

Shenzhen World Elite Electronic Co. LTD.

Sample Approval Sheet

Product Information:

Customer	Zhong Shan City Richsound Electronic Industrial Ltd
Material Description	SB595MKII BT Antenna
Customer's Part number	101000856
Specifications	FR4(41*14*0.2mm)+Black Coaxial Cable(Φ1.13*210mm) +Welding+UV adhesive+Sponge
Supplier's Part number	01-05-001-000063
Date	2026-5-14

Supplier:

Prepared By	Checked By	Approved By
Zhang Dengqiao	Li Yuepeng	Zhang Xiangting

Customer Approval:

Accepted By	Checked By	Approved By

Results:

- ☐ Full Approval
- ☐ Conditional Approval
- ☐ Unqualified
- ☐ Others:

Shenzhen World Elite Electronic Co. LTD.

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1、Specification

This report mainly provides the testing status of various electrical and structural performance parameters of SB595MKII BT Antenna.



Figure 1 Antenna

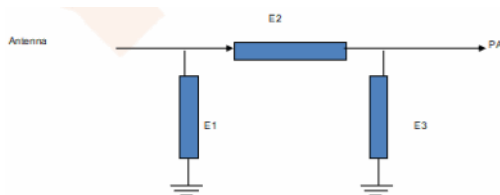
1.1 Electrical specification standard

1.1.1 Electrical Specifications

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

Antenna	SB595MKII BT Antenna
Frequency Range	2400-2500MHz
VSWR	< 2.0
Efficiency	>50%
Impedance	50 ohm
Polarization	Linear polarization

1.1.2 Antenna Matching Network



Element	Value
E1(0402)	NC
E2(0402)	0R
E3(0402)	NC

2、Test

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

2.1 Test of passive S11

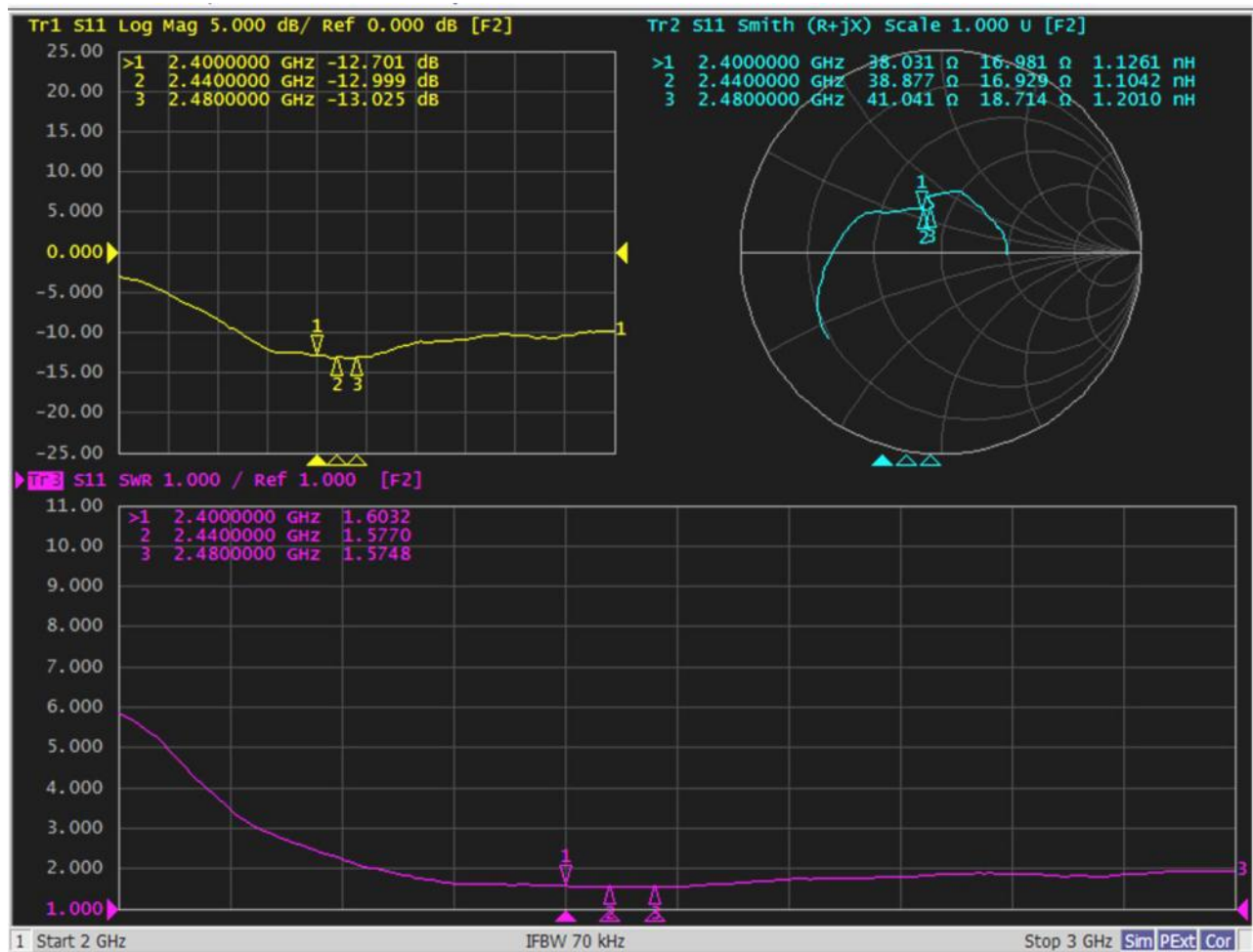
2.1.1 Test connection

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	2440	2480
VSWR	1.60	1.57	1.57
Return Loss	-12.70	-12.99	-13.02



