

DESCRIPTION

The EV4462DQ-00A is an evaluation board for the MP4462, a high frequency step-down regulator with an integrated power MOSFET.

The MP4462 integrates a 100mΩ MOSFET that provides 3.5A load current over a wide operating input voltage of 6V to 36V. A 5μA shutdown mode quiescent current allows use in battery-powered applications.

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

The MP4462 is available in compact SOIC8 with exposed pad package.

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	V _{IN}	8 – 36	V
Output Voltage	V _{OUT}	3.3	V
Output Current	I _{OUT}	3.5	A

FEATURES

- 3.5A Output Current
- Wide 8V to 36V Operating Input Range
- Adjustable Output from 0.8V to 33V
- Fully Assembled and Tested

APPLICATIONS

- Game Machines
- Automotive Systems
- Industrial Power Systems
- Distributed Power Systems
- Printer Systems
- Battery Powered Systems

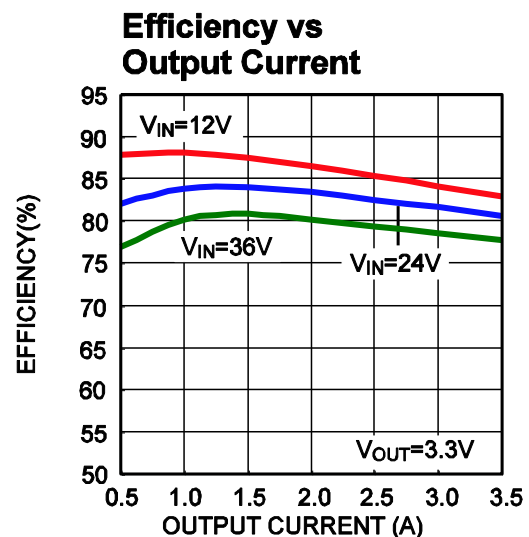
"MPS" and "The Future of Analog IC Technology" are Registered Trademarks of Monolithic Power Systems, Inc.

EV4462DQ-00A EVALUATION BOARD

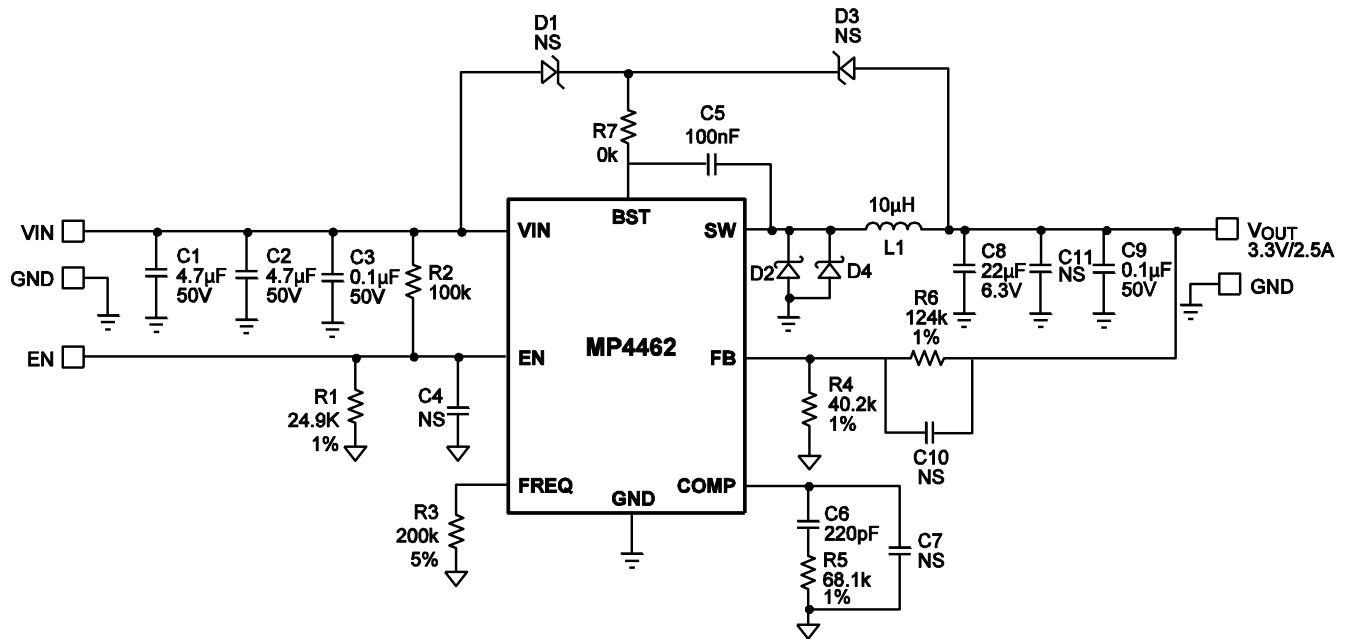


(L x W x H) 1.8" x 1.8" x 0.4"
(4.6cm x 4.6cm x 1.0cm)

