

123456

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CRYPTUS

DAUGHTERBOARD

REV. 1-A

COMMENT LEGEND

- General Notes

Assembly, Part Locations, Fabrication, Debug Information etc.
- Revisions

With author and date  
To be kept on schematic for a single revision
- Datasheet info

Part information, addresses, registers, pull-up/pull-downs, excerpts & tables etc.
- Calculations

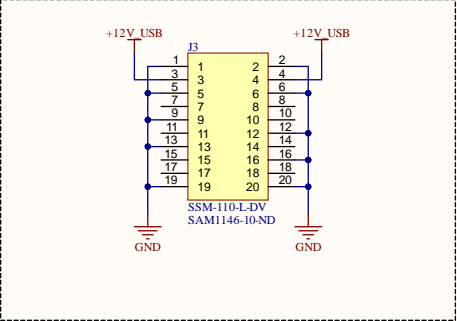
Values, tensions & currents, passives, etc.
- TODO

Things that are left to be done, with who should do it

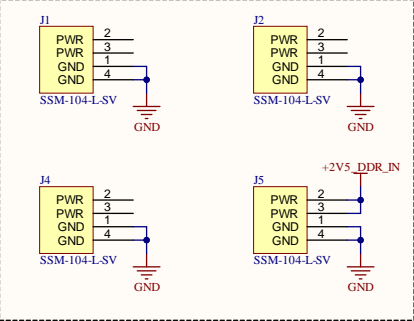
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		TITLE TITLE			
CryptUS		SIZE A3			REV
Pascal-Emmanuel Lachance		DWG NO.			
Benjamin Gélinas		FILE NAME Title.SchDoc			SHEET 1 OF 10

	1	2	3	4				
A	<div><div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX1</div><div>100K</div><div>0603</div><div>1/16W</div><div>10%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX2</div><div>47K</div><div>0603</div><div>1/8W</div><div>5%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX3</div><div>13K</div><div>0603</div><div>1/8W</div><div>5%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX4</div><div>4K7</div><div>0603</div><div>1/16W</div><div>10%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX5</div><div>3K24</div><div>0603</div><div>1/16W</div><div>1%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX6</div><div>2K2</div><div>0603</div><div>1/8W</div><div>5%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX7</div><div>300R</div><div>0603</div><div>1/8W</div><div>2%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX8</div><div>100R</div><div>0402</div><div>1/16W</div><div>10%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX9</div><div>80R6</div><div>0402</div><div>1/10W</div><div>0.5%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX10</div><div>49R9</div><div>0402</div><div>1/10W</div><div>0.5%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX11</div><div>10R</div><div>0402</div><div>1/8W</div><div>10%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX12</div><div>15mR</div><div>1206</div><div>1/2W</div><div>2%</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RX13</div><div>0R</div><div>0603</div><div>1/8W</div><div></div></div></div></div></div>				B			
C	<div><div>CAPACITORS</div><div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>CX1</div><div>47uF</div><div>35V</div><div>2917</div><div>T498X476K035ATE500</div><div>399-11397-1-ND</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>CX2</div><div>47uF</div><div>1206</div><div>25V</div><div></div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>CX3</div><div>4.7uF</div><div>0805</div><div>25V</div><div></div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>CX4</div><div>470nF</div><div>0402</div><div>25V</div><div></div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>CX5</div><div>100nF</div><div>0402</div><div>25V</div><div></div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>CX6</div><div>47nF</div><div>0201</div><div>25V</div><div></div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>CX7</div><div>10nF</div><div>0201</div><div>25V</div><div></div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>CX8</div><div>2.2pF</div><div>0402</div><div>25V</div><div></div></div></div></div><div><div>These components should not appear on the PCB or on the BOM.</div></div></div>				D			
	1	2	3	4				

