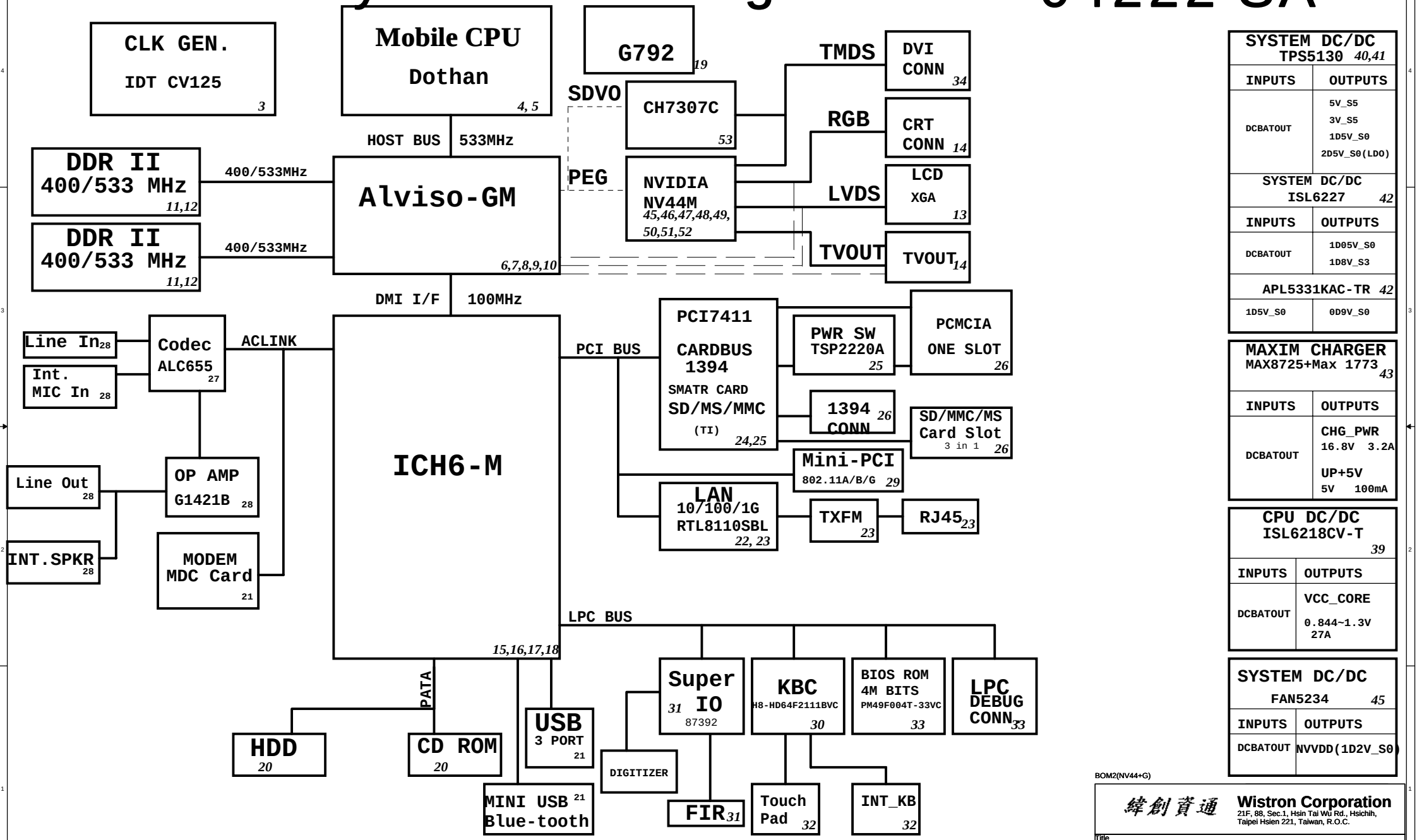
# Canary2 Block Diagram 04222-SA




**SYSTEM DC/DC** TPS5130 *40,41*

| INPUTS | OUTPUTS |
|---|---|
| DCBATOUT | 5V_S5<br>3V_S5<br>1D5V_S0<br>2D5V_S0(LDO) |

**SYSTEM DC/DC** ISL6227 *42*

| INPUTS | OUTPUTS |
|---|---|
| DCBATOUT | 1D05V_S0<br>1D8V_S3 |

**APL5331KAC-TR** *42*

| 1D5V_S0 | 0D9V_S0 |
|---|---|

**MAXIM CHARGER** MAX8725+Max 1773 *43*

| INPUTS | OUTPUTS |
|---|---|
| DCBATOUT | CHG_PWR 16.8V 3.2A<br>UP+5V 5V 100mA |

**CPU DC/DC** ISL6218CV-T *39*

| INPUTS | OUTPUTS |
|---|---|
| DCBATOUT | VCC_CORE 0.844~1.3V 27A |

**SYSTEM DC/DC** FAN5234 *45*

| INPUTS | OUTPUTS |
|---|---|
| DCBATOUT | NVVDD(1D2V_S0) |

**Port Replicator 4 (124 PIN)**

AC IN | RJ45-11 | SEARIAL PORT | CRT | PRINTER | PS2 | MIC | LINE IN | LINE OUT | TV OUT | DVI | PCIeX2 | SMBUS

BOM2(NV44+G)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Title: BLOCK DIAGRAM

Size: Custom | Document Number: CANARY2 | Rev: SA

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## Alviso Strapping Signals and Configuration

page 7

| Pin Name | Strap Description | Configuration |
|---|---|---|
| CFG[2:0] | FSB Frequency Select | 000 = Reserved<br>001 = FSB533<br>010 = FSB800<br>011-111 = Reversed |
| CFG[3:4] | Reversed | |
| CFG5 | DMI x2 Select | 0 = DMI x2<br>**1 = DMI x4** (Default) |
| CFG6 | DDR I / DDR II | 0 = DDR II<br>1 = DDR I |
| CFG7 | CPU Strap | 0 = Prescott<br>**1 = Dothan** (Default) |
| CFG[8:11] | Reversed | |
| CFG[12:13] | XOR/ALL Z test straps | 00 = Reserved<br>01 = XOR mode enabled<br>10 = All Z mode enabled<br>**11 = Normal Operation** (Default) |
| CFG[14:15] | Reversed | |
| CFG16 | FSB Dynamic ODT | 0 = Dynamic ODT Disabled<br>**1 = Dynamic ODT Enabled** (Default) |
| CFG17 | Reversed | |
| CFG18 | CPU core VCC Select | **0 = 1.05V** (Default)<br>1 = 1.5V |
| CFG19 | CPU VTT Select | **0 = 1.05V** (Default)<br>1 = 1.2V |
| CFG20 | Reversed | |
| SDVOCRTL_DATA | SDVO Present | **0 = No SDVO device present** (Default)<br>1= SDVO device present |

**NOTE:** All strap signals are sampled with respect to the leading edge of the Alviso GMCH PWORK In signal.

## CY28411ZC Spread Spectrum Select

page 3

| SS3 | SS2 | SS1 | Spread Mode | Spread Amount% |
|---|---|---|---|---|
| 0 | 0 | 0 | Down | 0.8 |
| 0 | 0 | 1 | Down | 1.25 |
| 0 | 1 | 0 | Down | 1.75 |
| 0 | 1 | 1 | Down | 2.5 |
| 1 | 0 | 0 | Center | +-0.3 |
| 1 | 0 | 1 | Center | +-0.5 |
| 1 | 1 | 0 | Center | +-0.8 |
| 1 | 1 | 1 | Center | +-1.25 |

## PCI Routing

| | IDSEL | IRQ | REQ/GNT |
|---|---|---|---|
| 7411 | 25 | B.F.G | 0 |
| MiniPCI | 21 | E | 1 |
| LAN | 23 | E | 2 |

## ICH6-M Integrated Pull-up and Pull-down Resistors

ICH6-M EDS 14308 0.8V1

| | |
|---|---|
| ACZ_BIT_CLK, DPRSLP#, EE_DIN, EE_DOUT, GNT[5]#/GPO[17], GNT[6]#/GPO[16], LDRQ[1]/GPI[41], LAD[3:0]#/FB[3:0]#, LDRQ[0], PME#, PWRBTN#, TP[3] | ICH6 internal 20K pull-ups |
| LAN_RXD[2:0] | ICH6 internal 10K pull-ups |
| ACZ_RST#, ACZ_SDIN[2:0], ACZ_SYNC, ACZ_SDOUT, ACZ_BITCLK, DPRSLPVR, SPKR, EE_CS, | ICH6 internal 20K pull-downs |
| USB[7:0][P,N] | ICH6 internal 15K pull-downs |
| DD[7], SDDREQ | ICH6 internal 11.5K pull-downs |
| LAN_CLK | ICH6 internal 100K pull-downs |

## ICH6-M IDE Integrated Series Termination Resistors

| | |
|---|---|
| DD[15:0], DIOW#, DIOR#, DREQ, DDACK#, IORDY, DA[2:0], DCS1#, DCS3#, IDEIRQ | approximately 33 ohm |

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Title: ITP

Size: A3 | Document Number: CANARY2 | Rev: SA

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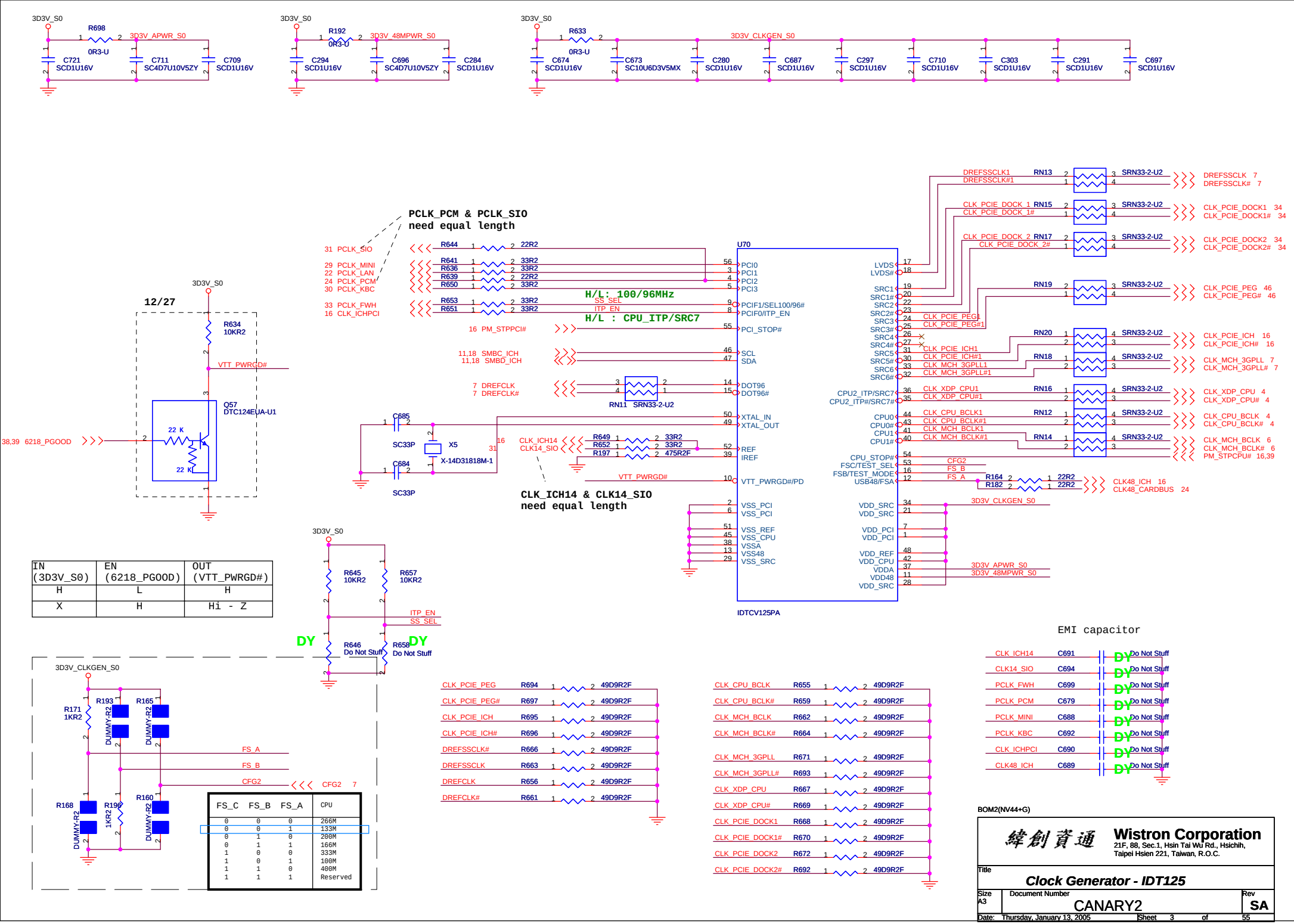
3D3V_S0
R698
0R3-U
3D3V_APWR_S0
C721 SCD1U16V
C711 SC4D7U10V5ZY
C709 SCD1U16V
R192
0R3-U
3D3V_48MPWR_S0
C294 SCD1U16V
C696 SC4D7U10V5ZY
C284 SCD1U16V
R633
0R3-U
3D3V_CLKGEN_S0
C674 SCD1U16V
C673 SC10U6D3V5MX
C280 SCD1U16V
C687 SCD1U16V
C297 SCD1U16V
C710 SCD1U16V
C303 SCD1U16V
C291 SCD1U16V
C697 SCD1U16V
12/27
R634 10KR2
VTT_PWRGD#
Q57 DTC124EUA-U1
22 K
22 K
38,39 6218_PGOOD
PCLK_PCM & PCLK_SIO need equal length
31 PCLK_SIO
29 PCLK_MINI
22 PCLK_LAN
24 PCLK_PCM
30 PCLK_KBC
33 PCLK_FWH
16 CLK_ICHPCI
R644 22R2
R641 33R2
R636 33R2
R639 22R2
R650 33R2
R653 33R2
R651 33R2
H/L: 100/96MHz
SS_SEL
ITP_EN
H/L : CPU_ITP/SRC7
16 PM_STPPCI#
11,18 SMBC_ICH
11,18 SMBD_ICH
7 DREFCLK
7 DREFCLK#
RN11 SRN33-2-U2
U70
PCI0
PCI1
PCI2
PCI3
PCIF1/SEL100/96#
PCIF0/ITP_EN
PCI_STOP#
SCL
SDA
DOT96
DOT96#
XTAL_IN
XTAL_OUT
REF
IREF
VTT_PWRGD#/PD
VSS_PCI
VSS_PCI
VSS_REF
VSS_CPU
VSSA
VSS48
VSS_SRC
C685
SC33P
X5
X-14D31818M-1
C684
SC33P
CLK_ICH14
CLK14_SIO
R649 33R2
R652 33R2
R197 475R2F
CLK_ICH14 & CLK14_SIO need equal length
LVDS
LVDS#
SRC1
SRC1#
SRC2
SRC2#
SRC3
SRC3#
SRC4
SRC4#
SRC5
SRC5#
SRC6
SRC6#
CPU2_ITP/SRC7
CPU2_ITP#/SRC7#
CPU0
CPU0#
CPU1
CPU1#
CPU_STOP#
FSC/TEST_SEL
FSB/TEST_MODE
USB48/FSA
VDD_SRC
VDD_SRC
VDD_PCI
VDD_PCI
VDD_REF
VDD_CPU
VDDA
VDD48
VDD_SRC
DREFSSCLK1
DREFSSCLK#1
RN13
SRN33-2-U2
DREFSSCLK 7
DREFSSCLK# 7
CLK_PCIE_DOCK_1
CLK_PCIE_DOCK_1#
RN15
CLK_PCIE_DOCK1 34
CLK_PCIE_DOCK1# 34
CLK_PCIE_DOCK_2
CLK_PCIE_DOCK_2#
RN17
CLK_PCIE_DOCK2 34
CLK_PCIE_DOCK2# 34
RN19
CLK_PCIE_PEG 46
CLK_PCIE_PEG# 46
CLK_PCIE_PEG1
CLK_PCIE_PEG#1
RN20
CLK_PCIE_ICH 16
CLK_PCIE_ICH# 16
CLK_PCIE_ICH1
CLK_PCIE_ICH#1
RN18
CLK_MCH_3GPLL 7
CLK_MCH_3GPLL# 7
CLK_MCH_3GPLL1
CLK_MCH_3GPLL#1
CLK_XDP_CPU1
CLK_XDP_CPU#1
RN16
CLK_XDP_CPU 4
CLK_XDP_CPU# 4
CLK_CPU_BCLK1
CLK_CPU_BCLK#1
RN12
CLK_CPU_BCLK 4
CLK_CPU_BCLK# 4
CLK_MCH_BCLK1
CLK_MCH_BCLK#1
RN14
CLK_MCH_BCLK 6
CLK_MCH_BCLK# 6
PM_STPCPU# 16,39
CFG2
FS_B
FS_A
R164 22R2
R182 22R2
CLK48_ICH 16
CLK48_CARDBUS 24
3D3V_CLKGEN_S0
3D3V_APWR_S0
3D3V_48MPWR_S0
IDTCV125PA
IN (3D3V_S0) | EN (6218_PGOOD) | OUT (VTT_PWRGD#)
H | L | H
X | H | Hi - Z
R645 10KR2
R657 10KR2
ITP_EN
SS_SEL
DY
R646 Do Not Stuff
R658 Do Not Stuff
DY
3D3V_CLKGEN_S0
R171 1KR2
R193 DUMMY-R2
R165 DUMMY-R2
FS_A
FS_B
CFG2
CFG2 7
R168 DUMMY-R2
R196 1KR2
R160 DUMMY-R2
FS_C FS_B FS_A CPU
0 0 0 266M
0 0 1 133M
0 1 0 200M
0 1 1 166M
1 0 0 333M
1 0 1 100M
1 1 0 400M
1 1 1 Reserved
CLK_PCIE_PEG R694 49D9R2F
CLK_PCIE_PEG# R697 49D9R2F
CLK_PCIE_ICH R695 49D9R2F
CLK_PCIE_ICH# R696 49D9R2F
DREFSSCLK# R666 49D9R2F
DREFSSCLK R663 49D9R2F
DREFCLK R656 49D9R2F
DREFCLK# R661 49D9R2F
CLK_CPU_BCLK R655 49D9R2F
CLK_CPU_BCLK# R659 49D9R2F
CLK_MCH_BCLK R662 49D9R2F
CLK_MCH_BCLK# R664 49D9R2F
CLK_MCH_3GPLL R671 49D9R2F
CLK_MCH_3GPLL# R693 49D9R2F
CLK_XDP_CPU# R667 49D9R2F
CLK_PCIE_DOCK1 R669 49D9R2F
CLK_PCIE_DOCK1# R668 49D9R2F
CLK_PCIE_DOCK2 R670 49D9R2F
CLK_PCIE_DOCK2# R672 49D9R2F
R692 49D9R2F
EMI capacitor
CLK_ICH14 C691 DY Do Not Stuff
CLK14_SIO C694 DY Do Not Stuff
PCLK_FWH C699 DY Do Not Stuff
PCLK_PCM C679 DY Do Not Stuff
PCLK_MINI C688 DY Do Not Stuff
PCLK_KBC C692 DY Do Not Stuff
CLK_ICHPCI C690 DY Do Not Stuff
CLK48_ICH C689 DY Do Not Stuff
BOM2(NV44+G)
緯創資通
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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
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Title
Clock Generator - IDT125
Size A3
Document Number
CANARY2
Rev SA
Date: Thursday, January 13, 2005
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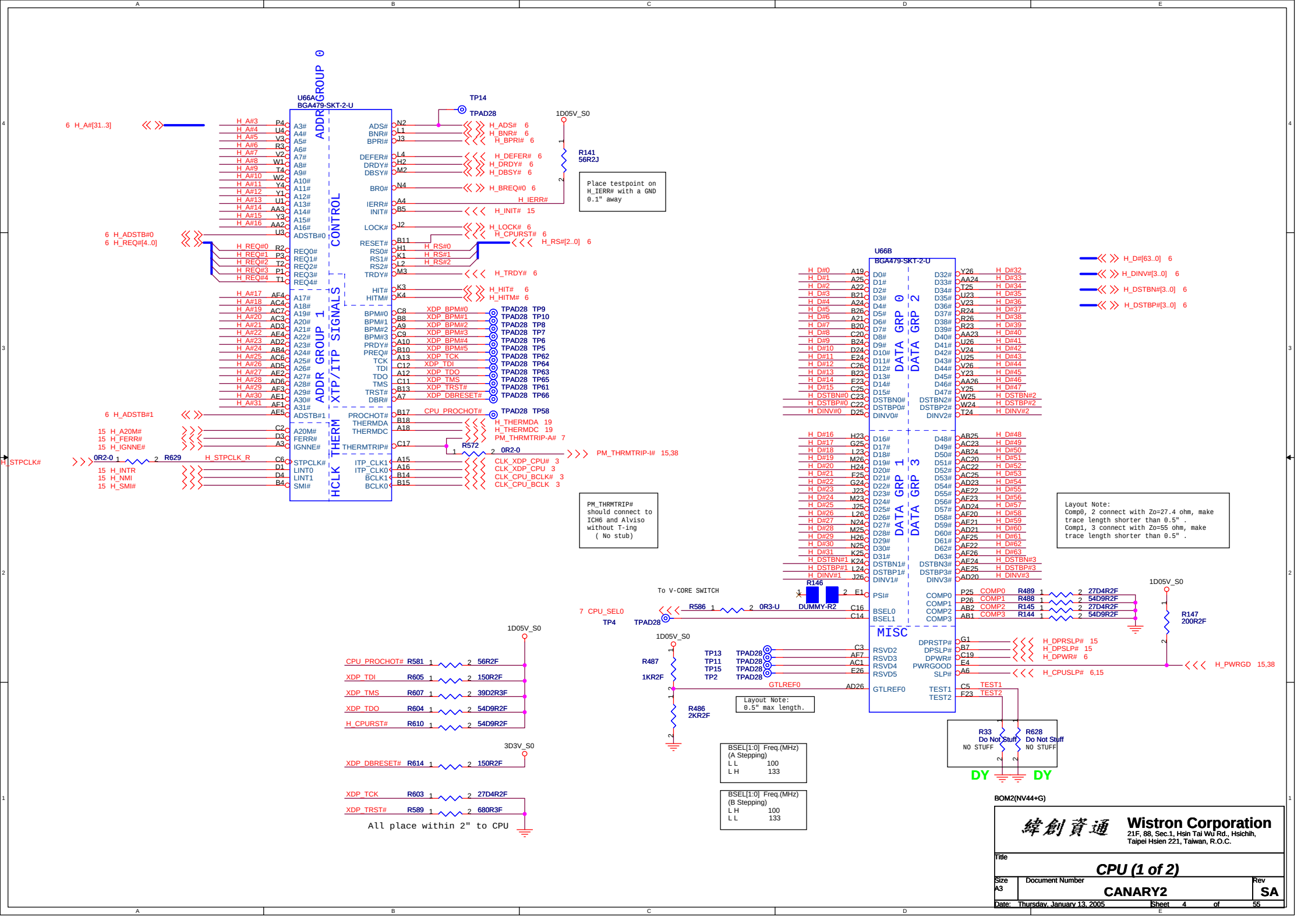
U66A
BGA479-SKT-2-U
ADDR GROUP 0
ADDR GROUP 1
XTP/ITP SIGNALS
CONTROL
HCLK THERM
TP14
TPAD28
1D05V_S0
R141
56R2J
Place testpoint on H_IERR# with a GND 0.1" away
U66B
DATA GRP 0
DATA GRP 1
DATA GRP 2
DATA GRP 3
MISC
R146
DUMMY-R2
To V-CORE SWITCH
R586
0R3-U
CPU_SEL0
TP4
R487
1KR2F
R486
2KR2F
GTLREF0
Layout Note:
0.5" max length.
BSEL[1:0] Freq.(MHz)
(A Stepping)
L L 100
L H 133
BSEL[1:0] Freq.(MHz)
(B Stepping)
L H 100
L L 133
R489
R488
R145
R144
27D4R2F
54D9R2F
R147
200R2F
R33
Do Not Stuff
NO STUFF
R628
Do Not Stuff
NO STUFF
DY
DY
PM_THRMTRIP#
should connect to ICH6 and Alviso without T-ing
( No stub)
R572
0R2-0
PM_THRMTRIP-I# 15,38
R629
H_STPCLK#
H_STPCLK_R
R581
R605
R607
R604
R610
R614
R603
R589
56R2F
150R2F
39D2R3F
54D9R2F
54D9R2F
150R2F
27D4R2F
680R3F
All place within 2" to CPU
Layout Note:
Comp0, 2 connect with Zo=27.4 ohm, make trace length shorter than 0.5" .
Comp1, 3 connect with Zo=55 ohm, make trace length shorter than 0.5" .
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Title
CPU (1 of 2)
Size A3
Document Number
CANARY2
Rev SA
Date: Thursday, January 13, 2005
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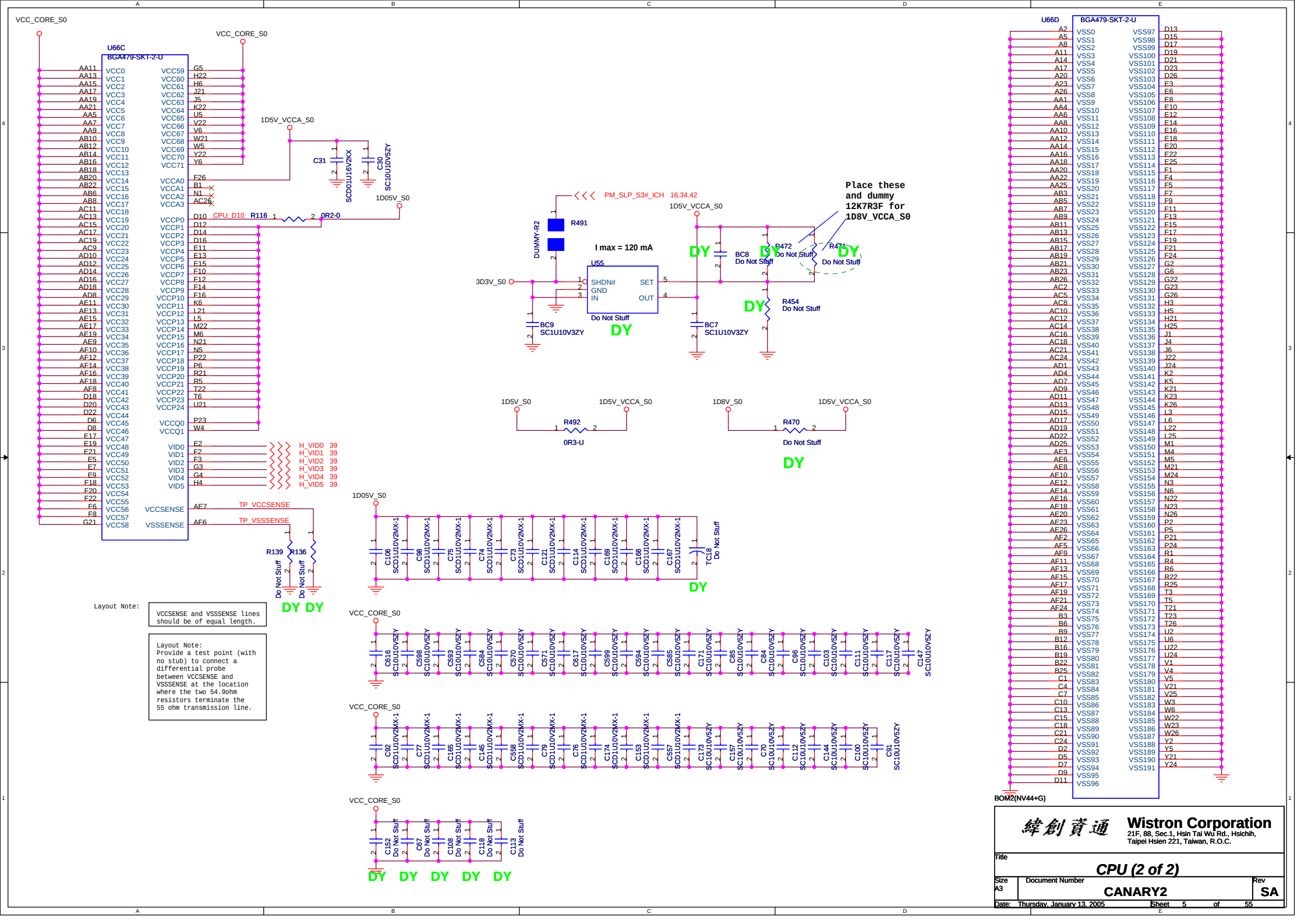
VCC_CORE_S0
U66C
BGA479-SKT-2-U
1D5V_VCCA_S0
C31
SCD01U16V2KX
C30
SC10U10V5ZY
1D5V_S0
CPU_D10
R116
0R2-0
H_VID0 39
H_VID1 39
H_VID2 39
H_VID3 39
H_VID4 39
H_VID5 39
TP_VCCSENSE
TP_VSSSENSE
R139
R136
Do Not Stuff
DY DY
Layout Note:
VCCSENSE and VSSSENSE lines should be of equal length.
Layout Note:
Provide a test point (with no stub) to connect a differential probe between VCCSENSE and VSSSENSE at the location where the two 54.9ohm resistors terminate the 55 ohm transmission line.
PM_SLP_S3#_ICH 16,34,42
R491
DUMMY-R2
I max = 120 mA
U55
SHDN#
GND
IN
SET
OUT
3D3V_S0
BC9
SC1U10V3ZY
BC8
BC7
R472
R471
R454
R492
0R3-U
R470
1D8V_S0
Place these and dummy 12K7R3F for 1D8V_VCCA_S0
C106
C98
C75
C74
C73
C121
C114
C169
C168
C167
C118
C616
C598
C593
C584
C570
C571
C617
C599
C594
C585
C171
C85
C84
C96
C103
C111
C117
C147
C92
C77
C165
C145
C558
C79
C76
C174
C153
C557
C173
C157
C70
C112
C144
C100
C91
C152
C67
C108
C118
C113
DY DY DY DY DY
U66D
BGA479-SKT-2-U
BOM2(NV44+G)
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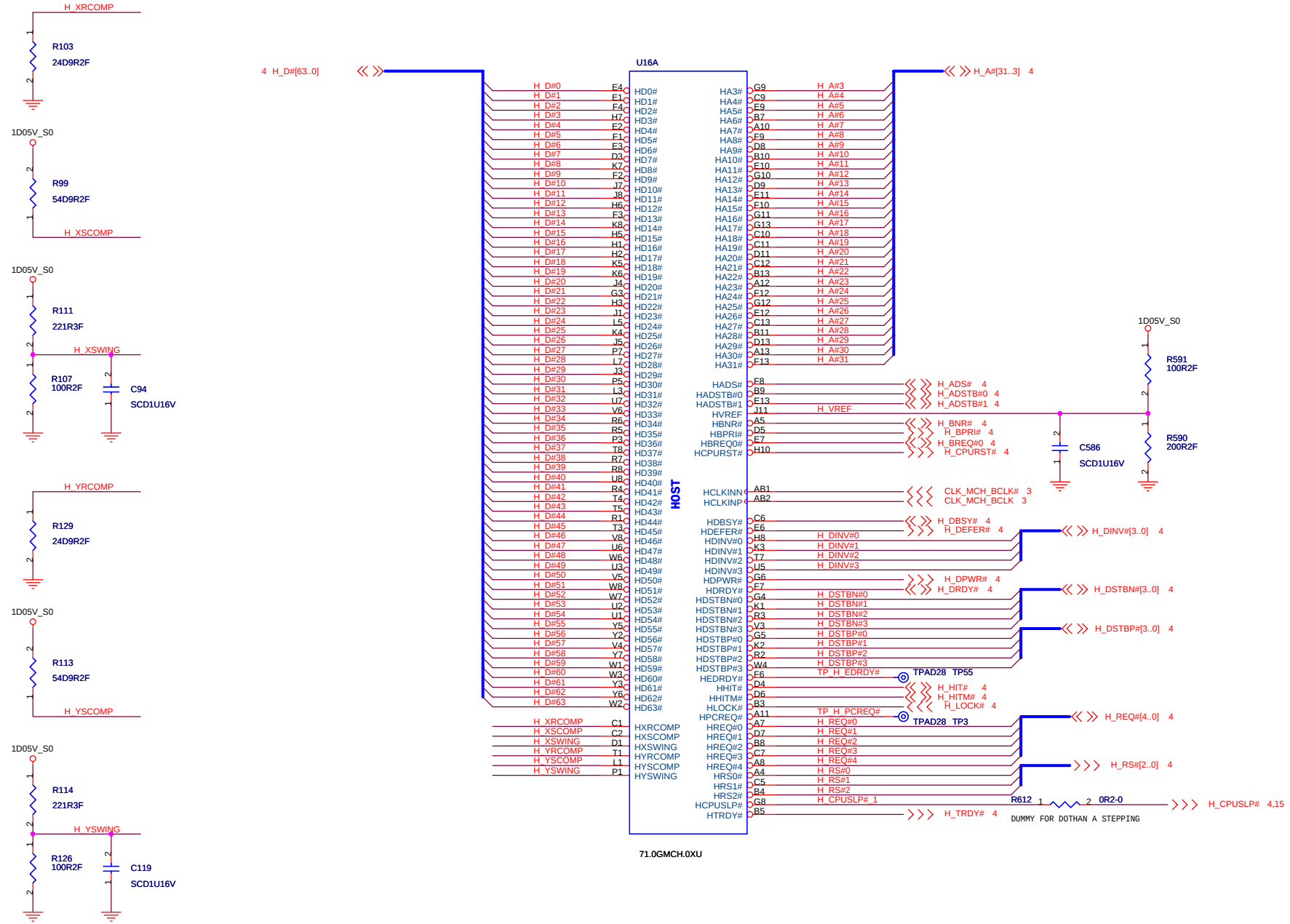
Title
CPU (2 of 2)
Size
A3
Document Number
CANARY2
Rev
SA
Date: Thursday, January 13, 2005
Sheet 5 of 55




Place them near to the chip

BOM2(NV44+G)

