

Shenzhen Lxc Electronics Technology Co ., Ltd

APPROVAL SHEET

(Customer) : Huayu Intelligent
(Product) : 2.4G External Antenna(L=125MM)
(Model) : Router (LXC-202311060004)
(Part Number) : 90.700.000004
(Written By) : TangHongjiao
(Issued Date) : 2023-12-06

CUSTOMER

(Frequency range)	WIFI:2400-2500 (MHz)
(VSWR)	<2.0
(Input Impedance)	50 (Ω)
(Polarization)	Vertical Polarization
(3dB) HPW	180° H-plane 120° E-plane
(Antenna type)	Built-in antenna
(Antenna gain MAX (dBi)	5.79dBi
(Antenna supplier)	Shenzhen Lxc Electronics Technology Co ., Ltd
(Antenna Model)	Router (LXC-202311060004)

RF by		Checked by	
ME by		Date	
Customer Confirm			

8Project:		Author:Wang	File Name: 90.700.000004
Date: 2023-12-06			
TEST:	Language:	Check: Zhong	
A	English		
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Revision History

Date	Revision	Description of Changes
20203-12-06	RA	Measured with SUS301 sample.

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1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the

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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.

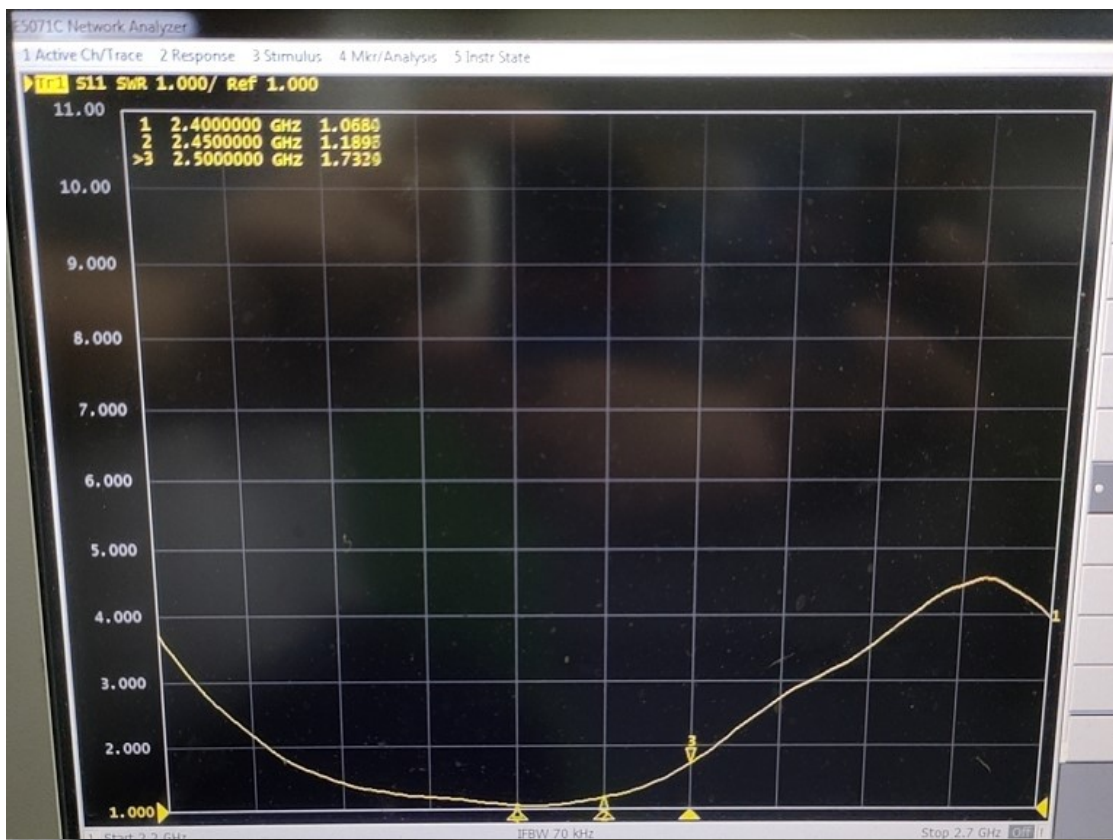
4.1.2 **Gain & Radiation Patterns**

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 800 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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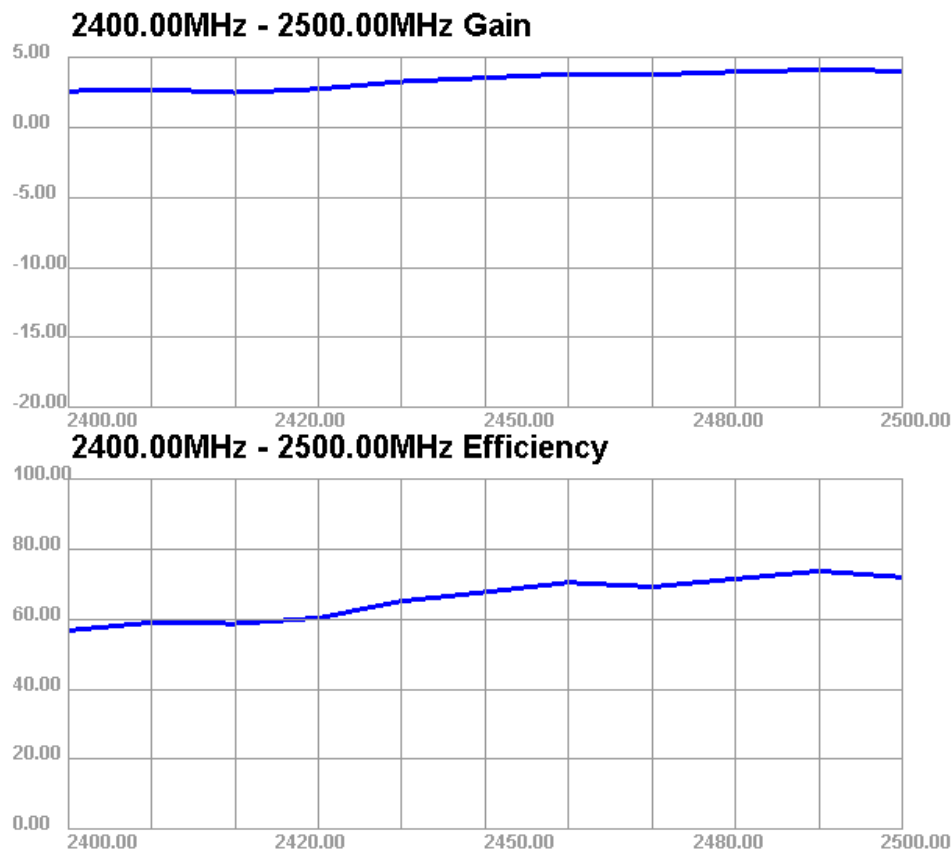


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4.2 Measurement Data

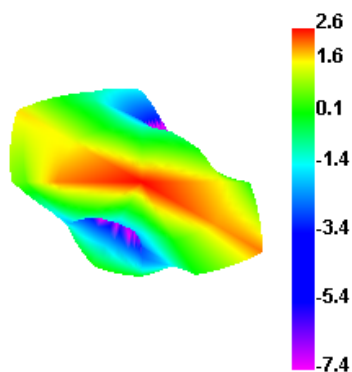
4.2.1 Active result (WIFI)

Freq(MHz)	Effi(%)	Effi(dB)	Gain(dBi)
2400	59.86	-2.23	2.6
2410	61.69	-2.4	2.7
2420	61.91	-2.08	5.77
2430	63.33	-1.98	5.03
2440	67.62	-1.7	5.37
2450	70.94	-1.49	5.61
2460	71.54	-1.45	5.79
2470	67.71	-1.69	5.66
2480	70.27	-1.53	5.03
2490	70.09	-1.54	5.08
2500	67.15	-1.73	5.12

