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Shenzhen

Antenna Specification

Customer Name: NewKepu

Machine Model: I315C1X

Antenna frequency band: 2400–2500MHz

Version:A0

Production Date:2024-07-10

No.: FS-891

Feisheng Electronics Co., Ltd. – R&D			
Structure:	<u>Xu Long</u>	Radio frequency:	<u>Guo Xi</u>
Examine and verify:	<u>Li Sheng</u>	Ratify:	<u>Li Sheng</u>
Customer Confirmation			
Customer Audit:		Customer Approval:	

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Amendant Record

edition	date	engineer	revise content
A0	2024-07-10	Xu Long	

Product Specifications Table

I. Basic Product Characteristics:

Product Type: FPC Antenna – 2.4 GHz – 1.13 IPEX – First-Generation Terminal – 1.13 mm Wire – Black – Dual-Tin – L = 100 mm	
DESCRIPTION	VALUE
Frequency range (Operating frequency band)	2400-2500MHz
Impedance (Characteristic Impedance)	50 Ω
VSWR (Voltage Standing Wave Ratio)	Comparative waveform
Gain(gain)	1.45DBi
Radiation (Directionality)	Omni-directional
Polarization (Linearization Method)	linear Vertical
Admitted power	1W
Antenna Type:	Internal Antenna
Operating temperature	-45℃~+85℃
Storage Temperature	-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.

This report illustrates the results of the measured antenna; the measurement setup includes the voltage standing wave ratio and reflection coefficient of the S-parameters, facilitating the data representation and analysis of the measured antenna.

2. S-Parameter Measurement –S-Parameter Measurement:

A. Reflection coefficient:

(a) Instrument: Network Analyzer.

(b) Setup: Install

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

The instrument calibration is performed for a single port using the OSL Calibration Kit.

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

Connect the antenna under test to the network analysis system.

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

Measure S11 as shown in Figure 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.

Generally, the S11 should be less than -10 dB and the VSWR should be less than 2.0:1, ensuring that 90% of the power is converted to the antenna and less than 10% of the power is reflected back into the system.

