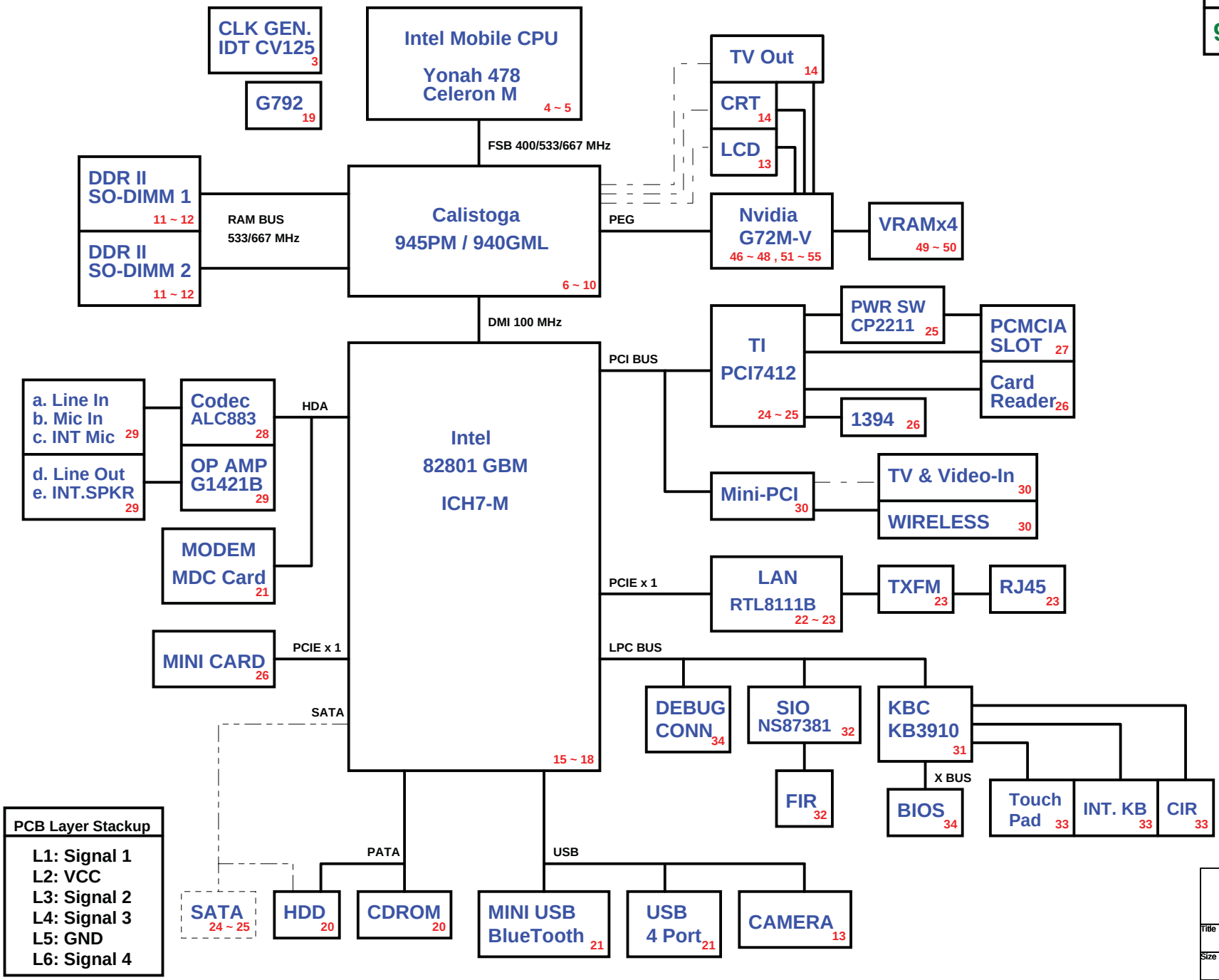
MYALL2 Block Diagram

Project Code	PCB
91.4G901.001	06203-MP



CPU DC/DC ISL6262 37 ~ 38

INPUTS	OUTPUTS
DCBATOUT	VCC_CORE 0.844~1.3V 27A

SYSTEM DC/DC MAX8744 35

INPUTS	OUTPUTS
DCBATOUT	3D3V_S5 5V_S5

APL5331-KAC
APL5912-KAC
APL5308-25AC 40

INPUTS	OUTPUTS
1D5V_S5	1D05V_S0
1D8V_S3	1D5V_S0
3D3V_S5	1D5V_S5
3D3V_S0	2D5V_S0

APW7057-KC
TPS51100DGQ
APL5331-KAC 41

INPUTS	OUTPUTS
5V_S5	3D3V_S5
5V_S5	1D8V_S3
5V_S5	0D9V
1D8V_S0	1D2V_S0

CHARGER ISL6255 42

INPUTS	OUTPUTS
DCBATOUT	BT+ 16.8V 3A

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Title: BLOCK DIAGRAM
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Date: Tuesday, April 11, 2006 Sheet 1 of 57

ICH7M Integrated Pull-up and Pull-down Resistors

EE_DIN, EE_DOUT, GNT[3:0], GPIO[25], GNT[4]#/GPIO48, GNT[5]#/GPO17, PME#, LAD[3:0]#/FHW[3:0]#, LAN_RXD[2:0] LDRQ[0], LDRQ[1]/GPIO[41], PWRBTN#, TP[3]	ICH7 internal 20K pull-ups
DD[7], DDREQ	ICH7 internal 11.5K pull-downs
ACZ_BIT_CLK, ACZ_RST#, ACZ_SDIN[2:0], ACZ_SDOUT, ACZ_SYNC, DPRSLPVR/GPIO16, EE_CS, SPI_ARB, SPI_CLK, SPKR,	ICH7 internal 20K pull-downs
USB[7:0][P,N]	ICH7 internal 15K pull-downs
SATALED#	ICH7 internal 15K pull-up
LAN_CLK	ICH7 internal 100K pull-down

ICH7M IDE Integrated Series Termination Resistors

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

ICH7M Functional Strap Definitions

page 16

Signal	Usage/When Sampled	Comment
ACZ_SDOUT	XOR Chain Entrance/ PCIE Port Config bit1, Rising Edge of PWROK	Allows entrance to XOR Chain testing when TP3 pulled low.When TP3 not pulled low at rising edge of PWROK,sets bit1 of RPC.PC(Config Registers: offset 224h)
ACZ_SYNC	PCIE bit0, Rising Edge of PWROK.	Sets bit0 of RPC.PC(Config Registers:Offset 224h)
EE_CS	Reserved	This signal should not be pull high.
EE_DOUT	Reserved	This signal should not be pull low.
GNT2#	Reserved	This signal should not be pull low.
GNT3#	Top-Block Swap Override. Rising Edge of PWROK.	Sampled low:Top-Block Swap mode(inverts A16 for all cycles targeting FWH BIOS space). Note: Software will not be able to clear the Top-Swap bit until the system is rebooted without GNT3# being pulled down.
GNT5#/ GPIO17#, GNT4#/ GPIO48	Boot BIOS Destination Selection. Rising Edge of PWROK.	Controllable via Boot BIOS Destination bit (Config Registers:Offset 3410h:bit 11:10). GNT5# is MSB, 01-SPI, 10-PCI, 11-LPC.
DPRSLPVR	Reserved	This signal should not be pull high.
GPIO25	Reserved. Rising Edge of RSMRST#.	This signal should not be pull low.
INTVRMEN	Integrated VccSus1_05 VRM Enable/Disable. Always sampled.	Enables integrated VccSus1_05 VRM when sampled high
LINKALERT#	Reserved	Requires an external pull-up resistor.
REQ[4:1]#	XOR Chain Selection. Rising Edge of PWROK.	TBD, Chapter 8.
SATALED#	Reserved	This signal should not be pull low.
SPKR	No Reboot. Rising Edge of PWROK.	If sampled high, the system is strapped to the "No Reboot" mode(ICH7 will disable the TCO Timer system reboot feature). The status is readable via the NO REBOOT bit.
TP3	XOR Chain Entrance. Rising Edge of PWROK.	This signal should not be pull low unless using XOR Chain testing.

954305 27Mhz/2CDC2K Spread and Frequency Selection Table

page 3

SS3 Byte9 bit 7	SS2 bit6	SS1 bit5	SS0 bit4	Spread Amount%
0	0	0	0	-0.50 Down
0	0	0	1	-1.00 Down
0	0	1	0	-1.50 Down
0	0	1	1	-2.00 Down
0	1	0	0	-0.75 Down
0	1	0	1	-1.25 Down
0	1	1	0	-1.75 Down
0	1	1	1	-2.25 Down
1	0	0	0	+-0.25 Center
1	0	0	1	+-0.5 Center
1	0	1	0	+-0.75 Center
1	0	1	1	+-1.0 Center
1	1	0	0	+-0.25 Center
1	1	0	1	+-0.5 Center
1	1	1	0	+-0.75 Center
1	1	1	1	+-1.0 Center

PCI Routing

page 16

	IDSEL	INT -> PIRQ	REQ/GNT
7412	22	A->G, B->B, C->F, D->G	0
MiniPCI	21	A/C -> E B/D -> F	1

Calistoga Strapping Signals and Configuration

page 7

Pin Name	Strap Description	Configuration
CFG[2:0]	FSB Frequency Select	001 = FSB533 011 = FSB667 others = Reserved
CFG[4:3]	Reserved	
CFG5	DMI x2 Select	0 = DMI x2 1 = DMI x4 (Default)
CFG6	Reserved	
CFG7	CPU Strap	0 = Reserved 1 =Mobile CPU(Default)
CFG8	Reserved	
CFG9	PCI Express Graphics Lane Reversal	0 = Reverse Lanes,15->0,14->1 ect.. **1= Normal operation(Default):Lane Numbered in order**
CFG[11:10]	Reserved	
CFG[13:12]	XOR/ALL Z test straps	00 = Reserved 01 = XOR mode enabled 10 = All Z mode enabled **11 = Normal Operation** (Default)
CFG[15:14]	Reserved	Reserved
CFG16	FSB Dynamic ODT	0 = Dynamic ODT Disabled **1 = Dynamic ODT Enabled (Default)**
CFG17	Global R-comp Disable (All R-comps)	0 = All R-comp Disable **1 = Normal Operation (Default)**
CFG18	VCC Select	**0 = 1.05V** (Default) 1 = 1.5V
CFG19	DMI Lane Reversal	**0 = Normal operation (Default):lane Numbered in order** 1 =Reverse Lane,4->0,3->1 ect...
CFG20	SDVO/PCIE Concurrent	**0 = Only SDVO or PCIE x1 is operational (Default)** 1 =SDVO and PCIE x1 are operating simultaneously via the PEG port
SDVOCRTL_DATA	SDVO Present	**0 = No SDVO Card present** (Default) 1= SDVO Card present

NOTE: All strap signals are sampled with respect to the leading edge of the Calistoga GMCH PWORK in signal.

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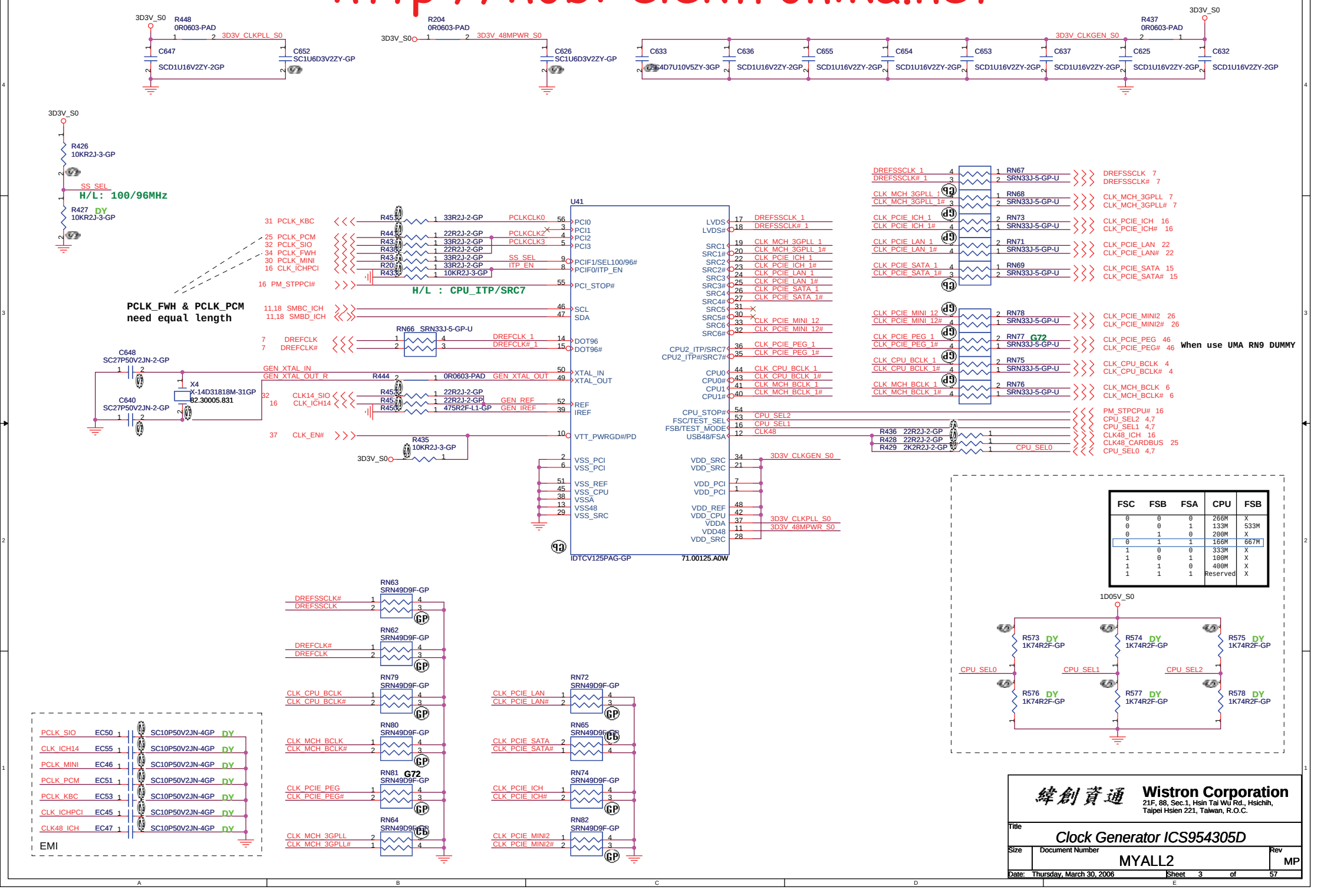
Title			
Reference			
Size	Document Number		Rev
	MYALL2		MP
Date: Friday, March 24, 2006	Sheet 2	of	57



FSC	FSB	FSA	CPU	FSB
0	0	0	266M	X
0	0	1	133M	533M
0	1	0	200M	X
0	1	1	166M	667M
1	0	0	333M	X
1	0	1	100M	X
1	1	0	400M	X
1	1	1	Reserved	X

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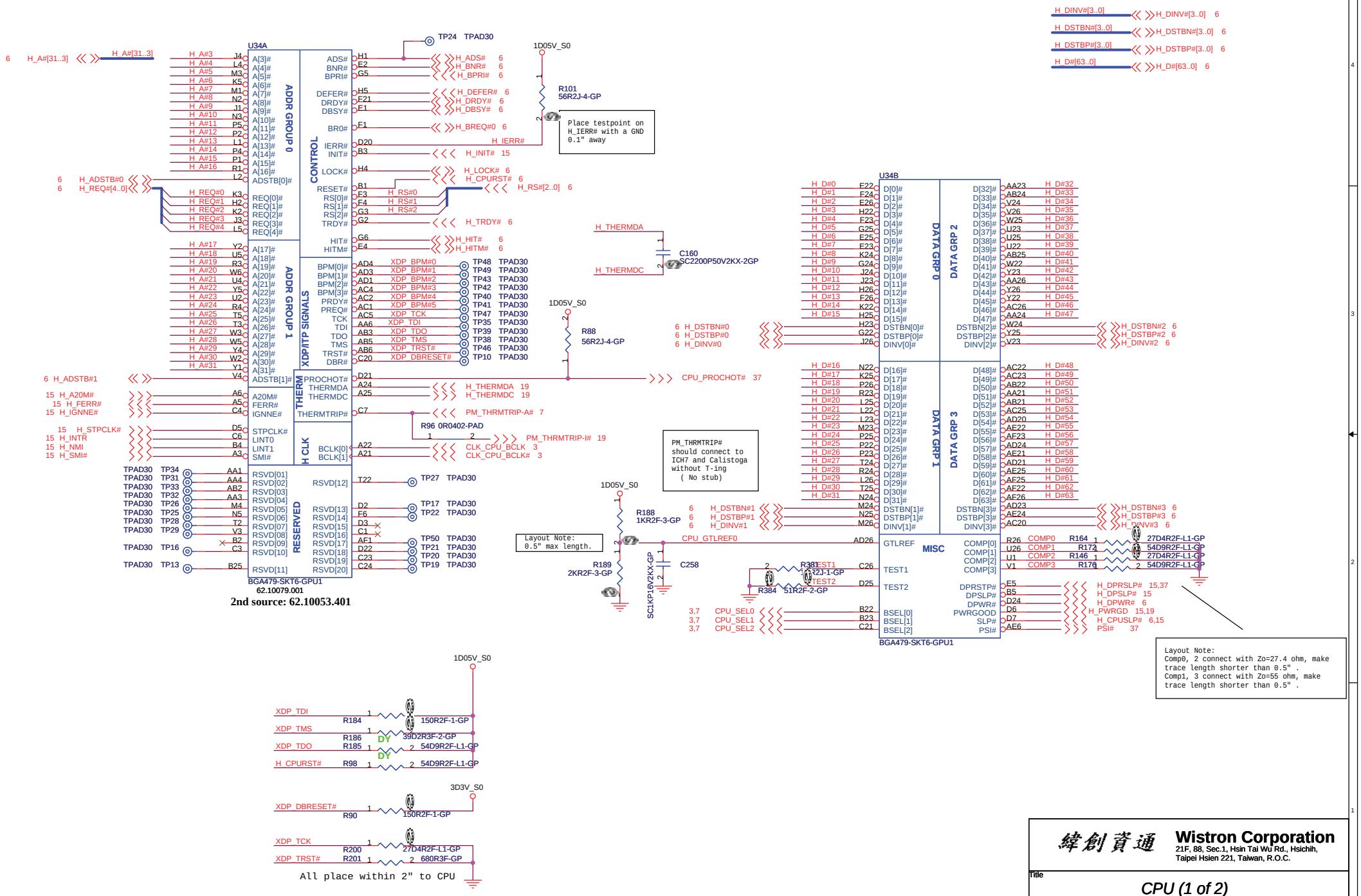
Title: *Clock Generator ICS954305D*

Size	Document Number	Rev
	MYALL2	MP

Date: Thursday, March 30, 2006 Sheet 3 of 57



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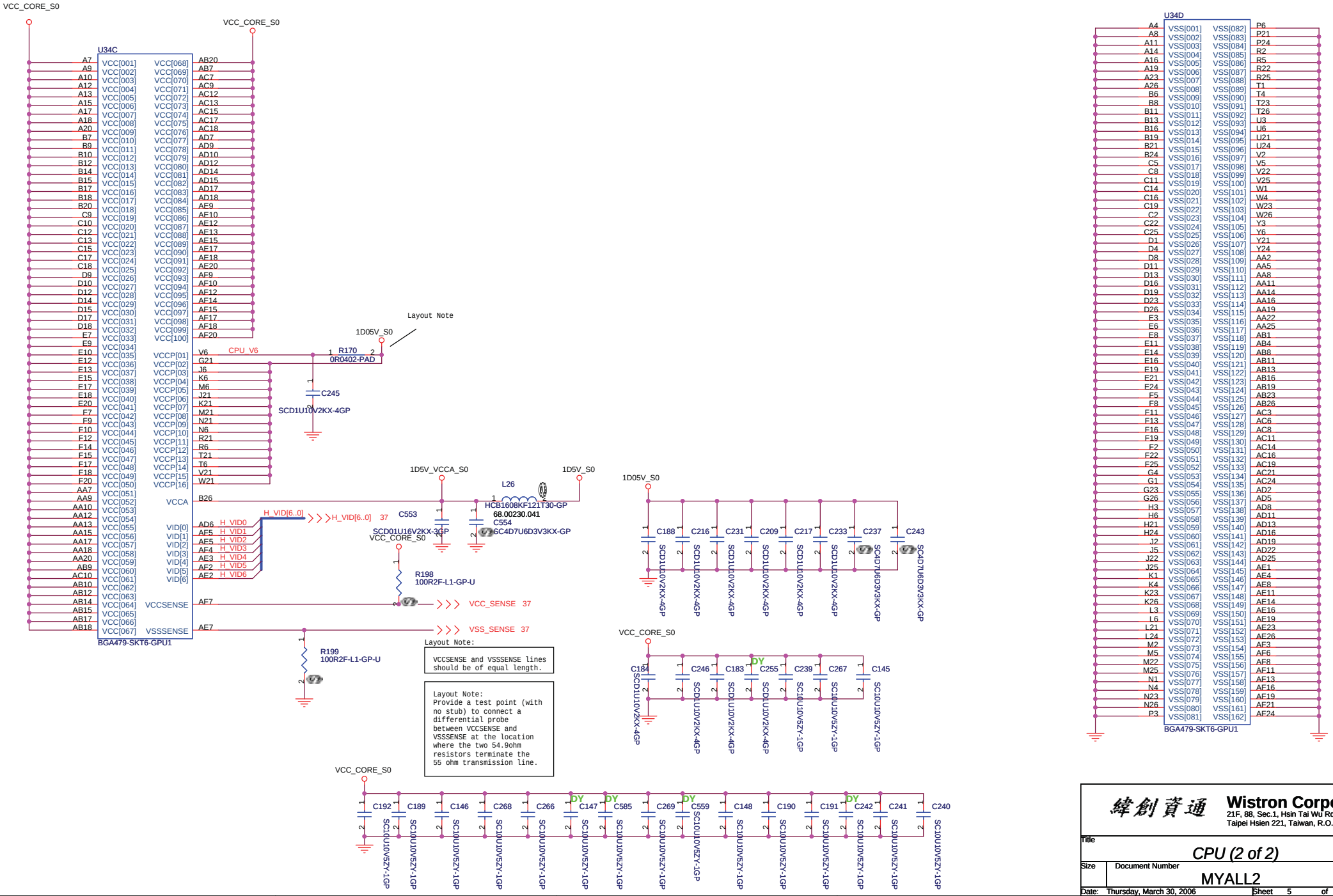
Size	Document Number: MYALL2 — Rev: MP
Date: Thursday, March 30, 2006	Sheet 4 of 57



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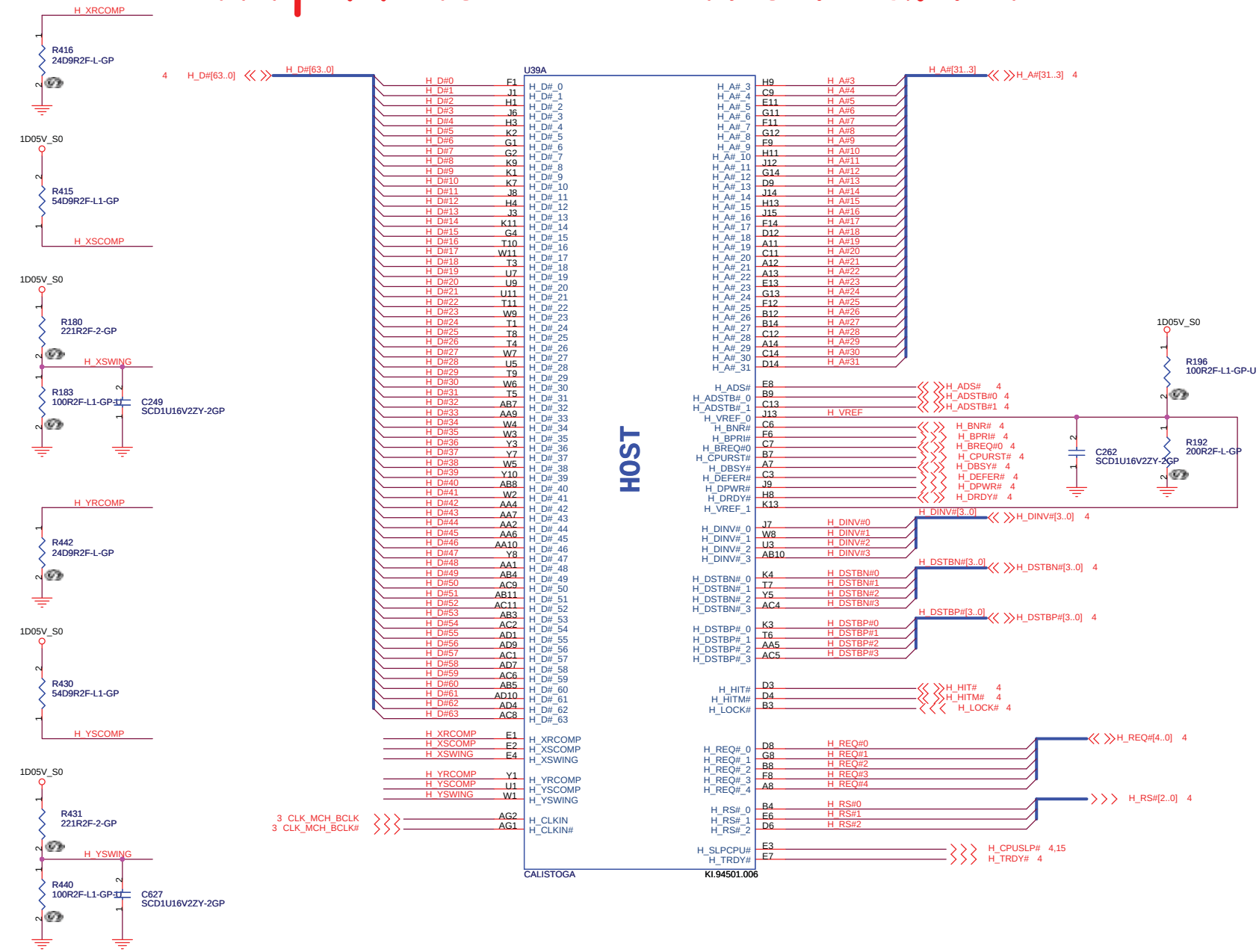
Title	*CPU (2 of 2)*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 5 of 57	



Place them near to the chip (< 0.5")

