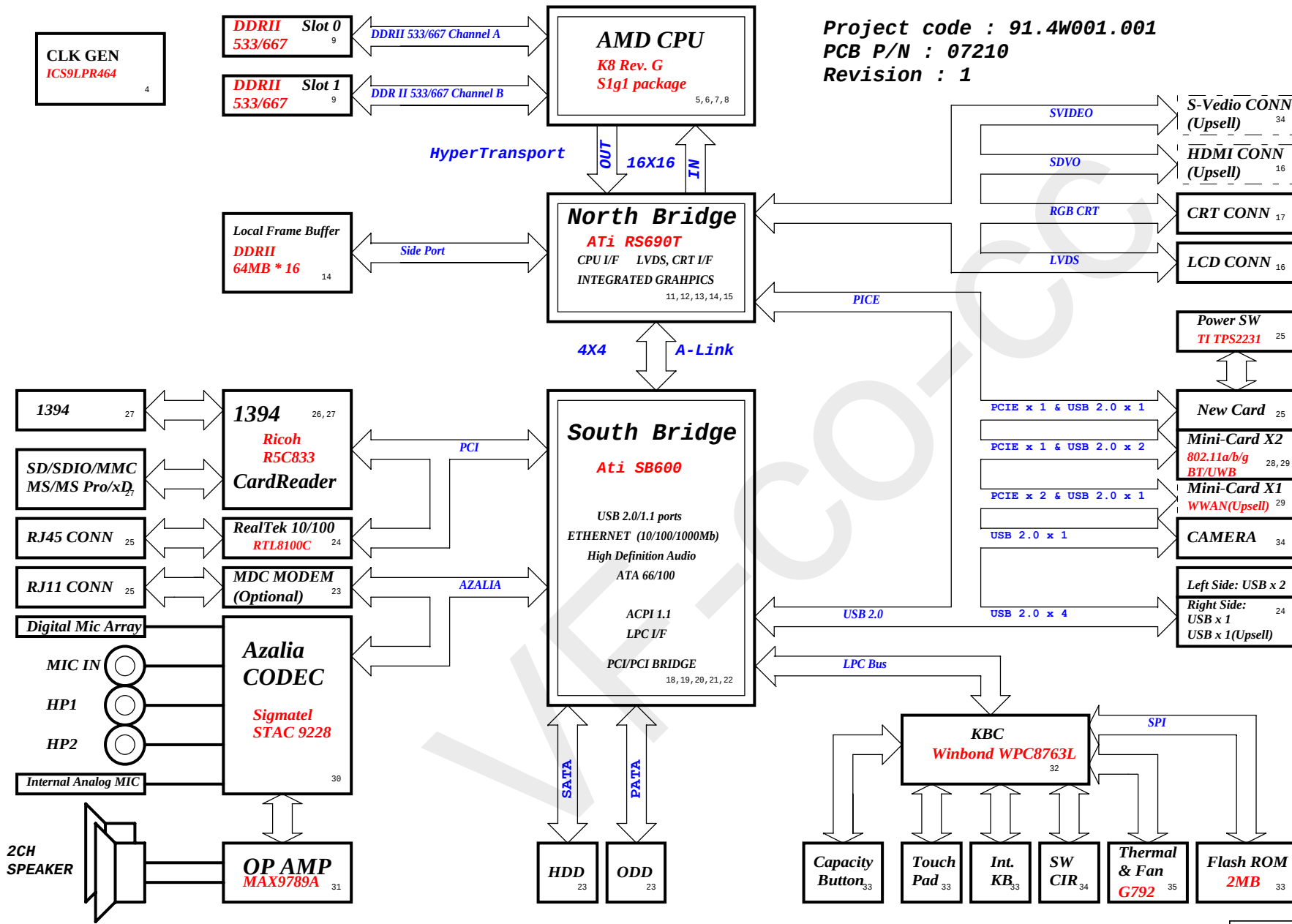


Spears AMD UMA Block Diagram



CPU V_CORE		39
ISL6264		
INPUTS	OUTPUTS	
DCBATOUT	VCC_CORE	

SYSTEM DC/DC	
TPS51117 48, 41	
INPUTS	OUTPUTS
DCBATOUT	1D8V_S3 1D2V_S0

SYSTEM DC/DC	
TPS51120 38	
INPUTS	OUTPUTS
DCBATOUT	5V_S5 3D3V_S5

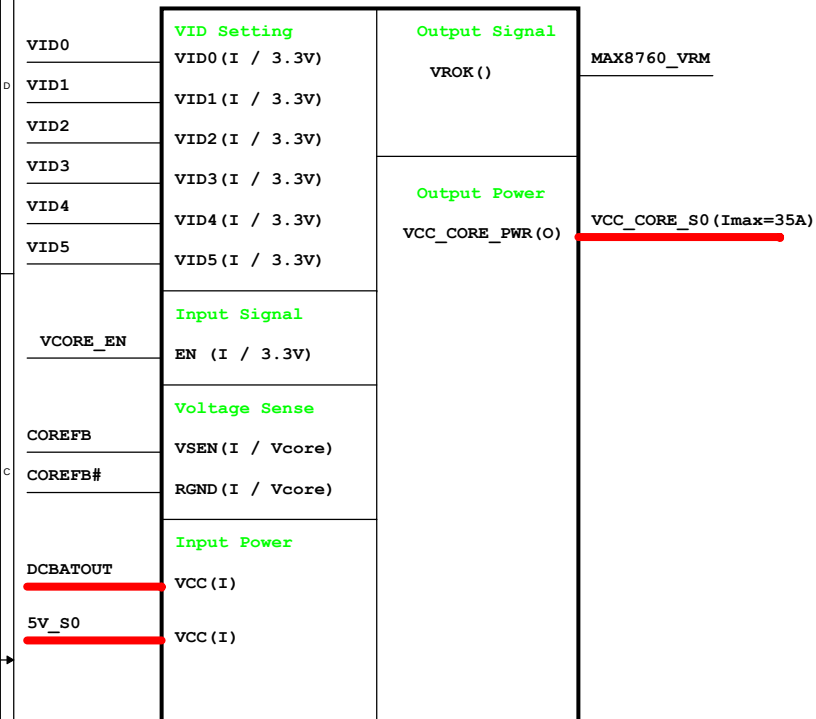
SYSTEM DC/DC LDO		42
INPUTS	OUTPUTS	
1D8V_S3	0D9V_S3	
1D8V_S0	1D5V_S0	

SYSTEM DC/DC LDO		42
INPUTS	OUTPUTS	
3D3V_S5	1D2V_S5	
3D3V_S0	2D5V_S0	

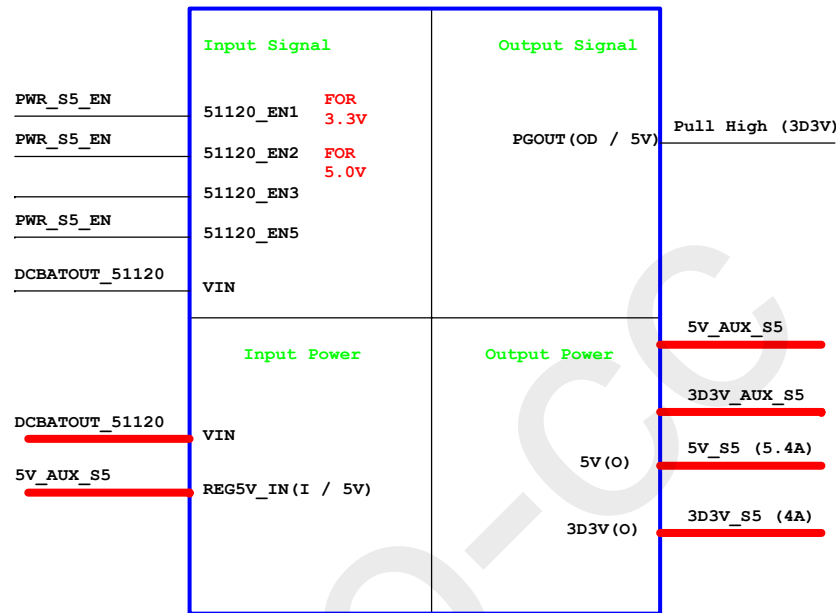
SYSTEM DC/DC		38
TPS51120		
INPUTS	OUTPUTS	
DCBATOUT	5V_AUX_S5 3D3V_AUX_S5	

MAXIM CHARGER MAX8731A		37
INPUTS	OUTPUTS	
AD+ BT+	DCBATOUT	

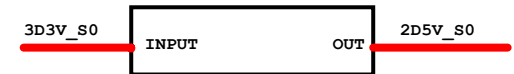
CPU_CORE
ISL6264CRZ



3D3V/5V
TI TPS51120



2D5V_S0



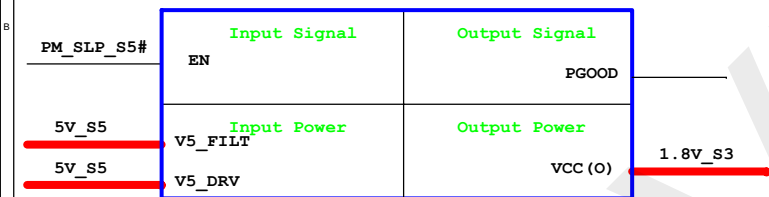
APL5913

1D8V_S5

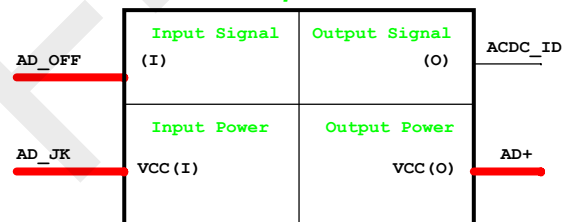


APL5332KAC-TRLGP

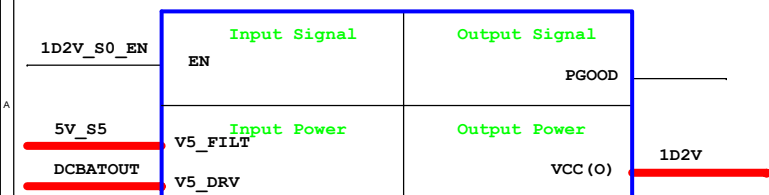
TI TPS51117
1.8V



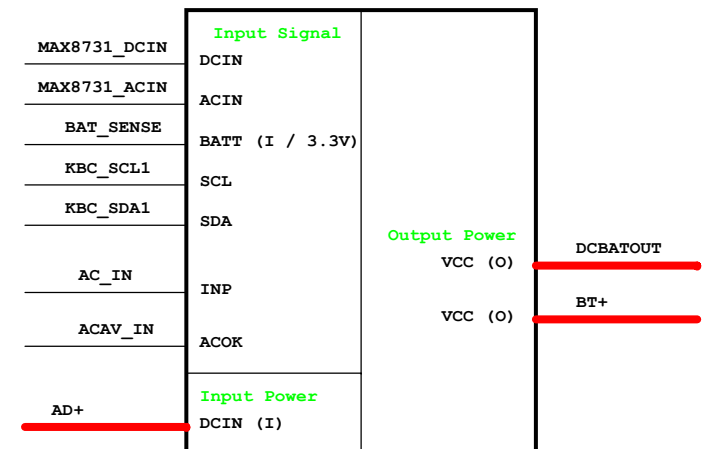
Adapter



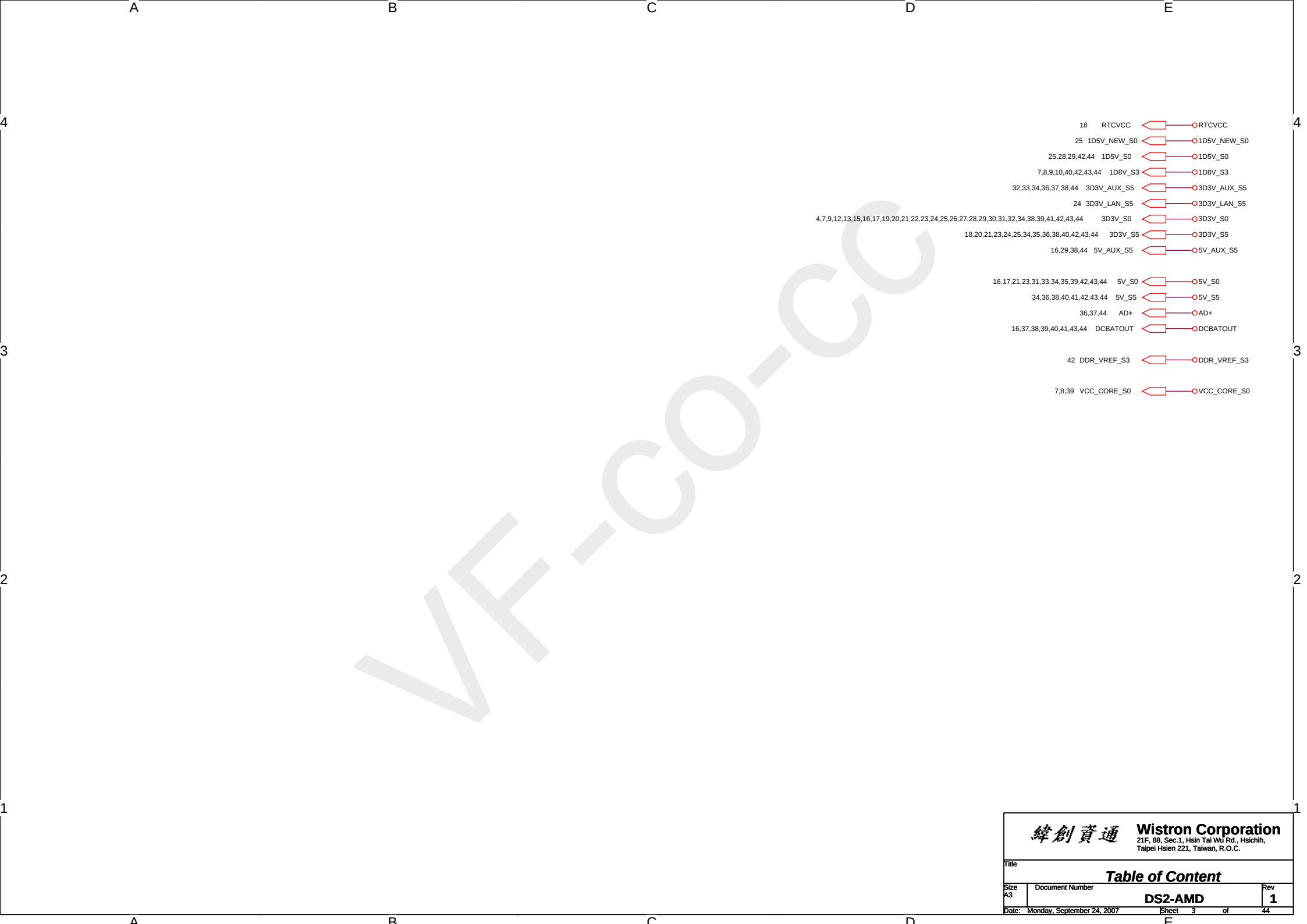
TI TPS51117
1.2V

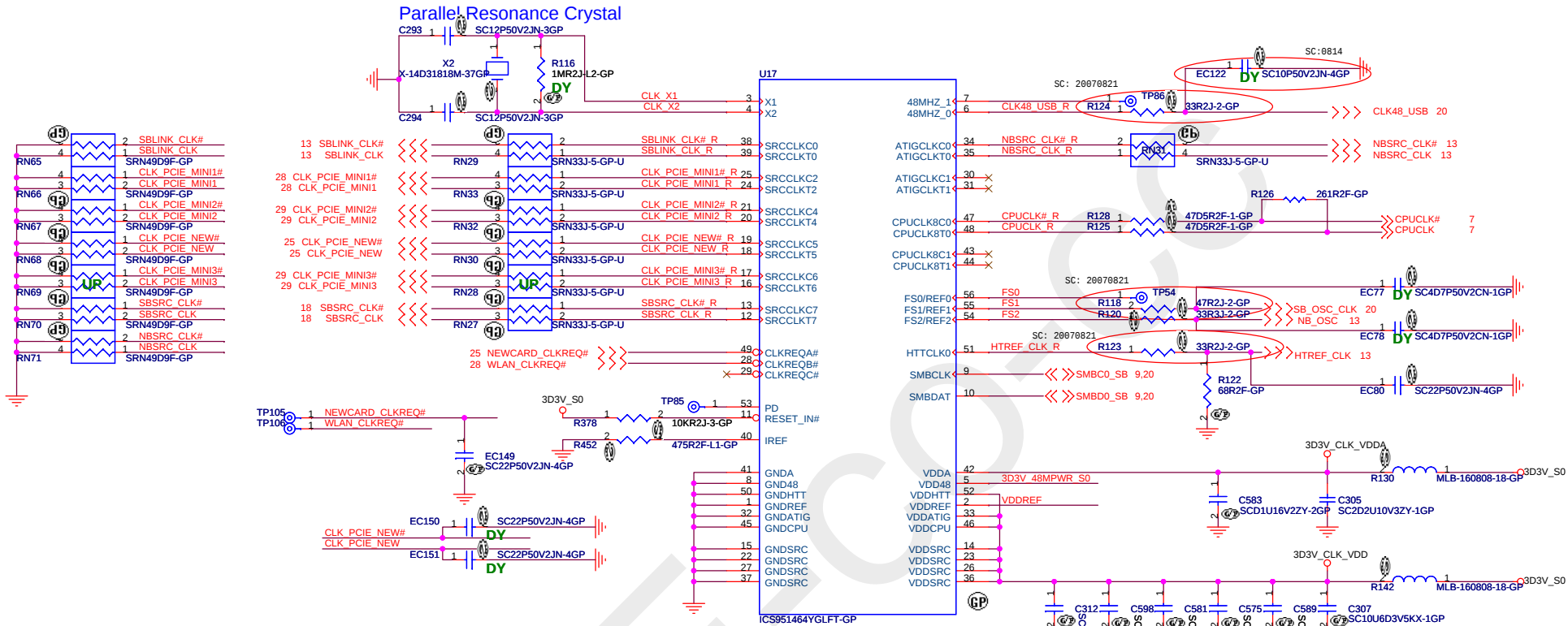


Charger_MAX8731AETI



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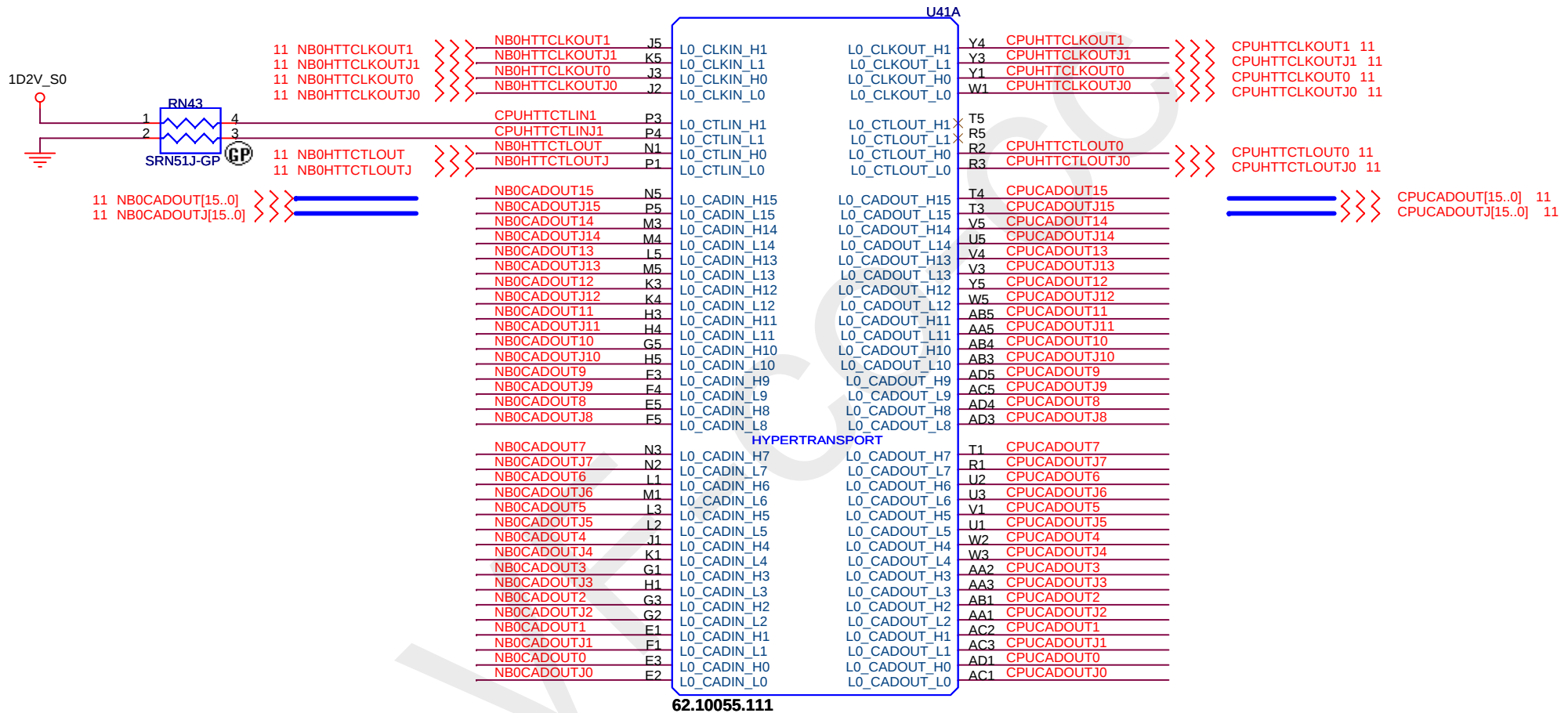


	RN27 ~RN33	R452	RN65 ~RN71	R125 R128	R126
