



RADIO TEST REPORT

Applicant	:	KREAFUNK APS
Address of Applicant	:	Klamsagervej 35 A, st.8230, Abyhoj 8000, Denmark
Manufacturer	:	ShenZhen Vigor Acoustic Technology Co.,Ltd
Address of Manufacturer	:	Room 301, Building C1, Yanchuan Northern Industrial Park, Yanluo Street, Baoan District, Shenzhen, P.R.China
Equipment under Test	:	Bluetooth speaker
Model No.	:	aCOUSTIC Ensemble
FCC ID	:	2ACVC-ACOUSTICENSEM
Test Standard(s)	:	47 CFR Part 15 Subpart C, ANSI C63.10-2020
Report No.	:	DDT-RE25073024-26E03
Issue Date	:	2026/01/29
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

Table of Contents

1.	Summary of Test Results	6
2.	General Test Information.....	7
2.1.	Description of EUT	7
2.2.	Accessories of EUT	7
2.3.	Block diagram of EUT configuration for test.....	7
2.4.	Decision of final test mode	8
2.5.	Deviations of test standard	8
2.6.	Test environment conditions	8
2.7.	Test laboratory	8
2.8.	Measurement uncertainty	9
3.	Equipment Used During Conductive Test	10
4.	20 dB Bandwidth & 99% Bandwidth.....	11
4.1.	Block diagram of test setup	11
4.2.	Limits	11
4.3.	Test procedure	11
4.4.	Test result.....	12
4.5.	Test graphs	13
5.	Frequency Tolerance	14
5.1.	Block diagram of test setup	14
5.2.	Limit.....	14
5.3.	Test procedure	14
5.4.	Test result.....	15
6.	Antenna Requirements.....	16
6.1.	Limit.....	16
6.2.	Result	16
7.	Radiated Emission	17
7.1.	Test equipment.....	17
7.2.	Block diagram of test setup	18
7.3.	Limits	18
7.4.	Assistant equipment used for test	20
7.5.	Test procedure	20
7.6.	Test result.....	21
7.7.	Test data	22
8.	Power Line Conducted Emissions.....	27
8.1.	Test equipment.....	27
8.2.	Block diagram of test setup	27

8.3. Limits27

8.4. Assistant equipment used for test27

8.5. Test procedure27

8.6. Test result.....28

8.7. Test data29

9. Antenna Requirement31

9.1. Assessment procedure.....31

9.2. Assess result31

10. Test Setup Photograph32

11. Photos of the EUT34

Test Report Declare

Applicant	:	KREAFUNK APS
Address of Applicant	:	Klamsagervej 35 A, st.8230, Abyhoj 8000, Denmark
Equipment under Test	:	Bluetooth speaker
Model No.	:	aCOUSTIC Ensemble
Manufacturer	:	ShenZhen Vigor Acoustic Technology Co.,Ltd
Address of Manufacturer	:	Room 301, Building C1, Yanchuan Northern Industrial Park, Yanluo Street, Baoan District, Shenzhen, P.R.China

Test Standard Used:
47 CFR Part 15 Subpart C
ANSI C63.10-2020

We Declare:
The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE25073024-26E03		
Date of Receipt:	2025/08/13	Date of Test:	2025/08/13 - 2026/01/29

Created: Chen Ziqin	Reviewed: Zoe Peng	Approved: Damon Hu
		
2025/10/26	2026/01/29	2026/01/29

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Version	Revision Content	Issue Date	Approved
V0	Initial issue	2026/01/29	Damon Hu

1. Summary of Test Results

No.	Test Parameter	Clause No.	Condition	Result
1	20dB Bandwidth and 99% Bandwidth	47 CFR Part 15 15.215	/	Pass
2	Frequency Stability	FCC Part 15:15.225	/	Pass
3	Radiated Emission	47 CFR Part 15 15.209, 47 CFR Part 15 15.225	/	Pass
4	Power Line Conducted Emissions	47 CFR Part 15 15.207	/	N/A
5	Antenna Requirement	47 CFR Part 15 15.203	/	Pass
Note: N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.				

2. General Test Information

2.1. Description of EUT

EUT Name	:	Bluetooth speaker
Model Number	:	aCOUSTIC Ensemble
Difference of model number	:	/
EUT Function Description	:	Please reference user manual of this device
Power Supply	:	DC 5V powered by an external adapter or a built-in 3.7V lithium battery
Hardware Version	:	V229
Software Version	:	JLC_aCOUSTIC 2_AMP_V1.0 2025.04.25.pcb JLC_aCOUSTIC 2_KEY_V1.0 2025.04.25.pcb
Antenna Type	:	inductive loop coil antenna

Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

“☒” means to be chosen or applicable; “☐” means don't to be chosen or not applicable; This note applies to entire report.

2.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
/	/	/	/

2.3. Block diagram of EUT configuration for test



2.4. Decision of final test mode

According pre-test, the worst test modes were reported as below:

Tested mode, channel, information		
Mode	Channel	Frequency (MHz)
TX	/	13.56

2.5. Deviations of test standard

No deviation.

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25 °C
Humidity range:	40-75%
Pressure range:	86 kPa to106 kPa

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

2.7. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

2.8. Measurement uncertainty

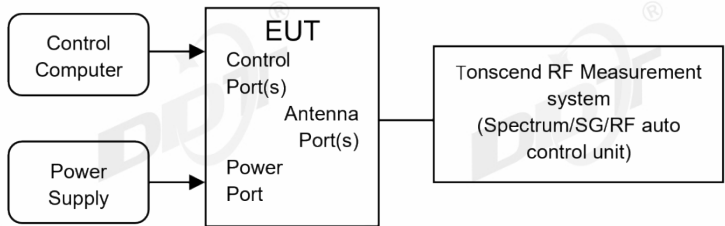
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Frequencies Stability	6.7×10^{-8} (Antenna couple method) 5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.40 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$) 1.66 dB ($8 \text{ GHz} \leq f < 26.5 \text{ GHz}$)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 °C
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V) 4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.10 dB (1 - 6 GHz) 4.40 dB (6 GHz - 18 GHz) 3.54 dB (18 GHz - 26 GHz) 4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.34dB (150KHz-30MHz) 3.72dB (9KHz-150KHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment Used During Conductive Test

Equipment	Manufacturer	Model No.	Serial Number	Due Date
☒ RF Connected Test (RF Measurement System 2#)				
SPECTRUM ANALYZER	R&S	FSU26	201124	2026/07/06
Power Sensor	R&S	NRP-Z22	101254	2026/07/06
Test Software	Tonscend	JS1120-3	Ver.3.2.22	N/A

4. 20 dB Bandwidth & 99% Bandwidth

4.1. Block diagram of test setup



4.2. Limits

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.

