



TEST REPORT

APPLICANT : Tianjin Jidian Road Technology Co.,Ltd

PRODUCT NAME : antenna

MODEL NAME : snake shaped inverted-F antenna

TRADE NAME : Key-Disp

BRAND NAME : N/A

STANDARD(S) : IEEE Std 149-2021

RECEIPT DATE : 2024-01-26

TEST DATE : 2024-01-26

ISSUE DATE : 2024-02-01



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Change History		
Version	Date	Reason for change
1.0	2024-02-01	First edition

1. Technical Information

Note: Provide by applicant.

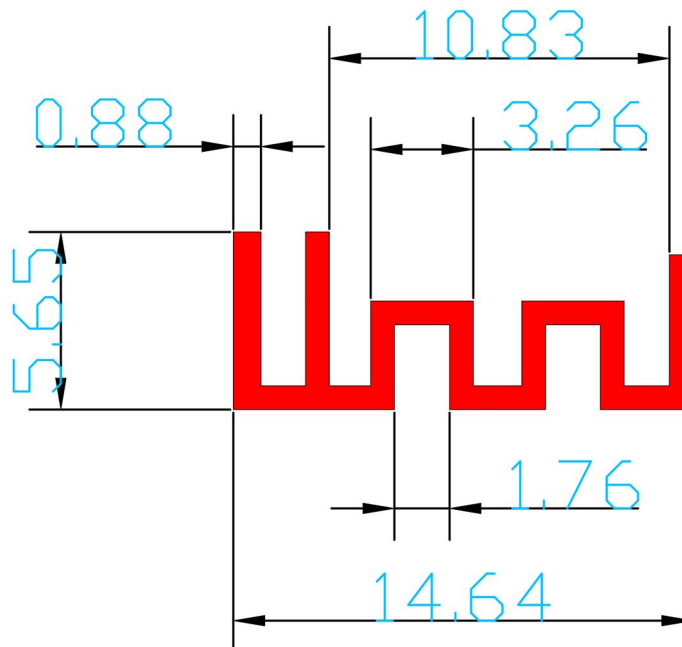
1.1. Applicant and Manufacturer Information

Applicant:	Tianjin Jidian Road Technology Co.,Ltd
Applicant Address:	S7-203, Block A, Haitang Zhongchuang Street, Yarun Road, Xianshuigu Town, Jinnan District, Tianjin
Manufacturer:	Tianjin KDS Technology Co., Ltd
Manufacturer Address:	# 183, Yougu new Tech park, Beichen District, Tianjin

1.2. Equipment Under Test (EUT) Description

Wireless Type	Bluetooth
Frequency	2400MHz-2500MHz
IMEI	N/A
Sample No.	1#

Dimension:





2. Test Results

2.1. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	IEEE Std 149-2021	IEEE Recommended Practice for Antenna Measurements

2.2. Test Conditions

Test Environment Conditions:

Relative Humidity(%):	25 - 75
Temperature(°C):	10 - 30

2.3. 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.

