REPORT No.: SZ23050028E10

TEST REPORT

APPLICANT	:	Linkplay Technology Inc.
PRODUCT NAME	:	IoT Module
MODEL NAME	:	S21
TRADE NAME	:	Linkplay
BRAND NAME	:	Linkplay
STANDARD(S)	:	IEEE Std 149-2021
RECEIPT DATE	:	2023-05-16
TEST DATE	:	2023-05-16
ISSUE DATE	:	2023-06-05

Edited by: Fang Jinshan(Rapporteur)

Approved by: Chi Shide(Supervisor)

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MORLAB

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DIRECTORY

Change History		
Version	Date	Reason for change
1.0	2023-06-05	First edition

1.Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Linkplay Technology Inc.
Applicant Address:	8000 Jarvis Avenue Suite #130, Newark, CA 94560
Manufacturer:	Linkplay Technology Inc.
Manufacturer Address:	8F-8036, Qianren Building, No.7, Yingcui Road, Jiangning District, Nanjing, China

1.2. Equipment Under Test (EUT) Description

Wireless Type	N/A
Frequency	2400MHz-2500MHz
IMEI	N/A
Product HW Version	V02
Product SW Version	v4.2-beta1-328-g97688dc2-dirty
Sample No.	16#

Note: The sample photos shall be provided separately in Annex C according to customer requirements.

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

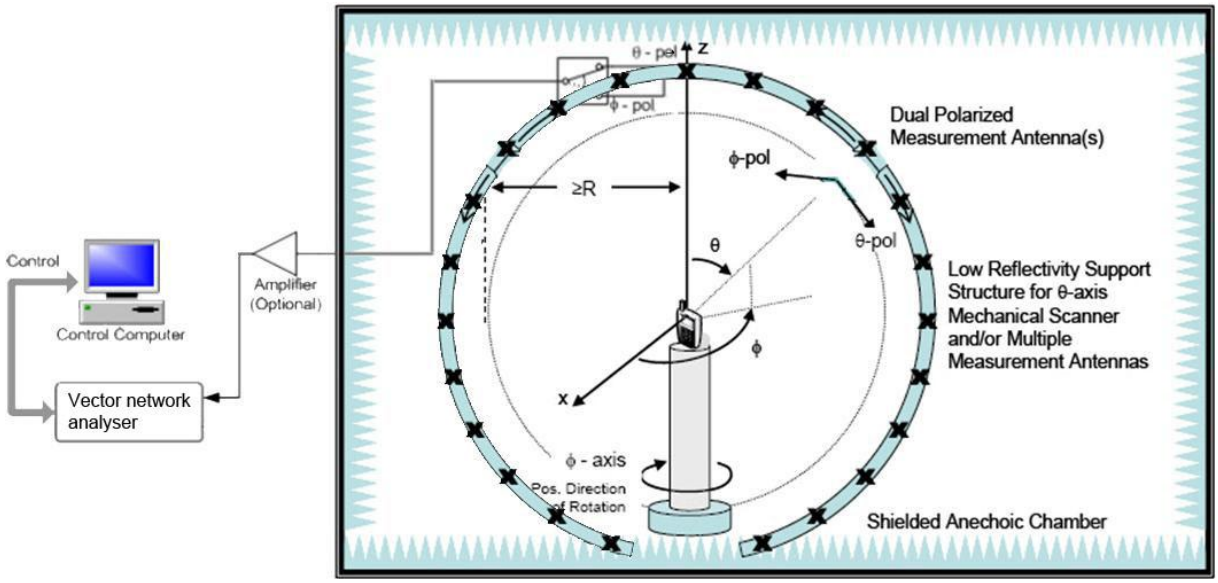
2.4.1.Gain

Frequency (MHz)	Gain(dBi)
2400	2.46
2410	2.50
2420	2.47
2430	2.51
2440	2.64
2450	2.54
2460	2.38
2470	2.14
2480	2.05
2490	2.09
2500	2.29

