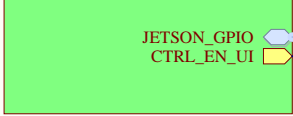
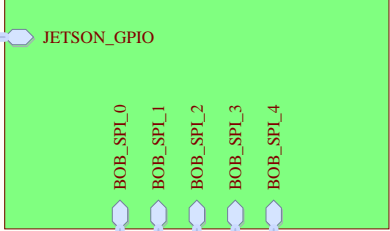


U\_ui  
ui.SchDoc



U\_jetson-nano  
jetson-nano.SchDoc



U\_power  
power.SchDoc



U\_bob\_0  
bob\_v2.SchDoc



U\_bob\_1  
bob\_v2.SchDoc



U\_bob\_2  
bob\_v2.SchDoc



U\_bob\_3  
bob\_v2.SchDoc



U\_bob\_4  
bob\_v2.SchDoc



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Size	Number	Revision
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A

B

C

D

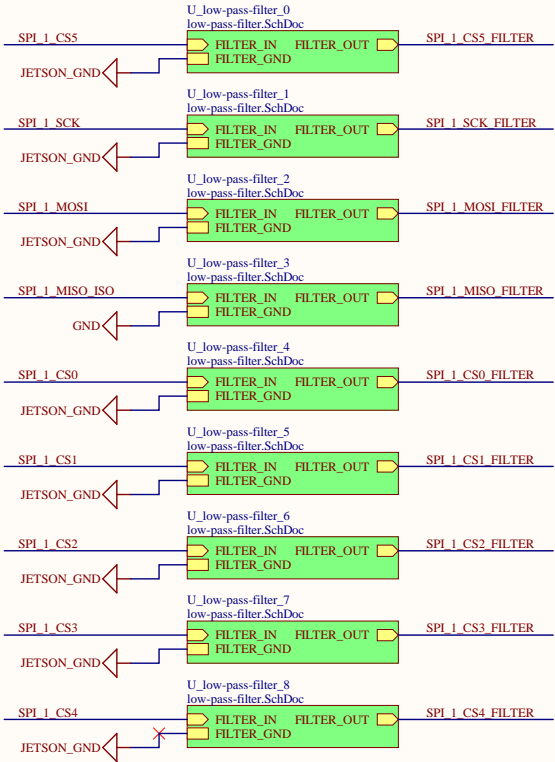
A

B

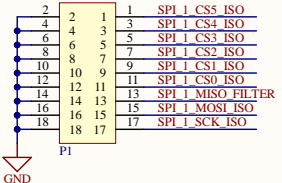
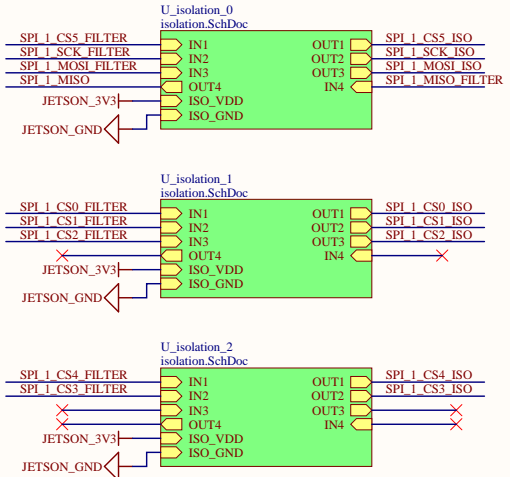
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D

