

TEST REPORT

Applicant: Xiamen Yingzhimei Electronic Technology Co., Ltd.
Address: Room E403A, south, Taiwan Technology Enterprise
Development Center, 88 Xiangxing Road, Xiang'an
District industrial zone, Xiamen
Equipment Type: Portable Label Maker
Model Name: U10
Brand Name: N/A
Test Standard: ANSI/IEEE Std 149-1979
Test Date: Sep. 05, 2022
Date of Issue: Sep. 13, 2022

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.



Tested by: Mai Jintian

Checked by: Tolan Tu

Approved by: Wei Yanquan
(Chief Engineer)

Mai Jintian

Tolan Tu

Wei Yanquan

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Sep. 13, 2022</u>	<u>Modify the photos on page 13 and basic information in Section 2.4. This report replaces BL-SZ2290126-901 which issued by BALUN on Sep. 09, 2022, the original report is invalid</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. 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

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Xiamen Yingzhimei Electronic Technology Co., Ltd.
Address	Room E403A, south, Taiwan Technology Enterprise Development Center, 88 Xiangxing Road, Xiang'an District industrial zone, Xiamen

2.2 Manufacturer Information

Manufacturer	Xiamen Yingzhimei Electronic Technology Co., Ltd.
Address	Room E403A, south, Taiwan Technology Enterprise Development Center, 88 Xiangxing Road, Xiang'an District industrial zone, Xiamen

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Portable Label Maker
Model Name Under Test	U10
Antenna Type	PCB Antenna
Dimensions	3*13 mm

2.5 Ancillary Equipment

Note: Not applicable.

2.6 Technical Information

Frequency Range	2400MHz ~ 2483MHz
Test Frequencies	2400MHz, 2402MHz, 2404MHz, 2406MHz, 2408MHz, 2410MHz, 2412MHz, 2414MHz, 2416MHz, 2418MHz, 2420MHz, 2422MHz, 2424MHz, 2426MHz, 2428MHz, 2430MHz, 2432MHz, 2434MHz, 2436MHz, 2438MHz, 2440MHz, 2442MHz, 2446MHz, 2448MHz, 2450MHz, 2452MHz, 2454MHz, 2456MHz, 2458MHz, 2460MHz, 2462MHz, 2464MHz, 2468MHz, 2470MHz, 2472MHz, 2474MHz, 2476MHz, 2478MHz, 2480MHz, 2482MHz, 2483MHz

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	ANSI/IEEE Std 149-1979	IEEE Standard Test Procedures for Antennas

3.2 Test Verdict

Report Section	Description	Remark
ANNEX A.1	Gain and Efficiency	--
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	$\pm 1.92\text{dB}$

4 GENERAL TEST CONFIGURATIONS

4.1 Test Condition

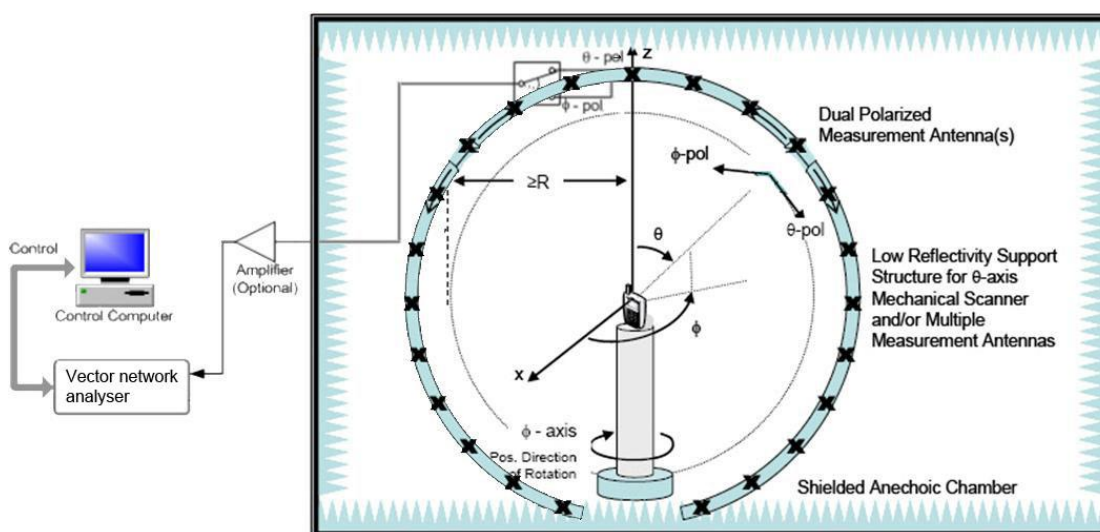
Environment Parameter	Selected Values During Tests			
	Ambient Pressure(KPa)	Temperature(°C)	Voltage	Relative Humidity (%)
Normal Temperature, Normal Voltage (NTNV)	101	25	N/A	50

