

# TLF50281EL

2.2 MHz Step-Down Regulator 500 mA  
low quiescent current

**Application Board**



# TLF50281EL Application Board Introduction



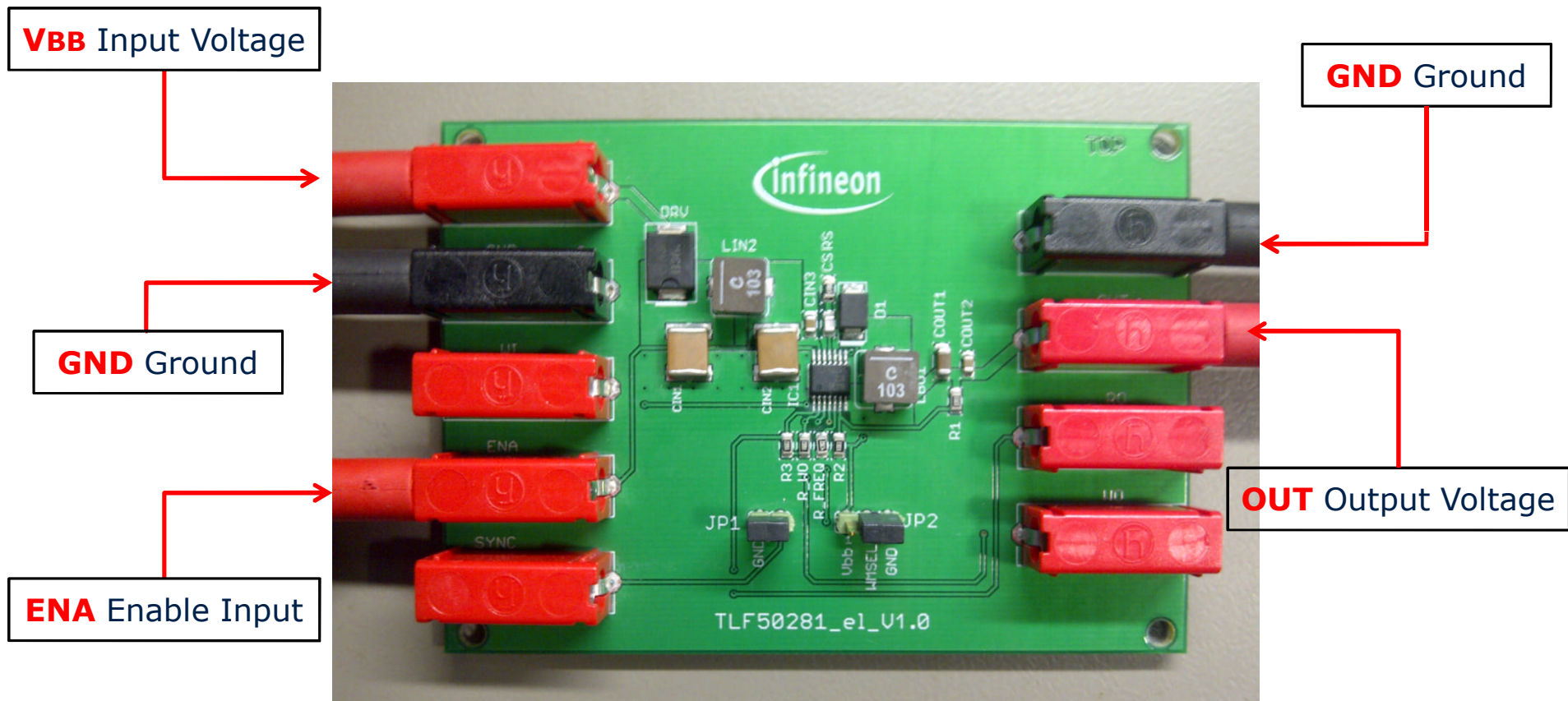
- This application board shall enable testing of the TLF50281EL
- 2.2 MHz Step-Down Regulator 500 mA, low quiescent current
- Fixed output voltage (5 V)
- The board offers the possibility to modify the circuit
- (please refer to datasheet for TLF50281EL details)

