

Shenzhen World Elite Electronic CO., LTD

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SAMPLE APPROVAL SHEET

Parts Information:

客户 (Customer)	
部品名称 (Material Description)	HSB5181 BT Antenna
客户料号 (Customer's Part number)	
Specifications	FPC(32*11.2mm)+Black Coax (Φ 1.13*100mm) + Welding
料号 (Supplier's Part number)	136-SB5181-10A
Date	2025-2-24

Sign-off:

Preparation Prepared By	Audit Checked By	Ratification Approved By
Zhang Dengqiao	Li Yuepeng	Zhang Hongying

Customer Sign-off:

Recognition Accepted By	Audit Checked By	Ratification Approved By

Acknowledgment of Results:

Full Approval Conditional
Approval Unqualified Others:

This sample acknowledgment is confirmed by our company, if confirmed and signed by your R&D department, please send it back to our company as soon as possible. If there are other reasons, please notify me in writing.

This sample approval sheet is guaranteed to be true. If it is confirmed by your R&D department, please send it back to us as soon as possible. If there are other reasons, please inform us in writing.

1 specification

This report provides the test status of various electrical and structural performance parameters of the antenna HSB5181 BT antenna.

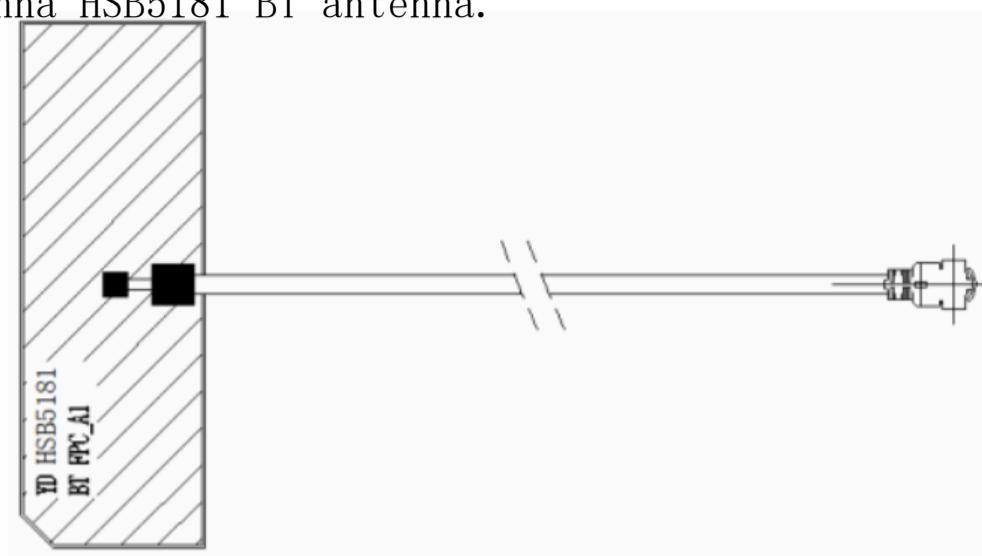


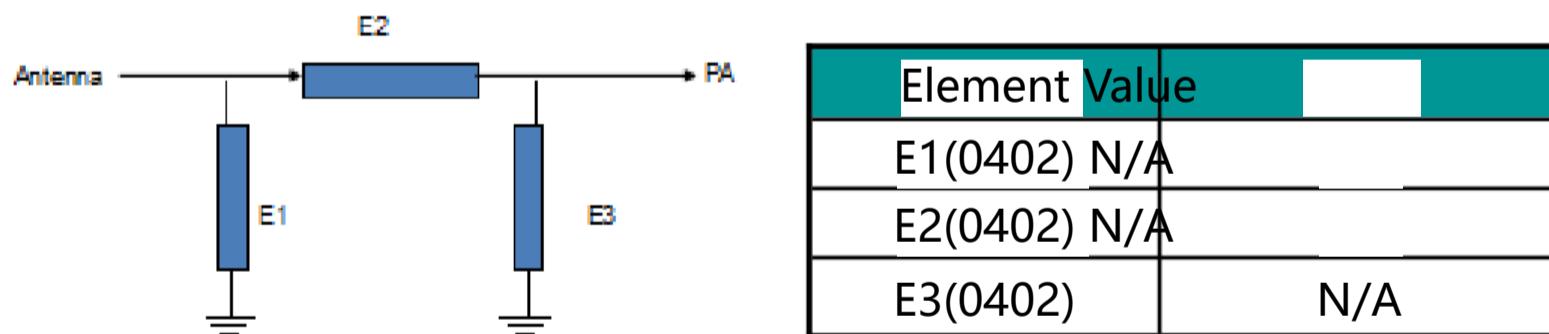
Figure 1 Skyline

1.1 Electrical Specification Standards

1.1.1 Electrical performance indicators The antenna works in the frequency band of 2400–2480MHz. The following table is an indicator of the electrical performance of the antenna designed by our company.

