

Yukon Block Diagram

Project code: 91.4BC01.001
 PCB P/N : 48.4BC01.0SA
 REVISION : 08226-SA

PCB Layer Stackup

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

CPU V_CORE

INPUT	OUTPUT
DCBATOUT	VCC_CORE_S0

SYSTEM DC/DC

INPUT	OUTPUT
DCBATOUT	ID2V_S0 ID8V_S3

SYSTEM DC/DC

INPUT	OUTPUT
DCBATOUT	5V_S5 3D3V_S5

SYSTEM LDO

INPUT	OUTPUT
1D8V_S3	0D9V_S3

SYSTEM LDO

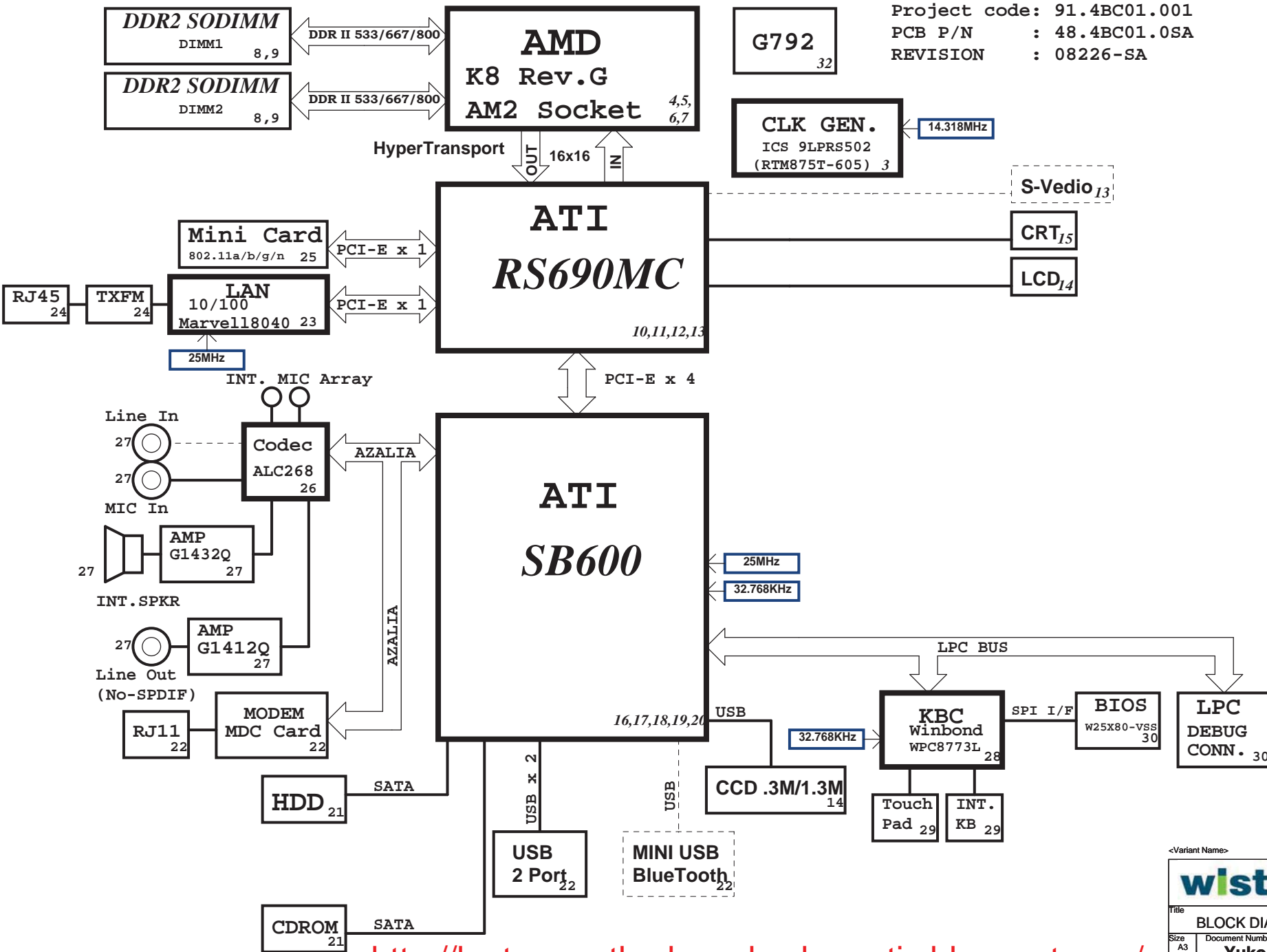
INPUT	OUTPUT
3D3V_S5 3D3V_S0 3D3V_S0	1D2V_S5 2D5V_S0 1D5V_S0

SYSTEM LDO

INPUT	OUTPUT
DCBATOUT	5V_AUX_S5 3D3V_AUX_S5

Battery Charger

INPUTS	OUTPUTS
AD+ BAT+	DCBATOUT



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 Hsichih, Taipei

Title: **BLOCK DIAGRAM**

Size A3 Document Number: **Yukon** Rev SA

Date: Thursday, July 03, 2008 Sheet 1 of 43

5

4

3

2

1

D

D

C

C

B

B

A

A

<Core Design>

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

Title **CHANGE HISTORY**

Size A3	Document Number Yukon	Rev SA
Date: Thursday, July 03, 2008	Sheet 2 of	43

5

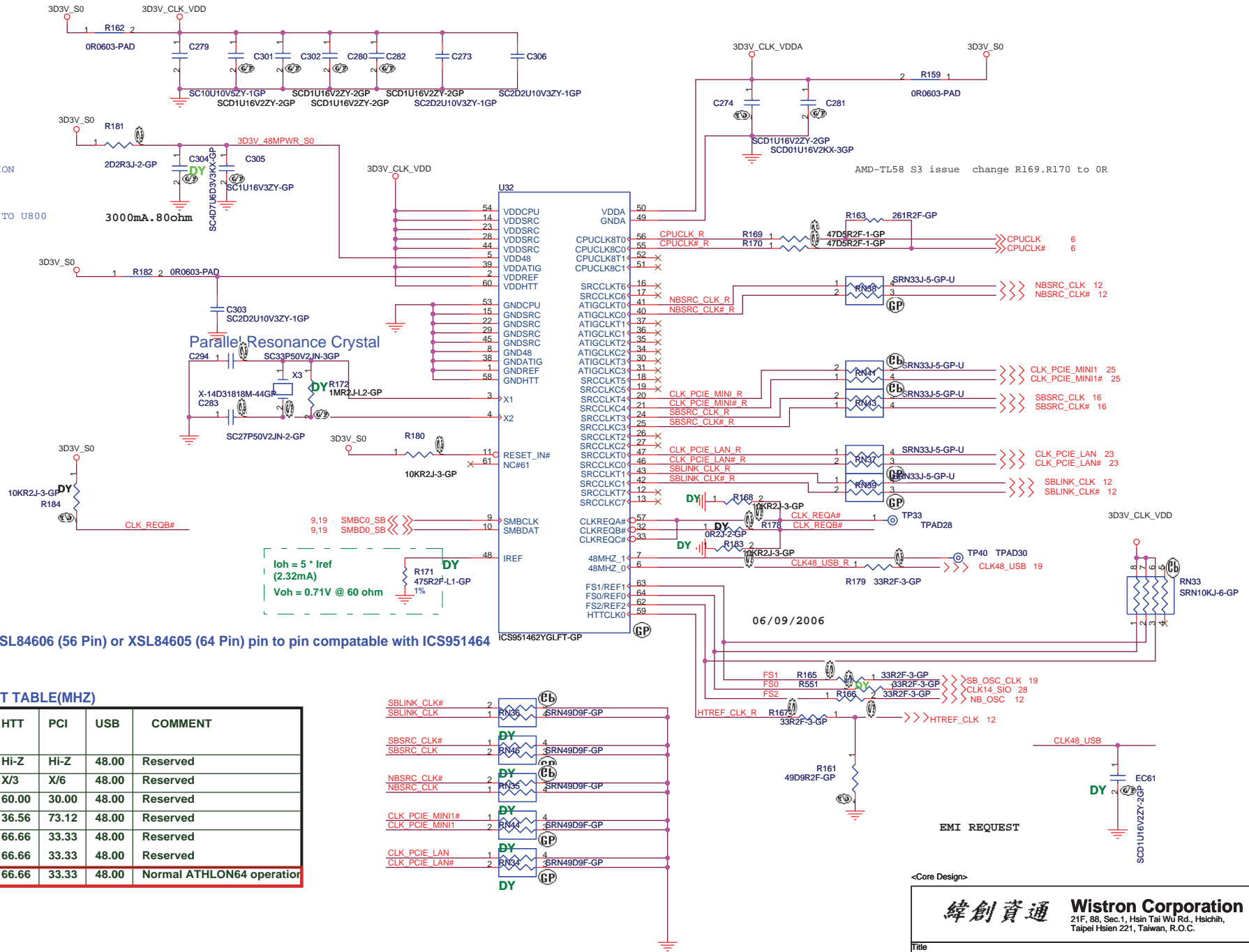
4

3

2

1

- 1- PLACE ALL SERIAL TERMINATION RESISTORS CLOSE TO U800
- 2- PUT DECOUPLING CAPS CLOSE TO U800 POWER PIN



Check SLGO EXT CLK XSL84606 (56 Pin) or XSL84605 (64 Pin) pin to pin compatible with ICS951464

EXT CLK FREQUENCY SELECT TABLE(MHZ)

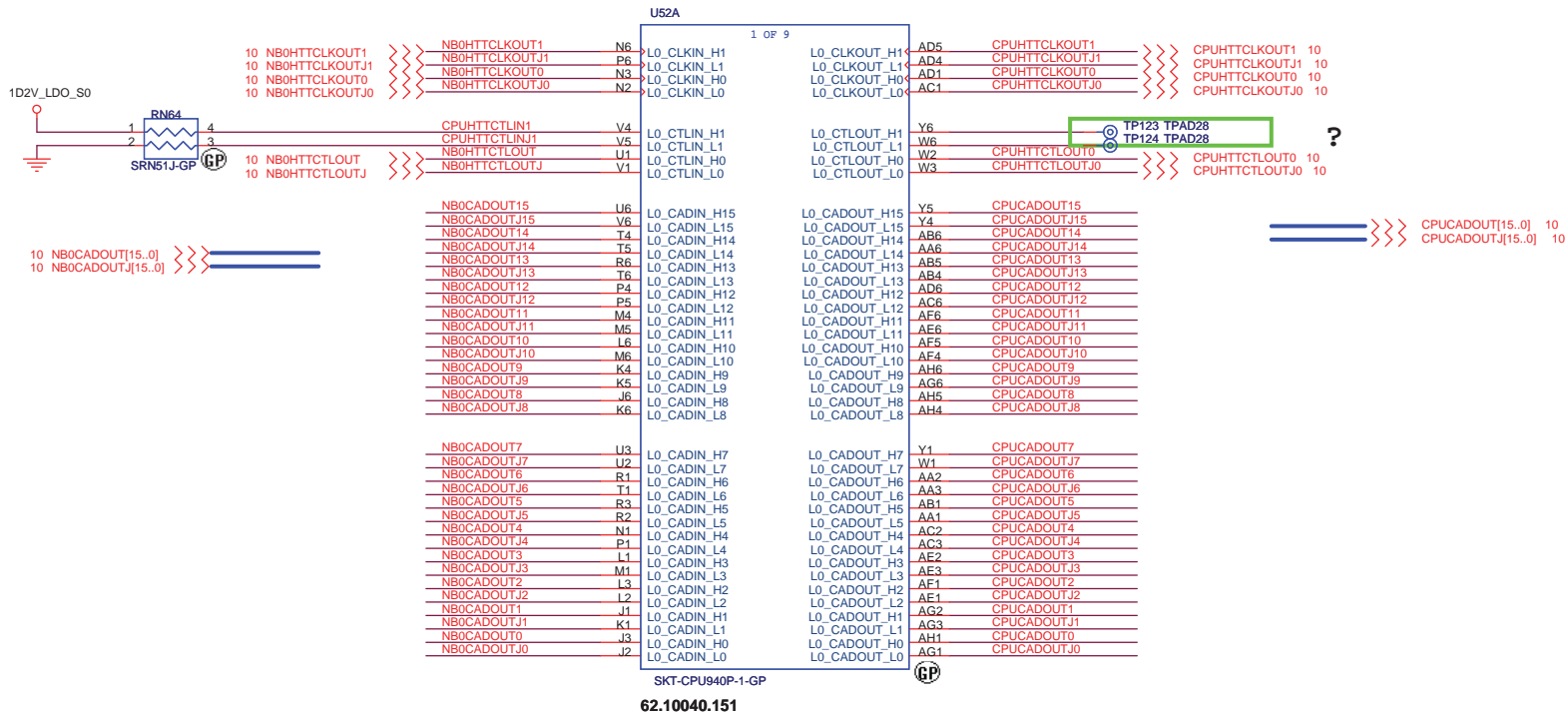
FS2	FS1	FS0	CPU	SRCCLK [2:1]	HTT	PCI	USB	COMMENT
0	0	0	Hi-Z	100.00	Hi-Z	Hi-Z	48.00	Reserved
0	0	1	X	100.00	X/3	X/6	48.00	Reserved
0	1	0	180.00	100.00	60.00	30.00	48.00	Reserved
0	1	1	220.00	100.00	36.56	73.12	48.00	Reserved
1	0	0	100.00	100.00	66.66	33.33	48.00	Reserved
1	0	1	133.33	100.00	66.66	33.33	48.00	Reserved
1	1	1	200.00	100.00	66.66	33.33	48.00	Normal ATHLON64 operator

<Core Design>

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Title: **CLKGEN_ICS951412**

Size A3	Document Number	Rev SA
Yukon		
Date: Thursday, July 03, 2008	Sheet 3	of 43

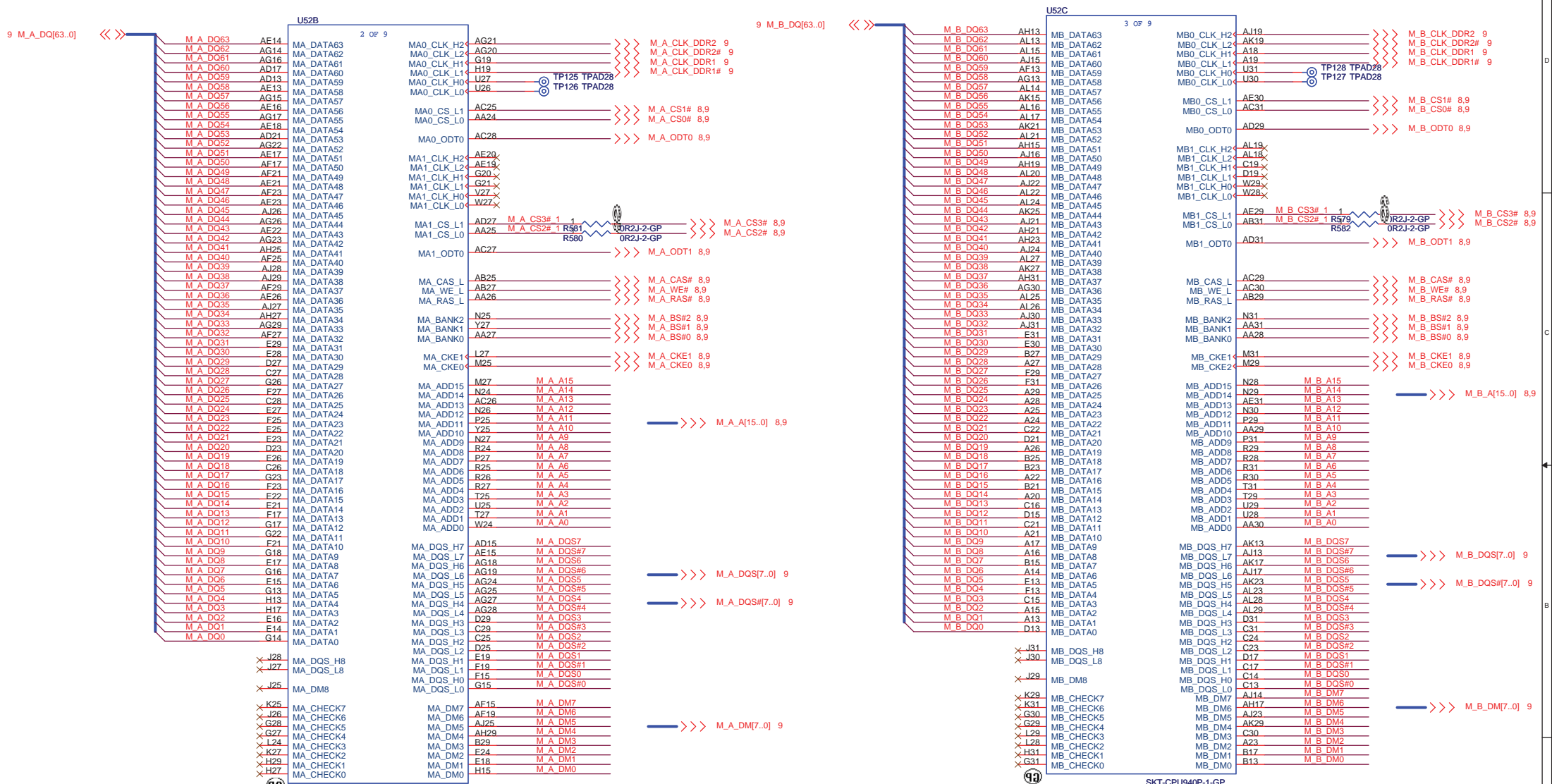


<Core Design>

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

Title: **CPU(1/4)_HyperTransport I/F**

Size: A3	Document Number: Yukon	Rev: SA
Date: Thursday, July 03, 2008	Sheet: 4	of: 43



62.10040.151

SKT-CPU940P-1-GP

62.10040.151

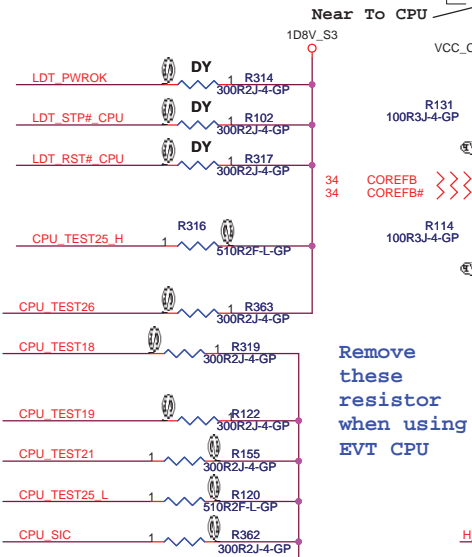
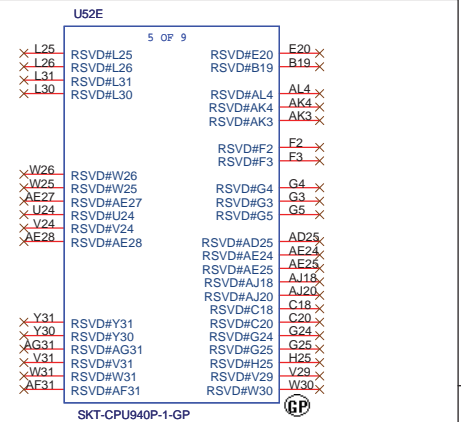
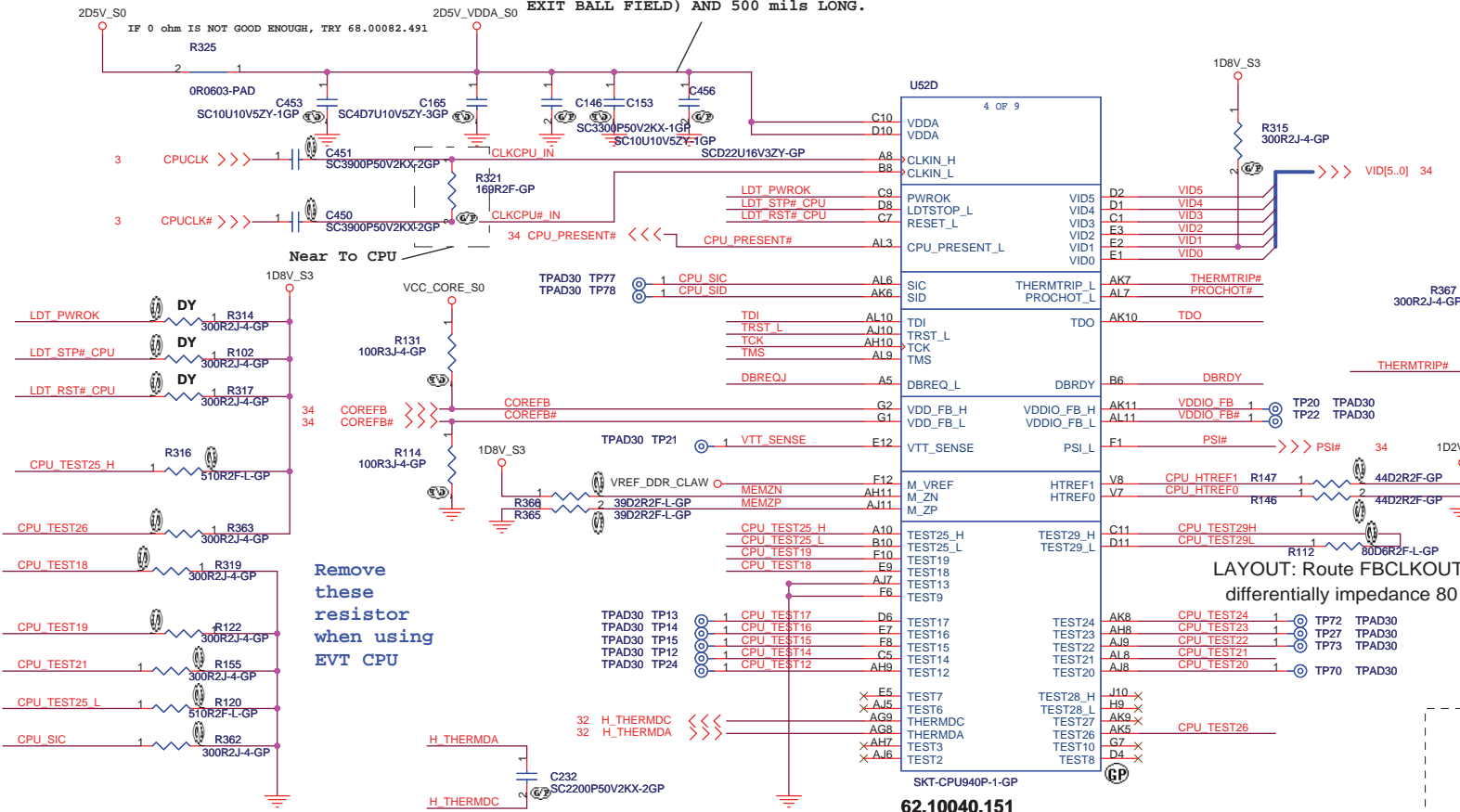
SKT-CPU940P-1-GP

<Core Design>

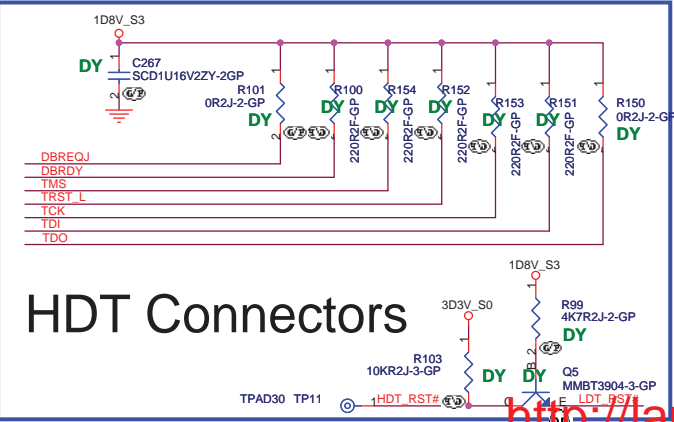
緯創資通 **Wistron Corporation**
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Title CPU(2/4)_DDR		
Size A3	Document Number Yukon	Rev SA
Date: Thursday, July 03, 2008	Sheet 5	of 43

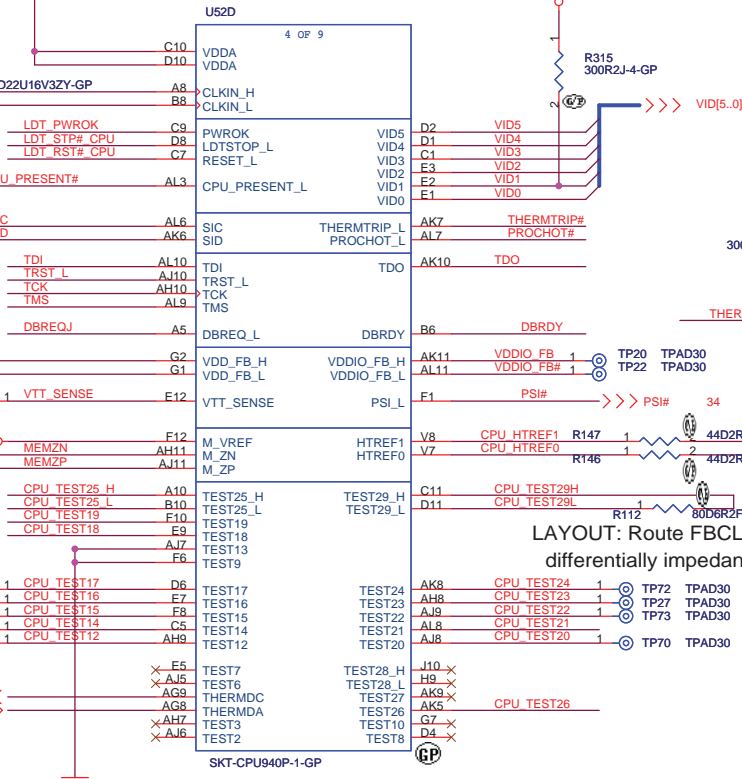
LYAOUT:ROUTE VDDA TRACE APPROX.
50mils WIDE(USE 2X25 mil TRACES TO
EXIT BALL FIELD) AND 500 mils LONG.



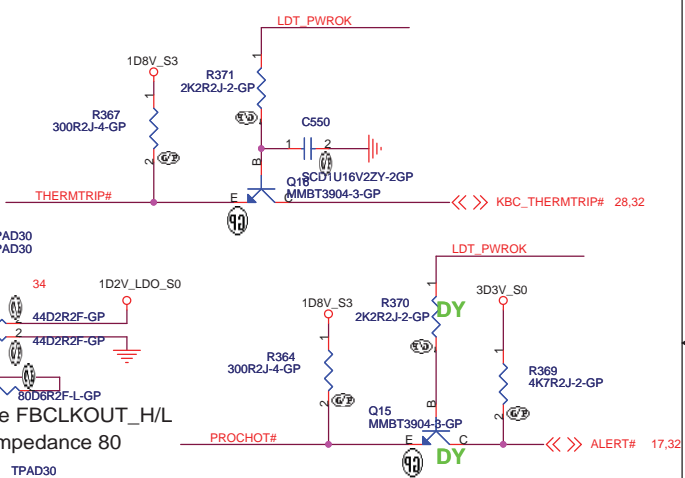
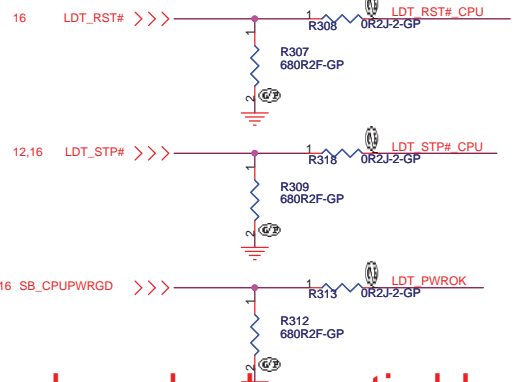
Remove these resistor when using EVT CPU



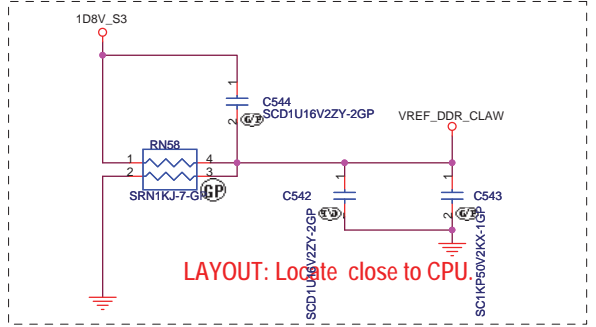
HDT Connectors



62.10040.151



VREF_DDR_CLAW

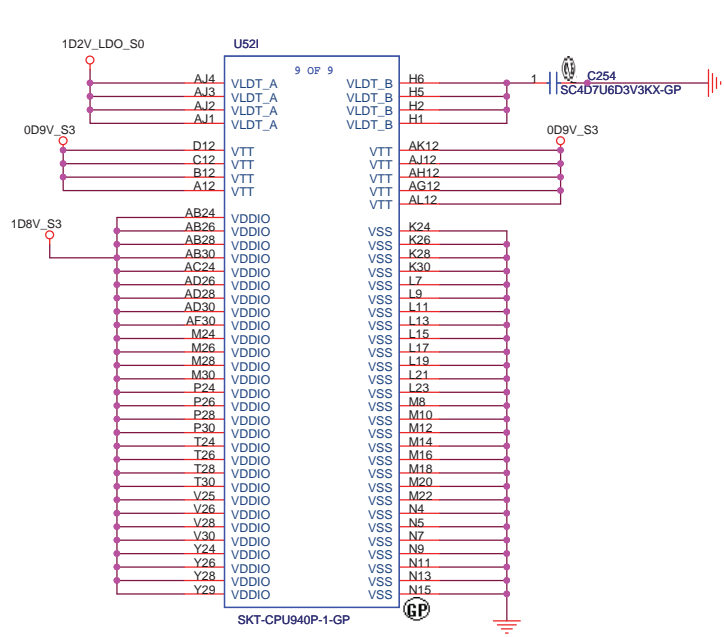


LAYOUT: Locate close to CPU

<Core Design>

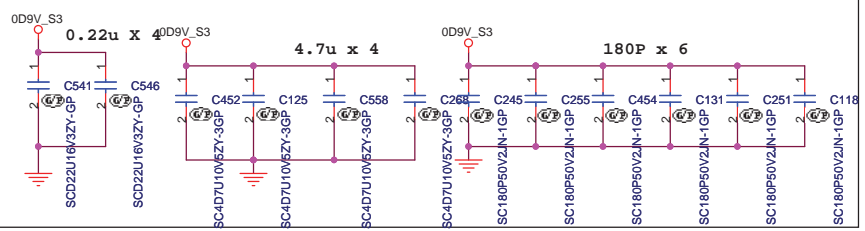
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Title		
CPU(3/4)_Control & Debug		
Size	Document Number	Rev
A3	Yukon	SA
Date:	Thursday, July 03, 2008	Sheet 6 of 43

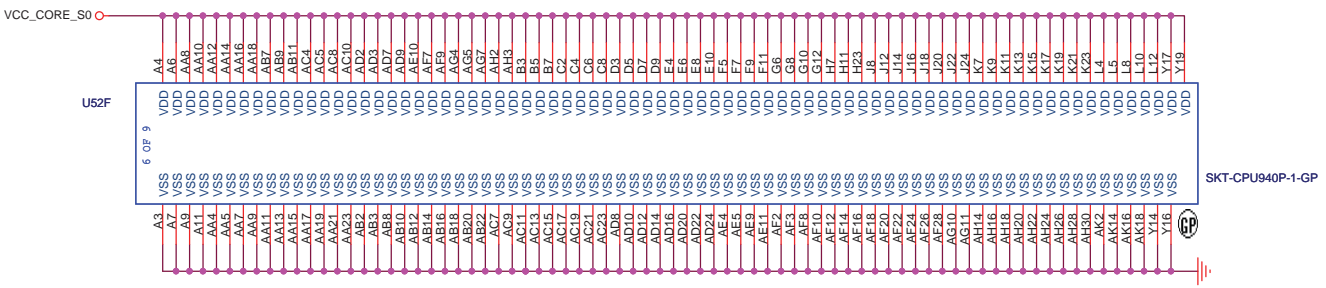
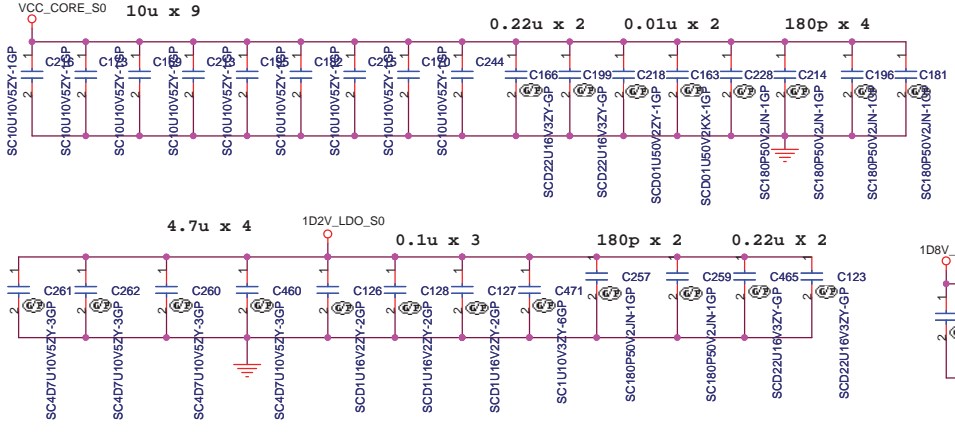


62.10040.151

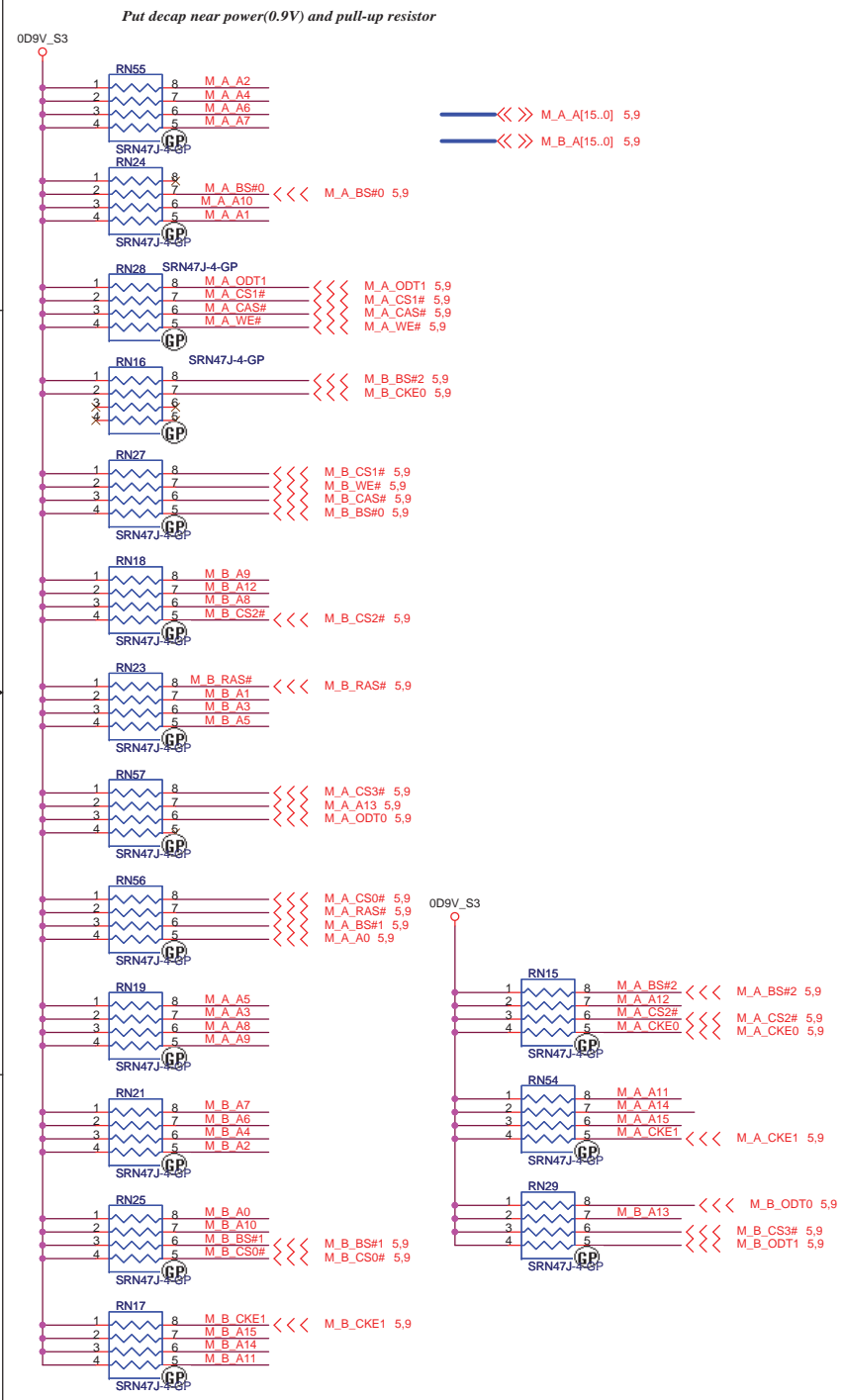
Place near to CPU



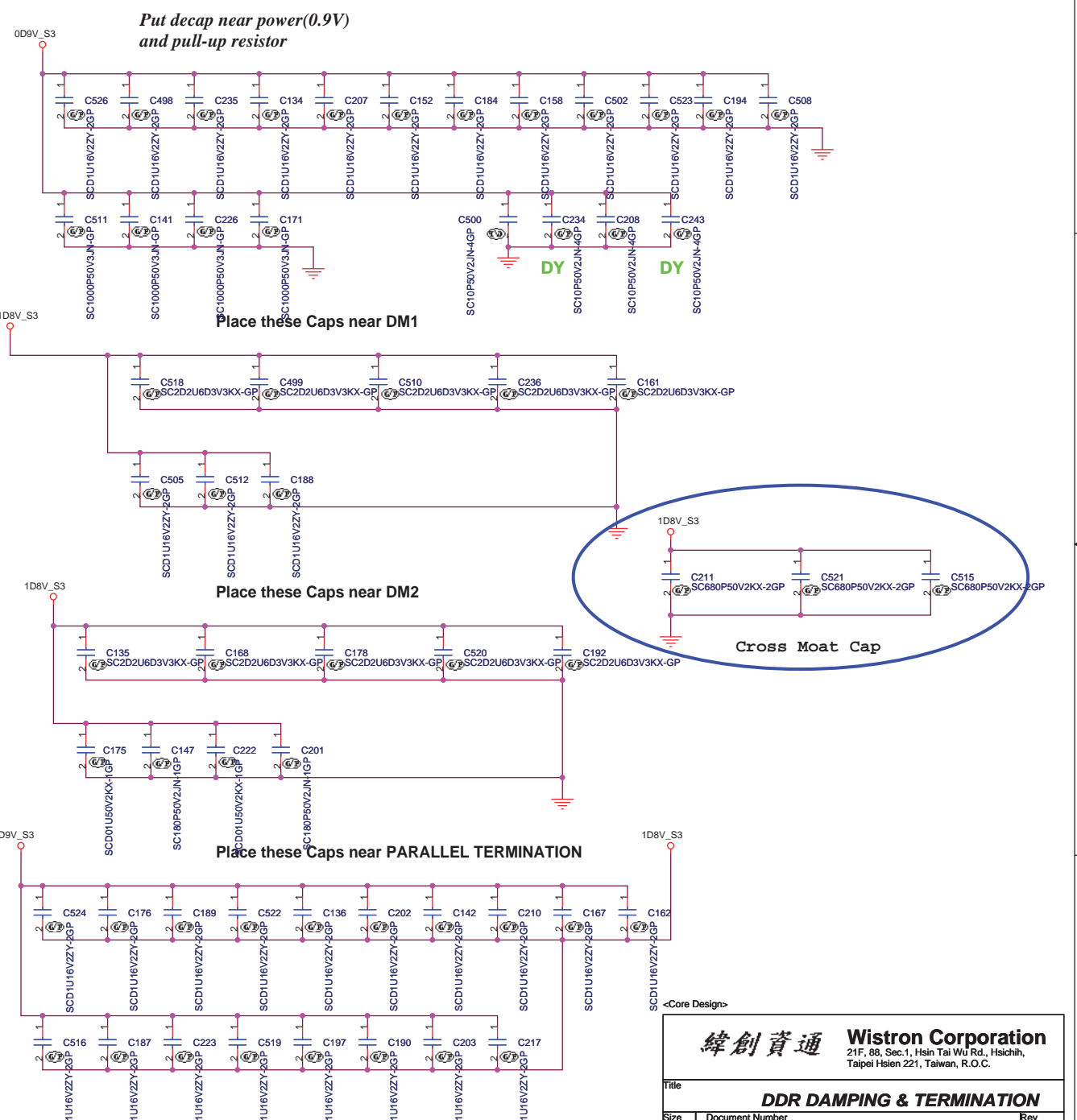
LAYOUT: Place on backside of processor.



PARALLEL TERMINATION



Decoupling Capacitor

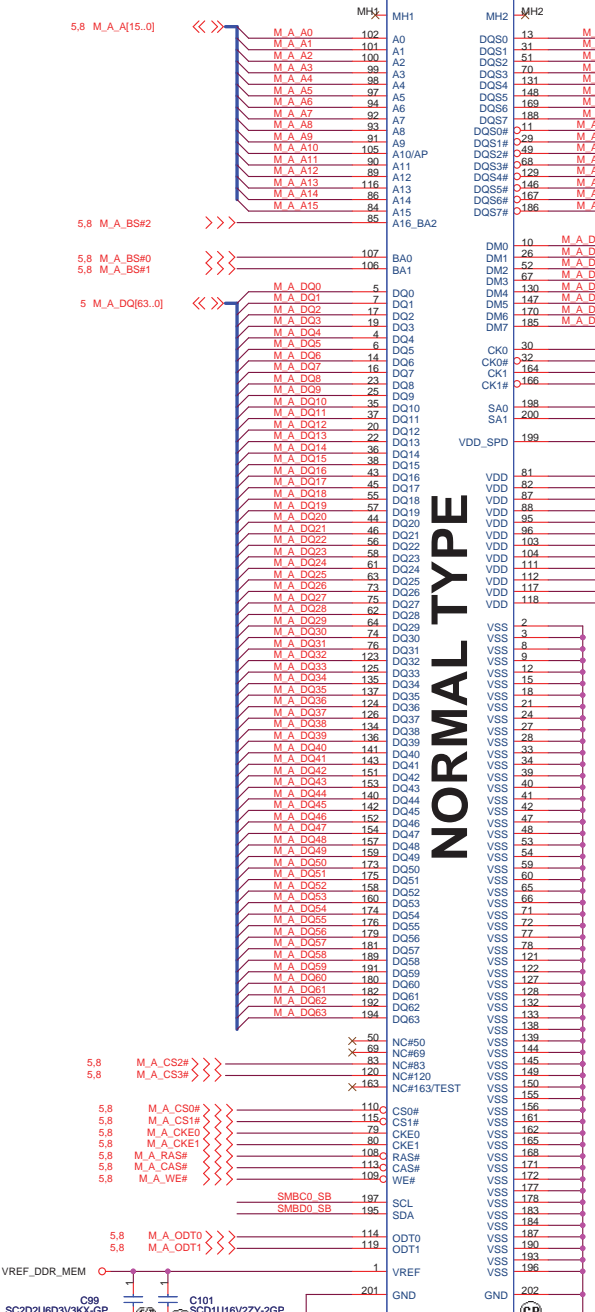
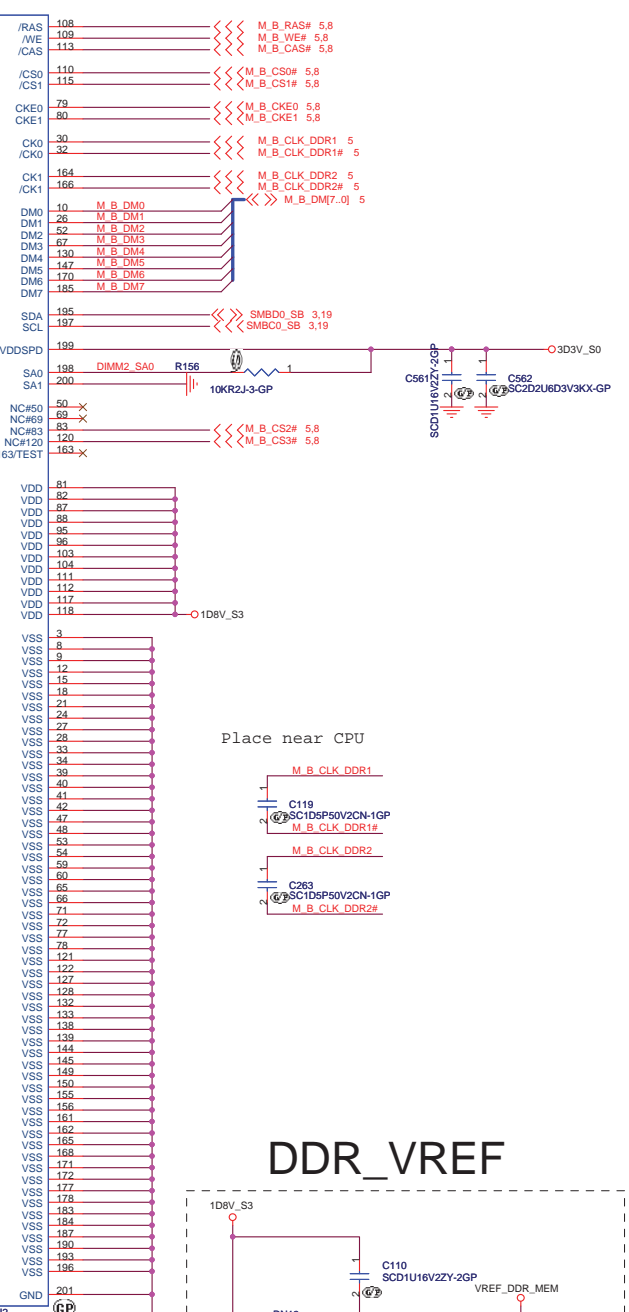
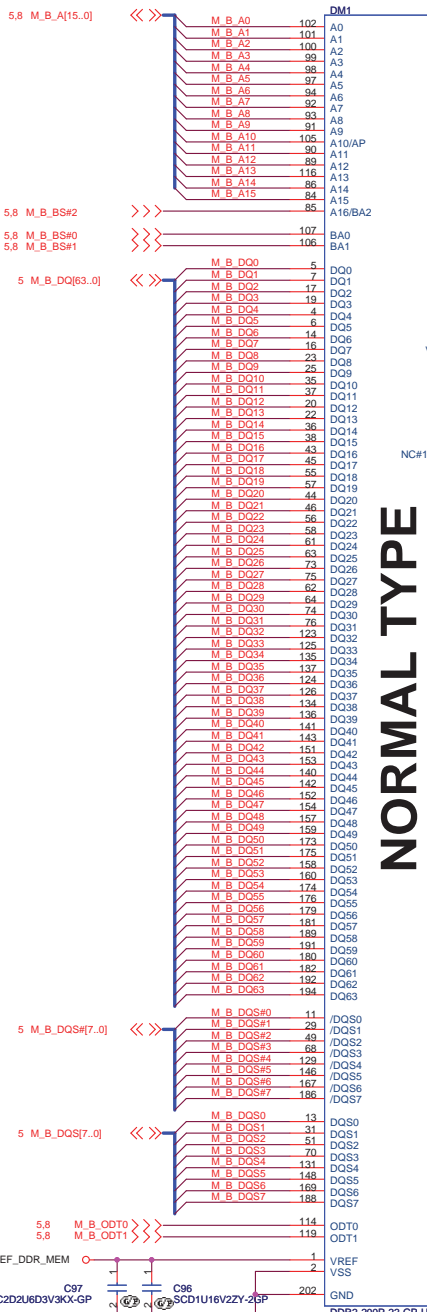


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File: **DDR DAMPING & TERMINATION**

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NORMAL TYPE

NORMAL TYPE

Place near CPU

Place near CPU

DDR_VREF

62.10017.A61
High 9.2mm
2nd: 62.10017.A51

62.10017.661
High 5.2mm
2nd: 62.10017.A41

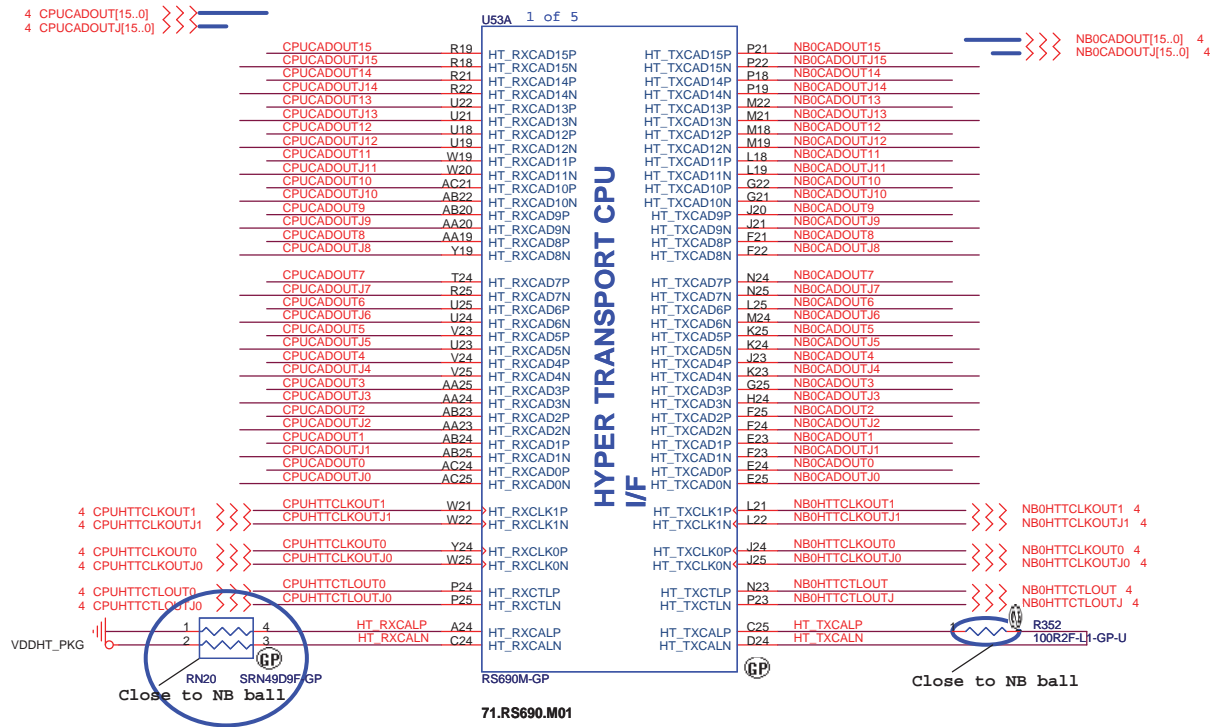
<Core Design>

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Title		DDR SO-DIMM SKT	
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Custom	Yukon		
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CLAW HAMMER TO NB

