TEST REPORT

Applicant Name :	GDU-Tech Co., Ltd.
Address :	Building 2, No.5, Huanglongshan South Road, Donghu New Technology Development Zone, Wuhan, China 430074
Report Number :	2504Q43921E-EM-01-M1
FCC ID:	2A8WC-A4G-200A

Test Standard (s)

FCC Rules and Regulations Part 15 Subpart B Class B

Sample Description

Product Type:	4G Cellular Dongle
Model No.:	A4G-200A
Trade Mark:	N/A
Date Received:	2025-02-13
Date of Test:	2025-04-22 to 2025-06-18
Report Date:	2025-06-18

Test Result:	The EUT complied with the standards above.

Prepared and Checked By:

Ronour Huang

Ronour Huang
EMC Engineer

Approved By:

Bob. Liao

Bob Liao
EMC Engineer

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2504Q43921E-EM-01	Original Report	2025-05-07
Rev.01	2504Q43921E-EM-01-M1	Amended Report	2025-06-18

Note: This is an updated report based on the report 2504Q43921E-EM-01, the details as following:

(1) The applicant modifies the FCC ID in the report.
(2) Modify some description in the report.

The previous report 2504Q43921E-EM-01 (The report date is 2025-05-07), is replaced by this report 2504Q43921E-EM-01-M1 (The report date is 2025-06-18).

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	4G Cellular Dongle
Tested Model	A4G-200A
Highest Operating Frequency	The EUT's highest operating frequency is 2690MHz#, the radiated emission measurement shall be made up to 14GHz.
Voltage Range#	DC 14.4V
Sample Serial Number	2YCE-1 (RE) (Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition

Objective

This report is in accordance with Part 2-Subpart J, and Part 15-Subparts B of the Federal Communication Commission's rules.

The objective of the manufacturer is to determine the compliance of EUT with FCC Part 15, Class B device.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

Unless otherwise stated there are no any additions to, deviations, or exclusions from the method.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Accredited by American Association for Laboratory Accreditation (A2LA).The Certificate Number is 4297.01.

Measurement Uncertainty

Parameter		Uncertainty
Radiated emission	30MHz-1GHz	4.3 dB*(k=2, 95% level of confidence)*
	1GHz-18GHz	4.9 dB*(k=2, 95% level of confidence)*
Temperature		1 ℃
Humidity		7 %
Supply voltages		0.4 %

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

Test Mode: Working

Test Voltage: DC 14.4V

EUT Exercise Software

No exercise software.

Special Accessories

No special accessory was used.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

