

Antenna Test Report

Model: XLK-H31-YK-7731E

Date: 2023.09.14.

01.Project Overview and Physical Photos - Project Overview



RF Engineer	Kong Gong	Mailbox	2532625702@qq.com
		Phone	18477016343
Antenna Overview			
Prototype status	Complete machine	Entry name	XLK-H31-YK-7731E
Antenna type	PIFA	Structural style	FPC+coaxial line
Main	(2G) GSM: B2/B3/B5/B8 (3G) WCDMA: B2/B5		
Other antennas	Three-in-one		

01. Project Overview and Physical Photos - Physical Photos



Front photo



Reverse photo



Interior photos

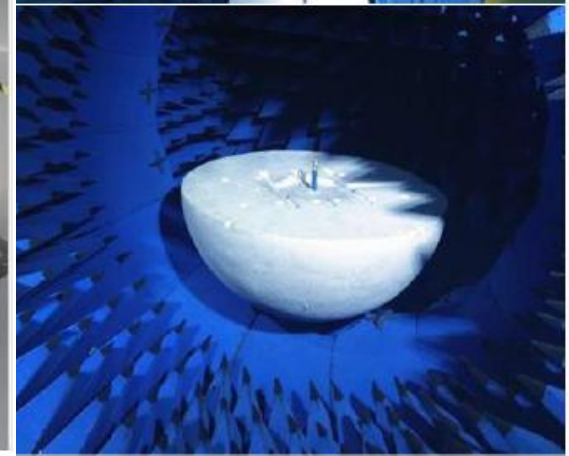
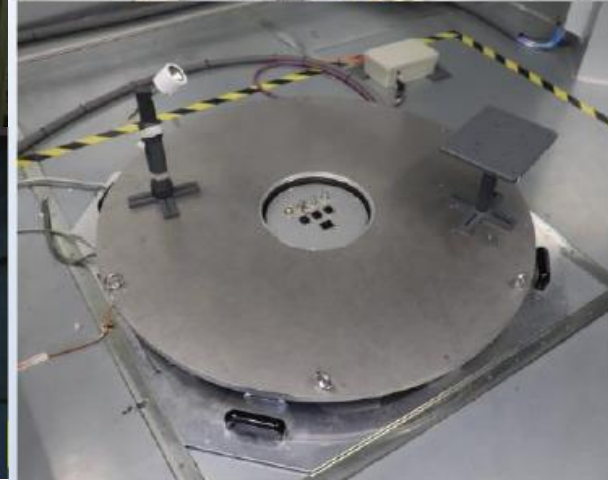
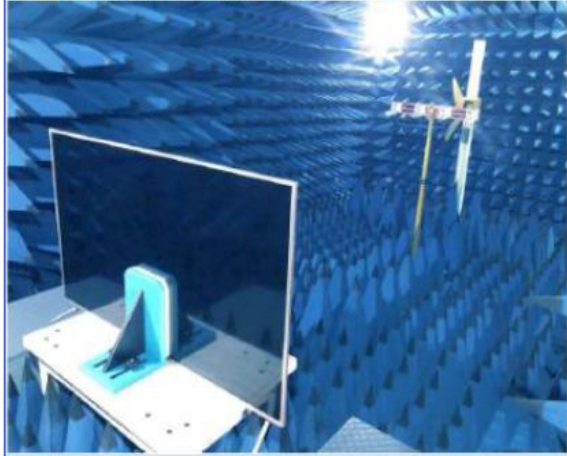
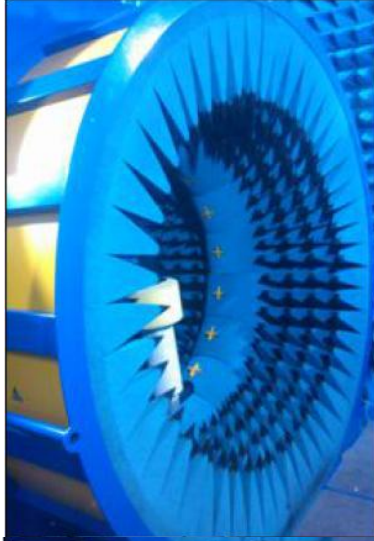
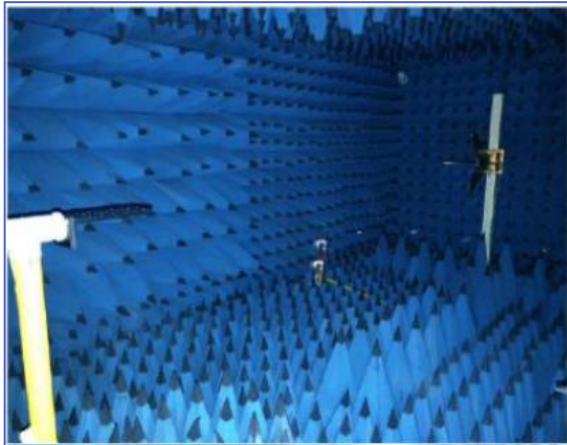


