

SPECIFICATION



Shenzhen Daxian Technology Co., Ltd.

Great Power Innovation GP-A392 WiFi antenna assembly

Product specification

Guest households	Great Power Innovation	frequency band	2400MHz~2480MHz
Project name	GP-A392	version	V03
Material No.	1G-PA392-014	color	Black
Customer number	5115000035		
R F design	Chuan.Shen	structure design	RuiBin.Zhou
Quality Manager	ZiYin.Hu	R & D director	Lei.Zhang
Date	2023-4-13		

client confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG

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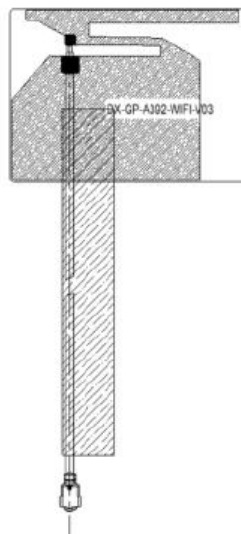
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— Project description

Customer name:	Great Power Innovation
Whole machine type:	Kitchen Speakers
Antenna band:	2400 ~ 2500MHz
Antenna form:	FPC + coaxial cable + cable sponge
Feed form:	weld
Number of feed legs:	TWO

一、WIFI antenna assembly

This report provides a variety of measurements of the electrical performance of the GP-A392 antenna. Figure 1 shows the antenna designed by the display.



antenna appearing diagram

Figure 1

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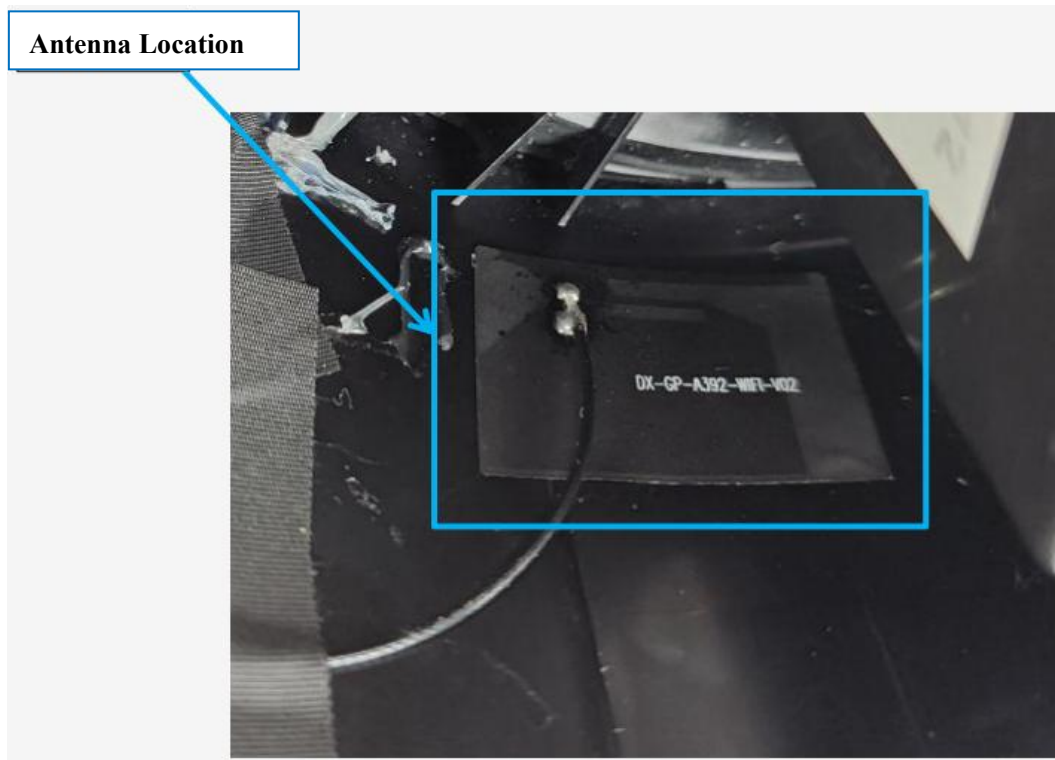
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1.1 Electrical specification standard

The frequency range of the antenna is 2400 ~ 2500MHz. 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

1.1.2 Antenna Location Assembly Diagram



1.2 Antenna composition

The antenna is mainly composed of FPC + coaxial cable + cable sponge.

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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:

OTA Active Test:

802.11 B Rate 11M	WIFI 2.4G		
CH	1	6	11
TRP	13.48	13.56	13.83
TIS	-80.67	-80.89	-80.75
802.11 G Rate 54M			
CH	1	6	11
TRP	12.67	12.84	12.73
TIS	-70.46	-70.69	-70.39
802.11 N Rate MCS7			
CH	1	6	11
TRP	11.71	11.89	11.67
TIS	-68.23	-68.75	-68.49

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OTA Passive Efficiency&Gain Test:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	53.07	-2.75	4.35
2410	54.06	-2.67	4.13
2420	54.18	-2.66	4.34
2430	54.97	-2.60	4.18
2440	55.54	-2.55	4.29
2450	55.93	-2.52	4.15
2460	54.89	-2.61	4.45
2470	54.85	-2.61	4.71
2480	54.56	-2.63	4.78
2490	54.65	-2.62	4.44
2500	53.36	-2.73	4.22

4、 Attachment chart



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5、 Antenna passive 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!

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