

RF TEST REPORT

Test Equipment : Wireless charger
Model Name : DWC-1000
FCC ID : 2BTVDDWC-1000
Date of receipt : 2025-10-15
Test Duration : 2025-11-17 ~ 2025-12-09
Date of issue : 2026-01-22

Applicant : DRAX Inc.
26, Jeonpa-ro 62 beon-gil, Manan-gu, Anyang-si,
Gyeonggi-do, 14086, Republic of Korea

Test Laboratory : Lab-T, Inc.
2182-42 Baegok-daero, Mohyeon-eup, Cheoin-gu
Yongin-si, Gyeonggi-do 17036, Republic of Korea

Test Specification : FCC Part 15 Subpart C 15.209

Test Result : Pass

The above equipment was tested by Lab-T Testing Laboratory for compliance with the requirements of FCC Rules and Regulations.
The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose.
This test report shall not be reproduced except in full, without the written approval of Lab-T, Inc

Tested by:



Engineer
ByeongHwa Yun

Reviewed by:



Technical Manager
SangHoon Yu

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1. Revision History

Test Report No.	Date	Description
TRRFCC26-0003	2026-01-22	Initial issue

2. Information

2.1 Applicant Information

Applicant Name	DRAX Inc.
Address	26, Jeonpa-ro 62 beon-gil, Manan-gu, Anyang-si, Gyeonggi-do, 14086, Republic of Korea
Telephone No.	+82-31-459-8530
Person in Charge	Sungwoong Kim / swkim@draxfit.com
Manufacturer	DRAX Inc.
Address	26, Jeonpa-ro 62 beon-gil, Manan-gu, Anyang-si, Gyeonggi-do, 14086, Republic of Korea

2.2 Test Laboratory Information

Corporate Name	Lab-T, Inc.
Representative	Duke (JongYoung) Kim
Address	2182-42 Baegok-daero, Mohyeon-eup, Cheoin-gu, Yongin-si, Gyeonggi-do 17036 Republic of Korea
FCC & IC MRA Designation No.	KR0159
ISED No.	22000
Telephone	+82-31-322-6767
Fax	+82-31-322-6768
E-mail	info@lab-t.net

2.3 Test Site

Test Site	used	Address
Building L	☒	2182-40 Baegok-daero, Mohyeon-eup, Cheoin-gu, Yongin-si, Gyeonggi-do 17036, Republic of Korea
Building T	☒	2182-42 Baegok-daero, Mohyeon-eup, Cheoin-gu, Yongin-si, Gyeonggi-do 17036, Republic of Korea
Building A	☐	2182-44 Baegok-daero, Mohyeon-eup, Cheoin-gu, Yongin-si, Gyeonggi-do 17036, Republic of Korea

3. Information About Test Equipment

3.1 Equipment Information

Equipment Type	Wireless charger
Equipment Model Name	DWC-1000
Frequency Range	110 kHz ~ 205 kHz
Modulation Type	ASK
Power Supply	DC 12 V
S/W Version	1.0
H/W Version	R1.0

Note 1 : The above EUT information was declared by the manufacturer.

3.2 Antenna Information

Type	Model No.	Gain	Note.
Loop Coil Antenna	-	-	-

3.3 Test Mode

Test Mode	Output Power
Mode 1	5 W Wireless Charging
Mode 2	7.5 W Wireless Charging
Mode 3	10 W Wireless Charging
Mode 4	15 W Wireless Charging

3.4 Tested Companion Device Information

Type	Manufacturer	Model	Note
Wireless charge jig	YBZ	Qi2.2 MPP 25W	-

4. Test Report

4.1 Summary

FCC Part 15C			
Reference	Parameter	Clause	Status
Transmitter Requirements			
15.203	Antenna Requirements	5.8	C
15.215(c)	20 dB Bandwidth	6.9.2	C
15.209(a)	Radiated Emission	6.4 6.5	C
15.207(a)	Conducted Emissions	6.2	C
Note 1 : C = Comply N/C = Not Comply N/T = Not Tested N/A = Not Applicable			

* The general test methods used to test this device is ANSI C63.10:2020

4.2 Measurement Uncertainty

Mesurement Items	Expanded Uncertainty	
99% Occupied Bandwidth	6.44 kHz	(The confidence level is about 95 %, $k=2$)
Radiated Spurious Emissions (30 MHz under)	4.03 dB	(The confidence level is about 95 %, $k=2$)
Radiated Spurious Emissions (30 MHz ~ 1 GHz)	4.85 dB	(The confidence level is about 95 %, $k=2$)
Conducted emission	2.42 dB	(The confidence level is about 95 %, $k=2$)

4.3 Transmitter Requirements

4.3.1 Antenna Requirements

4.3.1.1 Regulation

According to §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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

4.3.1.2 Result

Comply (The antenna of this EUT is Inductive Loop Coil Antenna Type. Therefore the antenna is permanently attached. Please refer to the internal photo.)

4.3.2 20 dB Bandwidth

4.3.2.1 Measurement Procedure

The 20 dB Bandwidth is measured with a spectrum analyzer connected via a receiving antenna placed near the EUT while the EUT is operating.

4.3.2.2 Result

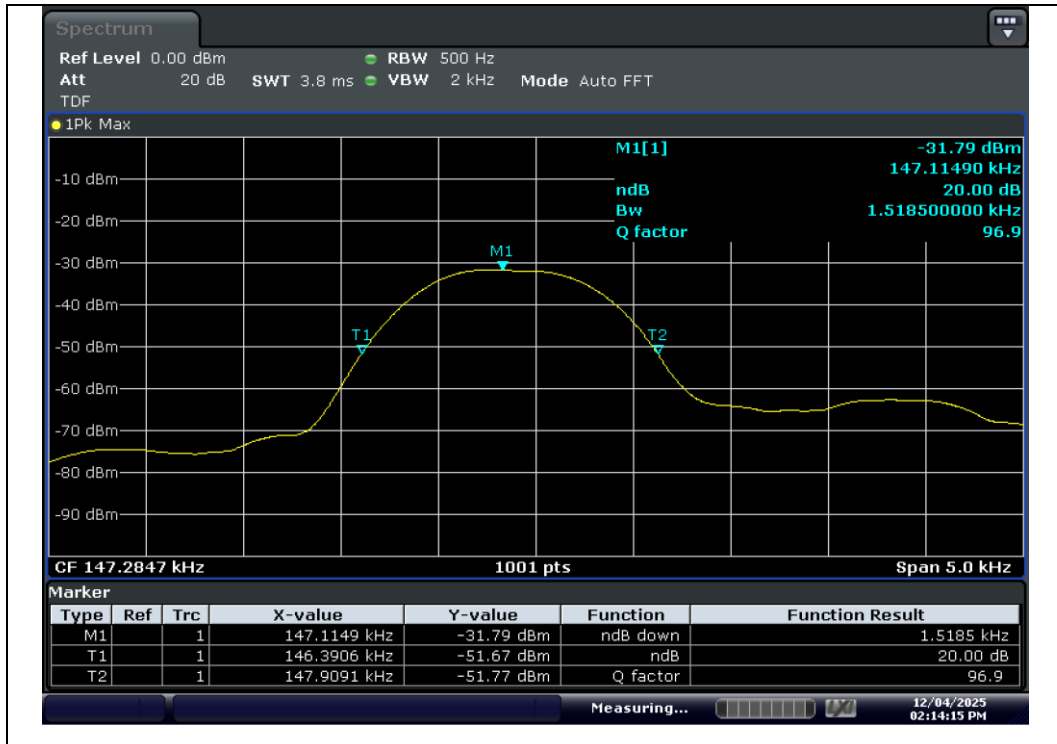
Comply (measurement data : refer to below)