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

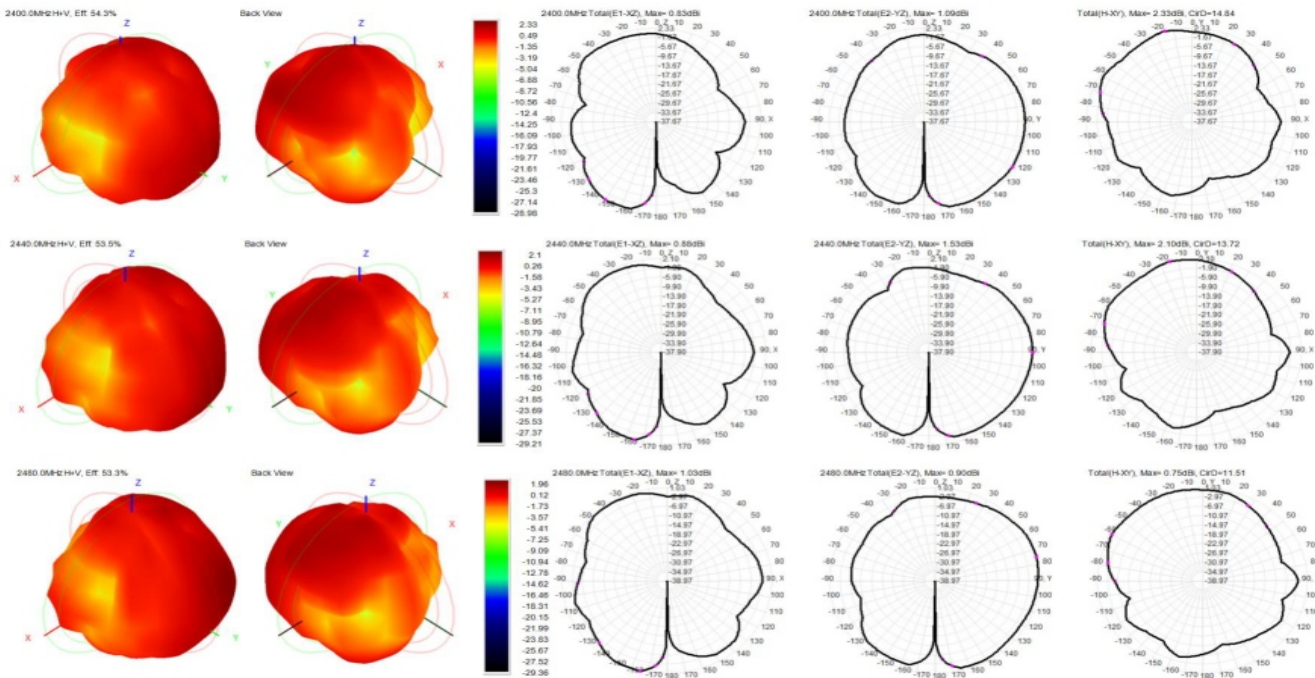
Network analyzer, standard horn antenna, multi-probe near field antenna test system, test computer, etc

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	2.33	54.40%
2410	2.41	52.40%
2420	2.42	51.50%
2430	2.41	53.80%
2440	2.1	53.60%
2450	1.85	53.50%
2460	1.78	54.20%
2470	1.85	53.60%
2480	1.96	53.40%
2490	2.23	55.00%
2500	2.25	54.00%

2.2.4 Radiation Pattern Results



2.3 OTA test

2.3.1 Results Summary

Channels	TRP	TIS
0	4.45	-88.89
39	3.77	-88.39
78	4.02	-88.84

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

	Rev	Description	Date	Remark
A	New drawing			

The figure shows a side view of a rectangular PCB or substrate labeled "YD SB595MKII BT FPC AI". A circular feature is dimensioned as $\phi 1.13(\text{黑色})$. The overall length is 41.00 ± 0.15 , and the width is 14.00 ± 0.15 . A component labeled "UV胶" (UV glue) is shown at the bottom center. Dimensions include 210 ± 3 for the distance from the top edge to the UV glue application point.

技术要求:

- 未标注尺寸依照图纸;
- 无虚焊、假焊、连锡、短路、断路等焊接不良现象;
- 所有部件需符合RoHS/REACH要求。

No.	Part No.	Name	Specification	Amount	Remark
3	05-03-004-000610	SBS95MKT II海綿	黑色海绵	1	
2	164-B918X-12A	B918 BT 2.5高细线	$\phi 1.13 \times 210\text{mm}$ /黑色同粗线/-一代端子	1	
1	05-01-001-002462	SBS95MKT II BT FPC	FPC表面贴片电解铜，黑色，背胶309471	1	

深圳市沃莱特电子有限公司 Shenzhen World Elite Electronic Co., LTD			
Third Angle	Project	SBS95MKT II	
0~10 ±0.05	Part Name	BT天线	
10~18 ±0.10	Part No.	01-05-001-000063	
18~30 ±0.12	Material		
30~40 ±0.15	Technology		
40~ ±0.20	Unit	mm	
Angle ±0.5°	Scale	1:1	
	Rev	V2	