

PCB antenna specification

1. Product model

PCB antenna

2. Features

- *Stable and reliable in performances
- *Low temperature coefficient of frequency
- *Low profile, compact size
- *RoHS compliance

3. Applications

- *Bluetooth earphone systems
- *Hand-held devices when Bluetooth functions are needed, e.g., Smart phone.

4. Description

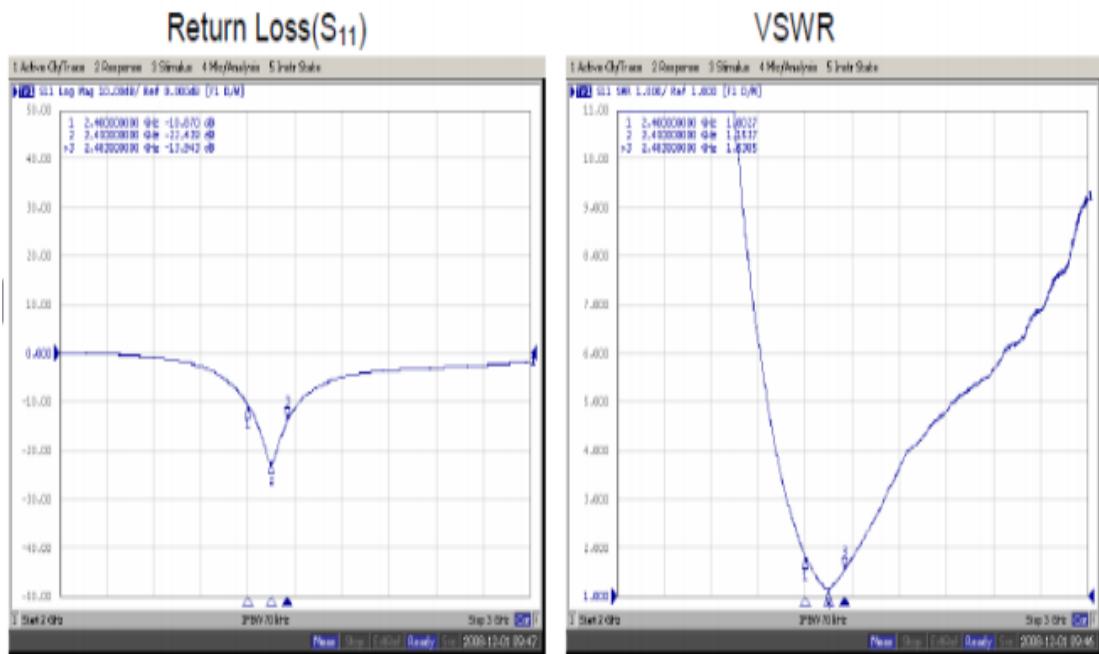
The antenna are specially designed for Bluetooth applications. Based on proprietary design and processes, this antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency

5. Electrical Specifications

5-1

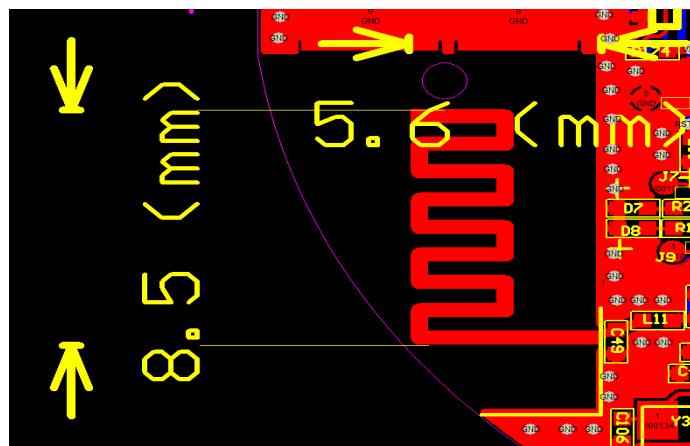
| Characteristics | | Specifications | Unit |
|--|------------|-----------------------|----------|
| Outline Dimensions | | 5.6x8.5 | mm |
| Working Frequency | | 2442 | MHz |
| Bandwidth (under -10dB return loss) | | 100min | MHz |
| VSWR | | 2MAX. | |
| Impedance | | 50 | Ω |
| Polarization | | Linear Polarization | |
| Gain** | Peak | 0.95 (typical) | dBi |
| | Efficiency | 84 (typical) | % |
| Temperature Coefficient of Frequency | | 0±20max (@-40°C~85°C) | ppm/°C |
| ** Working frequency will be offset to another frequency according to the conditions of users ground plane and radome. | | | |
| **The data was measured by A Test Lab Techno Corp.(CTIA Authorized Test Lab). | | | |

