

Antenna Acknowledgement

Dongguan Hanyi Electronics Co., Ltd

Company address: No. 25, Puxin Lake Center 2nd Road,
Tangxia Town, Dongguan City

Hanyi Item No: 5G-240mm-4.4mm-tail 12mm antenna buckle

Specification Description: 5G copper tube antenna, line length
L: 240mm

Customer Name:

Customer Item Number:

Factory signature:

Write	Examine	Approval

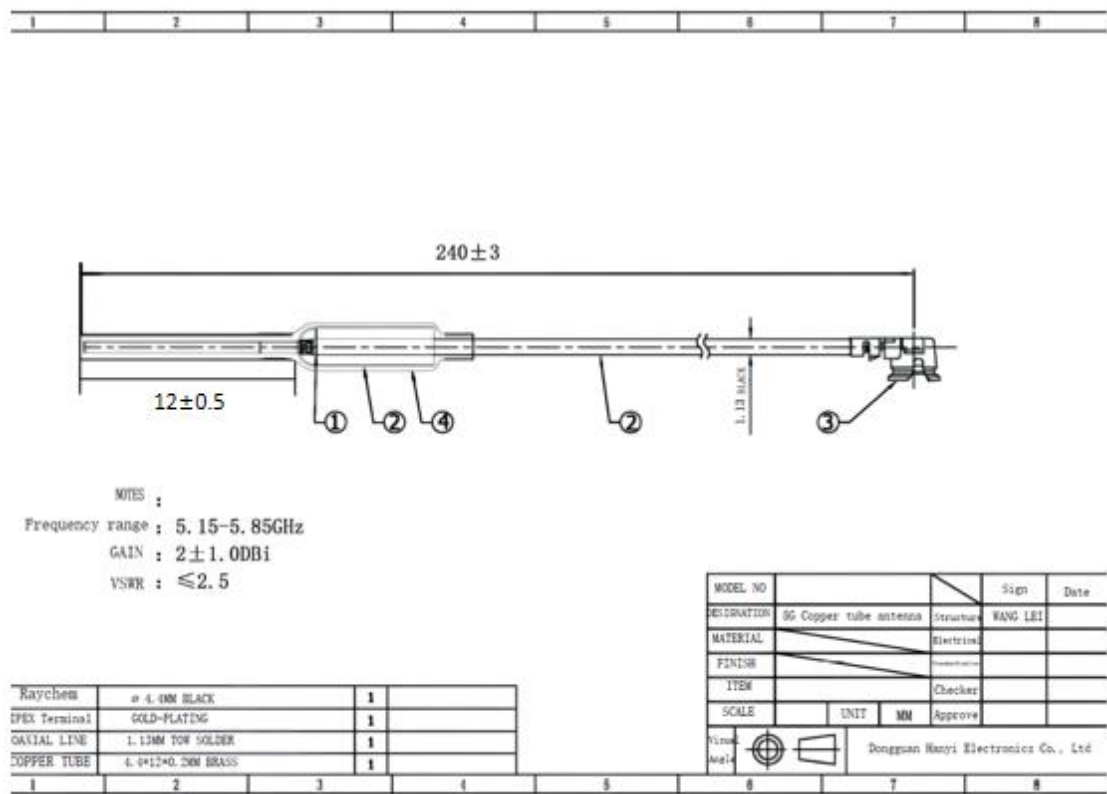
Customer Acknowledgement Signature:

Check	Examine	Approval

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3 Product Picture



4 Specification)

Parameter	
Frequency	5150-5850MHz
Impedance	50 Ω
VSWR	≤2.5
Connector	Generation 1 terminal
Gain	3.46dBi
Mechanical Parameter	
Length	240±3mm
Cable	/
Salt Spray Test	24H
Environment Parameter	
Operation Temperature	-20℃~65℃
Storage Temperature	-30℃~75℃

