Antenna Specifications

CUSTOMER			
CS P/N			
MATERIAL CODE		2.4G/5.8G-WiFi	
JS P/N		003-086-1A	
Checked by(RF)	Checked by(ME)	Checked by(QA)	Approval led by
Customer Approval			

Address: Elevator Zone B, 3rd Floor, Building 1, Weijie Technology Park, No. 118 Huaning Road, Dalang Street, Longhua District, Shenzhen
Tel：0755-23744434 Fax：0755-23744434

1. General Description

This document provides the antenna specifications on electric, mechanic and reliability. The testing conditions and related pictures are also included.

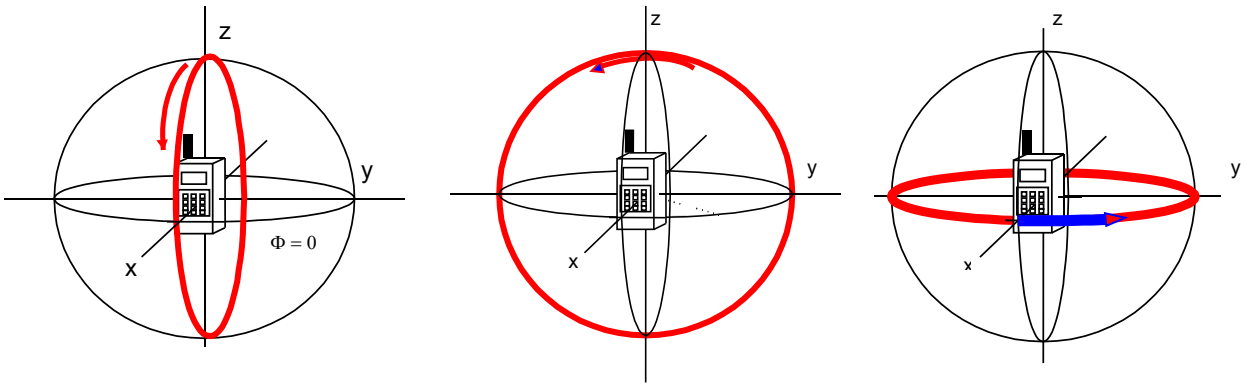
1.1 Print Acceptance

Samples and Antenna Specifications are to be sent to customer. When they are approved, the approval form should be completed, signed, and sent back to JINGSONG before further mass production batches can be delivered.

1.2 Coordinate System

The coordinate system for the phone is defined as follows:

- Origin in center of gravity.
- Positive X axis is perpendicular to, and directed from, front plane.
- Positive Y axis is perpendicular to, and directed from, right side plane (as seen from front).
- Positive Z axis is perpendicular to, and directed from, top plane.



a) E0-plane b) E90-plane c) Az-plane

Figure 1-1 The coordinate system for the phone

2. Specifications

This report mainly provides the testing conditions of various electric and structural performance parameters for cell antenna ----2.4G/5.8G-WiFi. Figure 2-1 shows the antenna designed by JS & The fixturing of 2.4G/5.8G-WiFi

2-1：Specification

Sample Photo	
A.Electrical Characteristics	
Frequency	2400-2480MHz 5150-5850MHz
V.S.W.R.	≦1.6 @ 2400-2480MHz ≦2.0 @ 5100-5850MHz
Peak Cain	1.42 dBi @ 2400 ~ 2480MHz 1.82 dBi @ 5150 ~ 5880MHz
Polarization	Linear
Impedance	50Ω
B.Material & Mechanical Characteristics	
Material of Radiator	FR4
Material of Plastic	/
Cable Type	/
Connector Type	/
Connector Pull Test	/
C.Environmental	
Operation Temperature	- 40 ℃ ~ + 70 ℃
Storage Temperature	- 40 ℃ ~ + 80 ℃