4.3.2.3 Measurement Data

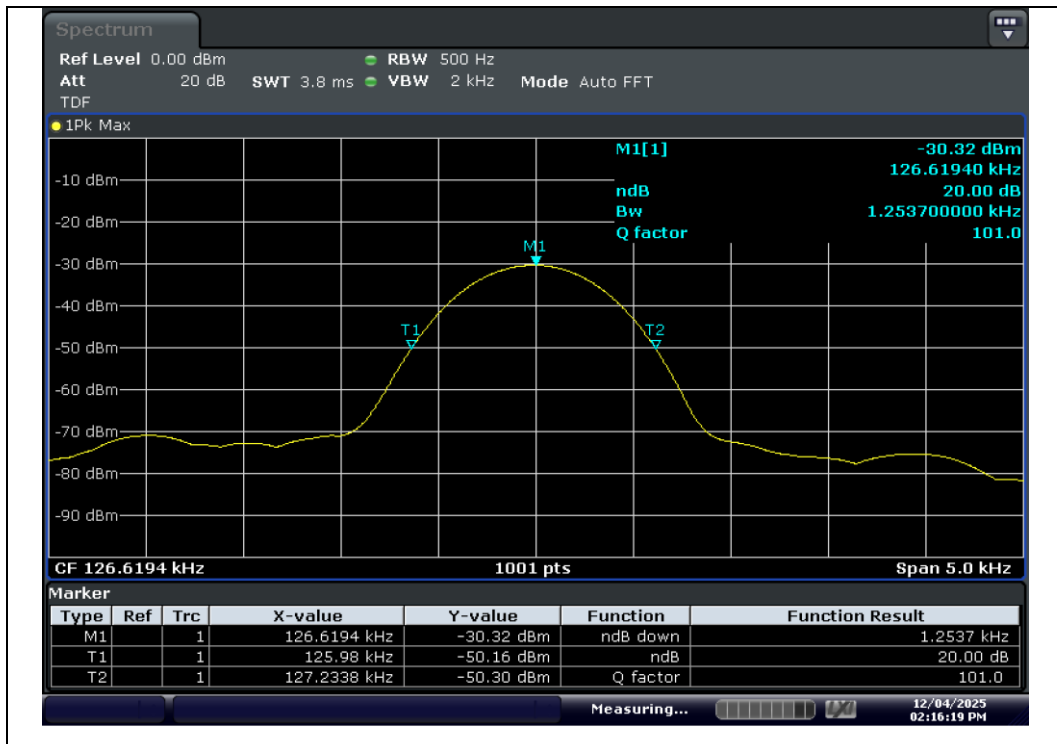
Test Mode	Tested Frequency(kHz)	Test Results(kHz)
Mode 1	147	1.519
Mode 2	127	1.254
Mode 3	147	1.259
Mode 4	145	1.274

