

Shenzhen World Elite Electronic Co. LTD.

Specification Sheet

Product Information:

Customer	Rently
Material Description	V5.1 HUB WIFI Antenna
Customer's Part number	
Specifications	FPC (24*19mm) +Black Coaxial Cable (ϕ 1.13*53mm) +Welding
Type	FPC Antenna
Supplier's Part number	01-05-001-000025
Date	2025-11-28

Supplier:

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1、Specification

This report mainly provides the testing status of various electrical and structural performance parameters of V5.1 HUB WIFI Antenna.



Figure 1 Antenna

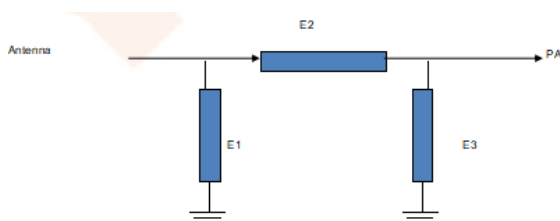
1.1 Electrical specification standard

1.1.1 Electrical Specifications

The antenna operates in the 2400-2500MHz, 5150-5850MHz. The following table is the electrical performance index of the antenna designed by our company.

Antenna	V5.1 HUB WIFI Antenna
Frequency Range	2400-2500MHz 5150-5850MHz
Efficiency	35-62%
Impedance	50 ohm
Polarization	Linear polarization

1.1.2 Antenna Matching Network



Element	Value
E1(0402)	N/A
E2(0402)	N/A
E3(0402)	N/A

2、Test

The antenna was debugged and tested with the prototype provided by the customer.

2.1 Test of passive S11

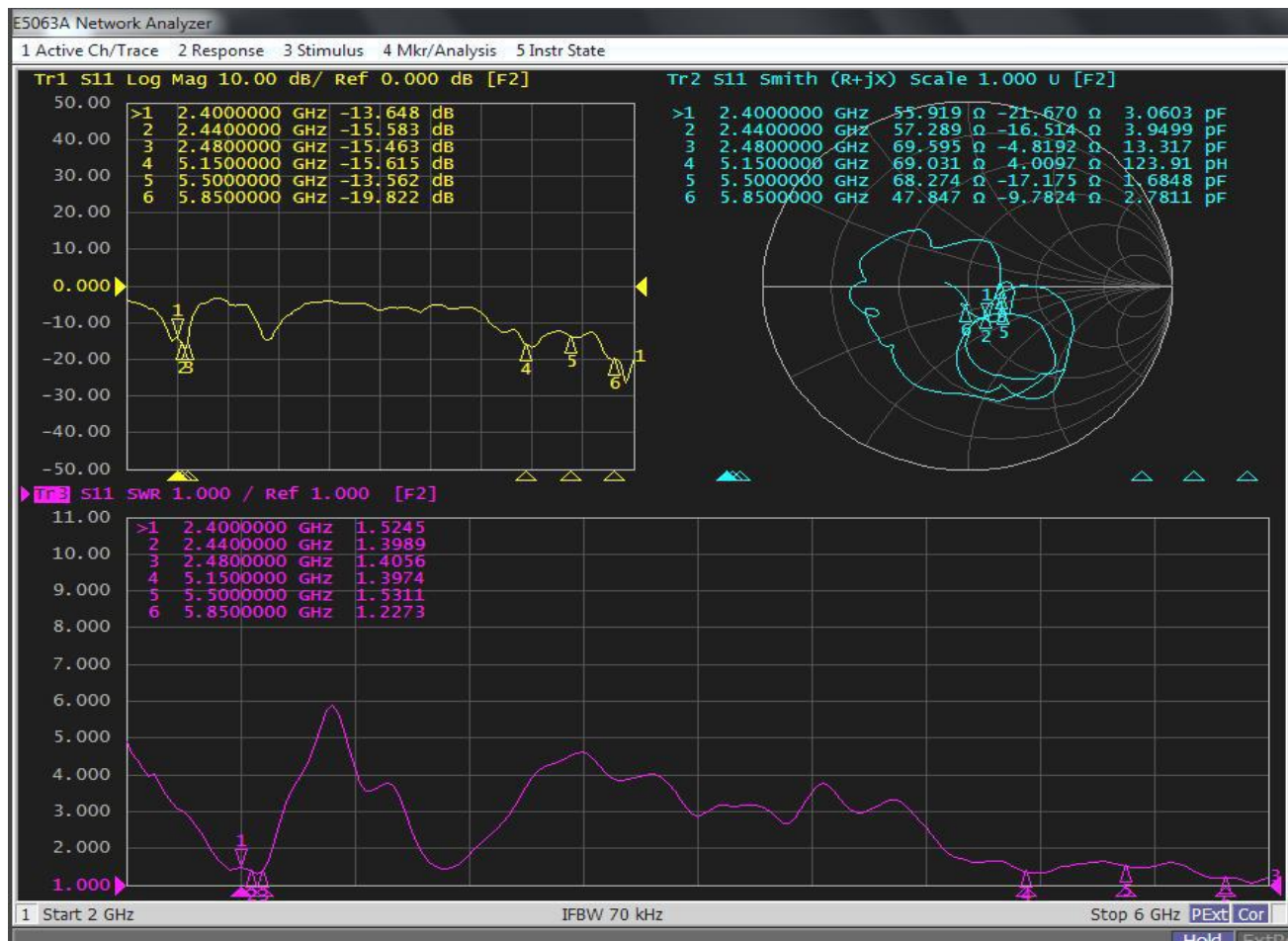
2.1.1 Test connection

The passive S11 test device is connected as follows: Network Analyzer → Test Line → Test Fixture.

