# TEST REPORT

| | | |
|---|---|---|
| Product | : | Bluetooth self-timer |
| Model Name | : | B01 |
| Report No. | : | PTC24040500302E-RF01 |

## Prepared for

Guangdong Jisheng Technology Co., LTD

Jilian commercial center 9001, Jinxiu road No.2, Changan Town,Dongguan City, GuangDongProv., CHINA

## Prepared by


Precise Testing & Certification Co., Ltd

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

TEL: +86-769-3880 8222

FAX: +86-769-3882 6111

# 1 Test Result Certification

| | | |
|---|---|---|
| Applicant's name | : | Guangdong Jisheng Technology Co., LTD |
| Address | : | Room 201, Building 1, No.29, Lanhedi Road, Houjie Town, Dongguan City, Guangdong Province |
| Manufacture's name | : | Guangdong Jisheng Technology Co., LTD |
| Address | : | Room 201, Building 1, No.29, Lanhedi Road, Houjie Town, Dongguan City, Guangdong Province |
| Product name | : | Bluetooth self-timer |
| Model name | : | B01 |
| Standards | : | GB/T 9410-2008; ANSI/IEEE Std 149-1979 |
| Test Date | : | Apr. 16, 2024 to Apr. 18, 2024 |
| Date of Issue | : | Apr. 19, 2024 |
| Test Result | : | Pass |

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the GB/T 9410 and ANSI/IEEE Std 149 requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of PTC, this document may be altered or revised by PTC, personal only, and shall be noted in the revision of the document.

Test Engineer:

Jack zhou / Engineer

Technical Manager:

Simon Pu / Manager

**Revision History of Report**

| Vision No. | Date | Revisions | Modifier |
|---|---|---|---|
| 00 | Apr. 19, 2024 | Initial Issue | |

# Contents

1 Test Result Certification ..... 2
2 Test Summary ..... 5
3 Test Site ..... 6
3.1 Test Facility ..... 6
3.2 Measurement Uncertainty ..... 6
3.3 List Of Test And Measurement Instruments ..... 6
3.4 Test environmental ..... 6
3.5 Test Setup ..... 7
4 EUT Description ..... 8
5 Test Data ..... 9
5.1 Typical free space efficiency and gain ..... 9
5.2 Typical free space radiation pattern ..... 10
5.3 3D Pattern ..... 12
6 EUT setup photo of free space OTA testing ..... 14
7 EUT appearance ..... 15

# 2 Test Summary

| Name | Parameter | Method | Standard no. |
|---|---|---|---|
| Mobile communication antenna | Antenna gain | Generic specification for antennas used in the mobile communications | GB/T 9410-2008 |
| | Radiation pattern | | |
| Antenna | Radiation efficiency | IEEE Standard Test Procedures for Antennas | ANSI/IEEE Std 149-1979 |
| | Gain and directivity | | |

# 3 Test Site

## 3.1 Test Facility

| | |
|---|---|
| Name | Precise Testing & Certification Co., Ltd |
| Address | Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China |
| CNAS Number | L5772 |

## 3.2 Measurement Uncertainty

The uncertainty was calculated on the basis of the GUM published by ISO, using the inclusion factor of K=2 and the 95% confidence level to express the extended uncertainty.

| Item | Uncertainty |
|---|---|
| Antenna gain | ±0.68dB |
| Radiation efficiency | ±0.68dB |

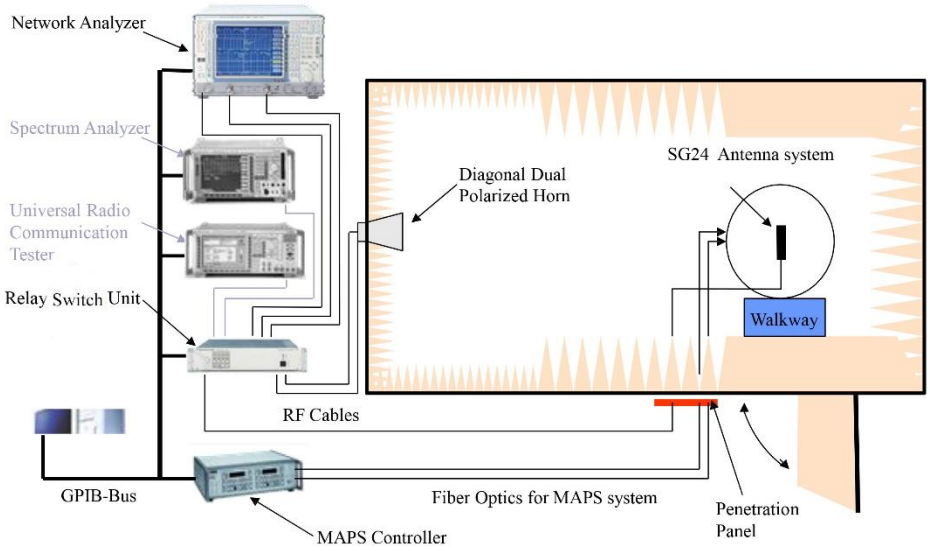
## 3.3 List Of Test And Measurement Instruments

