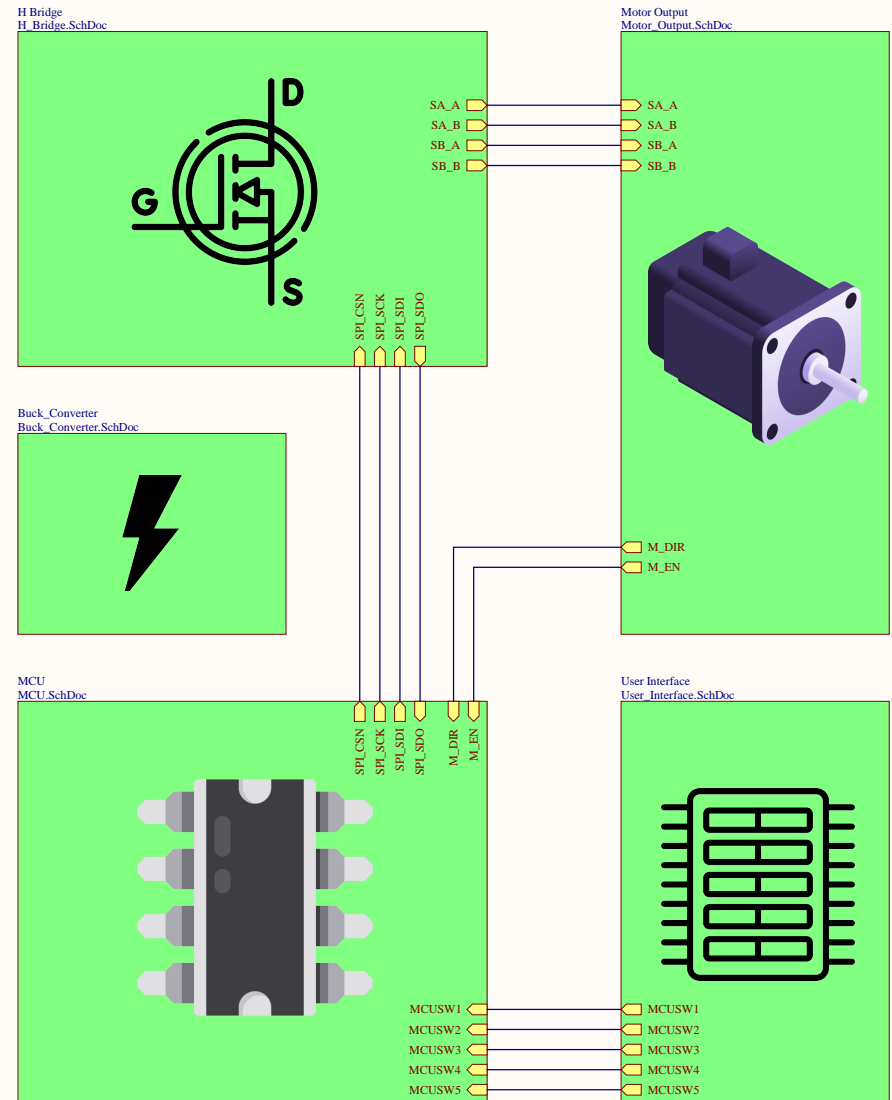
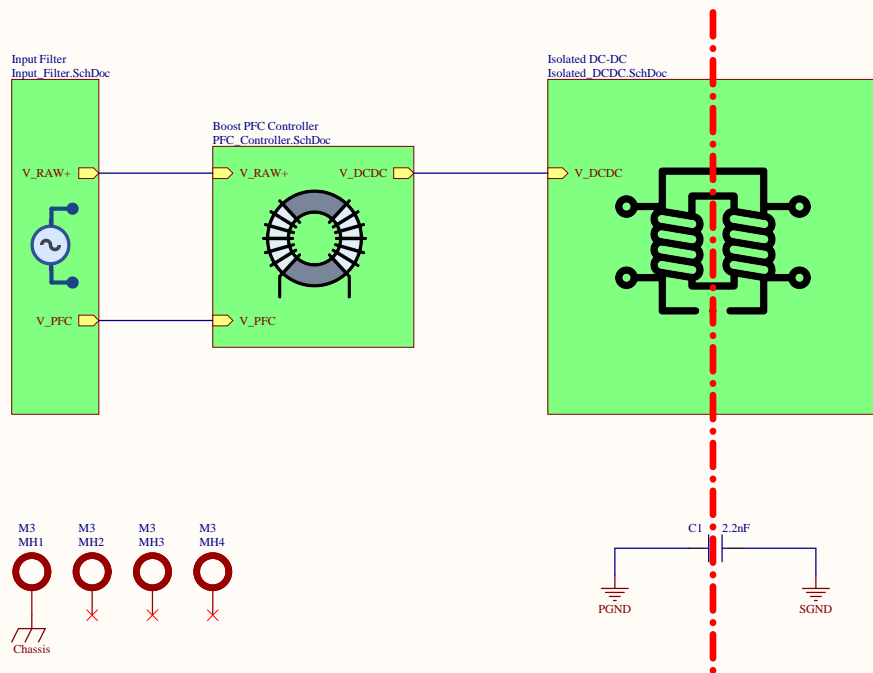
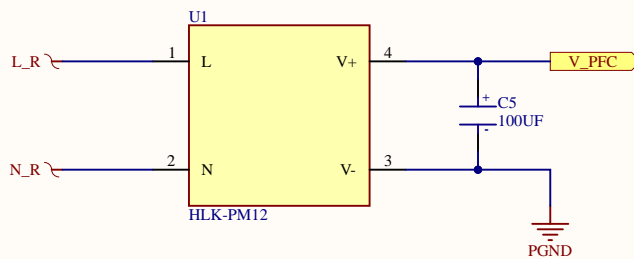
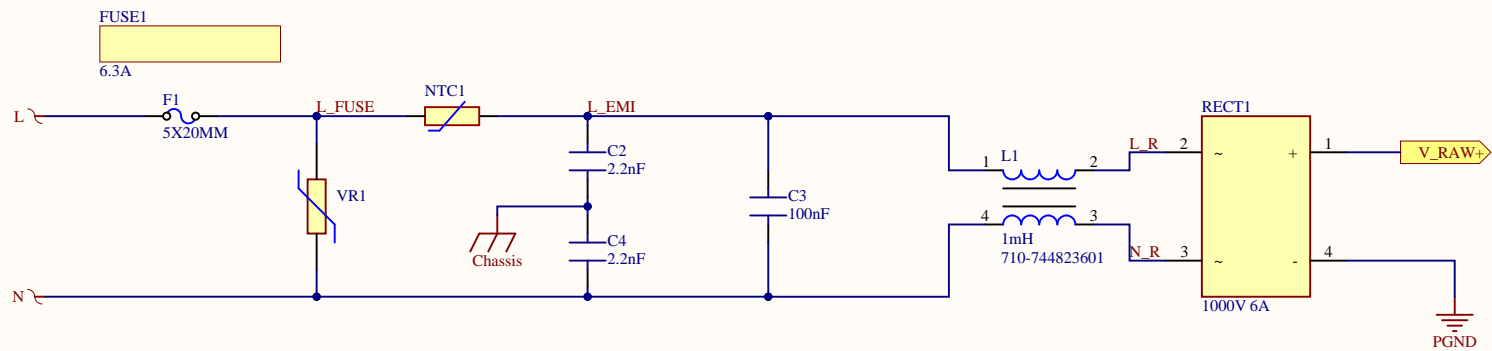
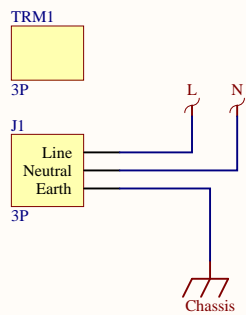
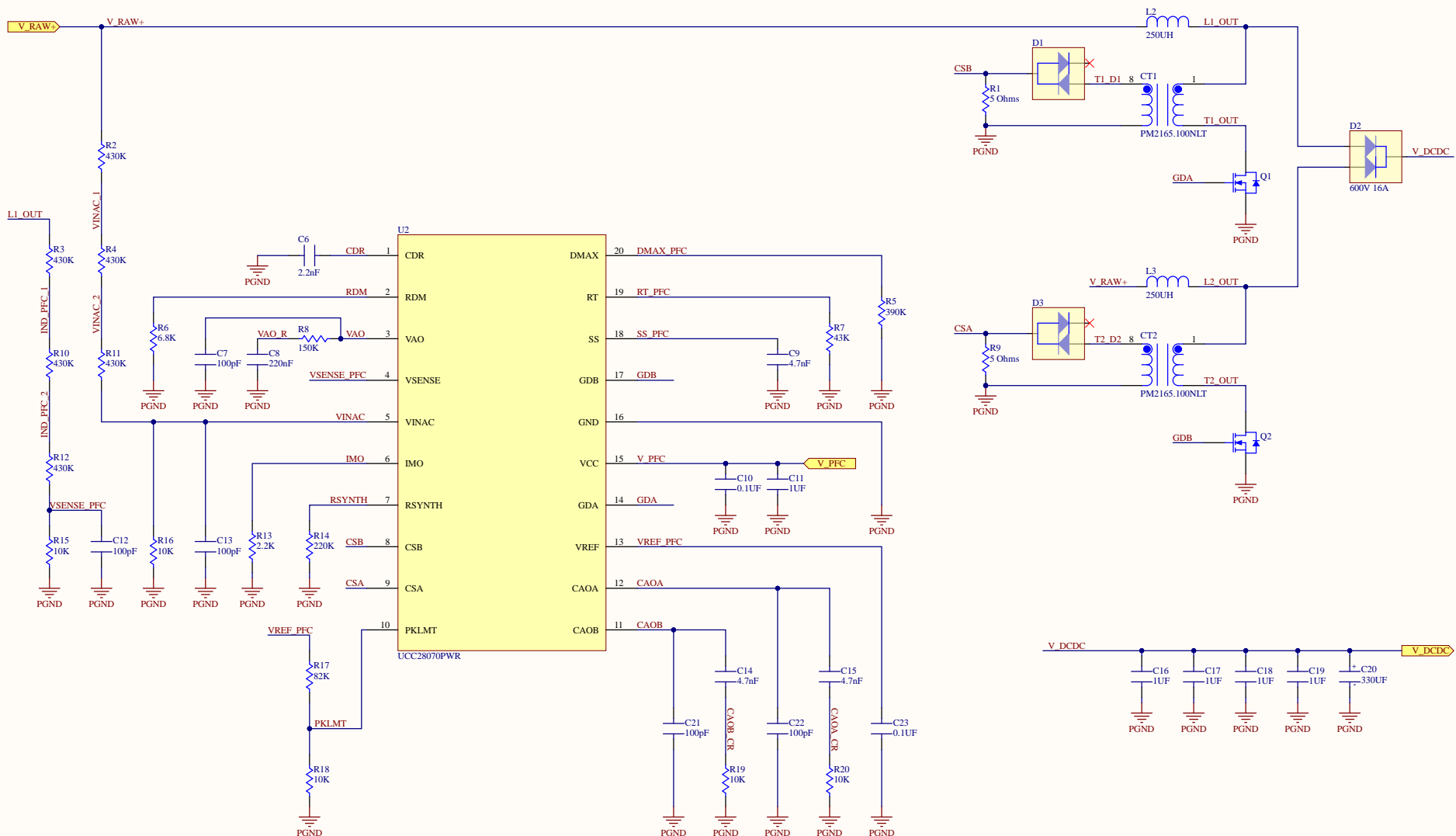


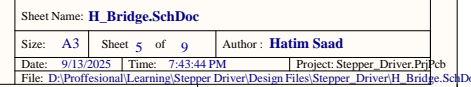
