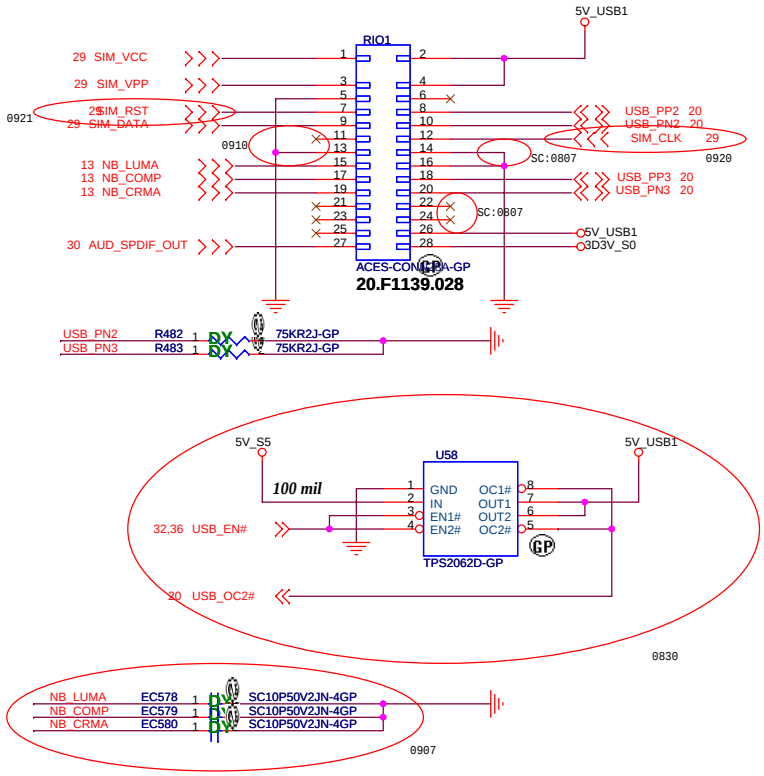


LED Board Connector

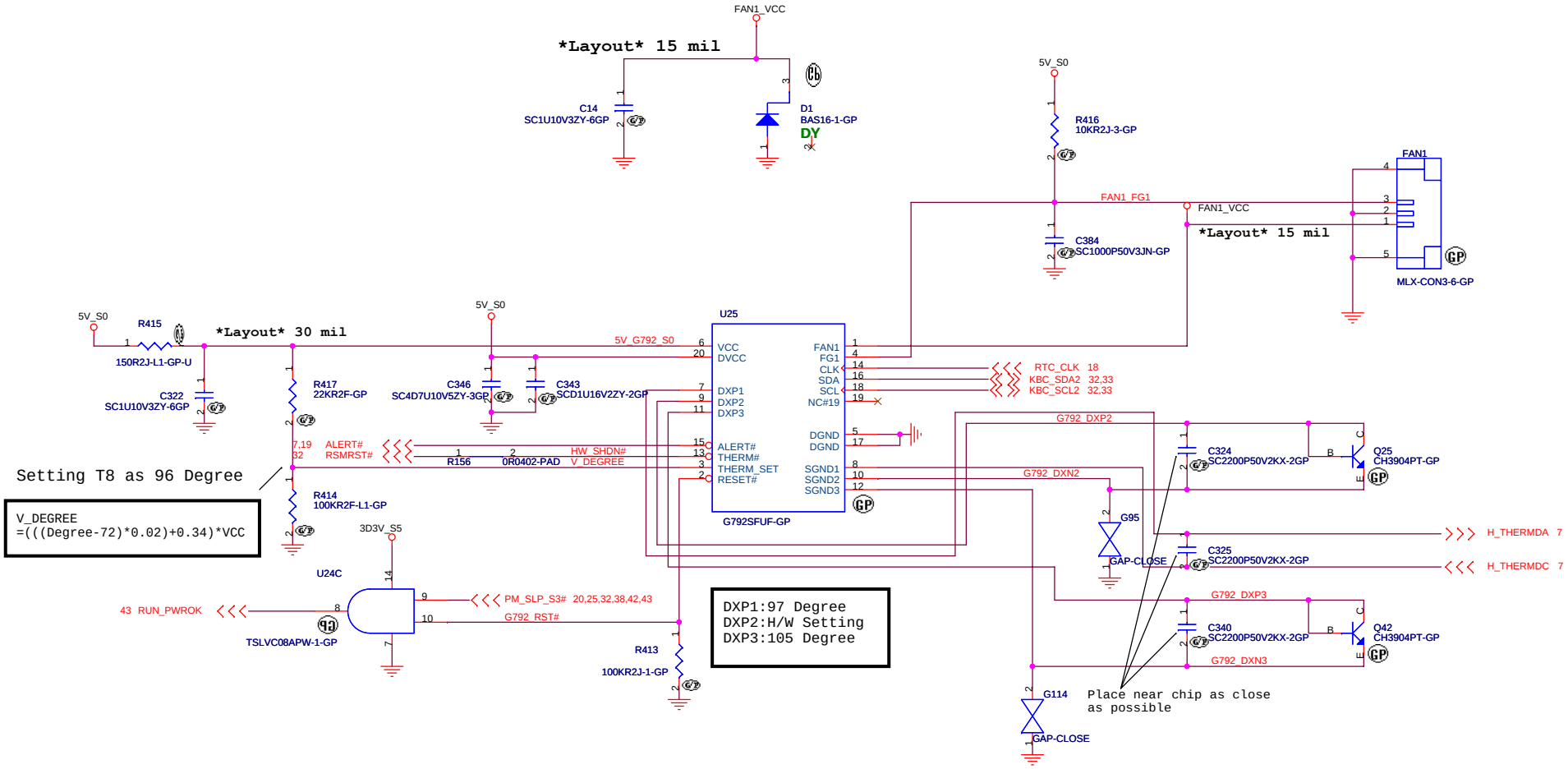


SNIFFER Board Connector

RIGHT I/O Board Connector



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			
Size: A3	Document Number: DS2-AMD		Rev: 1
Date: Monday, September 24, 2007	Sheet 34 of 44		

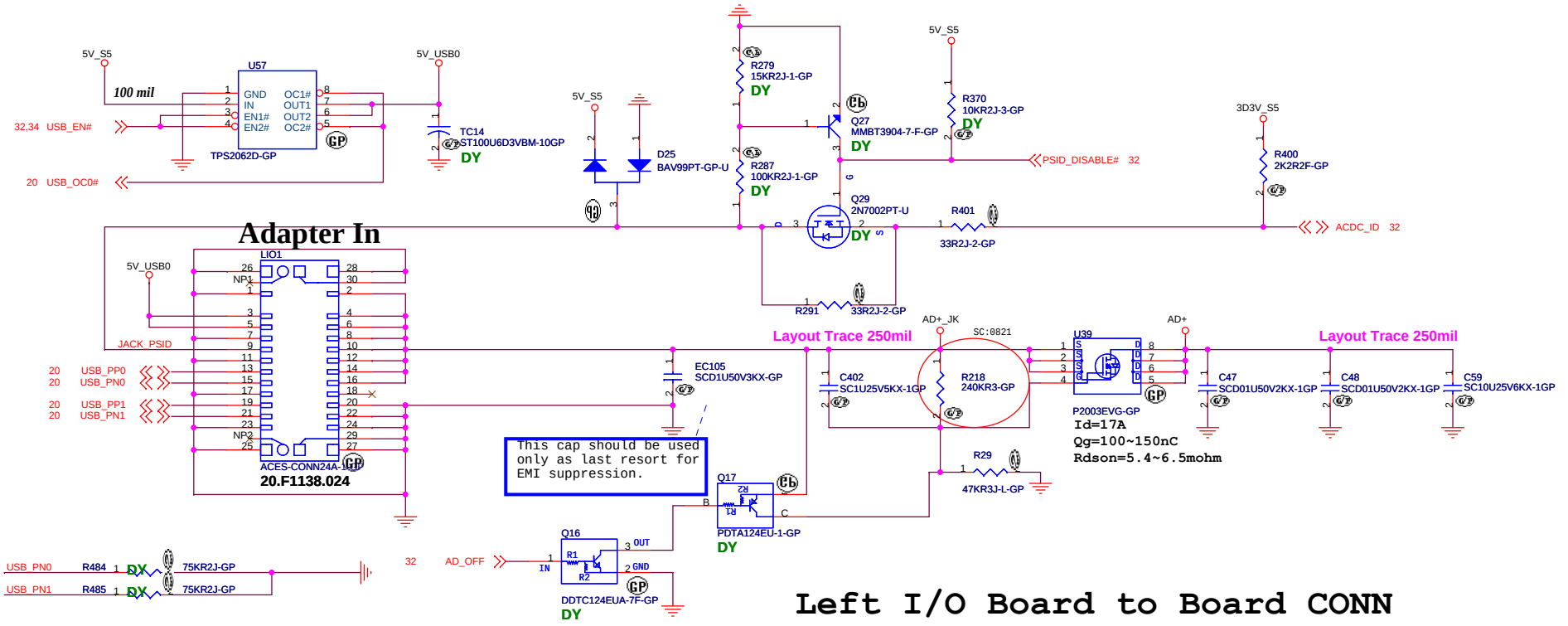


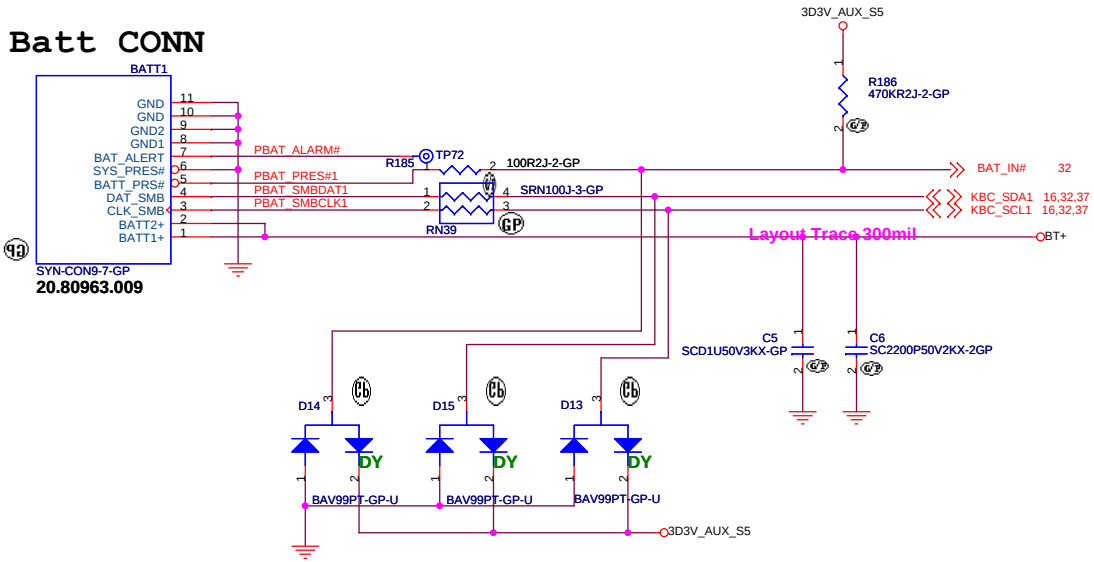
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: *Thermal/Fan Controllor G792*

