

- (c) Change modulation type of device if practicable.
- (d) Change power supply range from 85% to 115% of the rated supply voltage
- (e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18 GHz to 25 GHz, so below final test was performed with frequency range from 9 kHz to 18 GHz.

(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 equipment and all of the interface cables were changed according to ANSI C63.10:2013 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) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10:2013 clause 4.1.4.2.2 procedure for average measure.

(8) For portable device, X axis, Y axis, Z axis are tested, and worse setup is reported.

(9) According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

(10) For 30 MHz ~ 25 GHz: (Scan with all mode, the worst case is reported)

(11) For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in worst mode.

12.6. Test result

PASS. (See below detailed test result)

12.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-04-21

Tested By:

Lin Guoyaun

EUT:

Portable Bluetooth Speaker

Model Number:

Muo

Test Mode:

TX BLE1M Mode

Power Supply:

Battery

Condition:

Temp:24.1°C;Humi:48.4%

Test Site:

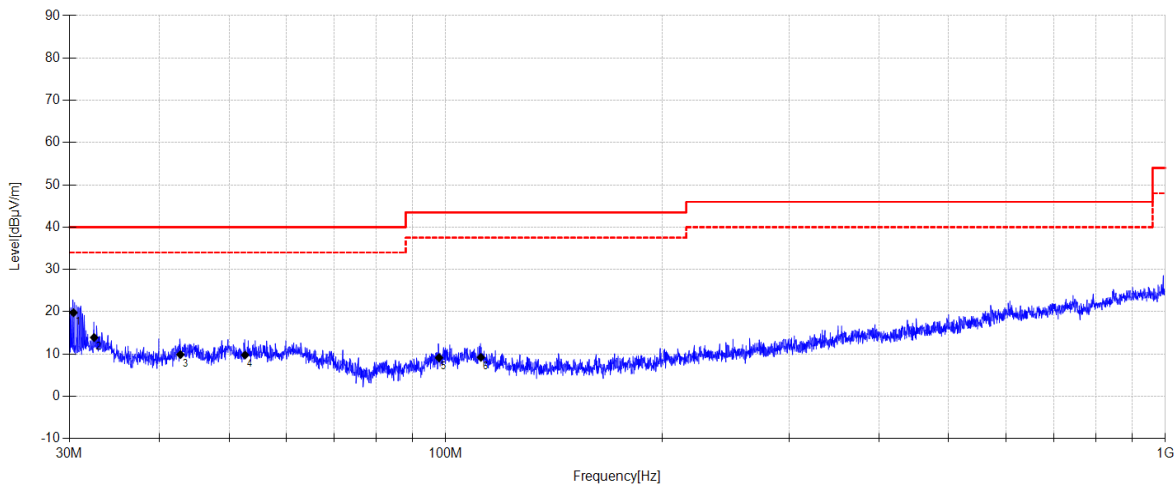
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25031421-2E\FCC Below 1G\20250421-165945_H

Memo:

Sample Numbler:S25031421-029



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	30.402	36.77	10.34	3.76	19.77	40.00	20.23	QP	Horizontal
2	32.474	30.76	10.48	3.77	13.91	40.00	26.09	QP	Horizontal
3	42.807	24.26	12.86	3.84	9.86	40.00	30.14	QP	Horizontal
4	52.643	23.61	13.35	3.90	9.76	40.00	30.24	QP	Horizontal
5	97.912	24.87	11.14	4.21	9.12	43.50	34.38	QP	Horizontal
6	111.944	24.32	11.71	4.28	9.20	43.50	34.30	QP	Horizontal

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:

2025-04-21

Tested By:

Lin Guoyaun

EUT:

Portable Bluetooth Speaker

Model Number:

Muo

Test Mode:

TX BLE1M Mode

Power Supply:

Battery

Condition:

Temp:24.1°C;Humi:48.4%

Test Site:

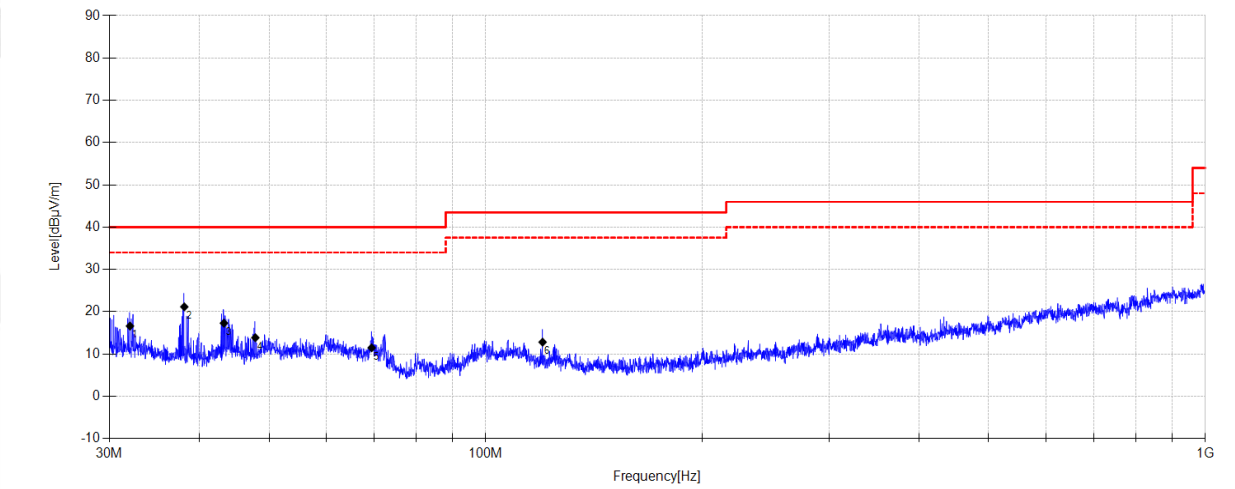
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25031421-2E\FCC Below 1G\20250421-170005_V

Memo:

Sample Numbel:S25031421-029



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	32.044	33.81	10.14	3.77	16.62	40.00	23.38	QP	Vertical
2	38.130	37.04	11.41	3.81	21.16	40.00	18.84	QP	Vertical
3	43.289	31.7	12.86	3.84	17.30	40.00	22.70	QP	Vertical
4	47.855	28.86	12.23	3.87	13.86	40.00	26.14	QP	Vertical
5	69.443	28.36	10.19	4.02	11.47	40.00	28.53	QP	Vertical
6	119.991	29.6	10.00	4.33	12.81	43.50	30.69	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:

2025-04-21

Tested By:

Lin Guoyaun

EUT:

Portable Bluetooth Speaker

Model Number:

Muo

Test Mode:

TX BLE2M Mode

Power Supply:

Battery

Condition:

Temp:24.1°C;Humi:48.4%

Test Site:

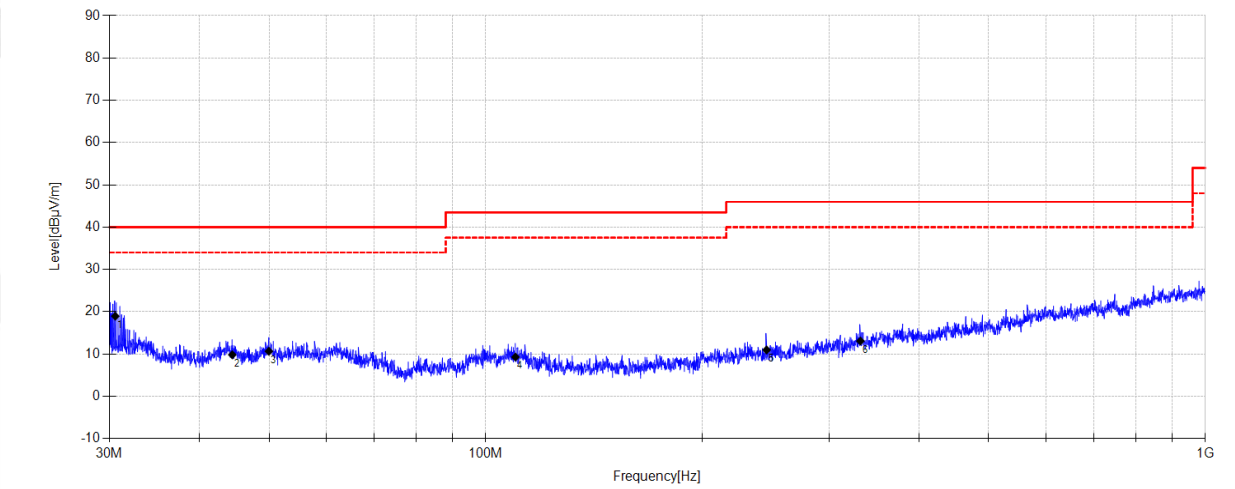
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25031421-2E\FCC Below 1G\20250421-170223_H

Memo:

Sample Numbel:S25031421-029



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	30.573	35.93	10.36	3.76	18.95	40.00	21.05	QP	Horizontal
2	44.458	23.97	13.09	3.85	9.81	40.00	30.19	QP	Horizontal
3	49.981	24.88	12.99	3.88	10.65	40.00	29.35	QP	Horizontal
4	109.999	24.02	12.10	4.27	9.28	43.50	34.22	QP	Horizontal
5	245.675	25.76	11.53	4.97	10.97	46.00	35.03	QP	Horizontal
6	331.660	24.74	14.40	5.35	13.07	46.00	32.93	QP	Horizontal