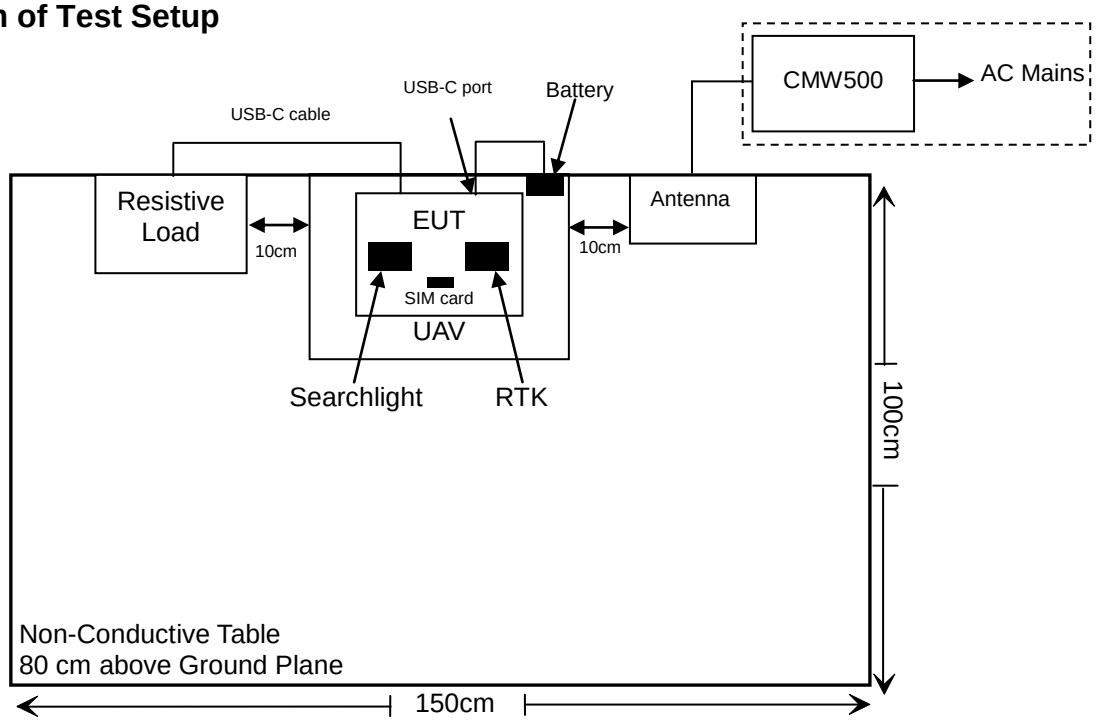
Manufacturer	Description	Model	Serial Number
Unknown	SIM card	Unknown	Unknown
GDU	UAV#	S220	Unknown
GDU	RTK#	A-RTK-200	Unknown
Unknown	Searchlight#	Unknown	Unknown
Unknown	Resistive Load	Unknown	Unknown
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606

Note: The UAV, RTK, Searchlight was provided by the applicant for testing.

External I/O Cable

Cable Description	Shielding Type	Length (m)	From Port	To
USB-C Cable	No	0.85	EUT	Resistive Load

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Not Applicable
§15.109	Radiated Emissions	Compliance

Note: Not Applicable -The device is DC powered.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Below 1GHz)					
Rohde & Schwarz	Test Receiver	ESR	102725	2024/11/08	2025/11/07
SONOMA INSTRUMENT	Amplifier	310N	186131	2025/03/26	2026/03/25
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2024/08/08	2027/08/07
Unknown	RF Coaxial Cable	No.12	N040	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.13	N300	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.14	N800	2024/10/08	2025/10/07
Test Software: e3 191218 (V9)					
Radiated Emission Test (Above 1GHz)					
Rohde & Schwarz	Spectrum Analyzer	FSV40	101949	2024/10/08	2025/10/07
Decentest	Filter Switch Unit	DT7220FSU	DQ77927	2024/10/08	2025/10/07
Decentest	Multiplex Switch Test Control Set	DT7220CSU	DQ77924	2024/10/08	2025/10/07
A.H. Systems, inc.	Preamplifier	PAM-0118	226	2025/03/20	2026/03/19
Schwarzbeck	Horn Antenna	BBHA9120D	837	2023/02/22	2026/02/21
Unknown	RF Coaxial Cable	No.10	N050	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.11	N1000	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.19	N500	2024/10/08	2025/10/07
Test Software: e3 191218 (V9)					

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

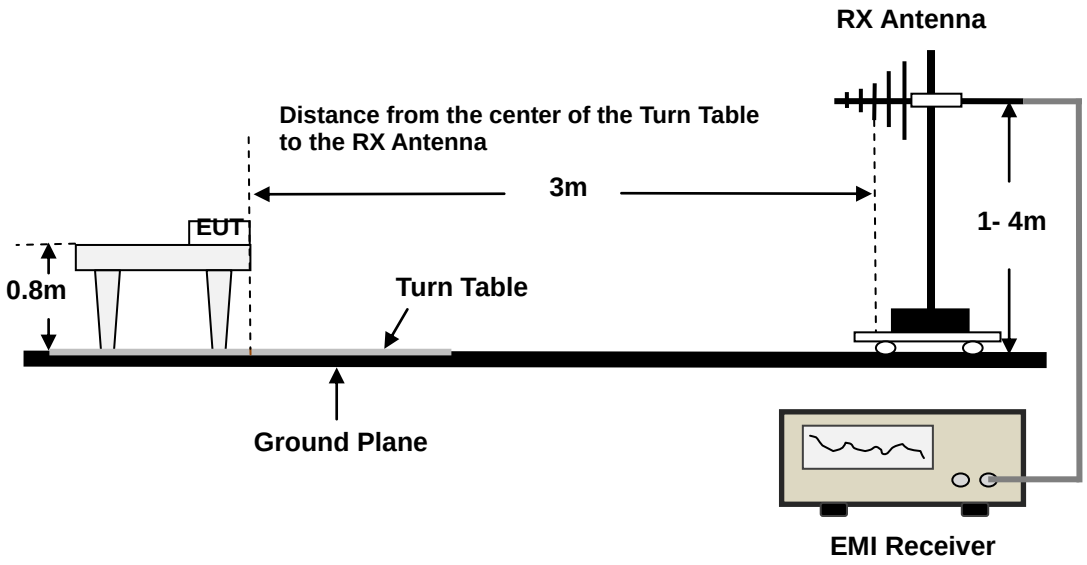
FCC §15.109-RADIATED EMISSIONS

Applicable Standard

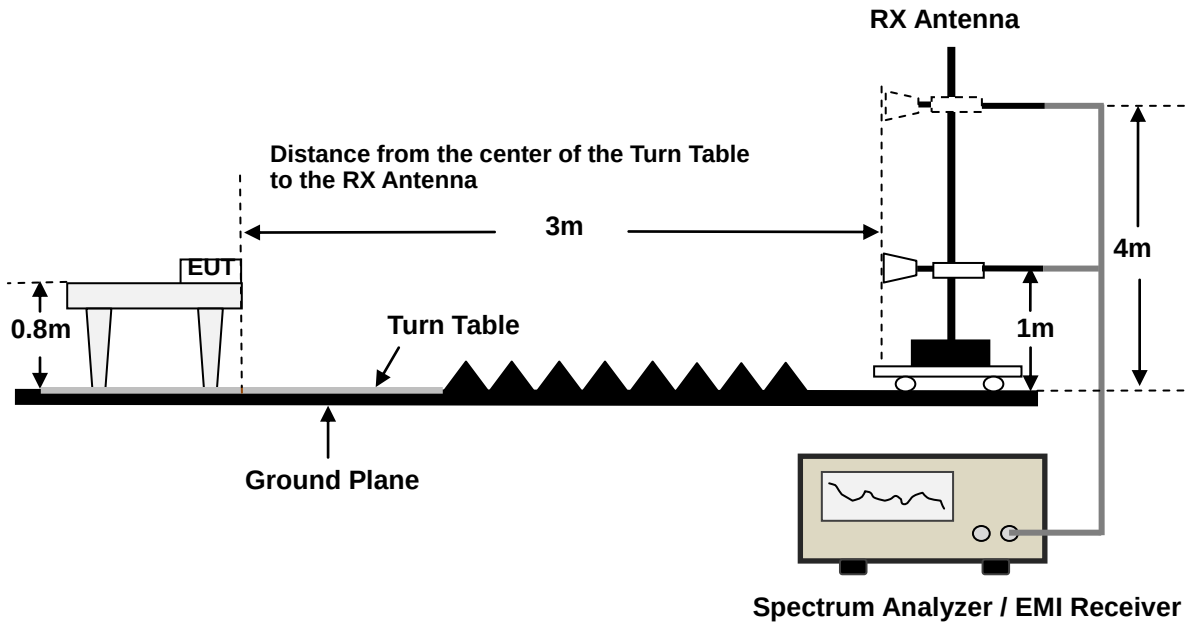
FCC §15.109

EUT Setup

30MHz - 1GHz:



Above 1GHz:



Boundary of the EUT, local AE and associated cabling and measurement distance for radiated emissions measurements:

The central point of the arrangement shall be positioned at the centre of the turntable. The measurement distance is the shortest horizontal distance between an imaginary circular periphery just encompassing this arrangement and the calibration point of the antenna. See as below Figure C.1 and C.2.