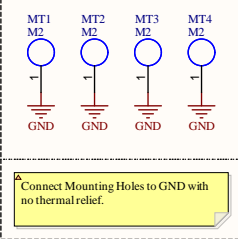
MAIN 20-PIN CONNECTOR



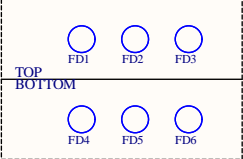
4-PIN POWER CONNECTORS



MOUTING HOLES



FIDUCIALS



PROJECT		CryptUS_Daughterboard	
TITLE		Mechanical & Interconnect	
CryptUS	SIZE	DWG NO.	REV
Pascal-Emmanuel Lachance	A3		
FILE NAME		Mechanical and Interconnect.SchDoc	SHEET 3 OF 10

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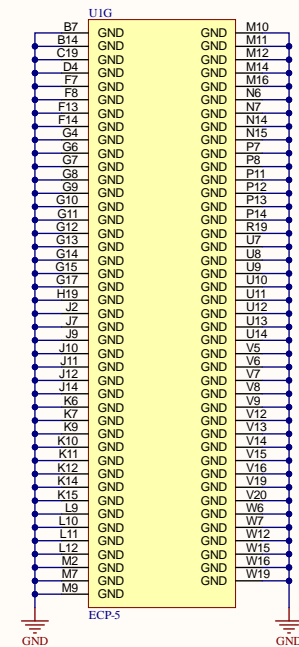
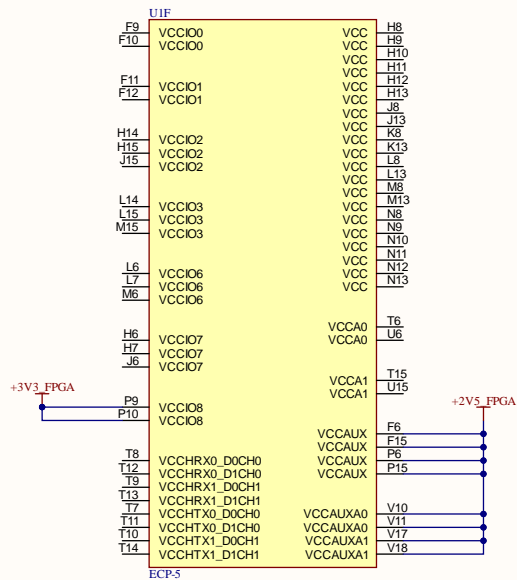
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PROJECT		CryptUS_Daughterboard	
TITLE		★	
SIZE	A3	DWG NO.	REV
FILE NAME	FPGA Power.SchDoc		SHEET 4 OF 10

UIA

BANK0

A6	PT4A/ULC_GPLL1T_IN	PT47A/GR_PCLK1_0	D12
B6	PT4B/ULC_GPLL1C_IN	PT47B/GR_PCLK1_1	E12
C6	PT6A	PT49A	A12
D6	PT6B	PT49B	A13
E6	PT9A	PT51A	B13
F6	PT9B	PT51B	C13
G6	PT11A	PT53A	D13
H6	PT11B	PT53B	E13
I6	PT13A	PT55A	A14
J6	PT13B	PT55B	C14
K6	PT15A	PT58A	D14
L6	PT15B	PT58B	E14
M6	PT18A	PT67A	B15
N6	PT18B	PT69A	C15
P6	PT20A	PT69B	D15
Q6	PT20B	PT71A	E15
R6	PT27A	PT71B	A16
S6	PT29A	PT74A	B16
T6	PT29B	PT74B	C16
U6	PT31A	PT76A	D16
V6	PT31B	PT76B	E17
W6	PT33A/GR_PCLK0_1	PT78A	B17
X6	PT33B/GR_PCLK0_0	PT78B	C17
Y6	PT36A/PCLK0_1	PT80A	D17
Z6	PT36B/PCLK0_0	PT80B	E18
AA	PT38A/PCLK0_0	PT83A	B19
AB	PT38B/PCLK0_0	PT83B	C19
AC	PT42A/PCLKT1_1	PT85A/URC_GPLL1T_IN	D19
AD	PT42B/PCLKC1_1	PT85B/URC_GPLL1C_IN	E19
AE	PT44B/PCLKC1_0		B20
AF			C20

