

# **CERTIFICATION TEST REPORT**

**Report Number. : S-4791776982-FR2V3**

**Applicant :** BH EVS Co.,Ltd  
5, Magokjungang 8-ro 5-gil, Gangseo-gu, Seoul, 07794 Republic of Korea

**Model :** WCMIT31A

**FCC ID :** 2A6WXWCMIT31A

**EUT Description :** Wireless Charger

**Test Standard(s) :** FCC 47 CFR PART 15 SUBPART C

**Date Of Issue:**  
2025-08-01

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Revision History

Rev.	Issue Date	Revisions	Presented By
V1	2025-07-04	Initial issue	SunGeun Lee
V2	2025-07-25	Updated to address TCB's question	SunGeun Lee
V3	2025-08-01	Updated the voltage	SunGeun Lee

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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** BH EVS Co.,Ltd  
**EUT DESCRIPTION:** Wireless Charger  
**MODEL NUMBER:** WCMIT31A  
**SERIAL NUMBER:** Proto Type (RADIATED)  
**DATE TESTED:** 2025-07-01 ~ 2025-07-04

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
47 CFR Part 15 Subpart C	Complies

UL KOREA LTD. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL KOREA LTD. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL KOREA LTD. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL KOREA LTD. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For  
UL KOREA LTD. By:



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Seokhwan Hong  
Suwon Lab Engineer  
UL Korea, Ltd.

Tested By:



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Sungeun Lee  
Suwon Lab Engineer  
UL Korea, Ltd.

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with following methods.

1. FCC 47 CFR Part 2.
2. FCC 47 CFR Part 15.
3. ANSI C63.10-2020.
4. KDB 414788 D01 Radiated Test Site v01r01

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro	
<input checked="" type="checkbox"/>	Chamber 1(3m semi-anechoic chamber)
<input checked="" type="checkbox"/>	Chamber 2(3m semi-anechoic chamber)
<input type="checkbox"/>	Chamber 3(3m semi-anechoic chamber)
<input type="checkbox"/>	Chamber 4(3m Full-anechoic chamber)
<input type="checkbox"/>	Chamber 5(3m Full-anechoic chamber)

UL KOREA LTD. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

$$\begin{aligned} \text{Corrected Reading (dBuV)} &= \text{Meter Reading (dBuV)} + \text{External Cable (dB)} + \\ &\text{Cableloss (dB)} \\ 46.62 \text{ dBuV} + 9.8 \text{ dB} + 0.1 \text{ dB} &= 56.52 \text{ dBuV} \end{aligned}$$

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Occupied Bandwidth	0.04 %
Frequency Stability	$5.3 \times 10^{-8}$ Hz
Conducted Disturbance, 0.15 to 30 MHz	1.84 dB
Radiated Disturbance, 9 kHz to 30 MHz	2.41 dB
Radiated Disturbance, 30 MHz to 1 GHz	3.69 dB

Uncertainty figures are valid to a confidence level of 95%.

### 4.4. DECISION RULE

Decision rule for statement(s) of conformity is based on Clause 4.4.3 in IEC Guide 115:2023.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is the wireless charger.

This test report addresses the DXX (NFC) operational mode.

### 5.2. MAXIMUM E-FIELD STRENGTH

The testing was performed at 3 meter. The transmitter maximum E-field at 30m distance is converted from 3 meter data.

Fundamental Frequency(MHz)	Test Case	E-Field (30m distance) FCC (dBuV/m)
13.56	1 (NFC Card tag O)	24.00
	2 (NFC Card tag X)	25.16

### 5.3. WORST-CASE CONFIGURATION AND MODE

The NFC function was tested at its' fundamental and only operational frequency of 13.56 MHz.

Radiated(fundamental level and spurious emissions) tests were performed both without reading a passive tag condition[test mode] and with reading a passive tag condition.