4.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.
- (2) Set the spectrum analyzer as follows:

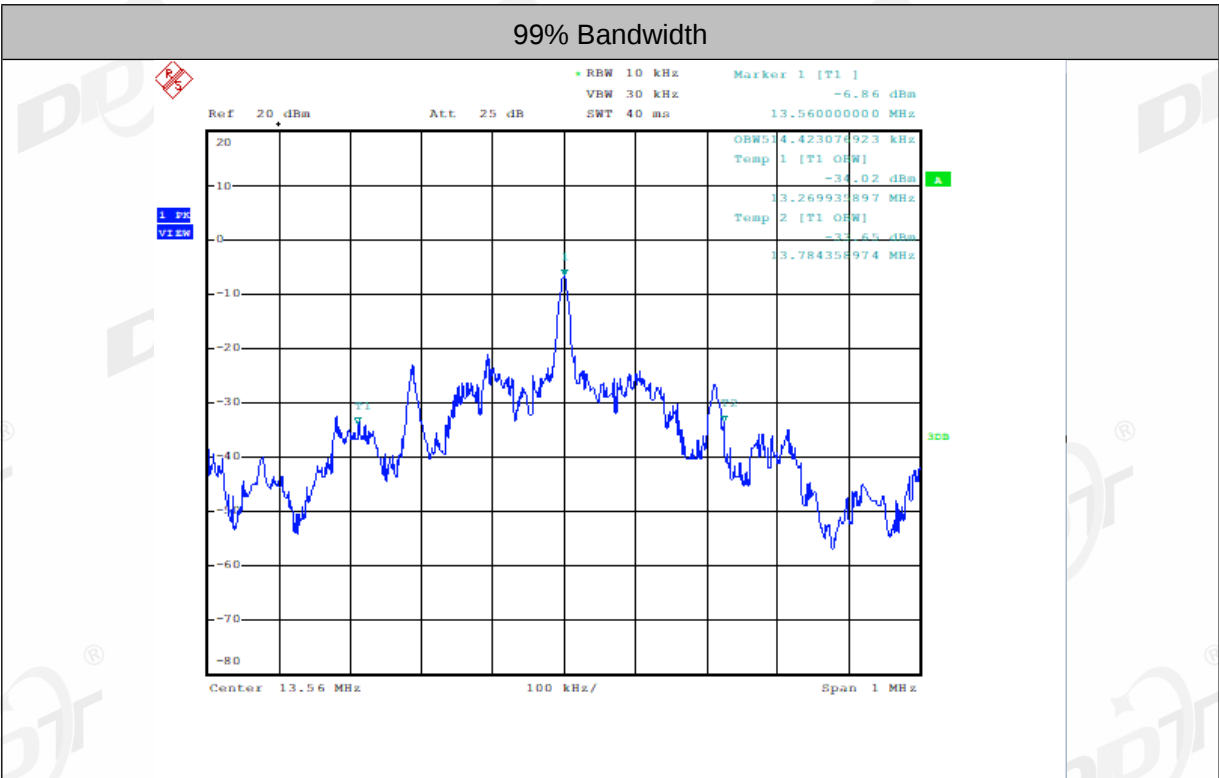
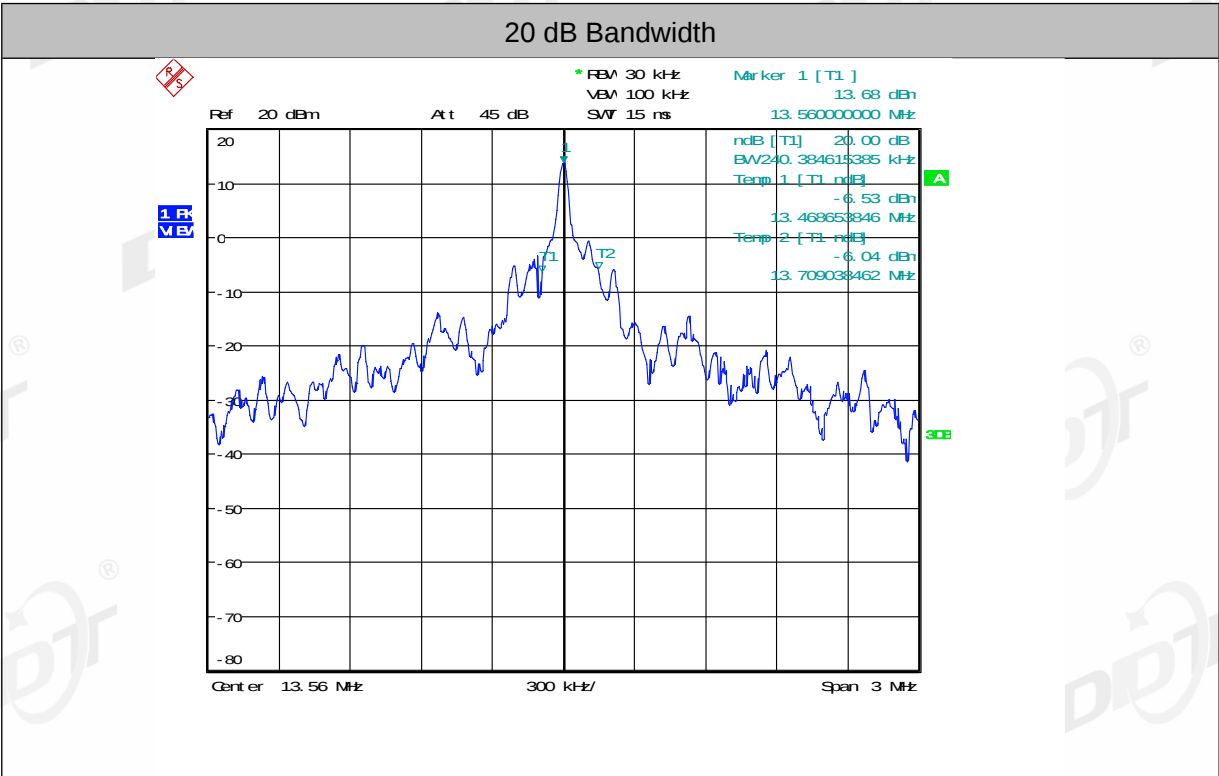
RBW:	1% to 5% of the OBW
VBW:	approximately three times RBW
Span:	between 2 times and 5 times the OBW
Detector Mode:	Peak
Sweep time:	Auto
Trace mode:	Max hold
- (3) Allow the trace to stabilize, measure the 20 dB bandwidth of signal.
- (4) Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