ECP-5

UIB

BANK7

A4	PL11A/ULC_GPLL0T_IN	PL35A/PCLKT6_1	G2
B4	PL11B/ULC_GPLL0C_IN	PL35B/PCLKC6_1	F1
C4	PL11C	PL35C/PCLKT6_0	F1
D4	PL11D	PL35D/PCLKC6_0	G1
E4	PL14A	PL38A/GR_PCLK6_0	H4
F4	PL14B	PL38B	I3
G4	PL14C	PL38C/GR_PCLK6_1	K3
H4	PL14D	PL38D	K2
I4	PL17A	PL41A	L1
J4	PL17B	PL41B	L1
K4	PL17C	PL41C	H1
L4	PL17D	PL41D	K1
M4	PL20A	PL44A	K4
N4	PL20B	PL44B/VREF1_6	K5
P4	PL20C	PL44C	L4
Q4	PL20D	PL44D	L5
R4	PL23A	PL53A	M5
S4	PL23B	PL59A	M4
T4	PL23C/VREF1_7	PL59B	N4
U4	PL23D	PL59C	N5
V4	PL26A	PL59D	N3
W4	PL26B	PL62A	M3
X4	PL26C	PL62B	L3
Y4	PL26D	PL62C	L2
Z4	PL29A/GR_PCLK7_1	PL62D	K2
AA	PL29B	PL65A	M1
AB	PL29C/GR_PCLK7_0	PL65B	P1
AC	PL29D	PL65C	P2
AD	PL32A/PCLKT7_1	PL65D	N1
AE	PL32B/PCLKC7_1	PL68A	P1
AF	PL32C/PCLKC7_0	PL68B	P2
AG	PL32D/PCLKC7_0	PL68C/LLC_GPLL0T_IN	K3
AH		PL68D/LLC_GPLL0C_IN	L4

ECP-5

UIC

BANK2

C18	PR11A/URC_GPLL0T_IN	PR35A/PCLKT3_1	L20
D18	PR11B/URC_GPLL0C_IN	PR35B/PCLKC3_1	M20
E18	PR11C	PR35C/PCLKT3_0	L19
F18	PR11D	PR35D/PCLKC3_0	M19
G18	PR14A	PR38A/GR_PCLK3_0	L17
H18	PR14B	PR38B	L18
I18	PR14C	PR38C/GR_PCLK3_1	M18
J18	PR14D	PR38D	N16
K18	PR17A	PR41A	N16
L18	PR17B	PR41B	M17
M18	PR17C	PR41C	N18
N18	PR17D	PR41D	P17
O18	PR20A	PR44A	N17
P18	PR20B	PR44B/VREF1_3	P16
Q18	PR20C	PR44C	R16
R18	PR20D	PR44D	R17
S18	PR23A	PR53A	L16
T18	PR23B	PR59A	N19
U18	PR23C/VREF1_2	PR59B	N20
V18	PR23D	PR59C	P19
W18	PR26A	PR59D	P18
X18	PR26B	PR62A	P20
Y18	PR26C	PR62B	R20
Z18	PR26D	PR62C	U20
AA	PR29A/GR_PCLK2_1	PR62D	L19
AB	PR29B	PR65A	R18
AC	PR29C/GR_PCLK2_0	PR65B	R19
AD	PR29D	PR65C	T18
AE	PR32A/PCLKT2_1	PR65D	U18
AF	PR32B/PCLKC2_1	PR68A	U17
AG	PR32C/PCLKC2_0	PR68B	U16
AH	PR32D/PCLKC2_0	PR68C/LRC_GPLL0T_IN	L17
AI		PR68D/LRC_GPLL0C_IN	L17

ECP-5

IO BANK 8 | 3.3V

UID

BANK 8

R1	PB4A/D7/IO7
T1	PB4B/D6/IO6
U1	PB6A/D5/MISO2/IO5
V1	PB6B/D4/MOSI2/IO4
W1	PB9A/D3/IO3
X1	PB9B/D2/IO2
Y1	PB11A/D1/MISO/IO1
Z1	PB11B/D0/MOSI/IO0
AA	PB13A/SN/CSN
AB	PB13B/CS1N
AC	PB15A/HOLDN/DI/BUSY/CSSPINCEN
AD	PB15B/DOUT/CSN
AE	PB18A/WRITEN

