

## DESCRIPTION

The EV4560DN-00A is an evaluation board for the MP4560, a high frequency step-down regulator with an integrated power MOSFET.

The MP4560 integrates a 250mΩ MOSFET that provides 2A load current over a wide operating input voltage of 4.5V to 55V.

Current mode control provides fast transient response and eases loop stabilization. An internal soft-start prevents inrush current at turn-on.

The EV4560DN-00A is a fully assembled and tested PCB. It generates a +3.3V output voltage at load current up to 2A from an 8V to 55V input range. Switching frequency is set at 500kHz.

## ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	$V_{IN}$	8 – 55	V
Output Voltage	$V_{OUT}$	3.3	V
Output Current	$I_{OUT}$	2	A

## FEATURES

- 2A Output Current
- Programmable Switching Frequency up to 2MHz
- Wide 8V to 55V Operating Input Range
- Adjustable Output from 0.8V
- Fully Assembled and Tested

## APPLICATIONS

- High Voltage Power Conversion
- Game Machines
- Automotive Systems
- Industrial Power Systems
- Distributed Power Systems
- Printer Systems
- Battery Powered Systems

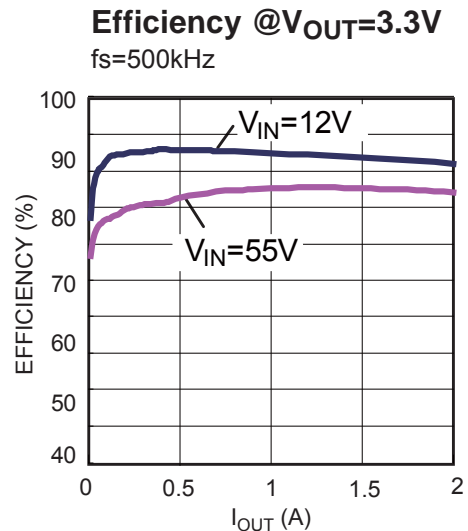
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## EV4560DN-00A EVALUATION BOARD

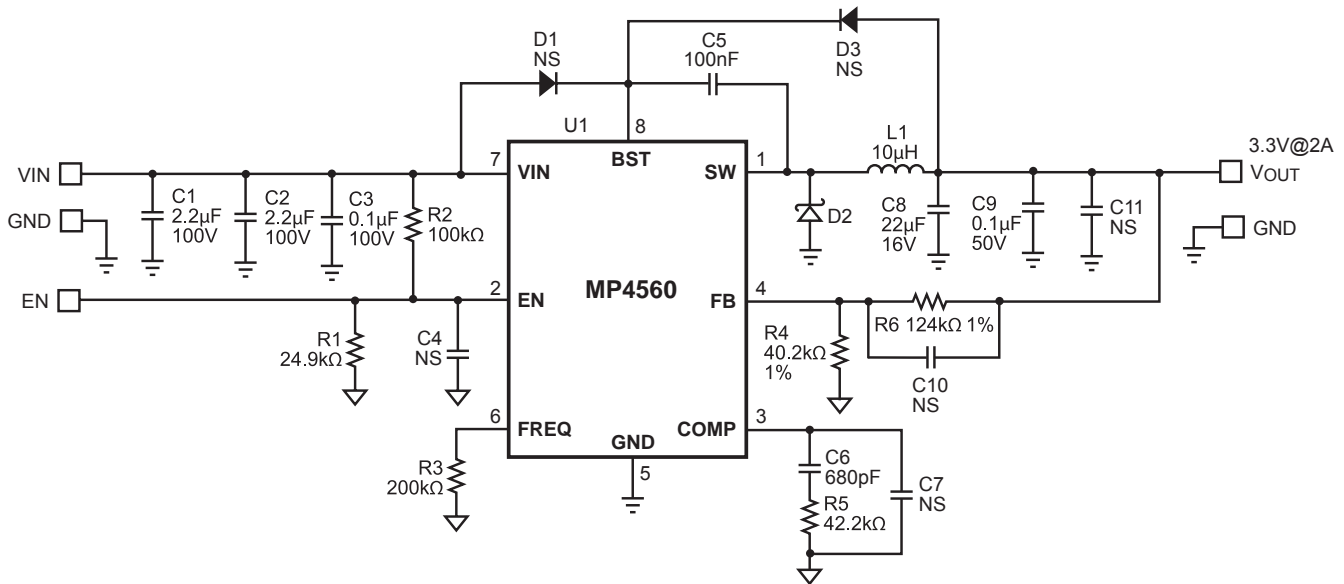


(L x W x H) 2.5" x 2.5" x 0.4"  
(6.35cm x 6.35cm x 1.0cm)

