



EV6513L-J-00A

0.6A, 5.5V
Full H-bridge Motor Driver
Evaluation Board

The Future of Analog IC Technology®

DESCRIPTION

The EV6513L-J-00A is an evaluation board for the MP6513LGJ, is a full-H-bridge motor driver used for driving reversible motors, which can drive one dc motor or one winding of a stepper motor or other loads.

It operates from a supply voltage range of 2.5V to 5.5V and can deliver motor current up to 0.6A.

The input control signals for the MP6513LGJ are applied through the connector.

ELECTRICAL SPECIFICATIONS

| Parameter | Symbol | Value | Units |
|------------------------|------------------|---------|-------|
| Input Voltage | V _{CC} | 2.5-5.5 | V |
| Maximum Output Current | I _{OUT} | 0.6 | A |

FEATURES

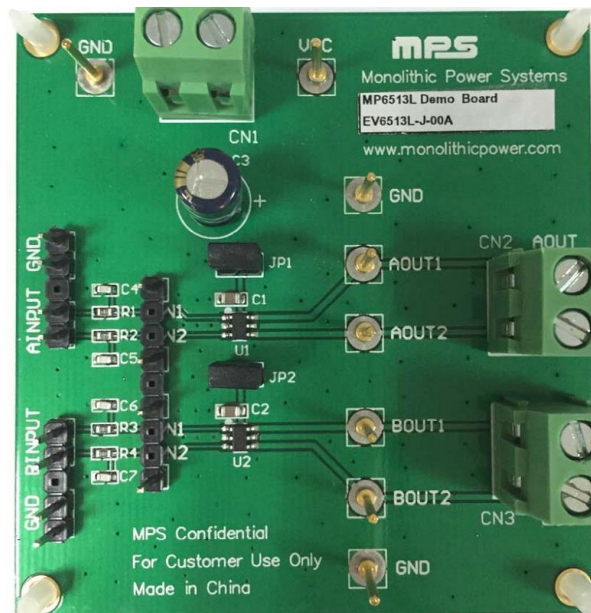
- Wide 2.5V to 5.5V Input Voltage Range
- 0.6A continuous driver current
- Full-H-bridge motor drive
- OCP, OVP, and OTP

APPLICATIONS

- Cameras
- Toys
- Consumer Products
- Medical Devices

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EV6513L-J-00A EVALUATION BOARD



(L x W x H) 6.35cm x 6.604cm x 1.8cm

| Board Number | MPS IC Number |
|---------------|---------------|
| EV6513L-J-00A | MP6513LGJ |

EVALUATION BOARD SCHEMATIC

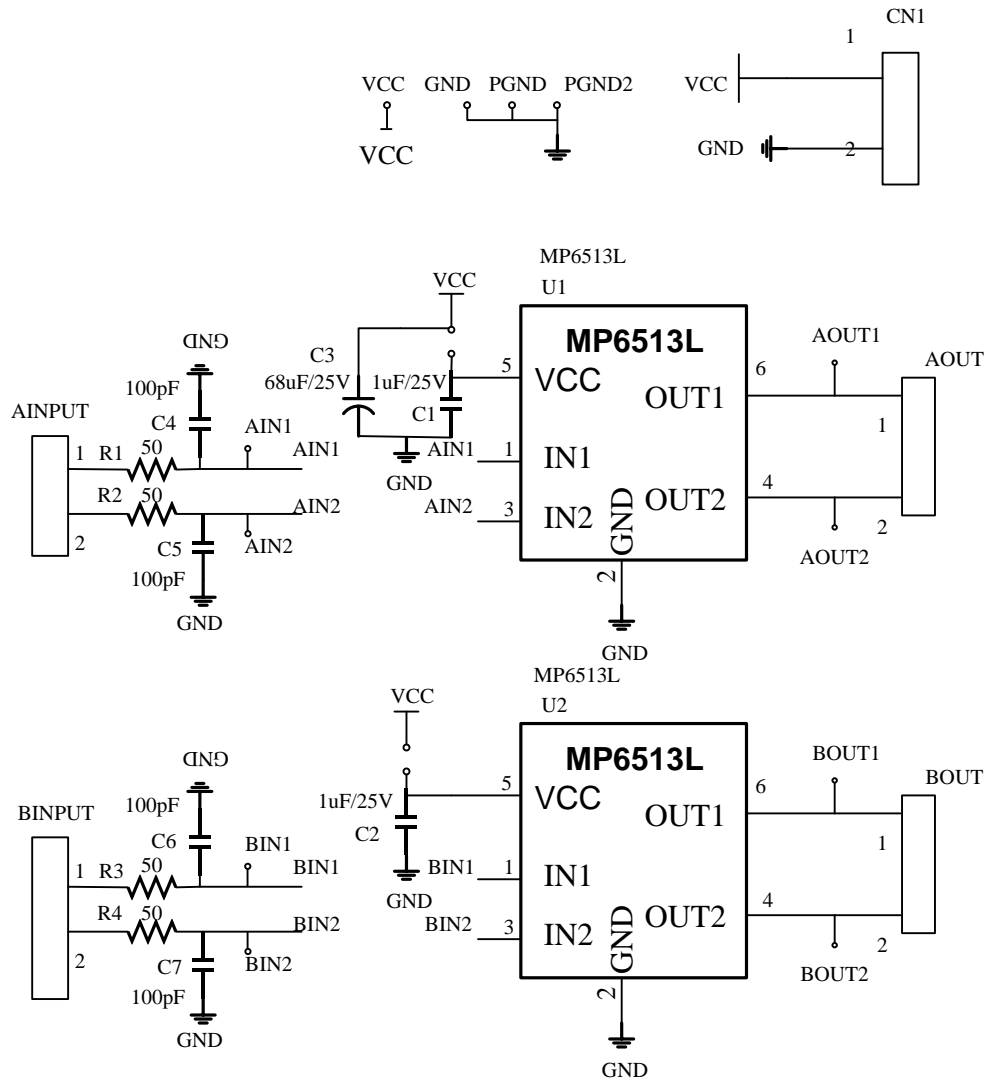


Figure 1 .Schematic of EVB

EV6513L-J-00A BILL OF MATERIALS

| Qty | Ref | Value | Description | Package | Manufacturer | Part Number |
|-----|---|----------------|-------------------------------------|------------|--------------|--------------------|
| 2 | C1,C2 | 1 μ F/25V | Ceramic Capacitor; 25V;X7R | 0805 | muRata | GRM21BR71E105KA99L |
| 1 | C3 | 68 μ F/25V | Ceramic Capacitor;50V | DIP | Panasonic | EEU-FCIH680 |
| 4 | C4,C5,C6,C7 | 100pF | Ceramic Capacitor; 50V;C0G; | 0603 | muRata | GRM1885C1H101JA01D |
| 4 | R1, R2, R3,R4 | 49.9 | Film Resistor;1% | 0603 | Yageo | RC0603FR-071KL |
| 3 | CN1, CN2, CN3 | | CONN/2PIN/5.08MM | DIP | | |
| 2 | AINPUT, BINPUT,AIN1, AIN2, BIN1, BIN2, GND | CONNE CTOR | SIP 2.54mm * 40 PIN CONNECTOR | Radial | ANY | |
| 2 | JP1,JP2 | CONNE CTOR | SIP 2.54mm * 40 PIN CONNECTOR | Radial | ANY | |
| 8 | AOUT1, BOUT1, AOUT2, BOUT2,GND* 3,VCC | TP | 1mm GOLD PLATED TEST POINT | Radial | ANY | |
| 2 | U1,U2 | MP6513L GJ | MP6513LGJ R6 | FCTSOT23-6 | MPS | MP6513LGJ |

PRINTED CIRCUIT BOARD LAYOUT

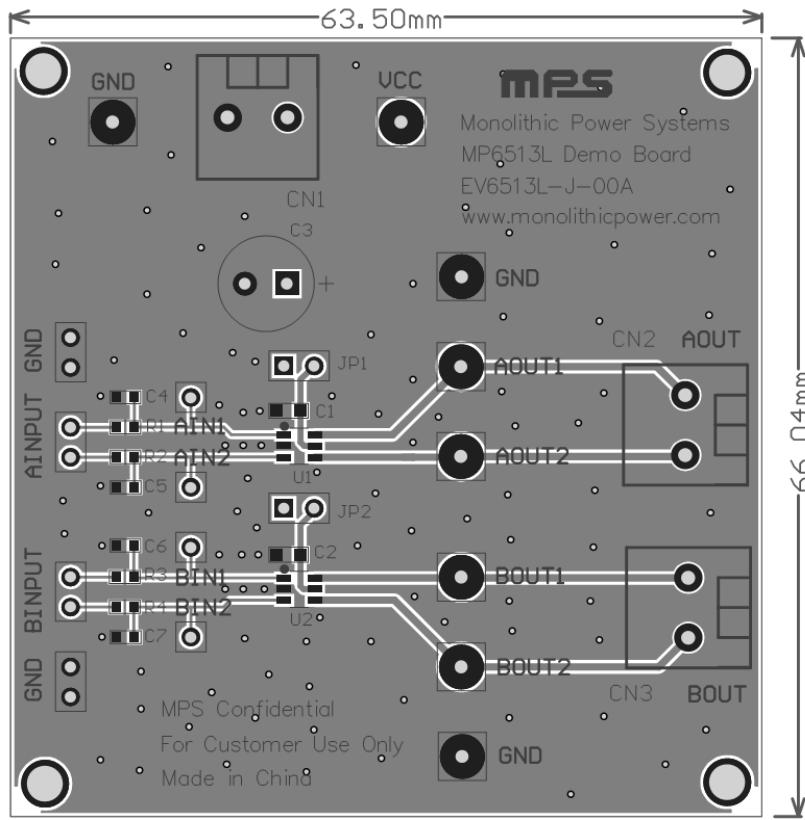


Figure 2 .Top Layer

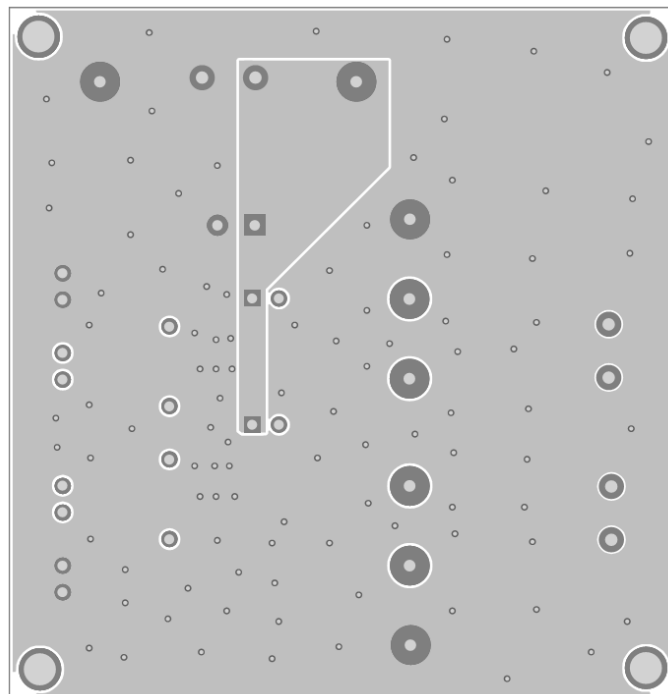


Figure 3 .Bottom Layer

QUICK START GUIDE

This board is set up from the factory for 2.5V to 5.5V operation.

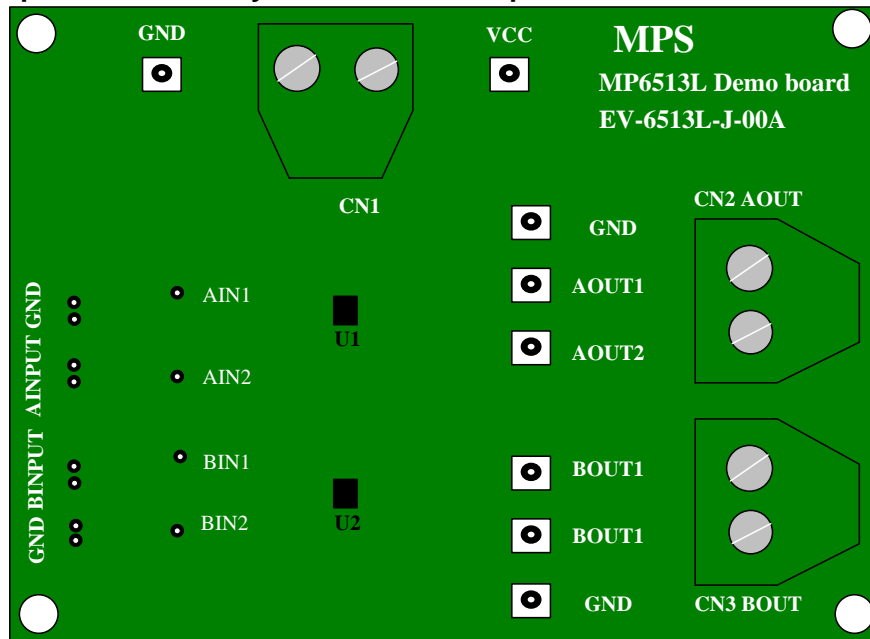


Figure 3. Input and Output Terminals of EV6513L-J-00A

1. Applications

This evaluation board can be used to control two single-phase DC motor independently or a stepper motor by corresponding input signals. The recommended supply voltage is range from 2.5V to 5.5V, and the maximum drive current is up to 0.6A for one channel.

2. Input logic

The MP6513L is controlled using a PWM input interface, each output is controlled by a corresponding input pin.

The following truth table shows the control logic for MP6513L:

| IN1 | IN2 | OUT1 | OUT2 | Function (DC Motor) |
|-----|-----|------|------|---------------------|
| L | L | Z | Z | Coast |
| L | H | L | H | Reverse |
| H | L | H | L | Forward |
| H | H | L | L | Brake |

3. Setup Condition

- Preset power supply of 2.5V to 5.5V between VCC and GND pins on CN1 terminal.
- The connector AINPUT/BINPUT should be connected to input signals, and refer above table to find the corresponding control logic.
- The connector CN2/CN3 should be connected to the motor winding terminals. For a stepper motor, one winding should be connected to CN2(AOUT1/AOUT2), while the other should be connected to CN3(BOUT1/BOUT2).
- Turn on power supply.

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