

Tibet Block Diagram

AMD CPU NPT Processor Rev. G S1 package (3, 4, 5, 6) is connected to **DDRII Slot 0** and **DDRII Slot 1** via **DDRII 667/800 Channel A** and **DDRII 667/800 Channel B**. The CPU is also connected to the **nVIDIA MCP67 ACPI 2.0** (9, 10, 11, 12, 13) via **HyperTransport 16X16 6.4GB/S**.

The **nVIDIA MCP67 ACPI 2.0** is connected to various components:

- HDCP EEPROM** via **HDCP**.
- Mini Card 802.11a/b/g** via **PCIE x 1**.
- LCD UP to 1920 X 1201** via **LVDS Dual Channel**.
- RJ45 CONN** via **10/100/1000 PHY MARVELL 88E3018** (28, 29) via **RGMI**.
- 1394 Conn** via **RICOH R5C833** (1* 1394 5 in 1 card reader 25, 26) via **PCI**.
- 5 in 1 Card reader** via **RICOH R5C833** (1* 1394 5 in 1 card reader 25, 26) via **PCI**.
- RJ11 CONN** via **AMOM MODEM CX20548** (33) via **HD AUDIO**.
- LINE OUT** and **LINE OUT/SPDIF** via **HD AUDIO CODEC CX20549-12Z** (33) via **HD AUDIO**.
- MIC IN** and **INTERNAL MIC ARRAY** via **OP AMP ANPEC APA2031** (34) via **HD AUDIO**.
- 2CH SPEAKER** via **OP AMP ANPEC APA2031** (34) via **HD AUDIO**.
- DOCKING** (1616) via **HD AUDIO**.
- TVOUT** (14) via **SVIDEO/COMP**.
- CRT** (14) via **RGB CRT**.
- EXPRESSCARD** (29) via **PCIE x 1/ USB2.0**.
- Power Switch RICOH R5538** (29) via **PCIE x 1/ USB2.0**.
- Bluetooth** (32) via **USB 2.0**.
- USB x 2** and **USB x 1** (24) via **USB 2.0**.
- ODD** (24) via **PATA**.
- HDD** (24) via **SATA**.
- Capacitive Button** (32) via **LPC Bus**.
- Comsumer IR** (33) via **LPC Bus**.
- Touch Pad** (32) via **LPC Bus**.
- Int. KB** (32) via **LPC Bus**.
- Thermal & Fan G792** (23) via **LPC Bus**.
- FlashRom 8Mb (1MB)** (31) via **LPC Bus**.

SYSTEM DC/DC MAX8734A

SYSTEM DC/DC MAX8734A	
INPUTS	OUTPUTS
DCBATOUT	3D3V_S5 5V_S5

SYSTEM DC/DC MAX8743

SYSTEM DC/DC MAX8743	
INPUTS	OUTPUTS
DCBATOUT	1D2V_HT_S0 1D2V_CORE_S0

MAXIM CHARGER MAX8725

MAXIM CHARGER MAX8725	
INPUTS	OUTPUTS
DCBATOUT	BT+ 18V 3.0A 5V 100mA

CPU DC/DC MAX8760

CPU DC/DC MAX8760	
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE_S0 1.35V 35A

PCB LAYER

PCB LAYER	
L1: SIGNAL 1	
L2: GND	
L3: SIGNAL 2	
L4: SIGNAL 3	
L5: VCC	
L6: SIGNAL 4	

Wistron Corporation

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

Block Diagram

Size: A3
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Tibet Block Diagram

AMD CPU NPT Processor
Rev. G
S1 package

HyperTransport
16X16
6.4GB/S

nVIDIA MCP67
ACPI 2.0

10/100/1000 PHY
MARVELL 88E3018

RICOH R5C833
1* 1394
5 in 1 card reader

AMOM MODEM
CX20548

HD AUDIO CODEC
CX20549-12Z

OP AMP
ANPEC APA2031

DOCKING

DDRII Slot 0

DDRII Slot 1

TVOUT

CRT

EXPRESSCARD

Power Switch
RICOH R5538

Bluetooth

USB x 2
USB x 1

ODD

HDD

KBC
WINBOND WPC8763

Capacitive Button

Comsumer IR

Touch Pad

Int. KB

Thermal & Fan
G792

FlashRom
8Mb (1MB)

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Block Diagram

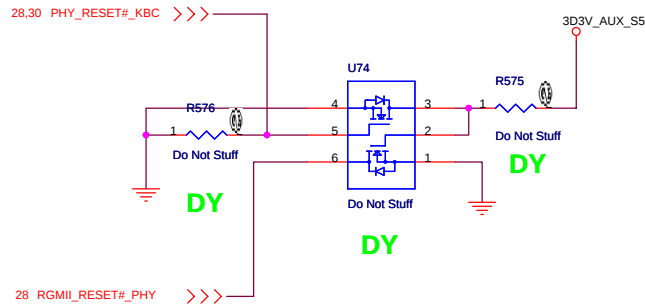
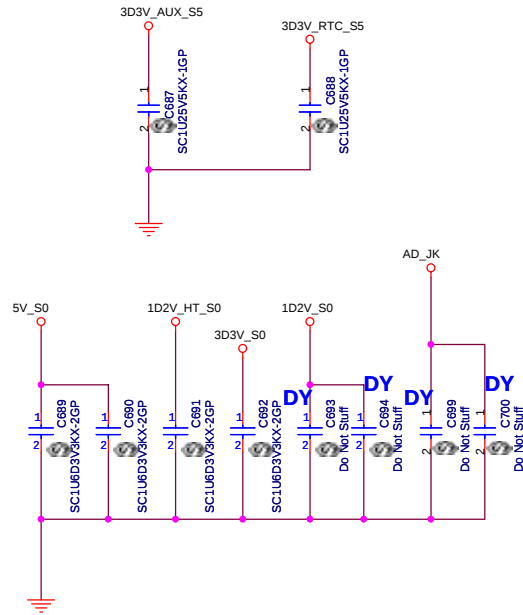
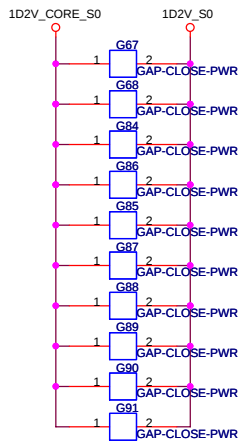
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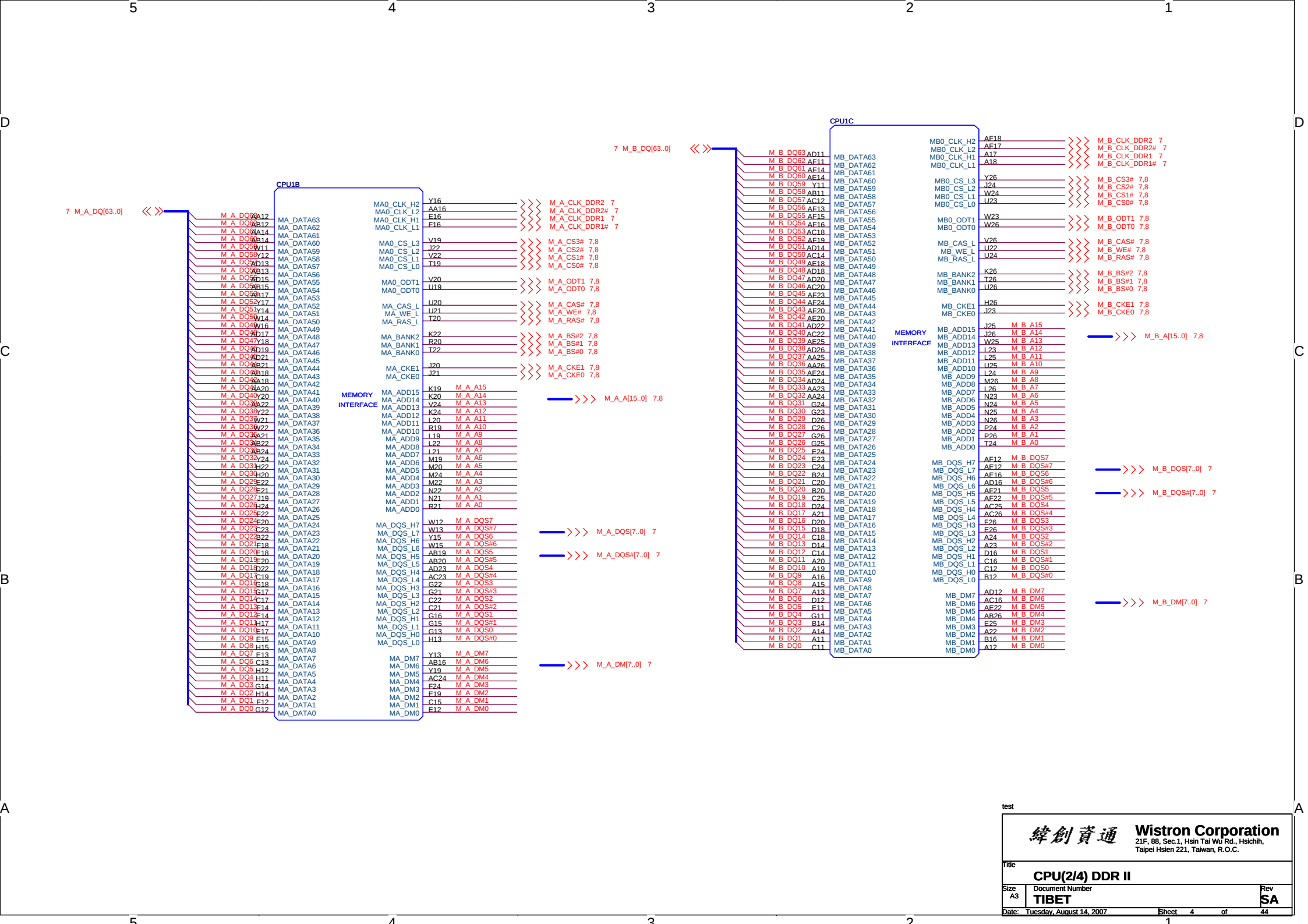
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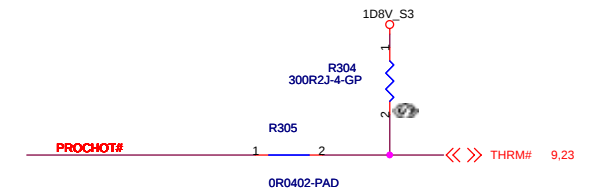
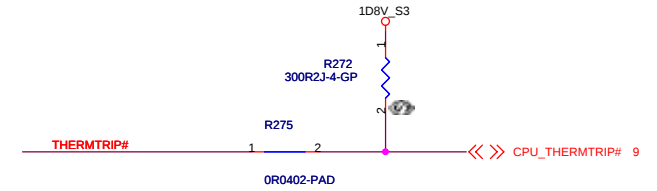
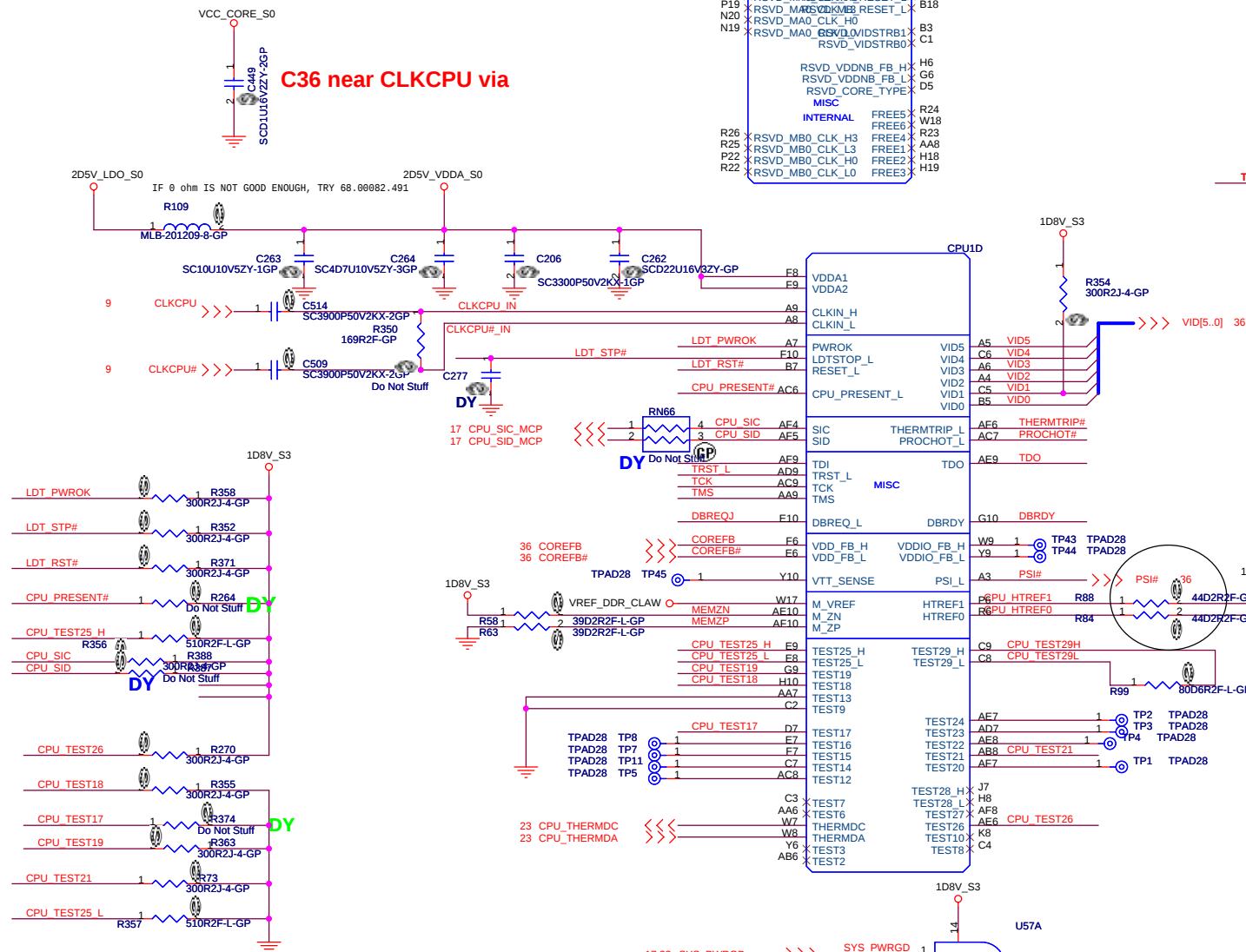
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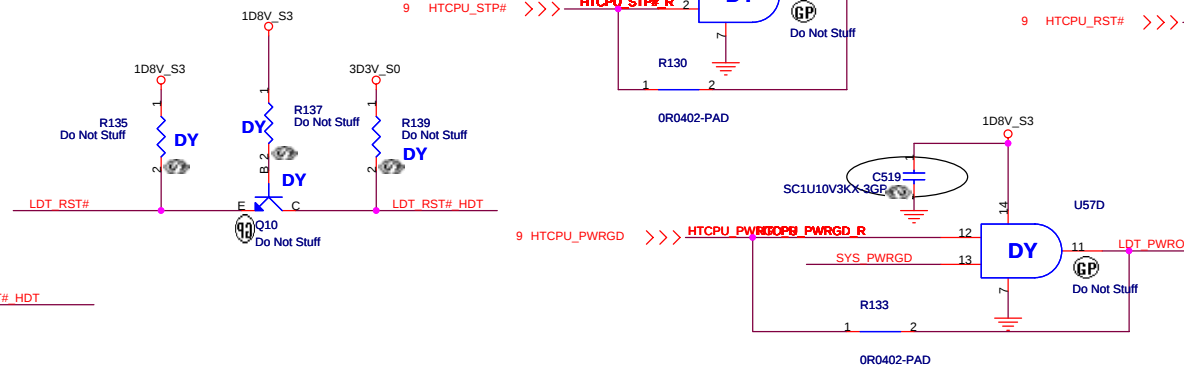
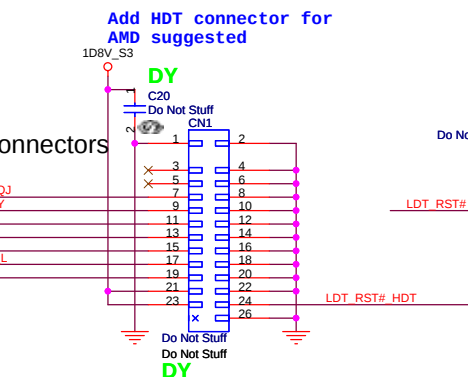
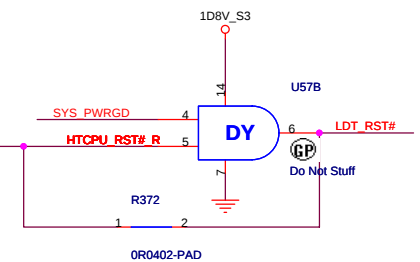
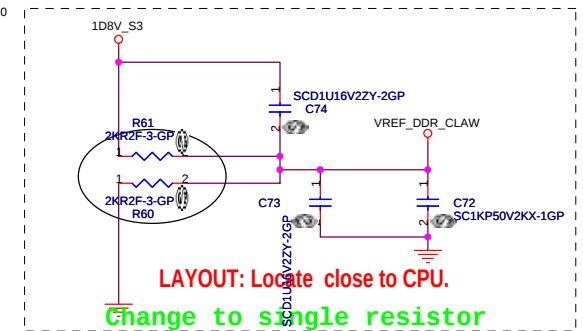


