ELECTROMAGNETIC EMISSION COMPLIANCE REPORT

Test Report No.	**: OT-225-RED-064**
Reception No.	**: 2205001663**
Applicant	**: LG Electronics USA, Inc.**
Address	**: 111 Sylvan Ave, North Building, Englewood Cliffs, New Jersey, 07632, United States**
Manufacturer	**: LG Electronics Inc.**
Address	**: 222 LG-ro Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, Korea**
Type of Equipment	**: Bluetooth Earbud**
Model Names	**: TONE-TF7Q**
Multiple Model Name	**: TONE-UTF7Q, TONE-DTF7Q**
Serial number	**: N/A**
Total page of Report	**: 20 pages (including this page)**
Date of Incoming	**: May 12, 2022**
Test Period	**: May 15, 2022 ~ May 25, 2022**
Date of Issuing	**: May 30, 2022**

SUMMARY

The equipment complies with the requirement of ***FCC CFR 47 PART 15 SUBPART B, Section 15.101***

This test report contains only the results of a single test of the sample supplied for the examination.

Tested by:	Reviewed by:	Approved by:
Jae-Yeon, Kim / Engineer	Ji-/Hwang, Jang / Manager	Seung-Hyun, Park / Senior Manager
EMC Testing Div.	EMC Testing Div.	EMC Testing Div.
ONETECH Corp.	ONETECH Corp.	ONETECH Corp.

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CONTENTS

Page

1. VERIFICATION OF COMPLIANCE 4

2. TEST FACILITY 5

3. PRODUCT INFORMATION 6

3.1 DESCRIPTION OF EUT 6
3.2 MODEL DIFFERENCES 6
3.3 SUPPORT EQUIPMENT 7
3.4 SYSTEM CONFIGURATION 7
3.5 CABLE DESCRIPTION FOR THE EUT 7
3.6 EQUIPMENT MODIFICATIONS 7
3.7 INFORMATION OF MEASUREMENT SOFTWARE 7

4. DESCRIPTION OF TESTS 8

4.1 TEST METHODOLOGY 8
4.2 TEST CONDITION 8
4.3 CONDUCTED EMISSION 9
4.4 RADIATED EMISSION 9

5. FINAL RESULT OF MEASUREMENT 10

5.1 CONDUCTED EMISSION TEST 10
5.1.1 Operating Environment 10
5.1.2 Test Setup 10
5.1.3 Measurement uncertainty 10
5.1.4 Limit 10
5.1.5 Test Equipment used 10
5.1.6 Test Data 11
5.2 RADIATED EMISSION TEST 13
5.2.1 Operating Environment 13
5.2.2 Test Setup 13
5.2.3 Measurement uncertainty 13
5.2.4 Limit 13
5.2.5 Test Equipment used 14
5.2.6 Test Data 15

6. SAMPLE CALCULATIONS 20

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Revision History

Rev. No.	Issued Report No.	Issued Date	Revisions	Section Affected
0	OT-225-RED-064	May 30, 2022	Initial Issue	All

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1. VERIFICATION OF COMPLIANCE

-. Applicant : LG Electronics USA, Inc.

-. Address : 111 Sylvan Ave, North Building, Englewood Cliffs, New Jersey, 07632, United States

-. Manufacturer : LG Electronics Inc.

-. Address : 222 LG-ro Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, Korea

-. Factory : BLUECOM

-. Address : C5-4, Area CN1, Trang Due Industrial Park, An Duong District, Haiphong City, Vietnam

-. MODEL NAME : TONE-TF7Q

-. SERIAL NUMBER : N/A

-. BRAND/TRADE NAME : LG

-. DATE : May 30, 2022

EQUIPMENT CLASS	Other Class B digital devices & peripherals
E.U.T. DESCRIPTION	Bluetooth Earbud
MEASUREMENT PROCEDURES	Original Grant
TYPE OF EQUIPMENT TESTED	ANSI C63.4a: 2017
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
STANDARDS	FCC PART 15 (Class B)
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	None
FINAL TEST WAS CONDUCTED ON	3m Semi anechoic chamber, 10 m Semi anechoic chamber

ONETECH Corp. tested the above equipment in accordance with the requirements set forth in the above standard. The test results show that equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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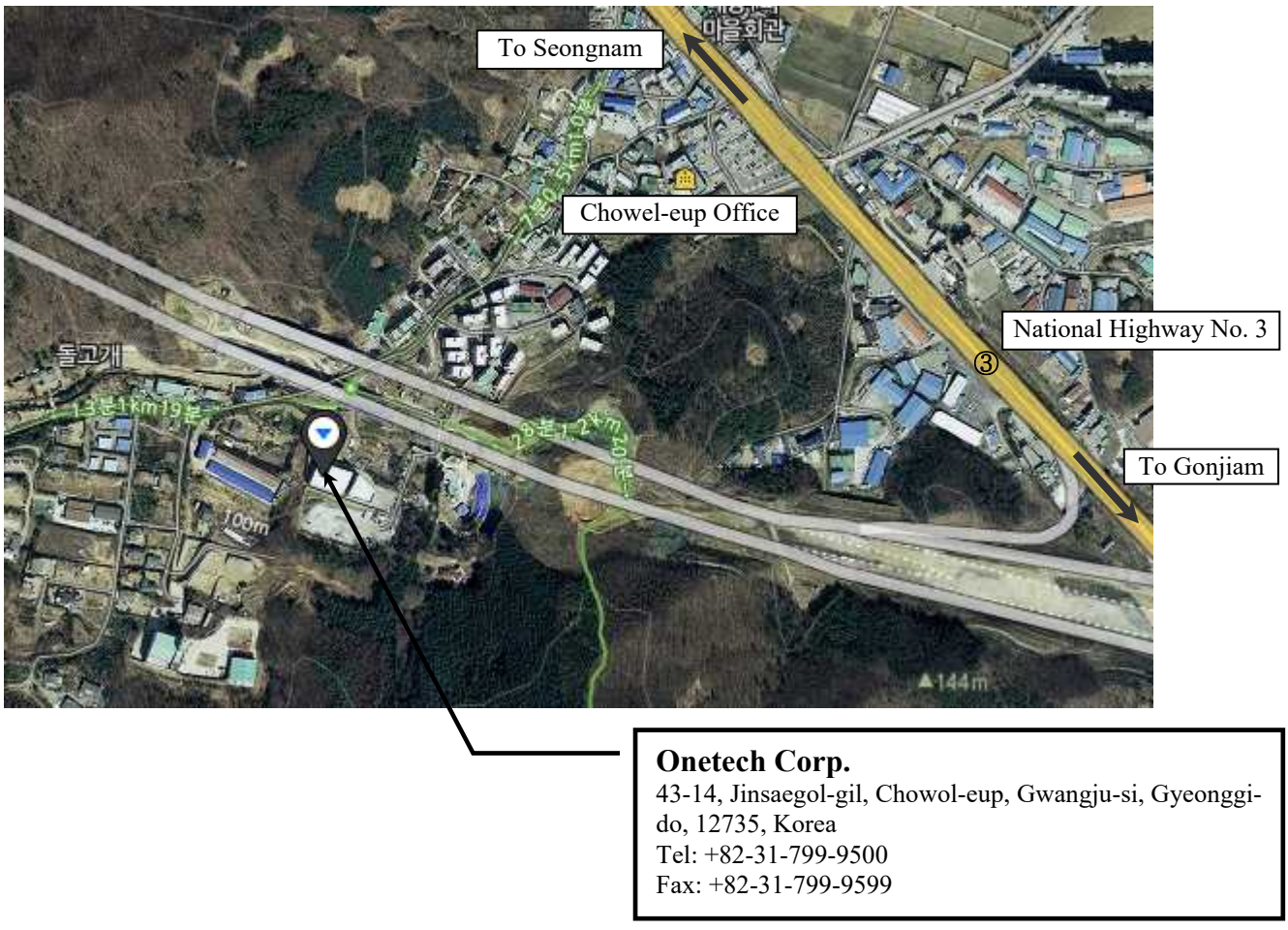
2. TEST FACILITY

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025 by Radio Research Agency as accreditation body. The Onetech Corp. is accredited for measuring devices subject to Declaration of Conformity (DOC) under Parts 15 & 18 as a Conformity Assessment Body (CAB) with designation number KR0013.

These measurement tests were conducted at Onetech Corp.

The 10 m semi anechoic chamber and conducted measurement facilities are located at

1) 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea.
2) 12-5, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea.



Onetech Corp.
43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea
Tel: +82-31-799-9500
Fax: +82-31-799-9599

3. PRODUCT INFORMATION

3.1 Description of EUT

The LG Electronics USA, Inc., Model TONE-TF7Q (referred to as the EUT in this report) is a Bluetooth Earbud.

Product specification described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Plastic
LIST OF EACH OSC. or CRY. FREQ. (FREQ. >= 1 MHz)	40 MHz
RF FREQ.	2 402 MHz ~ 2 480 MHz
ELECTRICAL RATING	Earbud: DC 5 V, 136 mA Charging case: DC 5 V, 500 mA Lithium-ion coin battery of earbud: 3.7 Vdc, 68 mAh Lithium-ion battery of cradle: 3.7 Vdc, 390 mAh
NUMBER OF PCB LAYERS	-
EXTERNAL CONNECTOR	Earbud: Charging terminals Charging case: Charging terminals, Charge port(USB Type C)
Temperature Range	0 °C ~ 40 °C

3.2 Model Differences

-. The following lists consist of the added model and their differences.

Model Name	Differences	Tested
TONE-TF7Q	Basic Model (Marketing area: Global, USA)	☑
TONE-UTF7Q	This model is identical to the basic model except fort the Marketing area (Korea, England, Australia)	☐
TONE-DTF7Q	This model is identical to the basic model except fort the Marketing area (Germany)	☐

Note: 1. Applicant consigns only basic model to test. Therefore, this test report just guarantees the units, which have been tested.

2. The Applicant/manufacturer is responsible for the compliance of all variants.

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3.3 Support Equipment

The model numbers for all the equipments that were used in the tested system is:

Description	Model	Manufacturer	Connected to
Bluetooth Earbud (EUT)	TONE-TF7Q	LG Electronics Inc.	Adapter
Adapter	ETA-U90KBK	RF Tech	EUT

3.4 System Configuration

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Bluetooth Earbud	LG Electronics Inc.	TONE-TF7Q	ZNFTONETF7Q

3.5 Cable Description for the EUT

Cable		Shielded	Ferrite Bead	Metal Shell	Length (m)	Connected to
Earbud	Charging terminals	-	-	-	-	Cradle
Cradle	Charging terminals	-	-	-	-	Earbud
	Charge port(USB Type C)	Y	N	N	0.5	Adapter

3.6 Equipment Modifications

-. None

3.7 Information of Measurement Software

	Chamber name	Software name	Software version
☐ -	Conducted Emission #1	Noise Terminal Voltage Measurement	2.00.0180
☐ -	Conducted Emission #2	EMC32	10.60.10
■ -	Conducted Emission #3	Noise Terminal Voltage Measurement	2.00.0178
☐ -	Radiated Emission 10 m SAC 1	Radiated Emission Measurement	2.00.0201
■ -	Radiated Emission 10 m SAC 2	Radiated Emission Measurement	2.00.0202
■ -	Radiated Emission 3 m SAC	Radiated Emission Measurement	2.00.0202

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4. DESCRIPTION OF TESTS

4.1 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4a: 2017.

Radiated testing was performed at a distance of 3 m from EUT to the antenna.

4.2 Test Condition

The test conditions of the noted test mode(s) in this test report are;

1) Test Voltage / Frequency

-. AC 120 V / 60 Hz

2) Test Mode(s)

Test Mode		Operating States
1	Charging	a) The USB Type C port on the EUT was connected to the adapter and then the Earbud was charging operate.

4.3 Conducted Emission

The EUT was placed on a non-conductive 1.0 m × 1.5 m table, which is 0.8 m in height above the reference ground plane and 0.4 m away from the vertical conducting plane (over 2 m × 2 m) that is bonded to the reference ground plane.
The power of EUT is fed through a 50 Ω/ 50 μH + 5 Ω LISN and all support equipment is powered from another LISN. Powers to the LISN are filtered by high-current high insertion loss power line filter.
Sufficient time for EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition.
The RF output of the LISN was connected to the EMI test receiver.
Exploratory measurements were conducted to identify the highest emission by operating the EUT in a range of typical modes of operation, cable positions, system configuration and arrangement.
Based on exploratory measurements, the final measurements were conducted at the worst test conditions.
Exploratory measurements were scanned using Peak mode of EMI Test receiver from 150 kHz to 30 MHz with 20 ms sweep time. The final measurements were measured with Quasi-Peak and CISPR Average mode.
The bandwidth of EMI Test Receiver was set to 9 kHz. Interface cables were connected to the available interface ports of the test unit. Excess cable lengths were bundled at center with 30 cm ~ 40 cm.

4.4 Radiated Emission

Exploratory Radiated measurements were conducted at the 3 m semi anechoic chamber in order to identify the highest emission by operating the EUT in a range of typical modes of operation, cable positions, system configuration and arrangement.
Based on exploratory measurements, the final measurements were conducted at the worst test conditions.
Final measurements were made at 10 m semi anechoic chamber that complies with CISPR 16/ ANSI C63.4a:2017/ ICES-003.
Exploratory measurements were scanned using Peak mode of EMI Test receiver and final measurements were measured with Quasi-Peak mode (Below 1 GHz) and Peak & CISPR Average mode (Above 1 GHz).
The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

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5. FINAL RESULT OF MEASUREMENT

Exploratory measurement was done in normal operation mode. And the final measurement was selected for the maximized emission level.

5.1 Conducted Emission Test

5.1.1 Operating Environment

Ambient temperature : 24.0 °C
Relative humidity : 46.5 % R.H.

5.1.2 Test Setup

The EUT and other support equipment were placed on a non-conductive table, 0.8 m height above the reference ground plane. The power of EUT was fed through a 50 Ω/ 50 μH + 5 Ω LISN. The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

5.1.3 Measurement uncertainty

Conducted emission, quasi-peak detection : ± 1.9 dB
Conducted emission, CISPR-average detection : ± 1.9 dB

Measurement uncertainty is calculated in accordance with CISPR 16-4-2. The measurement uncertainty is given with a confidence of 95 % with the coverage factor, k = 2.

5.1.4 Limit

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	CISPR 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		

5.1.5 Test Equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	ESCI	Rohde & Schwarz	Test Receiver	101420	Mar. 08, 2022 (1Y)
■ -	LT32C/10	Afj Instruments	LISN	32032039322	Mar. 21, 2022 (1Y)
□ -	3825/2	EMCO	AMN	9109-1867	Mar. 08, 2022 (1Y)
■ -	11947A	Hewlett Packard	Transient Limiter	3107A02762	Mar. 08, 2022 (1Y)

All test equipment used is calibrated on a regular basis.

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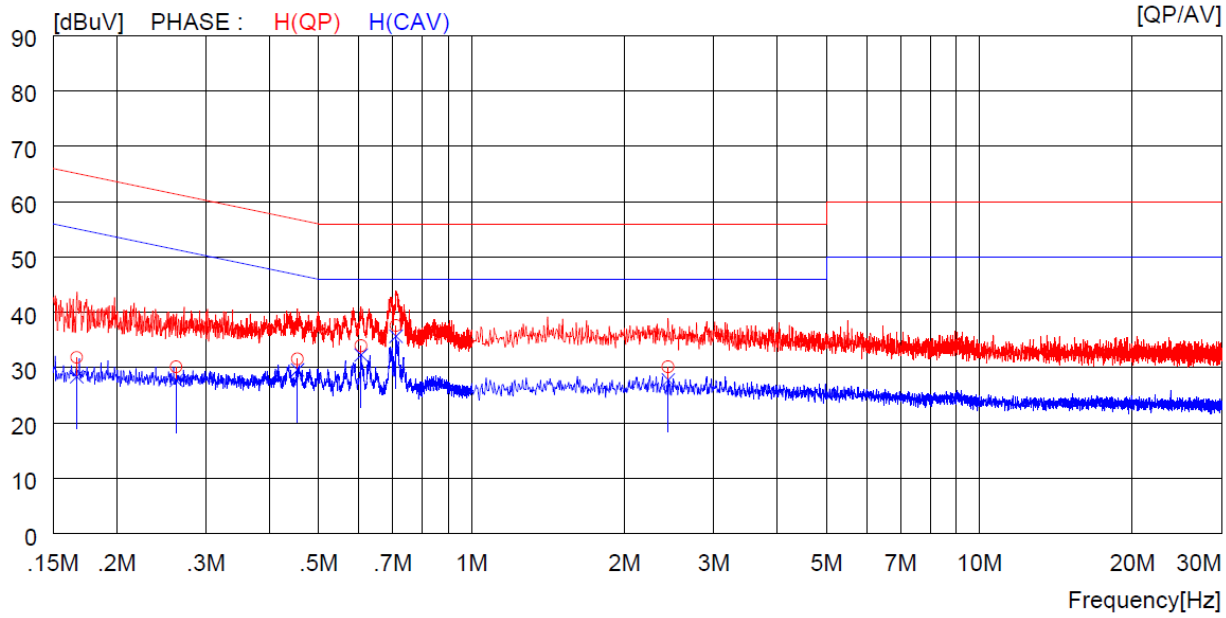
5.1.6 Test Data

Test Mode 1 (Charging)			
Frequency range	: 0.15 MHz ~ 30 MHz	Test Date	: May 25, 2022
Resolution bandwidth	: 9 kHz	Tested Line	: HOT



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.16700	10.4	----	21.5	31.9	----	65.1	----	33.2	----	H(QP)
2	0.26200	8.8	----	21.4	30.2	----	61.4	----	31.2	----	H(QP)
3	0.45400	10.2	----	21.4	31.6	----	56.8	----	25.2	----	H(QP)
4	0.60600	12.6	----	21.4	34.0	----	56.0	----	22.0	----	H(QP)
5	0.71000	16.2	----	21.4	37.6	----	56.0	----	18.4	----	H(QP)
6	2.44000	8.7	----	21.5	30.2	----	56.0	----	25.8	----	H(QP)
7	0.16700	----	6.9	21.5	----	28.4	----	55.1	----	26.7	H(CAV)
8	0.26200	----	6.3	21.4	----	27.7	----	51.4	----	23.7	H(CAV)
9	0.45400	----	8.2	21.4	----	29.6	----	46.8	----	17.2	H(CAV)
10	0.60600	----	10.9	21.4	----	32.3	----	46.0	----	13.7	H(CAV)
11	0.71000	----	14.3	21.4	----	35.7	----	46.0	----	10.3	H(CAV)
12	2.44000	----	6.3	21.5	----	27.8	----	46.0	----	18.2	H(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The result level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

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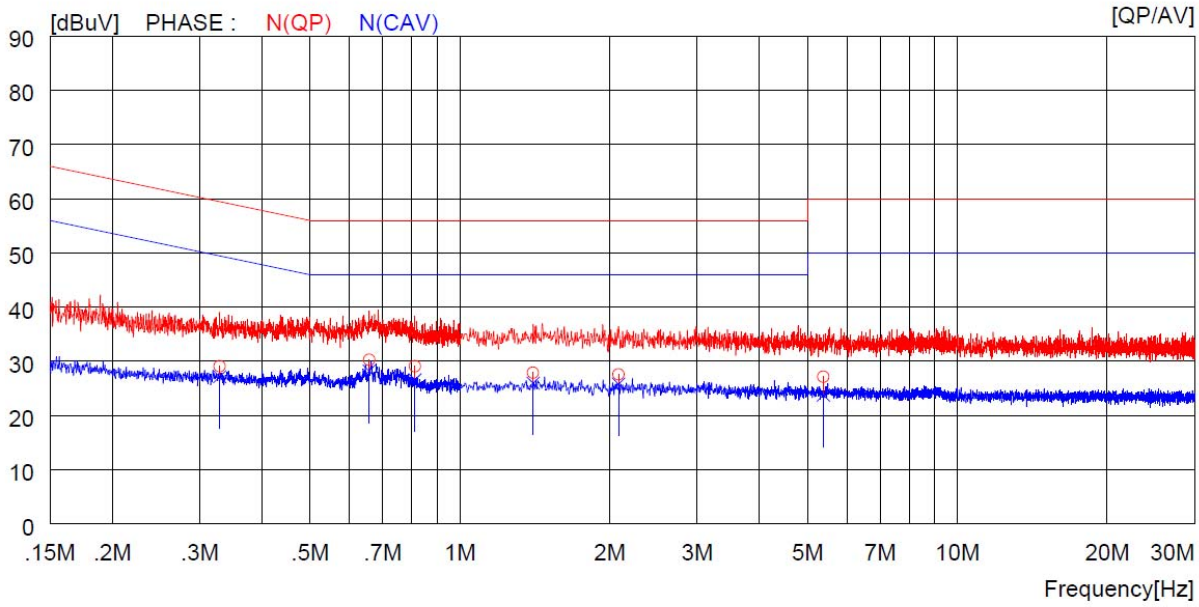
Test Mode 1 (Charging)			
Frequency range	: 0.15 MHz ~ 30 MHz	Test Date	: May 25, 2022
Resolution bandwidth	: 9 kHz	Tested Line	: NEUTRAL



