MEASUREMENT REPORT

FCC PART 15.247 / RSS-247 Bluetooth

FCC ID:	2APP4BT01
IC:	23867-BT01
APPLICANT:	Xiamen Health Technology Company Ltd.

Application Type:	Certification
Product:	Bluetooth Speaker
Model No.:	BT-01
FCC Classification:	FCC Part 15 Spread Spectrum Transmitter(DSS)
FCC Rule Part(s):	Part 15.247
IC Rule(s):	RSS-247 Issue 2, RSS-GEN Issue 5
Test Procedure(s):	ANSI C63.10-2013
Test Date:	May 21, 2018~ June 15, 2018

Reviewed By : (Kevin Guo)

Approved By : (Robin Wu)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

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.

Revision History

Report No.	Version	Description	Issue Date	Note
1804RSU027-U1	Rev. 01	Initial report	06-25-2018	Valid

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Description Page

§2.1033 General Information

Applicant:	Xiamen Health Technology Company Ltd.
Applicant Address:	No. 468, Xia Yang Road, Xinyang District, Haicang, Xiamen, Fujian, China
Manufacturer:	Xiamen Health Technology Company Ltd.
Manufacturer Address:	No. 468, Xia Yang Road, Xinyang District, Haicang, Xiamen, Fujian, China
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT FCC Registration No.:	893164
MRT 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 Section 2.948 of the FCC Rules.**
- **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 and Radio testing for FCC, Industry Canada, EU and TELEC Rules.**

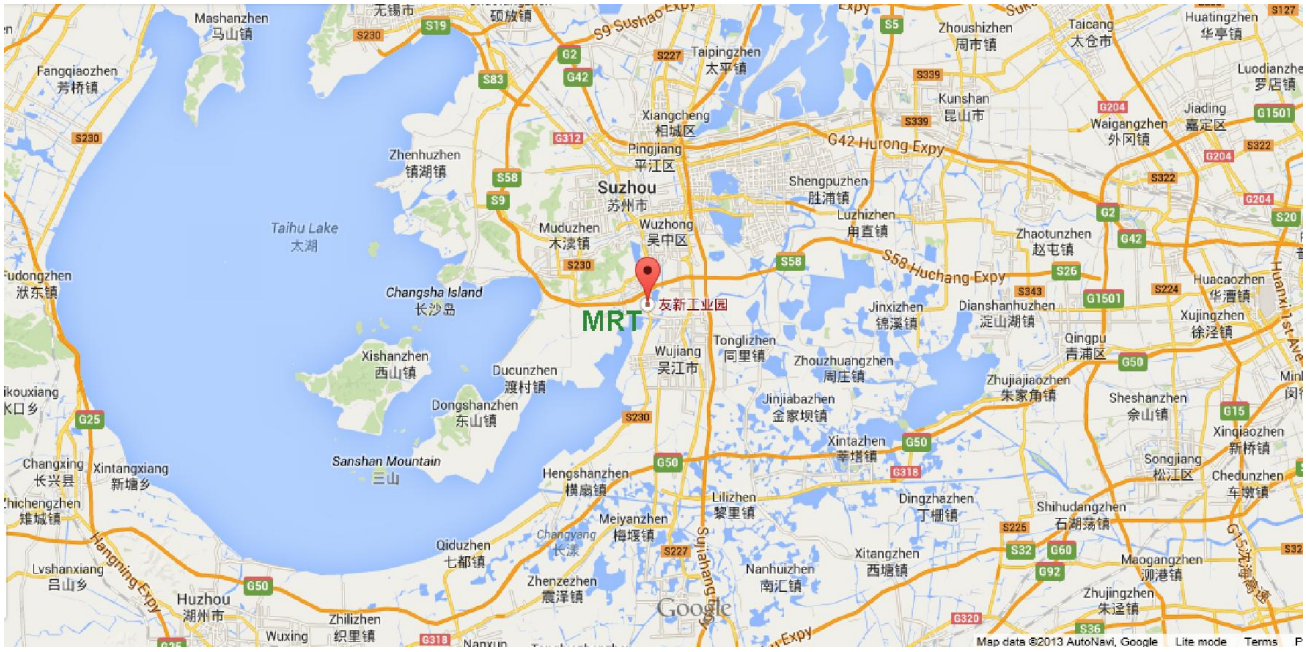
1. INTRODUCTION

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 detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	Bluetooth Speaker
Model No.:	BT-01
Bluetooth Version:	V2.1+EDR
Accessories	
USB Adapter:	Model No.: XH0500-1000W Input Power: 100 - 240V ~ 50/60Hz, Max. 0.2A Output Power: 5VDC 1A

2.2. Product Specification Subjective to this Standard

Operating Frequency:	2402~2480MHz
Channel Number:	79
Type of modulation:	GFSK, Pi/4 DQPSK
Data Rate:	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK)
Antenna Type:	PCB Antenna
Antenna Gain:	-0.68dBi

The equipment under test (EUT) is the **Bluetooth Speaker**. The test data contained in this report pertains only to the emissions due to the EUT's Bluetooth transmitter.

- 15.247(g): In accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) system.
- 15.247(h): In accordance with the Bluetooth Industry Standard, the system does not coordinate its channels selection/ hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.
- 15.247(h): The EUT employs Adaptive Frequency Hopping (AFH) which identifies sources of interference namely devices operating in 802.11 WLAN and excludes them from the list of available channels. The process of re-mapping reduces the number of test channels from 79 channels to a minimum number of 20 channels.

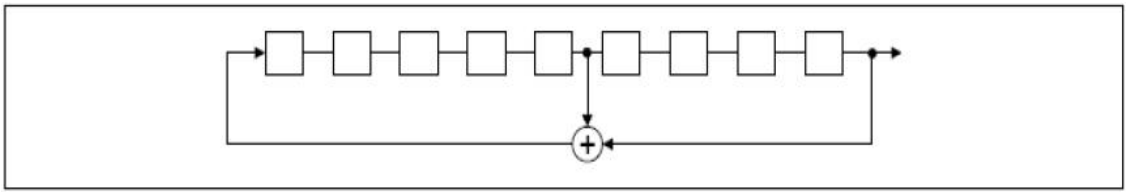
2.3. Operation Frequency / Channel List

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz
03	2405 MHz	04	2406 MHz	05	2407 MHz
06	2408 MHz	07	2409 MHz	08	2410 MHz
09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz
15	2417 MHz	16	2418 MHz	17	2419 MHz
18	2420 MHz	19	2421 MHz	20	2422 MHz
21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz
27	2429 MHz	28	2430 MHz	29	2431 MHz
30	2432 MHz	31	2433 MHz	32	2434 MHz
33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz
39	2441 MHz	40	2442 MHz	41	2443 MHz
42	2444 MHz	43	2445 MHz	44	2446 MHz
45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz
51	2453 MHz	52	2454 MHz	53	2455 MHz
54	2456 MHz	55	2457 MHz	56	2458 MHz
57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz
63	2465 MHz	64	2466 MHz	65	2467 MHz
66	2468 MHz	67	2469 MHz	68	2470 MHz
69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz
75	2477 MHz	76	2478 MHz	77	2479 MHz
78	2480 MHz	-	-	-	-

2.4. Pseudorandom Frequency Hopping Sequence

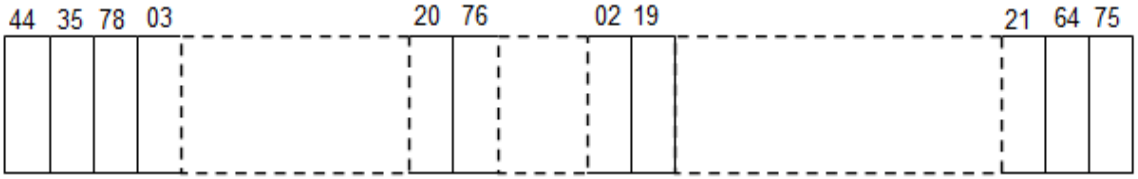
The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONEs; i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: 2^9 - 1 = 511 bits
- Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:



Each frequency used equally on the average by each transmitter.

The system receivers have input bandwidths that match the hopping channel bandwidths of their Corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

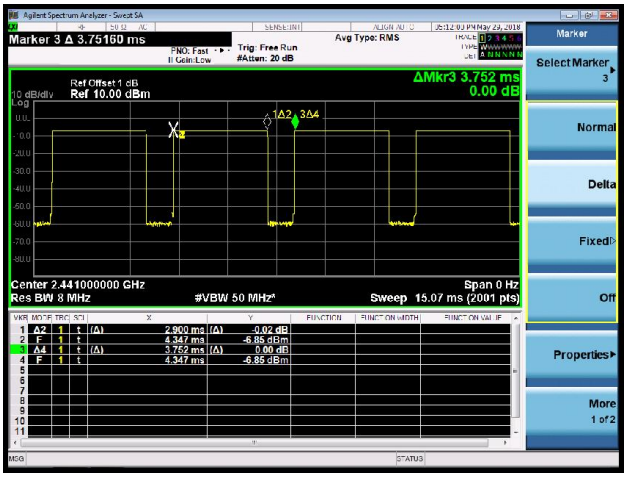
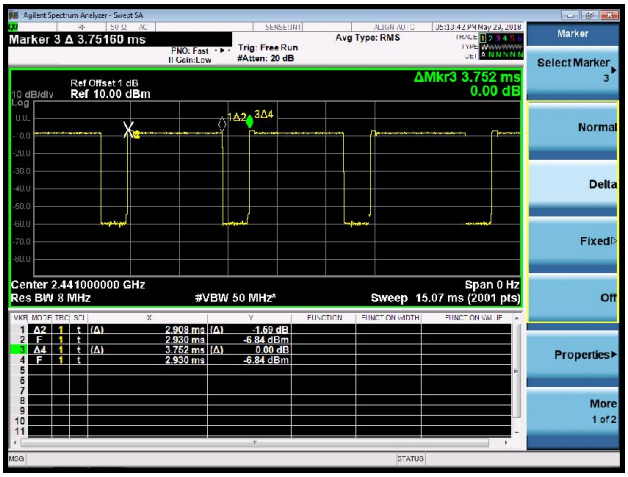
2.5. Device Capabilities

This device contains the following capabilities:

Bluetooth v2.1+EDR.

Note: The maximum achievable duty cycle was determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
DH5	77.29%
2DH5	77.51%

Duty Cycle (T = Transmission Duration)	
DH5 (T = 3.752ms)	2DH5 (T = 3.752ms)
	

2.6. Test Configuration

The **Bluetooth Speaker** was tested per the guidance of ANSI C63.10-2013. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.7. Test Software

The test utility software used during testing was “FCC Assist”, and the version was 1,5.

2.8. EMI Suppression Device(s)/Modifications

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

2.9. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

RSP-100 Issue 11 Section 3

The manufacturer, importer or distributor shall meet the labelling requirements set out in this section for every unit:

(i) prior to marketing in Canada, for products manufactured in Canada

(ii) prior to importation into Canada, for imported products

For information regarding the e-labelling option, see Notice 2014-DRS1003. The label for the certified product represents the manufacturer's or importer's compliance with Innovation, Science and Economic Development Canada's (ISED) regulatory requirements.

Please see attachment for IC label and label location.

3. DESCRIPTION of TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the Filing 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. 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 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. 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 data exchange speed, 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 were used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

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 30MHz 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 30MHz, 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 for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 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, clock speed, mode of operation or video resolution, 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 Beamwidth of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. 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 the device is **permanently attached.**
- There are no provisions for connection to an external antenna.

Conclusion:

The device unit complies with the requirement of §15.203.

5. 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	ENV 216	MRTSUE06002	1 year	2018/06/21
Two-Line V-Network	R&S	ENV 216	MRTSUE06003	1 year	2018/06/21
Thermohygrometer	Testo	608-H1	MRTSUE06404	1 year	2018/08/14
Shielding Anechoic Chamber	Mikebang	Chamber-SR2	MRTSUE06215	N/A	N/A

Radiated Emissions - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
PXA Signal Analyzer	Keysight	9030B	MRTSUE06395	1 year	2018/09/13
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2018/08/18
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2018/11/17
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2018/11/20
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2018/11/18
Broad Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2018/10/21
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2018/12/14
Amplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2019/06/13
Thermohygrometer	Testo	608-H1	MRTSUE06403	1 year	2018/08/14
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2019/05/02

Conducted Test Equipment - SR1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2018/12/06
Temperature Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2018/12/06
Spectrum Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2019/04/20
Thermohygrometer	Testo	608-H1	MRTSUE06401	1 year	2018/08/14

Software	**Version**	**Function**
EMI Software	V3	EMI Test Software

6. 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=2Uc(y)): 150kHz~30MHz: 3.46dB
Radiated Emission Measurement - AC1
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz ~ 1GHz: 4.18dB 1GHz ~ 25GHz: 4.76dB
Spurious Emissions, Conducted - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.78dB
Output Power - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.13dB
Power Spectrum Density - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.15dB
Occupied Bandwidth - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.28%

7. TEST RESULT

7.1. Summary

Product Name: **Bluetooth Speaker**

Method/System: **Frequency Hopping Spread Spectrum (FHSS)**

Number of Channels: **79**

FCC Part Section(s)	IC Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(a)(1)	RSS-247 [5.1]	20dB Bandwidth	N/A	Conducted	PASS	Section 7.2
15.247(b)(1)	RSS-247 [5.4(b)]	Peak Transmitter Output Power	<1 Watt if > 75 non-overlapping channels used		PASS	Section 7.3
15.247(a)(1)	RSS-247 [5.1]	Channel Separation	> 2/3 of 20 dB BW for systems with Output Power < 125mW		PASS	Section 7.4
15.247(a)(1)(iii)	RSS-247 [5.1]	Number of Channels	> 15 Channels		PASS	Section 7.5
15.247(a)(1)(iii)	RSS-247 [5.1]	Time of Occupancy	< 0.4 sec in 31.6 sec period		PASS	Section 7.6
15.247(d)	RSS-247 [5.5]	Band Edge / out-of-Band Emissions	Conducted ≥ 20dBc		PASS	Section 7.7 Section 7.8
15.205, 15.209	RSS-247 [5.5]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	PASS	Section 7.9 Section 7.10
15.207	RSS-Gen [8.8]	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.11

Notes:

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2) All modes of operation and data rates were investigated. 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.

7.2. 20dB Bandwidth Measurement

7.2.1.Test Limit

N/A

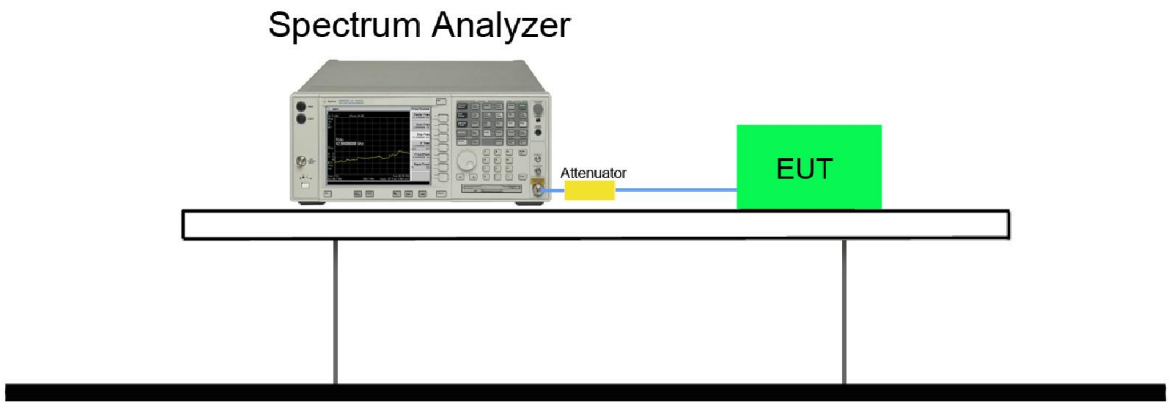
7.2.2.Test Procedure used

ANSI C63.10-2013 - Section 6.9.2

7.2.3.Test Setting

1. Set RBW ≥ 1% to 5% of the 20dB bandwidth
2. VBW = approximately three times RBW
3. Span = approximately 2 to 5 times the 20dB bandwidth, centered on a hopping channel
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.

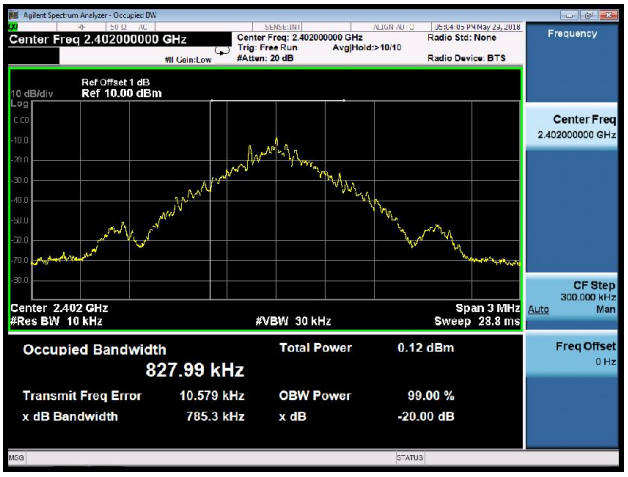
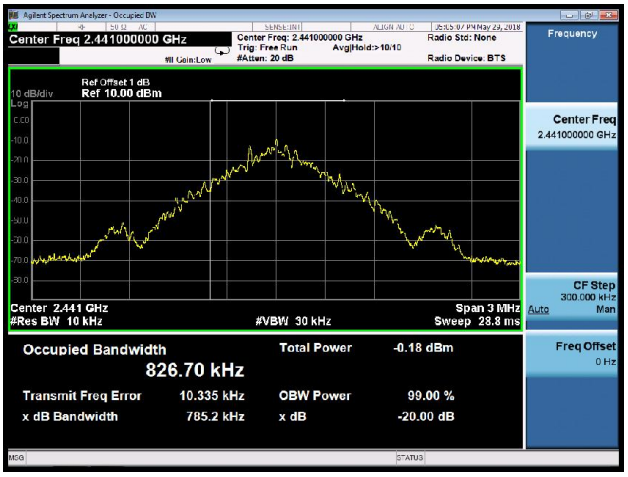
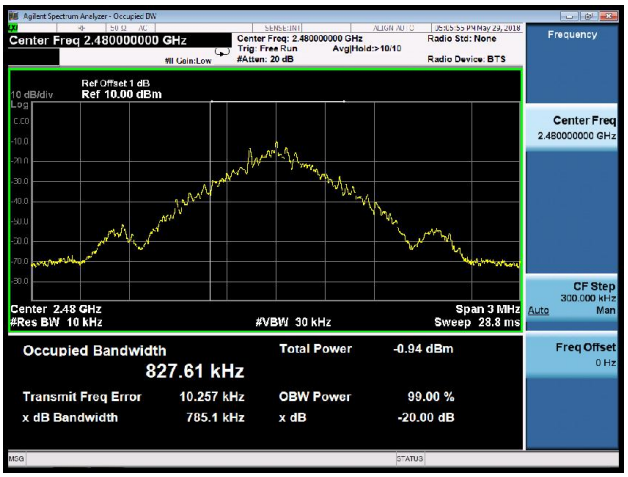
7.2.4.Test Setup



