

深圳市合拓科技有限公司

Shenzhen Hetuo Technology Co., Ltd.

样品承认书

Sample Approved Sheet

(HT-2.4G-B06) Specifications

Model: HT-2.4G-B06

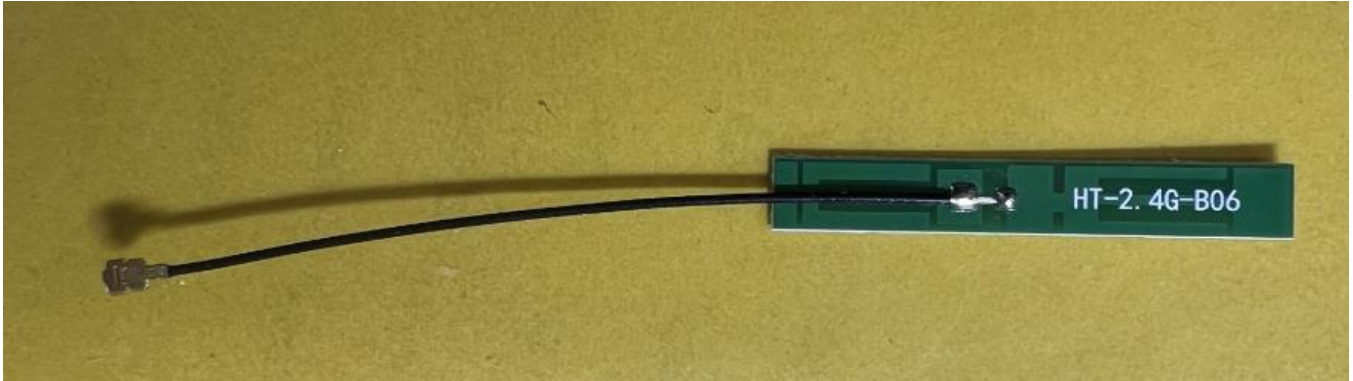
Type: PCB Antenna

Manufacturer: Shenzhen Hetuo Technology Co., Ltd.

**Address: Room 1202B, Building C6, Hengfeng Industrial City, No. 739, Zhoushi Road, Hezhou Community, Hangcheng Street,
Bao'an District, Shenzhen**

1. Antenna picture

The report mainly provides the test status of the electrical properties parameters of **HT-2.4G-B06**. The **HT-2.4G-B06** Antenna is a **2.4G** Band . The antenna Picture and assembly are shown below.



Antenna picture & assembly picture

2. Antenna Test Equipment Introduction

Test of antenna input characteristics using **Agilent E5071C** and **Agilent 5062A** vector network analyzer; The radiation pattern of the antenna are tested using the Satimo starlab 3D near field Anechoic Chamber , and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

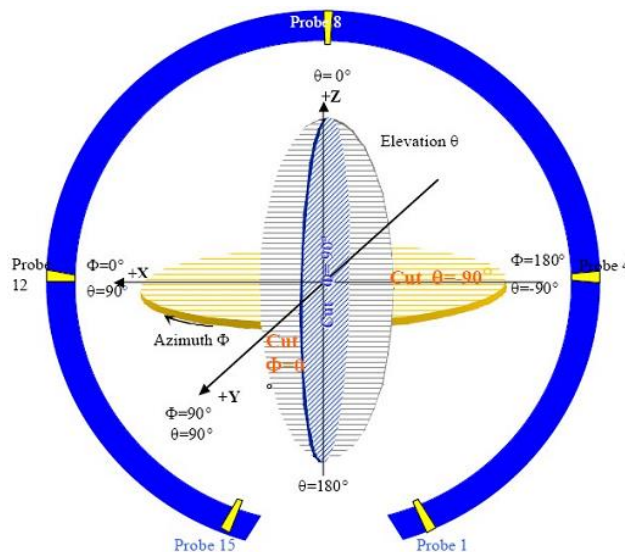
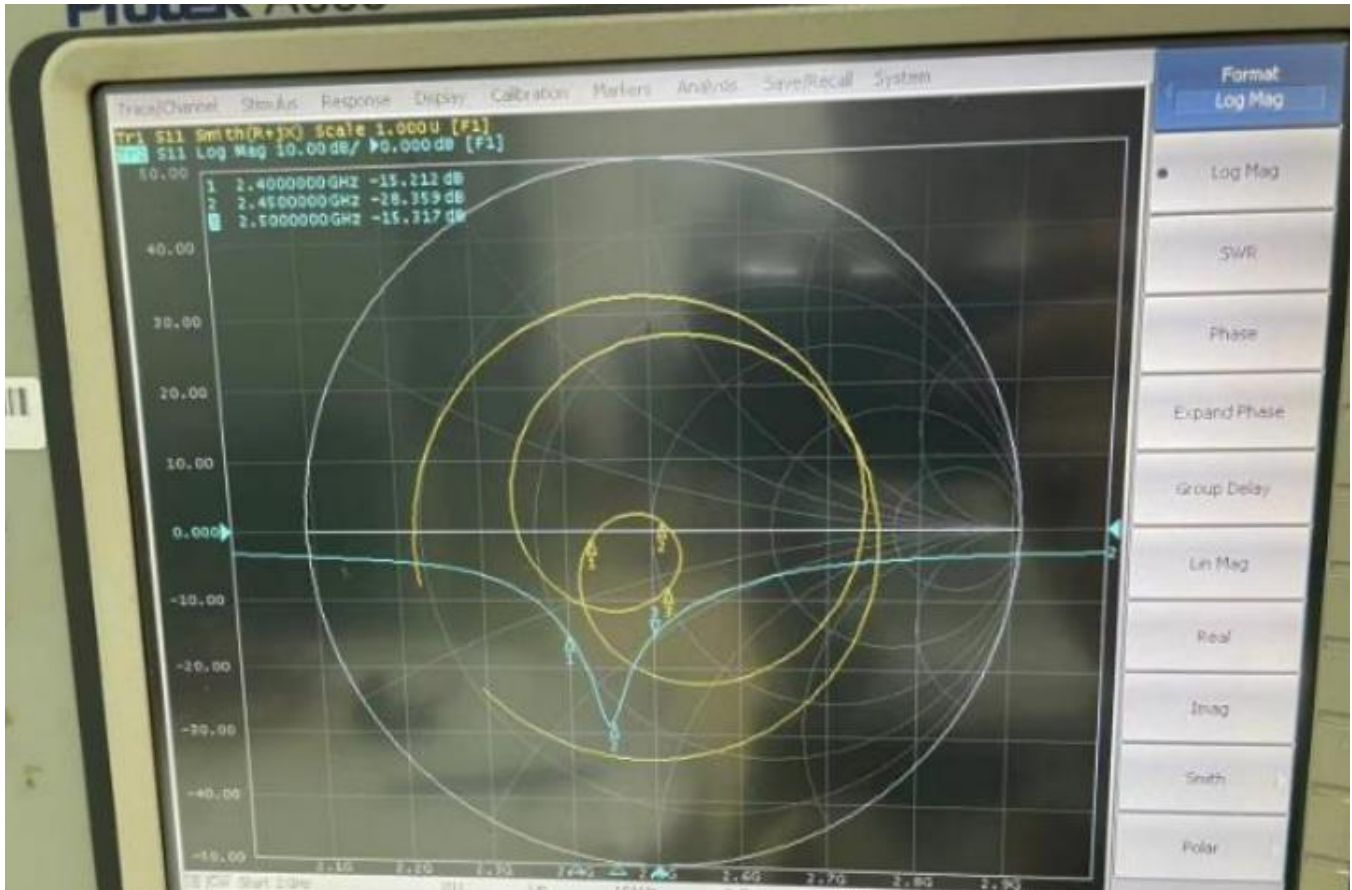


图 4 3D 微波暗室测试坐标系 (back view)

3. Electrical Specification

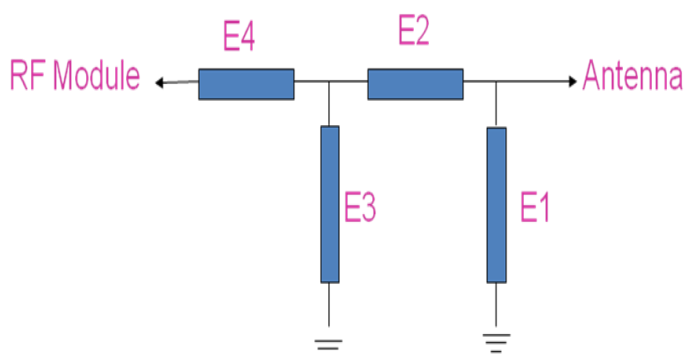
3-2 Passive S11 parameter

Measuring Method is a 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.



VSWR

3-3 Antenna Matching Network



Element	r
E1	N/A
E2	0Ω
E3	NA
E4	0Ω

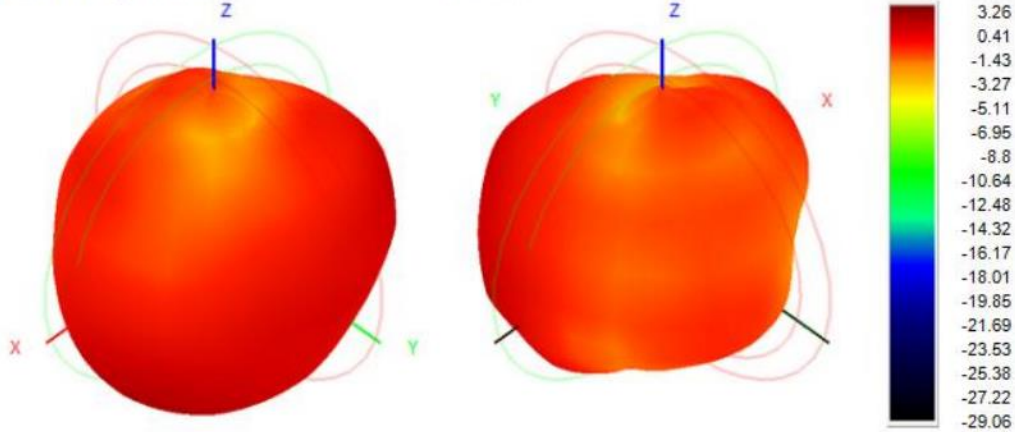
Gain & Efficiency—2.4- ANT

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	49.20	3.26
2410	51.89	3.35
2420	53.29	3.28
2430	54.82	3.32
2440	54.09	3.06
2450	53.88	2.94
2460	52.92	2.86
2470	51.96	2.87
2480	50.02	2.63
2490	47.42	2.47
2500	44.92	2.20

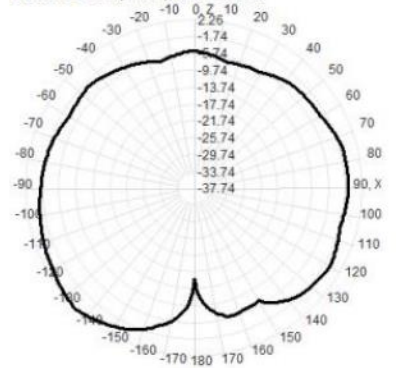
2D&3D — 2.4G- ANT

2400.0MHz H+V, Eff: 49.2%

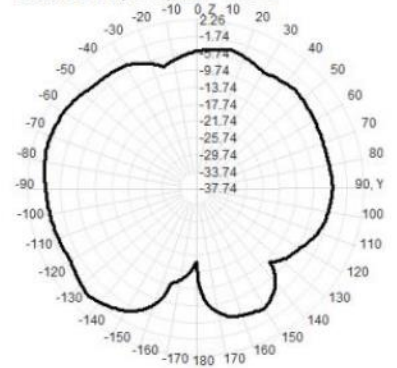
Back View



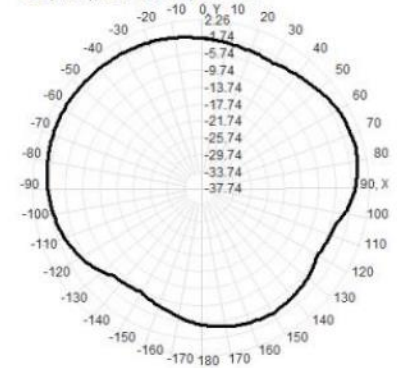
2400.0MHz Total(E1-XZ), Max= 2.26dBi



2400.0MHz Total(E2-YZ), Max= -1.08dBi



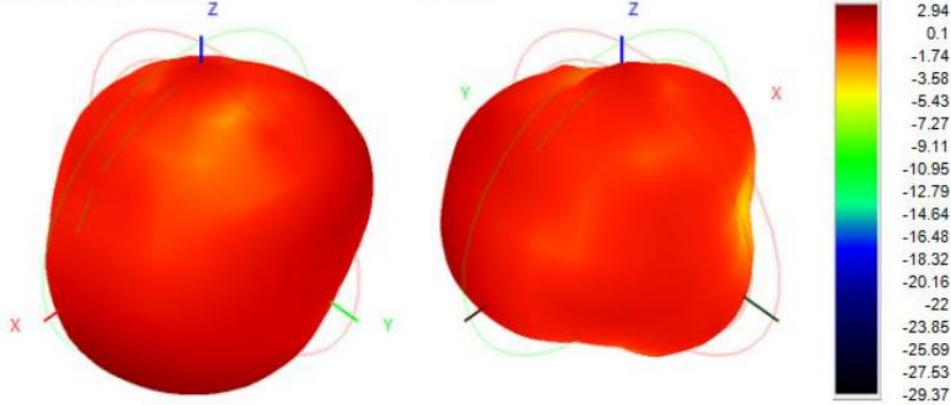
Total(H-XY), Max= 0.13dBi, CirD=9.57



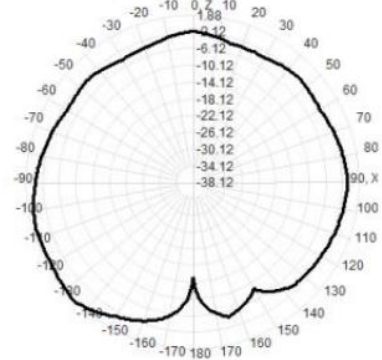
2D&3D — 2.4G- ANT

2450.0MHz H+V, Eff: 53.9%

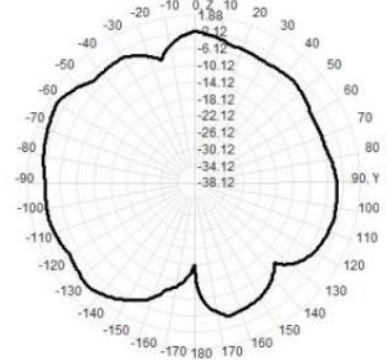
Back View



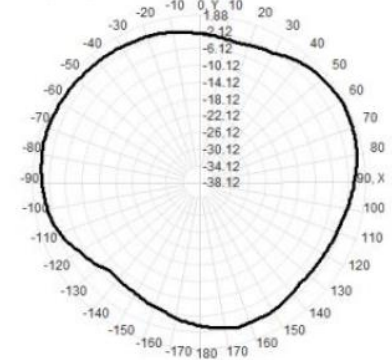
2450.0MHz Total(E1-XZ), Max= 1.88dBi



2450.0MHz Total(E2-YZ), Max= -0.34dBi



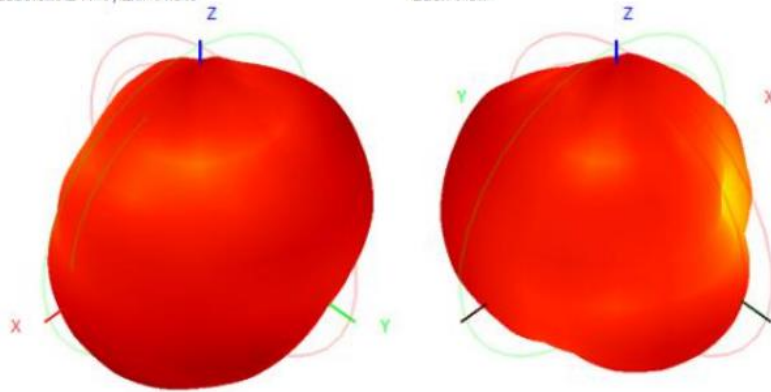
Total(H-XY), Max= 1.11dBi, CirD=9.33



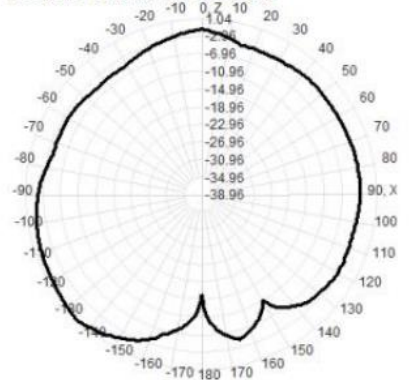
2D&3D — 2.4G- ANT

2500.0MHz H+V, Eff: 44.9%

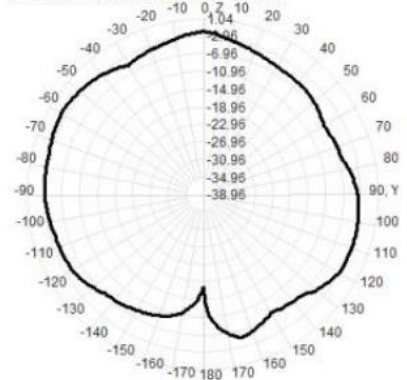
Back View



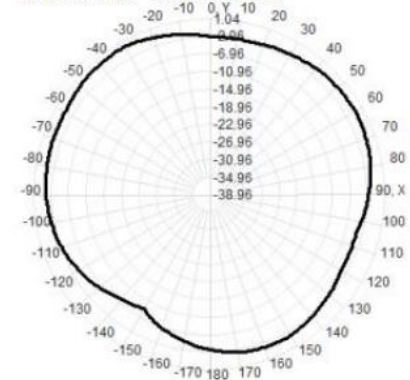
2500.0MHz Total(E1-XZ), Max= 1.04dBi



2500.0MHz Total(E2-YZ), Max= -1.83dBi



Total(H-XY), Max= -0.20dBi, CirD=9.03

**4. Mechanical Specification:**

Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure 8

