Antenna Specifications

CUSTOMER		奥科	
CS P/N		RX-panel	
HX P/N		A09-293-RX-panel	
Checked by(RF)	Checked by(ME)	Checked by(QA)	Approval led by
Customer Approval			

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1. General Description

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

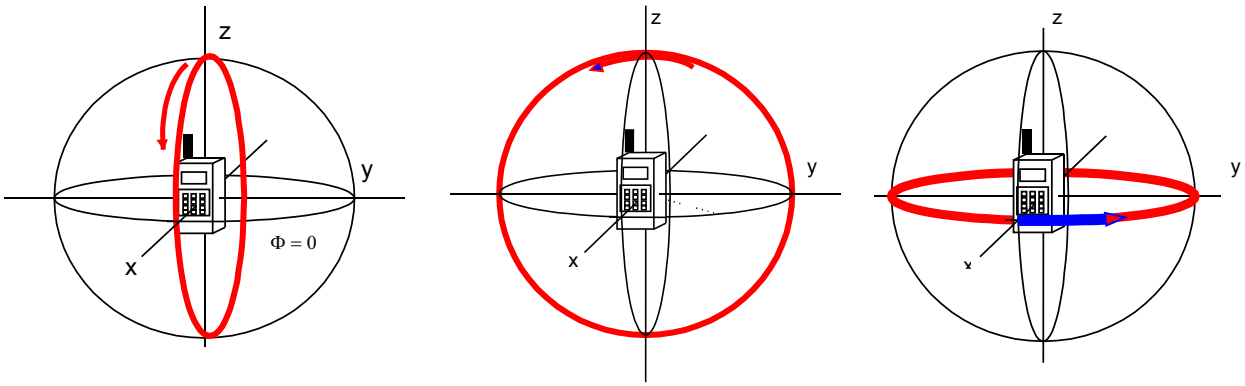
1.1 Print Acceptance

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 Hengxiangtong 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

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2. Specifications

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ---- RX-panel.Figure 2-1 shows the antenna designed by HX & The fixturing of RX-panel.

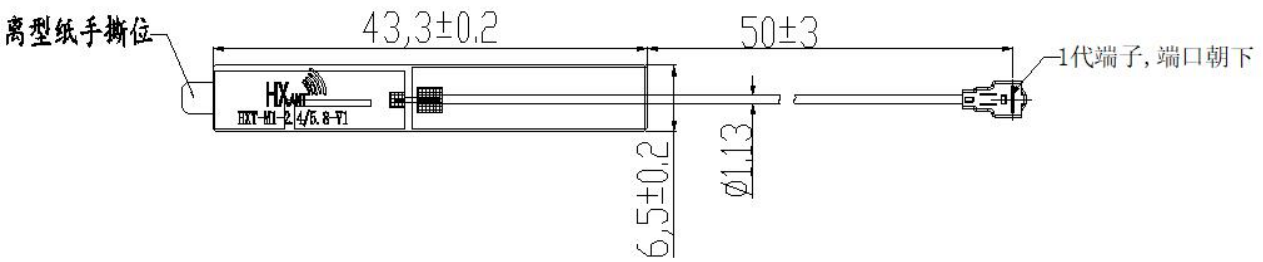

Figure 2-1 The antenna designed by HX & The fixturing of RX-panel

2.1 Frequency Band

Band	Frequency(MHz)
2.4G/5.8G	2400-2500/5150-5900

2.2 Impedance

2.2.1 Nominal

Nominal Impedance(including matching circuit) : 50 ohms

2.2.2 Matching Circuit

The matching circuit is as Figure 2-2.

