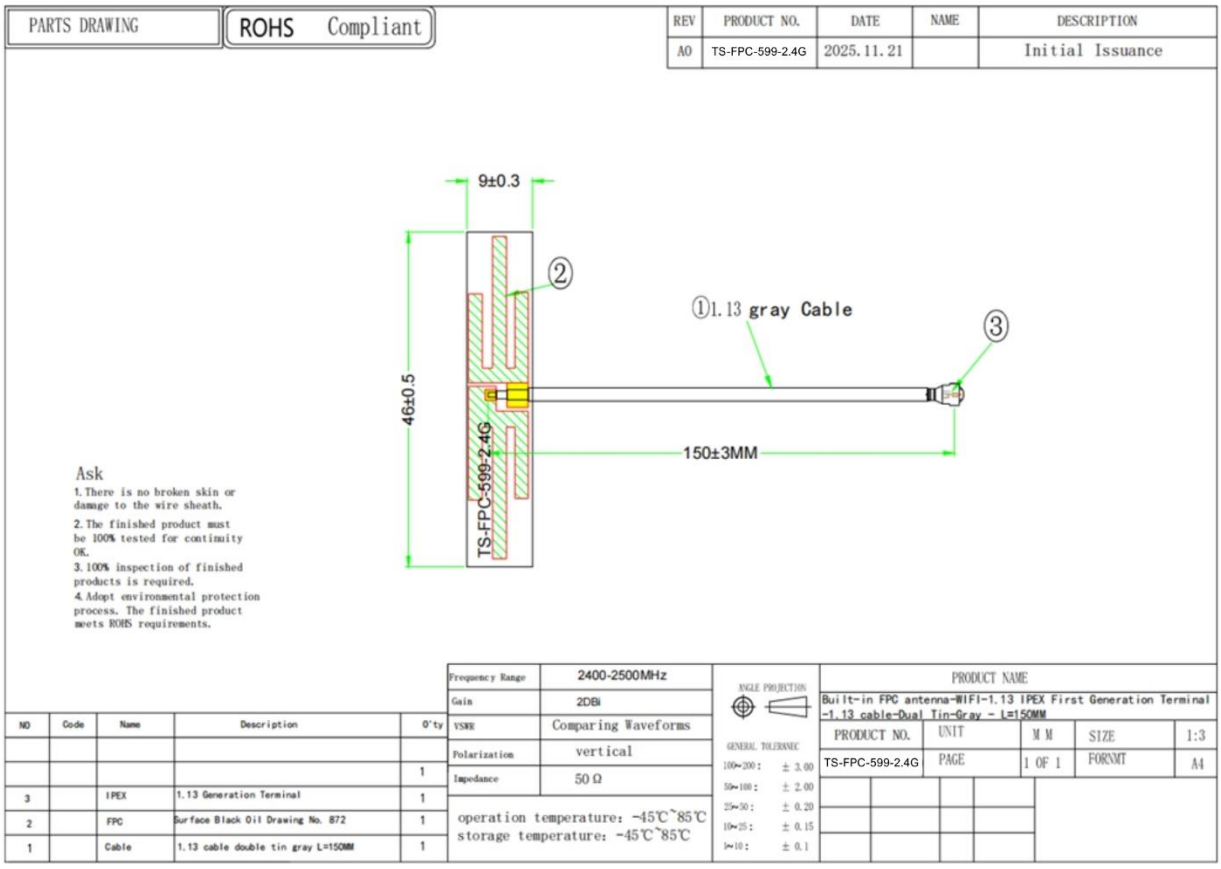
2.4Ghz WIFI Flexible With U.FL Cable TS-FPC-599



Product Features Specification Table

一、Basic characteristics of the product：

DESCRIPTION	VALUE
Frequency Range	2400-2500MHz
Impedance	50Ω
VSWR	Comparison waveform
Gain	2dBi

Radiation	Omni-directional
Polarization	linear Vertical
Powers	1W
Connector model	IPEX
Operating temperature	-45℃~+85℃
Storage temperature	-45℃~+85℃

二、**Product size：**

Dimensions	**46mm*9mm**	**Fixing method**	**Paste**
FPC color	**Black**	**Connector Model**	**1.13 IPEX**
cable	**1.13 cable-Dual Tin-Gray - L=150MM**		

Test data and graphs

1. Summary：

This report to account for the measurement setup and result of the Antenna. The measurement setup includes s-parameter, The measured data for Antenna are presented and analysis.

2. S-Parameter Measurement S：

A. Reflection coefficient :

(a) Instrument：Network Analyzer

(b) Setup：

(1) Calibrate the Network Analyzer by one port calibration using O.S.L. calibration kits.