antenna	HSB5181 BT antenna
Band	2400-2480MHz
VSWR	< 2
efficiency	> 40%
impedance	50 ohm
Polarization mode	Linear polarization

1.1.2 Matching circuit diagram



2 Test

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

2.1 Passive S11 test

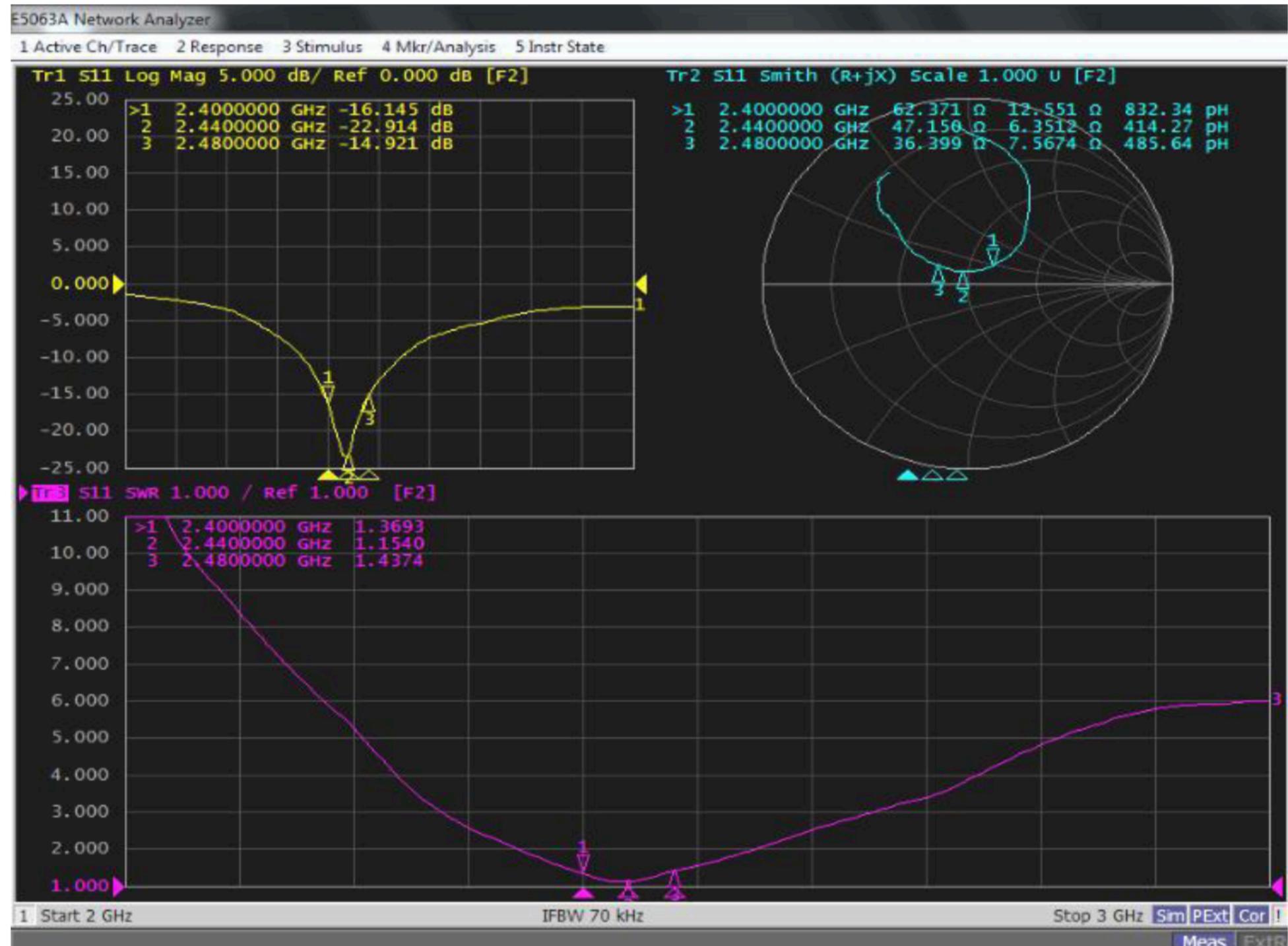
2.1.1 Test Connection

The passive S11 test set is connected in sequence: network analyzer → test lead → test fixture.

2.1.2 Passive S11

The following table shows the VSWR values at the edge of the antenna's operating band. Tested return loss, VSWR correlation waveform
The figure is shown in the figure below.

