Meteo Power Supply Module Manual

1. Descriptions

1.1 ADP2164

The ADP2164 is a 4A,synchronous,step-down,dc-to-dc regulator.

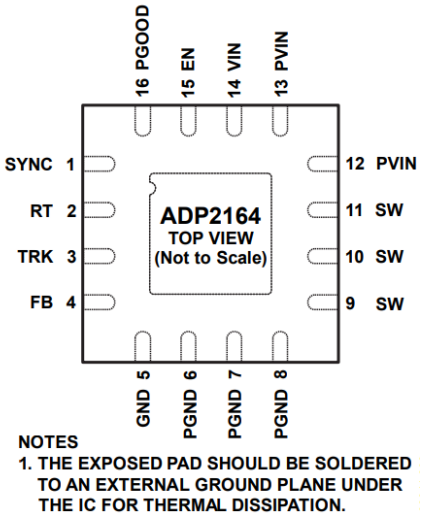


Figure. ADP2164 Pin Configuration

The reference design circuit from ADP2164 datasheet figure 43 is as follows.

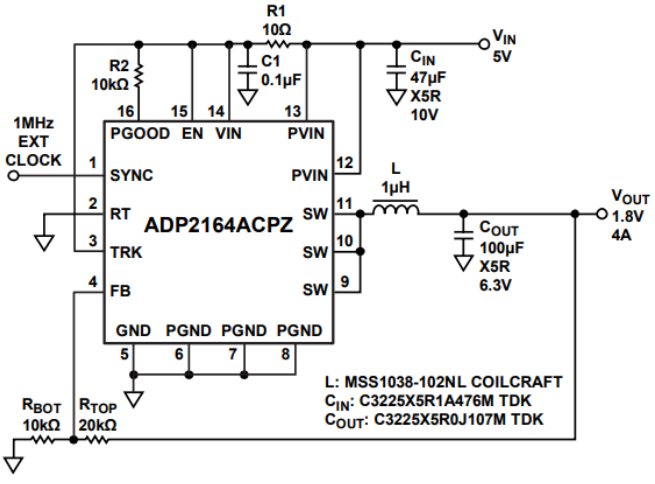


Figure 43. 1.8 V, 4 A Step-Down Regulator, Synchronized to 1 MHz, in Phase with the External Clock

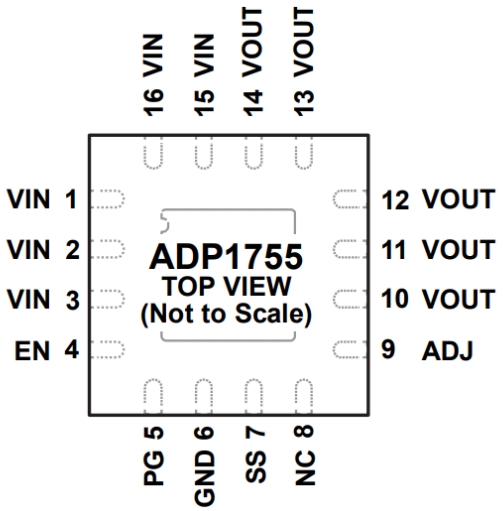
In this `Meteo Power Supply Module` , the circuit and its connections are described as follows.

Pin No.	Mnemonic	Descriptions
1	SYNC	connected to VIN
2	RT	connected to GND,the switching frequency is set to 600kHz
3	TRK	
4	FB	Connect this pin to a resistor from V_{out}
5	GND	Analog Ground
6,7,8	PGND	Power Ground
9,10,11	SW	Switch Node output.Connect to the output inductor
12,13	PVIN	Power Input PIn
14	VIN	Bias Voltage Input Pin.
15	EN	Precision Enable Pin
16	PGOOD	Power-Good Output
17	Exposed Pad	

Output voltage selction

$$V_{out} = 0.6 \times \left(1 + \frac{R_{TOP}}{R_{BOT}}\right)$$

1.2 ADP1755



Pin No.	Mnemonic	Descriptions
1,2,3,15,16	VIN	connected to VIN
4	EN	Enable Input
5	PG	Power Good
6	GND	Ground
7	SS	Soft Start
8	NC	Not connected
9	ADJ	Adjust.A resistor divider from VOUT to ADJ sets the output voltage.
10,11,12,13,14	VOUT	
17	EPAD	The exposed pad

The reference design circuit from ADP1755 datasheet figure 43 is as follows.

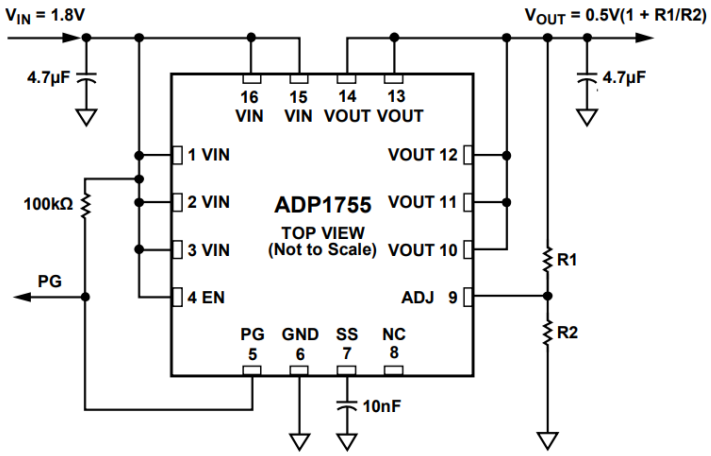
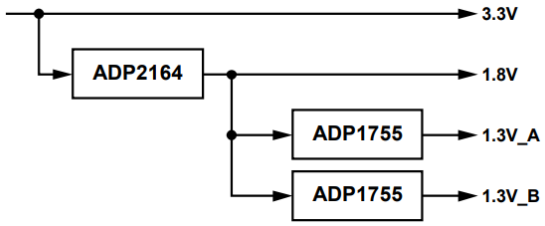


Figure 2. ADP1755 with Adjustable Output Voltage, 0.75 V to 3.3 V

$$V_{out} = 0.5V \times \left(1 + \frac{R1}{R2}\right)$$

2. General Description of Meteo Power Supply Module

The Block Diagram of this power Ssupply module which is the recommend method in AD9364 datasheet is as follows.



The schematic is as follows.