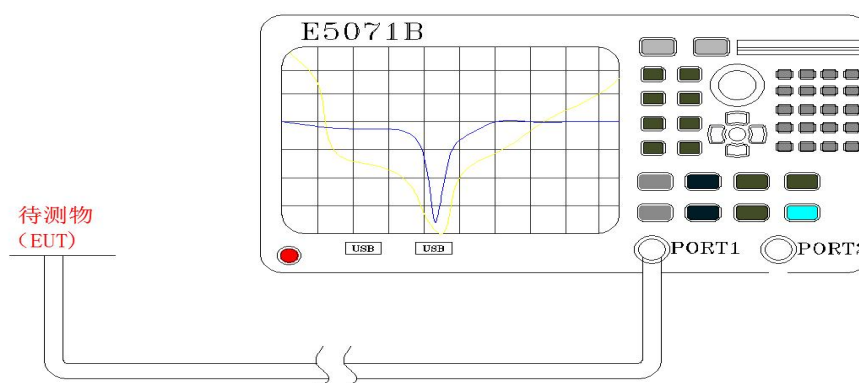


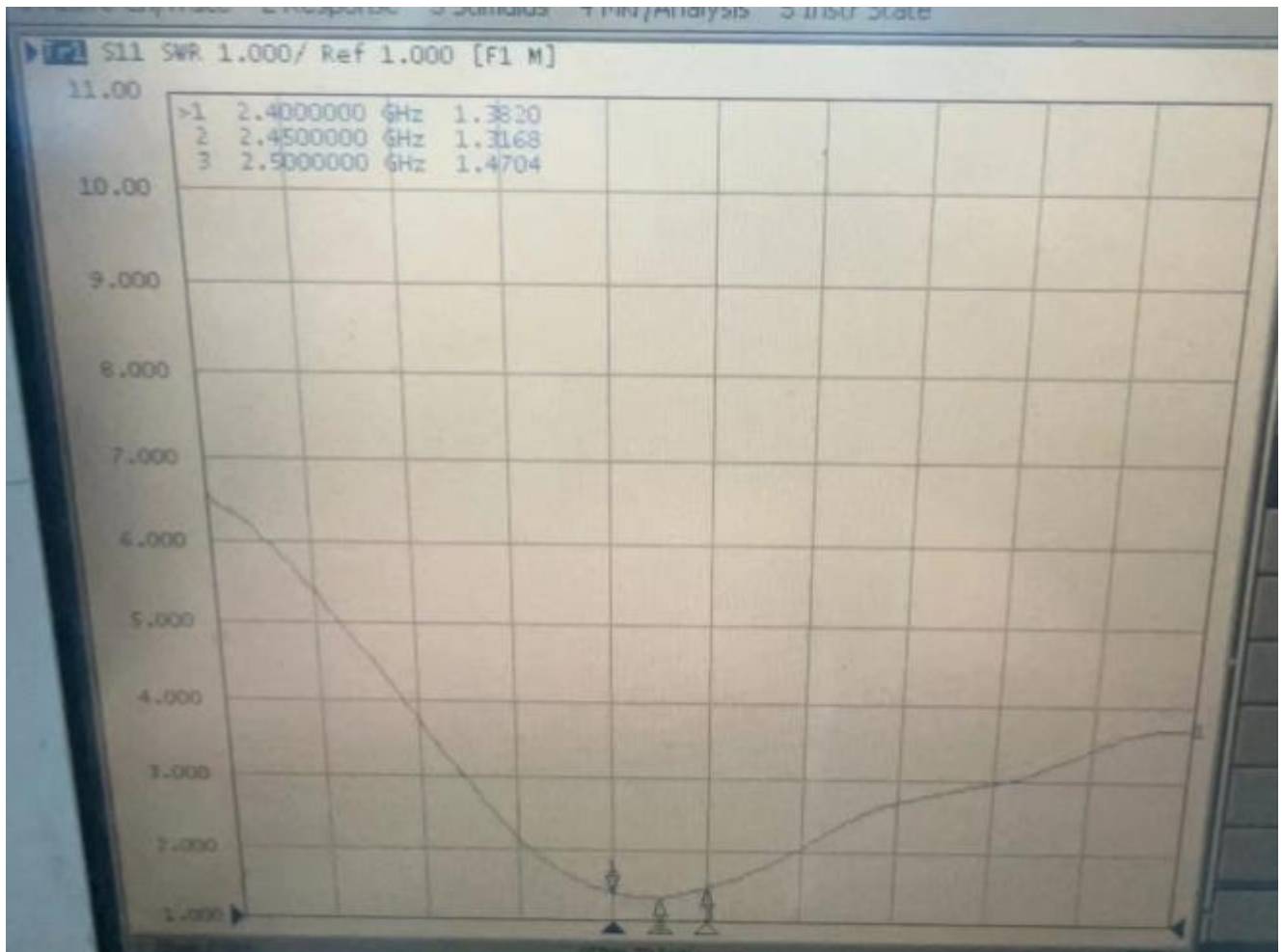
Fig. 1: Antenna Measured Using a Network Analyzer

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

S-parameter test data – S-parameter measurement data:

Frequency (MHz) – Operating Frequency Band	2400	2450	2500
V.S.W.R. Standing Wave Ratio	1.38	1.31	1.47