3.WiFi antenna test data

Wifi:2.4G efficiency / gain

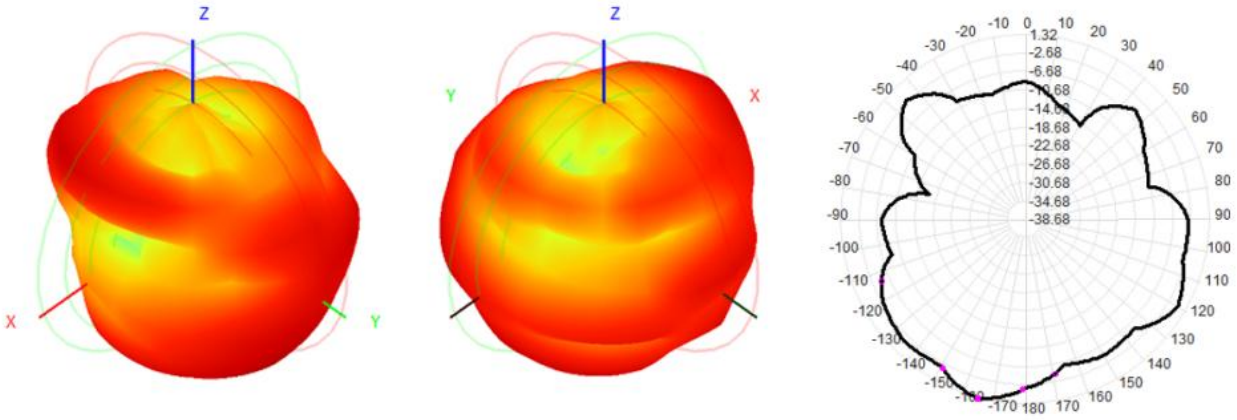
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	41.3	1.24
2410	42.6	1.23
2420	41.6	1.15
2430	43.8	1.18
2440	45.6	1.12
2450	42.4	1.26
2460	45.8	1.34
2470	47.1	1.42
2480	46.2	1.31

Wifi:5.8G efficiency / gain

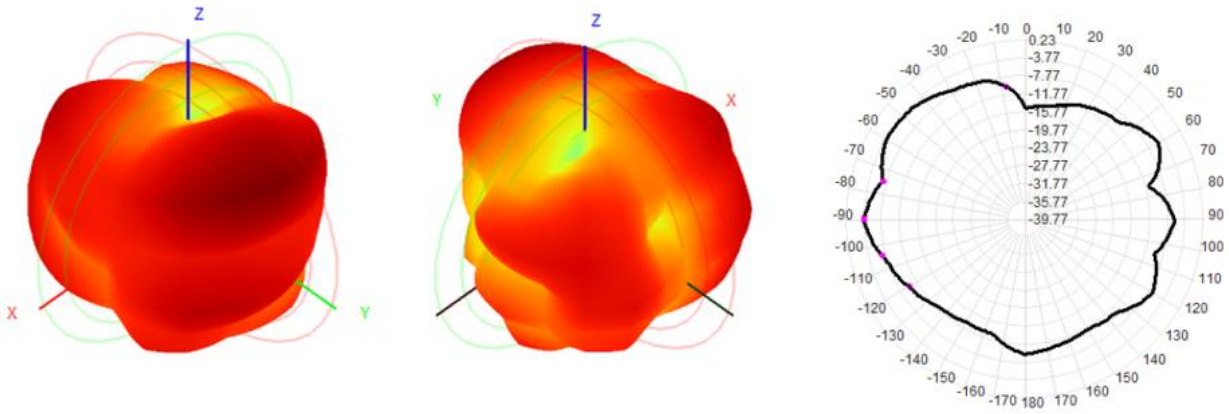
Freq(MHz)	Efficiency (%)	Gain (dBi)
5150	48.3	1.45
5200	46.4	1.36
5250	44.8	1.25
5300	47.2	1.41
5350	46.3	1.76
5400	45.1	1.58
5450	49.4	1.35
5500	48.6	1.47
5550	47.1	1.82
5600	46.2	1.76
5650	43.4	1.65
5700	42.7	1.17
5750	43.4	1.31
5800	41.8	1.22
5850	43.5	1.13

Address: Elevator Zone B, 3rd Floor, Building 1, Weijie Technology Park, No. 118 Huaning Road, Dalang Street, Longhua District, Shenzhen
Tel：0755-23744434 Fax：0755-23744434

