

天线测试数据报告

Antenna test data report

产品名称：智能门锁

Product Name: smart door lock

天线类型：外置天线

Antenna type: External antenna

天线型号：KD003PR0 钢片天线

Antenna type: KD003PR0 Sheet steel antenna

天线制造商：东莞浩凯五金制品

Antenna manufacturer: Dongguan Haokai hardware products

制造商地址：广东省东莞市大朗镇犀牛陂塘督路 2 号 101 室

Manufacturer's address: Room 101, No. 2, Rhino PI Tangdu Road, Dalang Town, Dongguan City, Guangdong Province

Standards: ANSI/ IEEE 149-2021

Test Result: Pass

测试设备：网络分析仪

设备型号：E5071C

校准周期：2024.8-2025.8

Test device [equipment: VNA

Unit type: E5071C

Periodic calibration: 2024.8-2025.8

测试地点：深圳市万物相连天线公司

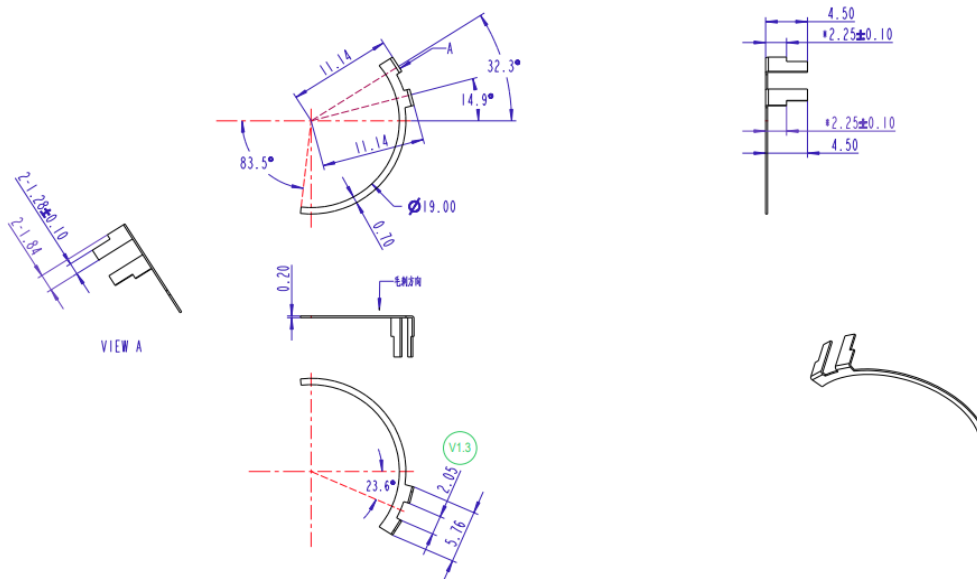
Type de test : Shenzhen all things connected antenna company

地址：深圳市南山区桃源街道桃源社区高发西路 28 号方大广场 3.4 号研发楼 4 号楼 1101

Address:Room 1101, Building 4, R&D Building, No. 3.4, Fangda Plaza, No. 28, Gaofa West Road, Taoyuan Community, Taoyuan Sub-district, Nanshan District, Shenzhen City

