

# Product Specifications for Approval

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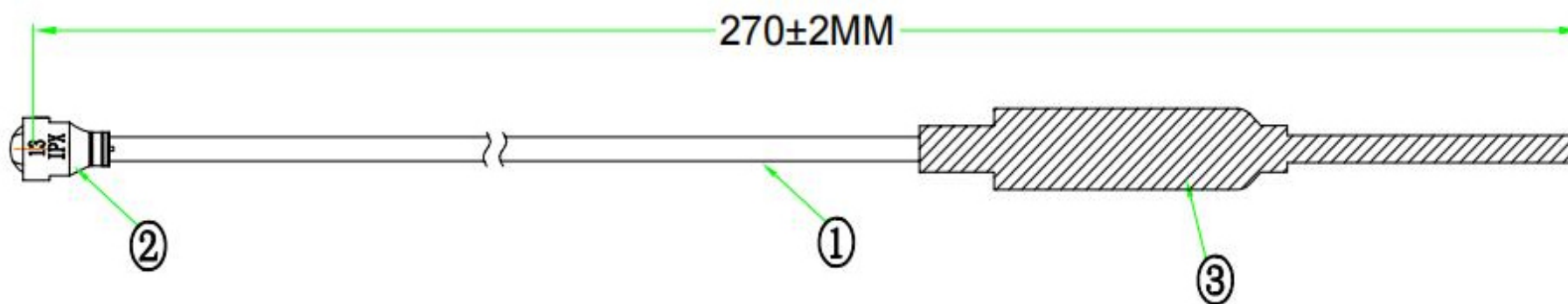
## PARTS DRAWING

ROHS Compliant

REV

A0

2022.09.13



NO	Code	Name	Description	Q'ty	Part NO
3		Heat shrinkable sleeve	4.0 Black environment-friendly heat shrinkable sleeve	1	
2		IPEX	1.13 First generation terminals	1	
1		Wire rod	1.13 Wire Double Silver Black	1	



## GENERAL TOLERANCE

100~200 :	± 3.00
50~100 :	± 2.00
25~50 :	± 0.20
10~25 :	± 0.15
1~10 :	± 0.1

1. The outer cover of wire shall be free of skin damage.
2. Finished products must be 100% tested for continuity OK.
3. Finished products must be 100% inspected OK.
4. Adopt environment-friendly manufacturing process. Insulation impedance of finished product: 500m-0hm

Rated voltage: AC60V    Contact impedance: 20-0hm  
 Withstand voltage: AC200V  
 Meet ROHS requirements. Characteristic impedance: 500hm

# Product characteristic specification table

## 1、 Basic product characteristics:

Product type: copper tube - WIFI-1.13IPEX first generation terminal - 1.13 wire - double silver wire - black - L=270MM	
DESCRIPTION	VALUE
Frequency range	2400-2500MHz
Impedance	50 $\Omega$
V.S.W.R	对比样品波形
Gain	2.84DBi
Radiation	Omni-directional
Polarization	linear Vertical
Admitted power	1W
Connector	IPEX CONN
Operating temp	-45℃~+85℃
Storage temp	-45℃~+85℃

## 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  $-10\text{dB}$  to ensure the 90% VSWR 2.0:1 power into antenna and only less than 10% power back to system.

