

# MUN20AD03-SM EVB Guide

## DESCRIPTION:

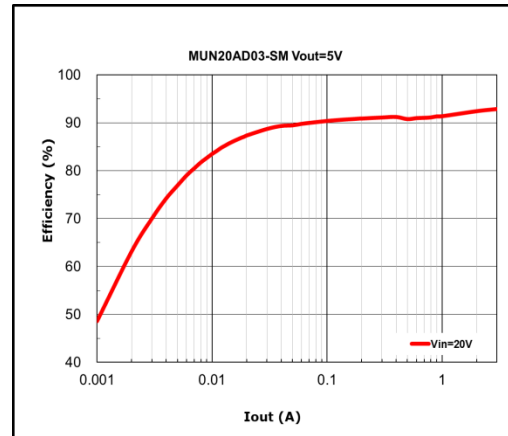
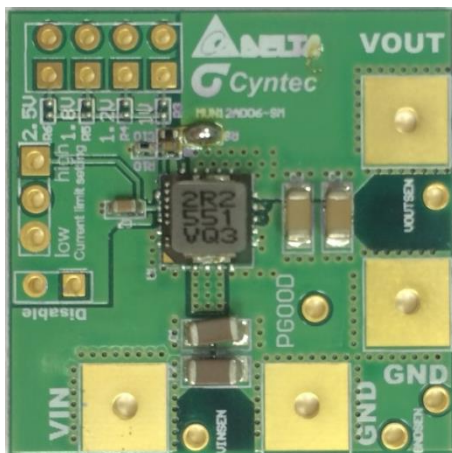
The evaluation board is for the MUN20AD03-SM, high efficiency DC/DC power module. The evaluation board generates a +2.5V output voltage at load currents up to 3A. Output setting resistor  $R_{FB}$  can be adjusted for evaluating different output voltage.

The MUN20AD03-SM switches at 800kHz and achieves up to 92% efficiency with the supplied components.

## ELECTRICAL SPECIFICATION:

Parameters	Symbol	Value	Unit
Input Voltage Range	VIN	9.0~24	V
Output Voltage	VOUT	0.6~5.5	V
Output Current	IOUT	3	A

## EVALUATION BOARD&EFFICIENCY::



## QUICK START:

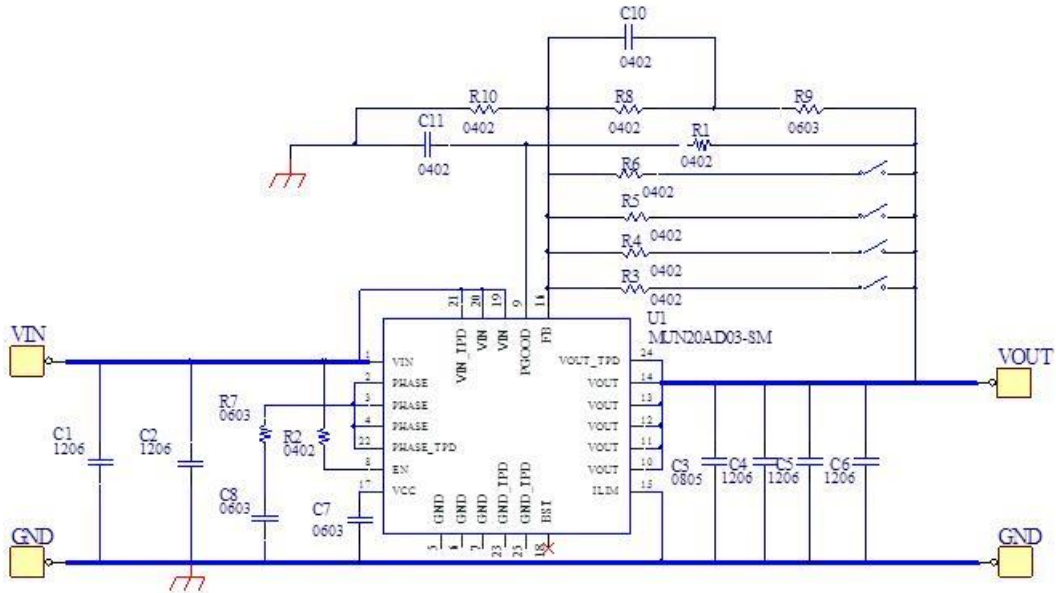
The output voltage VOUT can be programmed by varying R8 & R10

$$V_{out} (V) = 0.6 \times \left( 1 + \frac{R8}{20k} \right)$$

Vout	1.0V	1.2V	1.8V	2.5V	3.3V	5.0V
RFB(Ohm)	13.3k	20k	40.2k	63.3k	90.8k	147k
RFB2(Ohm)	20k	20k	20k	20k	20k	20k

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## EVALUATION BOARD SCHEMATIC:



## BILL OF MATERIALS:

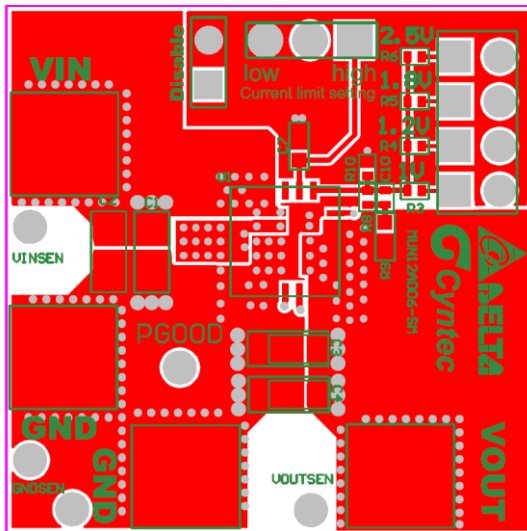
Qty	Function	Ref.	Value	Vendor
1	Input Cap	C1	4.7uF/50V/X7R/1206	Murata
1	Input Cap	C2	4.7uF/50V/X7R/1206	Murata
1	Output Cap	C3	100nF/25VV/X7R/0805	Murata
1	Output Cap	C4	47uF/6.3V/X5R/1206	Murata
1	Output Cap	C5	47uF/6.3V/X5R/1206	Murata
1	Output Cap	C6	47uF/6.3V/X5R/1206	Murata
1	VCC Cap	C7	2.2uF/6.3V/X7R/0603	Murata
1	Snubber	C8	DNP	-
1	CFB Cap	C10	150pF/50V/X7R/0402	Murata
1	Filter Cap	C11	DNP	-

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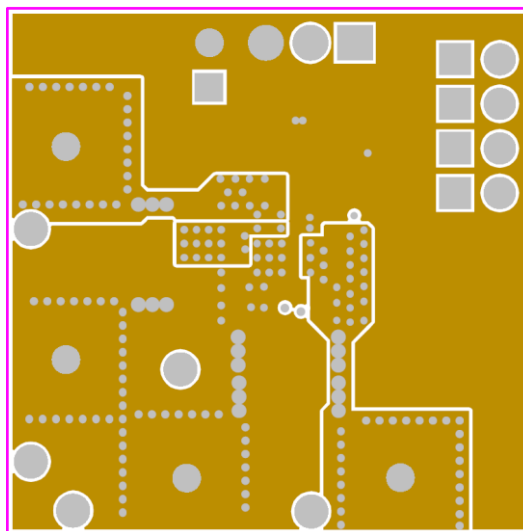
### BILL OF MATERIALS:(Cont)

1	PGOOD	R1	100k/0402	Cyntec
1	Enable	R2	100k/0402	Cyntec
1	RFB(1.0V)	R3	13.3k/0402	Cyntec
1	RFB(1.2V)	R4	20k/0402	Cyntec
1	RFB(1.8V)	R5	63.3k/0402	Cyntec
1	RFB(2.5V)	R6	90.8k/0402	Cyntec
1	Snubber	R7	DNP	Cyntec
1	RFB	R8	DNP	Cyntec
1	Bypass	R9	0/0603	Cyntec
1	RFB2	R10	20k/0402	Cyntec
1	Module	U1	MUN20AD03-SM	Cyntec

### PRINTED CIRCUIT BOARD LAYOUT:

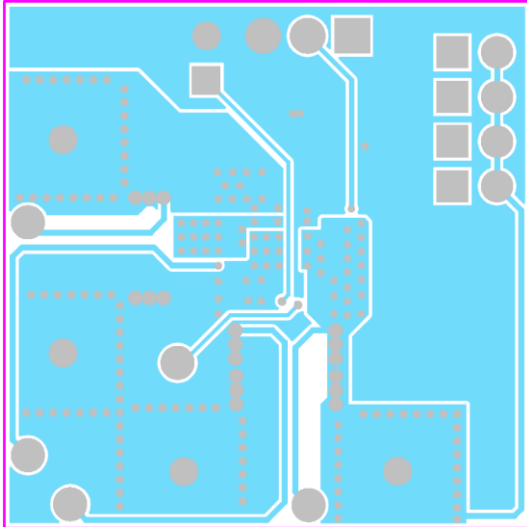


Top Layer

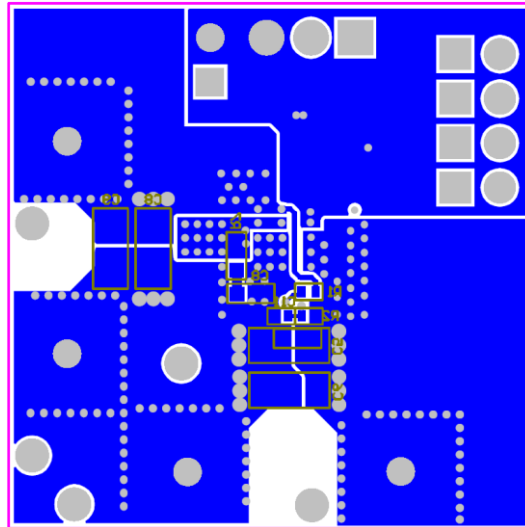


Mid1 Layer

## PRINTED CIRCUIT BOARD LAYOUT: (Cont)



Mid2 Layer



Bottom Layer