

## DESCRIPTION

The EV20049DC-01A evaluation board demonstrates the performance of MP20049, a low noise, low dropout and high PSRR linear regulator. It operates from a 2.3V to 6V input voltage and the output voltage is preset internally.

The EV20049DC-01A can supply up to 150mA of load current, and features current limiting, over temperature protection.

An internal PMOS pass element is used to allow a low 55uA ground current at no load, and drops down to 1uA when the device is disabled, making the MP20049 suitable for battery-power devices.

## ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	V <sub>IN</sub>	3.3 – 6	V
Output Voltage	V <sub>OUT</sub>	2.8	V
Load Current	I <sub>OUT</sub>	150	mA

## FEATURES

- Up to 150mA Output Current
- Low 50mV Dropout at 120mA
- Fast Transient Response
- 78dB PSRR at 1kHz
- 16μV<sub>RMS</sub> Low Noise Output
- Current Limit and Thermal Protection

## APPLICATIONS

- Telecom
- Servers
- DSP, FPGA Supplies

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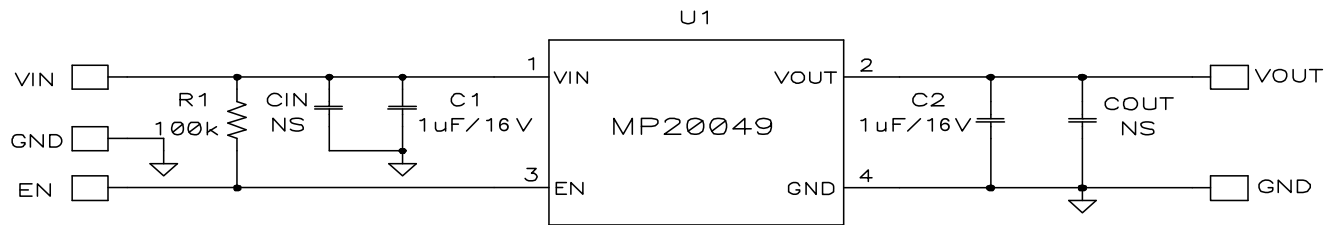
## EV20049DC-01A EVALUATION BOARD



(L x W x H) 2.5" x 2.5" x 0.4"  
(6.35cm x 6.35cm x 1.1cm)

Board Number	MPS IC Number
EV20049DC-01A	MP20049DC-2.8

## EVALUATION BOARD SCHEMATIC



## EV20049DC-01A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Part Number
2	C1, C2	1µF	Ceramic Capacitor X5R, 16V	0603	TDK	C1608X5R1C105K
0	CIN	NS				
0	COUT	NS				
1	R1	100k	Film Res, 1%	0603	Any	
1	U1		LDO Regulator	WLCSP	MPS	MP20049-2.8

## PRINTED CIRCUIT BOARD LAYOUT

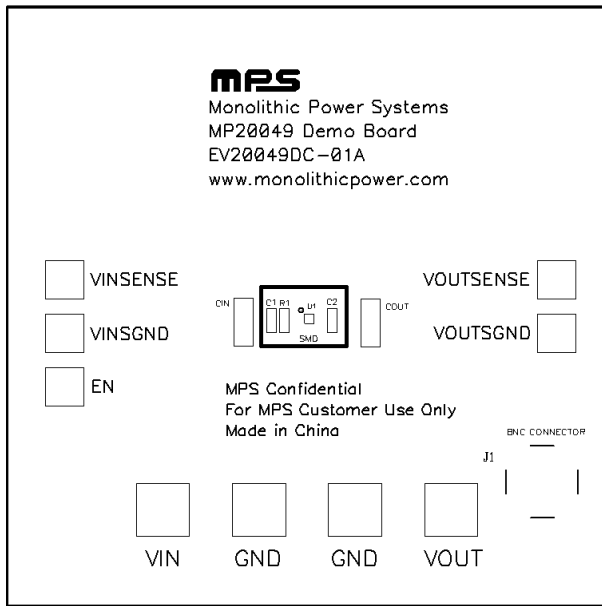


Figure 1—Top Silk Layer

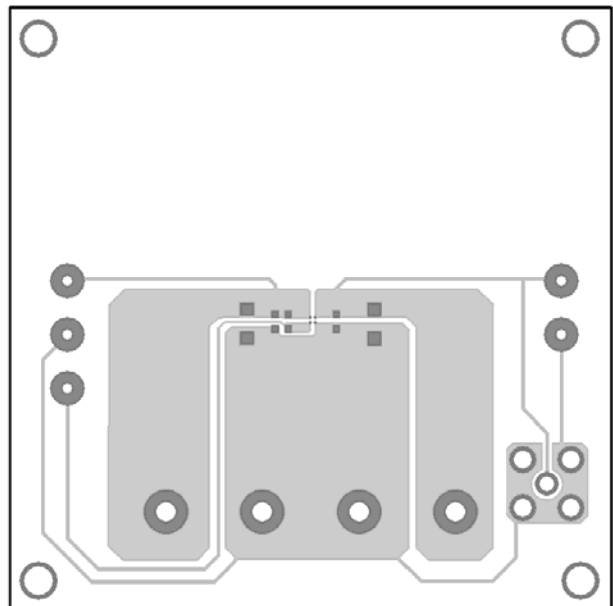


Figure 2—Top Layer

## QUICK START GUIDE

The output voltage of this board is set to 2.8V by operating from +3.3V to +6V input. The board layout accommodates most commonly used resistors and capacitors.

1. The EN pin is connected to VIN for automatic startup. You can connect EN to GND to disable the MP20049. Do not float the EN pin.
2. Attach the positive and negative ends of the load to the VOUT and GND pins, respectively.
3. Attach the input voltage ( $3.3V \leq V_{IN} \leq 6V$ ) and input ground to the VIN and GND pins, respectively.

To evaluate the other versions of MP20049DC with different output voltages, carefully remove the IC (U1) and replace it with the corresponding chip. Please refer to the datasheet for the detailed information of different output voltage option of MP20049DC.

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