



RF MEASUREMENT REPORT

FCC ID: 2AU47-00003
Applicant: Boxine US, INC.
Product: Toniebox
Model No.: 10003
Brand Name: tonies
FCC Classification: Part 15 Low Power Communication Device
Transmitter (DXX)
FCC Rule Part(s): Part 15 Subpart C (Section 15.225)
Result: Complies
Test Date: 2022-05-28 ~ 2022-07-14

Reviewed By:

Jame Yuan

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2204RSU038-U2	Rev. 01	Initial Report	2022-07-14	Invalid
2204RSU038-U2	Rev. 02	Updated test data	2022-07-18	Valid

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1.1. Applicant

3000 El Camino Real, Building 4, Suite 200, Palo Alto, CA 94306

Boxine US, INC.

3000 El Camino Real, building 4, Suite 200, Palo Alto, CA 94306

☒	Test Site – MRT Suzhou Laboratory
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 FCC: CN1166 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104
	CNAS: L10551 ISED: CN0001
☐	Test Site – MRT Shenzhen Laboratory
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 FCC: CN1284
CNAS: L10551 ISED: CN0105	
☐	Test Site – MRT Taiwan Laboratory
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: L3261-190725 FCC: 291082, TW3261
CNAS: L3261-190725 ISED: TW3261	

1.4. Product Information

Product Name	Toniebox
Model No.	10003
Serial No.	20220512Sample#07
Wi-Fi Specification	802.11b/g/n
Antenna Type	PCB
Antenna Gain	2.96 dBi
NFC Specification	13.56MHz
Operating Temperature	5 ~ 35°C
Accessories	
Adapter	Model No.: DYS819-090150W-1 Input: 120V~ 60Hz, 0.5A MAX Output: 9.0V=1.5A
Battery	Model No.: EPT Ni-MH Rated Capacity: AA2000mAh Rated Voltage: 3.6V
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

Frequency Range	13.56MHz
Channel Number	1
Type of modulation	ODK and ASK

Note: For other features of this EUT, test report will be issued separately.

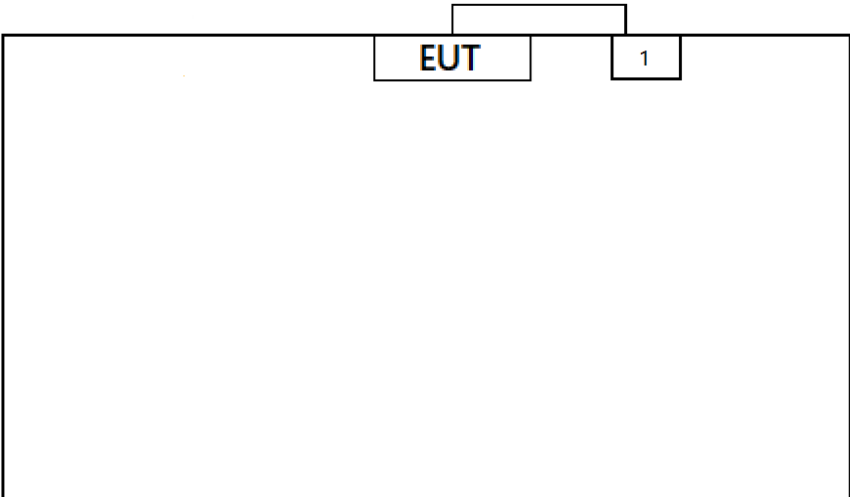
2. Test Configuration

2.1. Test Mode

Test Mode
Mode 1: Transmit by NFC

2.2. Test Configuration and Software

The device was tested per the guidance ANSI C63.10-2013 that was used to reference the appropriate EUT setup for radiated spurious emissions and AC line conducted emission testing.

			
Product		Manufacturer	Model No.
1	Adapter	Tonies	DYS819-090150W-1
Note: The adapter was from manufacturer.			

2.3. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.225
- ANSI C63.10-2013

2.4. Test Environment Condition

Ambient Temperature	15 ~ 35 °C
Relative Humidity	20 ~75 %RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna of this device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2022-12-29	WZ-AC1
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2022-06-08	WZ-SR2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2022-09-16	WZ-AC1
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2022-10-28	WZ-AC1
Temperature Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2022-10-10	WZ-TR3
Preamplifier	Agilent	83017A	MRTSUE06076	1 year	2022-11-12	WZ-AC1
Symmetrical Attenuator	Schwarzbeck	SYMAT 40	MRTSUE06117	1 year	2023-04-10	WZ-SR2
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2022-08-05	WZ-AC1
Passive Voltage Probe	R&S	ESH2-Z3	MRTSUE06189	1 year	2023-04-06	WZ-SR2
Triple-Loop Antenna	R&S	HM020	MRTSUE06191	3 years	2024-04-13	WZ-SR2
Vibration Test System	DongLing	ES-1-150	MRTSUE06206	1 year	2022-08-08	WZ-TR3
Anechoic Chamber	TDK	WZ-AC1	MRTSUE06212	1 year	2023-04-21	WZ-AC1
Shielding Room	MIX-BEP	WZ-SR2	MRTSUE06215	5 years	2026-12-20	WZ-SR2
Horn Antenna	ETS	3117	MRTSUE06257	1 year	2022-09-25	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2022-06-28	WZ-TR3
				1 year	2023-06-06	WZ-TR3
Thermohygrometer	testo	608-H1	MRTSUE06403	1 year	2022-06-28	WZ-AC1
				1 year	2023-06-06	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE06404	1 year	2022-06-28	WZ-SR2
				1 year	2023-06-06	WZ-SR2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2022-12-01	WZ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2022-12-29	WZ-AC1
Four-Line V-Network	R&S	ENV432	MRTSUE06615	1 year	2022-10-13	WZ-SR2
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2023-01-13	WZ-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE06909	1 year	2022-11-01	WZ-SR2
Preamplifier	EMCI	EMC051845SE	MRTSUE06987	1 year	2022-09-09	WZ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE07027	1 year	2022-12-05	WZ-TR3
Thermohygrometer	testo	Testo 608-H1	MRTSUE11039	1 year	2022-11-11	WZ-AC1

