

### **Circuit Description**

Battery (DC 3.7V) provides energy for the Bluetooth chip (AC7916A ); Crystal oscillator (24MHz) provides the clock signal for the Wifi chip. Bluetooth signals get through a matching circuit, and then transmitted to the space through the antenna (2402-2480MHz). When the product is connected, the product can in two-way communication with other Wifi Devices, and then the device's Wifi module sends Wifi signals into space, the product receives the Wifi signal through an antenna, transmission to the Bluetooth chip via matching circuit. Press the doorbell, start 433.92MHz transmission signal, and then a receiving box will ring.

Wi-Fi: 2412-2462MHz

Modulation Technique

BLE: GFSK

Wi-Fi: DSSS, OFDM

433.92MHz: ASK

For 433.92 MHz Radio, the transmission protocols descriptions as follow:

Duty Cycle:

Ton1 = 1.5362ms

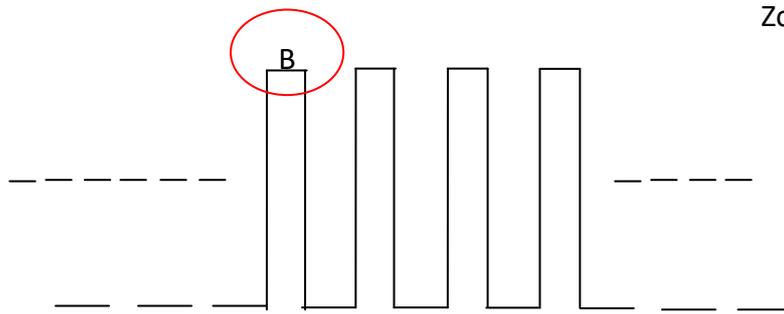
Ton2 = 0.5507ms

Ton = (10\*1.5362+15\*0.5507) ms=23.623 ms

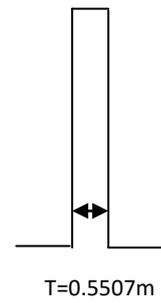
Tp = 61.034 ms

The transmission protocols descriptions as follow:

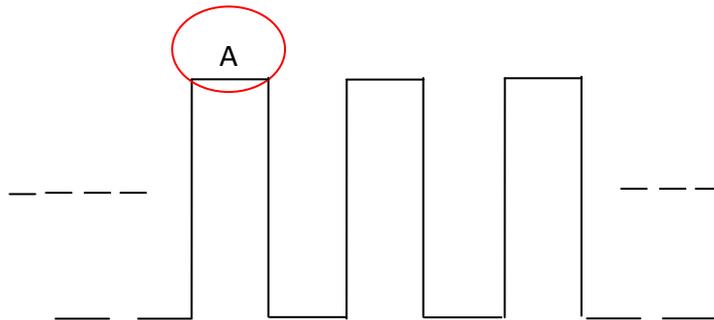
Ton2:



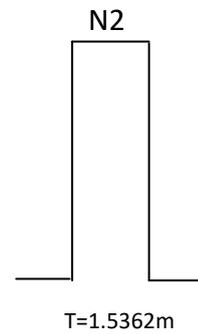
Zoom in B:



Ton1:



Zoom in A:



Tp:

