

# Bluetooth antenna of PCB on-board specification

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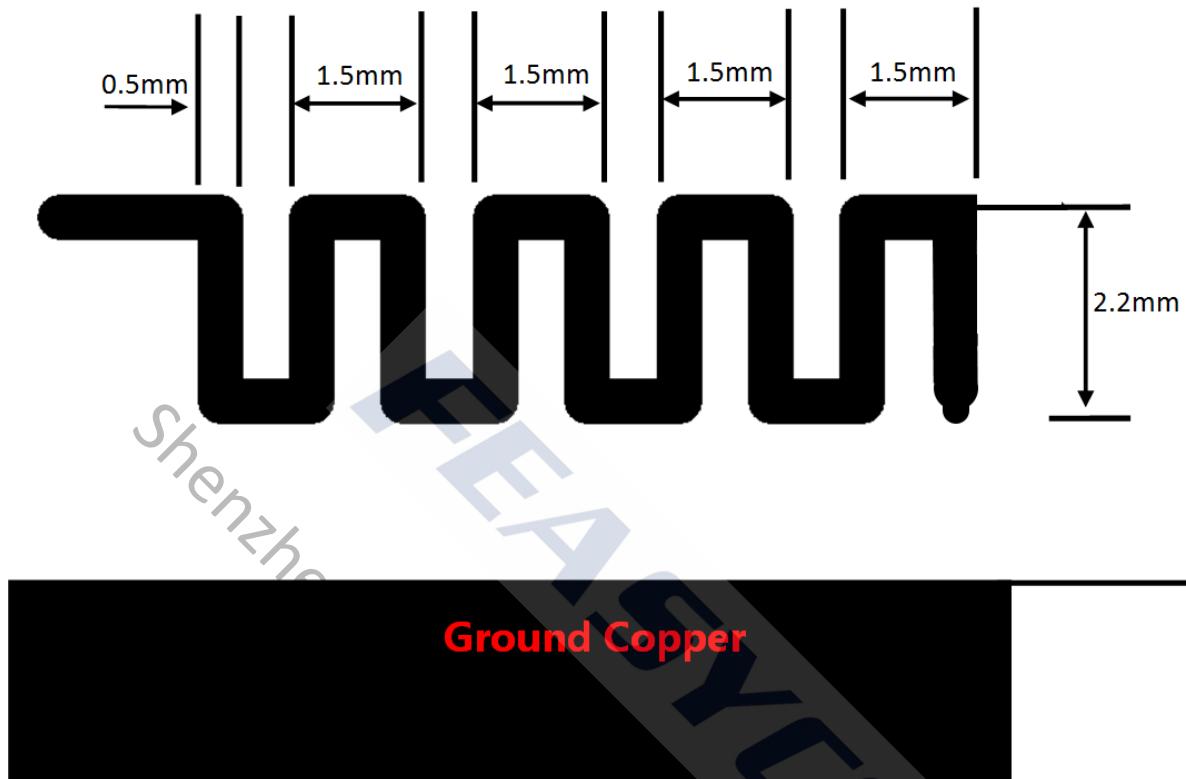
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## 2, Spec Drawing



## 3, Specification

Product Number: 2.4GHZ coil antenna

Sample Photo:



### A. Electrical Characteristics

|              |                 |
|--------------|-----------------|
| Frequency    | 2400 ~ 2500 MHz |
| S.W.R.       | <=2.0           |
| Gain         | 2.0 dBi         |
| Efficiency   | ~ 50%           |
| Polarization | Linear          |
| Impedance    | 50 Ohm          |

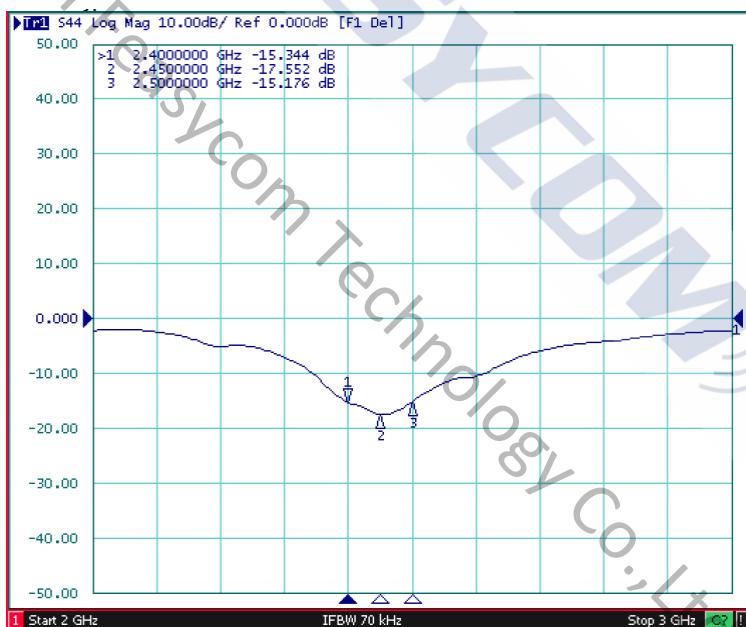
**B. Material & Mechanical Characteristics**

|                      |                    |
|----------------------|--------------------|
| Material of Radiator | Gold-plated copper |
|----------------------|--------------------|