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Title: ***GMCH (1 of 5)***

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

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When GM replace to PM

U16B

U16G

Alviso will provide SDVO_CTRLCLK and CTRLDATA pulldowns on-die

Lane Reversal enable

Layout Note: Route as short as possible

When High 1K Ohm

When Low choice lower than 3.5K Ohm

For B stepping

For A stepping

Place near C916,C917,C896,C897

Place near U104

71.0GMCH.0XU

| CFG[2:0] | Freq.(MHz) |
|---|---|
| 101 | 400 |
| 001 | 533 |

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Title: GMCH (2 of 5)

| Size | Document Number | Rev |
|---|---|---|
| Custom | CANARY2 | SA |

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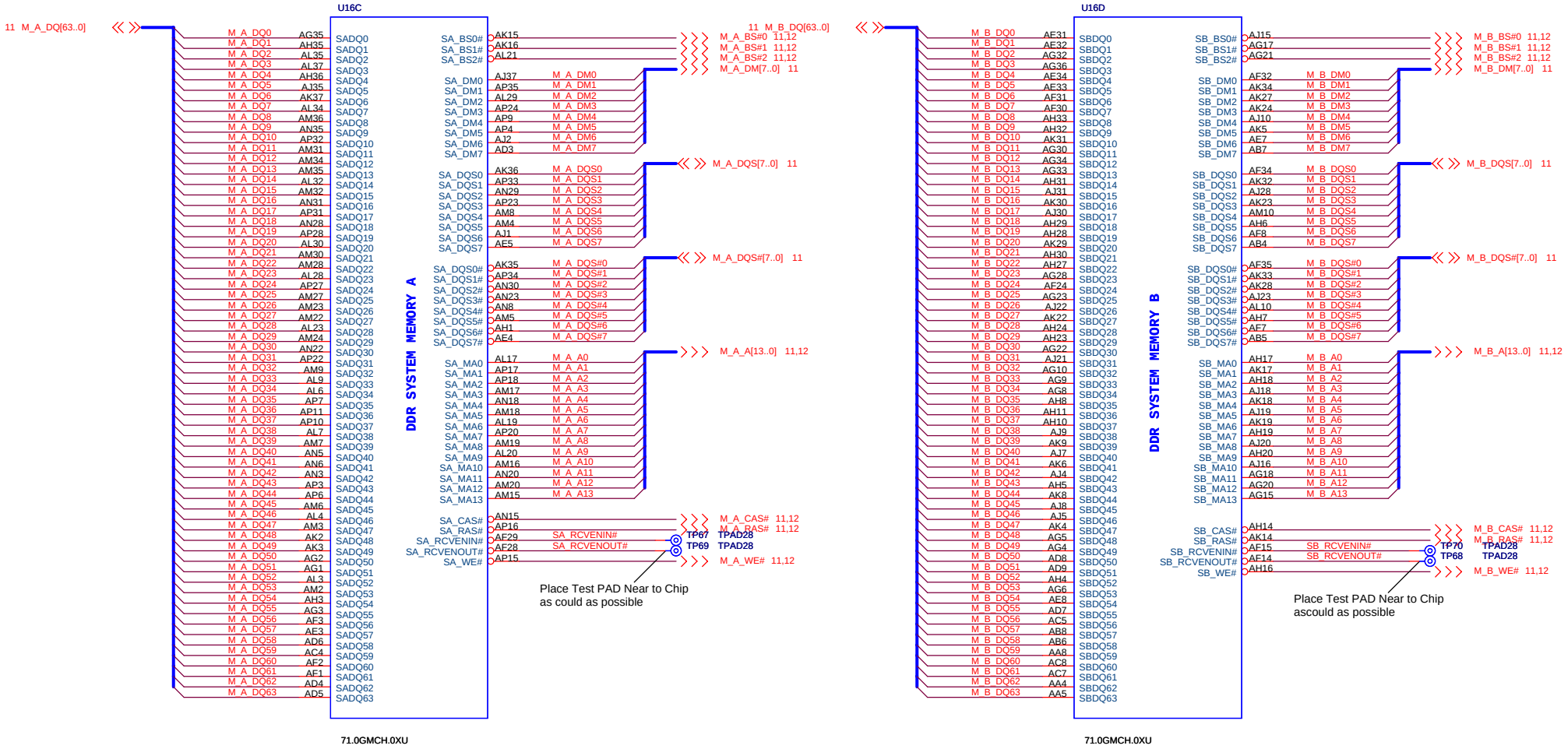


BOM2(NV44+G)

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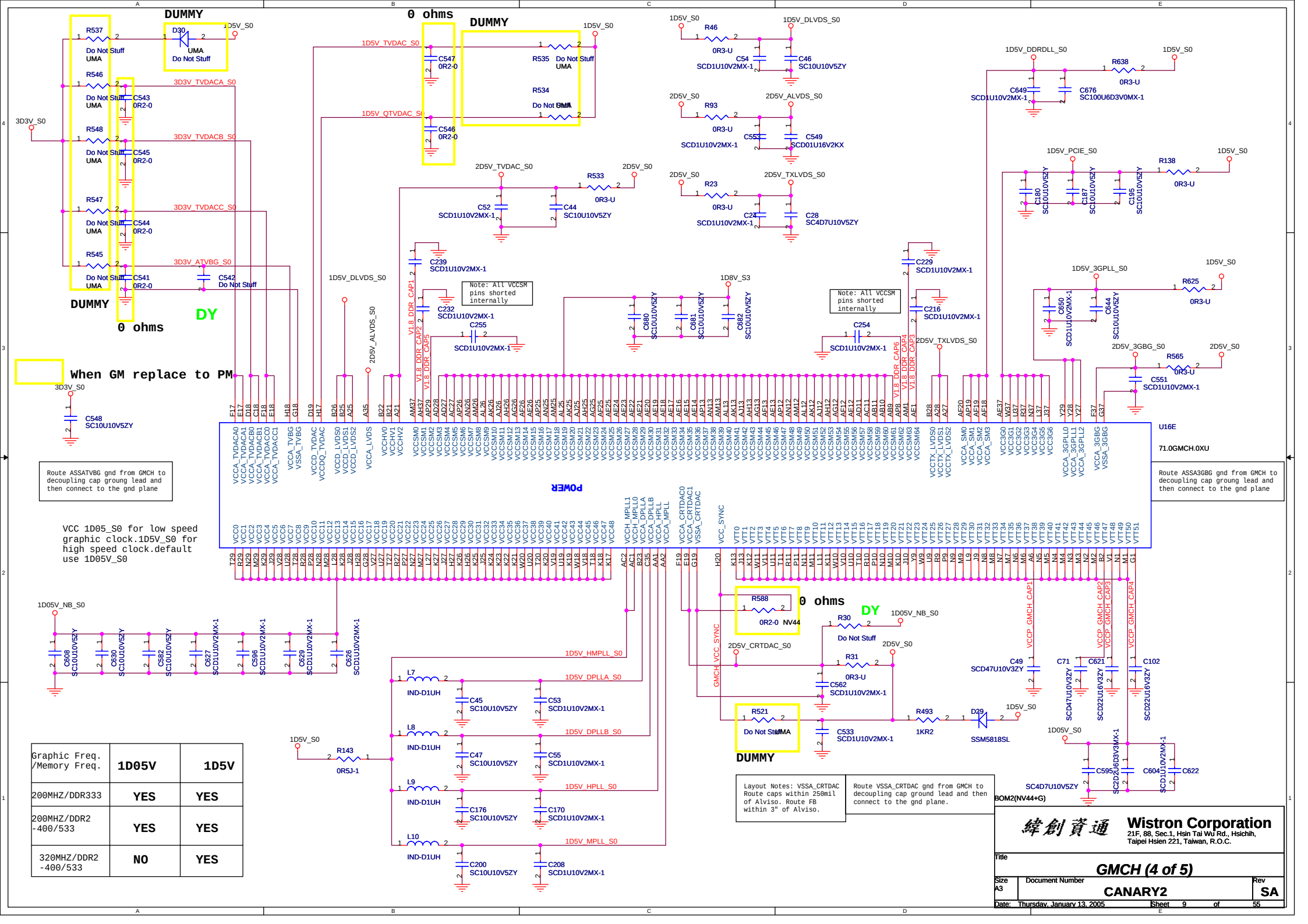
Title: ***GMCH (3 of 5)***

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

Date: Thursday, January 13, 2005 Sheet 8 of 55




| Graphic Freq. /Memory Freq. | 1D05V | 1D5V |
|---|---|---|
| 200MHZ/DDR333 | YES | YES |
| 200MHZ/DDR2 -400/533 | YES | YES |
| 320MHZ/DDR2 -400/533 | NO | YES |

緯創資通 **Wistron Corporation**
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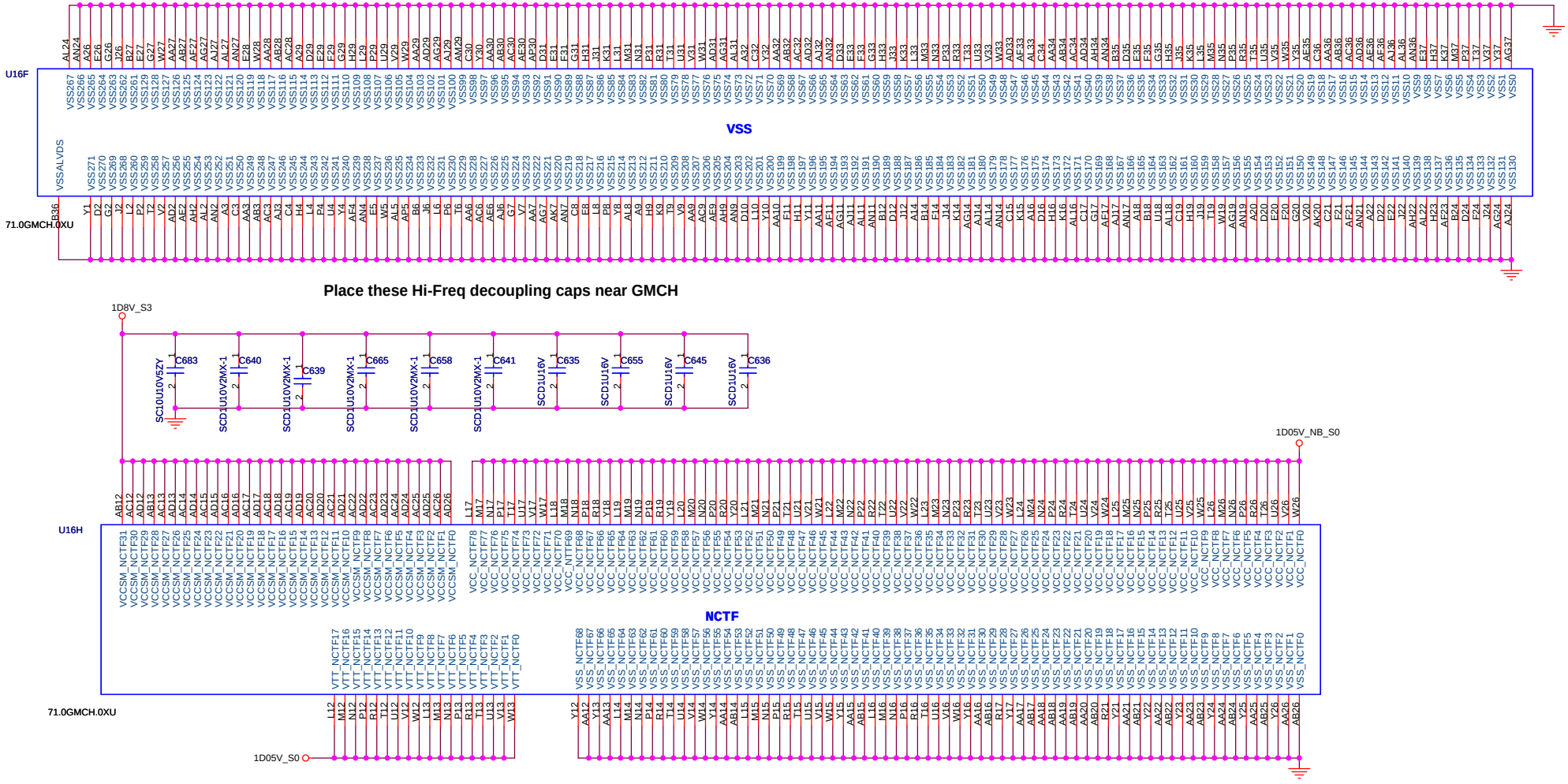
Title: **GMCH (4 of 5)**

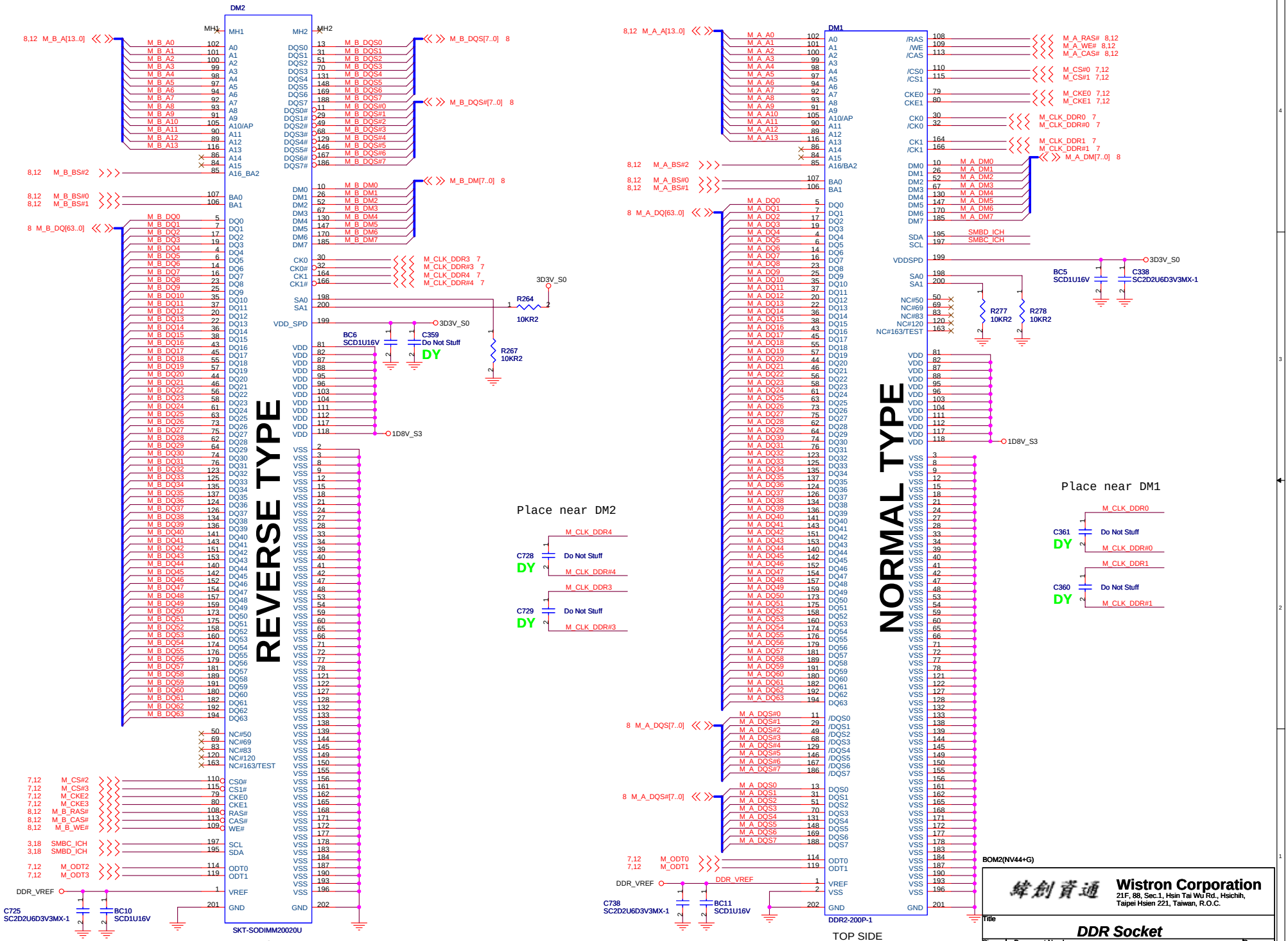
Size: A3 | Document Number: **CANARY2** | Rev: **SA**

Date: Thursday, January 13, 2005 | Sheet 9 of 55




BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 | **Wistron Corporation**<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | |
| Title | ***GMCH (5 of 5)*** | |
| Size<br>A3 | Document Number<br>**CANARY2** | Rev<br>**SA** |
| Date: Thursday, January 13, 2005 | Sheet 10 of 55 | |




BOM2(NV44+G)

蜂创资通 **Wistron Corporation**
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Title: ***DDR Socket***

| Size | Document Number | Rev |
|---|---|---|
| Custom | CANARY2 | SA |

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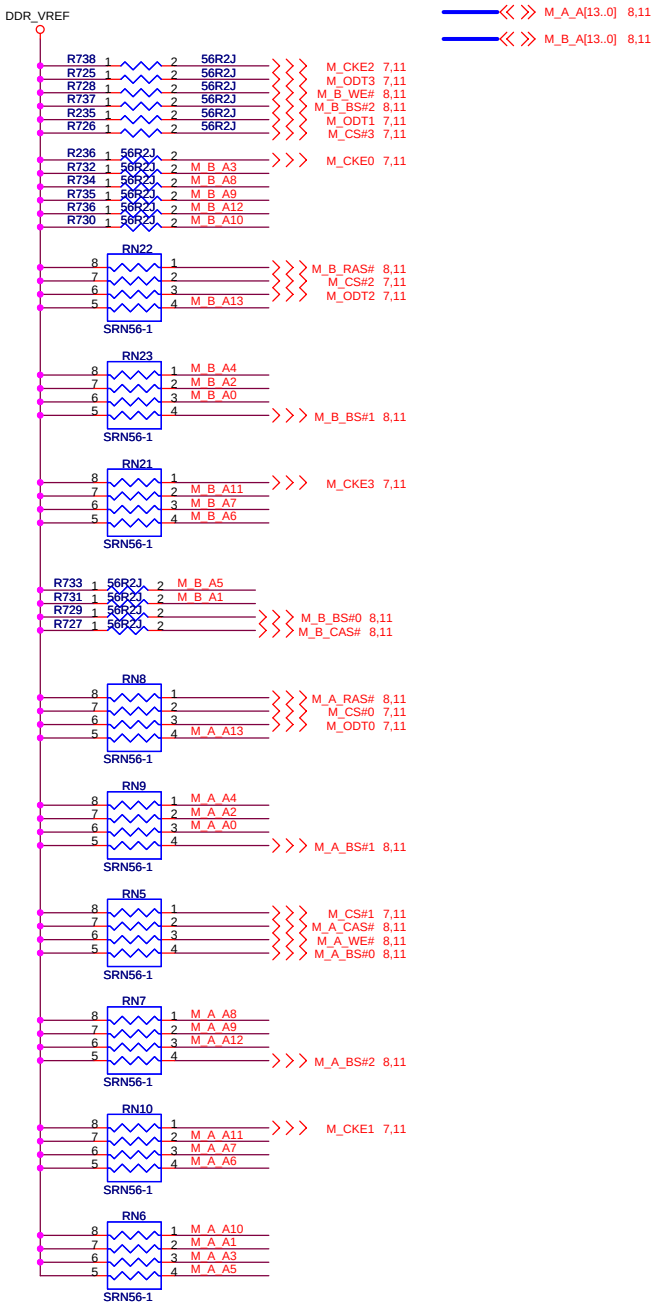
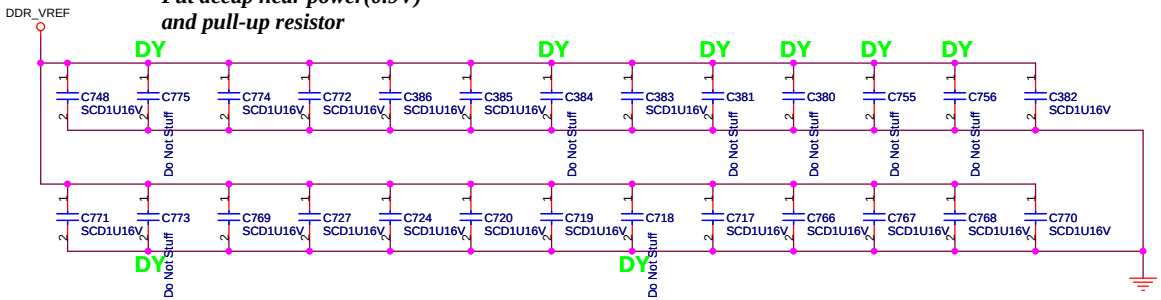
# PARALLEL TERMINATION

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

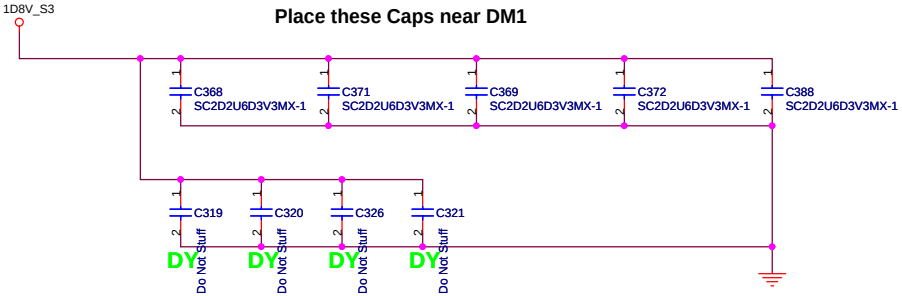



# Decoupling Capacitor

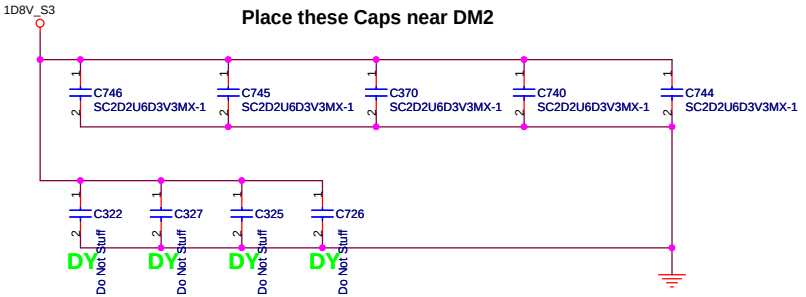
*Put decap near power(0.9V) and pull-up resistor*




## Place these Caps near DM1




## Place these Caps near DM2




BOM2(NV44+G)

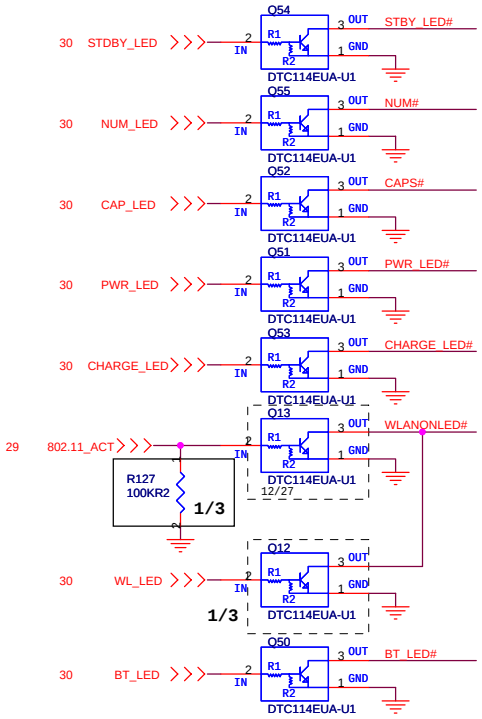
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

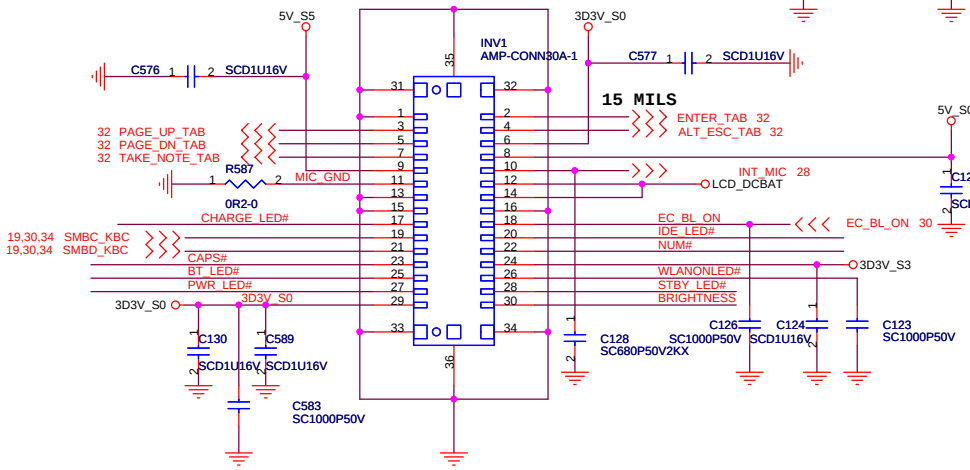
Title: ***DDR2 Termination Resistor***

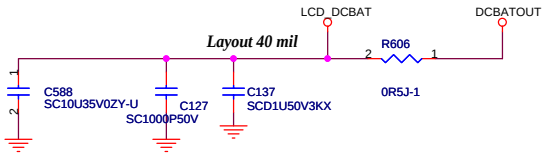
| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

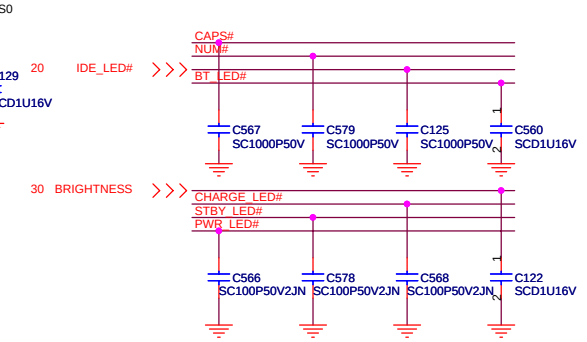
Date: Thursday, January 13, 2005 Sheet 12 of 55

# INVERTER INTERFACE

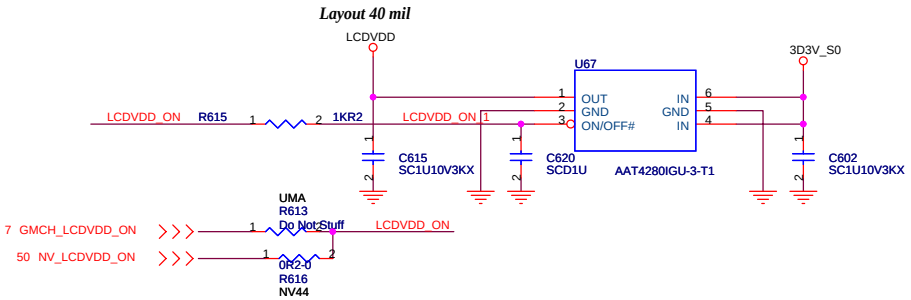


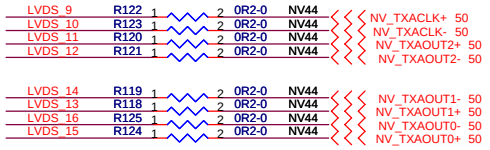




# LCD CONN

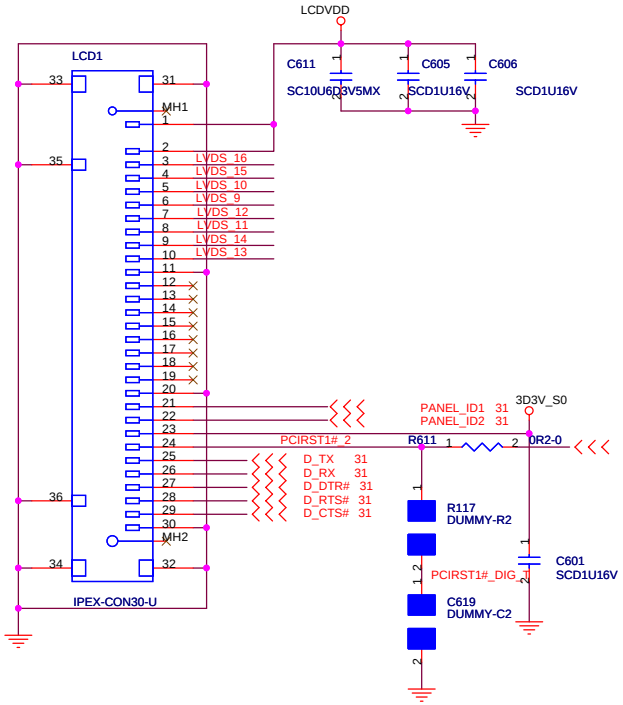


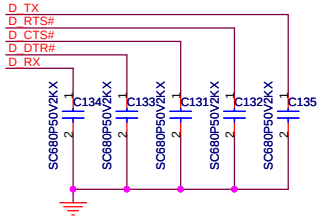


Place them as close to LCD as possible




Place them as close to LCD as possible




BOM2(NV44+G)

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: A3 | Document Number: CANARY2 | Rev: SA

Date: Thursday, January 13, 2005 | Sheet 13 of 55

# CRT I/F &TV CONNECTOR

*Ferrite bead impedance: 75ohm@100MHz*

50 Ohm Impedance

75 Ohm Impedance

34 CRT_R_SYS — CRT_R_SYS — L4 BLM11B750S — CRT_R
34 CRT_G_SYS — CRT_G_SYS — L5 BLM11B750S — CRT_G
34 CRT_B_SYS — CRT_B_SYS — L6 BLM11B750S — CRT_B

R11 150R2F, R19 150R2F, R20 150R2F
C13 SC3P50V2CN, C21 SC3P50V2CN, C22 SC3P50V2CN
C494 SC3P50V2CN, C496 SC3P50V2CN, C498 SC3P50V2CN

5V_S0, 5V_CRT_S0

*5V @ ext. CRT side*

D22 SDMK0340L-7
C499 SCD01U16V2KX
R458 10KR2, R8 2K2R2, R459 2K2R2

CRT1 VIDEO-15-34

CRT_R, CRT_G, CRT_B, CRT_IN#, DAT_DDC1_5, JVGA_HS, JVGA_VS, CLK_DDC1_5

C493 SC100P50V2JN, C495 SC100P50V2JN, C500 SC100P50V2JN
C501 SC100P50V2JN, C497 SC100P50V2JN

*DDC_CLK & DATA level shift*

2D5V_S0, 3D3V_S0

For GMCH: R499 Do Not Stuff UMA
For NV: R482 0R2-0 NV44

34 CLK_DDC1_5 — CLK_DDC1_5
34 DAT_DDC1_5 — DAT_DDC1_5

R484 2K2R2, R485 2K2R2, R483 2K2R2

For GMCH / For NV

7 GMCH_DDCDATA — R465 — UMA Do Not Stuff — DAT_DDC1_5
49 NV_DDCDATA — R466 — NV44 0R2-0 — For NV
49 NV_DDCCLK — R468 — NV44 0R2-0 — For NV
7 GMCH_DDCCLK — R467 — UMA Do Not Stuff — CLK_DDC1_5

Q2 2N7002
Q1 2N7002

*Hsync & Vsync level shift*

5V_S0
C504 SCD1U16V

49 NV_HSYNC — R4 NV44 0R2-0 — CRT_HSYNC
7 GMCH_HSYNC — R9 UMA Do Not Stuff
49 NV_VSYNC — R16 NV44 0R2-0 — CRT_VSYNC
7 GMCH_VSYNC — R14 Do Not Stuff UMA

U52B
U52A TSAHCT125
TSAHCT125

For System CRT

R12 JVGA_HS 39R2J
R13 JVGA_VS 39R2J

5V_S0
U1 PACDN009

CRT_HSYNC1, CRT_R, CRT_VSYNC1 → CRT_G, CRT_B

For Dock CRT

R461 VSYNC_5 39R2J — VSYNC_5 34
R452 HSYNC_5 39R2J — HSYNC_5 34

34 TV_CRMA_SYS — R5 150R2F — C6 SC150P — L1 IND-1D2UH — C5 SC33P — C2 SC270P50V2JN — CRMA_1
34 TV_LUMA_SYS — R6 150R2F — C10 SC150P — L2 IND-1D2UH — C9 SC33P — C7 SC270P50V2JN — LUMA_1
34 TV_COMP_SYS — R7 150R2F — C12 SC150P — L3 IND-1D2UH — C11 SC33P — C4 SC270P50V2JN — COMP_1

TVCONN_12
C492 DY Do Not Stuff
R448 0R2-0

TV1 MINDIN7-9

12/29

*150 Ohm close to connector*

*6 MHz Low-Pass filter close to CONN*

*ESD Protection Diode*

3D3V_S0
D24 BAV99LT1 — LUMA_1
D25 BAV99LT1 — CRMA_1
D23 BAV99LT1 — COMP_1
12/29

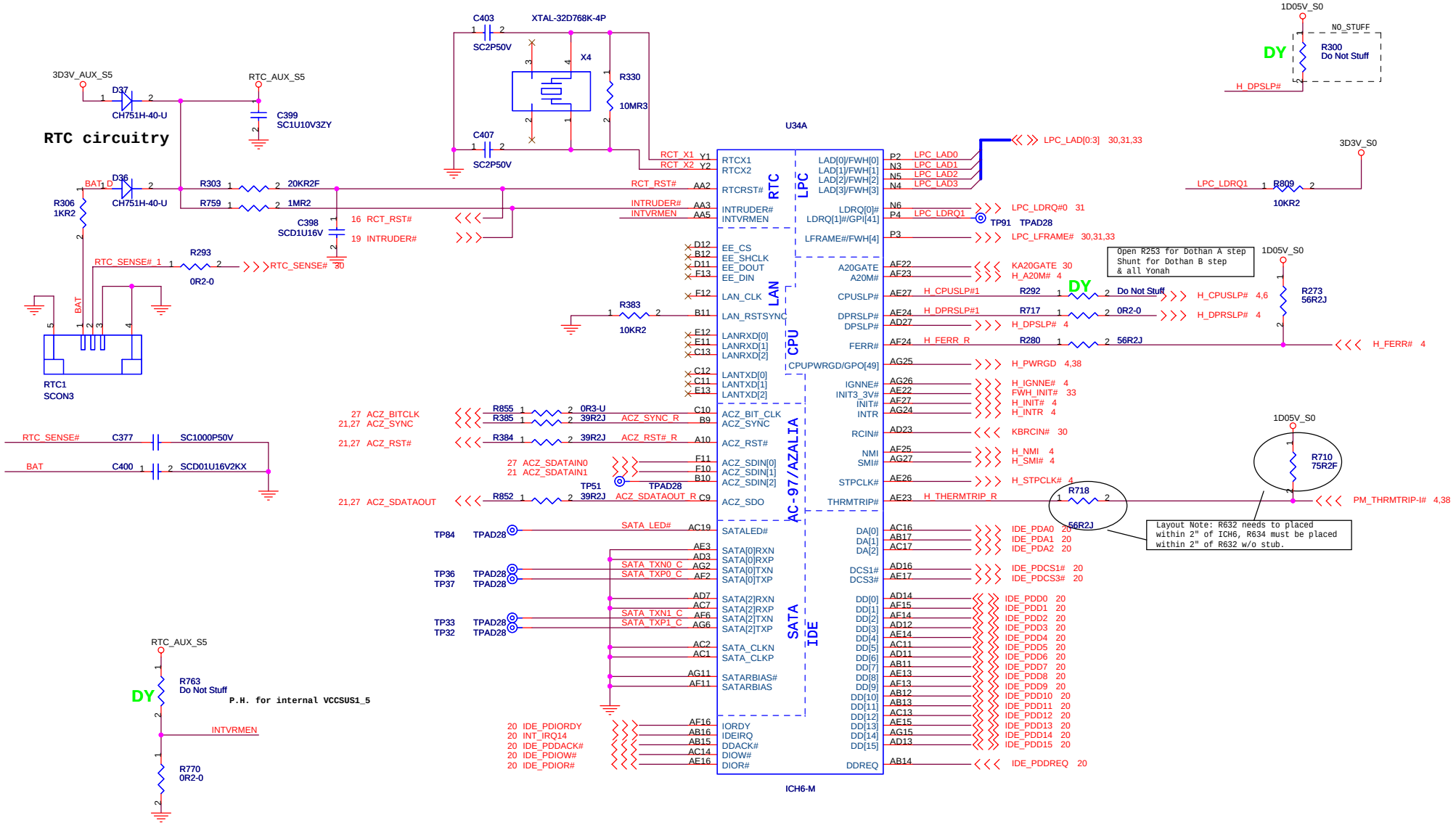
BOM2(NV44+G)


