

Approval Sheet

QN-AC2508-wifi Antenna

Customer	千鸟	Model Type	QN-AC2508-WiFi
YC P/N	014-039-01	Band	2.4
Color	Black	Version	REV:A
Designed and tested by	ANDY	Checked by	JACK
Date		Date	2025-10-30
Antenna manufacturer:Dongguan YC tech Electronic co,Ltd			
Add:8th Floor, Building E,Fengzhimei industrial Zone, Fenggang Town, Dongguan City			

Index

1. Summary.....	3
2. Specificaiton.....	3
2.1 Electrical Specification.....	3
2.2 Matching Circuit Description.....	4
2.3 Structure specification.....	4
2.3.1 Structure.....	5
2.3.2 Test requirement	5
3. Measurement Data	5
3.1 Passive test result	5
3.1.1 Test Set-up	5
3.1.2 VSWR.....	5
3.1.3 Gain & Radiation Patterns	6
3.1.4 Efficiency.....	6
4. Antenna Size Diagram.....	7

1、 Summary

This report summarizes the electrical performance results of the proposed Internal antenna to support QN-AC2508-WiFi program. The antenna is 2.4Gband PIFA . (see Figure1).

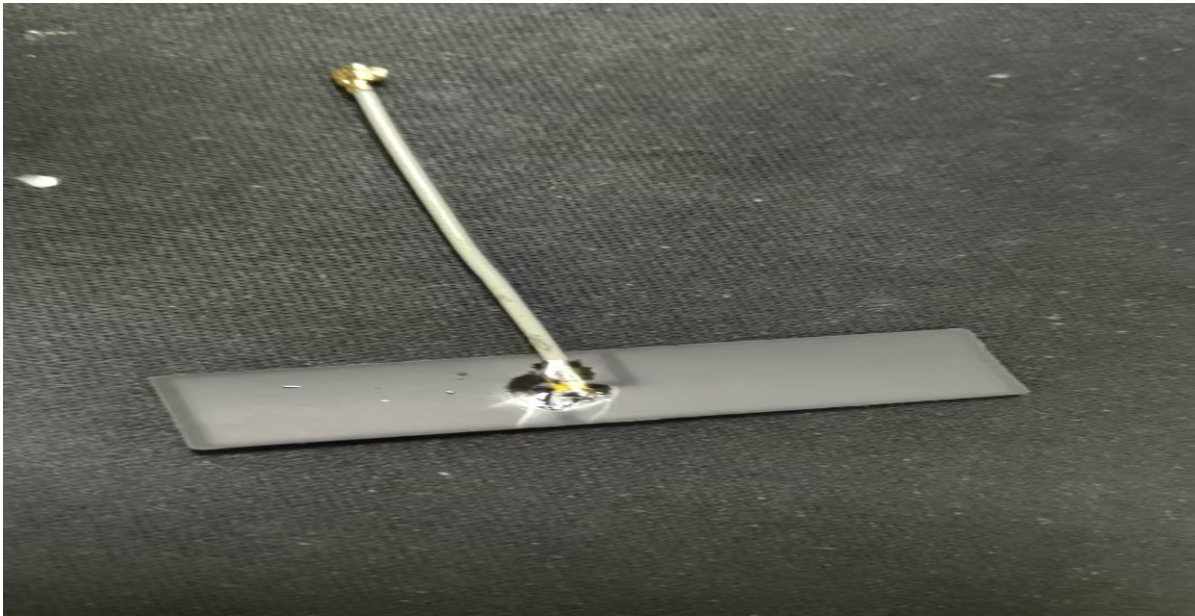


Figure 1: Proposed Antenna

2、 Specification

2.1 Electrical Specification

The specification is based on the design result. The following table indicates the electrical performance of QN-AC2508-WiFi gram.

产品测试参数			
产品名称(Name)	QN-AC2508-WiFi	产品型号(Model Type)	YC-dtg-001
电 性 能 指 标 (Electrical Specifications)			
频率范围 (Frequency Range)	2400-2500MHZ	极化方式 (Polarization)	垂直
输入阻抗(Impedance)	50 Ω	辐射方向	全向
驻波比 (VSWR)	1.5	功率容量(Power)	50W
增益(Gain)	3.00dBi	带宽 (Bandwidth)	136/980MHz

2.2 Matching Circuit Description

A matching circuit is designed to provide the required impedance match across the bands. The matching circuit of QN-AC2508-WiFi is supplied by our client.