ECP-5

PROJECT  
CryptUS\_Daughterboard

TITLE  
★

SIZE  
A3

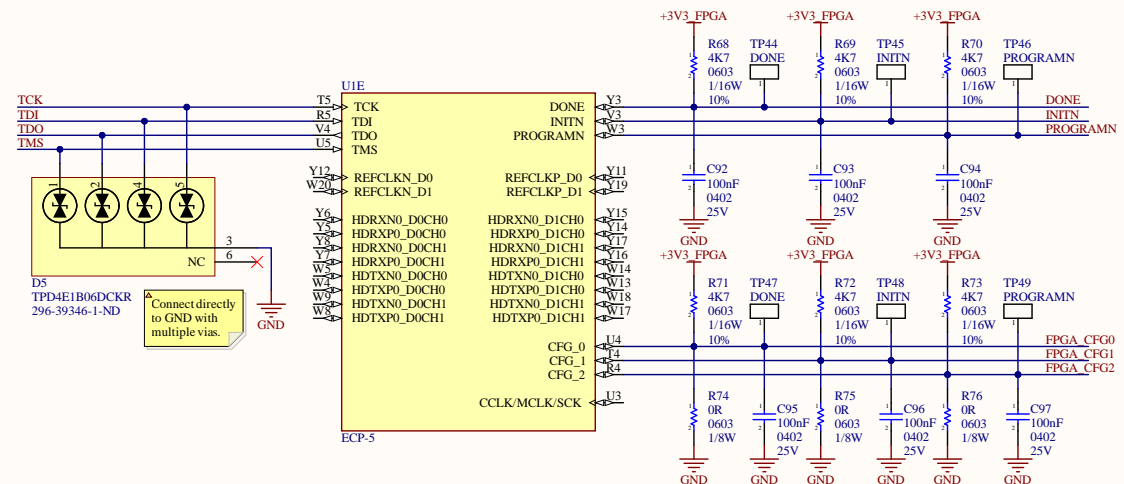
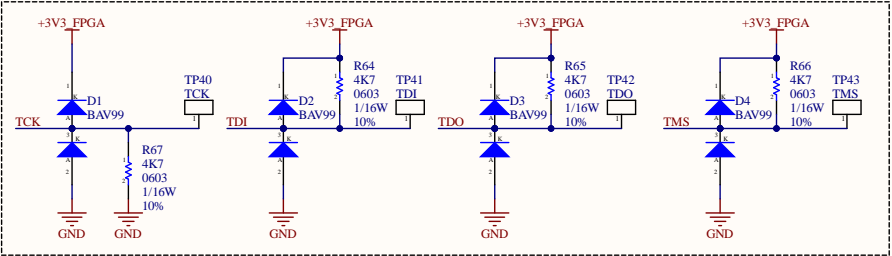
FILE NAME  
FPGA.SchDoc

DWG NO.