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


Title: **CRT Connector**

| Size | Document Number | Rev |
|---|---|---|
| Custom | CANARY2 | SA |

Date: Thursday, January 13, 2005 Sheet 14 of 55



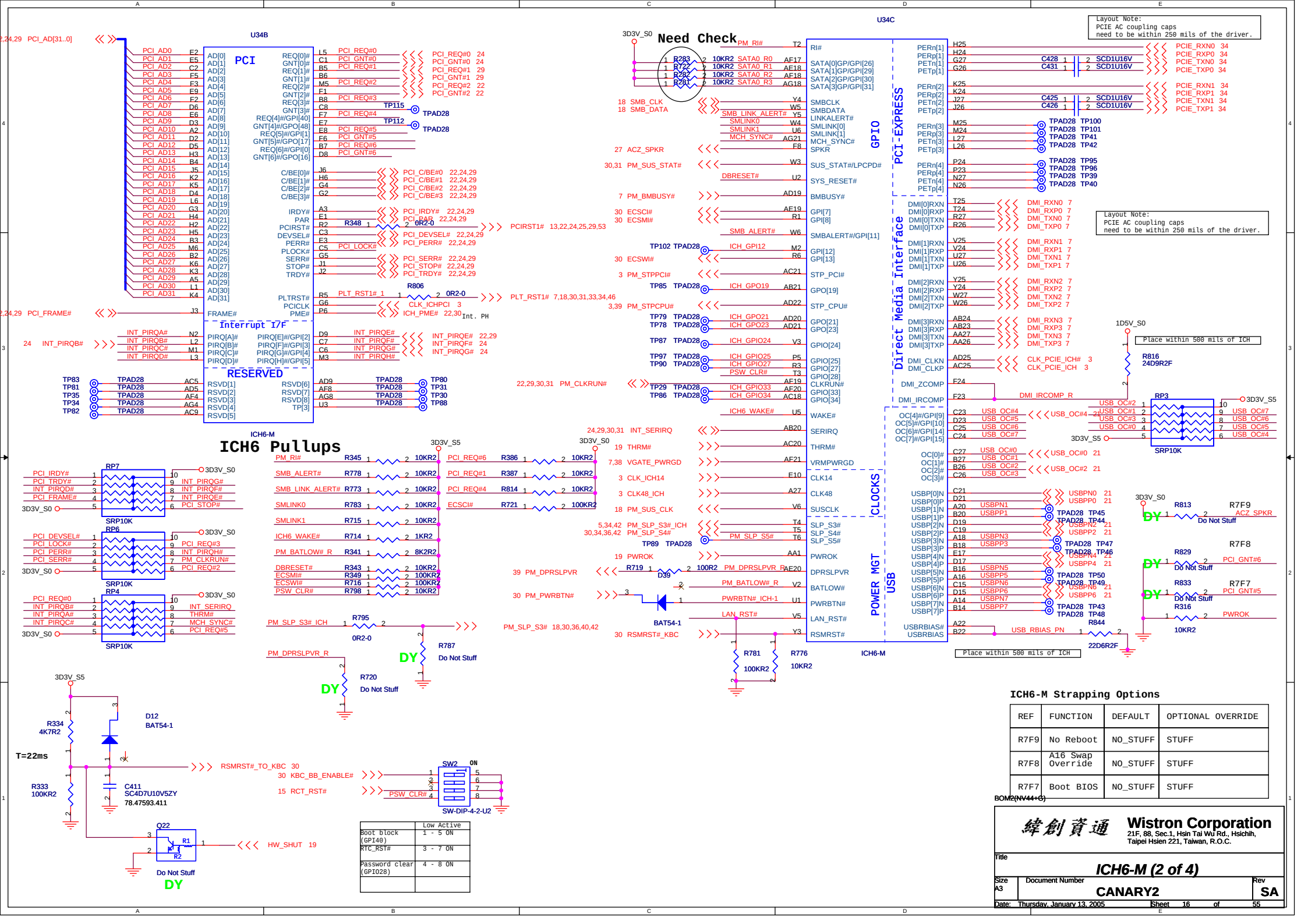

BOM2(NV44+G)

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

Title: **ICH6-M (1 of 4)**

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

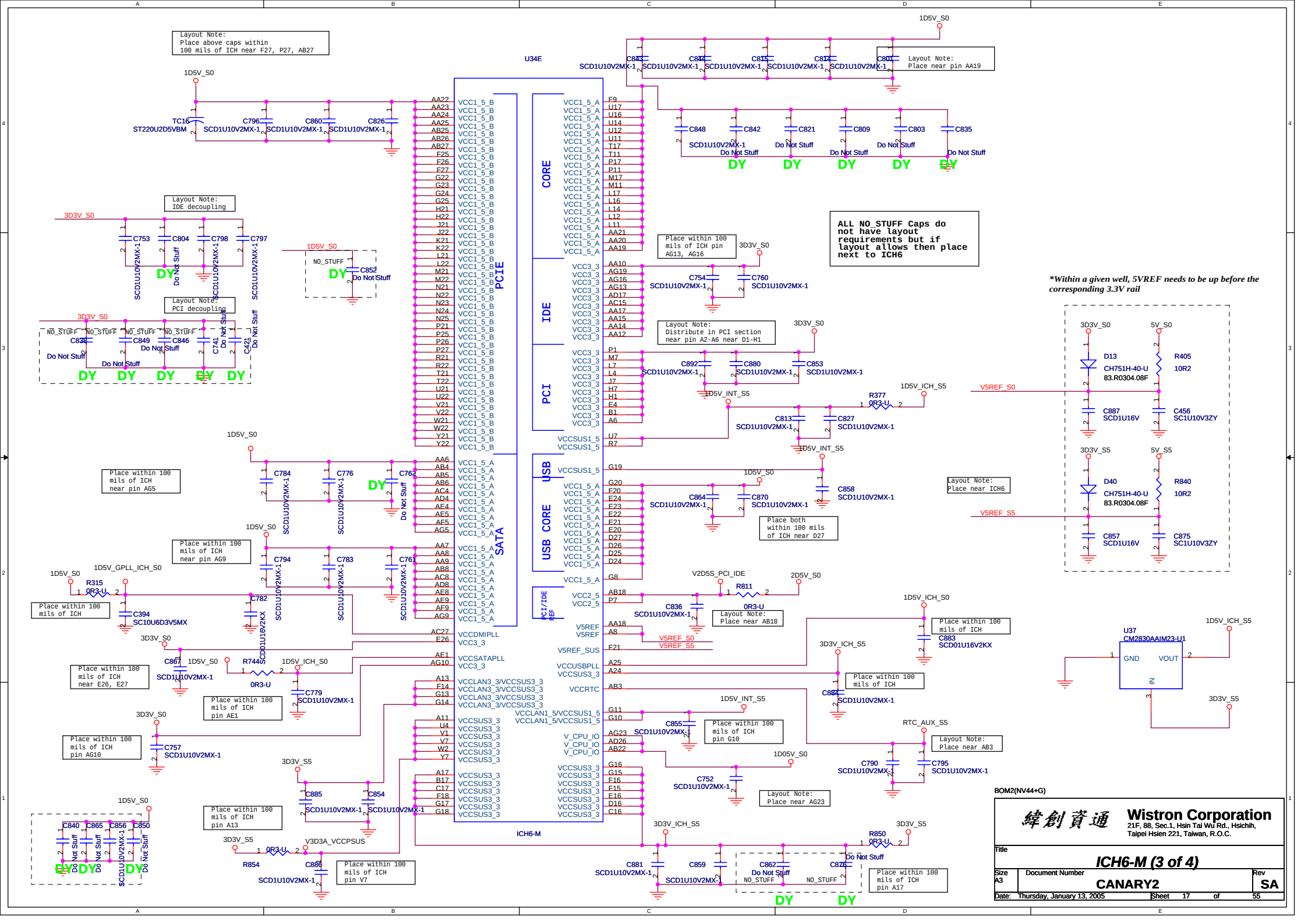
Date: Thursday, January 13, 2005 Sheet 15 of 55

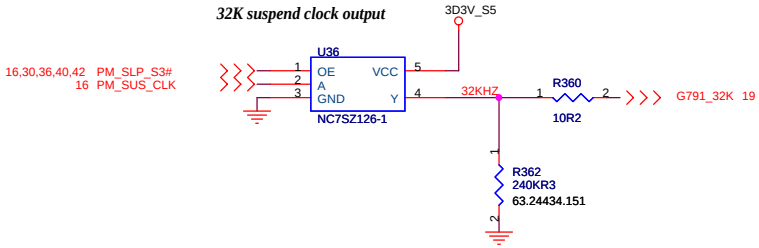


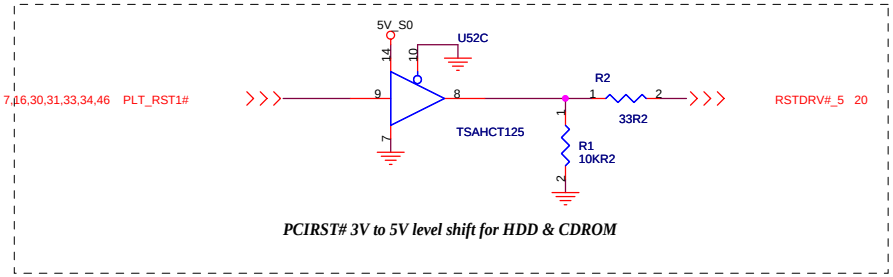

## ICH6-M Strapping Options

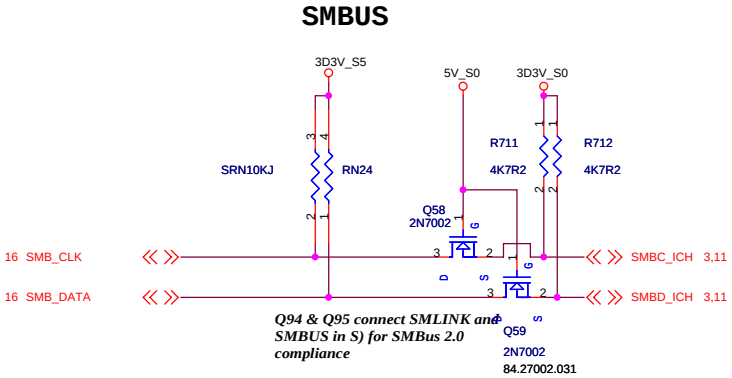
| REF | FUNCTION | DEFAULT | OPTIONAL OVERRIDE |
|---|---|---|---|
| R7F9 | No Reboot | NO_STUFF | STUFF |
| R7F8 | A16 Swap Override | NO_STUFF | STUFF |
| R7F7 | Boot BIOS | NO_STUFF | STUFF |

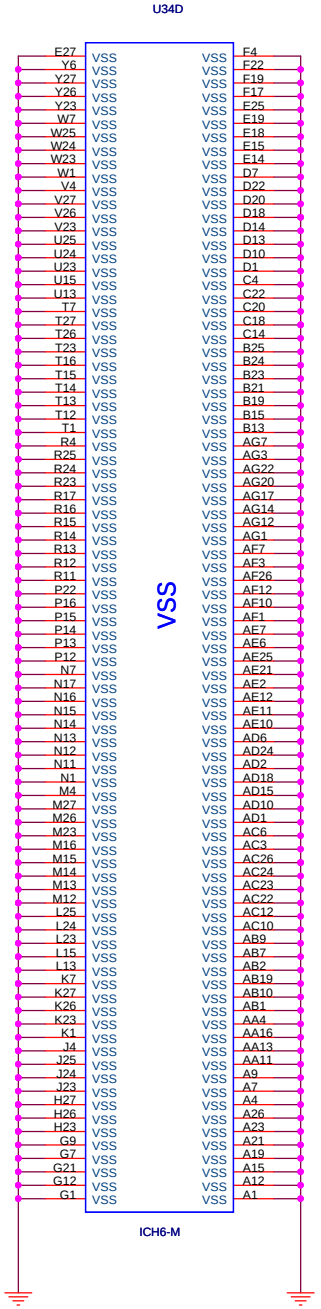
BOM2(NV44+G)


U34E
PCIE
SATA
CORE
IDE
PCI
USB
USB CORE
PCI/IDE REF
ICH6-M
Layout Note: Place above caps within 100 mils of ICH near F27, P27, AB27
Layout Note: Place near pin AA19
Layout Note: IDE decoupling
Layout Note: PCI decoupling
ALL NO_STUFF Caps do not have layout requirements but if layout allows then place next to ICH6
Place within 100 mils of ICH pin AG13, AG16
Layout Note: Distribute in PCI section near pin A2-A6 near D1-H1
Place within 100 mils of ICH near pin AG5
Place within 100 mils of ICH near pin AG9
Place within 100 mils of ICH
Place within 100 mils of ICH near E26, E27
Place within 100 mils of ICH pin AE1
Place within 100 mils of ICH pin AG10
Place within 100 mils of ICH pin A13
Place within 100 mils of ICH pin V7
Place within 100 mils of ICH pin G10
Place within 100 mils of ICH pin A17
Place both within 100 mils of ICH near D27
Layout Note: Place near AB18
Layout Note: Place near AB3
Layout Note: Place near AG23
Layout Note: Place near ICH6
*Within a given well, 5VREF needs to be up before the corresponding 3.3V rail
BOM2(NV44+G)
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title
ICH6-M (3 of 4)
Size A3
Document Number
CANARY2
Rev SA
Date: Thursday, January 13, 2005
Sheet 17 of 55



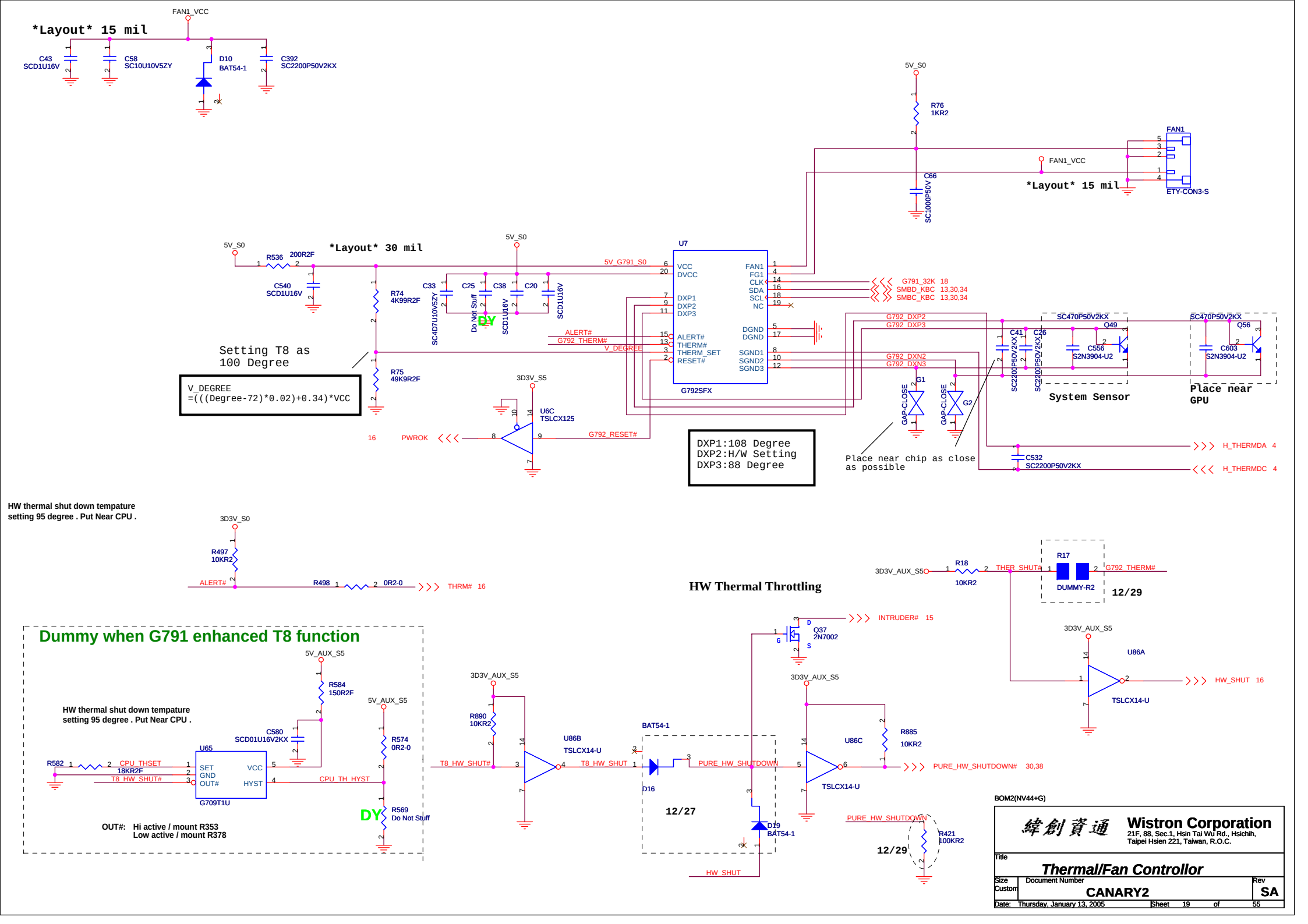




BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 | **Wistron Corporation**<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | |
| Title | ***ICH6-M (4 of 4)*** | |
| Size<br>A3 | Document Number<br>**CANARY2** | Rev<br>**SA** |
| Date: Thursday, January 13, 2005 | Sheet 18 of 55 | |




BOM2(NV44+G)

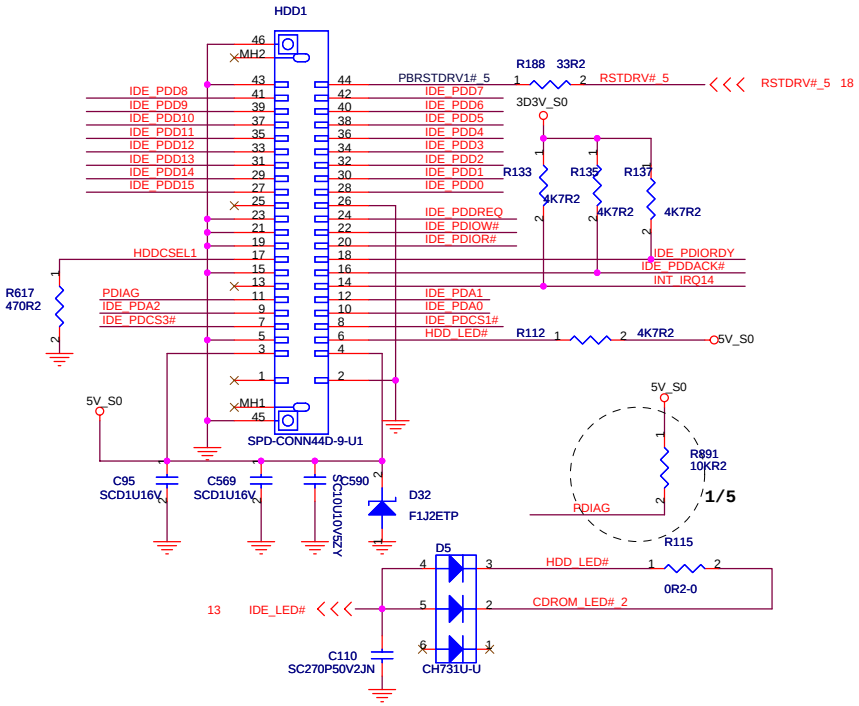
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: ***Thermal/Fan Controllor***

| Size | Document Number | Rev |
|---|---|---|
| Custom | CANARY2 | SA |

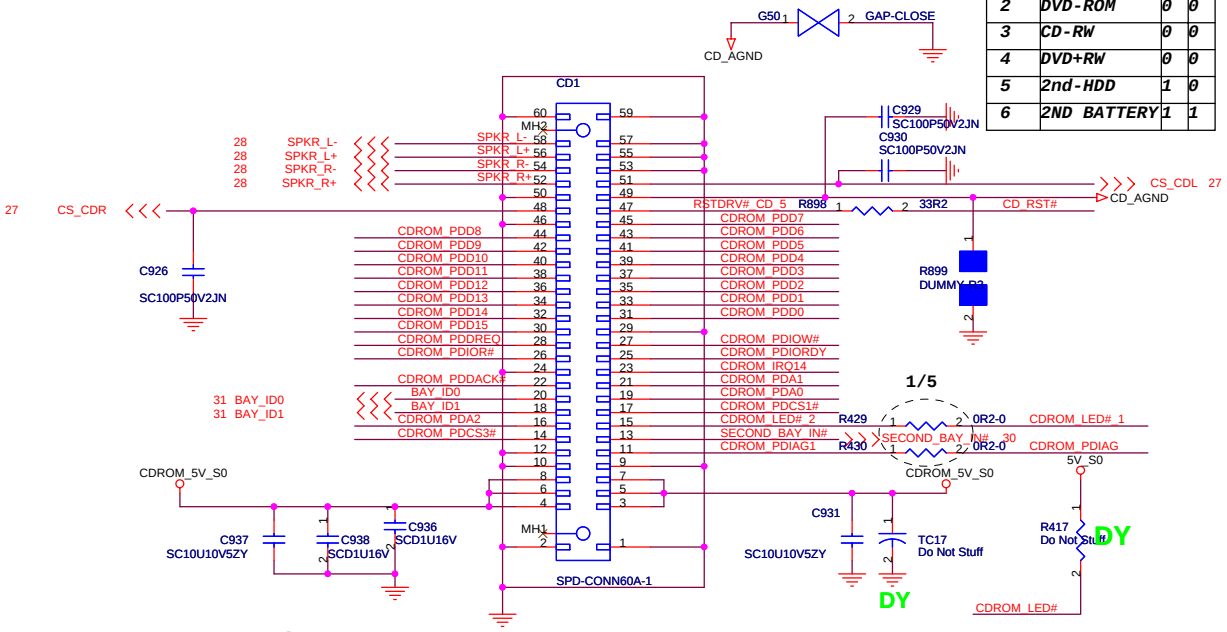
Date: Thursday, January 13, 2005 Sheet 19 of 55

# HDD Connector



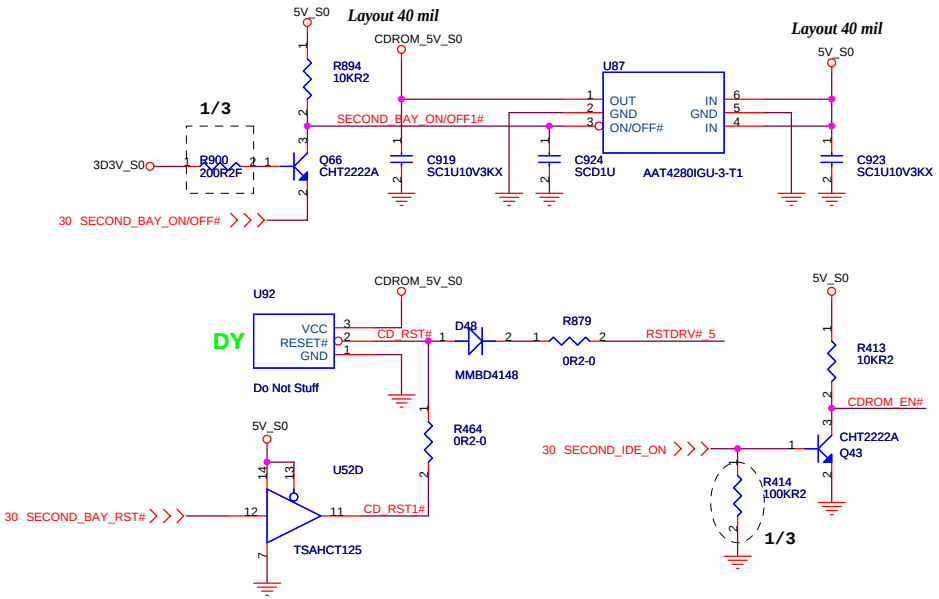

# CD-ROM Connector

| BAY Option Table | | | |
|---|---|---|---|
| Type | Device Description | BAYID 0 | 1 |
| 1 | CD-ROM | 0 | 0 |
| 2 | DVD-ROM | 0 | 0 |
| 3 | CD-RW | 0 | 0 |
| 4 | DVD+RW | 0 | 0 |
| 5 | 2nd-HDD | 1 | 0 |
| 6 | 2ND BATTERY | 1 | 1 |

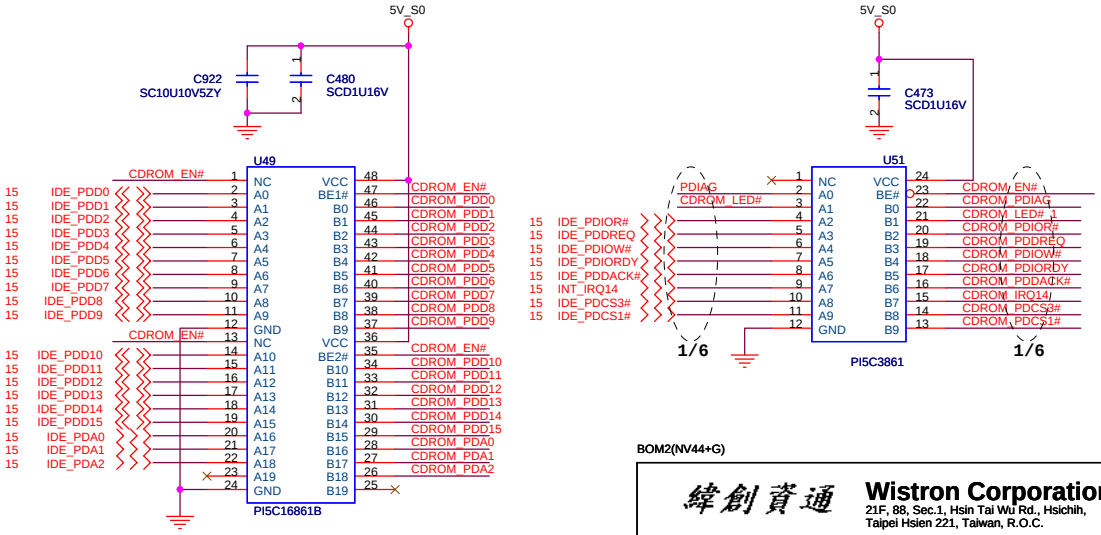



**CHECK PIDE/SIDE DIAG# PIN**

## HOT SWAP CIRCUIT




## TRI-STATE SWITCH FOR CDROM HOT SWAP

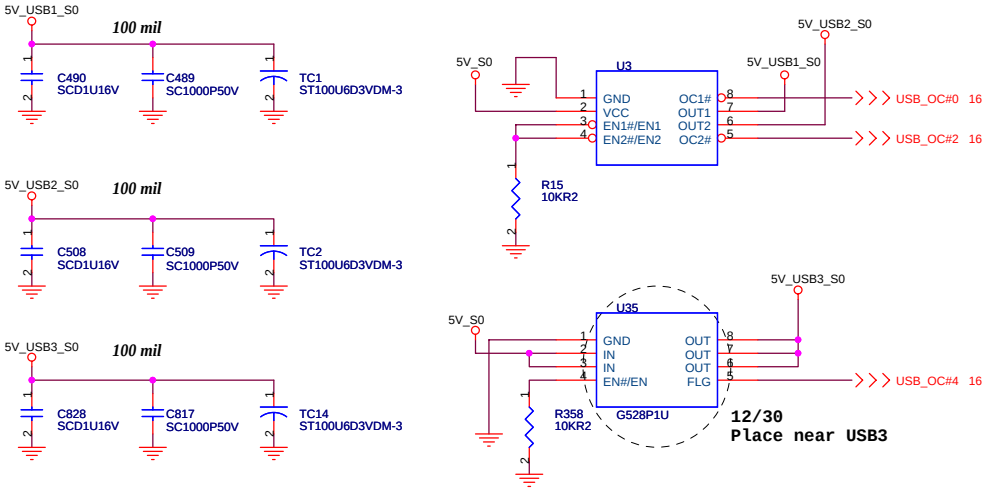


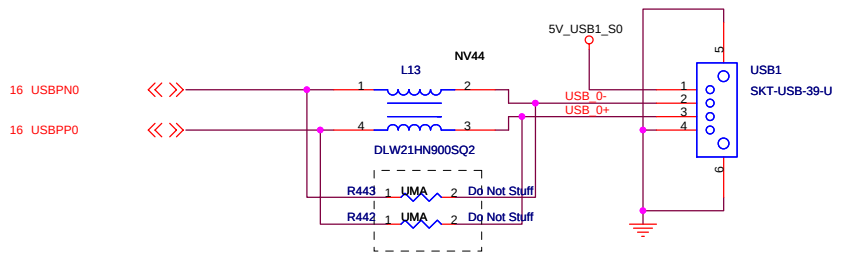

BOM2(NV44+G)

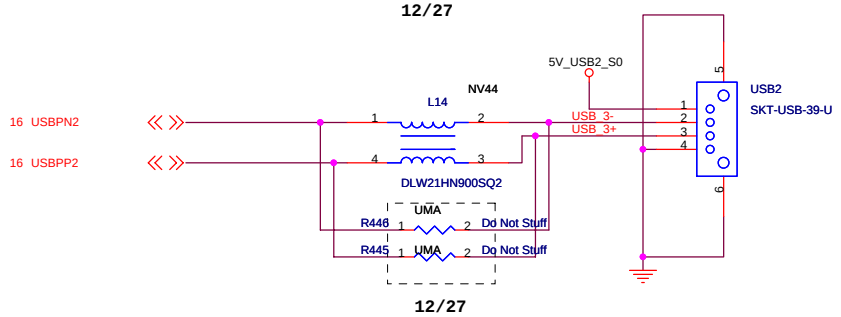
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

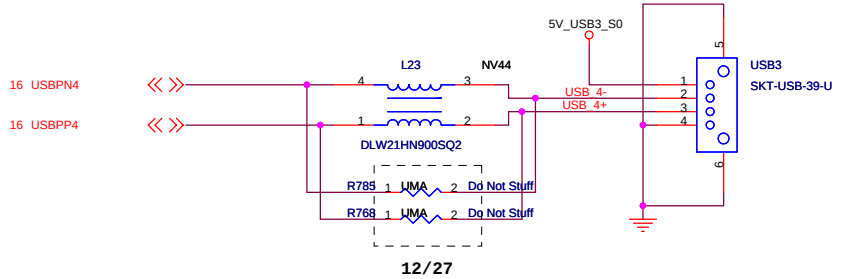
| | | |
|---|---|---|
| Title | HDD and CDROM | |
| Size A3 | Document Number CANARY2 | Rev SA |
| Date: Thursday, January 13, 2005 | Sheet 20 of 55 | |

# USB PORT

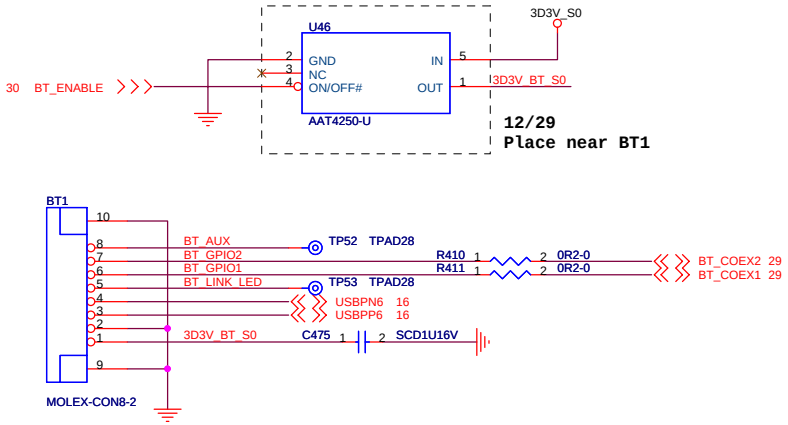


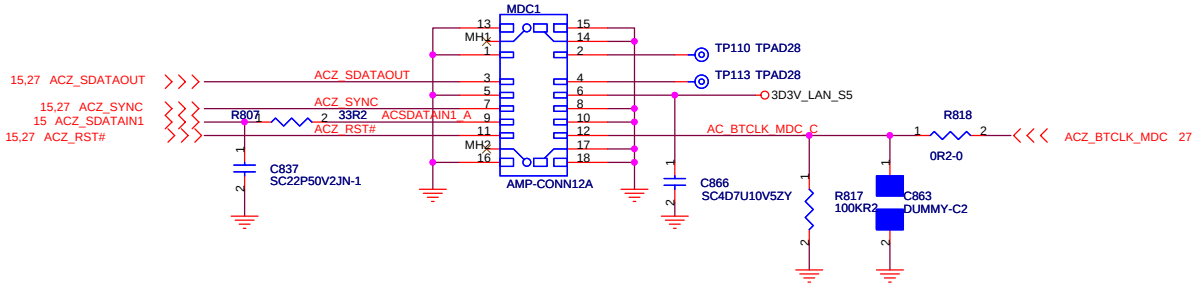




# BLUETOOTH MODULE CONNECTOR

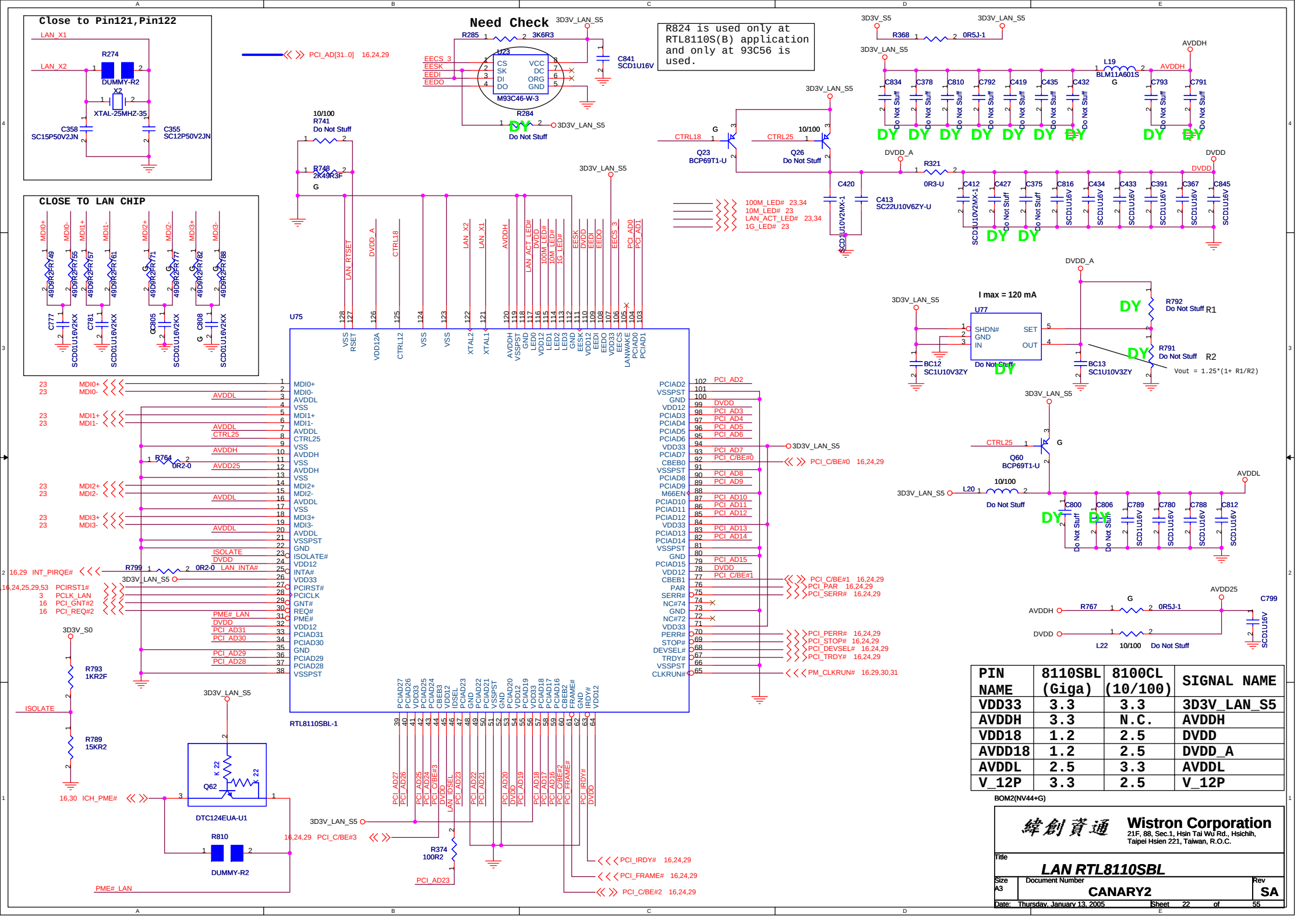



# MDC 1.5 CONNECTOR




BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 Wistron Corporation<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title: USB & MDC & BTOOTH | | |
| Size: A3 | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 21 of 55 | |




| PIN NAME | 8110SBL (Giga) | 8100CL (10/100) | SIGNAL NAME |
|---|---|---|---|
| VDD33 | 3.3 | 3.3 | 3D3V_LAN_S5 |
| AVDDH | 3.3 | N.C. | AVDDH |
| VDD18 | 1.2 | 2.5 | DVDD |
| AVDD18 | 1.2 | 2.5 | DVDD_A |
| AVDDL | 2.5 | 3.3 | AVDDL |
| V_12P | 3.3 | 2.5 | V_12P |

BOM2(NV44+G)

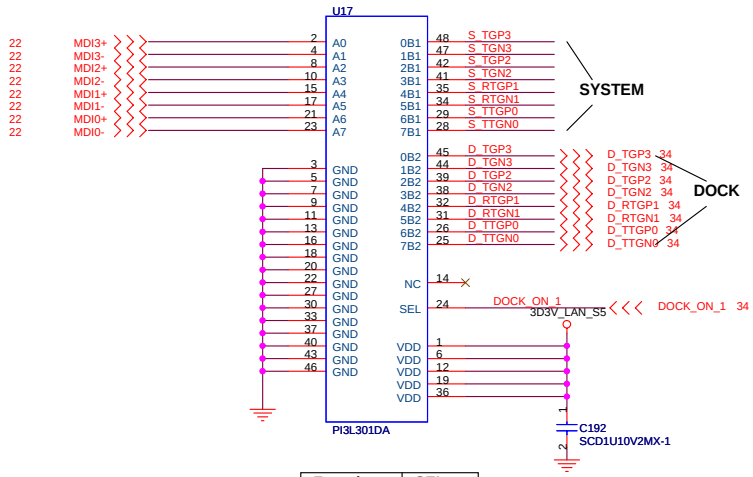

緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.


