



Antenna Specifications

CUSTOMER			
CS P/N			
MATERIAL CODE		<u>2.4G-WiFi</u>	
JS P/N		<u>003-079-1A</u>	
Checked by(RF)	Checked by(ME)	Checked by(QA)	Approval led by
Customer Approval			

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.

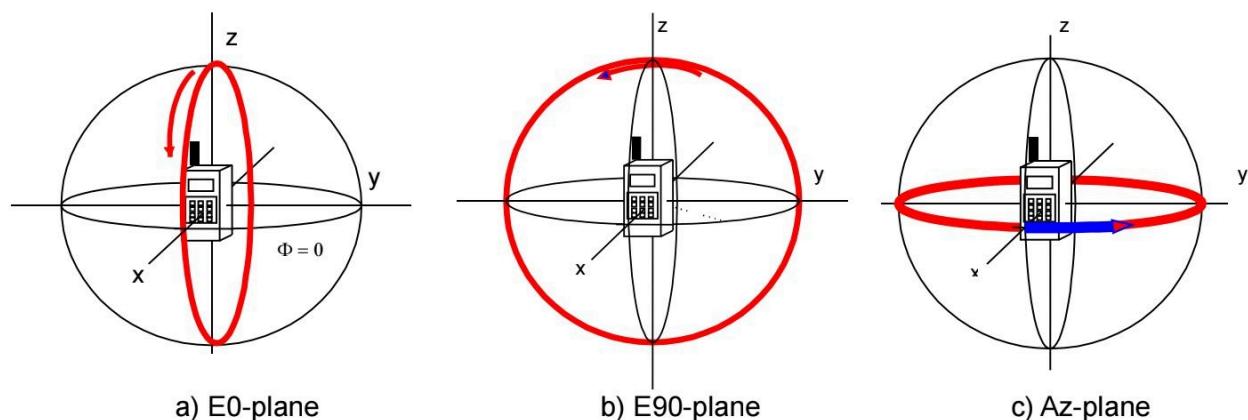


Figure 1-1 The coordinate system for the phone

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2. Specifications

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

2-1: Specification

Sample Photo	
A.Electrical Characteristics	
Frequency	2400-2480MHZ
V.S.W.R.	< 1.6 @ 2400-2480MHz
Peak Gain	1.8dBi @ 2400MHz
Polarization	Linear
Impedance	50ohm
B.Material & Mechanical Characteristics	
Material of Radiator	FR4
Material of Plastic	FPC
Cable Type	Copper + PI
Connector Type	Coaxial Cable
Connector Pull Test	Braided Wire
C.Environmental	
Operation Temperature	- 40 °C ~ +70 °C
Storage Temperature	- 40 °C ~ +80 °C

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3. WiFi antenna test data

Wifi: 2.4G efficiency / gain

Test data :		
2400-2480		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	55.8	1.8
2410	56.5	1.8
2420	57.0	1.7
2430	55.6	1.5
2440	58.9	1.6
2450	58.7	1.8
2460	59.0	1.8
2470	58.5	1.7
2480	55.0	1.4