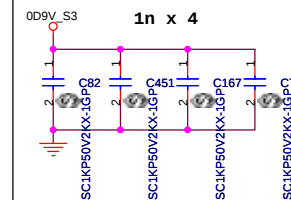
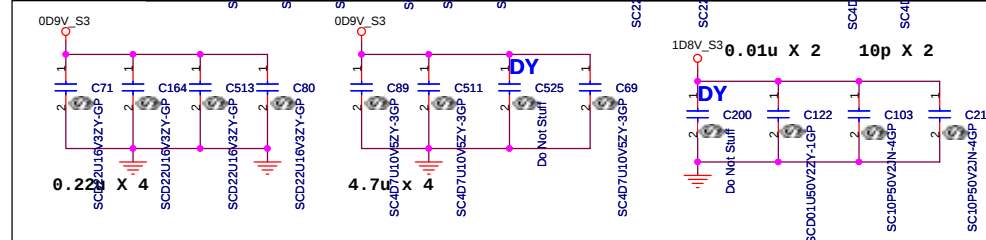
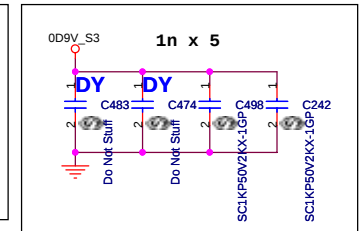
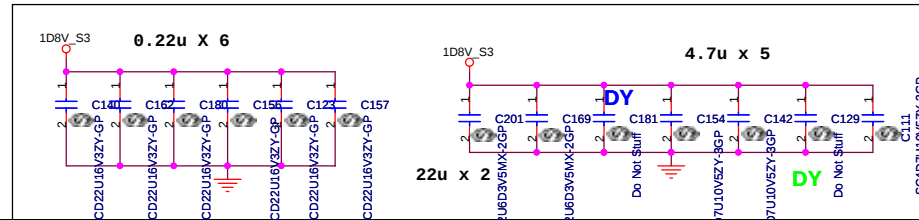
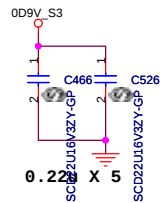
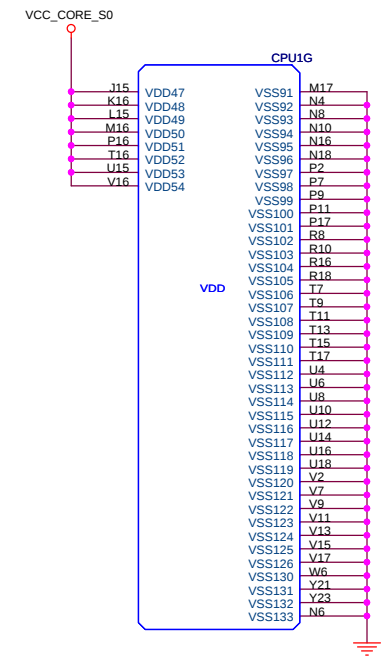
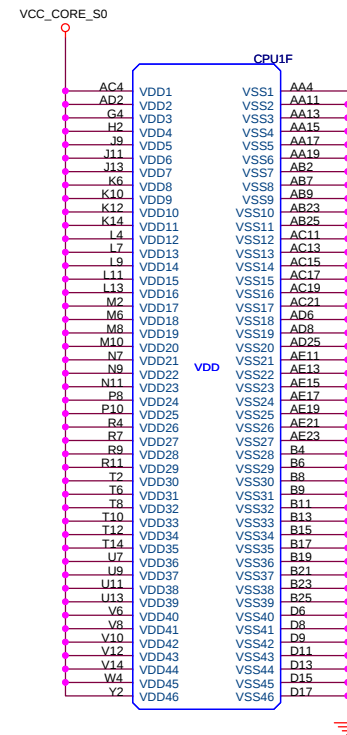
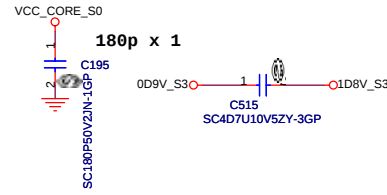
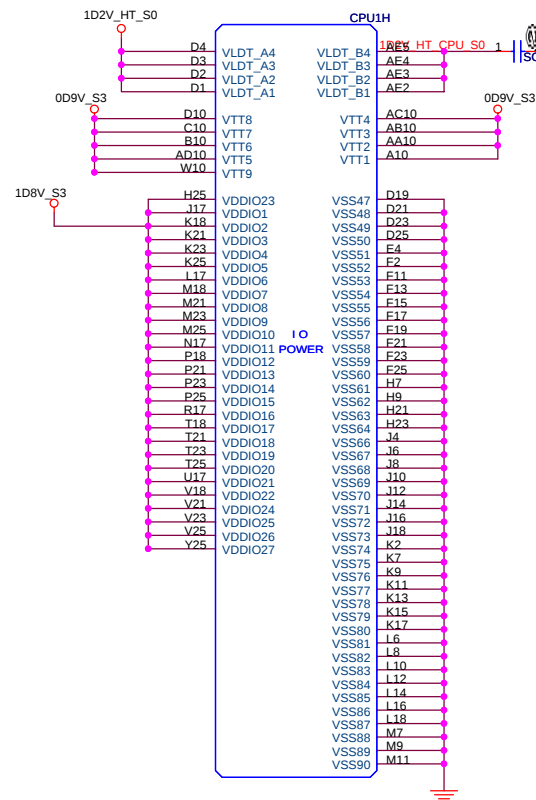
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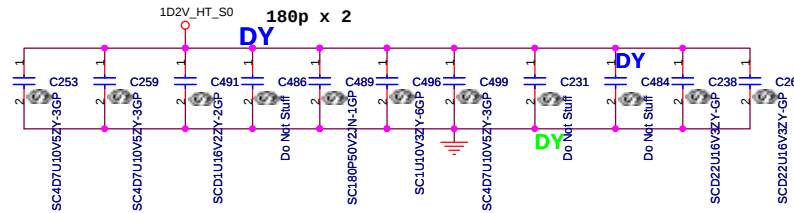
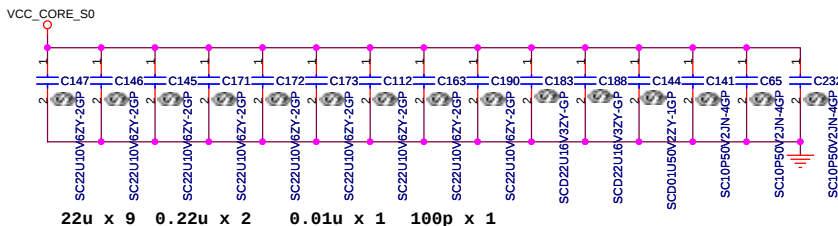


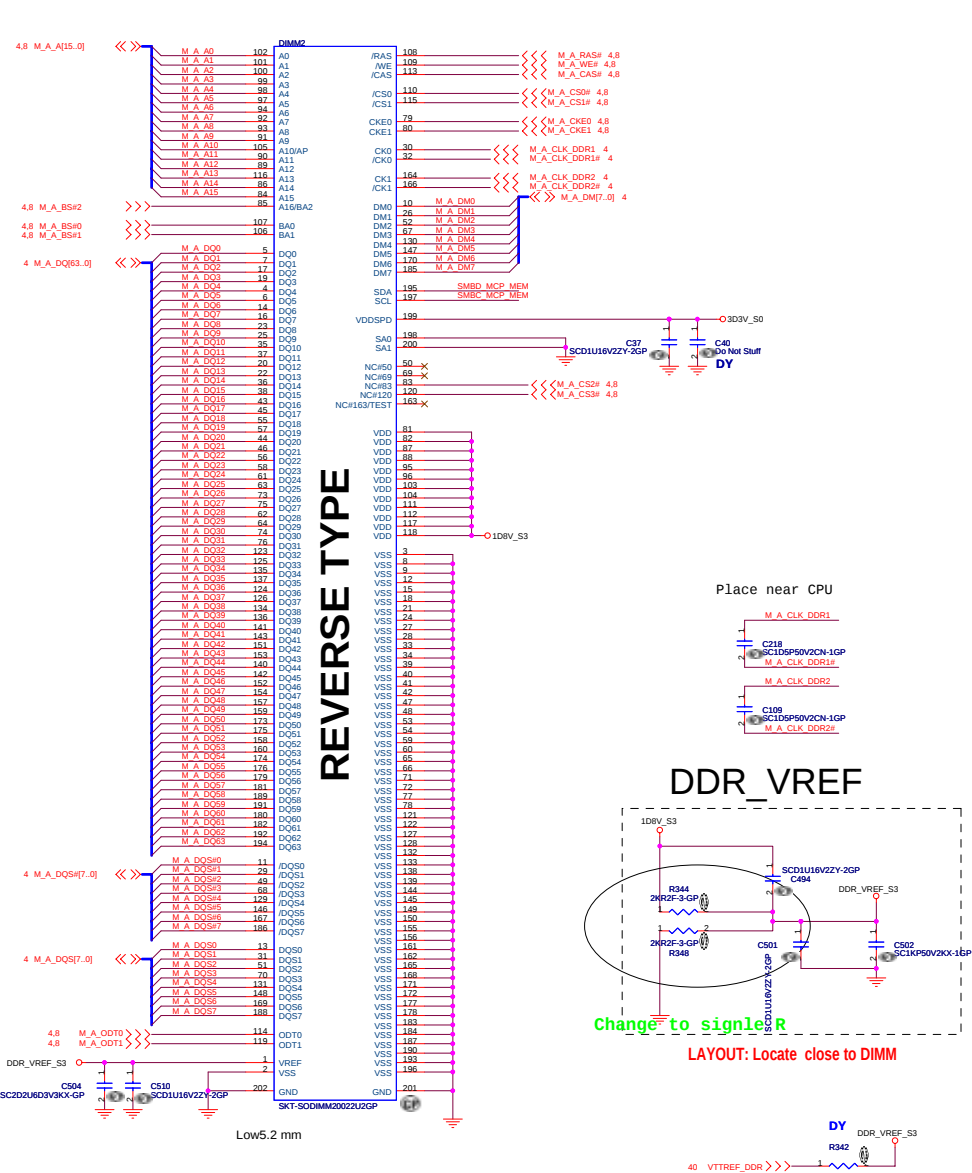
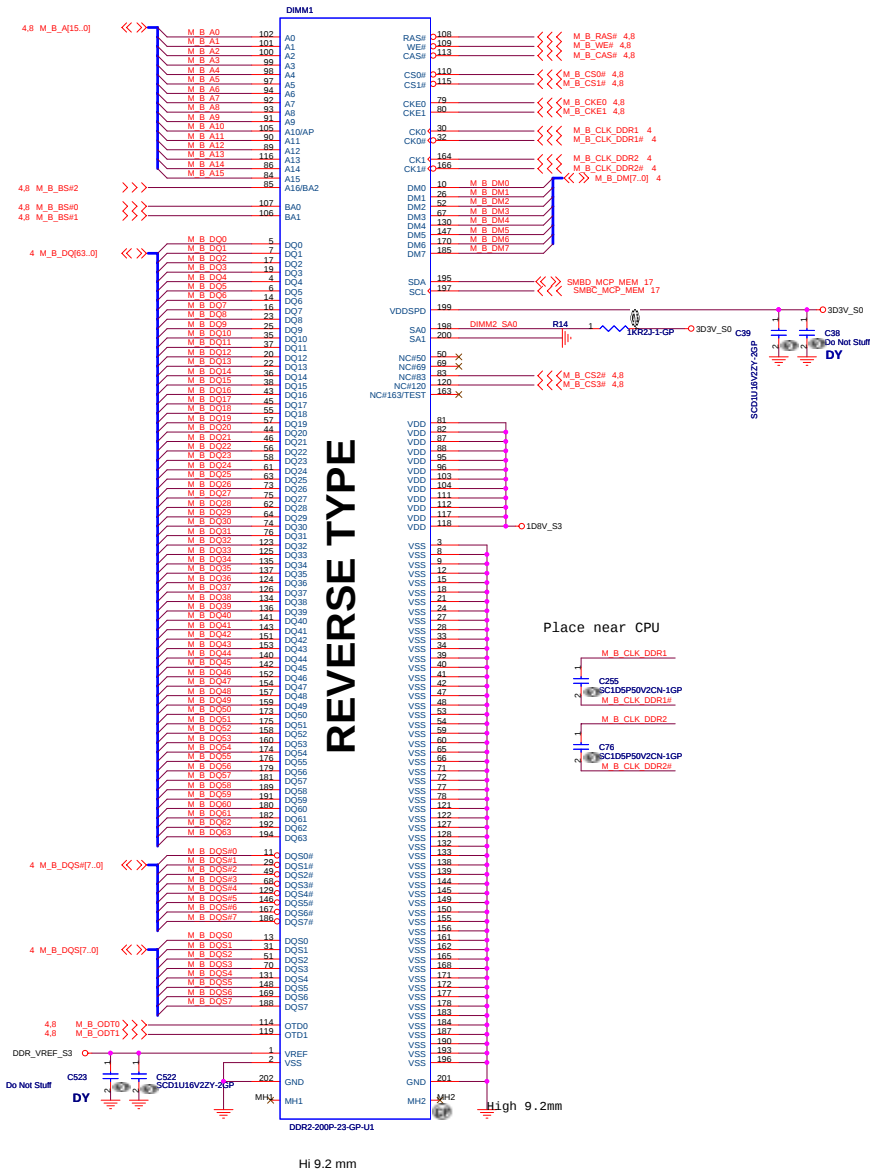
VREF_DDR_CLAW





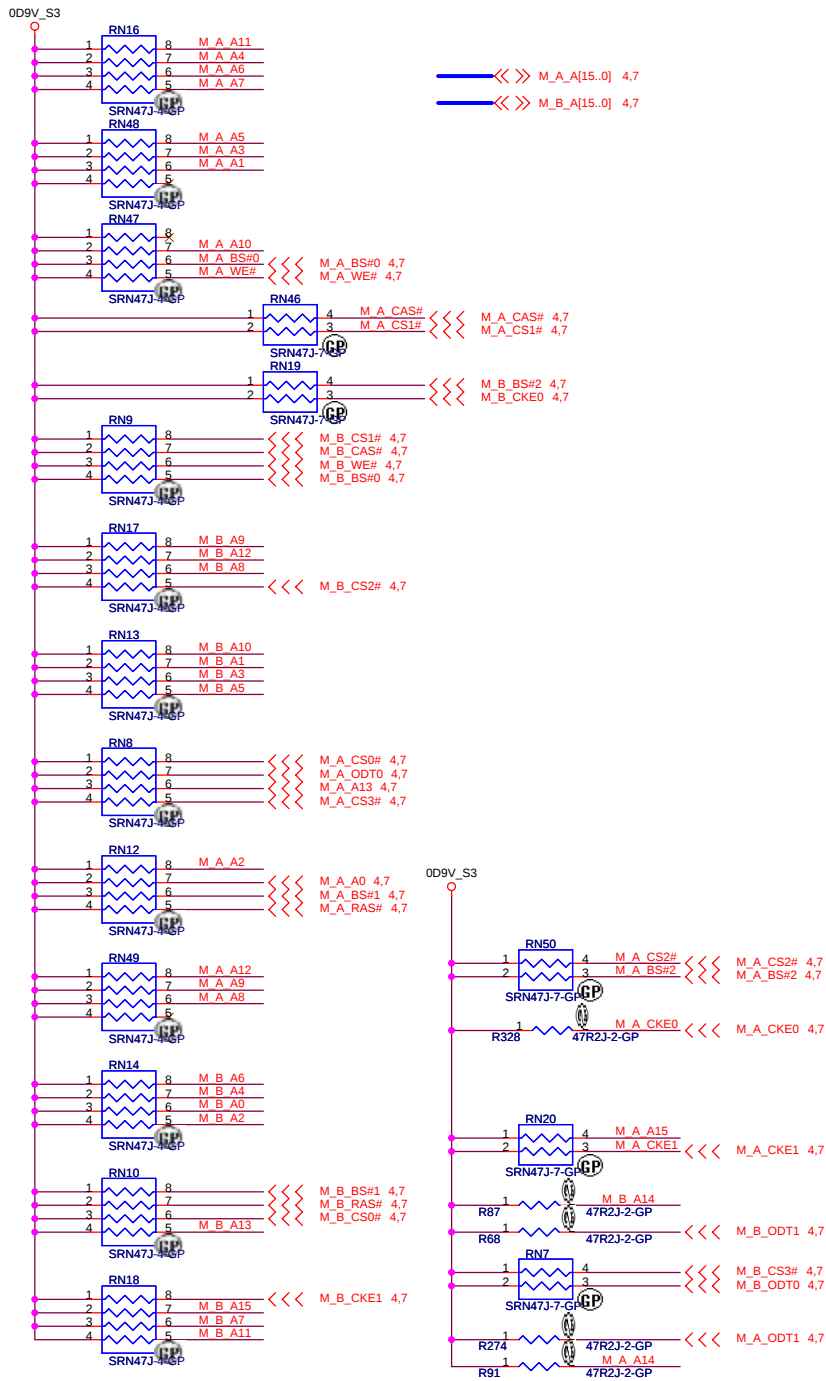
LAYOUT: Place on backside of processor.