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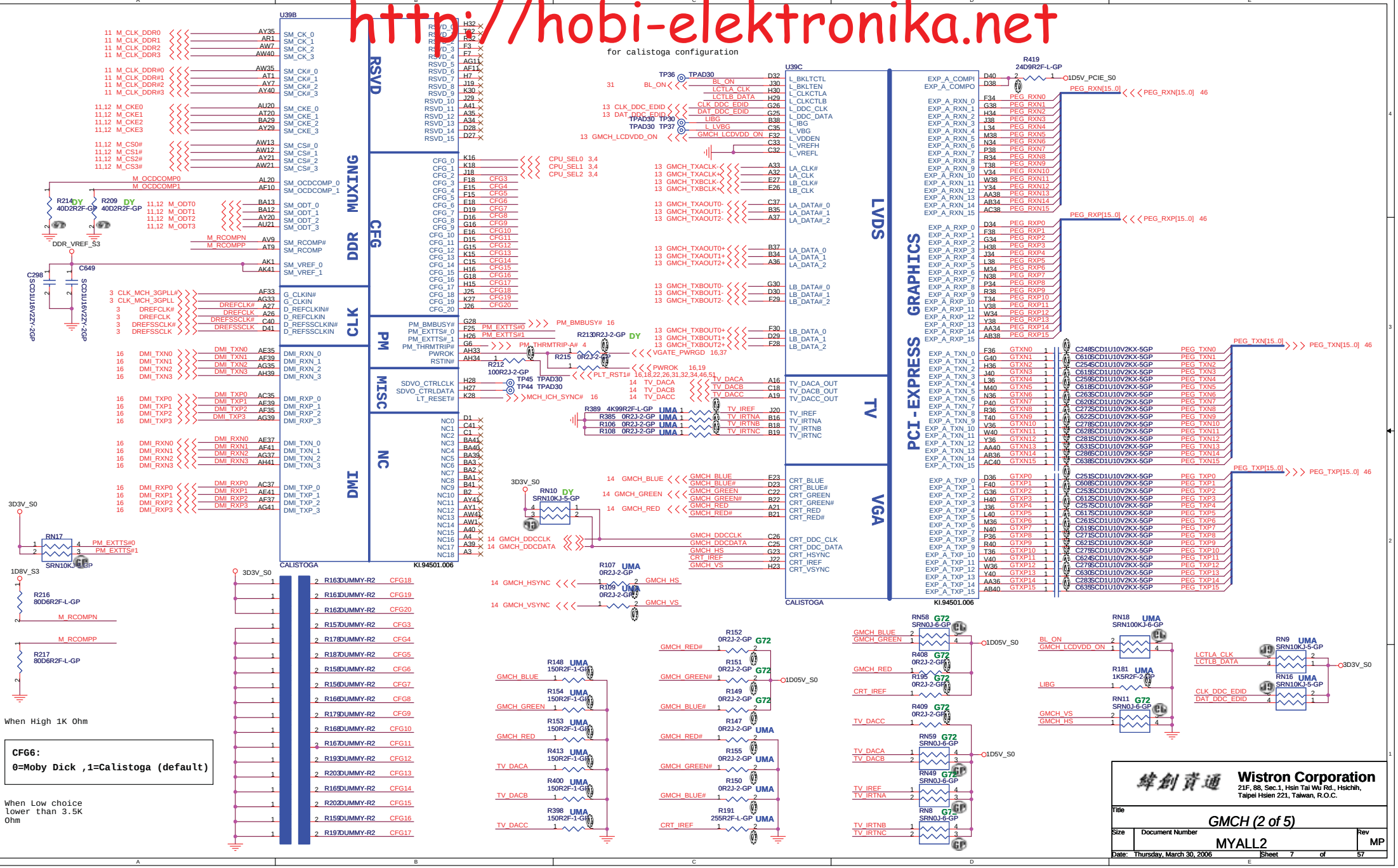
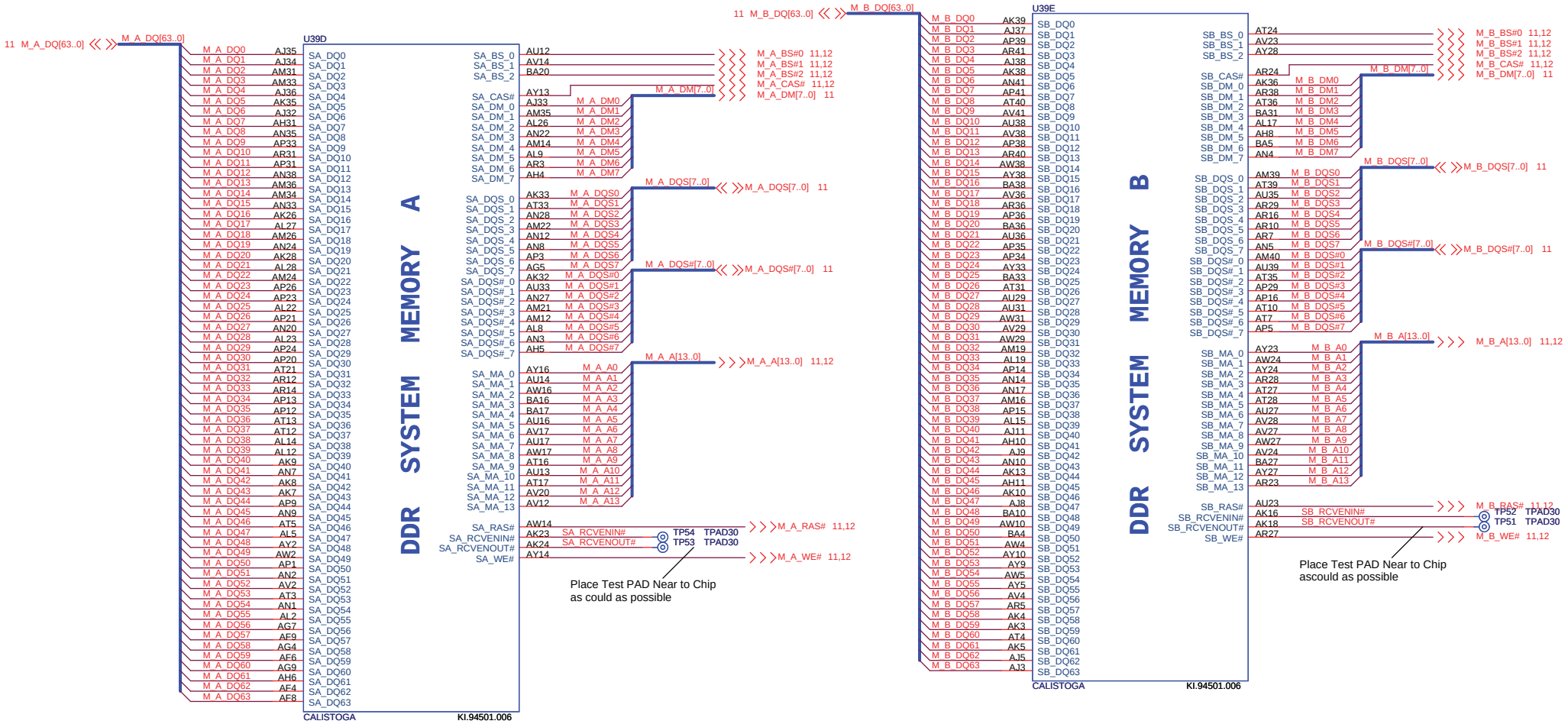
Title	*GMCH (1 of 5)*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 6 of 57	

for calistoga configuration





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Title	GMCH (3 of 5)	
Size	Document Number MYALL2	Rev MP
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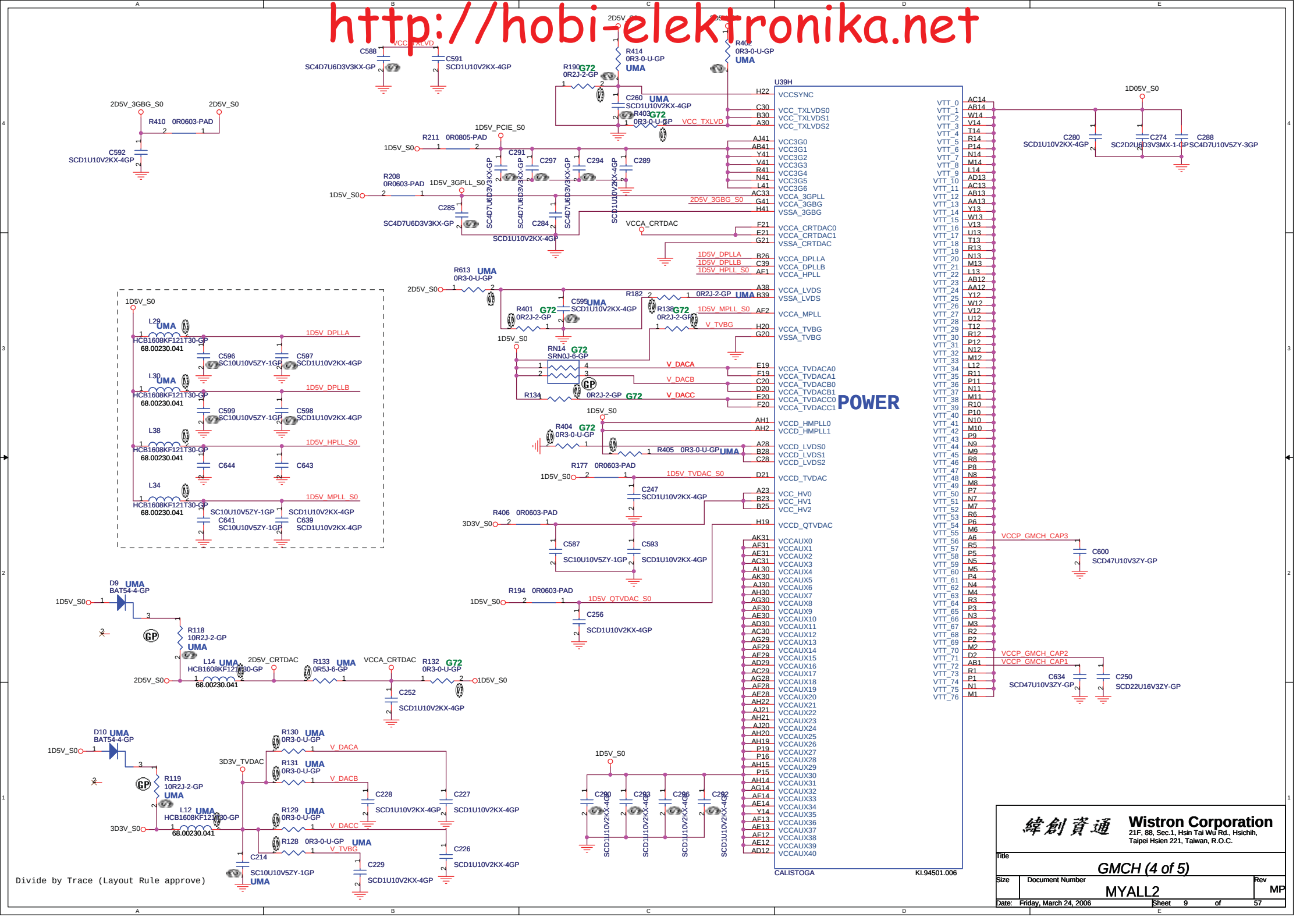

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	MYALL2	MP

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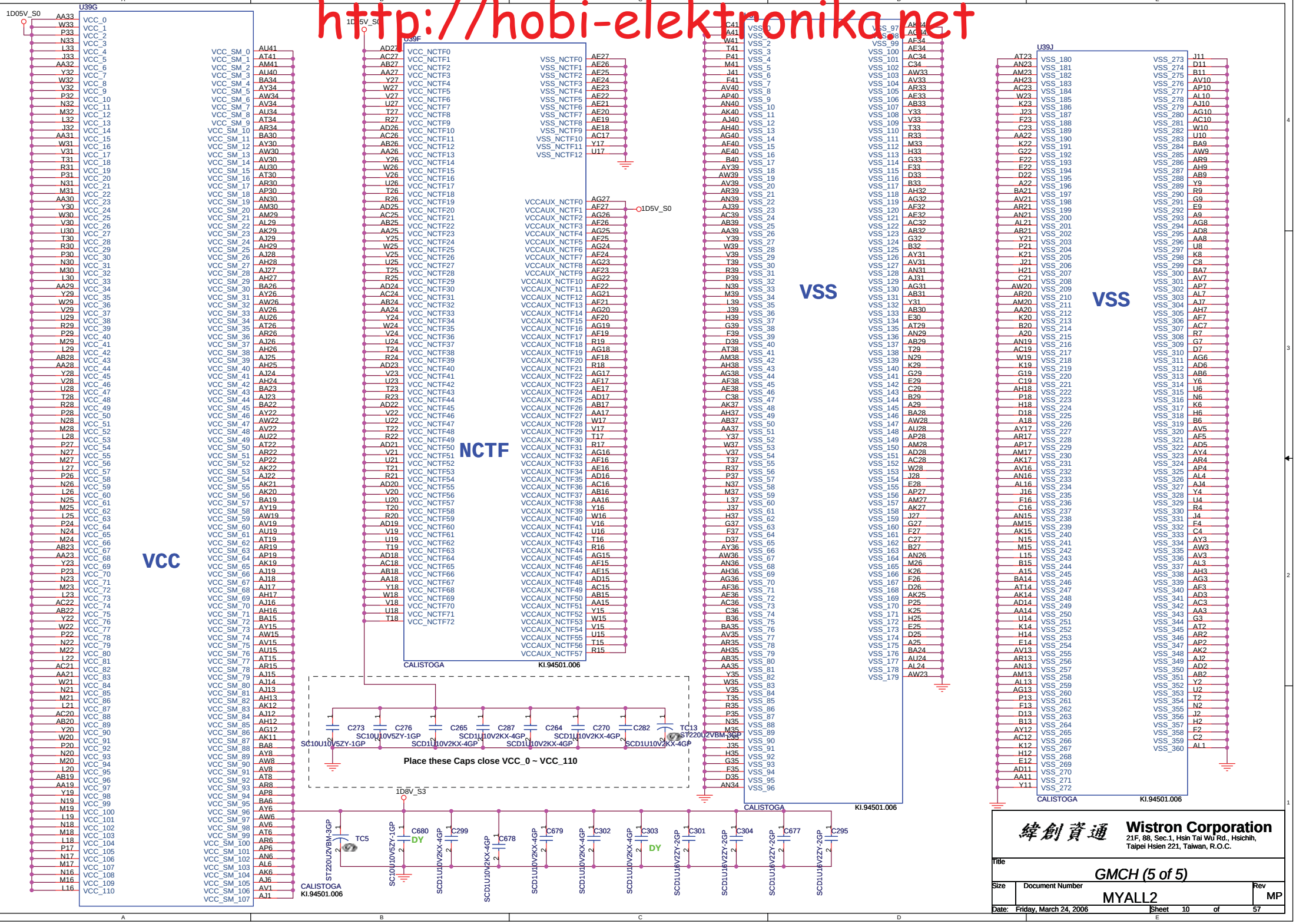

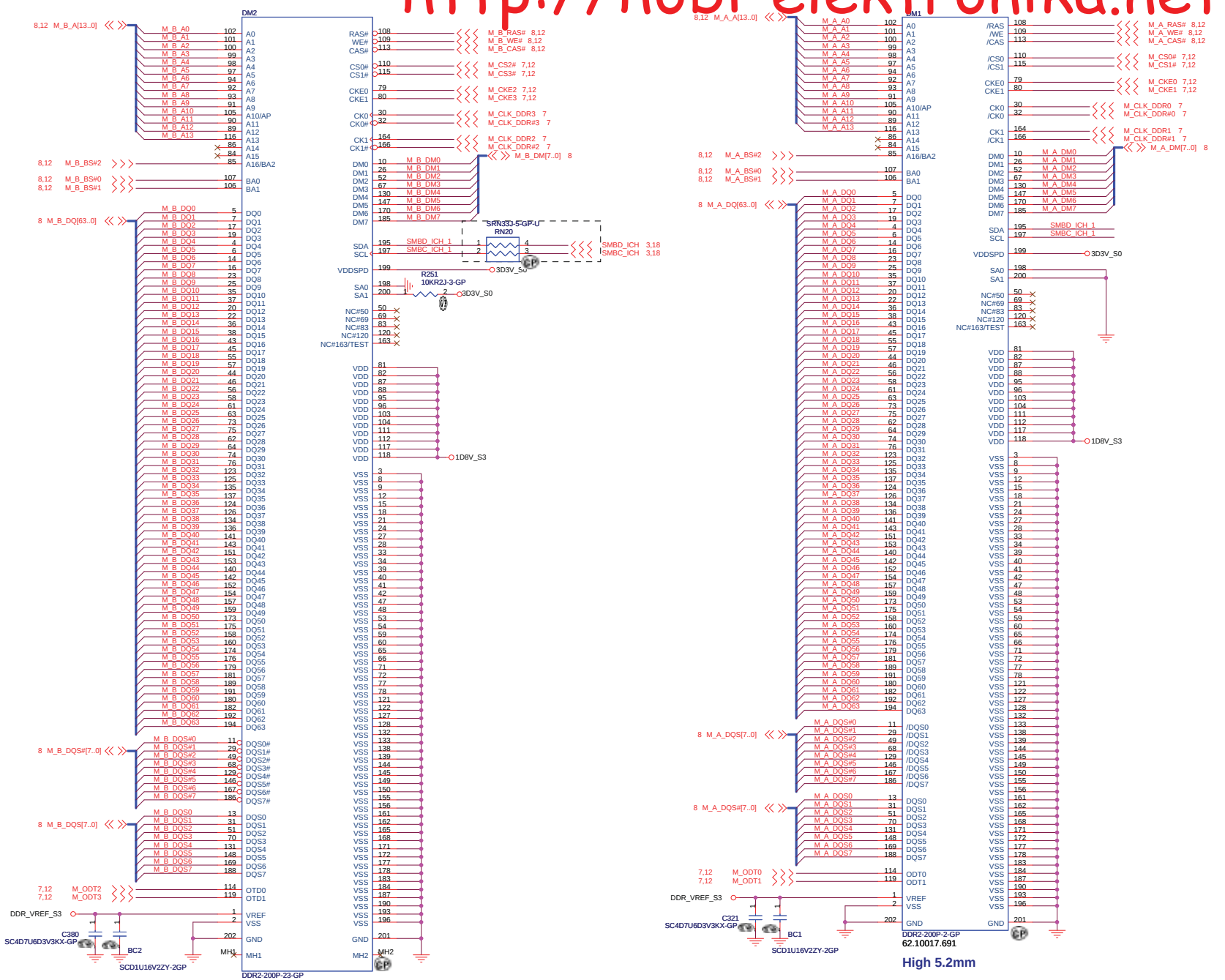

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Title	DDR2 Socket		
Size	Document Number: MYALL2	Rev: MP	
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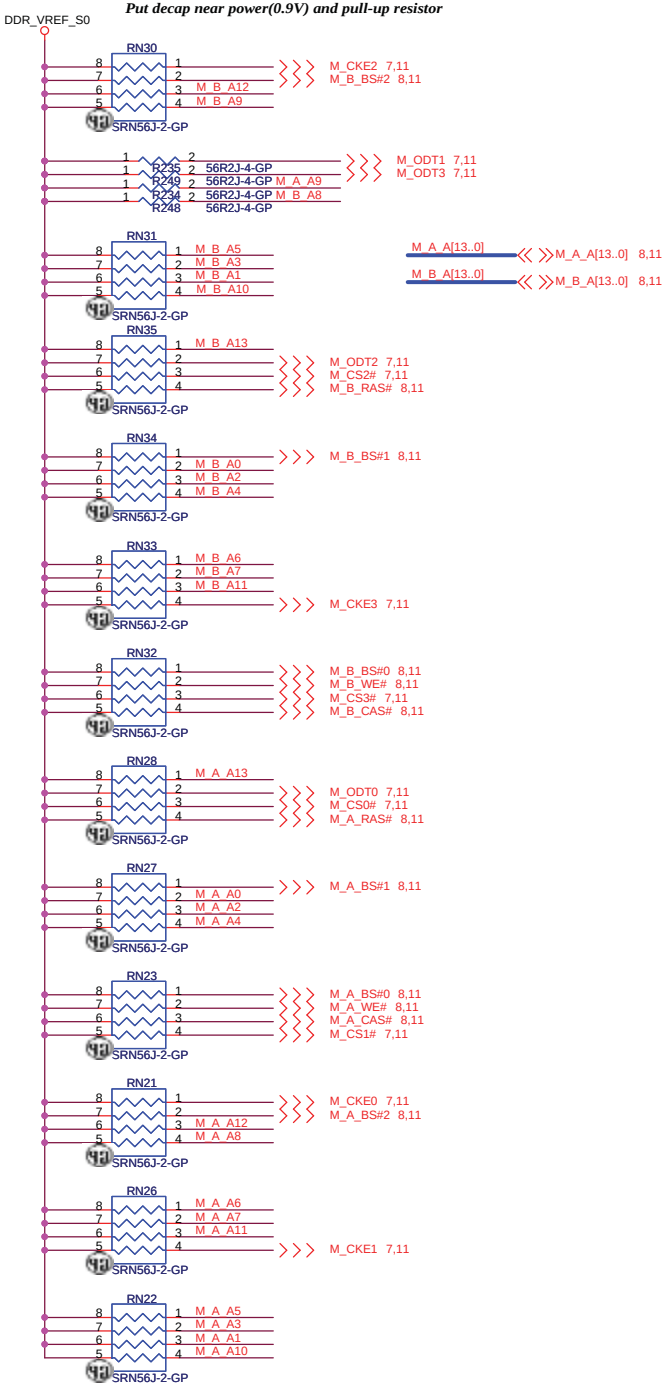
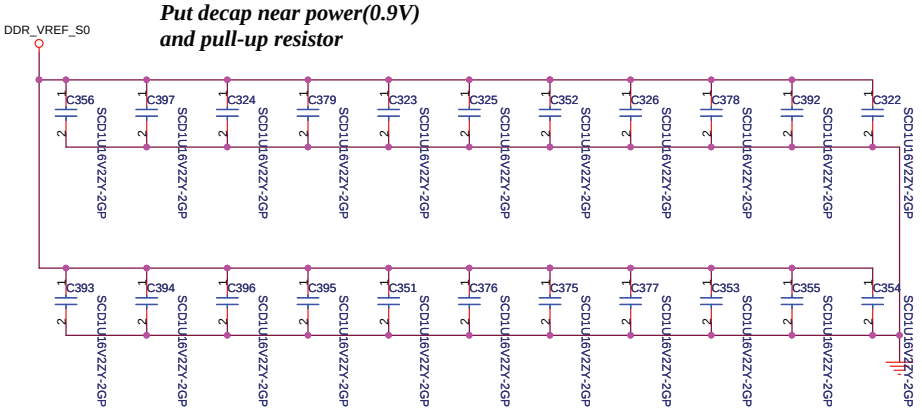
PARALLEL TERMINATION

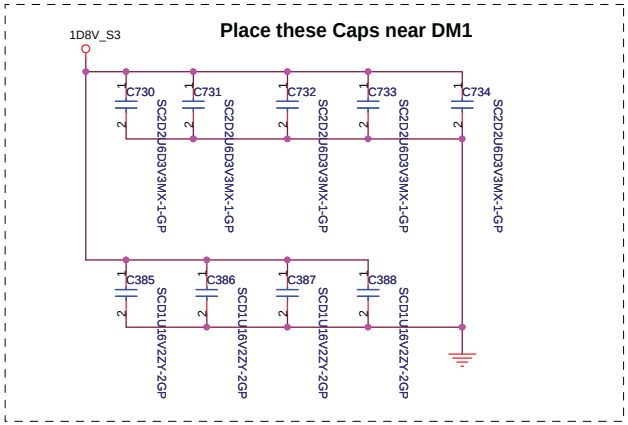
Put decap near power(0.9V) and pull-up resistor

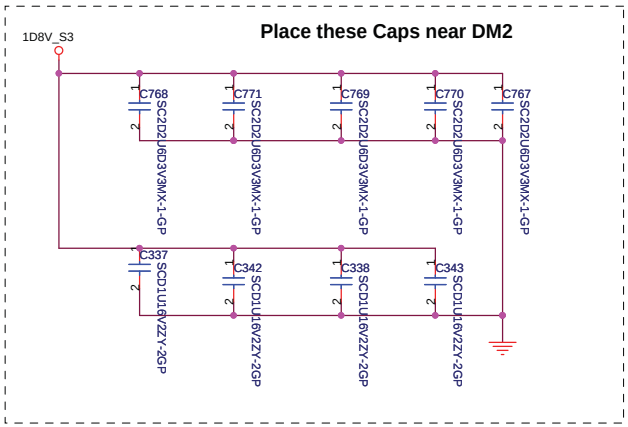


Decoupling Capacitor

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







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Title: *DDR2 Termination Resistor*		
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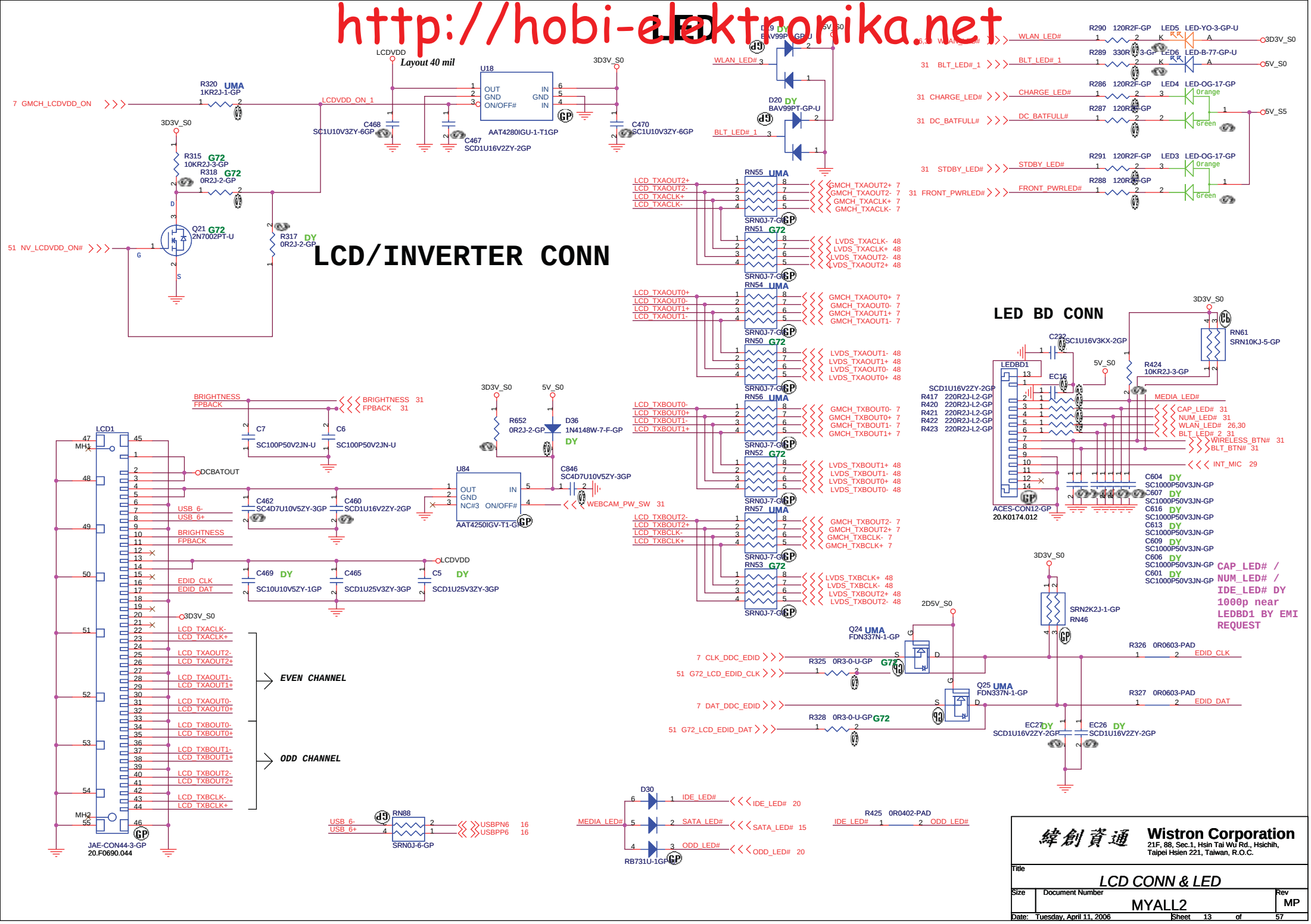
LCD/INVERTER CONN



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Title	LCD CONN & LED	
Size	Document Number: MYALL2	Rev: MP
Date: Tuesday, April 11, 2006	Sheet 13 of 57	

CRT I/F & CONNECTOR

Layout Note:
Place these resistors close to the CRT-out connector

ferrite bead impedance: 10 ohm@100MHz

47 CRT_RED — R375 G72 0R2J-2-GP
7 GMCH_RED — R376 UMA 0R2J-2-GP
47 CRT_GREEN — R373 G72 0R2J-2-GP
7 GMCH_GREEN — R374 UMA 0R2J-2-GP
47 CRT_BLUE — R371 G72 0R2J-2-GP
7 GMCH_BLUE — R372 UMA 0R2J-2-GP

RED — L22 FCB1608CF-GP — CRT_R
GREEN — L23 FCB1608CF-GP — CRT_G
BLUE — L24 FCB1608CF-GP — CRT_B

R294 150R2F-1-GP TVOUT
R295 150R2F-1-GP TVOUT
R296 150R2F-1-GP TVOUT
C457 SC3P50V2CN-1-GP DY
C452 SC3P50V2CN-1-GP DY
C453 SC3P50V2CN-1-GP DY
C446 SC3P50V2CN-1-GP
C447 SC3P50V2CN-1-GP
C448 SC3P50V2CN-1-GP

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.

CRT1
VIDEO-15-21-U3-GP
20.20334.015
MH1
MH2
CRT_R
CRT_G
CRT_B
DAT_DDC1_5
CLK_DDC1_5
CRT_HSYNC1
CRT_VSYNC1
5V_CRT_S0
C441 SC100P50V2JN-3GP
C439 SC18P50V2JN-1-GP
C440 SCD01U16V2KX-3GP
C442 SC100P50V2JN-3GP
C438 SC18P50V2JN-1-GP

5V_S0
R646 10KR2J-3-GP
R648 0R2J-GP
31 CRT_DEC
R647 0R2J-GP DY

Hsync & Vsync level shift

5V_S0
C459 SCD1U16V2ZY-2GP
7 GMCH_HSYNC — R306 UMA 0R2J-2-GP
47 HSYNC — R308 G72 0R2J-2-GP
7 GMCH_VSYNC — R313 UMA 0R2J-2-GP
47 VSYNC — R311 G72 0R2J-2-GP
HSYNC_4 — U16A TSAHCT125PW-GP — CRT_HSYNC1
VSYNC_4 — U16B TSAHCT125PW-GP — CRT_VSYNC1

DDC_CLK & DATA level shift

5V_S0
D24 CH751H-40PT
5V_CRT_S0 — 5V_CRT_S0
2D5V_S0
3D3V_S0
RN43 UMA SRN2K2J-1-GP
SRN2K2J-1-GP RN44 G72
R298 0R2J-2-GP UMA
R299 0R2J-2-GP G72
RN41 SRN10KJ-5-GP

7 GMCH_DDCDATA — R305 0R2J-2-GP UMA
47 G72_CRT_EDID_DAT — R297 0R2J-2-GP G72
47 G72_CRT_EDID_CLK — R303 0R2J-2-GP G72
7 GMCH_DDCCLK — R304 0R2J-2-GP UMA

Q19 FDN337N-1-GP — DAT_DDC1_5
Q20 FDN337N-1-GP — CLK_DDC1_5

TV CONN

47 G72_TV_LUMA — R379 G72 0R2J-2-GP
7 TV_DACB — R380 UMA 0R2J-2-GP
DACB — R300 150R2F-1-GP TVOUT
C449 SC33P50V3JN-GP TVOUT
L19 IND-1D2UH-5-GP TVOUT
C454 SC150P-GP TVOUT
C443 SC270P50V2JN-2GP TVOUT
LUMA_1

47 G72_TV_CRMA — R382 G72 0R2J-2-GP
7 TV_DACC — R383 UMA 0R2J-2-GP
DACC — R302 150R2F-1-GP TVOUT
C451 SC33P50V3JN-GP TVOUT
L21 IND-1D2UH-5-GP TVOUT
C456 SC150P-GP TVOUT
C445 SC270P50V2JN-2GP TVOUT
CRMA_1

47 G72_TV_COMP — R377 G72 0R2J-2-GP
7 TV_DACA — R378 UMA 0R2J-2-GP
DACA — R301 150R2F-1-GP TVOUT
C450 SC33P50V3JN-GP TVOUT
L20 IND-1D2UH-5-GP TVOUT
C455 SC150P-GP TVOUT
C444 SC270P50V2JN-2GP TVOUT
COMP_1

TVOUT1
LUMA
CRMA
COMP
NC#2
NC#5
GND
MINDIN7-19-GP-U2
22.10021.H61TVOUT

5V_S0
D1 BAV99PT-GP-U TVOUT — DACB
D3 BAV99PT-GP-U TVOUT — DACC
D2 BAV99PT-GP-U TVOUT — DACA
D21 BAV99PT-GP-U — CRT_R
D22 BAV99PT-GP-U — CRT_G
D23 BAV99PT-GP-U — CRT_B

