

DRV8871 Test Report



1. Schematic Implementation:

Attached is the schematic diagram illustrating the implementation of the DRV8871 motor driver on our custom PCB. Please refer to Figure 1 for details.

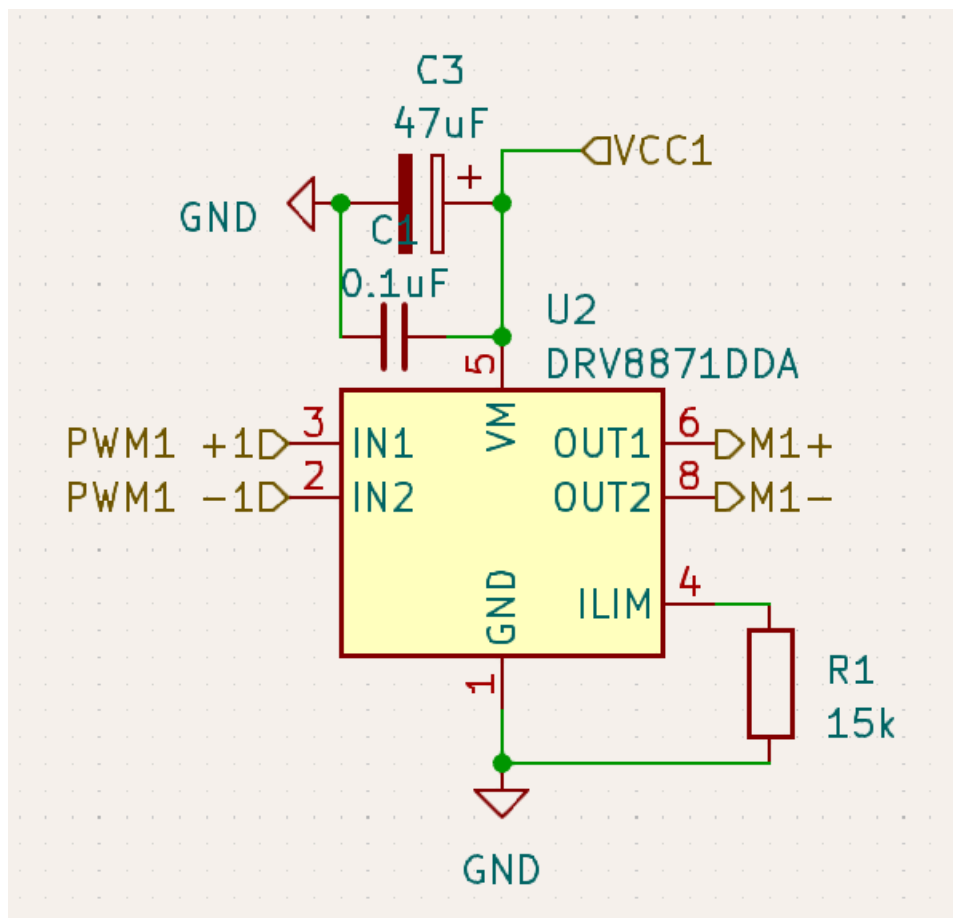


Figure 1

2. Test Results:

2.1 Normal Condition:

- Figure 2 depicts the waveform of the **PWM** signal and the corresponding **Current variation** under normal operating conditions.

