

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

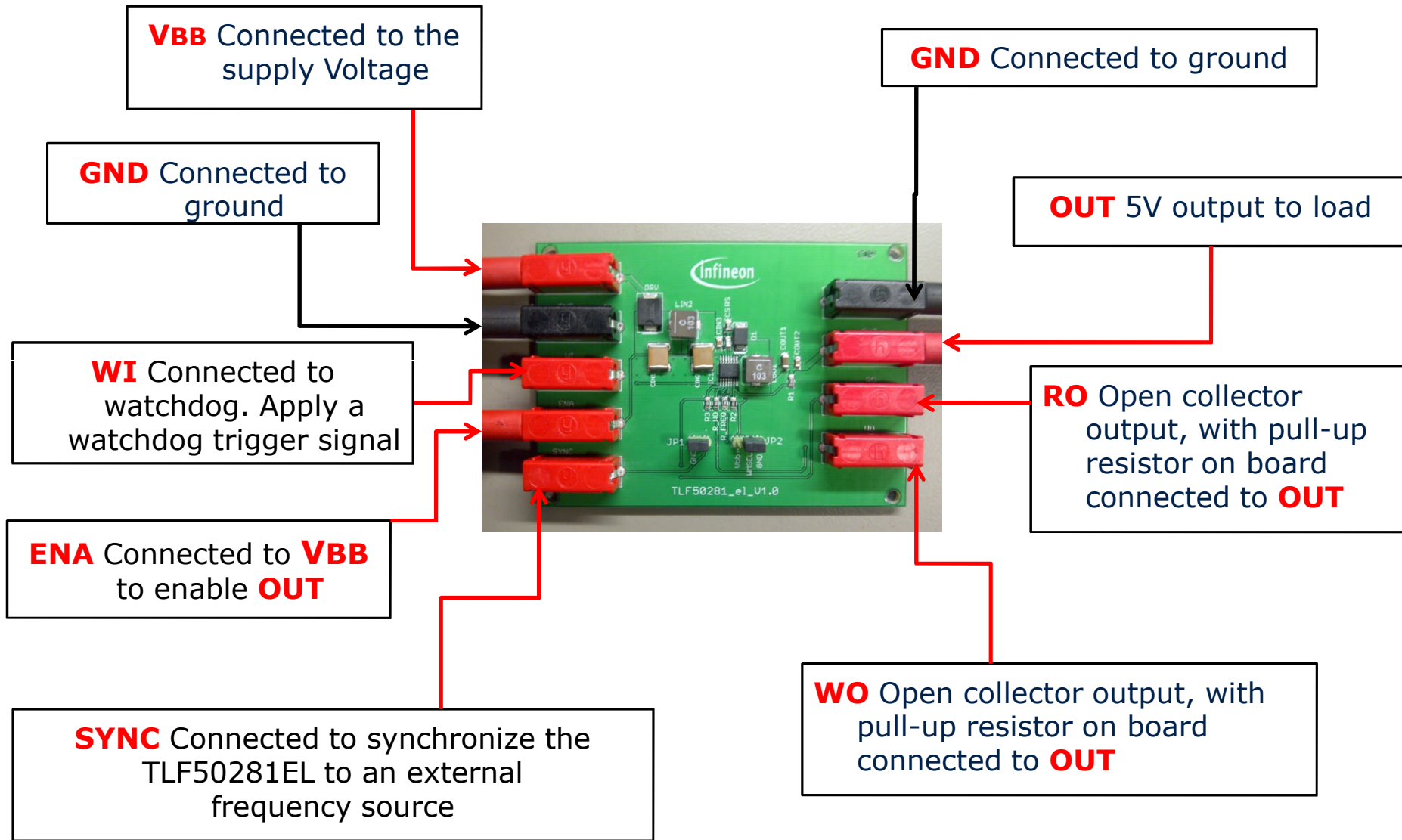


- Connect the Application Board as shown below for a basic Test:

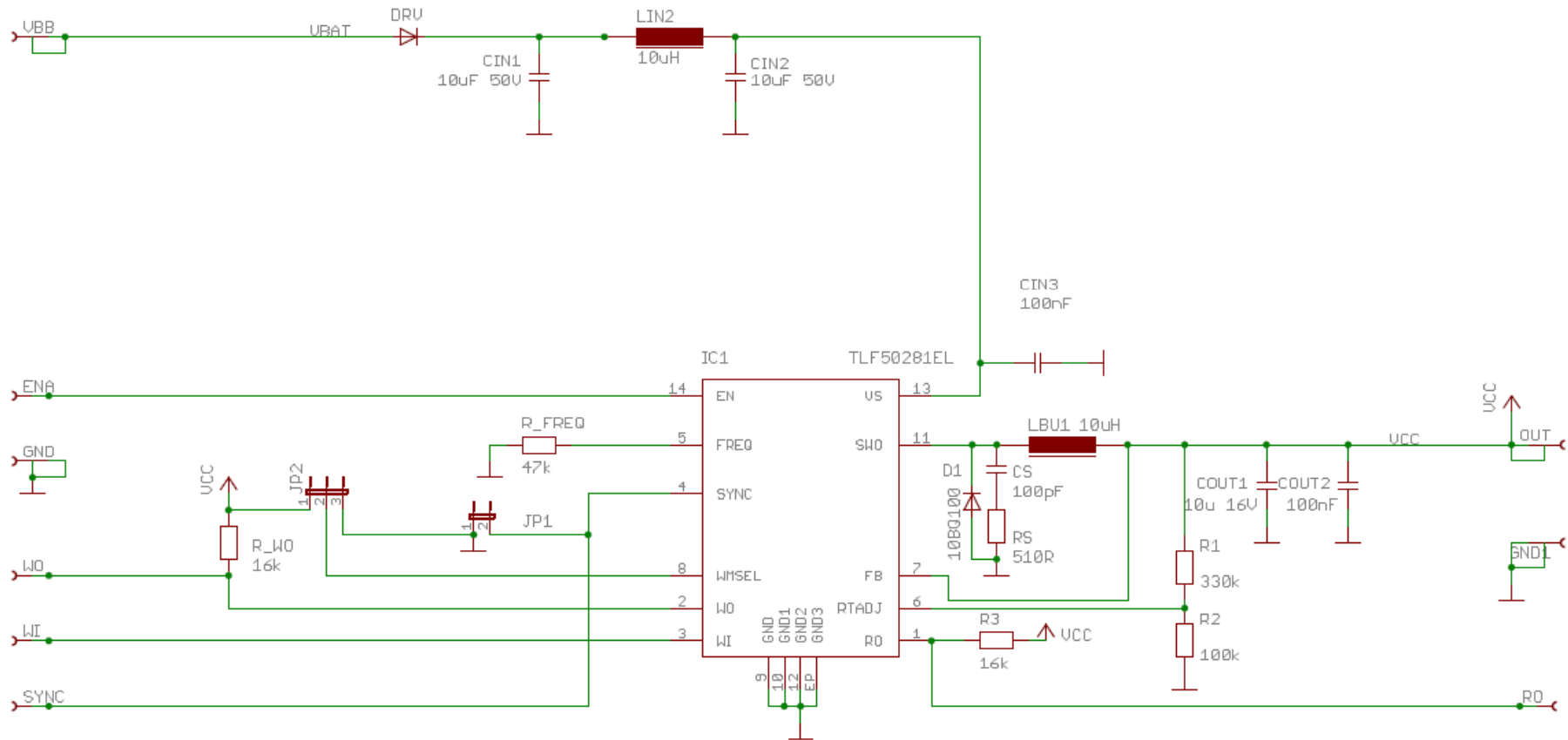


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Connections: details (Refer to Datasheet)



TLF50281EL Application Board Schematic



TLF50281EL Application Board

Bill Of Material



Reference Designator	Characteristics
	TLF50281EL
R1	330 k Ω
R2	100 k Ω
R3	16 k Ω
R_WO	16 k Ω
R_FREQ	47 k Ω
Rs	510 Ω
CIN1	10 μ F / 50 V
CIN2	10 μ F / 50 V
CIN3	100 nF / 50 V
COU1	10 μ F / 16 V
COU2	100 nF / 16 V
LIN2	XAL6060-103 10 μ H
LBU1	XAL6060-103 10 μ H
DRV	MURS360 3A / 600V

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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

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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} .

