

CERTIFICATION TEST REPORT

Report Number. : S-4791776982-FR1V5

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:

2025-08-13

Prepared by:

UL KOREA LTD.

26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Suwon Test Site: UL KOREA LTD. Suwon Laboratory

218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea

TEL: (031) 337-9902

FAX: (031) 213-5433

Revision History

Rev.	Issue Date	Revisions	Revised 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 to address TCB's question	SunGeun Lee
V4	2025-08-05	Updated to address TCB's question	SunGeun Lee
V5	2025-08-13	ANSI C63.30 → ANSI C63.10	SunGeun Lee

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION	5
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	6
4.3. MEASUREMENT UNCERTAINTY	6
4.4. DECISION RULE	6
5. EQUIPMENT UNDER TEST	7
5.1. DESCRIPTION OF EUT	7
5.2. MAXIMUM E-FIELD STRENGTH	7
5.3. WORST-CASE CONFIGURATION AND MODE	7
5.4. MODIFICATIONS	8
5.5. DESCRIPTION OF TEST SETUP	8
6. TEST AND MEASUREMENT EQUIPMENT	9
7. 20dB BANDWIDTH	10
8. APPLICABLE LIMITS AND TEST RESULTS	11
8.1. RADIATED EMISSIONS	11

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 ~ 2025-07-25

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:



Seokhwan Hong
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:



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 680106 D01 Wireless Power Transfer v04

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	
☐	Chamber 1(3m semi-anechoic chamber)
☒	Chamber 2(3m semi-anechoic chamber)
☐	Chamber 3(3m semi-anechoic chamber)
☐	Chamber 4(3m Full-anechoic chamber)
☐	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:

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

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

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 %
Conducted Disturbance, 0.15 to 30 MHz	1.84 dB
Radiated Disturbance, 9 kHz to 30 MHz	2.41 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 4.3.3 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 wireless low power transmitter(DCD) operational mode.

5.2. MAXIMUM E-FIELD STRENGTH

Fundamental Frequency(kHz)	Test Case	E-Field (300m distance) FCC (dBuV/m)
128	1 (Dummy)_Worst case	20.86
	2 (Fast charge)	7.46
	3 (Normal charge)	5.61

5.3. WORST-CASE CONFIGURATION AND MODE

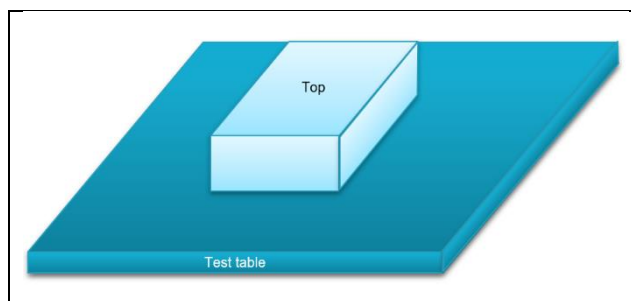
Cross Position (Client): When mounted on the final product (Car wireless Charger), Cross Position is not possible.

We found and tested the worst position, which is the highest measurement value in the EUT.

Both 'Fast charging mode (15W)' and 'Normal charging mode (5W)' are supported and tested. It was also tested with the dummy client provided by the customer.

Also according to current client device's(Phone) battery level, test results are different. Because the test results were worst when the battery level was 1%~20%, tests were performed when the battery level was 1%~20%.

