

# Keyboard Antenna Specification

## Antenna overview

1. Antenna Type and Model:

Type: PCB Antenna

Model: PIFA Antenna

2. Gain: about **3.36dBi (peak)**

3. Antenna Directivity Coefficient: about -1 @2450MHz

4. Antenna Polarization characteristic: elliptical polarization

5. Inside or outside: Inside

6. Name of Manufacturer: Shenzhen Qkie Technology Co., LTD(深圳市芯之源科技发展有限公司)

7. Name of Laboratory: Shenzhen Qkie Technology Co., LTD (深圳市芯之源科技发展有限公司)

8. Manufacturer's address: Room 1006, Shifeng Building, No. 6267, Bao'an Avenue, Qiaotou Community, Fuhai Subdistrict, Bao'an District

## Dongle PIFA Antenna

The Keyboard antenna adopts the ultra-small PIFA antenna, and because of the limited area of PCB, the gain of antenna will be smaller than that of the other antennas. The communication distance can reach about 15 ~ 20 meters. The size of the Dongle Module PCB antenna is 14.376\* 3.15mm, and the thickness of PCB is 1.0mm. The specific size of the antenna is shown in figure 1, the physical object is shown in figure 2

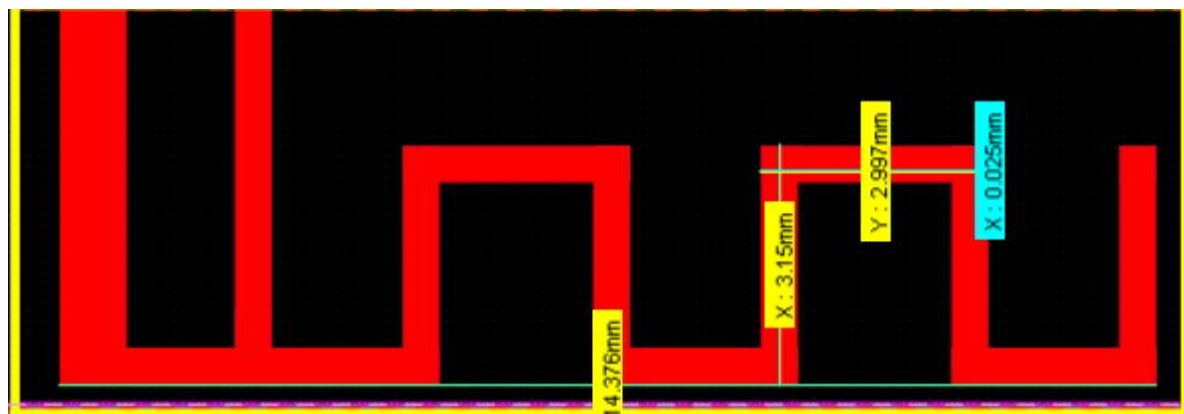


Figure 1 :keyboard Ant

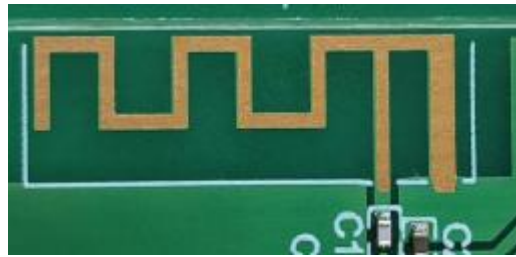


Figure 2 :Keyboard Antenna

The antenna's S11 test data is shown in figure 3, covering the entire 2.4 G frequency band.



