

Antenna Specifications

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

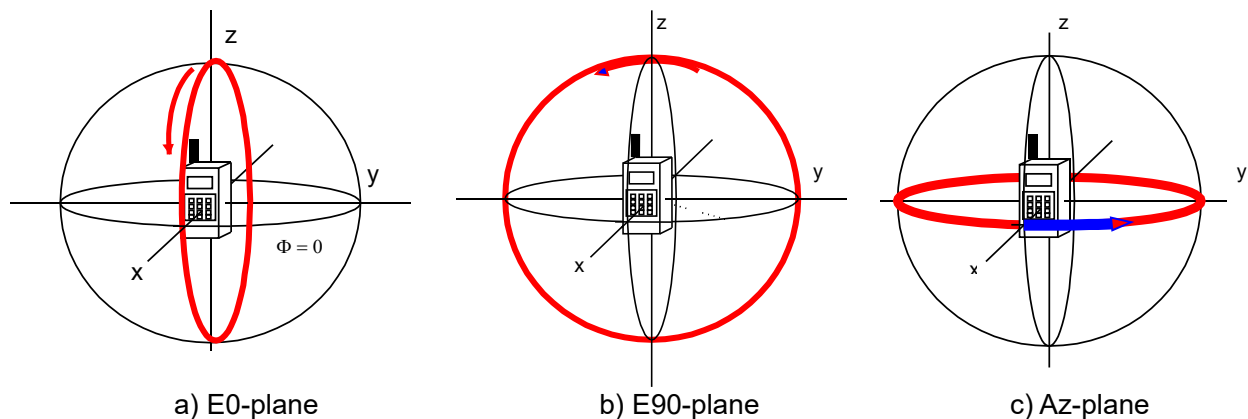


Figure 1-1 The coordinate system for the phone

2. Specifications

This report mainly provides the testing conditions of various electric and structural performance parameters for cell 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