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_MF 7802	2.03C	RE Antenna&turntable

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.

(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): Horizontal: 9kHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 9kHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB

6. Test Result

6.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Test Result	Reference
15.225 (a), (b), (c)	In-Band Emission	Radiated	Pass	Section 6.2
15.225(d)	Out-Band Emission		Pass	Section 6.3
15.215(c)	20dB Bandwidth		Pass	Section 6.4
15.225(e)	Frequency Stability Tolerance		Pass	Section 6.5
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass	Section 6.6

Notes: For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

6.2. In-band Emission Measurement

6.2.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.225		
Frequency (MHz)	Distance (m)	Level ($\mu\text{V/m}$)
13.553 ~13.567	30	15848
13.410 ~13.553, 13.567 ~13.710	30	334
13.110 ~13.410, 13.710 ~14.010	30	106
Note 1: The lower limit shall apply at the transition frequency.		
Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.		
Note 3: E field strength ($\text{dB}\mu\text{V/m}$) = $20 \log E$ field strength ($\mu\text{V/m}$)		

6.2.2. Test Procedure

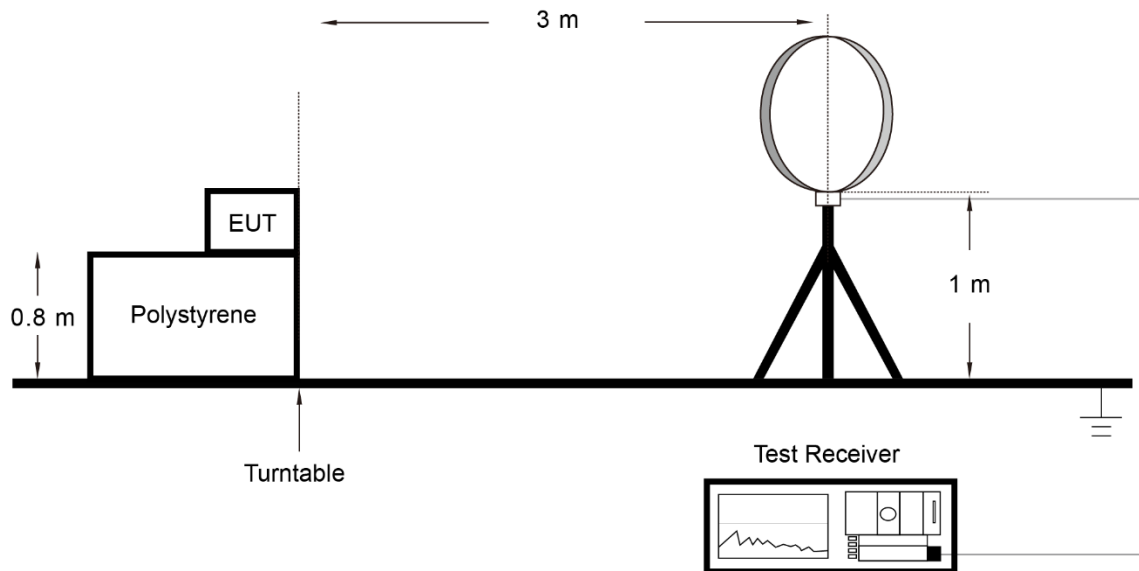
ANSI C63.10-2013 - Section 6.4.7

6.2.3. Test Setting

1. RBW = 9kHz
2. VBW = 3 * RBW
3. Detector = Peak
4. Trace mode = Max hold
5. Sweep = Auto couple
6. Allow the trace to stabilize

6.2.4. Test Setup

9kHz ~ 30MHz Test Setup:



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Out-band Emission Measurement

6.3.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Distance (m)	Level ($\mu\text{V/m}$)
0.009 - 0.490	300	2400/F (kHz)
0.490 - 1.705	30	24000/F (kHz)
1.705 - 30	30	30
30 - 88	3	100
88 - 216	3	150
216 - 960	3	200
Above 960	3	500

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Note 3: E field strength (dB $\mu\text{V/m}$) = 20 log E field strength ($\mu\text{V/m}$)

6.3.2. Test Procedure

ANSI C63.10-2013 - Section 6.5.4

6.3.3. Test Setting

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 9kHz for emission below 30MHz and 100kHz for emission between 30MHz and 1GHz
3. VBW = 3 * RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize

9kHz ~ 30MHz Test Setup:



Refer to Appendix A.2.

