

Shenzhen Lxc Electronics Technology Co ., Ltd

APPROVAL SHEET

(Customer) : Huayu Intelligent
(Product) : 5.8G External Antenna(L=135MM)
(Model) : Router (LXC-202311060002)
(Part Number) : 90.700.000002
(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
(3dB) HPW	180° H-plane 120° E-plane
(Antenna type)	(Built-in antenna)
(Antenna gain MAX (dBi)	6.81dBi
(Antenna supplier)	Shenzhen Lxc Electronics Technology Co ., Ltd
(Antenna Model)	Router (LXC-202311060002)

RF by		Checked by	
ME by		Date	

8Project:		Author:Wang	File Name: 90.700.000002
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 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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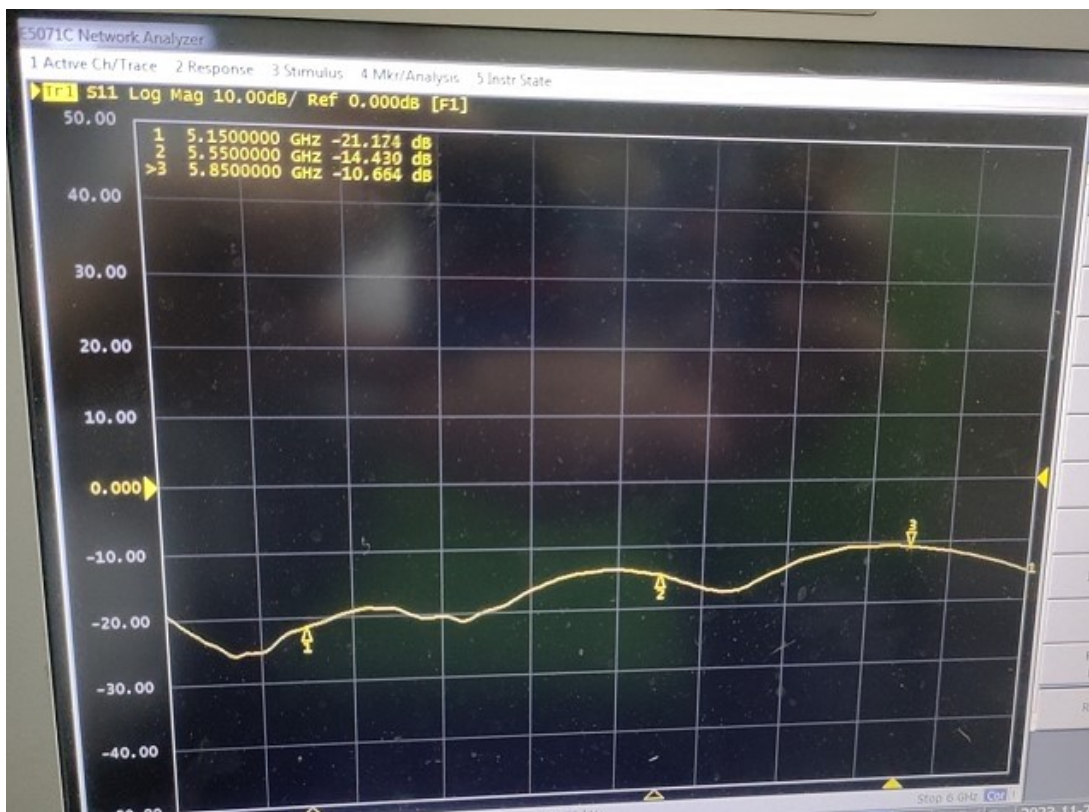