SILEGO xSLG84607	330Ohm	4750Ohm	49.90Ohm	00Ohm	DY
REALTEK RTM870T-691	00Ohm	DY	DY	47.50Ohm	2610Ohm
ICS 9LPR464	330Ohm	DY	DY	330Ohm	DY
SpectraLinear SL28RS680-3	00Ohm	DY	DY	00Ohm	DY

EXT CLK FREQUENCY SELECT TABLE(MHZ)

FS2	FS1	FS0	CPU	SRCCLK [2:1]	HTT	USB	REF0 REF1 REF2	
0	0	0	Hi-Z	100.00	Hi-Z	48.00	14.318	
0	0	1	X/2	100.00	X/3	48.00	14.318	
0	1	0	230.00	100.00	76.67	48.00	14.318	
0	1	1	240.00	100.00	80.00	48.00	14.318	
1	0	0	100.00	100.00	66.66	48.00	14.318	
1	0	1	133.33	100.00	66.66	48.00	14.318	
1	1	0	166.67	100.00	66.66	48.00	14.318	
1	1	1	200.00	100.00	66.67	48.00	14.318	

<Variant Name>



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Title

AMD K8 CPU Rev.G

Size
A4

Document Number

DS2-AMD

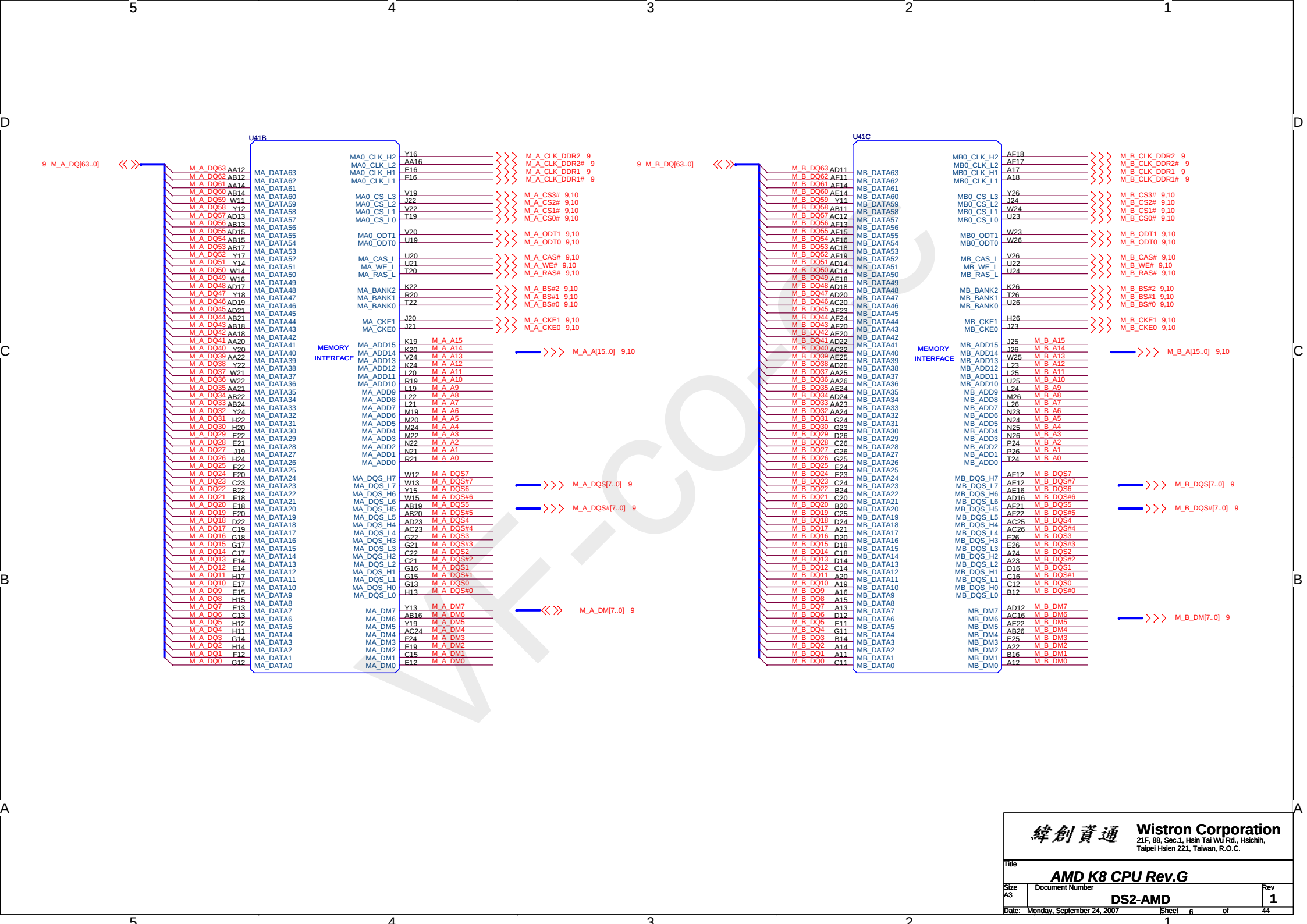
Rev

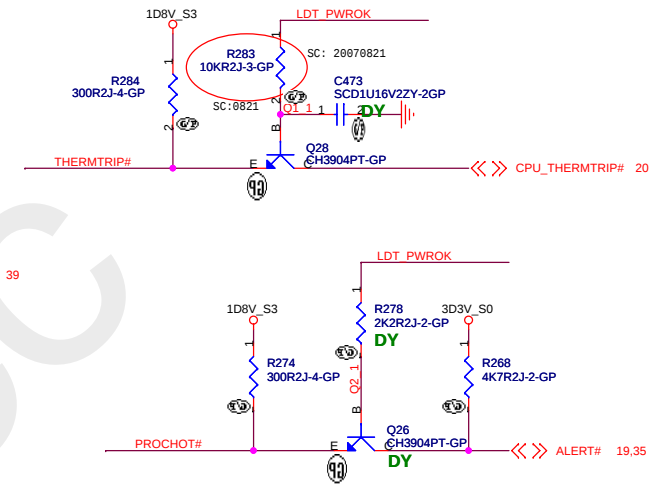
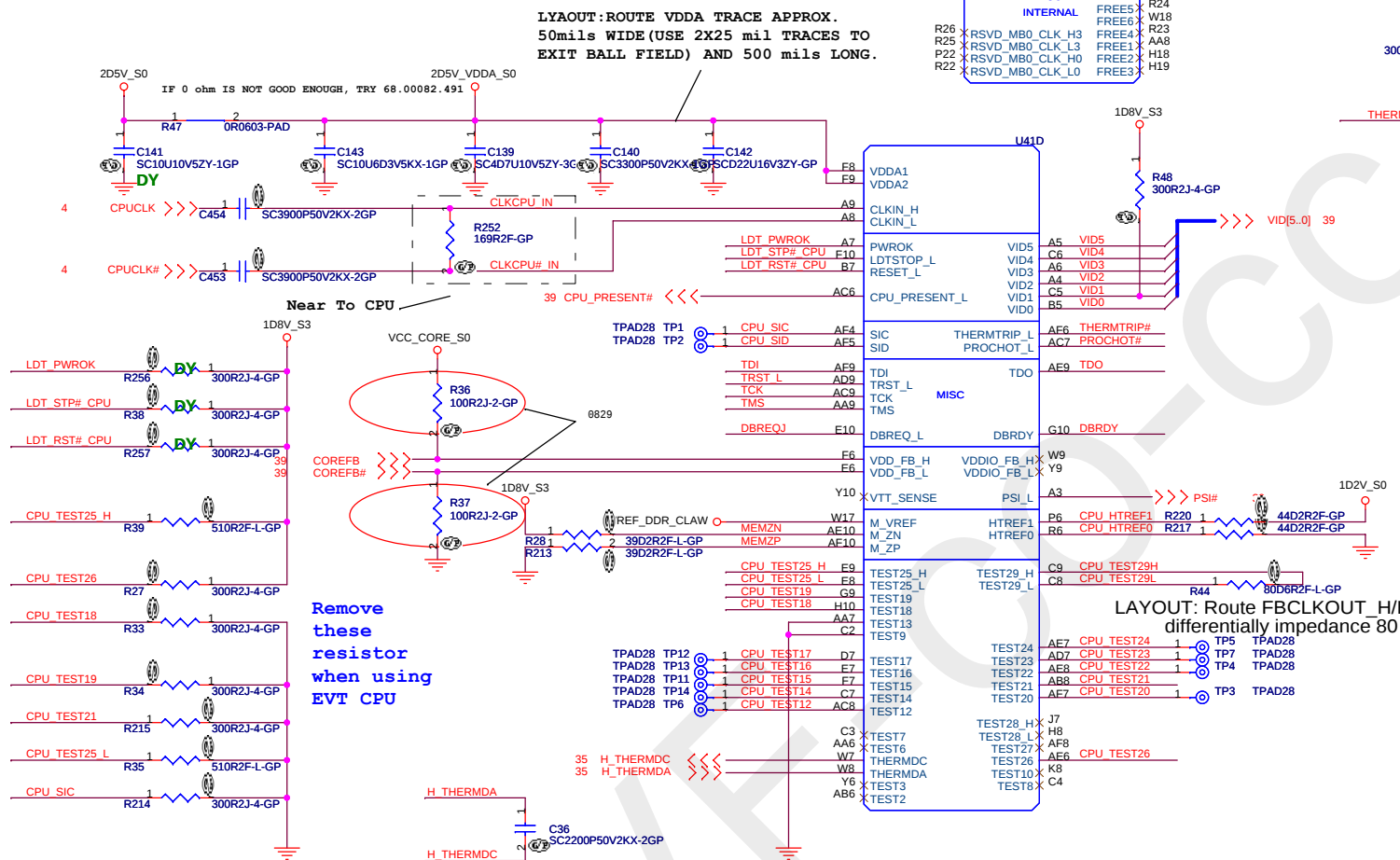
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Date: Monday, September 24, 2007

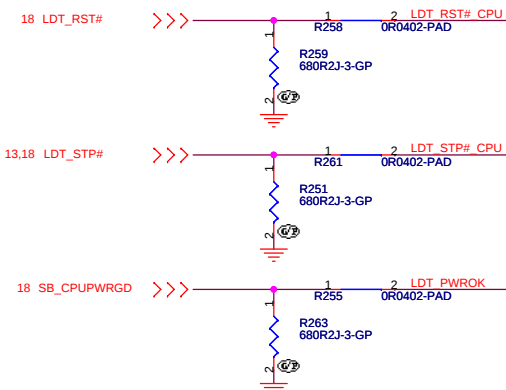
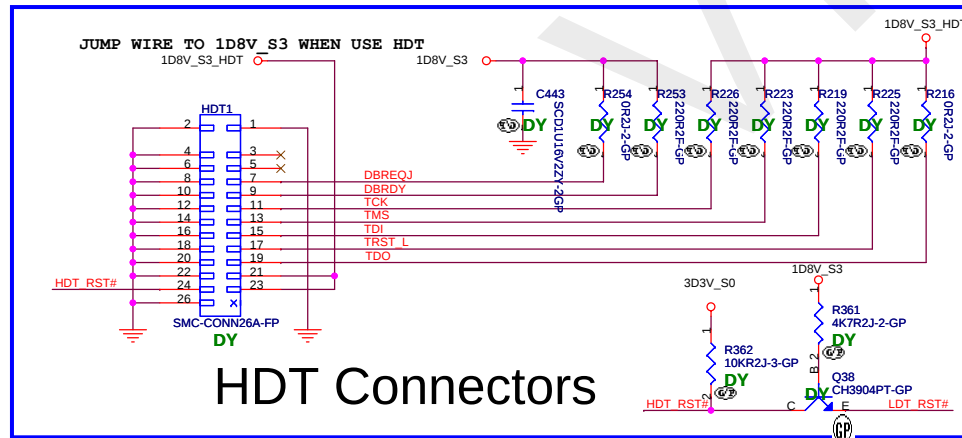
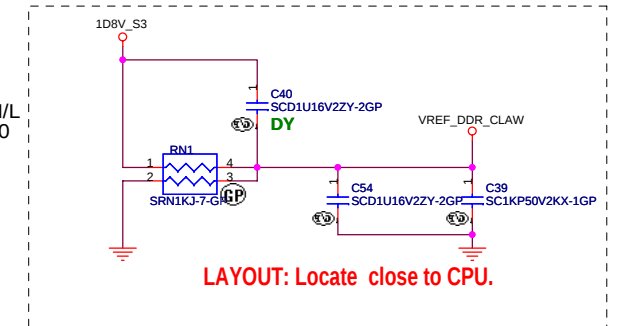
Sheet 5 of

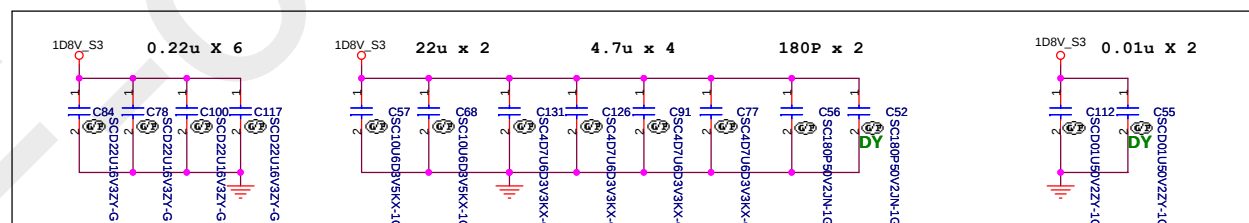
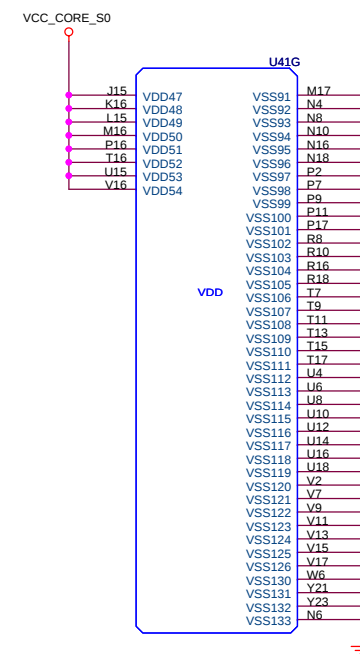
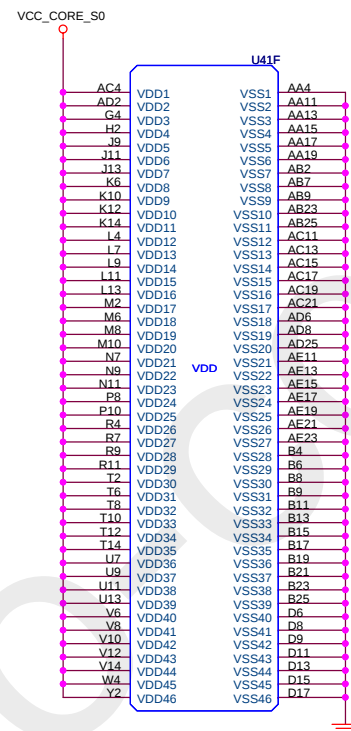
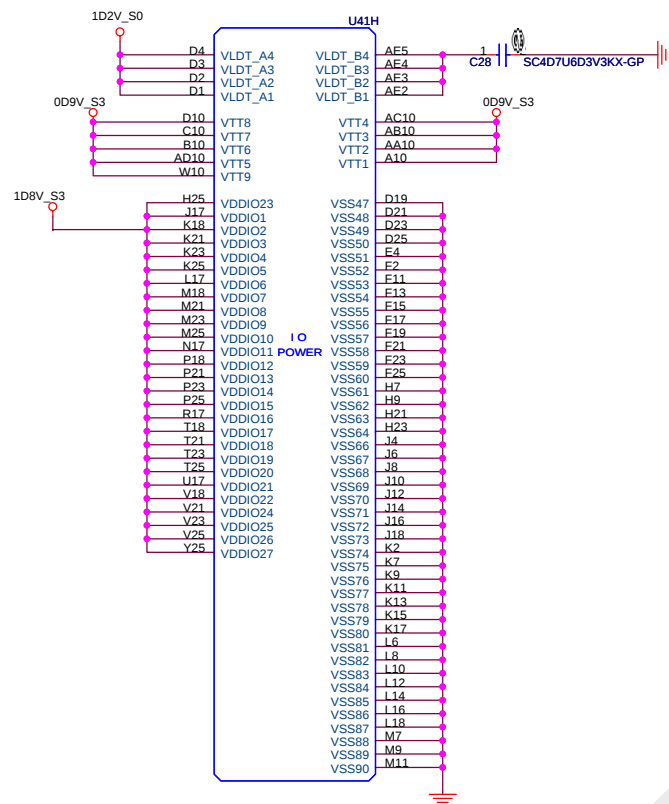
44