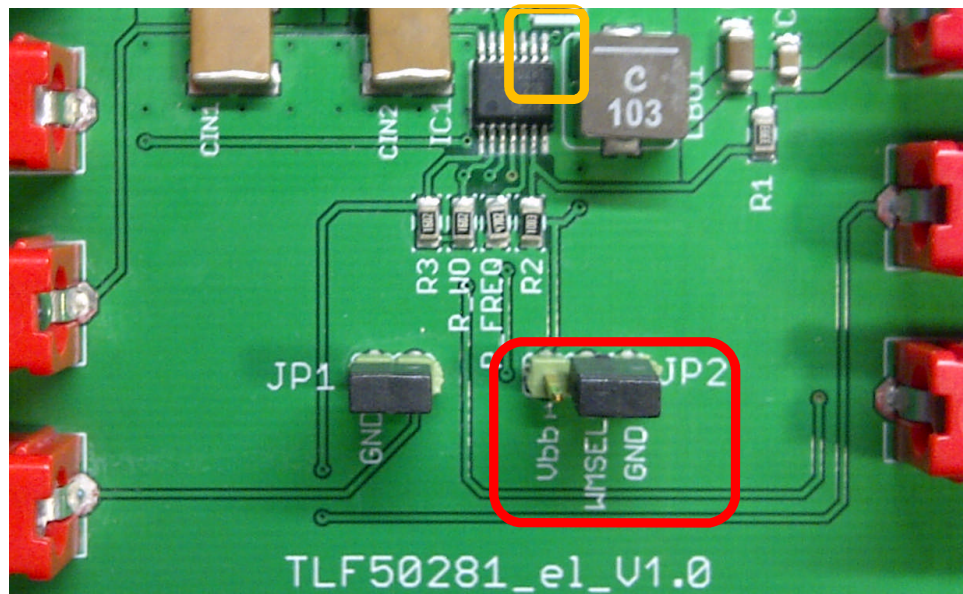
$$\text{Desired reset threshold} = V_{RO, T} \left(\frac{R1 + R2}{R2} \right) = V_{RT}$$

TLF50281EL Application Board Watchdog mode selection



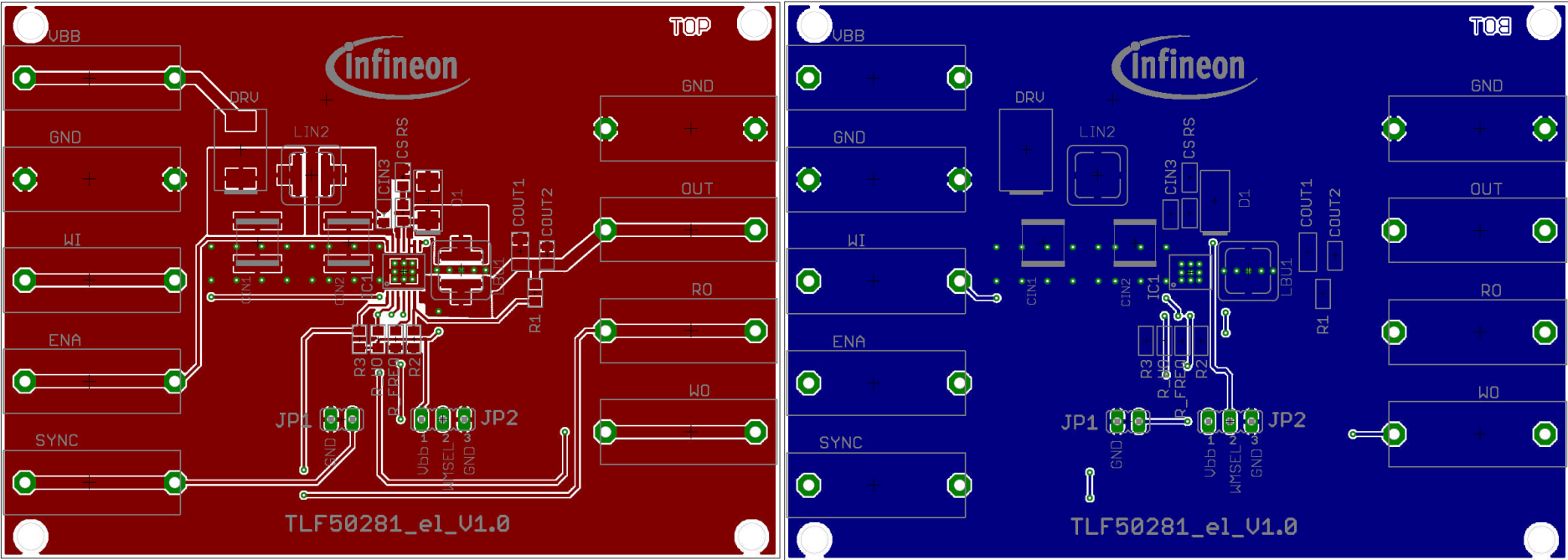
- The watchdog offers two operation modes:
 - Slow watchdog timing
 - Fast watchdog timing.

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



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