FCC AND ISED CERTIFICATION TEST REPORT

FOR

Applicant	**:**	Harman International Industries, Inc.
Address	**:**	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES
Equipment under Test	**:**	Portable Bluetooth Speaker
Model No.	**:**	BOOMBOX 2
Trade Mark	**:**	JBL
FCC ID	**:**	APIJBLBOOMBOX2
IC	**:**	6132A-JBLBOOMBOX2
Manufacturer	**:**	Harman International Industries, Inc.
Address	**:**	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808
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REPORT

Table of Contents

	Test report declares	3
1.	Summary of Test Results	5
2.	General Test Information	6
2.1.	Description of EUT	6
2.2.	Accessories of EUT	7
2.3.	Assistant equipment used for test	7
2.4.	Block diagram of EUT configuration for test	7
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 Test	10
4.	Radiated Emission	12
4.1.	Block diagram of test setup	12
4.2.	Limit	13
4.3.	Test procedure	14
4.4.	Test result	16
5.	Band Edge Compliance (Radiated Method)	20
5.1.	Block diagram of test setup	20
5.2.	Limit	20
5.3.	Test procedure	20
5.4.	Test result	20
6.	Antenna Requirements	33
6.1.	Limit	33
6.2.	Result	33
7.	Test Setup Photograph	34
8.	Photos of the EUT	35

Test Report Declare

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Equipment under Test	:	Portable Bluetooth Speaker
Model No.	:	BOOMBOX 2
Trade mark	:	JBL
Manufacturer	:	Harman International Industries, Inc.
Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart C, RSS-247 Issue 2 February 2017.

Test procedure used:

ANSI C63.10:2013, RSS-Gen Issue 5, Apr. 2018.

We Declare:

The equipment described above is tested by Dongguan 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 Dongguan Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC&ISED standards.

Report No.:	DDT-R19092708-1E6 Rev.03		
Date of Receipt:	Feb. 24, 2021	**Date of Test:**	Feb. 24, 2021 ~ Mar. 12, 2021

Prepared By:

Sam Li

Sam Li/Engineer

Approved By:

Damon Hu

Damon Hu/EMC Manager

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

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Dec. 17, 2019	
Rev.01	Add new power supplier information and new battery supplier information.	May 07, 2020	Bobo Chen
Rev.02	This report added battery cell (SUN-INTE-213) based on the report Rev. 01.	Nov. 11, 2020	Talent Zhang
Rev.03	This report added antenna based on the report Rev. 02	May 28, 2021	Sam Li

1. Summary of Test Results

Description of Test Item	Standard	Results
Radiated Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d) ANSI C63.10:2013 RSS-247 Issue 2 RSS-Gen Issue 5	Pass
Band Edge Compliance	FCC Part 15: 15.247(d) ANSI C63.10:2013 RSS-247 Issue 2 RSS-Gen Issue 5	Pass
Antenna Requirement	FCC Part 15: 15.203 RSS-Gen Issue 5	Pass
Note: This report added antenna based on the report Rev. 02, this change doesn't influence the RF conducted performance, so only radiated emission and band edge compliance were tested and updated in this report.		

2. General Test Information

2.1. Description of EUT

EUT* Name	:	Portable Bluetooth Speaker
Model Number	:	BOOMBOX 2
EUT function description	:	Please reference user manual of this device
Power supply	:	DC 24V from external AC Adapter or DC 7.2V built-in battery
Radio Specification	:	SRD
Operation frequency	:	2407 MHz - 2475 MHz
Modulation	:	GFSK, π/4-DQPSK, 8DPSK
Data rate	:	1 Mbps, 2 Mbps, 3 Mbps
Antenna Type	:	Dedicated FPC antenna, maximum PK gain: 2.18 dBi
Sample Type	:	Series production

Note: EUT is the abbreviation of equipment under test.

Channel information					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
5	2407	28	2430	51	2453
6	2408	29	2431	52	2454
7	2409	30	2432	53	2455
8	2410	31	2433	54	2456
9	2411	32	2434	55	2457
10	2412	33	2435	56	2458
11	2413	34	2436	57	2459
12	2414	35	2437	58	2460
13	2415	36	2438	59	2461
14	2416	37	2439	60	2462
15	2417	38	2440	61	2463
16	2418	39	2441	62	2464
17	2419	40	2442	63	2465
18	2420	41	2443	64	2466
19	2421	42	2444	65	2467
20	2422	43	2445	66	2468
21	2423	44	2446	67	2469
22	2424	45	2447	68	2470
23	2425	46	2448	69	2471
24	2426	47	2449	70	2472
25	2427	48	2450	71	2473
26	2428	49	2451	72	2474
27	2429	50	2452	73	2475

2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Description	Remark
AC Adapter	Harman	GHDT24V-4.2 C-DC	Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 24V4.2A	With a magnetic ring
Rechargeable Li-ion Battery	SUNWODA Electronic Co., Ltd.	SUN-INTE-21 3	7.26VDC, 10000mAh, 72.6Wh	Cell Manufacturer: SAMSUNG
AC cable	Harman	N/A	1.2 m long, unshielded, non-magnetic ring	N/A
AC Adapter	Harman	NSA100ED-2 4042000	Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 24V4.2A	With a magnetic ring
Rechargeable Li-ion Battery	SUNWODA Electronic Co., Ltd.	SUN-INTE-26 8	7.2VDC, 10000mAh, 72Wh	N/A

New power supplier and new battery supplier information:

Description of Accessories	Manufacturer	Model number	Description	Remark
Rechargeable Li-ion Battery	SUNWODA Electronic Co., Ltd.	SUN-INTE-21 3	7.26VDC, 10000mAh, 72.6Wh	Cell Manufacturer: Sanyo

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
Notebook	Lenovo Beijing Co. Ltd.	ThinkPad	FCC/CE	TP00015A

2.4. Block diagram of EUT configuration for test

EUT

Test software: FCCTool.exe
The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

Tested mode, channel, information			
Mode	Setting Tx Power	Channel	Frequency (MHz)
GFSK hopping on Tx mode	/	CH5 to CH73	2407 to 2475
π/4-DQPSK hopping on Tx mode	/	CH5 to CH73	2407 to 2475
8DPSK hopping on Tx mode	/	CH5 to CH73	2407 to 2475
GFSK hopping off Tx mode	/	CH5	2407
	/	CH39	2441
	/	CH73	2475
π/4-DQPSK hopping off Tx mode	/	CH5	2407
	/	CH39	2441
	/	CH73	2475
8DPSK hopping off Tx mode	/	CH5	2407
	/	CH39	2441
	/	CH73	2475

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 ℃
Humidity range:	40-75%
Pressure range:	86-106 kPa

2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

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

CNAS Accreditation No. L6451; A2LA Accreditation No. 3870.01

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

Industry Canada site registration number: 10288A-1; CAB identifier: CN0048

2.8. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.40 dB (3.6 GHz ≤ f < 8 GHz)
	1.66 dB (8 GHz ≤ f < 22 GHz)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 ℃
Humidity	2 %
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	3.32 dB (150 kHz - 30 MHz)
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 Test