NB TO CLAW HAMMER

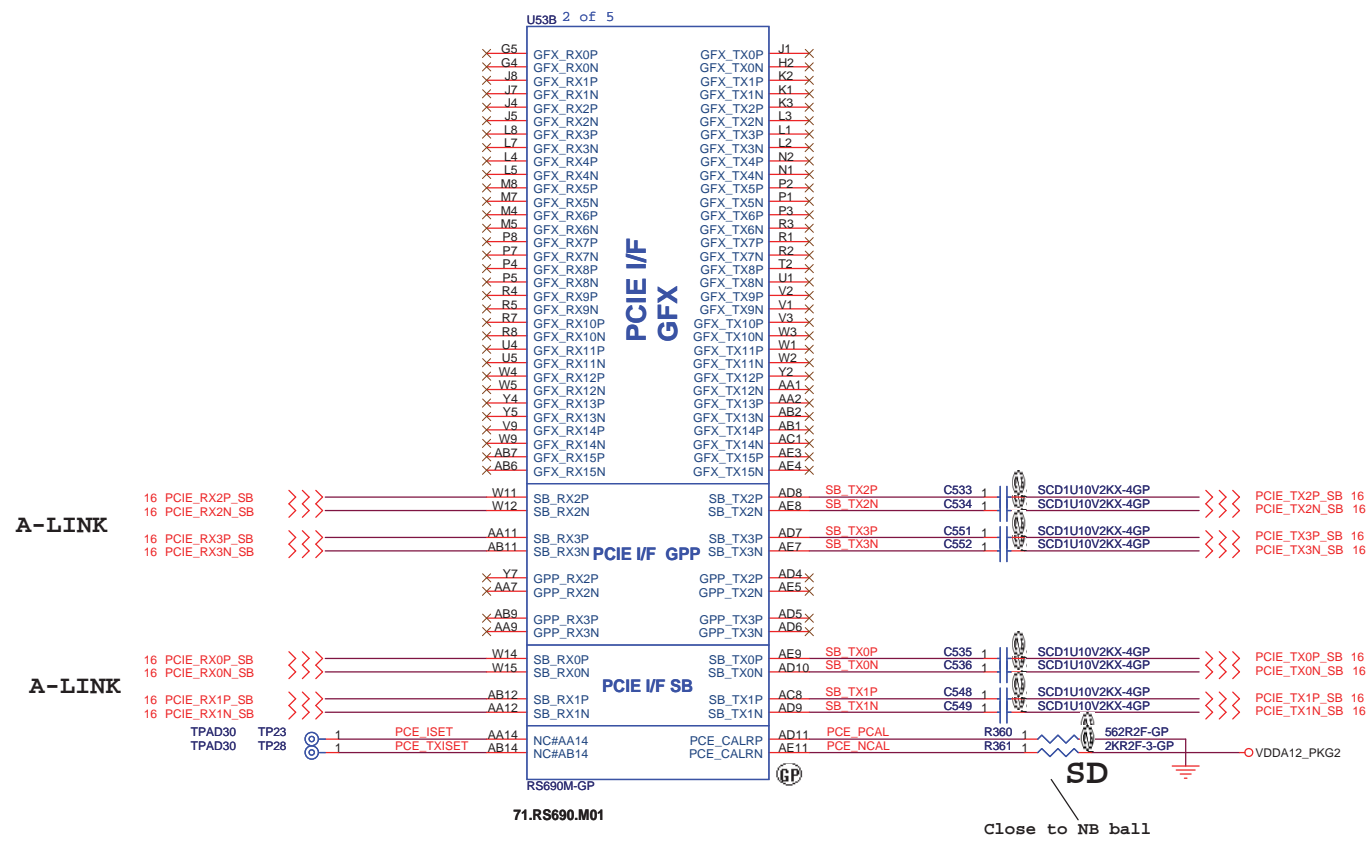


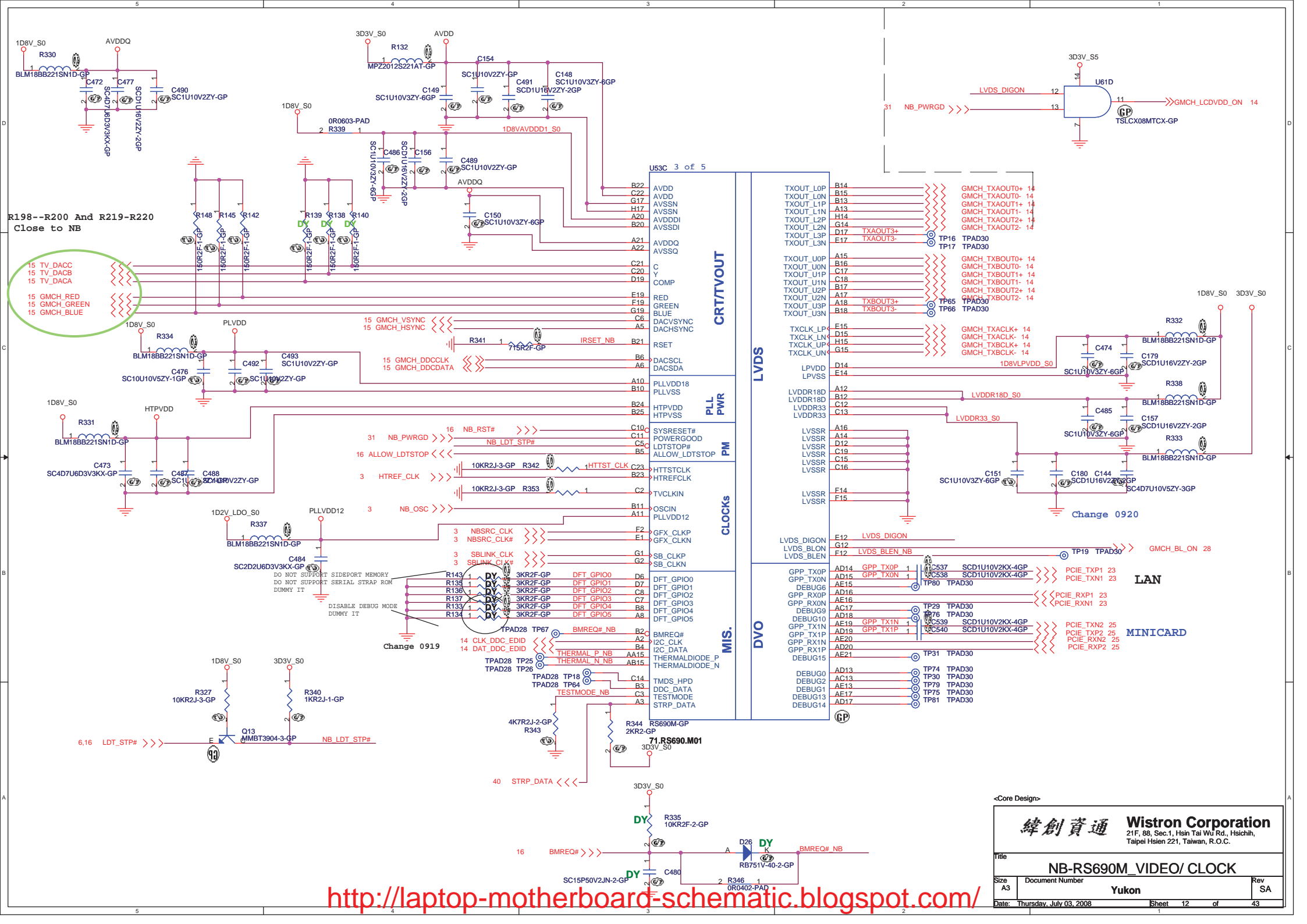
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Title: **NB-RS690M HT**

Size: A3	Document Number: Yukon	Rev: SA
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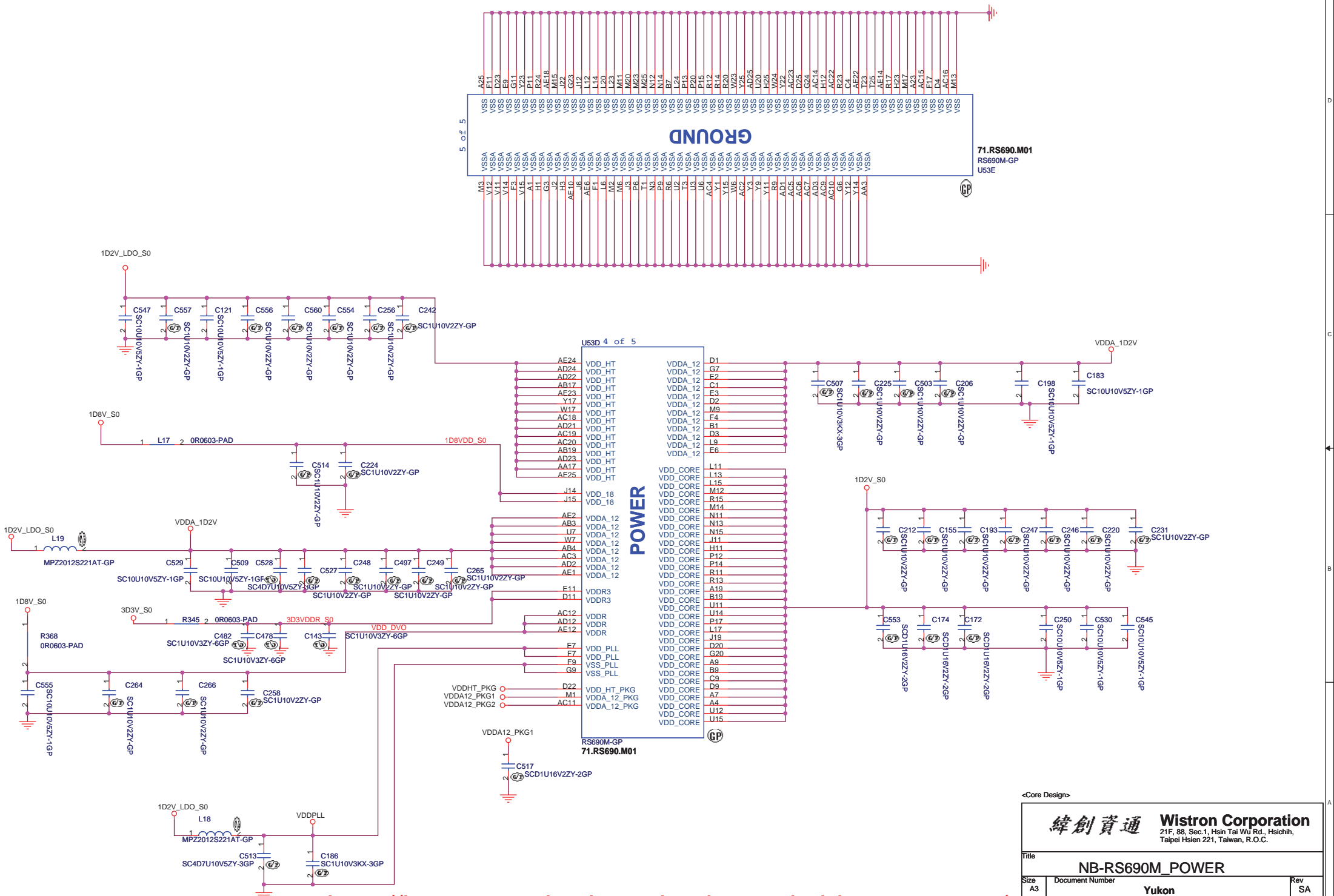
Wistron Corporation
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 Taipei Hsein 221, Taiwan, R.O.C.

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File: **NB-RS690M_VIDEO/ CLOCK**

Size: A3 Document Number: Yukon Rev: SA

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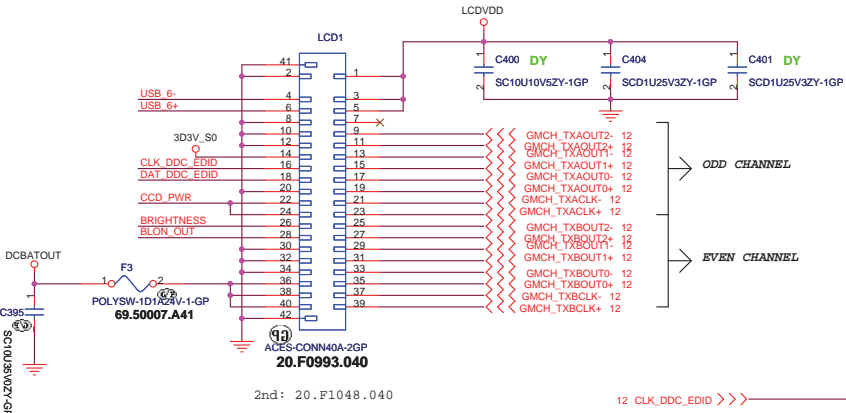
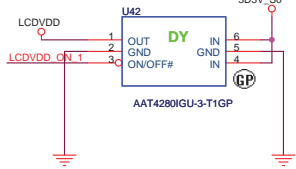
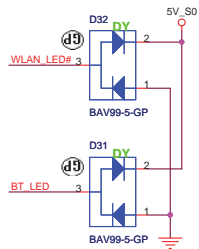
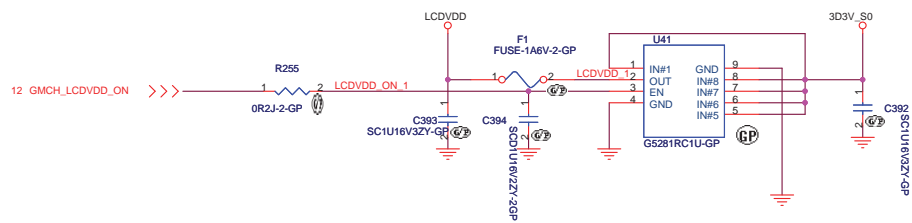
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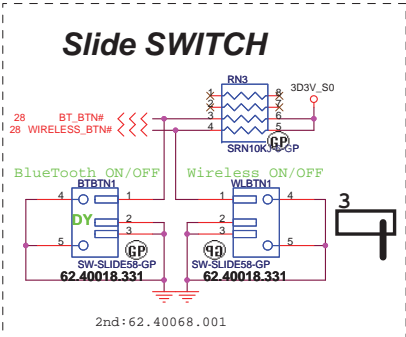
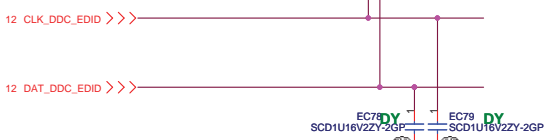
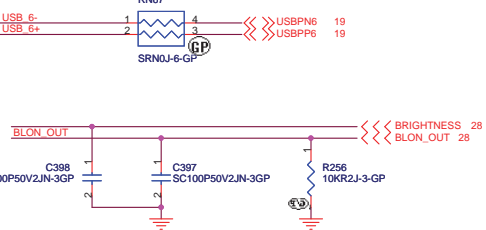
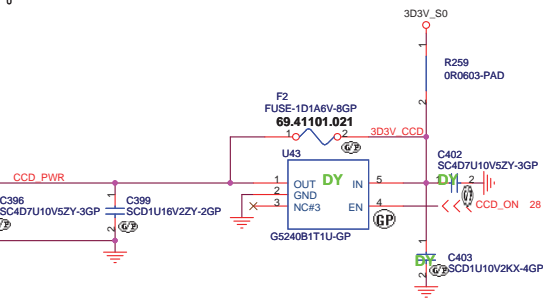
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Size: A3	Document Number: Yukon	Rev: SA
Date: Tuesday, July 01, 2008		Sheet 13 of 43

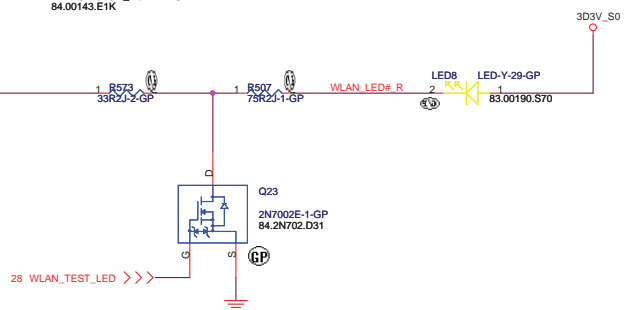
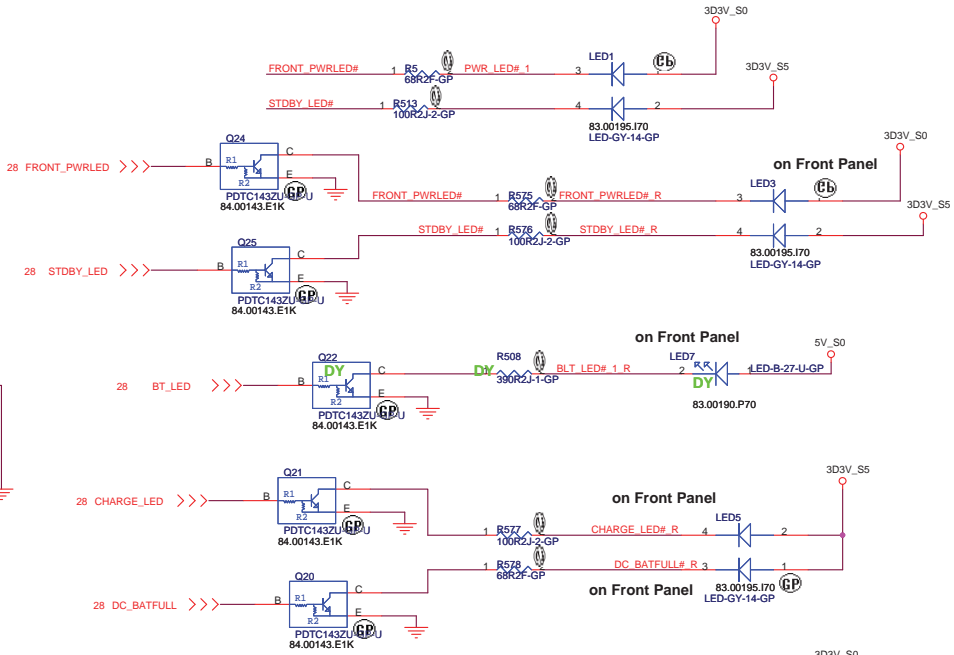
LCD/INVERTER CONN



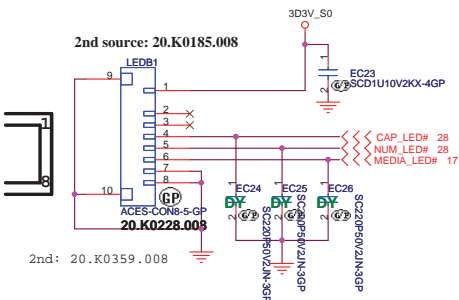
2nd: 20.F1048.040



2nd: 62.40068.001



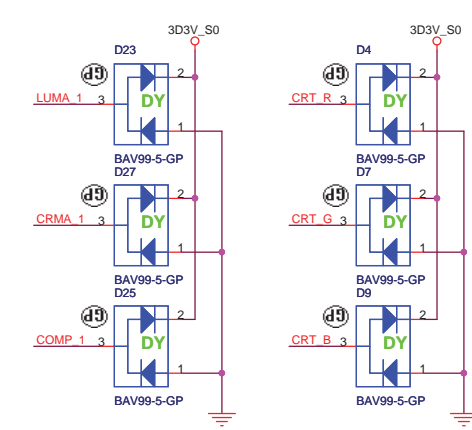
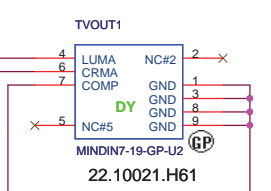
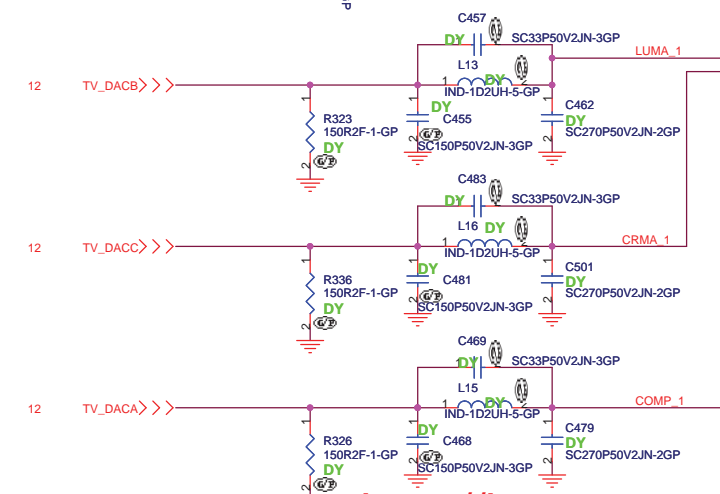
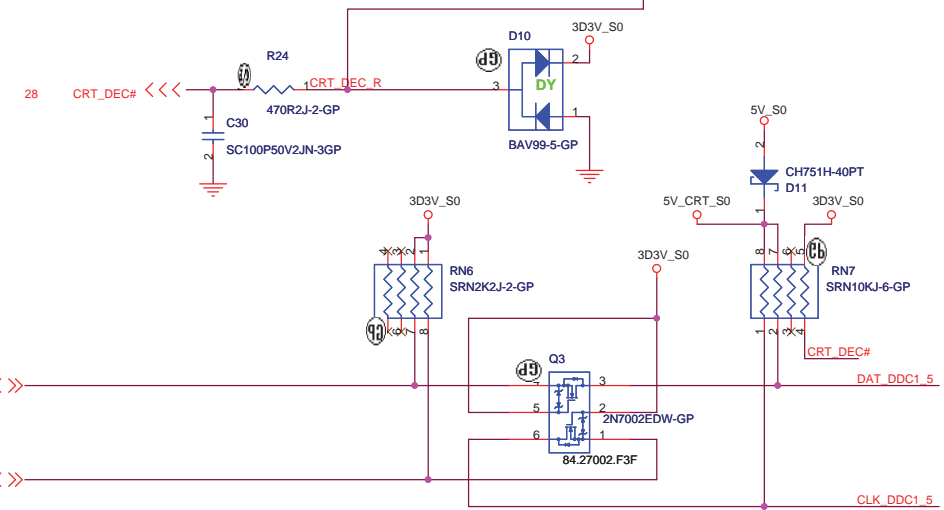
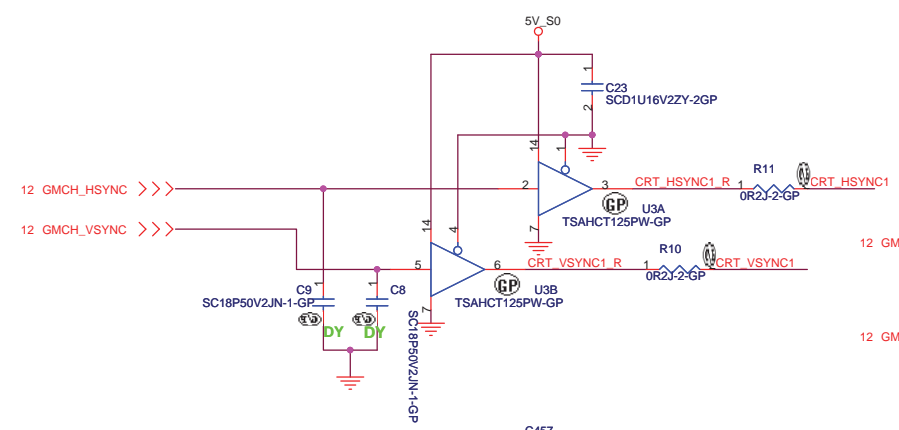
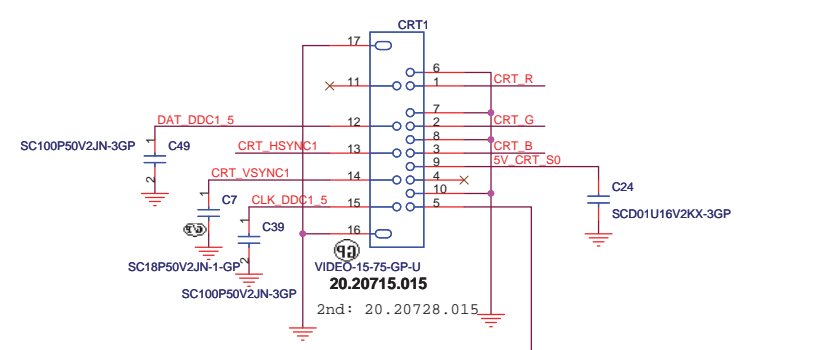
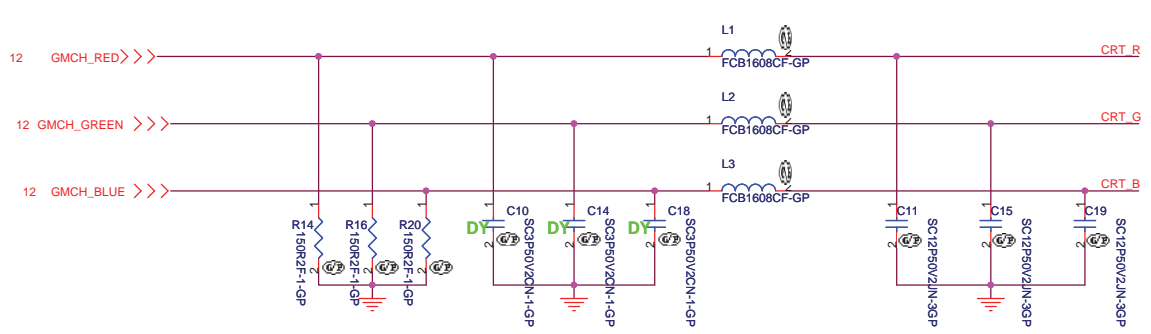
LED BD



2nd: 20.K0359.008

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File: LCD CONN & LED
Size: Document Number: Yukon
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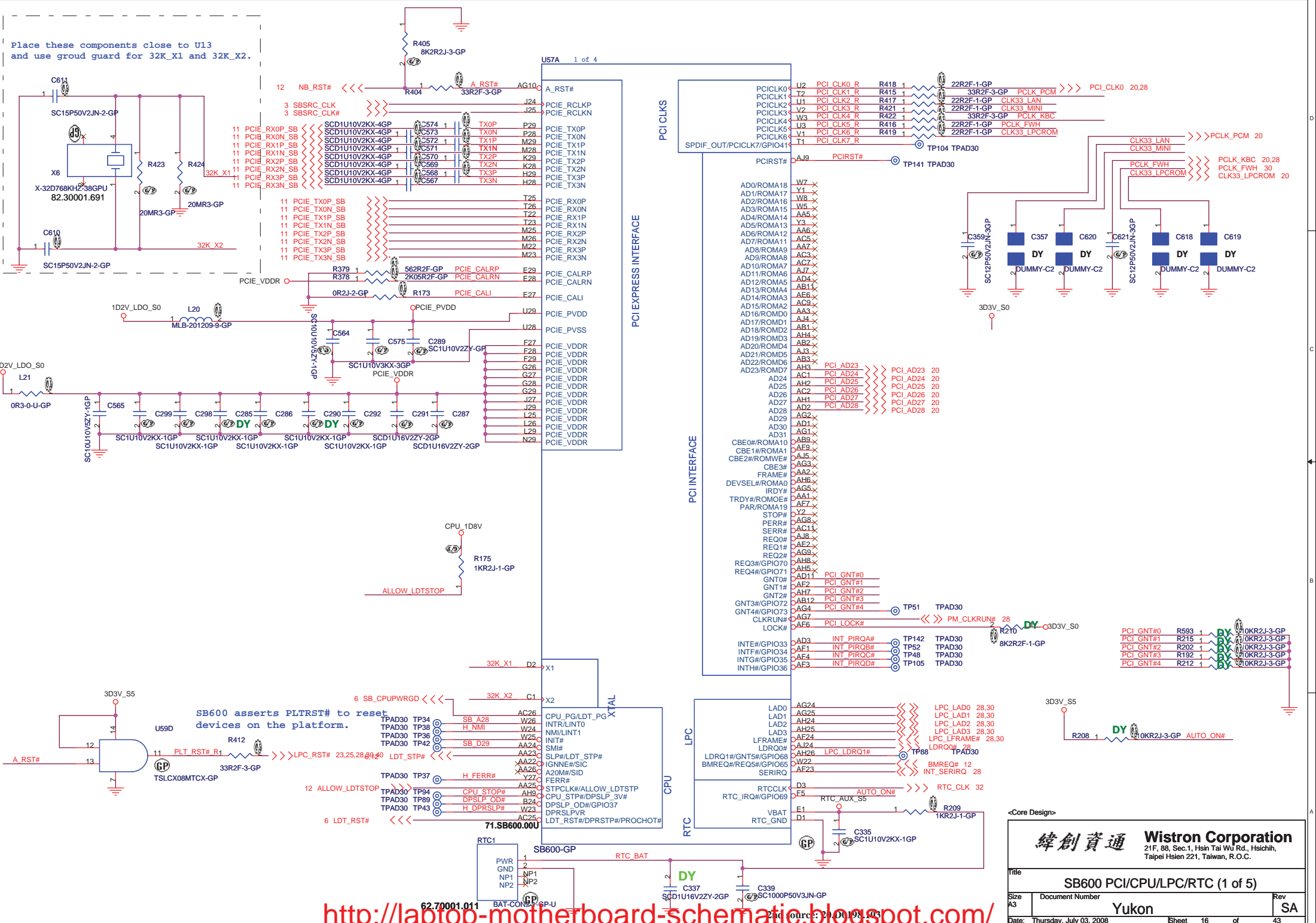


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Title		CRT/TV Connector	
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Place these components close to U13 and use ground guard for 32K_X1 and 32K_X2.