2.4G Apple chart



5.8G Apple chart



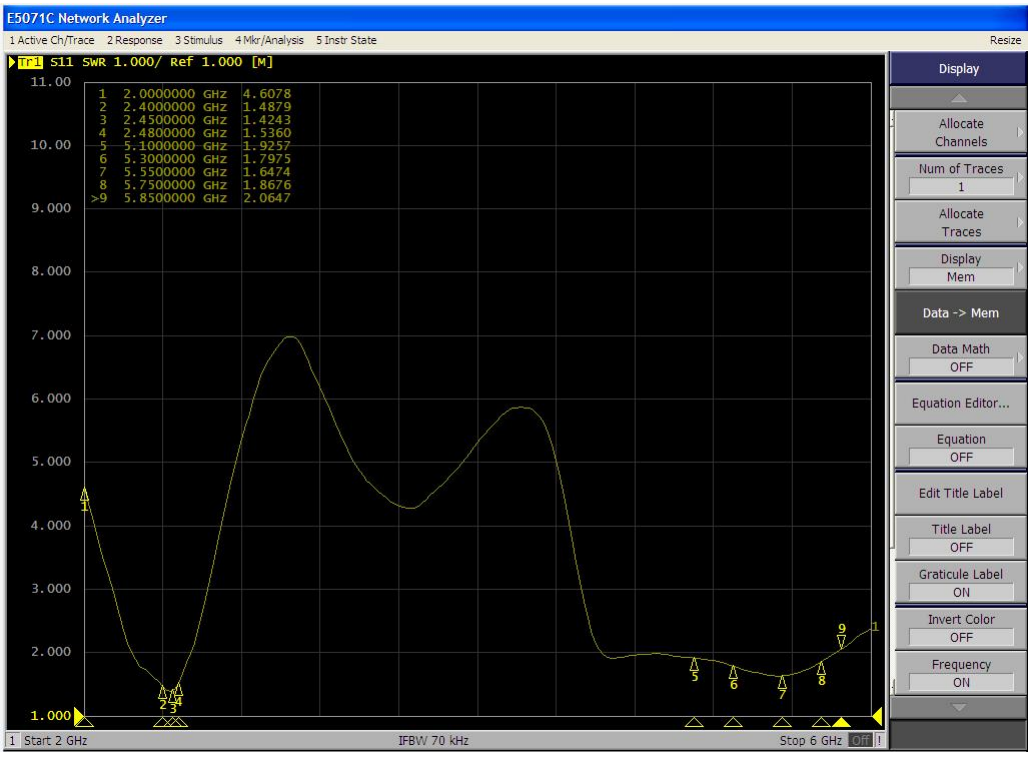
Address: Elevator Zone B, 3rd Floor, Building 1, Weijie Technology Park, No. 118 Huaning Road, Dalang Street, Longhua District, Shenzhen
Tel：0755-23744434 Fax：0755-23744434

OTA active data

天线测试报告	802.11B Antenna Performance Table			802.11G Antenna Performance Table		
Channel	CH 1	CH 6	CH11	CH 1	CH 6	CH 11
Max Power(dBm)	19.6	18.4	18.3	18.2	18.4	18.2
TRP(dBm)	16.7	15.5	15.3	15.7	15.6	15.2
Sensitivity(dBm)	-84.2	-84.1	-85.3	-74.6	-75.4	-74.3
TIS(dBm)	-81.3	-81.5	-82.1	-70.2	-71.5	-70.1

天线测试报告	802.11N Antenna Performance Table			802.11A Antenna Performance Table		
Channel	CH1	CH6	CH11	CH36	CH149	CH161
Max Power(dBm)	17.3	17.5	17.6	20.1	20.2	18.3
TRP(dBm)	14.6	14.7	14.3	17.3	17.4	16.7
Sensitivity(dBm)	-68.4	-69.3	-68.2	-80.5	-80.5	-80.6
TIS(dBm)	-65.3	-65.3	-65.7	-76.3	-77.3	-76.4