Title: LAN RTL8110SBL

Size: A3 | Document Number: CANARY2 | Rev: SA

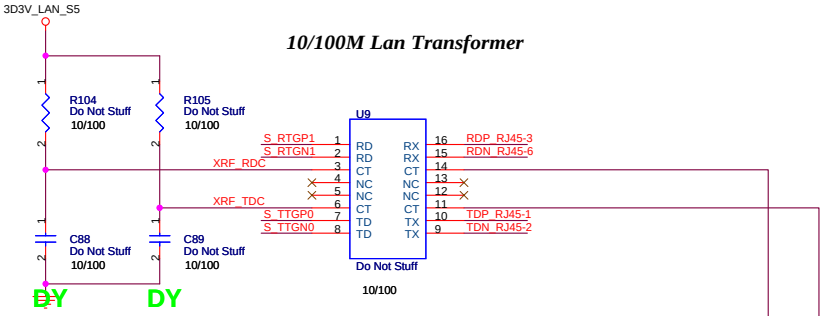
Date: Thursday, January 13, 2005 | Sheet 22 of 55

## LAN switch




| Function | SEL |
|---|---|
| An to nB1 | L |
| An to nB2 | H |

## 10/100M Lan Transformer



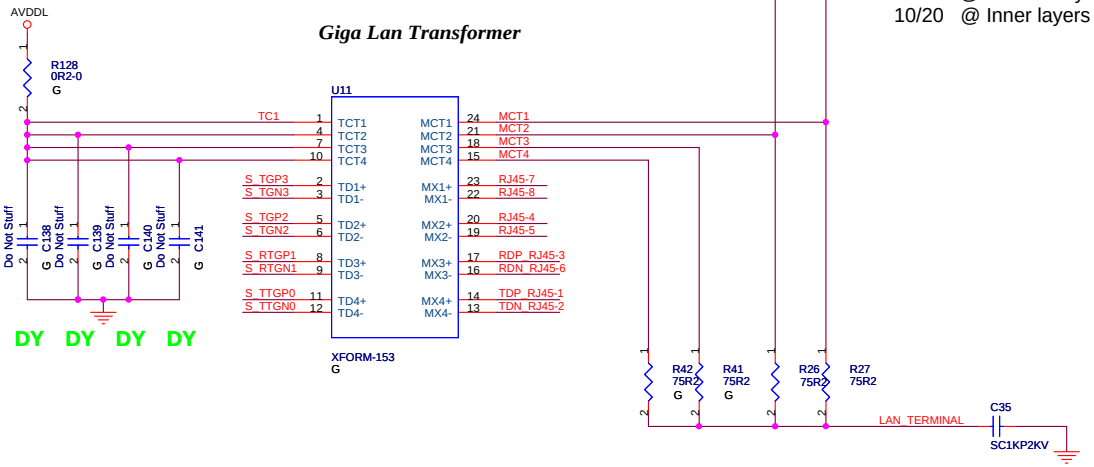

1.route on bottom as differential pairs.
2.Tx+/Tx- are pairs. Rx+/Rx- are pairs.
3.No vias, No 90 degree bends.
4.pairs must be equal lengths.
5.6mil trace width,12mil separation.
6.36mil between pairs and any other trace.
7.Must not cross ground moat,except RJ-45 moat.

**Green LED: Speed 100: ON / Speed 10:OFF**
**Yellow LED: Link: ON, TX/RX: ~~Flash(10Hz)~~**

**RJ11 signal must leave the other signal or power plane 100mil.**

DOC_TIP,DOC_RING,TIP,RING:
W/S : 10/100 @ Surface layers
10/20 @ Inner layers

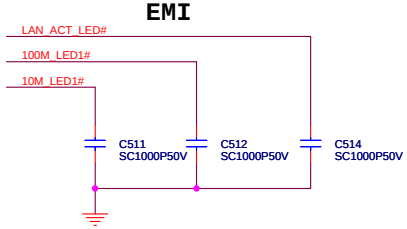
## Giga Lan Transformer



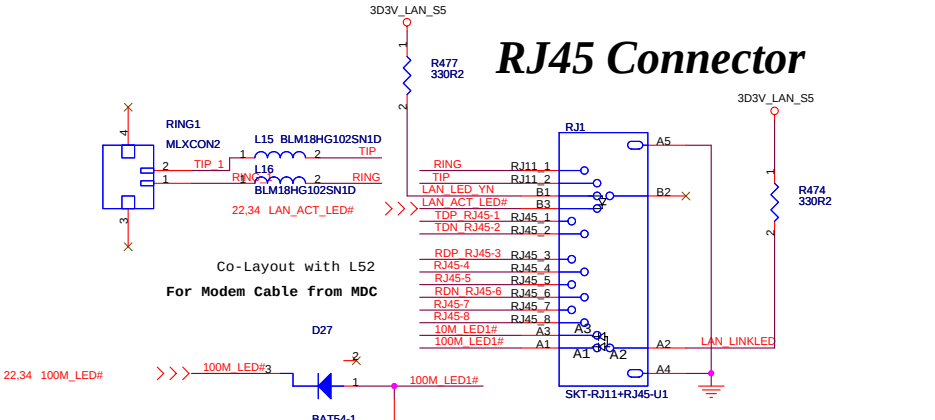


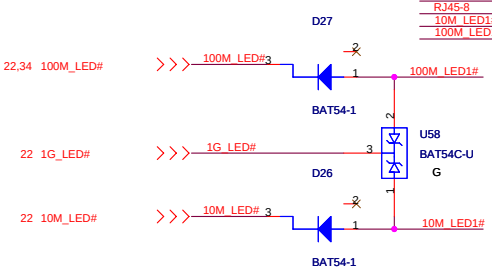


## EMI




## RJ45 Connector




Link: Green - 10Mbps/802.11b
Orange - 100Mbps/802.11a
Yellow - 1Gbps
Activity: Yellow

BOM2(NV44+G)

| | | |
|---|---|---|
| 鋒創資通 **Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title: ***LAN Connector*** | | |
| Size: Custom | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 23 of 55 | |

INTA# CARBUS 1
INTB# CARBUS 2
INTC# 1394
INTD# CARD READER

U26A — 1 of 4 — PCI7411

CARD BUS: VCCP, AD31–AD0, C/BE3#–C/BE0#, PAR, FRAME#, TRDY#, IRDY#, STOP#, DEVSEL#, IDSEL, PERR#, SERR#, REQ#, GNT#, PCLK, PRST#, GRST#, RI_OUT#/PME#, SUSPEND#, DATA, CLOCK, LATCH, SPKROUT

1394: MFUNC0–MFUNC6, CLK_48, AVDD, VDPLL_33, VSSPLL, VDPLL_15, R0, R1, TPBIAS0, TPA0P, TPA0N, TPB0P, TPB0N, PHY_TEST_MA, CPS, CNA, XO, XI, PC0(TEST1), PC1(TEST2), PC2(TEST3), AGND, TPBIAS1, TPA1P, TPA1N, TPB1P, TPB1N

SD/SDIO: MC_PWR_CTRL_0, MC_PWR_CTRL_1, SD_CD#, MS_CD#, SM_CD#, MS_CLK/SD_CLK/SM_EL_WP#, MS_BS/SD_CMD/SM_WE#, MS_DATA3/SD_DAT3/SM_D3, MS_DATA2/SD_DAT2/SM_D2, MS_DATA1/SD_DAT1/SM_D1, MS_SDIO(DATA0)/SD_DAT0/SM_D0, SD_CLK/SM_RE#, SD_CMD/SM_ALE, SD_DAT0/SM_D4, SD_DAT1/SM_D5, SD_DAT2/SM_D6, SD_DAT3/SM_D7, SD_WP/SM_CE, SM_CLE, SM_R/B#, SM_PHYS_WP#

UNUSED TERMINALS: B_USB_EN#, A_USB_EN#, SDA, SCL, NC#W17, RSVD, TEST0, RSVD

* All 1394 signals must be routed on top side only
* Differential pairs of each ports should have equal trace length
* Stubs must be keep as short as possible

Place it near to chip

Bypass/Decupoling Capacitors
Should be places as close to
PCI7421 as possible

SD MS/MS_pro

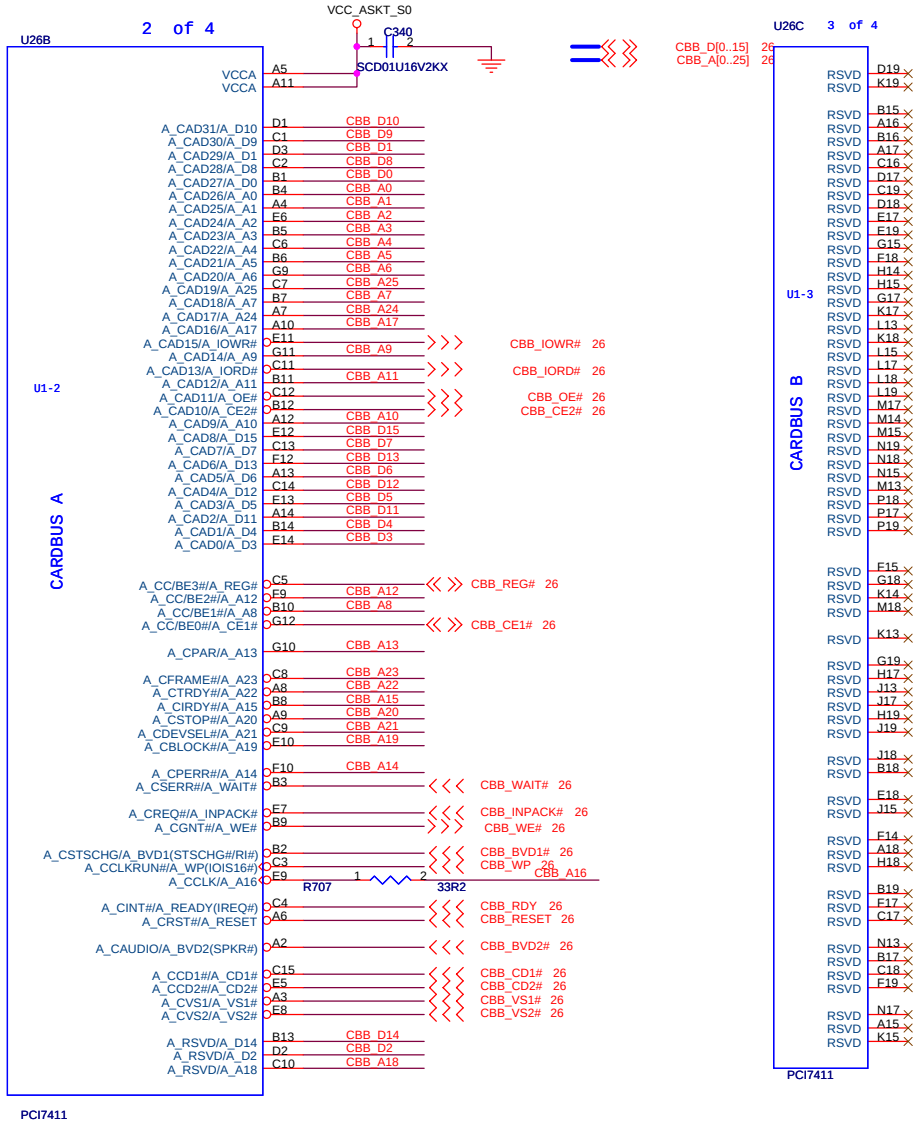
MS/MS_pro

SD

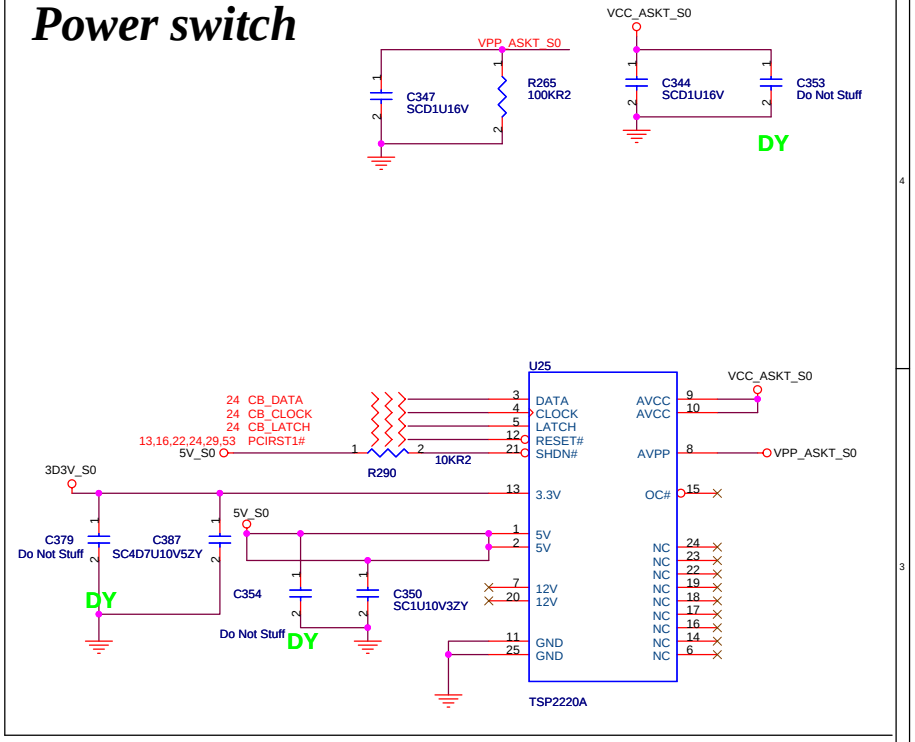
XD

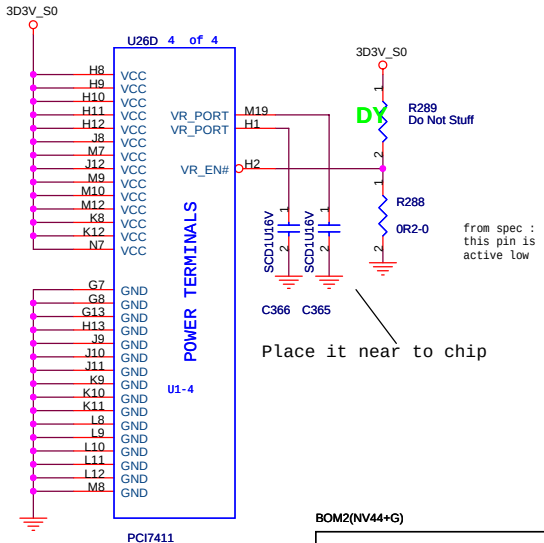
BOM2(NV44+G)

| | | |
|---|---|---|
| Wistron Corporation 緯創資通 | 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| Title: TI PCI7411 GHK (1 of 2) | | |
| Size: A3 | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 24 of 55 | |




# Power switch




BOM2(NV44+G)

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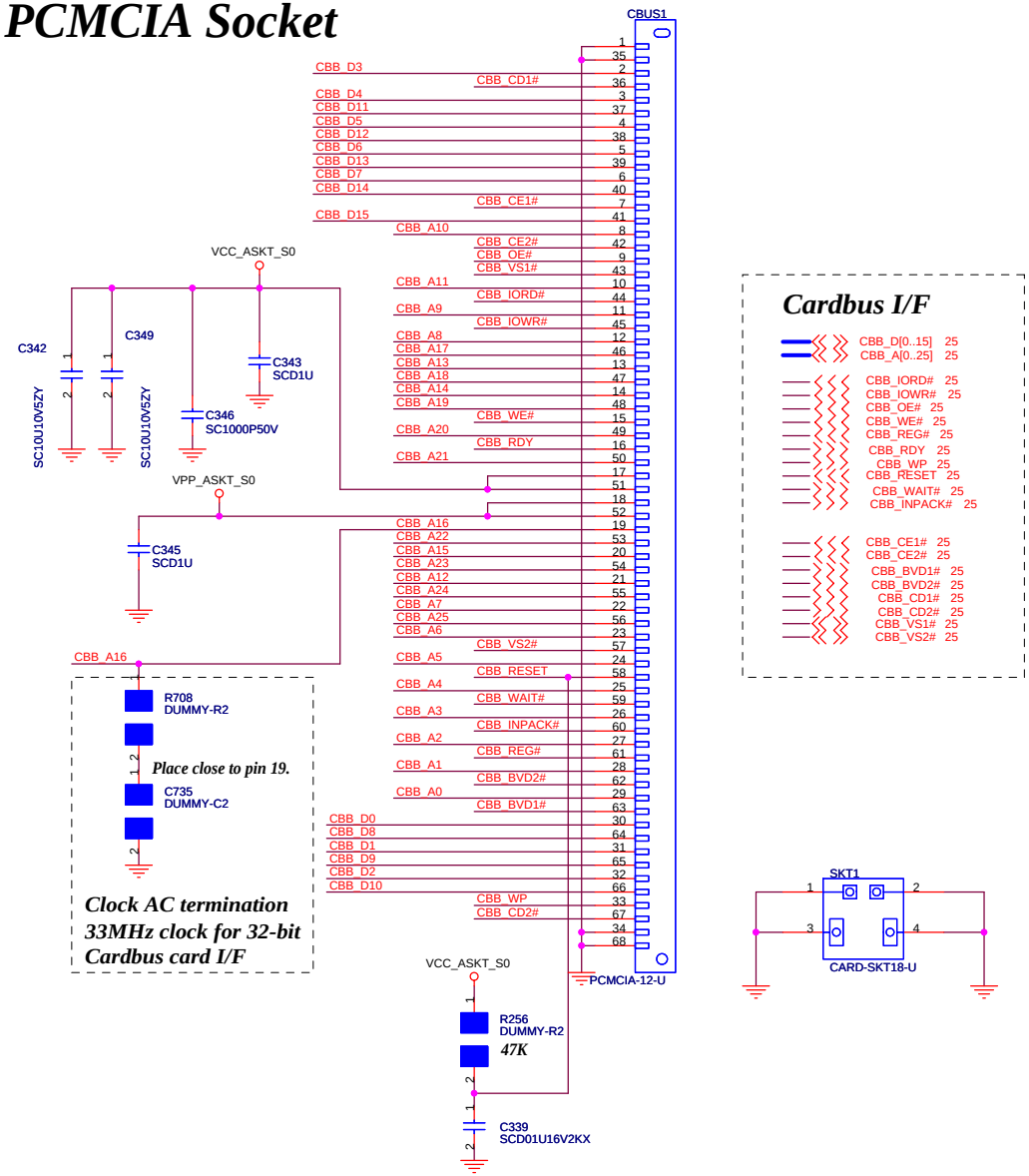
| | | |
|---|---|---|
| Title | *TI PCI7411 GHK (2 of 2)* | |
| Size A3 | Document Number CANARY2 | Rev SA |
| Date: Thursday, January 13, 2005 | Sheet 25 of 55 | |

# PCMCIA Socket



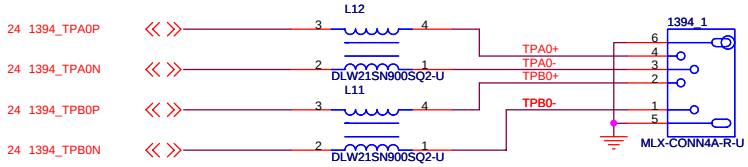

## Cardbus I/F



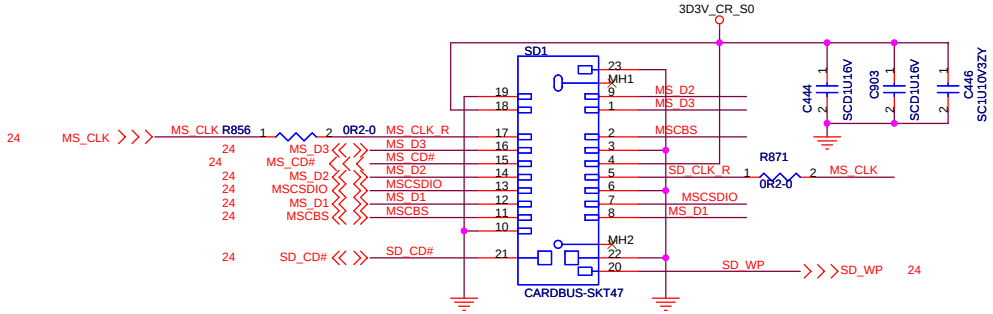




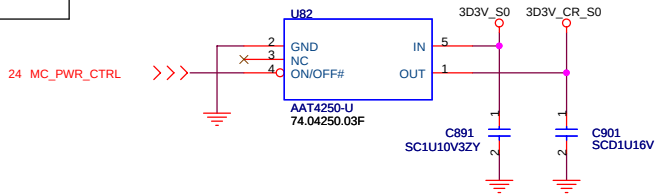
# 1394 Connector




# SD/MMC/MS CONN.




## POWER SWITCH




BOM2(NV44+G)

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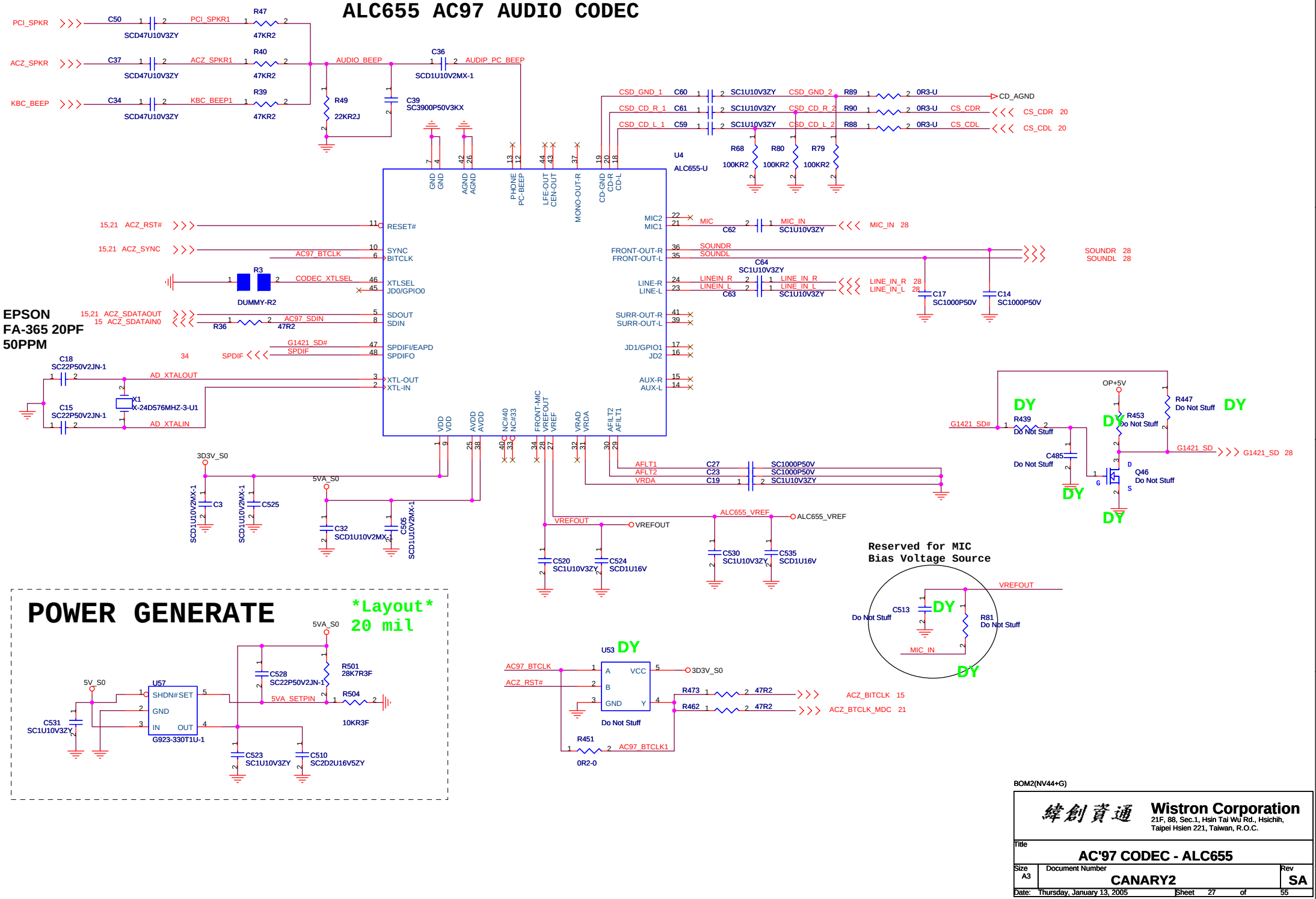
Taipei Hsien 221, Taiwan, R.O.C.

Title: PCMCIA SLOT / 1394 CONN.

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

Date: Thursday, January 13, 2005 Sheet 26 of 55

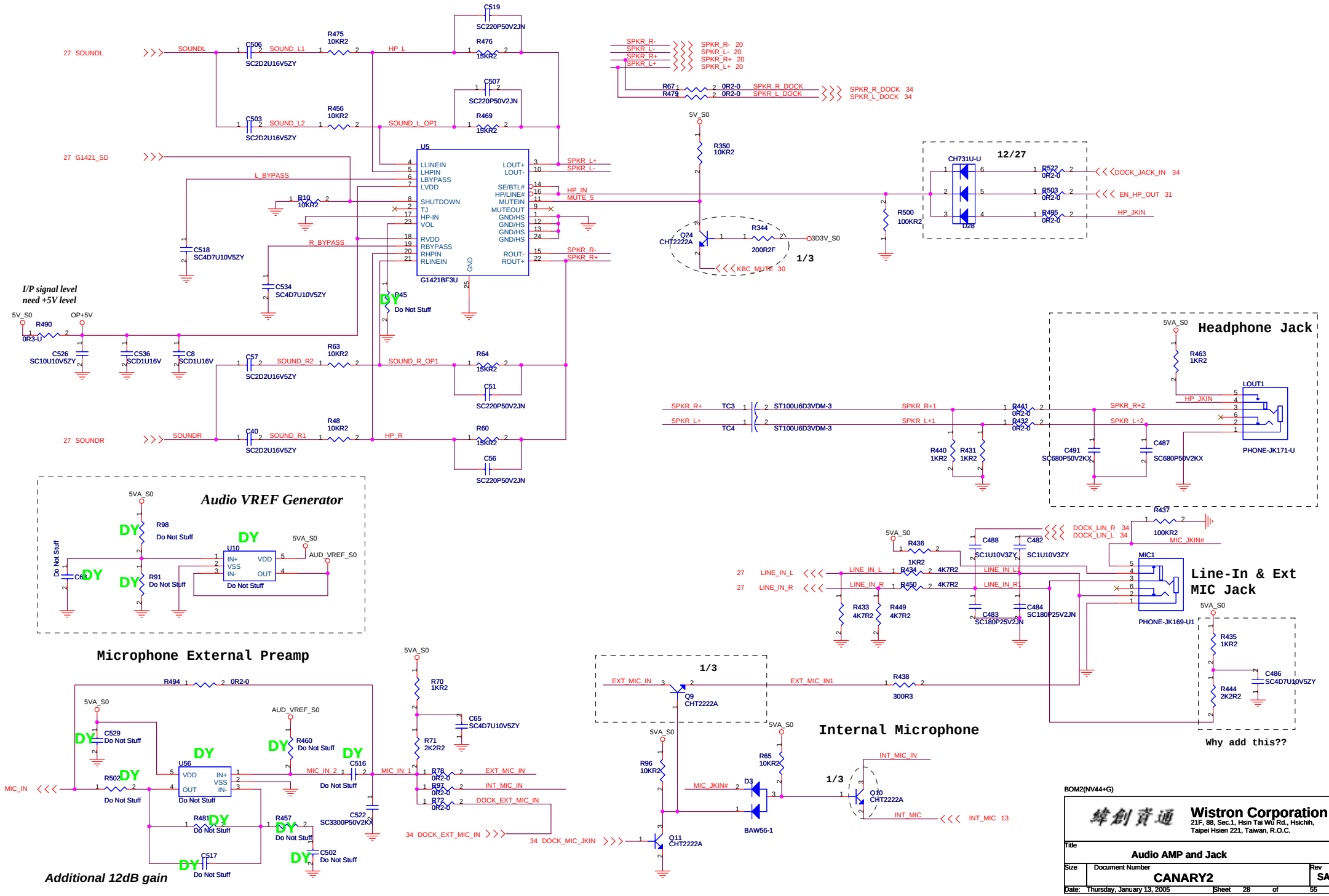
# ALC655 AC97 AUDIO CODEC




BOM2(NV44+G)

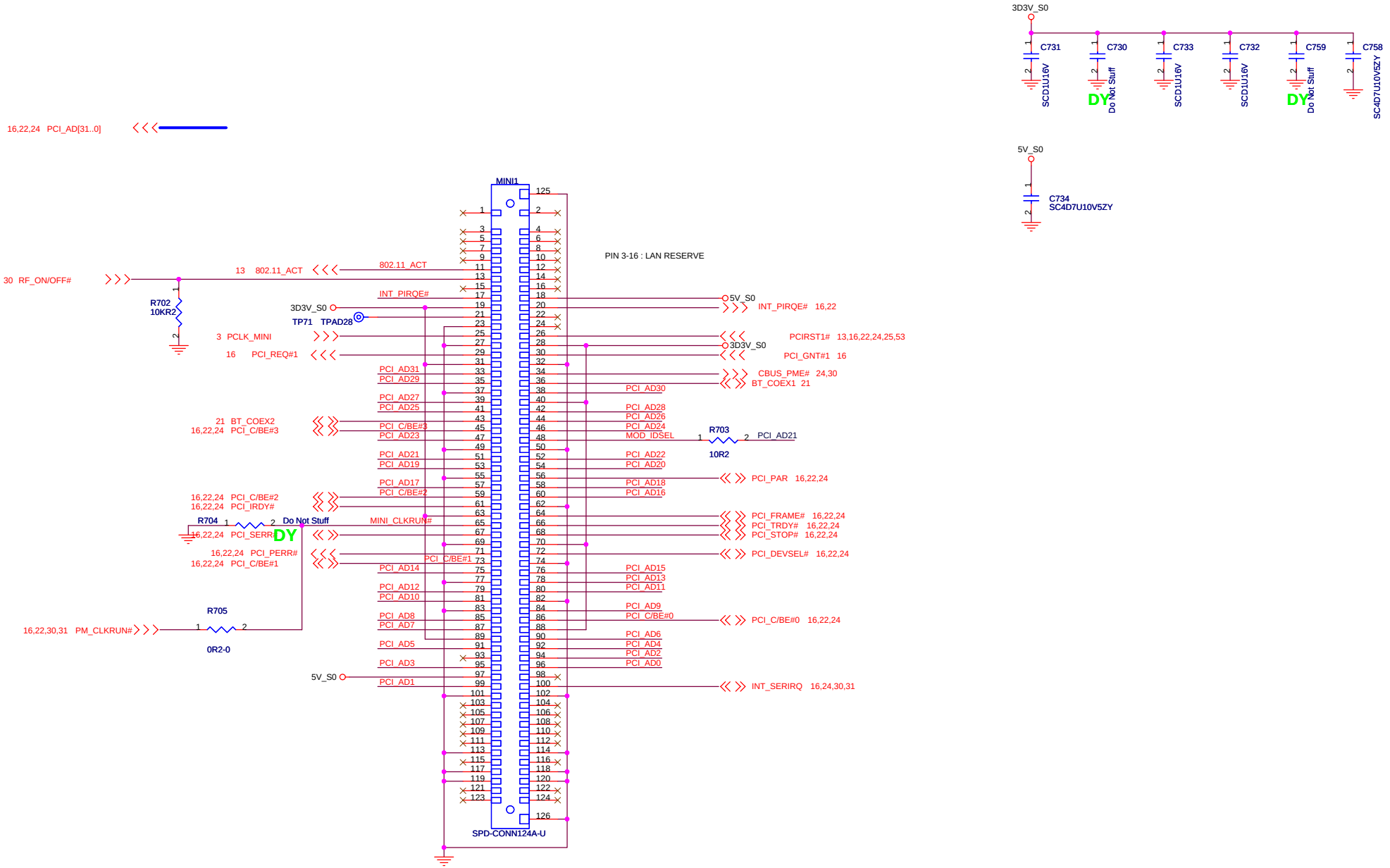
| | | |
|---|---|---|
| 緯創資通 | **Wistron Corporation**<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | |
| Title | **AC'97 CODEC - ALC655** | |
| Size: A3 | Document Number: **CANARY2** | Rev: **SA** |
| Date: Thursday, January 13, 2005 | Sheet 27 of 55 | |

# AUDIO OP AMPLIFIER




BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 | **Wistron Corporation**<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | |
| Title | **Audio AMP and Jack** | |
| Size | Document Number<br>**CANARY2** | Rev<br>**SA** |
| Date: Thursday, January 13, 2005 | Sheet 28 of 55 | |




BOM2(NV44+G)

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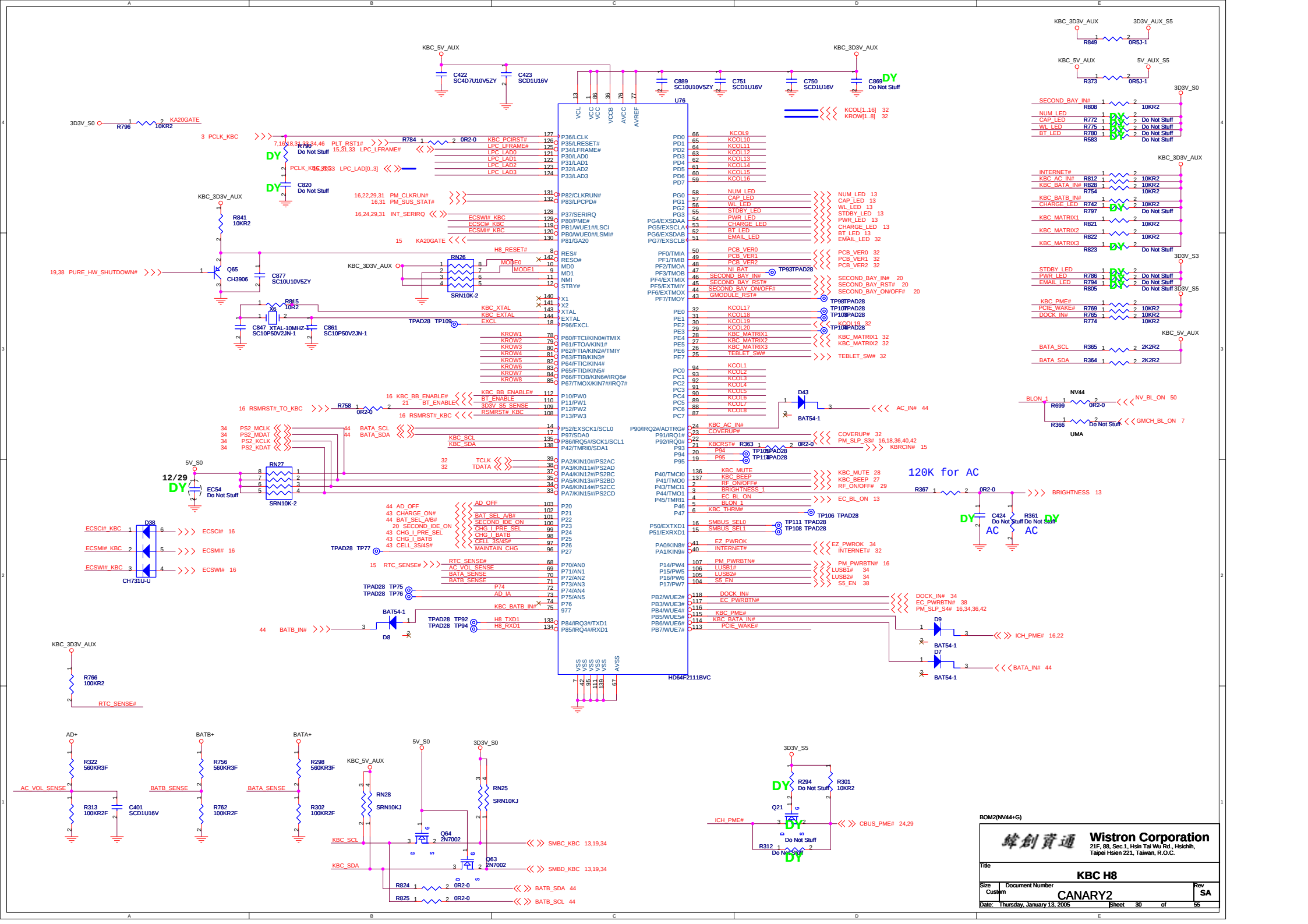
Taipei Hsien 221, Taiwan, R.O.C.