REV

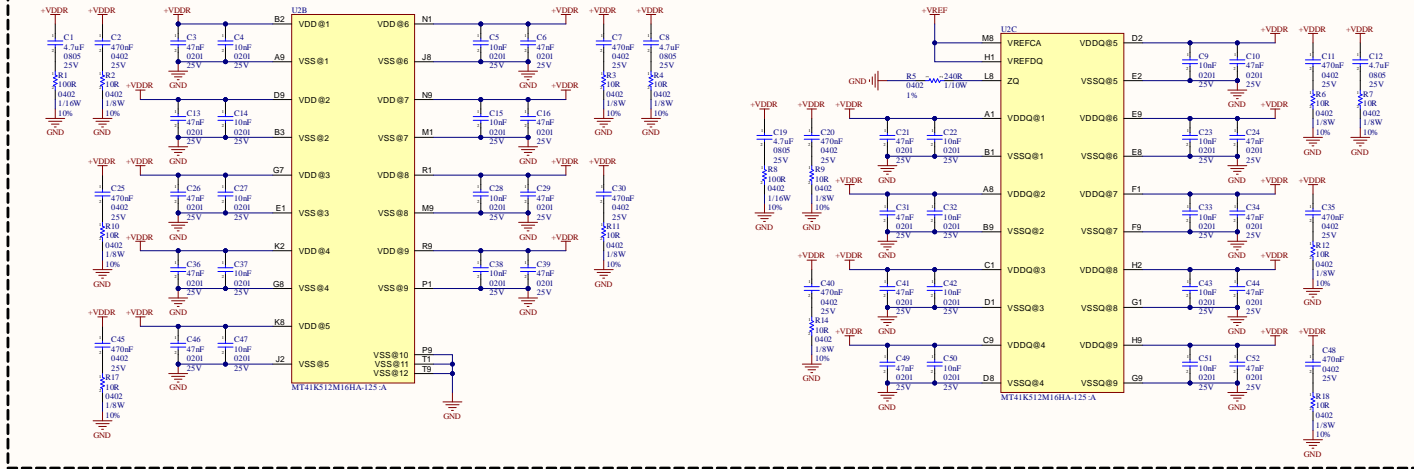
SHEET 5 OF 10

JTAG PROTECTIONS & PULL-UP

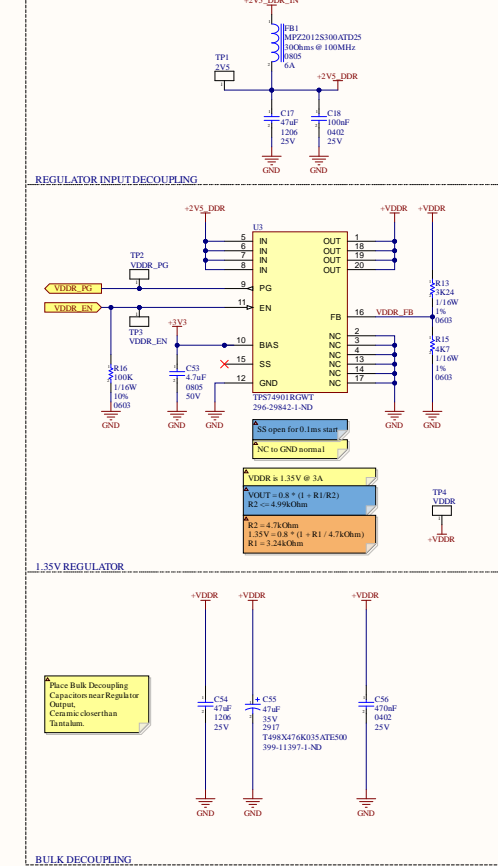


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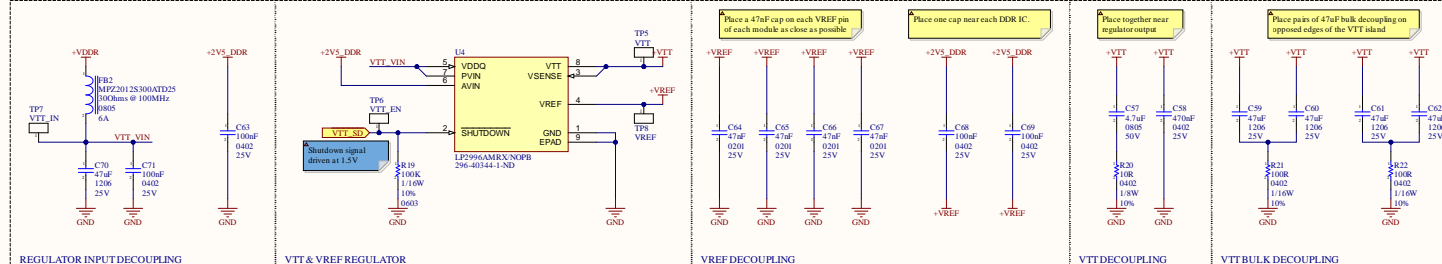
## DDR3 MODULE #1



