



ShenZhen DeWeiMa Communication Equipment Co.,Ltd

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## **Product Specification Approval Letter**

Devima Antenna Laboratory Shenzhen R&D Center  
Mobile Communication Terminal Antenna

Client: HIGH GREAT

Product: XB-2400+920-1.0 antenna

Material coding: 111601-0004



## 1.purpose

Standardize the product specifications and test methods of mobile communication terminal antennas produced by Shenzhen Deweima Communication Equipment Co., Ltd. to avoid errors caused by differences in test conditions and methods.

## 2. product categories and product model

### 2.1 categories

This mobile communication terminal antenna is: [Monopole antenna](#) ;

2.2 This report mainly Outlines the electrical results of the antenna designed by the XB-2400+920-1.0 project.

The antenna is designed in the frequency band: 900-930MHz and 2400-2500MHz

## 3. Technical indicators and equipment

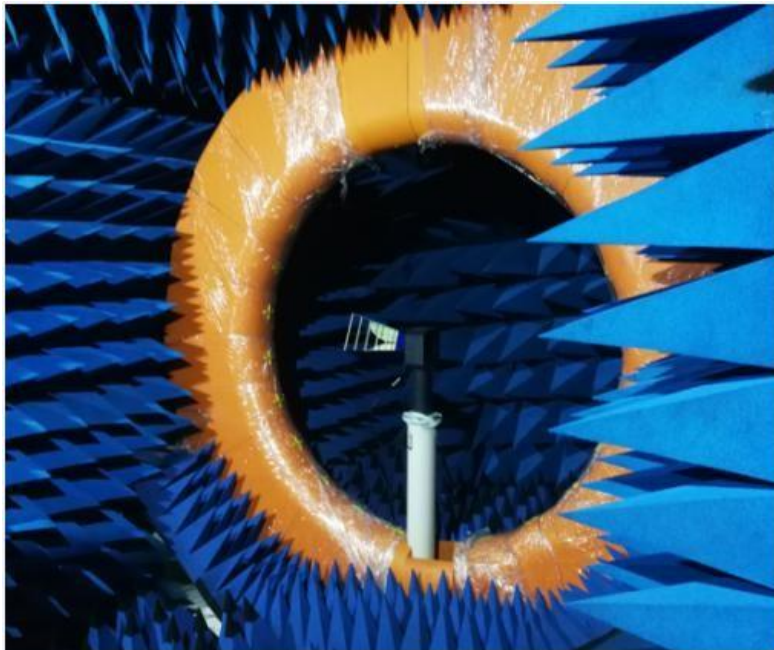
### 3.1 Technical indicators

Electrical performance indicators	
Operating frequency range	900~930 MHz 2400~2500MHz
standing wave ratio	900~930 MHz<2.0 2400~2500MHz<2.5
antenna gain	900~930MHz:1.27dBi 2400~2500MHz:4.04dBi
radiation efficiency	900~930 MHz>30% 2400~2500MHz>40%
impedance	50 ohm
Product Material Description	
<b>FPC+ Coaxial wire</b>	<b>Electrolytic copper + PI + 1.13 coaxial wire + first-generation terminals</b>
Product Environment Description	
operating temperature	- 30 °C ~ + 85 °C



storage temperature	- 30 °C ~ + 85 °C
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### 3.2 仪 equipmen



24-probe microwave chamber



R&S CMW500



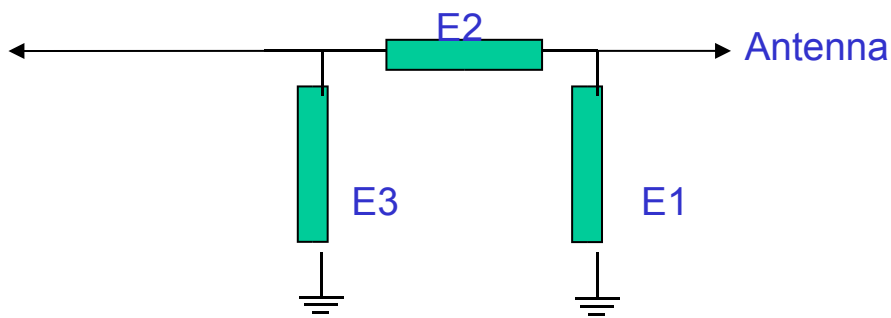
Agilent E4405B 频谱仪



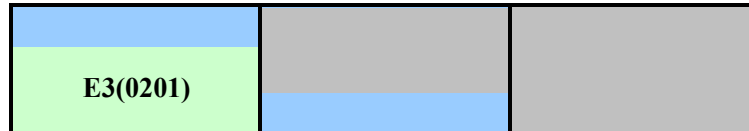
Agilent Technologies E5071B

### 4. Description of the matching circuit:

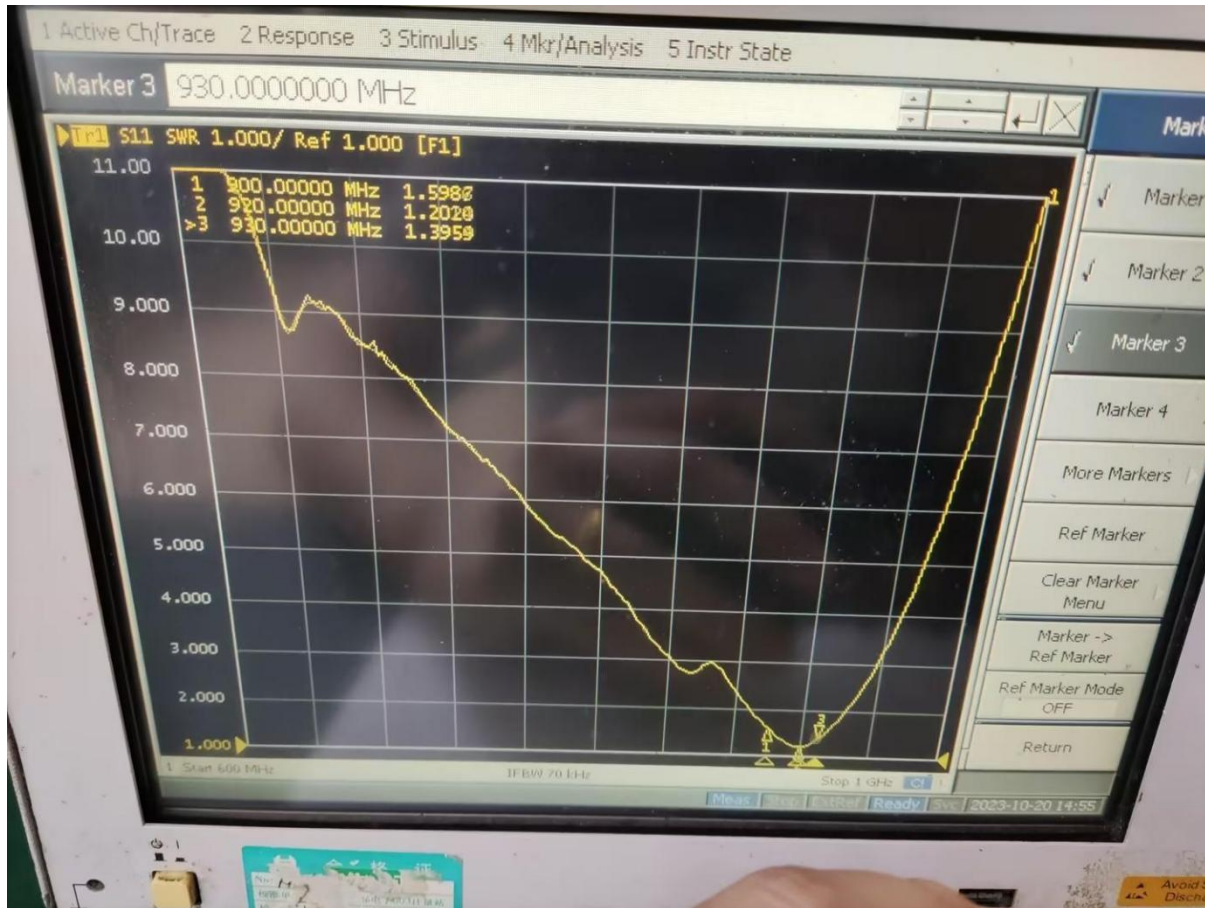
We have not modified the original matching circuit of the XB-2400+920 antenna RF Module



Element	Value	Vender
E1(0201)		
E2(0201)		



### 5. VSWR screenshot 920MHz



### 6. Antenna gain, efficiency, and pattern 920MHz

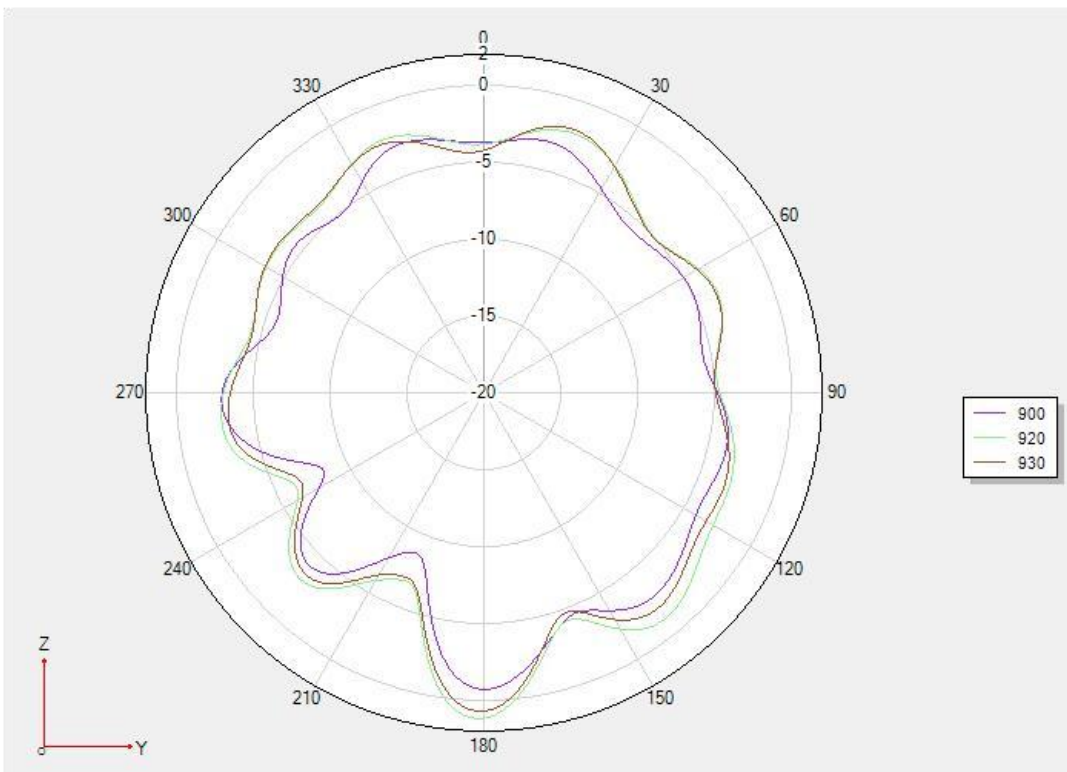
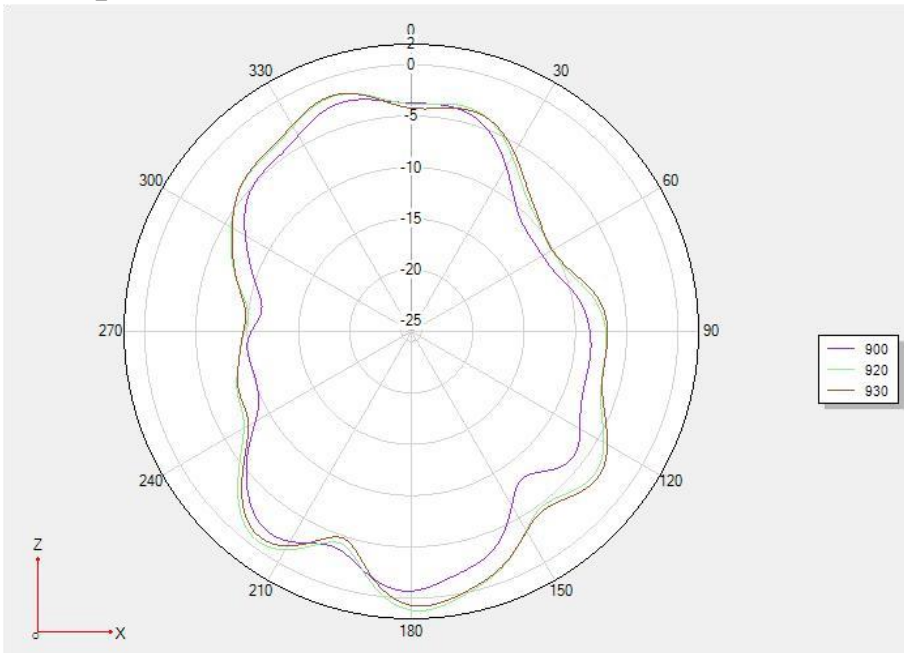
Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
900	-5.77	36.49	0.69
902	-5.67	37.1	0.53
904	-5.46	38.44	0.34
906	-5.4	38.84	0.33
908	-5.38	38.97	0.05
910	-5.24	39.92	0.52
912	-5.08	35.05	0.5
914	-5.2	35.2	0.5
916	-5.45	38.51	0.22

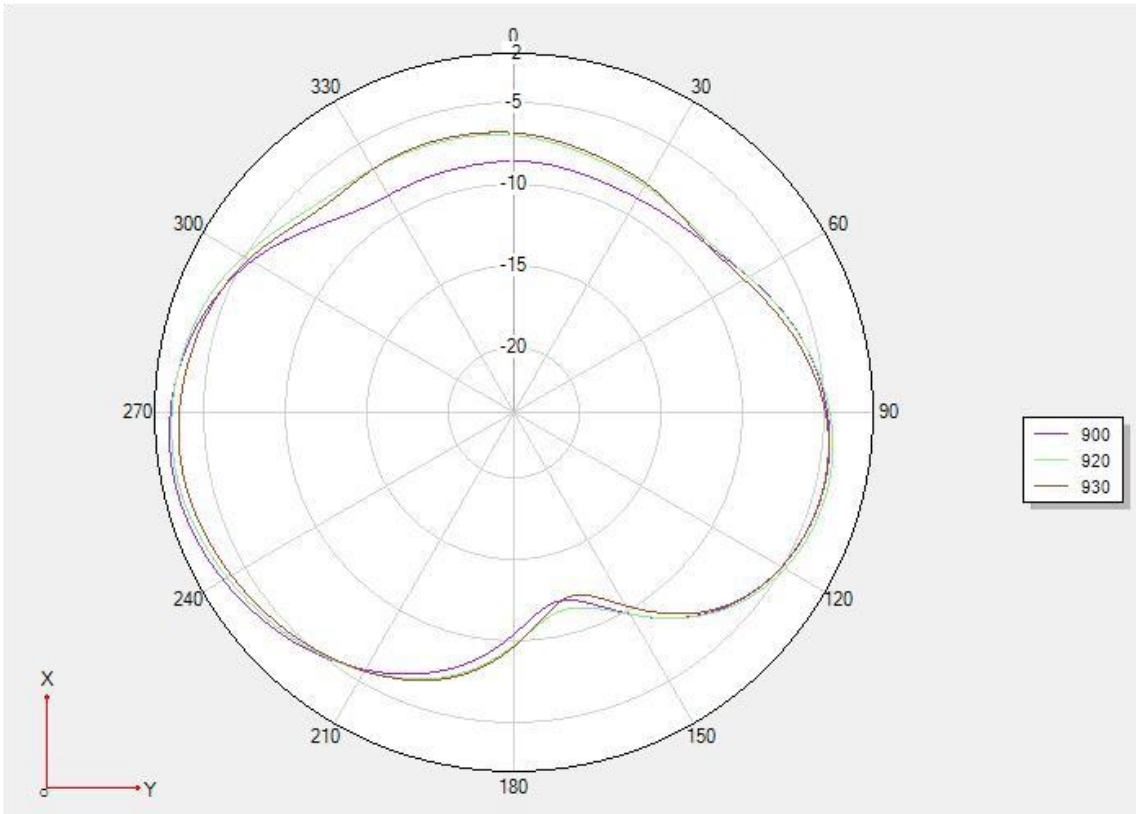


918	-5.34	39.24	0.35
920	-4.83	37.89	1.27
922	-4.67	34.12	1.12
924	-4.88	32.51	0.59
926	-5.01	31.55	0.54
928	-4.85	32.73	0.9
930	-4.86	32.66	0.82

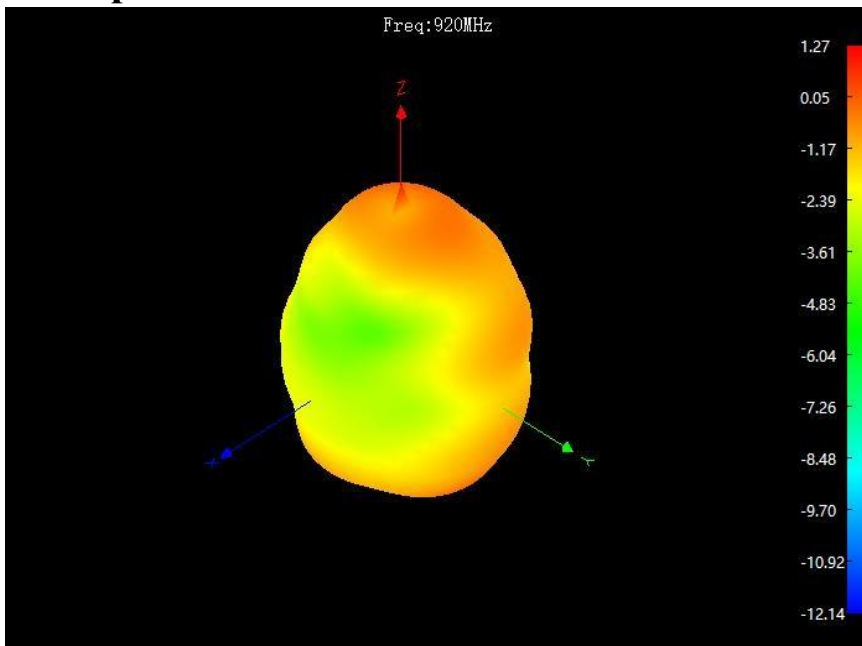


## 7.2D pattern 920MHz





### 3D pattern 920MHz





## 7.VSWR screenshot 2400~2500MHz



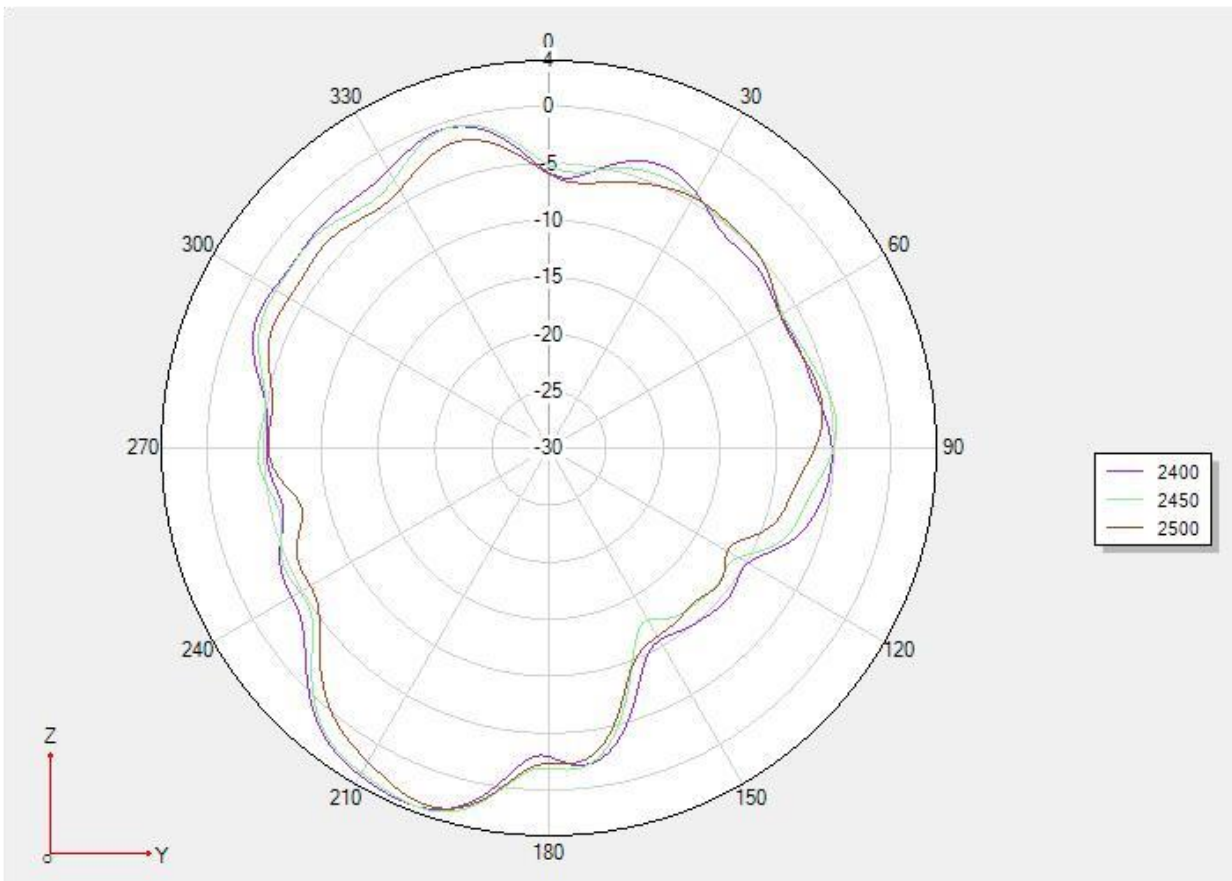
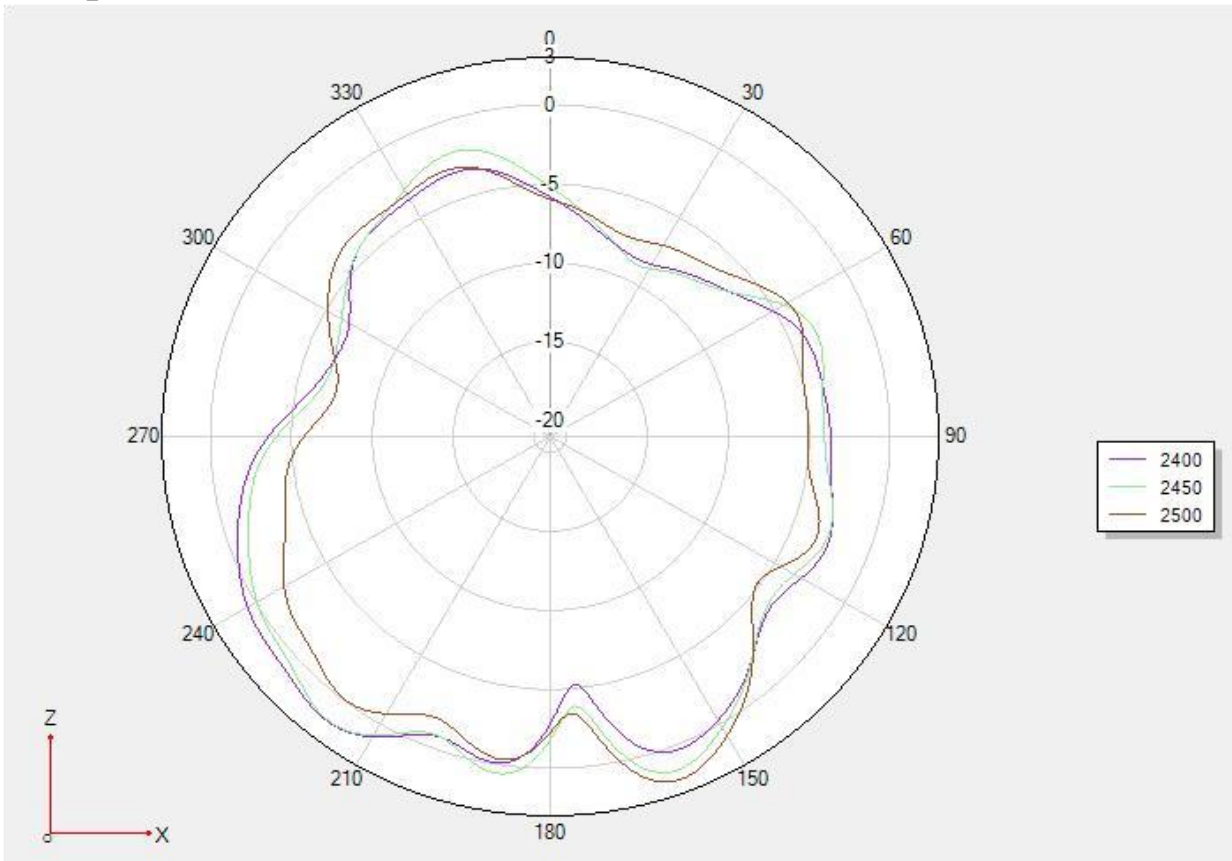
## Antenna gain, efficiency, and pattern 2400~2500MHz

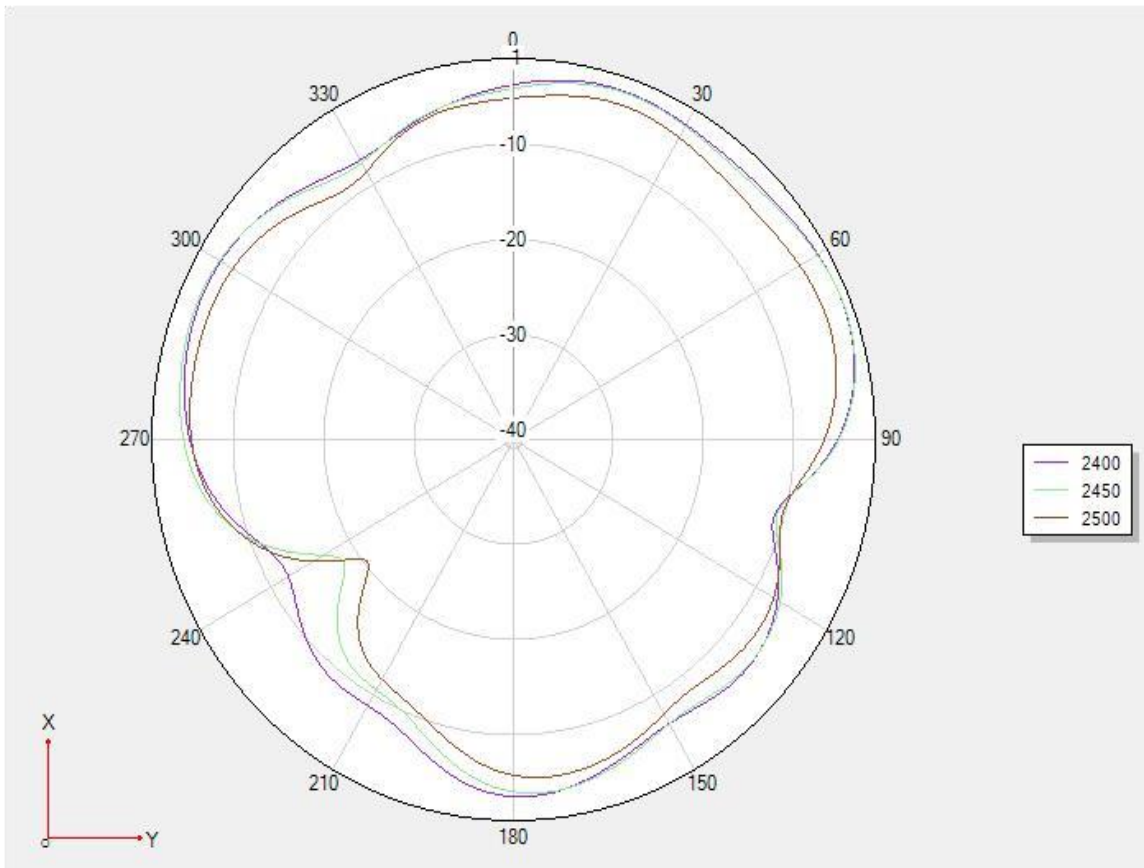
Frequency/Mhz	Efficiency / %	MaxGain/dBi
2400	52.7	3.57
2410	53.45	3.45
2420	53.85	3.69
2430	54.28	3.87
2440	55.21	4.01
2450	55.98	3.71
2460	54.36	3.71
2470	53.7	4.01
2480	50.93	3.93
2490	49.09	4.04
2500	43.45	3.36



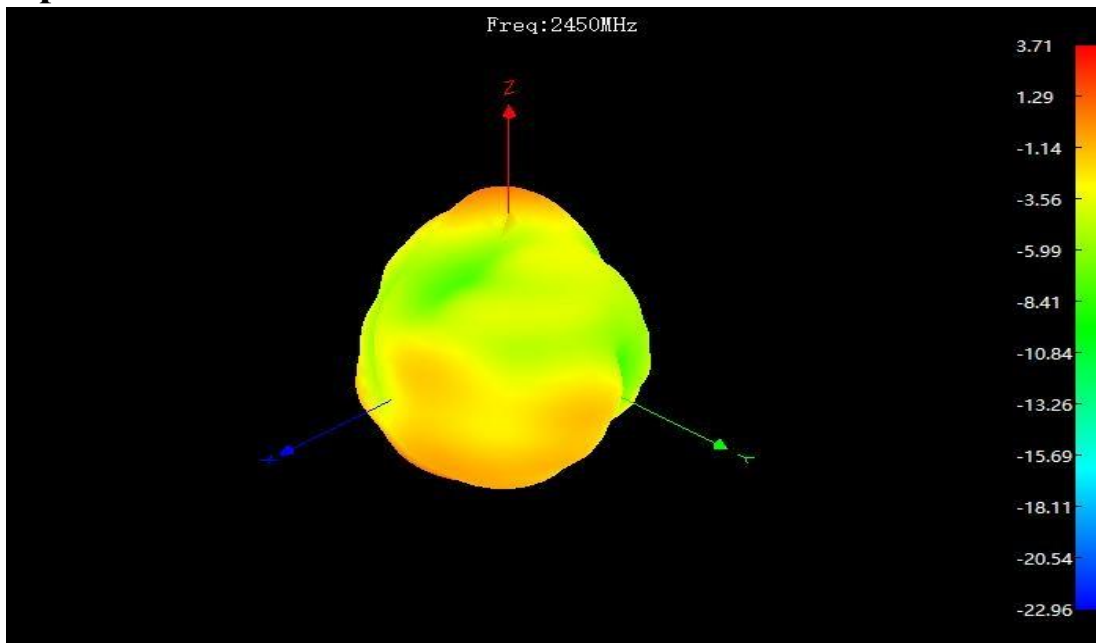


### D pattern 2400~2500MHz

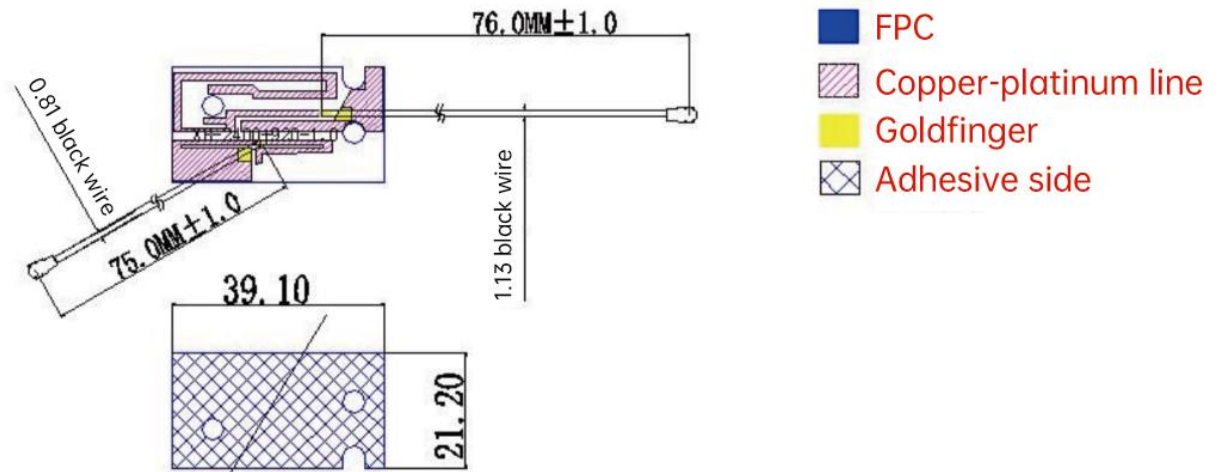




### 3D pattern 2450MHz



### 8. Product Structure:



**9. Packaging method: shipped in bags (100PCS/bag)**