
Antenna Reports

Issue date: 2023/03/12

Signature: 王康辉

Wang Kanghui

Date: March 12, 2023

Peak Gain

ANT 0

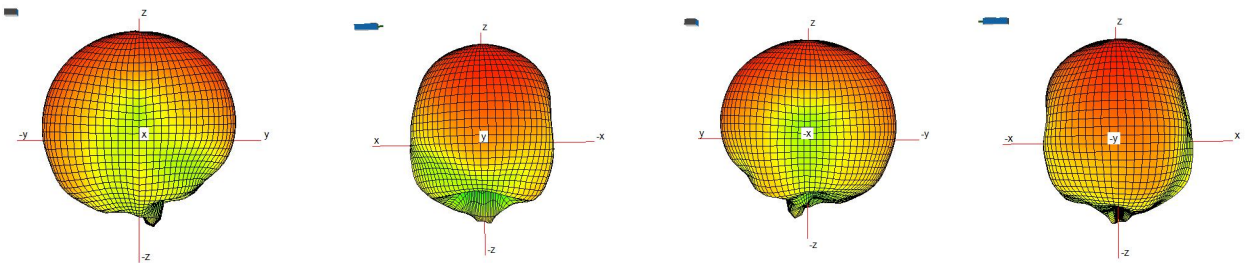
Antenna model name: WIFI antenna

Antenna type: FPC

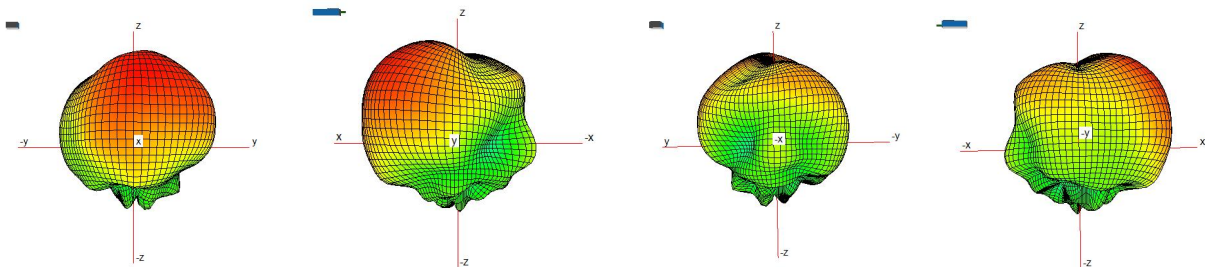
WLAN Peak Gain (dBi)			
2400~2500MHz	5.15	5470~5725MHz	6.9
5150~5250MHz	7.3	5725~5850MHz	6.5
5250~5350MHz	7.6	5925~7125MHz	

Antenna gain was measured in the anechoic chamber, 3D scan was exercised, and the highest numbers are reported in this document

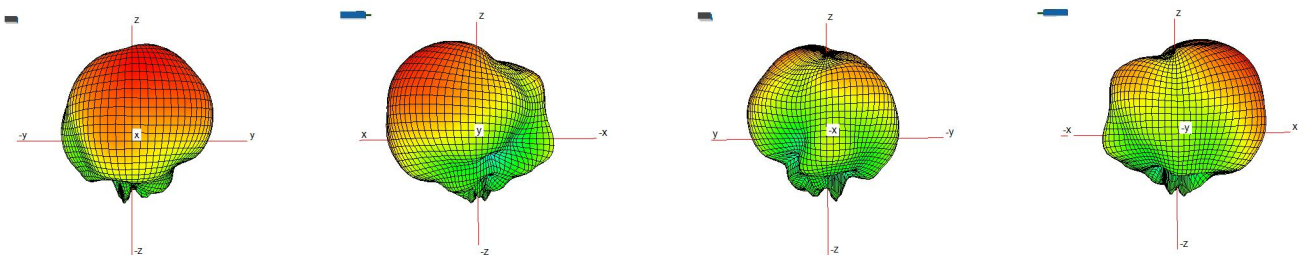
WIFI 2.4G (2450 MHz)



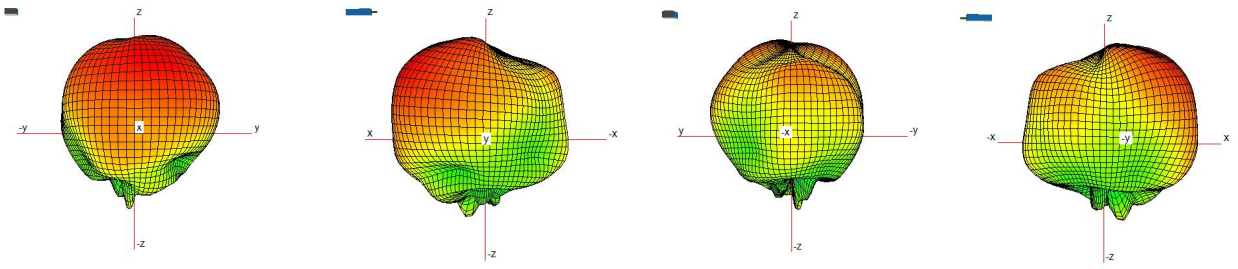
WIFI 5G (5200 MHz)



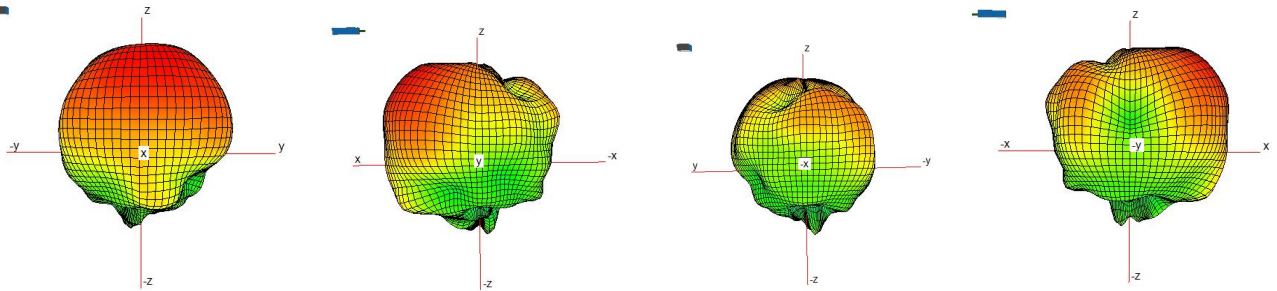
WIFI 5G (5300 MHz)



WIFI 5G (5500 MHz)



WiFi 5G (5800 MHz)



ANT1

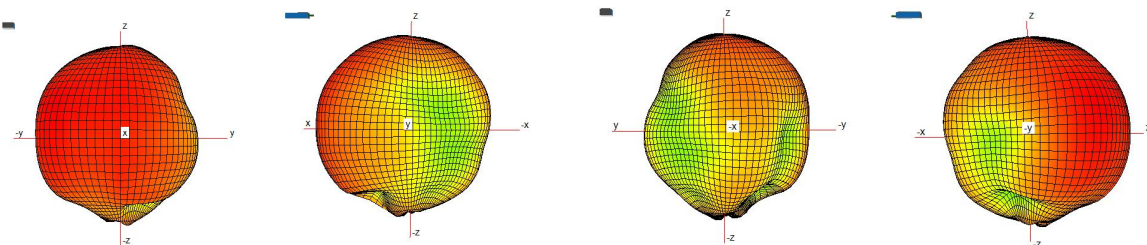
Antenna model name: Special 2.4G wireless ANT0

Antenna type: FPC

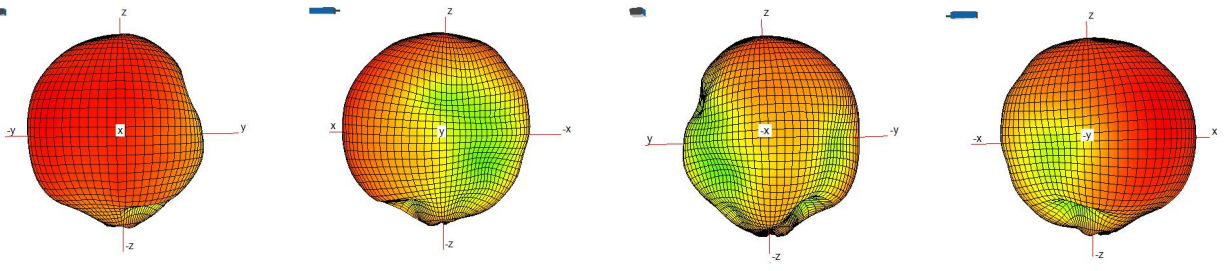
Special 2.4G wireless ANT0 Peak Gain (dBi)			
2400~2483.5MHz	1.26	5470~5725MHz	
5150~5250MHz		5725~5850MHz	
5250~5350MHz		5925~7125MHz	

Antenna gain was measured in the anechoic chamber, 3D scan was exercised, and the highest numbers are reported in this document

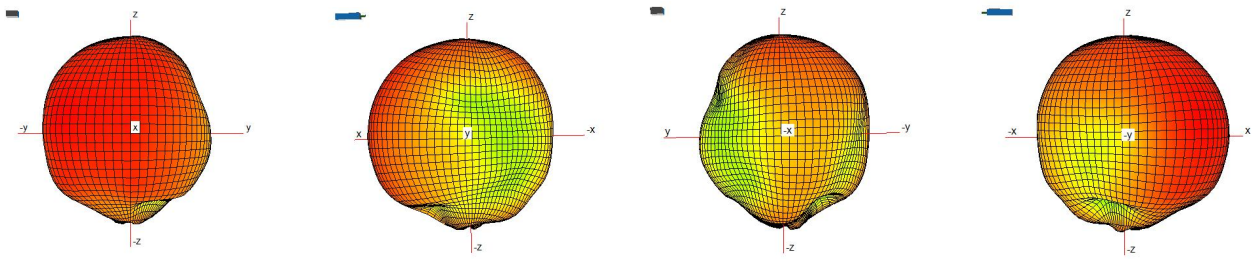
2.4G (2400 MHz)



2.4G (2435 MHz)



2.4G (2475MHz)



ANT2

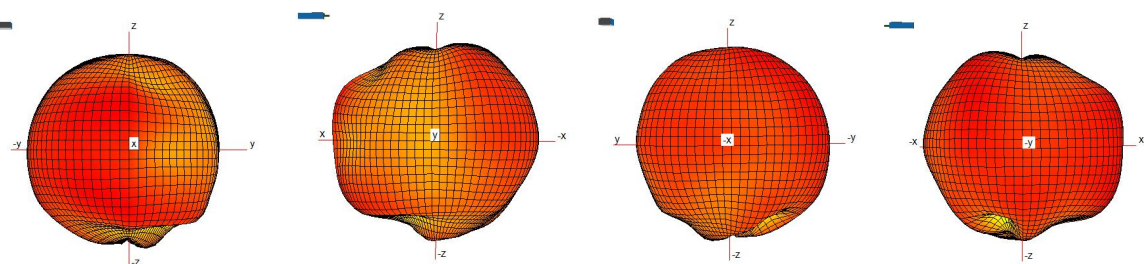
Antenna model name: Special 2.4G wireless ANT1

Antenna type: FPC

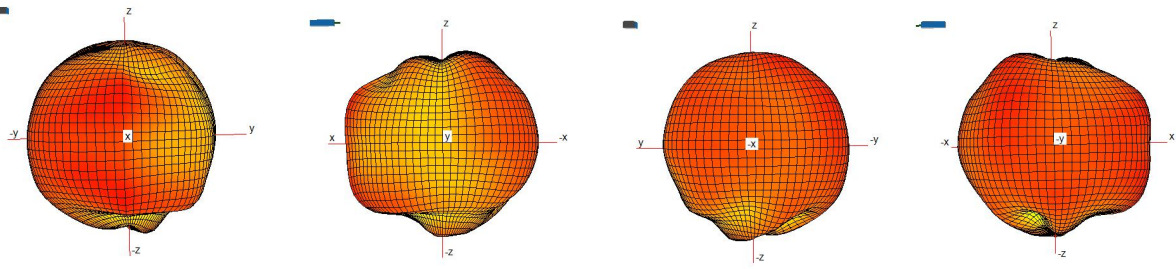
Special 2.4G wireless ANT1 Peak Gain (dBi)			
2400~2483.5MHz	-0.85	5470~5725MHz	
5150~5250MHz		5725~5850MHz	
5250~5350MHz		5925~7125MHz	

Antenna gain was measured in the anechoic chamber, 3D scan was exercised, and the highest numbers are reported in this document

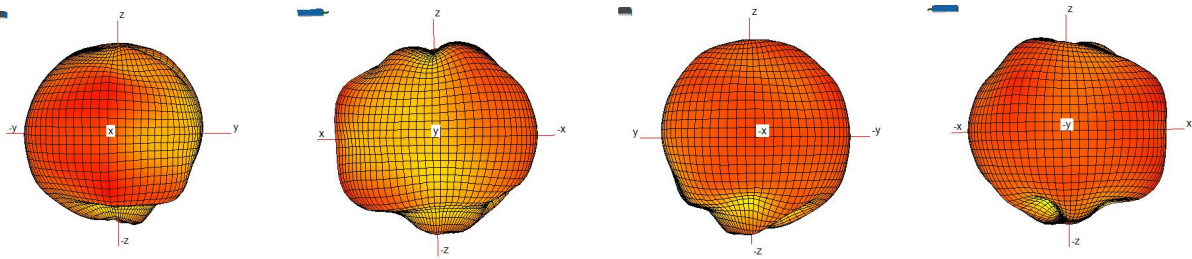
2.4G (2400 MHz)



2.4G (2435 MHz)



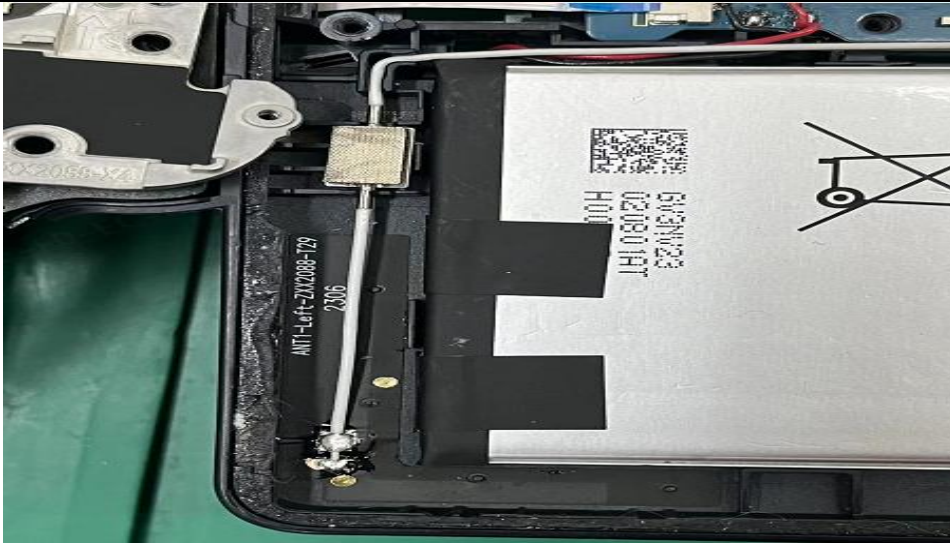
2.4G (2475MHz)



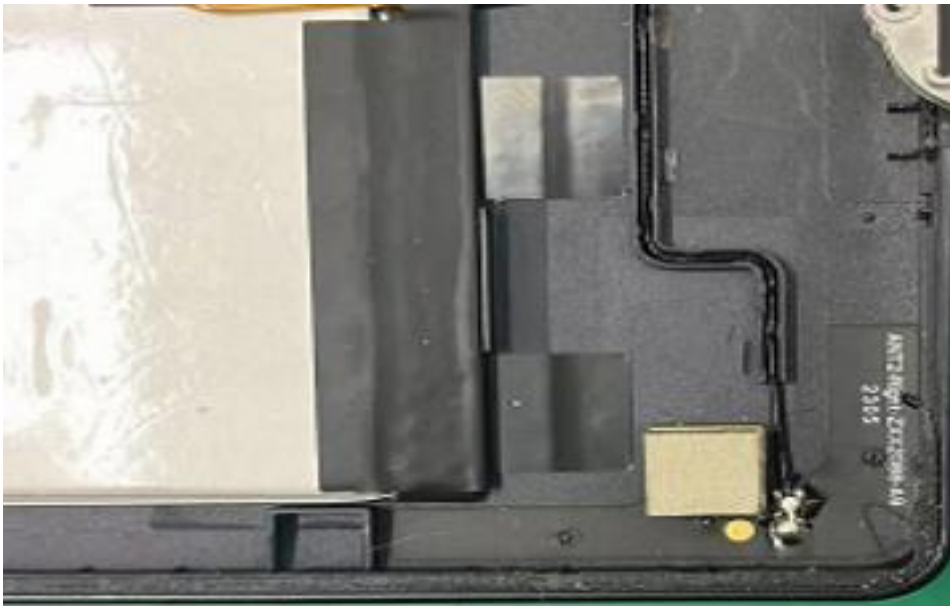
Antenna location 附图



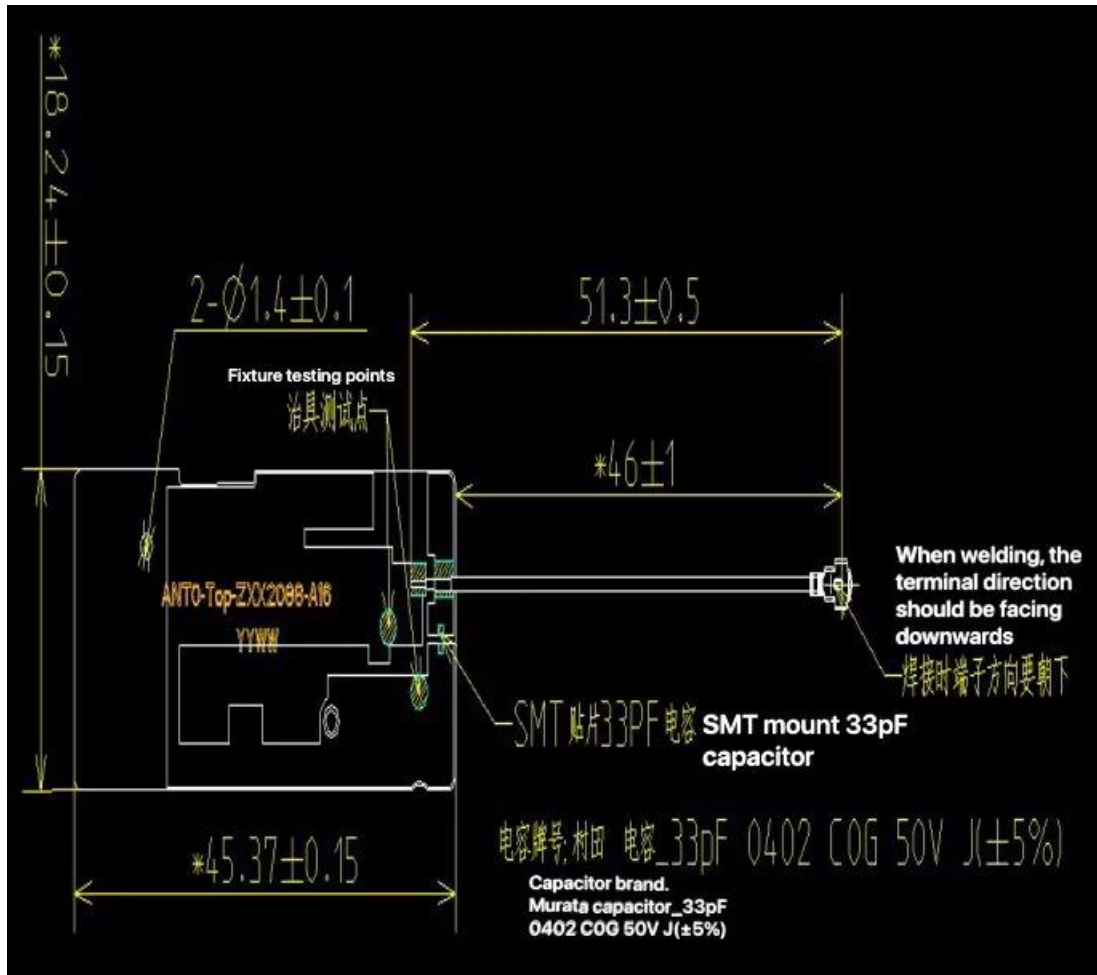
ANT 0 (WIFI ANT)



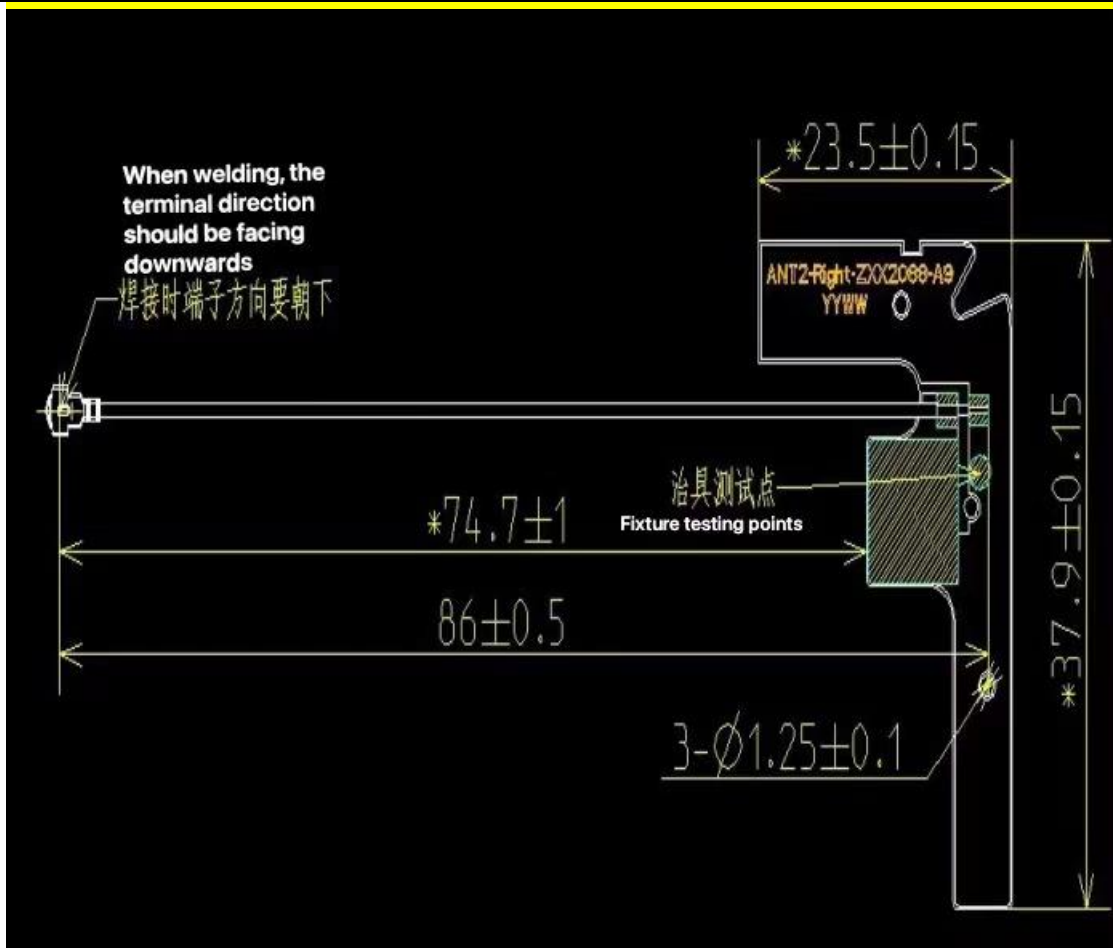
ANT 1 (Special 2.4G wireless ANT0)



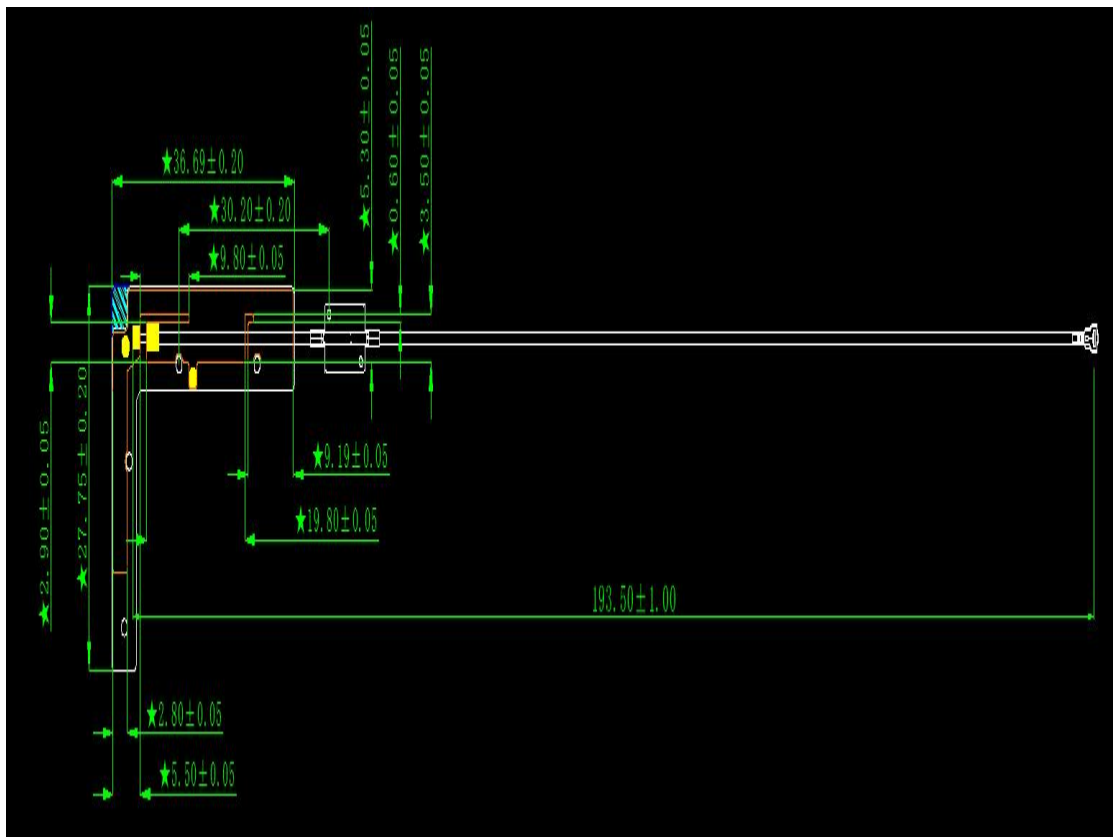
ANT 2(Special 2.4G wireless ANT1)



ANT 0 (WIFI ANT)

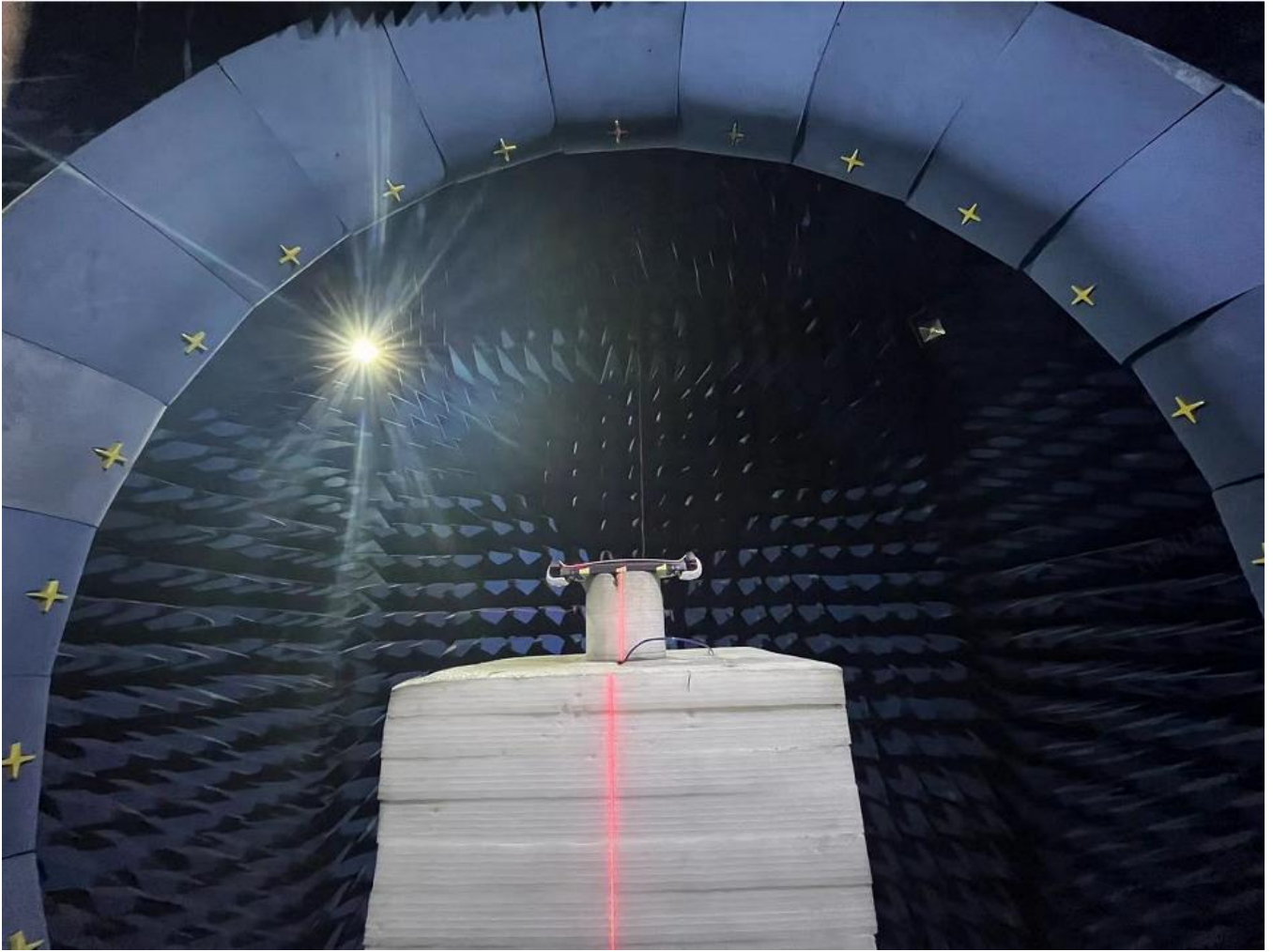


ANT 1 (Special 2.4G wireless ANT1)

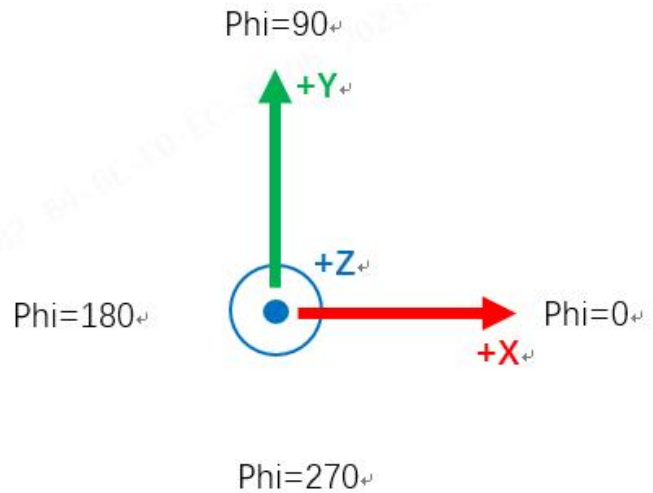


ANT 1(Special 2.4G wireless ANT0)

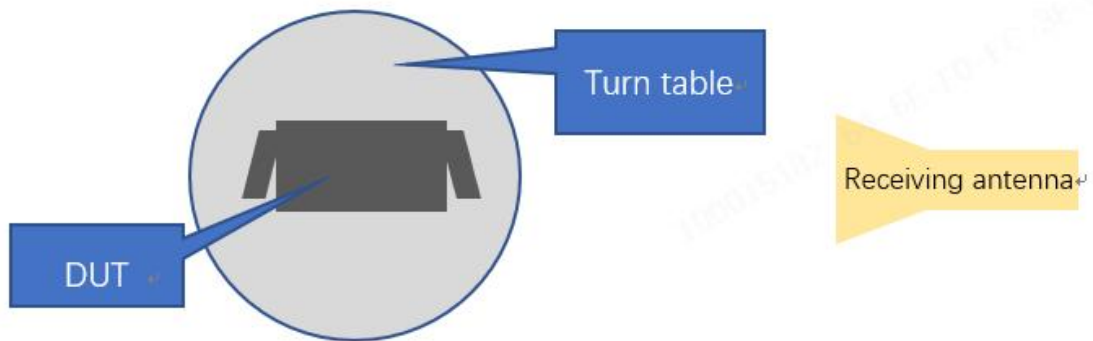
Setup photo:



Setup diagram:



Top view



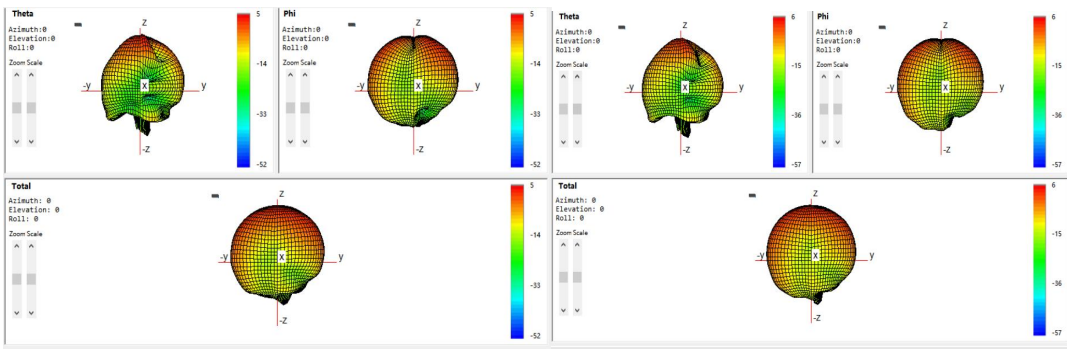
Test Environment

Test instrument: ROHDE&SCHWARZ CMW500
Test chamber: RayZone 2800
Test equipment calibration time: 2022/11/28-2023/11/28
Test software: GTS MaxSign
Test Name: 王康辉
Test time: 2022/03/28

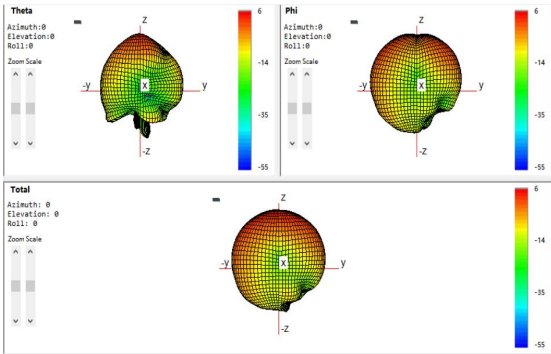
ANT Top

WIFI 2.4G (2400 MHz)

WIFI 2.4G (2450 MHz)

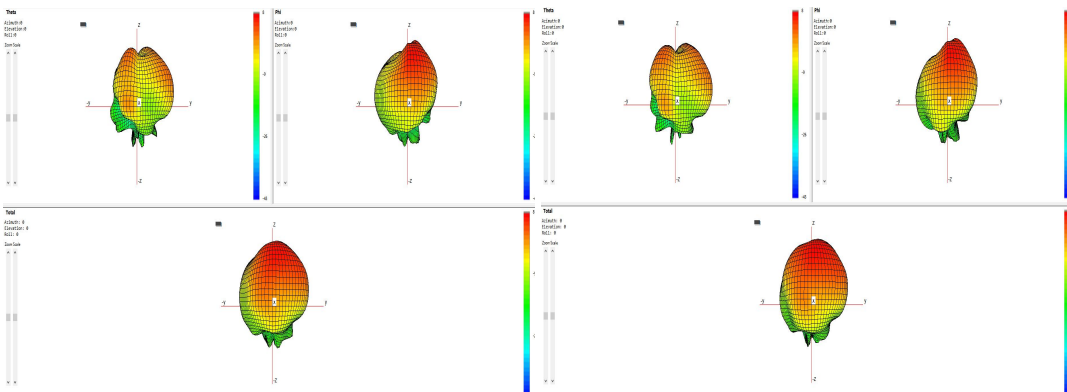


WIFI 2.4G (2500 MHz)



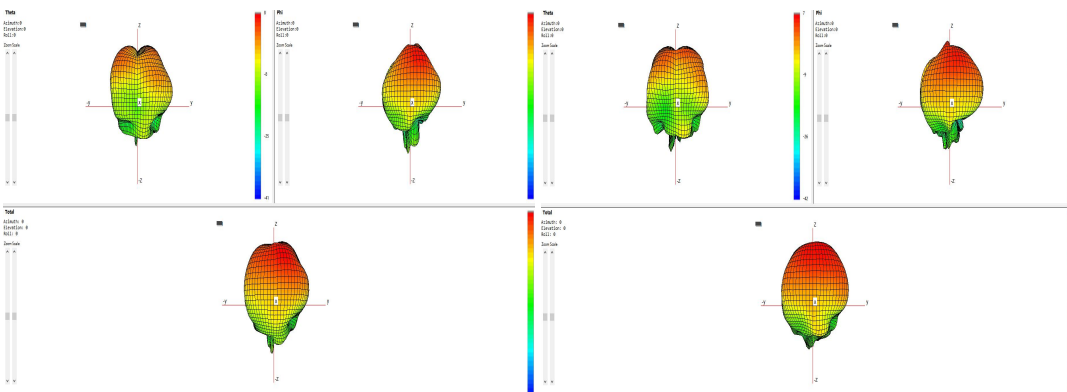
WIFI 5G (5200 MHz)

WIFI 5G (5300 MHz)



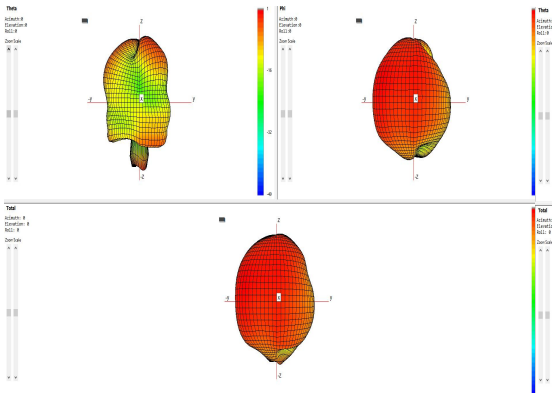
WIFI 5G (5600 MHz)

WIFI 5G (5800 MHz)

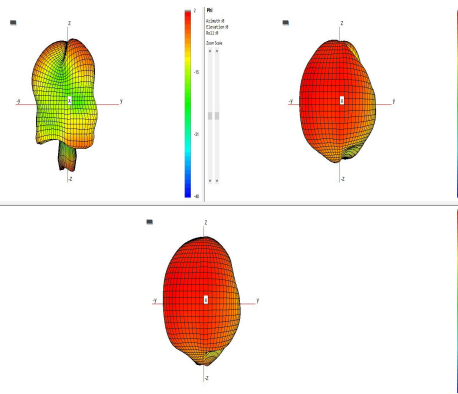


ANT 1 (Special 2.4G wireless ANT0)

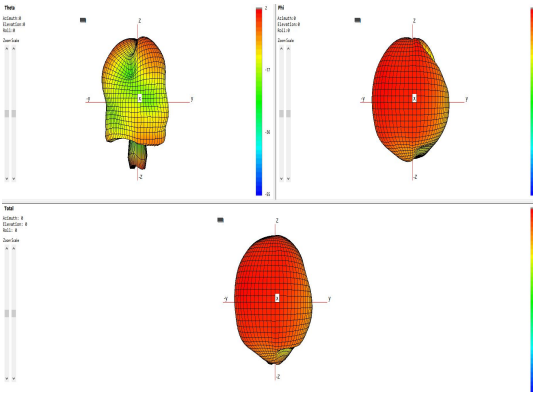
2.4G (2400 MHz)



2.4G (2435 MHz)

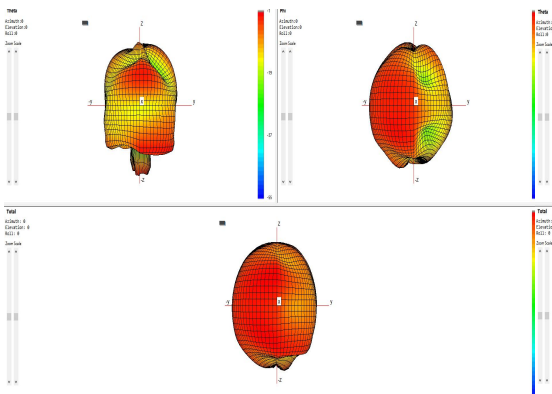


2.4G (2475 MHz)

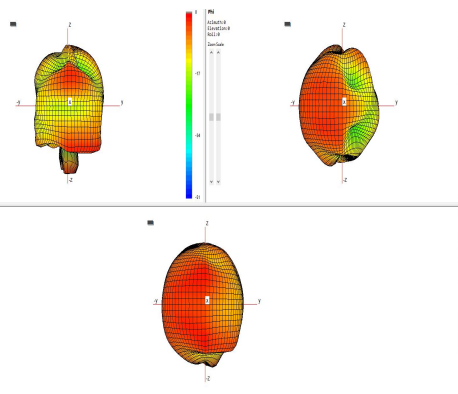


ANT 2 (Special 2.4G wireless ANT1)

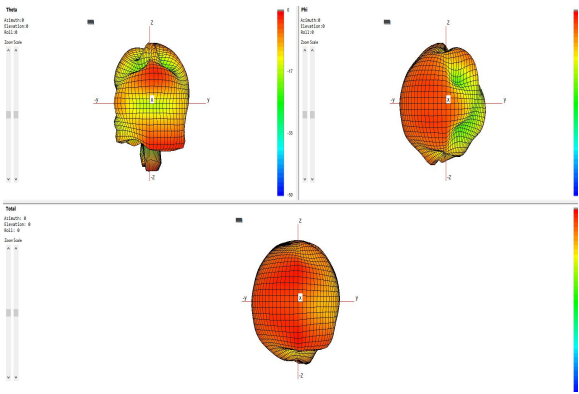
2.4G (2400 MHz)



2.4G (2435 MHz)

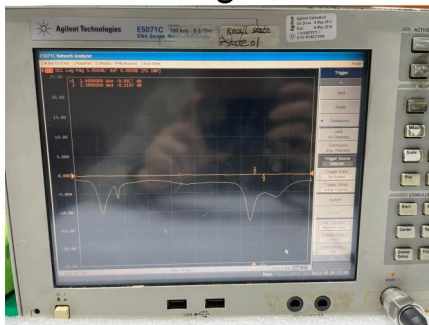


2.4G (2475 MHz)



Test steps and methods:

1. Agilent Technologies E5071C PORT1 View Passive Standing Waves

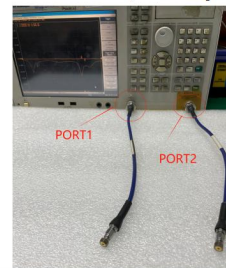


3. Rayzone2800 passive testing and active OTA testing darkroom

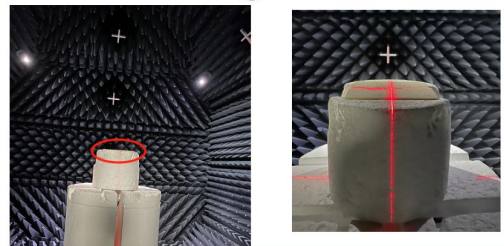


2.

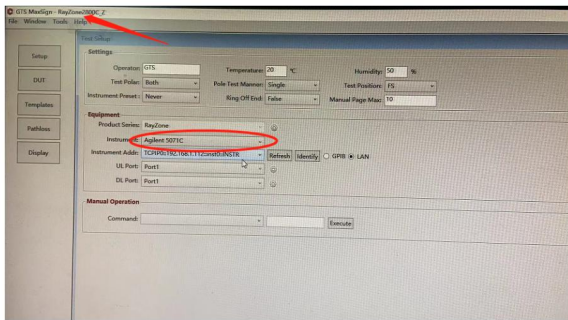
Check the antenna isolation of ANT0&ANT1, ANT0&ANT2, ANT1&ANT2 through PORT1 and PORT2, respectively



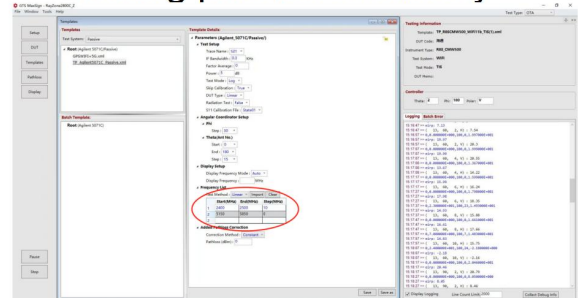
4. When testing the passive efficiency, place the tested equipment on the top of the foam plane with the screen facing down



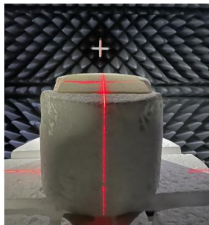
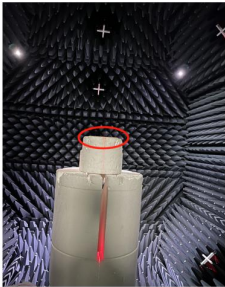
5. Testing software GTS Maxsign instrument switches to 5071C for passive efficiency testing



6. Open the corresponding template and set the frequency points to be tested to start testing passive efficiency



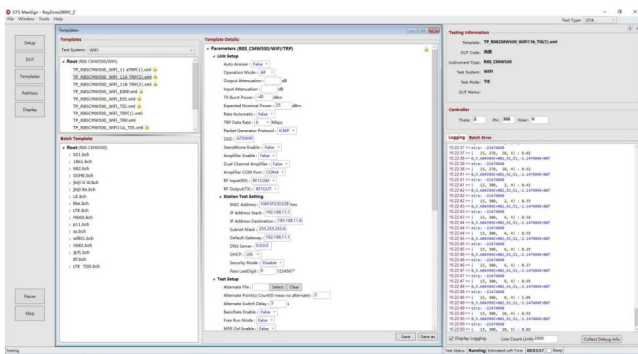
7. When testing the active OTA, place the device under test on the top of the foam plane with the screen facing up



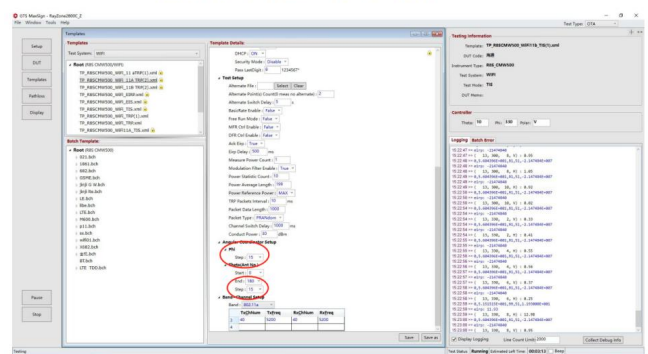
8. OTA testing instrument ROHDE&SCHWARZ CMW500



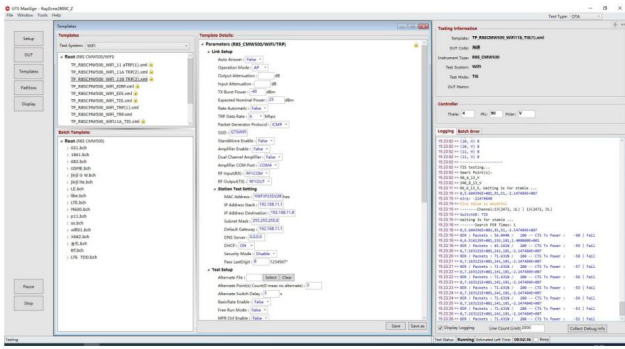
9.11a Test Template



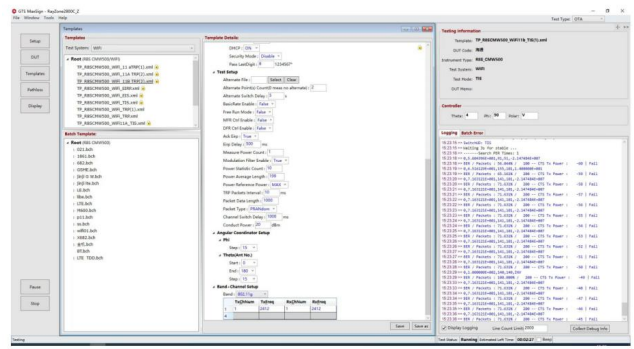
9.2: TRP Phi and Theta angle intervals are 15 °



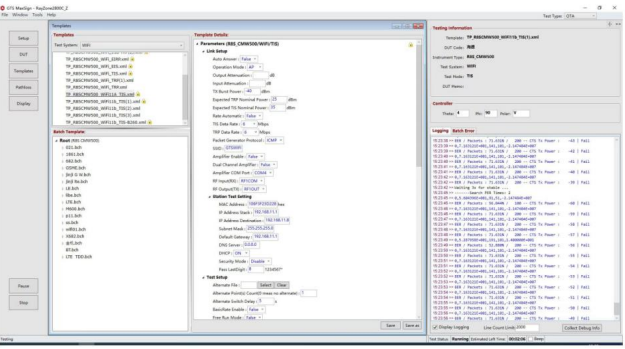
10.11g Test Template



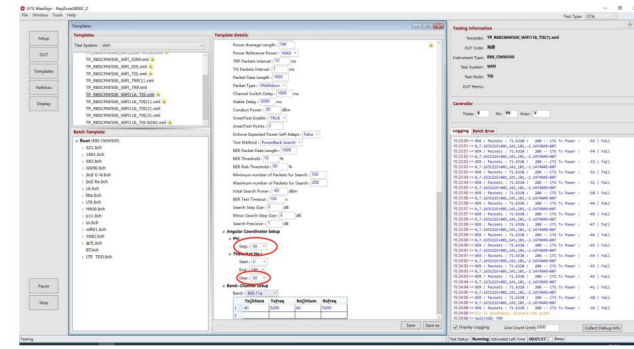
10.2: TRP Phi and Theta angle intervals are 15 °



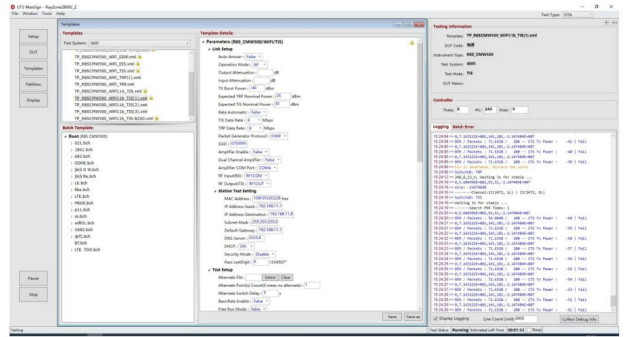
11. 11a TIS Test Template



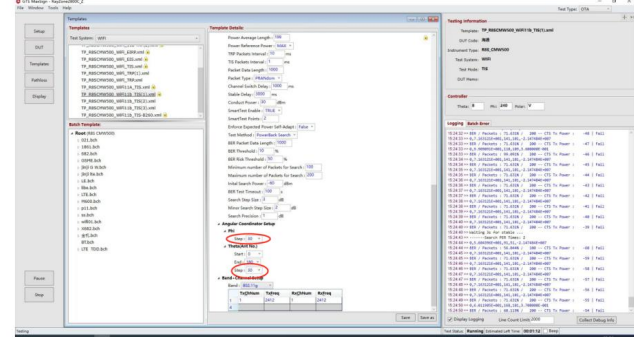
11.2: TIS Phi and Theta angle intervals are 30 °



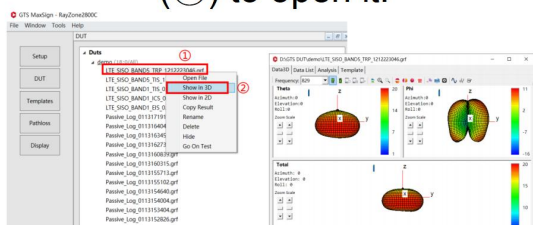
12. 11g TIS Test Template



12.2: TIS Phi and Theta angle intervals are 30 °



13. The format of the TRP&TIS result file is ". grf". Select the result file you want to view in the DUT tree directory (1), right-click and select "Show In 3D" (2) to open it.



14. Select Data List (1), where the TRP row contains the TRP data for the corresponding channel being tested (2)

DNGTS DUT\dms\LTE_SISO_BANDS_TRP_1212223046.grf

Data List (1) | Analysis | Template

Frequency: 829

TestItem	TRP	TestSys...	LTE SL	StartTL...	22:27...	EndTL...	22:30...	Tc...
Model	cal	TestBa...	BAND5					
Immo	20450	20525	20600	RayZo...				
Freq	829	836.5	844					
TRP	15.78...	15.48...	15.33...					
PeakERP	19.10...	18.91...	18.84...					
MinERP	5.846...	6.058...	6.855...					
BoreSightPhi	90	120	120					
BoreSightTheta	0	30	30					
NHRP	30	13.63...	13.23...	12.94...				
CMNO	45	14.85...	14.49...	14.27...				
LHRP	11.11...	10.69...	10.61...					
LHRP	13.97...	13.72...	13.55...					
ERP X	19.09...	18.80...	18.76...					
Polarizati...	Theta	Theta	Theta					
Theta X	90	120	120					
Phi X	0	30	0					
ThetaMax	19.09...	18.80...	18.76...					