02.Report Version Record



Version	Report Time	Debugging Overview
A0	2023.09.14	Antenna Test Report
A1		
A2		
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		

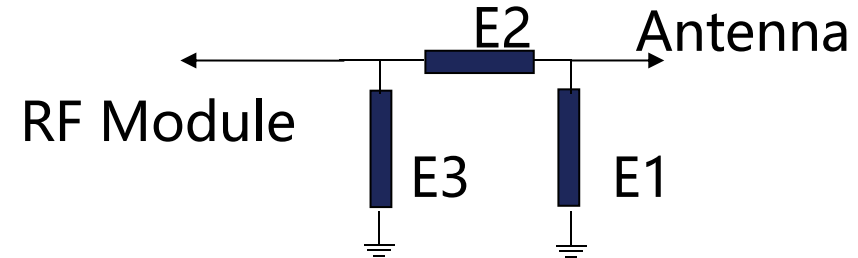
03. Company Introduction and Testing Environment Introduction - Te Environment Introduction



05. Matching circuit



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



Matching unchanged

06.Antenna related data

Main antenna active data



Band	Channel	TRP	TIS
850	L	25.53	
	M	26.3	
	H	26.41	102.24
900	L	24.24	
	M	24.44	
	H	25.48	-101.14
1800	L	23.87	
	M	25.37	
	H	25.55	-103.13
1900	L	25.07	
	M	25.68	
	H	25.81	-103.3

Band	Channel	TRP	TIS
W2	L	16.78	
	M	17.25	
	H	17.55	-89.03
W5	L	15.17	
	M	15.72	
	H	16.18	-100.94

06.Antenna related data



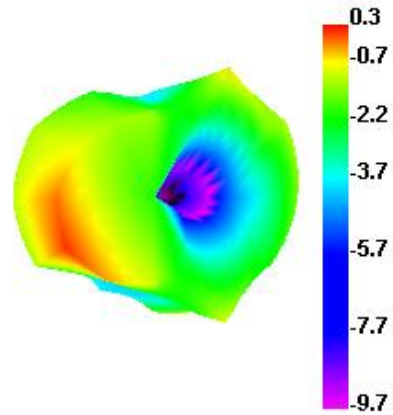
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
820	19.71	-7.05	-2.04
830	23.99	-6.2	-1.76
840	26.47	-5.77	-1.66
850	30.66	-5.13	-0.97
860	33.19	-4.79	-0.9
870	31.25	-5.05	-1.49
880	31.51	-5.02	-1.78
890	29.93	-5.24	-2.27
900	27.43	-5.62	-2.75
910	29.37	-5.32	-2.36
920	30.32	-5.18	-2.15
930	21.34	-6.71	-3.42
940	21.24	-6.73	-3.23
950	16.18	-7.91	-4.24
960	13.86	-8.58	-4.81