N/A

Figure 2-2: Matching circuit

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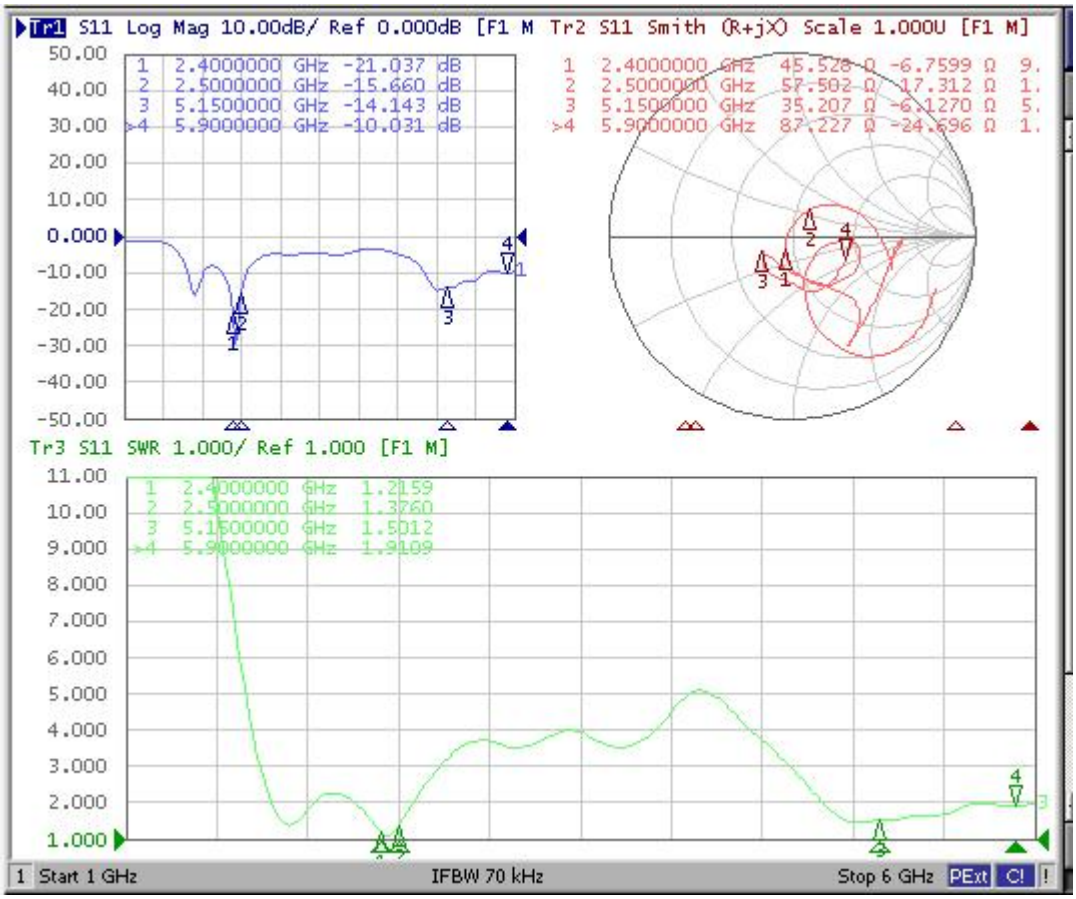
2.3 Passive Measurements

2.3.1 VSWR & Gain Specifications

VSWR		GAIN	
Freq. Band	SPEC	Freq. Band	SPEC
2400-2500MHz	≦2.0	2400-2500	≧0dBi
5150-5900MHz	≦2.0	5150-5900	≧0dBi