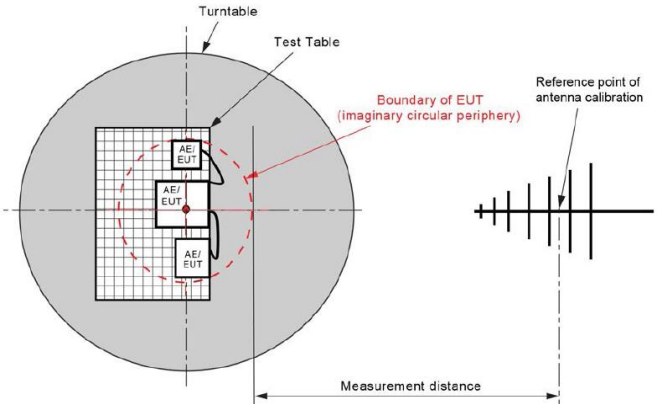


Figure C.1 – Measurement distance

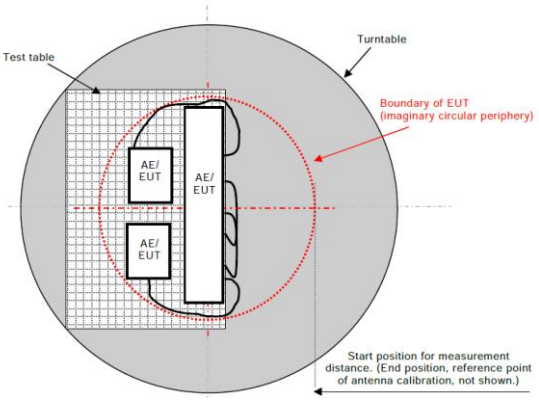


Figure C.2 – Boundary of EUT, Local AE and associated cabling

The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 14GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

30MHz - 1000MHz:

Frequency Range	Measurement	RBW	Video B/W	IF B/W	Detector
150kHz - 30MHz	PK	10kHz	30kHz	/	PK
	QP/AV	/	/	9kHz	QP/AV
30MHz - 1000MHz	PK	100kHz	300kHz	/	PK
	QP	/	/	120kHz	QP

1GHz - 14GHz:

Measurement	Detector	RBW	Video B/W
PK	Peak	1MHz	3MHz
AV	Peak	1MHz	5kHz

Note 1: For below 1GHz testing, if the maximized peak measured value complies with the limit, then it is unnecessary to perform QP measurement.

Note 2: For above 1GHz testing, the peak value is low than AV limit, then the result is unnecessary to perform Peak/AV measurement.

Note 3: Other emissions which were more than 20dB below to the limit or on noise floor level was not recorded.

Required highest measurement frequency for radiated emissions:

Highest frequency generated or used in the device or on which the device operates or tunes(MHz) (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40GHz, whichever is lower

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit = Level - Limit
Level = Reading + Factor

