

DESCRIPTION

The EV20046DQ-00A evaluation board demonstrates the performance of MP20046, a low noise, low dropout and high PSRR linear regulator. It operates from a 2.7V to 5.5V input voltage and the output voltage is preset internally which ranges from 1.5V to 3.3V.

The EV20046DQ-00A can supply up to 2A of load current, and features current limiting, over temperature protection and power-good status.

An internal PMOS pass element is used to allow a low 75 μ A ground current at full load, and drops down to 1 μ A when the device is disabled, making the MP20046 suitable for battery-power devices.

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	V_{IN}	4.3 – 5.5	V
Output Voltage	V_{OUT}	3.3	V
Load Current	I_{OUT}	2	A

FEATURES

- Up to 2A Output Current
- Low 210mV Dropout at 2A
- Fast Transient Response
- 70dB PSRR at 100Hz
- 17 μ V_{RMS} Low Noise Output
- Open Drain Power-Good Status Output
- Current Limit and Thermal Protection

APPLICATIONS

- Telecom
- Servers
- DSP, FPGA Supplies

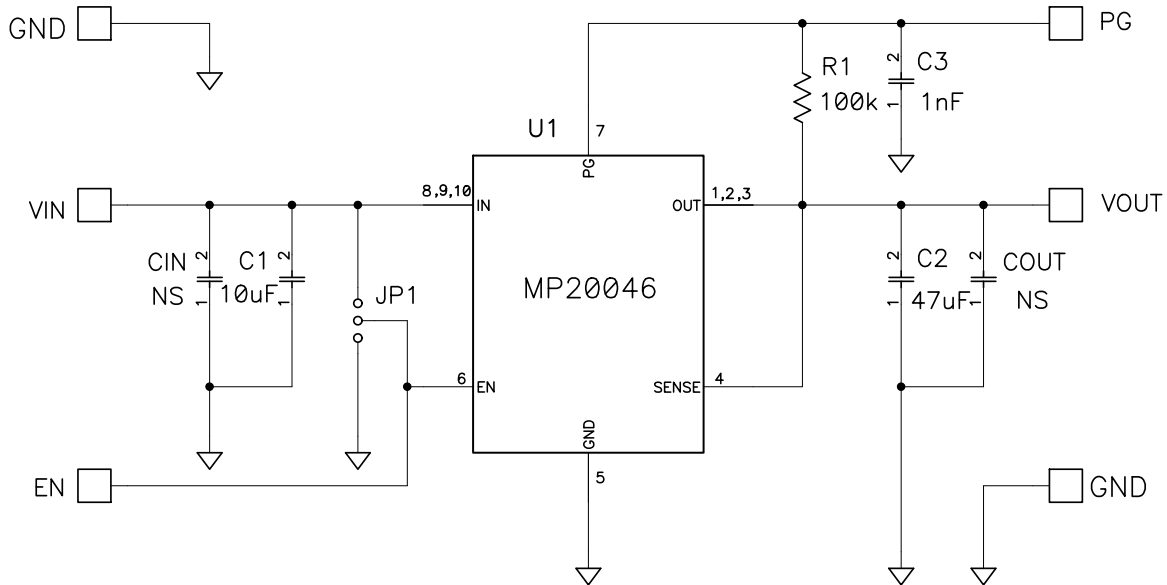
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EV20046DQ-00A EVALUATION BOARD



(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
EV20046DQ-00A	MP20046DQ

EVALUATION BOARD SCHEMATIC

EV20046DQ-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Part Number
1	C1	10µF	Ceramic Capacitor X5R, 16V	0805	KYOCERA	CM21X5R106K16AT
1	C2	47µF	Ceramic Capacitor X5R, 10V	1210	Murata	GRM32ER61A476KE20L
1	CIN	NS				
1	COUT	NS				
1	C3	1nF	Ceramic Capacitor X7R, 50V	0805	TDK	C2012X7R1H102K
1	R1	100k	Film Res, 5%	0603	Any	
1	U1		LDO Regulator	QFN10(3x3)	MPS	MP20046DQ

PRINTED CIRCUIT BOARD LAYOUT

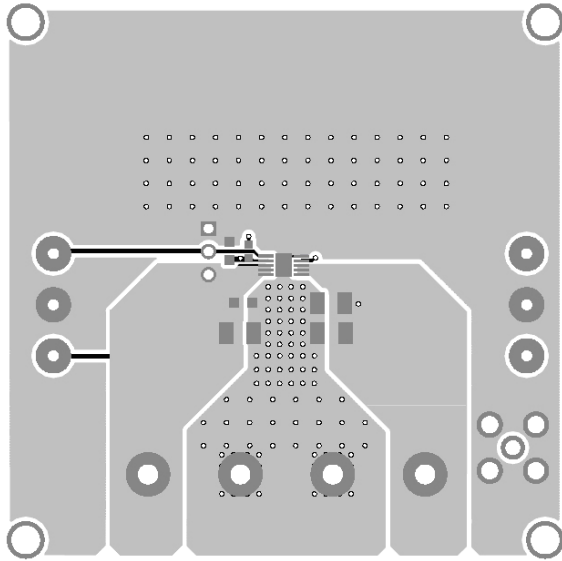


Figure 1—Top Layer

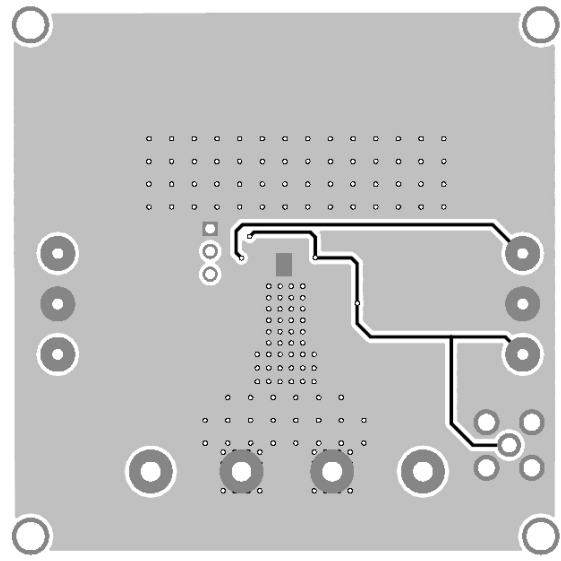


Figure 2—Bottom Layer

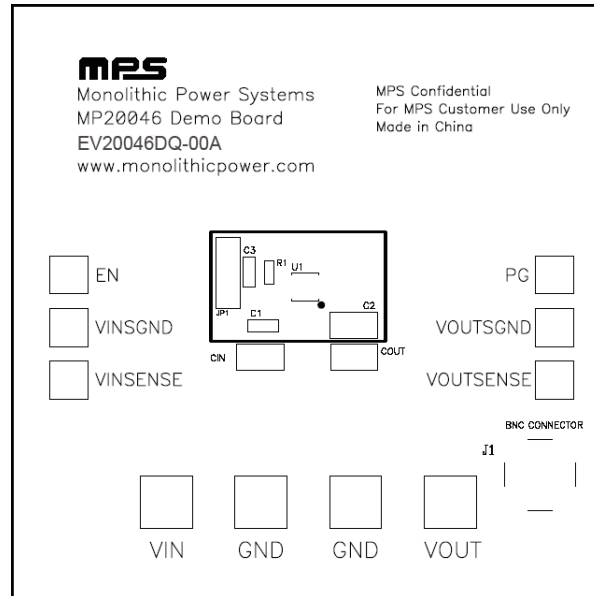


Figure 3—Top Silk Layer