一、天线尺寸图

Antenna size diagram



二、产品天线图

Product chart



三、天线测试配置 Antenna Test Configurations

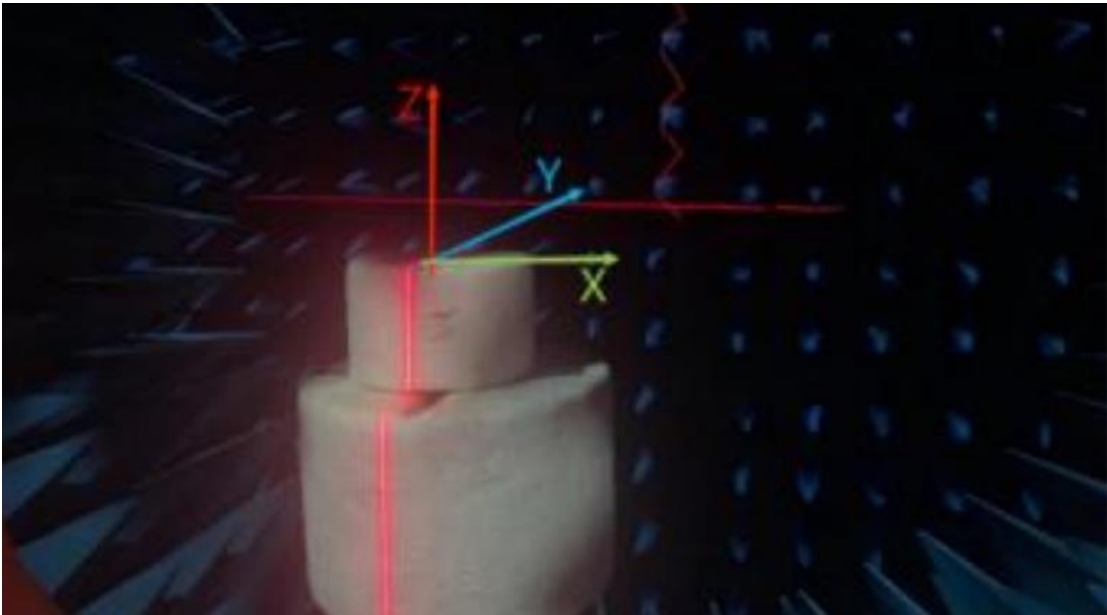
3.1 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Network Analyzer	Agilent	E5071C	MY46110140	2024-05-30	2025-05-29
OTA Chamber	ETS	AMS-8923-150	TJ2235-Q1793	2022-11-30	2025-11-29
Antenna Measurement System	ETS	EMQuest EMQ-100 V1.13 Build 21267	1685	N/A	N/A

3.2 Measurement Uncertainty

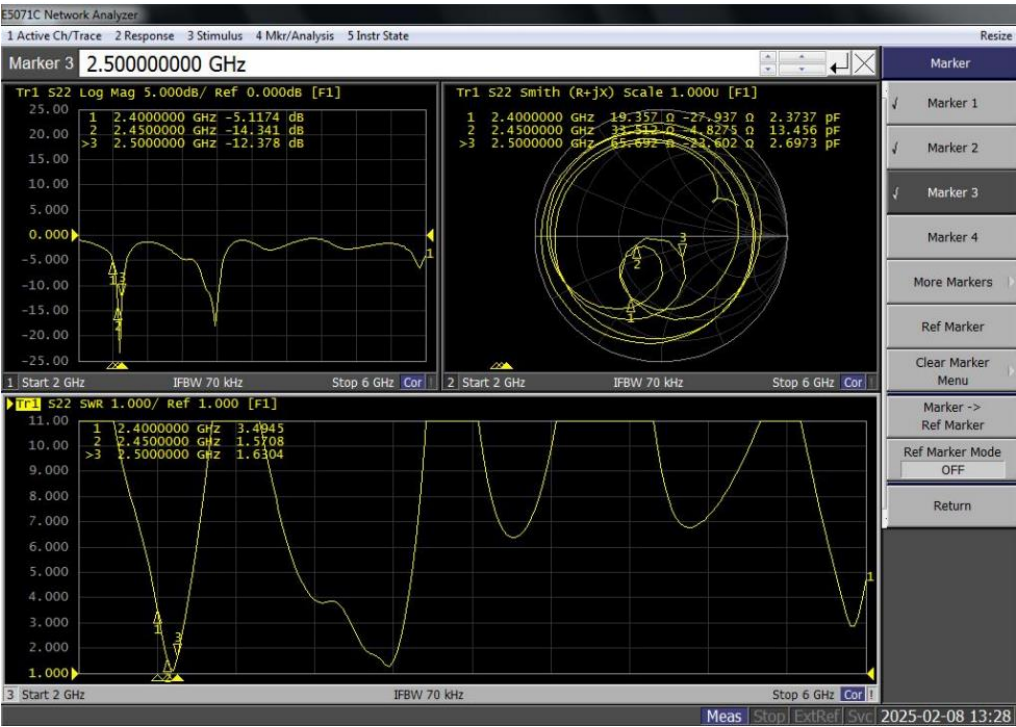
Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the“Guide to the Expression of Uncertainty in Measurement” (GUM) published by ISO. When the test result is a critical value,we will use the measurement uncertainty give the judgment result based on the 95%Confidence intervals.



