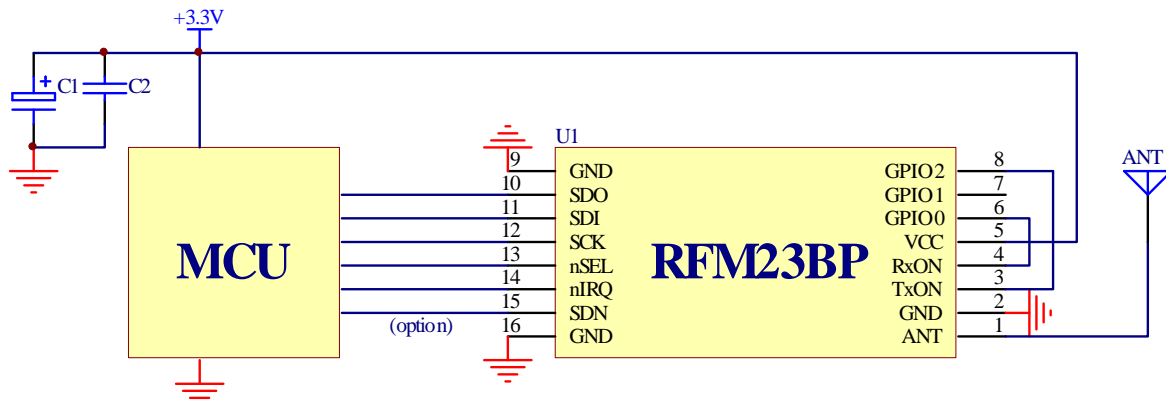


# RFM23BP The hardware design reference

RFM23BP is the enhance power of the RF23B with a PA and the max power output it's 30dBm (@5.5v power supply).there is a LDO which reduce the voltage from 5.5v to 3.3v to supply the RF23B so the SPI i/o pin (4 lines), nIRQ, SDN, GPION interface such as working voltage of 3.3 V.we recommend that users use the reference design circuit as below:

1. On the condition of the Power supply is 3.3V

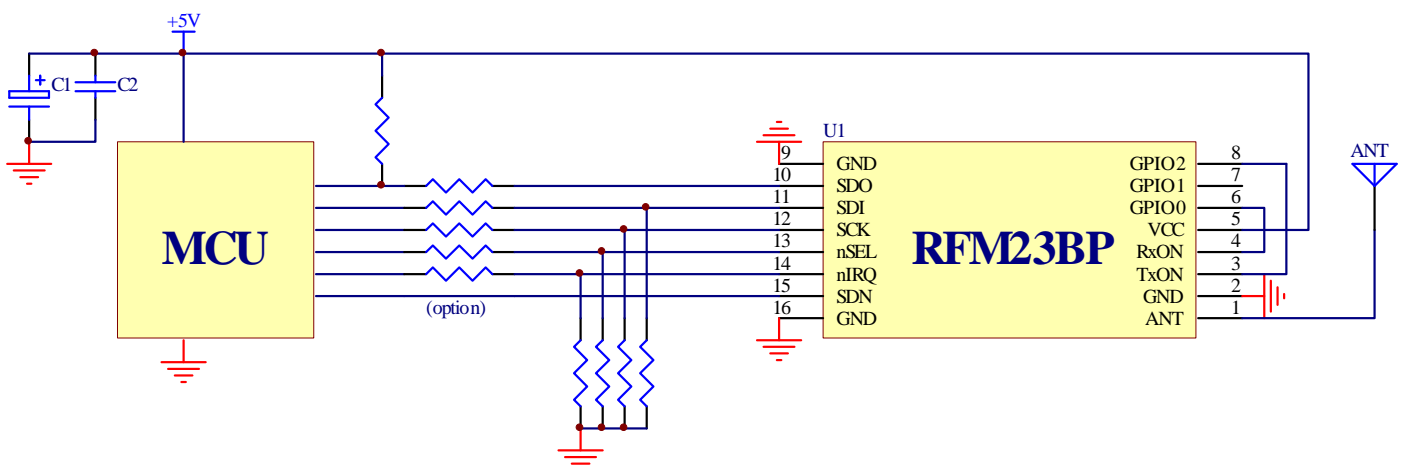


Note:

- A. The recommended connection of SDN is with a MCU if not connect to GND.
- B. To save the I/O resource of the MCU, the RF switch can be controlled by the GPIO0 and GPIO2 in the module if not it can be controlled by two I/O from the MCU.
- C. The max Power output is 27dBm on this condition that the power supply is 3.3v;

2. On the condition of the Power supply is 5V

Low cost solution:

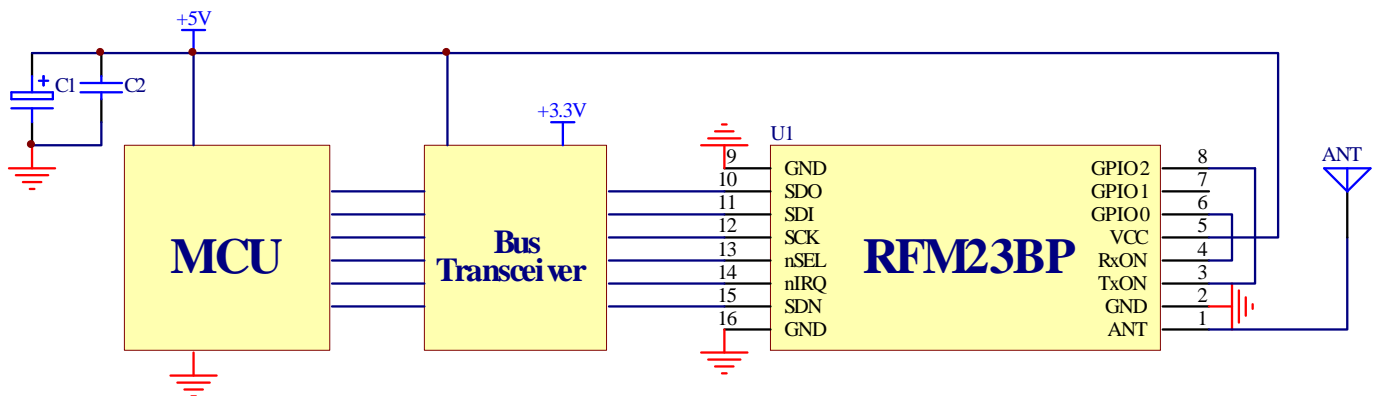


Note: A. Low cost solution pressure way through resistance points, so the partial pressure resistance needs to be combined with MCU port state and load capacity

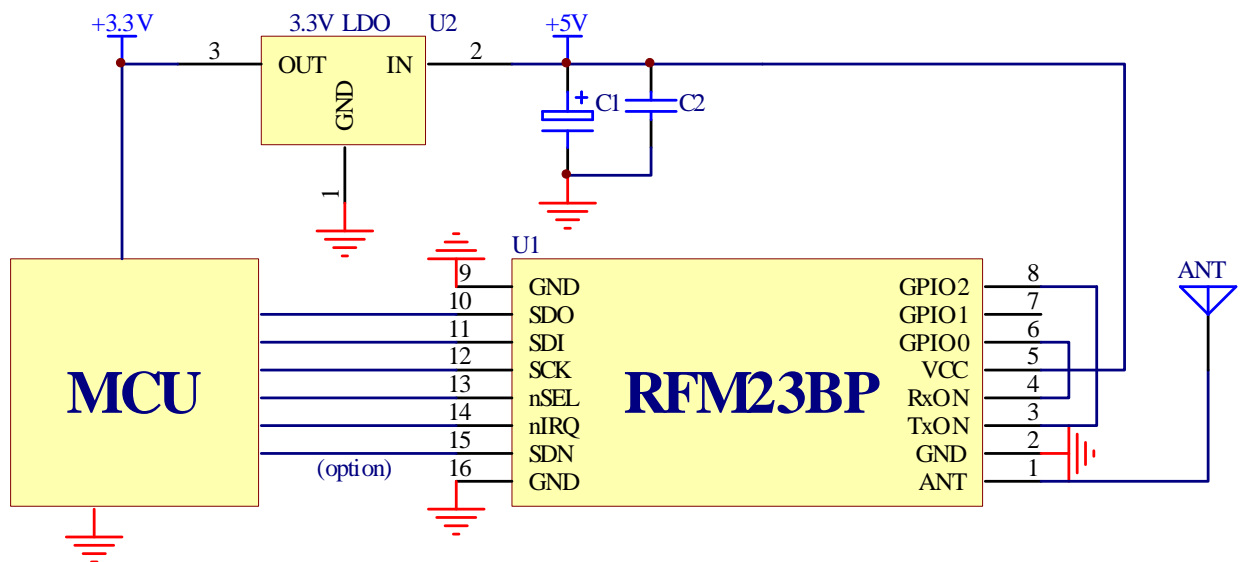
design

B. This design is not necessarily suitable for all types of MCU;

The recommend solution:



Choosing the special level conversion IC makes the design more reliable.



MCU work at 3.3 V, matching with RF23B chip level can make the system steady and reliably.