

Antenna information

Record for version modification

Date	Revision	Modify Content	Author
2022-03-15	V1.0	1 st Version	YINGJUN WEI

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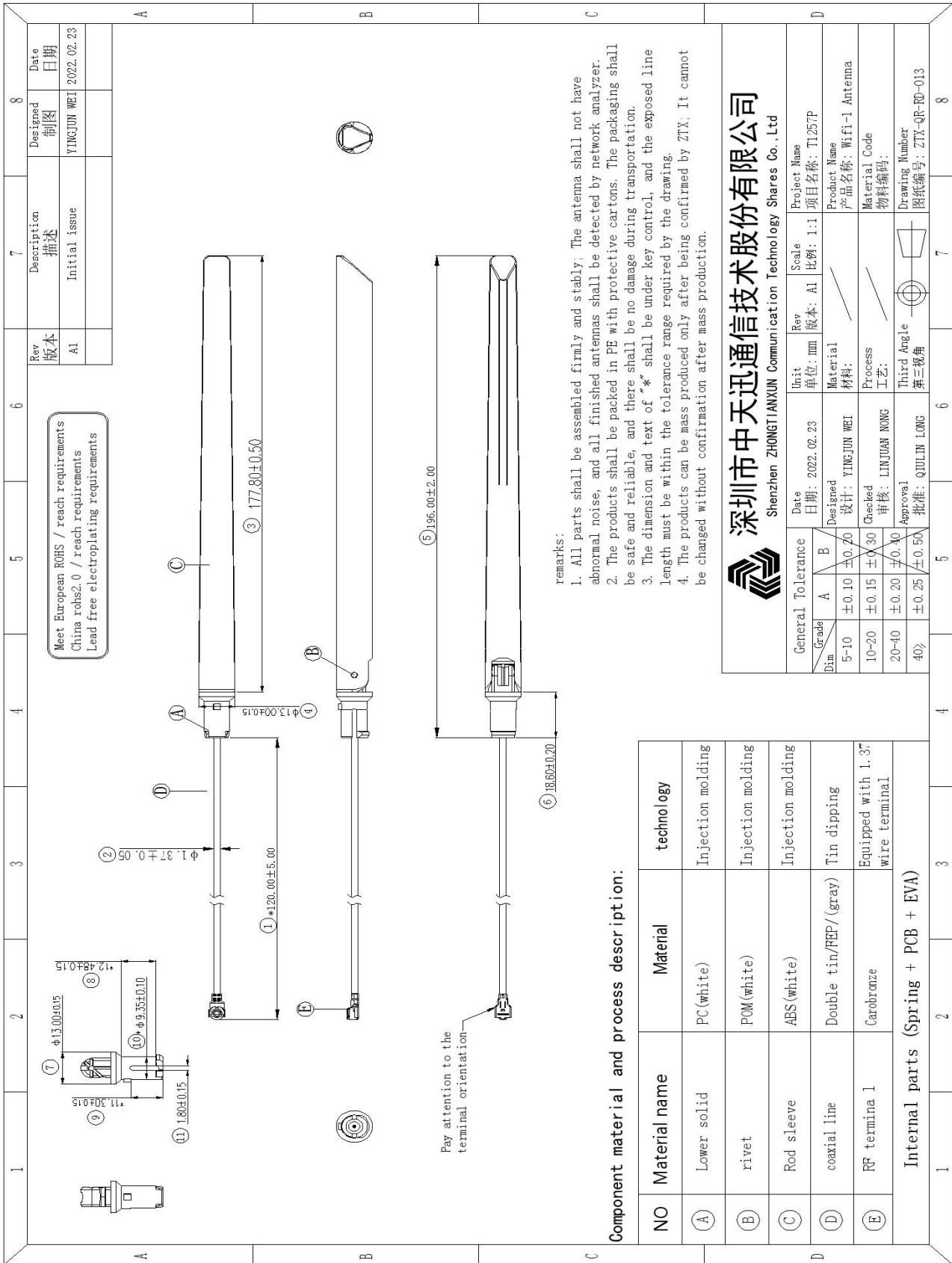
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1. Project information

