

Shenzhen Nano-ant communication

Techology Co. Ltd

深圳纳安特通信科技有限公司天线规格书

影冠投影仪天线

APPROVED BY	SIGNATURE	DATE
Mechanical Engineer:	蒋喜喜	2022-08-10
RF Engineer:	李国栋	2022-08-10
Engineering Manager:	肖大田	2022-08-10
Approved By Customer (as required):		

1.0 DESCRIPTIONS AND PART NUMBER;

1.1 DESCRIPTION;

Model Name	FPC antenna
MAX.Gain	3.54dBi

2.0 ELECTRICAL SPECIFICATIONS:

2.1 FREQUENCY BAND

2.4G/5.8GWIFI

测试设备:

E5071C 网络分析仪



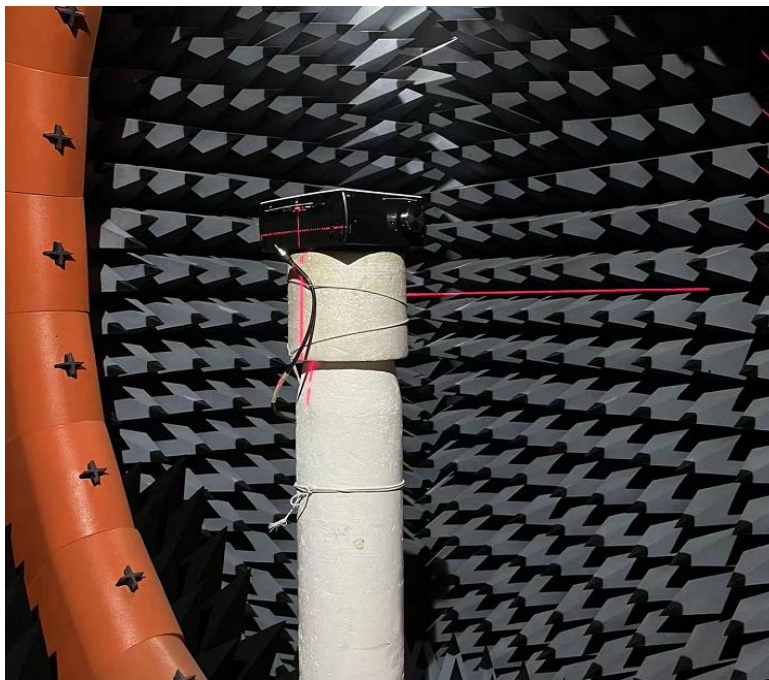
SG24 微波暗室



2 匹配电路 Matching circuit

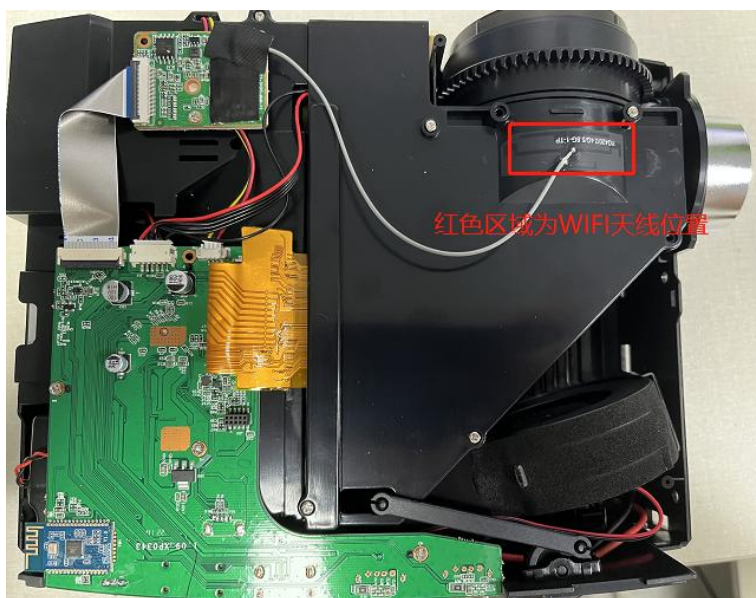
匹配无改动

3. 测试机器



4 天线位置

位置说明：所有天线都在机器上盖，具体如图所示。



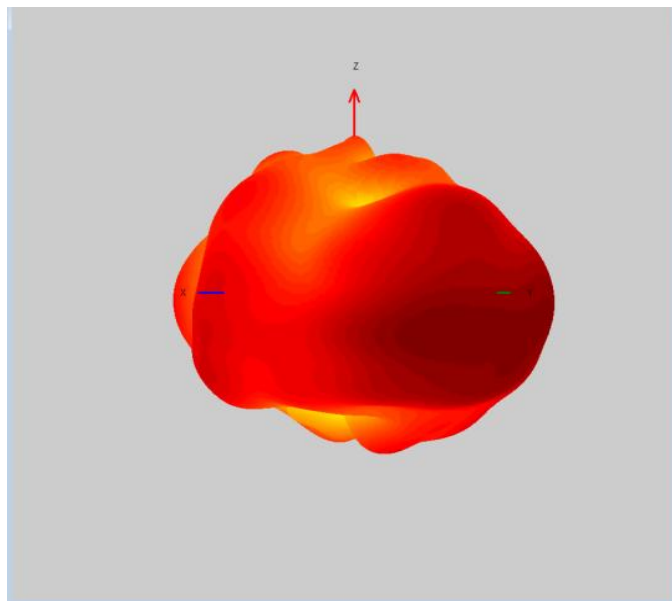
5. 无源测试数据 Passive result

下图为 2.4G 5G 天线效率

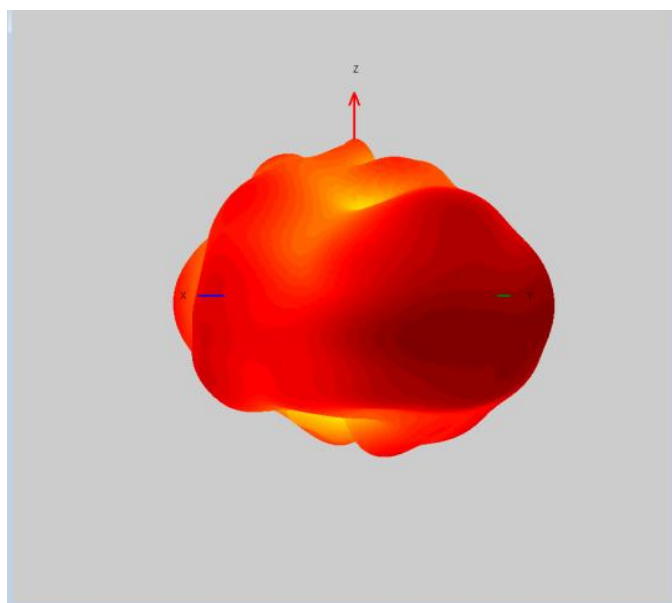
Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
2400M	3.5	-2.93	50.94%
2410M	3.33	-2.97	50.5%
2420M	3.35	-3.01	50%
2430M	3.1	-3.12	48.8%
2440M	2.95	-3.22	47.63%
2450M	3.31	-3.03	49.74%
2460M	2.96	-3.18	48.06%
2470M	2.61	-3.16	48.3%
2480M	2.41	-3.29	46.92%
2490M	2.1	-3.27	47.07%
2500M	1.71	-3.4	45.76%

Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
5150M	2.47	-3.28	47%
5175M	3.54	-3.14	48.58%
5200M	3.2	-3.26	47.24%
5225M	2.65	-3.56	44.1%
5250M	2.93	-3.35	46.24%
5275M	3.45	-3.1	48.93%
5300M	3.16	-3.2	47.91%
5325M	2.96	-3.31	46.63%
5350M	2.71	-3.35	46.23%
5375M	2.82	-3.4	45.73%
5400M	2.3	-3.57	44%
5425M	2.54	-3.11	48.82%
5450M	2.8	-3.43	45.43%
5475M	2.92	-3.7	42.62%
5500M	3.05	-3.5	44.68%
5525M	2.88	-3.71	42.55%
5550M	2.81	-3.7	42.7%
5575M	3.07	-3.43	45.42%
5600M	2.87	-3.43	45.37%
5625M	2.41	-3.69	42.78%
5650M	2.82	-3.37	45.98%
5675M	2.86	-3.23	47.51%
5700M	3.21	-3.13	48.64%
5725M	3.24	-2.93	50.95%
5750M	2.92	-3.16	48.31%
5775M	2.44	-3.44	45.26%
5800M	2.48	-3.37	46.03%

6. 方向图



2. 4G 方向图



5G 方向图

7. 有源测试数据

Format for OTA Test					
WIFI					
Band	Channel	Freespace TRP	Channel	Freespace TIS(-)	
WIFI B	1	11.6	2412	-80.6	
	6	13.1	2437	-79.2	
	13	13.5	2472	-78.1	
	AVE	12.7	AVE	-79.3	
WIFI A	36	11.6	5745	-68.2	
	149	10.3	5785	-67.4	
	165	11.8	5825	-67.2	
	AVE	11.2	AVE	-67.6	

文件编号		版次		修订		日期	
						2023-08-10	
单位: mm							

YG421灰色1.3锡锡线-端子,末端剥线: 2-2.5-1, L=150mm

技术要求

1: 剥线尺寸要准确, 电性能符合要求。

2: 电缆无破损, 无色差, 无污渍。

3: 末端圆剥锡, 剥端端子。

4: “*”为重点检验尺寸。

STP				设计		审核		批准		重量		数量		比例		客户料号		名称	
外径	Ø1.13	±0.08	C=0	目视															WJ12黑色1.3锡锡线-端子, 末端剥线: 2-2.5-1, L=150mm
A端长度	2.0	±0.3	NA	目视									1		4:1				
A端长度	2.5	±0.3	NA	目视															
A端长度	1.0	±0.3	NA	目视															
全长	250	±1	NA	目视															
检测内容	高度	公差	AQL=0.25	测量工具															

2	1	铜							
1	1	/							
项次	名称	数量	材质	图号	料号	备注			

9. 总结及建议

1. 从目前测试数据来看，天线位置与测试性能基本可以满足使用要求。

10.0 MECHANICAL SPECIFICATIONS:

10.1 MECHANICAL CONFIGURATION

The appearance of the antenna is in accordance with drawing SZ6070L

10.2 CONNECTOR TYPE

The connector type is an embedded type

11.0 ENVIRONMENTAL SPECIFICATIONS

11.1 TEMPERATURE

Operating Temperature Range: -40 °C ~ +85 °C

Storage Temperature Range: -40 °C ~ +120 °C

11.2 SALT SPRAY TEST

Antenna be exposed in a 35°C, 5% salt fog chamber for 24 hours then check the appearance and performance against the specifications in normal temperature.

11.3 STATIC HUMIDITY TEST

The antenna is subjected to the following test:

Temperatures: +70°C and 90%--95%RH

Test Duration: 24 Hours

The antenna should not undergo any structural or functional change and remain within the electrical/mechanical specification.

12.0 PACKAGING

The antennas will be packed in bags, There are 100 or 200 antennas per bag. The bags are packed in corrugated fibreboard over box

Drawing