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	2021.11.12	2024.11.11
Vector Network Analyzer	Agilent	E5071B	MY42404001	2022.04.02	2023.04.01
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



ANNEX A TEST RESULTS

A.1 Gain and Efficiency

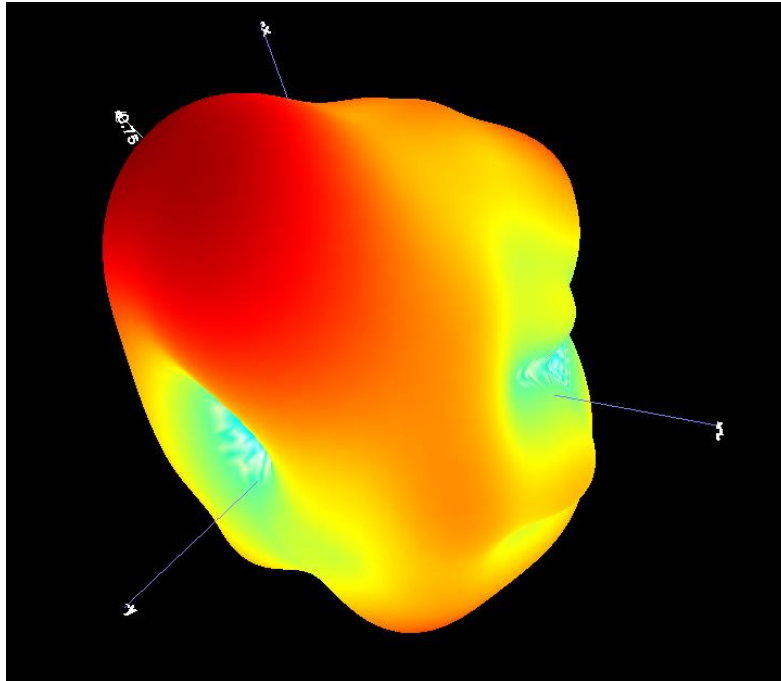
Frequency	Gain (dBi)	Efficiency (%)
2400MHz	-0.75	18%
2402MHz	-0.73	17%
2404MHz	-0.73	17%
2406MHz	-0.77	17%
2408MHz	-0.76	17%
2410MHz	-0.76	17%
2412MHz	-0.79	17%
2414MHz	-0.85	17%
2416MHz	-0.89	17%
2418MHz	-0.95	16%
2420MHz	-1.05	16%
2422MHz	-1.15	16%
2424MHz	-1.20	16%
2426MHz	-1.11	16%
2428MHz	-1.19	16%
2430MHz	-1.27	16%
2432MHz	-1.31	16%
2434MHz	-1.32	16%
2436MHz	-1.25	16%
2438MHz	-1.26	16%
2440MHz	-1.23	16%
2442MHz	-1.17	16%
2444MHz	-1.15	16%
2446MHz	-1.14	16%
2448MHz	-1.11	16%
2450MHz	-1.07	16%
2452MHz	-1.08	16%
2454MHz	-1.11	16%
2456MHz	-1.03	16%
2458MHz	-1.01	16%
2460MHz	-1.03	16%
2462MHz	-1.06	16%
2464MHz	-1.06	15%
2466MHz	-0.93	16%
2468MHz	-0.95	16%
2470MHz	-1.00	16%
2472MHz	-1.03	15%
2474MHz	-1.02	15%