| Name of Equipment | Manufacturer | Serial No. | Last Cal. | Calibration Interval |
|---|---|---|---|---|
| 24 probe microwave chamber | YIHENG ELECTPONC | 4*4*4 | Jan. 10,2024 | 1 Year |
| Network Analyzer | E5071C | Agilent | Jan. 10,2024 | 1 Year |
| XH.PassiveTest 2.7.6 | XH-IOT | / | / | / |

## 3.4 Test environmental

| Environment Parameter | Selected Values During the Testes | |
|---|---|---|
| Relative Humidity | 45% to 55% | |
| Value | Temperature(℃) | Voltage(V) |
| NTNV | 20 to 24 | N/A |
| Note: NV: Normal Voltage; NT: Normal Temperature | | |

## 3.5 Test Setup



# 4 EUT Description

| | |
|---|---|
| Product Name | Bluetooth self-timer |
| Sample Model | B01 |
| Size | / |
| Test Item | Antenna gain; Radiation pattern and efficiency |
| Antenna Type | PCB Antenna |
| Frequency Range | 2400MHz-2500MHz |

# 5 Test Data

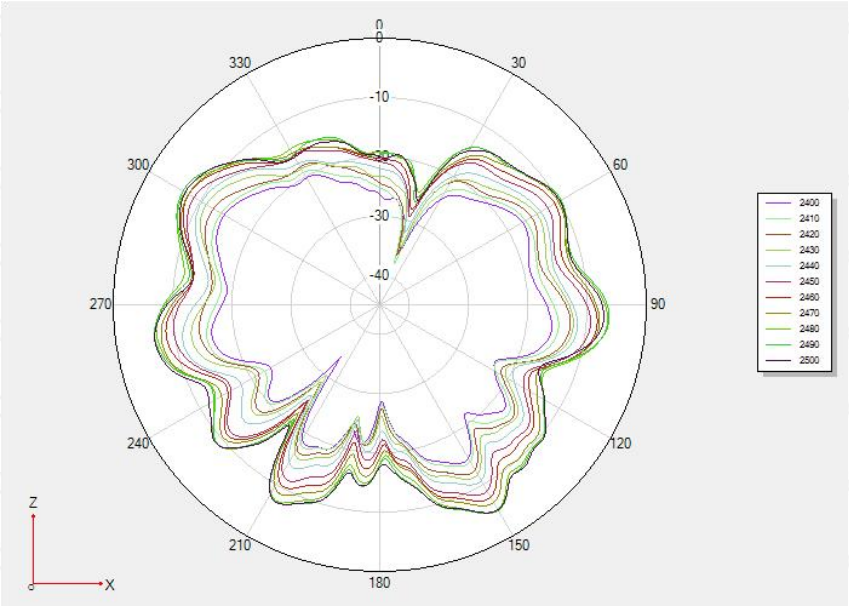
## 5.1 Typical free space efficiency and gain

| Frequency/MHz | Efficiency / dB | Efficiency / % | Max Gain/dBi | Avg Gain/dBi |
|---|---|---|---|---|
| 2400 | -18.35 | 1.46 | -11.87 | -18.35 |
| 2410 | -17.46 | 1.79 | -11.5 | -17.46 |
| 2420 | -16.37 | 2.31 | -10.22 | -16.37 |
| 2430 | -15.06 | 3.12 | -9.14 | -15.06 |
| 2440 | -13.87 | 4.1 | -8.34 | -13.87 |
| 2450 | -12.58 | 5.52 | -6.67 | -12.58 |
| 2460 | -11.22 | 7.55 | -5.06 | -11.22 |
| 2470 | -10.12 | 9.73 | -3.69 | -10.12 |
| 2480 | -9.42 | 11.43 | -1.92 | -9.42 |
| 2490 | -8.98 | 12.65 | -1.45 | -8.98 |
| 2500 | -8.92 | 12.82 | -1.71 | -8.92 |