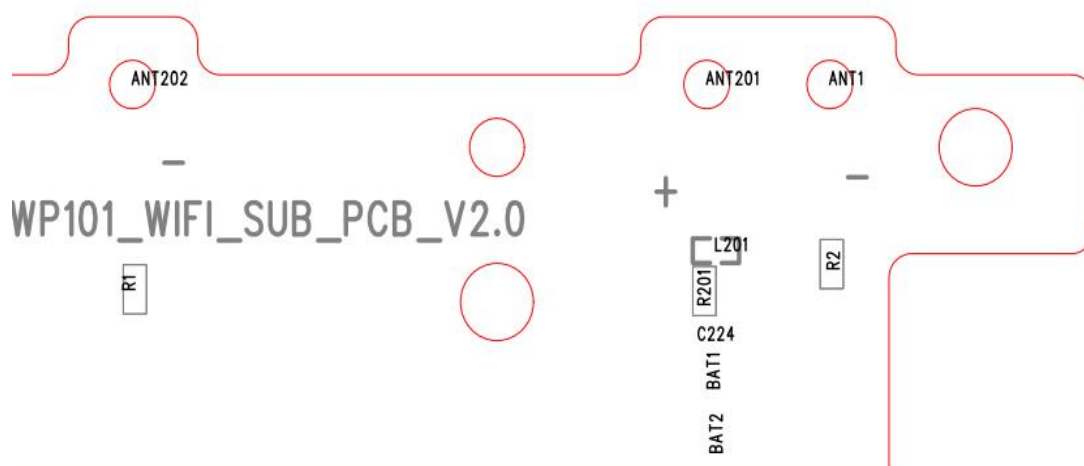
2.2 Impedance

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



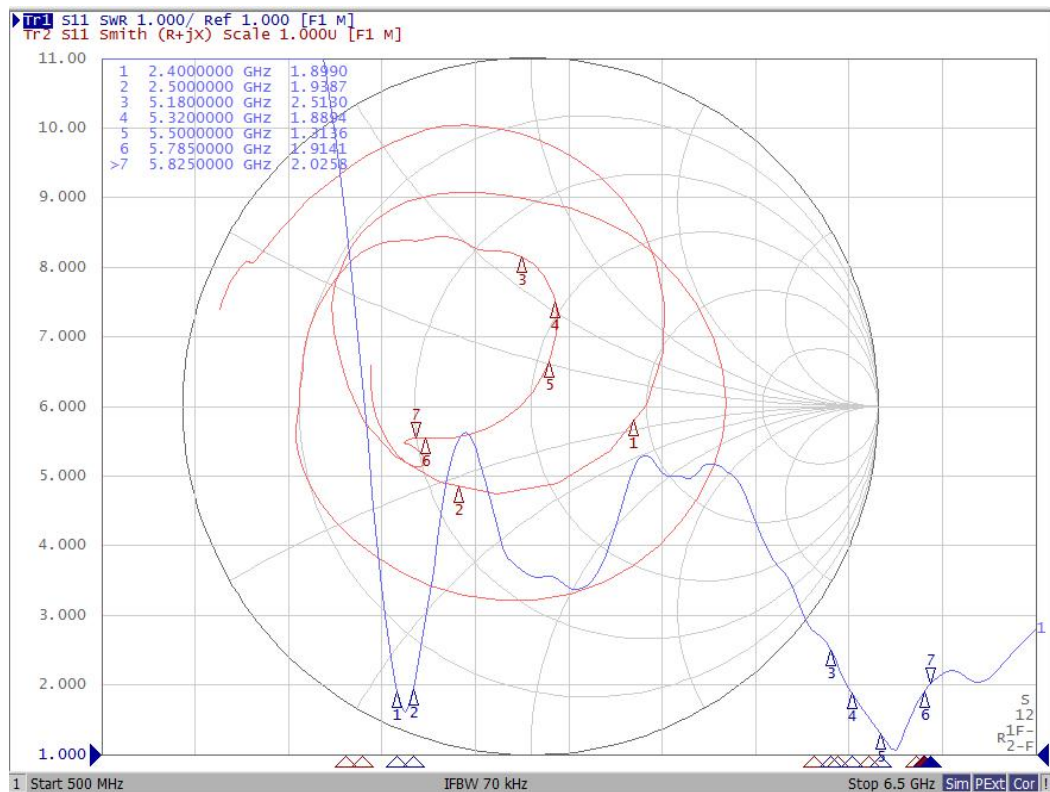
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2.3 Passive Measurements

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

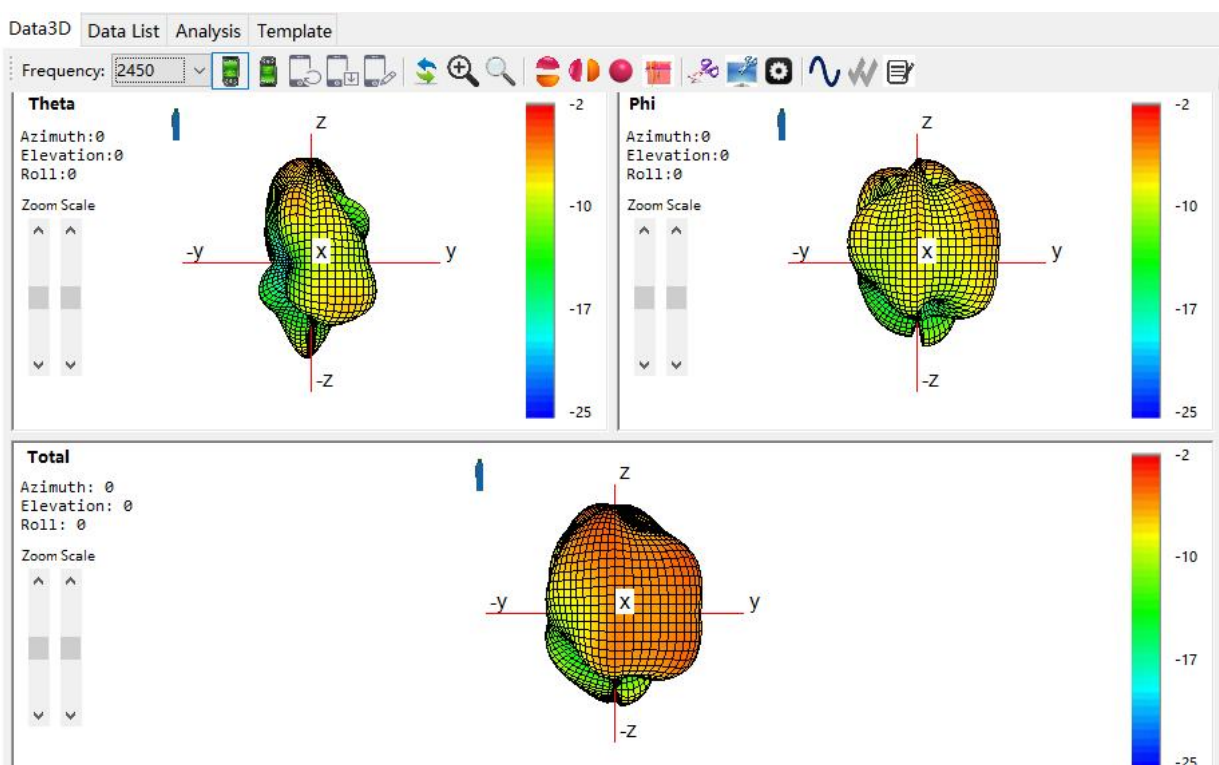
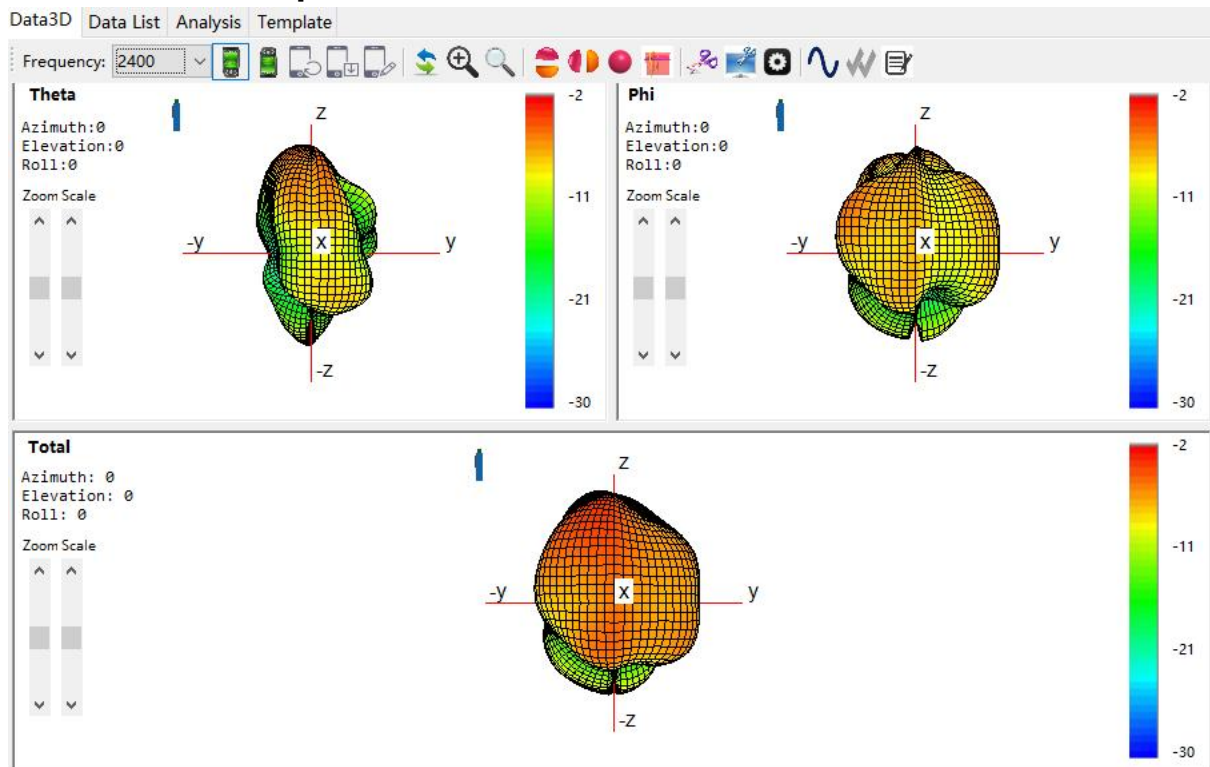
2.4 Active Measurements

