

Yuande Electronics (Shenzhen) Co., Ltd.

Sample Approval Sheet

Product Information:

Customer	DOSS
Material Description	WB526 Antenna
Customer's Part number	
Specifications	FPC (W36.3*L21.5mm) +Black Coaxial Cable (Φ 1.13*65mm) +Welding
Supplier's Part number	136-WB526-10A
Date	2024-4-19

Supplier:

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



Customer Approval:

Accepted By	Checked By	Approved By

Results:

- Full Approval
- Conditional Approval
- Unqualified
- Others:

Yuande Electronics (Shenzhen) Co., Ltd.

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Tel: 86-755-28510731

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1、 Specification

This report mainly provides the testing status of various electrical and structural performance parameters of WB526 Antenna.



Figure 1 Antenna

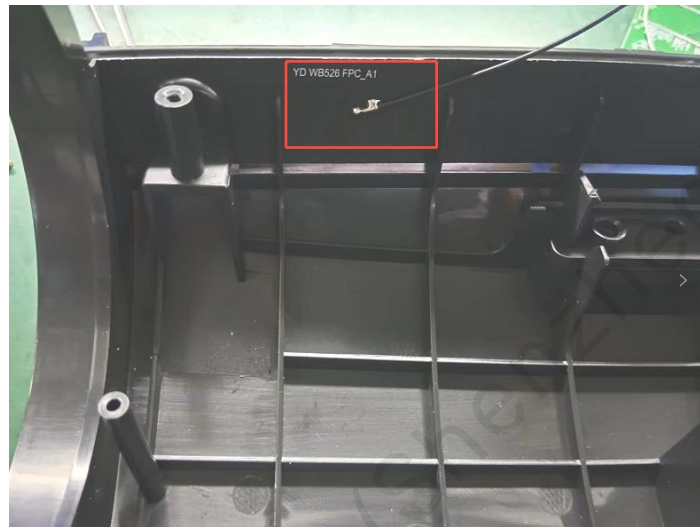


Figure 2 Antenna Position

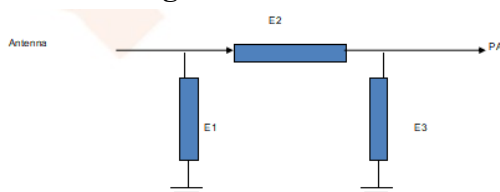
1.1 Electrical specification standard

1.1.1 Electrical Specifications

The antenna operates in the 2400-2480 MHz. The following table is the electrical performance index of the antenna designed by our company.

Antenna	WB526 Antenna
Frequency Range	2400-2480MHz
VSWR	< 2.0
Efficiency	>50%
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

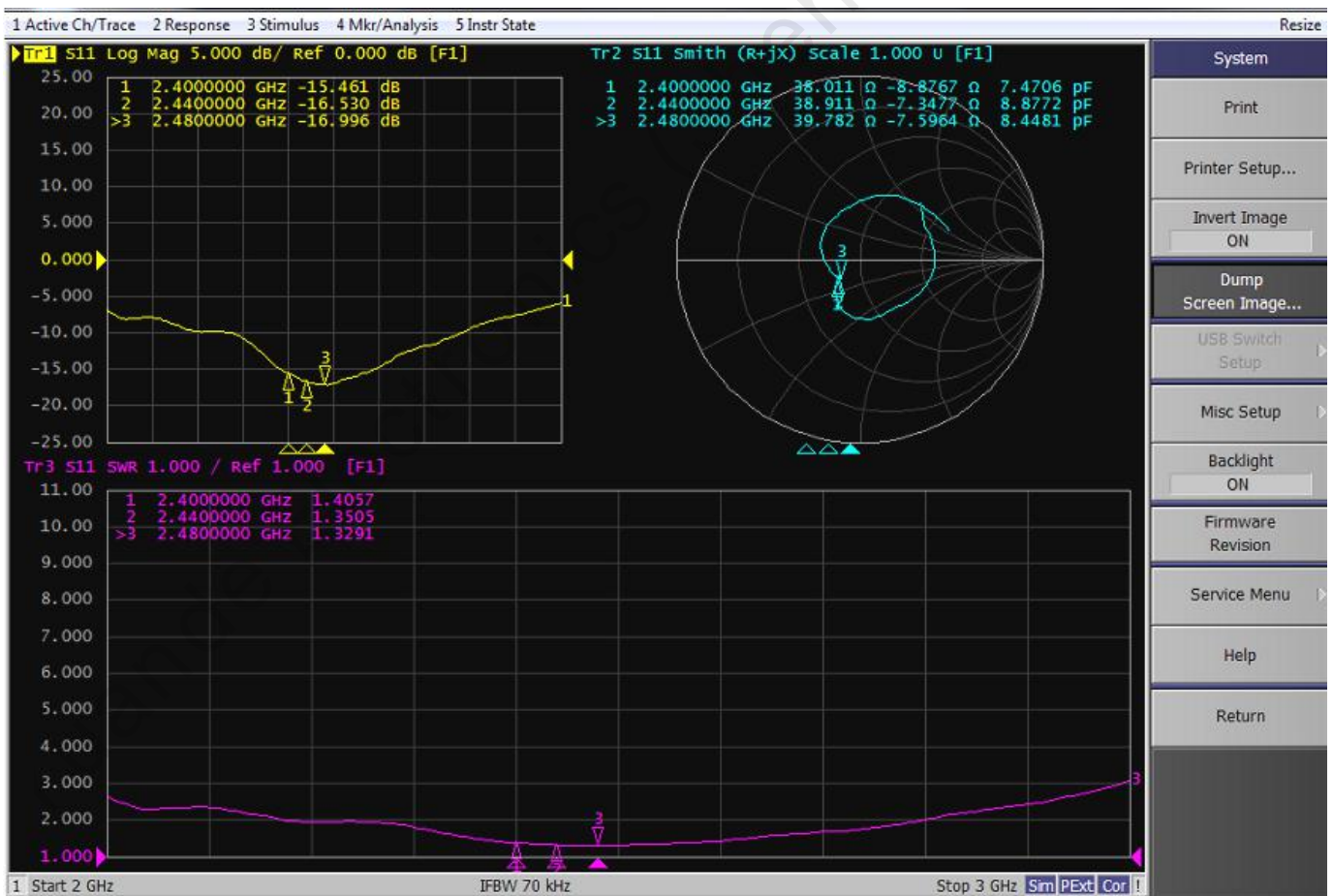
2.1.1 Test connection

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	2440	2480
VSWR	1.40	1.35	1.32
Return Loss	-15.46	-16.53	-16.99



2.2 Gain and efficiency test

2.2.1 Test Position

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

2.2.2 Test equipment

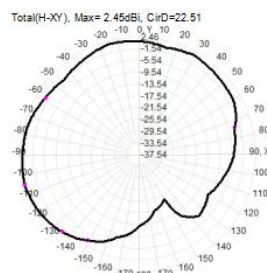
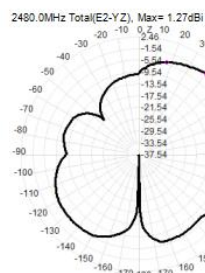
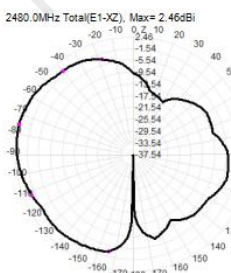
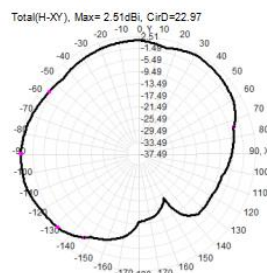
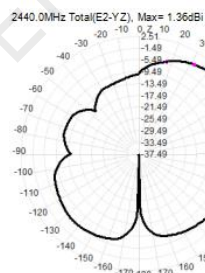
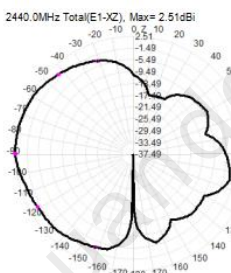
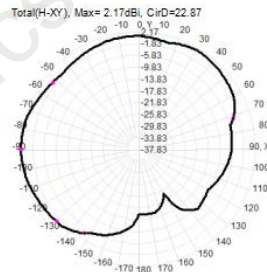
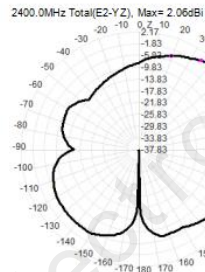
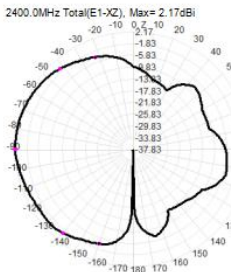
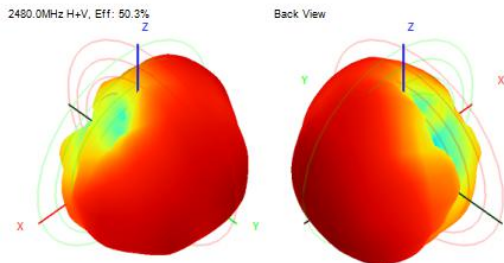
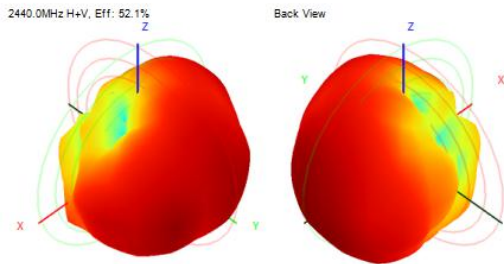
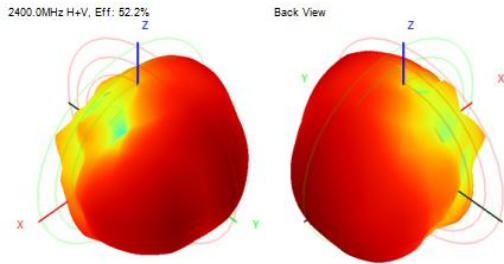
Network analyzer, standard horn antenna, multi-probe near field antenna test system, test computer, etc

