Wistron Confidential

MV-3

2008/08/20 REV :MV-03

BOM1

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

Title: *VOX*

Size	Document Number	Rev
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Artemis Block Diagram

Project code : 91.4V801.001
PCB P/N : 48.4V801.031
Revision : MV-3

SYSTEM DC/DC TPS51124	
INPUTS	OUTPUTS
B+	1.8V 10A 0.9V 2A 49

SYSTEM DC/DC TPS51120	
INPUTS	OUTPUTS
B+	+5VALW 6A +3VALW 6A 48

SYSTEM DC/DC TPS51124	
INPUTS	OUTPUTS
B+	+1.05M 13A 49

CHARGER BQ27470	
INPUTS	OUTPUTS
BATT_A BATT_B	BATT 18V 3.0A 5V 100mA 51

CPU DC/DC ISL6260C	
INPUTS	OUTPUTS
B+	+VCC_CORE 0.844~1.3V 65A 47

PCB LAYER	
L1:	Signal 1
L2:	GND
L3:	Signal 2
L4:	Signal 3
L5:	VCC
L6:	Signal 4
L7:	GND
L8:	Signal 5

CLK GEN
SLG8SP553 16

Intel CPU
Penryn
FSB:667,800 or 1066 MHz 5,6,7

HOST BUS
FSB 667/800/1066MHz

DDRII 667/800 Slot 0 14,15
DDRII 667/800 Slot 1 14,15
DDRII 667/800 Channel A
DDRII 667/800 Channel B

Cantiga PM
AGTL+ CPU I/F
DDR Memory I/F
PCIE GRAPHIC
8,9,10,11,12,13

PCI EXPRESS GRAPHIC

MXMII Module 17

RGB CRT
LVDS 2CH
DVI-D 2CH

CRT 18
15.4" LCD 18
HDMI 19
DVI DOCK

Smart Card ISO7816 25
1394 41
SD/MMC MS/XD 41

Ricoh 5C835
CardReader
40,41

PCI

DMI x4
C-LINK0

INTEL
ICH9-M
12 USB 2.0/1.1 ports
ETHERNET (10/100/1000Mb)
High Definition Audio
Serial Peripheral I/F
ACPI 1.1
LPC I/F
4 SATA
PCI/PCI BRIDGE
20,21,22,23,24

SMBus

Thermal Sensor EMC2103 43
Accelerometer STMicro LIS302DL 31

Fingerprinter AES2810B 42
CAMERA 42
Blue Tooth 45
USB x 5 32,45
HDD Bay 2.5" SATA 25
ODD Bay 25

USB 2.0
SATA
SATA

RJ45 CONN 30
RJ11 CONN 36

Intel BOAZ 82567
10/100/1000 29

PCIE/GLCI
PCI/LCI

MODEM MDC V1.5 34

HD Audio

AUDIO CODEC
ADI 1984A 26

INTERNAL MIC
DB
MIC IN
Headphone
PRE-AMP TLV2462 27

SPEAKER

OP AMP
TI 6041A 28

Power SW TPS2231 25

PCIE+USB 2.0
C-LINK1
PCIE x 2

Express Card 54 25
Mini-Card*2 802.11abg/n WWAN 31

LPC Bus
SPI

KBC
SMSC KBC1091 34

SPI

Flash ROM 32Mb x 1(AMT) 33
Tauch Pad 35
Int. KB 35
Capacitive Button 42

TPM SLB9635TT 33
SMSC Super I/O LPC47N217 44

DOCK
PCIE*1 PS2 SATA*1 USB*2 Serial Port Parallel Port LINE IN/Out RJ45/RJ11 VGA DVI-D 35

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5 4 3 2 1

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Title

Change Notes List

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Voltage Rails

o MEANS ON x MEANS OFF

State \ power plane	+B +3VL LDO5	+5VALW +3VALW	+1.5V +5V +0.75V	+5VS +3VS +1.5VS +CPU_CORE +VCCP	+3VM +1.05VM	CLOCK
S0	O	O	O	O	O	O
S3/M1	O	O	O	X	O	O
S3	O	O	O	X	O	O
S5 S4/AC	O	O	X	X	O	O
S5 S4/Battery only	O	X	X	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X	X	X

PCI Devices

EETERNAL	IDSEL#	REQ/GNT#	PIRQ
Cardreader & 1394	AD22	2	G,E

DMA Channel	Device
DMA0	Modem/LAN
DMA1	ECP
DMA2	~~Floppy Disk~~
DMA3	Audio
DMA4	(Cascade)
DMA5	Unused
DMA6	Unused
DMA7	Unused

Symbols	Description
DY/DUMMY	No install
1KR2J	Resistor 1K ohm ,Size 0402 ,5%
1KR3F	Resistor 1K ohm ,Size 0603 ,1%
GP	ROHS parts
NC	Pin no connect to anything

USB PORT#	Destination
0	USB1
1	USB4
2	EXPRESS SLOT
3	USB5
4	USB2
5	USB3
6	Bluetooth
7	WWAN
8	Fingerprint
9	Dock 1
10	Camera
11	Dock 2

IRQ	Device
0	System Timer
1	Keyboard
2	N/A
3	Serial port (COM2) ,LAN/Modem
4	Serial port (COM1)
5	Audio/VGA
6	~~Floppy~~
7	Parallel port
8	System CMOS/Real-time clock
9	Microsoft ACPI
10	N/A,Modem,LAN
11	Mass storage control/PCI simple communication control
12	synactic PS2 port GlidePAD
13	Numeric Data Process
14	Primary IDE interface ,HDD
15	Secondary IDE interface ,CD-ROM
16	Mobile Intel Crestline Express Chipset Family Microsoft UAA Bus Drive for High Definition Audio Intel 82801H (ICH8 Family) PCI Express Root Port -27D0
17	Intel 82801I (ICH9 Family) PCI Express Root Port -27D2 Intel 82801I (ICH9 Family) USB Universal Host Control
18	Intel 82801I (ICH9 Family) USB Universal Host Control Richo R5C835 Integrates FlashMedia Control Richo R5C835 Gemcore based SmartCard Control
19	Intel 82801I (ICH9 Family) PCI Express Root Port -27D6 Intel 82801I (ICH9 Family) USB Universal Host Control
20	Intel 82801I (ICH9 Family) USB Universal Host Control Intel 82801I (ICH9 Family) USB2 Enhanced Host Control
21	Intel 82801I (ICH9 Family) USB Universal Host Control
22	SDA Standard Compliant SD Host Control Accelerometer LIS302DL
23	HP Mobile Data Protection Sensor

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Title: ***Artemis List***

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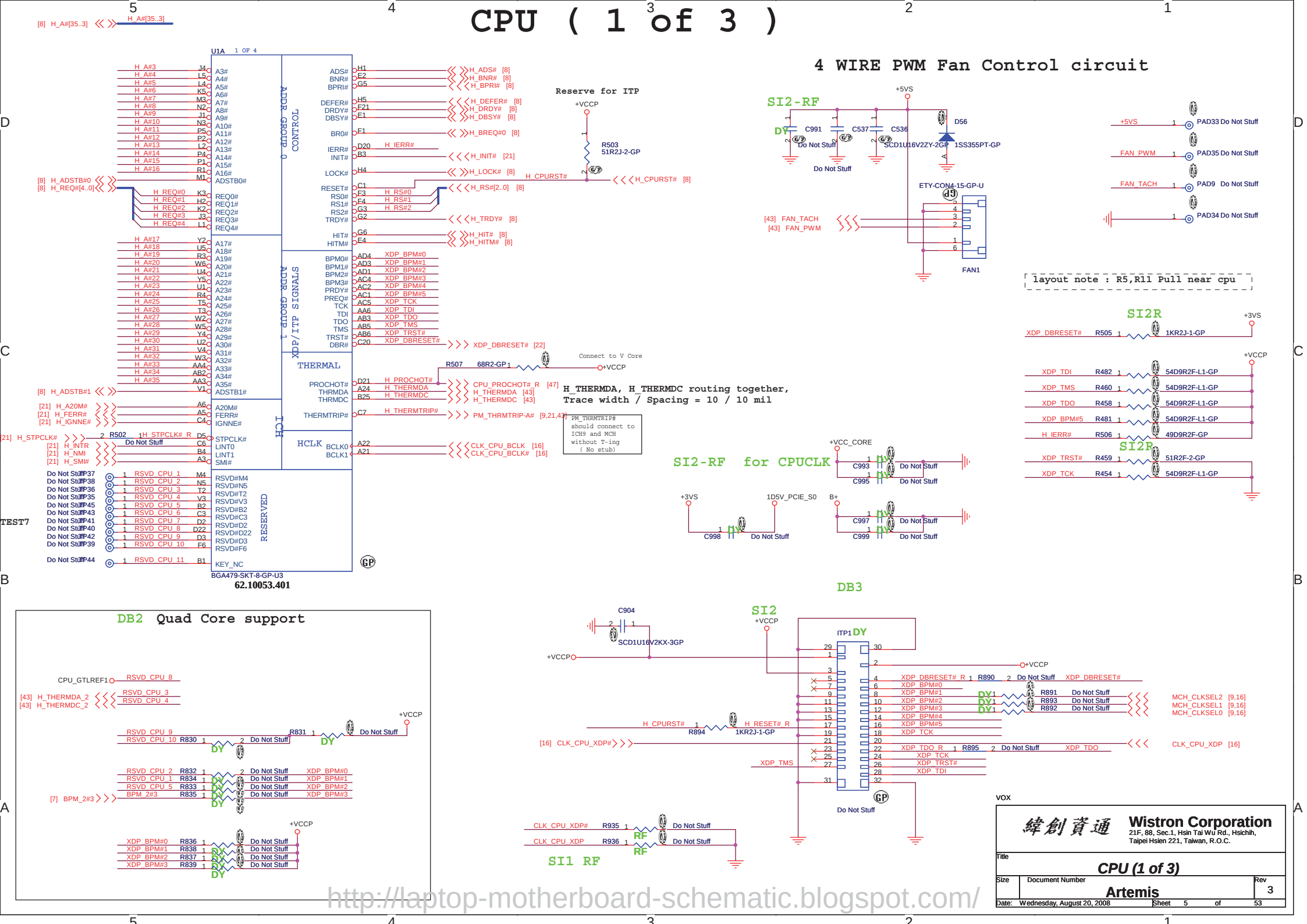
CPU (1 of 3)



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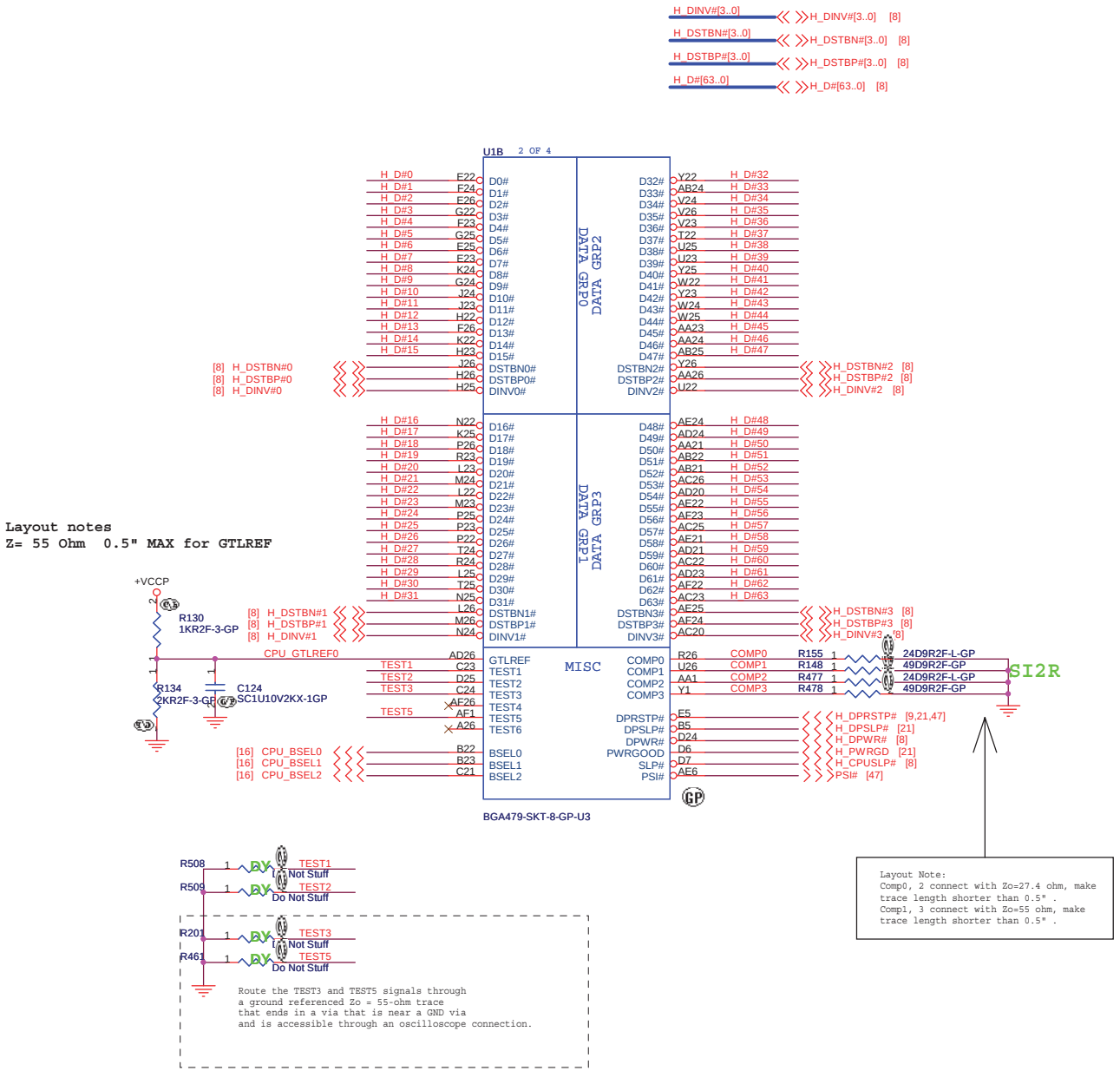
CPU (2 of 3)



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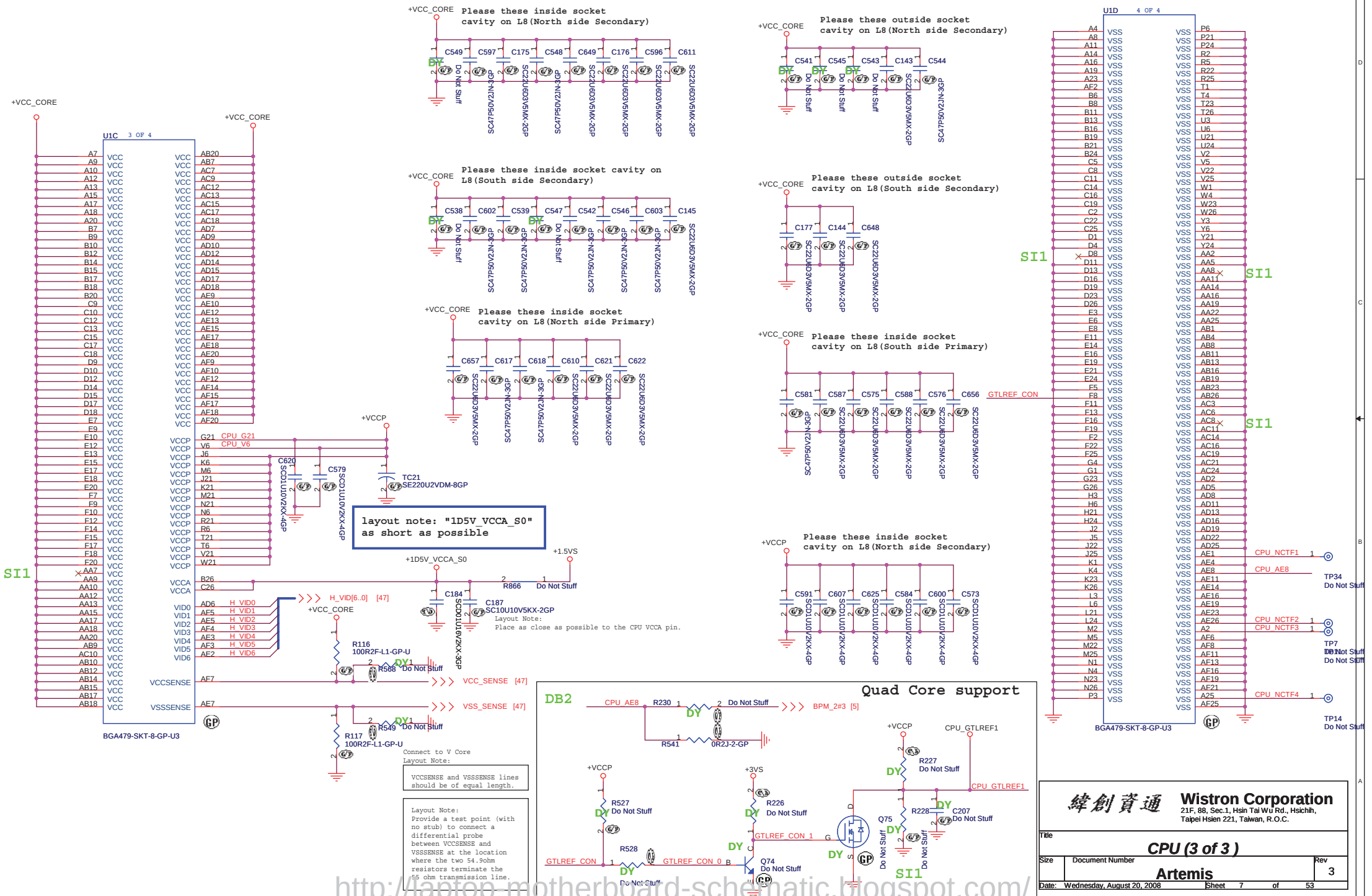
CPU (3 of 3)



Company	Wistron Corporation
Address	21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
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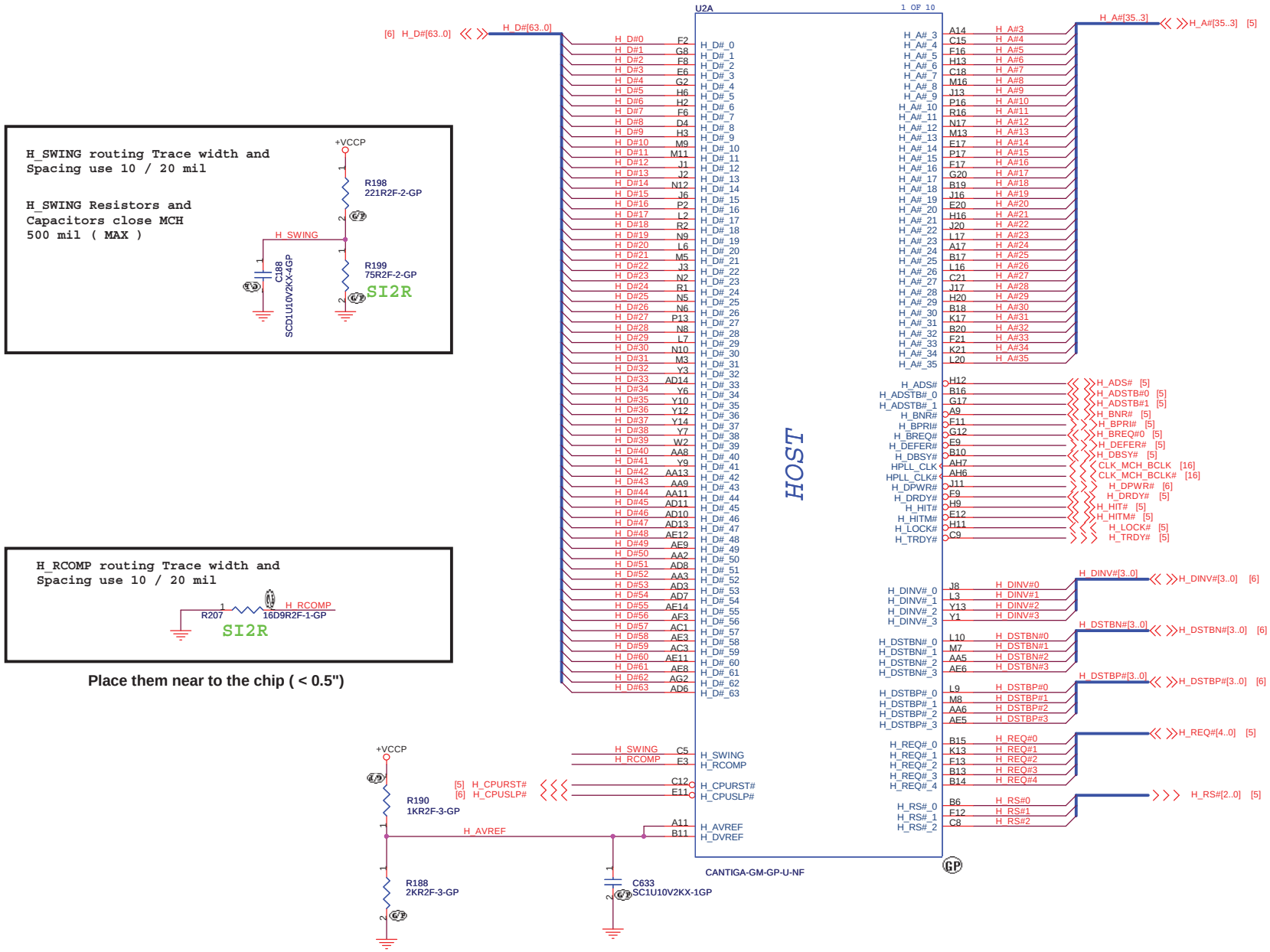
NB (1 of 6) HOST



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NB (2 of 6) PEG/DMI

Place the 49D9 Ohm resistor within 500 mils (1.27 mm) of the (G)MCH.

U2B — 2 OF 10

RESERVED#M36, RESERVED#N36, RESERVED#R33, RESERVED#T33, RESERVED#AH9, RESERVED#AH10, RESERVED#AH12, RESERVED#AH13, RESERVED#K12, RESERVED#AL34, RESERVED#AK34, RESERVED#AN35, RESERVED#AM35, RESERVED#T24, RESERVED#B31, RESERVED#B2, RESERVED#M1, RESERVED#AY21, RESERVED#BG23, RESERVED#BF23, RESERVED#BH18, RESERVED#BF18

RSVD

DDR CLK/ CONTROL/COMPENSATION

SA_CK_0, SA_CK_1, SB_CK_0, SB_CK_1 — M_CLK_DDR0 [14], M_CLK_DDR1 [14], M_CLK_DDR2 [14], M_CLK_DDR3 [14]

SA_CK#_0, SA_CK#_1, SB_CK#_0, SB_CK#_1 — M_CLK_DDR#0 [14], M_CLK_DDR#1 [14], M_CLK_DDR#2 [14], M_CLK_DDR#3 [14]

SA_CKE_0, SA_CKE_1, SB_CKE_0, SB_CKE_1 — M_CKE0 [14,15], M_CKE1 [14,15], M_CKE2 [14,15], M_CKE3 [14,15]

SA_CS#_0, SA_CS#_1, SB_CS#_0, SB_CS#_1 — M_CS0# [14,15], M_CS1# [14,15], M_CS2# [14,15], M_CS3# [14,15]

SM_VREF use TPS 51116 VTTREF Pin (5)

+1.8V

SA_ODT_0, SA_ODT_1, SB_ODT_0, SB_ODT_1 — M_ODT0 [14,15], M_ODT1 [14,15], M_ODT2 [14,15], M_ODT3 [14,15]

SM_RCOMP, SM_RCOMP# — M_RCOMPP, M_RCOMPN

SM_RCOMP_VOH, SM_RCOMP_VOL — SM_RCOMP_VOH, SM_RCOMP_VOL

+V_DDR_VREF_M

SM_VREF, SM_PWROK, SM_REXT, SM_DRAMRST# — M_VREF_MCH, SM_REXT

499R2F-2-GP R185

R464 49D9R2F-GP DY Do Not Stuff

R467 49D9R2F-GP DY Do Not Stuff

CLK

DPLL_REF_CLK, DPLL_REF_CLK#, DPLL_REF_SSCLK, DPLL_REF_SSCLK# — SI2

PEG_CLK, PEG_CLK# — CLK_MCH_3GPLL [16], CLK_MCH_3GPLL# [16]

DMI

DMI_RXN_0..3 — DMI_TXN3, DMI_TXN2, DMI_TXN1, DMI_TXN0 — DMI_TXN3 [22], DMI_TXN2 [22], DMI_TXN1 [22], DMI_TXN0 [22]

DMI_RXP_0..3 — DMI_TXP3, DMI_TXP2, DMI_TXP1, DMI_TXP0 — DMI_TXP3 [22], DMI_TXP2 [22], DMI_TXP1 [22], DMI_TXP0 [22]

DMI_TXN_0..3 — DMI_RXN3, DMI_RXN2, DMI_RXN1, DMI_RXN0 — DMI_RXN3 [22], DMI_RXN2 [22], DMI_RXN1 [22], DMI_RXN0 [22]

DMI_TXP_0..3 — DMI_RXP3, DMI_RXP2, DMI_RXP1, DMI_RXP0 — DMI_RXP3 [22], DMI_RXP2 [22], DMI_RXP1 [22], DMI_RXP0 [22]

0622 for routing requirement

GRAPHICS VID

GFX_VID_0..4 — B33, B32, G33, F33, E33

GFX_VR_EN — C34

ME

CL_CLK, CL_DATA, CL_PWROK, CL_RST#, CL_VREF — CL_CLK0 [22], CL_DATA0 [22], M_PWROK [22,37], CL_RST#0 [22], MCH_CLVREF

+1.05VM

R479 1KR2F-3-GP

R480 511R2F-2-GP

C577 SCD01U10V2KX-4GP

connect to Dock

MISC

DDPC_CTRLCLK, DDPC_CTRLDATA, SDVO_CTRLCLK, SDVO_CTRLDATA, CLKREQ#, ICH_SYNC# — MCH_CLK_REQ#7 [16], MCH_ICH_SYNC# [22]

TSATN# — R189 56R2F-1-GP — VCCP

HDA

HDA_BCLK, HDA_RST#, HDA_SDI, HDA_SDO, HDA_SYNC

NC

NC#BG48, NC#BF48, NC#BD48, NC#BC48, NC#BH47, NC#BG47, NC#BE47, NC#BH46, NC#BF46, NC#BG45, NC#BH44, NC#BH43, NC#BH6, NC#BH5, NC#BG4, NC#BH3, NC#BF3, NC#BH2, NC#BG2, NC#BE2, NC#BG1, NC#BF1, NC#BD1, NC#BC1, NC#F1, NC#A47

CANTIGA-GM-GP-U-NF

CFG

CFG_0..20 — T25, R25, P25, P20, P24, C25, N24, M24, E21, C23, C24, N21, P21, T21, R20, M20, L21, H21, P29, R28, T28

FSB setting

[5,16] MCH_CLKSEL0, [5,16] MCH_CLKSEL1, [5,16] MCH_CLKSEL2

CFG5, CFG6, CFG7, CFG8, CFG9, CFG10, CFG11, CFG12, CFG13, CFG16, CFG18, CFG19, CFG20

R173 80D6R2F-L-GP — M_RCOMPP

R175 80D6R2F-L-GP — M_RCOMPN

PM

PM_SYNC#, PM_DPRSTP#, PM_EXT_TS#_0, PM_EXT_TS#_1, PWROK, RSTIN#, THERMTRIP#, DPRSLPVR

[22] PM_SYNC#, [6,21,47] H_DPRSTP#, [14] PM_EXTTS#0, [14] PM_EXTTS#1, [17,18,22,34,37] PM_PWROK, [17,20,25,31,33,44,45] PLT_RST#