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Title: CRT/TV Connector
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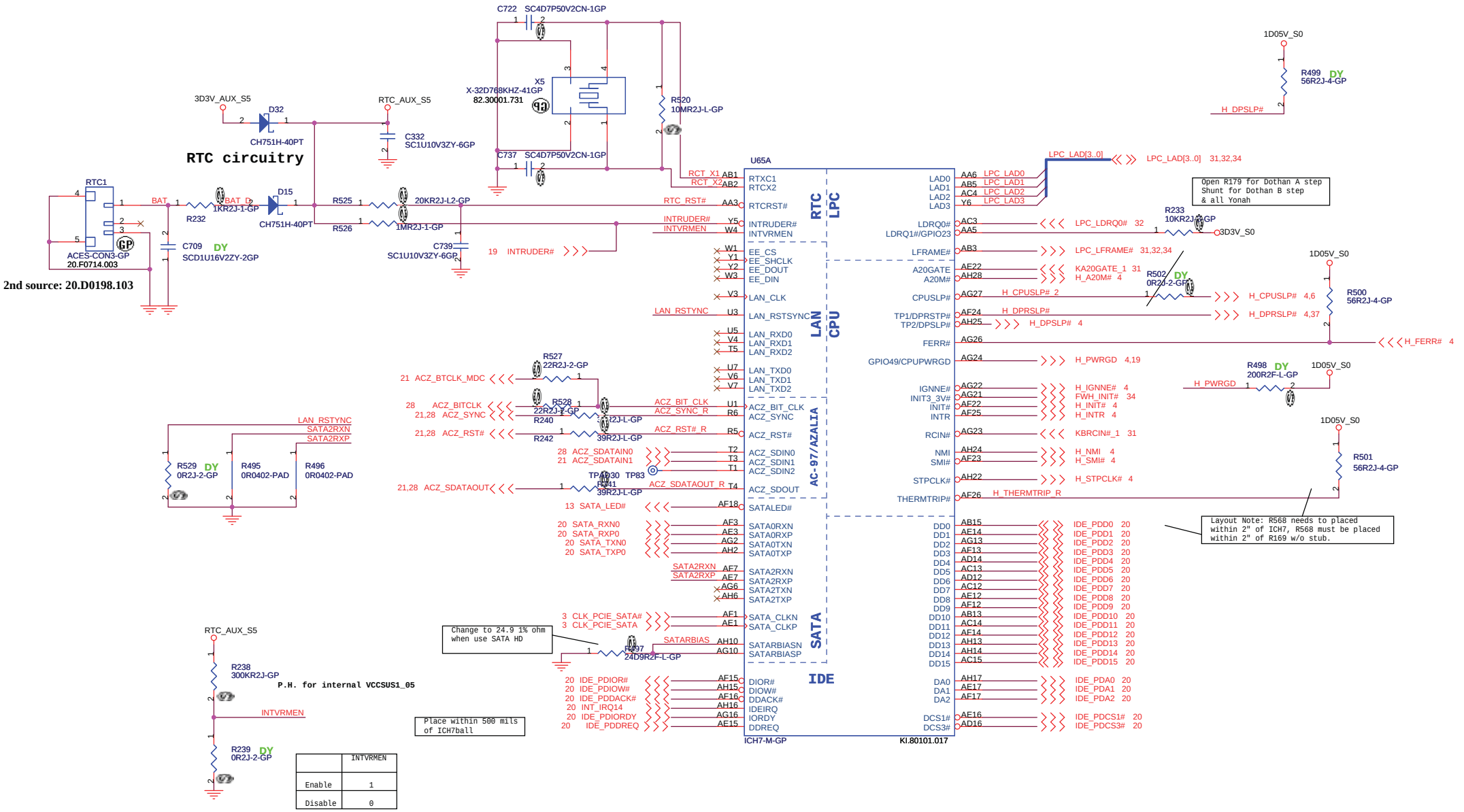
Date: Thursday, March 30, 2006 | Sheet 14 of 57



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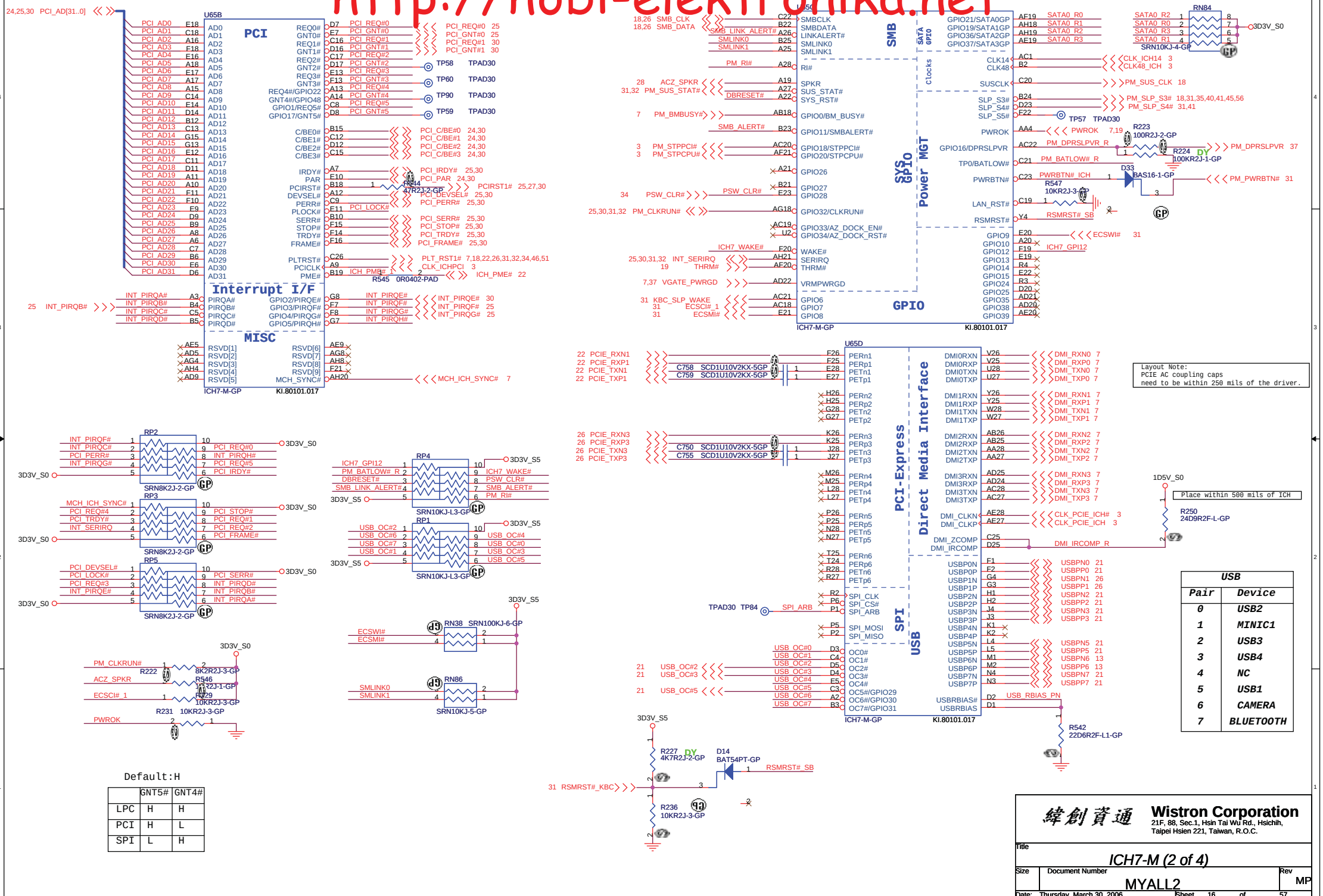
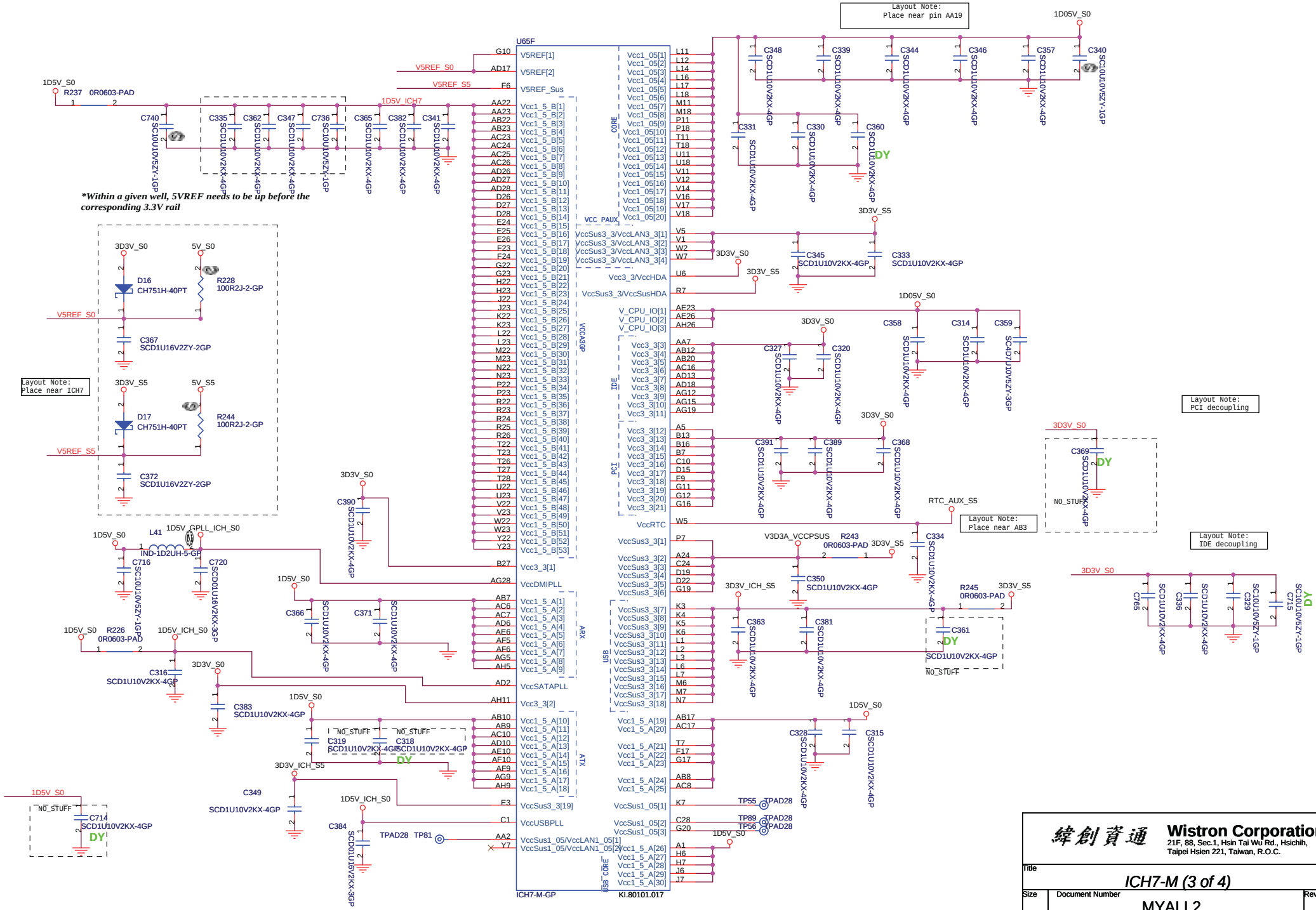
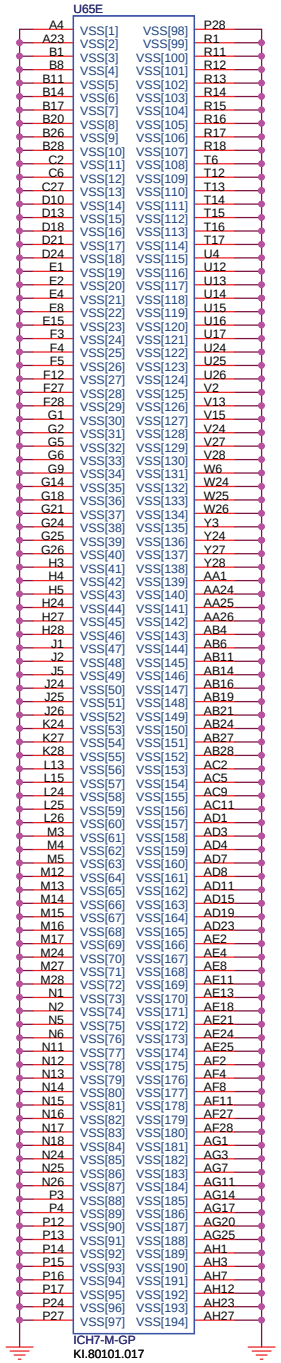
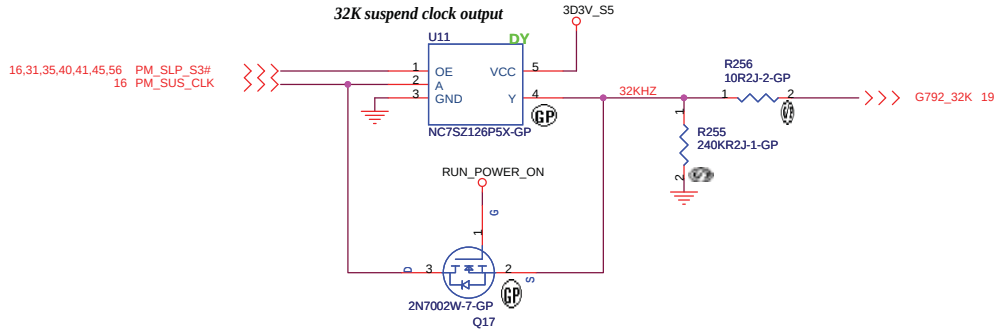
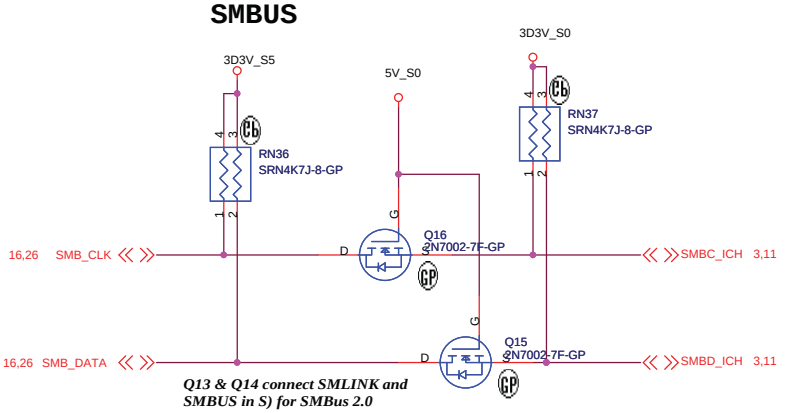
Title: ICH7-M (1 of 4)		
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 15 of 57	

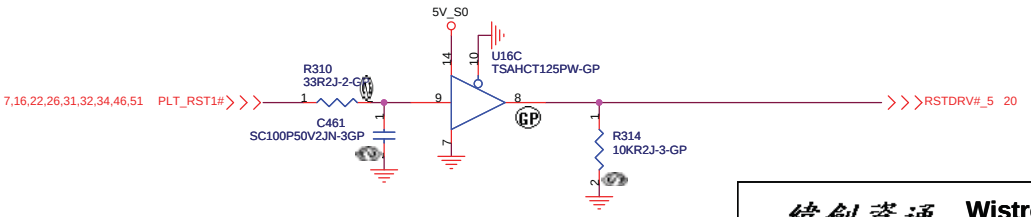












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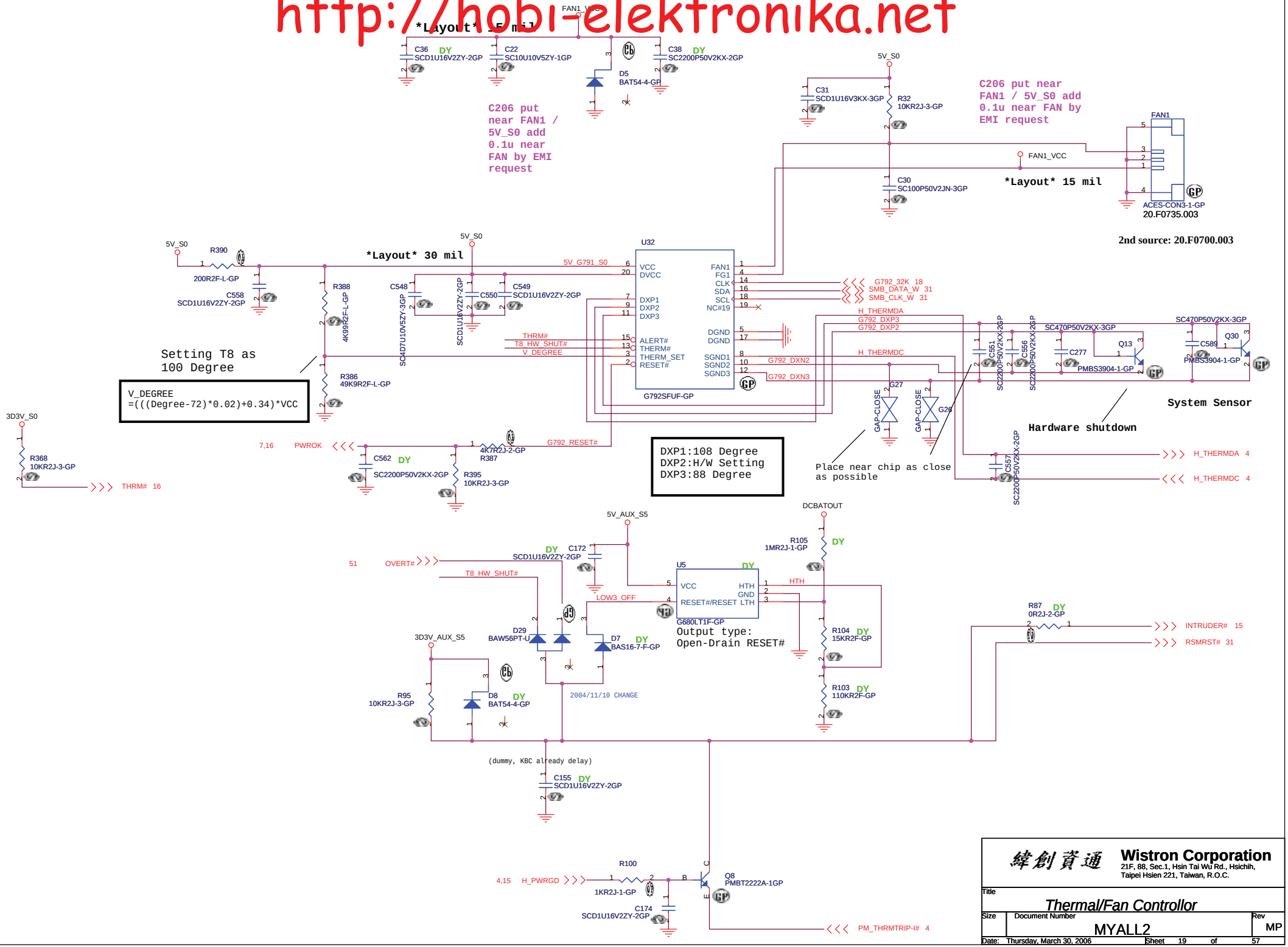
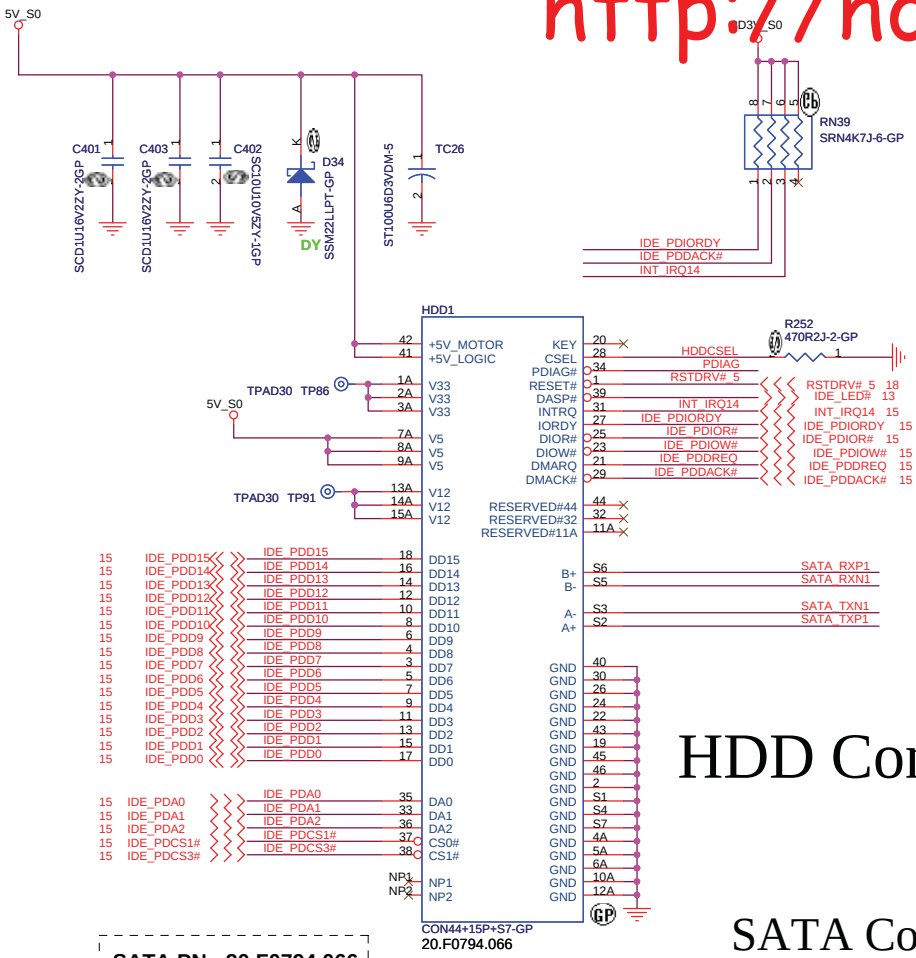


緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

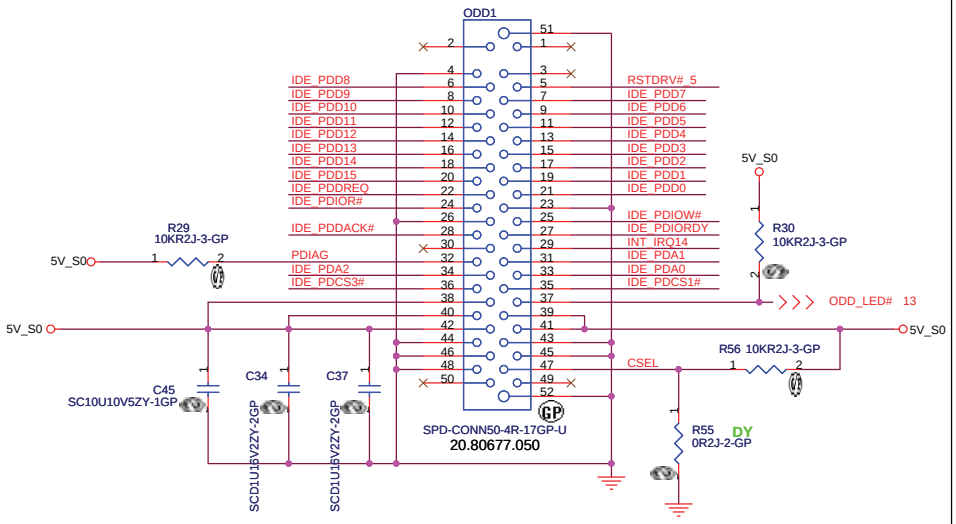
Title	*Thermal/Fan Controllor*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 19 of 57	

HDD Connector

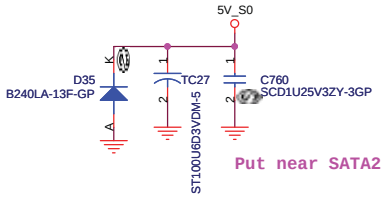


SATA PN : 20.F0794.066
PATA PN : 20.E0021.222

CD-ROM Connector

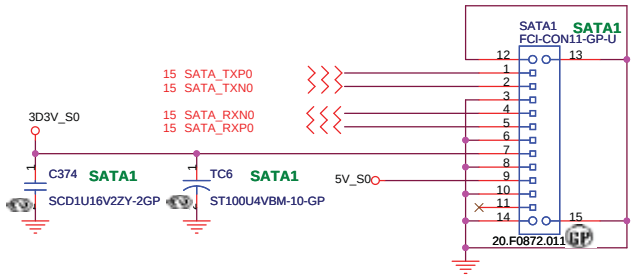


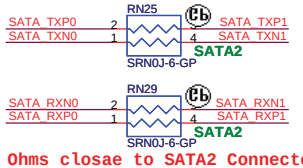
For HDD & SATA both



Put near SATA2 Connector

SATA Connector



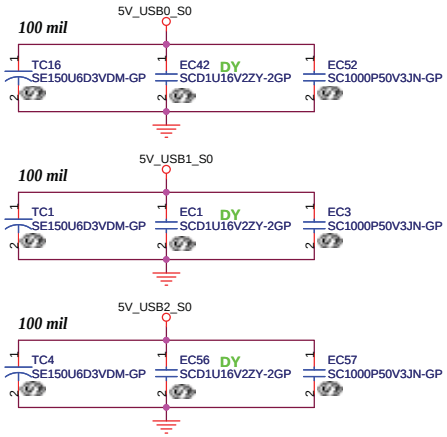


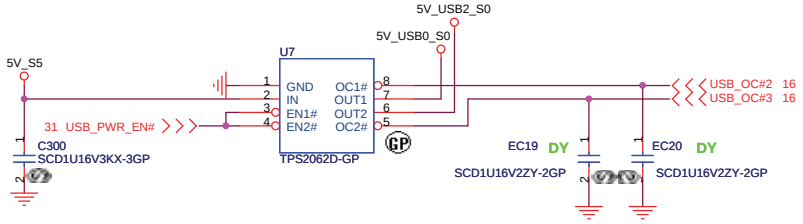
? 0 Ohms closae to SATA2 Connector

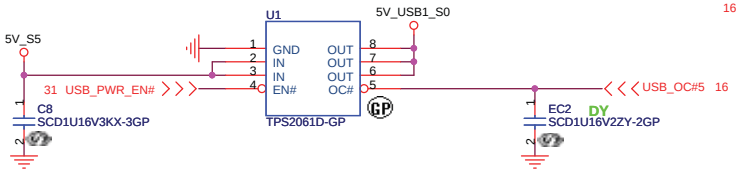
Dummy when use IDE

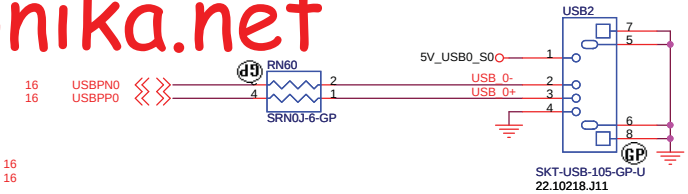
ME : 20.F0777.022

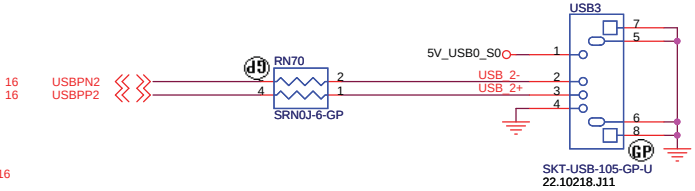
Wistron Corporation	緯創資通
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title: *HDD and CDROM*	
Size	Document Number: MYALL2 — Rev: MP
Date: Thursday, March 30, 2006	Sheet 20 of 57

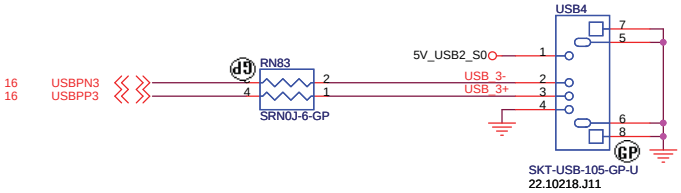


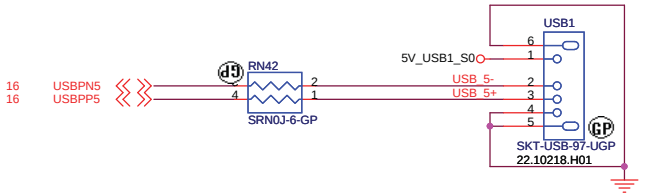




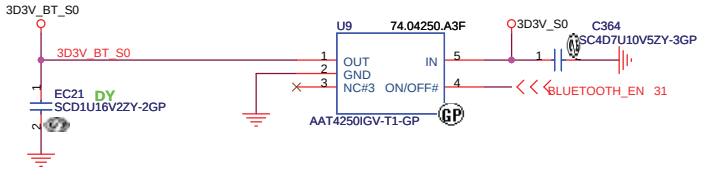




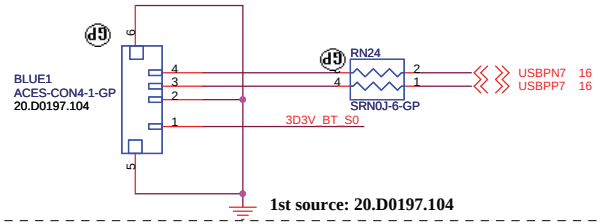




BLUETOOTH MODULE



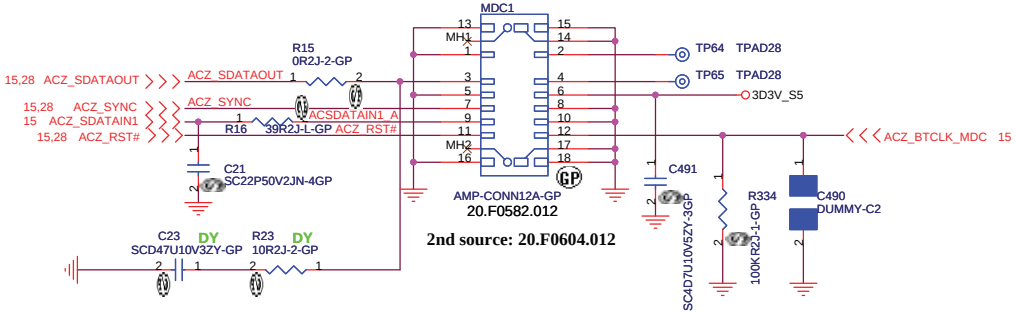
EC21 put near BLUE1 / all USB put one choke near connector by EMI request



