

Shenzhen Lxc Electronics Technology Co ., Ltd

APPROVAL SHEET

(Customer) : Huayu Intelligent
(Product) : 5.8G External Antenna(L=100MM)
(Model) : Router(LXC-202311060003)
(Part Number) : 90.700.000003
(Written By) : TangHongjiao
(Issued Date) : 2023-12-06

CUSTOMER

(Frequency range)	WIFI:5150-5850 (MHz)
(VSWR)	<2.0
(Input Impedance)	50 (Ω)
(Polarization)	Vertical Polarization
半功率波束 (3dB) HPW	180° H-plane 120° E-plane
(Antenna type)	(Built-in antenna)
(Antenna gain MAX (dBi)	6.92dBi
(Antenna supplier)	Shenzhen Lxc Electronics Technology Co ., Ltd
(Antenna Model)	Router (LXC-202311060003)

RF by		Checked by	
ME by		Date	
Customer Confirm			

8Project:		Author:Wang	File Name: 90.700.000003
Date: 2023-12-06			
TEST:	Language:	Check: Zhong	
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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.

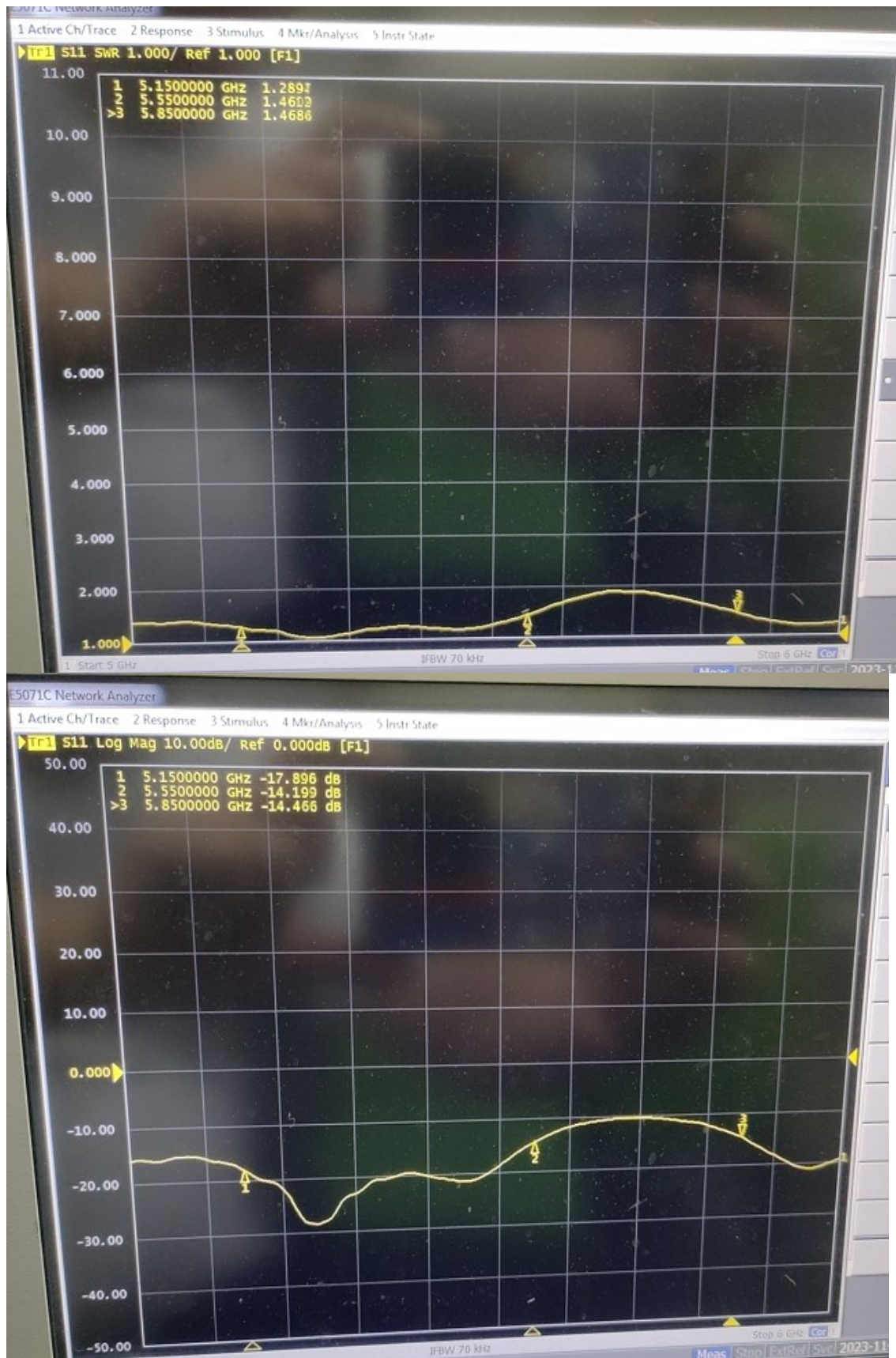
4.1.3 Matching Circuit Description



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4.2 Measurement Data

4.2.1 Active result (WIFI)



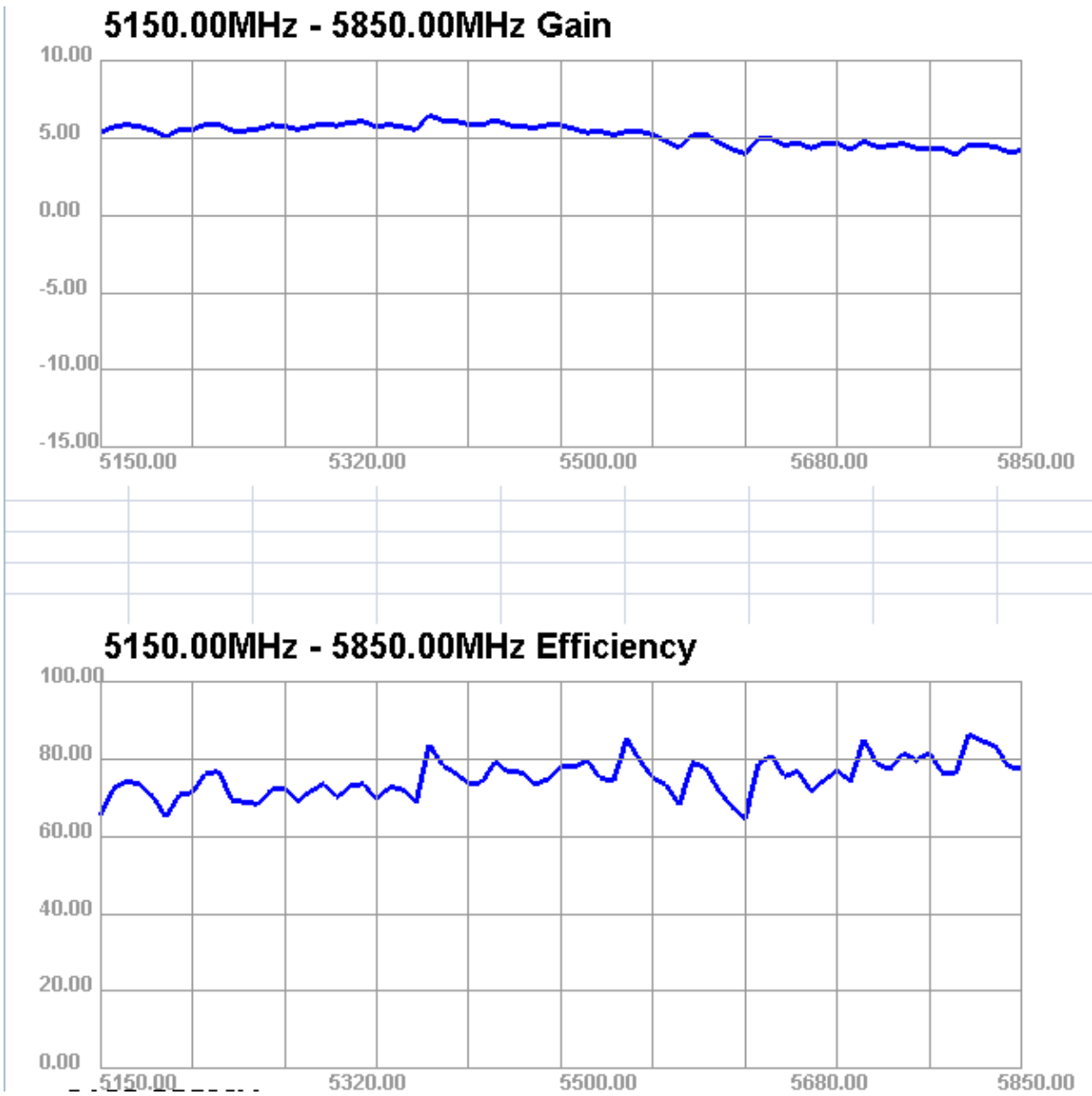
