TEST REPORT

Applicant Name:	Shenzhen TCL Smart Home Technology Co., Ltd.
Address:	702, Building G1, TCL International E City, Shuguang Community, Xili Street, Nanshan District, Shenzhen, China
Report Number:	2604P02236E-RFE
FCC ID:	2BG9T-TCLD2LM
IC:	34178-TCLD2LM

Test Standard (s)

FCC PART 15.225
RSS-210 ISSUE 11, JUNE 25, 2024
RSS-GEN ISSUE 5, FEBRUARY 2021 AMENDMENT 2

Sample Description

Product Name:	D2 Series Smart Door Lock
Model No.:	D2L
Trade Mark:	TCL
Date Received:	2026-02-02
Report Date:	2026-03-27

Test Result:	The EUT complied with the standards above.

Prepared and Checked By:

Roger.Ling
EMC Engineer

Approved By:

Bob.Liao
EMC Engineer

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TABLE OF CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2604P02236E-RFE	Original Report	2026-03-27

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name	D2 Series Smart Door Lock
Tested Model	D2L
HVIN	D2L Matter
Voltage Range#	DC 6V from battery(8 AA Alkaline Batteries, 4+4 parallel battery pack)
Note: The device (D2 Series Smart Door Lock) has two parts: Exterior Assembly and Interior Assembly.	

Only the Exterior Assembly has NFC function, it was tested and recorded in this report.	
Frequency Range	NFC: 13.56MHz
Modulation Technique	ASK
Maximum E-field Strength	66.17dBuV/m@3m
Antenna Specification#	LOOP Antenna (It is provided by the applicant.)
Sample Serial Number	3H0B-6 (Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 2- Subpart J, and Part 15-Subparts A and C of the Federal Communication Commissions rules; RSS-210 ISSUE 11, JUNE 2024 and RSS-GEN, ISSUE 5, FEBRUARY 2021 AMENDMENT 2 of the Innovation, Science and Economic Development Canada.

The objective is to determine the compliance of the EUT with FCC section 15.203, 15.205, 15.209 and 15.225; RSS-210 ISSUE 11, JUNE 2024 and RSS-GEN, ISSUE 5, FEBRUARY 2021 AMENDMENT 2.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020+Cor. 1-2023+ C63.10a-2024+Errata to C63.10a-2024▲, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices, RSS-210 ISSUE 11, JUNE 2024 and RSS-GEN, ISSUE 5, FEBRUARY 2021 AMENDMENT 2.

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.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements. The Registration Number is 30241.

Measurement Uncertainty

Parameter		Uncertainty
RF Frequency		$0.064*10^{-7}$
Emissions, Radiated	9kHz - 30MHz	2.1 dB
	30MHz - 1GHz	4.3 dB
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).

Equipment Modifications

No modification on the EUT.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
TCL	Access card	Unknown	Unknown

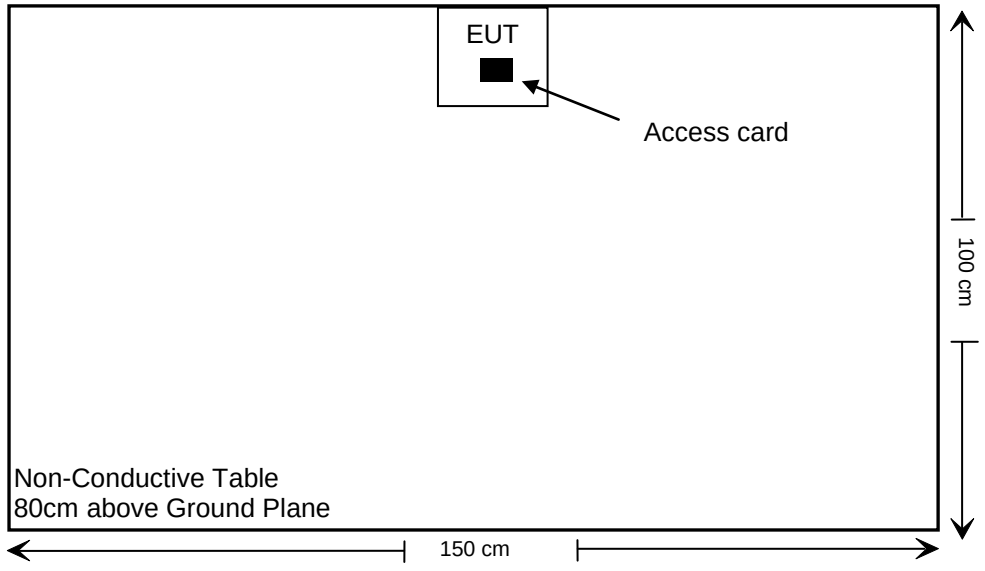
External I/O Cable

Cable Description	Shielding Type	Length (m)	From Port	To
/	/	/	/	/

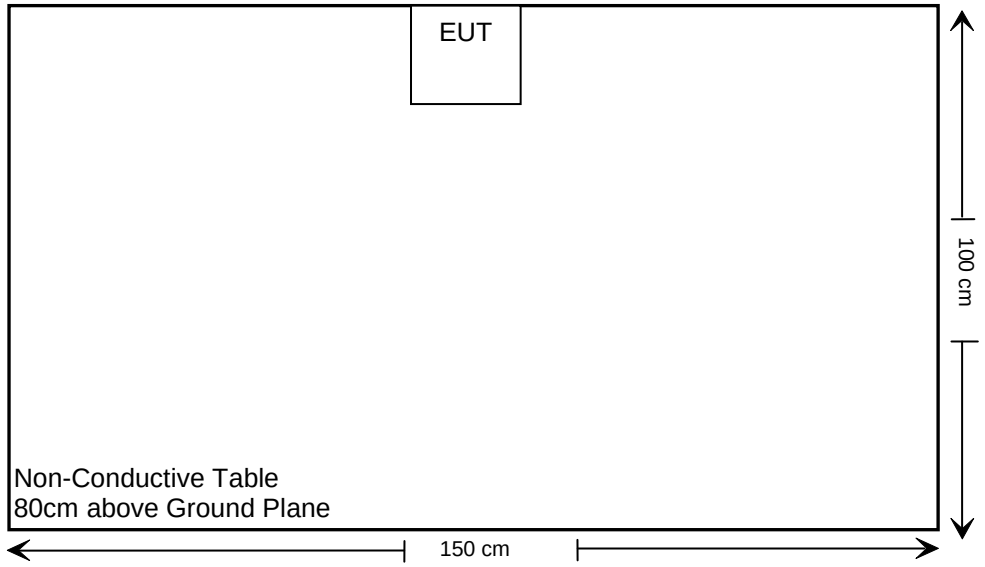
Block Diagram of Test Setup

For Radiated Emission Below 1GHz:

With card



Without card



SUMMARY OF TEST RESULTS

FCC Rules	ISED Rules	Description of Test	Result
§15.203	RSS-GEN §6.8	Antenna Requirement	Compliance
§15.207	RSS-GEN §8.8	AC Line Conducted Emission	Not Applicable
§15.225 §15.209, §15.205	RSS-210 Annex B B.6	Radiated Emission Test	Compliance
§15.225(e)	RSS-210 Annex B B.6	Frequency Stability	Compliance
§15.215(c)	RSS-GEN §6.7	20dB Emission Bandwidth & 99% Occupied Bandwidth	Compliance

Not Applicable - The device was powered by battery when operating.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Test Receiver	ESR	102725	2025/09/18	2026/09/17
SONOMA INSTRUMENT	Amplifier	310N	186131	2026/01/20	2027/01/19
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2026/01/23	2029/01/22
Unknown	RF Coaxial Cable	No.12	N040	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.13	N300	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.14	N800	2025/05/30	2026/05/29
BACL	LOOP ANTENNA	1313-1A	3110711	2024/01/16	2027/01/15
UNI-T	DC Power Supply	UTP1306S	2109D0903324	2026/01/20	2027/01/19
BACL	Temp. & Humid. Chamber	BTH-150-40	30192	2025/09/18	2026/09/17
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).

ANTENNA REQUIREMENT

Applicable Standard

According to FCC§15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

According to RSS-GEN §6.8,

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:

This radio transmitter [enter the device's ISED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.
Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

Antenna Connected Construction

The EUT has a LOOP antenna arrangement for NFC, which was permanently attached, fulfill the requirement of this section. Please refer to the EUT photos.

Type	Antenna Gain	Impedance
LOOP	Unknown	Unknown

Result: Compliance.

RADIATED EMISSIONS

Applicable Standard

According to FCC Part 15.225, §15.205& §15.209:

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

According to RSS-210 Annex B B.6

B.6 Band 13.110-14.010 MHz

Devices shall comply with the following requirements:

a. the field strength of any emission shall not exceed the following limits:

i. 15.848 mV/m (84 dBμV/m) at 30 m, within the band 13.553-13.567 MHz

ii. 334 μV/m (50.5 dBμV/m) at 30 m, within the bands 13.410-13.553 MHz and 13.567-13.710 MHz

iii. 106 μV/m (40.5 dBμV/m) at 30 m, within the bands 13.110-13.410 MHz and 13.710-14.010 MHz

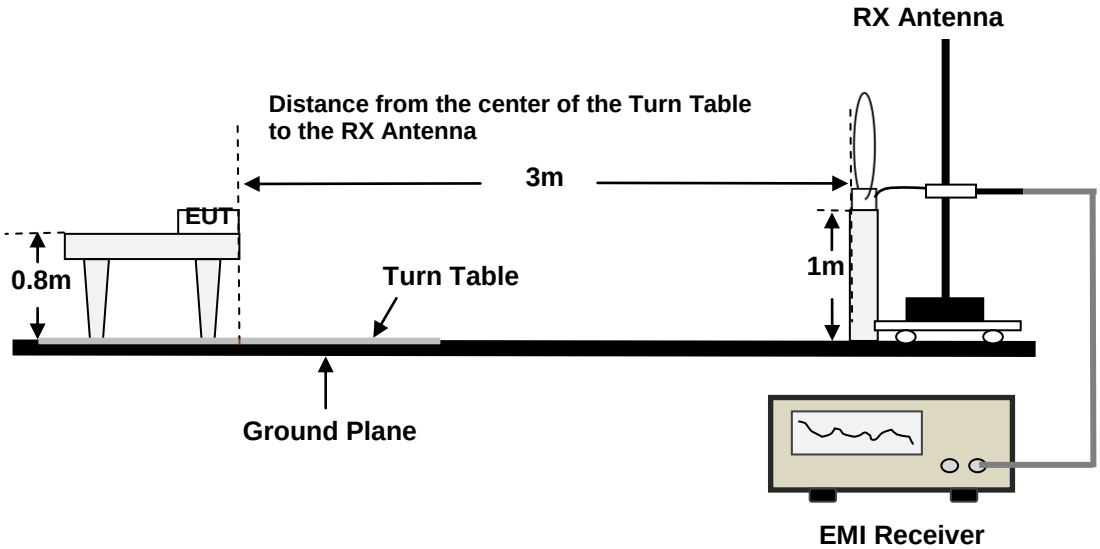
iv. RSS-Gen general field strength limits for frequencies outside the band 13.110-14.010 MHz

b. the carrier frequency stability shall not exceed ±100 ppm

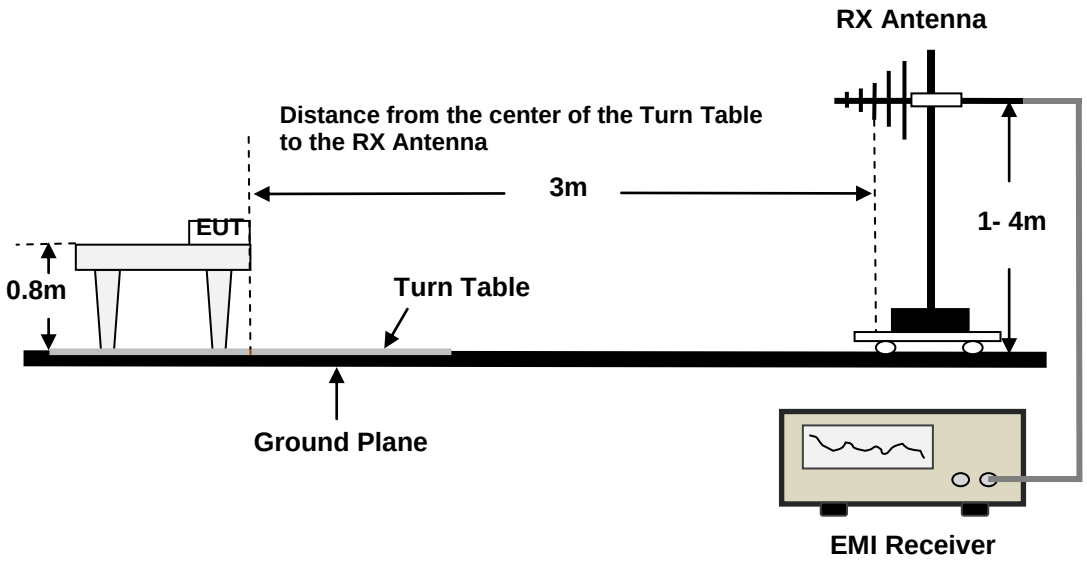
For the spurious emission below 30MHz, the unit of final result on the test plots are dBμV/m, so the limit should be added by 51,5 dB from dBμA/m to dBμV/m.

EUT Setup

9kHz - 30MHz:



30MHz - 1GHz:



The radiated emission tests were performed in the 3-meter chamber a test site, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC Part Subpart C, RSS-210 and RSS-GEN limits.

EMI Test Receiver Setup

The system was investigated from 9 kHz to 1 GHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

Frequency Range	Measurement	RBW	Video B/W	IF B/W	Detector
9kHz - 150kHz	PK	0.3kHz	1kHz	/	PK
	QP/AV	/	/	200Hz	QP/AV
150kHz - 30MHz	PK	10kHz	30kHz	/	PK
	QP/AV	/	/	9kHz	QP/AV
30MHz - 1000MHz	PK	100kHz	300kHz	/	PK
	QP	/	/	120kHz	QP

Test Procedure

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

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

According to FCC §15.209(e), the provisions in §15.31, 15.33, and 15.35 for measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

According to FCC§15.31 measurement standard (f)(2), at frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.

For 9kHz-30MHz, test distance is 3m, extrapolation limit shall be calculated using Equation:

$$E_{limit-measure} = E_{limit-Standard} + 40 \times \log10(\frac{d_{Standard}}{d_{measure}})$$

Note 1: If the maximized peak measured value is under the QP/Average limit by more than 6dB, then it is unnecessary to perform an QP/Average measurement.
Note 2: For above 1GHz, the test result of peak was 20dB below to the limit of peak, which can be compliant to the average limit, so just peak value was recorded.

Calculation

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

Factor = Antenna Factor + Cable Loss - Amplifier Gain

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

Over Limit/Margin = Level / Corrected Amplitude – Limit
Level / Corrected Amplitude = Read Level + Factor

Test Data

For Radiated Spurious Emissions, this device is installed vertically in Y-axes orientation. It was provided by applicant. The Y-axes orientation was tested and recorded in the report.

9kHz-1GHz

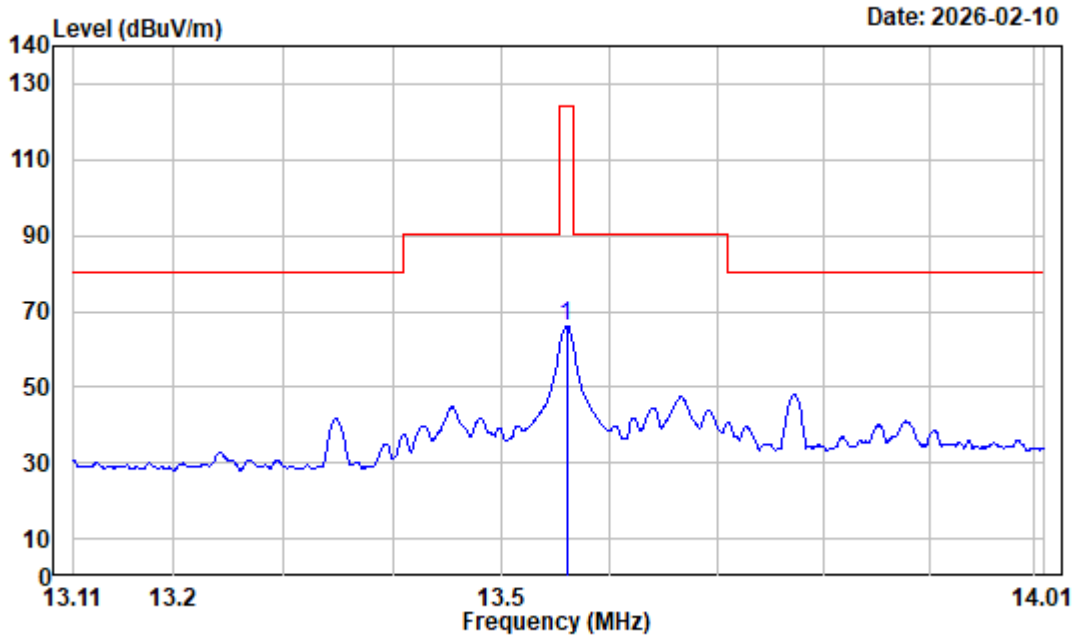
Environmental Conditions

Temperature:	20.7 ℃
Relative Humidity:	51 %
ATM Pressure:	101.9 kPa
Test Engineer:	Jayden Luo
Test Date:	2026-02-10
EUT Operation Mode:	Transmitting

Test Result: Compliance. Please refer to the below data.

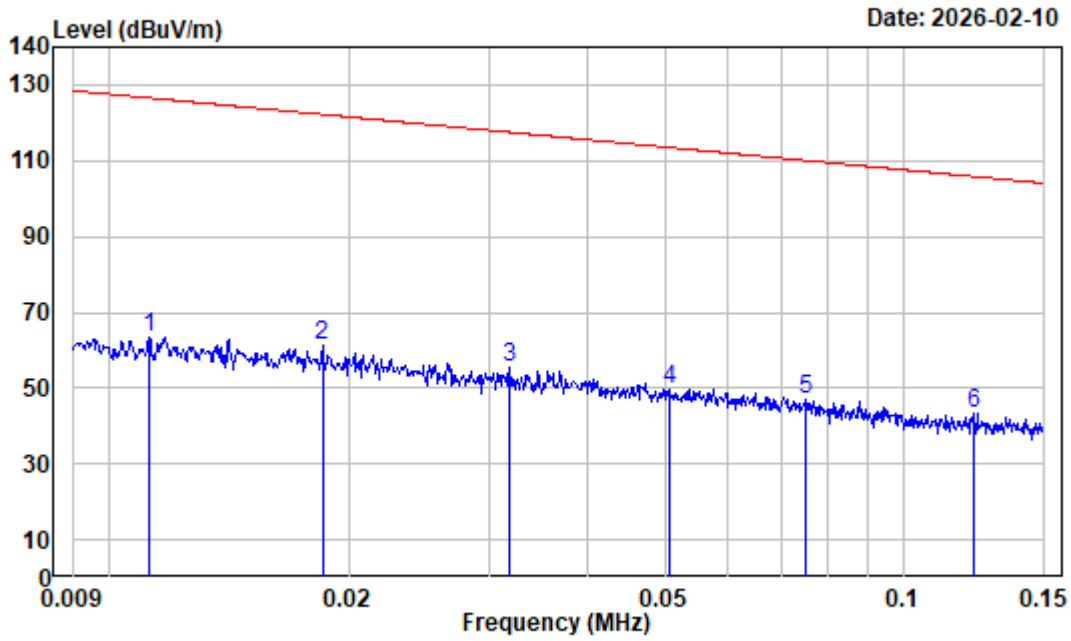
9kHz~30MHz:

With card:



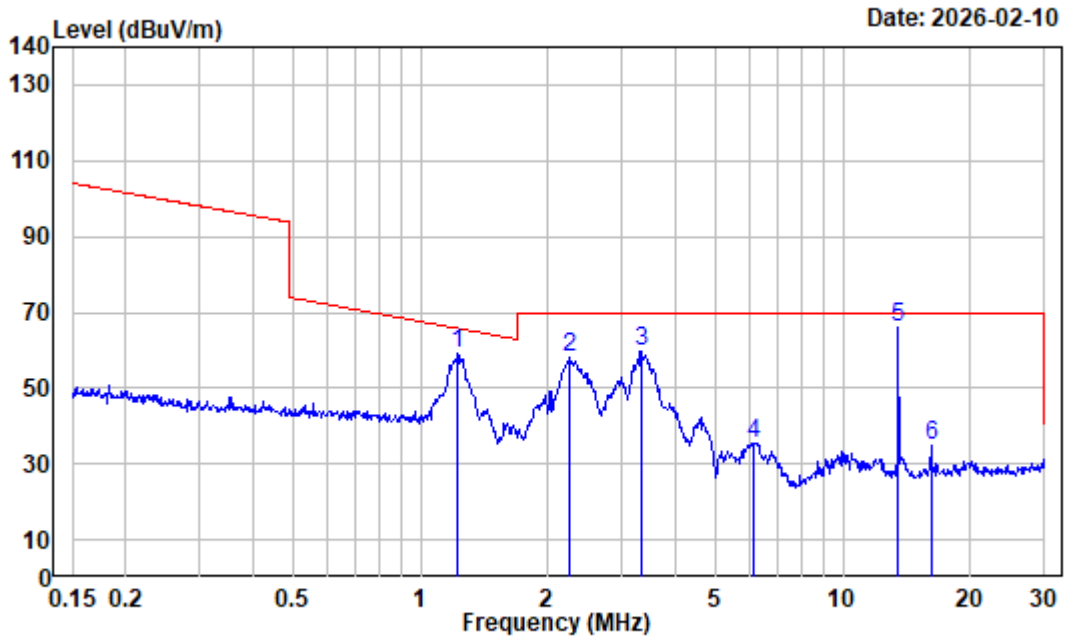
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	13.560	-4.41	70.58	66.17	124.00	-57.83	Peak



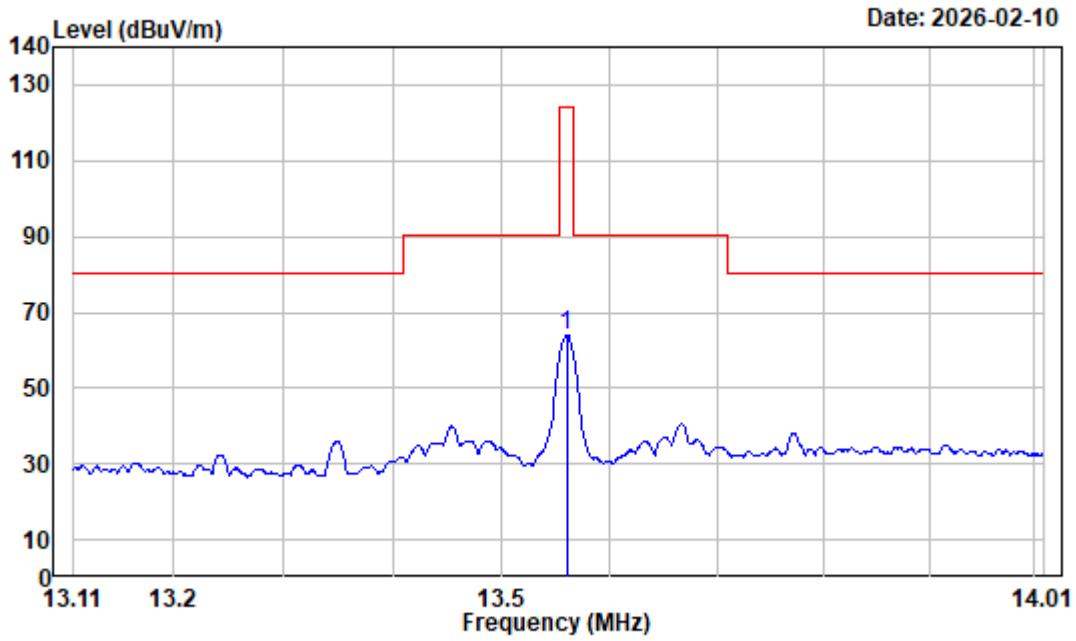
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:300Hz VBW:1kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.011	35.28	28.37	63.65	126.59	-62.94	Peak
2	0.019	32.04	29.11	61.15	122.24	-61.09	Peak
3	0.032	26.57	28.81	55.38	117.55	-62.17	Peak
4	0.051	22.72	27.20	49.92	113.52	-63.60	Peak
5	0.075	19.21	28.00	47.21	110.07	-62.86	Peak
6	0.122	15.43	28.07	43.50	105.87	-62.37	Peak



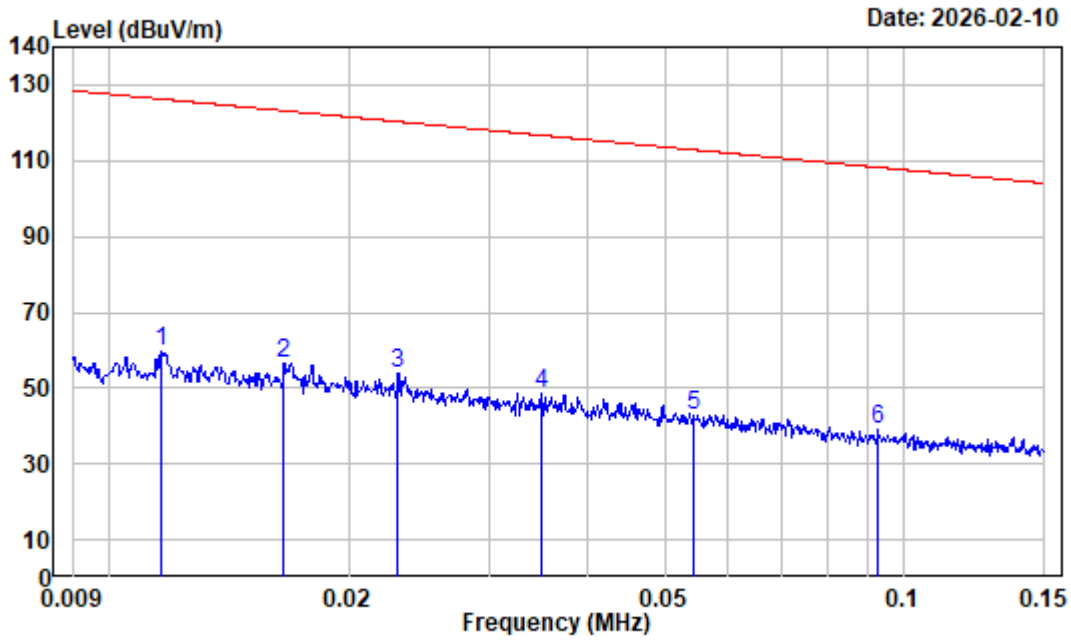
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1.223	-2.62	61.55	58.93	65.69	-6.76	Peak
2	2.261	-5.50	63.36	57.86	69.54	-11.68	Peak
3	3.328	-5.98	65.62	59.64	69.54	-9.90	Peak
4	6.153	-6.19	41.75	35.56	69.54	-33.98	Peak
5	13.551	-4.41	70.53	66.12	69.54	-3.42	Peak
6	16.226	-3.86	38.81	34.95	69.54	-34.59	Peak



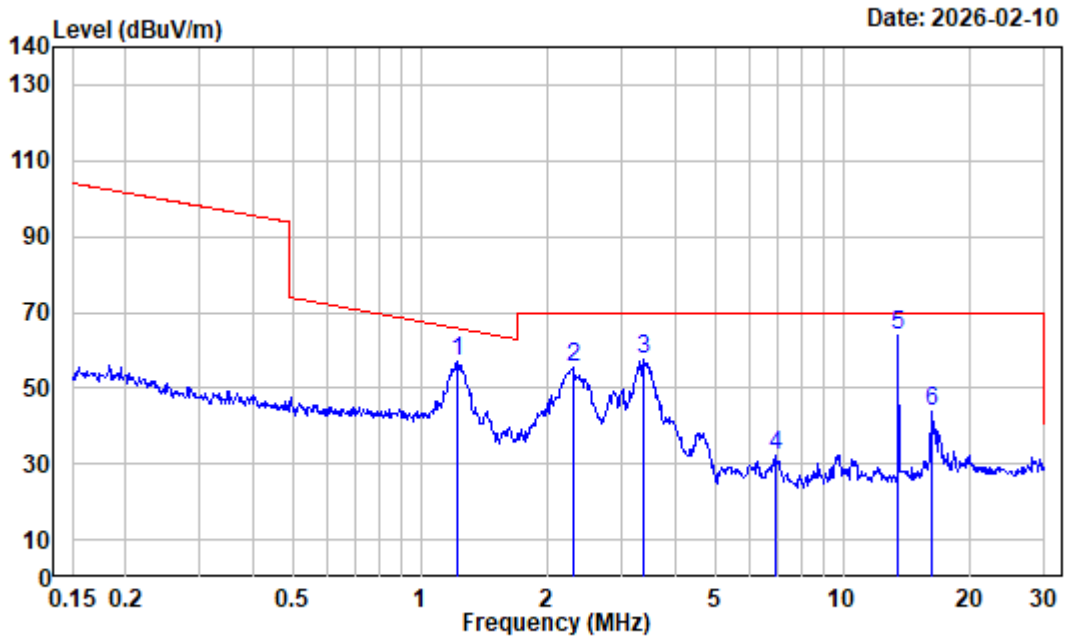
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Perpendicular Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	13.560	-4.41	68.55	64.14	124.00	-59.86	Peak



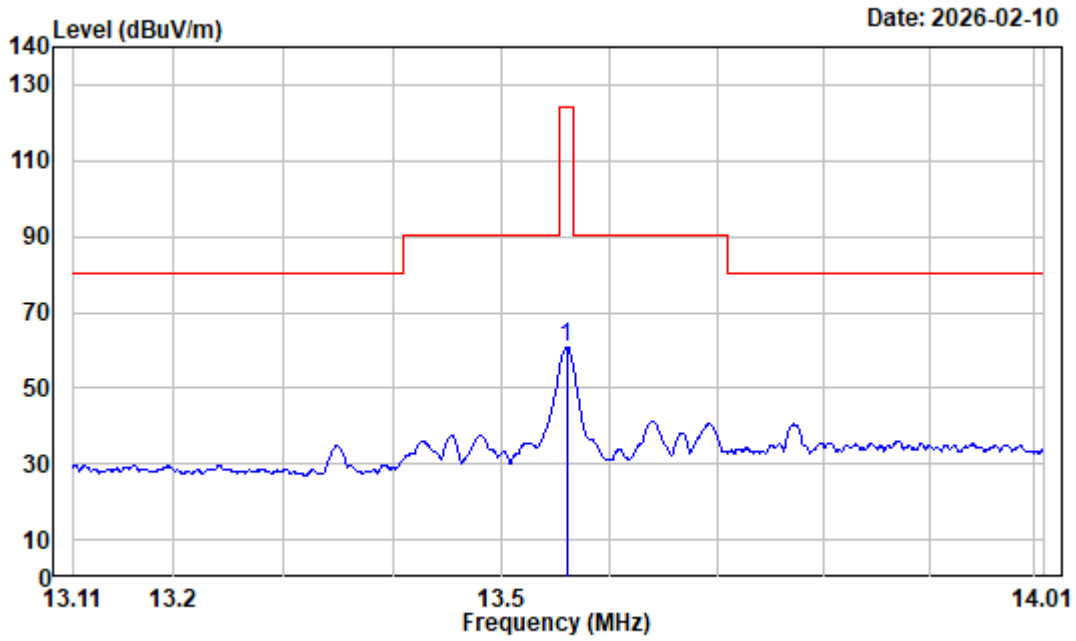
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Perpendicular Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:300Hz VBW:1kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.012	35.09	24.80	59.89	126.27	-66.38	Peak
2	0.017	32.92	23.69	56.61	123.22	-66.61	Peak
3	0.023	30.01	23.74	53.75	120.33	-66.58	Peak
4	0.035	25.93	22.60	48.53	116.74	-68.21	Peak
5	0.054	22.19	20.72	42.91	112.90	-69.99	Peak
6	0.093	17.20	21.64	38.84	108.26	-69.42	Peak



