

Shenzhen NiYi Technology Co., Ltd

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Sample Approved Sheet

NiYi (XNO-P190) Acknowledgment

Customer Name Shenzhen Xin Neng Yuan Technology Co., Ltd.

Client Type XNO-P190

Brand 2.4G copper tube antenna L-70mm

NiYi Judgment Audit Team

Formulate	Check	Ratify	Acknowledge the book completion time
ZhongXiaoMing	HuangZhiLing	Daitingting	2025.11.26

(Ruihe) Judgment Audit Team

Acknowledgement Number _____

Proving time

acknowledge	check	ratify	Acknowledge the book completion time

Project Review ☐ Three acknowledgements ☐ Specifications/drawings

☐ examining report ☐ Specimen PCS ☐ Safety standard ☐ HSF

Appraisal report ☐ Accept

☐ Conditional acceptance

☐ Refuse

Confidential Information

Items	Date	Version	The revised notes	Notes
1	2025.11.26	A0	For the first time	
2				

1. Antenna picture

The report mainly provides the test status of the electrical properties parameters of XNO-P190. The XNO-P190 antenna is a **BT** Band . The antenna Picture and assembly are shown below.



Antenna picture & assembly picture

2. Antenna Test Equipment Introduction

Test of antenna input characteristics using Agilent E5071C and Agilent 5062A vector network analyzer; The radiation pattern of the antenna are tested using the Satimo starlab 3D near field Anechoic Chamber , and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

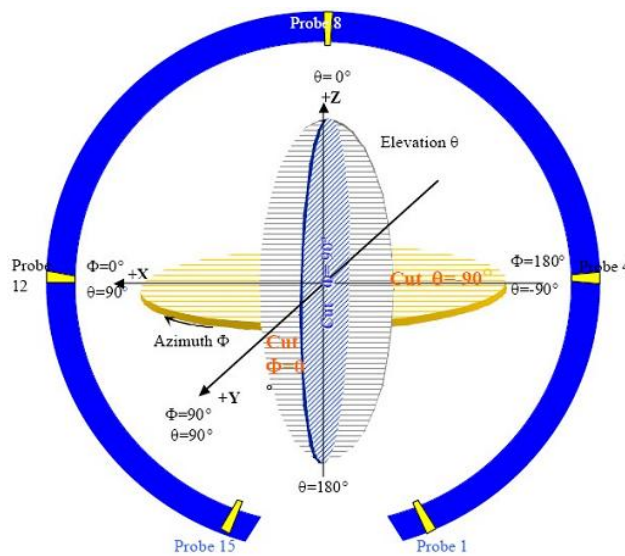


图 4 3D 微波暗室测试坐标系 (back view)

3. Electrical Specification

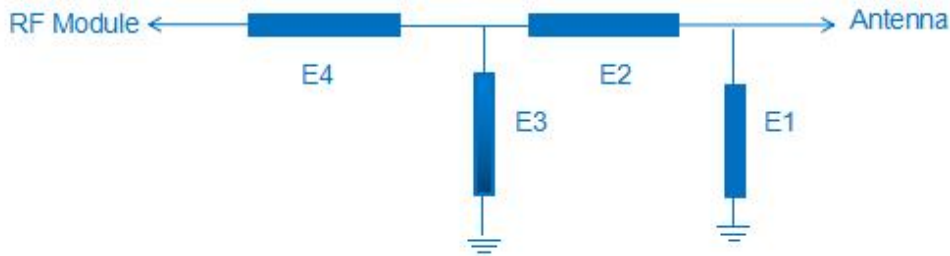
3-1 Passive S11 parameter

Measuring Method is a 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.



Antenna S11

3-2 Antenna Matching Network



The original motherboard matching circuit

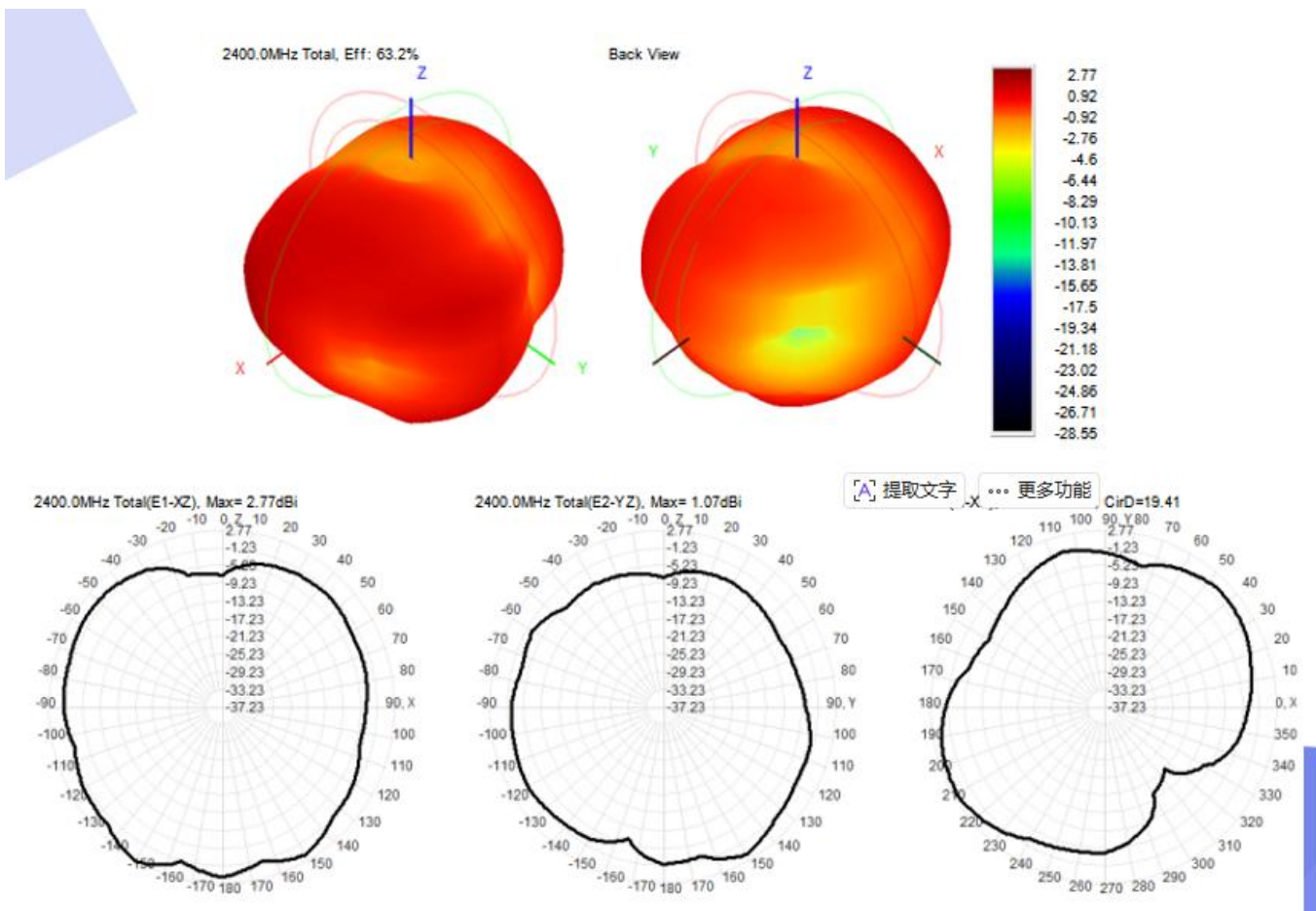
4. Test

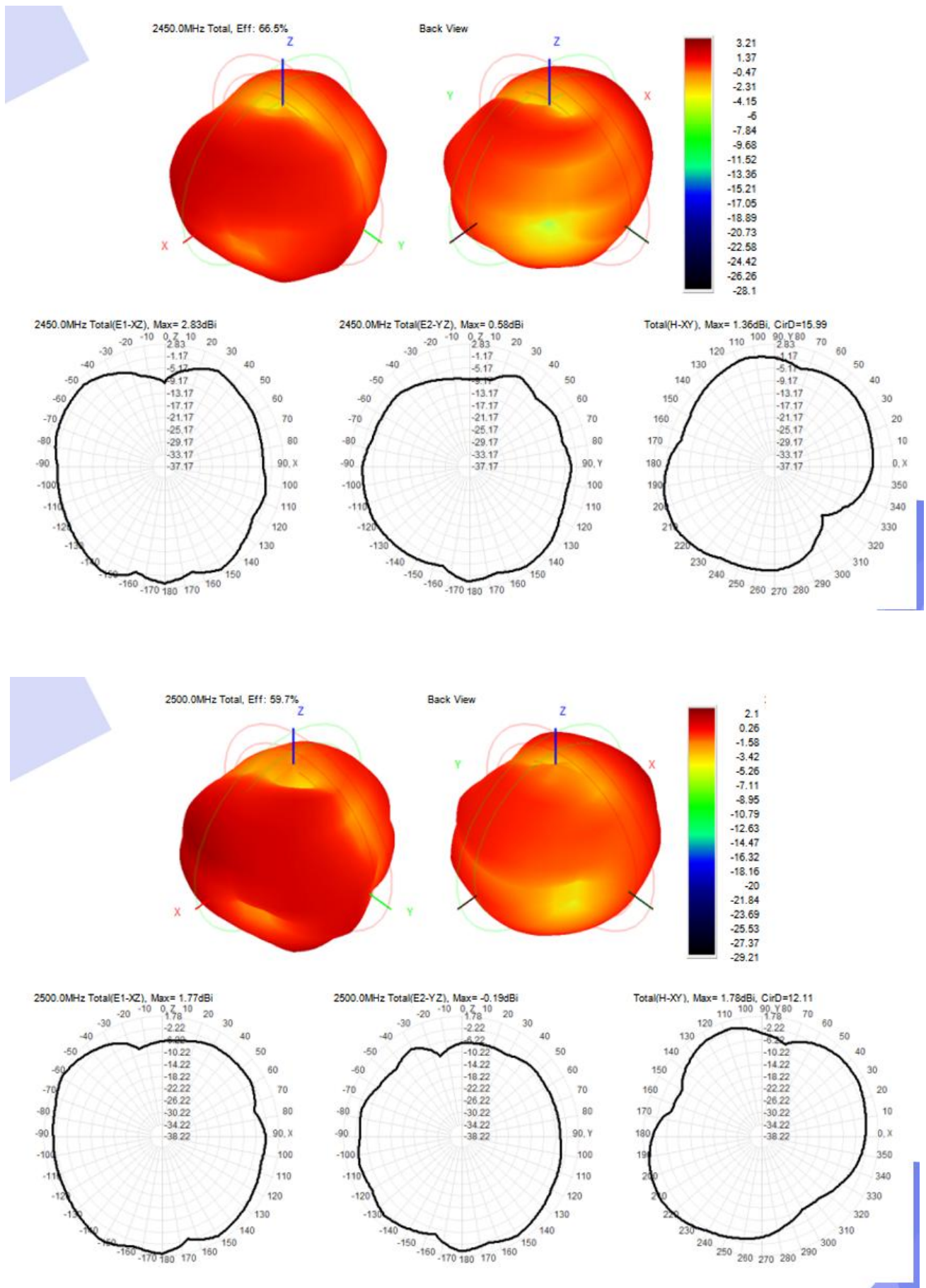
4.1 Active test data of the entire machine

Test Equipment:	R&S CMW500			
Test Condition:	3D chamber			
Band	Wireless Protocol	Channel	TRP(dBm)	TIS(dBm)
WIFI-2.4G	802.11b (11M)	1	23.35	-74.73
		6	22.79	-77.61
		11	23.28	-67.40
WIFI-2.4G	802.11g (54M)	1	20.28	-73.46
		6	21.33	-69.89
		11	21.53	-72.70
WIFI-2.4G	802.11n (MCS7)	1	21.18	-65.28
		6	21.07	-64.51
		11	19.81	-66.10

4.2 Antenna Efficiency&Gain

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	2.77	3.19	2.93	3.21	3.11	3.21	2.98	3.16	2.64	2.26	2.10
Efficiency (%)	63.24	69.18	61.91	64.06	63.29	66.55	63.76	66.47	61.00	57.35	59.72





4. Mechanical Specification:

Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure 8