6.4. Occupied Bandwidth Measurement

6.4.1. Test Limit

The occupied bandwidth is measured with a spectrum analyzer connected to the receive antenna while the EUT is operating in transmission mode at the appropriate frequency.

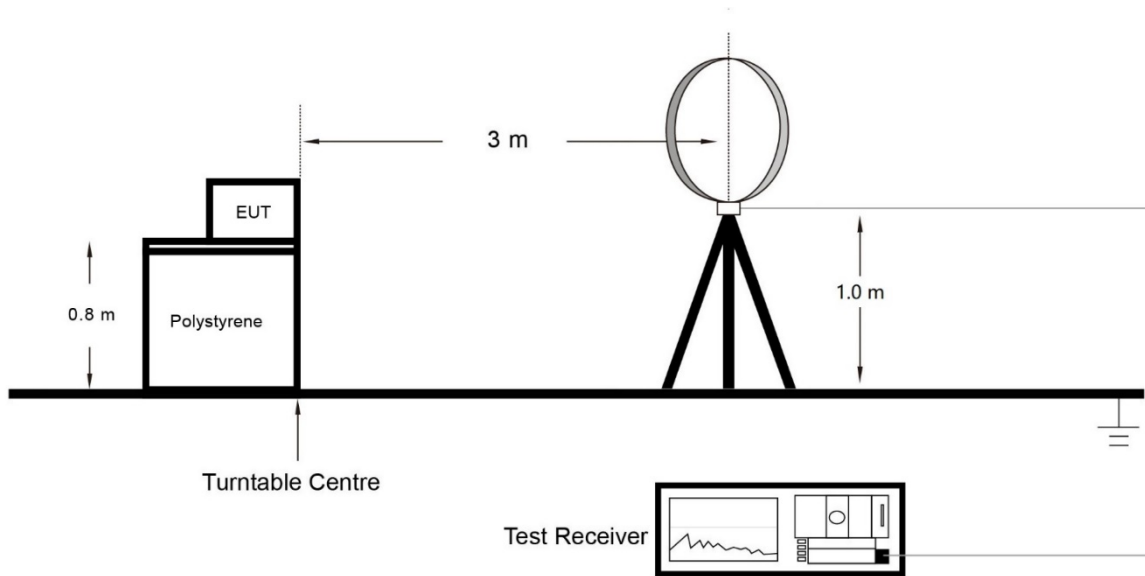
6.4.2. Test Procedure

ANSI C63.10-2013 - Section 6.9.2

6.4.3. Test Setting

1. Set RBW $\geq$ 1% to 5% of the 20dB bandwidth
2. VBW = approximately three times RBW
3. Span = approximately 2 to 5 times the 20dB bandwidth
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.3.

6.5. Frequency Tolerance Measurement

6.5.1. Test Limit

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency.

6.5.2. Test Procedure

ANSI C63.10-2013 - Section 6.8

6.5.3. Test Setting

Frequency Stability Under Temperature Variations:

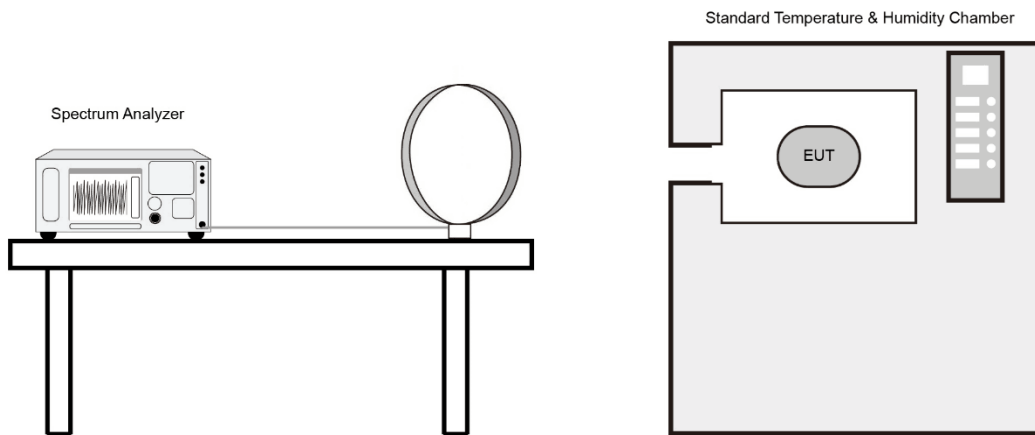
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change. For hand-carried battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.4.