Size	Document Number	Rev
A3	DS2-AMD	1

Date: Wednesday, September 26, 2007 Sheet 35 of 44





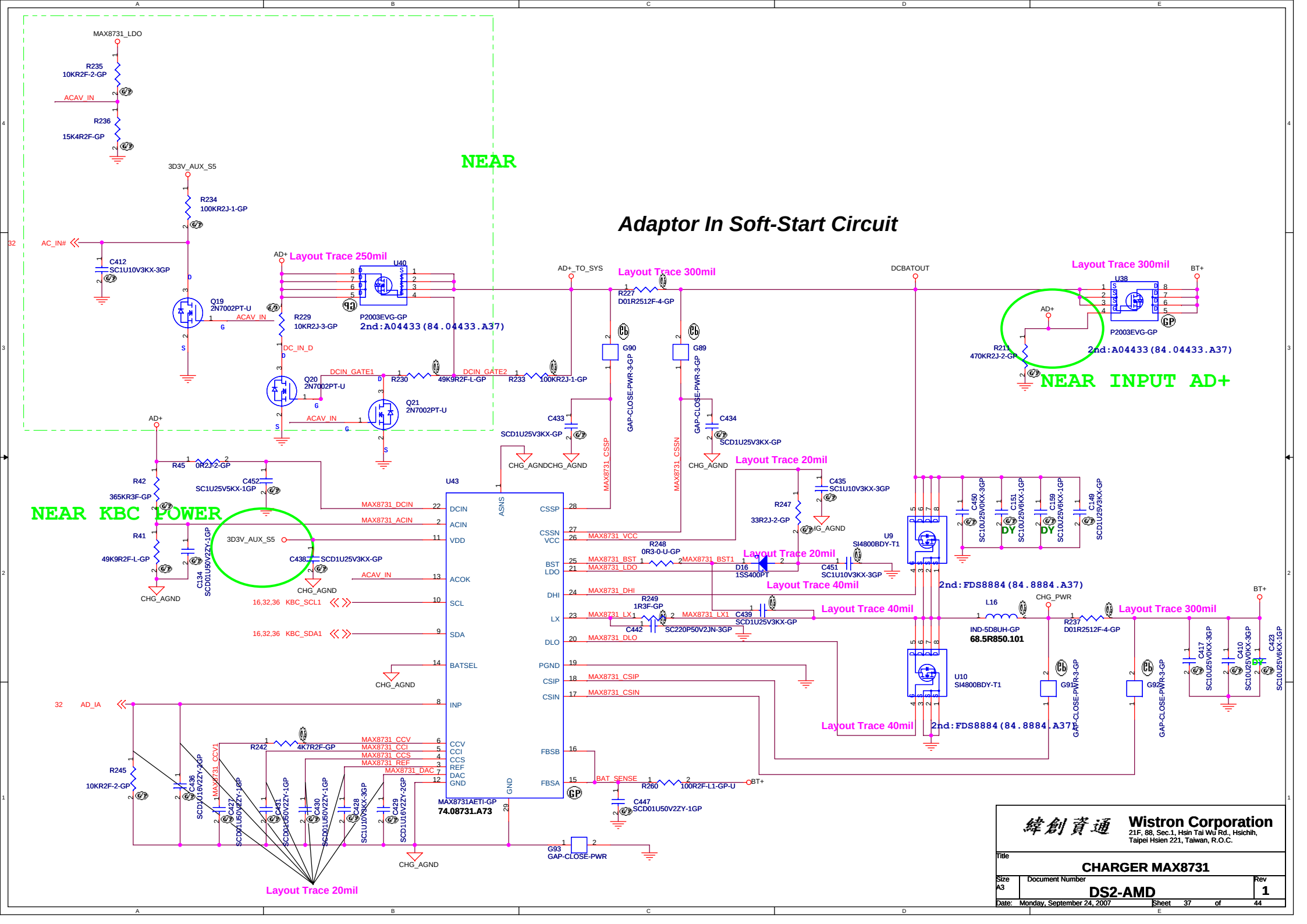
<Variant Name>

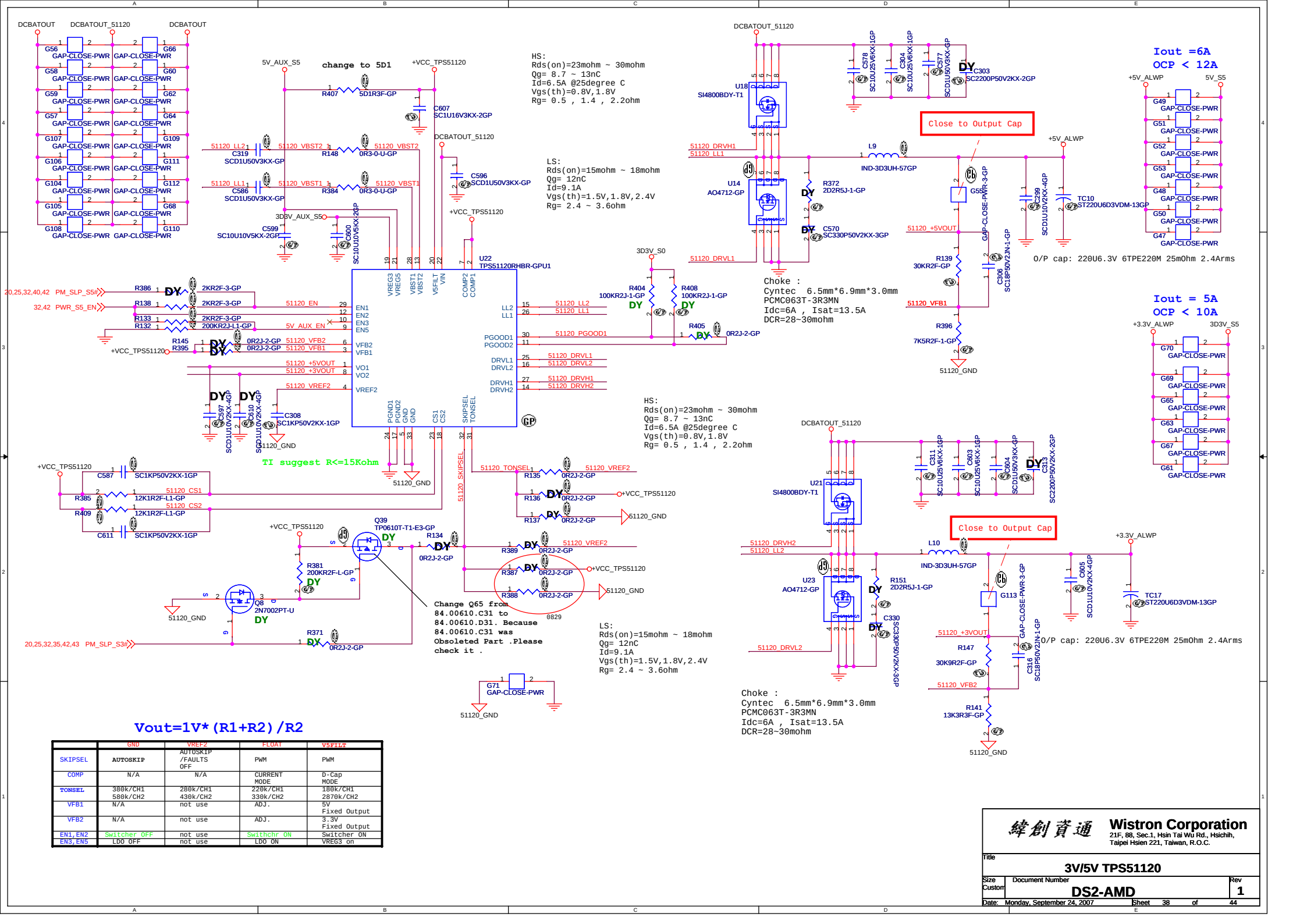
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **AD/BATT CONN**

Size	Document Number	Rev
A3	DS2-AMD	1

Date: Monday, September 24, 2007 Sheet 36 of 44


Adaptor In Soft-Start Circuit
NEAR
NEAR INPUT AD+
NEAR KBC POWER
MAX8731_LDO
R235
10KR2F-2-GP
ACAV_IN
R236
15K4R2F-GP
3D3V_AUX_S5
R234
100KR2J-1-GP
AC_IN#
C412
SC1U10V3KX-3GP
Q19
2N7002PT-U
AD+
Layout Trace 250mil
U40
P2003EVG-GP
2nd:A04433(84.04433.A37)
R229
10KR2J-3-GP
DC_IN_D
Q20
2N7002PT-U
Q21
2N7002PT-U
DCIN_GATE1
R230
49K9R2F-L-GP
DCIN_GATE2
R233
100KR2J-1-GP
AD+_TO_SYS
Layout Trace 300mil
R227
D01R2512F-4-GP
G90
G89
GAP-CLOSE-PWR-3-GP
C433
SCD1U25V3KX-GP
C434
SCD1U25V3KX-GP
CHG_AGND
MAX8731_CSSP
MAX8731_CSSN
DCBATOUT
Layout Trace 300mil
BT+
U38
P2003EVG-GP
R211
470KR2J-2-GP
2nd:A04433(84.04433.A37)
R45
0R2J-2-GP
R42
365KR3F-GP
C452
SC1U25V5KX-1GP
R41
49K9R2F-L-GP
C134
SCD01U50V2ZY-1GP
C438
SCD1U25V3KX-GP
U43
MAX8731_DCIN
MAX8731_ACIN
MAX8731_VCC
MAX8731_BST
MAX8731_LDO
MAX8731_DHI
MAX8731_LX
MAX8731_DLO
MAX8731_CSIP
MAX8731_CSIN
MAX8731_CCV
MAX8731_CCI
MAX8731_CCS
MAX8731_REF
MAX8731_DAC
ACAV_IN
16,32,36 KBC_SCL1
16,32,36 KBC_SDA1
DCIN
ACIN
VDD
ACOK
SCL
SDA
BATSEL
INP
CCV
CCI
CCS
REF
DAC
GND
ASNS
CSSP
CSSN
VCC
BST
LDO
DHI
LX
DLO
PGND
CSIP
CSIN
FBSB
FBSA
MAX8731AETI-GP
74.08731.A73
Layout Trace 20mil
R247
33R2J-2-GP
C435
SC1U10V3KX-3GP
R248
0R3-0-U-GP
D16
1SS400PT
U9
SI4800BDY-T1
C451
SC1U10V3KX-3GP
Layout Trace 40mil
2nd:FDS8884(84.8884.A37)
R249
1R3F-GP
C439
SCD1U25V3KX-GP
C442
SC220P50V2JN-3GP
L16
IND-5D8UH-GP
68.5R850.101
CHG_PWR
R237
D01R2512F-4-GP
U10
SI4800BDY-T1
G91
G92
G93
GAP-CLOSE-PWR
C450
SC10U25V6KX-3GP
C151
SC10U25V6KX-1GP
C159
SC10U25V6KX-1GP
C149
SCD1U25V3KX-GP
C417
SC10U25V6KX-3GP
C410
SC10U25V6KX-3GP
C423
SC10U25V6KX-1GP
DY
AD_IA
R242
4K7R2F-GP
R245
10KR2F-2-GP
C436
SCD01U16V2ZY-2GP
C427
SCD01U50V2ZY-1GP
C431
SCD01U50V2ZY-1GP
C430
SCD01U50V2ZY-1GP
C428
SC1U10V3KX-3GP
C429
SCD01U16V2ZY-2GP
BAT_SENSE
R260
100R2F-L1-GP-U
C447
SCD01U50V2ZY-1GP
Layout Trace 20mil
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
CHARGER MAX8731
Size
A3
Document Number
DS2-AMD
Rev
1
Date: Monday, September 24, 2007
Sheet 37 of 44



Vout=1V*(R1+R2)/R2

	GND	VREF2	FLOAT	V5FILT
SKIPSEL	AUTOSKIP	AUTOSKIP /FAULTS OFF	PWM	PWM
COMP	N/A	N/A	CURRENT MODE	D-Cap MODE
TONSEL	380k/CH1 580k/CH2	280k/CH1 430k/CH2	220k/CH1 330k/CH2	180k/CH1 2870k/CH2
VFB1	N/A	not use	ADJ.	5V Fixed Output
VFB2	N/A	not use	ADJ.	3.3V Fixed Output
EN1,EN2	Switcher OFF	not use	Switchcr ON	Switcher ON
EN3,EN5	LDO OFF	not use	LDO ON	VREG3 on

緯創資通 Wistron Corporation
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Taipei Hsien 221, Taiwan, R.O.C.