PARALLEL TERMINATION

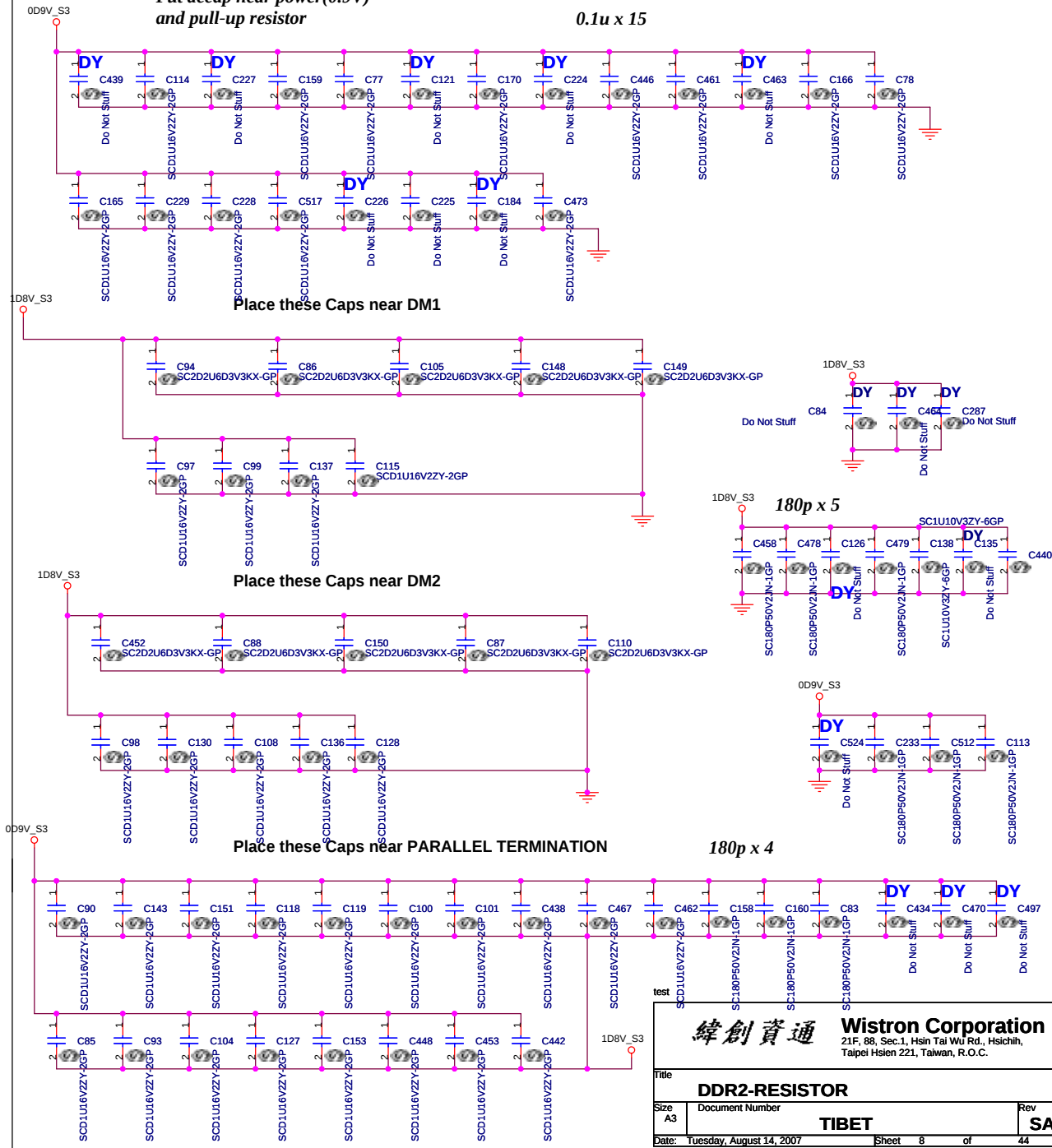
Put decap near power(0.9V) and pull-up resistor



Decoupling Capacitor

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

0.1u x 15



緯創資通

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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,

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

Title **DDR2-RESISTOR**

Size A3	Document Number
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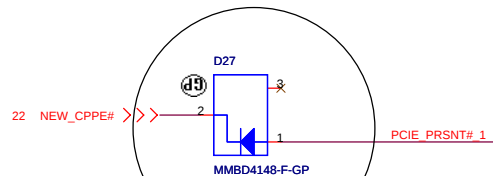
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SA

SA

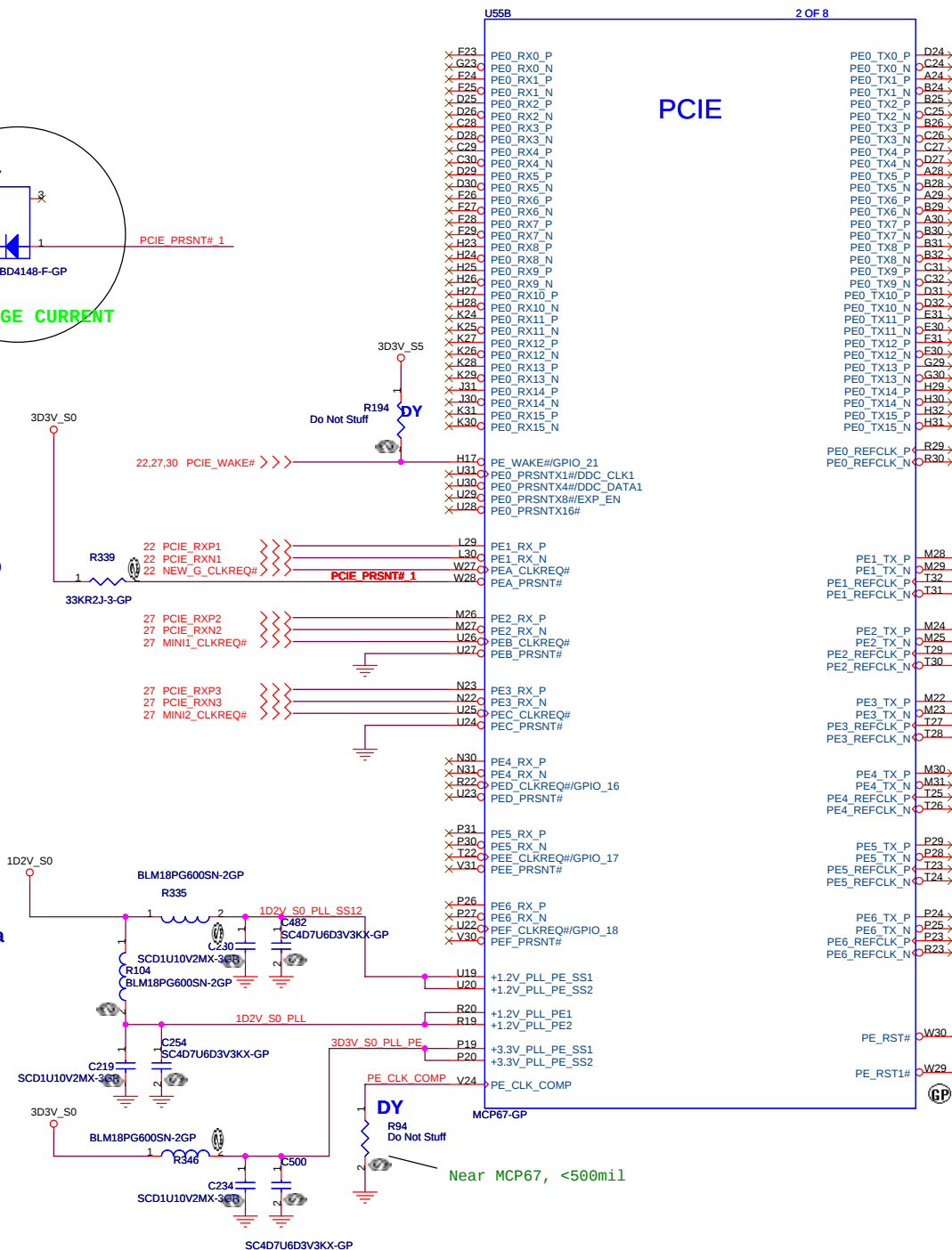


NEW CARD

MINI CARD1

MINI CARD2

C675 close to
CLK_PCIE_1/# L3 to L6 via

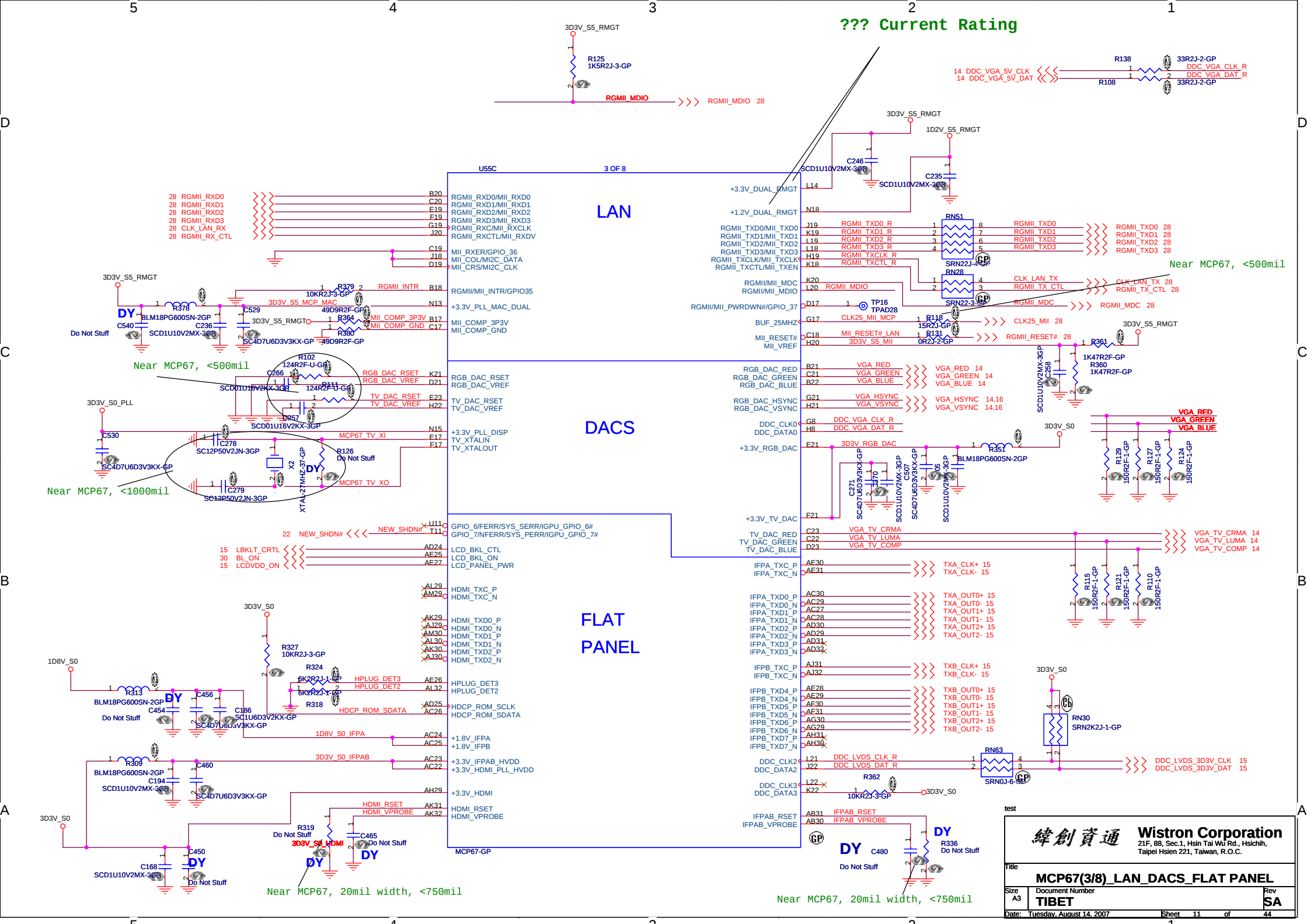


Near Connector, <500mil

For New_Card

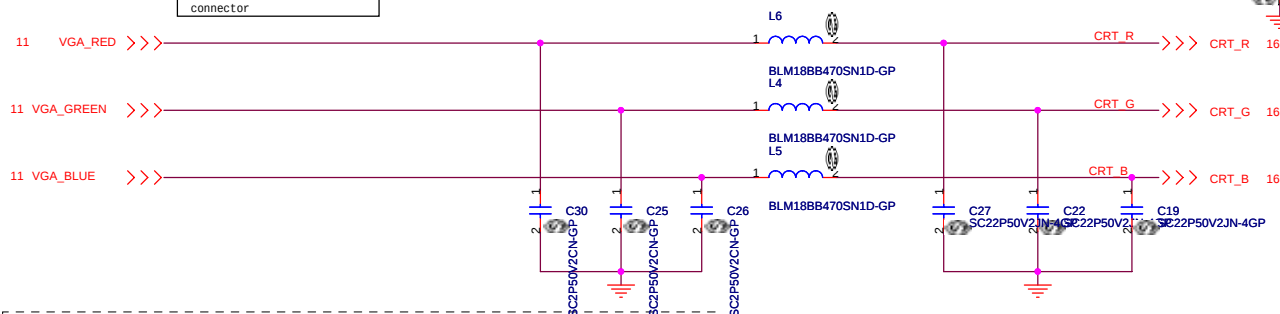
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緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title MCP67(2/8)_PCIE	
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CRT I/F & CONNECTOR

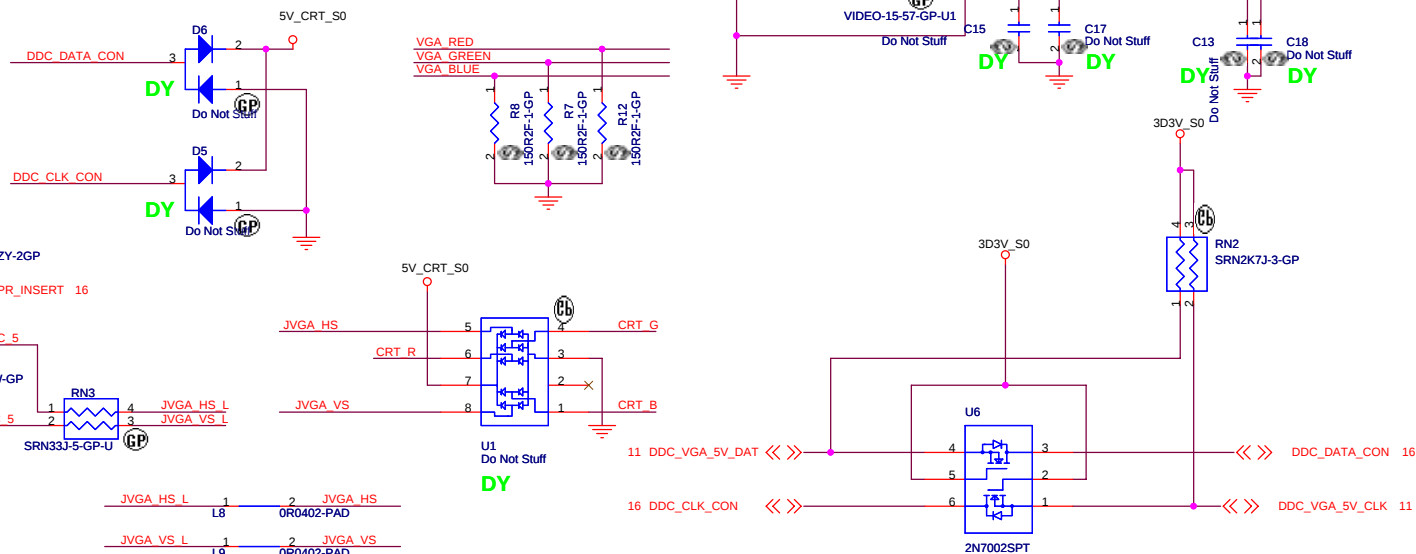
Layout Note:
Place these resistors
close to the CRT-out
connector



Layout Note:

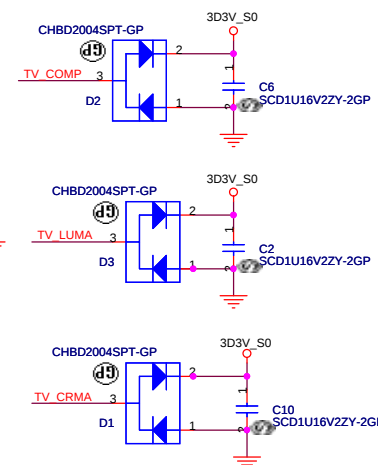
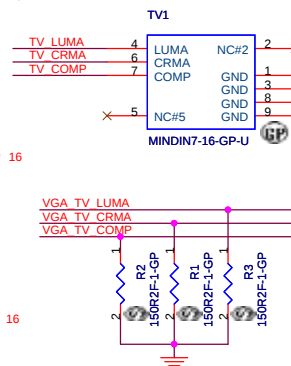
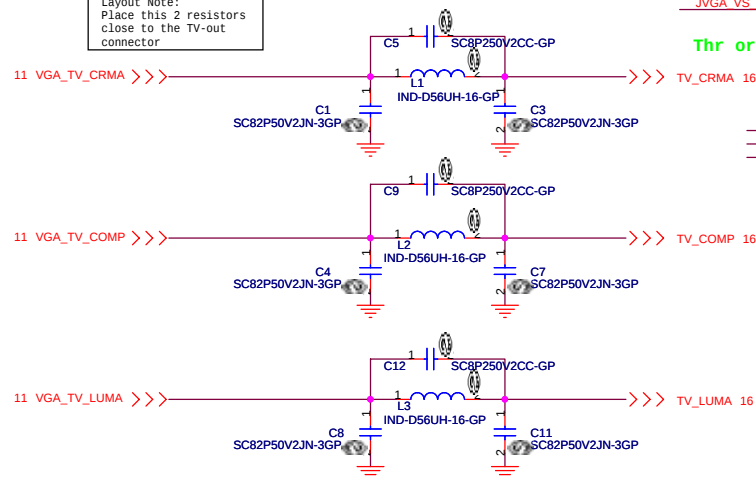
*** Must be a ground return path between this ground and the ground on the VGA connector.**

Pi-filter & 150 Ohm pull-down resistors should be as close as to CRT CONN. RGB will hit 75 Ohm first, pi-filter, then CRT CONN.



