

第 1 页

Catalogue

[illegible]

Product Specification Overview

●Electrical Performance:

1. Frequency Range:2.4GHz &5.8GHz
2. Impedance: 50 Ohms nominal
3. VSWR: ≤ 1.92
4. Gain: 4dBi
5. Admitted power radiation: 1W
6. Radiation of Radiation: Toroidal
7. Radiation: Omni
8. Polarization: Vertical
9. Connector Type: I-PEX

●Mechanical properties:

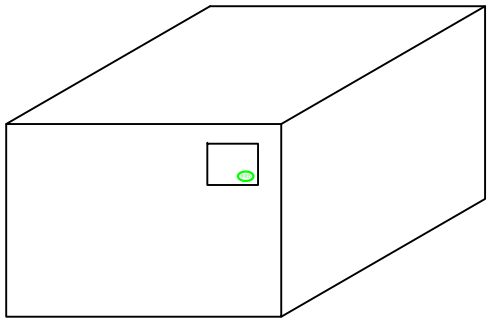
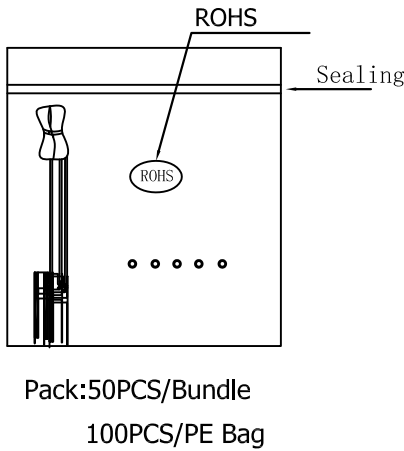
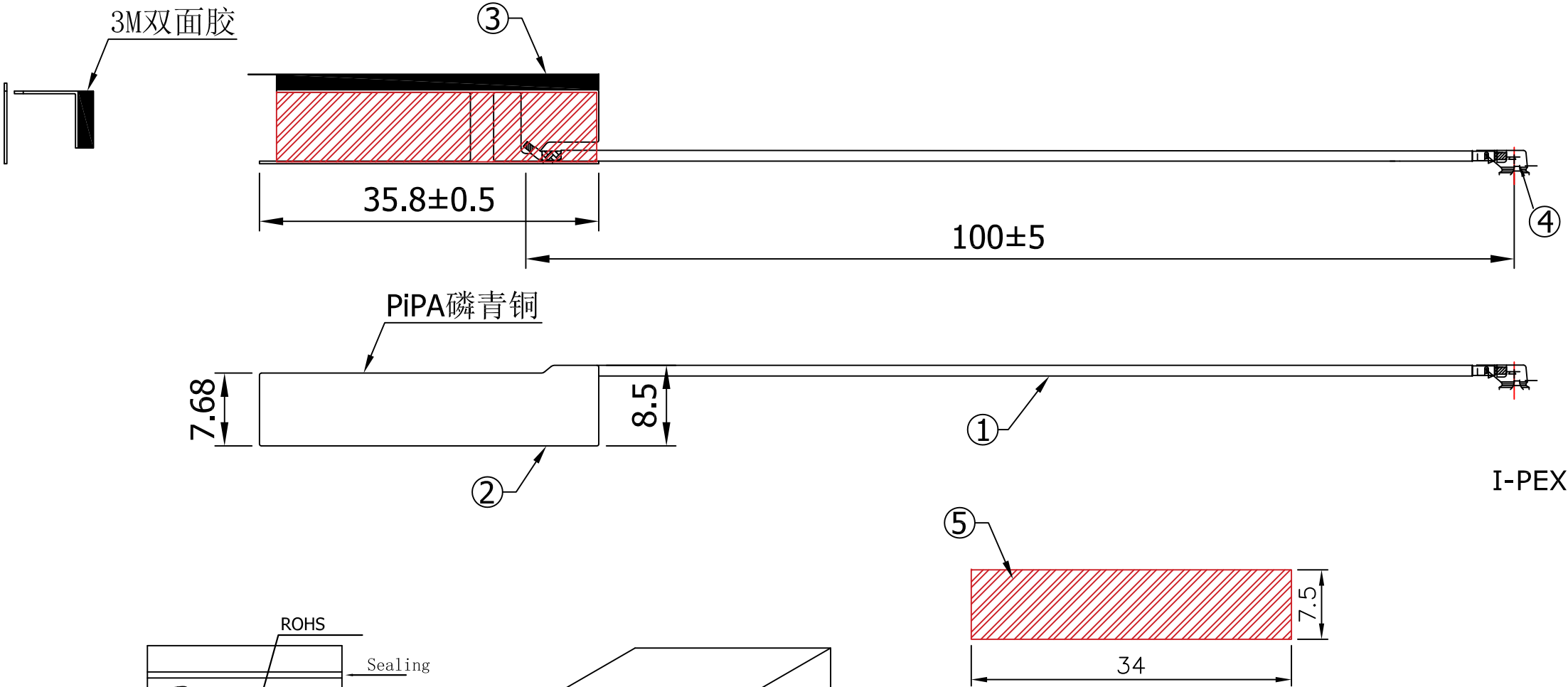
1. Cable: MI1.37mm Back cable ,50 Ohm
2. Operation temperature range: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
3. Storage temperature range: $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$

●The product structure pictures

成品图

ROHS

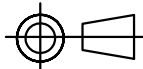
REV.	修 订 内 容	修 订 时 间
A	新 版 发 行	2020.03.04



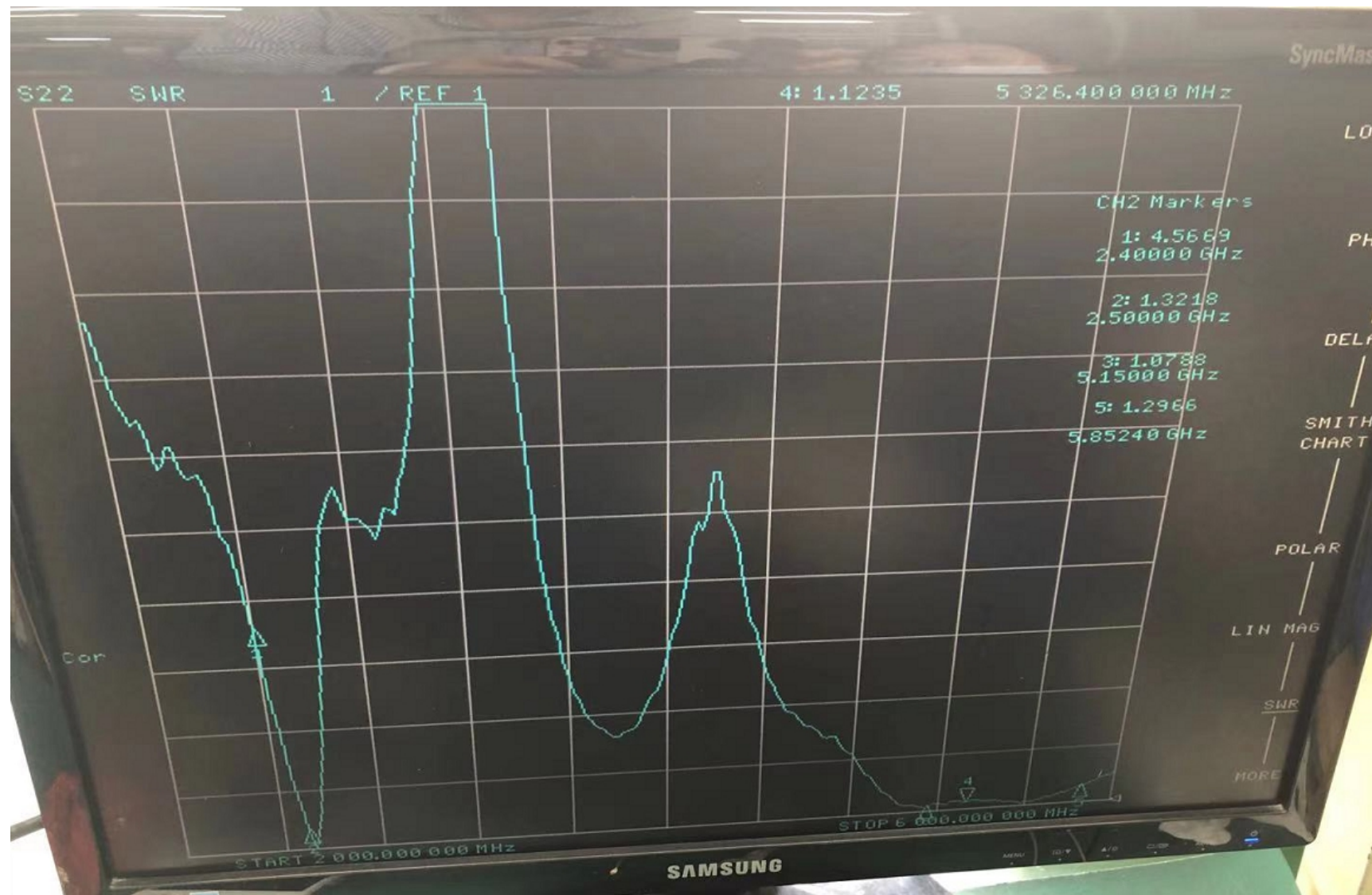
1.External carton pasted 1PCS/ROHS Label

Specification:
Frequency Rang:2.4GHz~2.5GHz/5.15GHz~5.85GHz
Impedance:50Ω
Return Loss:−10dB or less
VSWR:2.0
Gain:4.0

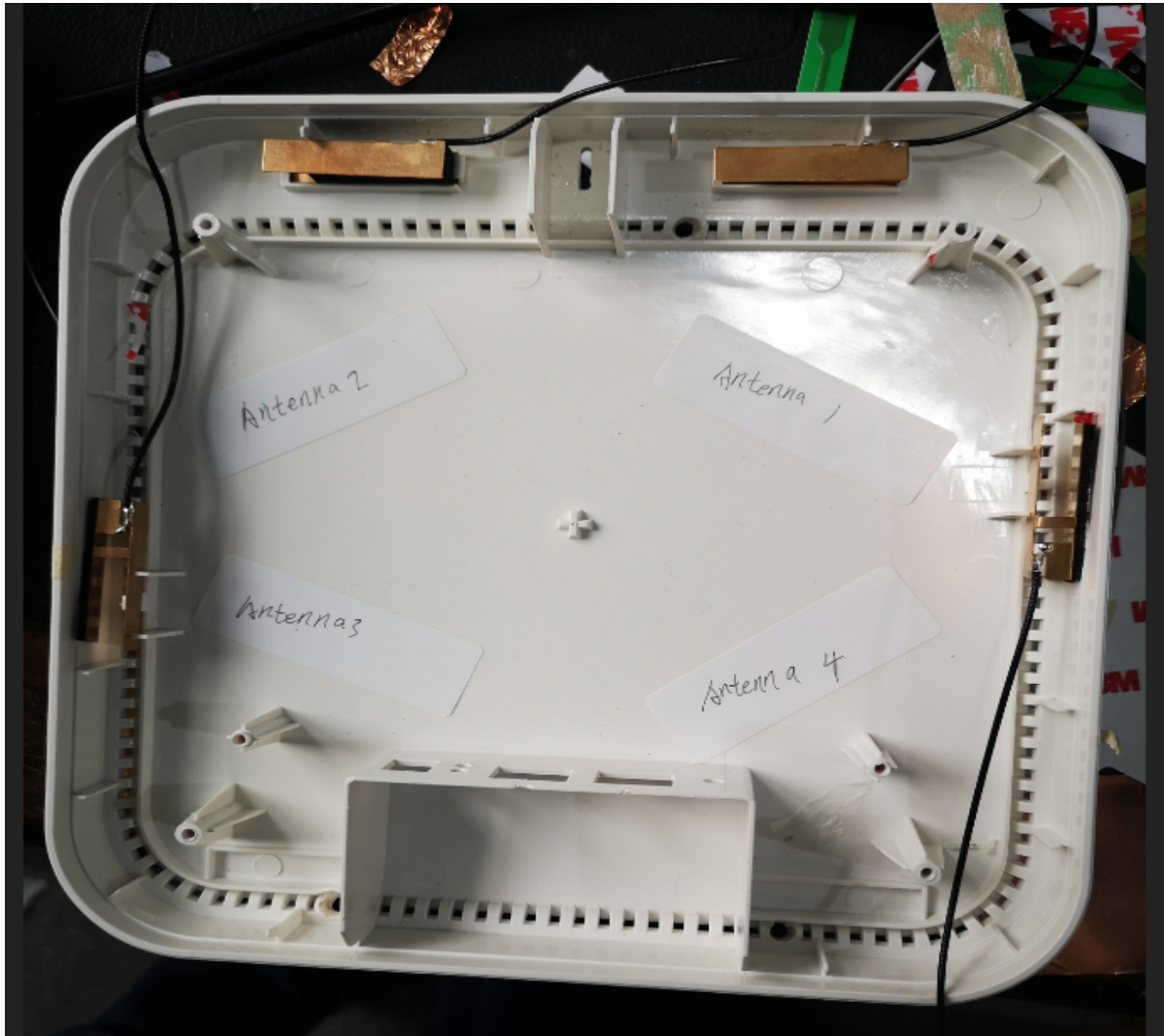
5	海绵	,L34*W6*T7.5mm	1	
4	Connector	MHF Plug for Φ1.37 Cable	1	
3	双面胶	3M,L34*W6*T2.0mm	1	
2	PiFA	Phosphor bronze,Ni-Plated,T=0.28mm	1	
1	Cable	1.37 Cable,single silver Black,50Ω	1	低损耗黑色线
NO.	DESCRIPTION		Q'TY	REMARK

TITLE:	PiPA ANTENNA			深圳市麒新弘泽科技有限公司 ShenZhen KeeSun Technology Co.,Ltd			
P/N:	PJ-NZLJX-044						
CUSTOMER:	KS030						
DRAW NO.:	KS030-100125-A						
DIMENSIONS TOLERANCES UNLESS OTHERWISE NOTED						APPROVED	
一般公差 TOLERANCE		.XXX ±0.05	XX. ±1.0			SHEET: 1/1	SCALE: 1:1
		.XX ±0.1		UNIT: mm	REV.A	DRAWED	李 家 茵
		.X ±0.2					
		X. ±0.5					

3.1 S-Parameters(2.4/5.8 G #1 VSWR)



2.1 Product picture



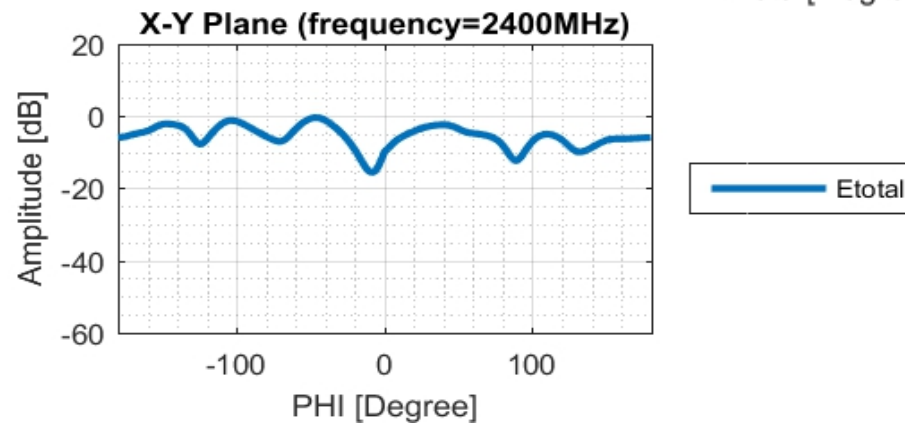
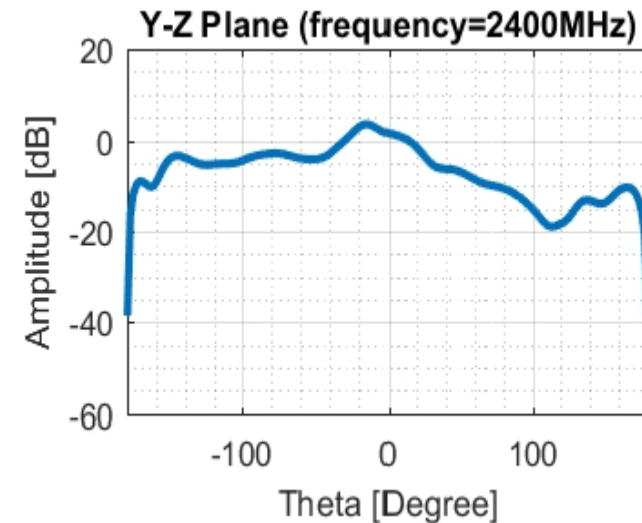
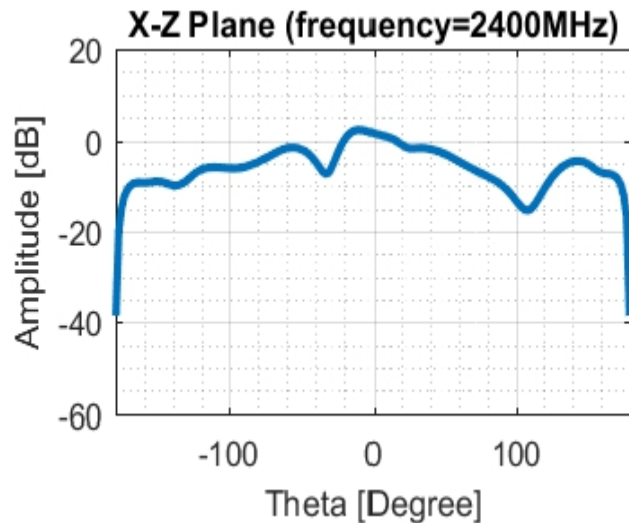
4.1 Antenna Efficiency&PeakGain(2.4G/5.8#1)

上海益麦电磁技术有限公司												
天线测试报告												
测试时间: 03/12/2021												
C:\Users\Administrator\Desktop\datatl.bin												
Frequency (MHz)	Directivity(dB)	Gain(dB)	Efficiency(dB)	Efficiency(%)	BW@Phi=0	BW@phi=90	BW@theta=90	oundness@Theta=3	oundness@Theta=6	oundness@Theta=9	Peak Gain@Phi(deg)	
2400	9.2485	6.271	-2.9775	50.3792	39.6484	37.8034	27.1241	11.6916	13.0761	15.2063	42	
2450	8.7698	6.7974	-1.9725	63.4972	34.5724	56.4245	23.9873	8.4959	14.1094	13.3287	40	
2500	7.8853	5.5084	-2.3769	57.8508	33.8683	37.8683	21.9659	7.4694	13.8266	15.6205	36	
5150	8.1698	4.8433	-3.3265	46.4893	51.5646	42.6501	12.8998	12.8872	11.7353	15.5491	176	
5200	8.0481	4.1458	-3.9024	40.7158	52.4324	46.8108	16.4777	12.7153	12.9089	13.7636	174	
5250	7.8996	3.8844	-4.0152	39.6712	54.322	29.6744	17.1532	13.9659	11.6187	14.4646	174	
5300	7.6007	3.4129	-4.1878	38.1259	56.1337	30.2804	18.9042	16.0696	11.2671	14.2531	172	
5350	7.4851	2.7631	-4.722	33.713	55.2696	33.8374	40.1379	17.1771	11.3187	18.5359	170	
5400	7.3578	2.0014	-5.3564	29.1314	54.6306	66.2816	11.6412	15.9023	12.0015	22.6364	168	
5450	7.0946	1.63	-5.4646	28.4143	58.4179	73.8264	19.091	15.6293	12.2151	20.7914	168	
5500	7.0723	1.6135	-5.4589	28.452	57.2303	71.7223	17.7169	17.1559	12.0473	17.2859	168	
5550	7.2421	1.4718	-5.7703	26.4829	50.6492	64.363	17.3736	19.3616	12.1125	17.4794	168	
5610	7.0423	2.0702	-4.9721	31.8265	35.558	56.4705	12.207	20.4008	12.3829	19.0106	170	
5670	6.9335	3.1829	-3.7506	42.1639	37.5928	53.5702	11.6211	20.6026	12.4039	17.6136	164	
5730	7.656	4.4642	-3.1919	47.9525	41.9577	52.1448	11.1431	21.1723	14.4272	16.7023	8	
5790	7.9825	4.4979	-3.4845	44.8277	37.2475	44.9753	10.9067	20.1364	16.1774	18.5435	8	
5850	8.1153	4.3148	-3.8005	41.6821	35.1892	45.2493	10.652	20.8599	15.1646	19.8012	8	
5900	8.1646	4.0803	-4.0843	39.0453	37.127	51.1283	10.5796	19.6835	14.0128	19.8011	8	
5950	8.1431	3.5425	-4.6006	34.6687	31.282	57.0096	16.4995	20.032	14.1862	20.5511	8	
6000	8.2587	3.3927	-4.866	32.6137	27.1356	61.8899	15.1265	17.8083	15.8675	21.1314	8	

效率影响天线的灵敏度，增益值越高天线穿透障碍后的保留信号强度越好

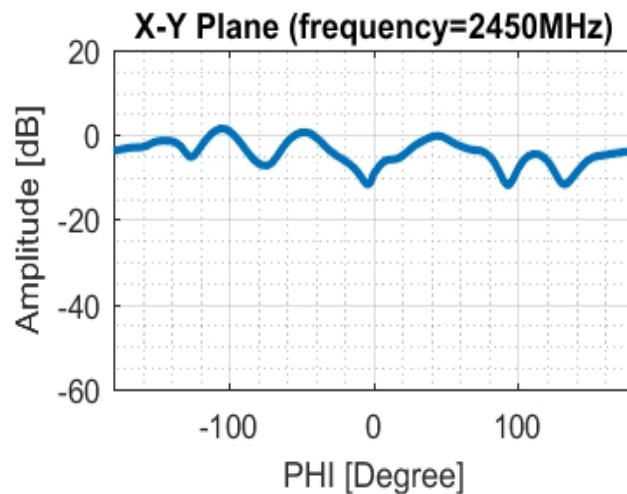
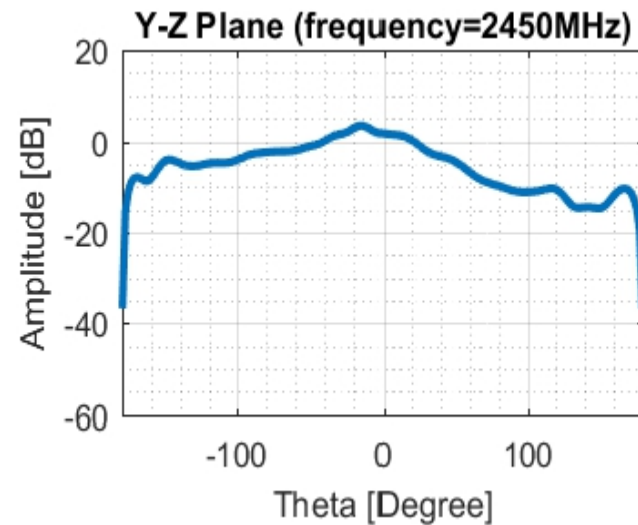
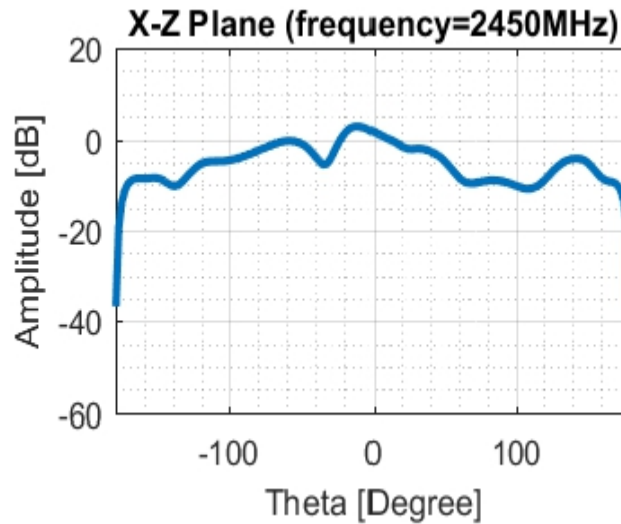
5.1 Radiation patterns—2D (2.4G#1)

24000MHz ---2D



5.2 Radiation patterns—2D (2.4G#1)

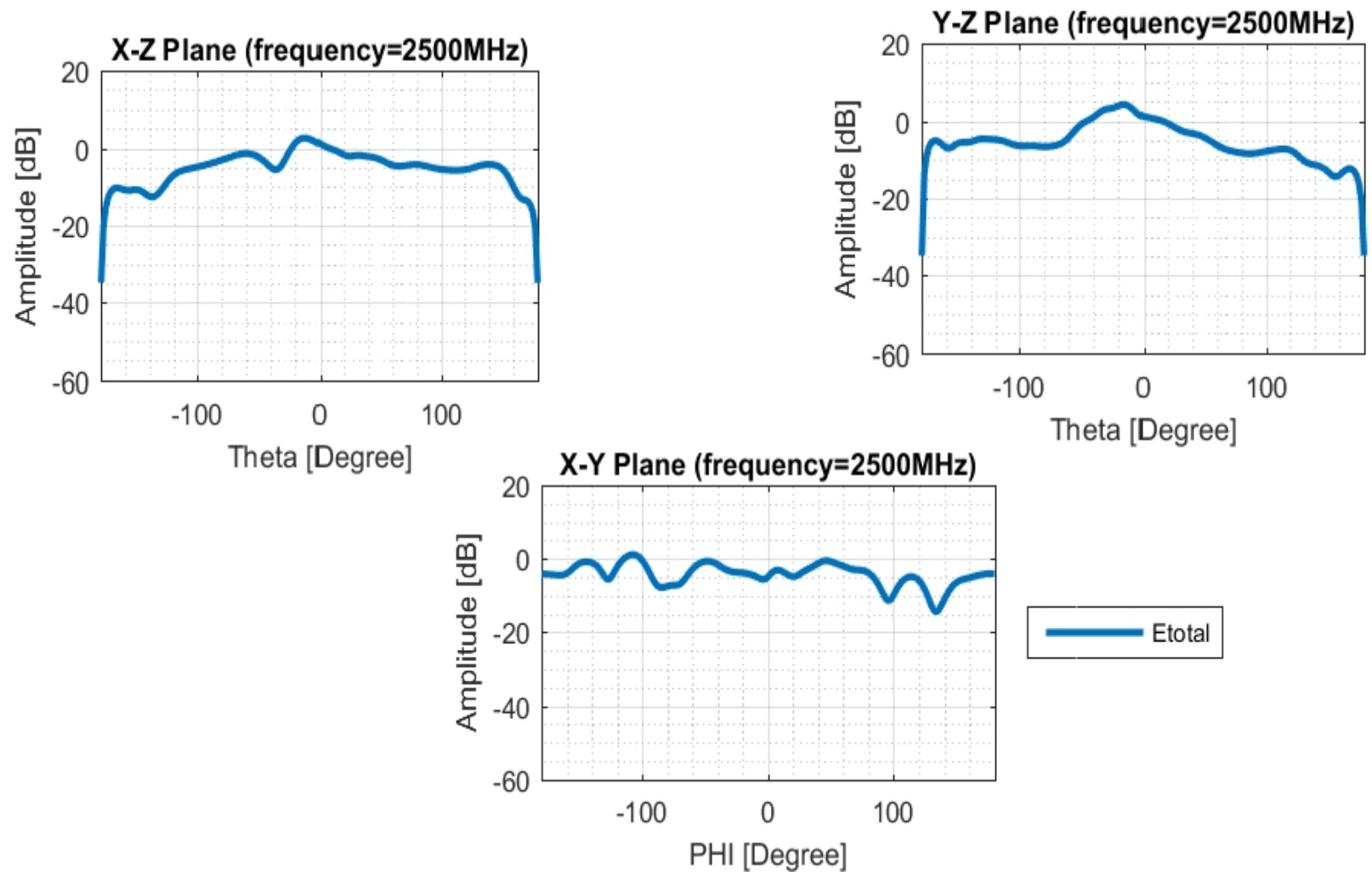
2450MHz---2D



— Etotal

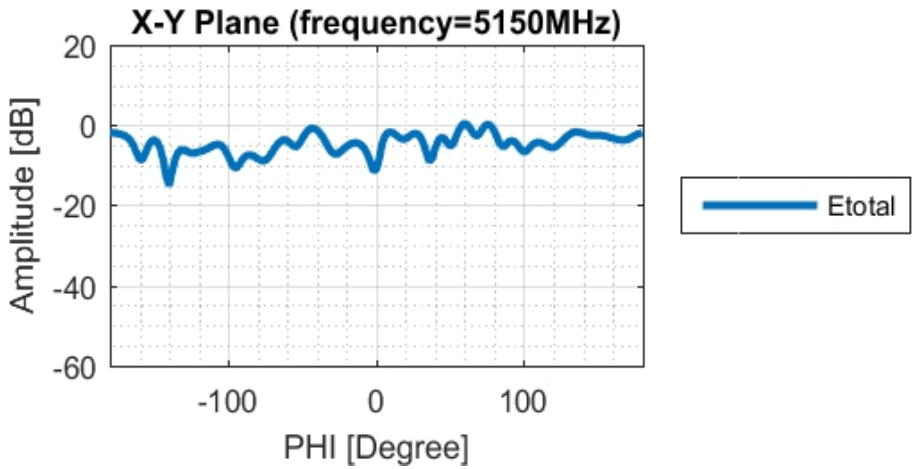
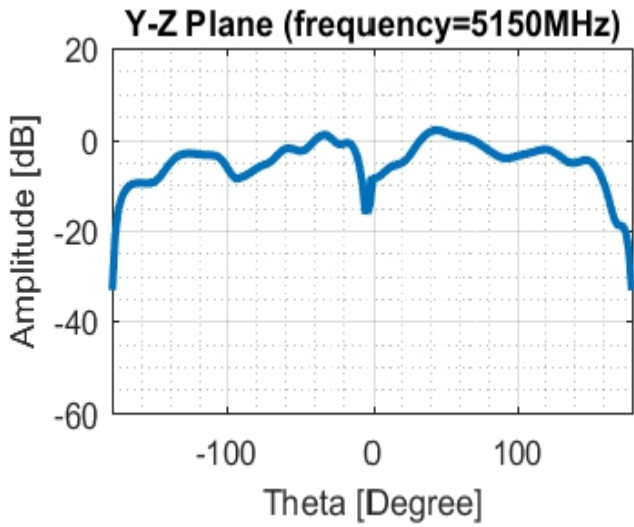
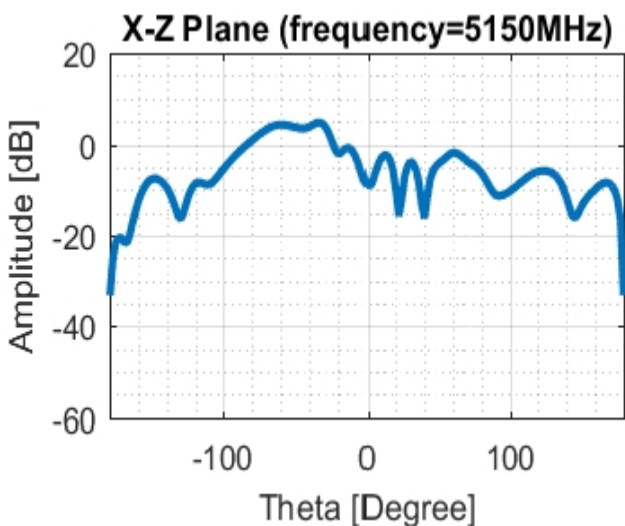
5.3 Radiation patterns—2D (2.4G#1)

2500MHz---2D



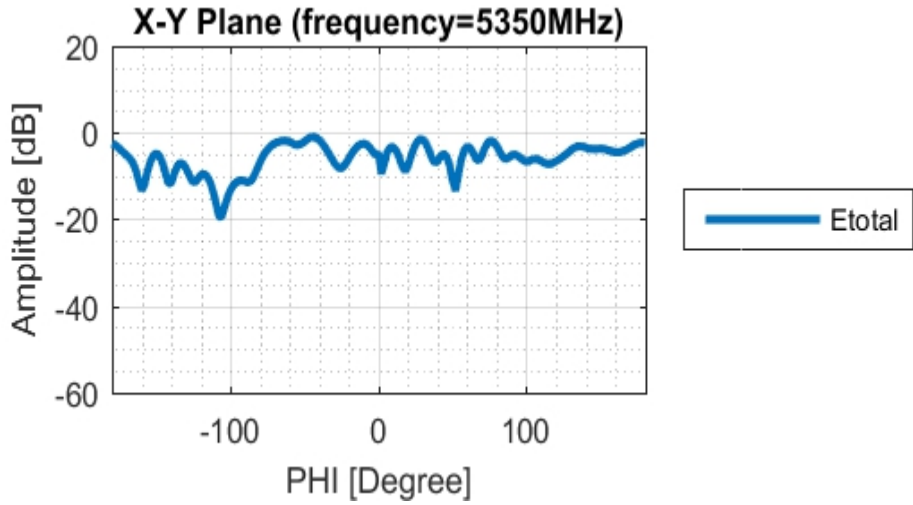
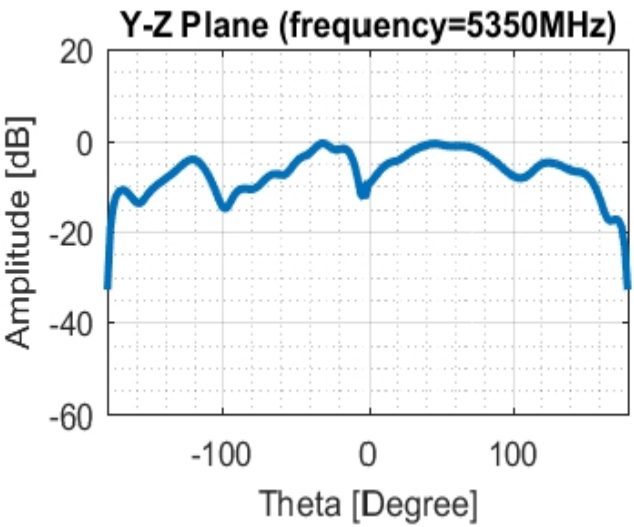
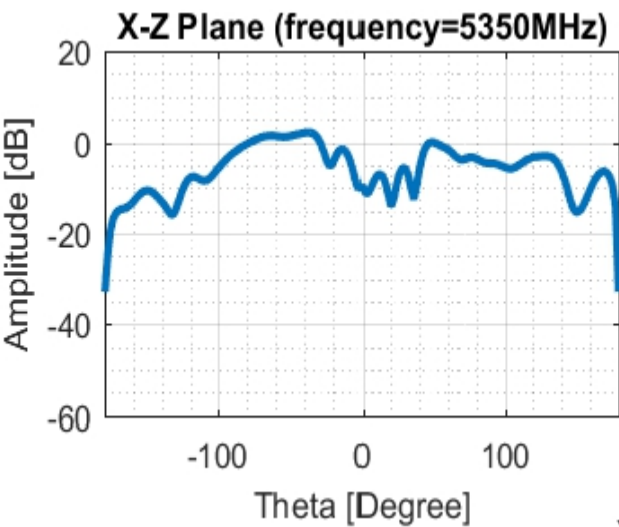
5.4 Radiation patterns—2D(5.8G#1)

5150MHz---2D



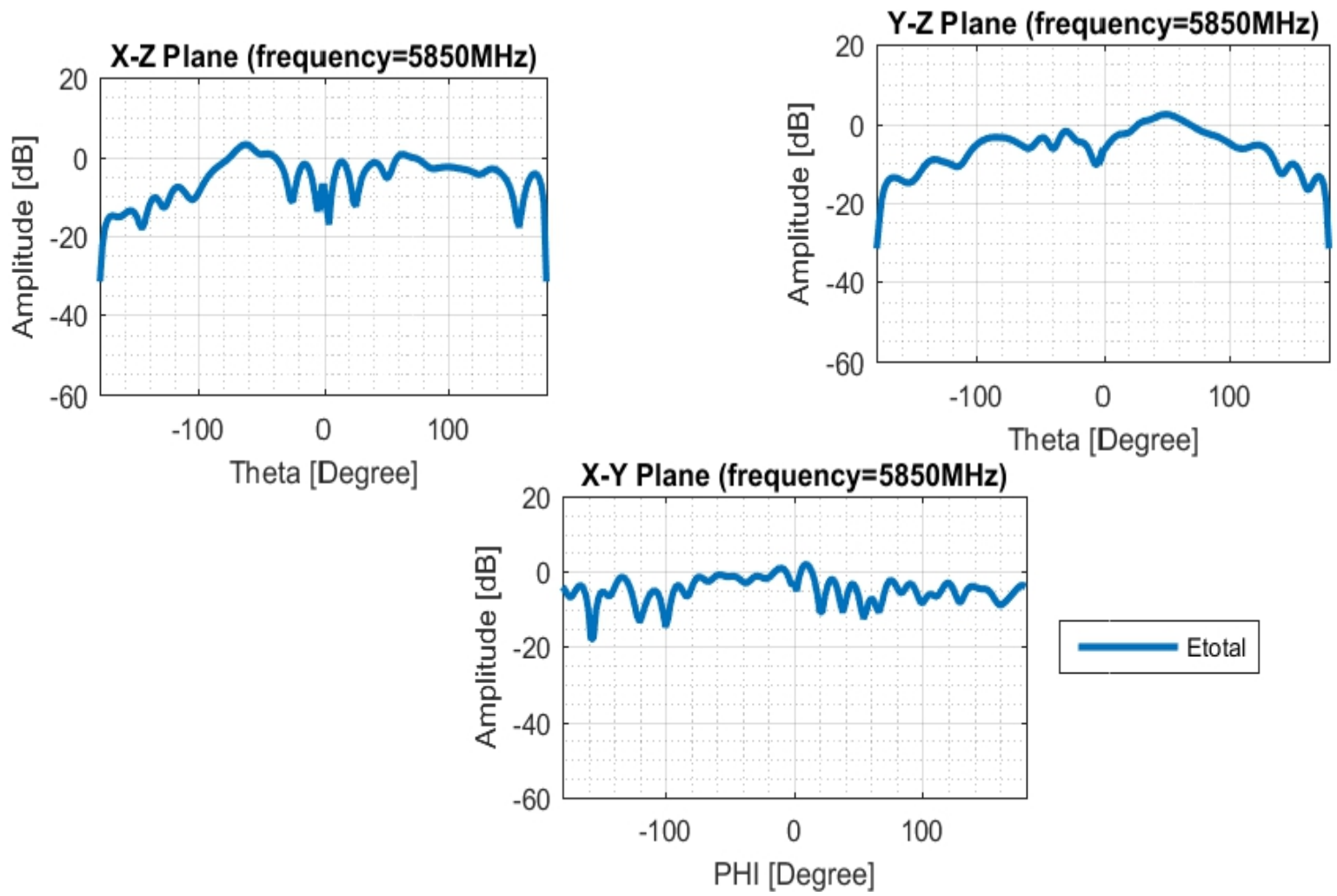
5.5 Radiation patterns—2D(5.8G#1)

5350MHz---2D



5.6 Radiation patterns—2D(5.8G#1)

5850MHz---2D

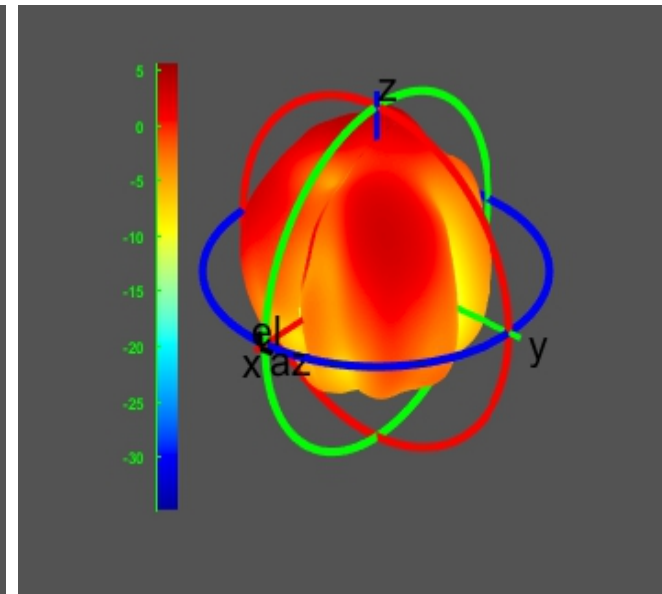
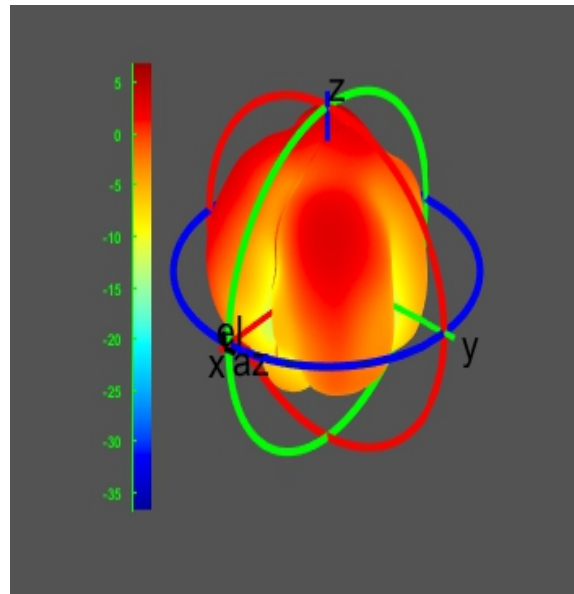
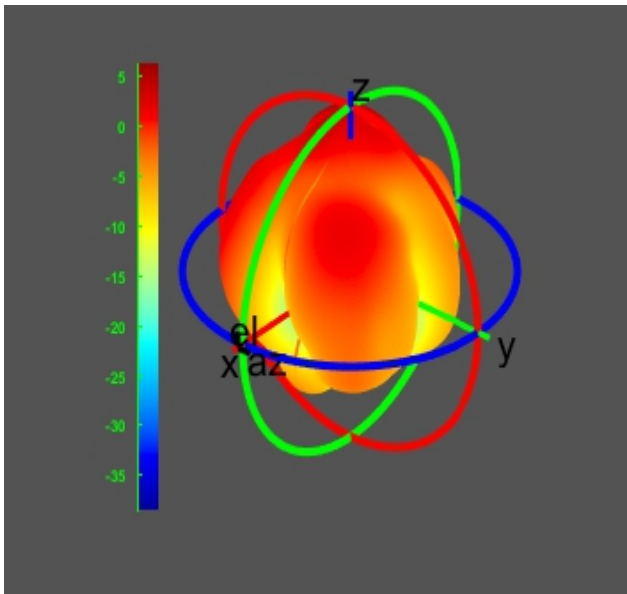


6.1 Radiation patterns—3D(2.4G#1)

2400MHz

2450MHz

2500MHz

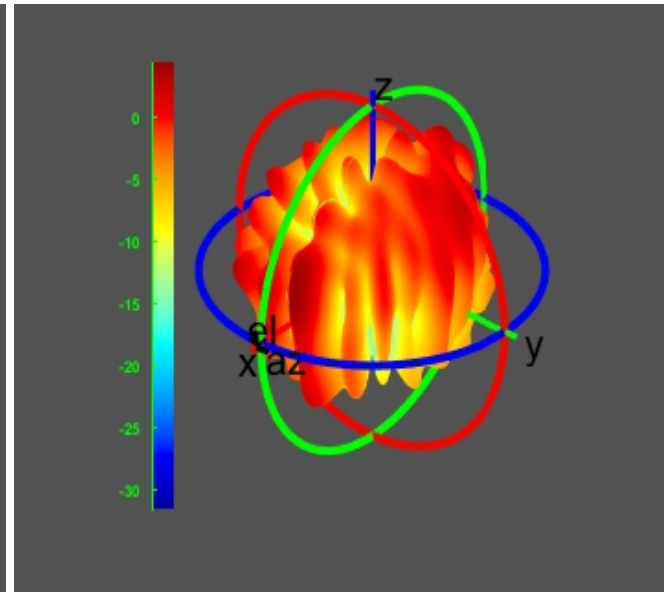
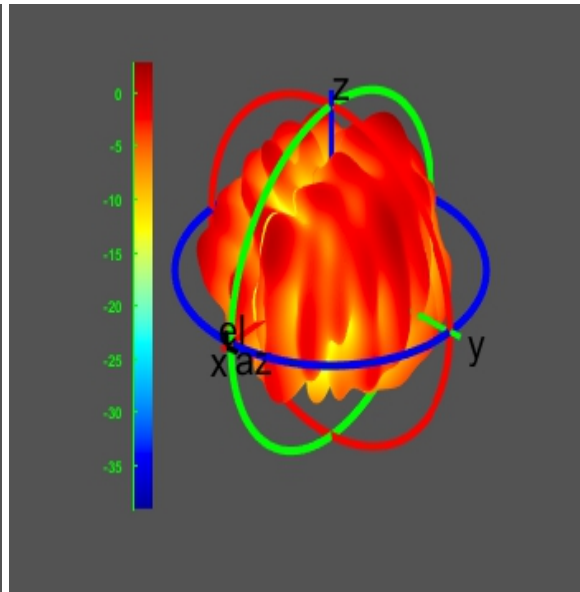
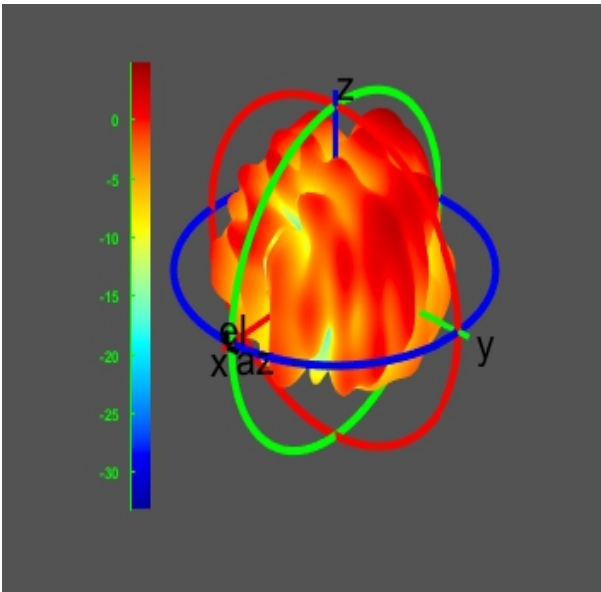


6.2 Radiation patterns—3D(5.8G#1)

5150MHz

5350MHz

5850MHz



Standard Parameters

一、Technical Specifications

Operating frequency	2.4GHz &5.8GHz
S. W. R	≤ 1.92
Antenna gain	4dBi
Transfer mode	I-PEX
Resistance	50 Ohm

二、Reliability test

Project	Test conditions	Specifications
Storage environment	The test temperature, humidity and air pressure are as follows when there is no specific condition: 1. Temperature: $-30\text{ }^{\circ}\text{C}\sim+80\text{ }^{\circ}\text{C}$ 2. The relative humidity is 45% - 85% 3. The air pressure is 86kpa-106kpa	Normal electrical and mechanical performance
High and low temperature test	Conduct 5 cycles between $70\text{ }^{\circ}\text{C}$ and $40\text{ }^{\circ}\text{C}$, and then check the appearance quality under normal conditions for 1-2H.	The size shall meet the requirements and the mechanical and electrical properties
Constant damp heat resistance test	Relative humidity: $95\pm 3\%$, test temperature: $40\text{ }^{\circ}\text{C}$ After the test object is taken out for 2h, the electrical performance shall be measured within 5min. The appearance quality of the test object shall be checked for 1-2h under normal conditions	The size shall meet the requirements and the mechanical and electrical properties
vibration test	Vibration frequency range: 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M/s, frequency sweeping cycles: 30 times	Normal electrical and mechanical performance
Drop test		
Pulling force test	Use a push-pull tester to test its bearing force: $\geq 10\text{N}$	Normal electrical and mechanical performance
Withstand voltage	1. Insulation spark voltage 1.5KV 2. Sheath spark voltage 1.5KV 3. Insulation to sheath withstand voltage 0.5KV	Normal electrical and mechanical performance
Attenuation value	2.0(nominal) 1.0GHz 2.9(nominal) 2.0GHz 3.2(nominal) 2.4GHz 3.7(nominal) 3.0GHz 4.3(nominal) 4.0GHz 4.8(nominal) 5.0GHz 5.3(nominal) 6.0GHz	3.3dB/m (at20℃)