# TLF50281EL Application Board

## How to start

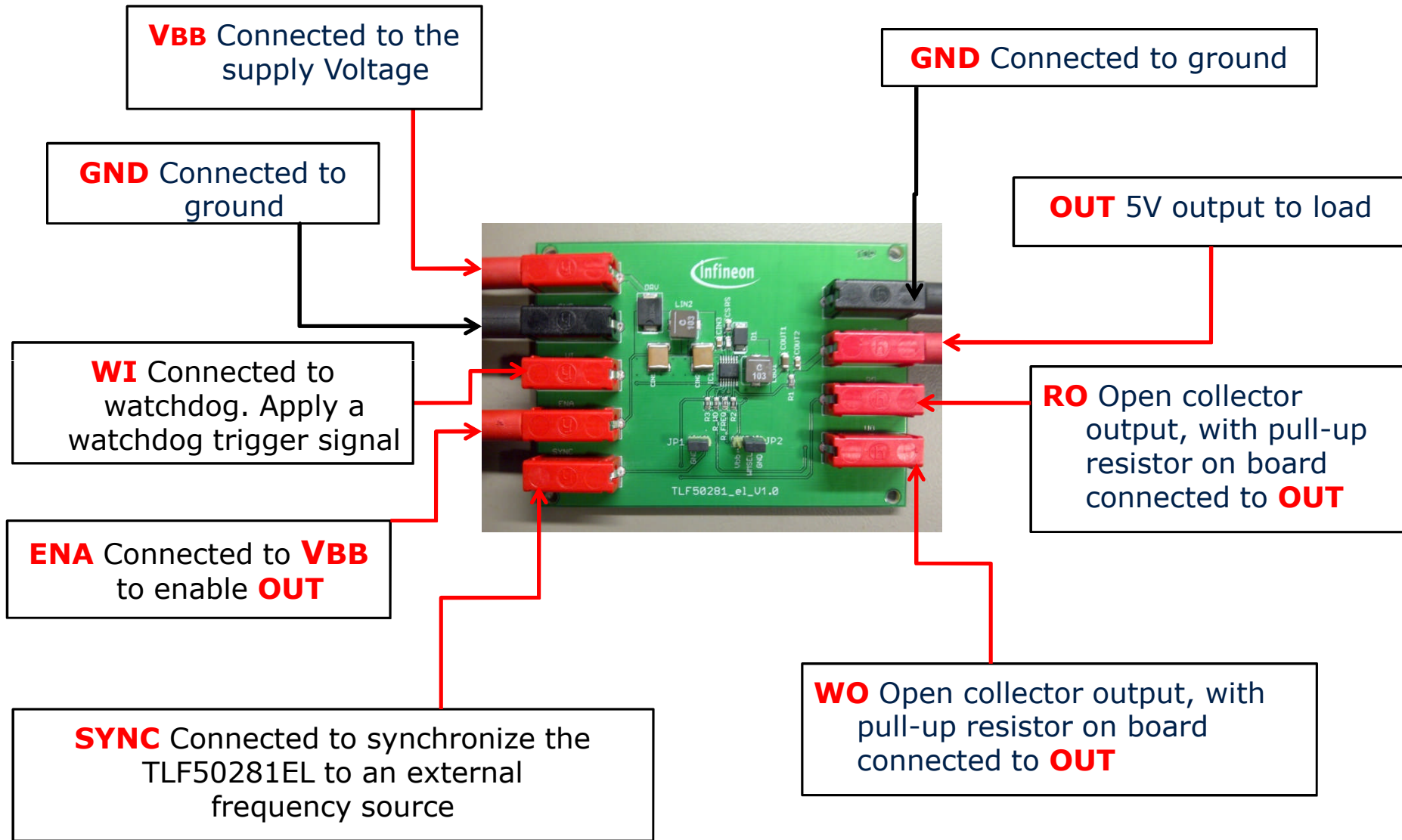


- Connect the Application Board as shown below for a basic Test:



# TLF50281EL Application Board

## Connections: details (Refer to Datasheet)





# TLF50281EL Application Board

## Bill Of Material



Reference Designator	Characteristics
	TLF50281EL
R1	330 k $\Omega$
R2	100 k $\Omega$
R3	16 k $\Omega$
R_WO	16 k $\Omega$
R_FREQ	47 k $\Omega$
Rs	510 $\Omega$
CIN1	10 $\mu$ F / 50 V
CIN2	10 $\mu$ F / 50 V
CIN3	100 nF / 50 V
COUT1	10 $\mu$ F / 16 V
COUT2	100 nF / 16 V
LIN2	XAL6060-103 10 $\mu$ H
LBU1	XAL6060-103 10 $\mu$ H
DRV	MURS360 3A / 600V

# TLF50281EL Application Board

## Bill Of Material



Reference Designator	Characteristics
D1	10BQ100 1A / 100V
Cs	100 pF
JP1	2 pins
JP2	3 pins
VBB	Banana Jack red
GND	2 x Banana Jack black
WI	Banana Jack red
ENA	Banana Jack red
SYNC	Banana Jack red
OUT	Banana Jack red
RO	Banana Jack red
WO	Banana Jack red

# TLF50281EL Application Board

## Reset adjustment



- The reset generator consists of an internal comparator with a reset threshold  $V_{RO,T}$ . By adding an external resistor divider between the output voltage  $V_{CC}$  and ground (GND) and connecting the point between the upper (R1) and lower (R2) resistor to pin RTADJ the desired reset threshold  $V_{RT}$  (where the reset generator indicates an under voltage) might be adjusted. If reset function is not used please connect pin RTADJ to  $V_{CC}$ .

$$\text{Desired reset threshold} = V_{RO, T} \left( \frac{R1 + R2}{R2} \right) = V_{RT}$$