Frequency (MHz)	2400	2440	2480
VSWR	1.37	1.15	1.44
Return Loss	-16.15	-22.91	-14.92



2.2 Gain and efficiency testing

2.2.1 The site of the test

Microwave anechoic chamber: The test frequency range is 400MHz–6GHz

2.2.2 Tested meters

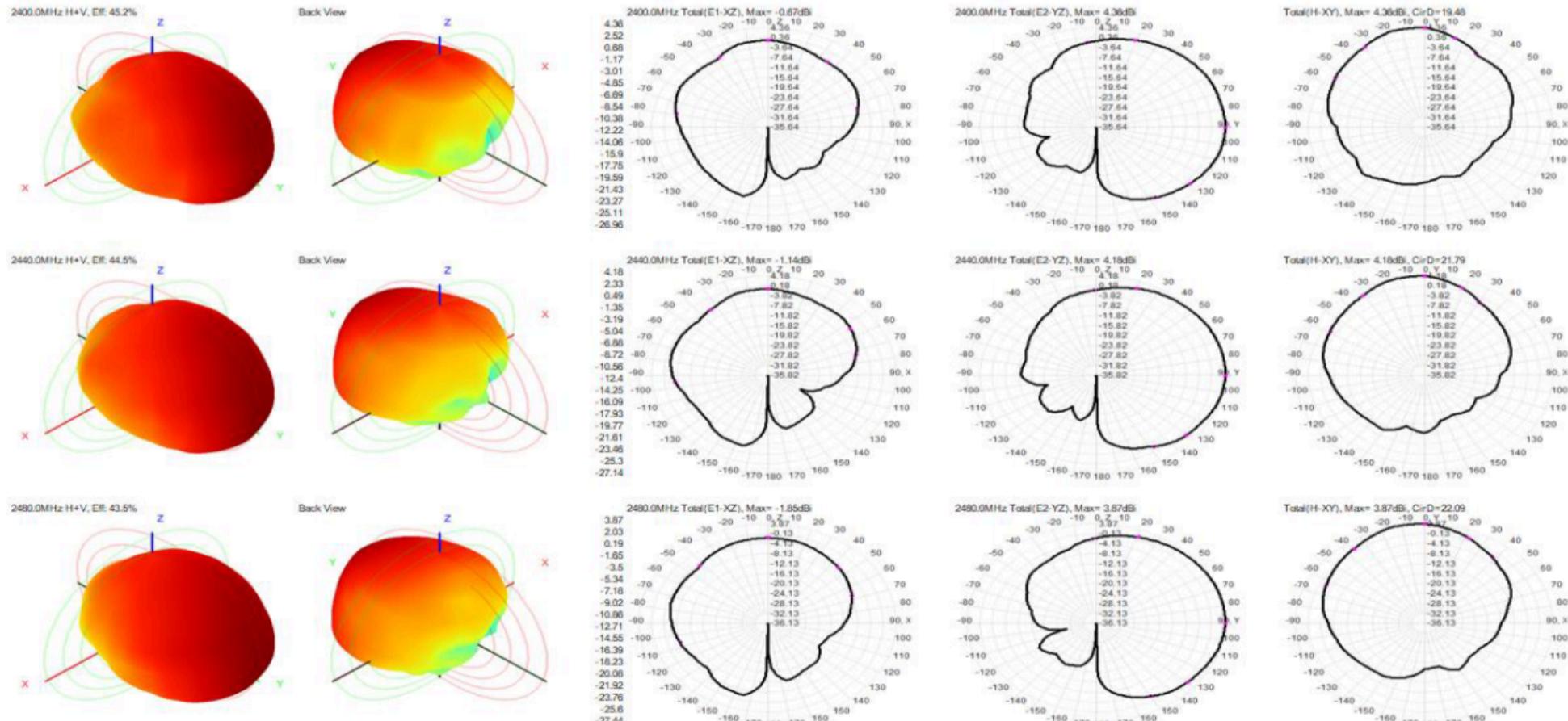
Network analyzers, standard horn antennas, multi-probe near-field antenna test systems, test computers, etc.

2.2.3 Test results

In a microwave anechoic chamber, the values tested in relation to efficiency and gain are shown in the table below

Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	4.36	45.20
2410	4.28	45.27
2420	4.21	45.18
2430	4.25	45.51
2440	4.18	44.47
2450	4.06	44.21
2460	3.94	43.92
2470	3.82	43.25
2480	3.87	43.48
2490	3.85	43.22
2500	3.67	42.32

2.2.4 Passive radiation pattern



2.3 Active testing

2.3.1 Test Results Channel

	TRP (dBm)	TIS (dBm)
0	5. 05	-85. 22
39	4. 69	-86. 54
78	3. 94	-84. 50

3. Conclusion

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

4. Product structure diagram