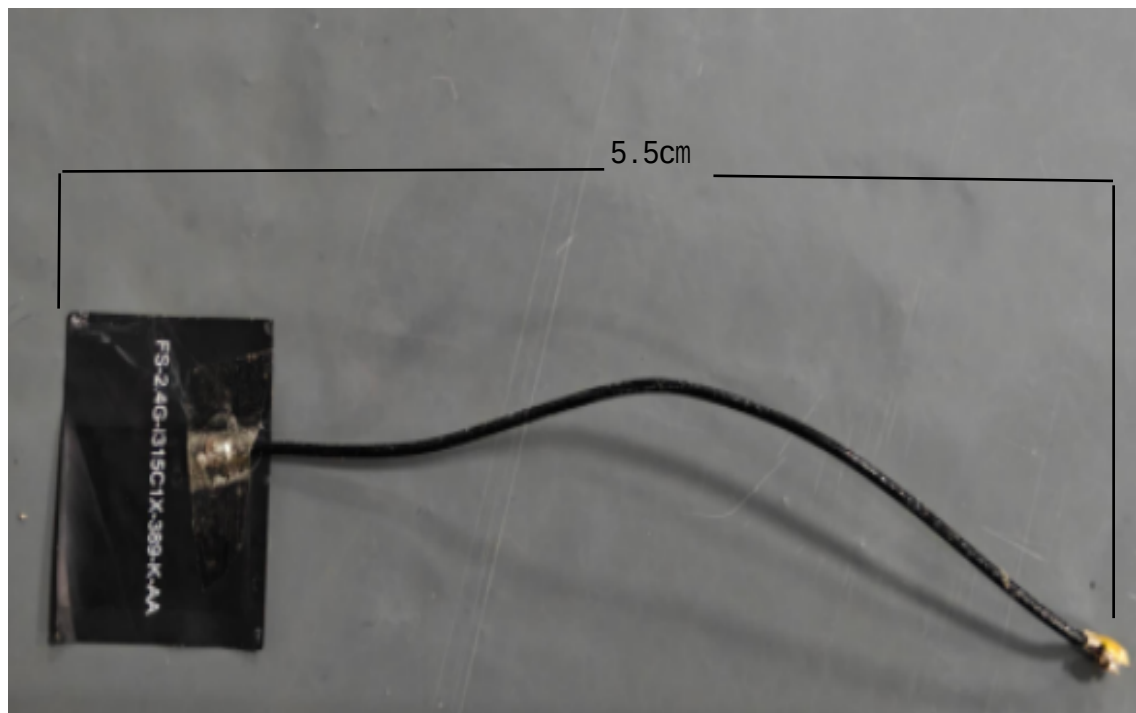
S-Parameter test image – S-parameter measurement image:



Machine appearance:



Antenna Mounting Position:



AntennaOTA:

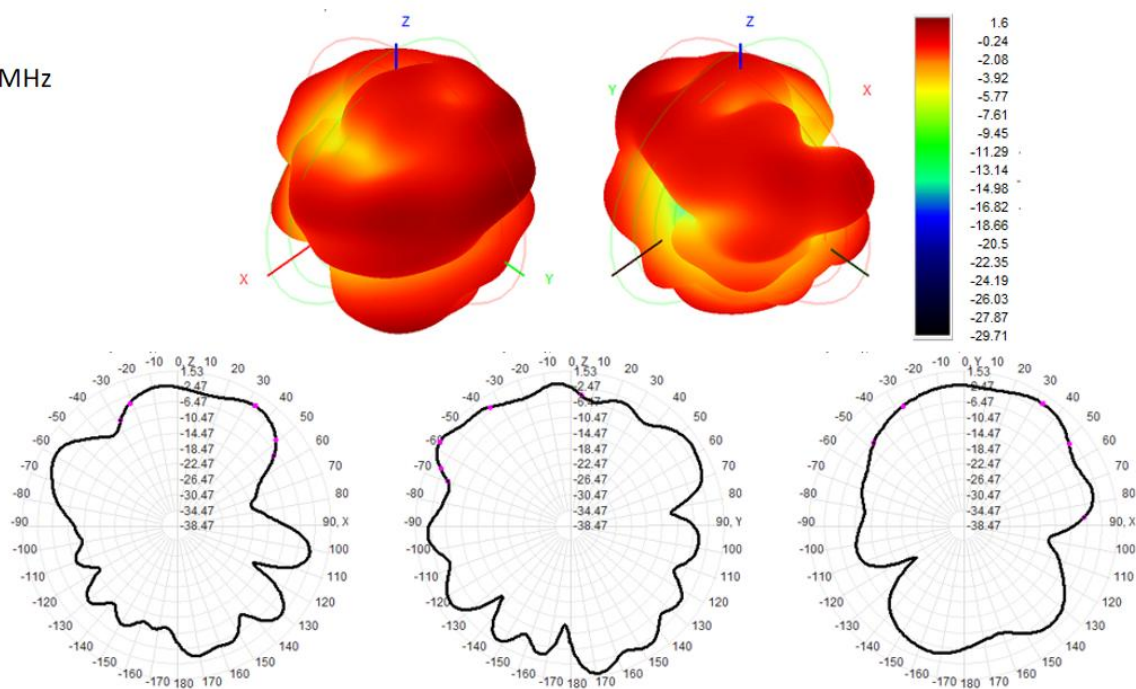
测试设备:	R&S CMW5000			
			OTA	
	无线协议	信道	TRP(dBm)	TIS(dBm)
WIFI	802.11 b /11Mbps	1	12.56	-85.05
		6	12.43	-85.77
		11	12.55	-85.36

Passive Value:

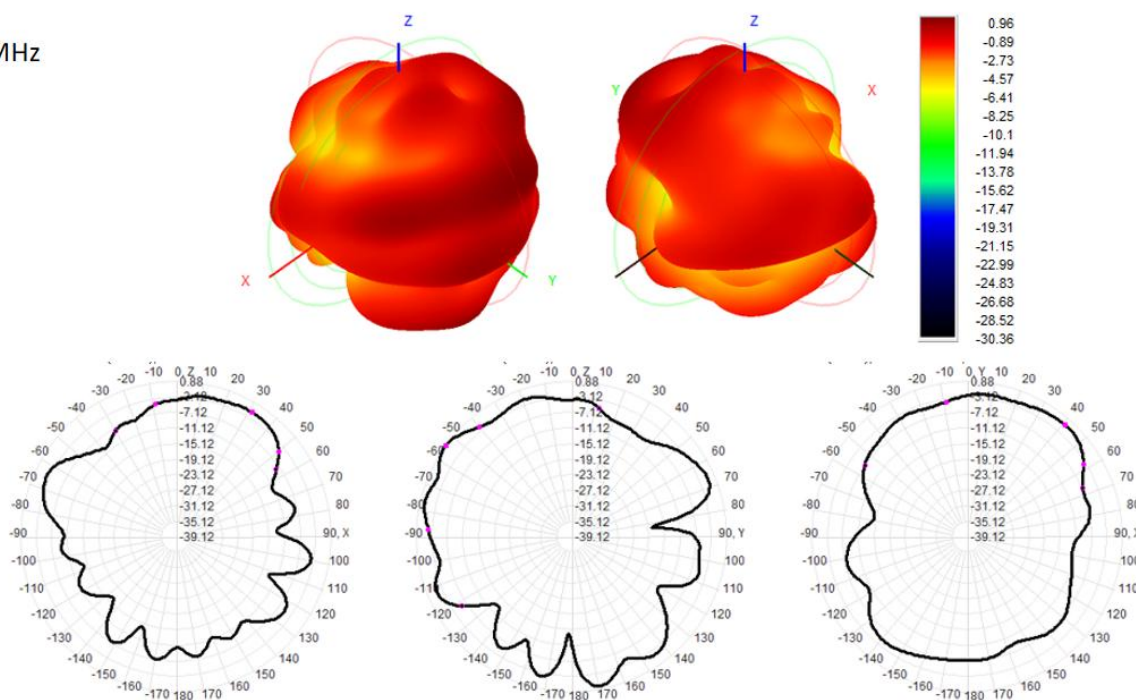
Frequency (MHz) (工作频段)	Efficiency (%) (效率)	Peak GAIN (dBi) (增益)
2400	40.41	1.25
2450	43.58	1.45
2500	40.84	1.27

2D\3D:

2400MHz



2450MHz



2500MHz