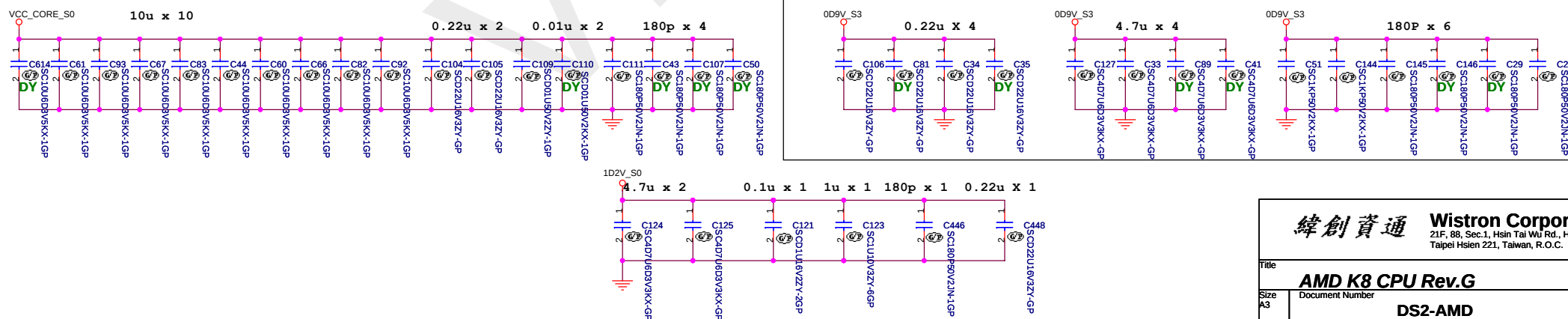
VREF_DDR_CLAW





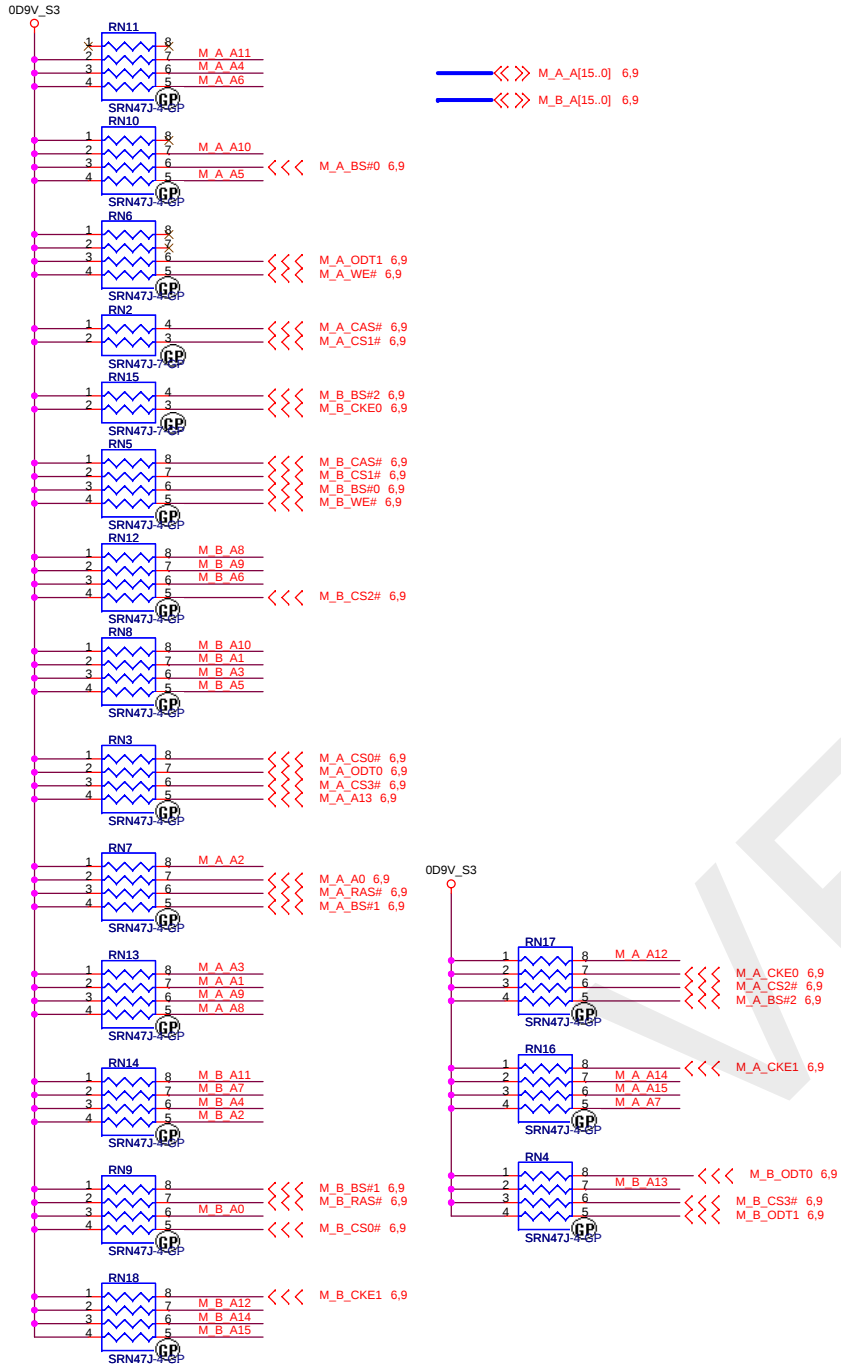
Place near to CPU

LAYOUT: Place on backside of processor.



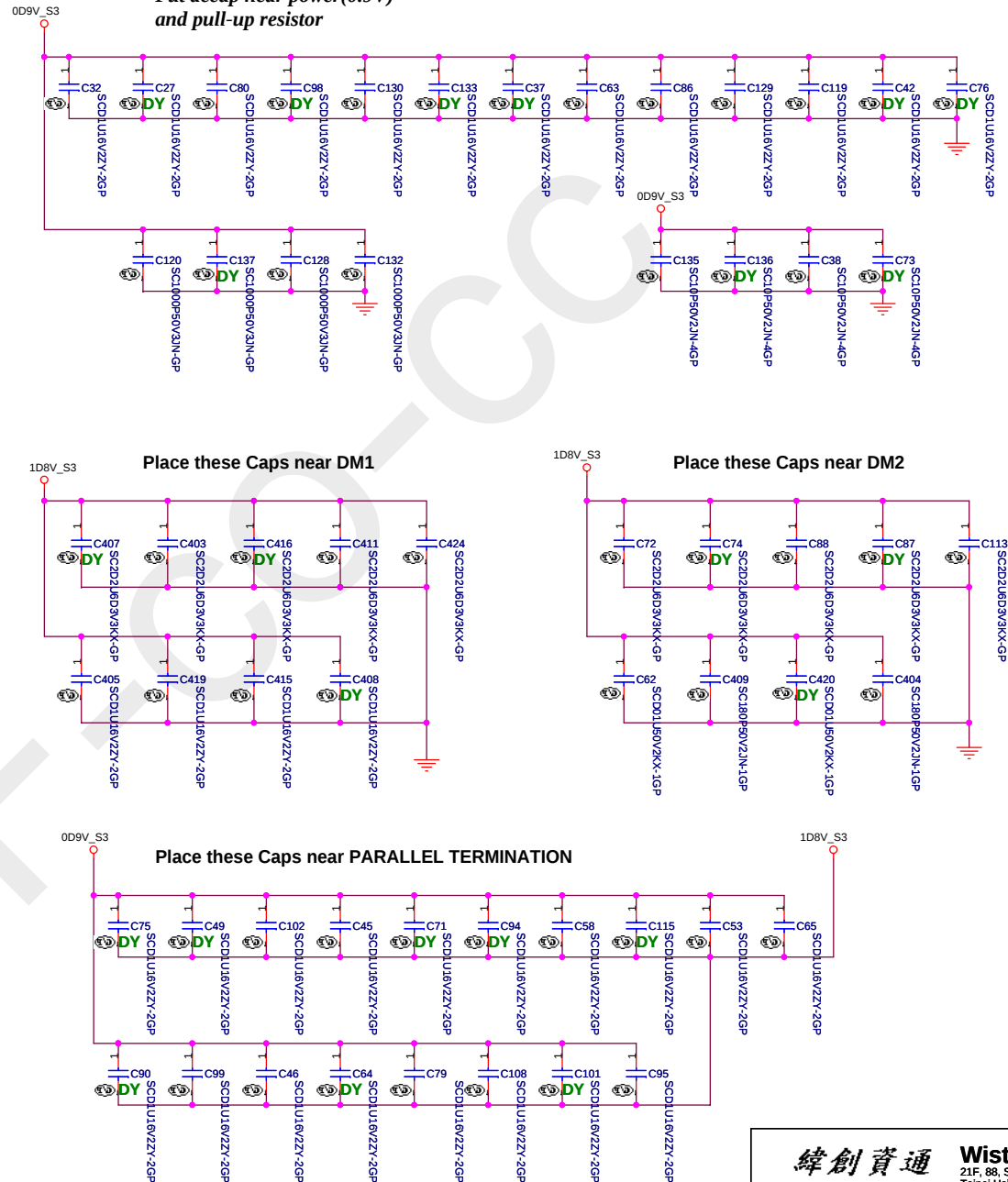
PARALLEL TERMINATION

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



Decoupling Capacitor

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

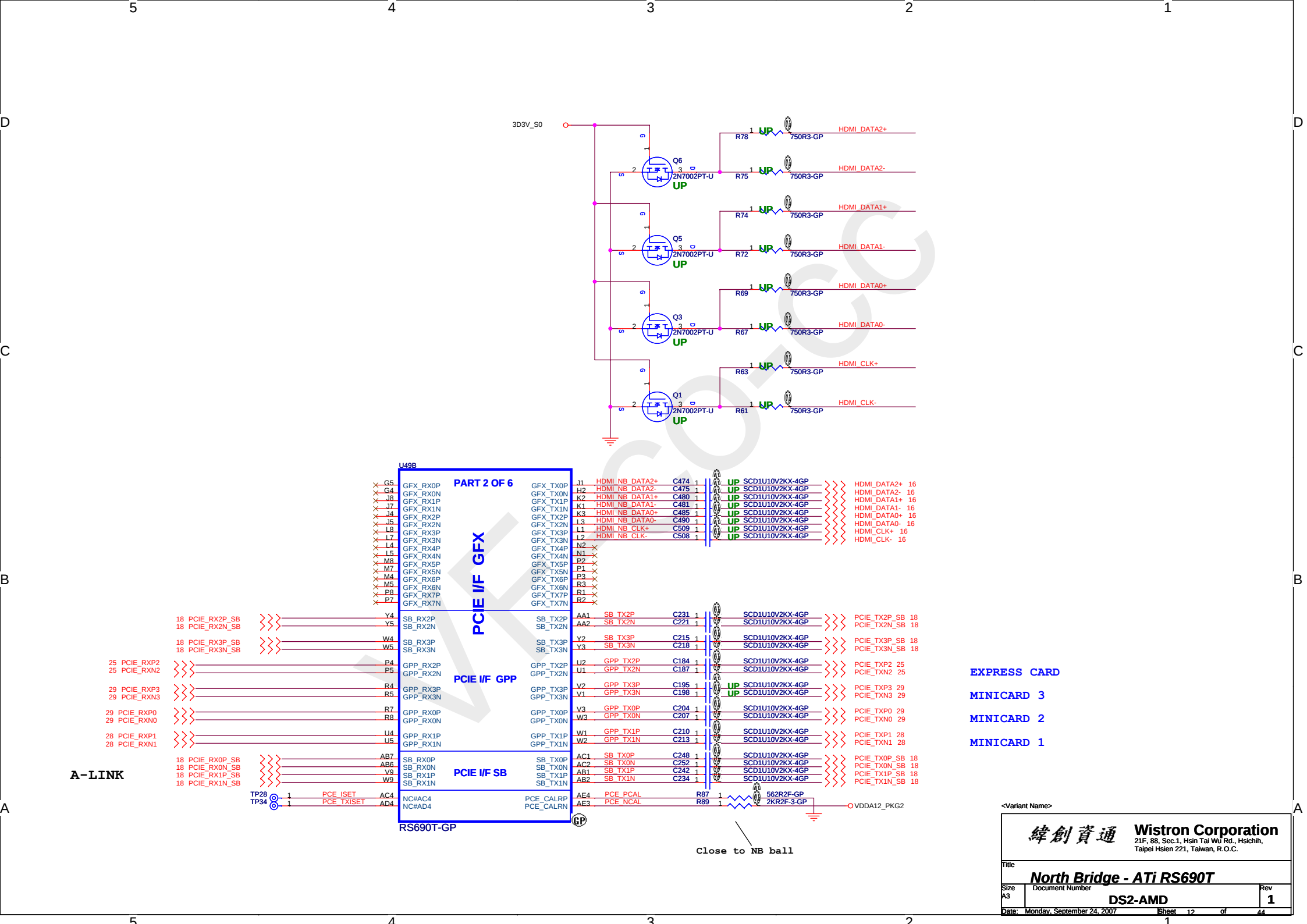


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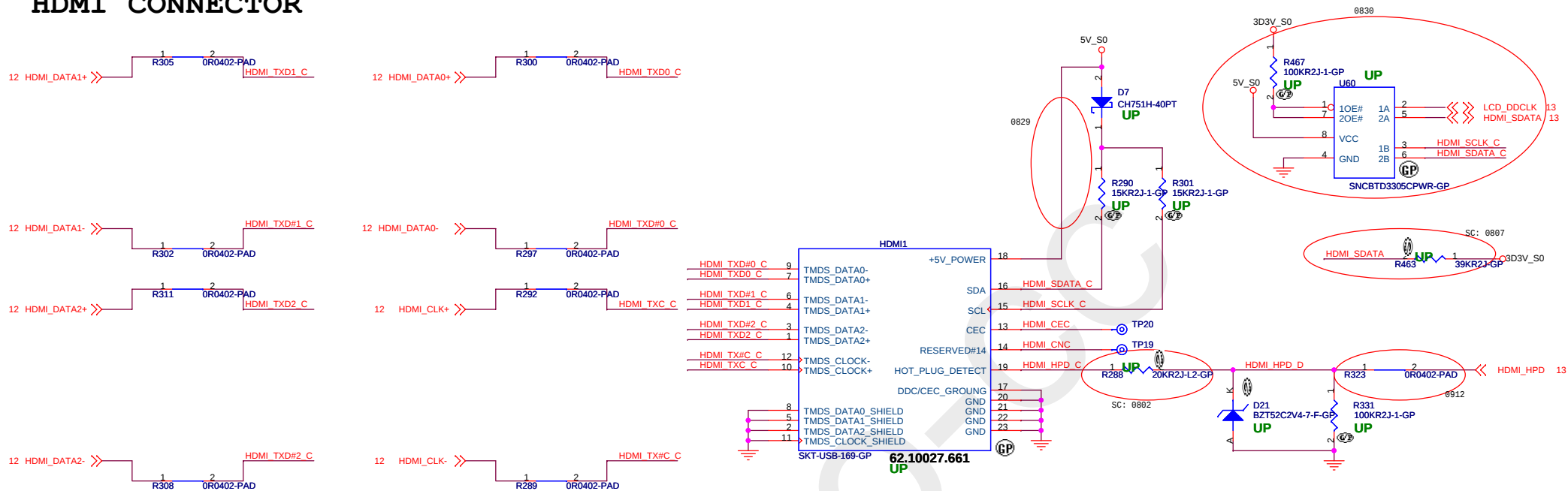
Title	DDR DAMPING & TERMINATION
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Size A3	Document Number DS2-AMD	Rev 1
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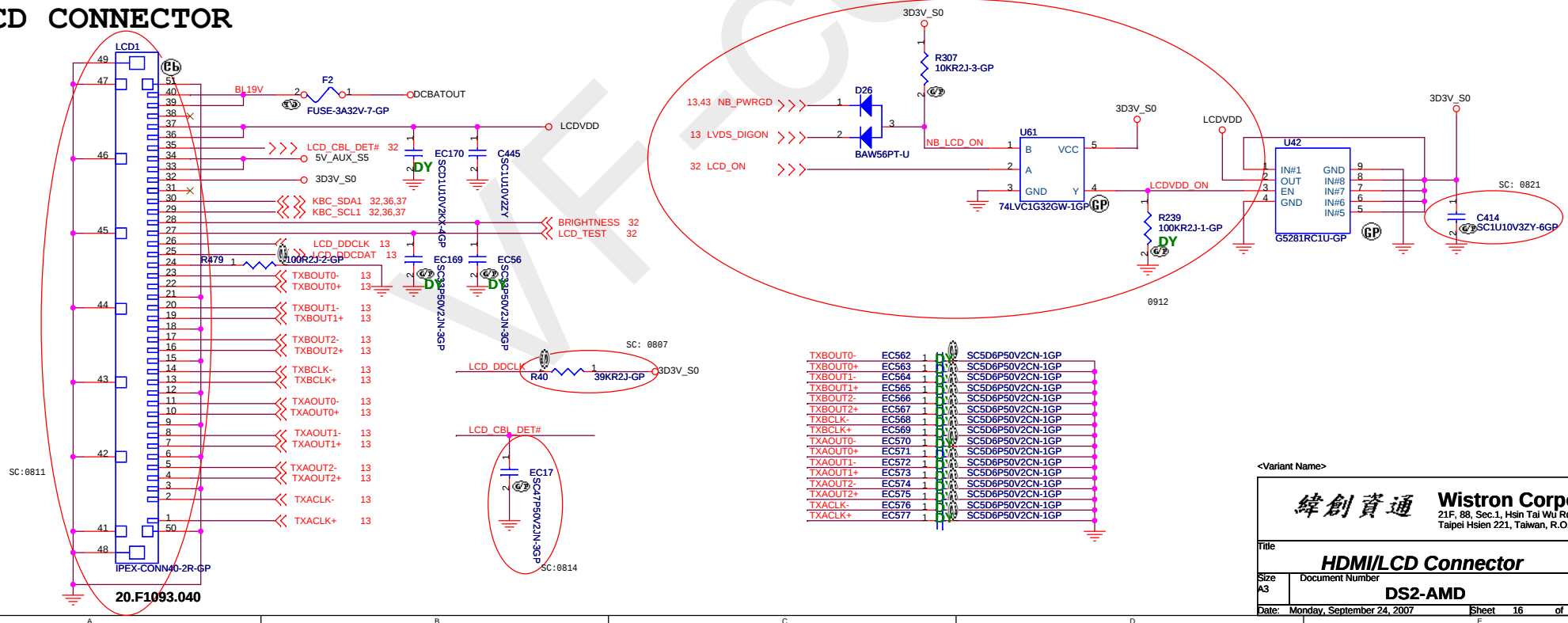