7.2.5.Test Result

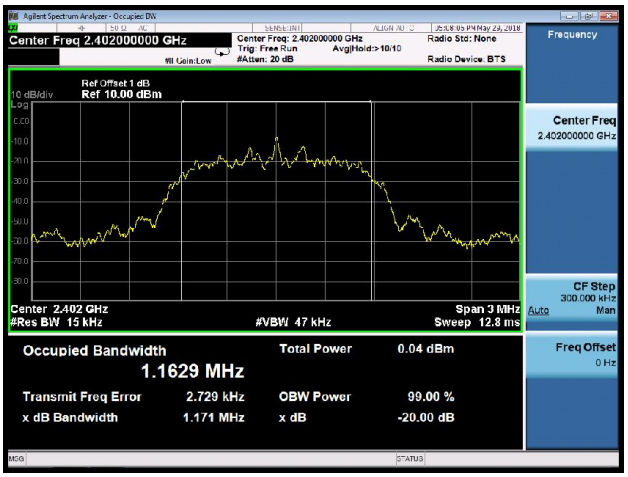
Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Hunk	Relative Humidity	52%
Test Site	TR3	Test Date	2018/05/29

Test Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)	Result
DH5	00	2402	785.3	827.99	Pass
DH5	39	2441	785.2	826.70	Pass
DH5	78	2480	785.1	827.61	Pass
2DH5	00	2402	1171.0	1162.90	Pass
2DH5	39	2441	1171.0	1164.30	Pass
2DH5	78	2480	1171.0	1163.70	Pass

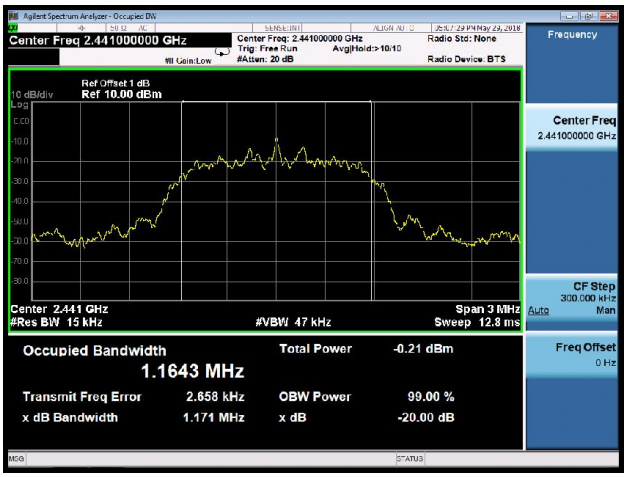
DH5 20dB Bandwidth	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Channel 78 (2480MHz)	
	

2DH5 20dB Bandwidth

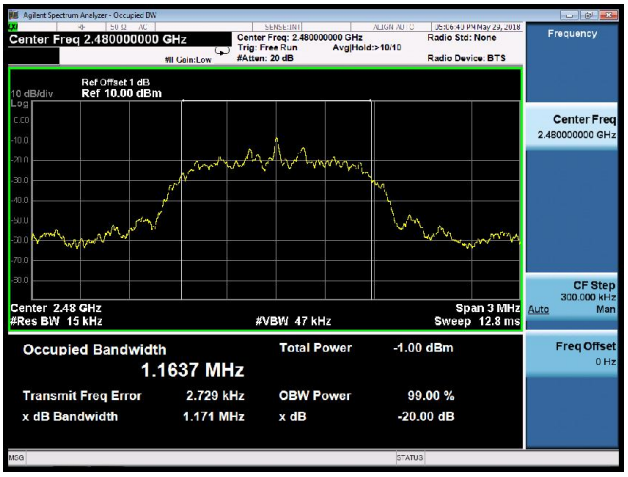
Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)



7.3. Output Power Measurement

7.3.1.Test Limit

The maximum out power permissible output power is 1 Watt for all other frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels. The E.I.R.P shall not exceed 4 Watt.

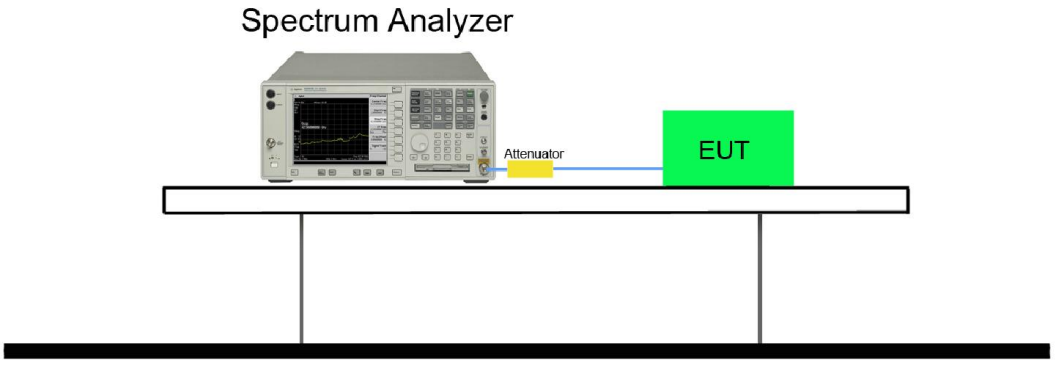
7.3.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.5

