Product Specifications Approval

Derweimar Antenna Laboratory

Shenzhen R&D Center

Mobile communication terminal antenna

Customer Name: Almu

Product Name: Rod Antenna

Material Code: XD-FL-00796

Contractor			**Date : February 18 ,** 2025
Radio Frequency	structure	Audit	quality
Qin Qiuming	Chen Yusong	余奇学	高春彦

Customer side		Date: Year Month Day
in conclusion	Confirmed by	Reviewer

Address: 3rd Floor, Building 1, Youyi Building, No. 23, Chuangye 2nd Road, Baoan District, Shenzhen

(Behind Ping An Bank, Exit B of Honglang North Subway Station)

Tel: 0755-27885739 0755-27885839-800

深圳市德玛通讯设备有限公司 研发专用章

1. Purpose

To standardize the specifications and test methods of mobile communication terminal antenna products produced by Shenzhen Deweima Communication Equipment Co., Ltd. Avoid errors caused by different testing conditions and methods.

2. Overview of product categories and product models

2.1 Category

This mobile communication terminal antenna is a Rod Antenna

2.2 Product model overview

This report summarizes the electrical results for the antennas designed as part of the Dual Band Antenna Project.

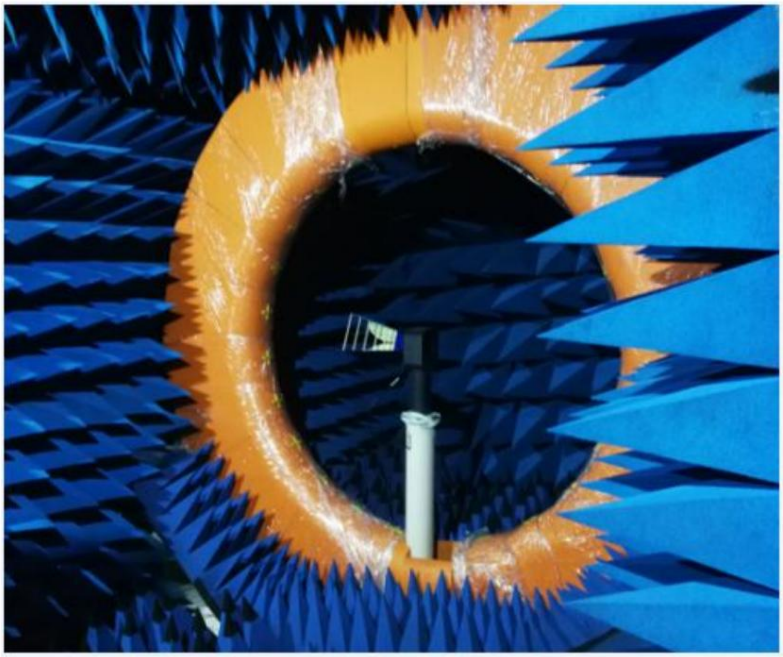
The design frequency band of this antenna is: 902~928MHz, 2400~2500MHz .

3. Technical indicators and instruments

3.1 Technical indicators

Product electrical performance indicators	
Operating frequency range	902~928MHz/2400~2500MHz
VSWR	902~928MHz/2400~2500MHz < 2.0
Antenna gain	902~928MHz :1.35dBi 2400~2500MHz :1.35dBi
Radiation efficiency	902~928MHz/2400~2500MHz>50%
impedance	50 ohm
Product Material Description	
Coaxial cable+terminal	
Product Environmental Description	
Operating temperature	- 30ÿC ~ + 85 ÿC
Storage temperature	- 30ÿC ~ + 85 ÿC

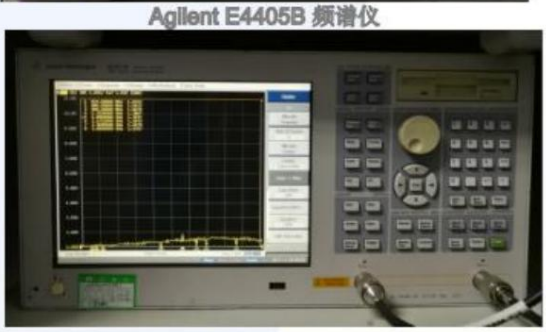
3.2 Instruments and Equipment



24-probe microwave chamber

R&S CMW500

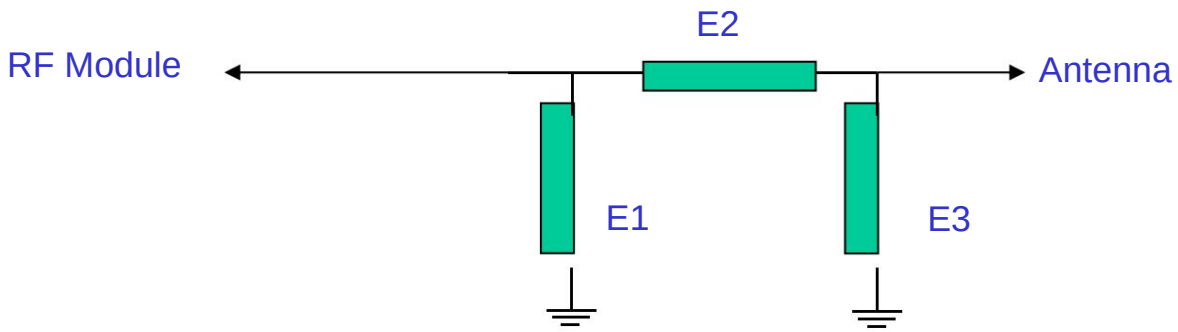
Agilent E4405B 频谱仪



Agilent Technologies E5071B

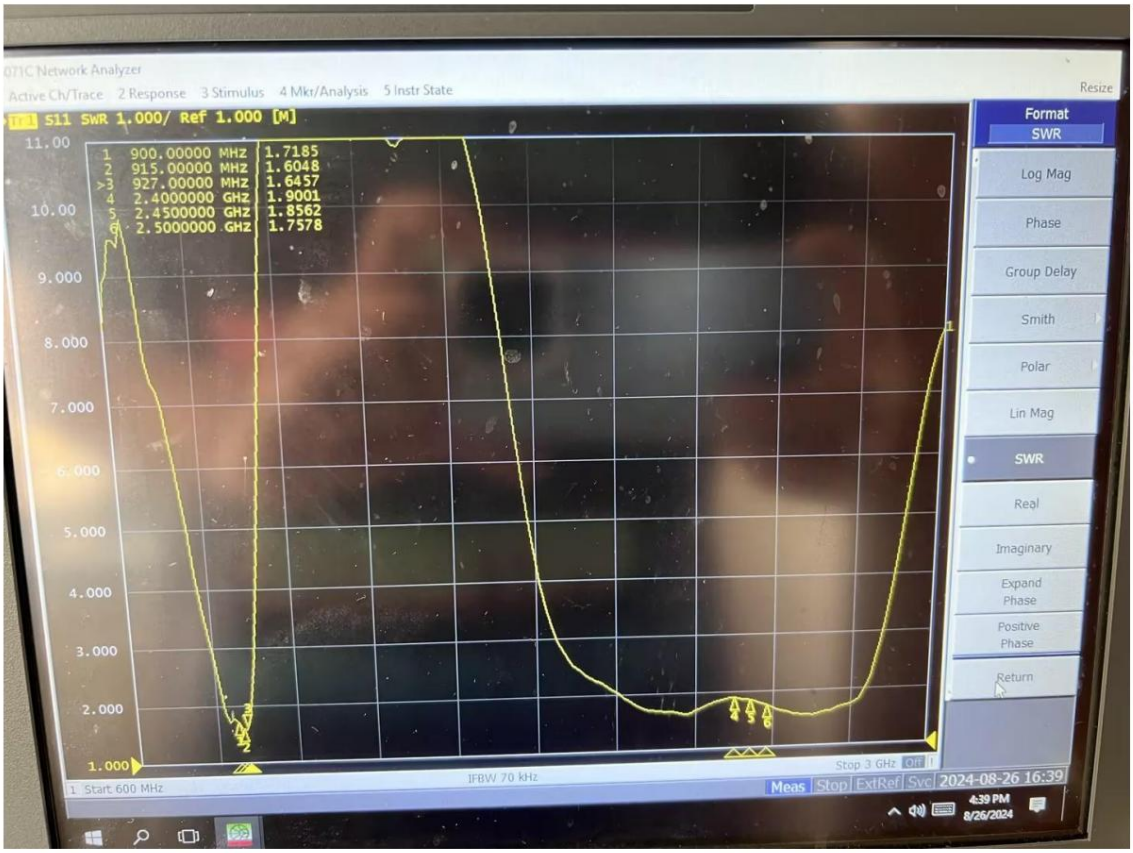
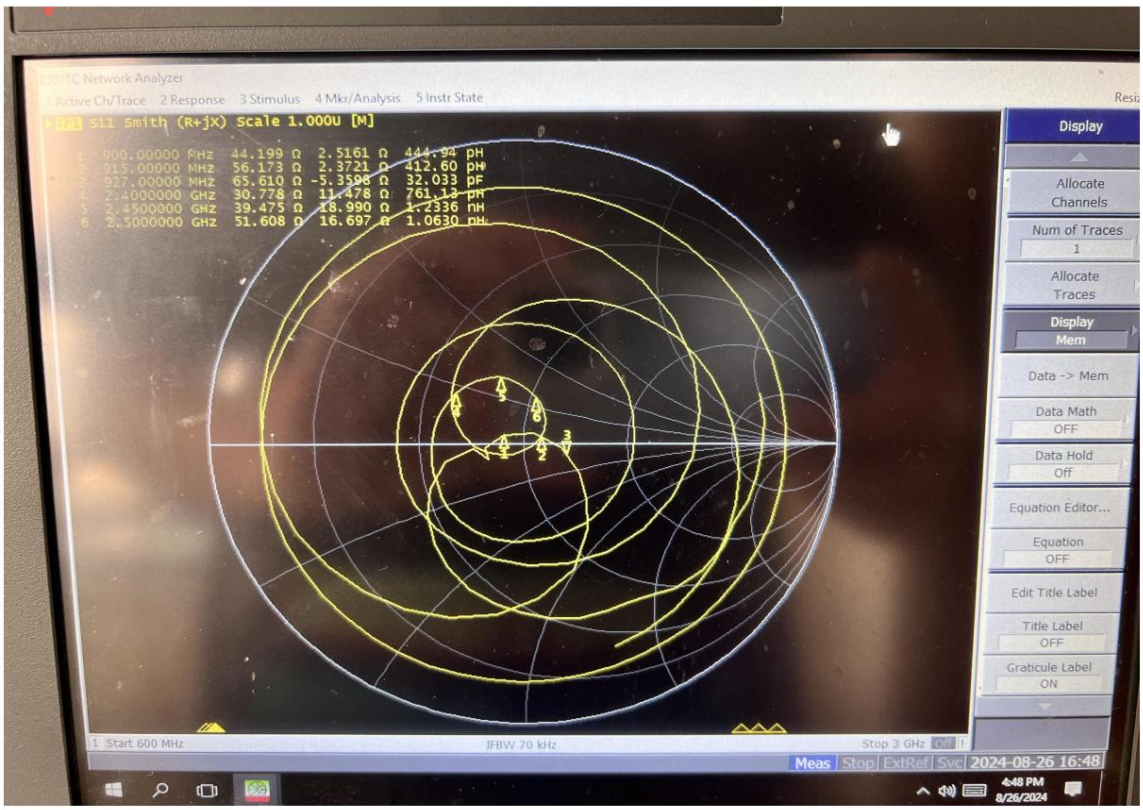
4. Matching circuit description:

Our company has not made any modifications to the antenna matching circuit.

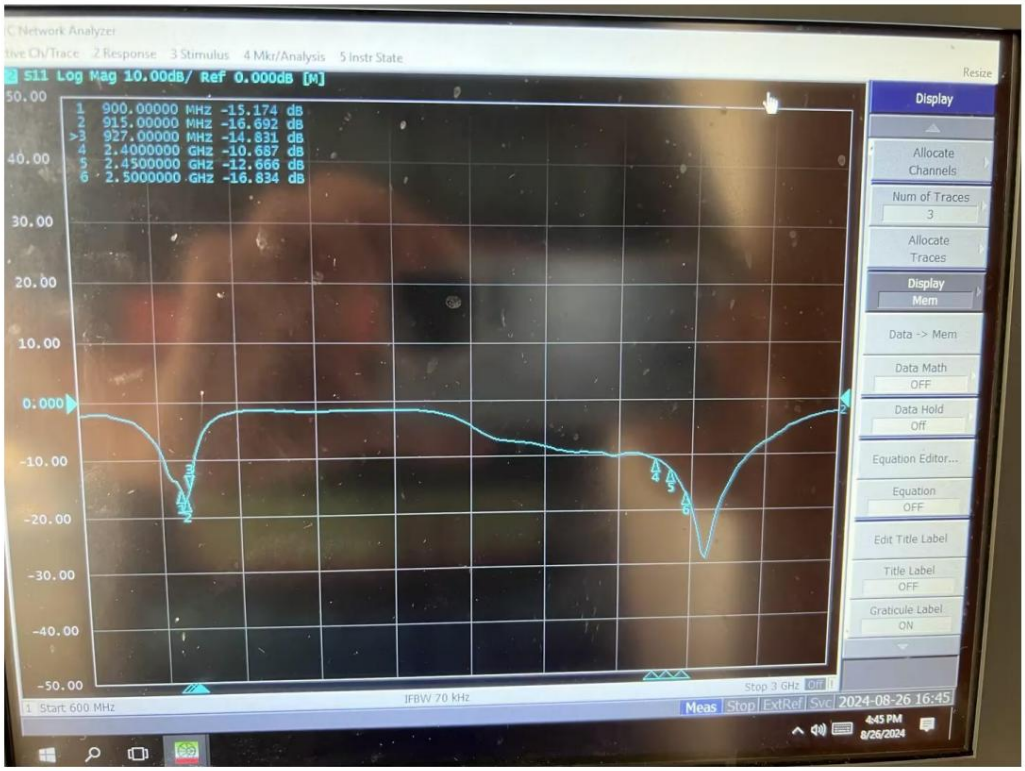


Element	Value	Sell
E1(0402)		
E2(0402)		
E3(0402)		

5. Antenna electrical performance parameters (standing wave ratio, impedance, loss, gain, efficiency, radiation pattern)

VSWR ÿVSWR)	
Impedance (Smith Chart)	

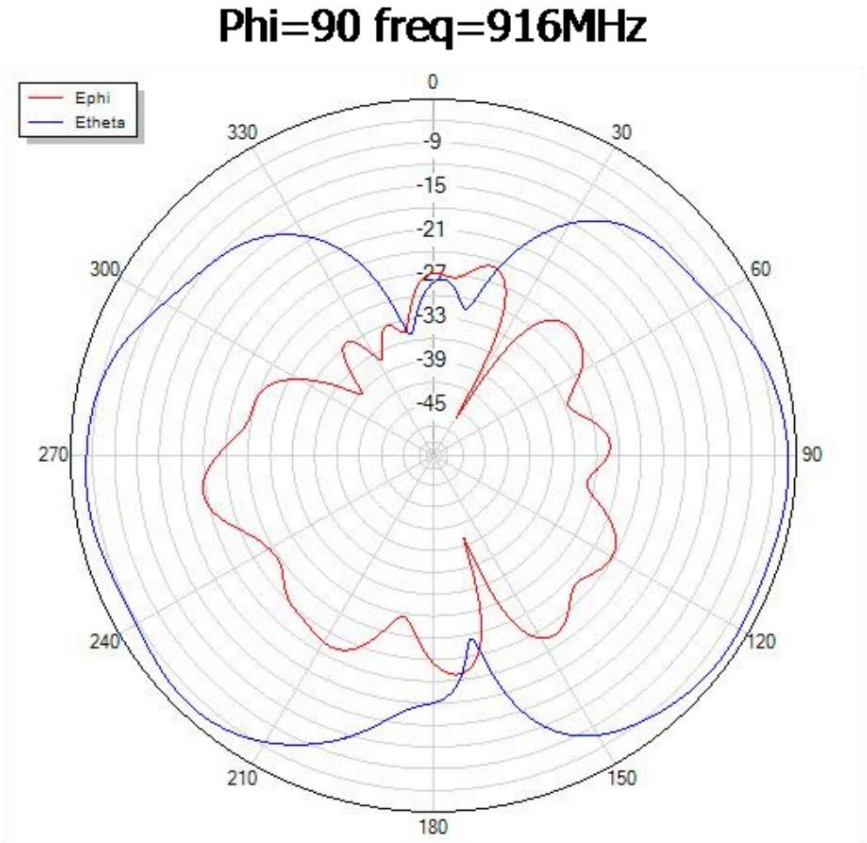
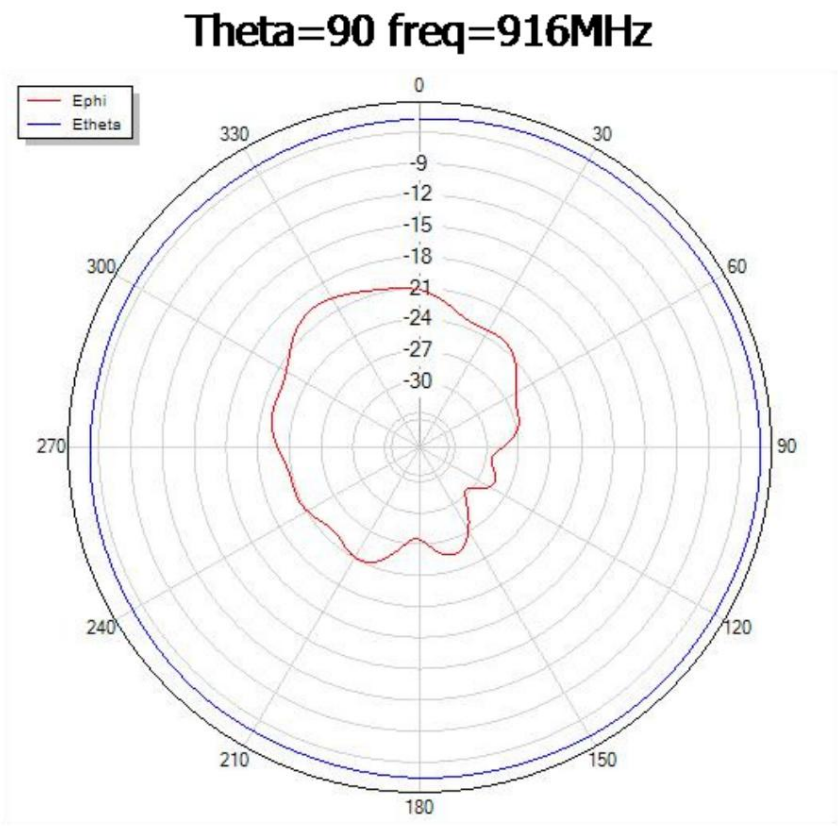
Return loss (ÿ Return Loss)

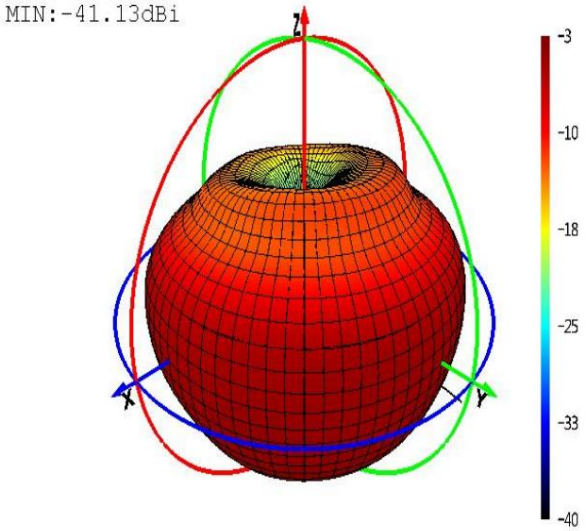
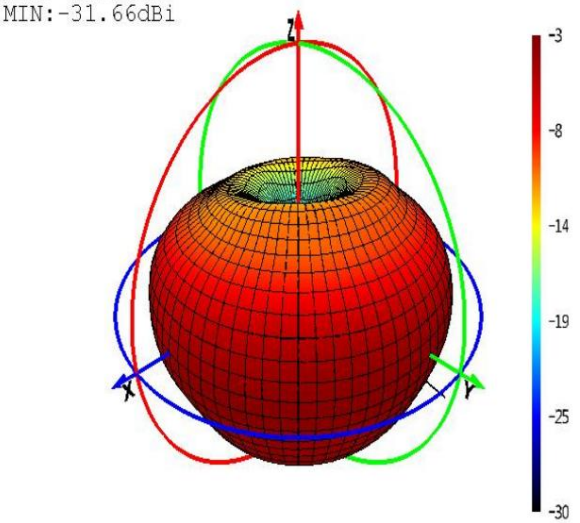
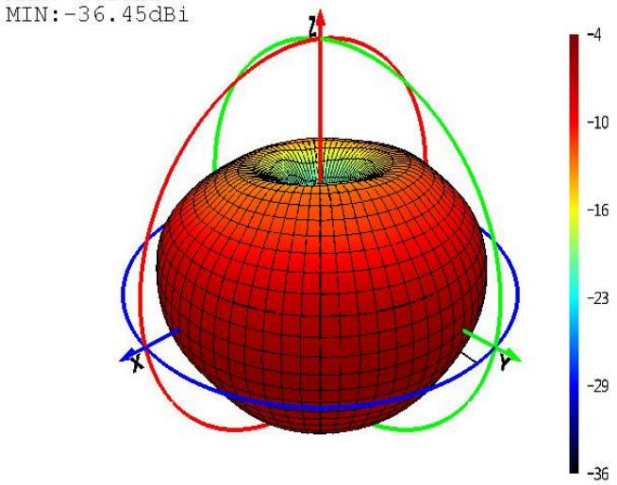


Efficiency and Gain (/Efficient of and Gain)

915 Band

Frequency Frequency (MHz)	Gain Gain (dBi)	Efficienc and efficiency(%)
902.00	0.44	35.97
904.00	0.63	35.12
906.00	0.73	34.74
908.00	0.76	34.41
910.00	0.86	34.26
912.00	1.05	33.84
914.00	1.08	34.18
916.00	0.95	34.58
918.00	0.98	34.47
920.00	1.35	33.78
922.00	0.79	33.40
924.00	0.85	33.54
926.00	0.88	34.25
928.00	1.20	34.64

PHi90 ° Surface Directional Pattern	
Theta90° Direction Diagram	

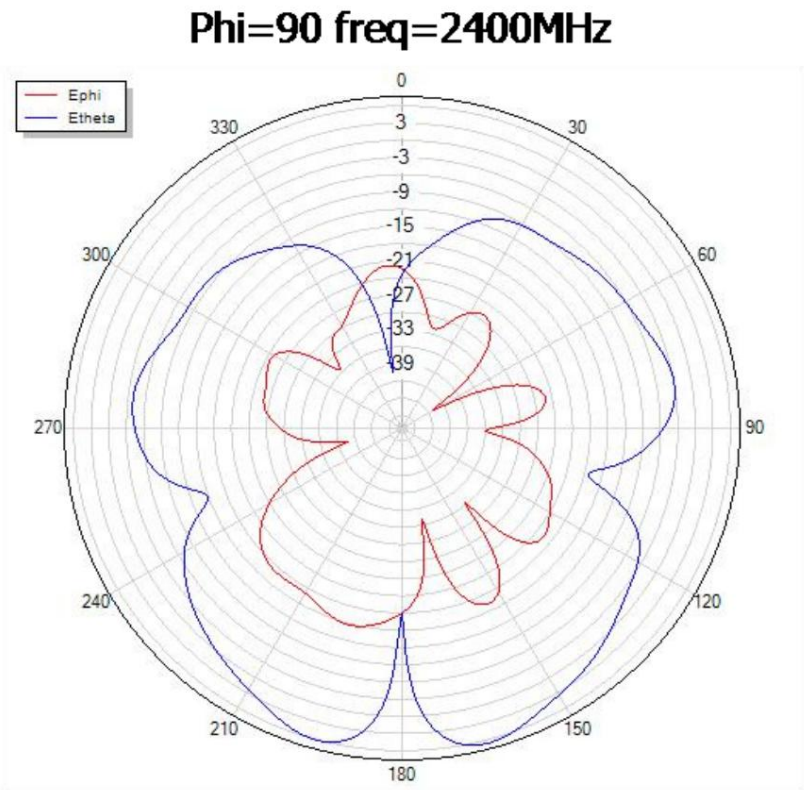
3D Directional Pattern /3D Pattern)	MAX:-3.44dBi MIN:-41.13dBi  MAX:-3.95dBi MIN:-31.66dBi  MAX:-4.2dBi MIN:-36.45dBi 

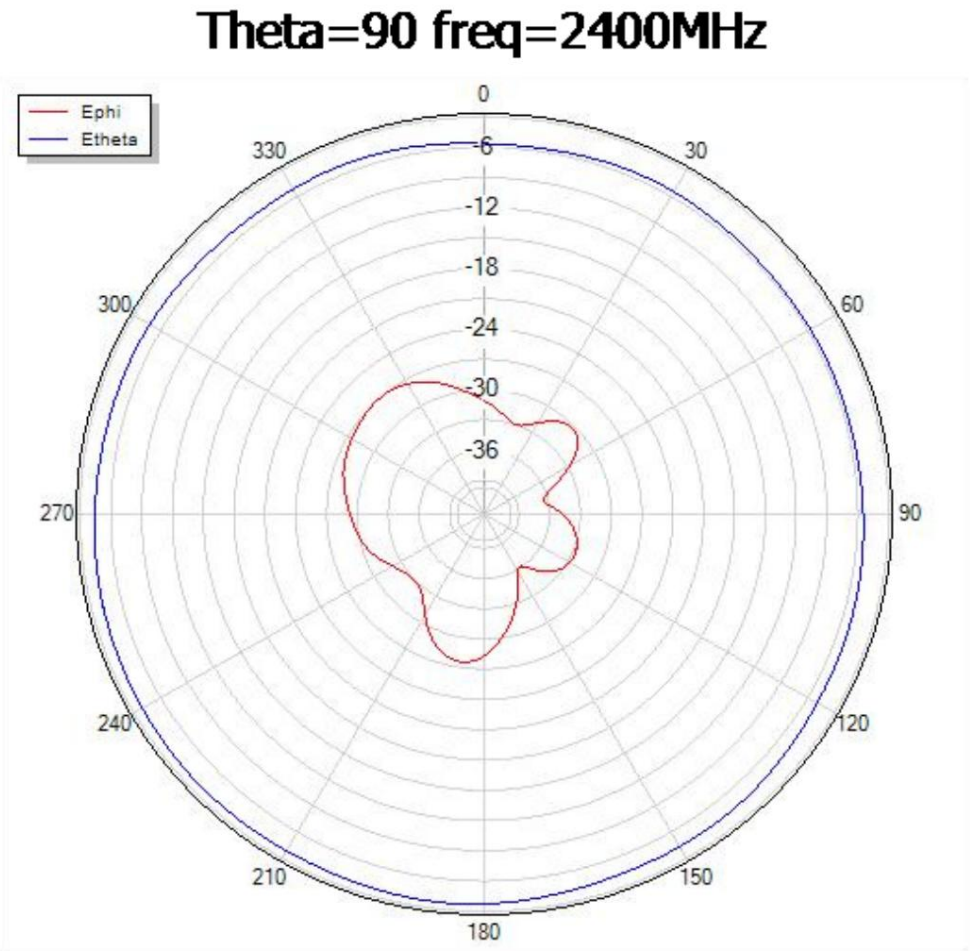
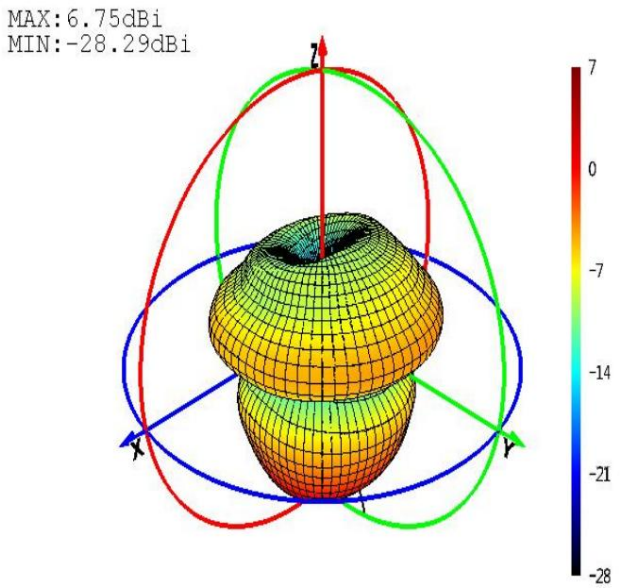
Efficiency and Gain /Efficient cy and Gain)	**2.4G** frequency band

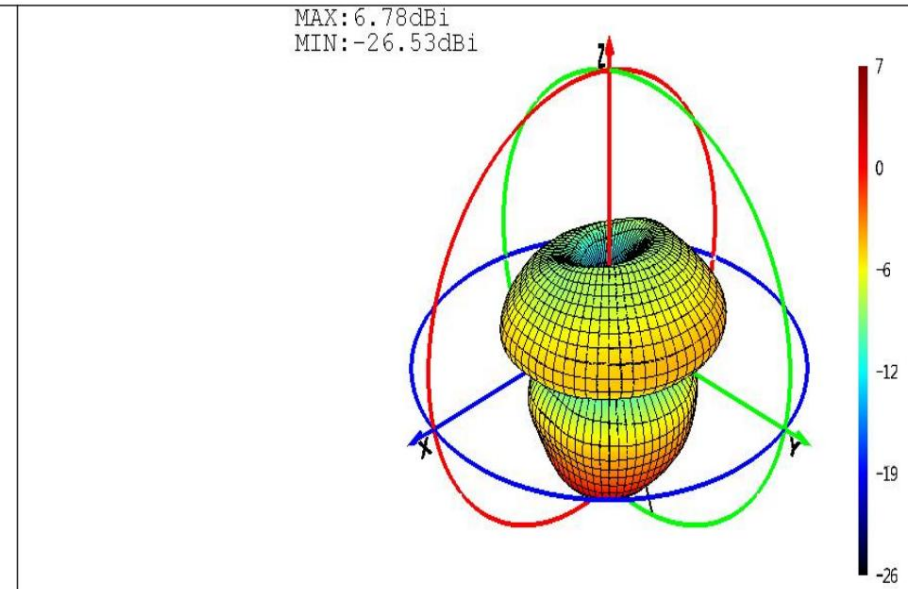
Frequent of frequency (MHz)	Gain Gain(dBi)	Efficienc and efficiency(%)
2400.00	0.75	55.12
2410.00	0.85	56.46
2420.00	0.93	56.44
2430.00	0.59	53.99
2440.00	0.90	56.77
2450.00	0.78	55.25
2460.00	1.35	58.23
2470.00	1.04	59.84
2480.00	1.21	60.36
2490.00	1.20	60.45
2500.00	1.13	58.27

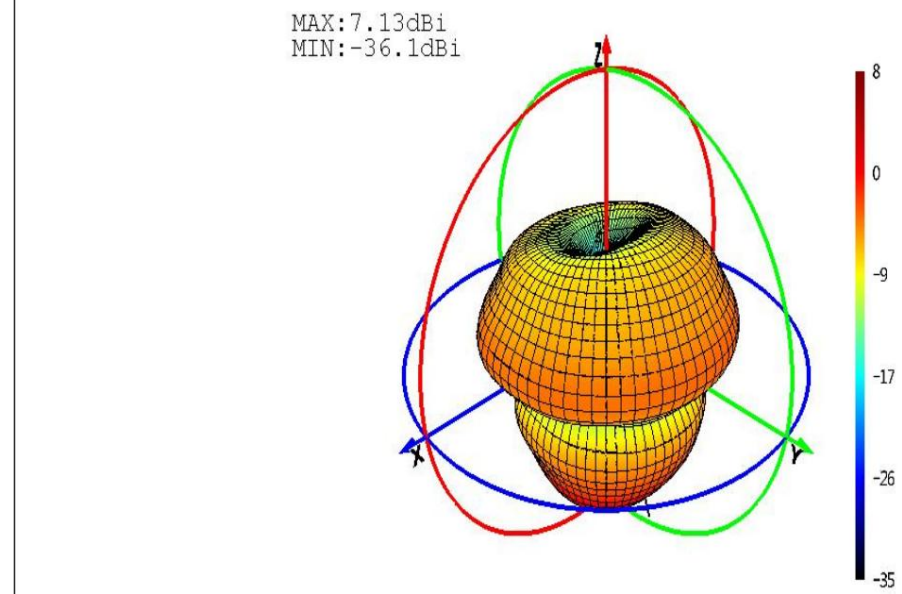
PHi90° surface

Direction diagram

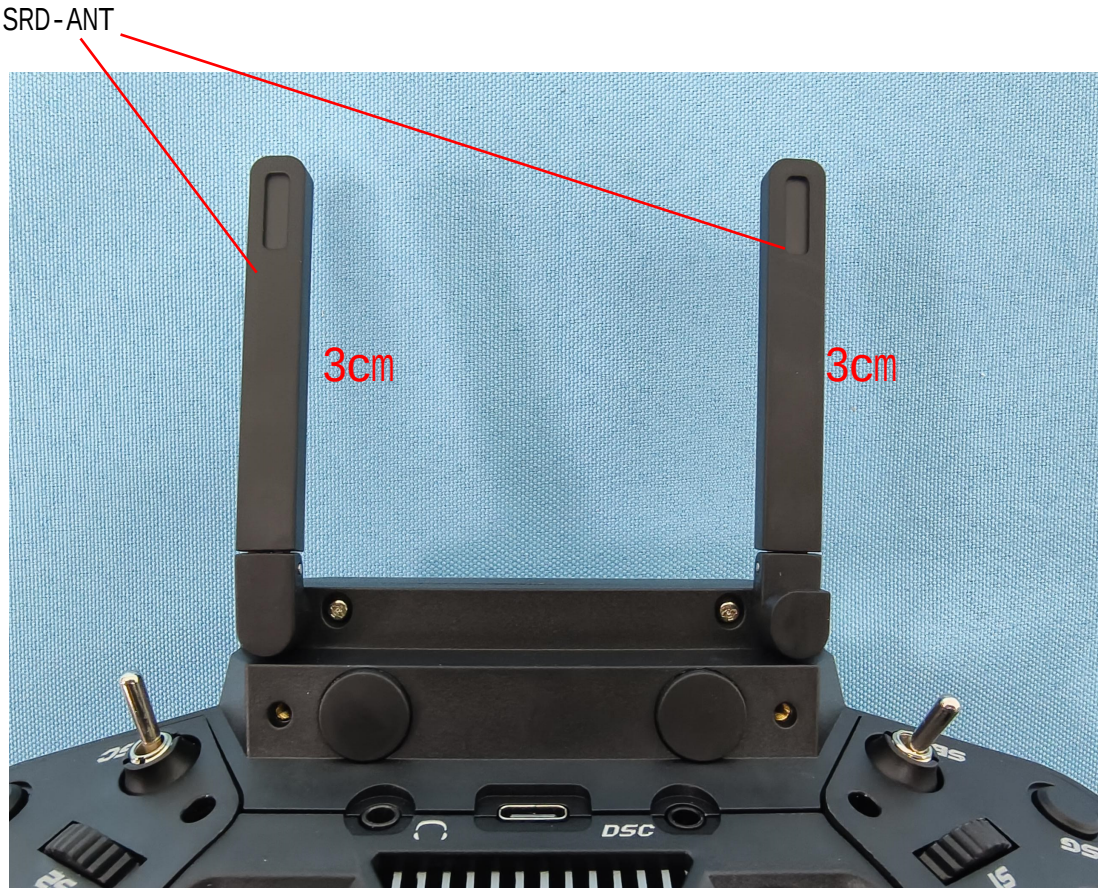


Theta90 Direction Map	
3D Directional Pattern /3D Pattern)	





6. Product pictures:



7.Packing met o :

Shipped in bags.