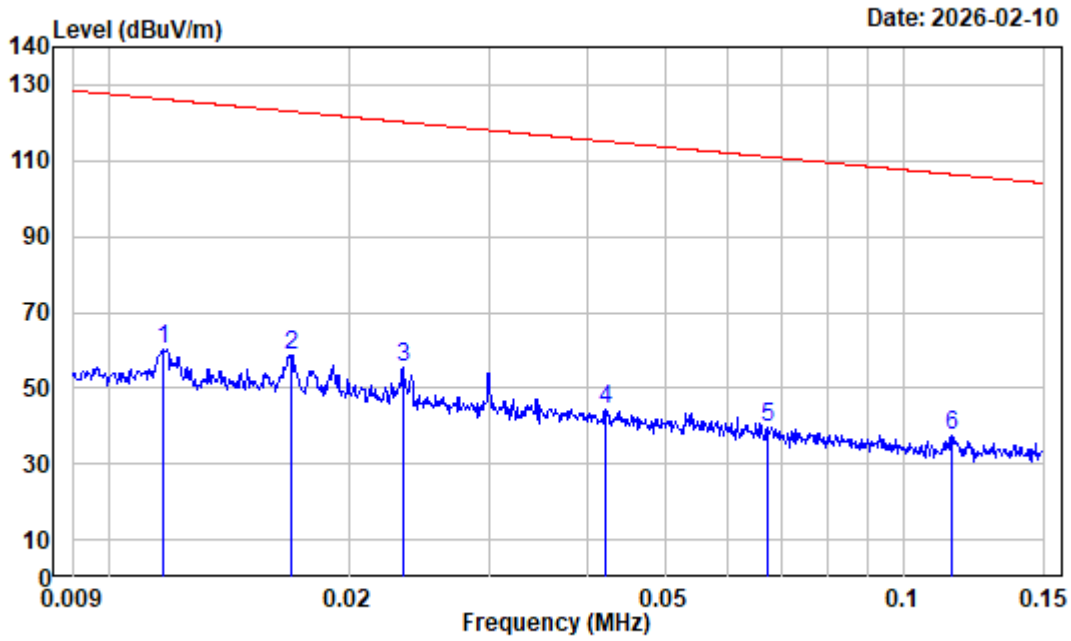
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Perpendicular Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1.229	-2.64	59.70	57.06	65.64	-8.58	Peak
2	2.309	-5.51	60.76	55.25	69.54	-14.29	Peak
3	3.381	-6.01	63.77	57.76	69.54	-11.78	Peak
4	6.914	-5.99	38.45	32.46	69.54	-37.08	Peak
5	13.551	-4.41	68.46	64.05	69.54	-5.49	Peak
6	16.226	-3.86	47.46	43.60	69.54	-25.94	Peak



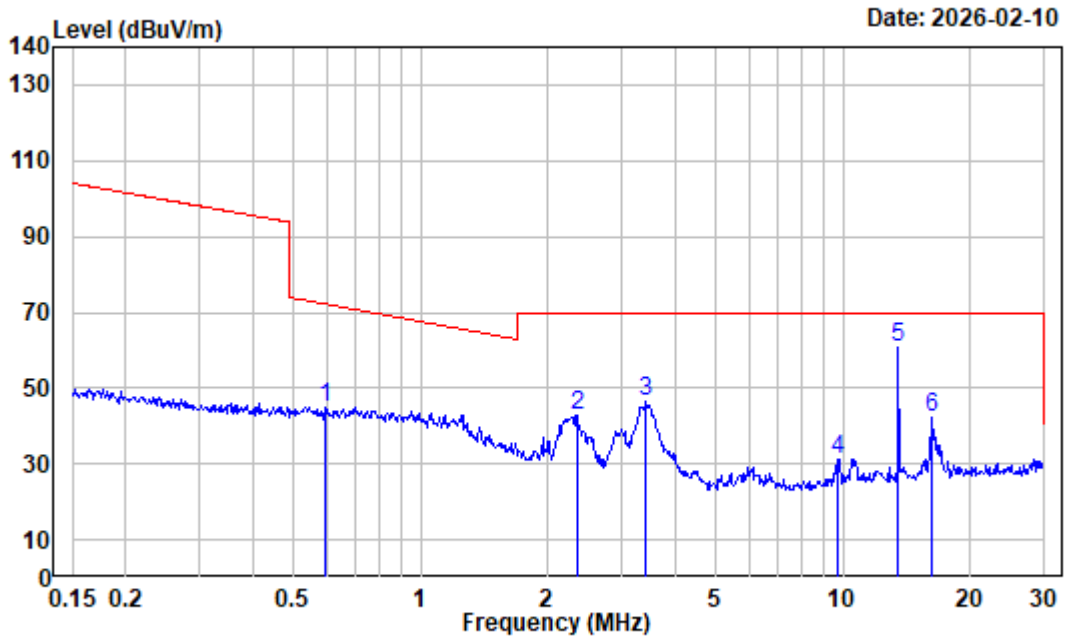
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Ground-parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	13.560	-4.41	65.36	60.95	124.00	-63.05	Peak



Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Ground-parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:300Hz VBW:1kHz

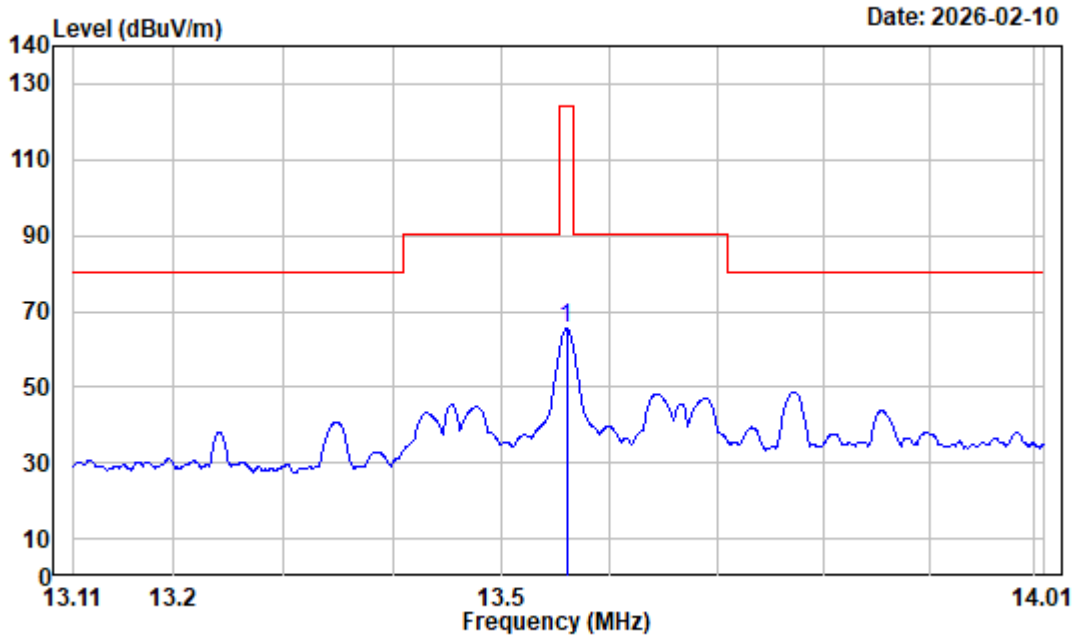
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.012	35.06	25.21	60.27	126.22	-65.95	Peak
2	0.017	32.73	26.05	58.78	123.00	-64.22	Peak
3	0.023	29.87	25.41	55.28	120.21	-64.93	Peak
4	0.042	24.46	19.78	44.24	115.13	-70.89	Peak
5	0.067	20.34	19.28	39.62	111.05	-71.43	Peak
6	0.114	15.78	21.55	37.33	106.43	-69.10	Peak



Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Ground-parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:10kHz VBW:30kHz

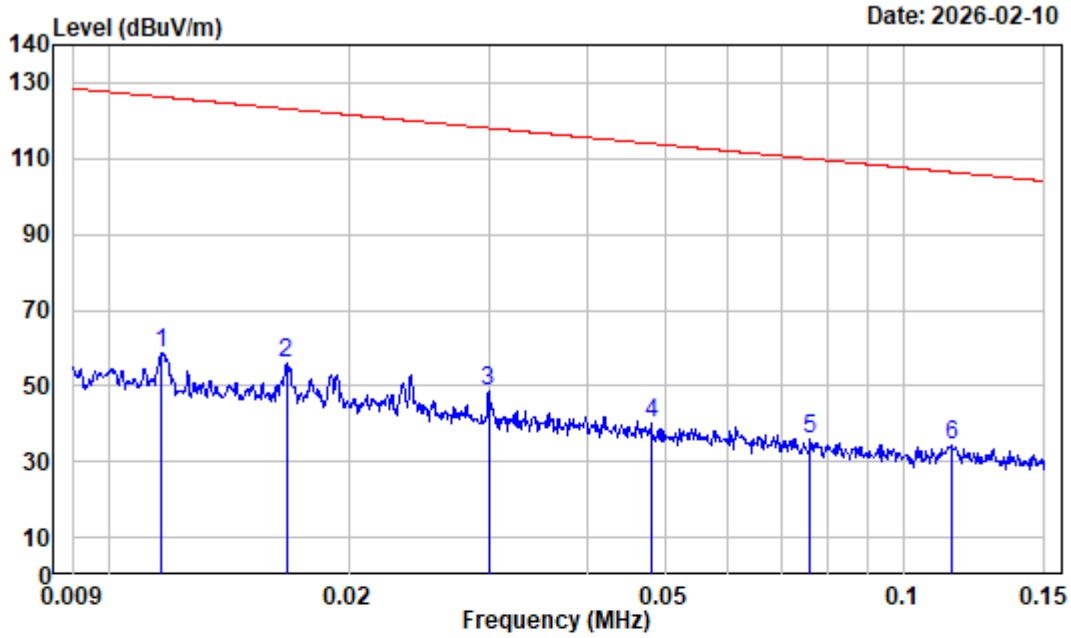
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.595	2.17	42.88	45.05	72.08	-27.03	Peak
2	2.346	-5.53	48.47	42.94	69.54	-26.60	Peak
3	3.417	-6.03	52.43	46.40	69.54	-23.14	Peak
4	9.757	-5.39	36.82	31.43	69.54	-38.11	Peak
5	13.551	-4.41	65.26	60.85	69.54	-8.69	Peak
6	16.226	-3.86	46.37	42.51	69.54	-27.03	Peak

