

DESCRIPTION

The EV6500GU-00A is an evaluation board for the MP6500GU, a stepper motor driver with a built-in micro stepping translator.

It operates from a supply voltage of up to 35V and can deliver motor current up to 2.5A. It can operate a bipolar stepper motor in full-, half-, quarter-, and eighth- step modes by setting the MS2, MS1. The input control signals for the MP6500GU are applied through the connector or generated on board.

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	V_{IN}	4.5 - 35	V
Maximum Output Current	I_{OUT-L}	2.5	A
Decay Mode	Automatic Decay		

FEATURES

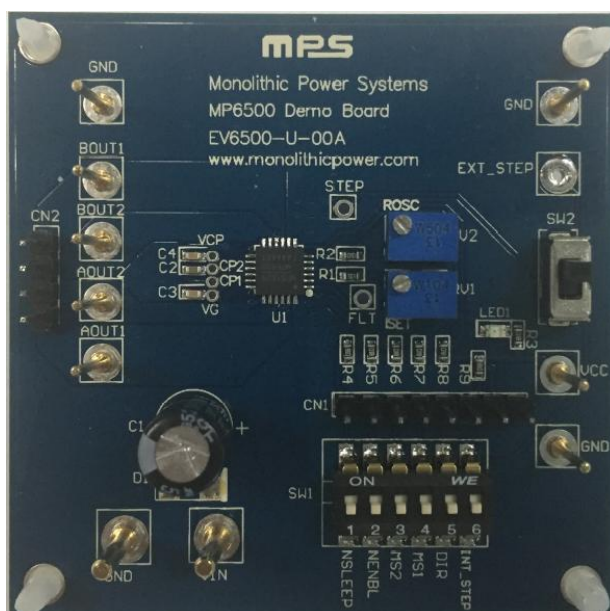
- Wide 4.5V to 35V Input Voltage Range
- Up to 2.5A Programmable Output Current
- Full-, Half-, Quarter-, and Eighth- Step Mode
- Automatic Decay Mode
- OCP, OVP, OTP
- Fault Indication Output

APPLICATIONS

- Bipolar Stepper Motors
- Printers

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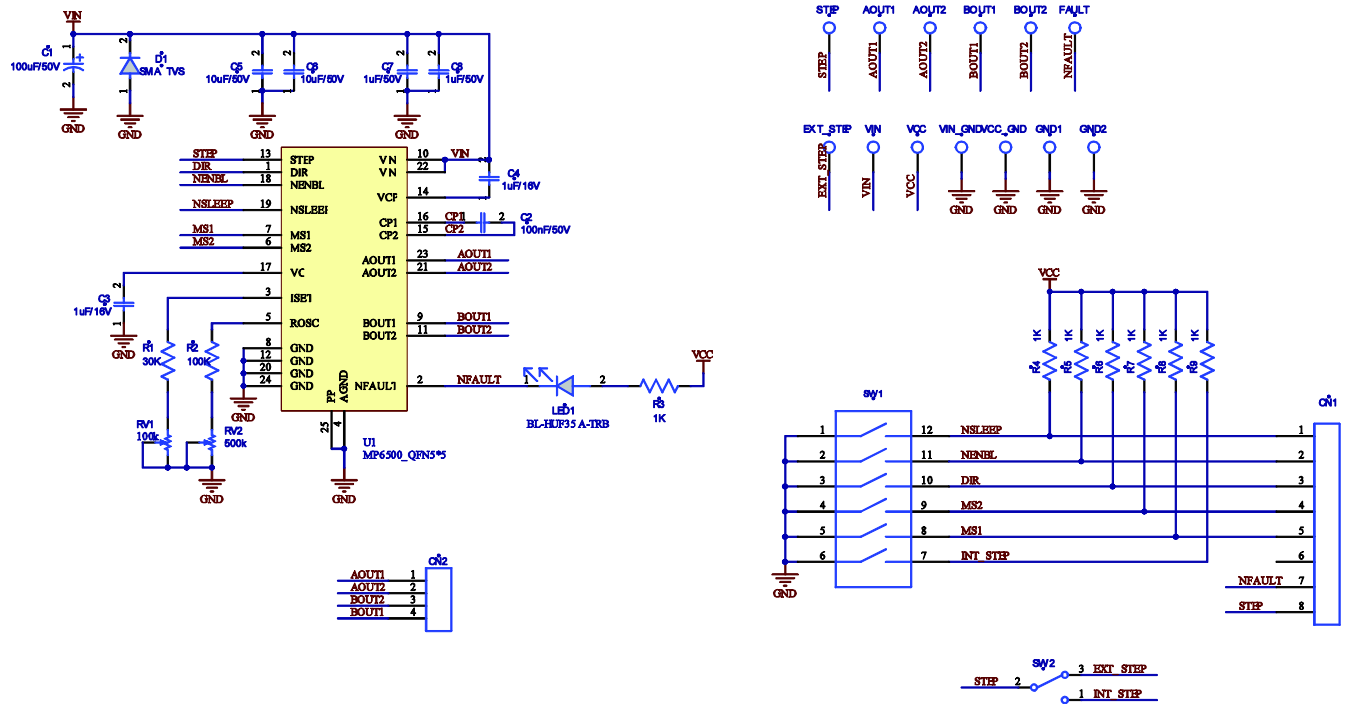
EV6500GU-00A EVALUATION BOARD