2476MHz	-1.14	15%
2478MHz	-1.16	15%
2480MHz	-1.17	15%
2482MHz	-1.16	15%
2483MHz	-1.16	16%

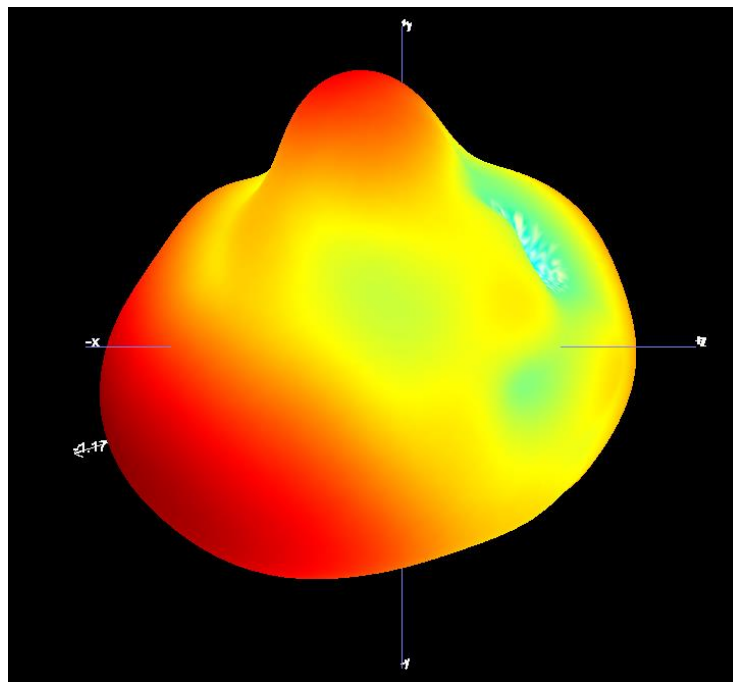
ANNEX B RADIATION PATTERN

B.1 3D Pattern

