Antenna Specifications

CUSTOMER		普锐	
CS P/N		WP101	
HX P/N		A56-012-WP101	
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.

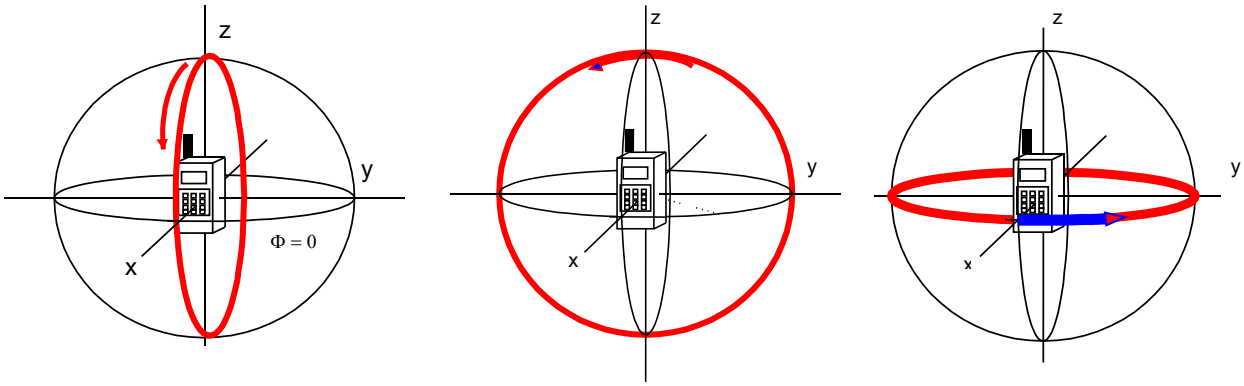
1.1 Print Acceptance

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 HX 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 ---WP101 Figure 2-1 shows the antenna designed by HX & The fixturing of WP101

Figure 2-1 The antenna designed by HX & The fixturing of WP101

2.1 Antenna frequency band and switching logic

网络模式	频段
WIFI	2.4G /5G

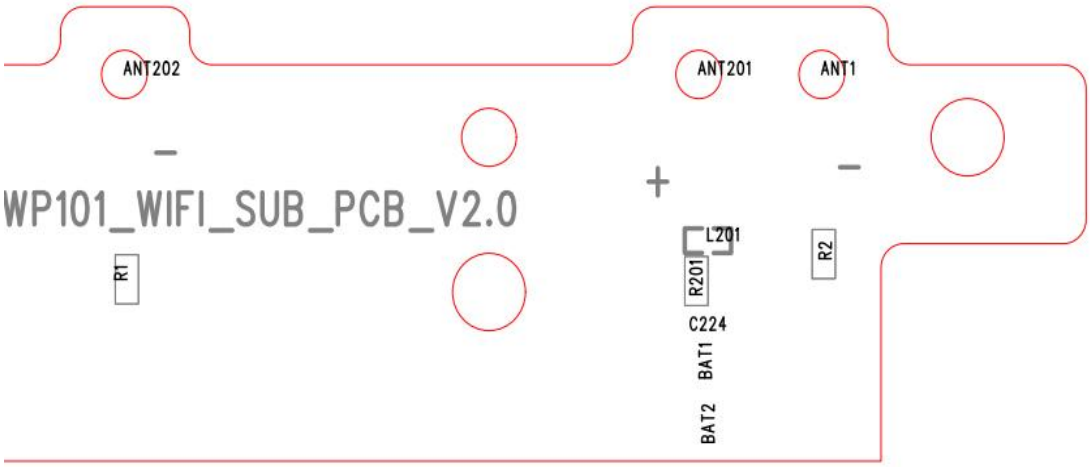
2.2 Impedance

2.2.1 Nominal

Nominal Impedance(including matching circuit) : 50 ohms

2.2.2 Matching Circuit

WiFi匹配	
位号	匹配值更改
L201	0.3pF
R201	0Ω
C224	2.2nH
R1	4.7pF
R2	NC
ANT201	贴
ANT202	贴
ANT1	NC



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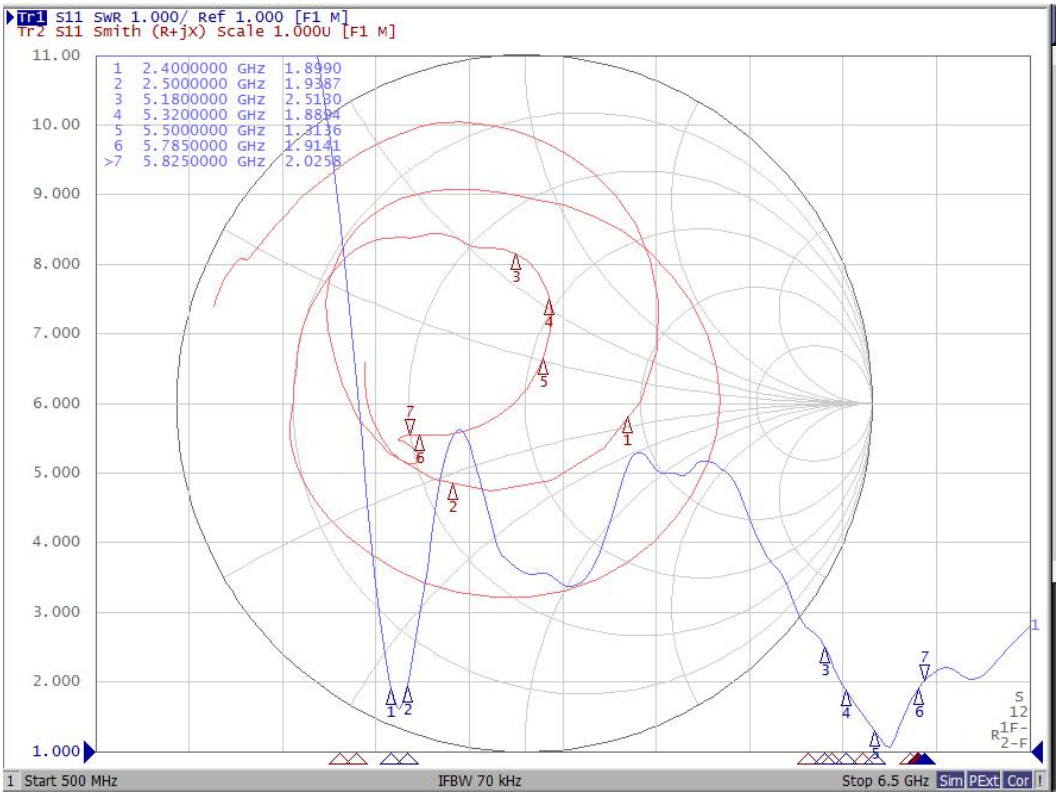
2.3 Passive Measurements