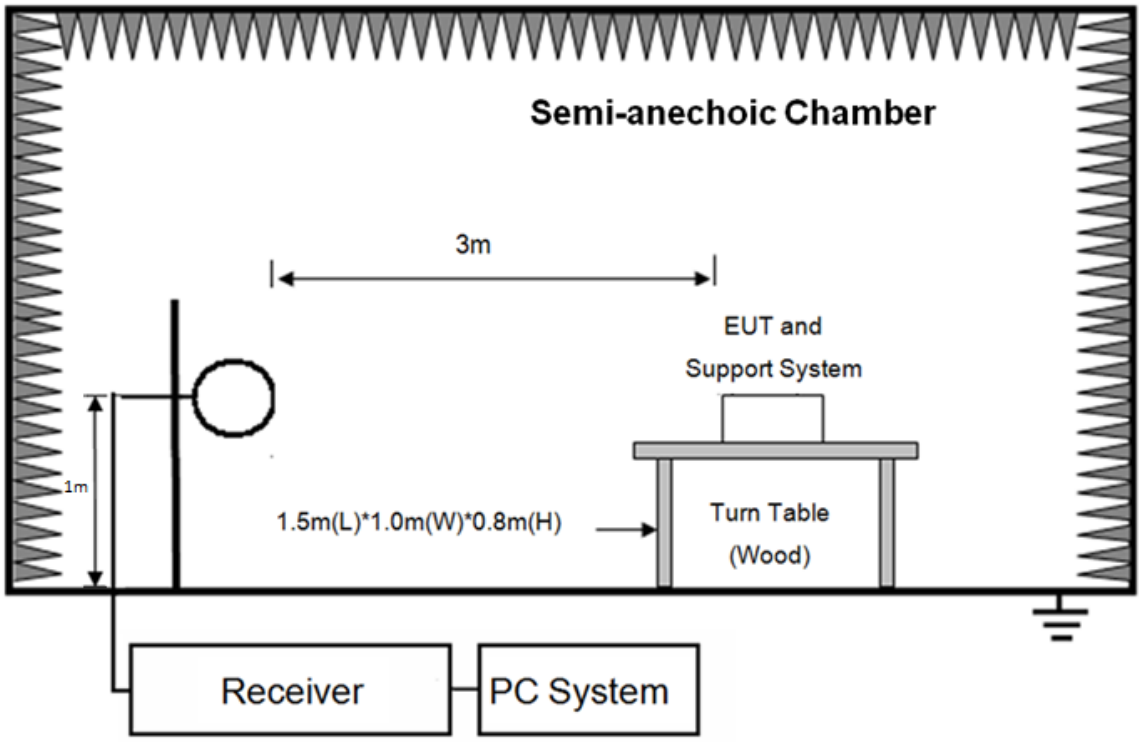
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
RF Connected Test (Tonscend RF Measurement System 1#)					
Spectrum analyzer	R&S	FSU26	101272	Jul. 01, 2020	1 Year
Spectrum analyzer	Agilent	N9020D	MY49100362	Sep. 28, 2020	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Jul. 01, 2020	1 Year
Vector Signal Generator	Agilent	E8267D	US49060192	Sep. 24, 2020	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180737	Jul. 01, 2020	1 Year
Power Sensor	Agilent	U2021XA	MY55150010	Jul. 01, 2020	1 Year
Power Sensor	Agilent	U2021XA	MY55150011	Jul. 01, 2020	1 Year
DC Power Source	MATRIS	MPS-3005L-3	D813058W	Apr. 25, 2020	1 Year
RF Cable	Micable	C10-01-01-1	100309	Sep. 28, 2020	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	Jul. 01, 2020	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.7	N/A	N/A
RF Connected Test (Tonscend RF Measurement System 2#)					
Spectrum analyzer	R&S	FSU26	200071	Sep. 25, 2020	1 Year
Spectrum analyzer	Agilent	N9020D	MY49100362	Sep. 28, 2020	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Jul. 01, 2020	1 Year
Vector Signal Generator	Agilent	N5182A	MY19060405	Jul. 01, 2020	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180912	Jul. 01, 2020	1 Year
RF Control Unit	Tonsend	JS0806-2	DDT-ZC01449	Jul. 01, 2020	1 Year
DC Power Source	MATRIS	MPS-3005L-3	D813058W	Apr. 25, 2020	1 Year
RF Cable	Micable	C10-01-01-1	100309	Sep. 28, 2020	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	Jul. 01, 2020	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.7	N/A	N/A
Radiation 1#chamber					
EMI Test Receiver	R&S	ESU8	100316	Sep. 24, 2020	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jul. 01, 2020	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	Nov. 13, 2020	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Nov. 13, 2020	1 Year
Double Ridged Horn Antenna	R&S	HF907	100276	Nov. 18, 2020	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	Apr. 11, 2020	1 Year
Pre-amplifier	A.H.	PAM-0118	360	Sep. 28, 2020	1 Year
RF Cable	HUBSER	CP-X2+	W11.03+	Sep. 24, 2020	1 Year

		CP-X1	W12.02		
RF Cable	N/A	5m+6m+1m	06270619	Sep. 30, 2020	1 Year
MI Cable	HUBSER	C10-01-01-1 M	1091629	Sep. 30, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
Radiation 2#chamber					
EMI Test Receiver	R&S	ESCI	101364	Sep. 28, 2020	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jul. 01, 2020	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	9163-994	Nov. 13, 2020	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Nov. 13, 2020	1 Year
Double Ridged Horn Antenna	Schwarzbeck	BBHA9120	02108	Jul. 11, 2020	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	Apr. 11, 2020	1 Year
Pre-amplifier	TERA-MW	TRLA-0040 G35	1013 03	Sep. 28, 2020	1 Year
RF Cable	N/A	14+1.5m	06270619	Sep. 28, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
Power Line Conducted Emissions Test 1#					
EMI Test Receiver	R&S	ESU8	100316	Sep. 24, 2020	1 Year
LISN 1	R&S	ENV216	101109	Sep. 28, 2020	1 Year
LISN 2	R&S	ESH2-Z5	100309	Sep. 28, 2020	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Sep. 24, 2020	1 Year
CE Cable 1	HUBSER	N/A	W10.01	Sep. 24, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
Power Line Conducted Emissions Test 2#					
Test Receiver	R&S	ESPI	101761	Sep. 24, 2020	1 Year
LISN 1	R&S	ENV216	101170	Sep. 28, 2020	1 Year
LISN 2	R&S	ESH2-Z5	100309	Sep. 28, 2020	1 Year
Pulse Limiter	R&S	KH43101	43101180156 8-12#	Jul. 01, 2020	1 Year
CE Cable 2	HUBSER	N/A	W11.02	Sep. 24, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

