



Shenzhen Jiexuntong Wireless Technology Co., Ltd

Antenna Specification Sheet

Project model: TP10

Antenna frequency band: 2400-2500MHz、5200MHz

Version: V1.0

Effective date: 2025-8-18

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1 Scope

This document specifies the radio frequency technical indicators and the external structure of the "TP10 WIFI/BT Antenna". This document is applicable to all aspects such as product design, verification, production and quality inspection of the "TP10 WIFI/BT Antenna", and the material description is: TP10 WIFI/BT Antenna.

2 Technical index

2.1 Electrical specification

Technical index	
Frequency domain (MHz)	2400-2500、5150-5250
Polarization mode	Linear polarization
Gain (dBi)	≤ 3
VSWR	≤ 3.0
Input impedance (Ω)	50
Joint categories	The Third Generation Controller
Antenna color	Black
Coaxial line dimensions(mm)	45

Form1:



2.2 VSWR

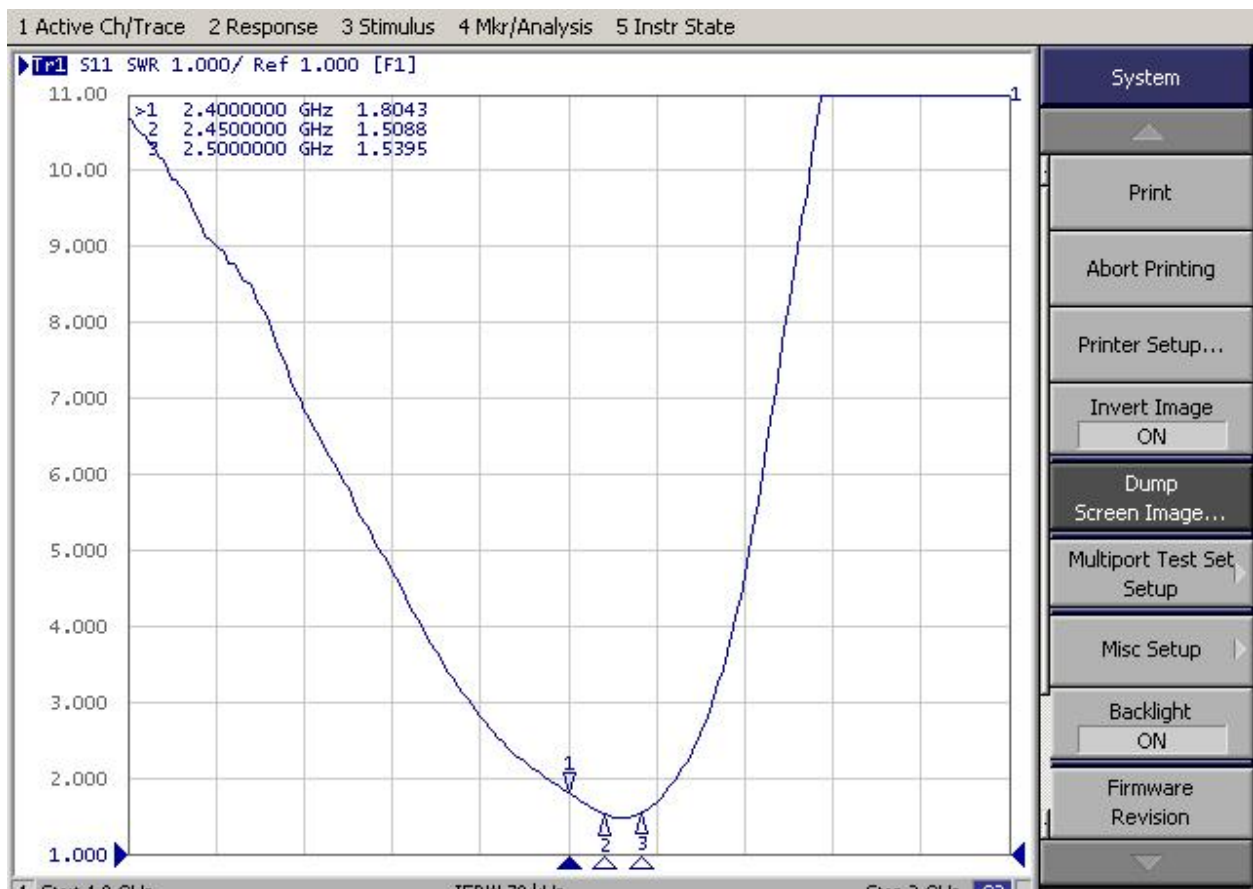


Figure1: VSWR-2.4GWiFi

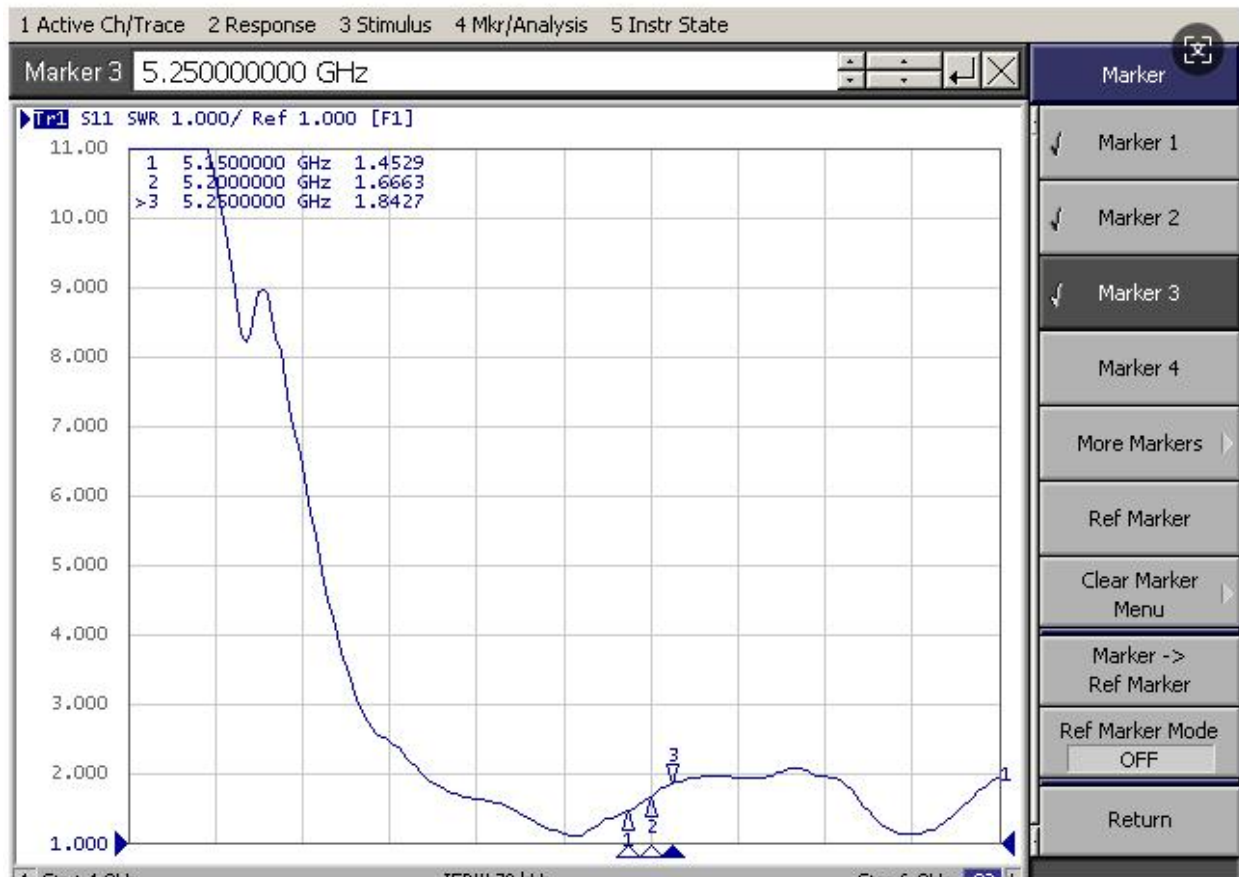


Figure2: VSWR-5GWiFi

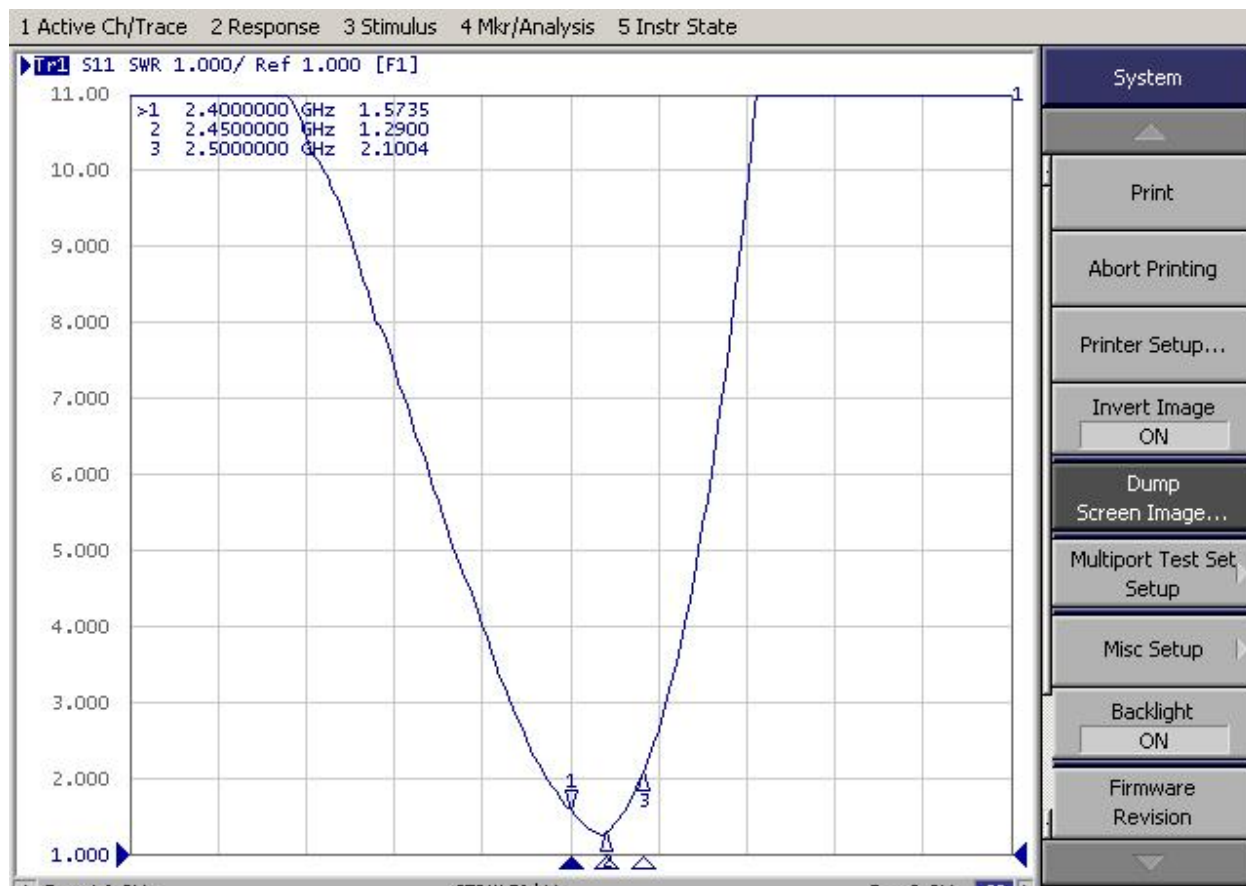


Figure3: VSWR-BT



2.3 Gain&Efficiency

WiFi: 2400-2500MHz

Freq (MHz)	Gain(dBi)	Efficiency (dB)	Efficiency (%)
2400	1.525663553	-3.928374662	40.47273317
2410	1.632701353	-3.926728376	40.48807813
2420	1.514104475	-3.978618613	40.00719828
2430	1.463126751	-3.950022781	40.27149219
2440	1.319192469	-3.995865738	39.84863287
2450	1.538609794	-3.89592177	40.77630068
2460	1.552993985	-3.911750834	40.62795068
2470	1.369069396	-3.884754364	40.88128738
2480	1.382512303	-3.887840764	40.8522446
2490	1.473705282	-3.815604444	41.53742361
2500	1.399209099	-3.87830678	40.94202527

**WiFi: 5150-5300MHz**

Freq (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
5150	1.621616264	-5.083445659	31.02097431
5200	1.761662194	-5.047181663	31.28108683
5250	1.728729275	-5.011784493	31.53708515

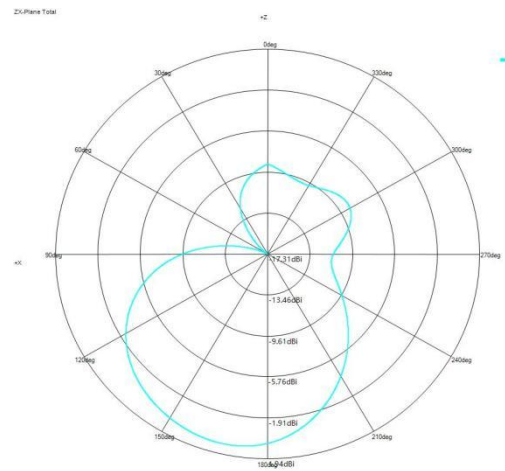
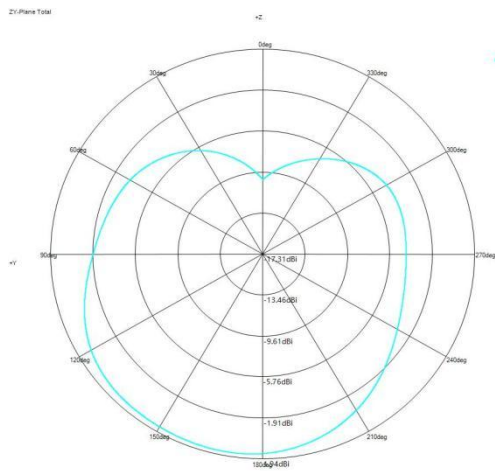
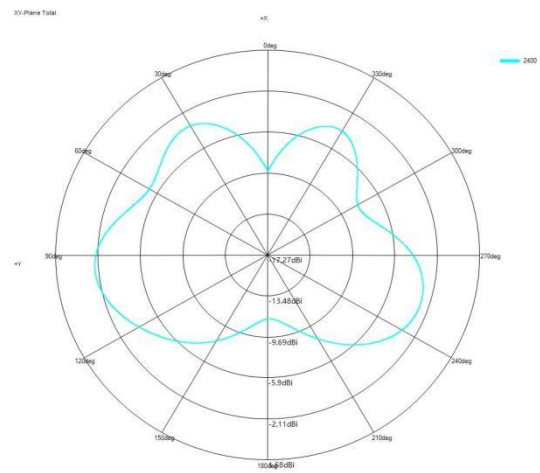
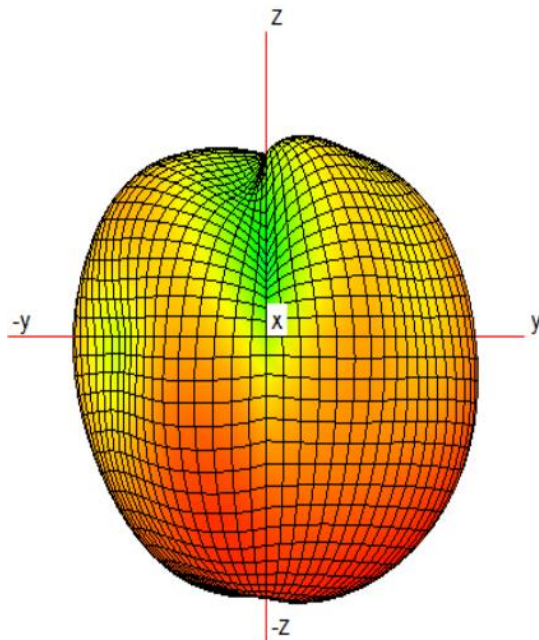
**BT: 2400-2500MHz**

Freq (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	1.806116724	-6.784125864	20.96946805
2410	1.843716643	-6.730854873	21.2282656
2420	1.486774075	-6.757543675	21.09821106
2430	1.356505207	-6.792762587	20.92780796
2440	1.601553312	-6.904752627	20.39504826
2450	1.908005684	-6.663276464	21.56117148
2460	1.64782602	-6.471687905	22.53363262
2470	1.70076377	-6.353109557	23.15735985
2480	2.212223053	-6.324861777	23.30847298
2490	2.249753027	-6.200845262	23.98366083
2500	1.899772357	-6.16325672	24.19214228



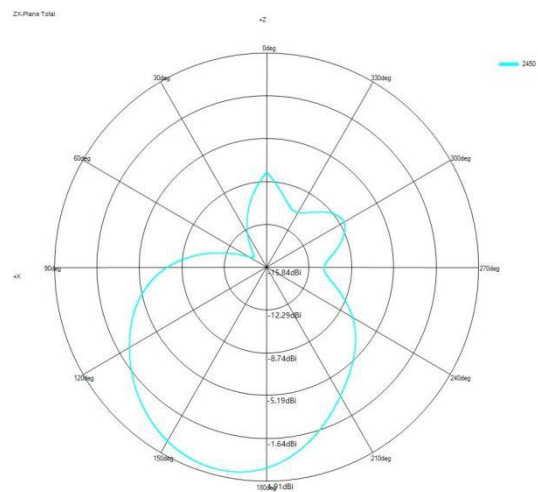
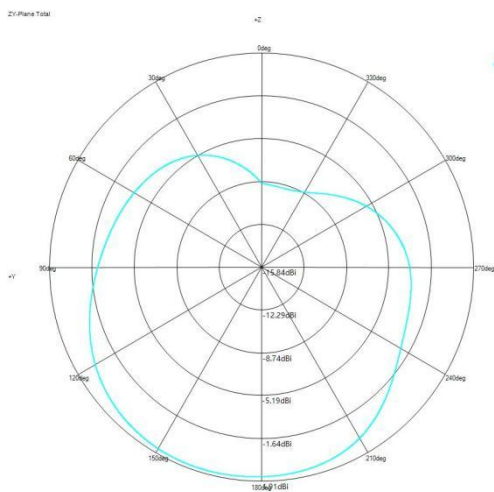
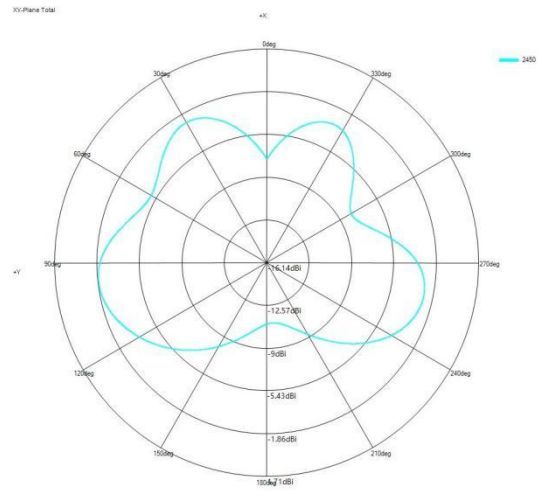
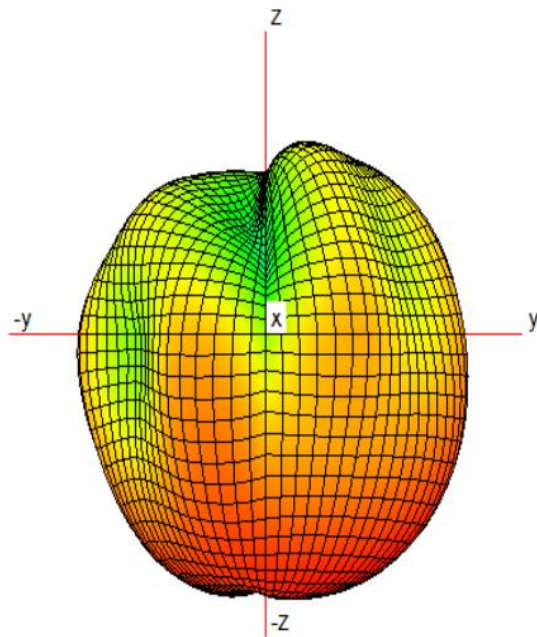
2.4 3D&2D Diagram

WiFi-2400MHz



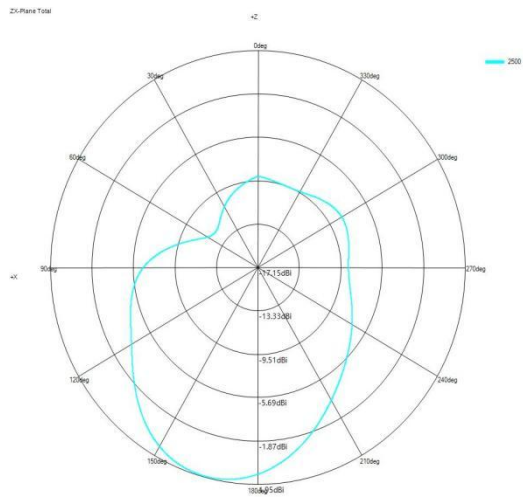
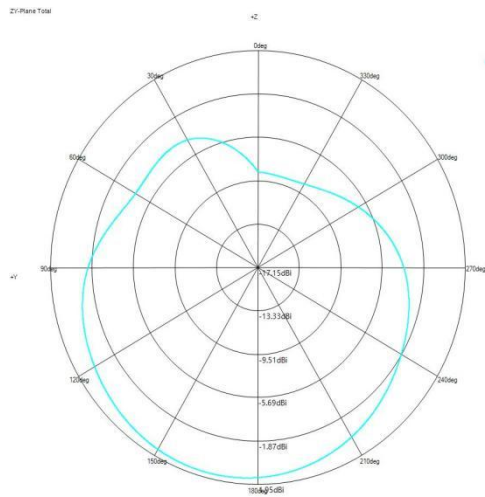
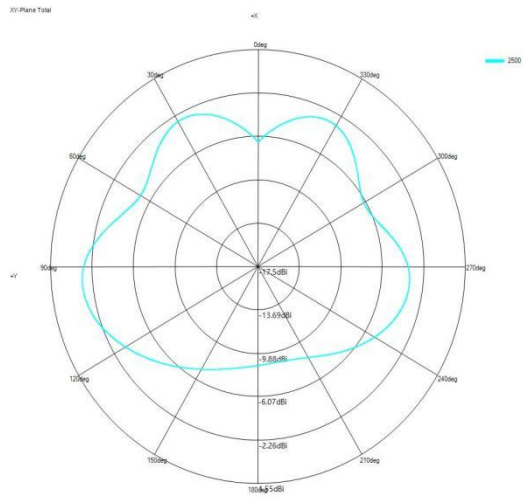
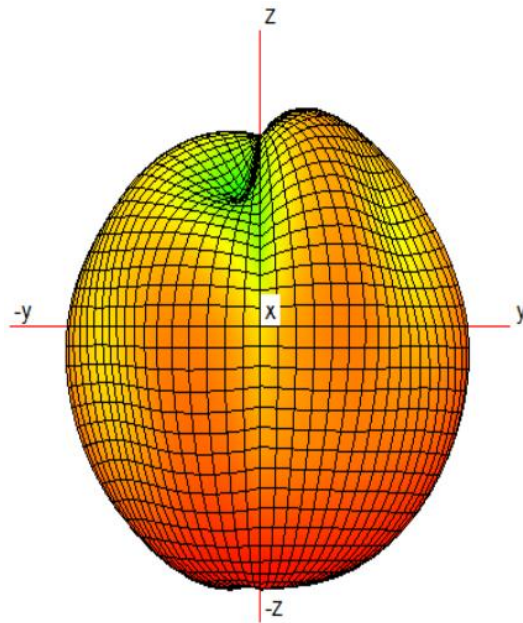