2.3 Structure specification

2.3.1 Structure

The antenna of QN-AC2508-WiFi program is composed by a plastic support.

2.3.2 Test requirement

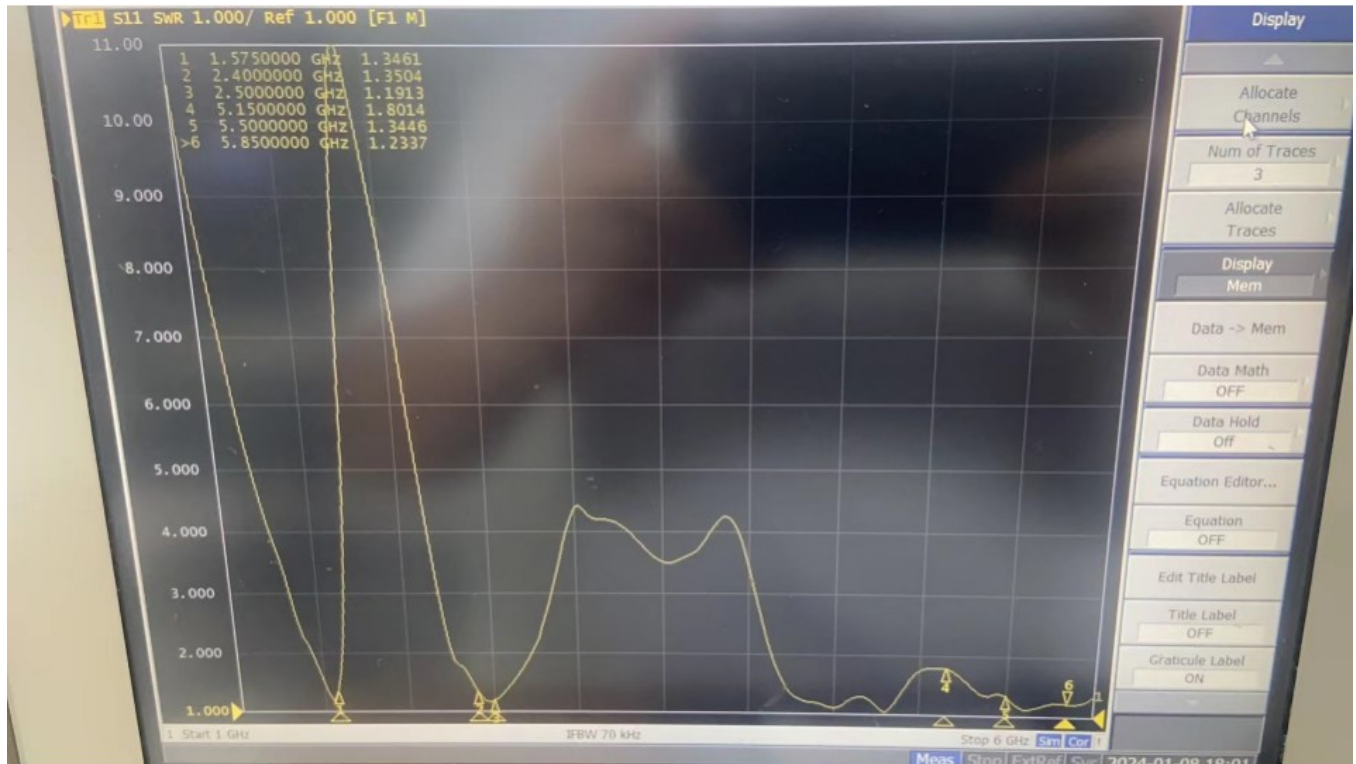
The structure and environmental testing is used to confirm that if the antenna performance is destroyed or affected after testing.

ITEM	Test Requirement	Acceptable criterion
1. Low Temperature	Temperature: -20° C Time: 24 hours	1.No visible damage 2.The electrical performance can reach the electrical specification
2. High Temperature	Temperature: 80° C Time: 24 hours	1.No visible damage 2.The electrical performance can reach the electrical specification
3.Salt fog testing	5±0.1% nad salt fog PH value: 6.5-7.0 Temperature; 35±1% Time: 24 hours	1. No obvious color change 2. No rust on the metal 3. The appearance of the antenna doesn't flake off

3. Measurement Data

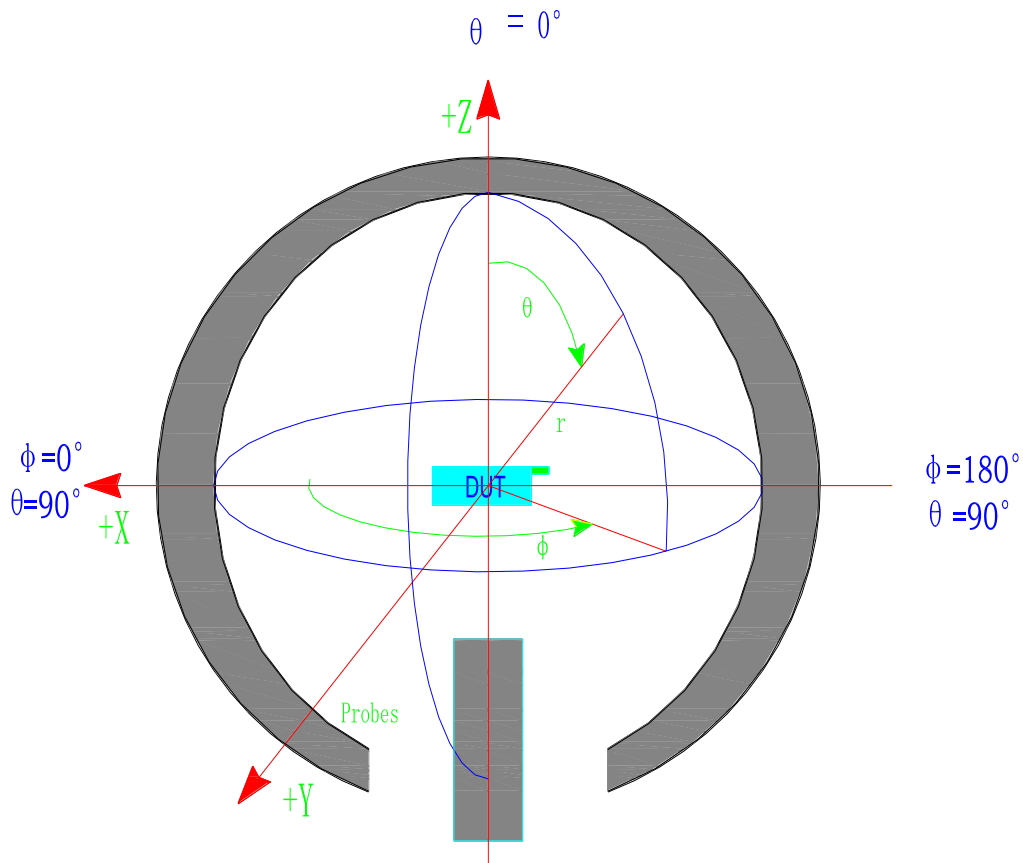
3.1 VSWR

VSWR measurements (S_{11}) are performed using Agilent 5071B Network Analyzer and the previously described test fixture. A ferrite-loaded coaxial cable is used to mitigate surface currents on the outside of the cabling. The testing was performed in free space. The following chart shows the VSWR of the antenna of QN-AC2508-WiFi program.



3.1.3 Gain & Radiation Patterns

The gain and efficiency of the antenna are measured in the Welletronics' anechoic chamber. The chamber provides less than -40 dB reflectivity from 800 MHz through 6 GHz and a 40cm diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.



Structure of CTIA approved Satimo SG24 system

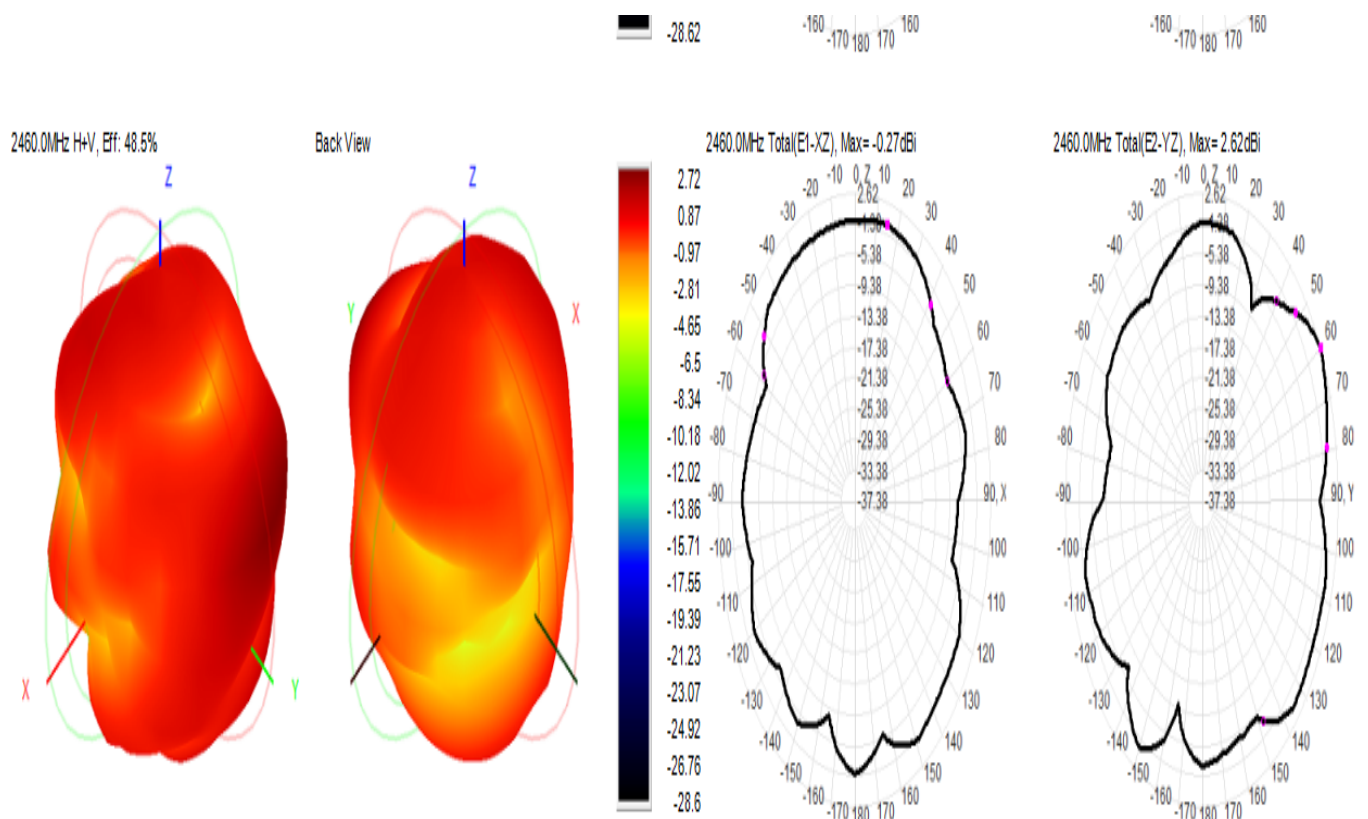
Gain indicates the passive performance of the antenna. The following chart shows the peak gain and average gain of the QN-AC2508-WiFi antenna.

3.1.4 Efficiency

Efficiency shows the radiation capability of the antenna designed by WELLETRONICS.

The following chart indicates the efficiency QN-AC2508-WiFi antenna.

Frequency	Efficiency (%)	Gain (dBi)
2390000000	53%	2.75
2400000000	54%	2.81
2410000000	55%	2.91
2420000000	56%	3.00
2450000000	53%	2.62
2460000000	48.5%	2.62
2480000000	48%	2.60
2500000000	47%	2.53



7, Antenna Size Diagram