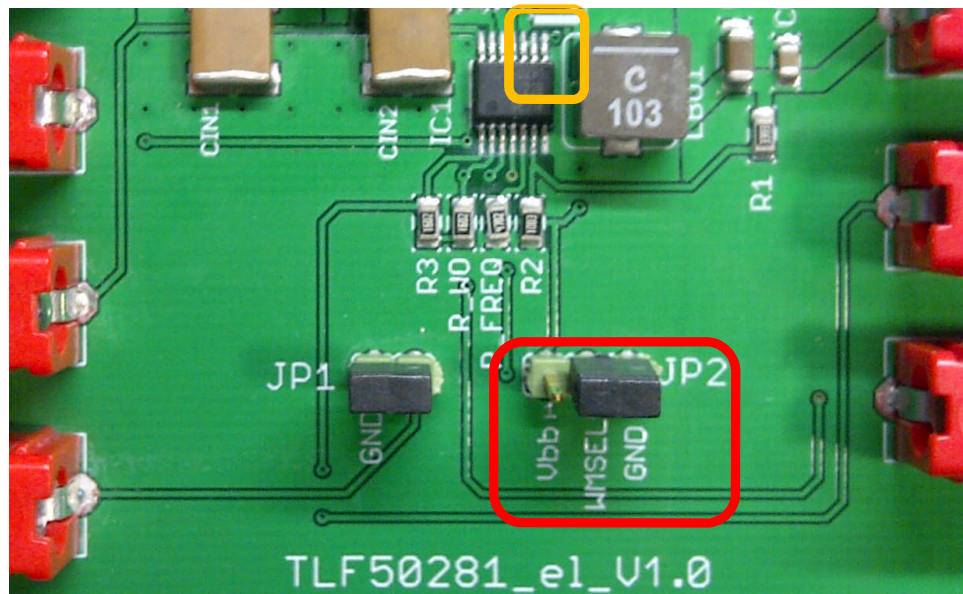
# TLF50281EL Application Board

## Watchdog mode selection



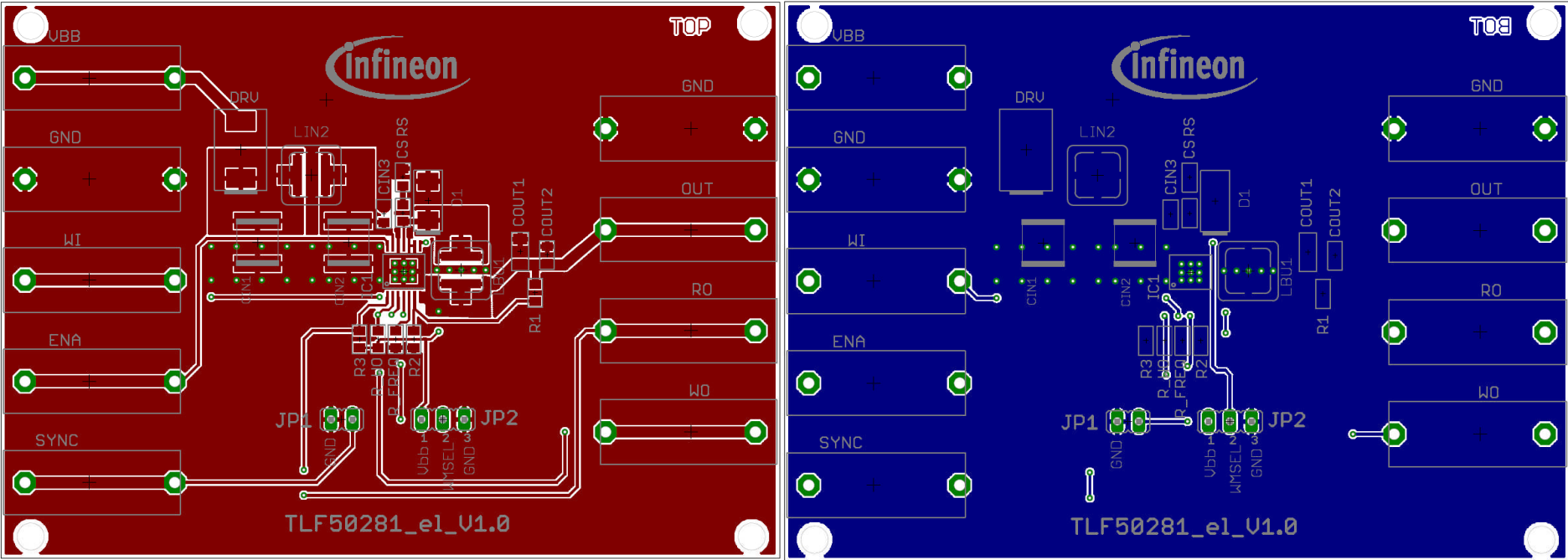
- The watchdog offers two operation modes:
  - Slow watchdog timing
  - Fast watchdog timing.

For slow watchdog timing please connect pin **WMSEL** to Vcc (output voltage) using **JP2**. For fast watchdog timing please connect WMSEL to ground (GND) using **JP2**.



➤ Pin 1 of JP2 is connected to OUT. Vcc is called Vbb at JP2. Please consider Vbb as Vcc, as described and listed in the datasheet.

# TLF50281EL Application Board PCB Layout



# TLF50281EL Application Board



**Edition 2012-04-05**

**Published by  
Infineon Technologies AG  
81726 Munich, Germany**

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