2.3.1 Parameters of antenna S11

2.4G/5G WIFI



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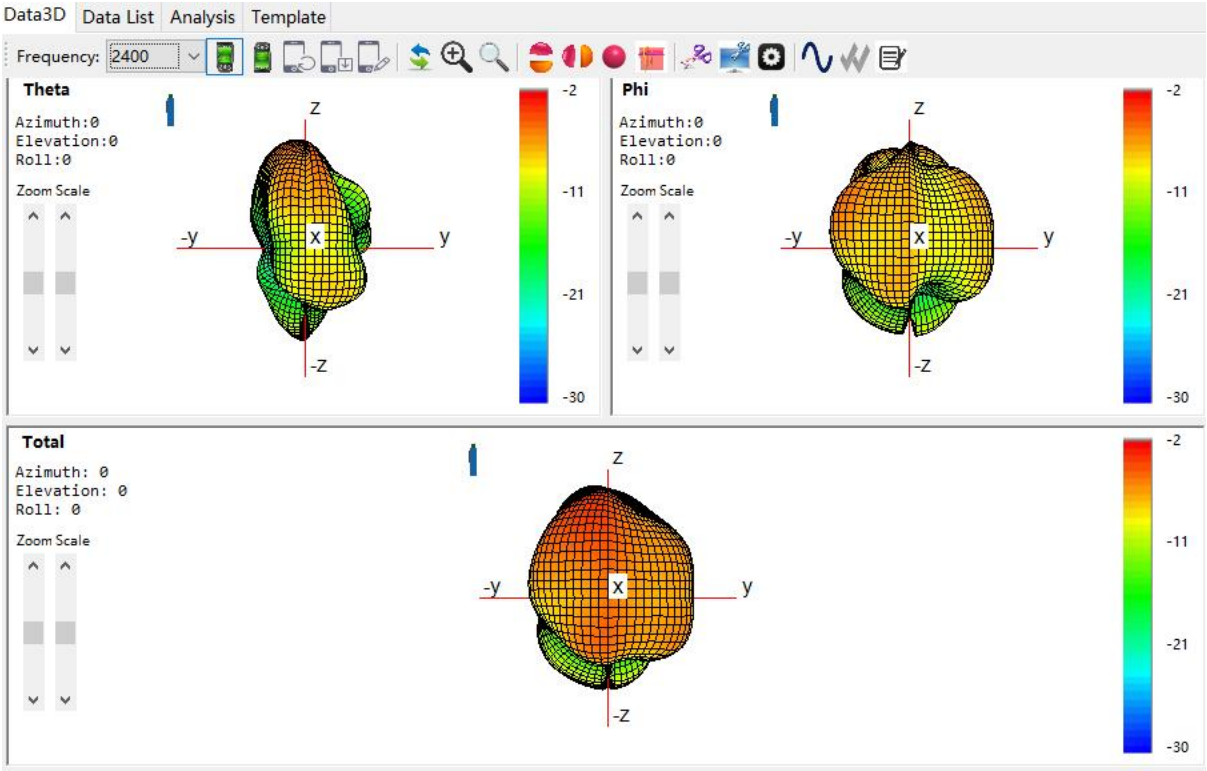
2.3.2 Passive efficiency of antenna