**C. Environmental**

|                       |                  |
|-----------------------|------------------|
| Operation Temperature | - 40°C ~ + 85°C  |
| Storage Temperature   | - 40°C ~ + 105°C |

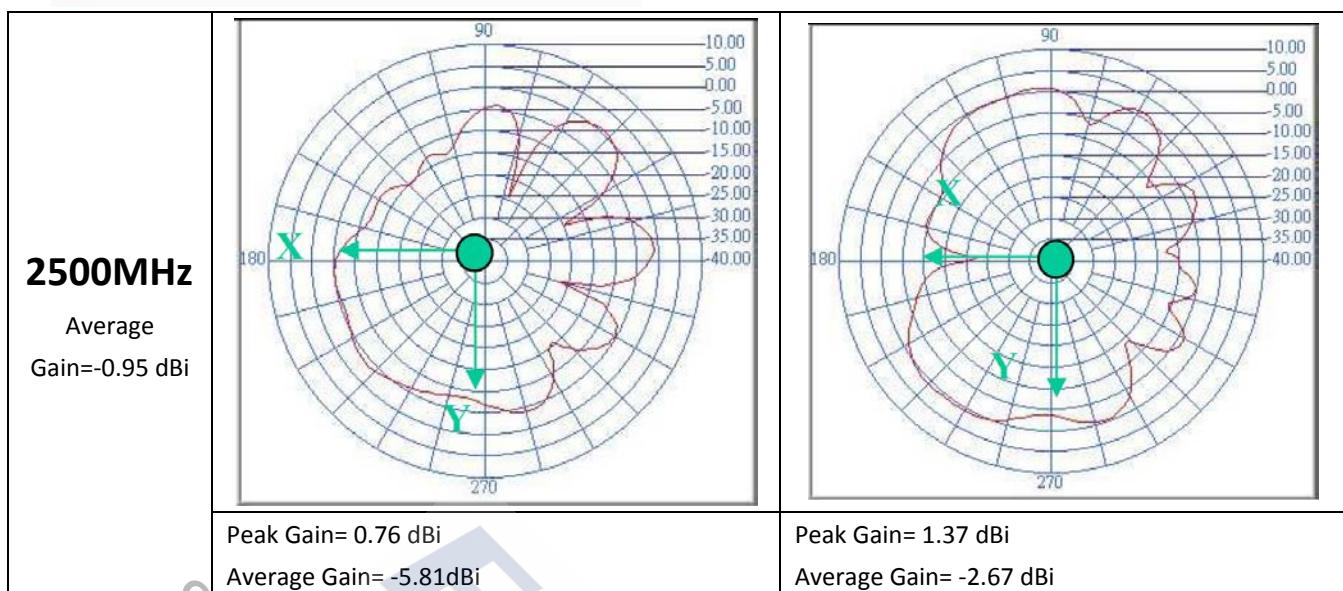
## 5, Return Loss



## 6, Radiation Pattern

Radiation Pattern and Gain were dependent on measurement board design. The specification of coil antenna was measured based on the PCB size and installation position as shown in the below figure Test Board.

|   | Vertical  | Horizontal |
|---|---|------------|
| <b>2400MHz</b><br>Average<br>Gain=1.19 dBi      |   |            |
| Peak Gain = 2.00 dBi<br>Average Gain = 0.71 dBi | Peak Gain= -1.37 dBi<br>Average Gain=-8.6 dBi   |            |
| <b>2450MHz</b><br>Average<br>Gain=-2.91dBi      |   |            |
| Peak Gain= -3.76 dBi<br>Average Gain= -8.72dBi  | Peak Gain= -0.25 dBi<br>Average Gain= -4.24 dBi |            |



| Freq (MHz) | Peak Gain (dBi) | Average Gain (dBi) |
|------------|-----------------|--------------------|
| 2400       | 2.00            | 1.19               |
| 2450       | -3.76           | -2.91              |
| 2500       | 0.76            | -0.95              |