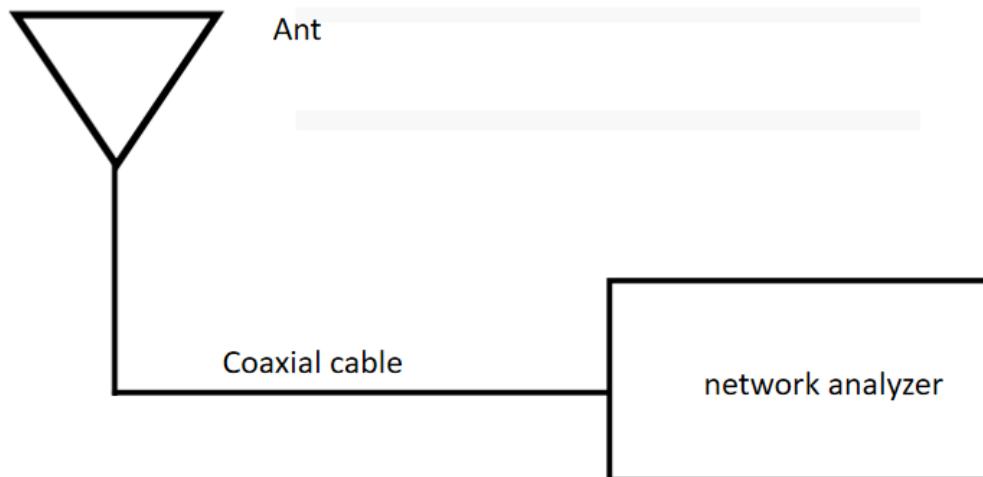
5 Test Equipment & Conditions

5.1 VSWR Test

5.1.1 Test equipment

Agilent5071C Network Analyzer.

