

## DESCRIPTION

The EV6522-U-00A is an evaluation board for the MP6522, an H-Bridge motor driver.

It operates from a supply voltage of up to 35V and can deliver 2A continuous current, 3.2A peak current. The input control signals for the MP6522 can be set by SW1 or applied through the connector CN1 on the board.

## ELECTRICAL SPECIFICATION

| Parameter      | Symbol    | Value    | Units |
|----------------|-----------|----------|-------|
| Input Voltage  | $V_{IN}$  | 5.4 - 35 | V     |
| Output Current | $I_{OUT}$ | 2        | A     |

## FEATURES

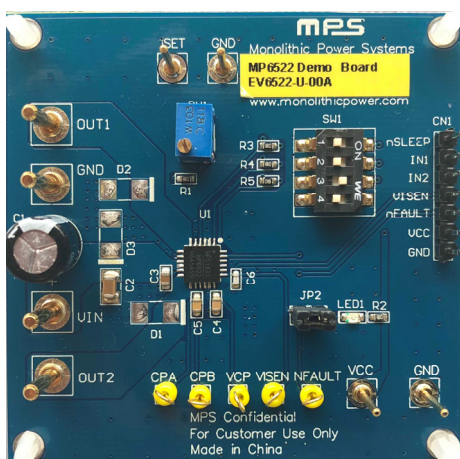
- Wide 5.4V to 35V Input Voltage Range
- Up to 3.2A Peak Output Current
- Internal Current Sense Output
- 3.3V and 5V Compatible Logic Supply
- OCP, OVP, OTP
- Fault Indication Output

## APPLICATIONS

- Solenoid Drivers
- DC Brush Motor Drive

All MPS parts are lead-free, halogen-free, and adhere to the RoHS directive. For MPS green status, please visit the MPS website under Quality Assurance. "MPS" and "The Future of Analog IC Technology" are registered trademarks of Monolithic Power Systems, Inc.

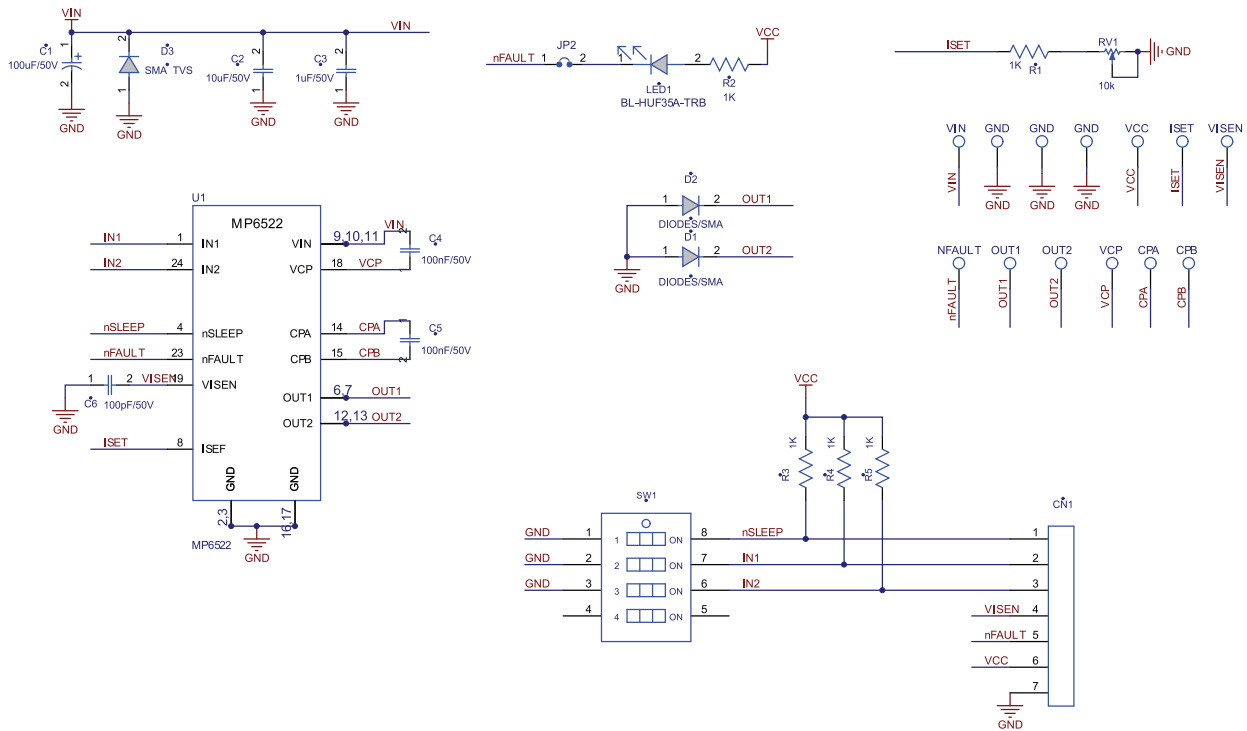
# EV6522-U-00A EVALUATION BOARD



**(L x W x H) 6.35cm x 6.35cm x 1cm**

|                     |                      |
|---------------------|----------------------|
| <b>Board Number</b> | <b>MPS IC Number</b> |
| EV6522-U-00A        | MP6522GU             |

## EVALUATION BOARD SCHEMATIC



## EV6522-U-00A BILL OF MATERIALS

| Qty | RefDes                       | Value | Description           | Package       | Manufacturer | Manufacturer P/N   |
|-----|------------------------------|-------|-----------------------|---------------|--------------|--------------------|
| 1   | C1                           | 100μF | Electrolytic Cap. 50V | DIP           | JiangHai     | CD287-50V100       |
| 1   | C2                           | 10μF  | Ceramic Cap. 50V, X5R | 1206          | Murata       | GRM31CR61H106KA12L |
| 1   | C3                           | 1μF   | Ceramic Cap. 50V, X7R | 0805          | Wurth        | 885012207103       |
| 2   | C4, C5                       | 100nF | Ceramic Cap. 50V, X7R | 0805          | Murata       | GRM21BR71H104KA01L |
| 1   | C6                           | 100pF | Ceramic Cap. 50V, C0G | 0603          | Murata       | GRM1885C1H101JA01D |
| 5   | R1,R2,R3, R4,R5              | 1k    | Film Resistor. 1%     | 0603          | Yageo        | RC0603FR-071KL     |
| 1   | RV1                          | 10k   | Adjustable Resistor   | DIP           |              | 3296W-1-103F       |
| 1   | LED1                         |       | LED. 红光               | 0805          | 佰鸿           | 2012SURC-11        |
| 1   | JP2                          |       | 2PIN. 2.54MM          |               |              |                    |
| 1   | JP2                          |       | 2.54MM Short Jumper   |               |              |                    |
| 1   | SW1                          |       | 4-Bits Button         | SMD           | Wurth        | 418121270804       |
| 1   | CN1                          |       | 7PIN. 2.54MM          |               |              |                    |
| 1   | U1                           |       | H-Bridge Motor Driver | QFN24 (5x5mm) | MPS          | MP6522GU           |
| 4   | OUT1, OUT2, VIN, GND         |       | 2.0 公针                |               |              |                    |
| 4   | VCC, ISET, GND, GND          |       | 1.0 公针                |               |              |                    |
| 5   | CPA, CPB, VCP, VISEN, NFAULT |       | Test Points           |               |              |                    |
| 3   | D1, D2, D3                   | NS    |                       |               |              |                    |

## PRINTED CIRCUIT BOARD LAYOUT

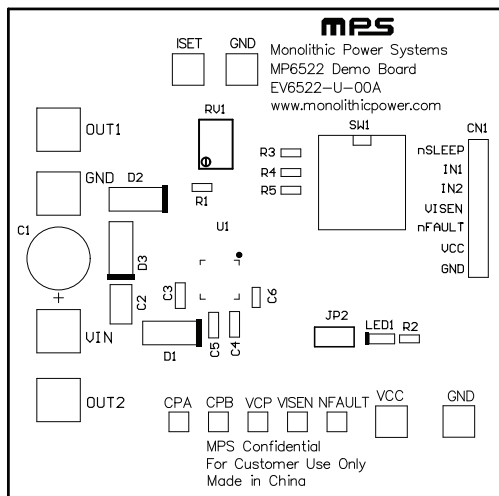


Figure 1: Top Silkscreen Layer

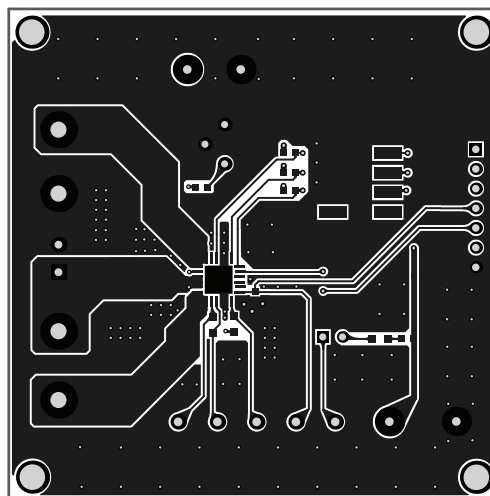


Figure 2: Top Layer

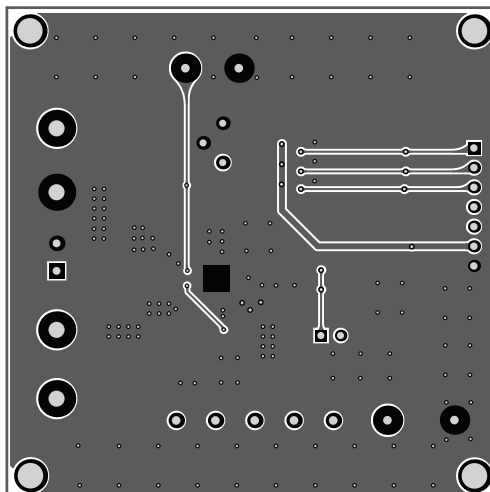


Figure 3: Bottom Layer

## QUICK START GUIDE

1. Attach the input voltage ( $5.4V \leq V_{IN} \leq 35V$ ) and input ground to the VIN and GND connectors respectively.
2. Input control and logic signal can be set either through the CN1 connector by the external MCU or through the SW1 by manual action. Manual action requires an external 3.3V or 5V VCC voltage as a pull-up power supply. The logic truth table is shown in below:

| IN1 | IN2 | OUT1 | OUT2 | Function           |
|-----|-----|------|------|--------------------|
| 0   | 0   | Z    | Z    | <i>Coast</i>       |
| 0   | 1   | L    | H    | <i>Forward</i>     |
| 1   | 0   | H    | L    | <i>Reverse</i>     |
| 1   | 1   | L    | L    | <i>Brake (low)</i> |

3. The VISEN output voltage scaling is set by the RV1 adjustable resistor.

**NOTICE:** The information in this document is subject to change without notice. Users should warrant and guarantee that third party Intellectual Property rights are not infringed upon when integrating MPS products into any application. MPS will not assume any legal responsibility for any said applications.