5-2



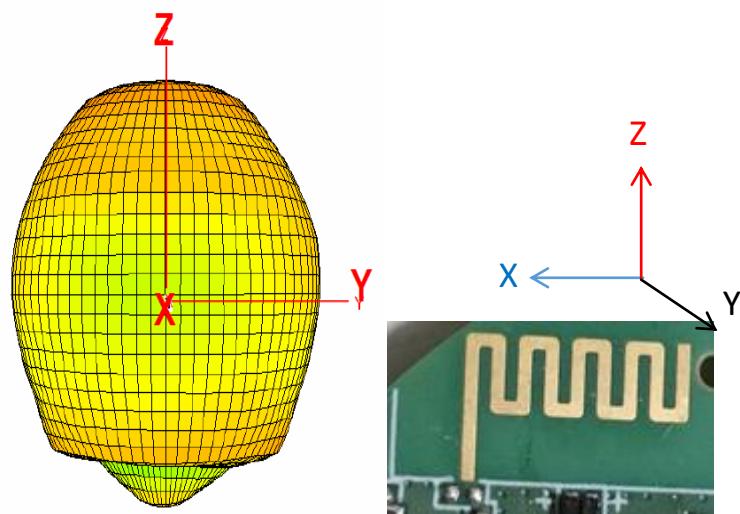
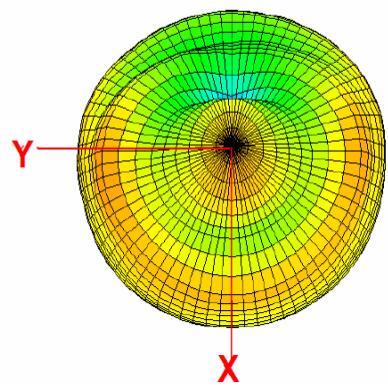
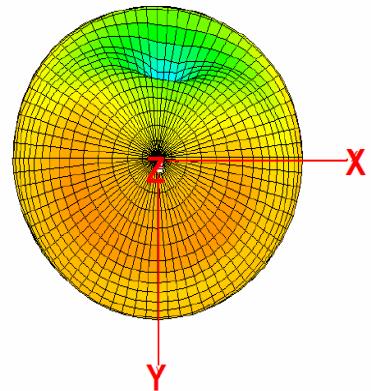
6. Antenna Dimensions(unit:mm)

a. Antenna Dimensions



7. Radiation Pattern

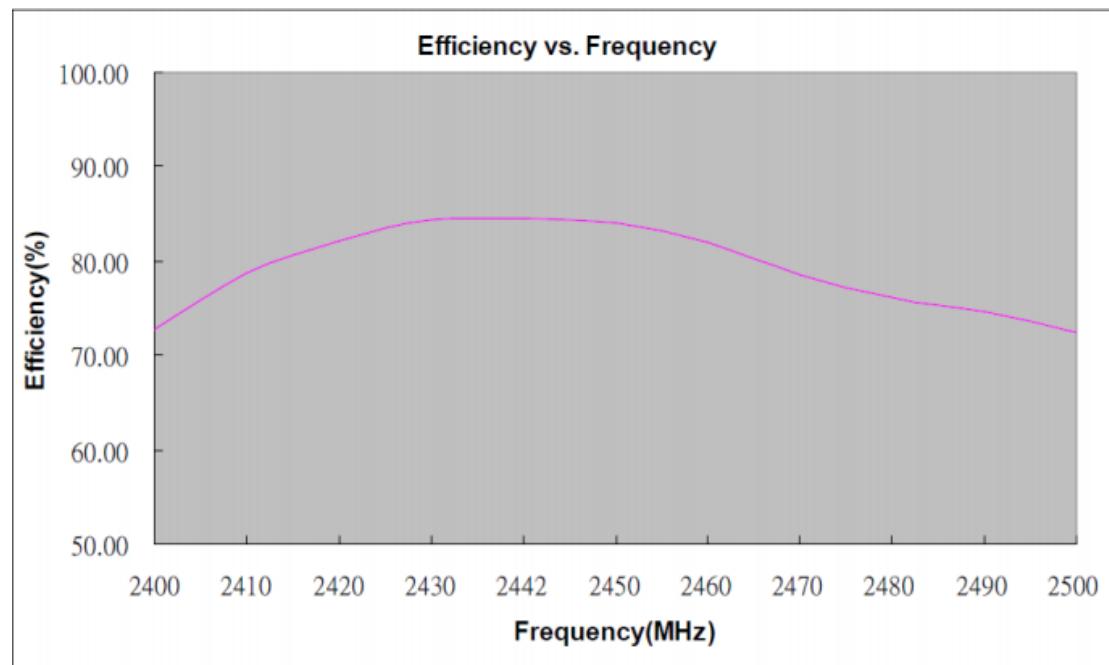
7-1.3D Gain Pattern at (2442MHz)



