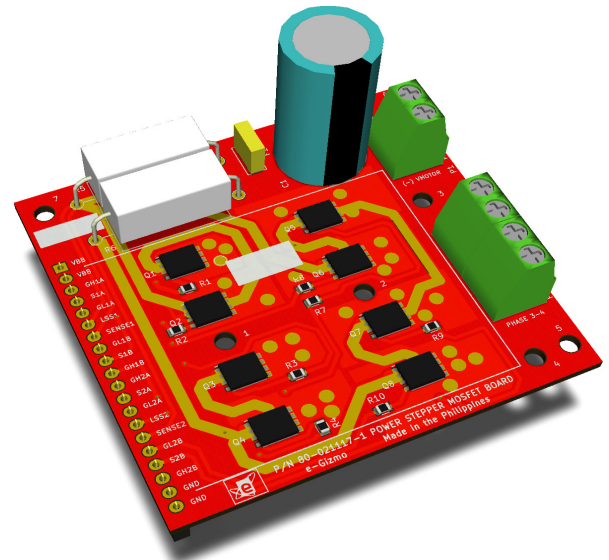
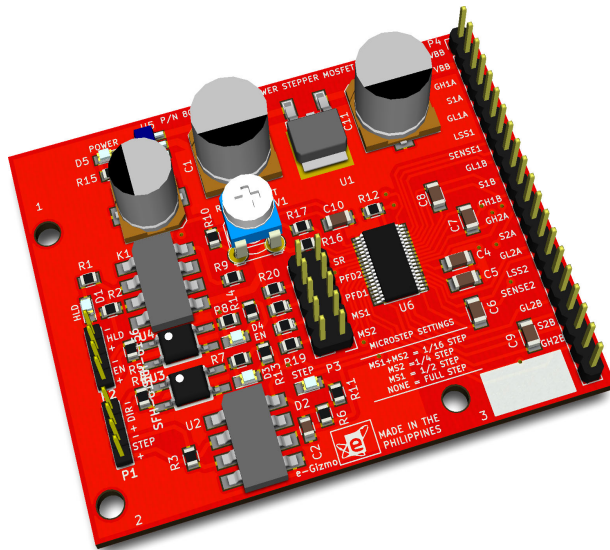


Power Stepper MOSFET Driver board

Technical Manual Rev 1r0



Power Stepper MOSFET Driver board is has A4989 dual full-bridge gate driver with integrated microstepping translator suitable for driving a wide range of higher power industrial bipolar 2-phase stepper motors. It is controlled by a two-wire step and direction interface, providing complete microstepping control.

Features:

- 2 wire step and direction interface
- Dual full-bridge gate drive for N-channel MOSFETs
- Synchronous rectification
- Cross-conduction protection
- Fixed off-time PWM current control
- Enhanced low current control when microstepping

General Specifications:

Controls

Input Supply Voltage: +12V DC

Built-in IC: A4989

Interface: Microcontroller or Control logic

Dimensions: 66mm x 54mm

MOSFET

Maximum Supply Voltage: 24V DC

Stepper Motor: Bipolar

Dimensions: 68mm x 72mm

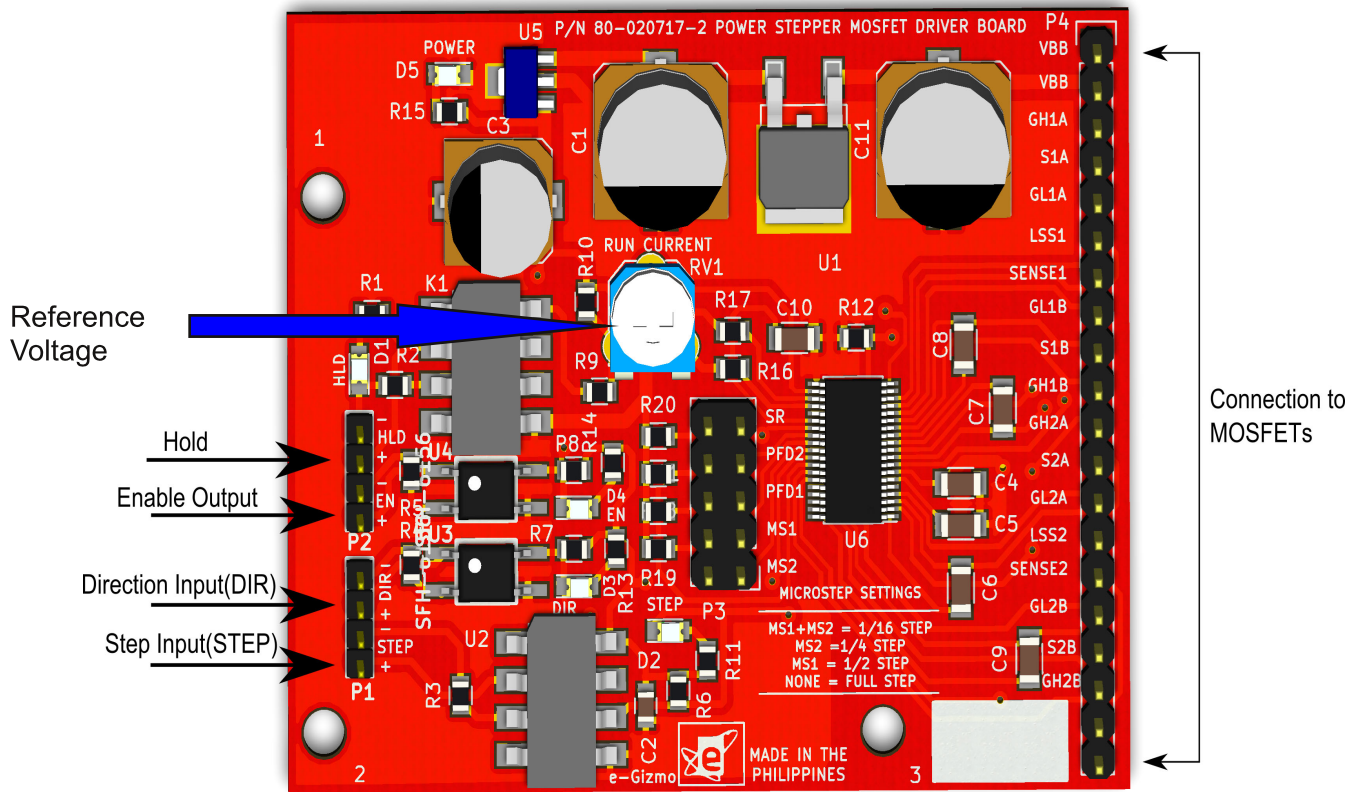
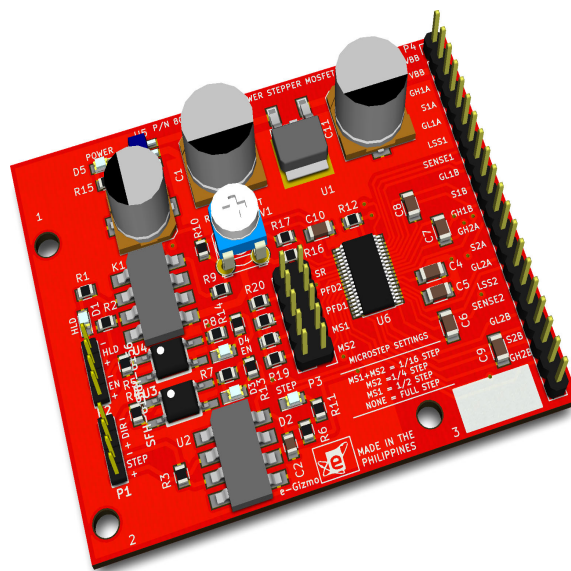


Figure 1. Major parts presentation of Power Stepper MOSFET Driver Board



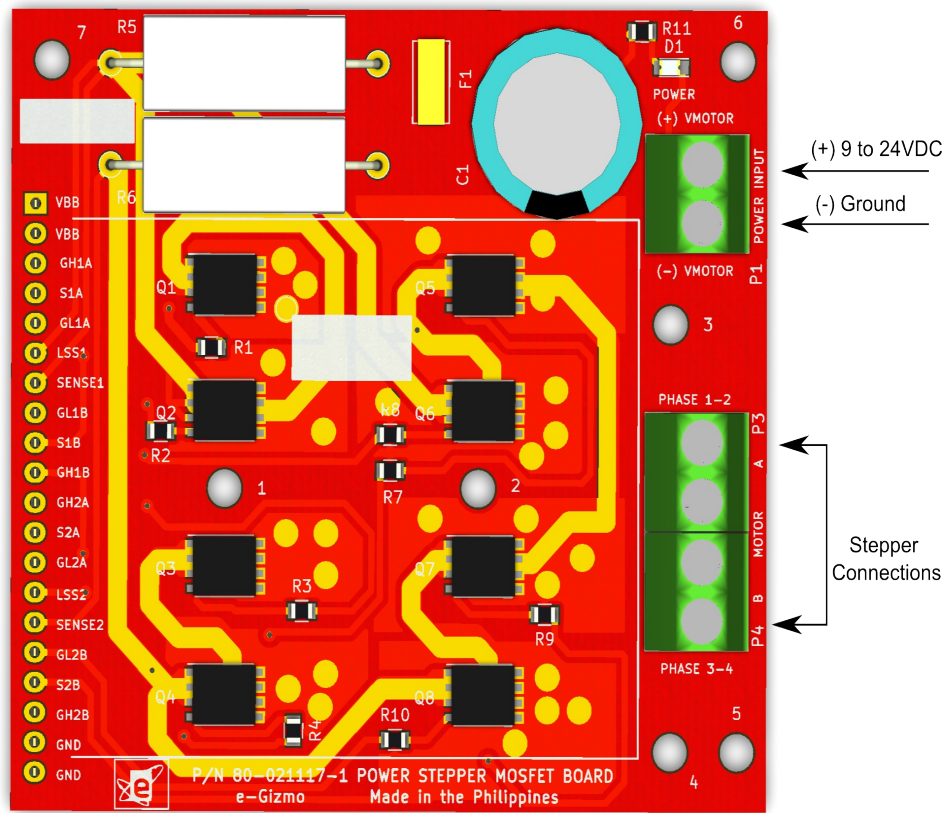
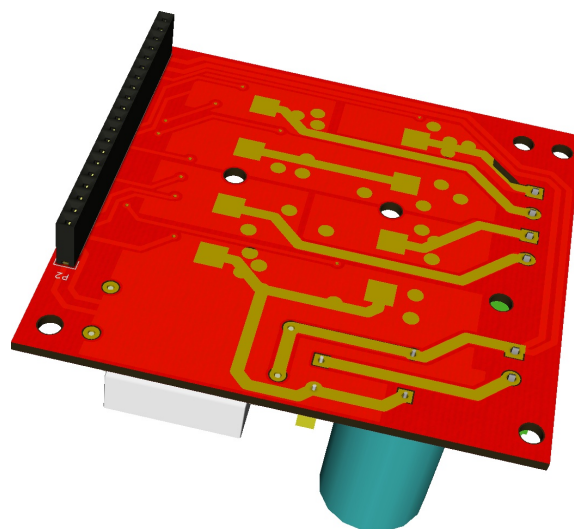