2.3.2 S11 of the Typical Sample

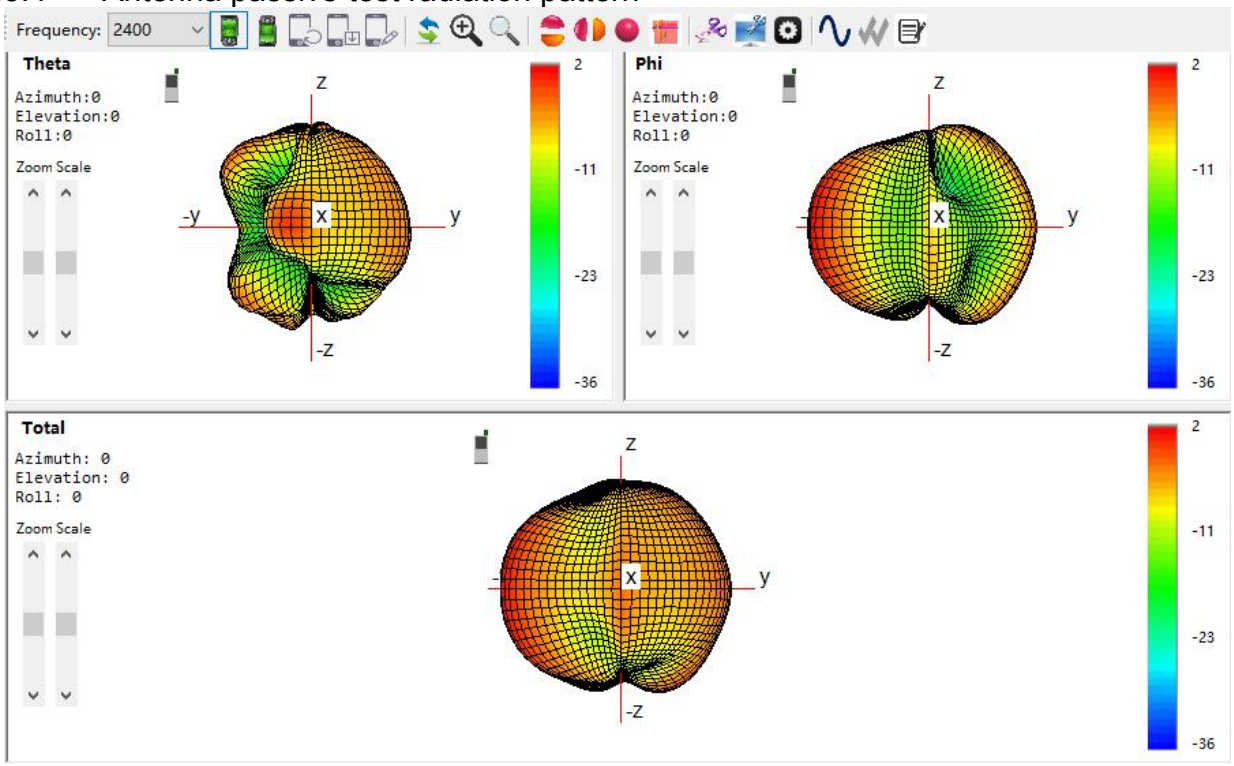
Freq (MHz)	2400	2500	5150	5900
RL	-21.03	-15.66	-14.14	-10.03
VSWR	1.21	1.37	1.5	1.91

