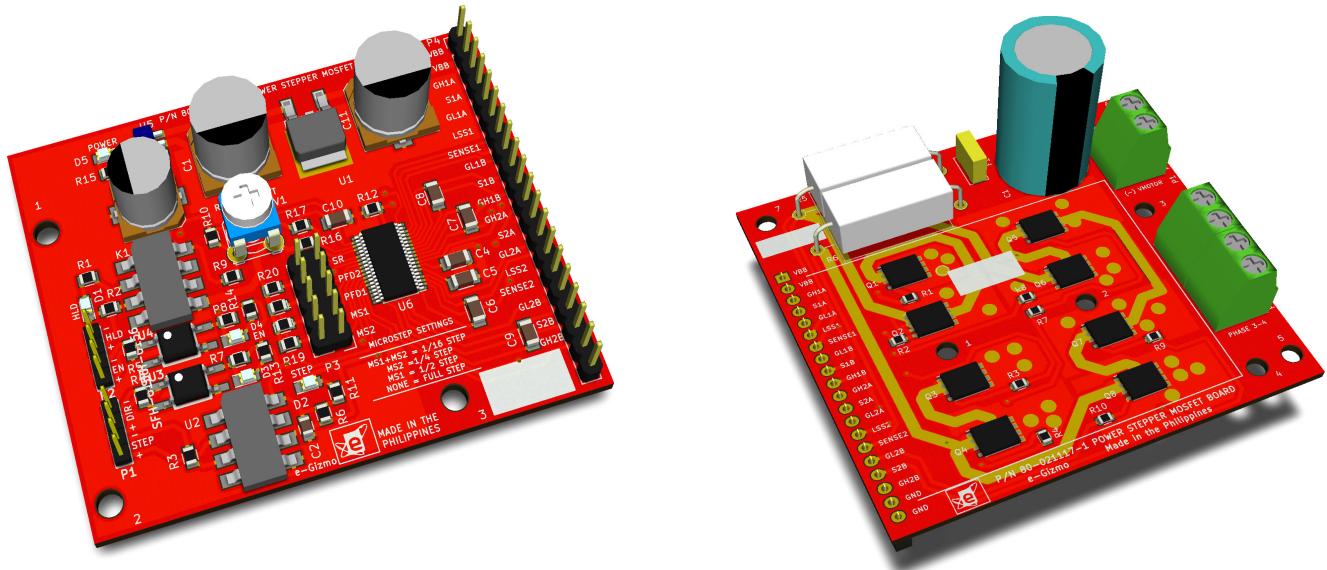


Power Stepper MOSFET Driver board

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

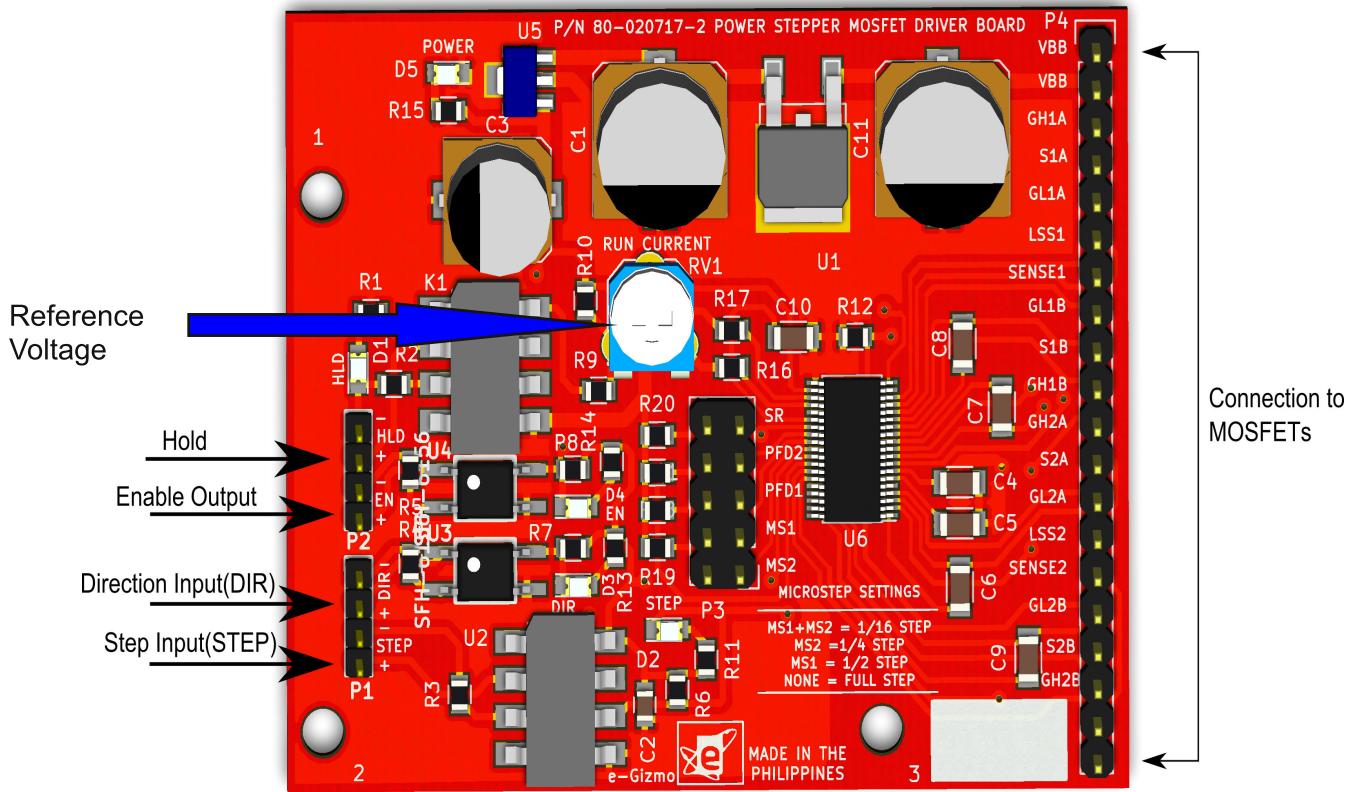
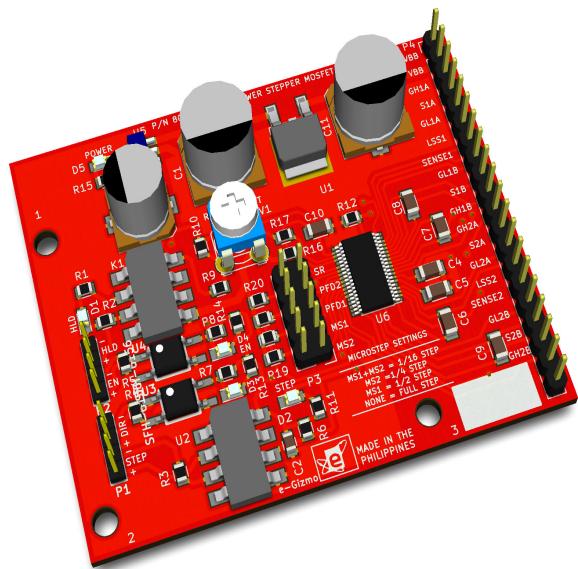


Figure 1. Major parts presentation of Power Stepper MOSFET Driver Board



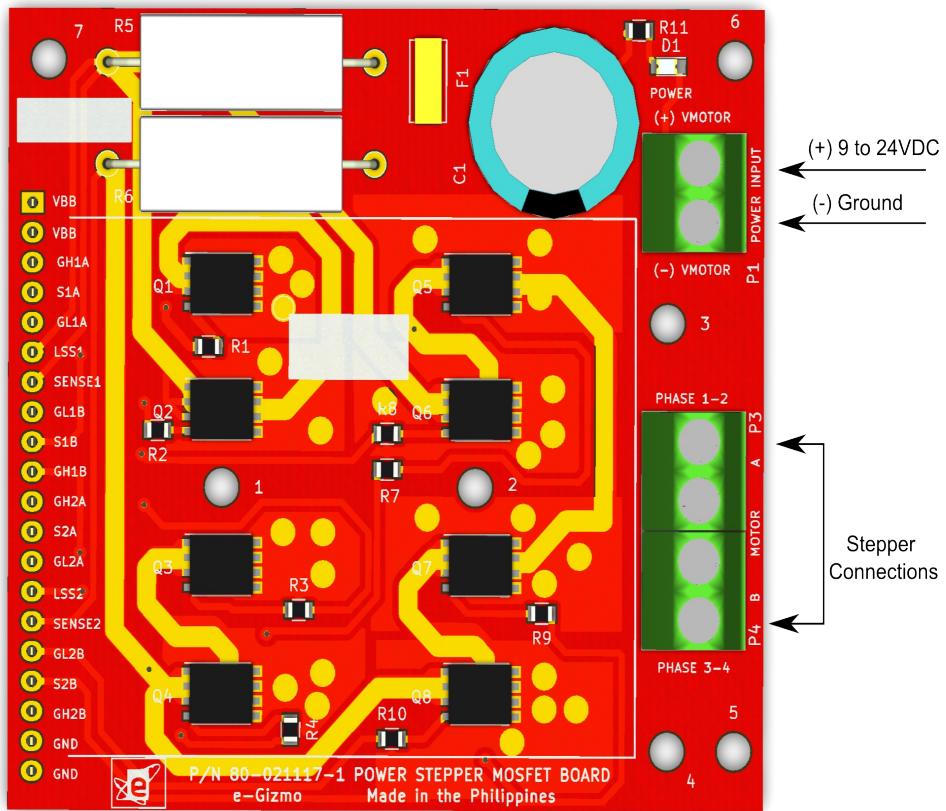
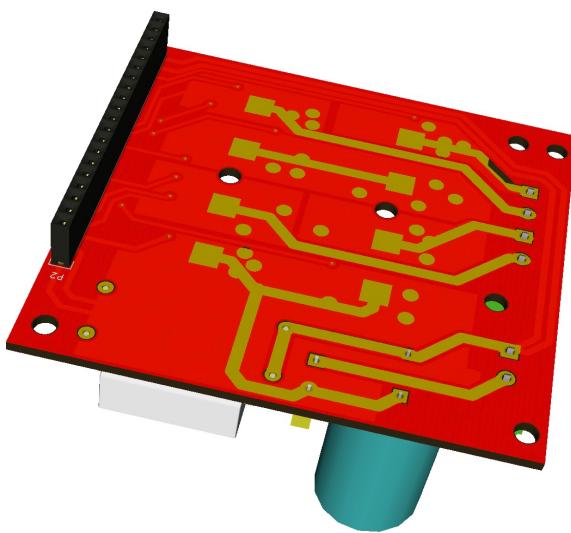