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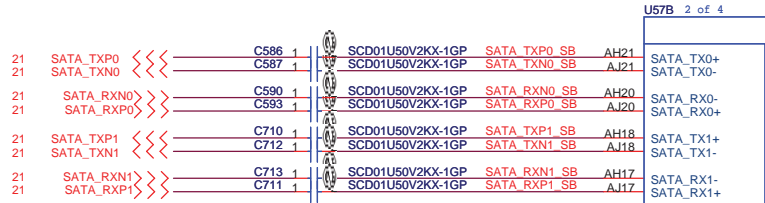
緯創資通 Wistron Corporation
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **SB600 PCI/CPU/LPC/RTC (1 of 5)**

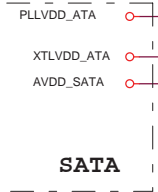
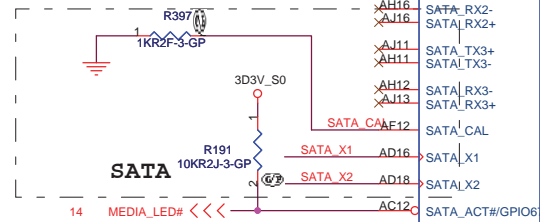
Size: A3 Document Number: Yukon Rev: SA

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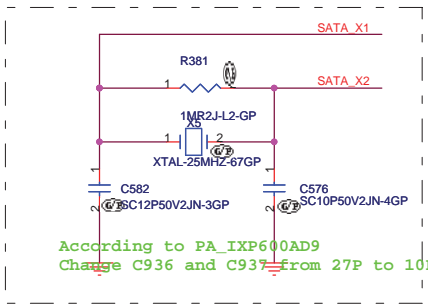
PLACE SATA AC DECOUPLING CAPS CLOSE TO SB460



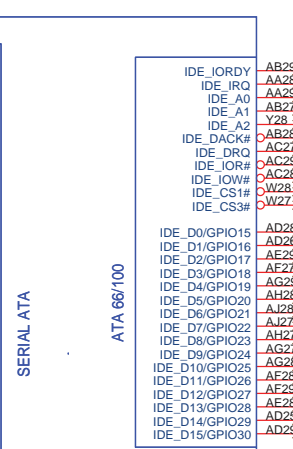
SATA



SATA



U57B 2 of 4



SERIAL ATA

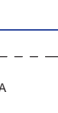
SERIAL ATA POWER



SPI ROM



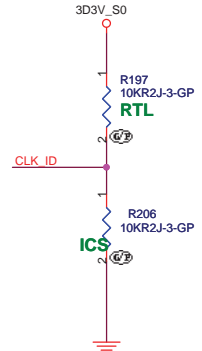
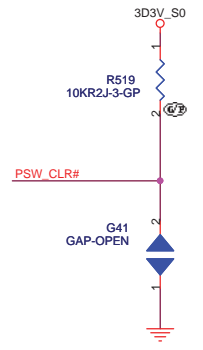
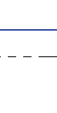
HW MONITOR



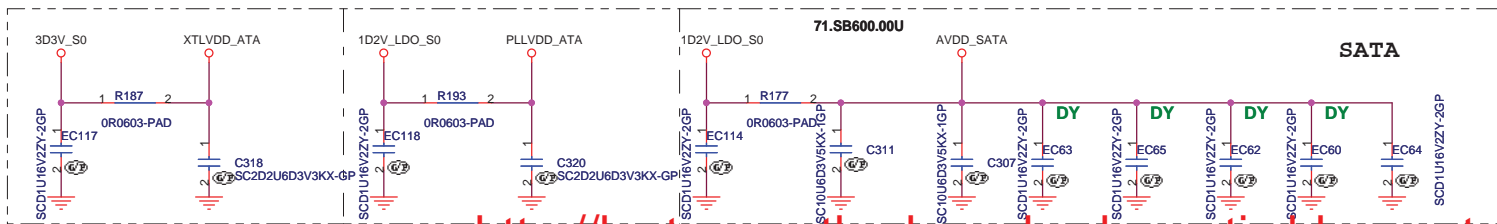
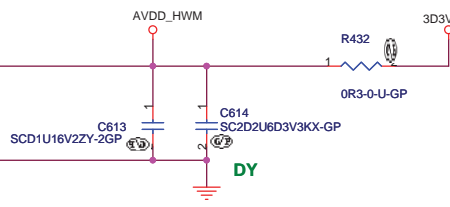
ATA 66/100



REMOVE FP_DETECT TO KBC



REMOVE FP_DETECT TO KBC



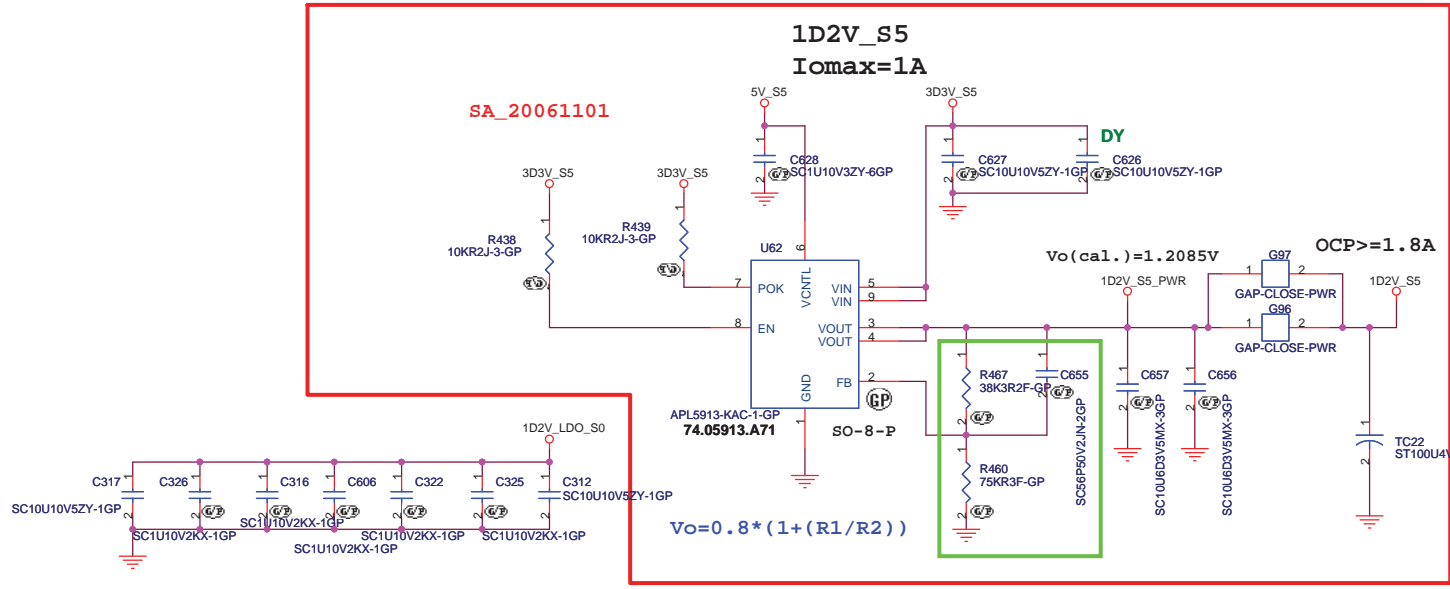
<Core Design>

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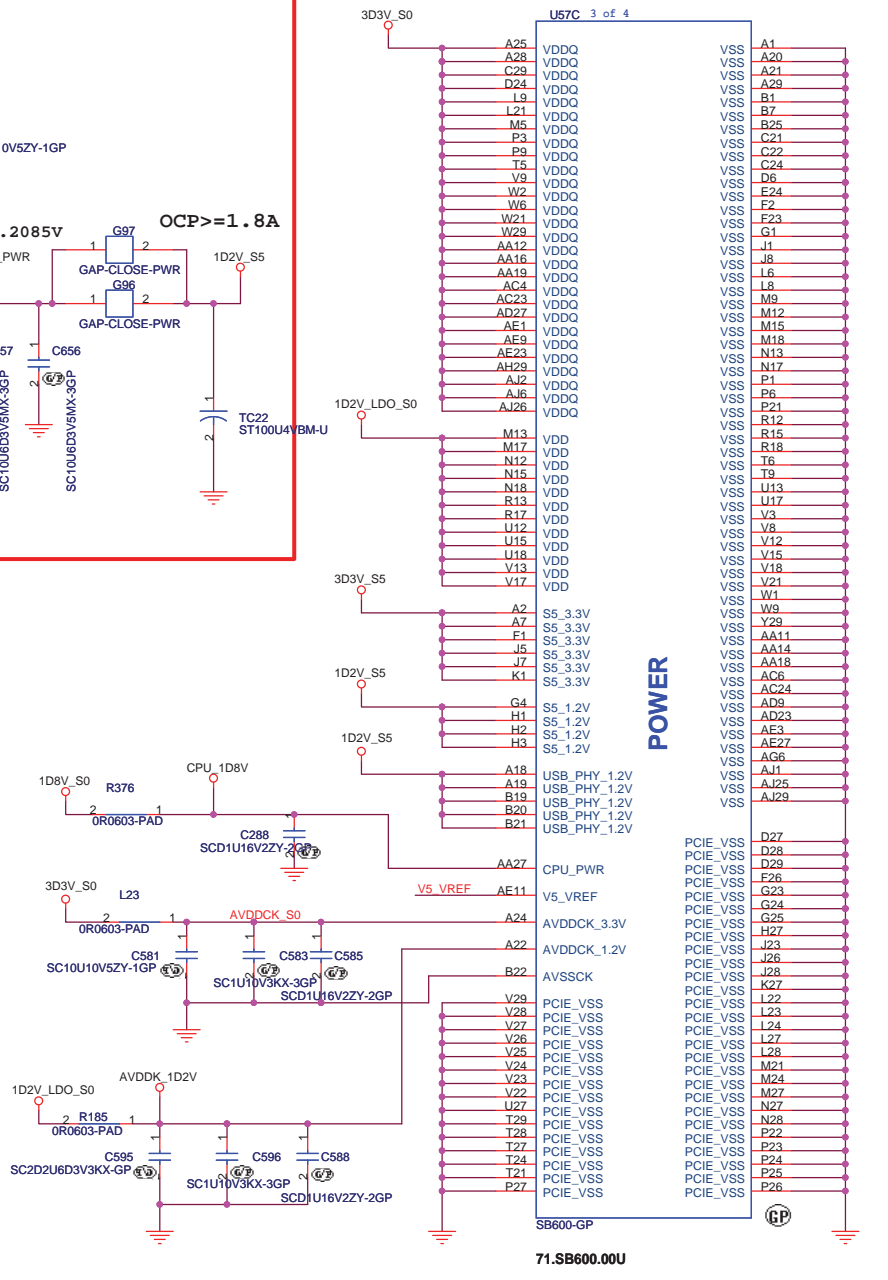
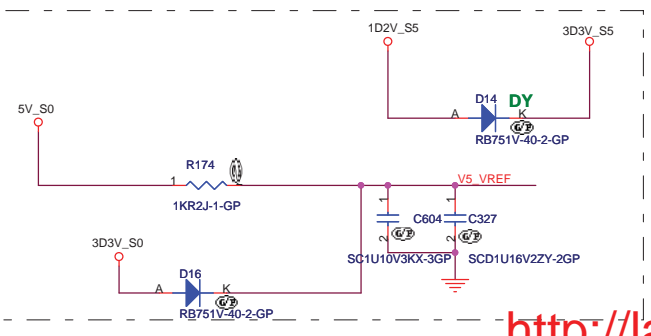
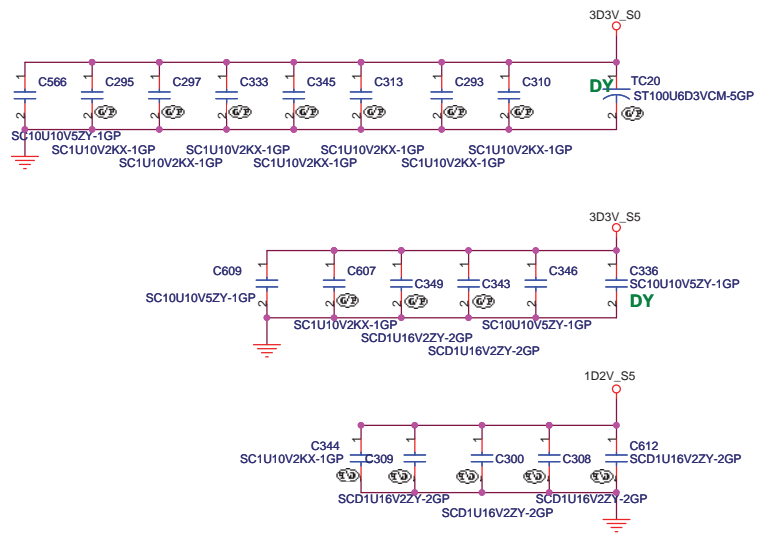
Title: **SB600 ACPI/GPIO/SATA/IDE (2 of 5)**

Size: A3 Document Number: Yukon Rev: SA

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Place near to SB600



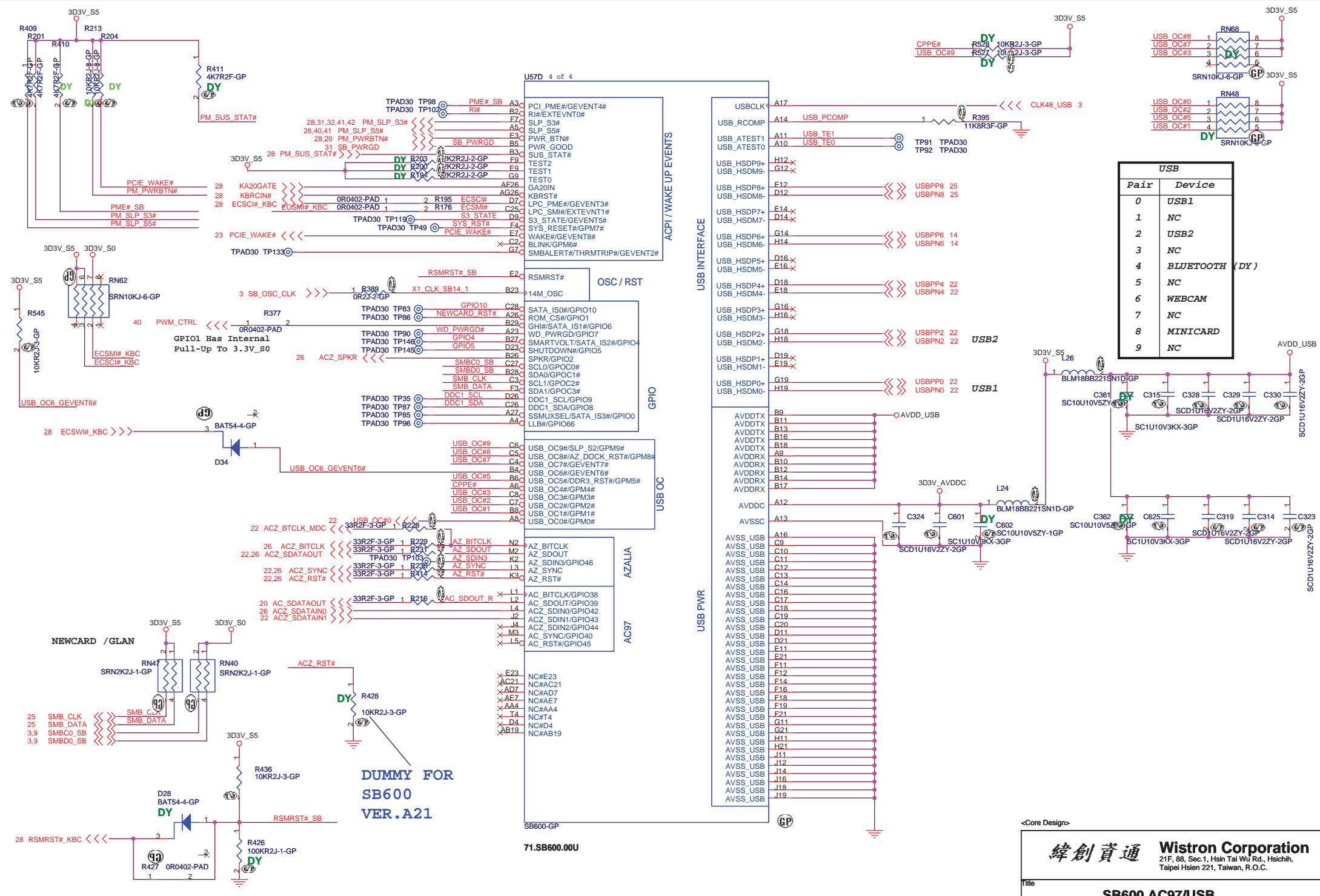
<Core Design>

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Title: **SB600 POWER/DECOUPLING**

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	Yukon	

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USB	
Pair	Device
0	USB1
1	NC
2	USB2
3	NC
4	BLUETOOTH (DY)
5	NC
6	WEBCAM
7	NC
8	MINICARD
9	NC

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<Core Design>

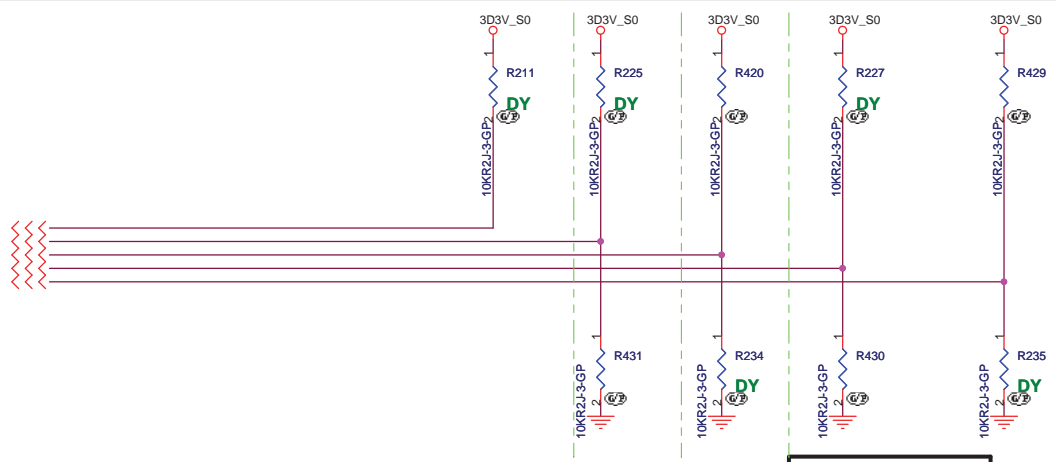
緯創資通 Wistron Corporation
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **SB600 AC97/USB**

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19 AC_SDATAOUT
 16,28 PCLK_KBC
 15 CLK33_LPCROM
 16,28 PCI_CLK0
 16 PCLK_PCM

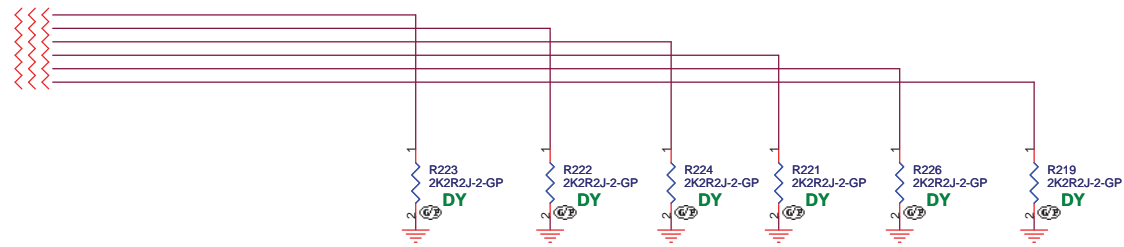


REQUIRED SYSTEM STRAPS

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

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

16 PCI_AD28
 16 PCI_AD27
 16 PCI_AD26
 16 PCI_AD25
 16 PCI_AD24
 16 PCI_AD23



DEBUG STRAPS

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

<Core Design>

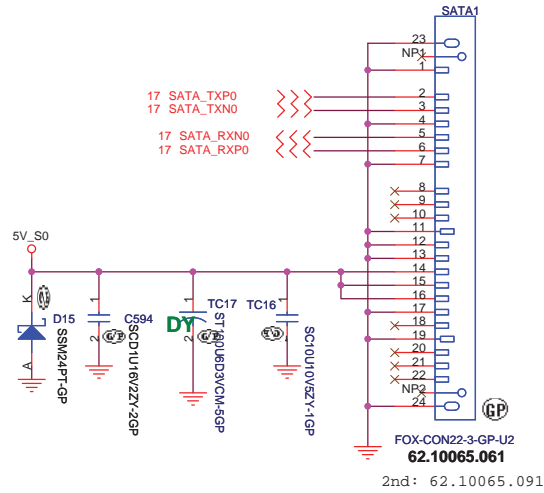
緯創資通 Wistron Corporation
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Title: **SB600 STRAPPING PIN**

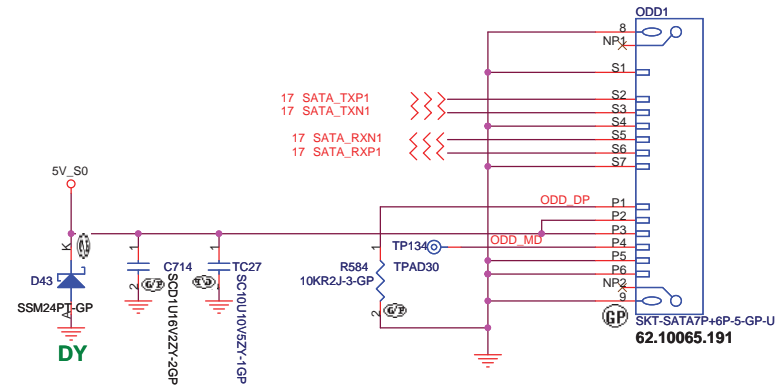
Size: A3 Document Number: Yukon Rev: SA

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SATA HD Connector




SATA ODD Connector

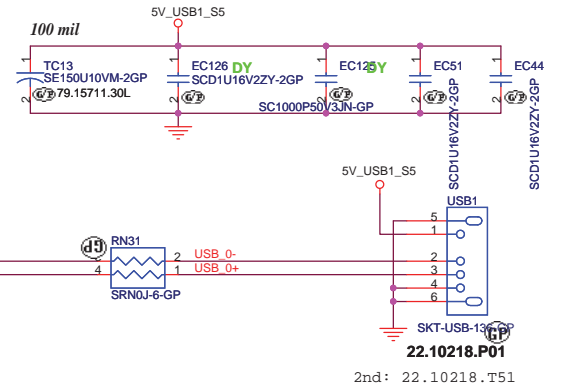
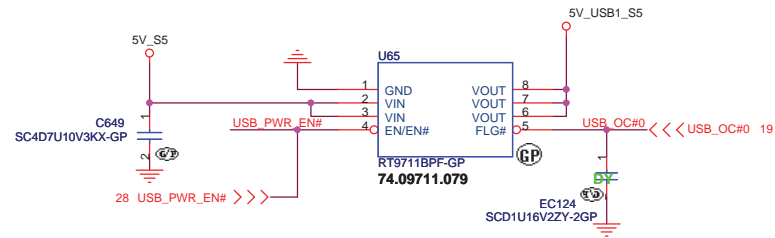


