

## written confirmation

Customer Name:

Customer material number:

Culminating material number:

Specification Description: 5G Antenna Black Sleeve  
274mm/4.4mm/Antenna Buckle/Required to wrap around the end  
/White part 9.5MM

Factory signed:

Writing	Audit	Approval

The client acknowledges the signature:

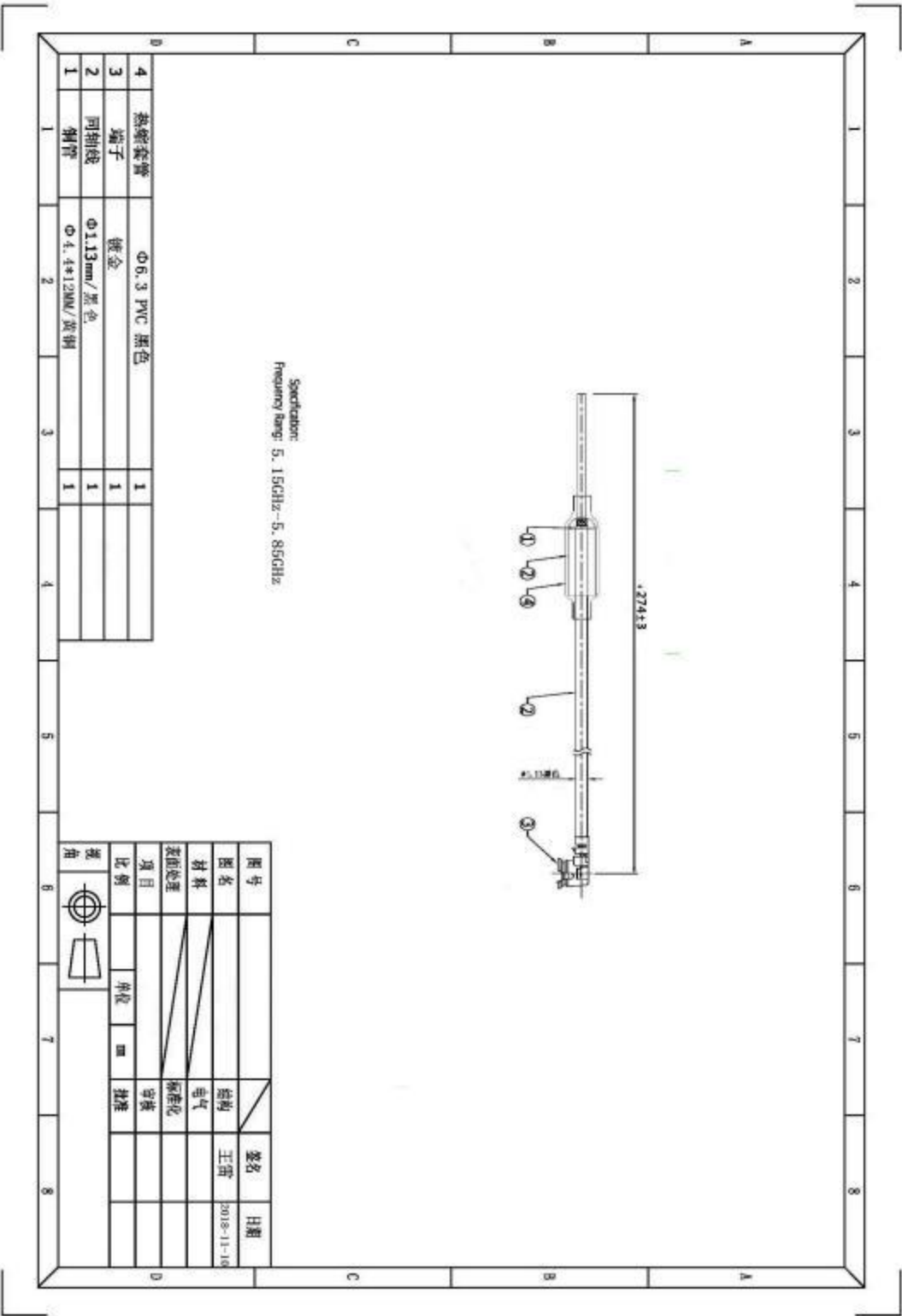
Inspection	Audit	Approval

# catalogs

## (Content)

1、Cover (Cover).....	1
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4, performance parameters table (Standardization).....	4
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3、Product picture (Product Picture)

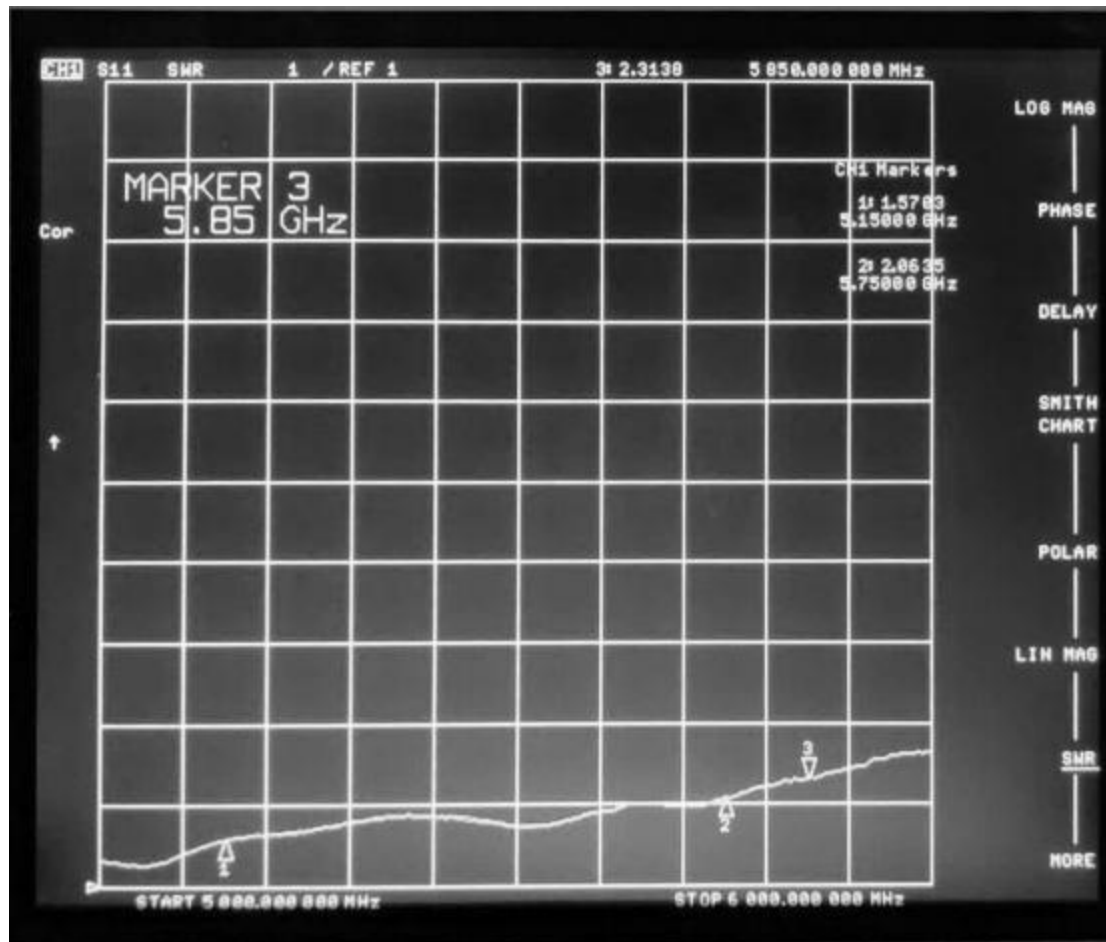


#### 4、Performance parameters (Standardization)

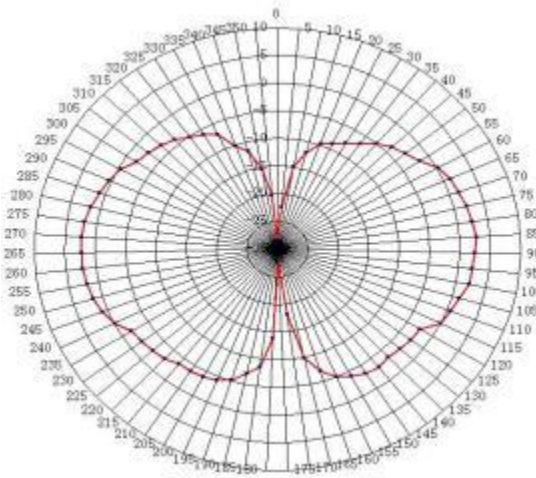
Electrical parameters (Parameter)	
Frequency range (Frequency)	5.15–5.85 GHz
Input Impedance (Impedance)	50 $\Omega$
VSWR (Variable Standing Wave Ratio)	$\leq 3.0$
Connector	Generation terminals
Mechanical Parameter	
Length	$274 \pm 3\text{mm}$
Coaxial cable (Cable)	/
Salt Spray Test	24H
Environment Parameter	
operating temperature (Operation Temperature)	$-20^{\circ}\text{C} \sim 65^{\circ}\text{C}$
Storage temperature (Storage Temperature)	$-30^{\circ}\text{C} \sim 75^{\circ}\text{C}$

## 5、Electrical performance test report (Radiation Report)

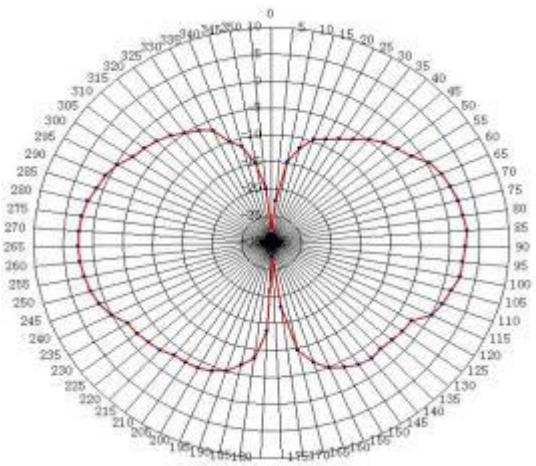
### 5.1 Standing wave diagram



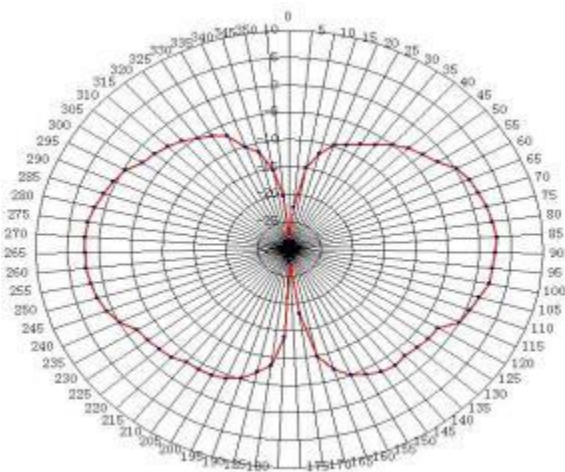
## 5.2 Direction maps



5.15 GHz



5.35 GHz



5.85GHz

### 5.3 Gain efficiency

Frequency (MHz)	Gain(dBi)	Efficiency(%)
5150	2.11	73.35
5200	2.40	78.35
5250	2.00	63.85
5300	2.77	71.62
5350	2.07	64.12
5400	2.08	63.34
5450	2.41	72.82
5500	2.81	75.29
5550	2.11	66.26
5600	2.42	70.58
5650	2.45	72.40
5700	2.66	75.02
5750	2.97	74.67
5800	2.18	63.77
5850	2.15	61.01

## 6. Reliability Report

### 6.1 Constant Temperature and Humidity Test

Pilot/Pilot Project (Project)	Constant temperature and humidity test (Constant Temperature and Humidity Test)	checklist number (Check ID)
Product Name	copper antenna	Test Quantity: 5PCS (quantity:5PCS)
Date of delivery: 2018-09-21 (Date Of Test)		Date of Complete: 2018-09-21 (Date of Complete)
Equipment For Test 1. Programmable Constant Temperature And Humidity Test Box 2. 8753ES Network Analyser		
Test/Inspection Conditions: (Condition For Test) 1. Under room temperature, 25 ° C, 65% humidity 2. +80 ° 85 ~ 90%RH 2 hours a cycle, total 24 <del>hrs</del> (Under 80 ° , 85% ~ 90% humidity , 2 hour per circulation, total 24 hours)		
Test Results (Test Result)		



Judgment standards (Standard) 1、Metal surface plating should be free of flaking, cracking wrinkling, separation, etc.; non-metallic parts should not be discolored. Cracking, deformation, degumming and other defects (Shedding-free, Non-cracking, No separation on the surface of metal ;Non-fading, Non-cracking, Non-deforming on the surface of nonmetal ) 2、Electrical test meets the standard requirements: Voltage VSWR test qualified (Test result meet the technical requirements)				
Inspection Program (Project)	Constant temperature and humidity test (Before Test)	After Test	Problem Description	Result
exterior condition (Appearance)	No discoloration or cracking in appearance, Deformation, Degumming (shedding-free. Non-cracking. No separation)	No discoloration or cracking in appearance, Deformation, Degumming (Non-fading. Non-cracking. Non-deforming)	not have (Void)	Pass
electrical property performance	Antenna voltage VSWR pass a test (VSWR Pass)	Antenna voltage VSWR measurement pass an exam (VSWR Pass)	not have (Void)	Pass
Test/Inspection Determination: Result. <div style="display: flex; justify-content: space-around; align-items: center;"> <span><input type="checkbox"/> PASS</span> <span><input type="checkbox"/> Fail ure FAIL</span> <span>Unable to judge</span> </div>				
Tested by: Liu Jie Reviewed by: Li Fei Approved by: Zhang Yunchun				

## 6.2 Salt Spray Test

Pilot/Pilot Project (Project)	Salt Spray Test		checklist number (Test ID)
Product Name/Specification (Project Name)	copper antenna		Test Quantity: 5PCS (quantity)
Date of delivery: 2018-09-21 (Date of test)		Date of completion: 2018-09-21 (Date of complete)	
Test/inspection equipment: (Test equipment) 1.HL-60-SS Salt Spray Test Tester (HL-60-SS Salt Spray Test Tester )			
Test/inspection conditions: (Test Condition) 1. The temperature inside the salt spray box is $35 \pm 2^{\circ}\text{C}$ ; the temperature in the laboratory is $22 \sim 30^{\circ}\text{C}$ ( $35 \pm 2^{\circ}\text{C}$ in the salt spray test box; $22 \sim 30^{\circ}\text{C}$ in the laboratory) 2. Salt spray settling rate was 1-2ML/h per 80cm area after 24H spraying, the concentration of sodium chloride was $50 \pm 10\text{g/L}$ , the PH value was 6.5/7.2 (PH=6.5/7.2, the concentration of the sodium chloride decade to $50 \pm 10\text{g/L}$ after 24 hours on per 80 square meter). The concentration of the sodium chloride decade to $50 \pm 10\text{g/L}$ after 24 hours on per 80 square centimeter )			
Test/inspection result: Pass (Pass)			
	Sample Number	Evaluation Rating (Result)	Description of defects (Problem)
	1	Pass	Void
	2	Pass	Void
	3	Pass	Void
	4	Pass	Void
	5	Pass	Void
Test/Inspection Determination: <input type="checkbox"/> Qualified PASS <input type="checkbox"/> Failed FAIL      Unable to judge			
Tested by: Liu Jie Reviewed by: Li Fei Approved by: Zhang Yunchun			