NO	FREQ	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.32900	7.7	----	21.4	29.1	----	59.5	----	30.4	----	N(QP)
2	0.65700	8.9	----	21.4	30.3	----	56.0	----	25.7	----	N(QP)
3	0.81200	7.7	----	21.4	29.1	----	56.0	----	26.9	----	N(QP)
4	1.40400	6.5	----	21.4	27.9	----	56.0	----	28.1	----	N(QP)
5	2.08400	6.1	----	21.5	27.6	----	56.0	----	28.4	----	N(QP)
6	5.37500	5.7	----	21.5	27.2	----	60.0	----	32.8	----	N(QP)
7	0.32900	----	5.8	21.4	----	27.2	----	49.5	----	22.3	N(CAV)
8	0.65700	----	6.8	21.4	----	28.2	----	46.0	----	17.8	N(CAV)
9	0.81200	----	5.2	21.4	----	26.6	----	46.0	----	19.4	N(CAV)
10	1.40400	----	4.6	21.4	----	26.0	----	46.0	----	20.0	N(CAV)
11	2.08400	----	4.3	21.5	----	25.8	----	46.0	----	20.2	N(CAV)
12	5.37500	----	2.3	21.5	----	23.8	----	50.0	----	26.2	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The result level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

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5.2 Radiated Emission Test

5.2.1 Operating Environment

Ambient temperature : (22.0 ~ 22.2) °C
Relative humidity : (44.6 ~ 51.1) % R.H.

5.2.2 Test Setup

The radiated emissions measurements were on the in 10 m semi anechoic chamber. The EUT and all local support equipments were placed on a non-conductive turntable approximately 0.8 m above the ground plane.

The frequency spectrum from 30 MHz to 25 000 MHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

5.2.3 Measurement uncertainty

Radiated emission electric field intensity, 30 MHz ~ 1 000 MHz : ± 4.5 dB
Radiated emission electric field intensity, 1 GHz ~ 25 GHz : ± 6.0 dB

Measurement uncertainty is calculated in accordance with CISPR 16-4-2. The measurement uncertainty is given with a confidence of 95 % with the coverage factor, $k = 2$.

5.2.4 Limit

-. FCC Part 15 Subpart B

Frequency of Emission (MHz)	Resolution bandwidth	Field strength @ 3 m (dBμV/m)	
		Quasi-peak	
30 ~ 88	120 kHz	40.0	
88 ~ 216		43.5	
216 ~ 230		46.0	
230 ~ 960		46.0	
960 ~ 1 000		54.0	
		Peak Limit	CISPR Average Limit
> 1 000	1 MHz	74.0	54.0

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5.2.5 Test Equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	ESW	Rohde & Schwarz	Test Receiver	101851	Mar. 08, 2022 (1Y)
■ -	ESR	Rohde & Schwarz	Test Receiver	102190	Oct. 12, 2021 (1Y)
■ -	310N	Sonoma Instrument	Amplifier	392756	Oct. 14, 2021 (1Y)
■ -	PAM-118A	Com-Power	Amplifier	18040081	Oct. 12, 2021 (1Y)
■ -	PAM-840A	Com-Power	Amplifier	461339	Oct. 18, 2021 (1Y)
■ -	HLP-2008	TDK RF Solutions	Hybrid Antenna	131316	Mar. 07, 2022 (1Y)
■ -	3115	ETS-LINDGREN	Horn Antenna	34823	Aug. 18, 2021 (1Y)
■ -	SAS-574	A.H. System	Horn Antenna	676	Oct. 21, 2021 (1Y)
■ -	CO3000	Innco Systems GmbH	Controller	N/A	N/A
■ -	DT2000-2t	Innco Systems GmbH	Turn Table	N/A	N/A
■ -	DT5000	Innco Systems GmbH	Turn Table	N/A	N/A
■ -	MA4640-XPET	Innco Systems GmbH	Antenna Master	N/A	N/A

All test equipment used is calibrated on a regular basis.

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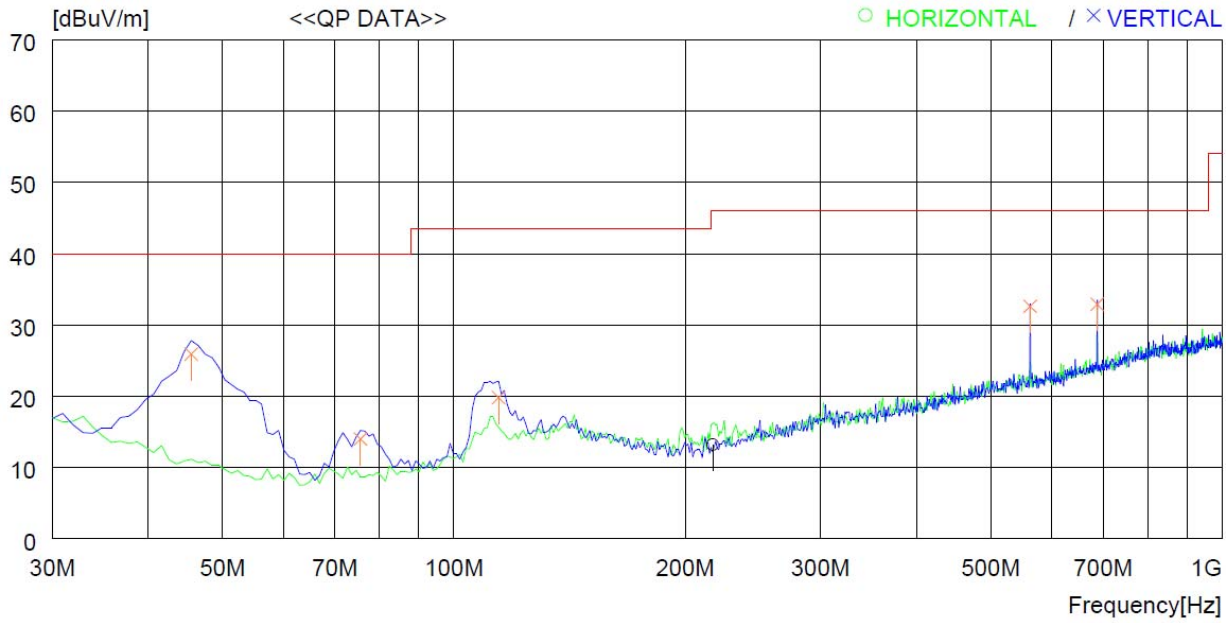
5.2.6 Test Data

Test Mode 1 (Charging)			
Frequency range	: 30 MHz ~ 1 000 MHz	Applied Standards	: FCC Part 15 Subpart B
Resolution bandwidth	: 120 kHz	Test Date	: May 25, 2022
Detector Mode	: Quasi-Peak	Measurement distance	: 3 m



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	217.210	26.6	16.2	2.5	32.1	13.2	46.0	32.8	200	162
----- Vertical ------										
2	45.520	41.9	14.6	1.4	32.0	25.9	40.0	14.1	300	359
3	75.590	31.2	13.2	1.6	32.0	14.0	40.0	26.0	100	86
4	114.390	32.3	17.7	1.9	32.1	19.8	43.5	23.7	200	342
5	562.529	37.2	23.7	4.1	32.4	32.6	46.0	13.4	100	178
6	687.655	35.5	25.2	4.6	32.4	32.9	46.0	13.1	100	334

Remark: Margin (dB) = Limit – Result

Result = Reading Quasi-Peak + Antenna Factor + Loss – Gain

Loss and Gain in above table means Cable Loss and Pre-amplifier gain.