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1710	37.19	-4.3	0.34
1720	40.01	-3.98	0.84
1730	35.58	-4.49	0.45
1740	32.68	-4.86	0.15
1750	35.1	-4.55	0.5
1760	37.1	-4.31	0.91
1770	33.57	-4.74	0.73
1780	35.11	-4.55	1.24
1790	37.24	-4.29	1.87
1800	46.49	-3.33	3.1
1810	47.24	-3.26	3.35
1820	49.57	-3.05	3.62
1830	52.99	-2.76	4.05
1840	53.26	-2.74	4.18
1850	58.02	-2.36	4.62
1860	61.45	-2.12	4.81
1870	58.67	-2.32	4.69
1880	59.05	-2.29	4.83
1890	61.21	-2.13	5.09
1900	71.41	-1.46	5.77
1910	69.75	-1.56	5.67
1920	70.44	-1.52	5.68
1930	82.39	-0.84	6.33
1940	77.43	-1.11	5.99
1950	77.43	-1.11	5.86
1960	83.15	-0.8	5.99
1970	70.09	-1.54	5.16
1980	63.56	-1.97	4.66
1990	62.36	-2.05	4.45

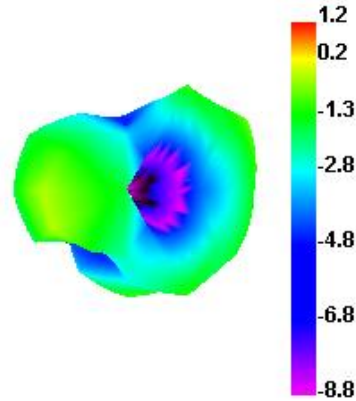
06.Antenna related data



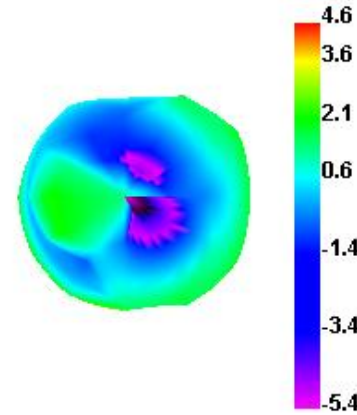
1710.000MHz



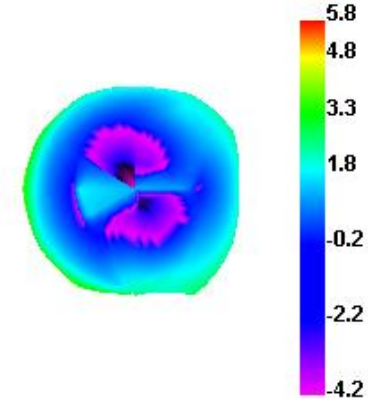
1780.000MHz



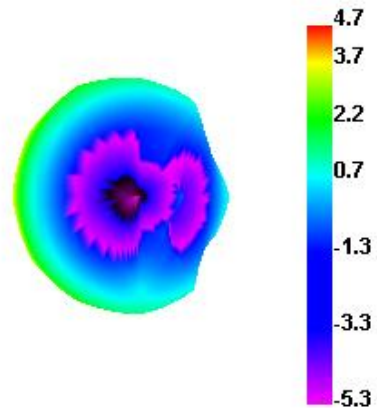
1850.000MHz



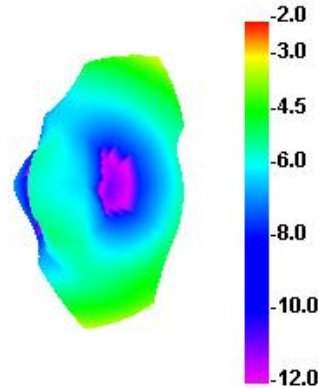
1900.000MHz



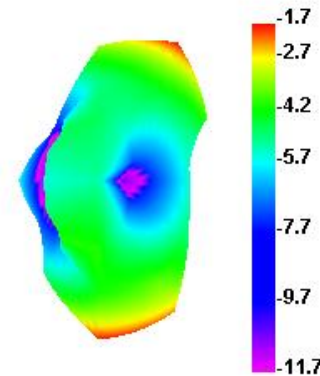
1980.000MHz



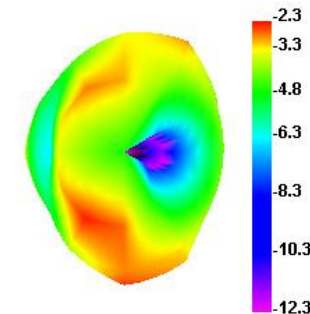
820.000MHz



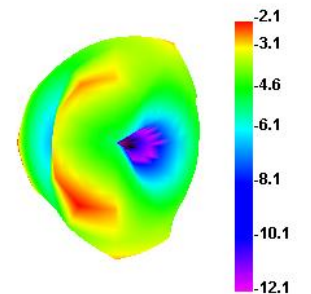
840.000MHz



890.000MHz



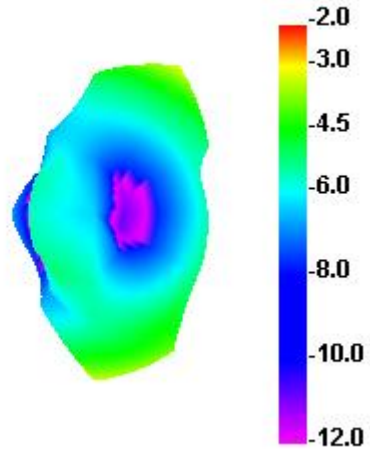
920.000MHz



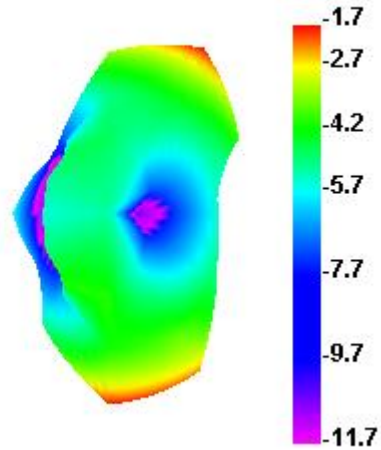
06. Antenna related data



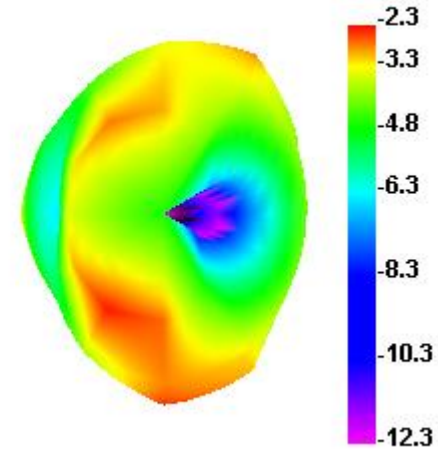
820.000MHz



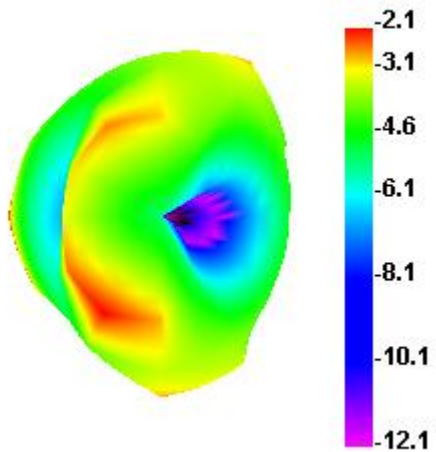
840.000MHz



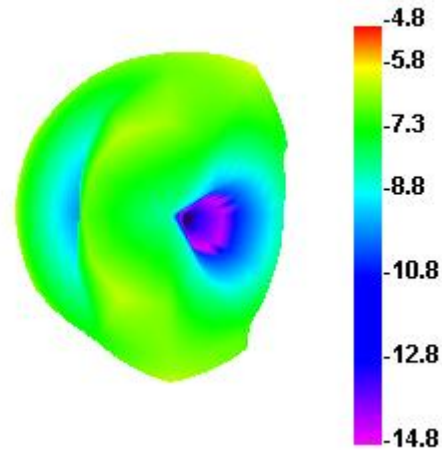
890.000MHz



920.000MHz



960.000MHz



7.WIFI active data

2.4G WIFI active data

2. 4GWIFI	802. 11b (11M)		
channel	1	7	13
TRP	5. 21	6. 54	7. 42
TIS			-75. 31

2.4G WIFI Conducting data

2. 4GWIFI	802. 11b (11M)		
channel	1	7	13
TRP	12. 71	12. 64	12. 52
TIS			



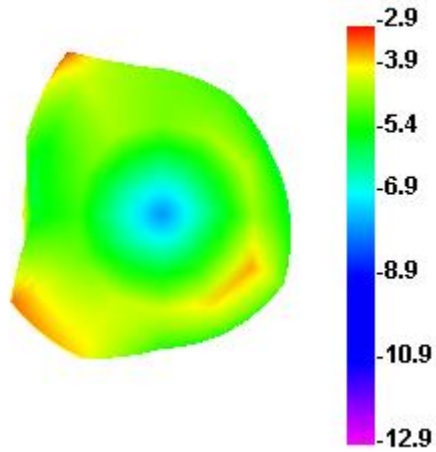
7.WIFI active data

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

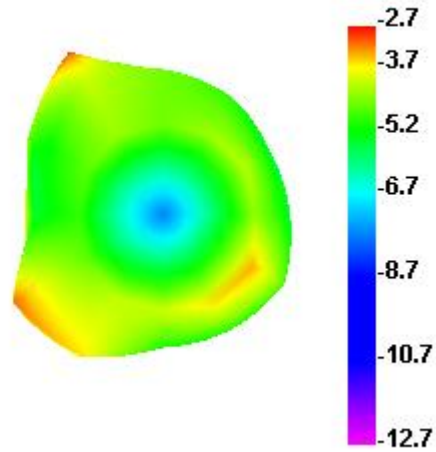
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	29.44	-5.31	-0.35
2410	34.42	-4.63	0.29
2420	30.67	-5.13	-0.35
2430	28.38	-5.47	-0.81
2440	31.17	-5.06	-0.4
2450	33.93	-4.69	0.01
2460	30.36	-5.18	-0.39
2470	28.58	-5.44	-0.61
2480	25.38	-5.95	-1.18
2490	25.79	-5.89	-1.04
2500	29.03	-5.37	-0.59

7. WIFI active data

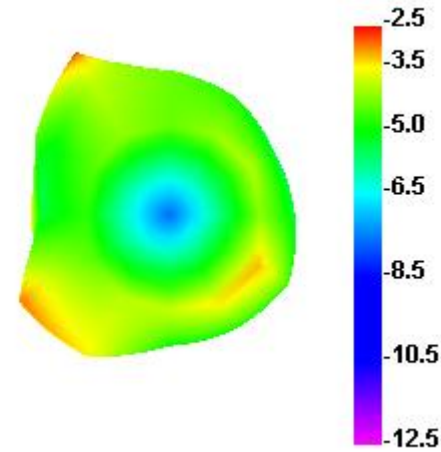
1574.000MHz



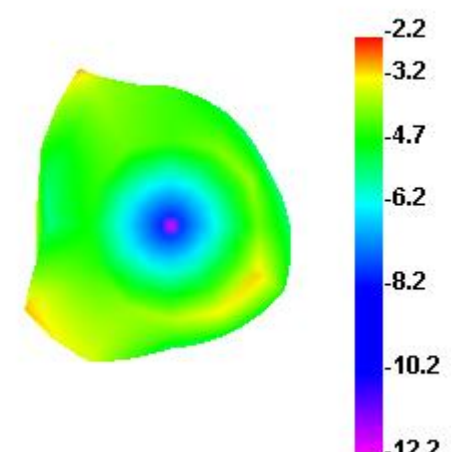
1576.000MHz



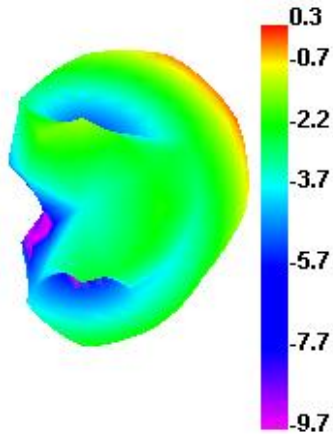
1578.000MHz



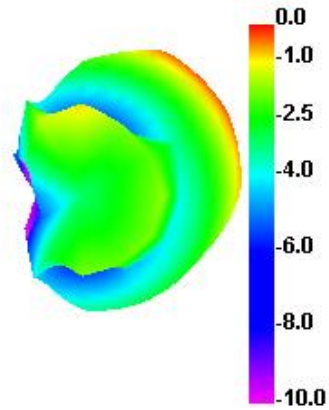
1590.000MHz



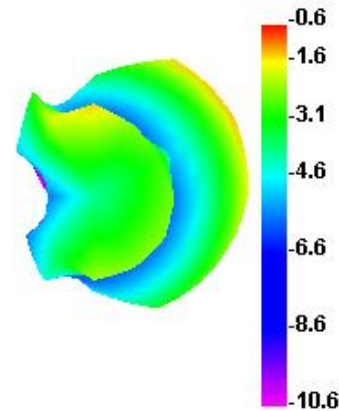
2410.000MHz



2450.000MHz



2500.000MHz



7.GPS/BT/Measured data

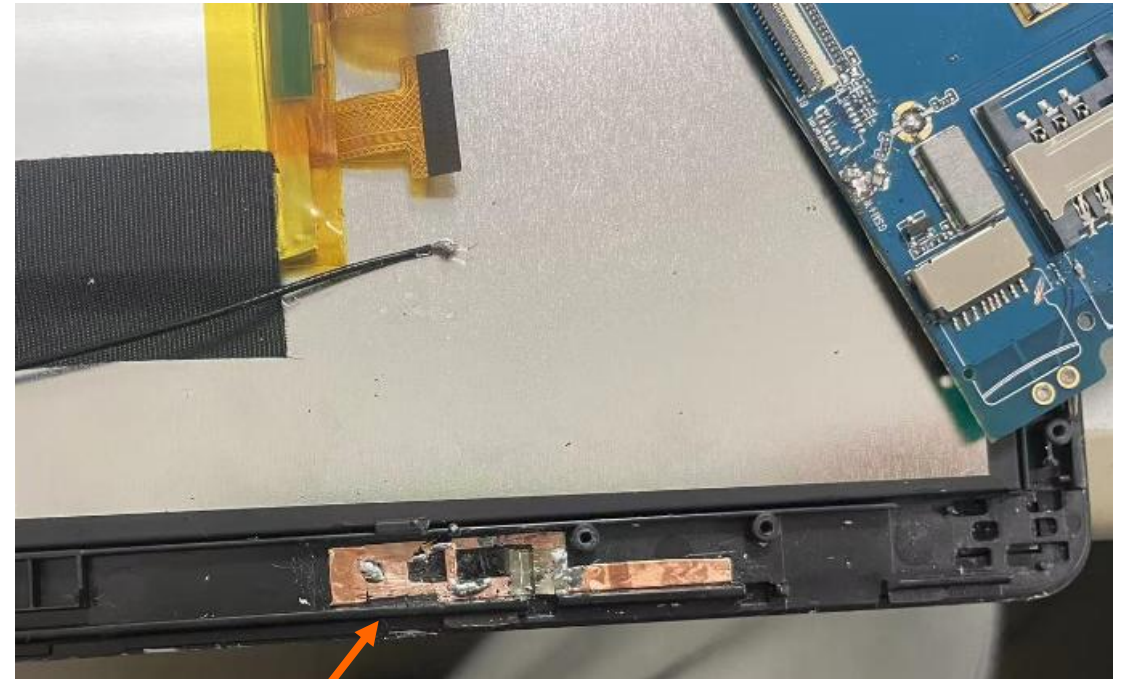


GPS search on the top of our fifth floor building, with a positioning time of 1 minute. Bluetooth unobstructed 12 meters for smooth music listening.

08. Antenna Location Map

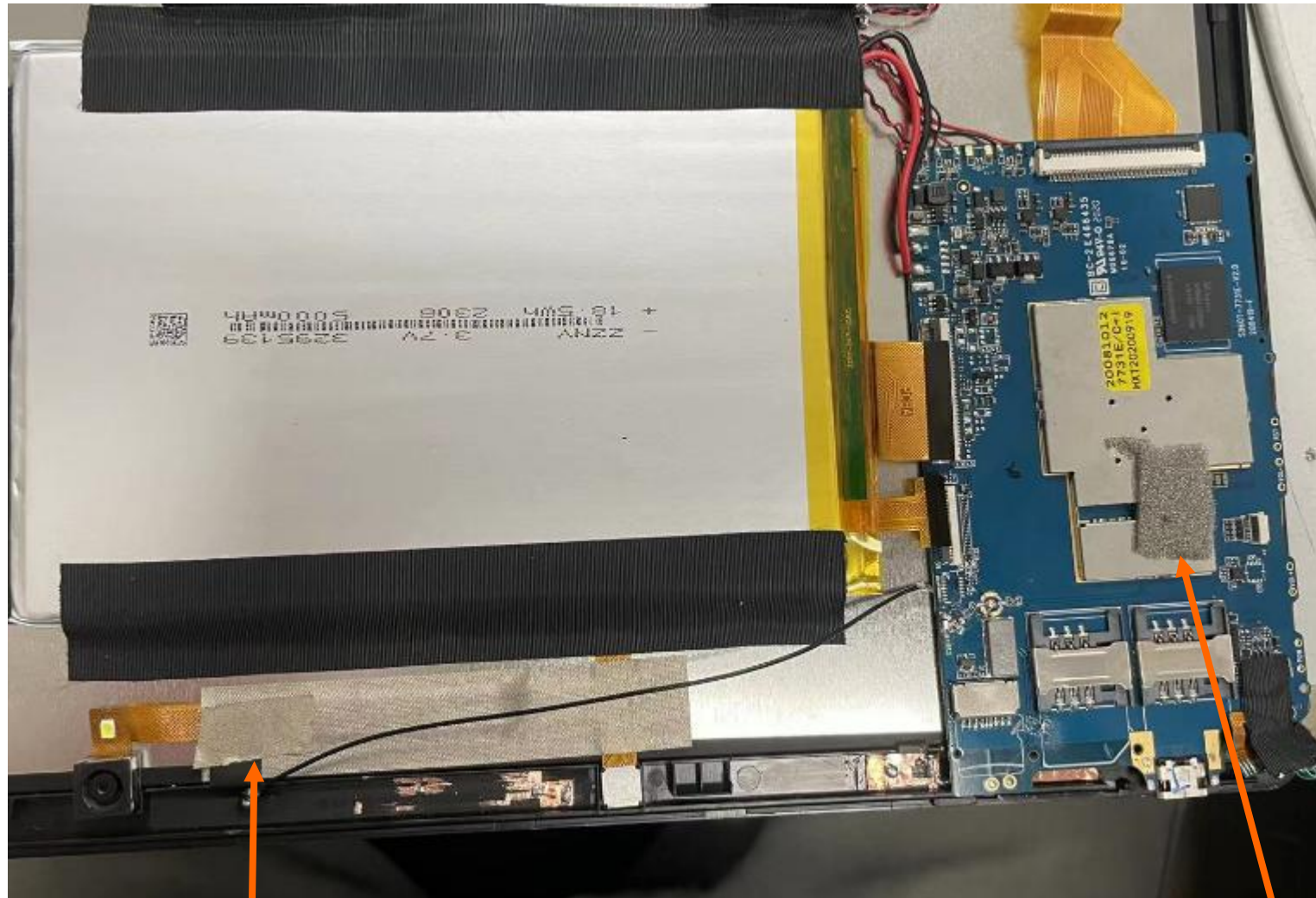


Main antenna position



Three in one antenna position

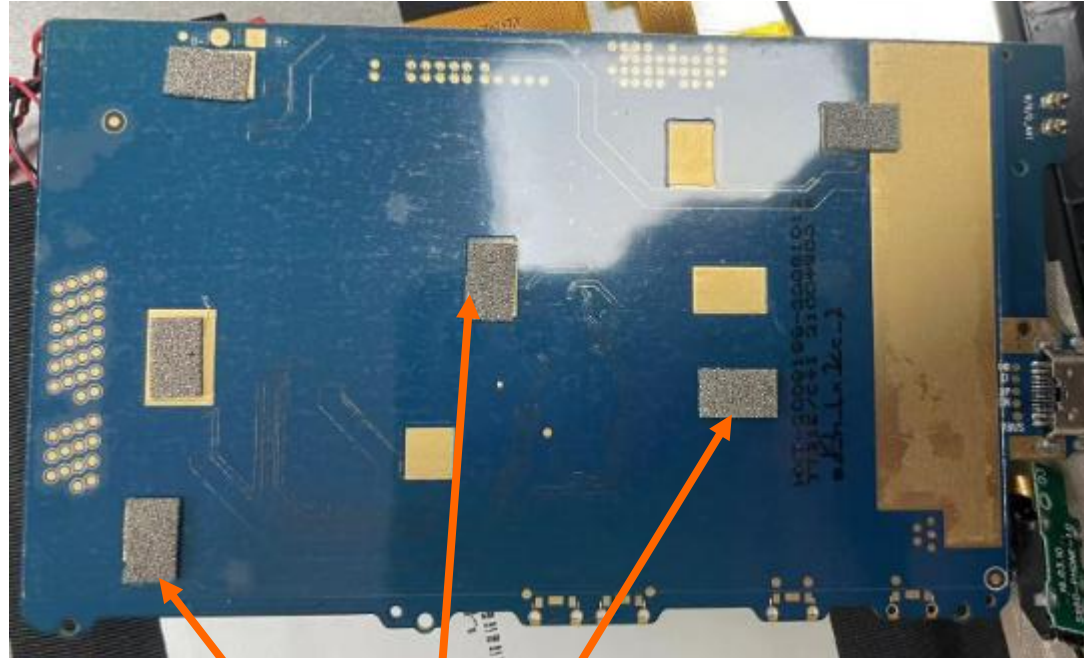
09.environmental treatment



Main antenna grounding

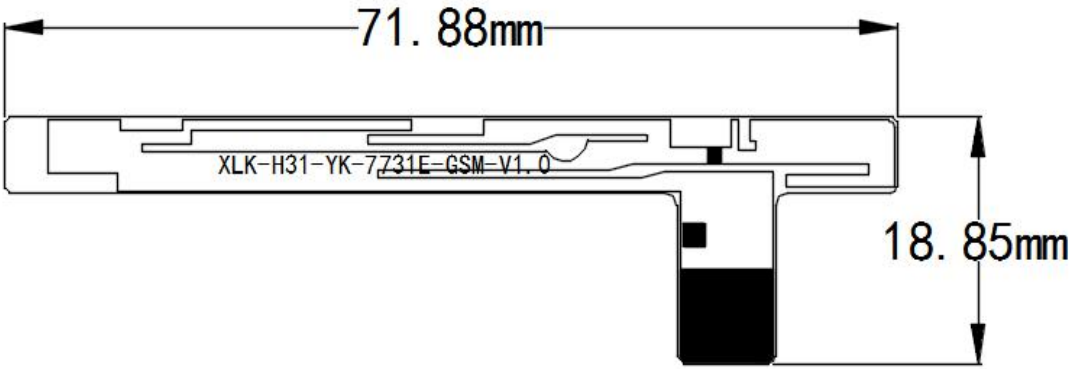
Main board and rear shell grounding

09.Environmental treatment



Main board with
conductive sponge
and screen grounding

主天线:



三合一天线:

