

### DESCRIPTION

The EV9361DJ-00A evaluation board is a fully assembled and tested PCB that demonstrates the performance of MP9361, a high performance, regulated charge pump converter. Its input voltage ranges from 2.8V to  $V_{OUT}$ . The output voltage is regulated to a fixed 5V.

No external inductor is required for simplicity and compactness. Internal soft-start circuit effectively reduces the in-rush current both while start-up and mode change.

This device, available in a TSOT23-6 package, provides a very compact system solution.

### ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	$V_{IN}$	2.8 – $V_{OUT}$	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
- Short Circuit Protection
- In-rush Current limit
- Available in a TSOT23-6 package and Lead (pb)-Free
- Fully Assembled and Tested

### APPLICATIONS

- Cell phone, Smart phone, LED backlight
- PDA or hand Held Computer
- Camera Flash White LED
- LCD Display Supply
- TV-Remote Control

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

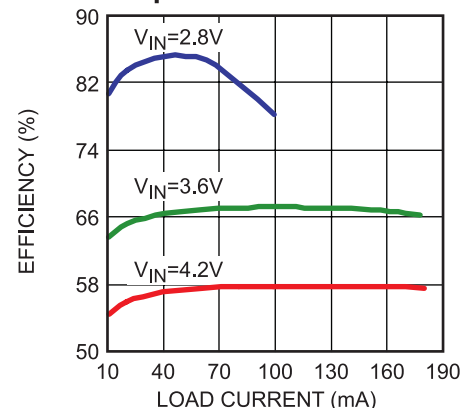
## EV9361DJ-00A EVALUATION BOARD

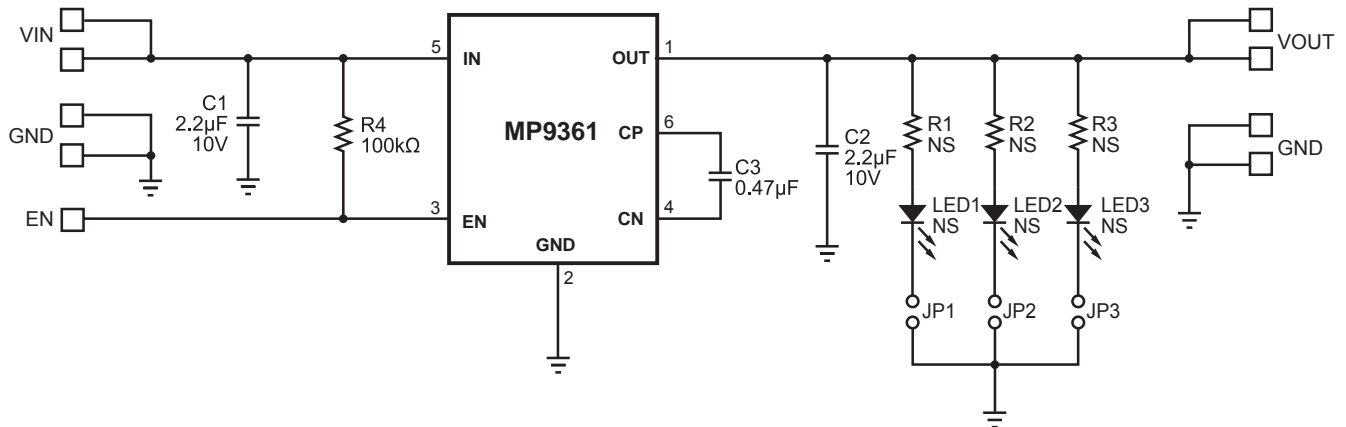


(L x W x H) 2.9" x 2.9" x 0.5"  
(7.5cm x 7.5cm x 1.2cm)