Figure 2. Major parts presentation of Power Stepper MOSFET Board



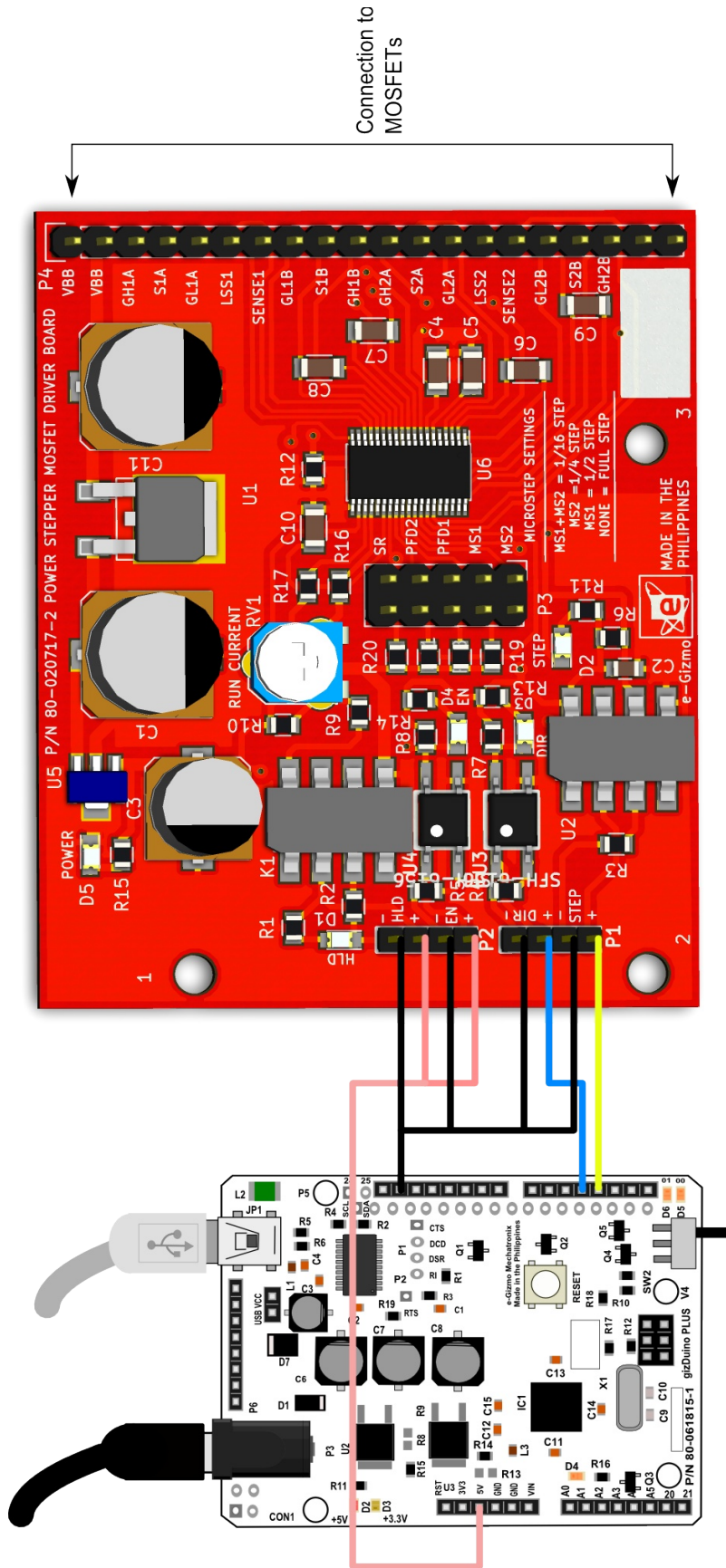


Figure 3. Sample connections

Wiring connections

- gizduino Power Mosfet control
- D3 -----> STP+
- D4 -----> DIR+
- GND -----> STR-, DIR-, EN-,HLD-
- +5V -----> EN+,HLD+