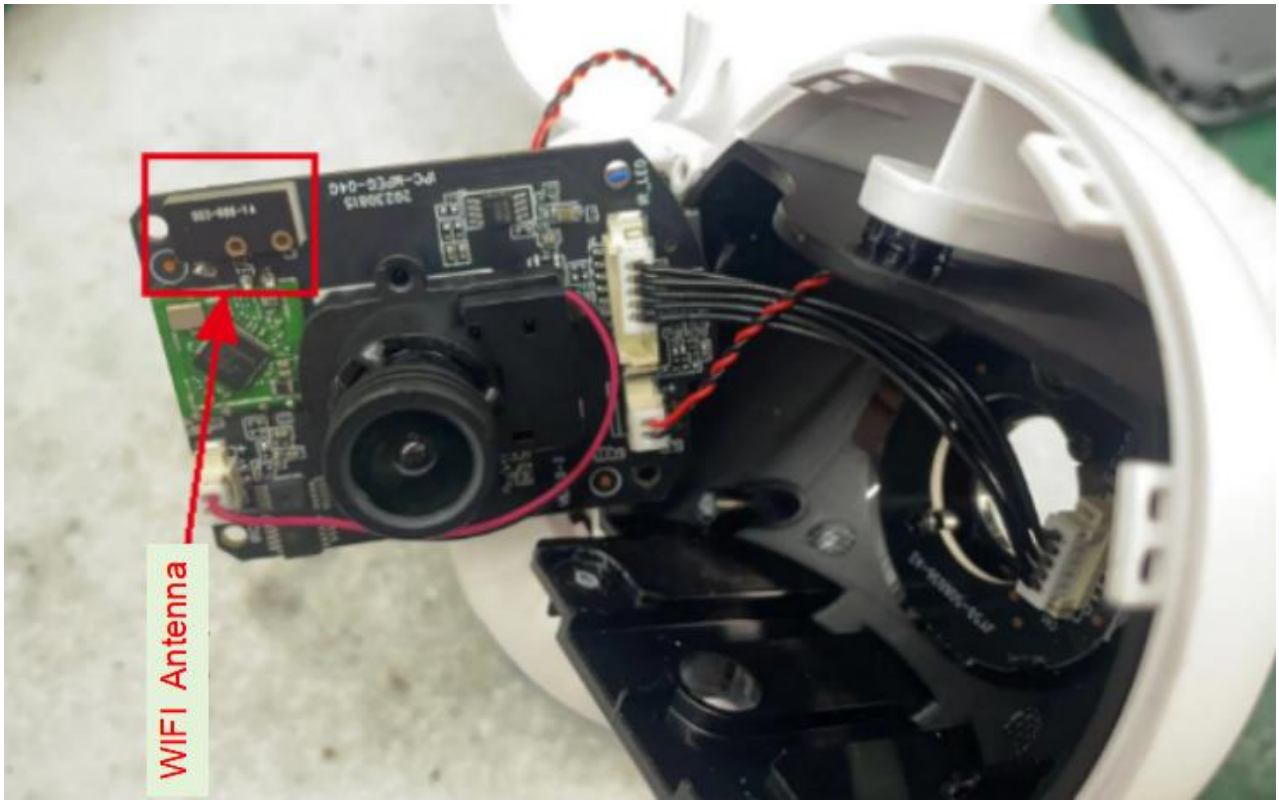
SWR



Address: Elevator Zone B, 3rd Floor, Building 1, Weijie Technology Park, No. 118 Huaning Road, Dalang Street, Longhua District, Shenzhen

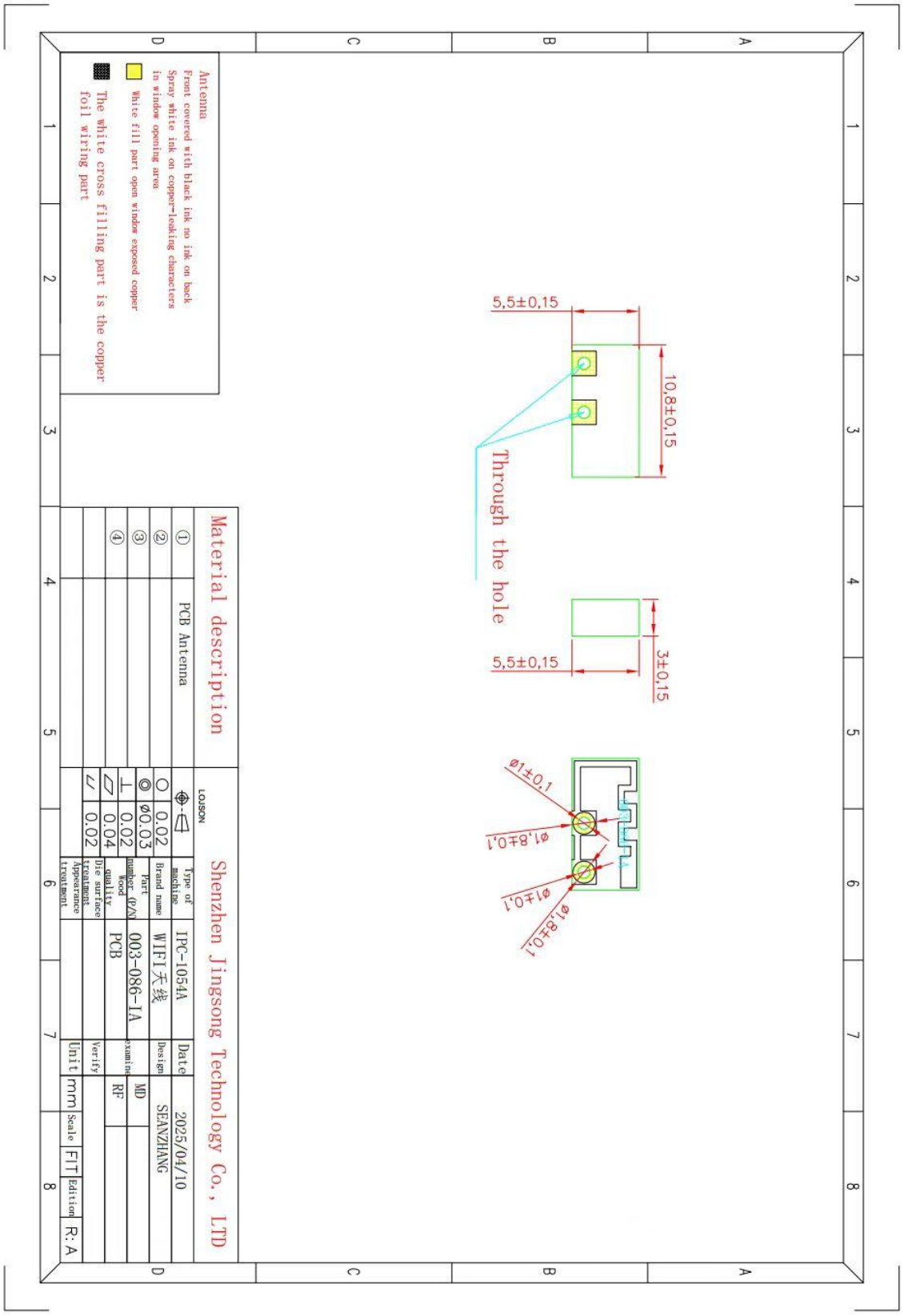
Tel：0755-23744434 Fax：0755-23744434

Assembly drawing



Address: Elevator Zone B, 3rd Floor, Building 1, Weijie Technology Park, No. 118 Huaning Road, Dalang Street, Longhua District, Shenzhen
Tel：0755-23744434 Fax：0755-23744434

4. Specifications Drawings



Address: Elevator Zone B, 3rd Floor, Building 1, Weijie Technology Park, No. 118 Huaning Road, Dalang Street, Longhua District, Shenzhen
Tel：0755-23744434 Fax：0755-23744434

5. Environmental Characteristic

Test Item	Test description
1. Low Temperature	Temp.: -20 ℃ Time: 24 hours
2. High Temperature	Temp.: 80℃ Time: 24 hours
3. Salt Fog	5±0.1% Nad salt fog PH Value: 6.5-7.2 Temp: 35±1℃ Time:24 hours

6.Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements	Result
C1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification	PASS
C3	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification	PASS
M1	Vibration	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. ≤5%	PASS
M4	Pull Test	Holding with individual specification; force applied to axis of Connector .	1. Directive DUT specification 2. Frequency Tol. ≤5%	PASS
M5	Magnetic force	The separate definition of retention product magnetic surface magnets and adsorption on the iron	1. Directive DUT specification 2. Frequency Tol. ≤ 5%	PASS
M6	Sway test	Holding with individual specification; the swing joint and wire, wire and plastic body test. .	1. Directive DUT specification 2. Frequency Tol. ≤ 5%	PASS
M7	Dimension	Inspection of dimension, color, material, package, surface process.	Directive DUT specification	PASS
E2	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H	1. No Visual Damage 2. Frequency Tol. ≤5%	PASS
E3	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5%	PASS
E4	Thermal Shock	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80° C (30 minutes)； Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5%	PASS