

Product Number: **ZD-24N648-L=200MM**

PRODUCT NAME/AGUGE: WIFI Antenna

SPECIFICATIONS: _____

Number of Samples: 1

: _____

DATE: December 16, 2023

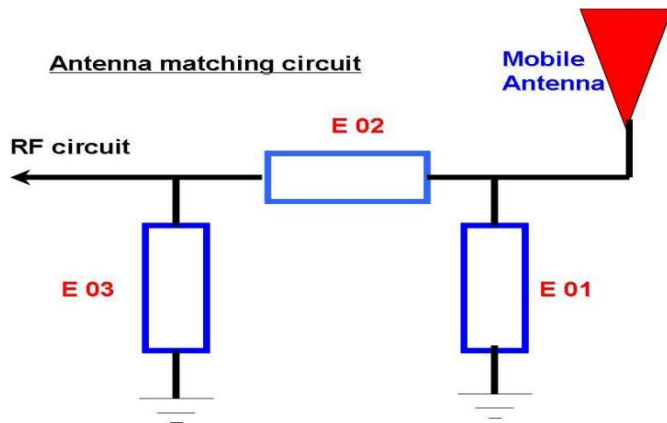
AI MATCH INTELLIGENT TECHNOLOGY CO., LTD.			Customer recognition
Engineering	Quality	Approved	Signature (seal)
Engineer Xie	Engineer Huang	Engineer Gao	

1. Technical Specification

A. Electrical Characteristics	
Working Frequency Range	2400~2500MHz
S.W.R.	2400~2500MHz:<3.0
Antenna Gain(avg.)	2400~2500MHz: 3dBi ± 0.5dBi
Impedance	50ohm
B. Material	
brass	

C. Environmental	
Operation Temperature	-45°C~+85°C
Storage Temperature	-45°C~+85°C

2. Matching Circuits



Element	Value	Vender
E1(0402)	OPEN	/
E2(0402)	SHORT	50 Ω
E3(0402)	OPEN	/

Note: Match has not changed.

3. Curing antenna S11 Testing Result.

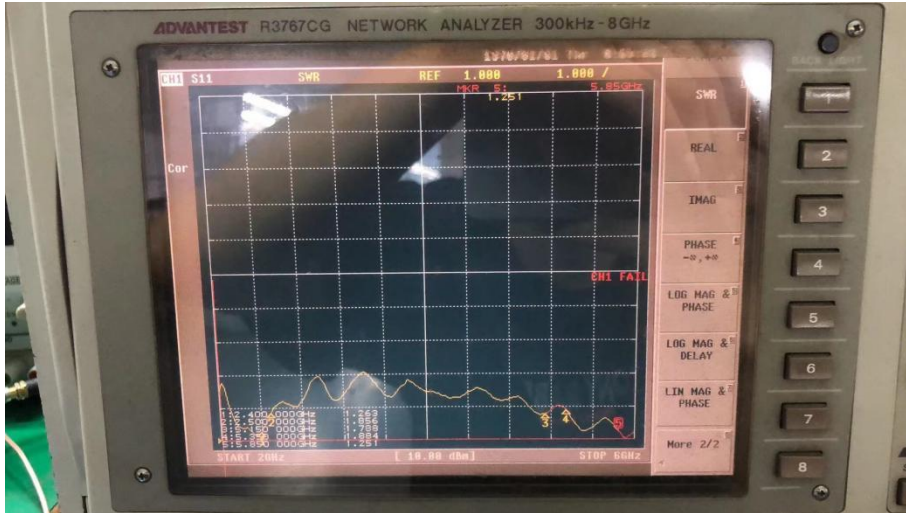
The S11 parameter was performed using a Agilent 8753D Network Analyzer and BEST'S test fixture that was using customer-providing device.

VSWR (Voltage standing wave ratio)

The Voltage Standing Wave Ratio (VSWR) is an indication of how good the impedance match is. VSWR is often abbreviated as SWR. If the transmission line and the antenna are not matched, the antenna will not accept all the power from the transmission line. The part it does not accept is reflected back and forth between the transmitter and the antenna. This sets up a fixed wave pattern along the line which we can measure and which is called the voltage standing wave ration(VSWR).The VSWR (ratio of maximum voltage to the minimum voltage along the line)expresses the degree of match between the transmission line and the antenna. When the VSWR is 1 to 1(1:1) the match is perfect and all the energy is

transferred to the antenna prior to be radiated. When the VSWR is 1.5:1, 96% of the power reaches the antenna. By definition VSWR can never be less than 1. VSWR and reflected power are different ways of measuring and expressing the same thing. A high VSWR is indication that the signal is reflected prior to being radiated by the antenna.

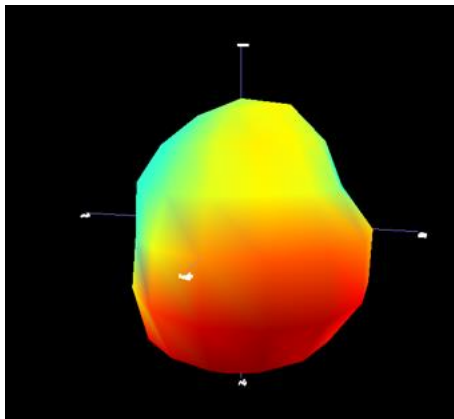
驻波 VSWR



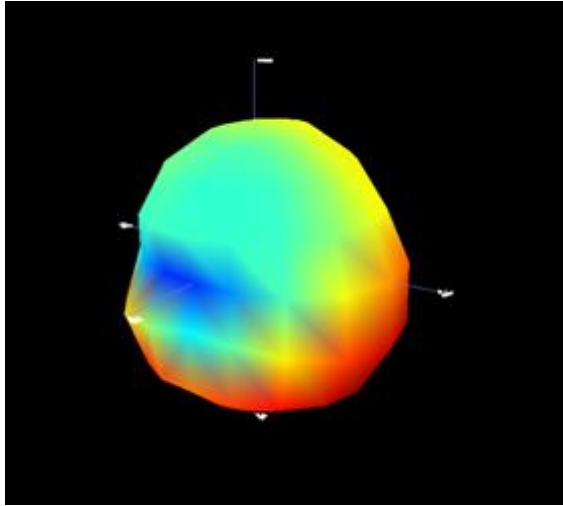
Marker	2400MHz	2450MHz	2500MHz
S.W.R	<3.0		

4.Test 3D Report

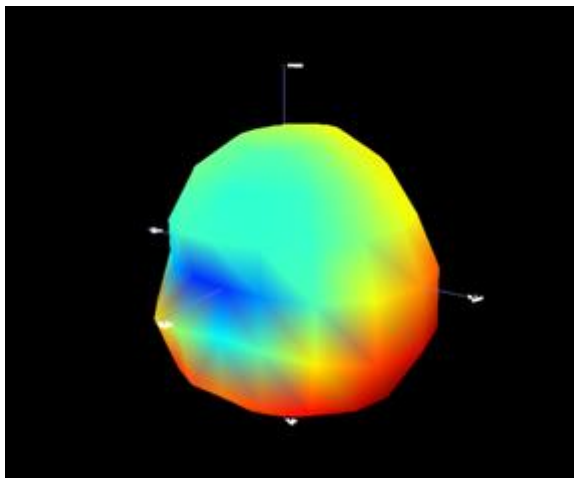
Frequency: 2400MHZ Gain: 1.76dbi



Frequency: 2450MHZ Gain: 2.99dbi



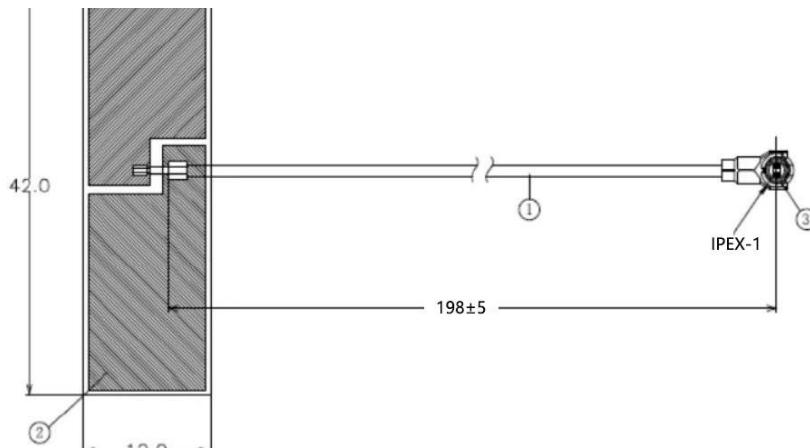
Frequency: 2500MHZ Gain: 3.6dbi



5. Passive test data

Passive Test For 2.4G-5.8G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	53.04	-2.75	1.76	-0.39	27.359	25.681	1.76	-17.22	4.51	30	45.51	45.06
2450	56.22	-2.5	2.99	0.84	30.615	25.6	2.99	-14.31	5.49	30	45.36	44.92
2500	56.42	-2.49	3.6	1.45	29.673	26.745	3.6	-19.59	6.09	120	45.93	45.51

6.Product appearance drawing



a real product L=200MM

A salt spray test

Test objective: To test the resistance of antenna to salt spray corrosion

Test method:

Solution content: 5% sodium chloride solution (prepared with distilled water, 95 ml distilled water +5 g sodium chloride)

Put the antenna into the salt spray test chamber and hang it with a rope to avoid uneven spraying of the solution or non-spraying of the surface.

The antenna must be placed in the test chamber immediately. The experiment period was 48 hours. During the experiment, it should not be taken out midway.

After the experiment, take out the antenna, clean it with cotton cloth and ion wind gun, place it for 49 hours and dry at room temperature, and check the appearance, mechanical properties and electrical properties of the antenna.