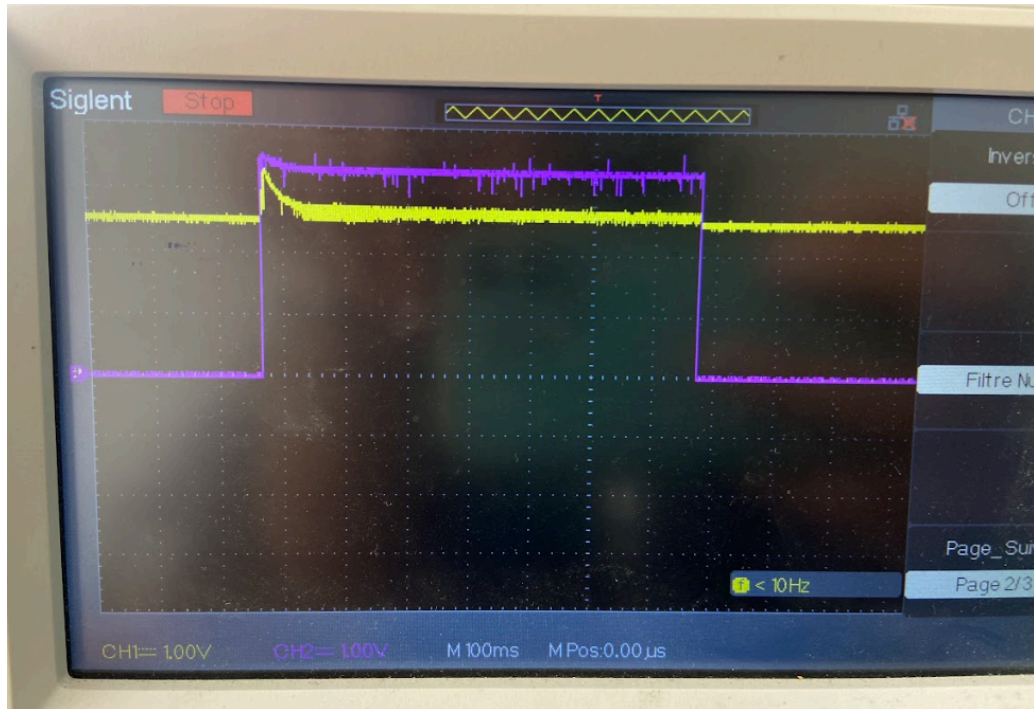


Figure 2

2.2 High Current Consumption:

- In this section, Figure 3 illustrates the **PWM** signal waveform and the **Current variation** during high current consumption.
- Despite setting a current limitation of 4A based on the formula provided in the datasheet, the maximum current achieved was 2.66A.

