OTA TEST REPORT

Applicant	Freemode Go LLC dba CRKD
Product	Guitar Controller
Model	CK25GM
Report No.	EFTA25050036-IE-01-T1
Issue Date	May 28, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **ANSI/IEEE Std 149-2021.** The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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1. Test Laboratory

1.1. Notes of the Test Report

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1.2. Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City:	Shanghai
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1.3. Laboratory Environment

Temperature	15°C ~ 35°C	
Relative humidity	20% ~ 80%	
Shield effect	0.7-6GHz	> 100dB
Ground resistance	<0.5Ω	

2. General Description of Equipment Under Test

2.1. Applicant and Manufacturer Information

Applicant Name	Freemode Go LLC dba CRKD
Applicant address	3142 Constitution drive, Livermore, CA 94551, USA.
Manufacturer Name	Shenzhen King Chuang Tech＆Electronic Co.,Ltd
Manufacturer address	Building 1-7, 101 Building 7, No.58, Guangtian Road, Luotian Community, Yanluo Street,Bao'an District Shen Zhen Guang Dong PRC

2.2. General Information

EUT Description	
Product Name:	Guitar Controller
Model	CK25GM
HW Version:	V1.0
SW Version:	/
Antenna Type:	Internal Antenna
Antenna Manufacturer:	Shenzhen King Chuang Tech＆Electronic Co.,Ltd
Test Frequency:	2402MHz ~ 2483.5MHz
Note: The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.	

2.3. Test Date

The test is performed on May 16, 2025.

2.4. Received Date

The sample was received on May 9, 2025.

2.5. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test Method: **ANSI/IEEE Std 149-2021**

3. Test Conditions

3.1. Test Configuration

Great-Circle-Cut method is used to measure the antenna 3D GAIN of EUT in OTA qualified anechoic chamber. Equipment Under Test (EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 5m.

3.2. Test Measurement

Spherical coordinate system

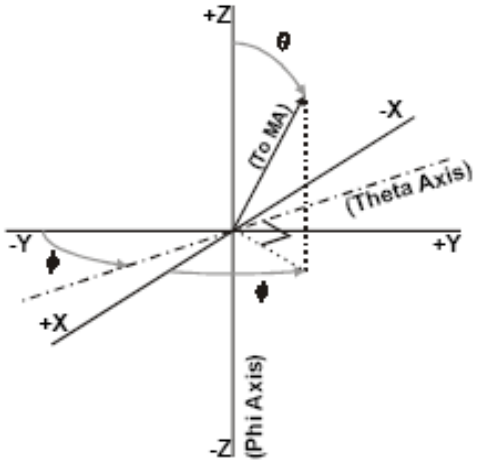
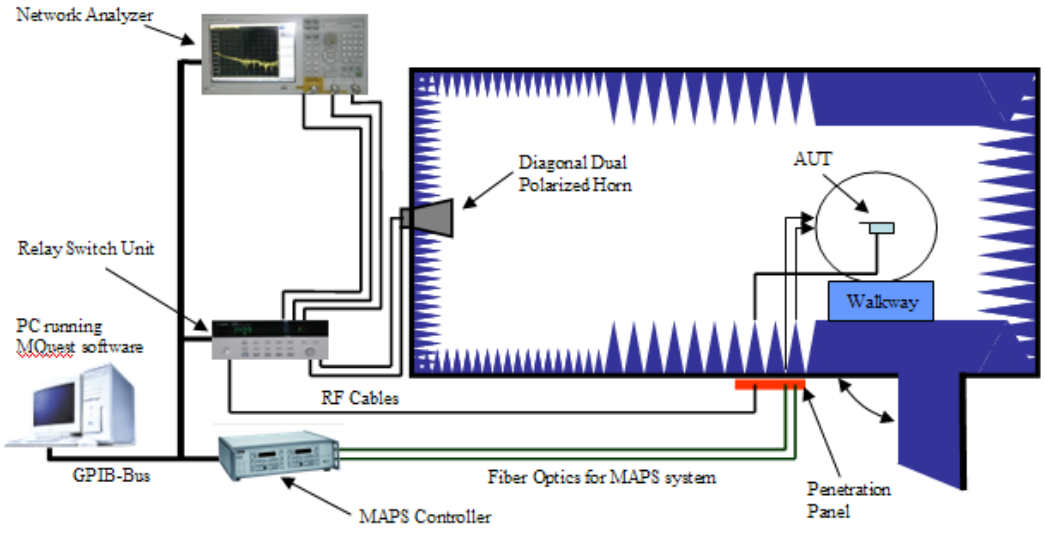


Figure 1 Test coordinate system

Note: Theta is from 0~180 degree. Phi is from 0~360. Rotate the EUT and record the Data, the step of rotation is 15 degree.