4.4. Test result

Test Engineer:	Zhongyao Zeng	Test Site:	RF Measurement System 2#
Ambient Condition:	23.8℃,41.5%RH	Test Date:	2025.08.13-2026.01.29
Test Power Supply:	Battery	Sample Number:	S25073024-006

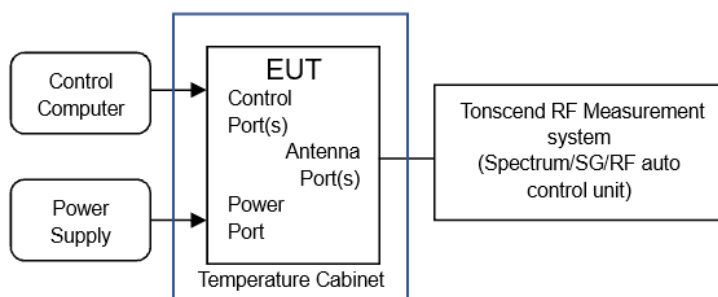
Mode	Frequency (MHz)	20 dB bandwidth Result (kHz)	99% bandwidth Result (kHz)	Verdict
ASK	13.56	240.385	512.423	Pass

4.5. Test graphs



5. Frequency Tolerance

5.1. Block diagram of test setup



5.2. Limit

As contained in § 15.225 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.

5.3. Test procedure

(1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:

Centre Frequency: The centre frequency of the channel under test.

Resolution BW: 10 kHz.

Video BW: 10 kHz.

Span: 1 MHz.

Detector: Peak.

Trace Mode: Max Hold.

(2) When the trace is complete, find the peak value of the power envelope and record the frequency.

5.4. Test result

Test Engineer:	Chen Haofeng	Test Site:	RF Measurement System 1#
Ambient Condition:	23.5 °C, 55%RH	Test Date:	2025/4/9 - 2025/4/10
Test Power Supply:	Battery	Sample Number:	S250XXXXX-00X

Mode	Condition		Result			Limit
	Temperature [°C]	Voltage [V]	Measured [MHz]	Tolerance [kHz]	Tolerance [ppm]	ppm
Carrier Tx Mode	NT	NV	13.560	0	0	±100
	-20	NV	13.560	0	0	±100
	-10	NV	13.560	0	0	±100
	0	NV	13.560	0	0	±100
	10	NV	13.560	0	0	±100
	30	NV	13.560	0	0	±100
	40	NV	13.560	0	0	±100
	NT	AC 102V	13.560	0	0	±100
	NT	AC 138V	13.560	0	0	±100
Note: NT: 20 °C, NV: AC 120V/60Hz						

Mode	Condition		Result			Limit
	Temperature [°C]	Voltage [V]	Measured [MHz]	Tolerance [kHz]	Tolerance [ppm]	ppm
Carrier Tx Mode	NT	NV	13.560	0	0	±100
	-20	NV	13.560	0	0	±100
	-10	NV	13.560	0	0	±100
	0	NV	13.560	0	0	±100
	10	NV	13.560	0	0	±100
	30	NV	13.560	0	0	±100
	40	NV	13.560	0	0	±100
	NT	AC 204V	13.560	0	0	±100
	NT	AC 276V	13.560	0	0	±100
Note: NT: 20 °C, NV: AC 240V/50Hz						

6. Antenna Requirements

6.1. Limit

For intentional device, according to FCC 47 CFR Section 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.

6.2. Result

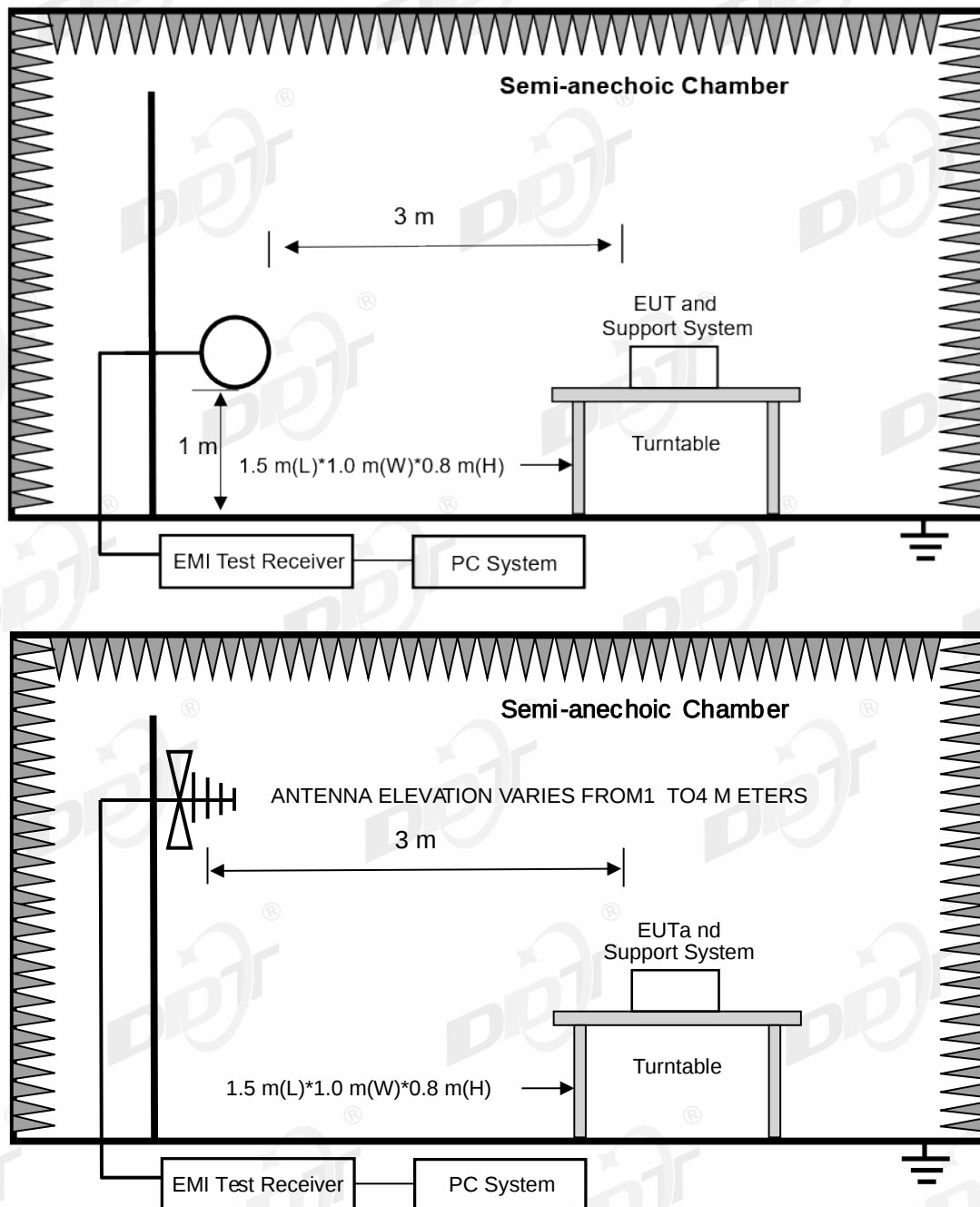
The antenna used for this product as Antenna information described in section 2.1 of the report, and there is no other antenna than that furnished by the responsible party shall be used with the device.