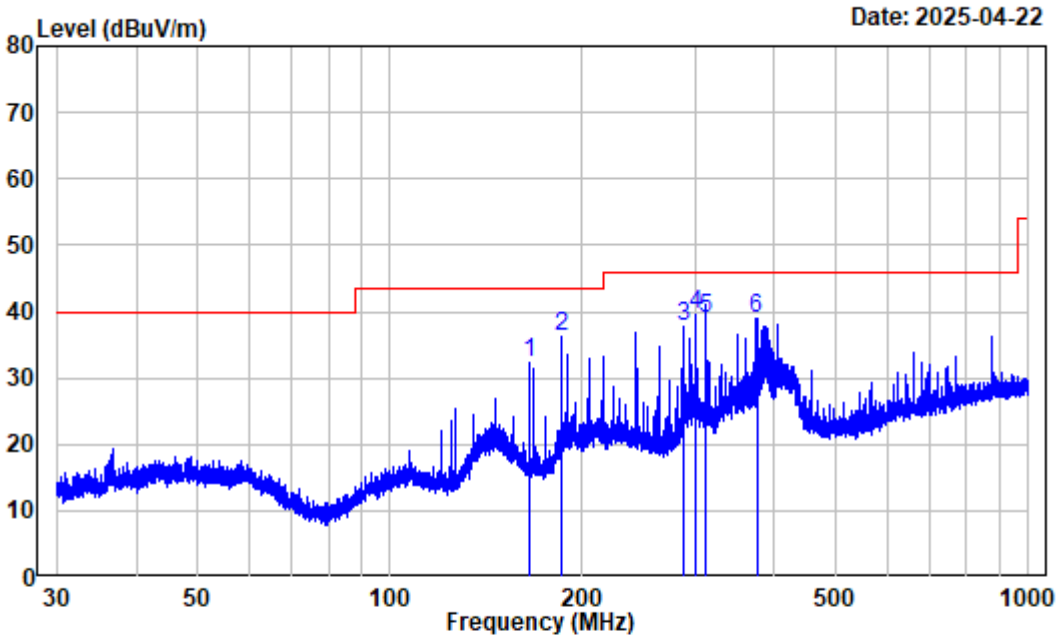
Test Data

Below 1GHz

Environmental Conditions

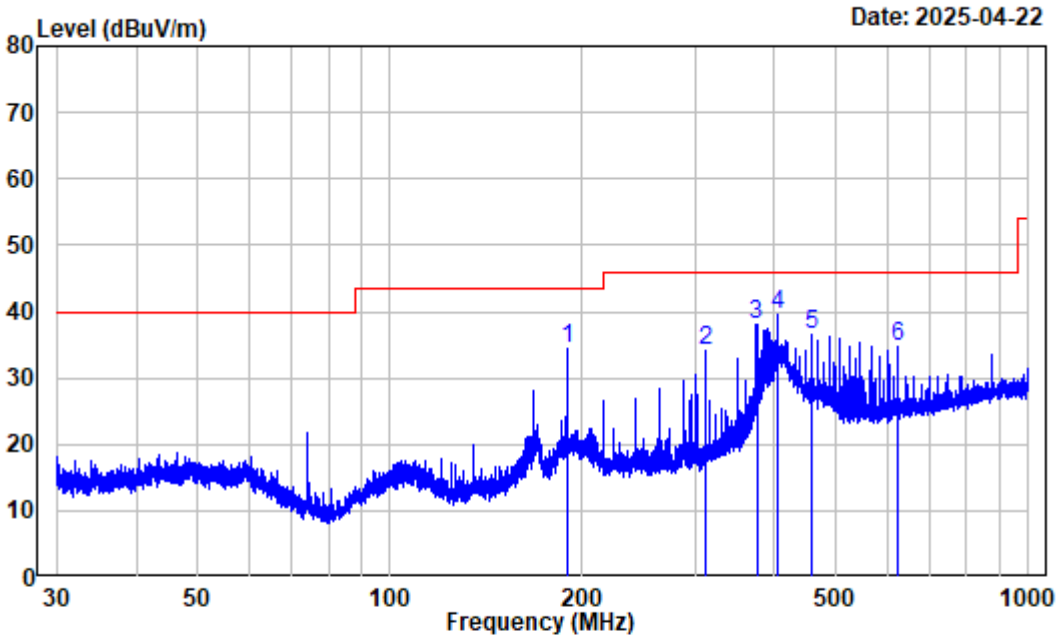
Temperature:	24 ℃
Relative Humidity:	55 %
ATM Pressure:	101.3 kPa
Test Engineer:	Jimi.zheng
Test Date:	2025-04-22
EUT Operation Mode:	Working

Test Result: Compliance, please refer to the below data.



Site : Chamber
Condition : 3m HORIZONTAL
Project No. : 2504Q43921E-EM
Test Mode : Working
Tester : Jimi Zheng
Receiver Setting: RBW:100kHz VBW:300kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	165.705	-14.44	46.66	32.22	43.50	-11.28	Peak
2	185.138	-12.09	48.22	36.13	43.50	-7.37	Peak
3	287.486	-9.77	47.49	37.72	46.00	-8.28	Peak
4	301.422	-9.64	49.28	39.64	46.00	-6.36	Peak
5	312.043	-9.42	48.40	38.98	46.00	-7.02	QP
6	375.116	-7.46	46.55	39.09	46.00	-6.91	Peak



Site : Chamber
Condition : 3m VERTICAL
Project No. : 2504Q43921E-EM
Test Mode : Working
Tester : Jimi Zheng
Receiver Setting: RBW:100kHz VBW:300kHz

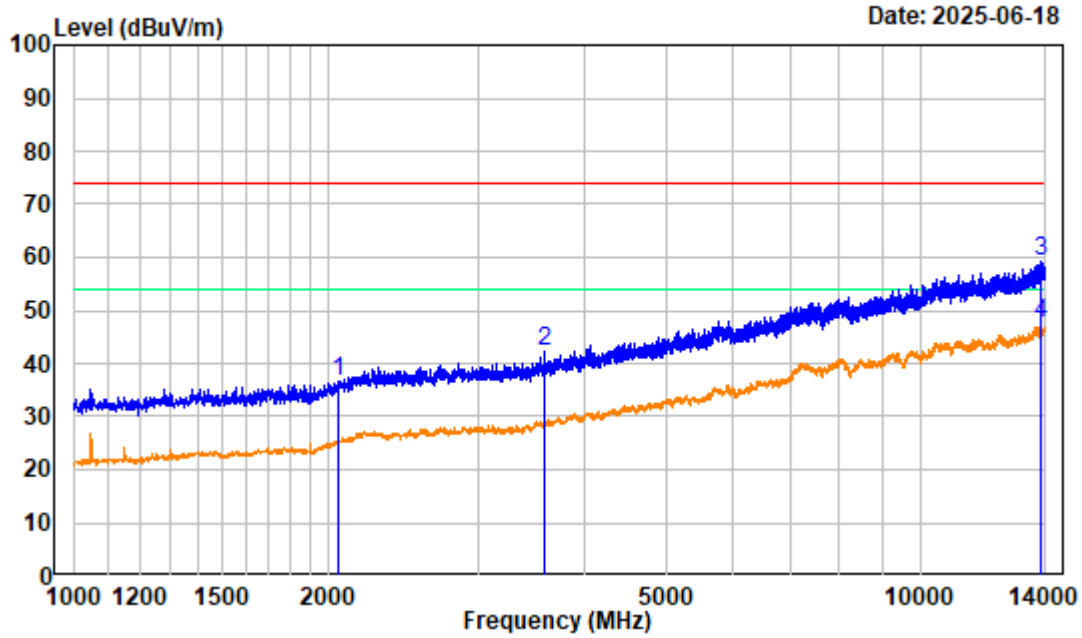
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	188.992	-11.11	45.48	34.37	43.50	-9.13	Peak
2	312.043	-9.42	43.46	34.04	46.00	-11.96	Peak
3	375.116	-7.46	45.52	38.06	46.00	-7.94	Peak
4	405.021	-6.49	46.05	39.56	46.00	-6.44	Peak
5	456.106	-5.61	42.27	36.66	46.00	-9.34	Peak
6	625.078	-2.43	37.20	34.77	46.00	-11.23	Peak