Title: 3V/5V TPS51120

Size: Custom | Document Number: DS2-AMD | Rev: 1

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VCC_CORE_S0

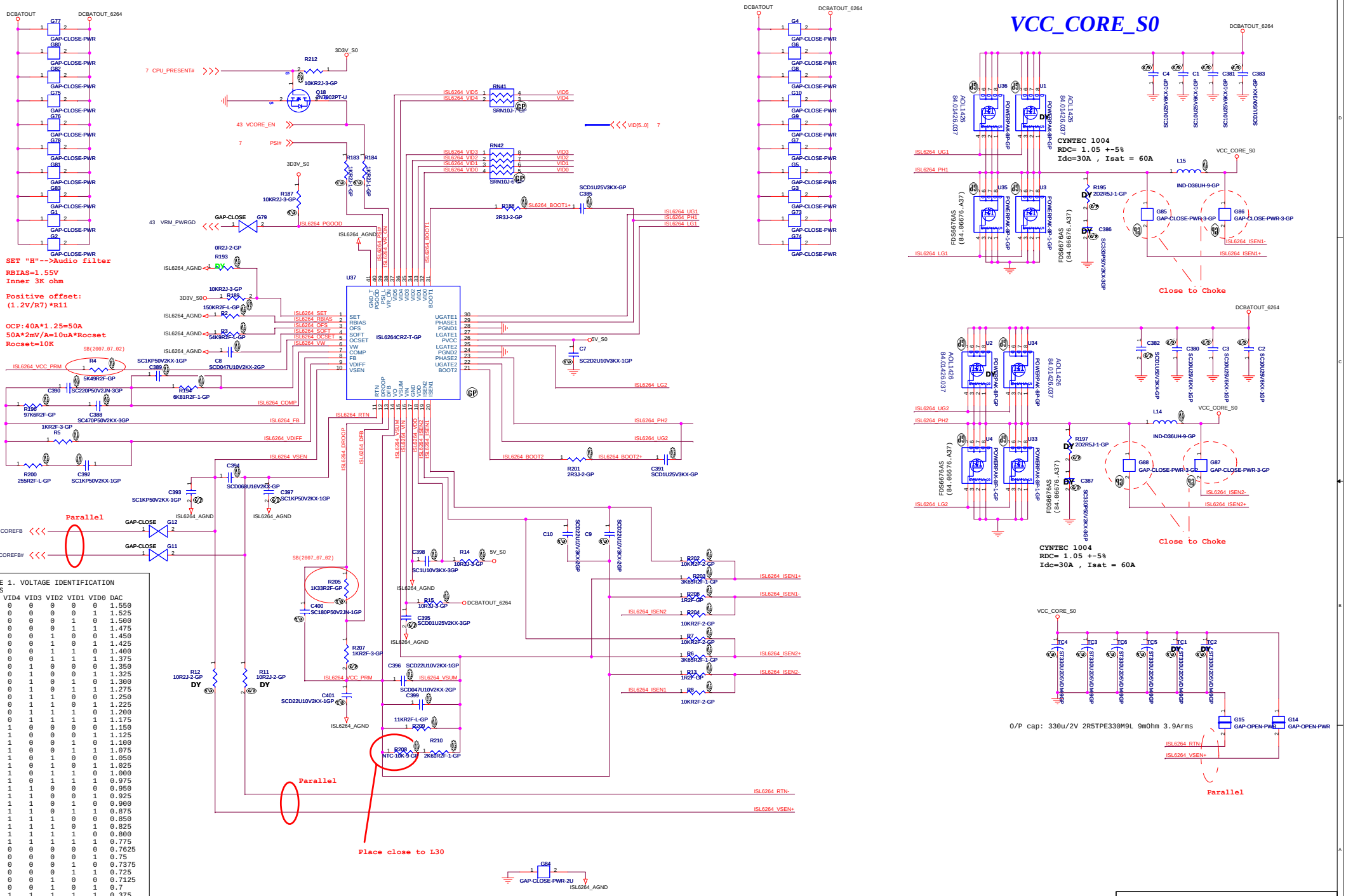
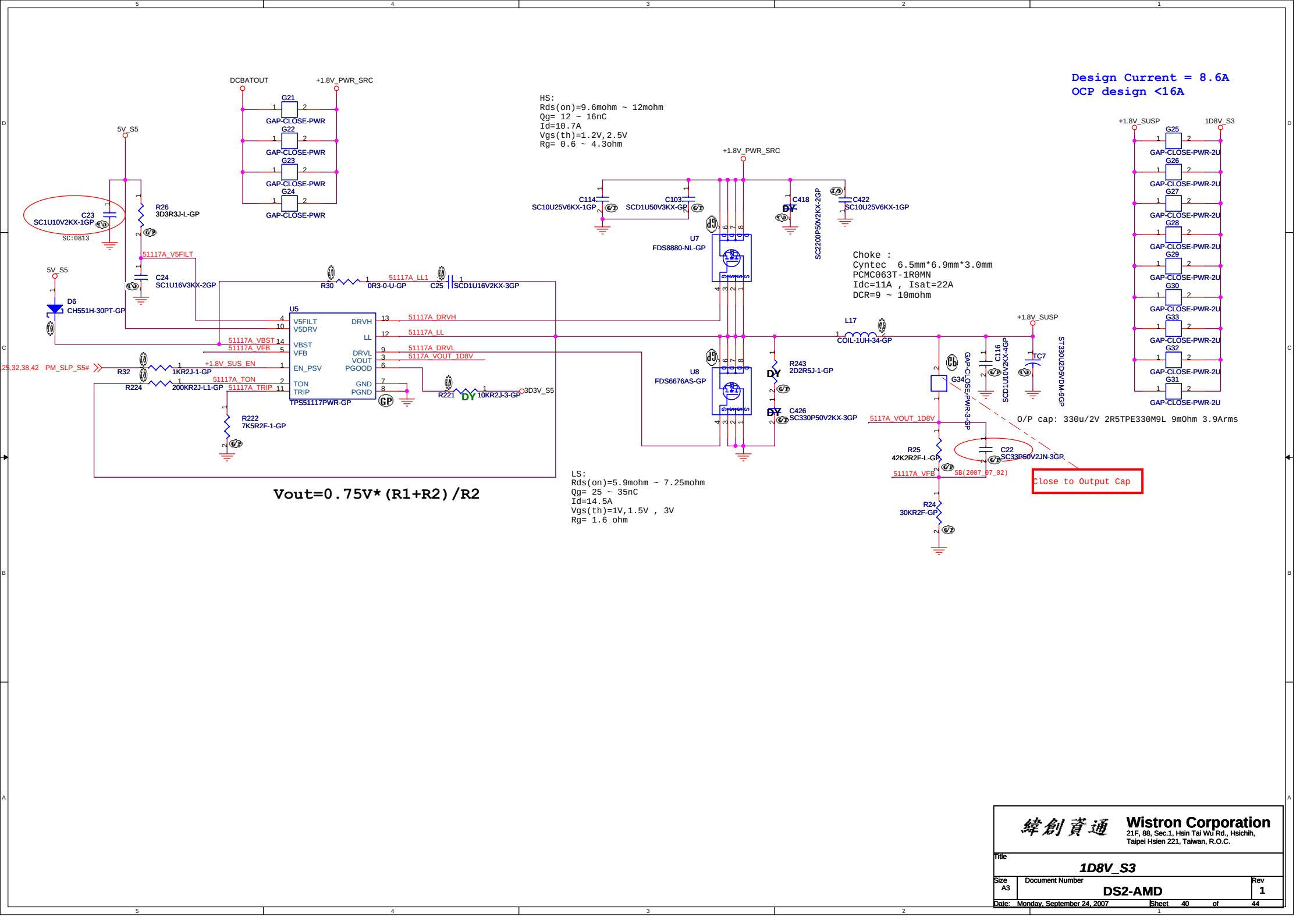


TABLE 1. VOLTAGE IDENTIFICATION CODES

VID5	VID4	VID3	VID2	VID1	VID0	DAC
0	0	0	0	0	0	1.550
0	0	0	0	0	1	1.525
0	0	0	0	1	0	1.500
0	0	0	0	1	1	1.475
0	0	0	1	0	0	1.450
0	0	0	1	0	1	1.425
0	0	0	1	1	0	1.400
0	0	0	1	1	1	1.375
0	0	1	0	0	0	1.350
0	0	1	0	0	1	1.325
0	0	1	0	1	0	1.300
0	0	1	0	1	1	1.275
0	0	1	1	0	0	1.250
0	0	1	1	0	1	1.225
0	0	1	1	1	0	1.200
0	0	1	1	1	1	1.175
0	1	0	0	0	0	1.150
0	1	0	0	0	1	1.125
0	1	0	0	1	0	1.100
0	1	0	0	1	1	1.075
0	1	0	1	0	0	1.050
0	1	0	1	0	1	1.025
0	1	0	1	1	0	1.000
0	1	0	1	1	1	0.975
0	1	1	0	0	0	0.950
0	1	1	0	0	1	0.925
0	1	1	0	1	0	0.900
0	1	1	0	1	1	0.875
0	1	1	1	0	0	0.850
0	1	1	1	0	1	0.825
0	1	1	1	1	0	0.800
0	1	1	1	1	1	0.775
1	0	0	0	0	0	0.7625
1	0	0	0	0	1	0.75
1	0	0	0	1	0	0.7375
1	0	0	0	1	1	0.725
1	0	0	1	0	0	0.7125
1	0	0	1	0	1	0.7
1	1	1	1	1	1	0.375

緯創資通	Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title	DC-DC VCCCPUCORE		
Size: A2	Document Number: DS2-AMD		Rev: 1
Date: Monday, September 24, 2007	Sheet 39 of 44		


