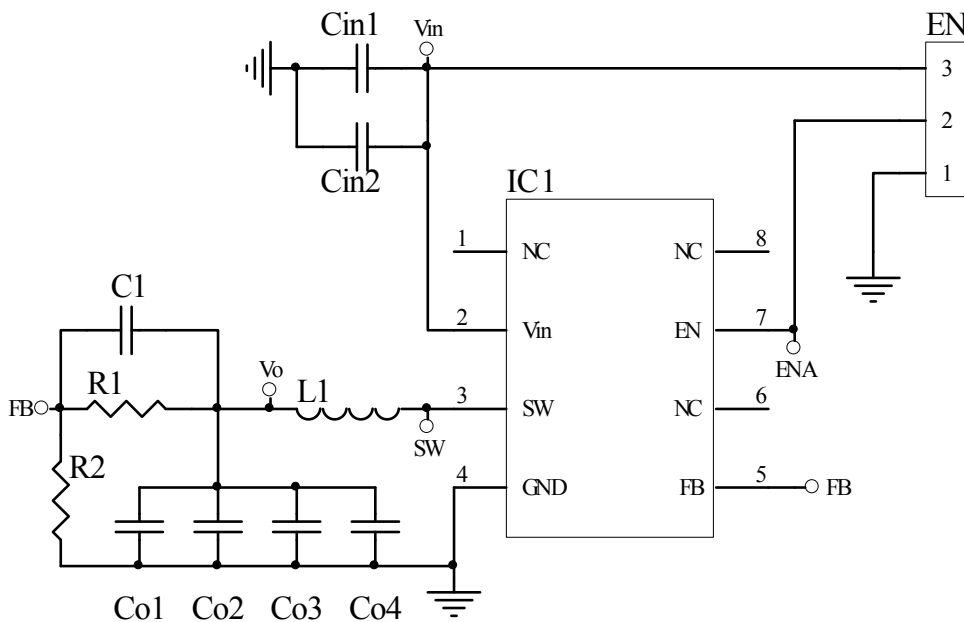


3. Key Features

- Output Current: Up to 2A
- Output Voltage: 0.6V to VIN
- Input Voltage: 2.7V to 5.5V
- Efficiency up to 95%
- 42µA (Typ) No Load Quiescent Current
- Shutdown Current: <1µA
- 100% Duty Cycle LDO Operation
- 1.5MHz Switching Frequency
- Internal Soft Start
- No external Compensation Required
- Current Limit Protection
- Thermal Shutdown
- SOP8 Package