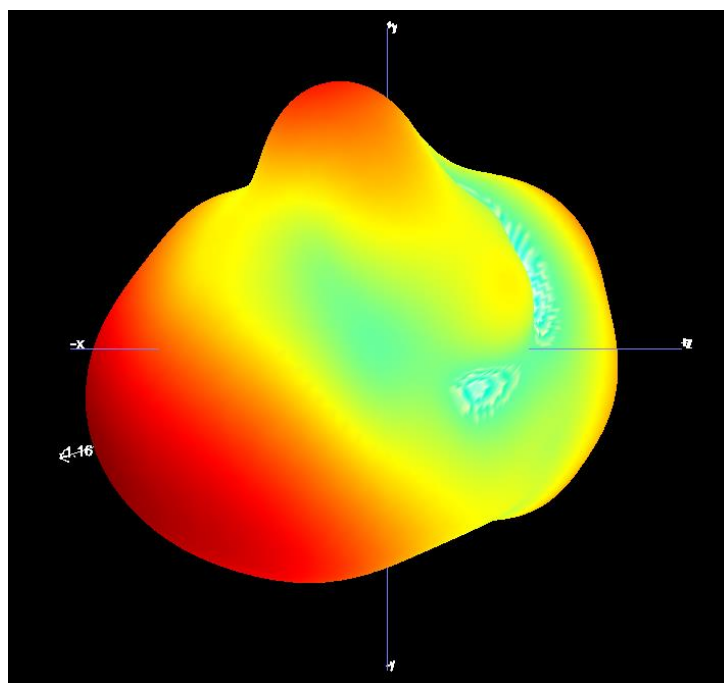
B1.1 3D Pattern for 2400MHz



B1.2 3D Pattern for 2442MHz

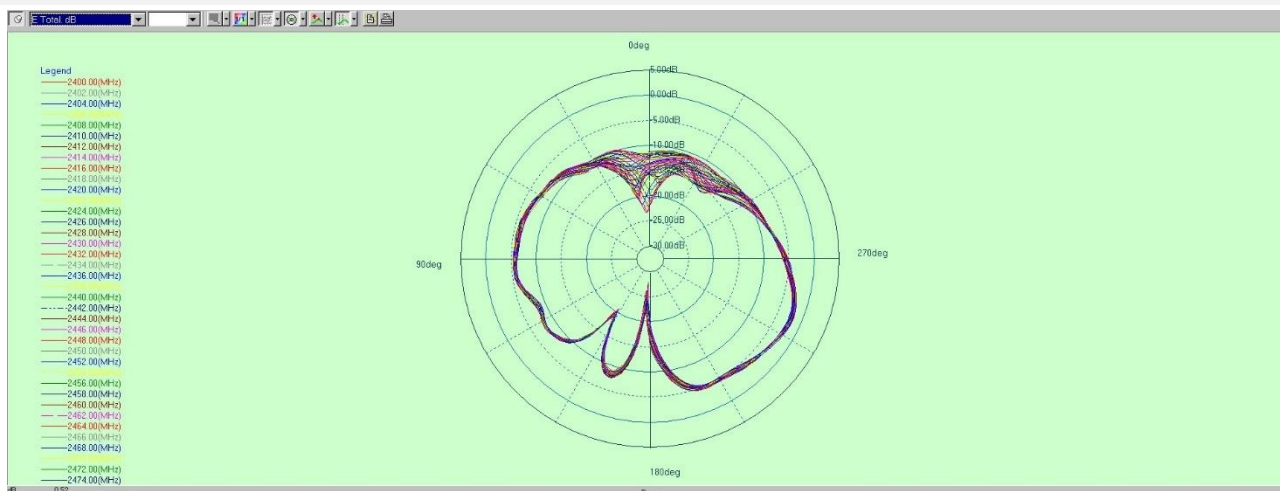


B1.3 3D Pattern for 2483MHz

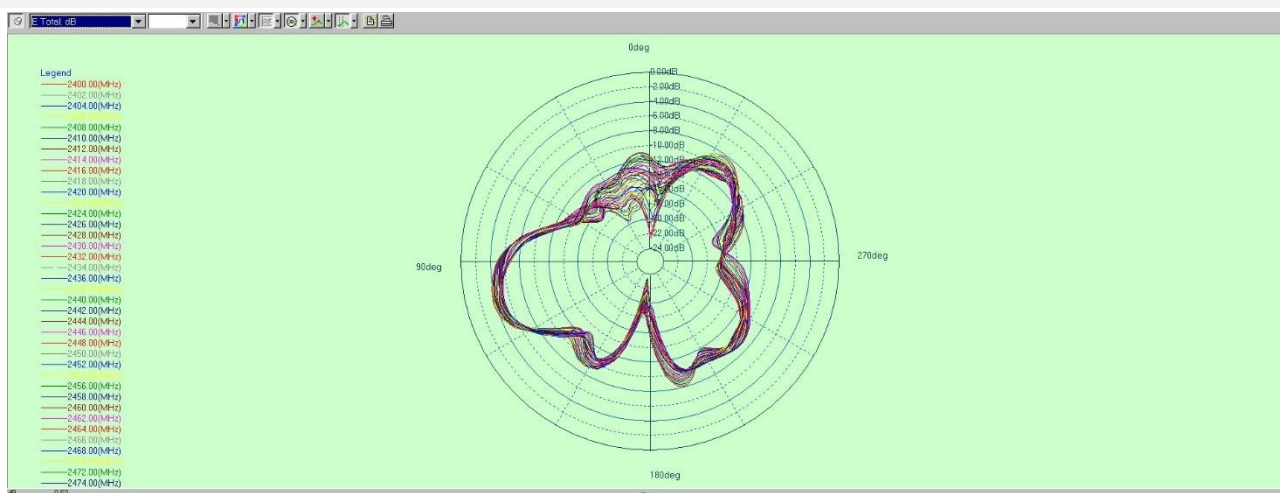