4.3.2.4 Test Plot

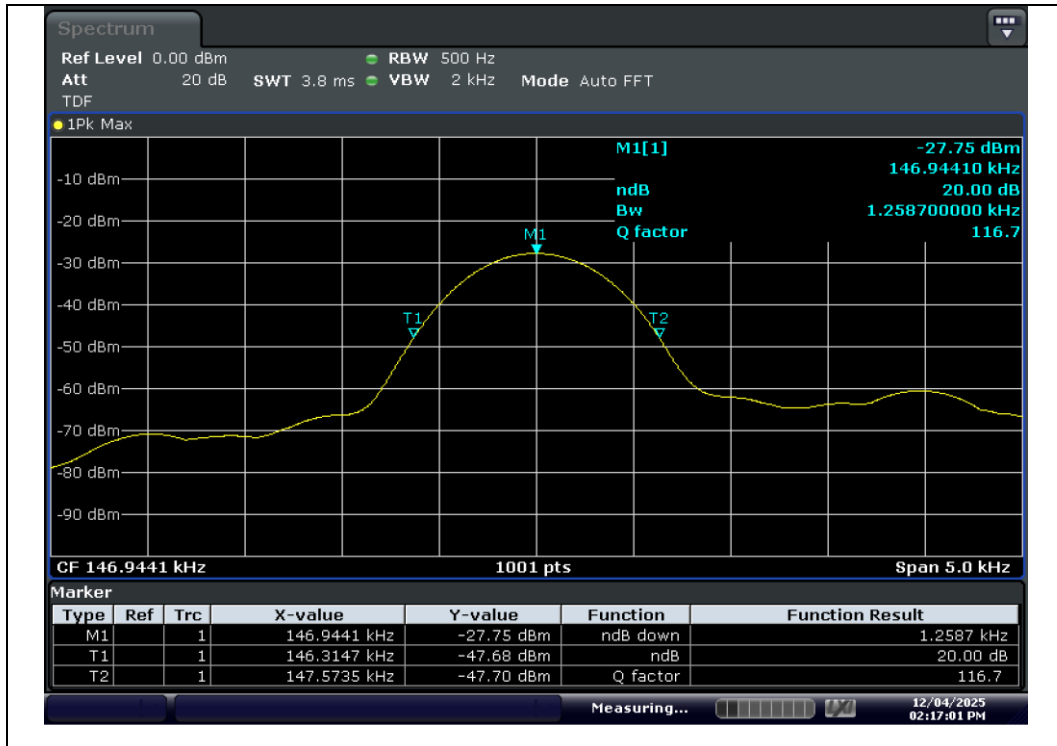
Test Mode : Mode 1



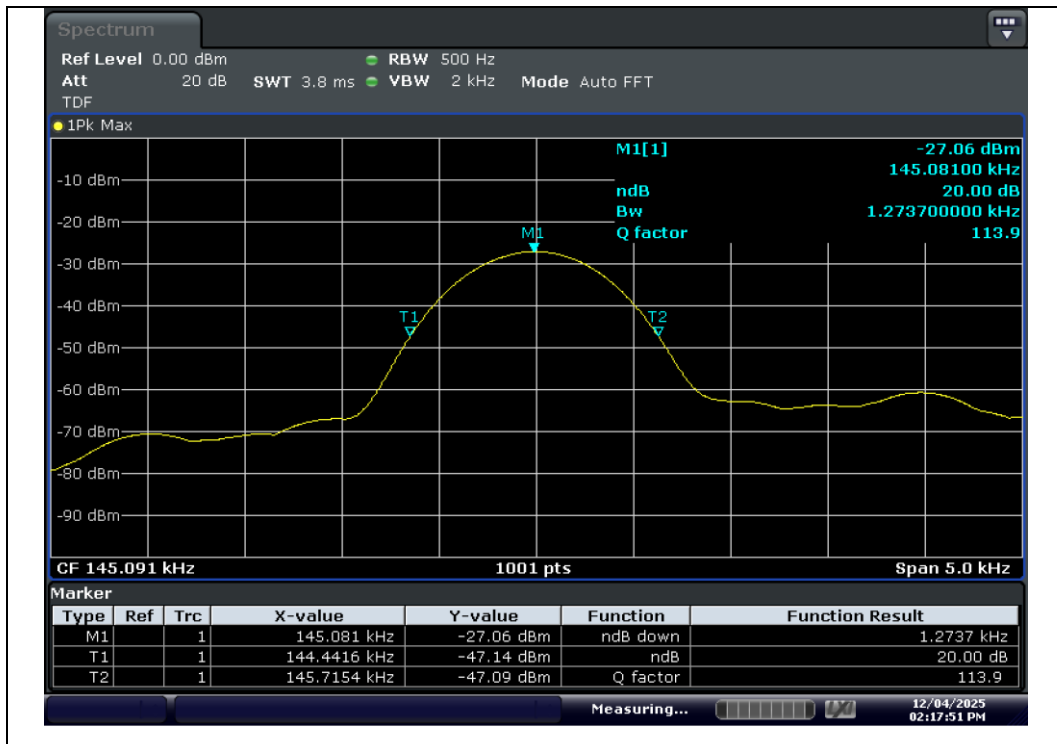
Test Mode : Mode 2



Test Mode : Mode 3



Test Mode : Mode 4



4.3.3 Radiated Emission

4.3.3.1 Regulation

According to §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:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009 - 0.490	2 400/F(kHz)	300
0.490 - 1.705	24 000/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.