TV OUT CONN

Layout Note:
Place this 2 resistors
close to the TV-out
connector



5V @ ext. CRT side

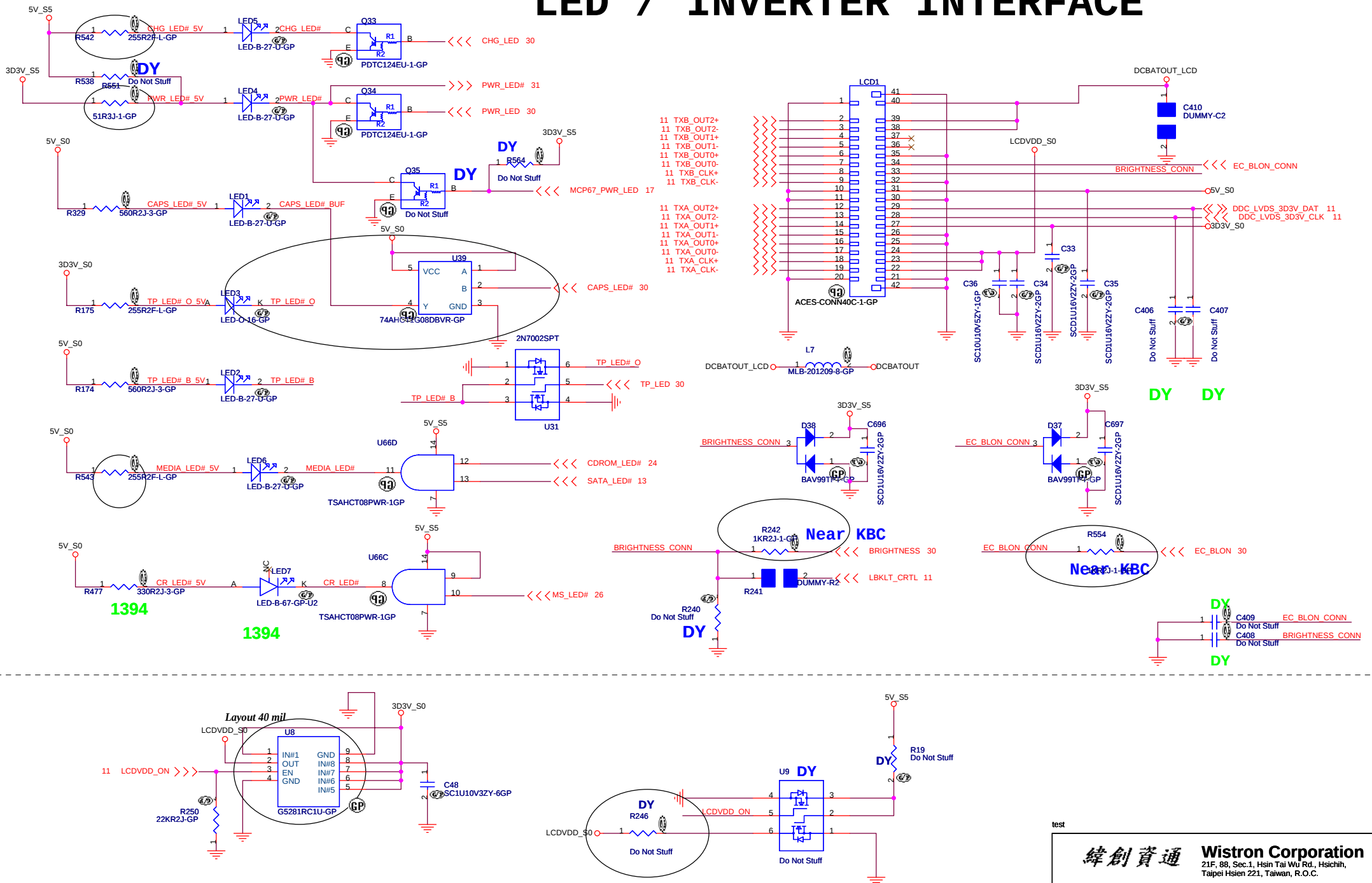
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Title			
CRT/TV CONNECTOR			
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LED / INVERTER INTERFACE

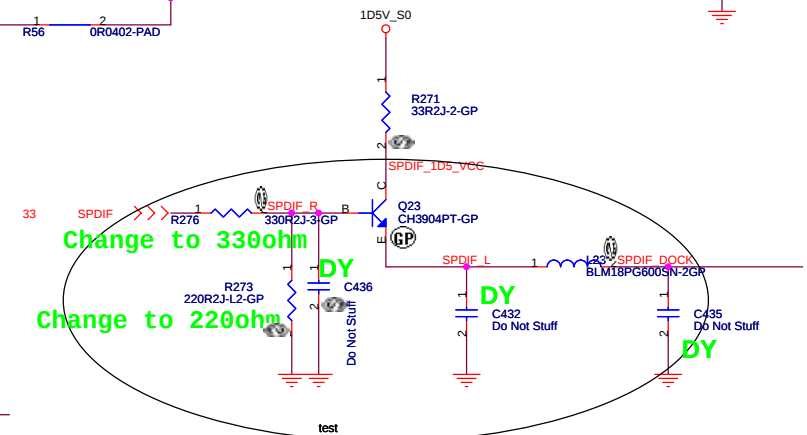
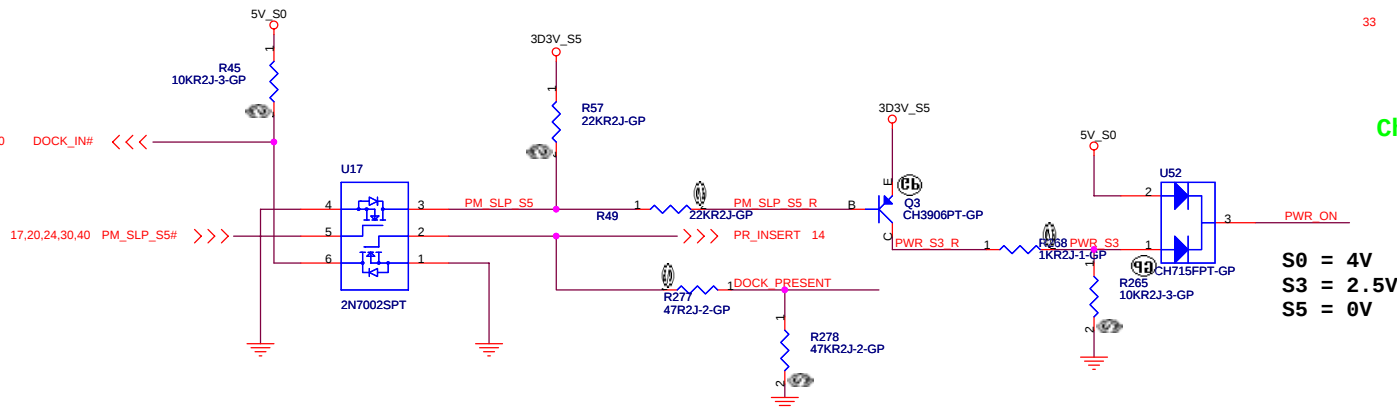
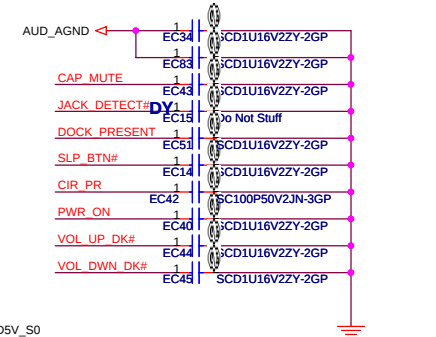
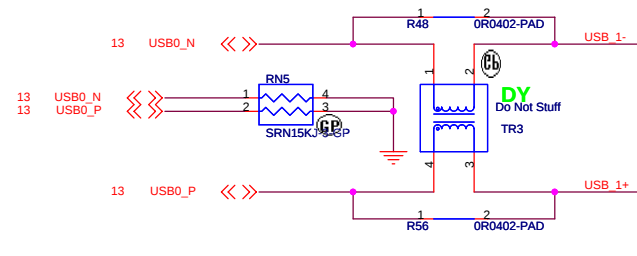
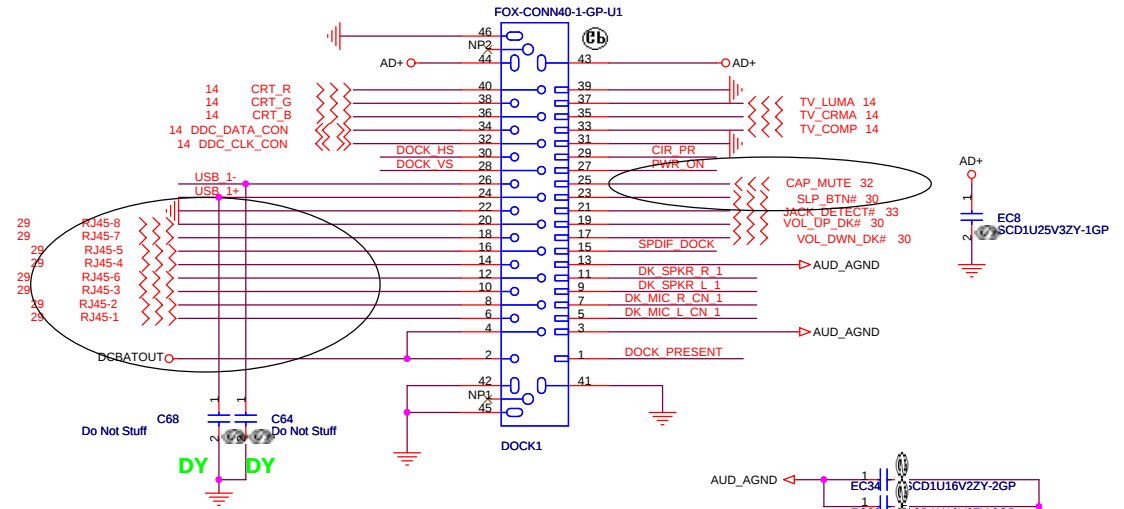
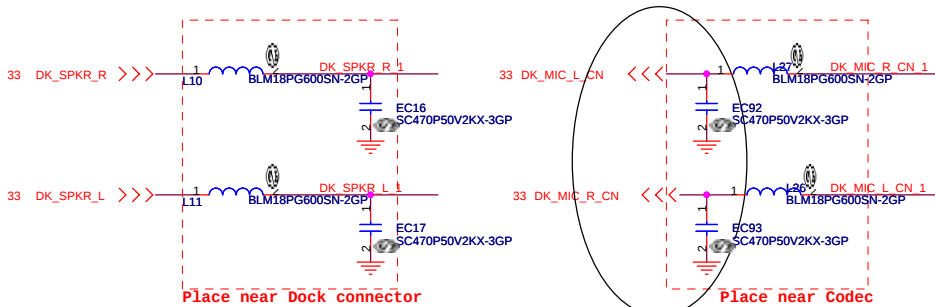
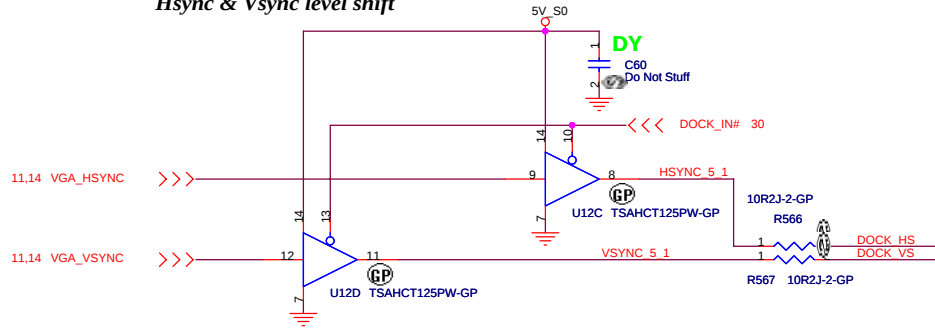
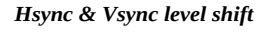
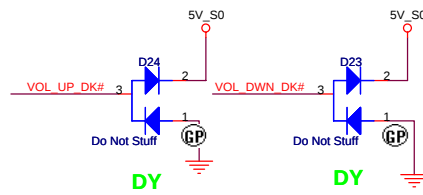


test

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

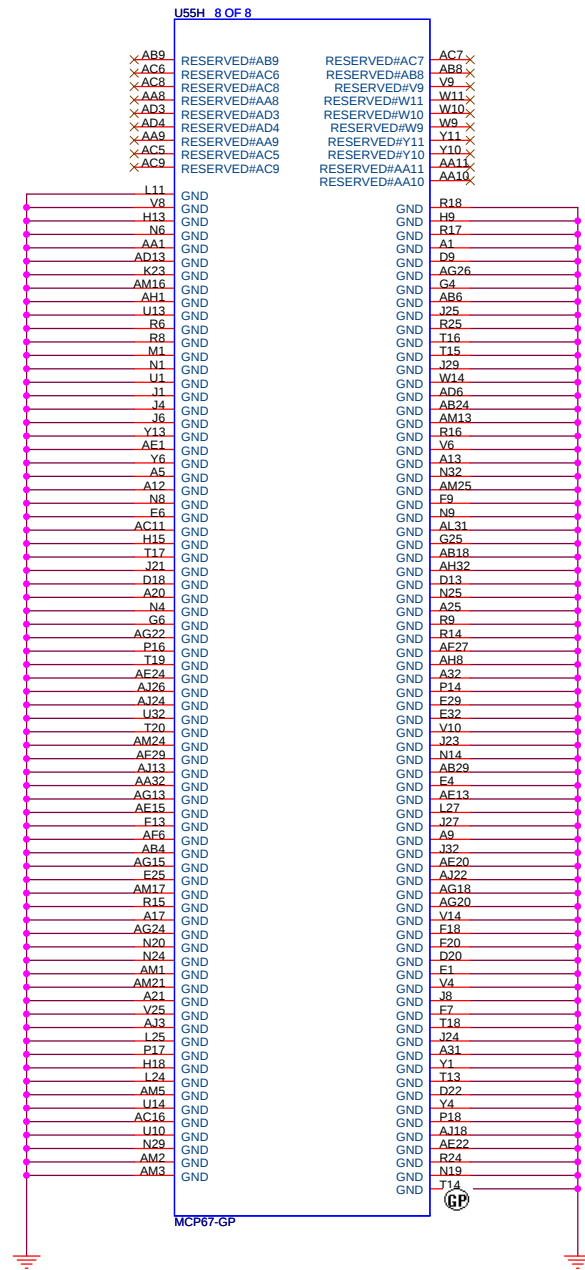
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LCD/Inverter Connector			
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Docking Connector



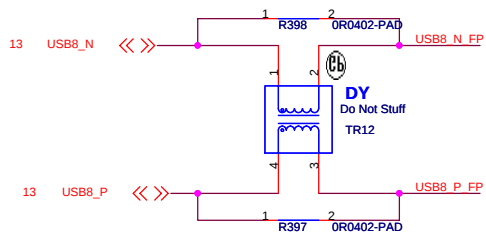
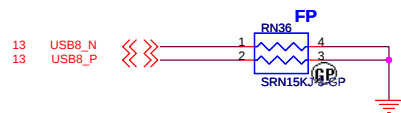
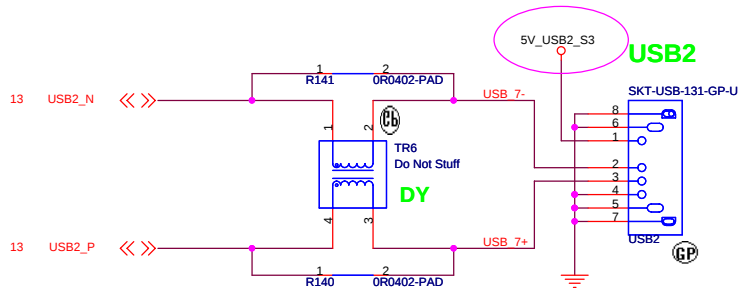
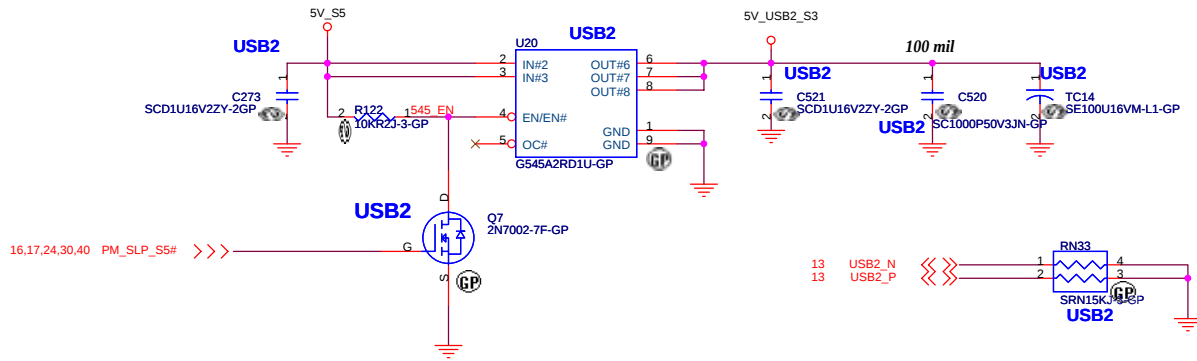
S0 = 4V
S3 = 2.5V
S5 = 0V



