

Customer: DUOKE

Project: DK130

ME: Xiao Xiang-13316888409

RF: RiXin Huang - 13682667404

Date: June 1 2026

Report Type:

Version No.: V1.0

Status: T0

Frequency band:

GPS

2.4G WIFI/BT

Manufacturer information: Shenzhen Xinbinuo Communication Technology Co., Ltd

A, 3rd Floor, Building 25, Feipeng Industrial Park, Pinghu Street, Feipeng Industrial Park, No. 171

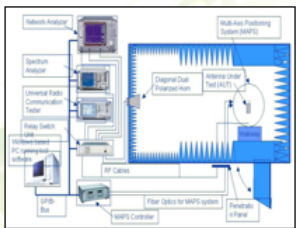
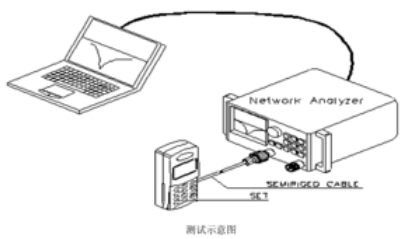
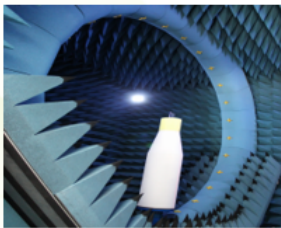
Ping'an Avenue, Longgang District, Shenzhen City, Guangdong Province

Antenna distribution diagram:



Passive Test Report

Test method: use a 50 ohm CABLE cable for the export of the instrument test port, use the SMA connector of the hand mechanism, and record the data such as echo loss or standing wave ratio corresponding to the relevant frequency point.

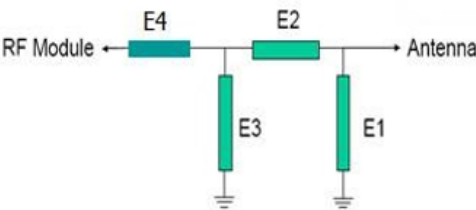


Matching Circuit The matching circuit was Default

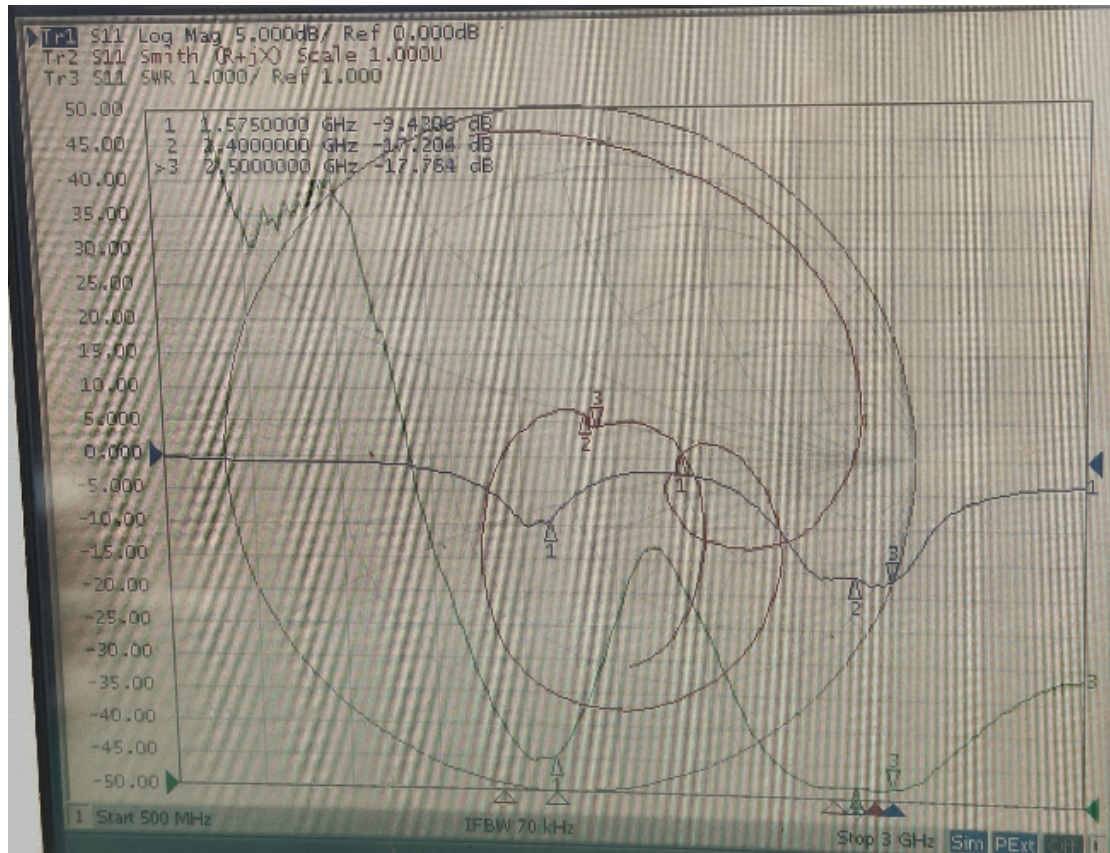
Antenna Matching Circuit:

W&B&G (mainboard):

0201 Specification		
Element	Value	NO.
E1	Match without changes	
E2		
E3		
E4		



Passive GPS/Wifi/BT Antenna :



Antenna gain:

Frequency (MHz)	Gain (dBi)	Efficiency (%)	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1570.0	0.06	42.56	2400.0	3.79	54.43
1571.0	-0.14	40.58	2410.0	4.57	64.01
1572.0	-0.27	39.12	2420.0	3.80	56.53
1573.0	-0.33	38.13	2430.0	3.50	55.71
1574.0	-0.32	37.62	2440.0	3.21	53.30
1575.0	-0.18	37.52	2450.0	3.98	61.98
1576.0	-0.10	37.98	2460.0	2.74	50.77
1577.0	-0.02	38.69	2470.0	3.97	59.64
1578.0	0.06	39.55	2480.0	4.33	61.76
1579.0	0.07	40.34	2490.0	3.86	56.67
1580.0	0.00	40.91	2500.0	4.39	64.55

Antenna OTA:

	Band	Channel	TRP	TIS
2.4G	b (11M)	1	11.9	
		6	12.7	
		13	13.6	-82.7
	g (54M)	1	12.7	
		6	13.3	
		13	13.9	-71.8
	n (MCS7)	1	12.5	
		6	13.6	
		13	13.9	-64.3

GPS Test:

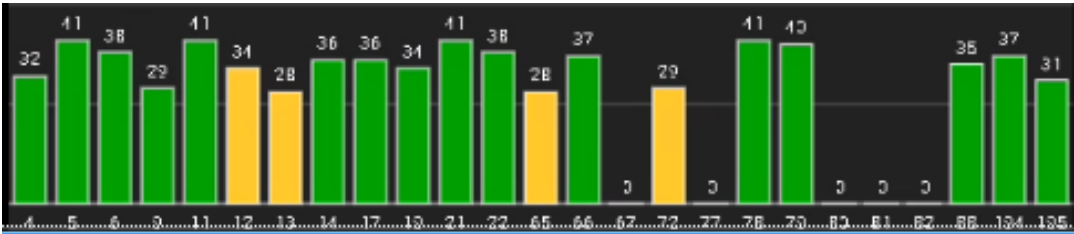
Measured site: Ping'an Rd

Weather: Sunny

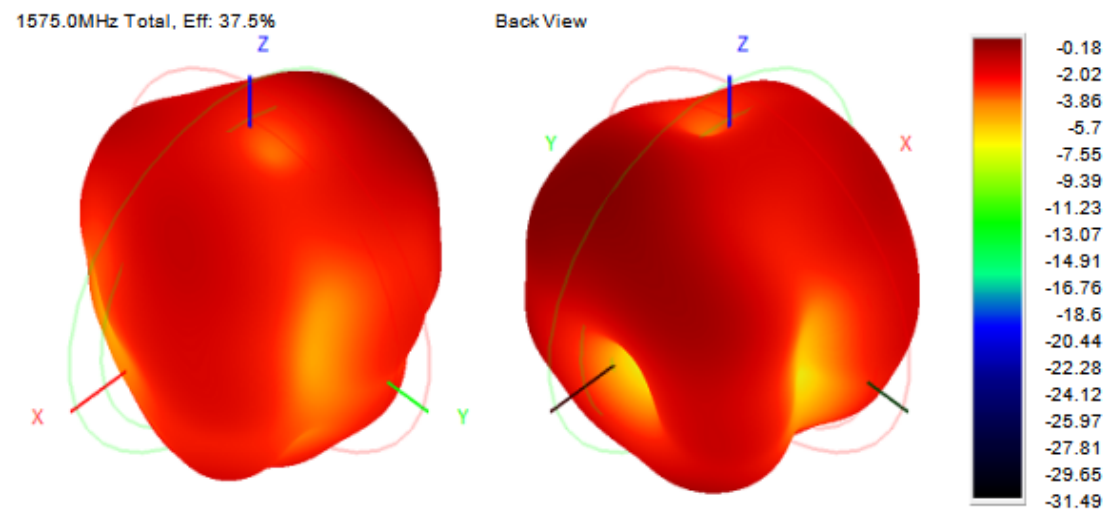
Max S/N : 41

Stars: 20

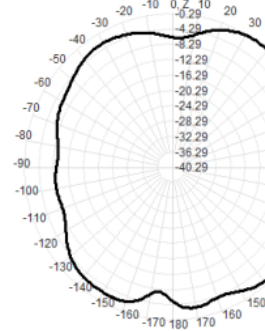
Positioning time: 45s



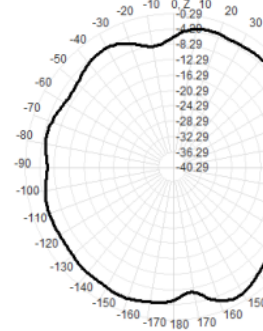
3D Pattern



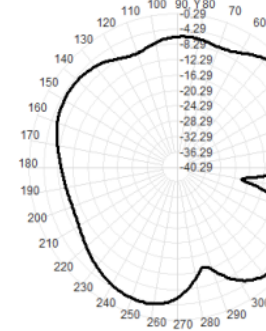
1575.0MHz Total(E1-XZ), Max=-0.29dBi



1575.0MHz Total(E2-YZ), Max=-2.38dBi

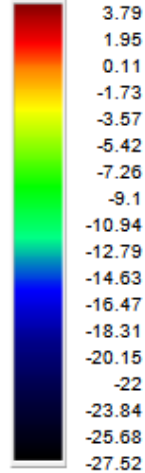
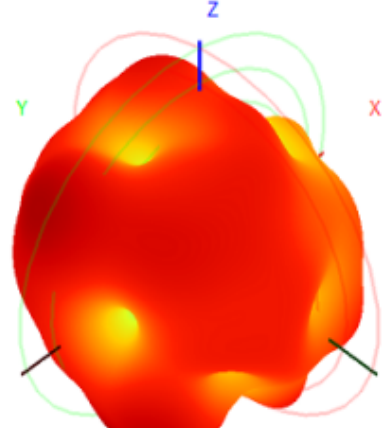
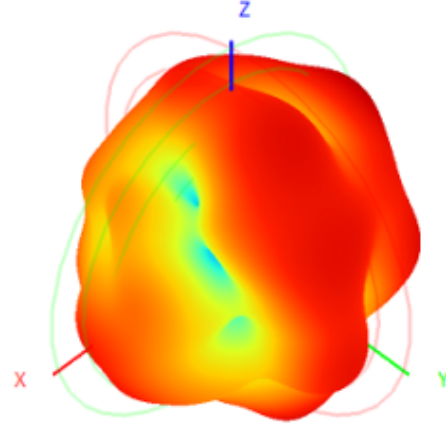


Total(H-XY), Max=-1.29dBi, CirD=21.39

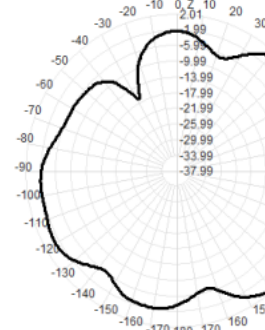


2400.0MHz Total, Eff: 54.4%

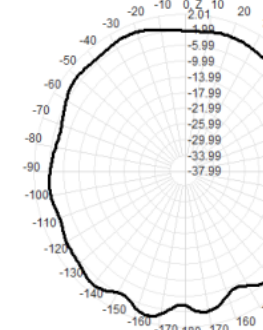
Back View



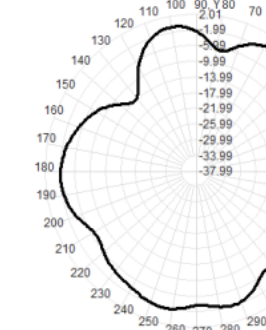
2400.0MHz Total(E1-XZ), Max=2.01dBi



2400.0MHz Total(E2-YZ), Max=0.03dBi

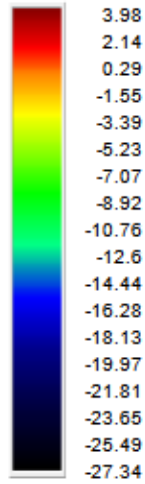
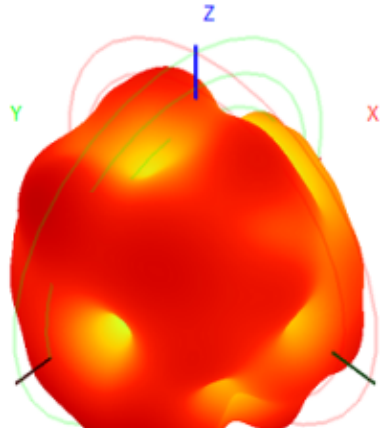
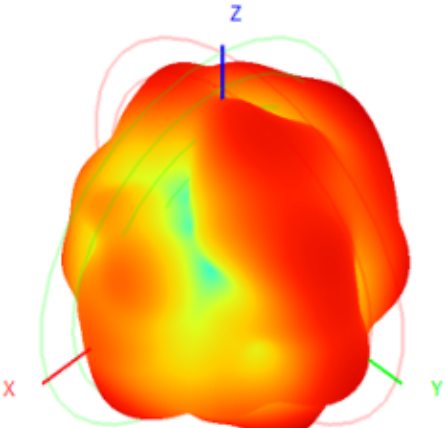


Total(H-XY), Max=-0.22dBi, CirD=13.75

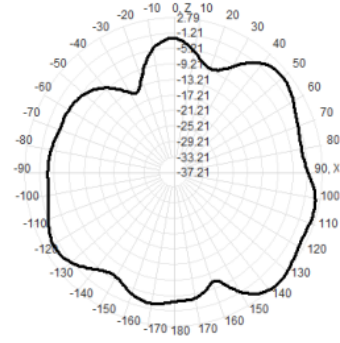


2450.0MHz Total, Eff: 62.0%

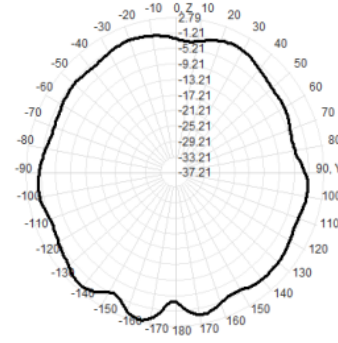
Back View



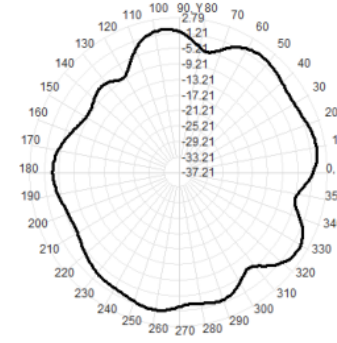
2450.0MHz Total(E1-XZ), Max= 2.79dBi



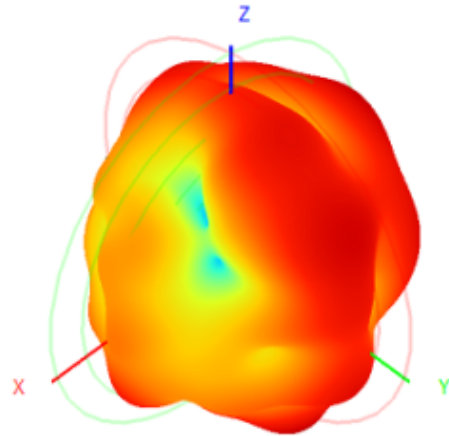
2450.0MHz Total(E2-YZ), Max= 1.92dBi



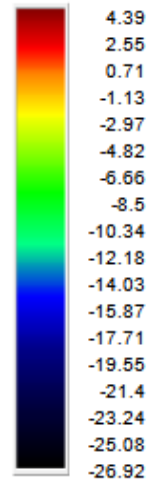
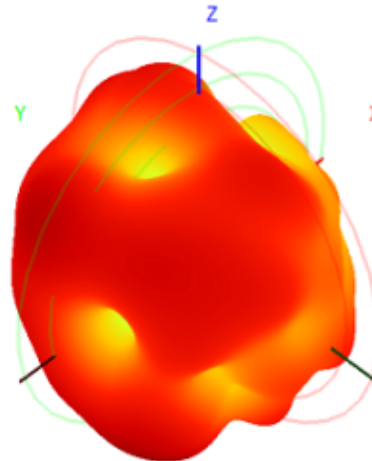
Total(H-XY), Max= 0.48dBi, CirD=9.22



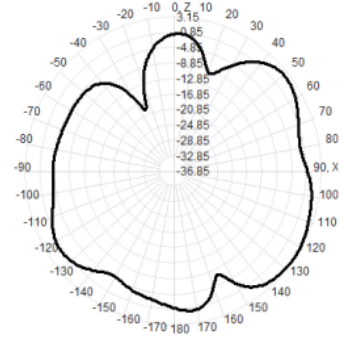
2500.0MHz Total, Eff: 64.5%



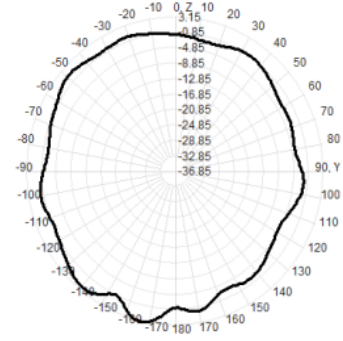
Back View



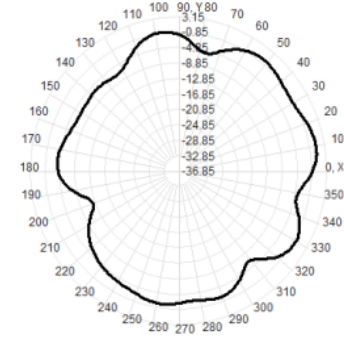
2500.0MHz Total(E1-XZ), Max= 2.61dBi



2500.0MHz Total(E2-YZ), Max= 3.15dBi

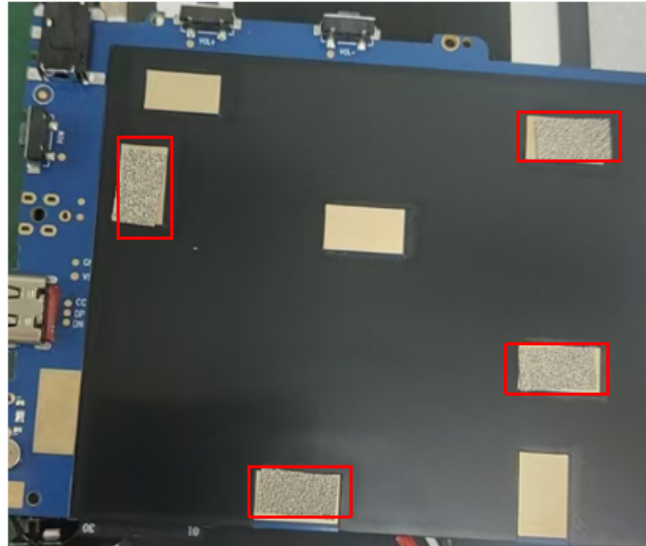


Total(H-XY), Max= 0.59dBi, CirD=12.99



Environmental treatment

The motherboard is attached with four conductive sponges to connect to the screen ground.



The conductive fabric in the exposed copper area of the antenna is approximately 21*8mm in size.



The board-end coaxial cable must not be welded to short-circuit and must not have obvious creases.

Antenna Size Diagram