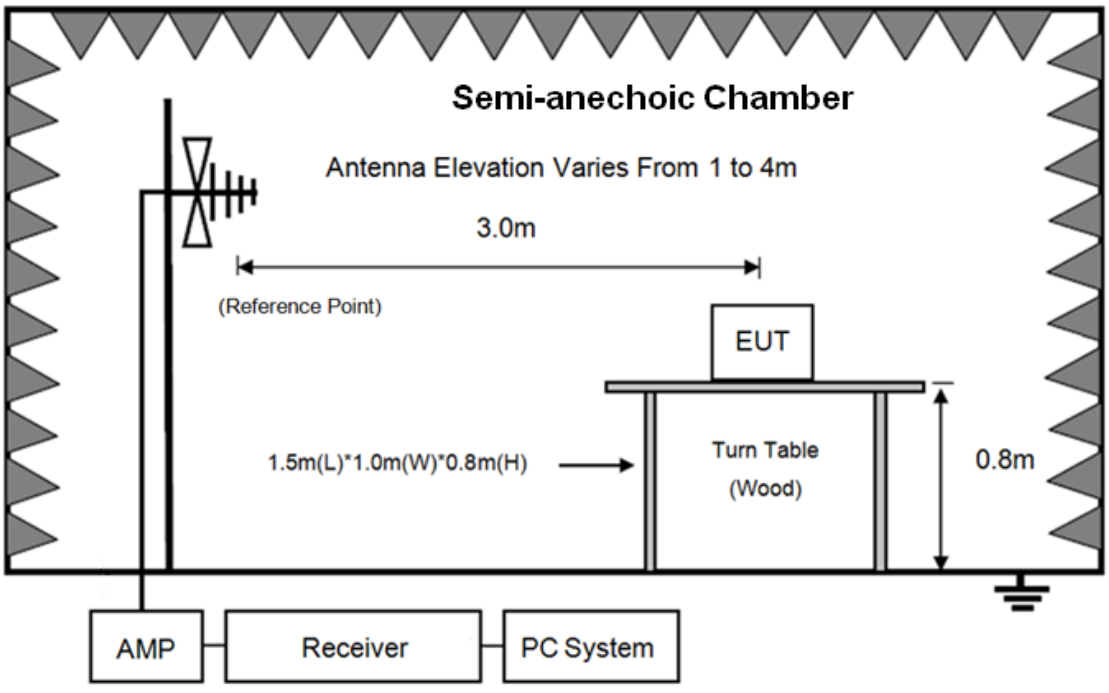
4. Radiated Emission

4.1. Block diagram of test setup

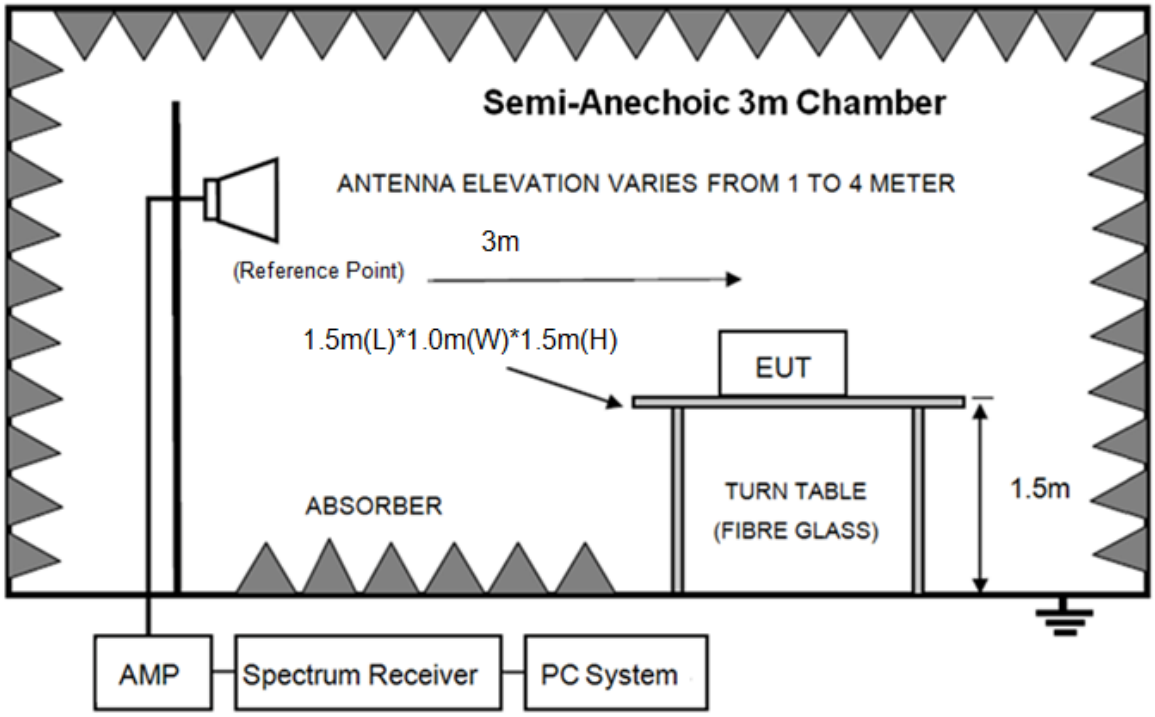
In 3 m Anechoic Chamber Test Setup Diagram for 9 kHz - 30 MHz



In 3 m Anechoic Chamber Test Setup Diagram for below 1 GHz



In 3 m Anechoic Chamber Test Setup Diagram for frequency above 1 GHz



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

4.2. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

(2) FCC 15.209 Limit.

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	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
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

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:

$$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

(3) Limit for this EUT
All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits.

4.3. Test procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1G and 150 cm above the ground plane inside a fully-anechoic chamber for above 1G.

(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
1 GHz - 18 GHz	Double Ridged Horn Antenna (1 GHz - 18 GHz)	3 m
18 GHz - 40 GHz	Horn Antenna (18 GHz - 40 GHz)	1 m

According ANSI C63.10:2013 clause 6.4.4.2 and 6,5.3, 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 center 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 25 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) 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 1 GHz, 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; RBW 1 MHz VBW 10 Hz for Average measure (according ANSI C63.10:2013 clause 4.1.4.2.2 procedure for average measure).

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

4.4. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits.

Note1: According exploratory test no any obvious emission was detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz.

Note2: 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 GFSK, Tx 2475 MHz mode.

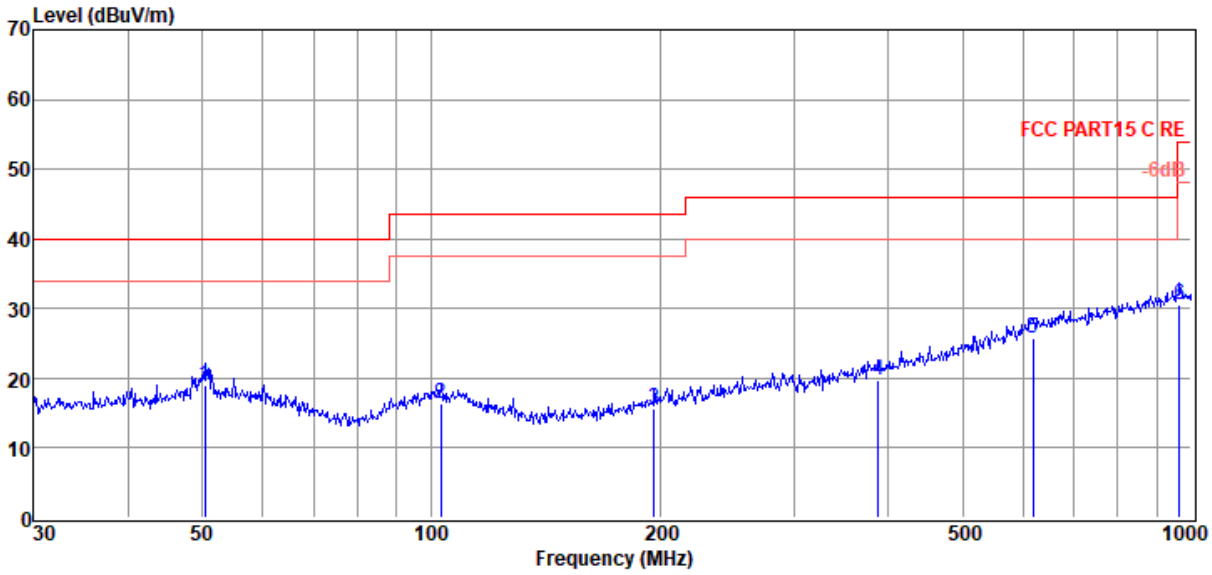
Note3: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

Radiated Emission test (below 1 GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2021 RE 1# Report data\Q21020220-3E BOOMBOX 2\FCC BELOW1G.EM6		
Test Date	:	2021-02-27	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:45%,Press:101.3kPa	**Antenna/Distance**	:	2020 VULB 9163 1#/3m/VERTICAL
Memo	:				

Data: 5



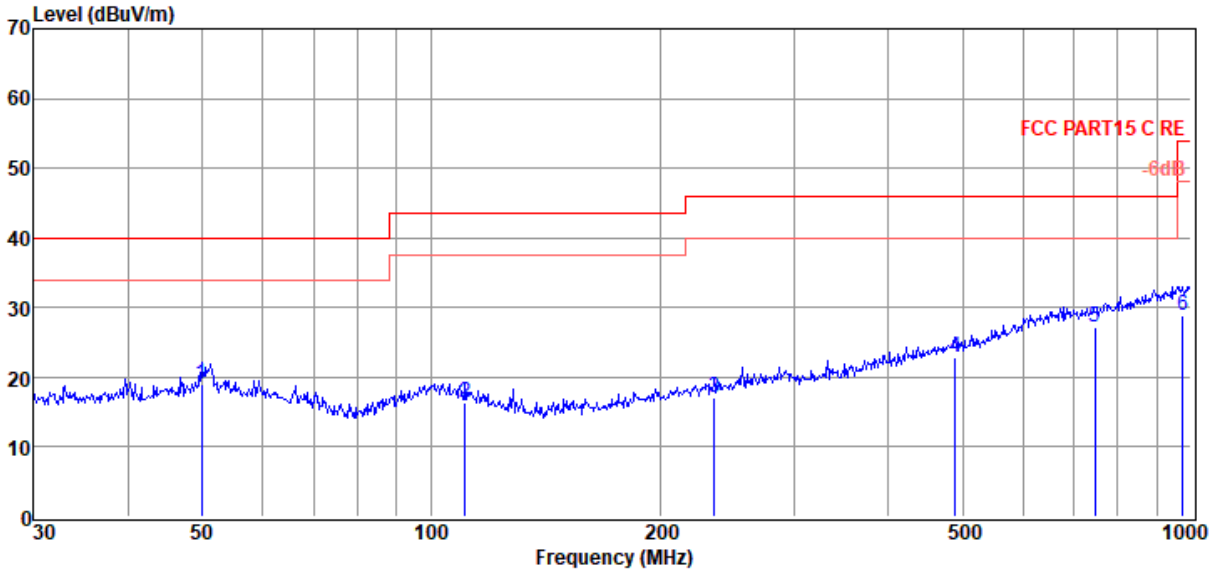
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	50.41	1.80	13.64	3.57	19.01	40.00	-20.99	QP	VERTICAL
2	103.08	-0.46	12.88	3.90	16.32	43.50	-27.18	QP	VERTICAL
3	196.51	0.11	11.10	4.32	15.53	43.50	-27.97	QP	VERTICAL
4	387.99	-0.91	15.54	4.98	19.61	46.00	-26.39	QP	VERTICAL
5	618.54	1.05	18.98	5.61	25.64	46.00	-20.36	QP	VERTICAL
6	965.54	1.88	22.33	6.38	30.59	54.00	-23.41	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
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 Site	:	DDT 3m Chamber 1#	D:\2021 RE 1# Report data\Q21020220-3E BOOMBOX 2\FCC BELOW1G.EM6		
Test Date	:	2021-02-27	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:45%,Press:101.3kPa	**Antenna/Distance**	:	2020 VULB 9163 1#/3m/HORIZONTAL
Memo	:				