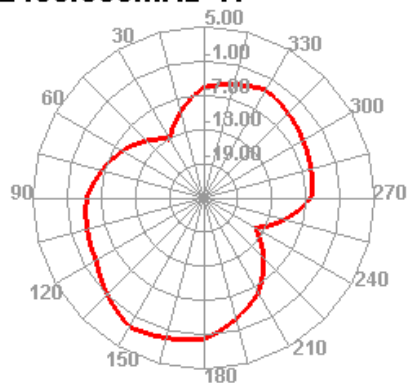


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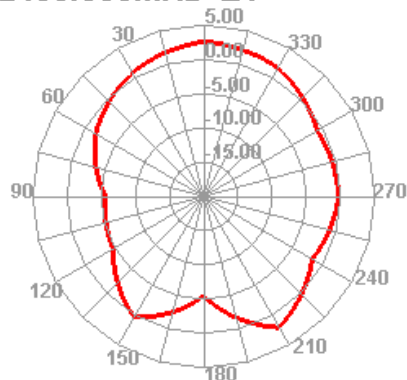
2400.000MHz



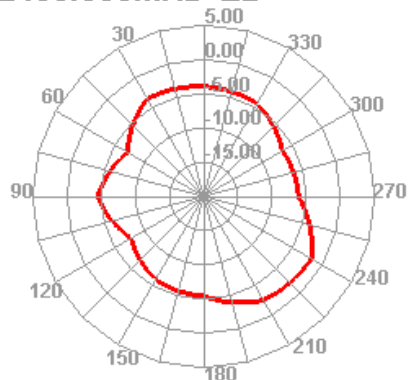
2400.000MHz H



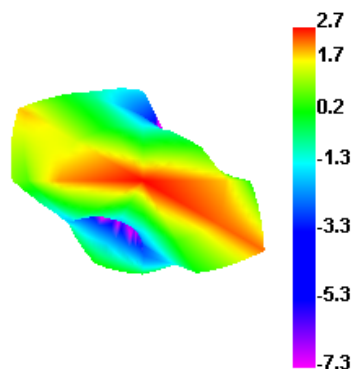
2400.000MHz E1



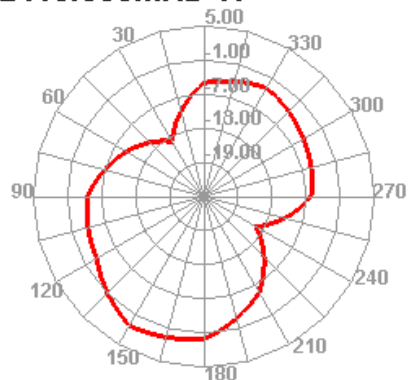
2400.000MHz E2



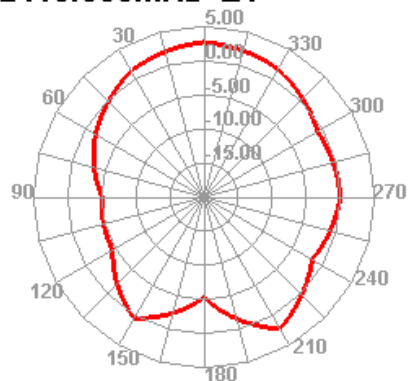
2410.000MHz



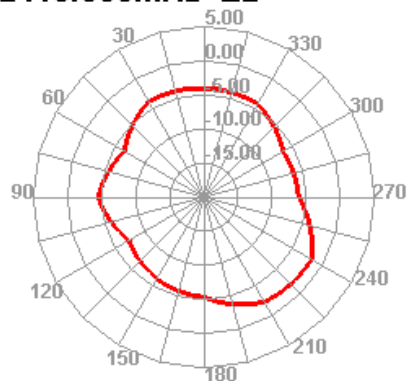
2410.000MHz H



2410.000MHz E1

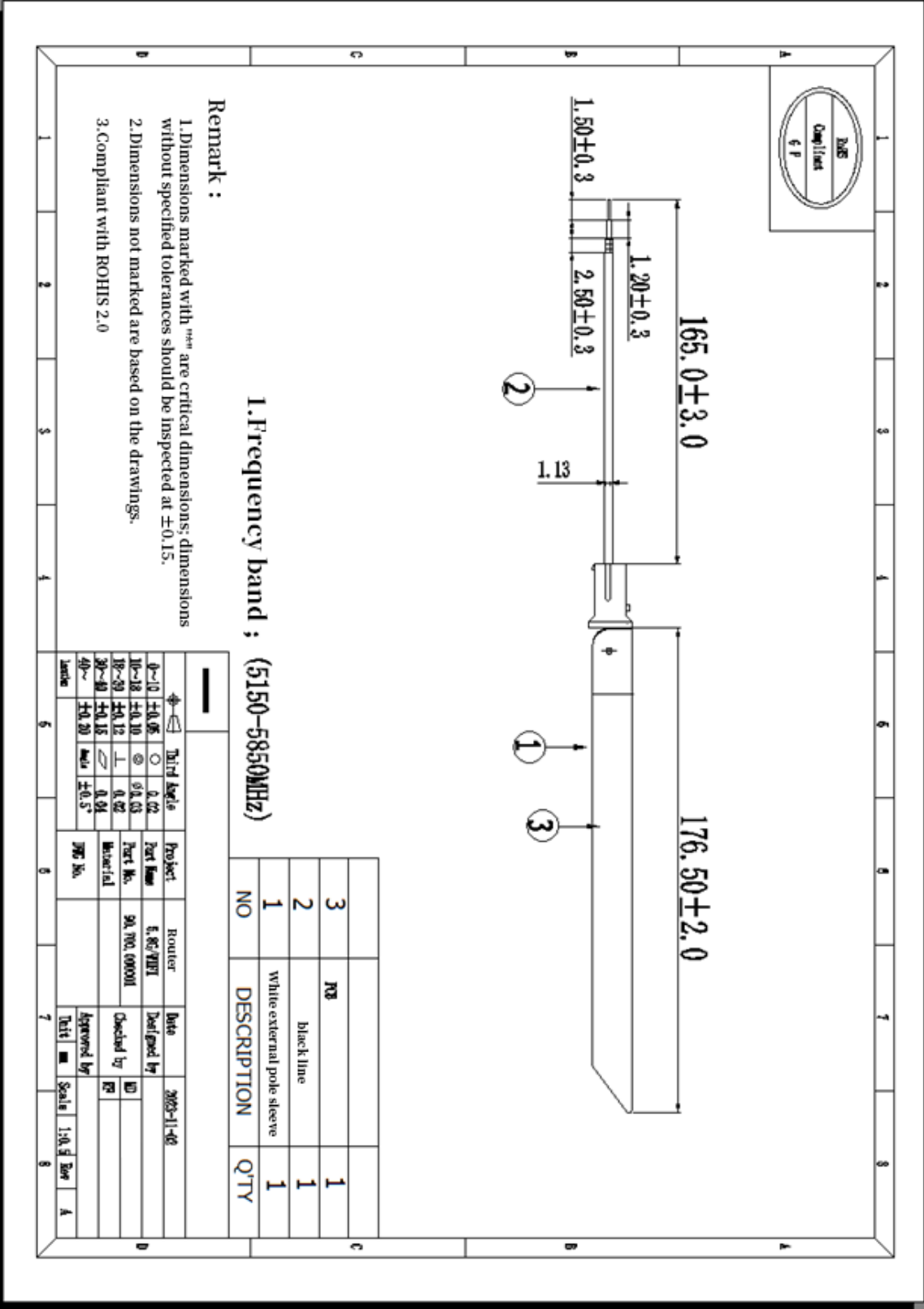


2410.000MHz E2



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6 Mechanical drawing



7 Reliability tests

7.1 Test content

No	Test Item	Test Method	Acceptance Criteria
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1	Salt Spray Test	Spray with 5% salt solution for 48HR	No defects such as discoloration, warping, peeling, etc. Corrosion area should not be excessive.

7.2 Test results

NO	Sample QTY	Test Duration	Result	Remarks
1	50	24 小时	OK	Technical grade 9. Corrosion <0.4mm
2	50	48 小时	OK	Technical grade 9. Corrosion <0.4mm

8Conclusion

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

Shenzhen Lxc Electronics Technology Co ., Ltd ,look forward to your confirmation, thank you for your cooperation !

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