R191 H_DPRSTP# MCH B7; R463 PM_EXTTS#0 N33; R498 PM_EXTTS#1 P32; PWROK_R AT40; RSTIN# AT11; PM_THRMTRIP-ART T20; R32

R191, R463, R498 — Do Not Stuff; 100R2J-2-GP

C631 DY Do Not Stuff

[5,21,43] PM_THRMTRIP-A#, [22,47] PM_DPRSLPVR — R496 Do Not Stuff

Connect to V Core

R167 1KR2F-3-GP +1.8V

R162 3K01R2F-3-GP — C593 SCD01U16V2KX-3GP — C166 SC2D2U6D3V3MX-1-GP — SM_RCOMP_VOH

R159 1KR2F-3-GP — C159 SCD01U16V2KX-3GP — C152 SC2D2U6D3V3MX-1-GP — SM_RCOMP_VOL

+3VS

RN15 SRN10KJ-11-GP-U — PM_EXTTS#1, PM_EXTTS#0

R485 DY Do Not Stuff CFG18
R484 4K02R2F-GP CFG19
R486 DY Do Not Stuff CFG20
R493 DY Do Not Stuff CFG11
R489 DY Do Not Stuff CFG5
R487 DY Do Not Stuff CFG6
R488 DY Do Not Stuff CFG7
R495 DY Do Not Stuff CFG8
R172 2K21R2F-GP CFG9
R492 DY Do Not Stuff CFG12
R491 DY Do Not Stuff CFG13
R494 DY Do Not Stuff CFG16
R168 DY Do Not Stuff CFG10

Strapping

U2C — 3 OF 10

L_BKLT_CTRL, L_BKLT_EN, L_CTRL_CLK, L_CTRL_DATA, L_DDC_CLK, L_DDC_DATA, L_VDD_EN, LVDS_IBG, LVDS_VBG, LVDS_VREFH, LVDS_VREFL, LVDSA_CLK#, LVDSA_CLK, LVDSB_CLK#, LVDSB_CLK, LVDSA_DATA#_0..3, LVDSA_DATA_0..3, LVDSB_DATA#_0..3, LVDSB_DATA_0..3

LVDS

TVA_DAC, TVB_DAC, TVC_DAC, TV_RTN

TV

CRT_BLUE, CRT_GREEN, CRT_RED, CRT_IRTN, CRT_DDC_CLK, CRT_DDC_DATA, CRT_HSYNC, CRT_TVO_IREF, CRT_VSYNC

VGA

PEG_COMPI, PEG_COMPO — PEG_CMP, R476 49D9R2F-GP +1.05VM

PEG_RX#_0..15, PEG_RX_0..15 — PEG_RXN15..0, PEG_RXP15..0

[17] PEG_TXP[15..0], [17] PEG_TXN[15..0], [17] PEG_RXP[15..0], [17] PEG_RXN[15..0]

PEG_TX#_0..15, PEG_TX_0..15 — PEGTXN15..0, PEGTXP15..0

CANTIGA-GM-GP-U-NF

Close to MXM connector

PEGTXN0	C69	SCD1U10V2KX-4GP	PEG_TXN0	PEGTXP0	C66	SCD1U10V2KX-4GP	PEG_TXP0
PEGTXN1	C71	SCD1U10V2KX-4GP	PEG_TXN1	PEGTXP1	C70	SCD1U10V2KX-4GP	PEG_TXP1
PEGTXN2	C75	SCD1U10V2KX-4GP	PEG_TXN2	PEGTXP2	C74	SCD1U10V2KX-4GP	PEG_TXP2
PEGTXN3	C79	SCD1U10V2KX-4GP	PEG_TXN3	PEGTXP3	C76	SCD1U10V2KX-4GP	PEG_TXP3
PEGTXN4	C81	SCD1U10V2KX-4GP	PEG_TXN4	PEGTXP4	C80	SCD1U10V2KX-4GP	PEG_TXP4
PEGTXN5	C83	SCD1U10V2KX-4GP	PEG_TXN5	PEGTXP5	C82	SCD1U10V2KX-4GP	PEG_TXP5
PEGTXN6	C86	SCD1U10V2KX-4GP	PEG_TXN6	PEGTXP6	C84	SCD1U10V2KX-4GP	PEG_TXP6
PEGTXN7	C88	SCD1U10V2KX-4GP	PEG_TXN7	PEGTXP7	C87	SCD1U10V2KX-4GP	PEG_TXP7
PEGTXN8	C90	SCD1U10V2KX-4GP	PEG_TXN8	PEGTXP8	C89	SCD1U10V2KX-4GP	PEG_TXP8
PEGTXN9	C92	SCD1U10V2KX-4GP	PEG_TXN9	PEGTXP9	C91	SCD1U10V2KX-4GP	PEG_TXP9
PEGTXN10	C95	SCD1U10V2KX-4GP	PEG_TXN10	PEGTXP10	C93	SCD1U10V2KX-4GP	PEG_TXP10
PEGTXN11	C96	SCD1U10V2KX-4GP	PEG_TXN11	PEGTXP11	C98	SCD1U10V2KX-4GP	PEG_TXP11
PEGTXN12	C514	SCD1U10V2KX-4GP	PEG_TXN12	PEGTXP12	C508	SCD1U10V2KX-4GP	PEG_TXP12
PEGTXN13	C520	SCD1U10V2KX-4GP	PEG_TXN13	PEGTXP13	C517	SCD1U10V2KX-4GP	PEG_TXP13
PEGTXN14	C518	SCD1U10V2KX-4GP	PEG_TXN14	PEGTXP14	C519	SCD1U10V2KX-4GP	PEG_TXP14
PEGTXN15	C522	SCD1U10V2KX-4GP	PEG_TXN15	PEGTXP15	C521	SCD1U10V2KX-4GP	PEG_TXP15

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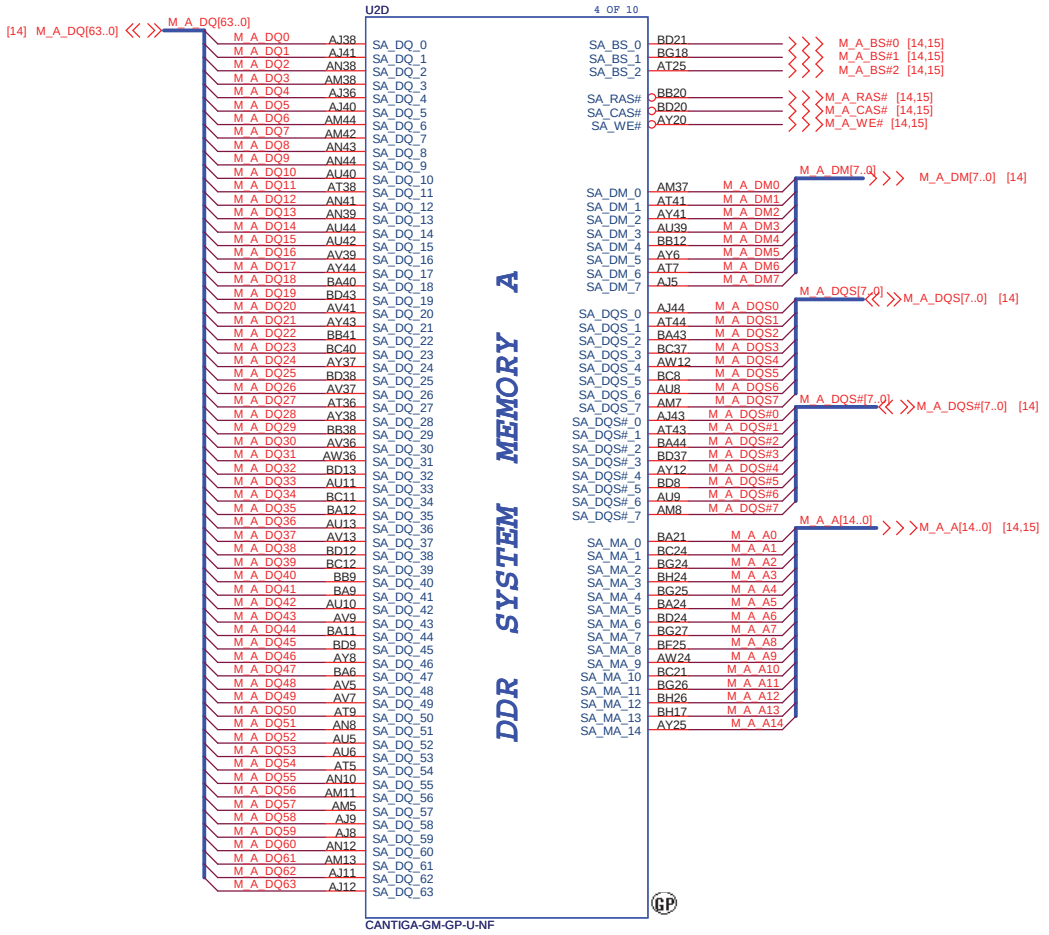
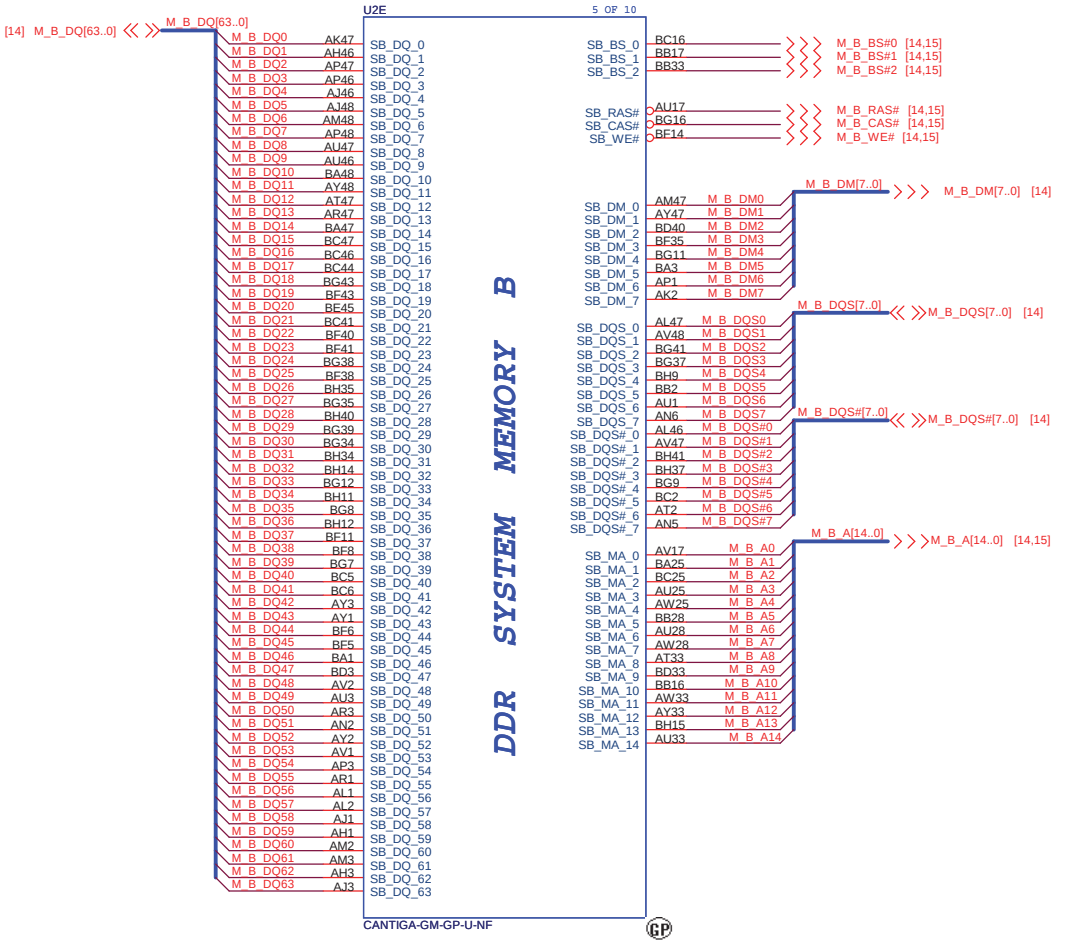
NB (3 of 6) DDRIII





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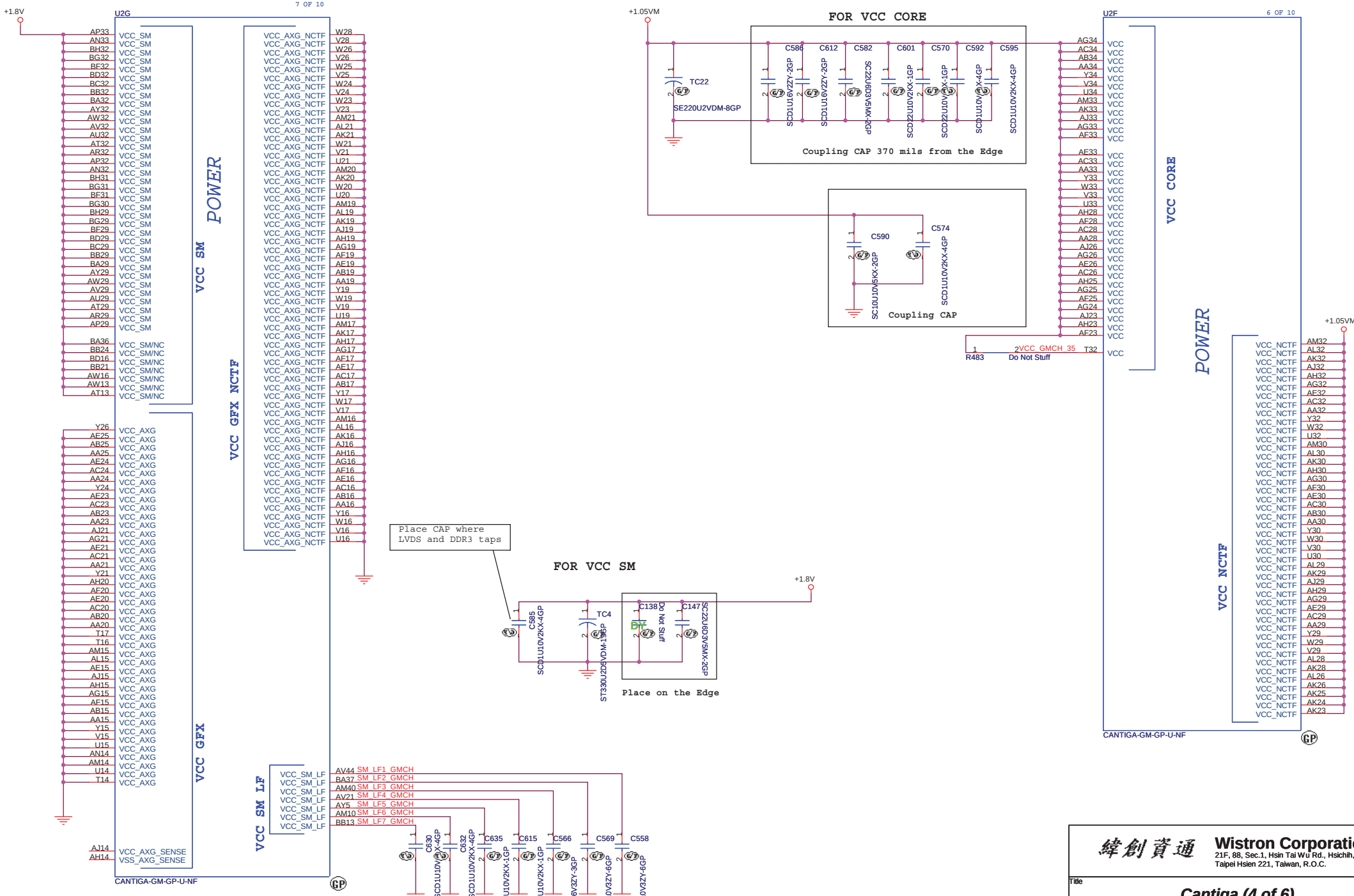
NB (4 of 6) PWR



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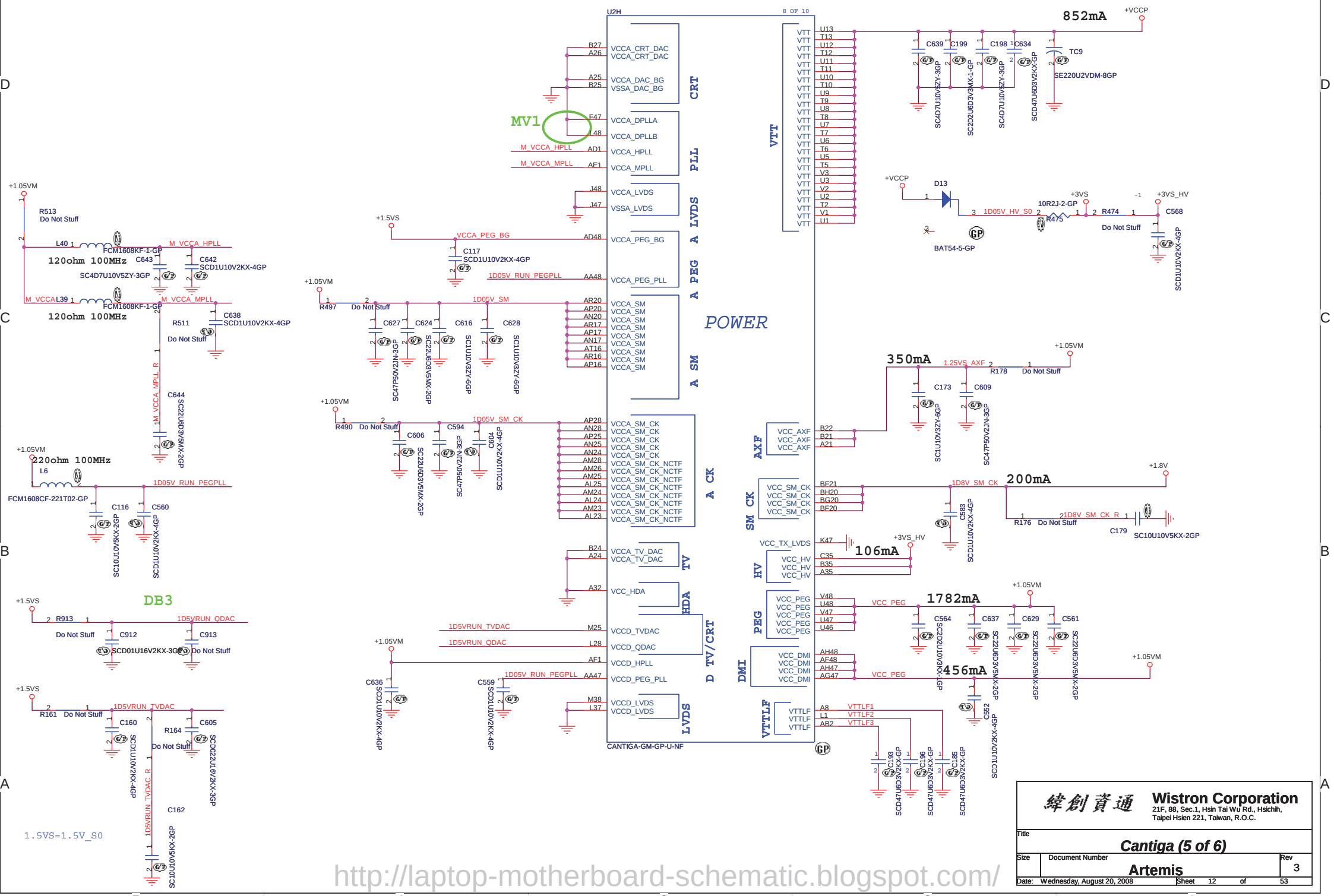
NB (5 of 6) PWR



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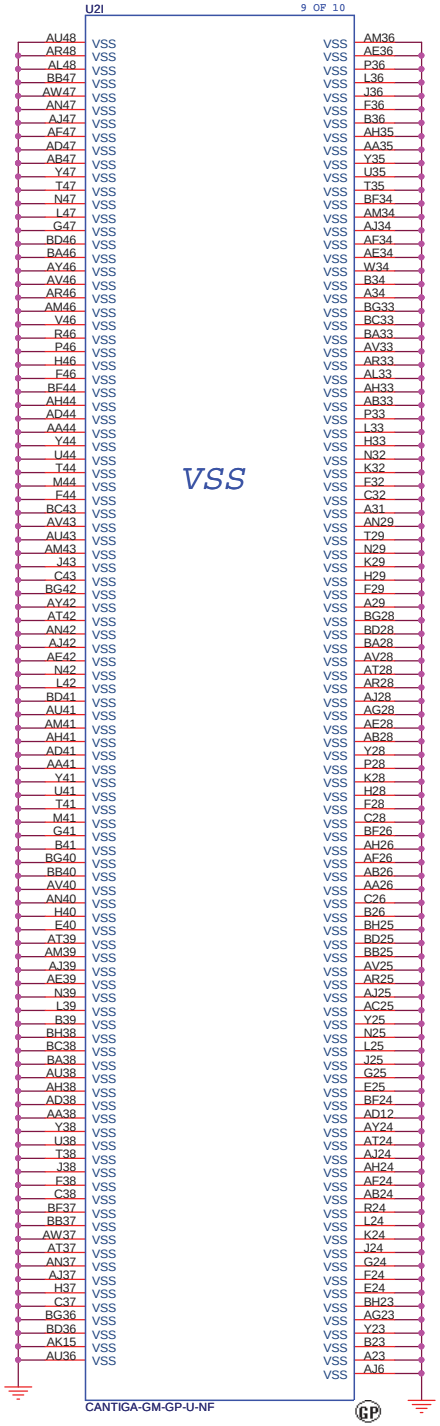
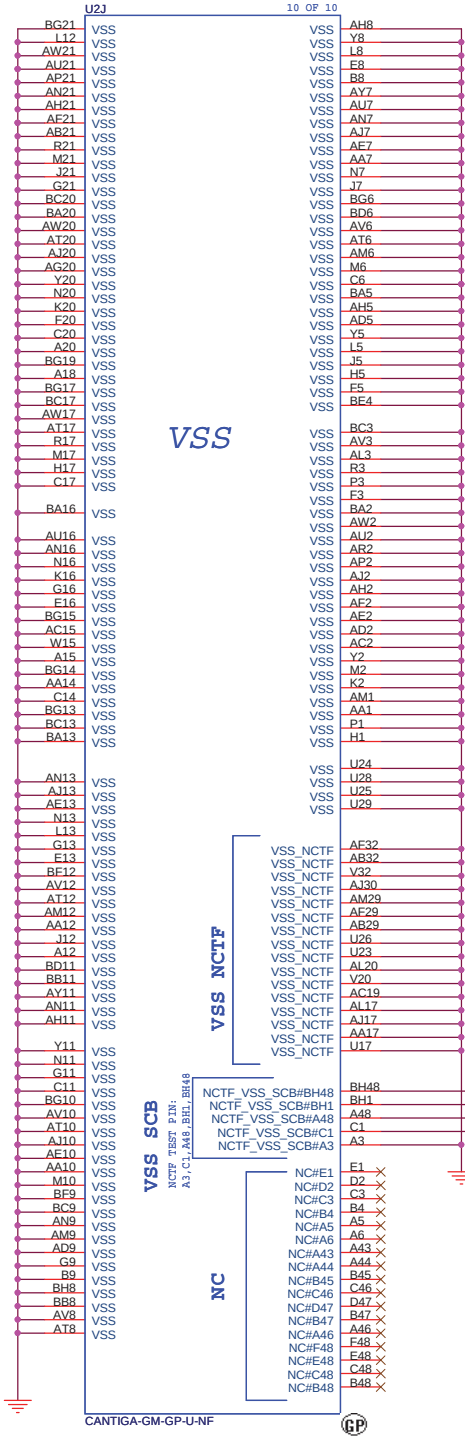
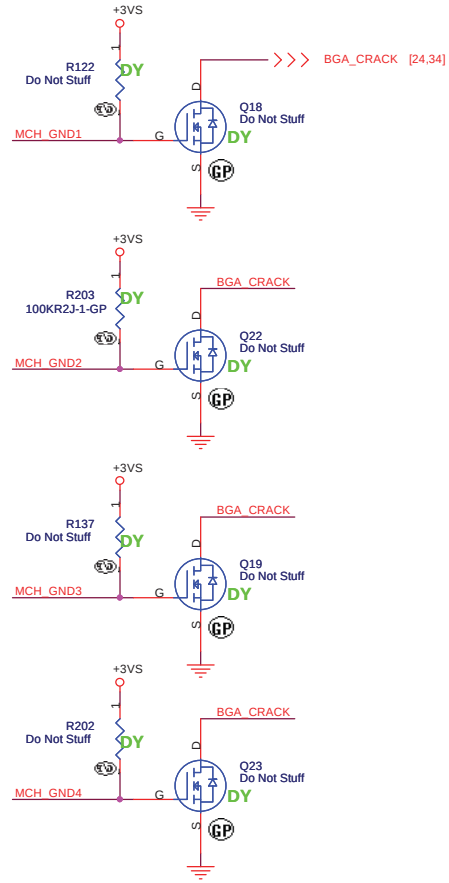
NB (6 of 6) GND

07/20 BGA CRACK CIRCUIT



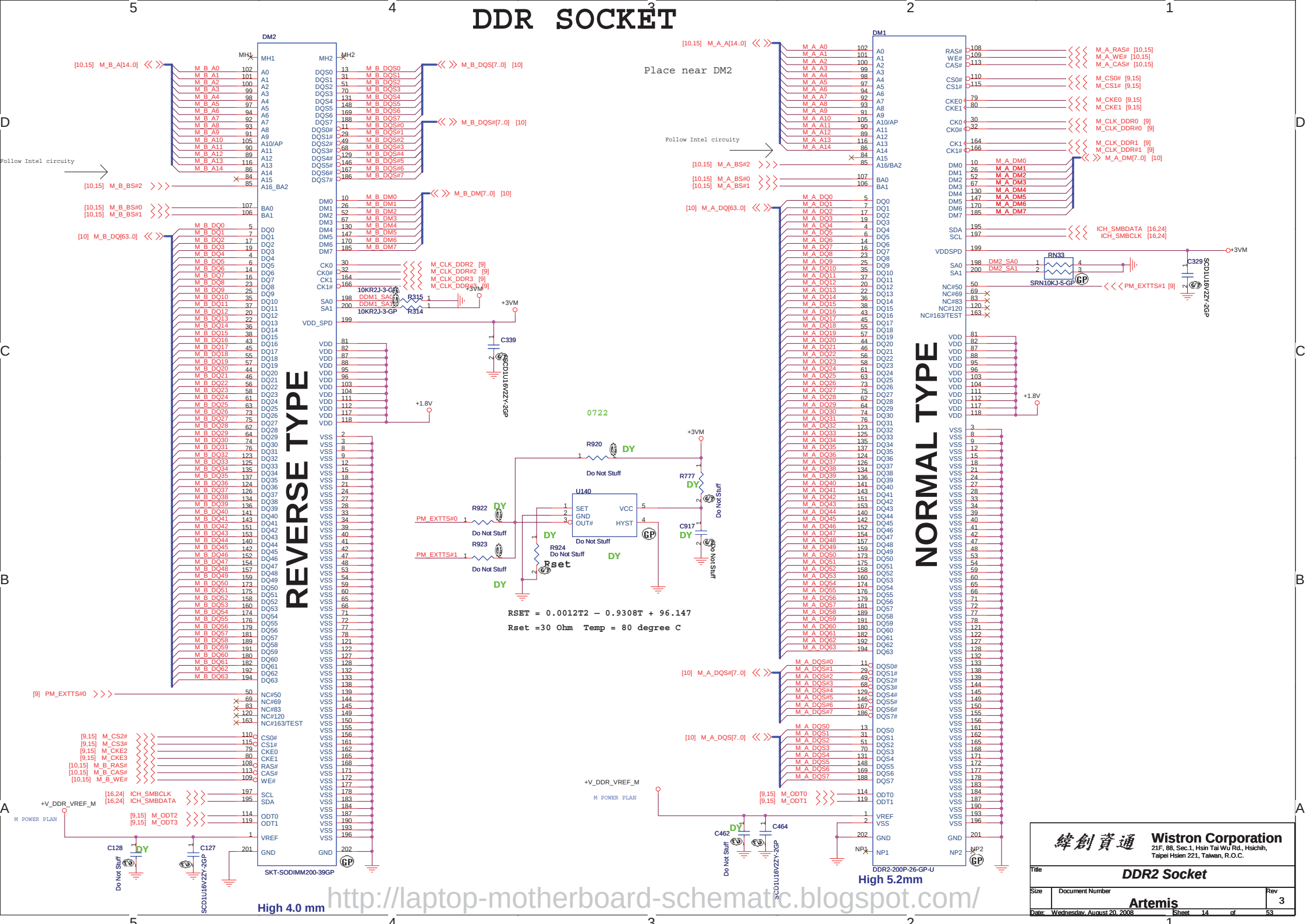




MCH_GND1 — TP8 Do Not Stuff
MCH_GND2 — TP13 Do Not Stuff
MCH_GND3 — TP9 Do Not Stuff
MCH_GND4 — TP12 Do Not Stuff
NCTF PIN

緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	*Cantiga (6 of 6)*	
Size	Document Number: **Artemis**	Rev: 3
Date: Wednesday, August 20, 2008	Sheet 13 of 53	

DDR SOCKET



緯創資通	Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title	DDR2 Socket
Size	Document Number: Artemis — Rev: 3
Date: Wednesday, August 20, 2008	Sheet 14 of 53

PARALLEL TERMINATION

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

+0.9V

RN60 SRN56J-5-GP: M_A_A7, M_A_A11, M_A_A14 → M_CKE1 [9,14]
RN61 SRN56J-5-GP: M_B_A0 → M_CS2# [9,14], M_B_RAS# [10,14], M_B_BS#1 [10,14]
RN62 SRN56J-5-GP: M_B_A8, M_B_A9, M_B_A5, M_B_A3
RN63 SRN56J-5-GP: M_B_A2, M_B_A4, M_B_A6, M_B_A7
RN64 SRN56J-5-GP: M_A_A8, M_A_A3, M_A_A5, M_A_A1
RN65 SRN56J-5-GP: M_A_A10 → M_A_BS#0 [10,14], M_A_CAS# [10,14], M_A_WE# [10,14]
RN66 SRN56J-5-GP: M_A_A13 → M_ODT0 [9,14], M_A_RAS# [10,14], M_CS0# [9,14]
RN67 SRN56J-5-GP: M_B_A11, M_B_A14 → M_CKE3 [9,14]
RN68 SRN56J-5-GP: M_B_A13 → M_ODT2 [9,14]
RN69 SRN56J-5-GP: M_A_A12, M_A_A9 → M_CKE0 [9,14], M_A_BS#2 [10,14]
RN70 SRN56J-5-GP: M_CS3# [9,14], M_B_CAS# [10,14], M_ODT3 [9,14]
RN71 SRN56J-5-GP: M_B_A1, M_B_A10 → M_B_BS#0 [10,14], M_B_WE# [10,14]
RN72 SRN56J-5-GP: M_B_A12 → M_CKE2 [9,14], M_B_BS#2 [10,14]
RN73 SRN56J-5-GP: M_A_A4, M_A_A2, M_A_A0 → M_A_BS#1 [10,14]
RN74 SRN56J-5-GP: M_CS1# [9,14], M_ODT1 [9,14]

R927 56R2J-4-GP: M_A_A6

Decoupling Capacitor

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

+0.9V

M_A_A[14..0] → M_A_A[14..0] [10,14]
M_B_A[14..0] → M_B_A[14..0] [10,14]

C922 Do Not Stuff, C923 Do Not Stuff, C924 SCD1U16V2ZY-2GP, C925 SCD1U16V2ZY-2GP, C926 SCD1U16V2ZY-2GP, C927 SCD1U16V2ZY-2GP, C928 SCD1U16V2ZY-2GP, C929 SCD1U16V2ZY-2GP, C930 Do Not Stuff, C931 SCD1U16V2ZY-2GP, C932 SCD1U16V2ZY-2GP, C933 SCD1U16V2ZY-2GP, C934 SCD1U16V2ZY-2GP, C935 SCD1U16V2ZY-2GP
C936 SCD1U16V2ZY-2GP, C937 SCD1U16V2ZY-2GP, C938 Do Not Stuff, C939 SCD1U16V2ZY-2GP, C940 SCD1U16V2ZY-2GP, C941 SCD1U16V2ZY-2GP, C942 SCD1U16V2ZY-2GP, C943 Do Not Stuff, C944 Do Not Stuff, C945 SCD1U16V2ZY-2GP, C946 SCD1U16V2ZY-2GP, C947 SCD1U16V2ZY-2GP, C948 SCD1U16V2ZY-2GP

Place these Caps near DM1

+1.8V

C949 SC2D2U6D3V3MX-1-GP, C950 SC2D2U6D3V3MX-1-GP, C951 SC2D2U6D3V3MX-1-GP, C952 SC2D2U6D3V3MX-1-GP, C953 SC2D2U6D3V3MX-1-GP, TC19 ST330U2D5VDM-13GP
C954 Do Not Stuff, C955 Do Not Stuff, C956 Do Not Stuff, C957 SCD1U16V2ZY-2GP

Place these Caps near DM2

+1.8V

C958 SC2D2U6D3V3MX-1-GP, C959 SC2D2U6D3V3MX-1-GP, C960 SC2D2U6D3V3MX-1-GP, C961 SC2D2U6D3V3MX-1-GP, C962 SC2D2U6D3V3MX-1-GP, TC24 ST330U2D5VDM-13GP
C963 Do Not Stuff, C964 Do Not Stuff, C965 Do Not Stuff, C966 Do Not Stuff

緯創資通 **Wistron Corporation**
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Title: ***DDR2 Termination Resistor***
Size | Document Number: **ARTEMIS** | Rev: 3
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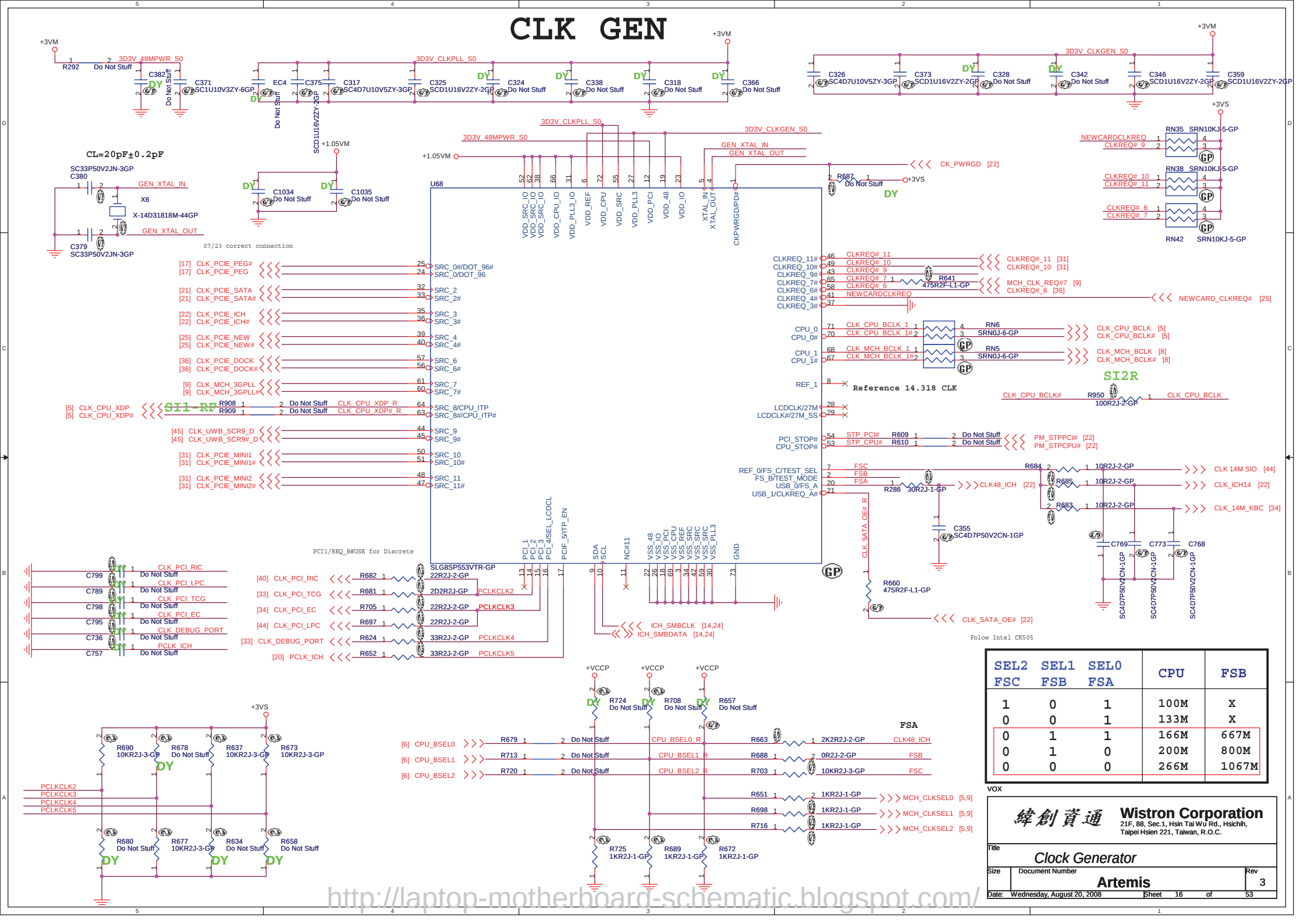
CLK GEN



SEL2 FSC	SEL1 FSB	SEL0 FSA	CPU	FSB
1	0	1	100M	X
0	0	1	133M	X
0	1	1	166M	667M
0	1	0	200M	800M
0	0	0	266M	1067M

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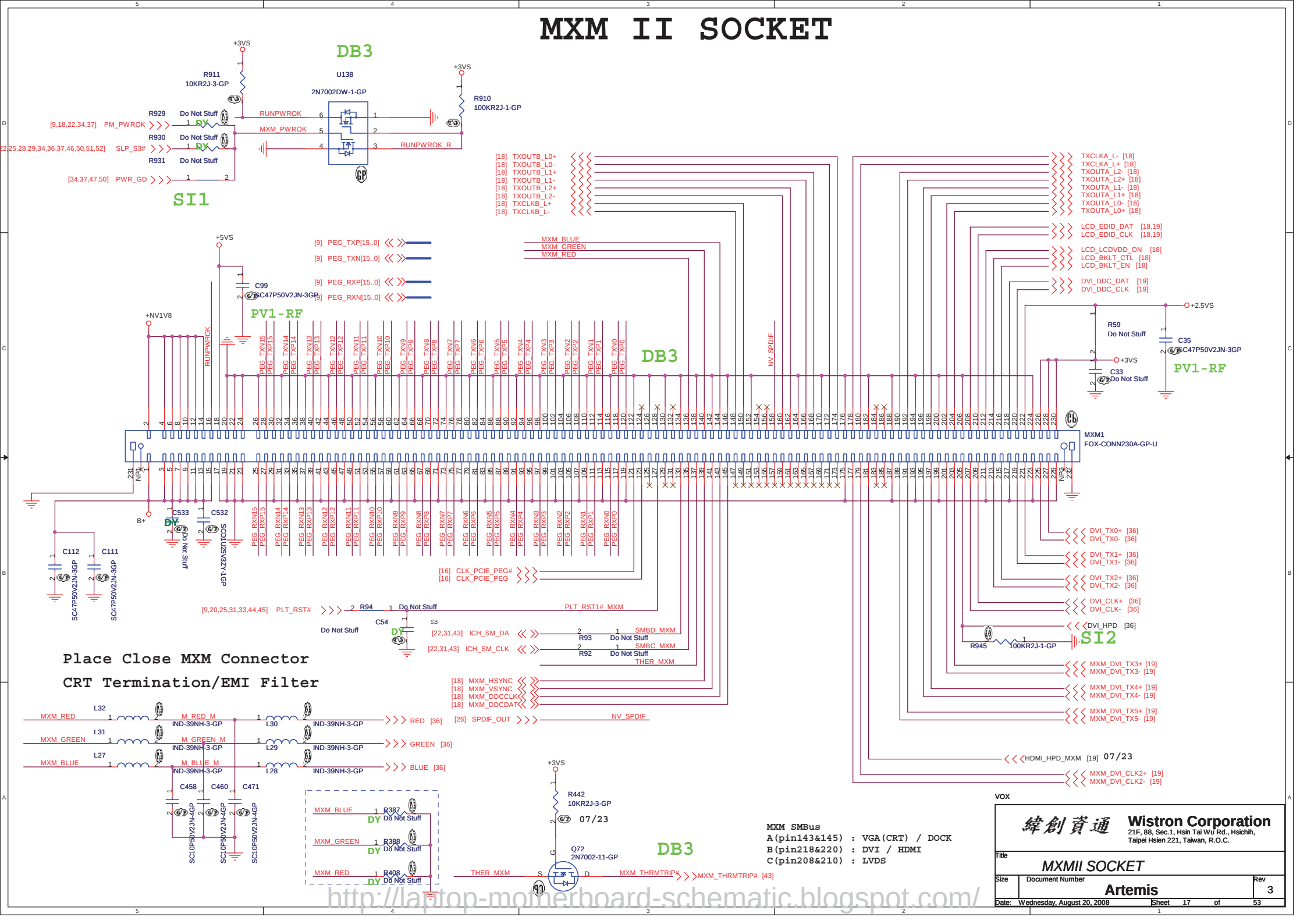
Title: Clock Generator

Size: | Document Number: Artemis | Rev: 3

Date: Wednesday, August 20, 2008 | Sheet 16 of 53

MXM II SOCKET



CRT & LCD

07/03 NV suggest

Layout Note : HSYNC & VSYNC SHOULD BE ROUTED TO DOCK CRT CONN. ,THEN TO SYSTEM CRT CONN.

07/28

07/03 NV suggest

PLACE CLOSE TO DOCKING CONN

07/03

PV1

LCD POWER CIRCUIT

Layout 40 mil

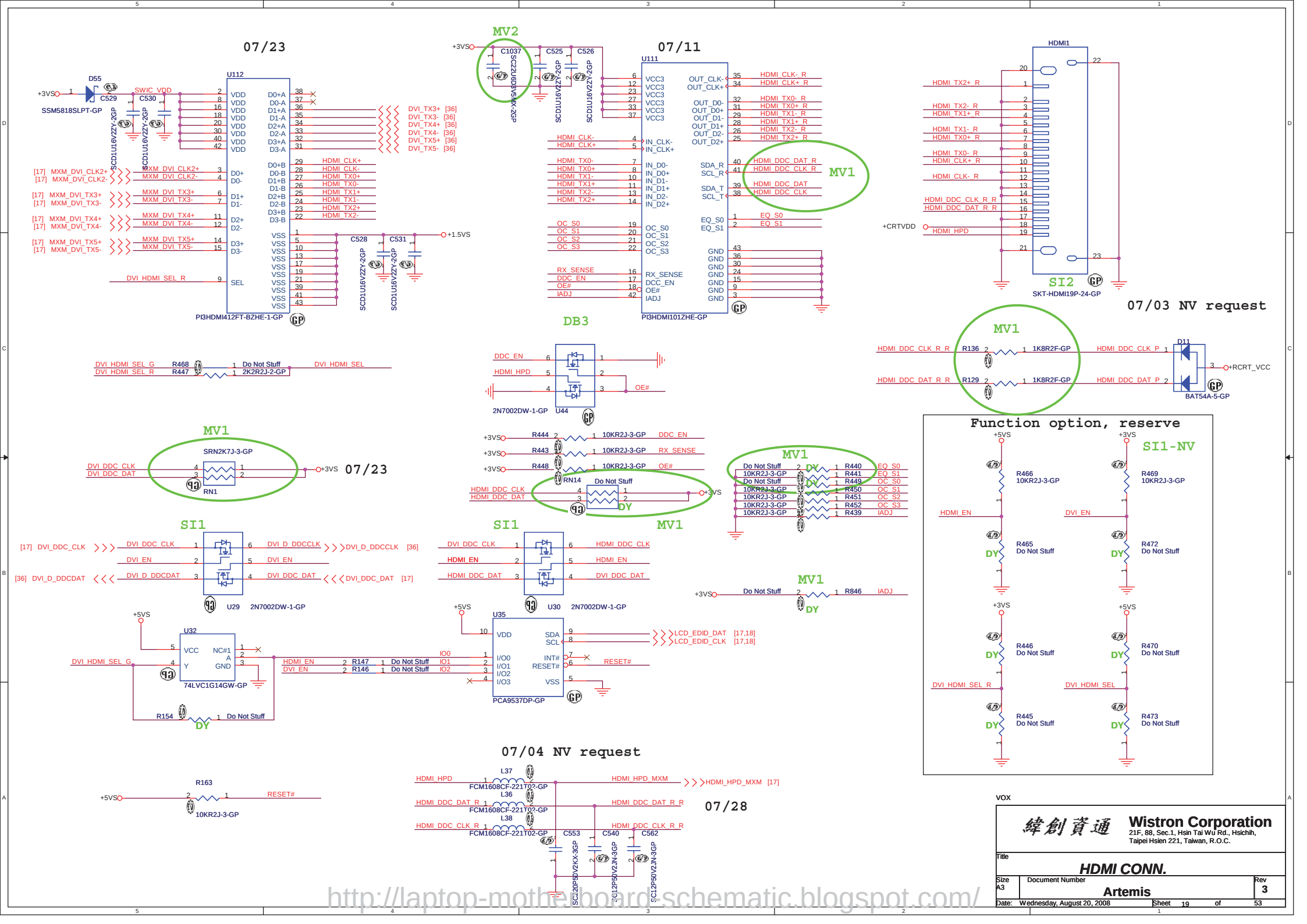
VOX

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

Title: CRT/LCD CONNECTOR

Size: A3 | Document Number: Artemis | Rev: 3

Date: Wednesday, August 20, 2008 | Sheet 18 of 53


07/23
MV2
07/11
HDMI1
07/03 NV request
MV1
DB3
Function option, reserve
SI1-NV
07/23
SI1
MV1
07/04 NV request
07/28
D55
SSM5818SLPT-GP
U112
PI3HDMI412FT-BZHE-1-GP
U111
PI3HDMI101ZHE-GP
SI2
SKT-HDMI19P-24-GP
2N7002DW-1-GP
U44
SRN2K7J-3-GP
RN1
RN14
U29
U30
U32
74LVC1G14GW-GP
U35
PCA9537DP-GP
BAT54A-5-GP
VOX
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HDMI CONN.
Artemis
Wednesday, August 20, 2008
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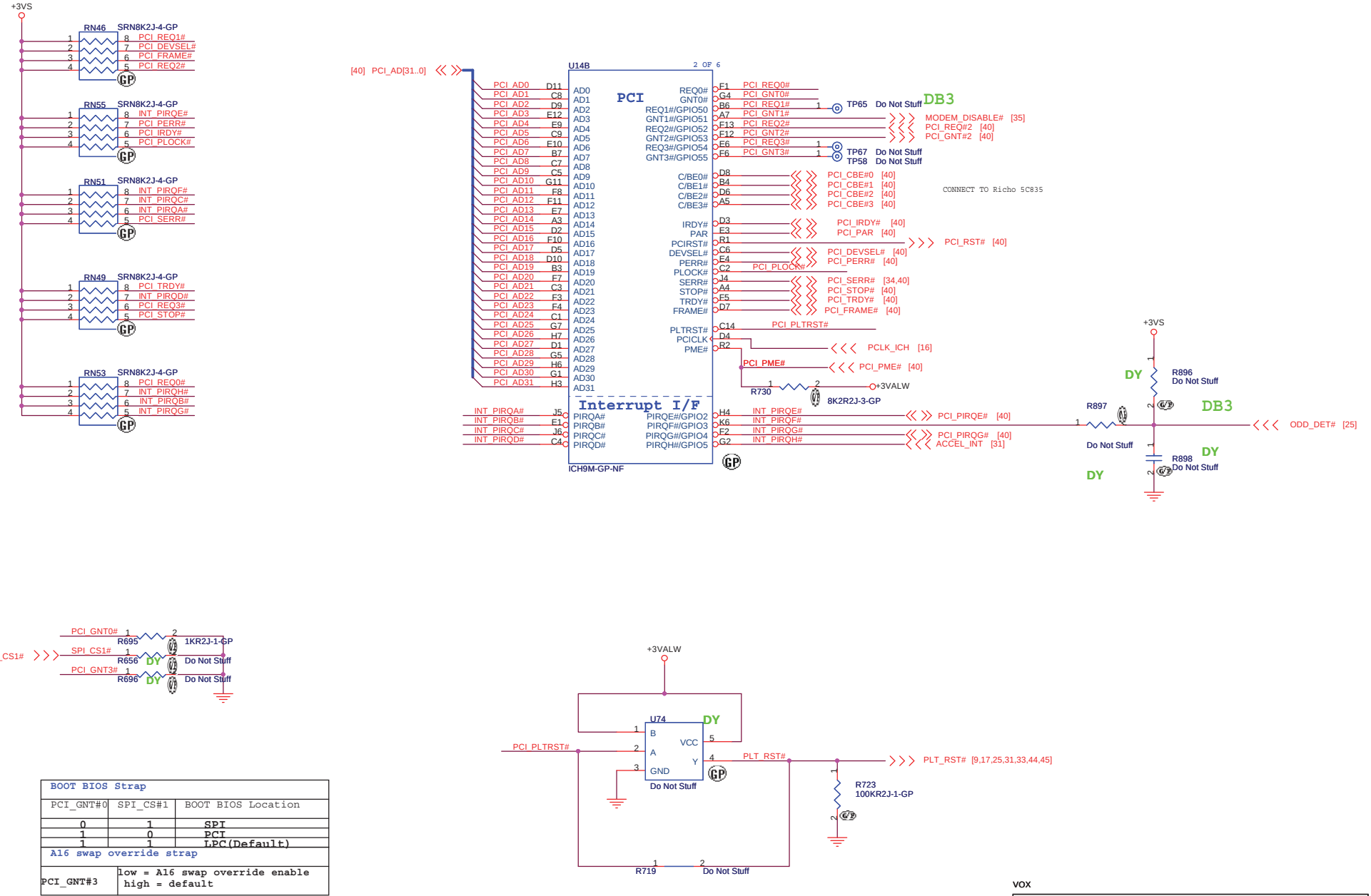
ICH9-M (1 of 5) PCI



BOOT BIOS Strap		
PCI_GNT#0	SPI_CS#1	BOOT BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC(Default)
A16 swap override strap		
PCI_GNT#3	low = A16 swap override enable high = default	

VOX

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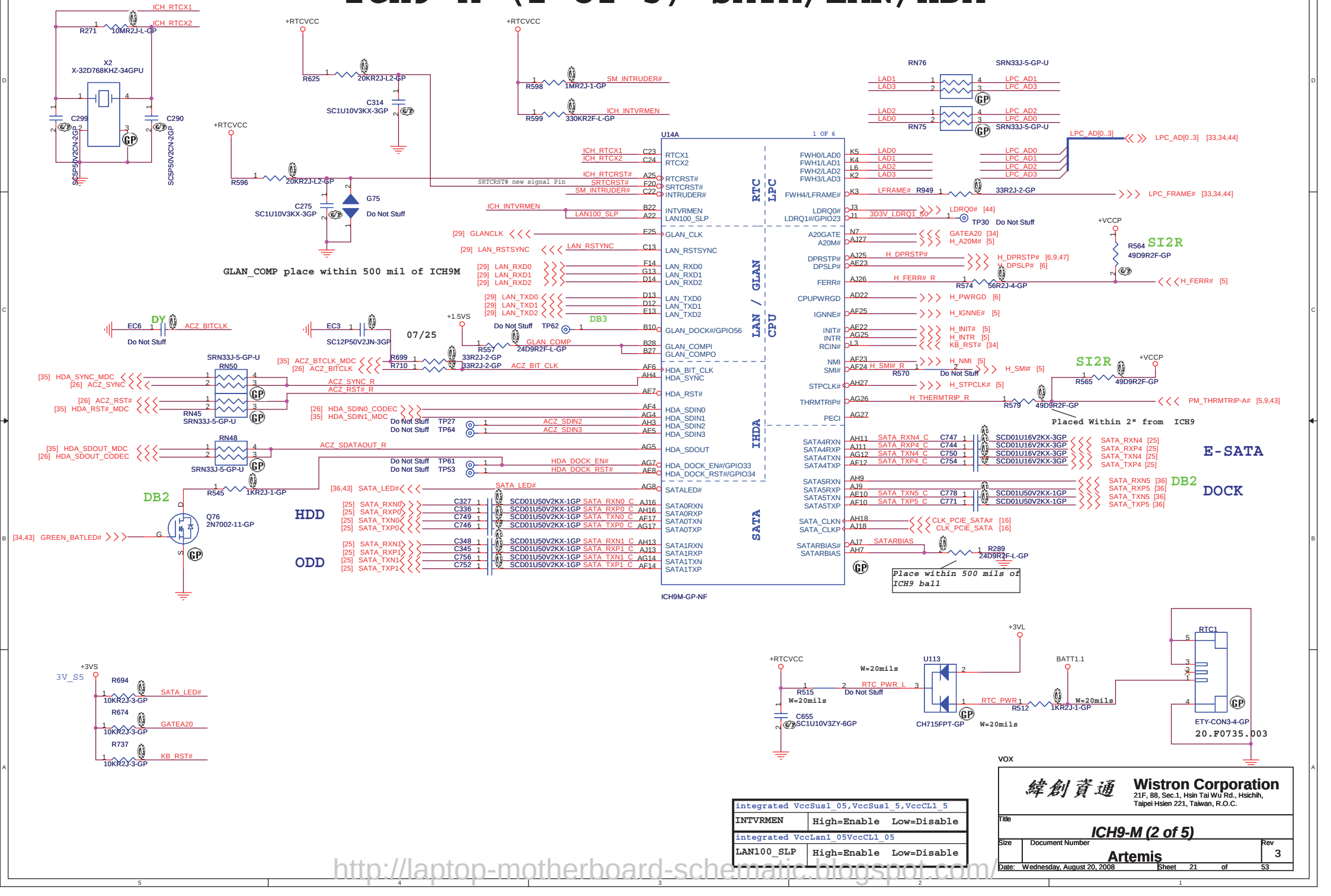
Title: ICH9-M (1 of 5)

Size | Document Number: Artemis | Rev: 3

Date: Wednesday, August 20, 2008 | Sheet 20 of 53

ICH9-M (2 of 5) SATA/LAN/HDA



integrated VccSus1_05,VccSus1_5,VccCL1_5		
INTVRMEN	High=Enable	Low=Disable
integrated VccLan1_05VccCL1_05		
LAN100_SLP	High=Enable	Low=Disable

VOX

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Title		
ICH9-M (2 of 5)		
Size	Document Number	Rev
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Date: Wednesday, August 20, 2008	Sheet 21 of 53	

ICH9-M (3 of 5) USB/PCIE/DMI

Pair	Device
0	USB1
1	USB4
2	EX-P
3	USB5/WLAN
4	USB2
5	USB3
6	BLUETOOTH
7	WWAN
8	FignerPrint
9	Dock1
10	WEBCAM
11	DOCK2

USB

Layout Note:
PCIE AC coupling caps
need to be within 250 mils of the driver.

Norn connect to charger

For iTPM option

ICH9M-GP-NF

MV1

VOX

Title	ICH9-M (3 of 5)
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Rev	3
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Sheet	22 of 53

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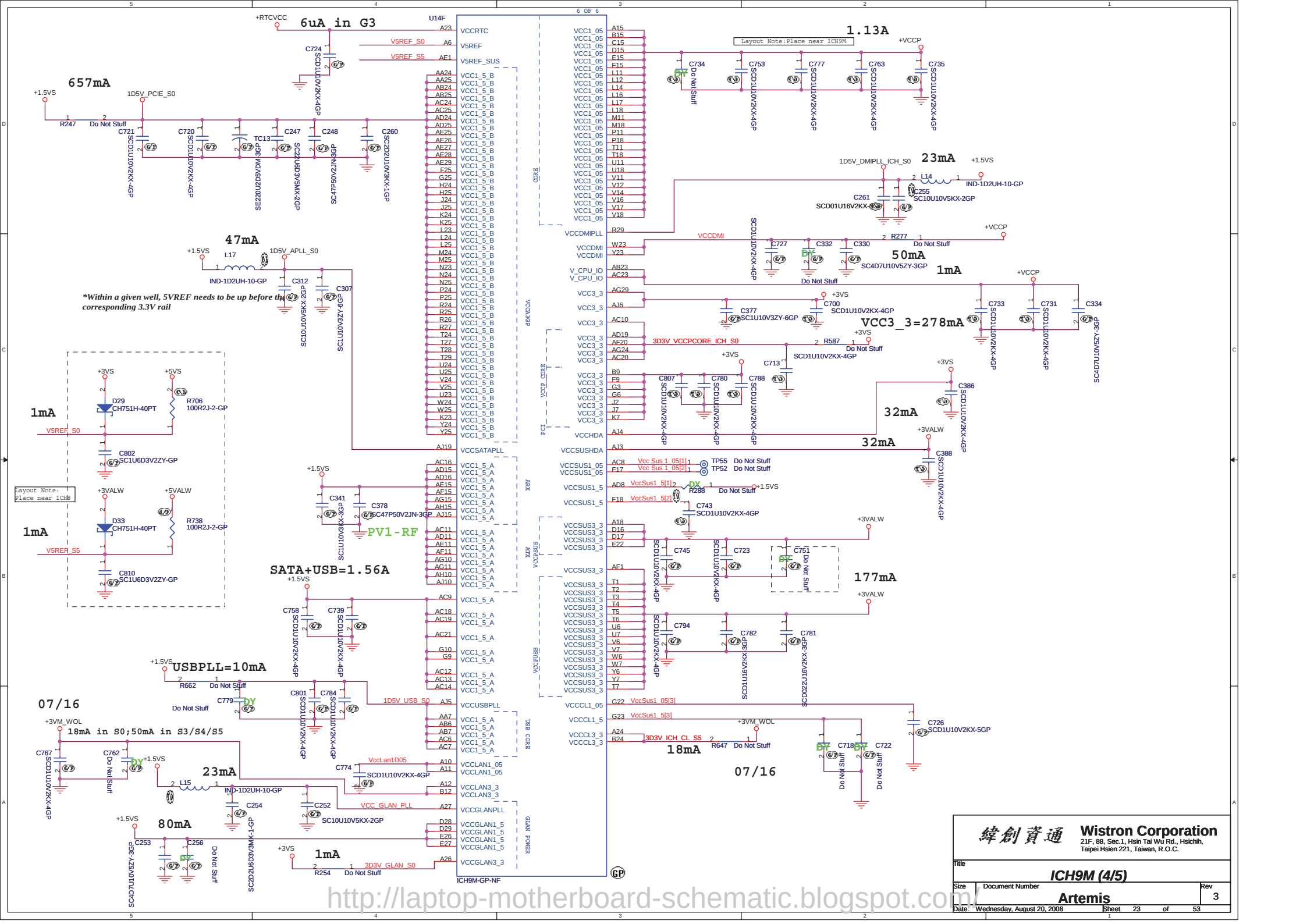
6uA in G3
657mA
47mA
1.13A
23mA
50mA
1mA
VCC3_3=278mA
32mA
32mA
177mA
18mA
07/16
1mA
1mA
SATA+USB=1.56A
USBPLL=10mA
07/16
23mA
80mA
1mA
PV1-RF
*Within a given well, 5VREF needs to be up before the corresponding 3.3V rail
Layout Note:Place near ICH9M
Layout Note: Place near ICH9
18mA in S0;50mA in S3/S4/S5
ICH9M-GP-NF
Wistron Corporation
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ICH9M (4/5)
Artemis
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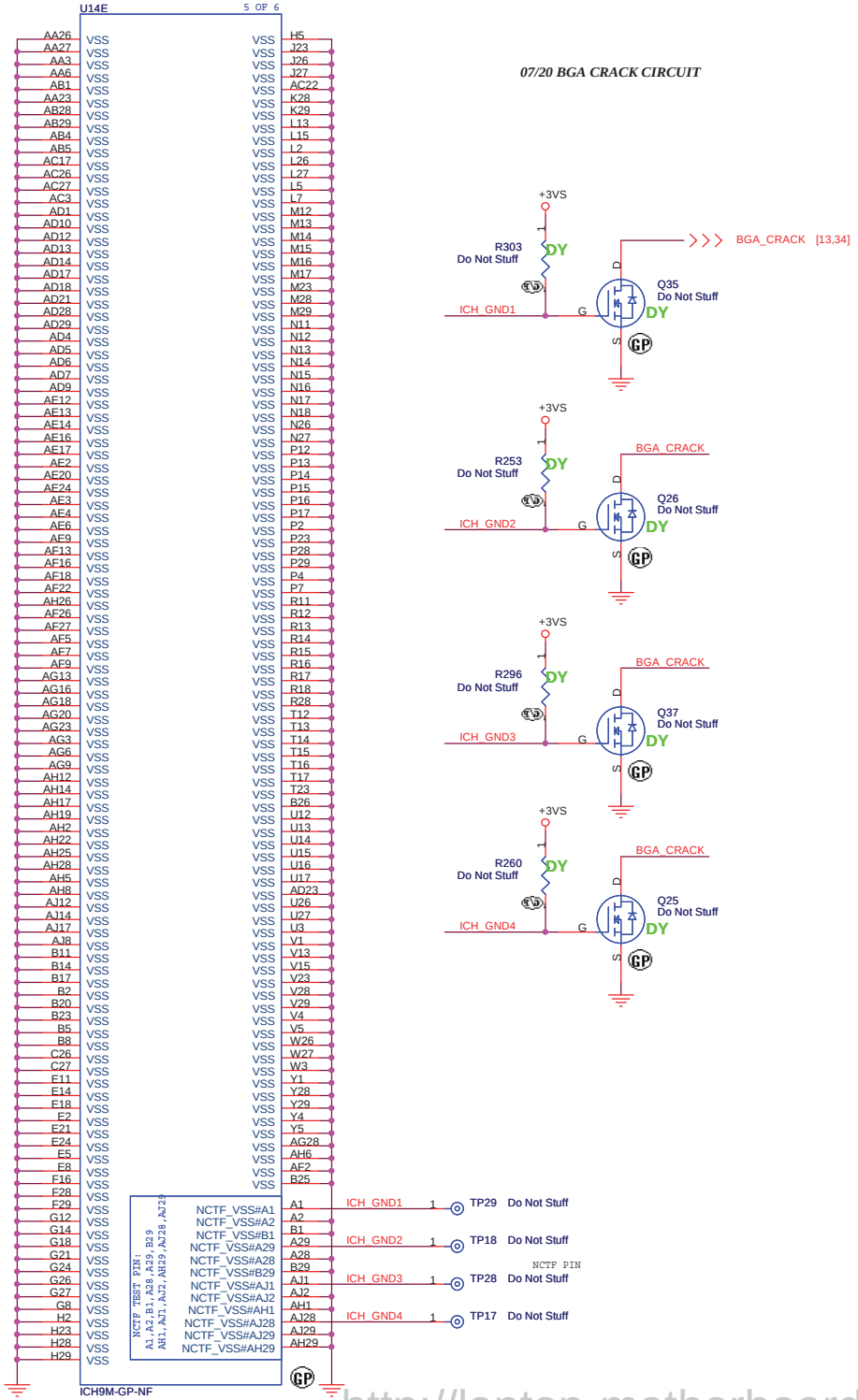
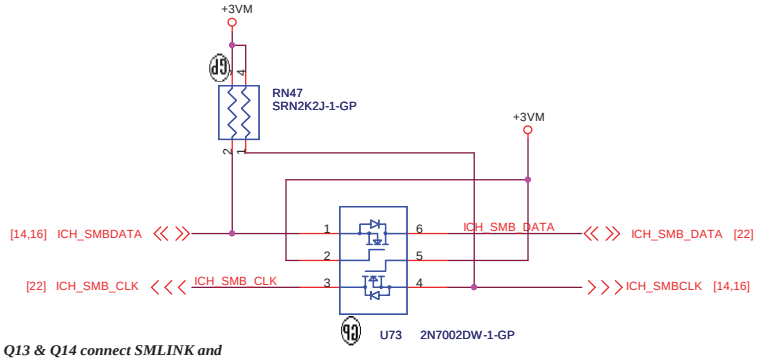


07/20 BGA CRACK CIRCUIT



Q13 & Q14 connect SMLINK and SMBUS in S) for SMBus 2.0 compliance

SMBUS

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Title	ICH9-M (5 of 5)		
Size	Document Number Artemis		Rev 3
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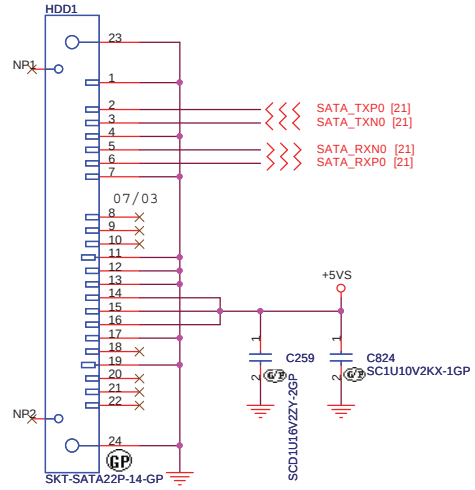
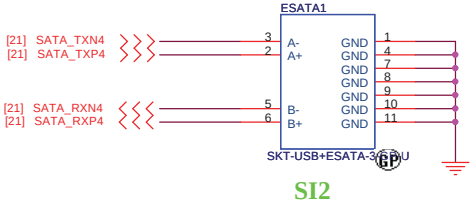
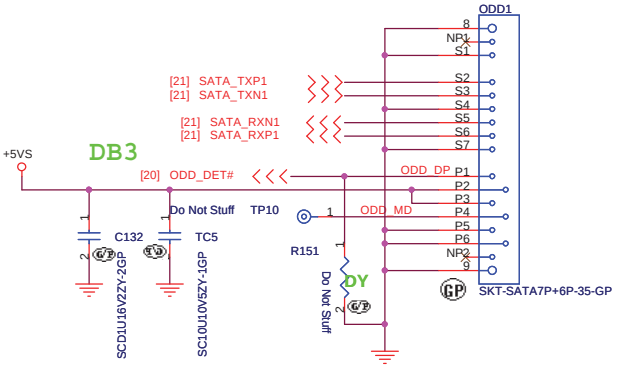
SATA HDD Connector



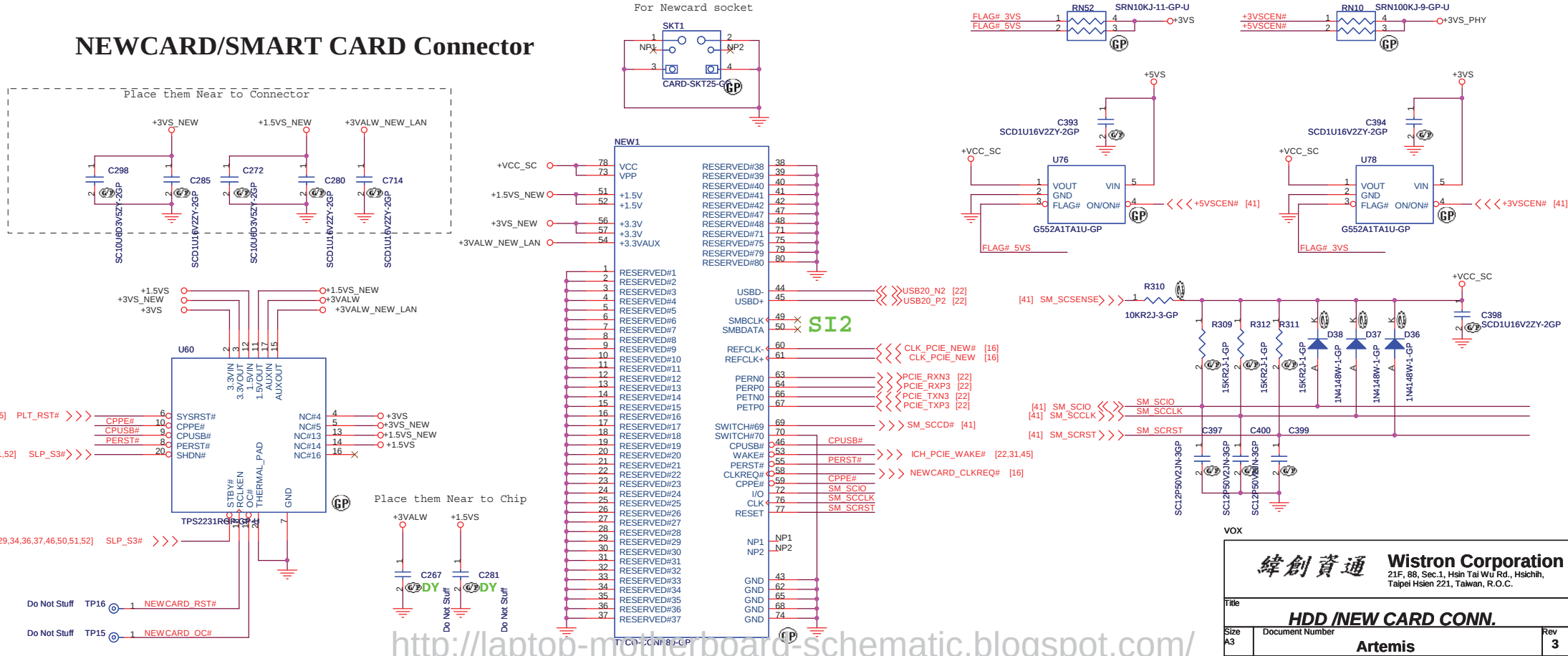
ESATA Connector



ODD Connector



NEWCARD/SMART CARD Connector



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

Title: **HDD /NEW CARD CONN.**

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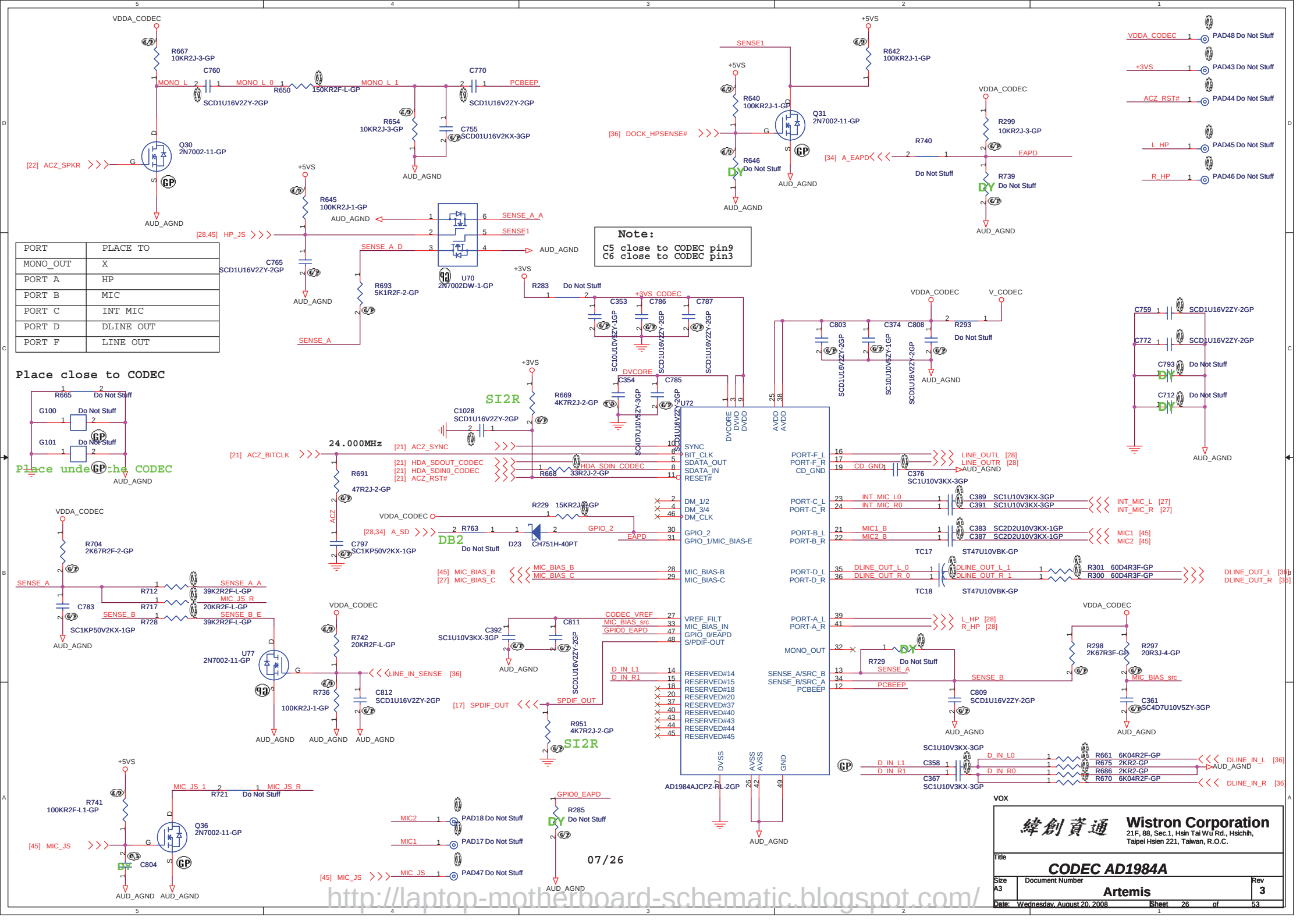
PORT	PLACE TO
PORT A	HP
PORT B	MIC
PORT C	INT MIC
PORT D	DLINE OUT
PORT F	LINE OUT
Note:
C5 close to CODEC pin9
C6 close to CODEC pin3
Place close to CODEC
Place under the CODEC
24.000MHz
SI2R
SI2R
DB2
AD1984AJCPZ-RL-2GP
Wistron Corporation
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Taipei Hsien 221, Taiwan, R.O.C.
CODEC AD1984A
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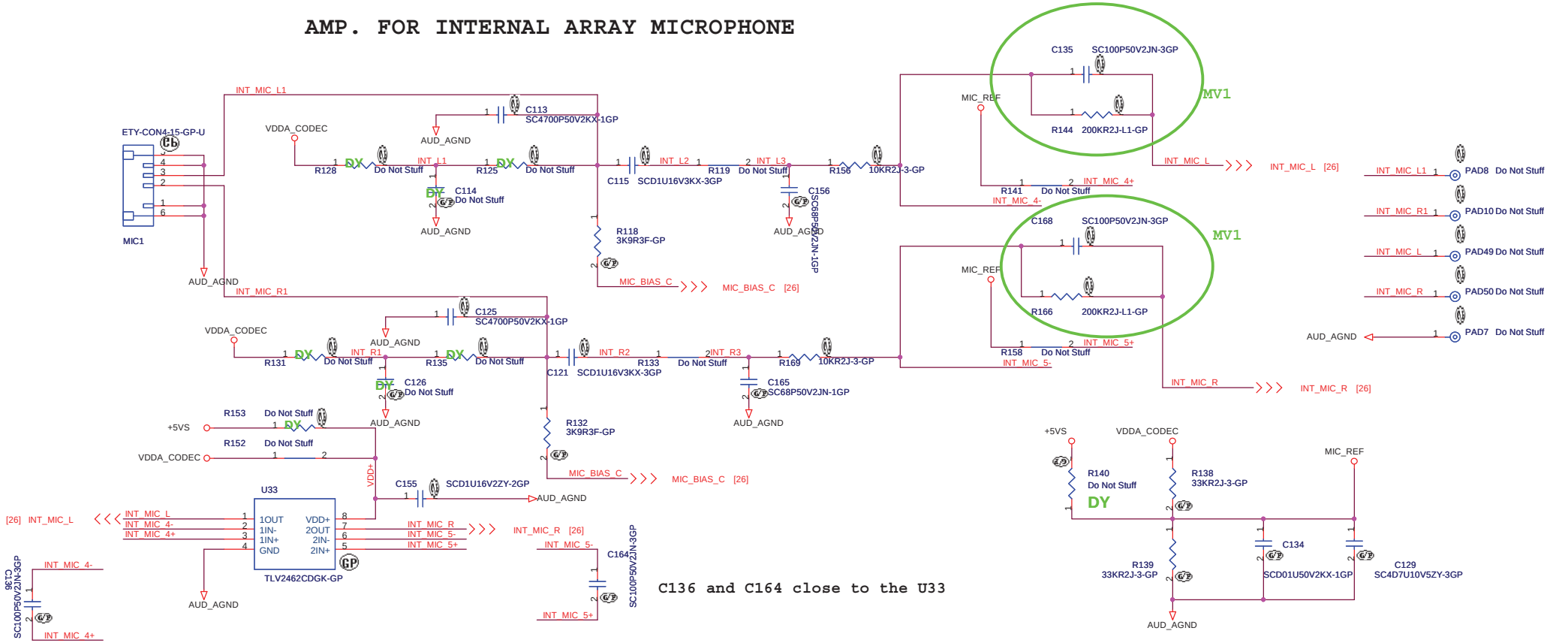
AMP. FOR INTERNAL ARRAY MICROPHONE



C136 and C164 close to the U33

VOX

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Title	***INT MIC***
Size A3	Document Number **Artemis** Rev **3**
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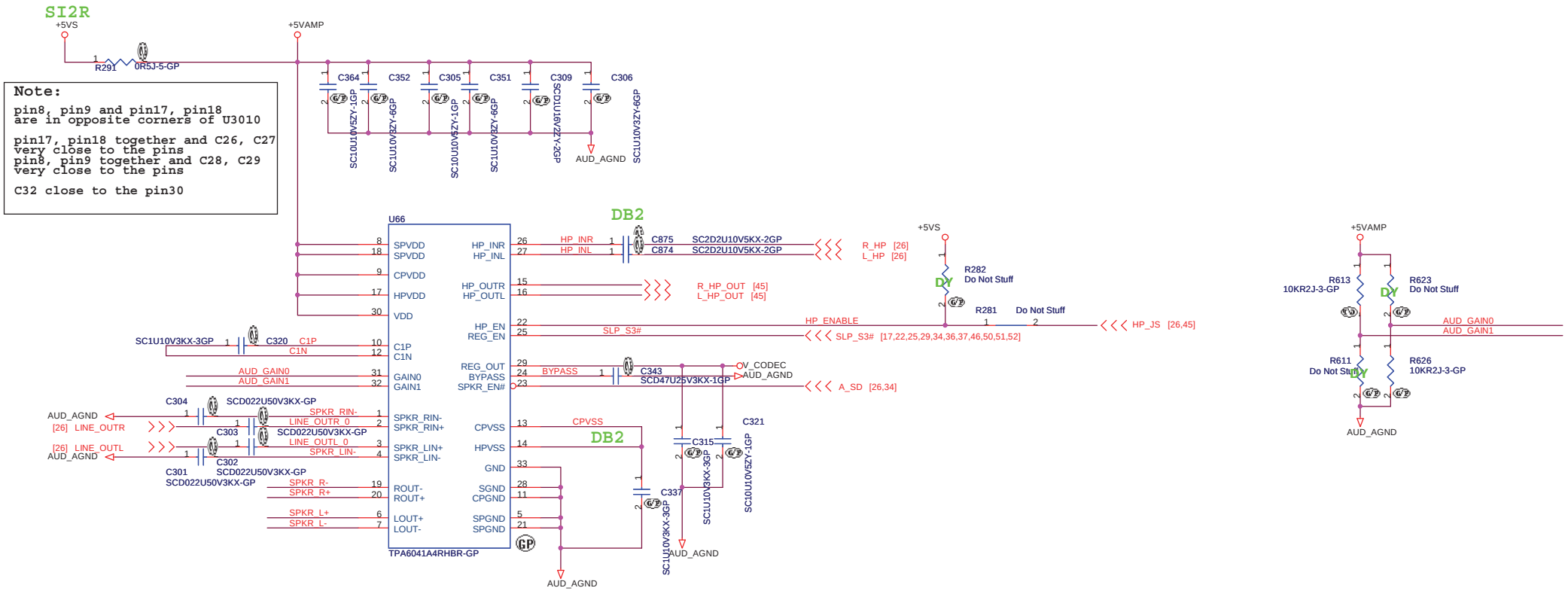
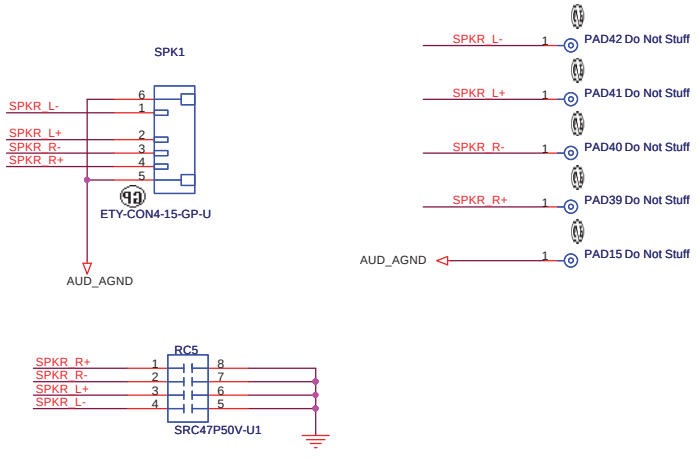


Speaker CONN.



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Title	***AMP & SPEAKER***	
Size A3	Document Number **Artemis**	Rev 3
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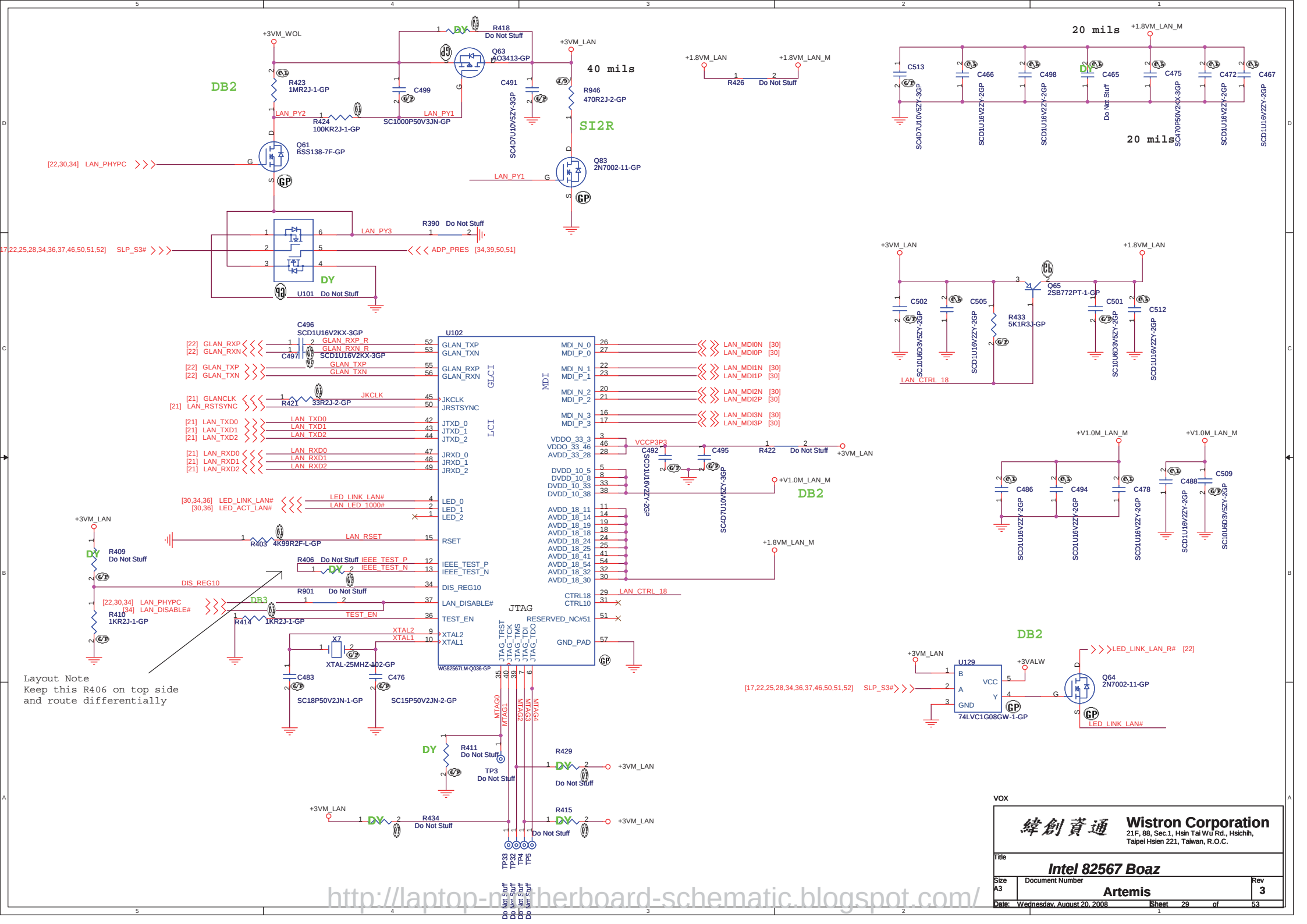