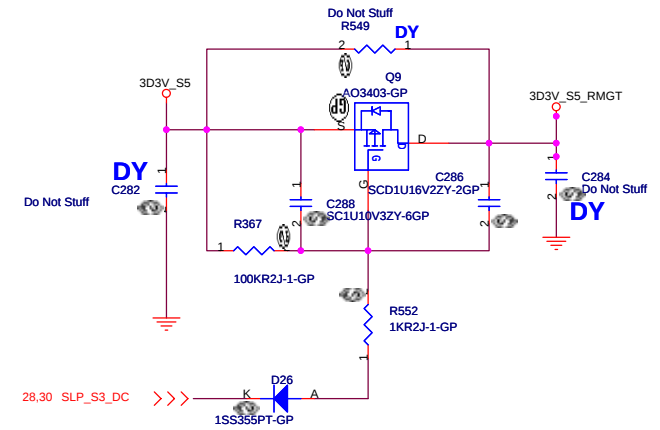
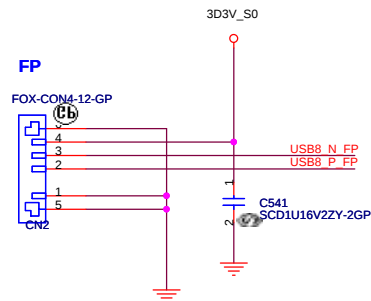


test

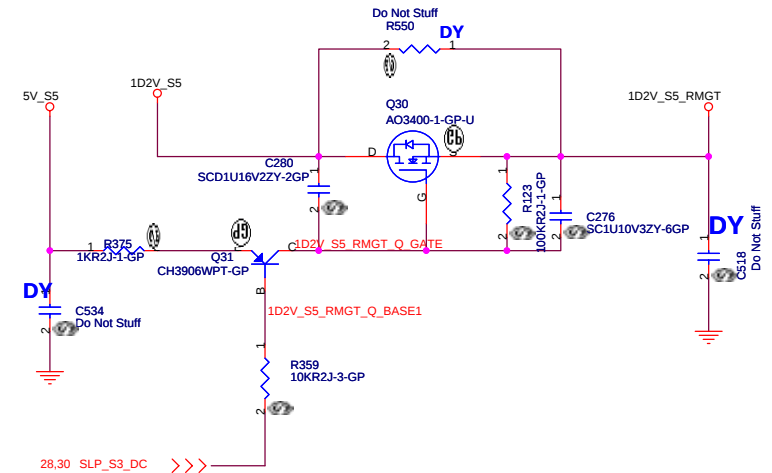
緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
MCP67(8/8)_GND			
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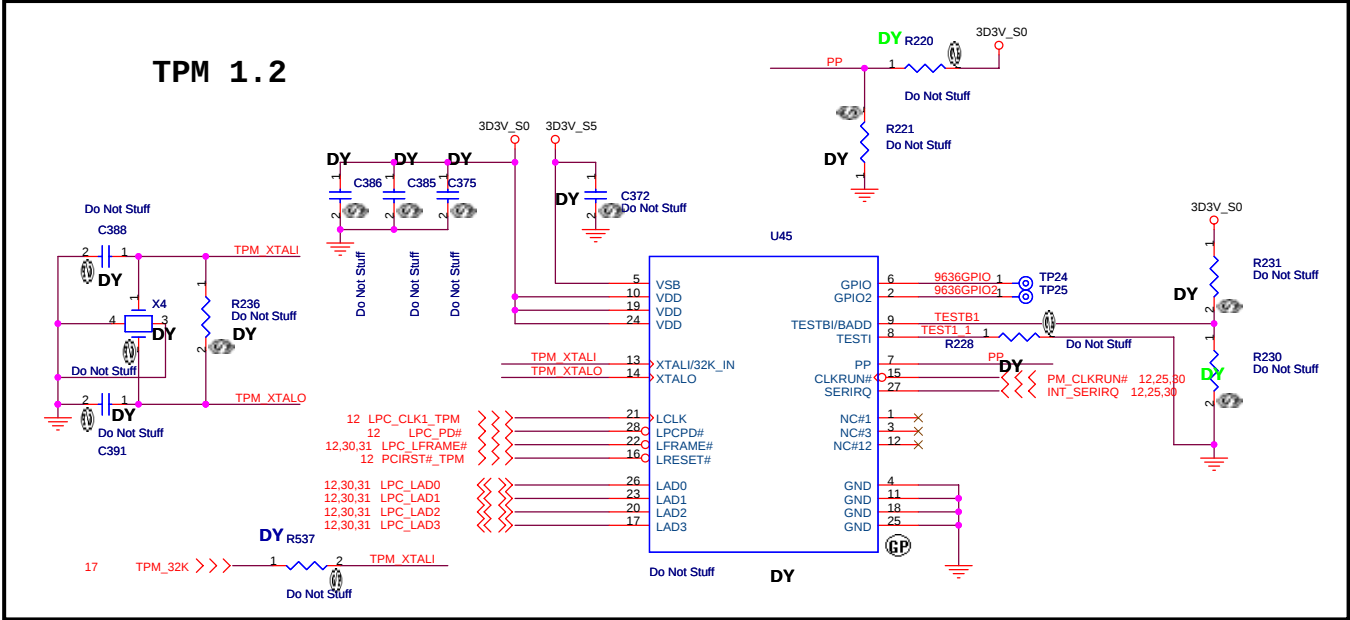
Finger Printer



??? Current Rating



test



test

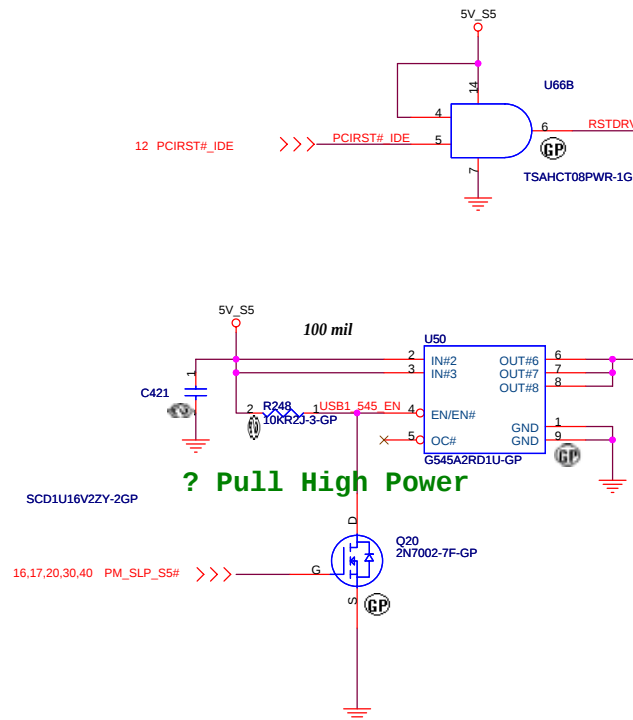
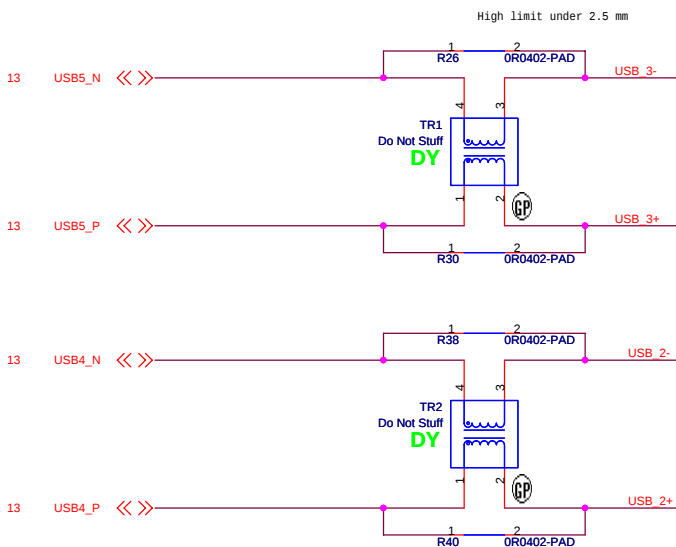
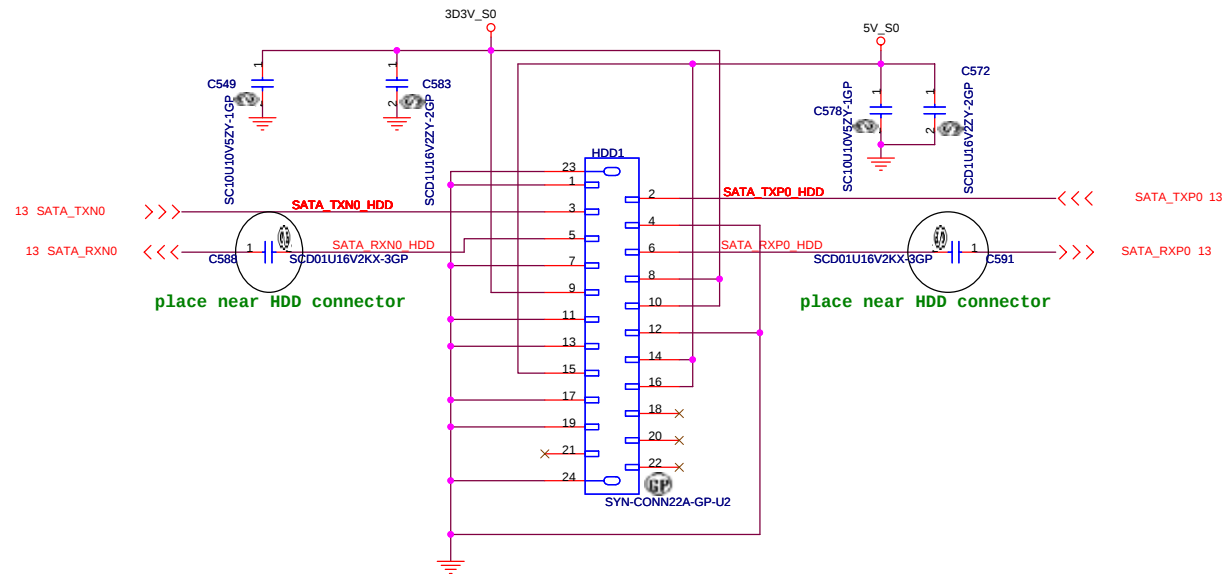
D

C

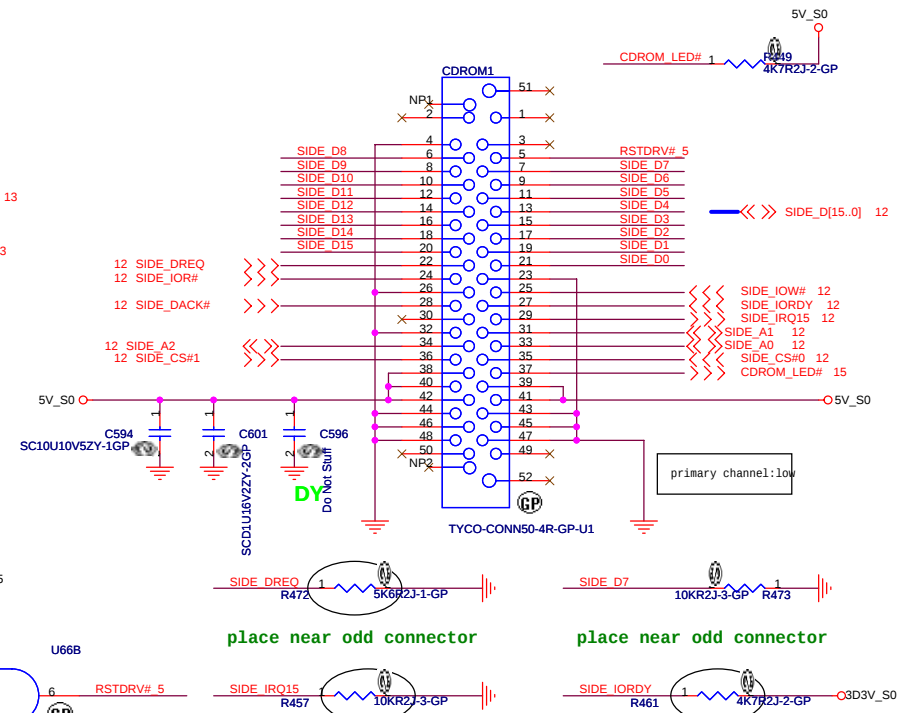
B



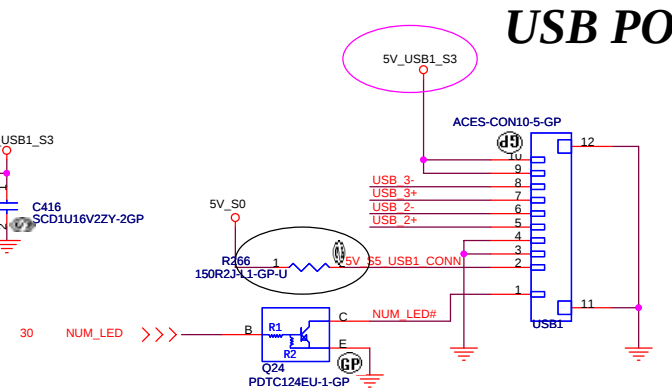
SATA HD Connector



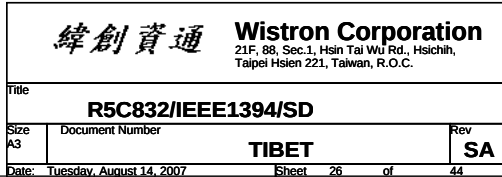
CD-ROM CONNECTOR



USB PORT

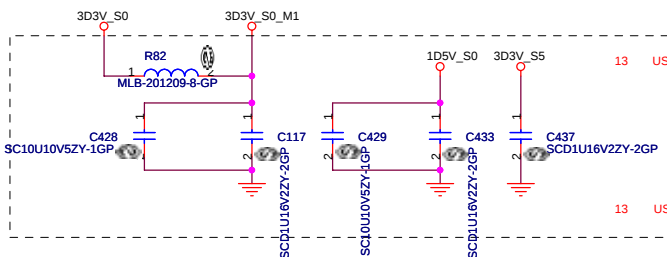
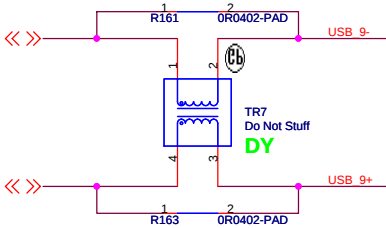
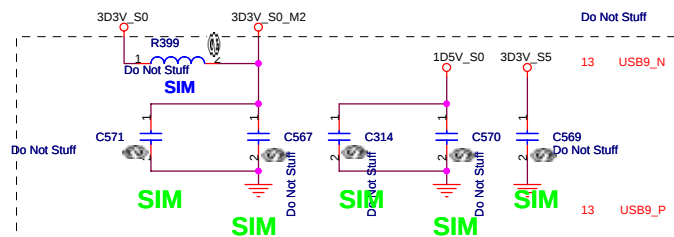
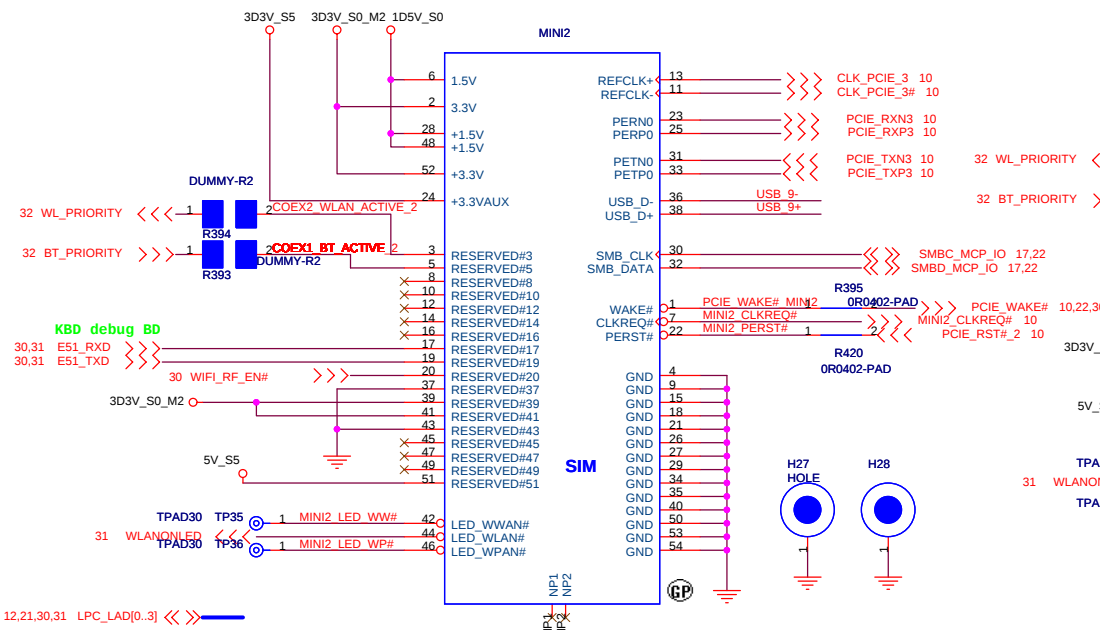


test



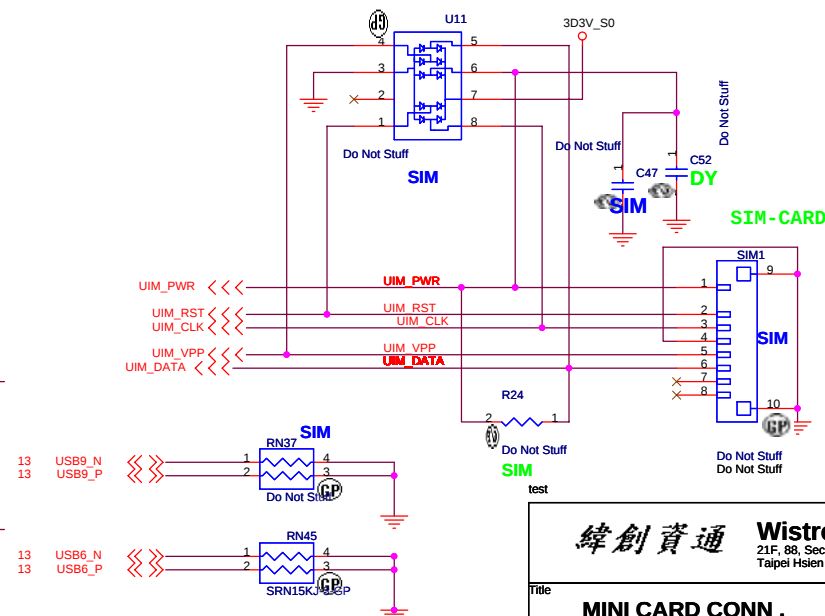
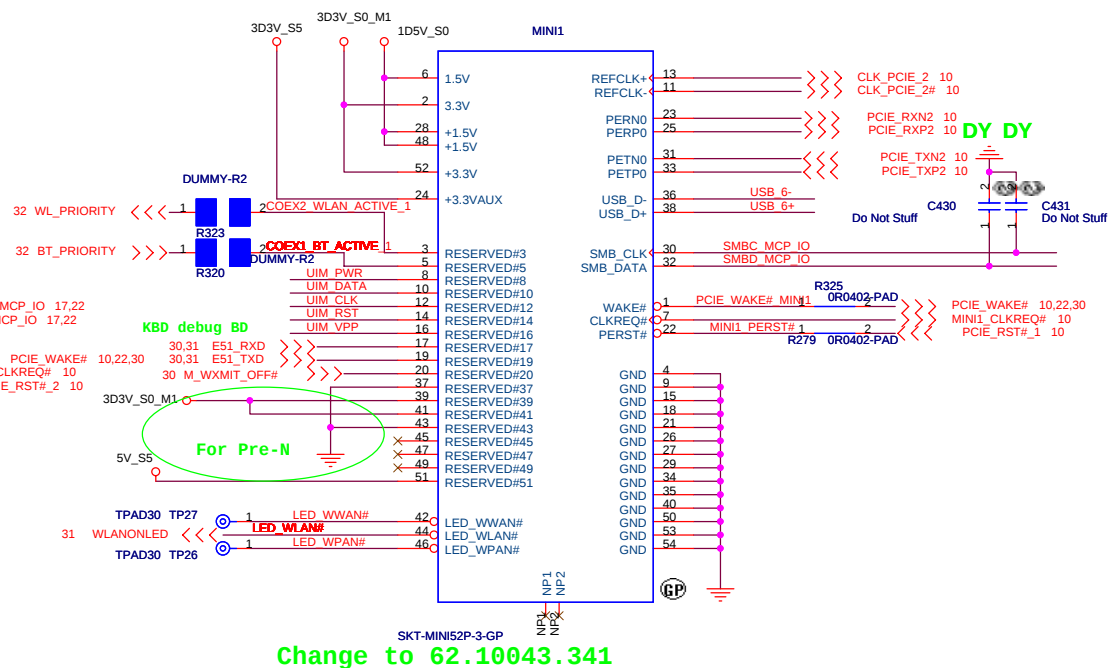
Mini Card Connector 2

