

Shenzhen unity wireless technology co., ltd

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Address: Room 1002/1012, Building 7E, Evergrande Fashion Valley, Dalang, Longhua Distri

Antenna Test Report

Custome: Yunshi

Product Mode: M1-C

frequency band: 2. 4G/5. 8G

Prepared by: Wencaihui	RF Engineer: Wencaihui	
Date: 2026. 04. 20		

Debugging Log:

Revision Date	Revision Content	Revised By	Original Version
2024. 7. 30	Initial Debugging	Wen Caihui	V1.0
2026. 4. 20	Added 5900MHz Data	Wen Caihui	V1.0

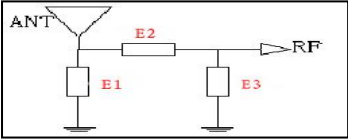
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1..Antenna Matching (Original Antenna Matching)

E1	E2	E3
N/A	0 欧	N/A

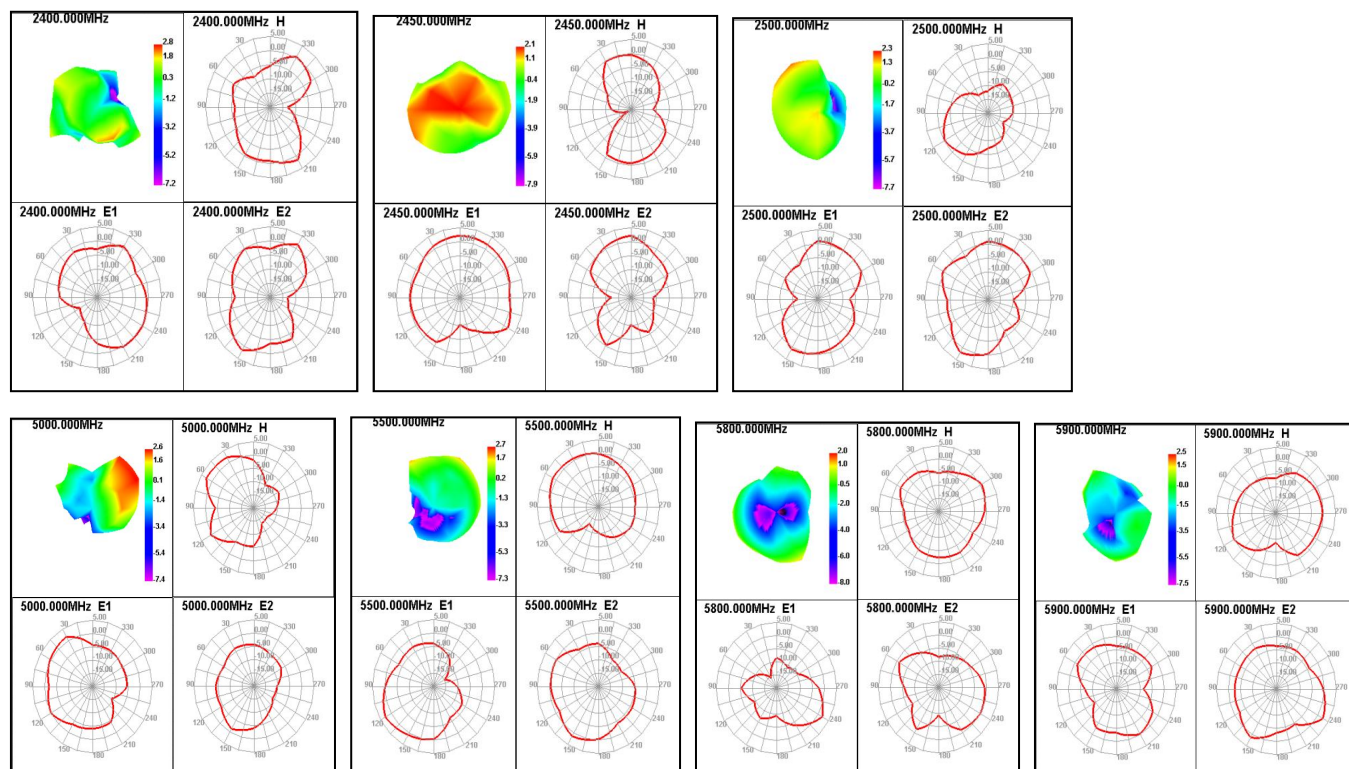


WIFI 2.4-5.8G Passive Test Results:

Freq (MHz)	Effi (%)	Gain (dBi)
2400	59.39	2.79
2410	57.92	2.95
2420	58.66	2.27
2430	55.26	2.19
2440	58.39	2.51
2450	53.88	2.1
2460	56.84	2.34
2470	55.16	2.1
2480	55.17	2.01
2490	56.81	2.98
2500	50.5	2.26

Freq (MHz)	Effi (%)	Gain (dBi)
5000	53.32	2.6
5100	56.35	2.57
5200	58.56	2.55
5300	53.78	2.48
5400	55.14	2.11
5500	54.1	2.7
5600	54.07	2.91
5700	56.97	2.05
5800	54.79	2
5900	49.14	2.49

2. Antenna Radiation Patterns:



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3. Antenna Placement Diagram:



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3. Test Equipment

- The measuring instruments are microwave anechoic chamber, network analyzer and standard antenna.
- Microwave darkroom description:

This is the microwave anechoic chamber installed in Shenzhen by our company. As part of a far-field measurement system, the chamber measures 7.0 meters x4.0 meters x3.0 meters, with a quiet zone measuring 15 cm x15 cm x15 cm.

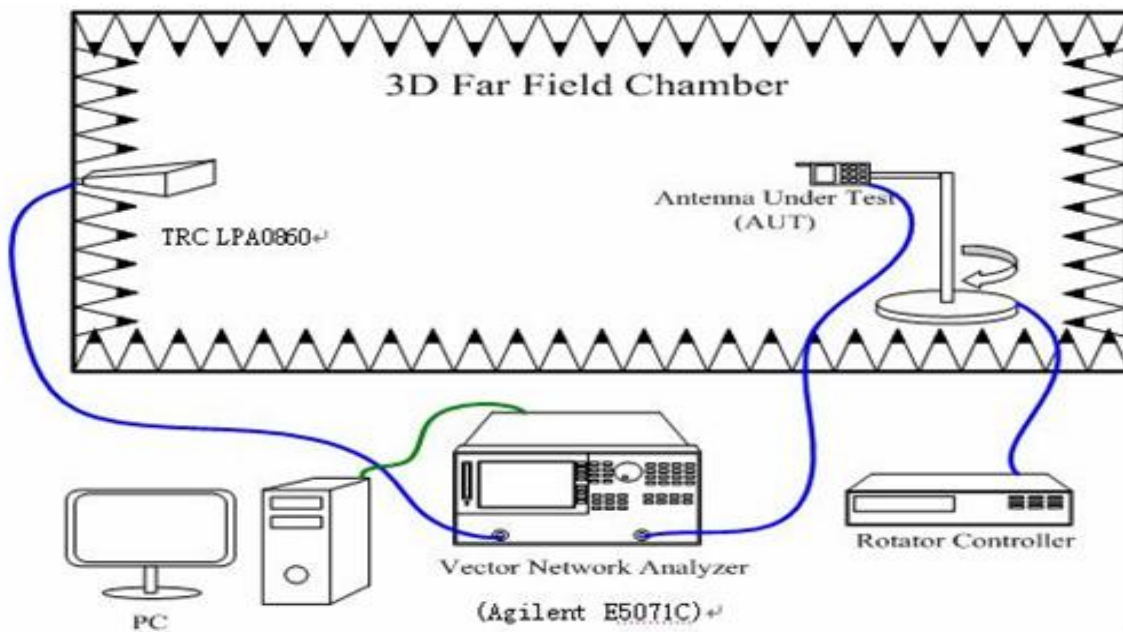


图. 1. 微波暗室内部仪器设置 r.

picture1 The setup diagram for the instrument in the microwave anechoic chamber and the connection diagram of the network analyzer are provided. The distance between the transmitting antenna (model TRC LPA0860 800MHz-6GHz used in this chamber) and the test antenna (AUT) is 1.35 meters. The test antenna is placed on a rotating platform, and by controlling the rotation angle of the platform, both rough and precise measurements can be performed on the test antenna.

Position the test antenna on the rotating platform to measure its 360-degree field strength data across all planes (ZY and ZX planes). Subsequently, replace the test antenna with a standard dipole antenna (the TRC AD series dipole antenna 800MHz~2500MHz used in this anechoic chamber) and measure its 360-degree field strength data to establish a gain calibration reference. The gain value and pattern of the test antenna can then be obtained through conversion using Equation 1.

$$G_{AUT} = G_{stand} + P_{AUT} - P_{stand}$$

G_{AUT} : Gain of AUT

G_{stand} : Gain of Standard Gain Antenna

P_{AUT} : Measured Power of AUT

P_{stand} : Measured Power of Standard Gain Antenna