

Construction of Electronic Systems

Exercise 11: USB DAQ project: designing the rest of the PCB

The power supplies – carefully choosing the point from where to draw power for power distribution

In the remaining parts of the circuit that you still need to design you will find a few voltage regulators, such as the one for the WiFi module, for example. What you need to be careful about when distributing the power supply is *how you choose the exact point to where you connect the power distribution line*. The power supply lines can be quite long on the PCB since they can be distributing the power to many different components. Therefore, you must be careful not to "catch" noise onto these long lines by choosing a problematic point from where you draw the power. So think before you place the power distribution connection:

is it better to draw the power from the regulator pin (Figure 1, blue arrow) or the output capacitor (yellow arrow)? Which one is more "stable and quiet"?

Voltage regulator - WiFi

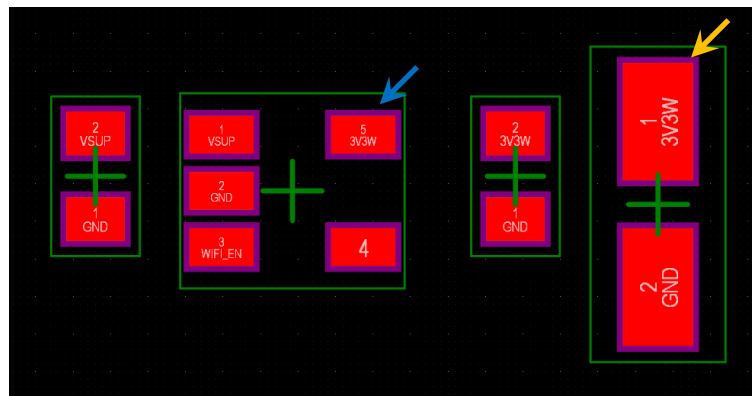
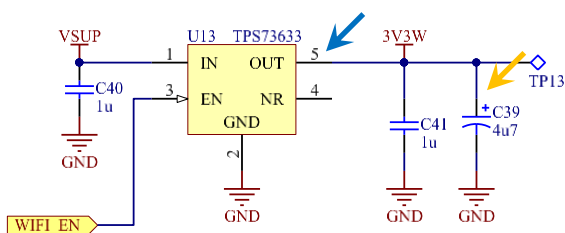


Figure 1 – be careful about choosing the actual point from where you will draw the power and distribute it across the PCB