(L x W x H) 2.54" x 2.54" x 0.4"
(6.35cm x 6.35cm x 1cm)

Board Number	MPS IC Number
EV6500GU-00A	MP6500GU

EVALUATION BOARD SCHEMATIC



EV6500GU-00A BILL OF MATERIALS

Qty	RefDes	Value	Description	Package	Manufacturer	Manufacturer P/N
1	C1	100μF/50V	Electrolytic Capacitor; 50V;Electrolytic	DIP	Rubycon	50YXF100MEFC
1	C2	100nF/50V	Ceramic Capacitor; 50V;X7R	0805	muRata	GRM21BR71H104KA01L
2	C3, C4	1μF/16V	Ceramic Capacitor; 16V;X7R;	0603	muRata	GRM188R71C105KA12D
2	C5, C6	10μF/50V	Ceramic Capacitor; 50V;X7R	1210	muRata	GRM32ER71H106KA12L
2	C7, C8	1μF/50V	Ceramic Capacitor; 50V;X7R	0805	muRata	GRM21BR71H105KA12L
7	R3, R4, R5, R6, R7, R8, R9	1k	Film Resistor;1%	0603	Yageo	RC0603FR-071KL
1	R1	30k	Film Resistor;1%	0603	Yageo	RC0603FR-0730KL
1	R2	100k	Film Resistor;1%	0603	Yageo	RC0603FR-07100KL
1	RV1	100k	Adjustable Resistor	DIP		3266W-1-104LF
1	RV2	500k	Adjustable Resistor	DIP		3266W-1-504LF
1	LED1		LED;红光;	0805	佰鸿	BL-HUE35A-AV-TRB
1	SW1		6-Bits Dial Switch	SMD	Würth	418121270806
1	SW2		Button			SS-12D01EG4
1	CN1		8PIN. 2.54MM Connector			
1	CN2		4PIN. 2.54MM Connector			
1	D1	NS				
2	STEP, FAULT		Test Point			
2	VIN, VIN_GND		2.0 公针			
9	VCC, VCC_GND, AOUT1, AOUT2, BOUT1, BOUT2, EXT_STEP, GND1, GND2		1.0 公针			
1	U1		Stepper Motor Driver	QFN24 (5mmx5mm)	MPS	MP6500GU