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:

2025-04-21

Tested By:

Lin Guoyaun

EUT:

Portable Bluetooth Speaker

Model Number:

Muo

Test Mode:

TX BLE2M Mode

Power Supply:

Battery

Condition:

Temp:24.1°C;Humi:48.4%

Test Site:

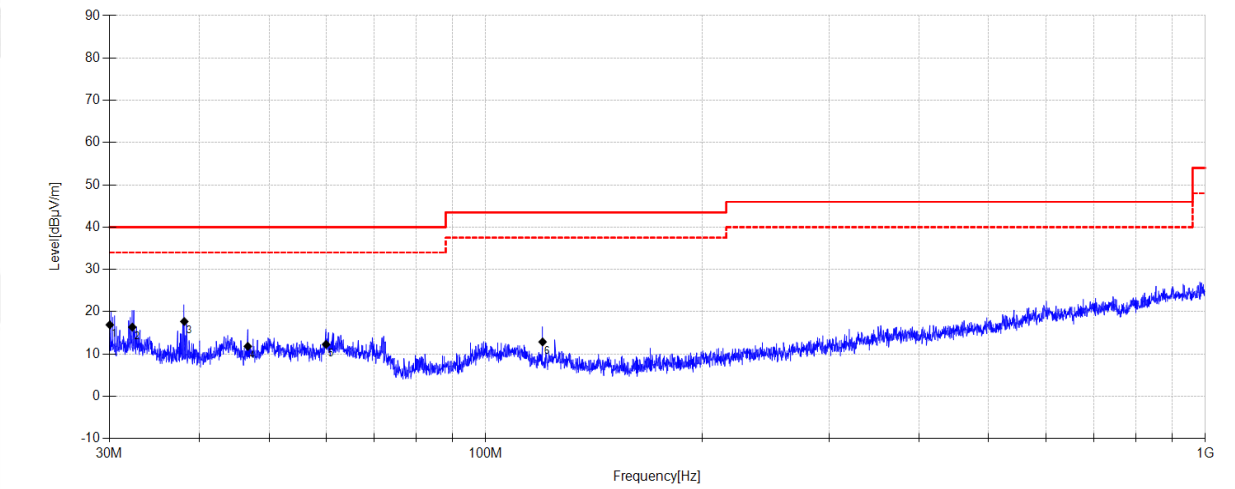
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25031421-2E\FCC Below 1G\20250421-170243_V

Memo:

Sample Numbel:S25031421-029



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	30.042	33.94	10.30	3.76	16.90	40.00	23.10	QP	Vertical
2	32.292	33.36	10.33	3.77	16.36	40.00	23.64	QP	Vertical
3	38.130	33.57	11.41	3.81	17.69	40.00	22.31	QP	Vertical
4	46.728	26.24	12.81	3.86	11.81	40.00	28.19	QP	Vertical
5	60.019	26.63	12.79	3.96	12.28	40.00	27.72	QP	Vertical
6	119.991	29.65	10.00	4.33	12.86	43.50	30.64	QP	Vertical

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:

2025-04-16

Tested By:

Lin Guoyaun

EUT:

Portable Bluetooth Speaker

Model Number:

Muo

Test Mode:

TX BLE1M 2402MHz Mode

Power Supply:

Battery

Condition:

Temp:24.1°C;Humi:48.4%

Test Site:

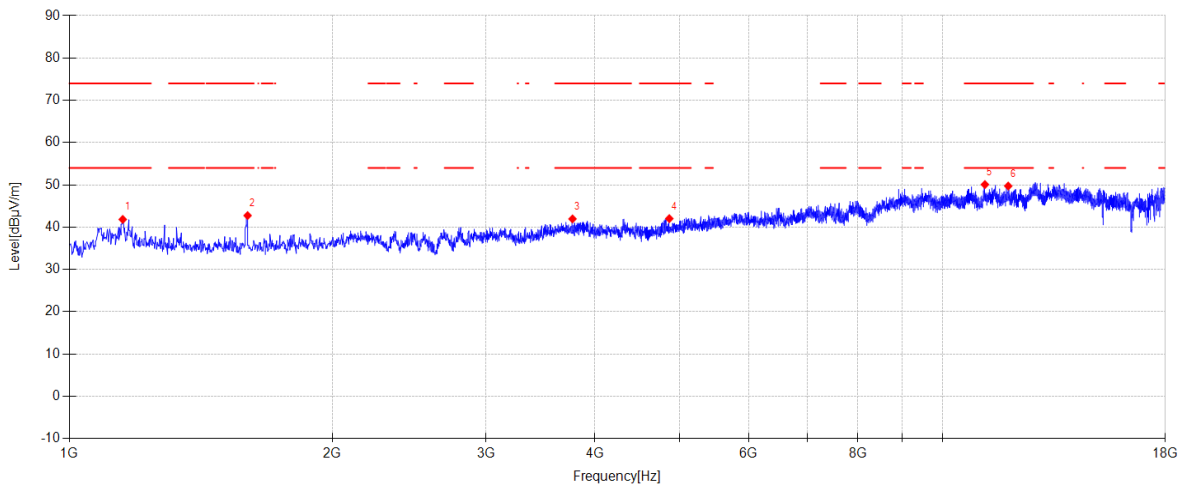
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\1

Memo:

Sample Numbre:S25031421-029



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1151.300	50.86	24.80	3.13	-36.96	41.83	74.00	32.17	PK	Horizontal
2	1600.100	50.84	25.60	3.90	-37.60	42.74	74.00	31.26	PK	Horizontal
3	3769.300	45.90	30.58	5.09	-39.62	41.95	74.00	32.05	PK	Horizontal
4	4865.800	42.51	33.55	5.57	-39.61	42.02	74.00	31.98	PK	Horizontal
5	11184.700	41.78	39.22	8.25	-39.18	50.07	74.00	23.93	PK	Horizontal
6	11893.600	42.03	38.90	8.69	-39.89	49.73	74.00	24.27	PK	Horizontal

Note:

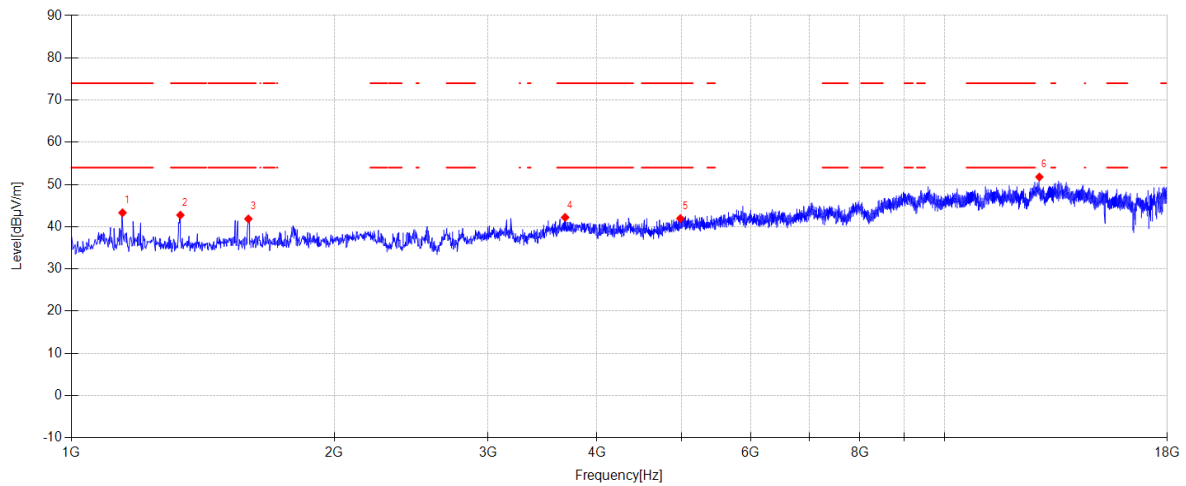
1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE1M 2402MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\2
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

