

SPECIFICATION

Daxian Communication Technology Limited



Shenzhen Daxian Technology Co., Ltd.

SUNWINON T8502

Bluetooth+WIFI antenna

Product specification

Guest households	SUNWINON	frequency band	2400MHz~2500MHz
Project name	T8502	version	V4.0
Material No.	1T-8502X-042	color	Black
R F design	Qun.Jin	structure design	Manyi.Zeng
Quality Manager	Ziyin.Hu	R & D director	Lie Zhang
Date	2022-10-09		

client confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG

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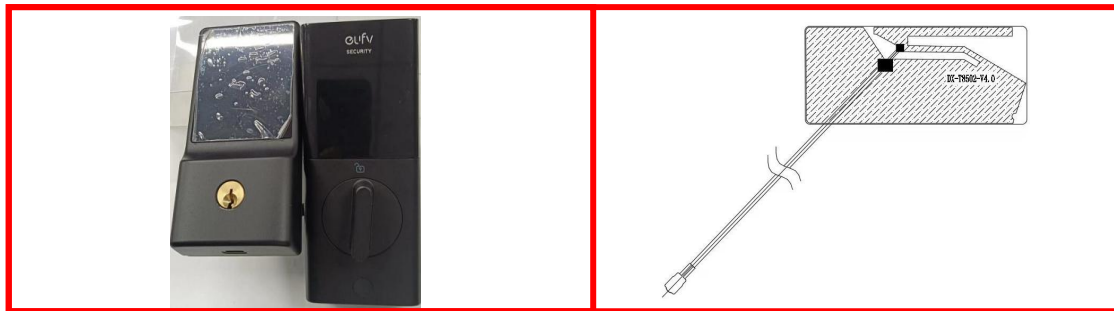
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— Project description

Customer name:	SUNWINON
Whole machine type:	WIFI antenna
Antenna band:	2400 ~ 2500MHz
Antenna form:	FPC+Cable
Feed form:	welding
Number of feed feet:	2 left and right ears
Hardware version:	motherboard:

一、WIFI antenna

This report provides a variety of measurements of the electrical performance of the T8502 antenna. Figure 1 shows the antenna designed by the display.



Whole machine appearance chart

antenna appearing diagram

Figure 1

1.1 Electrical specification standard

The frequency range of the antenna is 2400 ~ 2500 MHz. The following table indicates the electrical performance specifications of the antenna. The antenna is designed and manufactured by a large display.

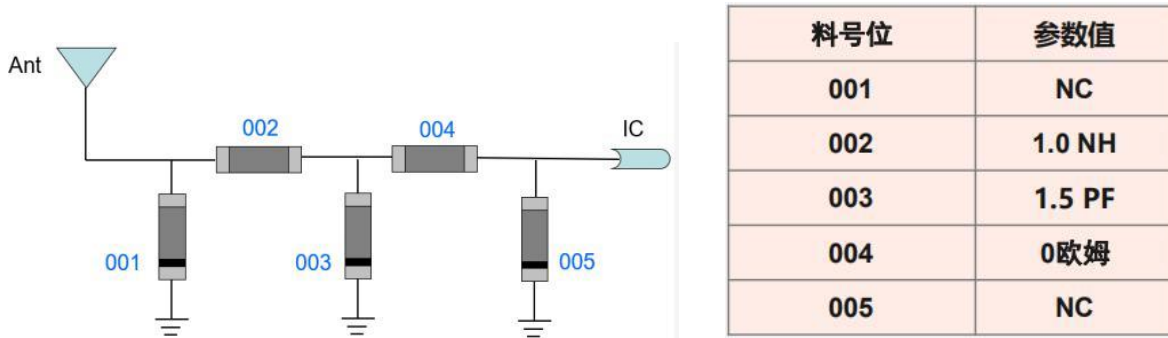
Frequency Range	Frequency (MHz)	VSWR
BT	2400 ~ 2500	≤ 3
WIFI	2400 ~ 2500	≤ 2

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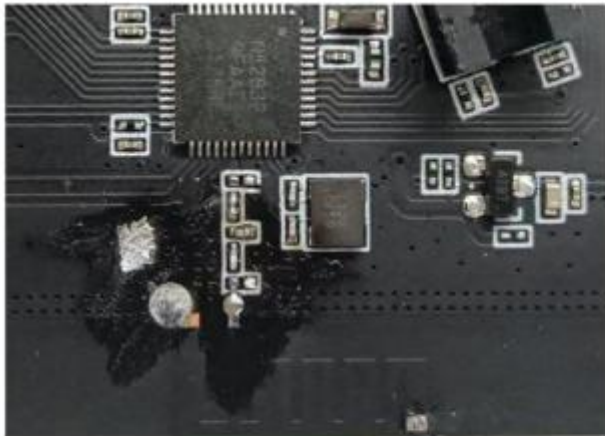
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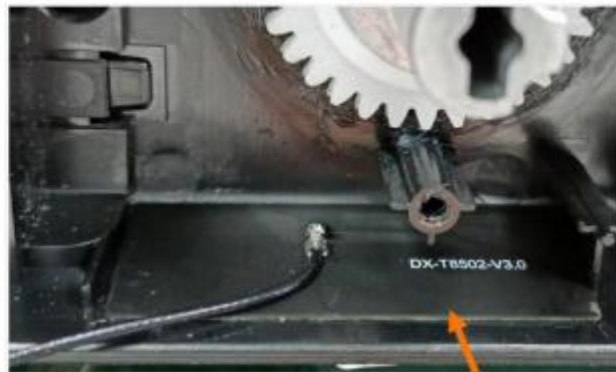
1.1.1 Antenna matching circuit-BT



1.1.2 Picture of antenna position



BT



天线粘贴置以此卡扣位置
为参考位，如图

WIFI

1.2 Antenna composition

The antenna is mainly composed of FPC+Cable.

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2、 The Equipment of Active Test

Satimo 3D Chamber $6 \times 4 \times 4$ (m)

Agilent 8960 E5515c

Network analyzer-R&S ZVL



Figure 2

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3 test

3.1 The Test of standing Wave (VSWR)

3.1.1 The Test of standing Wave (VSWR): In turn, the connection of the VSWR testing device is as follows: RES ZVL Network Analyzer / testing Line / testing tool

Actual measurement (with diagram)

3.2 Measurement of Efficiency, Power (TRP) and Sensitivity (TIS)

3.2.1 Test site:

Large-scale microwave darkroom. The test frequency range is 400MHz / 6GHz, the static range is 50cm circumferential and the reflectivity is less than-50 dB..

3.2.2 Test instrument:

Rs ZVL Network Analyzer, Agilent8960 E5515C, Standard Horn Antenna, French SATIMO-SG24SYSTEM system, Printer, etc.

3.2.3 test data : In microwave anechoic chambers, the power and sensitivity values measured are shown in the following table:

Passive Test: BT

Frequency (MHz)	Efficiency (%)	AVG Gain (dB)	Gain (dBi)
2400	43.79%	-3.59	1.72
2410	44.11%	-3.55	1.66
2420	44.87%	-3.48	1.61
2430	45.95%	-3.38	1.57
2440	44.71%	-3.50	1.52
2450	47.31%	-3.25	1.43
2460	46.79%	-3.30	1.46
2470	46.54%	-3.32	1.62
2480	45.90%	-3.38	1.61
2490	45.13%	-3.46	1.68
2500	44.27%	-3.54	1.73

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Passive Test: WIFI 2.4G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	57.4	-2.41	3.21
2410	59.26	-2.27	3.3
2420	61.27	-2.13	3.35
2430	62.11	-2.07	3.41
2440	61.9	-2.08	3.21
2450	64.12	-1.93	3.36
2460	65.82	-1.82	3.22
2470	66.51	-1.77	3.34
2480	67.6	-1.7	3.19
2490	69.29	-1.59	3.55
2500	66.44	-1.78	3.58

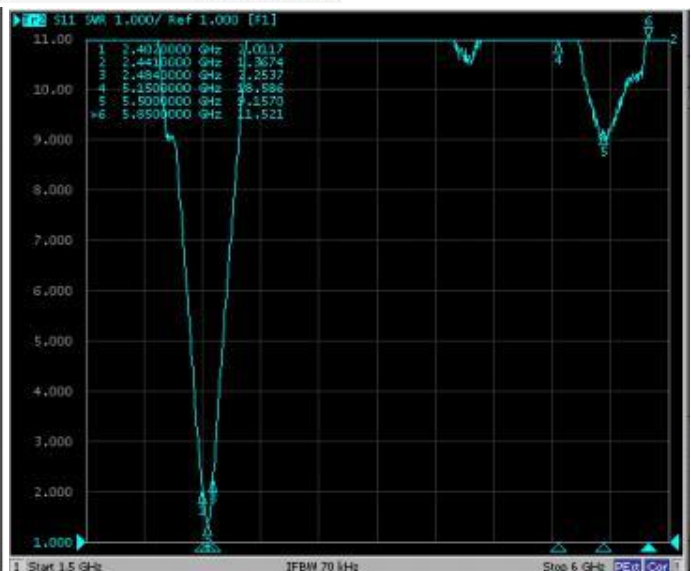
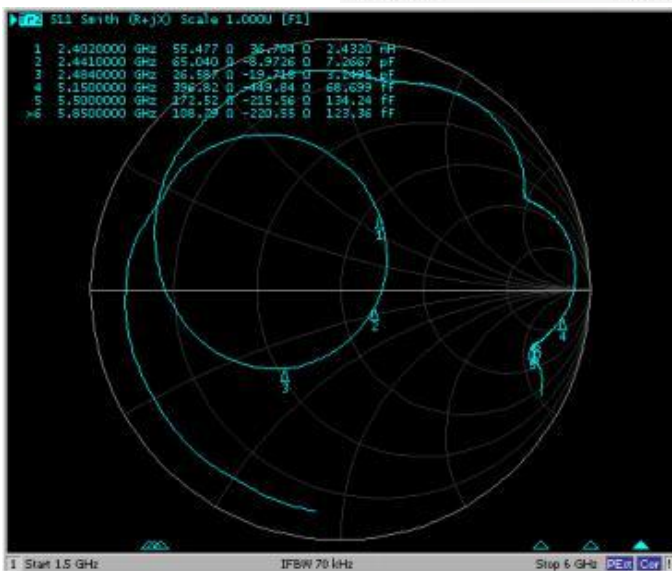
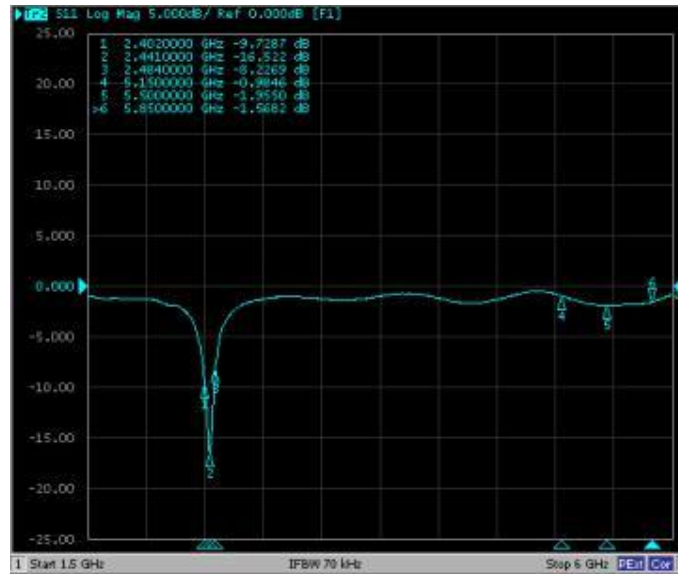
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4、Attachment chart

4.1 VSWR parameter diagram-BT

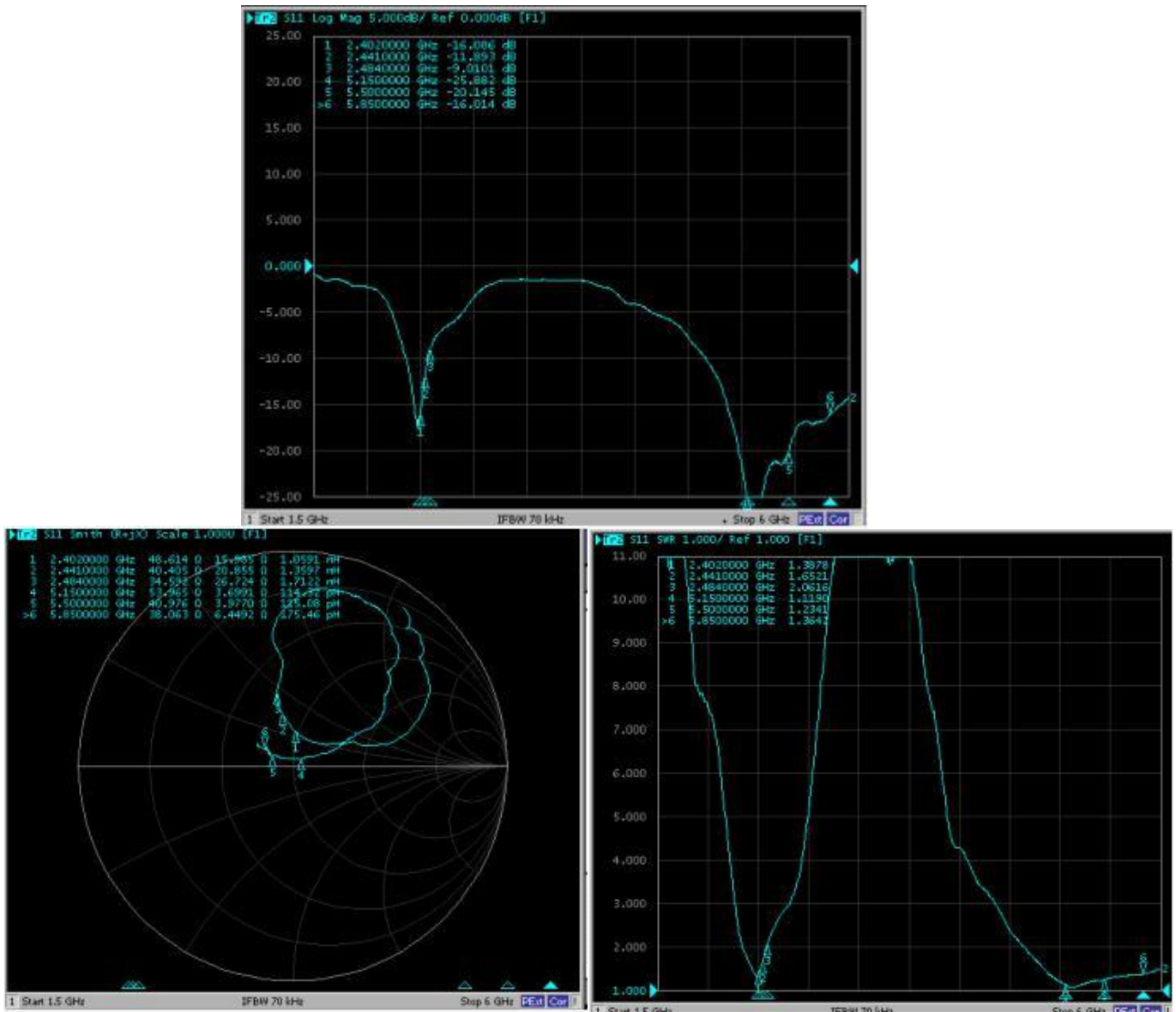


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4.1.1 VSWR parameter diagram-WIFI 2.4G



5、 conclusion:

This antenna is designed on the basis of the prototype provided by the customer, electrical parameters and structural performance have reached the technical requirements, please confirm!

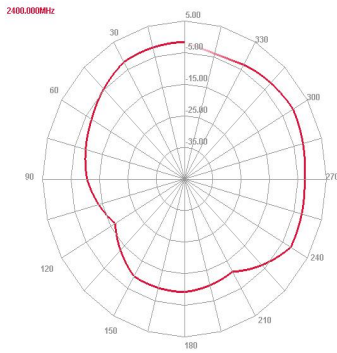
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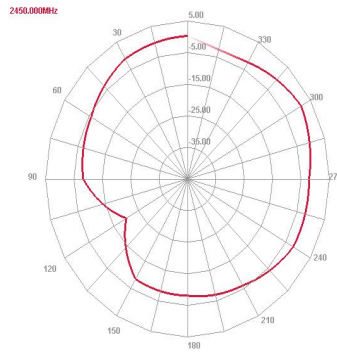
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6、2D&3D Field pattern diagram-BT

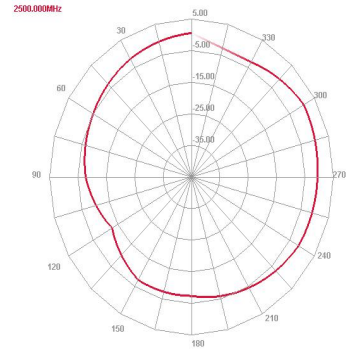
Horizontal



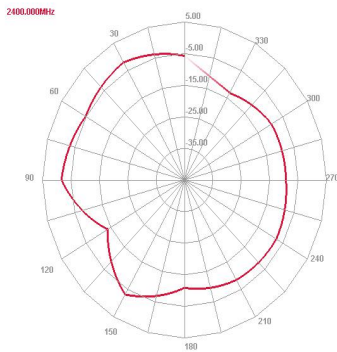
Horizontal



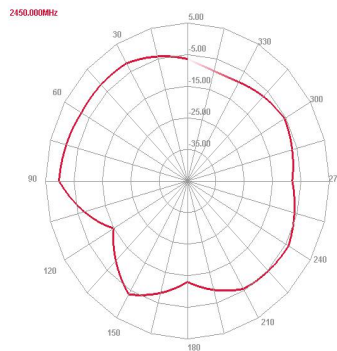
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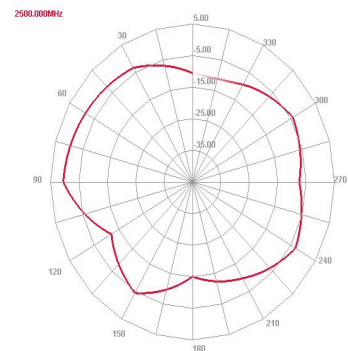
E1 Face



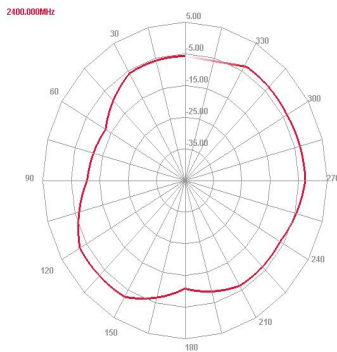
E1 Face



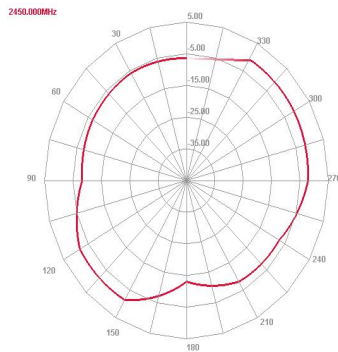
E1 Face



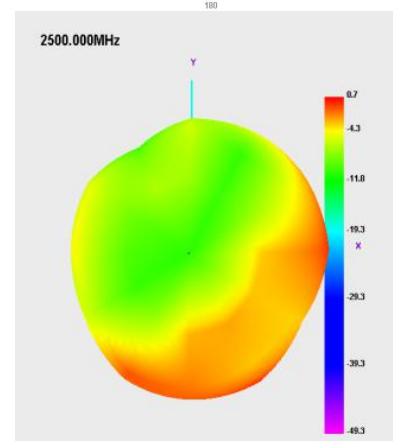
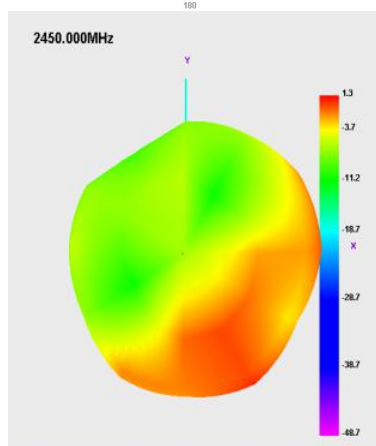
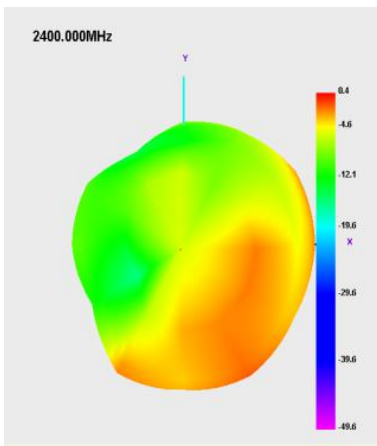
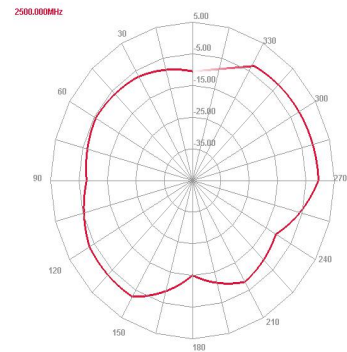
E2 Face



E2 Face



E2 Face

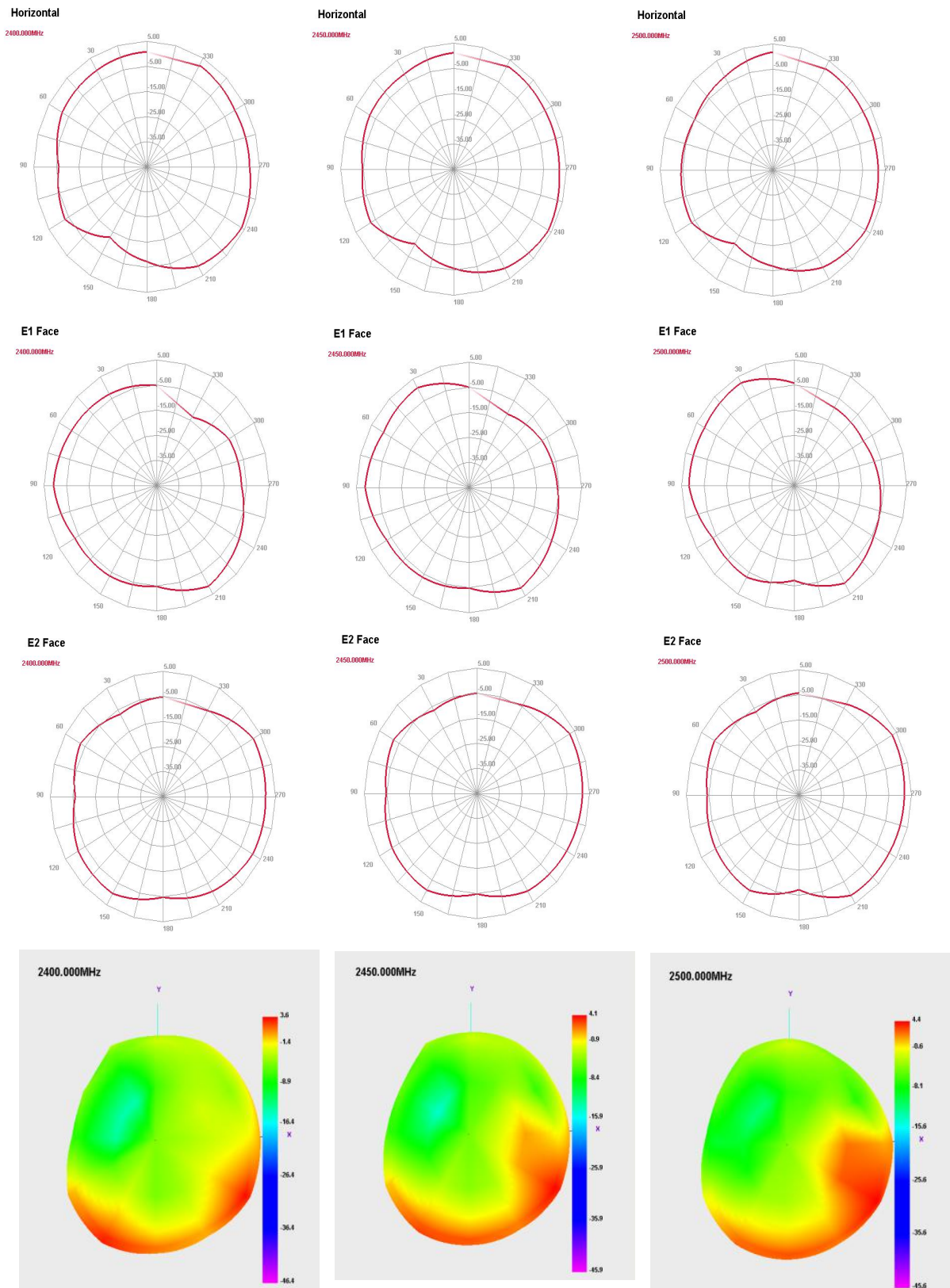


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7、2D&3D Field pattern diagram-WIFI 2.4G



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