VOX

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

Title: ***Intel 82567 Boaz***

Size	Document Number	Rev
A3	**Artemis**	3

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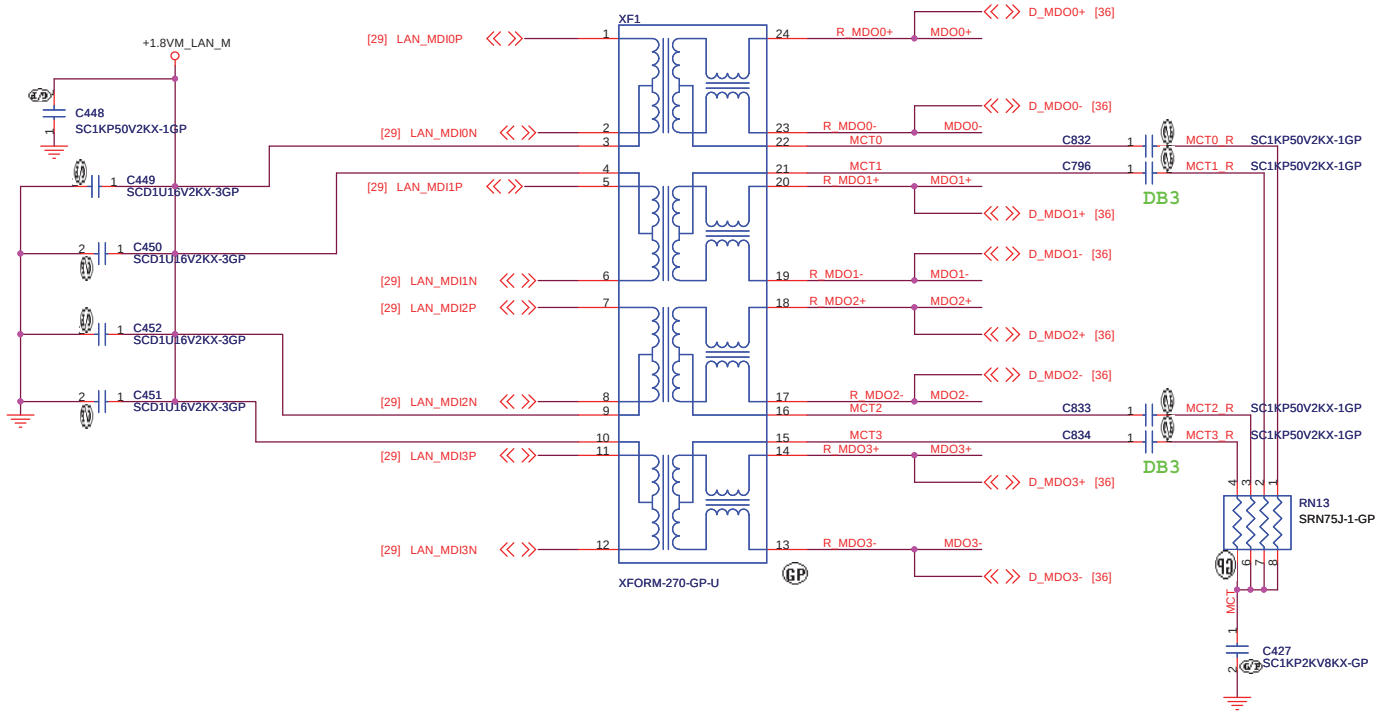
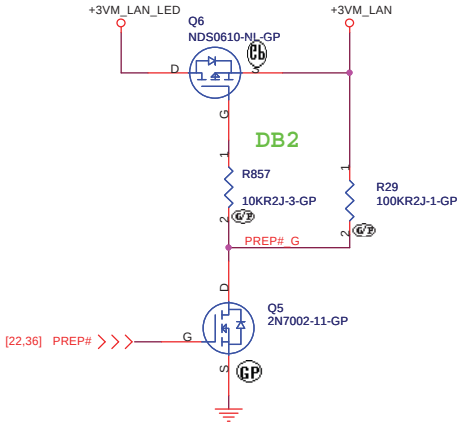
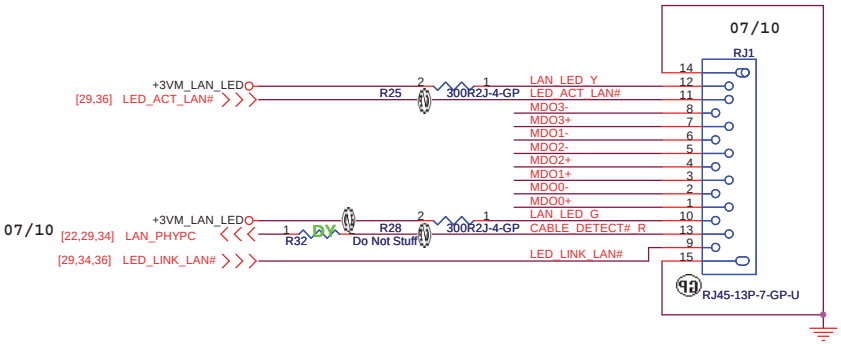
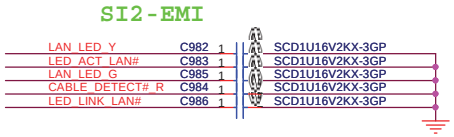
Note : MDO[3..0]+- signals should route to RJ45 first then to DOCK CONN .



LAN ENERGY DET







VOX

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

Title: ***Magnetic & RJ45***

Size	Document Number	Rev
A3	Artemis	3

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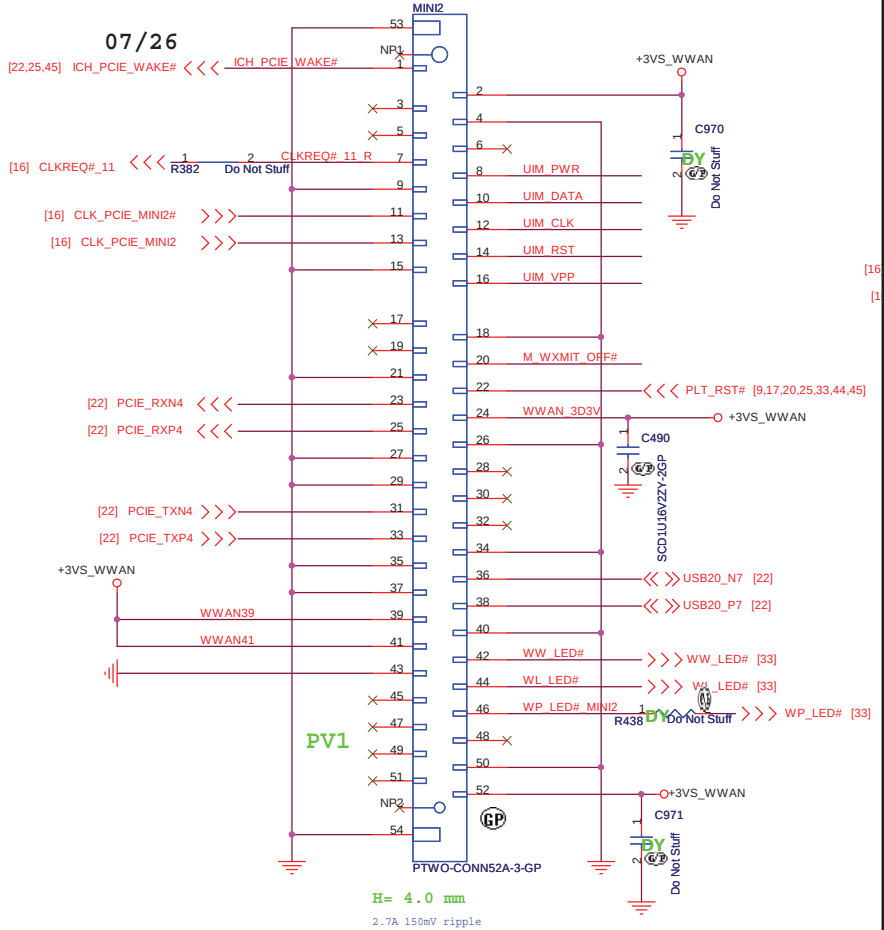
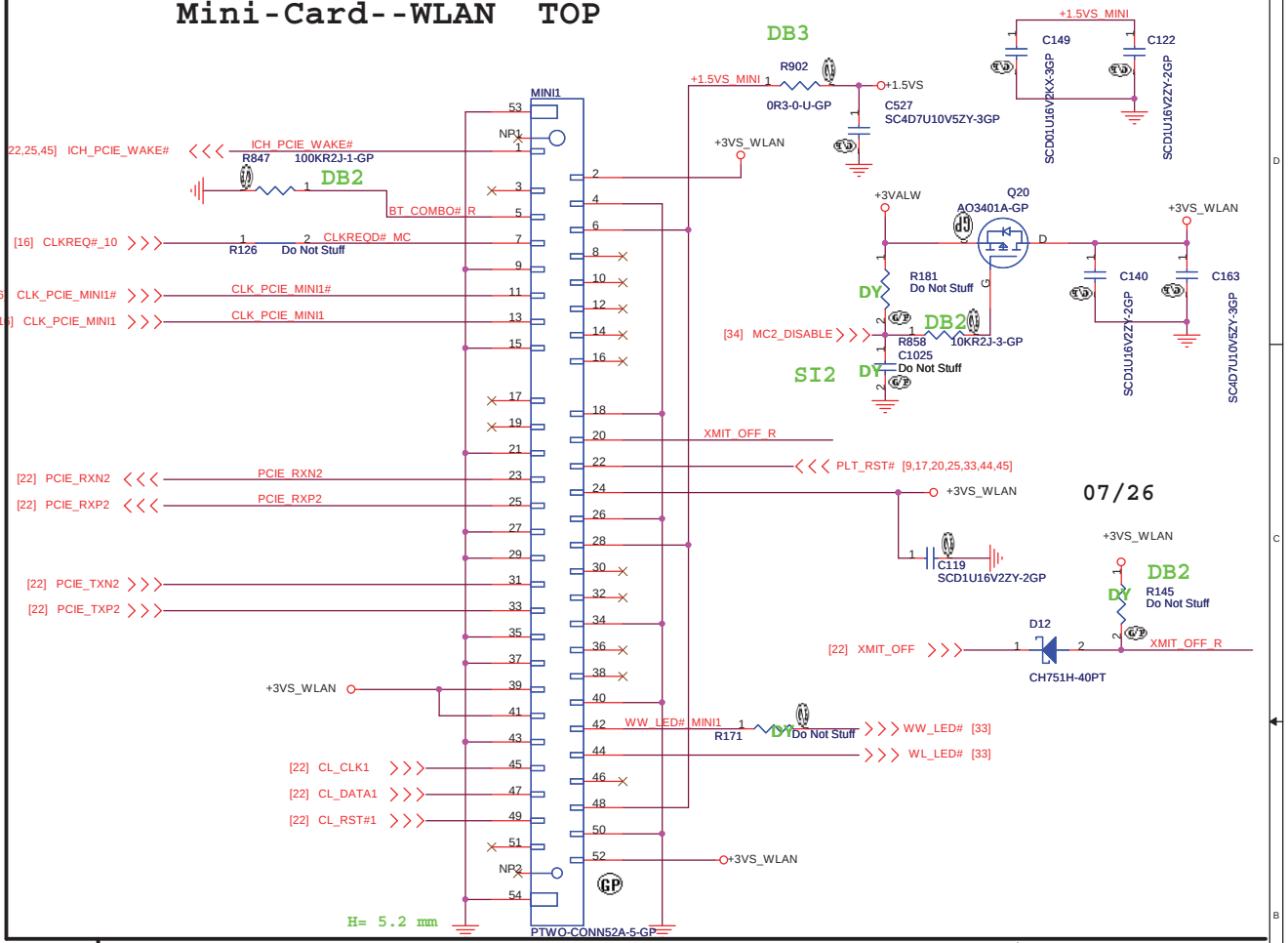
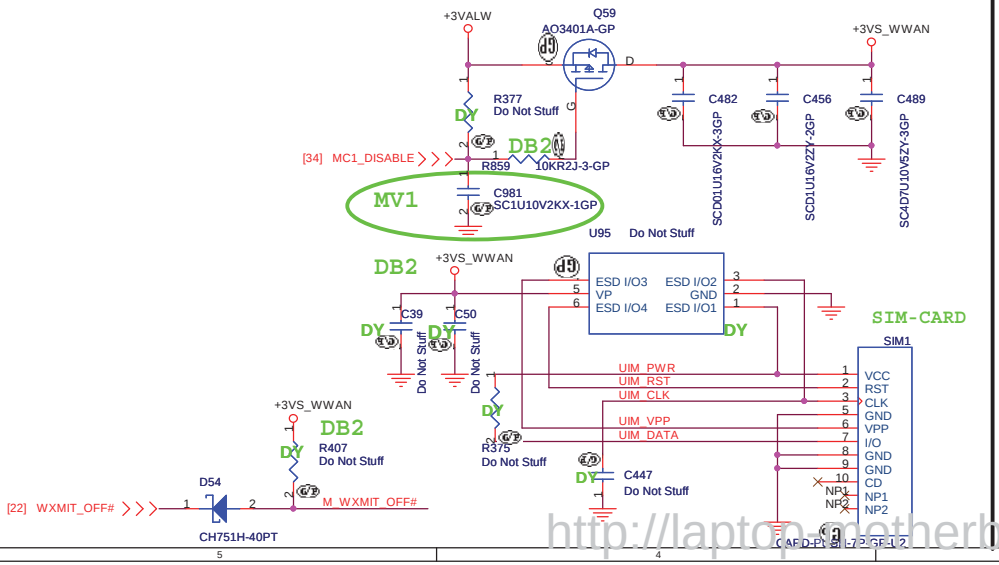
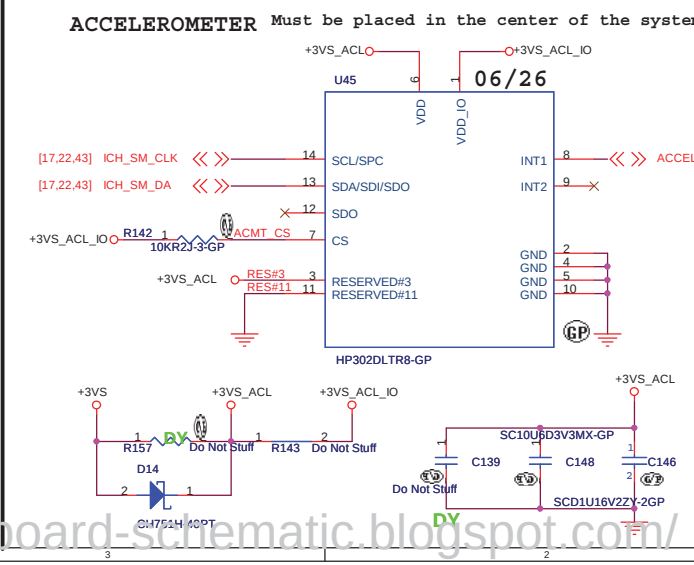
Mini-Card--WWAN BOTTOM



Mini-Card--WLAN TOP







VOX

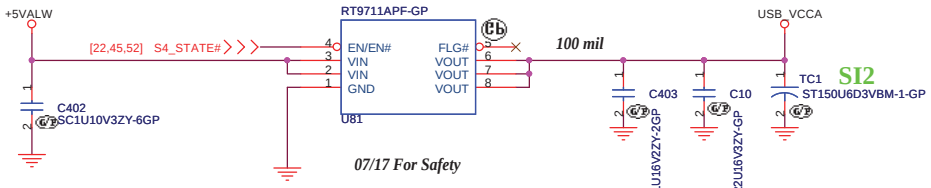
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

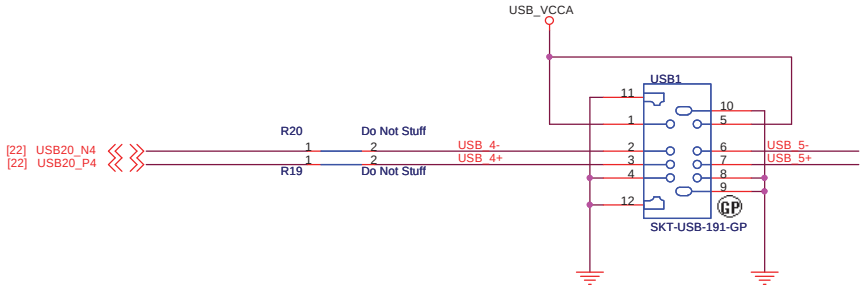
Title: ***Mini-Card/Accelerometer***

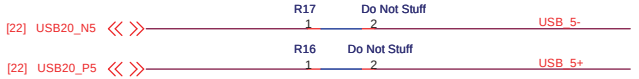
Size	Document Number	Rev
A3	Artemis	3

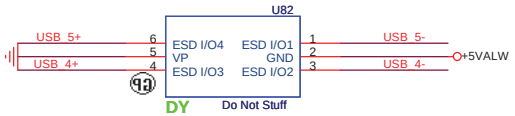
Date: Wednesday, August 20, 2008 Sheet 31 of 53

74.05240.A7F









74.02231.073-->74.00577.A73,74.05538.073

2462--G1224

VOX

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

Title: **USB Connector**

Size	Document Number	Rev
A3	Artemis	3

Date: Wednesday, August 20, 2008 Sheet 32 of 53

07/13 For KBC1091 reserve

07/25 For KBC1091 reserve

32Mb x 1

U59 SKT-SPI8P-GP-U

62.10076.011& 62.10089.001 is SPI Socket part number

32M SPI
> 72.25X16.001 W25X16VSSIG
32M SPI
> 72.25165.001 MX25L1605AM2C-15G

1. Keep traces of SPI as short as possible and keep trace spacing close to 7mils to any other signal (basically follow specs).

2. AMT designs need 2x2MB SPI parts in addition to connecting to a debug connector. Keep stuffing options from 2nd SPI part to debug connector very close to 2nd part so stub effect can be eliminated during testing as needed.

Debug port

DEBUG1 ETY-CONN24A-GP

SI2R

RC6 SRC47P50V-U1

TPM 1.2

U64 SLB9635TT1D2-1-GP

X4 X-32D768KHZ-40GPU

Mini-PCIE Card LED control circuit

Q71 DDTA114YCA-7-F-GP

Q70 DDTA114YCA-7-F-GP

Q69 Do Not Stuff

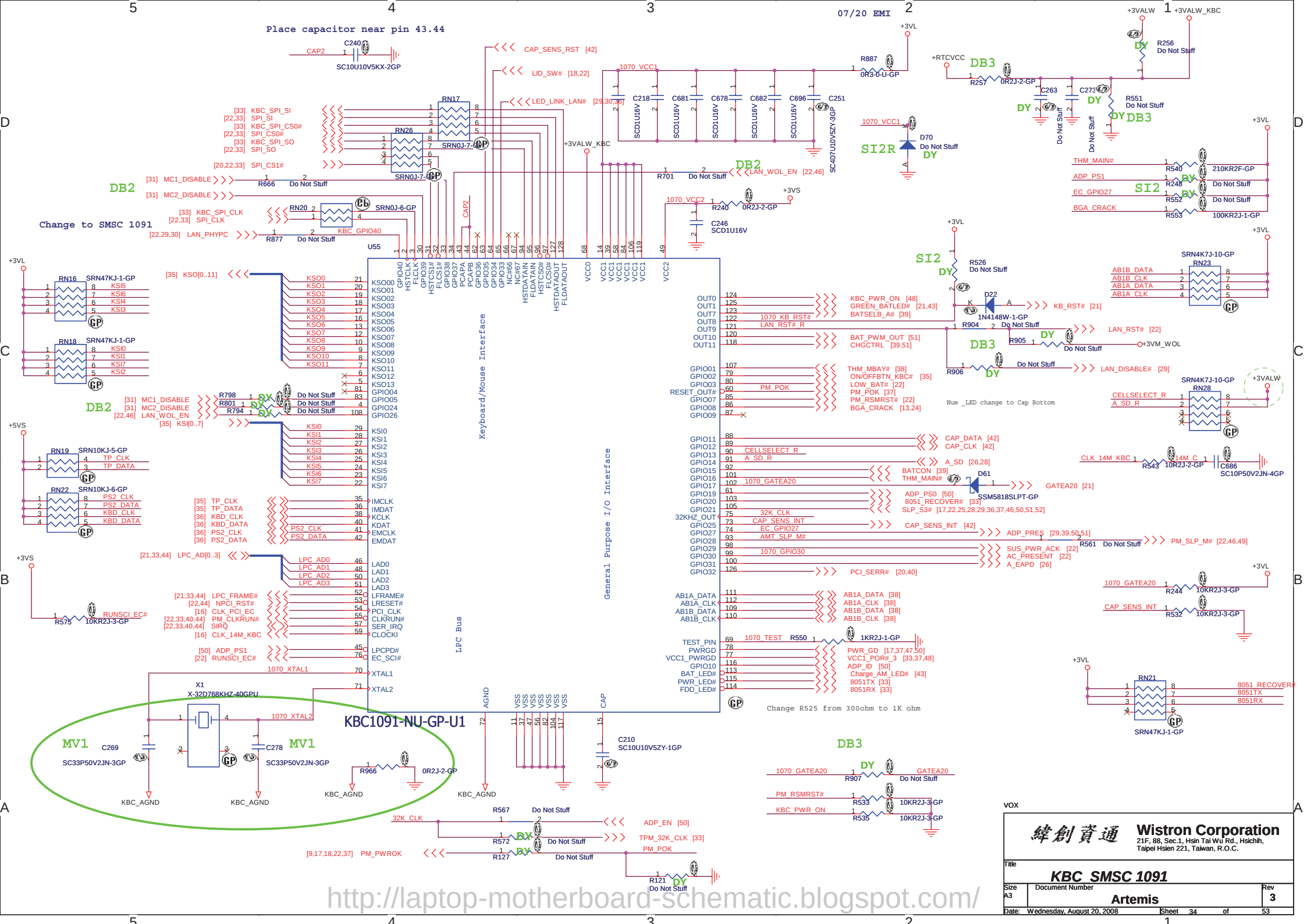
U108 2N7002DW-1-GP

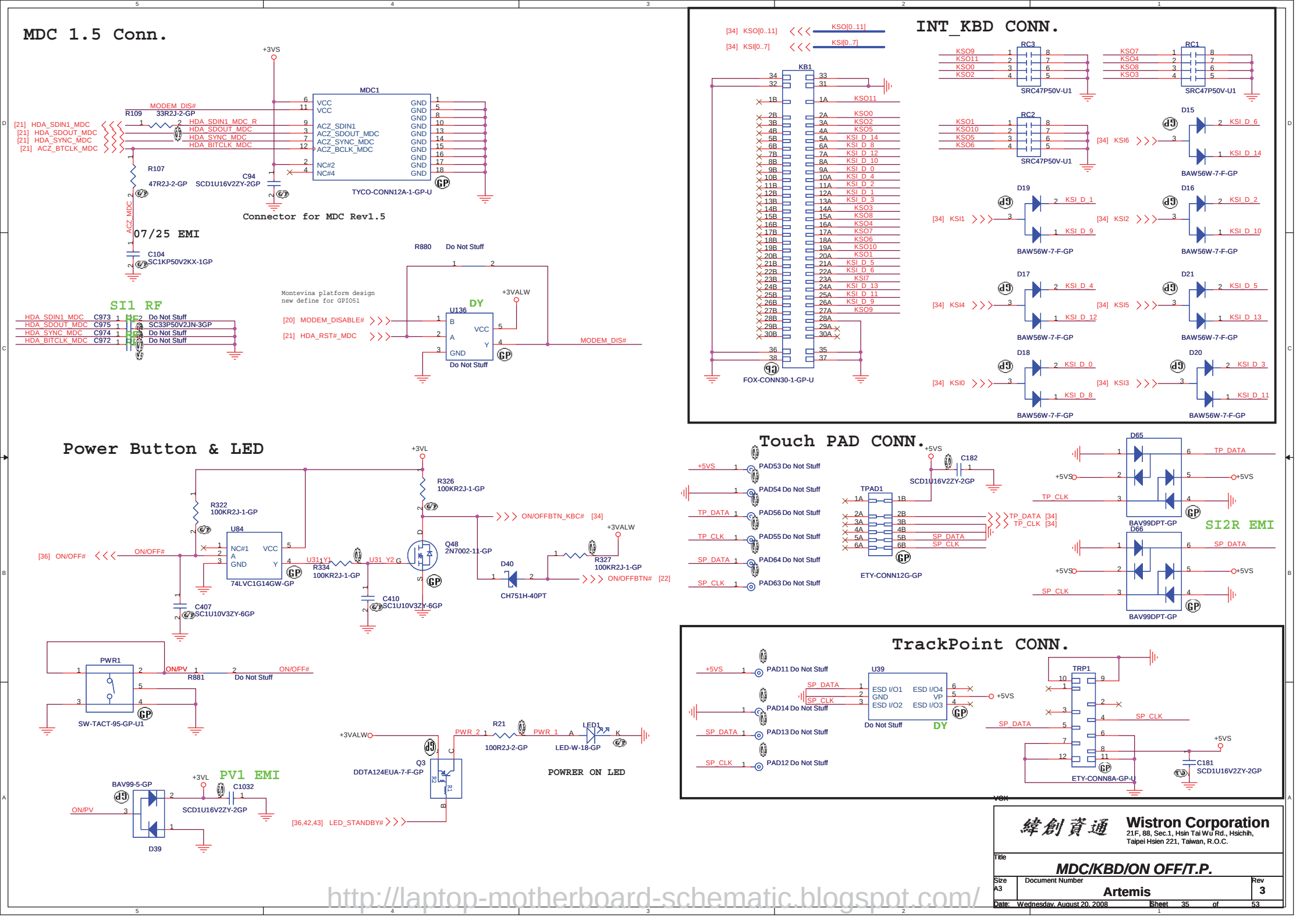
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: TPM/BIOS/24 DEBUG PORT

Size: A3 | Document Number: Artemis | Rev: 3

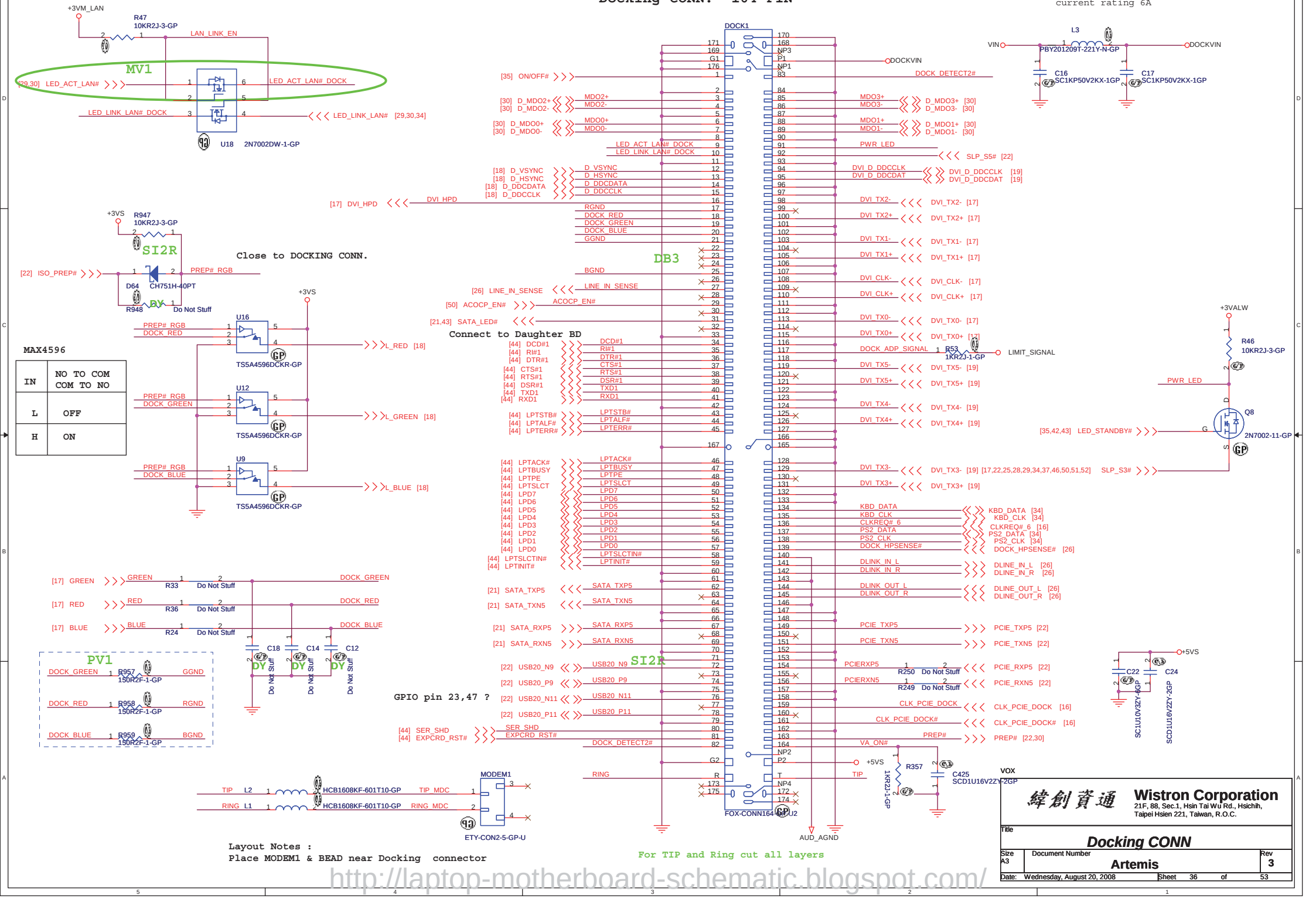
Date: Wednesday, August 20, 2008 | Sheet 33 of 53