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



5.4. MODIFICATIONS

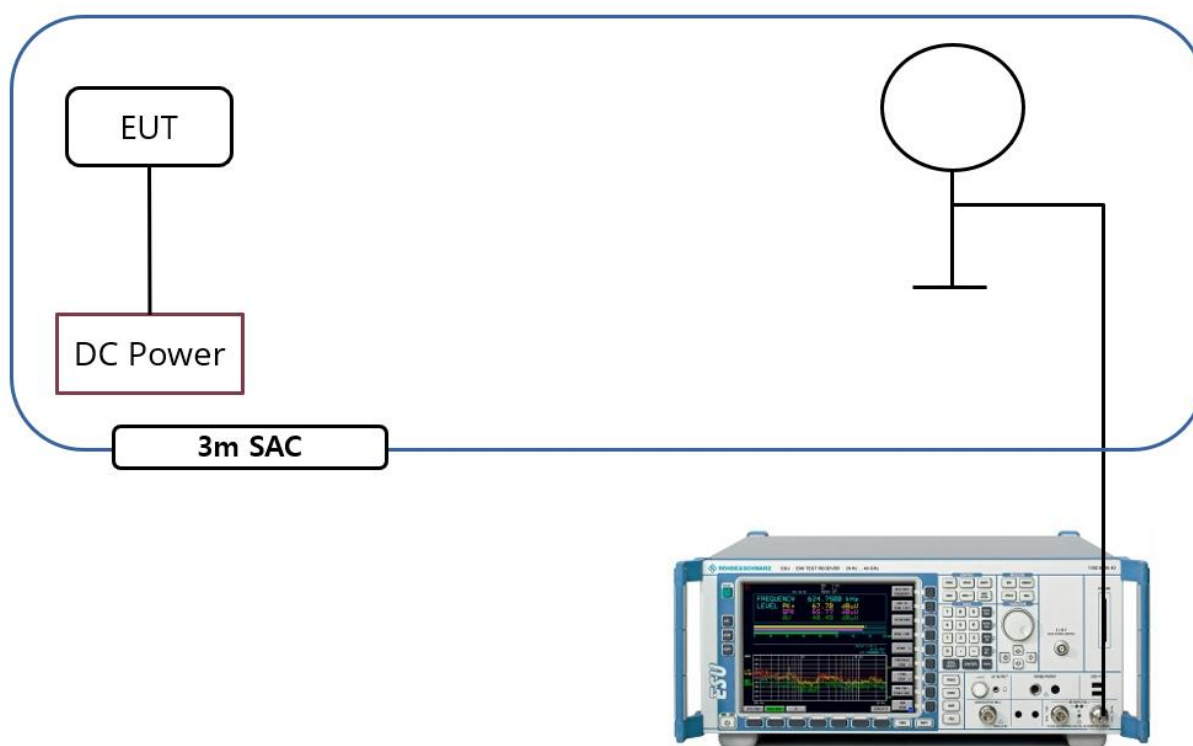
No modifications were made during testing.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT & PERIPHERALS

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Client device	SAMSUNG	SM-S937U	R3CXC0G5QHB	A3LSMS937U
Client device	BH-EVS	-	-	-

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
Spectrum Analyzer, 7 GHz	Agilent / HP	N9010A	MY54200580	2026-07-21
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030A	MY54170614	2026-07-21
EMI Test Receiver, 40 GHz	R&S	ESU40	100439	2026-07-21
DC Power Supply	Agilent / HP	E3640A	MY54226395	2026-07-23
Temperature Chamber	ESPEC	SH-642	93001109	2026-07-21
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2E	100900	2027-07-24
UL Software				
Description	Manufacturer	Model	Version	
Radiated software	UL	UL EMC	Ver 9.5	

