

WAG-F-LA-00-231 Specification

1. Explanation of part number :

WAG _ F _ LA _ 00 _ 231
(1) (2) (3) (4) (5)

- (1) Product Type: Wireless Antenna
(2) Combo: FPCB
(3) Frequency : 2400-2500MHz
(4) Coaxial Cable Type : no coaxial cable
(5) Suffix : 231

2. Storage Condition:

Temperature -40 to +85°C
Humidity 20 to 85 %RH

Recommended storage condition:

Store in room condition as listed below: Temperature -20°C~+45°C, Humidity 80% Max.

3. Operating Condition:

Temperature -40 to +85°C
Humidity 10 to 85 %RH

4. Electrical Specification:

Those specifications were specially defined for NDT501 model, and all characteristics were measured in the customer's machine.

4-1. Frequency Band:

Frequency Band	MHz
ANT-3 WIFI	2400-2500

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X = ± X.X = ± X.XX = ±

ANGLES = ± HOLEDIA = ±

SCALE : UNIT : mm

DRAWN BY: 朱敏超 CHECKED BY: 李志强

DESIGNED BY:周振兴 APPROVED BY : 唐龙



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4-2. Impedance

50 ohm nominal

4-3. Matching circuit

None

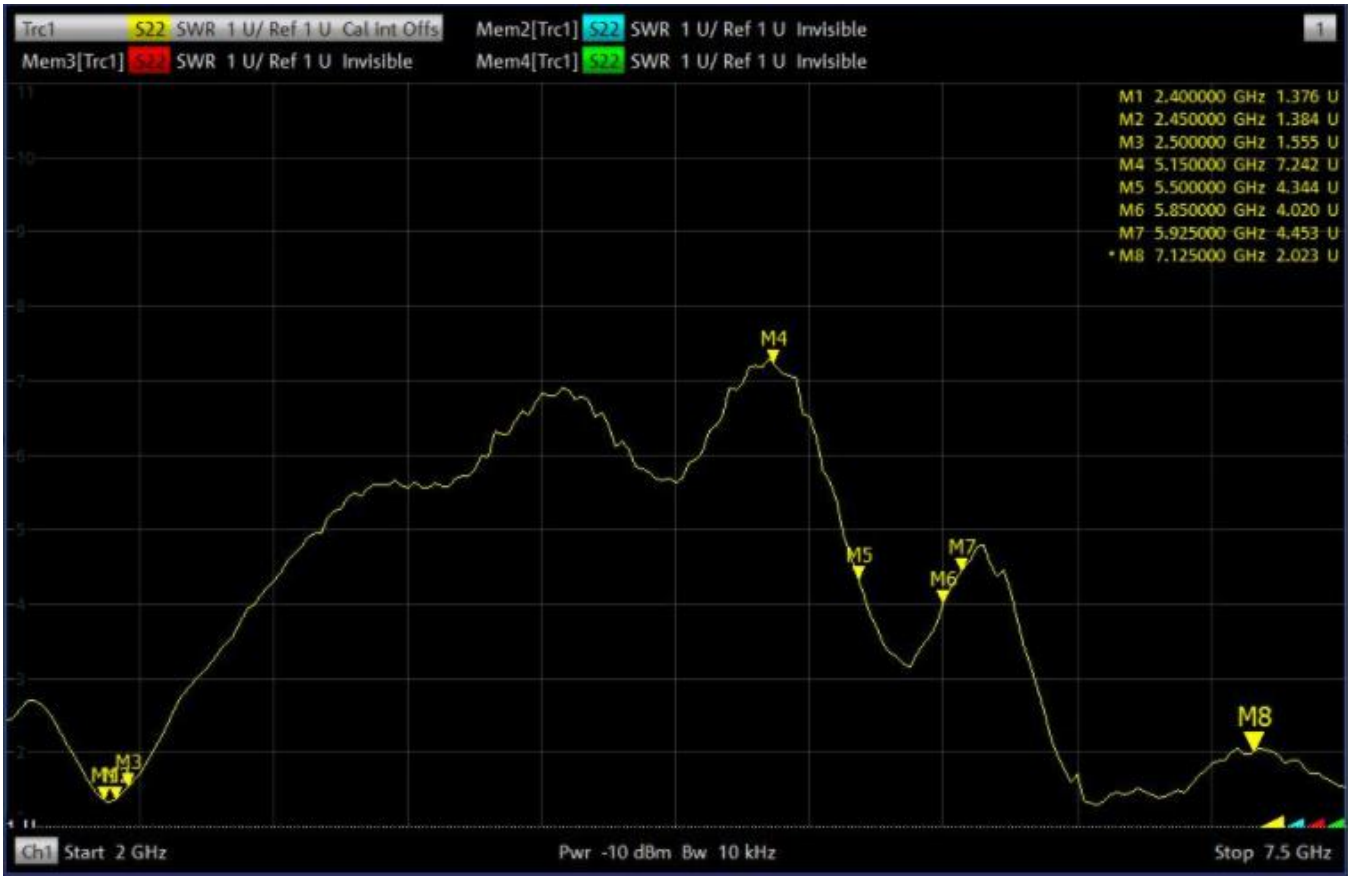
4-4. VSWR

4-4.1 Measuring Method

- 1.A 50Ωcoaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR
- 2.Keeping this jig away from metal at least 20cm

4-4.2 Measurement frequency points and VSWR value

Frequency (Unit MHz)	2400	2450	2500
WIFI	1.4	1.4	1.6



4-5. Efficiency and Gain

4-5.1 Measuring equipment

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Measuring instrument:

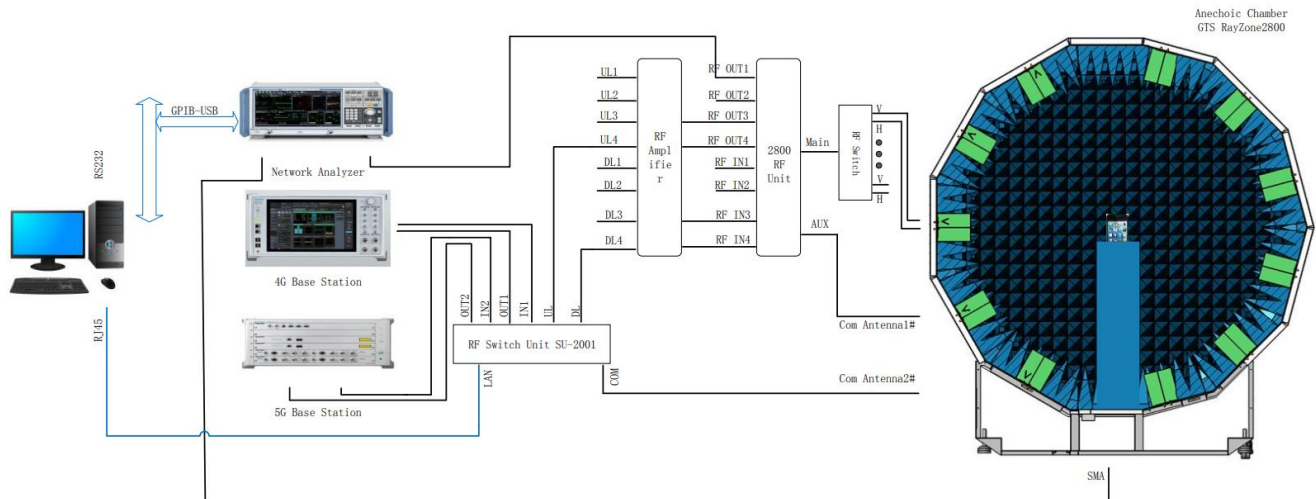
Microwave chamber, Network analyzer, and standard antenna.

Instructions for microwave chamber:

This is a microwave chamber set up by our company in Suzhou, This microwave chamber belongs to a set of near-field measurement system. The size of the chamber is 2.95M * 3M * 3M.



RayZone2800 Test Setup



The microwave chamber, shown above, using a unique multi-probe technique, The aim is to reduce the measurement time of the whole measurement system. The measuring system use multi-probe array instead of single probe to scan the measured surface of the antenna under test, a single probe has the capability of measuring orthogonal polarization amplitude and phase, it also has a wide frequency range, the corresponding multi-probe array is switched quickly by electronic switch, greatly improved the measurement efficiency.

The probe model: MA186960A(400MHz~7.5GHz) . Because of its capability of broadband frequency and the orthogonal polarization function, the number of probes needed to be equipped with the system is reduced; The small size of the probe reduces the coupling between the probes, make it is possible to insert probes of other frequency bands between probes, then a single system can support a wider frequency range.

4-5.2 Efficiency and Gain

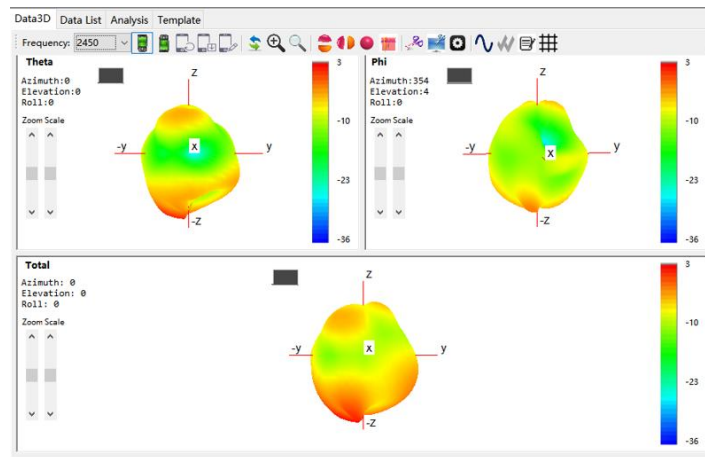
Antenna gain is marked (dBi) and is based on STANDARD HORN antenna. The data shows Peak Gain and Average Gain.

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ANT3

Freq(MHz)	Efficiency_dB	Gain	Efficiency(%)
2400	-3.74	2.84	42.25
2410	-3.67	2.84	42.91
2420	-3.65	2.78	43.12
2430	-3.62	2.71	43.46
2440	-3.40	2.85	45.74
2450	-3.59	2.60	43.74
2460	-3.32	2.77	46.54
2470	-3.61	2.32	43.51
2480	-3.70	2.13	42.63
2490	-3.63	2.14	43.39
2500	-3.42	2.25	45.49
AVG	-3.57	2.56	43.89

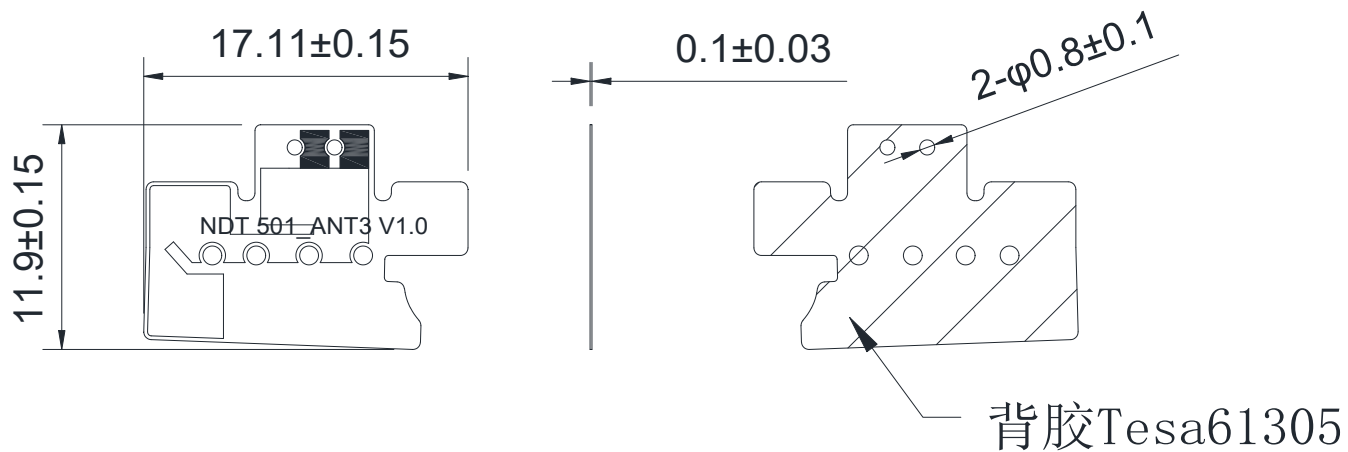
3D Pattern ANT3



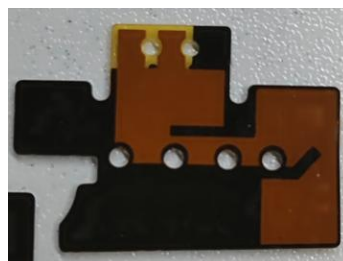
Frequency Band(MHz)	2400	2450	2500
Efficiency(dB)	≥ -4.5	≥ -4.5	≥ -5.2

5. Mechanical Specification:

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6. Product picture:



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