EV6550-G-00A

22V, 2A H-Bridge Motor Driver Evaluation Board

DESCRIPTION

The EV6550-G-00A is an evaluation board for the MP6550, an H-bridge motor driver. It operates from a supply voltage of up to 22V and can deliver motor current up to 2A.

The MP6550 has a PWM interface, which is compatible with industry-standard devices. Very low standby circuit current can be achieved when disabled the device. The MP6550 is available in a QFN2X2-12 package, it is typically used to drive a DC brushed motor.

ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Units
Input Voltage	V_{IN}	1.8-22	V
Output Current	I_{OUT}	2	A

FEATURES

- Wide 1.8V to 22V Input Voltage Range
- Up to 2A Continuous Driver Current
- Built-in 3.3V Reference Output
  PWM Input Interface which is Compatible Industry-standard Devices
  Low Standby Circuit Current
- Thermal Shutdown Protection
- Short Circuit Protection
- Available in a QFN2X2-12 Package

APPLICATIONS

- Solenoid Drivers
- DC Brush Motor Drive

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EV6550-G-00A EVALUATION BOARD

(L × W × H) 6.35cm x 6.35cm x 1cm

Board Number	MPS IC Number
EV6550-G-00A	MP6550GG

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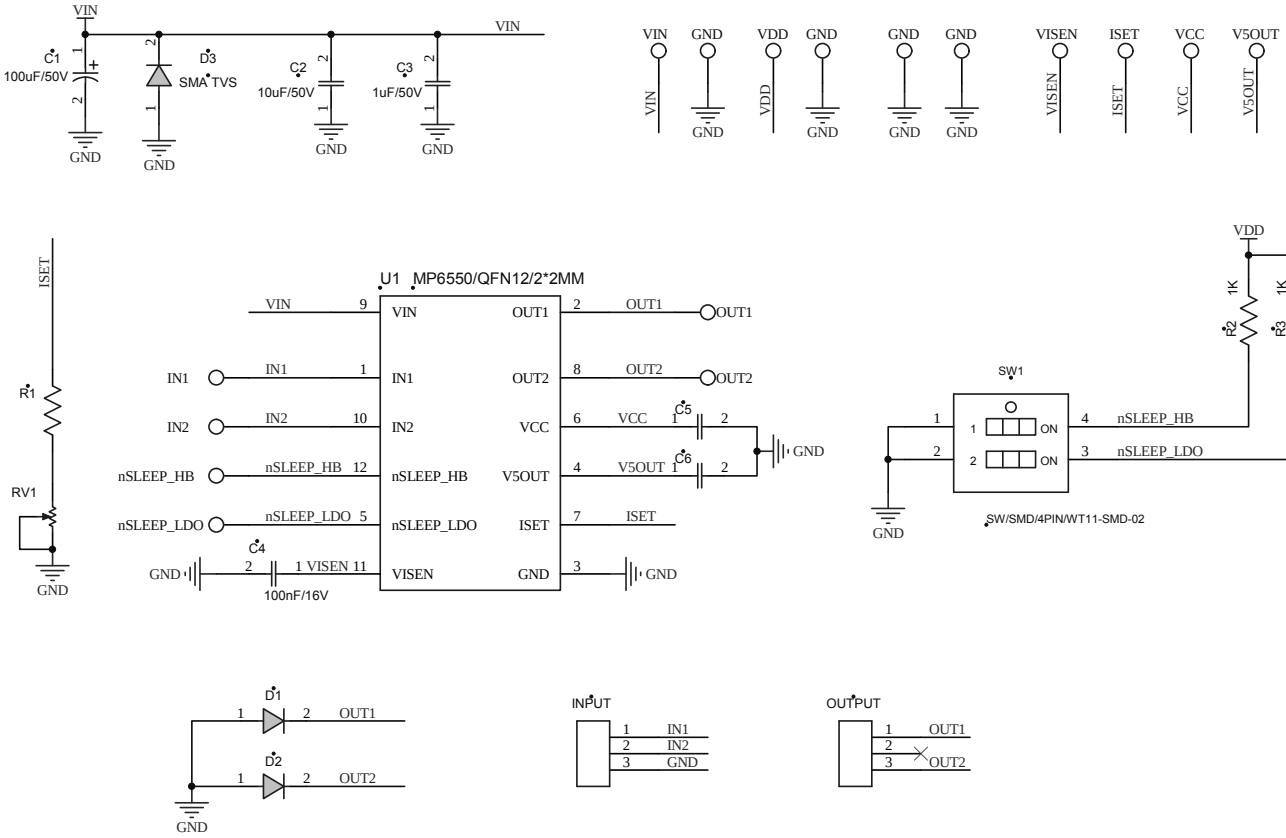
EVALUATION BOARD SCHEMATIC



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EV6550-G-00A BILL OF MATERIALS