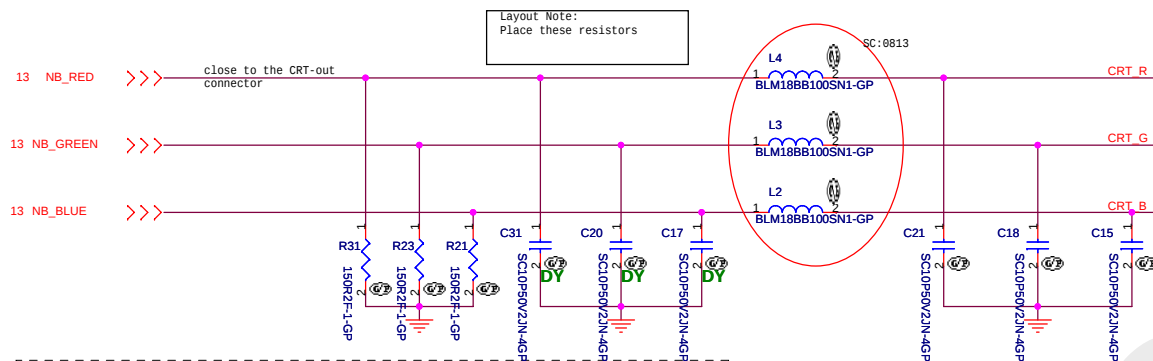
HDMI CONNECTOR



LCD CONNECTOR

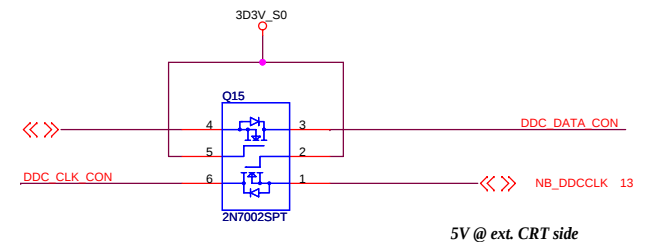
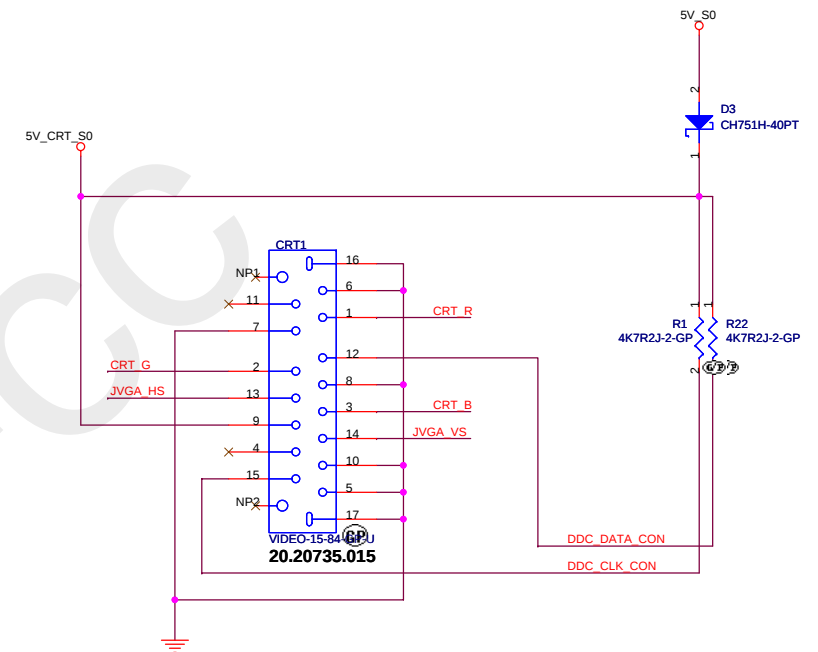
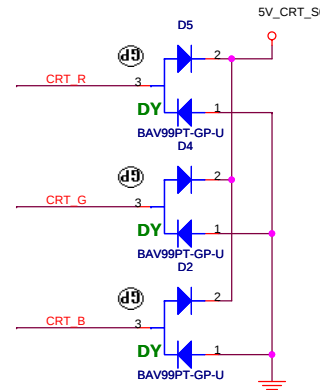
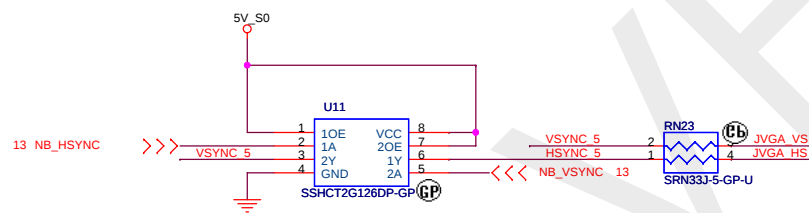


CRT I/F & CONNECTOR



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.

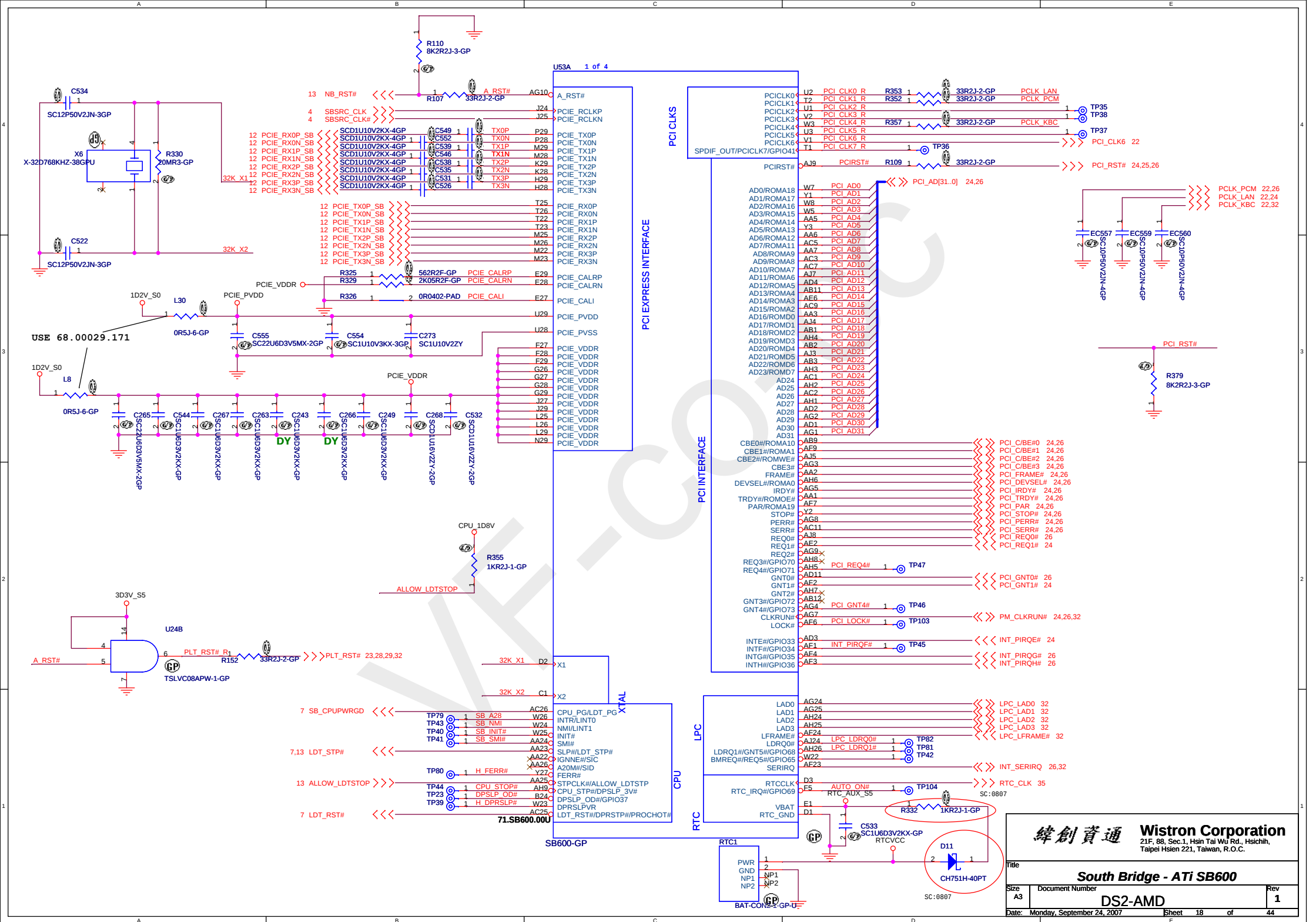
Hsync & Vsync level shift

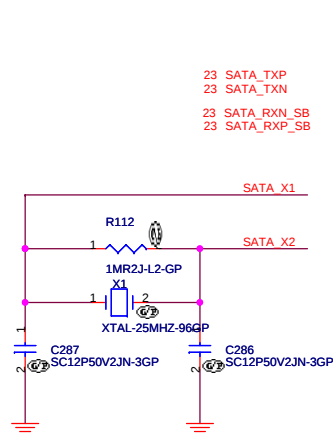


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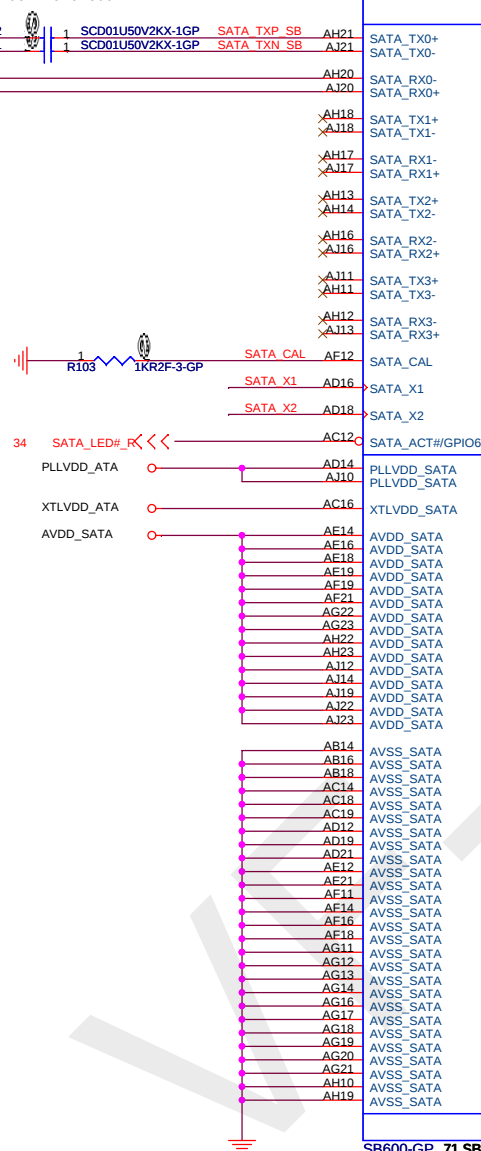
緯創資通 Wistron Corporation
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Title		
CRT Connector		
Size	Document Number	Rev
A3	DS2-AMD	1
Date:	Monday, September 24, 2007	Sheet 17 of 44





PLACE SATA AC DECOUPLING CAPS CLOSE TO SB600



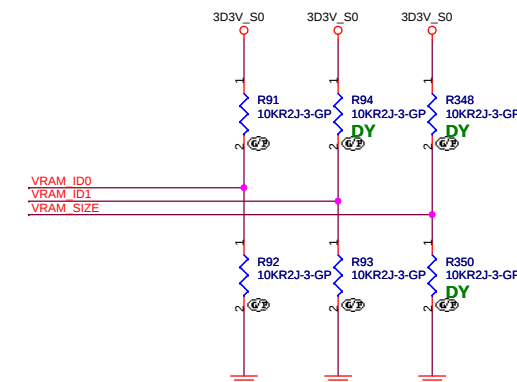
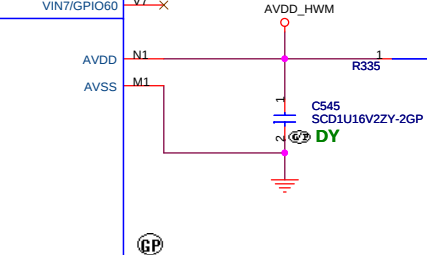
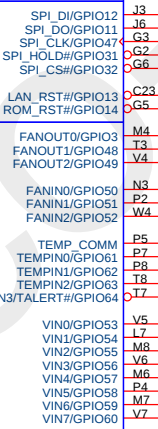
SERIAL ATA