7. Radiated Emission

7.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2026/03/28
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2026/03/28
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	/
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2026/03/28
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2026/03/28
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2026/03/28
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2026/08/10
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2026/03/28
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2026/03/28
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2026/03/28
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2026/03/28
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2026/04/01
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2026/07/25
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2026/08/11
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2026/08/18
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2026/03/28

7.2. Block diagram of test setup



7.3. Limits

Operation within the band 13.110-14.010 MHz as contained in §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 band shall not exceed the general radiated emission limits in §15.209.

FREQUENCY (MHz)	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		($\mu\text{V}/\text{m}$)	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	$2400/\text{F}(\text{KHz})$	$67.6-20\log(\text{F})$
0.490 ~ 1.705	30	$24000/\text{F}(\text{KHz})$	$87.6-20\log(\text{F})$
1.705 ~ 13.110	30	30	29.54
13.110 ~ 13.410	30	106	40.51
13.410 ~ 13.553	30	334	50.47
13.553 ~ 13.567	30	15848	84.00
13.567 ~ 13.710	30	334	50.47
13.710 ~ 14.010	30	106	40.51
14.010 ~ 30	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR QP 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.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3\text{m}}(\text{dB}\mu\text{V}/\text{m}) = \text{Limit}_{300\text{m}}(\text{dB}\mu\text{V}/\text{m}) + 40\log(300\text{m}/3\text{m}) = \text{Limit}_{300\text{m}}(\text{dB}\mu\text{V}/\text{m}) + 80$$

$$\text{Limit}_{3\text{m}}(\text{dB}\mu\text{V}/\text{m}) = \text{Limit}_{30\text{m}}(\text{dB}\mu\text{V}/\text{m}) + 40\log(30\text{m}/3\text{m}) = \text{Limit}_{30\text{m}}(\text{dB}\mu\text{V}/\text{m}) + 40$$

FREQUENCY (MHz)	DISTANCE Meters	FIELD STRENGTHS LIMIT $\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	3	$147.6-20\log(\text{F})$
0.490 ~ 1.705	3	$127.6-20\log(\text{F})$
1.705 ~ 13.110	3	69.54
13.110 ~ 13.410	3	80.51
13.410 ~ 13.553	3	90.47
13.553 ~ 13.567	3	124.00
13.567 ~ 13.710	3	90.47
13.710 ~ 14.010	3	80.51
14.010 ~ 30	3	69.54
30 ~ 88	3	40.00
88 ~ 216	3	43.50

216 ~960	3	46.00
960 ~ 1000	3	54.00

7.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

7.5. Test procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.

(2) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9 kHz - 30 MHz	Active Loop antenna	3 m
30 MHz - 1 GHz	Trilog Broadband Antenna	3 m

According ANSI C63.10-2020+Cor.1-2023+C63.10a-2024, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also is positioned with its plane horizontal at the specified distance from the EUT. The lowest height of the loop is 1 m above the ground. For measurement above 30 MHz, the Trilog Broadband Antenna or Horn Antenna was located 3 m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 1 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions. Spectrum frequency from 9 kHz to 1 GHz (tenth harmonic of fundamental frequency) was investigated.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10-2020+Cor.1-2023+C63.10a-2024 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the

frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz - 90 kHz, 110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW.

Frequency band	RBW
9 kHz - 150 kHz	200 Hz
150 kHz - 30 MHz	9 kHz
30 MHz - 1 GHz	120 kHz

(7) X axis, Y axis, Z axis are tested, and worse setup X axis is reported

7.6. Test result

PASS. (See below detailed test result)

7.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-10

Tested By:

Lin Guoyuan

EUT:

Bluetooth speaker

Model Number:

aCOUSTIC Ensemble

Test Mode:

TX NFC Mode

Power Supply:

Battery

Condition:

Temp:23.6°C;Humi:59.4%

Test Site:

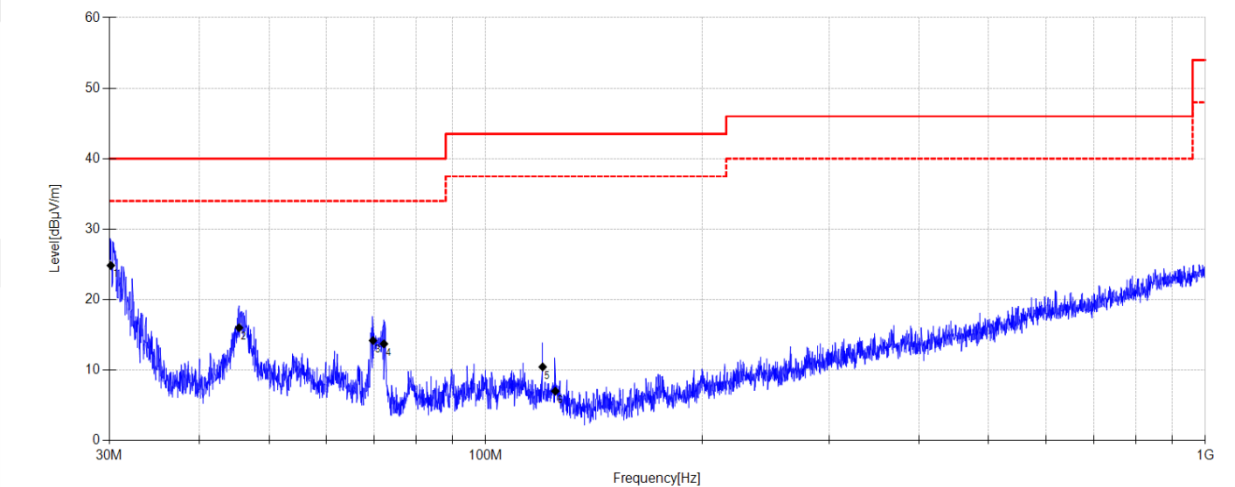
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25073024-26E\FCC BELOW1G NFC\3

Memo:

Sample Numbler:S25073024



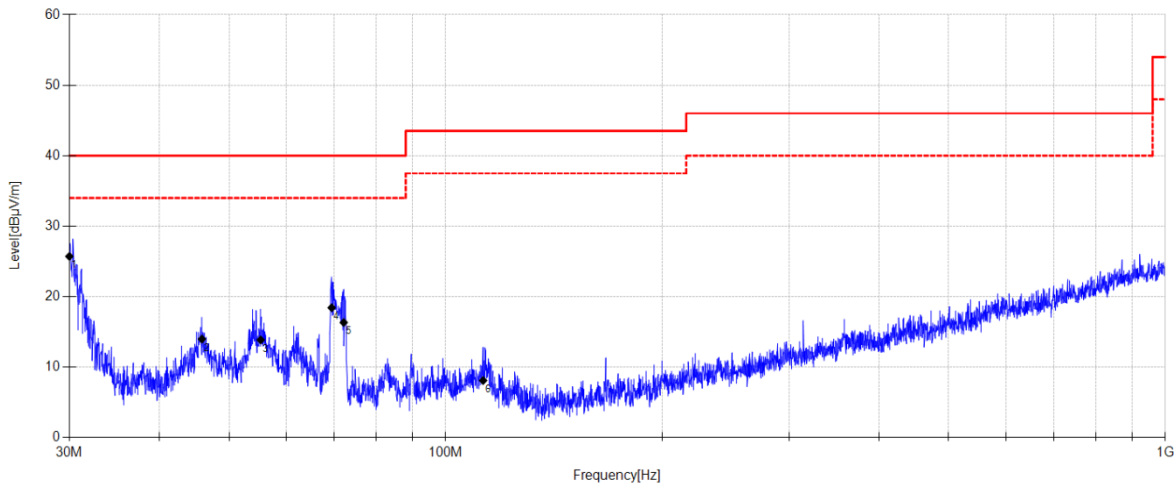
Final Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	30.148	42.95	10.47	3.72	24.84	40.00	15.16	QP	Horizontal
2	45.435	31.24	13.23	3.84	16.01	40.00	23.99	QP	Horizontal
3	69.735	32.57	9.91	4.01	14.19	40.00	25.81	QP	Horizontal
4	72.223	32.57	9.43	4.02	13.72	40.00	26.28	QP	Horizontal
5	119.991	28.82	9.70	4.25	10.45	43.50	33.05	QP	Horizontal
6	124.971	25.87	9.20	4.26	7.01	43.50	36.49	QP	Horizontal

Note:

- Result Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-10-10 Tested By: Lin Guoyuan
EUT: Bluetooth speaker Model Number: aCOUSTIC Ensemble
Test Mode: TX NFC Mode Power Supply: Battery
Condition: Temp:23.6°C;Humi:59.4% Test Site: DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25073024-26E\FCC BELOW1G NFC\4
Memo: Sample Numbre:S25073024

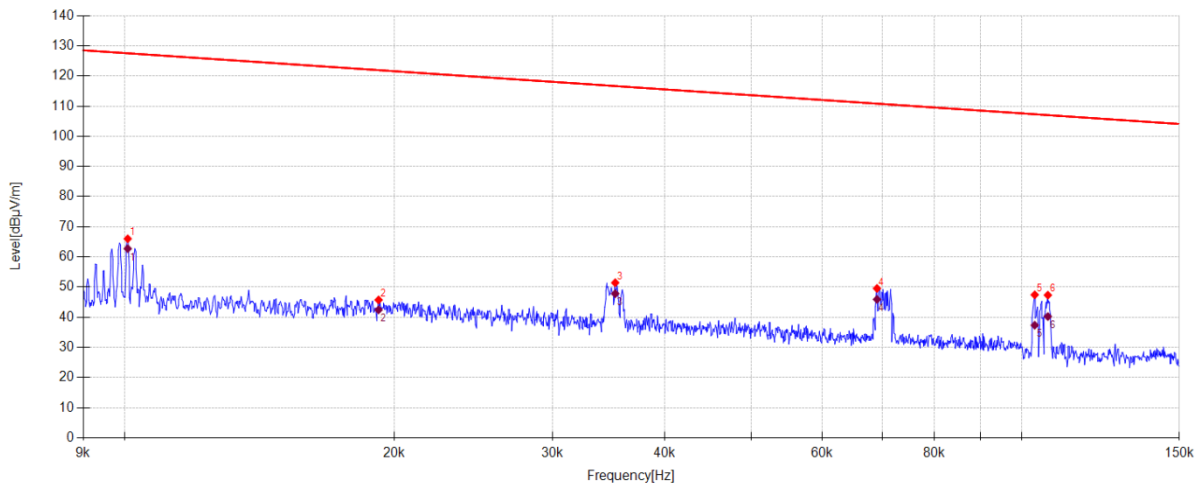


Final Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	30.000	43.79	10.50	3.72	25.71	40.00	14.29	QP	Vertical
2	45.851	29.37	13.06	3.85	13.98	40.00	26.02	QP	Vertical
3	55.330	29.44	12.80	3.92	13.86	40.00	26.14	QP	Vertical
4	69.443	36.57	10.15	4.01	18.43	40.00	21.57	QP	Vertical
5	72.173	35.16	9.45	4.02	16.33	40.00	23.67	QP	Vertical
6	112.732	24.69	11.49	4.23	8.10	43.50	35.40	QP	Vertical