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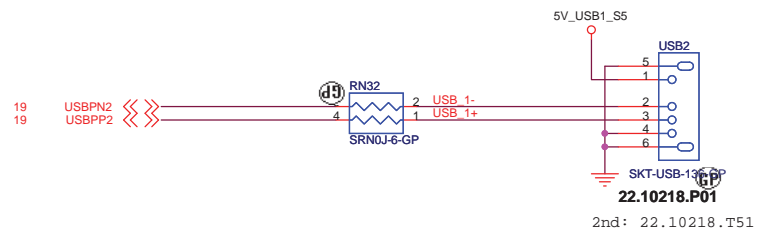
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HDD and CDROM	
Size	Document Number
Yukon	
Date: Thursday, July 03, 2008	Sheet 21 of 43

Rev SA

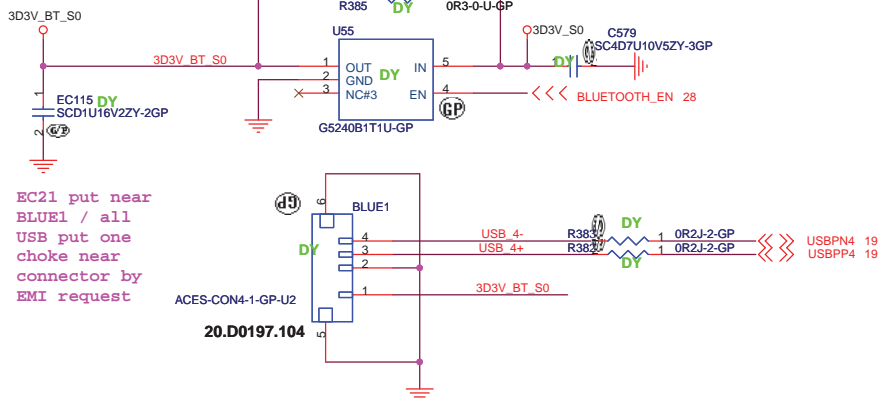


2nd: 22.10218.T51



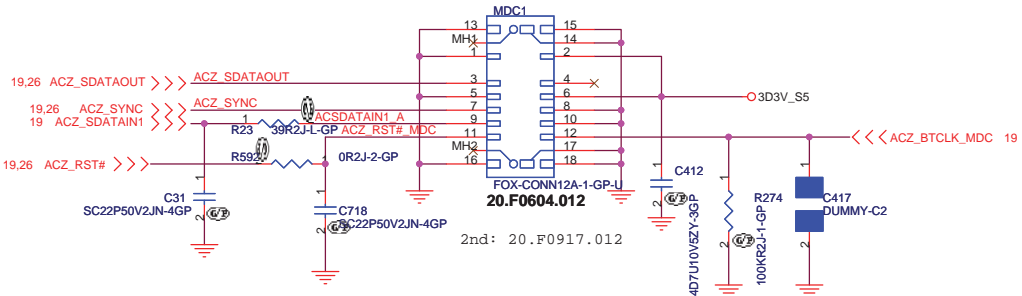
2nd: 22.10218.T51

BLUETOOTH MODULE

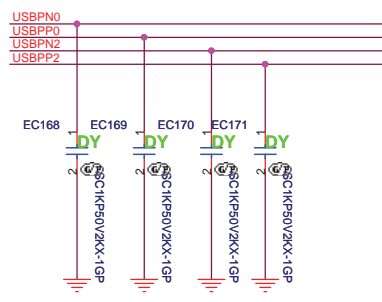


EC21 put near BLUE1 / all USB put one choke near connector by EMI request

MDC 1.5 CONN



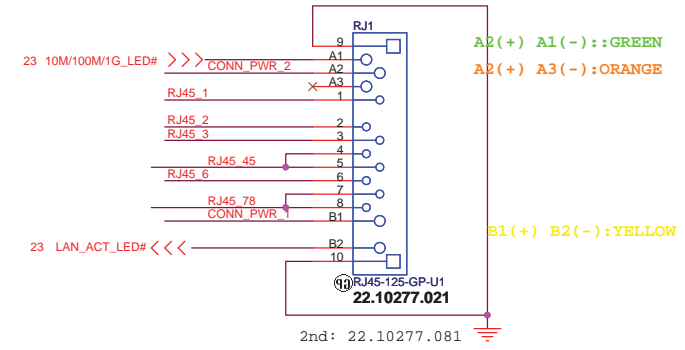
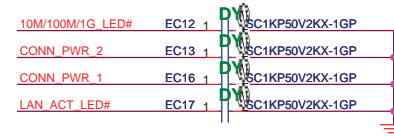
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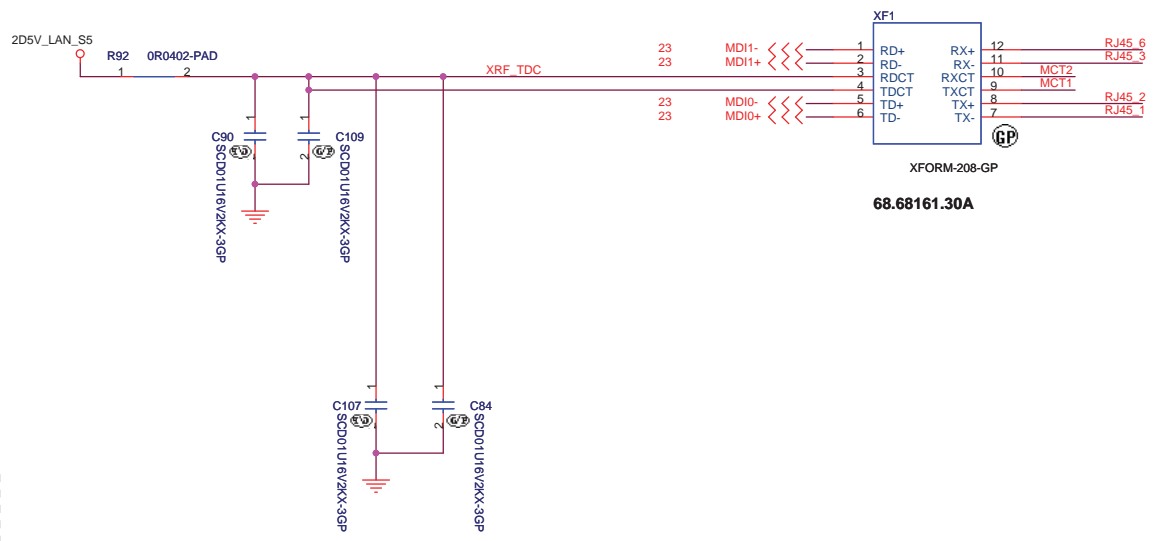
bom1

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		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
USB / MDC / BLUETOOTH			
File	Document Number		Rev
Size	Yukon		SA
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LAN Connector



10/100 Lan Transformer

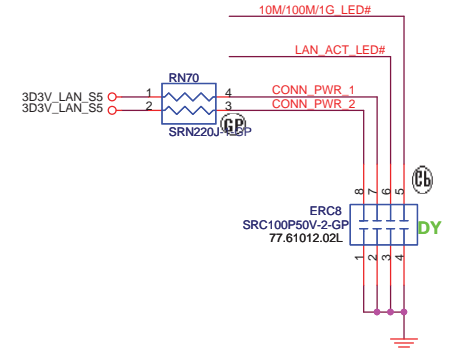
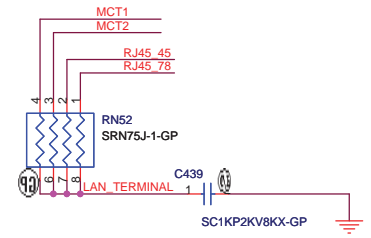


1. route on bottom as differential pairs.
2. Tx+/Tx- are pairs. Rx+/Rx- are pairs.
3. No vias, No 90 degree bends.
4. pairs must be equal lengths.
5. 6mil trace width, 12mil separation.
6. 36mil between pairs and any other trace.
7. Must not cross ground moat, except RJ-45 moat.

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

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

10/100 LAN Transformer	RJ45 PIN
TD+ --> TX+	RJ45-1
TD- --> TX-	RJ45-2
RD+ --> RX+	RJ45-3
RD- --> RX-	RJ45-6



<Variant Name>

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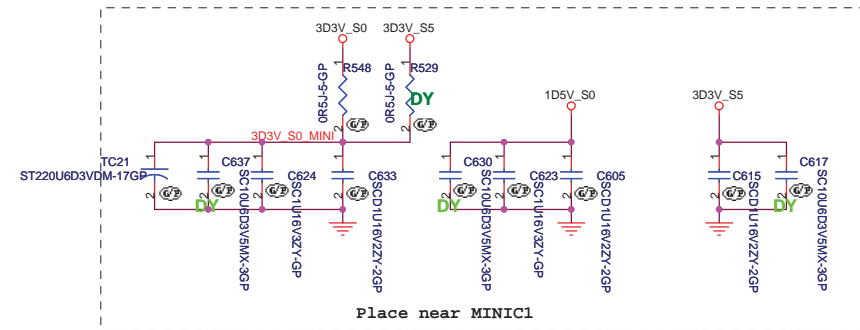
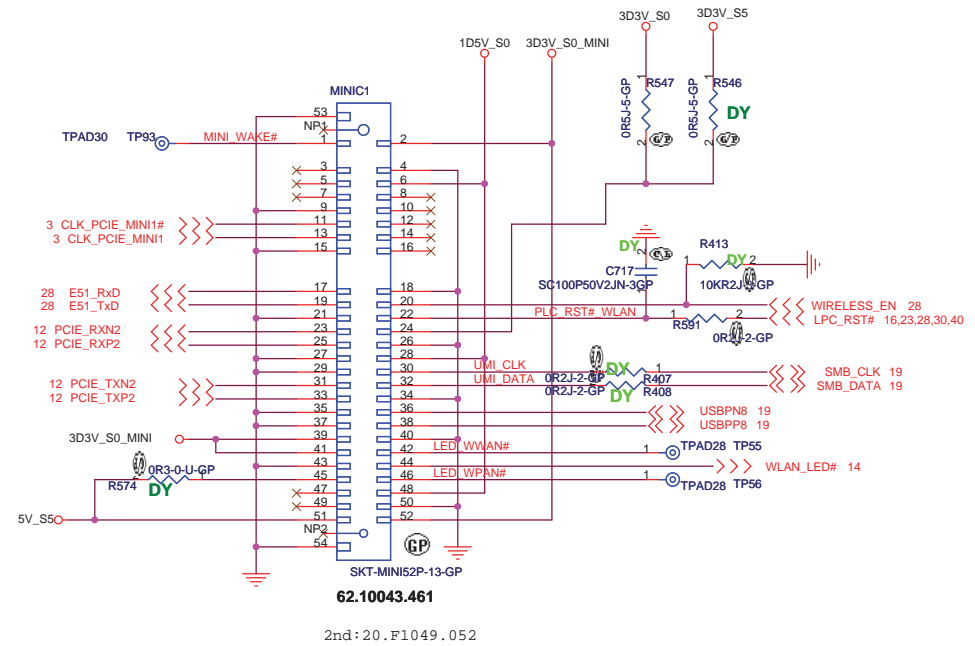
Title: **LAN Connector**

Size A3	Document Number	Rev SA
Yukon		

Date: Thursday, July 03, 2008 Sheet 24 of 43

Mini Card Connector

NEWCARD Connector



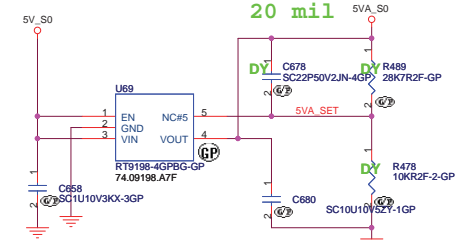
bom1

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
MINI CARD / NEW CARD				
Title	Document Number			Rev
	Yukon			SA
Date: Thursday, July 03, 2008	Sheet	25	of	43

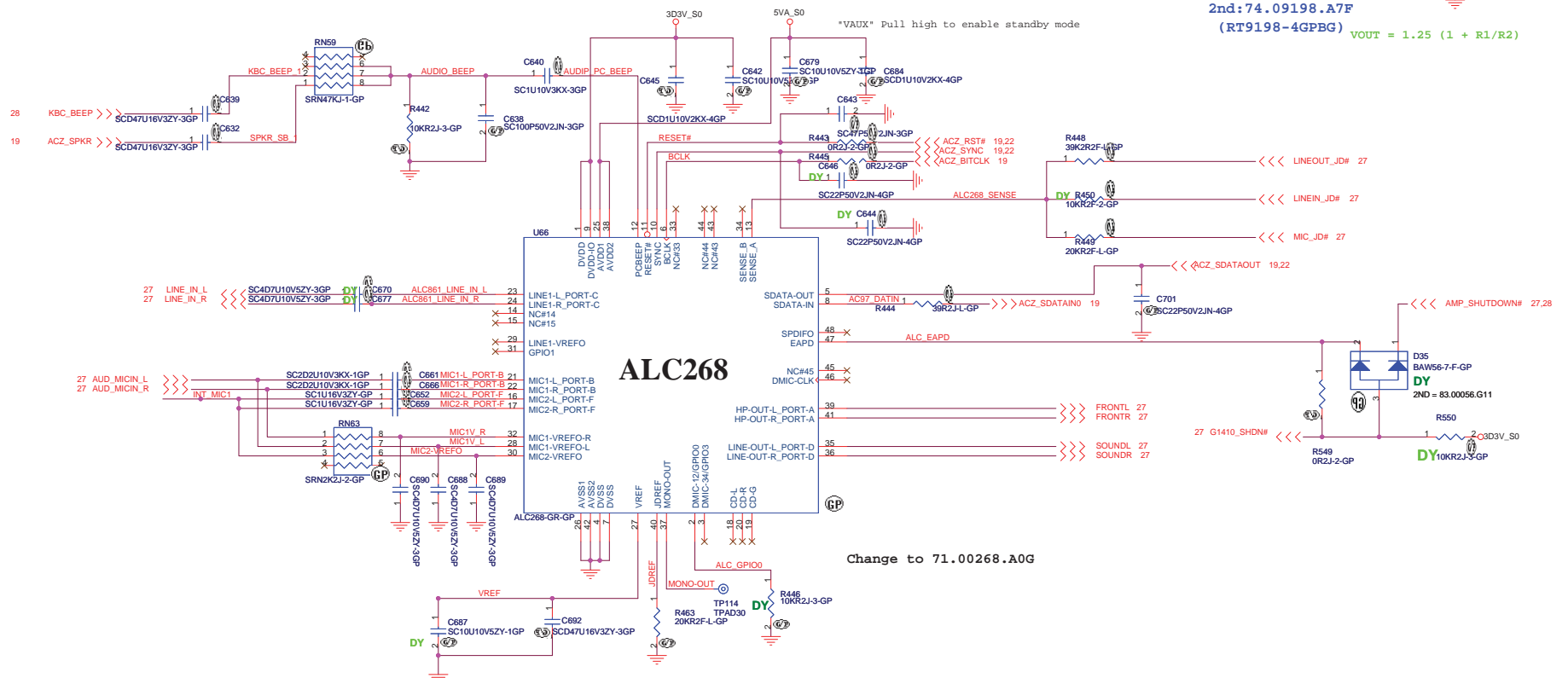
POWER GENERATE

Layout

20 mil

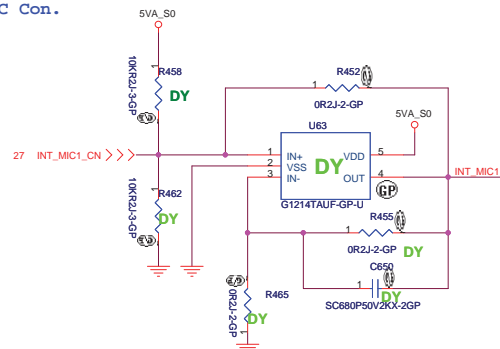


2nd: 74.09198.A7F
(RT9198-4GPBG) VOUT = 1.25 (1 + R1/R2)



Change to 71.00268.A0G

Near INTMIC Con.



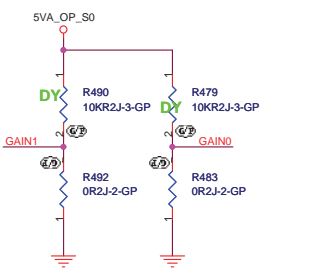
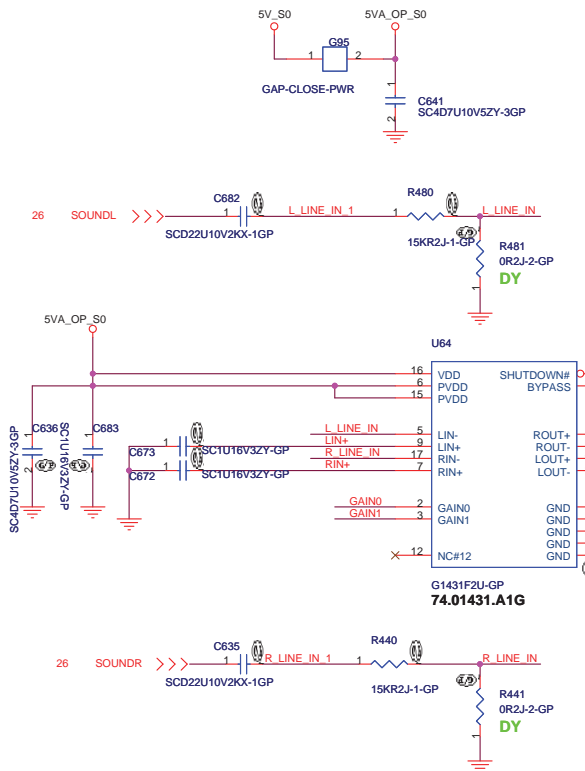
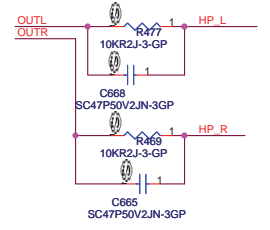
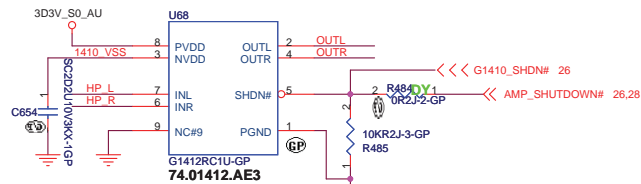
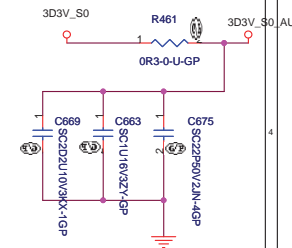
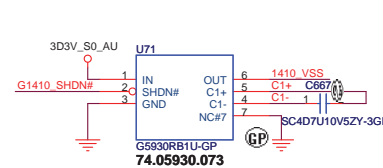
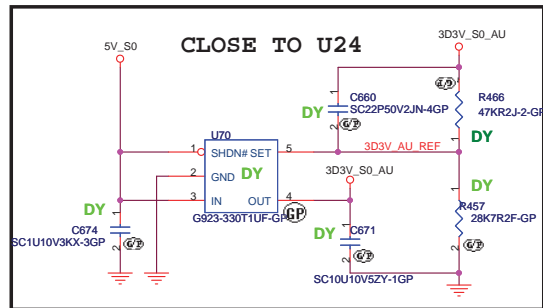
<http://laptop-motherboard-schematic.blogspot.com/>

<-Variant Name>

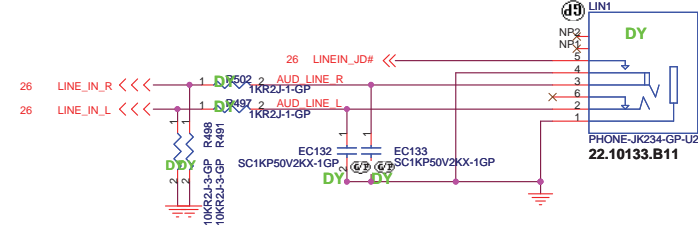
緯創資通 Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title AZALIA CODEC - ALC268		
Size	Document Number	Rev
	Yukon	SA
Date: Thursday, July 03, 2008	Sheet	43

AUDIO OP AMPLIFIER

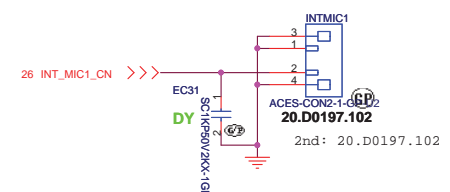
KBC_MUTE_GPIO8



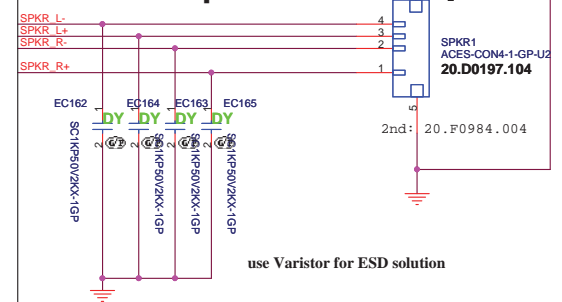
LINE IN



Internal Microphone

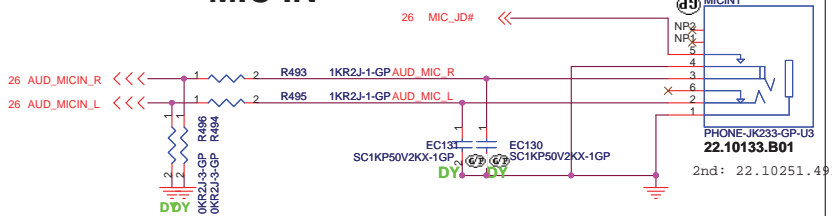


Internal Speaker

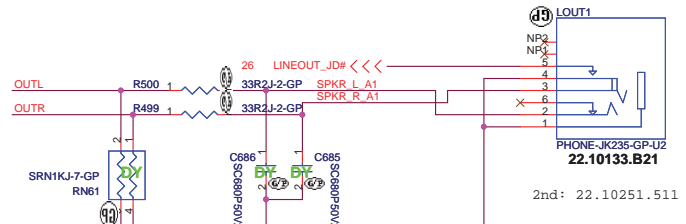


use Varistor for ESD solution

MIC IN



LINE OUT



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<Variant Name>

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

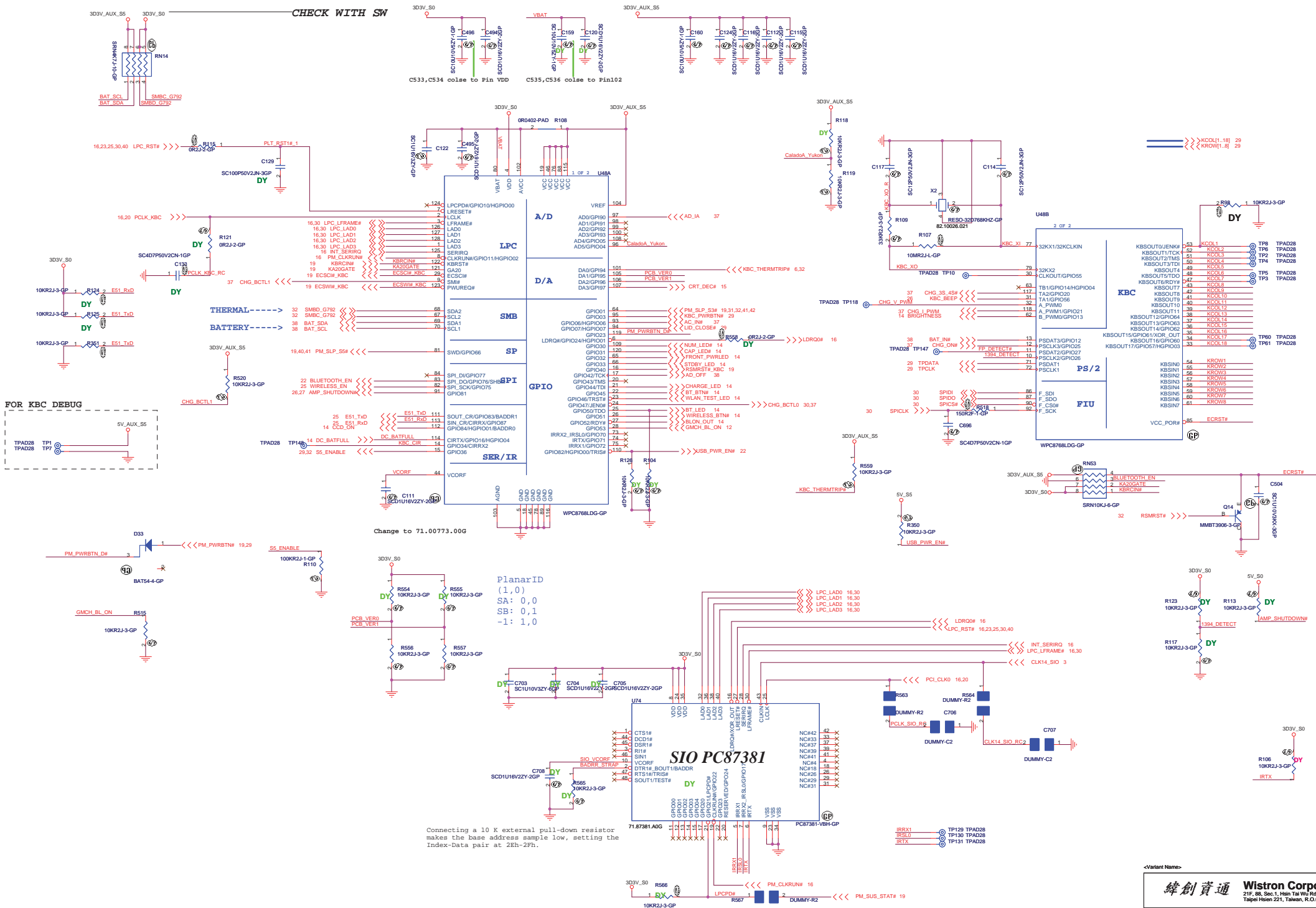
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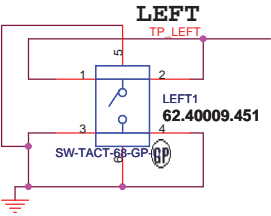
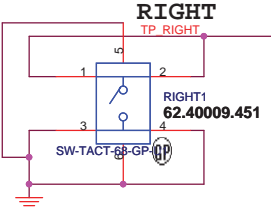
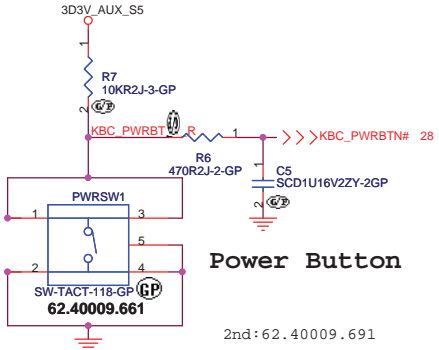
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Date: Thursday, July 03, 2008

Sheet 27 of 43

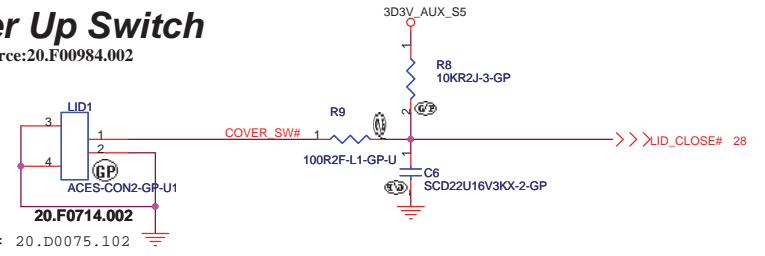
Rev SA





Cover Up Switch

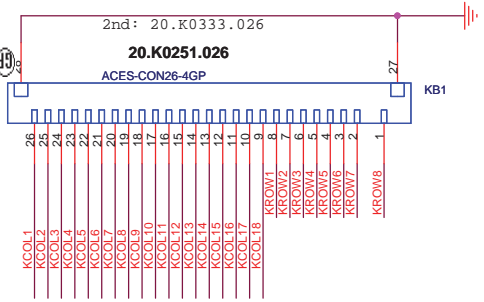
2nd source: 20.F00984.002



Check test point

- 3D3V_AUX_S5 ○ TP69 TPAD30
- 3D3V_S5 ○ TP62 TPAD30
- 5V_S5 ○ TP71 TPAD30
- 19,28 PM_PWRBTN# <<< ○ TP68 TPAD30
- 28,32 S5_ENABLE <<< ○ TP63 TPAD30

Test Point 放在 Dimm Door 打開可量測處

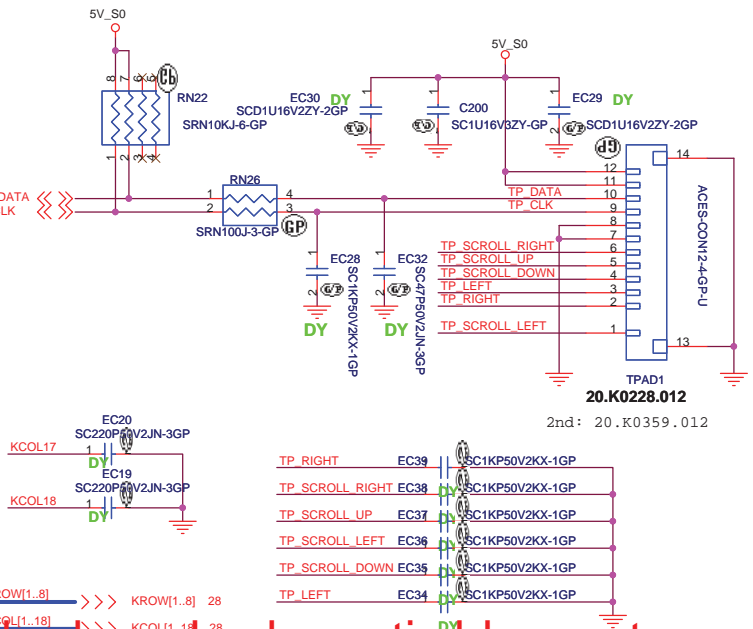


Internal Keyboard CONN

CHECK KB SPEC. AND PIN DEFINE

EMI Bypass cap.

- | | | |
|--------|-------|------------------|
| KCOL14 | EC134 | SC220P50V2JN-3GP |
| KCOL15 | EC137 | SC220P50V2JN-3GP |
| KCOL16 | EC136 | SC220P50V2JN-3GP |
| KCOL8 | EC135 | SC220P50V2JN-3GP |
| KCOL10 | EC138 | SC220P50V2JN-3GP |
| KCOL6 | EC142 | SC220P50V2JN-3GP |
| KCOL7 | EC139 | SC220P50V2JN-3GP |
| KCOL5 | EC143 | SC220P50V2JN-3GP |
| KCOL4 | EC140 | SC220P50V2JN-3GP |
| KCOL3 | EC144 | SC220P50V2JN-3GP |
| KCOL2 | EC141 | SC220P50V2JN-3GP |
| KCOL1 | EC145 | SC220P50V2JN-3GP |
| KROW2 | EC147 | SC220P50V2JN-3GP |
| KROW6 | EC146 | SC220P50V2JN-3GP |
| KROW7 | EC149 | SC220P50V2JN-3GP |
| KROW8 | EC148 | SC220P50V2JN-3GP |
| KROW1 | EC151 | SC220P50V2JN-3GP |
| KROW3 | EC150 | SC220P50V2JN-3GP |
| KROW4 | EC152 | SC220P50V2JN-3GP |
| KROW5 | EC153 | SC220P50V2JN-3GP |
| KCOL11 | EC154 | SC220P50V2JN-3GP |
| KCOL12 | EC156 | SC220P50V2JN-3GP |
| KCOL13 | EC155 | SC220P50V2JN-3GP |
| KCOL9 | EC157 | SC220P50V2JN-3GP |



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bom1

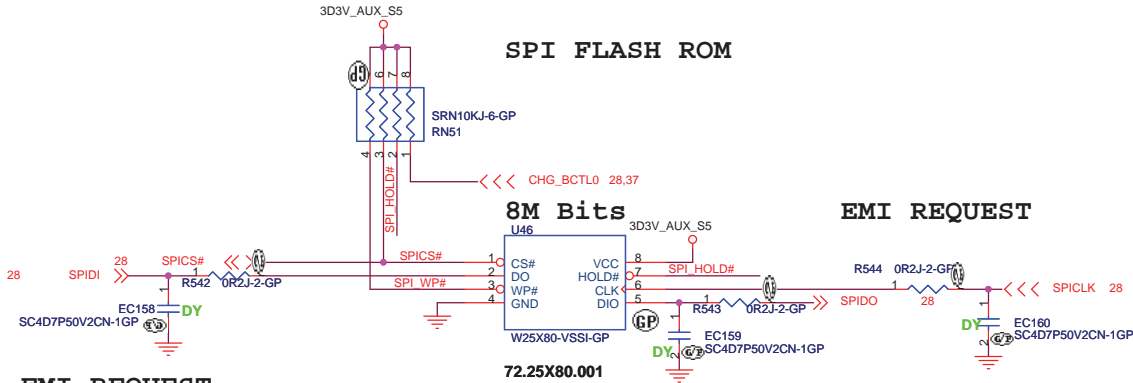
緯創資通 Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **BUTTONS / KB / TOUCHPAD**

Size: Document Number **Yukon** Rev: SA

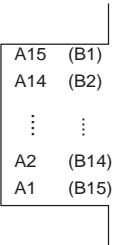
Date: Thursday, July 03, 2008 Sheet 29 of 43

SPI FLASH ROM



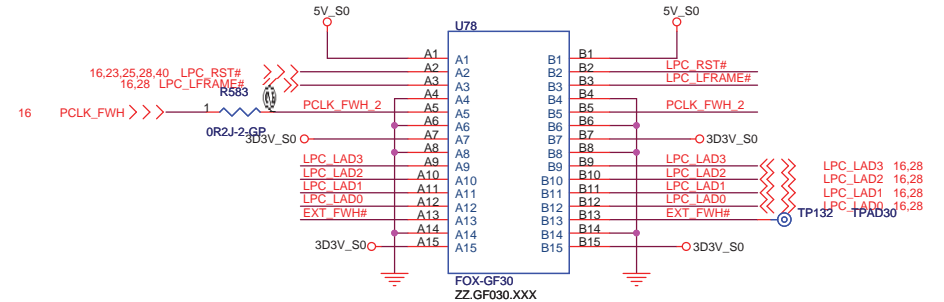
EMI REQUEST

TOP VIEW

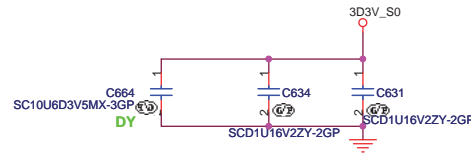


(BOTTOM VIEW)

GOLDEN FINGER FOR DEBUG BOARD

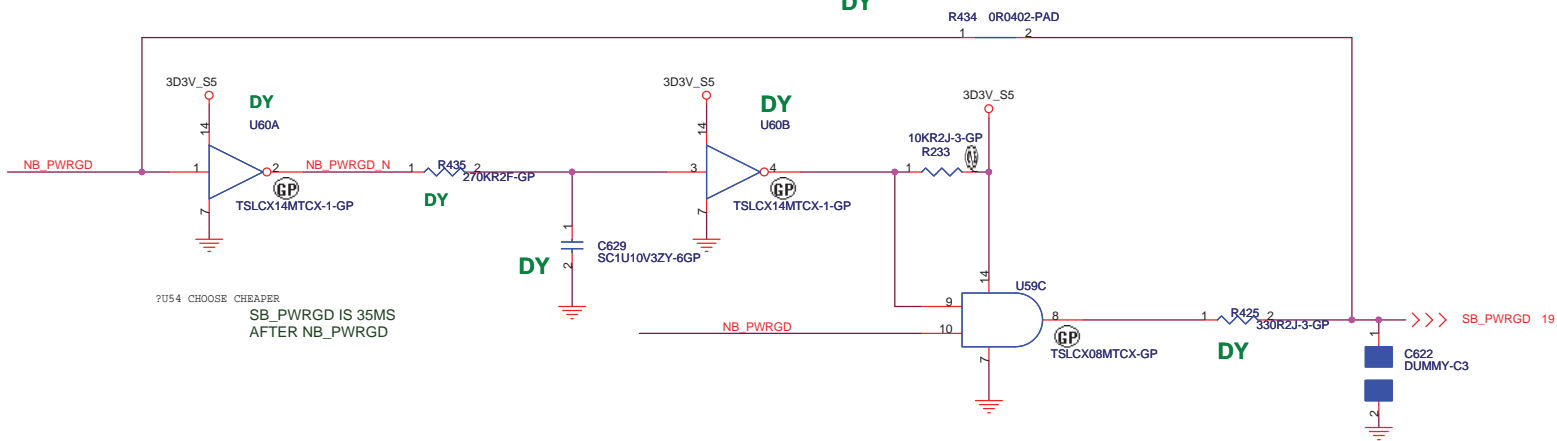
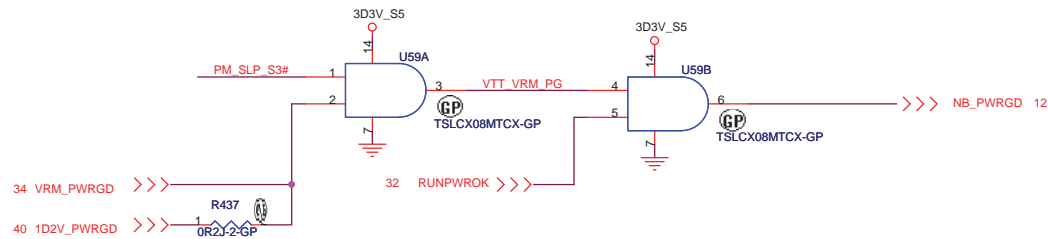
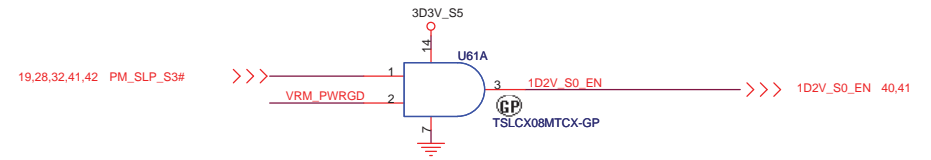
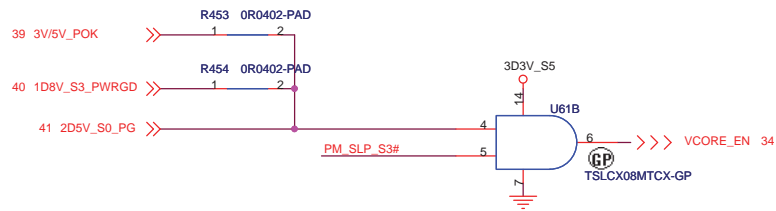


Boot Device must have ID[3:0] = 0000
 Has internal pull-down resistors
 All may be left floated
 FPET7 Elec. P3-46



<Core Design>

緯創資通 Wistron Corporation		
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Title		
BIOS		
Size A3	Document Number Yukon	Rev SA
Date: Thursday, July 03, 2008	Sheet 30 of	43



?U54 CHOOSE CHEAPER
SB_PWRGD IS 35MS
AFTER NB_PWRGD

<Core Design>

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title: POWERGOOD&ENABLES(1/2)		
Size: A3	Document Number: Yukon	Rev: SA
Date: Thursday, July 03, 2008	Sheet: 31	of: 43

Setting T8 as 90 Degree

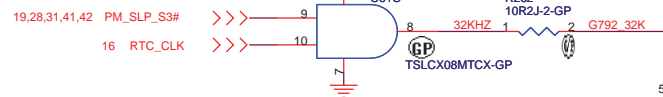
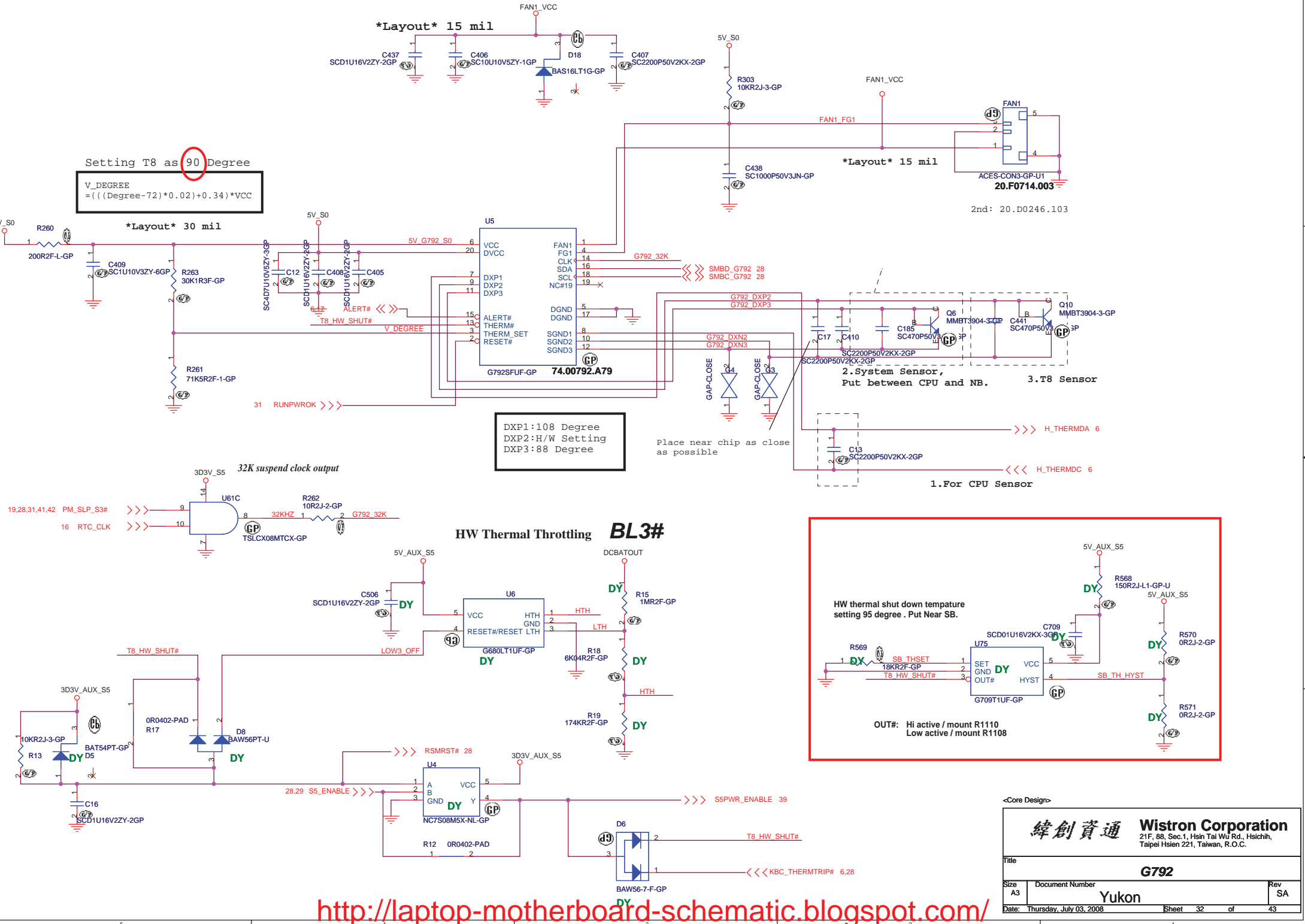
$$V_DEGREE = (((Degree - 72) * 0.02) + 0.34) * VCC$$

Layout 15 mil

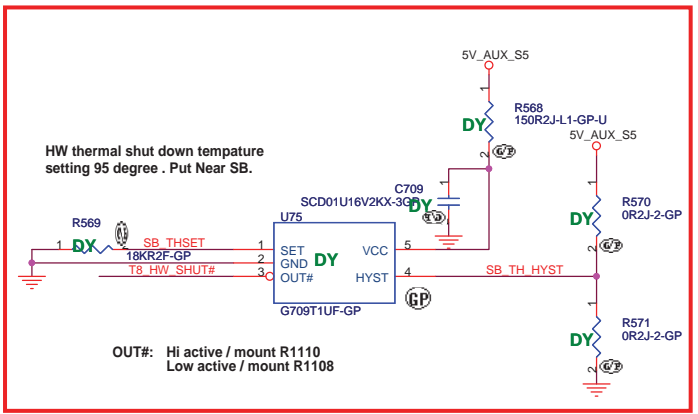
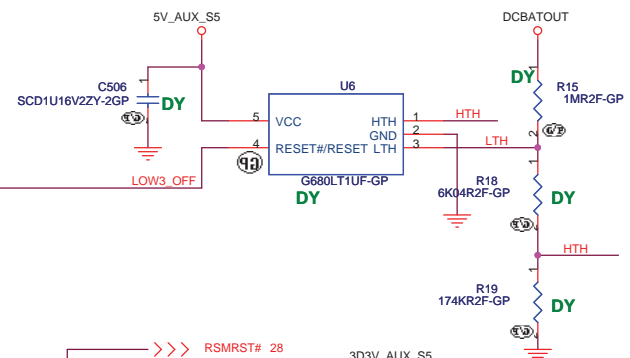
Layout 15 mil

Layout 30 mil

DXP1:108 Degree
DXP2:H/W Setting
DXP3:88 Degree



HW Thermal Throttling BL3#



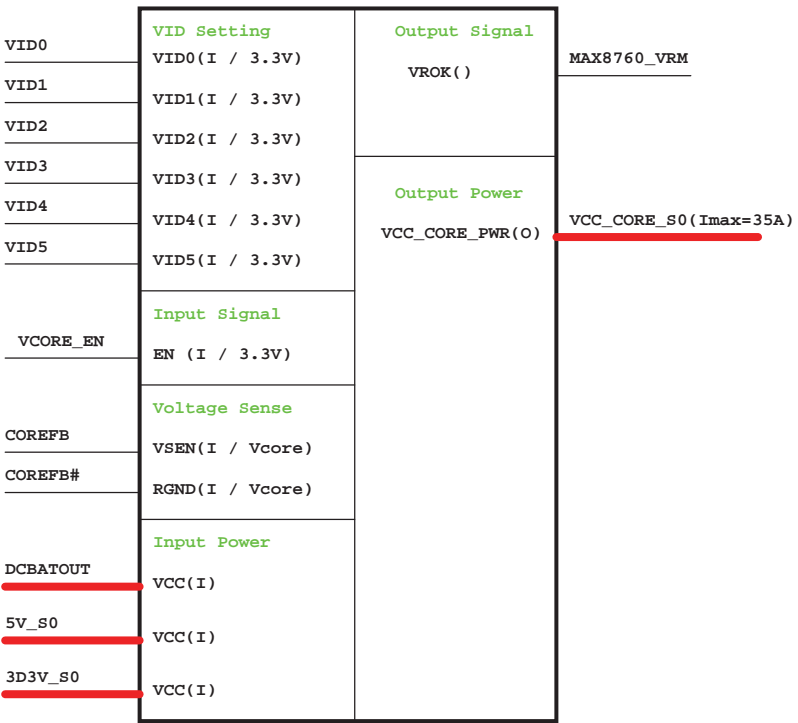
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緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

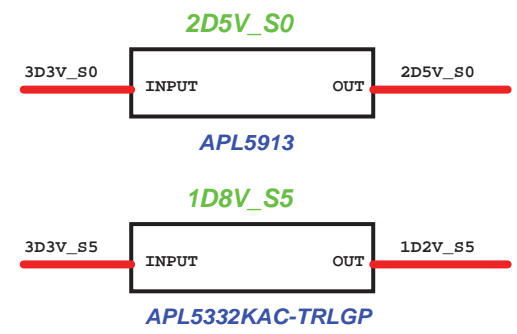
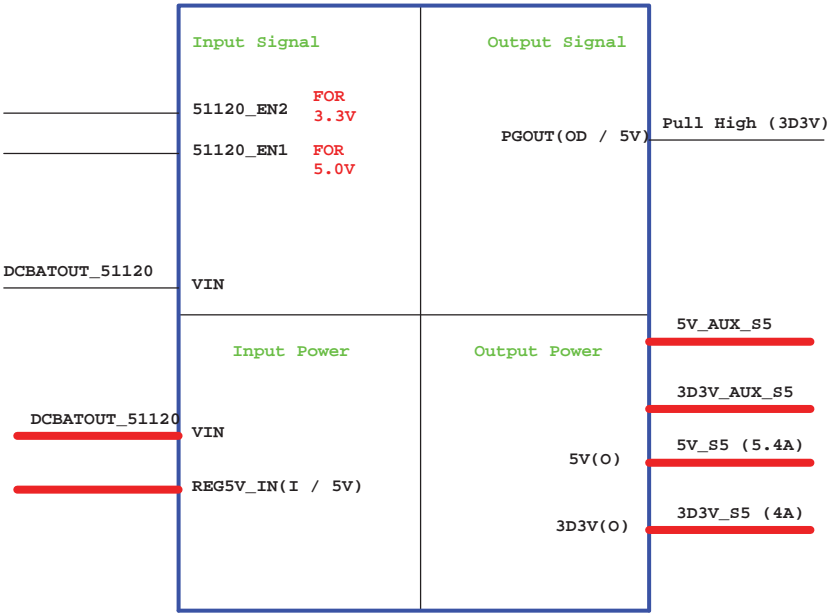
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Size: A3	Document Number: Yukon	Rev: SA
Date: Thursday, July 03, 2008	Sheet: 32 of 43	