4.3.3.2 Measurement Procedure

- 1) The preliminary and final radiated measurements were performed to determine the frequency producing the maximum emissions in at a 10m anechoic chamber. The EUT was tested at a distance 3 meters.
- 2) The EUT was placed on the top of the 0.8-meter height table. To find the maximum emission levels, the height of a measuring antenna was changed and the turntable was rotated 360°
- 3) The antenna polarization was also changed from vertical to horizontal. The spectrum was scanned from 9 kHz to 30 MHz using the loop antenna, and from 30 to 1 000 MHz using the TRILOG broadband antenna.
- 4) Each frequency found during preliminary measurements was re-examined and investigated. The test-receiver system was set up to average, peak, and quasi-peak detector function with specified bandwidth.

Note 1 : The resolution bandwidth of test receiver/spectrum analyzer is 200 Hz for Quasi-peak detection (QP) at frequency below 150 kHz.

Note 2 : The resolution bandwidth of test receiver/spectrum analyzer is 9 kHz for Quasi-peak detection (QP) at frequency 150 kHz to 30 MHz

Note 3 : The resolution bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.

Note 4 : The video bandwidth of test receiver/spectrum analyzer is three times as much as resolution bandwidth

4.3.3.3 Result

Comply (measurement data : refer to the next page)

4.3.3.4 Measurement Data

Test Mode : Mode 1_9 kHz ~ 30 MHz

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Cable Loss (dB)	Result at 3m (dBμV/m)	Result at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.147	QP	F	H	72.6	12.0	0.1	84.7	4.7	24.3	19.6
0.147	QP	F	V	66.5	12.0	0.1	78.6	-1.4	24.3	25.7

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Cable Loss (dB)	Result at 3m (dBμV/m)	Result at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
Not detected	-	S	-	-	-	-	-	-	-	-

Note 1 : Not detected means peak measurement did not take place because it is more than 20dB difference in the limit

Test Mode : Mode 2_9 kHz ~ 30 MHz

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Cable Loss (dB)	Result at 3m (dBμV/m)	Result at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.127	QP	F	H	73.6	12.0	0.1	85.7	5.7	25.5	19.8
0.127	QP	F	V	65.0	12.0	0.1	77.1	-2.9	25.5	28.4

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Cable Loss (dB)	Result at 3m (dBμV/m)	Result at 300m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.635	QP	S	H	38.4	11.8	0.2	50.4	10.4	31.5	21.1

Note 1 : "F" : Fundamental, "S" : Spurious

Note 2 : Result : Reading + Ant Factor + Cable Loss

Note 3 : According to §15.31 (f)(2);

Result at 30m (dBμV/m) = Result at 3m(dBμV/m)-40log(30/3) (dBμV/m)

Result at 300m (dBμV/m) = Result at 3m(dBμV/m)-40log(300/3) (dBμV/m)

Note 4 : The radiation measurements are performed in X, Y, Z axis positioning. And worst case mode is recorded in the report.

Test Mode : Mode 3_9 kHz ~ 30 MHz

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Cable Loss (dB)	Result at 3m (dBμV/m)	Result at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.147	QP	F	H	75.5	12.0	0.1	87.6	7.6	24.3	16.7
0.147	QP	F	V	70.5	12.0	0.1	82.6	2.6	24.3	21.7

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Cable Loss (dB)	Result at 3m (dBμV/m)	Result at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.732	QP	S	H	42.7	11.8	0.2	54.7	14.7	30.3	15.6

Test Mode : Mode 4_9 kHz ~ 30 MHz

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Cable Loss (dB)	Result at 3m (dBμV/m)	Result at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.147	QP	F	H	69.5	12.0	0.1	81.6	1.6	24.3	22.7
0.147	QP	F	V	62.6	12.0	0.1	74.7	-5.3	24.3	29.6

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Cable Loss (dB)	Result at 3m (dBμV/m)	Result at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
Not detected	-	S	-	-	-	-	-	-	-	-

Note 1 : "F" : Fundamental, "S" : Spurious

Note 2 : Result : Reading + Ant Factor + Cable Loss

Note 3 : According to §15.31 (f)(2);

Result at 30m (dBμV/m) = Result at 3m(dBμV/m)-40log(30/3) (dBμV/m)

Result at 300m (dBμV/m) = Result at 3m(dBμV/m)-40log(300/3) (dBμV/m)

Note 4 : The radiation measurements are performed in X, Y, Z axis positioning. And worst case mode is recorded in the report.