Without card:



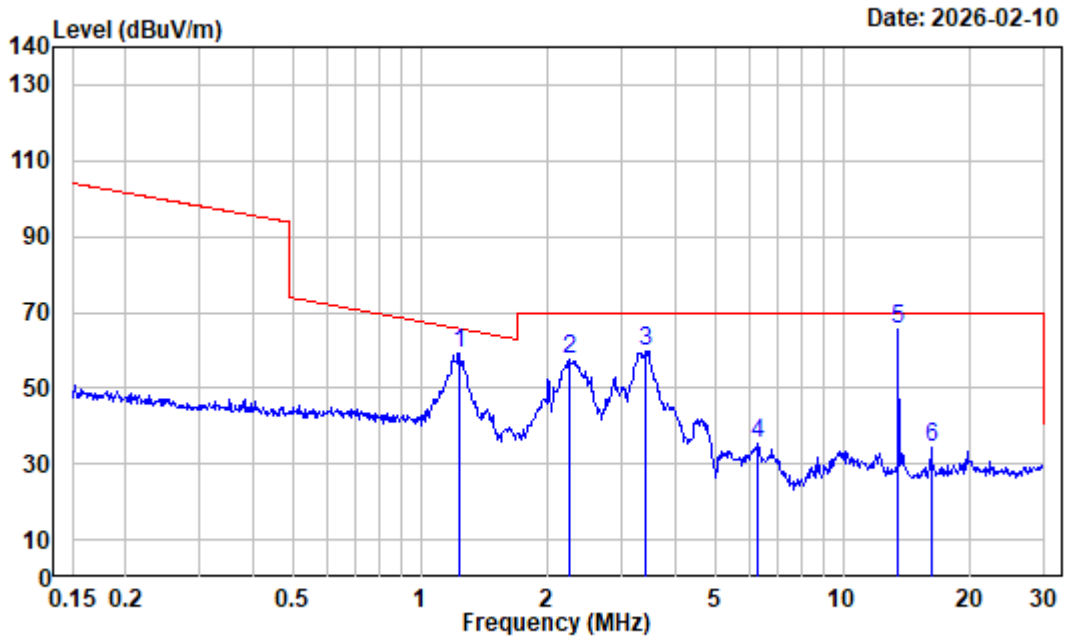
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	13.560	-4.41	69.86	65.45	124.00	-58.55	Peak



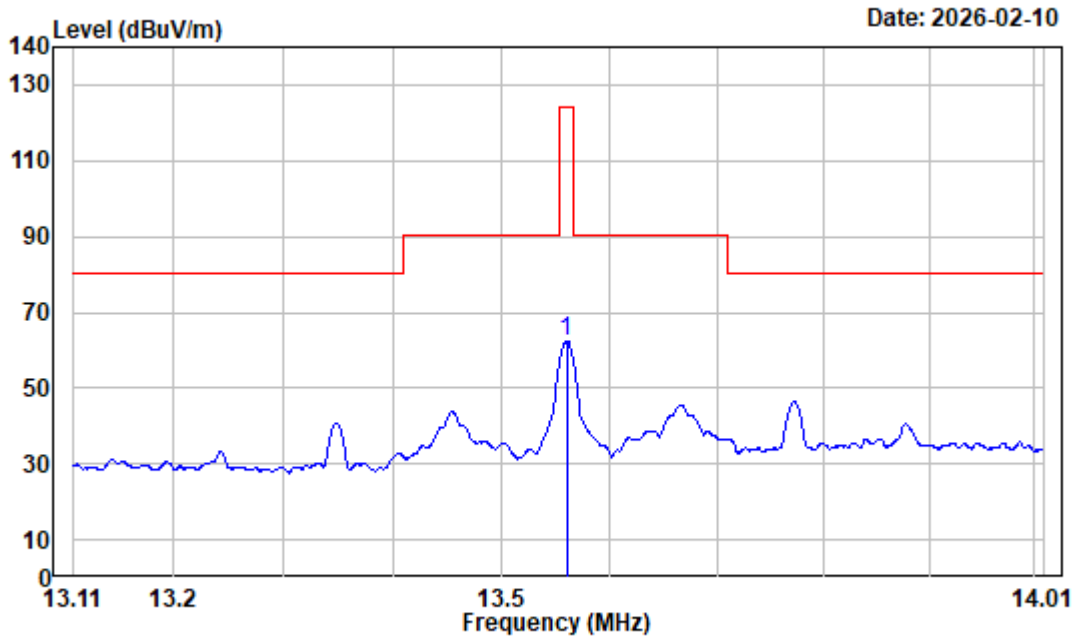
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:300Hz VBW:1kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.012	35.09	23.49	58.58	126.27	-67.69	Peak
2	0.017	32.85	23.31	56.16	123.14	-66.98	Peak
3	0.030	26.95	21.79	48.74	118.06	-69.32	Peak
4	0.048	23.22	16.82	40.04	113.98	-73.94	Peak
5	0.076	19.08	16.59	35.67	109.97	-74.30	Peak
6	0.115	15.77	18.77	34.54	106.40	-71.86	Peak



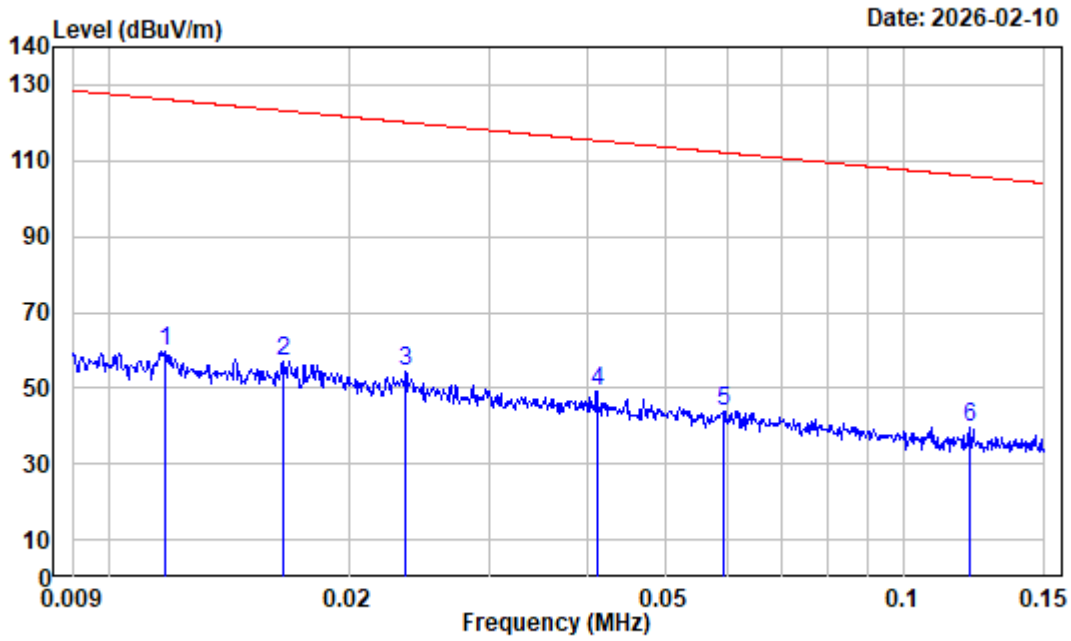
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1.236	-2.67	61.91	59.24	65.60	-6.36	Peak
2	2.249	-5.49	63.19	57.70	69.54	-11.84	Peak
3	3.417	-6.03	65.81	59.78	69.54	-9.76	Peak
4	6.285	-6.15	41.33	35.18	69.54	-34.36	Peak
5	13.551	-4.41	69.75	65.34	69.54	-4.20	Peak
6	16.226	-3.86	38.37	34.51	69.54	-35.03	Peak



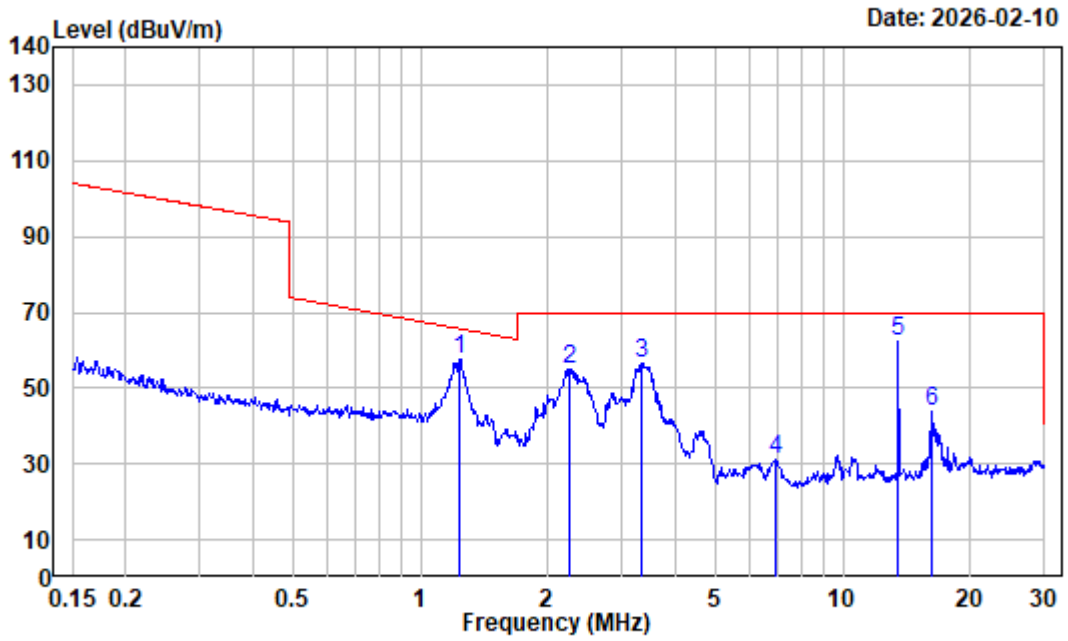
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Perpendicular Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	13.560	-4.41	66.95	62.54	124.00	-61.46	Peak