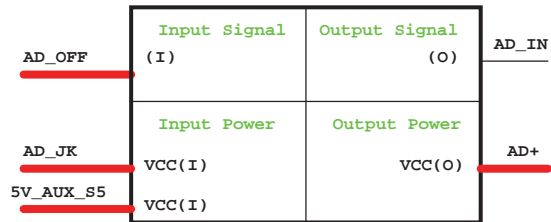
CPU_CORE
ISL6264CRZ



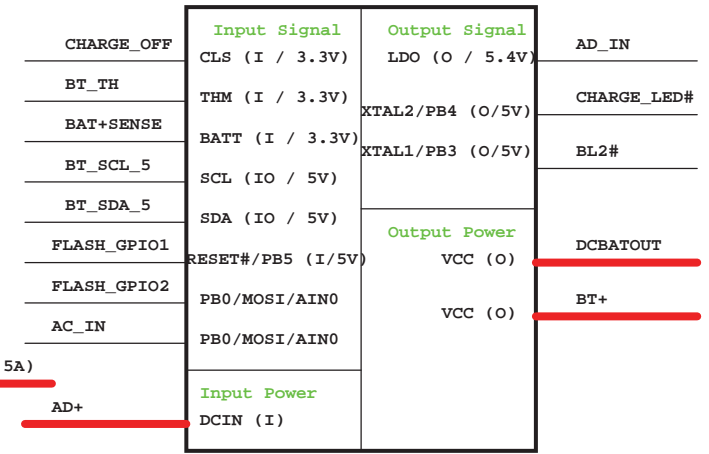
TI TPS51120
3D3V/5V



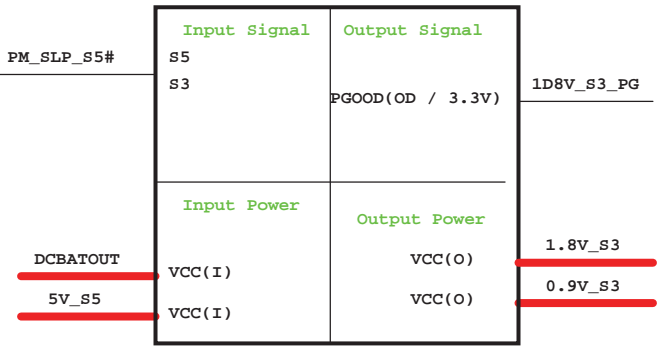
Adapter



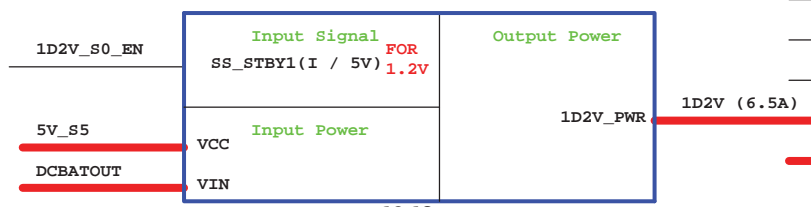
Charger_ISL6255



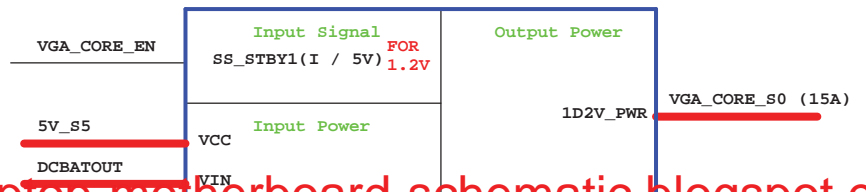
TI TPS51116
1.8V / 0.9V



ISL6268_1D2V



ISL6268_VGA_CORE



<Core Design>

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**

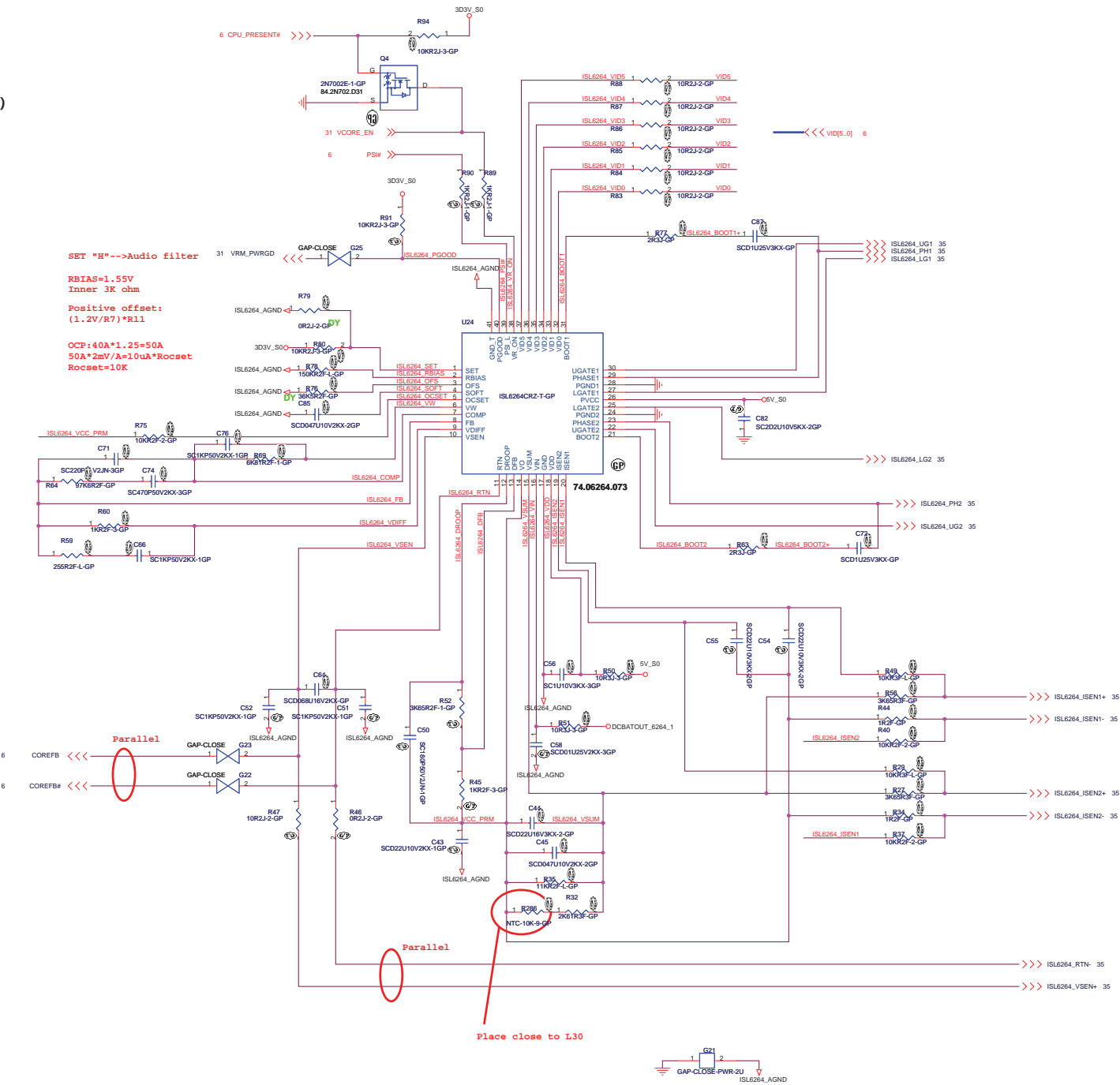
Size A3 Document Number **Yukon** Rev **SA**

Date: Tuesday, July 01, 2008 Sheet 33 of 43

CPU_VCORE
 VID=1.20V(25W)/1.15V(35W)
 Iomax=21A(25W)/35A(35W)
 OCP=40A~45A

TABLE 1. VOLTAGE IDENTIFICATION CODES

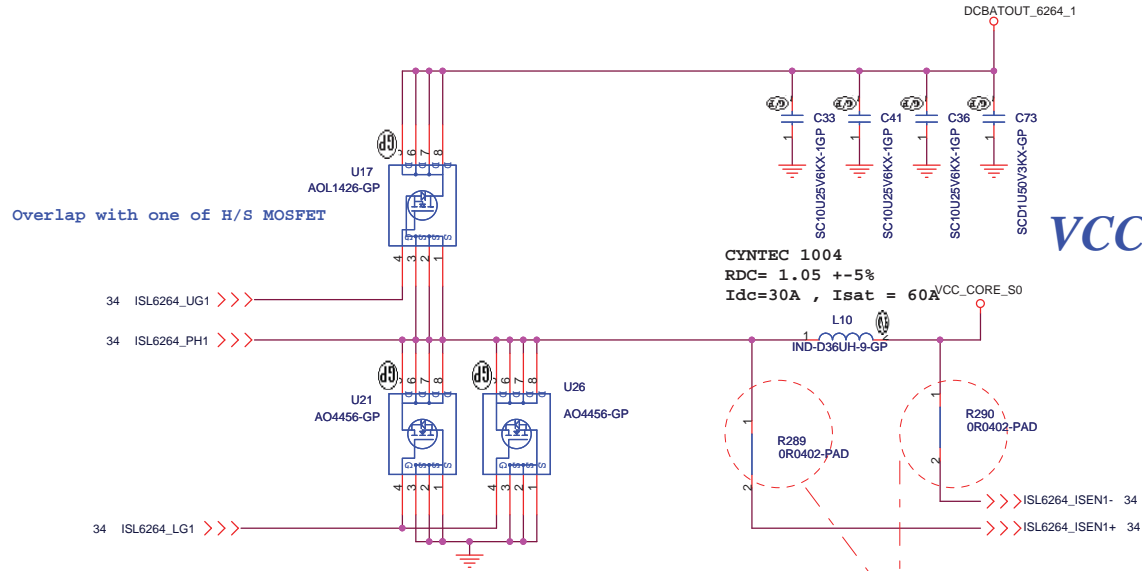
VID5	VID4	VID3	VID2	VID1	VID0	DAC
0	0	0	0	0	0	1.550
0	0	0	0	0	1	1.525
0	0	0	0	0	1	1.500
0	0	0	0	1	1	1.475
0	0	0	1	0	0	1.450
0	0	0	1	0	1	1.425
0	0	0	1	1	0	1.400
0	0	0	1	1	1	1.375
0	0	1	0	0	0	1.350
0	0	1	0	0	1	1.325
0	0	1	0	1	0	1.300
0	0	1	0	1	1	1.275
0	0	1	1	0	0	1.250
0	0	1	1	0	1	1.225
0	0	1	1	1	0	1.200
0	1	0	0	0	0	1.175
0	1	0	0	0	1	1.150
0	1	0	0	1	0	1.125
0	1	0	0	1	1	1.100
0	1	0	1	0	0	1.075
0	1	0	1	0	1	1.050
0	1	0	1	1	0	1.025
0	1	0	1	1	1	1.000
0	1	1	0	0	0	0.975
0	1	1	0	0	1	0.950
0	1	1	0	1	0	0.925
0	1	1	0	1	1	0.900
0	1	1	1	0	0	0.875
0	1	1	1	0	1	0.850
0	1	1	1	1	0	0.825
0	1	1	1	1	1	0.800
1	0	0	0	0	0	0.775
1	0	0	0	0	1	0.750
1	0	0	0	1	0	0.725
1	0	0	0	1	1	0.700
1	0	1	0	0	0	0.675
1	0	1	0	0	1	0.650
1	0	1	1	0	0	0.625
1	0	1	1	0	1	0.600
1	1	0	0	0	0	0.575
1	1	0	0	0	1	0.550
1	1	0	1	0	0	0.525
1	1	0	1	0	1	0.500
1	1	1	0	0	0	0.475
1	1	1	0	0	1	0.450
1	1	1	1	0	0	0.425
1	1	1	1	0	1	0.400
1	1	1	1	1	0	0.375
1	1	1	1	1	1	0.350



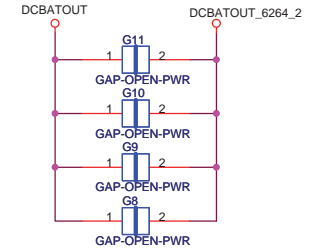
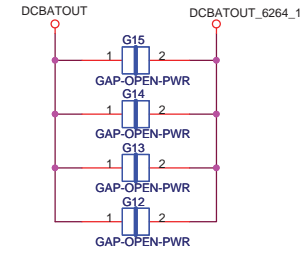
SET "H"--->Audio filter
 RBIAS=1.55V
 Inner 3K ohm
 Positive offset:
 (1.2V/R7)*R11
 OCP:40A*1.25=50A
 50A*2mV/A=10uA*Rocset
 Rocset=10K

Place close to L30

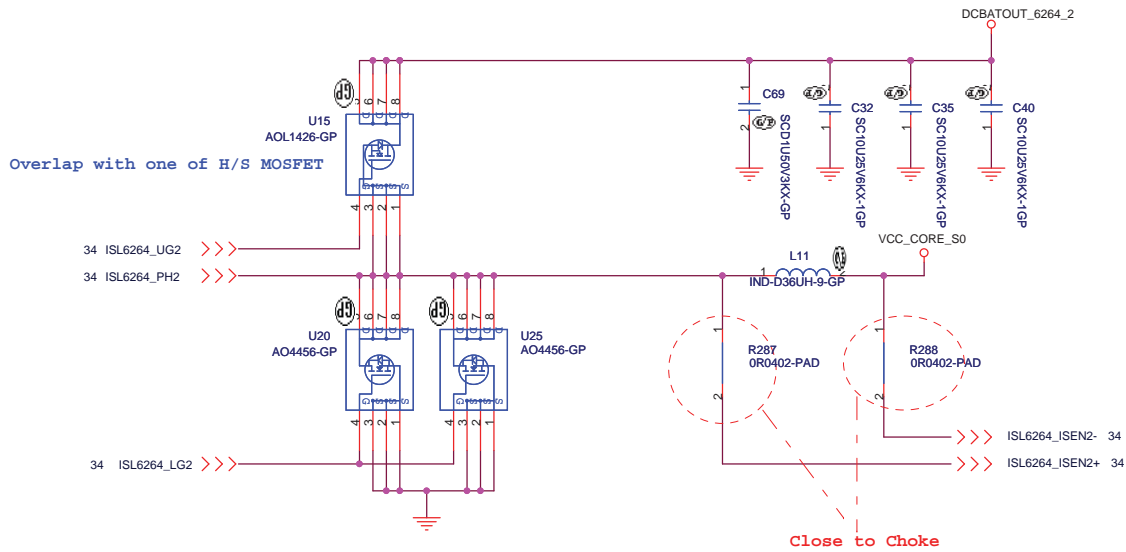




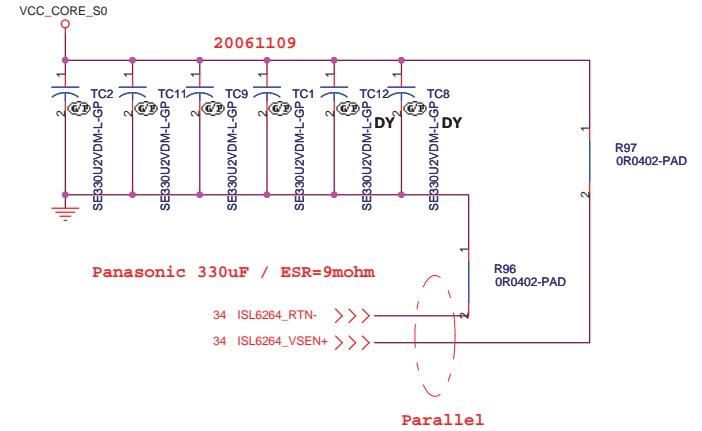
VCC_CORE_S0



Close to Choke



Close to Choke



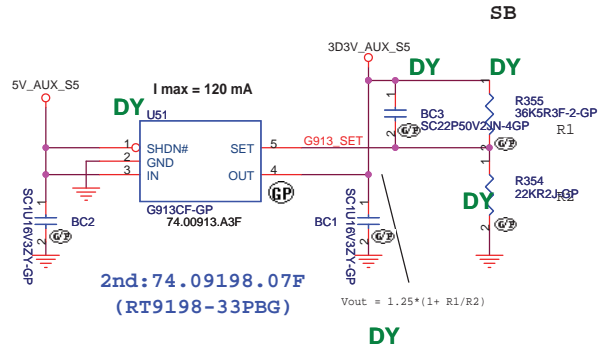
<Core Design>

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

Title		
CPU Vcore Power_2		
Size	Document Number	Rev
A3		SA
Date: Thursday, July 03, 2008		Sheet 35 of 43

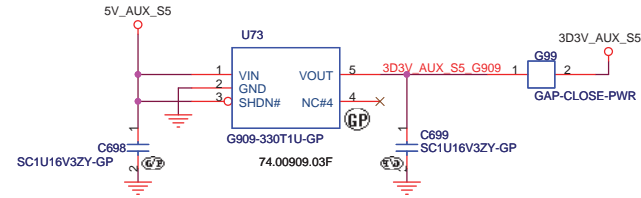
Aux Power

3D3V_AUX_S5




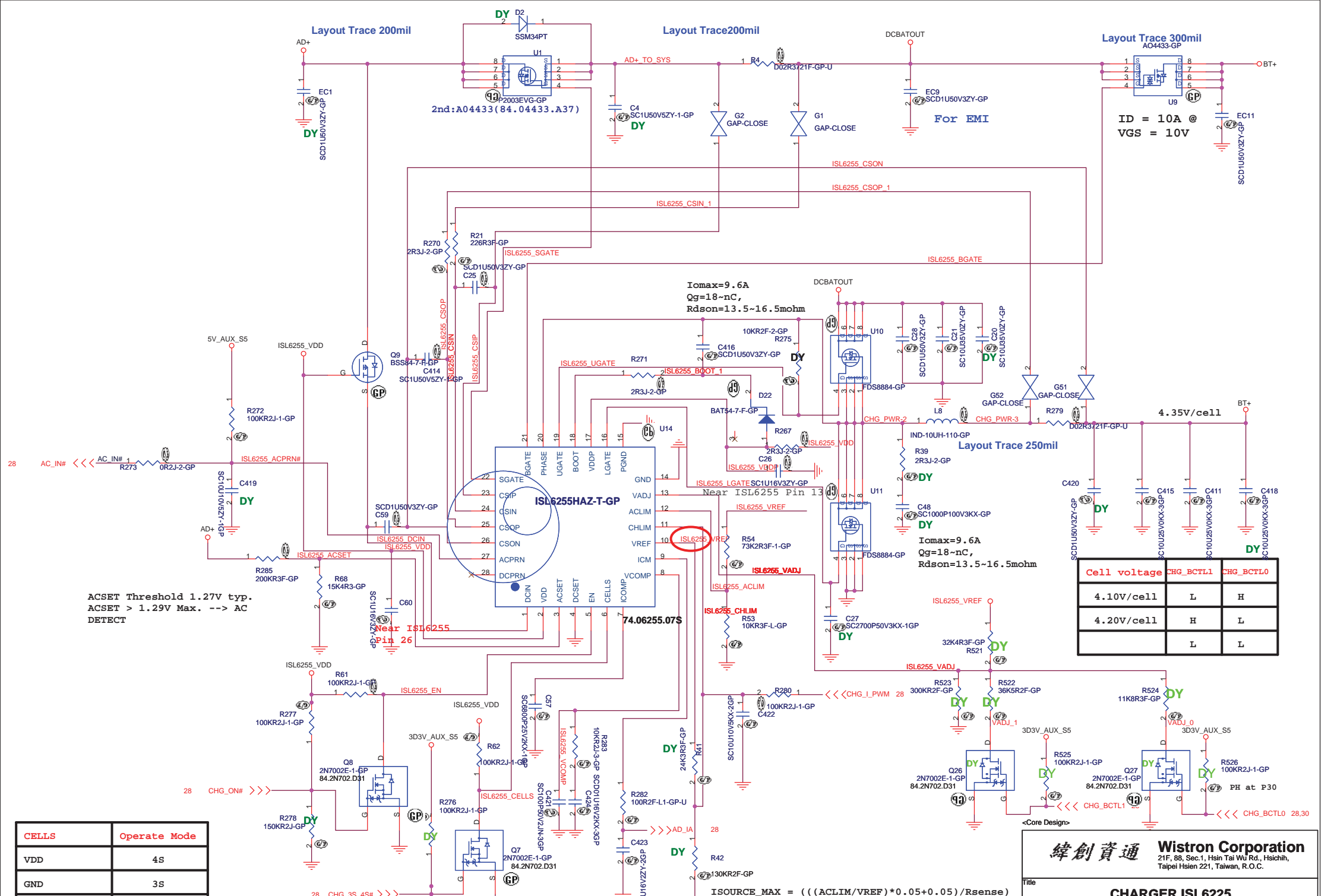
Aux Power

3D3V_AUX_S5



<Core Design>

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3D3V AUX	
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ACSET Threshold 1.27V typ.
 ACSET > 1.29V Max. --- AC
 DETECT

$I_{omax}=9.6A$
 $Q_g=18-nC,$
 $R_{dson}=13.5-16.5mohm$

$I_{omax}=9.6A$
 $Q_g=18-nC,$
 $R_{dson}=13.5-16.5mohm$

Cell voltage	CHG_BCTL1	CHG_BCTL0
4.10V/cell	L	H
4.20V/cell	H	L
	L	L

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

<http://laptop-motherboard-schematic.blogspot.com/>

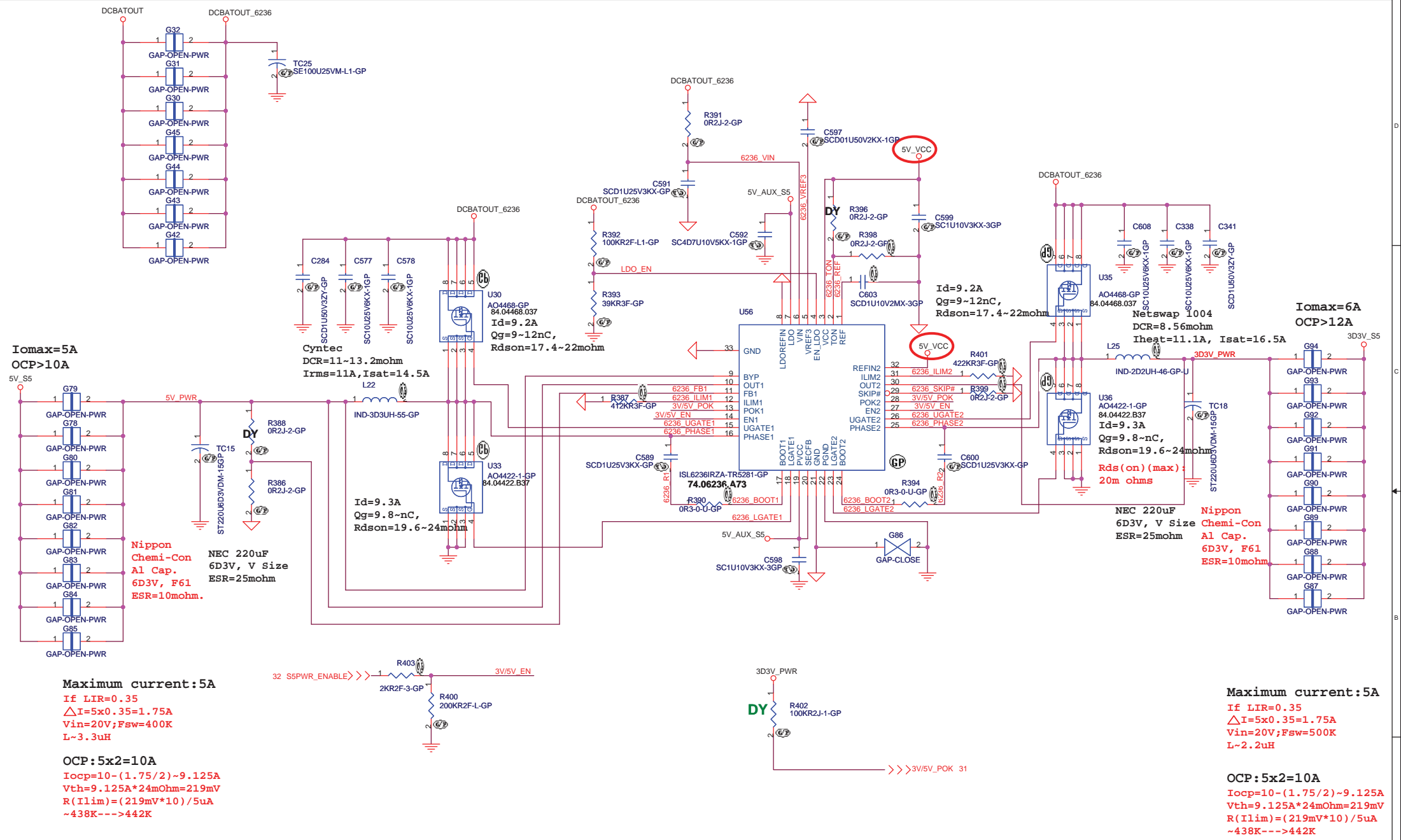
$I_{SOURCE_MAX} = ((ACLIM/VREF) * 0.05 + 0.05) / R_{sense}$
 Adaptor is 90W/19V ; I_LIMIT = 4.02A (85%)

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Title: **CHARGER ISL6225**

Size A3 Document Number **Yukon** Rev **SA**

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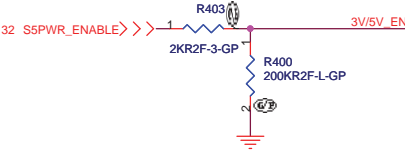
I_{omax}=5A
OCP>10A
 5V_S5

Nippon Chemi-Con Al Cap.
 6D3V, F61
 ESR=10mohm.