测试带宽	CH	传导数据		WiFi没屏蔽罩		WiFi有屏蔽罩	
		POWRE	SENSITVIT	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

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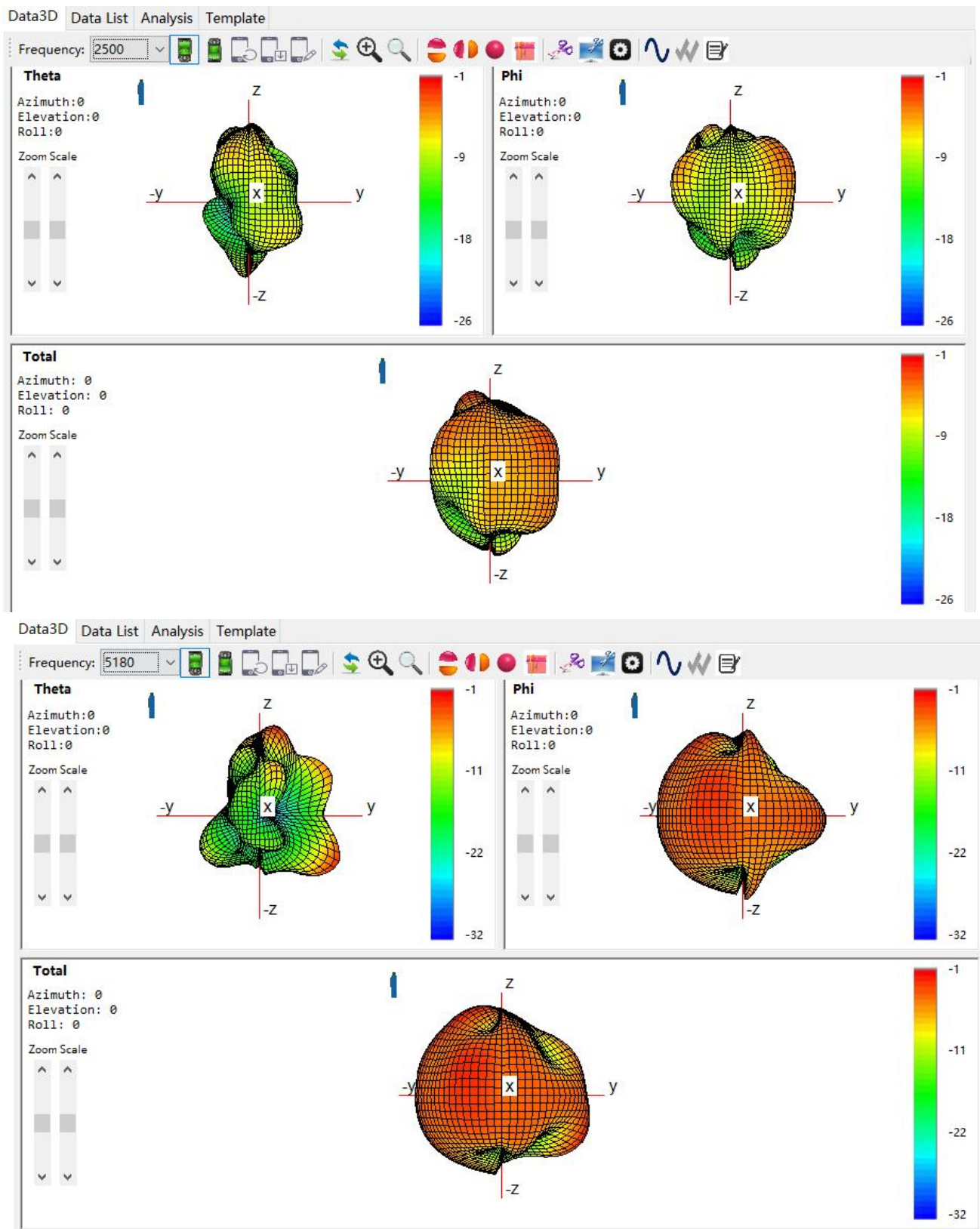
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3. Antenna radiation pattern



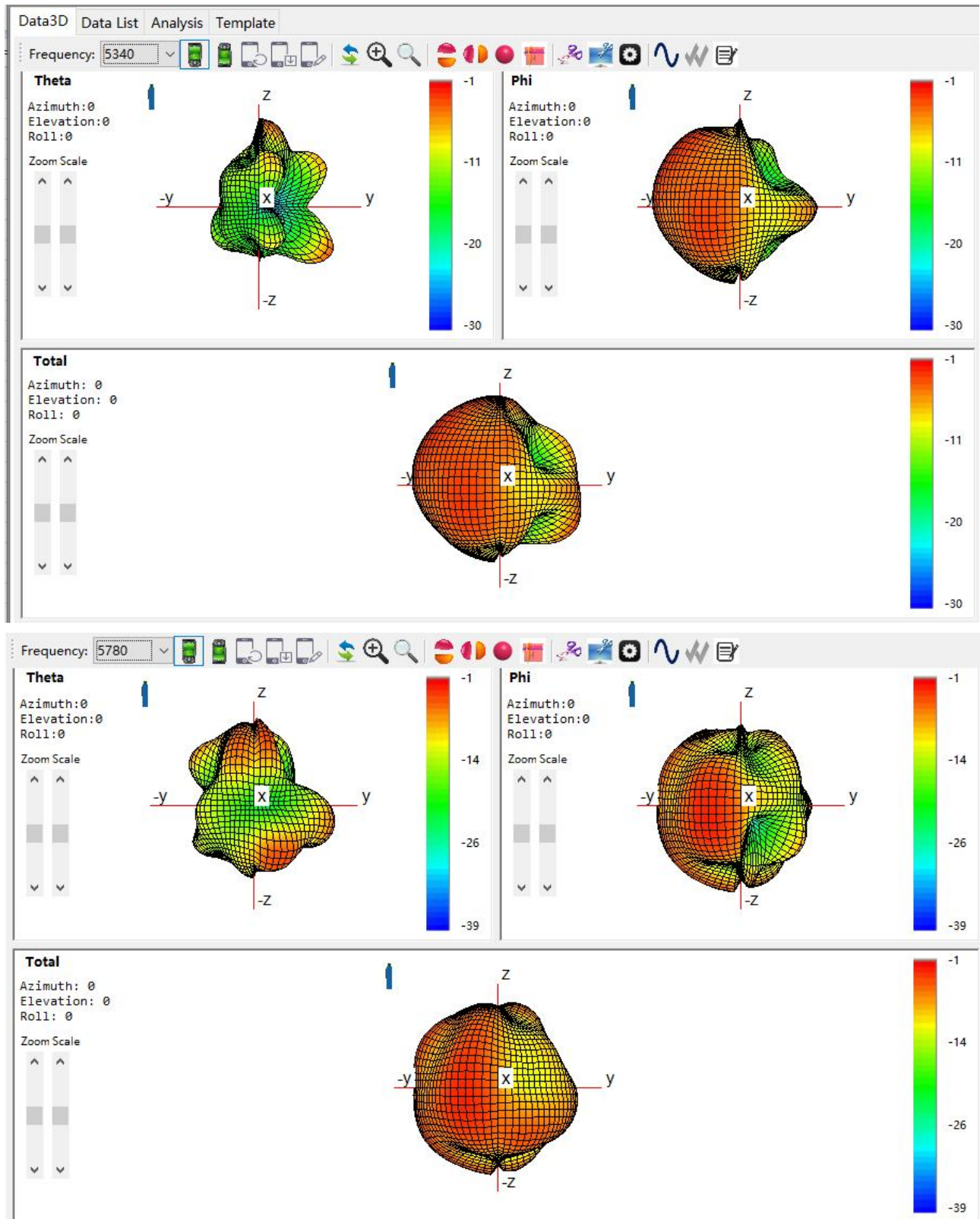
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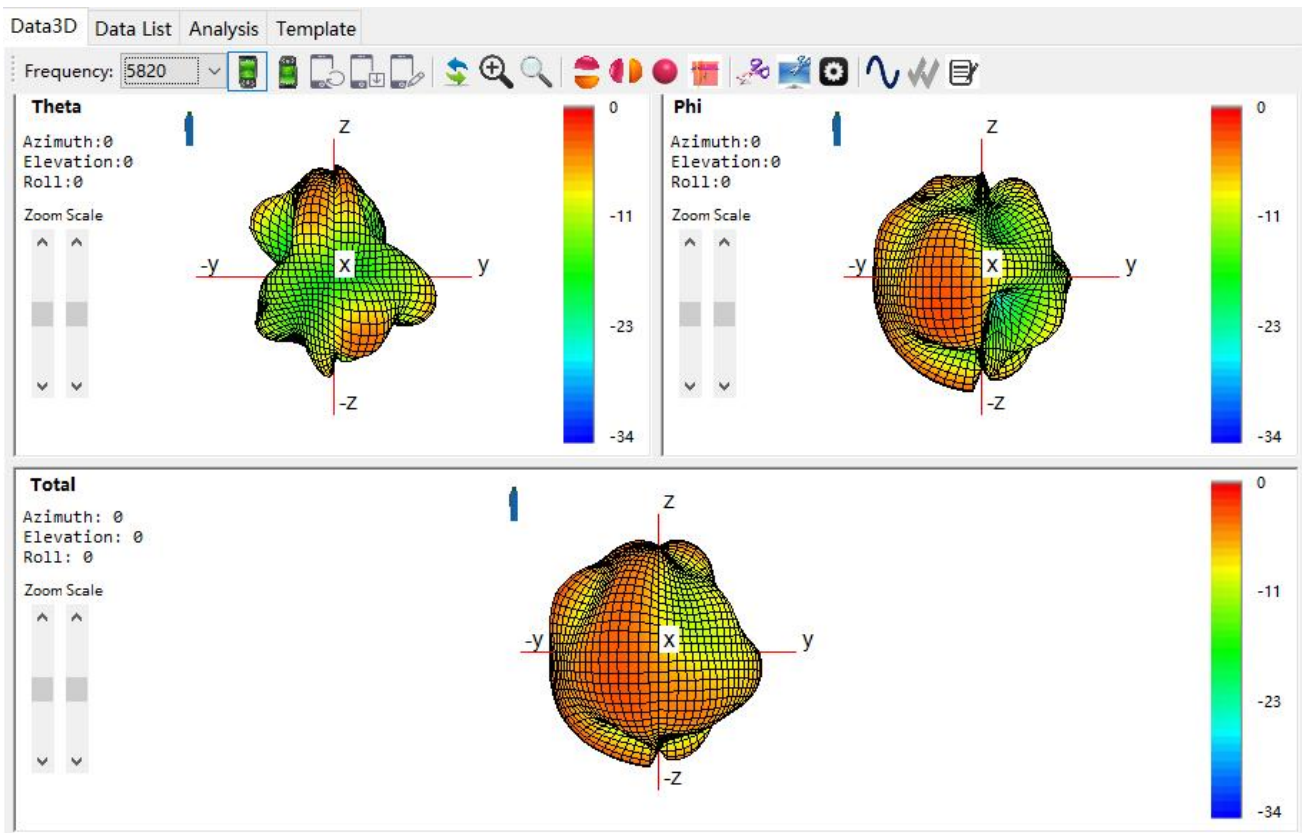
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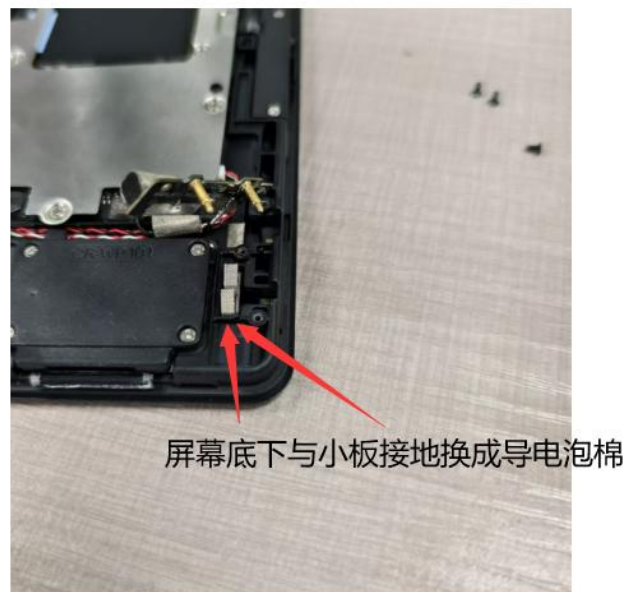
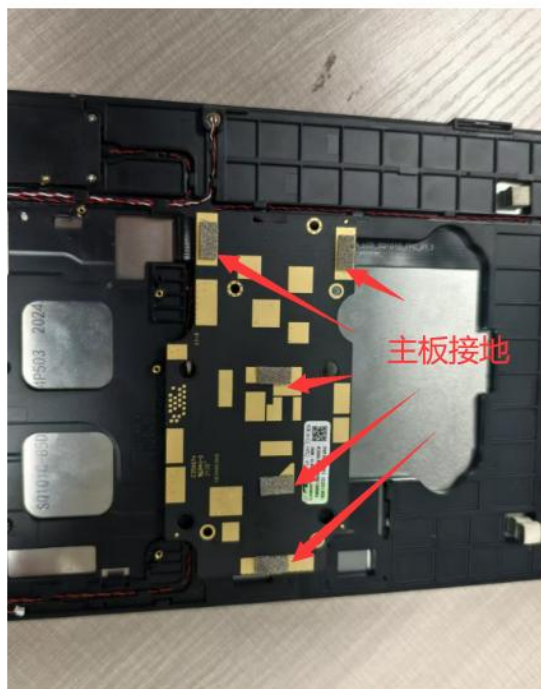
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4. Environmental treatment of the whole machine





5. Mechanical Properties

5.1 Specifications Drawings

修改标记			
修改次数	修改说明		
第一次 △			
第二次 △			

技术要求

- 1、端子需和同轴线连接处需压合牢靠.
- 2、端子型号为4代端子。同轴线外径为0.81mm
- 3、同轴线表面无破损
- 4、同轴线颜色为黑色
- 5、符合ROHS标准

WP101, WIFI同轴线, 黑色线

客户	材料	数量	日期	比例	审核
Customer's	Material	Qty.	DATE	SCALE	CHECKED BY
*****	Cu	01	2024.11.19	1:1	批准
					激活 Wind

产品名称	PRODUCT NAME	客户	材料	数量	日期	比例	审核
ITEM NO.				Qty.	DATE	SCALE	CHECKED BY
ZIGBEE同轴线	A56-012-ZT-WP101	*****	Cu	01	2024.11.19	1:1	批准
激活 Wind							

深圳市恒祥通天线技术有限公司
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6. 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