Title: ***MINI-PCI***

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

Date: Thursday, January 13, 2005 Sheet 29 of 55


KBC_5V_AUX
KBC_3D3V_AUX
U76
HD64F2111BVC
3D3V_S0
KA20GATE
R796 10KR2
PCLK_KBC
PLT_RST1#
LPC_LFRAME#
LPC_LAD0
LPC_LAD1
LPC_LAD2
LPC_LAD3
LPC_LAD[0..3]
R784 0R2-0
R790 Do Not Stuff
C820 Do Not Stuff
PM_CLKRUN#
PM_SUS_STAT#
INT_SERIRQ
ECSWI# KBC
ECSCI# KBC
ECSMI# KBC
KA20GATE
H8_RESET#
PURE_HW_SHUTDOWN#
R841 10KR2
Q65 CH3906
C877 SC10U10V5ZY
RN26 SRN10K-2
MODE0
MODE1
R815 10R2
X6 XTAL-10MHZ-1
C847 SC10P50V2JN-1
C861 SC10P50V2JN-1
KBC_XTAL
KBC_EXTAL
EXCL
TPAD28 TP109
KROW1
KROW2
KROW3
KROW4
KROW5
KROW6
KROW7
KROW8
KBC_BB_ENABLE#
BT_ENABLE
3D3V_S5_SENSE
RSMRST# KBC
RSMRST#_TO_KBC
R758 0R2-0
PS2_MCLK
PS2_MDAT
PS2_KCLK
PS2_KDAT
BATA_SCL
BATA_SDA
KBC_SCL
KBC_SDA
TCLK
TDATA
5V_S0
12/29 DY
EC54 Do Not Stuff
RN27 SRN10K-2
AD_OFF
CHARGE_ON#
BAT_SEL_A/B#
SECOND_IDE_ON
CHG_I_PRE_SEL
CHG_I_BATB
CELL_3S/4S#
MAINTAIN_CHG
TPAD28 TP77
RTC_SENSE#
AC_VOL_SENSE
BATA_SENSE
BATB_SENSE
TPAD28 TP75
TPAD28 TP76
P74
AD_IA
KBC_BATB_IN#
BAT54-1
TPAD28 TP92
TPAD28 TP94
H8_TXD1
H8_RXD1
BATB_IN#
D38 CH731U-U
ECSCI# 16
ECSMI# 16
ECSWI# 16
C422 SC4D7U10V5ZY
C423 SCD1U16V
C889 SC10U10V5ZY
C751 SCD1U16V
C750 SCD1U16V
C869 DY Do Not Stuff
KCOL[1..16] 32
KROW[1..8] 32
NUM_LED
CAP_LED
WL_LED
STDBY_LED
PWR_LED
CHARGE_LED
BT_LED
EMAIL_LED
PCB_VER0
PCB_VER1
PCB_VER2
NI_BAT
SECOND_BAY_IN#
SECOND_BAY_RST#
SECOND_BAY_ON/OFF#
GMODULE_RST#
KCOL17
KCOL18
KCOL19
KCOL20
KBC_MATRIX1
KBC_MATRIX2
KBC_MATRIX3
TEBLET_SW#
KCOL1
KCOL2
KCOL3
KCOL4
KCOL5
KCOL6
KCOL7
KCOL8
D43 BAT54-1
AC_IN# 44
KBC_AC_IN#
COVERUP#
KBCRST#
R363 0R2-0
KBRCIN# 15
PM_SLP_S3# 16,18,36,40,42
KBC_MUTE
KBC_BEEP
RF_ON/OFF#
BRIGHTNESS_1
EC_BL_ON
BLON_1
KBC_THRM#
TP106 TPAD28
SMBUS_SEL0
SMBUS_SEL1
TP111 TPAD28
TP108 TPAD28
EZ_PWROK
INTERNET#
PM_PWRBTN#
LUSB1#
LUSB2#
S5_EN
DOCK_IN#
EC_PWRBTN#
KBC_PME#
KBC_BATA_IN#
PCIE_WAKE#
D9 BAT54-1
ICH_PME# 16,22
D7 BAT54-1
BATA_IN# 44
120K for AC
R367 0R2-0
BRIGHTNESS 13
C424 Do Not Stuff AC
R361 Do Not Stuff AC
EC_BL_ON 13
KBC_MUTE 28
KBC_BEEP 27
RF_ON/OFF# 29
SMBUS_SEL0 34
SMBUS_SEL1 34
EZ_PWROK 34
INTERNET# 32
PM_PWRBTN# 16
LUSB1# 34
LUSB2# 34
S5_EN 38
DOCK_IN# 34
EC_PWRBTN# 38
PM_SLP_S4# 16,34,36,42
KBC_PME# 16,34,36,42
KBC_BATA_IN# 34
PCIE_WAKE# 16,34,36,42
R849 0R5J-1
R373 0R5J-1
SECOND_BAY_IN# R808 10KR2
NUM_LED R772 Do Not Stuff
CAP_LED R775 Do Not Stuff
WL_LED R780 Do Not Stuff
BT_LED R583 Do Not Stuff
INTERNET# R812 10KR2
KBC_AC_IN# R828 10KR2
KBC_BATA_IN# R754 10KR2
CHARGE_LED R742 DY Do Not Stuff
R797
KBC_MATRIX1 R821 10KR2
KBC_MATRIX2 R822 10KR2
KBC_MATRIX3 R823 DY Do Not Stuff
STDBY_LED R786 DY Do Not Stuff
PWR_LED R794 DY Do Not Stuff
EMAIL_LED R805 Do Not Stuff
KBC_PME# R769 10KR2
PCIE_WAKE# R765 10KR2
DOCK_IN# R774 10KR2
BATA_SCL R365 2K2R2
BATA_SDA R364 2K2R2
NV44
BLON_1 R699 0R2-0 NV_BL_ON 50
R366 Do Not Stuff GMCH_BL_ON 7
UMA
R766 100KR2
R322 560KR3F
R313 100KR2F
C401 SCD1U16V
R756 560KR3F
R762 100KR2F
R298 560KR3F
R302 100KR2F
RN28 SRN10KJ
RN25 SRN10KJ
Q64 2N7002
Q63 2N7002
SMBC_KBC 13,19,34
SMBD_KBC 13,19,34
R824 0R2-0
R825 0R2-0
BATB_SDA 44
BATB_SCL 44
R294 DY Do Not Stuff
R301 10KR2
Q21
R312 DY Do Not Stuff
CBUS_PME# 24,29
BOM2(NV44+G)
Wistron Corporation
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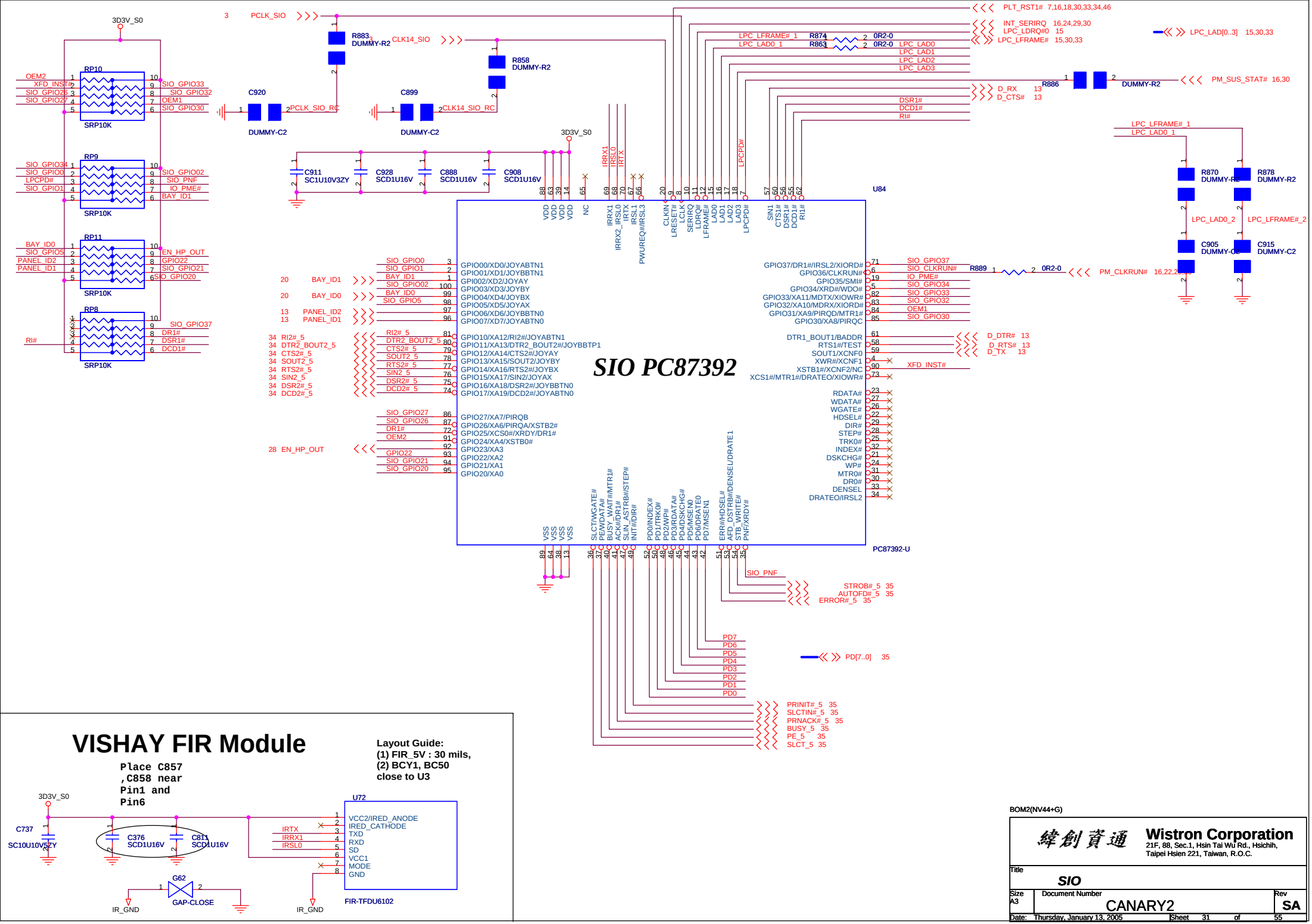
Taipei Hsien 221, Taiwan, R.O.C.
Title
KBC H8
Size Custom
Document Number CANARY2
Rev SA
Date: Thursday, January 13, 2005
Sheet 30 of 55




# VISHAY FIR Module

**Place C857 ,C858 near Pin1 and Pin6**

**Layout Guide:**
**(1) FIR_5V : 30 mils,**
**(2) BCY1, BC50 close to U3**




BOM2(NV44+G)

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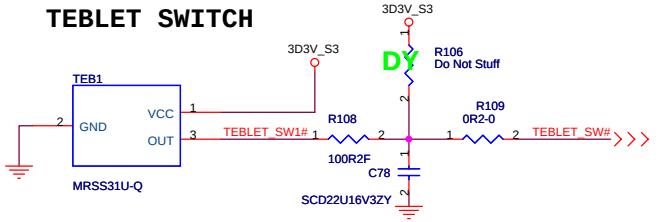
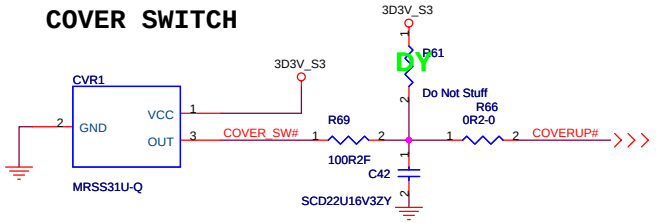
| | | |
|---|---|---|
| Title | SIO | |
| Size A3 | Document Number CANARY2 | Rev SA |
| Date: Thursday, January 13, 2005 | Sheet 31 of 55 | |

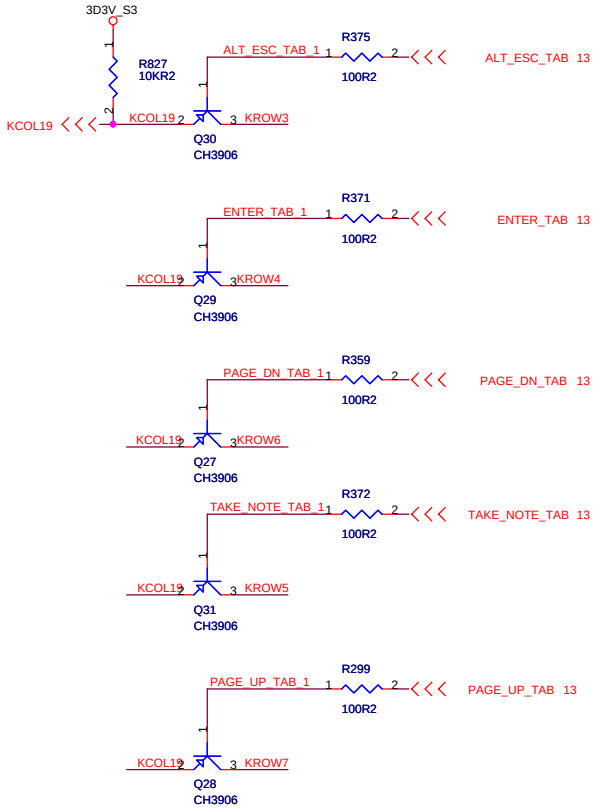
## TEBLET SWITCH



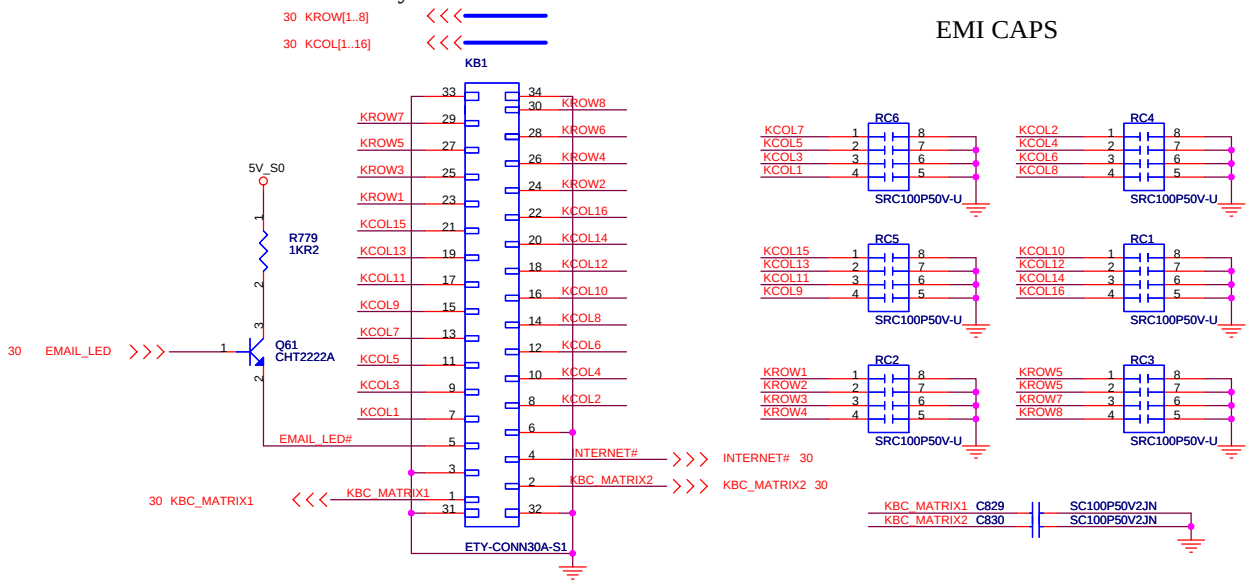

## COVER SWITCH




## TABLET FUNCTION BUTTON



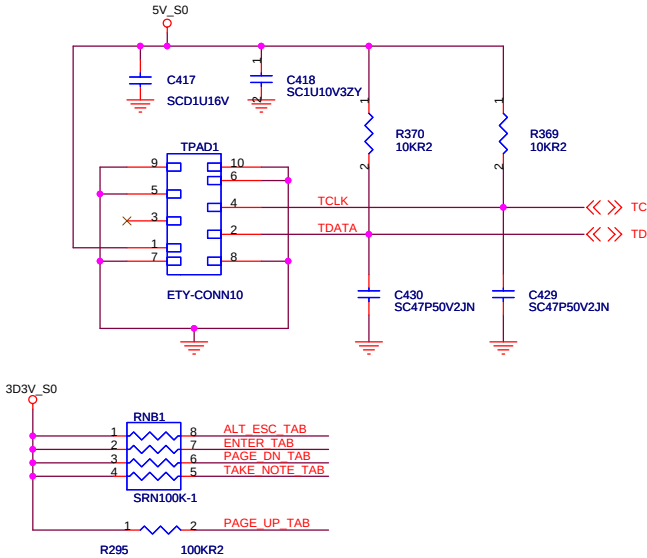

## Internal KeyBoard Connector



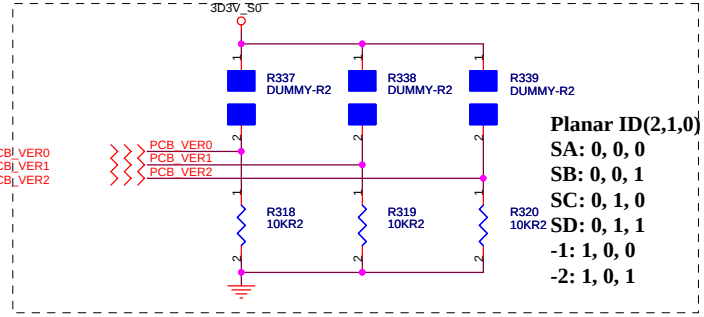

## EMI CAPS




## TouchPad Connector




## Board ID




Keyboard matrix

| | US | Jap | Europe | US international |
|---|---|---|---|---|
| MATRIX1 | HIGH | LOW | HIGH | HIGH |
| MATRIX2 | HIGH | HIGH | LOW | HIGH |

BOM2(NV44+G)

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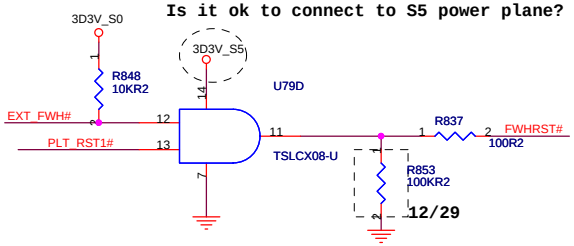
Taipei Hsien 221, Taiwan, R.O.C.

Title: **KBC&TPAD CONN**

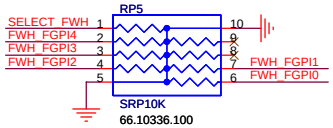
Size: A3 | Document Number: **CANARY2** | Rev: **SA**

Date: Thursday, January 13, 2005 | Sheet 32 of 55

Is it ok to connect to S5 power plane?



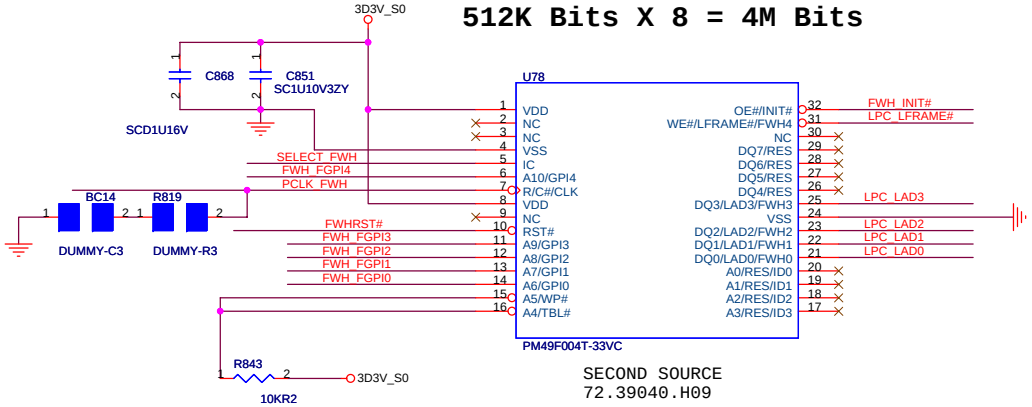

Unused FGPI pins must not be float




15,30,31 LPC_LAD[0:3]

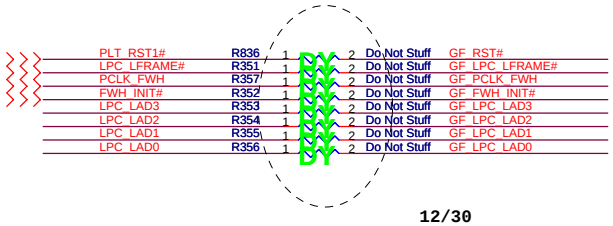
# FLASH ROM

## 512K Bits X 8 = 4M Bits




SECOND SOURCE
72.39040.H09

7,16,18,30,31,34,46 PLT_RST1#
15,30,31 LPC_LFRAME#
3 PCLK_FWH
15 FWH_INIT#



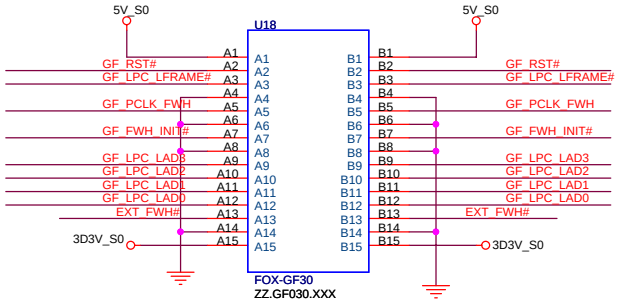

12/30

TOP VIEW

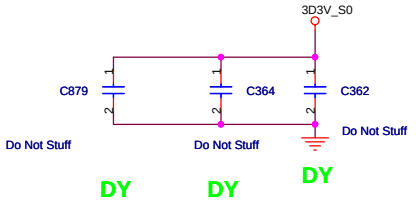
| | |
|---|---|
| A15 | (B1) |
| A14 | (B2) |
| ⋮ | ⋮ |
| A2 | (B14) |
| A1 | (B15) |

(BOTTOM VIEW)

## GOLDEN FINGER FOR DEBUG BOARD




Boot Device must have ID[3:0] = 0000
Has internal pull-down resistors
All may be left floated
FPET7 Elec. P3-46



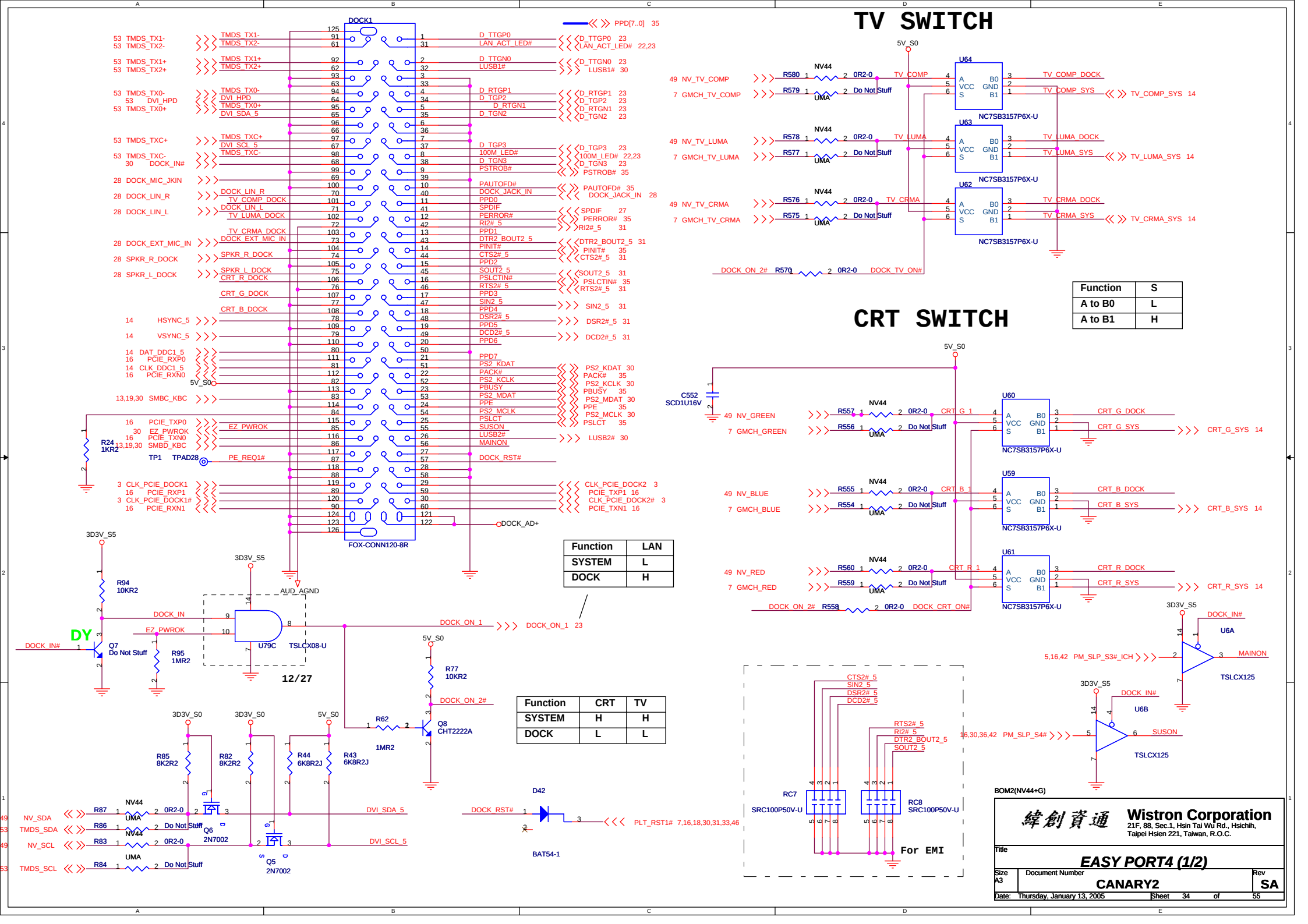

BOM2(NV44+G)

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

Title: FWH and Debug

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

Date: Thursday, January 13, 2005 Sheet 33 of 55

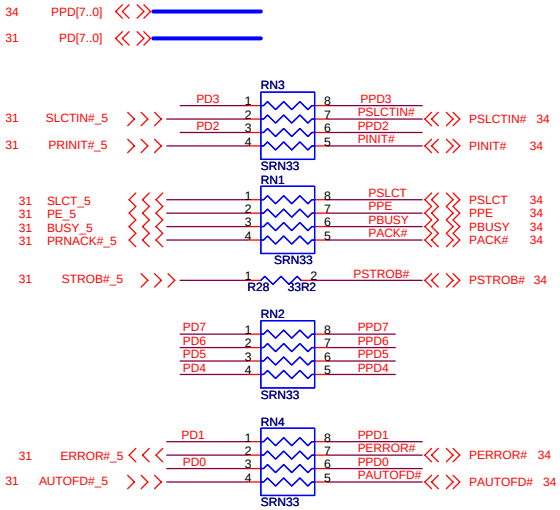


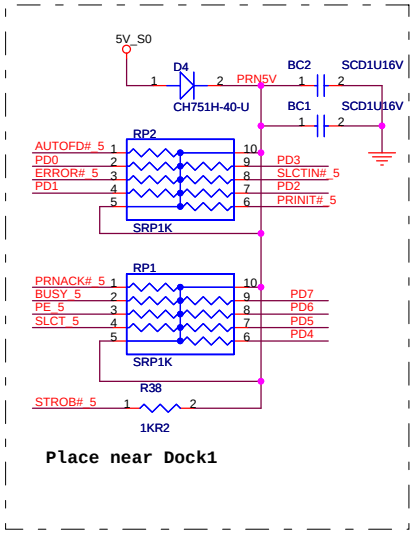

| Function | S |
|---|---|
| A to B0 | L |
| A to B1 | H |

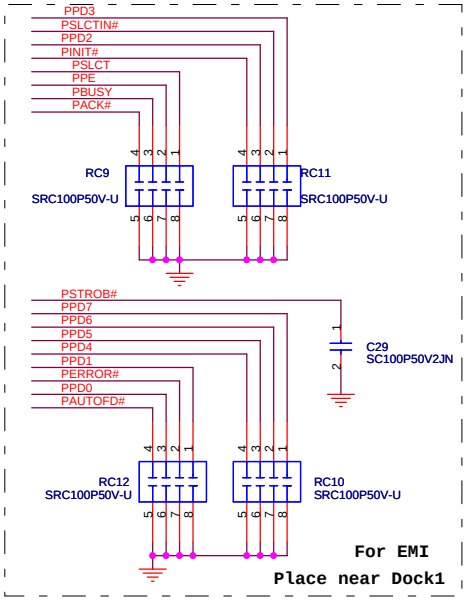
| Function | LAN |
|---|---|
| SYSTEM | L |
| DOCK | H |

| Function | CRT | TV |
|---|---|---|
| SYSTEM | H | H |
| DOCK | L | L |

# PRINT PORT



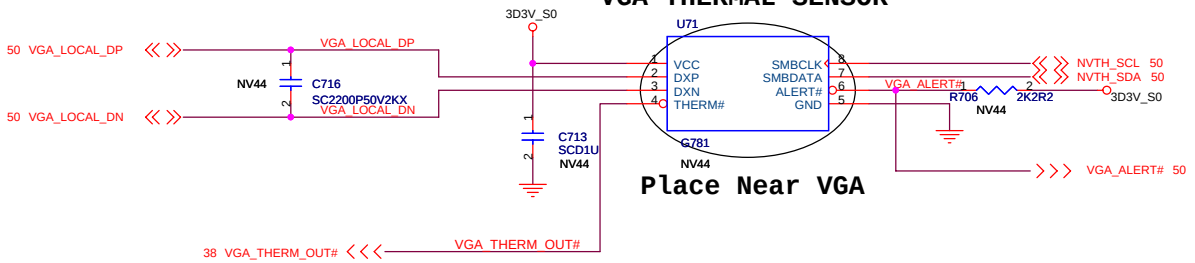




BOM2(NV44+G)

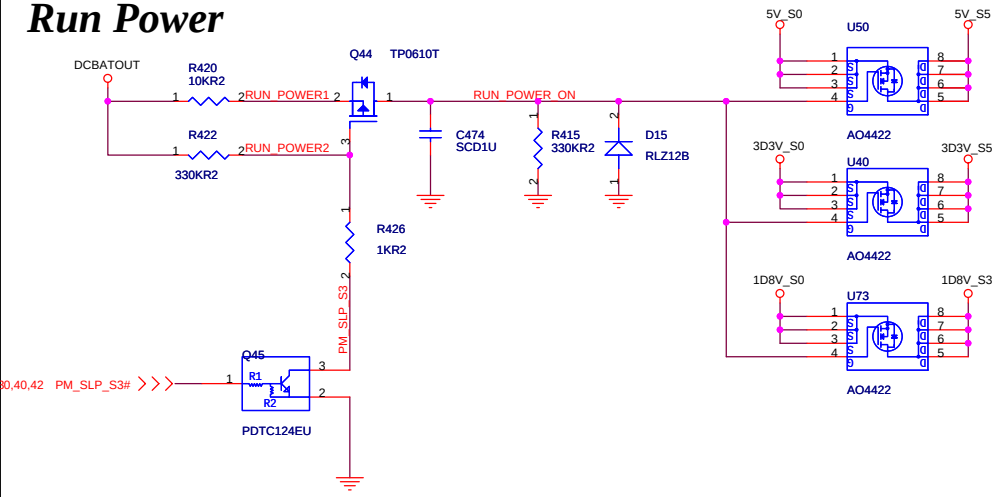
| | | |
|---|---|---|
| 緯創資通 Wistron Corporation<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title: *EASY PORT4 (2/2)* | | |
| Size: A3 | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 35 of 55 | |