4.2 Measurement Data

4.2.1 Active result (WIFI)



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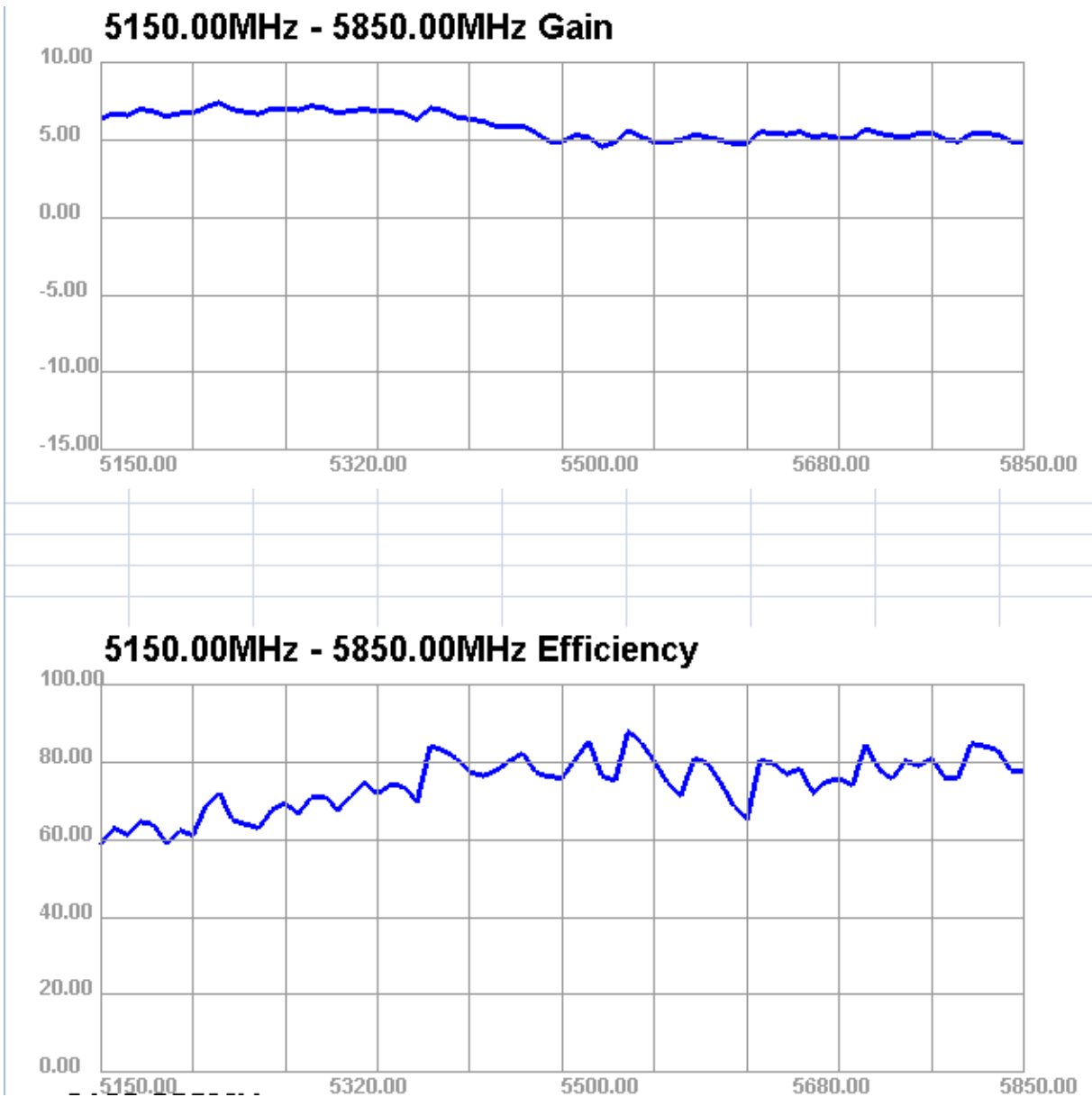
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Freq(MHz)	Effi(%)	Effi(dB)	Gain(dBi)
5150	65.45	-2.56	6.4
5160	66.96	-2.44	6.7
5170	66.06	-2.51	6.81
5180	66.86	-2.45	6.18
5190	65.14	-2.59	5.91
5200	63.13	-2.75	6.6
5210	65.1	-2.59	5.58
5220	63.18	-2.74	5.47
5230	61.47	-2.33	6.27
5240	65.79	-2.23	6.4
5250	67.1	-2.43	5.24
5260	67.2	-2.43	6.2
5270	64.93	-2.6	5.17
5280	68.22	-2.35	5.45
5290	70.37	-2.19	5.71
5300	70.06	-2.51	5.54
5310	64.38	-1.91	5.64
5320	63.05	-2	5.71
5330	69.52	-2.25	5.51
5340	62.65	-2.03	6.02
5350	65.23	-1.86	5.97
5360	73.68	-1.96	6.2
5370	64.67	-1.89	6.31
5380	64.79	-1.88	6.15
5390	69.33	-2.27	5.99
5400	71.08	-1.48	6.88
5410	67.51	-1.71	6.7
5420	68.97	-1.61	6.76
5430	70.55	-1.52	6.67
5440	67.14	-1.73	6.44
5450	69	-1.61	6.47
5460	64.78	-1.89	6.19
5470	65.45	-1.84	6.08
5480	69.99	-1.55	6.28
5490	71.24	-1.47	6.26
5500	72.38	-1.4	6.17
5510	69.09	-1.61	6.1
5520	66.15	-1.79	5.53
5530	66.72	-1.76	5.51
5540	68.55	-1.64	5.79
5550	73.5	-1.34	5.82
5560	69.56	-1.58	5.59
5570	68.79	-1.88	5.9
5580	66.32	-1.78	5.15
5590	68.56	-1.64	5.44