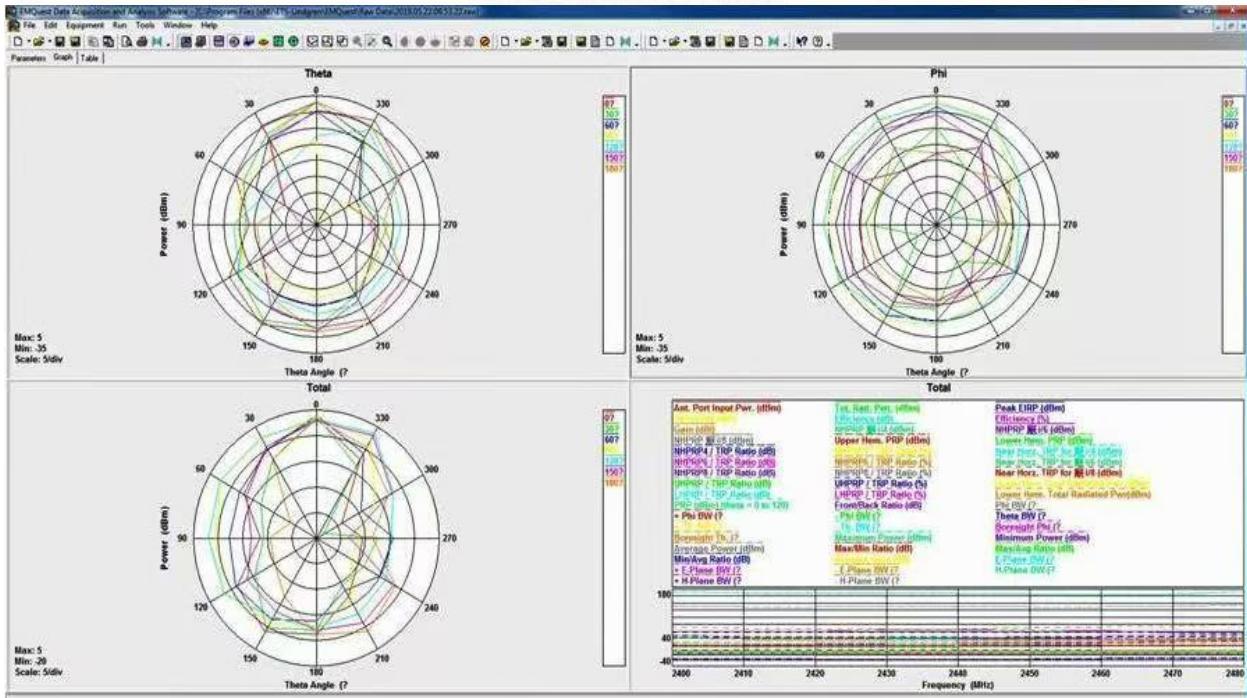
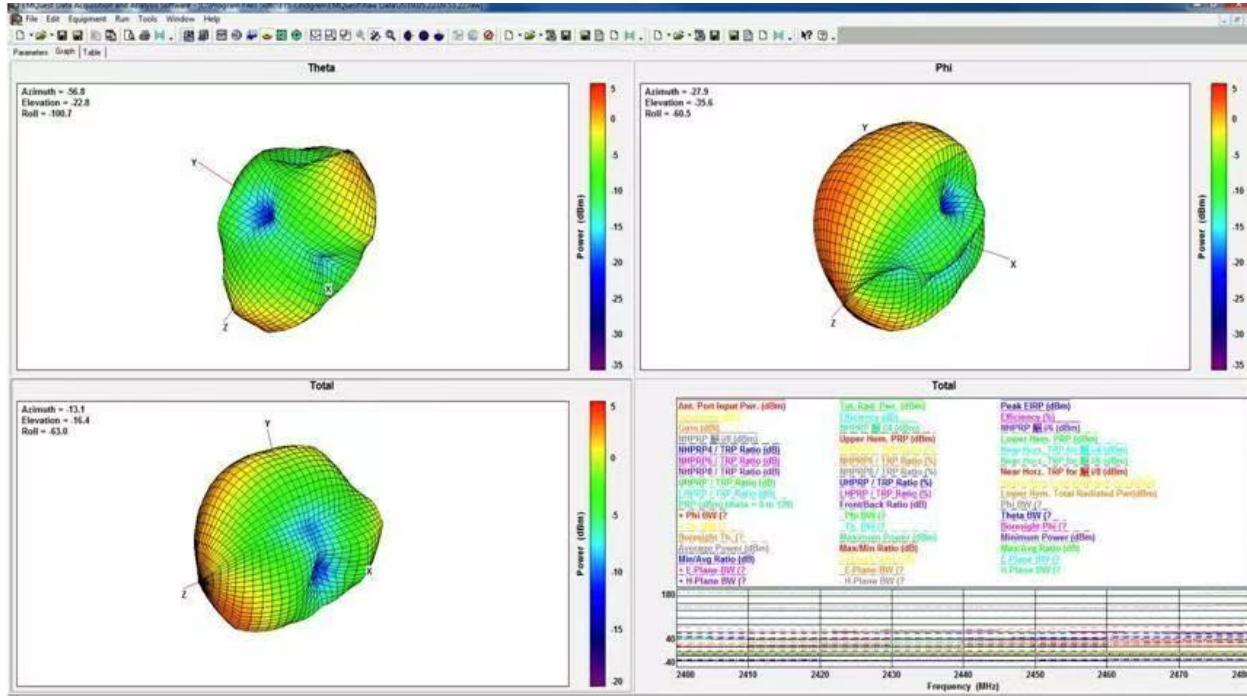
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2.4G Apple chart