Test Mode : 30 MHz ~ 1 GHz (Worst Case: Mode 3)

Frequency (MHz)	Detector	Note 1	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Loss (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
36.063	QP	S	V	46.9	19.0	-29.1	36.8	40.0	3.2
141.669	QP	S	H	45.8	19.1	-27.9	37.0	43.5	6.5
142.881	QP	S	V	43.4	19.2	-27.9	34.7	43.5	8.8

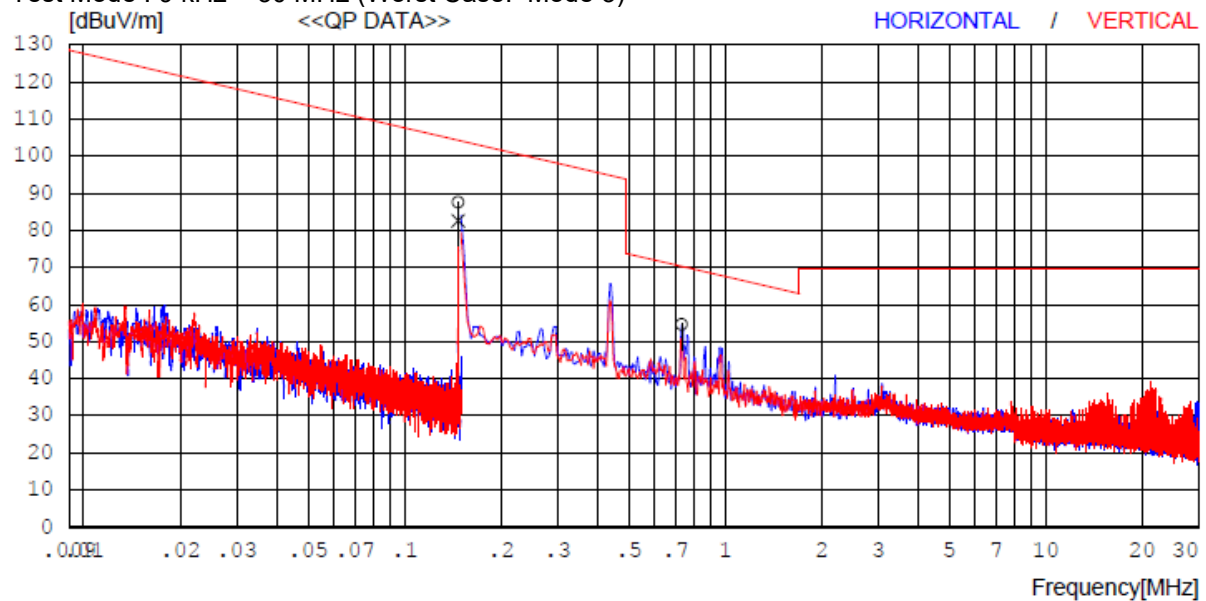
Note 1 : "F" : Fundamental, "S" : Spurious

