

DESCRIPTION

The EV20044DGT-PP-00A evaluation board demonstrates the performance of MP20044, a dual channel, low noise, low dropout and high PSRR linear regulator. It operates from a 3.5V to 6V input voltage and regulates the output voltage to 3V for output channel 1 and 3V for output channel 2.

Each output channel can supply up to 300mA of load current. The EN1 and EN2 pins control each output respectively. The EV20044DGT-PP-00A features current limiting and over temperature protection, stability with ultra low ESR ceramic capacitors, and fast transient response.

EV20044DGT-PP-00A can also be used to evaluate the other version MP20044 with different output voltage by replacing the chip on the evaluation board.

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	V_{IN}	3.5 to 6.0	V
Output Voltage	V_{OUT1}	3	V
	V_{OUT2}	3	V
Operating Temperature		-40 to +85	°C

FEATURES

- Wide Operating Voltage Ranges: 3.5V to 6V
- Up to 300mA Output Current (Per Channel)
- Dual Enable Pins Control Each Output
- 72dB PSRR at 10kHz
- 11 μ V_{RMS} Low Noise Output
- 110mV Dropout at 100mA Load
- Very Fast Transient Responses with Small Output Capacitor
- Current Limiting and Thermal Protection

APPLICATIONS

- Cellular Phones
- Battery-powered Equipment
- Laptop, Notebook, and Palmtop Computers
- Hand-held Equipment
- Wireless LAN

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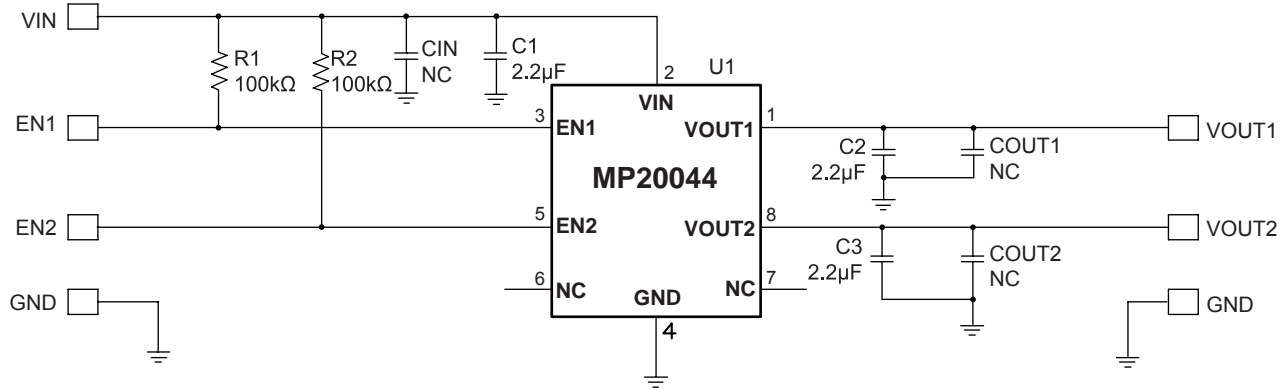
EV20044DGT-PP-00A EVALUATION BOARD



(L x W x H) 2.0" x 2.0" x 0.4"
(5.0cm x 5.0cm x 1.1cm)

Board Number	MPS IC Number
EV20044DGT-PP-00A	MP20044DGT-PP

EVALUATION BOARD SCHEMATIC



EV20044DGT-PP-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Part Number
3	C1, C2, C3	2.2μF	Ceramic Capacitor, X7R/ X5R, 10V	0805	TDK	C2012X5R1A225K
2	R1, R2	100k	Film Res, 5%	0805	Yageo	RC0805JR-07100KL
0	CIN	NS				
0	COUT1, COUT2	NS				
1	U1		LDO Regulator	TQFN8(2x2)	MPS	MP20044DGT-PP

PRINTED CIRCUIT BOARD LAYOUT

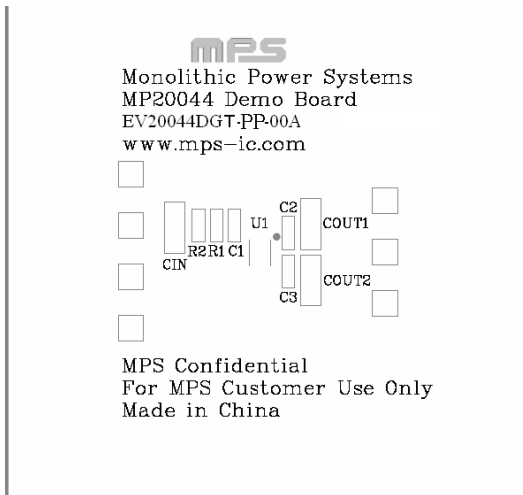


Figure 1—Top Silk Layer

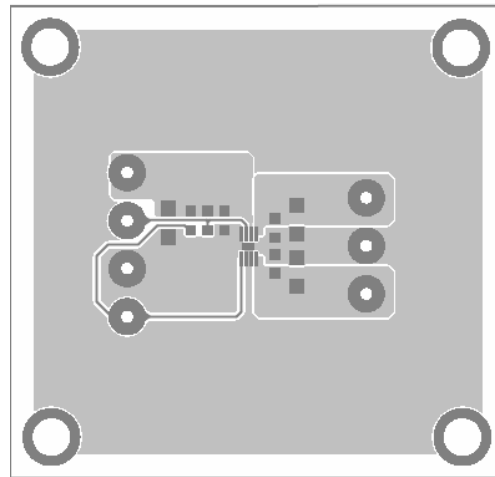


Figure 2—Top Layer

QUICK START GUIDE

The output voltage of this board is set to 3V for channel 1 and 3V for channel 2. The EN pin is connected to V_{IN} with a 100k Ω resistor for automatic startup. You can connect EN to GND to disable the MP20044.

1. Attach the positive and negative ends of the load to the V_{OUT} and GND pins, respectively.
2. Attach the input voltage ($3.5V \leq V_{IN} \leq 6V$) and input ground to the V_{IN} and GND pins, respectively.

To evaluate the other version MP20044 with different output voltage, carefully remove the IC (U1) and replace it with the corresponding chip. Please refer to the datasheet for the detailed information of the different output voltage option of MP20044.

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