1st source: 20.D0197.104

MDC 1.5 CONNECTOR

CHANGE TO AZ



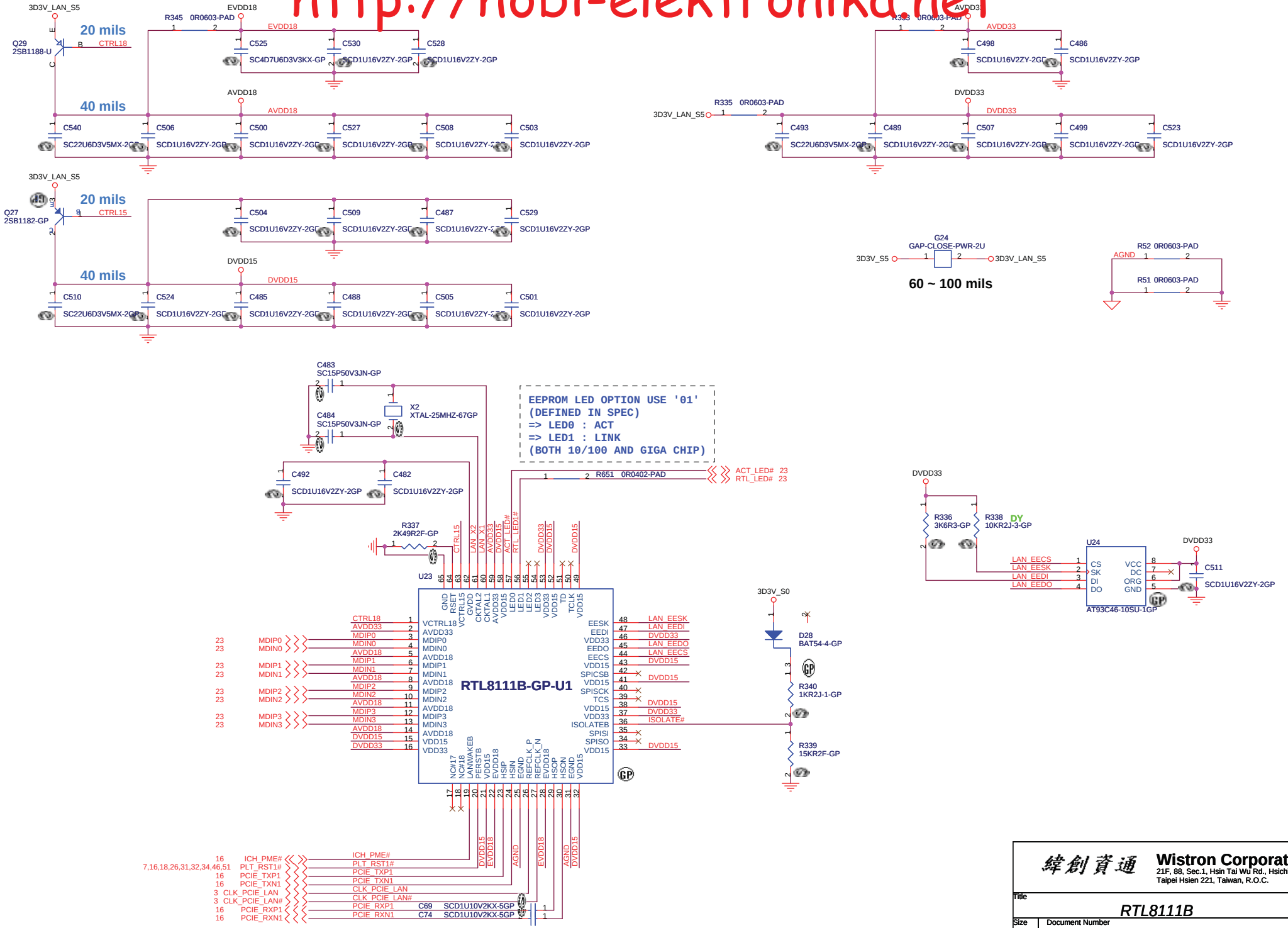
2nd source: 20.F0604.012

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

Title: USB / MDC / BLUETOOTH

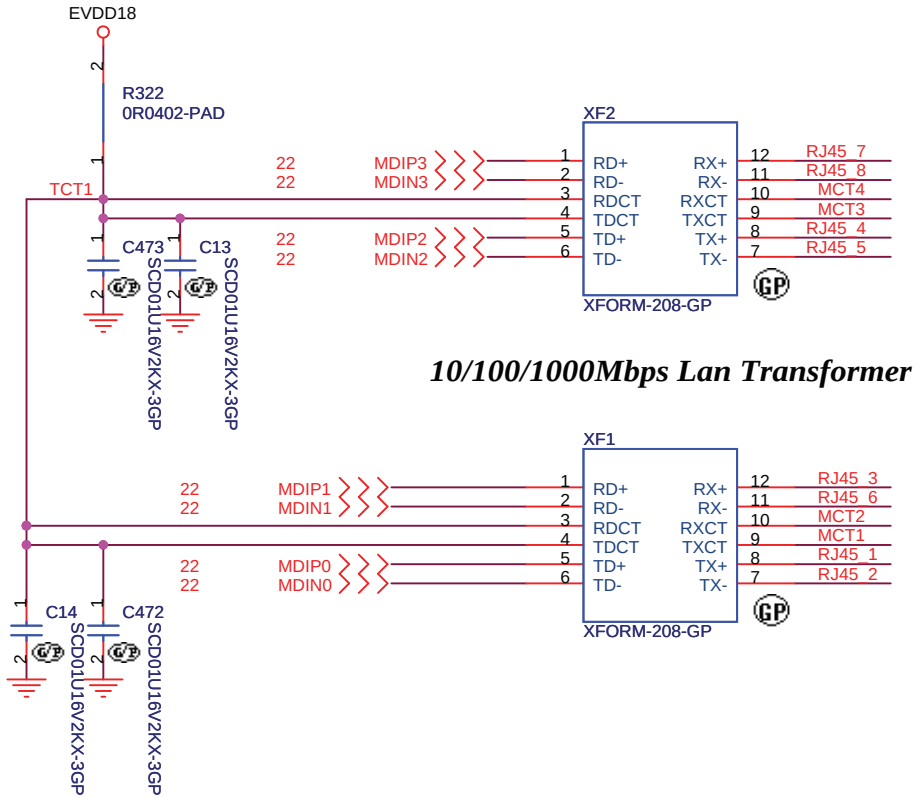
Size	Document Number	Rev
	MYALL2	MP

Date: Thursday, March 30, 2006 Sheet 21 of 57

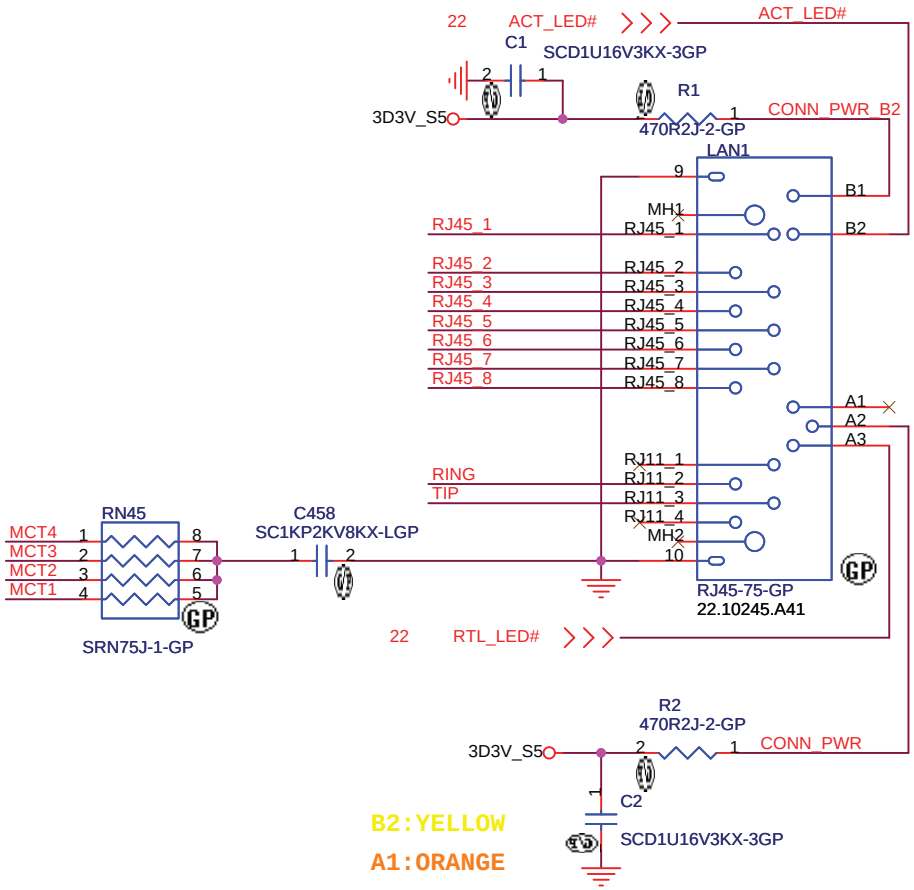


緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title	*RTL8111B*		
Size	Document Number MYALL2		Rev MP
Date: Thursday, March 30, 2006	Sheet 22 of 57		

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.

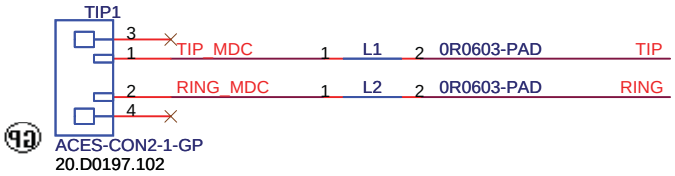


10/100/1000Mbps Lan Transformer

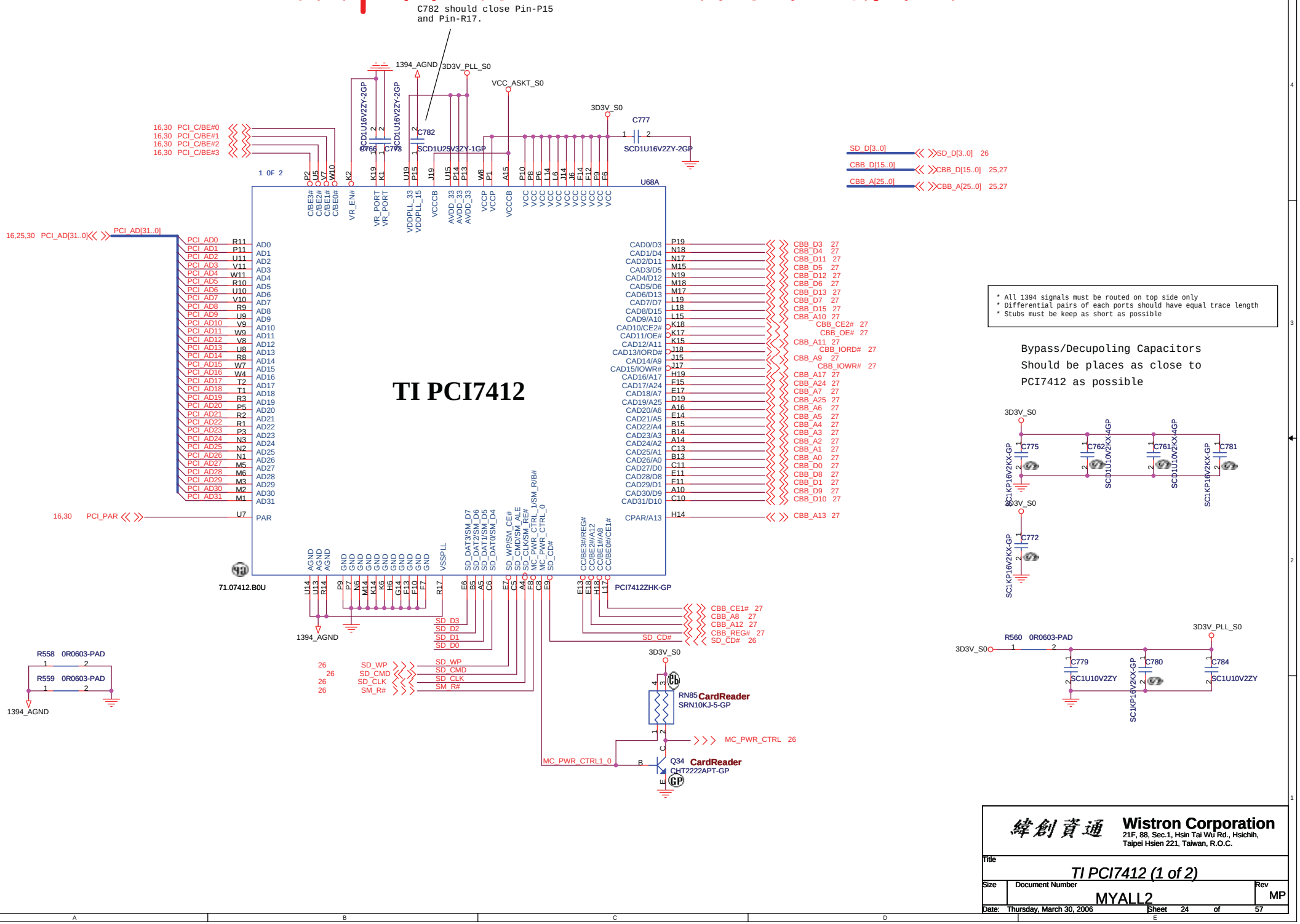


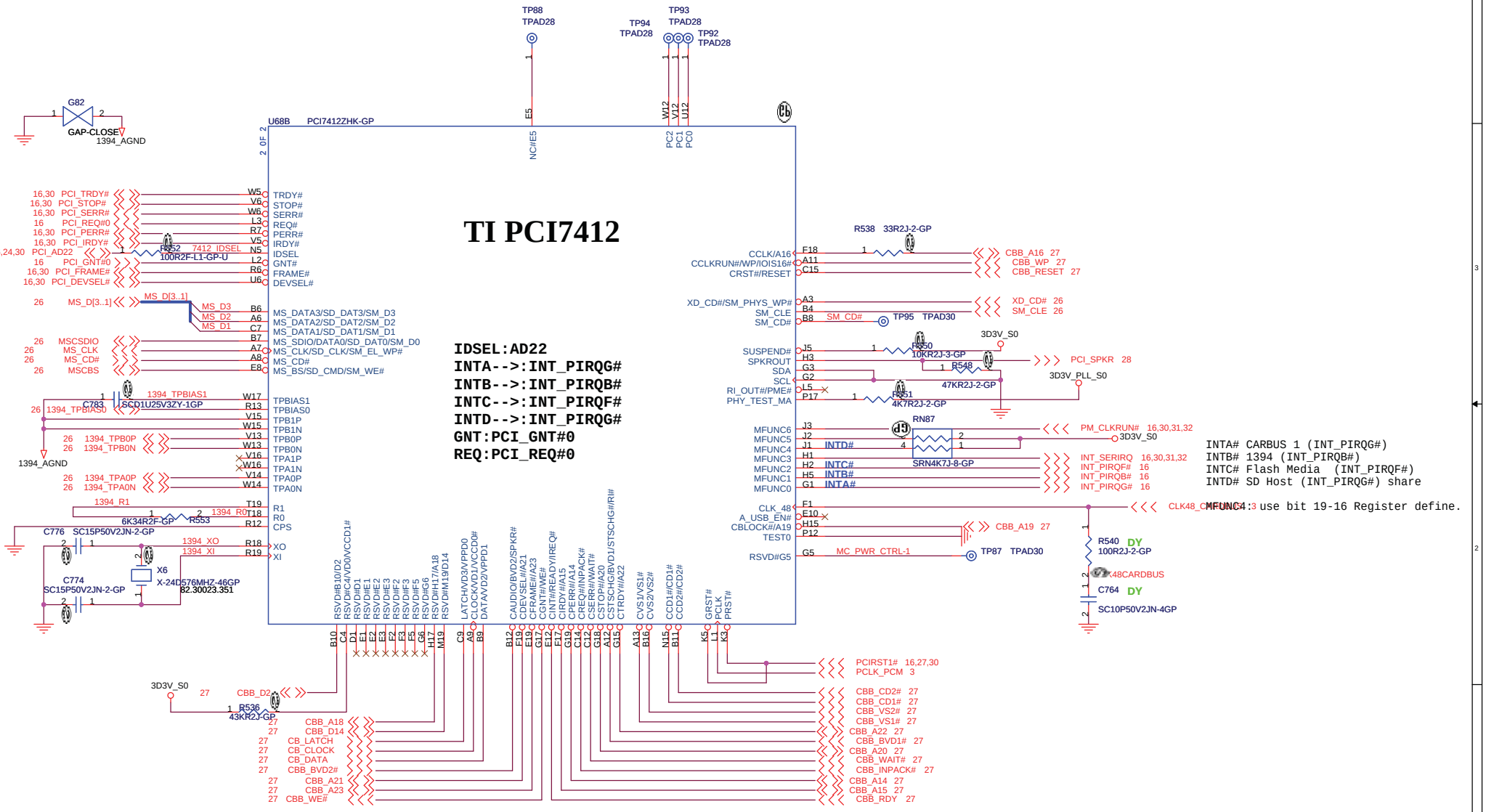
B2:YELLOW
A1:ORANGE
A3:GREEN

3D3V_S5 add 0.1u near LAN1 by EMI request



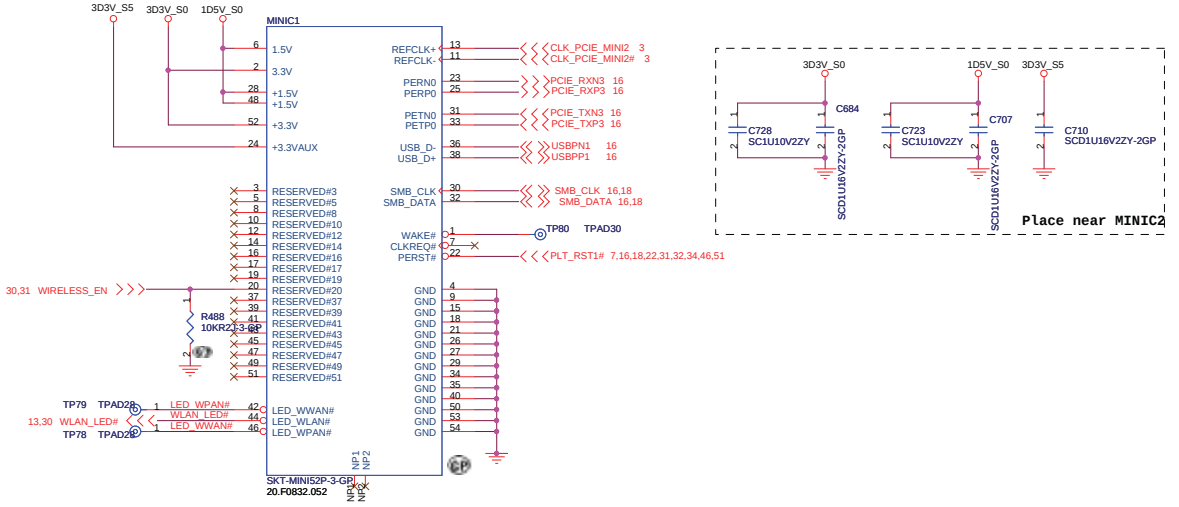
緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*LAN CONN*	
Size	Document Number MYALL2	Rev MP
Date: Thursday, March 30, 2006	Sheet 23 of 57	



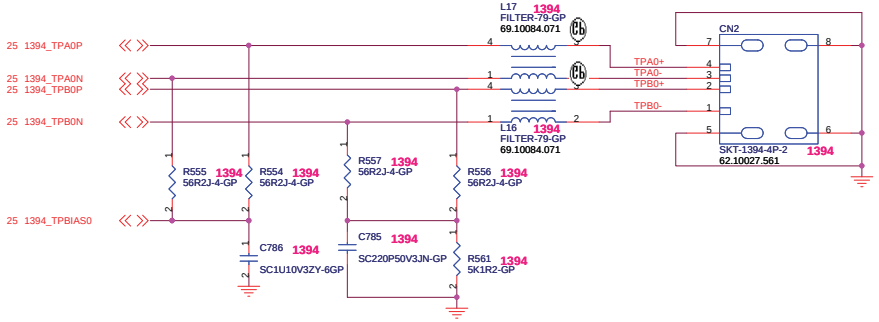


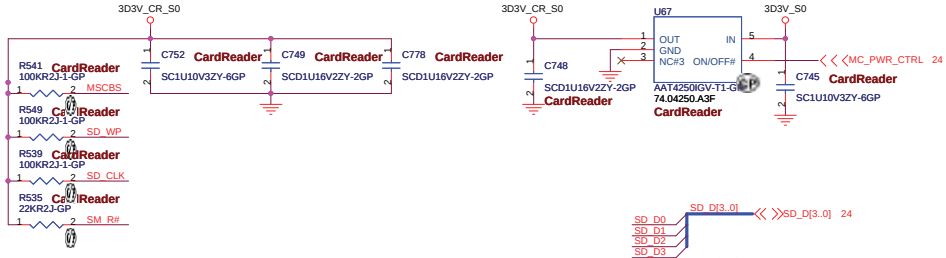
緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title	*TI PCI7412 (2 of 2)*		
Size	Document Number MYALL2		Rev MP
Date: Thursday, March 30, 2006	Sheet 25 of 57		

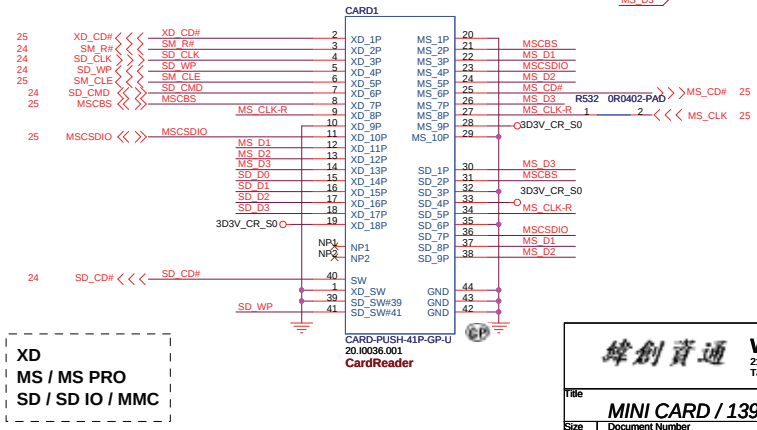
Mini Card Connector



1394 Connector







XD
MS / MS PRO
SD / SD IO / MMC

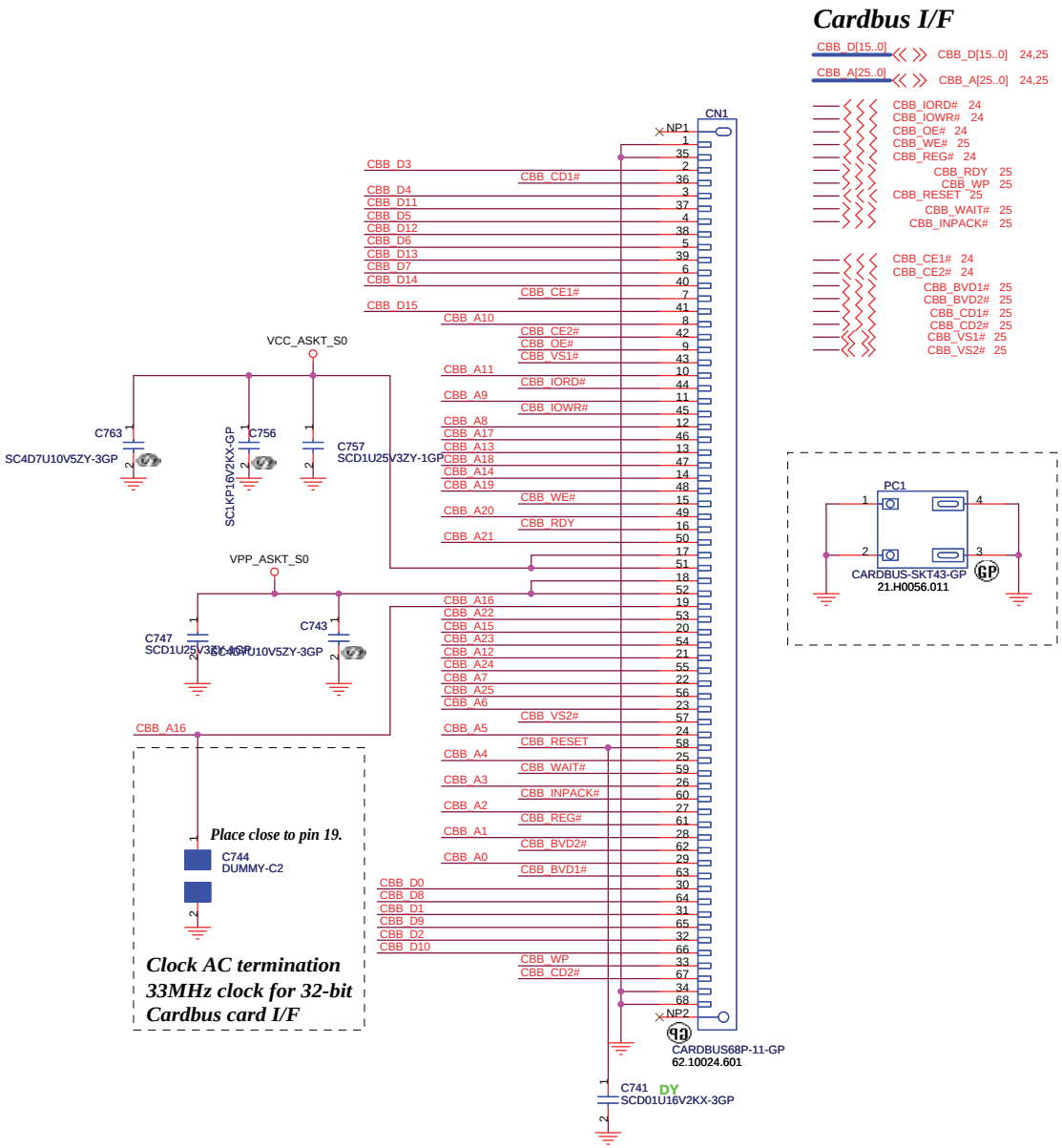
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: MINI CARD / 1394 / CARD READER

Size	Document Number	Rev
	MYALL2	MP

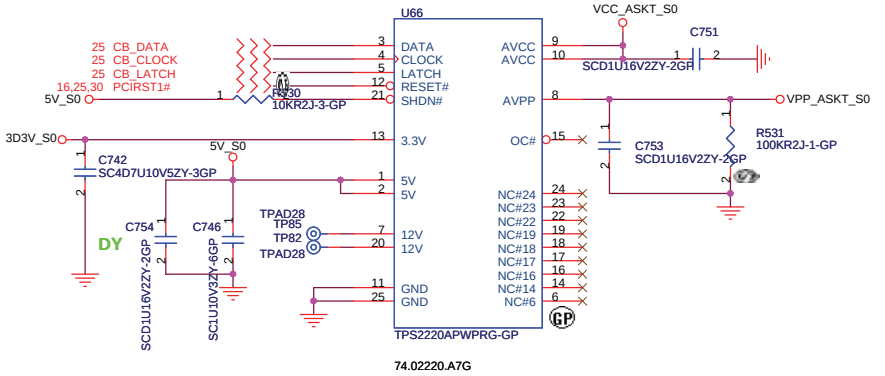
Date: Friday, March 31, 2006 Sheet 26 of 57

PCMCIA Socket

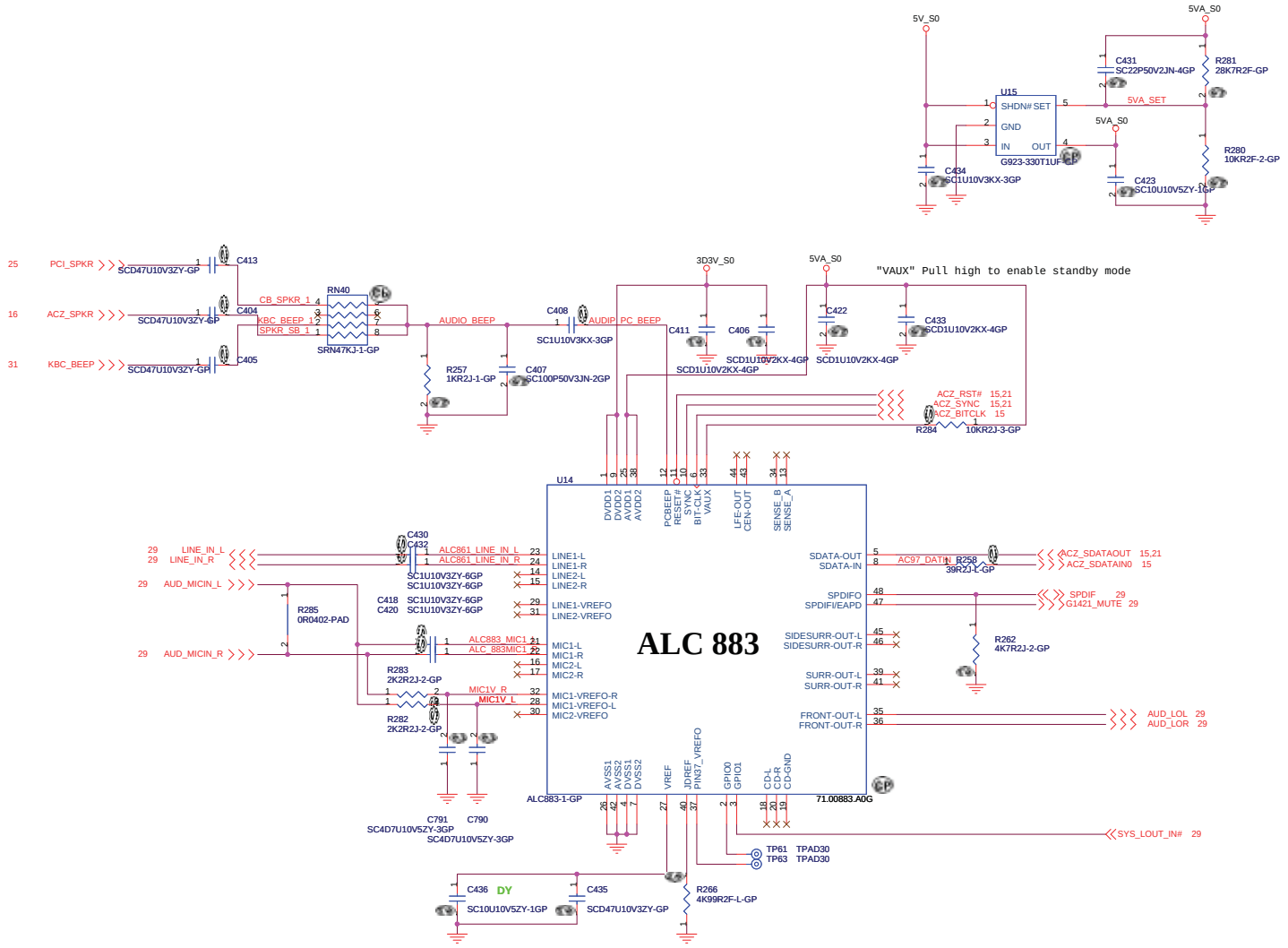


Cardbus I/F

Power switch

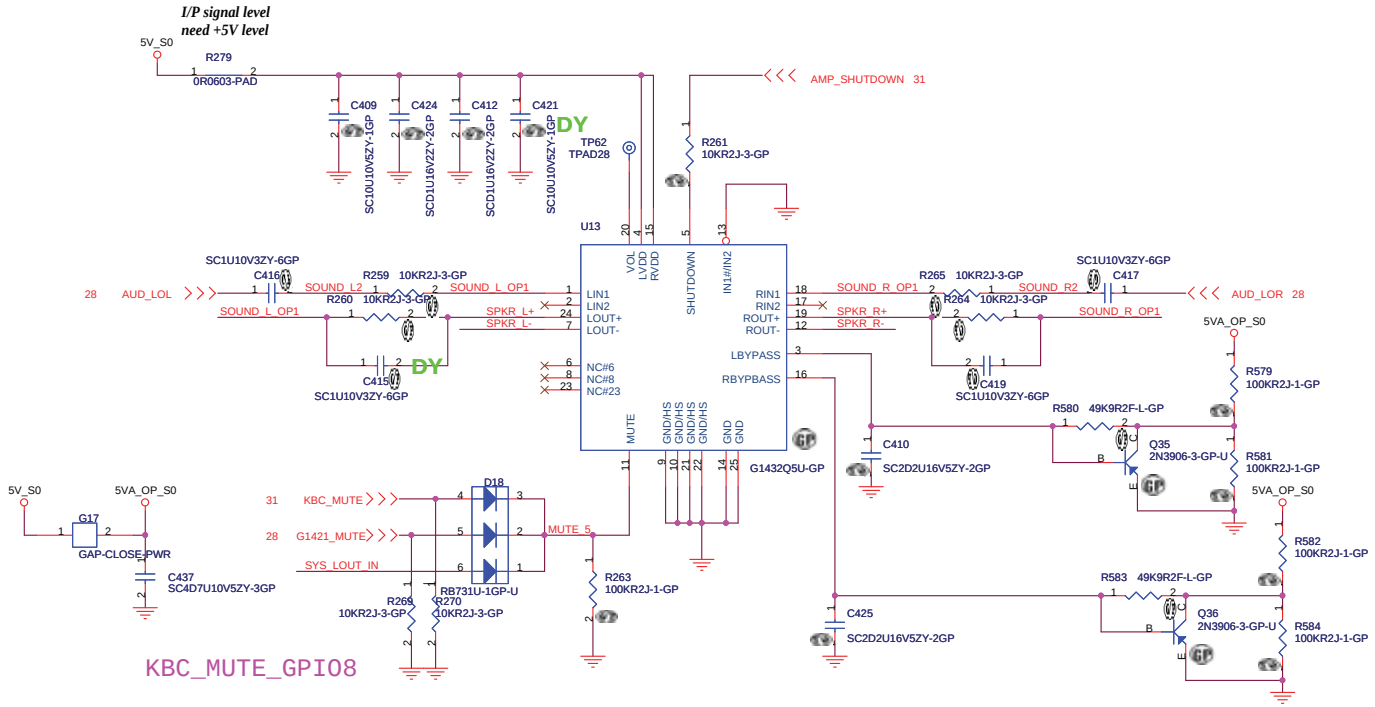


緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*PCMCIA*	
Size	Document Number MYALL2	Rev MP
Date: Thursday, March 30, 2006	Sheet 27 of 57	