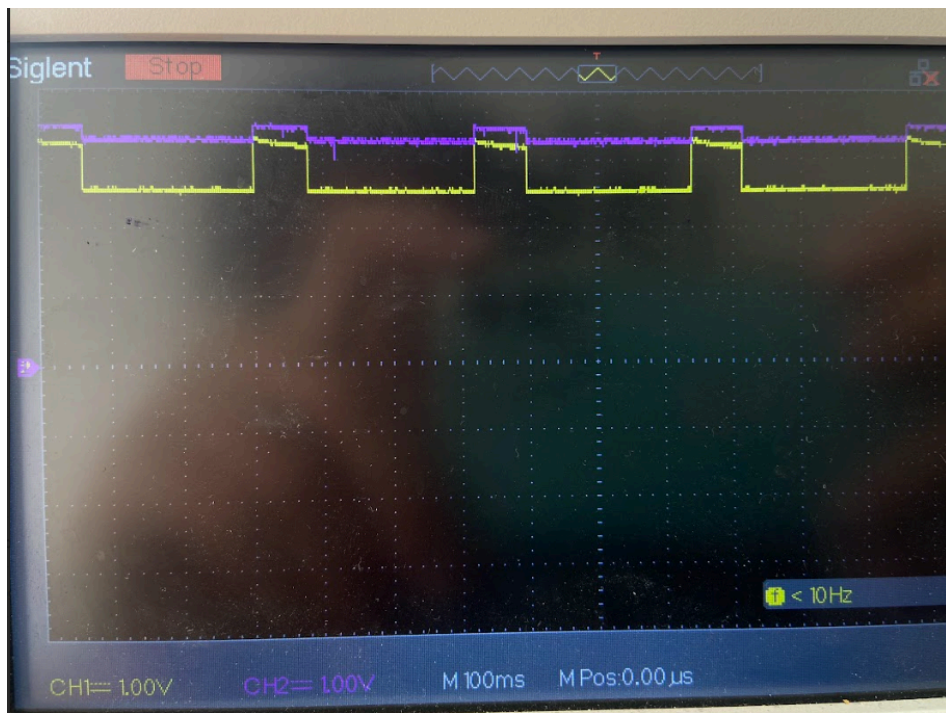


Figure 3

3. Temperature Analysis:

- Figure 4 presents the temperature curve recorded during the testing phase.
- The temperature increased from 31°C to 72°C within approximately 10 seconds under high current consumption conditions.

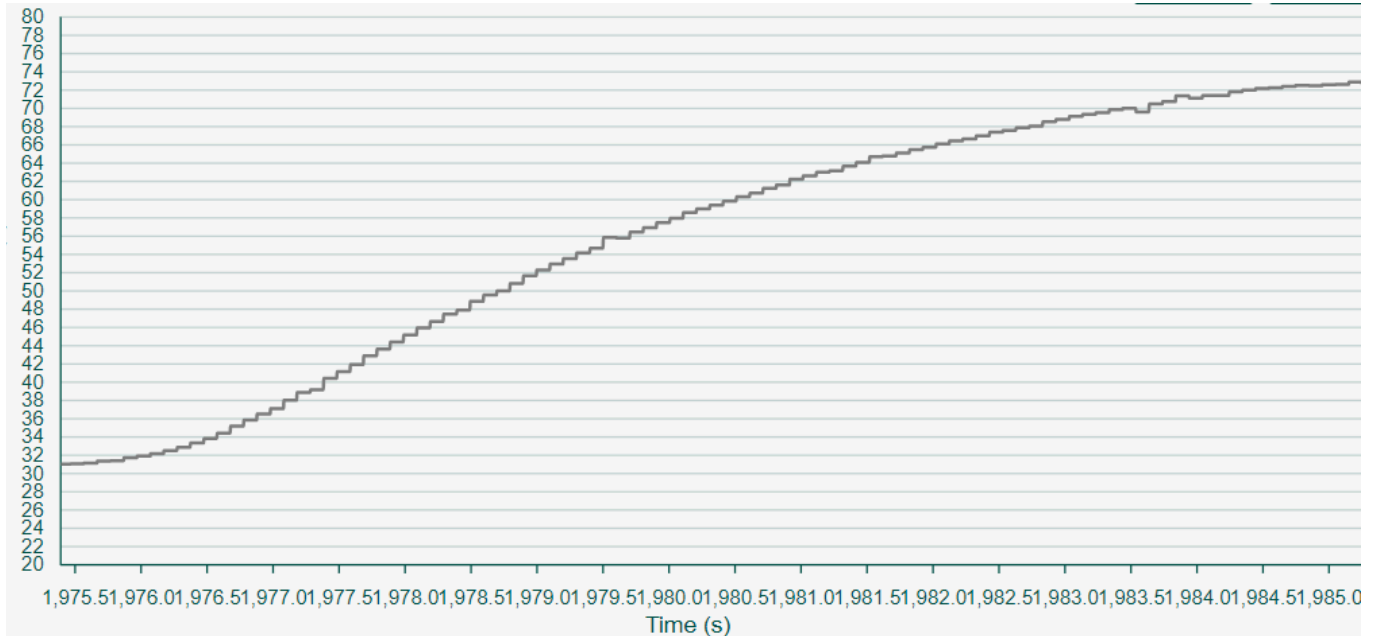


Figure 4

Conclusion:

Based on the test results, it's evident that the DRV8871 motor driver exhibits limitations in achieving the specified current limitation of 4A on our custom PCB. Additionally, the rapid increase in temperature during high current consumption requires further investigation to ensure the reliability and safety of the system.