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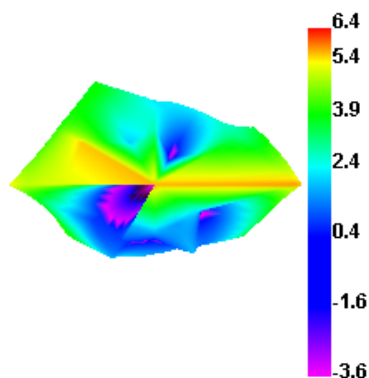
5600	69.1	-1.61	5.44
5610	66.82	-1.75	5.92
5620	66.18	-1.79	5.16
5630	68.77	-1.82	5.06
5640	66.98	-1.74	5.22
5650	69.3	1.59	5.65
5660	66.62	-1.76	5.82
5670	68.01	-1.67	5.16
5680	70.47	-1.52	5.55
5690	69.81	-1.56	5.27
5700	67.73	-1.69	5.13
5710	68.64	-1.89	5.72
5720	67.91	-1.68	5.94
5730	73.22	-1.35	5.27
5740	69.65	-1.57	5.13
5750	71.36	-1.47	5.08
5760	68.57	-1.65	5.99
5770	70.34	-1.53	5.07
5780	73	-1.37	5.29
5790	69.66	-1.76	5.78
5800	72.12	-1.42	5
5810	73.32	-1.35	5.34
5820	72.37	-1.4	5.34
5830	74.37	-1.29	5.56
5840	67.89	-1.68	5.17
5850	70.15	-1.54	5.32

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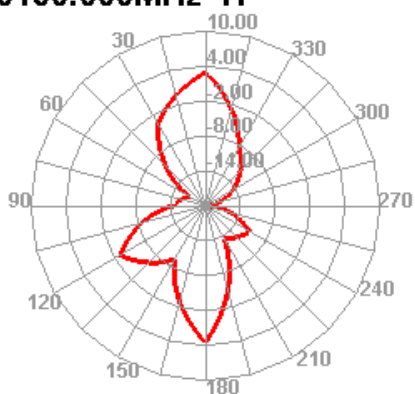


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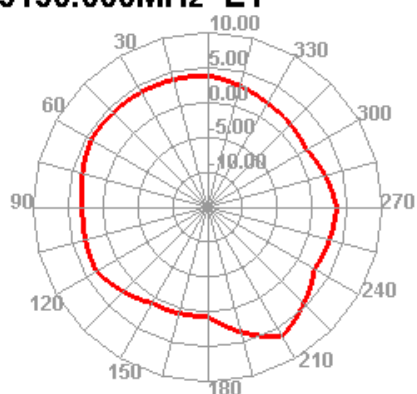
5150.000MHz



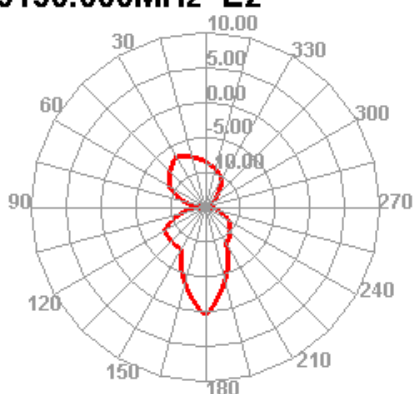
5150.000MHz H



5150.000MHz E1

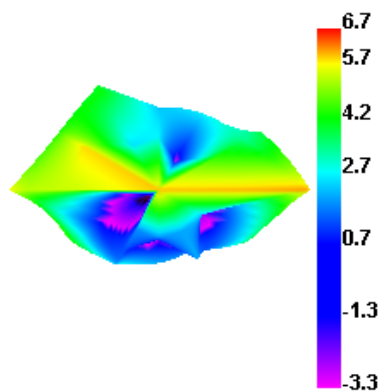


5150.000MHz E2

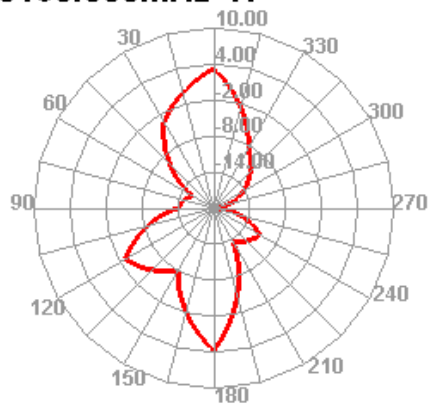


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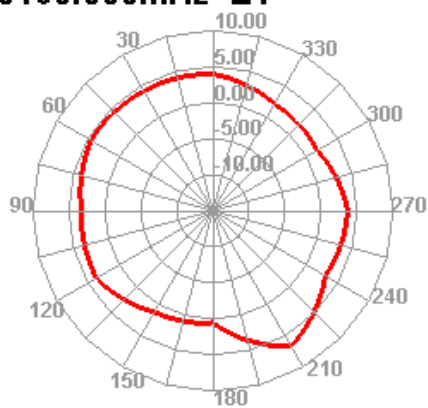
5160.000MHz



