

DESCRIPTION

The EV9218-GT-00A is an evaluation board designed to demonstrate the performance of the MP9218, a high-performance regulated charge pump converter. This board is a fully assembled and tested PCB. Its input voltage ranges from 2.8V to V_{OUT} , and its output voltage is regulated to a fixed 5V.

No external inductor is required, which provides additional simplicity and compactness. Internal soft-start circuitry effectively reduces the inrush current during start-up and while the device changes modes.

The MP9218 is a compact system solution, and is available in a TQFN-6 (2mmx2mm) package.

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input voltage	V_{IN}	2.8 to V_{OUT}	V
Output voltage	V_{OUT}	5	V

FEATURES

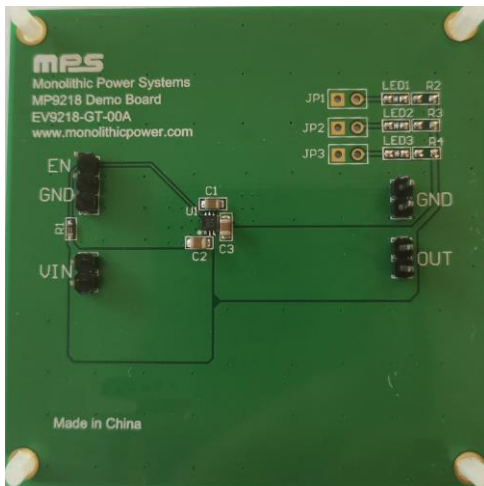
- Input Voltage Range: 2.8V to V_{OUT}
- Internal Soft Start
- Output Maximum Current up to 110mA
- Fixed 5V Output Voltage with 30mV Ripple
- 2x Charge Pump
- Fixed 1MHz Switching Frequency
- Over-Current Protection (OCP)
- Short-Circuit Protection (SCP)
- Inrush Current Limit
- Fully Assembled and Tested
- Available in a TQFN-6 (2mmx2mm) Package

APPLICATIONS

- Cell Phones, Smartphones, LED Backlights
- PDAs or Handheld Computers
- Cameras, Flash White LEDs
- LCD Display Supplies
- TV Remote Controls

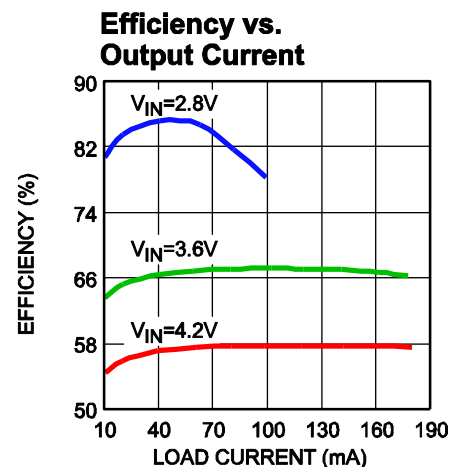
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EV9218-GT-00A EVALUATION BOARD



(LxW) 6.35cmx6.35cm

Board Number	MPS IC Number
EV9218-GT-00A	MP9218DG



QUICK START GUIDE

1. Connect the load terminals to:
 - a. Positive (+): VOUT
 - b. Negative (-): GND
2. Connect the power supply output terminals to:
 - a. Positive (+): VIN
 - b. Negative (-): GND
3. Preset the power supply output between 2.8V and 5V, then turn the power supply off.
4. Turn the power supply on. The EV9218-GT-00A should automatically start up.
5. To use the enable function, apply an input to the EN pin. Drive EN above 1.5V to turn the regulator on; drive EN below 0.4V to turn it off.
6. The switching frequency on the board is preset to 1.3MHz.