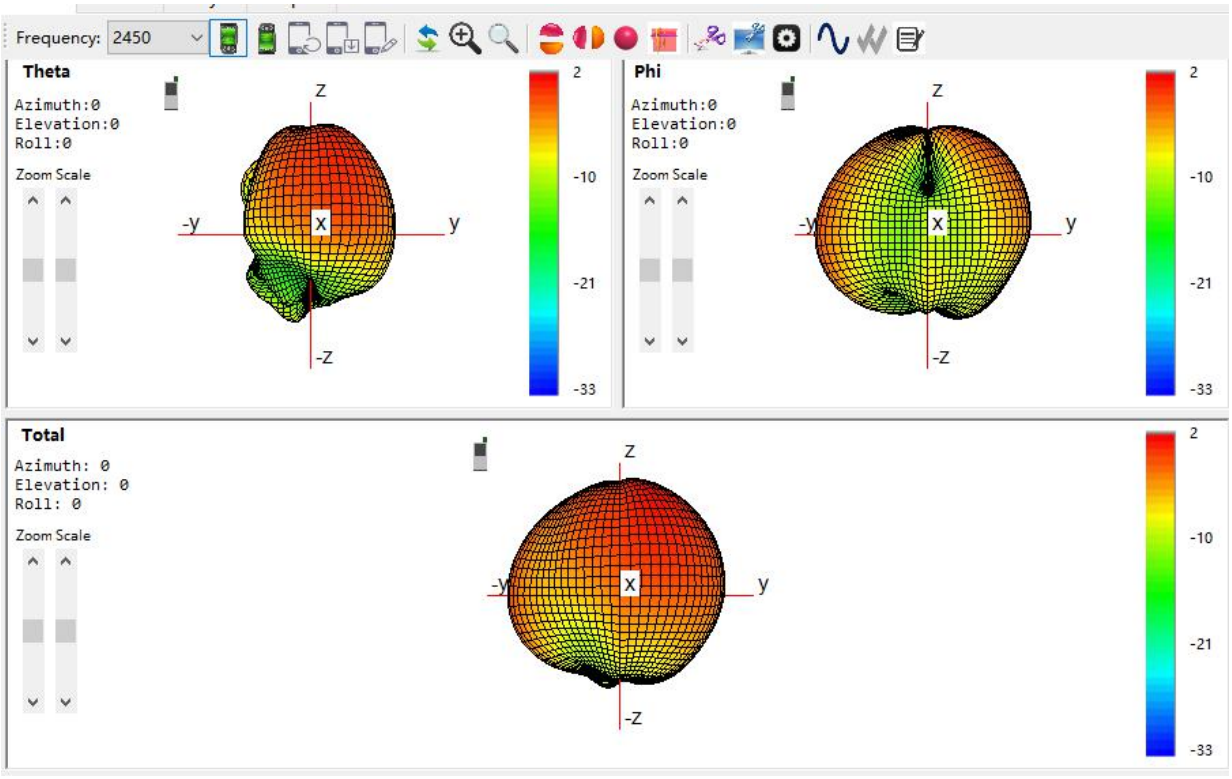


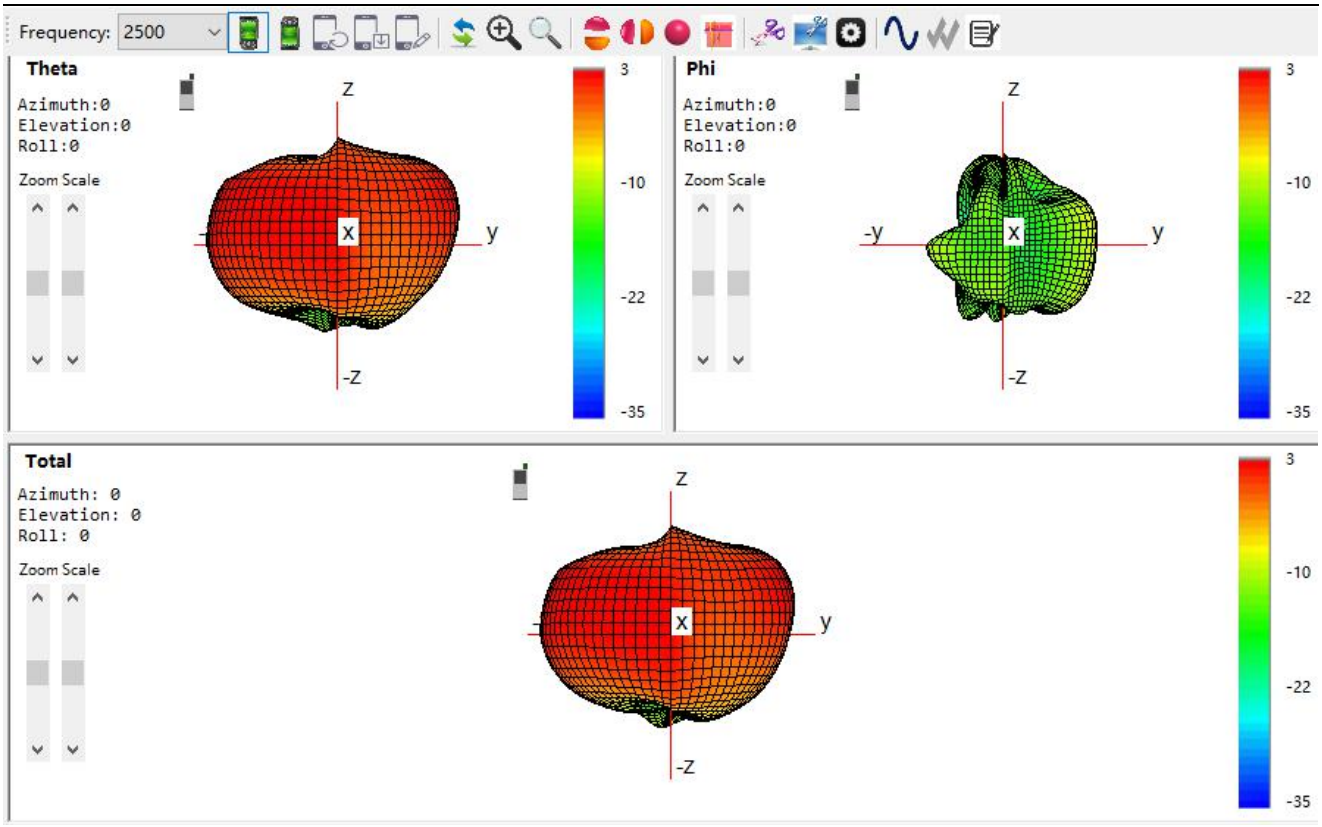
2.3.3 Gain Effi. & Ratiation Pattern of the Typical Sample