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-09-11
Tested By: Nan Zhong
EUT: Bluetooth speaker
Model Number: aCOUSTIC Ensemble
Test Mode: TX NFC Mode
Power Supply: Battery
Condition: Temp:23.6°C;Humi:59.4%
Test Site: DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25073024-26E\FCC BELOW1G NFC\20250911-065333_V
Memo: Sample Numbel:S25073024



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.010	75.13	20.21	3.17	-32.50	66.01	127.52	61.51	PK	Coaxial
2	0.019	54.80	20.25	3.18	-32.51	45.72	121.93	76.21	PK	Coaxial
3	0.035	60.50	20.27	3.18	-32.53	51.42	116.65	65.23	PK	Coaxial
4	0.069	58.81	20.10	3.19	-32.57	49.53	110.82	61.29	PK	Coaxial
5	0.103	56.47	20.37	3.18	-32.60	47.42	107.30	59.88	PK	Coaxial
6	0.107	56.33	20.39	3.19	-32.60	47.31	107.01	59.70	PK	Coaxial

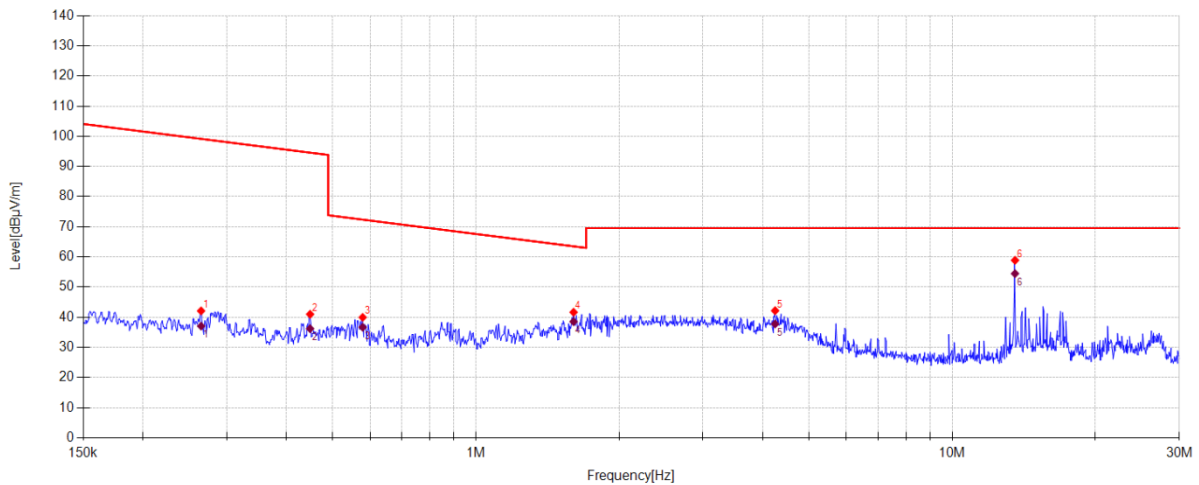
Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.010	71.84	20.21	3.17	62.72	127.51	64.79	AV	Coaxial
2	0.019	51.51	20.25	3.18	42.43	121.93	79.50	AV	Coaxial
3	0.035	56.88	20.27	3.18	47.80	116.64	68.84	AV	Coaxial
4	0.069	55.19	20.10	3.19	45.91	110.82	64.91	AV	Coaxial
5	0.103	46.38	20.37	3.18	37.33	107.30	69.97	QP	Coaxial
6	0.107	49.23	20.39	3.19	40.21	107.01	66.80	QP	Coaxial

Note:

- Level = Reading + Cable Loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.
- Measured at antenna position coaxial and coplanar, only record the worst case of Coaxial.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-09-11
Tested By: Nan Zhong
EUT: Bluetooth speaker
Model Number: aCOUSTIC Ensemble
Test Mode: TX NFC Mode
Power Supply: Battery
Condition: Temp:23.6°C;Humi:59.4%
Test Site: DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25073024-26E\FCC BELOW1G NFC\20250911-065600_V
Memo: Sample Numbel:S25073024



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.265	51.22	20.27	3.19	-32.60	42.08	99.14	57.06	PK	Coaxial
2	0.449	50.17	20.21	3.20	-32.60	40.98	94.56	53.58	PK	Coaxial
3	0.579	49.12	20.22	3.20	-32.60	39.94	72.35	32.41	PK	Coaxial
4	1.604	50.76	20.24	3.22	-32.58	41.64	63.50	21.86	PK	Coaxial
5	4.251	51.16	20.23	3.26	-32.49	42.16	69.54	27.38	PK	Coaxial
6	13.556	67.80	19.93	3.43	-32.30	58.86	69.54	10.68	PK	Coaxial