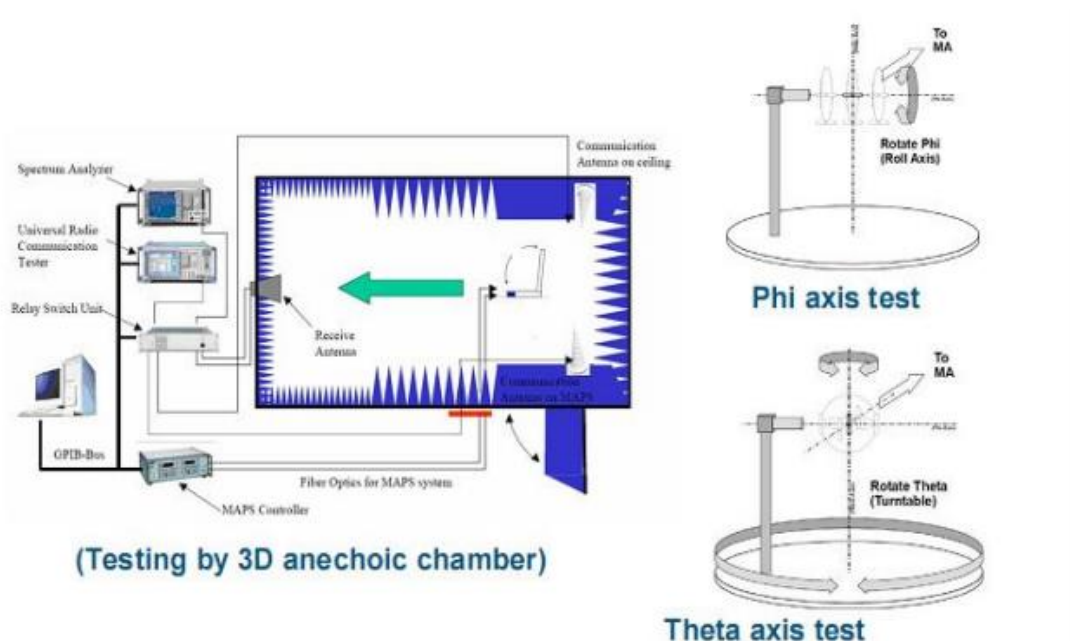
5.1.2 Test system



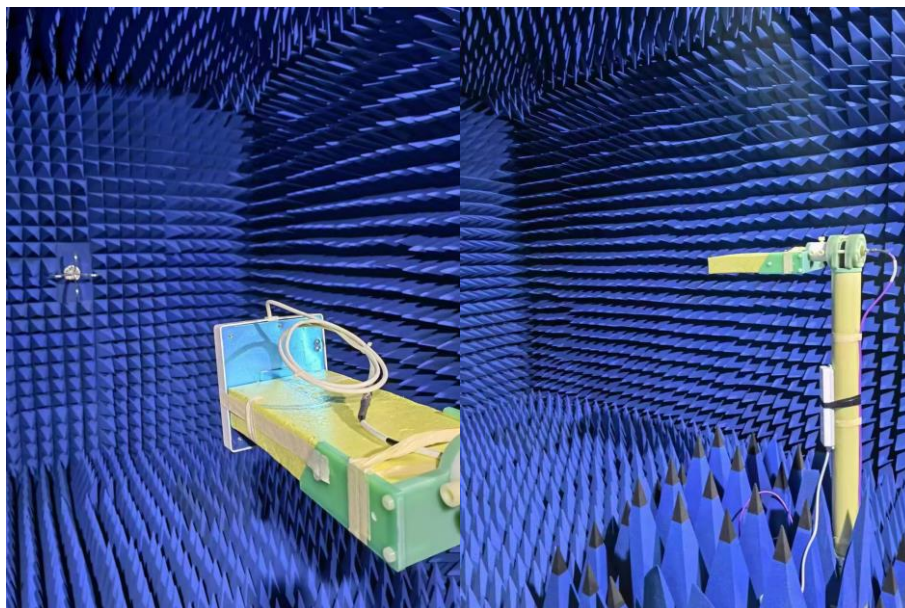
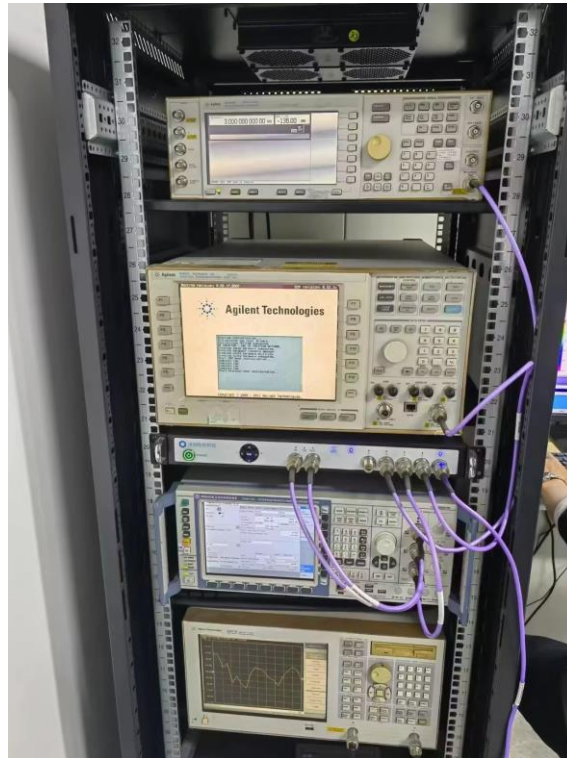
Antenna standing wave test equipment is connected in sequence:
Agilent 5071C network analyzer → test cable → antenna.

5.2 Radiation Pattern test

5.2.1 3D Chamber Test System



5.2.2 Radiation Pattern test environment

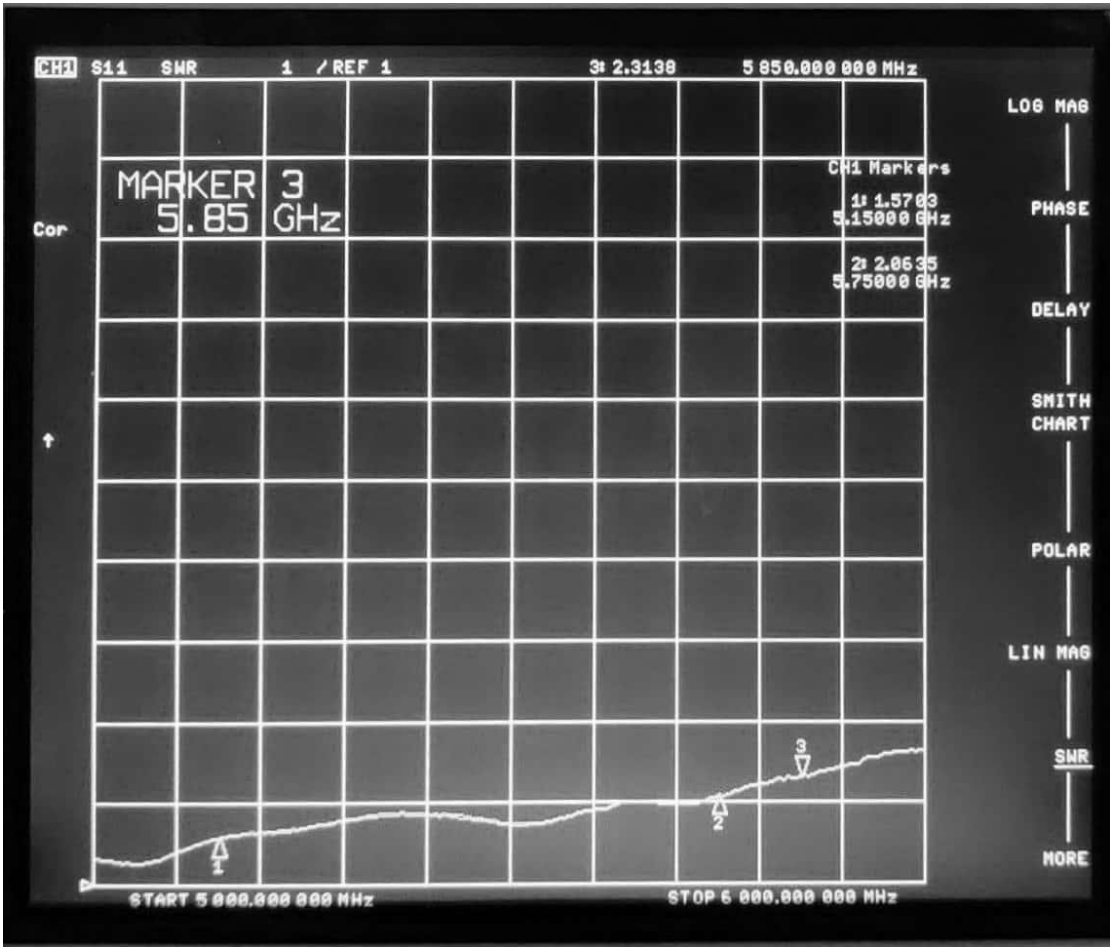


LR microwave anechoic chamber: The test frequency range is 400MHz to 6GHz, and in a spherical quiet zone with a diameter of 40cm, the anechoic chamber provides a reflectivity of less than - 90dB in the range of 400MHz to 6GHz.

