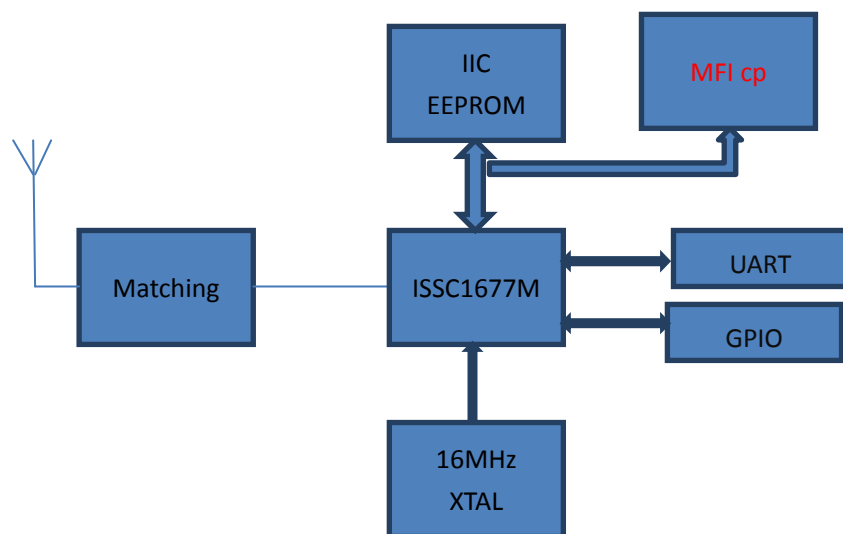


RF part structure picture of model:

The iSSC BM77SPP03MC2 Bluetooth module is design for Bluetooth standard SPP/ BLE electronic accessories via Bluetooth connectivity. It is available in the 2.4GHz ISM band Class 2 Radio, compatible with Bluetooth Core Specification Version 3.0/ 4.0 + EDR.

iSSC IS1677NM single chip solution combines transceiver and baseband function to decrease the external components. It narrows down the module size and minimizes its cost.

The optimized power design minimize power consumption to keep low battery



1. matching circuit

The antenna matching circuit is capable of matching with an antenna better and enabling the antenna to receive radio frequency signals better.

In fact, The antenna matching circuit is connected between the antenna and the iSSC1677 model can match the receiving capacity of the antenna to the optimum and effectively reduce the antenna standing wave ratio.

2. IIC circuit

The circuit is used to configure the necessary information for the Bluetooth, such as operating mode, sniff interval, SSID, password, etc. parameters so that the module meets the requirements of customers

3. MFI cp

MFI chip interface set aside to meet some customers BT3.0 Apple device needs to connect

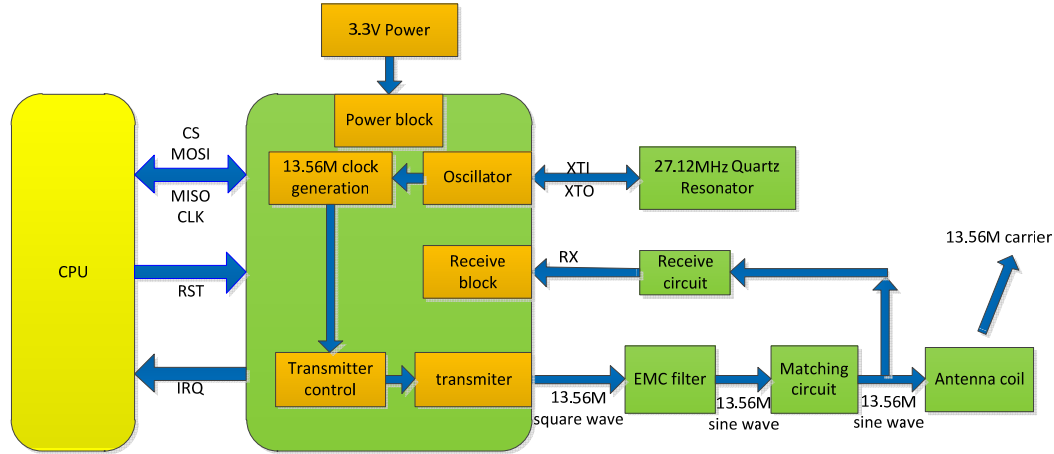
4. UART GPIO

Used to control Bluetooth module and transfer the data communication before between Bluetooth and master MCU b, GPIO module is used to control access to various work, and response the current Bluetooth work status.

Circuit description

Contactless reader part structure picture of model:

This radio's frequency range is $13.56\text{MHz} \pm 7\text{k}$.



1、The crystal resonator

We use a crystal resonator to generate a 27.12MHz clock for the contactless reader part. The contactless chip as3911 divide the clock to a 13.56MHz clock which is used as the carrier signal.

2、The transmitting circuit

The transmitting pins of as3911 generate a 13.56MHz square wave. The signal firstly pass the EMC filter which filters the high order harmonic of 13.56MHz, then be sent to the antenna coil by the matching circuit. The antenna transmits out the 13.56MHz carrier signal to the air.

3、The receiving circuit

The receiving circuit is a voltage division circuit actually. The contactless card's response signal is received by the antenna coil. However, the voltage on the antenna is too high for the contactless chip as3911 to receive and decode the card signal. The receiving circuit reduces the voltage to a suitable voltage for receiving.

4、Microprocessor(MPU)

The CPU system controls the function of radio using SPI interface.