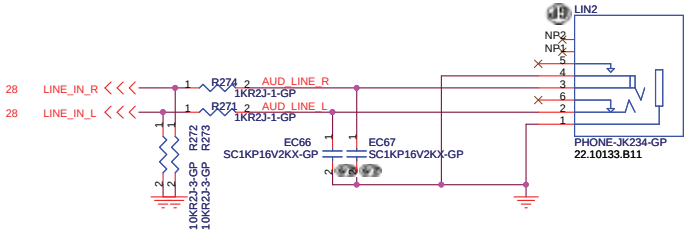


蜂創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title	AZALIA CODEC - ALC883		
Size	Document Number MYALL2		Rev MP
Date: Thursday, March 30, 2006	Sheet 28 of 57		

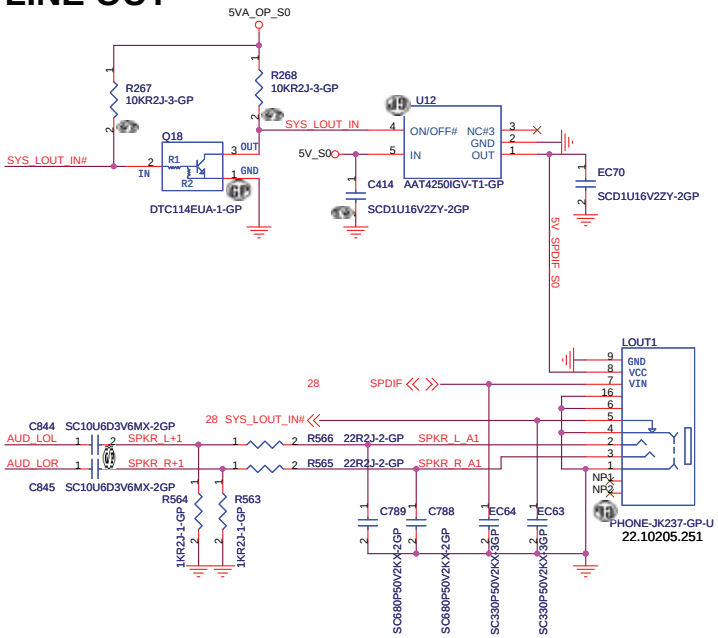
AUDIO OP AMPLIFIER



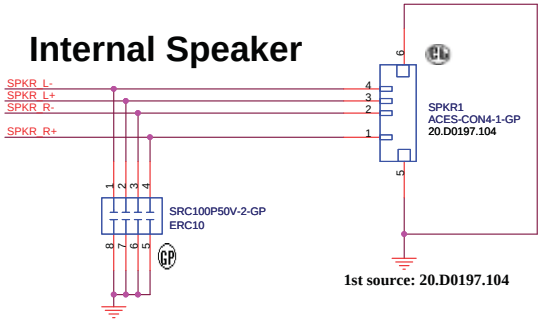
LINE IN



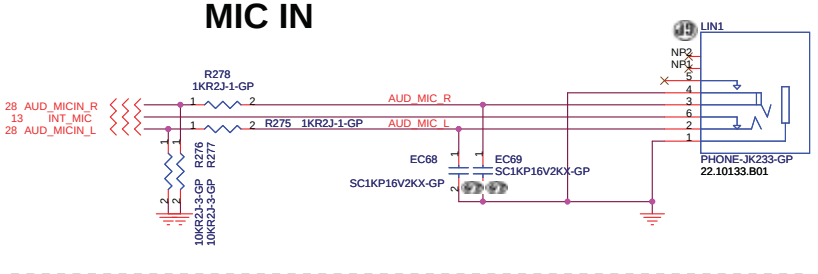
LINE OUT



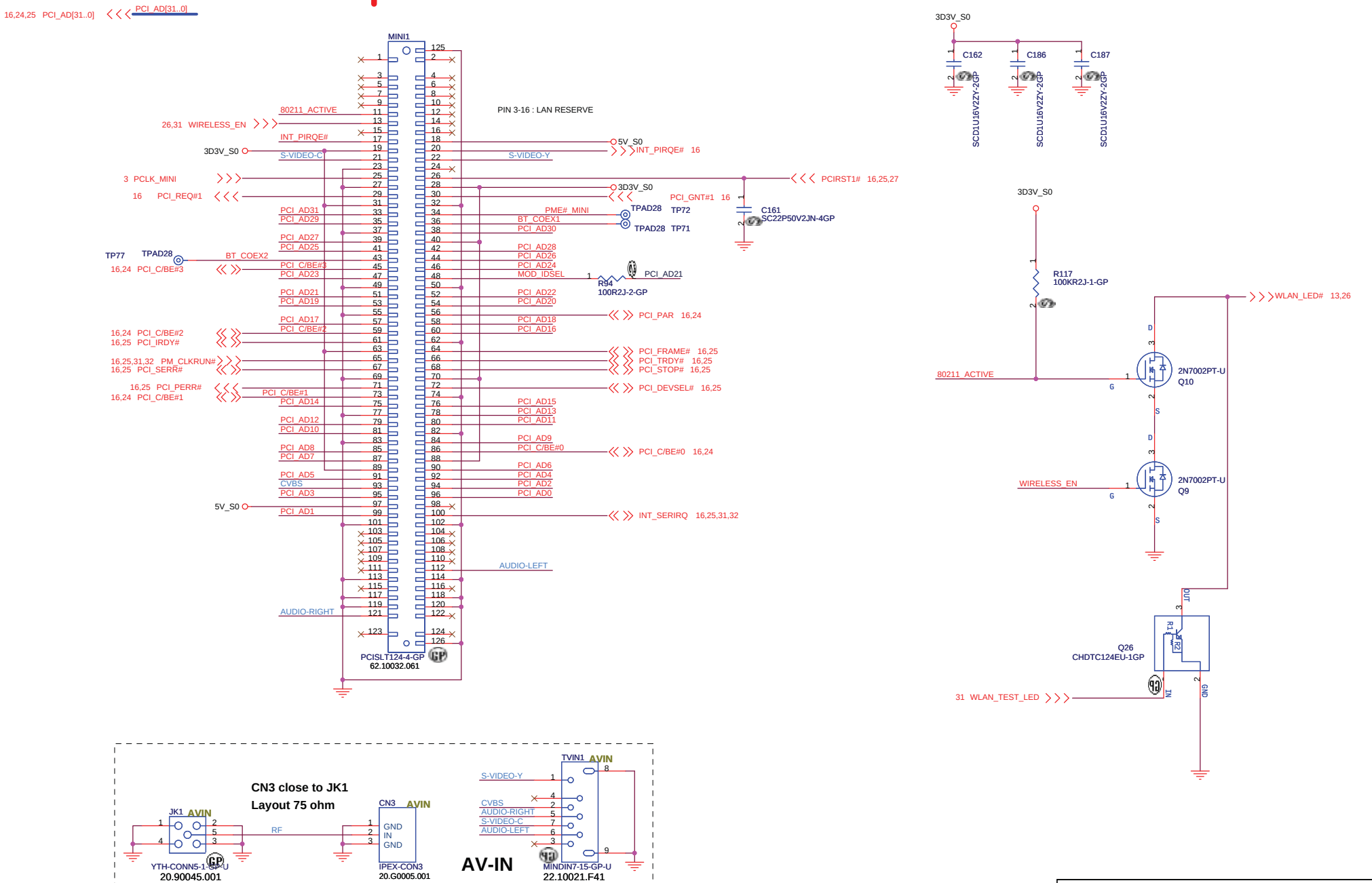
Internal Speaker



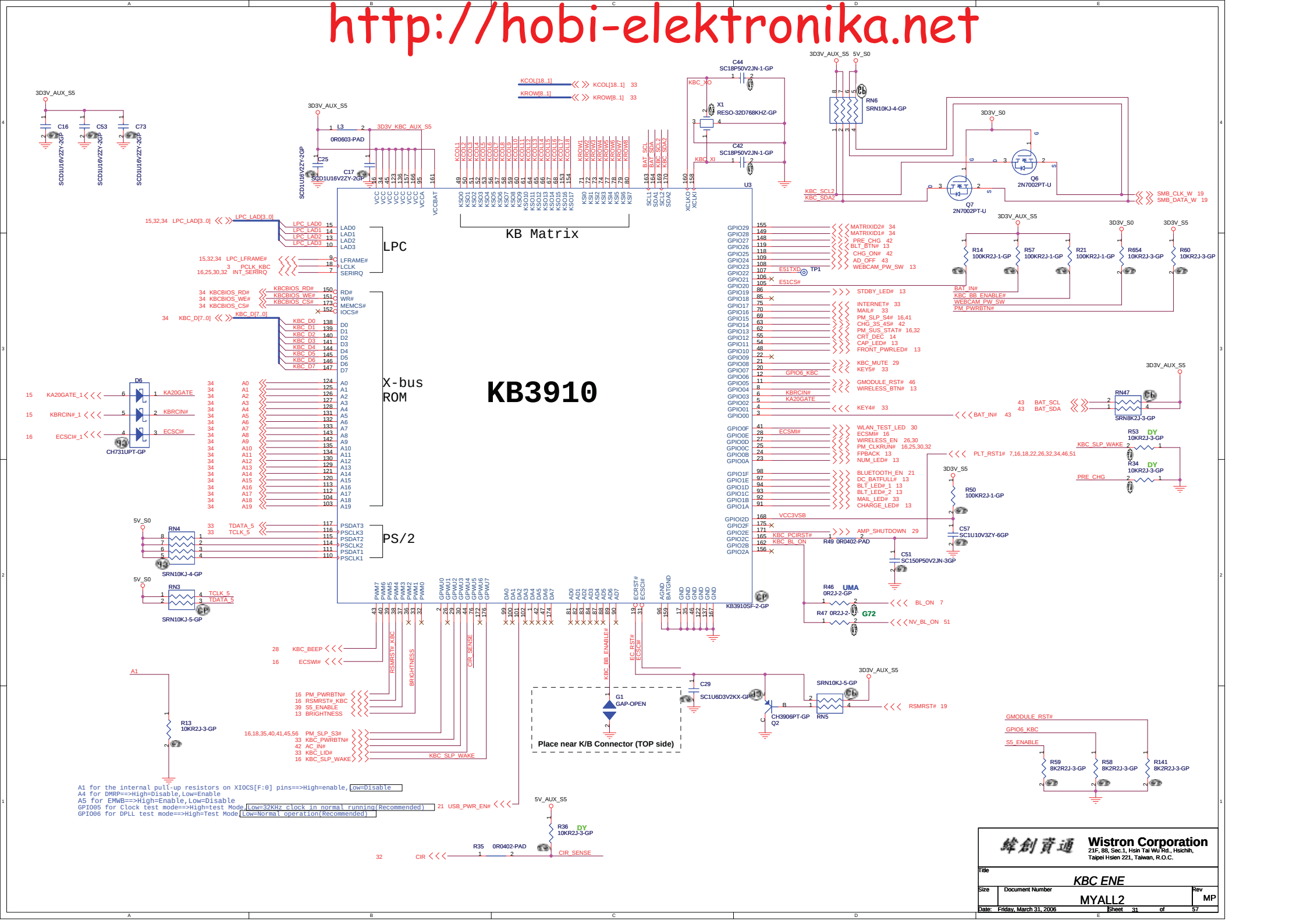
MIC IN

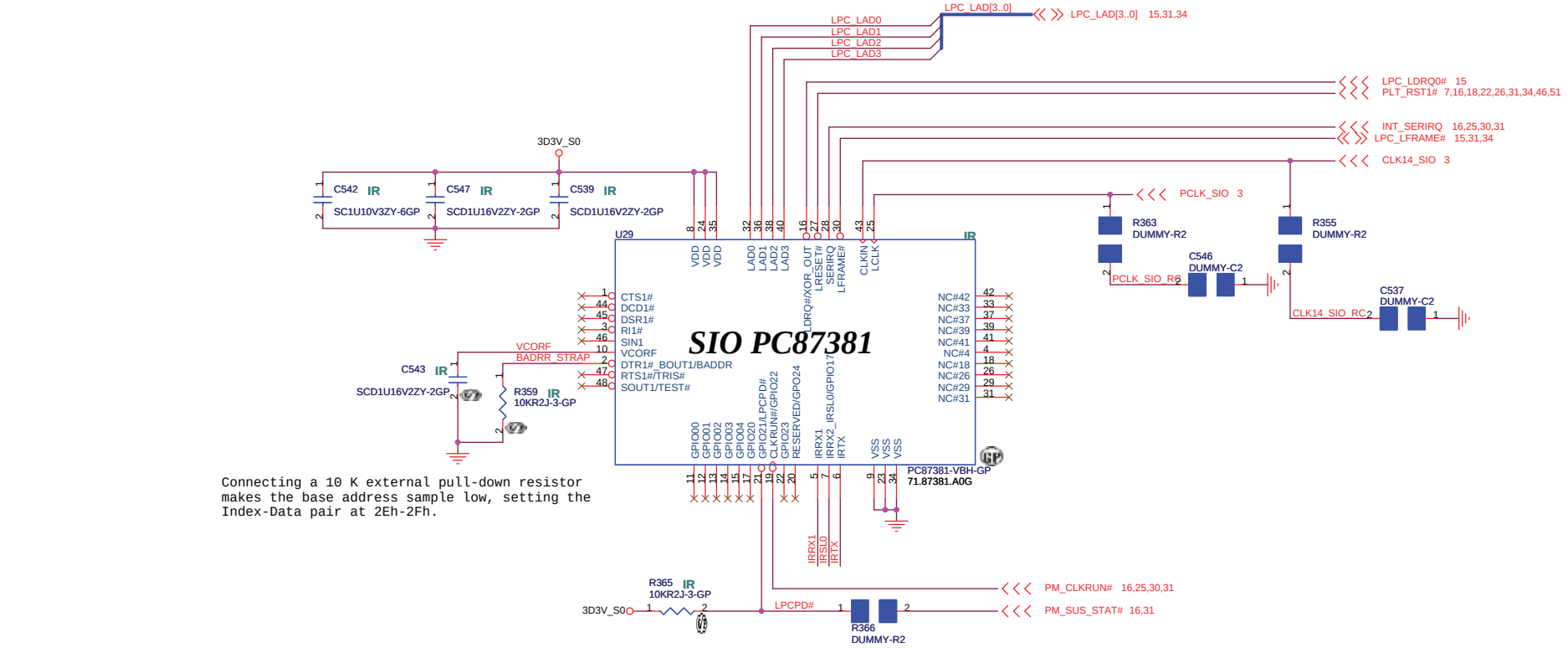


Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title: AUDIO AMP AND JACK		
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 29 of 57	



緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*MINI-PCI / AV-IN*	
Size	Document Number MYALL2	Rev MP
Date: Thursday, March 30, 2006	Sheet 30 of 57	

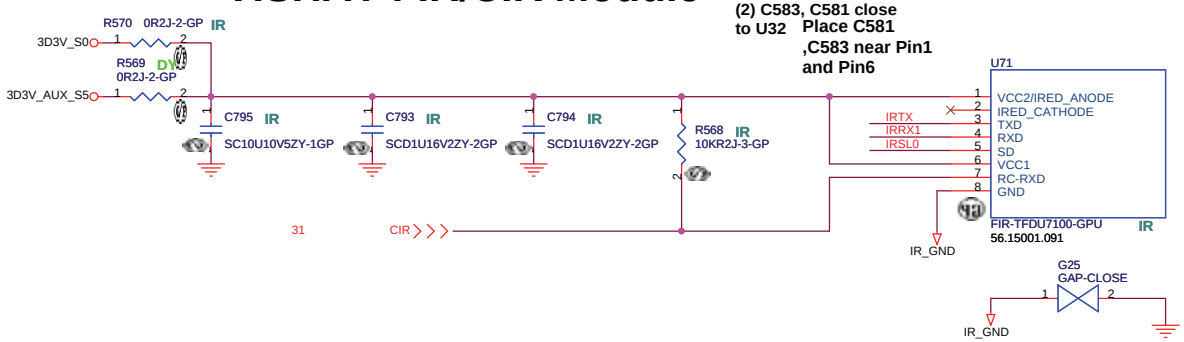




Connecting a 10 K external pull-down resistor makes the base address sample low, setting the Index-Data pair at 2Eh-2Fh.

VISHAY FIR/CIR Module

Layout Guide:
(1) FIR_3D3V : 30 mils,
(2) C583, C581 close to U32 Place C581 ,C583 near Pin1 and Pin6



緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*SIO 87381 / IR*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 32 of 57	

Internet Button

Mail Button

Power Button

2nd source: 20.K0185.012

Program Button

E-Button

POWER LED FOR BUTTON SIDE

MAIL LED FOR BUTTON SIDE

Cover Up Switch

TOUCH PAD

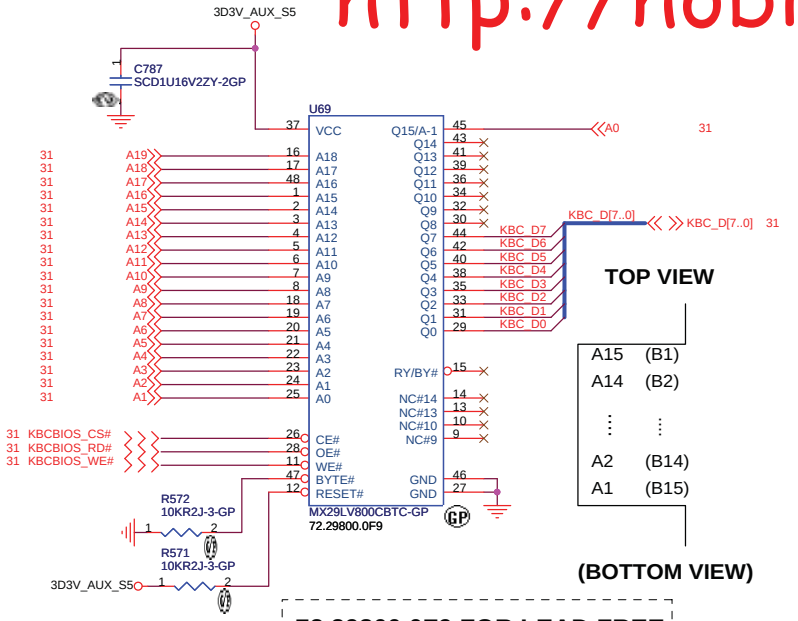
2nd source: 62.40009.341

EMI Bypass cap.

Internal KeyBoard CONN

CHECK KB SPEC. AND PIN DEFINE

Wistron Corporation	緯創資通
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title: BUTTONs / KB / TOUCHPAD	
Size	Document Number: MYALL2 — Rev: MP
Date: Thursday, March 30, 2006	Sheet 33 of 57



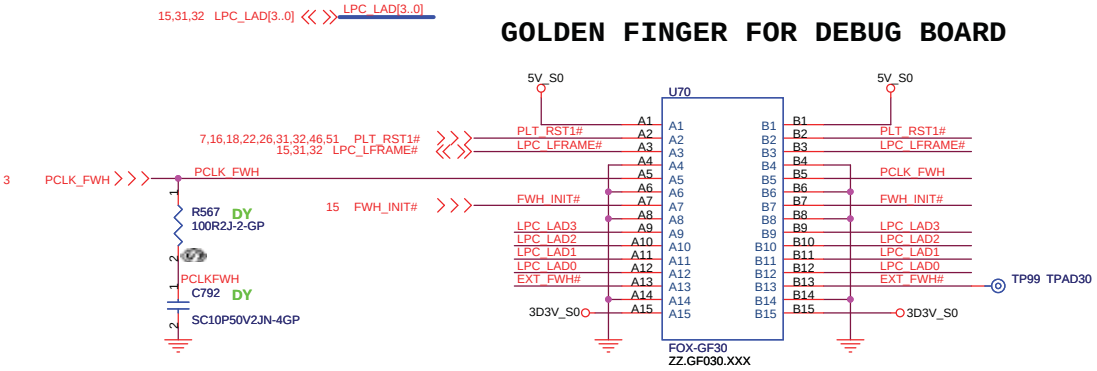
TOP VIEW

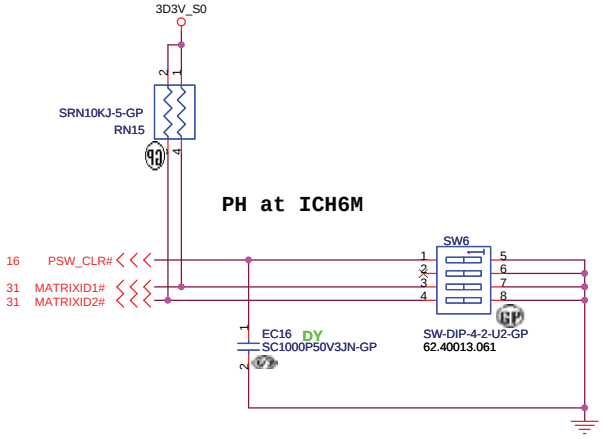
A15	(B1)
A14	(B2)
⋮	⋮
A2	(B14)
A1	(B15)

(BOTTOM VIEW)

72.29800.0F9 FOR LEAD FREE
ROM SIZE MAX. 1MB

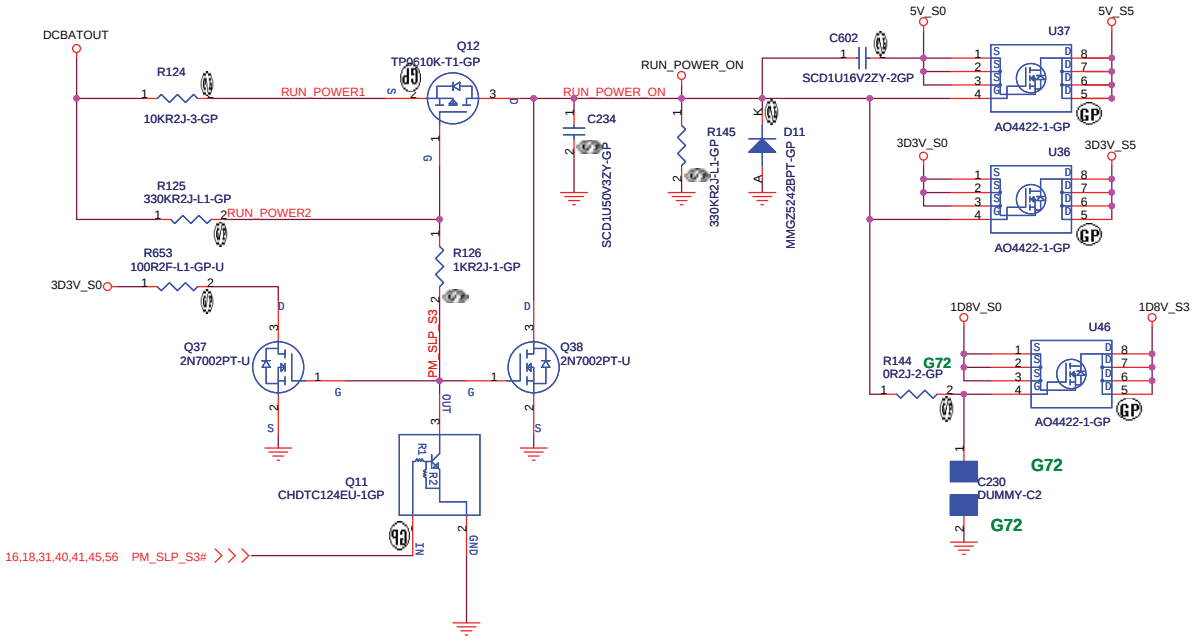
GOLDEN FINGER FOR DEBUG BOARD





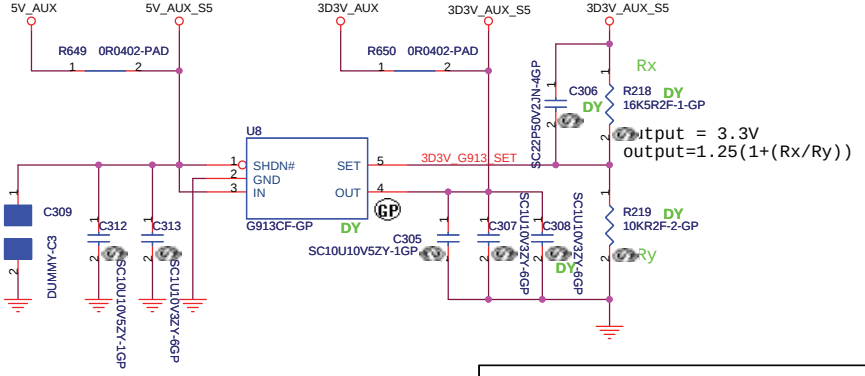
緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*BIOS*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 34 of 57	

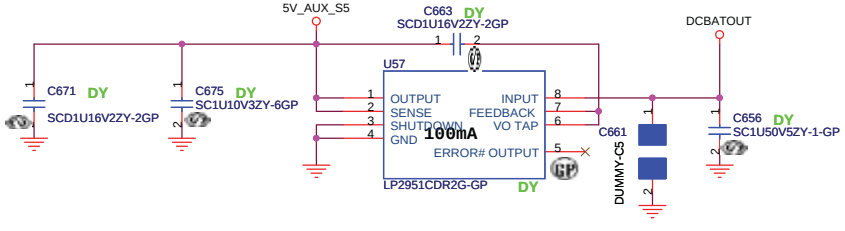
Run Power



Aux Power

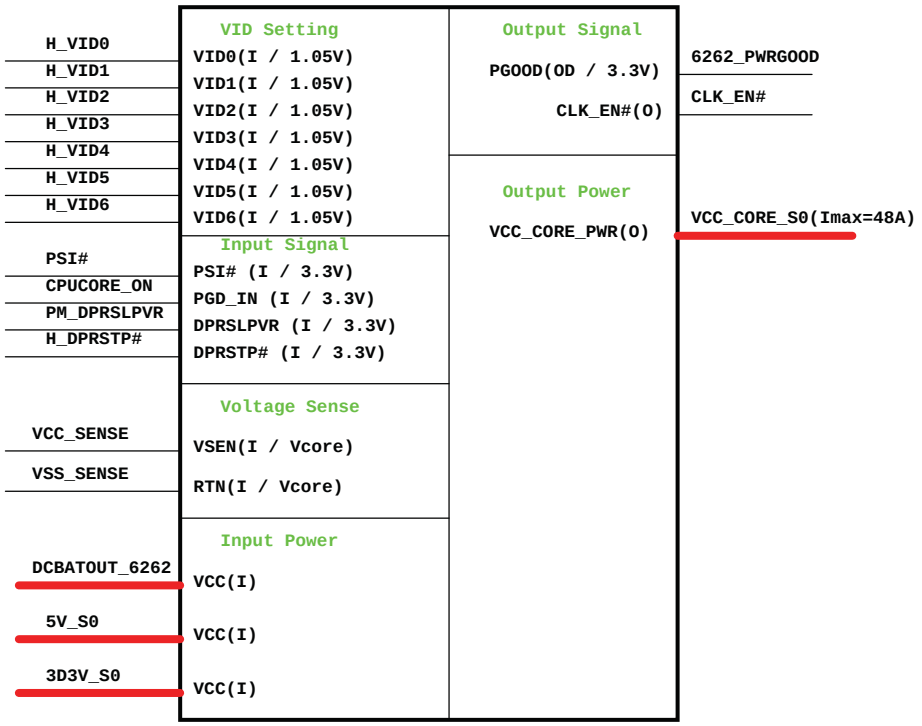
3D3V_AUX_S5



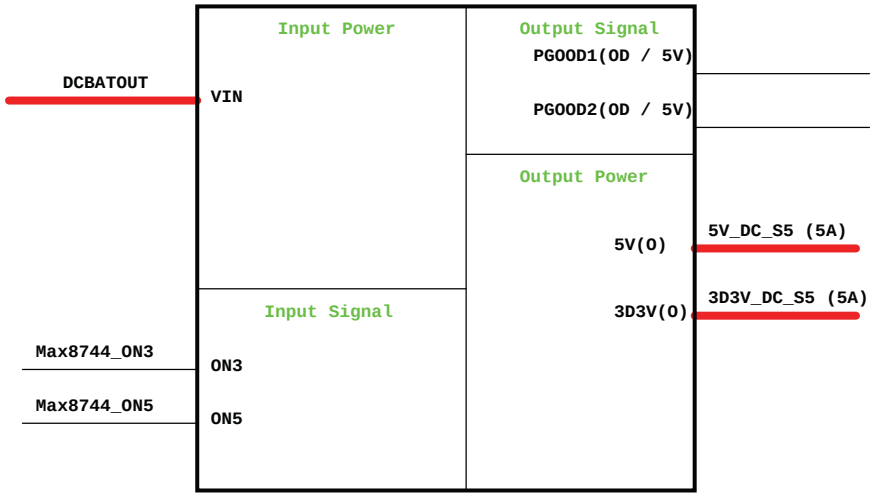


緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*RUN POWER and 3D3V_AUX_S5*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 35 of 57	