NEC 220uF 6D3V, V Size
 ESR=25mohm

Maximum current:5A
 If LIR=0.35
 $\Delta I = 5 \times 0.35 = 1.75A$
 $V_{in} = 20V; F_{sw} = 400K$
 $L \sim 3.3\mu H$

OCP: 5x2=10A
 $I_{ocp} = 10 - (1.75/2) \sim 9.125A$
 $V_{th} = 9.125A \times 24m\Omega = 219mV$
 $R(I_{lim}) = (219mV \times 10) / 5uA \sim 438K \rightarrow 442K$



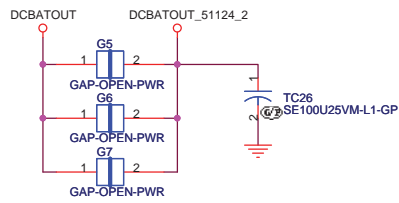
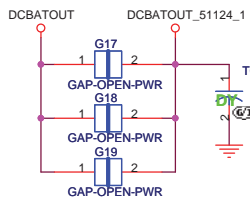
Maximum current:5A
 If LIR=0.35
 $\Delta I = 5 \times 0.35 = 1.75A$
 $V_{in} = 20V; F_{sw} = 500K$
 $L \sim 2.2\mu H$

OCP: 5x2=10A
 $I_{ocp} = 10 - (1.75/2) \sim 9.125A$
 $V_{th} = 9.125A \times 24m\Omega = 219mV$
 $R(I_{lim}) = (219mV \times 10) / 5uA \sim 438K \rightarrow 442K$

<Core Design>

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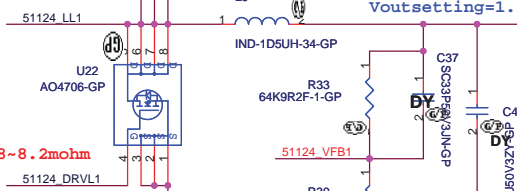
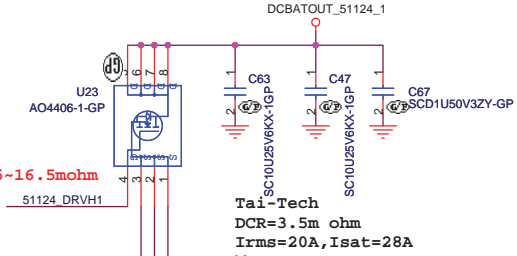
Title	ISL6236 5V 3D3V	
Size	Document Number	Rev
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$I_d=9.6A$
 $Q_g=18\sim nC$,
 $R_{dson}=13.5\sim 16.5m\Omega$

$I_d=13.2A$
 $Q_g=27nC$,
 $R_{dson}=6.8\sim 8.2m\Omega$

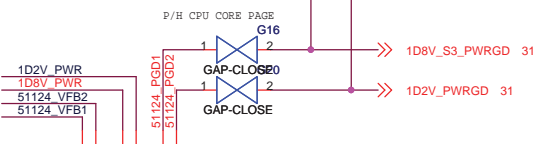
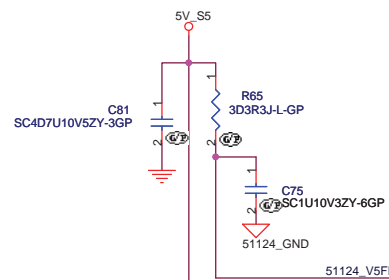
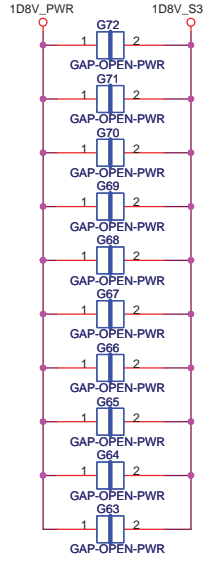
1D8V_S3_PWRGD 31
 1D2V_PWRGD 31



1D8V $I_{omax}=8A$
 $OCP>16A$

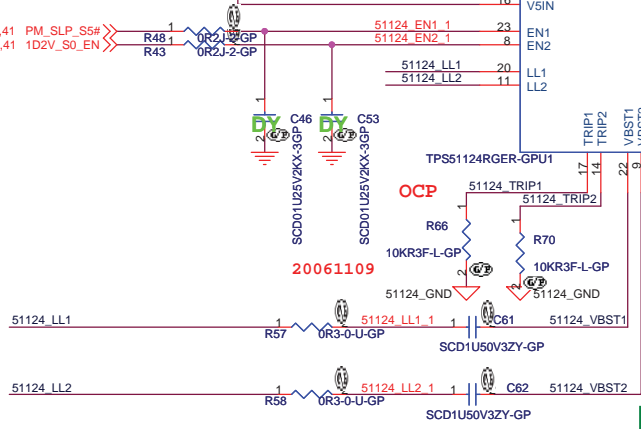
Nippon
 Chemi-Con
 Al Cap.
 $390\mu F / 2D5V$
 $ESR=15m\Omega$

Kemet
 $220\mu F / 4V$
 $ESR=15m\Omega$



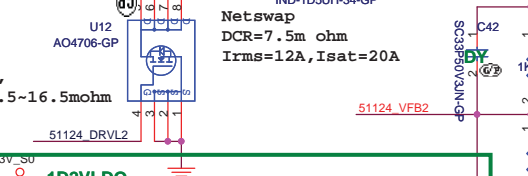
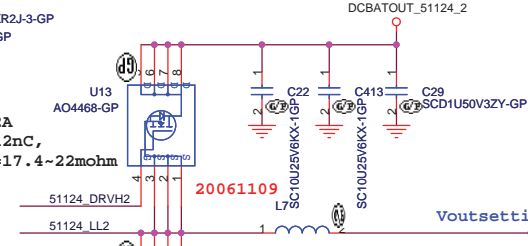
$$V_{out}=0.758V \cdot (R1+R2) / R2$$

19,28.41 PM_SLP_S5#
 31.41 1D2V_S0_EN



OCP

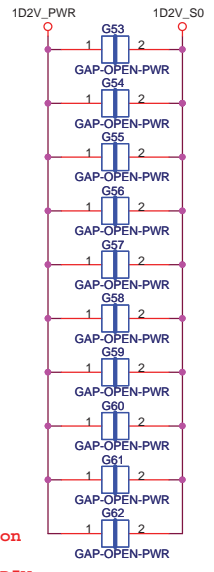
20061109



1D2V $I_{omax}=8A$
 $OCP>16A$

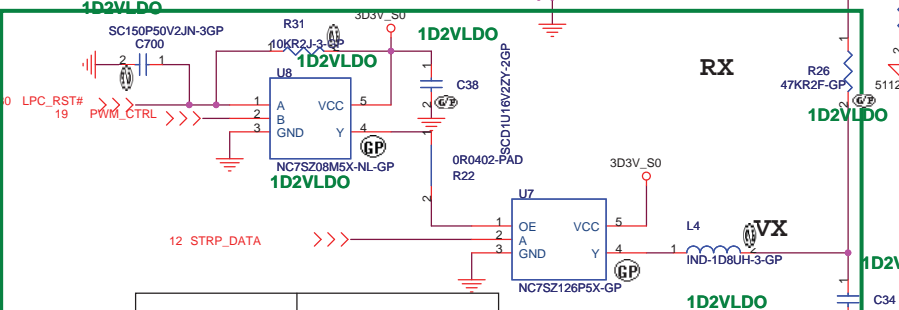
Kemet
 $220\mu F / 4V$
 $ESR=15m\Omega$

Nippon
 Chemi-Con
 Al Cap.
 $390\mu F / 2D5V$
 $ESR=15m\Omega$



$V_{trip}(mV)=R_{trip}(K\Omega) \cdot 10(\mu A)$
 $I_{ocp}=(V_{trip}/R_{dson}) + ((1/(2 \cdot L \cdot f)) \cdot ((V_{in}-V_{out}) \cdot V_{out}) / V_{in}))$

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



STRP_DATA	1D2V(VCC_NB)	1D2V_LDO	1D2V_LDO
0	1.0		
1	1.2		

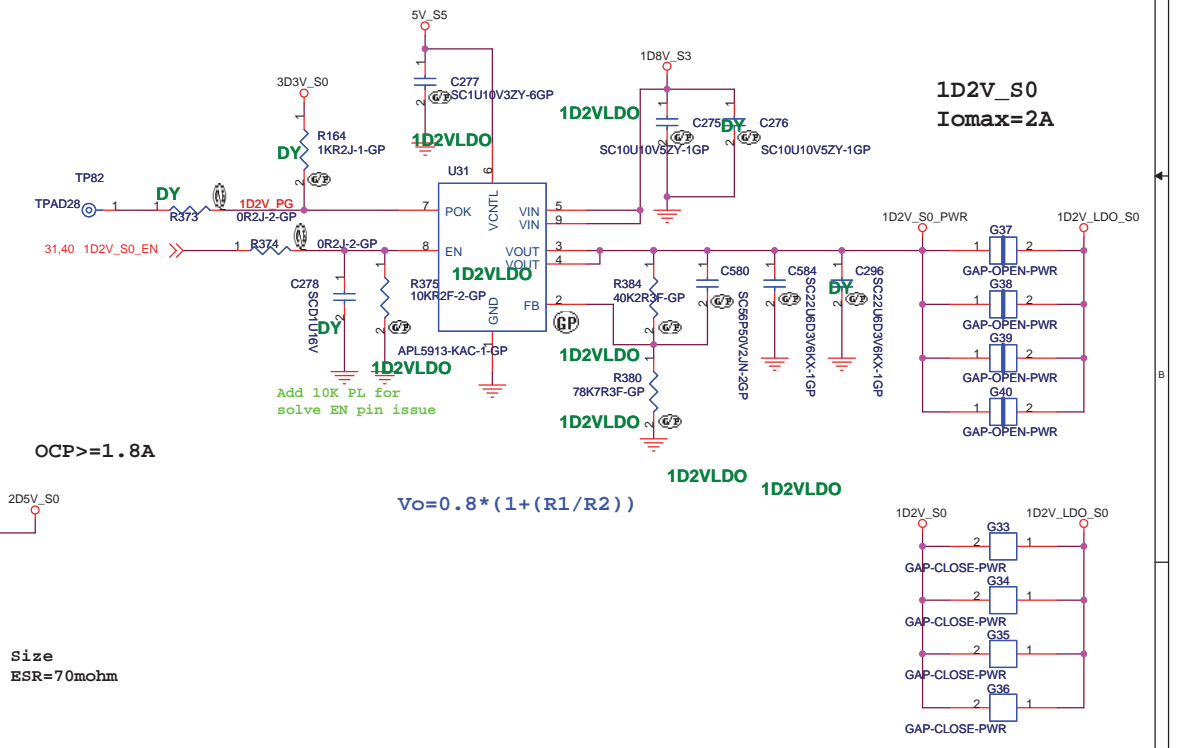
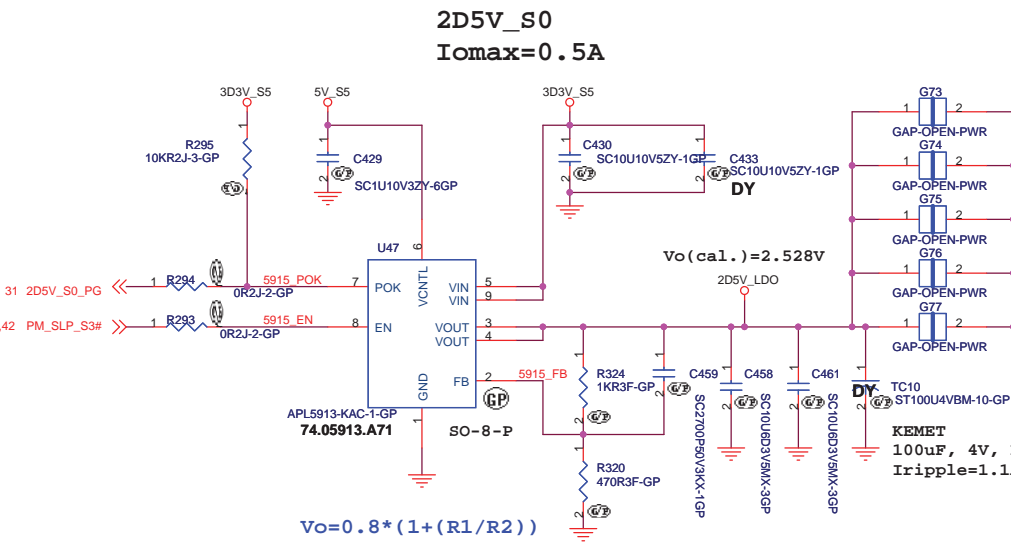
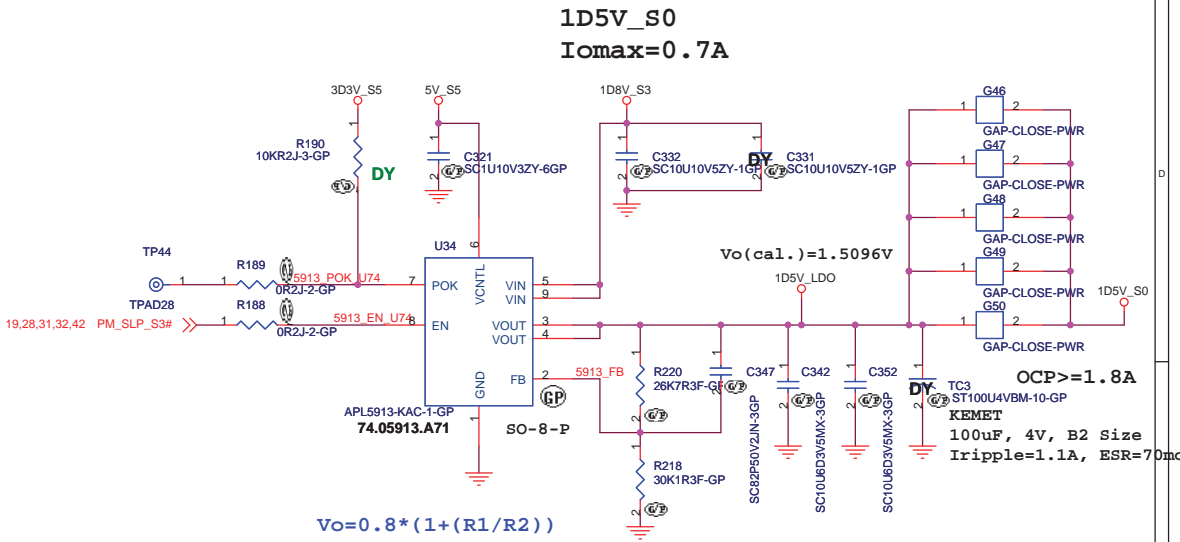
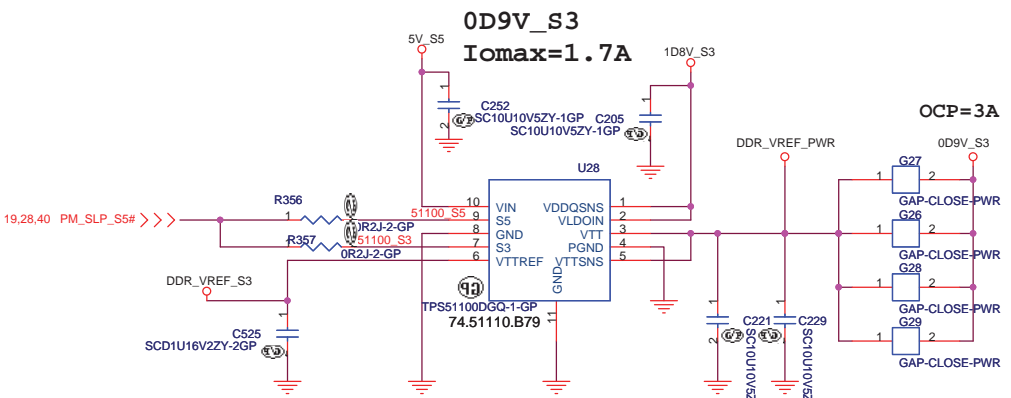
<Core Design>

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TPS51124 1D8V 1D2V

Title: _____
 Size: A3 Document Number: _____
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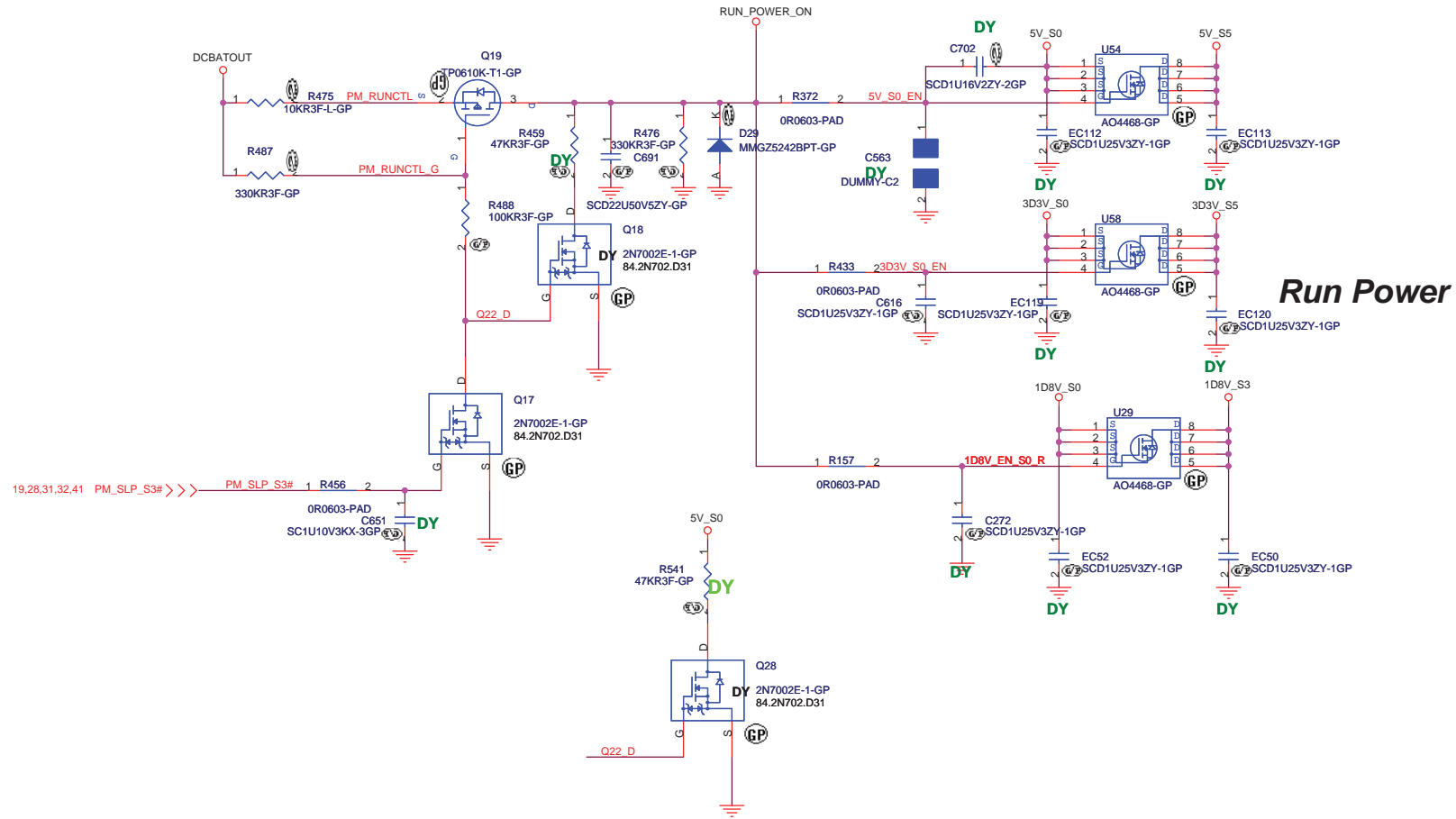
Yukon SA



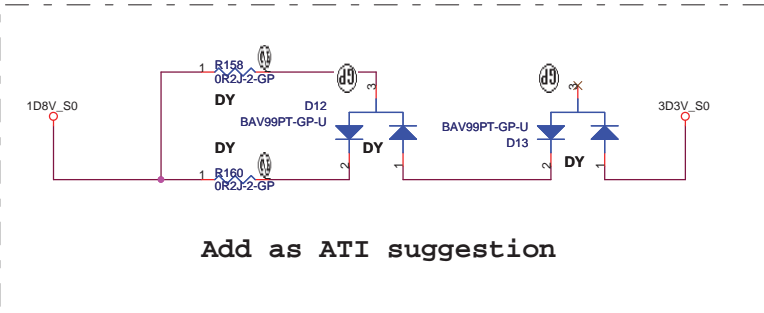
<Core Design>

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Title	2D5V/1D5V/0D9V	
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Run Power

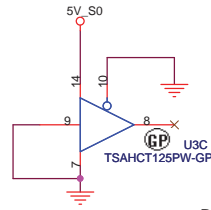
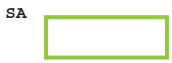


Add as ATI suggestion

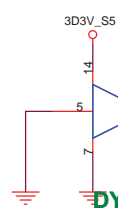
Power On Logic

<Core Design>

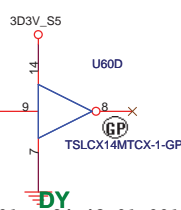
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
RUB POWER		
Size	Document Number	Rev
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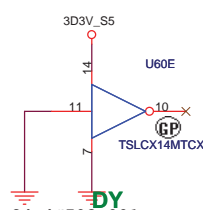
DUMMY in SA



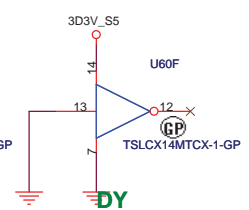
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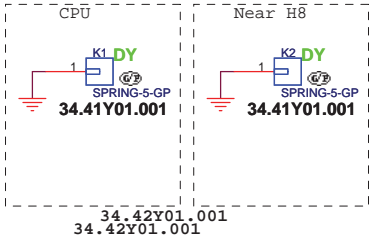
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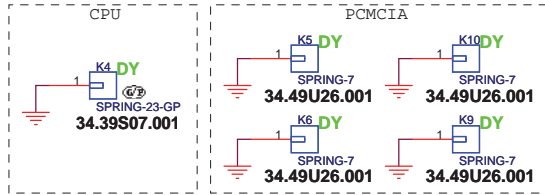
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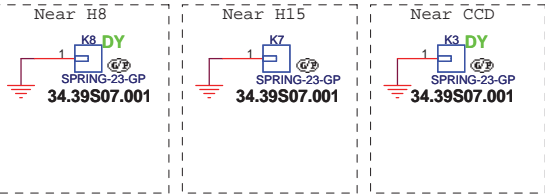
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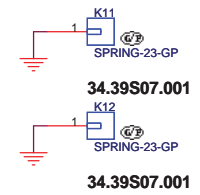
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34.42Y01.001



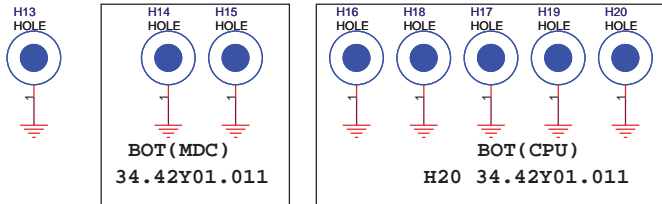
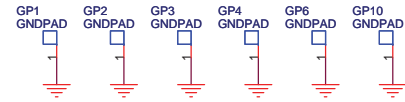
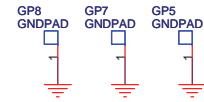
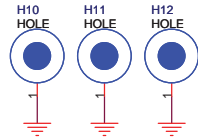
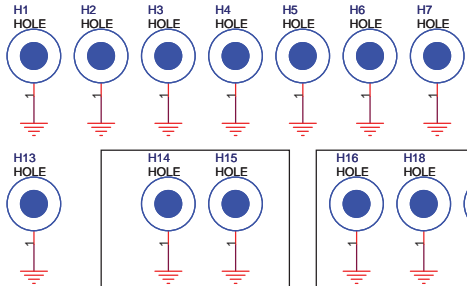
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34.49U26.001
34.49U26.001
34.49U26.001



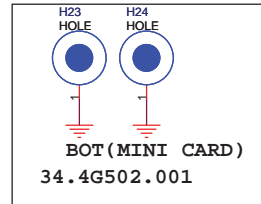
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34.39S07.001



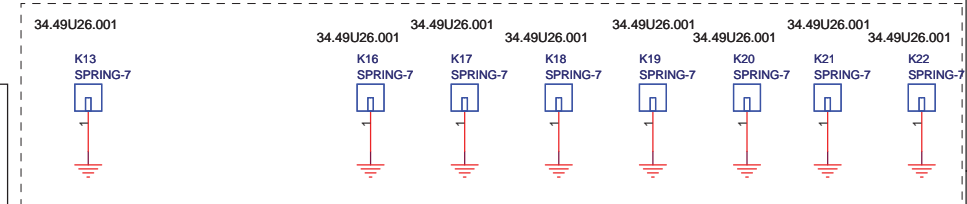
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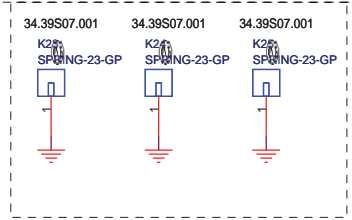
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H20 34.42Y01.011



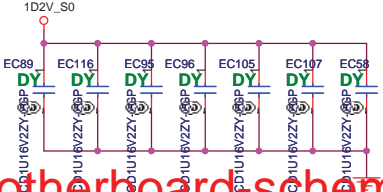
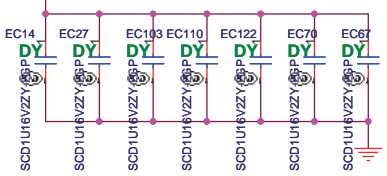
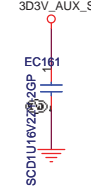
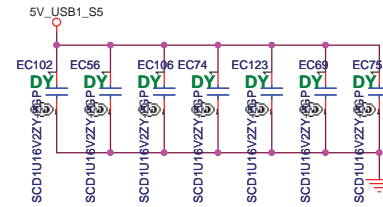
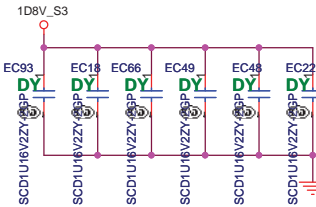
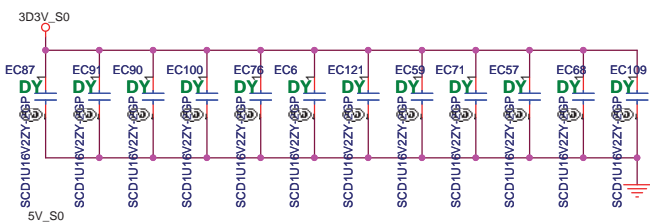
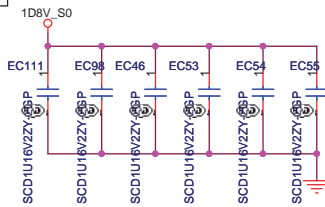
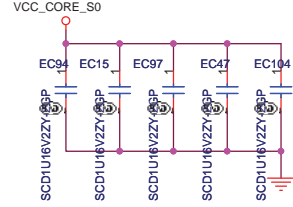
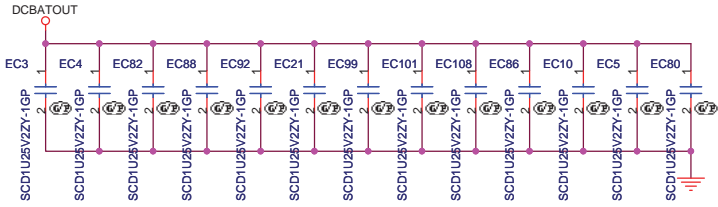
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34.49U26.001
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34.49U26.001



34.39S07.001
34.39S07.001
34.39S07.001



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Title: **EMI/Spring/Boss**

Size: Document Number: **Yukon** Rev: SA

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