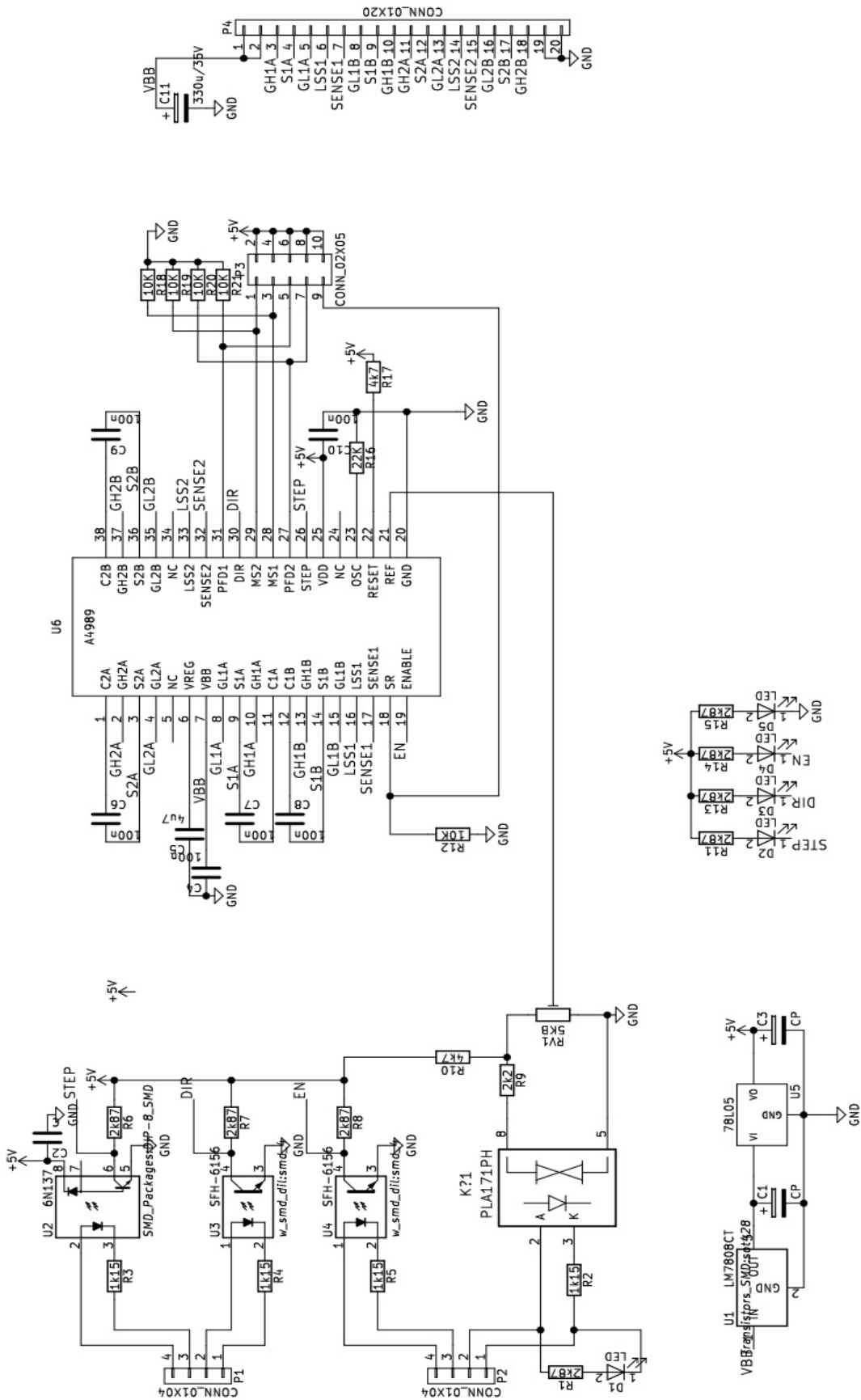


Figure 4. Schematic Diagram of Control Board