07/20 EMI
Place capacitor near pin 43.44
Change to SMSC 1091
KBC1091-NU-GP-U1
Keyboard/Mouse Interface
General Purpose I/O Interface
LPC Bus
Change R525 from 300ohm to 1K ohm
Num _LED change to Cap Bottom
VOX
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.
KBC_SMSC 1091
Artemis
Wednesday, August 20, 2008
http://laptop-motherboard-schematic.blogspot.com/



Docking CONN. 164 PIN

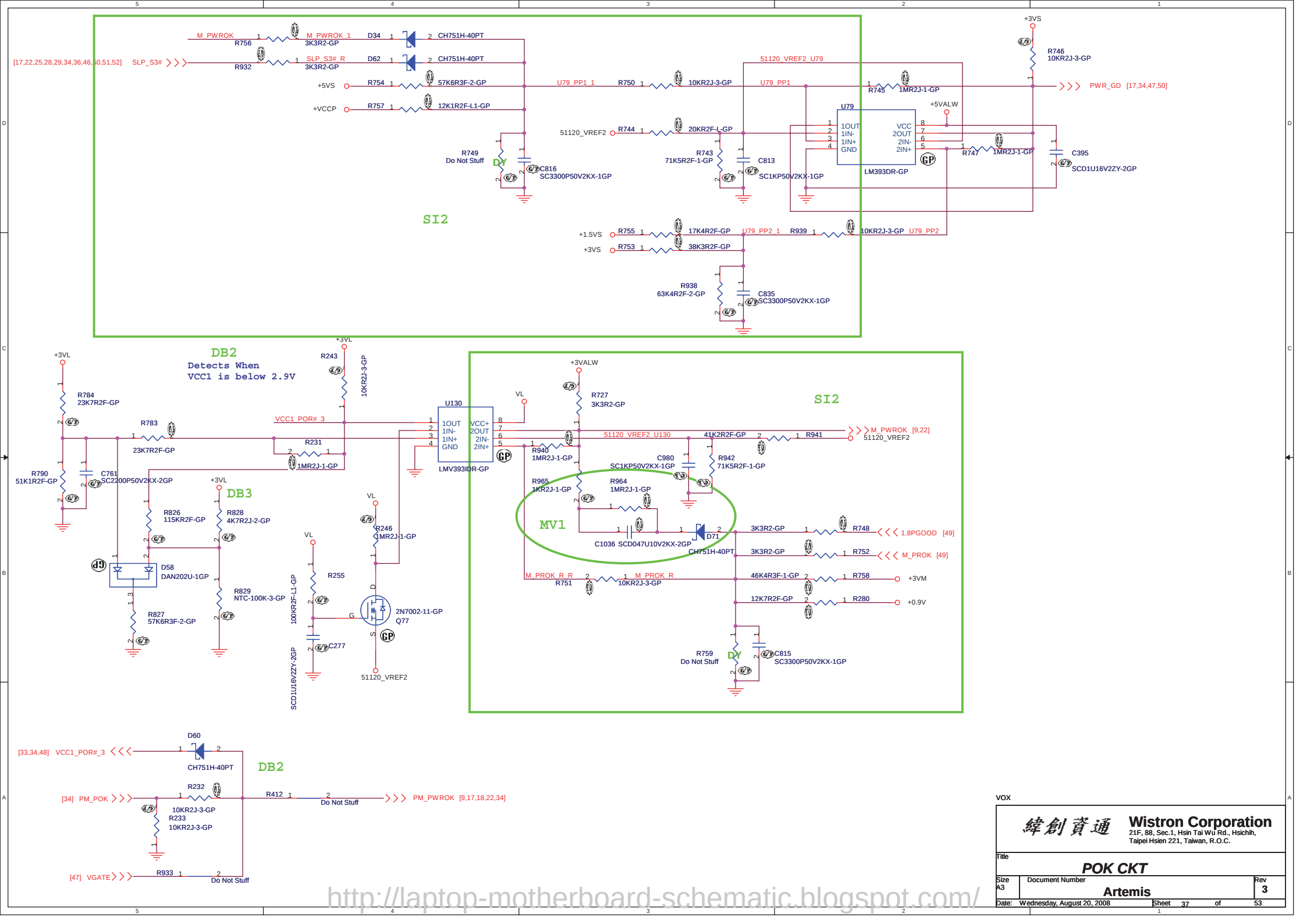
current rating 6A



Layout Notes :
Place MODEM1 & BEAD near Docking connector

For TIP and Ring cut all layers

緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title	**Docking CONN**
Size A3	Document Number: **Artemis**
Rev	3
Date: Wednesday, August 20, 2008	Sheet 36 of 53

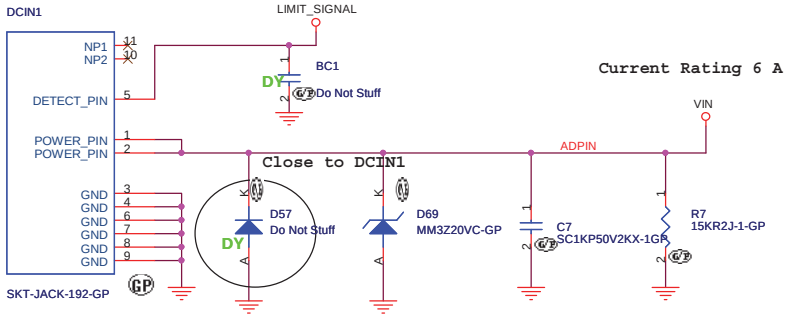


VOX

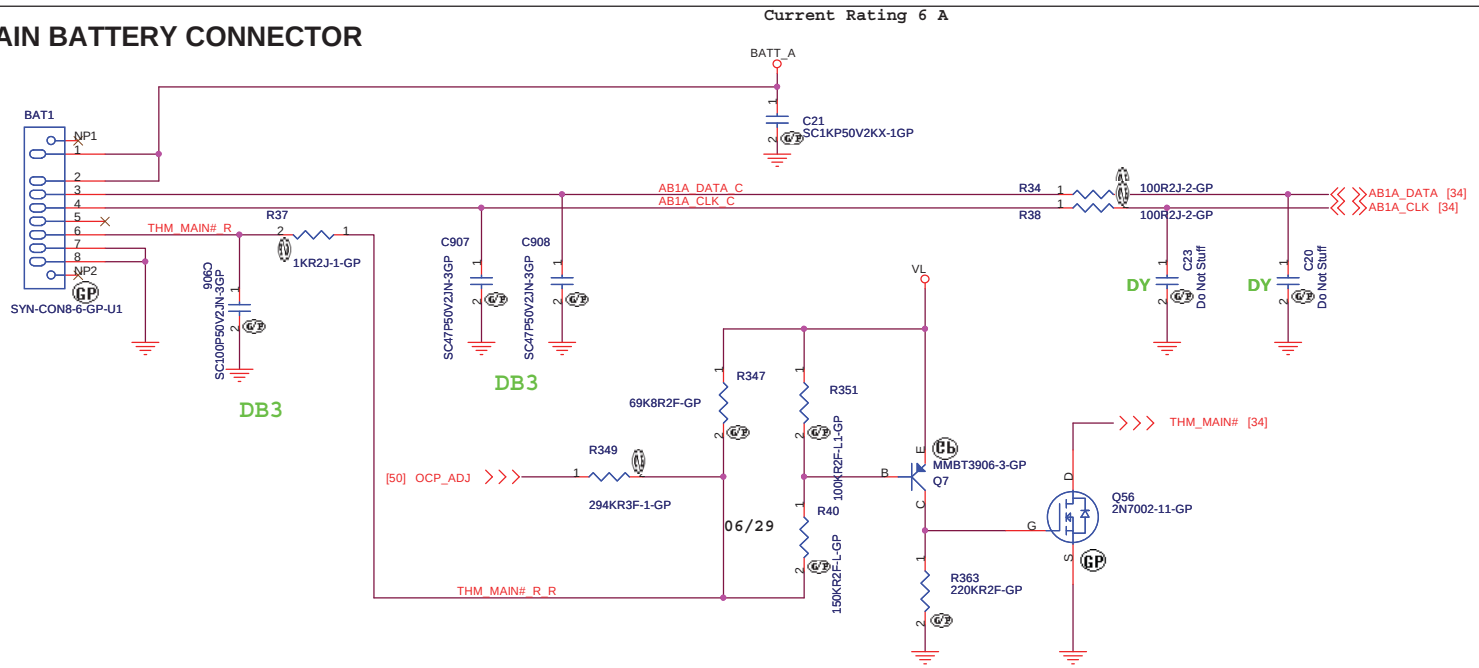
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

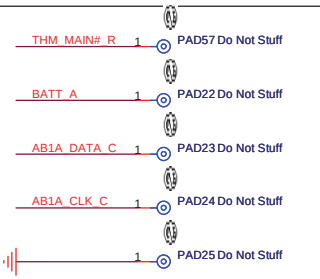
Title	**POK CKT**	
Size A3	Document Number **Artemis**	Rev 3
Date: Wednesday, August 20, 2008	Sheet 37 of 53	

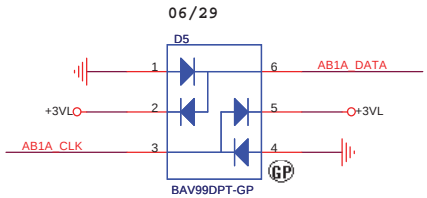
Adaptor in to generate DCBATOUT

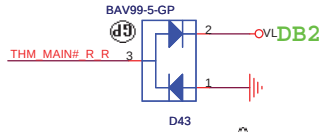


MAIN BATTERY CONNECTOR

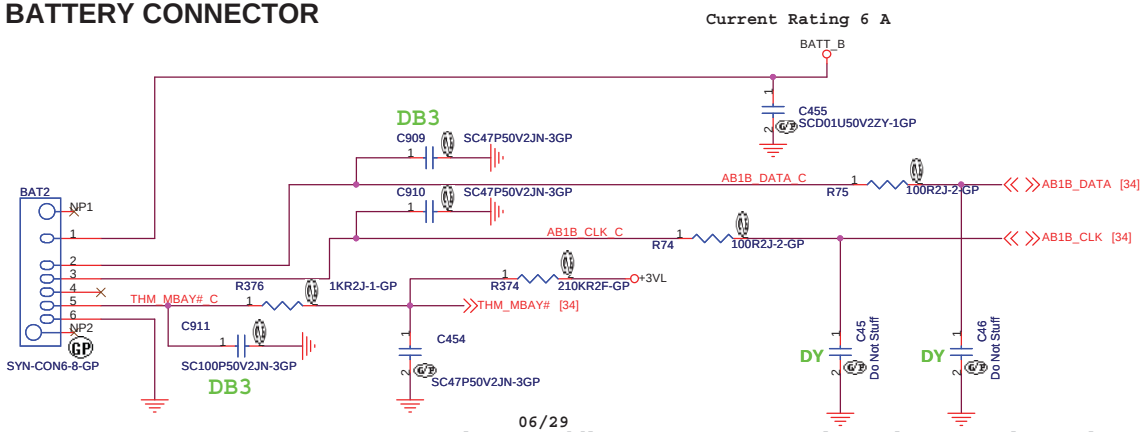


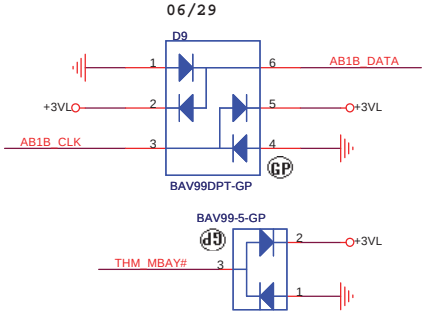


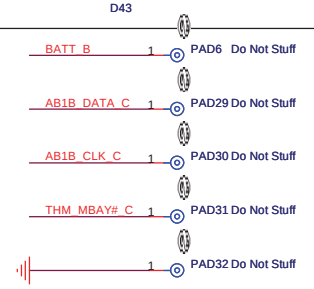




BAY BATTERY CONNECTOR







VOX

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

Title	DC & BATTERT CONN.	
Size A3	Document Number Artemis	Rev 3
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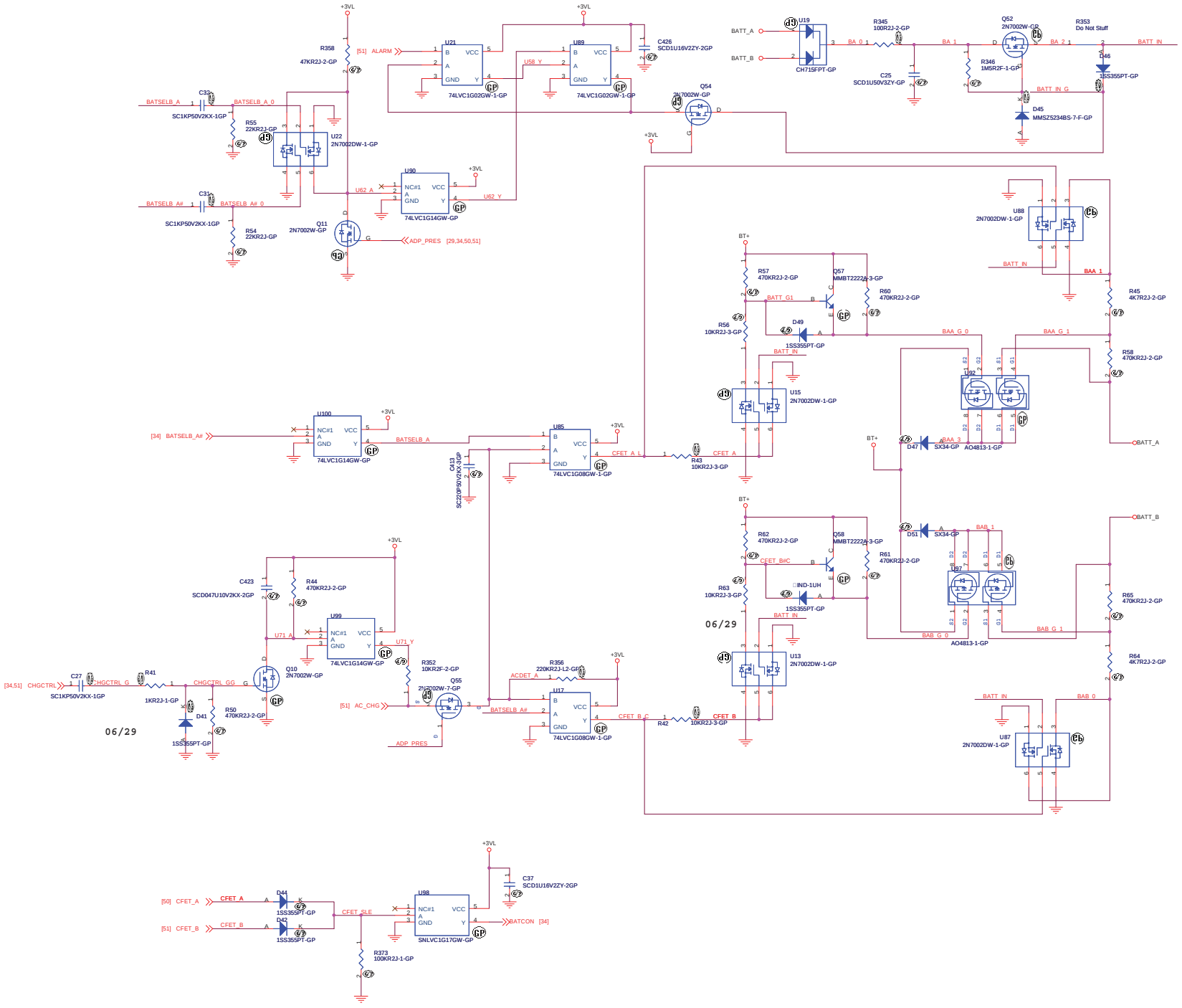


VOX

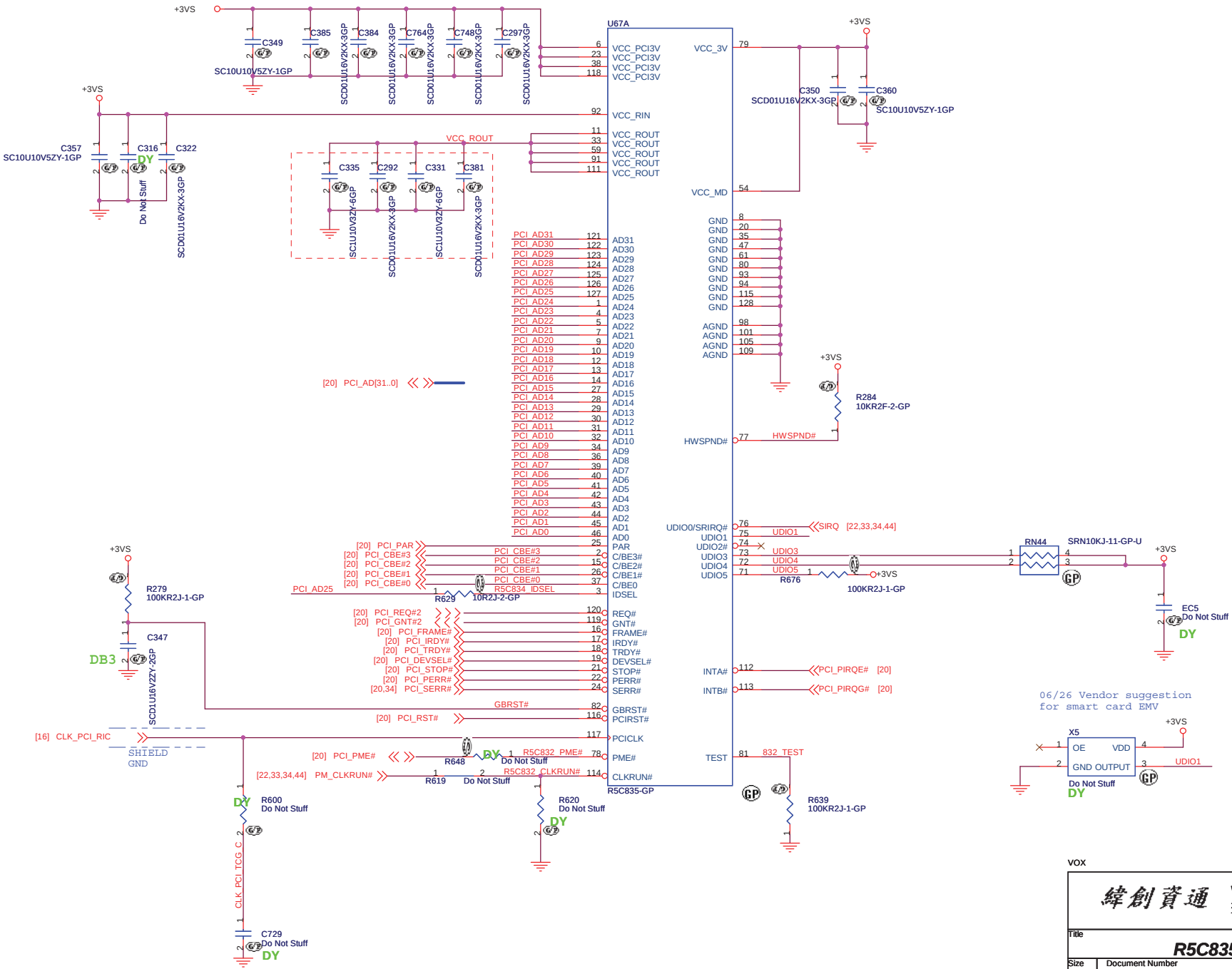
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: Battery Selector

Size	Document Number	Rev
A2	Artemis	3

Date: Wednesday, August 20, 2008 Sheet 39 of 53

RICOH R5C835 (1 OF 2) PCI



VOX

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title: R5C835/PCI		
Size: A3	Document Number: Artemis	Rev: 3
Date: Wednesday, August 20, 2008	Sheet 40 of 53	

RICOH R5C835 (2 OF 2)

Layout notes :
1394
GND
TPB0-
TPB0+
GND
TPA0-
TPA0+
GND

06/28 vendor suggest

GUARD GND

C311 SC15P50V2JN-2-GP 1394_XI
X3
X-24D576MHZ-63GP
C300 SC15P50V2JN-2-GP 1394_XO

U67B
R5C835-GP

+3VS_PHY
AVCC_PHY3V 97
AVCC_PHY3V 104
AVCC_PHY3V 108
TPBIAS0 110
TPBN0 102
TPBP0 103
TPAN0 106
TPAP0 107

L16 FCM1608KF-3-GP
C289 SC10U6D3V5ZY-2GP
C296 SCD01U16V2ZY-2GP
C740 SC1KP50V2KX-1GP
C741 SCD01U16V2KX-3GP

TPBIAS0 R604 56R2J-4-GP
R603 56R2J-4-GP
C295 SCD01U16V2KX-3GP
C291 SCD33U10V3KX-3GP

TPB0N TPB0P TPA0N TPA0P

R601 56R2J-4-GP
R602 56R2J-4-GP
1394_TPB1_R
C738 SC270P50V2JN-2GP
R617 5K11R2F-L1-GP

CLOSE TO CHIP R5C835

GUARD GND

RICHO_REXT 100 REXT
R272 10KR2F-2GP
RICHO_VREF 99 VREF
C293 SCD01U16V2KX-3GP

+VCC_SC 90 VCC_SC
C340 SC1U10V3ZY-6GP

[25] +5VSCEN# 83 SCVCC5EN#
[25] +3VSCEN# 84 SCVCC3EN#
[25] SM_SCSENSE 85 SCSENSE
[25] SM_SCCD# 86 SCCD#
[25] SM_SCIO 87 SCIO
[25] SM_SCCLK SCCLK 88 SCCLK
[25] SM_SCRST 89 SCRST
R632 33R2J-2-GP

MDIO19 48 XDALE
MDIO18 49 XDCLE
MDIO17 50 DATA7
MDIO16 51 DATA6
MDIO15 52 DATA5
MDIO14 53 DATA4
MDIO13 55 DATA3
MDIO12 56 DATA2
MDIO11 57 DATA1
MDIO10 58 DATA0
MDIO09 60 CLK/XD_RE#
MDIO08 62 SD_CMD/MSBS/XD_WE#
R702 100KR2J-1-GP
MDIO06 65 MDIO06_1 TP25 Do Not Stuff
MDIO05 66 XD_WP#
MDIO04 67 PWR_EN
MDIO03 68 SD_WP#/XD_R/B#
MDIO02 63 XD_CE#
MDIO01 69 MS_CD#/XD_CD1#
MDIO00 70 SD_CD#/XD_CD0#
MDIO07 64

Layout notes :
external parts for
VREF, REXT and FIL0 as
close as possible to R5C835.

RN9 SRN33J-7-GP
DATA6 DATA7 XDCLE XDALE
DATA6_1 DATA7_1 XDCLE_1 XDALE_1

RN11 SRN33J-7-GP
DATA2 DATA3 DATA4 DATA5
DATA2_1 DATA3_1 DATA4_1 DATA5_1

RN7 SRN33J-7-GP
SD_CMD/MSBS/XD_WE# CLK/XD_RE# DATA0 DATA1
SD_CMD/MSBS/XD_WE#_1 CLK/XD_RE#_1 DATA0_1 DATA1_1

RN8 SRN33J-7-GP
SD_WP#/XD_R/B# XD_WP# XD_CE#
SD_WP#/XD_R/B#_1 XD_WP#_1 XD_CE#_1

D31 1SS355PT-GP
MS_CD#/XD_CD1# A K XD_CD#
D30 1SS355PT-GP
SD_CD#/XD_CD0# A K XD_CD#

06/28 vendor suggest

DB2
U80
SOCBTLV3125-1GP
DATA1_1 DATA2_1 MS_DATA1_1 MS_DATA2_1
1A 2A 3A 4A 1B 2B 3B 4B 1OE# 2OE# 3OE# 4OE# VCC GND
MS_CD#/XD_CD1# MS_CD#/XD_CD1#
+3VS_CARD

TPA0P R222 Do Not Stuff TPA0+
TPA0N R223 Do Not Stuff TPA0-

SKT-1394-4P-25-GP
TPA0+ TPA0- TPB0+ TPB0-
1394

TPB0P R215 Do Not Stuff TPB0+
TPB0N R216 Do Not Stuff TPB0-

SD/MS/XD CARD Connector

+3VS_CARD
C287 C344 C368 Do Not Stuff

CARD1
CARD-PUSH-40P-1-GP-U3
XD-VCC SD-VCC MS-VCC
MS-DATA0 MS-DATA1 MS-DATA2 MS-DATA3
MS-BS MS-INS MS-SCLK
SD-DAT0 SD-DAT1 SD-DAT2 SD-DAT3 SD-DAT4 SD-DAT5 SD-DAT6 SD-DAT7
SD-CLK SD-WP SD-CD SD-CMD
XD-D0 XD-D1 XD-D2 XD-D3 XD-D4 XD-D5 XD-D6 XD-D7
XD-WP XD-WE XD-ALE XD-CLE XD-CE XD-RE XD-R/B XD-CD
NP1 NP2
7IN1-GND

DATA0_1 MS_DATA1_1 MS_DATA2_1 DATA3_1
SD_CMD/MSBS/XD_WE#_1 MS_CD#/XD_CD1# CLK/XD_RE#_1
DATA0_1 DATA1_1 DATA2_1 DATA3_1 DATA4_1 DATA5_1 DATA6_1 DATA7_1
CLK/XD_RE#_1 SD_WP# SD_CD#/XD_CD0# SD_CMD/MSBS/XD_WE#_1
XD_WP# XD_WE# XD_ALE_1 XD_CLE XDCLE_1 XD_CE#_1 CLK/XD_RE#_1 SD_WP#/XD_R/B#_1 XD_CD#

06/28 vendor suggest

+3VS_CARD
C276 SCD01U16V2KX-1GP
C288 SCD01U16V2KX-3GP
C356 SCD01U16V2KX-3GP
R643 150KR2J-GP
PIN3 PIN28 PIN21

DB3
+3VS
R882 Do Not Stuff
R912 Do Not Stuff
SD_WP#/XD_R/B#_1
SD_WP#
Q80 Do Not Stuff

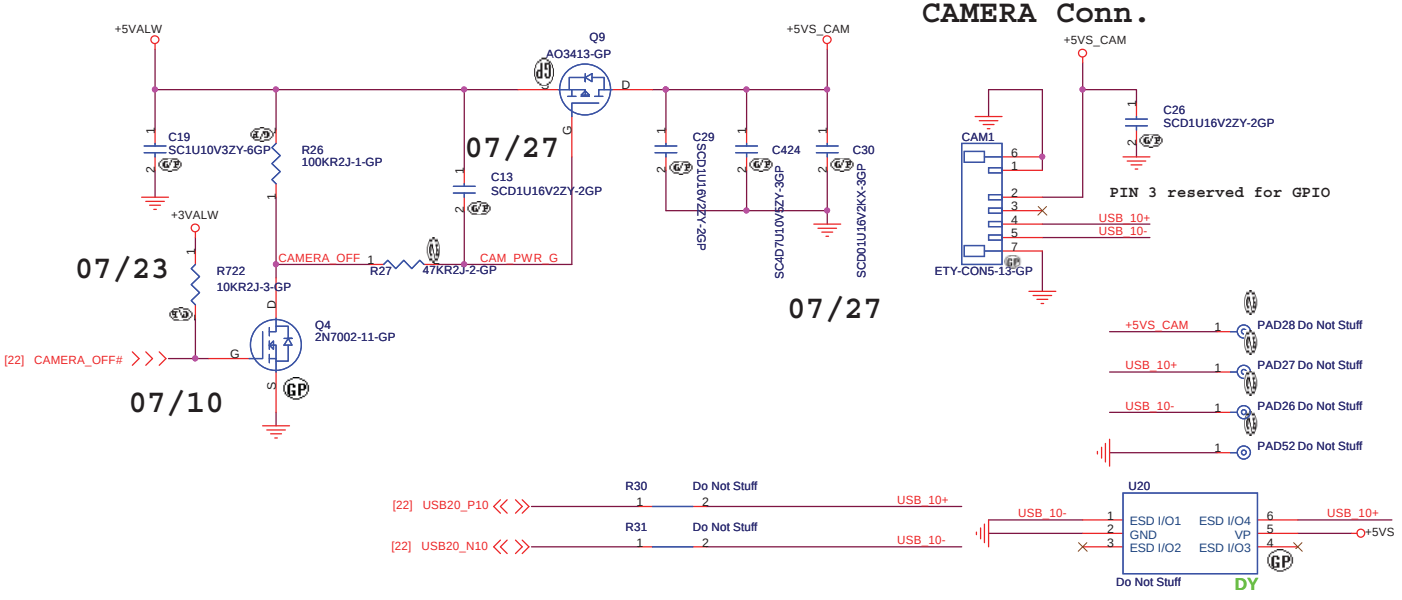
For Card Power
+3VS_CARD 40mil
R304 10KR2J-3-GP
C396 SC1U10V3ZY-6GP
U75 RT9711CPBG-GP
VOUT GND NC#3 VIN EN/EN#
+3VS
C390 Do Not Stuff
PWR_EN

VOX

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

Title: R5C835/1394/SD/Smart
Size: A3 | Document Number: Artemis | Rev: 3
Date: Wednesday, August 20, 2008 | Sheet 41 of 53

CAMERA

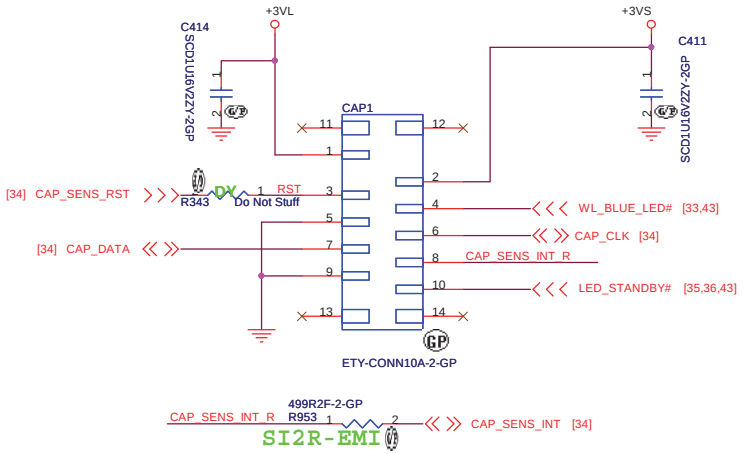


CAMERA Conn.