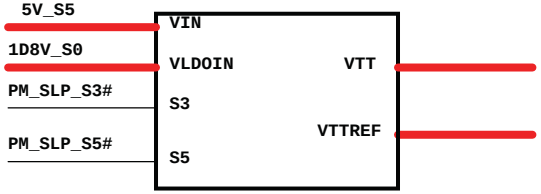
CPU_CORE
Intersil ISL6262



Max8744 3D3V/5V

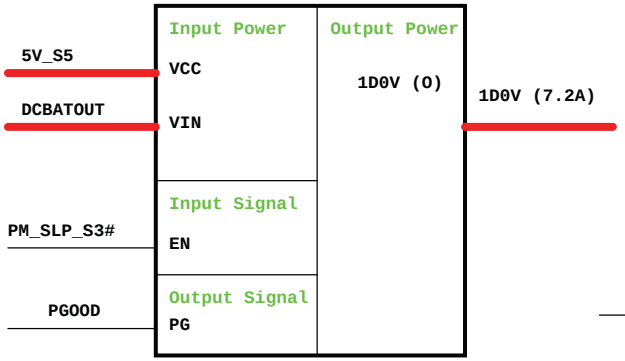


0D9V_S3

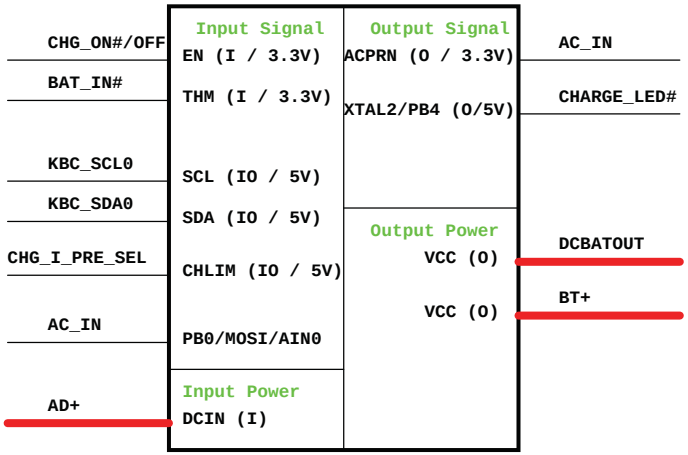


TPS51100

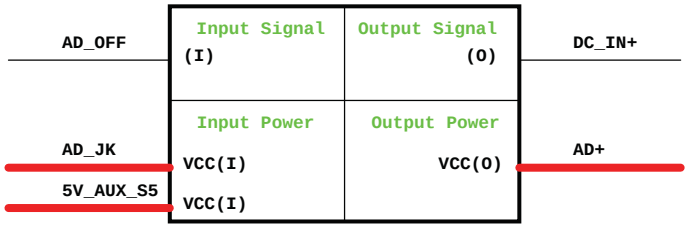
ISL6269_VGA_Core 1D0V



Charger_ISL6255



Adapter

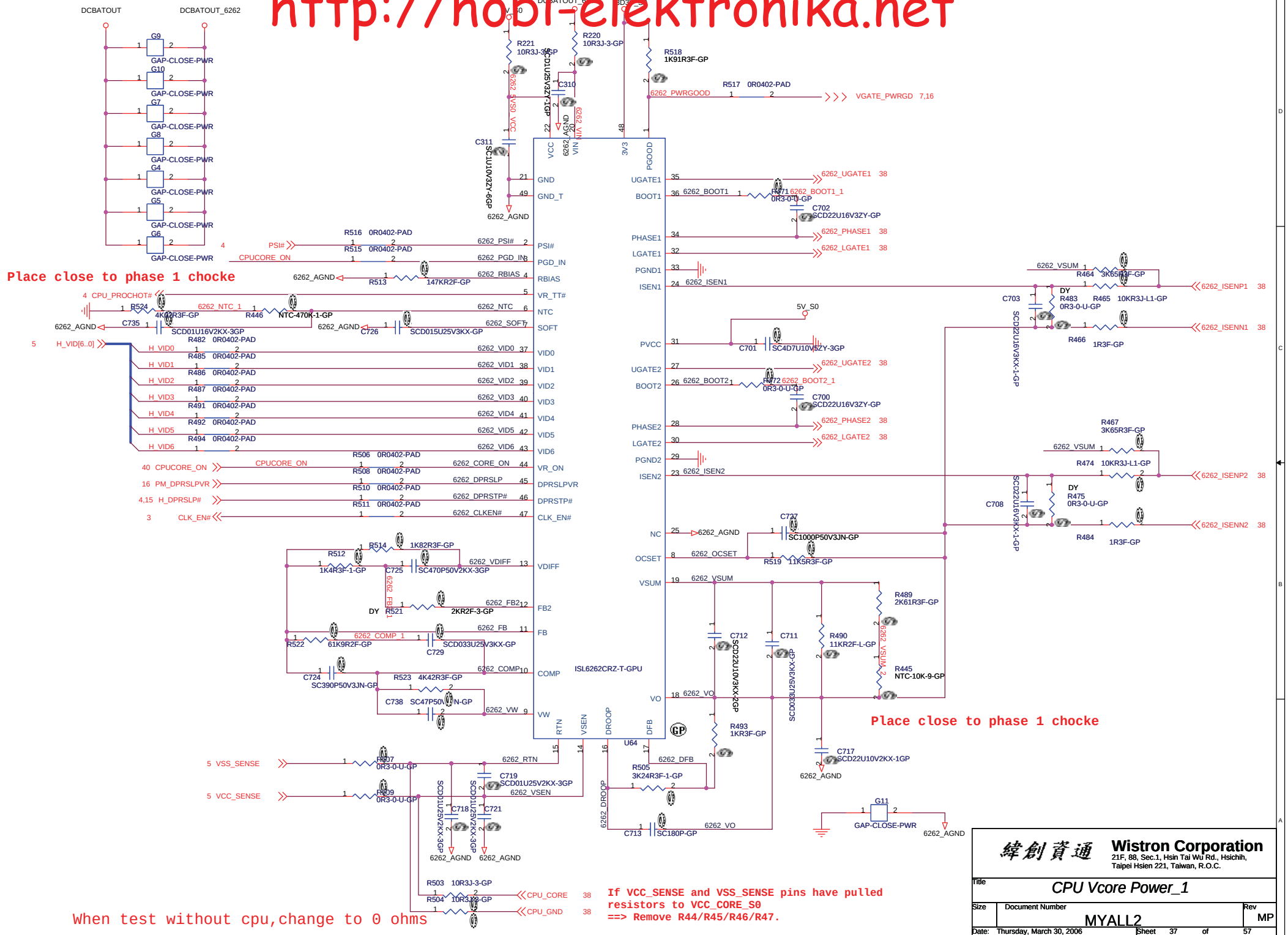


緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

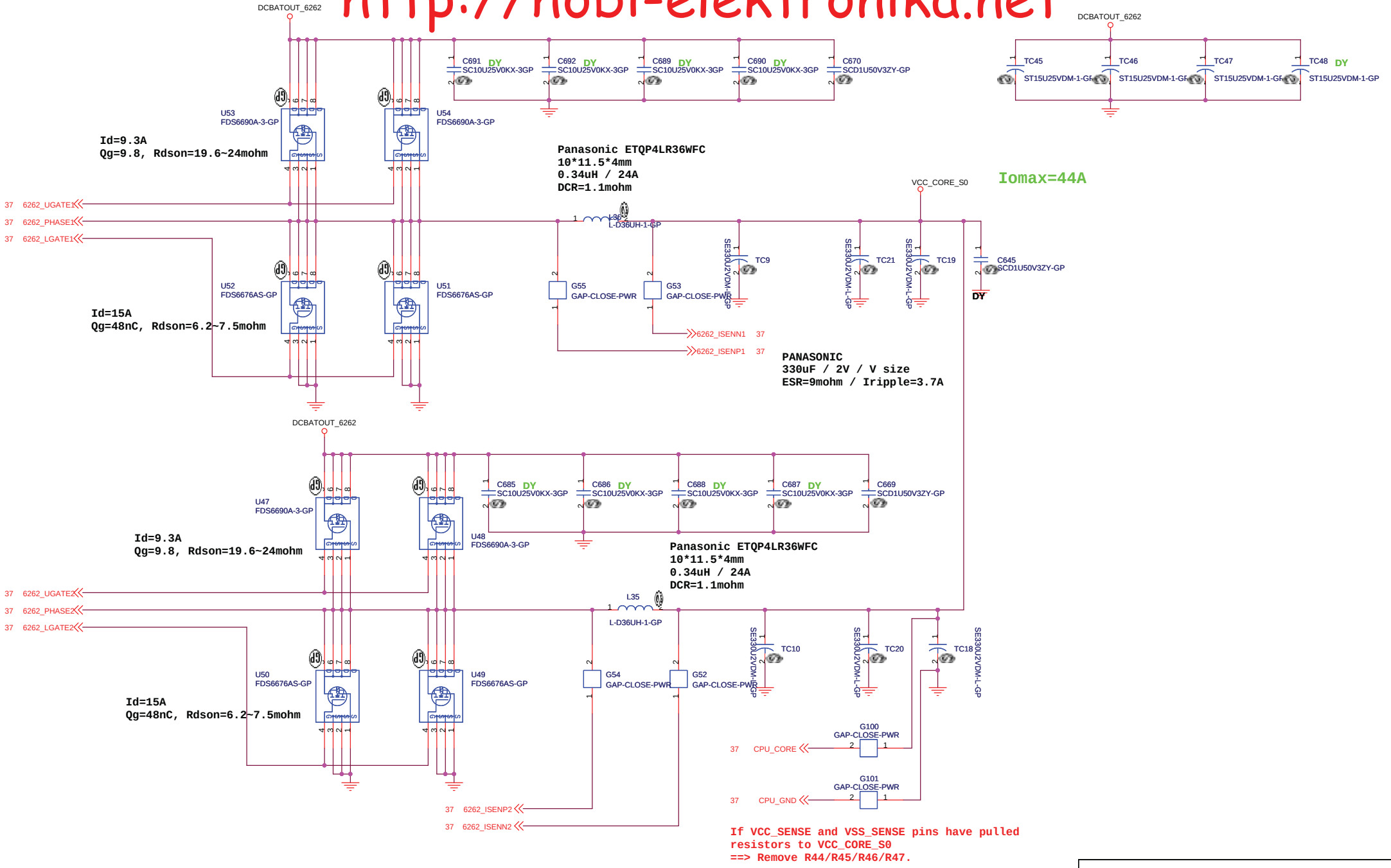
Title: *Power Block Diagram*

Size	Document Number	Rev
	MYALL2	MP

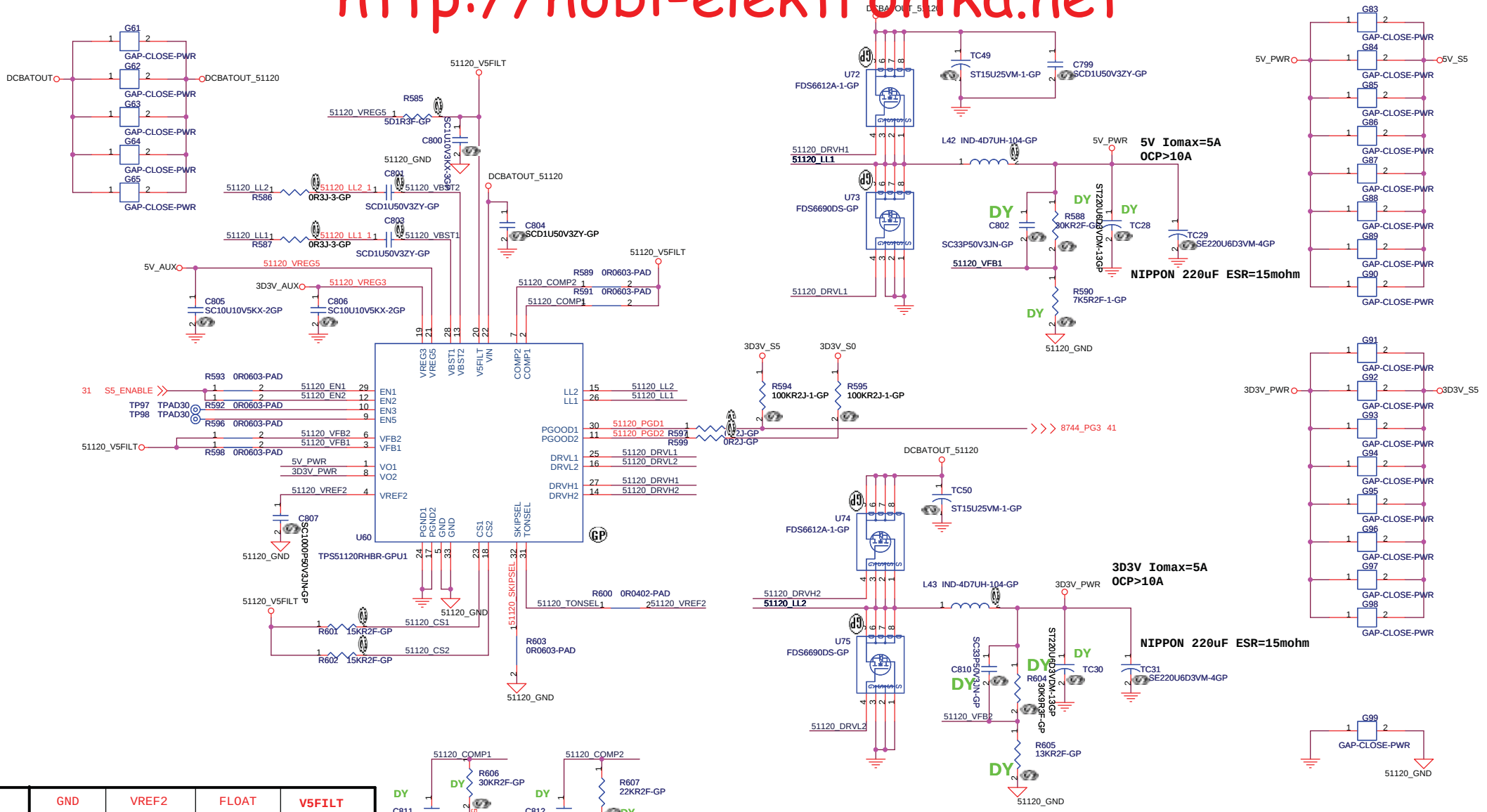
Date: Friday, March 24, 2006 Sheet 36 of 57



Wistron Corporation	緯創資通
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	CPU Vcore Power_1
Size	Document Number: MYALL2
Rev	MP
Date: Thursday, March 30, 2006	Sheet 37 of 57



緯創資通	Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	CPU Vcore Power_2	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 38 of 57	



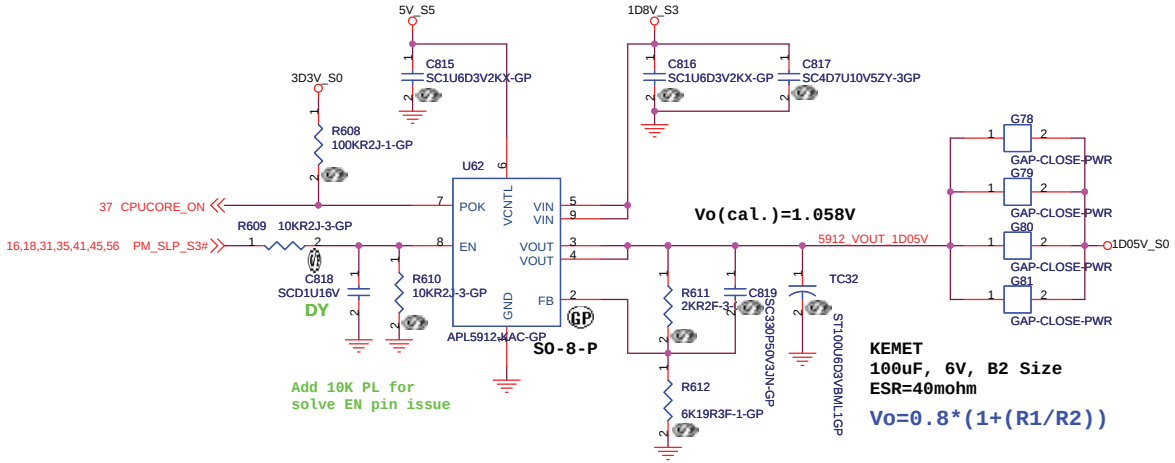
	GND	VREF2	FLOAT	V5FILT
SKIPSEL	AUTOSKIP	AUTOSKIP /FAULTS OFF	PWM	PWM
COMP	N/A	N/A	CURRENT MODE	D-Cap MODE
TONSEL	380k/CH1 590k/CH2	280k/CH1 430k/CH2	220k/CH1 330k/CH2	180k/CH1 280k/CH2
VFB1	N/A	not use	ADJ.	5V Fixed Output
VFB2	N/A	not use	ADJ.	3.3V Fixed Output
EN1,EN2	Switcher OFF	not use	Swithchr ON	Switcher ON
EN3,EN5	LDO OFF	not use	LDO ON	VREG3 on

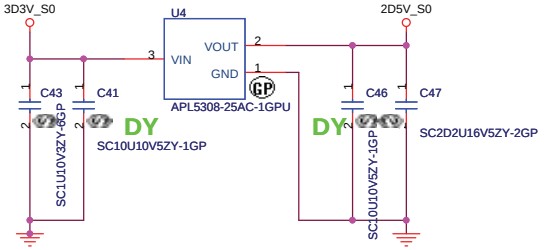
For TPS51120,
Vout=5V
1. If you use a 6.8uH inductor, the minimum ESR is 70m ohm.
2. If you use a 4.7uH inductor, the minimum ESR is 48m ohm.
3. If you use a 3.3uH inductor, the minimum ESR is 34m ohm.

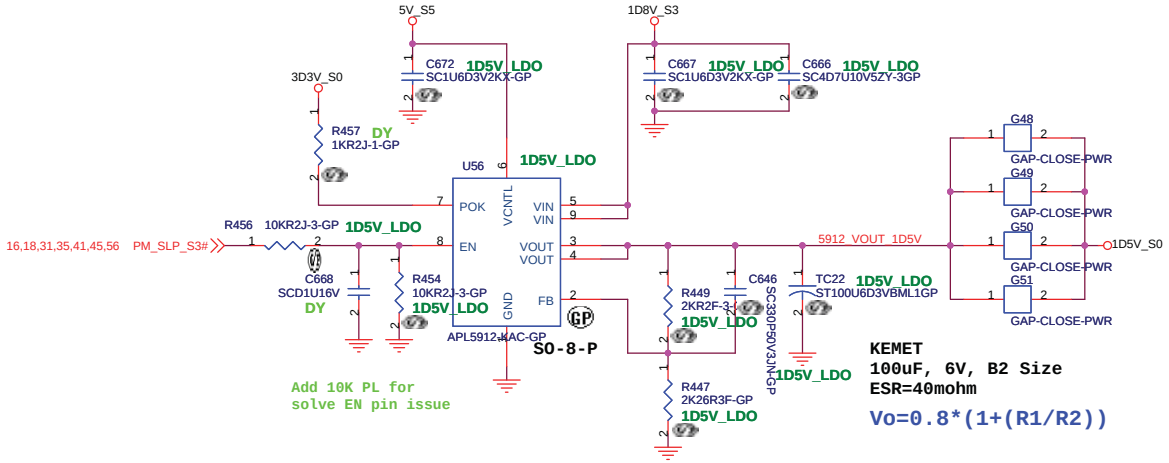
Vout=3.3V
1. If you use a 4.7uH inductor, the minimum ESR is 51m ohm.
2. If you use a 3.3uH inductor, the minimum ESR is 36m ohm.
3. If you use a 2.5uH inductor, the minimum ESR is 27m ohm.

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

Title: 3D3V_S5 & 5V_S5
Size: | Document Number: MYALL2 | Rev: MP
Date: Thursday, March 30, 2006 | Sheet 39 of 57





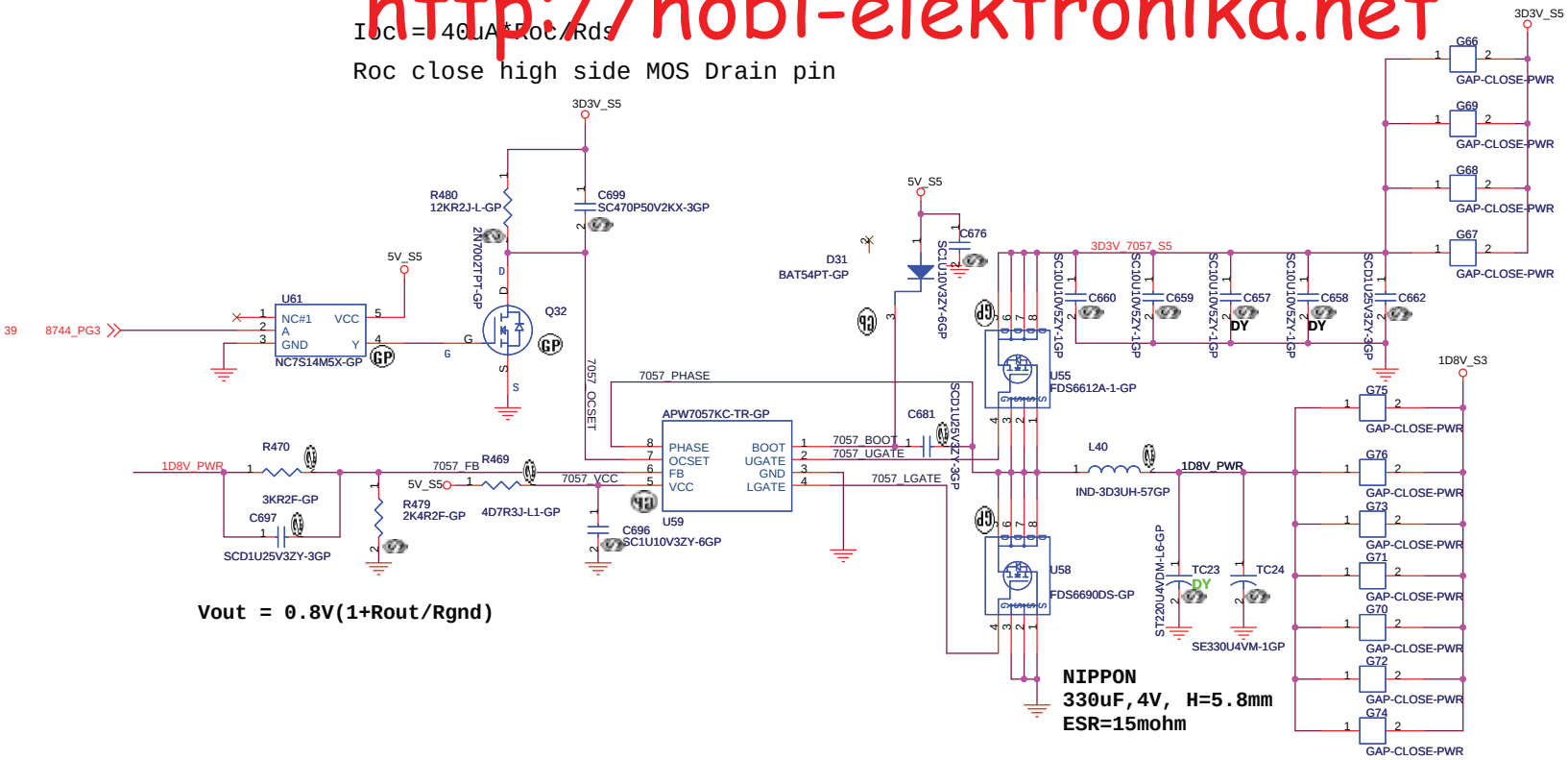


緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title	1D05V / 1D5V/2D5V	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 40 of 57	

Ioc = 40uA*Roc/Rds

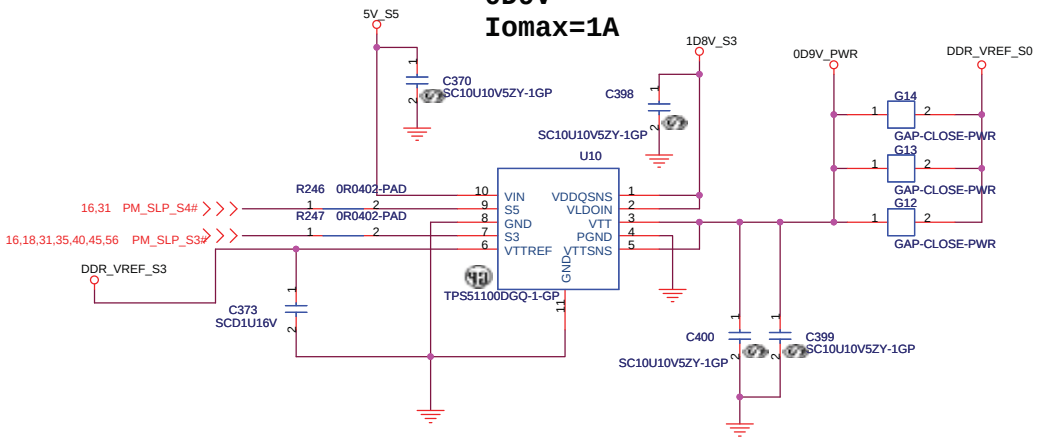
Roc close high side MOS Drain pin



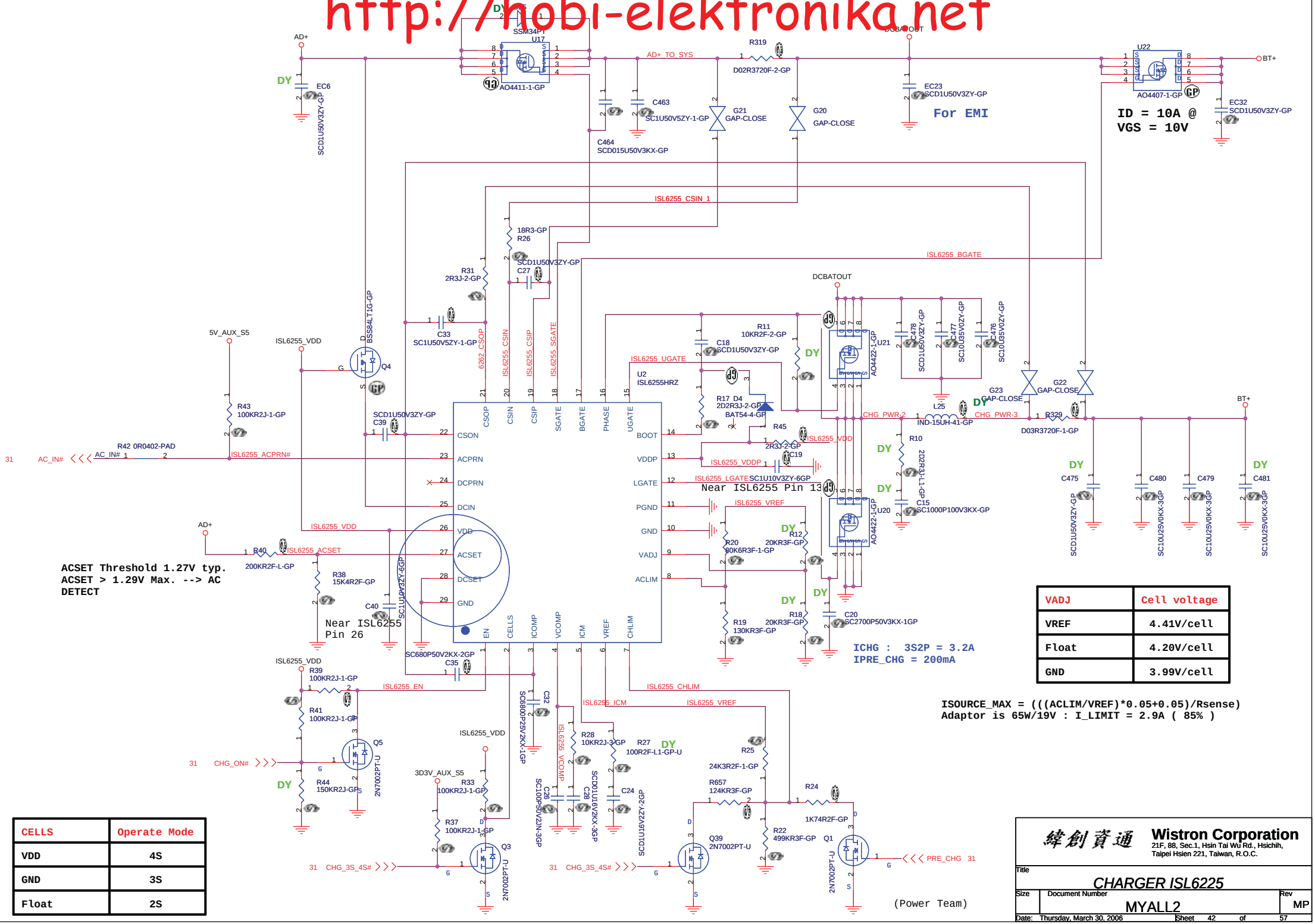
Vout = 0.8V(1+Rout/Rgnd)

NIPPON
330uF,4V, H=5.8mm
ESR=15mohm

0D9V
Iomax=1A



緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title	*APW7057 / 1D8V/0D9V*
Size	Document Number: MYALL2 — Rev: MP
Date: Thursday, March 30, 2006	Sheet 41 of 57