WiFi-2450MHz



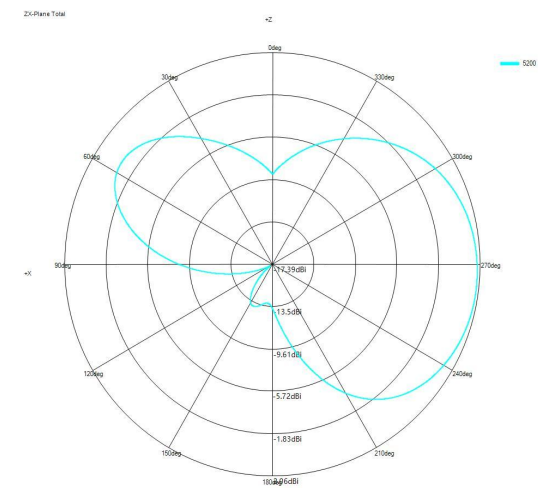
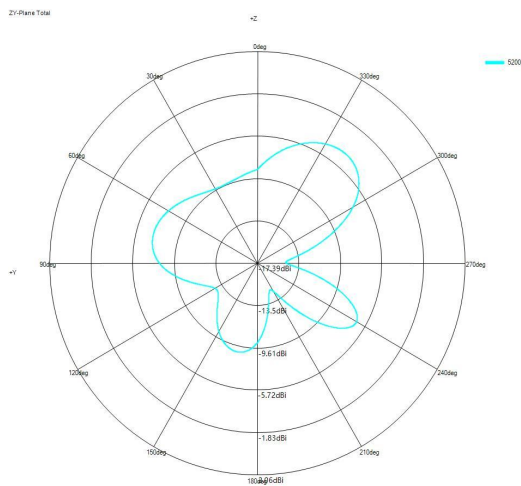
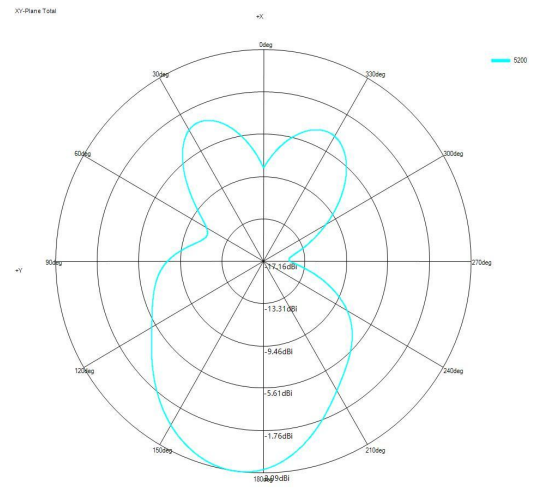
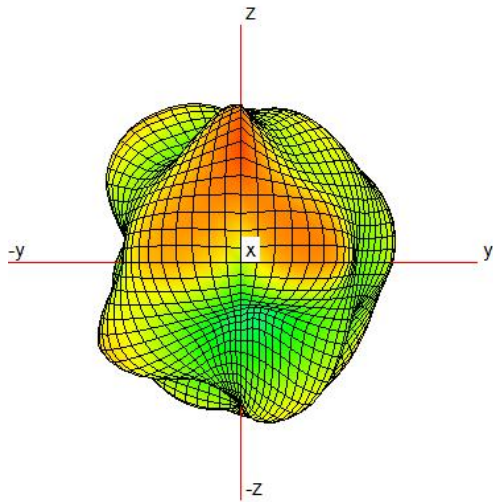


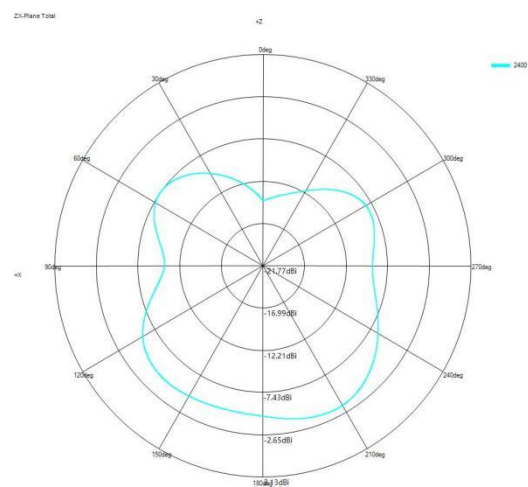
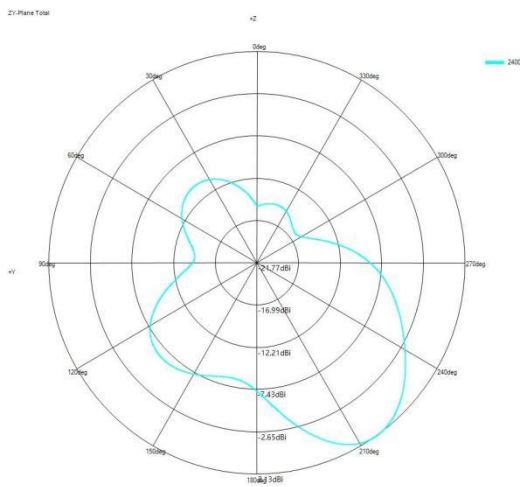
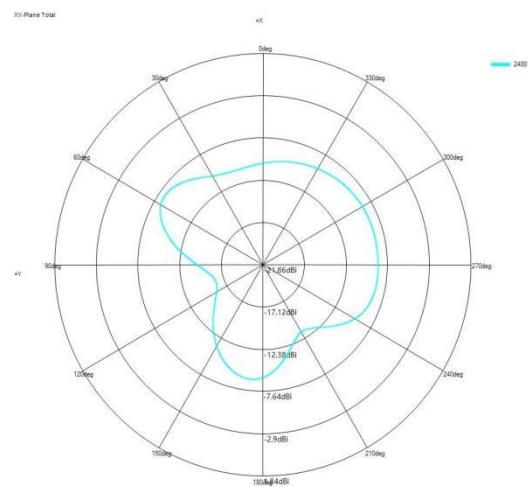
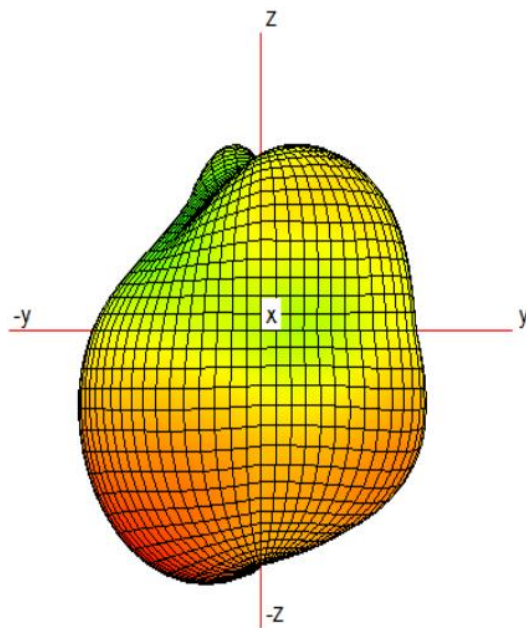
WiFi-2500MHz

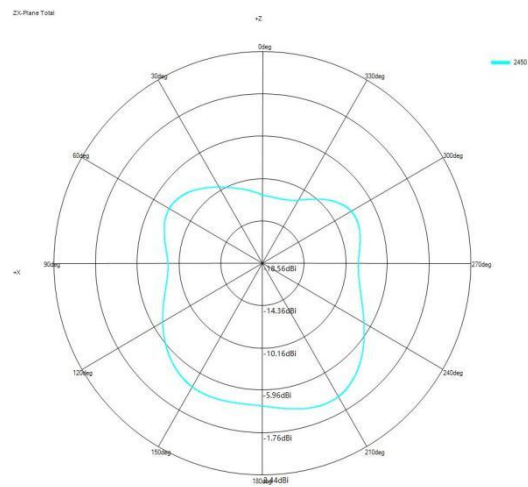
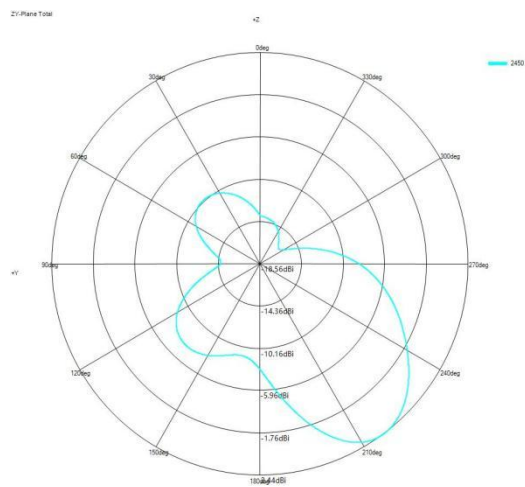
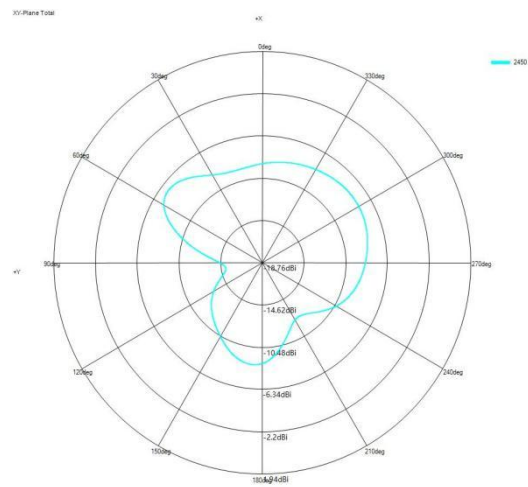
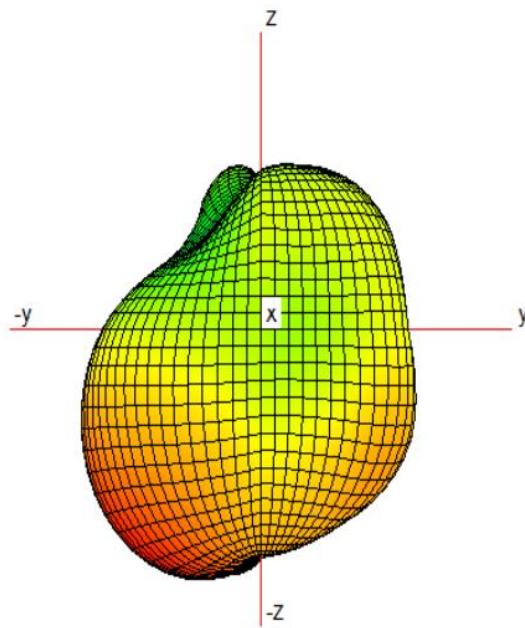