6. Radiation Report

6.1 VSWR

6.1.1 VSWR Test waveform

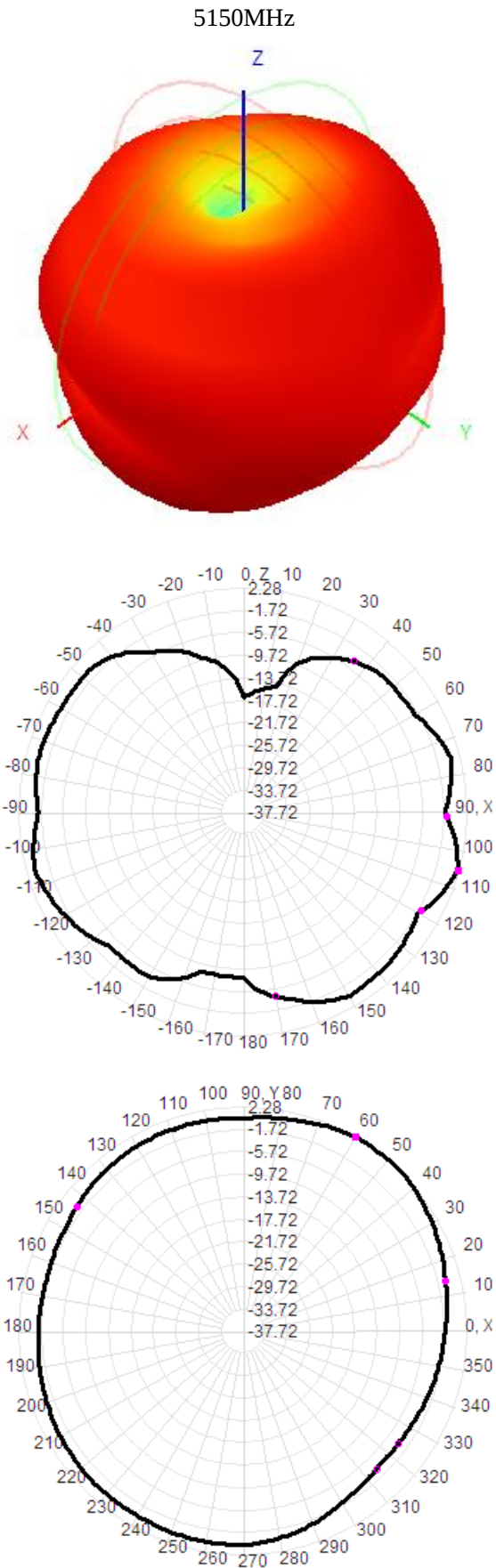


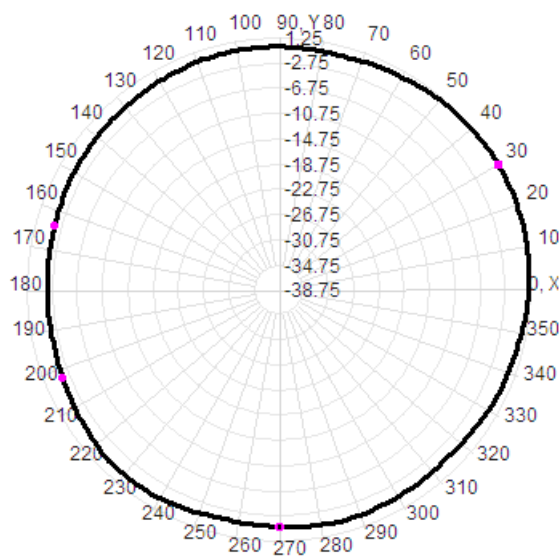
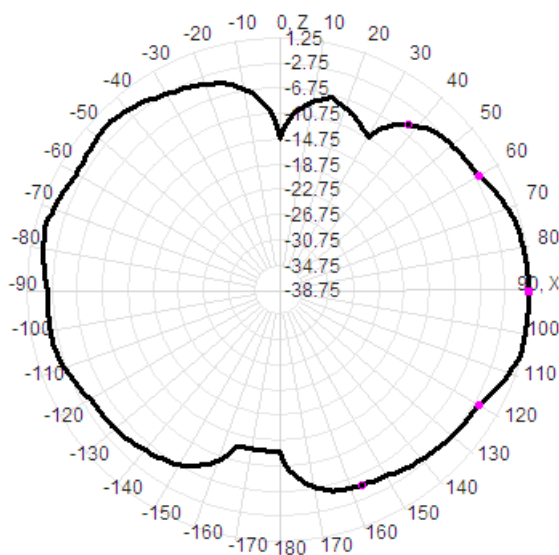
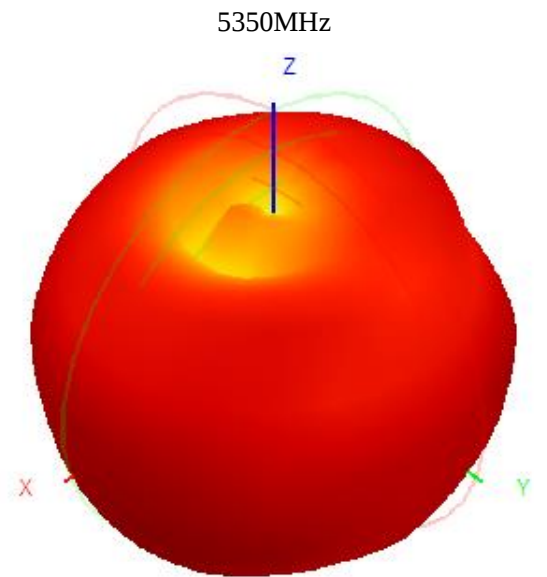
6.1.2 VSWR test result

