

Microphone Antenna Specification (Update 20260918)

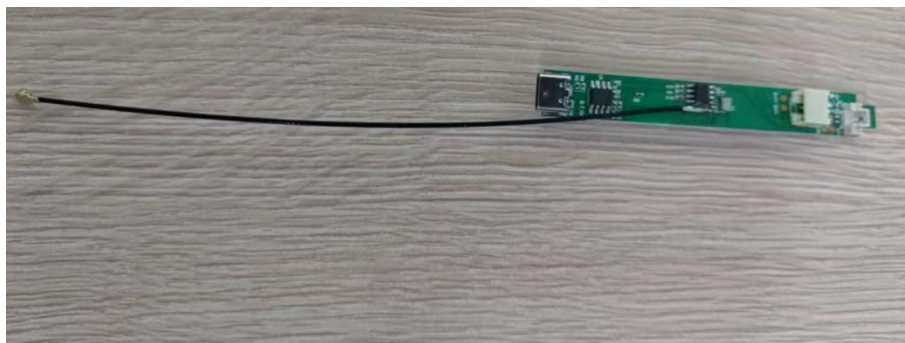
Antenna Test

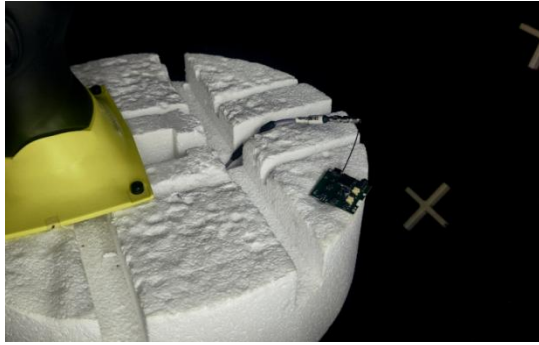
1. Hardware Test
2. Software Test
3. Data Reading

1. Hardware Test

0.1 PCBA Bare-board Test

Solder the RF cable to the bare board, then connect it to the OTA equipment. See the figure below for the connection diagram of RF cable and bare-board.

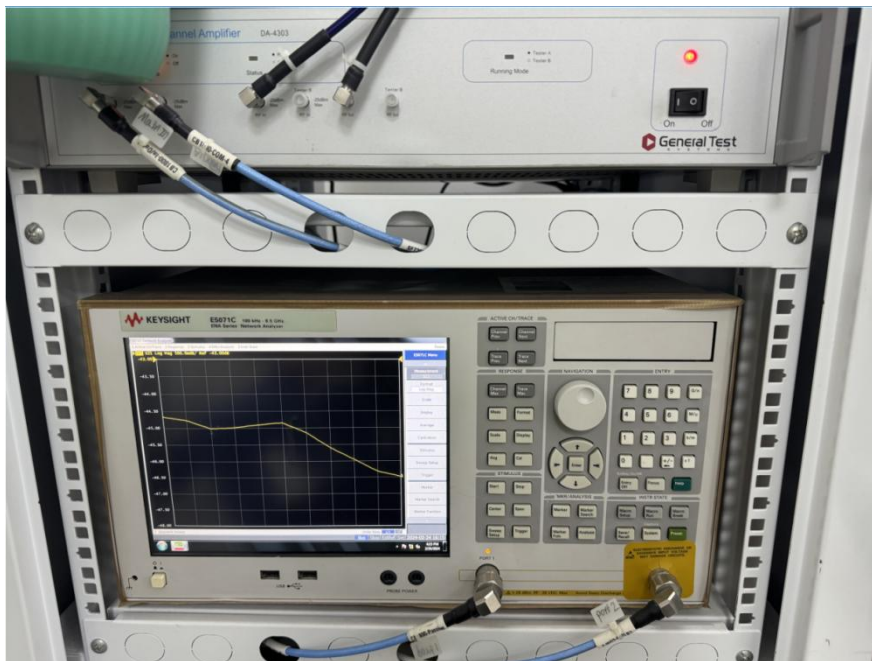




(Figure: PCBA bare-board with soldered RF cable)(Figure: Bare-board placed inside anechoic chamber fixture)