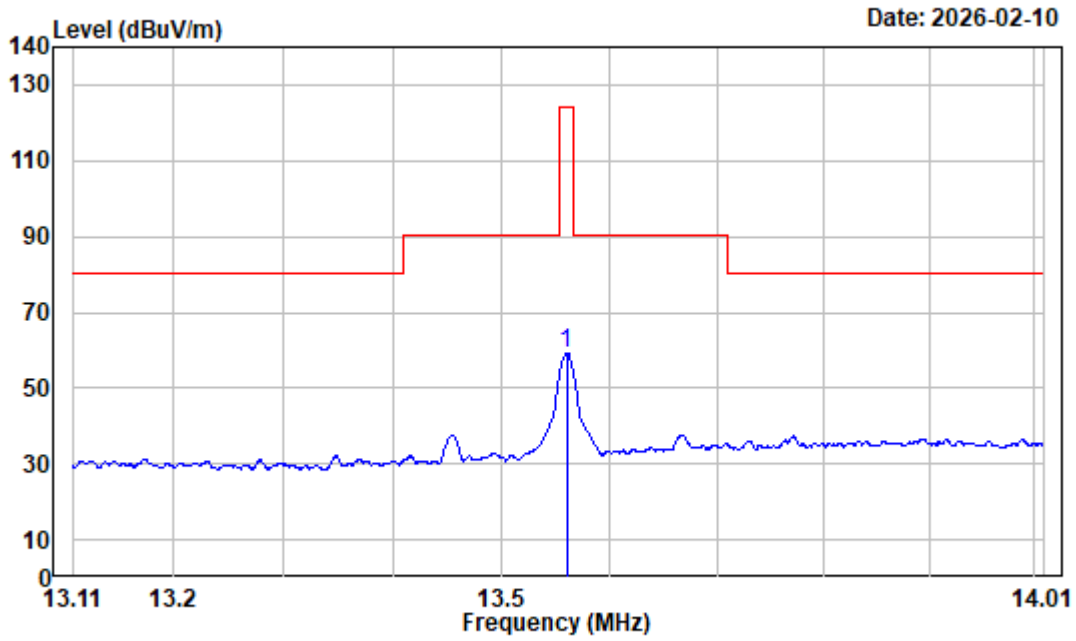
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Perpendicular Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:300Hz VBW:1kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.012	35.03	24.72	59.75	126.17	-66.42	Peak
2	0.017	32.92	24.30	57.22	123.22	-66.00	Peak
3	0.024	29.78	24.71	54.49	120.14	-65.65	Peak
4	0.041	24.65	24.45	49.10	115.32	-66.22	Peak
5	0.059	21.51	22.36	43.87	112.17	-68.30	Peak
6	0.121	15.49	24.17	39.66	105.96	-66.30	Peak



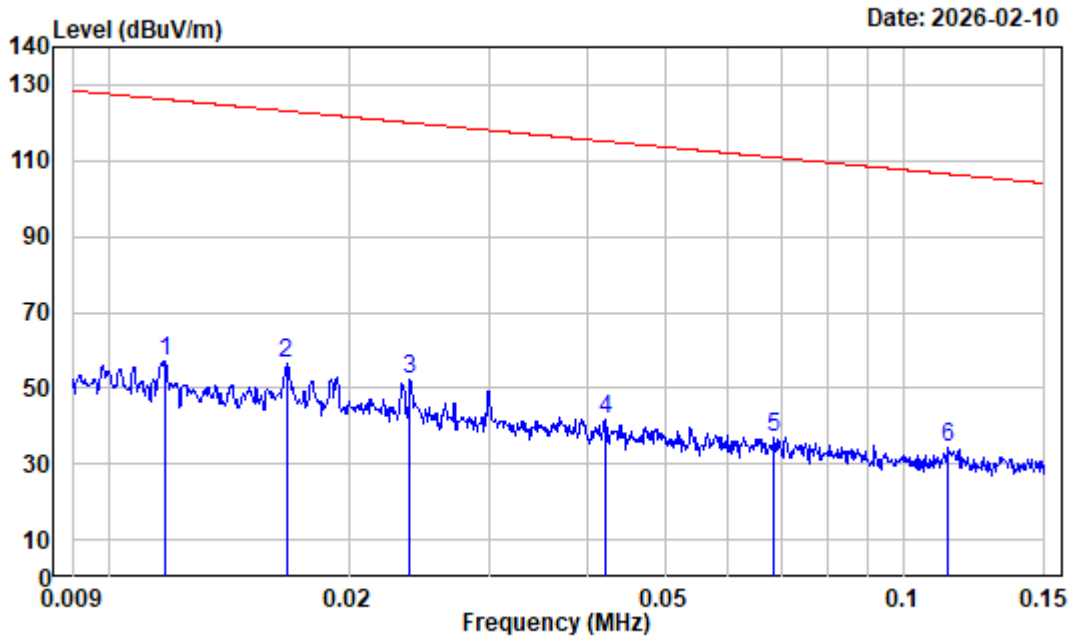
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Perpendicular Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1.242	-2.69	60.08	57.39	65.55	-8.16	Peak
2	2.249	-5.49	60.49	55.00	69.54	-14.54	Peak
3	3.346	-5.99	62.43	56.44	69.54	-13.10	Peak
4	6.914	-5.99	36.97	30.98	69.54	-38.56	Peak
5	13.551	-4.41	66.82	62.41	69.54	-7.13	Peak
6	16.226	-3.86	47.55	43.69	69.54	-25.85	Peak



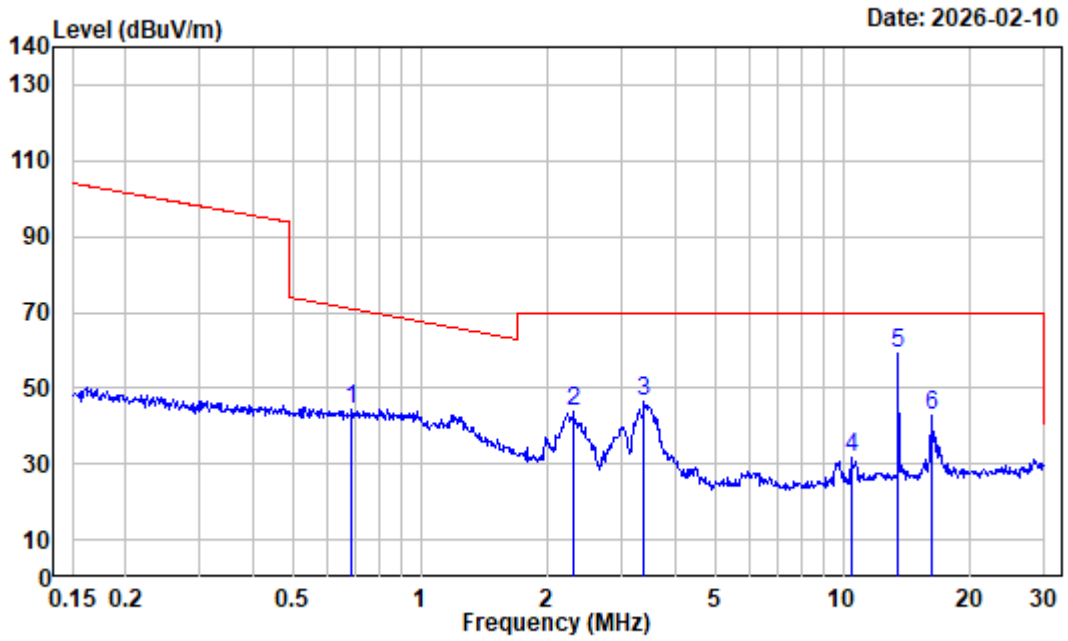
Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Ground-parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	13.560	-4.41	63.77	59.36	124.00	-64.64	Peak



Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Ground-parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:300Hz VBW:1kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.012	35.05	22.24	57.29	126.20	-68.91	Peak
2	0.017	32.85	23.63	56.48	123.14	-66.66	Peak
3	0.024	29.66	22.49	52.15	120.04	-67.89	Peak
4	0.042	24.46	17.13	41.59	115.13	-73.54	Peak
5	0.069	20.15	16.74	36.89	110.88	-73.99	Peak
6	0.113	15.84	18.24	34.08	106.53	-72.45	Peak

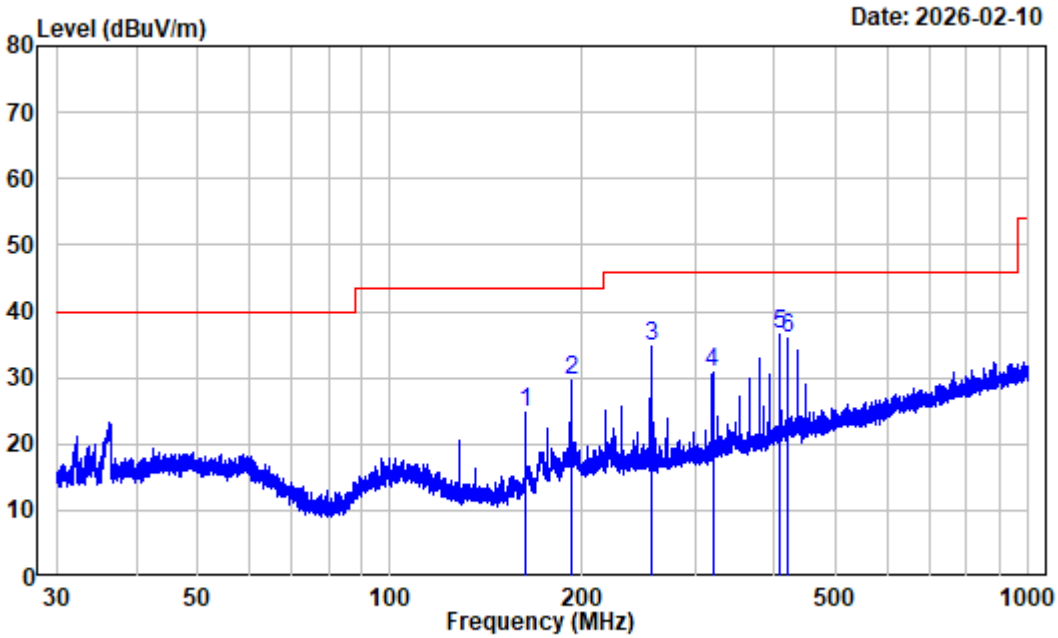


Site : chamber
Condition : 3m
Job No. : 2604P02236E-RF
Polarization : Ground-parallel Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.686	1.08	43.42	44.50	70.81	-26.31	Peak
2	2.309	-5.51	49.56	44.05	69.54	-25.49	Peak
3	3.381	-6.01	52.57	46.56	69.54	-22.98	Peak
4	10.452	-5.24	36.90	31.66	69.54	-37.88	Peak
5	13.551	-4.41	63.68	59.27	69.54	-10.27	Peak
6	16.226	-3.86	46.69	42.83	69.54	-26.71	Peak