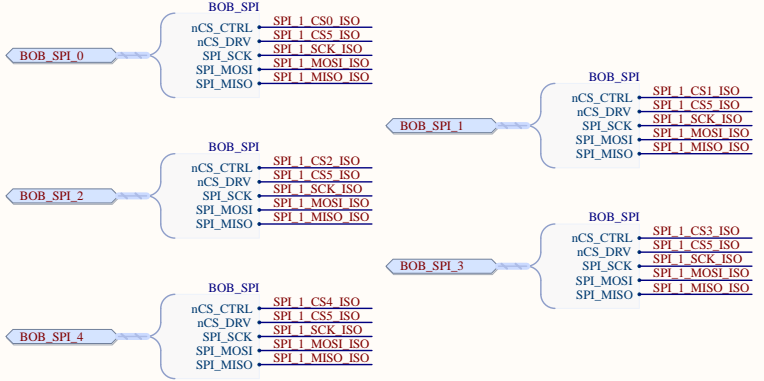
SPI Filtering



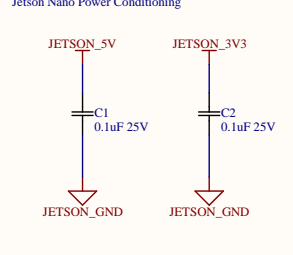
SPI Isolation



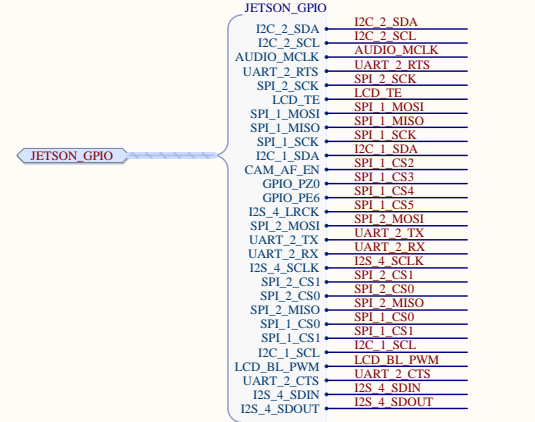
BOB Interface



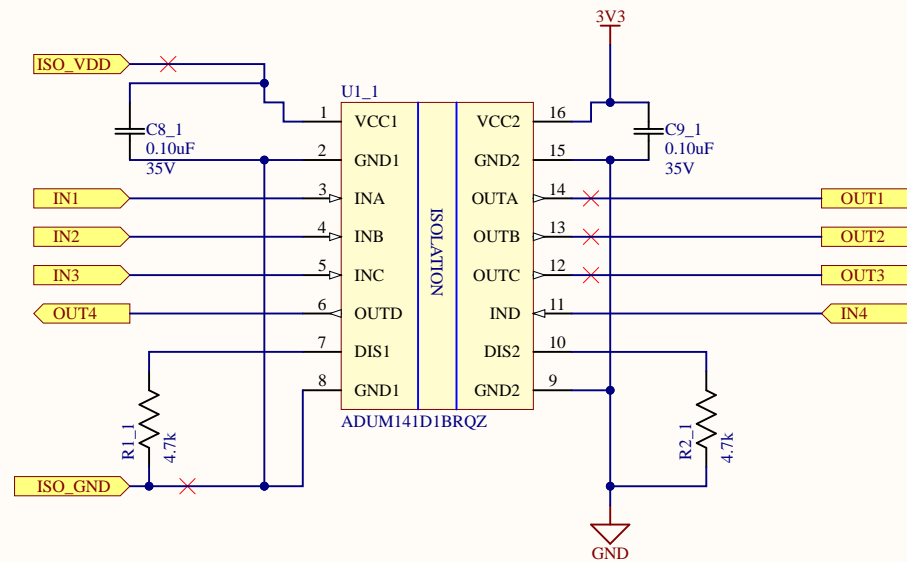
Jetson Nano Power Conditioning



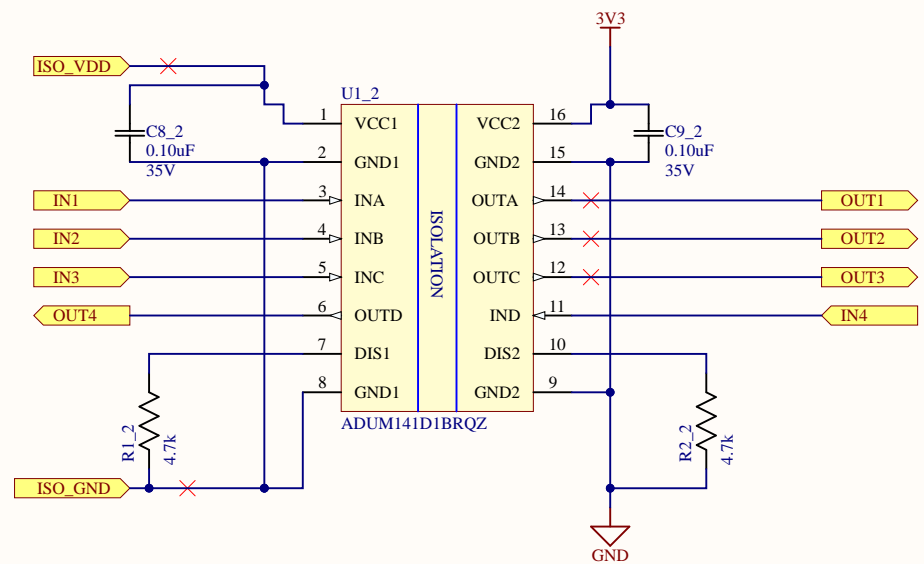
UI Interface