PRINTED CIRCUIT BOARD LAYOUT

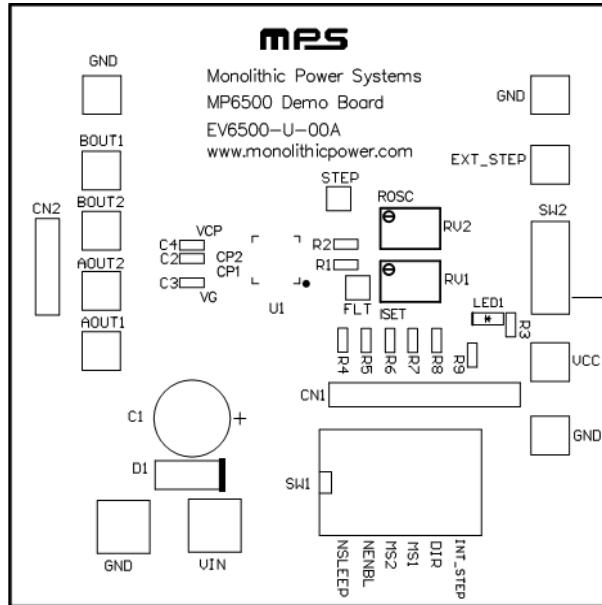


Figure 1—Top Silk Layer

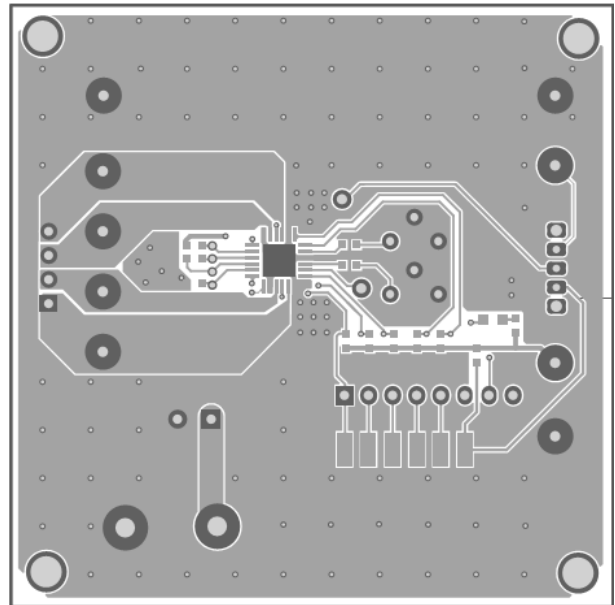


Figure 2—Top Layer

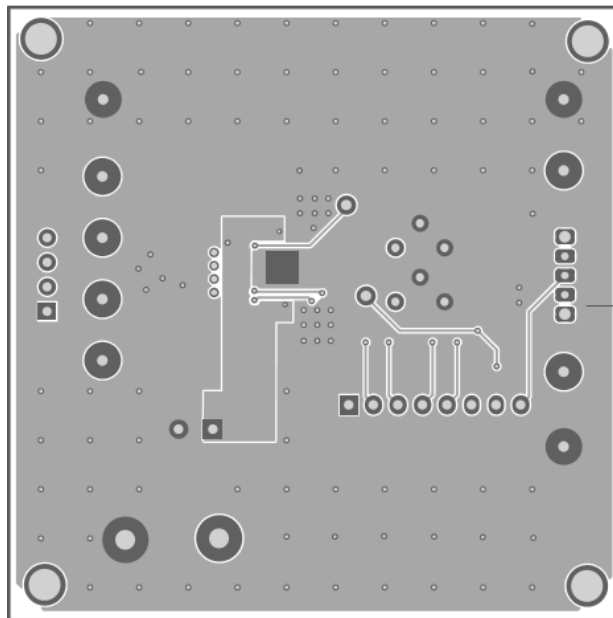


Figure 3—Bottom Layer

QUICK START GUIDE

1. Attach the input voltage ($4.5V \leq V_{IN} \leq 35V$) and input ground to the VIN and GND connectors respectively.
2. Switch the SW2 to the position 3(Top side) to enable external step signal input from the EXT_STEP connector.
3. Attach the step signal to the EXT_STEP connector.
4. 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 5V Vcc voltage as a pull-up power supply.

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