I2C ADDRESS: 0x98H

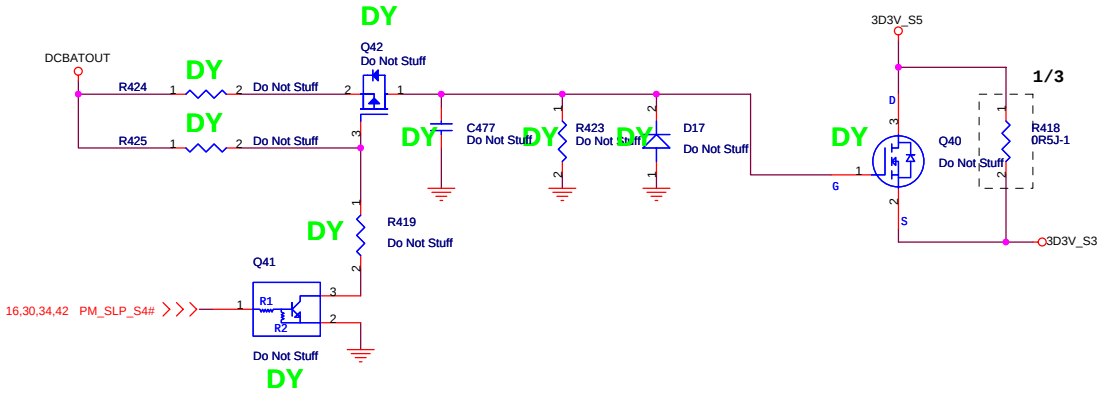
## VGA THERMAL SENSOR




## Run Power



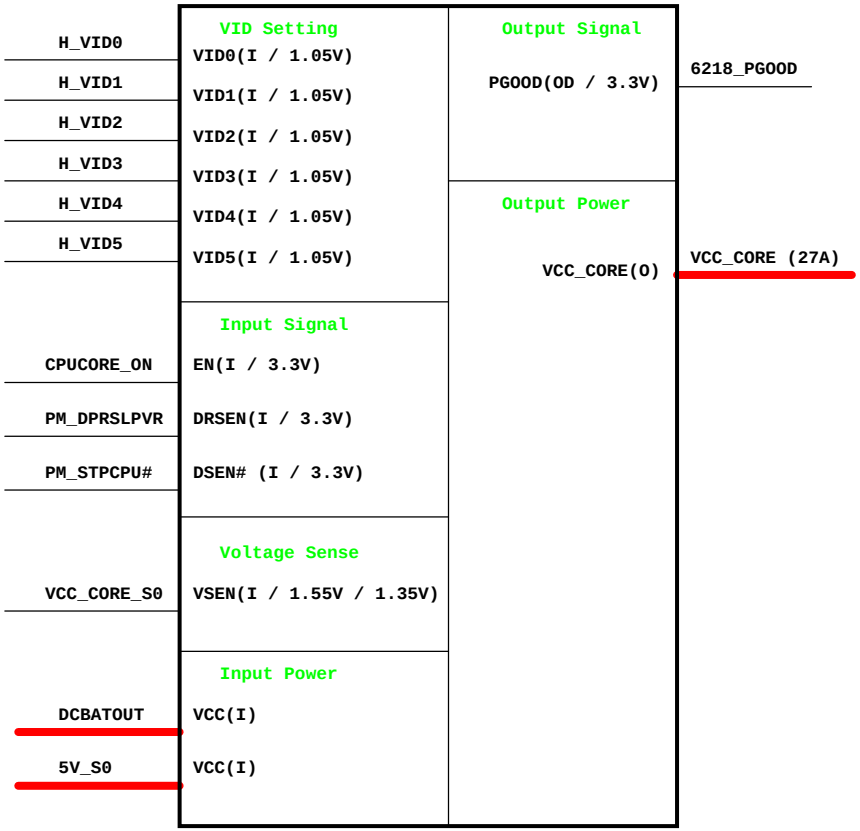

## Suspend Power



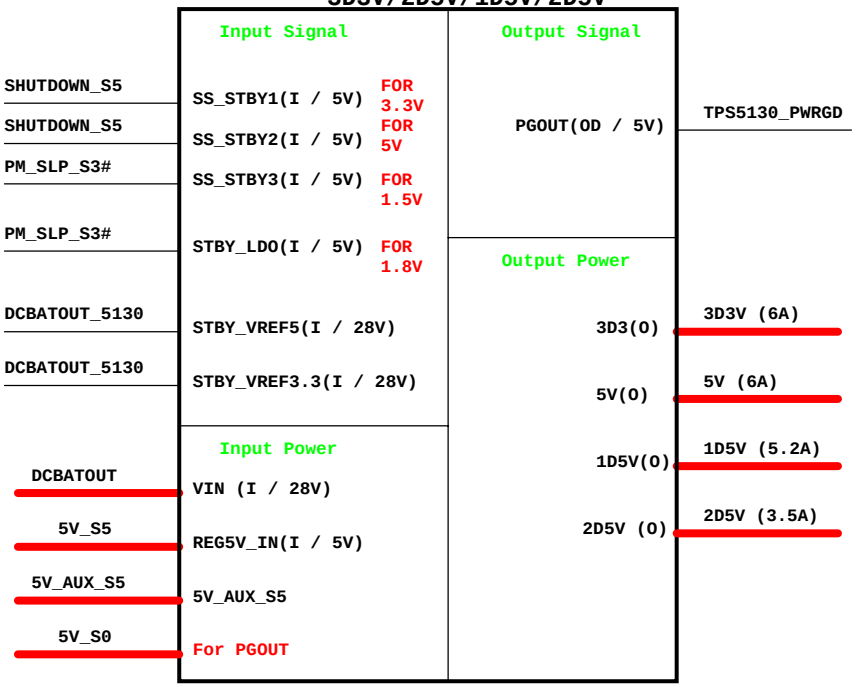

BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 Wistron Corporation<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title: *RUN and SUSPEND Power* | | |
| Size: A3 | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 36 of 55 | |

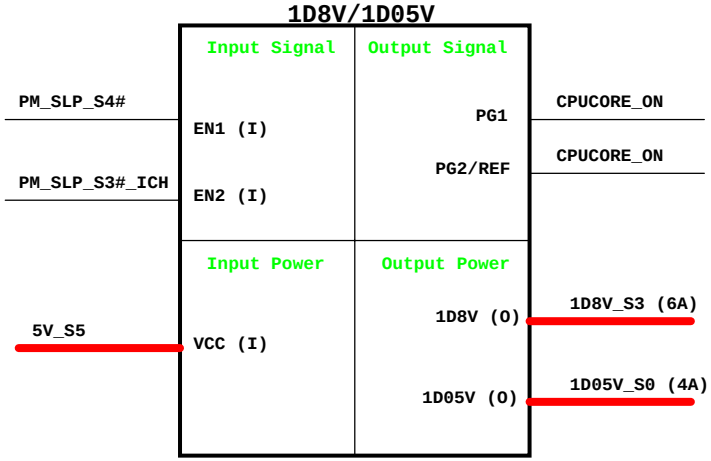
## CPU_CORE ISL6218CV



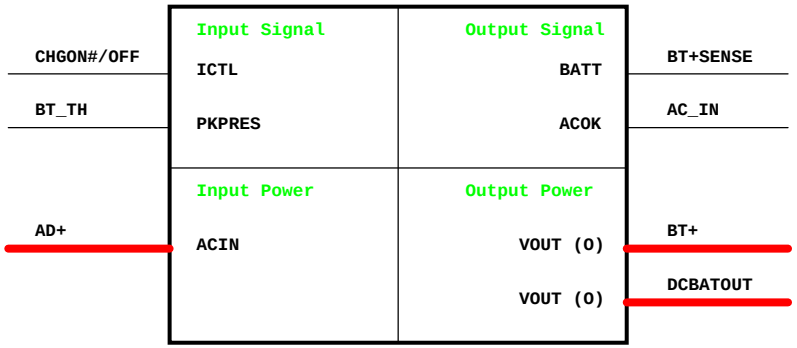

## TPS5130 3D3V/2D5V/1D5V/2D5V



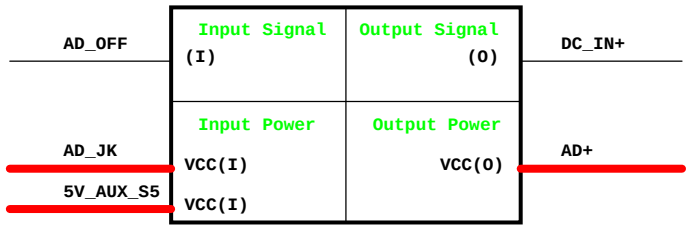

## ISL6227 1D8V/1D05V




## Charger Max8725




## Adapter




BOM2(NV44+G)

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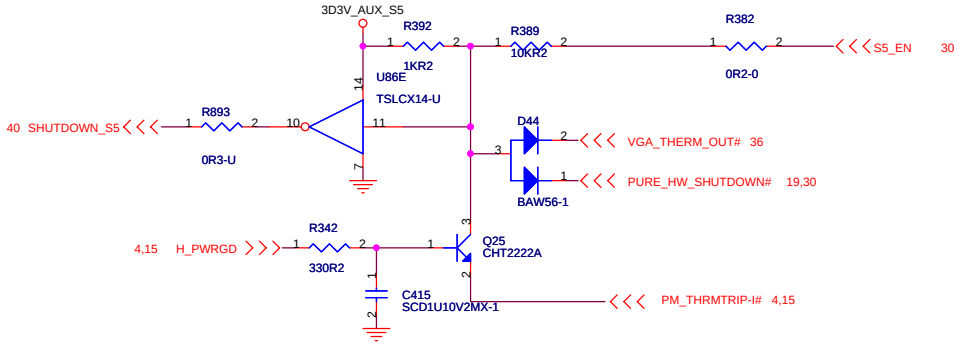
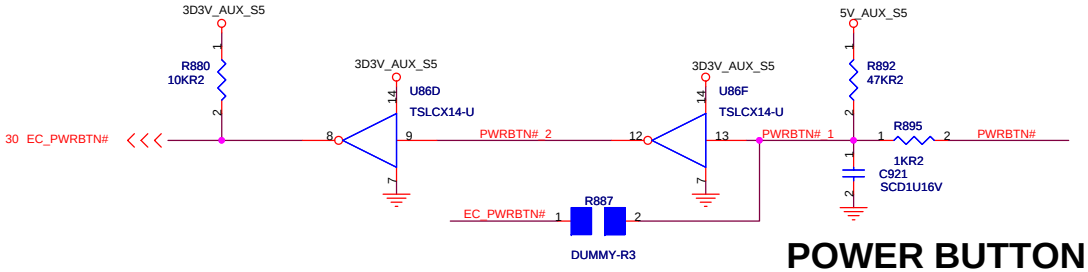
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **Power Diagram**

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

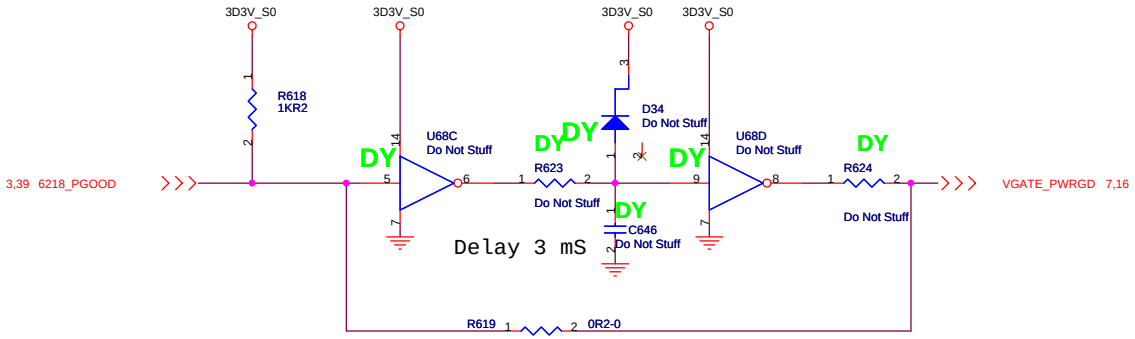
Date: Thursday, January 13, 2005 Sheet 37 of 55



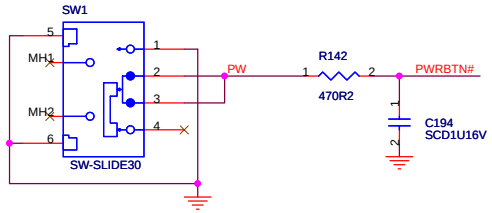




## POWER BUTTON

## PWRGD for NB and SB

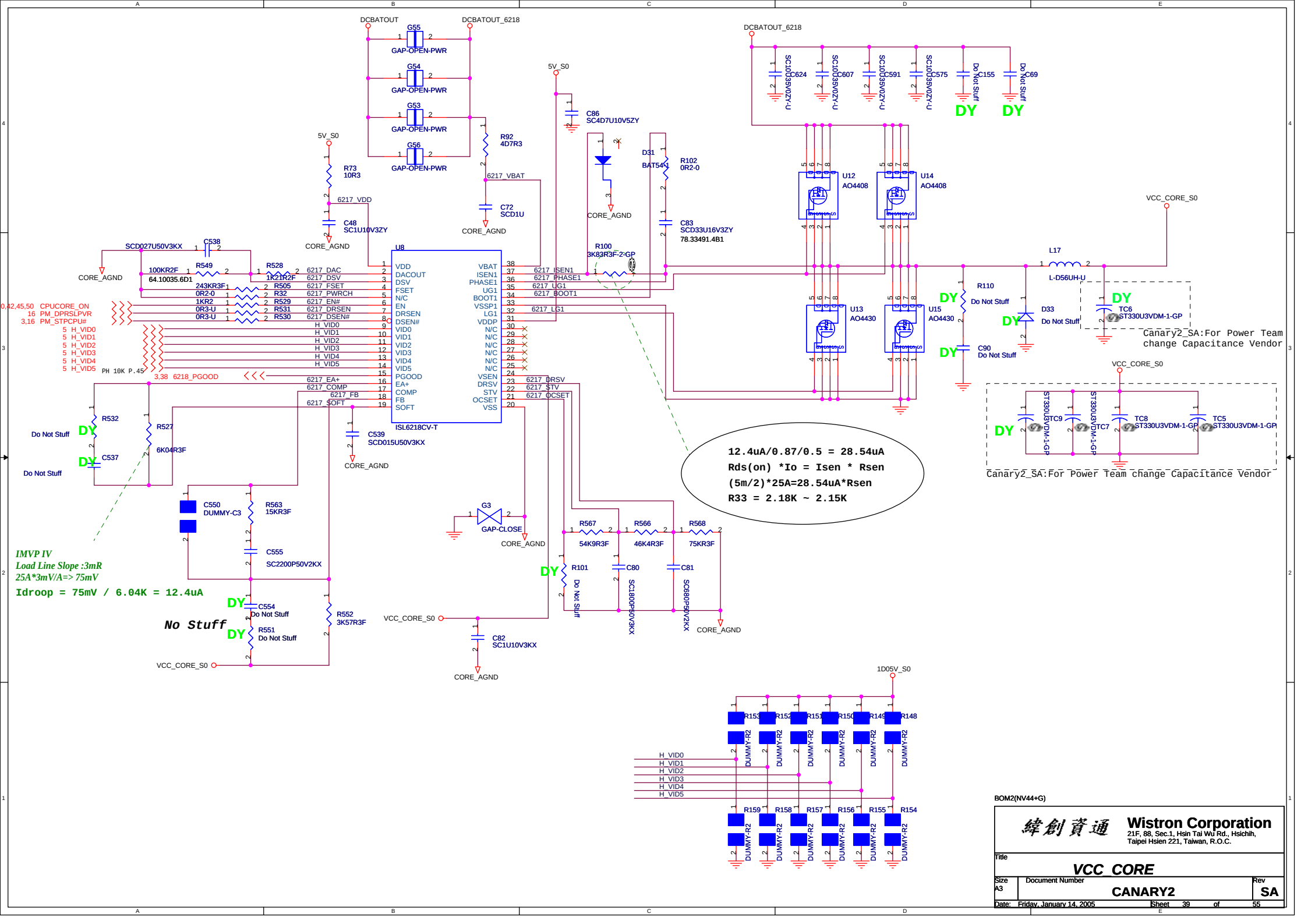



## POWERSWITCH



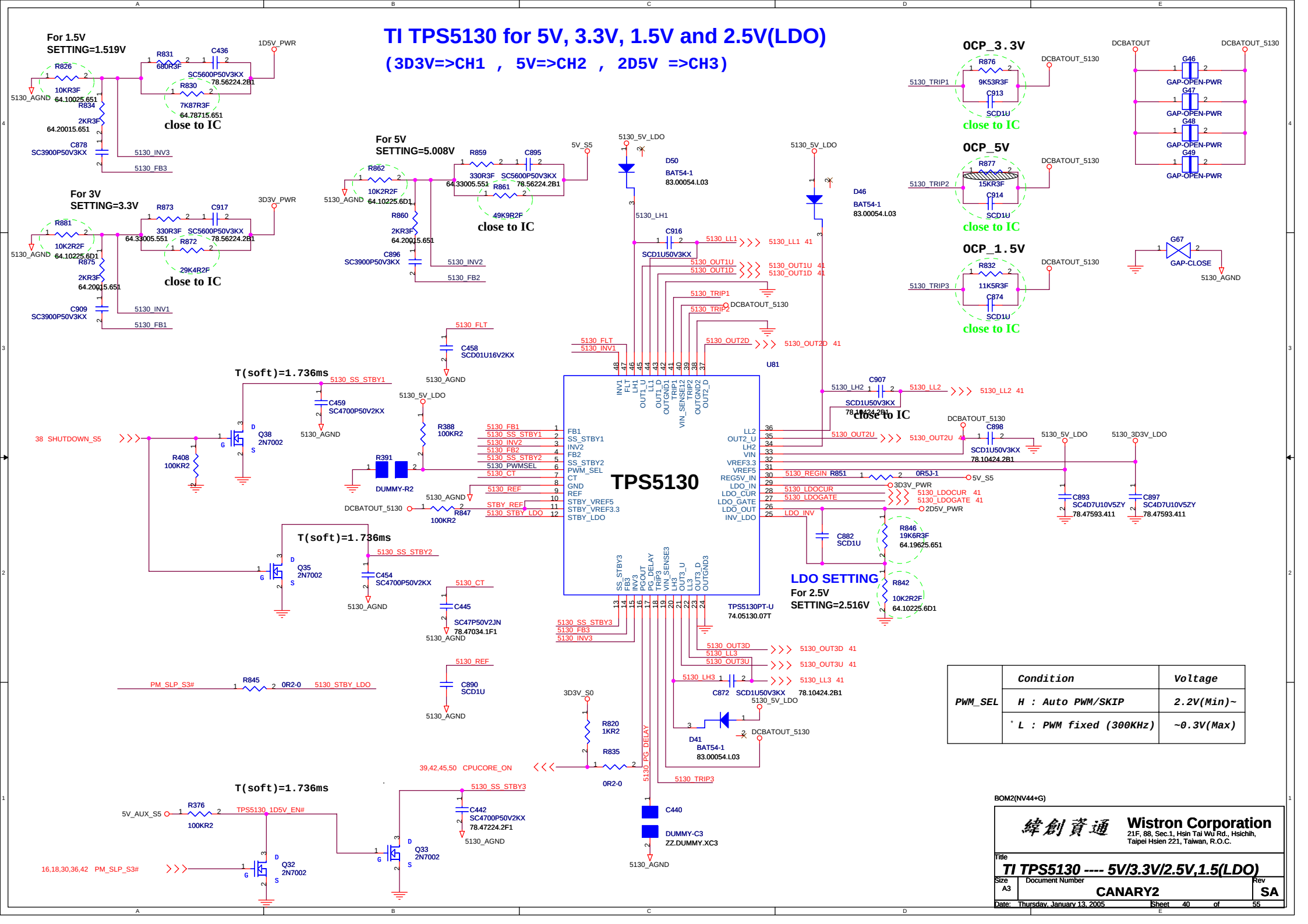

BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 Wistron Corporation<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title: ***POWER ON CIRCUIT*** | | |
| Size: A3 | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 38 of 55 | |


DCBATOUT
DCBATOUT_6218
G55
GAP-OPEN-PWR
G54
GAP-OPEN-PWR
G53
GAP-OPEN-PWR
G56
GAP-OPEN-PWR
R92
4D7R3
6217_VBAT
C72
SCD1U
CORE_AGND
5V_S0
R73
10R3
6217_VDD
C48
SC1U10V3ZY
C86
SC4D7U10V5ZY
D31
BAT54-1
R102
0R2-0
C83
SCD33U16V3ZY
78.33491.4B1
R100
3K83R3F-2-GP
U8
ISL6218CV-T
VDD
DACOUT
DSV
FSET
N/C
EN
DRSEN
DSEN#
VID0
VID1
VID2
VID3
VID4
VID5
PGOOD
EA+
COMP
FB
SOFT
VBAT
ISEN1
PHASE1
UG1
BOOT1
VSSP1
LG1
VDDP
N/C
VSEN
DRSV
STV
OCSET
VSS
6217_DAC
6217_DSV
6217_FSET
6217_PWRCH
6217_EN#
6217_DRSEN
6217_DSEN#
H_VID0
H_VID1
H_VID2
H_VID3
H_VID4
H_VID5
6218_PGOOD
6217_EA+
6217_COMP
6217_FB
6217_SOFT
6217_ISEN1
6217_PHASE1
6217_UG1
6217_BOOT1
6217_LG1
6217_DRSV
6217_STV
6217_OCSET
SCD027U50V3KX
C538
R549
100KR2F
64.10035.6D1
R528
1K21R2F
R505
243KR3F
R532
Do Not Stuff
R527
6K04R3F
C537
C539
SCD015U50V3KX
C550
DUMMY-C3
R563
15KR3F
C555
SC2200P50V2KX
C554
Do Not Stuff
R551
Do Not Stuff
R552
3K57R3F
VCC_CORE_S0
G3
GAP-CLOSE
R567
54K9R3F
R566
46K4R3F
R568
75KR3F
R101
Do Not Stuff
C80
SC1800P50V3KX
C81
SC680P50V2KX
C82
SC1U10V3KX
12.4uA/0.87/0.5 = 28.54uA
Rds(on) *Io = Isen * Rsen
(5m/2)*25A=28.54uA*Rsen
R33 = 2.18K ~ 2.15K
IMVP IV
Load Line Slope :3mR
25A*3mV/A=> 75mV
Idroop = 75mV / 6.04K = 12.4uA
No Stuff
U12
AO4408
U14
AO4408
U13
AO4430
U15
AO4430
L17
L-D56UH-U
R110
Do Not Stuff
D33
Do Not Stuff
C90
Do Not Stuff
TC6
ST330U3VDM-1-GP
TC9
TC7
TC8
TC5
Canary2_SA:For Power Team
change Capacitance Vendor
C624
C607
C591
C575
Do Not Stuff
C155
Do Not Stuff
C69
1D05V_S0
R153
R152
R151
R150
R149
R148
R159
R158
R157
R156
R155
R154
DUMMY-R2
H_VID0
H_VID1
H_VID2
H_VID3
H_VID4
H_VID5
BOM2(NV44+G)
緯創資通
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
VCC_CORE
Size
A3
Document Number
CANARY2
Rev
SA
Date: Friday, January 14, 2005
Sheet 39 of 55

# TI TPS5130 for 5V, 3.3V, 1.5V and 2.5V(LDO)

## (3D3V=>CH1 , 5V=>CH2 , 2D5V =>CH3)




| PWM_SEL | Condition | Voltage |
|---|---|---|
| | H : Auto PWM/SKIP | 2.2V(Min)~ |
| | * L : PWM fixed (300KHz) | ~0.3V(Max) |

BOM2(NV44+G)

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

Title: TI TPS5130 ---- 5V/3.3V/2.5V,1.5(LDO)

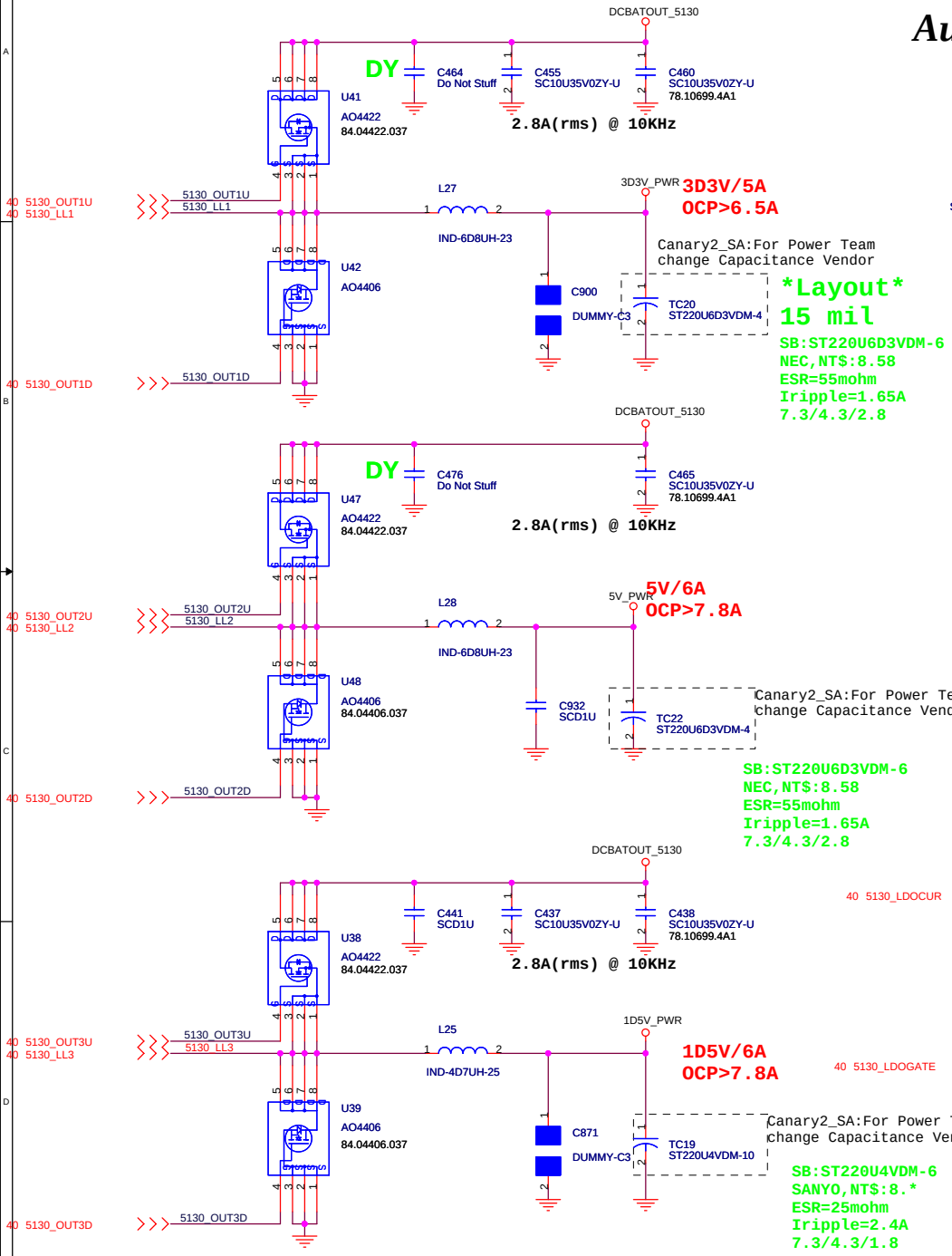
| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

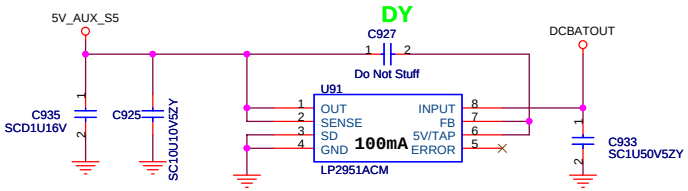
Date: Thursday, January 13, 2005 Sheet 40 of 55

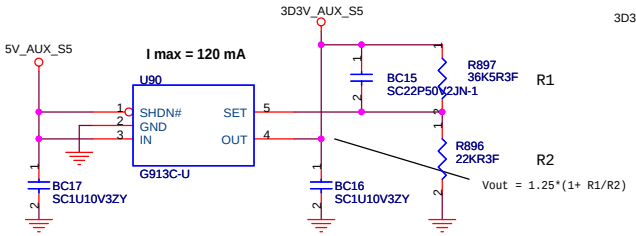
# TI TPS5130 for 5V, 3.3V, 1.5V and 2.5V(LDO)

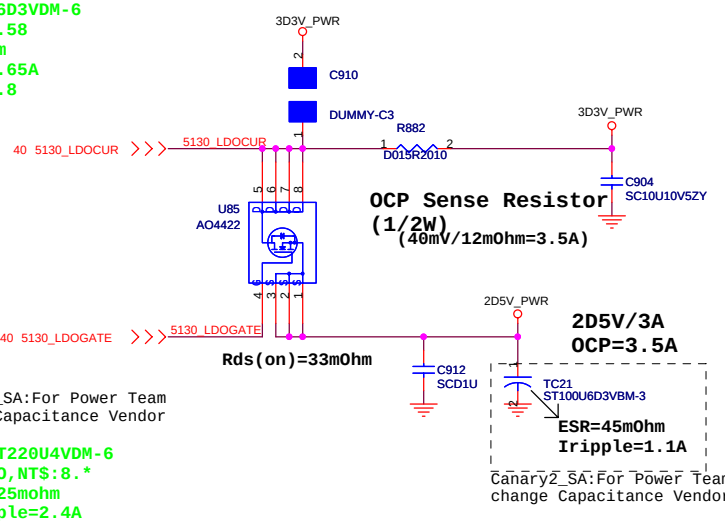
**(3D3V=>CH1 , 5V=>CH2 , 2D5V =>CH3)**

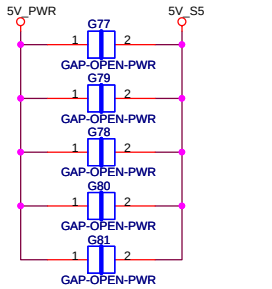
## Aux Power

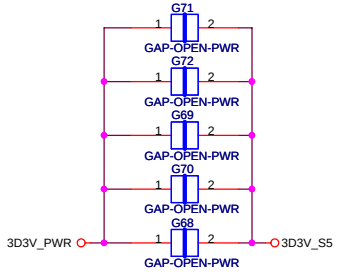


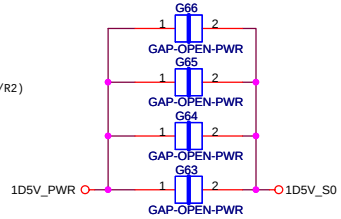



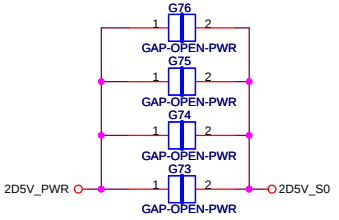



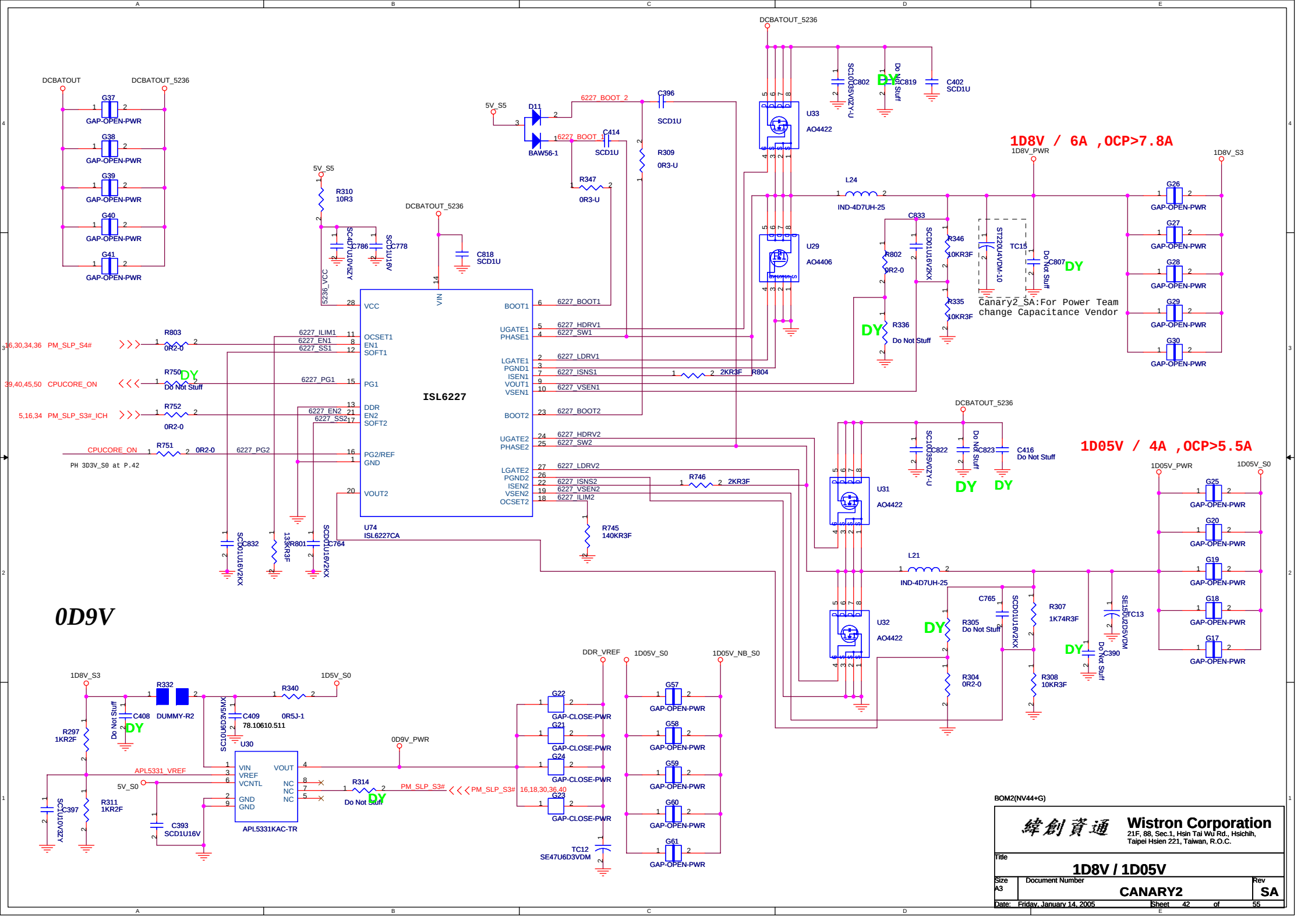

BOM2(NV44+G)