Figure 3 keyboard Antenna S11

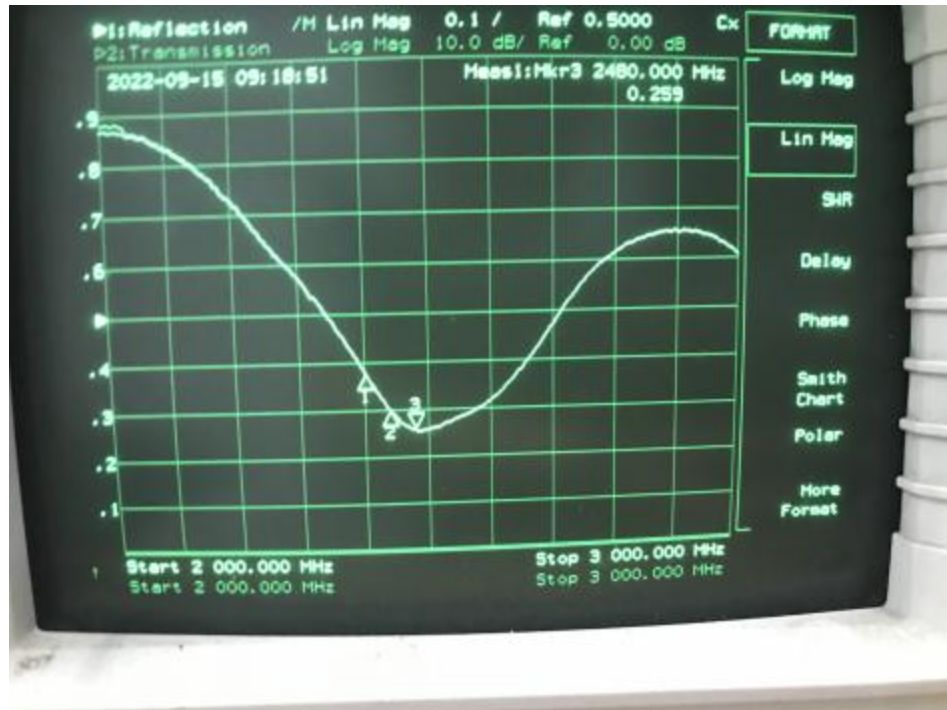
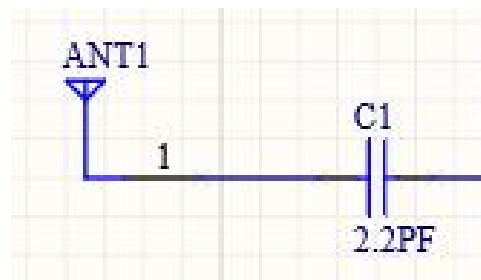


Figure 4 keyboard Antenna S11

The gain simulation data of the antenna is shown in figure 4



| Number | Brand | Value |
|--------|-------|-------|
| C1     |       | 2.2pF |

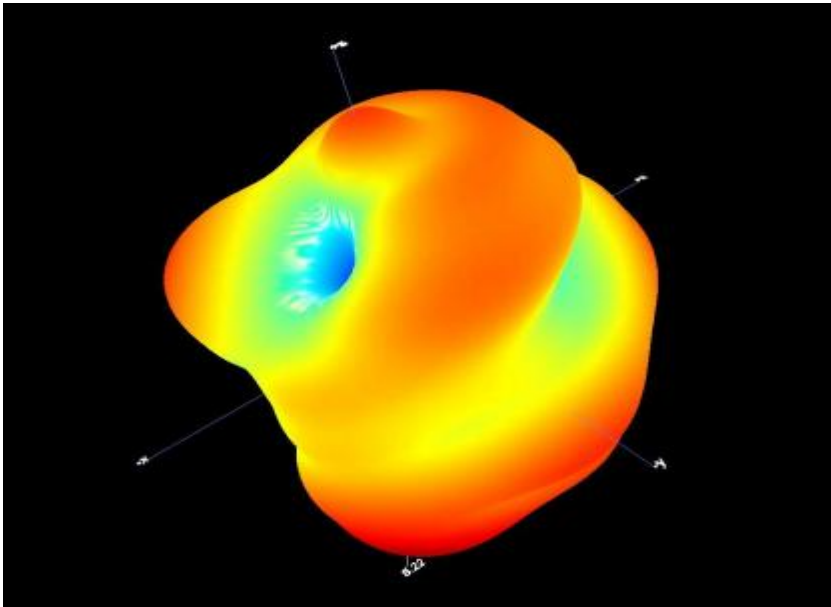
Channel List-2.4G(MHz)