6.6. AC Conducted Emissions Measurement

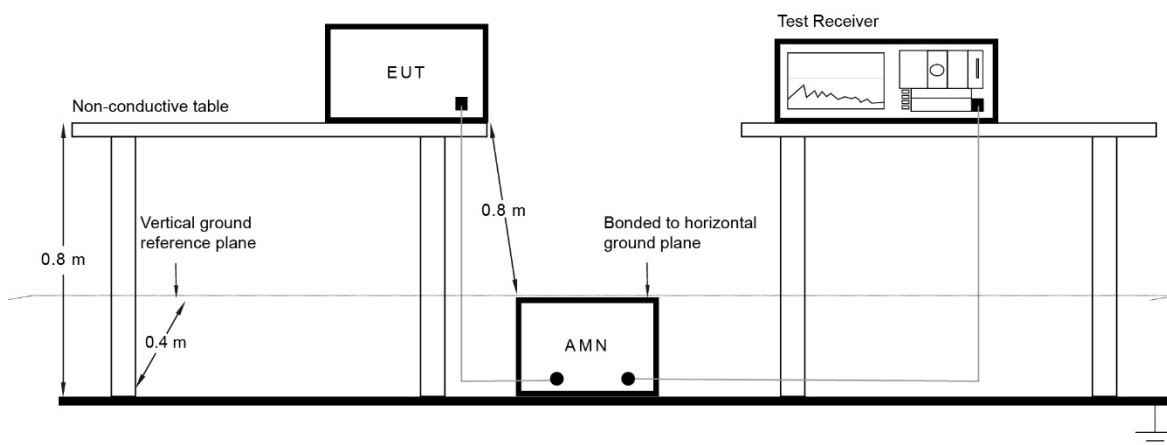
6.6.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207		
Frequency (MHz)	QP (dB μ V)	AV (dB μ V)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.6.2. Test Setup



6.6.3. Test Result

Refer to Appendix A.5.

Appendix A - Test Result

A.1 In-band Emission Test Result

Test Engineer	Hyde Yu	Test Date	2022-05-28
Test Mode	Mode1	Test Site	WZ-AC1

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit @3m (dBμV/m)	Margin [dB]	Detector	Polarization
13.40	20.81	17.04	37.85	80.51	-42.66	PK	Coaxial
13.53	32.49	17.03	49.52	90.47	-40.95	PK	Coaxial
13.56	49.85	17.03	66.88	124.00	-57.12	PK	Coaxial
13.59	32.75	17.03	49.78	90.47	-40.69	PK	Coaxial
13.72	19.29	17.03	36.32	80.51	-44.19	PK	Coaxial
13.40	24.60	17.04	41.64	80.51	-38.87	PK	Coaxial
13.53	36.68	17.03	53.71	90.47	-36.76	PK	Coaxial
13.56	54.78	17.03	71.81	124.00	-52.19	PK	Coplanar
13.59	38.64	17.03	55.67	90.47	-34.80	PK	Coplanar
13.72	25.78	17.03	42.81	80.51	-37.70	PK	Coplanar

Note

- All measurements were performed using a loop antenna. The antenna was positioned in two orthogonal (face on and face off) and the position with the highest emission level was recorded.
- Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)
Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)
- Measurements were tested at 3m and the data was extrapolated to the specified measurement distance of 30m using the square of an inverse linear extrapolation factor (40 dB/decade) as specified in &15.31(f)(2).
Extrapolation Factor = $40 \cdot \log(30/3) = 40$ dB
For example, Limit (@3m) = $20 \cdot \log(106) + 40 = 80.51$ dBμV/m
- All measurements were recorded using an EMI test receiver employing a peak detector.

A.2 Out-Band Emission Test Result

Test Engineer	Hyde Yu	Test Date	2022-05-28
Test Mode	Mode1	Test Site	WZ-AC2

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)	Detector	Polarization
0.15	31.74	17.12	48.86	104.08	-55.22	Peak	Coaxial
0.25	24.34	17.12	41.46	99.65	-58.19	Peak	Coaxial
0.42	21.19	17.22	38.41	95.14	-56.73	Peak	Coaxial
0.85	15.63	17.47	33.10	69.02	-35.92	Peak	Coaxial
1.24	14.50	17.50	32.00	65.74	-33.74	Peak	Coaxial
7.66	11.77	17.32	29.09	69.54	-40.45	Peak	Coaxial
0.15	29.35	17.12	46.47	104.08	-57.61	PK	Coplanar
0.36	21.62	17.17	38.79	96.48	-57.69	PK	Coplanar
0.66	16.07	17.41	33.48	71.21	-37.73	PK	Coplanar
1.03	14.81	17.50	32.31	67.35	-35.04	PK	Coplanar
6.06	12.33	17.35	29.68	69.54	-39.86	PK	Coplanar
27.12	17.10	17.13	34.23	69.54	-35.31	PK	Coplanar

Note:

- Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)
Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)
- Measurements were tested at 3m and the data was extrapolated to the specified measurement distance of 30m or 300m using the square of an inverse linear extrapolation factor (40 dB/decade) as specified in &15.31(f)(2). Extrapolation Factor = $40 \cdot \log(300/3) = 80$ dB for range 0.009 ~ 0.490MHz,
Extrapolation Factor = $40 \cdot \log(30/3) = 40$ dB for range 0.490 ~ 30MHz,
For example, Limit @3m = $20 \cdot \log(30) + 40 = 69.54$ dBμV/m
- Below 30MHz measurement was performed using a loop antenna. The antenna was positioned in two orthogonal (Coaxial and Coplanar) and the position with the highest emission level was recorded.
- All measurements were recorded using an EMI test receiver employing a peak detector.