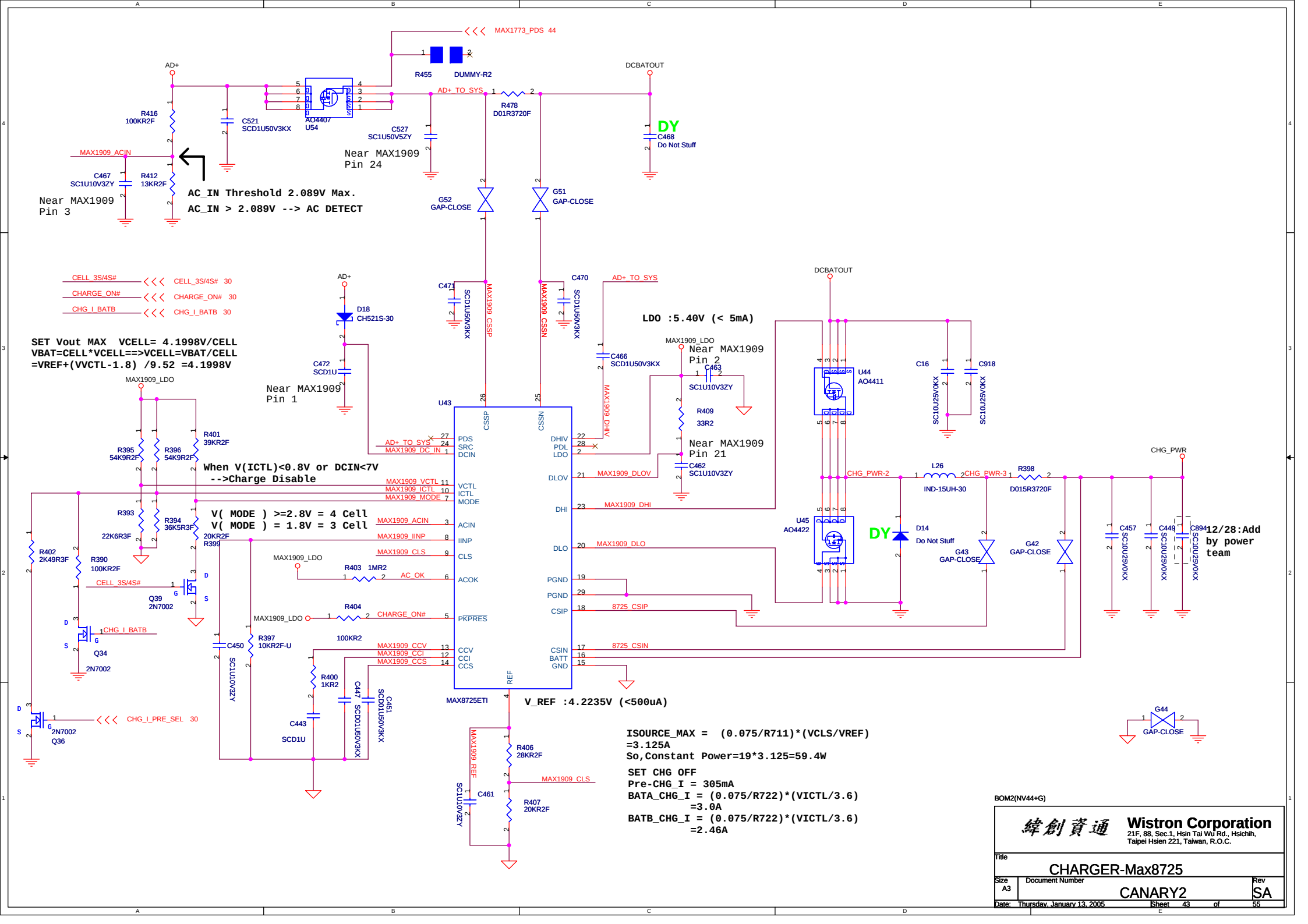
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: ***TI TPS5130 ---- 5V/3.3V/1.5V,2.5(LDO)***

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

Date: Friday, January 14, 2005 Sheet 41 of 55

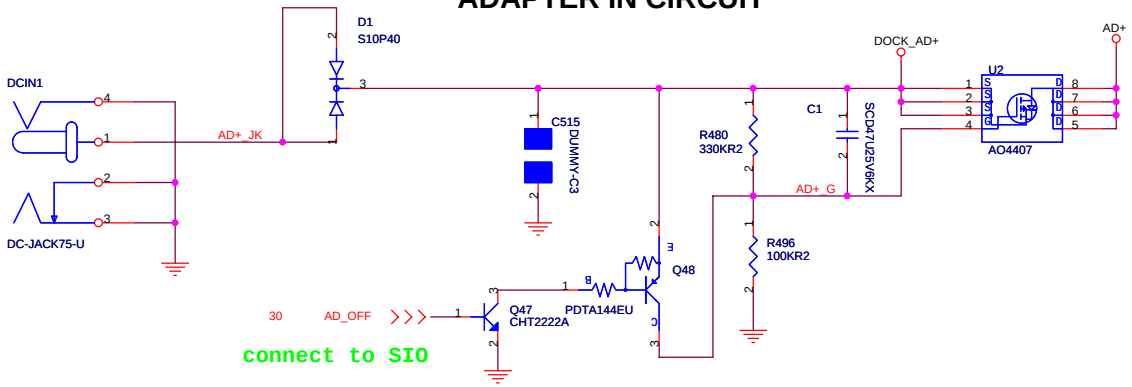

1D8V / 6A ,OCP>7.8A
1D05V / 4A ,OCP>5.5A
0D9V
ISL6227
U74
ISL6227CA
APL5331KAC-TR
Canary2_SA:For Power Team
change Capacitance Vendor
DCBATOUT
DCBATOUT_5236
1D8V_PWR
1D8V_S3
1D05V_PWR
1D05V_S0
1D05V_NB_S0
0D9V_PWR
DDR_VREF
5V_S5
BOM2(NV44+G)
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
1D8V / 1D05V
Size A3
Document Number
CANARY2
Rev SA
Date: Friday, January 14, 2005
Sheet 42 of 55

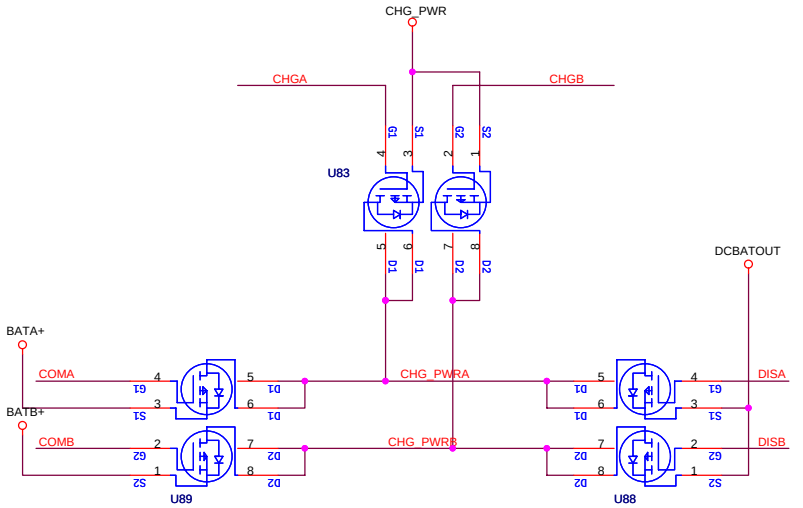



BOM2(NV44+G)

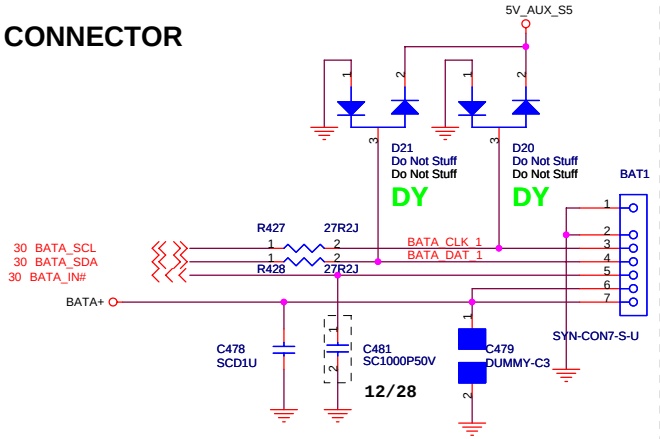
| | | |
|---|---|---|
| 緯創資通 Wistron Corporation<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title: CHARGER-Max8725 | | |
| Size: A3 | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 43 of 55 | |

# ADAPTER IN CIRCUIT

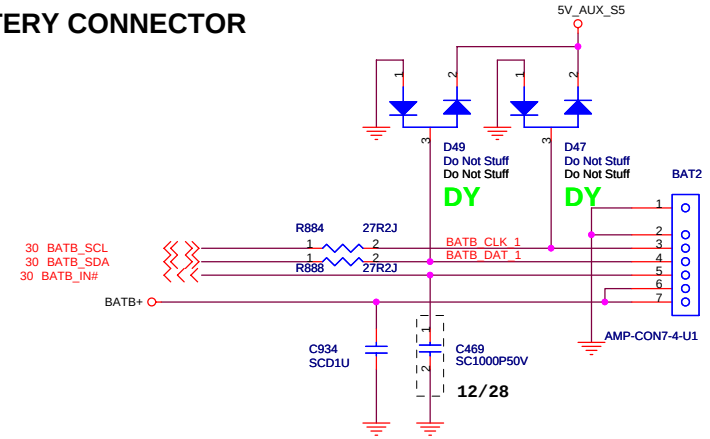



# MAIN BATTERY CONNECTOR

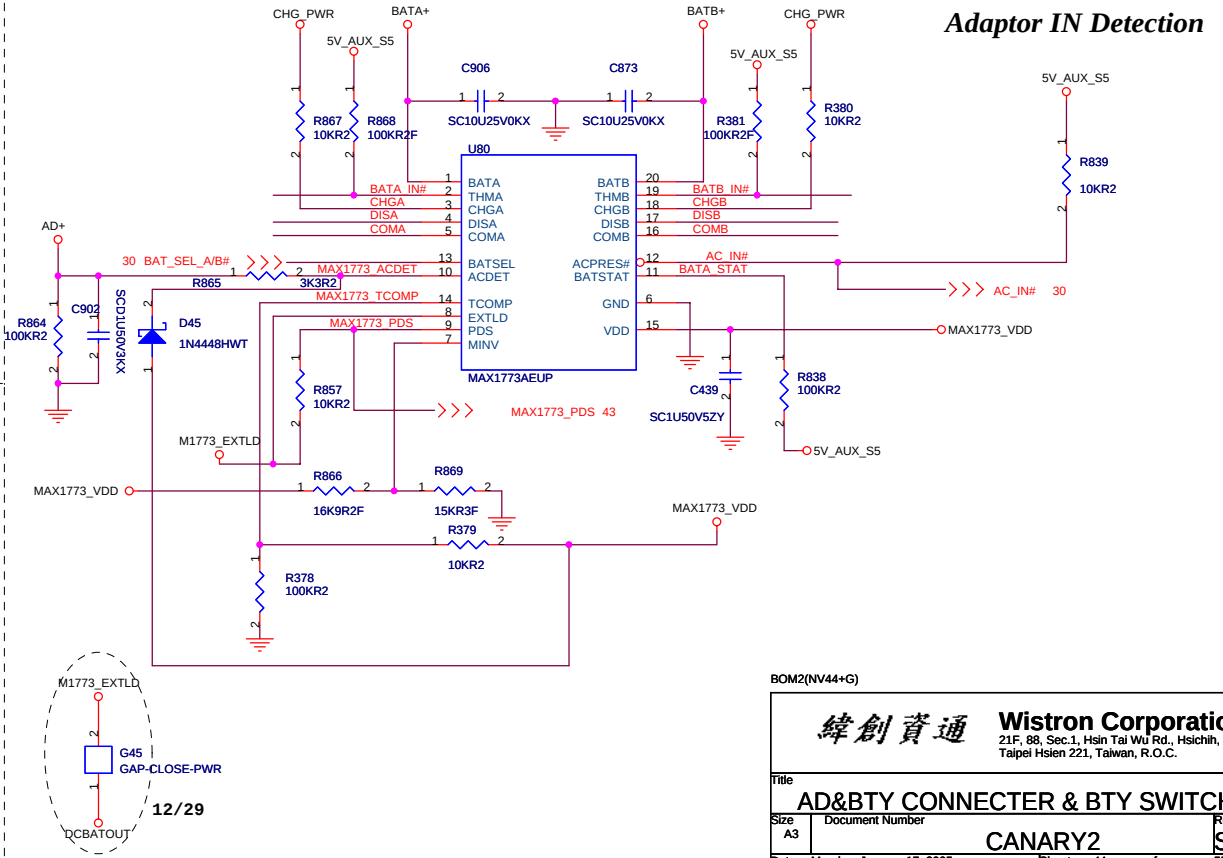



# 2ND BATTERY CONNECTOR




# BATTERY SWITCH

*Adaptor IN Detection*




BOM2(NV44+G)

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

Title: AD&BTY CONNECTER & BTY SWITCH

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

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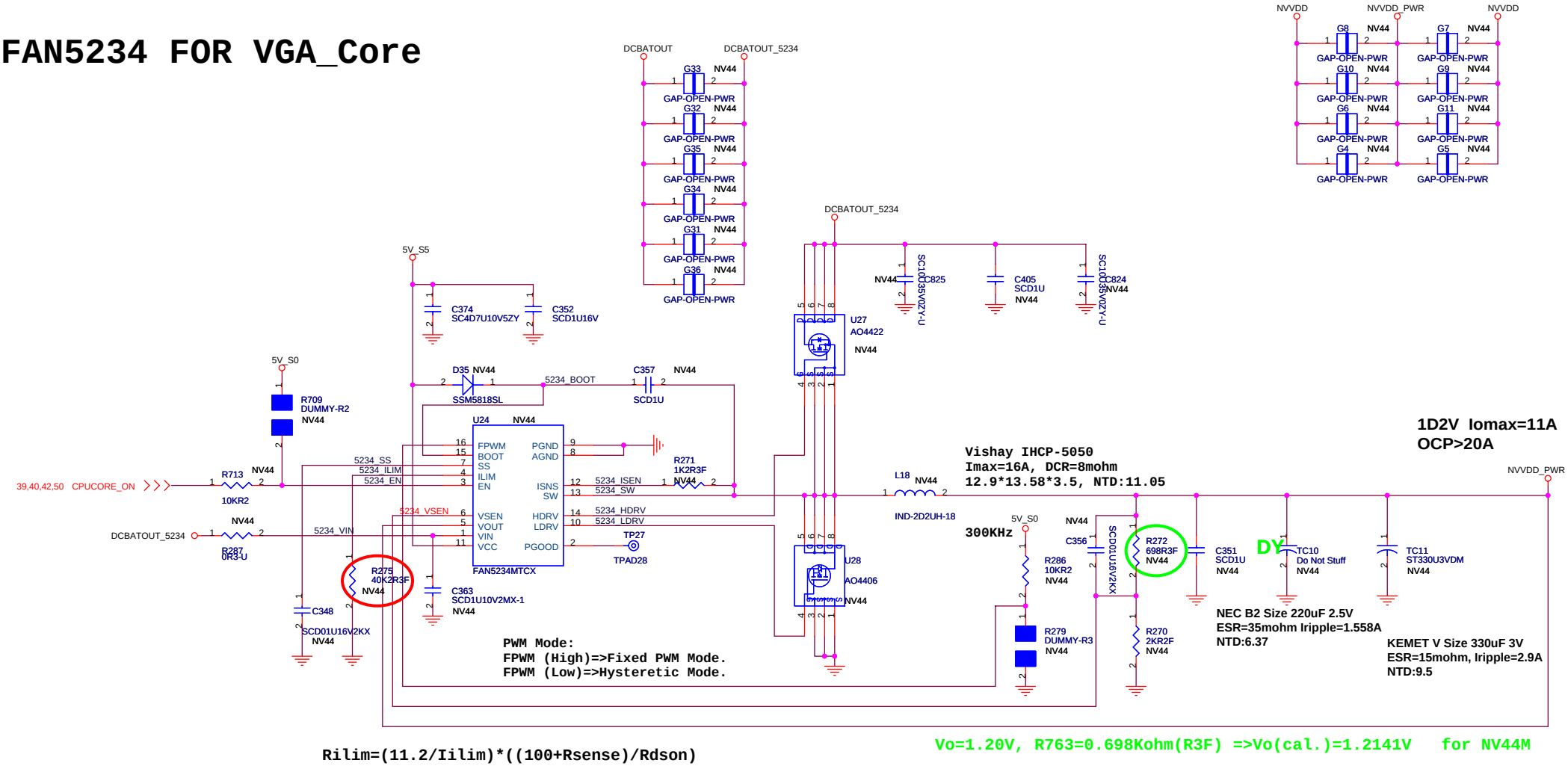
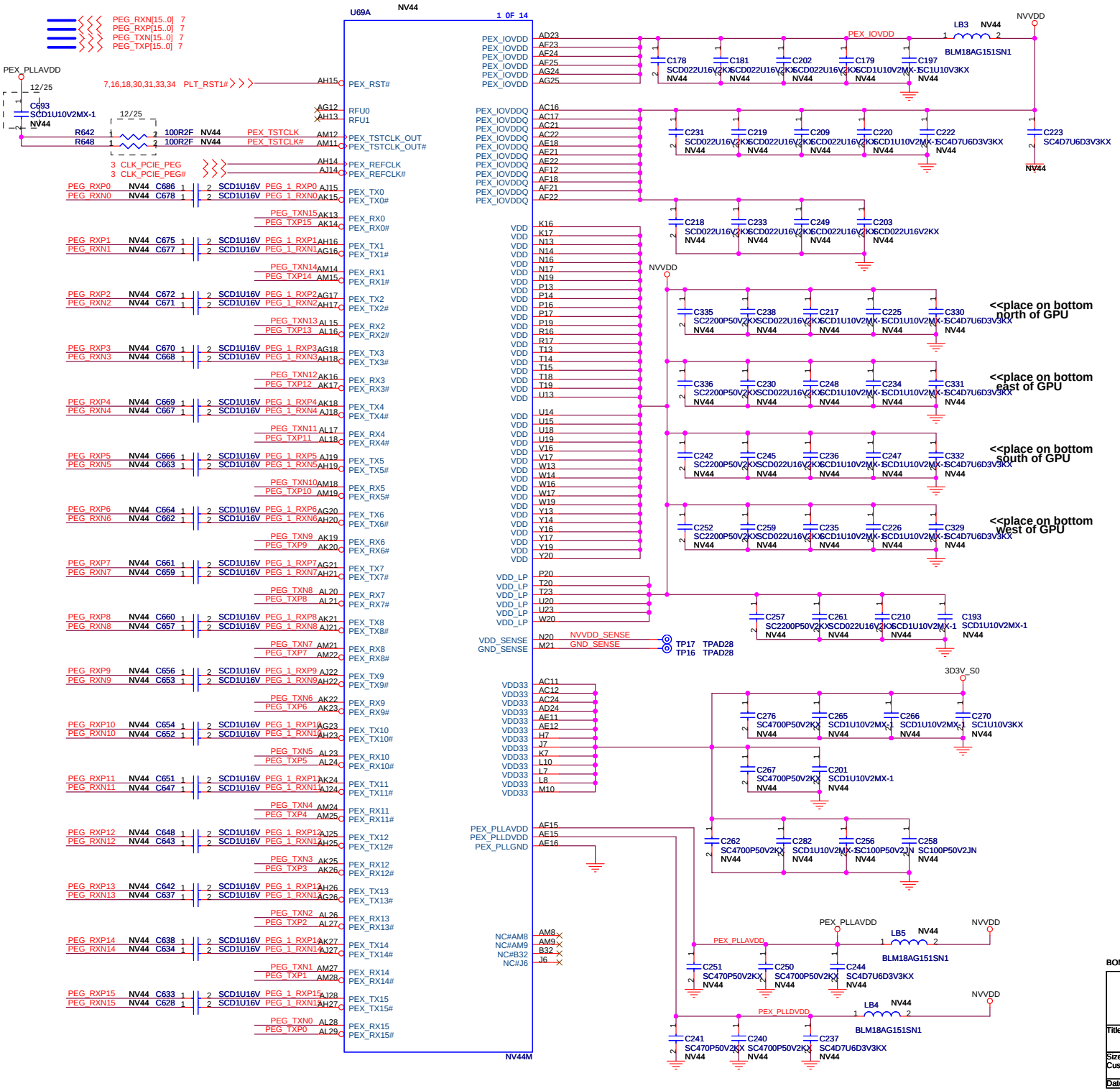
# FAN5234 FOR VGA_Core




BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 Wistron Corporation<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title: FAN5234_VGA_CORE_1D20V or 1D15V | | |
| Size: A3 | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 45 of 55 | |



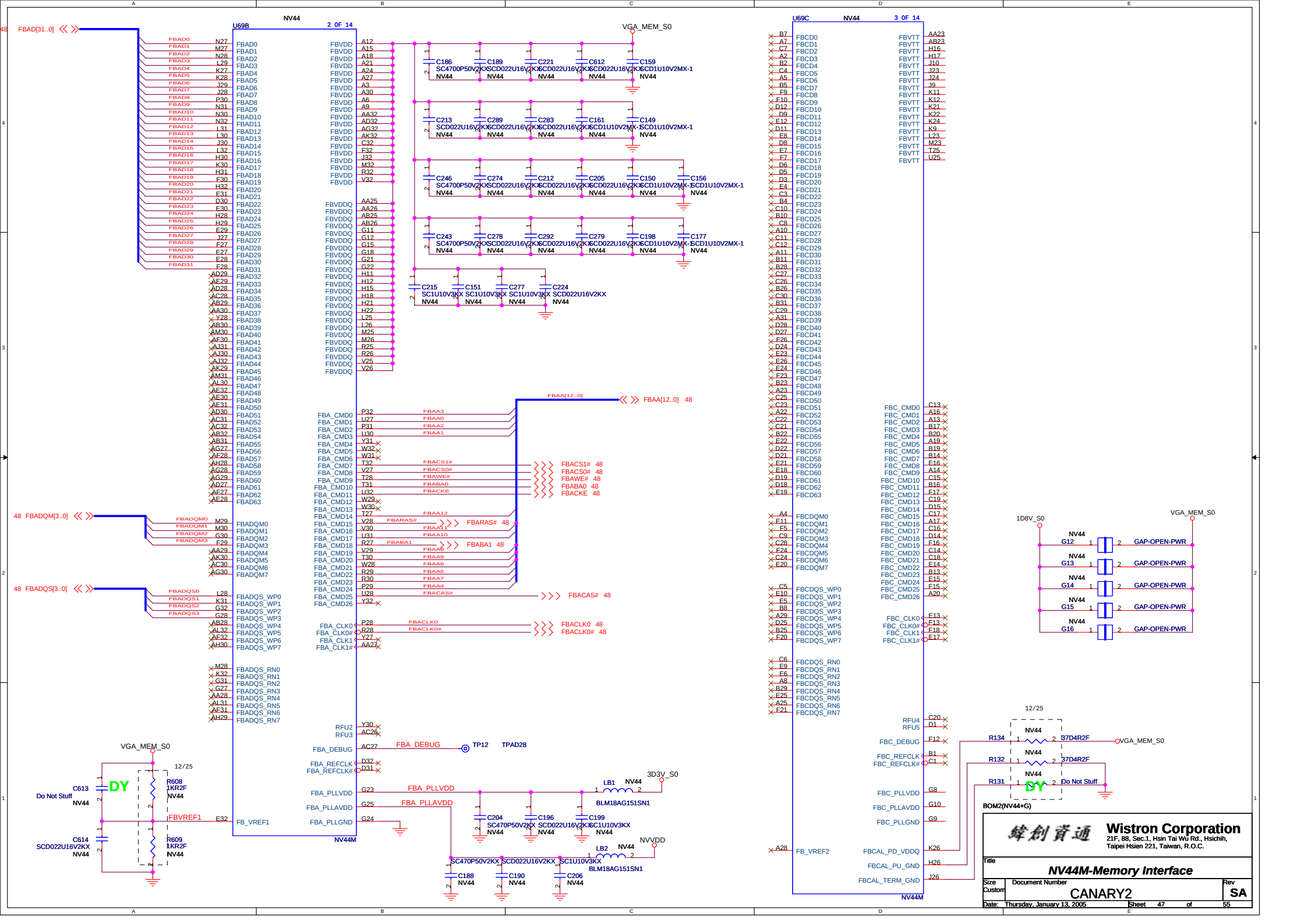

BOM2(NV44+G)

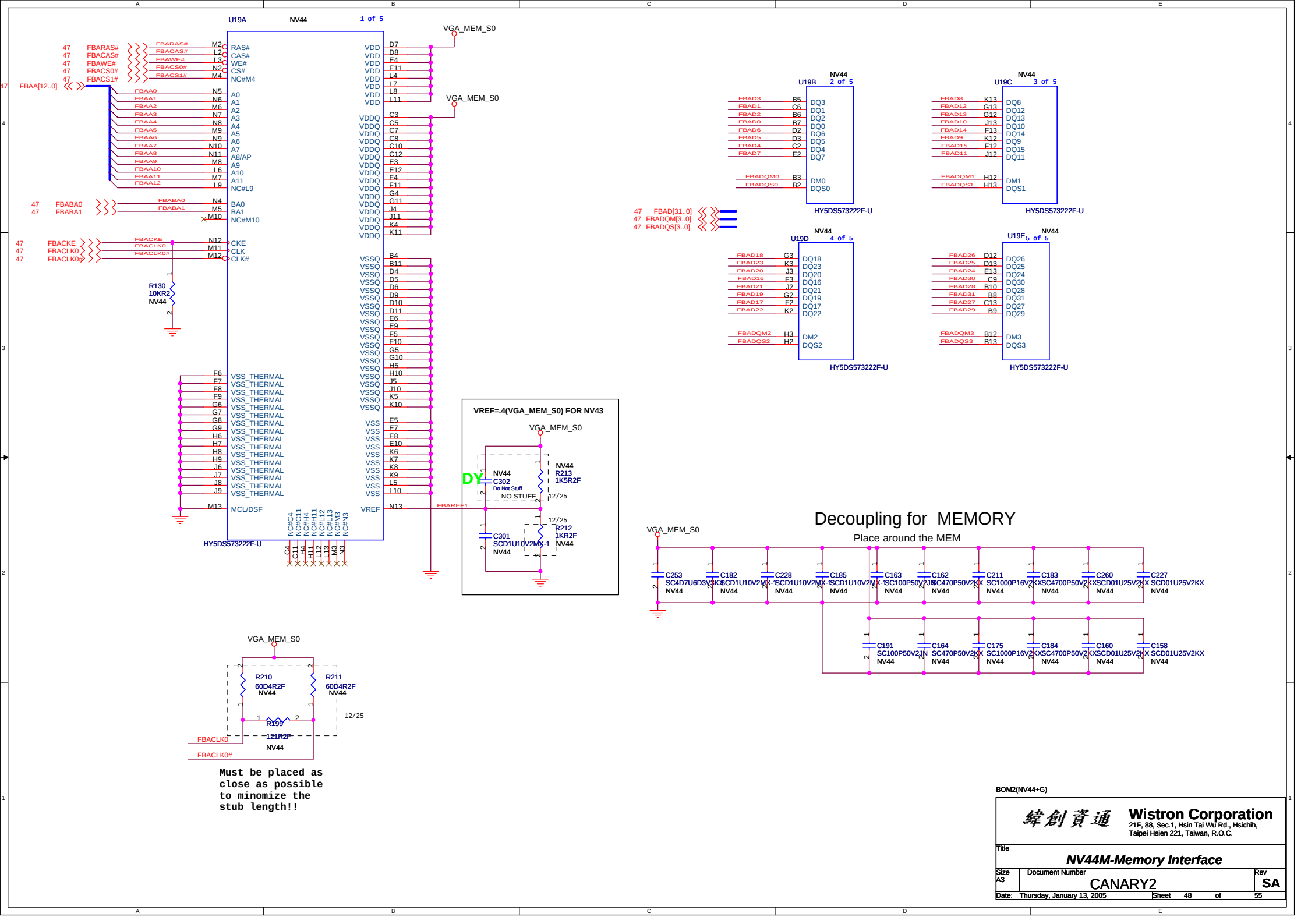
蜂創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