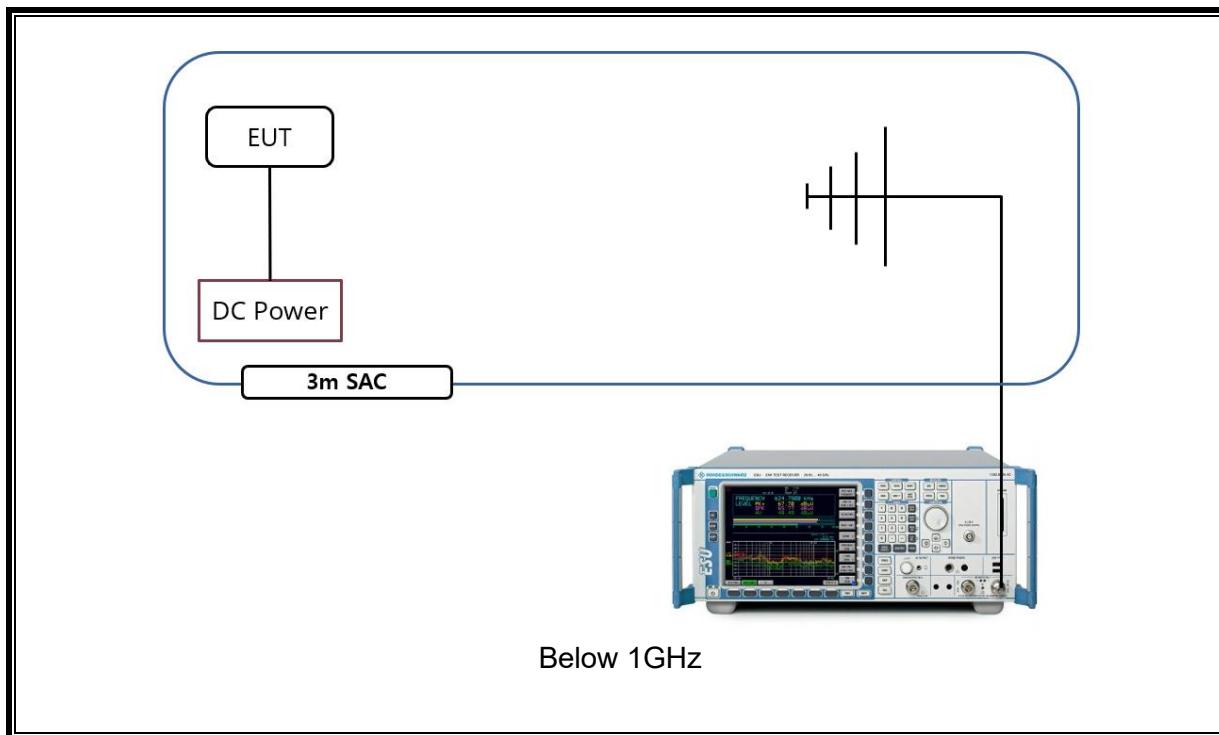
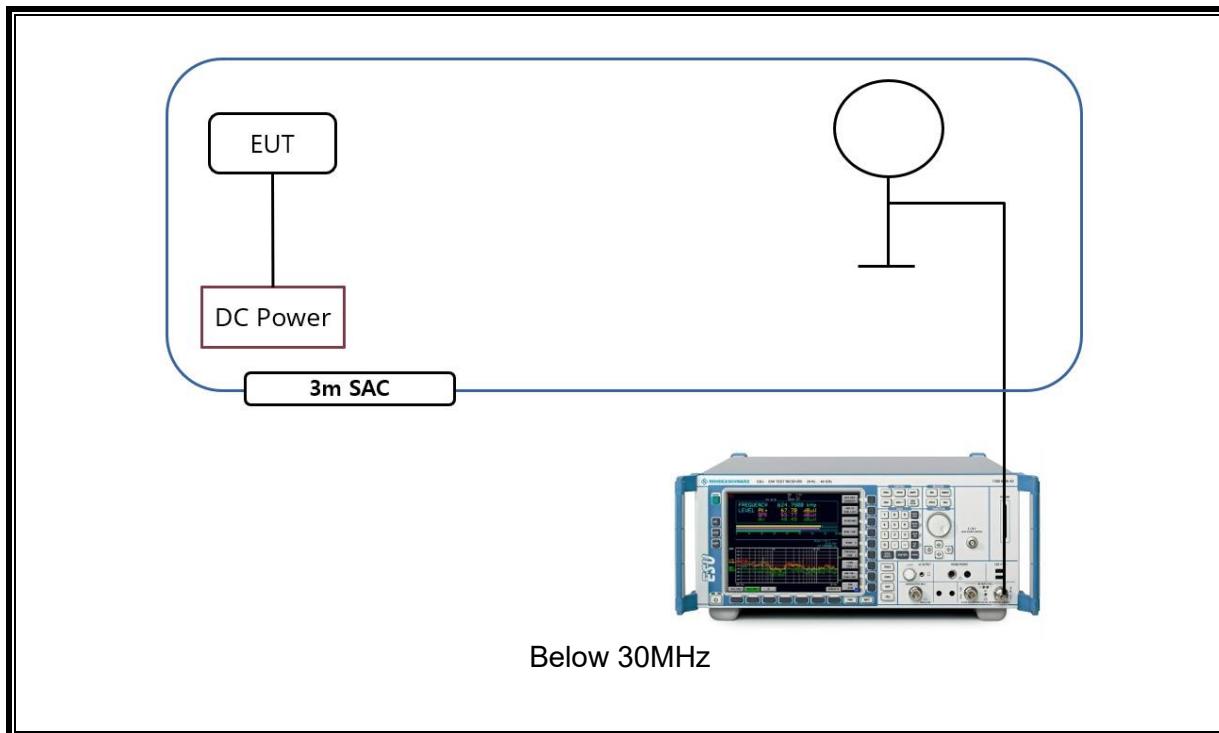
The EUT will be connected DC power (Car battery). So AC line conducted test (FCC Part 15.207) not required.

### 5.4. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
-	-	-	-	-

**SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	Manufacturer	Model	S/N	Cal Due
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB 9163	845	2026-07-30
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB 9163	749	2026-08-12
Preamplifier, 1000 MHz	Sonoma	310N	341282	2025-07-22
Preamplifier, 1000 MHz	Sonoma	310N	351741	2025-07-22
Spectrum Analyzer, 7 GHz	Agilent / HP	N9010A	MY54200580	2025-07-23
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030A	MY54170614	2025-07-24
EMI Test Receiver, 3 GHz	R&S	ESR 3	101832	2025-07-22
DC Power Supply	Agilent / HP	E3640A	MY54226395	2025-07-24
Temperature Chamber	ESPEC	SH-642	93001109	2025-07-23
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	2025-09-07
UL Software				
Description	Manufacturer	Model	Version	
Radiated software	UL	UL EMC	Ver 9.5	