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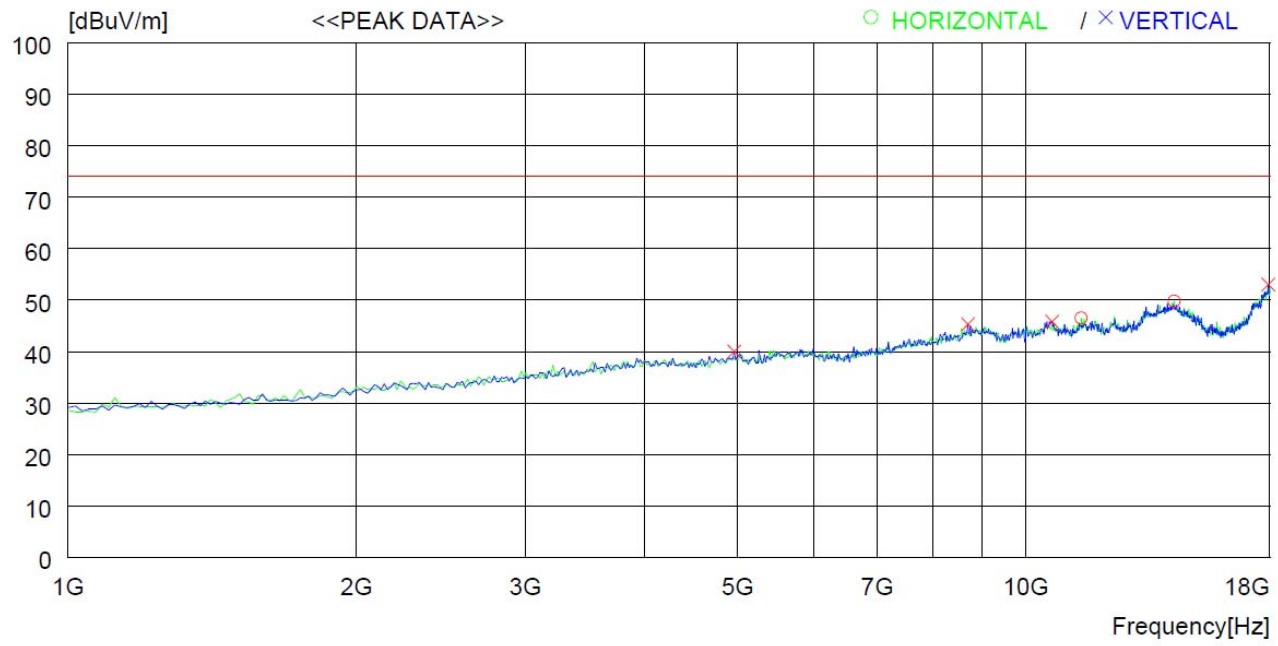
Test Mode 1 (Charging)			
Frequency range	: 1 GHz ~ 18 GHz	Test Date	: May 15, 2022
Resolution bandwidth	: 1 MHz	Measurement distance	: 3 m
Detector Mode	: Peak		



No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	11421.000	42.9	38.5	7.5	42.4	46.5	74.0	27.5	200	359
2	14294.000	41.6	41.7	8.7	42.2	49.8	74.0	24.2	100	359
----- Vertical ------										
3	4961.000	45.1	32.9	4.9	42.9	40.0	74.0	34	100	0
4	8701.000	42.6	38.3	6.6	42.2	45.3	74.0	28.7	100	244
5	10656.000	43.0	37.9	7.3	42.4	45.8	74.0	28.2	300	0
6	17915.000	39.5	46.9	9.9	43.3	53.0	74.0	21	100	359

Remark: Margin (dB) = Limit – Result

Result = Reading Peak + Antenna Factor + Loss – Gain

Loss and Gain in above table means Cable Loss and Pre-amplifier gain.

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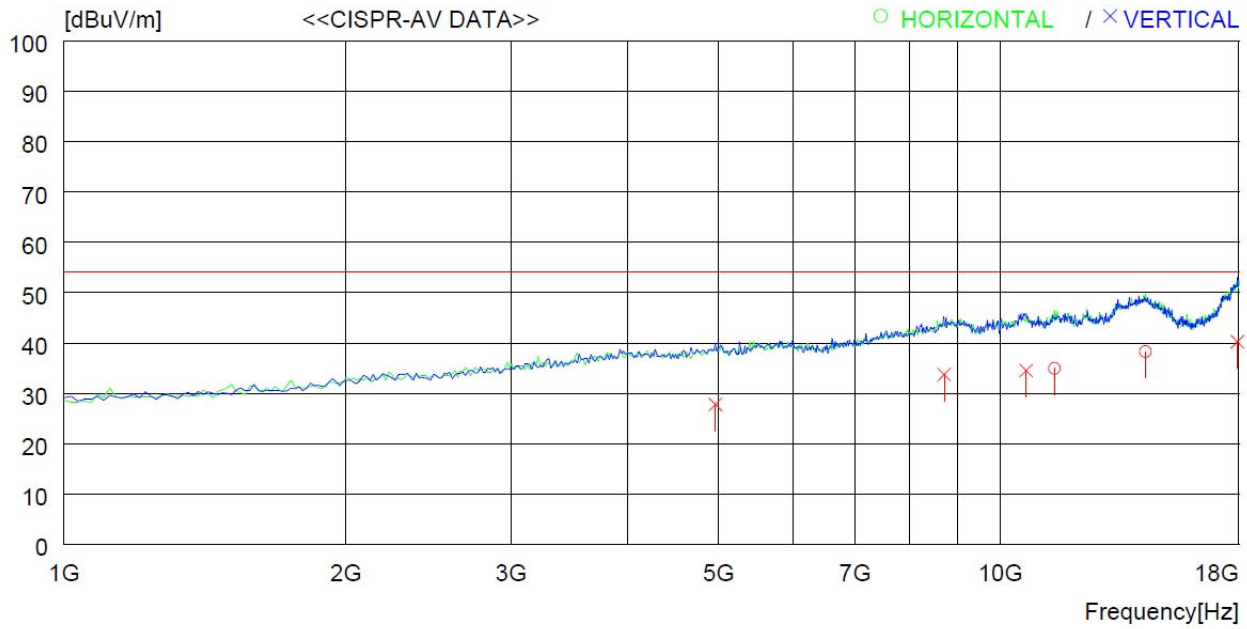
Test Mode 1 (Charging)			
Frequency range	: 1 GHz ~ 18 GHz	Test Date	: May 15, 2022
Resolution bandwidth	: 1 MHz	Measurement distance	: 3 m
Detector Mode	: CISPR-Average		



No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	11421.710	31.3	38.5	7.5	42.4	34.9	54.0	19.1	200	359
2	14288.460	30.1	41.7	8.7	42.2	38.3	54.0	15.7	100	359
----- Vertical ------										
3	4962.847	32.9	32.9	4.9	42.9	27.8	54.0	26.2	100	0
4	8713.422	31.0	38.3	6.6	42.2	33.7	54.0	20.3	100	244
5	10658.560	31.7	37.9	7.3	42.4	34.5	54.0	19.5	300	0
6	17915.240	26.7	46.9	9.9	43.3	40.2	54.0	13.8	100	359

Remark: Margin (dB) = Limit – Result

Result = Reading CISPR-Average + Antenna Factor + Loss – Gain

Loss and Gain in above table means Cable Loss and Pre-amplifier gain.