EVALUATION BOARD SCHEMATIC

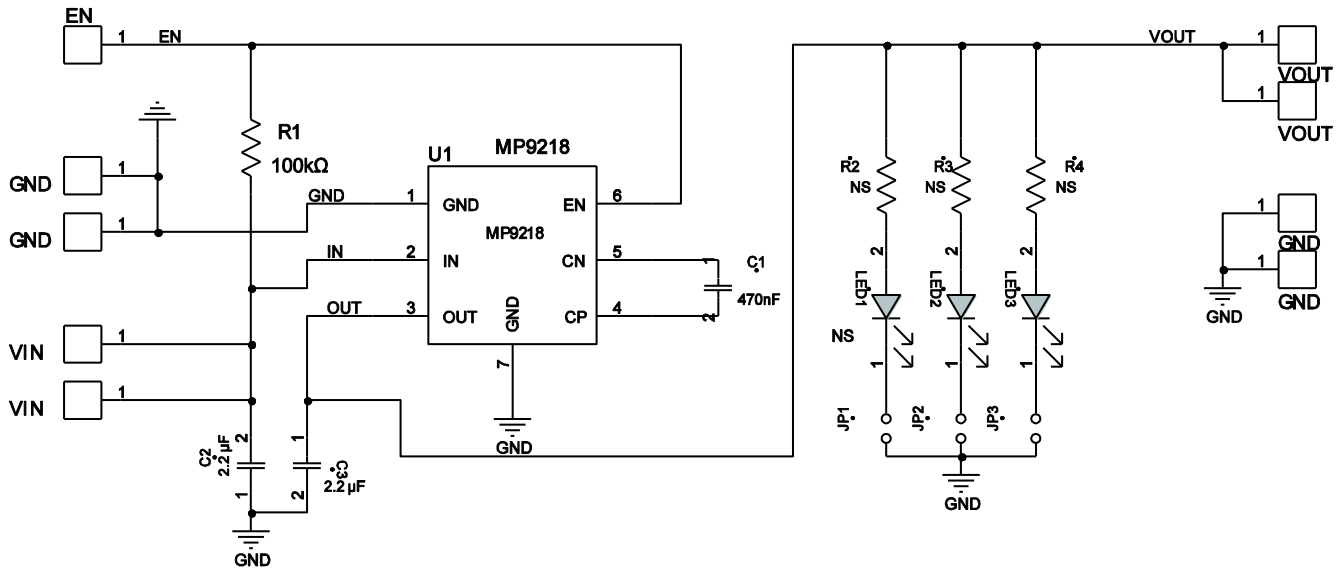


Figure 1: Evaluation Board Schematic

EV9218-GT-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Manufacturer P/N
1	C1	470nF	Ceramic capacitor, 16V, X7R, 0805	0805	Murata	GRM219R71C474KA0 1D
2	C2, C3	2.2μF	Ceramic capacitor, 50V, X5R	0805	Murata	GRM21BR61C225KA8 8L
1	R1	100kΩ	Film resistor, 1%	0603	Yageo	RC0603FR-0710RL
3	R2, R3, R4	NC	Film resistor, 5%	0603		
3	LED1, LED2, LED3	NC				
3	JP1, JP2, JP3	NC				
1	U1	MP9218	Regulated charge pump converter	TQFN-6 (2mmx2mm)	MPS	MP9218DGT-LF-Z
9	TP1-TP5	VIN, EN, VOUT, GND	TP	Straight Line		

PCB LAYOUT

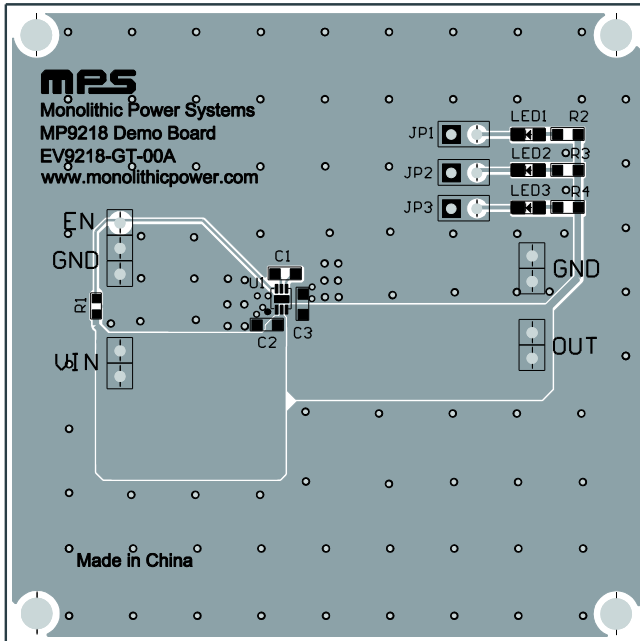


Figure 2: Top Layer

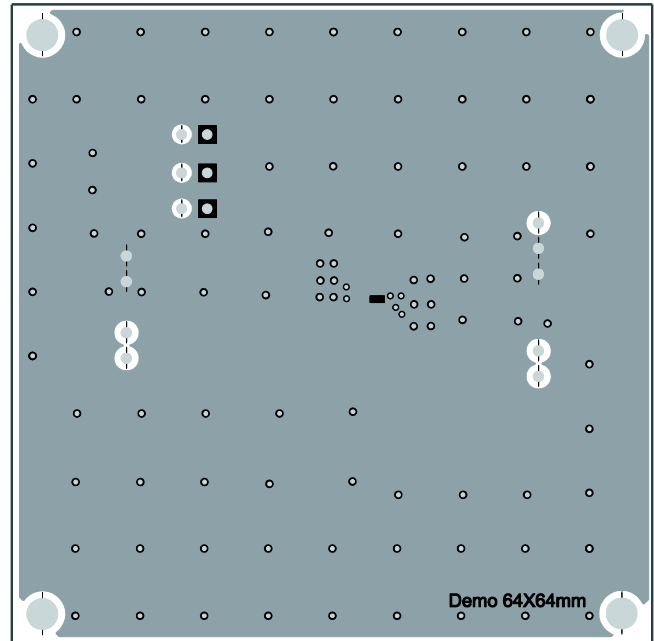


Figure 3: Bottom Layer