7. 20dB BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

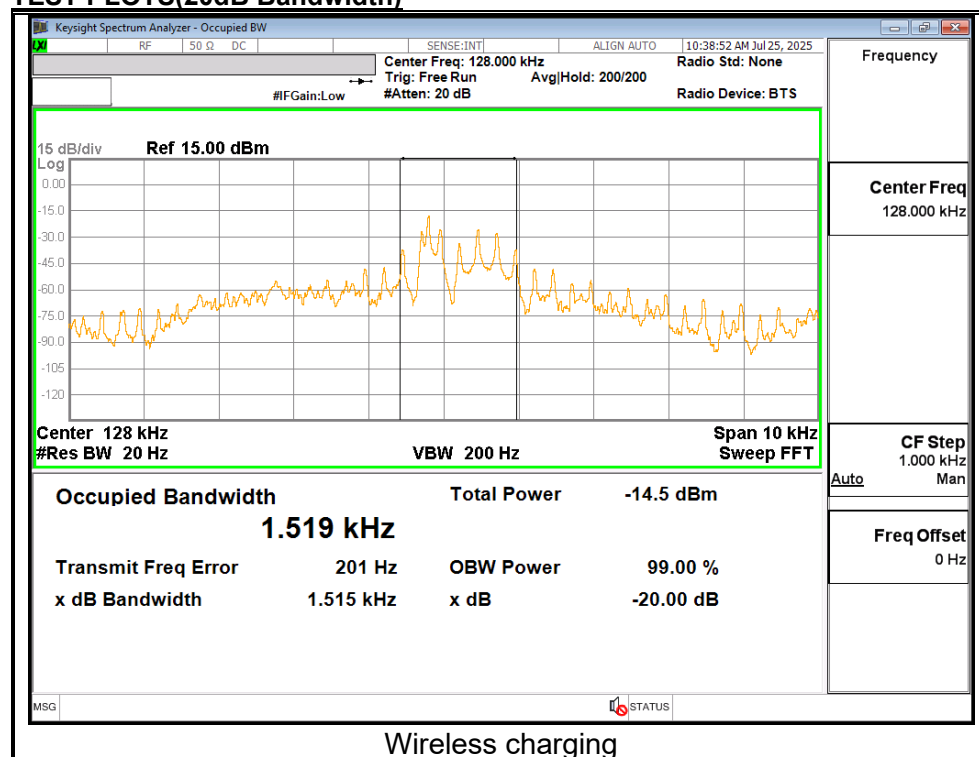
- 20dB Bandwidth

RBW: 1 ~ 5% of 20dB Bandwidth, VBW >= 3 x RBW, Peak detector.

RESULTS

Test Mode	Frequency [kHz]	20dB Bandwidth [kHz]
Wireless charging	128	1.515

TEST PLOTS(20dB Bandwidth)



8. APPLICABLE LIMITS AND TEST RESULTS

8.1. RADIATED EMISSIONS

TEST PROCEDURE

ANSI C63.10: 2020;

The highest clock frequency generated or used in the EUT is below 600 kHz therefore the frequency range was investigated from 9 kHz to 30 MHz.

LIMIT

FCC §15.209 (a)

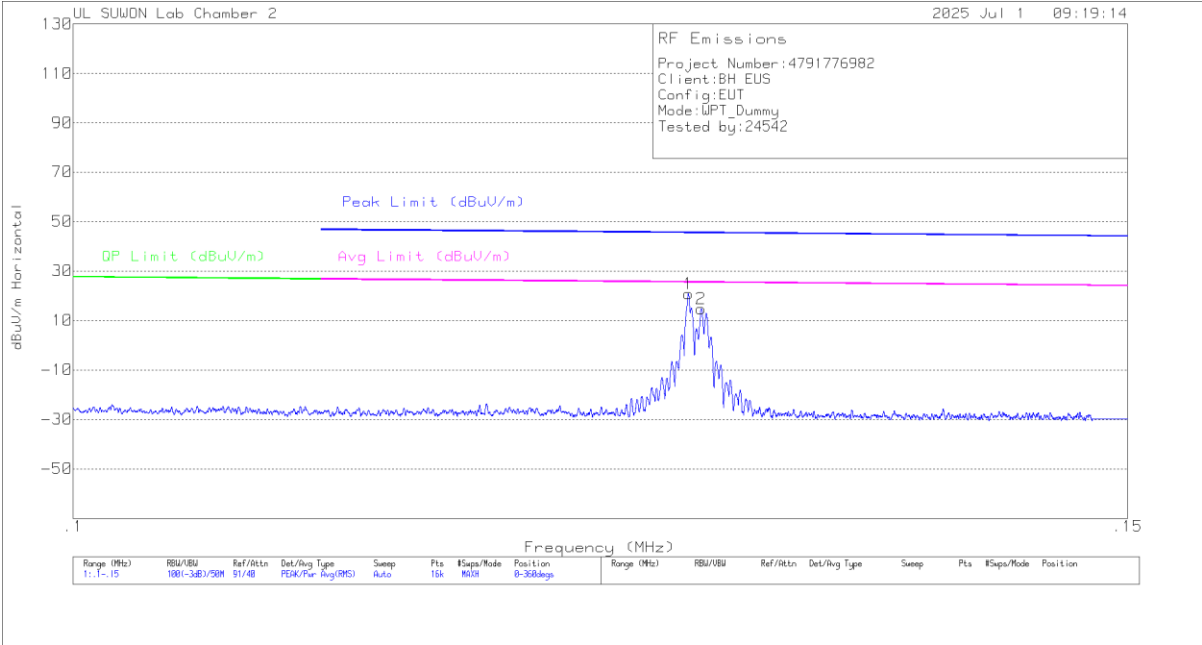
Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (m)
0.009–0.490	2400/F(kHz)	300
0.490–1.705	24000/F(kHz)	30
1.705–30.0	30	30
30–88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960 MHz	500	3
Note: The lower limit shall apply at the transition frequency.		