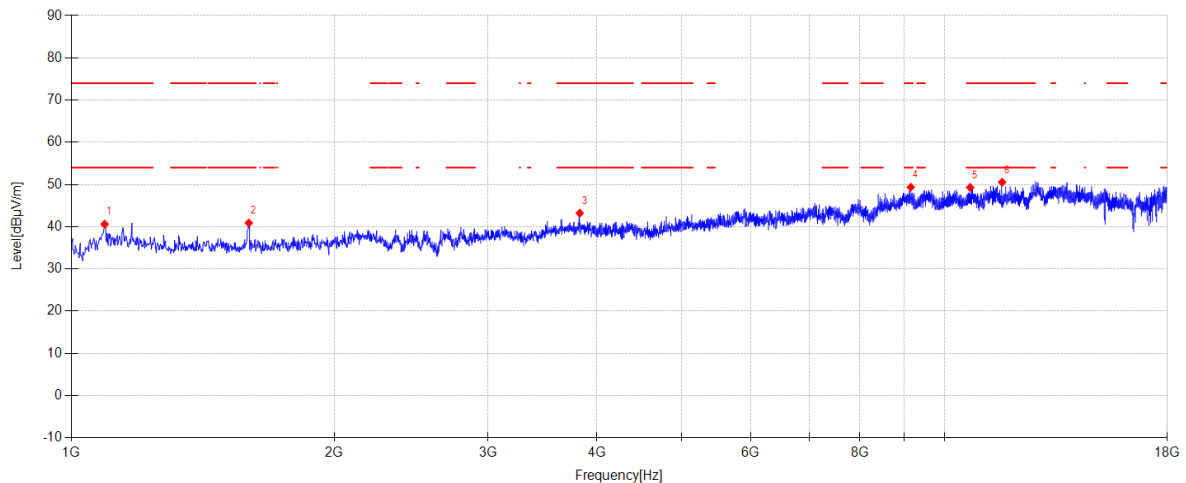
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1144.500	52.38	24.77	3.12	-36.95	43.32	74.00	30.68	PK	Vertical
2	1333.200	51.80	24.73	3.44	-37.22	42.75	74.00	31.25	PK	Vertical
3	1595.000	50.05	25.52	3.89	-37.60	41.86	74.00	32.14	PK	Vertical
4	3677.500	46.40	30.31	5.10	-39.60	42.21	74.00	31.79	PK	Vertical
5	4983.100	42.74	33.17	5.64	-39.60	41.95	74.00	32.05	PK	Vertical
6	12843.900	42.59	39.84	9.19	-39.83	51.79	-	-	PK	Vertical

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE1M 2440MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\3
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

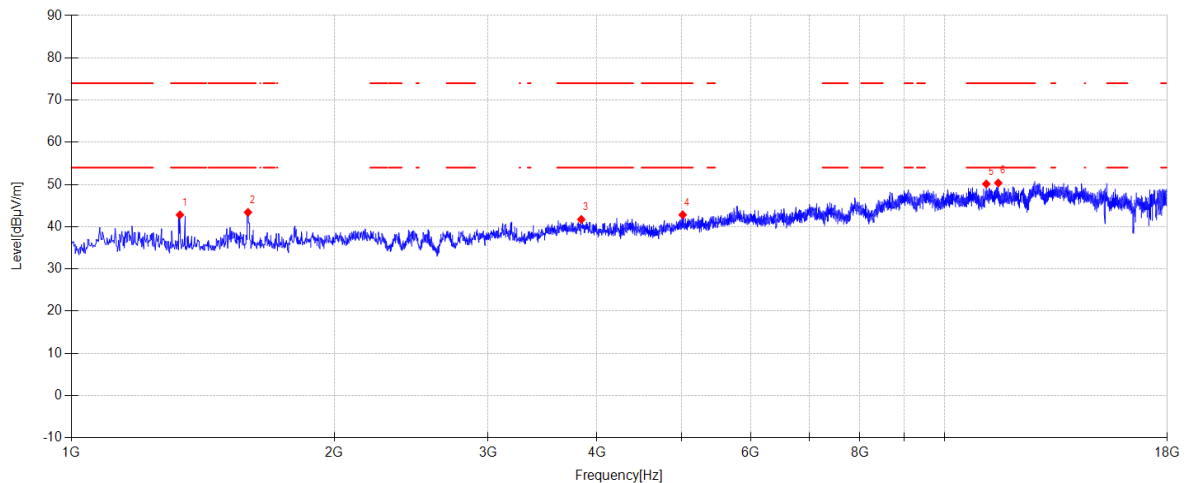
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1091.800	49.97	24.48	3.03	-36.87	40.61	74.00	33.39	PK	Horizontal
2	1596.700	49.04	25.55	3.90	-37.60	40.89	74.00	33.11	PK	Horizontal
3	3822.000	47.00	30.79	5.08	-39.64	43.23	74.00	30.77	PK	Horizontal
4	9149.800	42.43	38.50	7.35	-38.92	49.36	74.00	24.64	PK	Horizontal
5	10700.200	41.10	39.40	7.98	-39.18	49.30	74.00	24.70	PK	Horizontal
6	11642.000	42.65	39.00	8.53	-39.64	50.54	74.00	23.46	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE1M 2440MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\4
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

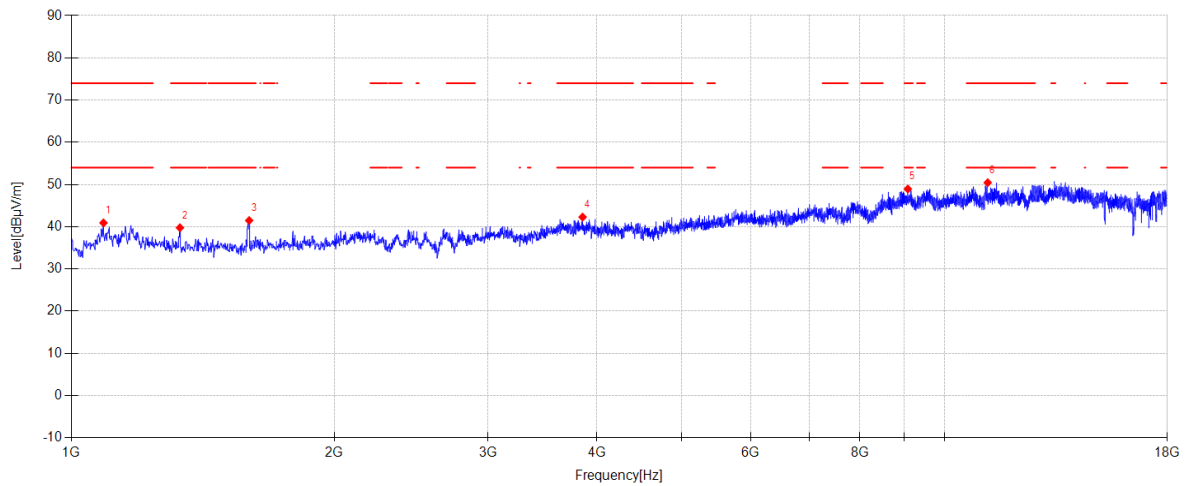
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1331.500	51.86	24.73	3.44	-37.22	42.81	74.00	31.19	PK	Vertical
2	1593.300	51.62	25.49	3.89	-37.59	43.41	74.00	30.59	PK	Vertical
3	3837.300	45.44	30.85	5.08	-39.64	41.73	74.00	32.27	PK	Vertical
4	5013.700	43.53	33.23	5.66	-39.60	42.82	74.00	31.18	PK	Vertical
5	11167.700	41.84	39.23	8.24	-39.17	50.14	74.00	23.86	PK	Vertical
6	11524.700	42.27	39.15	8.46	-39.52	50.36	74.00	23.64	PK	Vertical

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE1M 2480MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\5
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

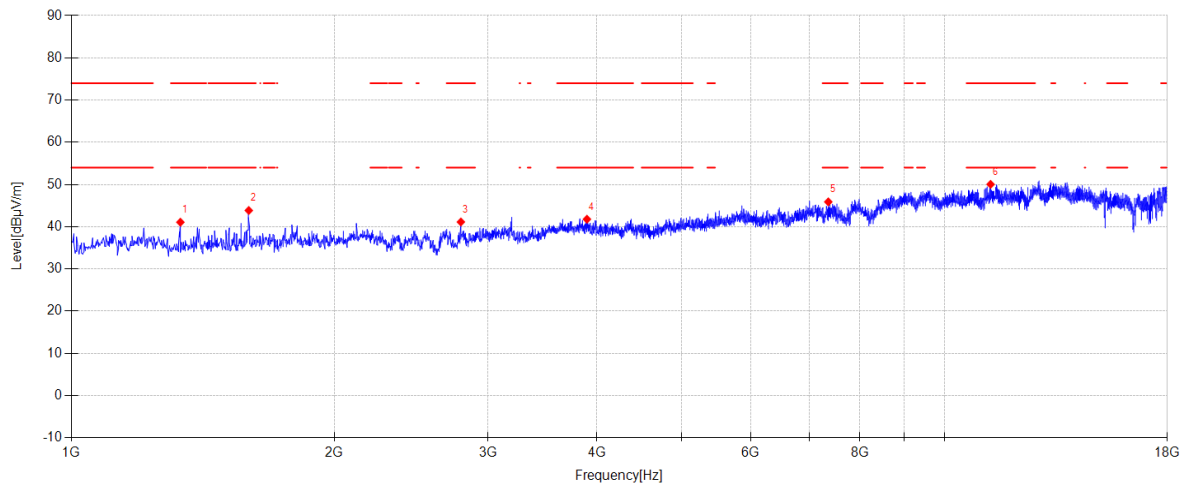
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1088.400	50.28	24.48	3.02	-36.87	40.91	74.00	33.09	PK	Horizontal
2	1331.500	48.81	24.73	3.44	-37.22	39.76	74.00	34.24	PK	Horizontal
3	1598.400	49.61	25.57	3.90	-37.60	41.48	74.00	32.52	PK	Horizontal
4	3850.900	45.94	30.91	5.08	-39.64	42.29	74.00	31.71	PK	Horizontal
5	9080.100	42.00	38.46	7.33	-38.86	48.93	74.00	25.07	PK	Horizontal
6	11208.500	42.19	39.20	8.26	-39.21	50.44	74.00	23.56	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE1M 2480MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\6
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

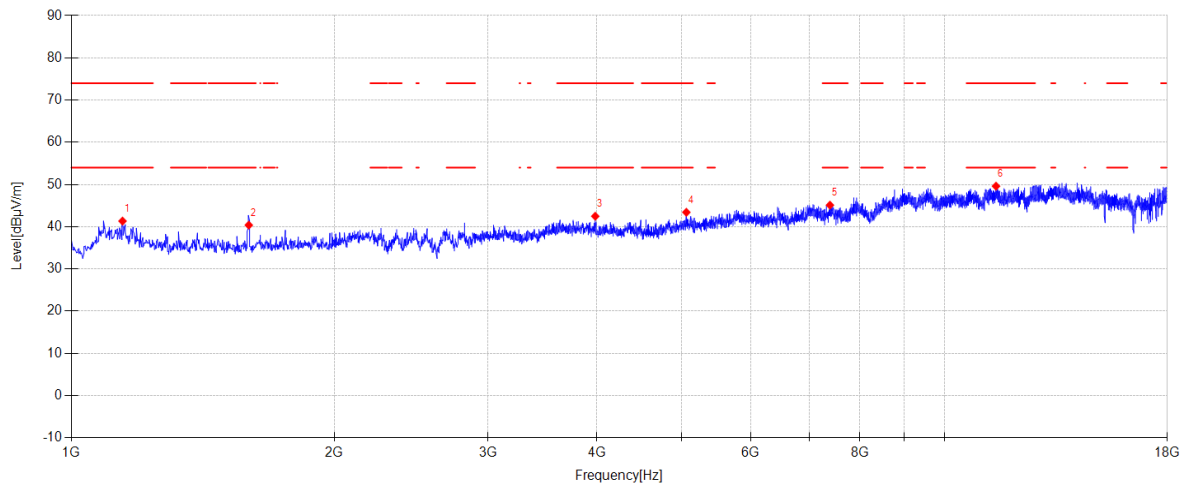
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1333.200	50.12	24.73	3.44	-37.22	41.07	74.00	32.93	PK	Vertical
2	1596.700	52.00	25.55	3.90	-37.60	43.85	74.00	30.15	PK	Vertical
3	2793.500	47.79	27.43	5.09	-39.18	41.13	74.00	32.87	PK	Vertical
4	3895.100	45.19	31.17	5.07	-39.65	41.78	74.00	32.22	PK	Vertical
5	7361.400	43.15	36.78	6.63	-40.67	45.89	74.00	28.11	PK	Vertical
6	11293.500	41.82	39.20	8.31	-39.29	50.04	74.00	23.96	PK	Vertical

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE2M 2478MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\7
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

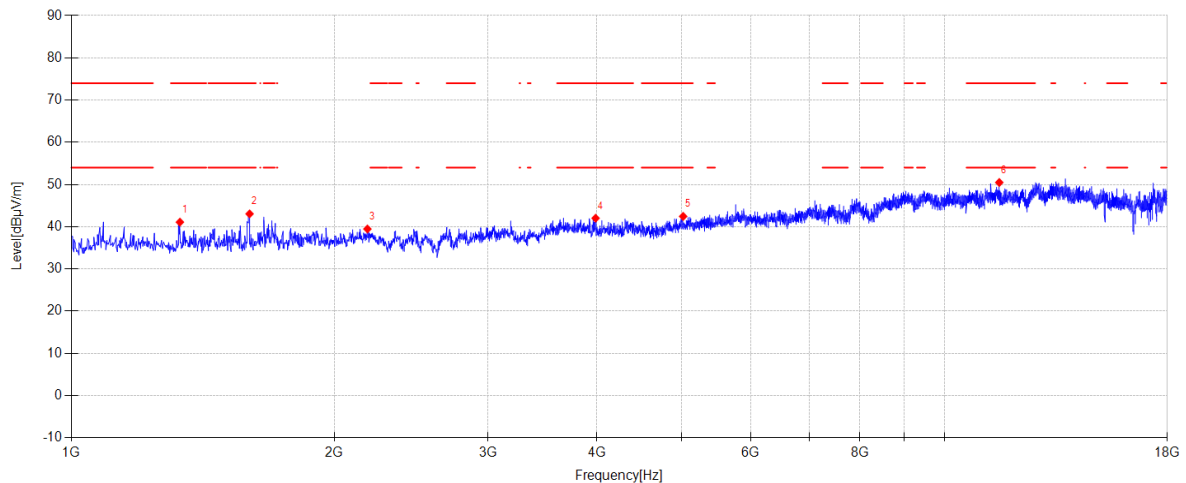
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1144.500	50.39	24.77	3.12	-36.95	41.33	74.00	32.67	PK	Horizontal
2	1596.700	48.53	25.55	3.90	-37.60	40.38	74.00	33.62	PK	Horizontal
3	3981.800	46.14	30.97	5.05	-39.68	42.48	74.00	31.52	PK	Horizontal
4	5063.000	44.01	33.33	5.68	-39.60	43.42	74.00	30.58	PK	Horizontal
5	7393.700	42.41	36.71	6.65	-40.65	45.12	74.00	28.88	PK	Horizontal
6	11456.700	41.40	39.24	8.42	-39.46	49.60	74.00	24.40	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE2M 2478MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\8
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

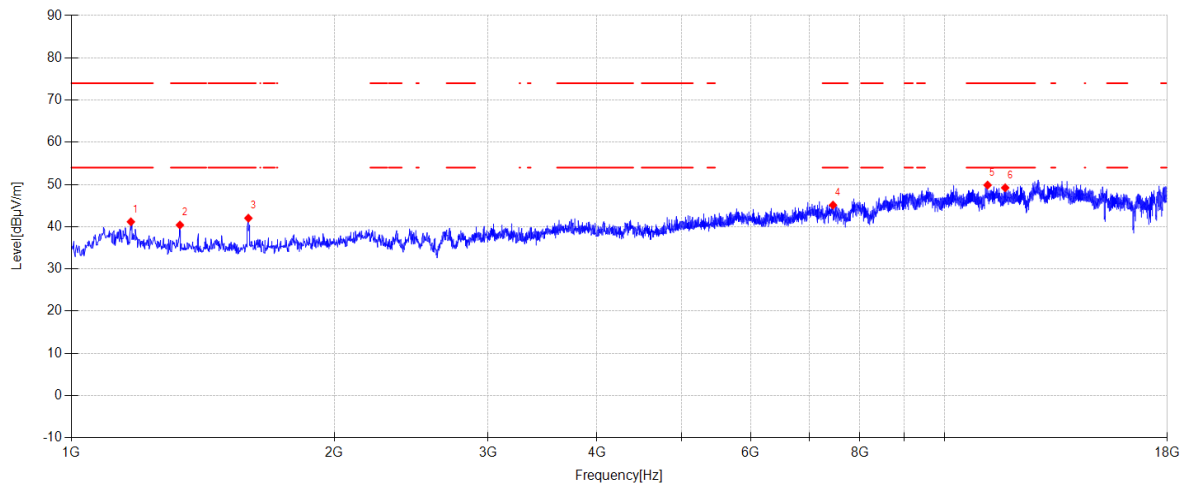
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1331.500	50.14	24.73	3.44	-37.22	41.09	74.00	32.91	PK	Vertical
2	1600.100	51.15	25.60	3.90	-37.60	43.05	74.00	30.95	PK	Vertical
3	2183.200	45.46	27.70	4.71	-38.41	39.46	-	-	PK	Vertical
4	3985.200	45.69	30.96	5.05	-39.68	42.02	74.00	31.98	PK	Vertical
5	5020.500	43.15	33.24	5.66	-39.60	42.45	74.00	31.55	PK	Vertical
6	11555.300	42.47	39.09	8.48	-39.56	50.48	74.00	23.52	PK	Vertical

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE2M 2440MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\9
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

