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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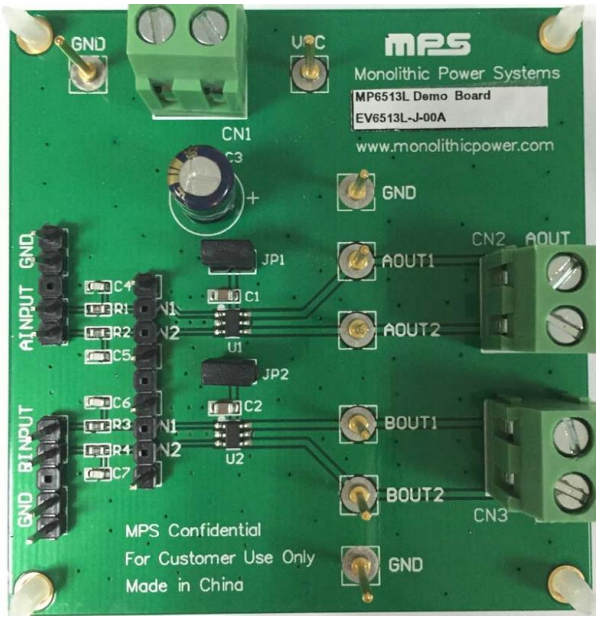
EV6513L-J-00A EVALUATION BOARD



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

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

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EVALUATION BOARD SCHEMATIC

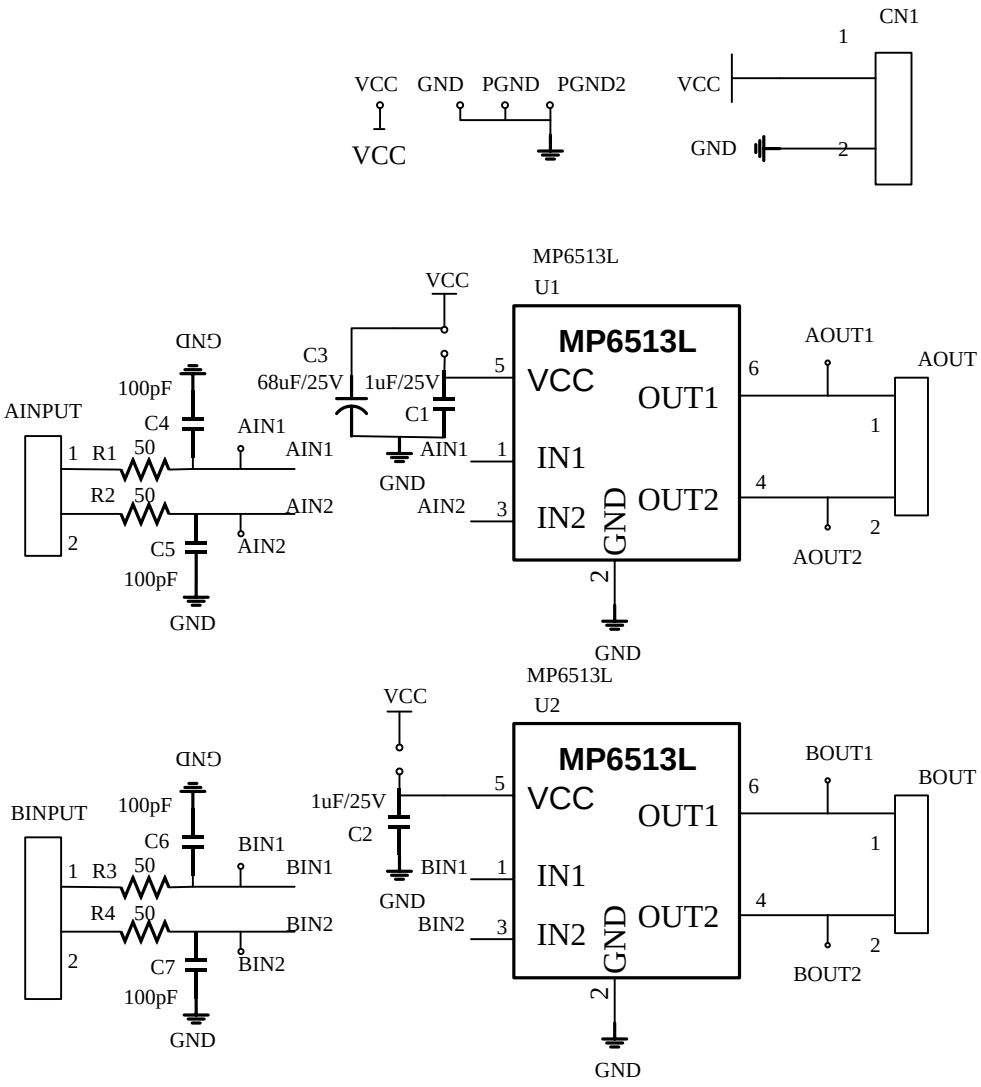

Figure 1 .Schematic of EVB

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EV6513L-J-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Part Number
2	C1,C2	1μF/25V	Ceramic Capacitor; 25V;X7R	0805	muRata	GRM21BR71E105KA99L
1	C3	68μF/25 V	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	CONNECTOR	SIP 2.54mm * 40 PIN CONNECTOR	Radial	ANY	
2	JP1,JP2	CONNECTOR	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	MP6513LGJ	MP6513LGJR6	FCTSOT23-6	MPS	MP6513LGJ

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PRINTED CIRCUIT BOARD LAYOUT

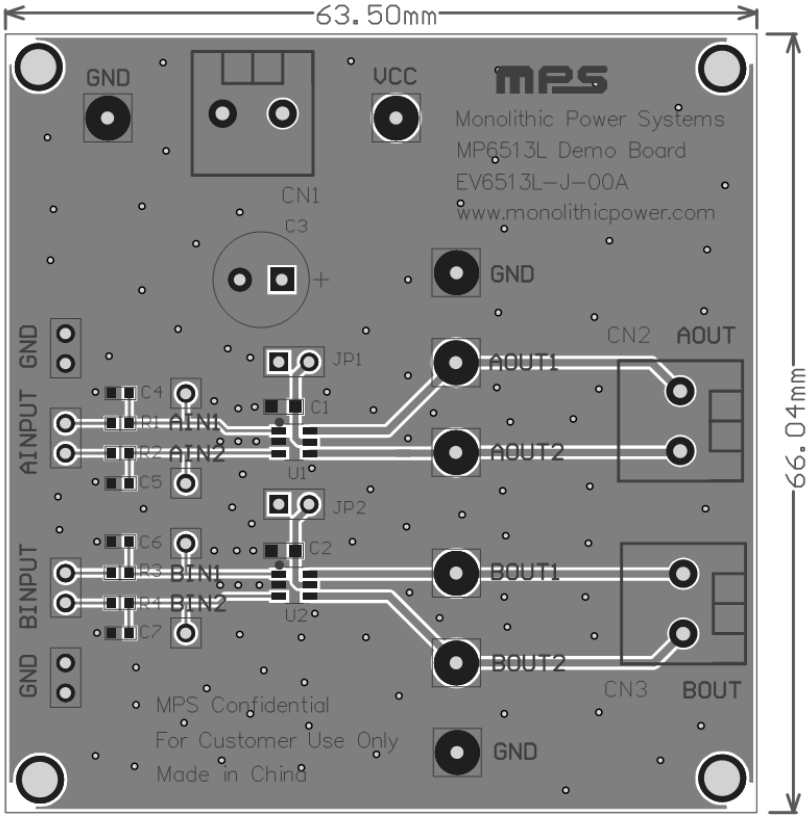

Figure 2 .Top Layer

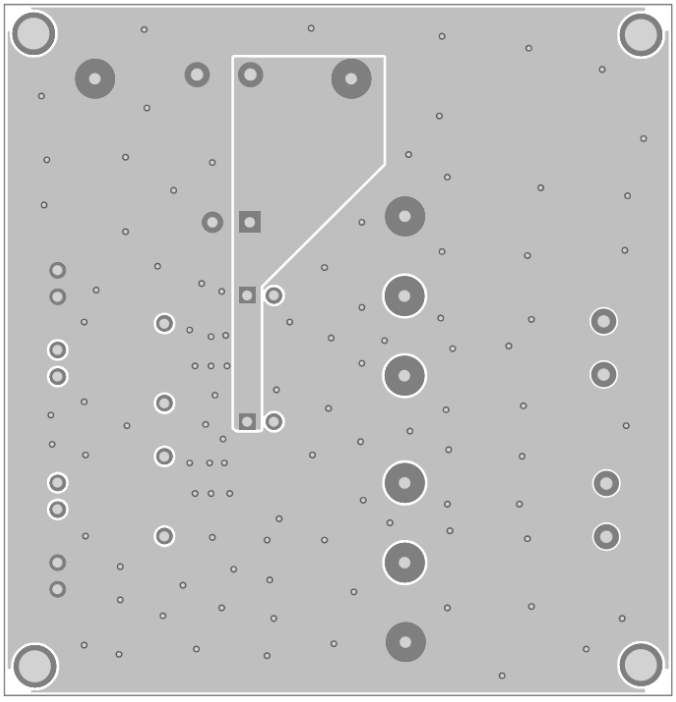

Figure 3 .Bottom Layer

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QUICK START GUIDE

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

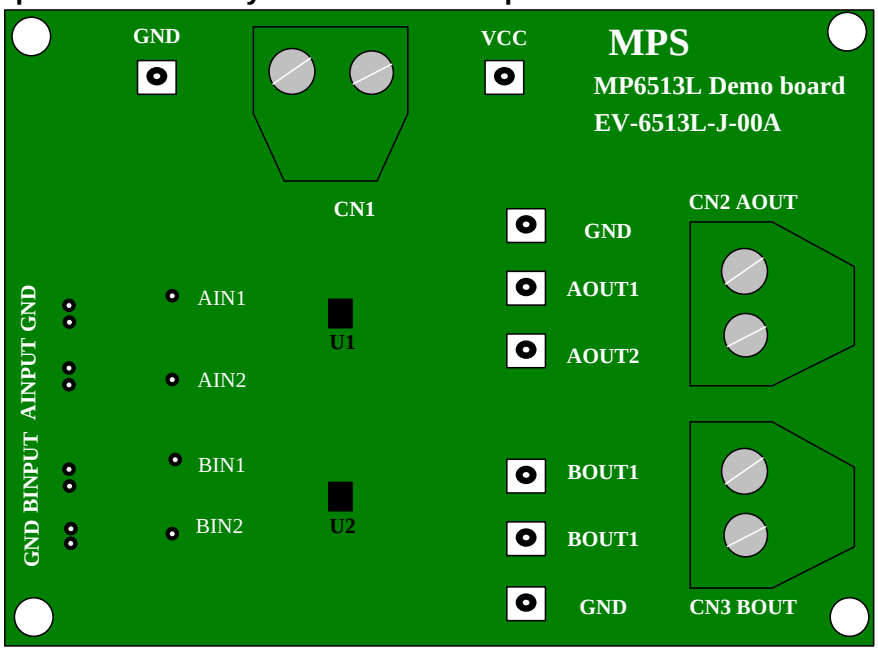

Figure 3. Input and Output Terminals of EV6513L-J-00A

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

a. Preset power supply of 2.5V to 5.5V between VCC and GND pins on CN1 terminal.

b. The connector AINPUT/BINPUT should be connected to input signals, and refer above table to find the corresponding control logic.

c. 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).

d. Turn on power supply.

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