WiFi-5200MHz

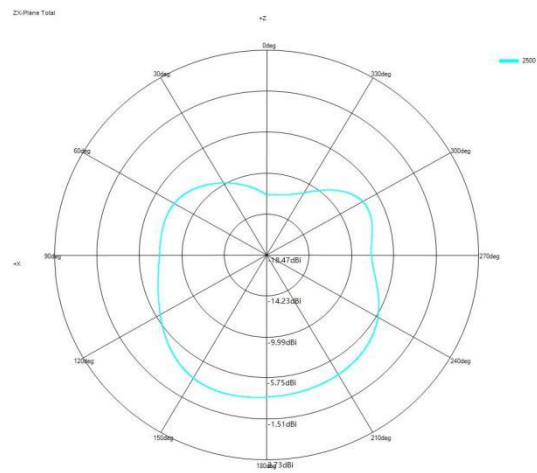
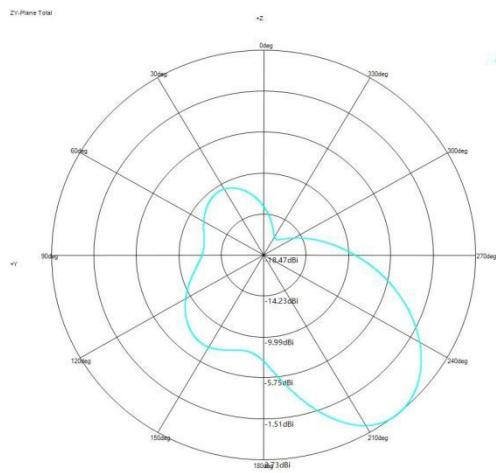
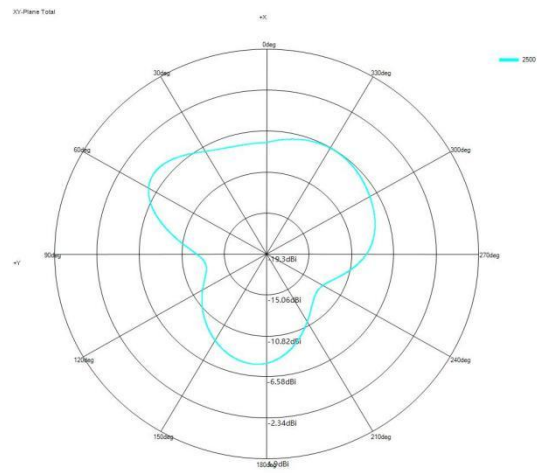
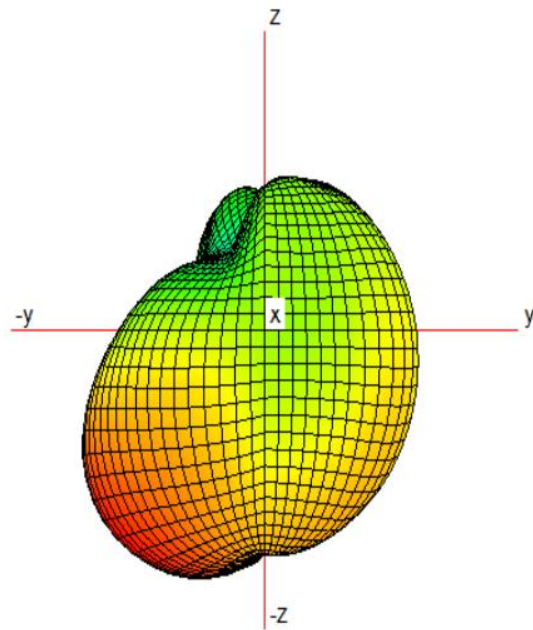