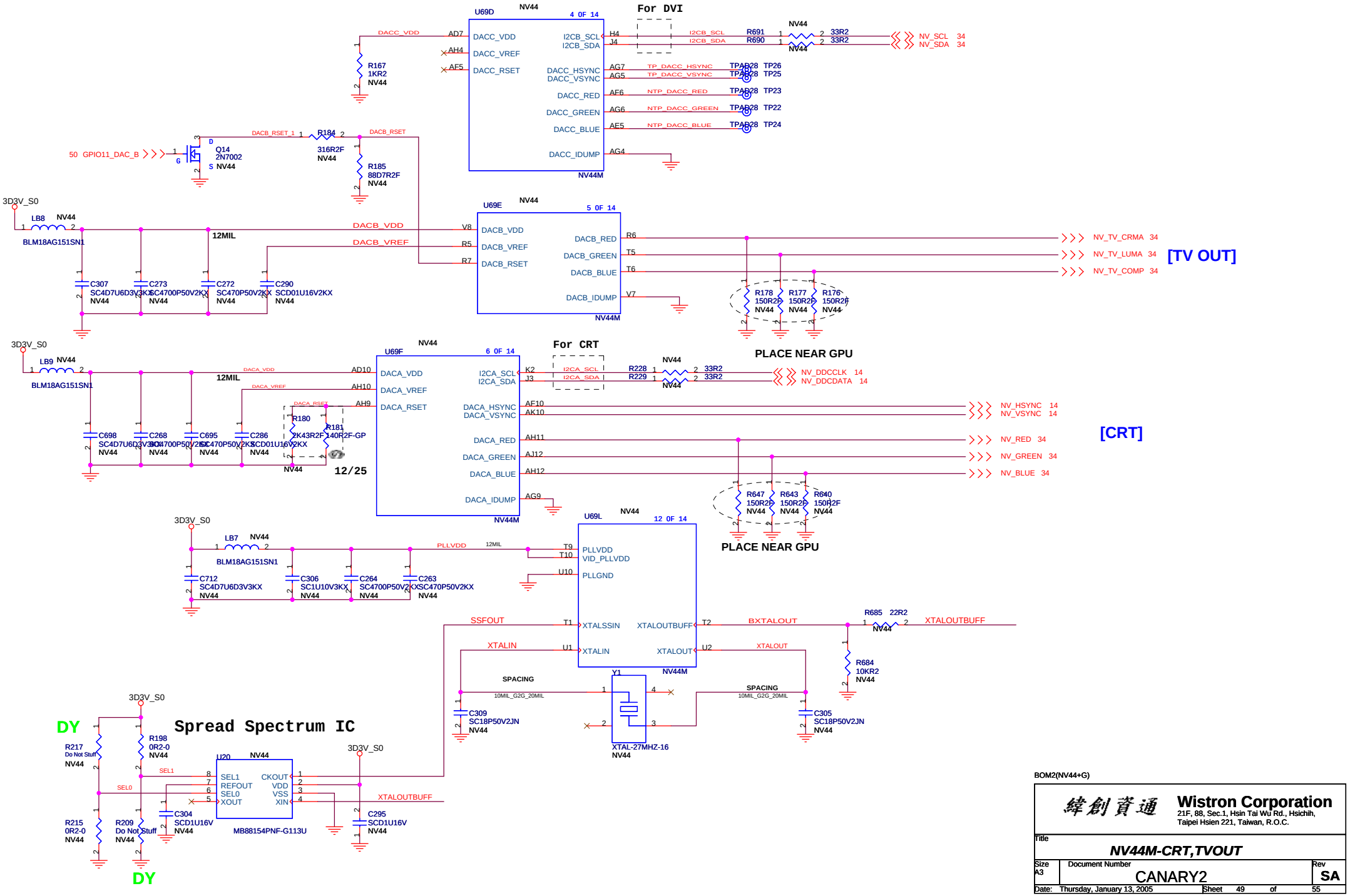
Title: **NV44M-PCIE**

| Size | Document Number | Rev |
|---|---|---|
| Custom | CANARY2 | SA |

Date: Thursday, January 13, 2005 Sheet 46 of 55


NV44
U69B
2 OF 14
FBAD[31..0]
FBAD0 N27
FBAD1 M27
FBAD2 N28
FBAD3 L29
FBAD4 K27
FBAD5 K28
FBAD6 J29
FBAD7 J28
FBAD8 P30
FBAD9 N31
FBAD10 N30
FBAD11 N32
FBAD12 L31
FBAD13 L30
FBAD14 J30
FBAD15 L32
FBAD16 H30
FBAD17 K30
FBAD18 H31
FBAD19 E30
FBAD20 H32
FBAD21 E31
FBAD22 D30
FBAD23 E30
FBAD24 H28
FBAD25 H29
FBAD26 E29
FBAD27 J27
FBAD28 F27
FBAD29 F27
FBAD30 E28
FBAD31 F28
AD29 AE29 AD28 AC28 AB29 AA30 Y28 AB30 AM30 AF30 AJ31 AJ30 AJ32 AK29 AM31 AL30 AE32 AE30 AE31 AD30 AC31 AC32 AB32 AB31 AG27 AF28 AH28 AG28 AG29 AD27 AF27 AE28
FBAD0 FBAD1 FBAD2 FBAD3 FBAD4 FBAD5 FBAD6 FBAD7 FBAD8 FBAD9 FBAD10 FBAD11 FBAD12 FBAD13 FBAD14 FBAD15 FBAD16 FBAD17 FBAD18 FBAD19 FBAD20 FBAD21 FBAD22 FBAD23 FBAD24 FBAD25 FBAD26 FBAD27 FBAD28 FBAD29 FBAD30 FBAD31 FBAD32 FBAD33 FBAD34 FBAD35 FBAD36 FBAD37 FBAD38 FBAD39 FBAD40 FBAD41 FBAD42 FBAD43 FBAD44 FBAD45 FBAD46 FBAD47 FBAD48 FBAD49 FBAD50 FBAD51 FBAD52 FBAD53 FBAD54 FBAD55 FBAD56 FBAD57 FBAD58 FBAD59 FBAD60 FBAD61 FBAD62 FBAD63
VGA_MEM_S0
A12 A15 A18 A21 A24 A27 A3 A30 A6 A9 AA32 AD32 AG32 AK32 C32 F32 J32 M32 R32 V32
FBVDD
C186 SC4700P50V2KX NV44
C189 SCD022U16V2KX NV44
C221 SCD022U16V2KX NV44
C612 SCD022U16V2KX NV44
C159 SCD1U10V2MX-1 NV44
C213 SCD022U16V2KX NV44
C289 SCD022U16V2KX NV44
C283 SCD022U16V2KX NV44
C161 SCD1U10V2MX-1 NV44
C149 SCD1U10V2MX-1 NV44
C246 SC4700P50V2KX NV44
C274 SCD022U16V2KX NV44
C212 SCD022U16V2KX NV44
C205 SCD022U16V2KX NV44
C150 SCD1U10V2MX-1 NV44
C156 SCD1U10V2MX-1 NV44
C243 SC4700P50V2KX NV44
C278 SCD022U16V2KX NV44
C292 SCD022U16V2KX NV44
C279 SCD022U16V2KX NV44
C198 SCD1U10V2MX-1 NV44
C177 SCD1U10V2MX-1 NV44
AA25 AA26 AB25 AB26 G11 G12 G15 G18 G21 G22 H11 H12 H15 H18 H21 H22 L25 L26 M25 M26 R25 R26 V25 V26
FBVDDQ
C215 SC1U10V3KX NV44
C151 SC1U10V3KX NV44
C277 SC1U10V3KX NV44
C224 SCD022U16V2KX NV44
FBAA[12..0]
FBAA[12..0] 48
FBA_CMD0 P32 FBAA3
FBA_CMD1 U27 FBAA0
FBA_CMD2 P31 FBAA2
FBA_CMD3 U30 FBAA1
FBA_CMD4 Y31
FBA_CMD5 W32
FBA_CMD6 W31
FBA_CMD7 T32 FBACS1# FBACS1# 48
FBA_CMD8 V27 FBACS0# FBACS0# 48
FBA_CMD9 T28 FBAWE# FBAWE# 48
FBA_CMD10 T31 FBABA0 FBABA0 48
FBA_CMD11 U32 FBACKE FBACKE 48
FBA_CMD12 W29
FBA_CMD13 W30
FBA_CMD14 T27 FBAA12
FBA_CMD15 V28 FBARAS# FBARAS# 48
FBA_CMD16 V30 FBAA11
FBA_CMD17 U31 FBAA10
FBA_CMD18 R27 FBABA1 FBABA1 48
FBA_CMD19 V29 FBAA8
FBA_CMD20 T30 FBAA9
FBA_CMD21 W28 FBAA6
FBA_CMD22 R29 FBAA5
FBA_CMD23 R30 FBAA7
FBA_CMD24 P29 FBAA4
FBA_CMD25 U28 FBACAS# FBACAS# 48
FBA_CMD26 Y32
48 FBADQM[3..0]
FBADQM0 M29
FBADQM1 M30
FBADQM2 G30
FBADQM3 F29
AA29 AK30 AC30 AG30
FBADQM0 FBADQM1 FBADQM2 FBADQM3 FBADQM4 FBADQM5 FBADQM6 FBADQM7
48 FBADQS[3..0]
FBADQS0 L28
FBADQS1 K31
FBADQS2 G32
FBADQS3 G28
AB28 AL32 AE32 AH30
FBADQS_WP0 FBADQS_WP1 FBADQS_WP2 FBADQS_WP3 FBADQS_WP4 FBADQS_WP5 FBADQS_WP6 FBADQS_WP7
M28 K32 G31 G27 AA28 AL31 AE31 AH29
FBADQS_RN0 FBADQS_RN1 FBADQS_RN2 FBADQS_RN3 FBADQS_RN4 FBADQS_RN5 FBADQS_RN6 FBADQS_RN7
FBA_CLK0 P28 FBACLK0 FBACLK0 48
FBA_CLK0# R28 FBACLK0# FBACLK0# 48
FBA_CLK1 Y27
FBA_CLK1# AA27
RFU2 Y30
RFU3 AC26
FBA_DEBUG AC27 FBA_DEBUG TP12 TPAD28
FBA_REFCLK D32
FBA_REFCLK# D31
FBA_PLLVDD G23 FBA_PLLVDD
FBA_PLLAVDD G25 FBA_PLLAVDD
FBA_PLLGND G24
3D3V_S0
LB1 NV44 BLM18AG151SN1
C204 SC470P50V2KX NV44
C196 SCD022U16V2KX NV44
C199 SC1U10V3KX NV44
NVVDD
LB2 NV44 BLM18AG151SN1
C188 SC470P50V2KX NV44
C190 SCD022U16V2KX NV44
C206 SC1U10V3KX NV44
FBVREF1 E32
FB_VREF1
C613 Do Not Stuff NV44
C614 SCD022U16V2KX NV44
R608 1KR2F NV44
R609 1KR2F NV44
DY
12/25
NV44M
U69C
NV44
3 OF 14
B7 A7 C7 A2 B2 C4 A5 B5 F9 F10 D12 D9 E12 D11 E8 D8 E7 F7 D6 D5 D3 E4 C3 B4 C10 B10 C8 A10 C11 C12 A11 B11 B28 C27 C26 B26 C30 B31 C29 A31 D28 D27 F26 D24 E23 E26 E24 F23 B23 A23 C25 C23 A22 C22 C21 B22 E22 D22 D21 E21 E18 D19 D18 E19
FBCD0 FBCD1 FBCD2 FBCD3 FBCD4 FBCD5 FBCD6 FBCD7 FBCD8 FBCD9 FBCD10 FBCD11 FBCD12 FBCD13 FBCD14 FBCD15 FBCD16 FBCD17 FBCD18 FBCD19 FBCD20 FBCD21 FBCD22 FBCD23 FBCD24 FBCD25 FBCD26 FBCD27 FBCD28 FBCD29 FBCD30 FBCD31 FBCD32 FBCD33 FBCD34 FBCD35 FBCD36 FBCD37 FBCD38 FBCD39 FBCD40 FBCD41 FBCD42 FBCD43 FBCD44 FBCD45 FBCD46 FBCD47 FBCD48 FBCD49 FBCD50 FBCD51 FBCD52 FBCD53 FBCD54 FBCD55 FBCD56 FBCD57 FBCD58 FBCD59 FBCD60 FBCD61 FBCD62 FBCD63
FBVTT AA23 AB23 H16 H17 J10 J23 J24 J9 K11 K12 K21 K22 K24 K9 L23 M23 T25 U25
A4 E11 F5 C9 C28 F24 C24 E20
FBCDQM0 FBCDQM1 FBCDQM2 FBCDQM3 FBCDQM4 FBCDQM5 FBCDQM6 FBCDQM7
C5 E10 E5 B8 A29 D25 B25 F20
FBCDQS_WP0 FBCDQS_WP1 FBCDQS_WP2 FBCDQS_WP3 FBCDQS_WP4 FBCDQS_WP5 FBCDQS_WP6 FBCDQS_WP7
C6 E9 E6 A8 B29 E25 A25 F21
FBCDQS_RN0 FBCDQS_RN1 FBCDQS_RN2 FBCDQS_RN3 FBCDQS_RN4 FBCDQS_RN5 FBCDQS_RN6 FBCDQS_RN7
FBC_CMD0 C13
FBC_CMD1 A16
FBC_CMD2 A13
FBC_CMD3 B17
FBC_CMD4 B20
FBC_CMD5 A19
FBC_CMD6 B19
FBC_CMD7 B14
FBC_CMD8 E16
FBC_CMD9 A14
FBC_CMD10 C15
FBC_CMD11 B16
FBC_CMD12 F17
FBC_CMD13 C19
FBC_CMD14 D15
FBC_CMD15 C17
FBC_CMD16 A17
FBC_CMD17 C16
FBC_CMD18 D14
FBC_CMD19 F16
FBC_CMD20 C14
FBC_CMD21 C18
FBC_CMD22 E14
FBC_CMD23 B13
FBC_CMD24 E15
FBC_CMD25 F15
FBC_CMD26 A20
FBC_CLK0 E13
FBC_CLK0# F13
FBC_CLK1 F18
FBC_CLK1# E17
RFU4 C20
RFU5 D1
FBC_DEBUG F12
FBC_REFCLK B1
FBC_REFCLK# C1
FBC_PLLVDD G8
FBC_PLLAVDD G10
FBC_PLLGND G9
A28 FB_VREF2
FBCAL_PD_VDDQ K26
FBCAL_PU_GND H26
FBCAL_TERM_GND J26
1D8V_S0
VGA_MEM_S0
NV44 G12 GAP-OPEN-PWR
NV44 G13 GAP-OPEN-PWR
NV44 G14 GAP-OPEN-PWR
NV44 G15 GAP-OPEN-PWR
NV44 G16 GAP-OPEN-PWR
12/25
R134 37D4R2F
R132 37D4R2F
R131 Do Not Stuff
DY
BOM2(NV44+G)
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
NV44M-Memory Interface
Size Custom
Document Number
CANARY2
Rev
SA
Date: Thursday, January 13, 2005
Sheet 47 of 55


U19A NV44 1 of 5
HY5DS573222F-U
VGA_MEM_S0
VREF=.4(VGA_MEM_S0) FOR NV43
DY
NO STUFF
Do Not Stuff
Must be placed as close as possible to minomize the stub length!!
U19B NV44 2 of 5
U19C NV44 3 of 5
U19D NV44 4 of 5
U19E NV44 5 of 5
Decoupling for MEMORY
Place around the MEM
BOM2(NV44+G)
緯創資通
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
NV44M-Memory Interface
Size A3
Document Number
CANARY2
Rev SA
Date: Thursday, January 13, 2005
Sheet 48 of 55



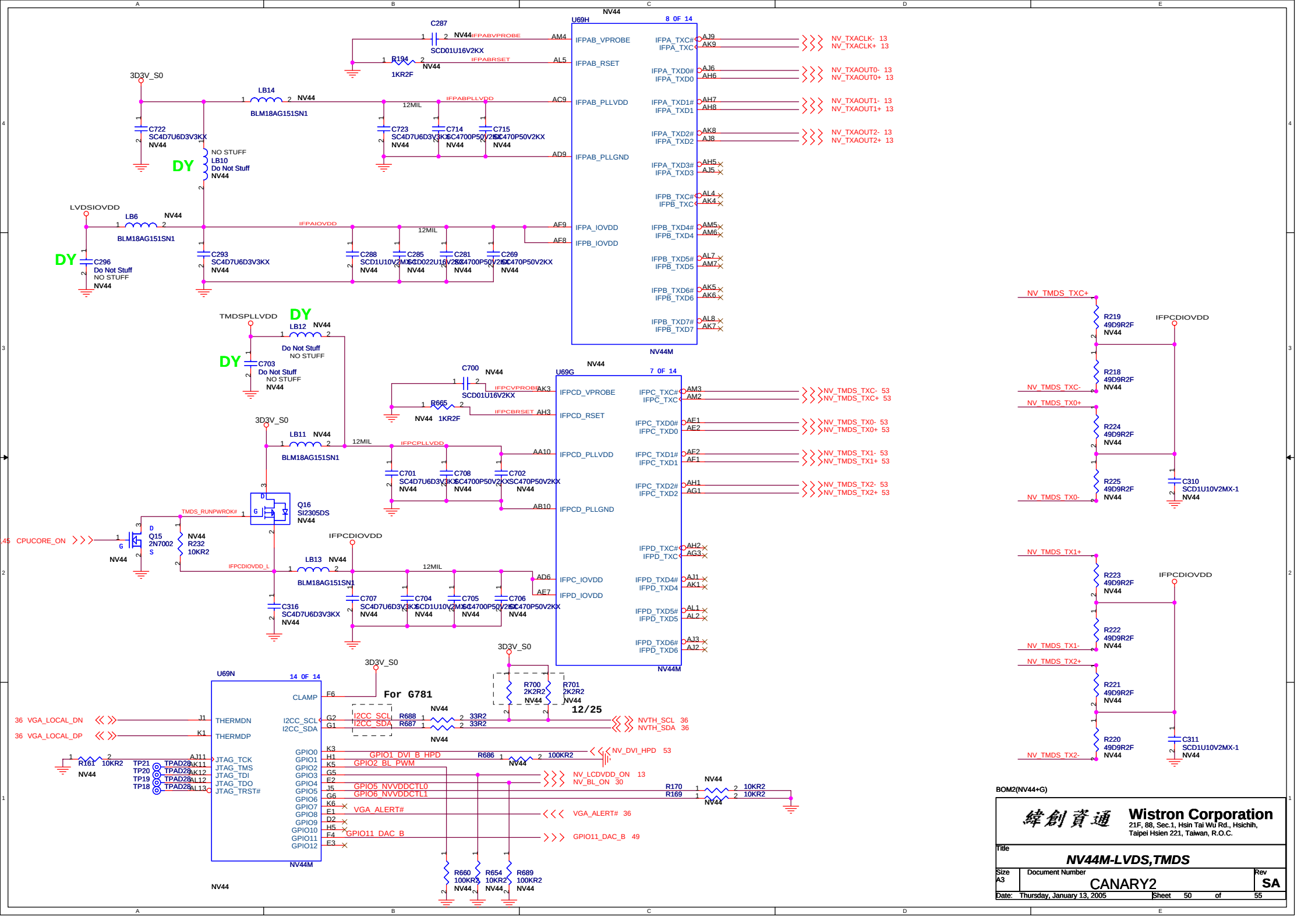

BOM2(NV44+G)

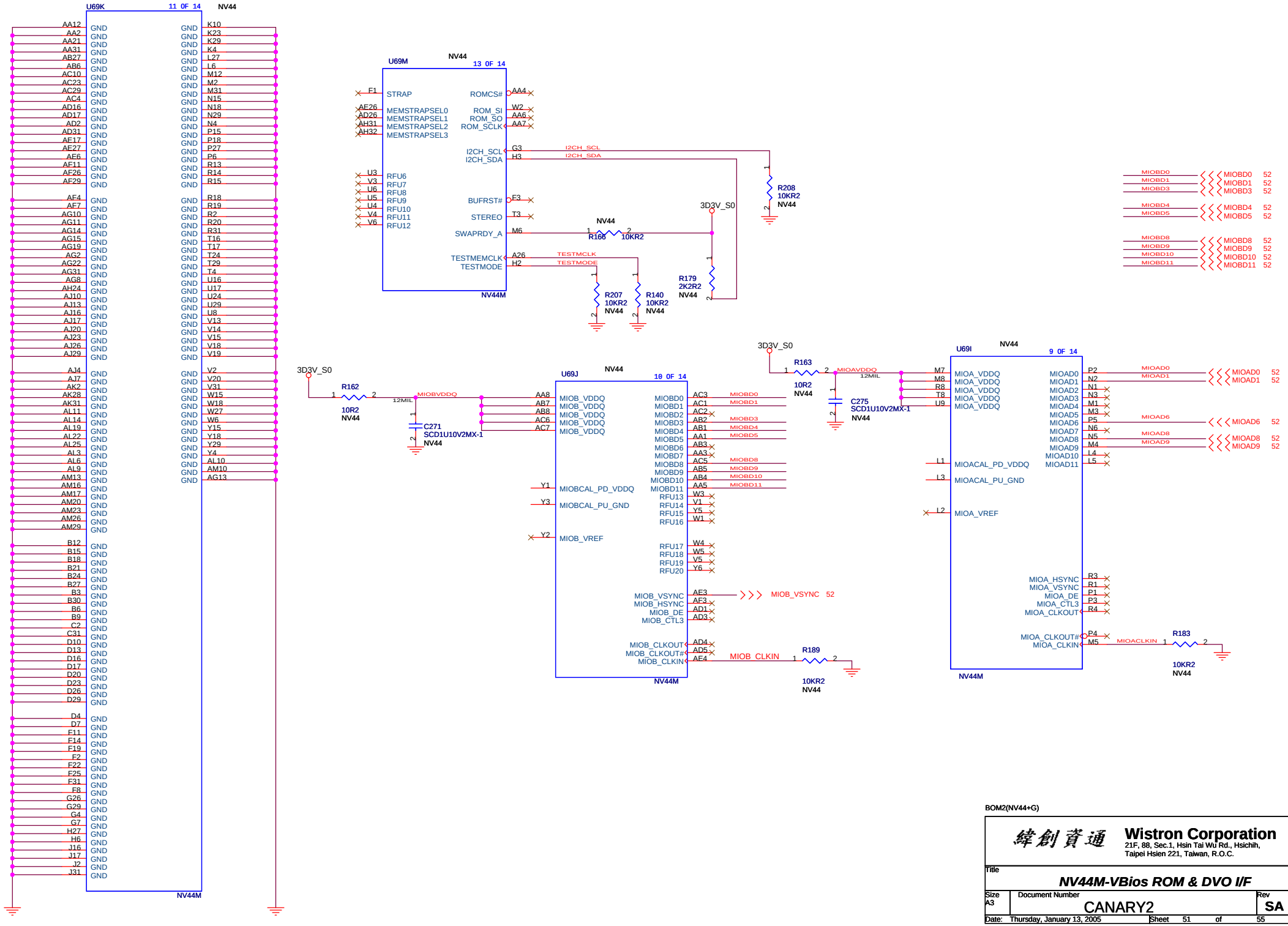
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: NV44M-CRT,TVOUT

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

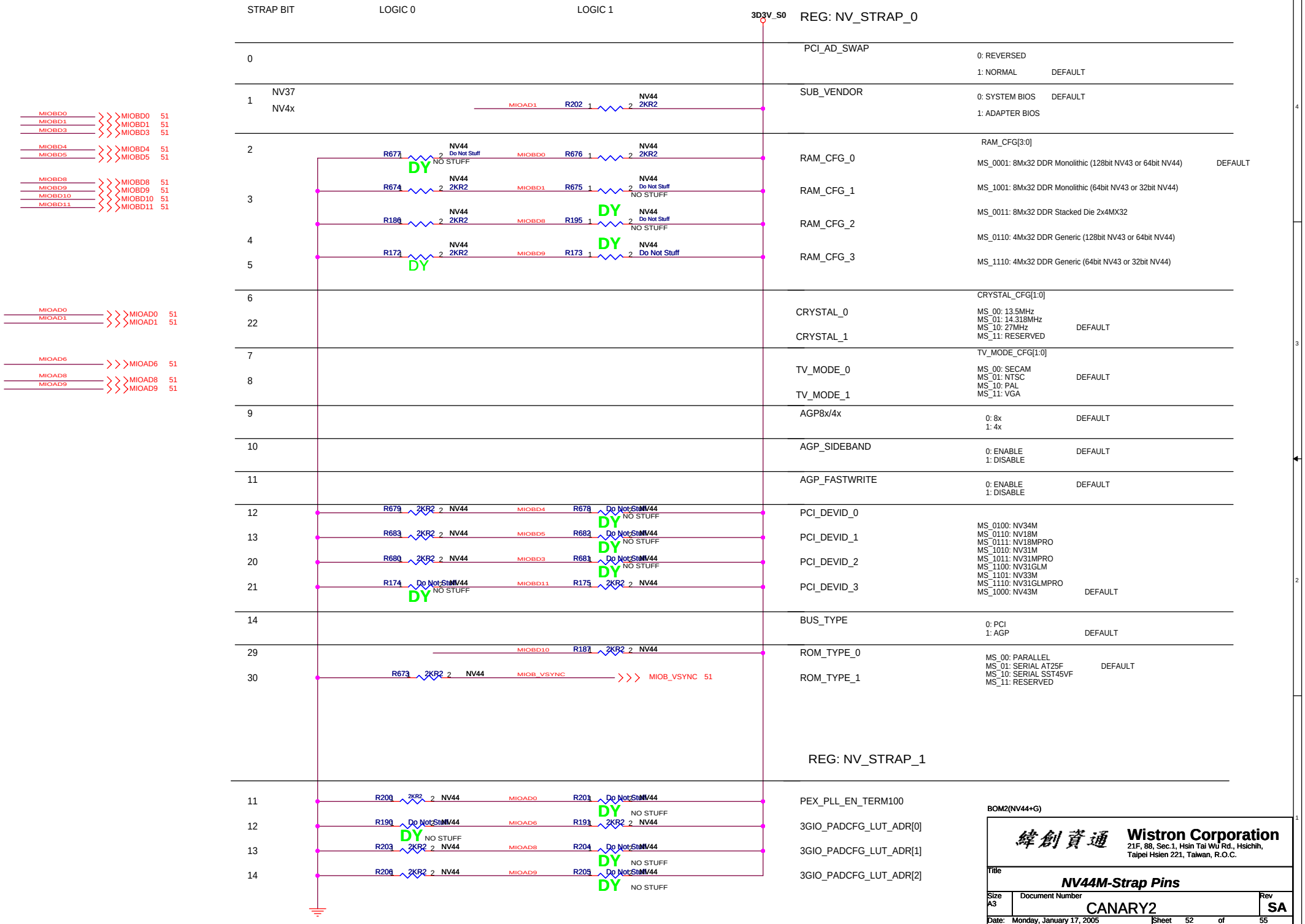
Date: Thursday, January 13, 2005 Sheet 49 of 55

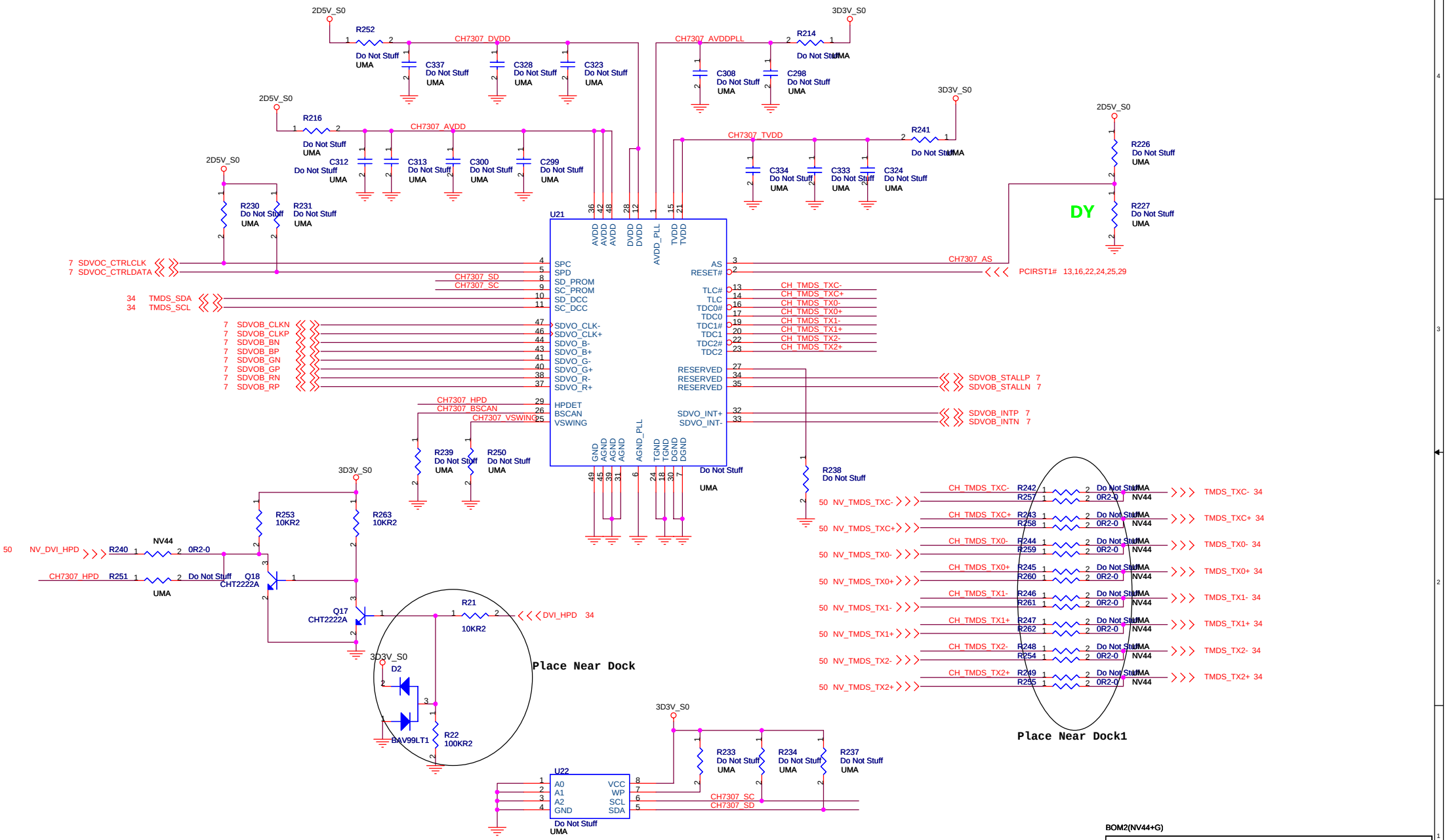

U69H
8 OF 14
NV44M
IFPAB_VPROBE
IFPAB_RSET
IFPAB_PLLVDD
IFPAB_PLLGND
IFPA_IOVDD
IFPB_IOVDD
IFPA_TXC#
IFPA_TXC
IFPA_TXD0#
IFPA_TXD0
IFPA_TXD1#
IFPA_TXD1
IFPA_TXD2#
IFPA_TXD2
IFPA_TXD3#
IFPA_TXD3
IFPB_TXC#
IFPB_TXC
IFPB_TXD4#
IFPB_TXD4
IFPB_TXD5#
IFPB_TXD5
IFPB_TXD6#
IFPB_TXD6
IFPB_TXD7#
IFPB_TXD7
NV_TXACLK- 13
NV_TXACLK+ 13
NV_TXAOUT0- 13
NV_TXAOUT0+ 13
NV_TXAOUT1- 13
NV_TXAOUT1+ 13
NV_TXAOUT2- 13
NV_TXAOUT2+ 13
U69G
7 OF 14
IFPCD_VPROBE
IFPCD_RSET
IFPCD_PLLVDD
IFPCD_PLLGND
IFPC_IOVDD
IFPD_IOVDD
IFPC_TXC#
IFPC_TXC
IFPC_TXD0#
IFPC_TXD0
IFPC_TXD1#
IFPC_TXD1
IFPC_TXD2#
IFPC_TXD2
IFPD_TXC#
IFPD_TXC
IFPD_TXD4#
IFPD_TXD4
IFPD_TXD5#
IFPD_TXD5
IFPD_TXD6#
IFPD_TXD6
NV_TMDS_TXC- 53
NV_TMDS_TXC+ 53
NV_TMDS_TX0- 53
NV_TMDS_TX0+ 53
NV_TMDS_TX1- 53
NV_TMDS_TX1+ 53
NV_TMDS_TX2- 53
NV_TMDS_TX2+ 53
U69N
14 OF 14
THERMDN
THERMDP
JTAG_TCK
JTAG_TMS
JTAG_TDI
JTAG_TDO
JTAG_TRST#
CLAMP
I2CC_SCL
I2CC_SDA
GPIO0
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
For G781
12/25
NVTH_SCL 36
NVTH_SDA 36
NV_DVI_HPD 53
NV_LCDVDD_ON 13
NV_BL_ON 30
VGA_ALERT# 36
GPIO11_DAC_B 49
GPIO1_DVI_B_HPD
GPIO2_BL_PWM
GPIO5_NVVDDCTL0
GPIO6_NVVDDCTL1
VGA_ALERT#
36 VGA_LOCAL_DN
36 VGA_LOCAL_DP
45 CPUCORE_ON
3D3V_S0
LVDSIOVDD
TMDSPLLVDD
IFPAIOVDD
IFPCPLLVDD
IFPCVPROBE
IFPCBRSET
IFPABPLLVDD
IFPABVPROBE
IFPABRSET
IFPCDIOVDD
IFPCDIOVDD_L
TMDS_RUNPWROK#
NV_TMDS_TXC+
NV_TMDS_TXC-
NV_TMDS_TX0+
NV_TMDS_TX0-
NV_TMDS_TX1+
NV_TMDS_TX1-
NV_TMDS_TX2+
NV_TMDS_TX2-
BOM2(NV44+G)
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
NV44M-LVDS,TMDS
Size A3
Document Number
CANARY2
Rev SA
Date: Thursday, January 13, 2005
Sheet 50 of 55




BOM2(NV44+G)

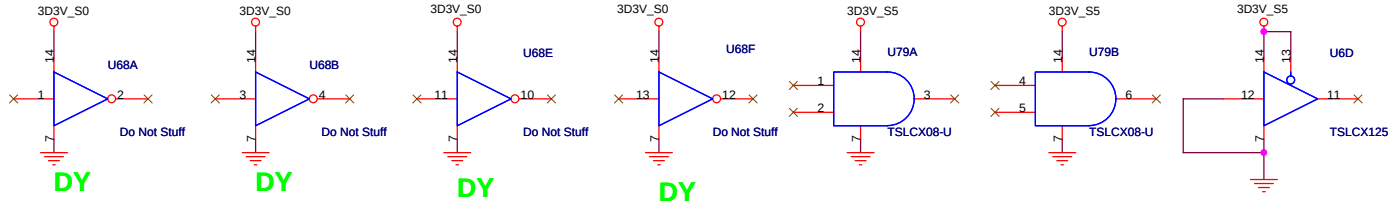
| | | |
|---|---|---|
| 緯創資通 Wistron Corporation<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title: NV44M-VBios ROM & DVO I/F | | |
| Size: A3 | Document Number: CANARY2 | Rev: SA |
| Date: Thursday, January 13, 2005 | Sheet 51 of 55 | |

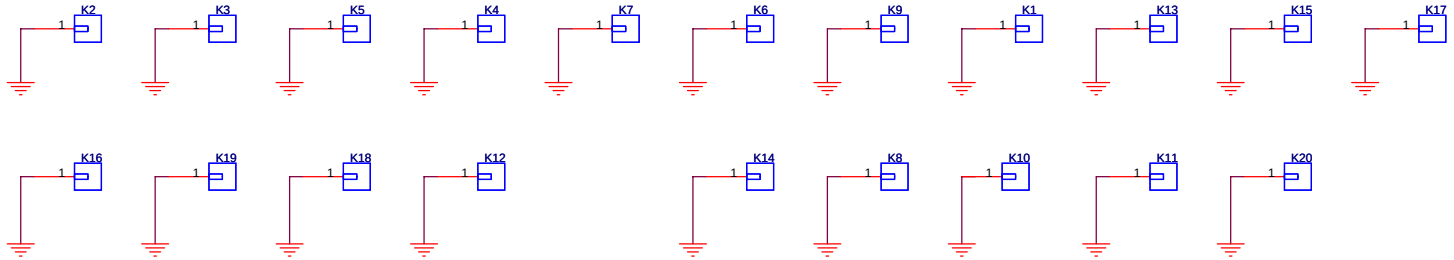

STRAP BIT
LOGIC 0
LOGIC 1
3D3V_S0
REG: NV_STRAP_0
0
PCI_AD_SWAP
0: REVERSED
1: NORMAL DEFAULT
1
NV37
NV4x
SUB_VENDOR
0: SYSTEM BIOS DEFAULT
1: ADAPTER BIOS
MIOAD1 R202 NV44 2KR2
2
3
4
5
RAM_CFG[3:0]
RAM_CFG_0
RAM_CFG_1
RAM_CFG_2
RAM_CFG_3
MS_0001: 8Mx32 DDR Monolithic (128bit NV43 or 64bit NV44) DEFAULT
MS_1001: 8Mx32 DDR Monolithic (64bit NV43 or 32bit NV44)
MS_0011: 8Mx32 DDR Stacked Die 2x4MX32
MS_0110: 4Mx32 DDR Generic (128bit NV43 or 64bit NV44)
MS_1110: 4Mx32 DDR Generic (64bit NV43 or 32bit NV44)
R677 R676 R674 R675 R186 R195 R172 R173
MIOBD0 MIOBD1 MIOBD8 MIOBD9
NV44 2KR2
Do Not Stuff
NO STUFF
DY
6
22
CRYSTAL_CFG[1:0]
CRYSTAL_0
CRYSTAL_1
MS_00: 13.5MHz
MS_01: 14.318MHz
MS_10: 27MHz DEFAULT
MS_11: RESERVED
7
8
TV_MODE_CFG[1:0]
TV_MODE_0
TV_MODE_1
MS_00: SECAM
MS_01: NTSC DEFAULT
MS_10: PAL
MS_11: VGA
9
AGP8x/4x
0: 8x DEFAULT
1: 4x
10
AGP_SIDEBAND
0: ENABLE DEFAULT
1: DISABLE
11
AGP_FASTWRITE
0: ENABLE DEFAULT
1: DISABLE
12
13
20
21
PCI_DEVID_0
PCI_DEVID_1
PCI_DEVID_2
PCI_DEVID_3
MS_0100: NV34M
MS_0110: NV18M
MS_0111: NV18MPRO
MS_1010: NV31M
MS_1011: NV31MPRO
MS_1100: NV31GLM
MS_1101: NV33M
MS_1110: NV31GLMPRO
MS_1000: NV43M DEFAULT
R679 R683 R680 R174 R175 R681 R682 R678
MIOBD4 MIOBD5 MIOBD3 MIOBD11
14
BUS_TYPE
0: PCI
1: AGP DEFAULT
29
30
ROM_TYPE_0
ROM_TYPE_1
MS_00: PARALLEL
MS_01: SERIAL AT25F DEFAULT
MS_10: SERIAL SST45VF
MS_11: RESERVED
MIOBD10 R187 2KR2 NV44
R673 2KR2 NV44 MIOB_VSYNC MIOB_VSYNC 51
REG: NV_STRAP_1
11
12
13
14
PEX_PLL_EN_TERM100
3GIO_PADCFG_LUT_ADR[0]
3GIO_PADCFG_LUT_ADR[1]
3GIO_PADCFG_LUT_ADR[2]
R200 R190 R203 R206 R201 R191 R204 R205
MIOAD0 MIOAD6 MIOAD8 MIOAD9
MIOBD0 51
MIOBD1 51
MIOBD3 51
MIOBD4 51
MIOBD5 51
MIOBD8 51
MIOBD9 51
MIOBD10 51
MIOBD11 51
MIOAD0 51
MIOAD1 51
MIOAD6 51
MIOAD8 51
MIOAD9 51
BOM2(NV44+G)
緯創資通
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
Title
NV44M-Strap Pins
Size A3
Document Number
CANARY2
Rev SA
Date: Monday, January 17, 2005
Sheet 52 of 55

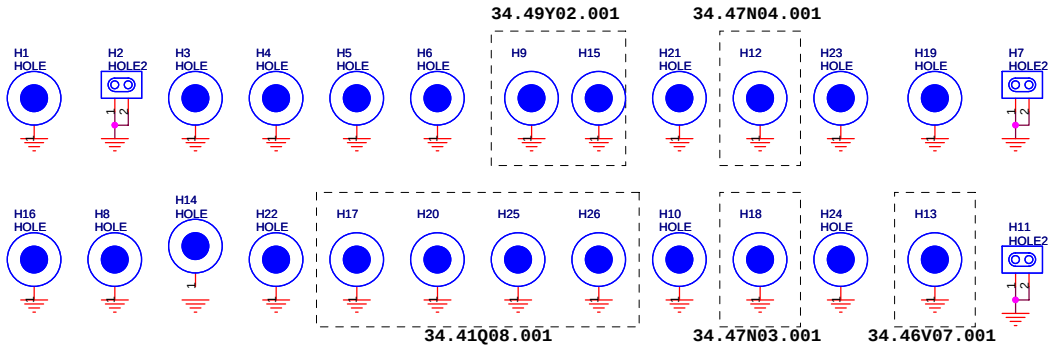



BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 | **Wistron Corporation**<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | |
| Title | ***DVI Transmitter-CH7307C*** | |
| Size<br>A3 | Document Number<br>CANARY2 | Rev<br>**SA** |
| Date: Thursday, January 13, 2005 | Sheet 53 of 55 | |




BOM2(NV44+G)

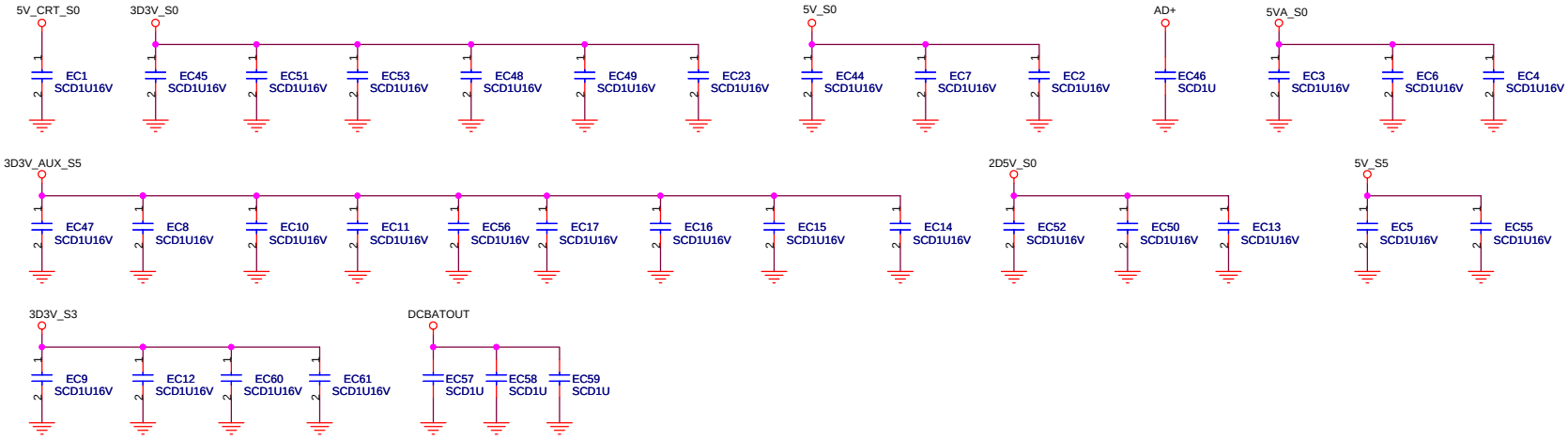
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: ***SPRING,BOSS & UNUSED TTL***

| Size | Document Number | Rev |
|---|---|---|
| A3 | CANARY2 | SA |

Date: Thursday, January 13, 2005 Sheet 54 of 55

# BYPASS CAP




# CROSS PLANE CAP

BOM2(NV44+G)

| | | |
|---|---|---|
| 緯創資通 | **Wistron Corporation**<br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. | |
| Title: ***EMI SOLUTION*** | | |
| Size: A3 | Document Number: CANARY2 | Rev: **SA** |
| Date: Thursday, January 13, 2005 | Sheet 55 of 55 | |