- 2-phase bipolar microstepping driver, open-loop
- Universal AC input: 85–265 VAC, 47–63 Hz
- Isolated DC-DC Power Supply
- Phase current up to ~4.2 A RMS (≈ 5.94 A peak)
- Suitable for NEMA-34 and NEMA-23
- Microstepping: full-step to 1/256, user-selectable, designed for 200 pulse/rev stepper motors
- Isolated gate-driver rail (10–15 V) and isolated logic rail (5 V)
- MOSFET half-bridges
- Protections: over/under-voltage, over-current, short-circuit, over-temperature; fault output + LEDs

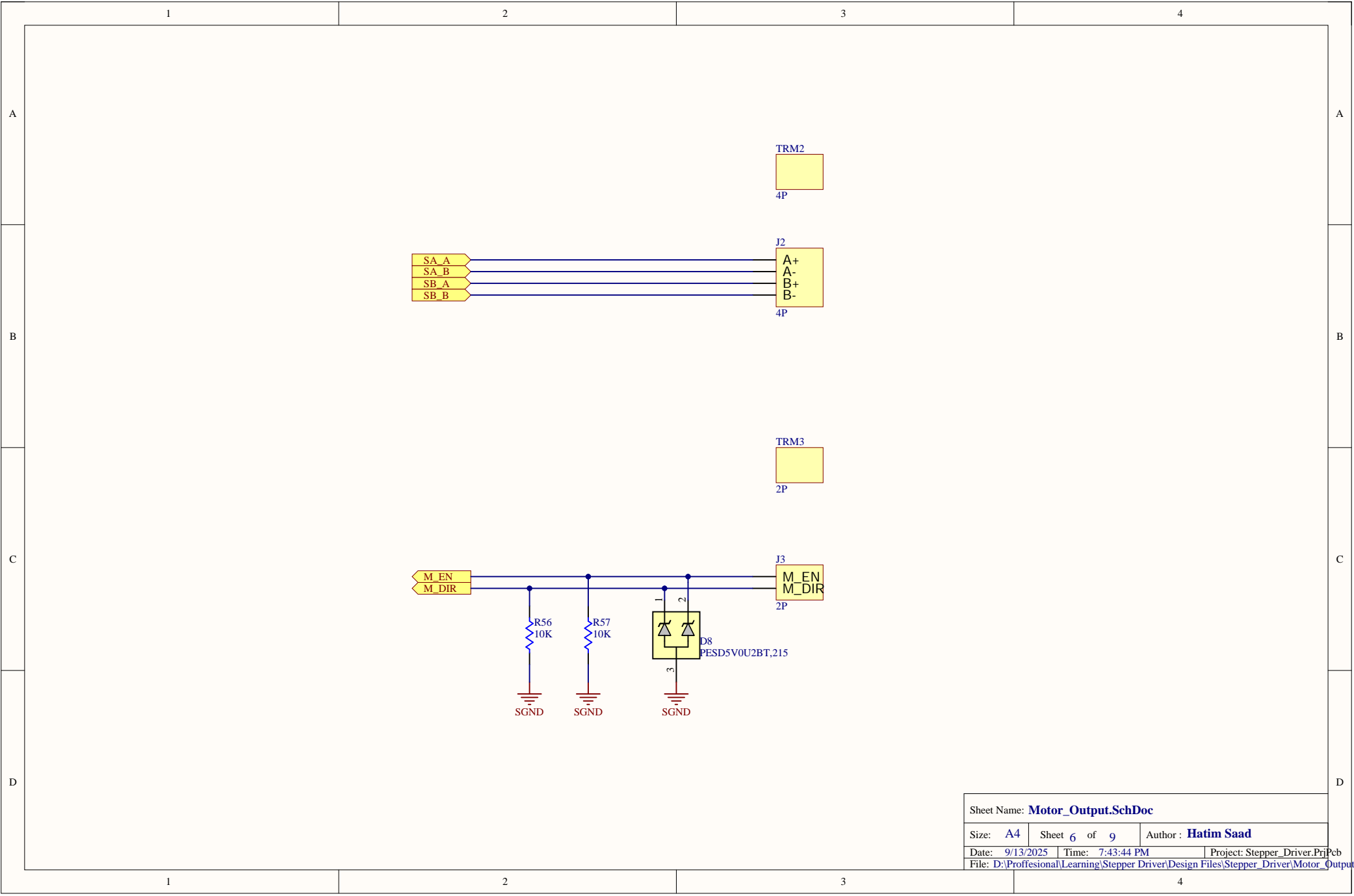


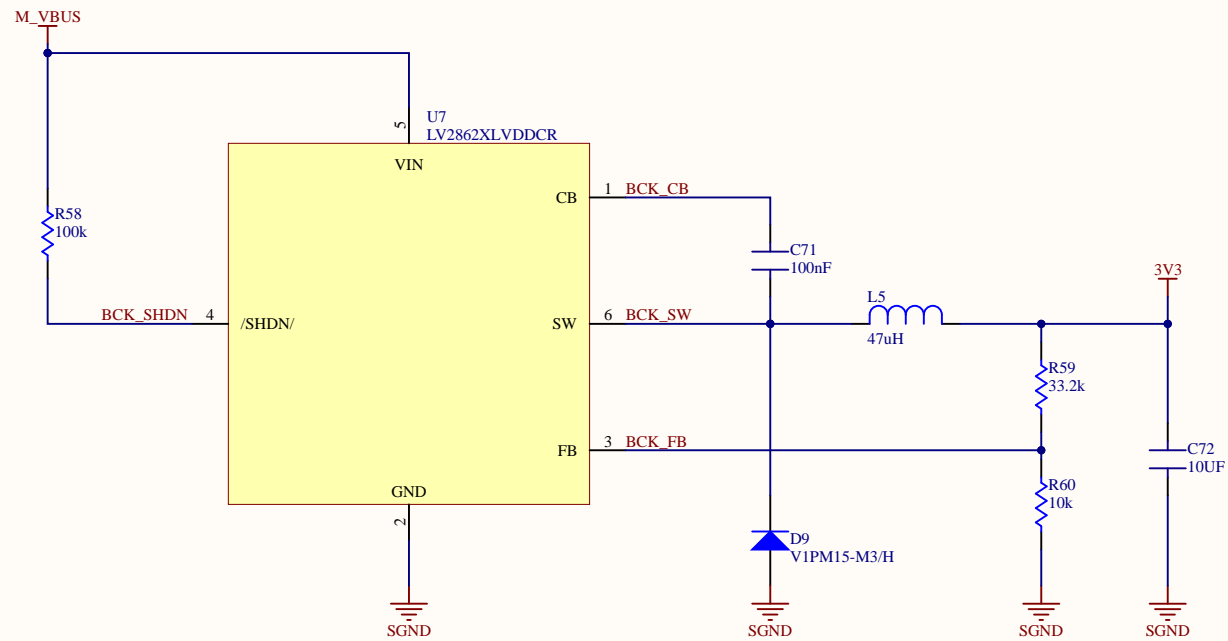


