

DV8910 BT Ant Test Report

Record for version modification

Date	Revision	Modify Content	Author
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SDMC

1 Test Summary

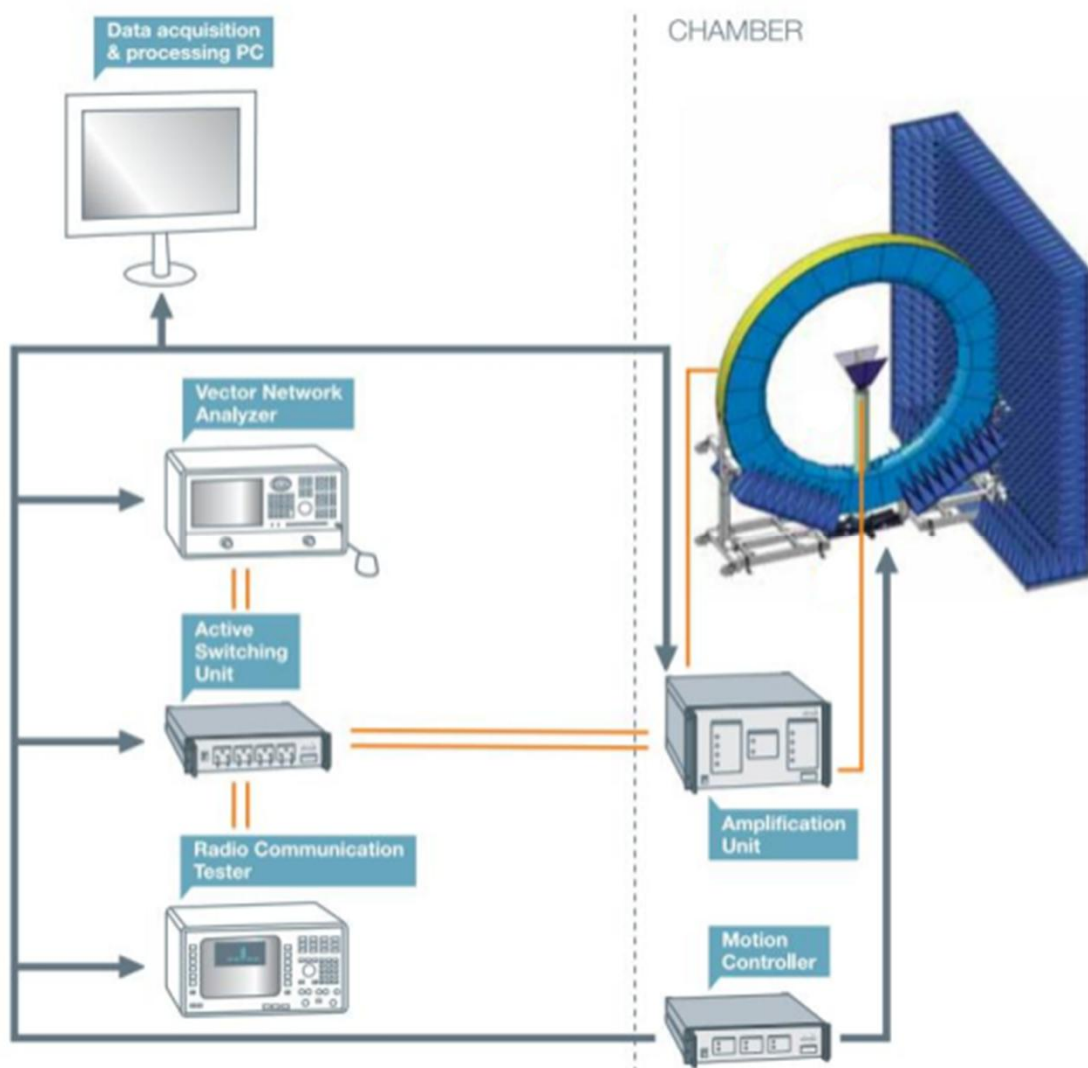
No.	Sample Name	Test item	Conclusion
1	DV8910	VSWR	Pass
2		Efficiency & Gain	Pass
3		2D & 3D Radiation Pattern	Pass
4		OTA test	Pass

2 Test Information

Model No.	DV8910
HW Version	DV8919X-GEI-LPDDR4-V3
SW Version	BaseLine-v11.1.1.1
CPU	Amlogic S905X4-J
DDR	FLXC4004G-N2
Wi-Fi Module	AP6275PR3
Tester	FANGJINXI
Reviewer	Yurnero He
Approver	Zoau
Date	2023.08.24

3 Testing Environment

Chamber	XH Chamber
Wireless Communication Tester	R&S CMW500
Vector Network Analyzer	KEYSIGHT E5071C
Temperature	25±2°C
Humidity	50±20%Rh

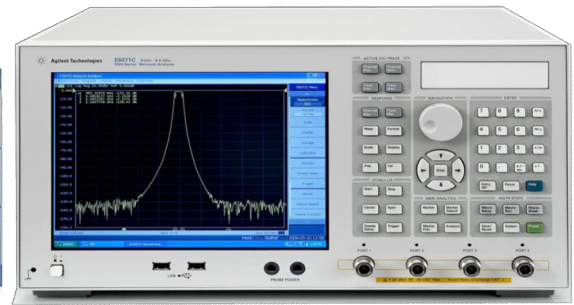




R&S CMW500

Wireless Communication Tester

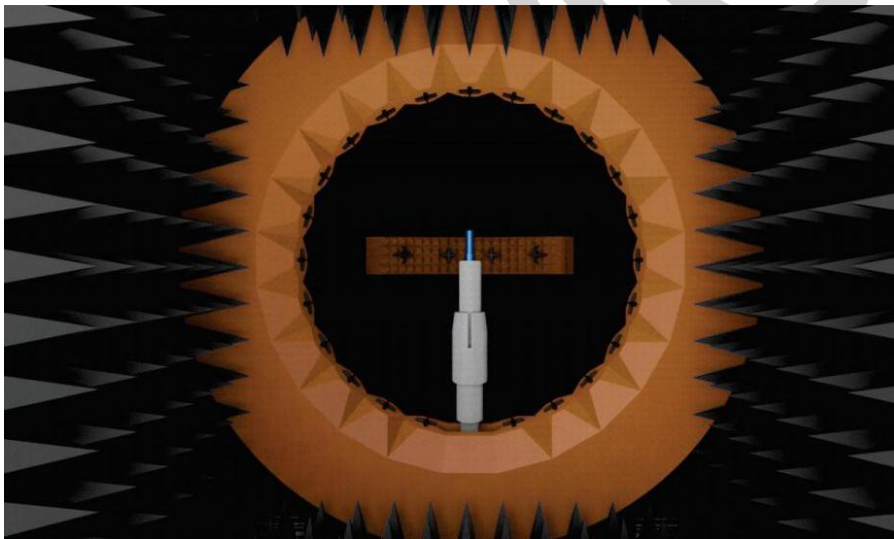
- GSM/3G/4G
- Wi-Fi/ BT
- NB-IoT



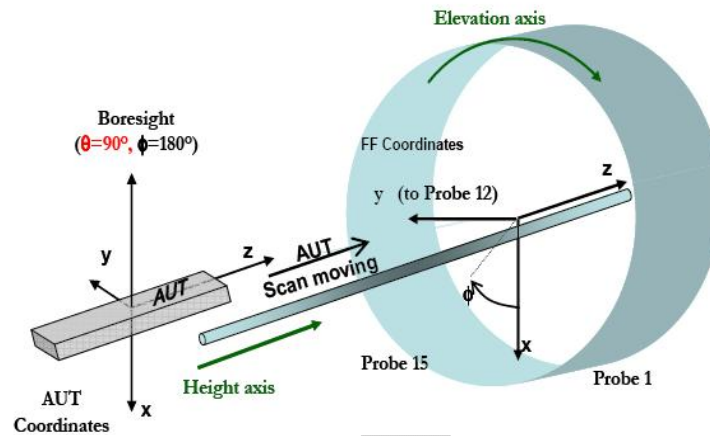
KEYSIGHT E5071C

Vector Network Analyzer

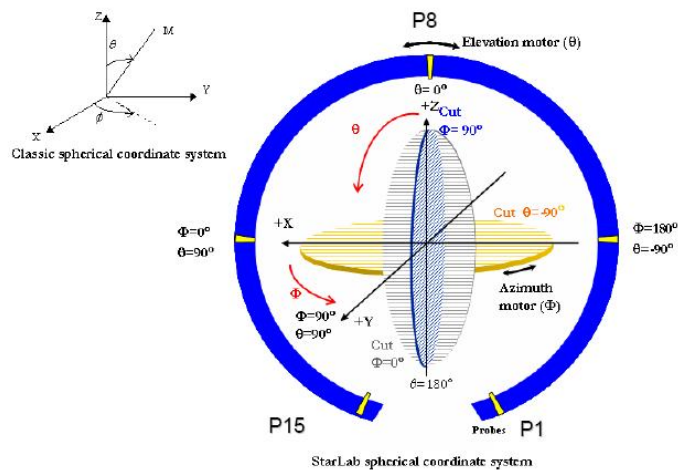
- Frequency: 100 kHz~8.5GHz



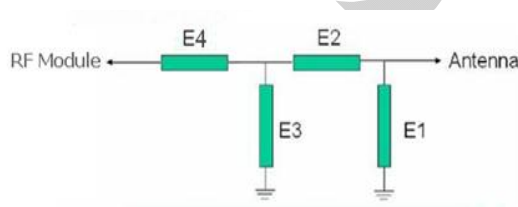
Coordinate system – Cylindrical geometry



Coordinate system – Spherical geometry



4 Matching Circuit Description



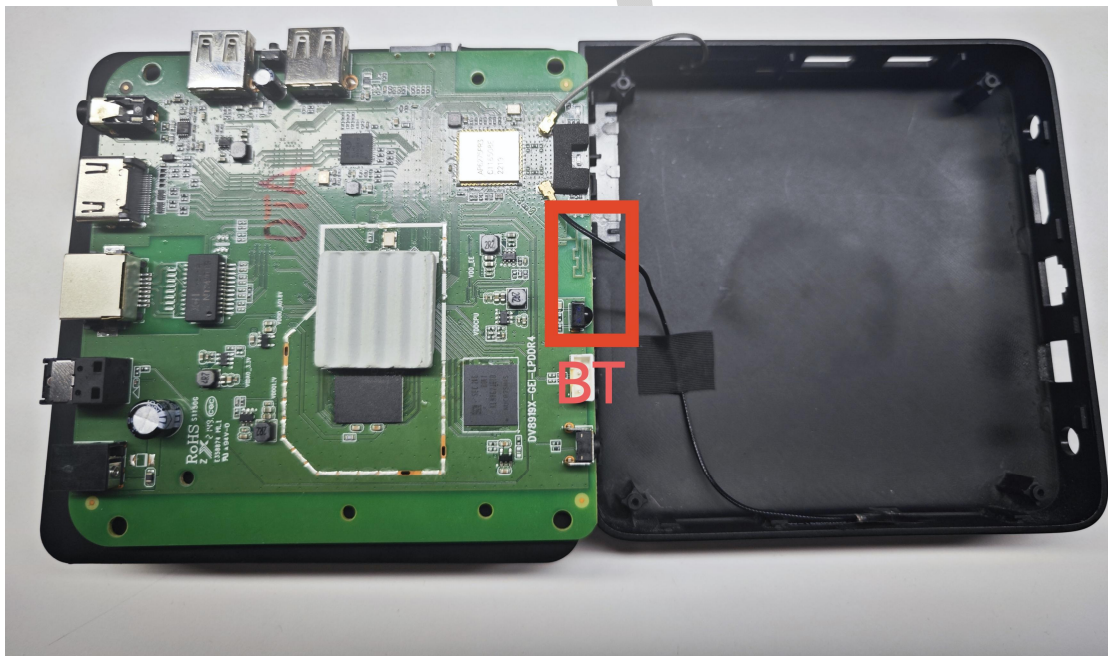
Element	Value
E1	N/A
E2	N/A
E3	N/A
E4	N/A

5 Antenna Technical Parameter

Electrical Technical Parameter				
Electrical Spec				
Frequency Range	2400 ~2500MHz			
VSWR	≤2.0			
	Remark: VSWR of ceramic & on-board layout Antenna≤3.0			
Input Impedance	50 Ω			
Direction	Omnidirectional			
Efficiency	≥50%			
	Remark: Efficiency of ceramic & on-board layout Antenna≥30%			
Gain	BT≥-1dBi			
Mechanical Specifications				
Material Type	Metal ☐	FPC ☐	PCB ☐	Layout ☒
Working Temperature	-20℃~+70℃			
Working Humidity	20%~80%			

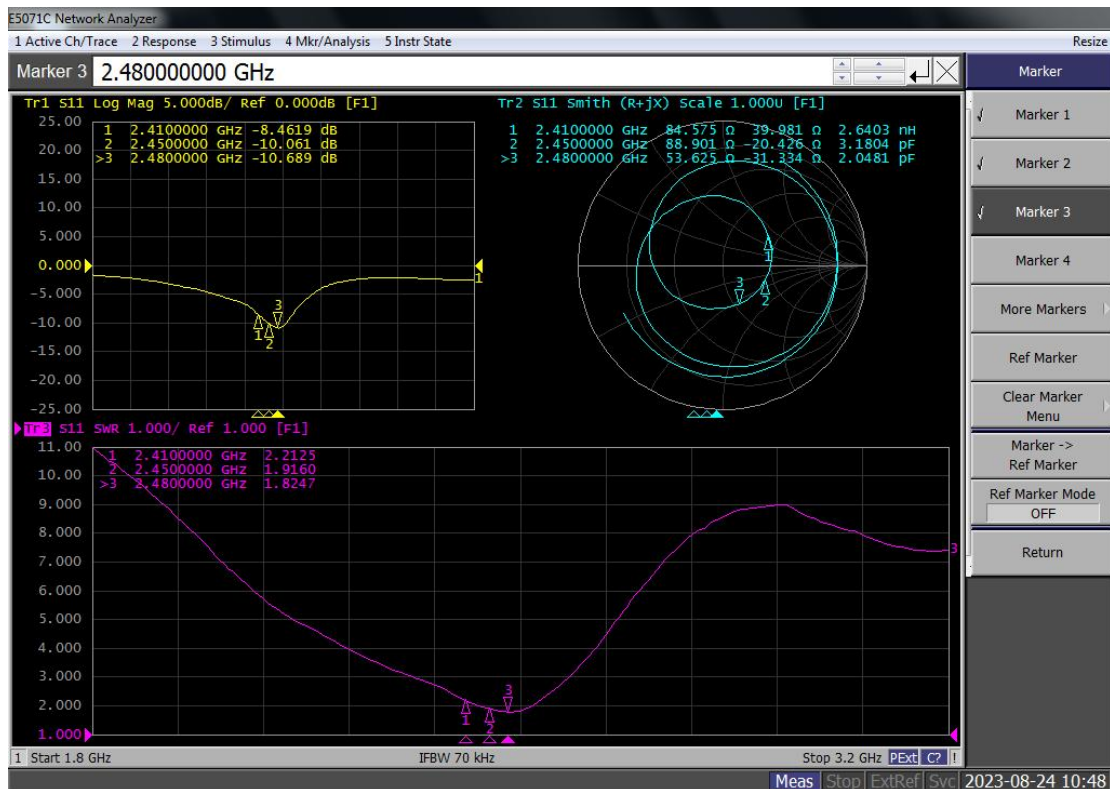
6 Assembly Description

Antenna Attachment Position



7 Passive Parameter Test

7.1 VSWR

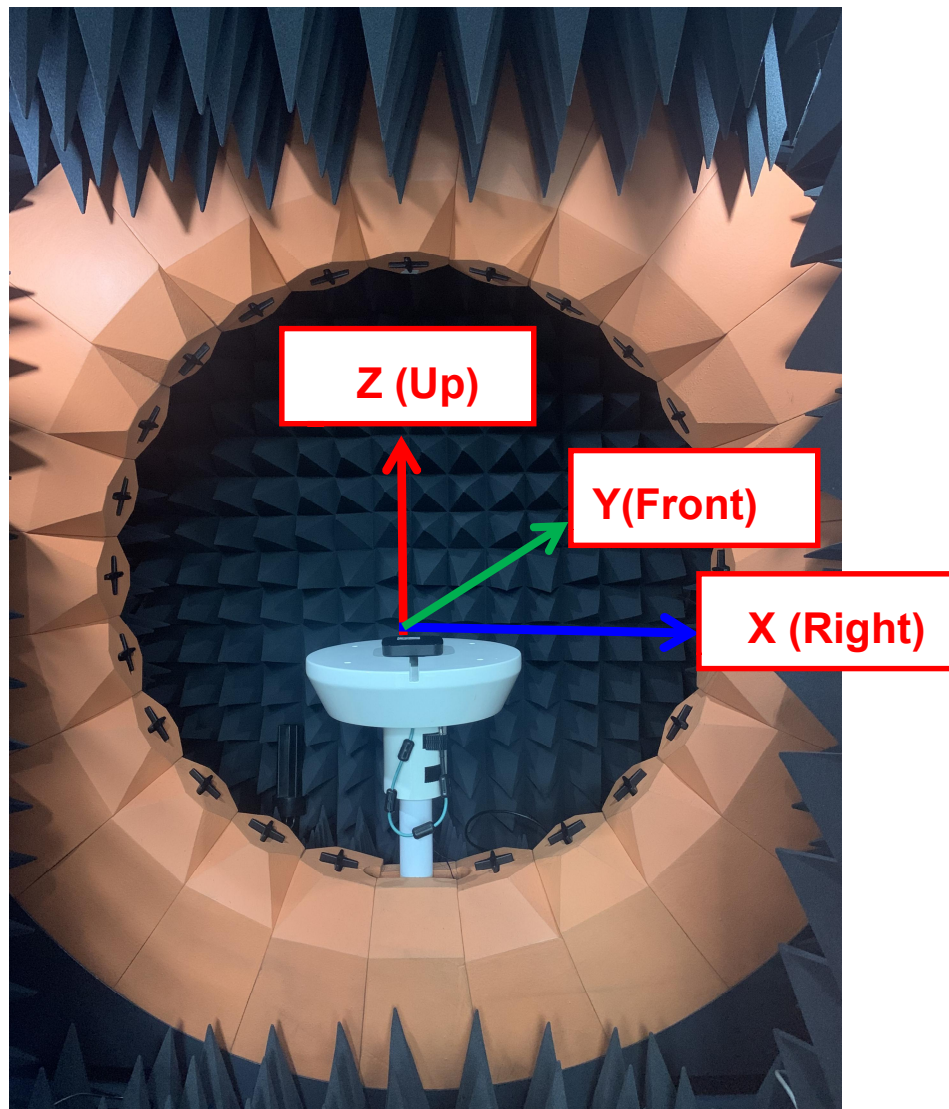


Freq/GHz	2.41	2.45	2.48
VSWR	2.2	1.9	1.8

7.2 Efficiency & Gain

Efficiency & Gain of BT Ant		
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	1.8	37.41
2410	2.17	38.55
2420	2.24	39.54
2430	1.8	39.9
2440	2.43	41.02
2450	2.08	41.3
2460	2.06	40.46
2470	1.38	39.63
2480	1.69	38.82
2490	1	36.48
2500	0.41	33.73

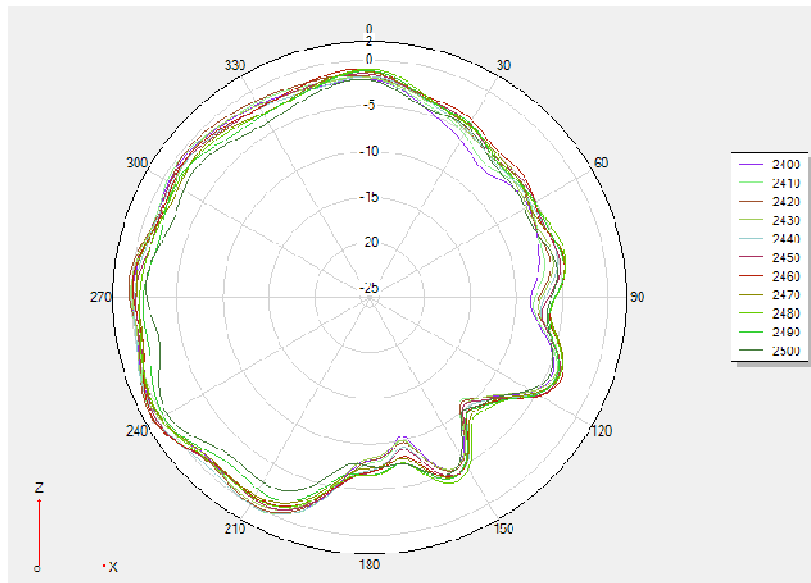
7.3 Reference Coordinate System



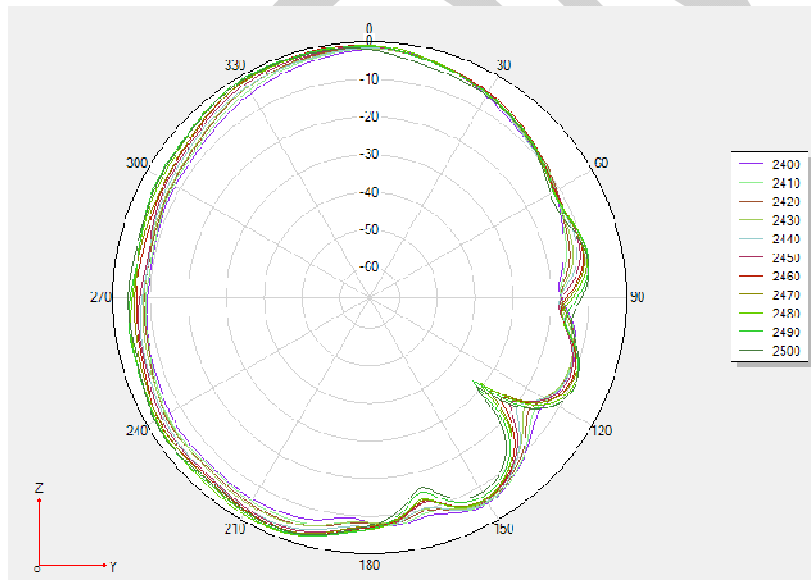
	XY	XZ	YZ
0°	Right	Up	Up
90°	Front	Right	Front
180°	Left	Down	Down
270°	Back	Left	Back

7.4 2D & 3D Radiation Pattern

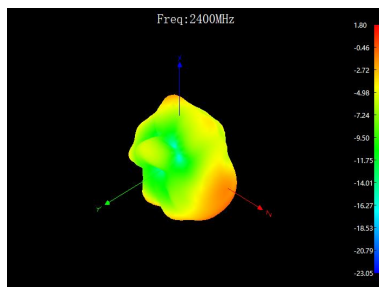
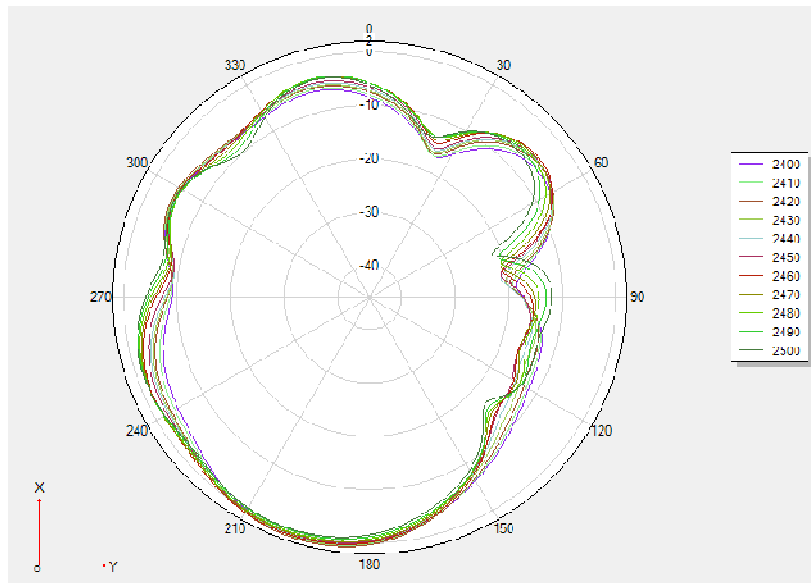
Phi =0



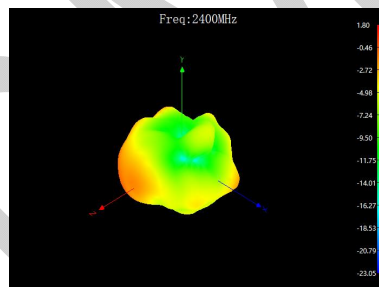
Phi =90



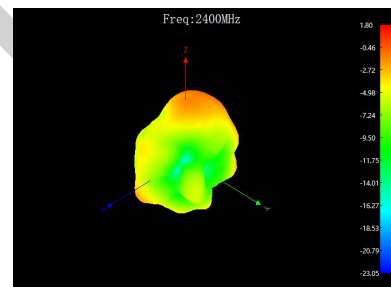
Theta =90



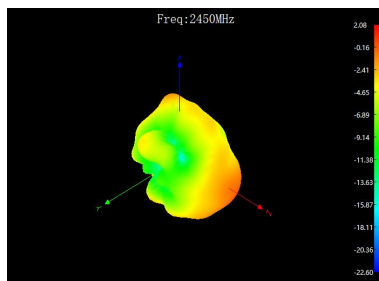
ZXY face @2400MHz



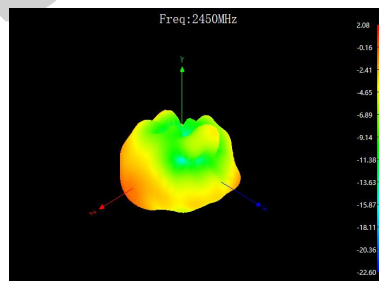
XYZ face @2400MHz



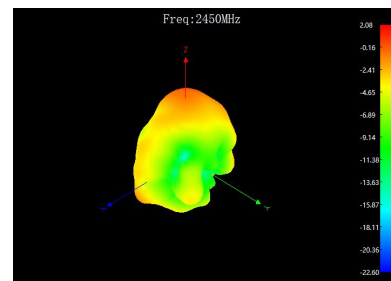
YZX face @2400MHz



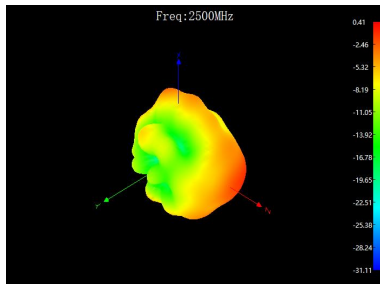
ZXY face @2450MHz



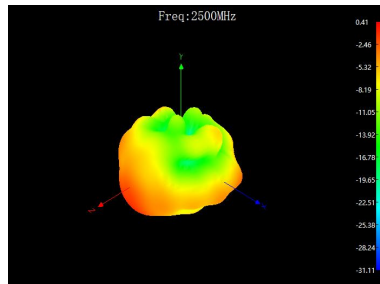
XYZ face @2450MHz



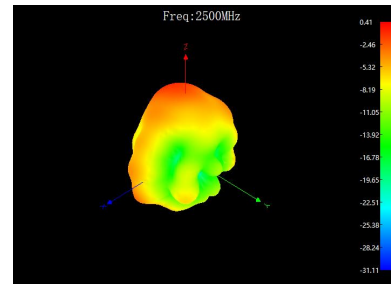
YZX face @2450MHz



ZXY face @2500MHz



XYZ face @2500MHz



YZX face @2500MHz

8 TRP & TIS Test Result

Test mode: DH1			
Standard	TRP $\geq -1\text{dbm}$		
	TIS $\leq -80\text{dbm}$ (Worst channel ≤ -75)		
Test Item	BT TRP&TIS		
Channel	0	39	78
Frequency (MHz)	2402	2441	2480
TRP(dBm)	4.6	4.76	4.62
TIS(dBm)	-87.44	-87.24	-84.28
Remark			