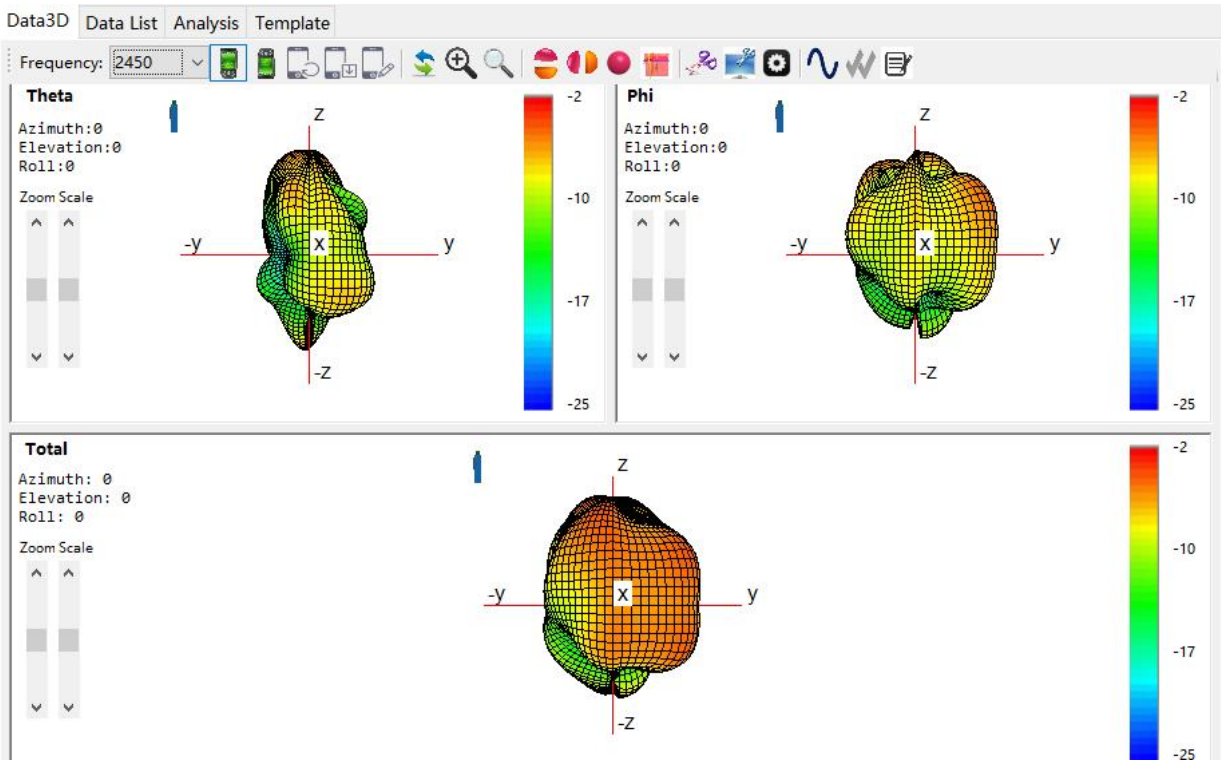
WIFI antenna								
(MHz)	Ave Gain (dB)	Peak Gain (dBi)	Effi (%)		(MHz)	Ave Gain (dB)	Peak Gain (dBi)	Effi (%)
2380	-7.65	-4.1	17.16		5400	-5.99	-1.96	25.2
2390	-7.47	-3.57	17.9		5420	-6.18	-2.39	24.08
2400	-7.39	-3.11	18.24		5440	-6.60	-3.3	21.87
2410	-7.44	-2.8	18.05		5460	-6.58	-3.15	21.99
2420	-7.38	-2.43	18.3		5480	-6.91	-3.69	20.39
2430	-7.30	-2.11	18.61		5500	-6.87	-4.23	20.58
2440	-7.22	-2.01	18.97		5520	-7.06	-4.31	19.68
2450	-7.07	-1.76	19.63		5540	-7.15	-4.68	19.26
2460	-7.07	-1.92	19.65		5560	-7.12	-4.42	19.43
2470	-7.07	-2.13	19.63		5580	-6.98	-3.83	20.04
2480	-7.04	-1.95	19.78		5600	-6.86	-4.03	20.6
2490	-6.97	-1.76	20.07		5620	-6.55	-3.54	22.13
2500	-6.99	-1.64	20.01		5640	-6.52	-2.97	22.27
					5660	-6.41	-2.48	22.84
5180	-5.95	-1.22	25.43		5680	-6.29	-2.09	23.47
5200	-5.81	-1.08	26.27		5700	-6.13	-1.41	24.37
5220	-5.63	-1.29	27.36		5720	-6.12	-1.19	24.41
5240	-5.57	-0.9	27.72		5740	-5.96	-1.07	25.33
5260	-5.70	-1.04	26.89		5760	-6.16	-0.33	24.2
5280	-5.61	-1.23	27.49		5780	-6.38	-0.33	23.02
5300	-5.88	-1.75	25.8		5800	-6.40	-0.5	22.93
5320	-5.92	-2.26	25.61		5820	-6.38	-0.58	23.02
5340	-5.97	-1.9	25.29		5840	-6.50	-0.62	22.39
5360	-6.11	-2.44	24.48		5860	-6.51	-1.36	22.33
5380	-5.95	-1.98	25.39		5880	-6.52	-1.37	22.27