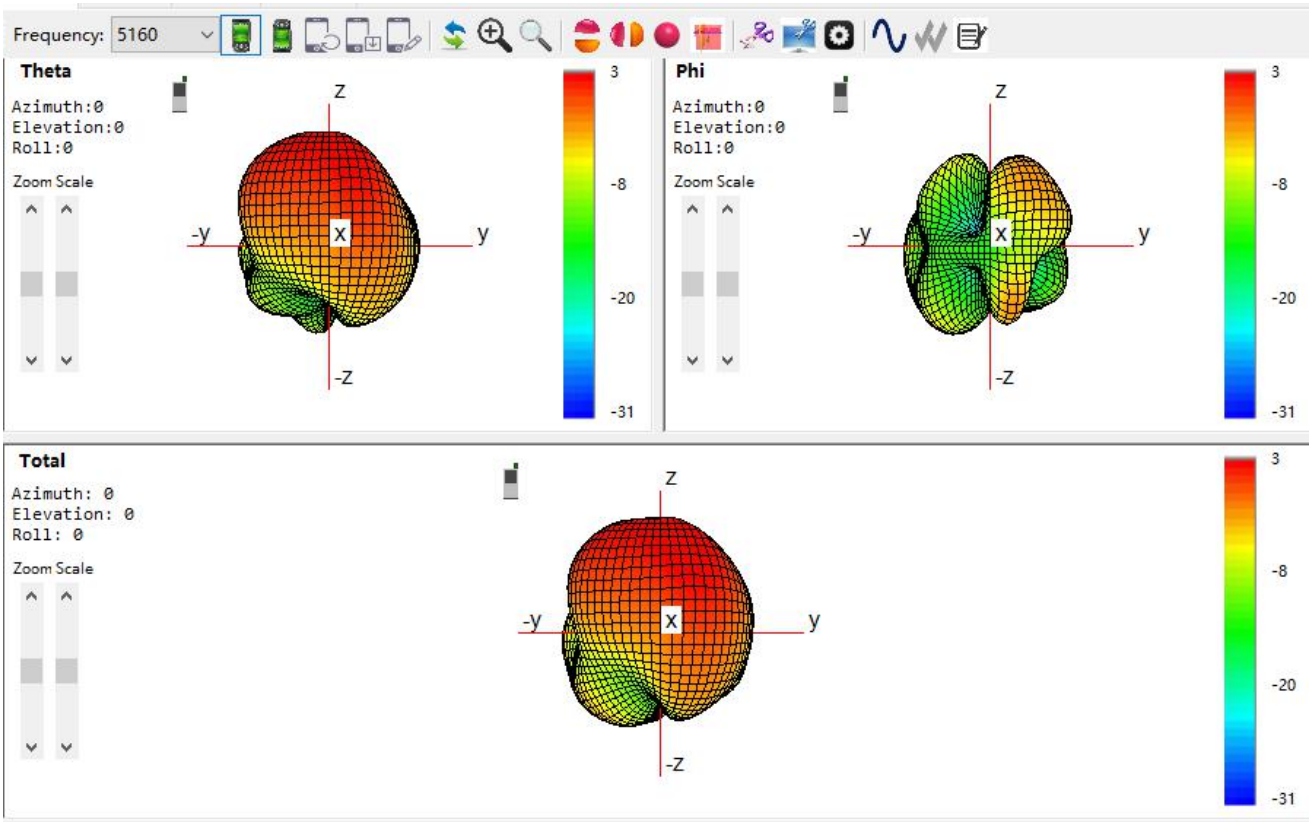
2.4G WiFi				5G WiFi			
	Effi	Gain	Effi		Effi	Gain	Effi
Freq	(dB)	(dBi)	(%)	Freq	(dB)	(dBi)	(%)
2400	-2.71	1.37	53.54	5160	-2.87	2.47	51.63
2410	-2.62	1.15	54.65	5200	-2.74	2.65	53.18
2420	-2.58	1.05	55.18	5240	-2.93	2.22	50.92
2430	-2.53	1.2	55.8	5280	-2.98	1.88	50.37
2440	-2.51	1.36	56.08	5320	-2.97	1.5	50.46
2450	-2.44	1.71	56.95	5360	-2.71	1.64	53.55
2460	-2.46	1.79	56.8	5400	-2.85	1.71	51.9
2470	-2.43	1.93	57.13	5440	-2.33	2.49	58.41
2480	-2.42	1.96	57.23	5480	-2.33	3.36	58.44
2490	-2.36	2.32	58.09	5520	-2.36	3.48	58.06
2500	-2.36	2.59	58.09	5560	-2.1	3.94	61.73
				5600	-1.99	4.33	63.24
				5640	-2.12	4.86	61.34
				5680	-1.82	5.14	65.84
				5720	-1.89	5.53	64.79
				5760	-2.15	5.41	61.01
				5800	-2.04	5.66	62.49
				5840	-2.19	5.58	60.41
				5880	-2.6	5.12	55.01

2.3.4 Antenna passive test radiation pattern









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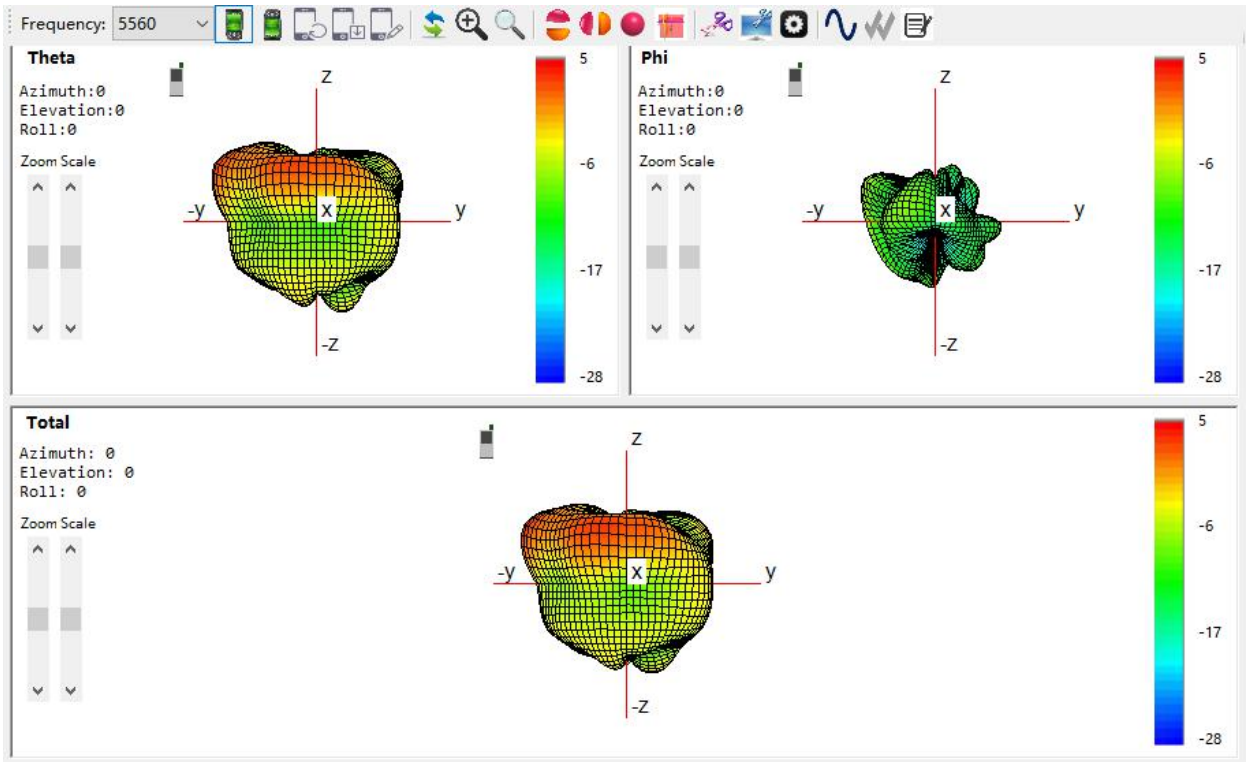

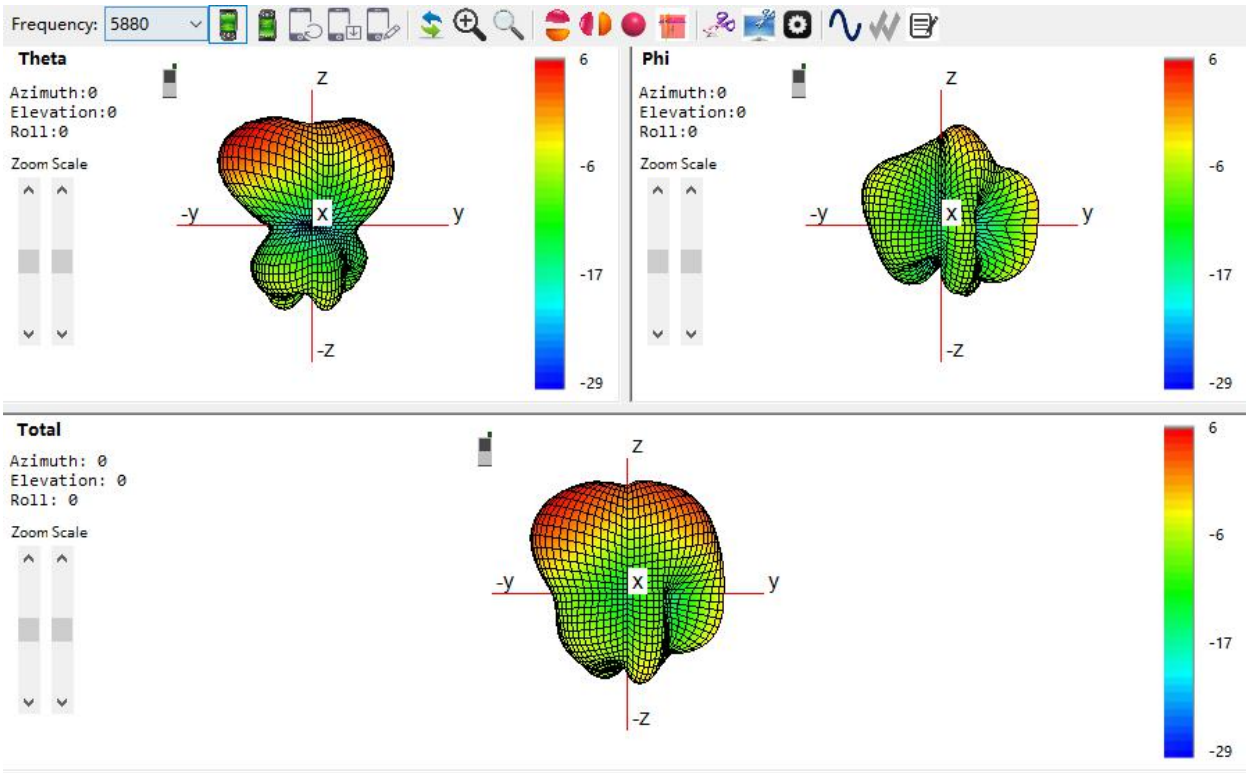

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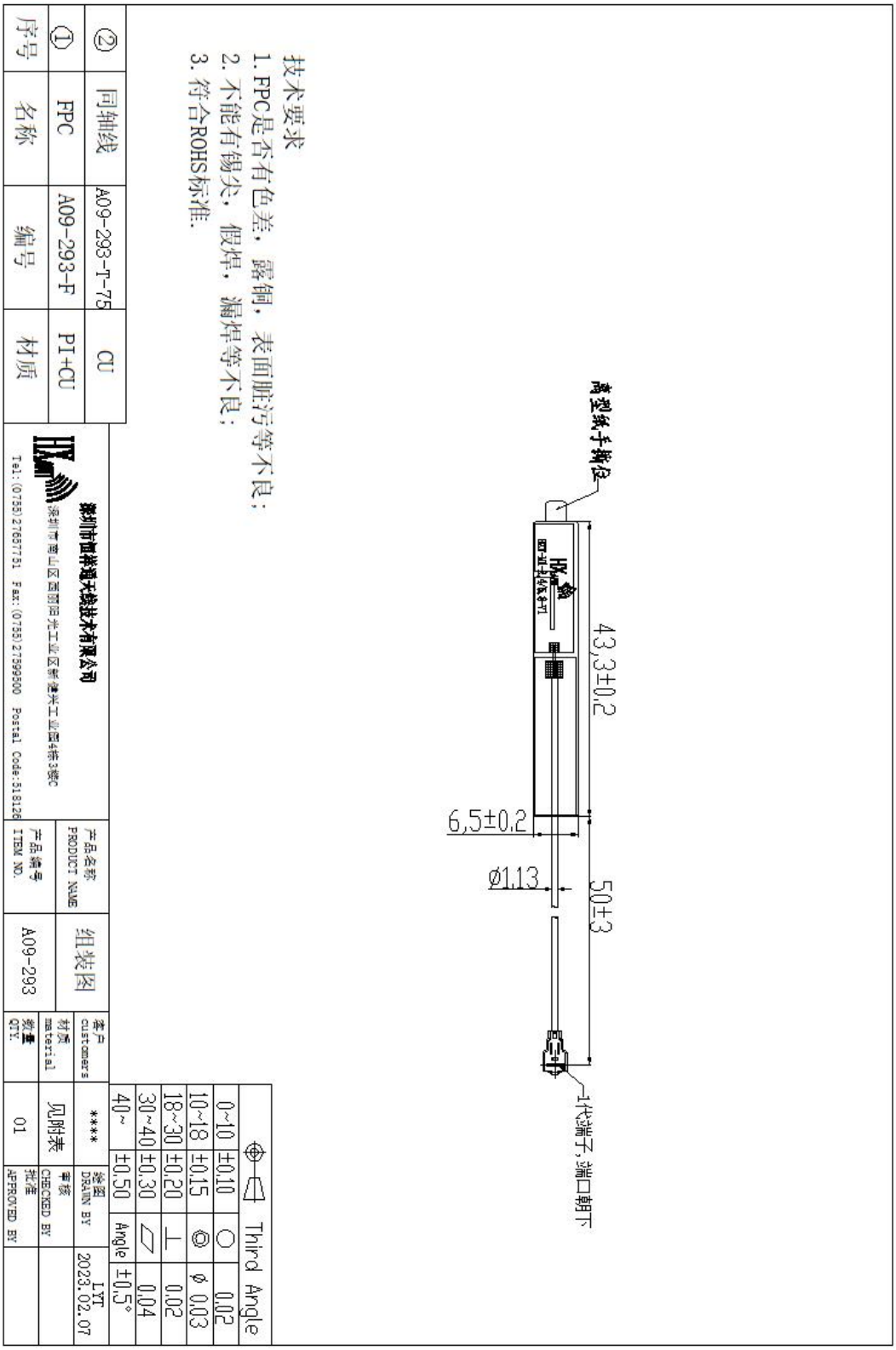
3. Mechanical Properties

3.1 Specifications Drawings



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4. 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

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