



# 东莞扬跃电子通信科技有限公司

DongGuan Yangyue Electronic Communication Technology Co., Ltd.

## SPECIFICATION FOR APPROVAL

# 承認書

<b>Customer Name</b>	SHENZHEN FEIBIT ELECTRONIC TECHNOLOGY Co., LTD.
<b>Product name</b>	80B1/80B0 by dedicated Zigbee antenna
<b>Product number</b>	44-ANT80B0Z1
<b>Prepared By</b>	Tony-Men
<b>Checked By</b>	
<b>Approved By</b>	
<b>Apply Date</b>	December 12, 2022

CUSTOMER SIGNATURE		
Prepared By	Checked By	Approved By

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频率范围 <b>Frequency range</b>	2400~2500 (MHz)
增益 <b>Gain</b>	4.1dBi
驻波比系数 <b>VSWR</b>	<1.5
输入阻抗 <b>Input Impedance</b>	$50 \pm 5$ ( $\Omega$ )
极化方式 <b>Polarization</b>	Vertical polarization + horizontal polarization



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## Revision History

Date	Revision	Description of Changes
2022-12-9	RA	Measured 2.4GHz Antenna with sample.

## 1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the 2.4GHz Antenna program. We test the antenna with the latest version handset. And it seems to be acceptable.

## 2 General Description

### 2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

## 3 Mechanical Description

## 4 Electrical Performance

### 4.1 Set-up

#### 4.1.1 VSWR

VSWR measurements (S11) were performed using an Agilent 8753D Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

#### 4.1.2 Gain & Radiation Patterns

The gain of the antenna was measured in the Lxc's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 300 MHz through 3 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