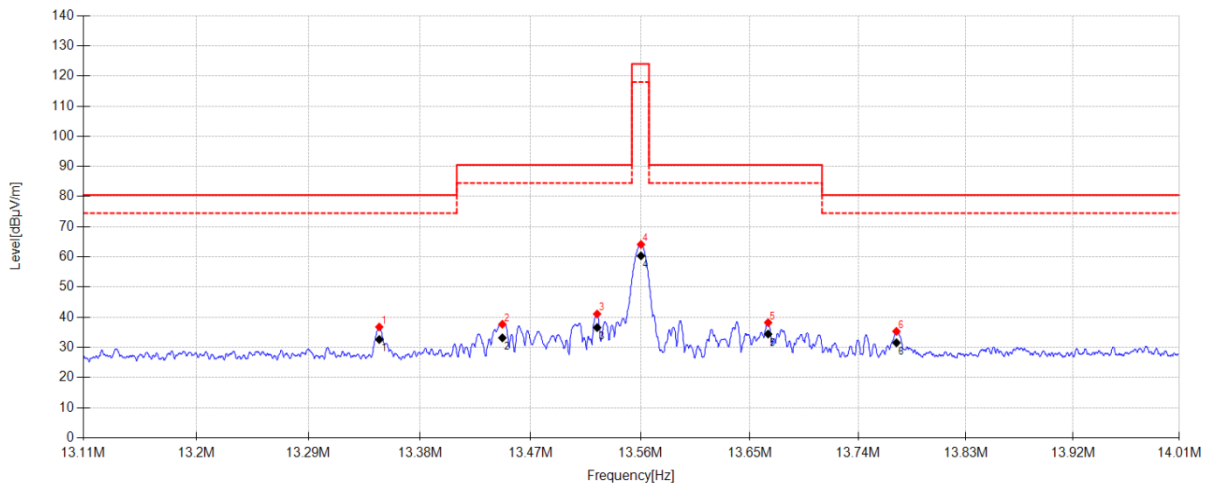
Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.265	46.17	20.27	3.19	37.03	99.13	62.10	AV	Coaxial
2	0.449	45.37	20.21	3.20	36.18	94.56	58.38	AV	Coaxial
3	0.579	45.85	20.22	3.20	36.67	72.35	35.68	QP	Coaxial
4	1.604	47.63	20.24	3.22	38.51	63.50	24.99	QP	Coaxial
5	4.251	46.75	20.23	3.26	37.75	69.54	31.79	QP	Coaxial
6	13.556	63.39	19.93	3.43	54.45	69.54	15.09	QP	Coaxial

Note:

- Level = Reading + Cable Loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.
- Measured at antenna position coaxial and coplanar, only record the worst case of Coaxial.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-10-10
Tested By: Lin Guoyuan
EUT: Bluetooth speaker
Model Number: aCOUSTIC Ensemble
Test Mode: TX NFC Mode
Power Supply: Battery
Condition: Temp:23.6°C;Humi:59.4%
Test Site: DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25073024-26E\FCC BELOW1G NFC\20251010-043635_V
Memo: Sample Numbel:S25073024



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	13.347	45.72	19.92	3.42	-32.30	36.76	80.51	43.75	PK	Coaxial
2	13.447	46.60	19.92	3.43	-32.30	37.65	90.47	52.82	PK	Coaxial
3	13.524	50.00	19.93	3.43	-32.30	41.06	90.47	49.41	PK	Coaxial
4	13.560	73.06	19.93	3.43	-32.30	64.12	124.00	59.88	PK	Coaxial
5	13.665	47.13	19.93	3.43	-32.30	38.19	90.47	52.28	PK	Coaxial
6	13.772	44.22	19.94	3.43	-32.30	35.29	80.51	45.22	PK	Coaxial

Note:

- Level = Reading + Cable Loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.
- Measured at antenna position coaxial and coplanar, only record the worst case of Coaxial.

8. Power Line Conducted Emissions

8.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
EMI Test Receiver	R&S	ESCI	DDT-ZC00235	2026/07/06
Two Line V-Network	R&S	ENV216	DDT-ZC00535	2026/07/06
Artificial mains	R&S	ESH2-Z5	DDT-ZC00538	2026/07/06
Pulse Limiter	SCHWARZBEC K	ESH3-Z2	DDT-ZC00539	2026/07/06
CE Cable 1	R&S	ESU8/RF2	DDT-ZC00566	2026/07/06
EMI Test Software	Audix/TW	e3	DDT-ZC01252	/

8.2. Block diagram of test setup

8.3. Limits

Frequency	Quasi-Peak Level dB(uV)	Average Level dB(uV)
150 kHz~500 kHz	66 ~ 56*	56 ~ 46*
500 kHz~5 MHz	56	46
5 MHz~30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

8.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

8.5. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

8.6. Test result

PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

Note2: “----” means Peak detection; “-----” means Average detection.

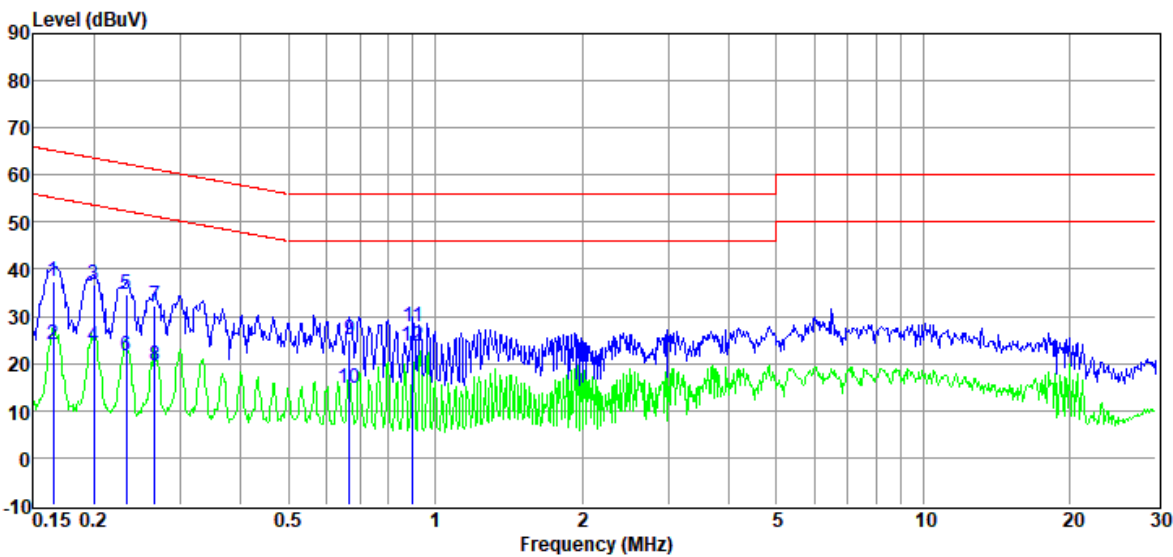
Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded the worst case.