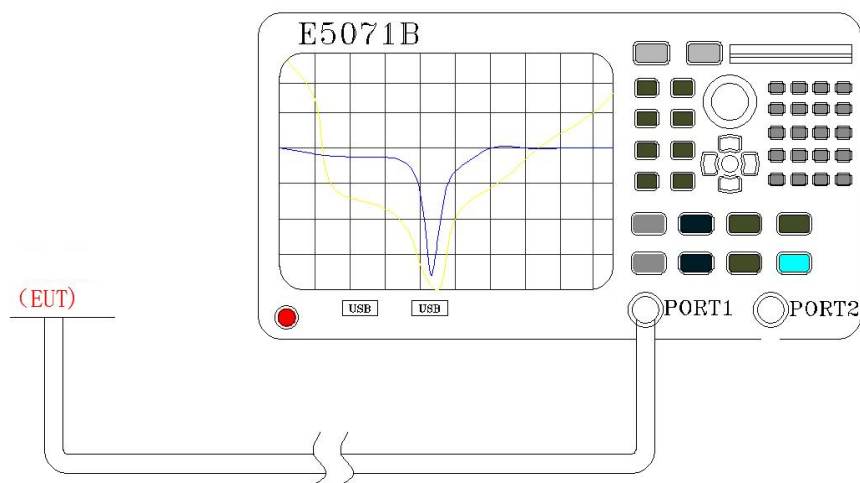


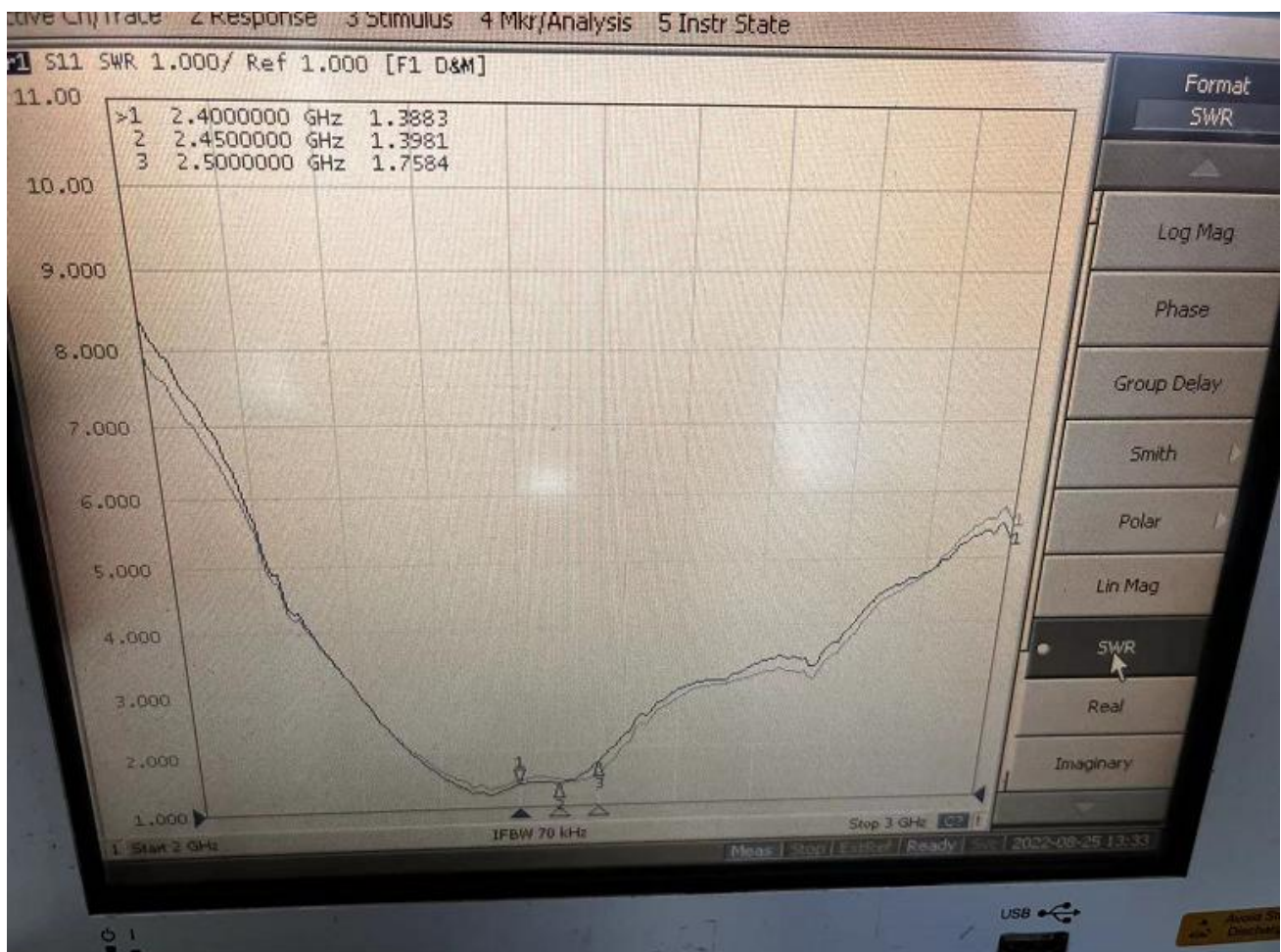
Fig.1 Antenna measured in Network Analyzer

