

Testing Report

Customer Name: Shenzhen Gintway Technology Co., Ltd.

Product Name: 2.4GHz BT

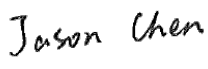
Sample Model: T10

Reference Standard: GB/T 9410-2008;ANSI/IEEE Std

149-1979 Issue Date: 2022.06.17

Manufacturer: ShenZhen Wayfinder Future Tech CO., Ltd

Address: 3rd Floor, Building A. B2 Fucheng'ao Industrial Zone, Pinghu Street,
Longgang District, Shenzhen, China

Engineer: 	Date: 2022.06.17
Auditor: 	Date: 2022.06.17
Approver: 	Date: 2022.06.17

Version

Version No.	Date	Description	Formulate	Approval
A0	2022.06.17	For the first time, formulate		

Contents

Testing Report	1
1.General Information	3
1.1 General information of testing institutions	3
1.2 Testing principle	3
Multi-Probe OTA Measurement System	3
1.3 Test equipment	4
1.4 Test environment	4
1.5 Statement	4
2.Sample Information.....	5
2.3 EUT appearance	6
2.4 DUT setup photo of free space OTA testing.....	6
3.Test Results	6
3.1 Test standard.....	6
3.2 Test uncertainty	7
3.3..... Test data	8
3.3.1 Network analyzer S parameter	8
.....	8
3.3.2 S11 Data	8
3.3.3 Typical free space efficiency and gain.....	8
3.3.4 Typical free space radiation pattern	9

1.General Information

1.1 General information of testing institutions

Name	Shenzhen Gintway Technology Co., Ltd.
Address	
Tel	
E-mail	
Equipment	

1.2 Testing principle

Multi-Probe OTA Measurement System

1.3 Test equipment

Equipment	Model No.	Serial No.	Manufacturer	Calibration date	Next calibration date
Network Analyzer	ZND	1521141	ROHED&SCHWARZ	2022.11.22	2023.11.21
Microwave Chamber	5*5*5	/	ROHED&SCHWARZ	2022.10.14	2024.10.13

1.4 Test environment

Temperature	23.9℃
Humidity	24%RH
Pressure	100.32kPa

1.5 Statement

- (1) The test results in the report are only applicable to the tested samples and the tested samples work under the environment described in the report.
- (2) Only Xiaomi Communication Technology Co. LTD. have the right to modify the report, and the modification information shall be annotated in the revision form.
- (3) Any objection to this report shall be raised within 30 days after formal confirmation of the report.
- (4) This report is invalid if there is any evidence that the sample information provided is falsified.
- (5) The report is invalid without the signature of the auditor and approver.

2.Sample Information

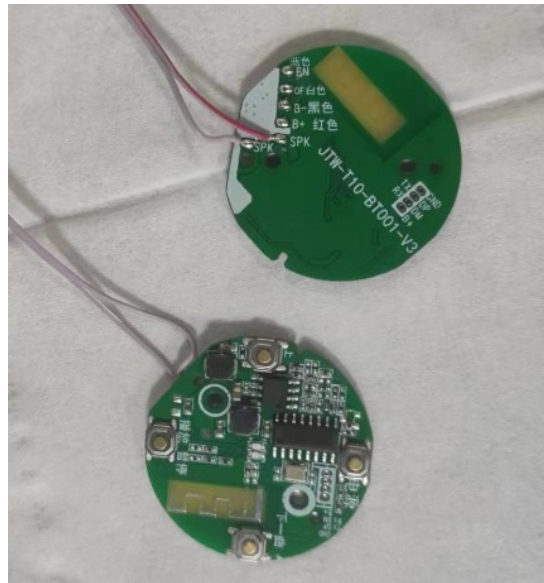
2.1 Client information

Name	Shenzhen Gintway Technology Co., Ltd.
Address	
Contacts	
Tel	
E-mail	

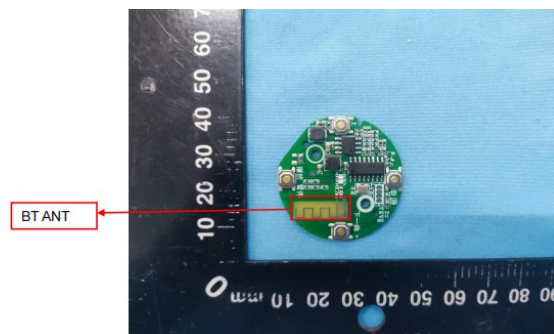
2.2 Description of EUT(S)

Product Name	2.4GHz BT
Sample Modle	T10
Serial No.	
Test Item	VSWR, Peak Gian, Radiation Efficiency, Radiation pattern
Frequency Range	2402-2480MHz
Received Date	2022.06.17
Test Date	2022.06.17
Remark	RF Cable: cable length=50mm, SMA

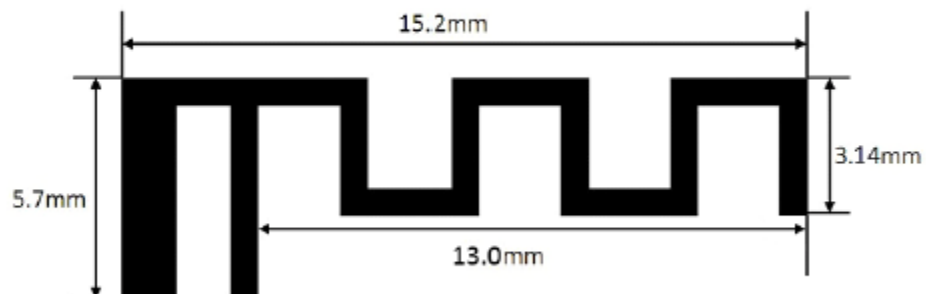
2.3 EUT appearance



2.4 DUT setup photo of free space OTA testing



Antenna Photo & Length (mm)



3. Test Results

3.1 Test standard

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

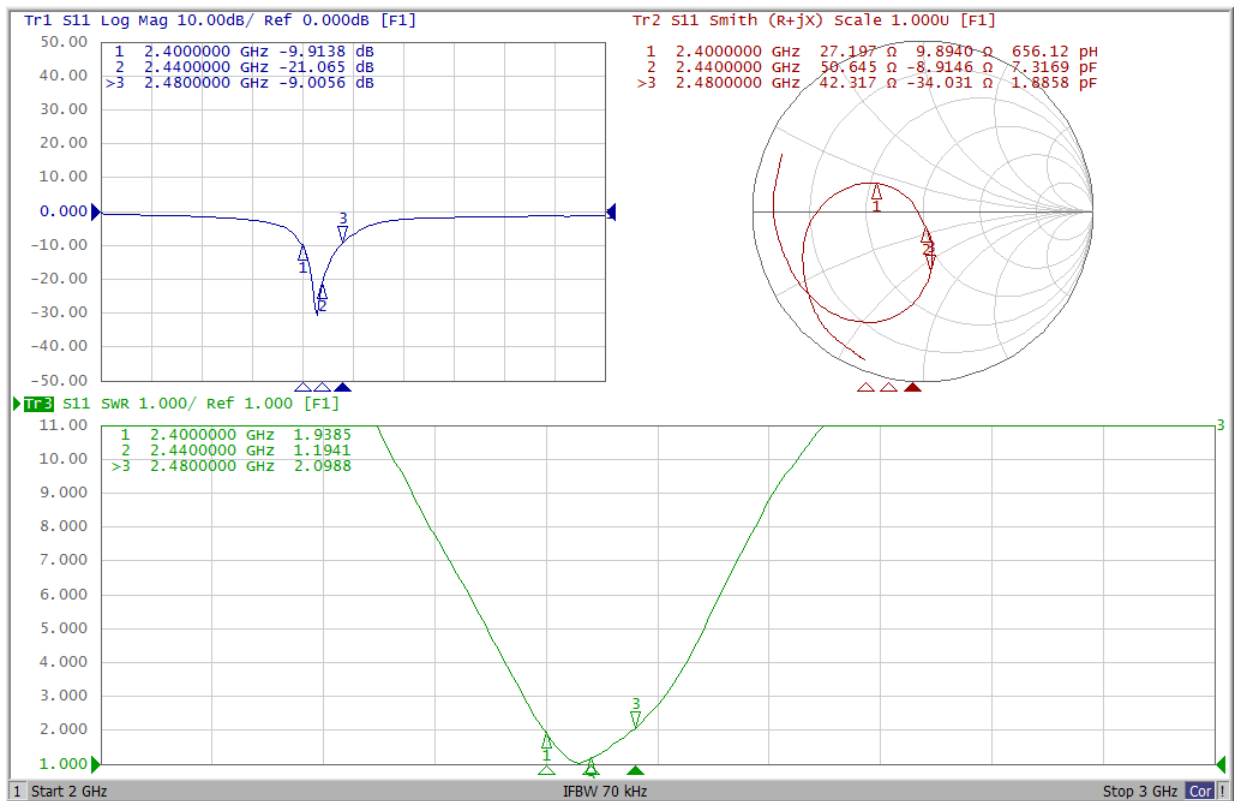
3.2 Test uncertainty

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
VSWR	± 0.3
Antenna gain	$\pm 1.0 \text{ dBi}$
Radiation efficiency	$\pm 10\%$

