



Shenzhen Yinshengxin Technology Co., Ltd

Product Specification

Customer: Shenzhen WOWOTO Technology Co., Ltd.

Material Code:

Product Name : Smart Projector

Specification: BT:4410mm*645mm, wire length 90mm+ first terminal, Wire Diameter 113mm, Grey

Date : 2019-03-20

Customer Approve/Date

Address: 1 and 2 Floor, No.1, Shajing Road, Shajing Street, Bao'An District, Shenzhen

Tel: 0755-23713891

Fax: 0755-61193120

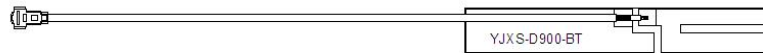
Catalogue

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1. Specification Summary

This specification describes WOWOTO D900 Smart Projector's WIFI antenna statu,its frequency 2.4G/5GHz, factory is Shenzhen Yishengxin Teconology Co.,Ltd

2.Apperance

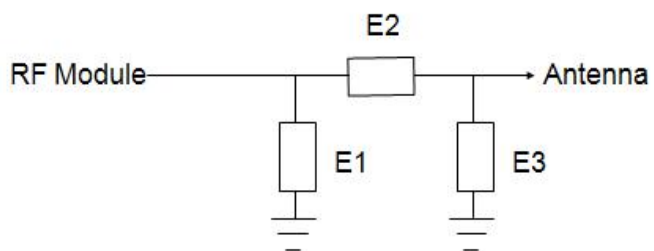


3. Electrical Property

3.1 Antenna Frequency

Transmit/Receive Frequency(GHz)	WIFI		BT
	2.4G~2.5G	5.15G~5.85G	2.4G-2.5G

3.2 Matching Schematic (all without change)



Element	Value
E1(0402)	Original Matching
E2(0402)	Original Matching
E3(0402)	Original Matching

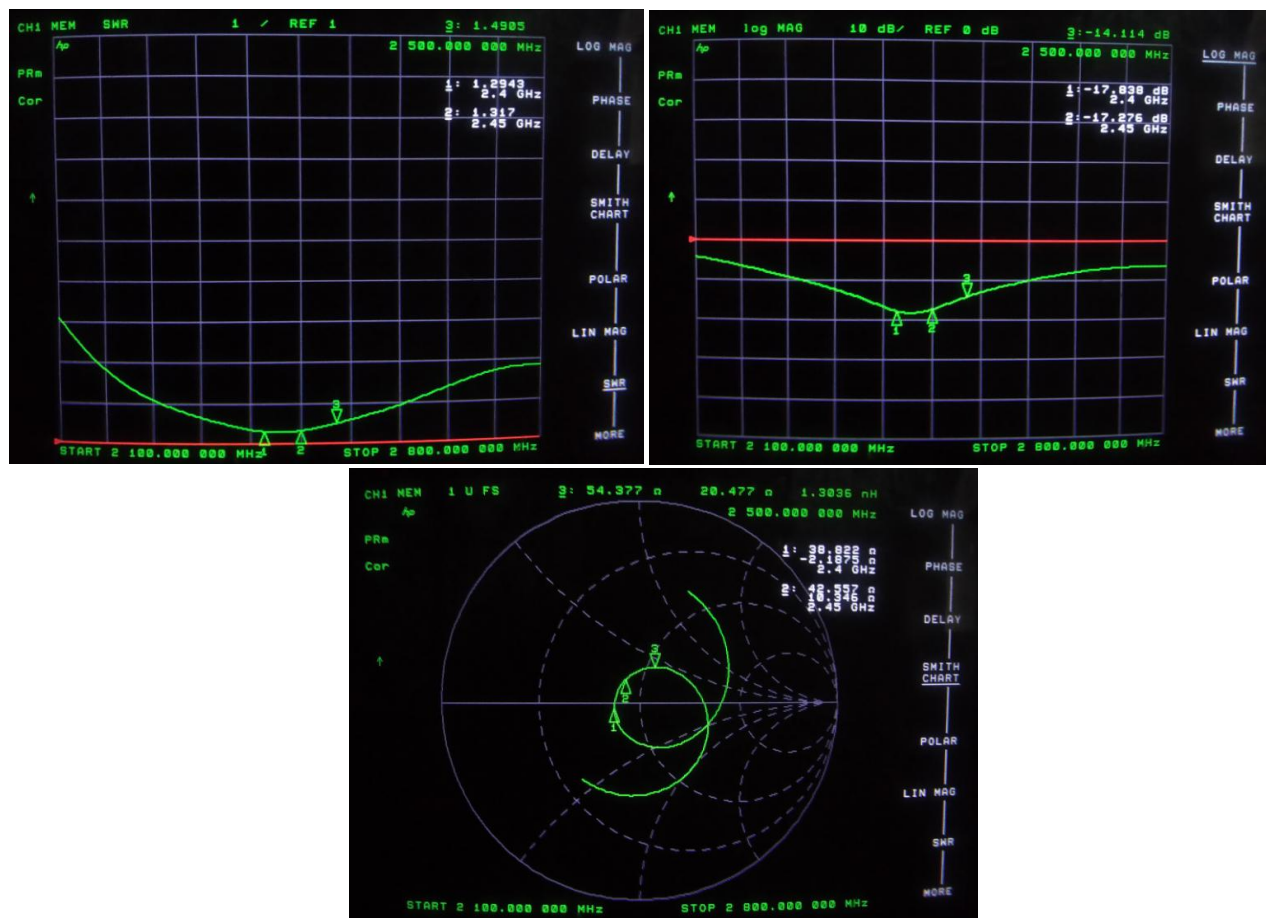
3.3 Impedance requirement 50 ohm

3.4 Electronic Property Data:

WIFI 2.4G Electronic Property Data:

Electrical Properties	
Frequency	2.4G-2.5G
Impedance	50 ohm Nominal
V.S.W.R	1:1.29 Max
Return Loss	-17.83dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

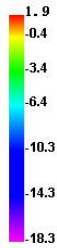
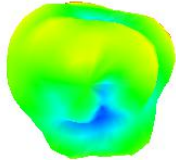
VSWR&Return Loss&Smith Chart



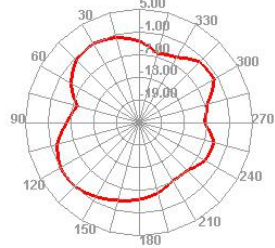
Effeciency&Gain&Direction Chart:

Passive Test For 2.4G_wifi						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
2400	58.23	-4.72	1.92	-0.23	1.92	-15.26
2440	60.42	-3.58	2.13	-0.02	2.13	-14.67
2500	61.36	-3.17	2.21	0.06	2.21	-14.13

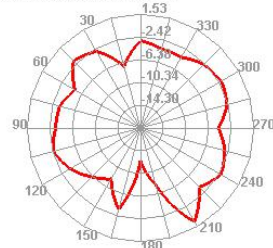
2400.000MHz



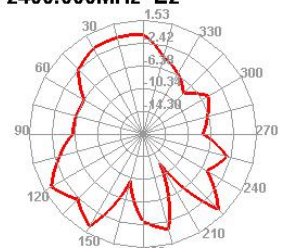
2400.000MHz H



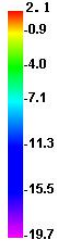
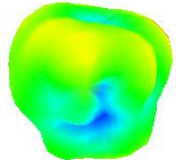
2400.000MHz E1



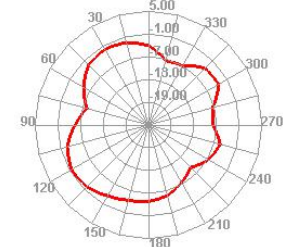
2400.000MHz E2



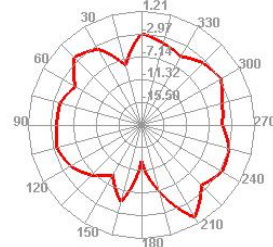
2440.000MHz



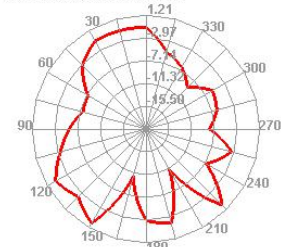
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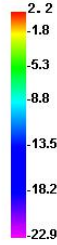
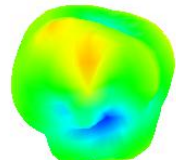
2440.000MHz E1



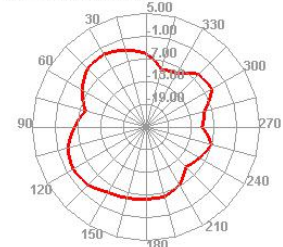
2440.000MHz E2



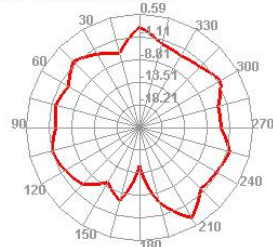
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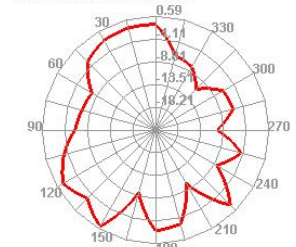
2500.000MHz H



2500.000MHz E1



2500.000MHz E2

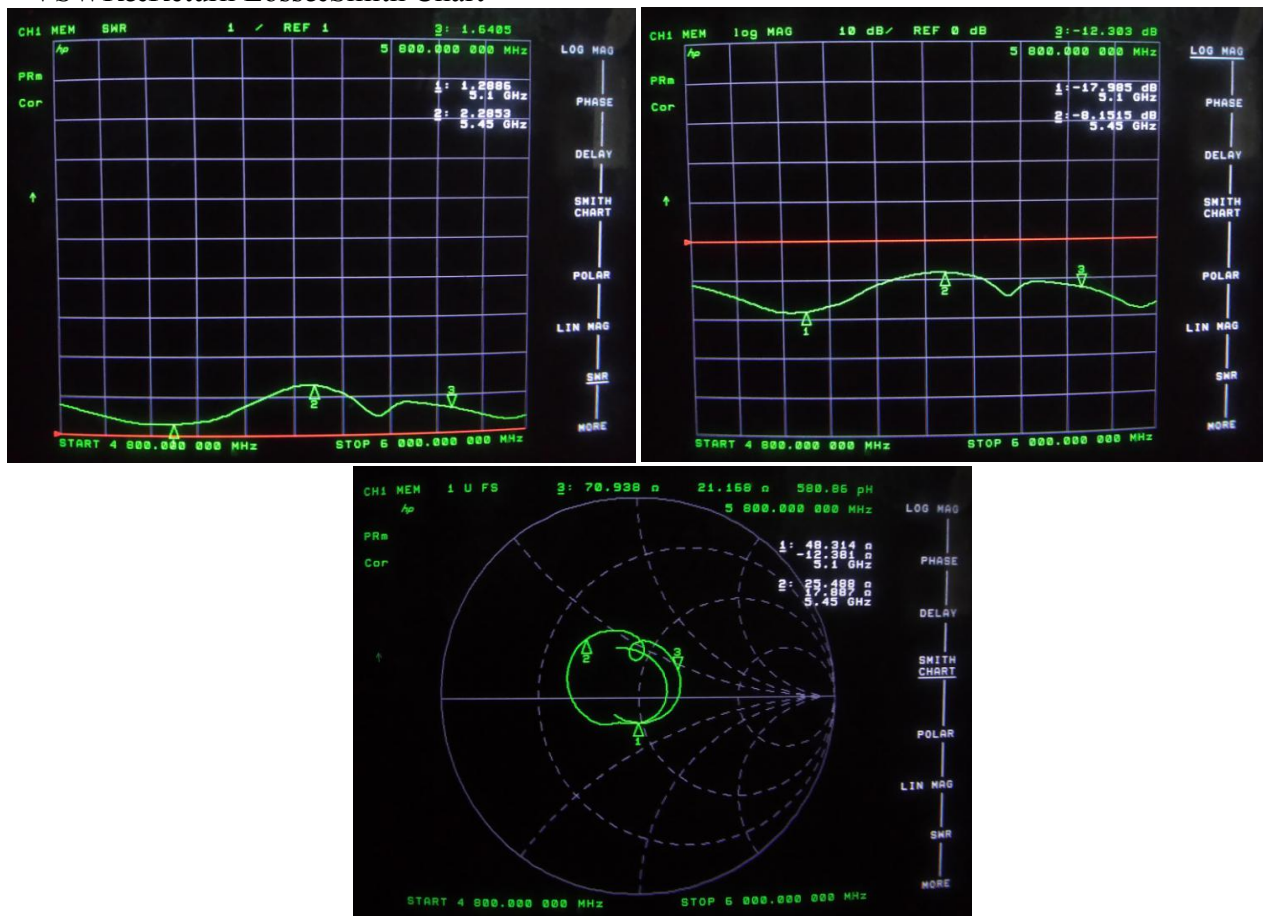


WIFI 5G Electronic Test Dat

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Electrical Properties	
Frequency	5.15G-5.85G
Impedance	50 ohm Nominal
V.S.W.R	1:1.28 Max
Return Loss	-17.98dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

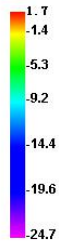
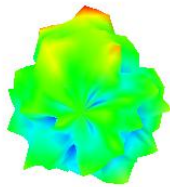
VSWR&Return Loss&Smith Chart



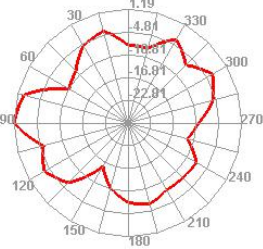
Effeciency, Gain, Direction:

Passive Test For 2.4G_wifi						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
5100	56.28	-0.45	1.71	-0.44	1.71	-24.38
5500	57.14	-0.37	1.94	-0.21	1.94	-23.56
5900	57.72	-1.25	2.03	-0.12	2.03	-25.88

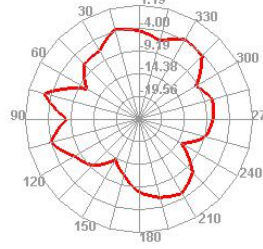
5100.000MHz



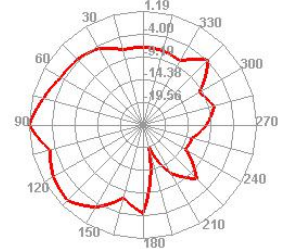
5100.000MHz H



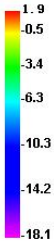
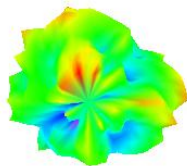
5100.000MHz E1



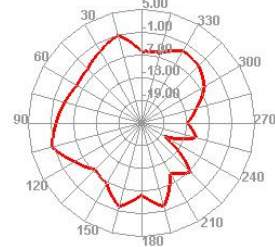
5100.000MHz E2



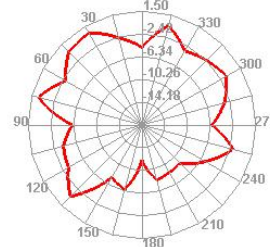
5500.000MHz



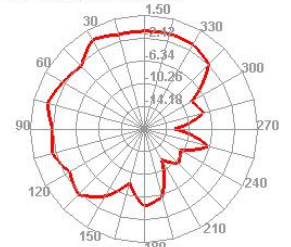
5500.000MHz H



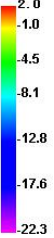
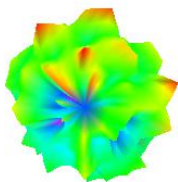
5500.000MHz E1



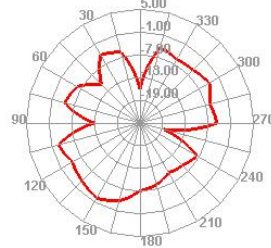
5500.000MHz E2



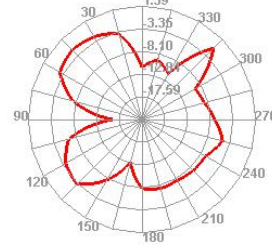
5900.000MHz



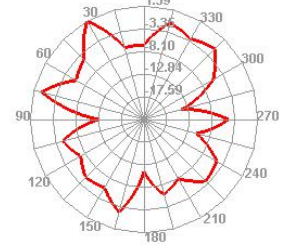
5900.000MHz H



5900.000MHz E1



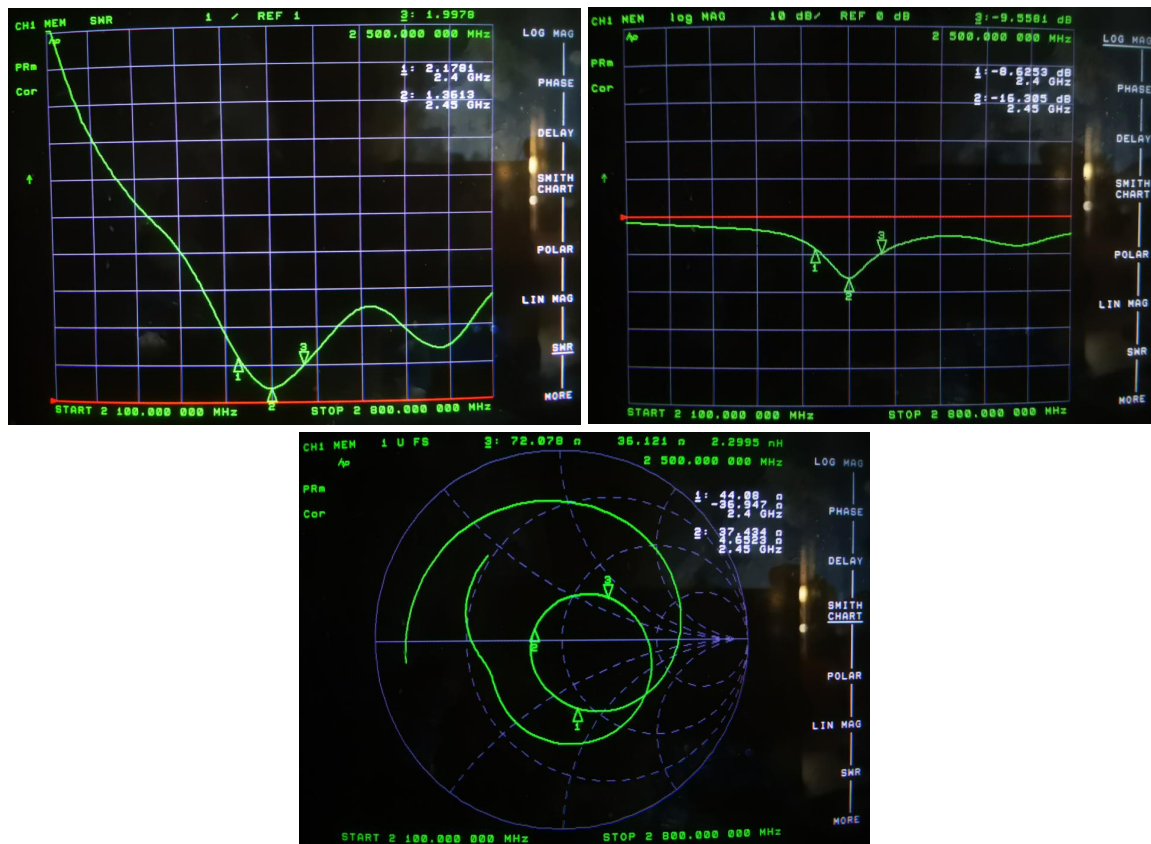
5900.000MHz E2



BT Antenna Electronical Property Test Data:

Electrical Properties	
Frequency	2.4G-2.5G
Impedance	50 ohm Nominal
V.S.W.R	1:1.36 Max
Return Loss	-16.30dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

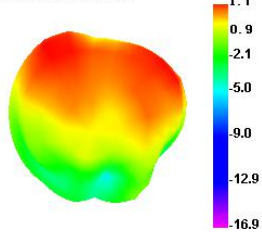
VSWR&Return Loss&Smith Chart



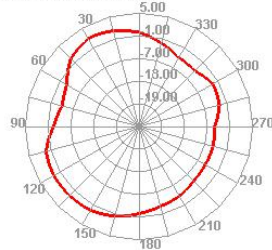
Effeciency, Gain, Direction

Passive Test For wifi 2.4G						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
2400	55.21	-2.25	1.67	-0.48	1.67	-15.24
2440	56.63	-2.14	1.88	-0.27	1.88	-14.23
2500	56.82	-3.31	1.76	-0.39	1.76	-14.11

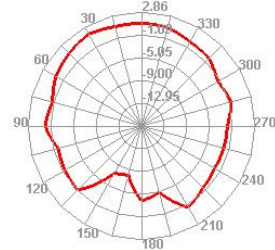
2400.000MHz



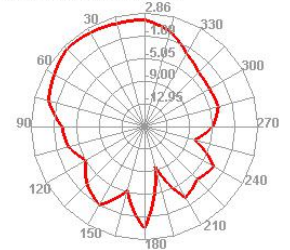
2400.000MHz H



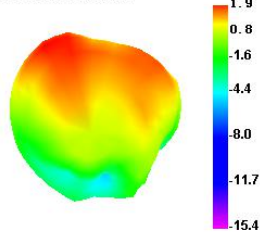
2400.000MHz E1



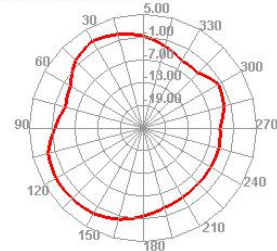
2400.000MHz E2



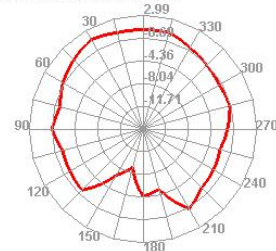
2440.000MHz



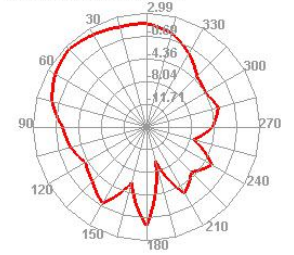
2440.000MHz H



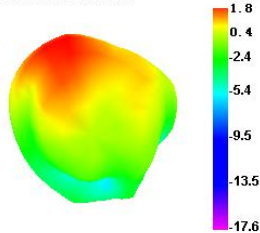
2440.000MHz E1



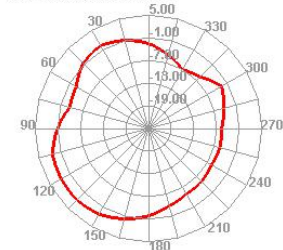
2440.000MHz E2



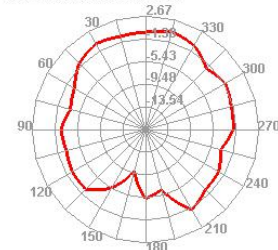
2500.000MHz



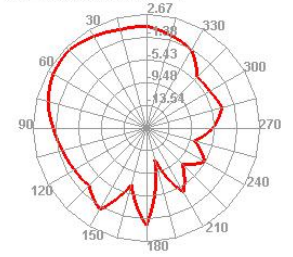
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



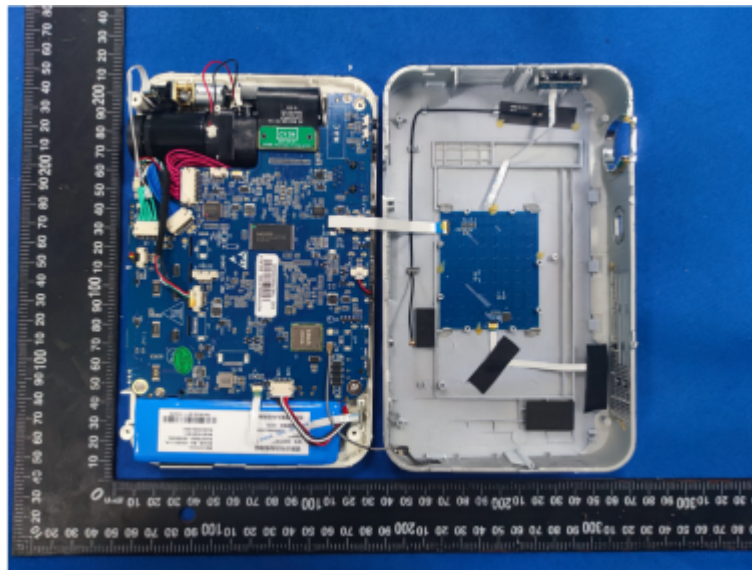
4. Throughput test data

注：测试条件为吸波暗室、1.5米、单向8条流、打流20秒，数据取2次或3次测量的最大值（吸波暗室多次测量值非常接近），单位Mbps。

详细测试数据如下：

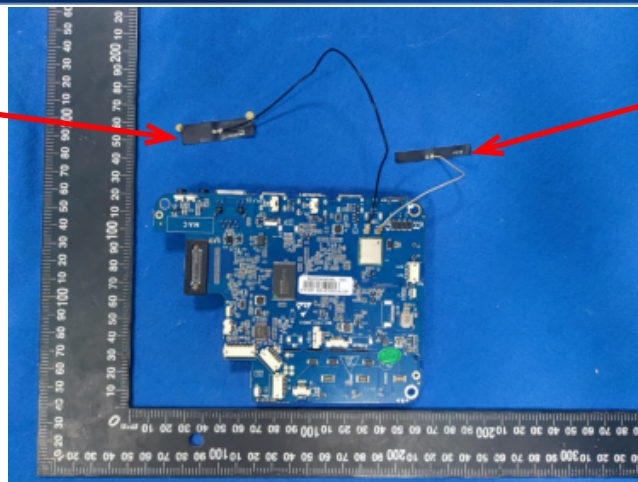
	0	45	90	135	180	225	270	315						AVERAGE	不圆度
2.4G															
RX	84.8	100.1	102.6	85	75.6	104.6	104.7	83.1						92.6	0.125
TX	67.5	82.5	101.1	72.8	71.6	102.9	103.2	90.1						86.5	0.173
5G															
RX	140.8	138.7	143.8	111.3	120.5	136.3	125.9	135.4						131.6	0.086
TX	135.9	136.6	137.5	137.6	137.3	130.5	136.2	137.4						136.1	0.017

5. Antenna Placement

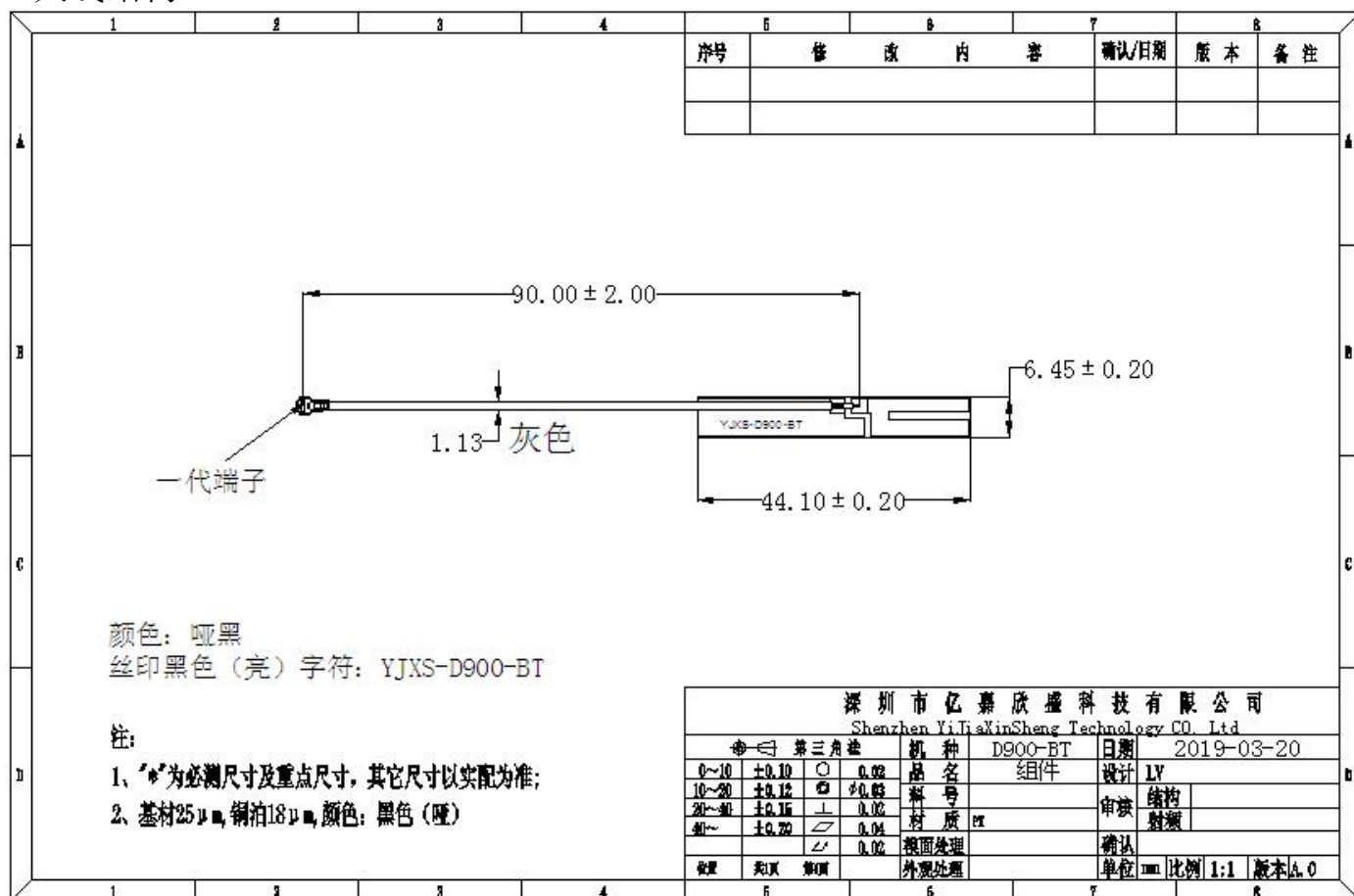


WIFI Antenna

BT Antenna



6. 天线结构





深圳市亿嘉欣盛科技有限公司

Shenzhen YiJiaXinSheng Technology Co., Ltd.

Product Specification

Customer: Shenzhen WOWOTO Technology Co., Ltd.

Customer :

Product Name: Smart Projector

Specification: WIFI: 41.40mm*11.15mm, Wire Length 140mm+Terminal, Wire Diameter 1.13mm, Black

D a t e : 2019-03-20

地址:深圳市宝安区沙井街道沙井路 1 号 1 栋 1-2 楼

电话: 0755-23713891 传真: 0755-61193120

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1. Specification Summary

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2. Apperance

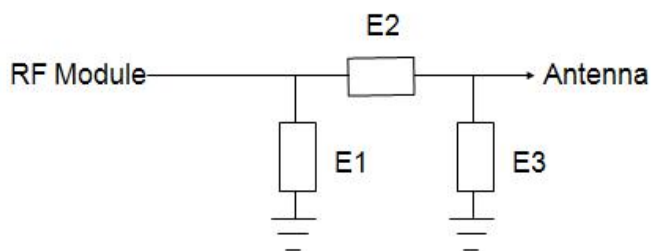


3. Electrical Property

3.1 Antenna Frequency

Transmit/Receive Frequency(GHz)	WIFI		BT
	2.4G~2.5G	5.15G~5.85G	2.4G-2.5G

3.2 Matching Schematic(not change)



Element	Value
E1(0402)	原匹配
E2(0402)	原匹配
E3(0402)	原匹配

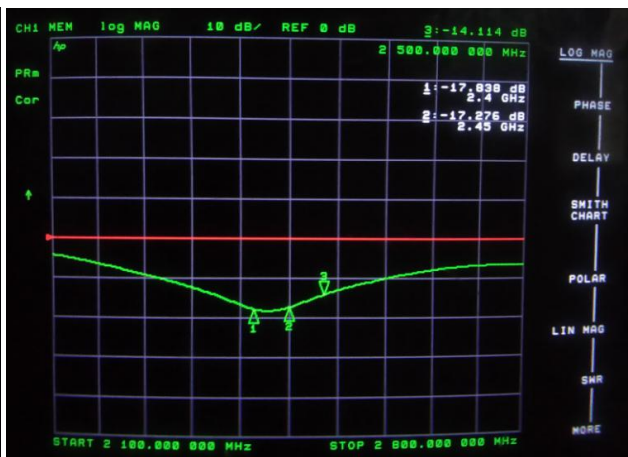
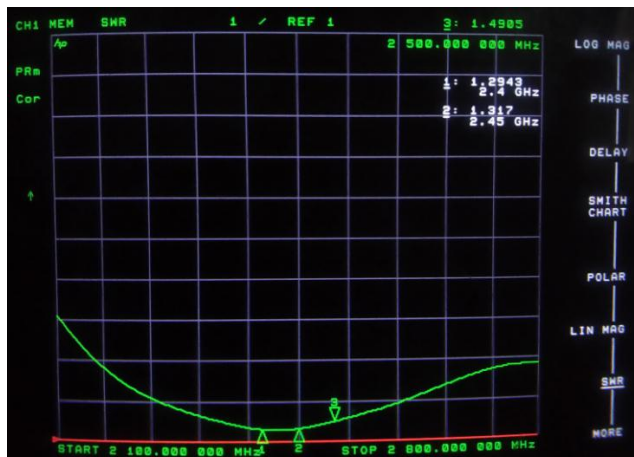
3.3 Impedance requirement 50 ohm

3.4 Electrical Property Data:

WIFI 2.4G Electrical Property Data:

Electrical Properties	
Frequency	2.4G-2.5G
Impedance	50 ohm Nominal
V.S.W.R	1:1.29 Max
Return Loss	-17.83dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

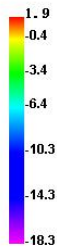
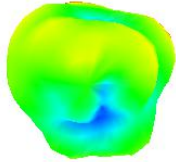
VSWR&Return Loss&Smith Chart



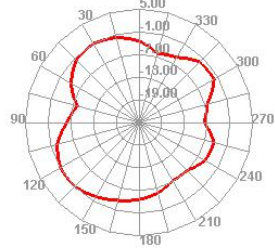
效率&增益&方向图:

Passive Test For 2.4G_wifi						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
2400	58.23	-4.72	1.92	-0.23	1.92	-15.26
2440	60.42	-3.58	2.13	-0.02	2.13	-14.67
2500	61.36	-3.17	2.21	0.06	2.21	-14.13

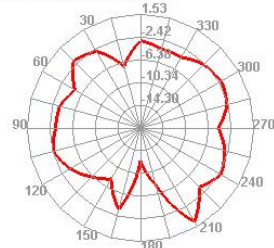
2400.000MHz



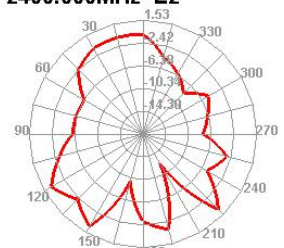
2400.000MHz H



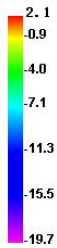
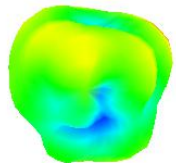
2400.000MHz E1



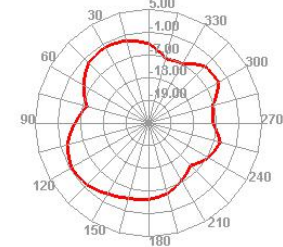
2400.000MHz E2



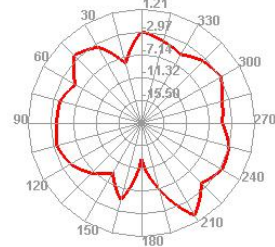
2440.000MHz



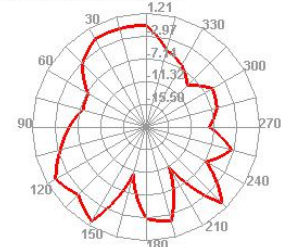
2440.000MHz H



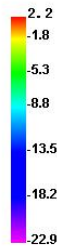
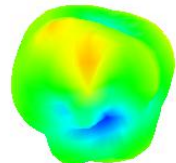
2440.000MHz E1



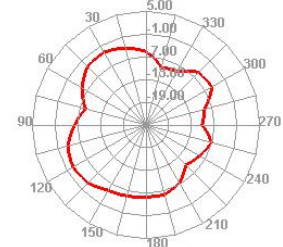
2440.000MHz E2



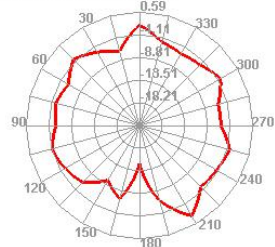
2500.000MHz



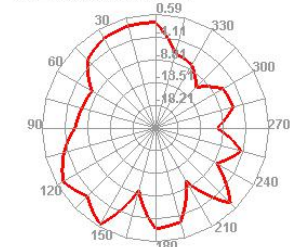
2500.000MHz H



2500.000MHz E1



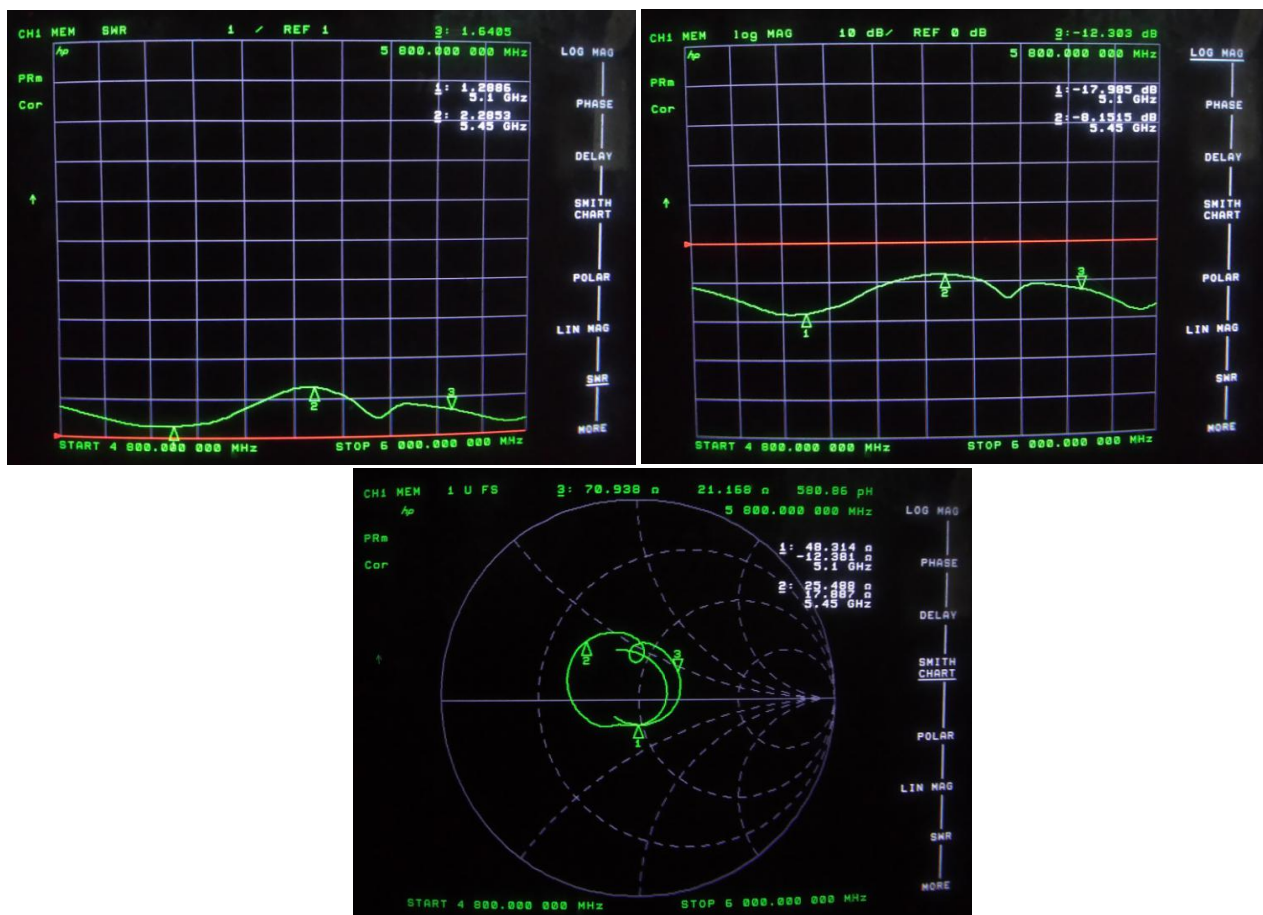
2500.000MHz E2



WIFI 5G 电性能测试数据:

Electrical Properties	
Frequency	5.15G-5.85G
Impedance	50 ohm Nominal
V.S.W.R	1:1.28 Max
Return Loss	-17.98dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

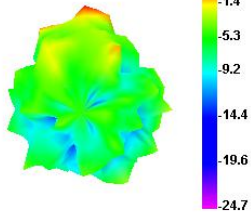
VSWR&Return Loss&Smith Chart



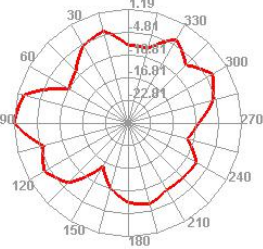
Effeciency, Gain, Direction:

Passive Test For 2.4G_wifi						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
5100	56.28	-0.45	1.71	-0.44	1.71	-24.38
5500	57.14	-0.37	1.94	-0.21	1.94	-23.56
5900	57.72	-1.25	2.03	-0.12	2.03	-25.88

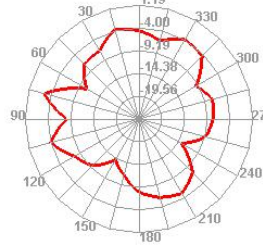
5100.000MHz



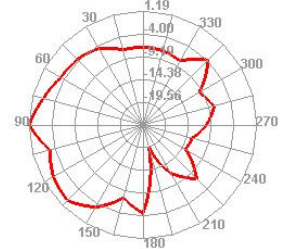
5100.000MHz H



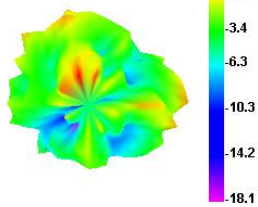
5100.000MHz E1



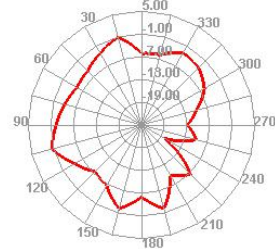
5100.000MHz E2



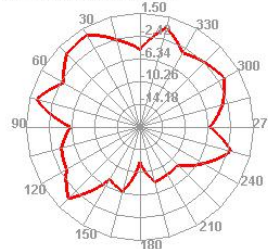
5500.000MHz



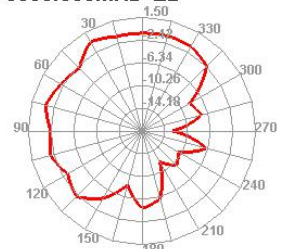
5500.000MHz H



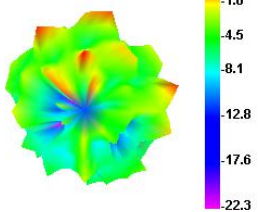
5500.000MHz E1



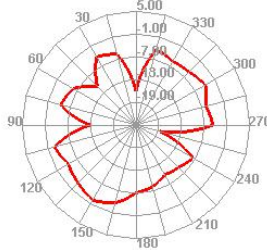
5500.000MHz E2



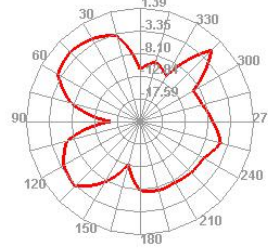
5900.000MHz



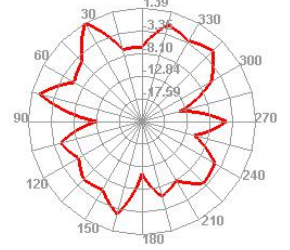
5900.000MHz H



5900.000MHz E1



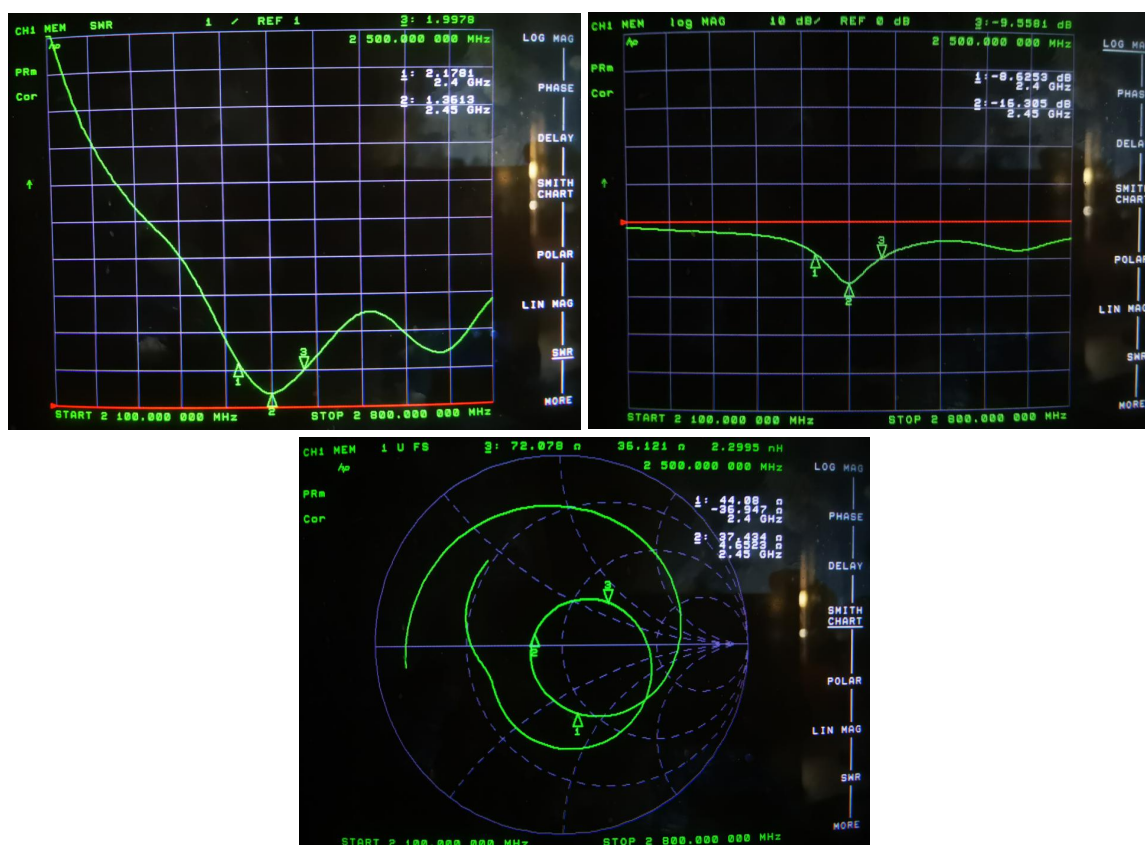
5900.000MHz E2



BT Efficiency&Gain&Direction Chart:

Electrical Properties	
Frequency	2.4G-2.5G
Impedance	50 ohm Nominal
V.S.W.R	1:1.36 Max
Return Loss	-16.30dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

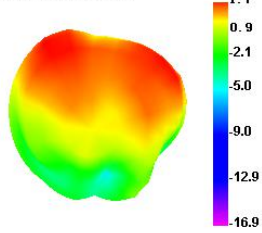
VSWR&Return Loss&Smith Chart



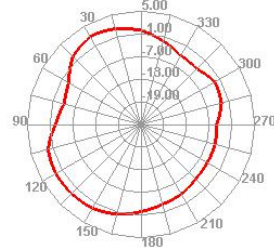
Effeciency, Gain, Direction:

Passive Test For wifi 2.4G						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
2400	55.21	-2.25	1.67	-0.48	1.67	-15.24
2440	56.63	-2.14	1.88	-0.27	1.88	-14.23
2500	56.82	-3.31	1.76	-0.39	1.76	-14.11

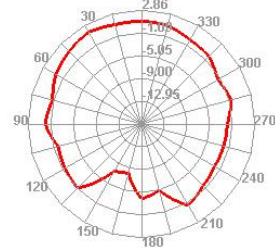
2400.000MHz



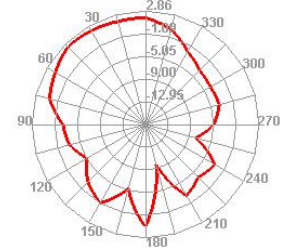
2400.000MHz H



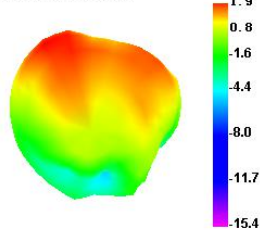
2400.000MHz E1



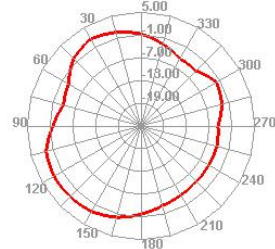
2400.000MHz E2



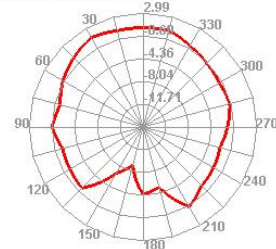
2440.000MHz



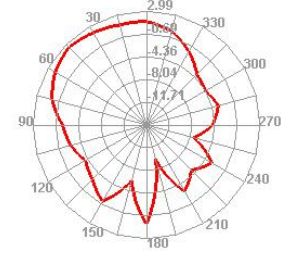
2440.000MHz H



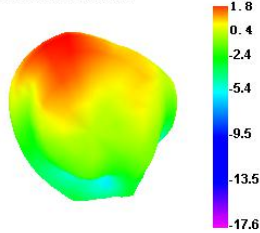
2440.000MHz E1



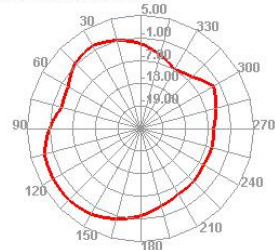
2440.000MHz E2



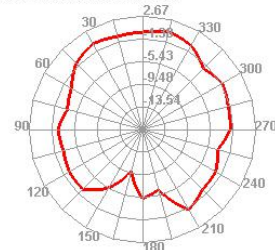
2500.000MHz



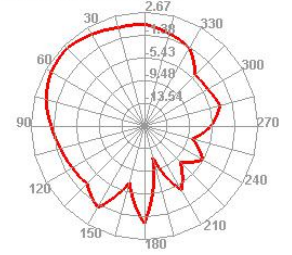
2500.000MHz H



2500.000MHz E1



2500.000MHz E2

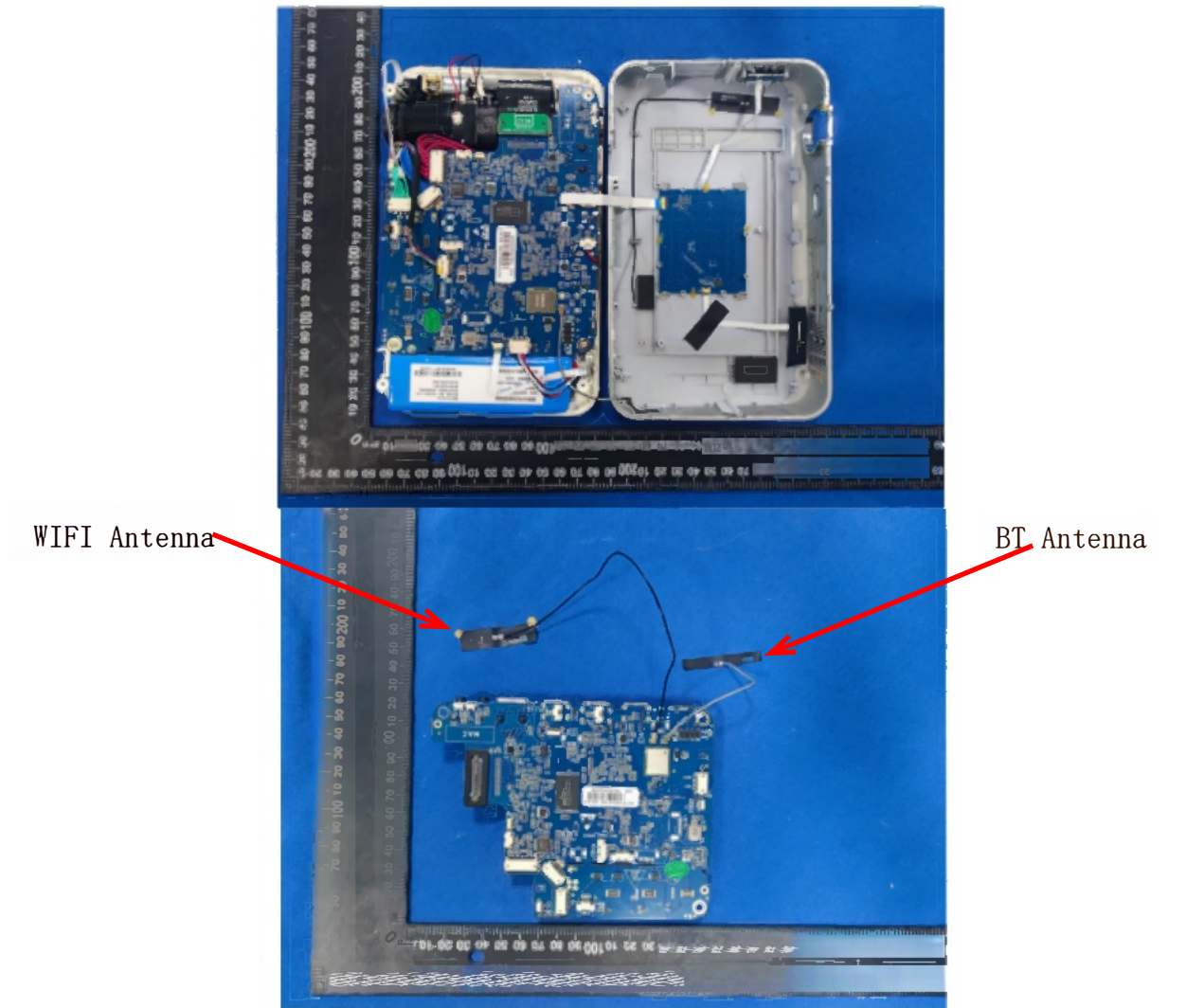


4. Throughput test data

注：测试条件为吸波暗室、1.5米、单向8条流、打流20秒，数据取2次或3次测量的最大值（吸波暗室多次测量值非常接近），单位Mbps。

	0	45	90	135	180	225	270	315						
2.4G														
RX	84.8	100.1	102.6	85	75.6	104.6	104.7	83.1					92.6	0.125
TX	67.5	82.5	101.1	72.8	71.6	102.9	103.2	90.1					86.5	0.173
5G														
RX	140.8	138.7	143.8	111.3	120.5	136.3	125.9	135.4					131.6	0.086
TX	135.9	136.6	137.5	137.6	137.3	130.5	136.2	137.4					136.1	0.017

5. Antenna Placement



6. Antenna Structure