Frequency	5150-5850MHz
VSWR	≤2.5

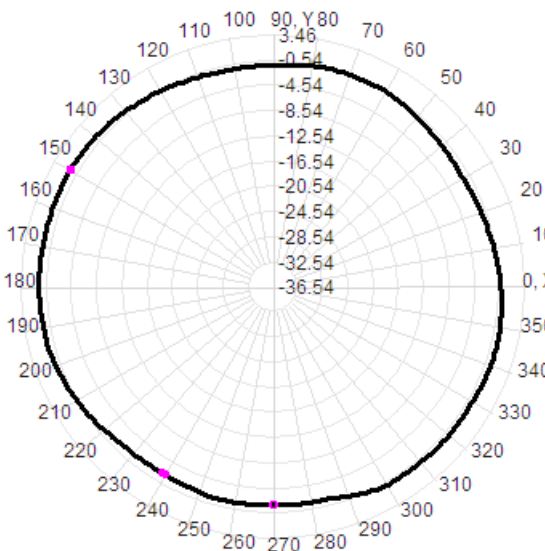
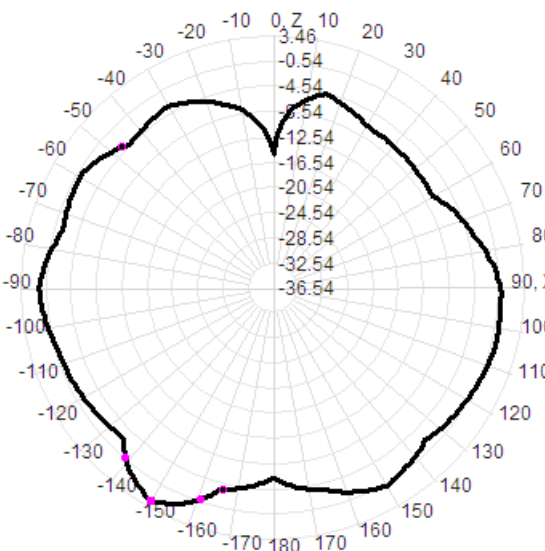
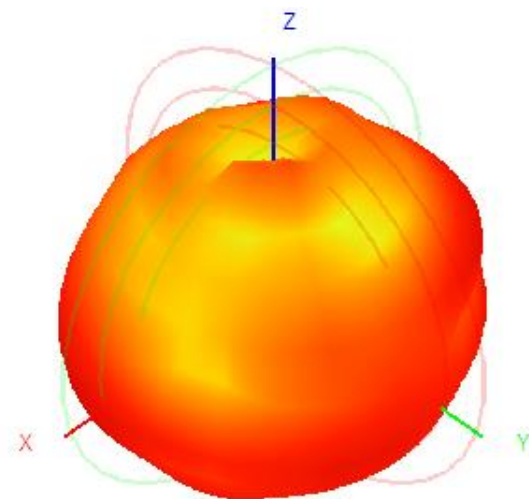
6.2 Radiation Pattern

6.2.1 Radiation Pattern





5850MHz



6.2.2 Radiation Pattern test result

Frequency	Gain	Effi
MHz	dBi	%
5150	2.28	72.9
5350	1.25	60.6
5850	3.46	62.8

7 Reliability Report

7.1 Constant Temperature and Humidity Test

Project	Constant Temperature and Humidity Test	Check ID		
Product Name	Copper tube antenna	quantity:5PCS		
Date Of Test: 2022-05-24		Date of Complete: 2022-05-25		
Equipment For Test 1.Programmable Constant Temperature And Humidity Test Box. 2. 8753ES Network Analyser.				
Condition For Test 1.Under room temperature,65% humidity. 2.Under 80° ,85%~90% humidity ,2 hour per circulation, total 24 hours.				
Test Result				
Standard 1、Shedding-free, Non-cracking, No separation on the surface of metal ;Non-fading, Non-cracking, Non-deforming on the surface of nonmetal. 2、Test result meet the technical requirements.				
Project	Before Test	After Test	Problem	Result
Appearance	shedding-free, Non-cracking, No separation	Non-fading, Non-cracking, Non-deforming	Void	Pass
performance	VSWR Pass	VSWR Pass	Void	Pass
Result: PASS FAIL Unable to judge				
Tested by: Liu Jie Reviewed by: Li Fei Approved by: Zhang Yunchun				

7.2 Salt Spray Test

Project	Salt Spray Test	Test ID																		
Project Name	Copper tube antenna	quantity: 5PCS																		
Date of test: 2022-05-26		Date of complete:2022-05-28																		
Test equipment: 1.HL-60-SS Salt Spray Test Tester.																				
Test Condition: 1.35±2℃ in the salt spray test box; 22~30℃ in the laboratory 2.PH=6.5/7.2, the concentration of the sodium chloride decade to 50 ±10g/L after 24 hours on per 80 square centimeter.																				
Result: Pass																				
<table><tr><td>Number</td><td>(Result</td><td>Problem</td></tr><tr><td>1</td><td>Pass</td><td>Void</td></tr><tr><td>2</td><td>Pass</td><td>Void</td></tr><tr><td>3</td><td>Pass</td><td>Void</td></tr><tr><td>4</td><td>Pass</td><td>Void</td></tr><tr><td>5</td><td>Pass</td><td>Void</td></tr></table>			Number	(Result	Problem	1	Pass	Void	2	Pass	Void	3	Pass	Void	4	Pass	Void	5	Pass	Void
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5	Pass	Void																		
Result: ☒ PASS ☐ FAIL ☐ Unable to judge																				
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