Out-Band Emission Above 30MHz							
Polarization	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
H	149.31	10.47	18.07	28.54	43.50	-14.96	Peak
H	190.05	10.78	14.97	25.75	43.50	-17.75	Peak
H	271.05	22.11	17.29	39.40	46.00	-6.60	Peak
H	284.63	16.94	17.79	34.73	46.00	-11.27	Peak
H	300.15	13.43	18.15	31.58	46.00	-14.42	Peak
H	499.97	9.28	22.98	32.26	46.00	-13.74	Peak
V	40.67	13.99	17.80	31.79	40.00	-8.21	Peak
V	135.73	16.31	17.02	33.33	43.50	-10.17	Peak
V	149.31	18.71	18.07	36.78	43.50	-6.72	Peak
V	271.05	22.44	17.29	39.73	46.00	-6.27	Peak
V	284.63	17.83	17.79	35.62	46.00	-10.38	Peak
V	660.02	10.79	26.11	36.90	46.00	-9.10	Peak

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

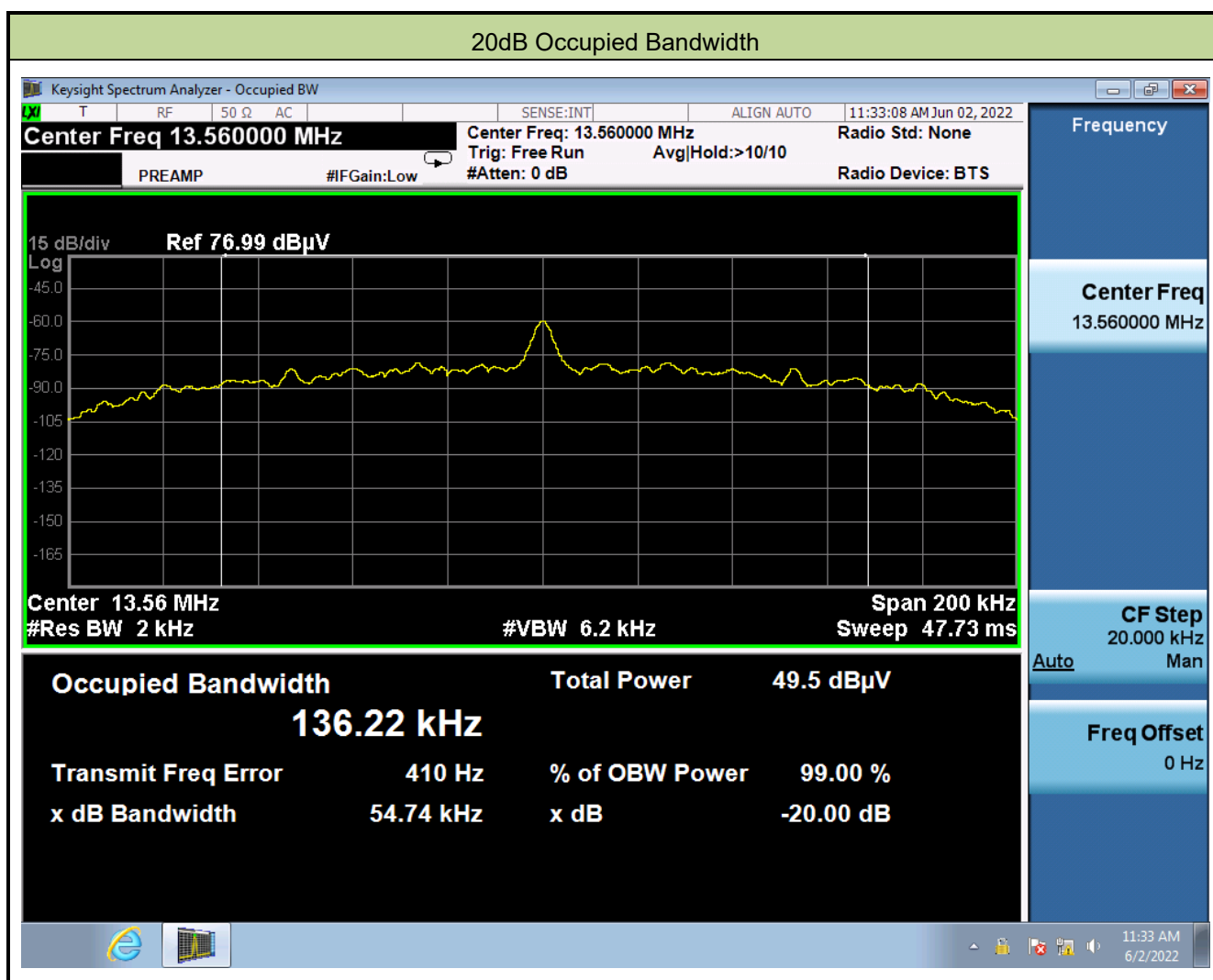
Note 2: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 3: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

