

深圳市泓德致新科技有限公司

HCAR4000-MI WIFI 双频天线规格书

客户：皓程科技			项 目 名 称： HCAR4000-MI
频段：2.4G/5G		日期：2021.04.26	版本：R:A
研发	结构：张旺	审核：胥工	批准：
	射频：胥工	审核：贵春雷	
客户审核：		客户批准：	

主天线：2.4g 5.8gwifi 天线 HDZX-P10192A0, 黑色 线长 200mm 四代端子

副天线：2.4g 5.8g 双频天线 HDZX-J2060, 灰色 线长 **120mm** 四代端子

contents

contents.....	1
1. PROJECT INFORMATION AND ELECTRICAL SPECIFICATION	2
1-1 Project picture.....	2
1-2 Frequency Band:	2
1-3 Impedance matching	2
2. VSWR	2
2-1 Measuring Method:	2
2-2 S11 parameter values.....	4

3. EFFICIENCY AND GAIN	5
3-1 Efficiency/Gain- WIFI	5
4. THE PRODUCTION INDEX	9
5. STRUCTURAL DRAWINGS	错误！未定义书签。

1. Project information and Electrical Specification

Those specifications were specially defined for 2.4G/5G model, and all characteristics were measured under the model's handset testing jig .

1-1Antenna picture

1-2 Frequency Band:

Frequency Band	MHz
2.4G/5G	2400-2500/4950-5850

1-3 Impedance matching

天线原匹配

2.VSWR

2-1 Measuring Method:

1. A 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR,

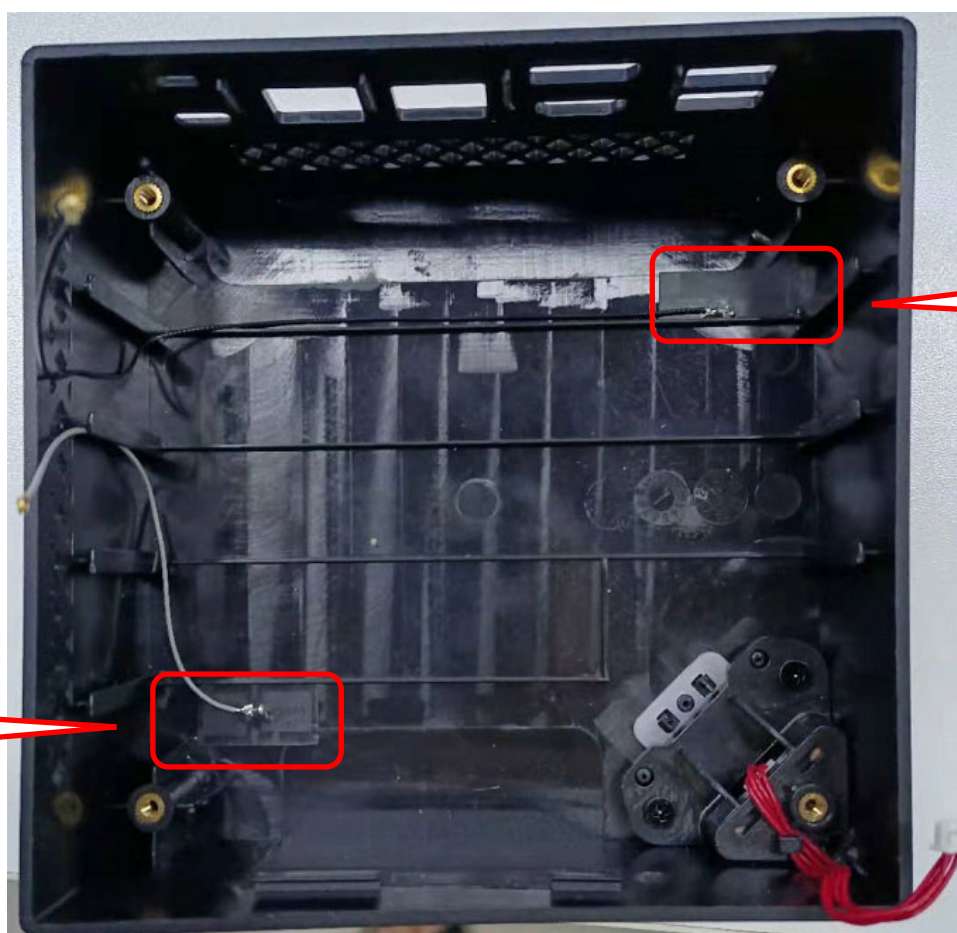
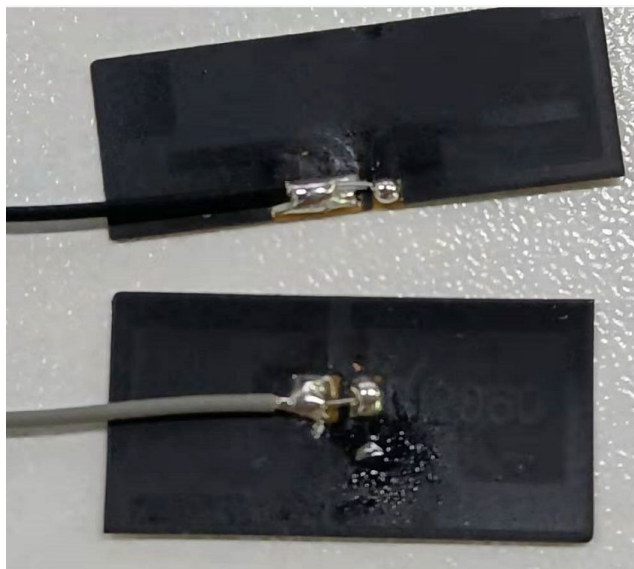
2. Keeping this jig away from metal at least 20cm.