(2) Connect the antenna under test to the Network Analyzer.

(3) Measure the S11(reflection coefficient) shown in Fig. 1.

(4) Generally, the S11 is less than –10dB to ensure the 90% VSWR 2.0:1 power into antenna and only less than 10% power back to system.

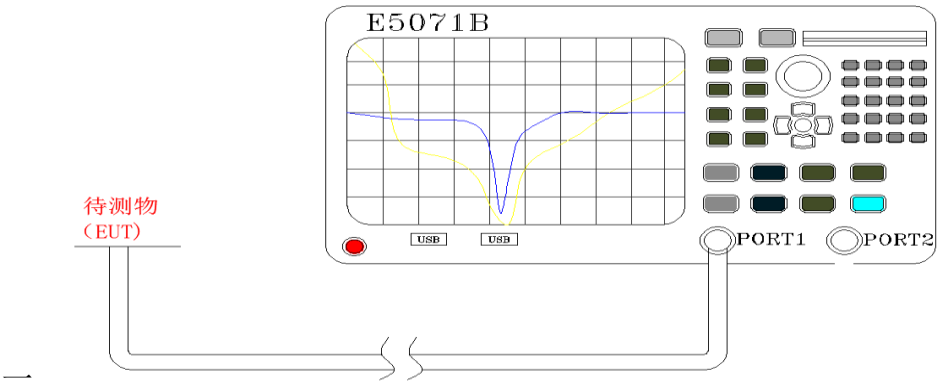


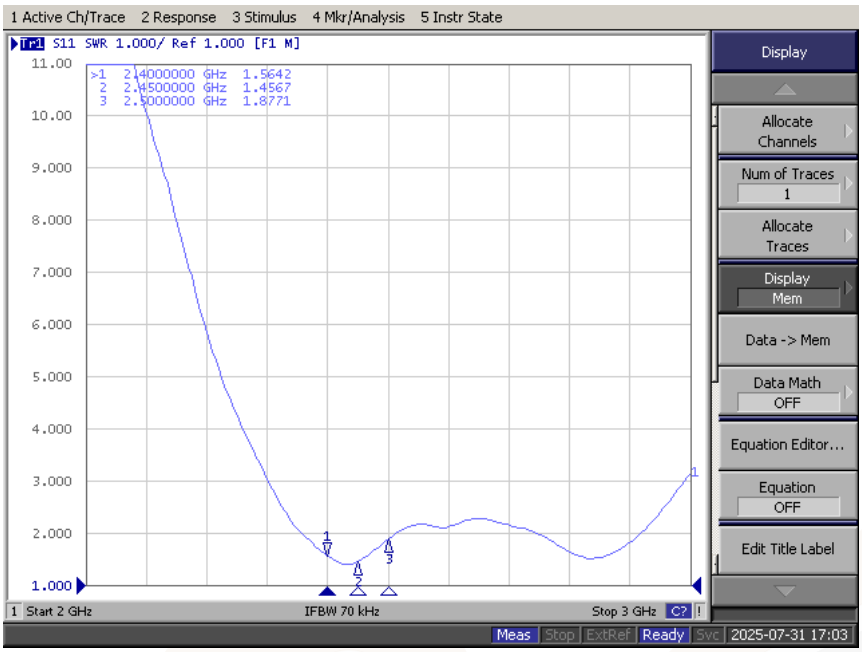
Fig.1 Antenna measured in Network Analyzer

3. S-Parameter Measurement Result S:

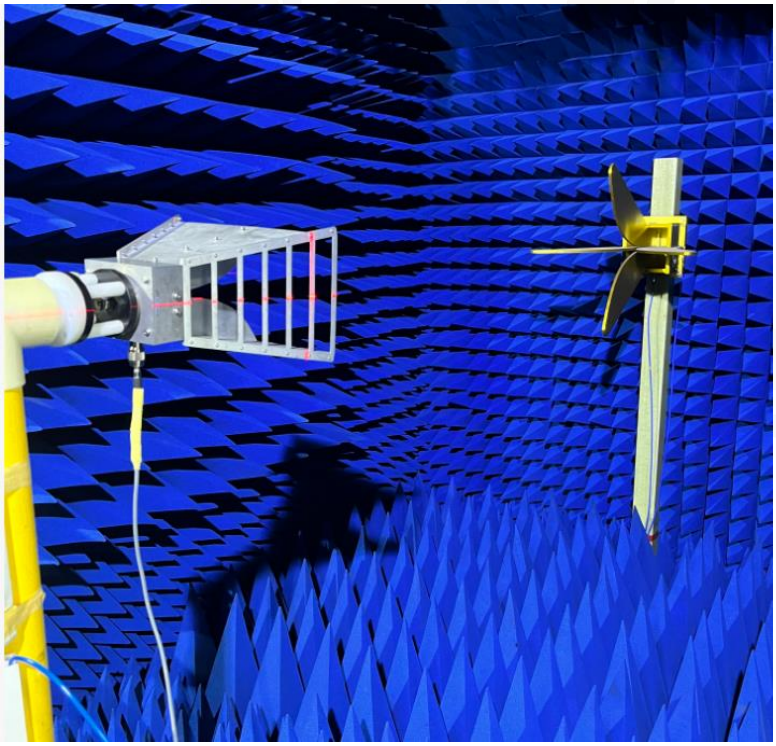
S-Parameter test data:

Frequency MHz	2400	2450	2500
V.S.W.R	1.56	1.45	1.87

S-Parameter test image:



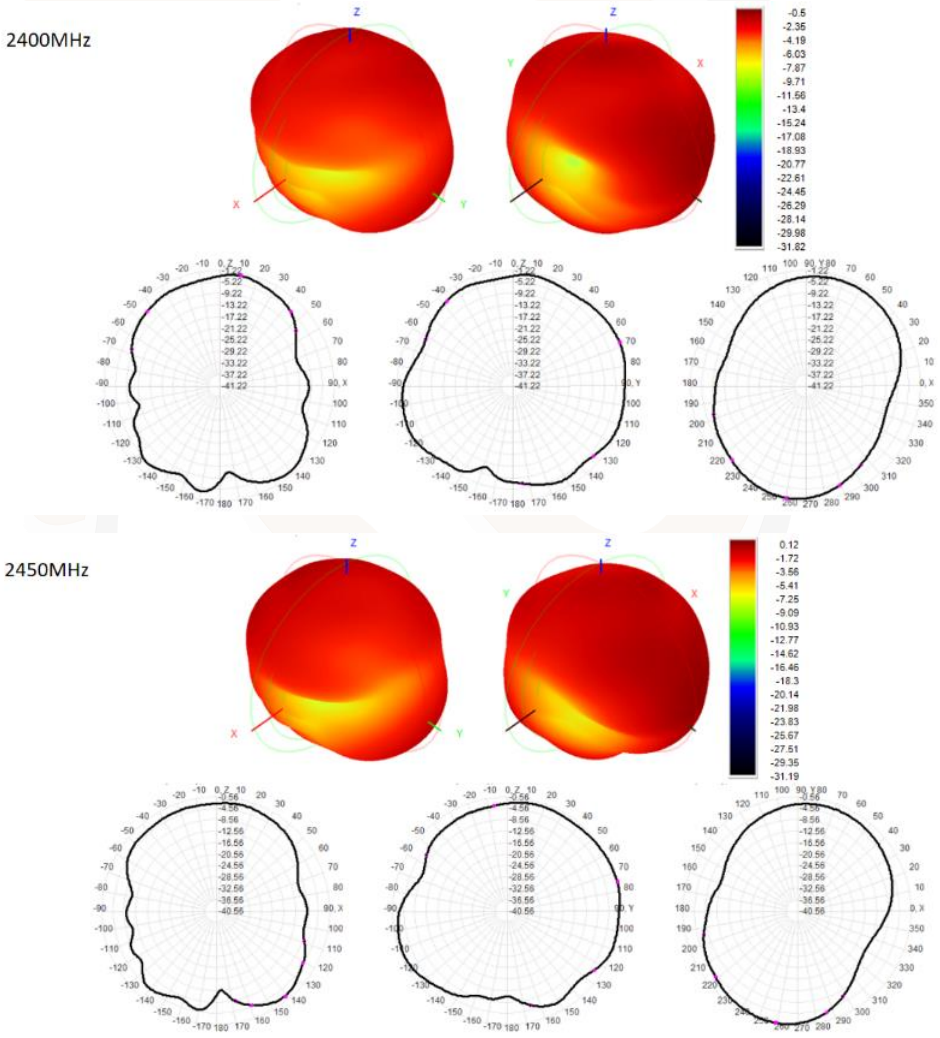
Darkroom test environment:

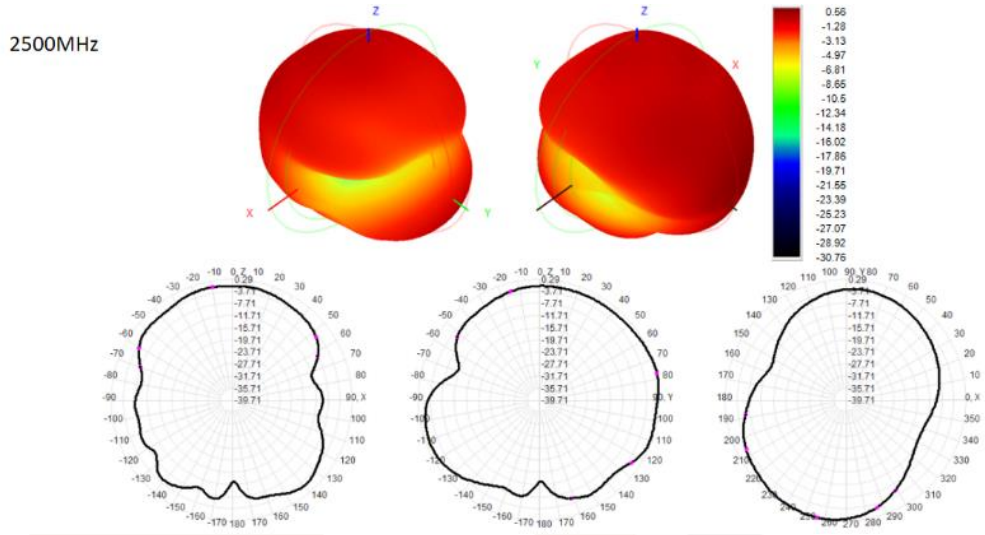


Passive numerical value:

Frequency (MHz) （工作频段）	Efficiency (%) （效率）	Peak GAIN (dBi) （增益）
2400	33.07	1.5
2450	38.47	2.12
2500	41.82	1.56

2D、3D:





Environmental test requirements

Preface	Test items	Test methods and conditions	Test equipment	Test results
1	Temperature and humidity test	Reference E1A 364-31 Method Three, Test Condition A The purpose of this test process is to conduct detailed standard tests. The products used are affected by high humidity and heat. Influence the performance of the material for evaluation. Requirements: Temperature: 85℃ Humidity: 90~95% (R.H) Time : 72 hours	K.SON INS THS-A4L-150	Qualified
2	Low temperature test	Refer to Test Specification: The measured sample should be traveled in a temperature-balanced environment, and its temperature setting Set at -45° C	K.SON INS THS-A4L-150	Qualified

		Requirements : Time : 24 hours		
3	High temperature test	Refer to Test Specification: The measured sample should be placed in a constant temperature environment, and the gas temperature should be set at 70℃. Requirements : TIne : 24 hours	K.SON INS THS-A4L-150	Qualified

Environmental test requirements

Preface	Test items	Test methods and conditions	Test equipment	Test results
4	Hot and cold tests	Refer to Test Specification: The measured sample should be placed in a fixed environment, and the temperature should be set at -45~85℃. Requirements : More than 8 hours.(30 minutes/time, 12 cycles)	K.SON INS THS-A4L-150	Qualified
5	Salt spray test	Refer to Test Specification: The tested sample should be placed in a fixed environment: NaCL Concentration: 40-60g/1Kg PH value: 6.5-7.2 Test time: 24 hours 1.Gold-plated products are not allowed to peel with rust spots. 2.Other nickel-plated, tinned and galvanized products shall not have more than two rust points on the same shaft or surface.	Salt spray tester	Qualified

Mechanical test requirements

Preface	Test items	Test methods and conditions	Test equipment	Test results
1	Vibration test	Test condition A The purpose of this test process is to evaluate the products used in the detailed standard test methods, which are moved or moved to affect the performance of the material. Requirements : Vibration range: 10-55HZ Displacement amplitude value: 0.35mm Acceleration amplitude: 50.0M/S Number of frequency sweeping cycles: 30Times	Vibration tester	Qualified
2	DROP TESTS	Refer to Test Specification: The measured sample should be placed at a certain height, and its height should be set to 1 meter, and it should fall freely 3 times in the direction of 6 surfaces. Requirements : The mechanical characteristics of the product are normal after the drop test.	Drop test fixtures	Qualified

Mechanical test requirements

3	Tula test	Refer to Test Specification: Fix the object under test through the fixture, and after applying a certain force in the opposite direction, the product assembly shall not fall off. Requirements: 1. The product assembly cannot fall off. 2. Minimum tensile force: 1.2KG	Tile tester	Qualified

Note: performs the above mechanical and environmental parameter tests before R&D and trial delivery.