#### 4.1.3 Matching Circuit Description

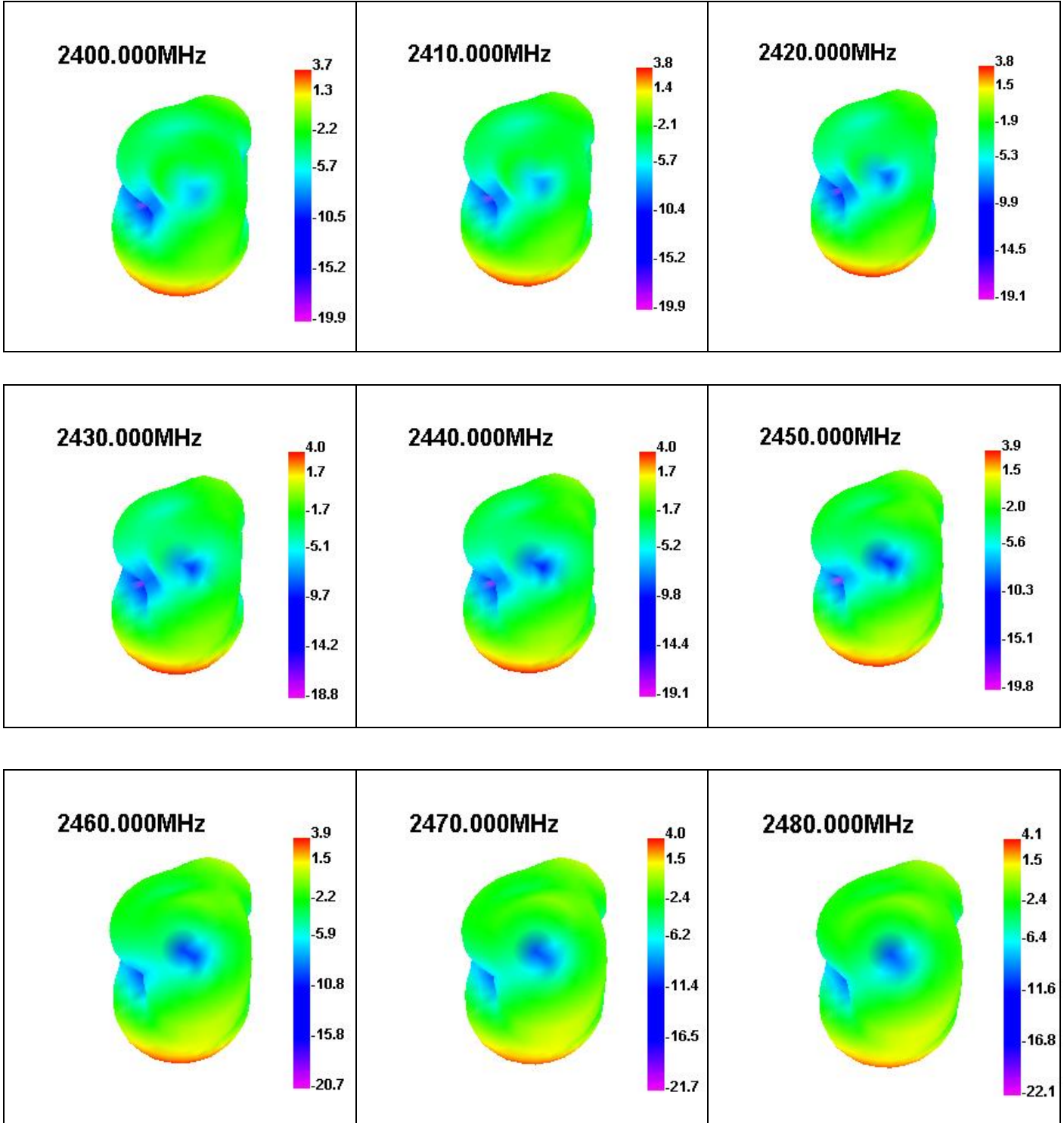
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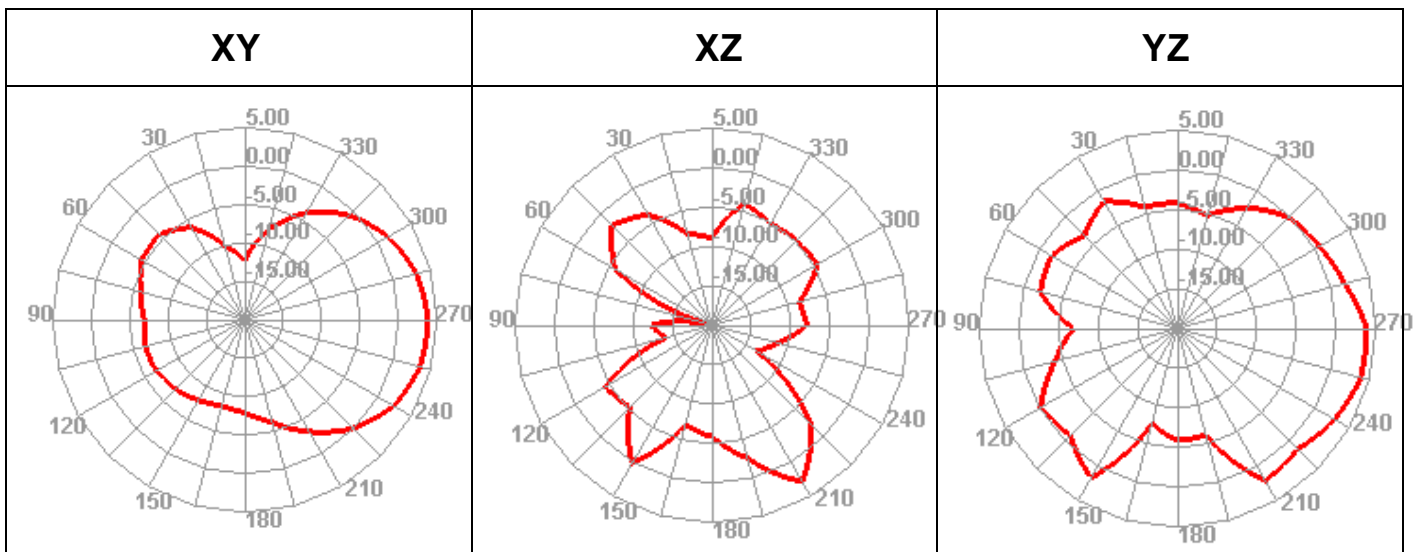
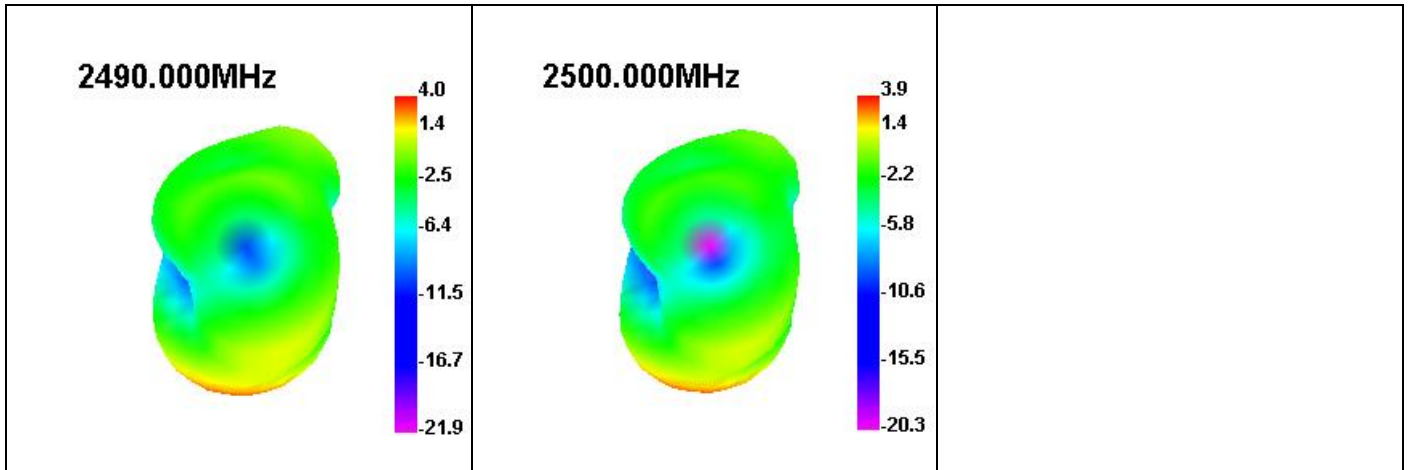
## 4.2 Antenna - Radiation Pattern Test Data