4. EV Board Schematic

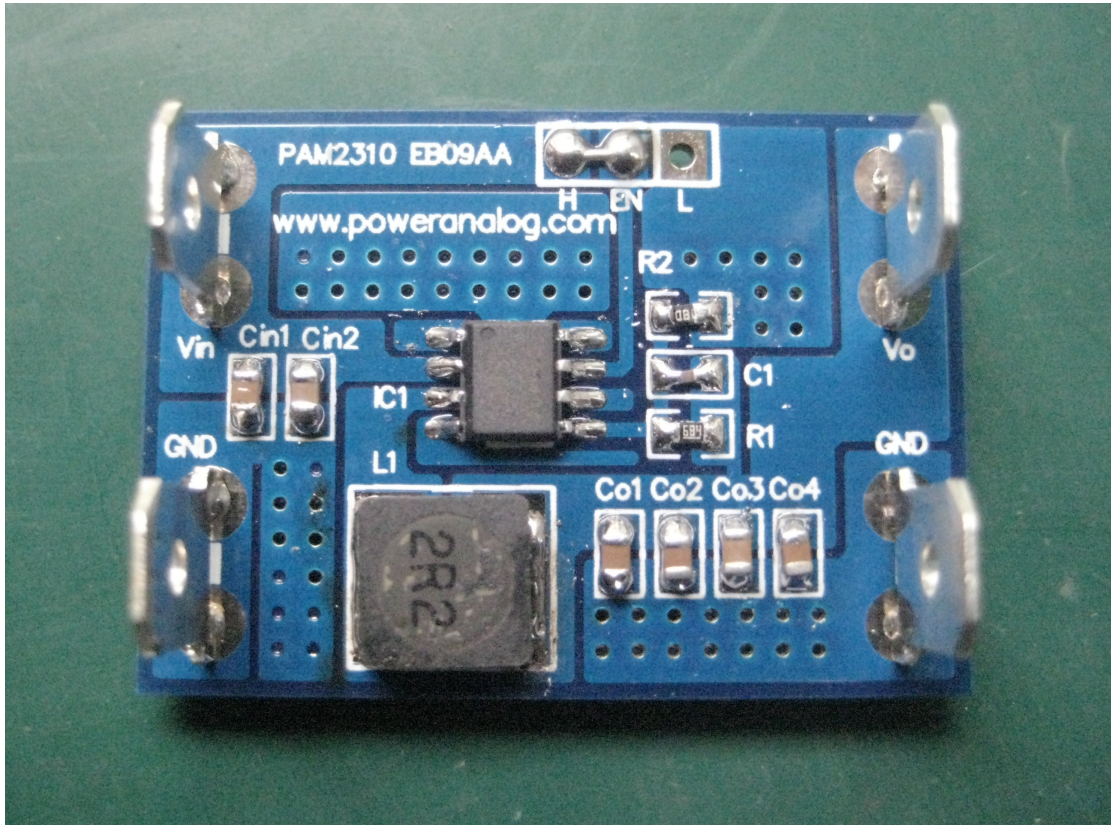


5. EVB PAM2310 EB09AA Description

PAM2310 EB09AA is an evaluation board for the PAM2310 SOP8, a DC/DC converter. The board is targeted to be used in providing a simple and convenient evaluation environment for the PAM2310. Requires parts, power supply connectors etc. on the board, which makes it easy to be evaluated.

6. EV Board View

Top View



7. Resistor Select for Output Voltage Setting

$$V_{OUT} = (1 + R1/R2) \times V_{REF} \quad (V_{REF} = 0.6V)$$

Vo	R1	R2	L
1.2V	150k	150k	2.2μH
1.5V	225k	150k	2.2μH
1.8V	300k	150k	2.2μH
2.5V	475k	150k	2.2μH
3.3V	680k	150k	2.2μH

8. External Components Selection

Input & output Capacitors (CinX, CoX)

- (1) For lower output ripple, low ESR is required.
- (2) Low leakage current needed, X5R/X7R ceramic recommend, multiple capacitor parallel connection.

Feed forward capacitor (C1)

- (1) Lower the output ripple
- (2) Low leakage current needed, 100pF, COH/CH ceramic recommend

Output Voltage programmer resistors (R1, R2)

- (1) For programmer output voltage
- (2) For accurate output voltage, 1% tolerance is required.

Inductor (L1)

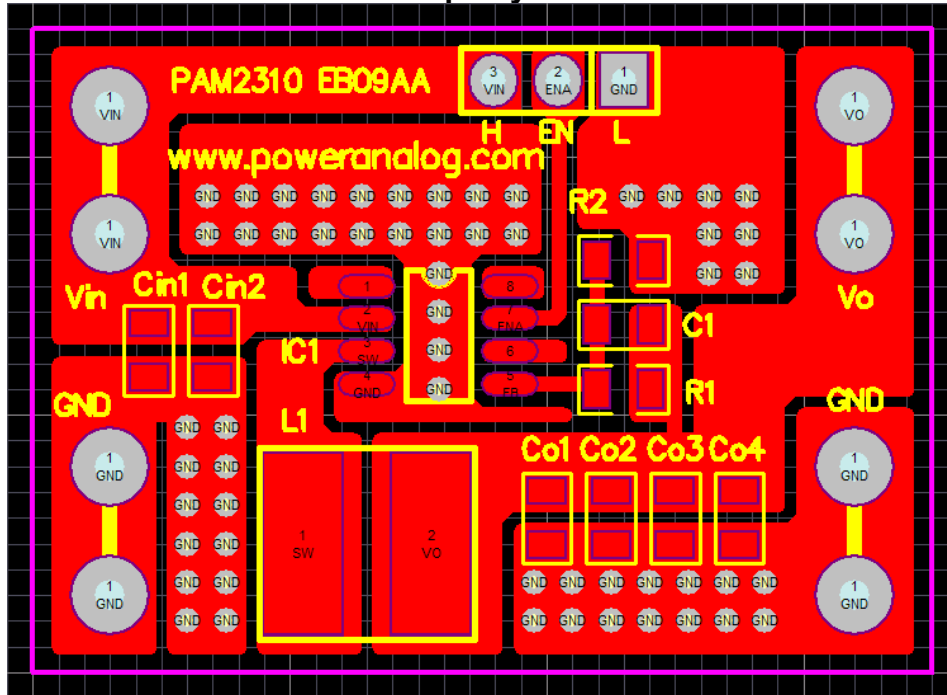
- (1) Low DCR for good efficiency
- (2) Inductance saturate current must higher than the output current

9. Evaluation Board BOM List:

Item	Value	Type	Rating	Description	Vender and Part No.
Cin1, Cin2, Co1, Co2, Co3, Co4	10 μ F	X5R/X7R, Ceramic/0805	10V	Input coupling CAP, Output CAP	TAIYO YUDEN EMK212ABJ106KD-T
C1	100pF	COH/CH, Ceramic/0402	50V	Feed forward CAP	TAIYO YUDEN UMK105CH101JV-F
L1	2.2 μ H	5848	>3A	Inductor	WURTH 744774022 TAIYO YUDEN NRS8030T3R0NMGJ
R1	680K	0603	1%	Voltage set RES	
R2	150K	0603	1%		
IC1		PAM2310	SOP-8		
PCB		PAM2310 EB09AA			

10. PCB Layout Example

Top Layer



Bottom Layer