RESULTS

Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 300 m open field 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 D01.

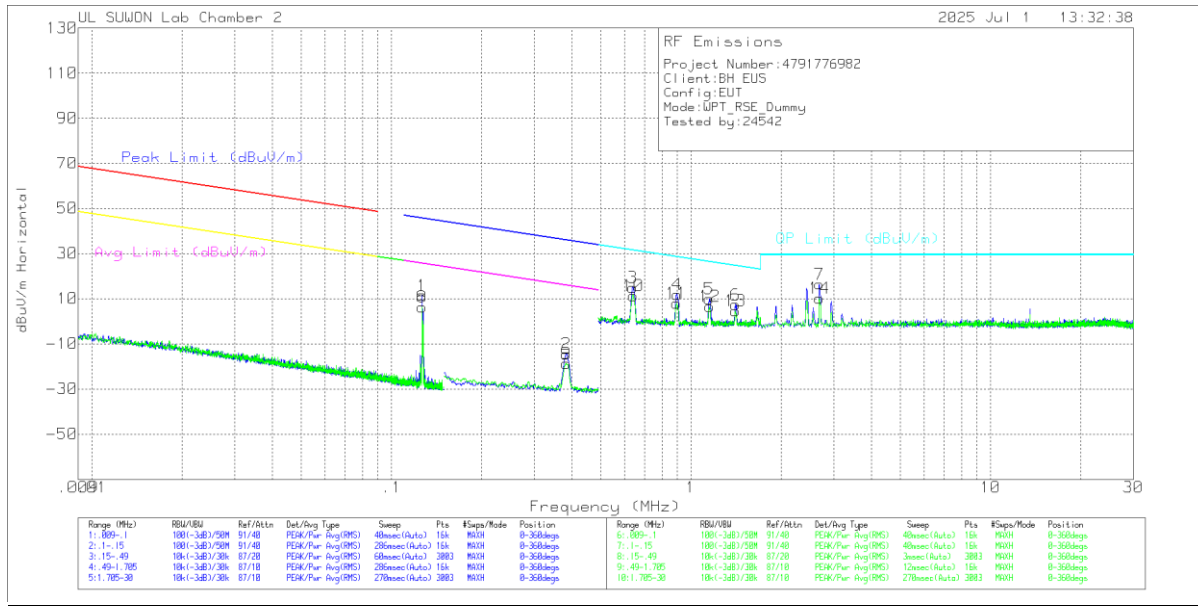
FUNDAMENTAL AND RADIATED EMISSIONS 9 KHz to 30 MHz (Test Case 1)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFV2-Z2_Loop Antenna	Cable Loss	Dist Cor 300m	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	12669	80.76	Pk	20	.1	-80	20.86	-	-	45.57	-24.71	25.57	-4.71	0-360
2	12732	74.74	Pk	20	.1	-80	14.84	-	-	45.53	-30.69	25.53	-10.69	0-360

PK - Peak detector



TEST DATA

Trace Markers

[Face on]

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 300m	Corrected Reading dBuV/m	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
**1	.12669	71.4	Pk	20	.1	-80	11.5	45.57	-34.07	25.57	-14.07	0-360
2	.38363	45.71	Pk	19.8	.1	-80	-14.39	35.93	-50.32	15.93	-30.32	0-360

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)
3	.63926	35.08	Pk	19.9	.1	-40	15.08	31.5	-16.42	0-360
4	.89766	31.73	Pk	19.9	.2	-40	11.83	28.56	-16.73	0-360
5	1.15036	29.9	Pk	19.9	.2	-40	10	26.41	-16.41	0-360
6	1.40892	27.23	Pk	19.9	.2	-40	7.33	24.65	-17.32	0-360
7	2.6852	36.09	Pk	20.1	.3	-40	16.49	29.5	-13.01	0-360

[Face off]

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 300m	Corrected Reading dBuV/m	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
**8	.12669	66.23	Pk	20	.1	-80	6.33	45.57	-39.24	25.57	-19.24	0-360
9	.38261	41.46	Pk	19.8	.1	-80	-18.64	35.95	-54.59	15.95	-34.59	0-360

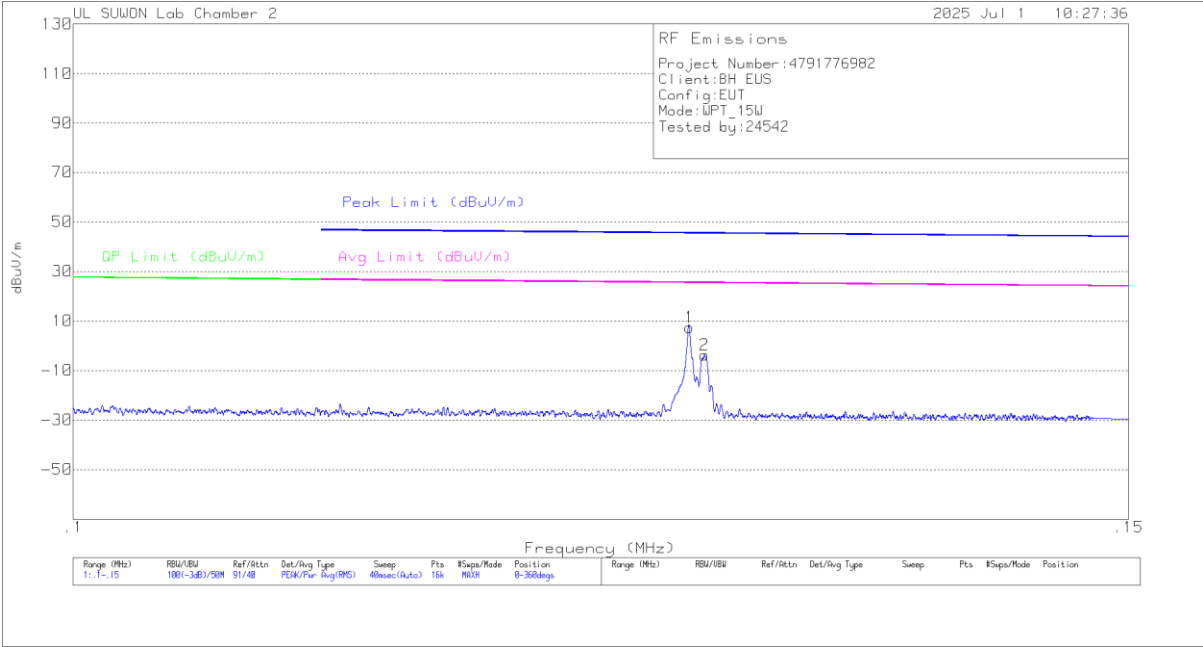
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 30m	Corrected Reading dBuV/m	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
10	.64063	31.47	Pk	19.9	.1	-40	11.47	31.48	-20.01	0-360
11	.89523	27.9	Pk	19.9	.2	-40	8	28.58	-20.58	0-360
12	1.15435	26.48	Pk	19.9	.2	-40	6.58	26.38	-19.8	0-360
13	1.40645	24.57	Pk	19.9	.2	-40	4.67	24.67	-20	0-360
14	2.6852	29.94	Pk	20.1	.3	-40	10.34	29.5	-19.16	0-360

Pk - Peak detector

**Fundamental

Note : 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.

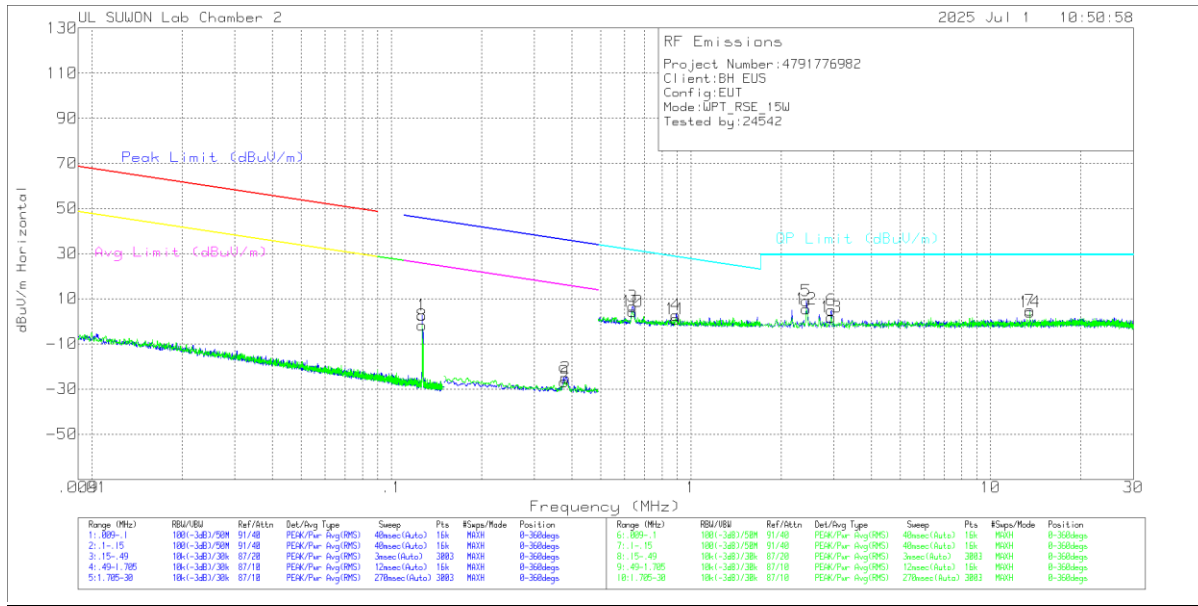
FUNDAMENTAL AND RADIATED EMISSIONS 9 KHz to 30 MHz (Test Case 2)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFVQ-ZZ_Loop Antenna	Cable Loss	Dist Cor 300m	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	12672	67.36	Pk	20	.1	-80	7.46	-	-	45.57	-38.11	25.57	-18.11	0-360
2	12745	56.1	Pk	20	.1	-80	-3.8	-	-	45.52	-49.32	25.52	-29.32	0-360

Pk - Peak detector



TEST DATA

Trace Markers

[Face on]

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 300m	Corrected Reading dBUV/m	Peak Limit (dBUV/m)	Margin (dB)	Avg Limit (dBUV/m)	Margin (dB)	Azimuth (Degs)
**1	.12669	62.64	Pk	20	.1	-80	2.74	45.57	-42.83	25.57	-22.83	0-360
2	.38109	35.08	Pk	19.8	.1	-80	-25.02	35.99	-61.01	15.99	-41.01	0-360

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)
3	.63885	26.55	Pk	19.9	.1	-40	6.55	31.5	-24.95	0-360
4	.89196	22.6	Pk	19.9	.2	-40	2.7	28.61	-25.91	0-360
5	2.43073	29.01	Pk	20	.2	-40	9.21	29.5	-20.29	0-360
6	2.93968	24.56	Pk	20.1	.3	-40	4.96	29.5	-24.54	0-360
7	13.56165	24.35	Pk	20	.5	-40	4.85	29.5	-24.65	0-360

[Face off]

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 300m	Corrected Reading dBUV/m	Peak Limit (dBUV/m)	Margin (dB)	Avg Limit (dBUV/m)	Margin (dB)	Azimuth (Degs)
**8	.12669	58.15	Pk	20	.1	-80	-1.75	45.57	-47.32	25.57	-27.32	0-360
9	.37854	33.3	Pk	19.8	.1	-80	-26.8	36.05	-62.85	16.05	-42.85	0-360

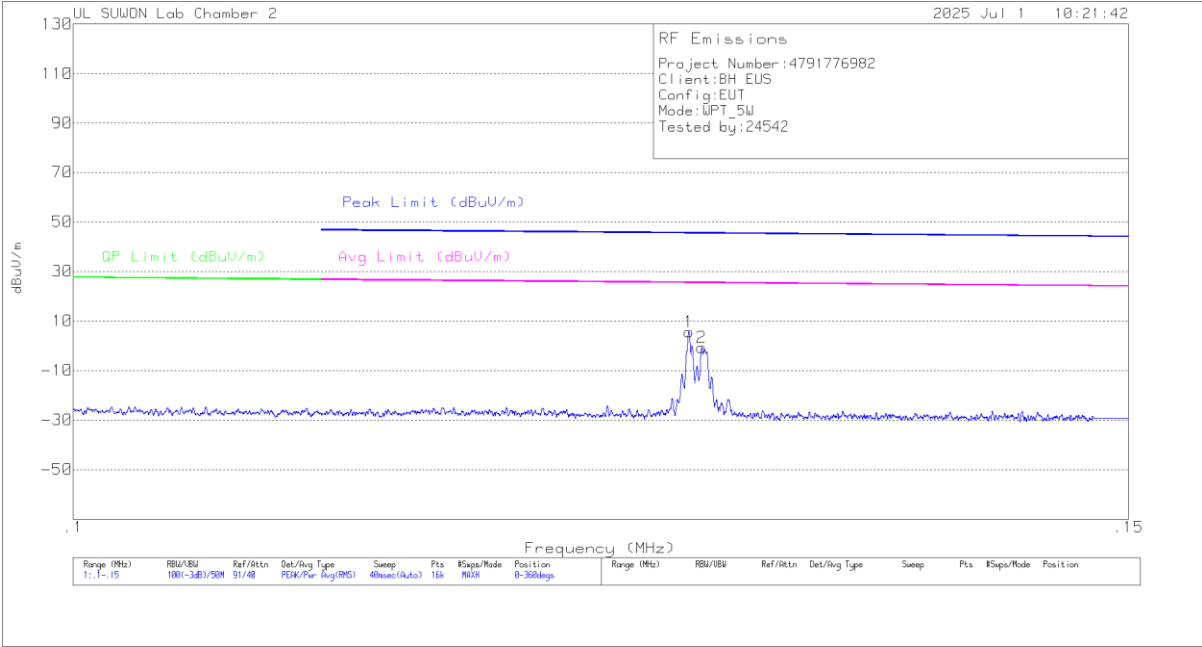
Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	HFH2-Z2_Loop Antenna	Cable Loss	Dist Corr 30m	Corrected Reading dBUV/m	QP Limit (dBUV/m)	Margin (dB)	Azimuth (Degs)
10	.63923	24.47	Pk	19.9	.1	-40	4.47	31.5	-27.03	0-360
11	.88858	21.04	Pk	19.9	.2	-40	1.14	28.64	-27.5	0-360
12	2.43073	25.28	Pk	20	.2	-40	5.48	29.5	-24.02	0-360
13	2.93968	21.45	Pk	20.1	.3	-40	1.85	29.5	-27.65	0-360
14	13.56165	23.54	Pk	20	.5	-40	4.04	29.5	-25.46	0-360

PK - Peak detector

**Fundamental

Note : 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.

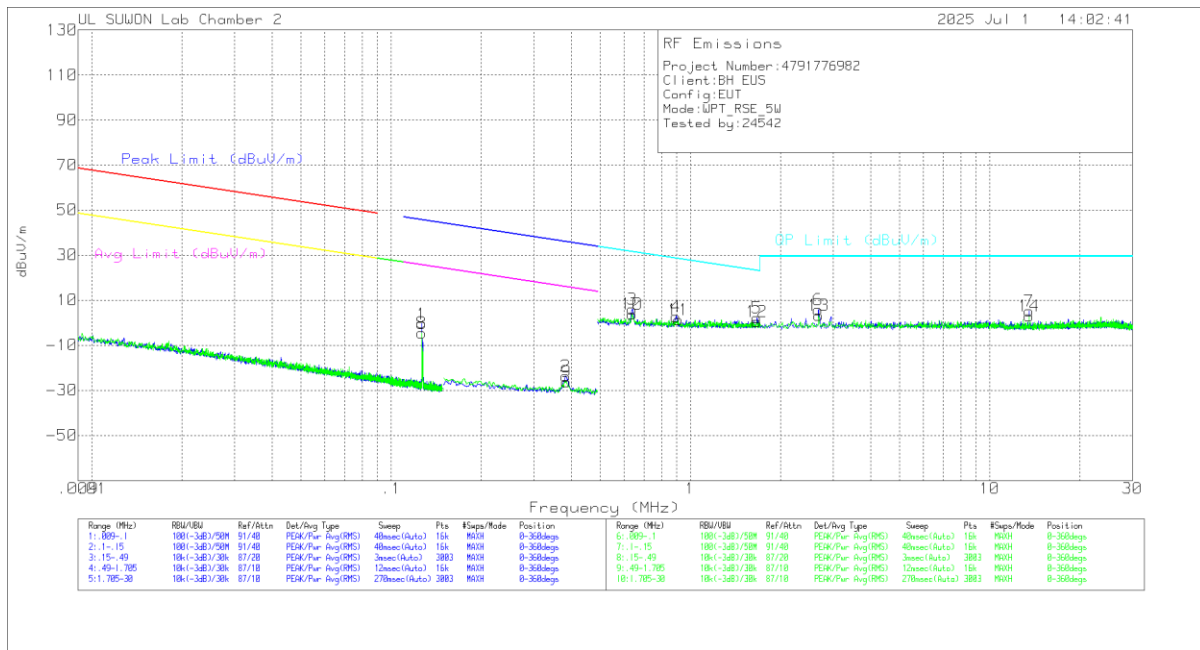
FUNDAMENTAL AND RADIATED EMISSIONS 9 KHz to 30 MHz (Test Case 3)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	HFV2-Z2_Loop Antenna	Cable Loss	Dist Cor 300m	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	12669	65.51	Pk	20	.1	-80	5.61	-	-	45.57	-39.96	25.57	-19.96	0-360
2	12732	59.31	Pk	20	.1	-80	-59	-	-	45.53	-46.12	25.53	-26.12	0-360

Pk - Peak detector



Trace Markers

[Face on]

Marker	Frequen cy (MHz)	Meter Reading (dBuV)	Det	HFH2- Z2_Loop Antenna	Cable Loss	Dist Corr 300m	Correcte d Reading dBuV/m	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
**1	.12669	59.45	Pk	20	.1	-80	-.45	45.57	-46.02	25.57	-26.02	0-360
2	.38318	36.34	Pk	19.8	.1	-80	-23.76	35.94	-59.7	15.94	-39.7	0-360

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)
3	.63983	26.05	Pk	19.9	.1	-40	6.05	31.49	-25.44	0-360
4	.89622	22.64	Pk	19.9	.2	-40	2.74	28.57	-25.83	0-360
5	1.6691	21.98	Pk	20	.2	-40	2.18	23.18	-21	0-360
6	2.67578	25.47	Pk	20.1	.3	-40	5.87	29.5	-23.63	0-360
7	13.56165	24.76	Pk	20	.5	-40	5.26	29.5	-24.24	0-360

[Face off]

Marker	Frequen cy (MHz)	Meter Reading (dBuV)	Det	HFH2- Z2_Loop Antenna	Cable Loss	Dist Corr 300m	Correcte d Reading dBuV/m	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
**8	.12669	55.48	Pk	20	.1	-80	-4.42	45.57	-49.99	25.57	-29.99	0-360
9	.38464	34.06	Pk	19.8	.1	-80	-26.04	35.91	-61.95	15.91	-41.95	0-360

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)
10	.63835	23.95	Pk	19.9	.1	-40	3.95	31.51	-27.56	0-360
11	.91123	21.19	Pk	19.9	.2	-40	1.29	28.43	-27.14	0-360
12	1.66542	20.31	Pk	20	.2	-40	.51	23.2	-22.69	0-360
13	2.6852	22.88	Pk	20.1	.3	-40	3.28	29.5	-26.22	0-360
14	13.56165	22.53	Pk	20	.5	-40	3.03	29.5	-26.47	0-360

Pk - Peak detector

**Fundamental

END OF TEST REPORT