## 7. 20dB BANDWIDTH

### LIMITS

§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

§15.225

Operation within the band 13.110 – 14.010MHz

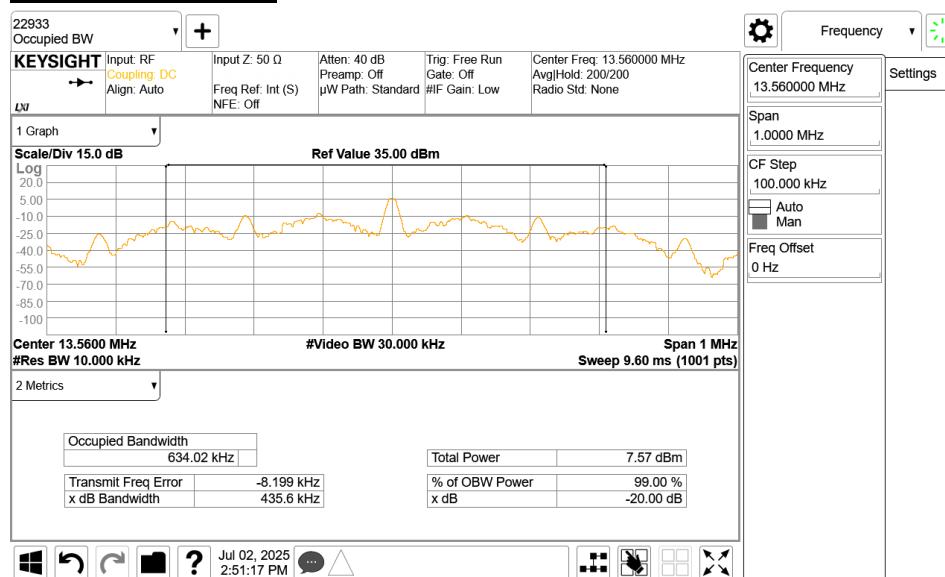
### TEST PROCEDURE

The spectrum analyzer connected receive antenna and the EUT placed on near the receive antenna. The RBW is set to 1-5% of emission BW. The VBW is set to 3 times the RBW. The sweep time is coupled.

### RESULTS

Frequency [MHz]	20 dB Bandwidth [kHz]
13.56	435.6

### 20dB Bandwidth Plot



## 8. RADIATED EMISSION TEST RESULTS

### 8.1. LIMITS AND PROCEDURE

#### LIMIT

§15.225

(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 and shall not exceed the general radiated emission limits in § 15.209 as follows:

§15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits ( $\mu$ V/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

\*\* Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

Formula for converting the filed strength from uV/m to dBuV/m is:

Limit (dBuV/m) = 20 log limit (uV/m)

In addition:

§15.209 (d) The emission limits shown 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 emissions limits in these three bands are based on measurements employing an average detector.

§15.209 (d) The provisions in §§ 15.225, 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.

### **TEST PROCEDURE**

ANSI C63.10-2020

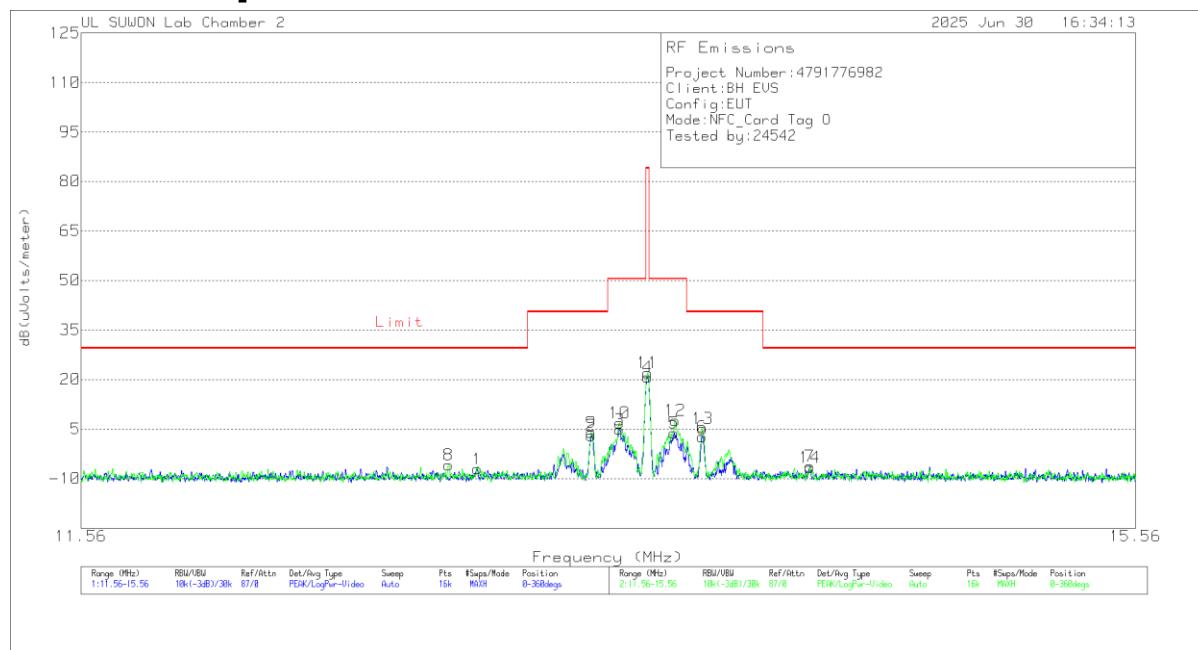
The EUT is an intentional radiator that incorporates a digital device. The highest fundamental frequency generated or used in the device is 13.56 MHz. The frequency range was investigated from 0.15 MHz to the 10<sup>th</sup> harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater (1000MHz)

- a) Set the RBW = 100 Hz for the emissions below 150kHz  
9 kHz for the emissions between 150kHz and 30MHz  
(The minimum RBW setting value for the Spectrum analyzer is 10 kHz)  
100 kHz for the emissions between 30MHz and 1GHz  
(The minimum RBW setting value for the Spectrum analyzer is 120 kHz)
- b) Set VBW  $\geq$  3  $\times$  RBW;
- c) Sweep time = Auto;
- d) Detector = Peak;
- e) Trace mode = Max Hold;