Test Setup



4. Test Results

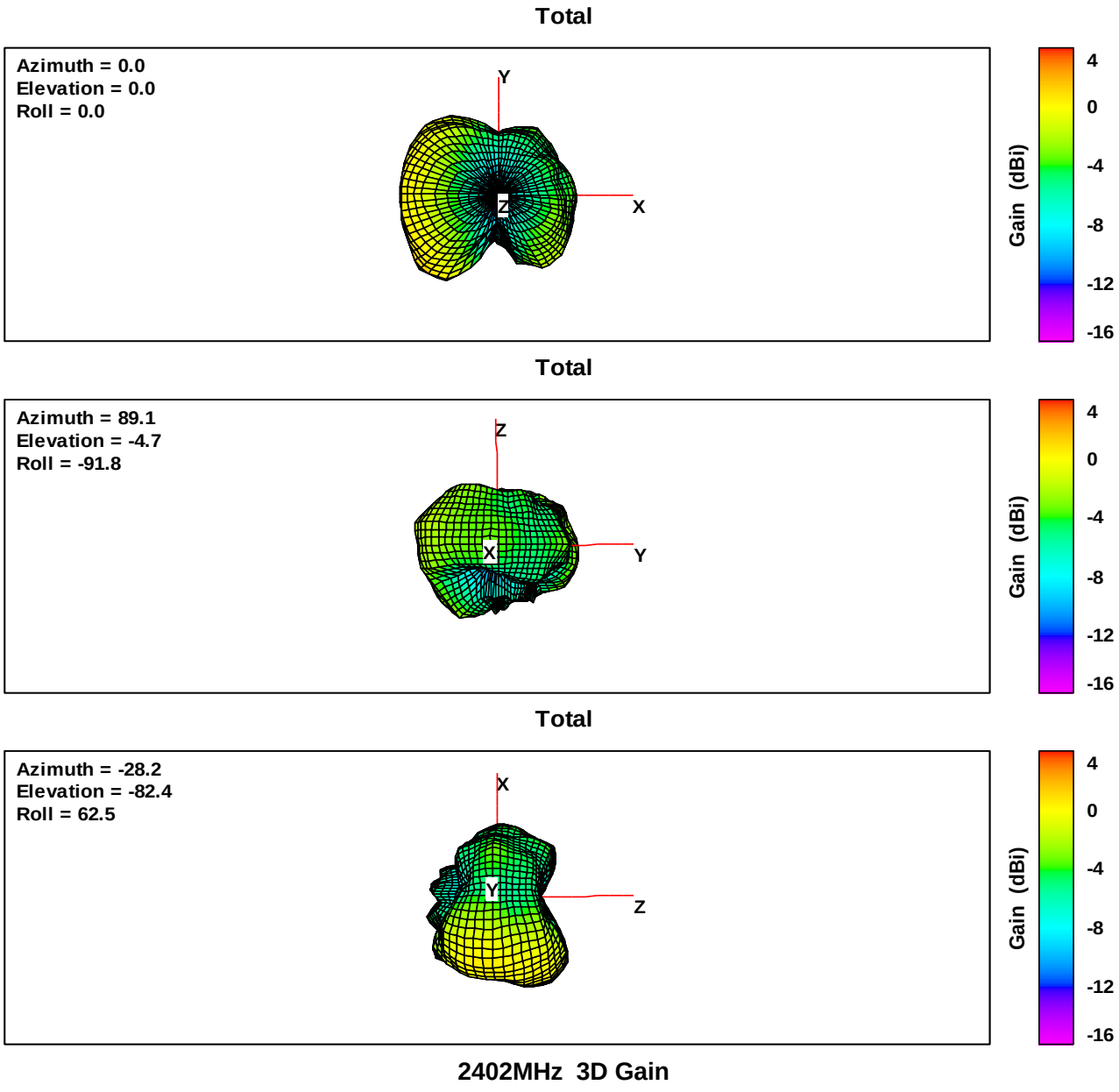
4.1. Gain and Efficiency

Test Item	Test State	Frequency (MHz)	Efficiency(%)	Gain(dBi)	Note
Gain	FS	2402	46.67	2.05	/
		2407	46.86	1.86	
		2412	46.66	1.86	
		2417	46.54	1.92	
		2422	45.92	1.80	
		2427	45.66	1.74	
		2432	45.68	1.59	
		2437	45.61	1.62	
		2442	44.82	1.16	
		2447	44.26	1.27	
		2452	43.34	0.90	
		2457	42.64	0.95	
		2462	41.29	0.62	
		2467	39.10	0.21	
		2472	37.59	0.36	
		2477	37.39	0.20	
		2482	35.26	-0.52	
		2485	34.49	-0.36	

5. Equipment List

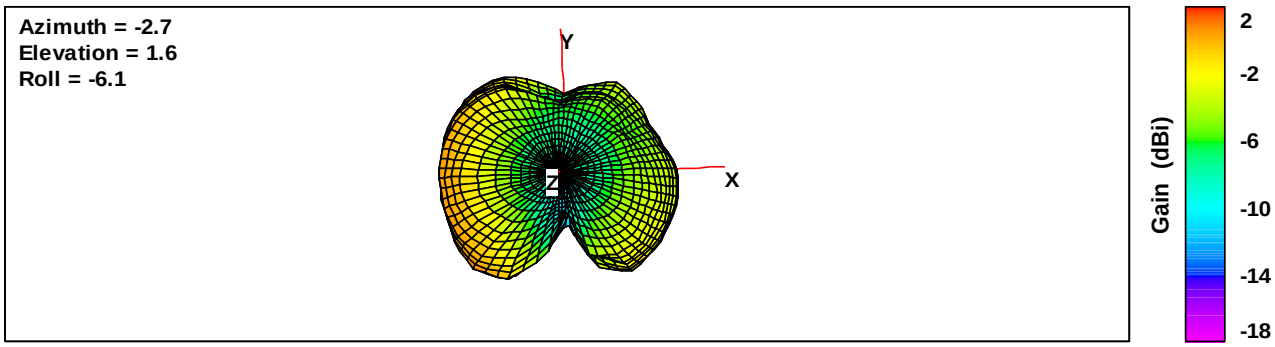
