![BodyCAP — Your e-health partner]

Temperature data →

P110 Gateway

Or P040 Monitor

← Synchronisation request

RF 433MHz

37.5°C

Temperature sensing

Storage

Storage

Data synchronization

Alert (technical & physiological)

Time

RF communication (433MHz & BLE)

The pill sends the temperature data to another device (Gateway or monitor) by 433Mhz radio communication.

It also receives the request from (Gateway or monitor) for data synchronization.

The antenna is a PCB antenna with the conductor of the coplanar line 75 µm and the distance 160 µm.

It is designed by Bodycap. More details are shown as below:

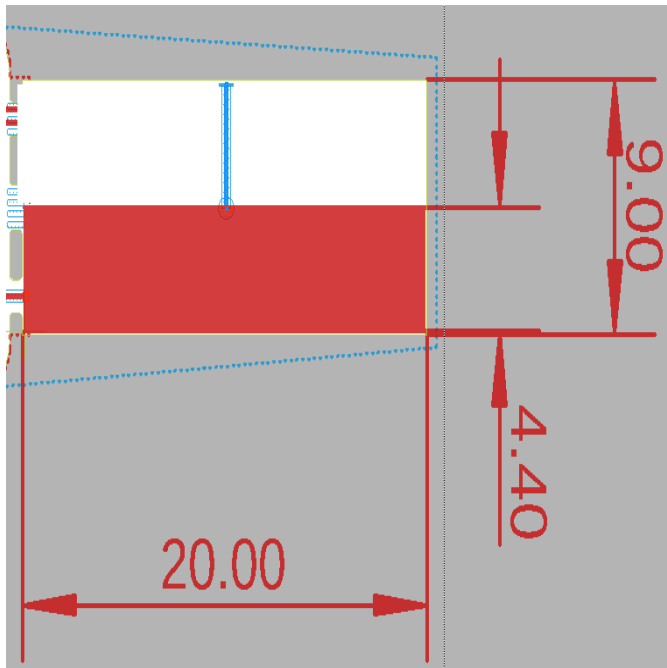*Type of the antenna:* PCB Antenna