## 5.2 Typical free space radiation pattern

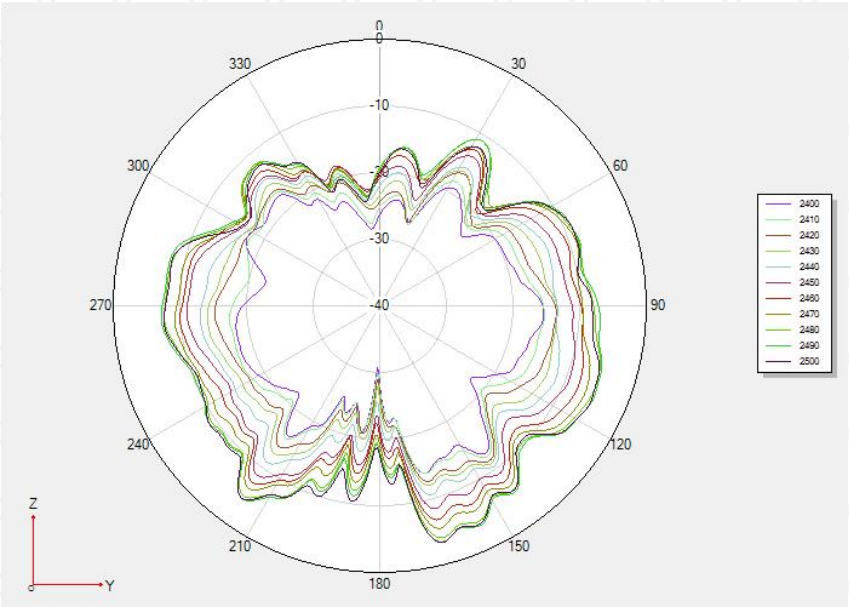
(1) X-Z Plane:

V Phi=0



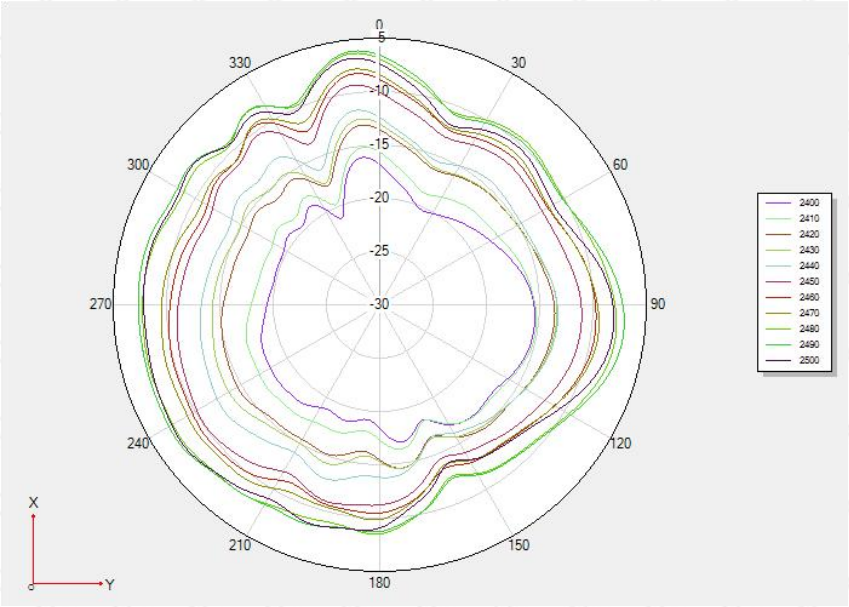

(2) Y-Z Plane:

V Phi=90



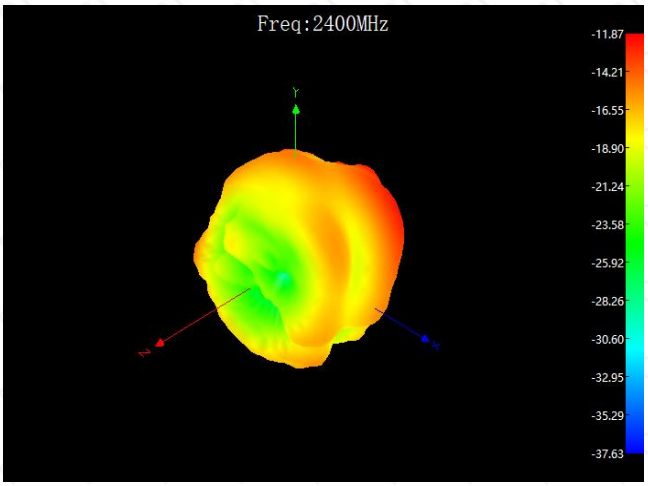

(3)X-Y Plane:

H Theta=90

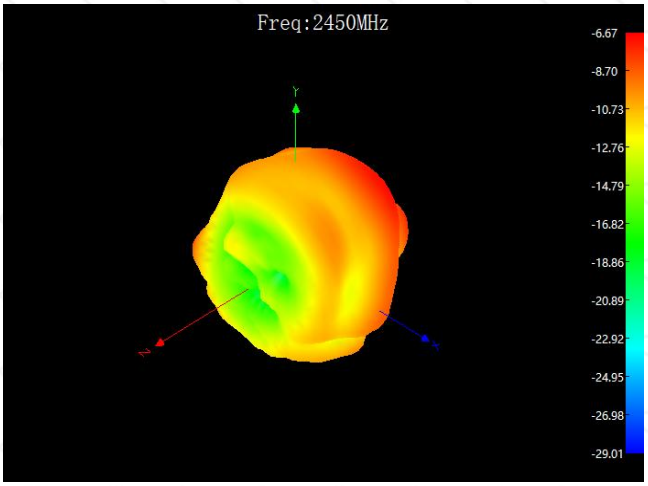

0
30
60
90
120
150
180
210
240
270
300
330
5
-10
-15
-20
-25
-30
2400
2410
2420
2430
2440
2450
2460
2470
2480
2490
2500
X
Y

