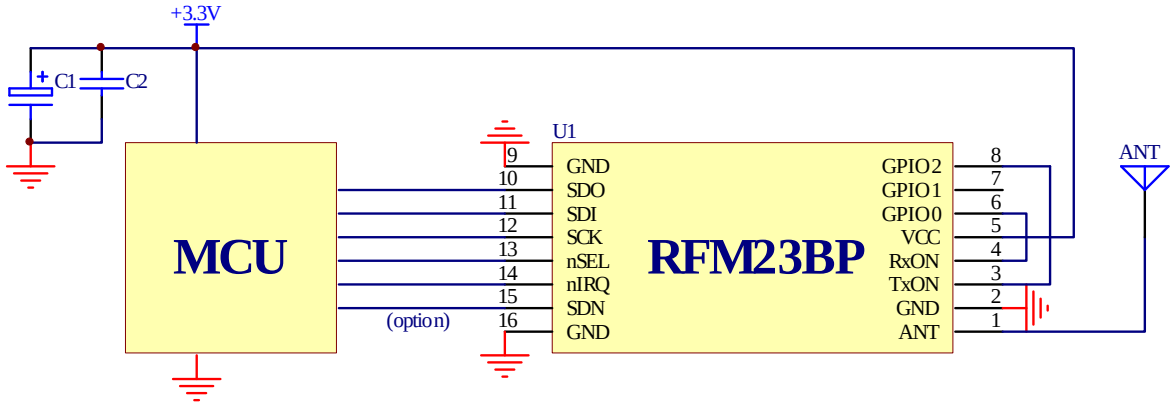
RFM23BP The hardware design reference

RFM23BP is the enhance power of the RF23B with a PA and the max power output is + 30dBm (@5.5v power supply).There is a LDO which reduce the voltage from 5.5v to 3.3v to supply the RF23B power on board, so the SPI interface (4 lines), nIRQ, SDN, GPIOn interface, etc pins of the RF23B IC work such as the power voltage of 3.3V. We recommend that users do the design as the reference circuit below：

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



Note：

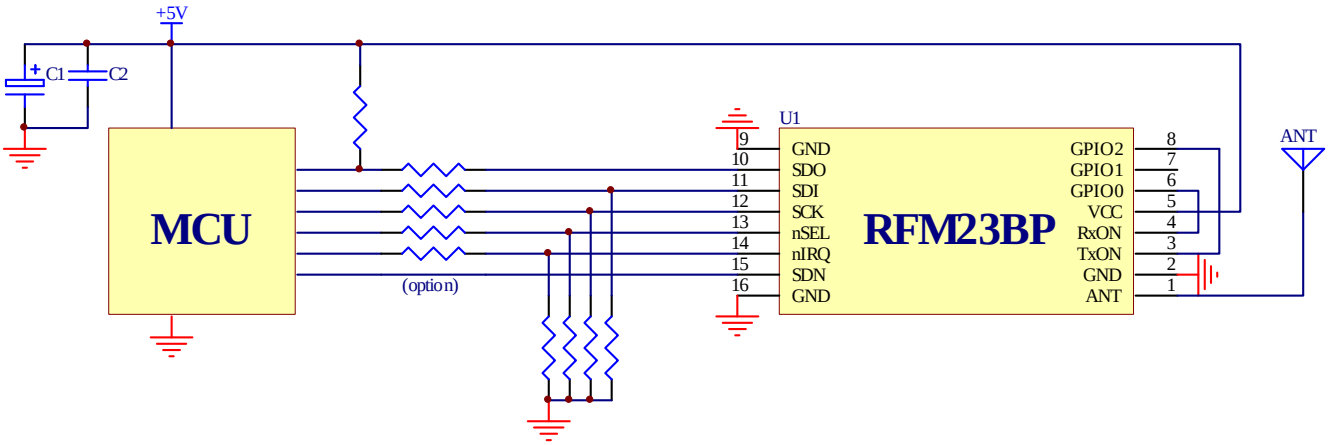
A. The recommended connection of SDN is with a MCU if not connect to GND.

B. To save the I/O resource of the MCU, the RF switch can be controlled by the GPIO0 and GPIO2 on the module, if not it can be controlled by two I/O pin of the MCU.