SERIAL ATA POWER

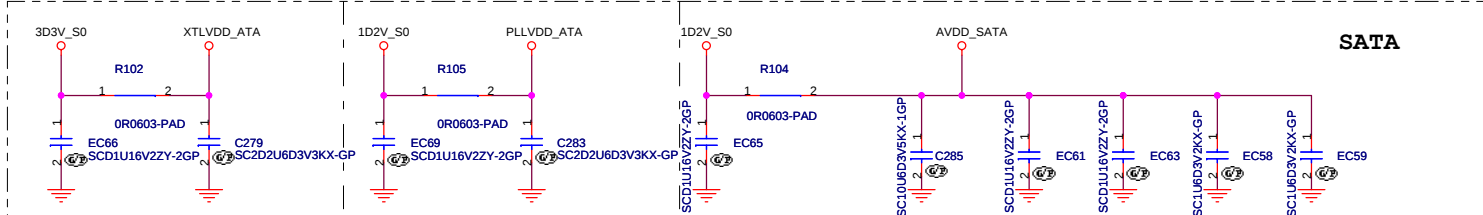
SPI ROM

HW MONITOR

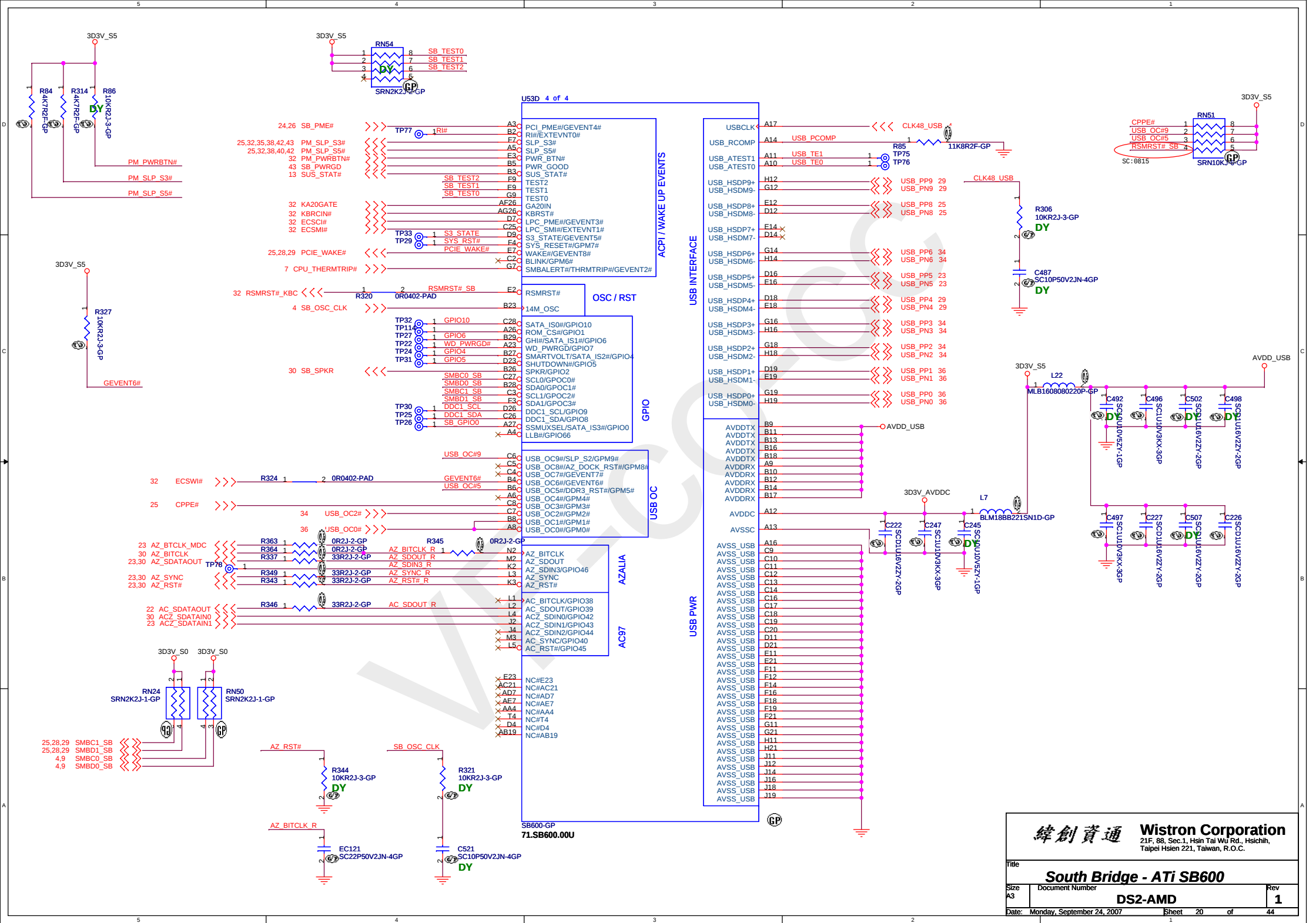
ATA 66/100

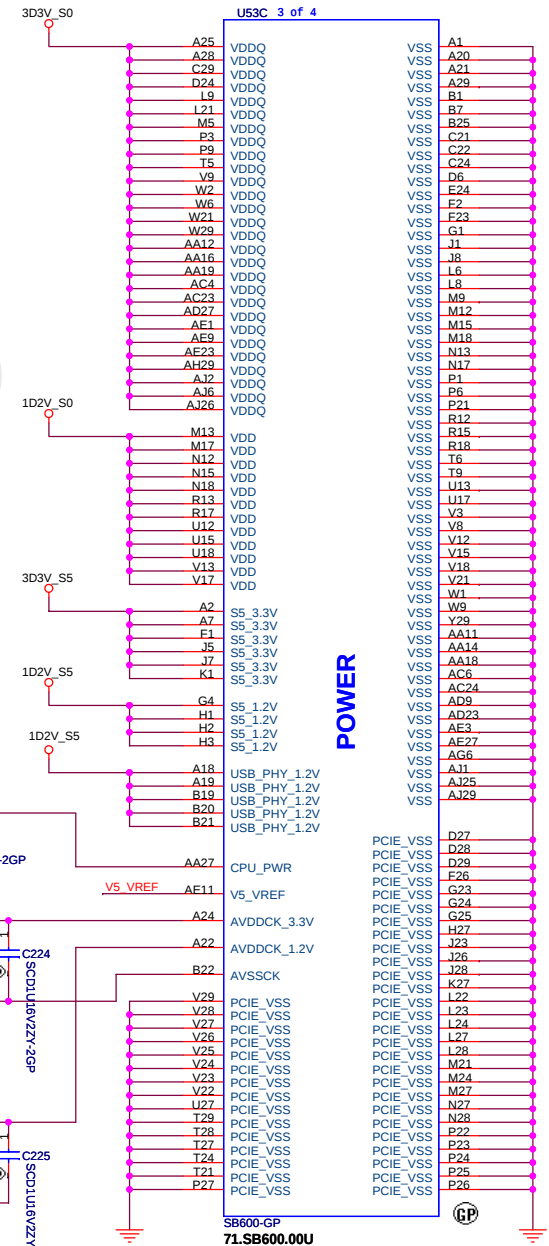
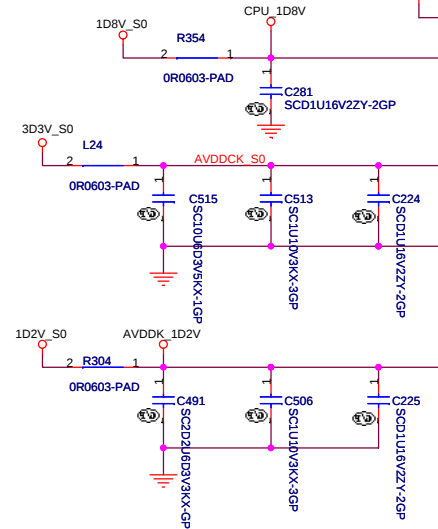
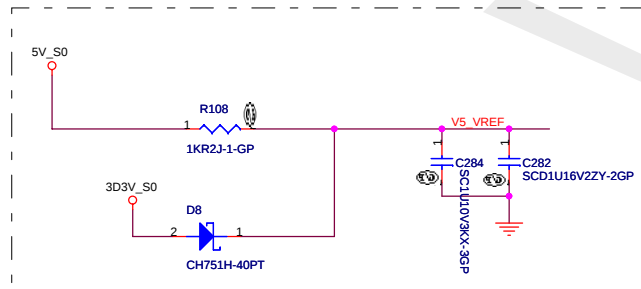
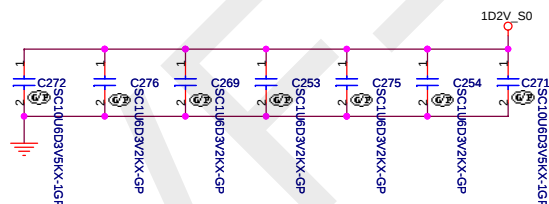
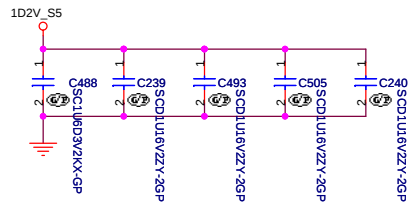
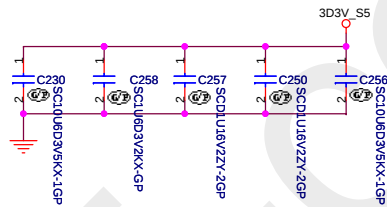
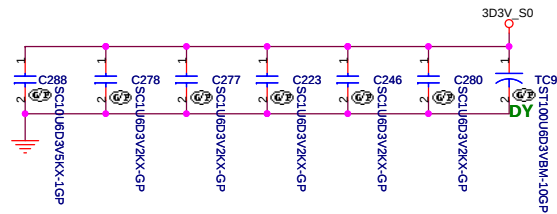


	GPIO56	GPIO55
	ID1	ID0
HYNIX	0	0
QIMONDA	0	1



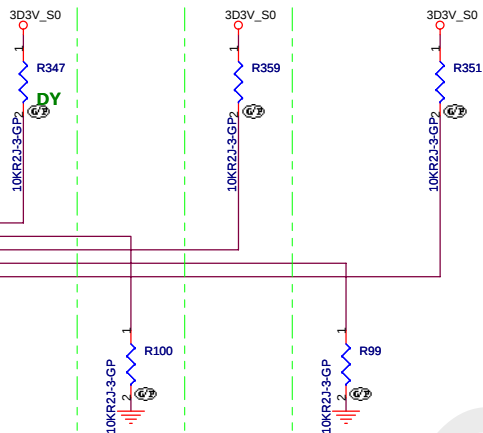
SATA





PCI_CLK4
PCI_CLK6
PCI_CLK0
PCI_CLK1

20 AC_SDATAOUT
18,32 PCLK_KBC
18 PCI_CLK6
18,24 PCLK_LAN
18,26 PCLK_PCM



REQUIRED SYSTEM STRAPS

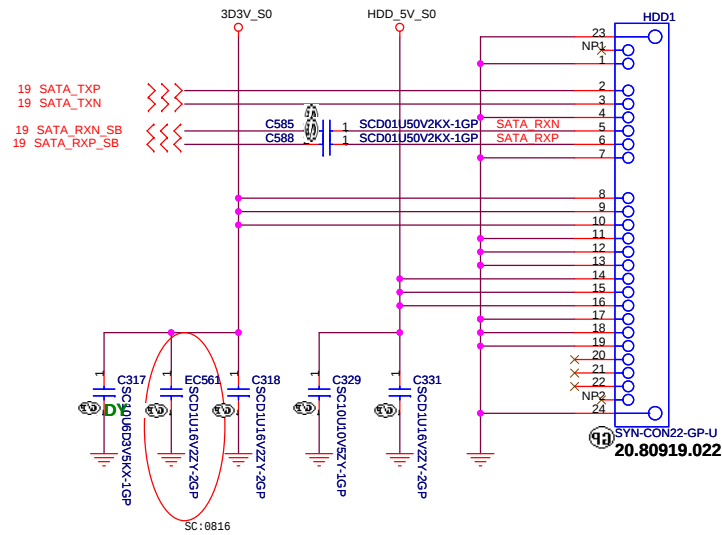
SB600					
	AC_SDOUT	PCI_CLK4	PCI_CLK6	PCI_CLK0	PCI_CLK1
PULL HIGH	USE DEBUG STRAPS	USE INT. PLL48	CPU IF=K8 DEFAULT	ROM TYPE: H, H = PCI ROM H, L = SPI ROM L, H = LPC ROM	DEFAULT
PULL LOW	IGNORE DEBUG STRAPS DEFAULT	USE EXT. 48MHZ DEFAULT	CPU IF=P4	L, L = FWH ROM	