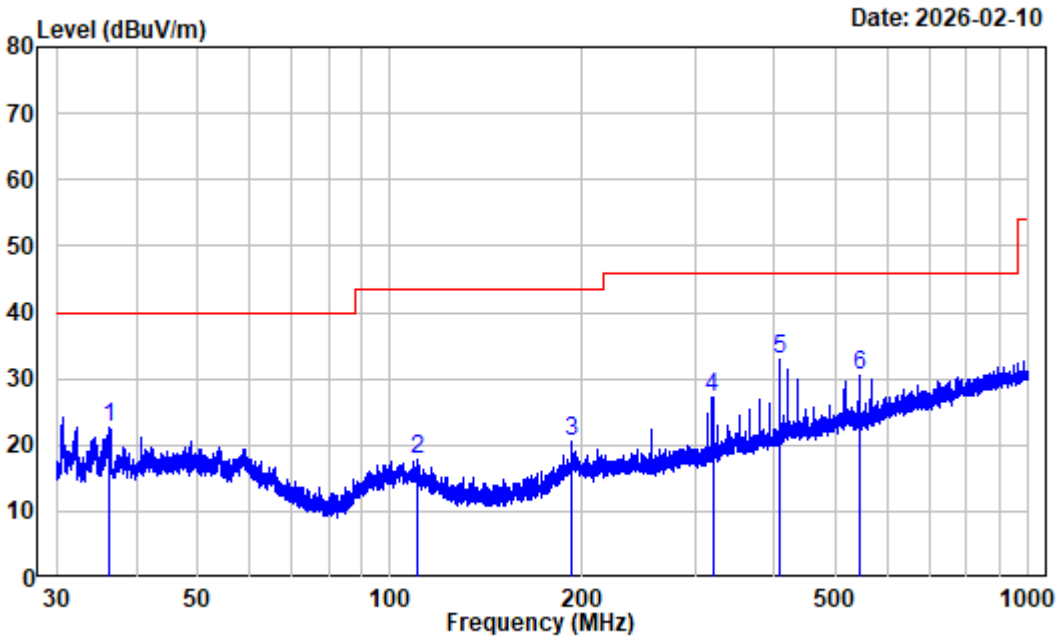
30MHz~1GHz:

With card:



Site : chamber
Condition : 3m HORIZONTAL
Job No. : 2604P02236E-RF Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:100kHz VBW:300kHz

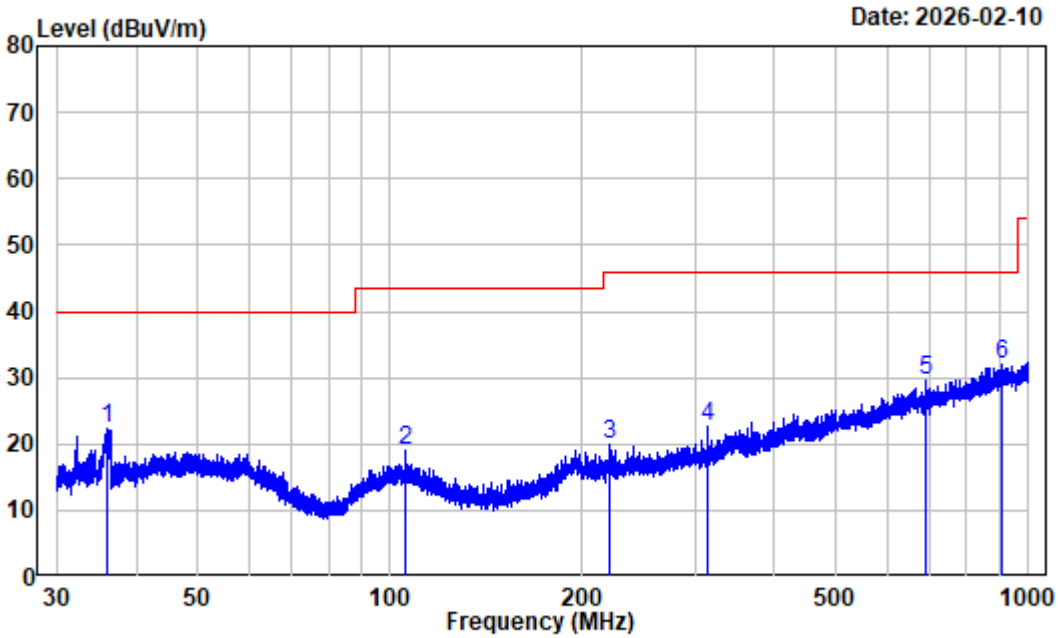
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	162.753	-13.90	38.62	24.72	43.50	-18.78	Peak
2	192.082	-10.15	39.80	29.65	43.50	-13.85	Peak
3	256.072	-10.12	44.74	34.62	46.00	-11.38	Peak
4	320.077	-8.37	39.18	30.81	46.00	-15.19	Peak
5	406.801	-5.74	42.29	36.55	46.00	-9.45	Peak
6	420.396	-5.10	41.12	36.02	46.00	-9.98	Peak



Site : chamber
Condition : 3m VERTICAL
Job No. : 2604P02236E-RF Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : with card
Receiver Setting: RBW:100kHz VBW:300kHz

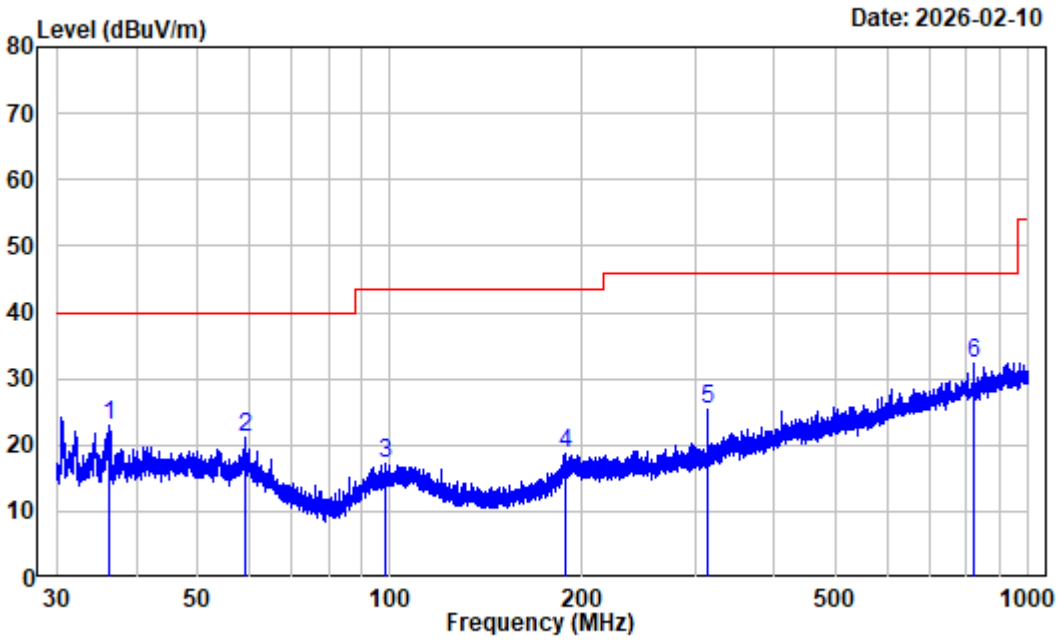
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	36.286	-11.40	34.15	22.75	40.00	-17.25	Peak
2	109.989	-11.62	29.33	17.71	43.50	-25.79	Peak
3	191.997	-10.17	30.56	20.39	43.50	-23.11	Peak
4	320.077	-8.37	35.65	27.28	46.00	-18.72	Peak
5	406.801	-5.74	38.63	32.89	46.00	-13.11	Peak
6	542.560	-3.47	33.93	30.46	46.00	-15.54	Peak

Without card:



Site : chamber
Condition : 3m HORIZONTAL
Job No. : 2604P02236E-RF Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
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	35.953	-11.46	33.78	22.32	40.00	-17.68	Peak
2	105.503	-11.14	30.21	19.07	43.50	-24.43	Peak
3	221.295	-10.54	30.35	19.81	46.00	-26.19	Peak
4	314.928	-8.62	31.24	22.62	46.00	-23.38	Peak
5	690.472	-1.13	30.64	29.51	46.00	-16.49	Peak
6	911.263	1.99	30.05	32.04	46.00	-13.96	Peak



Site : chamber
Condition : 3m VERTICAL
Job No. : 2604P02236E-RF Tester: Jayden Luo
Test Mode : NFC Transmitting
Note : without card
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	36.206	-11.42	34.44	23.02	40.00	-16.98	Peak
2	59.414	-10.30	31.43	21.13	40.00	-18.87	Peak
3	98.314	-11.70	28.84	17.14	43.50	-26.36	Peak
4	188.660	-10.69	29.48	18.79	43.50	-24.71	Peak
5	314.928	-8.62	33.99	25.37	46.00	-20.63	Peak
6	819.552	0.42	32.02	32.44	46.00	-13.56	Peak

FREQUENCY STABILITY

Applicable Standard

According to FCC§15.225(e):

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

According to RSS-210 ANNEX B B.6:

The carrier frequency stability shall not exceed ±100 ppm

Test Procedure

According to ANSI C63.10-2020 Section 6.8

Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or b connecting a dummy load to the measuring instrument, through an attenuator if necessary.

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more that 10 °C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.

Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15 °C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument. NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

c) Measure the frequency at each of the frequencies specified in 5.6.

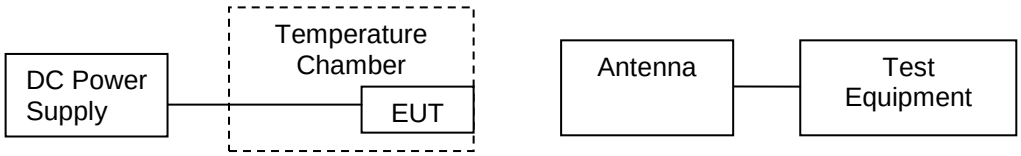
d) Repeat the above procedure at 85% and 115% of the nominal supply voltage as described in 5.13.

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and inductive antenna was connected to a Spectrum Analyzer. The EUT was placed inside the temperature chamber.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the Spectrum Analyzer.

Frequency Stability vs. Voltage: An external DC power supply Source. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the end point. The output frequency was recorded for each voltage.