Wireless Card



Mini Card Connector 1

WWAN



ta transitions

RN35

1 RGMII_RXD0_R 4
2 RGMII_RX_CTL_R 3

SRN22-3 (CP)

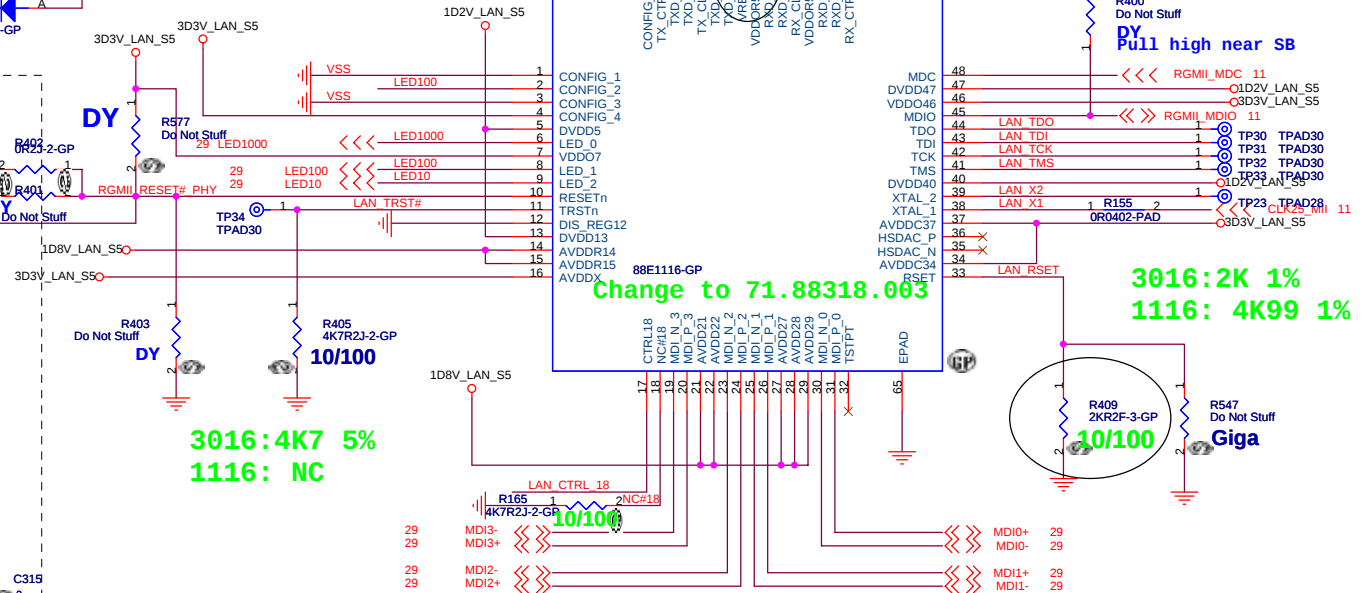
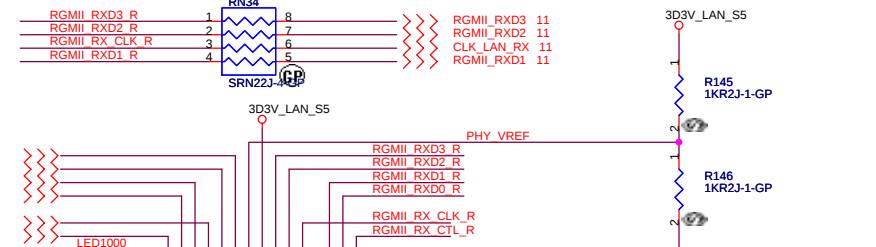
RGMII_RXD0 11
RGMII_RX_CTL 11

RN34

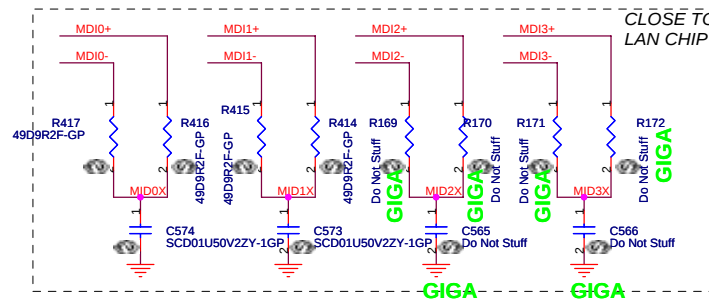
1 RGMII_RXD3_R 8
2 RGMII_RXD2_R 7
3 RGMII_RX_CLK_R 6
4 RGMII_RXD1_R 5

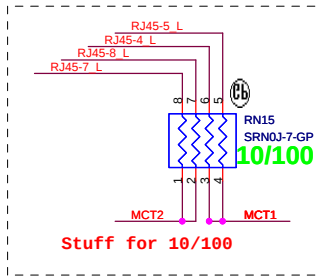
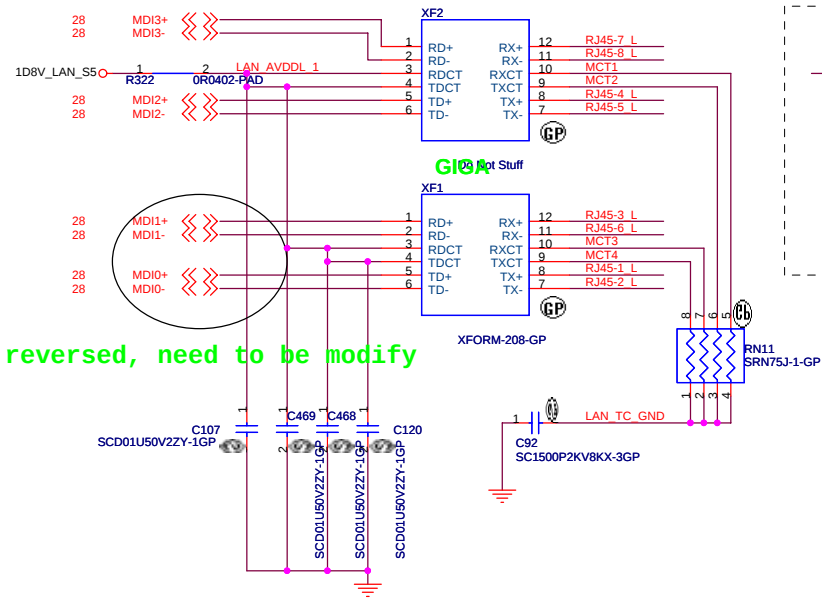
(CP)

RGMII_RXD3 11
RGMII_RXD2 11
CLK_LANE_RX 11
RGMII_RXD1 11

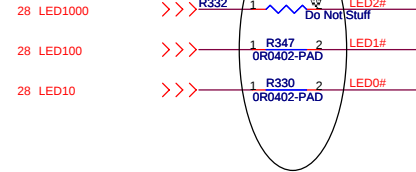


3016:2K 1%
1116: 4K99 1%

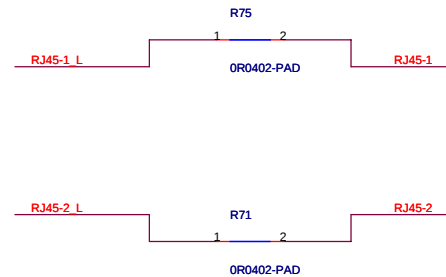
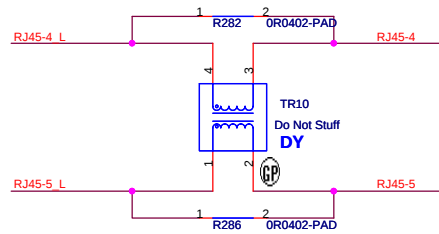
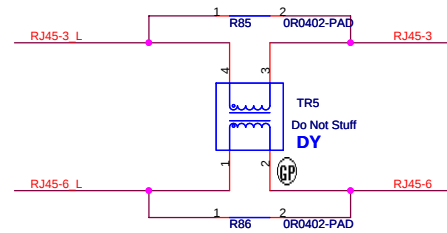
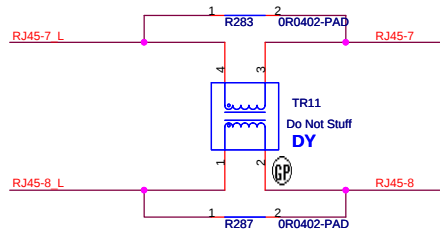
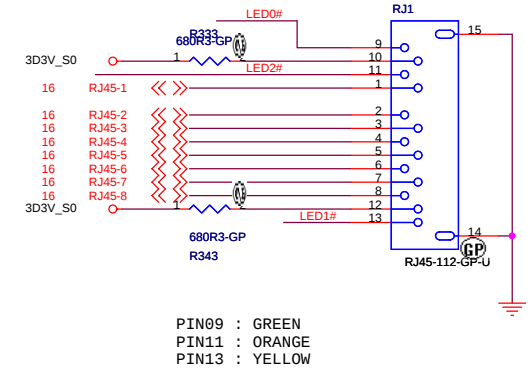




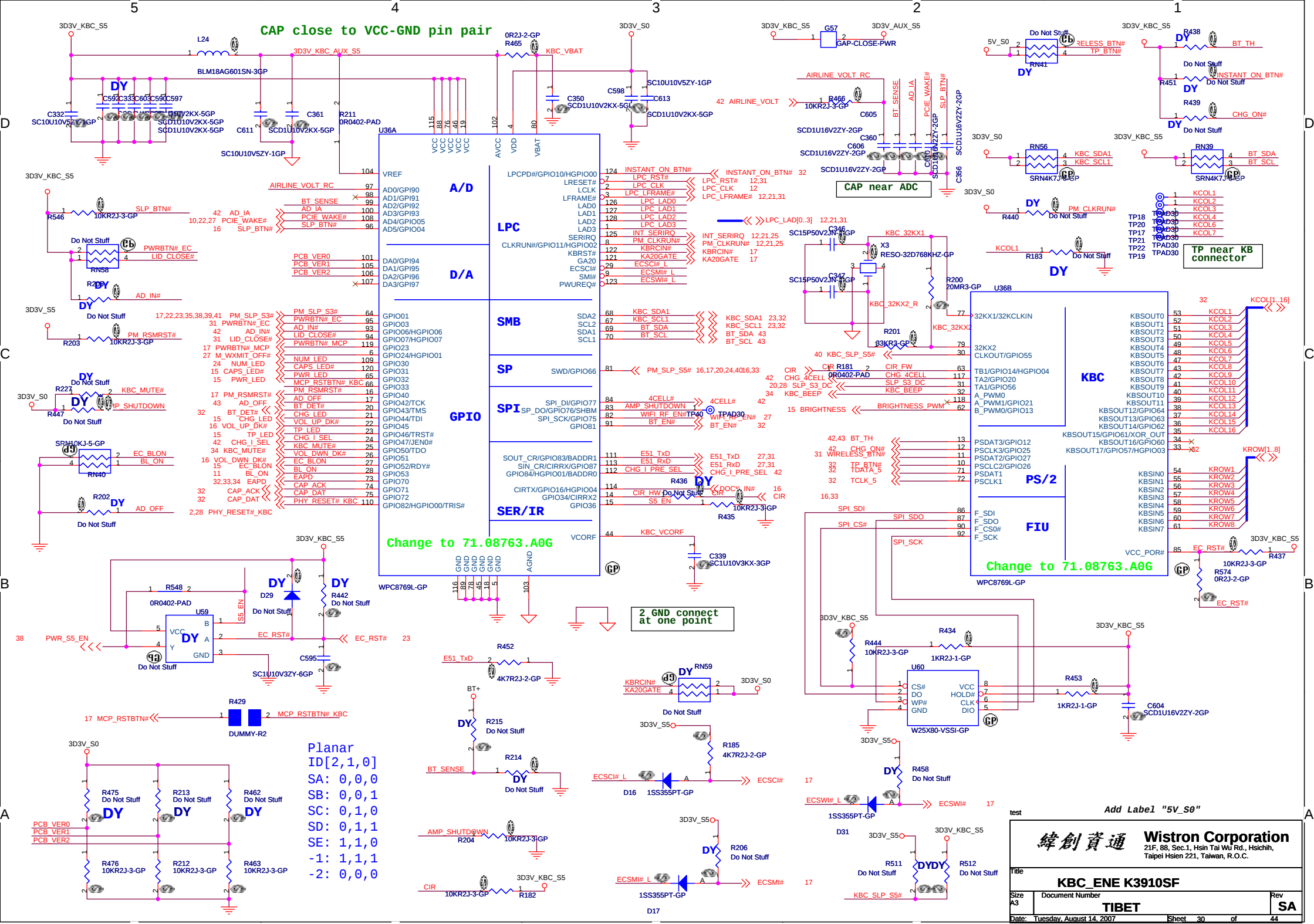
- 1.route on bottom as differential pairs.
- 2.Tx+/Tx- are pairs. Rx+/Rx- are pairs.
- 3.No vias, No 90 degree bends.
- 4.pairs must be equal lengths.
- 5.6mil trace width,12mil separation.
- 6.36mil between pairs and any other trace.
- 7.Must not cross ground moat,except RJ-45 moat.



GREEN: LINK 10/100 Mbps
YELLOW: TX/RX ACTIVITY
ORANGE: LINK 1000Mbps



test

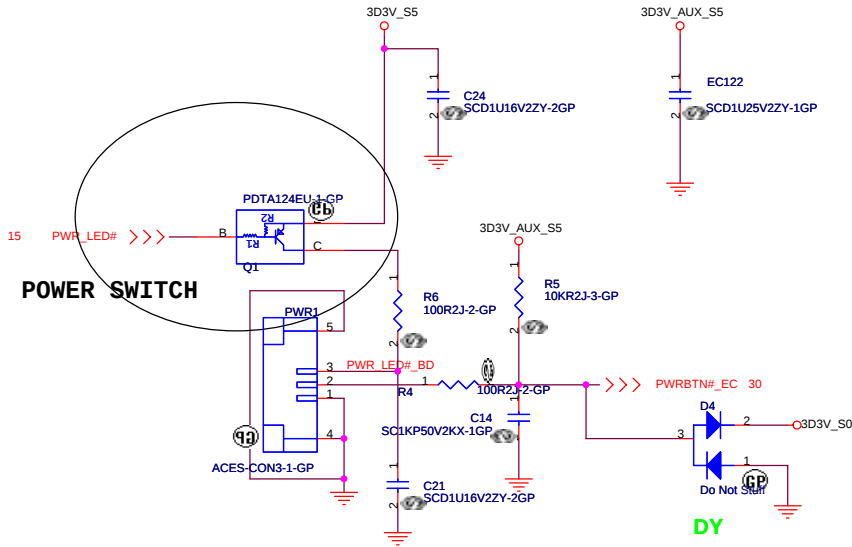


GOLDEN FINGER FOR DEBUG BOARD

TOP VIEW

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

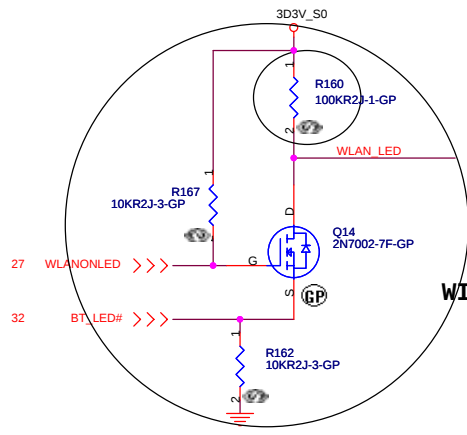
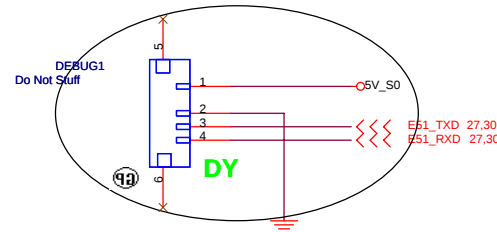
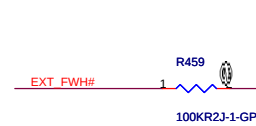
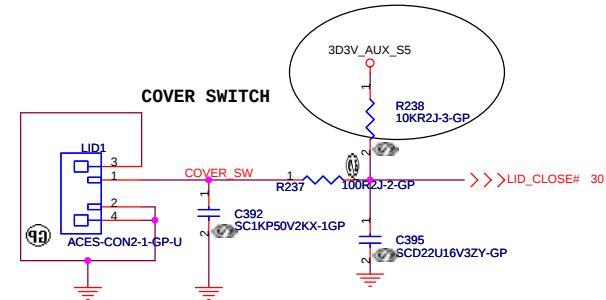
(BOTTOM VIEW)



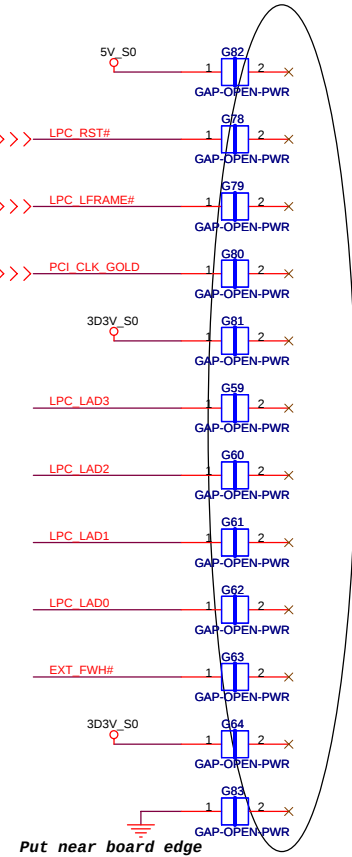
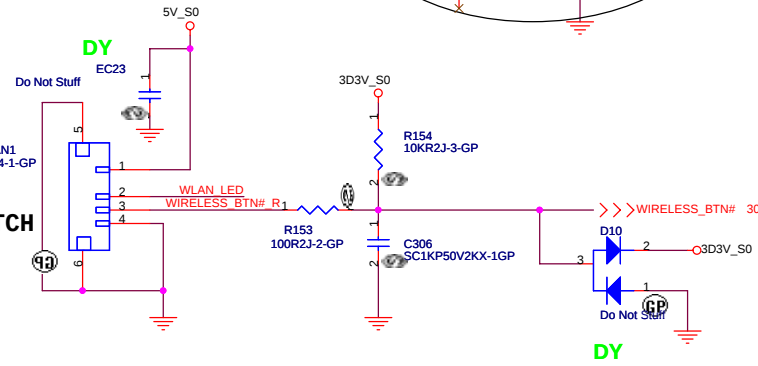
12,30 LPC_RST# >>> LPC_RST#

12,21,30 LPC_LFRAME# >>> LPC_LFRAME#

12 PCI_CLK_GOLD >>> PCI_CLK_GOLD



WIRELESS SWITCH



Put near board edge
test

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

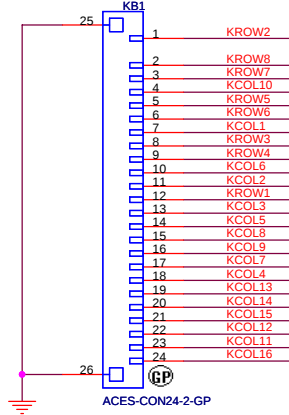
Title		
FLASH and Debug		
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Internal KeyBoard Connector

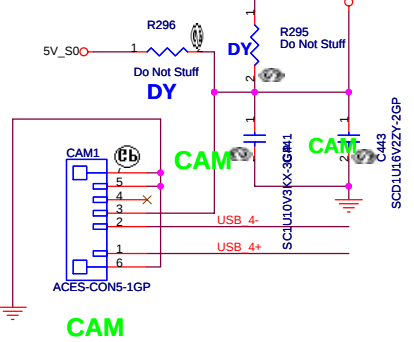
30 KROW[1..8] <<< <<< <<<
30 KCOL[1..16] <<< <<< <<<

Keyboard matrix (from vendor)

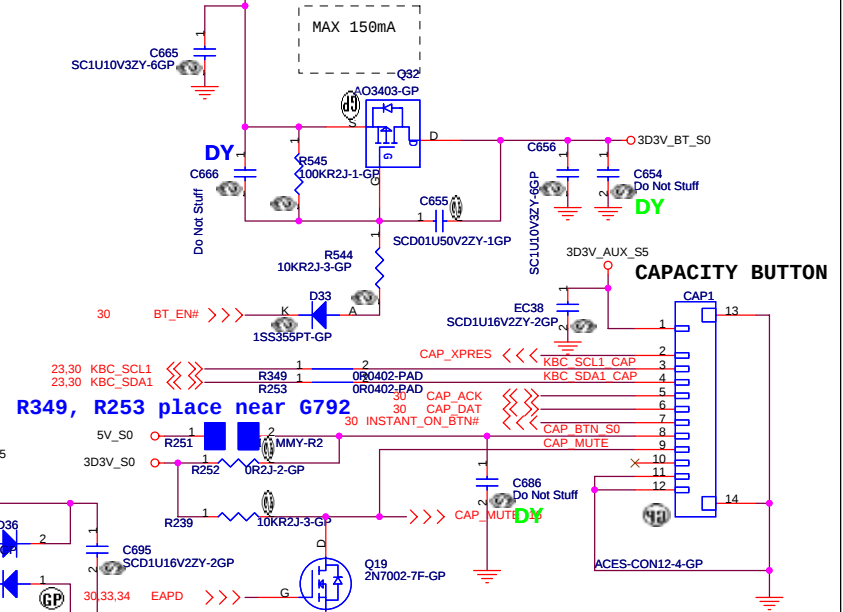
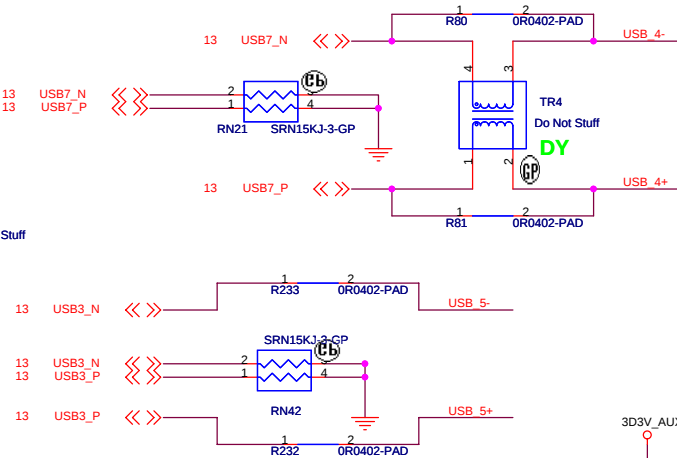
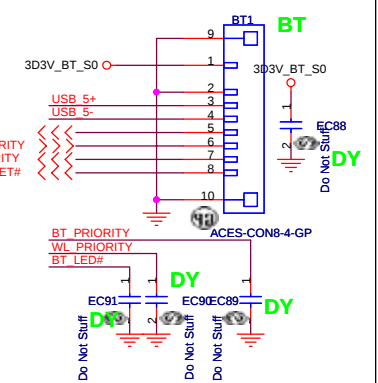
	US	Eur	Jap
MATRIXID1#	0	1	0
MATRIXID2#	0	0	1



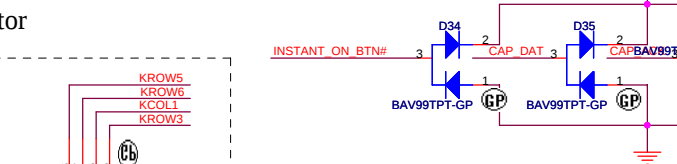
CAMERA



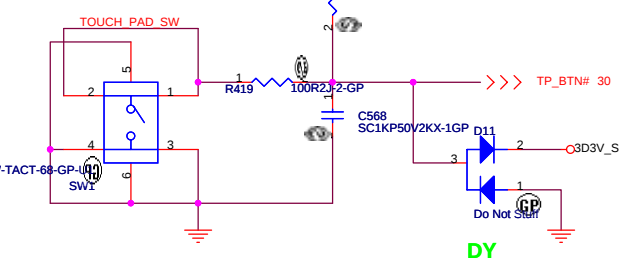
BT



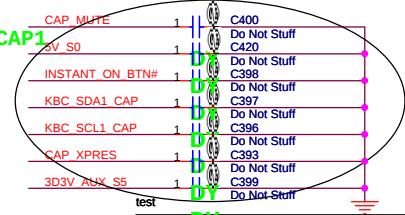
TouchPad Connector

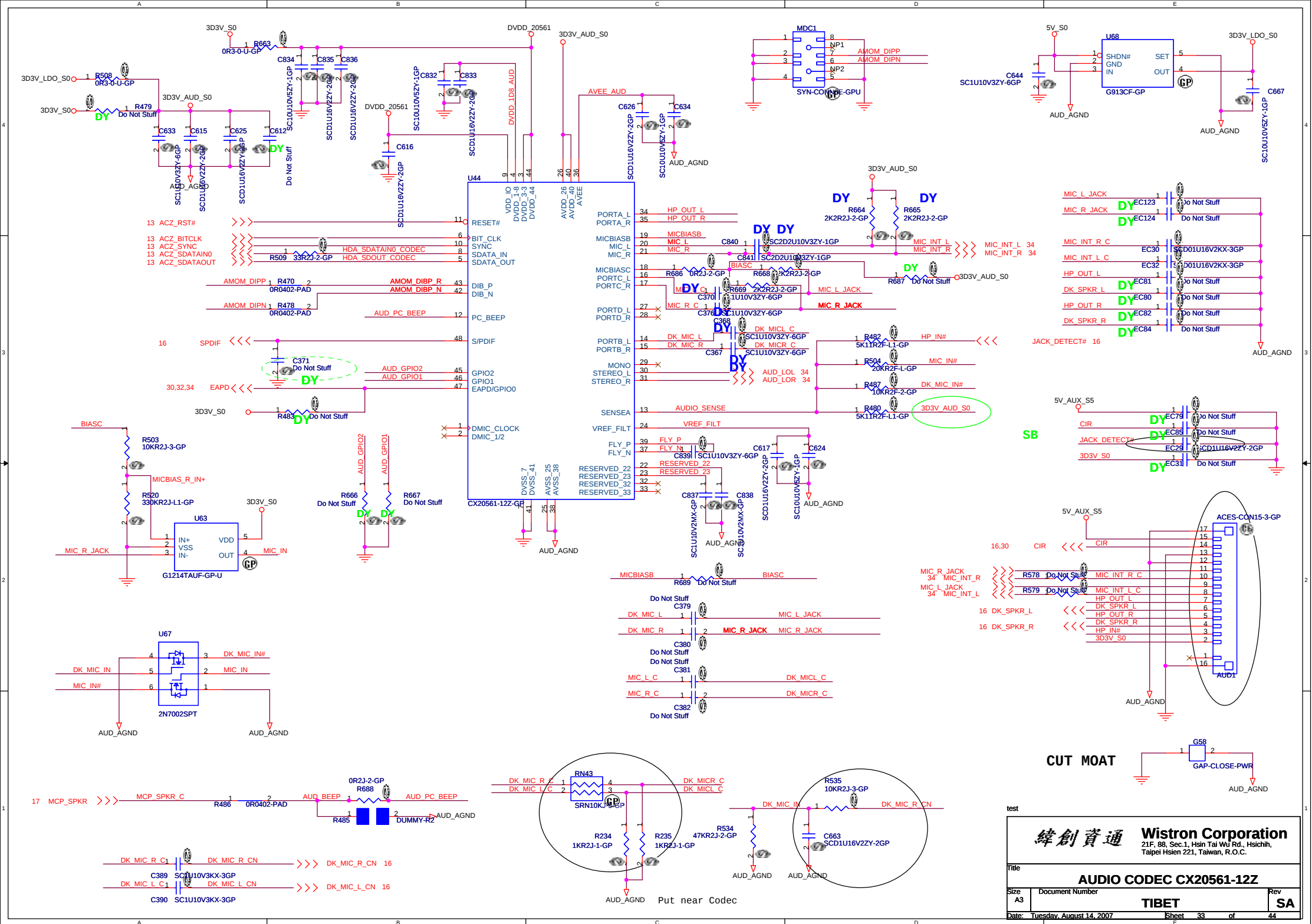


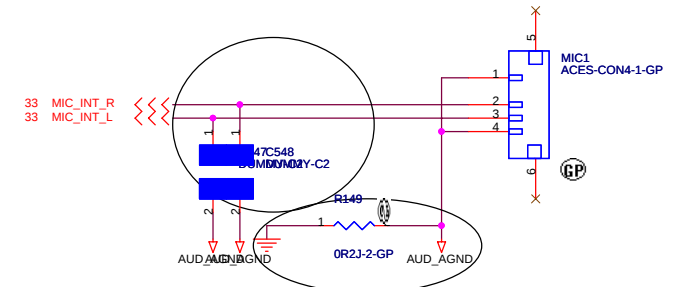
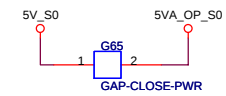
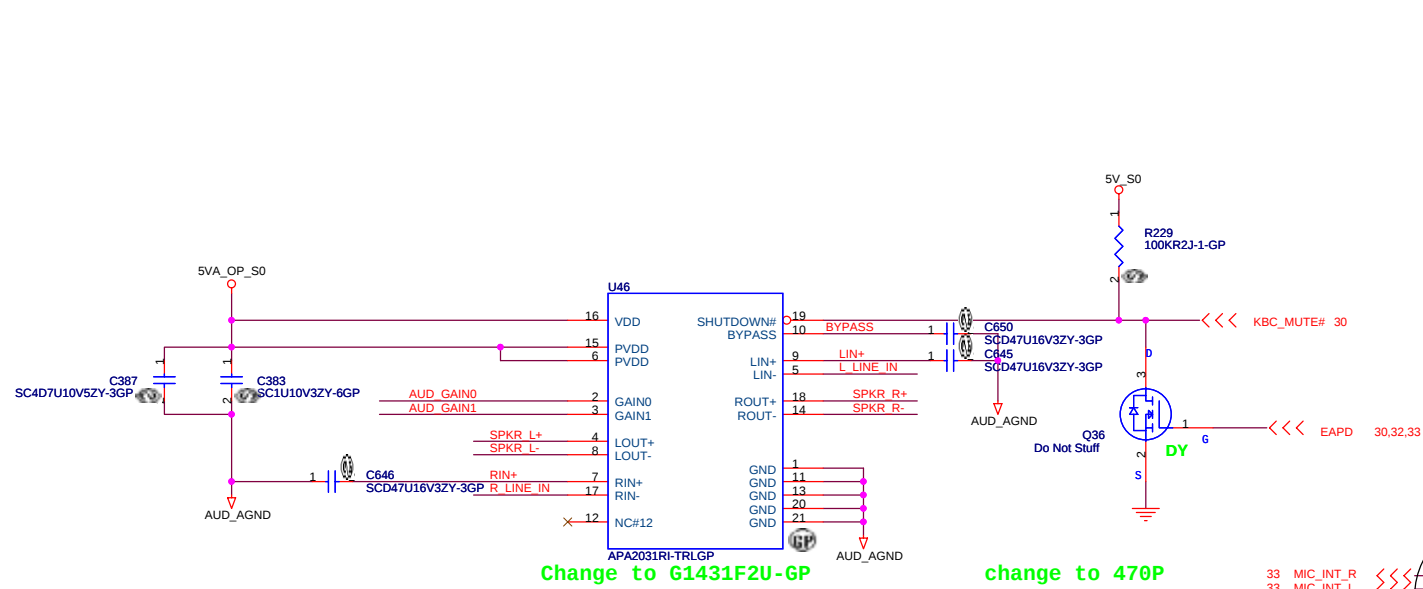
TOUCH-PAD SWITCH



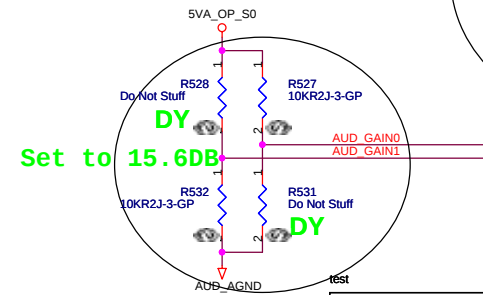
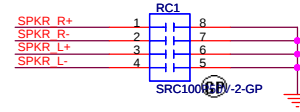
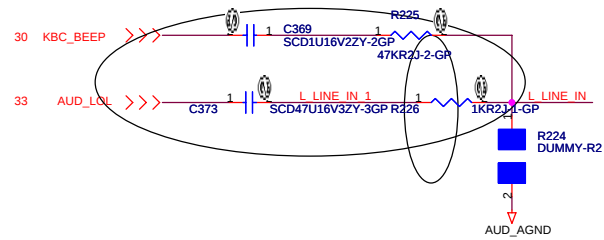
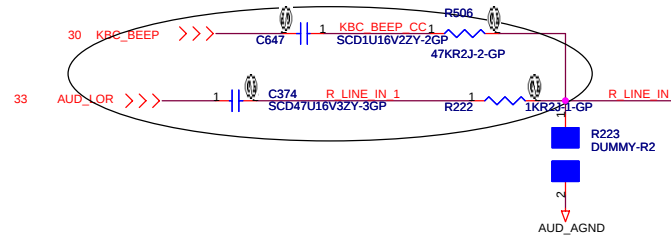
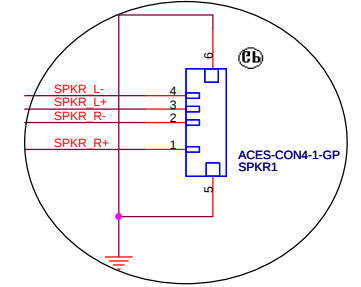
PLACE NEAR CAP1