Board Number	MPS IC Number
EV9361DJ-00A	MP9361DJ

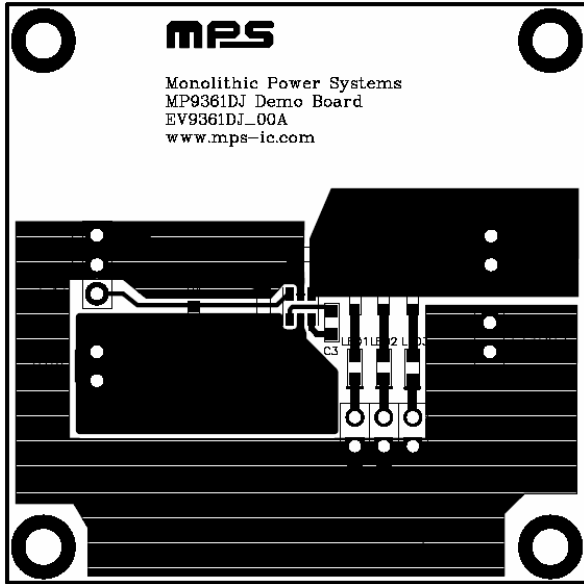
Efficiency vs.  
Output Current



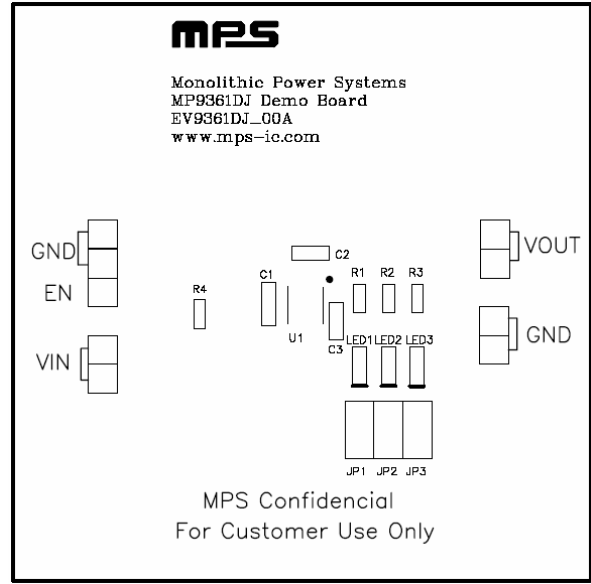
**EVALUATION BOARD SCHEMATIC**

**EV9361DJ-00A BILL OF MATERIALS**

Qty	Ref	Value	Description	Package	Manufacturer	Part Number
2	C1, C2	2.2µF	Ceramic Cap., 10V, X5R	805	TDK	C2012X7R1C225K
1	C3	0.47µF	Ceramic Cap., 25V, X7R	805	TDK	C2012X7R1E474M
3	R1, R2, R3	NS	Not Stuffed			
1	R4	100kΩ	Film Res.100KΩ, 5%	603	Panasonic	ERJ-3GEY1003V
3	LED1, LED2, LED3		Led Green, Surface Mount	603	Lumex	SML-LX0603GW-TR
1	VIN		Connector Header, 7-Pin, 0.100"		Sullins	
1	VOUT		Connector Header, 5-Pin, 0.100"		Sullins	
1	JP1		3-Pin Connector Header, 0.100"		Sullins	PTC03SAAN
1	U1		Step-Up Converter	TSOT23-6	MPS	MP9361DJ

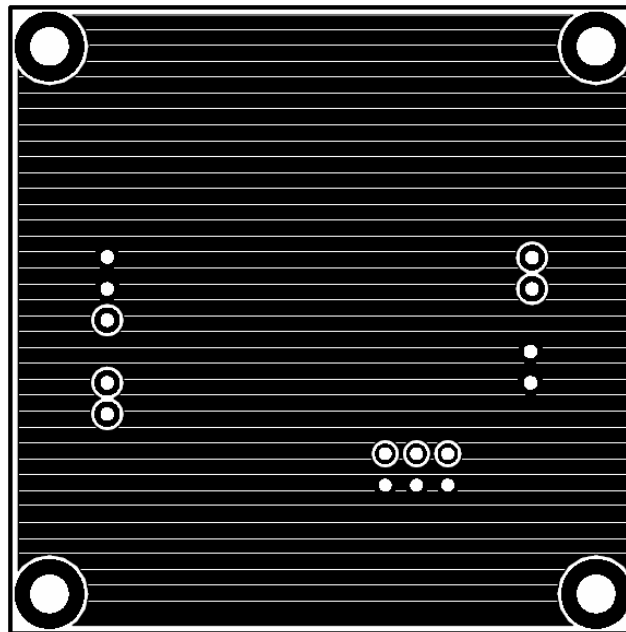
**PRINTED CIRCUIT BOARD LAYOUT**



**Figure 1—Top Layer**



**Figure 2—Top Silk Layer**



**Figure 3—Bottom Layer**

## QUICK START GUIDE

1. Connect the positive terminal of the load to VOUT pin, and the negative terminal of the load to GND pin
2. Connect the positive terminal of the power supply output to the VIN pin and the negative terminal of the power supply output to the GND pin
3. Preset the power supply output to 2.8V to 5V and turn off the power supply
4. Turn on the power supply. The EV9361DJ-00A will automatically start up
5. To use the Enable function, apply a input to the EN pin. Drive EN higher than 1.5V to turn on the regulator or less than 0.4V to turn it off
6. The switching frequency on the board is preset to 1.3MHz

**NOTICE:** The information in this document is subject to change without notice. Users should warrant and guarantee that third party Intellectual Property rights are not infringed upon when integrating MPS products into any application. MPS will not assume any legal responsibility for any said applications.