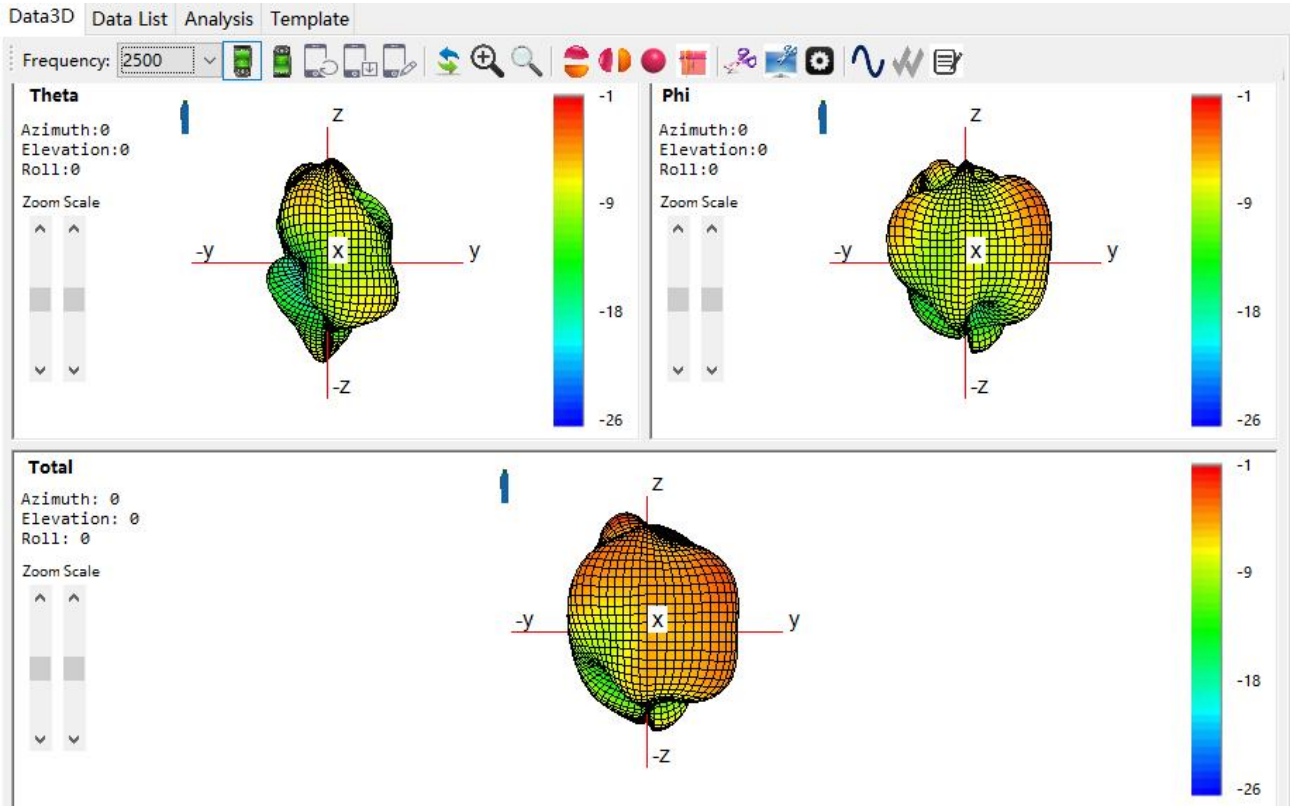
2.4 Active Measurements

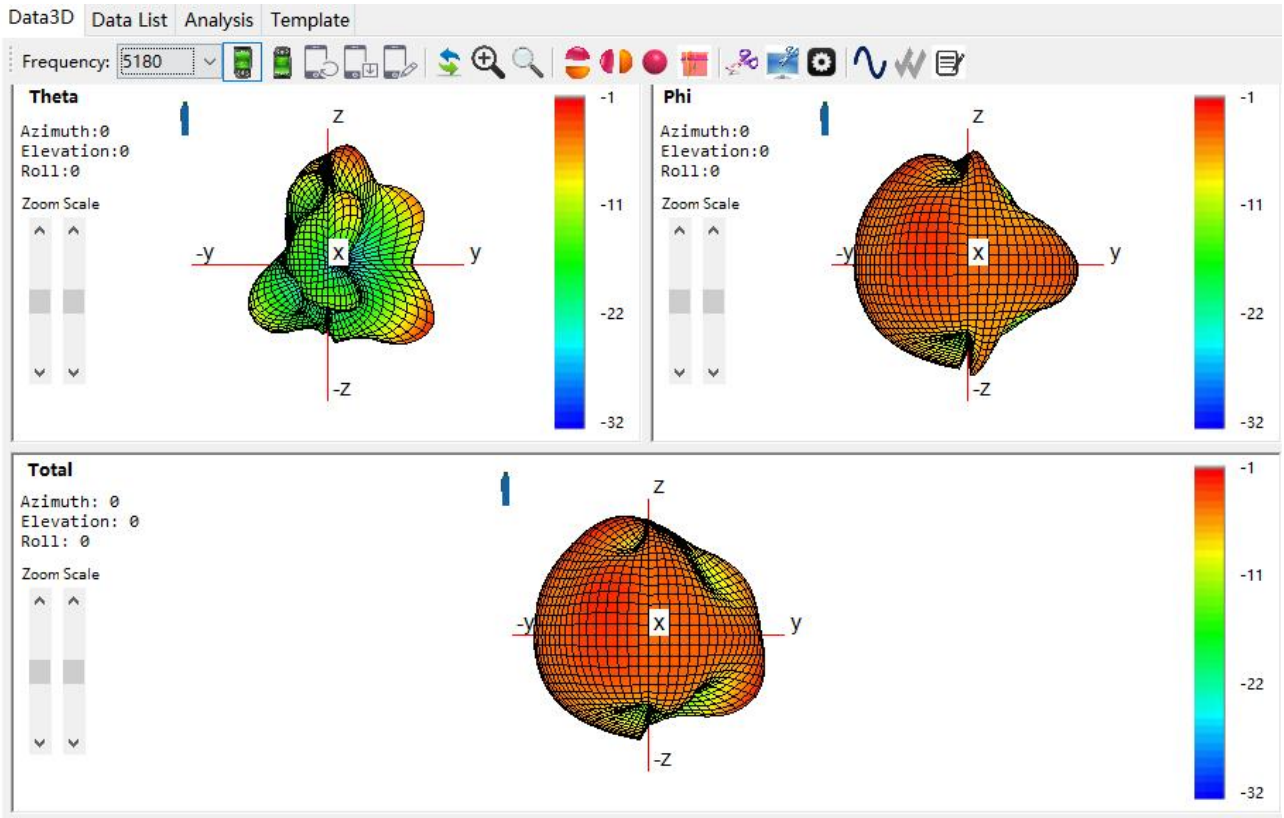
		传导数据		WiFi没屏蔽罩		WiFi有屏蔽罩	
测试带宽	CH	POWRE	SENSITIVITY	TRP	TIS	TRP	TIS
11b : 11MBps	1	17.6	-86	10.12	-77.39	10.51	-78.35
	7	17.4	-86	11.18	-78.21	11.38	-78.63
	13	17.1	-87	10.55	-78.17	10.99	-78.51
11a : 54MBps	36	16.8	-76	9.11	-67.08	10.07	-68.29
	64	16.5	-76	10.13	-67.71	9.67	-67.13
	140	15.8	-74	10.29	-66.62	9.61	-67.08

3. Antenna radiation pattern









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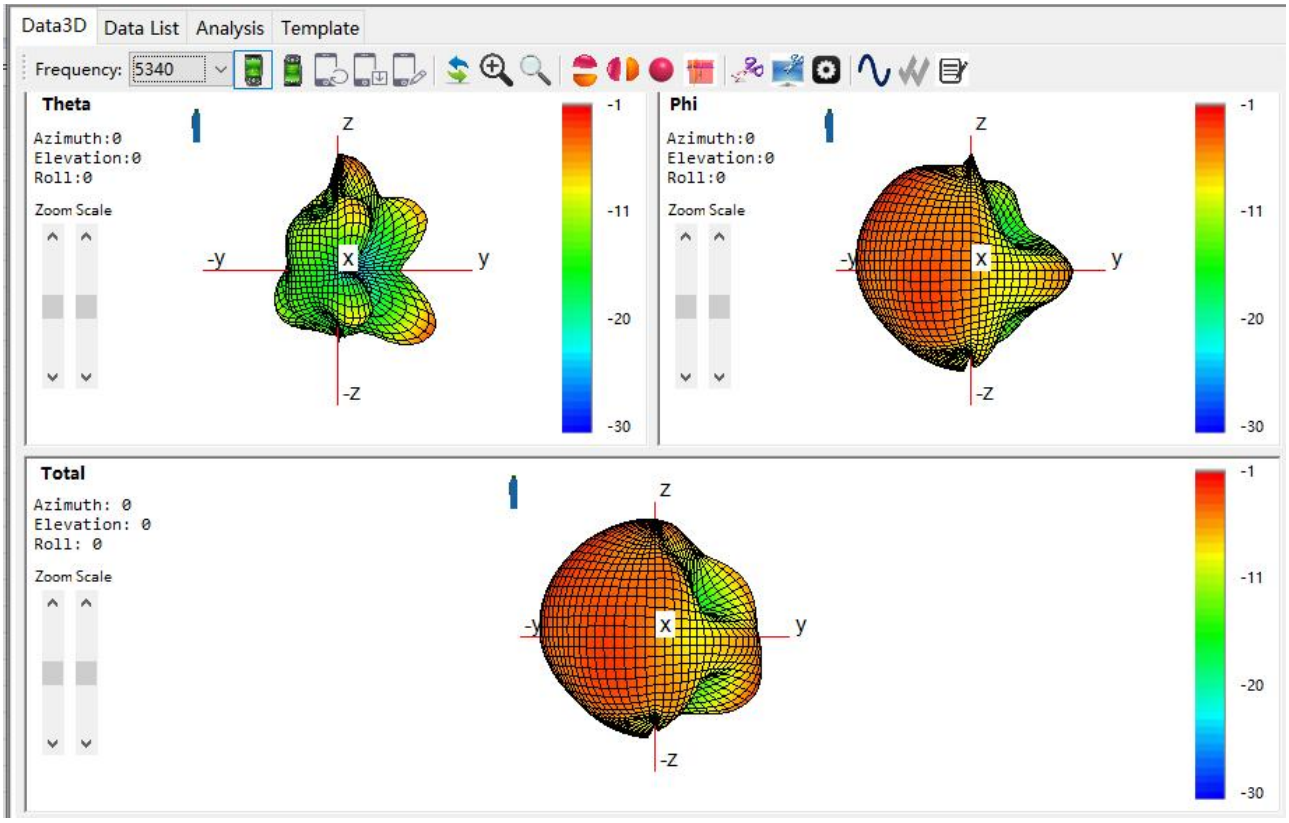
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