

Shenzhen Tianyiyuan Elec& Technology co., Ltd

Contact: Tang Gong 13244864327 (same as wechat number)
Address: 6th Floor, Building A, Xinlongxin Industrial Park, No.50 Fengtang Avenue, Fuhai Street,
Baoan District, Shenzhen

Recognition book

SPECIFICATION FOR APPROVAL



Project Information

<u>Customer</u>	Shenzhen Huaxin Zhiying Technology Co., Ltd
<u>Project</u>	CT319-230D-双频-KT
<u>Band</u>	2450/5250/5800MHz
TTY <u>Part number</u>	CT319-230D-双频-KT
<u>Version</u>	01
<u>RF</u>	Mike Tang
<u>ME</u>	Jake Jian
<u>Date</u>	2025.7.11
<u>project Version</u>	V1.0

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Customer part number

1、Specifications

The report provides a test of the electrical performance parameters of the TYY-TX3905 Technical__parameters__of__antenna__electrical appliances antenna, which is a science and technology model. TYY-TX3905 WIFI Built in antenna, WIFI Antenna is made by copper pipe+RF Line composition。 (As follows 1 Shown)

Electrical technical parameters			
电 性 能 指 标		Electrical Specifications	
频率范围	2400~2500MHZ 5180~5320MHZ 5700~5800MHZ	Frequency Range	2400~2500MHZ 5180~5320MHZ 5700~5800MHZ
电压驻波比	≤2.0	VSWR	≤2.0
增益	3.8dBi	GAIN	3.8dBi
输入阻抗	50 Ω	Input Impedance	50 Ω
机 械 指 标		Mechanical Specifications	
天线颜色	黑色	Antenna Color	BLACK
接口形式	IPEX-2	Input connector	IPEX-2
线长度	60mm	Cable length	60mm
工作温度	-40℃~+85℃	Working Temperature	-40℃~+85℃
工作湿度	20~80%	Working Humidity	20~80%

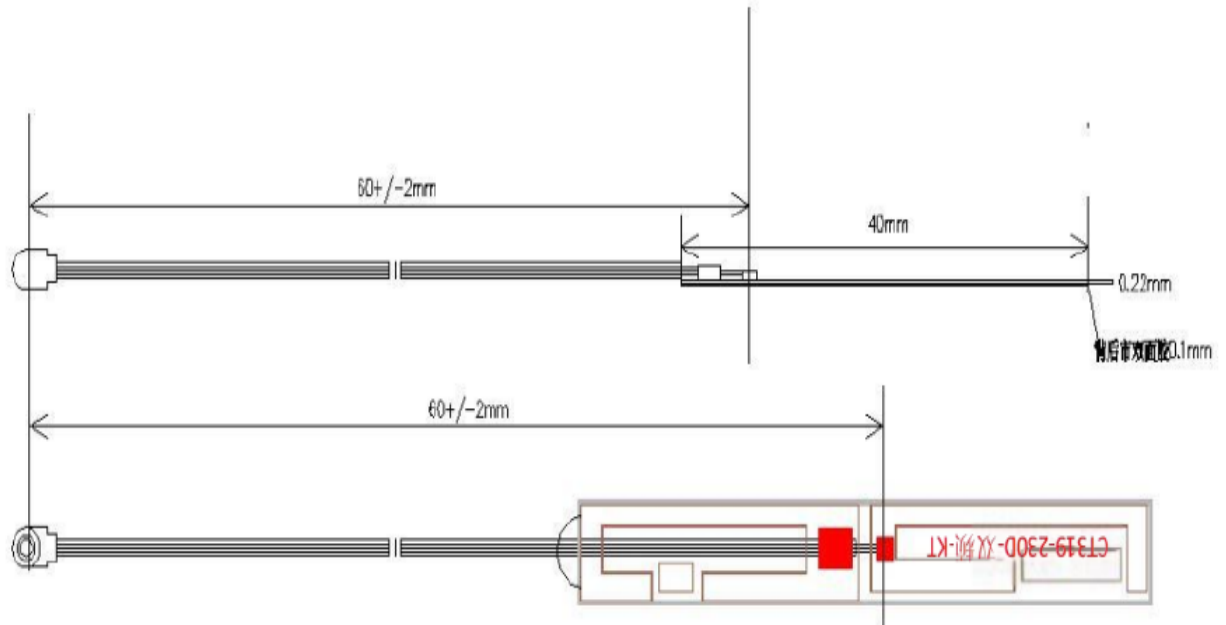
Chart 1 TYY-TX3905Product size

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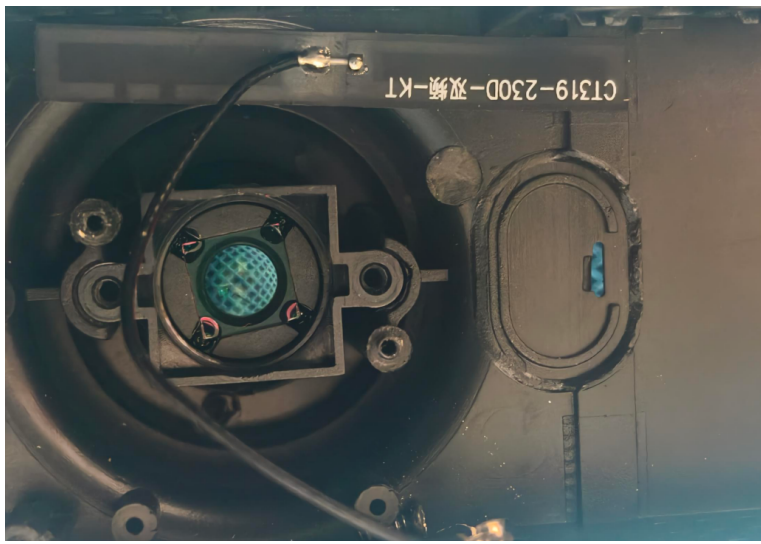
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Chart 2 TVX/TX2005 Antenna finished



Line length $60 \pm 2\text{mm}$.

Chart 3 Location of antenna patch



First, fasten the terminal socket, then peel off the adhesive tape on the back of the antenna. The antenna must be attached to the plastic shell and kept away from metal components and objects.

Chart 4 Model appearance diagram

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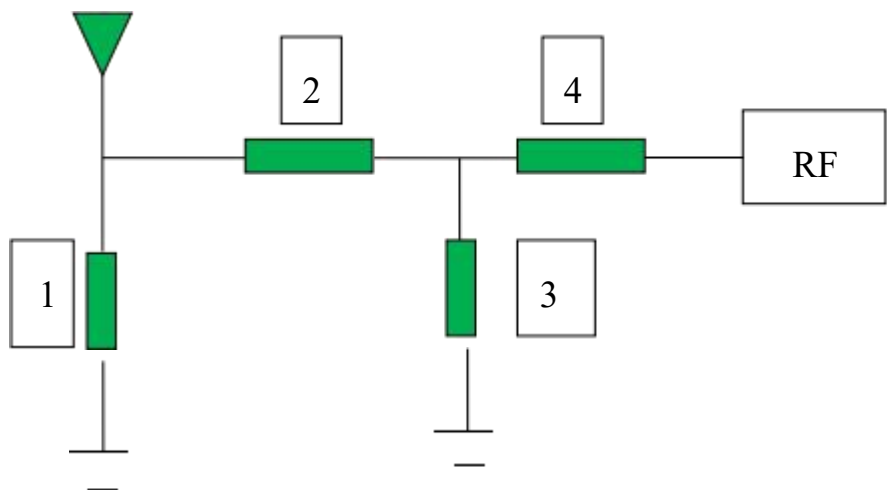
Chart 5 Actual measurement test chart (download speed 12.1 M/S per



second)

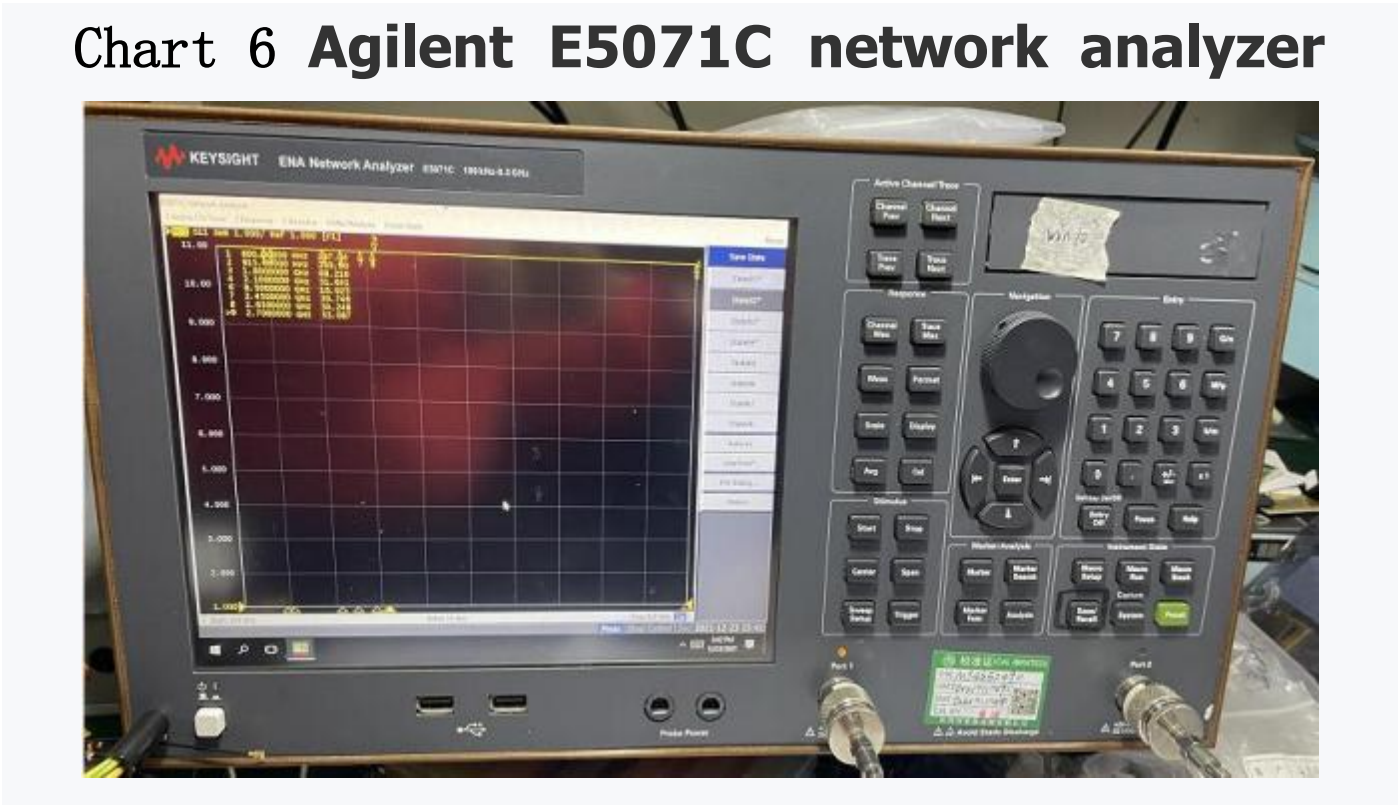
2. Electrical properties

2.1 WIFI Antenna matching circuit This item matching circuit is provided by the customer.



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Element number	1	2	3	4
WIFI optimum	NC	0 ohm	NC	
Original (spare)	50 ohm matching (inductance capacitance / sunlord Darfon)			



OTA microwave anechoic chamber: The test frequency range is 800MHz-8.5 GHz, the quiet zone range is 50cm circumference, and the reflectivity is less than-90 dB.

2.4. 2 Instruments tested

Agilent E5071C network analyzer, log-periodic antenna, computer, transmitting turntable, receiving antenna, printer, jacket choke (in order to reduce the loss of signal connection lines).

Chart 7 OTA Microwave dark room

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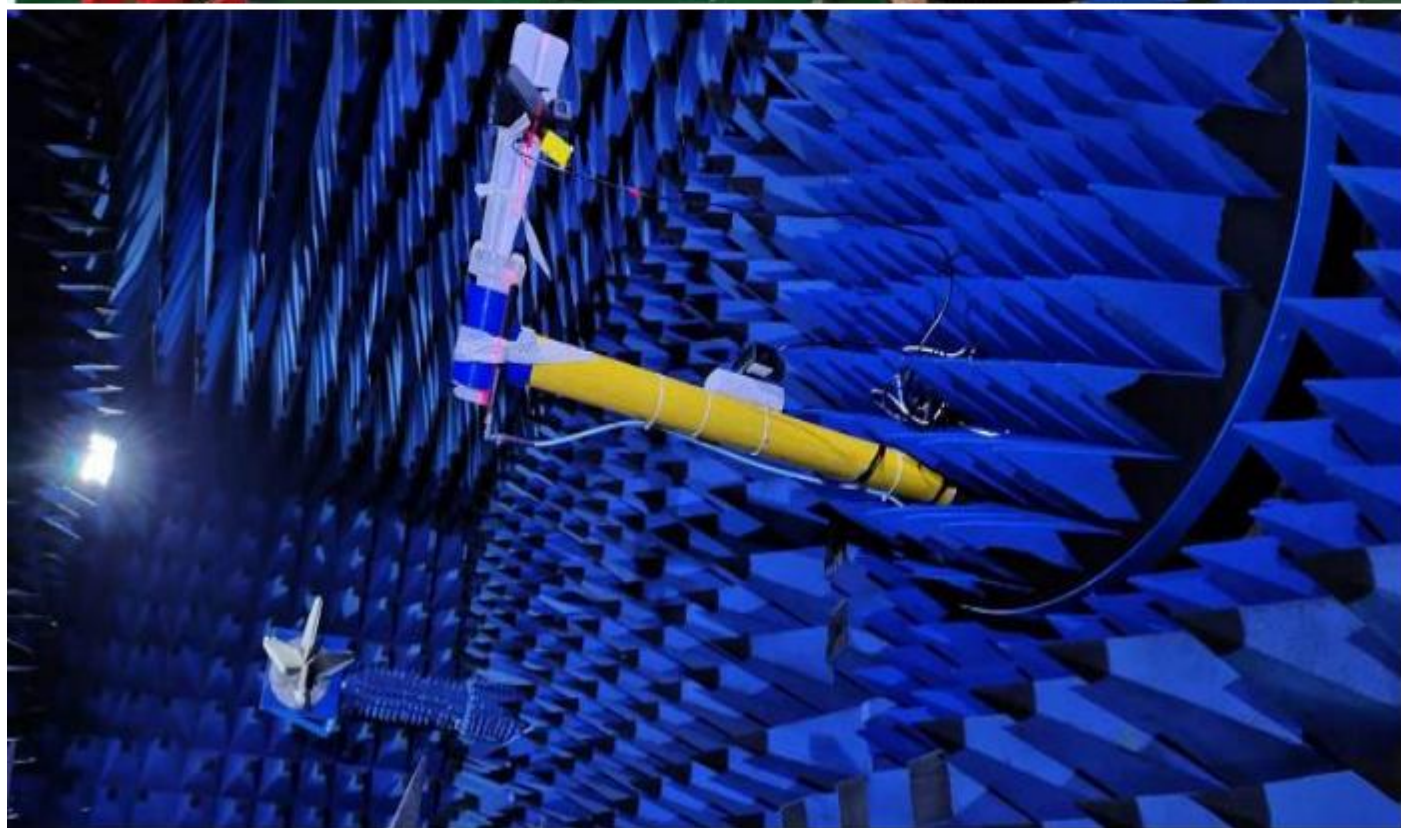


Chart 8 Test system

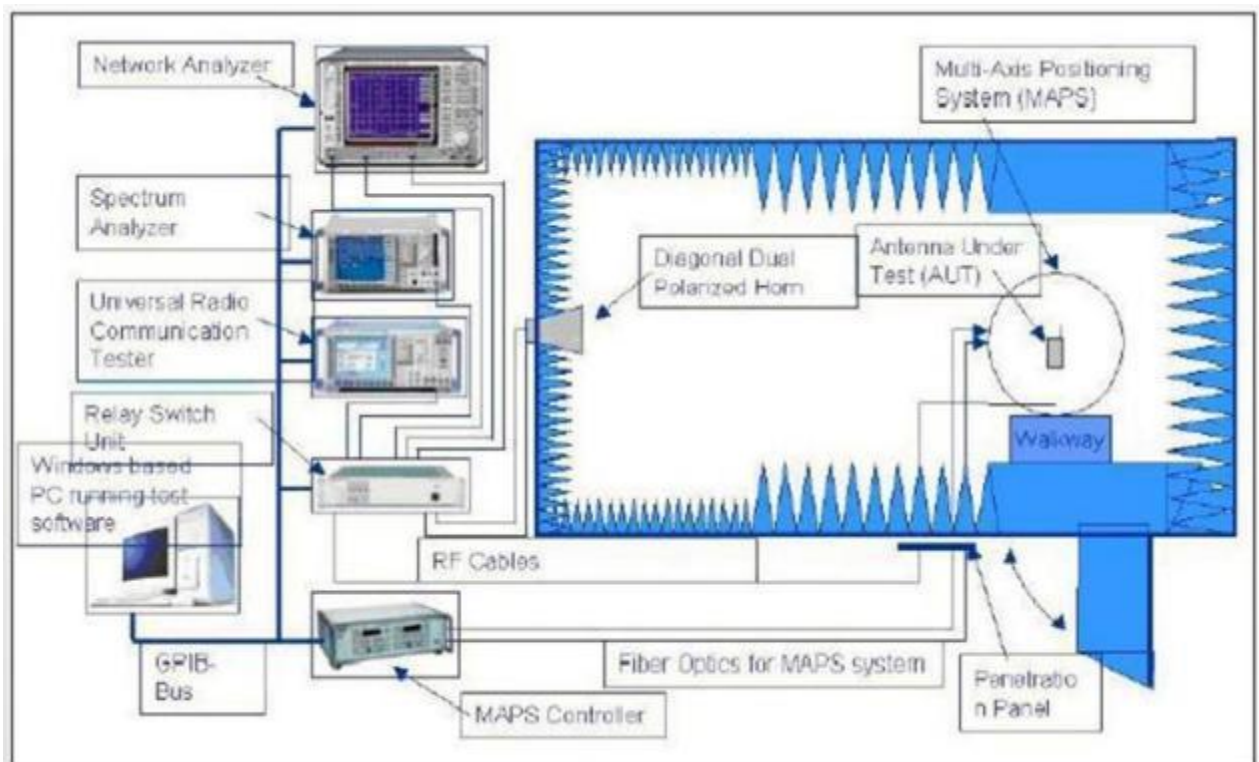
Test environment: OTA743 darkroom, W500/8960/8753ES /5071C,
the machine is placed with its back to the turntable 4 meters away from
the

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standard horn



2.3.1. Test setup

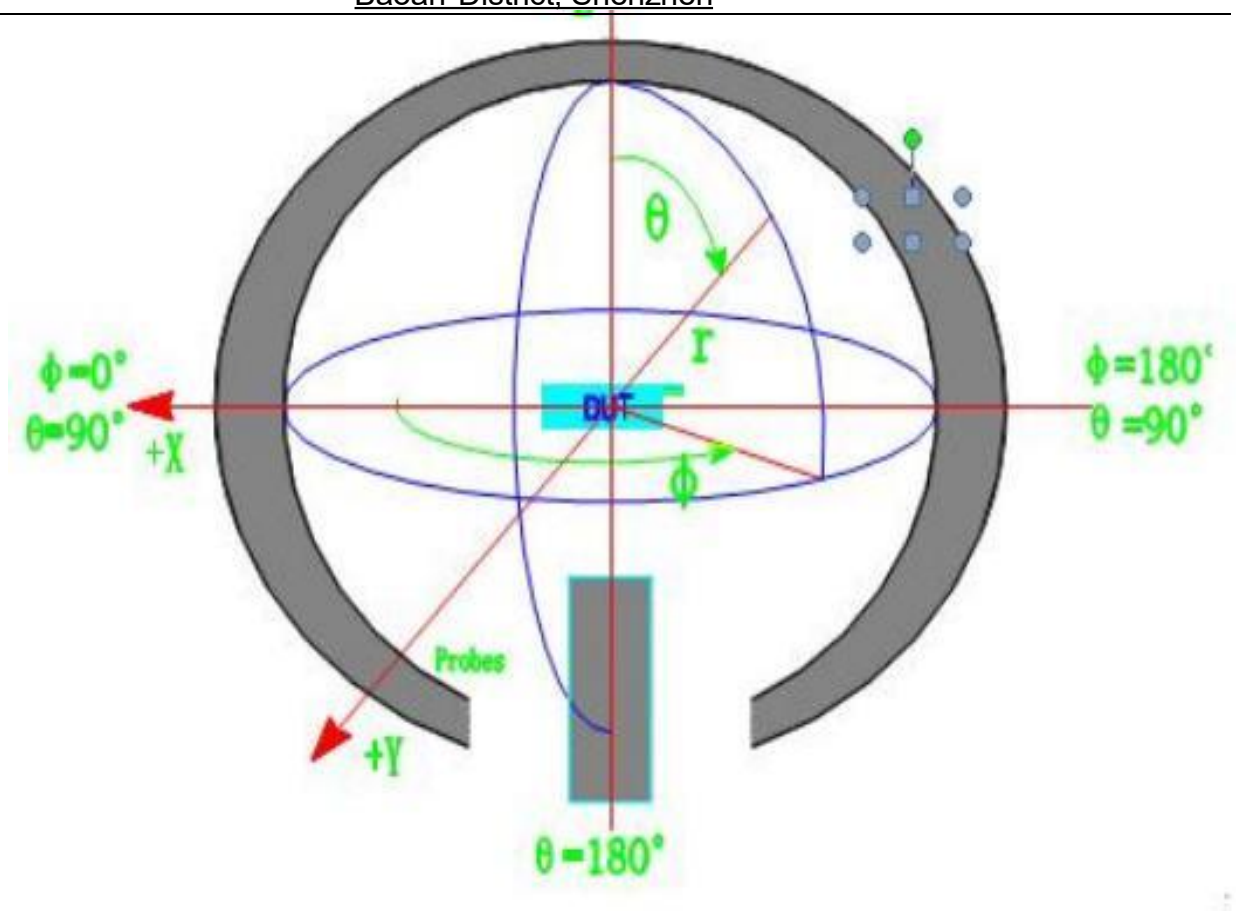
Connect the VSWR test device are: Agilent E5071C network analyzer
from 50 ohm coaxial Cable 120mm long Brass & test fixture Processing
test fixture: 50 ohm antenna leads to SMA-J connector from the test point on the
plate PCB with a rigid cable, and a Connect the choke tube, and then sequentially
connected with other devices.

Chart 9 Return loss

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4.1 Test site

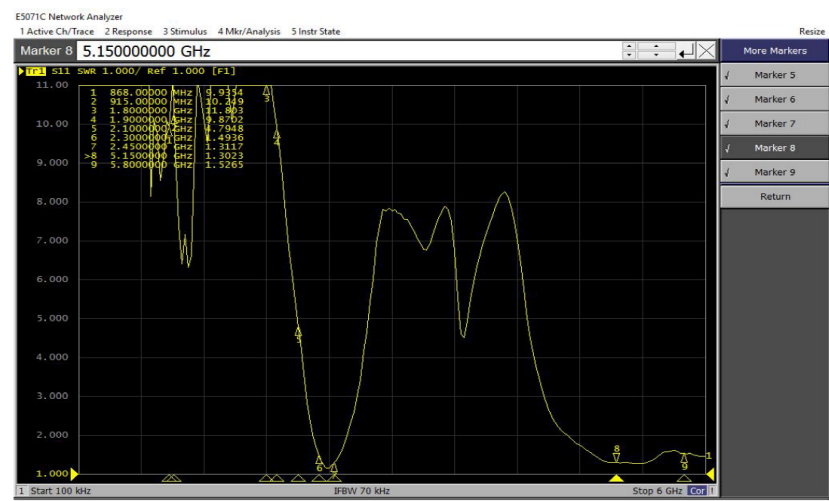
TCT microwave anechoic chamber: the test frequency range is 800MHz-6GHz, the quiet zone range is 50cm circle, and the reflectivity is less than -90 dB.

Chart 10 WIFI VSWR

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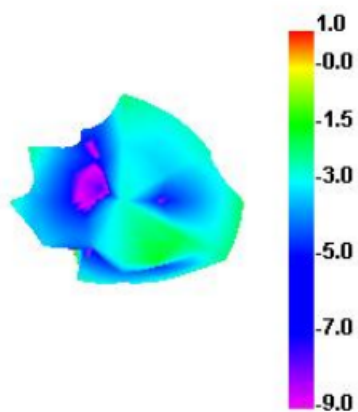
band	2.4~2.5GHz		5.7~5.85GHz		
fre. (MHz)	2450	2500	5150	5850	
VSWR	1.3	1.4	1.3	1.5	

Elevation map coverage

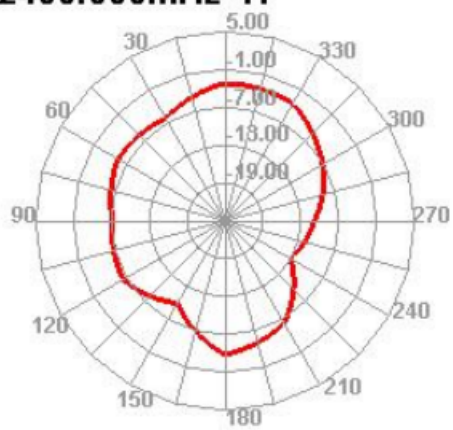
Freq (MHz)	Effi (%)	Gain (dBi)
2400	52.4	0.97
2410	54.42	1.28
2420	53.62	1.79
2430	54.1	2.36
2440	55.44	2.53
2450	54.3	2.68
2460	55.38	2.31
2470	54.96	2.32
2480	54.47	2.46
2490	57.1	2.51
2500	57.46	2.48

Freq (MHz)	Effi (%)	Gain (dBi)
5150	53.99	-0.55
5200	54.76	-0.58
5250	50.15	-0.81
5750	51.35	2.68
5800	51.85	2.69
5850	52.37	2.31

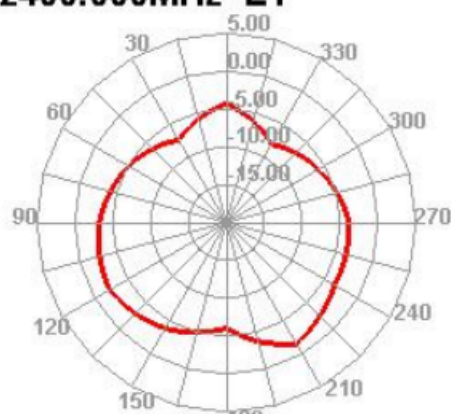
2400.000MHz



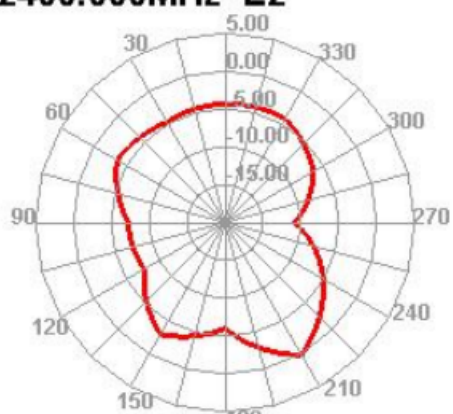
2400.000MHz H



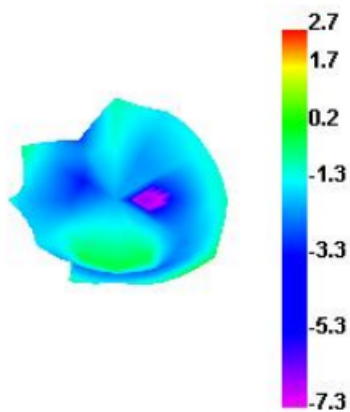
2400.000MHz E1



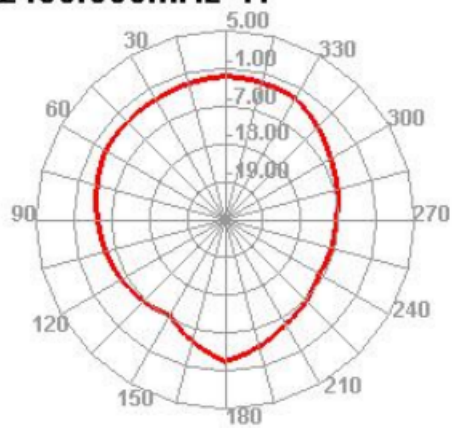
2400.000MHz E2



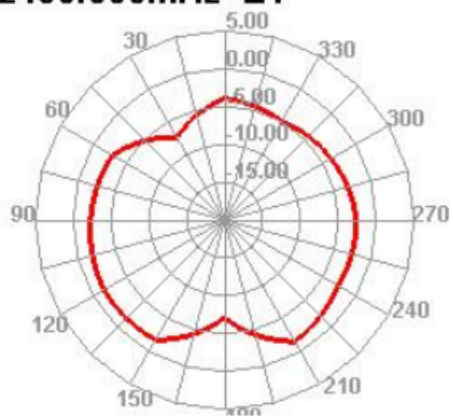
2450.000MHz



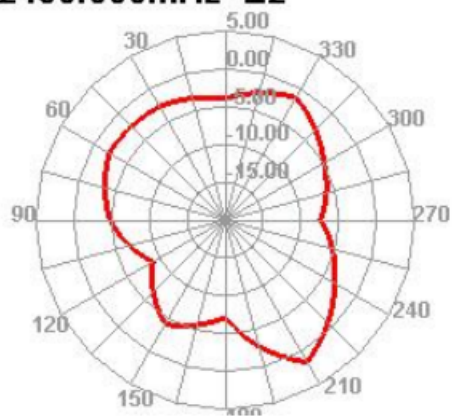
2450.000MHz H



2450.000MHz E1

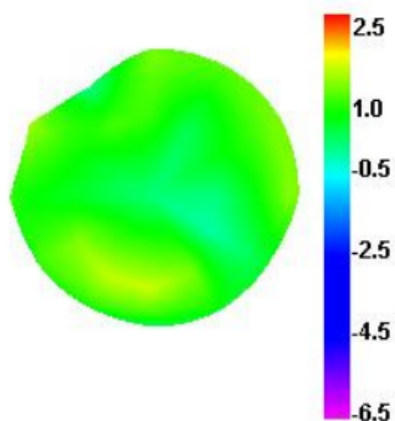


2450.000MHz E2

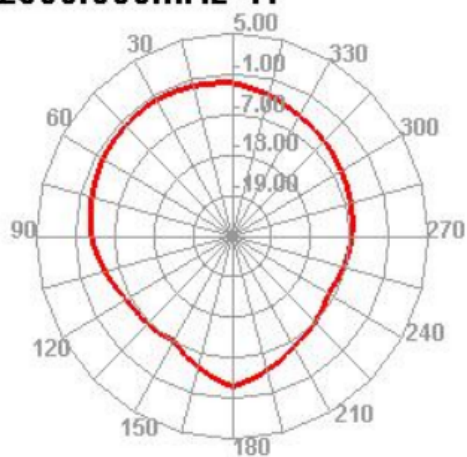


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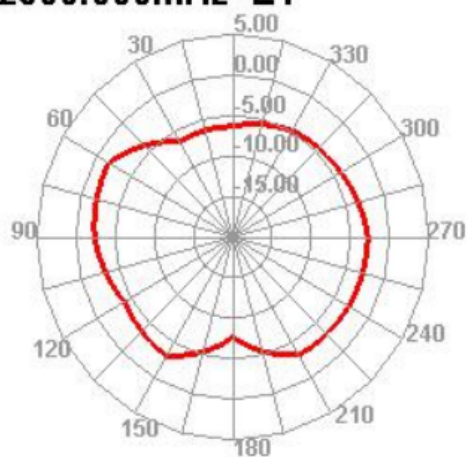
2500.000MHz



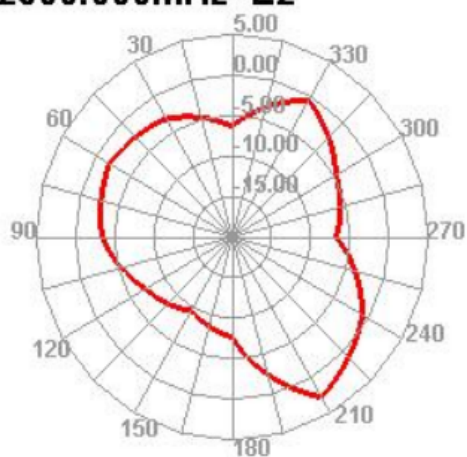
2500.000MHz H



2500.000MHz E1

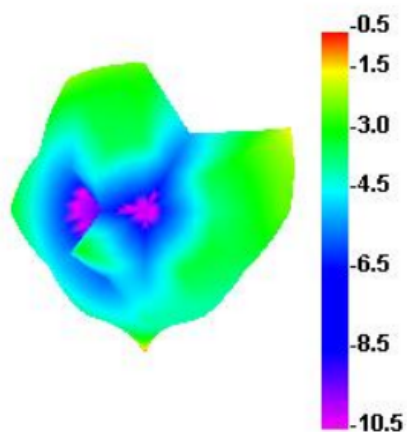


2500.000MHz E2

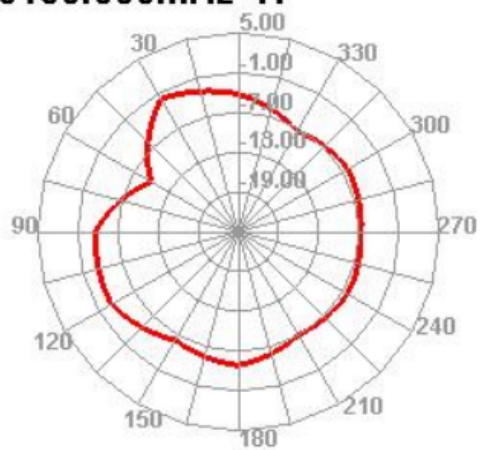


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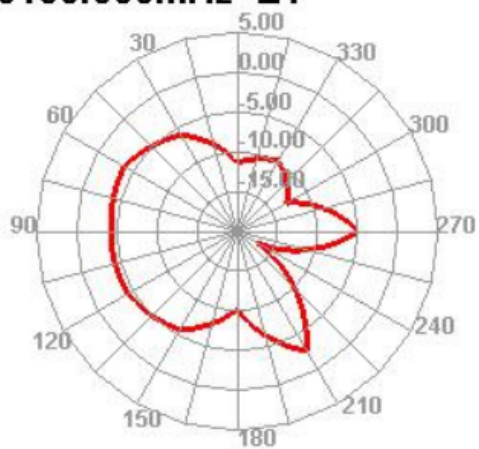
5150.000MHz



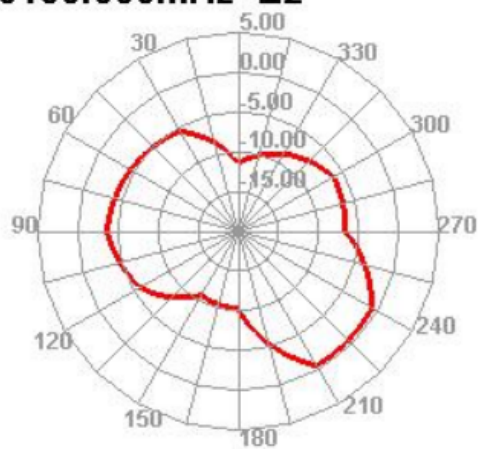
5150.000MHz H



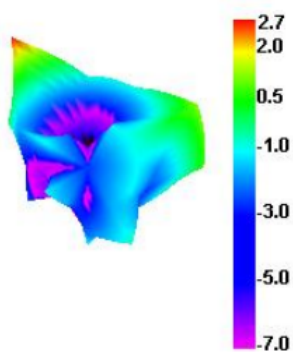
5150.000MHz E1



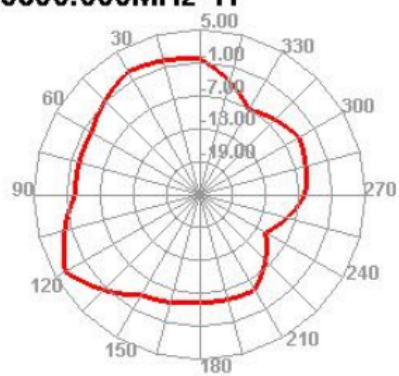
5150.000MHz E2



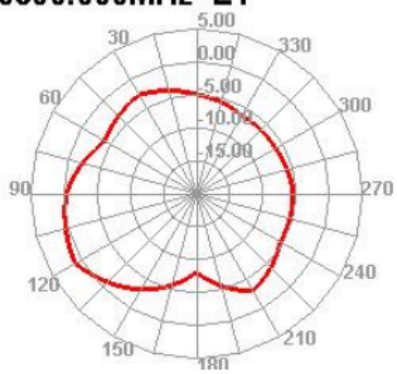
5800.000MHz



5800.000MHz H



5800.000MHz E1



5800.000MHz E2