C. The max Power output it's 27dBm on this condition ；

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

Low cost solution：

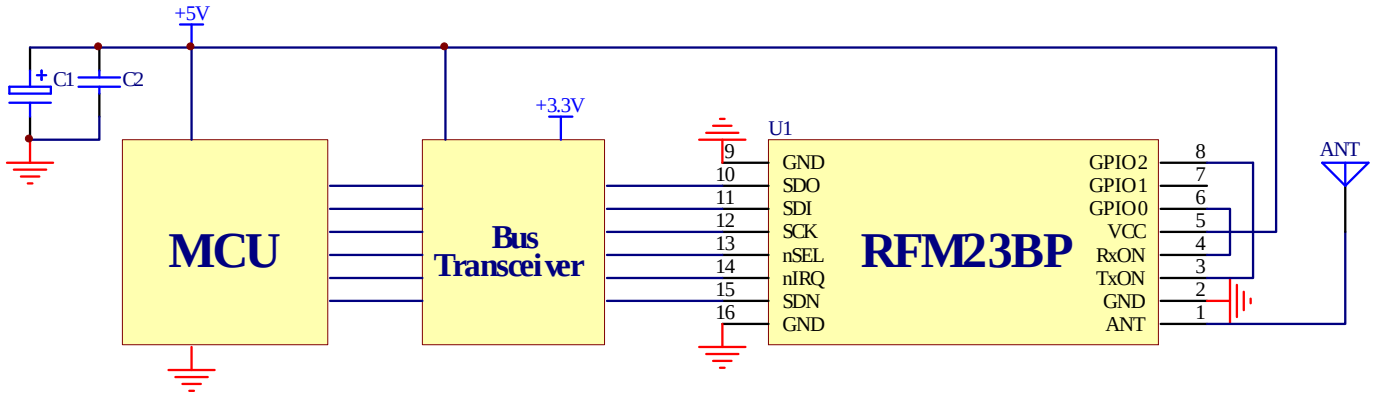


Tel: +86-755-82973805 E-mail: sales@hoperf.com http://www.hoperf.com

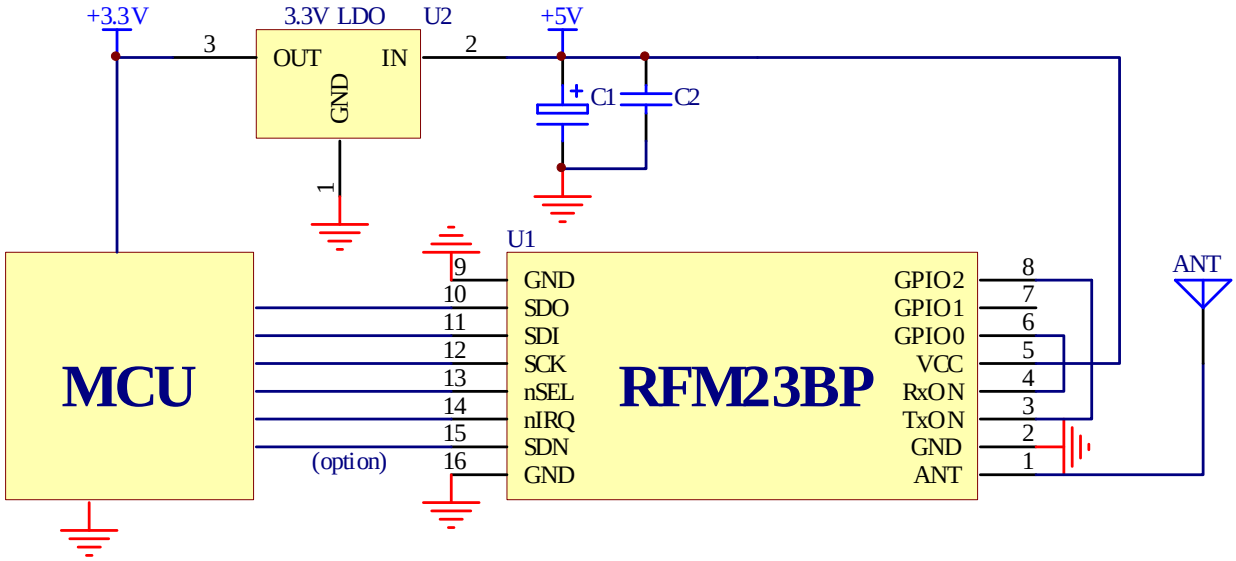
Note：A. Low cost solution pressure way through resistance points, so the partial pressure resistance needs to be combined with MCU port state and load capacity design

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.

Tel: +86-755-82973805 E-mail: sales@hoperf.com http://www.hoperf.com

HOPE MICROELECTRONICS CO.,LTD
Add: 2/F, Building 3, Pingshan Private Enterprise Science and Technology Park, Lishan Road, XiLi Town, Nanshan District, Shenzhen, Guangdong, China
Tel: 86-755-82973805
Fax: 86-755-82973550
Email: sales@hoperf.com
Website: http://www.hoperf.com
http://www.hoperf.cn