8.7. Test data

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2025 CE report data\Q25073024-26E\1013 CE.EM6
Test Date	: 2025-10-13	Tested By : Alex Liu
EUT	: Bluetooth speaker	Model Number : aCOUSTIC Ensemble
Power Supply	: AC 120V/60Hz	Test Mode : NFC mode
Condition	: TEMP:22.3°C, RH:61.1%	LISN : 2025 1# 216/LINE
Memo	:	

Data: 6



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Margin	Detector	Phase
(Mark)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV)	(dBuV)	(dB)		
1	0.17	17.54	9.84	0.05	9.89	37.32	65.21	27.89	QP	LINE
2	0.17	4.07	9.84	0.05	9.89	23.85	55.21	31.36	Average	LINE
3	0.20	16.89	9.82	0.06	9.89	36.66	63.62	26.96	QP	LINE
4	0.20	4.06	9.82	0.06	9.89	23.83	53.62	29.79	Average	LINE
5	0.23	14.93	9.82	0.06	9.89	34.70	62.35	27.65	QP	LINE
6	0.23	1.99	9.82	0.06	9.89	21.76	52.35	30.59	Average	LINE
7	0.27	12.64	9.78	0.06	9.89	32.37	61.25	28.88	QP	LINE
8	0.27	-0.10	9.78	0.06	9.89	19.63	51.25	31.62	Average	LINE
9	0.67	5.09	9.95	0.11	9.89	25.04	56.00	30.96	QP	LINE
10	0.67	-5.07	9.95	0.11	9.89	14.88	46.00	31.12	Average	LINE
11	0.90	7.84	9.85	0.14	9.90	27.73	56.00	28.27	QP	LINE
12	0.90	3.73	9.85	0.14	9.90	23.62	46.00	22.38	Average	LINE

- Note:
- 1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
 - 2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
 - 3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
 - 4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room

D:\2025 CE report data\Q25073024-26E\1013 CE.EM6

Test Date : 2025-10-13

Tested By : Alex Liu

EUT : Bluetooth speaker

Model Number : aCOUSTIC Ensemble

Power Supply : AC 120V/60Hz

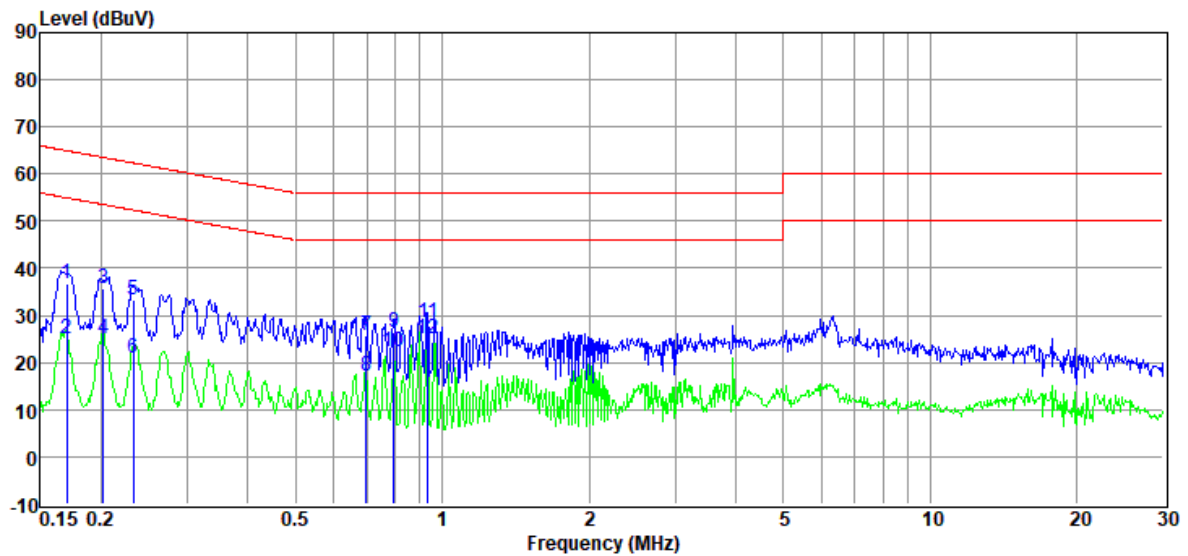
Test Mode : NFC mode

Condition : TEMP:22.3°C, RH:61.1%

LISN : 2025 1# 216/NEUTRAL

Memo :

Data: 8



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Margin	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.17	17.09	9.68	0.05	9.89	36.71	64.94	28.23	QP	NEUTRAL
2	0.17	5.57	9.68	0.05	9.89	25.19	54.94	29.75	Average	NEUTRAL
3	0.20	15.76	9.83	0.06	9.89	35.54	63.54	28.00	QP	NEUTRAL
4	0.20	5.14	9.83	0.06	9.89	24.92	53.54	28.62	Average	NEUTRAL
5	0.23	13.55	9.84	0.06	9.89	33.34	62.35	29.01	QP	NEUTRAL
6	0.23	1.04	9.84	0.06	9.89	20.83	52.35	31.52	Average	NEUTRAL
7	0.70	5.97	9.93	0.12	9.89	25.91	56.00	30.09	QP	NEUTRAL
8	0.70	-2.85	9.93	0.12	9.89	17.09	46.00	28.91	Average	NEUTRAL
9	0.80	6.75	9.80	0.13	9.90	26.58	56.00	29.42	QP	NEUTRAL
10	0.80	2.58	9.80	0.13	9.90	22.41	46.00	23.59	Average	NEUTRAL
11	0.93	8.66	9.90	0.14	9.90	28.60	56.00	27.40	QP	NEUTRAL
12	0.93	5.18	9.90	0.14	9.90	25.12	46.00	20.88	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

9. Antenna Requirement

9.1. Assessment procedure

The antenna used for this product is inductive loop coil antenna and that no antenna other than that furnished by the responsible party shall be used with the device.

9.2. Assess result

The antenna used for this product is inductive loop coil antenna and that no antenna other than that furnished by the responsible party shall be used with the device.

11. Photos of the EUT

Please refer to DDT-Q25073024-25E appendix I

-----End Report-----