2.1.2 Passive S11

The following table shows the standing wave ratio values of the edge frequency points of the antenna operating frequency band. The waveform of Return Loss and VSWR obtained by the test is shown as follows.

Frequency(MHz)	2400	2480	5150	5850
VSWR	1.52	1.41	1.40	1.23
Return Loss	-13.65	-15.46	-15.62	-19.82



2.2 Gain and efficiency test

2.2.1 Test Position

Microwave anechoic chamber, the test frequency range is 400MHz-6GHz.

2.2.2 Test equipment

Network analyzer, standard horn antenna, multi-probe near field antenna test system, test computer, etc

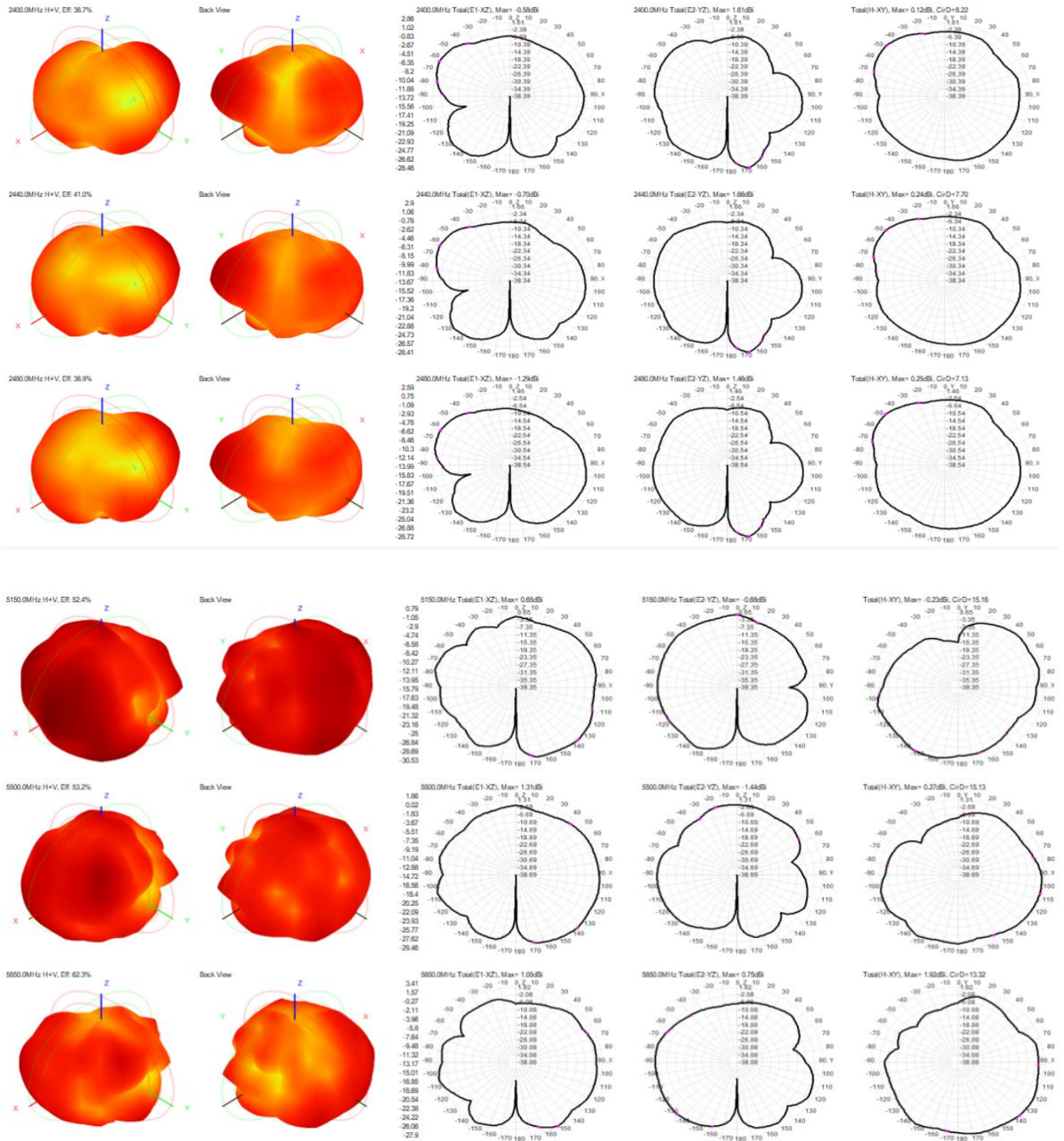
2.2.3 Results Summary

In the microwave anechoic chamber, the measured values related to efficiency and gain are shown in the table below.

Frequency(MHz)	Gain(dBi)	Efficiency(%)
2400	2.86	38.66
2410	2.92	39.81
2420	2.93	40.26
2430	2.98	41.17
2440	2.90	41.01
2450	2.89	41.69
2460	2.81	41.08
2470	2.74	40.19
2480	2.59	38.89
2490	2.23	36.40
2500	1.81	35.78

Frequency(MHz)	Gain(dBi)	Efficiency(%)
5150	0.79	52.44
5200	0.86	52.64
5250	1.27	57.38
5300	1.46	55.91
5350	1.70	56.64
5400	1.94	57.08
5450	1.63	57.19
5500	1.86	53.18
5550	1.66	52.01
5600	2.04	52.42
5650	2.58	55.39
5700	2.46	55.42
5750	2.85	58.55
5800	3.06	62.52
5850	3.41	62.30

2.2.4 Radiation Pattern Results



3、 Conclusion

This antenna is designed on the basis of the prototype provided by the customer. The above electrical performance parameters are tested under the environmental treatment conditions of the test prototype. The electrical parameters and structural performance have met the technical requirements. Please confirm!

4、Part Drawing