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	2.17	52.16
2410	2.13	50.78
2420	2.56	53.72
2430	2.50	52.07
2440	2.51	52.09
2450	2.71	54.47
2460	2.48	50.81
2470	2.72	53.25
2480	2.46	50.28
2490	2.52	51.16
2500	2.62	52.39

2.2.4 Radiation Pattern Results



2.3 OTA test

2.3.1 Results Summary

	TRP/TIS
BlueTh-0000-TX	5.02
BlueTh-0039-TX	5.63
BlueTh-0078-TX	5.77
BlueTh-0000-RX	-94.02
BlueTh-0039-RX	-92.32
BlueTh-0078-RX	-92.24

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

1	2	3	4	5	6	7	8																																										
						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Rev</th> <th>Description</th> <th>Date</th> <th>Remark</th> </tr> <tr> <td>A</td> <td>New drawing</td> <td></td> <td></td> </tr> </table>	Rev	Description	Date	Remark	A	New drawing																																					
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<p>技术要求:</p> <p>1. 标“*” 尺寸为重点管控尺寸;</p> <p>2. 未标注尺寸依照图纸;</p> <p>3. 无虚焊、假焊、连锡、短路、断路等焊接不良现象;</p> <p>4. 所有部件需符合RoHS要求。</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>No.</th> <th>Part No.</th> <th>Name</th> <th>Specification</th> <th>Amount</th> <th>Remark</th> </tr> <tr> <td>1</td> <td>100-WB526-11A</td> <td>WB526 FPC</td> <td>单面板PI电浆铜, 黑色, 背胶3M9471</td> <td>1</td> <td></td> </tr> <tr> <td>2</td> <td>164-86XXX-12A</td> <td>86接钮同轴线</td> <td>Ø1.13*65mm/黑色同轴线/-代端子</td> <td>1</td> <td></td> </tr> </table>		No.	Part No.	Name	Specification	Amount	Remark	1	100-WB526-11A	WB526 FPC	单面板PI电浆铜, 黑色, 背胶3M9471	1		2	164-86XXX-12A	86接钮同轴线	Ø1.13*65mm/黑色同轴线/-代端子	1		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Third Angle</th> <th>0~10</th> <th>±0.05</th> <th>10~18</th> <th>±0.10</th> <th>18~30</th> <th>±0.12</th> <th>30~40</th> <th>±0.15</th> <th>40~</th> <th>±0.20</th> <th>Angle</th> <th>±0.5°</th> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>		Third Angle	0~10	±0.05	10~18	±0.10	18~30	±0.12	30~40	±0.15	40~	±0.20	Angle	±0.5°	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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