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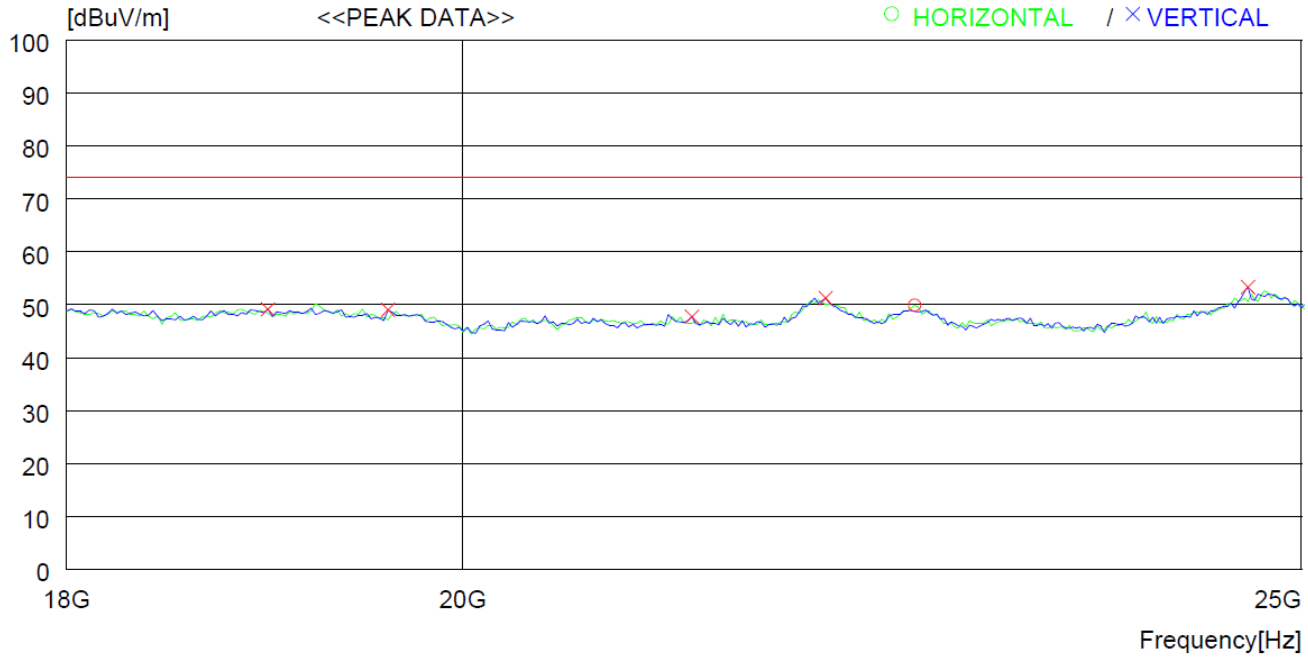
Test Mode 1 (Charging)			
Frequency range	: 18 GHz ~ 25 GHz	Test Date	: May 15, 2022
Resolution bandwidth	: 1 MHz	Measurement distance	: 3 m
Detector Mode	: Peak		



No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA TABLE [cm]	[DEG]
----- Horizontal ------										
1	22554.000	41.5	40.1	11.2	42.9	49.9	74.0	24.1	100	359
----- Vertical ------										
2	18990.000	40.4	40.0	10.0	41.3	49.1	74.0	24.9	100	3
3	19606.000	40.6	40.1	10.1	41.8	49.0	74.0	25	100	0
4	21256.000	39.6	40.1	10.6	42.6	47.7	74.0	26.3	200	0
5	22026.000	42.8	40.1	11.0	42.7	51.2	74.0	22.8	100	0
6	24644.000	44.4	40.1	11.5	42.7	53.3	74.0	20.7	200	0

Remark: Margin (dB) = Limit – Result

Result = Reading Peak + Antenna Factor + Loss – Gain

Loss and Gain in above table means Cable Loss and Pre-amplifier gain.

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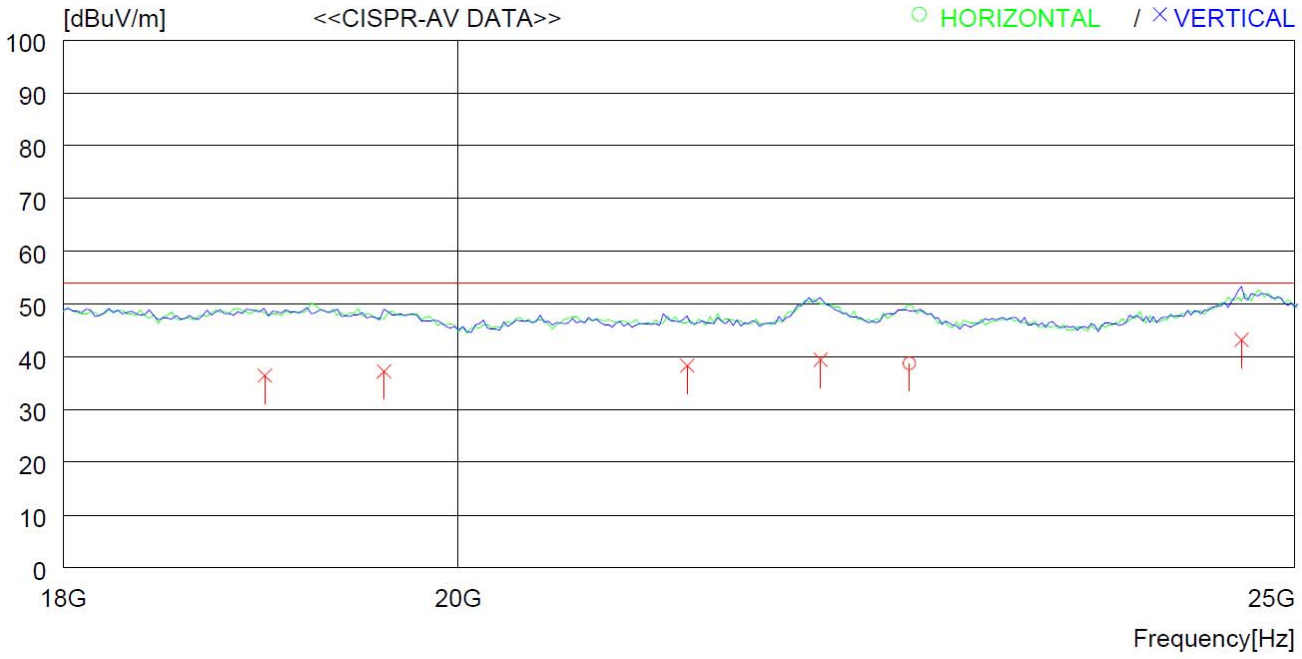
Test Mode 1 (Charging)			
Frequency range	: 18 GHz ~ 25 GHz	Test Date	: May 15, 2022
Resolution bandwidth	: 1 MHz	Measurement distance	: 3 m
Detector Mode	: CISPR-Average		



No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	22555.470	30.3	40.1	11.2	42.9	38.7	54.0	15.3	100	359
----- Vertical ------										
2	18994.010	27.7	40.0	10.0	41.3	36.4	54.0	17.6	100	3
3	19607.660	28.8	40.1	10.1	41.8	37.2	54.0	16.8	100	0
4	21258.080	30.2	40.1	10.6	42.6	38.3	54.0	15.7	100	0
5	22028.110	31.1	40.1	11.0	42.8	39.4	54.0	14.6	100	0
6	24644.520	34.3	40.1	11.5	42.7	43.2	54.0	10.8	100	0

Remark: Margin (dB) = Limit – Result

Result = Reading CISPR-Average + Antenna Factor + Loss – Gain

Loss and Gain in above table means Cable Loss and Pre-amplifier gain.