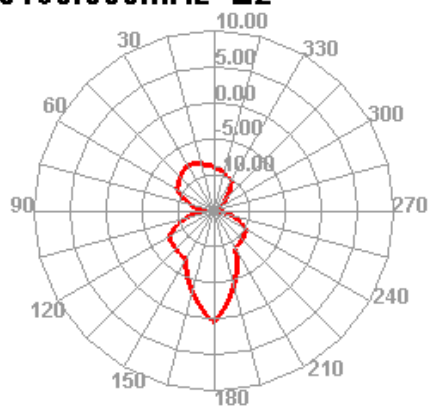
5160.000MHz H



5160.000MHz E1



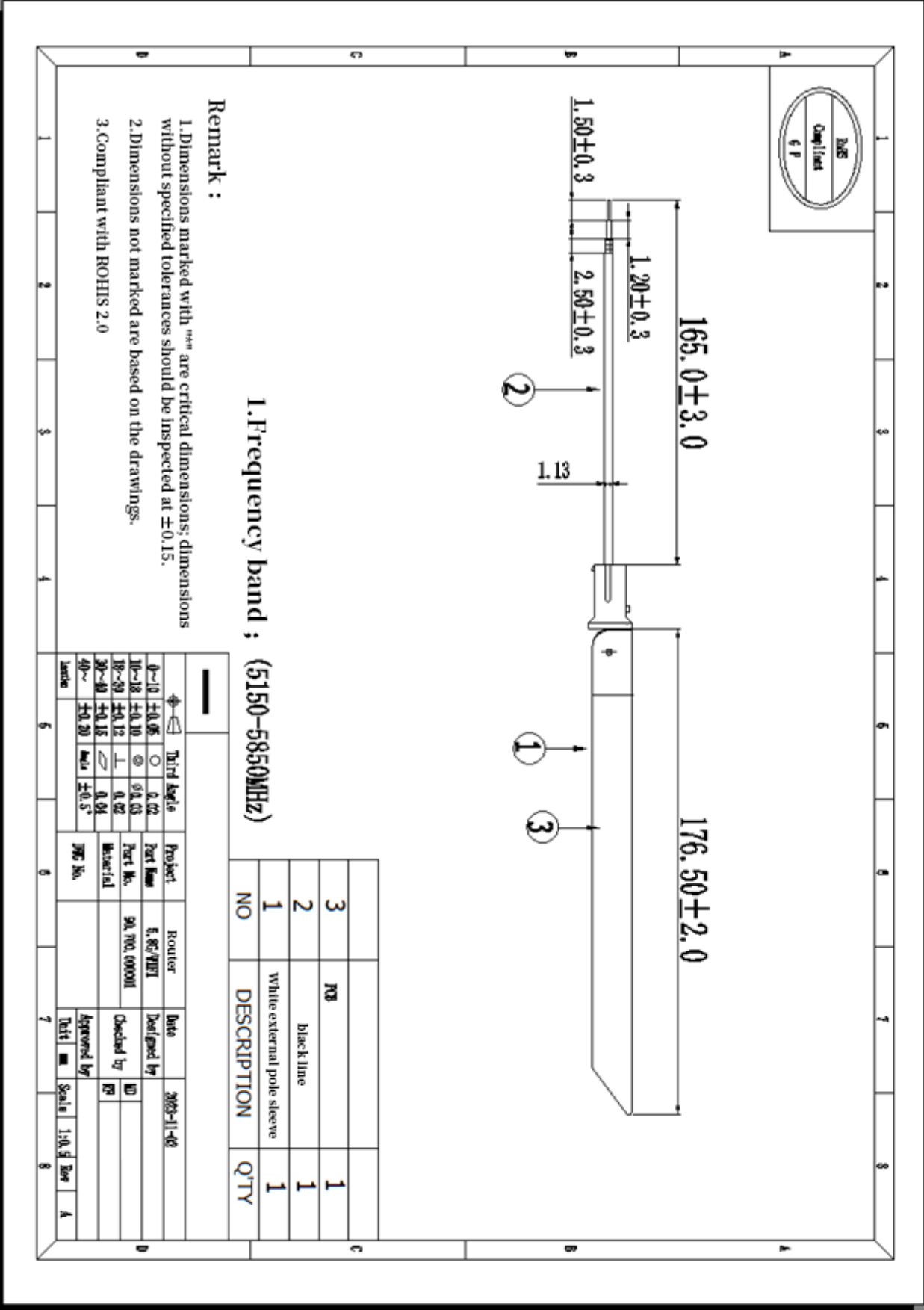
5160.000MHz E2



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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.

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

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