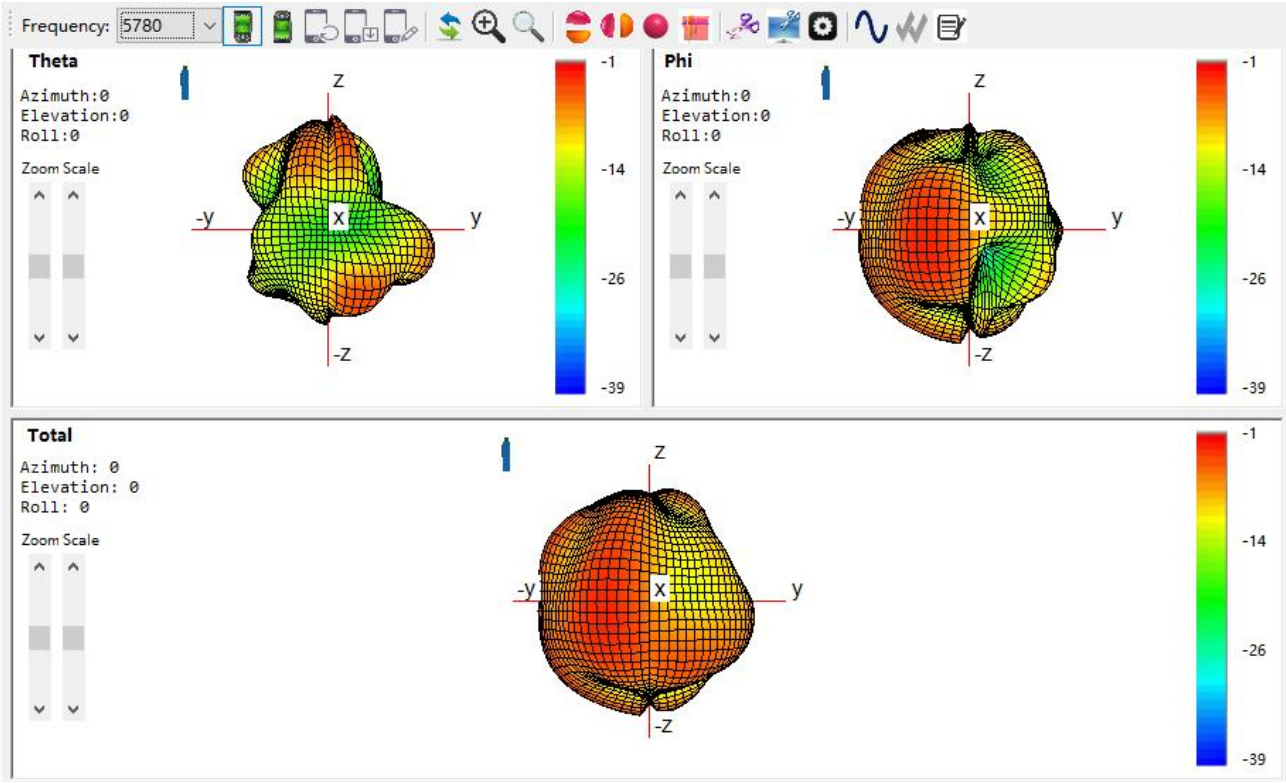
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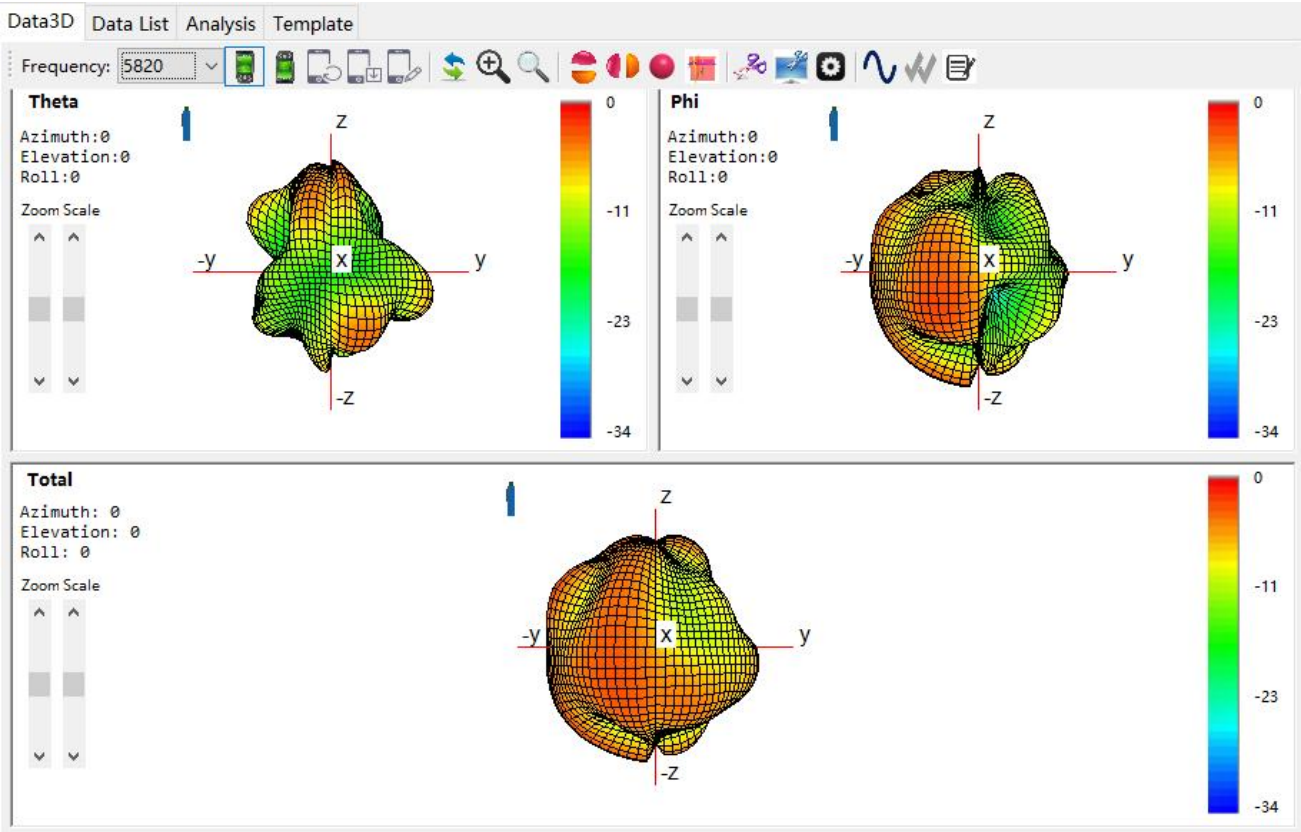

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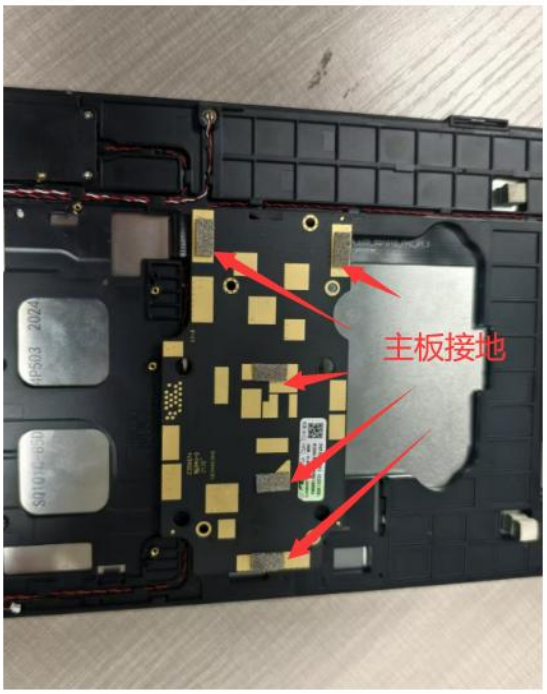
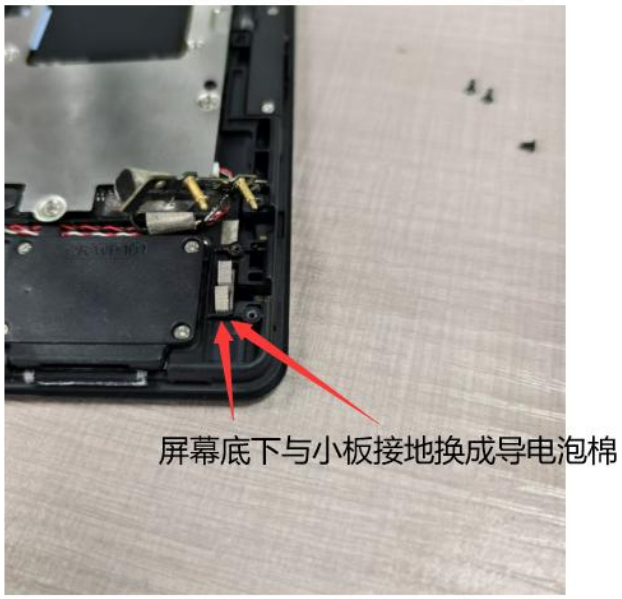
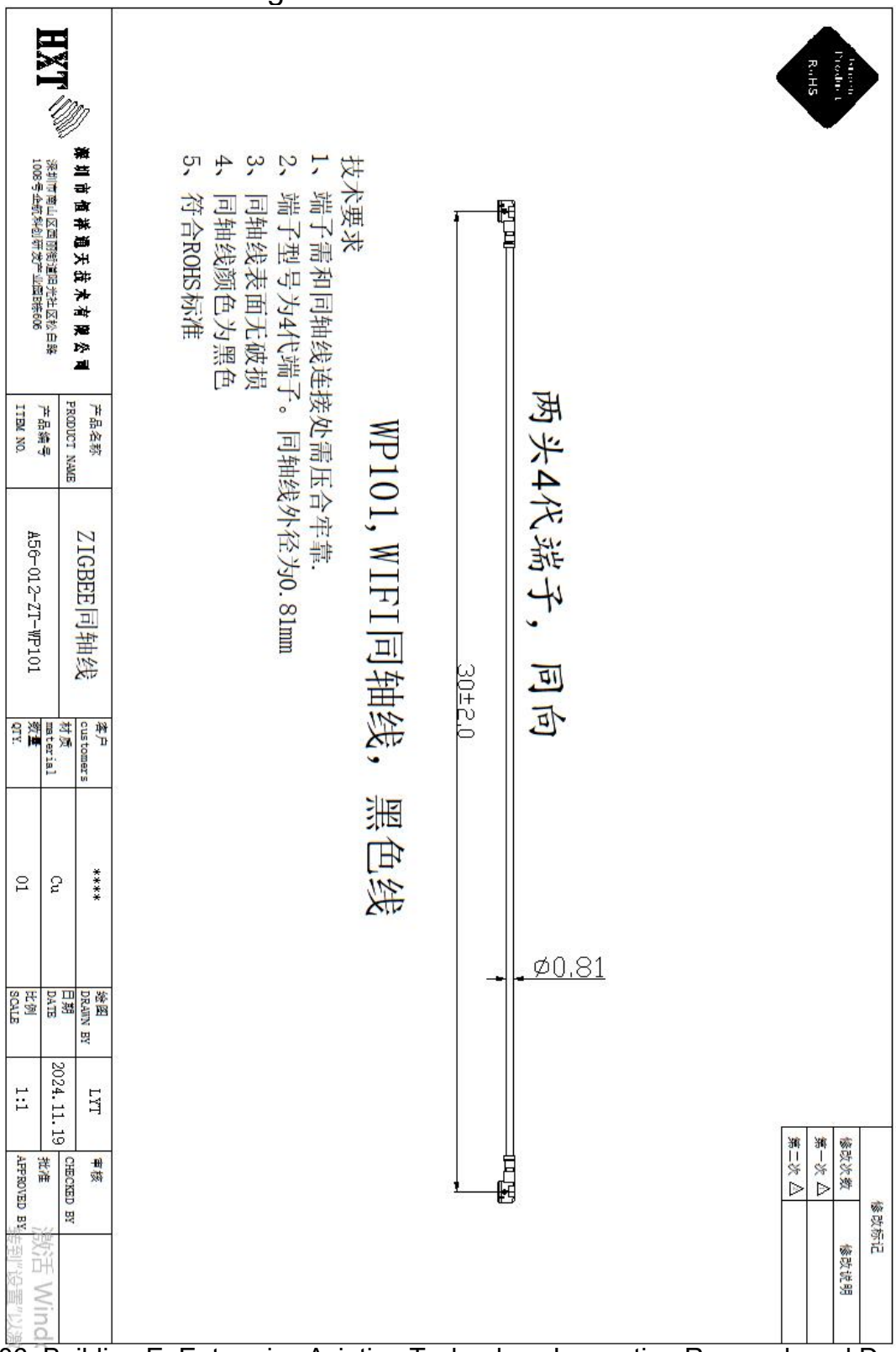
4. Environmental treatment of the whole machine