### **RESULTS**

No non-compliance noted:

### 8.1.1. FUNDAMENTAL AND SPURIOUS EMISSIONS [EUT with passive TAG mode]



#### Trace Markers

Face on

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Dist Corr 30m	Cable Loss	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	Margin (dB)	Azimuth (Degs)
1	12.92513	12.31	Pk	20.1	-40	.5	-7.09	29.54	-36.63	0-360
2	13.34838	22.47	Pk	20.1	-40	.5	3.07	40.51	-37.44	0-360
3	13.45363	24.26	Pk	20.1	-40	.5	4.86	50.5	-45.64	0-360
**4	13.56038	40.19	Pk	20.1	-40	.5	20.79	84	-63.21	0-360
5	13.66313	23.11	Pk	20.1	-40	.6	3.81	50.5	-46.69	0-360
6	13.77188	21.94	Pk	20.1	-40	.6	2.64	40.51	-37.87	0-360
7	14.19638	13.12	Pk	20.1	-40	.6	-6.18	29.54	-35.72	0-360

Face off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Dist Corr 30m	Cable Loss	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	Margin (dB)	Azimuth (Degs)
8	12.82163	13.59	Pk	20.1	-40	.5	-5.81	29.54	-35.35	0-360
9	13.34738	23.34	Pk	20.1	-40	.5	3.94	40.51	-36.57	0-360
10	13.45413	26.2	Pk	20.1	-40	.5	6.8	50.5	-43.7	0-360
**11	13.56063	41.43	Pk	20.1	-40	.5	22.03	84	-61.97	0-360
12	13.66688	26.86	Pk	20.1	-40	.6	7.56	50.5	-42.94	0-360
13	13.77288	24.38	Pk	20.1	-40	.6	5.08	40.51	-35.43	0-360
14	14.19588	12.73	Pk	20.1	-40	.6	-6.57	29.54	-36.11	0-360

Pk - Peak detector

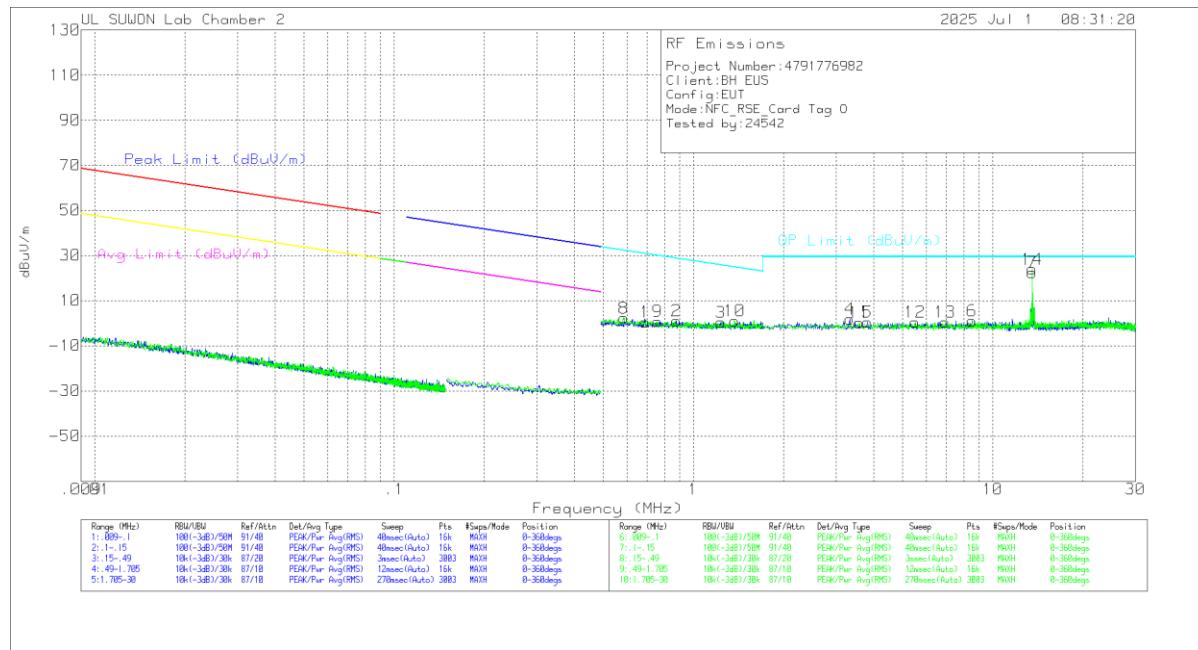
\*\*Fundamental

Note 1 : Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open air test site.

Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

Note 2: Radiated test were investigated with three receiving antenna axes: Face-on, Face-off and horizontal (parallel to the ground plane) and the worse orientations of Face-on and Face-off were set for final test.