3.3 Test data

3.3.1 Network analyzer S parameter



3.3.2 S11 Data

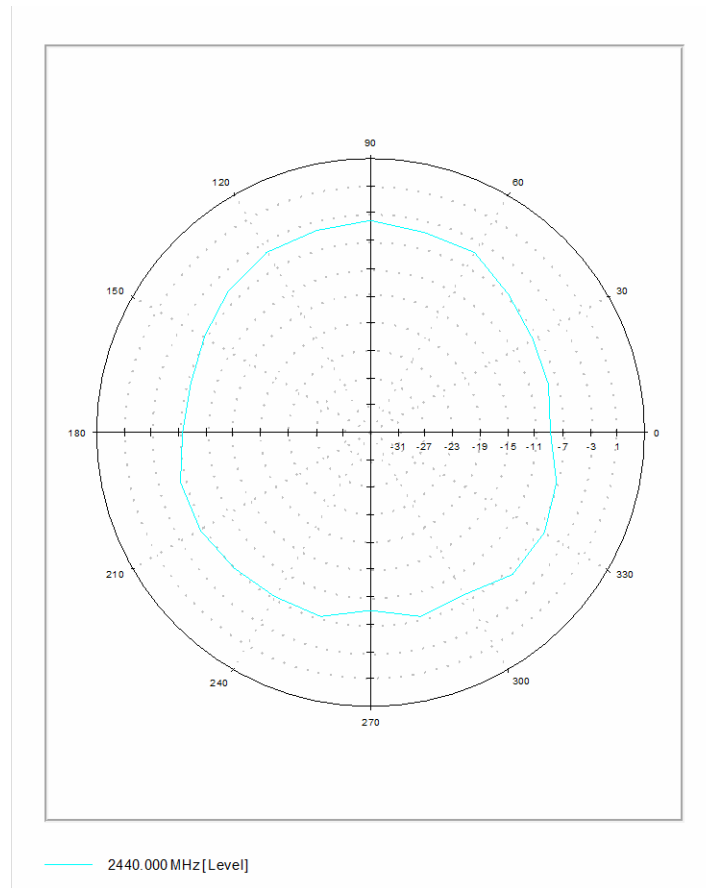
Frequency/MHz	2400	2440	2480
VSWR	1.9	1.2	2.1

3.3.3 Typical free space efficiency and gain

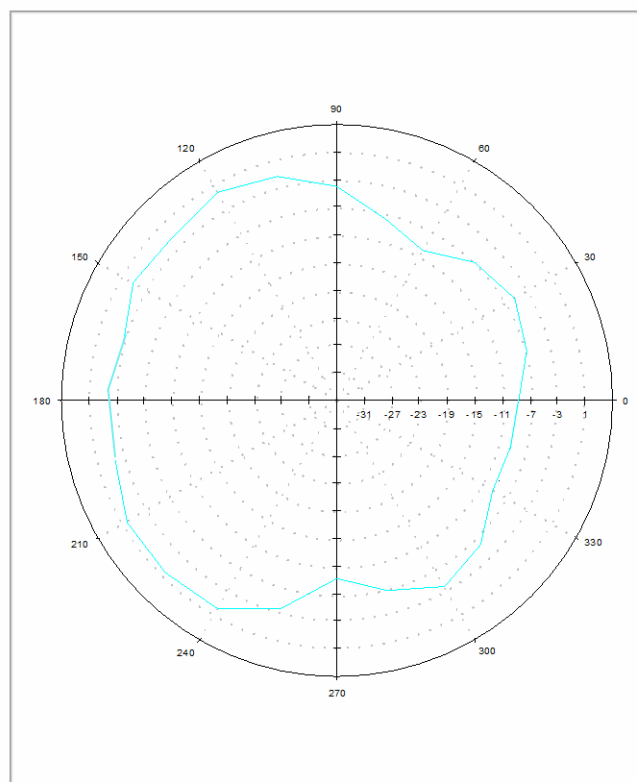
Frequency/MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480
Peak Gain/dBi	-0.1	1.7	2.0	2.3	2.4	1.4	2.6	2.8	2.6
Efficiency/%	30.2	36.4	40.9	44.9	47.8	40.3	50.8	51.3	51.2

3.3.4 Typical free space radiation pattern

(1) X-Y Plane:

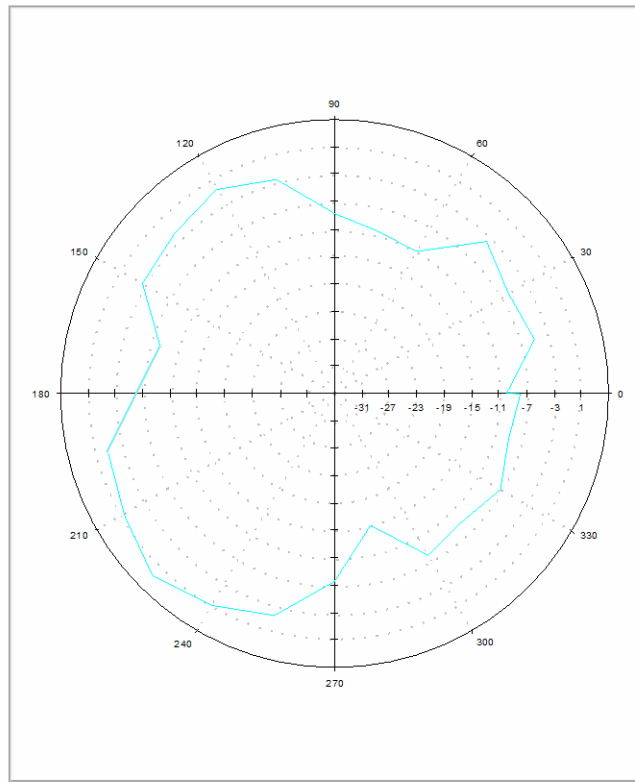


(2) Y-Z Plane:



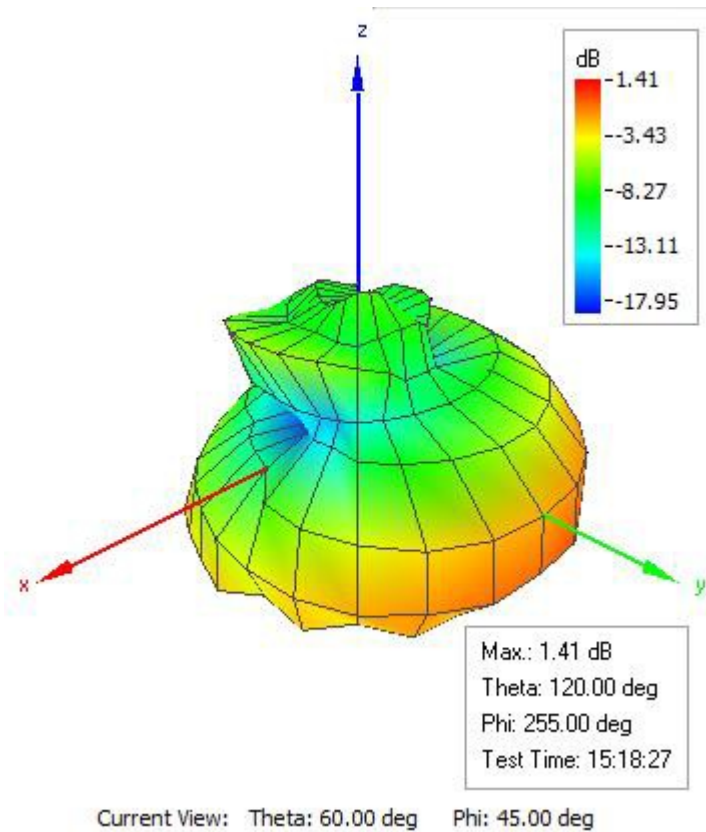
— 2440.000MHz [Level]

(3) X-Z Plane:



— 2440.000 MHz [Level]

(4) Typical Free Space 3D Radiation Pattern at 2440MHz:



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