Design Current = 8.6A
OCP design <16A
HS:
Rds(on)=9.6mohm ~ 12mohm
Qg= 12 ~ 16nC
Id=10.7A
Vgs(th)=1.2V,2.5V
Rg= 0.6 ~ 4.3ohm
Choke :
Cyntec 6.5mm*6.9mm*3.0mm
PCMC063T-1R0MN
Idc=11A , Isat=22A
DCR=9 ~ 10mohm
O/P cap: 330u/2V 2R5TPE330M9L 9mOhm 3.9Arms
Close to Output Cap
LS:
Rds(on)=5.9mohm ~ 7.25mohm
Qg= 25 ~ 35nC
Id=14.5A
Vgs(th)=1V,1.5V , 3V
Rg= 1.6 ohm
Vout=0.75V*(R1+R2)/R2
DCBATOUT
+1.8V_PWR_SRC
5V_S5
+1.8V_SUSP
1D8V_S3
3D3V_S5
U5
TPS51117PWR-GP
U7
FDS8880-NL-GP
U8
FDS6676AS-GP
L17
COIL-1UH-34-GP
PM_SLP_S5#
51117A_V5FILT
51117A_LL1
51117A_DRVH
51117A_LL
51117A_DRVL
5117A_VOUT_1D8V
51117A_VBST
51117A_VFB
51117A_TON
51117A_TRIP
+1.8V_SUS_EN
C23 SC1U10V2KX-1GP
R26 3D3R3J-L-GP
C24 SC1U16V3KX-2GP
D6 CH551H-30PT-GP
R30 0R3-0-U-GP
C25 SCD1U16V2KX-3GP
R32 1KR2J-1-GP
R224 200KR2J-L1-GP
R222 7K5R2F-1-GP
R221 10KR2J-3-GP
C114 SC10U25V6KX-1GP
C103 SCD1U50V3KX-GP
C418 DY
C422 SC10U25V6KX-1GP
SC2200P50V2KX-2GP
R243 2D2R5J-1-GP
C426 SC330P50V2KX-3GP
C116 SCD1U10V2KX-4GP
TC7 ST330U2D5VDM-9GP
R25 42K2R2F-L-GP
C22 SC33P50V2JN-3GP
R24 30KR2F-GP
G21 G22 G23 G24 GAP-CLOSE-PWR
G25 G26 G27 G28 G29 G30 G33 G32 G31 GAP-CLOSE-PWR-2U
G34 GAP-CLOSE-PWR-3-GP
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
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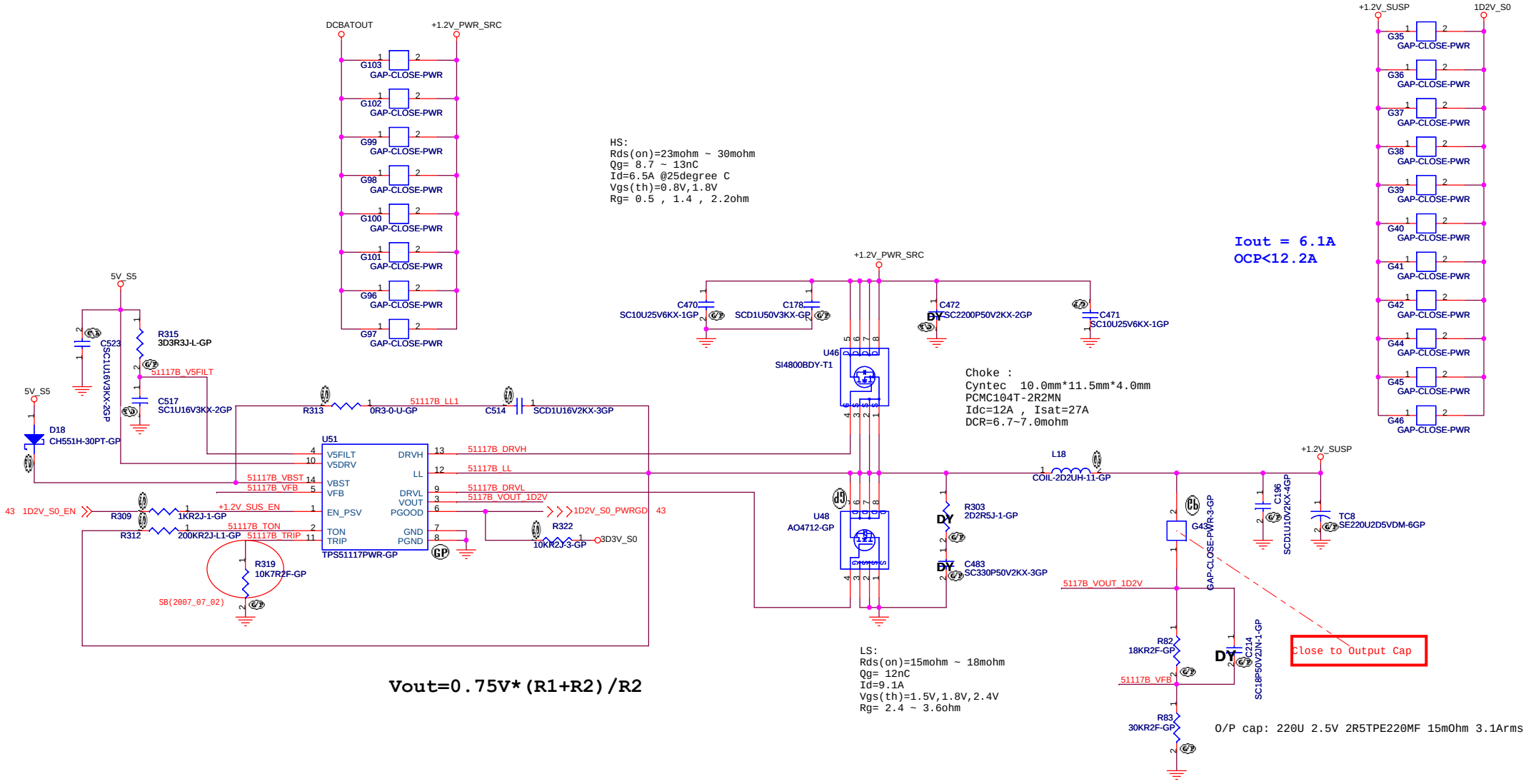

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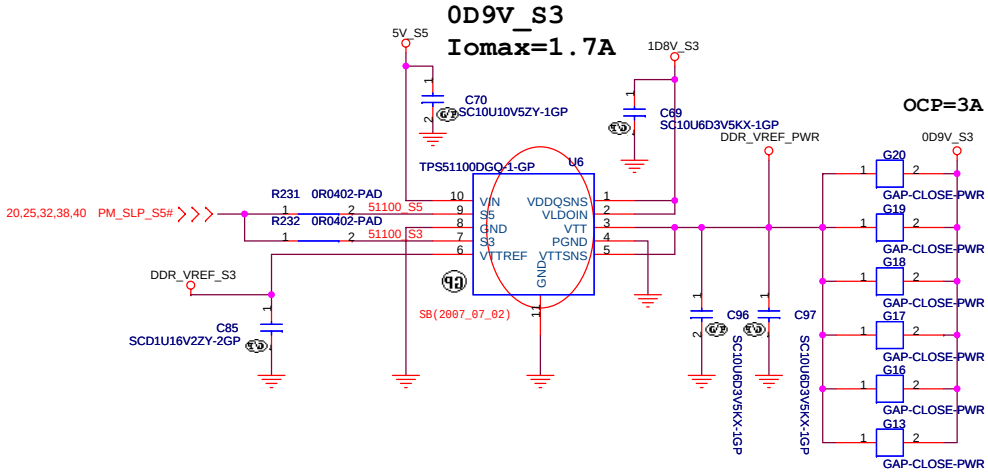