Figure 2. Major parts presentation of
Power Stepper MOSFET Board



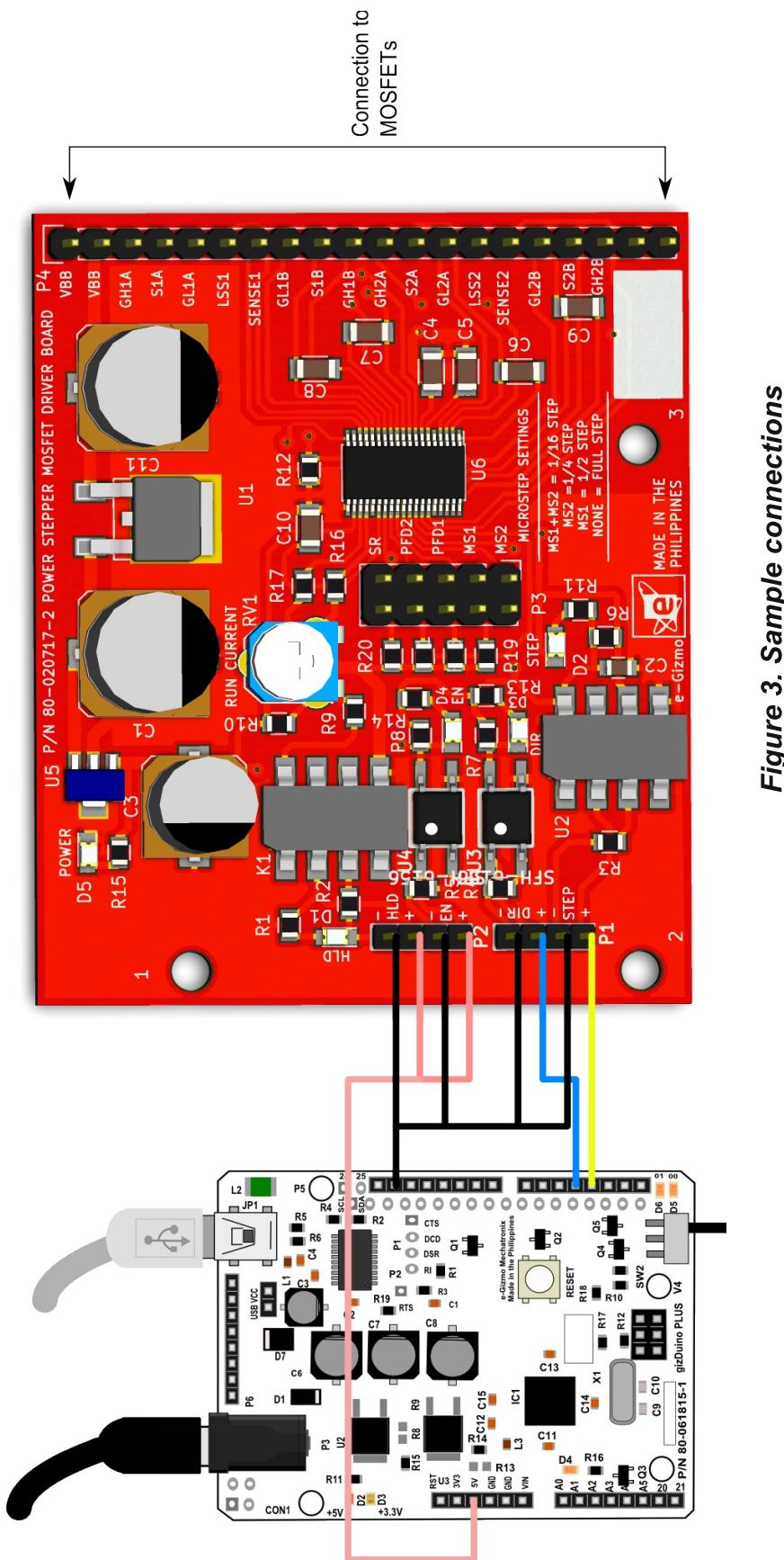


Figure 3. Sample connections

