



The Future of Analog IC Technology®

EV6601-U-00A

35V, 2.5A

Bipolar Stepper Motor Driver Evaluation Board

DESCRIPTION

The EV6601-U-00A is an evaluation board for the MP6601, a stepper motor driver with parallel inputs and current regulation.

The EV6601-U-00A 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- and quarter- step modes by setting corresponding inputs. The input control signals for the MP6601 are applied through the connectors 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
- Two Internal Full-bridge Drivers
- Internal Current Sensing and Regulator
- No Control Power Supply Required
- Operates from Full-step to 1/4-step
- Automatic Current Decay
- Over-current Protection
- Input OVP, UVLO Function
- Thermal Shutdown Protection
- Fault Indication Output

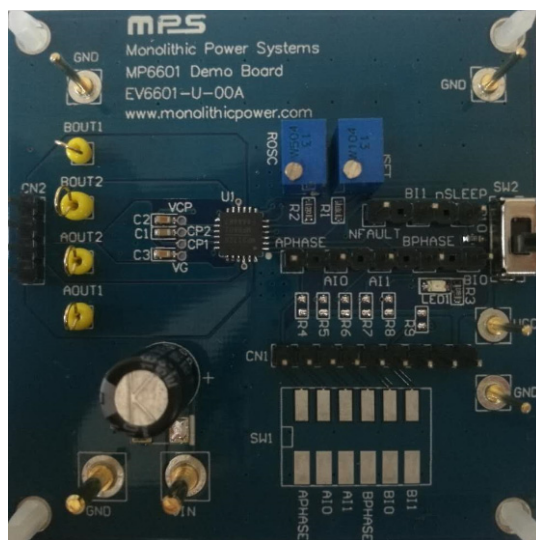
APPLICATIONS

- Bipolar Stepper Motors
- Printers

All MPS parts are lead-free, halogen free, and adhere to the RoHS directive. For MPS green status, please visit MPS website under Quality Assurance.

"MPS" and "The Future of Analog IC Technology" are Registered Trademarks of Monolithic Power Systems, Inc.

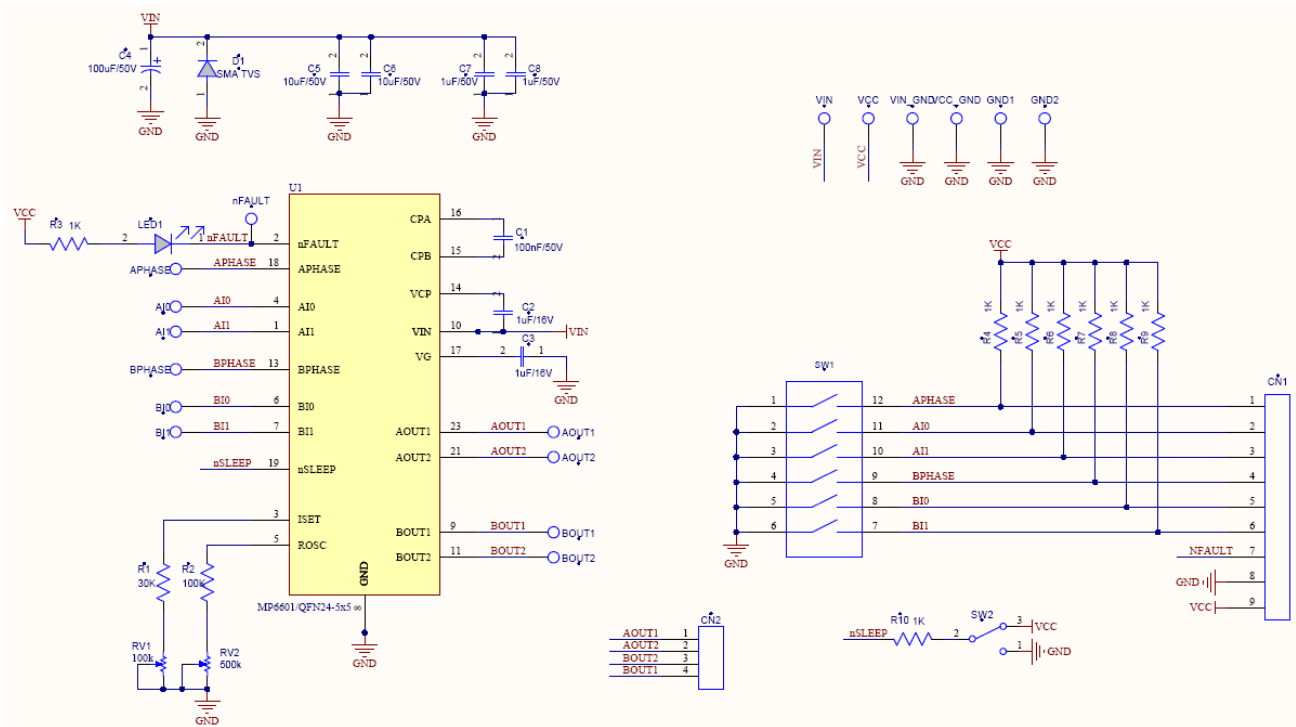
MP6601 EVALUATION BOARD



(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
EV6601-U-00A	MP6601GU

MP6601 EVALUATION BOARD SCHEMATIC



MP6601 EVALUATION BOARD BILL OF MATERIALS

Qty	RefDes	Value	Description	Package	Manufacturer	Manufacturer P/N
1	C1	100nF/50V	Ceramic Capacitor;50V;X7R	0603	muRata	GRM188R71H104KA93D
2	C2, C3	1µF/16V	Ceramic Capacitor;16V;X7R;	0603	muRata	GRM188R71C105KA12D
1	C4	100µF/50V	Electrolytic Capacitor;50V;Electrolytic	DIP	Rubycon	50YXF100MEFC
2	C5, C6	10µF/50V	Ceramic Capacitor;50V;X7R	1210	muRata	GRM32ER71H106KA12L
2	C7, C8	1µF/50V	Ceramic Capacitor;50V;X7R	0805	muRata	GRM21BR71H105KA12L
1	R1	30K	Film Resistor;1%	0603	Yageo	RC0603FR-0730KL
1	R2	100K	Film Resistor;1%	0603	Yageo	RC0603FR-07100KL
2	R3, R10	1K	Film Resistor;1%	0603	Yageo	RC0603FR-071KL
0	R4, R5, R6, R7, R8, R9	NS				
1	RV1	100k	Adjustable Resistor	DIP		3266W-1-104F
1	RV2	500k	Adjustable Resistor	DIP		3266W-1-504LF
1	LED1		LED;红光;	0805	佰鸿	BL-HUE35A-AV-TRB
0	SW1	NS	6-Bits Dial Switch	SMD	Würth	418121270806
1	SW2		Button			SS-12D01EG4
1	CN1		9PIN. 2.54MM Connector			
1	CN2		4PIN. 2.54MM Connector			
0	D1	NS				
8	nSLEEP, nFAULT, APHASE, AI0, AI1, BPHASE, BI0, BI1		Test Point			
2	VIN, VIN_GND		2.0 公针			
8	VCC, VCC_GND, AOUT1, AOUT2, BOUT1, BOUT2, GND1, GND2		1.0 公针			
1	U1		Stepper Motor Driver	QFN24 (5mmx5mm)	MPS	MP6601GU

EV6601-U-00A PRINTED CIRCUIT BOARD LAYOUT

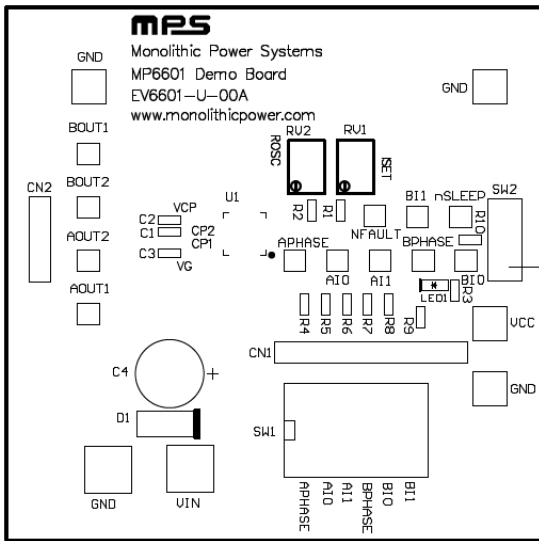


Figure 1—Top Silk Layer

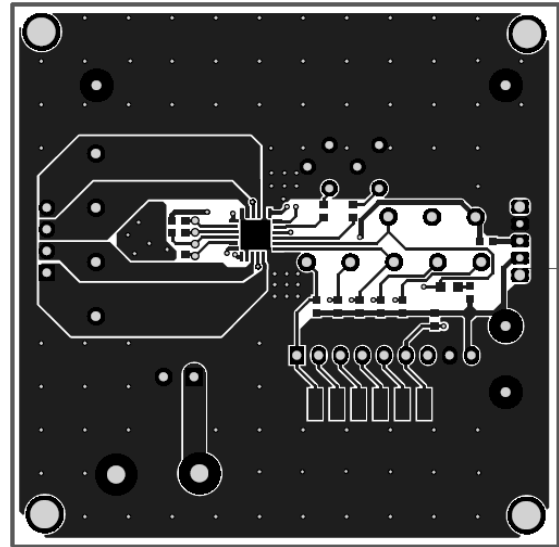


Figure 2—Top Layer

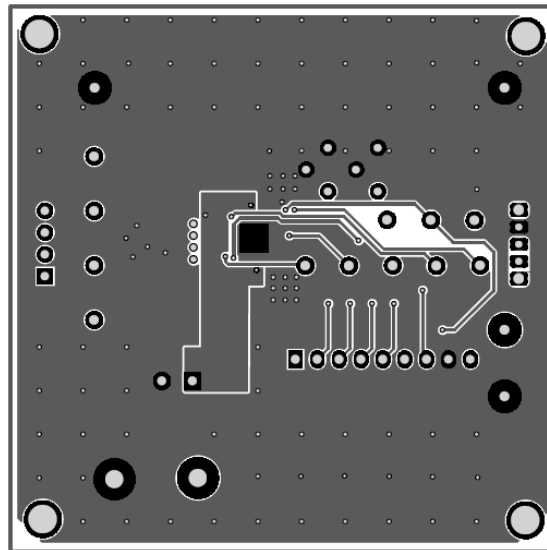


Figure 3—Bottom Layer