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6. SAMPLE CALCULATIONS

$dB\mu V = 20 \log_{10} (\mu V)$

Margin = Limit - Result

-. Example 1: 0.71000 MHz

Class B Limit	= 46.0 dBμV (CISPR-Average)
Reading	= 14.3 dBμ
Correction Factor	= Cable Loss + Pulse Limiter
	= 21.4 dB
Total	= 35.7 dBμV
Margin	= 46.0 dBμV – 35.7 dBμV
	= 10.3 dB

-. Example 2: 687.655 MHz

Class B Limit	= 46.0 dBμV/m (CISPR-Average)
Reading	= 35.5 dBμV
Correction Factor	= Antenna Factor (25.2 dB/m) + Cable Loss (4.6 dB) - Amp. Gain (32.4 dB)
	= -2.6 dB
Total	= 32.9 dBμV/m
Margin	= 46.0 dBμV/m – 32.9 dBμV/m
	= 13.1 dB

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APPENDIX A

[TEST SET UP PHOTOGRAPHS]

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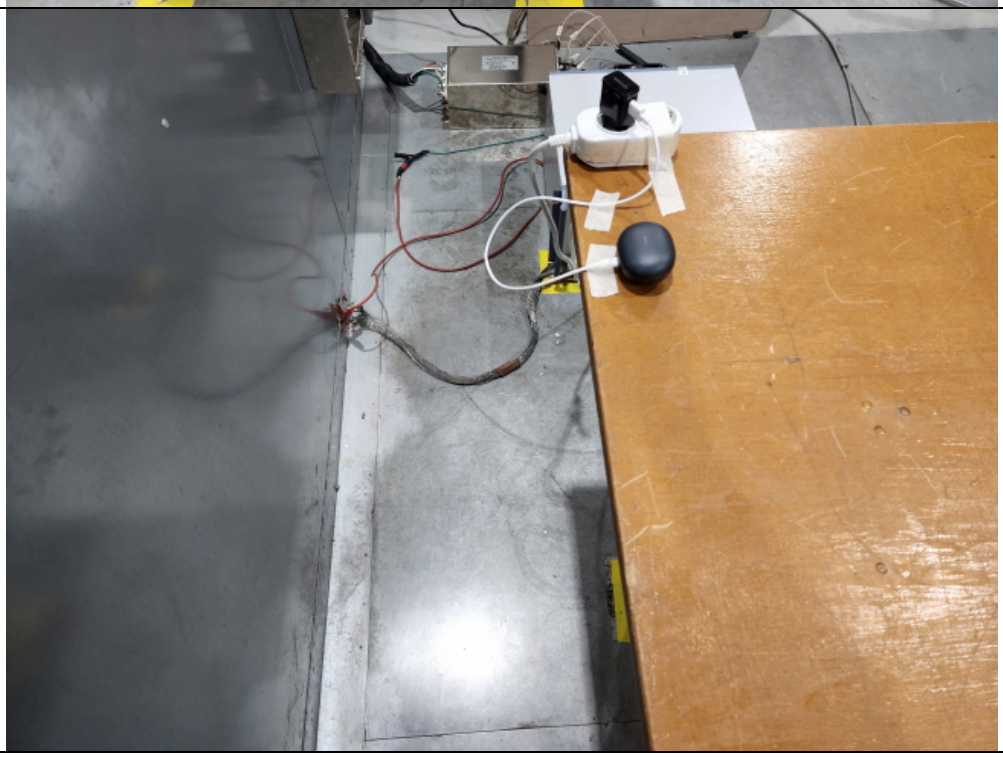
Conducted Emission Test Set Up



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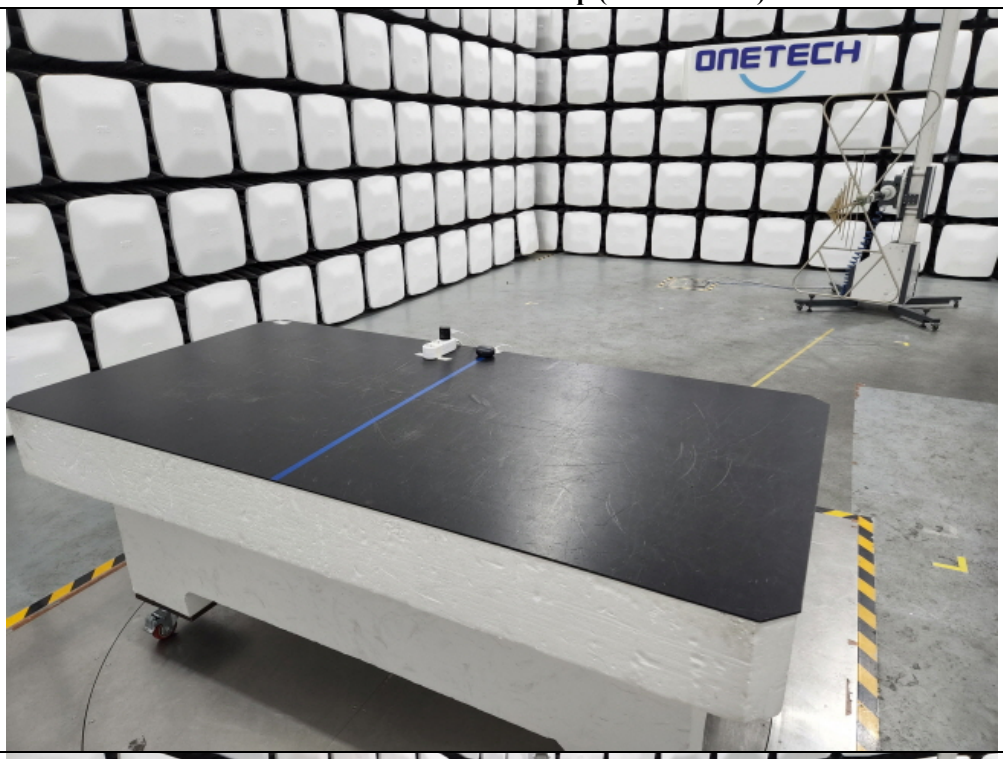
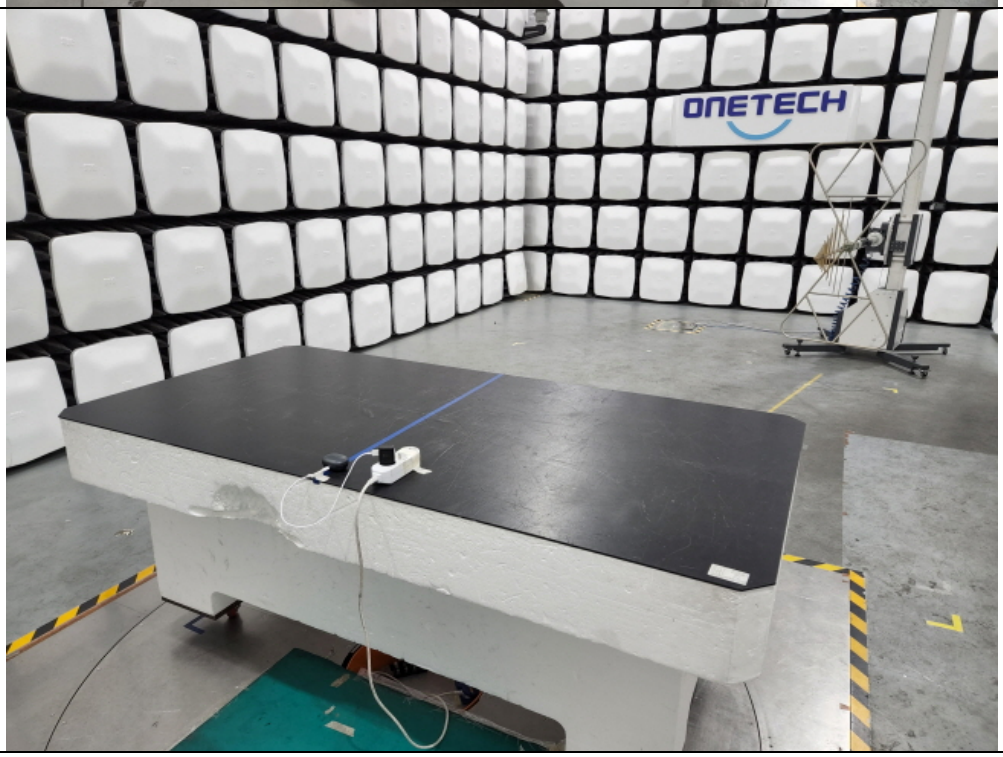
Radiated Emission Test Set Up (Below 1 GHz)