### 8.1.2. SPURIOUS EMISSION 0.009 TO 30 MHz [EUT with passive TAG mode]



#### Trace Markers

##### Face on

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 30m	Corrected Reading dBuV/m	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.69079	20.61	Pk	19.9	.1	-40	.61	30.83	-30.22	0-360
2	.87695	20.99	Pk	19.9	.2	-40	1.09	28.76	-27.67	0-360
3	1.23666	20.29	Pk	19.9	.2	-40	.39	25.78	-25.39	0-360
4	3.3261	21.62	Pk	20.1	.3	-40	2.02	29.5	-27.48	0-360
5	3.8162	20.18	Pk	20.1	.3	-40	.58	29.5	-28.92	0-360
6	8.51928	20.6	Pk	20	.4	-40	1	29.5	-28.5	0-360
**7	13.56165	42.09	Pk	20	.5	-40	22.59	29.5	-6.91	0-360

##### Face off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 30m	Corrected Reading dBuV/m	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
8	.58462	22.33	Pk	19.9	.1	-40	2.33	32.27	-29.94	0-360
9	.75885	20.72	Pk	19.9	.2	-40	.82	30.01	-29.19	0-360
10	1.37141	21.03	Pk	19.9	.2	-40	1.13	24.89	-23.76	0-360
11	3.58058	19.86	Pk	20.1	.3	-40	.26	29.5	-29.24	0-360
12	5.49385	20.01	Pk	20.1	.4	-40	.51	29.5	-28.99	0-360
13	6.9453	19.95	Pk	20.1	.4	-40	.45	29.5	-29.05	0-360
**14	13.56165	43.5	Pk	20	.5	-40	24	29.5	-5.5	0-360

Pk - Peak detector

\*\*Fundamental

Note 1: The data for marker number 7 and 14 are the fundamental signal.

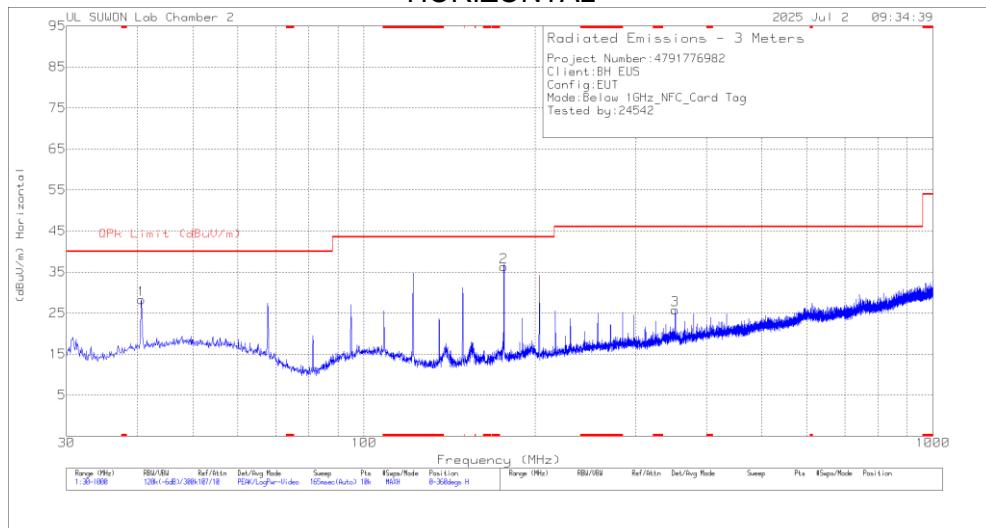
Please refer to section 8.1.1 about the fundamental level.

Frequency range 0.009MHz ~ 0.490MHz, only noise floor level and more than 20dB margin.

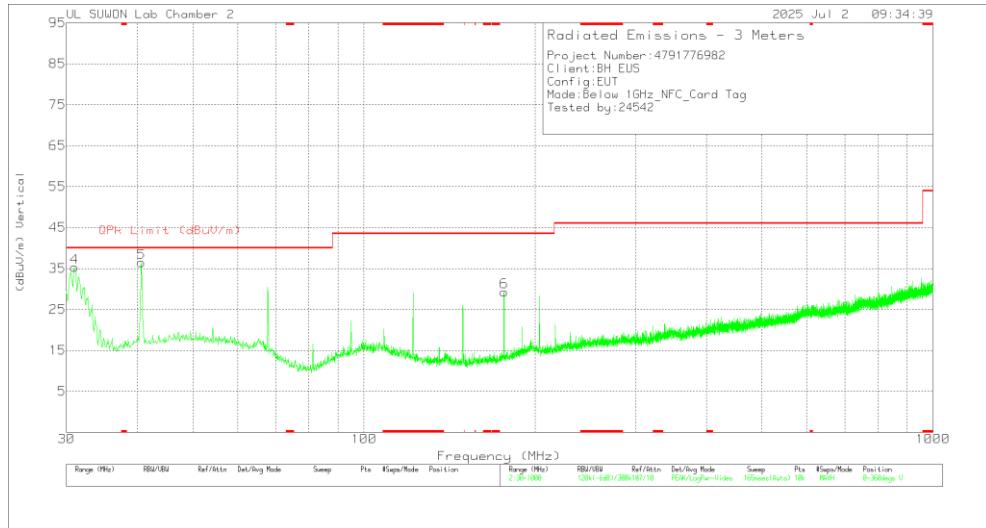
Note 2: Radiated test were investigated with three receiving antenna axes: Face-on, Face-off and horizontal (parallel to the ground plane) and the worse orientations of Face-on and Face-off were set for final test.

### 8.1.3. TX SPURIOUS EMISSION 30 TO 1000 MHz [EUT with passive TAG mode]

#### HORIZONTAL



#### VERTICAL



#### Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dB/m)	Below_1G_Path Loss(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.67	41.23	Pk	18.7	-31.7	28.23	40	-11.77	0-360	200	H
2	176.179	52.26	Pk	14.9	-30.9	36.26	43.52	-7.26	0-360	100	H
3	352.525	35.08	Pk	20.8	-30.1	25.78	46.02	-20.24	0-360	100	H
4	30.97	51.46	Pk	15.7	-31.9	35.26	40	-4.74	0-360	100	V
5	40.67	49.4	Pk	18.7	-31.7	36.4	40	-3.6	0-360	100	V
6	176.276	45.28	Pk	14.9	-30.9	29.28	43.52	-14.24	0-360	100	V