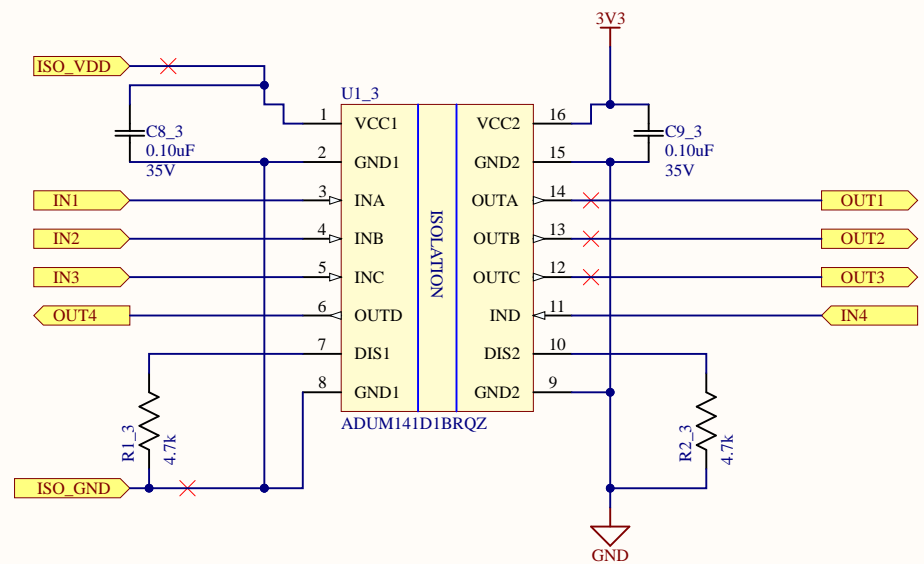
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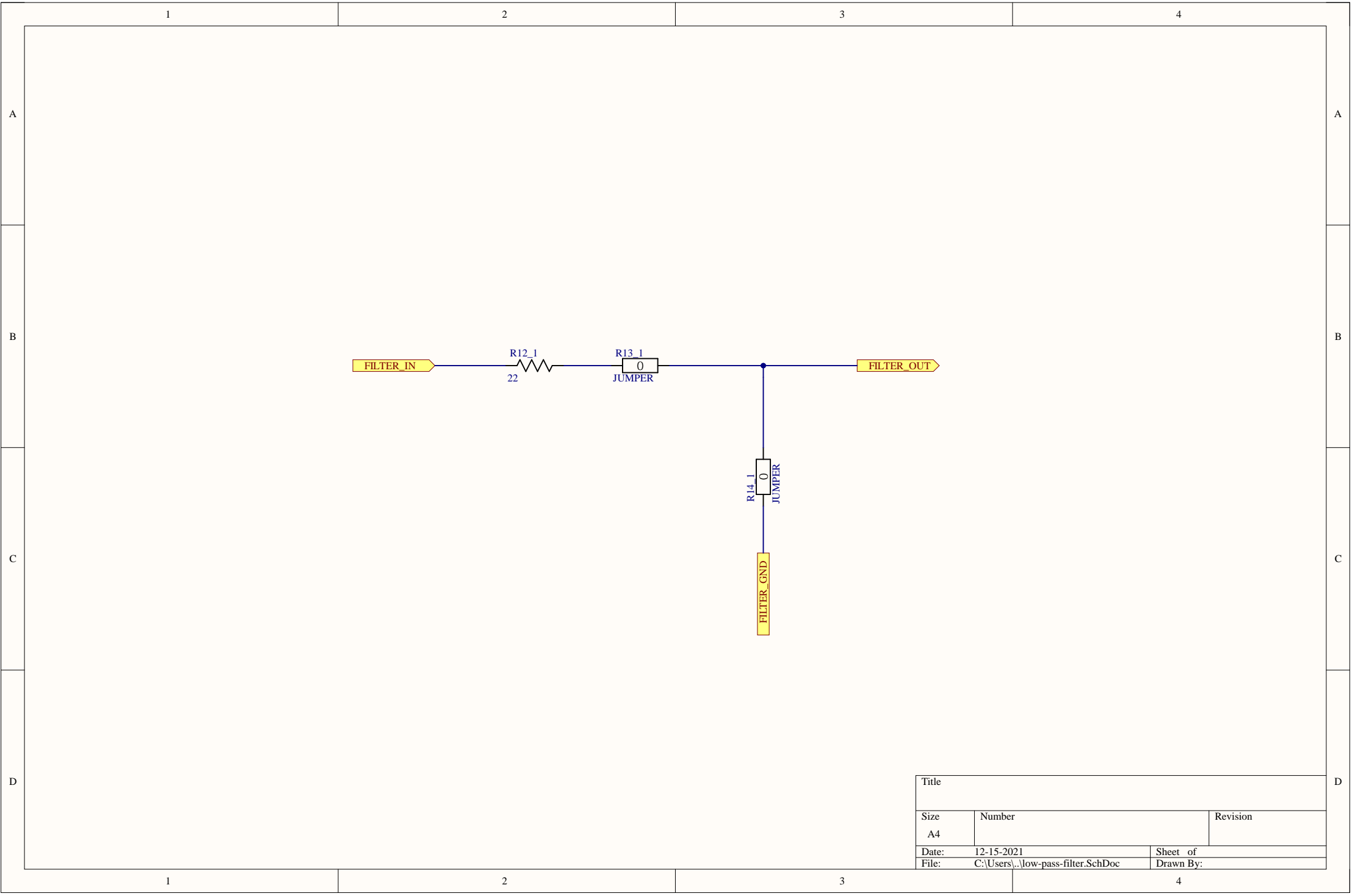
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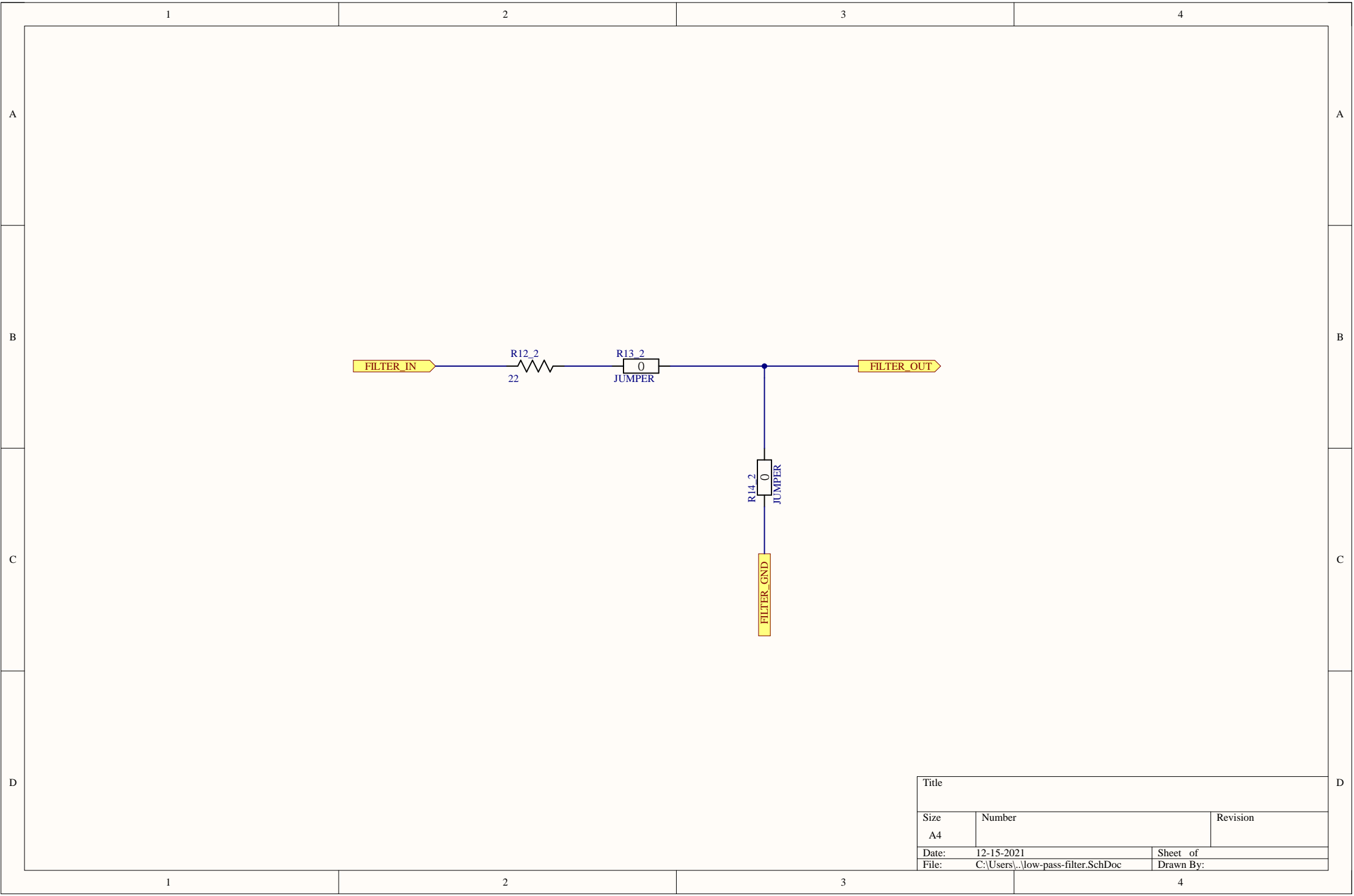
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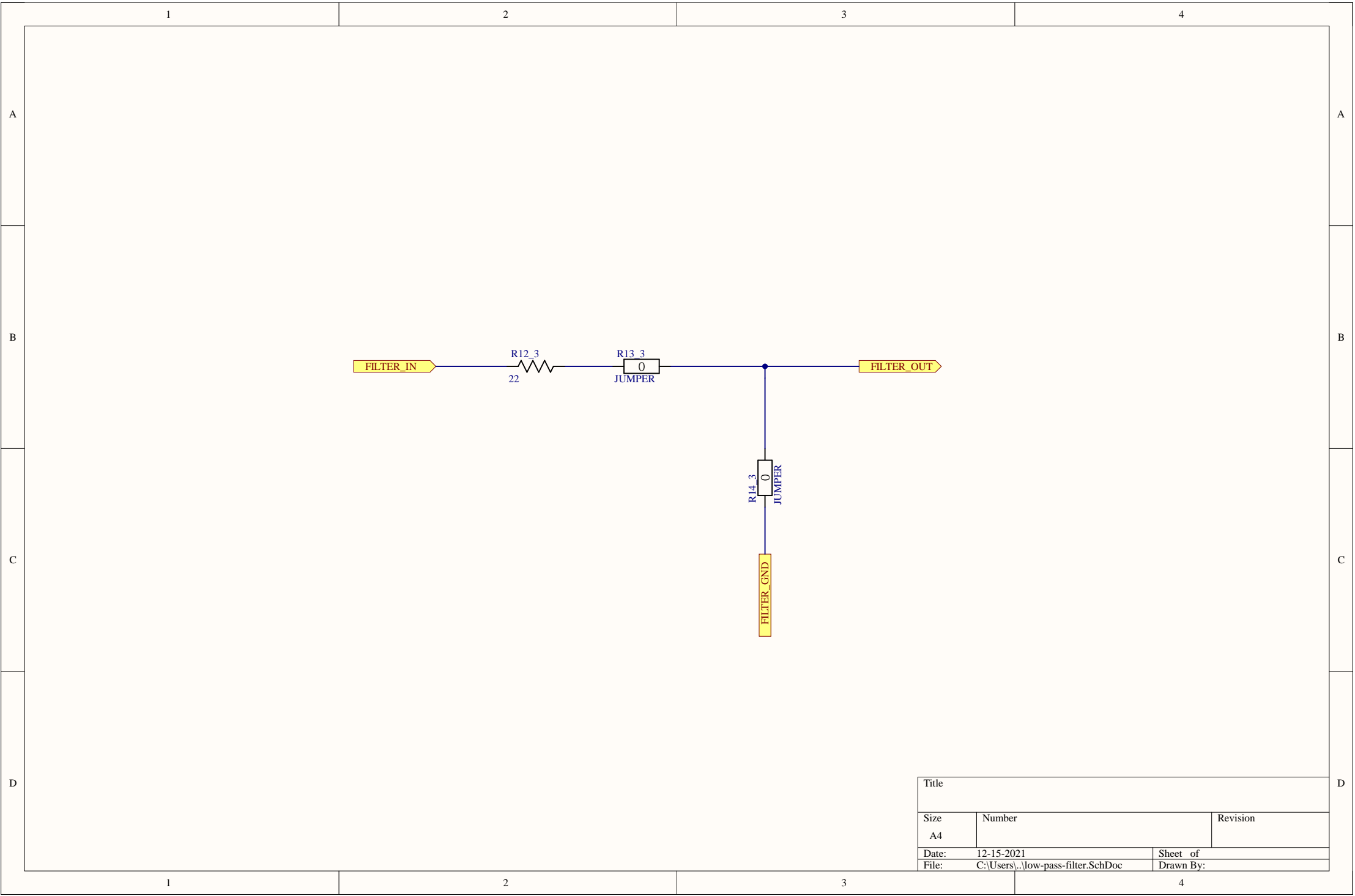


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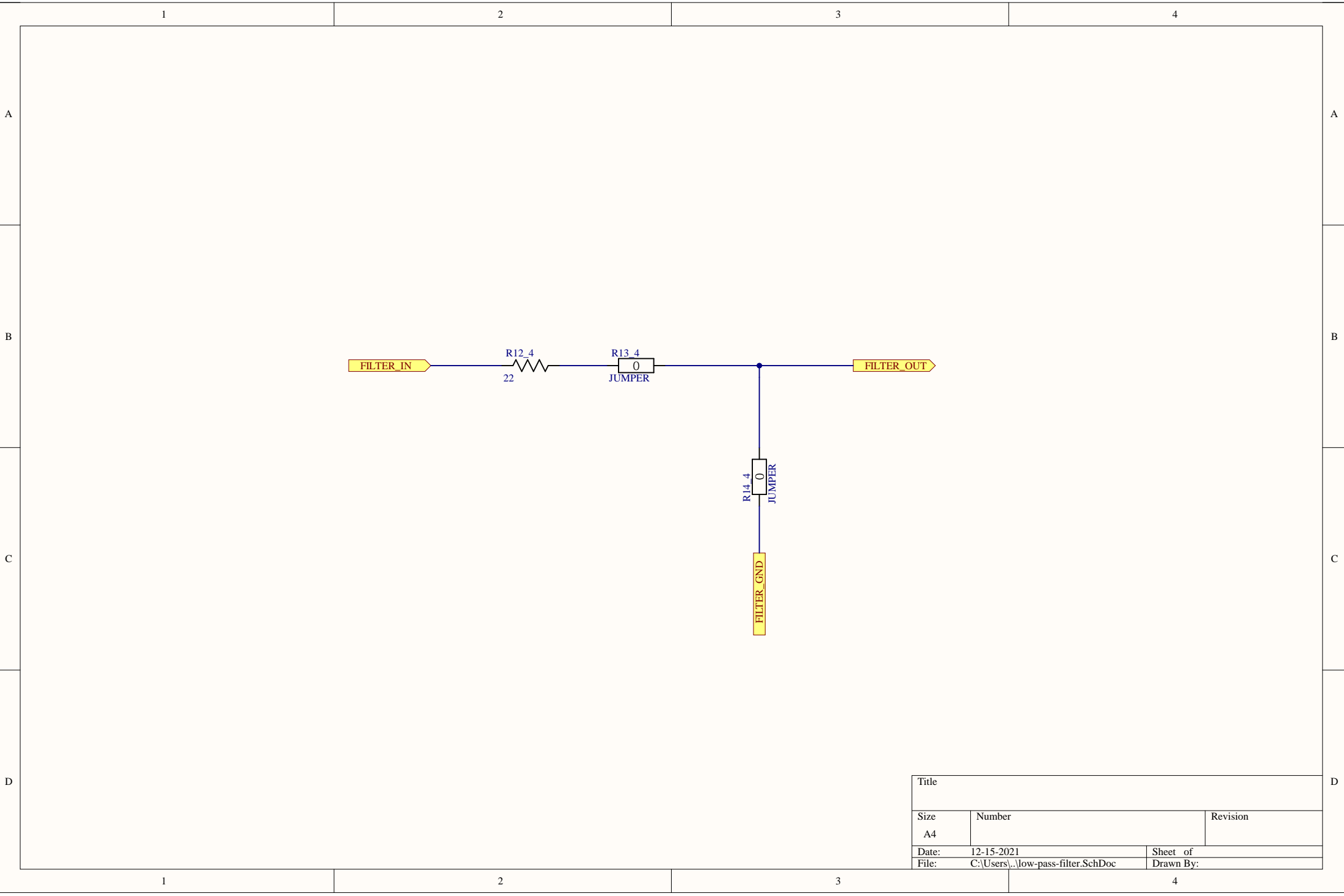
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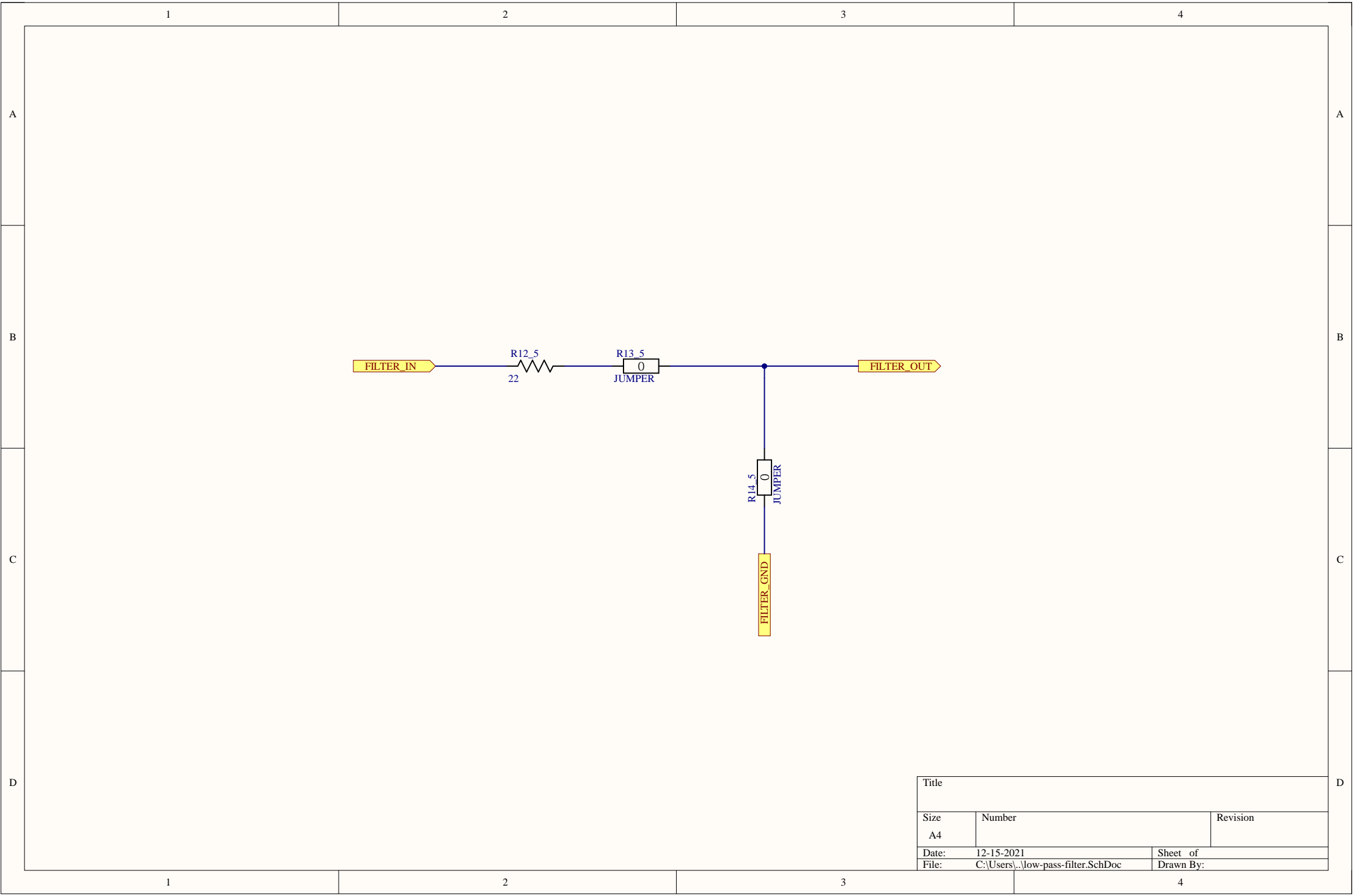


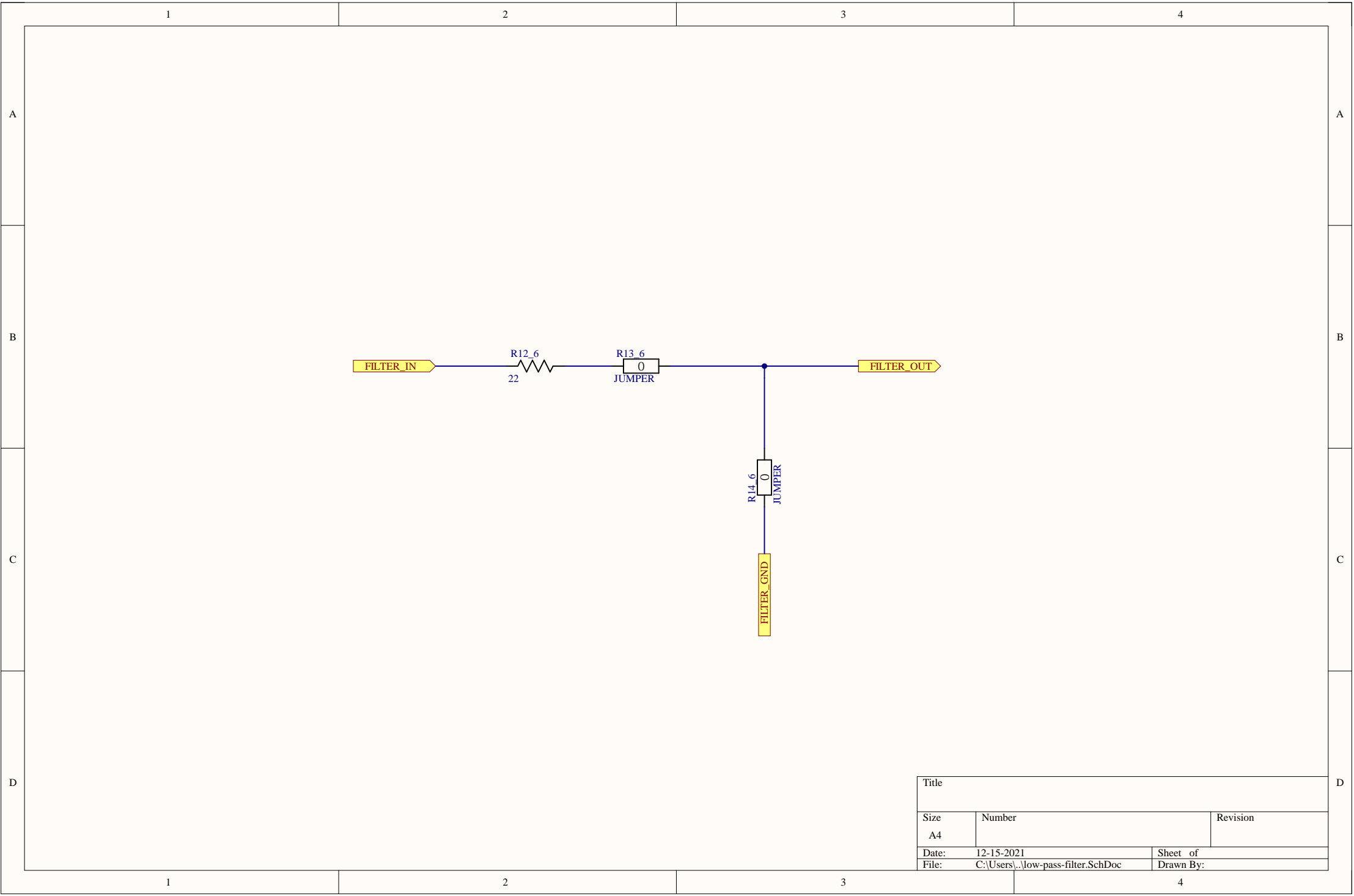


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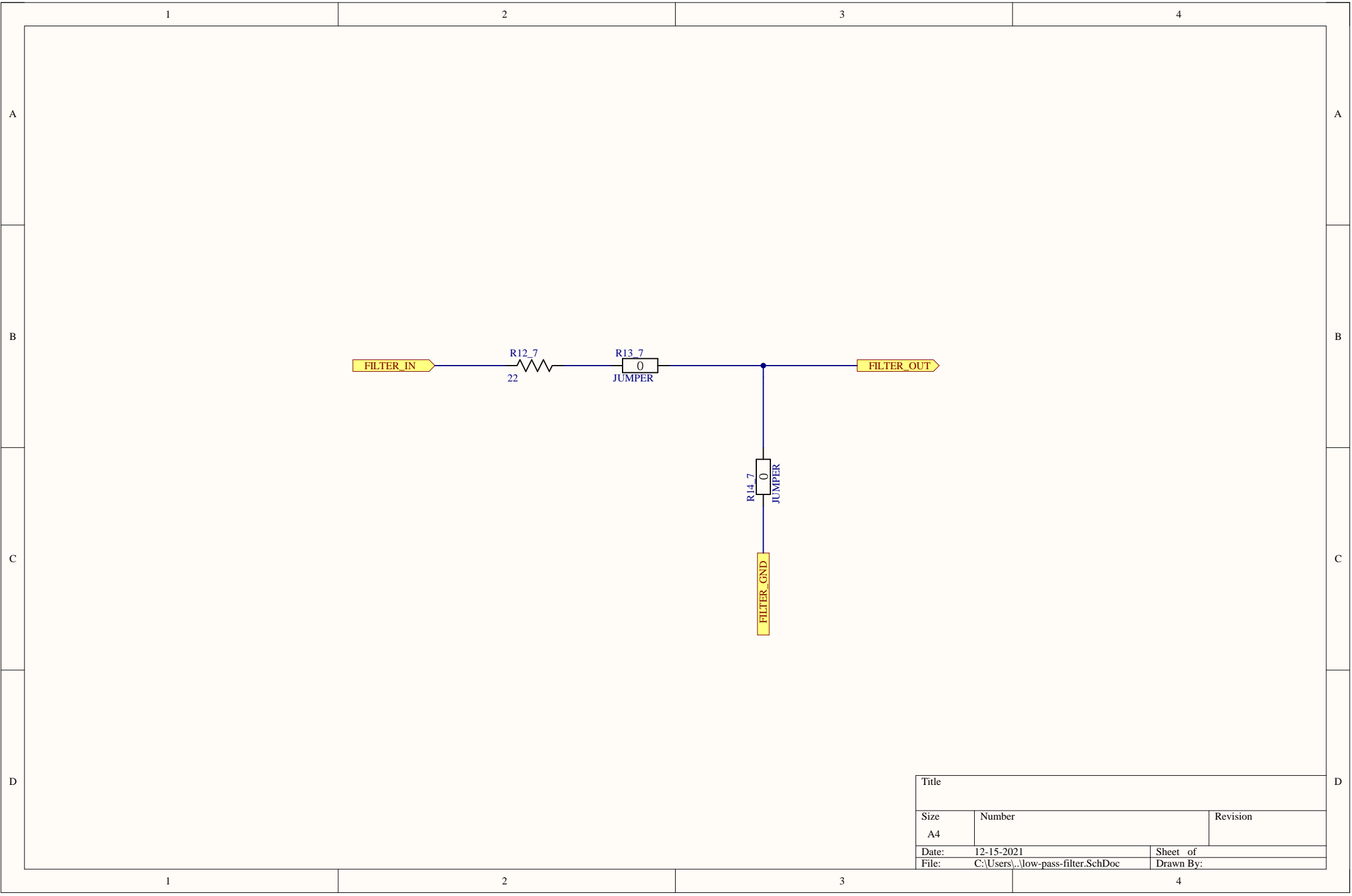




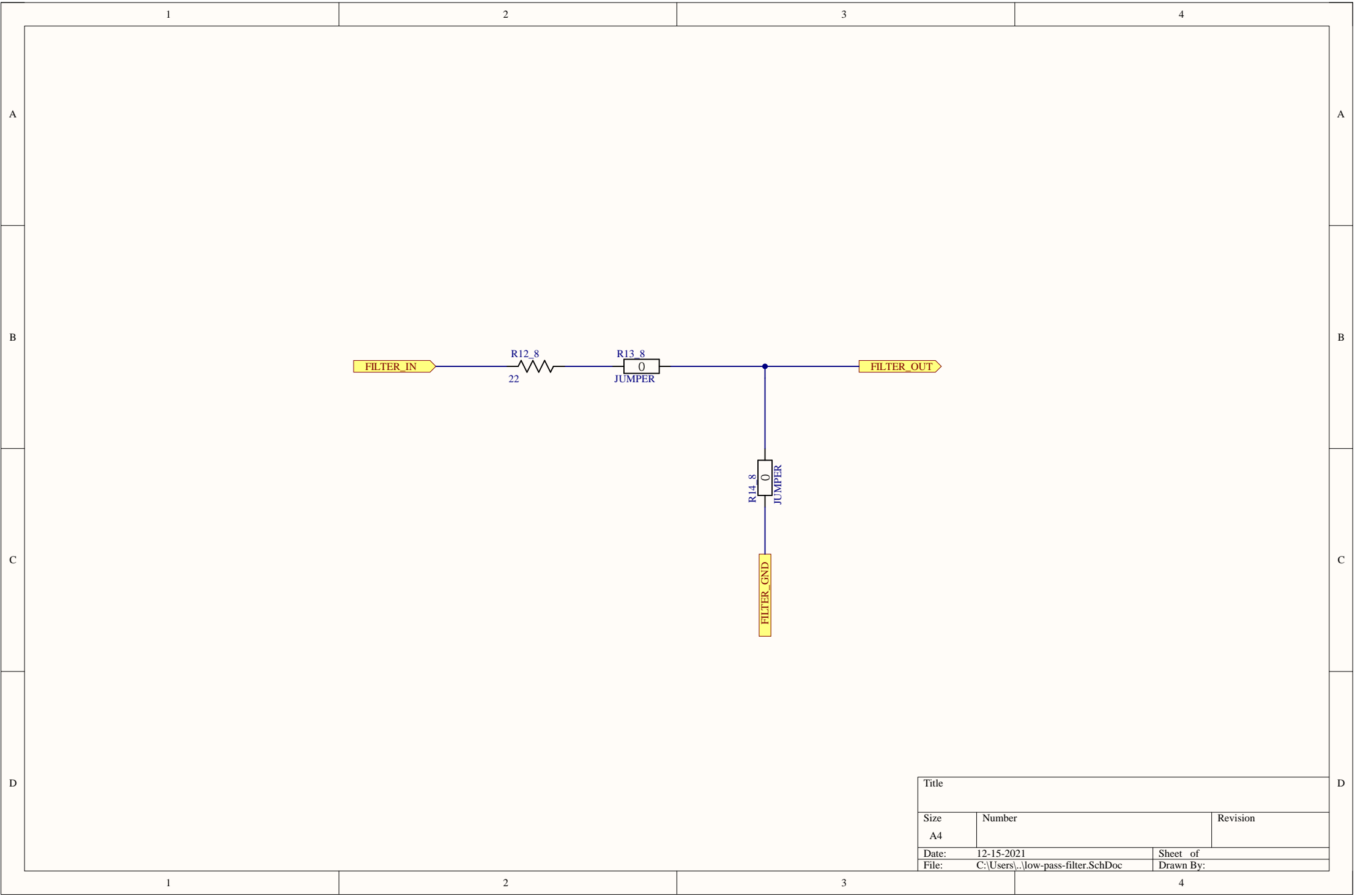


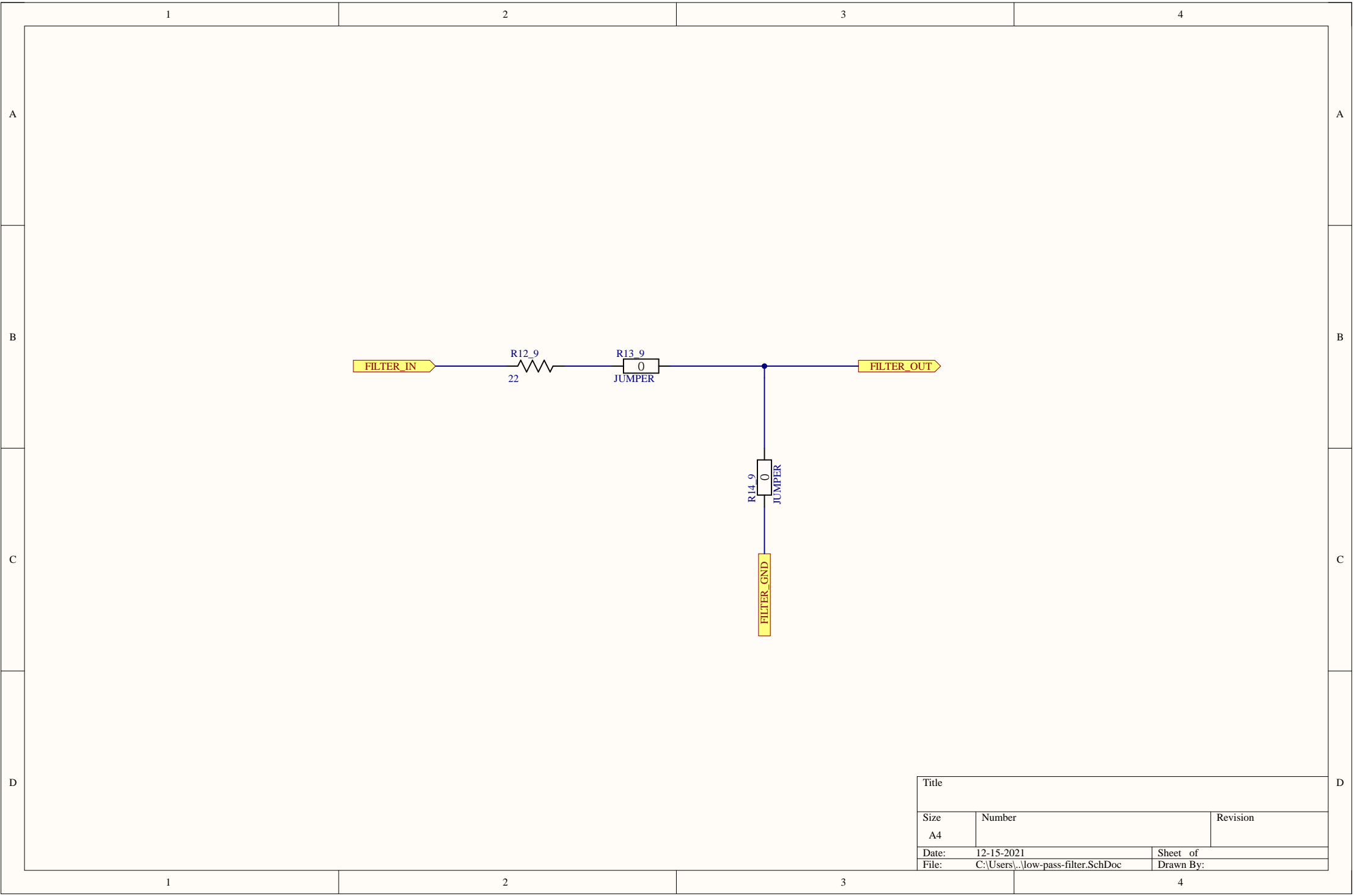


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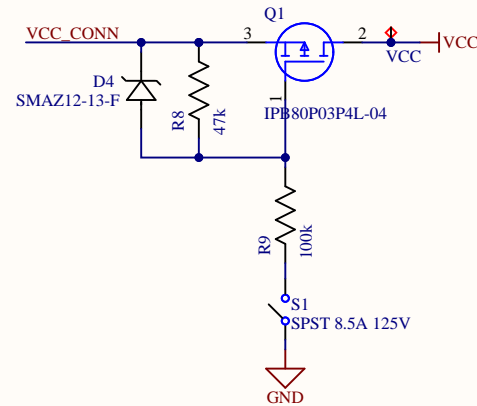
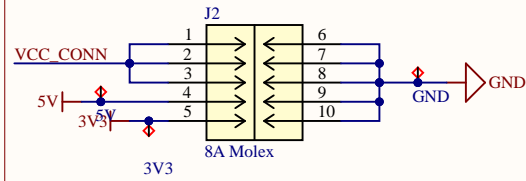




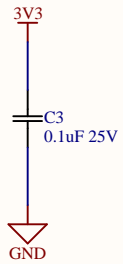
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## Power Interface

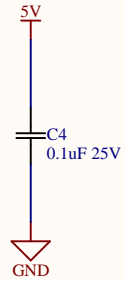
Power Board Connection



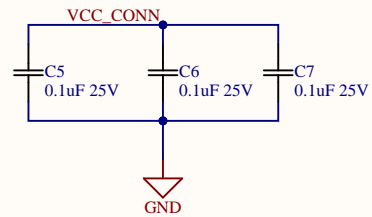
3V3 Power Conditioning



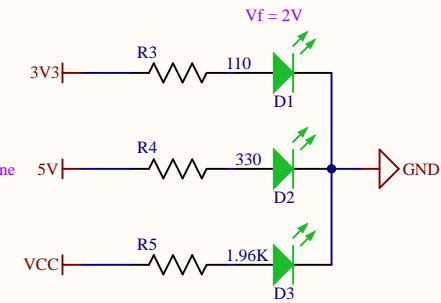
5V Power Conditioning



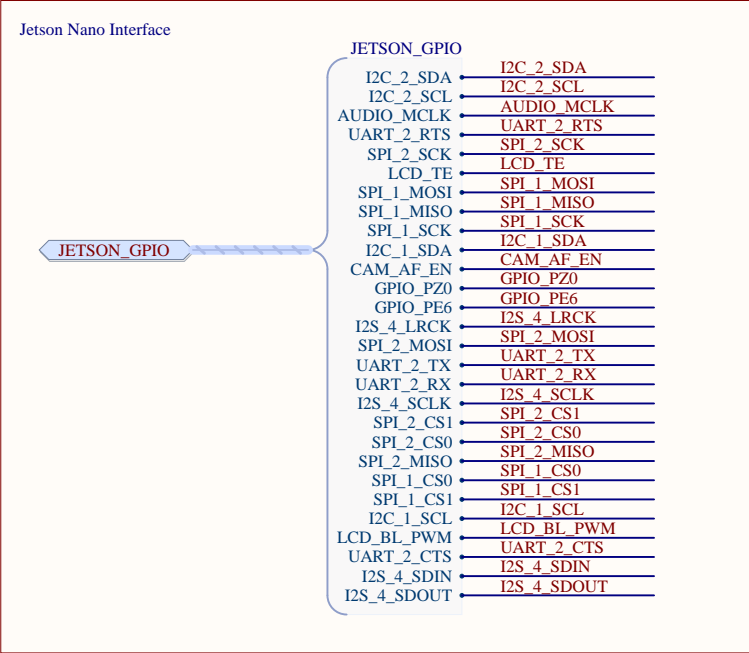
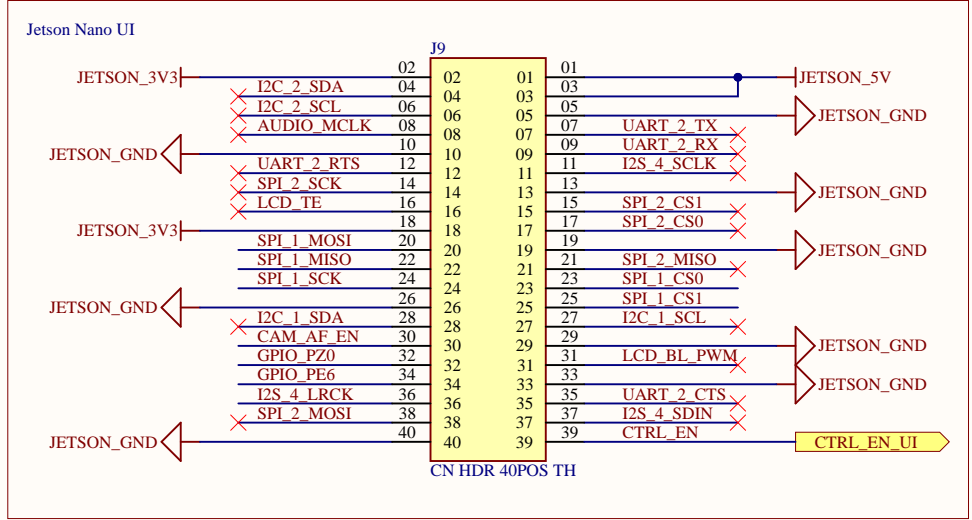
VCC Power Conditioning



Power LEDs



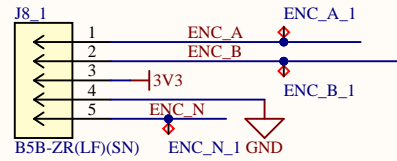
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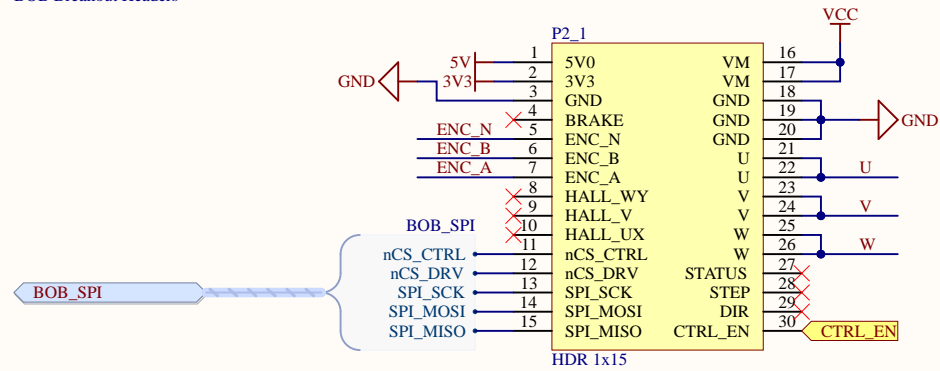
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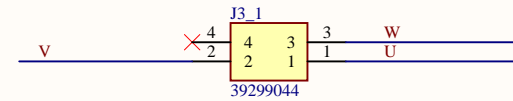
BOB Encoder Interface



BOB Breakout Headers

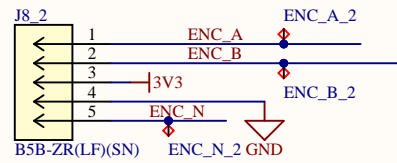


Motor Connectors

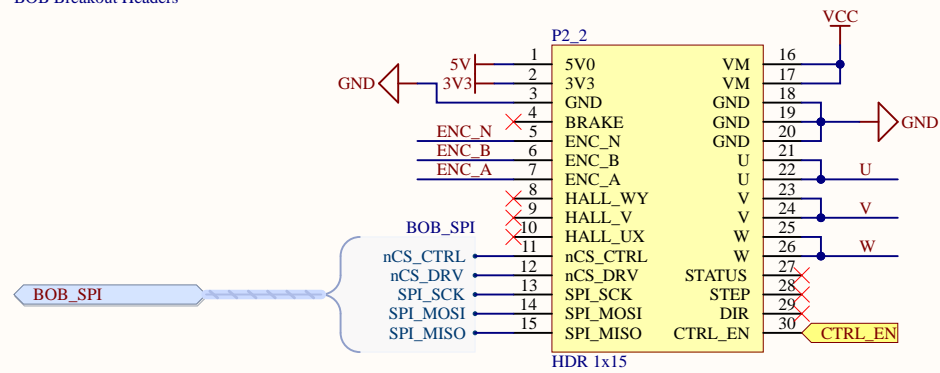


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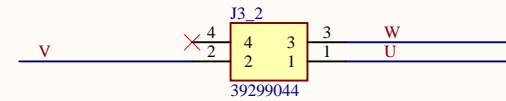
BOB Encoder Interface



BOB Breakout Headers

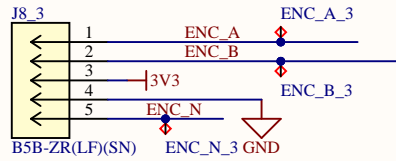


Motor Connectors

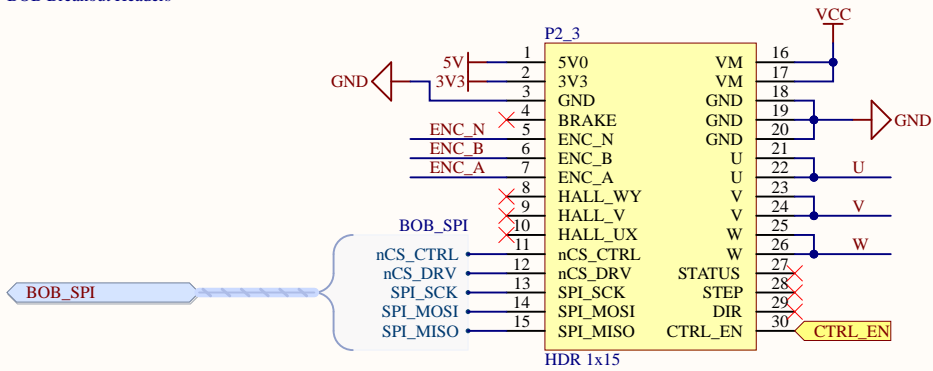


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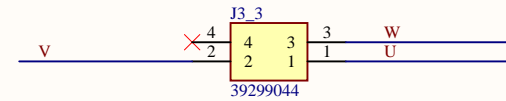
BOB Encoder Interface