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

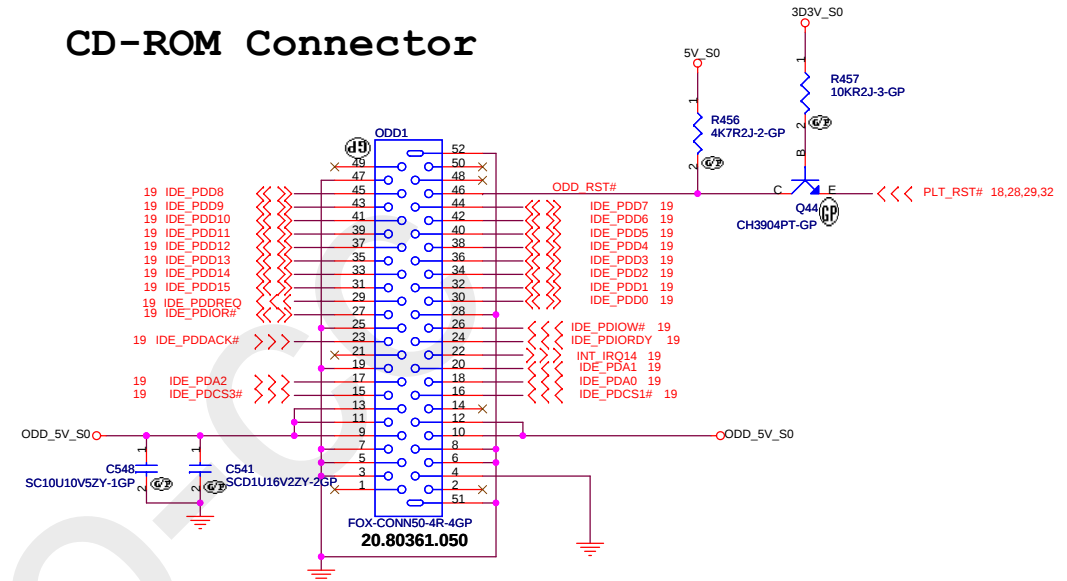
DEBUG STRAPS

	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

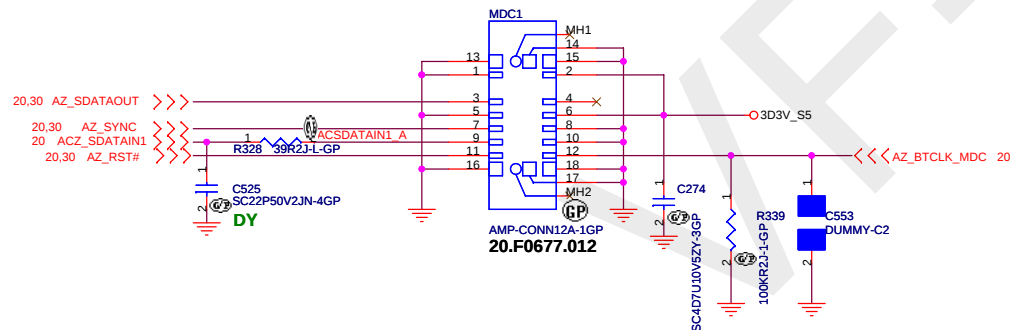
SATA HD Connector



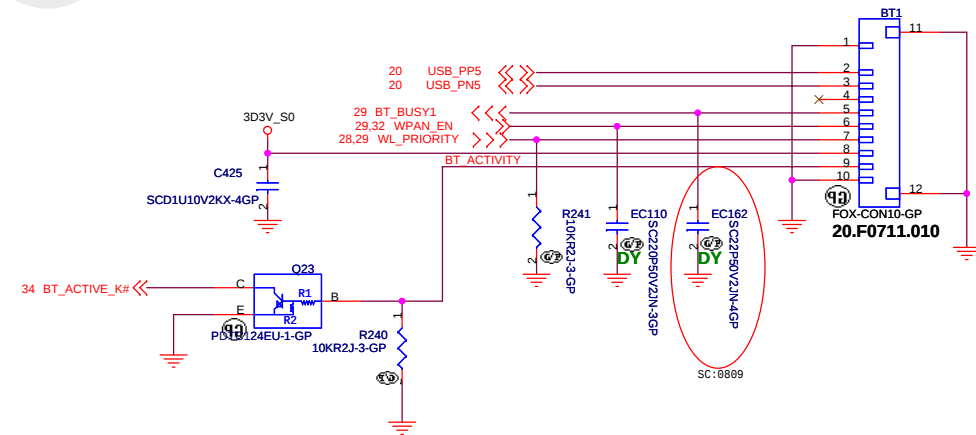
CD-ROM Connector



MDC 1.5 Connector

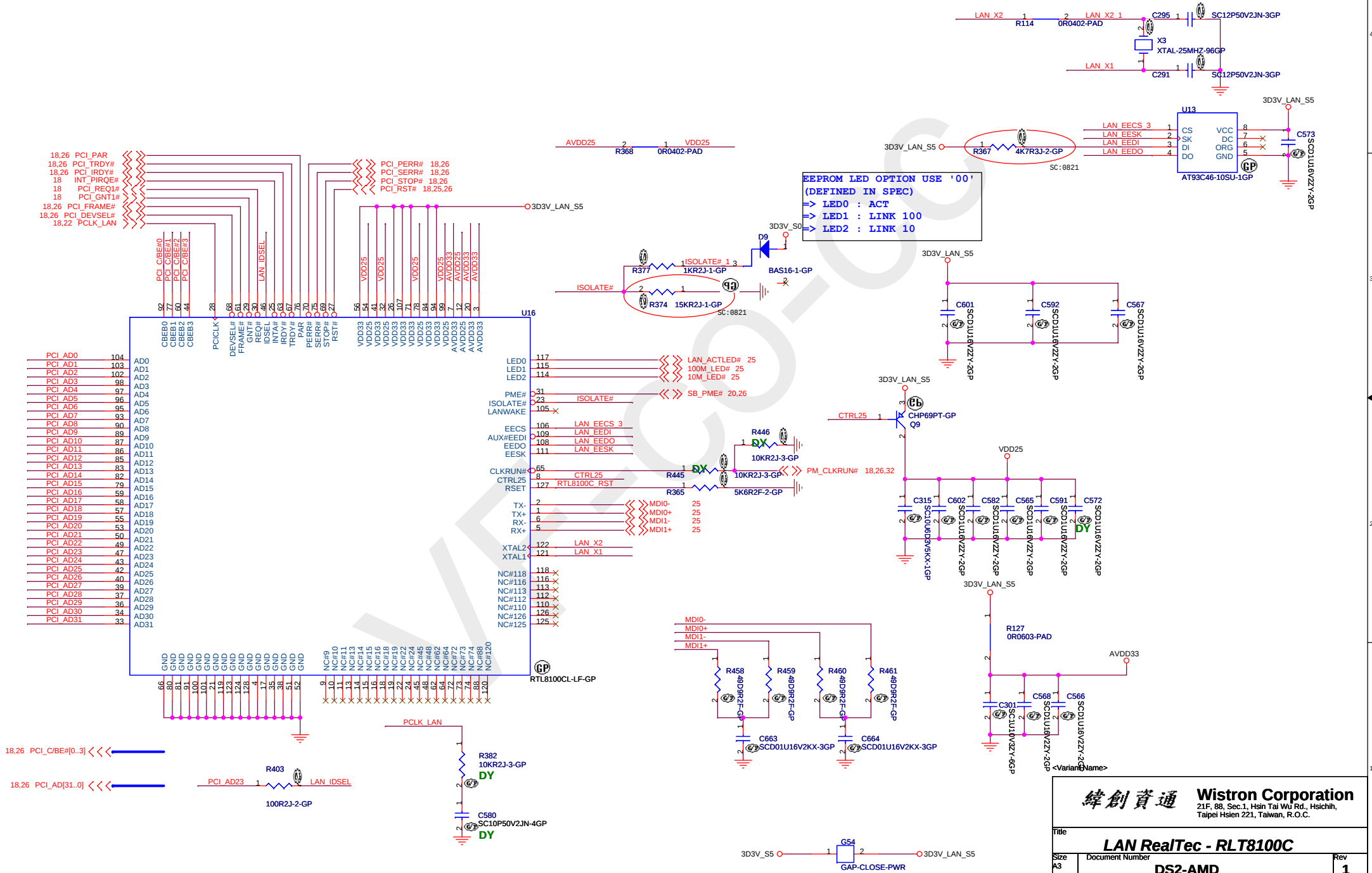


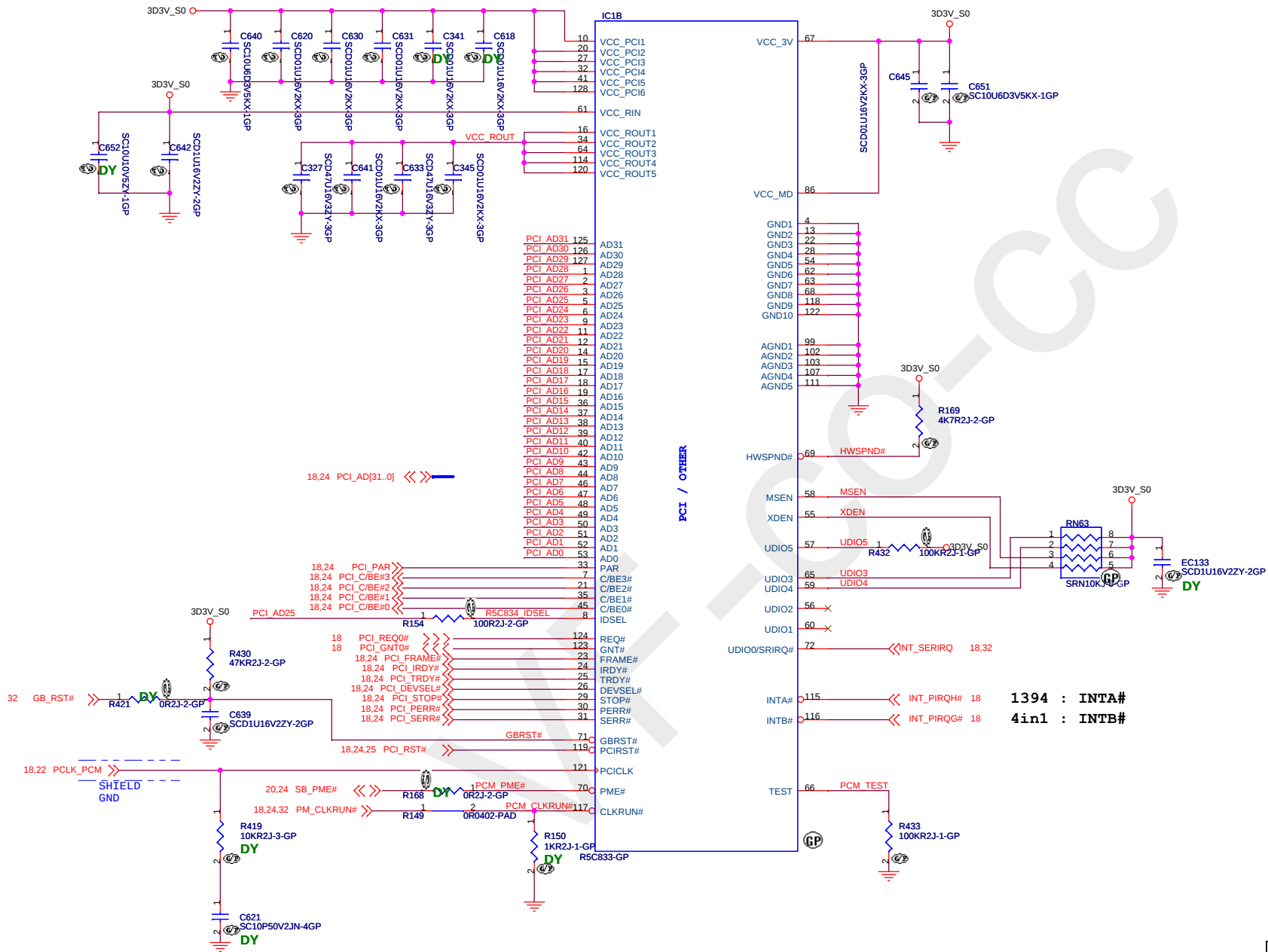
BT Module Connector

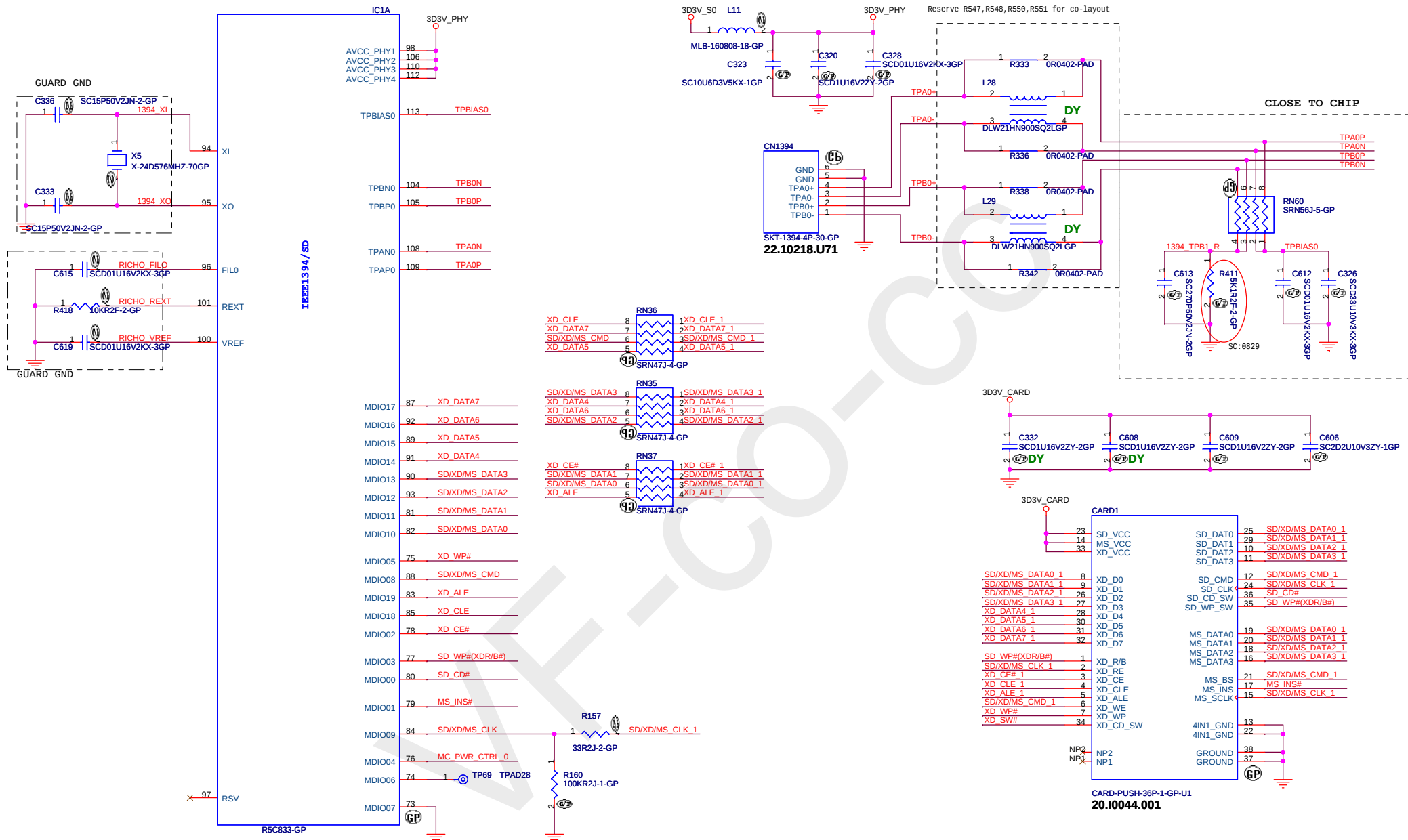


緯創資通 Wistron Corporation
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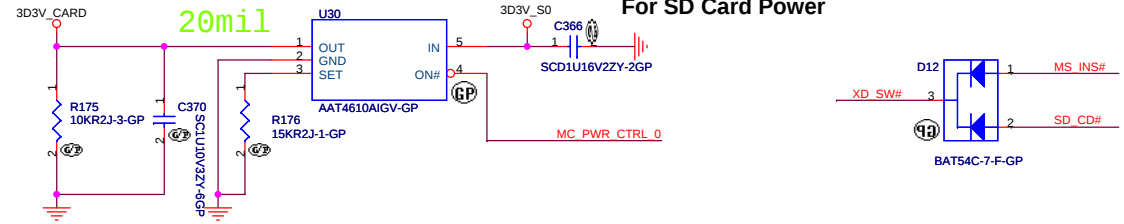
Title HD/CDROM/MDC/BT		
Size A3	Document Number DS2-AMD	Rev 1
Date: Monday, September 24, 2007	Sheet 23	of 44







For SD Card Power



<Variant Name>

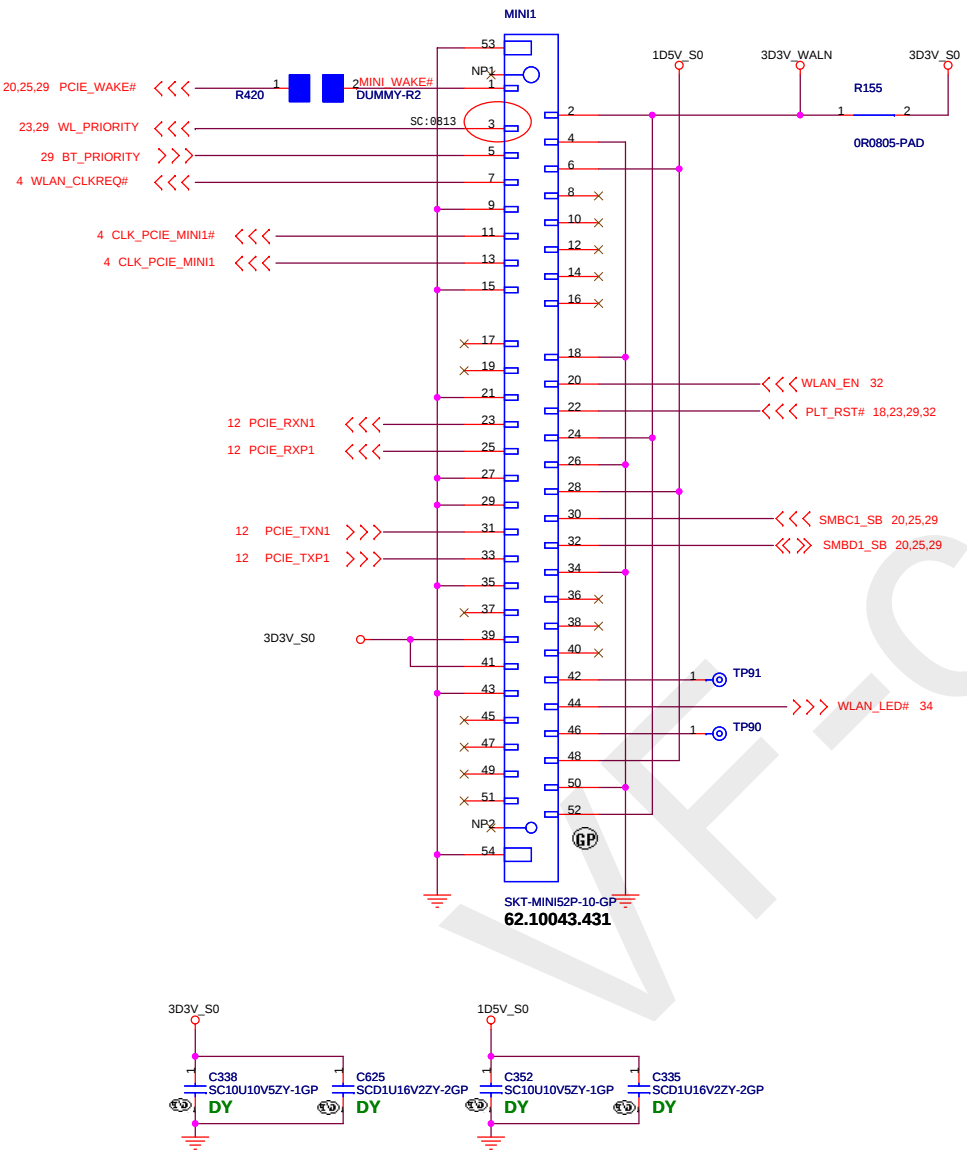
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **R5C832/IEEE1394/SD**

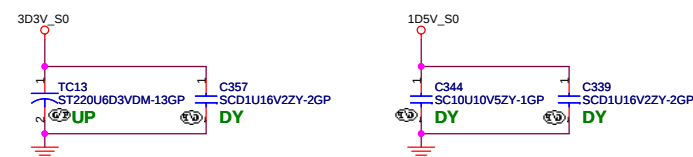
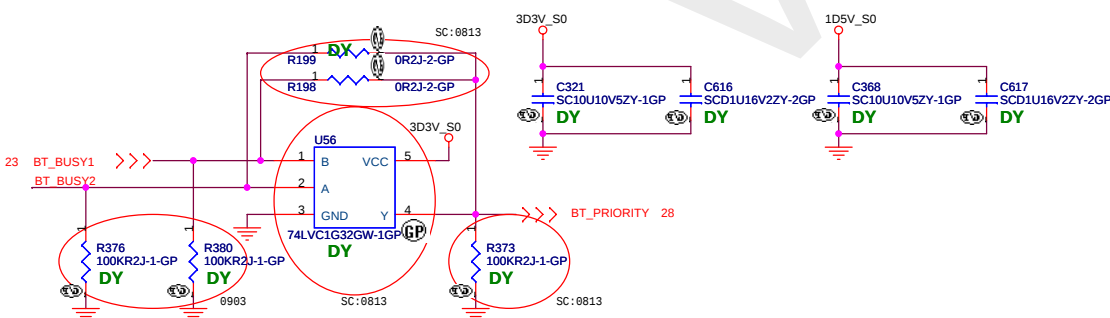
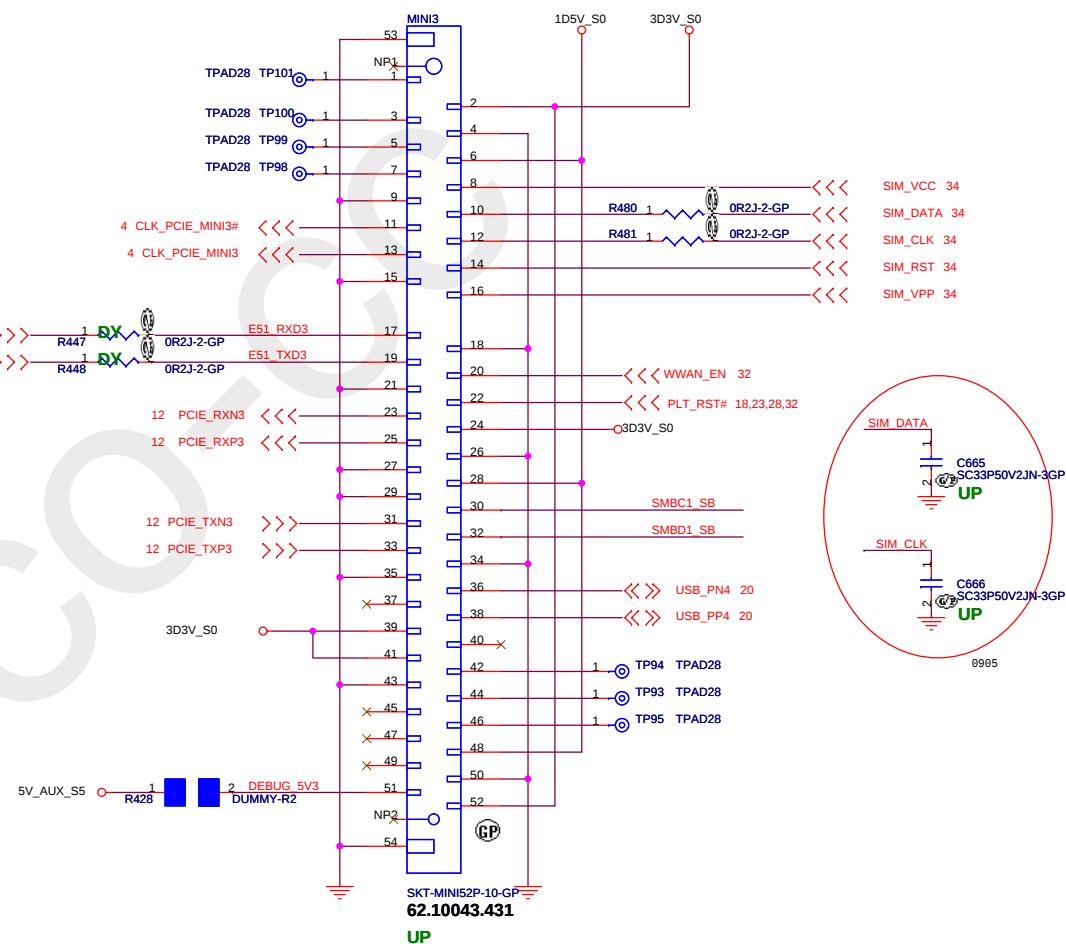
Size: A3 Document Number: **DS2-AMD** Rev: **1**

Date: Monday, September 24, 2007 Sheet 27 of 44

Mini Card Connector 1(802.11a/b/g)



Mini Card Connector 3(WWAN)



<Variant Name>

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

Title

MINI CARD CONN.Size
A3

Document Number

DS2-AMD

Rev	1
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Date: Monday, September 24, 2007

Sheet 29 of 44

WPC8763L STRAP PIN

JEN0 (Pin 24)	JENK (Pin 53)	Functionality of Pins 17, 20, 21, 23 25, 27	Functionality of Pins 47, 48, 50, 51, 52
NO PD RES		GPIO Port	Keyboard Scan
10K PD	NO PD	JTAG signals	Keyboard Scan
NO PD	10K PD	GPIO Port	JTAG signals

TRIS#(Pin 110) TRI-STATE

Forces the device to float all its output and I/O pins, if an external 10 KΩ pull-down resistor is connected.

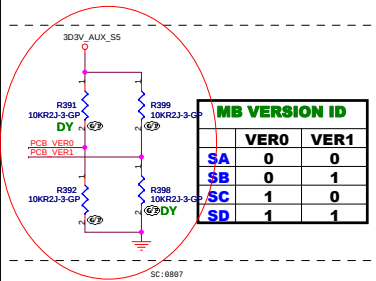
BADDR1-0 (PIN 111, 112) I/O Base Address.

10KΩ external pull-down resistor on BADDR1: Core defined

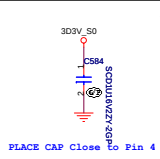
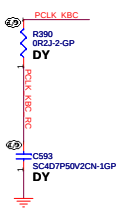
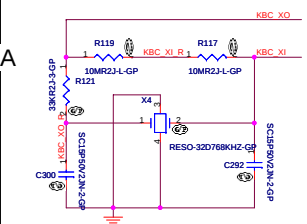
SHBM PIPN83 Shared Host BIOS Memory.

HIGH:NO SHARED(internal resistor)
LOW:SHARED BIOS memory.