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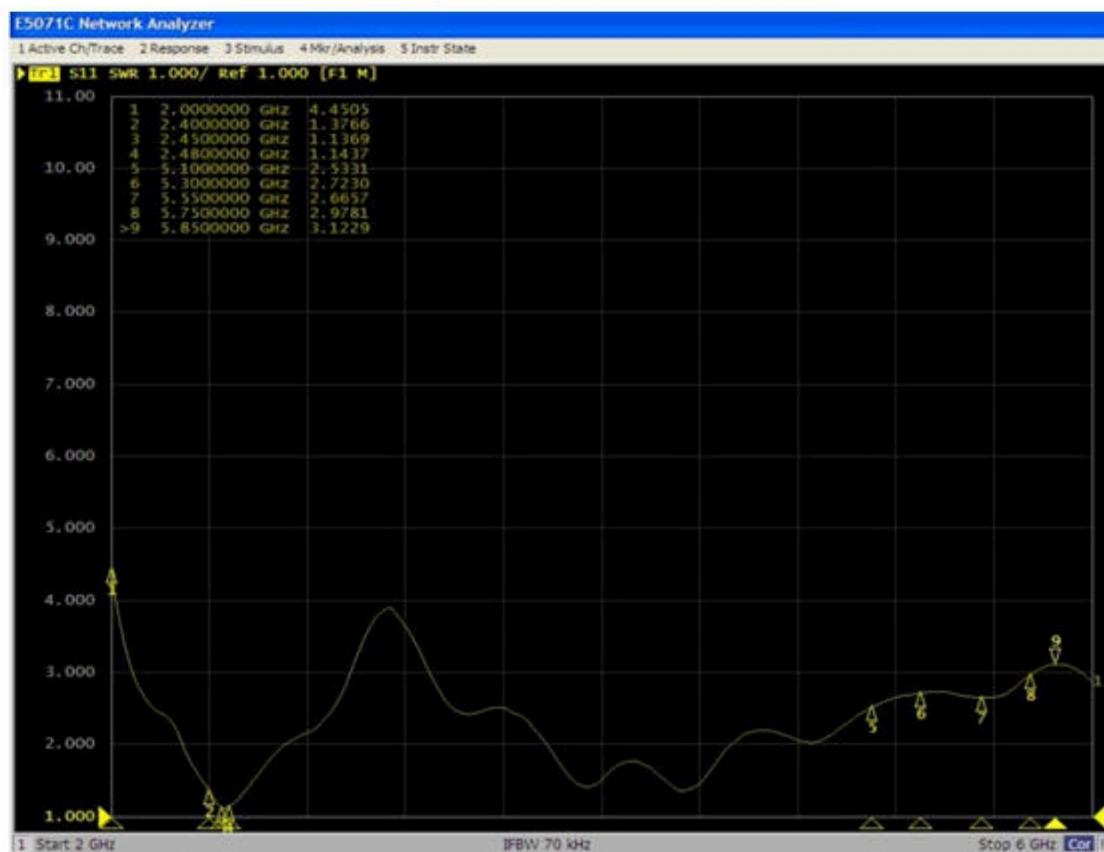
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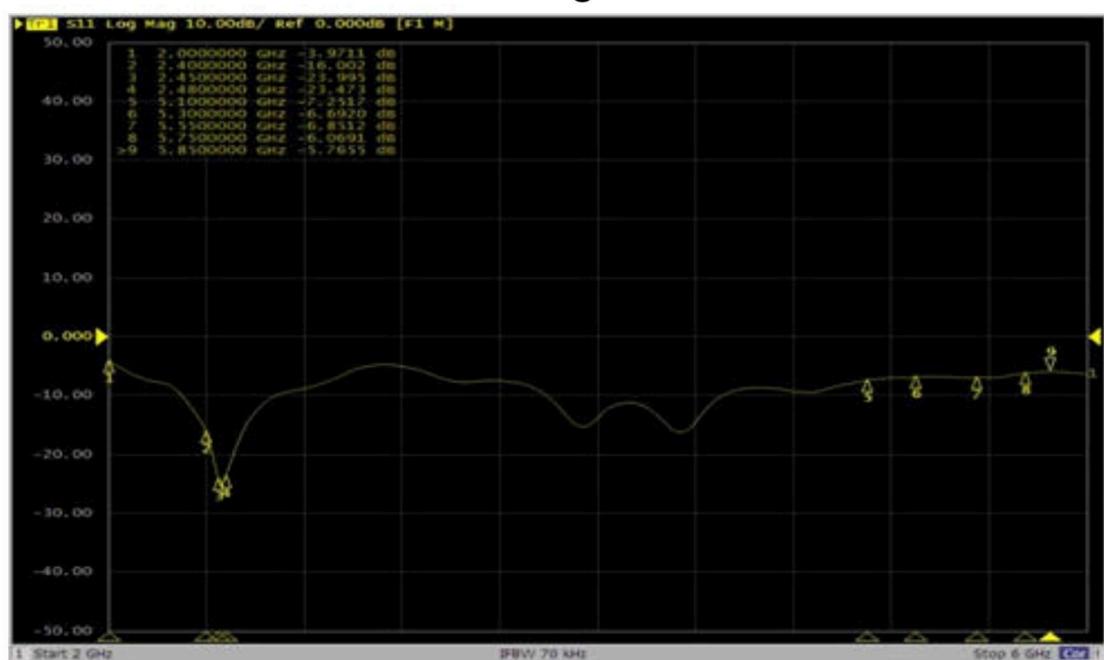
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SWR