B.2 1D Radiation Pattern

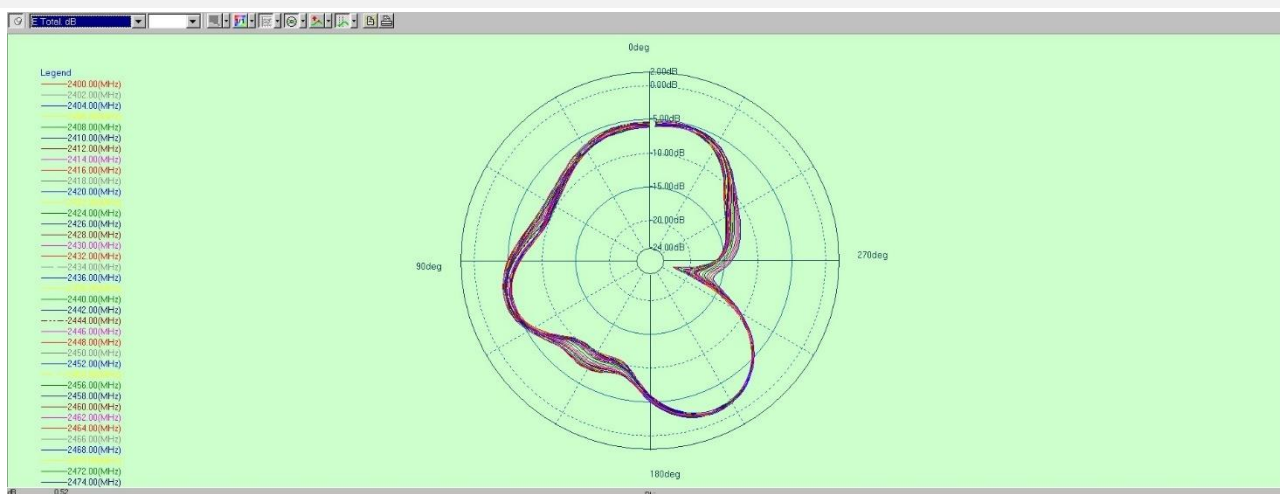
B2.1 PHI=0



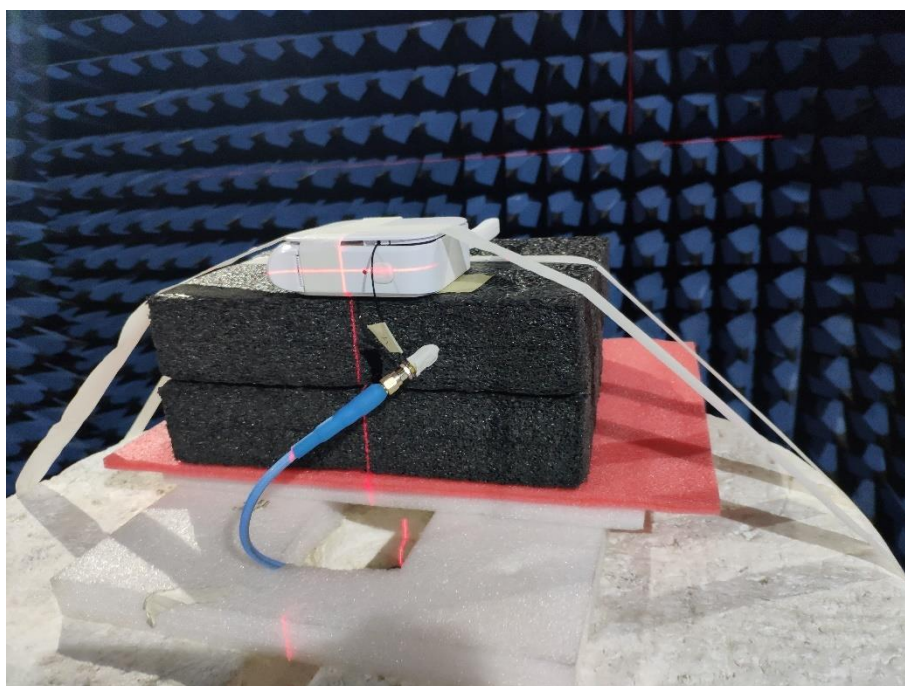
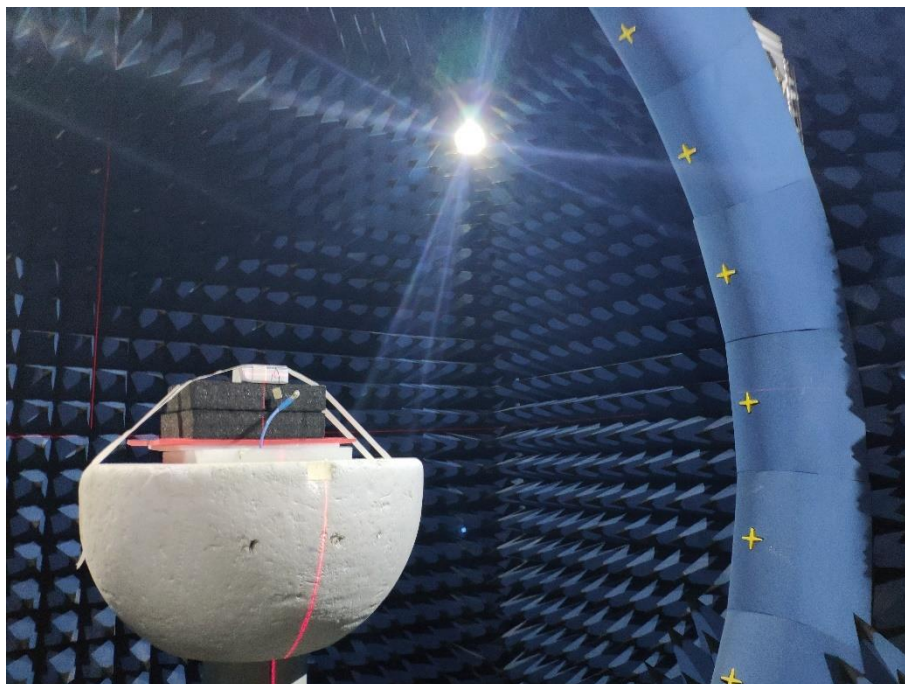
B2.2 PHI=90