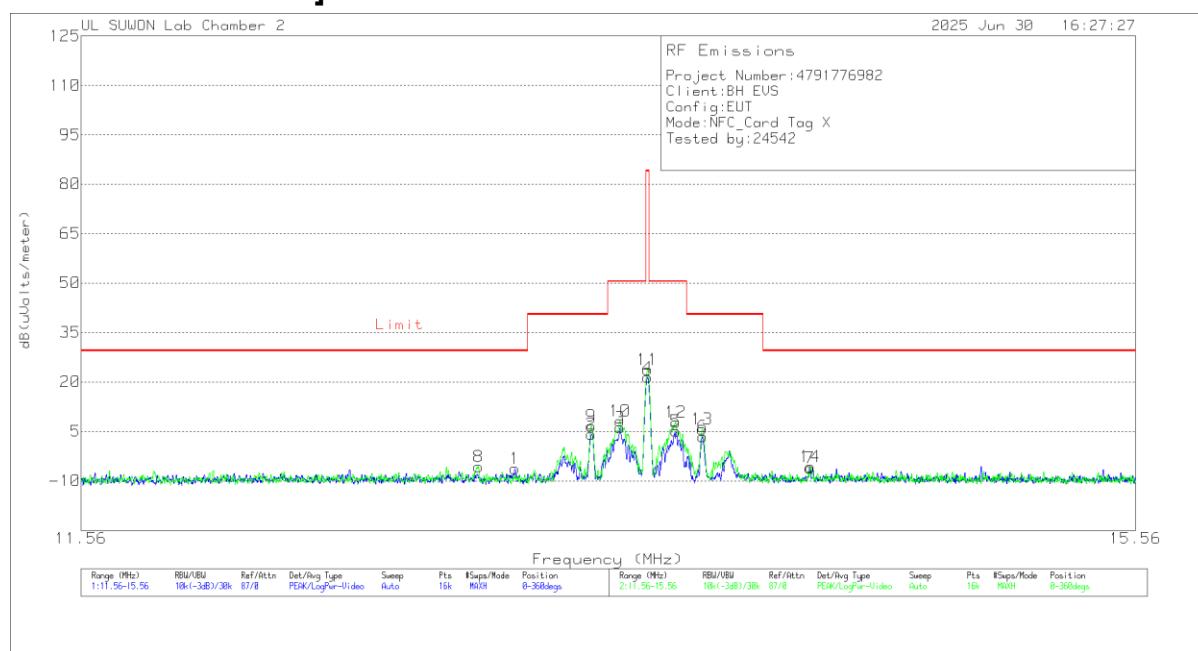
Pk - Peak detector

#### Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dB/m)	Below_1G_Pat h Loss(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
31.1299	47.02	Qp	15.7	-31.9	30.82	40	-9.18	51	100	V
40.67	48.43	Qp	18.7	-31.7	35.43	40	-4.57	86	100	V

Qp - Quasi-Peak detector

### 8.1.4. FUNDAMENTAL AND SPURIOUS EMISSIONS) [EUT without passive TAG mode]



#### Trace Markers

Face on

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Dist Corr 30m	Cable Loss	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	Margin (dB)	Azimuth (Degs)
1	13.06338	13.16	Pk	20.1	-40	.5	-6.24	29.54	-35.78	0-360
2	13.34788	23.56	Pk	20.1	-40	.5	4.16	40.51	-36.35	0-360
3	13.45613	25.6	Pk	20.1	-40	.5	6.2	50.5	-44.3	0-360
**4	13.56063	40.8	Pk	20.1	-40	.5	21.4	84	-62.6	0-360
5	13.66963	24.42	Pk	20.1	-40	.6	5.12	50.5	-45.38	0-360
6	13.77238	22.81	Pk	20.1	-40	.6	3.51	40.51	-37	0-360
7	14.19438	13.25	Pk	20.1	-40	.6	-6.05	29.54	-35.59	0-360

#### Face off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Dist Corr 30m	Cable Loss	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	Margin (dB)	Azimuth (Degs)
8	12.92963	13.71	Pk	20.1	-40	.5	-5.69	29.54	-35.23	0-360
9	13.3475	26.04	Pk	20.1	-40	.5	6.64	40.51	-33.87	0-360
10	13.45538	27.61	Pk	20.1	-40	.5	8.21	50.5	-42.29	0-360
**11	13.56063	43.14	Pk	20.1	-40	.5	23.74	84	-60.26	0-360
12	13.66863	27.06	Pk	20.1	-40	.6	7.76	50.5	-42.74	0-360
13	13.77138	25.07	Pk	20.1	-40	.6	5.77	40.51	-34.74	0-360
14	14.19688	13.57	Pk	20.1	-40	.6	-5.73	29.54	-35.27	0-360