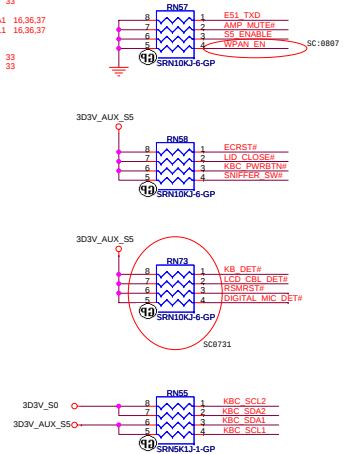
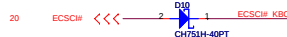
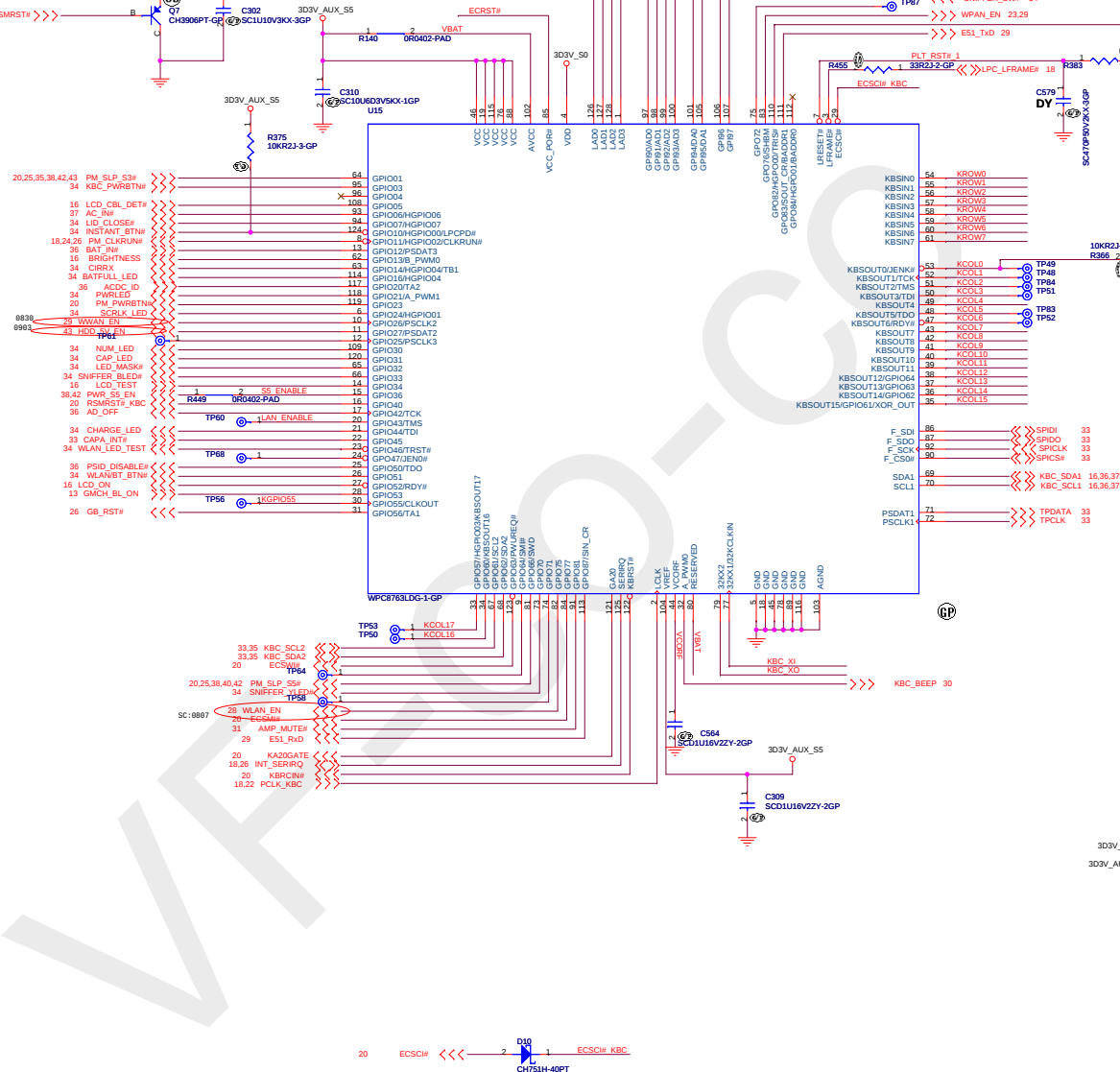
B



A



4



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File	KBC Winbond WPC8763L	Rev	1
Size	Document Number	DS2-AMD	
Date	Wednesday, September 26, 2007	Sheet	32 of 44

5

4

3

2

1

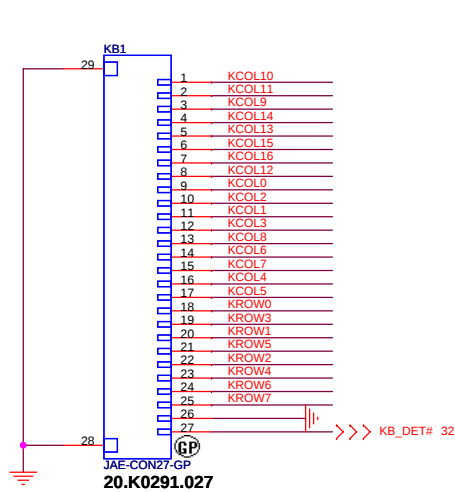
A

B

C

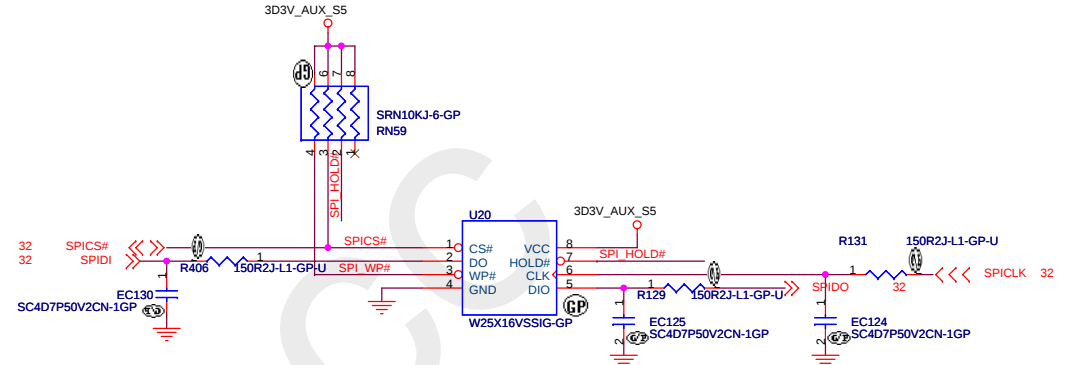
D

Internal KeyBoard Connector

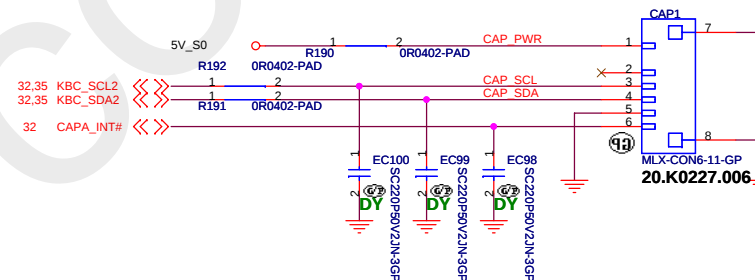


>>> KCOL[0..16] 32
<<< KROW[0..7] 32

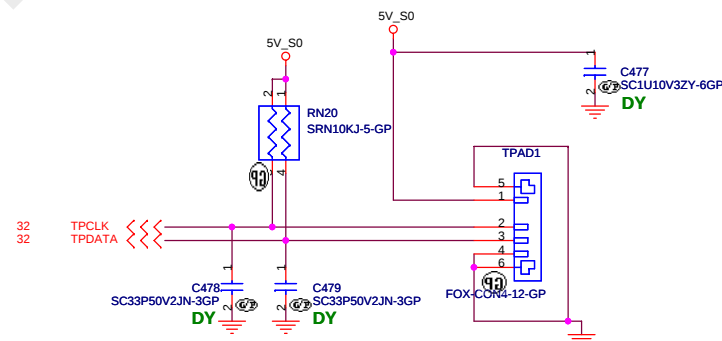
SPI ROM



CAPACITY BUTTON



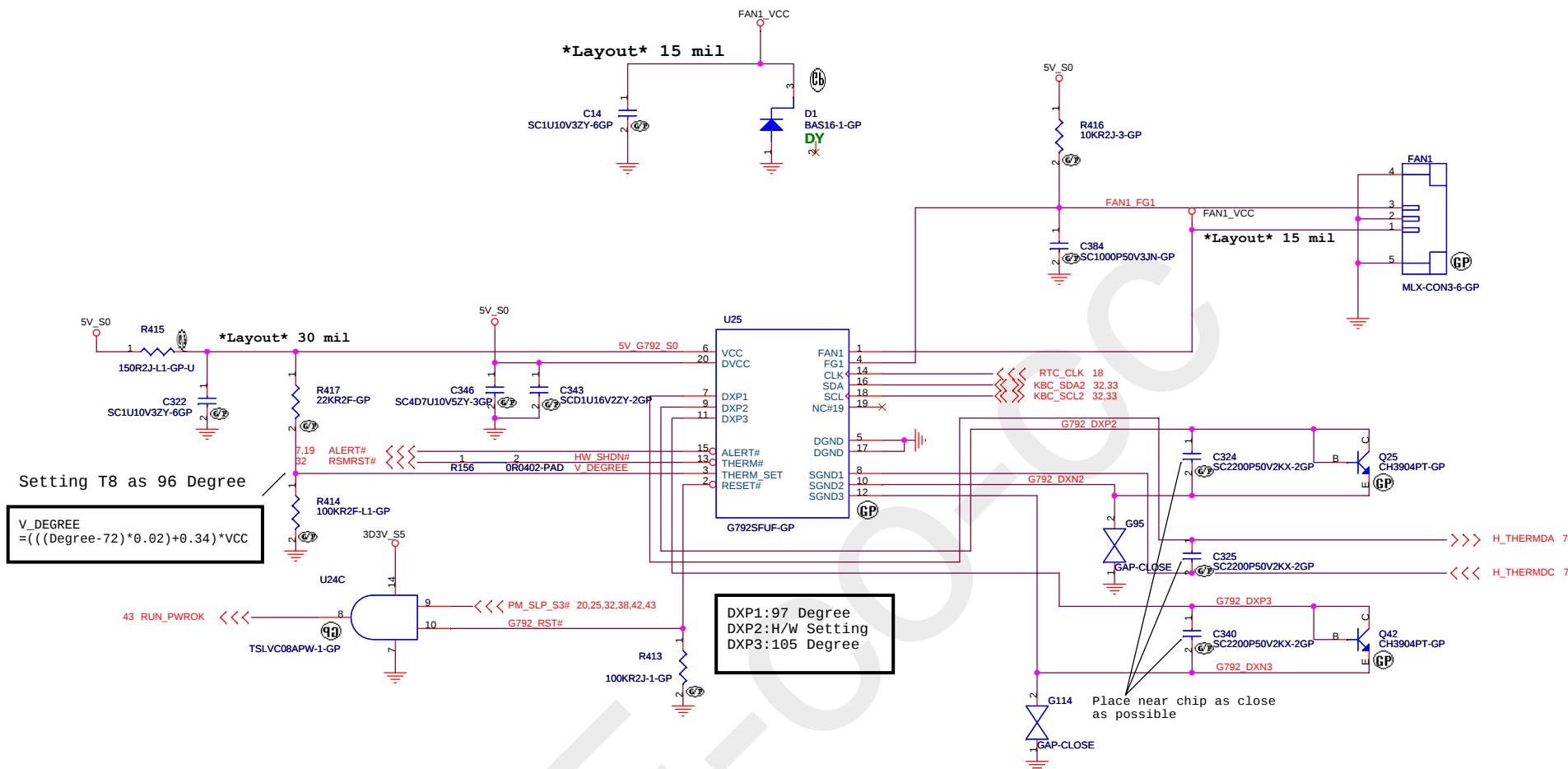
TouchPad Connector

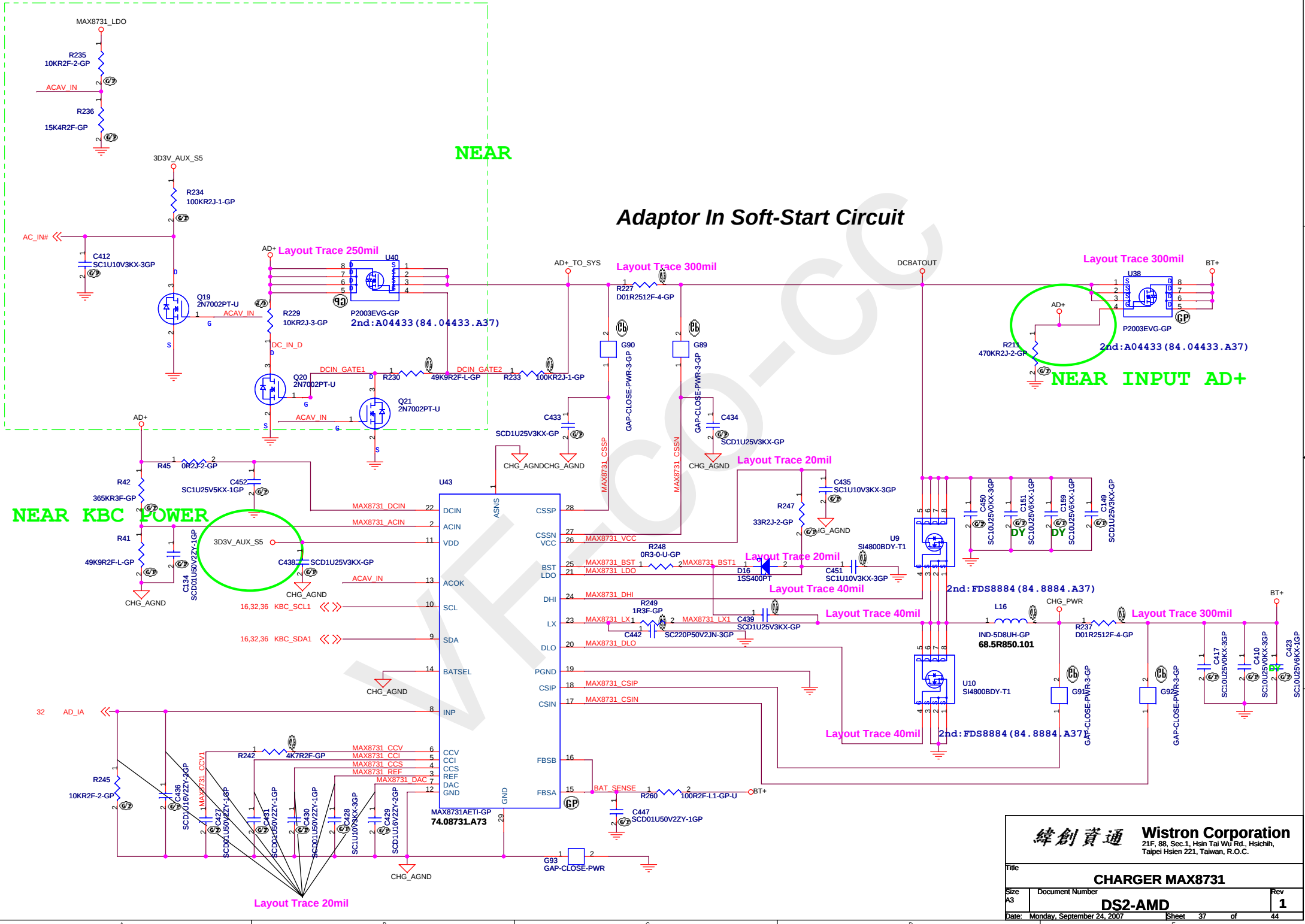


FOR EMI

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KeyBoard-CONN			
Size A3	Document Number	Rev	1
Date: Wednesday, September 26, 2007	Sheet 33 of 44	DS2-AMD	1

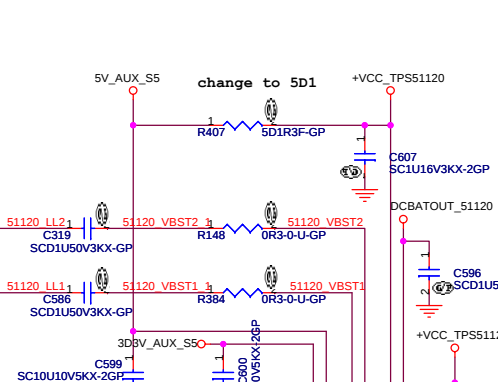
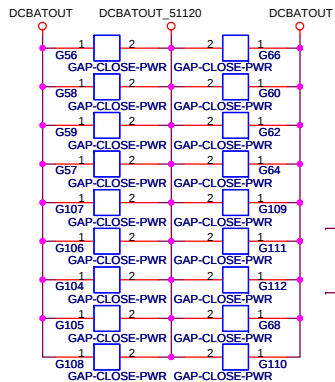




Adaptor In Soft-Start Circuit

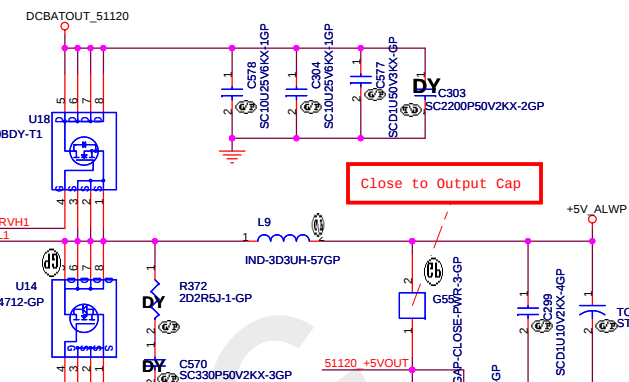
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Title				
CHARGER MAX8731				
Size A3	Document Number			Rev
	DS2-AMD			1
Date: Monday, September 24, 2007		Sheet	37	of 44

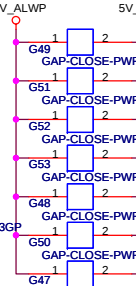


HS:
 $R_{ds(on)} = 23\text{m}\Omega \sim 30\text{m}\Omega$
 $Q_g = 8.7 \sim 13\text{nC}$
 $I_d = 6.5\text{A}$ @25degree C
 $V_{gs(th)} = 0.8\text{V}, 1.8\text{V}$
 $R_g = 0.5, 1.4, 2.2\text{ohm}$

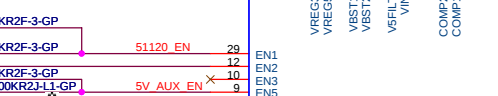
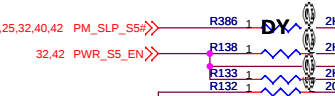
LS:
 $R_{ds(on)} = 15\text{m}\Omega \sim 18\text{m}\Omega$
 $Q_g = 12\text{nC}$
 $I_d = 9.1\text{A}$
 $V_{gs(th)} = 1.5\text{V}, 1.8\text{V}, 2.4\text{V}$
 $R_g = 2.4 \sim 3.6\text{ohm}$



$I_{out} = 6\text{A}$
 $OCP < 12\text{A}$



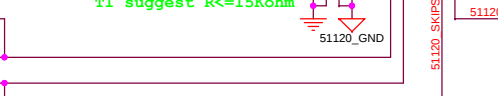
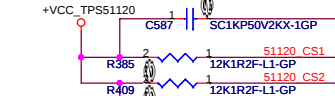
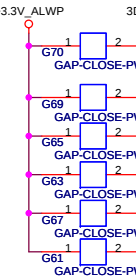
O/P cap: 220u6.3V 6TPE220M 25mOhm 2.4Arms



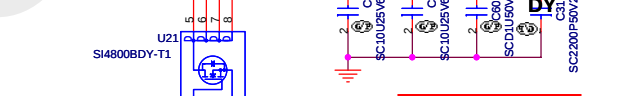
Choke :
 Cyntec 6.5mm*6.9mm*3.0mm
 PCMC063T-3R3MN
 $I_{dc} = 6\text{A}$, $I_{sat} = 13.5\text{A}$
 $DCR = 28 \sim 30\text{m}\Omega$



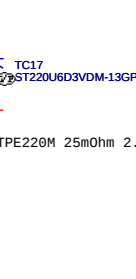
$I_{out} = 5\text{A}$
 $OCP < 10\text{A}$