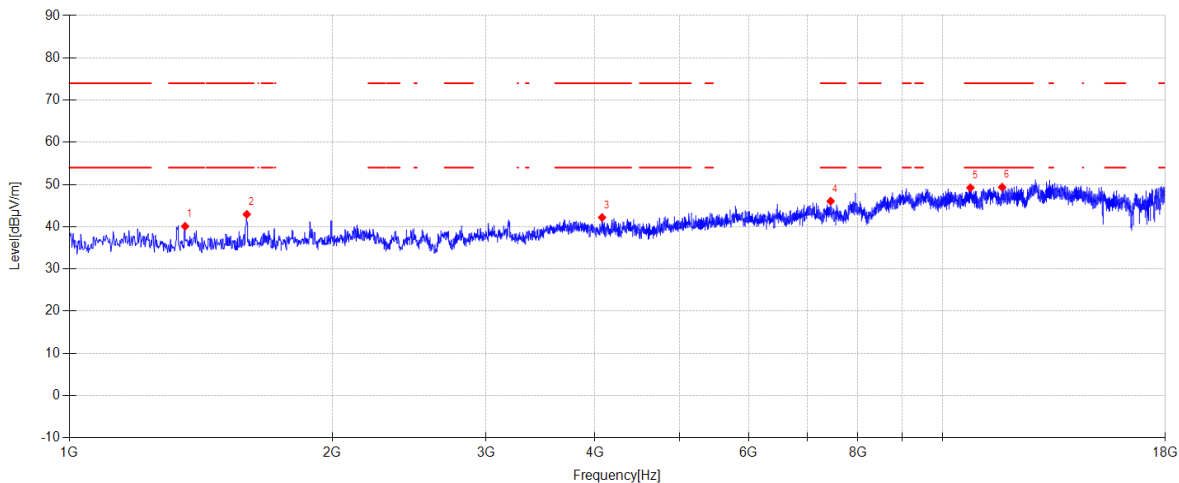
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1170.000	50.14	24.84	3.16	-36.98	41.16	74.00	32.84	PK	Horizontal
2	1331.500	49.45	24.73	3.44	-37.22	40.40	74.00	33.60	PK	Horizontal
3	1595.000	50.22	25.52	3.89	-37.60	42.03	74.00	31.97	PK	Horizontal
4	7453.200	42.44	36.59	6.68	-40.59	45.12	74.00	28.88	PK	Horizontal
5	11205.100	41.61	39.20	8.26	-39.21	49.86	74.00	24.14	PK	Horizontal
6	11737.200	41.42	38.96	8.59	-39.74	49.23	74.00	24.77	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 Tested By: Lin Guoyaun
EUT: Portable Bluetooth Speaker Model Number: Muo
Test Mode: TX BLE2M 2440MHz Mode Power Supply: Battery
Condition: Temp:24.1°C;Humi:48.4% Test Site: DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\10
Memo: Sample Numbler:S25031421-029

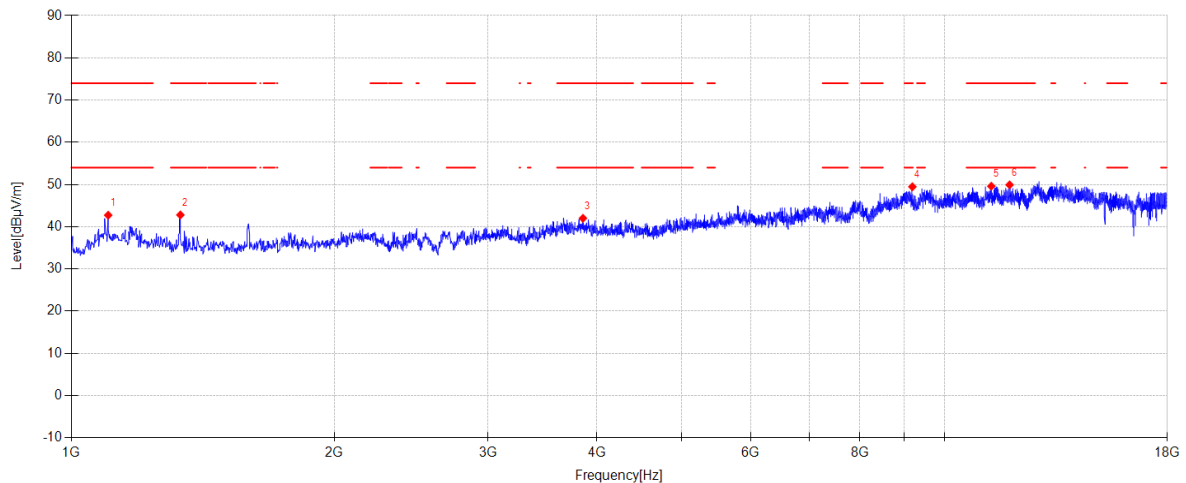


Suspected Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1357.000	49.03	24.84	3.48	-37.25	40.10	74.00	33.90	PK	Vertical
2	1596.700	51.08	25.55	3.90	-37.60	42.93	74.00	31.07	PK	Vertical
3	4075.300	45.71	31.05	5.10	-39.67	42.19	74.00	31.81	PK	Vertical
4	7446.400	43.35	36.61	6.68	-40.60	46.04	74.00	27.96	PK	Vertical
5	10764.800	40.96	39.40	8.01	-39.14	49.23	74.00	24.77	PK	Vertical
6	11704.900	41.50	39.00	8.57	-39.70	49.37	74.00	24.63	PK	Vertical

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE2M 2404MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\11
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

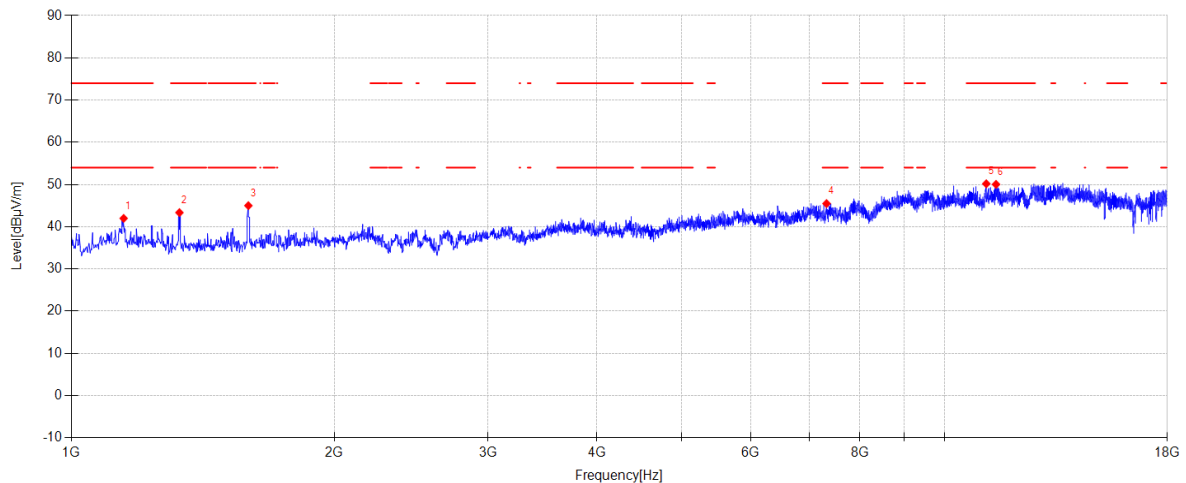
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1102.000	52.06	24.51	3.05	-36.89	42.73	74.00	31.27	PK	Horizontal
2	1333.200	51.84	24.73	3.44	-37.22	42.79	74.00	31.21	PK	Horizontal
3	3854.300	45.65	30.93	5.07	-39.65	42.00	74.00	32.00	PK	Horizontal
4	9188.900	42.48	38.58	7.36	-38.95	49.47	74.00	24.53	PK	Horizontal
5	11315.600	41.37	39.22	8.33	-39.32	49.60	74.00	24.40	PK	Horizontal
6	11874.900	42.21	38.90	8.68	-39.87	49.92	74.00	24.08	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE2M 2404MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\12
Memo: Sample Numbler:S25031421-029

**Suspected Data List**

N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1147.900	51.02	24.79	3.12	-36.95	41.98	74.00	32.02	PK	Vertical
2	1329.800	52.40	24.72	3.44	-37.21	43.35	74.00	30.65	PK	Vertical
3	1595.000	53.18	25.52	3.89	-37.60	44.99	74.00	29.01	PK	Vertical
4	7327.400	42.73	36.85	6.61	-40.71	45.48	74.00	28.52	PK	Vertical
5	11166.000	41.89	39.23	8.23	-39.17	50.18	74.00	23.82	PK	Vertical
6	11456.700	41.84	39.24	8.42	-39.46	50.04	74.00	23.96	PK	Vertical

Note:

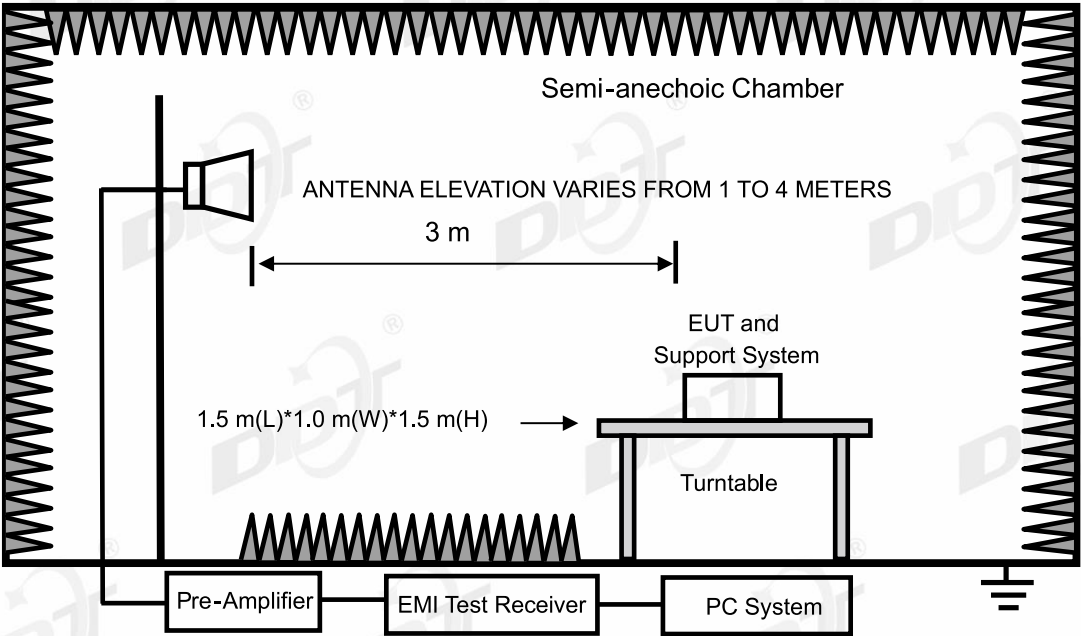
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

13. Band Edge Compliance

13.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2026/03/28
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2026/03/28
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2026/03/28
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2027/04/01
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2026/03/28
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2026/03/28
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2026/03/28
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2026/03/28
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2026/03/28
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2026/03/28
Hochgewinn-Hornantenne	SCHWARZBEC K	BBHA 9120 D	DDT-ZC02129	2025/09/18
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2026/03/28
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/08/25
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2026/03/28
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11

13.2. Block diagram of test setup



13.3. Limits

All restriction band should comply with 15.209 and RSS-Gen section 8.9 limits, other emission should be at least 20 dB below the fundamental.