Pk - Peak detector

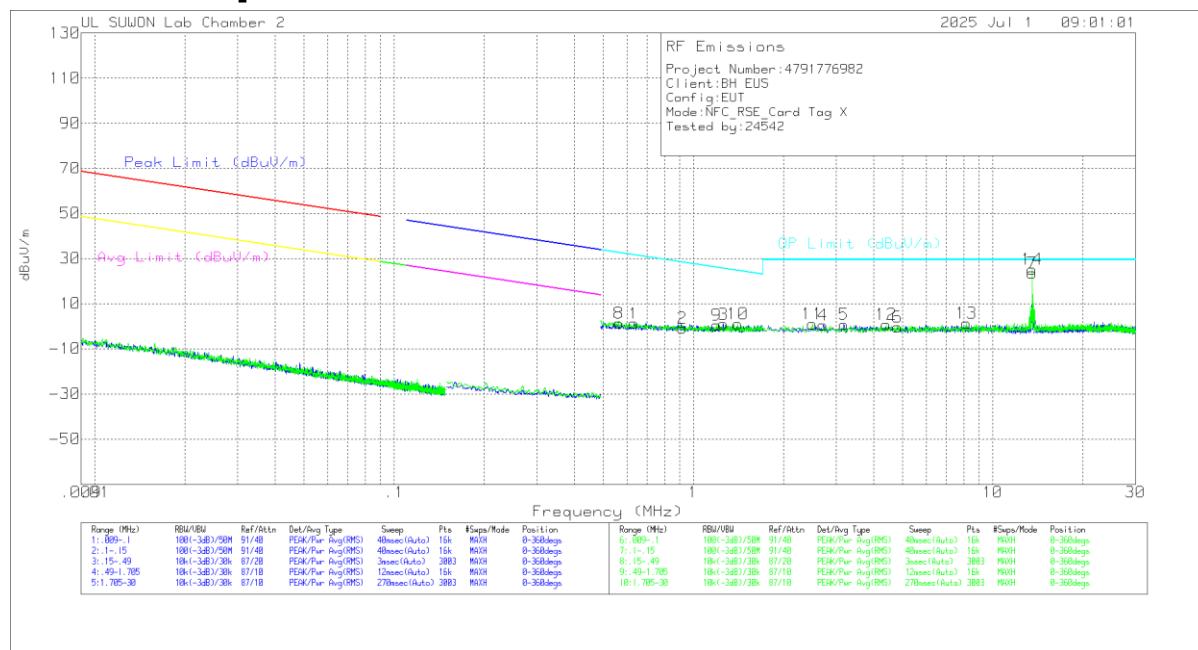
\*\*Fundamental

Note 1: Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.

Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

Note 2: Radiated test were investigated with three receiving antenna axes: Face-on, Face-off and horizontal (parallel to the ground plane) and the worse orientations of Face-on and Face-off were set for final test.

### 8.1.5. SPURIOUS EMISSION 0.09 TO 30 MHz [EUT without passive TAG mode]



#### Trace Markers

Face on

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 30m	Corrected Reading dBuV/m	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.63292	21.23	Pk	19.9	.1	-40	1.23	31.58	-30.35	0-360
2	.91894	19.15	Pk	19.9	.2	-40	-.75	28.35	-29.1	0-360
3	1.25749	20.84	Pk	19.9	.2	-40	.94	25.64	-24.7	0-360
4	2.71348	20.03	Pk	20.1	.3	-40	.43	29.5	-29.07	0-360
5	3.18473	20.37	Pk	20.1	.3	-40	.77	29.5	-28.73	0-360
6	4.81525	19.25	Pk	20.1	.3	-40	-.35	29.5	-29.85	0-360
**7	13.56165	43.02	Pk	20	.5	-40	23.52	29.5	-5.98	0-360

Face off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 30m	Corrected Reading dBuV/m	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
8	.5641	21.47	Pk	19.9	.1	-40	1.47	32.58	-31.11	0-360
9	1.19676	20.51	Pk	19.9	.2	-40	.61	26.07	-25.46	0-360
10	1.40804	20.91	Pk	19.9	.2	-40	1.01	24.66	-23.65	0-360
11	2.4967	20.72	Pk	20	.3	-40	1.02	29.5	-28.48	0-360
12	4.40998	20.45	Pk	20.1	.3	-40	.85	29.5	-28.65	0-360
13	8.16113	20.89	Pk	20	.4	-40	1.29	29.5	-28.21	0-360
**14	13.56165	44.66	Pk	20	.5	-40	25.16	29.5	-4.34	0-360

Pk - Peak detector

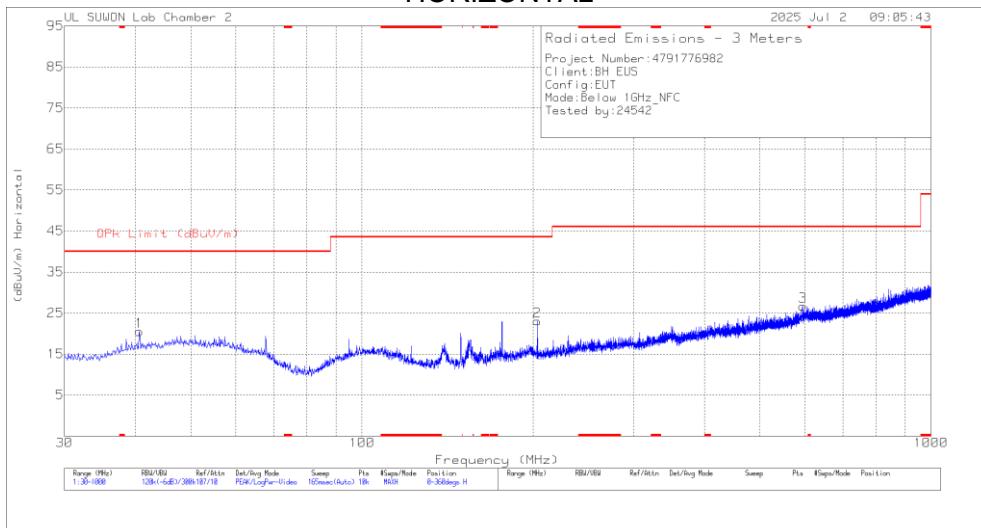
\*\*Fundamental

Note 1: The data for marker number 7 and 14 are the fundamental signal. Please refer to section 8.1.4 about the fundamental level. Frequency range 0.009MHz ~ 0.490MHz, only noise floor level and more than 20dB margin.