Data: 6



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	49.88	1.80	13.68	3.57	19.05	40.00	-20.95	QP	HORIZONTAL
2	110.96	0.12	12.24	3.94	16.30	43.50	-27.20	QP	HORIZONTAL
3	235.82	0.47	12.05	4.48	17.00	46.00	-29.00	QP	HORIZONTAL
4	489.03	0.42	17.15	5.26	22.83	46.00	-23.17	QP	HORIZONTAL
5	747.48	0.95	20.24	5.91	27.10	46.00	-18.90	QP	HORIZONTAL
6	975.75	0.17	22.38	6.40	28.95	54.00	-25.05	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
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.

Radiated Emission test (above 1 GHz)

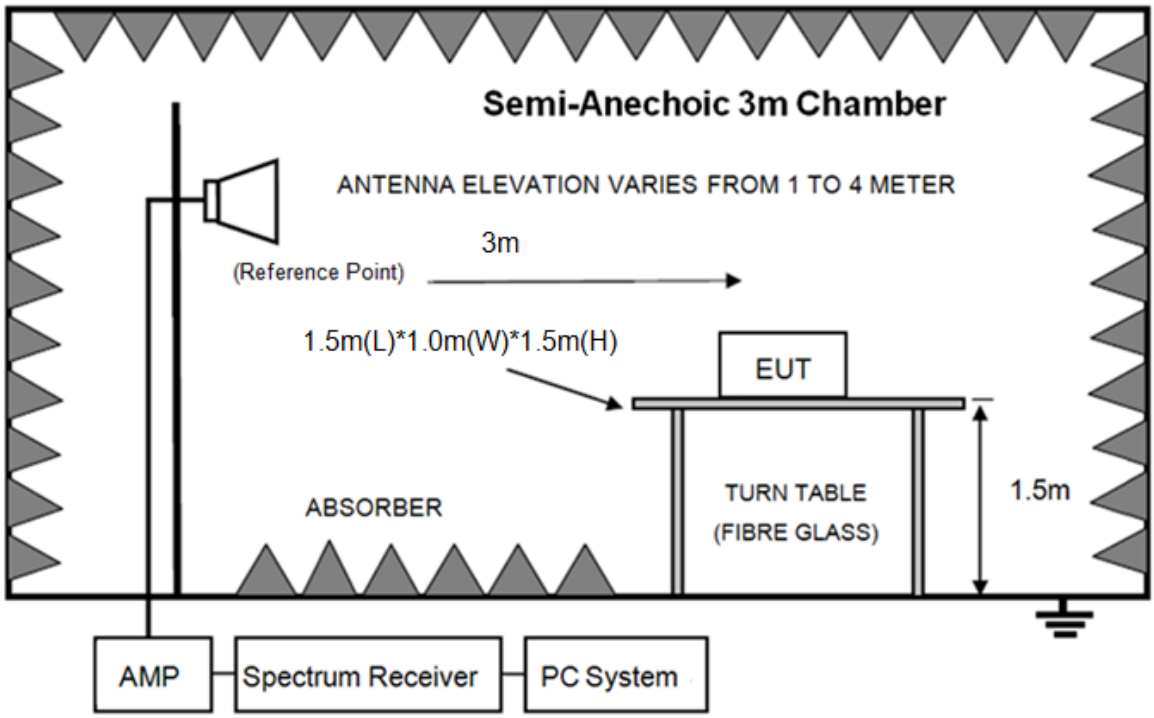
Freq. (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
Tx mode 2407 MHz									
4825.00	49.13	32.26	43.48	6.17	44.08	74.00	-29.92	Peak	HORIZONTAL
7239.00	46.48	37.14	42.90	7.83	48.55	74.00	-25.45	Peak	HORIZONTAL
9534.00	45.78	39.13	42.49	9.02	51.44	74.00	-22.56	Peak	HORIZONTAL
12832.00	45.37	39.26	41.43	10.67	53.87	74.00	-20.13	Peak	HORIZONTAL
18000.00	43.56	46.30	40.00	13.29	63.15	74.00	-10.85	Peak	HORIZONTAL
18000.00	31.34	46.30	40.00	13.29	50.93	54.00	-3.07	Average	HORIZONTAL
4825.00	48.66	32.26	43.48	6.17	43.61	74.00	-30.39	Peak	VERTICAL
7188.00	45.62	37.11	42.91	7.77	47.59	74.00	-26.41	Peak	VERTICAL
10180.00	44.91	39.75	42.39	9.37	51.64	74.00	-22.36	Peak	VERTICAL
12985.00	44.56	39.57	41.28	10.69	53.54	74.00	-20.46	Peak	VERTICAL
17949.00	41.37	46.11	40.00	13.25	60.73	74.00	-13.27	Peak	VERTICAL
17949.00	31.52	46.11	40.00	13.25	50.88	54.00	-3.12	Average	VERTICAL
Tx mode 2441 MHz									
4882.00	51.21	32.33	43.46	6.20	46.28	74.00	-27.72	Peak	HORIZONTAL
7851.00	46.29	37.79	42.82	8.52	49.78	74.00	-24.22	Peak	HORIZONTAL
9636.00	45.34	39.21	42.47	9.10	51.18	74.00	-22.82	Peak	HORIZONTAL
12866.00	44.54	39.33	41.40	10.67	53.14	74.00	-20.86	Peak	HORIZONTAL
17915.00	42.25	45.98	40.00	13.22	61.45	74.00	-12.55	Peak	HORIZONTAL
17915.00	31.68	45.98	40.00	13.22	50.88	54.00	-3.12	Average	HORIZONTAL
4882.00	54.01	32.33	43.46	6.20	49.08	74.00	-24.92	Peak	VERTICAL
7256.00	49.04	37.15	42.90	7.85	51.14	74.00	-22.86	Peak	VERTICAL
9840.00	47.09	39.37	42.43	9.26	53.29	74.00	-20.71	Peak	VERTICAL
12135.00	47.68	38.97	42.15	10.57	55.07	74.00	-18.93	Peak	VERTICAL
12135.00	41.54	38.97	42.15	10.57	48.93	54.00	-5.07	Average	VERTICAL
13189.00	44.21	39.86	41.07	10.74	53.74	74.00	-20.26	Peak	VERTICAL
Tx mode 2475 MHz									
4944.00	51.01	32.42	43.43	6.24	46.24	74.00	-27.76	Peak	HORIZONTAL
7834.00	46.51	37.77	42.82	8.50	49.96	74.00	-24.04	Peak	HORIZONTAL
9840.00	45.44	39.37	42.43	9.26	51.64	74.00	-22.36	Peak	HORIZONTAL
12849.00	44.88	39.30	41.41	10.67	53.44	74.00	-20.56	Peak	HORIZONTAL
17711.00	42.92	45.20	40.01	13.06	61.17	74.00	-12.83	Peak	HORIZONTAL
17711.00	32.68	45.20	40.01	13.06	50.93	54.00	-3.07	Average	HORIZONTAL
4944.00	49.34	32.42	43.43	6.24	44.57	74.00	-29.43	Peak	VERTICAL
8021.00	46.13	37.99	42.80	8.69	50.01	74.00	-23.99	Peak	VERTICAL
10435.00	46.14	40.11	42.38	9.35	53.22	74.00	-20.78	Peak	VERTICAL
12849.00	44.94	39.30	41.41	10.67	53.50	74.00	-20.50	Peak	VERTICAL
17949.00	42.35	46.11	40.00	13.25	61.71	74.00	-12.29	Peak	VERTICAL
17949.00	31.56	46.11	40.00	13.25	50.92	54.00	-3.08	Average	VERTICAL
Result: Pass									

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

5. Band Edge Compliance (Radiated Method)

5.1. Block diagram of test setup



5.2. Limit

All restriction band should comply with 15.209, other emission should be at least 20 dB below the fundamental.