• Type of Equipment	Manufacturer	Model	SN	Version	Calibration Date	Expiration Time
Anechoic Chamber	ETS	AMS-8500	CT-001157-1219	/	2025-05-07	2030-05-06
Test Software	ETS	EMQuest™	1464	REV 1.17	/	/
EMCenter_Switch Control System	ETS	7006/7001	00059957/MY42001152	/	/	/
Diagonal Dual Polarized Horn	ETS	ETS 3164-04	00062743	/	2024-03-09	2029-03-08
Network Analyzer	Keysight	E5071B	MY42404014	REV.A.06.50	2025-01-06	2026-01-05

ANNEX A: 3-D Pattern Plots



2402MHz 3D Gain

Total



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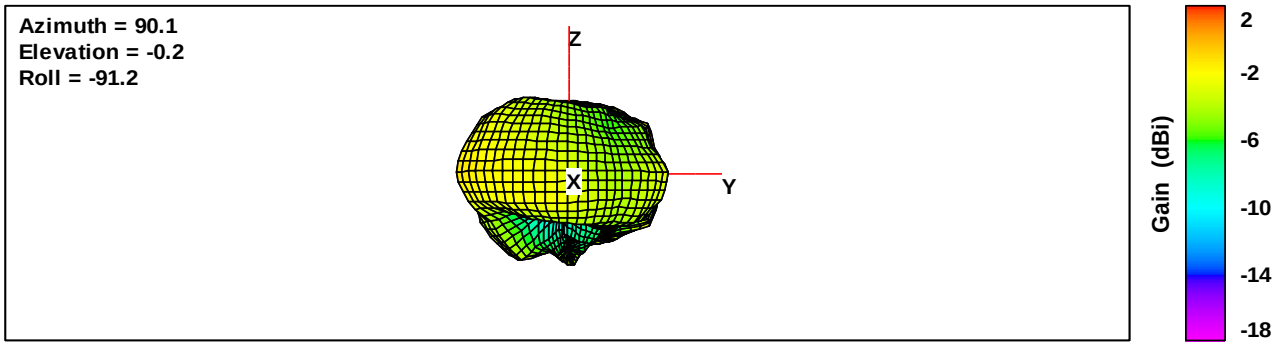