## 5.3 3D Pattern

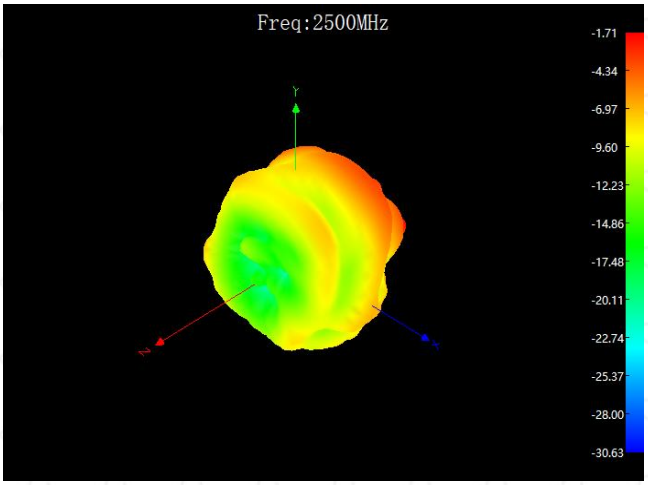
3D Pattern for 2400MHz



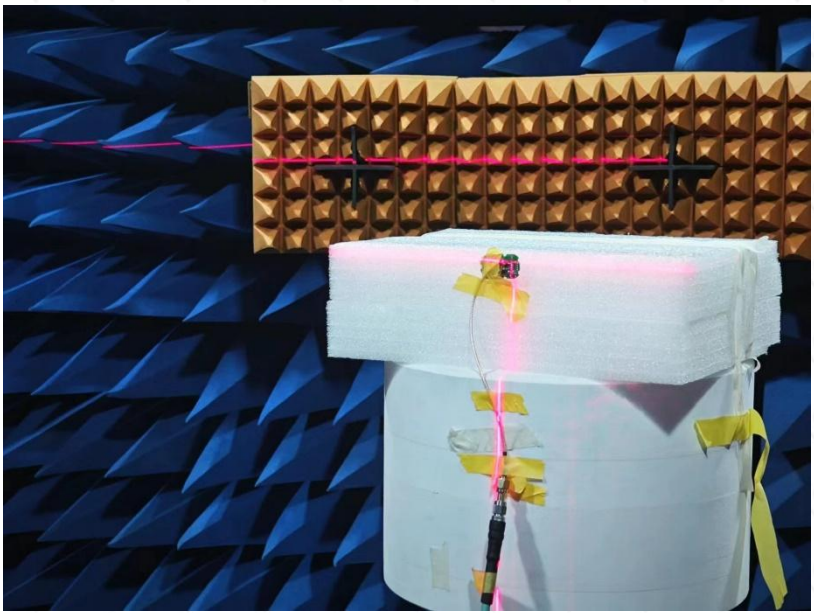

3D Pattern for 2450MHz



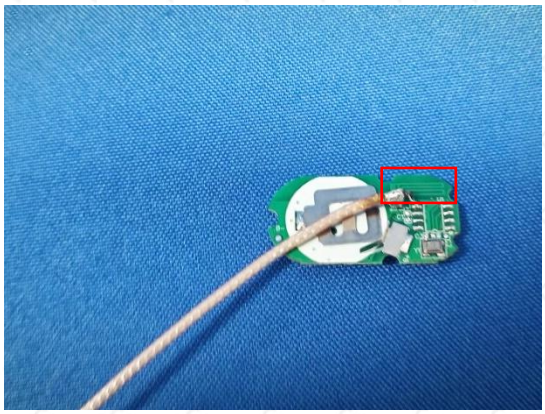
3D Pattern for 2500MHz



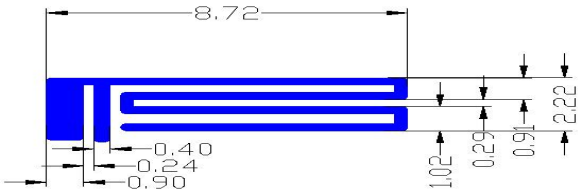
# 6 EUT setup photo of free space OTA testing



# 7 EUT appearance



**Unit: mm**




********THE END REPORT********