Note 2 : Loss : Cable loss – Amp gain

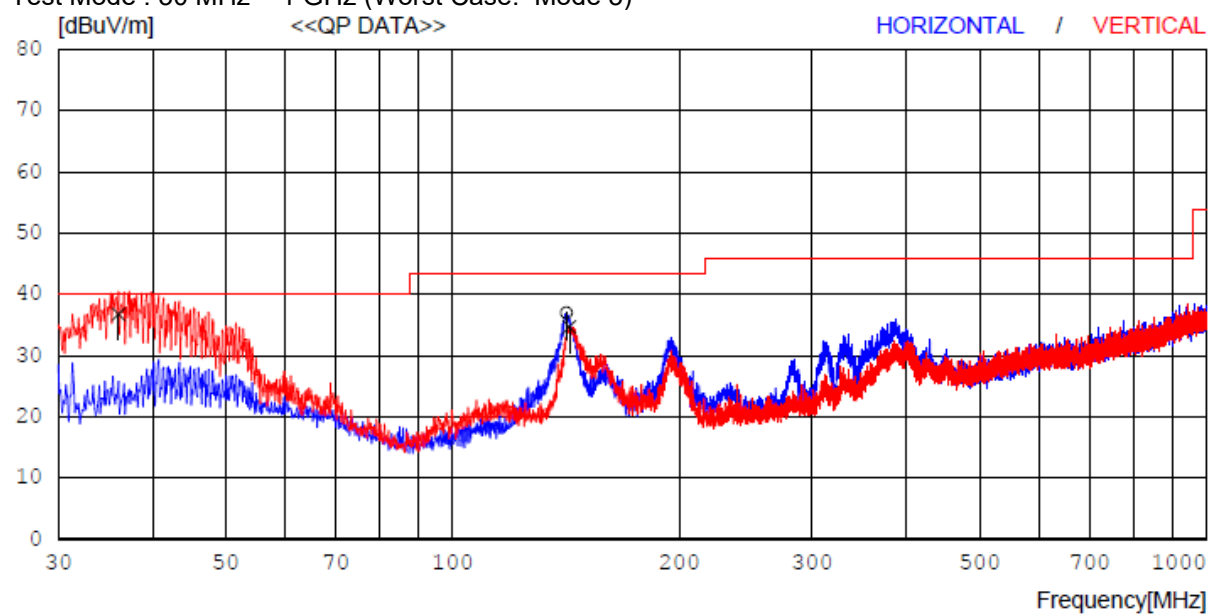
Note 3 : Result : Reading + Ant Factor + Loss

4.3.3.5 Measurement Plot

Test Mode : 9 kHz ~ 30 MHz (Worst Case: Mode 3)



Test Mode : 30 MHz ~ 1 GHz (Worst Case: Mode 3)



4.3.4 Conducted Emission

4.3.4.1 Regulation

According to §15.207(a), 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 μ H/50 Ω 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 boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency.

According to §15.107(a), for unintentional device, except for Class A digital devices, line conducted emission limits are the same as the above table.

4.3.4.2 Measurement Procedure

1) The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 cm in which is located 40 cm away from the vertical wall and 1.5 m away from the side wall of the shielded room.

2) Each current-carrying conductor of the EUT power cord was individually connected through a 50 Ω /50 μ H LISN, which is an input transducer to a Spectrum Analyzer or an EMI/Field Intensity Meter, to the input power source.

3) Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.

4) The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) was then performed over the frequency range of 0.15 MHz to 30 MHz.

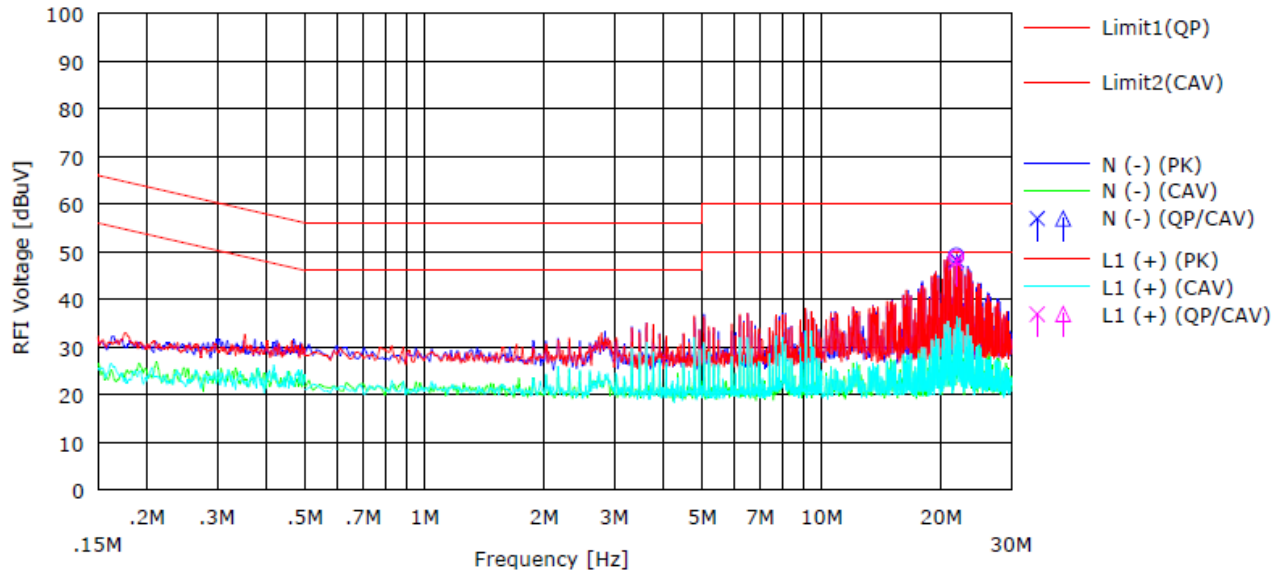
5) The measurements were made with the detector set to PEAK amplitude within a bandwidth of 10 kHz or to QUASIPEAK and AVERAGE within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