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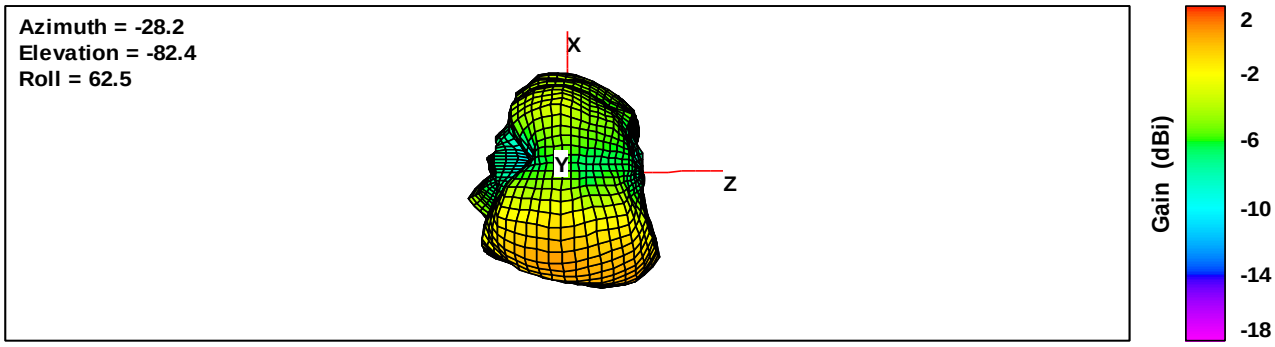
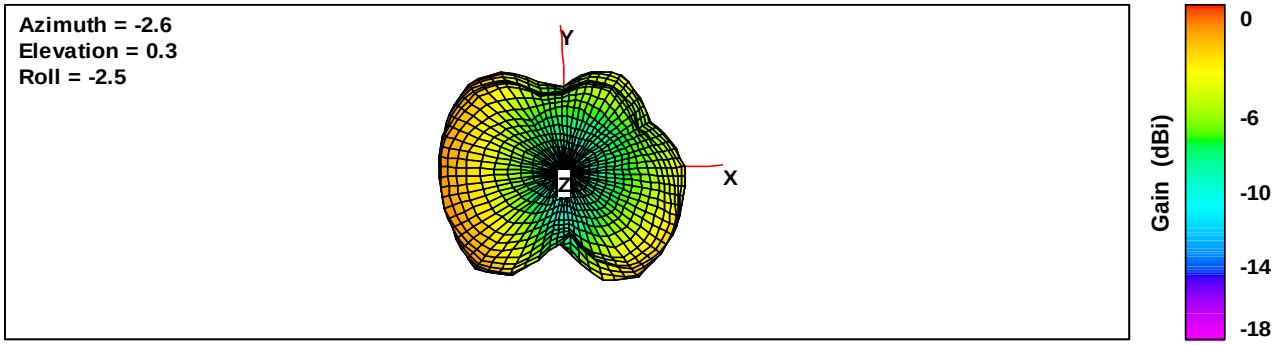


2442MHz 3D Gain

Total



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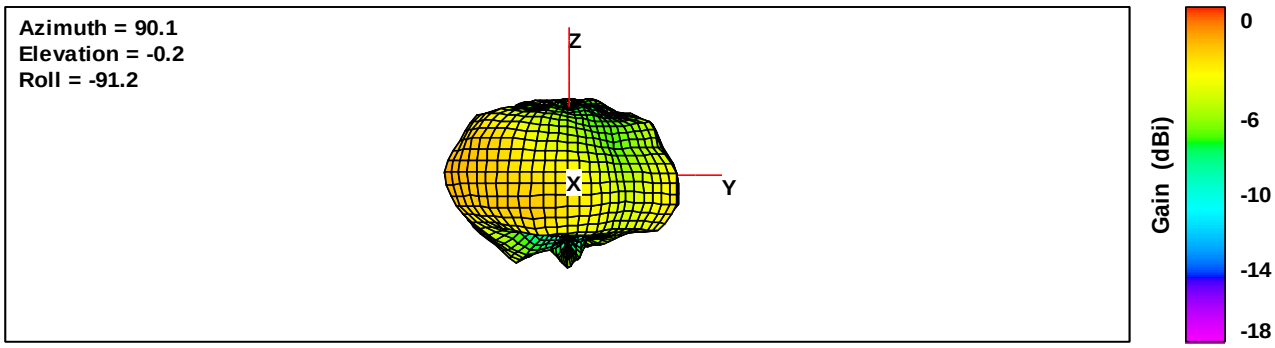