Board Number	MPS IC Number
EV4560DN-00A	MP4560DN



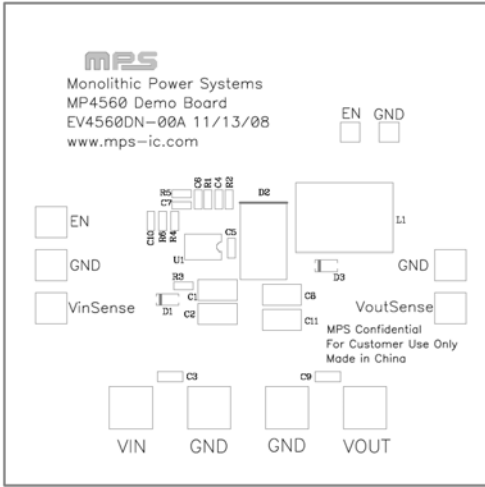
## EVALUATION BOARD SCHEMATIC



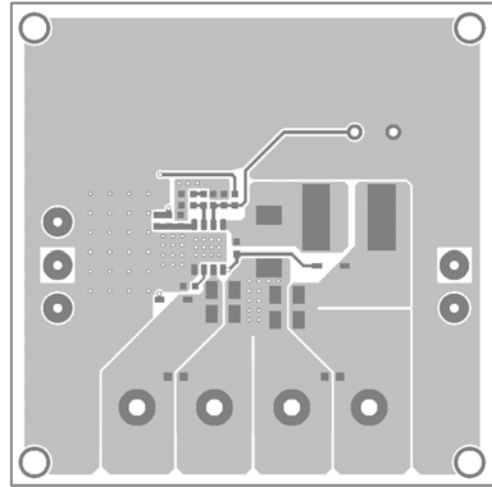
## EV4560DN-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Part Number
2	C1, C2	2.2 $\mu$ F	Ceramic Cap., 100V, X7R	1210	Murata	GRM32ER72A225KA35L
1	C3	0.1 $\mu$ F	Ceramic Cap., 100V, X7R	0805	TDK	C2012X7R2A104K
4	C4, C7, C10, C11		Not Stuffed			
1	C5	100nF	Ceramic Cap., 50V, X7R	0603	TDK	C1608X7R1H104K
1	C6	680pF	Ceramic Cap., 50V, X7R	0603	TDK	C1608X7R1H681K
1	C8	22 $\mu$ F	Ceramic Cap., 16V, X7R	1210	Murata	GRM32ER71C226ME18L
1	C9	0.1 $\mu$ F	Ceramic Cap., 50V, X7R	0805	TDK	C2012X7R1H104K
1	R1	24.9k $\Omega$	Film Res., 1%	0603	Yageo	RC0603FR-0724K9L
1	R2	100k $\Omega$	Film Res., 1%	0603	Yageo	RC0603FR-07100KL
1	R3	200k $\Omega$	Film Res., 1%	0603	Yageo	RC0603FR-07200KL
1	R4	40.2k $\Omega$	Film Res., 1%	0603	Yageo	RC0603FR-0740K2L
1	R5	42.2k $\Omega$	Film Res., 1%	0603	Yageo	RC0603FR-0742K2L
1	R6	124k $\Omega$	Film Res., 1%	0603	Yageo	RC0603FR-07124KL
2	D1, D3		Not Stuffed			
1	D2		Diode Schottky, 90V, 2A	SMB	Diodes Inc	B290-13-F
1	L1	10uH	Inductor, 4.3A	SMD	Toko	D104C-#919AS-100M
			Inductor, 4A	SMD	Cooper	SD8350-100-R
			Inductor, 3.6A	SMD	Würth	744066100
1	U1		Step-Down Regulator	SO8	MPS	MP4560DN

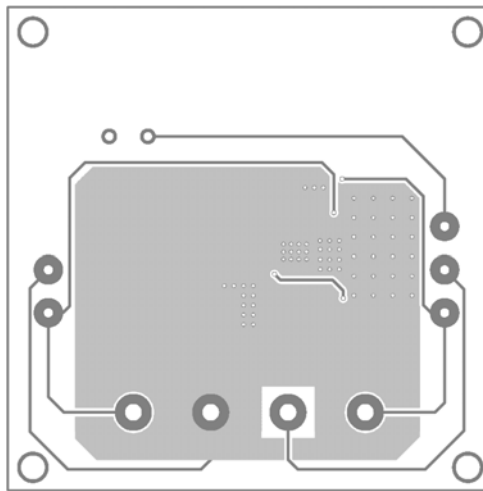
**PRINTED CIRCUIT BOARD LAYOUT**



**Figure 1—Top Silk Layer**



**Figure 2—Top Layer**



**Figure 3—Bottom Layer**