SPECIFICATION

Daxian Communication Technology Limited

Shenzhen Daxian Technology Co., Ltd.

GenHigh M1 WIFI antenna assembly

Product specification

Guest households	GenHigh	frequency band	2400MHz～2500MHz
Project name	M1	version	V01
Material No.	1M-1XXXX-045	color	Black
Customer part number	**D090-0012-0001**		
R F design	Chuan.Shen	structure design	NingPing.Lai
Quality Manager	Jin.Yang	R & D director	Lei.Zhang
Date	2023-10-10		

client confirmation：

Whether the assembly meets your requirements：☐OK ☐NG

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Change resume

version number	Change content	Reason for change	Initiate change Party	date	Modifier
V1.0	create			2023.10.10	

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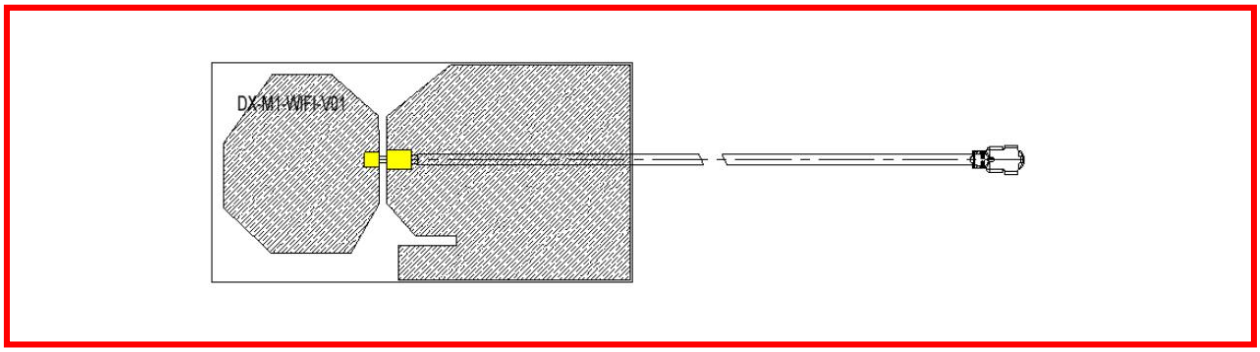
一 Project description

Customer name：	GenHigh
Whole machine type：	sweeper
Antenna band：	2400 ～ 2500MHz
Antenna form：	FPC+coaxial line
Feed form：	weld

一、WIFI antenna

This report provides a variety of measurements of the electrical performance of the M1 antenna. Figure 1 shows the antenna designed by the display.



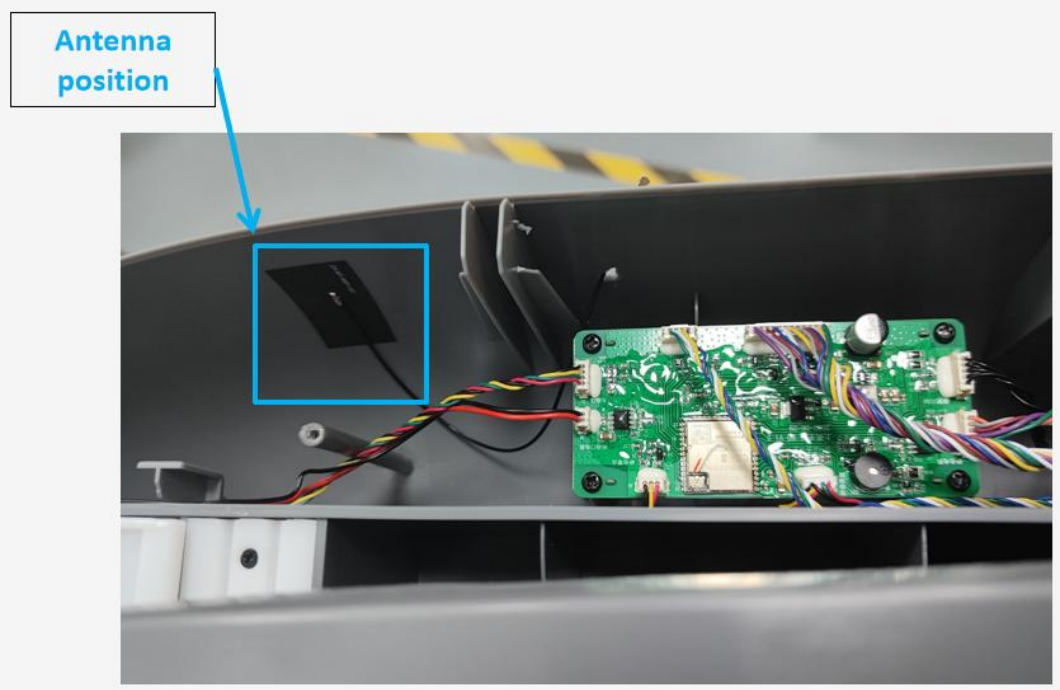
antenna appearing diagram
Figure 1

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
WIFI	2400 ~ 2500	≤ 2

1.2 Antenna position picture



1.3 Antenna composition

The antenna is mainly composed of FPC+coaxial line.

2、 The Equipment of Active Test

Satimo 3D Chamber　6×4×4(m)

Agilent 8960 E5515c

Network analyzer-R&S ZVL

Figure 2

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:

OTA active testing - stationary state:

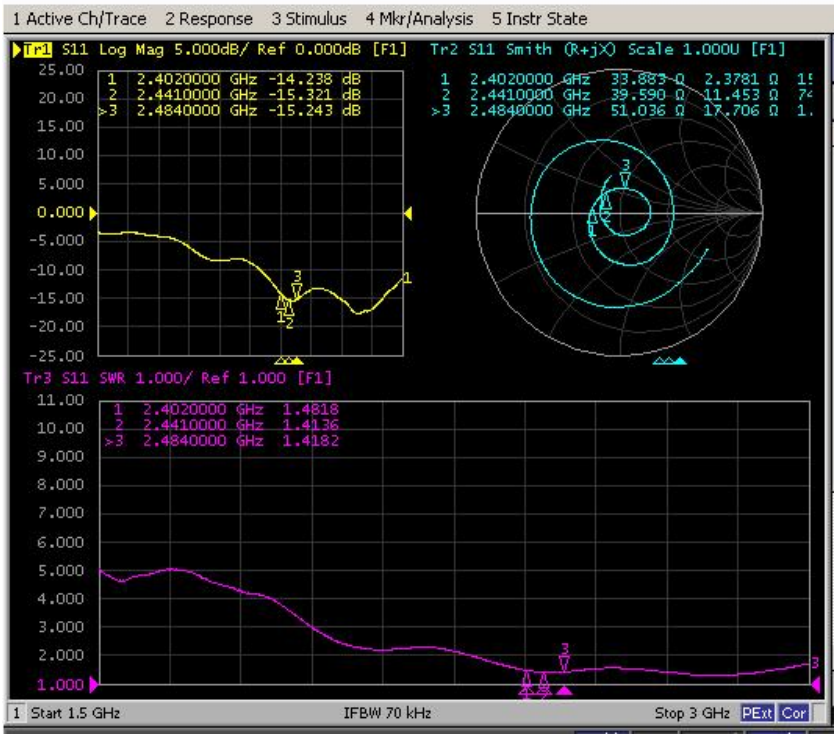
802.11 B rate 11M	WIFI 2.4G		
CH	1	6	11
TRP	17.39	17.80	17.51
TIS	-85.69	-85.71	-85.62
802.11 G rate 54M			
CH	1	6	11
TRP	16.23	16.55	16.41
TIS	-71.20	-72.04	-71.96
802.11 N rate MCS7			
CH	1	6	11
TRP	15.07	15.18	15.11
TIS	-69.22	-69.47	-69.03

OTA Passive Efficiency&Gain Test:

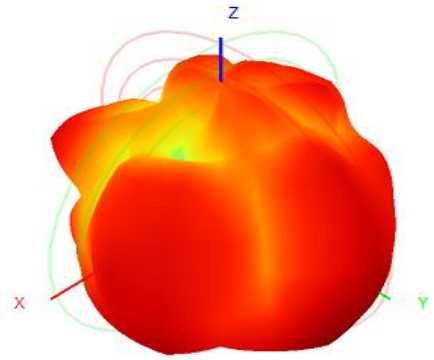
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	52.51	-2.80	2.28
2410	52.72	-2.78	2.22
2420	53.55	-2.71	2.51
2430	53.59	-2.71	2.16
2440	53.61	-2.71	2.37
2450	54.11	-2.67	2.67
2460	54.47	-2.64	2.47
2470	53.78	-2.69	2.41
2480	53.41	-2.72	2.56
2490	53.36	-2.73	2.34
2500	52.98	-2.76	2.51

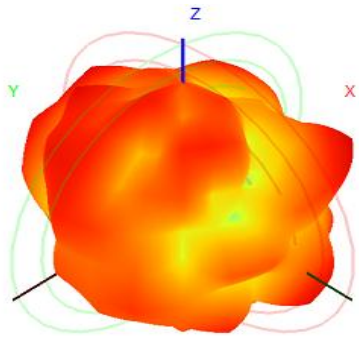
4、Attachment chart

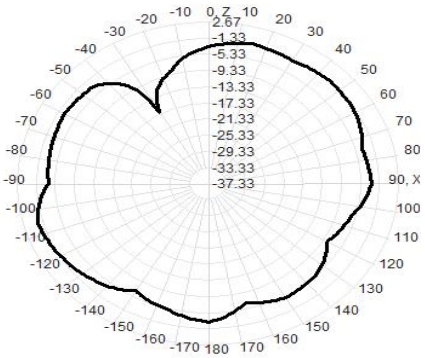
4.1 VSWR parameter diagram

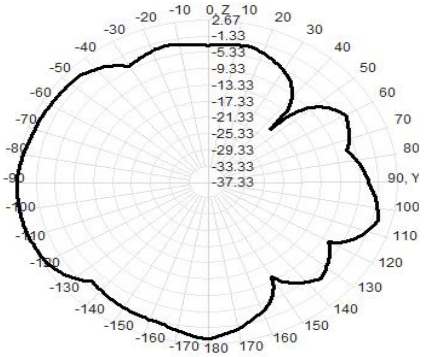


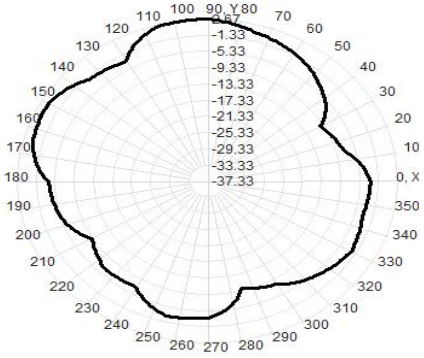
5、Antenna 2D&3D field pattern diagram







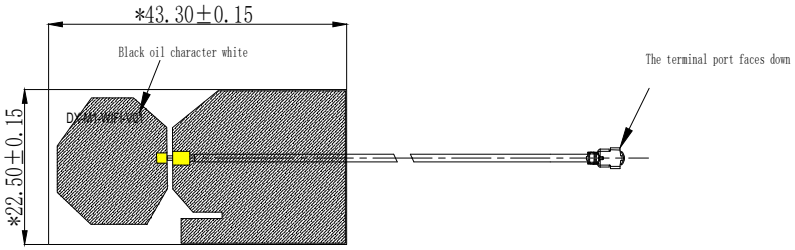


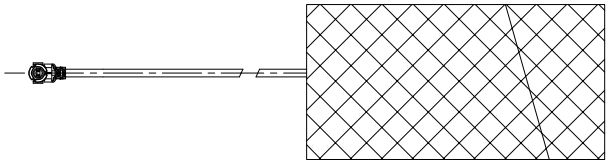


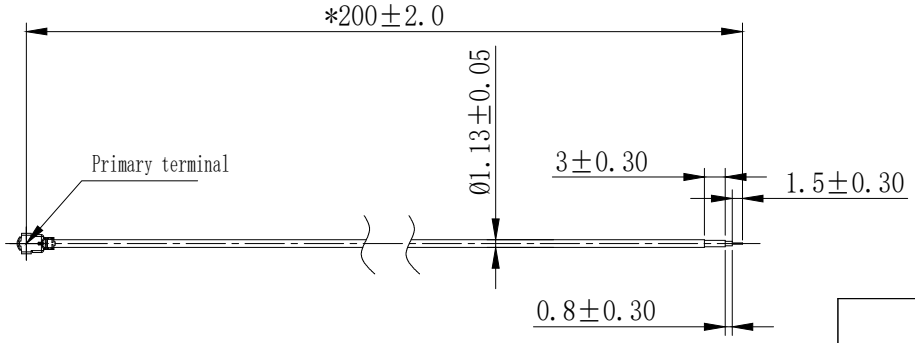
6、conclusion：

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!

	0~10	10~30	30~50	50~	Angle	○	◎	⊥	▱
	0.05	0.10	0.15	0.20	1°	0.02	0.02	0.03	0.05







NO.	Part name	Material		Remark
B	Terminal coaxial line	Cable线	Black	
A	FPC	Electrolytic copper PI	Black	

Note:

1. "*" is the key size
2. Please follow the drawing if the dimensions are not marked;
3. No false welding, missing welding, short line, broken line and other bad operation;
4. Comply with RoHS requirements.

Edition	Description	Date	Remark
A	Initial issue	2023.6.14	

TOPANT Shenzhen Topant Technology Co., Ltd.

Type of aircraft	M1	Colour	Black	Date	2023/10/09
Item coding	CM-1XXXX-045	Die surface treatment		MD	
Part name	WIFI antenna finished drawing	Third perspective		RF	Shen Chuan
Part coding	1M-1XXXX-045			Examine	Kang Zhou
Material quality	FPC+ coaxial line	Unit mm	Scale 1:1	Give permission to	Lei Zhang
Save path				Current version	A