5.3. Test procedure

Same with clause 10.3 except change investigated frequency range from 2310 MHz to 2412 MHz and 2470 MHz to 2500 MHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

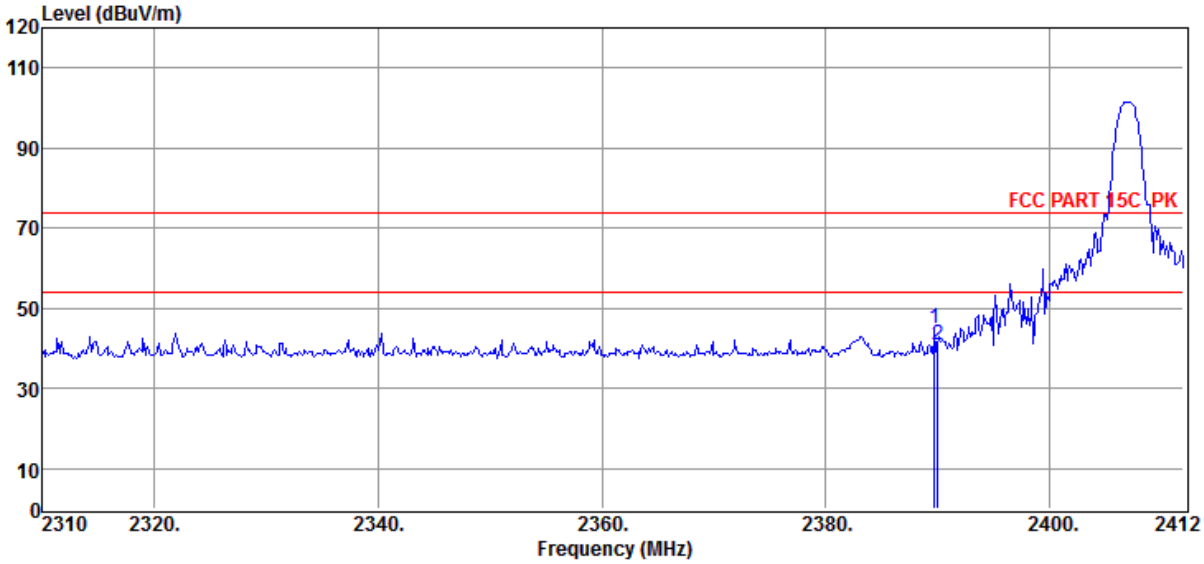
5.4. Test result

Pass. (See below detailed test result)

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/VERTICAL
Memo	:	SRD DH5 2407			

Data: 34



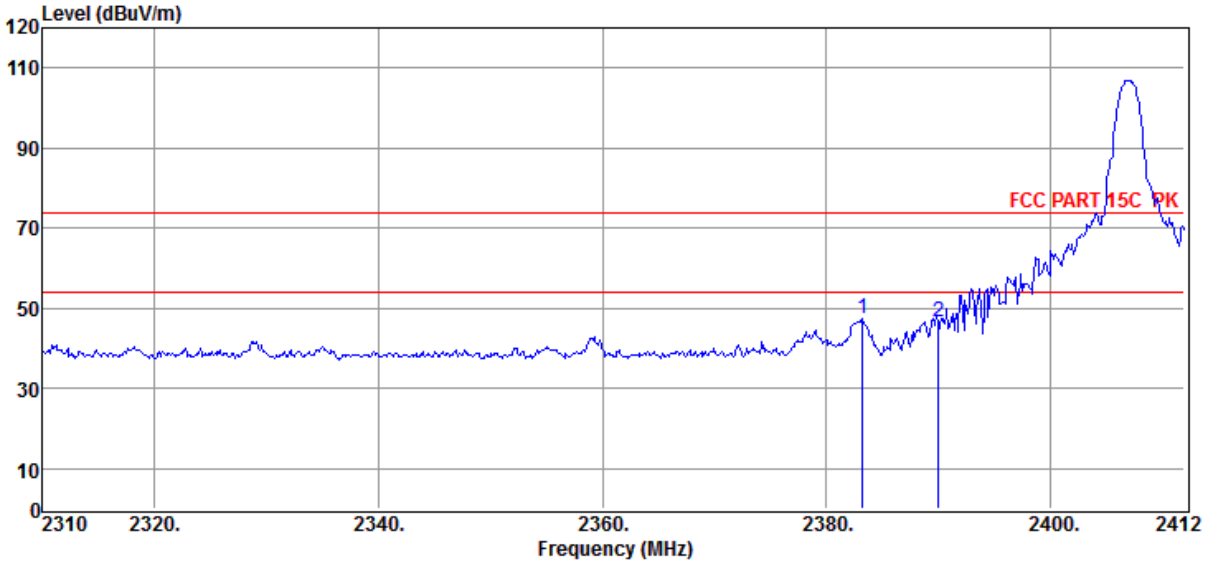
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2389.76	56.52	27.48	43.21	4.03	44.82	74.00	-29.18	Peak	VERTICAL
2	2390.00	52.67	27.48	43.21	4.03	40.97	74.00	-33.03	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/HORIZONTAL
Memo	:	SRD DH5 2407			

Data: 35



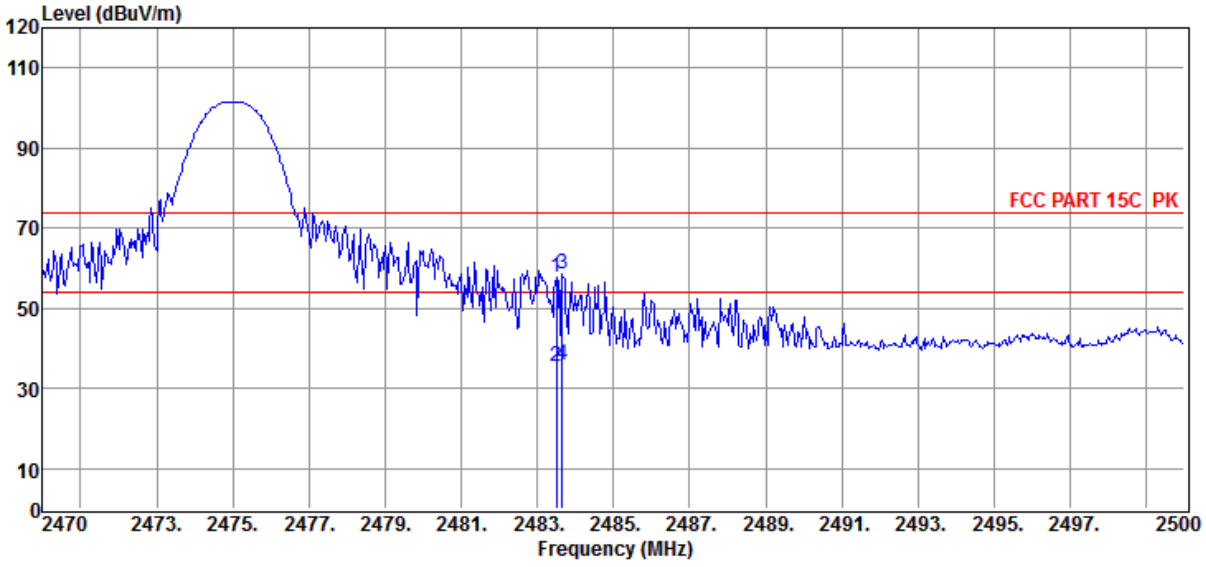
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2383.24	58.98	27.47	43.20	4.03	47.28	74.00	-26.72	Peak	HORIZONTAL
2	2390.00	58.29	27.48	43.21	4.03	46.59	74.00	-27.41	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/VERTICAL
Memo	:	SRD DH5 2475			