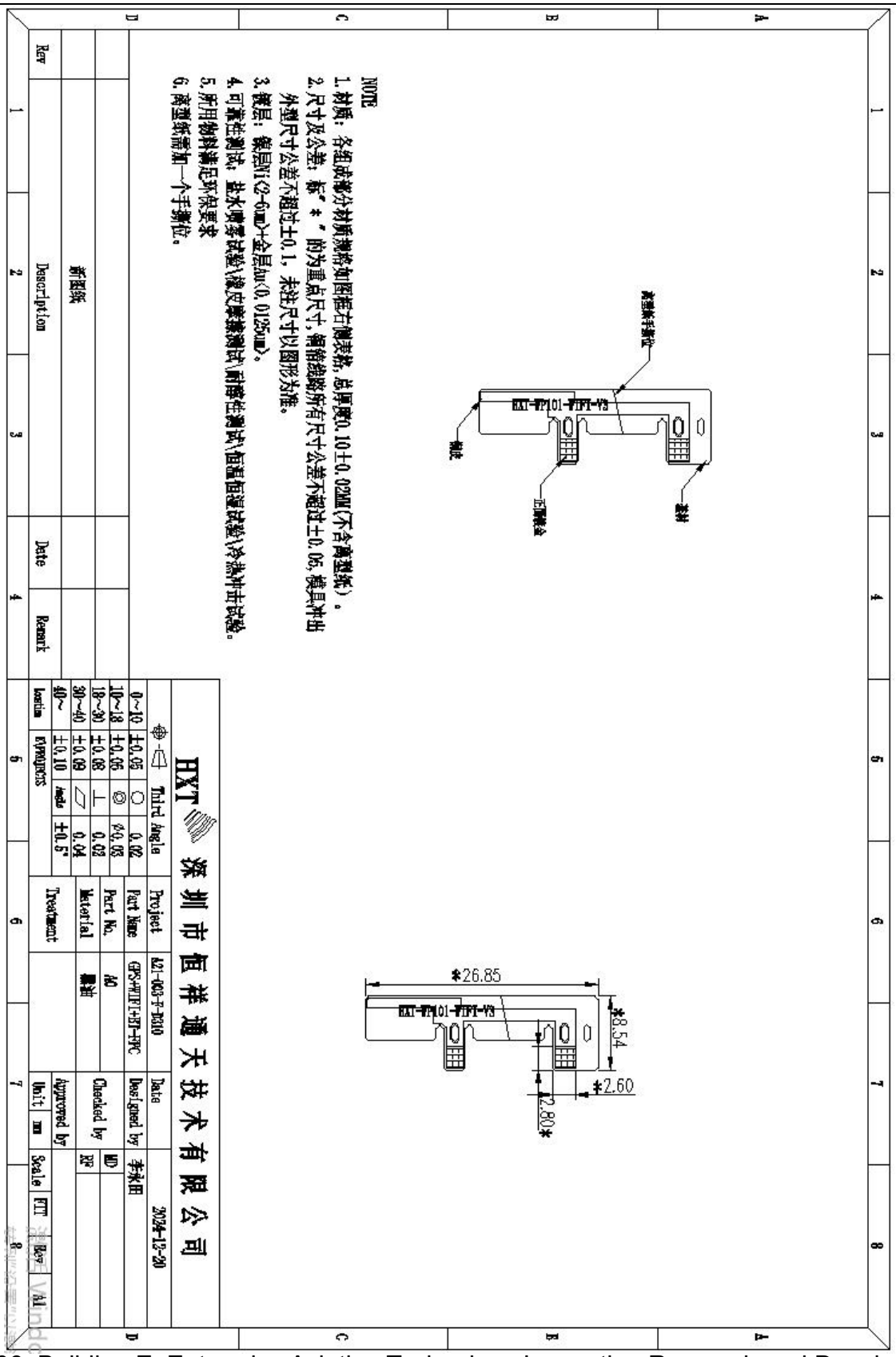




5. Mechanical Properties

5.1 Specifications Drawings





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6. 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