7.3.3.Test Setting

1. Set RBW ≥ the 20 dB bandwidth of the emission being measured.
2. VBW ≥ RBW
3. Span = approximately five times the 20dB bandwidth, centered on a hopping channel
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize, Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power (don't forget added the external attenuation and cable loss)

7.3.4.Test Setup



7.3.5.Test Result

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Hunk Li	Relative Humidity	52%
Test Site	TR3	Test Date	2018/06/01

Test Mode	Channel No.	Frequency (MHz)	Peak Power (dBm)	Peak Power Limit (dBm)	E.R.I.P (dBm)	E.I.R.P Limit (dBm)
DH5	00	2402	-6.30	≤ 30.00	-6.98	≤ 36.00
DH5	39	2441	-6.70	≤ 30.00	-7.38	≤ 36.00
DH5	78	2480	-7.57	≤ 30.00	-8.25	≤ 36.00
2DH5	00	2402	-5.48	≤ 30.00	-6.16	≤ 36.00
2DH5	39	2441	-5.85	≤ 30.00	-6.53	≤ 36.00
2DH5	78	2480	-6.69	≤ 30.00	-7.37	≤ 36.00

Note: EIRP (dBm) = Conducted Power (dBm) + Antenna Gain (dBi), Antenna Gain = -0.68 dBi.

DH5 Output Power	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Channel 78 (2480MHz)	
	

2DH5 Output Power

Channel 00 (2402MHz)

Channel 39 (2441MHz)

Channel 78 (2480MHz)

7.4. Carrier Frequency Separation Measurement

7.4.1.Test Limit

The minimum permissible channel separation for this system is 2/3 the value of the 20dB BW.

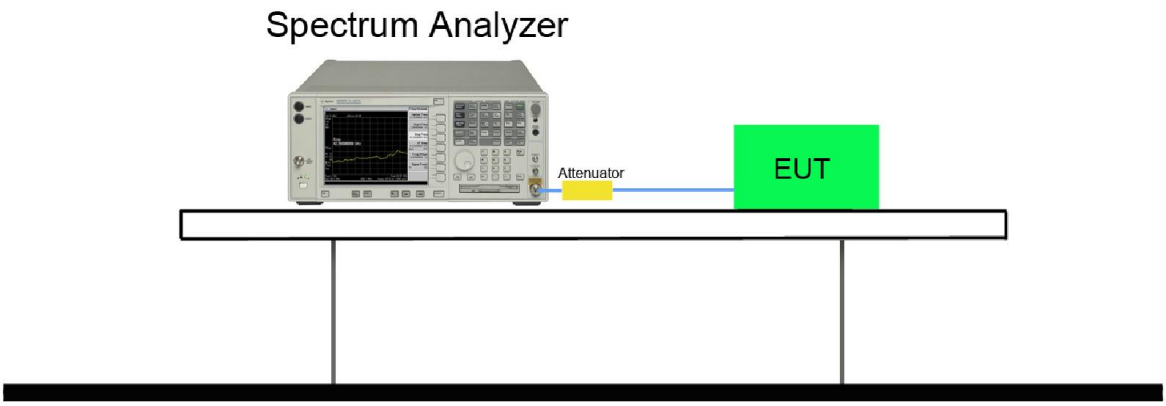
7.4.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.2

7.4.3.Test Setting

1. Span = wide enough to capture the peaks of two adjacent channels.
2. Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
3. VBW ≥ RBW
4. Sweep time = Auto couple
5. Detector = Peak
6. Trace mode = Max hold
7. Allowed the trace to stabilize
8. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

7.4.4.Test Setup

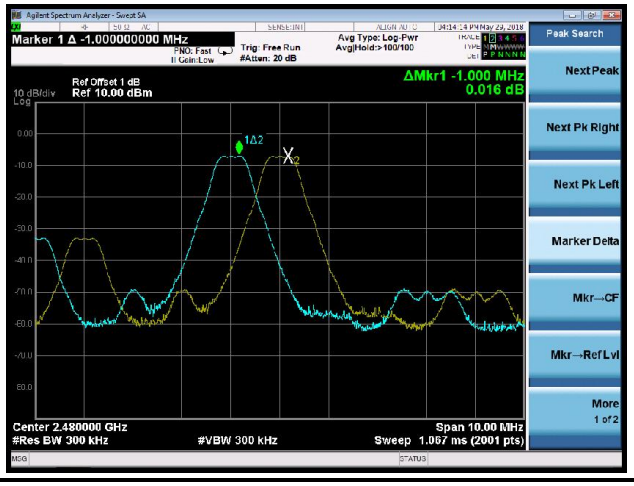


7.4.5.Test Result

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Lewis Huang	Relative Humidity	52%
Test Site	TR3	Test Date	2018/05/29

Test Mode	Channel No.	Frequency (MHz)	Limit (kHz)	Result
DH5	00	2402	≥ 523.53	Pass
DH5	39	2441	≥ 523.47	Pass
DH5	78	2480	≥ 523.40	Pass
2DH5	00	2402	≥ 780.67	Pass
2DH5	39	2441	≥ 780.67	Pass
2DH5	78	2480	≥ 780.67	Pass

Note: The Limit is 2/3 the value of the 20dB BW.

DH5 Carrier Frequency Separation	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Channel 78 (2480MHz)	
	

2DH5 Carrier Frequency Separation	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Channel 78 (2480MHz)	
	

7.5. Number of Hopping Channels Measurement

7.5.1.Test Limit

This frequency hopping system must employ a minimum of 15 hopping channels.

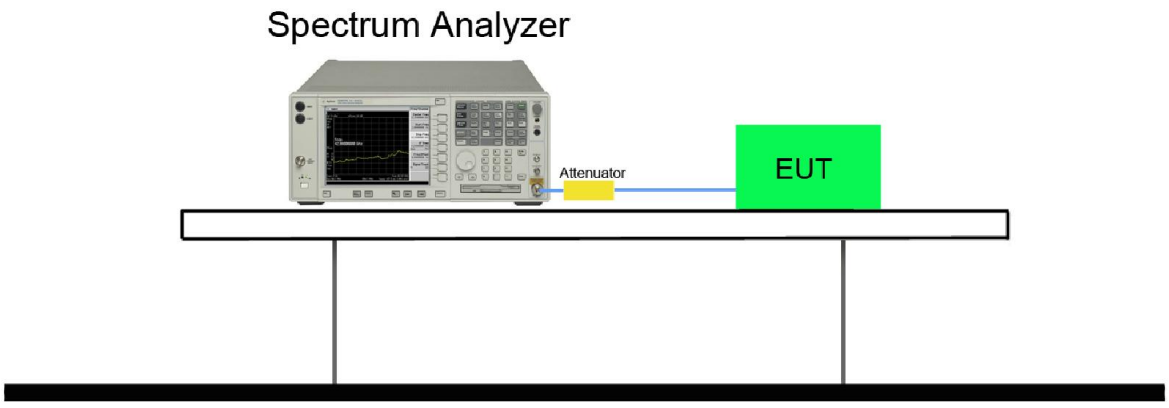
7.5.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.3

7.5.3.Test Settitng

1. Span = the frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
2. To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
3. VBW ≥ RBW
4. Sweep time = Auto couple
5. Detector = Peak
6. Trace mode = Max hold
7. Allow the trace to stabilize

7.5.4.Test Setup



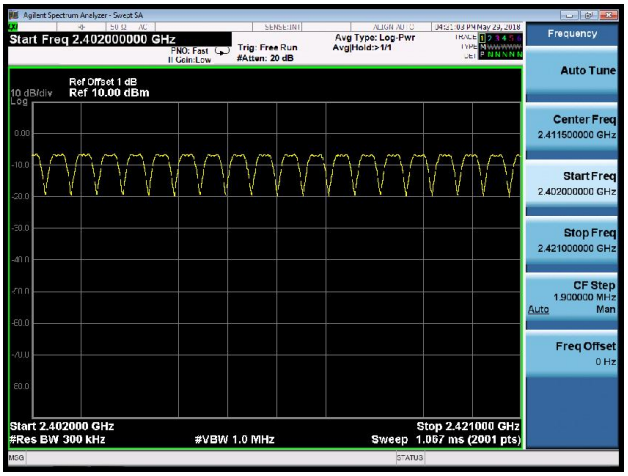
7.5.5.Test Result

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Hunk Li	Relative Humidity	52%
Test Site	TR3	Test Date	2018/05/29

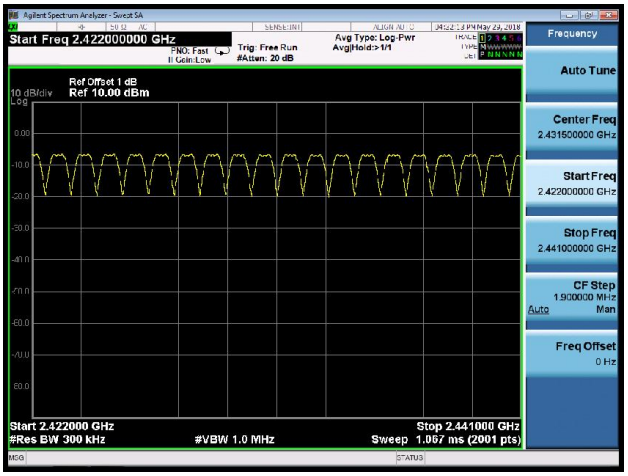
Test Mode (Hopping)	Channel Numbers	Frequency (MHz)	Limit (Hopping Channels)	Result
DH5	79	2402~2480	≥ 15	Pass
2DH5	79	2402~2480	≥ 15	Pass
3DH5	79	2402~2480	≥ 15	Pass