Data: 36



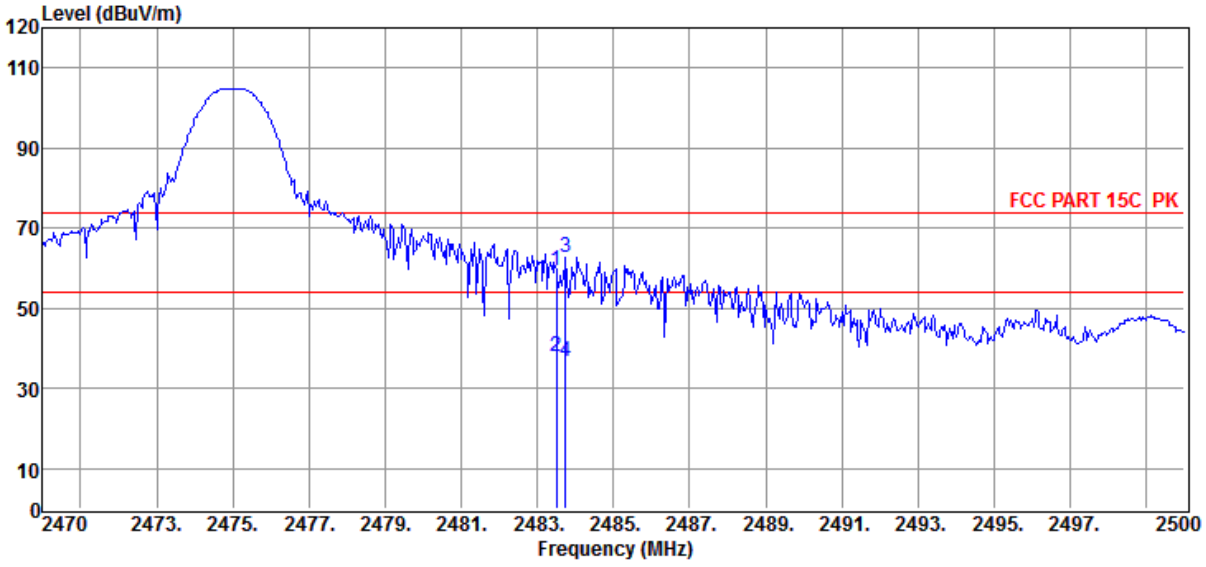
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	69.01	27.67	43.25	4.12	57.55	74.00	-16.45	Peak	VERTICAL
2	2483.50	46.98	27.67	43.25	4.12	35.52	54.00	-18.48	Average	VERTICAL
3	2483.65	69.93	27.67	43.25	4.12	58.47	74.00	-15.53	Peak	VERTICAL
4	2483.65	47.22	27.67	43.25	4.12	35.76	54.00	-18.24	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/HORIZONTAL
Memo	:	SRD DH5 2475			

Data: 37



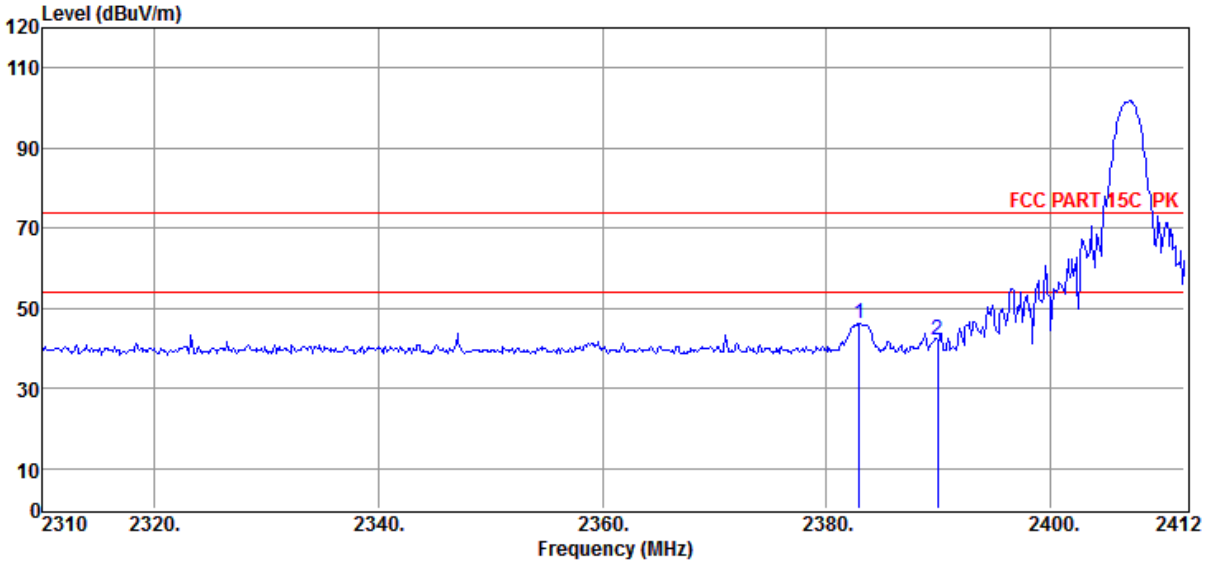
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	71.03	27.67	43.25	4.12	59.57	74.00	-14.43	Peak	HORIZONTAL
2	2483.50	49.32	27.67	43.25	4.12	37.86	54.00	-16.14	Average	HORIZONTAL
3	2483.74	74.19	27.67	43.25	4.12	62.73	74.00	-11.27	Peak	HORIZONTAL
4	2483.74	48.36	27.67	43.25	4.12	36.90	54.00	-17.10	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/VERTICAL
Memo	:	SRD 2DH5 2407			

Data: 38



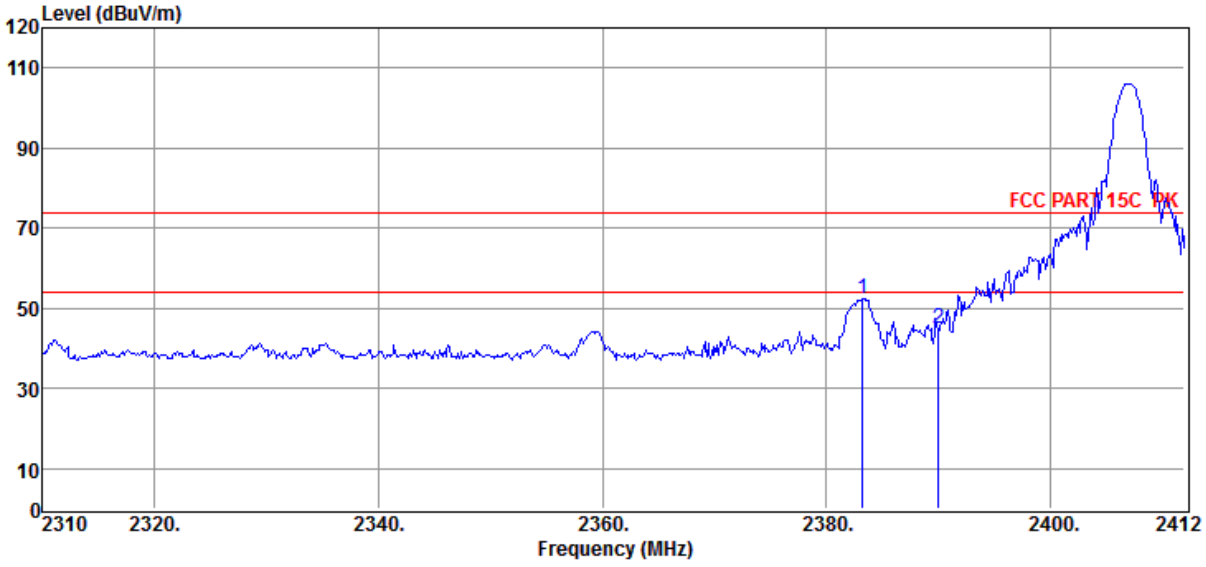
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2382.93	57.95	27.47	43.20	4.03	46.25	74.00	-27.75	Peak	VERTICAL
2	2389.97	53.86	27.48	43.21	4.03	42.16	74.00	-31.84	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/HORIZONTAL
Memo	:	SRD 2DH5 2407			