### 3. S-Parameter Measurement Result S :

S-Parameter test data S:-

Frequency MHz	2400	2450	2500
V.S.W.R	1.38	1.39	1.75

S-Parameter test image :



**Antenna profile :**



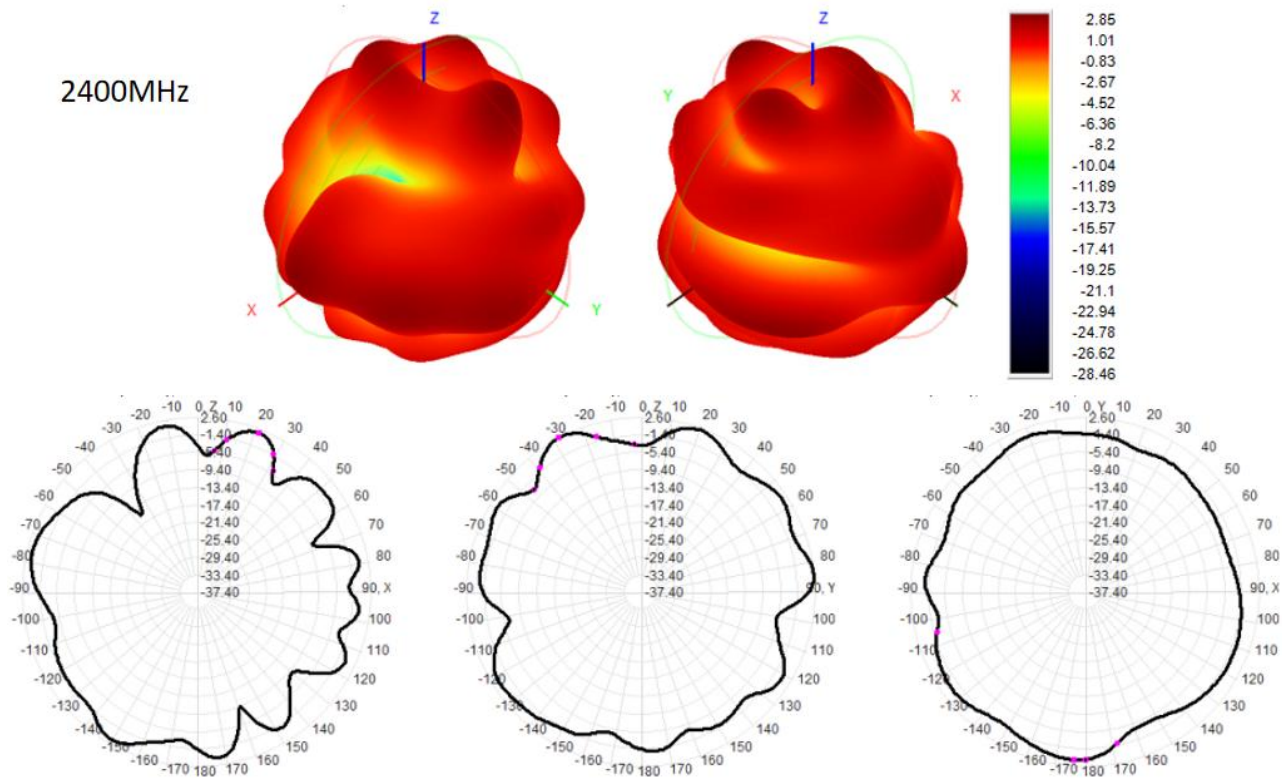
**Passive value :**

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	70.73	2.45
2450	65.28	2.84
2500	64.23	2.71