|      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|
| 2402 | 2404 | 2406 | 2408 | 2410 | 2412 | 2414 | 2416 | 2418 | 2420 |
| 2422 | 2424 | 2426 | 2428 | 2430 | 2432 | 2434 | 2436 | 2438 | 2440 |
| 2442 | 2444 | 2446 | 2448 | 2450 | 2452 | 2454 | 2456 | 2458 | 2460 |
| 2462 | 2464 | 2466 | 2468 | 2470 | 2472 | 2474 | 2476 | 2478 | 2480 |

B.1 3D Pattern

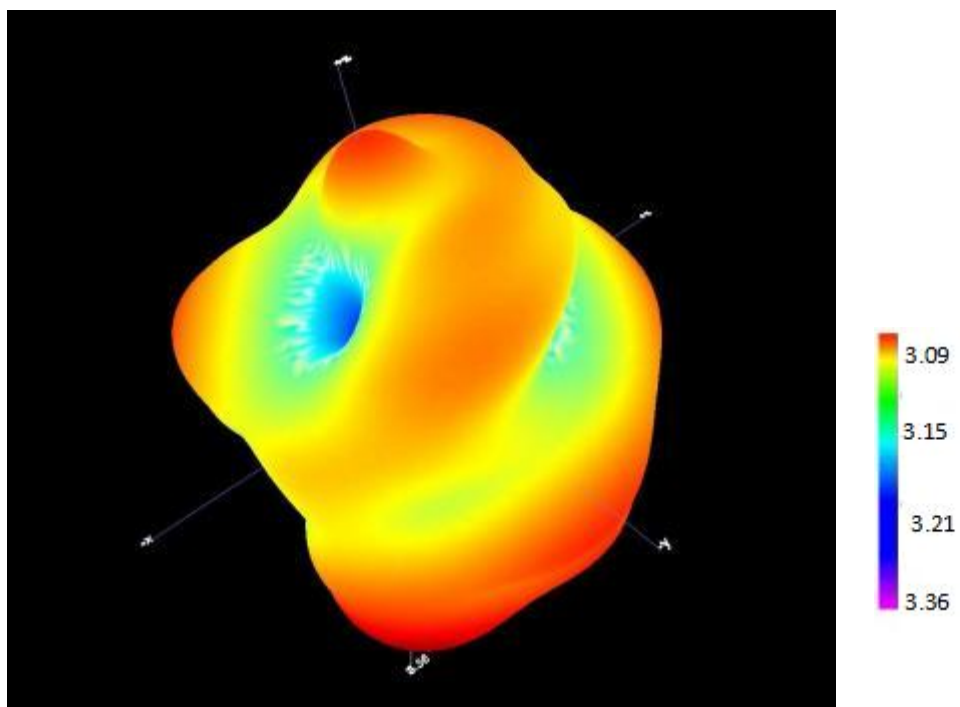
B1.1 3D Pattern for 2400MHz

|      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|
| Phi  | 0    | 45   | 90   | 135  | 180  | 235  | 270  | 315  |
| Gain | 3.03 | 3.12 | 3.27 | 3.18 | 3.05 | 3.17 | 3.29 | 3.22 |



**B1.23D Pattern for 2450MHz**

| Phi  | 0    | 45   | 90   | 135  | 180  | 235  | 270  | 315  |
|------|------|------|------|------|------|------|------|------|
| Gain | 3.15 | 3.19 | 3.24 | 3.19 | 3.11 | 3.21 | 3.36 | 3.09 |



B1.3 3D Pattern for 2500MHz

| Phi  | 0    | 45   | 90   | 135  | 180  | 235  | 270  | 315  |
|------|------|------|------|------|------|------|------|------|
| Gain | 2.87 | 2.98 | 3.03 | 3.14 | 3.08 | 3.06 | 3.11 | 3.01 |