A.3 Occupied Bandwidth Test Result

Test Engineer	Hyde Yu	Test Date	2022-06-02
Test Mode	Mode1	Test Site	WZ-AC1

Frequency (MHz)	20dB Occupied Bandwidth (kHz)
13.56	54.74



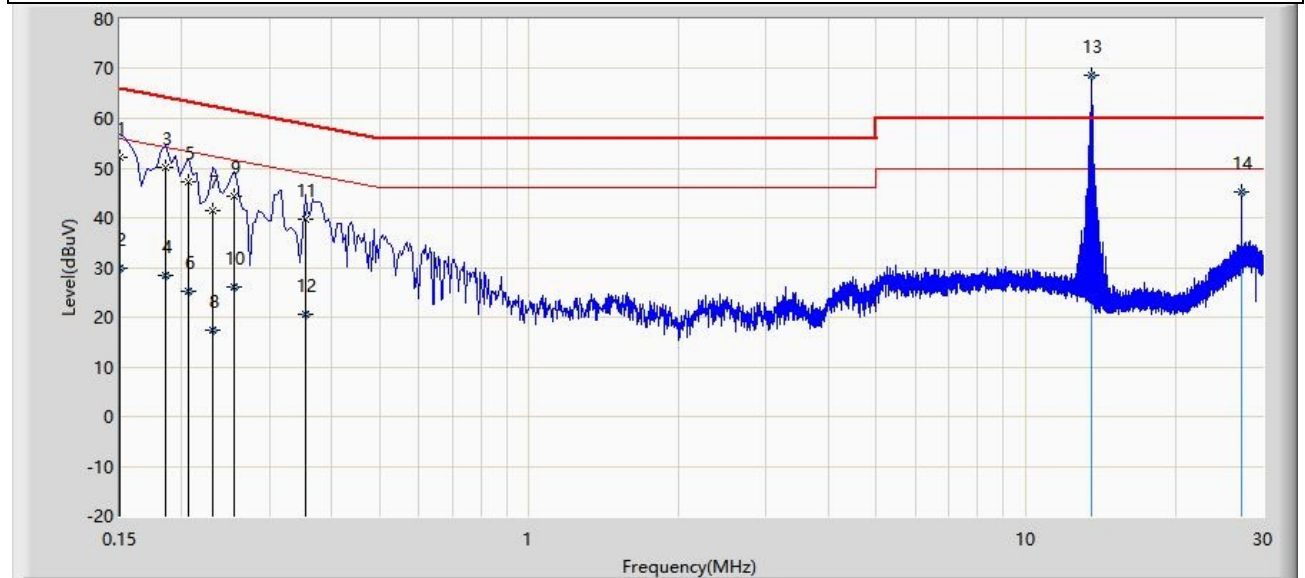
A.4 Frequency Stability Tolerance Test Result

Test Engineer	Hyde Yu	Test Date	2022-05-29
Test Mode	Mode1	Test Site	WZ-TR3

Reference Voltage: 120V			
Deviation Limit: +/- 0.01% = +/- 1356Hz			
Voltage (%)	Power Battery	Temp (°C)	Frequency Deviation (Hz)
100%	120V	-20	-50
		-10	-40
		0	-50
		+10	-40
		+20	-60
		+30	-40
		+40	-40
		+50	-20
85%	102V	+ 20	-60
115%	138V	+ 20	-50