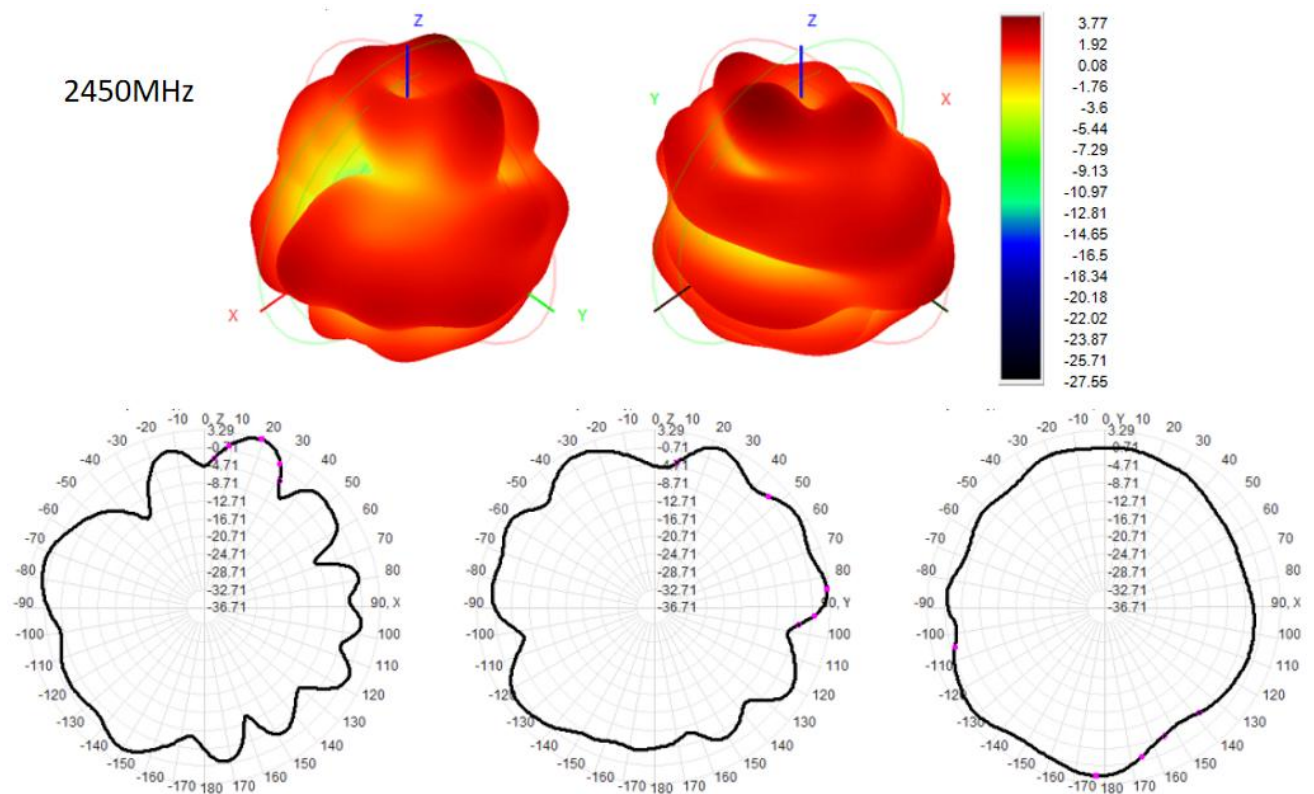


## 2D、3D

2400MHz

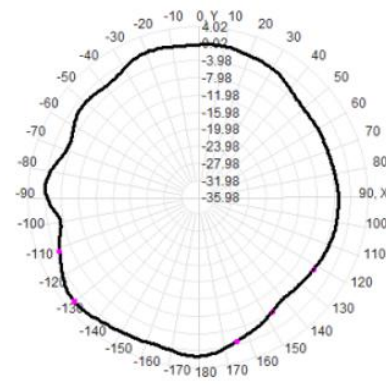
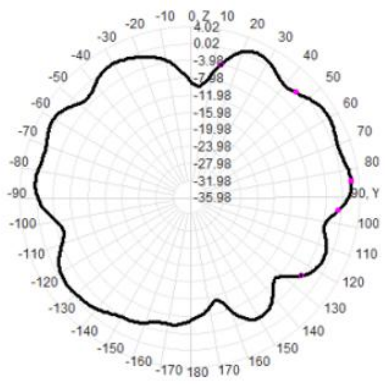
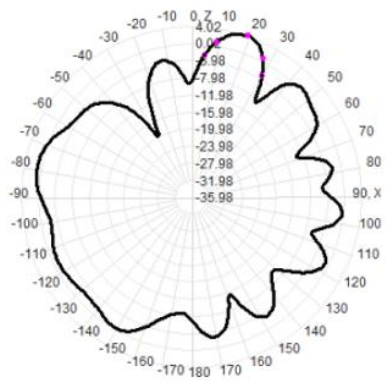
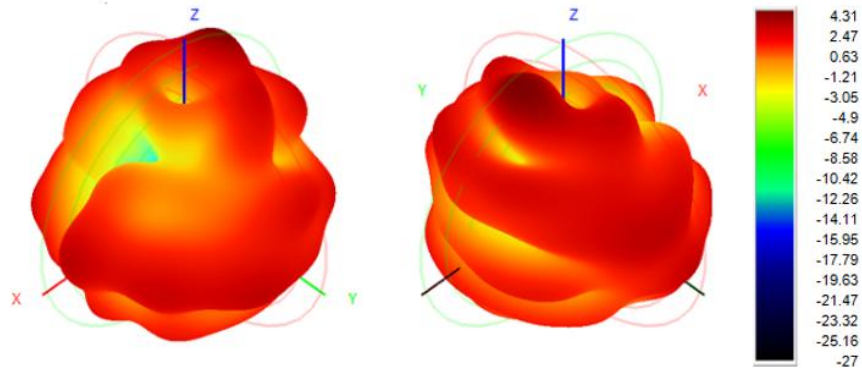


