

Antenna Test report

Model Name: XLK-X76-WT-T863-HNH

Date: May 14, 2025

Shenzhen Xinlingke Technology Co., Ltd.

www.kpantenna.com

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01.Project Introduction and Photoes-Project Introduction



RF Engineer	Engineer Kong	Email	2532625702@qq.com
		Mobile	18477016343
Antenna Overview			
Status of Sample machine	Whole machine	Project Name	XLK-X76-WT-T863-HNH
Antenna Type	PIFA	Structure mode	FPC+Fourth generation terminal coaxial line
Main Antenna	2G:850/900/1800/1900 3G:850/1900 4G:B2.3.4.5.7.8.28		
Other Antenna	Diversity Three-in-one antenna		

02.Report Versions



Version	Report Time	Commissioning Overview
A0	May 14, 2025	Antenna Test Report
A1		
A2		
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		

03.Introduction of Company and Test Environment- Company



Company Experience

Shenzhen Xinlingke Technology Co., Ltd. owns 12 years of experience in R & D and production of various mobile communication terminals. Company has established a joint RF device laboratory with universities. Company is proficient in antennas of 5G NSA and SA, ultra thin mobile phones, NB IOT / EMTC, and base station.



Product Range

The products of company cover many fields, such as smart home, Internet of vehicles, smart wear, mobile phones, pad, base station etc.



Core Task

Company has been committed to improving our long-term competitiveness by providing whole RF solution, insisted on taking customer demand as the first place.

04.Introduction of Company and Test Environment-Test Environment



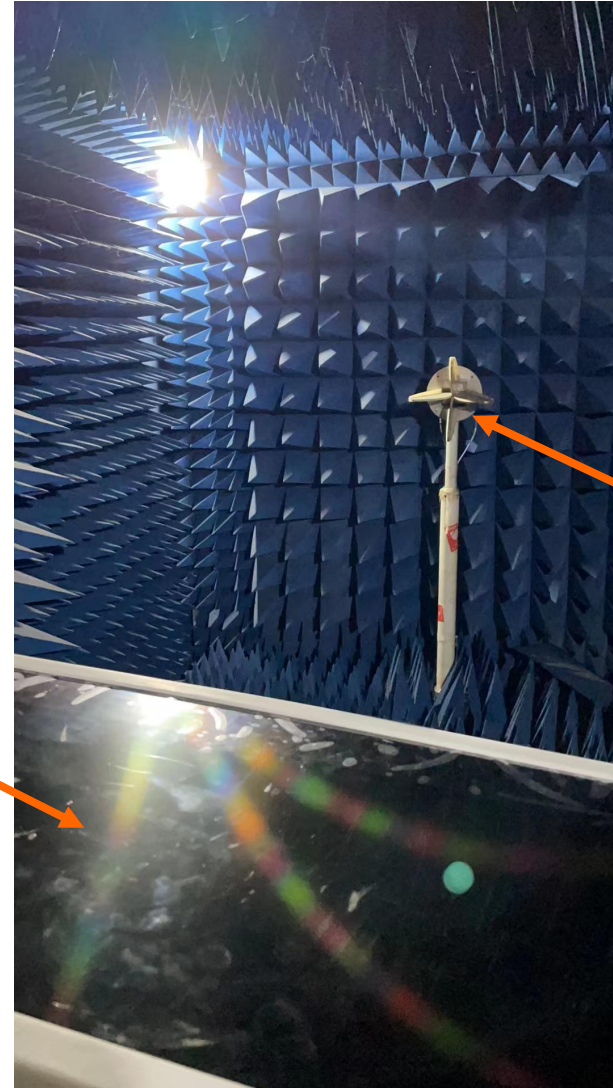
The company owns several OTA darkrooms whose frequency bands covers from 400mhz to 8.5ghz.

- Providing OTA test for whole machine which include but not be limited to 5G NSA, SA(trp/tis), WiFi active test (supporting 11b/11g/11n/11ax mode), bluetooth/GPS active test
- Providing antenna gain and efficiency
- Providing 2D pattern / Apple chart analysis
- Providing upper and lower hemisphere efficiency
- Providing mutual interference correlation coefficient test items.

05.Environment Test



Location of
Tested
Machine



Location of
Loudspeaker

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06.Antenna correlation data



Main antenna active data

Band	Channel	TRP	TIS
B2	L	15.21	
	M	16.41	
	H	13.57	-90.21
B3	L	15.57	
	M	16.24	
	H	14.67	-89.24
B4	L	14.57	
	M	14.11	
	H	14.21	-89.17
B5	L	17.21	
	M	17.24	
	H	17.27	-88.57

Band	Channel	TRP	TIS
B7	L	12.21	
	M	12.21	
	H	11.73	-84.7
B8	L	13.24	
	M	11.24	
	H	10.24	-85.47
B28A	L	10.31	
	M	11.24	
	H	11.09	-88.37

07.WIFI active data



2.4G WIFI active data

2.4GWIFI	802.11b (11M)		
channel	1	7	13
TRP	12.25	13.52	13.1
TIS			-81.61

5G WIFI source data

5GWIFI	802.11a (54M)			
channel	36	64	149	165
TRP	12.24	12.01	9.68	8.64
TIS				-68.44

08. GPS/BT/ measured data



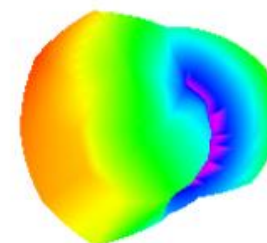
GPS searches for stars in our company with a positioning time of 1 minute. Bluetooth unobstructed 12 meter listening to music smoothly.



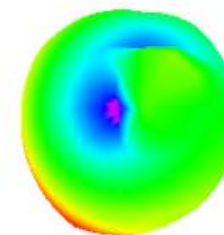
07. Gain data

Freq (MHz)	Gain (dBi)	Freq (MHz)	Gain (dBi)	Freq (MHz)	Gain (dBi)	Freq (MHz)	Gain (dBi)
700	-4.85	1700	-0.5	2000	-0.95		
710	-3.94	1710	0.62	2010	-2.23		
720	-3.69	1720	0.05	2020	-1.53		
730	-3.62	1730	0.09	2030	-0.89		
740	-3.96	1740	0.46	2040	-1.01	2500	0.25
750	-3.32	1750	0.17	2050	-0.64	2510	0.27
760	-3	1760	-0.02	2060	-0.86	2520	0.49
770	-3.1	1770	0.03	2070	-0.46	2530	0.28
780	-3.26	1780	-0.21	2080	-1.29	2540	-0.02
790	-2.91	1790	-0.12	2090	-0.83	2550	-0.39
800	-2.2	1800	0.67	2100	-0.33	2560	-0.48
810	-1.94	1810	0.67	2110	-0.54	2570	-0.32
820	-1.47	1820	0.52	2120	-1.03	2580	-0.1
830	-0.75	1830	0.38	2130	-0.91	2590	-0.34
840	-0.62	1840	1.28	2140	-0.12	2600	-0.32
850	-0.24	1850	1.39	2150	-0.71	2610	0.5
860	-0.93	1860	0.81	2160	-1.1	2620	0.09
870	-1.95	1870	0.36	2170	-0.71	2630	-0.12
880	-2.73	1880	1.87	2300	-1.22	2640	-0.27
890	-3.54	1890	1.14	2310	-1.09	2650	0.45
900	-4.42	1900	1.2	2320	-0.87		
910	-5	1910	0.81	2330	-0.45		
920	-4.63	1920	1.41	2340	-0.57		
930	-5.33	1930	1.04	2350	-0.29		
940	-5.5	1940	1	2360	0.43		
950	-6.72	1950	1.22	2370	-0.1		
		1960	0.71	2380	-0.03		
		1970	-0.12	2390	0.51		
		1980	-0.49	2400	0.39		
		1990	-0.19	2500	0.25		
		2000	-0.95	2510	0.27		
				2520	0.49		
				2530	0.28		
				2540	-0.02		

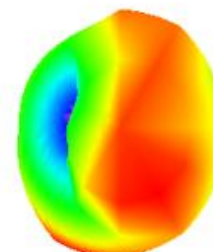
700.000MHz



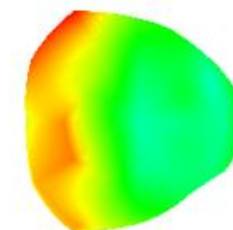
820.000MHz



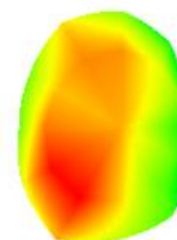
900.000MHz



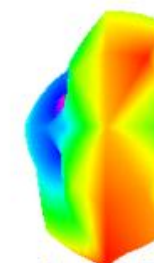
1710.000MHz



1900.000MHz



2550.000MHz



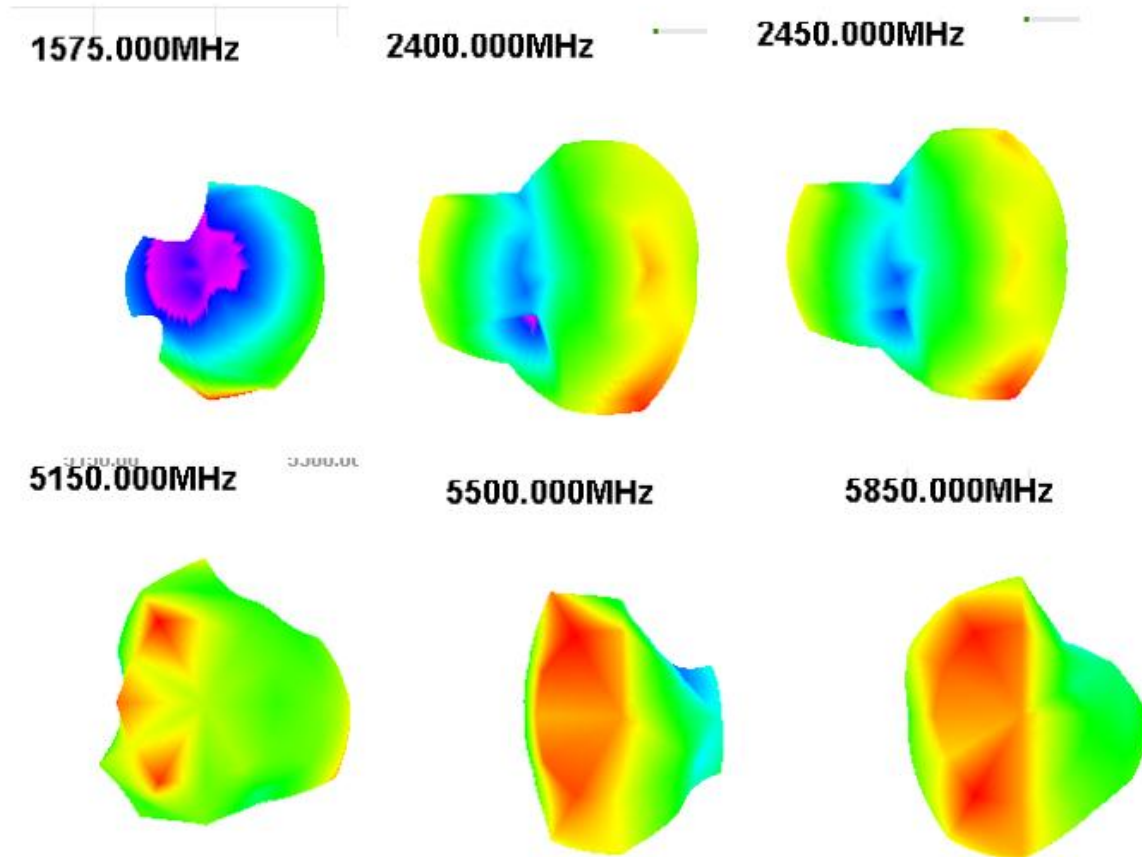
7. Gain data



Freq (MHz)	Gain (dBi)
1550	-2.94
1555	-2.98
1560	-2.95
1565	-2.89
1570	-3.07
1575	-3.06
1580	-2.76
1585	-2.71
1590	-3
1595	-3.28
1600	-3.32

Freq (MHz)	Gain (dBi)
2400	-3.17
2410	-2.91
2420	-2.97
2430	-3.2
2440	-2.59
2450	-2.56
2460	-2.81
2470	-3.28
2480	-3.1
2490	-3.32
2500	-3.7

Freq (MHz)	Gain (dBi)
5150	-0.44
5200	-2.76
5250	-3.63
5300	-3.47
5350	-2.76
5400	-2.45
5450	-1.82
5500	-1.2
5550	-1.6
5600	-1.99
5650	-2.04
5700	-1.23
5750	-2.37
5800	-2.52
5850	-1.87



08. Antenna position diagram



Triple antenna
position



Array antenna
position

Main antenna
position

Here it needs to be folded down
and pasted

09.environmental treatment



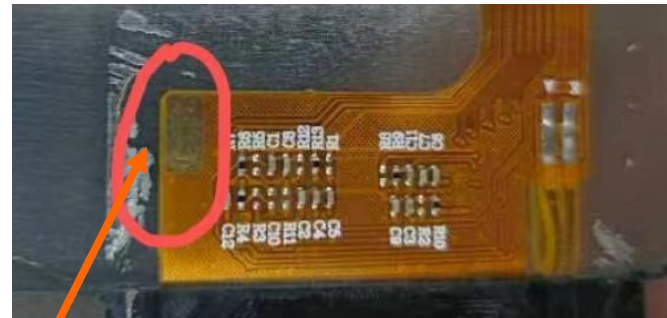
Main antenna is grounded with conductive cloth

Conductive cloth for cable tape

09.environmental treatment



Grounding with
conductive cloth at the
place of the wiring device

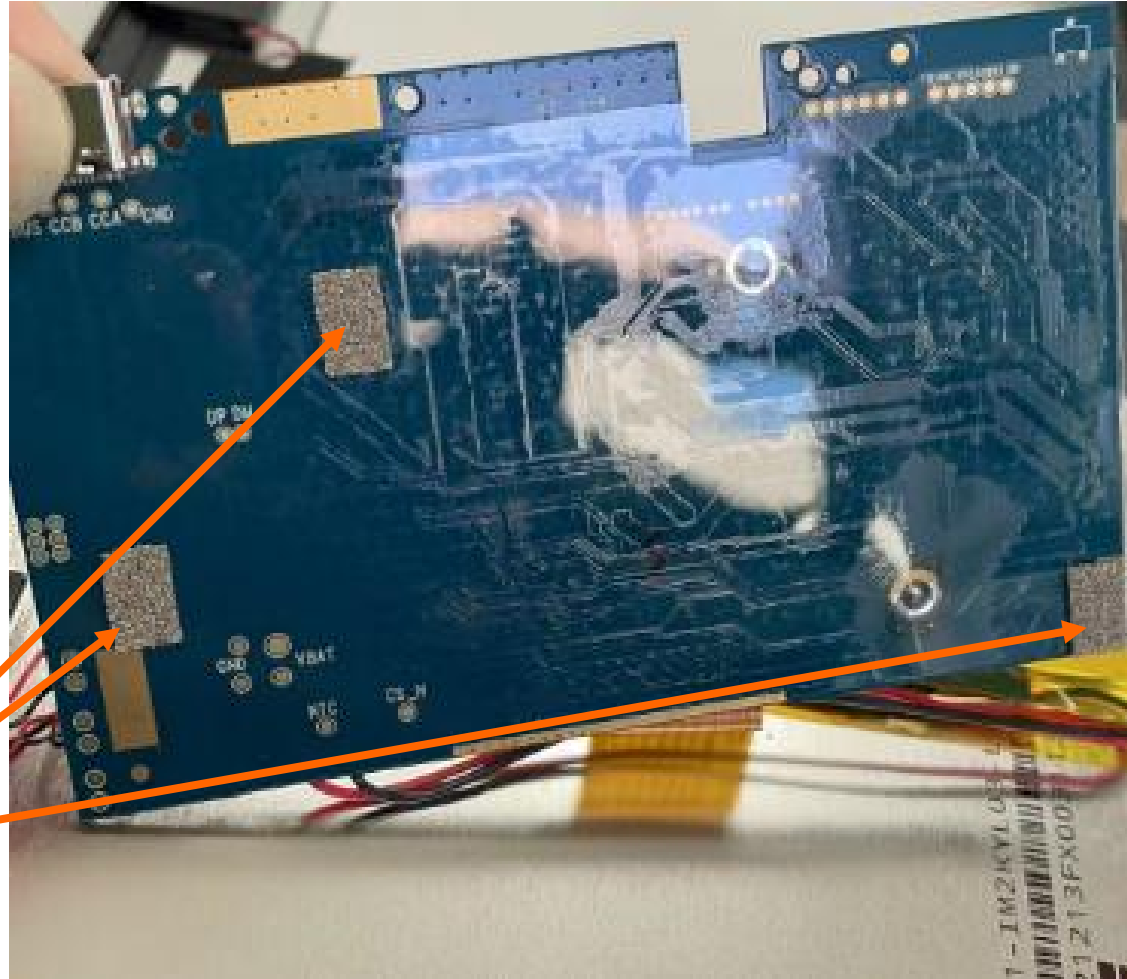


Here, try to paste the
conductive cloth to
the ground.



Conductive cloth for cable harness

09.environmental treatment



Mainboard and
screen
grounding

The background features a dark blue gradient with several overlapping, stylized chevron or arrow shapes pointing towards the center. These shapes are in various shades of blue, from light to dark, creating a layered, 3D effect.

THANKS!

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