天线装配图跟实物

主天线: 2.4g 5.8gwifi 天线 HDZX-P10192A0, 黑色 线长 200mm 四代端子

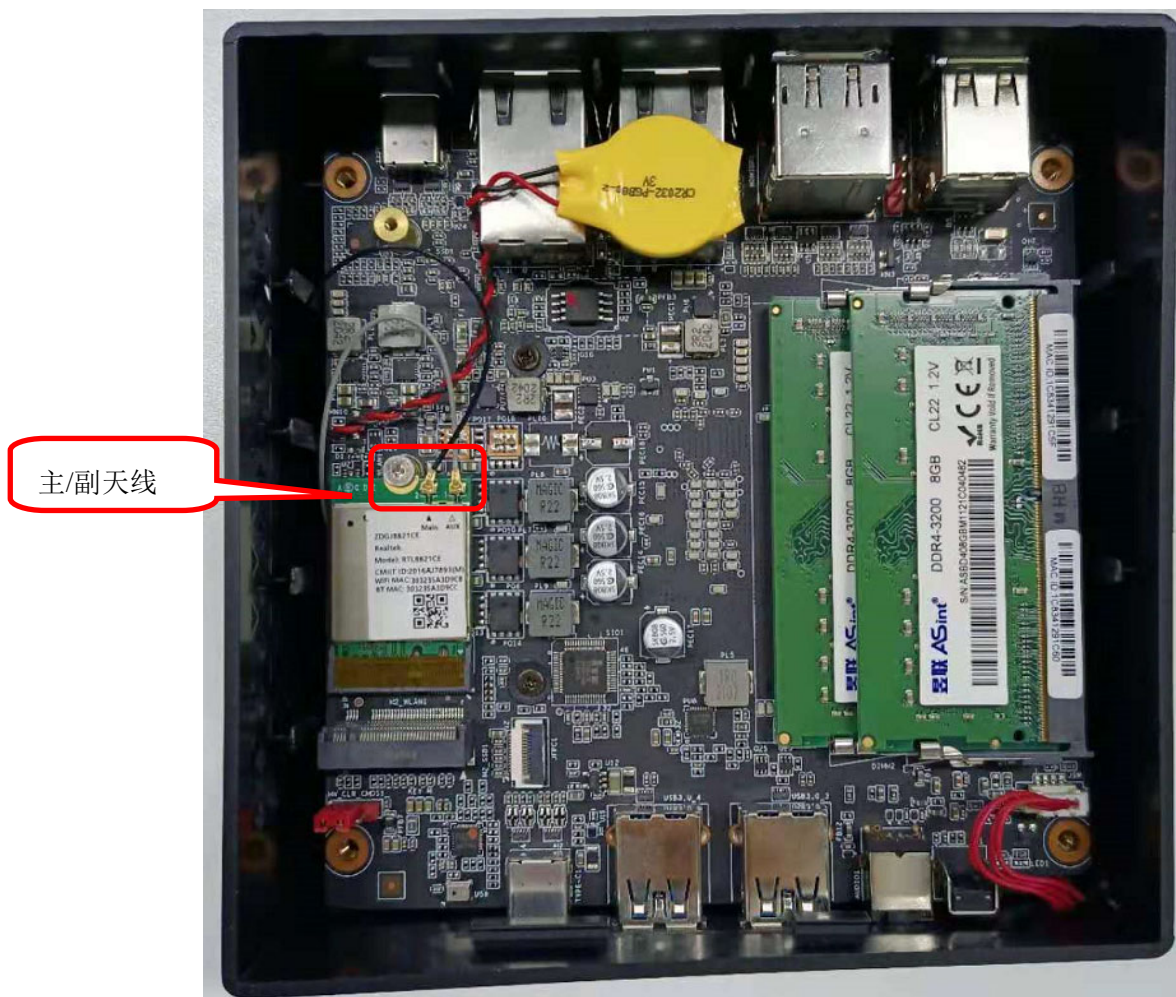
副天线: 2.4g 5.8g 双频天线 HDZX-J2060, 灰色 线长 **120mm 四代端子**



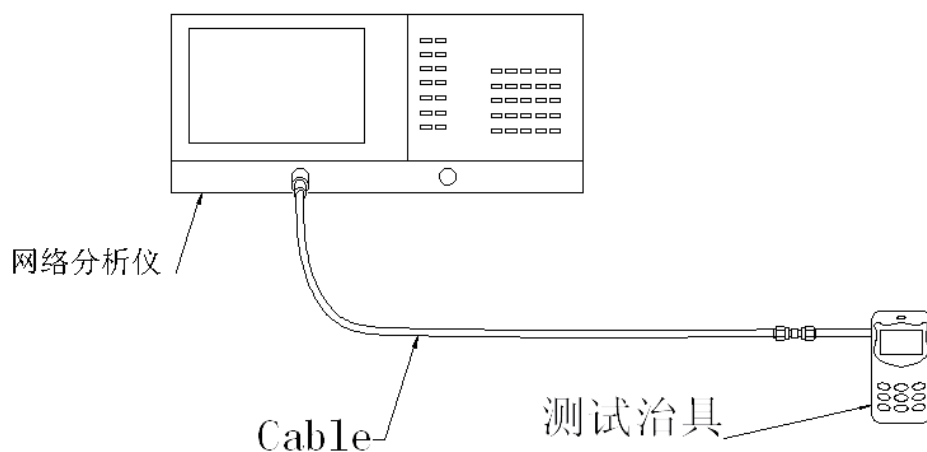


主天线

副天线



测试示意图如下：



2-2 S11 parameter values

频率 (MHZ)	2400	2500	4950	5400	5850
驻波	1.3	1.2	1.78	1.63	1.23



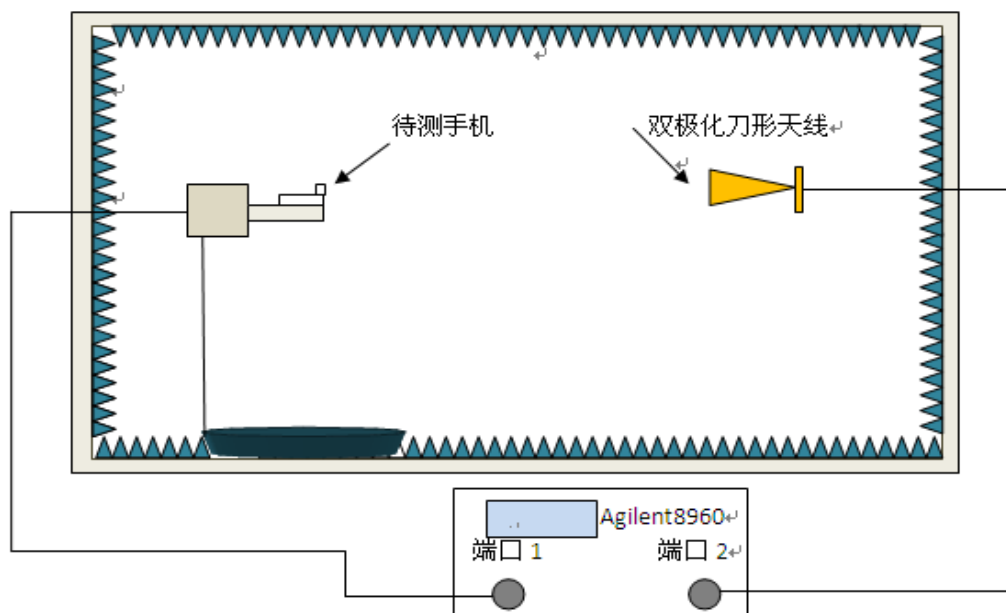
3. Efficiency and Gain

*measuring and test instruments:

微波暗室, Agilent 网络分析仪, Agilent 频谱分析仪, 8960 综合测试仪, 标准天线

*test method:

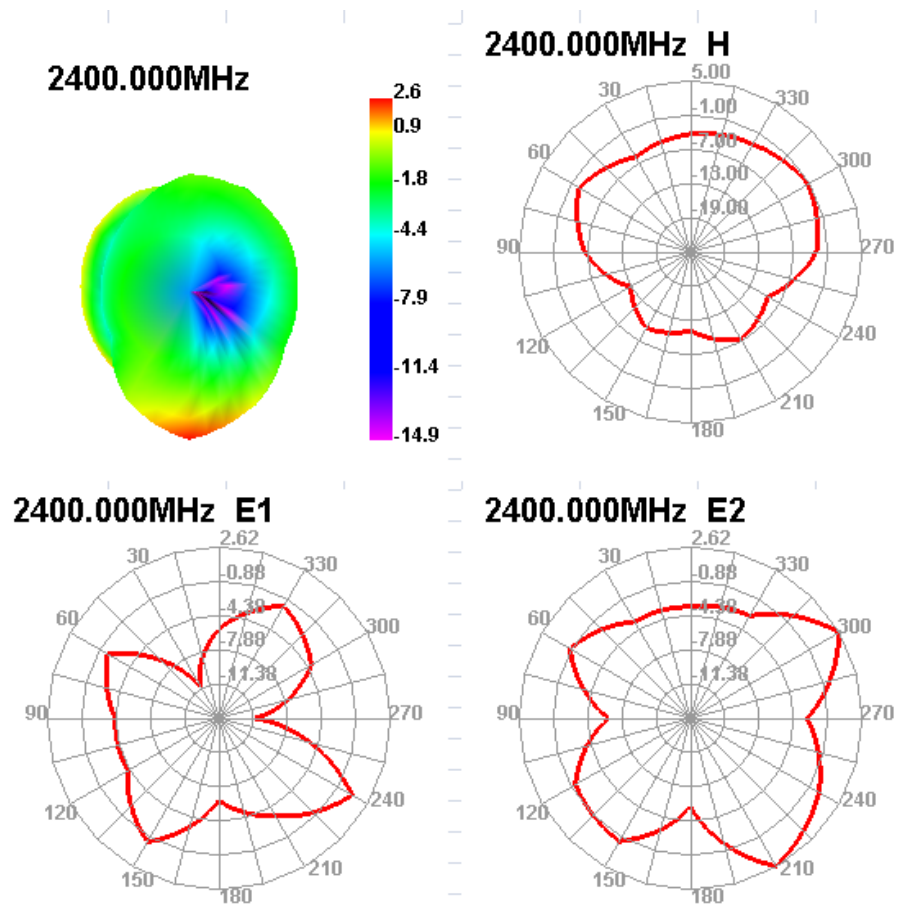
equipment 以 H 面放于转台中心位置固定, 与喇叭天线中心位置在同一个水平线上。

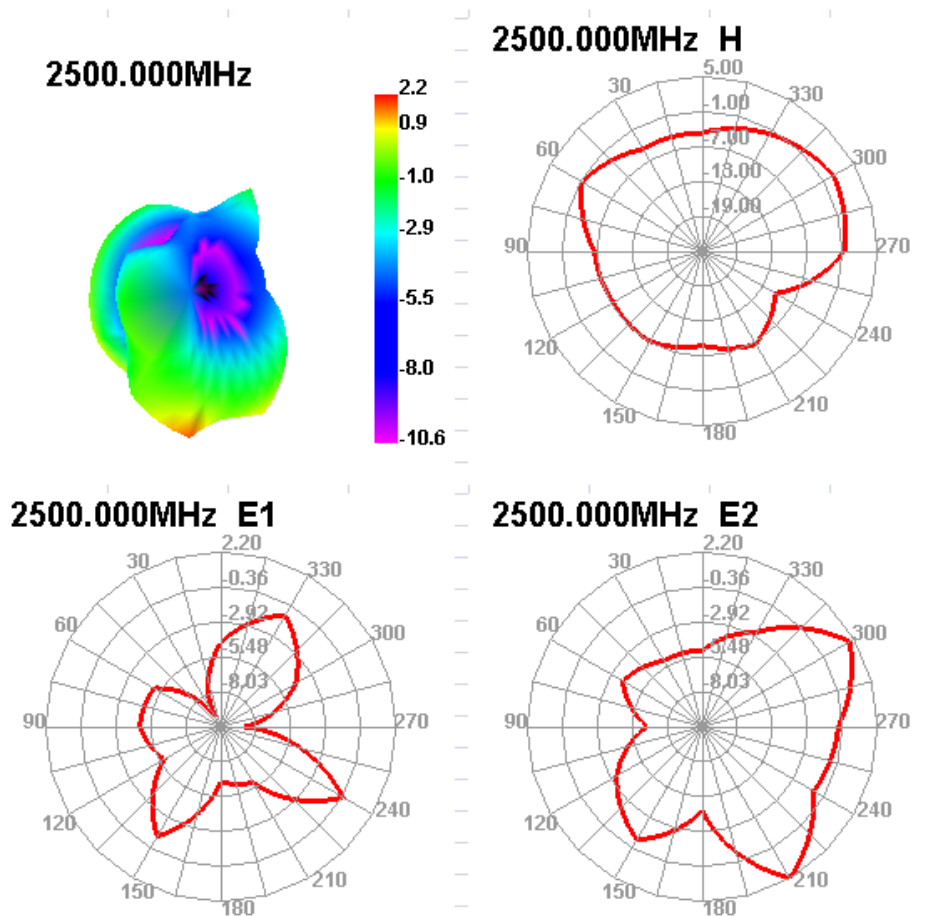
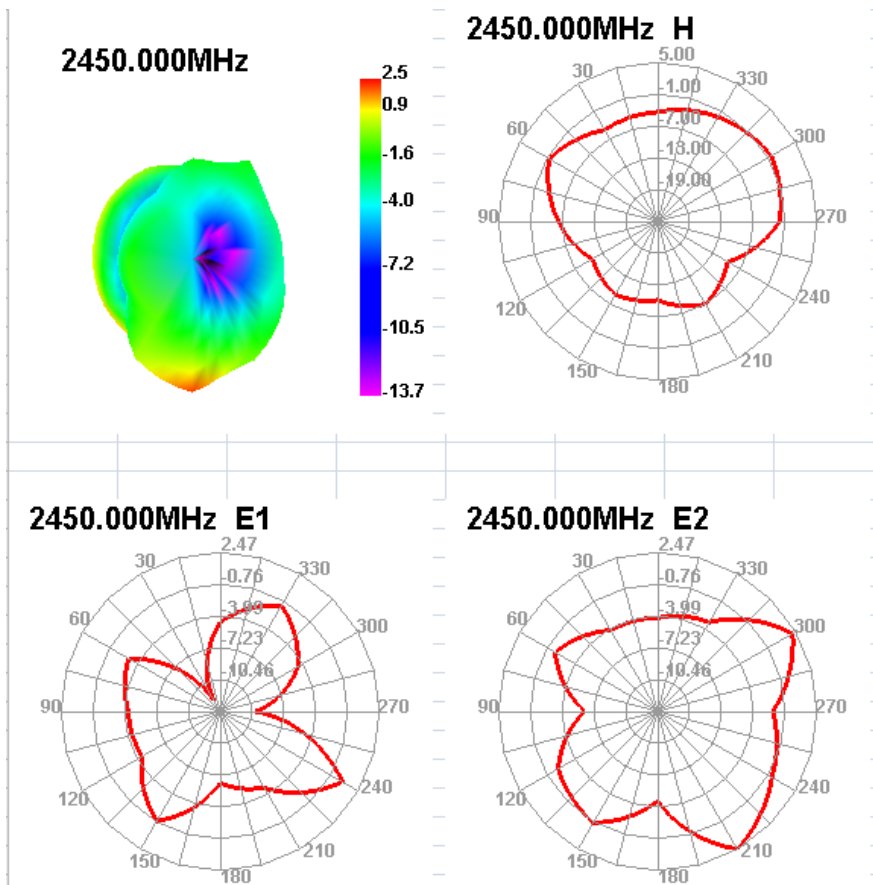


3-1 Efficiency/Gain- WIFI

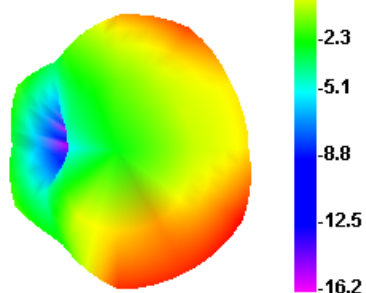
Passive Test For WIFI_BT								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	64.61	-1.9	2.62	0.47	2.62	-14.89	51.03	51.21
2450	59.76	-2.24	2.47	0.32	2.47	-13.7	51.78	51.74
2500	53.62	-2.71	2.2	0.05	2.2	-10.59	51.76	51.66

Passive Test For 5.8								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
4950	53.52	-2.71	2.33	0.18	2.33	-16.16	62.44	62.5
5400	66.72	-1.76	4.64	2.49	4.64	-19.6	63.55	63.99
5850	64.22	-1.92	3.44	1.29	3.44	-11.42	66.35	66.32

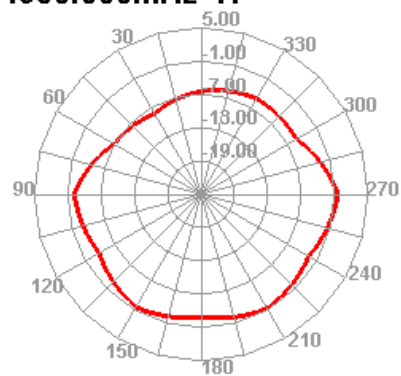




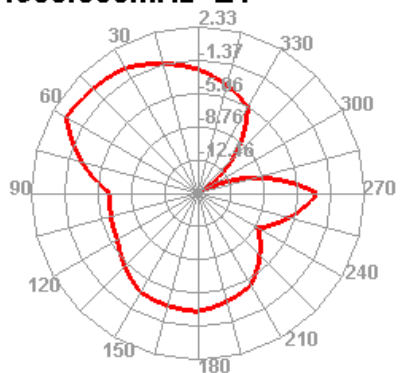
4950.000MHz



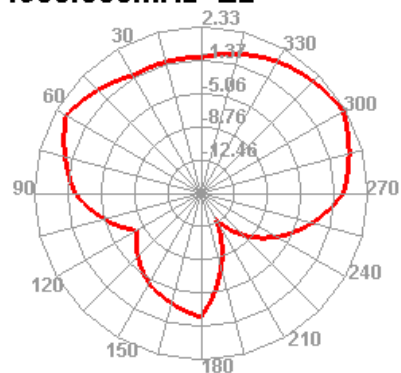
4950.000MHz H



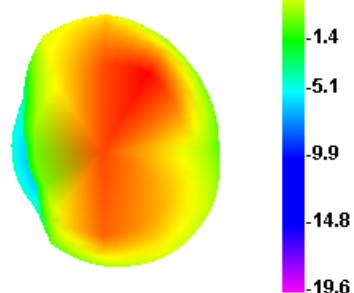
4950.000MHz E1



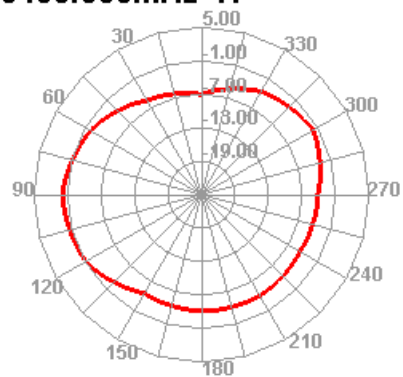
4950.000MHz E2



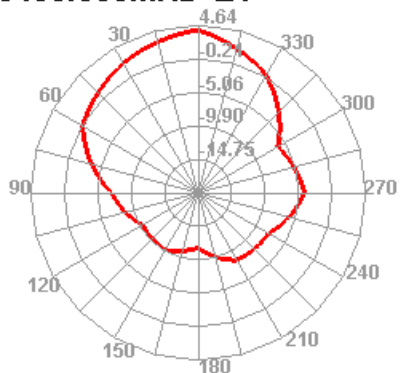
5400.000MHz



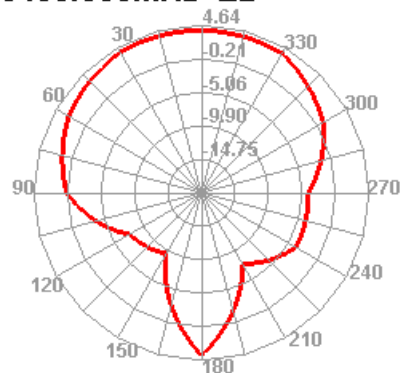
5400.000MHz H

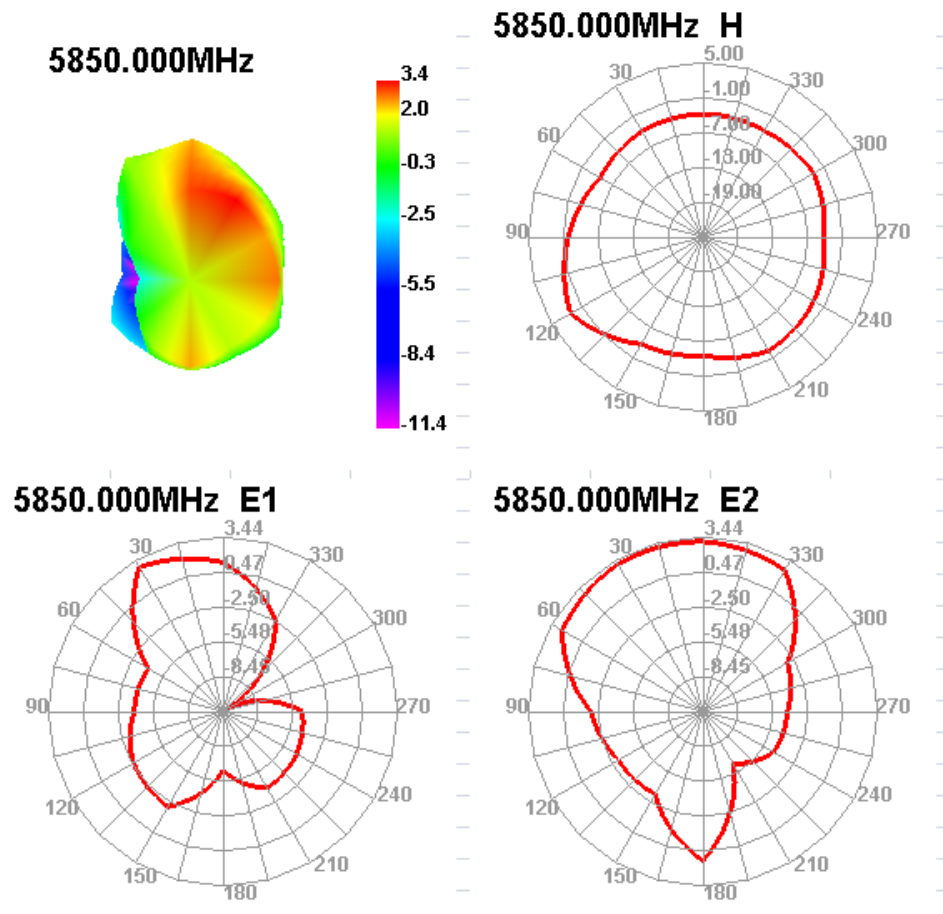


5400.000MHz E1



5400.000MHz E2





4. The production index

天线量产时，以驻波比作为量产测试标准。

根据项目本身的差异,给出如下标准：

频率	量产标准
WIFI (2400-2500Mhz/4950-5850MHZ)	$VSWR(\text{量产产品}) < VSWR(\text{设计样品}) + 0.5$