Qty	RefDes	Value	Description	Package	Manufacturer	Manufacturer P/N
1	C1	100μF/ 50V	Electrolytic Capacitor;50V;Electrolytic	DIP	Rubycon	50YXF100MEFC
2	C2	10μF/ 50V	Ceramic Capacitor;50V;X7R	1210	muRata	GRM32ER71H106KA12L
1	C3	100nF/ 50V	Ceramic Capacitor;50V;X7R	0603	muRata	GRM188R71H104KA93D
1	C4	100pF/ 50V	Ceramic Capacitor;50V;X7R	0603	muRata	GRM1885C1H101JA01D
2	C5, C6	1μF/ 16V	Ceramic Capacitor;16V;X7R;	0603	muRata	GRM188R71C105KA12D
1	R1	1k	Film Resistor;1%	0603	Yageo	RC0603FR-071KL
2	R2, R3	4.7k	Film Resistor;1%	0603	Yageo	RC0603FR-074K7L
1	RV1	10k	Potentiometer	DIP		3266W-1-103F
3	D1, D2, D3	NS				
1	SW1		Dual Switch			WT11-SMD-02
8	VCC, NSLEEP_LDO, NSLEEP_HB, VISEN, V5OUT, IN1, IN2, ISET		Test Point			
2	OUTPUT, INPUT		2.54MM Connector			
6	OUT1, OUT2, VDD, GND1, GND2, GND3		1MM 公针			
2	VIN, GND		2MM 公针			
1	U1		H-bridge motor driver	QFN2X2-12	MPS	MP6550GG

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PRINTED CIRCUIT BOARD LAYOUT

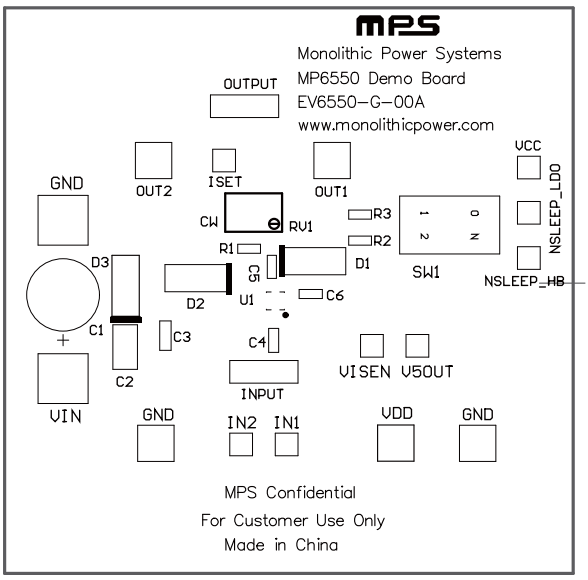

Figure 1: Top Silkscreen Layer

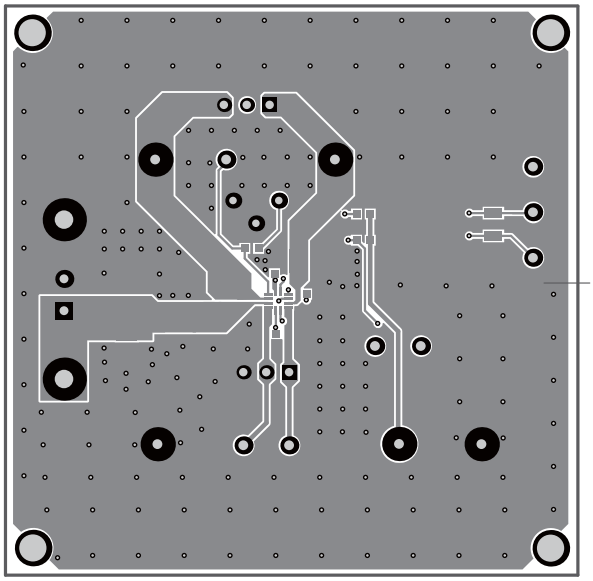

Figure 2: Top Layer

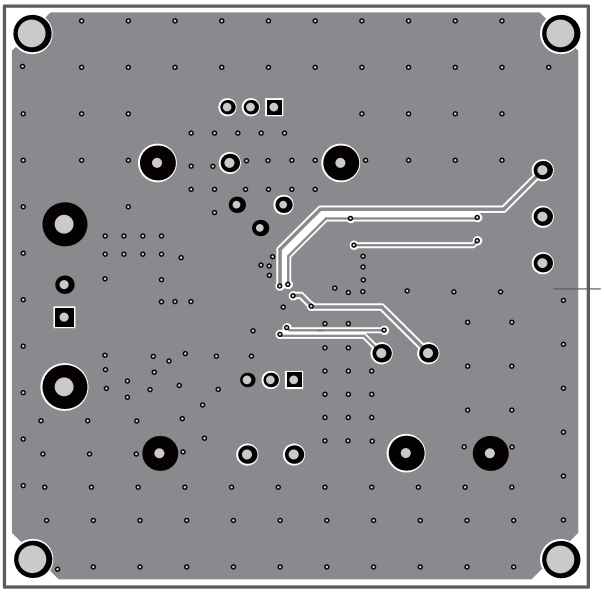

Figure 3: Bottom Layer

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QUICK START GUIDE

1. Attach the input signal (PWM or DC) to the INPUT connector.
2. Attach the VDD supply voltage (3.3V) and ground to the VDD and GND terminals respectively.
3. Attach the VIN supply voltage (1.8V ≤ V_{IN} ≤ 22V) and ground to the VIN and GND terminals respectively.
4. Switch SW1 to enable or disable H-bridge and LDO output.
5. Rotate RV1 to adjust the output current limit.

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