EUT Setup



Test Data

Environmental Conditions

Temperature:	20.2 ℃
Relative Humidity:	46 %
ATM Pressure:	101.9 kPa
Test Engineer:	Jayden Luo
Test Date:	2026-02-10
EUT Operation Mode:	Transmitting (Radiated Measurement)

Test Result: Compliance. Please refer to the below data.

With card

Test Item	Temperature (℃)	Voltage (V_{DC})	Measured frequency (MHz)	FCC Frequency Error (%)	FCC Limit (%)	ISED Frequency Error (ppm)	ISED Limit (ppm)
Frequency Stability vs. Temperature	-20	6	13.56022193	0.00164	0.01	16.37	±100
	-10		13.56022113	0.00163	0.01	16.31	±100
	0		13.56022123	0.00163	0.01	16.31	±100
	10		13.56022168	0.00164	0.01	16.35	±100
	20		13.56022243	0.00164	0.01	16.40	±100
	25		13.56022153	0.00163	0.01	16.34	±100
	30		13.56022162	0.00163	0.01	16.34	±100
	40		13.56022166	0.00164	0.01	16.35	±100
	50		13.56022181	0.00164	0.01	16.36	±100
Frequency Stability vs. Voltage	20	4.65	13.56022159	0.00163	0.01	16.34	±100
	20	6.75	13.56022171	0.00164	0.01	16.35	±100

Without card

Test Item	Temperature (℃)	Voltage (V_{DC})	Measured frequency (MHz)	FCC Frequency Error (%)	FCC Limit (%)	ISED Frequency Error (ppm)	ISED Limit (ppm)
Frequency Stability vs. Temperature	-20	6	13.56021196	0.00156	0.01	15.63	±100
	-10		13.56021312	0.00157	0.01	15.72	±100
	0		13.56021275	0.00157	0.01	15.69	±100
	10		13.56021311	0.00157	0.01	15.72	±100
	20		13.56021193	0.00156	0.01	15.63	±100
	25		13.56021295	0.00157	0.01	15.70	±100
	30		13.56021236	0.00157	0.01	15.66	±100
	40		13.56021316	0.00157	0.01	15.72	±100
	50		13.56021321	0.00157	0.01	15.72	±100
Frequency Stability vs. Voltage	20	4.65	13.56021255	0.00157	0.01	15.67	±100
	20	6.75	13.56021092	0.00156	0.01	15.55	±100

Note: the extreme voltage was declared by the applicant.

20DB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH

Requirement

According to FCC §15.215 (c):

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

According to RSS-GEN §6.7:

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

In some cases, the “x dB bandwidth” is required, which is defined as the frequency range between two points, one at the lowest frequency below and one at the highest frequency above the carrier frequency, at which the maximum power level of the transmitted emission is attenuated x dB below the maximum in-band power level of the modulated signal, where the two points are on the outskirts of the in-band emission.

Test Procedure

According to ANSI C63.10-2020 Section 6.9.2

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2 d) Steps a) through c) might require iteration to adjust within the specified tolerances.

e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target

“−xx dB down” requirement; that is, if the requirement calls for measuring the −20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.

f) Set detection mode to peak and trace mode to max hold.

g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

h) Determine the “−xx dB down amplitude” using [(reference value) − xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.

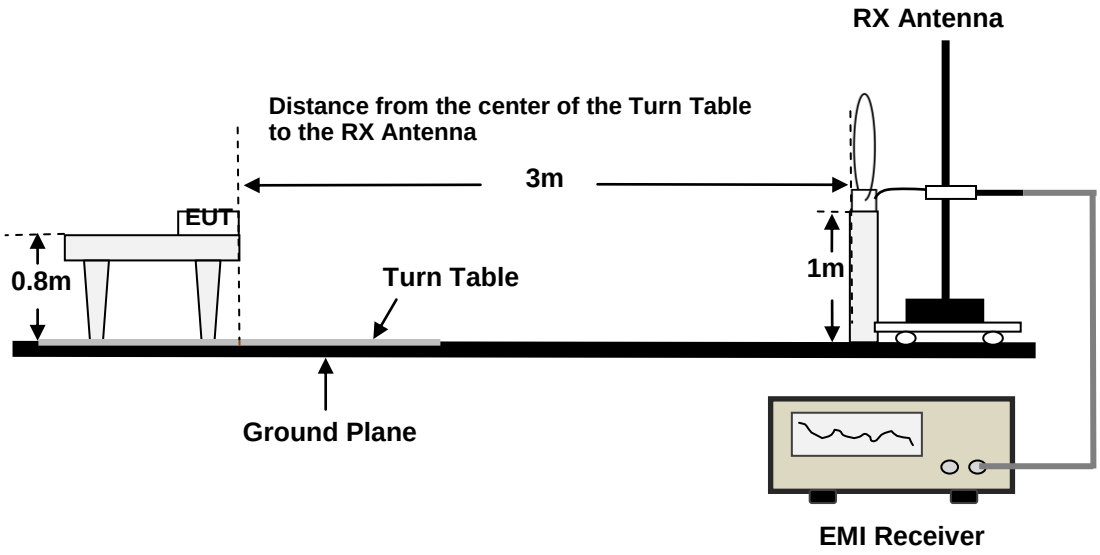
i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).

j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−xx dB down amplitude" determined in step h). If a marker is below this "−xx dB down amplitude" value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "−xx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.

EUT Setup



Test Data

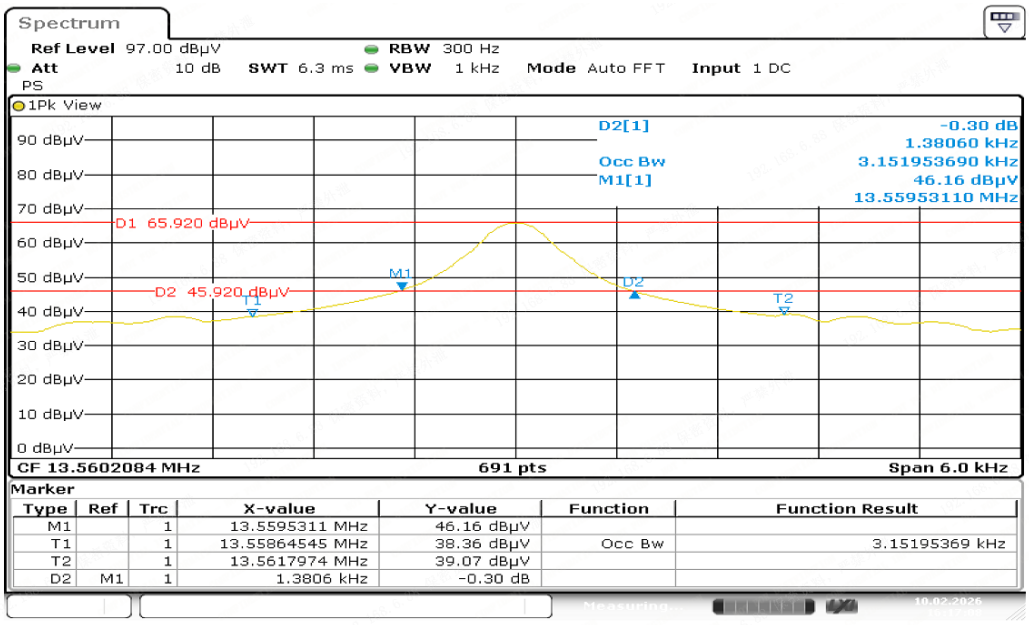
Environmental Conditions

Temperature:	20.2 ℃
Relative Humidity:	46 %
ATM Pressure:	101.9 kPa
Test Engineer:	Jayden Luo
Test Date:	2026-02-10
EUT Operation Mode:	Transmitting (Radiated Measurement)

Test Result: Compliance. Please refer to the below data.

With card

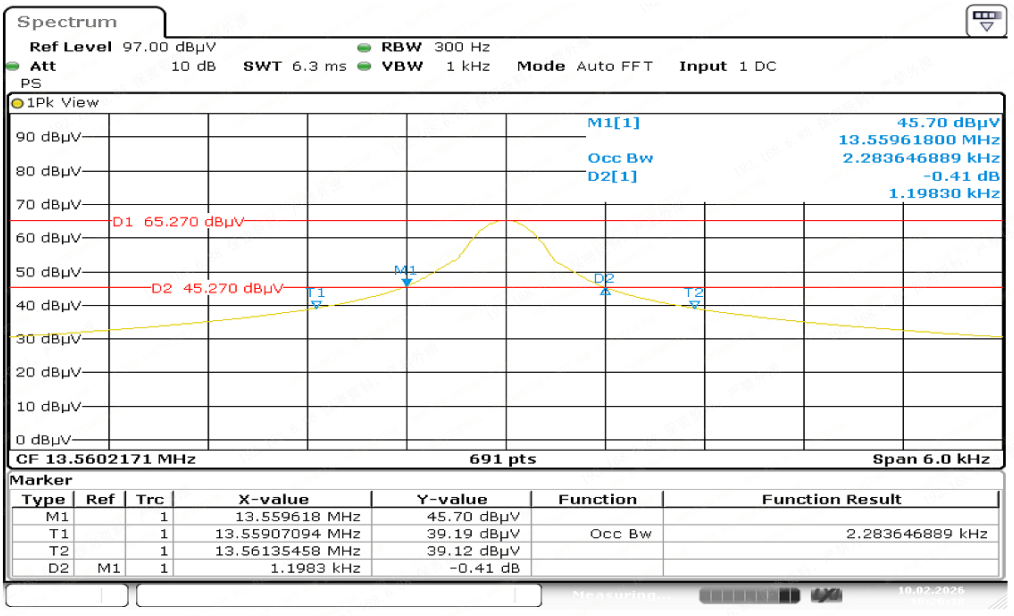
Frequency (MHz)	20 dB Bandwidth (kHz)	99% Occupied Bandwidth (kHz)
13.56	1.381	3.152



ProjectNo.:2604P02236E-RF Tester:Jayden Luo
Date: 10.FEB.2026 16:17:09

Without card

Frequency (MHz)	20 dB Bandwidth (kHz)	99% Occupied Bandwidth (kHz)
13.56	1.199	2.284



ProjectNo.:2604P02236E-RF Tester:Jayden Luo
Date: 10.FEB.2026 16:26:18

EXHIBIT A-EUT PHOTOGRAPHS

Please refer to the Attachment No.1 2604P02236E-RF EUT External Photos and Attachment No.2 2604P02236E-RF EUT Internal Photos.

EXHIBIT B-TEST SETUP PHOTOGRAPHS

Please refer to the Attachment No.5 2604P02236E-RFE Test Photos.

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