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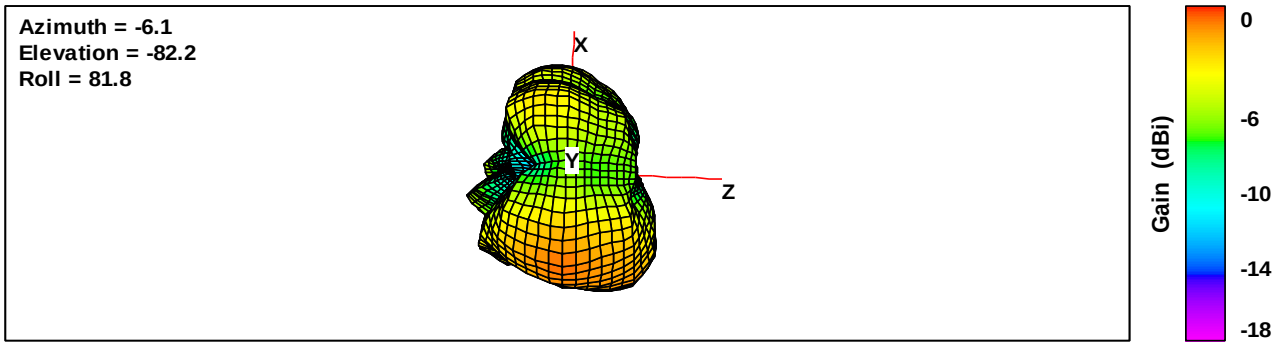
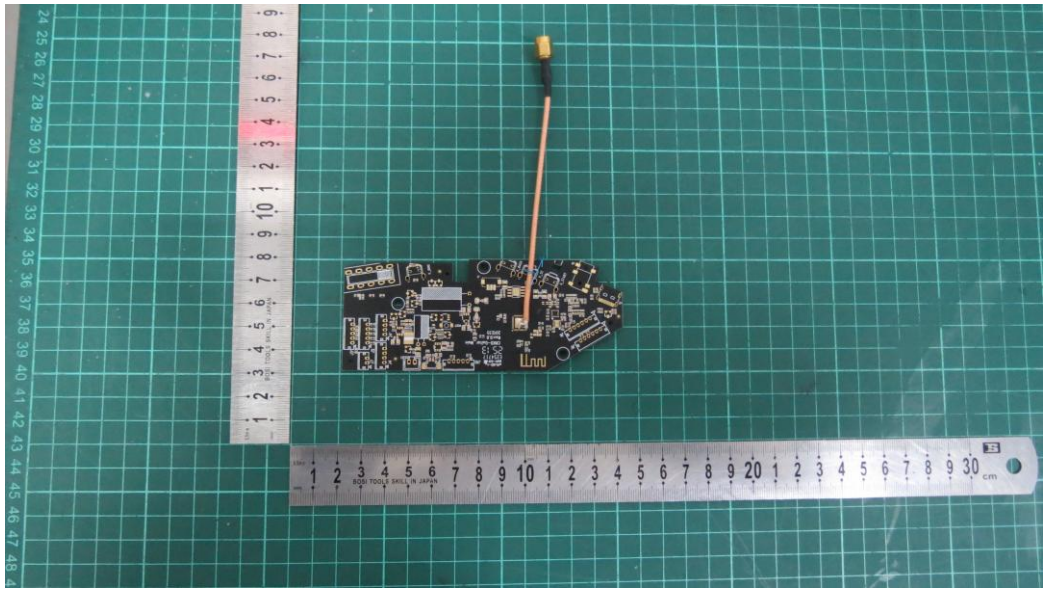
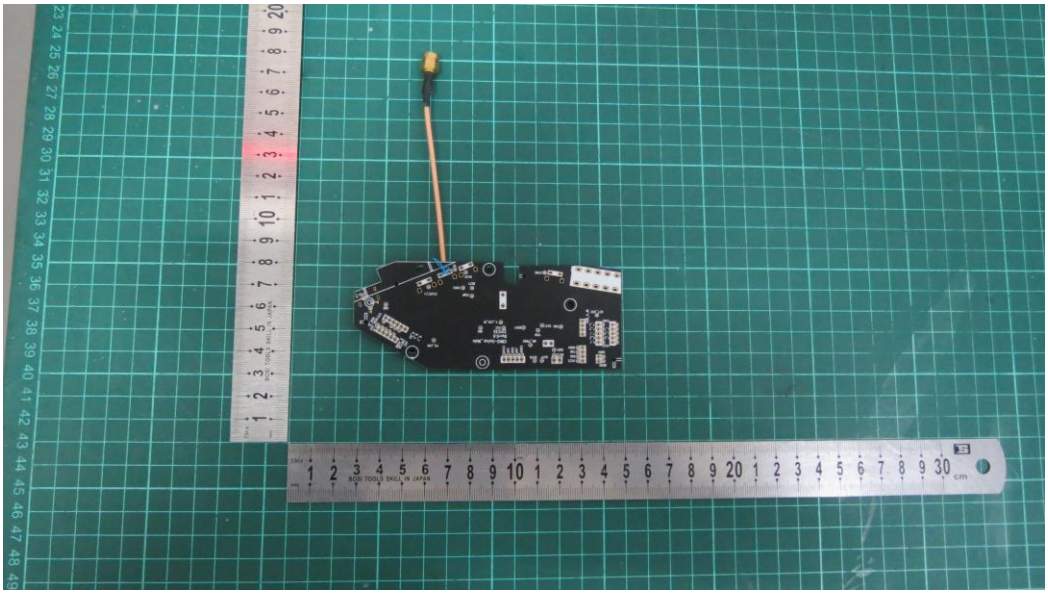


2485MHz 3D Gain

ANNEX B: The EUT Appearance and Test Configuration

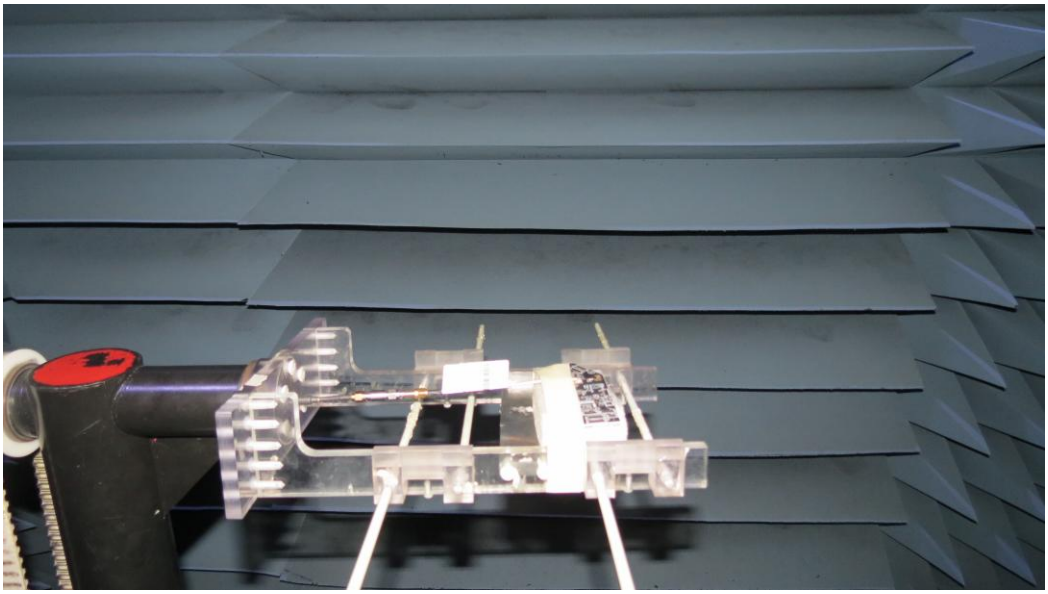
B.1 EUT Appearance





Picture 1 Constituents of EUT

B.2 Test Configuration



Picture 2 Test Setup

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