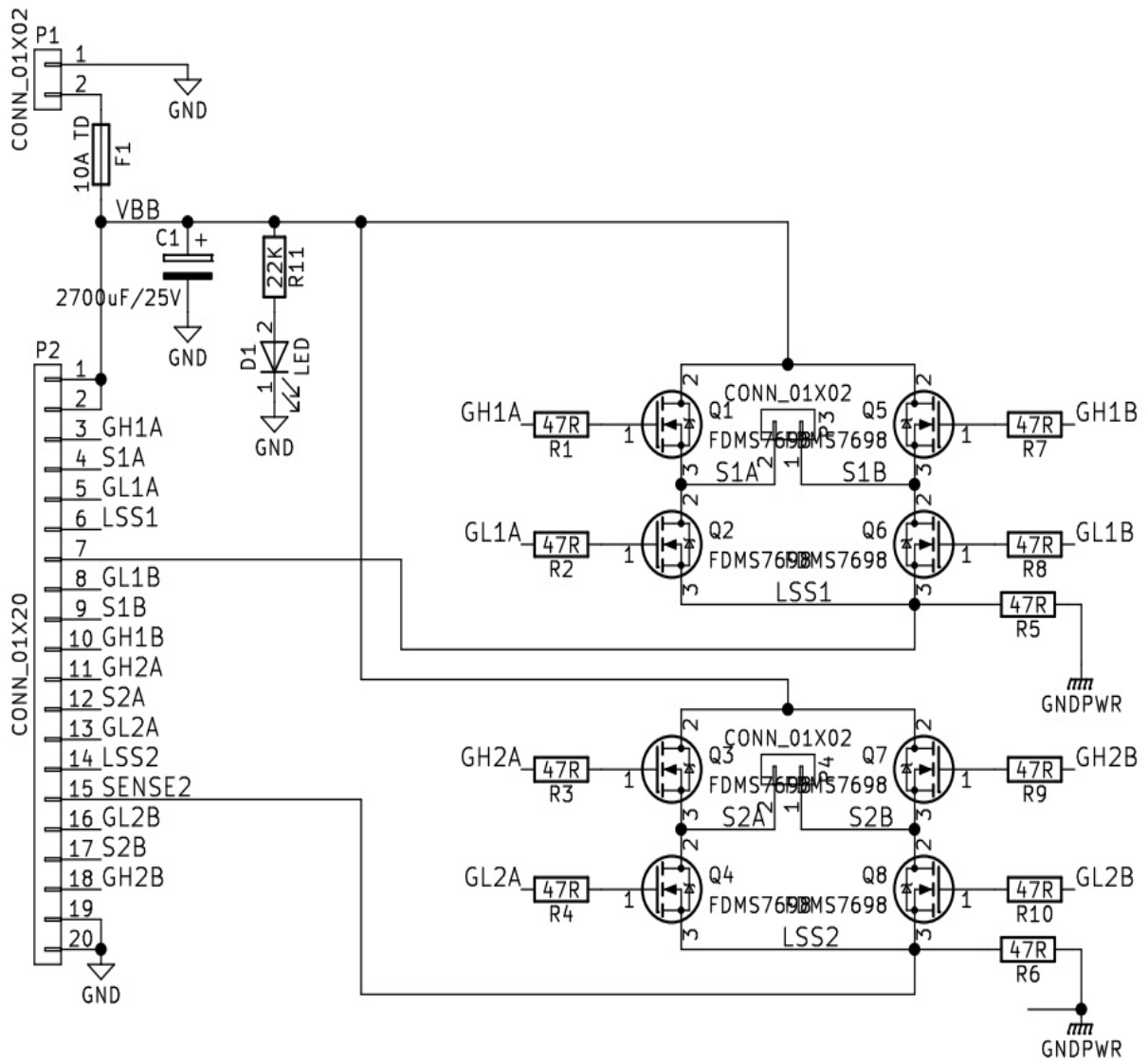


Figure 5. Schematic Diagram of MOSFET board