2.4.2.VSWR

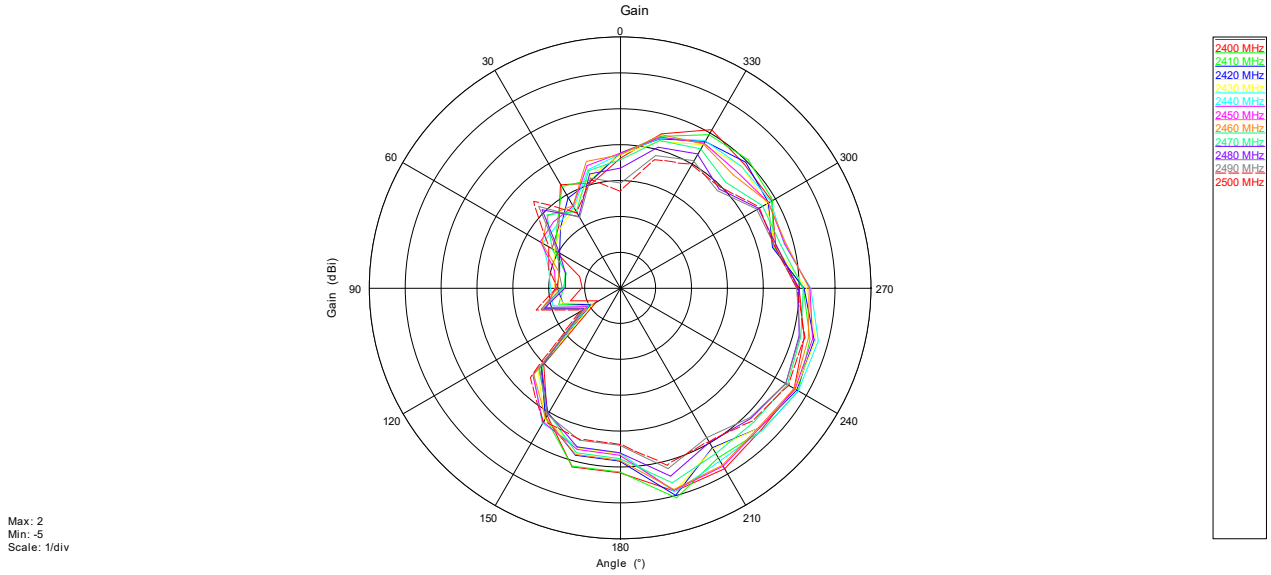
Frequency	VSWR
2400MHz	1.88
2450MHz	1.70
2500MHz	2.17

Annex A Test Setup Photos

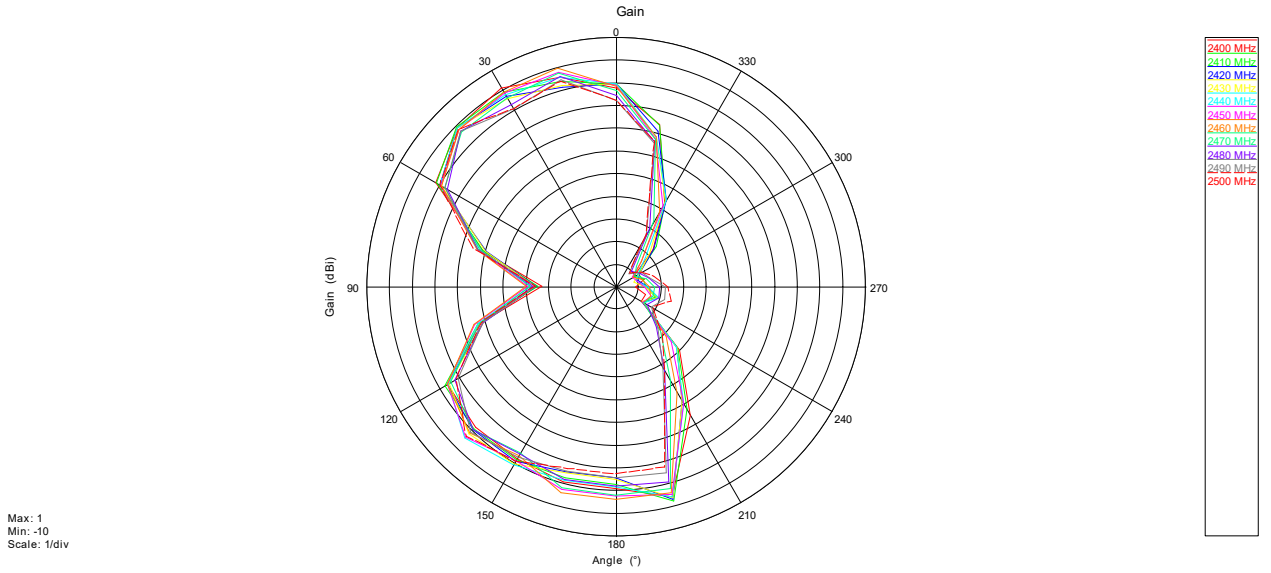


Annex B Figures

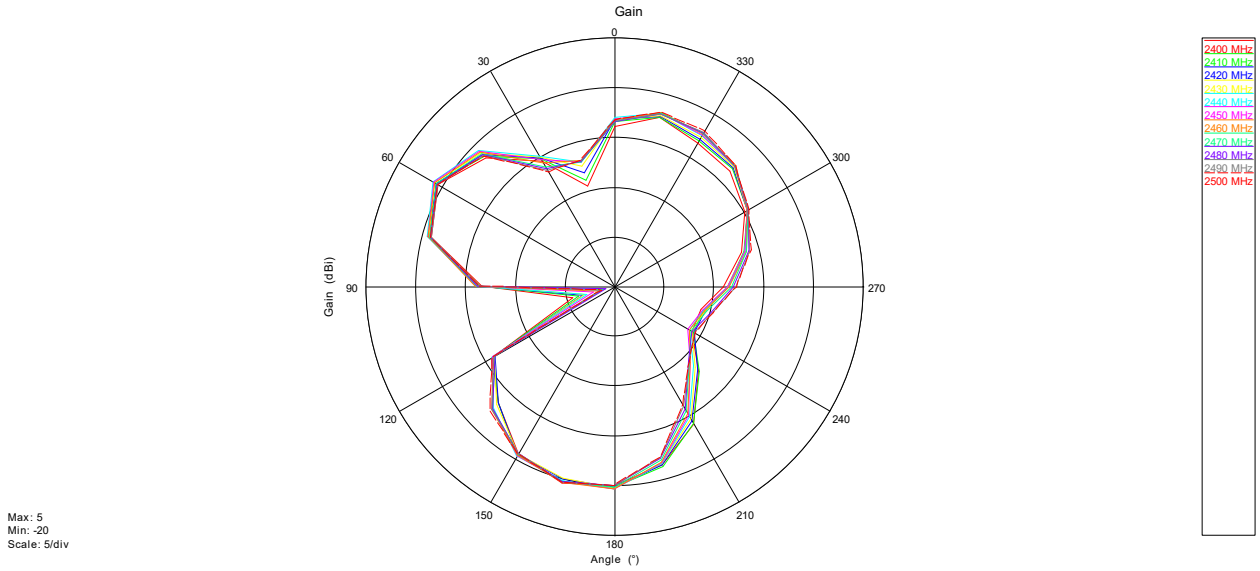
1. 2D Radiation Pattern



Phi=0°

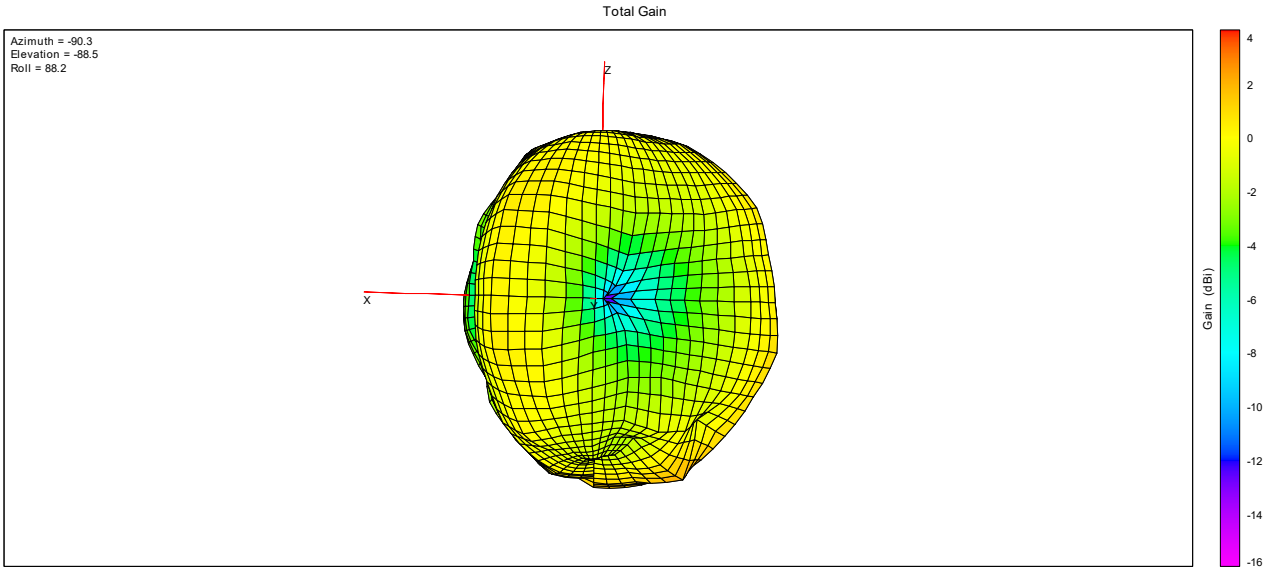


Phi=90°

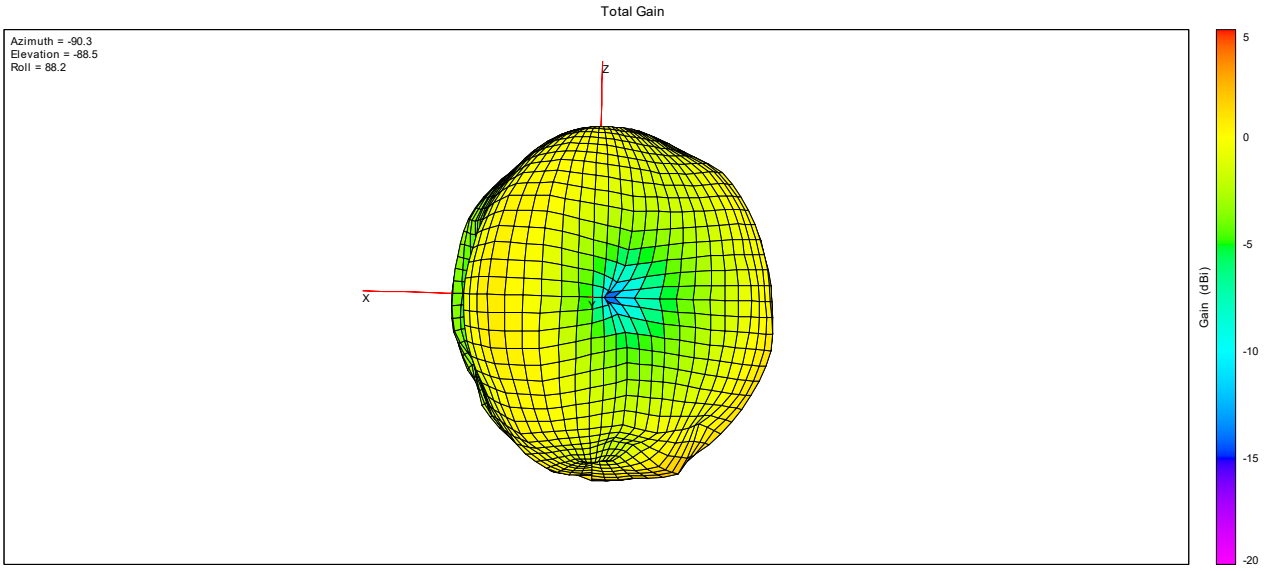


Theta=90°

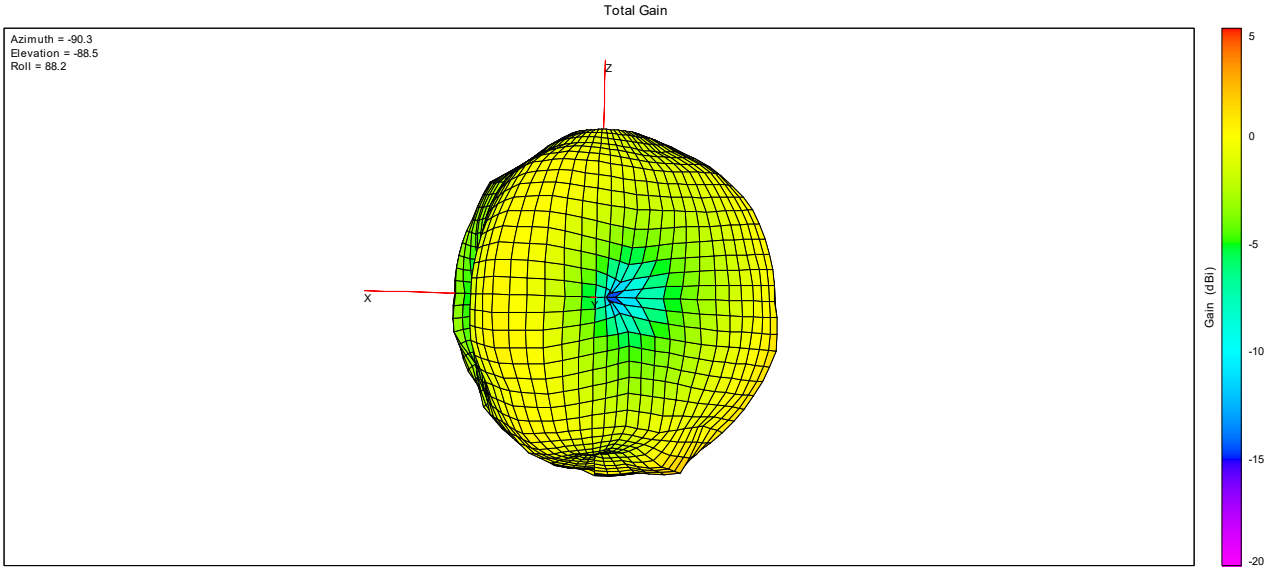
2. 3D Radiation Pattern



2400MHz

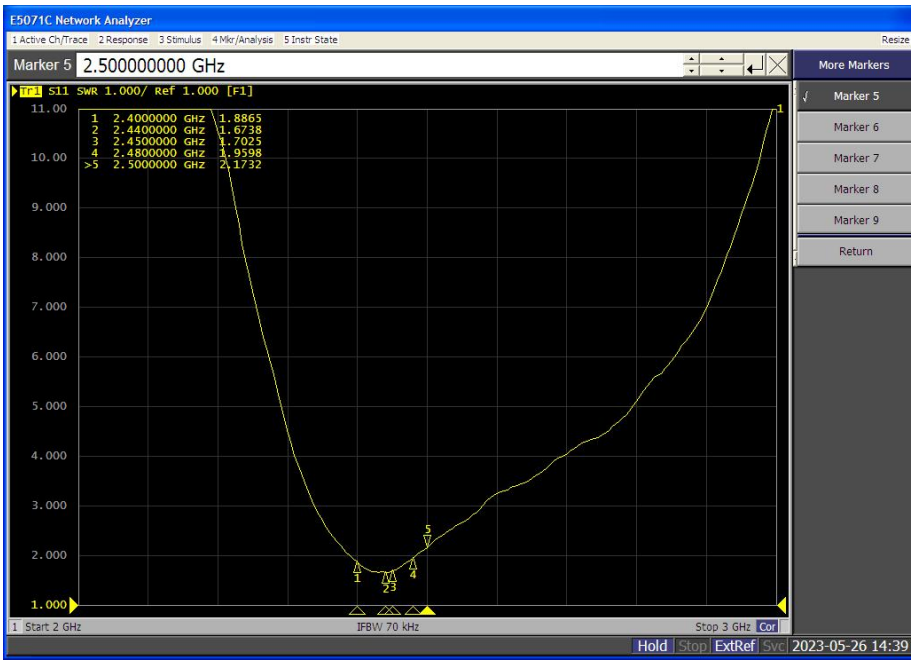


2450MHz



2500MHz

3. VSWR


E5071C Network Analyzer
1 Active Ch/Trace
2 Response
3 Stimulus
4 Mkr/Analysis
5 Instr State
Resize
Marker 5
2.500000000 GHz
More Markers
Marker 5
Marker 6
Marker 7
Marker 8
Marker 9
Return
Tr1 S11 SWR 1.000/ Ref 1.000 [F1]
1 2.4000000 GHz 1.8865
2 2.4400000 GHz 1.6738
3 2.4500000 GHz 1.7025
4 2.4800000 GHz 1.9598
>5 2.5000000 GHz 2.1732
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 2 GHz
IFBW 70 kHz
Stop 3 GHz
Cor
Hold
Stop
ExtRef
Svc
2023-05-26 14:39

Annex D 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	2022.07.04	2023.07.03
2	OTA Chamber	TJ2235-Q1793	AMS-8923 -150	ETS	2022.11.30	2025.11.29
3	Antenna Measurement System	1685	EMQuest EMQ-100 V 1.13 Build 21267	ETS	N/A	N/A

END OF REPORT