0.2 Test Equipment & Environment

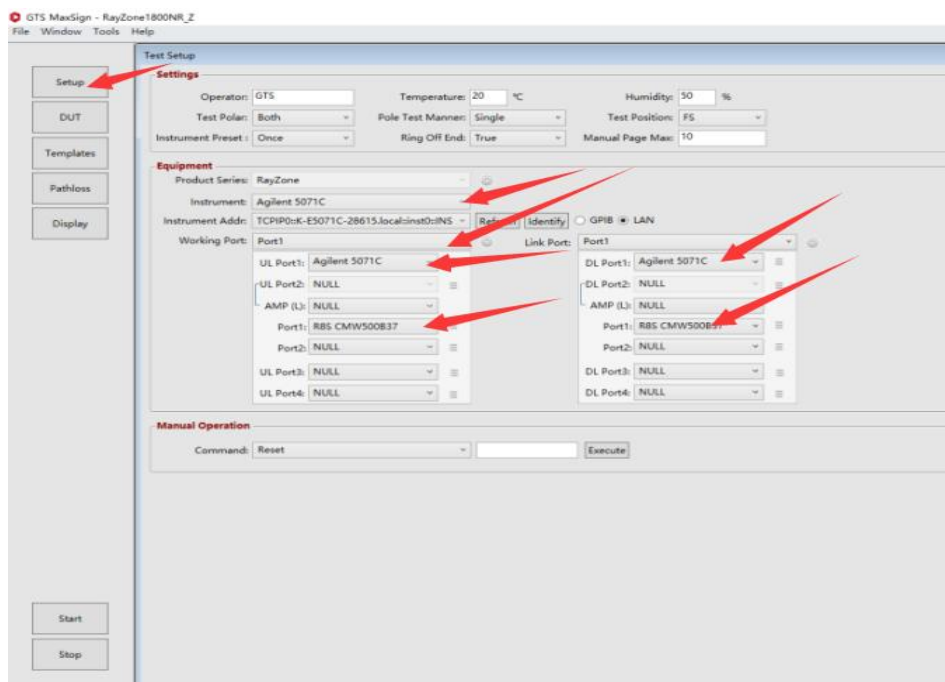
The test equipment required for this test includes a computer, spectrum analyzer, amplifier and anechoic chamber. See figures below.

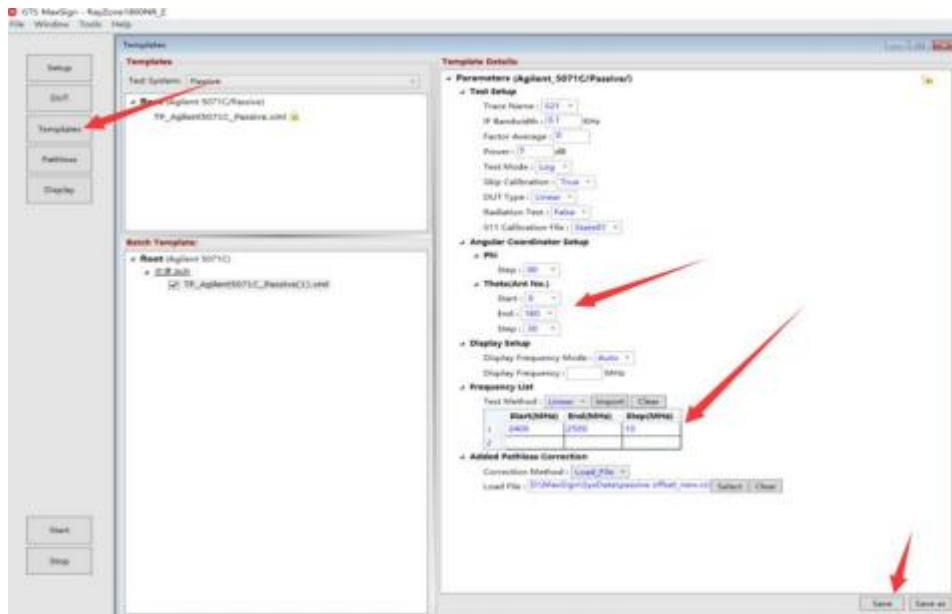




(Figure: Spectrum analyzer and amplifier setup)(Figure: RayZone 1800 5G anechoic chamber, 5G NR Sub6GHz)

2. Software Test



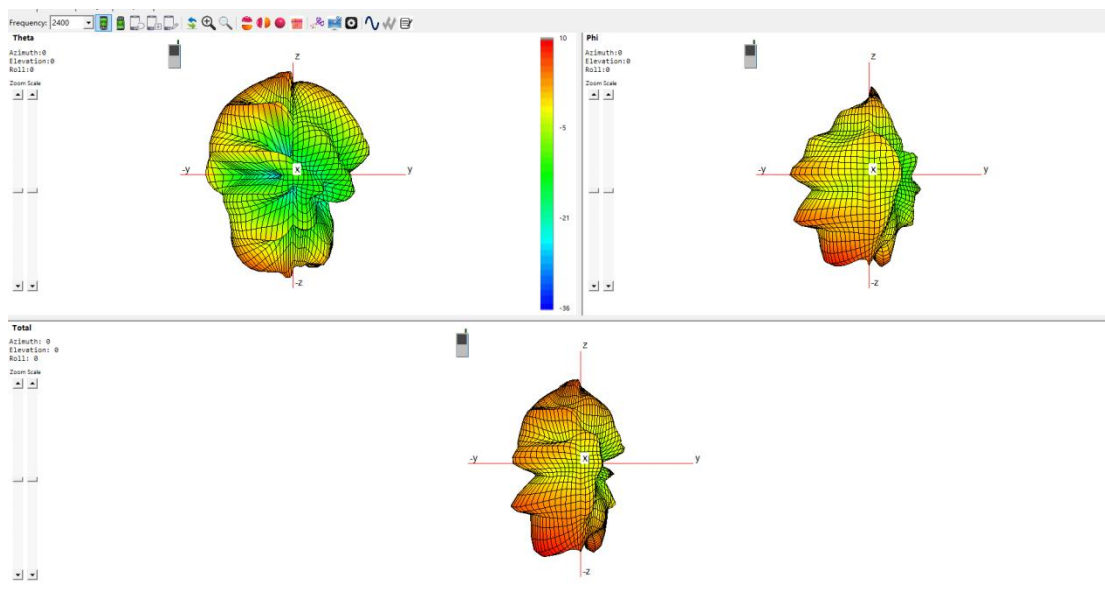


(Figure: GTS Madsign RayZone1800 software Test-Setup parameter configuration interface)(Figure: GTS Madsign RayZone1800 software parameter detail setting interface)

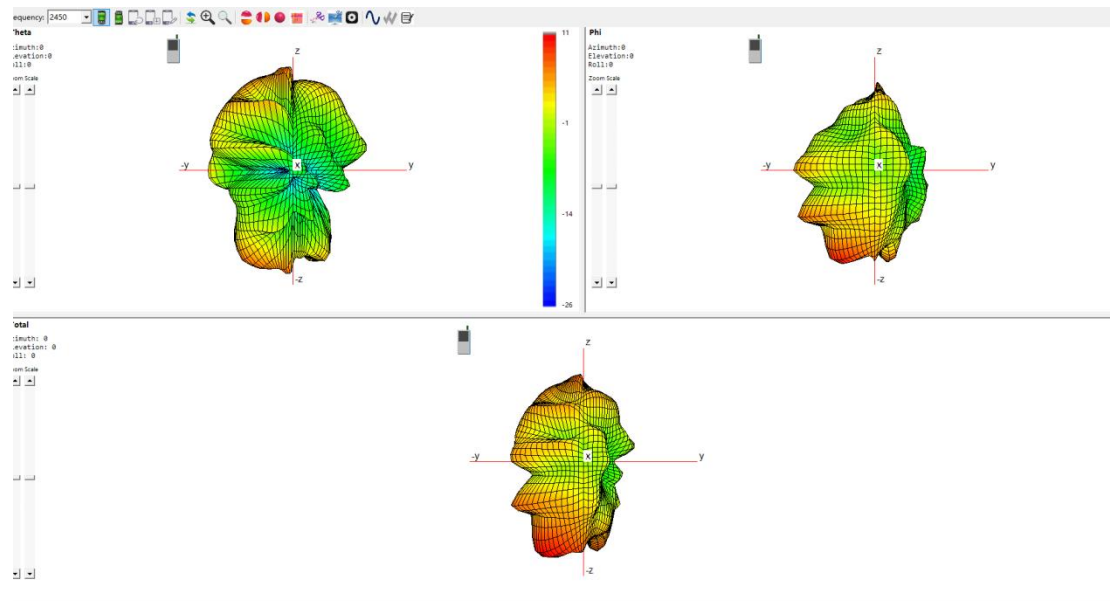
3. Data Reading

2.1 3D Antenna Radiation Pattern

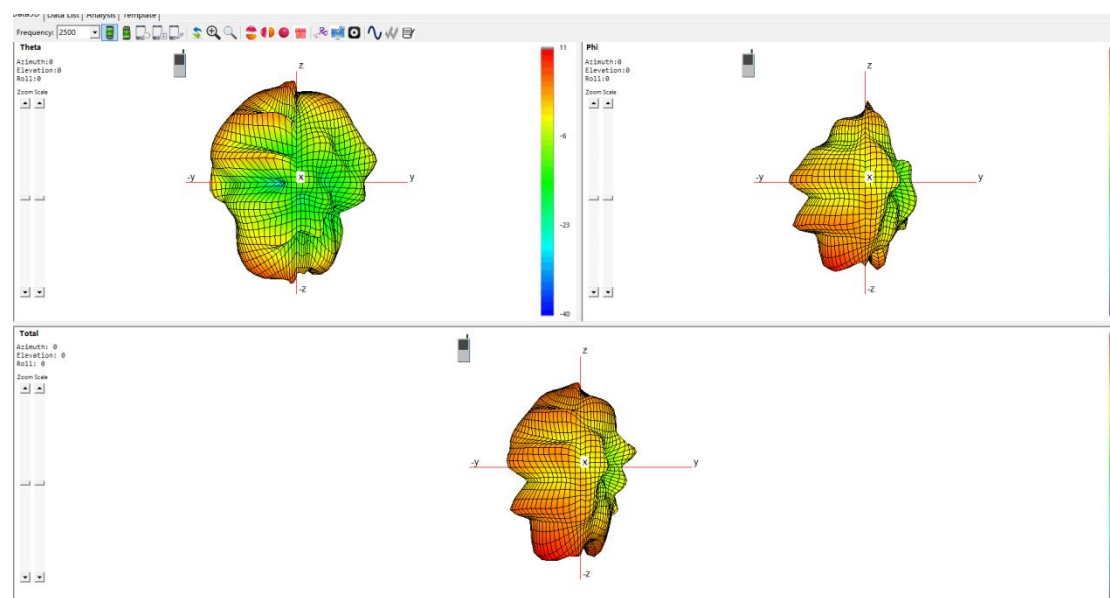
2400MHz(Figure: 3D radiation pattern @2400MHz)



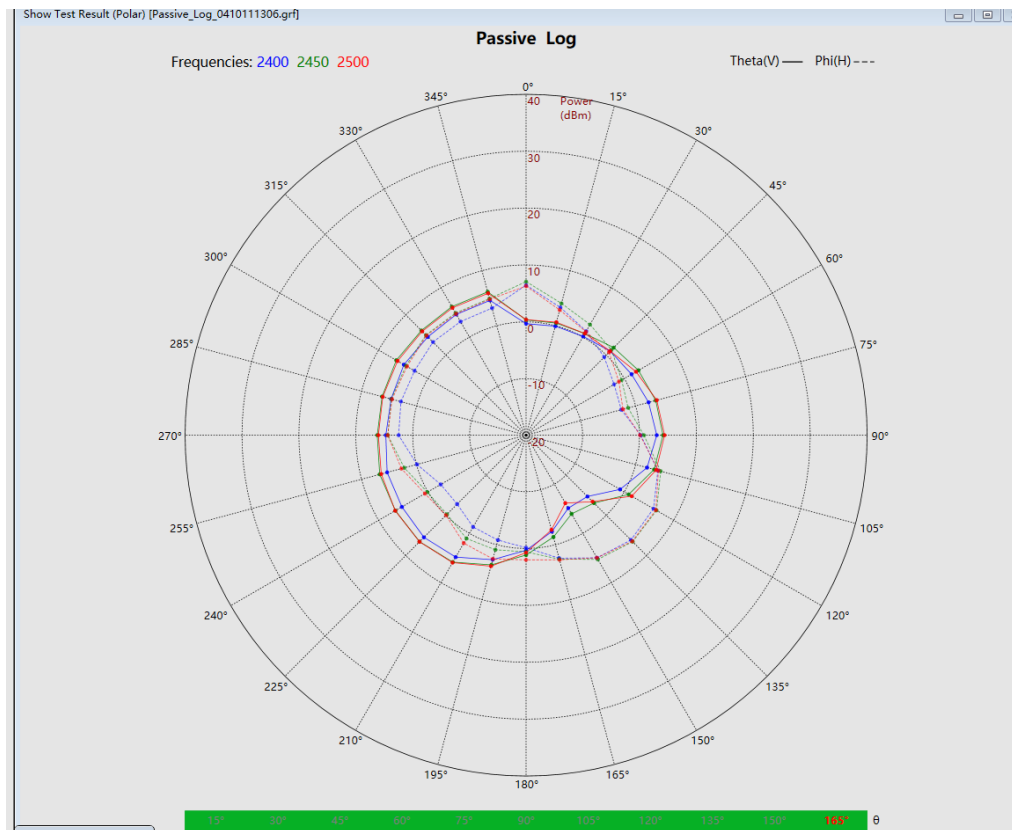
2450MHz(Figure: 3D radiation pattern @2450MHz)



2500MHz(Figure: 3D radiation pattern @2500MHz)



2.2 2D Antenna Radiation Pattern

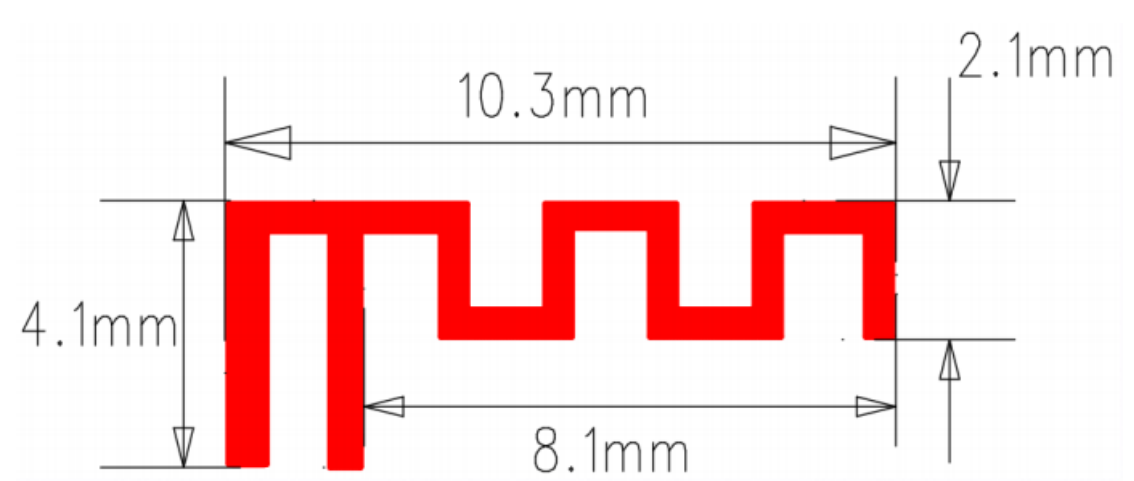


(Figure: Polar 2D Passive Log radiation pattern, frequencies: 2400 / 2450 /2500MHz)

2.3 Detailed Scan Output Test Results

Freq (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	1.68780662520884	0.794033387146613	120.061382165417
2410	2.0118389516155	1.18096359730949	131.249107761556
2420	2.4009849329741	1.57132406265487	143.592714734613
2430	2.5361105550862	1.68319878312963	147.339732930495
2440	2.5989948761988	1.68593708885818	147.43266260681
2450	2.9331328784454	1.99049316297015	158.142760803987
2460	2.9336854281553	2.00757643303747	158.766051228755
2470	2.7996135229011	1.82038045769657	152.068074103843
2480	2.804228454566	1.79181986007354	151.071306813431
2490	2.6239796482235	1.64115325655912	145.920169566323
2500	2.6986900197952	1.75439124848679	149.77492984879

ITEM	ANT SPEC		
Model Name	2.4G ANT		
Antenna plate	PCB antenna		
Center Frequency	2400MHz	2450MHz	2500MHz
	1.68dBi	2.93dBi	2.69dBi
MAX.Gain	2.93dBi		
Polarization	Horizontal and Vertical		
Impedance	50Ohm		
Manufacture	SHENZHEN ZHONGKELANXUN TECHNOLOGY CO.,LTD 13/F, Unit1, Block A, Zhihui Plaza, Qiaoxiang Road, Gaofa Community, Shahe Sub-district, Nanshan District, Shenzhen		



Antenna Drawing & Dimensions (mm)(Figure: PCB antenna outline dimension drawing: overall length 10.3 mm, width 4.1 mm and other dimension marks)