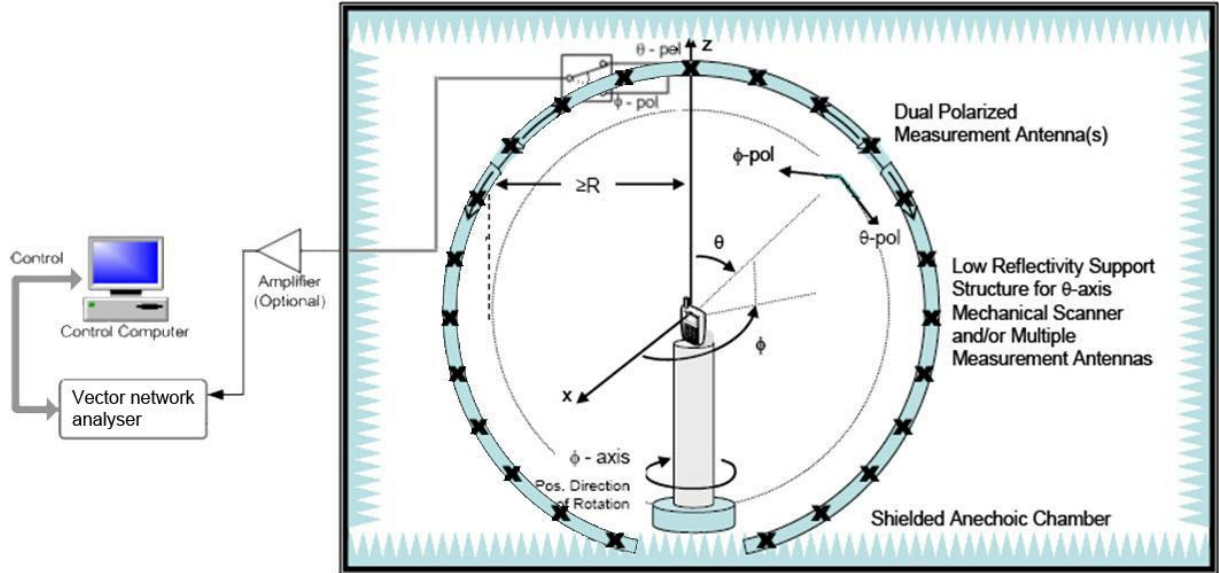


2.4. Test Results lists

2.4.1. Gain

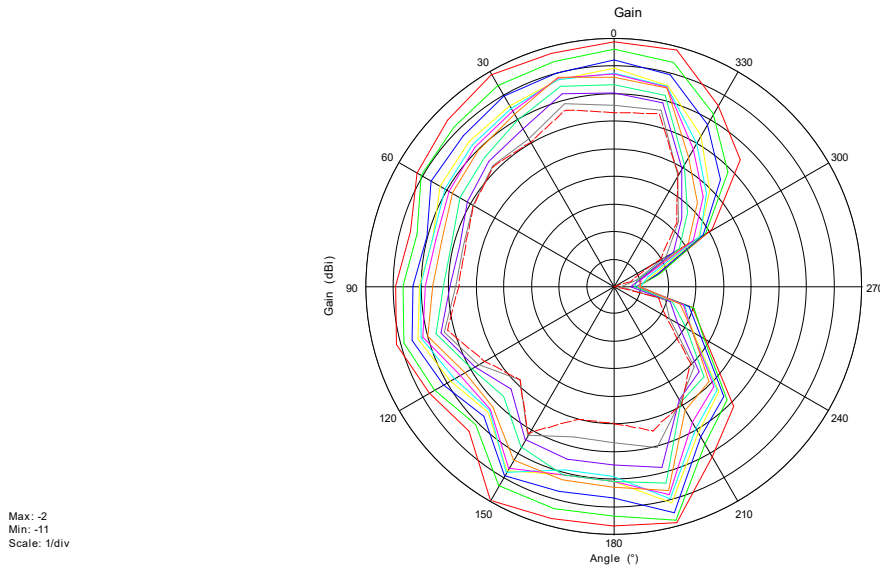
Frequency (MHz)	Gain(dBi)
2400	-1.10
2410	-1.41
2420	-2.02
2430	-2.45
2440	-2.44
2450	-2.63
2460	-2.80
2470	-2.79
2480	-3.05
2490	-3.39
2500	-3.62

Annex A Test Setup Photos

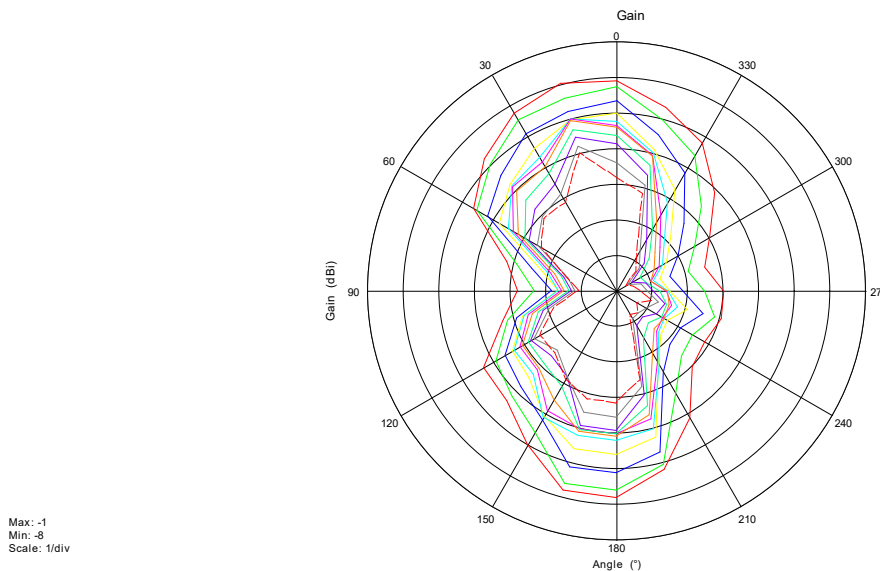


Annex B Figures

1. 2D Radiation Pattern

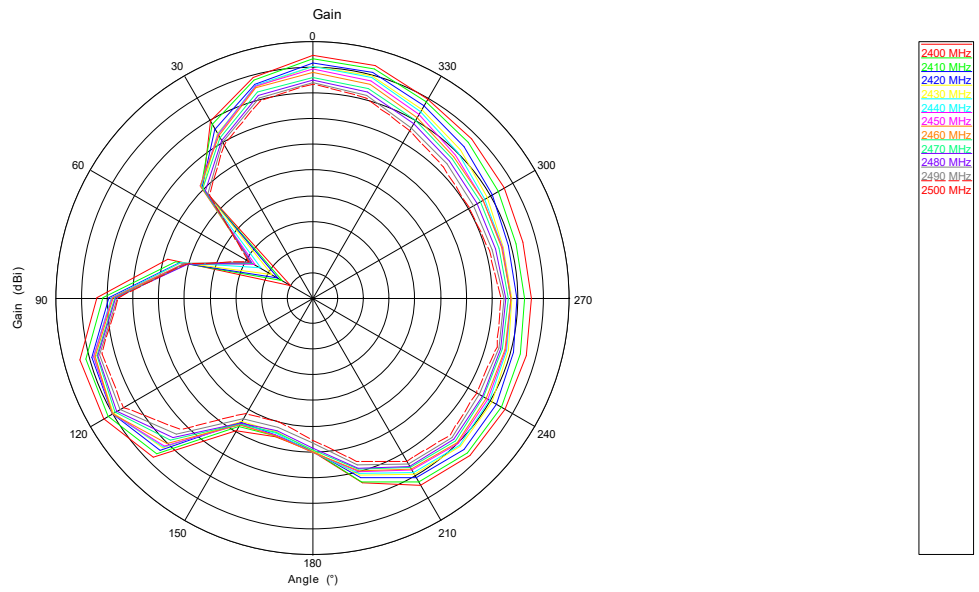


Phi=0°



Phi=90°

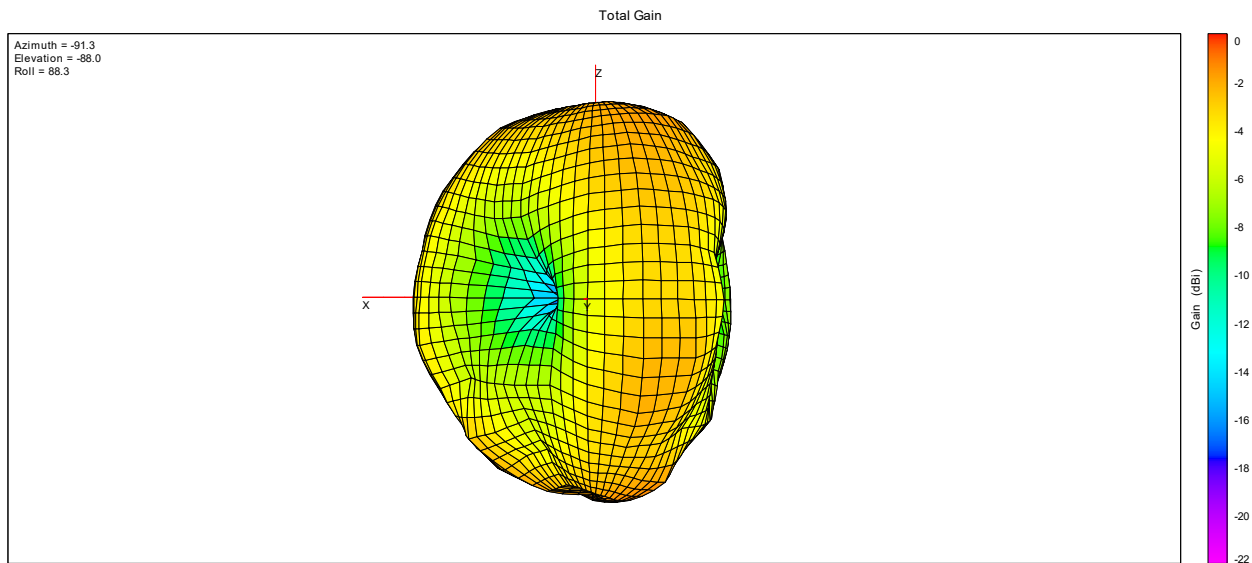




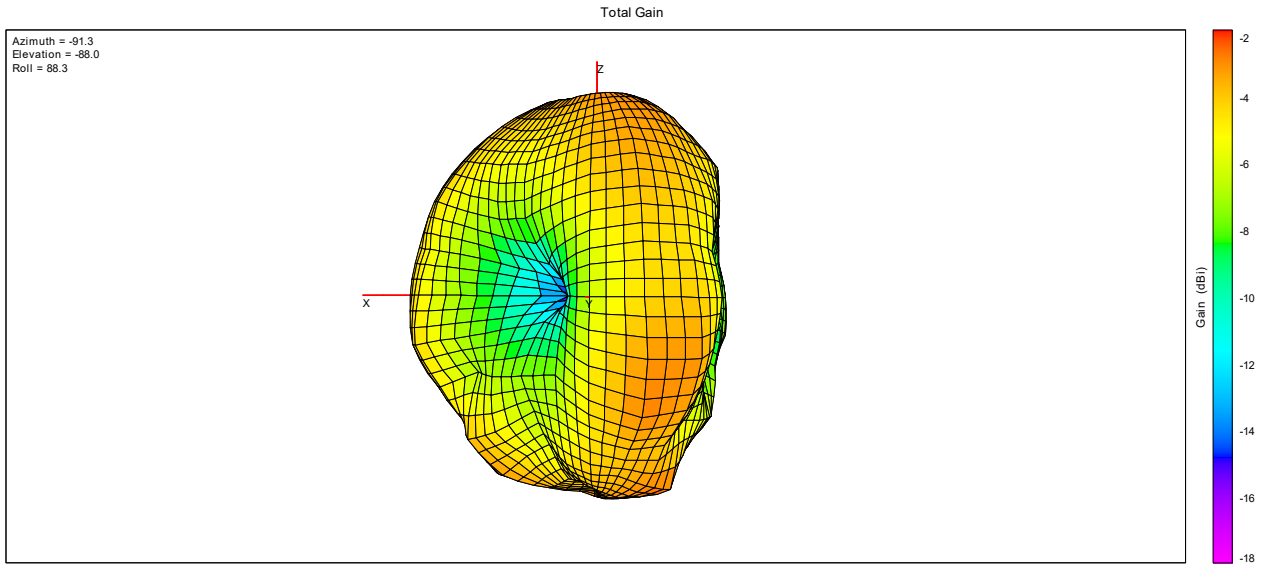
-2
22
:2/div

Theta=90°

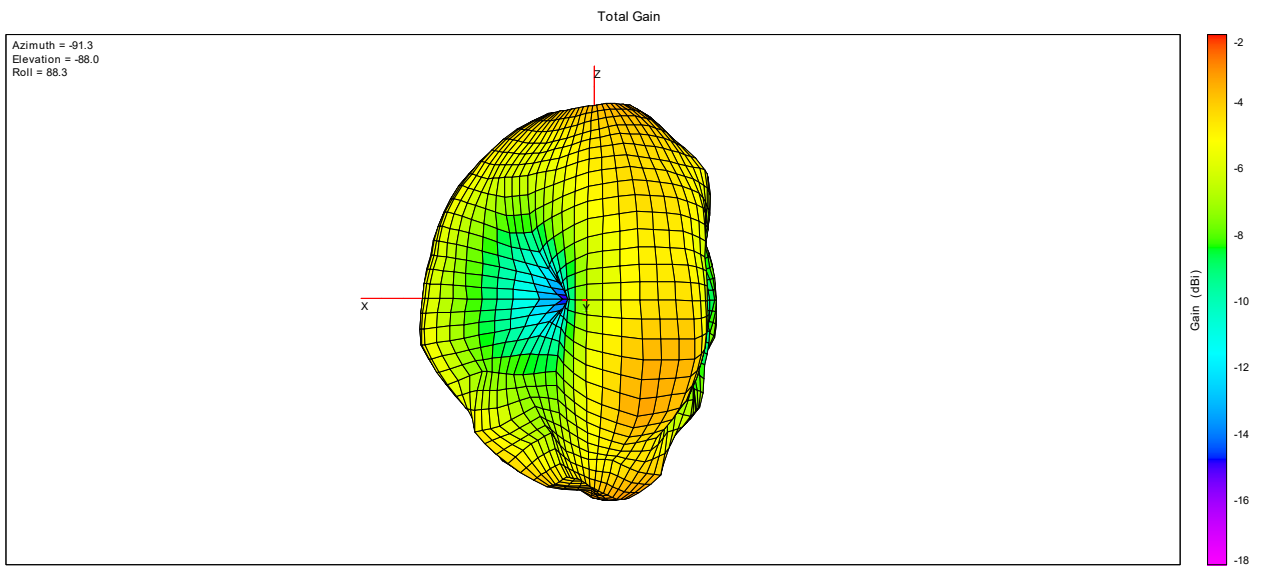
2. 3D Radiation Pattern



2400MHz



2440MHz



2480MHz



Annex C General Information

1.1 Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen , Guangdong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

1.2 Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen , Guangdong Province, P. R. China

1.3 Test Equipments Utilized

No.	Equipement Name	Serial No.	Type	Manufacturer	Cal.Date	Cal.Due Date
1	Network Analyzer	MY46110140	E5071C	Agilent	2023.06.21	2024.06.20
2	OTA Chamber	TJ2235-Q1793	AMS-8923 -150	ETS	2022.11.30	2025.11.29

1.4 Test Software Utilized

No.	Software Name	Serial No.	Version	Manufacturer
1	Antenna Measurement System	1685	EMQuest EMQ-100 V 1.13 Build 21267	ETS

Note:The Main report is end here and the other Annex D will be submitted separately.

————— END OF MIAN REPORT —————