

SPECIFICATION

JIADe WIRELESS TECHNOLOGY (SHENZHEN) CO., LTD

UDG-G109 WIFI Antenna

Product Specification

connection	PROITAV	frequency range	2400 ~ 2500MHz 5150 ~ 5850MHZ
entry name	UDG-G109	edition	V2.0
Material No	1D-GG109-130	material quality	Stainless steel nickel plating
Customer Item Number	J.03.0024G5G000		
R F Design	Yuanqing.Zhu	Structural Design	Ruibin.Zhou
Quality Manager	Jin.Yang	Technical Director	Lei.Zhang
Date	2024-4-19		

Customer confirmation:

Whether the assembly meets your company's requirements: ☐OK ☐NG

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Revision history

[illegible]

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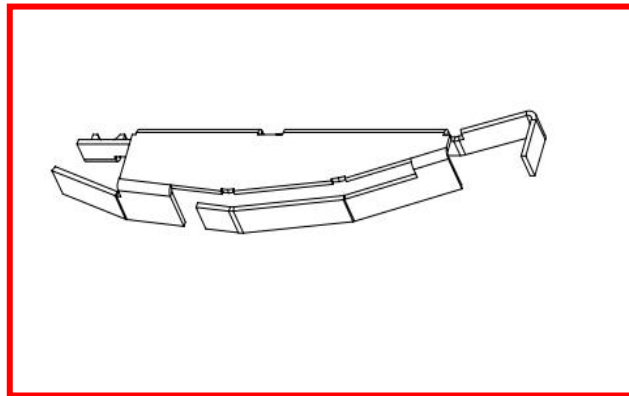
I、Project Description

Customer Name:	PROITAV
Type of complete machine:	UDG-G109
Antenna band:	2400 ~ 2500MHz 5150 ~ 5850MHz
Antenna form:	Stainless steel nickel plating
Feed form:	soldered
Number of feed legs:	two

IV 、BT Antenna

1 、specifications

This report mainly provides the testing status of various electrical and structural performance parameters of the antenna for the CE-2188N project. The following image shows an antenna with a large display design.



antenna appearing diagram

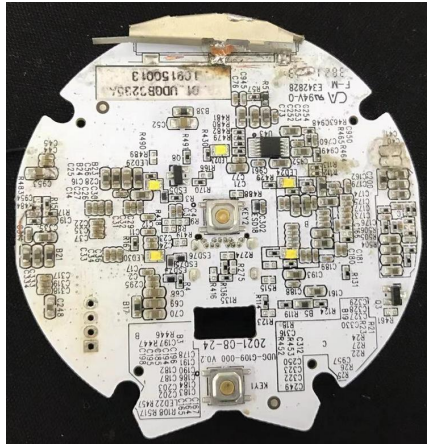
1.1 Electrical specifications and standards

1.1.1 Electrical performance index

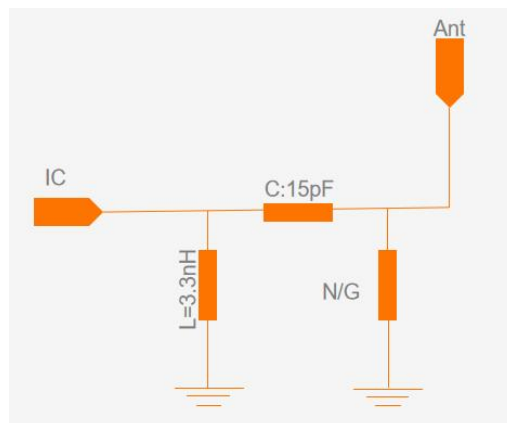
The operating frequency band of the antenna is between 2400 ~ 2500 MHz&5150~ 5850 MHz. The following table shows the electrical performance indicators of large display design and mass production antennas.

Frequency Range	Frequency (MHz)	VSWR
BT	2400 ~ 2500 5150 ~ 5850	≤ 3

1.1.2 Antenna placement



1.1.3 Antenna matching



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1.2、 Structural specifications and standards

The antenna is mainly composed of Stainless steel nickel plating.

IV、 The Equipment of Active Test

Satimo 3D Chamber $6 \times 4 \times 4$ (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:

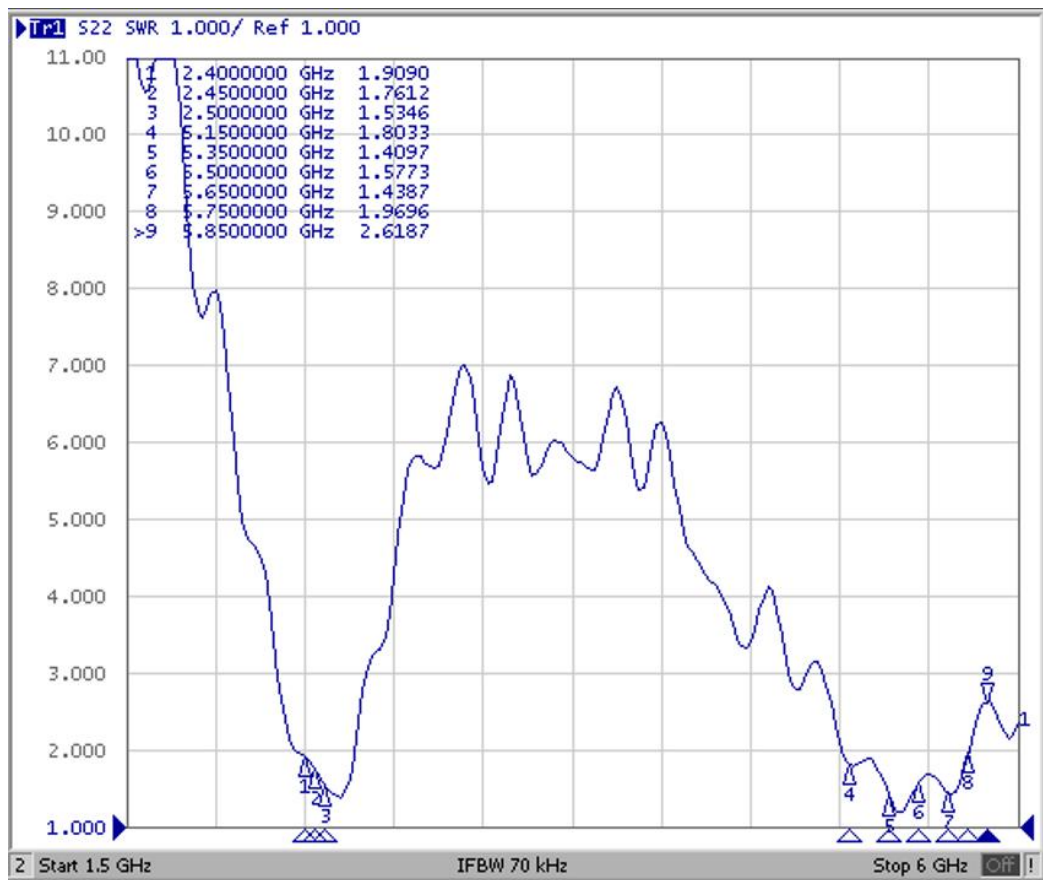
Rs ZVL Network Analyzer, Agilent8960 E5515C, Standard Horn Antenna, French SATIMO-SG24SYSTEM system, Printer, etc.

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

Passive efficiency&gain:

Freq (MHz)	Effi (%)	Gain (dBi)
2400	52.24	0.88
2450	55.58	1.15
2500	55.21	1.10
5150	62.38	1.67
5350	63.72	0.52
5500	59.23	0.10
5650	51.05	0.08
5750	46.66	0.60
5850	38.85	-0.14

4、VSWR parameter diagram



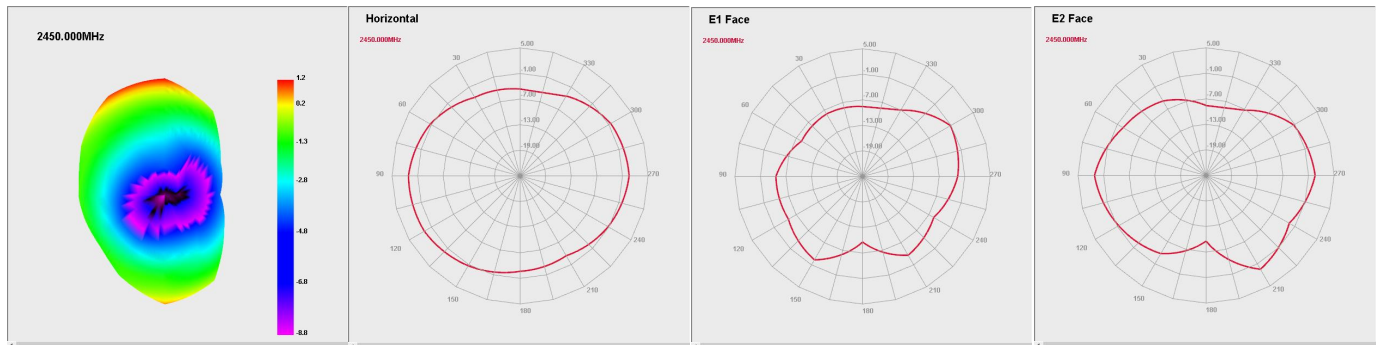
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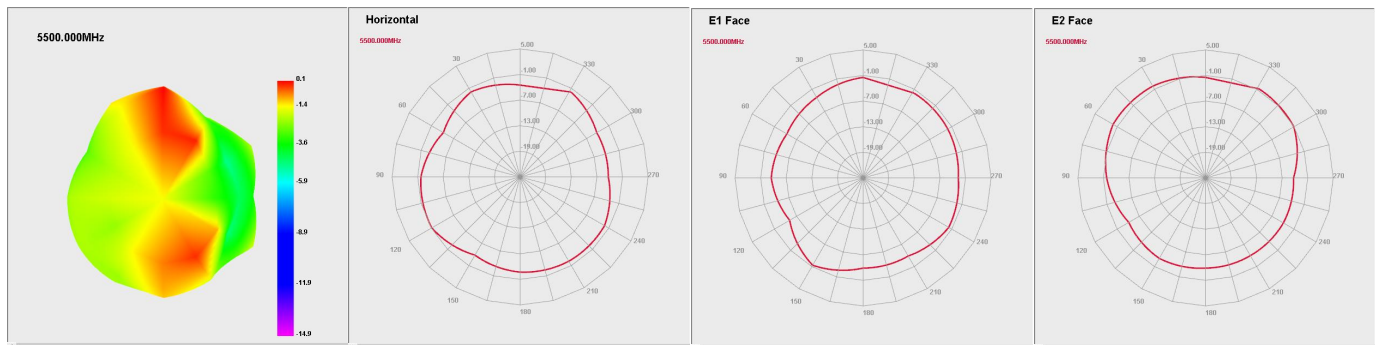
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5、Radiation 2D & 3D Field Diagrams -TRP

--WIFI 2.4G



--WIFI 5.8G



6、conclusion

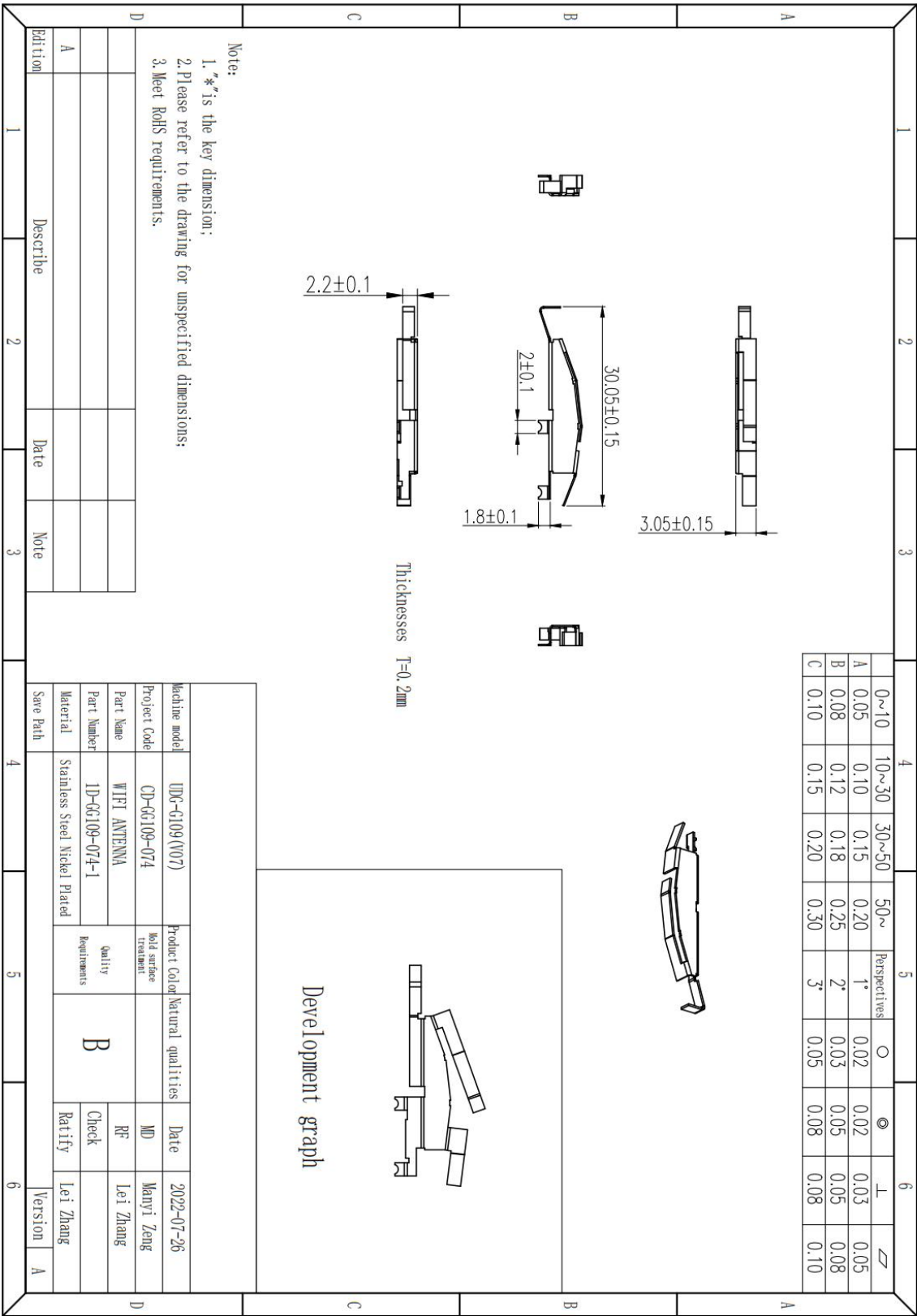
This antenna is designed based on the prototype provided by the customer. The electrical parameters and structural performance have met the technical requirements, please confirm!

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7、Structural drawings



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