Board Number	MPS IC Number
EV4462DQ-00A	MP4462DQ



EVALUATION BOARD SCHEMATIC



EV4462DQ-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Part Number
2	C1, C2	4.7µF	Ceramic Cap., 50V, X7R	1210	Murata	GRM32ER71H475KA88L
2	C3, C9	0.1µF	Ceramic Cap., 50V, X7R	0805	TDK	C2012X7R1H104K
1	C4	1nF	Ceramic Cap, 50V, X7R	0603	TDK	C1608X7R1H102K
1	C5	100nF	Ceramic Cap., 50V, X7R	0603	TDK	C1608X7R1H104K
1	C6	220pF	Ceramic Cap, 50V, NPO	0603	TDK	C1608C0G1H221J
21	C7,C10	NS	Not Stuffed			
1	C8	22µF	Ceramic Cap., 6.3V, X5R	1210	TDK	C3225X5R0J226M
1	R1	24.9kΩ	Film Res., 1%	0603	Yageo	RC0603FR-0724K9L
1	R2	100kΩ	Film Res., 5%	0603	Any	
1	R3	200kΩ	Film Res., 5%	0603	Any	
1	R4	40.2kΩ	Film Res., 1%	0603	Yageo	RC0603FR-0740K2L
1	R5	51kΩ	Film Res., 5%	0603	Any	
1	R6	127kΩ	Film Res., 1%	0603	Yageo	RC0603FR-07127KL
1	R7	NS	Not Stuffed			
2	D1, D3	NS	Not Stuffed			
1	D2		Diode Schottky, 40V, 5A	PowerDI	Diodes Inc	PDS540
1	L1	10µH	Inductor, 5.0A	SMD	Cooper	DR1050-100-R
1	U1		Step-Down Regulator	DQ	MPS	MP4462DQ

PRINTED CIRCUIT BOARD LAYOUT

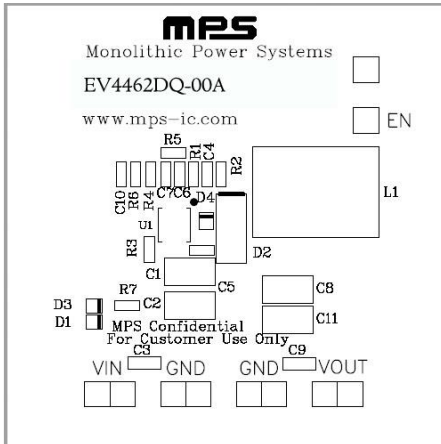


Figure 1—Top Silk Layer

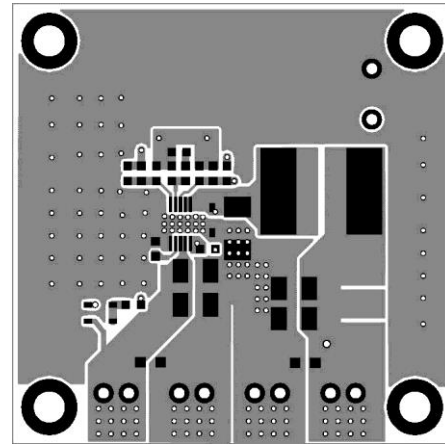


Figure 2—Top Layer

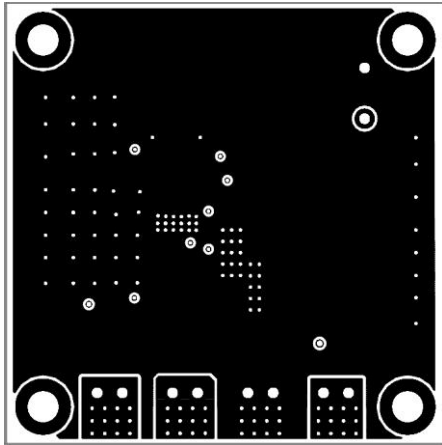


Figure 3—Inner 1 Layer

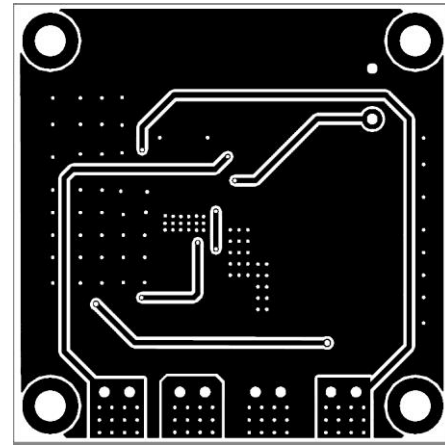


Figure 4—Inner 2 Layer

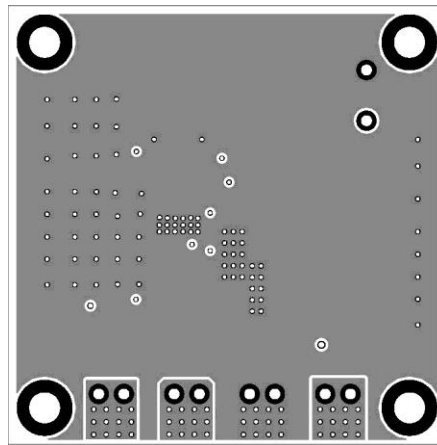


Figure 5—Bottom Layer