Wiring connections

Power Mosfet control

D3	----->	STP+
D4	----->	DIR+
GND	----->	STR-, DIR-, EN-, HLD-
+5V	----->	EN+, HLD+

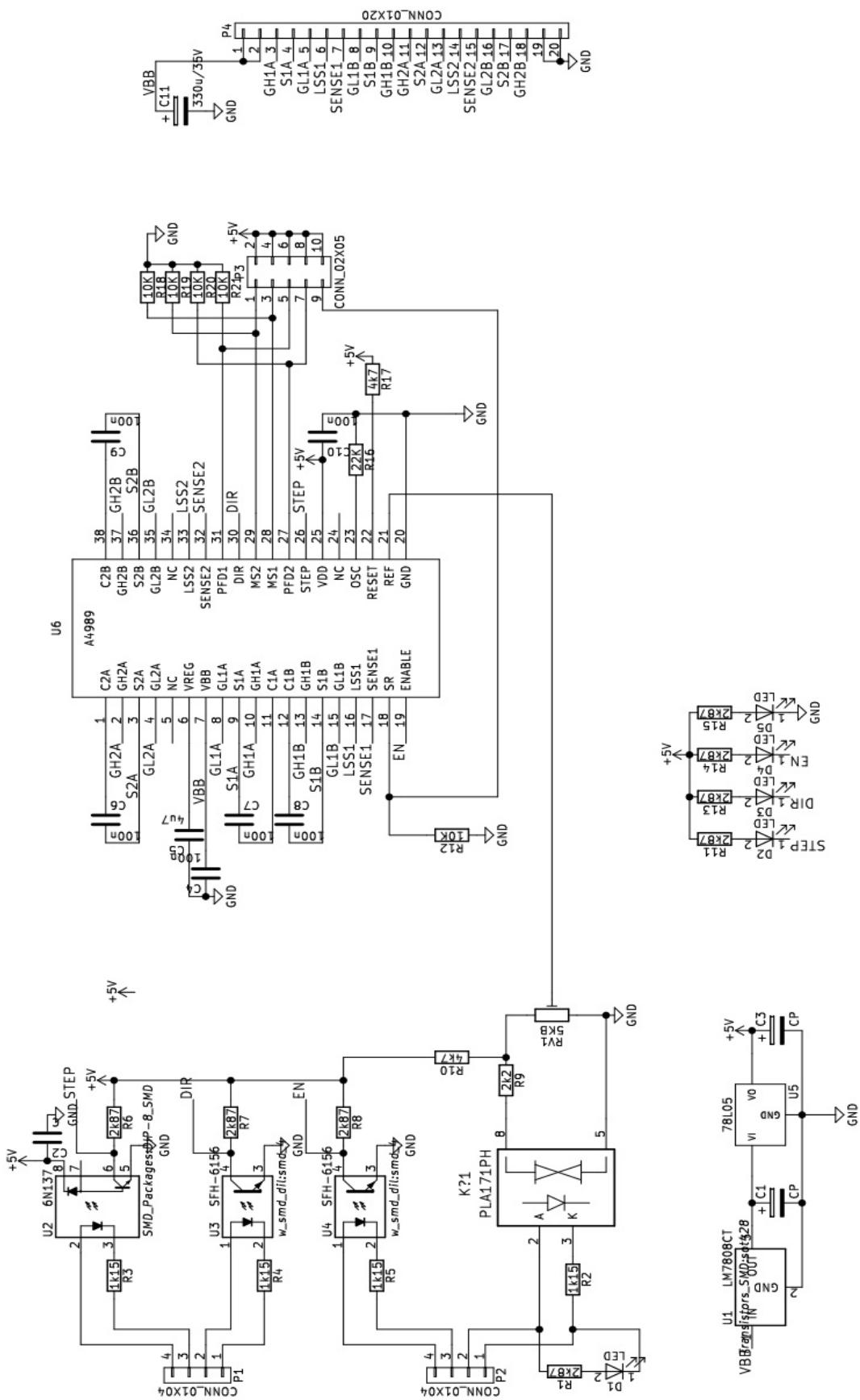


Figure 4. Schematic Diagram of Control Board

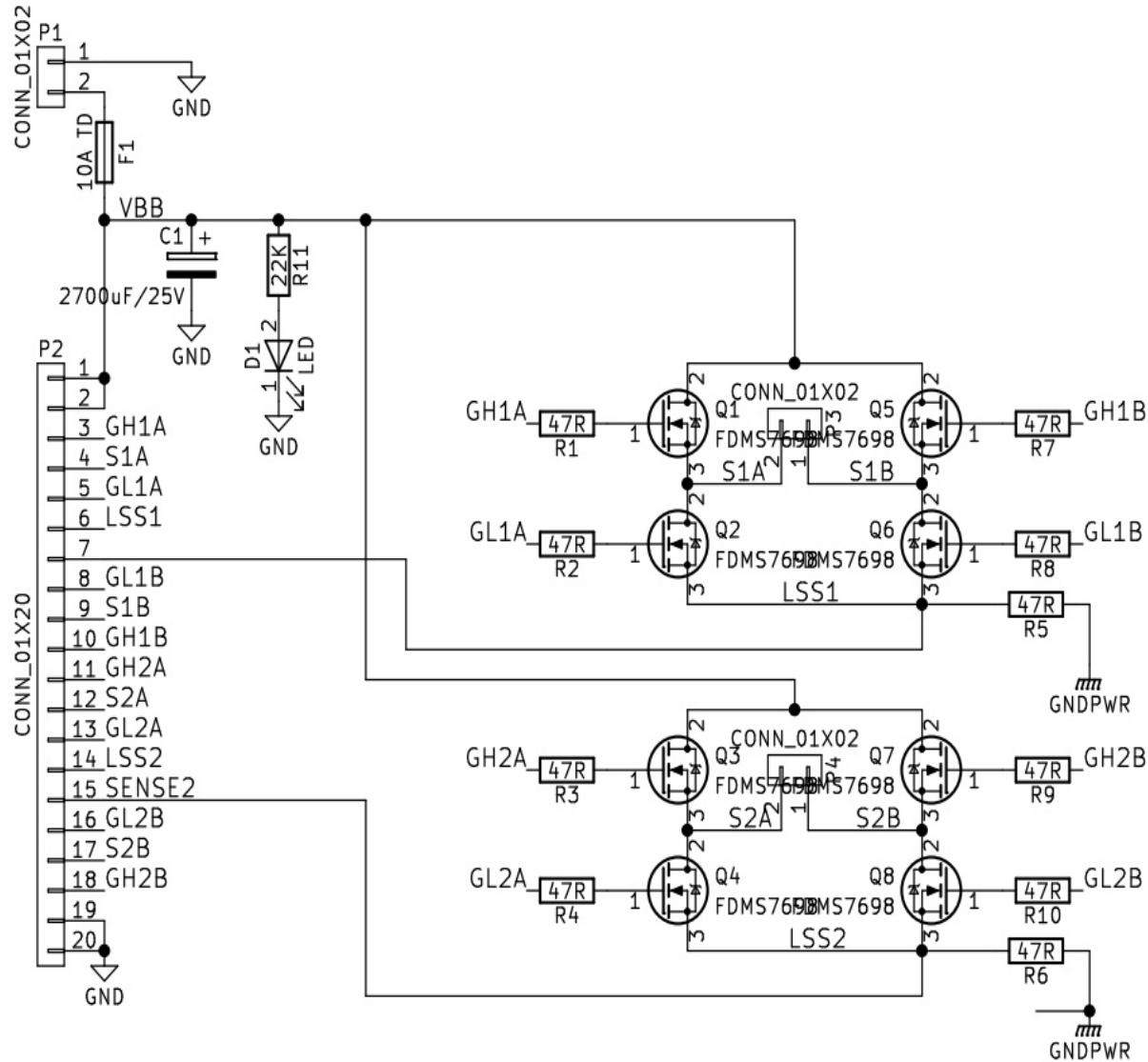


Figure 5. Schematic Diagram of MOSFET board