## 1.35V @ 3A VDDR Regulation



## VTT & VREF REGULATION



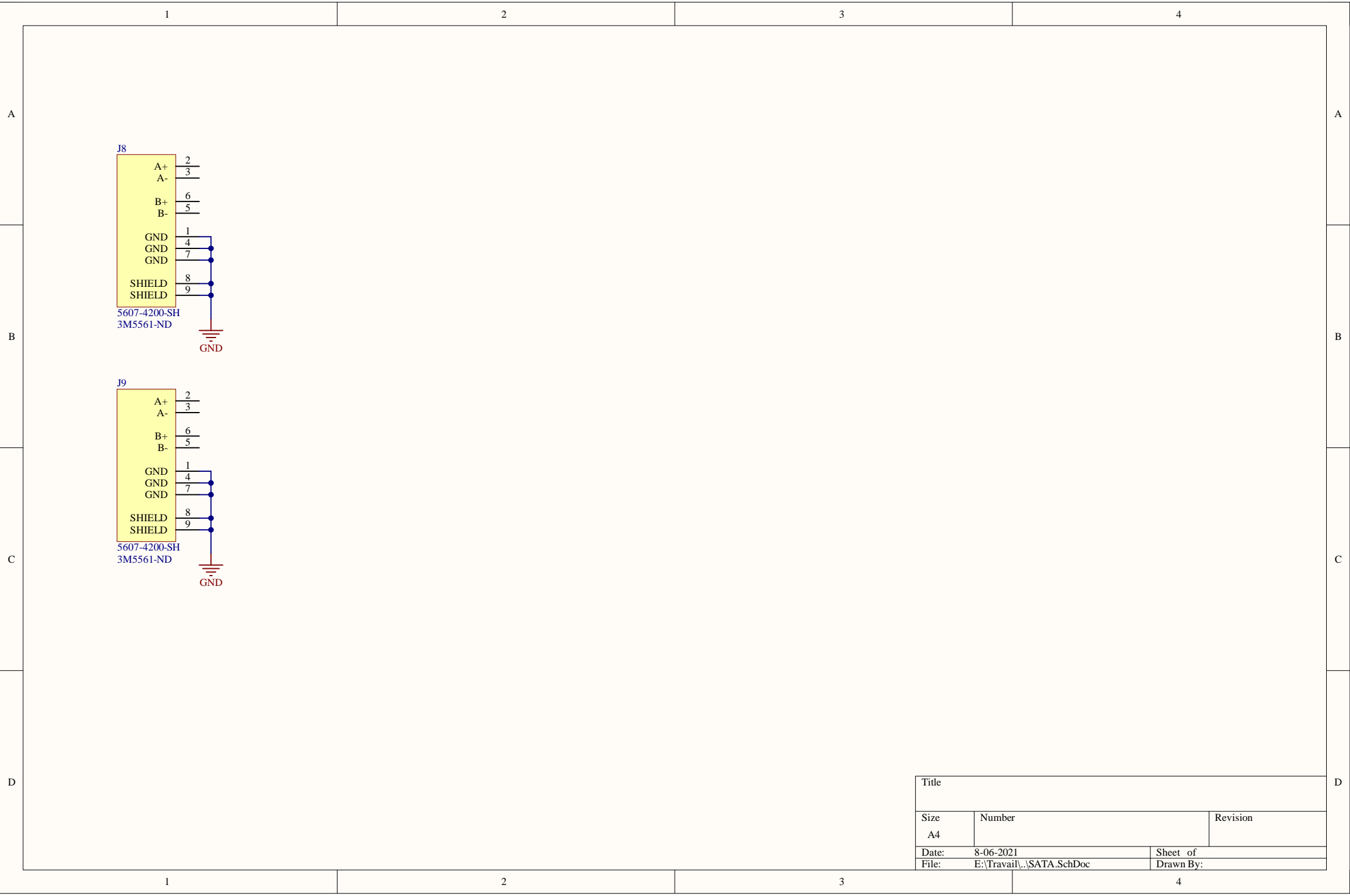
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A2		
Date:	8-06-2021	Sheet of
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Title		
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Date: 8-06-2021	Sheet of	
File: E:\Travail\...USB.SchDoc	Drawn By:	



Title		
Size A4	Number	Revision
Date:	8-06-2021	Sheet of
File:	E:\Travail\...\SATA.SchDoc	Drawn By: