TEST REPORT

Applicant:	Shenzhen Kaichuangliu Optoelectronics Co., Ltd.
Address:	Building E, East Zone, F Floor, Huachuangda Science and Technology Park, Hangcheng Avenue, Xixiang, Bao'an District, Shenzhen City, Guangdong Province
Equipment Type:	Bluetooth Remote
Model Name:	ONNVTPROKIT-NOC, 36020825 (KM-1075, KT-3116) ONNRL8RGBKIT-NOC, 36020826 (KM-1033D)
Brand Name:	N/A
Test Standard:	IEEE Std 149-2021
Sample Arrival Date:	Nov. 25, 2025
Test Date:	Dec. 01, 2025
Date of Issue:	Dec. 03, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Mai Jintian **Checked by:** Xia Long **Approved by:** Tolan Tu (Testing Director)

Revision History

Version	Issue Date	Revisions
Rev. 01	Dec. 03, 2025	Initial Issue

TABLE OF CONTENTS

1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Building 2, Intelligent Connected Vehicle Industrial Park, No. 55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen, Guangdong Province, China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☑ Building 2, Intelligent Connected Vehicle Industrial Park, No. 55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen, Guangdong Province, China

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Shenzhen Kaichuangliu Optoelectronics Co., Ltd.
Address	Building E, East Zone, F Floor, Huachuangda Science and Technology Park, Hangcheng Avenue, Xixiang, Bao'an District, Shenzhen City, Guangdong Province

2.2 Manufacturer Information

Manufacturer	N/A
Address	N/A

2.3 General Description for Equipment under Test (EUT)

EUT Name	Bluetooth Remote
Model Name Under Test	ONNVTPROKIT-NOC, 36020825 (KM-1075, KT-3116) ONNRL8RGBKIT-NOC, 36020826 (KM-1033D)
Antenna Type	PCB Antenna
Dimensions	9*4 mm

2.4 Ancillary Equipment

Note: Not applicable.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	IEEE Std 149-2021	IEEE Standard Test Procedures for Antennas

3.2 Test Verdict

Report Section	Description	Remark
ANNEX A.1	Gain and Efficiency	--
ANNEX A.2	VSWR	--
ANNEX B	Radiation Pattern	--

3.3 Test Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

Item	Uncertainty
VSWR(S11)	±0.61
Gain	±1.92dB

4 GENERAL TEST CONFIGURATIONS

4.1 Test Condition

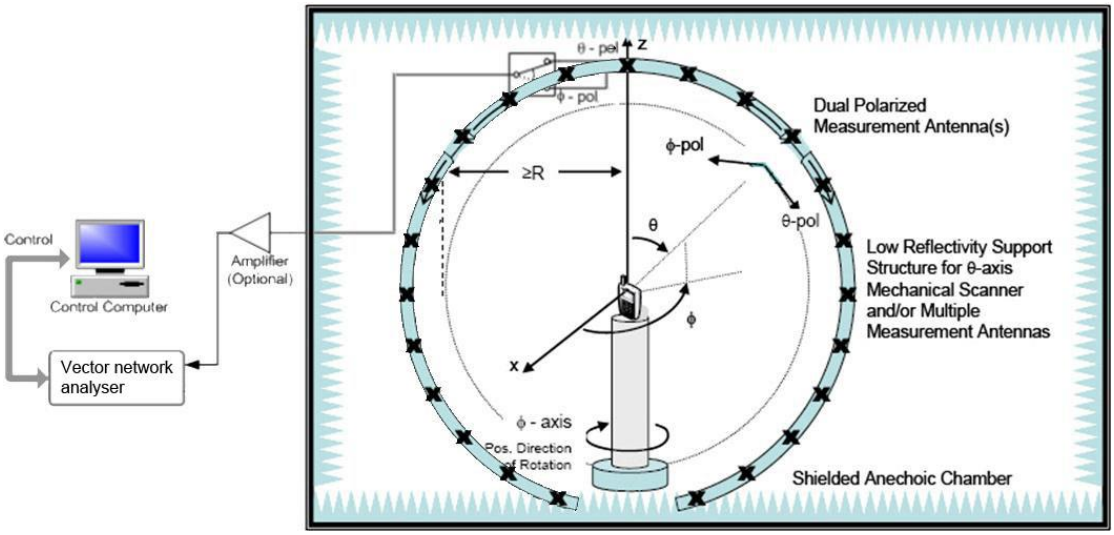
Environment Parameter	Selected Values During Tests			
	Ambient Pressure(KPa)	Temperature(℃)	Voltage	Relative Humidity (%)
Normal Temperature, Normal Voltage (NTNV)	101	22	N/A	43

4.2 Test Equipment List

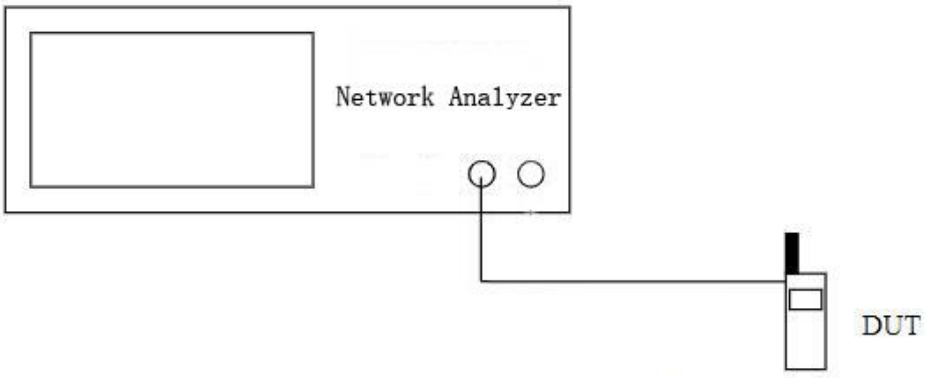
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
SG24 Multi-probe Antenna Measurement System	SATIMO	SG24-L	1101855-0001	2025.11.03	2028.11.02
Vector Network Analyzer	Agilent	E5071B	MY42404001	2025.01.23	2026.01.22
Description	Manufacturer	Name		Version	
Test Software	MVG	SPM		V 1.8	

4.3 Test Setup

4.3.1 Antenna gain, efficiency and radiation pattern test setup



4.3.2 S11 parameter test setup



4.4 Test Frequencies

Test Frequencies	2400MHz, 2402MHz, 2404MHz, 2406MHz, 2408MHz, 2410MHz, 2412MHz, 2414MHz, 2416MHz, 2418MHz, 2420MHz, 2422MHz, 2424MHz, 2426MHz, 2428MHz, 2430MHz, 2432MHz, 2434MHz, 2436MHz, 2438MHz, 2440MHz, 2442MHz, 2444MHz, 2446MHz, 2448MHz, 2450MHz, 2452MHz, 2454MHz, 2456MHz, 2458MHz, 2460MHz, 2462MHz, 2464MHz, 2466MHz, 2468MHz, 2470MHz, 2472MHz, 2474MHz, 2476MHz, 2478MHz, 2480MHz, 2482MHz, 2484MHz, 2486MHz, 2488MHz, 2490MHz, 2492MHz, 2494MHz, 2496MHz, 2498MHz, 2500MHz

ANNEX A TEST RESULTS

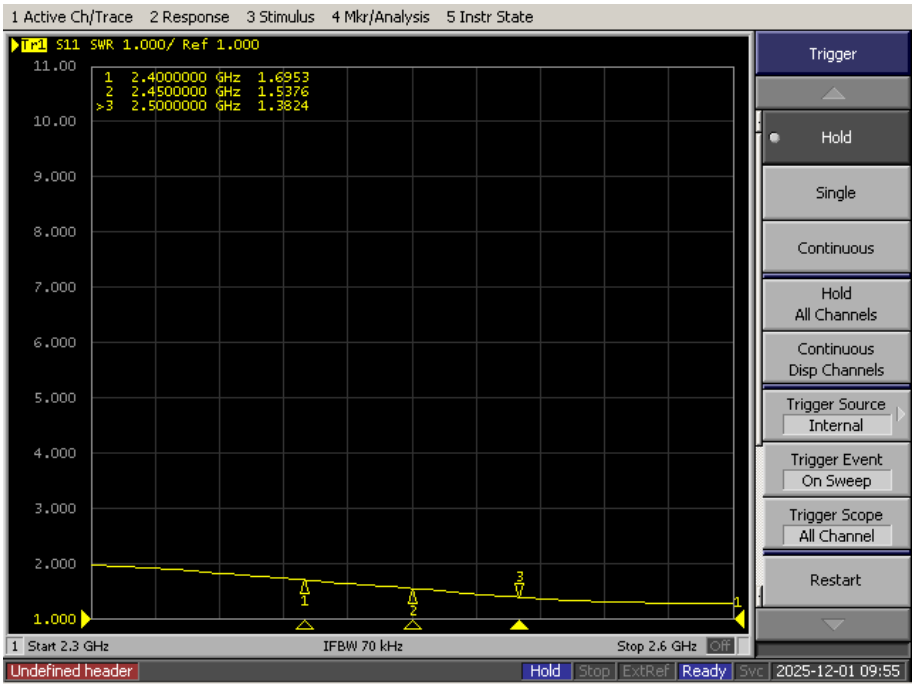
A.1 Gain and Efficiency

Frequency	Gain (dBi)	Efficiency (%)
2400MHz	4.12	45
2402MHz	4.10	44
2404MHz	4.07	44
2406MHz	4.05	44
2408MHz	4.06	44
2410MHz	4.09	44
2412MHz	4.11	44
2414MHz	4.16	44
2416MHz	4.25	45
2418MHz	4.34	45
2420MHz	4.43	45
2422MHz	4.51	46
2424MHz	4.62	46
2426MHz	4.73	46
2428MHz	4.82	47
2430MHz	4.89	47
2432MHz	4.96	47
2434MHz	5.02	47
2436MHz	5.07	47
2438MHz	5.08	47
2440MHz	5.08	47
2442MHz	5.07	47
2444MHz	5.05	47
2446MHz	4.99	47
2448MHz	4.92	46
2450MHz	4.85	46
2452MHz	4.79	46
2454MHz	4.71	46
2456MHz	4.63	46
2458MHz	4.56	46
2460MHz	4.58	46
2462MHz	4.54	46
2464MHz	4.50	46
2466MHz	4.48	46
2468MHz	4.46	46
2470MHz	4.45	46
2472MHz	4.31	46
2474MHz	4.20	46

2476MHz	4.22	47
2478MHz	4.28	47
2480MHz	4.33	47
2482MHz	4.42	47
2484MHz	4.54	47
2486MHz	4.67	47
2488MHz	4.77	46
2490MHz	4.88	46
2492MHz	5.02	46
2494MHz	5.14	47
2496MHz	5.24	46
2498MHz	5.34	47
2500MHz	5.43	47

A.2 VSWR

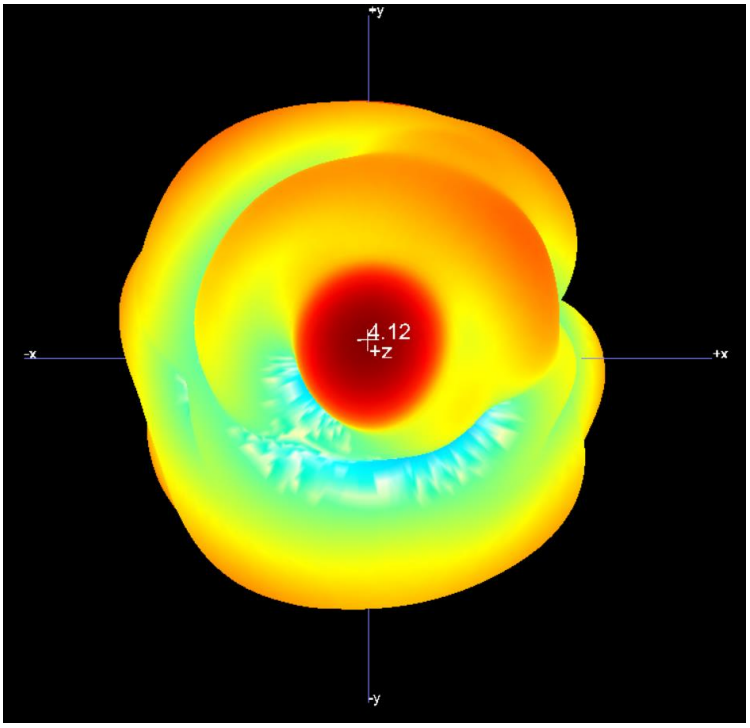
Frequency	VSWR
2400MHz	1.70
2450MHz	1.54
2500MHz	1.38



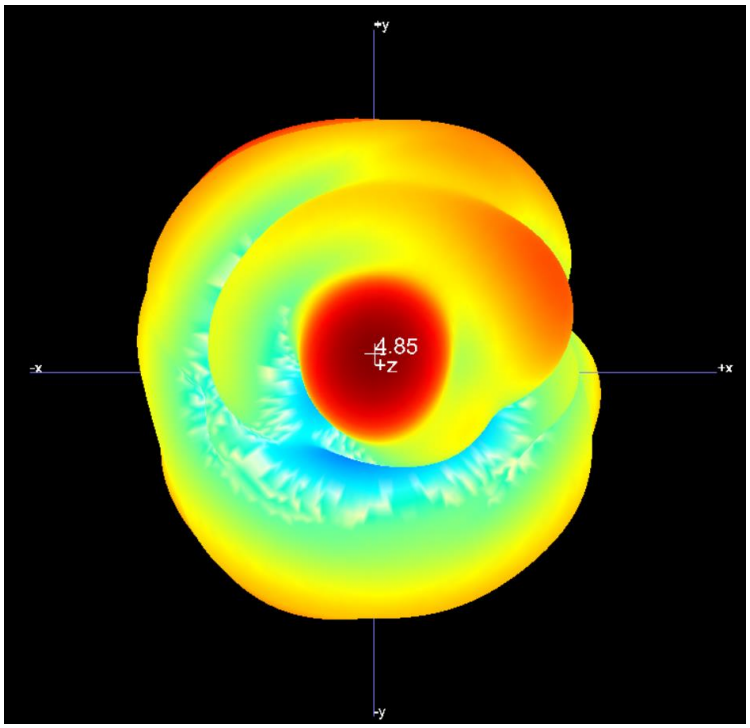
ANNEX B RADIATION PATTERN

B.1 3D Pattern

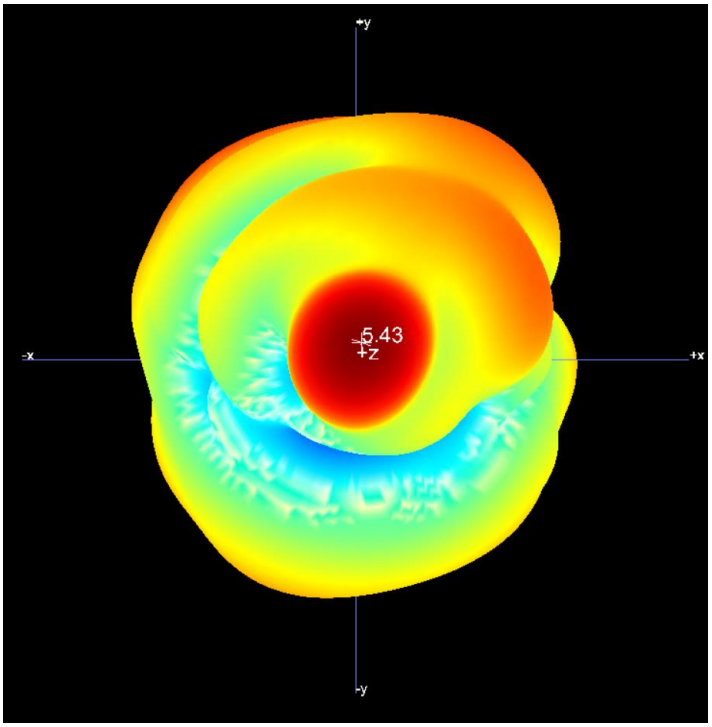
B1.1 3D Pattern for 2400MHz



B1.2 3D Pattern for 2450MHz

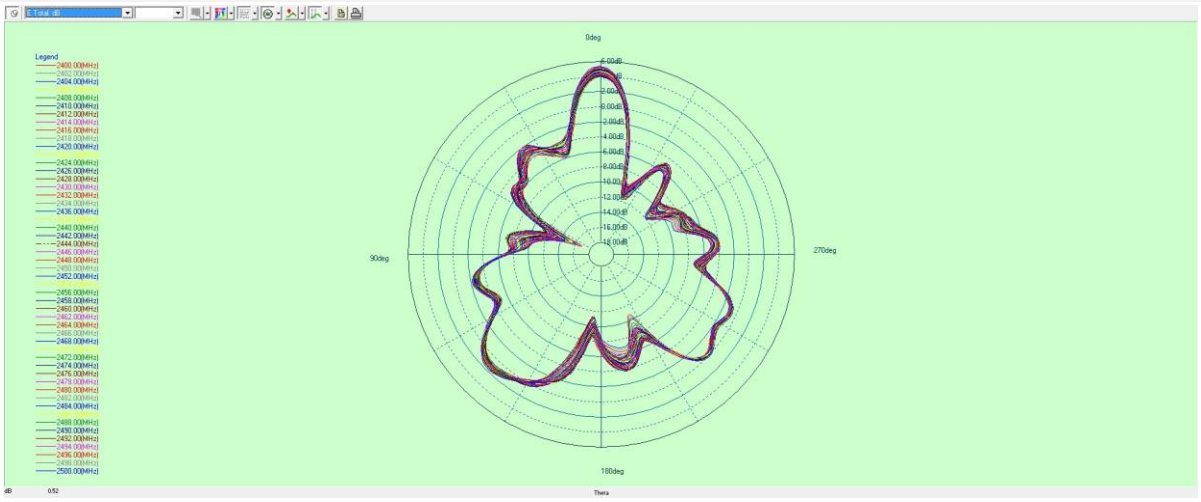


B1.3 3D Pattern for 2500MHz

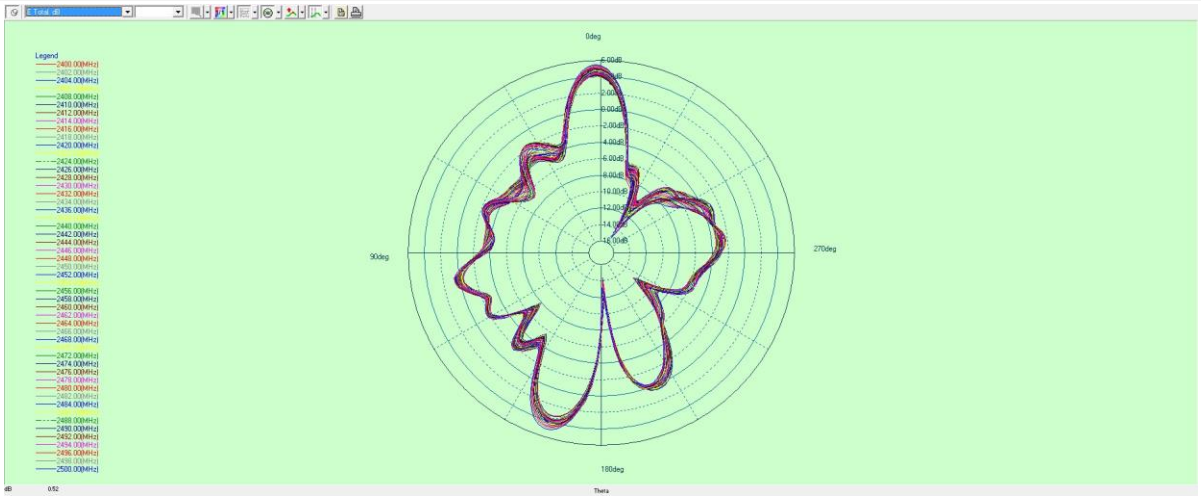


B.2 1D Radiation Pattern

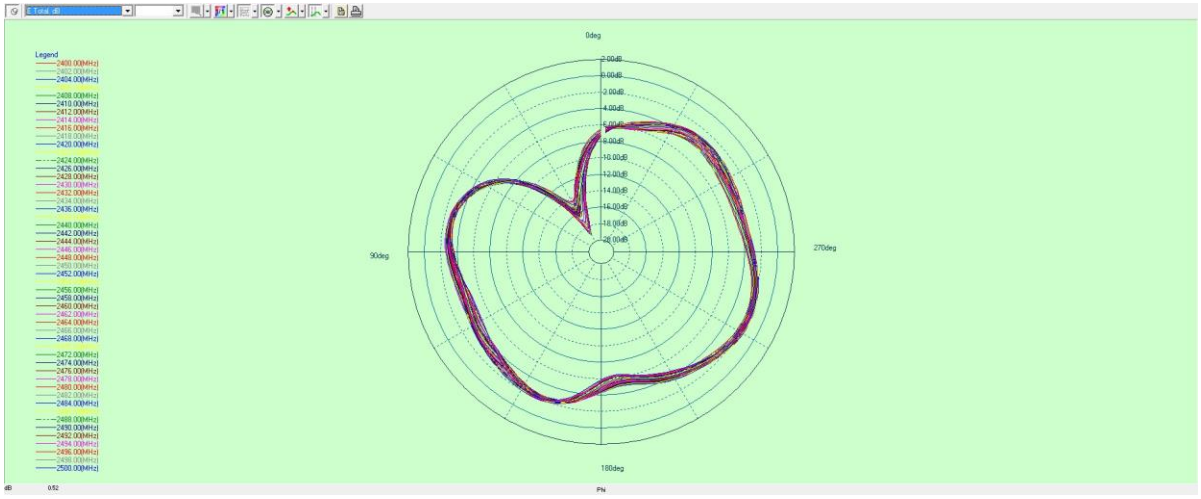
B2.1 PHI=0



B2.2 PHI=90



B2.3 THETA=90



ANNEX C TEST SETUP PHOTOS

Please refer the document “BL-SZ25B1269-AO.PDF”.

ANNEX D EUT PHOTO

Please refer the document “BL-SZ25B1269-AA.PDF”.

Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
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--END OF REPORT--