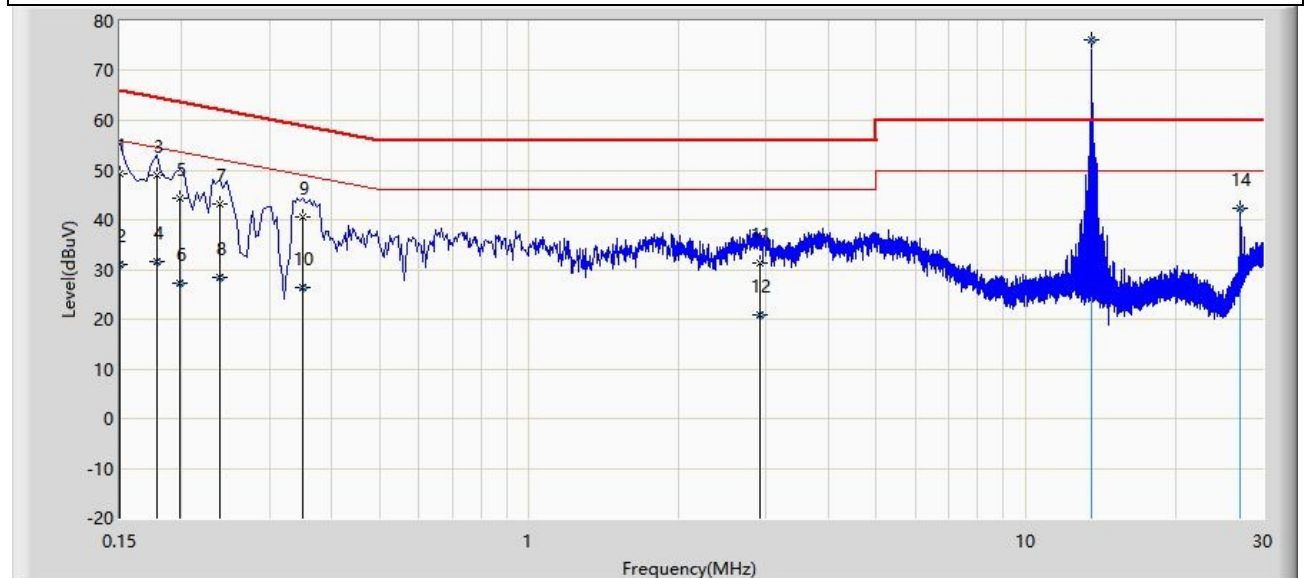
A.5 AC Conducted Emissions Test Result

Site: WZ-SR2	Test Date: 2022-05-30
Temperature: 23.3°C	Humidity: 51.1%
Limit: FCC_Part15.207_CE_AC Power	Engineer: Helen Han
Probe: ENV216_101683_Filter Off_E	Polarity: Line
EUT: Toniebox	Power: AC 120V/60Hz
Test Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.150	52.156	42.255	-13.844	66.000	9.901	QP
2		0.150	29.906	20.005	-26.094	56.000	9.901	AV
3		0.186	50.018	40.118	-14.196	64.213	9.900	QP
4		0.186	28.344	18.444	-25.869	54.213	9.900	AV
5		0.206	47.297	37.396	-16.068	63.365	9.901	QP
6		0.206	25.109	15.208	-28.256	53.365	9.901	AV
7		0.230	41.402	31.500	-21.048	62.450	9.902	QP
8		0.230	17.307	7.405	-35.143	52.450	9.902	AV
9		0.254	44.318	34.415	-17.307	61.625	9.903	QP
10		0.254	26.053	16.150	-25.572	51.625	9.903	AV
11		0.354	39.740	29.830	-19.128	58.868	9.910	QP
12		0.354	20.567	10.657	-28.301	48.868	9.910	AV
13		13.570	68.831	57.876	N/A	N/A	10.955	PK
14		27.130	45.187	33.244	N/A	N/A	11.944	PK

Site: WZ-SR2	Test Date: 2022-05-31
Temperature: 23.3°C	Humidity: 51.1%
Limit: FCC_Part15.207_CE_AC Power	Engineer: Helen Han
Probe: ENV216_101683_Filter Off_E	Polarity: Neutral
EUT: Toniebox	Power: AC 120V/60Hz
Test Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.150	49.228	39.308	-16.772	66.000	9.920	QP
2		0.150	30.933	21.013	-25.067	56.000	9.920	AV
3	*	0.178	49.102	39.187	-15.477	64.578	9.914	QP
4		0.178	31.572	21.658	-23.006	54.578	9.914	AV
5		0.198	44.322	34.410	-19.372	63.694	9.911	QP
6		0.198	27.312	17.401	-26.382	53.694	9.911	AV
7		0.238	43.168	33.256	-18.997	62.166	9.912	QP
8		0.238	28.270	18.357	-23.896	52.166	9.912	AV
9		0.350	40.494	30.575	-18.468	58.962	9.920	QP
10		0.350	26.373	16.453	-22.590	48.962	9.920	AV
11		2.906	31.423	21.269	-24.577	56.000	10.154	QP
12		2.906	20.769	10.615	-25.231	46.000	10.154	AV
13		13.566	76.294	65.329	N/A	N/A	10.965	PK
14		27.046	42.398	30.367	N/A	N/A	12.031	PK

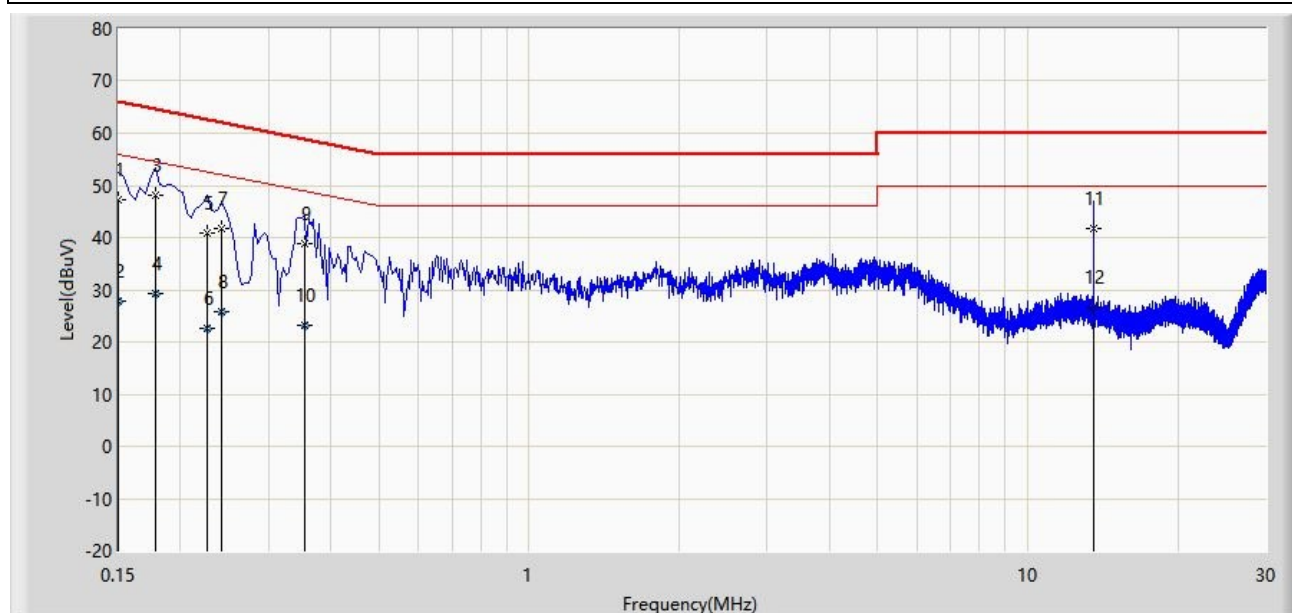
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Note 4: The point (13) is NFC fundamental frequency and the point (14) is harmonic frequency of NFC that are not evaluated in this standard. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