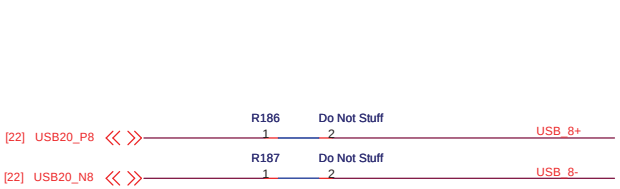
SYSTEM CAPACITY BOARD

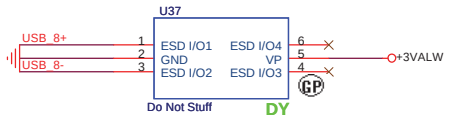
Vol up , Vol down , Mute ,Presentation

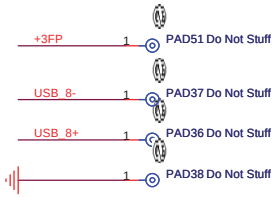
PIN 3 reserved for GPIO



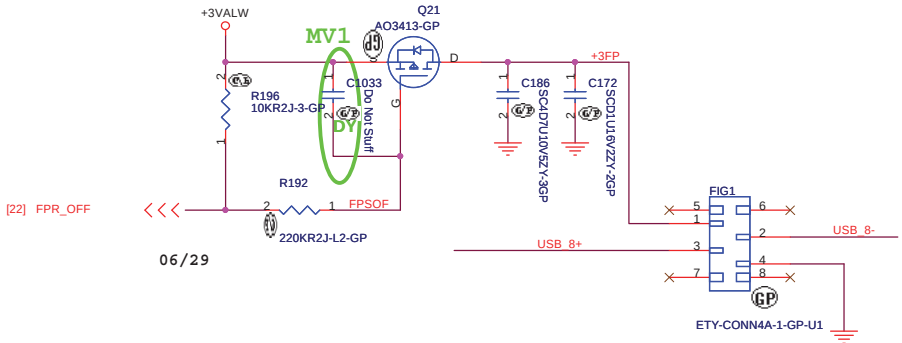
FingerPrint



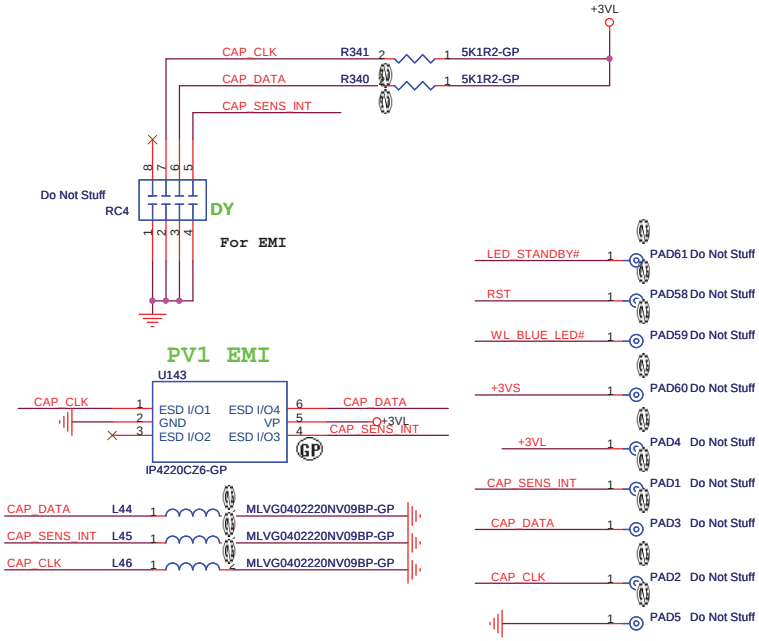




3VALW FOR XP , 3VS FOR Vista



FingerPrint Conn.



VOX

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

Title	Camera/W-COM	
Size A3	Document Number Artemis	Rev 3
Date: Wednesday, August 20, 2008	Sheet 42 of 53	

Thermal Sensor

CPU TEMP:

H_THERMDA and H_THERMDC routing 10mil trace width and spacing. Locate Capacity near ADT7473.

[5] H_THERMDA — C178 SC1KP50V2KX-1GP — H_THERMDA

[5] H_THERMDC — H_THERMDC

CPU TEMP:

DB2

H_THERMDA and H_THERMDC routing 10mil trace width and spacing. Locate Capacity near ADT7473.

[5] H_THERMDA_2 — C209 SC1KP50V2KX-1GP — H_THERMDA_2

[5] H_THERMDC_2 — H_THERMDC_2

DB3 Change Power to 3VS for A009 issue

MV1

07/10

D1+ C174 SC2200P50V2KX-2GP D1-

+3VS R961 10KR2J-3-GP

[22] THERM_SCI#

D2+ DY C169 Do Not Stuff D2-

C153 SCD1U16V2ZY-2GP

R962 0R2J-2-GP

MV1

07/02

U36

H_THERMDA 100R2J-2-GP R180 D1+

H_THERMDC 100R2J-2-GP R179 D1-

DB2 H_THERMDA_2 Do Not Stuff DY R174 D2+

H_THERMDC_2 Do Not Stuff DY R170 D2-

SYS_SHDN# THERM_SCI# R R177 Do Not Stuff

[17,22,31] ICH_SM_CLK

[17,22,31] ICH_SM_DA

VDD DP1 DN1 DP2/DN3 ND2/DP3 SYS_SHDN# ALERT# SMCLK SMDATA

GPIO1 GPIO2 TACH PWM TRIP_SET SHDN_SEL GND GND

EMC2103-2-AP-GP

+3VS R150 10KR2J-3-GP FAN_TACH [5]

+3VS R149 10KR2J-3-GP FAN_PWM [5]

TRIP_SEL SHDN_SEL

SI2

+3VS R165 953R2F-GP TRIP_SEL

R160 15KR2J-1-GP SHDN_SEL

DB2

+3VS R237 DY Do Not Stuff

R234 0R2J-2-GP SYS_SHDN#

[5,9,21] PM_THRMTRIP-A#

R251 0R2J-2-GP

[17] MXM_THRMTRIP#

U142

+3VS R239 DY Do Not Stuff

DY Do Not Stuff

LED

DB2

+3VALW R313 68R2-GP NLED1 LED3 LED-W-21-GP LED_STANDBY# [35,36,42]

PIN1 Amber
PIN3 Aqua White

LED-WA-2-GP

+3VL DB3

Charge_Amber_1#_1 R848 Charge_Amber_1#

Charge_Aqua_1#_1 R849 Charge_Aqua_1#

LED2

PIN1 Amber
PIN3 Aqua White

LED-WA-2-GP

+3VS

HDD_Safe_1#_1 R852 HDD_Safe_1#

HDD_Act_1#_1 R851 HDD_Act_1#

LED4

PIN2 Amber
PIN3 Blue

LED5

+3VS C1030 Do Not Stuff RF LED-BO-9-GP-U

WL_A#_1 R853 WL_A#

WL_B#_1 R854 WL_B#

2N7002DW-1-GP

[34] Charge_AM_LED# Charge_Amber_1# Charge_Amber_1#_0 U131

[22] HDD_HALTLED# HDD_Safe_1# HDD_Safe_1#_0 U132

[33,42] WL_BLUE_LED# WL_B# WL_B#_0 U133

WL_B#_0 R850 Do Not Stuff WL_A#

2N7002DW-1-GP

[21,34] GREEN_BATLED# Charge_Aqua_1# Charge_Aqua_1#_0 U135

[21,36] SATA_LED# HDD_Act_1# HDD_Act_1#_0 U134

+3VL DB3

RN57 SRN10KJ-6-GP

Charge_Amber_1#
Charge_Aqua_1#
Charge_Amber_1#_0
Charge_Aqua_1#_0

Charge_AM_LED#

SI2

+3VS

RN58 SRN10KJ-6-GP

HDD_Safe_1#
HDD_Act_1#
HDD_Safe_1#_0
HDD_Act_1#_0

RN59 SRN10KJ-5-GP

HDD_HALTLED#
WL_BLUE_LED#

+3VS RN56 SRN10KJ-5-GP

WL_A#
WL_B#

VOX

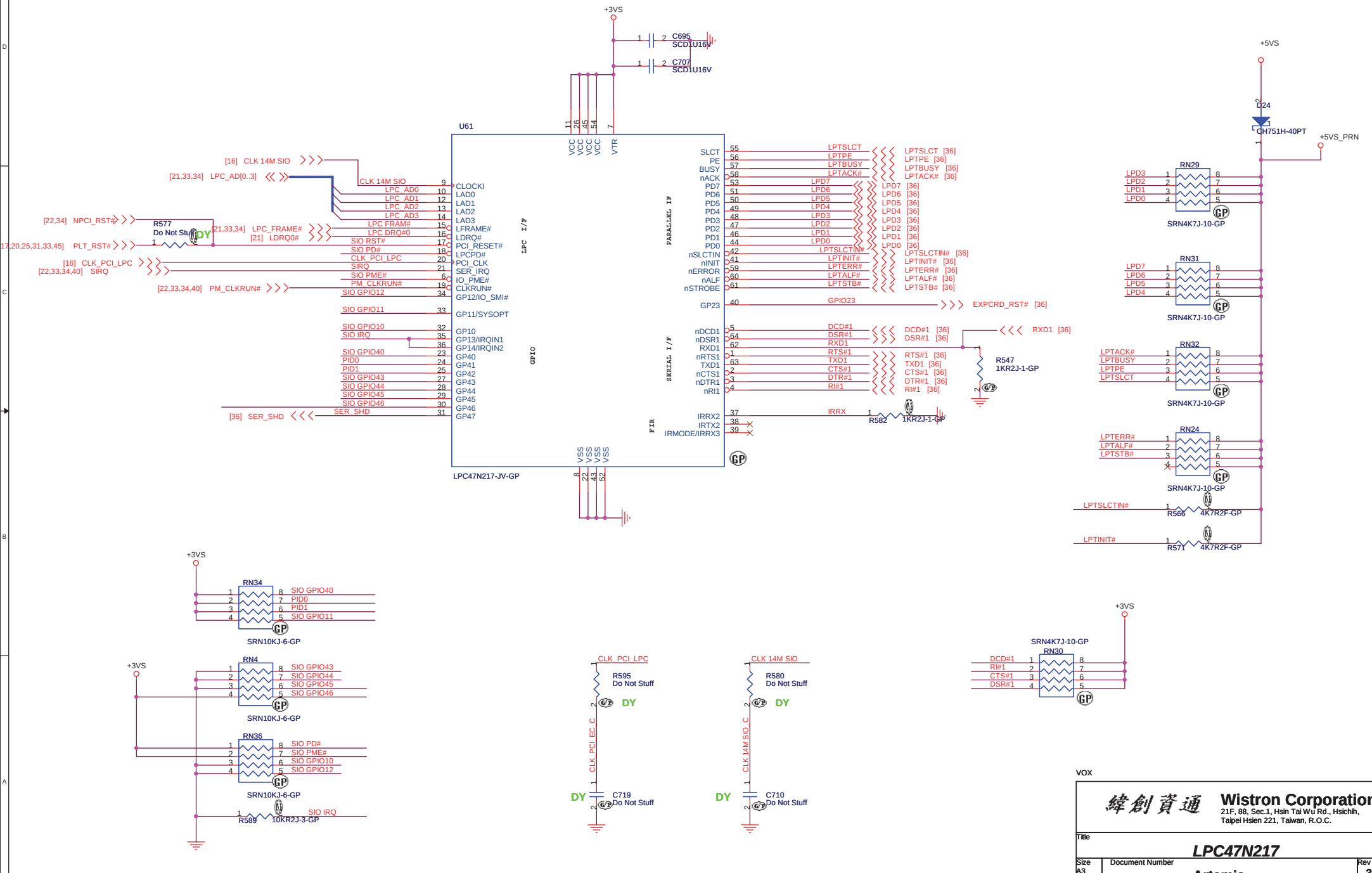
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: ADT7473 Thermal Sensor

Size: A3 | Document Number: Artemis | Rev: 3

Date: Wednesday, August 20, 2008 | Sheet 43 of 53

SIO



VOX

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

Title: ***LPC47N217***

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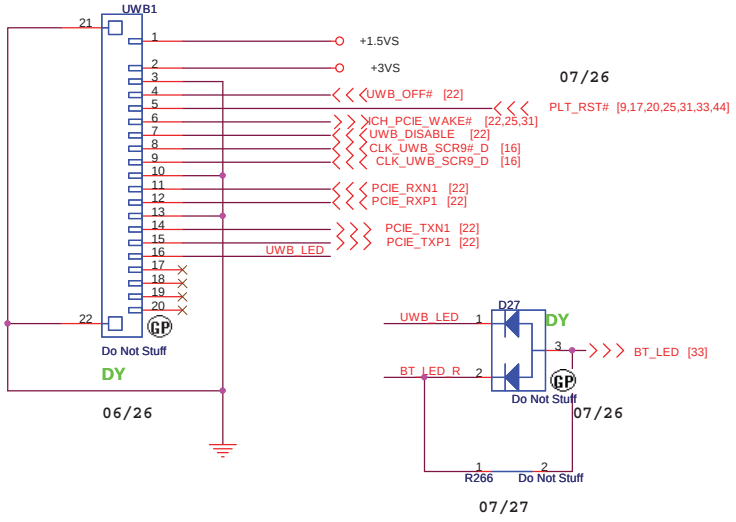
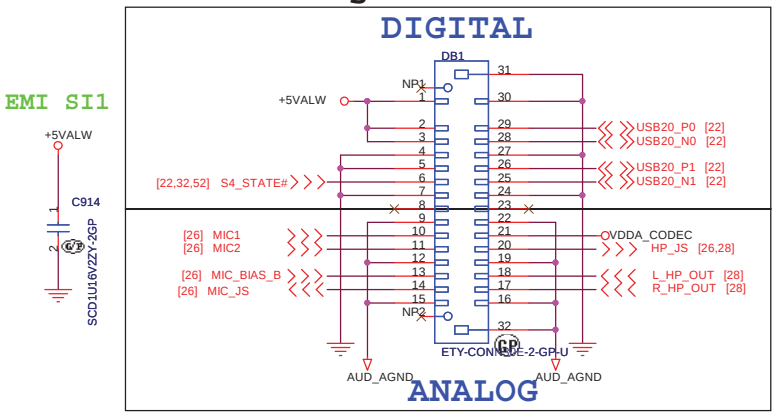
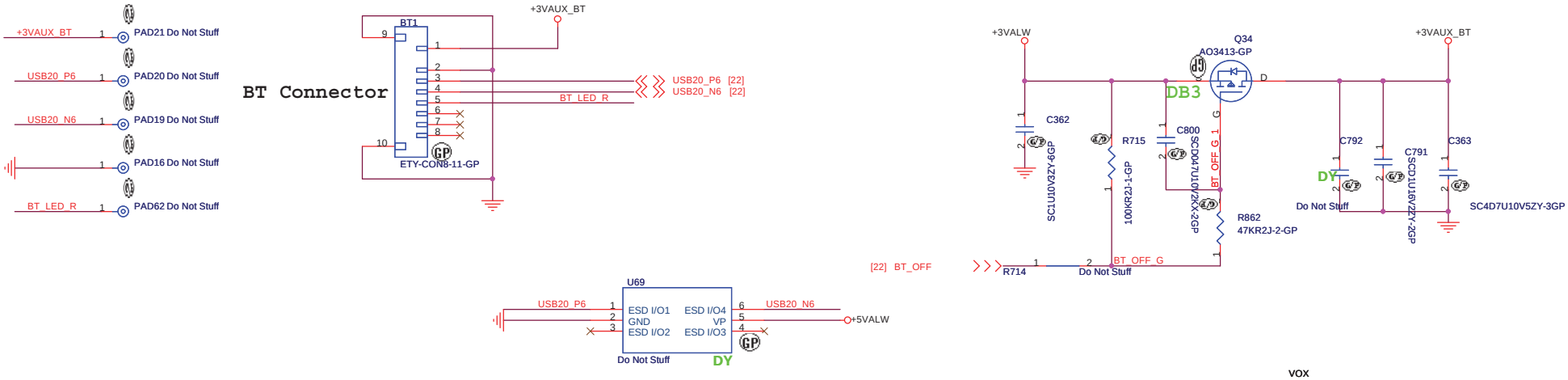
UWB Connector



AUDIO Daughter Board Connector



Bluetooth Connector

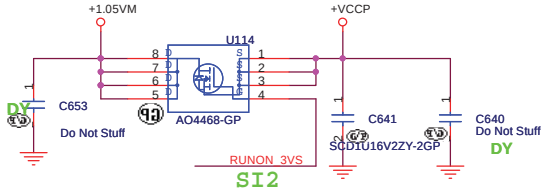


VOX

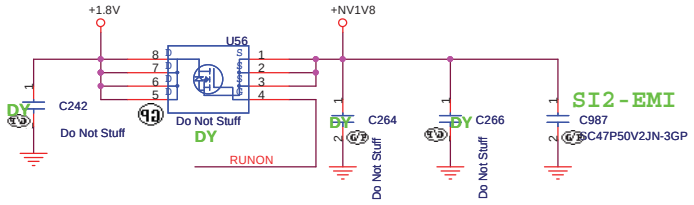
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title	BT/UWB/Audio board Connector	
Size A3	Document Number Artemis	Rev 3
Date: Wednesday, August 20, 2008	Sheet 45 of 53	

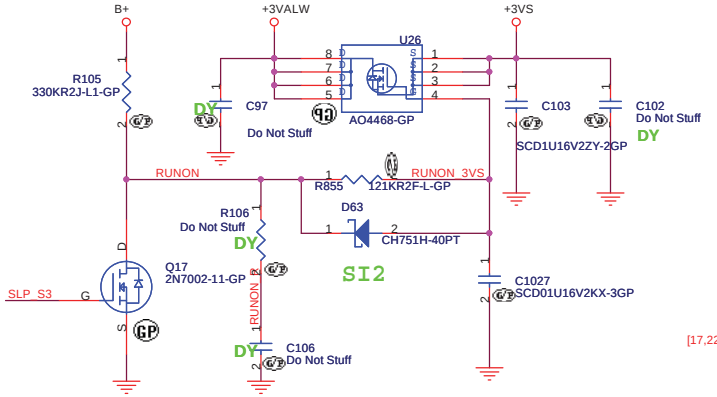
+1.05VM to +VCCP Transfer



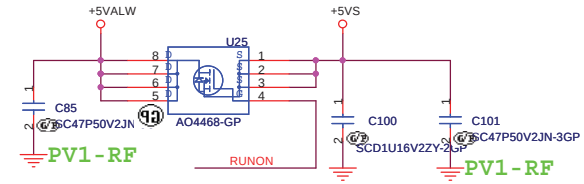
+1.8V to +1.8VS Transfer



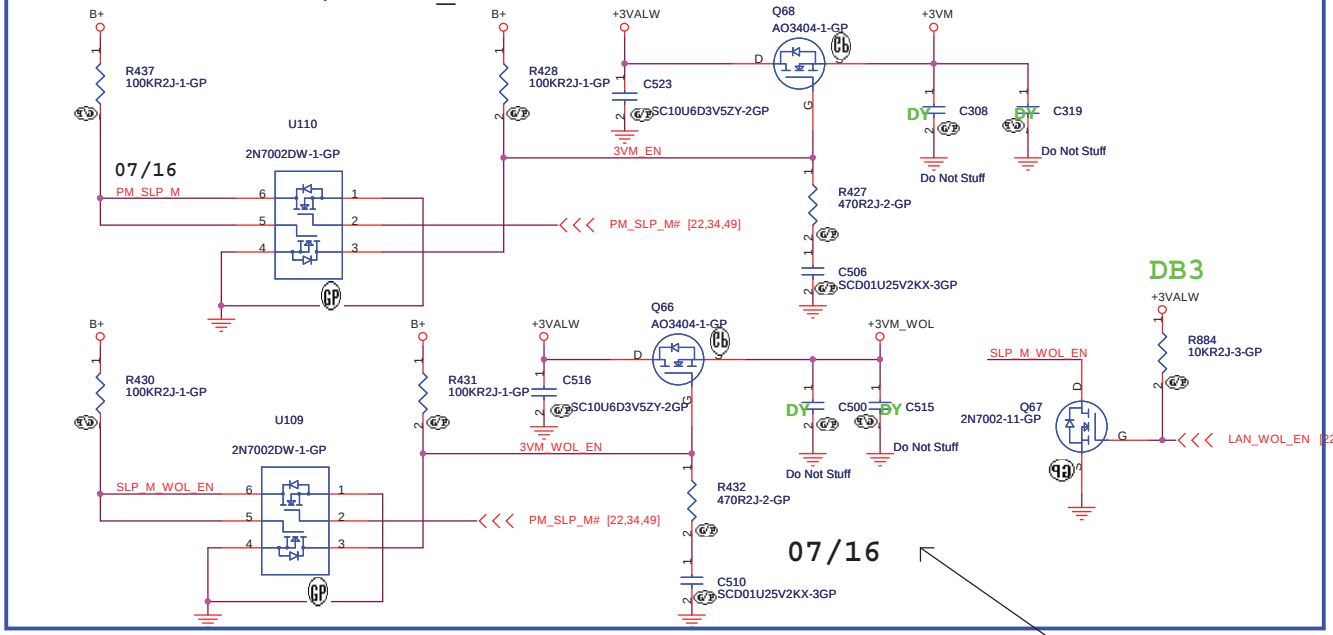
+3VALW to +3VS Transfer



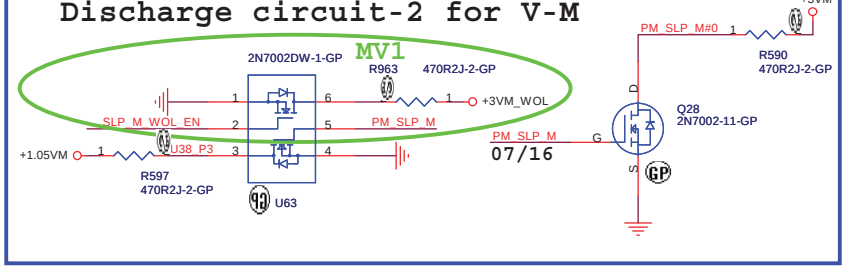
+5VALW to +5VS Transfer



+3VALW to +3VM / +3VM_WOL Transfer

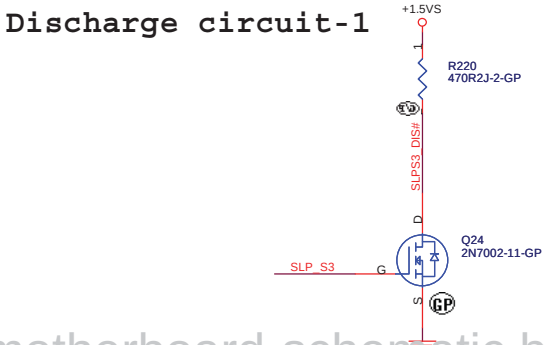


Discharge circuit-2 for V-M



PM_SLP_M#	LAN_WOL_EN	+3VM_WOL	+3VM	SYSTEM STATE
0	0	0V	0V	Moff / No WOL
0	1	3.3V	0V	Legacy WOL/ Moff
1	0	3.3V	3.3V	M1
1	1	3.3V	3.3V	M1

Discharge circuit-1



VOX

緯創資通	**Wistron Corporation** 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	**DC/DC Circuit**	
Size A3	Document Number **Artemis**	Rev 3
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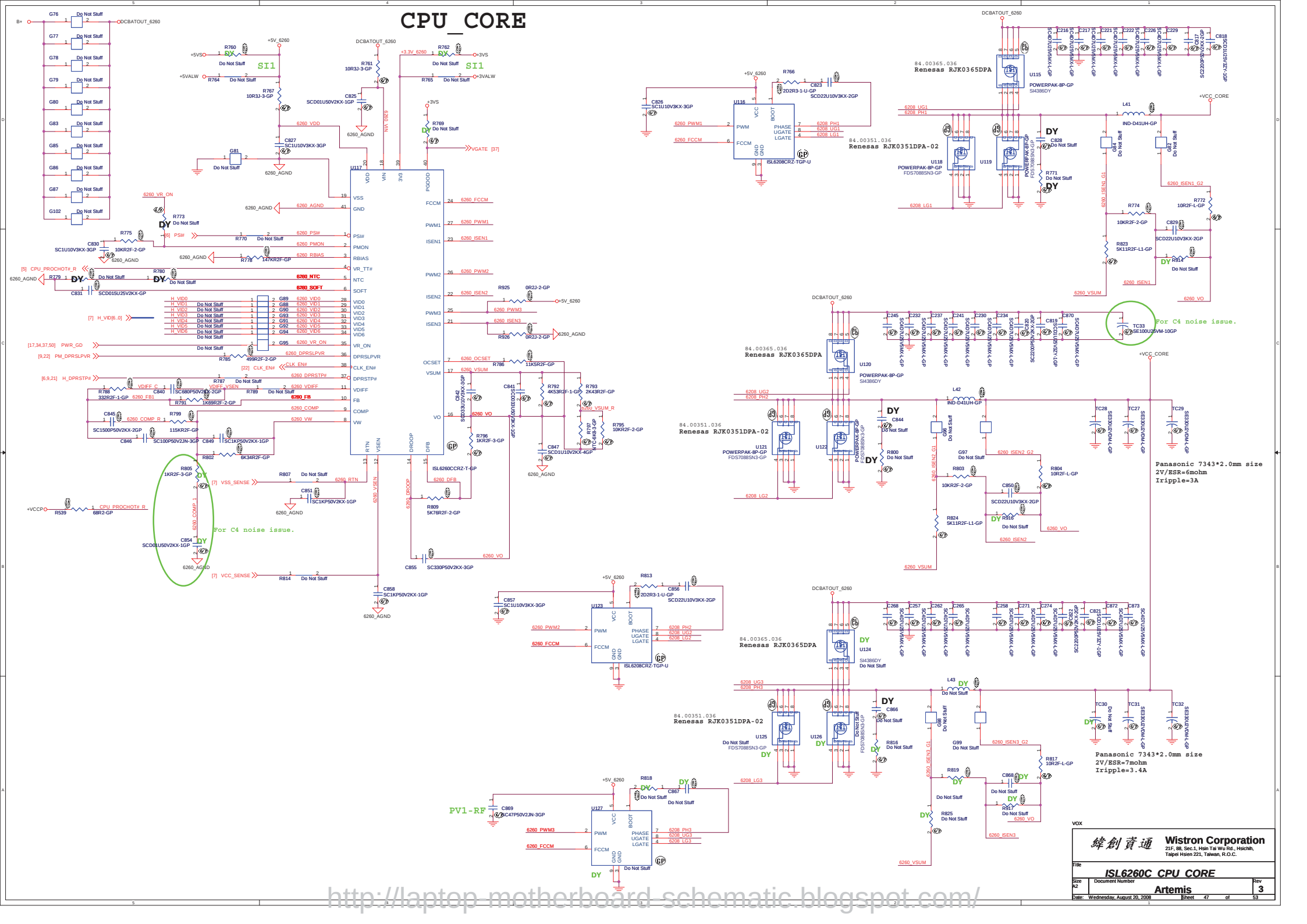
CPU_CORE



