

### DESCRIPTION

The EV6402DN-00A evaluation board demonstrates the performance of MP6402, integrated dual ultra low noise, low dropout linear regulators with a RESET circuit. MP6402 operates from a 2.5V to 5.5V input voltage and the output voltage ranges from 0.9V to 3.3V. The RESET signal asserts when the regulator output voltage drops below the microprocessor supply threshold (-7.5% of nominal output voltage). The RESET delay time is set to 2.1ms initially.

MP6402 can supply up to 500mA of load current. The EV6402DN-00A features current limiting and over temperature protection, stability with ultra low ESR ceramic capacitors.

EV6402DN-00A can be used to evaluate the MP6402 all versions by replacing the chip on the evaluation board.

### ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage Range	$V_{IN}$	3 – 5.5	V
Output Voltage Range	$V_{OUT1}$	1.8	V
Output Voltage Range	$V_{OUT2}$	2.5	V

### FEATURES

- $\pm 1.5\%$  Accurate Output Voltage
- Programmable Reset Delay Time
- $15\mu V_{RMS}$  Low Noise Output
- 60dB PSRR at 100Hz

### APPLICATIONS

- Smart Phone and Cell Phone
- Portable GPS Devices
- Wireless Devices
- PDA and PMP

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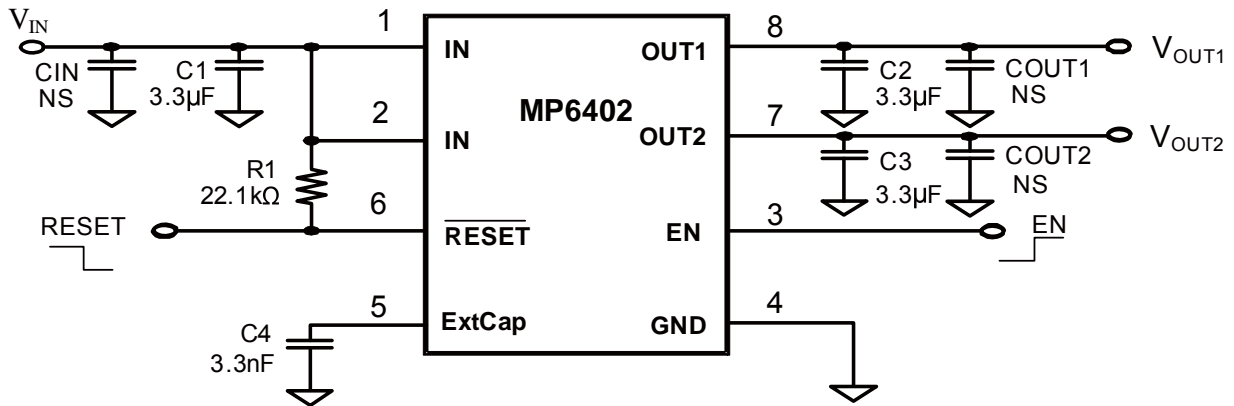
## EV6402DN-00A EVALUATION BOARD



Dimensions (2.5"X x 2.5"Y x 0.5"Z)  
(6.3cm X 6.3cm X 1.2cm)

Board Number	MPS IC Number
EV6402DN-00A	MP6402DN-EF

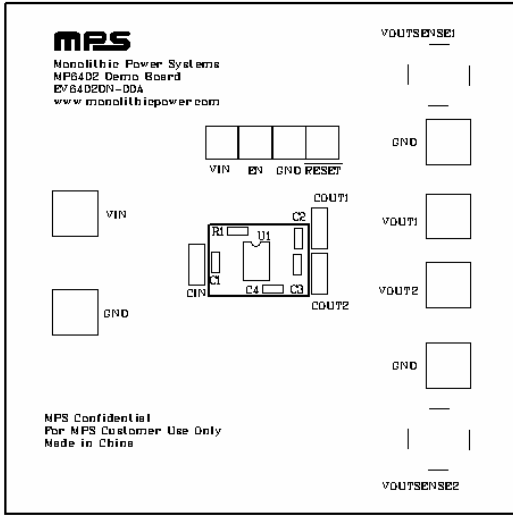
**EVALUATION BOARD SCHEMATIC**



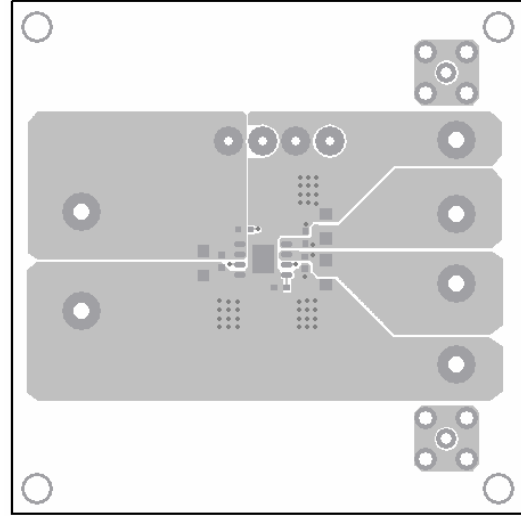
**EV6402DN-00A BILL OF MATERIALS**

Qty	Ref	Value	Description	Package	Manufacturer	Manufacturer P/N
3	C1, C2, C3	3.3µF	Ceramic Cap., 10V, X5R	0603	TDK	C1608X5R1A335K
1	C4	3.3nF	Ceramic Cap., 50V, C0G	0603	TDK	C1608C0G1H332J
0	CIN, COUT1, COUT2	NS				
1	R1	22.1kΩ	Film Res., 1%	0603	Yageo	RC0603FR-0722K1L
1	U1		LDO with RESET circuit	SOIC8	MPS	MP6402DN-EF

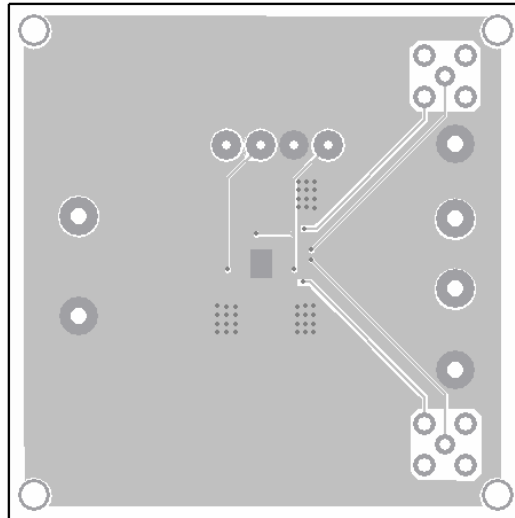
**PRINTED CIRCUIT BOARD LAYOUT**



**Figure 1—Top Silk Layer**



**Figure 2—Top Layer**



**Figure 3—Bottom Layer**

## QUICK START GUIDE

For modifying the EV6402DN-00A to accommodate a fixed output voltage version of the MP6402:

1. Carefully remove the IC(U1) and replace it with the corresponding fixed output version of the MP6402 chip.
2. Attach the input voltage ( $2.5V \leq V_{IN} \leq 5.5V$ ) and input ground to the VIN and GND pins, respectively.
3. To use the Enable function, apply a digital input to the EN pin. Drive EN higher than 1.5V to turn on the regulator or less than 0.6V to turn it off. Don't float this pin.
4. To program the RESET delay time, the value of external capacitor (C4) can be adjusted.

Please refer to the datasheet for the detailed information of the different output voltage option of MP6402.

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