HS:
 $R_{ds(on)} = 23\text{m}\Omega \sim 30\text{m}\Omega$
 $Q_g = 8.7 \sim 13\text{nC}$
 $I_d = 6.5\text{A}$ @25degree C
 $V_{gs(th)} = 0.8\text{V}, 1.8\text{V}$
 $R_g = 0.5, 1.4, 2.2\text{ohm}$



$I_{out} = 5\text{A}$
 $OCP < 10\text{A}$



LS:
 $R_{ds(on)} = 15\text{m}\Omega \sim 18\text{m}\Omega$
 $Q_g = 12\text{nC}$
 $I_d = 9.1\text{A}$
 $V_{gs(th)} = 1.5\text{V}, 1.8\text{V}, 2.4\text{V}$
 $R_g = 2.4 \sim 3.6\text{ohm}$



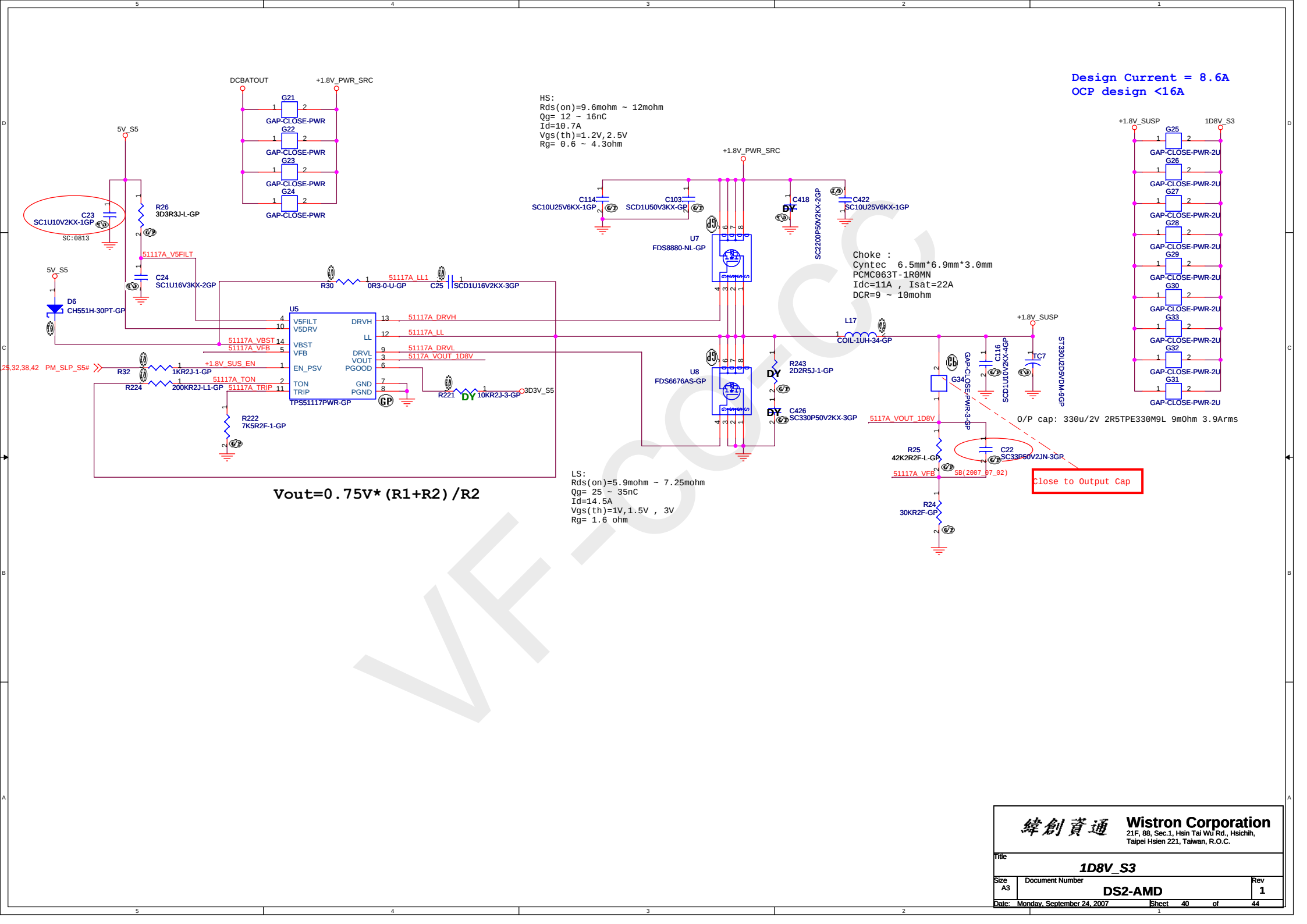
$I_{out} = 5\text{A}$
 $OCP < 10\text{A}$

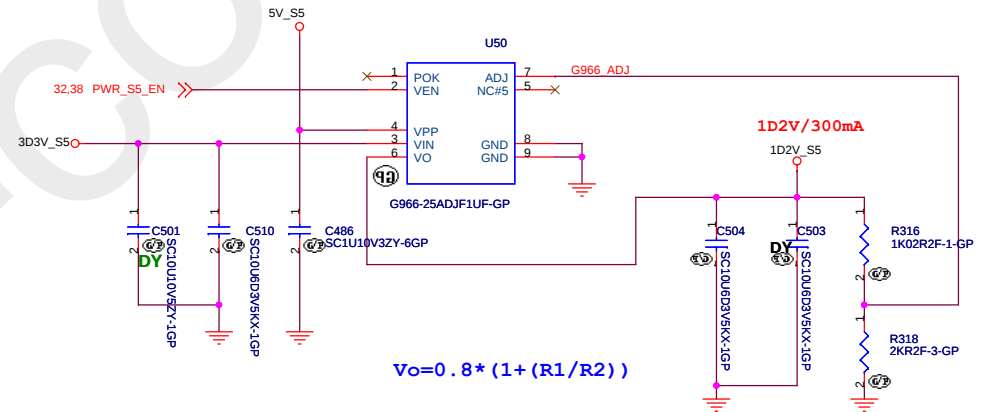
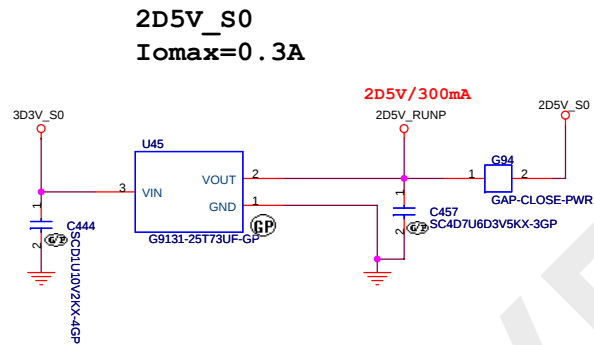
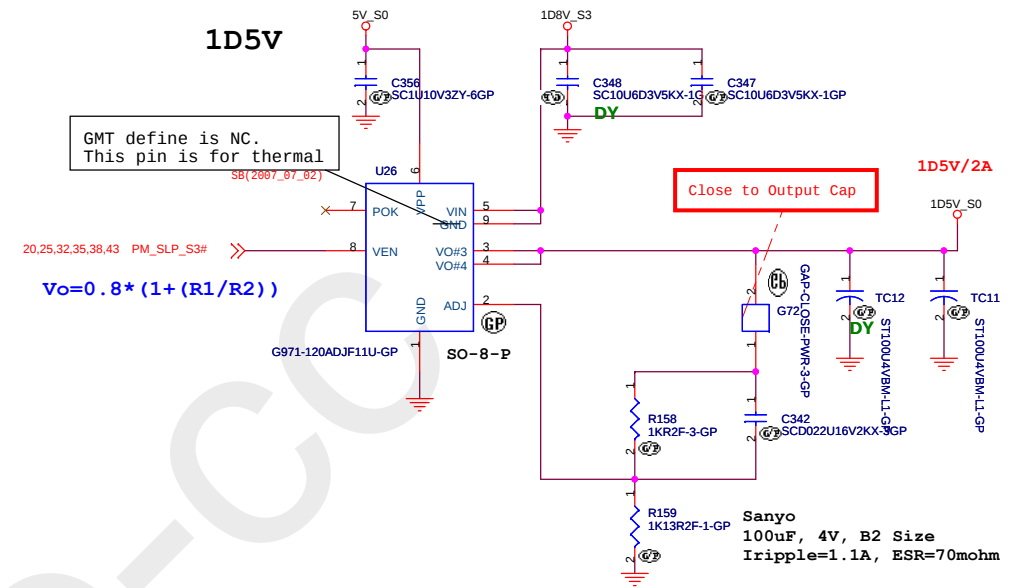
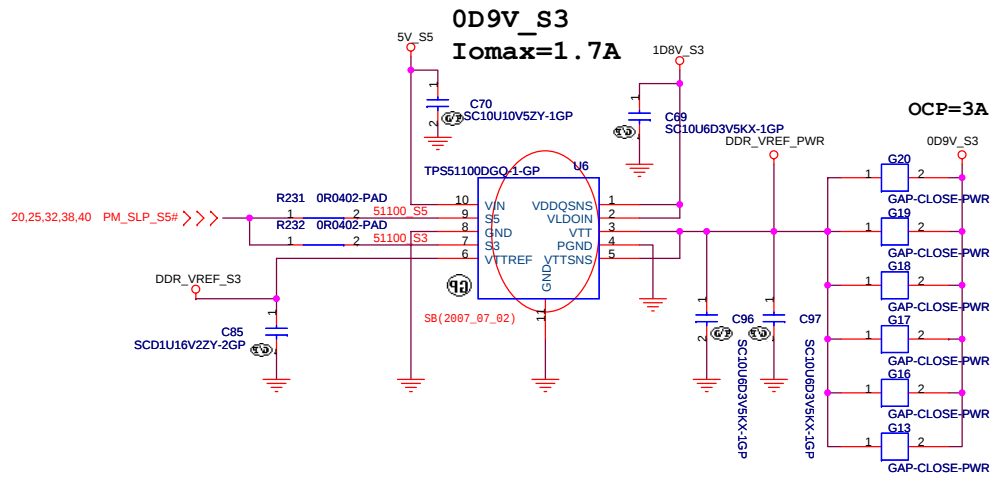


$$V_{out} = 1V * (R1 + R2) / R2$$

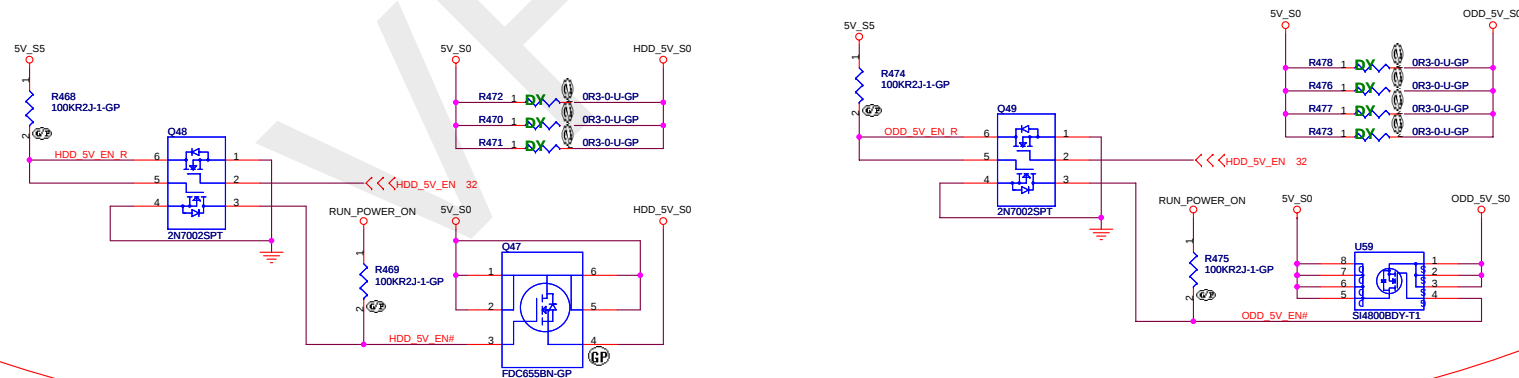
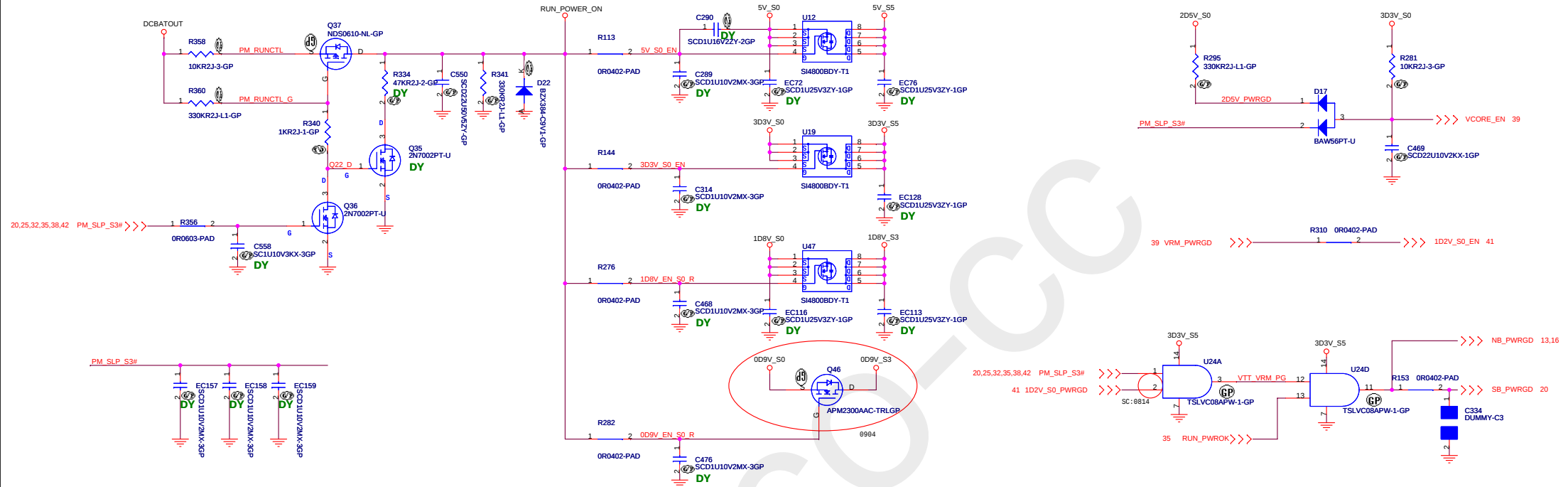
	GPIO	VREF2	FLOAT	V5FILT
SKIPSEL	AUTOSKIP	AUTOSKIP / FAULTS OFF	PWM	PWM
COMP	N/A	N/A	CURRENT MODE	D-Cap MODE
TONSEL	380k/CH1	280k/CH1	220k/CH1	180k/CH1
VFB1	580k/CH2	430k/CH2	330k/CH2	2870k/CH2
VFB2	N/A	not use	5V	Fixed Output
VFB2	N/A	not use	Adj.	3.3V
EN1, EN2	Switcher OFF	not use	Switcher ON	Switcher ON
EN3, EN5	LDO OFF	not use	LDO ON	VREG3 on

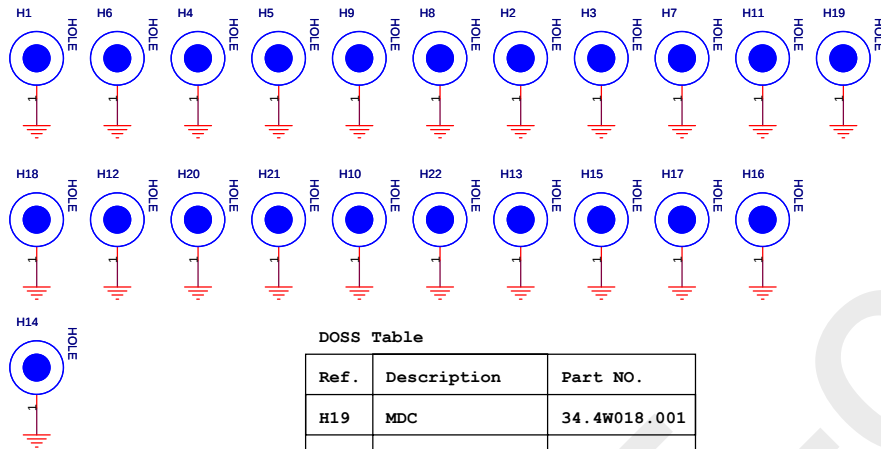
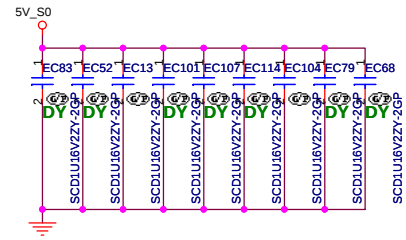
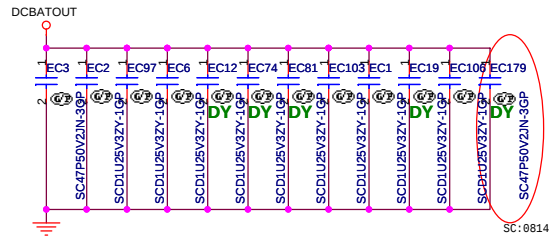
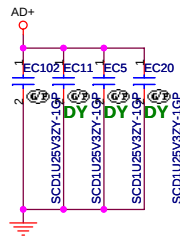
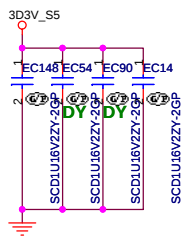
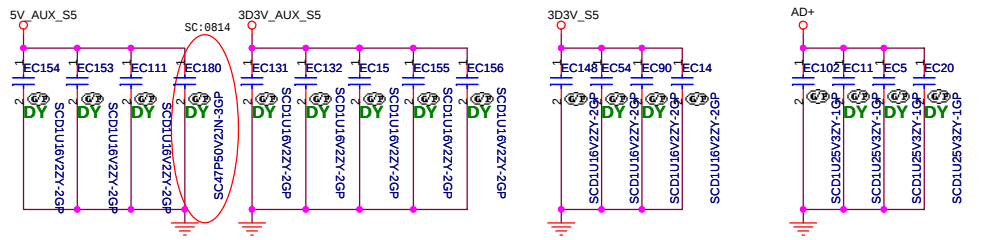
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 Taipei Hsien 221, Taiwan, R.O.C.





Run Power





DOSS Table

Ref.	Description	Part NO.
H19	MDC	34.4W018.001
H20	Mini Card	34.4W005.001
H21	Mini Card	34.4W005.001
H22	Mini Card	34.4W005.001
H18	Heat sink	34.4A908.001
H15	New Card	34.4W004.001