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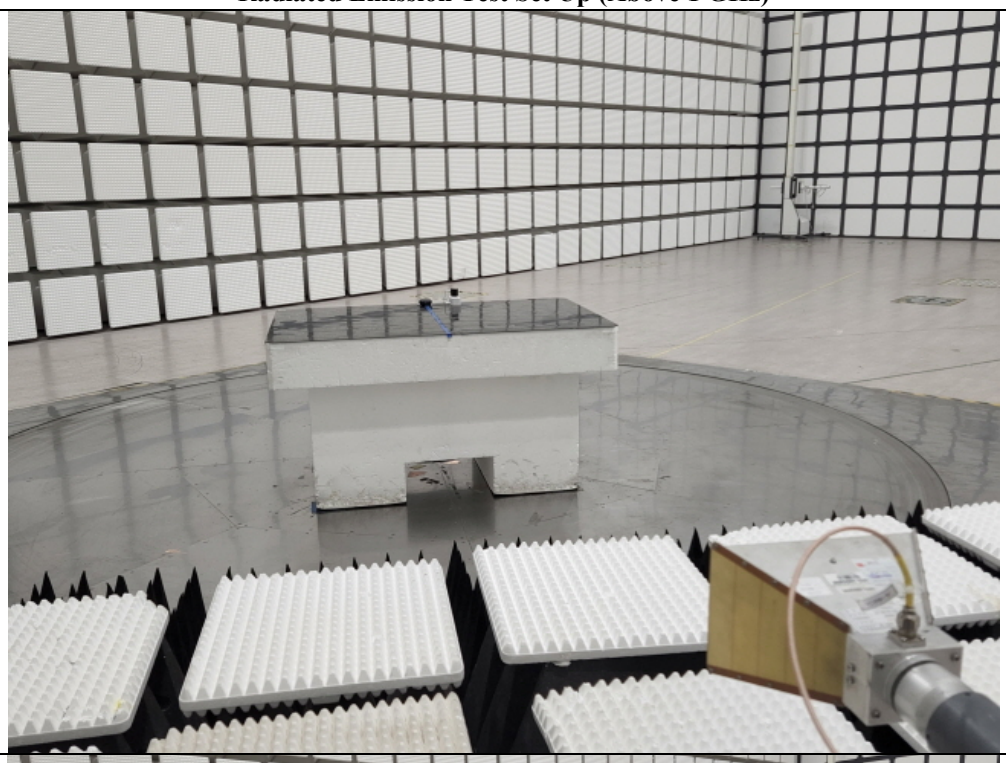
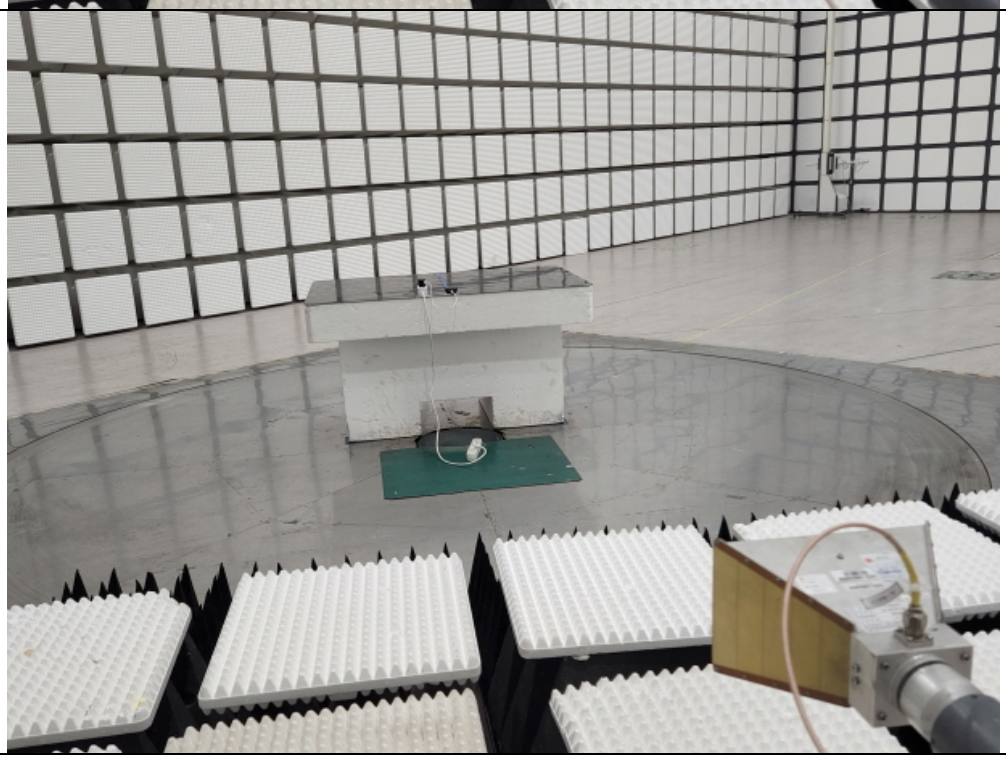
Radiated Emission Test Set Up (Above 1 GHz)





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