4.3.4.3 Result

Comply (measurement data : refer to below)

4.3.4.4 Measurement data

Test Mode : Mode 4(Worst Case)



No.	Freq. [MHz]	Reading		C.Fac [dB]	Results		Limit		Margin		Phase	Comment
		<QP>	<CAV>		<QP>	<CAV>	<QP>	<CAV>	<QP>	<CAV>		
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
1	1.79963	28.58	27.69	20.62	49.20	48.31	60.00	50.00	10.80	1.69	N (-)	
2	1.79763	28.25	27.30	20.57	48.82	47.87	60.00	50.00	11.18	2.13	L1 (+)	

APPENDIX I

TEST EQUIPMENT USED FOR TESTS

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

Equipment	Manufacturer	Model	Serial No.	Cal. Date (yy.mm.dd)	Next Cal.Date (yy.mm.dd)
FSV Signal Analyzer	ROHDE&SCHWARZ	FSV30	103370	2025-10-01	2026-10-01
DC POWER SUPPLY	AGILENT	E3632A	MY51160055	2025-04-01	2026-04-01
HUMIDITY/TEMP DATA RECORDER	LUTRON	MHB-382SD	79735	2025-04-02	2026-04-02
Digital MultiMeter	HP	34401A	US36025428	2025-12-23	2026-12-23
Signal Generator	ROHDE&SCHWARZ	SMB100A	178384	2025-10-01	2026-10-01
RF Cable	Radiall	1800920922000KE	CON-R007	2025-07-21	2026-01-21
EMI Test Receiver	ROHDE&SCHWARZ	ESU40	100445	2025-09-01	2026-09-01
Active Loop H-Field	ETS	6502	00150598	2025-06-05	2027-06-05
BiLog Antenna	Schwarzbeck	VULB9168	00821	2025-03-05	2027-03-05
Attenuator	JFW	50F-006	6 dB-3	2025-03-04	2026-03-04
PREAMPLIFIER	TSJ	MLA-10k01-b01-27	1870367	2025-03-27	2026-03-27
Antenna Mast	TOKIN	5977	-	-	-
Controller	TOKIN	5909L	141909L-1	-	-
Turn Table	TOKIN	5983-1.5	-	-	-
Microwave Cable	HUBER + SUHNER	SUCOFLEX 106	CON-E001	2025-03-31	2026-03-31
Cable	HUBER + SUHNER	-	CON-E015	2025-03-31	2026-03-31
EMI Test Receiver	R&S	ESR7	101440	2025-09-01	2026-09-01
LISN	R&S	ENV216	101883	2025-03-26	2026-03-26
Pulse Limiter	Schwarzbeck	VTSD 9561-F	00189	2025-03-26	2026-03-26
Coaxial Cable	HUBER + SUHNER	RG 223/U	CON-E003	2025-03-31	2026-03-31

-End-