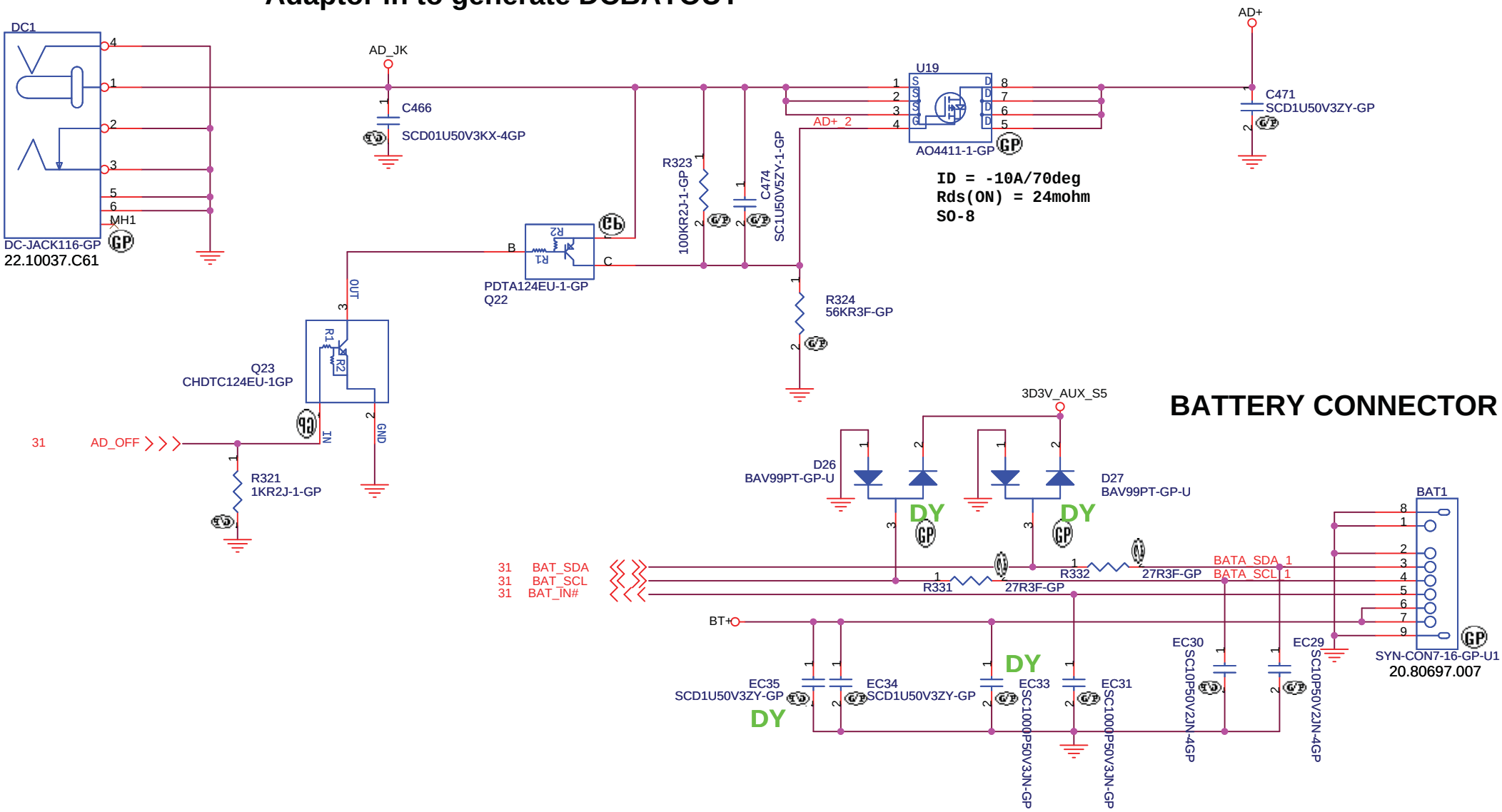


VADJ	Cell voltage
VREF	4.41V/cell
Float	4.20V/cell
GND	3.99V/cell

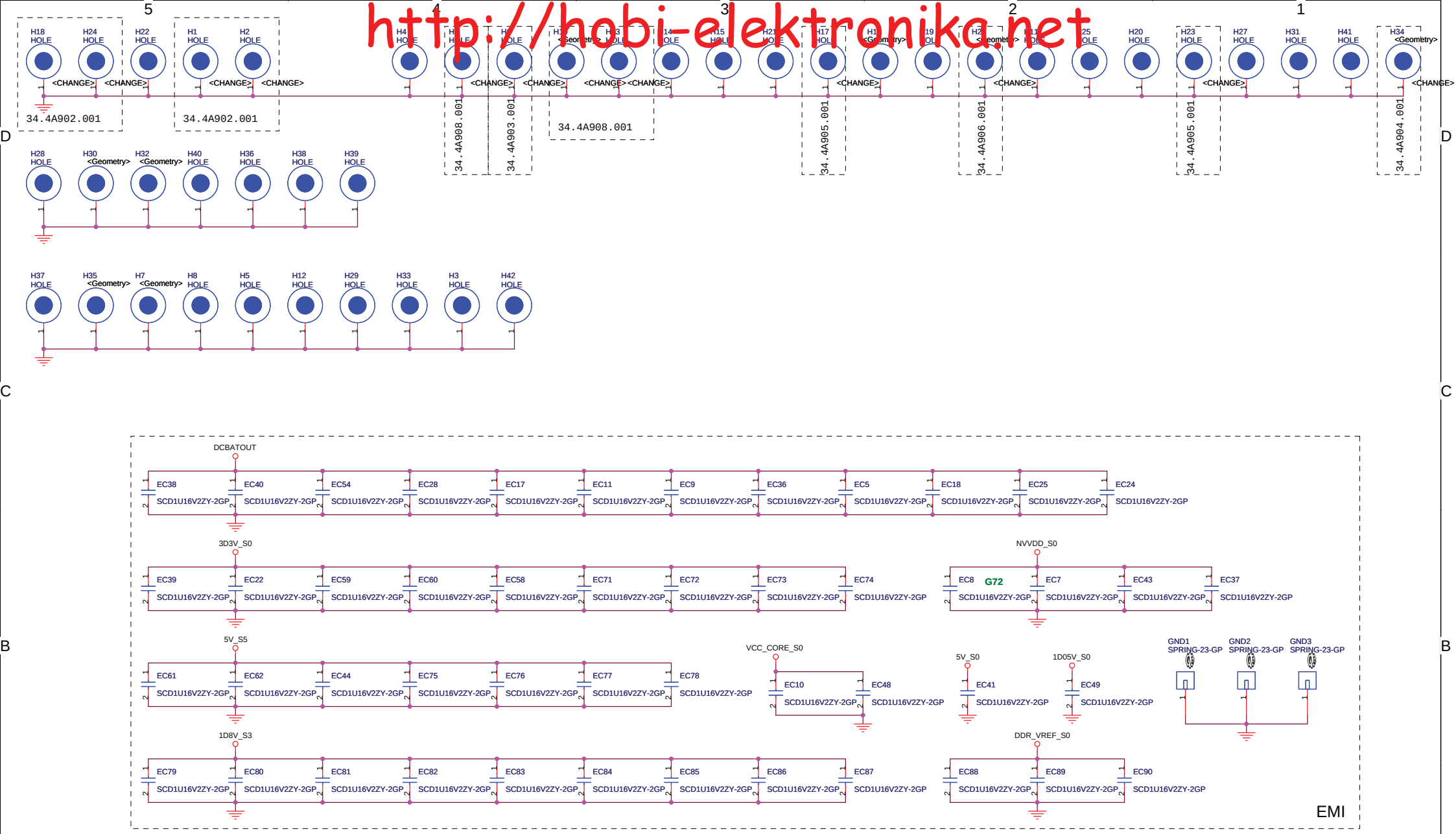
CELLS	Operate Mode
VDD	4S
GND	3S
Float	2S

Wistron Corporation	緯創資通
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title: CHARGER ISL6225	
Size	Document Number: MYALL2 — Rev: MP
Date: Thursday, March 30, 2006	Sheet 42 of 57

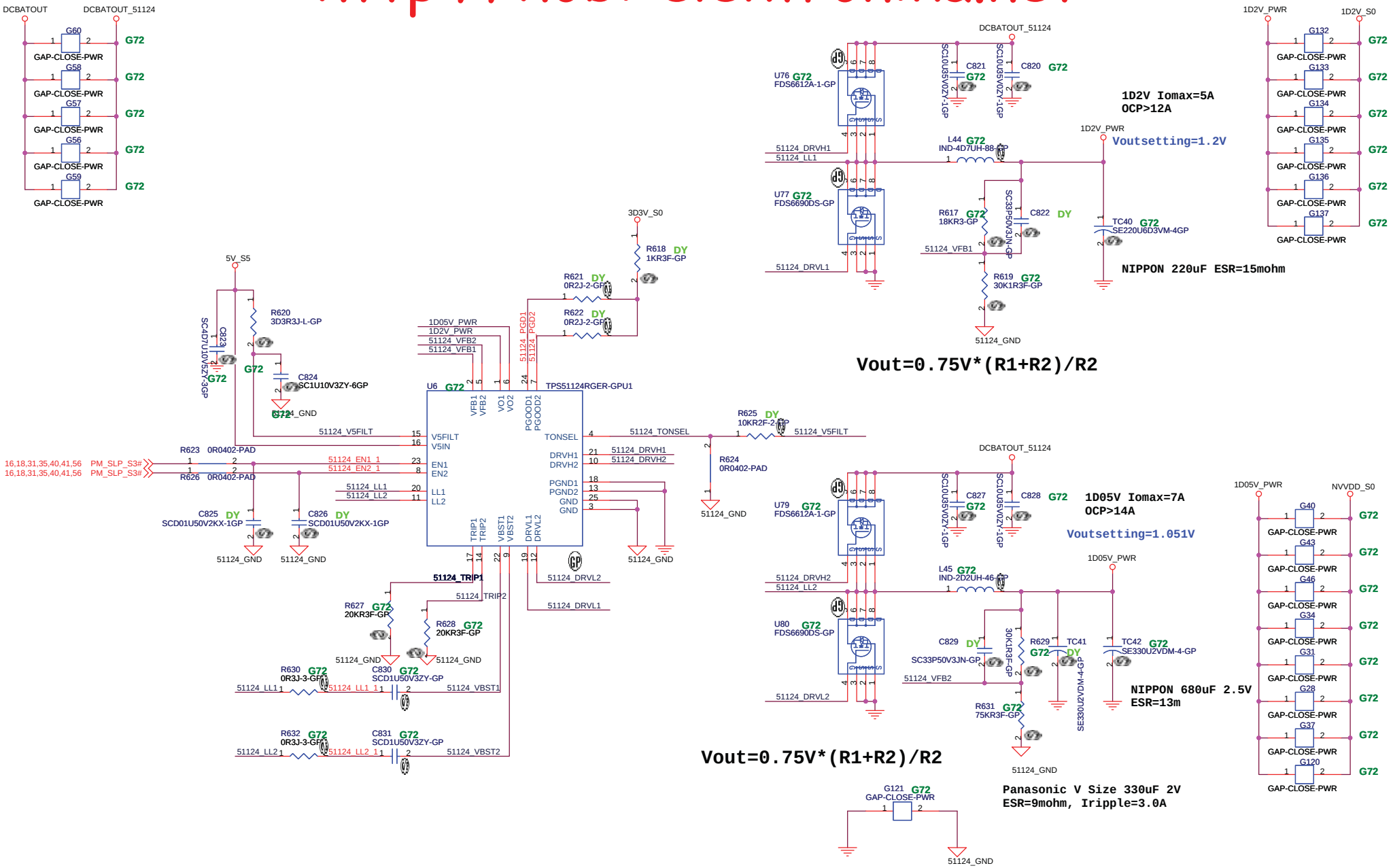
Adaptor in to generate DCBATOUT



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 MYALL2	Rev MP
Date: Thursday, March 30, 2006	Sheet 43 of 57	



緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title: *EMI*		
Size	Document Number: MYALL2	Rev: MP
Date: Friday, March 24, 2006	Sheet 44 of 57	



	GND	OPEN	V5FILT
TONSEL	230k/CH1 283k/CH2	283k/CH1 346k/CH2	346k/CH1 423k/CH2

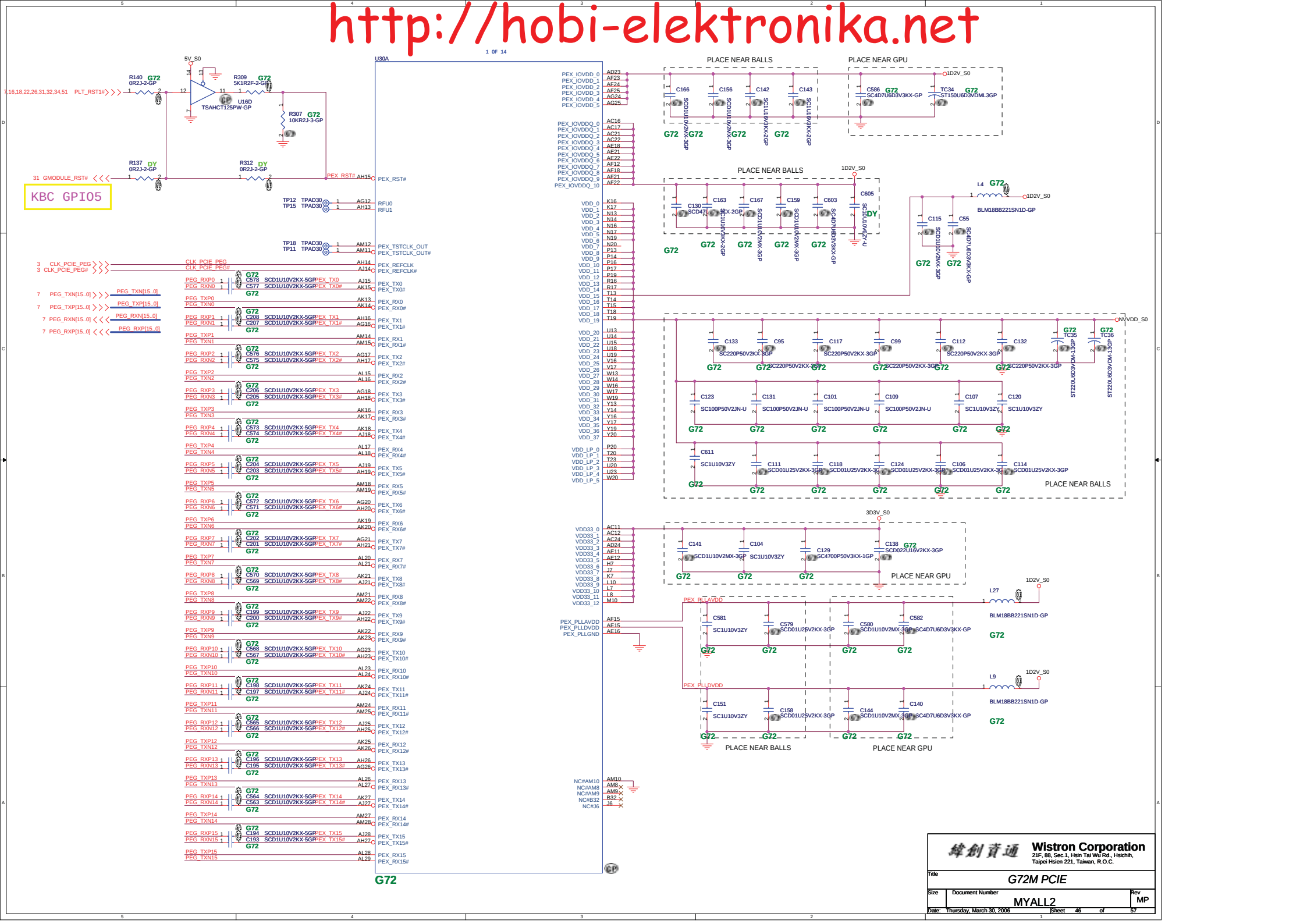
<Variant Name>

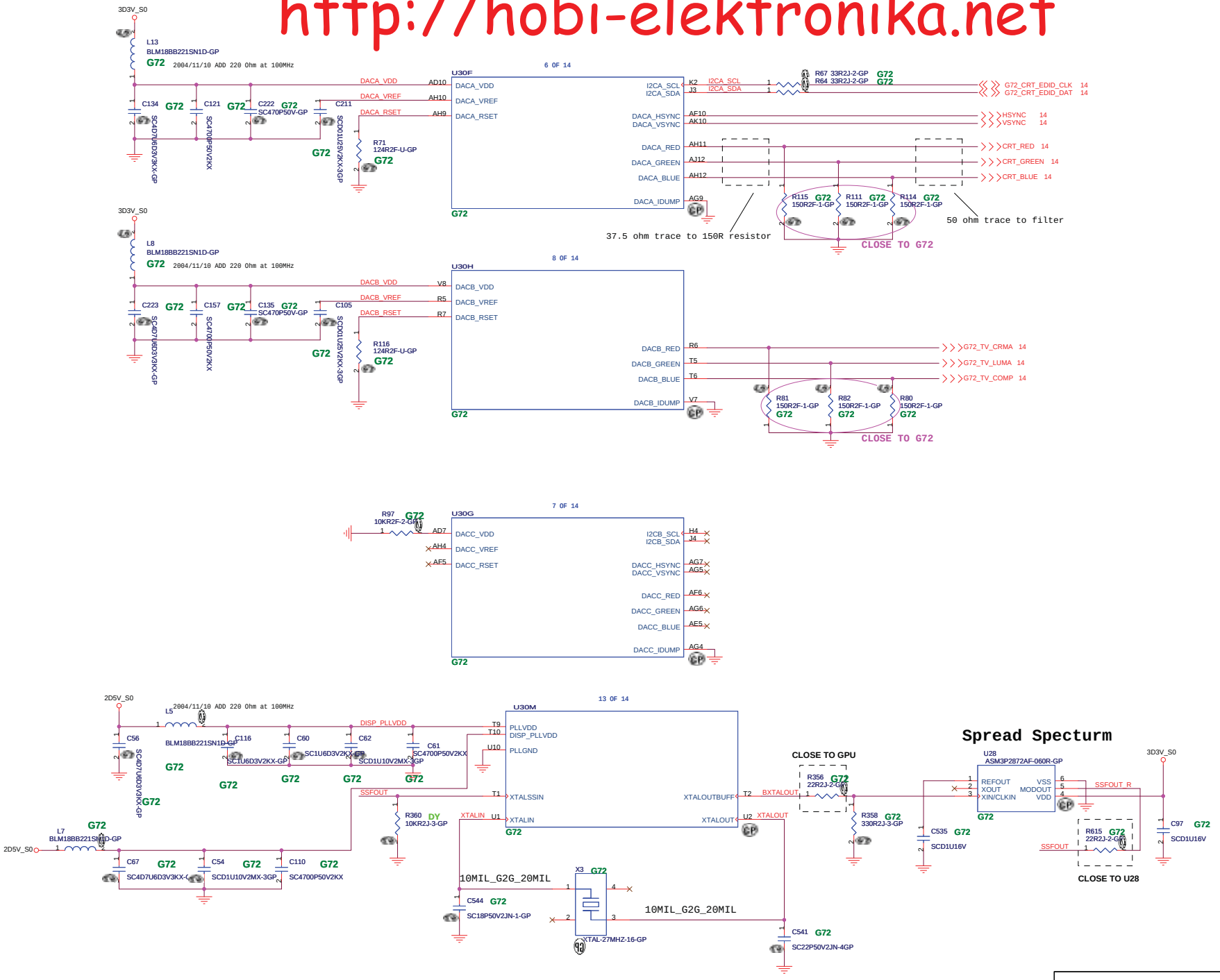
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: TPS51124 / NVDD/1D2V

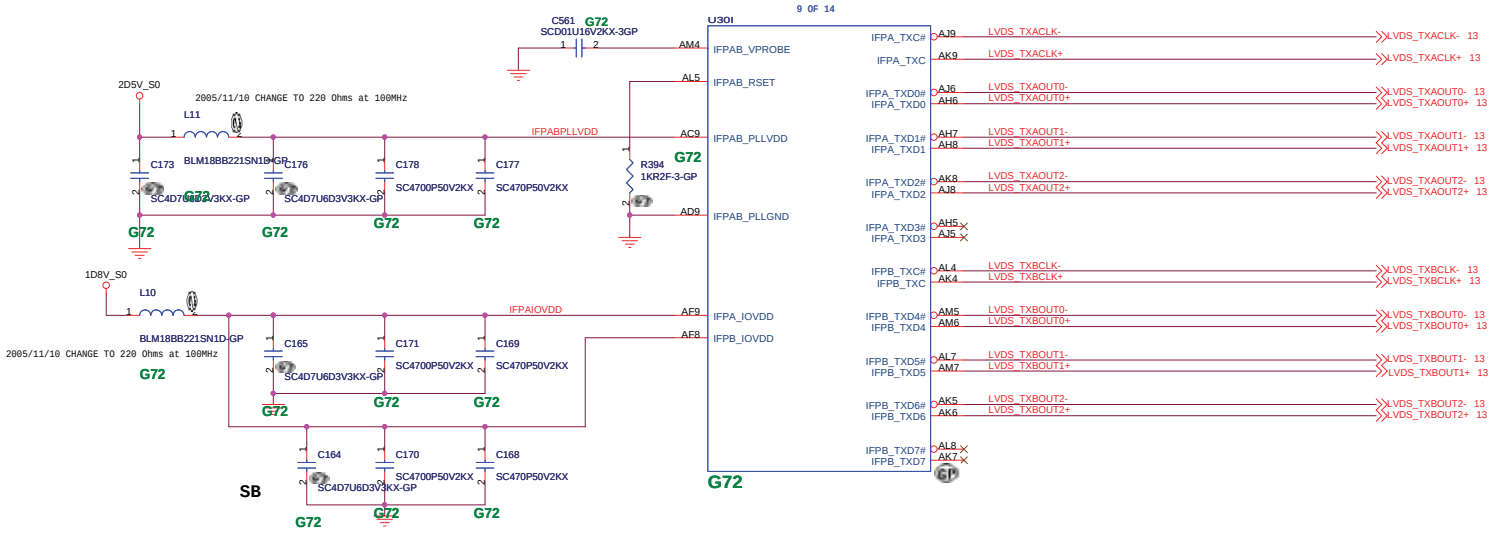
Size	Document Number	Rev
	MYALL2	MP

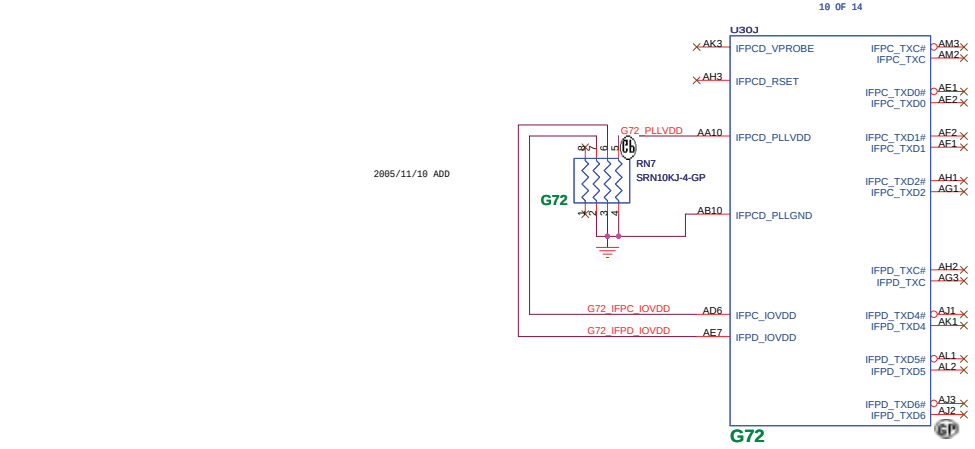
Date: Thursday, March 30, 2006 Sheet 45 of 57



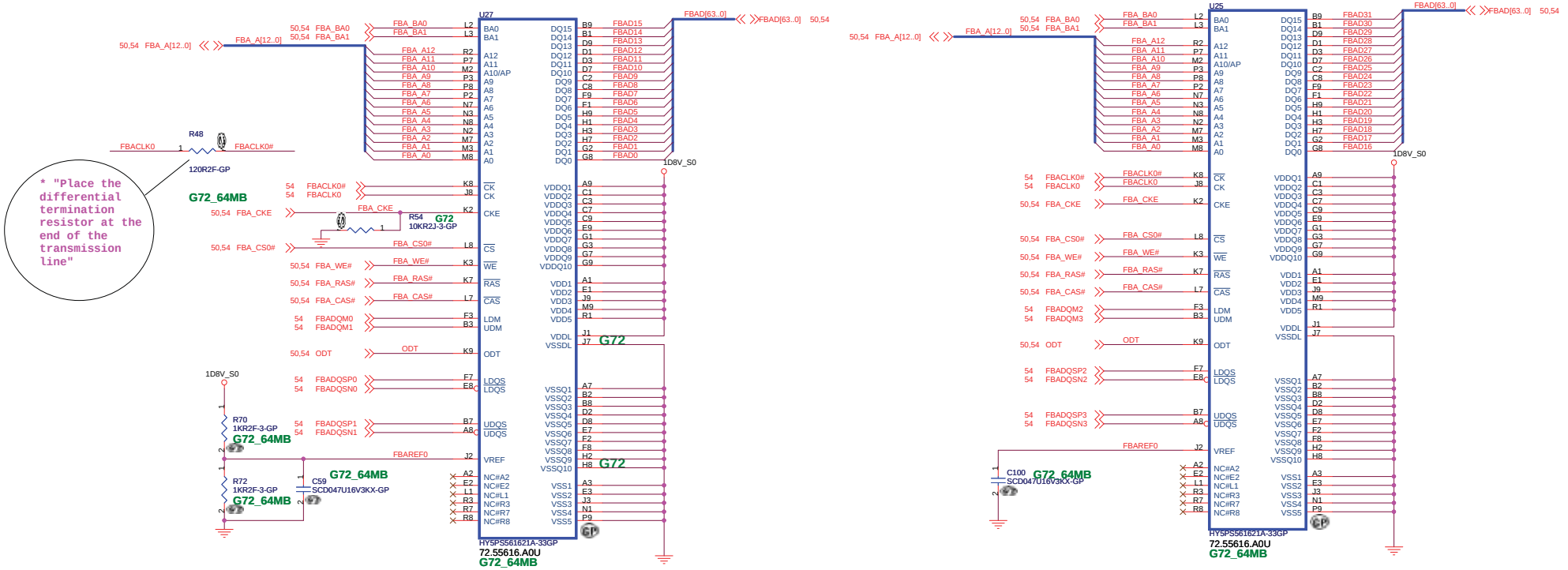


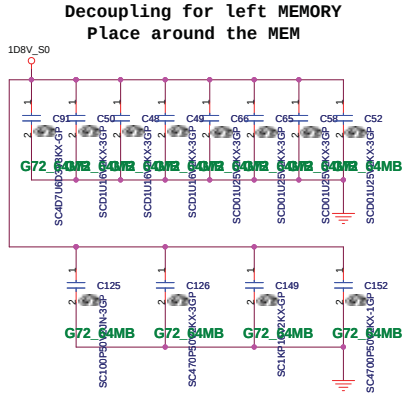
鋒創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*G72M CRT & TV OUT*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 47 of 57	

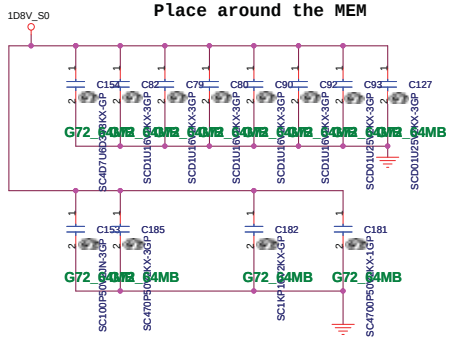




鋒創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*G72M LVDS & TMDS*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 48 of 57	

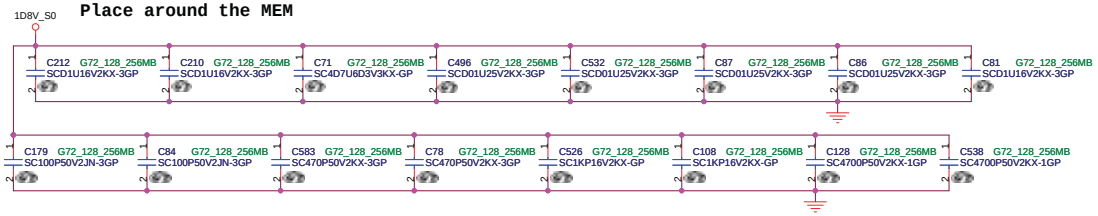




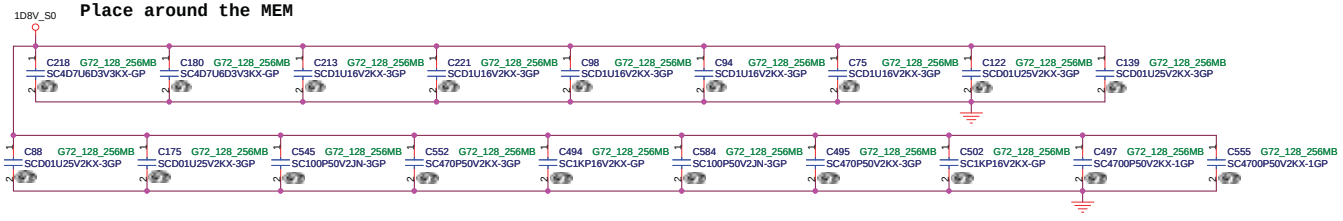


鋒創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*G72M VRAM (1ST 1/2)*	
Size	Document Number: MYALL2	Rev: MP
Date: Thursday, March 30, 2006	Sheet 49 of 57	