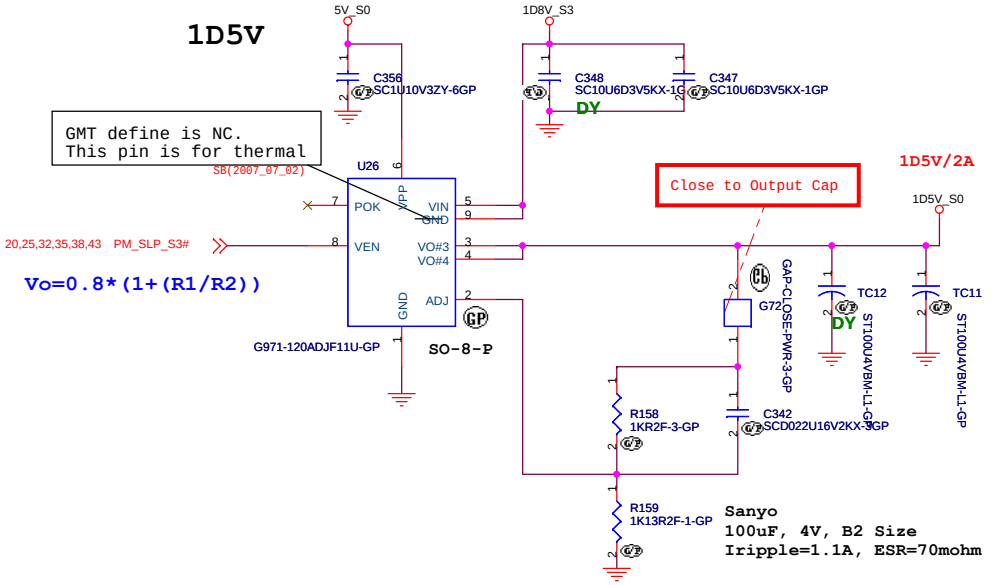

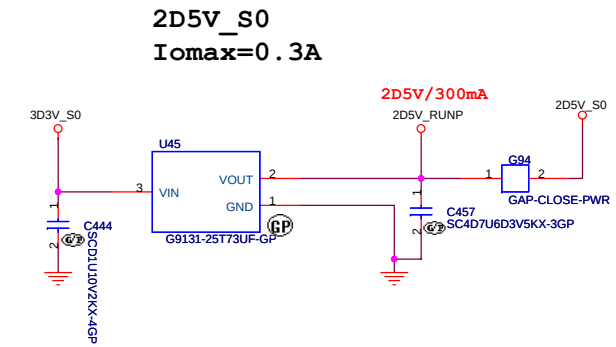

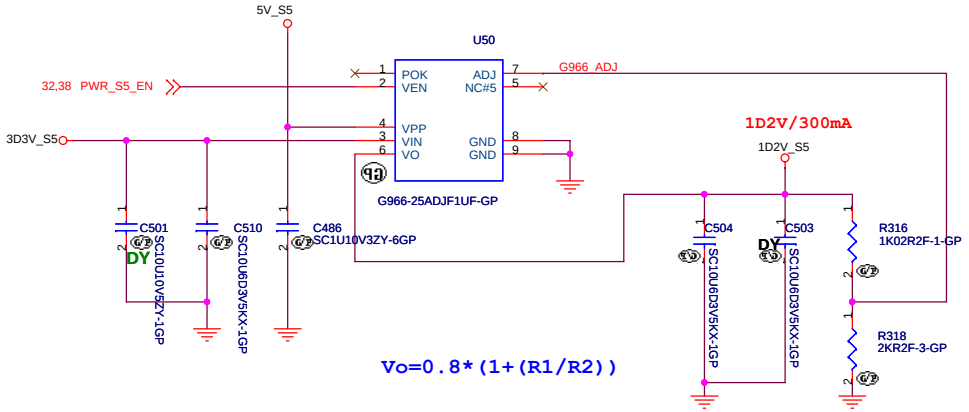

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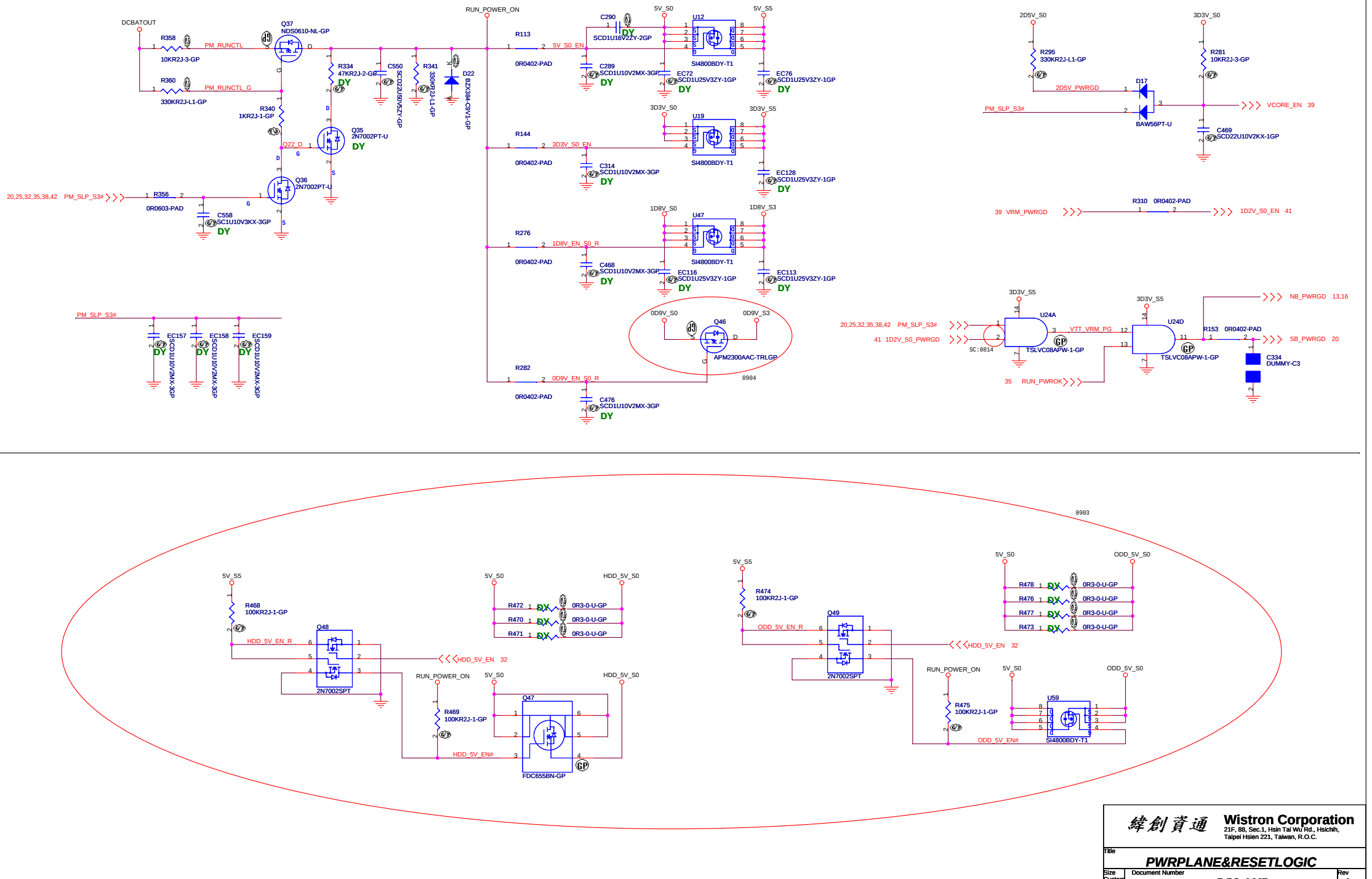

緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
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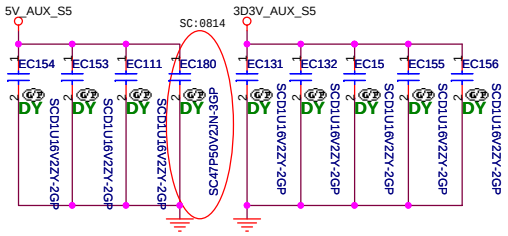
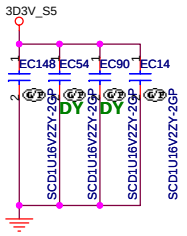
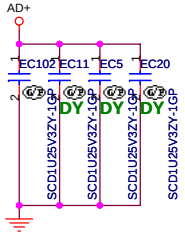
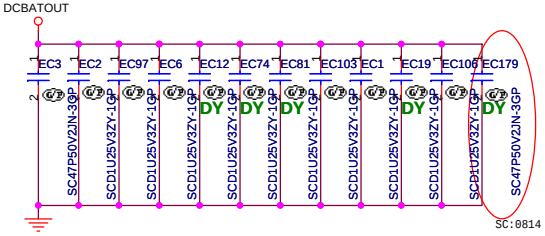
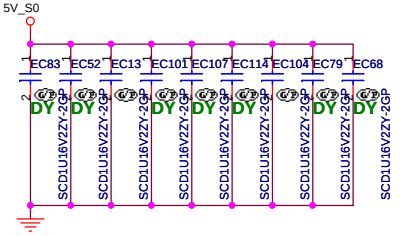
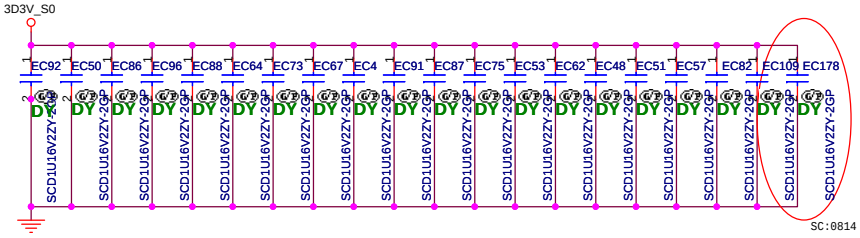


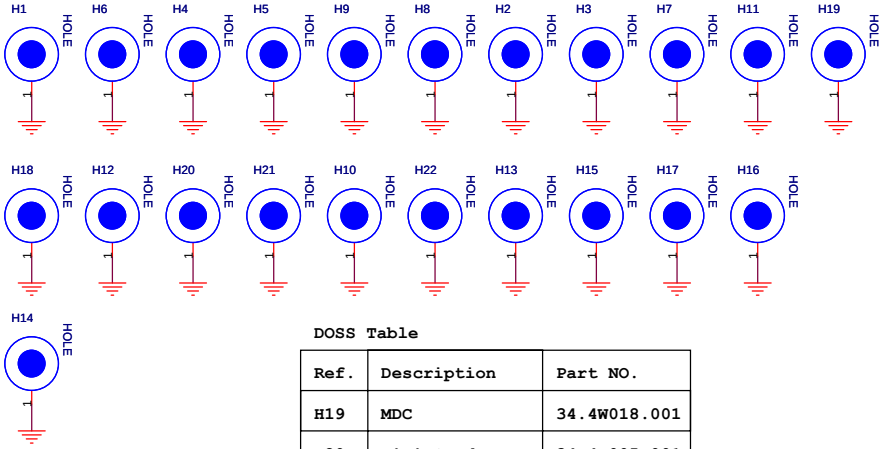






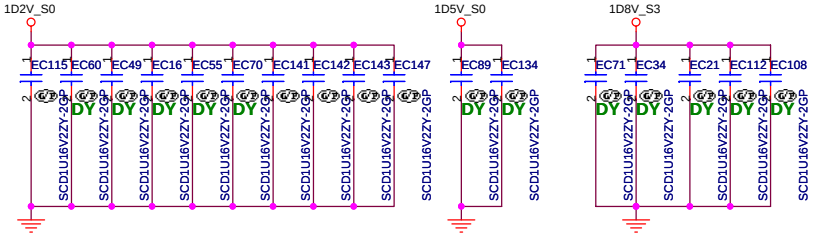


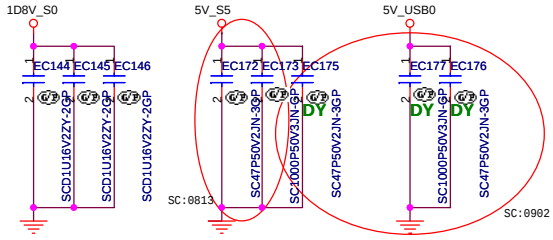


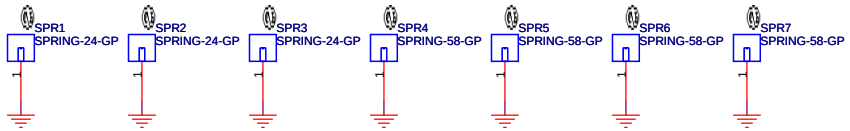


DOSS Table

Ref.	Description	Part NO.
H19	MDC	34.4W018.001
H20	Mini Card	34.4W005.001
H21	Mini Card	34.4W005.001
H22	Mini Card	34.4W005.001
H18	Heat sink	34.4A908.001
H15	New Card	34.4W004.001







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