Data: 39



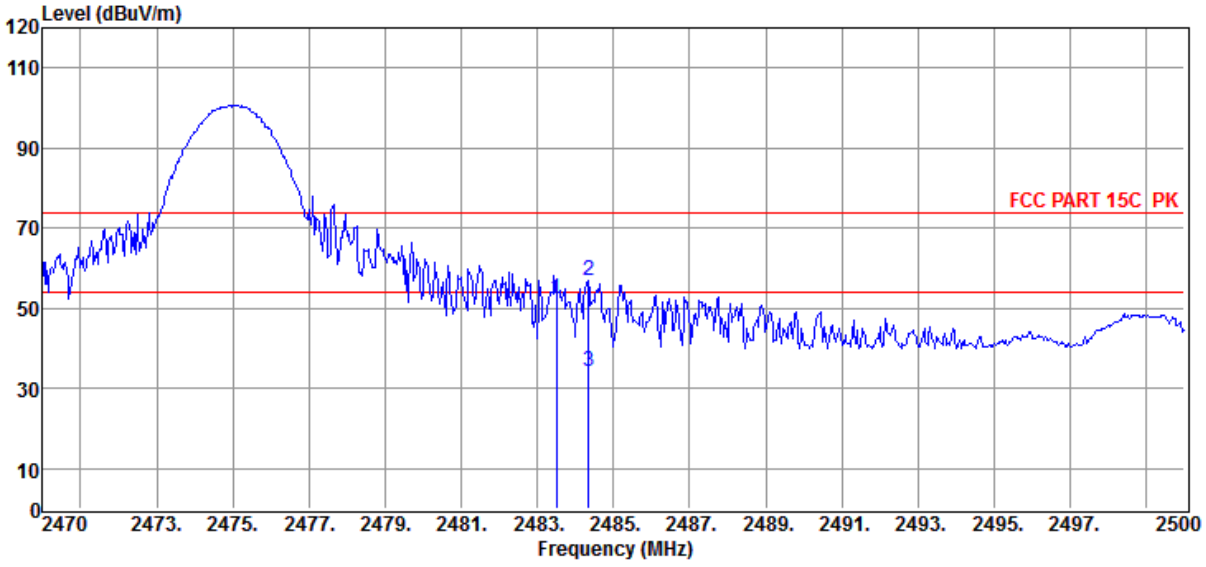
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2383.24	64.01	27.47	43.20	4.03	52.31	74.00	-21.69	Peak	HORIZONTAL
2	2390.00	56.85	27.48	43.21	4.03	45.15	74.00	-28.85	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/VERTICAL
Memo	:	SRD 2DH5 2475			

Data: 40



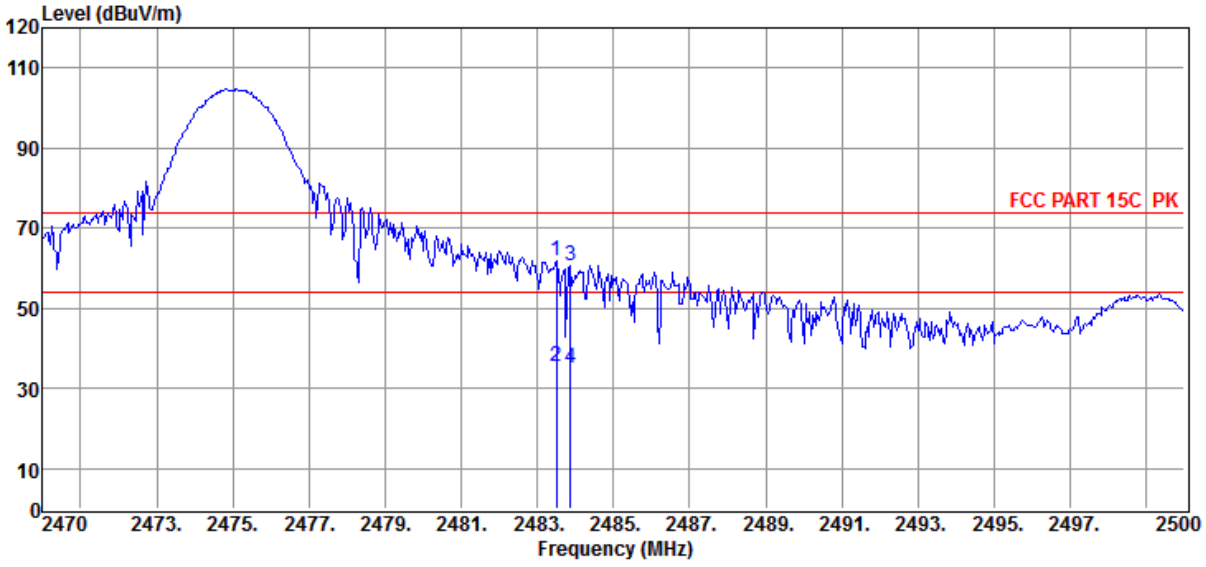
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	63.67	27.67	43.25	4.12	52.21	74.00	-21.79	Peak	VERTICAL
2	2484.34	68.36	27.67	43.25	4.12	56.90	74.00	-17.10	Peak	VERTICAL
3	2484.34	45.68	27.67	43.25	4.12	34.22	54.00	-19.78	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/HORIZONTAL
Memo	:	SRD 2DH5 2475			

Data: 41



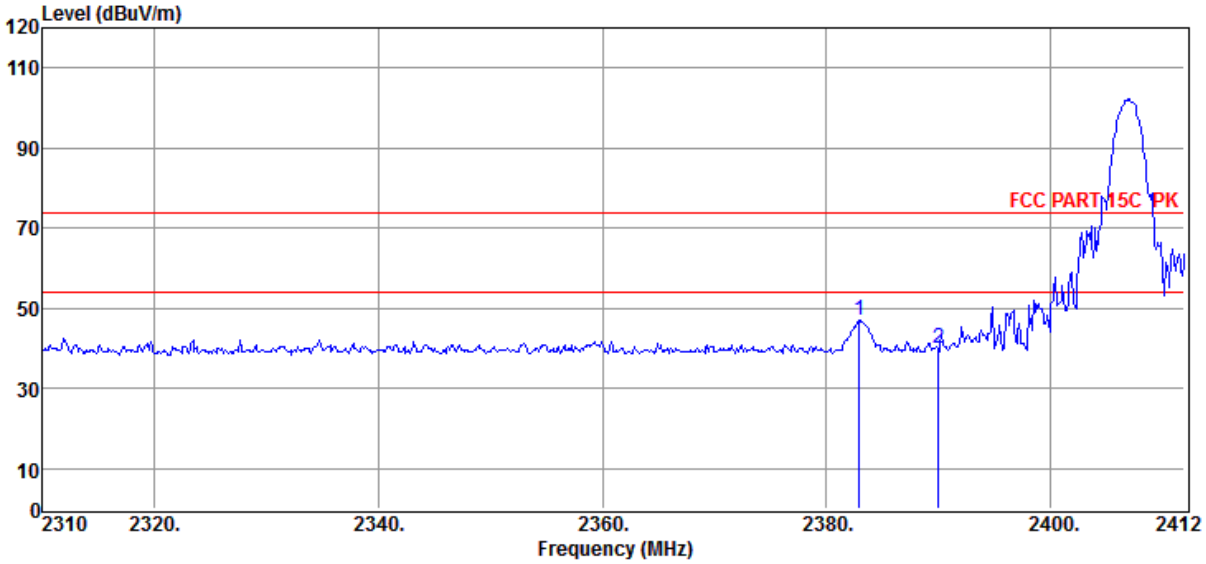
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	73.30	27.67	43.25	4.12	61.84	74.00	-12.16	Peak	HORIZONTAL
2	2483.50	46.87	27.67	43.25	4.12	35.41	54.00	-18.59	Average	HORIZONTAL
3	2483.86	72.16	27.67	43.25	4.12	60.70	74.00	-13.30	Peak	HORIZONTAL
4	2483.86	46.57	27.67	43.25	4.12	35.11	54.00	-18.89	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/VERTICAL
Memo	:	SRD 3DH5 2407			

Data: 42



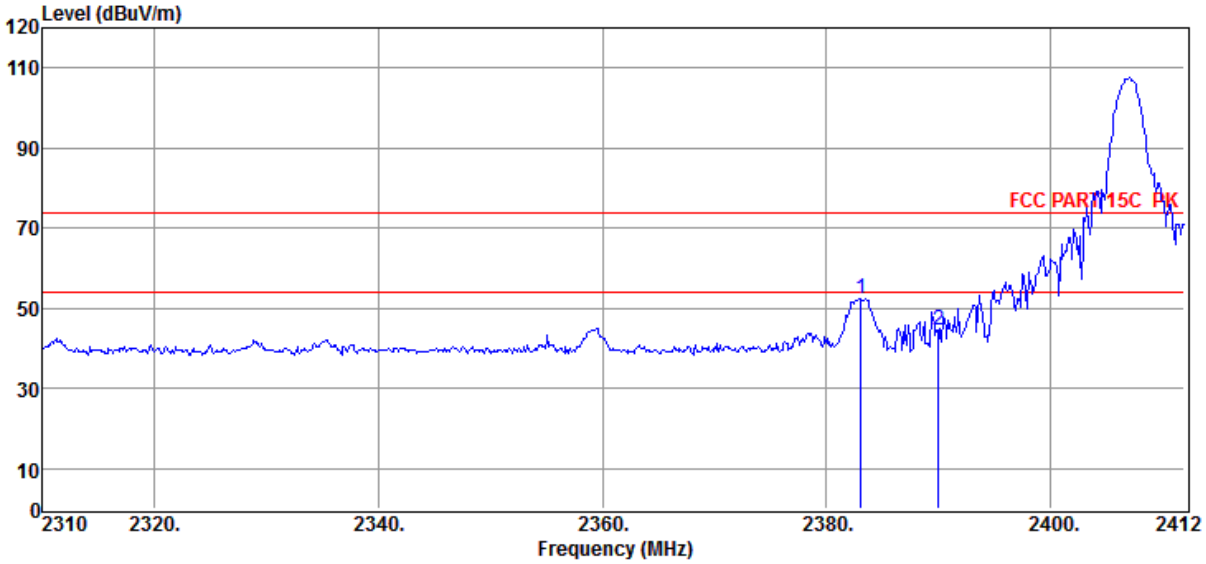
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2382.93	58.76	27.47	43.20	4.03	47.06	74.00	-26.94	Peak	VERTICAL
2	2390.00	51.52	27.48	43.21	4.03	39.82	74.00	-34.18	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/HORIZONTAL
Memo	:	SRD 3DH5 2407			

Data: 43



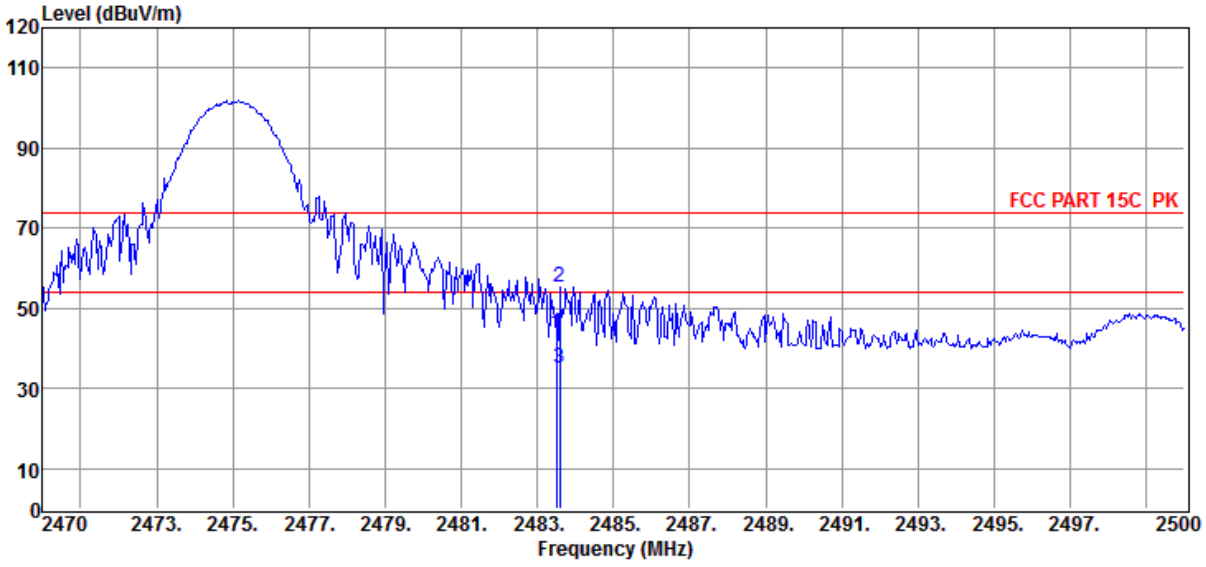
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2383.13	64.12	27.47	43.20	4.03	52.42	74.00	-21.58	Peak	HORIZONTAL
2	2390.00	56.38	27.48	43.21	4.03	44.68	74.00	-29.32	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/VERTICAL
Memo	:	SRD 3DH5 2475			

Data: 44



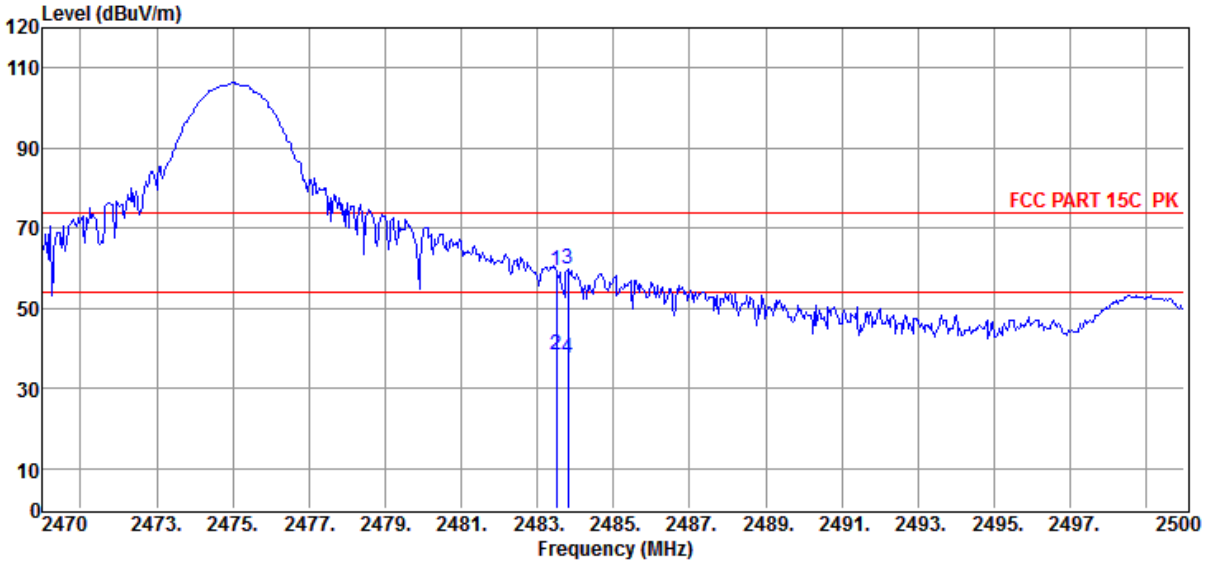
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	55.00	27.67	43.25	4.12	43.54	74.00	-30.46	Peak	VERTICAL
2	2483.59	66.79	27.67	43.25	4.12	55.33	74.00	-18.67	Peak	VERTICAL
3	2483.59	46.68	27.67	43.25	4.12	35.22	54.00	-18.78	Average	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21020220-3E BOOMBOX 2\FCC ABOVE 1G.EM6		
Test Date	:	2021-02-28	**Tested By**	:	Jacky
EUT	:	Portable Bluetooth Speaker	**Model Number**	:	BOOMBOX 2
Power Supply	:	Battery	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2019 BBHA9120D/3m/HORIZONTAL
Memo	:	SRD 3DH5 2475			

Data: 45



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	70.83	27.67	43.25	4.12	59.37	74.00	-14.63	Peak	HORIZONTAL
2	2483.50	49.63	27.67	43.25	4.12	38.17	54.00	-15.83	Average	HORIZONTAL
3	2483.80	71.43	27.67	43.25	4.12	59.97	74.00	-14.03	Peak	HORIZONTAL
4	2483.80	49.00	27.67	43.25	4.12	37.54	54.00	-16.46	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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.

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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.2. Result

The antenna used for this product is dedicated FPC antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain is 2.18 dBi.