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Freq (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Effi (%)	59.77	61.15	62.52	65.93	68.17	67.62	68.85	69.74	69.3	66.22	63.18
Gain (dBi)	3.71	3.8	3.83	4	4.05	3.9	3.93	4.05	4.13	4.02	3.86

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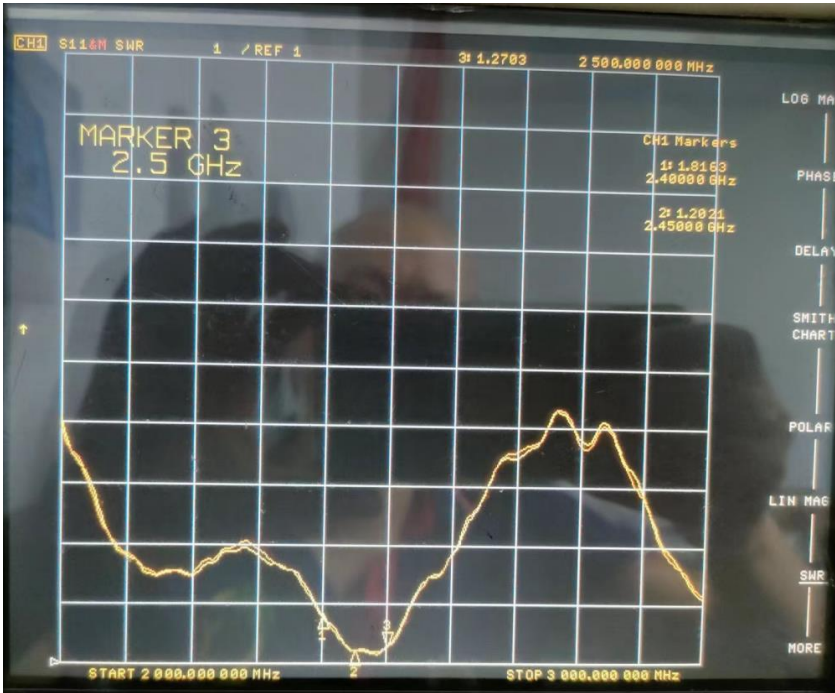
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## 6.Plots

### VSWR

注：驻波系数的标准值



### Return Loss

注：回损的标准值



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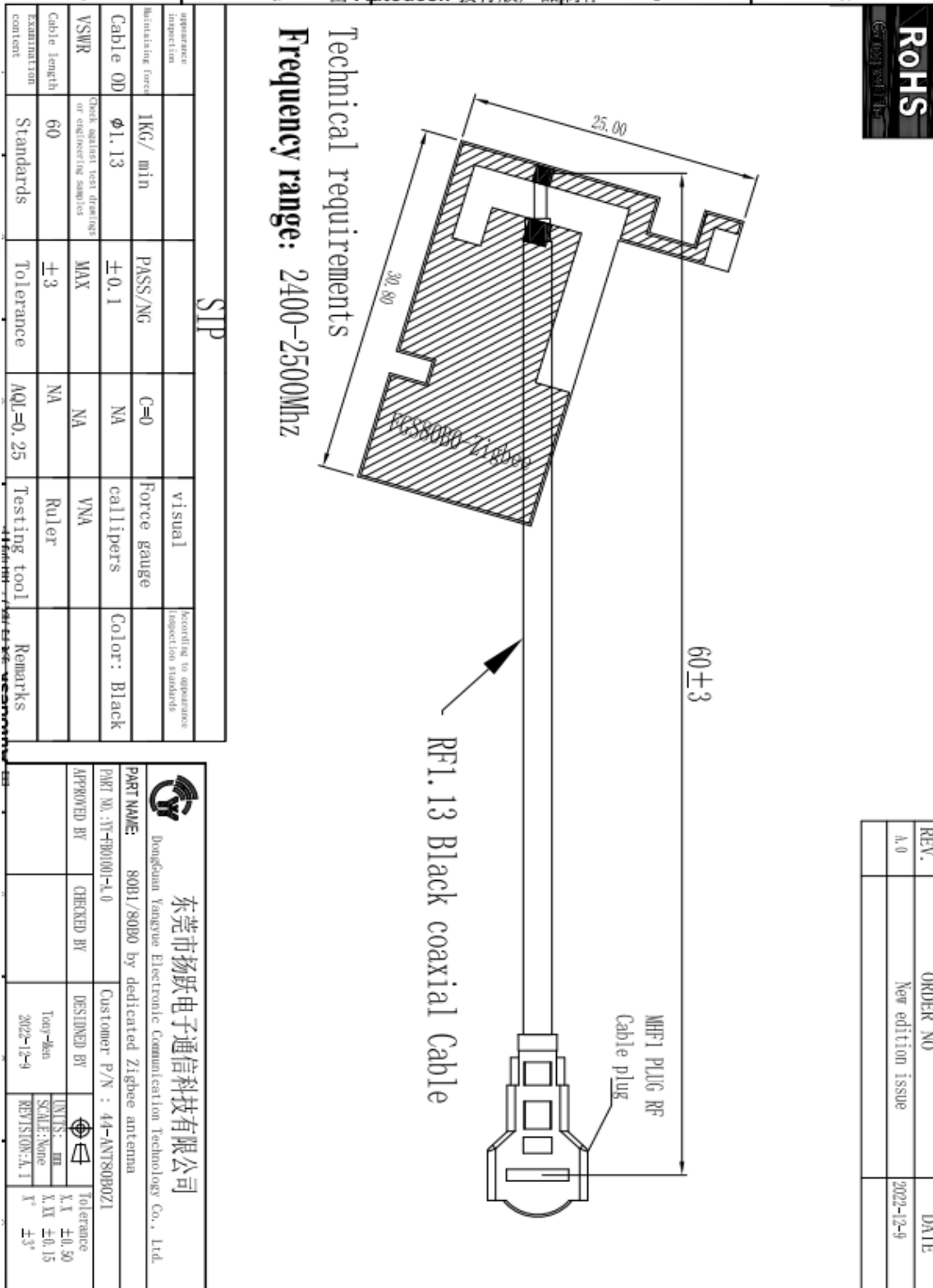




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## 7. Mechanical drawing



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## 7 Reliability tests

### 7.1 Test content

No	Test item	Test method	standard of criterion
1	Salt spray test	Spray a 5% salt solution for 24HR	There can be no discoloration, distortion (deformation) fall off and other shortcomings of the corrosion area can not be too large

### 7.2 Test results

NO	Sample number	Test duration	Found	Remarks
1	10	24H	<b>PASS</b>	Technical grade 9 corrosion <0.4mm

## 8 Conclusion

以上数据表明此 2.4GHz 天线参数均已达标。性能以装机后的实际使用效果为准。

The above data indicates that the 2.4GHz antenna parameters are up to standard. The performance depends on the actual use effect after installation.

From the above test results, we can know the electrical performance of the antenna is seems good.

DongGuan Yangyue Electronic Communication Technology Co., Ltd, look forward to your confirmation, thank you for your cooperation !