四、天线驻波比

Antenna standing wave ratio



五、无源效率

Passive efficiency

2.4

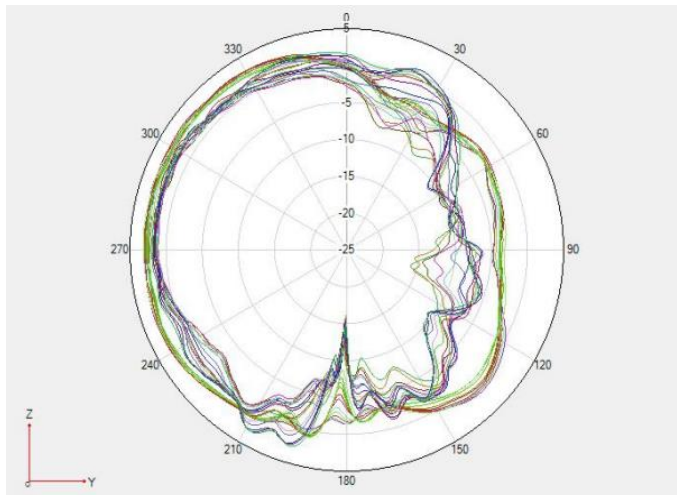
Frequency/Mhz	Efficiency / dB	Efficiency / %
2400	-4.84	32.8
2410	-5.03	31.38
2420	-5.25	29.82
2430	-5.38	28.96
2440	-4.94	32.09
2450	-4.61	34.62
2460	-4.45	35.91
2470	-4.65	34.25
2480	-4.91	32.27
2490	-4.96	31.91
2500	-4.72	33.7

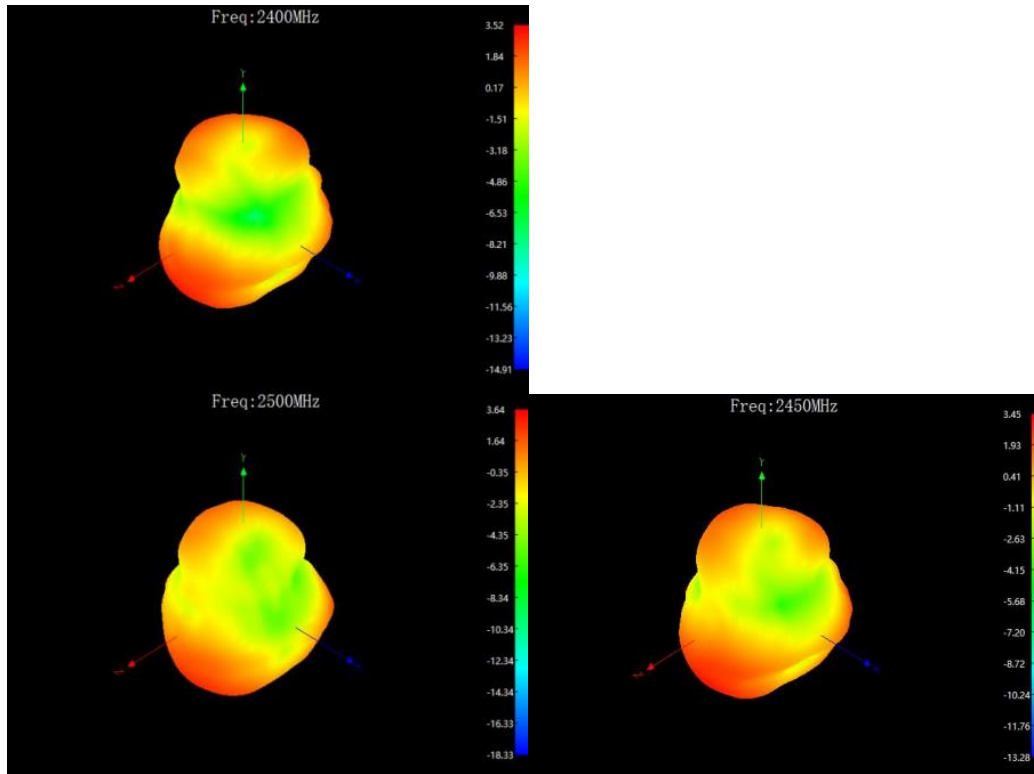
增益

Frequency/MHz	MaxGain/dBi	AvgGain/dBi
2400	3.52	-1.09
2410	3.35	-1.17
2420	3.35	-1.26
2430	3.25	-1.31
2440	3.19	-1.13
2450	3.45	-0.99
2460	3.54	-0.92
2470	3.31	-1.01
2480	3.21	-1.12
2490	3.25	-1.14
2500	3.64	-1.04

六、2D3D 方向图

2D3D directional diagram





Test: Zhaoting Wu

Laboratory:Shenzhen all things connected communication Co., LTD

Address:Room 1101, Building 4, R&D Building, No. 3.4, Fangda Plaza, No. 28, Gaofa West Road, Taoyuan Community, Taoyuan Sub-district, Nanshan District, Shenzhen City

Date: 2025-03-18