红色部分根据项目情况自行填写，软硬件信息找对接工程师核对

Model No.	NP1257G
HW Version	
SW Version	
Antenna type	
Installation mode	
WIFI Model	
Antenna supplier	Shenzhen ZhongTianXun Communication Technology CO.,LTD
Tester	
Acceptance	
Reviewer	
Date	

2. Appearance and specification



remarks:

1. All parts shall be assembled firmly and stably; The antenna shall not have abnormal noise, and all finished antennas shall be detected by network analyzer.
2. The products shall be packed in PE with protective cartons. The packaging shall be safe and reliable, and there shall be no damage during transportation.
3. The dimension and text of "*" shall be under key control, and the exposed line length must be within the tolerance range required by the drawing.
4. The products can be mass produced only after being confirmed by ZTX; It cannot be changed without confirmation after mass production.

Component material and process description:

NO	Material name	Material	technology
(A)	Lower solid	PC(white)	Injection molding
(B)	rivet	POM(white)	Injection molding
(C)	Rod sleeve	ABS(white)	Injection molding
(D)	coaxial line	Double tin/FRP/gray	Tin dipping
(E)	RF termina 1	Carobronze	Equipped with 1.37 wire terminal

Internal parts (Spring + PCB + EVA)

Meet European ROHS / reach requirements
China rohs2.0 / reach requirements
Lead free electroplating requirements

Rev 版本	Description 描述	Designed 制图	Date 日期
A1	Initial issue	YINGJUN WEI	2022.02.23

深圳市中天迅通信技术股份有限公司
Shenzhen ZHONGTIANXUN Communication Technology Shares Co., Ltd

General Tolerance	Date 日期	Unit 单位: mm	Rev 版本: A1	Scale 比例: 1:1	Project Name 项目名称: T1257P
Dim Grade	Designed 设计: YINGJUN WEI	Material 材料:	Checked 审核: LINJUAN MONG	Product Name 产品名称: Wifi-1 Antenna	
5-10 ±0.10 ±0.20			Approval 批准: QIULIN LONG	Material Code 物料编码:	
10-20 ±0.15 ±0.20				Process 工艺:	
20-40 ±0.20 ±0.25				Third Angle 第三视角	Drawing Number 图纸编号: ZTX-QR-RD-013
40>					

3. Performance parameter

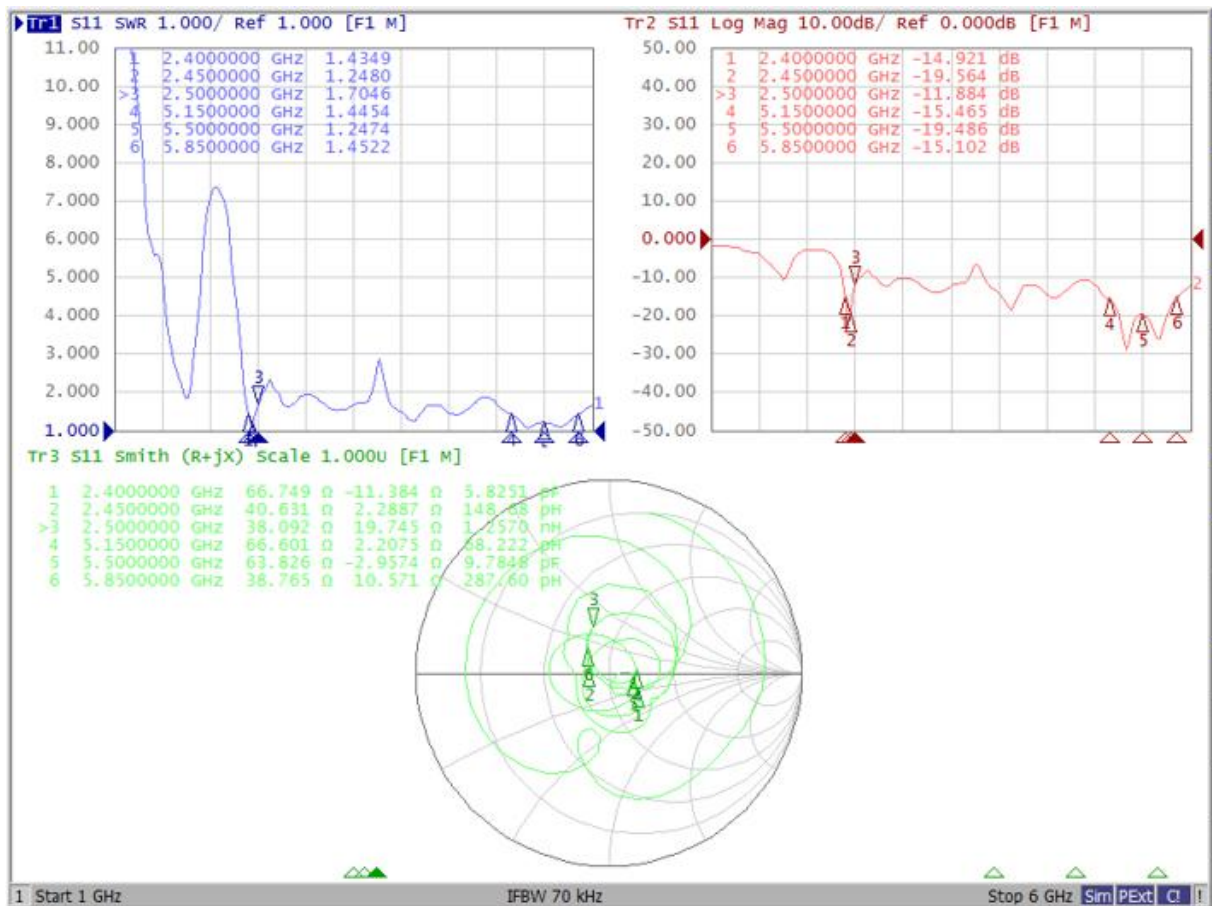
3.1 Antenna passive test

Frequency	2400Mhz~2483.5Mhz/5150Mhz~5850Mhz
Impedance	50Ω
Antenna Gain	2.4GAntenna A: 4.61dBi; Antenna B: 2.82dBi 5GAntenna A: 3.65dBi; Antenna B: 4.36dBi
Power capacity	<10w
Radiation	Omni-directional

3.1.1 Reflection loss&V.S.W.R

Test tools: 5071C(标注网分型号)

Standard: Reflection loss≤-10db V.S.W.R≤2



V.S.W.R

Freq/GHz	2.4	2.45	2.5	5.15	5.5	5.85
VSWR	1.43	1.24	1.70	1.44	1.24	1.45

3.1.2 Gain & Efficiency

Test tools: **Microwave Anechoic Chamber+Agiilent Technologies E5071C**

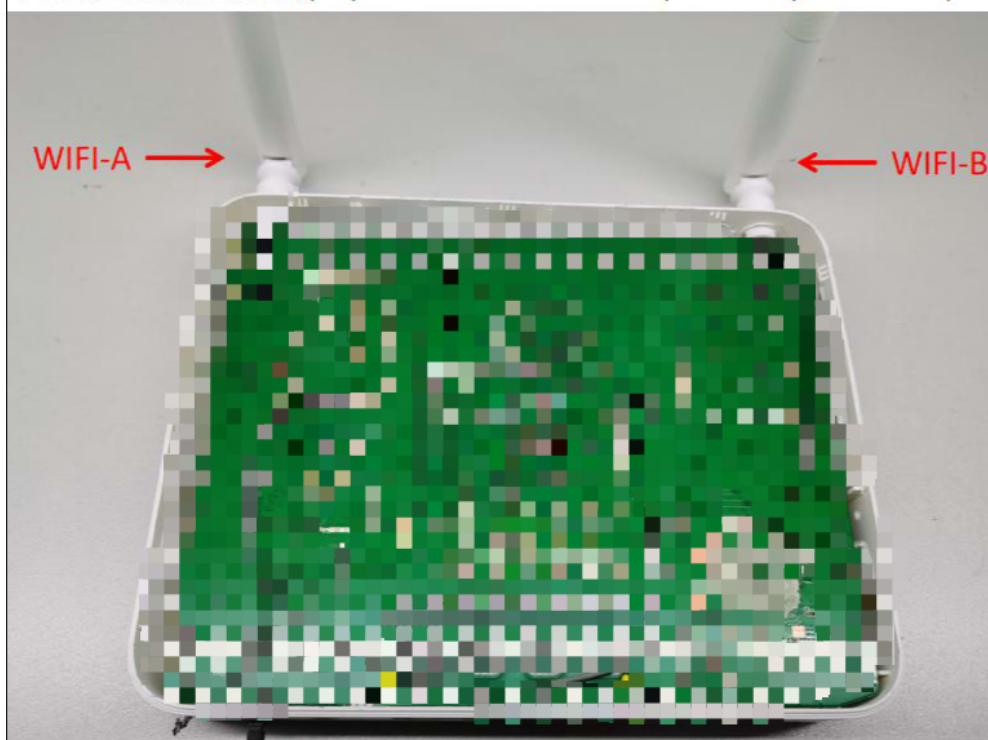
Standard: 2.4G $1.5\text{dBi} \leq \text{Gain} \leq 6\text{dBi}$ Efficiency $\geq 55\%$

5G $1.7\text{dBi} \leq \text{Gain} \leq 6\text{dBi}$ Efficiency $\geq 50\%$

Testing Environment: As shown in the figure

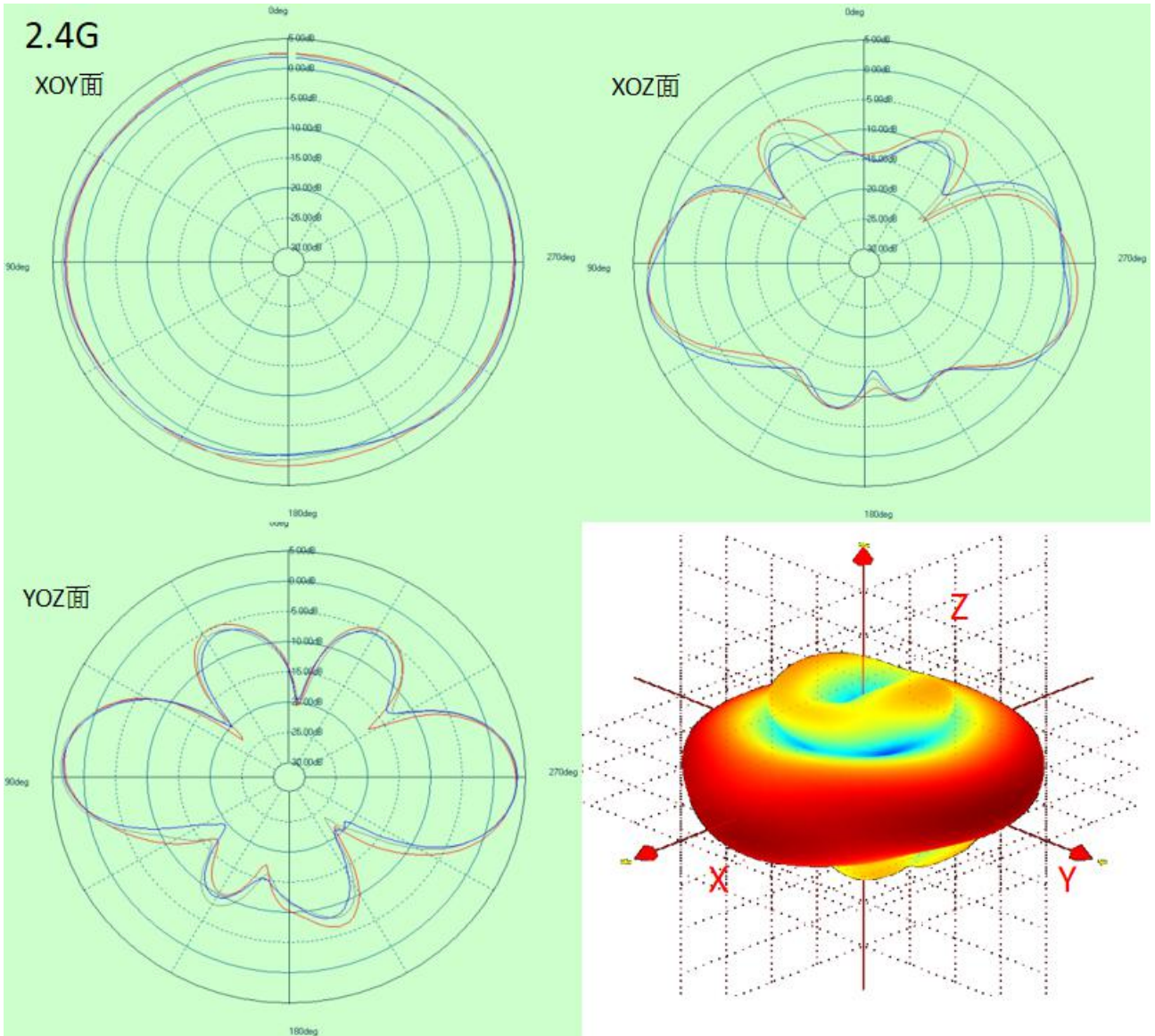


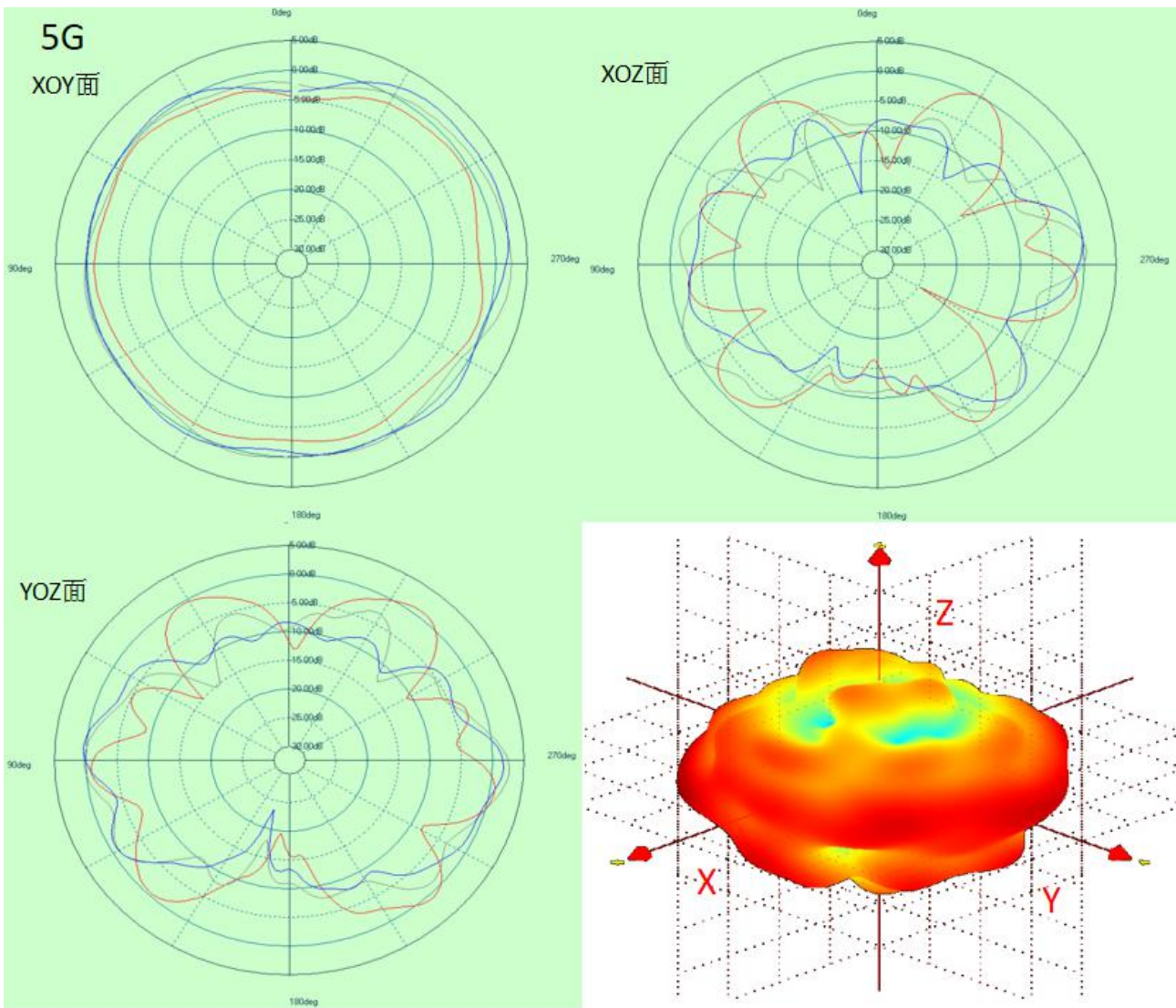
天线位置摆放说明(Explanation of antenna position placement)



Antenna test data

Frequency	Efficiency	Efficiency . dB	Gain . dB
2400000000	63%	-2.00	3.49
2410000000	62%	-2.06	3.55
2420000000	67%	-1.76	3.99
2430000000	71%	-1.47	4.26
2440000000	68%	-1.69	3.99
2450000000	63%	-2.00	3.69
2460000000	62%	-2.10	3.69
2470000000	62%	-2.09	3.82
2480000000	61%	-2.13	3.73
2490000000	58%	-2.37	3.41
2500000000	62%	-2.11	3.70
5150000000	56%	-2.51	2.70
5200000000	58%	-2.39	2.60
5250000000	58%	-2.33	3.67
5300000000	57%	-2.45	3.60
5350000000	56%	-2.53	3.33
5400000000	52%	-2.88	2.58
5450000000	55%	-2.57	2.77
5500000000	57%	-2.46	2.74
5550000000	57%	-2.46	3.01
5600000000	55%	-2.61	3.11
5650000000	53%	-2.74	2.90
5700000000	53%	-2.72	3.06
5750000000	55%	-2.57	2.99
5800000000	54%	-2.68	2.55
5850000000	55%	-2.61	2.67





3.1.3 Antenna isolation

Test tools: 5071C(标注网分型号)

Standard: Isolation \leq -20dB

吞吐量测试数据(Throughput Test Data)

2.4G 40M CH6			
衰减(dB)	角度(°)	TX (Mbits/sec)	RX (Mbits/sec)
0	0	198	216
	90	198	218
	180	196	229
	270	199	213
10	0	200	237
	90	204	232
	180	207	225
	270	192	213
20	0	203	205
	90	204	203
	180	209	204
	270	207	202
30	0	194	164
	90	188	160
	180	192	167
	270	184	163
40	0	178	147
	90	175	120
	180	177	144
	270	173	128
50	0	166	134
	90	161	115
	180	168	135
	270	164	112

吞吐量测试数据(Throughput Test Data)

5G 80M CH36			
衰减(dB)	角度(°)	TX (Mbits/sec)	RX (Mbits/sec)
0	0	559	647
	90	564	632
	180	572	645
	270	545	629
10	0	543	613
	90	541	625
	180	550	615
	270	543	617
20	0	544	601
	90	529	593
	180	530	603
	270	533	599
30	0	485	508
	90	473	496
	180	475	509
	270	471	495
40	0	470	460
	90	478	451
	180	474	456
	270	475	450
50	0	467	439
	90	460	432
	180	468	436
	270	450	428

吞吐量测试数据(Throughput Test Data)

5G 80M CH149			
衰减(dB)	角度(°)	TX (Mbits/sec)	RX (Mbits/sec)
0	0	543	622
	90	550	650
	180	555	652
	270	546	624
10	0	539	644
	90	544	506
	180	546	658
	270	546	655
20	0	527	627
	90	529	601
	180	543	621
	270	530	594
30	0	480	505
	90	468	506
	180	474	506
	270	476	498
40	0	475	455
	90	479	451
	180	478	457
	270	482	452
50	0	471	441
	90	476	434
	180	502	438
	270	455	433

4. Test Report

N/A