LOSS drawings



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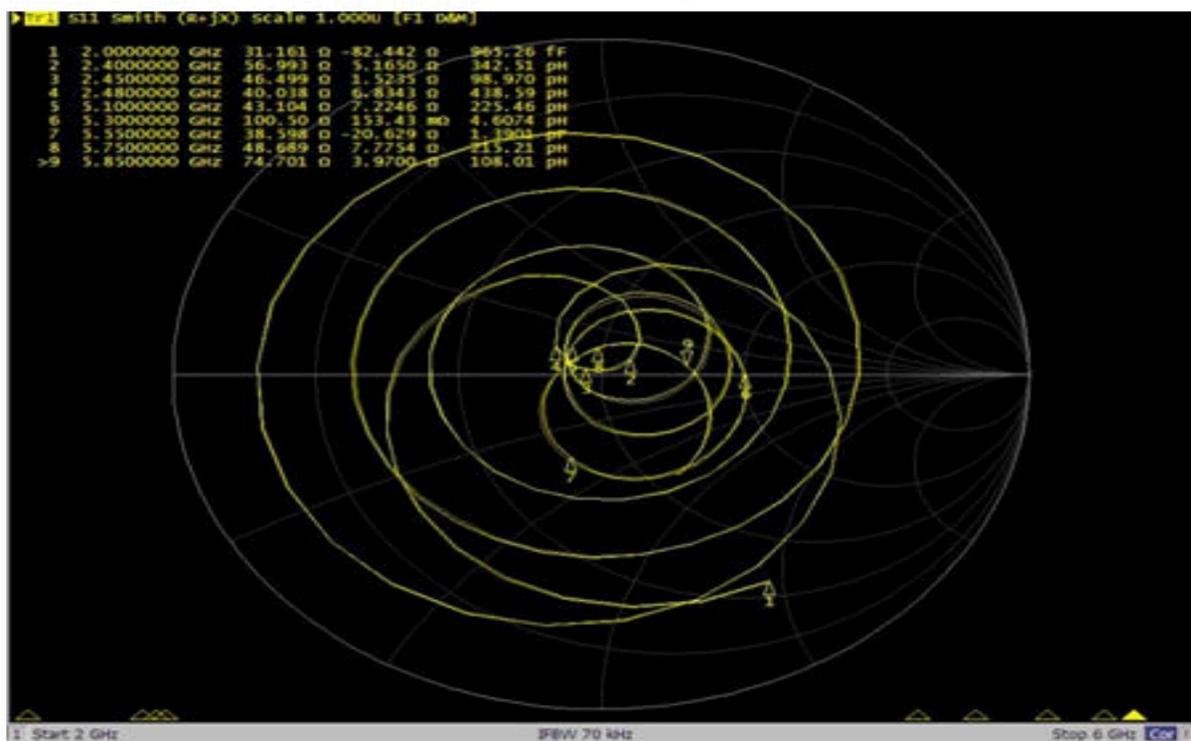
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