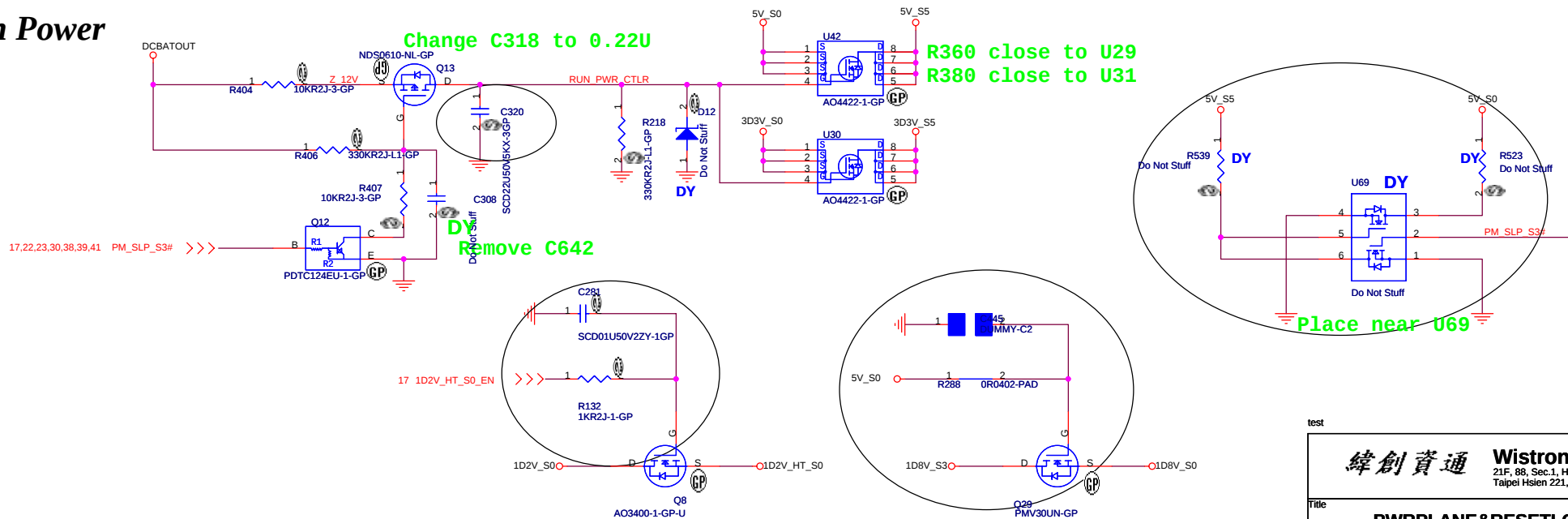
Speaker



Suspend Power

Remove Dummy PAD

Run Power



(Power Team)

test

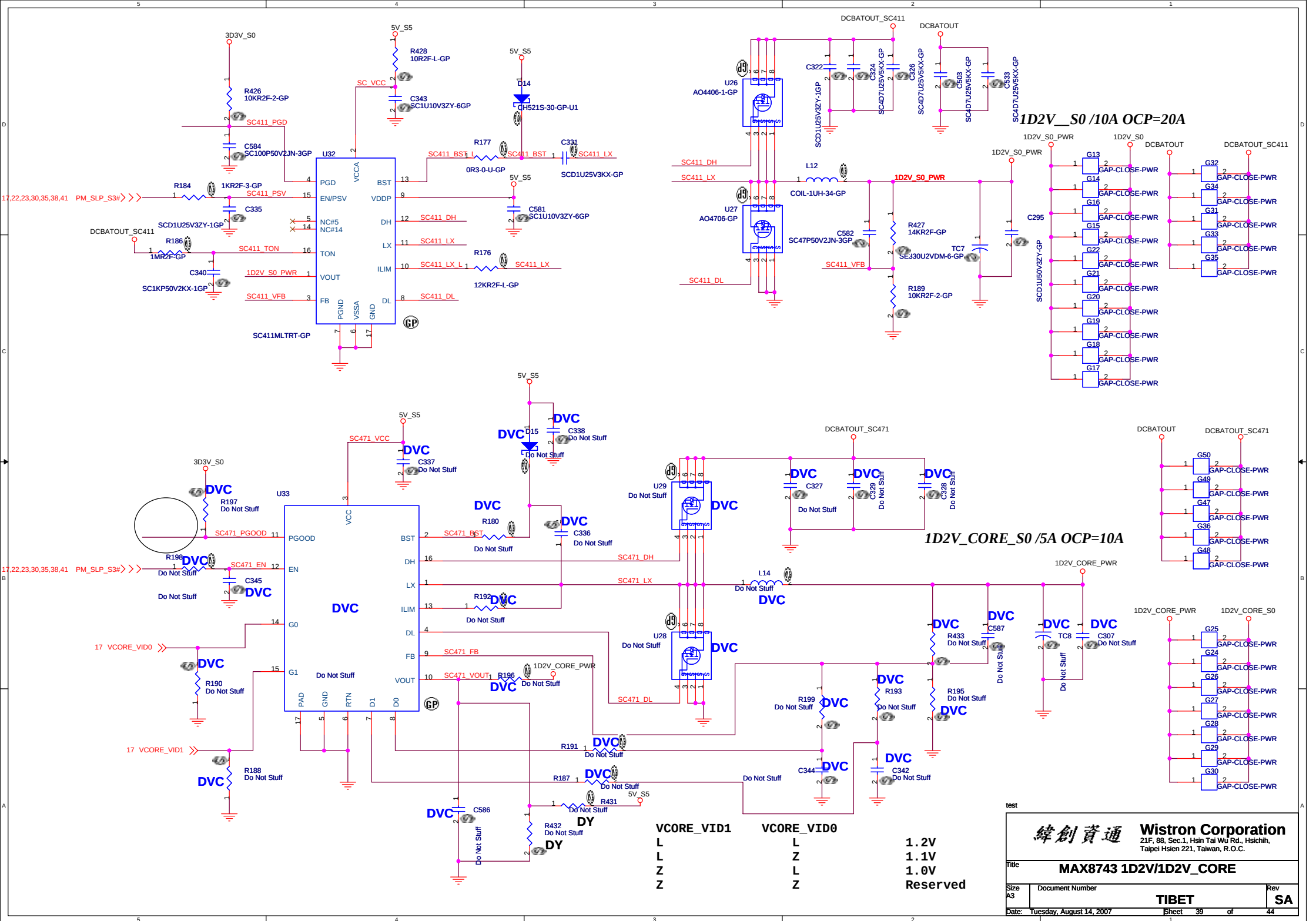
緯創資通 **Wistron Corporation**
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Taipei Hsien 221, Taiwan, R.O.C.

Title	CPU CORE MAX8760(2/2)
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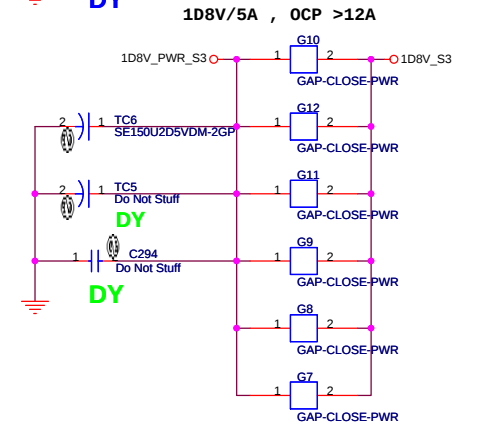
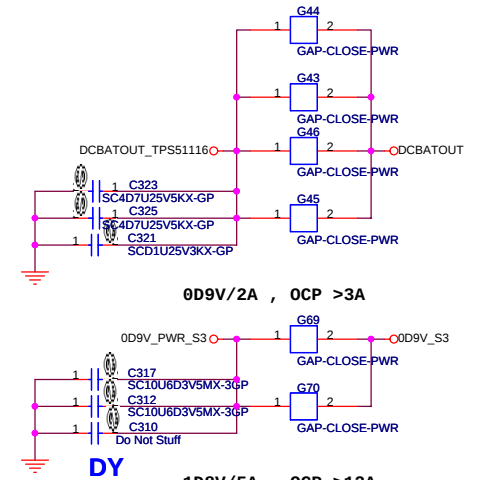
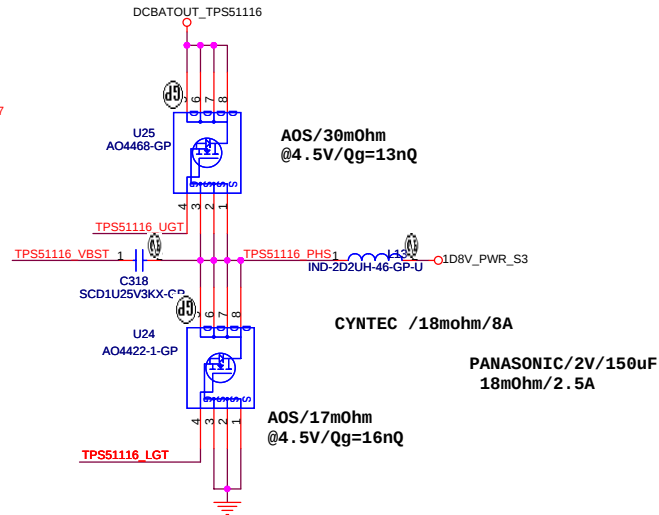
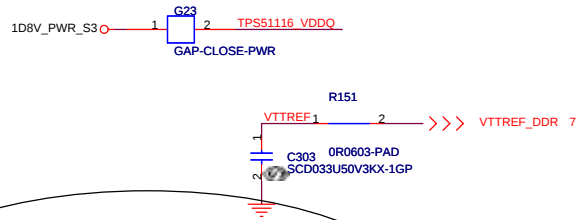
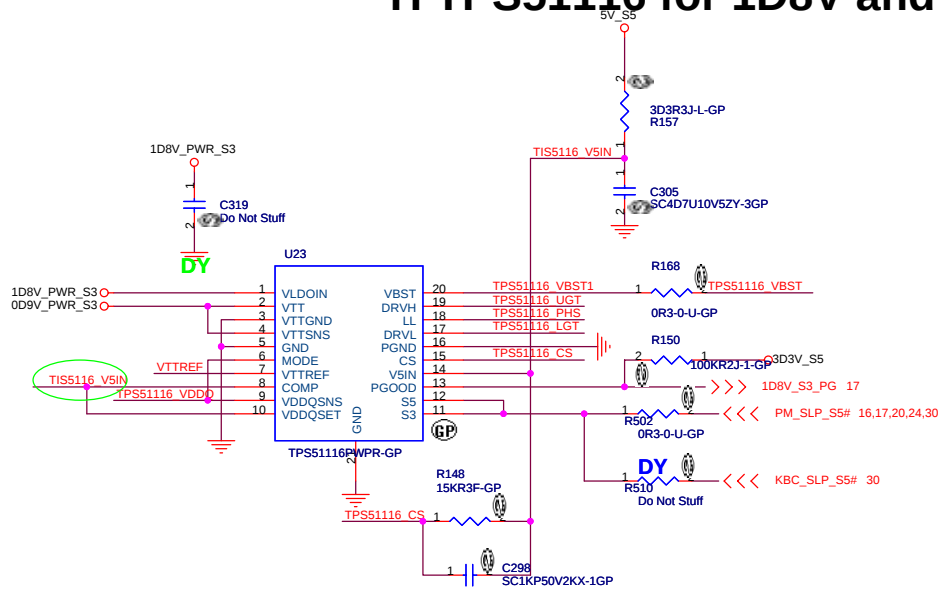
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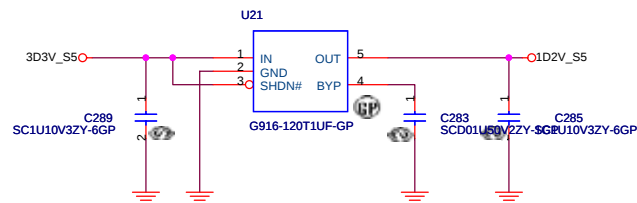
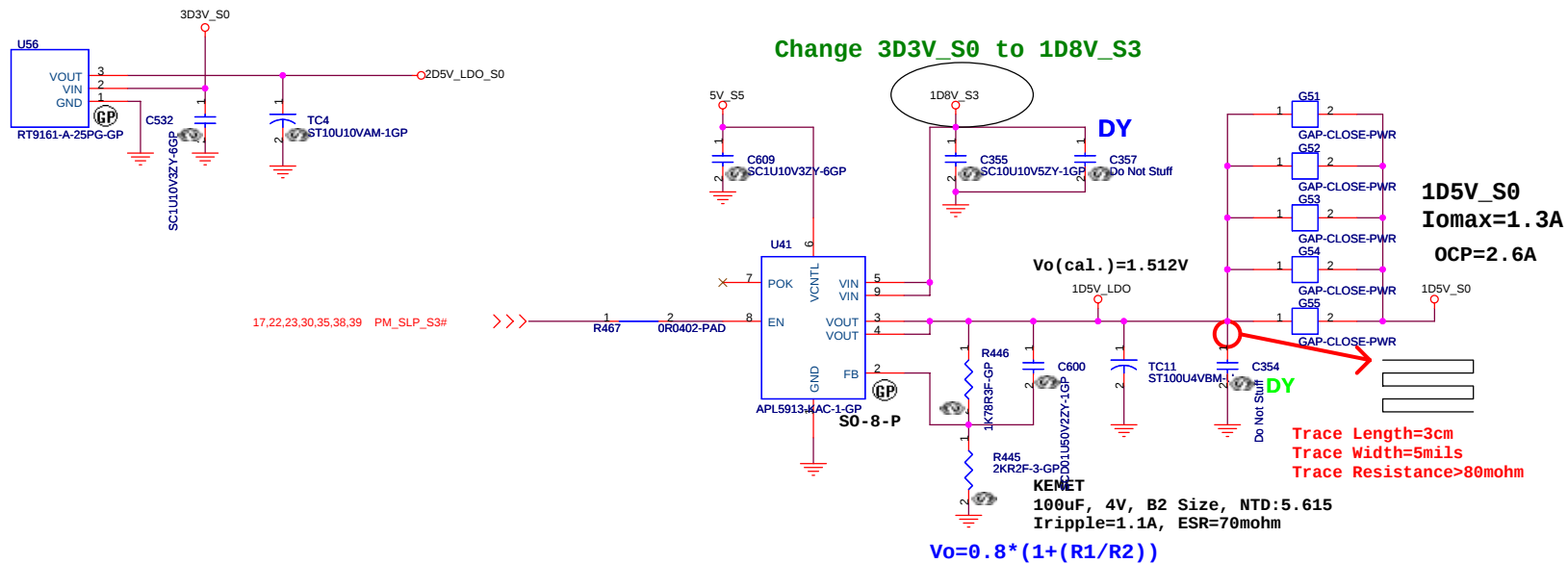


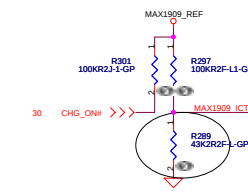
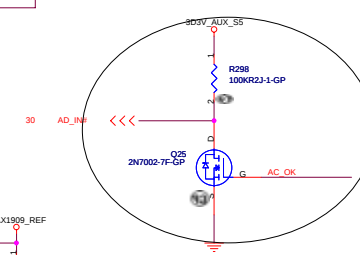


TI TPS51116 for 1D8V and 0D9V

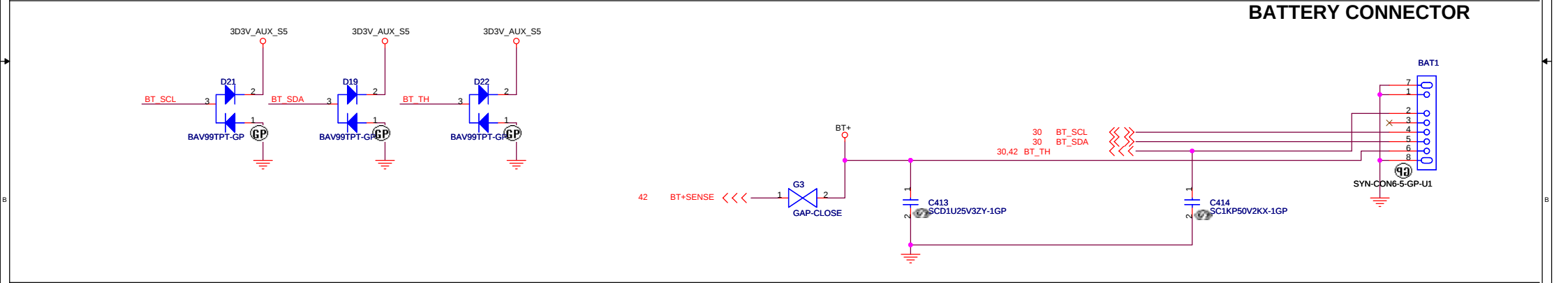


State	S3	S5	VDDR	VTTREF	VTT
S0	Hi	Hi	On	On	On
S3	Lo	Hi	On	On	Off(Hi-Z)
S4/S5	Lo	Lo	Off	Off	Off





Pre-Charge :
MAX8725 : CHG_I_PRE_SEL = H,
Pre-Charge current = 300mA

[illegible]

test

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
AD/BATT CONN		
Size A3	Document Number TIBET	Rev SA
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