BOB Breakout Headers

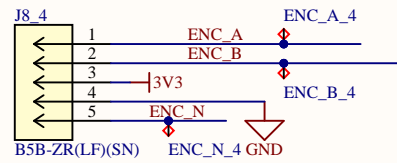


Motor Connectors

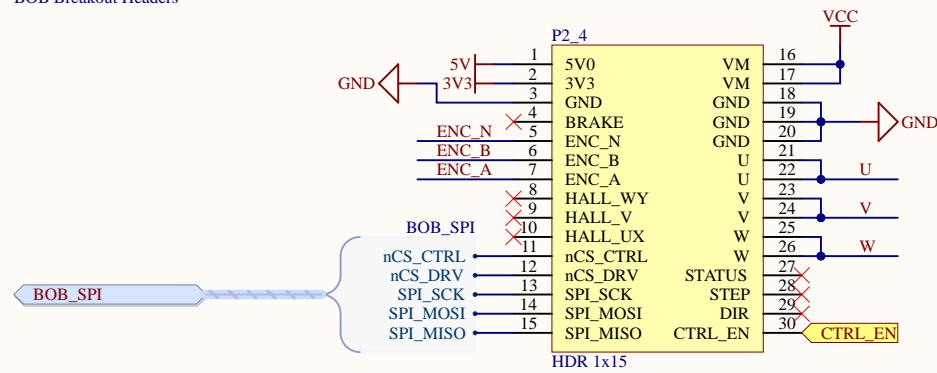


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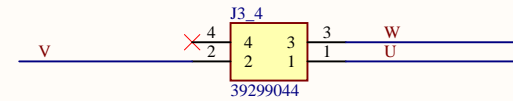
BOB Encoder Interface



BOB Breakout Headers

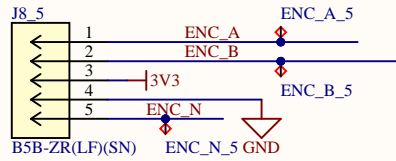


Motor Connectors

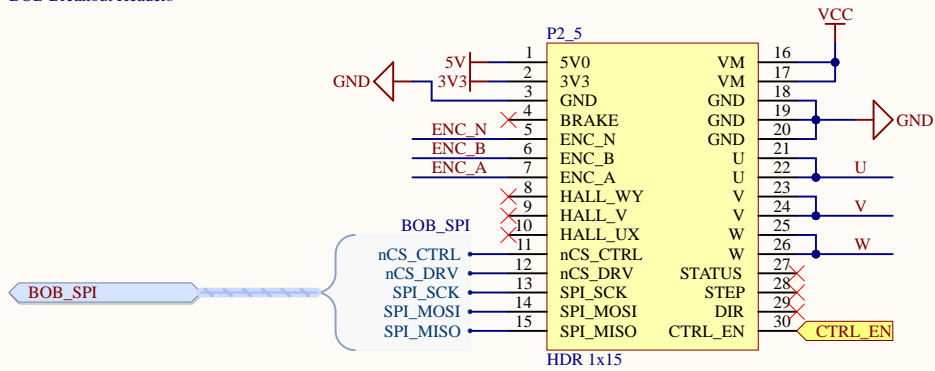


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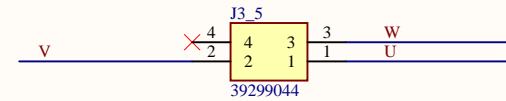
BOB Encoder Interface



BOB Breakout Headers



Motor Connectors



Title		
Size	Number	Revision
A4		
Date:	12-15-2021	Sheet of
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Comment	Description	Designator	Footprint	LibRef	Quantity
Test Point (Via)		3V3, 5V, ENC_A_1, ENC_A_2, ENC_A_3, ENC_A_4, ENC_A_5, ENC_B_1, ENC_B_2, ENC_B_3, ENC_B_4, ENC_B_5, ENC_N_1, ENC_N_2, ENC_N_3, ENC_N_4, ENC_N_5, GND, VCC	TP	Test Point (Via)	19
0.1uF 25V	CAP CER 0.1UF 25V X7R 0805/0603	C1, C2, C3, C4, C5, C6, C7	0805	CAP 0.1uF 25V	7
0.10uF	CAP CER 0.10UF 35V X7R 0603/0805	C8_1, C8_2, C8_3, C9_1, C9_2, C9_3	0603	CAP 0.10uF 35V	6
LED2	Typical RED, GREEN, YELLOW, AMBER GaAs LED	D1, D2, D3	3.2X1.6X1.1	LED GREEN SMD	3
SMAZ12-13-F	Zener Diode 12 V 1 W ±5% Surface Mount SMA	D4	SMA_DIO-L	DIODE ZENER 12V 1W	1
8A Molex	CONN HEADER VERT 10POS 3MM	J2	MOLEX_0430451012	CN HDR 10POS MOLEX 0430451012	1
39299044	Molex 39299044 4POS Minifit dual row, vertical	J3_1, J3_2, J3_3, J3_4, J3_5	39299044	CN HDR 4POS Molex CN HDR 4POS Molex 39299044 VERT	5
B5B-ZR(LF)(SN)	Connector Header Through Hole 5 position 0.059 (1.50mm)	J8_1, J8_2, J8_3, J8_4, J8_5	JST_B5B-ZR(LF)(SN)	CN 5POS JST ZR	5
CN HDR 40POS TH	SSQ - Samtec 2.54mm Square Tail Dual Row Socket Strip 8.5mm Profile	J9	SAMTEC_SSQ-120-22- G-D	CN HDR 40POS TH	1
CN HDR 18POS 2x9		P1	HDR2x9	CN HDR 18POS 2x9	1
HDR 1x15		P2_1, P2_2, P2_3, P2_4, P2_5	TRINAMIC_BOB	TRINAMIC_BOB	5
IPB80P03P4L-04	P-Channel 30 V 80A (Tc) 137W (Tc) Surface Mount PG-T0263-3-2	Q1	IPB80P03P4L04	MOSFET IPB80P03P4L- 04	1
4.7k	RES SMD 4.7k OHM 5% 1/8W 0805	R1_1, R1_2, R1_3, R2_1, R2_2, R2_3	0603	RES 4.7k 1/8W - 5%	6
110	RES SMD 110 OHM 1% 1/8W 0805/0603	R3	0603	RES 110.0 1/8W - 1%	1
330	RES SMD 330 OHM 5% 1/8W 0805	R4	0603	RES 330.0 1/8W - 5%	1
1.96K	RES SMD 1.96K OHM 1% 1/8W 0805	R5	0603	RES 1.96k 1/8W	1
47k	RES SMD 47k OHM 5% 1/8W 0805	R8	0603	RES 47k 1/8W - 5%	1
100k	RES SMD 100K OHM 5% 1/8W 0805/0603	R9	0603	RES 100k 1/8W - 5%	1
22	RES SMD 22 OHM 5% 1/8W 0805	R12_1, R12_2, R12_3, R12_4, R12_5, R12_6, R12_7, R12_8, R12_9	0805	RES 22.0 1/8W	9
JUMPER	RES SMD 0 OHM JUMPER GENERIC 0805/0603	R13_1, R13_2, R13_3, R13_4, R13_5, R13_6, R13_7, R13_8, R13_9, R14_1, R14_2, R14_3, R14_4, R14_5, R14_6, R14_7, R14_8, R14_9	0805	RES 0 JUMPER	18
SPST 8.5A 125V	SWITCH SLIDE SPST 8.5A 125V	S1	SPST GF-123-0054	SW SLIDE	1
ADUM141D1BRQZ	Digital Isolator CMOS 4-CH 150Mbps 16-Pin QSOP T/R	U1_1, U1_2, U1_3	SOP64P600X175-16N	ISO ADUM141D1BRQZ	3