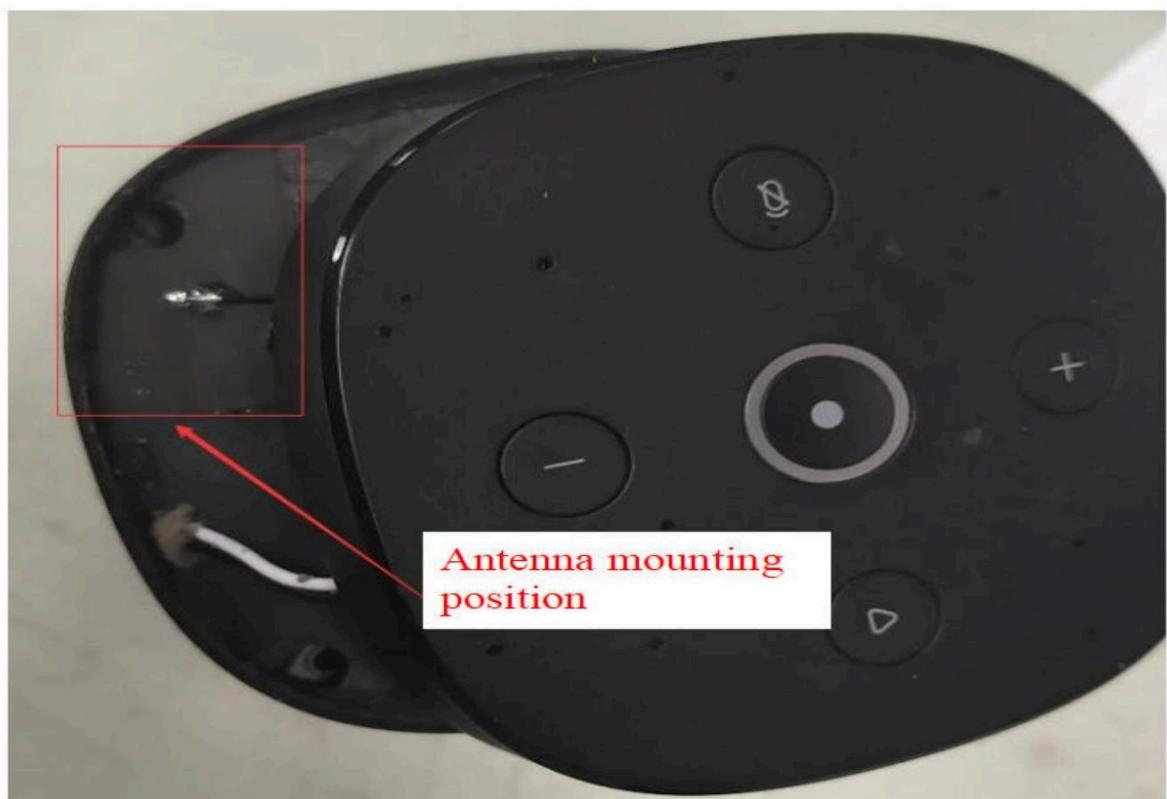
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SMITH drawings



Assembly drawing



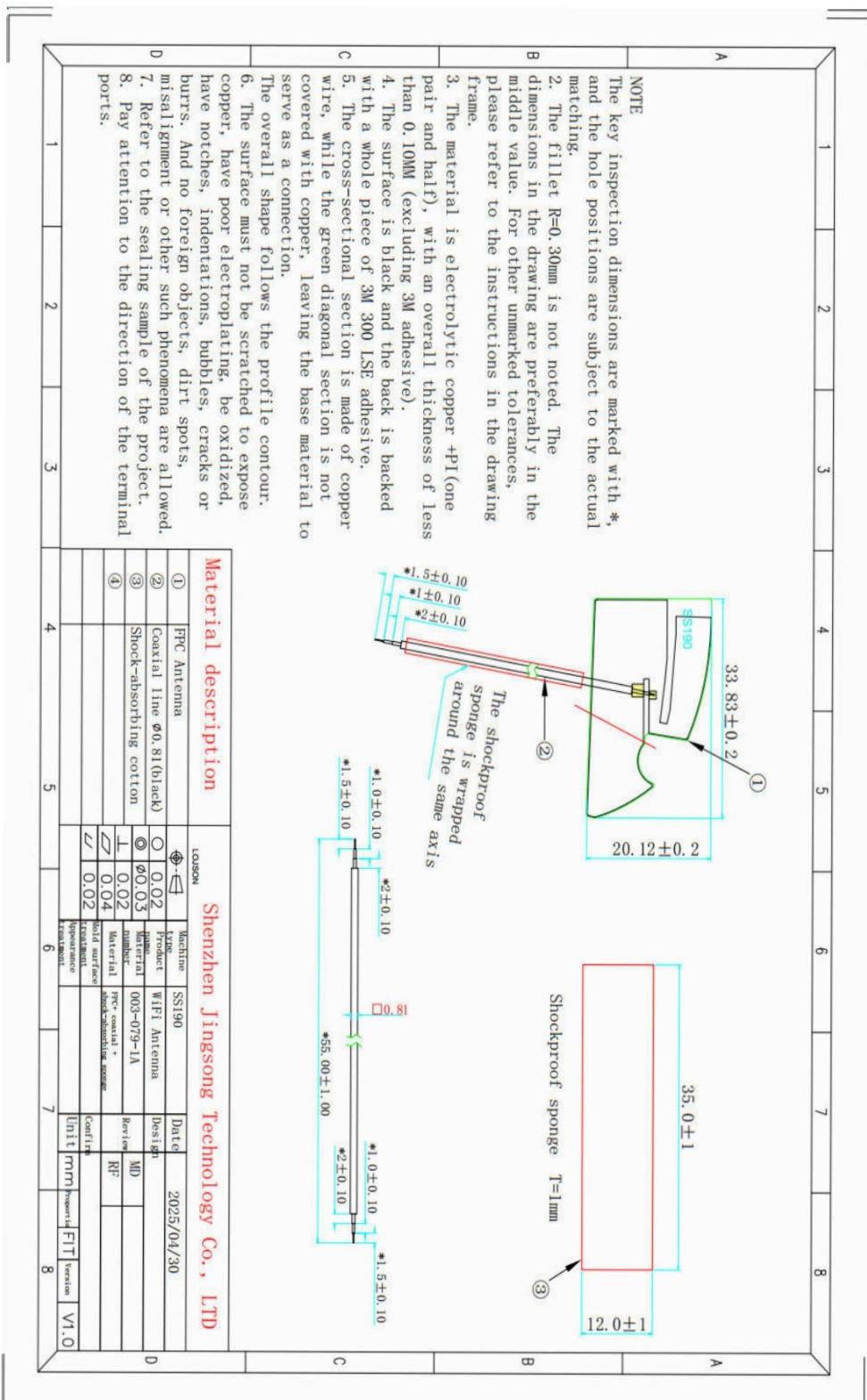
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4. Specifications Drawings



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5. Environmental Characteristic

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

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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 specification	DUT PASS
C3	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive specification	DUT 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. $\leq 5\%$	PASS
M4	Pull Test	Holding with individual specification; force applied to axis of Connector .	1. Directive specification 2. Frequency Tol. $\leq 5\%$	DUT PASS
M5	Magnetic force	The separate definition of retention product magnetic surface magnets and adsorption on the iron	1. Directive specification 2. Frequency Tol. $\leq 5\%$	PASS
M6	Sway test	Holding with individual specification; the swing joint and wire, wire and plastic body test. .	1. Directive specification 2. Frequency Tol. $\leq 5\%$	PASS
M7	Dimension	Inspection of dimension, color, material, package, surface process.	Directive specification	DUT PASS
E2	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: $\geq 95\%$; NaCl solution: $\geq 5\%$; Time: 24H	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$	PASS
E3	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: $\geq 90\%$; Time: 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$	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. $\leq 5\%$	PASS

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