Above 1GHz

Environmental Conditions

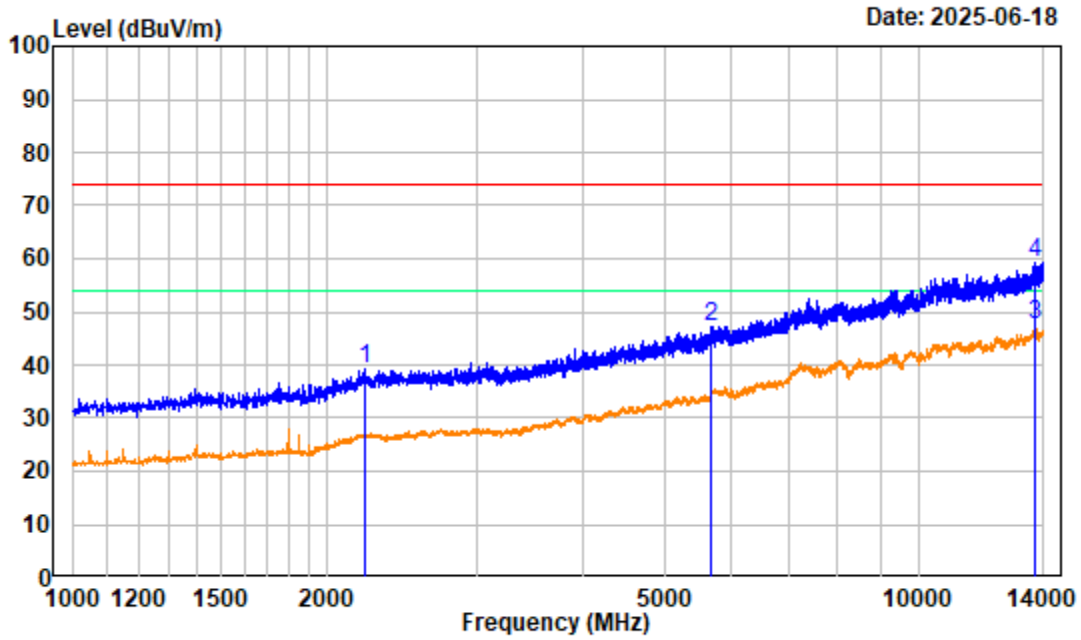
Temperature:	23 ℃
Relative Humidity:	55 %
ATM Pressure:	99.7 kPa
Test Engineer:	Kevin Lv
Test Date:	2025-06-18
EUT Operation Mode:	Working

Test Result: Compliance, please refer to the below data.



Site : chamber
Condition : 3m HORIZONTAL
Project No. : 2504Q43921E-EM
Test Mode : Working
Tester : Kevin Lv
Receiver Setting: Peak:RBW:1MHz VBW:3MHz AV:RBW:1MHz VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2054.625	-11.44	48.19	36.75	74.00	-37.25	Peak
2	3598.375	-9.41	51.69	42.28	74.00	-31.72	Peak
3	13855.380	7.99	51.25	59.24	74.00	-14.76	Peak
4	13855.380	7.99	39.54	47.53	54.00	-6.47	Average



Site : chamber
Condition : 3m VERTICAL
Project No. : 2504Q43921E-EM
Test Mode : Working
Tester : Kevin Lv
Receiver Setting: Peak:RBW:1MHz VBW:3MHz AV:RBW:1MHz VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2212.250	-10.10	49.16	39.06	74.00	-34.94	Peak
2	5678.375	-4.60	51.87	47.27	74.00	-26.73	Peak
3	13684.750	7.83	39.76	47.59	54.00	-6.41	Average
4	13684.750	7.83	51.34	59.17	74.00	-14.83	Peak

EXHIBIT A-EUT PHOTOGRAPHS

Please refer to the Annex: 2504Q43921E-EM EUT EXTERNAL PHOTOGRAPHS and 2504Q43921E-EM EUT INTERNAL PHOTOGRAPHS.

EXHIBIT B-TEST SETUP PHOTOGRAPHS

Please refer to the Attachment: 2504Q43921E-EM-01 TEST SETUP PHOTOGRAPHS.

******* END OF REPORT *******