



Shenzhen Zhongcheng Wireless

Technology Co., Ltd.

Shenzhen unity wireless technology co., ltd

Address: Room 1012,10th Floor, Unit E, Building 7, Hengda Fashion Huigu Building, beside Fulong Road, Dalang Street, Longhua District, Shenzhen

Tel: 0755-23285621 Fax: 0755-23285621

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Antenna Test Report

Customer Name: Ku Hang

Product model: XJ18

Antenna frequency band: 2.4 GHz

Table: Ma Li Na TEL :0755-23285621	Radio Frequency Engineer: Ma Lina TEL : 0755-23285621	
Date: 2025-12.17		

Debugging Resume:

Revision Date	Revision Content	expurgator	Original Version
2025.12.17	First Debugging	Ma Lina	V1.0

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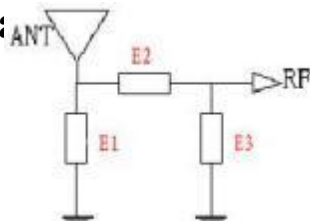
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1. Antenna matching (original antenna m

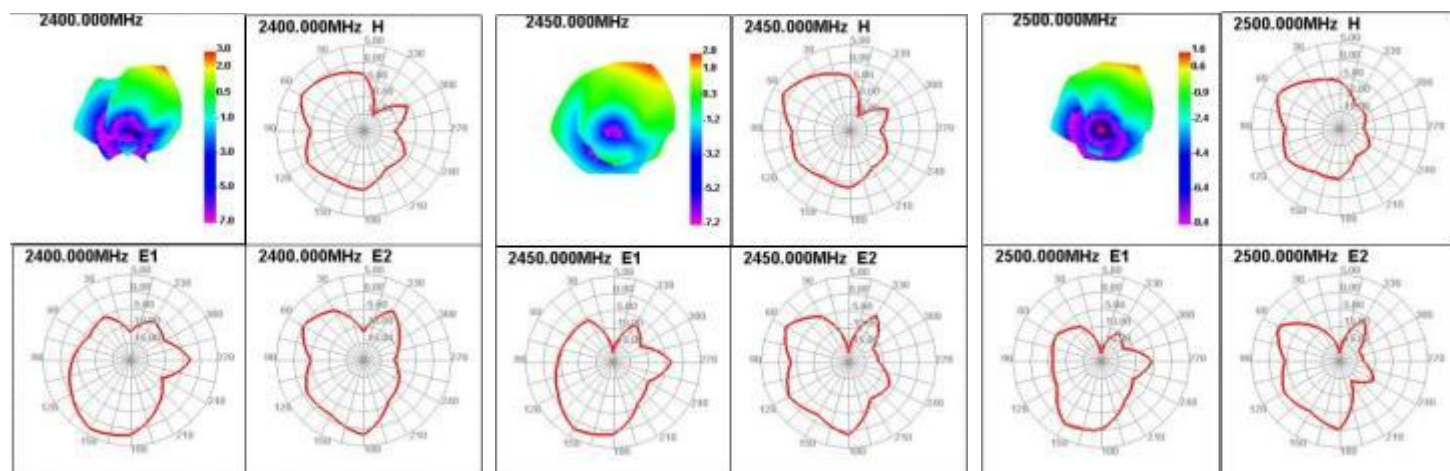
	E1	E2	E3
	N/A	0 ohms	N/A



WIFI passive test data:

Freq (MHz)	Effi (%)	Gain (dBi)
2400	45.12	2.98
2410	45.43	2.81
2420	43.51	2.62
2430	42.33	2.56
2440	42	2.59
2450	43.29	2.84
2460	42.82	2.95
2470	41.35	2.73
2480	38.12	2.45
2490	40.88	2.74
2500	30.55	1.58

Antenna Apple Image:



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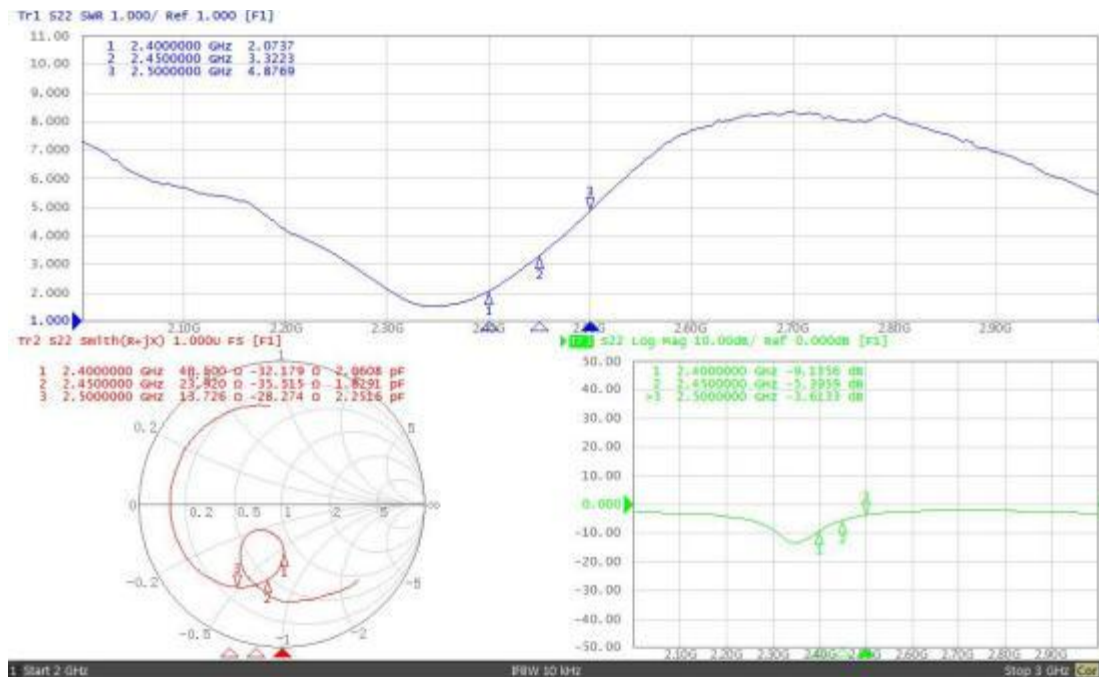
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S11 Antenna Standing Wave Chart:



Antenna placement:



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testing facility

Measurement instruments: microwave anechoic chamber, network analyzer, standard antenna.

Microwave Anechoic Chamber Description:

This is the microwave anechoic chamber established by our company in Shenzhen. The chamber constitutes a far-field measurement system, measuring 7.0 meters × 4.0 meters × 3.0 meters in dimensions, with a quiet zone measuring 15 centimeters × 15 centimeters × 15 centimeters.

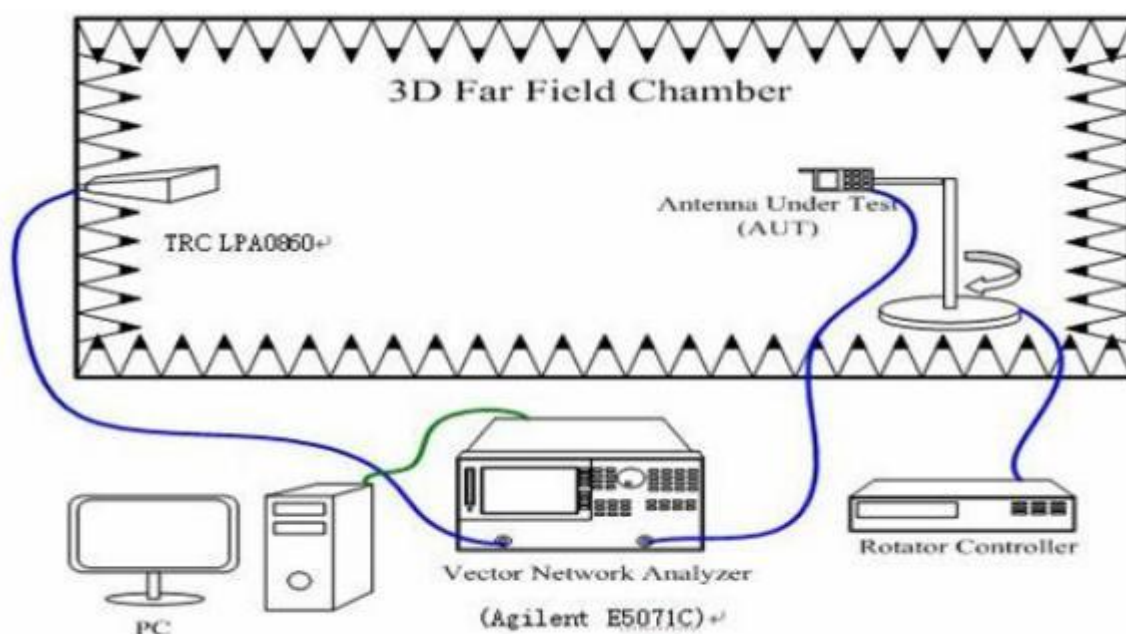


图. 1. 微波暗室内部仪器设置 r.

Figure 1 shows the instrument setup in the microwave anechoic chamber and the connection diagram of the network analyzer. The distance from the transmitting antenna (model TRC LPA0860 800 MHz–6 GHz, used in this chamber) to the test antenna (AUT) is 1.35 meters. The test antenna is mounted on a rotating platform, allowing for both approximate and precise measurements by controlling the platform's rotation angle.

Place the antenna under test on the rotating platform and measure the 360-degree field strength data across all planes (ZY plane and ZX plane). Then, place the antenna under test...

The line was replaced with a standard dipole antenna (the model used in this anechoic chamber is the TRC AD series dipole antenna, operating at 800 MHz–2500 MHz). The 360-degree field strength data were measured to establish a standard gain value, which was then converted using Equation 1 to obtain the gain and direction pattern of the antenna under test.

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

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