Sheet Name: Input_Filter.SchDoc			
Size: A4	Sheet 2 of 9	Author : Hatim Saad	
Date: 9/13/2025	Time: 7:43:44 PM	Project: Stepper_Driver.Prj	
File: D:\Proffesional\Learning\Stepper Driver\Design Files\Stepper_Driver\Input_Filter.Sch			

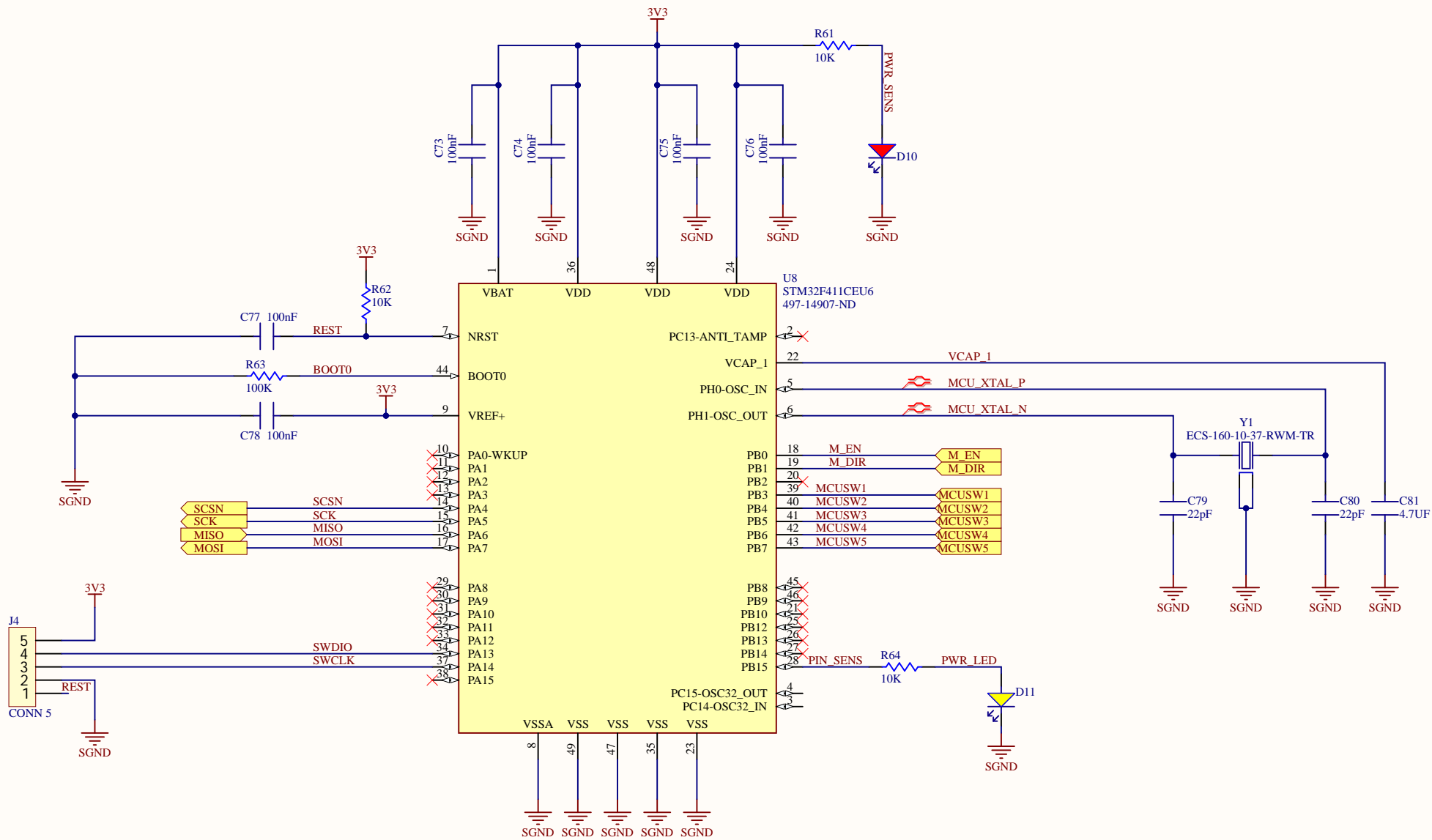