Decoupling for left MEMORY
Place around the MEM

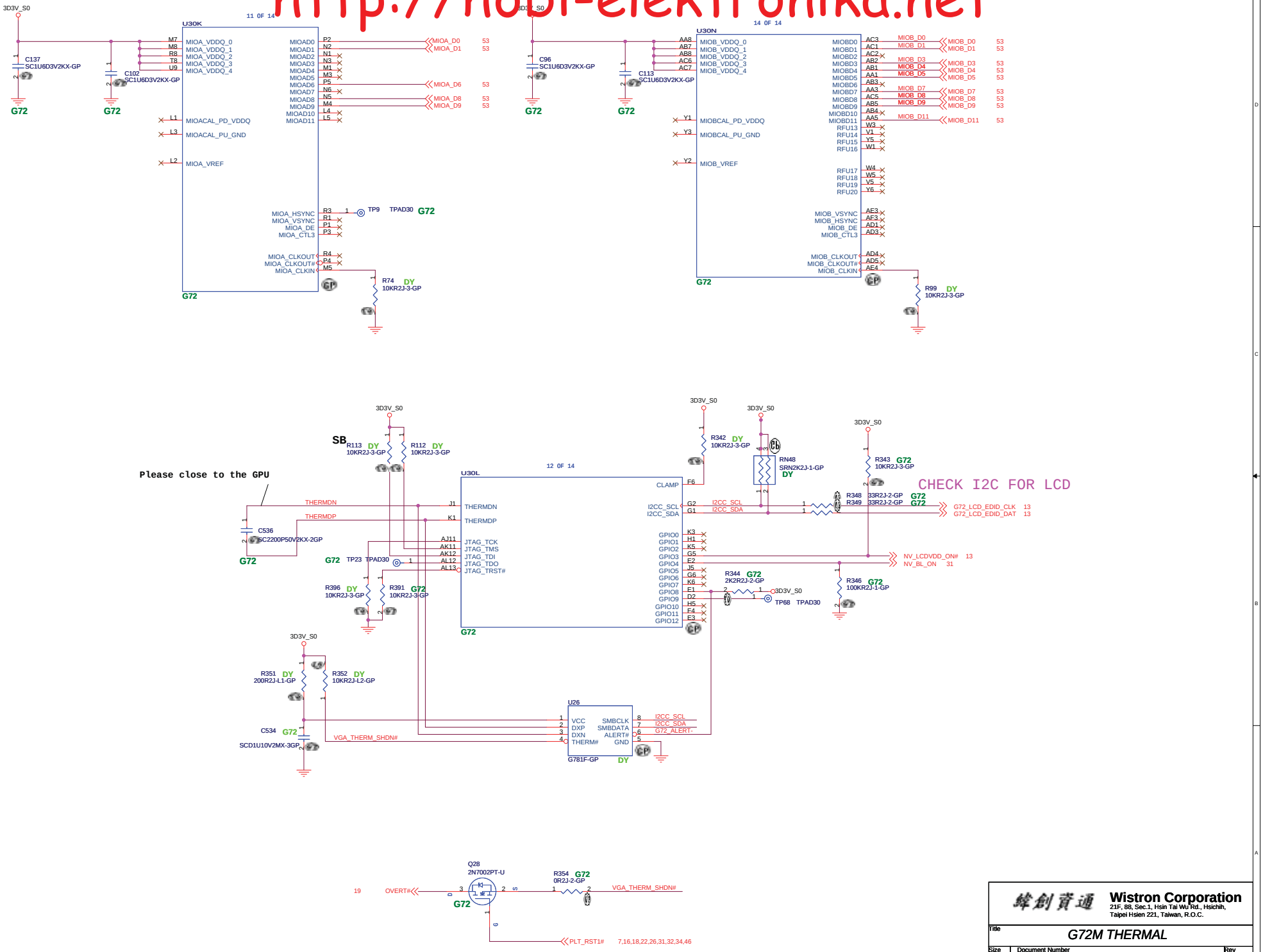


Decoupling for right MEMORY
Place around the MEM

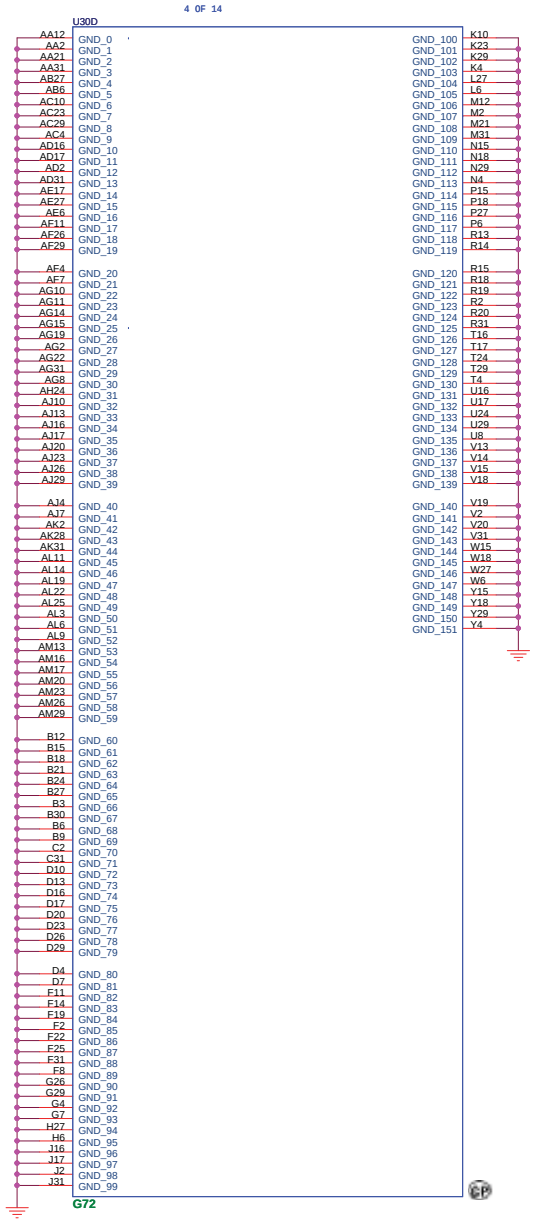


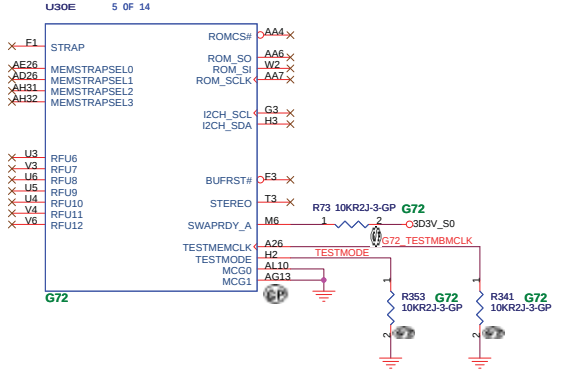
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title	G72M VRAM (1ST 2/2)	
Size	Document Number MYALL2	Rev MP
Date: Thursday, March 30, 2006	Sheet 50 of 57	



Wistron Corporation	21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	G72M THERMAL	
Size	Document Number MYALL2	Rev MP
Date: Thursday, March 30, 2006	Sheet 51 of 57	

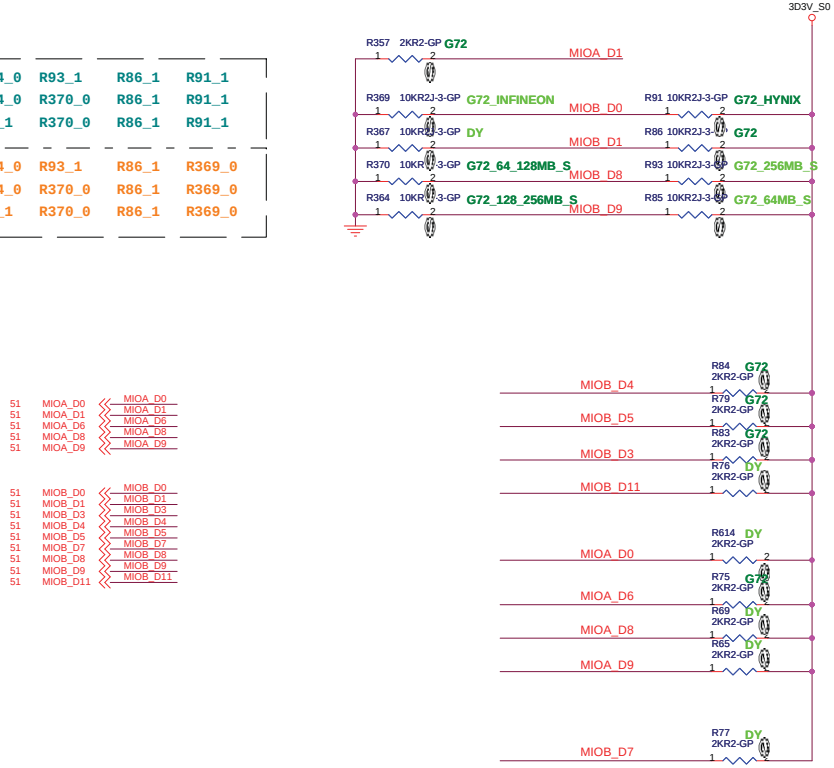




鋒創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*G72M ROM & Spread Specturm*	
Size	Document Number: MYALL2	Rev: MP
Date: Friday, March 24, 2006	Sheet 52 of 57	

STRAPS, Mechanical Parts

Hynix256MB :	R364_0	R93_1	R86_1	R91_1
Hynix128MB :	R364_0	R370_0	R86_1	R91_1
Hynix64MB :	R85_1	R370_0	R86_1	R91_1
Infineon256MB :	R364_0	R93_1	R86_1	R369_0
Infineon128MB :	R364_0	R370_0	R86_1	R369_0
Infineon64MB :	R85_1	R370_0	R86_1	R369_0



Bit	Signal	Values	
MIOA_D1:	SUB_VENDOR	0 NO_BIOS 1 READ FROM BIOS	
MIOB_D0:	RAM_CFG_0	0000 RFU 0001 8Mx32 BGA 1.8V	1000 RFU 1001 RFU
MIOB_D1:	RAM_CFG_1	0010 RFU 0011 RFU 0100 4Mx32 BGA 1.8V	1010 RFU 1011 RFU 1100 RFU
MIOB_D8:	RAM_CFG_2	0101 RFU 0110 RFU 0111 RFU	1101 RFU 1110 RFU 1111 RFU
MIOB_D9:	RAM_CFG_3	0011 16MX16	
MIOB_D2:	CRYSTAL_0	00 13.500 MHz 01 14.31818 MHz 10 27.000 MHz	
MIOB_D6:	CRYSTAL_1	11 UNKNOWN	
MIOA_D7:	TV_MODE_0	00 SECAM 01 NTSC 10 PAL 11 CRT	
MIOA_D10:	TV_MODE_1		
MIOB_D4:	PCI_DEVID_0		
MIOB_D5:	PCI_DEVID_1	1000 (default 0x00FC)	
MIOB_D3:	PCI_DEVID_2		
MIOB_D11:	PCI_DEVID_3	0111 G72MV	
MIOA_D0:	PEX_PLL_EN_TERM100	0 ENABLED 1 DISABLED	
MIOA_D6:	3GIO_PADCFG_LUT_ADDR[0]	0 DESKTOP 1 MOBILE	
MIOA_D8:	3GIO_PADCFG_LUT_ADDR[1]		
MIOA_D9:	3GIO_PADCFG_LUT_ADDR[2]	010 DEFAULT	
MIOB_D7:	MOBILE_GPIO	0 GPIO_PULLDN 1 GPIO_FLOAT	

For MEM strapping, Please use below table:

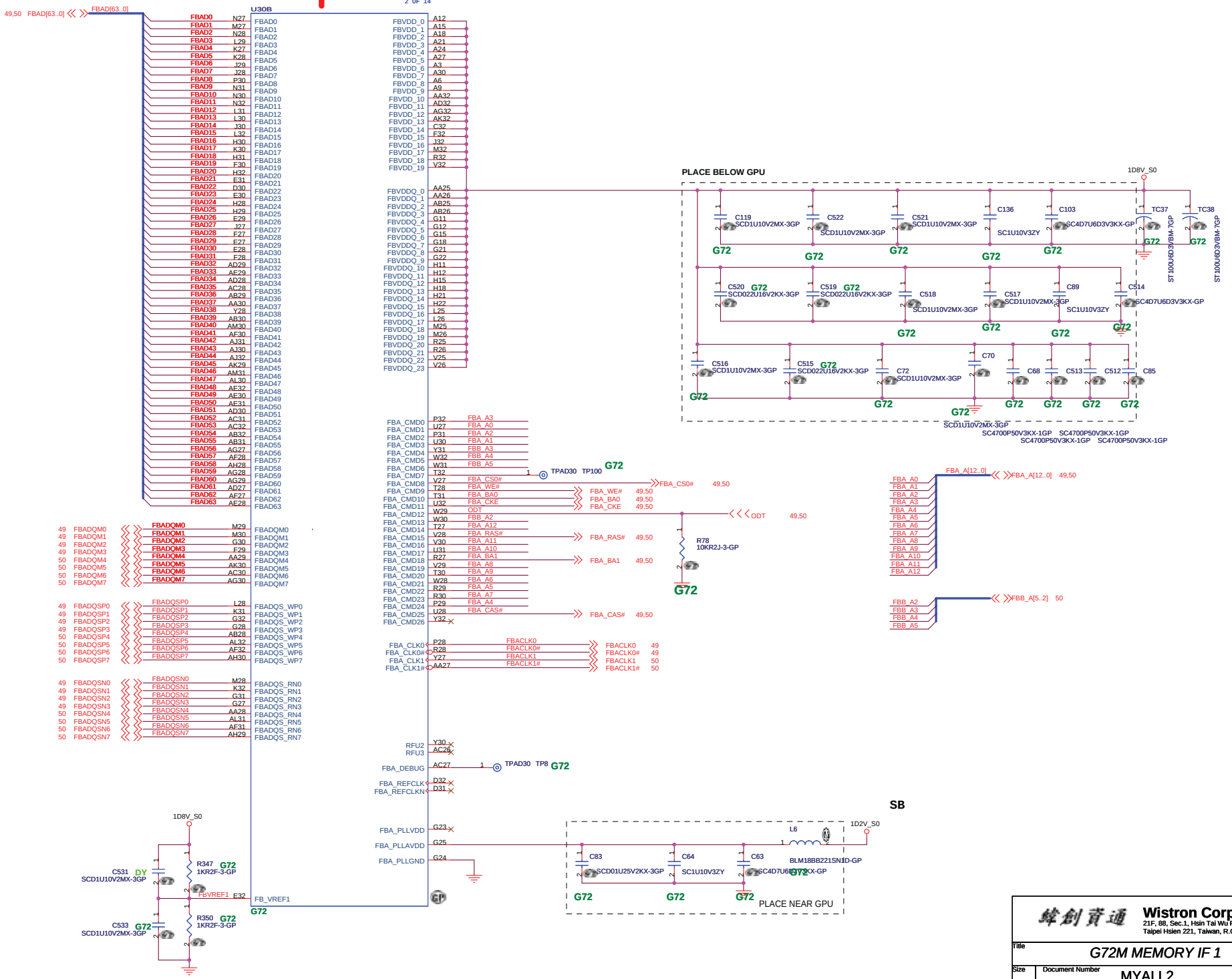
RAM_CFG[3:0]	Config	FB Bus Width	Definitions
0000	16Mx16 DDR2	64-bit	Elpida
0001	16Mx16 DDR2	64-bit	Samsung
0010	16Mx16 DDR2	64-bit	Infineon
0011	16Mx16 DDR2	64-bit	Hynix
0100	32Mx16 DDR2	64-bit	Elpida
0101	32Mx16 DDR2	64-bit	Samsung
0110	32Mx16 DDR2	64-bit	Infineon
0111	32Mx16 DDR2	64-bit	Hynix

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

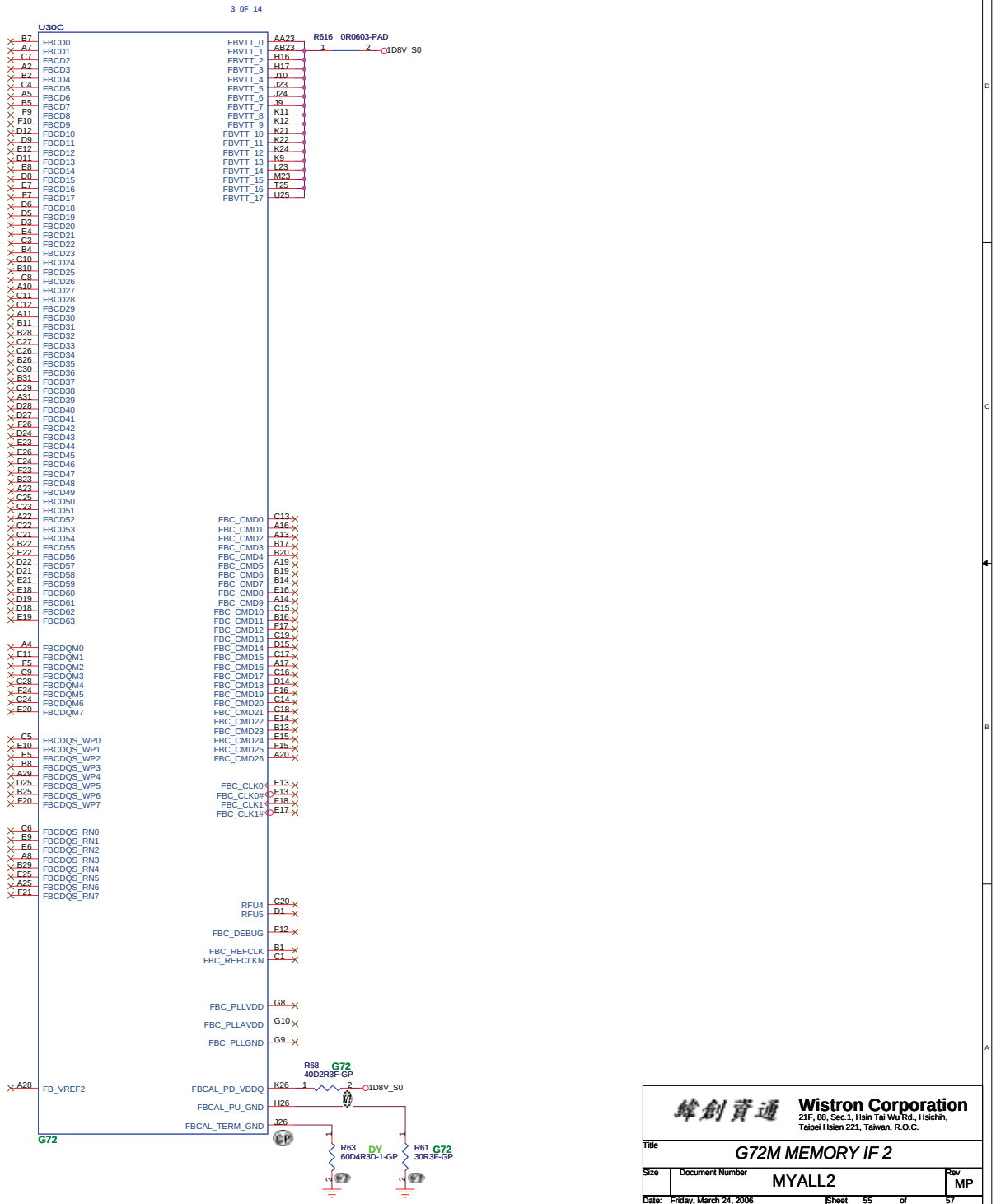
Title: G72M STRAPPING

Size | Document Number: MYALL2 | Rev: MP

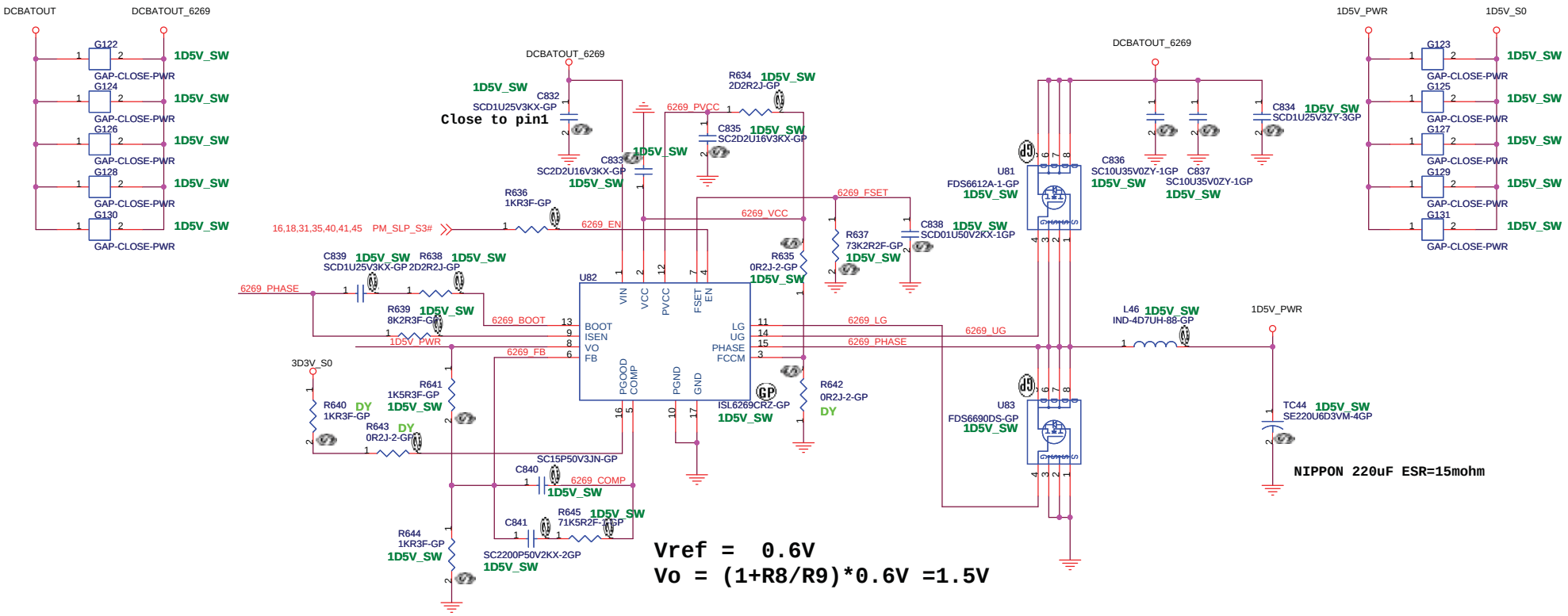
Date: Thursday, March 30, 2006 | Sheet 53 of 57



Wistron Corporation			
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title: G72M MEMORY IF 1			
Size	Document Number: MYALL2	Rev: MP	
Date: Thursday, March 30, 2006	Sheet 54 of 57		



鋒創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*G72M MEMORY IF 2*	
Size	Document Number: MYALL2	Rev: MP
Date: Friday, March 24, 2006	Sheet 55 of 57	



緯創資通	Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	ISL6269/1D5V	
Size A3	Document Number MYALL2	Rev MP
Date: Thursday, March 30, 2006	Sheet 56 of 57	

1. 5V_S5_G913 chnge to 5V_AUX_S5 ====> 1229
2. Bluetooth USB change to port 7 ====> 1229
3. Add CPU frequency selection resistor ====> 1229
4. Change LVDS connector ====> 1229
5. Change C435 from 1uF to 0.47uF and for pop noise ====> 1230
6. Change T7 and T8 from 68uF to 22uF for pop noise ====> 1230
7. Add 579 ~ R584 / Q35 and Q36 for pop noise ====> 1230
8. Power change 1D05V_S0 and 1D5V_S0 power source ====> 0102
9. Power change 5D_PWR and 3D3V_PWR power source ====> 0107
10. R427 DY for PCIE bus clock ====> 0107
11. Delete Q14 / R543 / R254 for boot up ====> 0107
12. Power change R505 from 3.01K to 3.24K ====> 0107
13. Power change R142 from 2.21K to 8.2K ====> 0107
14. Power change R122 from 56.2K to 73.2K ====> 0107
15. Change R68 from 37ohm to 40.2ohm and R61 from 37ohm to 30ohm ====> 0107
16. Delete R401 for UMA boot up short ====> 0107
17. ME change TVOUT1 material from 22.10021.F41 to 22.10021.H61 ====> 0107
18. R568 DY for CIR working ====> 0109
19. Swap CARD1 pin18 and pin19 ====> 0110
20. Power change C699 from 510P/50V to 470P/50V ====> 0111
21. Power change R397 and R399 from resister to gap-close ====> 0111
22. Remove R392 / R393 / C560 / R62 / R92 / R123 ====> 0111
23. Add R615 for G72 SS ====> 0111
24. Dummy G72 external thermal sensor U26 / R351 / R352 / C534 ====> 0111
25. Add G72 strapping MIOA_D0 R614 with dummy ====> 0111
26. EMI add capacitor EC66 ~ EC69 for 1000P/16V and EC70 ~ EC78 for 0.1U/16V ====> 0111
27. Power change R480 from 6.2K to 8.2K ====> 0112
28. Delete R533 and R534 for cardreader detect ====> 0112
29. Delete R210 for 1D5V_S0 power rail ====> 0112
30. Power delete R407 0 ohm ====> 0112
31. Add TC34 ~ TC38 for U39_G72 ====> 0112
32. Remove R362 ====> 0112
33. Change R282 and R283 from 22 ohm to 2.2K for internal mic record function failure ====> 0112
34. Change R306 / R308 / R313 / R311 from 47 ohm to 0 ohm for Hsync and Vsync input ====> 0112
35. Change R379 / R380 / R377 / R378 / R382 / R383 from 47 ohm to 0 ohm for TV input ====> 0112
36. Change CIR pull hi voltage from 5V to 3D3V ====> 0113
37. Delete G2 pad ====> 0113
38. Add GIGA LAN reset trace ====> 0113
39. Power change 1D5V power source ====> 0117
40. Power change NVVDD power source ====> 0117
41. Power add 1D5V power switching ====> 0117
42. Change C774 and C776 from 12pF to 15pF ====> 0119
43. Change C640 and C648 from 20pF to 27pF ====> 0119
44. Change C722 and C737 from 4.7pF to 2.7pF ====> 0119
45. Change C42 and C44 from 22pF to 18pF ====> 0119
46. Power delete R633 and pull hi voltage ====> 0119
47. Power delete TC39, TC43 and change TC41, TC42 to 79.33719.20C ====> 0120
48. Add CRT detect circuit ====> 0119
49. Change R594 pull hi voltage from 3D3V_S0 to 3D3V_S5 for S3 wake up issue ====> 0123
50. Power change material L44 and L46 from 68.3R310.20A to 68.4R710.20D
    L45 from 68.3R310.20A to 68.2R210.20B ====> 0123
51. Power change R480 from 8.2K to 12K ====> 0124
52. Power change capacitor material from 78.10699.42L to 78.10622.53L as C685 ~ C692 ====> 0125
53. Delete U57 / C671 /C675 / C656 / C663 / U8 / D12 / D13 / C306 / R218 / R219 for don't boot up with battery only ====> 0205
54. Change R59 from 100K to 8.2K and add R649 / R650 for don't boot up with battery only ====> 0205
55. Change TC7 / TC8 to C844 / C845 from 220U/6.3V to 100U/6.3V for headphone system resolve have "BO" sound ====> 0208-PD
56. EMC change U1 and U7 materials from G528 / G546 to TPS2061 / TPS2062 ====> 0208-PD
57. Add R651 0 ohm for vendor test ====> 0208-PD
58. Add R652 0 ohm for camera voltage ====> 0209-PD
59. Add R653 / Q37 / Q38 for quick discharge of 5V_S0 / 3D3V_S0 / 1D8V_S0 ====> 0209-PD
60. Change DIMM connector from 62.10017.741(DM1)/62.10017.751(DM2) to 62.10017.691(DM1)/62.10017.A71(DM2) ====> 0209-PD
61. Change G72 DACB net of DACA_VDD / DACA_VREF / DACA_RSET to DACB_VDD / DACB_VREF / DACB_RSET ====> 0209-PD
62. Delete R230 and C317 for non-delay RSMRST# ====> 0210-PD
63. Stuff R285 for internal mic record issue ====> 0210-PD
64. Change C541 and C544 from 27pF to 22pF with 18pF ====> 0210-PD
65. Change HDD1/ODD1/TVOUT1/TVIN1/LOUT1 symbol ====> 0210-PD
66. Delete R330 for BAT_IN# double pull hi issue ====> 0213-PD
67. EMI add EC79 ~ EC87 for 1D8V_S3 and EC88 ~ EC90 for DDR_VREF_S0 ====> 0213-PD
68. Add U84/C846/R654/R655/R656/L47 for camera function ====> 0213-PD
69. EMI add spring GND1 ~ GND3 ====> 0213-PD
70. Change TVOUT1 symbol for don't display TV issue ====> 0214-PD
71. Power change C805 and C806 from 51120_GND to GND ====> 0220-PD
72. Change DC1material from 22.10037.C51(yellow power jack) to 22.10037.C61(blue power jack) ====> 0223-PD
73. Power change C466 from 0.1uF to 0.01uF for U19 burned issue ====> 0303-PD
74. Power change material U47 / U48 / U53 / U54 from 84.07807.F37 to 84.06690.F37
    U49 / U50 / U51 / U52 from 84.07805.A37 to 84.06676.A37 for burned issue ====> 0306-PD
75. Power change R523 / C738 from 3.57K / 5600pF to 4.42K / 47pF ====> 0306-MP
76. Charger change R19 from 15.8K to 130K ====> 0307-MP
77. Charger change R22 from 100K to 499K and add R657 124K / Q39 2N7002 for 6 cell 3.2A with 8 cell 3.8A issue ====> 0309-MP
78. Acer suggestion change JK1 AV-IN connector from 62.10059.011 to 20.90045.001 and delete R292 / R293 ====> 0315-MP
79. Change CRT1 / Q35 / Q36 footprint for SMT issue ====> 0317-MP
80. Change LED5 driver voltage from 5V_S0 to 3D3V_S0 for light leak issue ====> 0317-MP
81. Delete dual layout of dummy of of L47 / L28 / L33 / L39 / L15 / L18 ====> 0317-MP
82. Short 0 ohm with pad ====> 0320-MP
    S : R89 / R418 / R225 / R537 / R316 / R5 / R52 / R51 / R333 / R345 / R335 / R651 / R558 / R559 / R532 / R285 / R649 / R650
    / R49 / R448 / R204 / R437 / R96 / R562 / R410 / R211 / R208 / R177 / R406 / R194 / R237 / R226 / R245 / R243 / R322 / R326
    / R327 / R425 / R444 / R495 / R496 / R560 / R616
    P : R515 / R516 / R491 / R492 / R494 / R482 / R485 / R486 / R487 / R517 / R506 / R508 / R510 / R511 / R591 / R589 / R592
    / R593 / R596 / R598 / R603 / R600 / R246 / R247 / R623 / R626 / R624 / R42
83. Power change materials for high frequency noise issue ====> 0324-MP
    A. add TC45 ~ TC50
    B. dummy C691 / C692 / C689 /C685 / C686 / C688
    C. delete C797 / C798 / C808 / C809
84. Power change material TC23 from 79.3371T.30L to 80.22716.L08 and L42 / L43 from 68.4R750.10Z to 68.4R71A.10P ====> 0324-MP
85. Change C29 material from 78.10491.4FL to 78.10520.5FL for hot plug don't boot up issue ====> 0328-MP
86. Change BOM level that add 1394 / TVIN / TVOUT / IR function ====> 0331-MP
87. ME change 1394 connector material from 62.10027.121 to 62.10027.561 for RoSH issue ====> 0331-MP

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

Title	HISTORY	
Size	Document Number: MYALL2	Rev: MP
Date: Friday, March 31, 2006	Sheet 57 of 57	