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Freq(MHz)	Effi(%)	Effi(dB)	Gain(dBi)
5150	66.96	-2.52	5.3
5160	68.18	-2.35	5.7
5170	67.2	-2.35	6.78
5180	68.55	-2.11	5.94
5190	61.12	-2.14	6.92
5200	66.16	-2.51	6.59
5210	68.21	-2.35	6.82
5220	66.72	-2.46	5.83
5230	65.18	-1.86	6.27
5240	68.29	-1.66	6.29
5250	65.27	-2.13	6.66
5260	69.68	-2.24	6.59
5270	67.09	-2.43	6.35
5280	66.4	-2.12	6.59
5290	64.97	-1.87	6.54
5300	71.3	-2.13	6.39
5310	63.45	-1.98	6.9
5320	63.2	-1.99	5.83
5330	69.97	-2.22	6.54
5340	70.77	-1.95	5.75
5350	66.45	-1.78	5.82
5360	66.24	-1.79	5.85
5370	66.53	-1.77	5.87
5380	67.29	-1.72	5.6
5390	61.07	-2.14	5.31
5400	72.72	-1.38	6.27
5410	71.92	-1.43	6.08
5420	72.27	-1.41	6.03
5430	71.78	-1.44	5.87
5440	68.93	-1.62	5.43
5450	68.9	-1.62	5.46
5460	69.51	-1.58	5.41
5470	70.13	-1.54	6.15
5480	67.7	-1.69	6.09
5490	69.15	-1.6	5.51
5500	70.04	-1.55	5.61
5510	69.82	-1.56	5.54
5520	59.8	-1.56	5.64
5530	63.67	-1.96	6.22
5540	65.48	-1.84	5.35
5550	75.54	-1.22	6.11
5560	71.27	-1.47	5.93
5570	69.03	-1.61	5.78
5580	73.48	-1.97	5.26
5590	71.69	-2.17	5.97