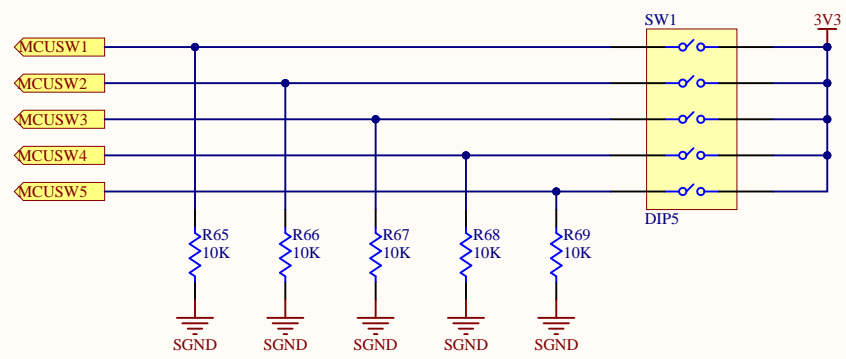
Sheet Name: Buck_Converter.SchDoc			
Size: A4	Sheet 7 of 9	Author : Hatim Saad	
Date: 9/13/2025	Time: 7:43:44 PM	Project: Stepper_Driver.PriPcb	
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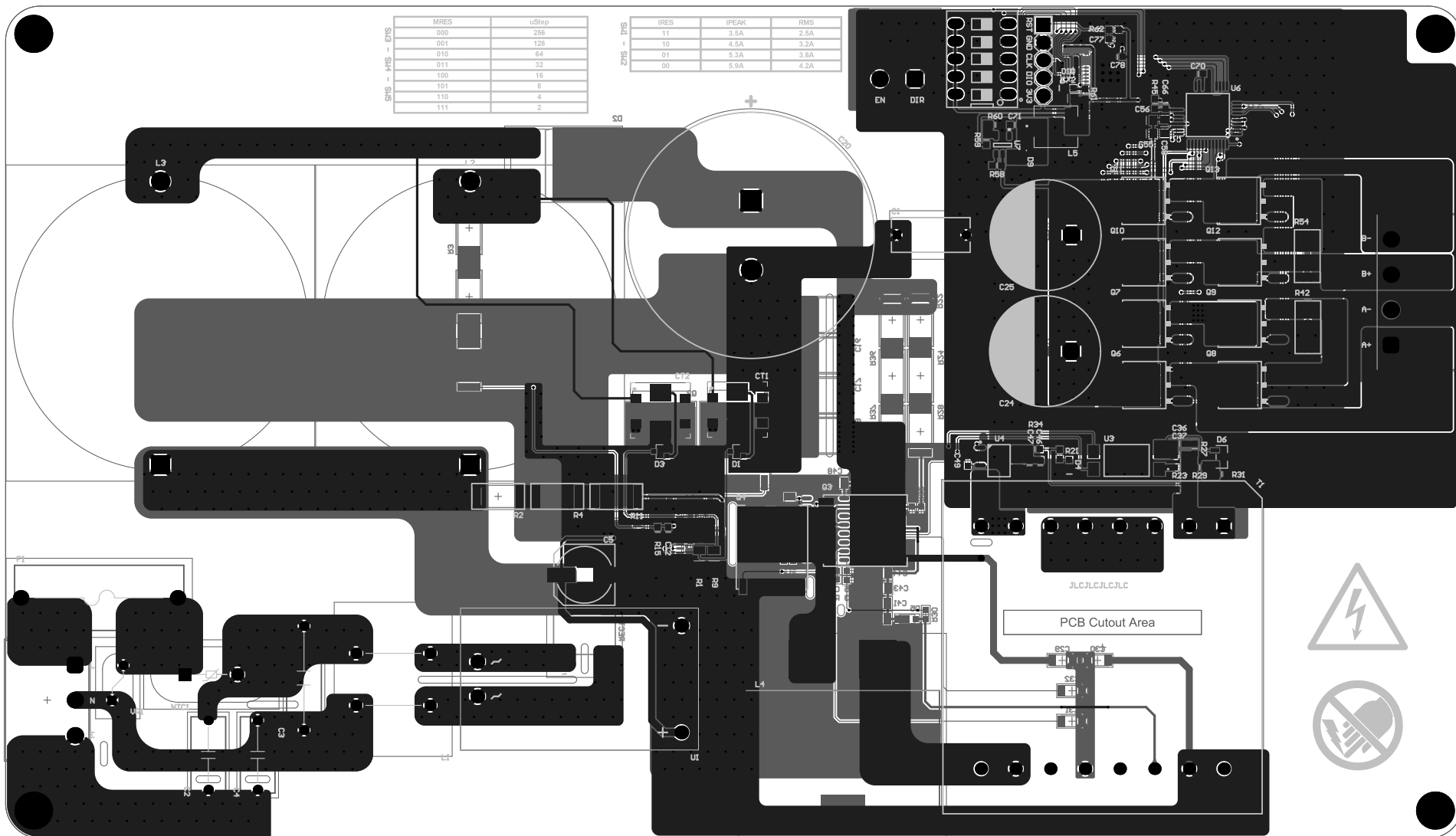


Sheet Name: MCU.SchDoc			
Size: A4	Sheet 8 of 9	Author : Hatim Saad	
Date: 9/13/2025	Time: 7:43:44 PM	Project: Stepper_Driver.PriPcb	
File: D:\Proffesional\Learning\Stepper Driver\Design Files\Stepper_Driver\MCU.SchDoc			

• MRES	• μ steps/full-step
• 000	• 256
• 001	• 128
• 010	• 64
• 011	• 32
• 100	• 16
• 101	• 8
• 110	• 4
• 111	• 2

IRES	Peak	RMS
11	3.5A	2.5A
10	4.5A	3.2A
01	5.3A	3.8A
00	5.9A	4.2A





S1S - S1S - S1S	
MRES	uStep
000	256
001	128
010	64
011	32
100	16
101	8
110	4
111	2

S1S - S1S		
IRES	IPEAK	RMS
11	3.5A	2.5A
10	4.5A	3.2A
01	5.3A	3.8A
00	5.9A	4.2A