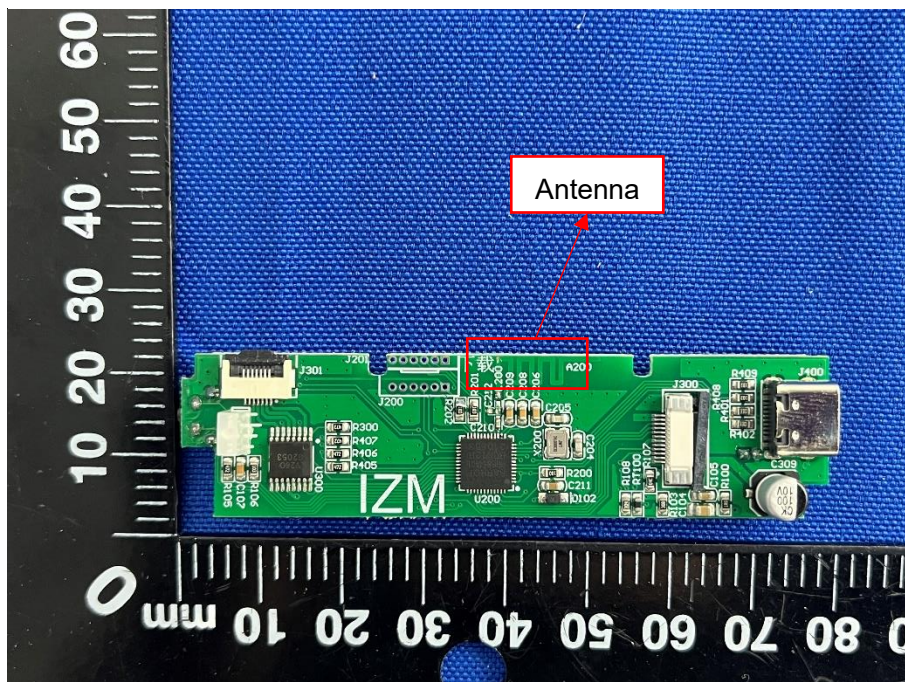
B2.3 THETA=90



ANNEX C TEST SETUP PHOTO



ANNEX D EUT PHOTO



Statement

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7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--