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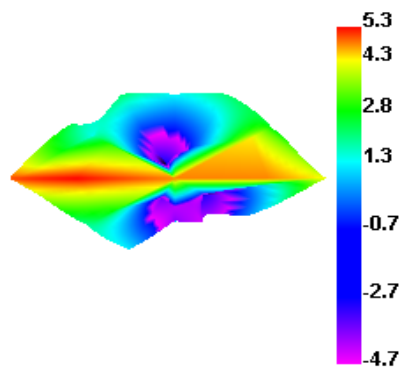
5600	68.03	-1.67	5.61
5610	66.66	-1.96	5.36
5620	68.79	-1.95	5.25
5630	69.56	-2.34	5.01
5640	66.24	-2.5	5.71
5650	68.44	-1.65	5.46
5660	65.93	-1.81	5.41
5670	71.24	-2.13	5.73
5680	65.44	1.84	5.47
5690	64.54	-2.18	5.12
5700	62.26	-2.06	5.22
5710	66.09	-2.14	5.19
5720	69.73	-2.24	5.19
5730	68.32	-1.65	5.67
5740	63.02	-2.01	5.29
5750	64.41	-1.91	5.33
5760	67.34	-1.72	5.63
5770	68.59	-1.64	5.52
5780	69.58	-1.58	5.6
5790	60.6	-2.17	5.32
5800	63.71	-1.96	5.19
5810	74.57	-1.96	5.19
5820	71.32	-1.47	5.81
5830	71	-1.49	5.53
5840	66.13	-1.8	5.44
5850	66.83	-1.75	5.55

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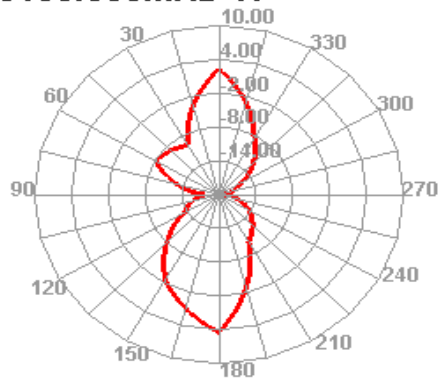


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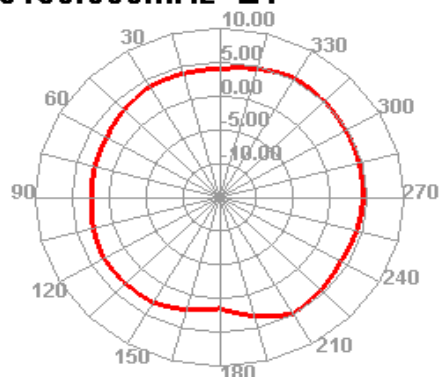
5150.000MHz



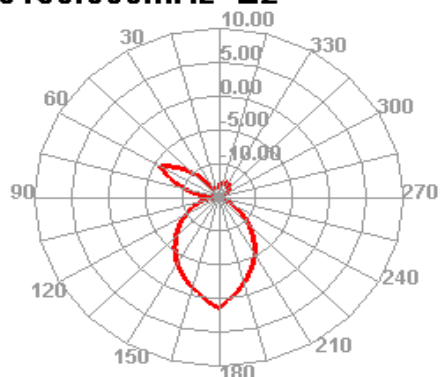
5150.000MHz H



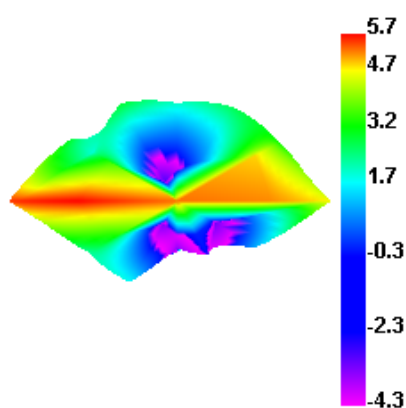
5150.000MHz E1



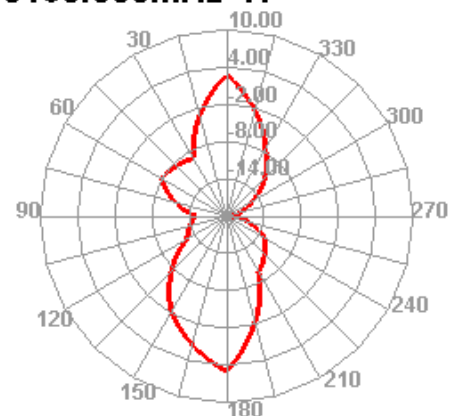
5150.000MHz E2



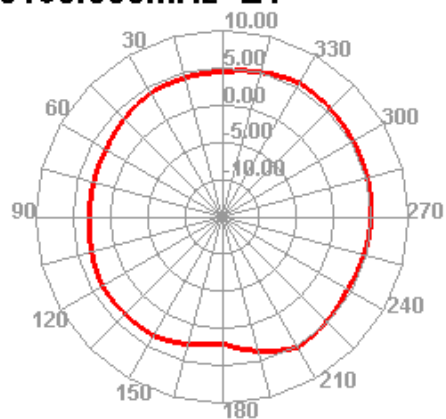
5160.000MHz



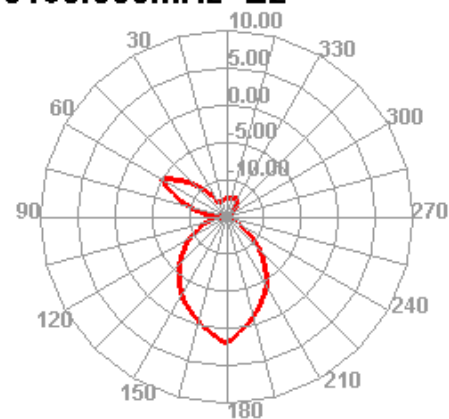
5160.000MHz H



5160.000MHz E1

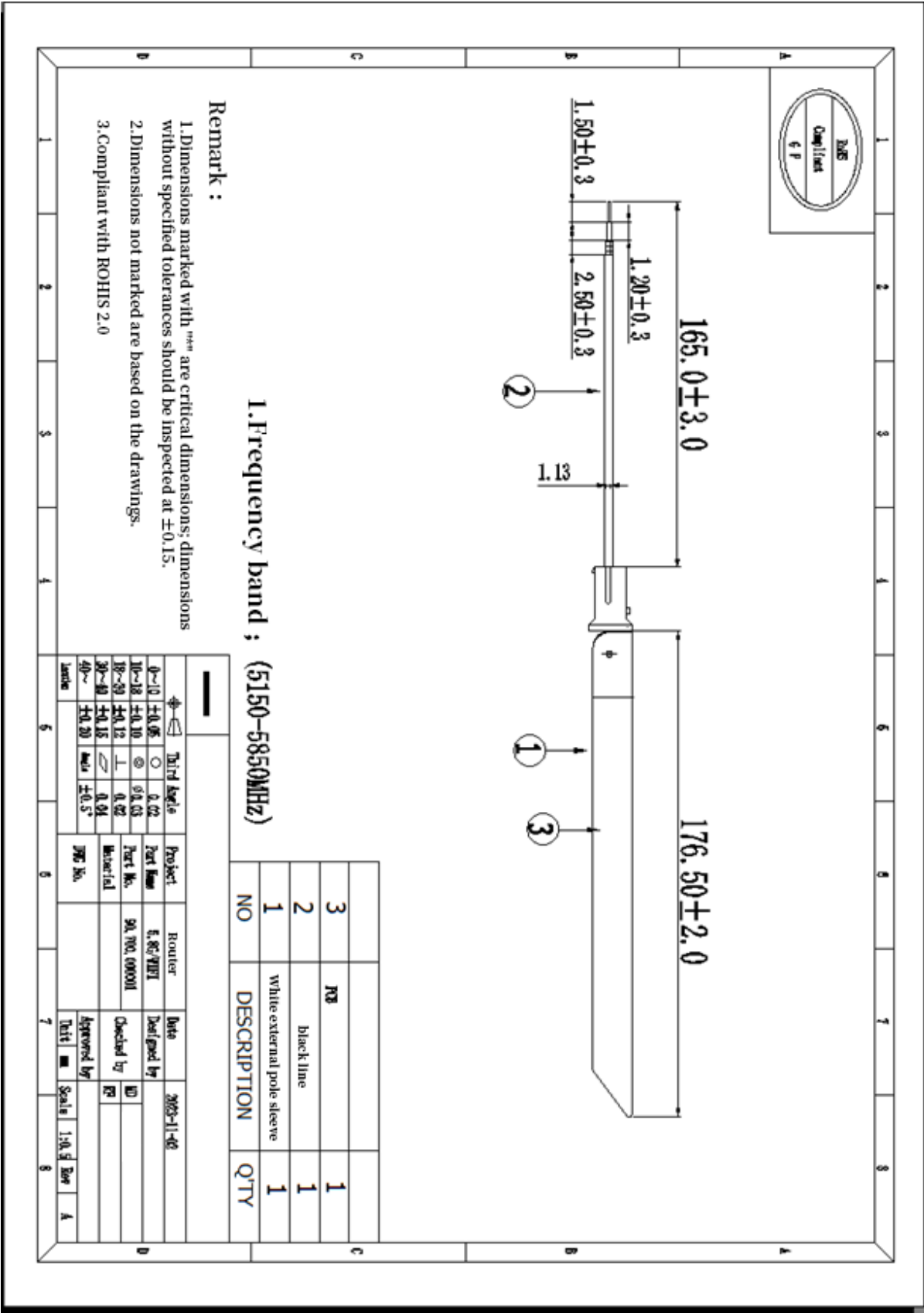


5160.000MHz E2



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6 Mechanical drawing



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7 Reliability tests

7.1 Test content

No	Test Item	Test Method	Acceptance Criteria
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	24h	OK	Technical grade 9. Corrosion <0.4mm
2	50	48h	OK	Technical grade 9. Corrosion <0.4mm

8 Conclusion

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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