13.4. Assistant equipment used for test

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

13.5. Test procedure

Same with Radiated Emission except change investigated frequency range.
Remark: All restriction band have been tested, and only the worst case is shown in report.

13.6. Test result

PASS. (See below detailed test result)

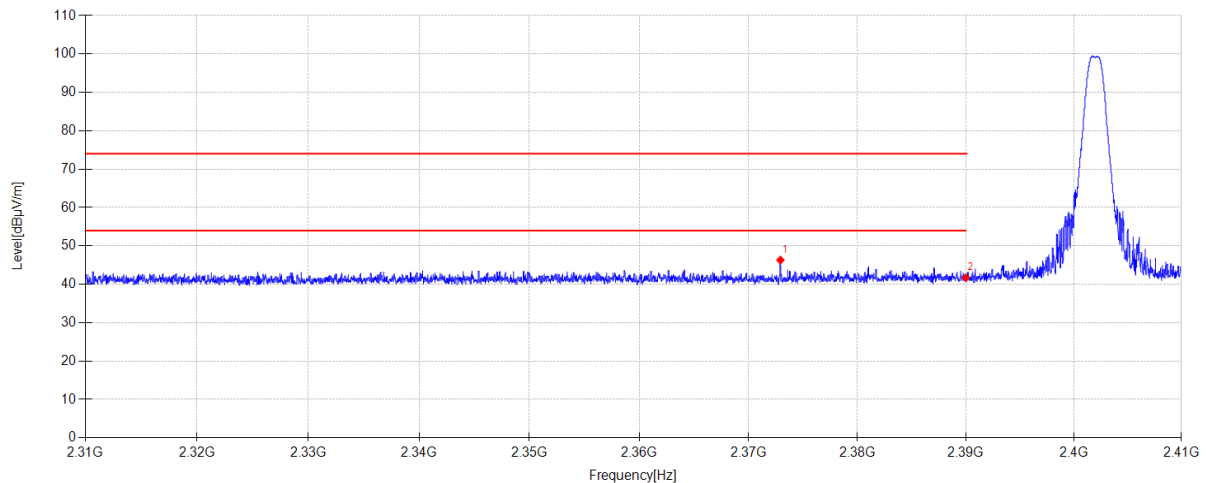
TR-4-E-009 Radiated Emission Test Result

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-04-16 **Tested By:** Lin Guoyaun
EUT: Portable Bluetooth Speaker **Model Number:** Muo
Test Mode: TX BLE1M 2402MHz Mode **Power Supply:** Battery
Condition: Temp:24.1°C;Humi:48.4% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\14
Memo: Sample Numbler:S25031421-029



Suspected Data List

N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2372.930	15.56	27.19	3.56	0.00	46.31	74.00	27.69	PK	Horizontal
2	2390.000	10.86	27.26	3.57	0.00	41.69	74.00	32.31	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-04-16

Tested By:

Lin Guoyaun

EUT:

Portable Bluetooth Speaker

Model Number:

Muo

Test Mode:

TX BLE1M 2480MHz Mode

Power Supply:

Battery

Condition:

Temp:24.1°C;Humi:48.4%

Test Site:

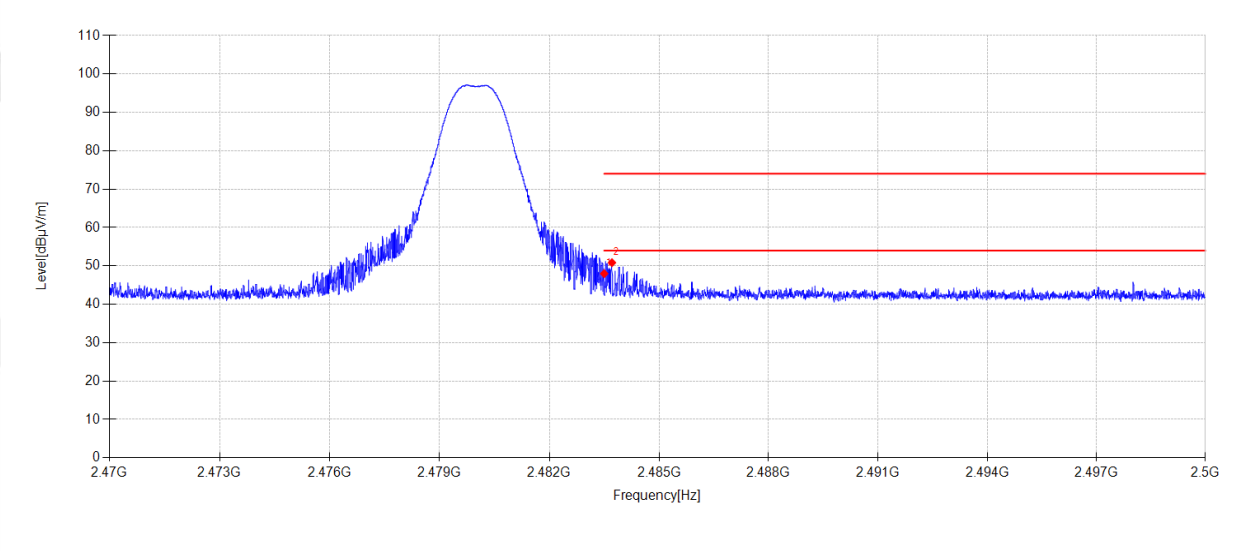
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\15

Memo:

Sample Numble:S25031421-029



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	16.83	27.53	3.62	0.00	47.98	74.00	26.02	PK	Horizontal
2	2483.713	19.69	27.53	3.62	0.00	50.84	74.00	23.16	PK	Horizontal

Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-04-16

Tested By:

Lin Guoyaun

EUT:

Portable Bluetooth Speaker

Model Number:

Muo

Test Mode:

TX BLE2M 2478MHz Mode

Power Supply:

Battery

Condition:

Temp:24.1°C;Humi:48.4%

Test Site:

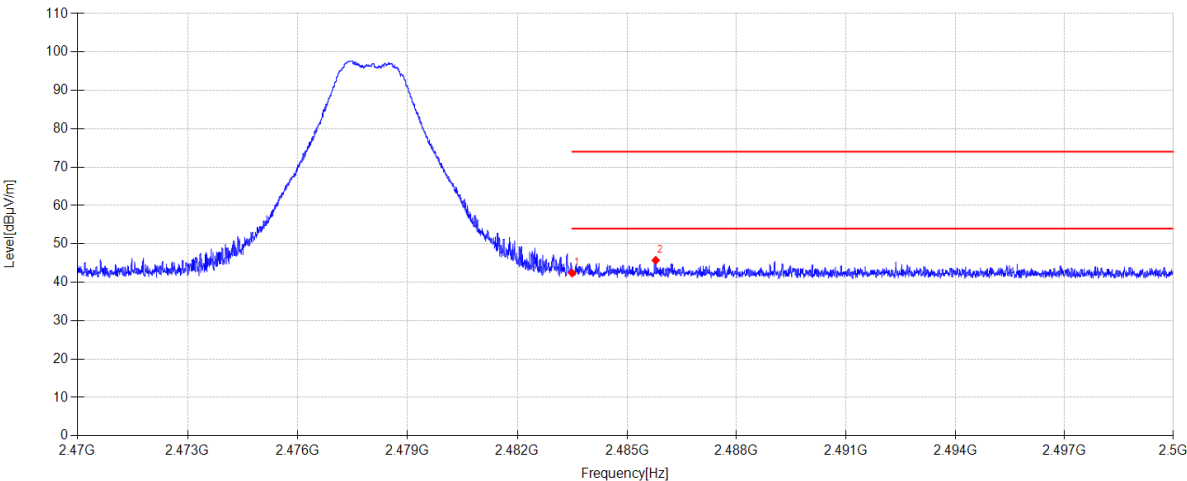
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25031421-2E\FCC Above 1G BLE\16

Memo:

Sample Numbler:S25031421-029



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	11.26	27.53	3.62	0.00	42.41	74.00	31.59	PK	Horizontal
2	2485.786	14.57	27.54	3.62	0.00	45.73	74.00	28.27	PK	Horizontal

Note:

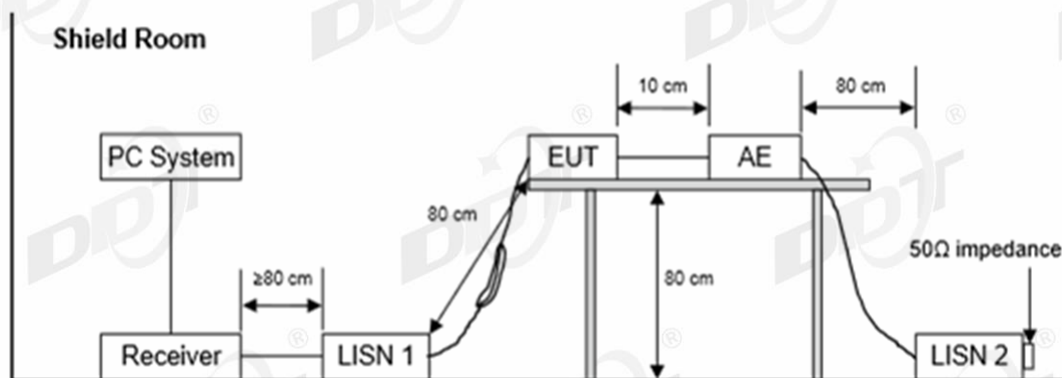
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

14. Power Line Conducted Emissions

14.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
Pulse Limiter	SCHWARZBEC K	VTSD 9561	DDT-ZC02128	2025/07/08
Conducted Radiated Software	Audix	E3	DDT-ZC00562	/
Δ -shaped artificial power network	SCHWARZBEC K	PVDC 8301	DDT-ZC03939	2026/03/28
Three-phase artificial power network	SCHWARZBEC K	NSLK 8163	DDT-ZC01572	2025/07/08
EMI Test Receiver	R&S	ESCI/E3	DDT-ZC01297	2025/07/08
RF Cable	Yuhu Technology	Z806-NJ-NJ-6M	DDT-ZC02004	2025/07/08
Two Line V-Network	R&S	ENV216	DDT-ZC02056	2025/07/08
Two Line V-Network	R&S	ENV216	DDT-ZC02059	2025/07/08

14.2. Block diagram of test setup



14.3. Limits

Frequency	Quasi-Peak Level	Average Level
	dB(μ V)	dB(μ V)
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.

14.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
Adapter	HUAWEI	HW-100400C01	Huawei fast charging 66W-1#/2# site	Input: 100-240V~ 50/60Hz, Output: 5V/2A or 9V/2A or 10V/4A MAX

14.5. 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.

14.6. 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.

14.7. Test data

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

Test Date : 2025-03-28

EUT : Portable Bluetooth Speaker

Power Supply : AC 120V/60Hz

Condition : Temp:22.6°C,Humi:59.3%

Memo :

D:\2025 Report Date\Q25031421-2E\0328 CE.EM6

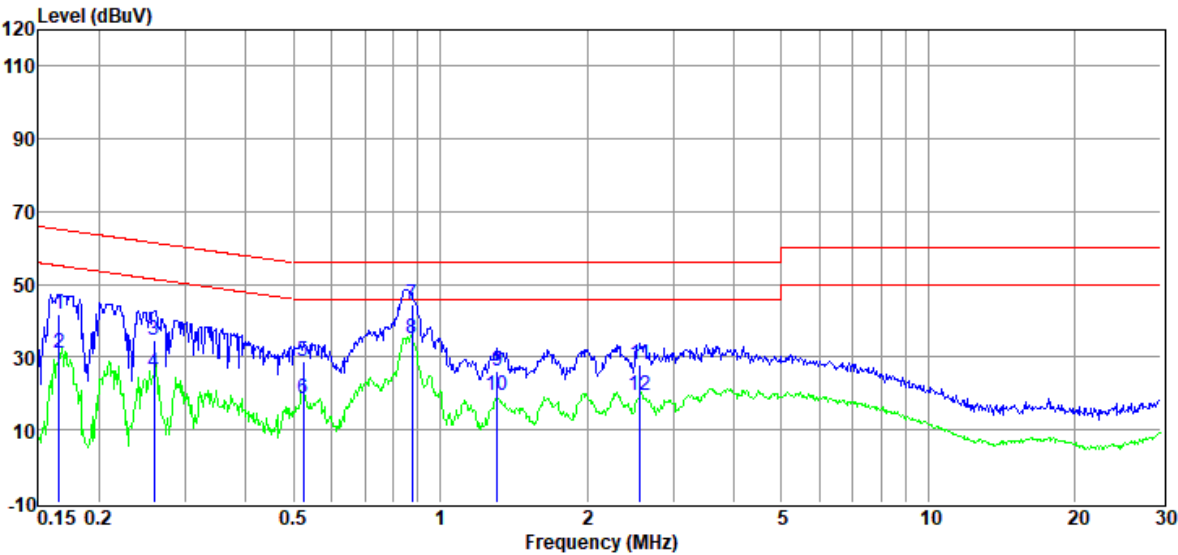
Tested By : Zhong Nan

Model Number : Muo

Test Mode : BLE 1M mode

LISN : 2024 ENV216 3#/LINE

Data: 6



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV)	(dBuV)	(dB)		
1	0.17	22.12	9.78	0.07	9.83	41.80	65.16	-23.36	QP	LINE
2	0.17	11.43	9.78	0.07	9.83	31.11	55.16	-24.05	Average	LINE
3	0.26	14.91	9.76	0.06	9.83	34.56	61.47	-26.91	QP	LINE
4	0.26	5.90	9.76	0.06	9.83	25.55	51.47	-25.92	Average	LINE
5	0.52	9.21	9.75	0.10	9.83	28.89	56.00	-27.11	QP	LINE
6	0.52	-1.15	9.75	0.10	9.83	18.53	46.00	-27.47	Average	LINE
7	0.88	24.88	9.75	0.08	9.84	44.55	56.00	-11.45	QP	LINE
8	0.88	15.43	9.75	0.08	9.84	35.10	46.00	-10.90	Average	LINE
9	1.31	6.33	9.74	0.12	9.84	26.03	56.00	-29.97	QP	LINE
10	1.31	-0.39	9.74	0.12	9.84	19.31	46.00	-26.69	Average	LINE
11	2.57	8.28	9.76	0.11	9.84	27.99	56.00	-28.01	QP	LINE
12	2.57	-0.24	9.76	0.11	9.84	19.47	46.00	-26.53	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.

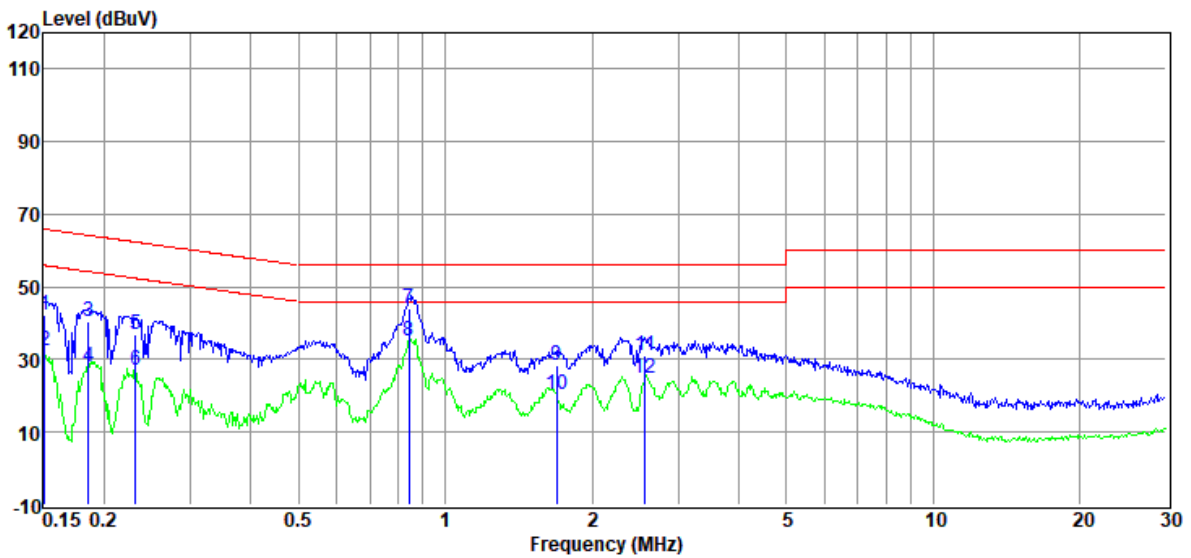
TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room
Test Date : 2025-03-28
EUT : Portable Bluetooth Speaker
Power Supply : AC 120V/60Hz
Condition : Temp:22.6°C,Humi:59.3%

D:\2025 Report Date\Q25031421-2E\0328 CE.EM6
Tested By : Zhong Nan
Model Number : Muo
Test Mode : BLE 1M mode
LISN : 2024 ENV216 3#/NEUTRAL

Memo :

Data: 8



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	22.73	9.78	0.07	9.83	42.41	65.96	-23.55	QP	NEUTRAL
2	0.15	12.67	9.78	0.07	9.83	32.35	55.96	-23.61	Average	NEUTRAL
3	0.19	20.96	9.76	0.06	9.83	40.61	64.24	-23.63	QP	NEUTRAL
4	0.19	8.27	9.76	0.06	9.83	27.92	54.24	-26.32	Average	NEUTRAL
5	0.23	17.38	9.76	0.06	9.83	37.03	62.39	-25.36	QP	NEUTRAL
6	0.23	7.47	9.76	0.06	9.83	27.12	52.39	-25.27	Average	NEUTRAL
7	0.84	24.36	9.75	0.07	9.84	44.02	56.00	-11.98	QP	NEUTRAL
8	0.84	15.52	9.75	0.07	9.84	35.18	46.00	-10.82	Average	NEUTRAL
9	1.69	8.74	9.77	0.11	9.84	28.46	56.00	-27.54	QP	NEUTRAL
10	1.69	0.65	9.77	0.11	9.84	20.37	46.00	-25.63	Average	NEUTRAL
11	2.57	11.32	9.77	0.11	9.84	31.04	56.00	-24.96	QP	NEUTRAL
12	2.57	5.08	9.77	0.11	9.84	24.80	46.00	-21.20	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.