2450MHz





2500MHz





## Environmental testing requirements

No	Test items	Test methods and conditions	Test equipment	Test result
1	Temperature and humidity test	<p>Refer to EIA364-31 Method III, Test Condition A The purpose of this test procedure is to evaluate the products used in the detailed standard test methods, which are affected by high humidity and heat and affect the performance of materials.</p> <p>requirement: Temperature: 85 Humidity: 90~95% (R.H) Time: 72 hours</p>	<p>K. SON INS</p> <p>THS-A4L-150</p>	<div>Qualified</div>
2	Low temperature test	<p>Refer to the test specification of Feisheng Electronics: The tested sample shall be placed in a constant temperature environment with the temperature set at -45</p> <p>requirement: Time: 24 hours</p>	<p>K. SON INS</p> <p>THS-A4L-150</p>	<div>Qualified</div>
3	Hot test	<p>Refer to the test specification of Feisheng Electronics: The tested sample shall be placed in a constant temperature environment with the temperature set at 85</p> <p>Requirement: Time: 24 hours</p>	<p>K. SON INS</p> <p>THS-A4L-150</p>	<div>Qualified</div>
4	Thermal Shock	<p>Refer to the test specification of Feisheng Electronics: The measured sample shall be placed in a fixed environment with the temperature set at - 45~85</p> <p>requirement: More than 8 hours (30 minutes/time, 12 cycles)</p>	<p>K. SON INS</p> <p>THS-A4L-150</p>	<div>Qualified</div>
5	Salt spray test	<p>Refer to the test specification of Feisheng Electronics: The tested sample shall be placed in a fixed environment. The required concentration of NaCL: 40-60g/1Kg PH value: 6.5-7.2 Test time: 24H</p> <p>1. Gold plated products are not allowed to have rust spots and peeling 2. Other nickel and tin plated galvanized products shall not have more than two rust spots on the same shaft or surface</p>	<p>Salt spray tester</p>	<div>Qualified</div>

## Mechanical test requirements

No	Test items	Test methods and conditions	测试设备	测试结果
1	Vibration test	<p>Test condition A The purpose of this test procedure is to</p> <p>The products used are evaluated by their movement or moving, which affects the performance of materials.</p> <p>requirement: Vibration range: 10-55HZ Displacement amplitude: 0.35mm Acceleration amplitude: 50.0M/s F frequency sweep cycles: 30 times</p>	Vibration testing machine	<div>Qualified</div>
2	Drop Test	<p>Refer to the test specification of Feisheng Electronics: The measured sample shall be placed at a certain height, and its height shall be set as 1M. It shall fall freely for three times in the direction of six sides</p> <p>Requirement: The mechanical properties of the product are normal after the drop test</p>	Drop test fixture	<div>Qualified</div>
3	Tensile test	<p>Refer to the test specification of Feisheng Electronics: Fix the tested object with a fixture, and apply a certain force in the opposite direction to prevent the product assembly from falling off</p> <p>requirement: 1. Product assembly shall not fall off. 2. Minimum tension: 1.2KG</p>	tensile testing machine	<div>Qualified</div>

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