

Shenzhen Xinlingke Technology Co., Ltd



Antenna Test Report

Model: M8-T310

Date: 2023-9-9

www.kpantenna.com

01.Project Overview and Physical Photos - Project Overview



RF engineer	KONG	Mailbox	2532625702@qq.com
		Phone	18477016343
Antenna Overview			
Prototype status			
Antenna type	PIFA	Structural style	
main	2G: 2 3 5 8 3G: 2 5 4G: 2 4 5 7 12 17 41		

01. Project Overview and Physical Photos - Physical photos



Front photo



Reverse photo



Interior photos



02.Report Version Record

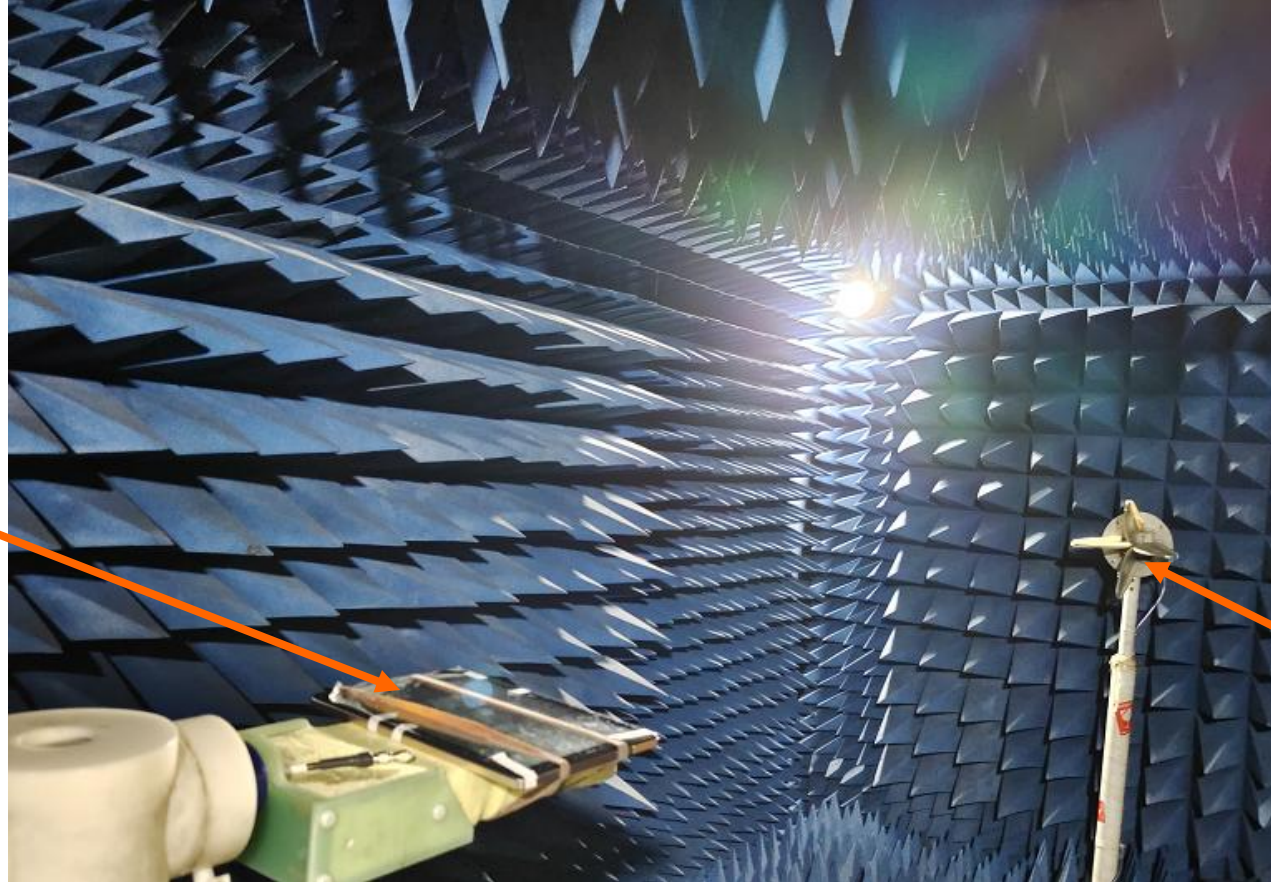


Version	Report Time	Debugging Overview
A0	2023.03.16	Antenna Test Report
A1	2023.03.18	Antenna Test Report
A2	2023.03.20	Antenna Test Report
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		

04. Testing environment



Location of the tested object

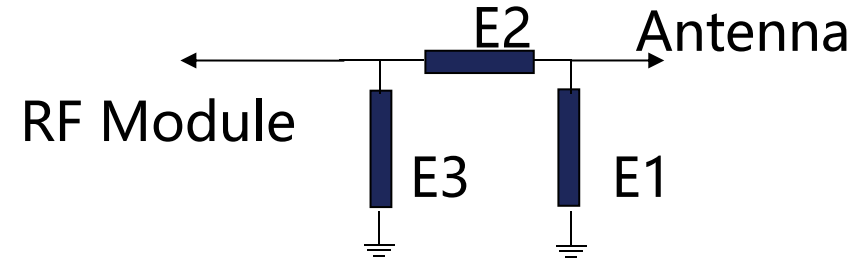


Horn antenna
position

05. Matching circuit



Element	Value
E1(0402)	
E2(0402)	
E3(0402)	



Unchanged

06.Antenna related data

Main antenna active data



Band	Channel	TRP	TIS
B2	L	17.17	
	M	16.25	
	H	15.72	-90.3
B4	L	17.81	
	M	18	
	H	17.8	-91.36
B5	L	11.99	
	M	11.55	
	H	11.12	-82.5
B7	L	16.28	
	M	16.06	
	H	15.81	-86.62

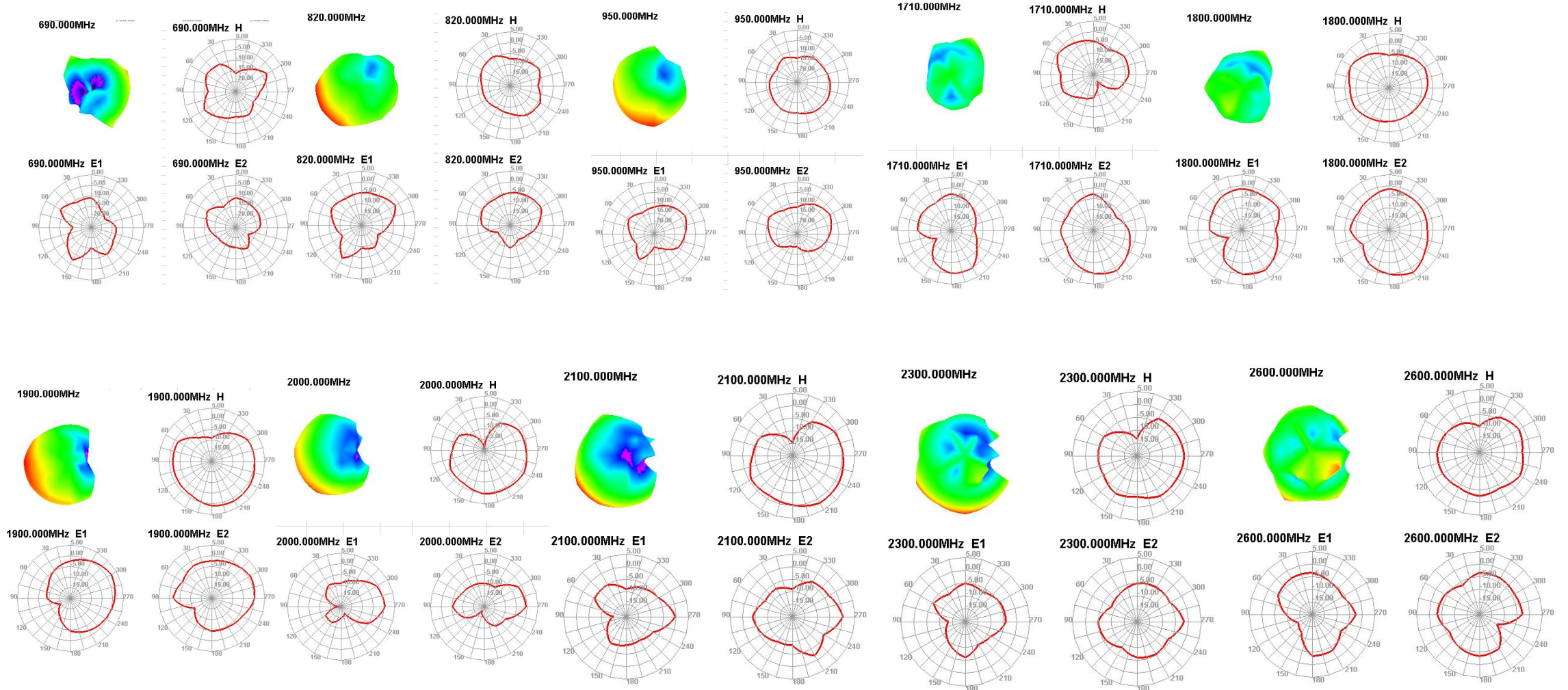
Band	Channel	TRP	TIS
B12	L	10.78	
	M	11.36	
	H	11.74	-84.92
B17	L	11.26	
	M	11.39	
	H	11.72	-79.56
B41	L	15.25	
	M	15.24	
	H	15.14	-86.34

Main antenna data



Passive Test For		Passive Test For					
Freq (MHz)	Gain (dBi)	Freq (MHz)	Gain (dBi)				
690	-2.74	1700	-1.68	1980	-2.34	2580	-0.71
700	-2.09	1710	-1.41	1990	-1.68	2590	-0.55
710	-2.98	1720	-1.71	2000	-1.91	2600	-0.39
720	-2.74	1730	-1.91	2010	-1.51	2610	0.85
730	-2.24	1740	-1.87	2020	-2.86	2620	-0.33
740	-2.1	1750	-1.91	2030	-2.25	2630	-1.11
750	-2.41	1760	-1.81	2040	-2.01	2640	-0.23
760	-2.33	1770	-1.88	2050	-2.28	2650	-0.4
770	-2.26	1780	-1.86	2060	-2.04		
780	-3.05	1790	-1.7	2070	-1.92		
790	-3.13	1800	-0.33	2080	-2.96		
800	-3.27	1810	-0.47	2090	-2.67		
810	-3.32	1820	-0.43	2300	-1.79		
820	-3.32	1830	-0.16	2310	-1.31		
830	-3.43	1840	0.6	2320	-2.58		
840	-3.51	1850	0.27	2330	-2.31		
850	-3.56	1860	-0.32	2340	-1.86		
860	-3.55	1870	-0.25	2350	-1.87		
870	-3.62	1880	0.67	2360	-1.97		
880	-3.77	1890	0.02	2370	-1.78		
890	-3.77	1900	-0.67	2380	-1.96		
900	-3.79	1910	-0.9	2390	-1.76		
910	-3.81	1920	-0.66	2400	-1.62		
920	-3.93	1930	-0.92	2500	-1.81		
930	-3.95	1940	-1.29	2510	-1.24		
940	-4.02	1950	-1.12	2520	-1.28		
950	-4.12	1960	-1.27	2530	-0.68		
960	-4.54	1970	-2.13	2540	-1.14		
				2550	-0.99		
				2560	-0.2		
				2570	-0.36		

Main antenna data



7.GPS/BT/measured data



GPS searched for one star above 40 on the top of our fifth floor building, with a positioning time of 1 minute. Bluetooth unobstructed 12 meters for smooth music listening.



7.WIFI Active data

2.4G WIFI Active data

2.4GWIFI	802.11b (11M)		
channel	1	7	13
TRP	11.43	6.32	9.68
TIS			-73.42

5G WIFI Active data

5GWIFI	802.11a (54M)			
channel	36	64	149	165
TRP	10.08	9.87	4.7	4.17
TIS				-61.99



7.WIFI Active data

1570	19.74	-7.05	-3.06
1572	19.83	-7.03	-2.98
1574	20.08	-6.97	-2.88
1576	20.7	-6.84	-2.72
1578	21.61	-6.65	-2.48
1580	22.57	-6.47	-2.24
1582	22.95	-6.39	-2.13
1584	23.05	-6.37	-2.07
1586	22.75	-6.43	-2.07
1588	22.24	-6.53	-2.14
1590	21.85	-6.61	-2.16
1592	21.55	-6.67	-2.21
1594	21.48	-6.68	-2.2

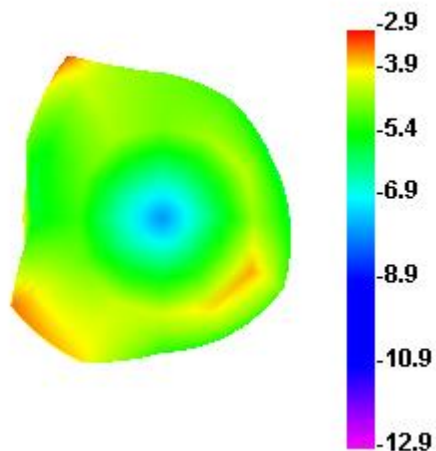
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	29.44	-5.31	-0.35
2410	34.42	-4.63	0.29
2420	30.67	-5.13	-0.35
2430	28.38	-5.47	-0.81
2440	31.17	-5.06	-0.4
2450	33.93	-4.69	0.01
2460	30.36	-5.18	-0.39
2470	28.58	-5.44	-0.61
2480	25.38	-5.95	-1.18
2490	25.79	-5.89	-1.04
2500	29.03	-5.37	-0.59

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	36.83	-4.14	0.55
5200	37.15	-3.43	0.03
5250	32.09	-4.76	0.22
5300	38.97	-4.09	0.59
5350	31.23	-3.85	0.89
5400	33.26	-4.78	0.04
5450	33.58	-4.74	0.14
5500	33.85	-4.7	0.75
5550	28.48	-5.46	0.45
5600	26.34	-5.79	0.07
5650	25.78	-5.89	0.23
5700	33.43	-4.76	1.48
5750	25.6	-5.92	0.64
5800	26.97	-5.69	0.93
5850	32.13	-4.93	1.62

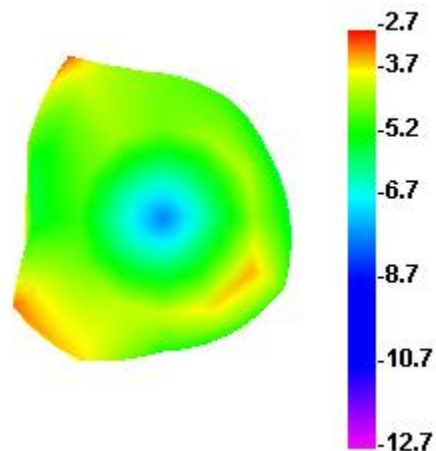


7.WIFI Active data

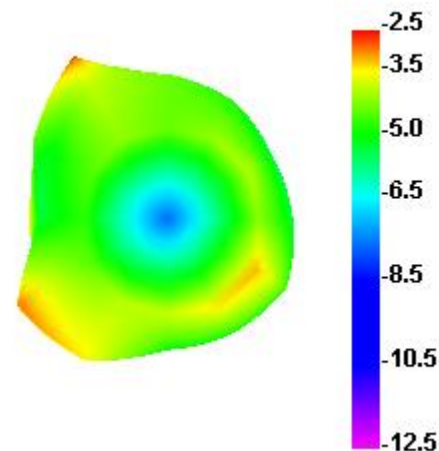
1574.000MHz



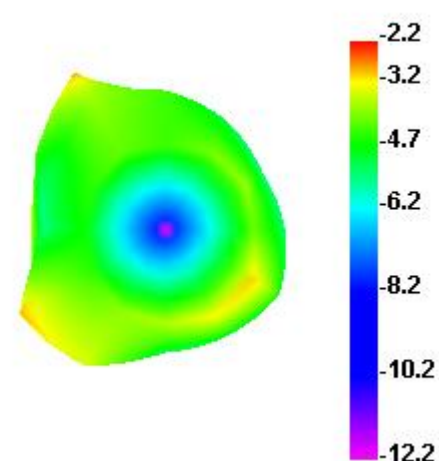
1576.000MHz



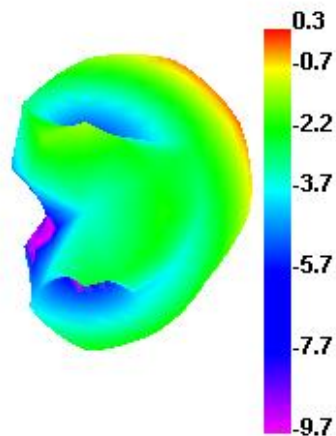
1578.000MHz



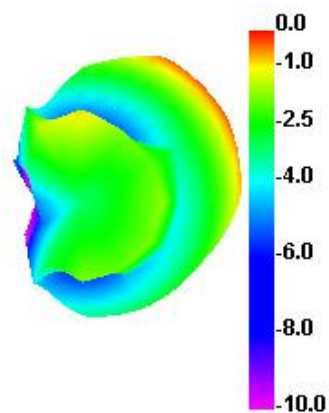
1590.000MHz



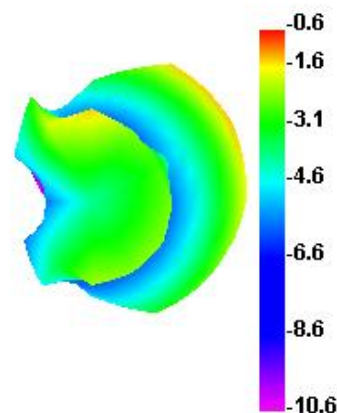
2410.000MHz



2450.000MHz

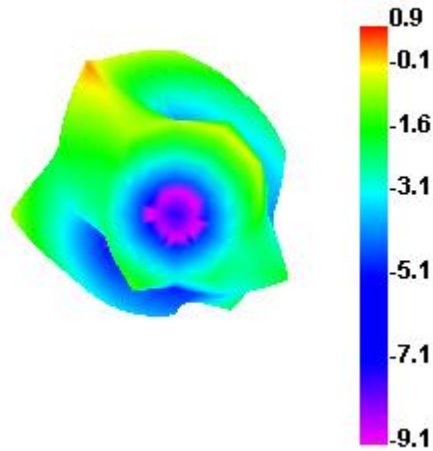


2500.000MHz

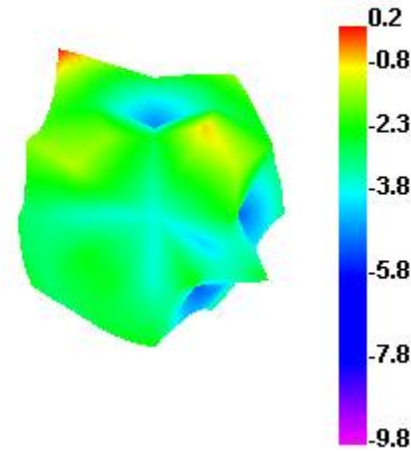


7.WIFI Active data

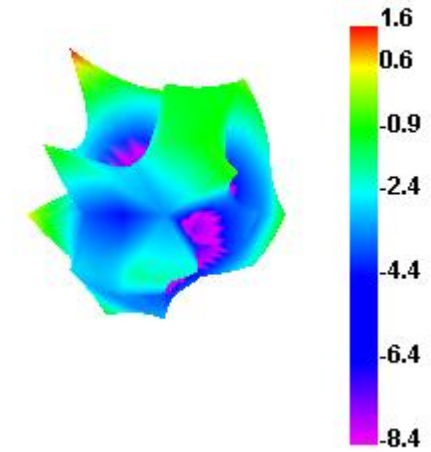
5350.000MHz



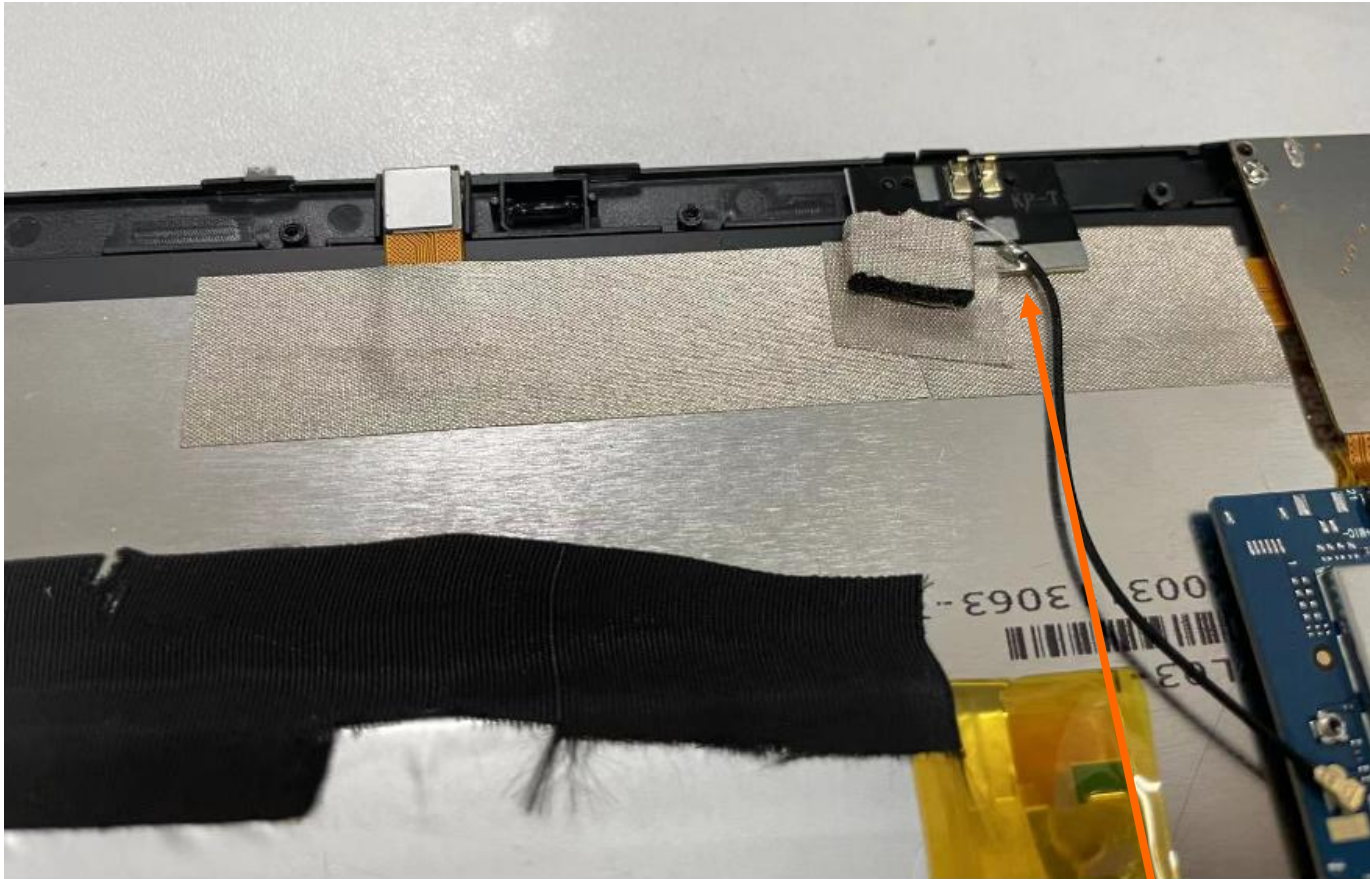
5650.000MHz



5850.000MHz



08. Antenna Location Map

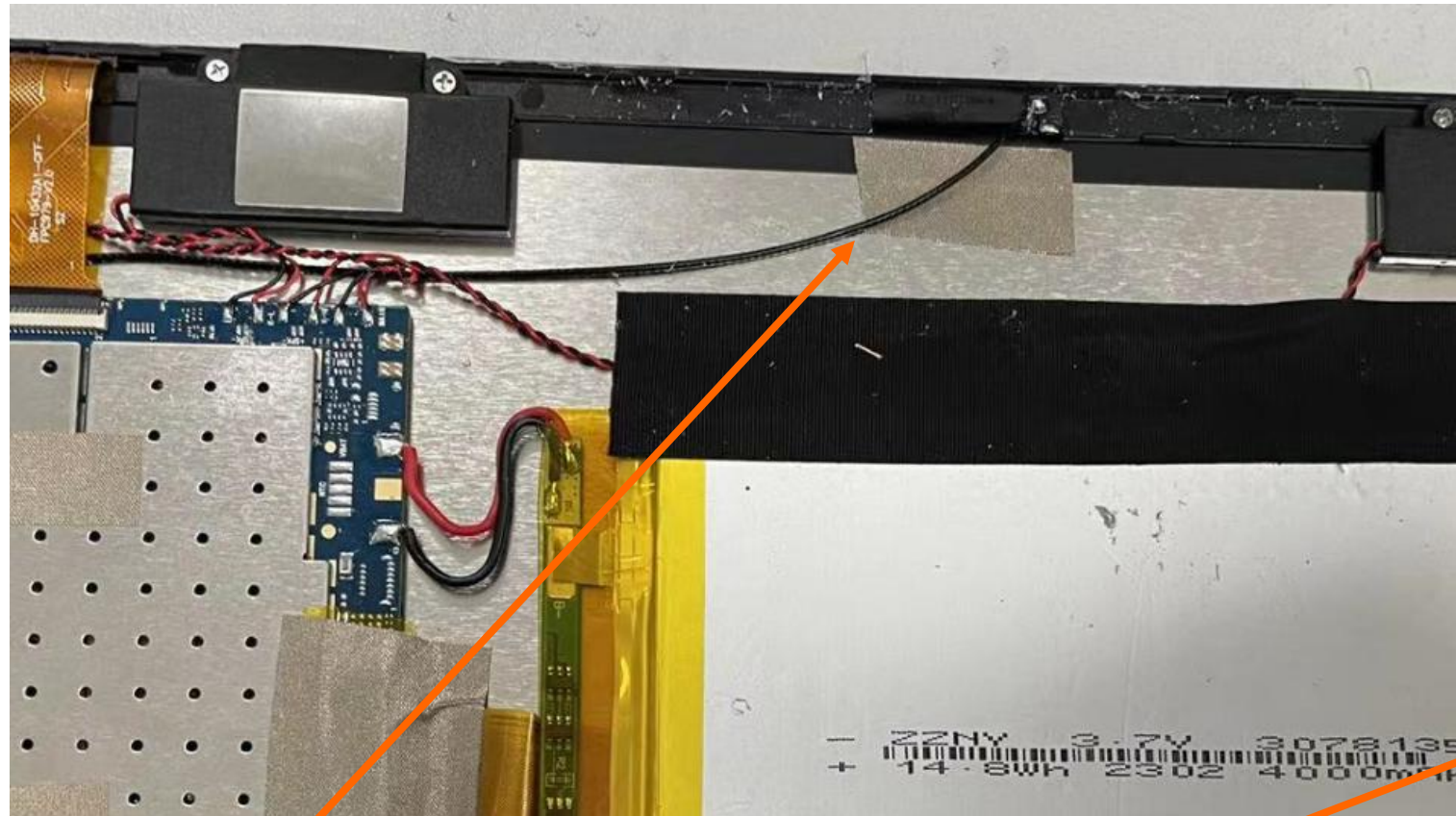


Main antenna small
board position



Main antenna position

08. Antenna Location Map

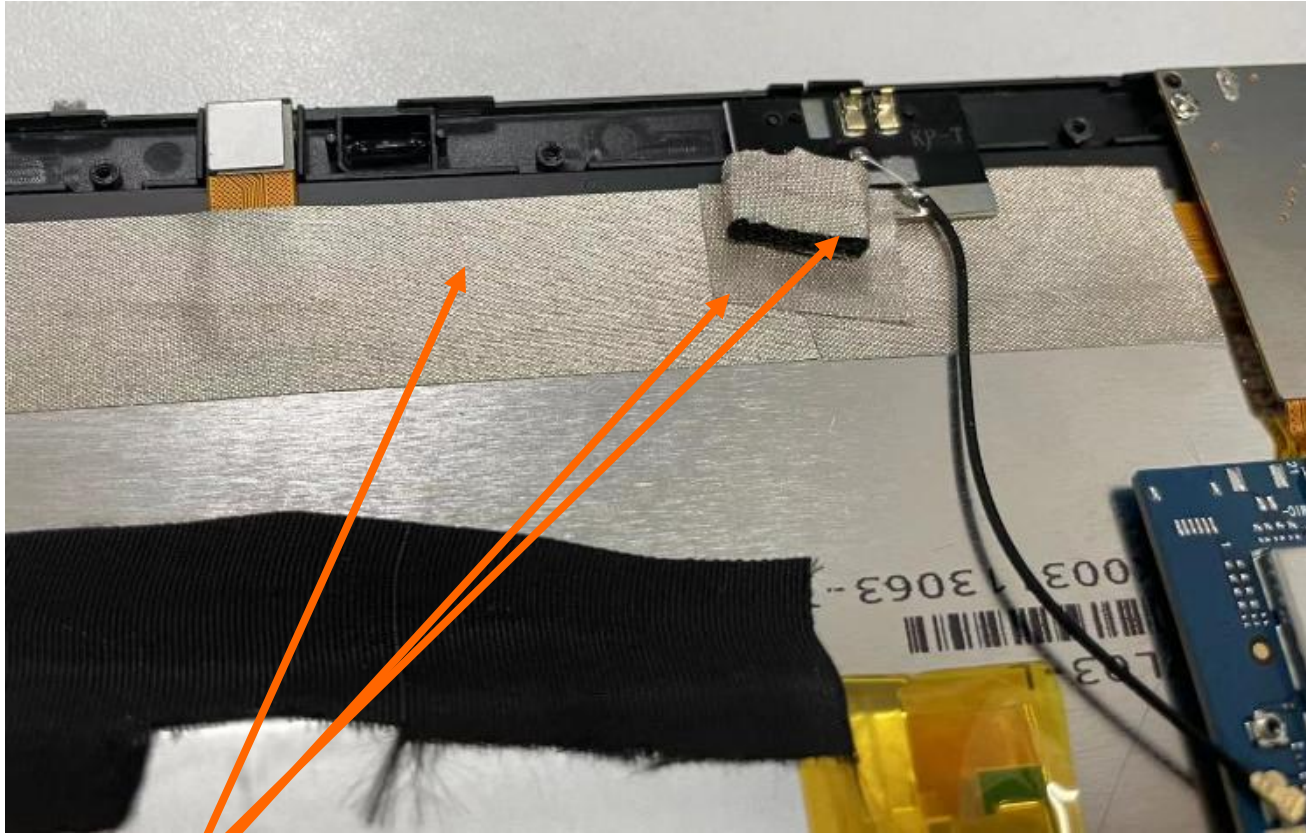


Three in one
antenna
position

Diversity antenna
position



09.Environmental treatment



The camera cable is pasted with conductive cloth, the small board is pasted with conductive cloth, and the conductive foam is grounded to the rear shell



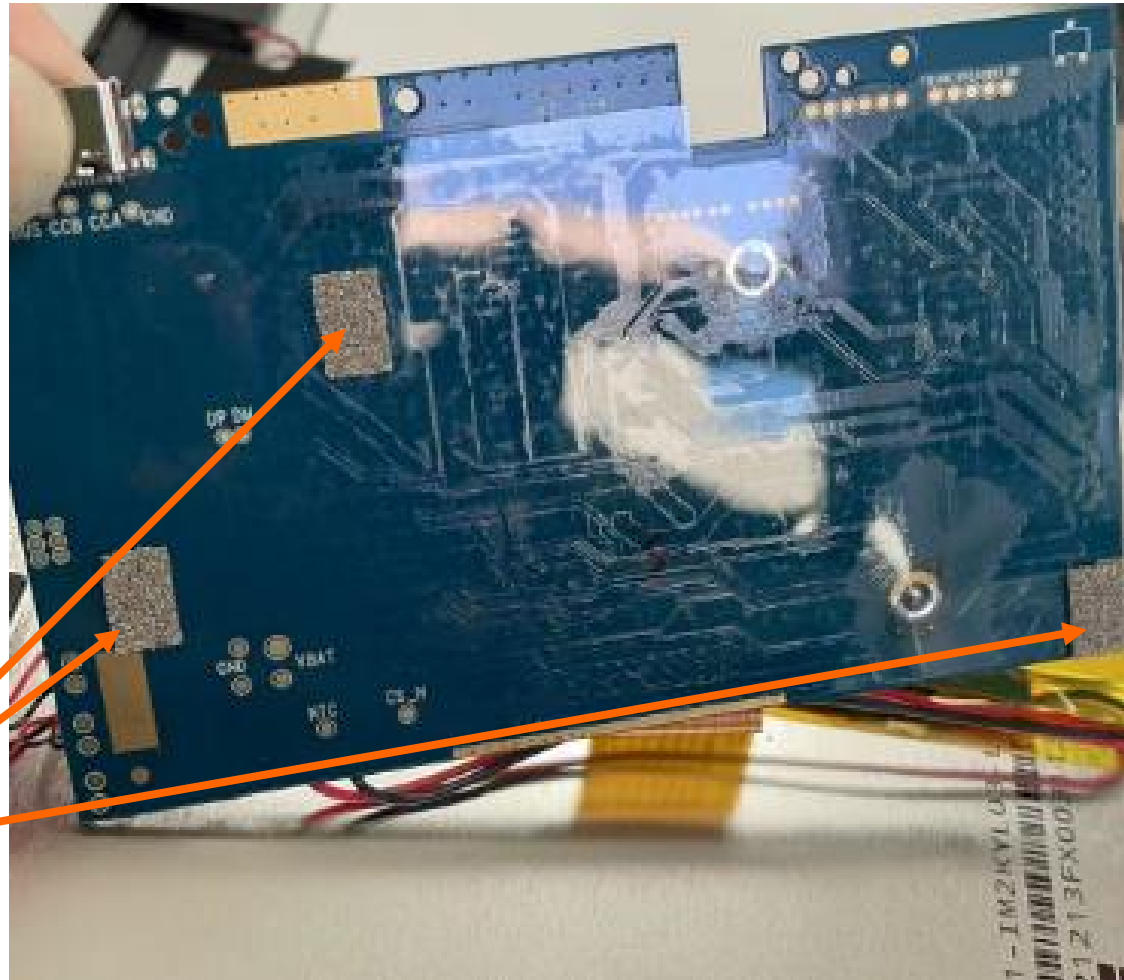
Three in one antenna grounding

09.Environmental treatment



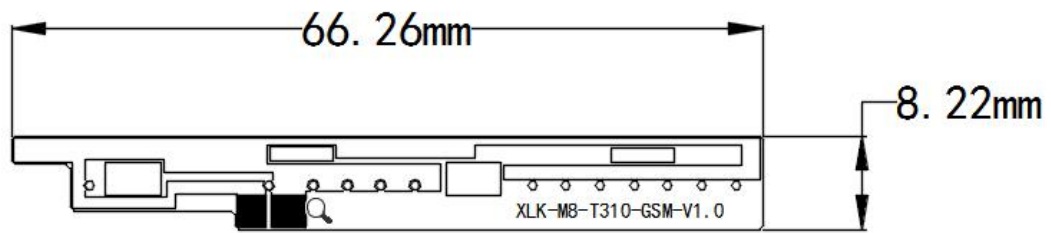
Rear shell and
motherboard
grounding

09.Environmental treatment

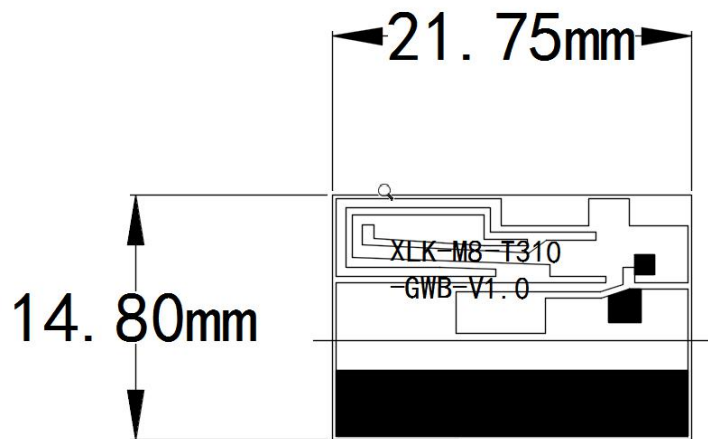


Main board and
screen grounding

Main:



Three in one antenna:



Diversity Antenna:

