



MEASUREMENT REPORT

FCC Part 15 Subpart B / ICES-003

FCC ID: FHO-E1716

IC: 10912A-E1716

Applicant: IKEA of Sweden AB

Application Type: Certification

Product: Wireless Speaker ENEBY Built-in

Model No.: E1716

Brand Name: IKEA

FCC Rule Part(s): FCC Part 15 Subpart B: 2016 Class B

IC Rule Part(s): ICES-003 Issue 6

Test Procedure(s): ANSI C63.4: 2014

Result: Complies

Test Date: July 05 ~ July 25, 2018

Reviewed By : Kevin Guo
(Kevin Guo)

Approved By : Robin Wu
(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 C63.4-2014. 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
1807WSU002-U3	Rev. 01	Initial report	08-27-2018	Invalid
1807WSU002-U3	Rev. 02	Change Application type	09-30-2018	Invalid
1807WSU002-U3	Rev. 03	Change Application type from Verification to Certification	10-09-2018	Valid

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§2.1033 General Information

Applicant:	IKEA of Sweden AB
Applicant Address:	SE-343 81, Älmhult, Sweden
Manufacturer:	IKEA of Sweden AB
Manufacturer Address:	SE-343 81, Älmhult, Sweden
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
FCC Registration No.:	893164
IC Registration No.:	11384A-1
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in ANSI C63.4-2014.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications, Radio and SAR testing.



1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The measurement facility compliant with the test site requirements specified in ANSI C63.4-2014.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	Wireless Speaker ENEBY Built-in
Model No.:	E1716
Brand Name:	IKEA
Bluetooth Version:	V4.2 (Only support Bluetooth v3.0+HS)

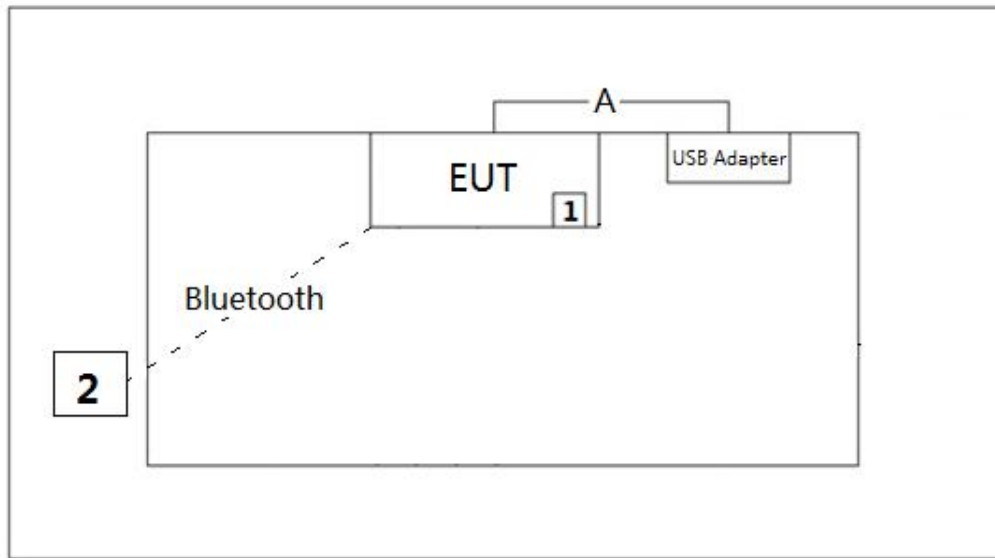
2.2. Test Mode

EMI Mode	Mode 1: Charging by USB adapter & Connect to Bluetooth Speaker through Bluetooth and play music
	Mode 2: Charging by USB adapter & Connect to Bluetooth Speaker through Audio Cable and play music

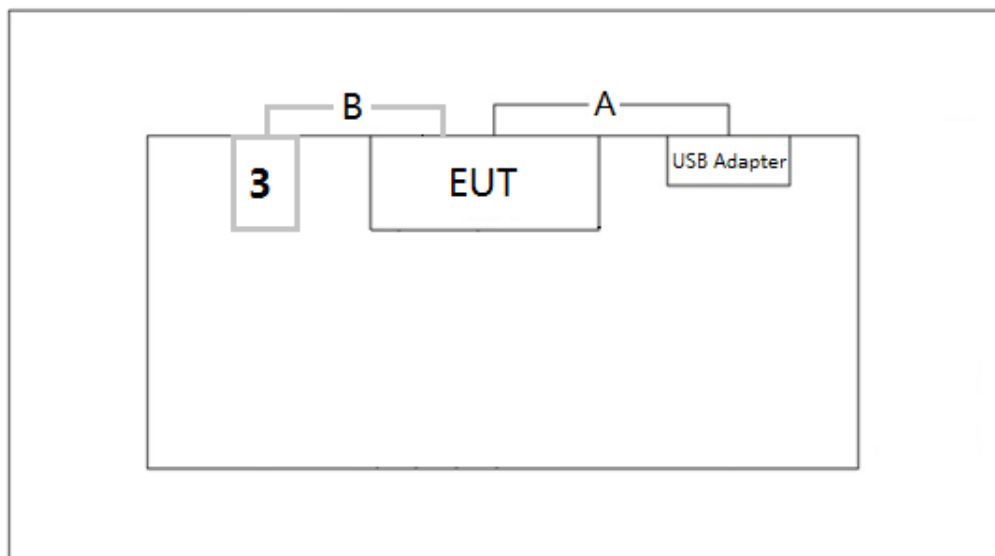
2.3. Configuration of Tested System

The **Wireless Speaker ENEBY Built-in** was tested per the guidance FCC Part 15 Subpart B: 2016 Class B and ANSI C63.4: 2014 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

Connection Diagram (Mode 1)



Connection Diagram (Mode 2)



Signal Cable Type		Signal Cable Description
A	USB Cable	Non-Shielding, 1m
B	Audio Cable	Non-Shielding, 1m

2.4. Test System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord
1 Mobile Phone	OPPO	X9009	MZWG99B6NZ7HY9VW	N/A

Note: USB adapter is provided by MRT.

2.5. Test Procedure

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	a) Make EUT Charging by USB adapter & Connect to Bluetooth Speaker through Bluetooth and play music b) Make EUT Charging by USB adapter & Connect to Bluetooth Speaker through Audio Cable and play music

2.6. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical Equipment in the Range of 9kHz to 18GHz (ANSI C63.4-2014) was used in the measurement of the device.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply line(s) will be connected to the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150 kHz to 30 MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9 kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or resolution, clock or data exchange speed, scrolling H pattern to the EUT and/or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. An MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30 MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30 MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 0.8 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, mode of operation, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB beam-width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2018/08/18
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2019/06/15
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2019/06/15
Thermohygrometer	Testo	608-H1	MRTSUE06404	1 year	2018/08/14
Shielding Anechoic Chamber	Mikebang	Chamber-SR2	MRTSUE06215	N/A	N/A

Radiated Disturbance - AC2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2019/06/20
Broadband Coaxial Preamp	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2018/11/06
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2018/11/06
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06171	1 year	2018/12/10
Digital Thermometer & Hygrometer	Minggao	ETH529	MRTSUE06170	1 year	2018/11/29
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2019/05/10

Software	Version	Function
EMI Software	V3	EMI Test Software

5. 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 - SR2	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
150kHz~30MHz: 2.42dB	
Radiated Emission Measurement – AC2	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
Horizontal: 30MHz~1GHz: 4.22dB	
1GHz~18GHz: 4.05dB	
Vertical: 30MHz~1GHz: 3.37dB	
1GHz~18GHz: 4.08dB	

6. TEST RESULT

6.1. Summary

Product Name: Wireless Speaker ENEBY Built-in

Test Mode: Mode 1, Mode 2

FCC Part Section(s)	IC Part Section(s)	Test Description	Test Result
15.107	ICES-003 Issue 5	Conducted Emissions	Pass
15.109	ICES-003 Issue 5	Radiated Emissions	Pass

6.2. Conducted Emission Measurement

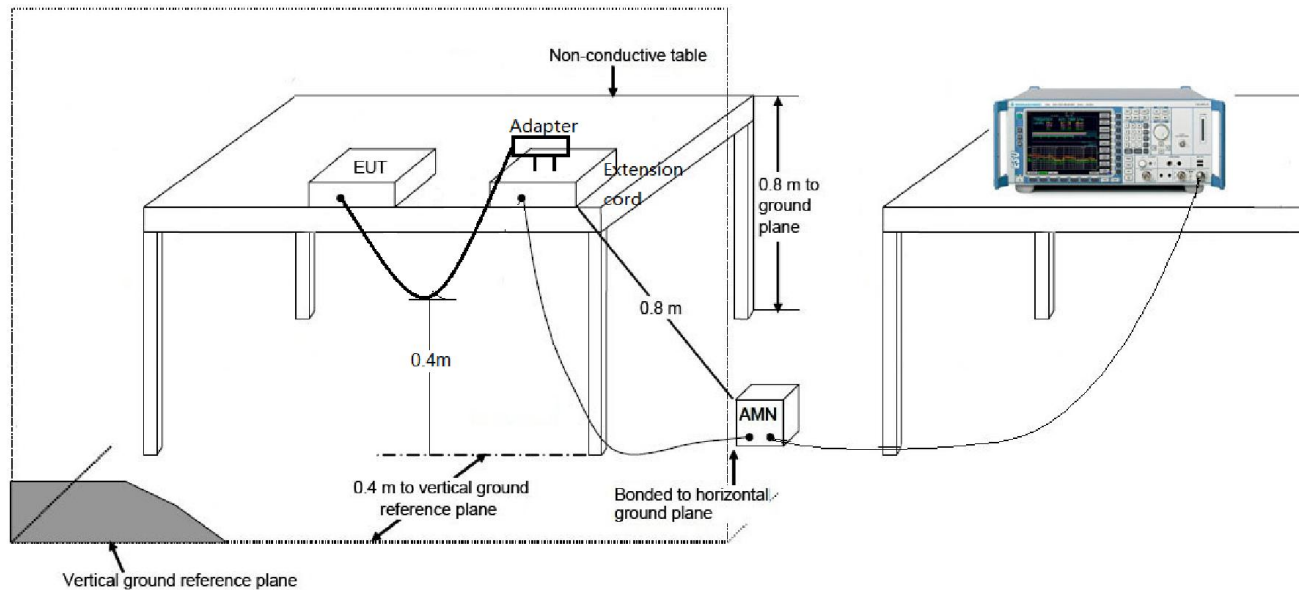
6.2.1. Test Limit

FCC Part 15.107 Limits		
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.

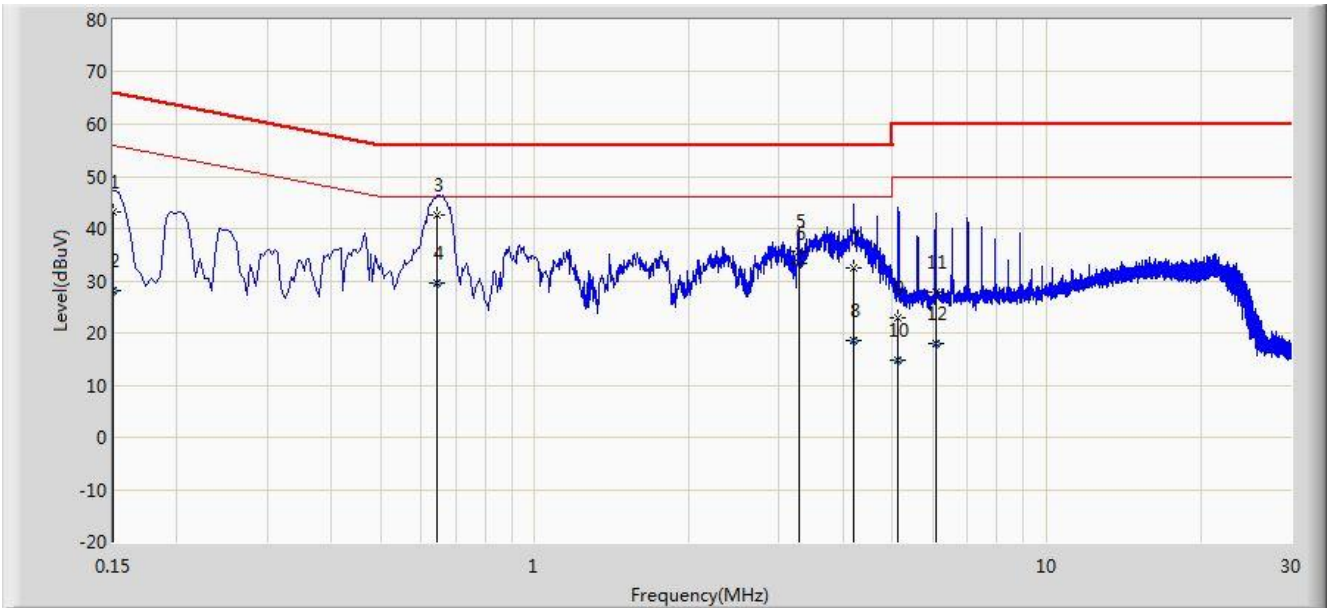
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.2.2. Test Setup



6.2.3. Test Result of Conducted Emissions

Site: SR2	Time: 2018/07/07 - 17:39
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 1	

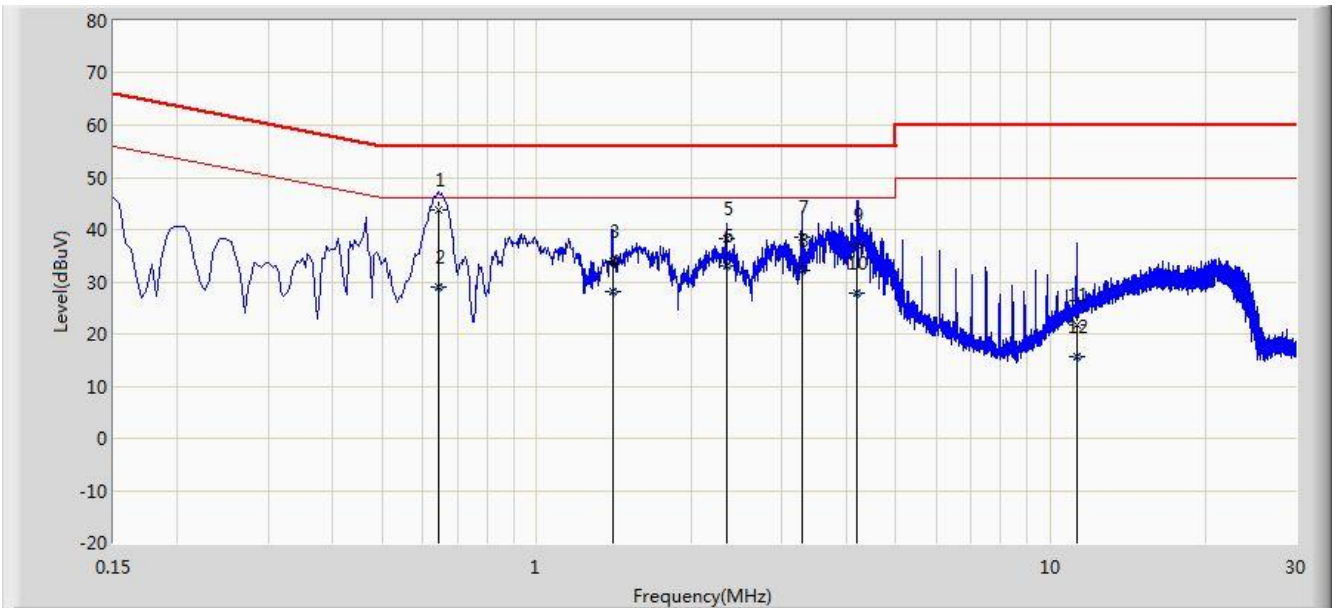


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Over Limit (dB)	Limit (dBμV)	Factor (dB)	Type
1			0.150	43.209	32.041	-22.791	66.000	11.168	QP
2			0.150	28.190	17.021	-27.810	56.000	11.168	AV
3			0.646	42.721	32.630	-13.279	56.000	10.091	QP
4			0.646	29.570	19.479	-16.430	46.000	10.091	AV
5			3.274	35.673	25.789	-20.327	56.000	9.884	QP
6		*	3.274	33.455	23.571	-12.545	46.000	9.884	AV
7			4.190	32.503	22.527	-23.497	56.000	9.976	QP
8			4.190	18.621	8.645	-27.379	46.000	9.976	AV
9			5.126	22.966	12.917	-37.034	60.000	10.048	QP
10			5.126	14.709	4.661	-35.291	50.000	10.048	AV
11			6.074	27.932	17.814	-32.068	60.000	10.118	QP
12			6.074	18.043	7.924	-31.957	50.000	10.118	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2018/07/09 - 17:05
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 1	

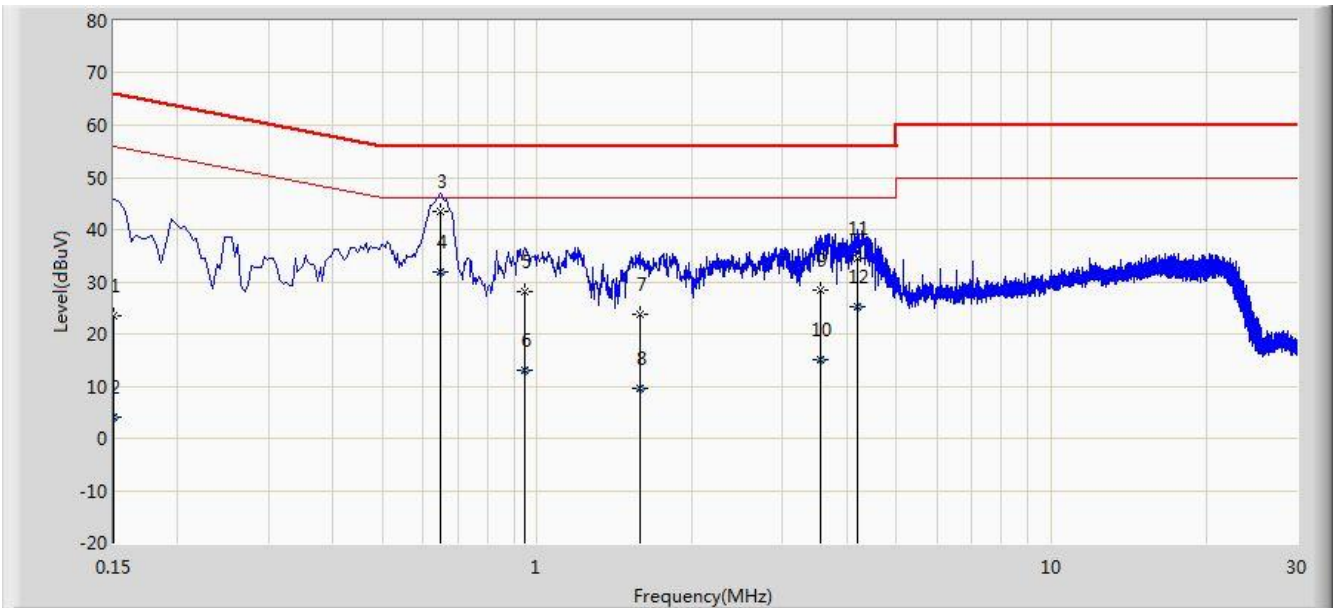


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.642	43.756	33.648	-12.244	56.000	10.108	QP
2			0.642	29.117	19.009	-16.883	46.000	10.108	AV
3			1.406	34.002	24.108	-21.998	56.000	9.893	QP
4			1.406	28.109	18.215	-17.891	46.000	9.893	AV
5			2.338	38.289	28.423	-17.711	56.000	9.865	QP
6			2.338	32.967	23.102	-13.033	46.000	9.865	AV
7			3.274	38.473	28.583	-17.527	56.000	9.890	QP
8			3.274	32.300	22.410	-13.700	46.000	9.890	AV
9			4.210	37.079	27.094	-18.921	56.000	9.985	QP
10			4.210	27.756	17.771	-18.244	46.000	9.985	AV
11			11.222	21.769	11.642	-38.231	60.000	10.127	QP
12			11.222	15.702	5.575	-34.298	50.000	10.127	AV

Note: Measure Level (dBuV) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2018/07/09 - 17:31
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 2	

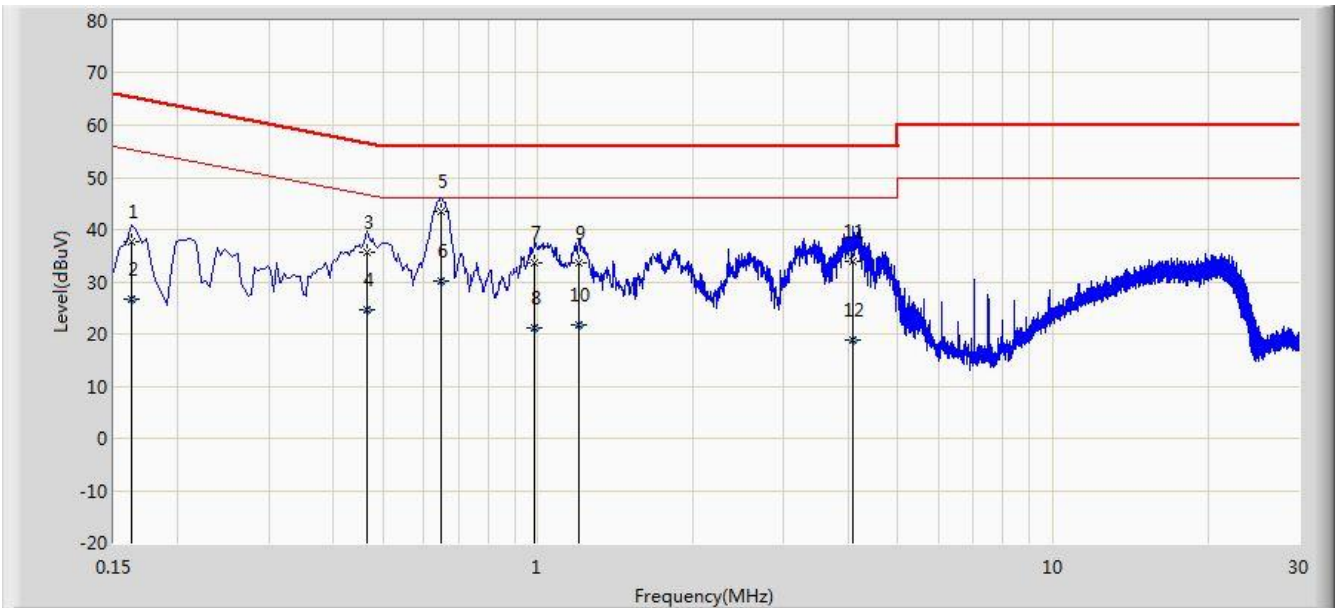


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	23.399	12.231	-42.601	66.000	11.168	QP
2			0.150	4.156	-7.013	-51.844	56.000	11.168	AV
3		*	0.650	43.557	33.468	-12.443	56.000	10.089	QP
4			0.650	31.932	21.843	-14.068	46.000	10.089	AV
5			0.946	28.026	18.091	-27.974	56.000	9.936	QP
6			0.946	13.023	3.087	-32.977	46.000	9.936	AV
7			1.590	23.738	13.852	-32.262	56.000	9.886	QP
8			1.590	9.466	-0.420	-36.534	46.000	9.886	AV
9			3.550	28.319	18.406	-27.681	56.000	9.913	QP
10			3.550	14.933	5.020	-31.067	46.000	9.913	AV
11			4.210	34.579	24.602	-21.421	56.000	9.977	QP
12			4.210	25.186	15.209	-20.814	46.000	9.977	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2018/07/09 - 17:36
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 2	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.162	37.648	27.569	-27.713	65.361	10.078	QP
2			0.162	26.753	16.675	-28.608	55.361	10.078	AV
3			0.466	35.535	25.373	-21.050	56.585	10.162	QP
4			0.466	24.627	14.465	-21.958	46.585	10.162	AV
5		*	0.650	43.383	33.279	-12.617	56.000	10.103	QP
6			0.650	30.135	20.032	-15.865	46.000	10.103	AV
7			0.986	33.636	23.719	-22.364	56.000	9.917	QP
8			0.986	21.105	11.188	-24.895	46.000	9.917	AV
9			1.202	33.534	23.632	-22.466	56.000	9.902	QP
10			1.202	21.718	11.815	-24.282	46.000	9.902	AV
11			4.098	33.789	23.811	-22.211	56.000	9.978	QP
12			4.098	18.755	8.777	-27.245	46.000	9.978	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

6.3. Radiated Emission Measurement

6.3.1. Test Limit

FCC Part 15.109 Limits		
Frequency (MHz)	Distance (m)	Level (dB μ V/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

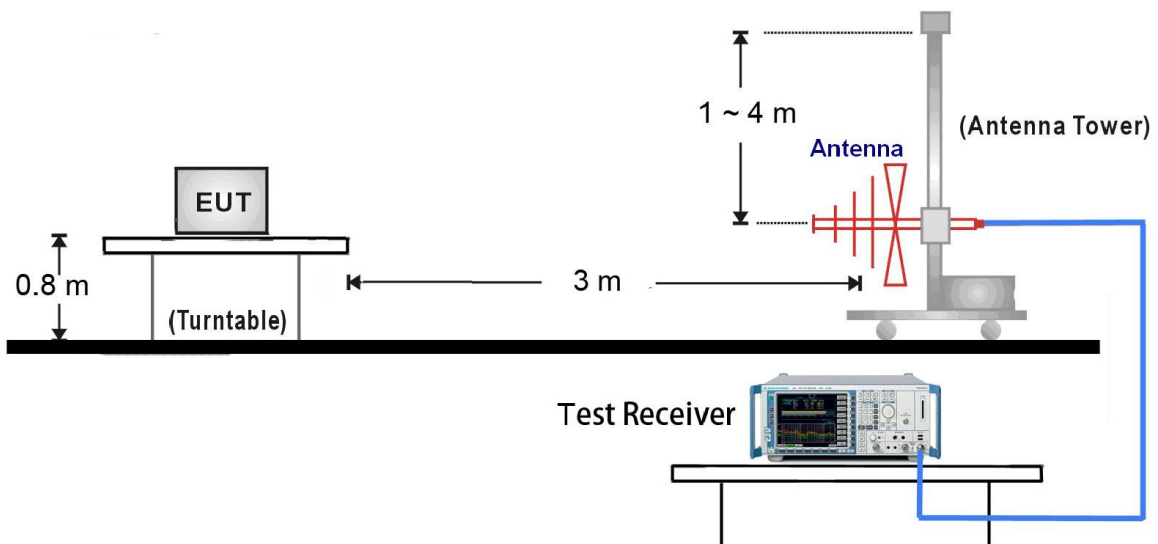
Note 1: The lower limit shall apply at the transition frequency.

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.

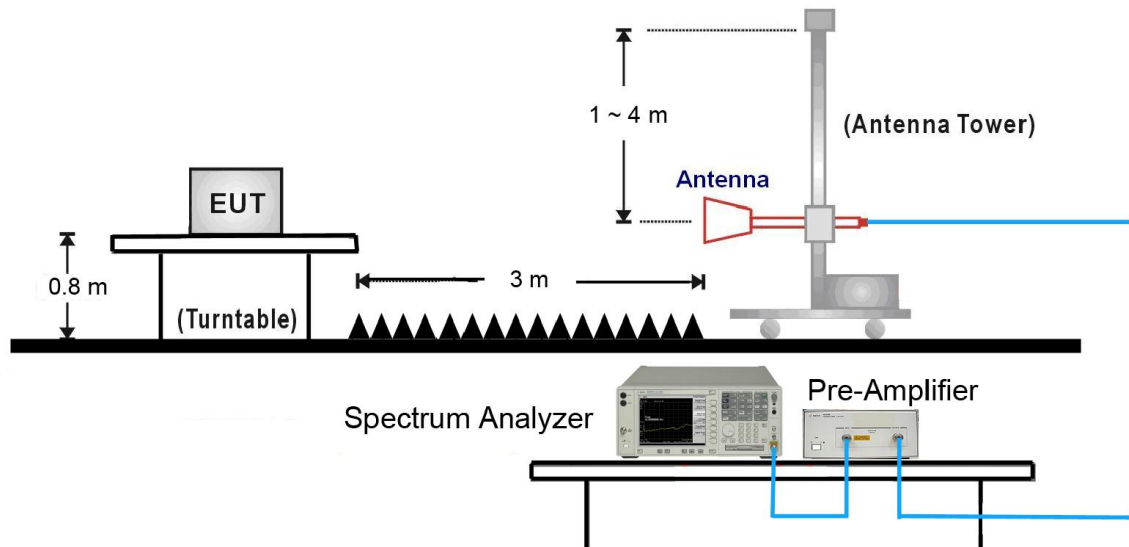
Note 3: E field strength (dB μ V/m) = 20 log E field strength (μ V/m)

6.3.2. Test Setup

30MHz ~ 1GHz Test Setup:

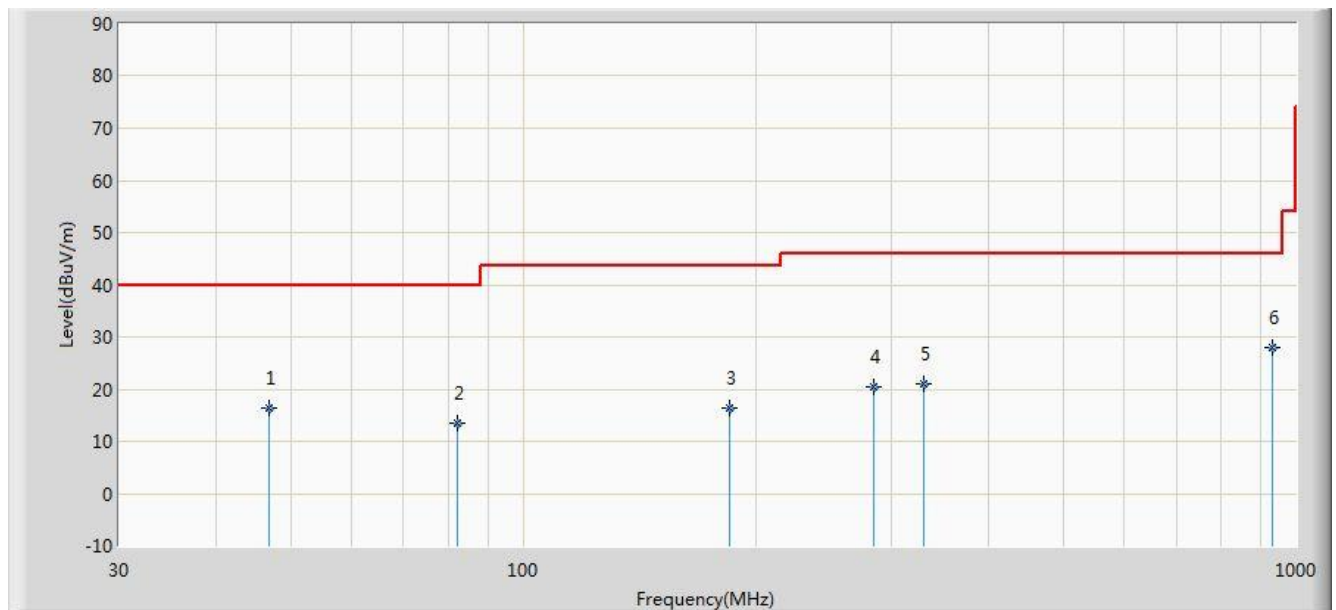


1GHz ~18GHz Test Setup:



6.3.3. Test Result of Radiated Emissions

Site: AC2	Time: 2018/07/05 - 17:19
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Max Wang
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 1	

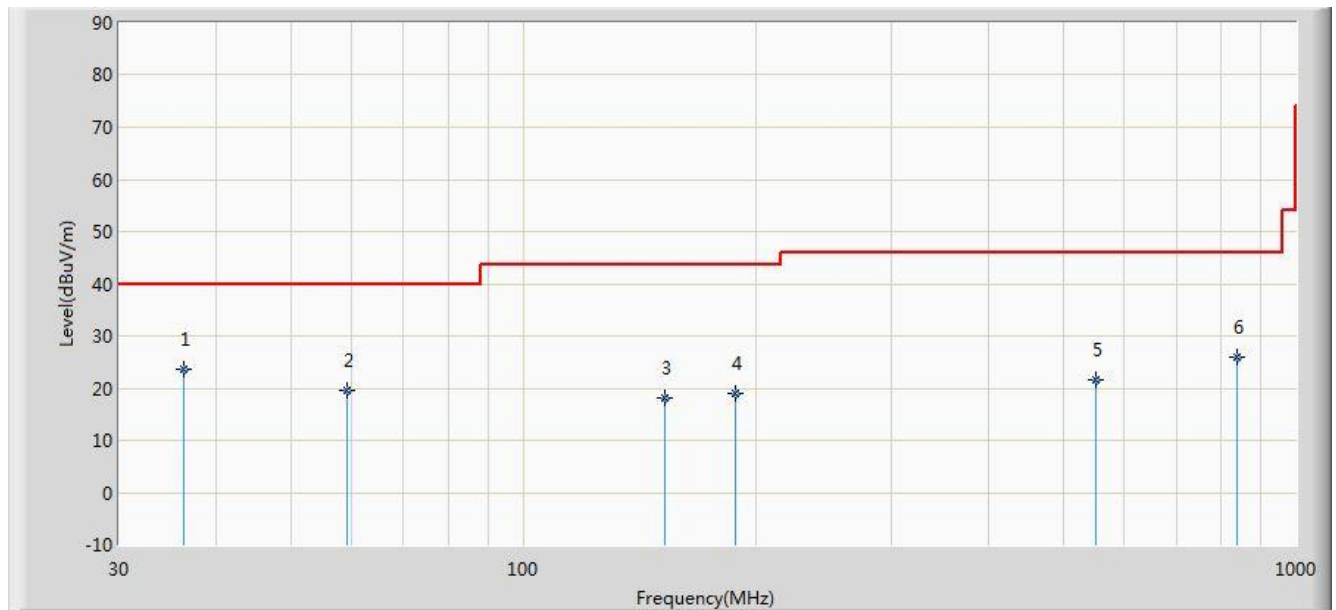


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			46.975	16.368	1.275	-23.632	40.000	15.093	QP
2			82.380	13.502	3.629	-26.498	40.000	9.873	QP
3			185.200	16.314	4.703	-27.186	43.500	11.611	QP
4			284.140	20.376	5.837	-25.624	46.000	14.539	QP
5			329.245	21.083	5.428	-24.917	46.000	15.655	QP
6		*	933.555	28.005	3.218	-17.995	46.000	24.787	QP

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC2	Time: 2018/07/05 - 17:24
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Max Wang
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 1	

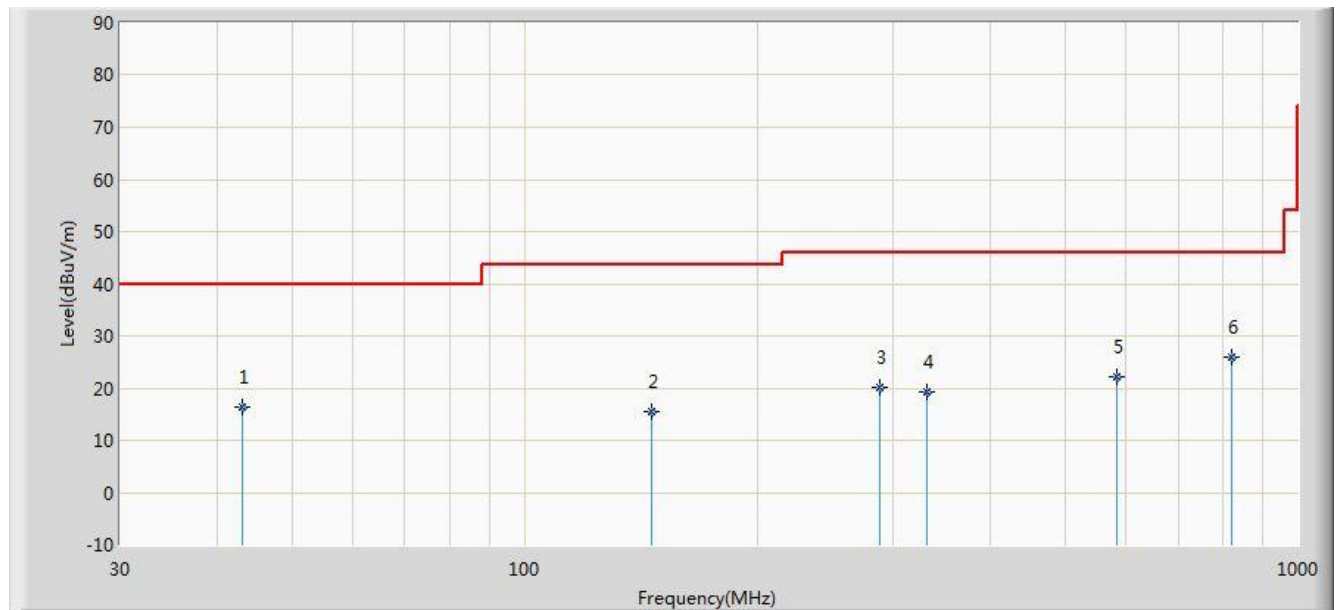


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	36.305	23.704	10.427	-16.296	40.000	13.277	QP
2			59.100	19.473	5.316	-20.527	40.000	14.158	QP
3			152.220	18.184	8.416	-25.316	43.500	9.768	QP
4			188.595	19.130	7.205	-24.370	43.500	11.925	QP
5			550.405	21.549	2.035	-24.451	46.000	19.514	QP
6			838.980	26.018	2.139	-19.982	46.000	23.879	QP

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC2	Time: 2018/07/05 - 17:29
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Max Wang
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 2	

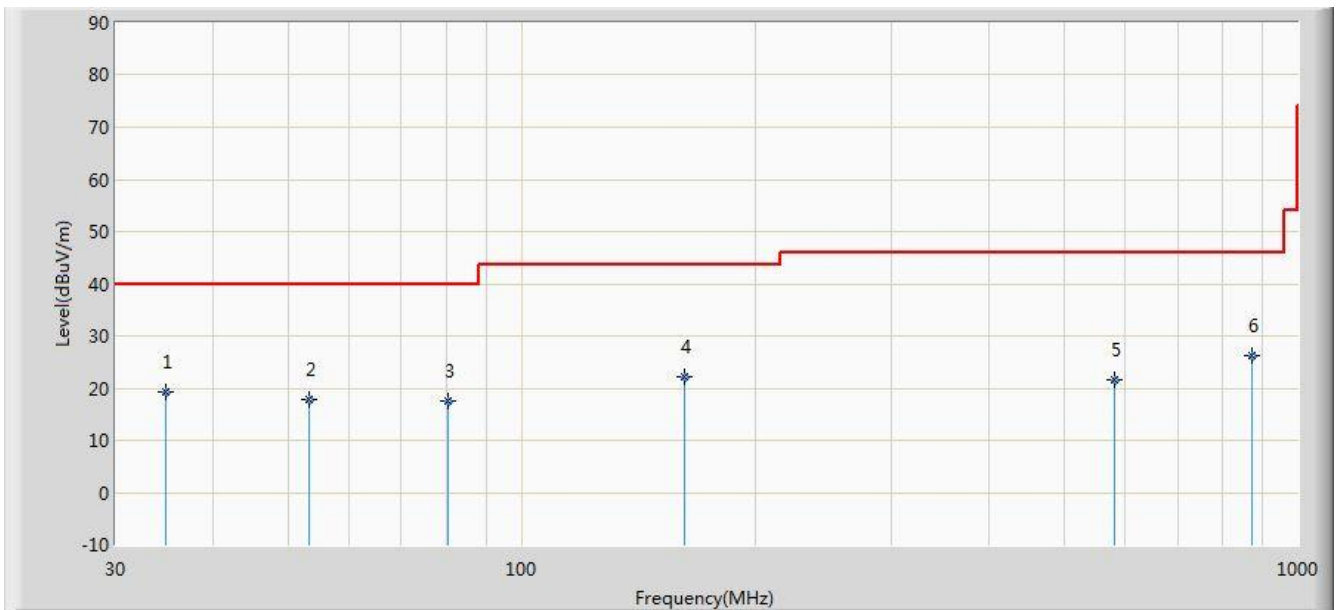


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			43.095	16.402	1.839	-23.598	40.000	14.563	QP
2			145.915	15.600	5.938	-27.900	43.500	9.662	QP
3			288.020	20.096	5.492	-25.904	46.000	14.604	QP
4			331.185	19.229	3.513	-26.771	46.000	15.716	QP
5			583.385	22.160	1.974	-23.840	46.000	20.185	QP
6		*	820.550	25.918	2.315	-20.082	46.000	23.603	QP

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC2	Time: 2018/07/05 - 17:32
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Max Wang
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 2	

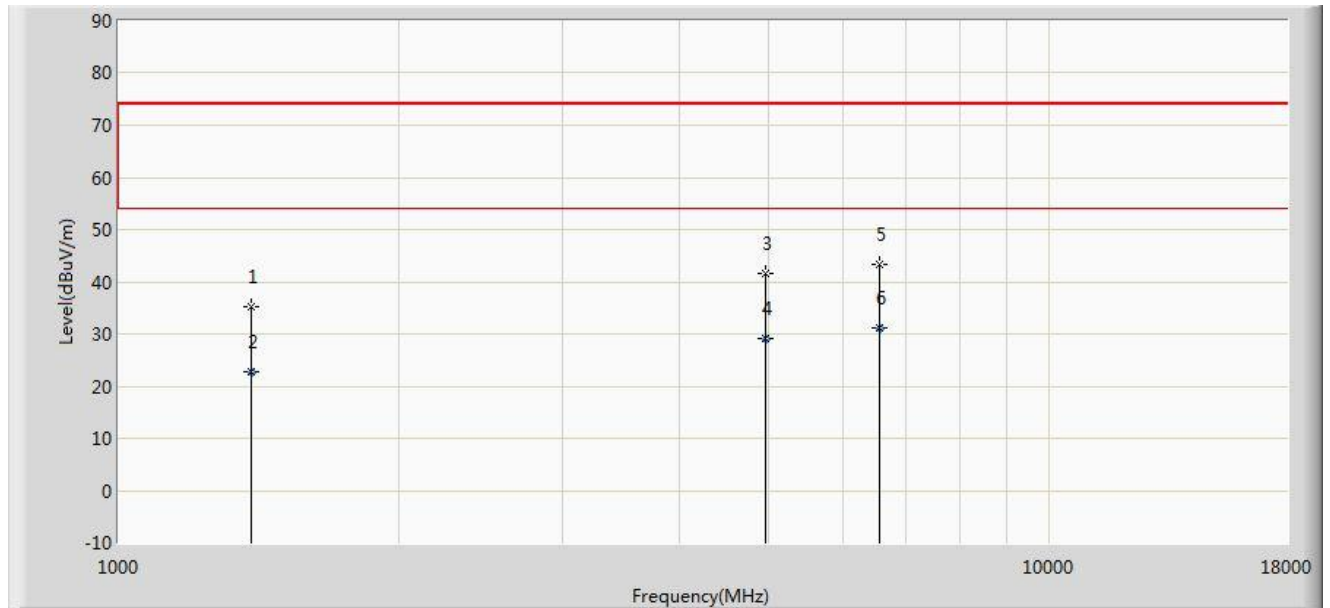


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			34.850	19.307	6.294	-20.693	40.000	13.013	QP
2			53.280	17.761	2.762	-22.239	40.000	14.999	QP
3			80.440	17.629	8.027	-22.371	40.000	9.601	QP
4			161.920	22.030	11.893	-21.470	43.500	10.137	QP
5			581.445	21.460	1.306	-24.540	46.000	20.154	QP
6		*	873.900	26.352	2.018	-19.648	46.000	24.334	QP

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC2	Time: 2018/07/09 - 10:46
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Max Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 1	

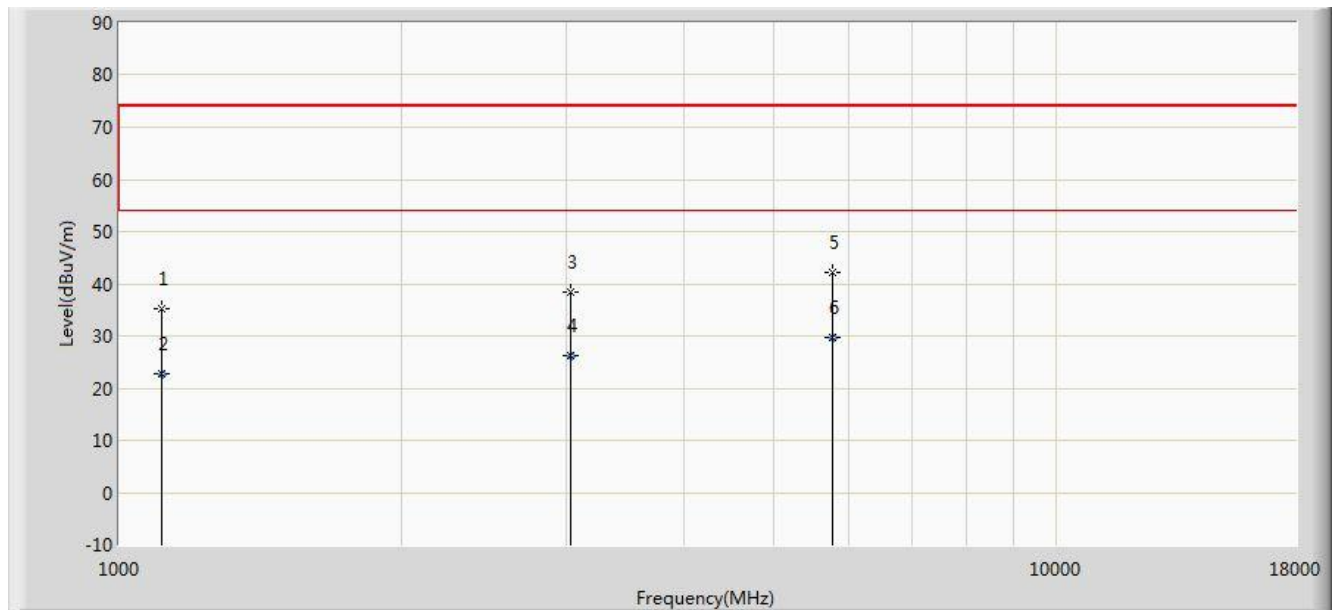


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			1391.000	35.211	38.317	-38.789	74.000	-3.106	PK
2			1391.000	22.721	25.827	-31.279	54.000	-3.106	AV
3			4952.500	41.505	35.840	-32.495	74.000	5.665	PK
4			4952.500	29.093	23.428	-24.907	54.000	5.665	AV
5			6559.000	43.336	32.691	-30.664	74.000	10.645	PK
6		*	6559.000	31.173	20.528	-22.827	54.000	10.645	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Site: AC2	Time: 2018/07/09 - 10:54
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Max Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 1	

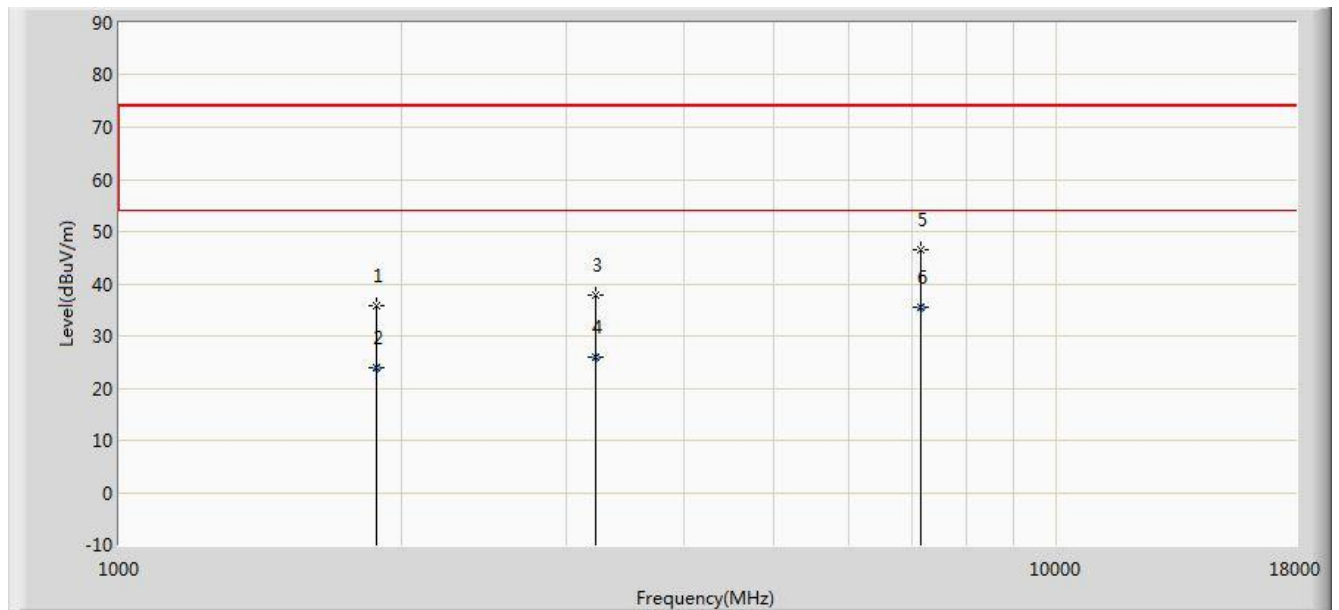


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			1110.500	35.236	39.761	-38.764	74.000	-4.525	PK
2			1110.500	22.689	27.214	-31.311	54.000	-4.525	AV
3			3031.500	38.355	38.262	-35.645	74.000	0.094	PK
4			3031.500	26.122	26.029	-27.878	54.000	0.094	AV
5			5760.000	42.192	34.739	-31.808	74.000	7.453	PK
6		*	5760.000	29.772	22.319	-24.228	54.000	7.453	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Site: AC2	Time: 2018/07/09 - 10:40
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Max Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 2	

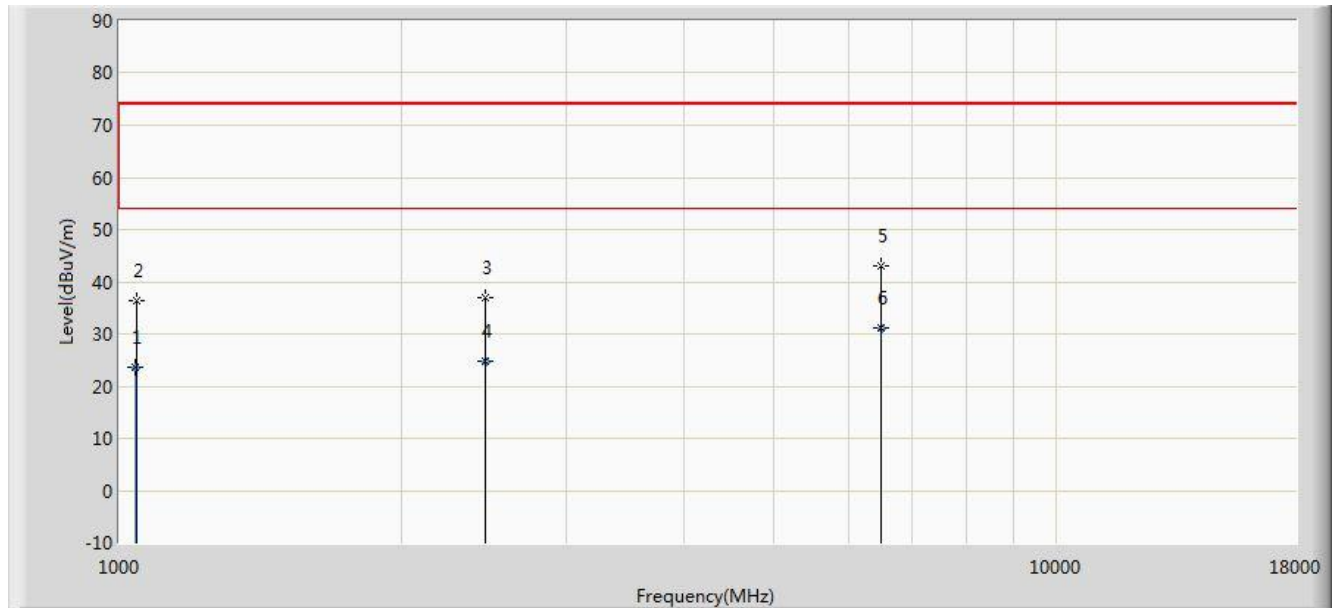


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			1884.000	35.867	38.587	-38.133	74.000	-2.720	PK
2			1884.000	24.015	26.735	-29.985	54.000	-2.720	AV
3			3218.500	37.748	37.192	-36.252	74.000	0.556	PK
4			3218.500	25.950	25.394	-28.050	54.000	0.556	AV
5			7171.000	46.459	32.655	-27.541	74.000	13.804	PK
6		*	7171.000	35.543	21.739	-18.457	54.000	13.804	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Site: AC2	Time: 2018/07/09 - 10:44
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Max Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Wireless Speaker ENEBY Built-in	Power: AC 120V/60Hz
Test Mode 2	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			1042.000	23.752	28.426	-30.248	54.000	-4.674	AV
2			1042.500	36.251	40.926	-37.749	74.000	-4.676	PK
3			2462.000	36.924	37.436	-37.076	74.000	-0.512	PK
4			2462.000	24.806	25.318	-29.194	54.000	-0.512	AV
5			6491.000	43.136	32.934	-30.864	74.000	10.202	PK
6		*	6491.000	31.096	20.894	-22.904	54.000	10.202	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

7. CONCLUSION

The data collected relate only the item(s) tested and show that the **Wireless Speaker ENEBY Built-in** has been tested to comply with the requirements specified in Part 15B of the FCC Rules and ICES-003 Issue 6 of IC Rules.

The End

Appendix A – Test Setup Photograph

Refer to “1807WSU002-UT” file.

Appendix B – EUT Photograph

Refer to “1807WSU002-UE” file.