7-2. Efficiency Table

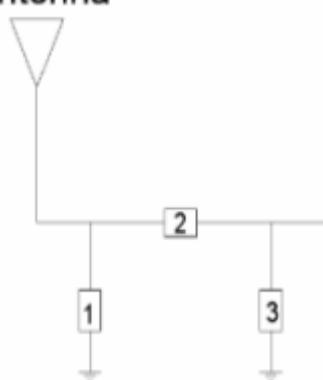
| | | | | | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Frequency(MHz) | 2400 | 2410 | 2420 | 2430 | 2442 | 2450 | 2460 | 2470 | 2480 | 2490 | 2500 |
| Efficiency (dB) | -1.38 | -1.04 | -0.85 | -0.74 | -0.73 | -0.76 | -0.86 | -1.05 | -1.18 | -1.27 | -1.40 |
| Efficiency (%) | 72.83 | 78.71 | 82.27 | 84.39 | 84.53 | 84.04 | 82.00 | 78.60 | 76.14 | 74.64 | 72.50 |
| Gain (dBi) | 0.55 | 0.6 | 0.71 | 0.82 | 0.95 | 0.95 | 0.8 | 0.69 | 0.65 | 0.63 | 0.59 |

7-3. Efficiency vs. Frequency



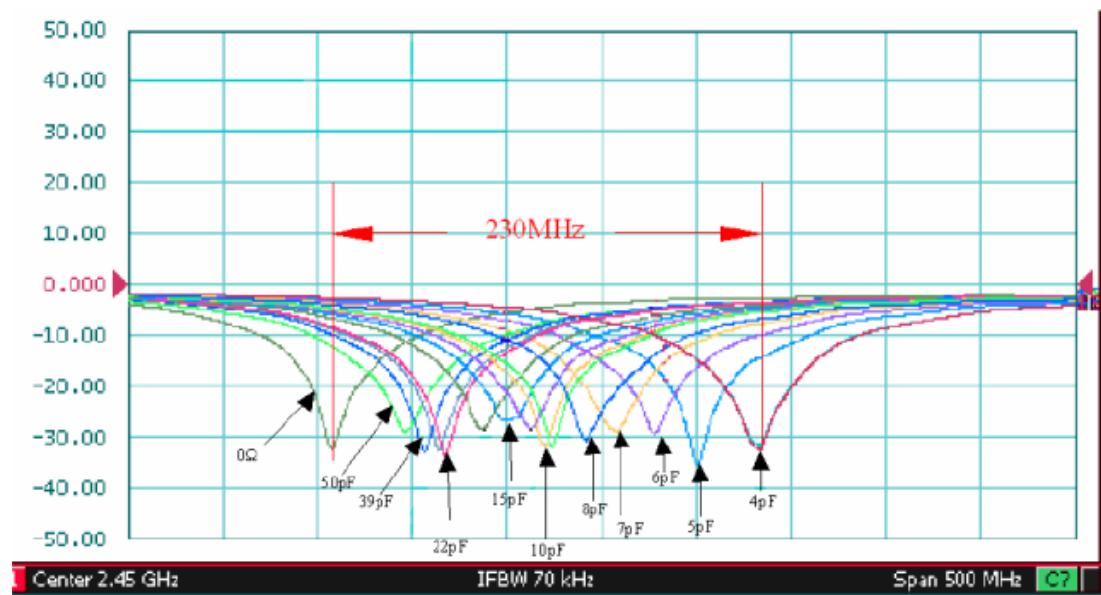
8. Matching circuit:

Antenna



| System Matching Circuit Component | | |
|-----------------------------------|-------------|--------|
| Location | Description | Vendor |
| 1 | N/A | - |
| 2 | 2.2uH | (0402) |
| 3 | 0.7PF | 0402 |
| | | |

9. Fine tuning element vs. Center frequency



10. Storage Conditions:

- 1) Temperature:-25 to 85
- (2) Relative Humidity:20% to 70%

Manufacturer: MEIZHOU WORLDTONG PC BOARD CO LTD

Address: DONG B INDUSTRIAL PARK AREA ECONOMIC DEVELOPMENT
ZONE MEIZHOU, GUANGDONG 514021 CHINA