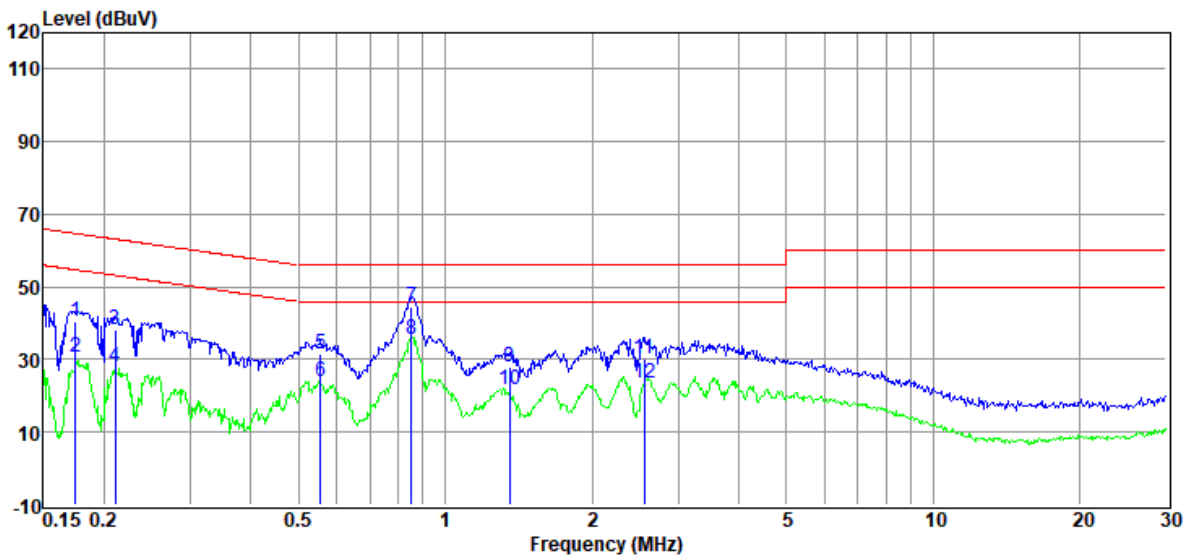
TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room
Test Date : 2025-03-28
EUT : Portable Bluetooth Speaker
Power Supply : AC 120V/60Hz
Condition : Temp:22.6°C,Humi:59.3%

D:\2025 Report Date\Q25031421-2E\0328 CE.EM6
Tested By : Zhong Nan
Model Number : Muo
Test Mode : BLE 2M mode
LISN : 2024 ENV216 3#/NEUTRAL

Memo :

Data: 10



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.17	20.63	9.77	0.06	9.83	40.29	64.72	-24.43	QP	NEUTRAL
2	0.17	11.17	9.77	0.06	9.83	30.83	54.72	-23.89	Average	NEUTRAL
3	0.21	18.40	9.76	0.06	9.83	38.05	63.18	-25.13	QP	NEUTRAL
4	0.21	8.12	9.76	0.06	9.83	27.77	53.18	-25.41	Average	NEUTRAL
5	0.56	11.66	9.76	0.10	9.83	31.35	56.00	-24.65	QP	NEUTRAL
6	0.56	4.05	9.76	0.10	9.83	23.74	46.00	-22.26	Average	NEUTRAL
7	0.85	24.75	9.75	0.07	9.84	44.41	56.00	-11.59	QP	NEUTRAL
8	0.85	16.10	9.75	0.07	9.84	35.76	46.00	-10.24	Average	NEUTRAL
9	1.35	8.47	9.76	0.12	9.84	28.19	56.00	-27.81	QP	NEUTRAL
10	1.35	1.85	9.76	0.12	9.84	21.57	46.00	-24.43	Average	NEUTRAL
11	2.55	10.64	9.77	0.11	9.84	30.36	56.00	-25.64	QP	NEUTRAL
12	2.55	3.83	9.77	0.11	9.84	23.55	46.00	-22.45	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.

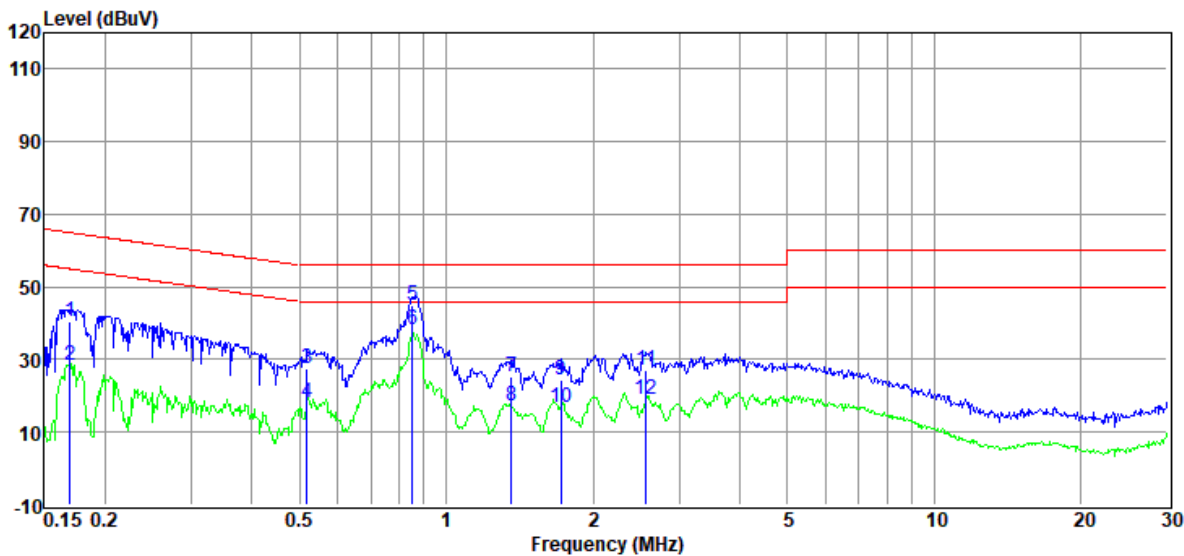
TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room
Test Date : 2025-03-28
EUT : Portable Bluetooth Speaker
Power Supply : AC 120V/60Hz
Condition : Temp:22.6°C,Humi:59.3%

D:\2025 Report Date\Q25031421-2E\0328 CE.EM6
Tested By : Zhong Nan
Model Number : Muo
Test Mode : BLE 2M mode
LISN : 2024 ENV216 3#/LINE

Memo :

Data: 12



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV)	(dBuV)	(dB)		
1	0.17	20.70	9.78	0.07	9.83	40.38	64.99	-24.61	QP	LINE
2	0.17	8.62	9.78	0.07	9.83	28.30	54.99	-26.69	Average	LINE
3	0.52	7.83	9.75	0.11	9.83	27.52	56.00	-28.48	QP	LINE
4	0.52	-1.41	9.75	0.11	9.83	18.28	46.00	-27.72	Average	LINE
5	0.85	25.50	9.75	0.07	9.84	45.16	56.00	-10.84	QP	LINE
6	0.85	18.37	9.75	0.07	9.84	38.03	46.00	-7.97	Average	LINE
7	1.36	5.39	9.74	0.12	9.84	25.09	56.00	-30.91	QP	LINE
8	1.36	-2.24	9.74	0.12	9.84	17.46	46.00	-28.54	Average	LINE
9	1.72	4.77	9.75	0.11	9.84	24.47	56.00	-31.53	QP	LINE
10	1.72	-2.73	9.75	0.11	9.84	16.97	46.00	-29.03	Average	LINE
11	2.57	7.34	9.76	0.11	9.84	27.05	56.00	-28.95	QP	LINE
12	2.57	-0.74	9.76	0.11	9.84	18.97	46.00	-27.03	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.

16. Photos of the EUT

Please refer to DDT-Q25031421-1E appendix I

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