

MUN12AD06-SM EVB Guide

DESCRIPTION:

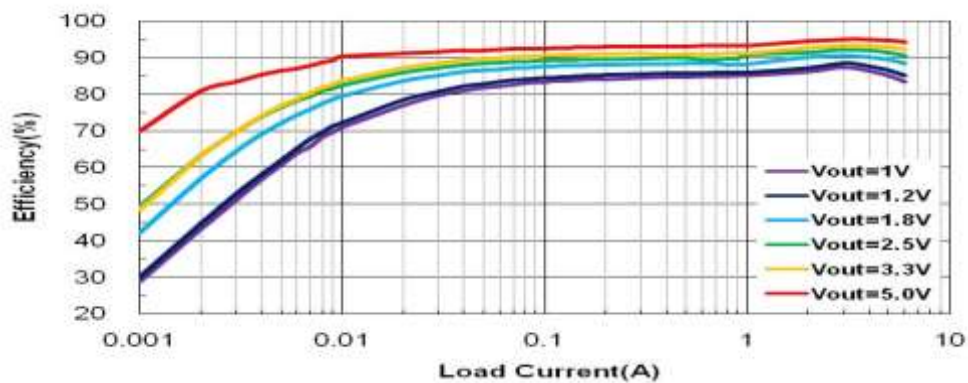
The evaluation board is for the MUN12AD06-SM, high efficiency DC/DC power module. The evaluation board generates a +7.0V output voltage at load currents up to 6A. Output setting resistor R_{FB} can be adjusted for evaluating different output voltage.

The MUN12AD06-SM switches at 800kHz and achieves up to 93% efficiency with the supplied components.

ELECTRICAL SPECIFICATION:

Parameters	Symbol	Value	Unit
Input Voltage Range	VIN	7~24	V
Output Voltage	VOUT	0.6~7	V
Output Current	IOUT	6	A

EVALUATION BOARD&EFFICIENCY::



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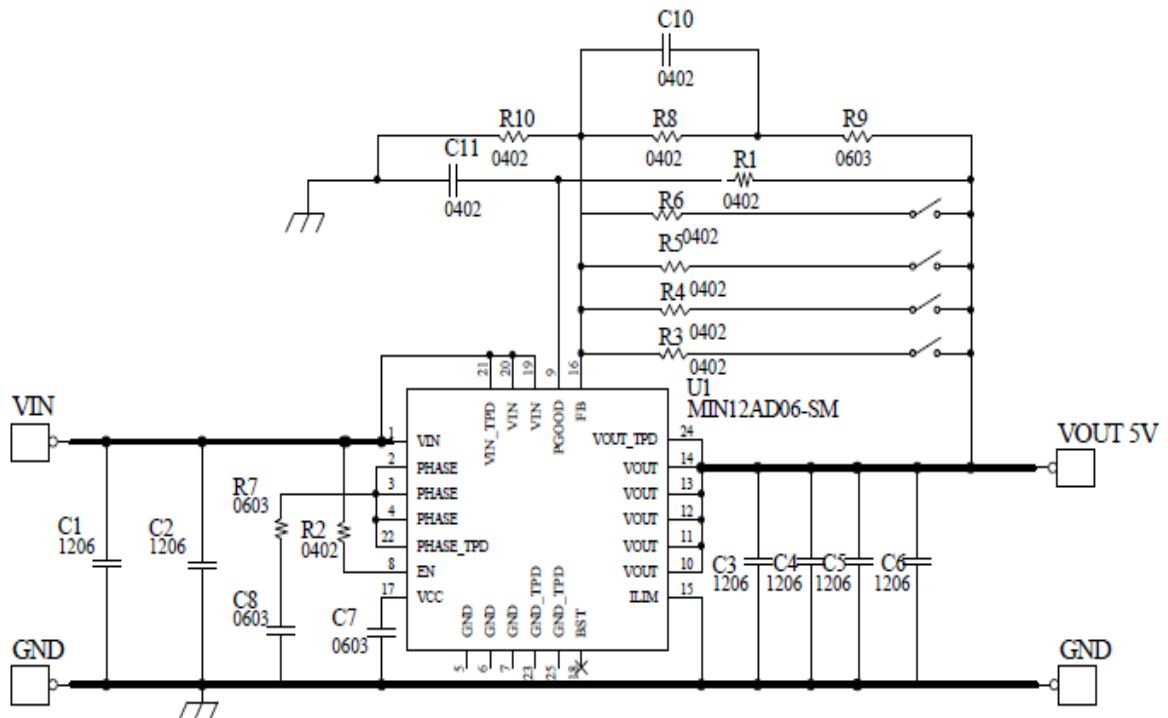
QUICK START:

The output voltage VOUT can be programmed by varying R_x (R3~R6).

$$V_{out} (V) = 0.6 \times \left(1 + \frac{R_{FB}}{20K} \right)$$

Vout	1.0V	1.2V	1.8V	2.5V	3.3V	5.0V	9.0V	12V	15V
R _{FB} (Ohm)	13.3K	20k	40.2k	63.3K	90.8K	147K	280K	383K	480K

EVALUATION BOARD SCHEMATIC:

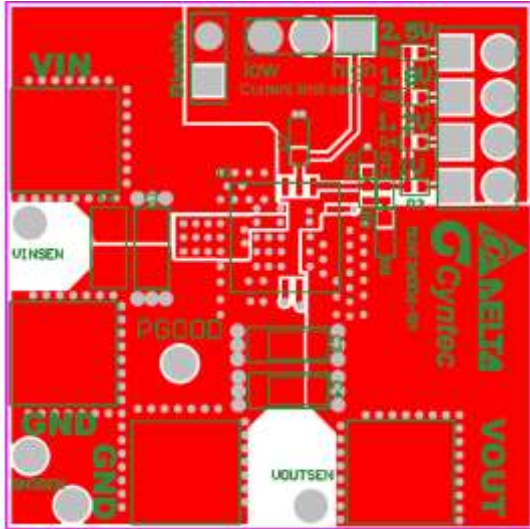


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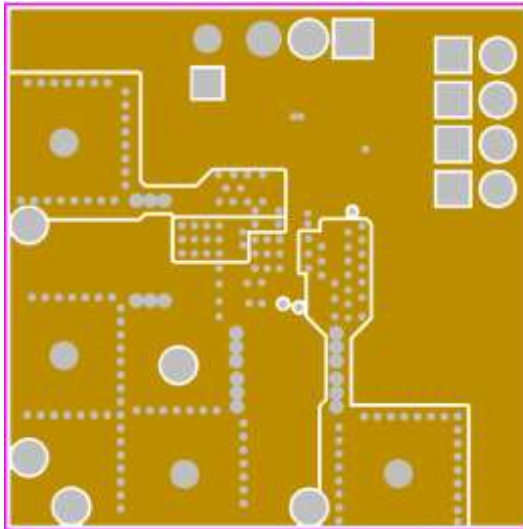
BILL OF MATERIALS:

Qty	Function	Ref.	Value	Vendor
1	Input Cap	C1	4.7uF/50V/X7R/1206	Murata
1	Input Cap	C2	4.7uF/50V/X7R/1206	Murata
1	Output Cap	C3	100uF/6.3V/X5R/1206	Murata
1	Output Cap	C4	100nF/25V/X7R/0603	Murata
1	Output Cap	C5	47uF/10V/X5R/1206	Murata
1	Output Cap	C6	DNP	-
1	PGOOD	R1	100k/0402	Cyntec
1	Enable	R2	100k/0402	Cyntec
1	R _{FB}	R3	13.3k/0402	Cyntec
1	R _{FB}	R4	20k/0402	Cyntec
1	R _{FB}	R5	40.2k/0402	Cyntec
1	R _{FB}	R6	63.3k/0402	Cyntec
1	VCC Cap	C7	2.2uF/6.3V/X7R/0603	- Murata
1	Module	U1	MUN12AD06-SM	Cyntec
1	Snubber	R7	DNP	-
1	Snubber	C8	DNP	-
1	CFF	C10	DNP	-
1	C _{POOD}	C11	DNP	-
1	R _{FB}	R8	DNP	-
1	R _{FB}	R9	DNP	-
1	R _{FB}	R10	DNP	-

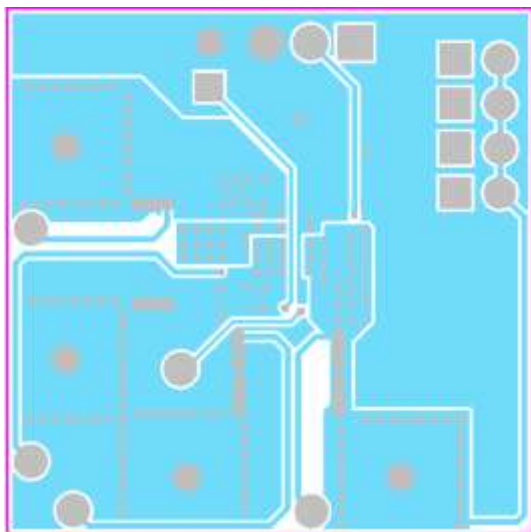
PRINTED CIRCUIT BOARD LAYOUT:



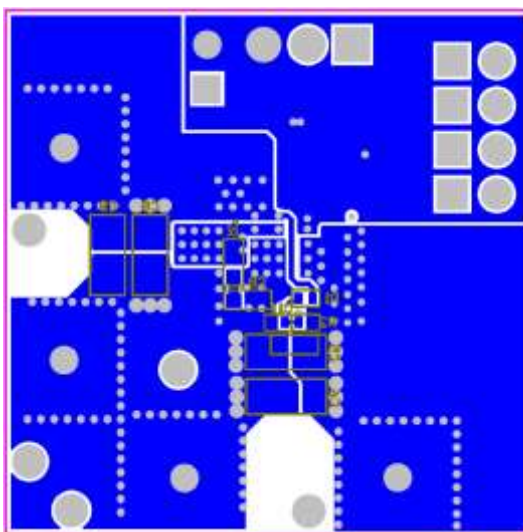
Top Layer



Mid1 Layer



Mid2 Layer



Bottom Layer