Site: WZ-SR2	Test Date: 2022/07/14
Temperature: 22.4°C	Humidity: 58.5%
Limit: FCC_Part15.207_CE_AC Power	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_E	Polarity: Line
EUT: Toniebox	Power: AC 120V/60Hz
Test Mode: Remove NFC Antenna	



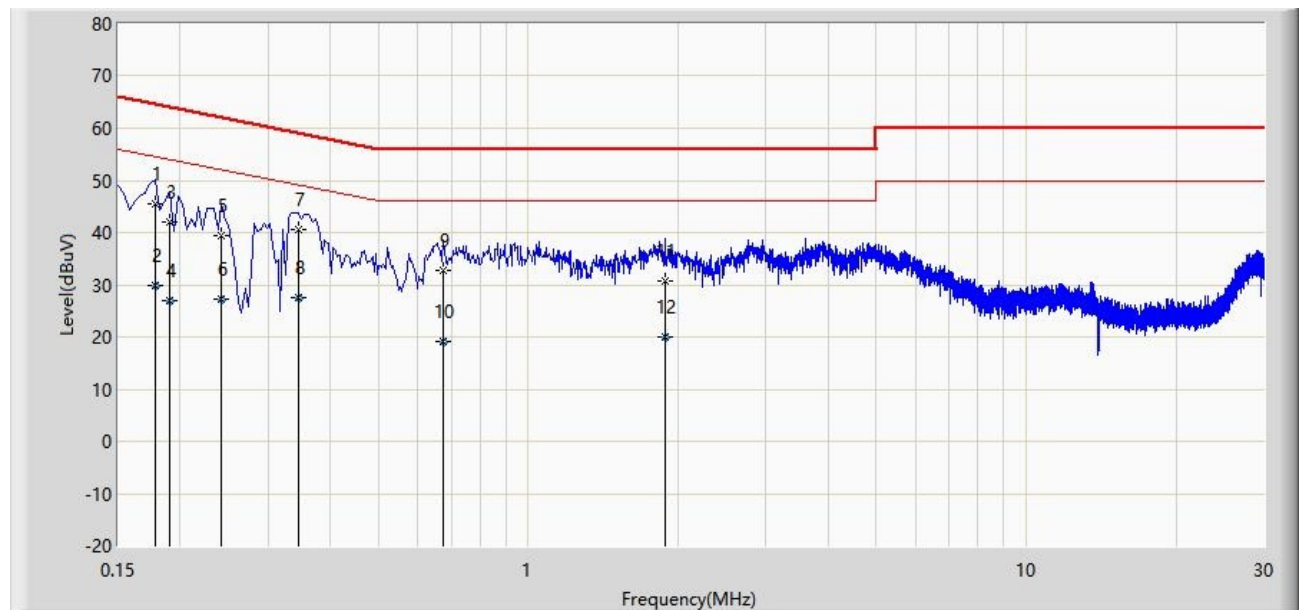
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.150	47.308	37.431	-18.692	66.000	9.878	QP
2		0.150	27.921	18.043	-28.079	56.000	9.878	AV
3	*	0.178	48.176	38.296	-16.391	64.567	9.880	QP
4		0.178	29.330	19.450	-25.238	54.567	9.880	AV
5		0.226	40.821	30.935	-21.774	62.595	9.885	QP
6		0.226	22.495	12.609	-30.101	52.595	9.885	AV
7		0.242	41.677	31.787	-20.351	62.027	9.890	QP
8		0.242	25.690	15.800	-26.337	52.027	9.890	AV
9		0.354	38.779	28.863	-20.089	58.868	9.916	QP
10		0.354	23.228	13.312	-25.640	48.868	9.916	AV
11		13.562	41.839	30.760	-18.161	60.000	11.080	QP
12		13.562	26.605	15.525	-23.395	50.000	11.080	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: WZ-SR2	Test Date: 2022/07/14
Temperature: 22.4°C	Humidity: 58.5%
Limit: FCC_Part15.207_CE_AC Power	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_E	Polarity: Neutral
EUT: Toniebox	Power: AC 120V/60Hz
Test Mode: Remove NFC Antenna	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.178	45.556	35.651	-19.022	64.578	9.906	QP
2		0.178	29.854	19.948	-24.724	54.578	9.906	AV
3		0.190	42.046	32.138	-21.991	64.037	9.908	QP
4		0.190	27.082	17.174	-26.954	54.037	9.908	AV
5		0.242	39.404	29.487	-22.623	62.027	9.917	QP
6		0.242	27.124	17.207	-24.904	52.027	9.917	AV
7	*	0.346	40.658	30.724	-18.400	59.058	9.934	QP
8		0.346	27.393	17.458	-21.665	49.058	9.934	AV
9		0.674	32.857	22.882	-23.143	56.000	9.975	QP
10		0.674	19.186	9.210	-26.814	46.000	9.975	AV
11		1.878	30.616	20.598	-25.384	56.000	10.017	QP
12		1.878	20.049	10.032	-25.951	46.000	10.017	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Appendix B - Test Setup Photograph

Refer to “2204RSU038-UT” file.

Appendix C - EUT Photograph

Refer to “2204RSU038-UE” file.

The End