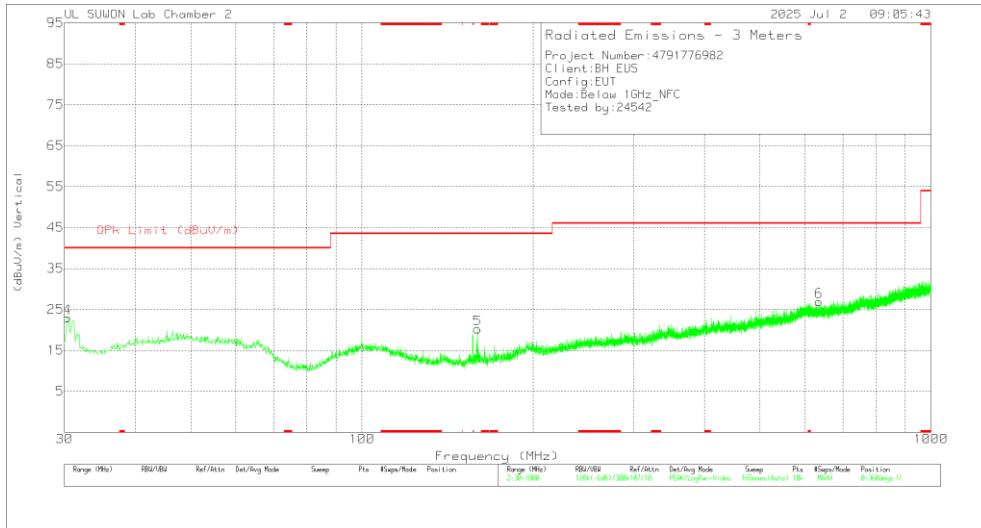
Note 2: Radiated test were investigated with three receiving antenna axes: Face-on, Face-off and horizontal (parallel to the ground plane) and the worse orientations of Face-on and Face-off were set for final test.

### 8.1.6. TX SPURIOUS EMISSION 30 TO 1000 MHz [EUT without passive TAG mode]

#### HORIZONTAL



#### VERTICAL



#### Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dB/m)	Below_1G_Path Loss(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.67	33.53	Pk	18.7	-31.7	20.53	40	-19.47	0-360	300	H
2	203.339	37.06	Pk	16.8	-30.8	23.06	43.52	-20.46	0-360	100	H
3	595.801	31.26	Pk	25	-29.6	26.66	46.02	-19.36	0-360	100	H
4	30.388	38.94	Pk	15.9	-31.9	22.94	40	-17.06	0-360	100	V
5	159.495	36.89	Pk	14.2	-30.9	20.19	43.52	-23.33	0-360	300	V
6	635.668	31.39	Pk	24.9	-29.4	26.89	46.02	-19.13	0-360	200	V

Pk - Peak detector

## 9. AC MAINS LINE CONDUCTED EMISSIONS

### LIMITS

§15.207

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range (MHz)	Limits (dB $\mu$ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Notes:

1. The lower limit shall apply at the transition frequencies
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

### RESULTS

N/A

## 10. FREQUENCY STABILITY

### LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  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.

### TEST PROCEDURE

ANSI C63.10 §6.8

### RESULTS

Test Date	2025-07-02
Test Engineer	22933

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: $\pm 100$ ppm = 1.356 kHz										
Power Supply (Vdc)	Envir. Temp (°C)	Frequency Deviation Measured with Time Elapse								
		Start up (MHz)	Delta (ppm)	@ 2mins (MHz)	Delta (ppm)	@ 5mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
13.50	50	13.560091597	-1.655	13.560042773	-5.255	13.560011342	-7.573	13.560004468	-8.080	100
13.50	40	13.560029729	-6.217	13.560023270	-6.694	13.560022457	-6.754	13.560020333	-6.910	100
13.50	30	13.560058446	-4.100	13.560054761	-4.371	13.560047114	-4.935	13.560042456	-5.279	100
13.50	20	<b>13.560114036</b>	<b>0.000</b>	<b>13.560110959</b>	<b>-0.227</b>	<b>13.560109230</b>	<b>-0.354</b>	<b>13.560108411</b>	<b>-0.415</b>	<b>100</b>
13.50	10	13.560171177	4.214	13.560164524	3.723	13.560164112	3.693	13.560163956	3.681	100
13.50	0	13.560226065	8.262	13.560224338	8.134	13.560223486	8.071	13.560222814	8.022	100
13.50	-10	13.560246665	9.781	13.560246113	9.740	13.560245855	9.721	13.560245438	9.690	100
13.50	-20	13.560228604	8.449	13.560229887	8.544	13.560231467	8.660	13.560232370	8.727	100
13.50	-30	13.560197870	6.182	13.560201679	6.463	13.560203357	6.587	13.560205984	6.781	100

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: $\pm 100$ ppm = 1.356 kHz										
Power Supply (Vdc)	Envir. Temp (°C)	Frequency Deviation Measured with Time Elapse								
		Start up (MHz)	Delta (ppm)	@ 2mins (MHz)	Delta (ppm)	@ 5mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
11.48	20	13.560107041	-0.516	13.560106793	-0.534	13.560106583	-0.034	13.560106414	-0.562	100
13.50	20	<b>13.560114036</b>	<b>0.000</b>	<b>13.560110959</b>	<b>-0.227</b>	<b>13.560109230</b>	<b>-0.354</b>	<b>13.560108411</b>	<b>-0.415</b>	<b>100</b>
15.53	20	13.560109412	-0.341	13.560108675	-0.395	13.560108307	-0.422	13.560107664	-0.470	100

No non-compliance noted.

## END OF TEST REPORT