Wistron Corporation	21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title	ISL6260C_CPU_CORE
Size: A2	Document Number: Artemis
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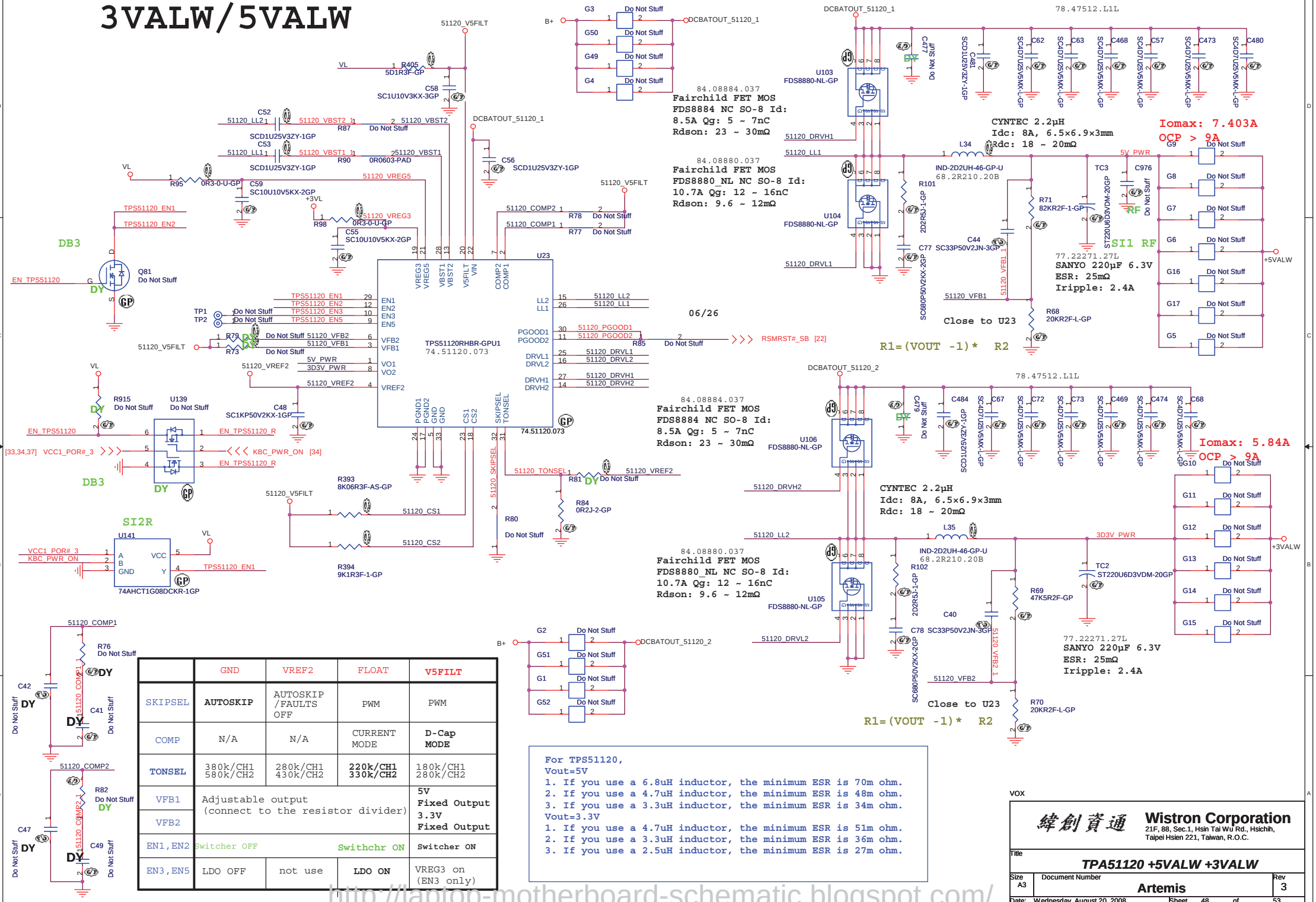
3VALW/5VALW



	GND	VREF2	FLOAT	V5FILT
SKIPSEL	**AUTOSKIP**	AUTOSKIP /FAULTS OFF	PWM	PWM
COMP	N/A	N/A	CURRENT MODE	**D-Cap MODE**
TONSEL	380k/CH1 580k/CH2	280k/CH1 430k/CH2	**220k/CH1 330k/CH2**	180k/CH1 280k/CH2
VFB1	Adjustable output (connect to the resistor divider)			**5V Fixed Output**
VFB2				**3.3V Fixed Output**
EN1,EN2	Switcher OFF		**Swithchr ON**	**Switcher ON**
EN3,EN5	LDO OFF	not use	**LDO ON**	VREG3 on (EN3 only)

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.

VOX

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

Title: **TPA51120 +5VALW +3VALW**

Size	Document Number	Rev
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1D8V & 1D05V

	GND	OPEN	V5FILT
TONSEL	230k/CH1 283k/CH2	283k/CH1 346k/CH2	360kHz/CH1 420kHz/CH2

07/20 POWER

TPS51124RGER-GPU1
74.51124.073

360kHz/CH1
420kHz/CH2

PV1-RF

1.5V OCP: 12A, Trip1: 12K7
1.05V OCP: 15A, Trip2: 7k5

07/20 EMI

+1.8V_PWR
Iomax: 10A
OCP < 15A

U47 POWERPAK-8P-GP
84.00365.036
Renesas RJK0365DPA

U53 POWERPAK-8P-GP
84.00351.036
Renesas RJK0351DPA-02

CYNTEC 1.0µH
Idc: 11A, 6.5×6.9×3mm
Rdc: 9 ~ 10mΩ
68.1R01A.20B

Panasonic 330µF 2V
ESR: 15mΩ
Iripple: 2.7A
79.33719.20C

Vout=0.758V*(R1+R2)/R2
FBV1 1.8V: 29.4 k / 41.2k

Close to U116

+1.05V_PWR
Iomax: 12.286A
OCP < 18A

U48 POWERPAK-8P-GP
84.00365.036
Renesas RJK0365DPA

U54 POWERPAK-8P-GP
84.00351.036
Renesas RJK0351DPA-02

CYNTEC 0.82µH
Idc: 13A, 6.5×6.9×3mm
Rdc: 6.7 ~ 8mΩ

Panasonic 330µF 2V
ESR: 15mΩ
Iripple: 2.7A
79.33719.20D

Vout=0.758V*(R1+R2)/R2
FBV2 1.05V: 11.5 k / 29.4K

0D9V
Iomax: 1.2A

U52
TPS51100DGQ-1-GP

SC

VOX

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

Title: TPS51124 1D5V/1D05V
Size: A3 | Document Number: Artemis | Rev: 3
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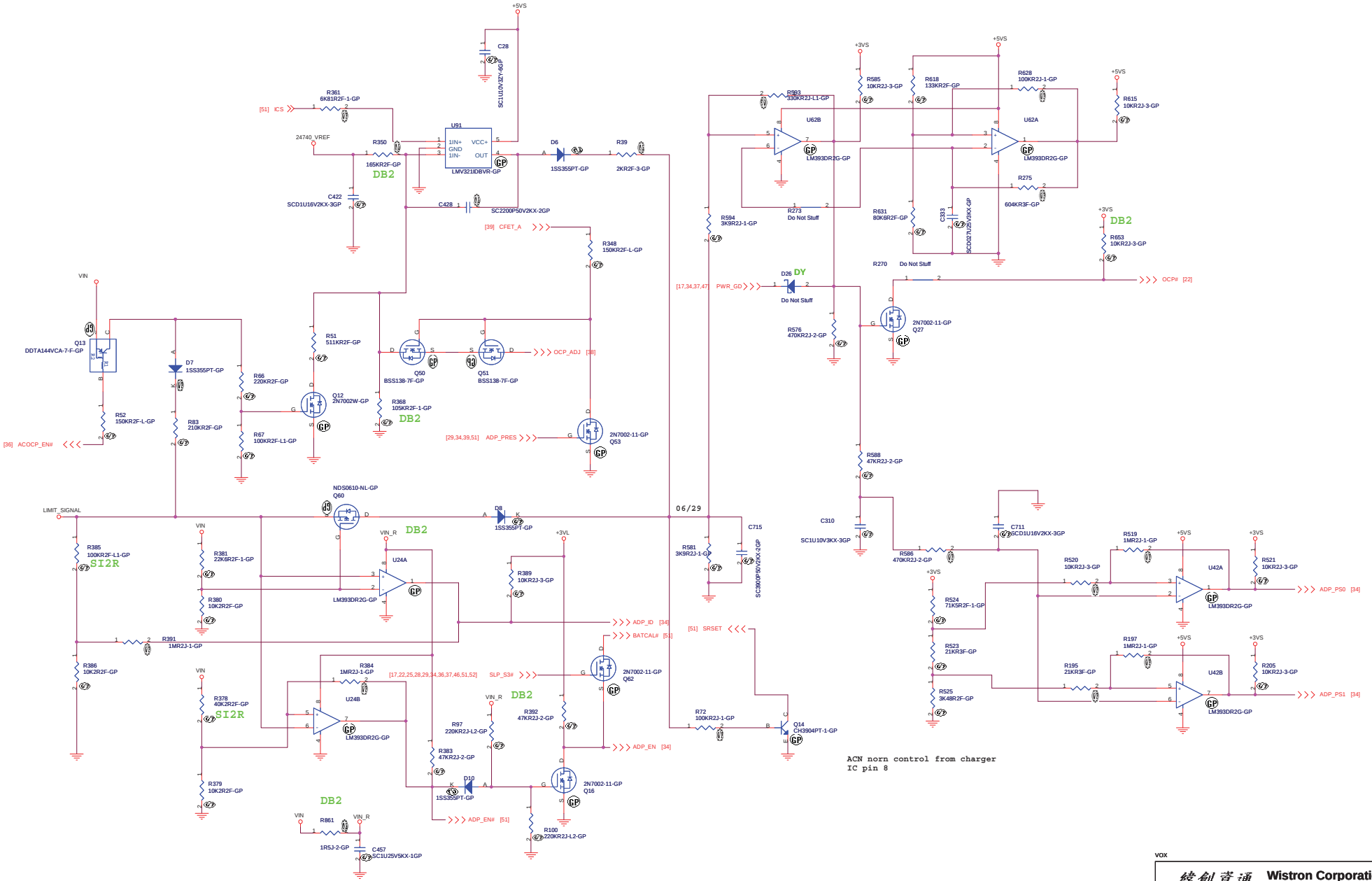
ADP/OCP



VOX

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Title: ADP OCP		
Size: A2	Document Number: Artemis	Rev: 3
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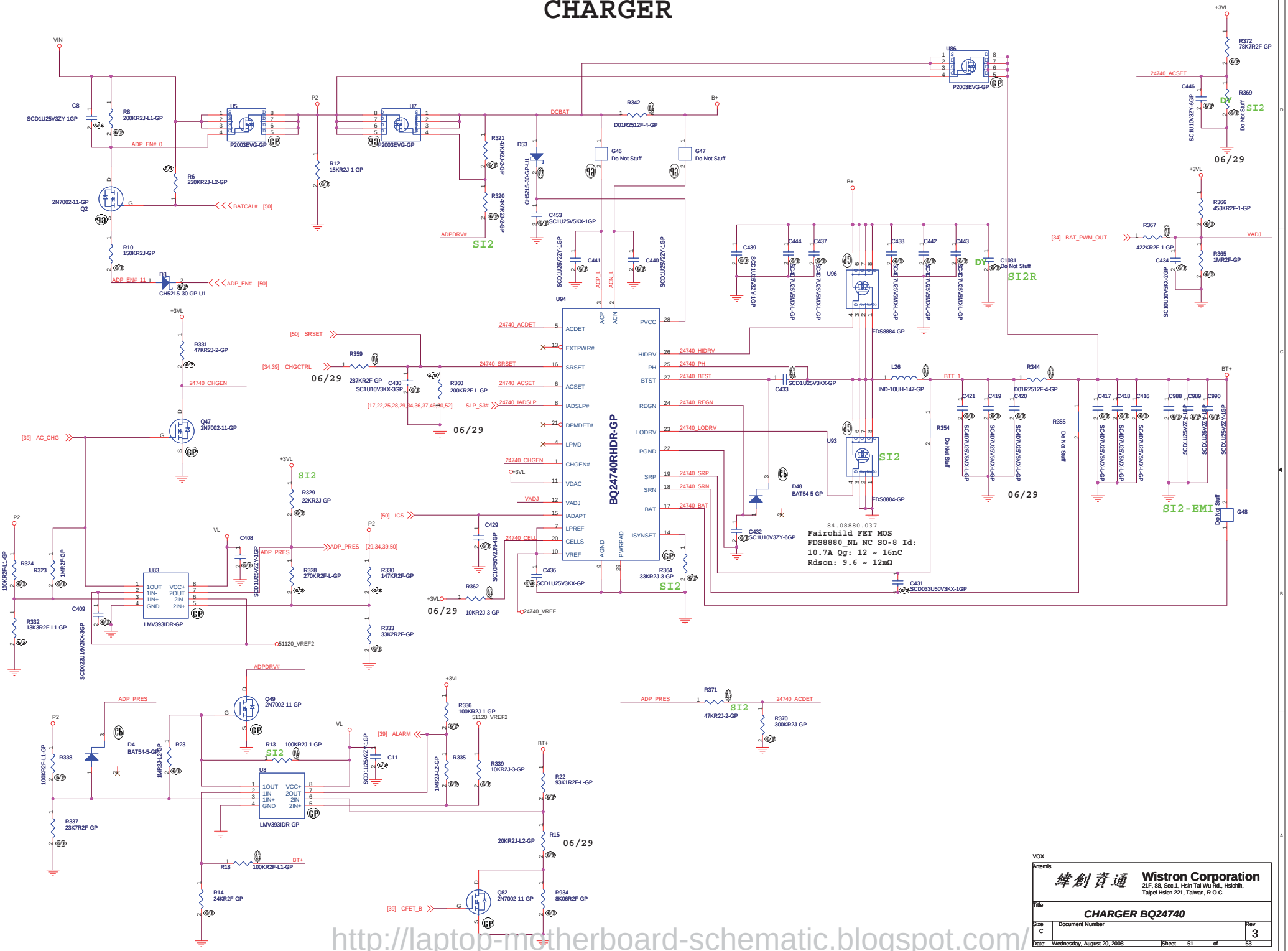
CHARGER



VOX

Artemis

緯創資通 **Wistron Corporation**

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Title: **CHARGER BQ24740**

Size	Document Number	Rev
C		3

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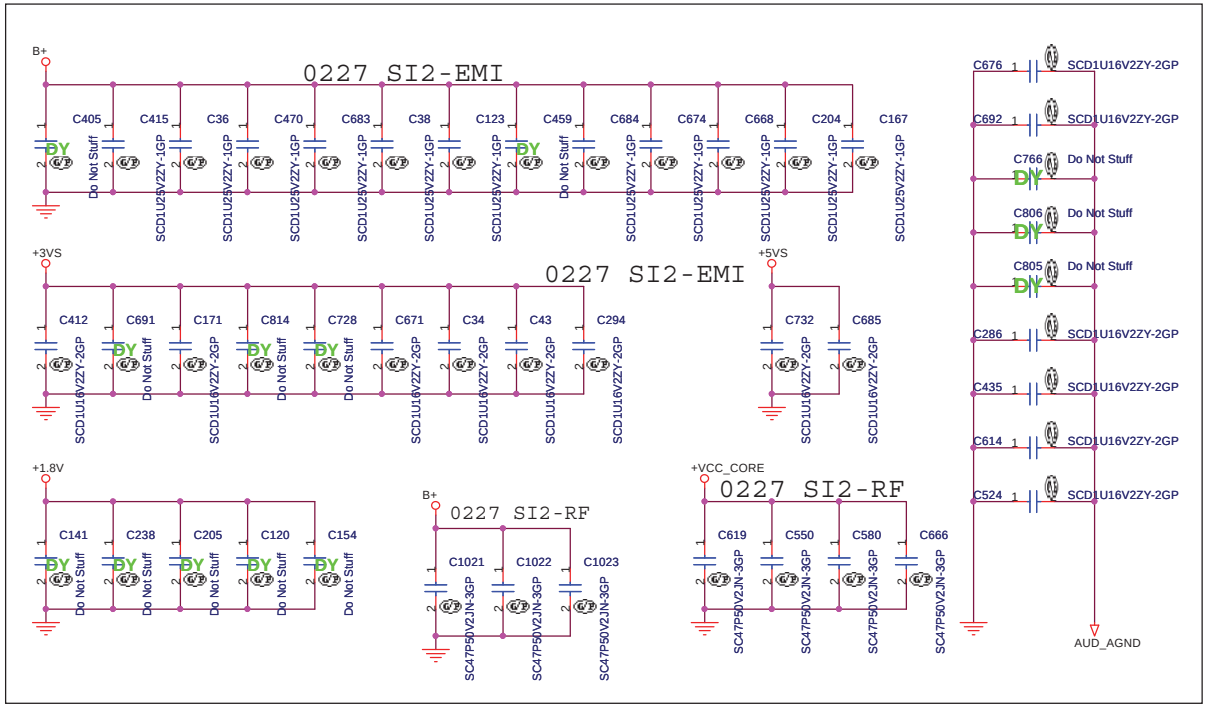
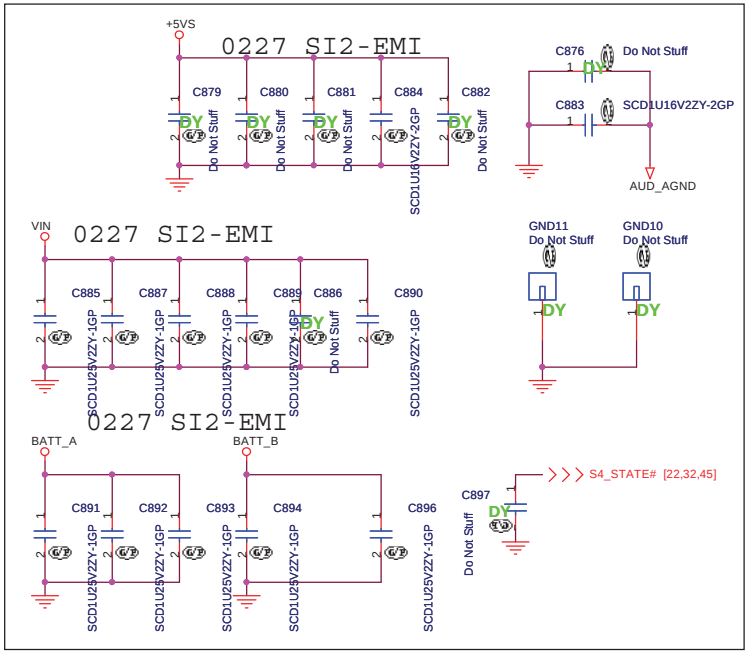
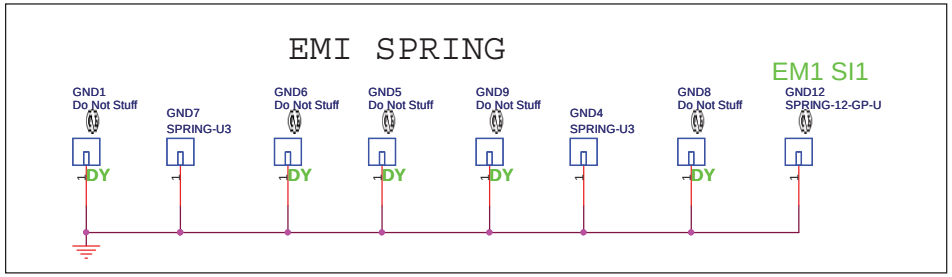
07/25 EMI



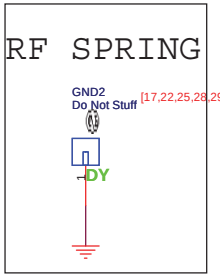
09/28 EMI

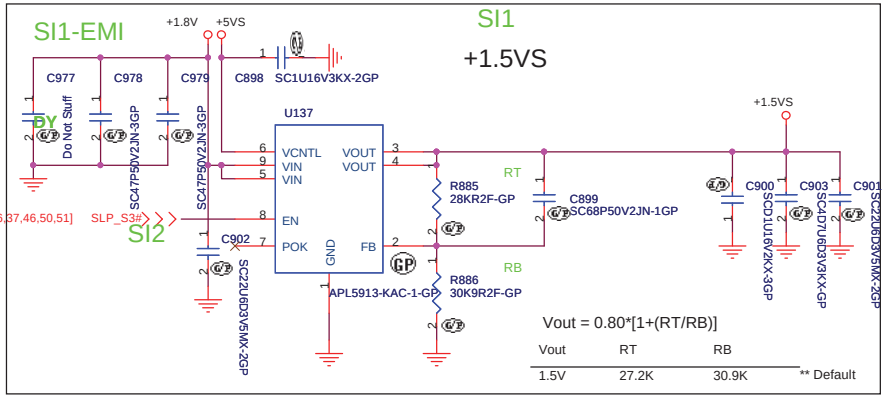


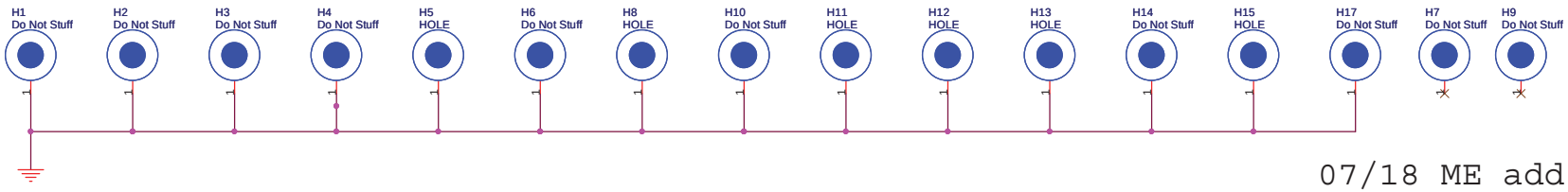
EMI SPRING

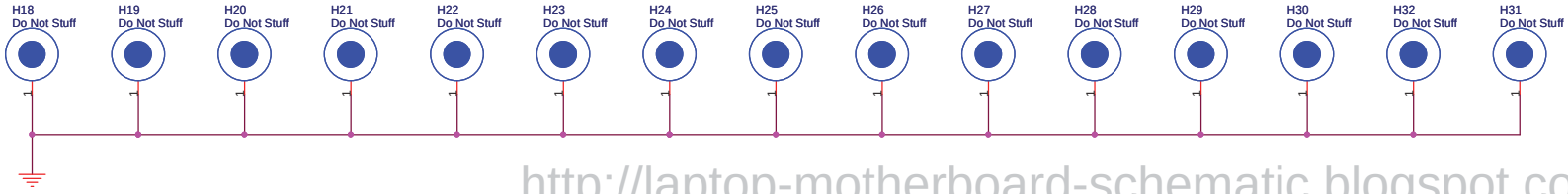


RF SPRING









07/18 ME add.

VOX

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Title: **RESERVE**

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A3	**Artemis**	3

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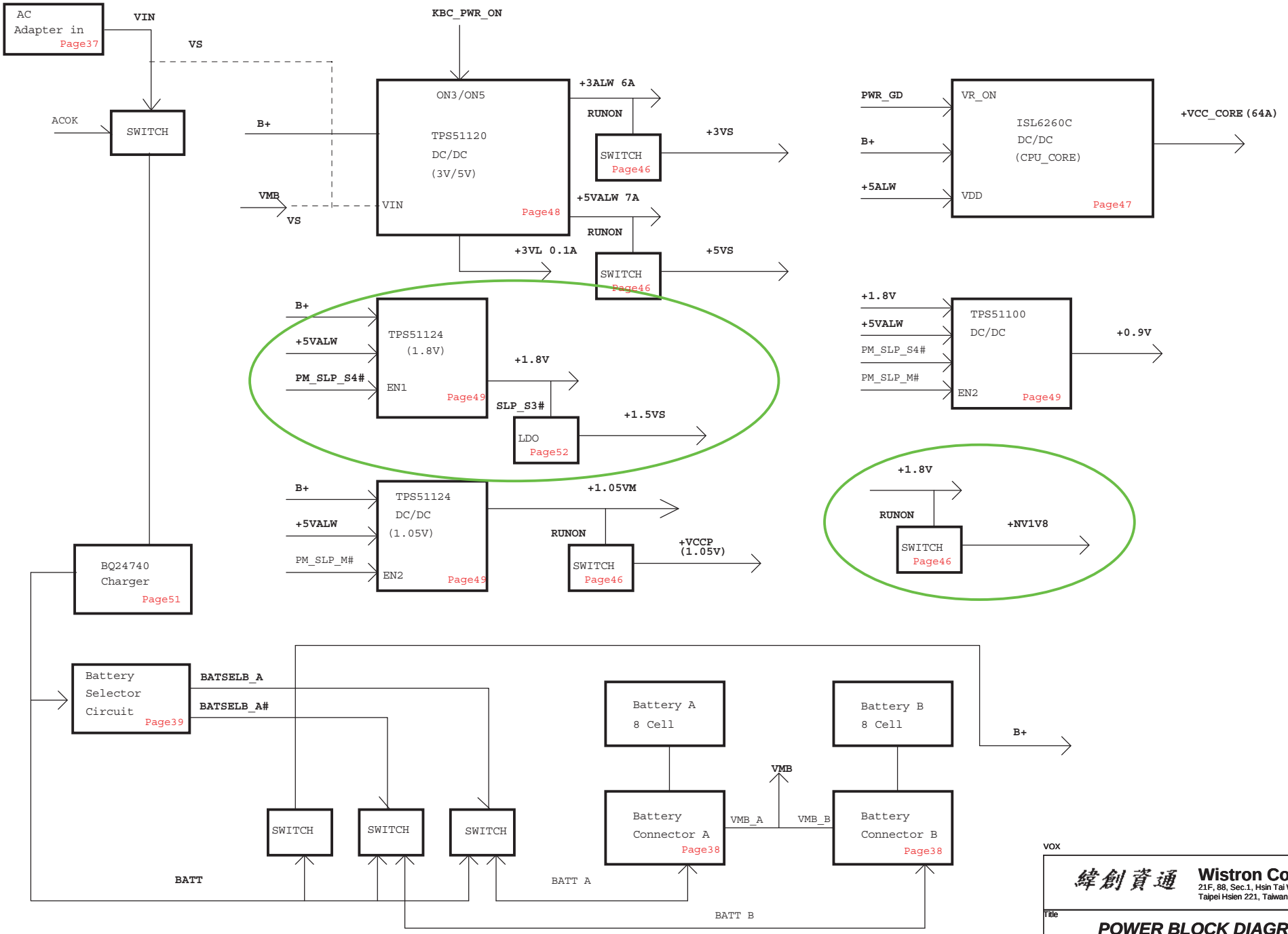

VOX

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

Title: POWER BLOCK DIAGRAM

Size	Document Number	Rev
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