

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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Index

一、 Project description.....	4
二、 Wifi antenna.....	4
1、 specifications.....	4
1.1 Electrical specification standard.....	5
1.1.2 Antenna Location Assembly Diagram.....	5
1.2 Antenna composition.....	5
2、 The Equipment of Active Test.....	6
3、 test.....	7
3.1 The Test of standing Wave (VSWR).....	7
3.1.1 test connection.....	7
3.2 Measurement of Efficiency, Power (TRP) and Sensitivity (TIS).....	7
3.2.1 Test site.....	7
3.2.2 Test instrument.....	7
3.2.3 test data	7-8
4、 Attachment chart.....	9
5、 Antenna passive field pattern diagram.....	10
6、 Conclusion.....	11
三、 Schedule drawing.....	12

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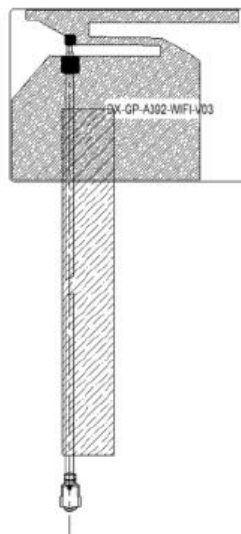
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— Project description

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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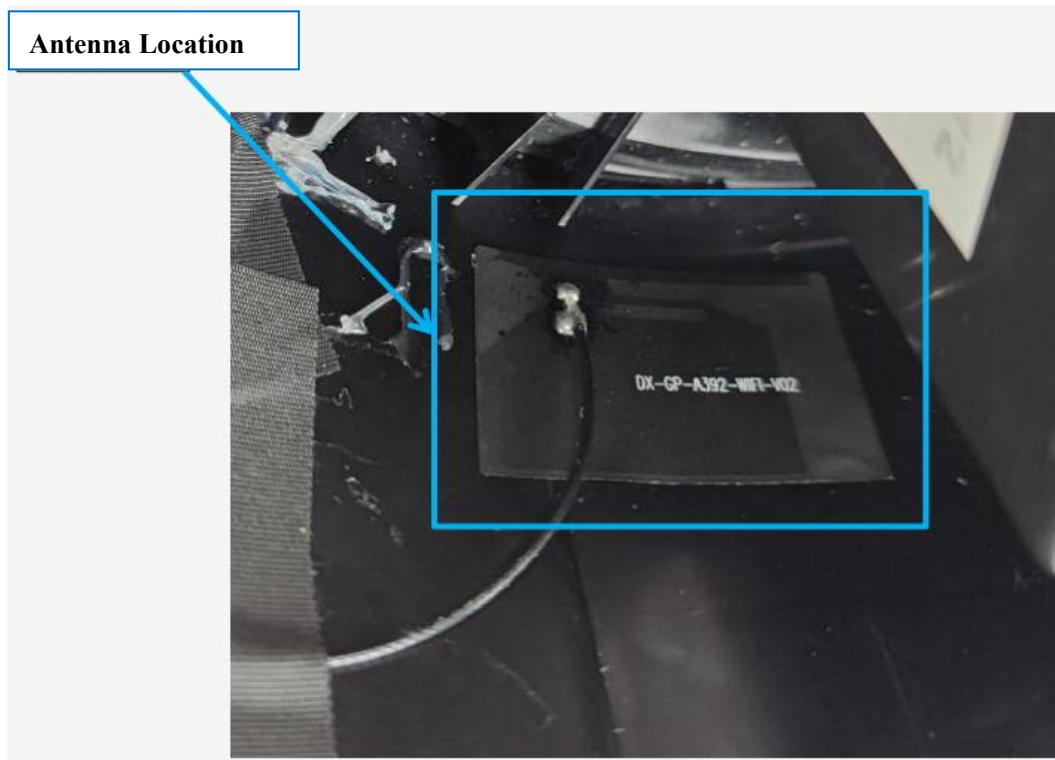
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1.1 Electrical specification standard

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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1		2		3		4		5		6	
第三视角											
单位 mm		比例 1:1									

A									B																											
Notes: 1."*"is the key dimension; 2.Please refer to the drawing for unspecified dimensions; 3. There should be no poor operation such as faulty soldering, missing soldering, short wires, broken wires, etc 4.Meet RoHS requirements. .								Generation 1 Terminals																												
C									<table><tr><td>C</td><td>Cable ponge</td><td>PUF</td><td></td><td></td><td></td></tr><tr><td>B</td><td>RF connector</td><td>Cable</td><td></td><td></td><td></td></tr><tr><td>A</td><td>FPC</td><td>lectrolyt c copper PI</td><td></td><td></td><td></td></tr><tr><td>Serial No</td><td>Part Name</td><td>material</td><td>color</td><td></td><td>Note</td></tr></table>				C	Cable ponge	PUF				B	RF connector	Cable				A	FPC	lectrolyt c copper PI				Serial No	Part Name	material	color		Note
C	Cable ponge	PUF																																		
B	RF connector	Cable																																		
A	FPC	lectrolyt c copper PI																																		
Serial No	Part Name	material	color		Note																															
Shenzhen Topant Technology Co., Ltd.																																				
D	Machine model		GP-A392		Product Color		Blac		Date		2023/4/13																									
Project Code			CG-PA392-014			Mold surface treatment			M D			RuiBin.Zhou																								
Part Name			WIFI antenna						R F			Chuan.Shen																								
Part Number			1G-PA392-014						Check			XiHuan.Wu																								
material			FPC+Sponge+RF connector						Ratify			Lei.Zhang																								
Save Path									current version			A																								
1		2		3		4		5		6																										
Initial Issue		2023/4/13		Date		Note																														
Describe																																				