Impedance of the antenna: 80 Ω

Gain of the antenna: 0dB

Modulation: GFSK

Data rate: 48004 bits/s

Frequency range: 433.25 – 434.65MHz

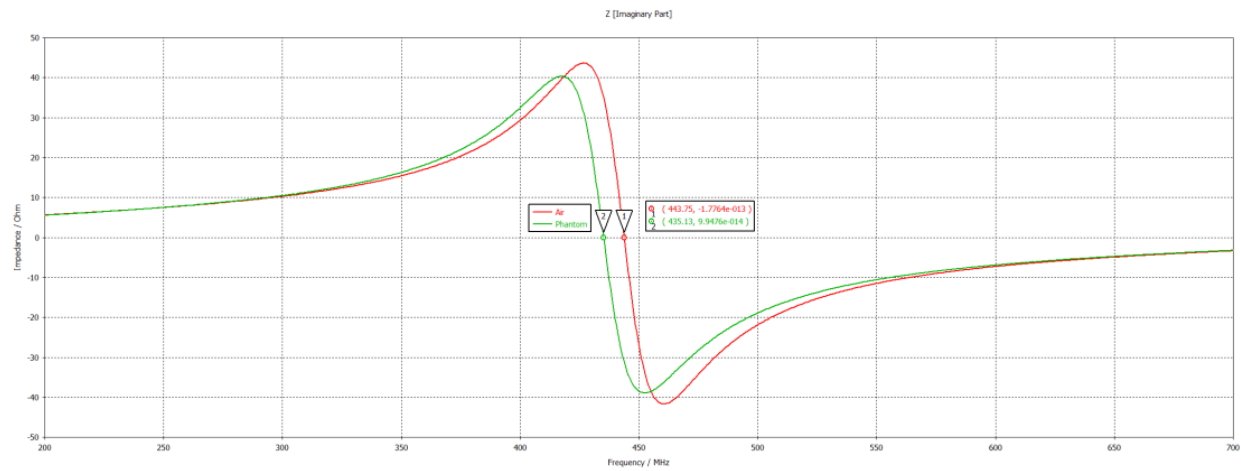*Size of the antenna:* 20mmx9mm
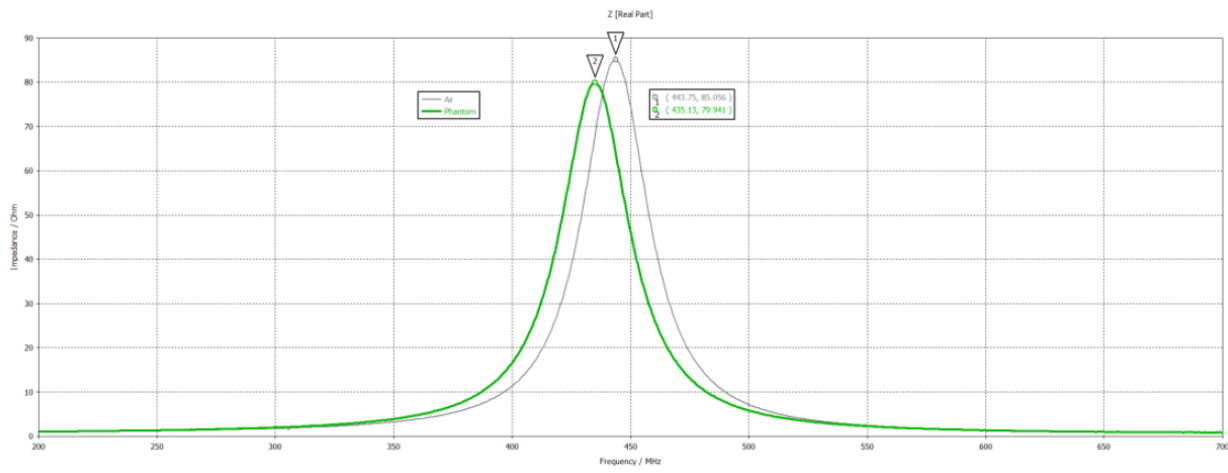
Here is the measured performance of the antenna.

The antenna resonates in the phantom at 435 MHz (in air at 444

MHz, thus very robust). The imaginary part Im(Z) in air and in the phantom

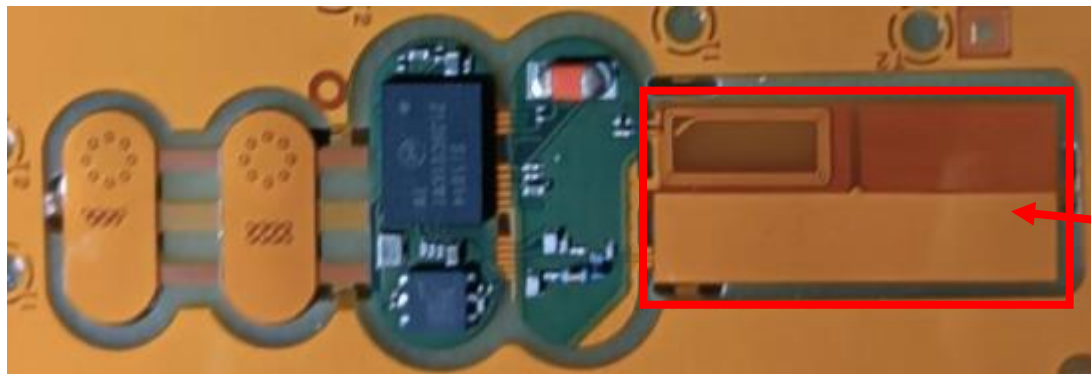(the resonance is at y = 0) :

The real part Re(Z) - the impedance of the antenna for the matching circuit:

Position of the antenna

433Mhz Antenna