**BT-2400MHz**

**BT-2450MHz**



BT-2500MHz





3 Structure specification

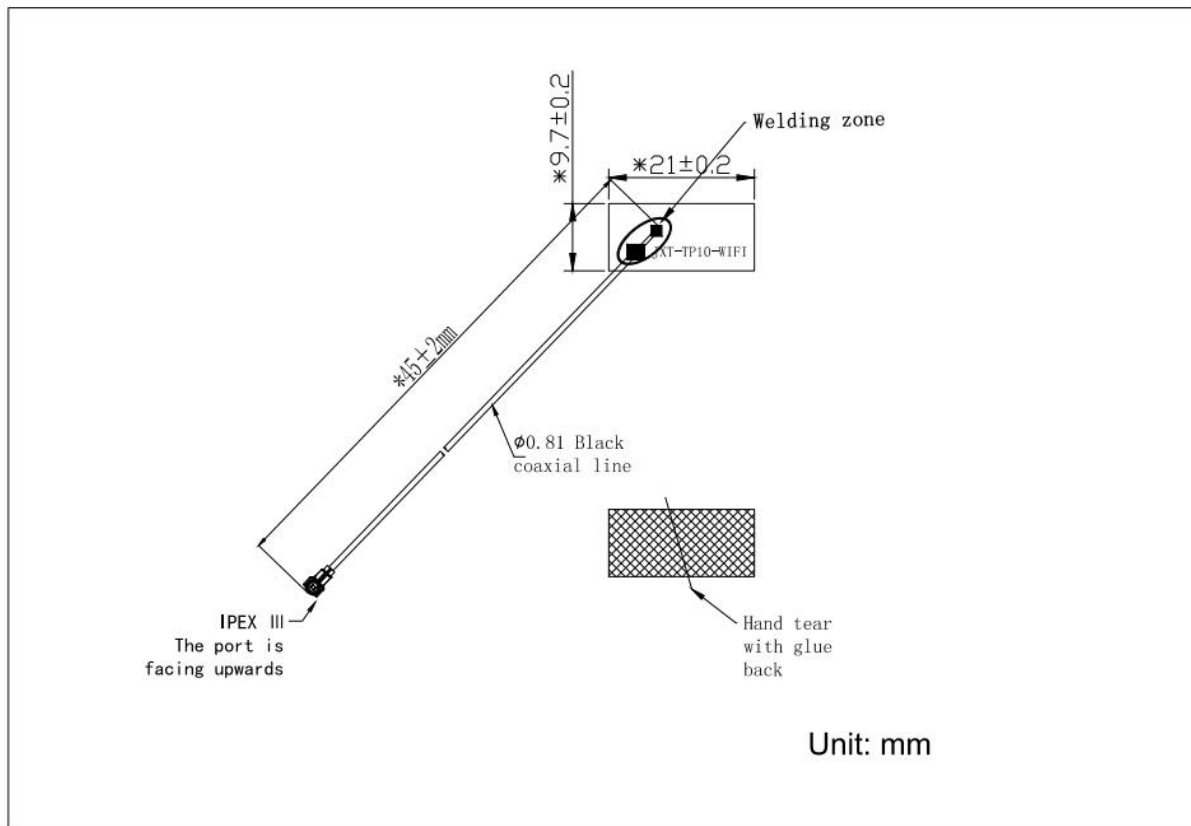


Figure 3: WiFi Structural dimension drawing



Figure 4: WiFi Antenna picture

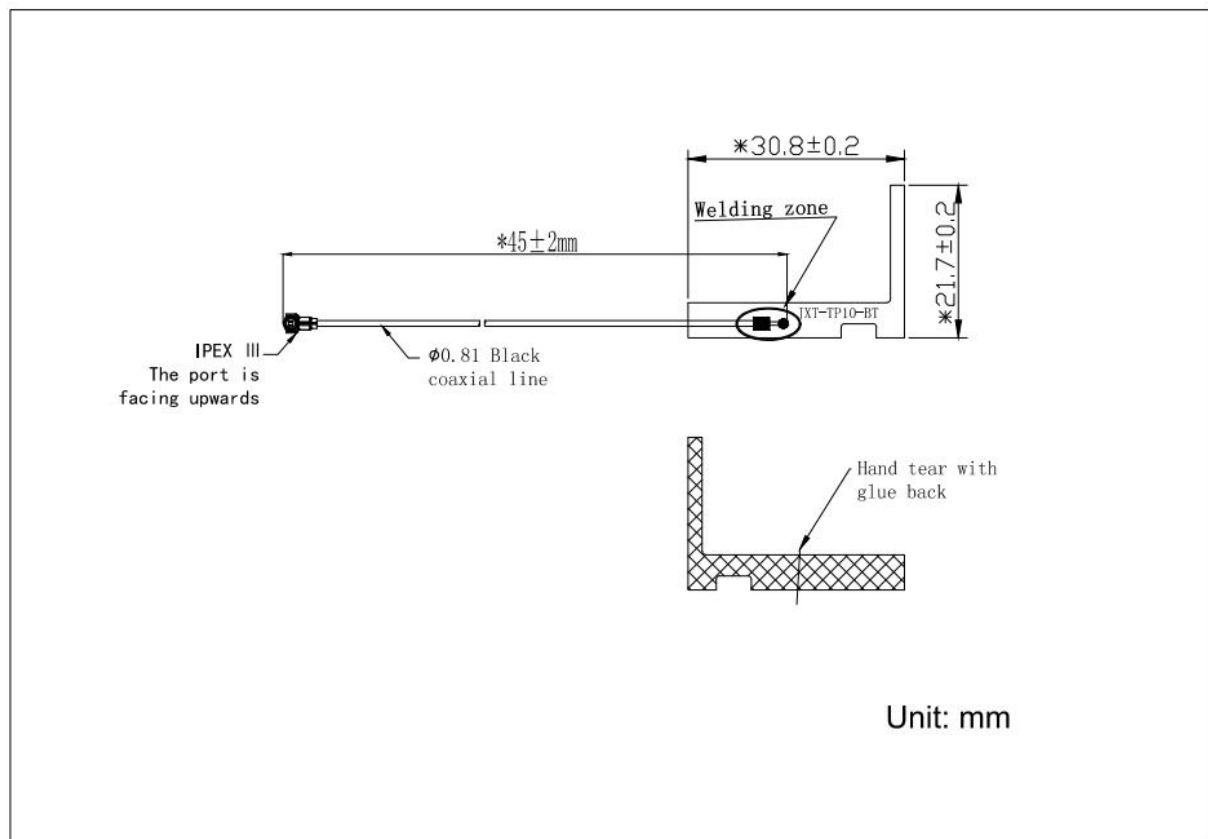


Figure 5: BT Structural dimension drawing



Figure 6: BT Antenna picture



4 General technical requirements

- Operating temperature: -30°C to $+70^{\circ}\text{C}$, humidity: $\leq 95\%$
- Storage temperature: -30°C to $+70^{\circ}\text{C}$, humidity: 20% to 80%
- Test temperature: 15°C to $+30^{\circ}\text{C}$, humidity: 40% to 70%
- Atmospheric pressure: 86 - 106 kPa
- Transportation requirements: The packaging must be rainproof and shockproof. The outer packaging should be marked with fire prevention, moisture resistance and chemical resistance.
- Requirements for packaging drop test and random vibration test: Refer to items FALLOUT/VIBRATION/RANDOM in TABLE 6 of EN_3000190202v020102P (Environmental Engineering (EE); Environmental Conditions and Environmental Testing for Telecommunication Equipment; Part 2-2: Environmental Testing Specifications; Transportation) as the standard.

5 Reliability characteristics

The feasibility test was conducted in accordance with "GB/T 5080.7—1986 Equipment Reliability Test - Verification Test Scheme under the Assumption of Constant Failure Rate". The reliability of the product was measured by the Mean Time Between Failures (MTBF).

The average time between failures (MTBF) of the product shall not be



less than 100,000 hours.

6 Product packaging, storage, and transportation

6.1 Product packaging

The product or packaging should be marked with: product name, model specification, standard number, manufacturer's name and address; on the outer packaging box, there should be the manufacturer's name, product name, product model, production date, etc., and transportation marks such as "Be careful, handle with care", "Damp-sensitive" etc., and the transportation marks should comply with the provisions of "GB 191—1990 Packaging Storage and Transportation Graphic Symbols". The packaging box should meet the requirements of moisture-proof, dust-proof and shock-proof, and there should be relevant random documents such as inspection certificate, spare parts and product user manual in the packaging box.

6.2 Storage

The products should be stored in the packaging boxes. The temperature in the warehouse should be between -25°C and $+60^{\circ}\text{C}$, and the relative humidity should be between 30% and 95%. No harmful gases are allowed in the warehouse. Products that are flammable, explosive, corrosive, and subject to strong mechanical vibration, shock, and strong magnetic fields are



not permitted. The packaging boxes should be at least 20 cm off the ground, and at least 50 cm away from walls, heat sources, windows, or air inlets. The storage period under these conditions is generally one year. After one year, re-inspection for delivery should be conducted.

6.3 Transportation

The packaged products should be capable of being transported to any location by any means of transportation. During the transportation process, they must not be mixed with flammable, explosive or corrosive items, and the products must not be exposed to rain, snow or liquid substances or suffer mechanical damage.