DH5 Number of Hopping Channels

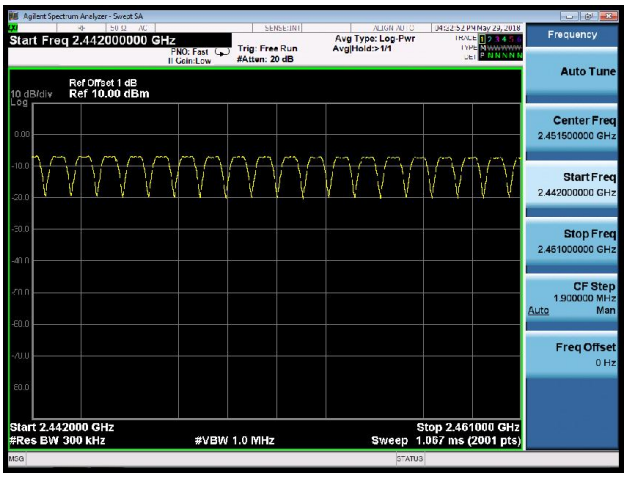
2402 ~ 2421MHz



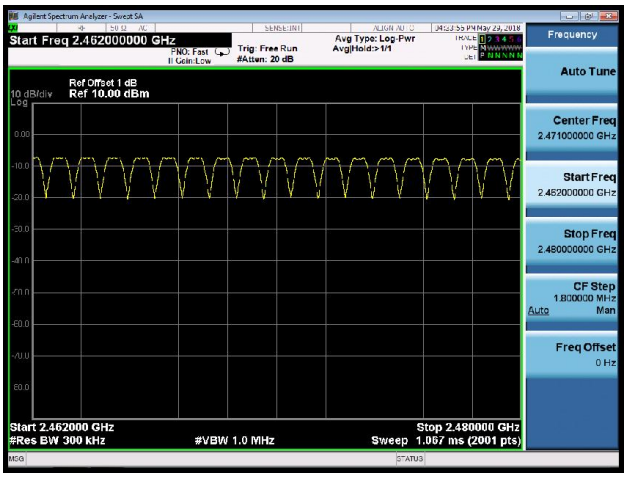
2422 ~ 2441MHz

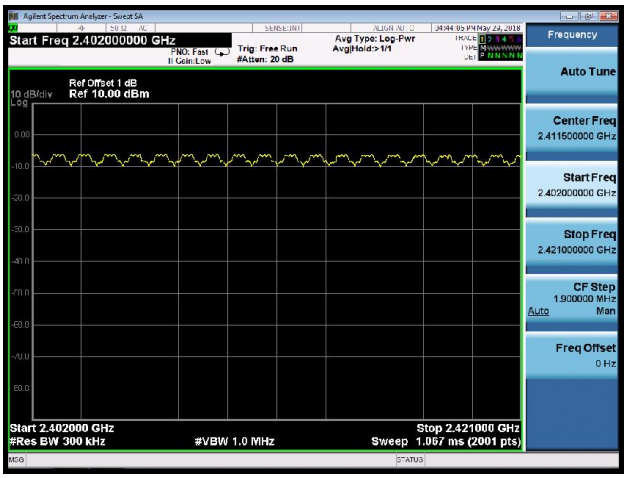
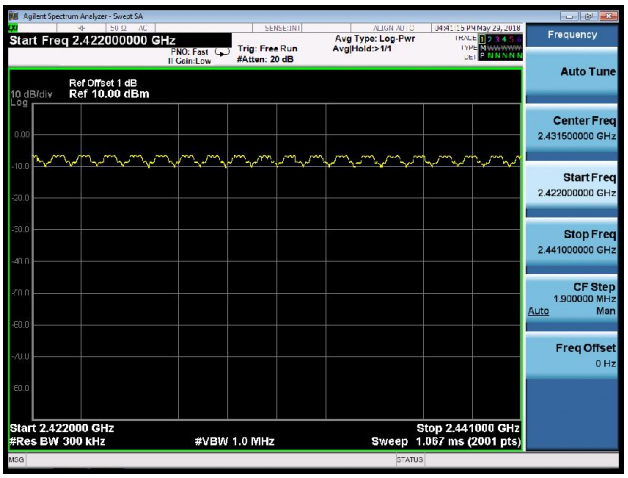
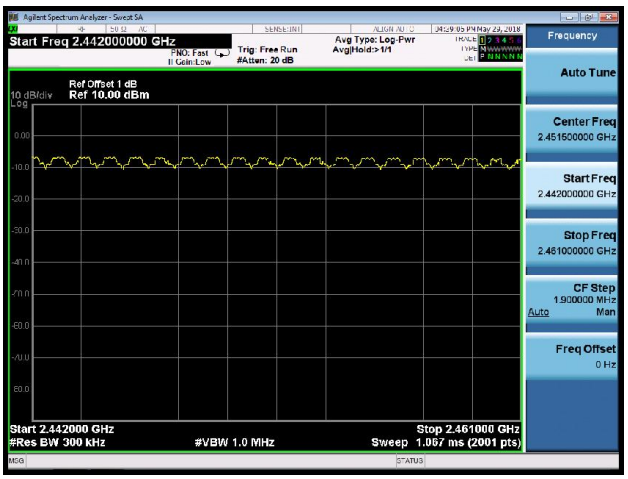
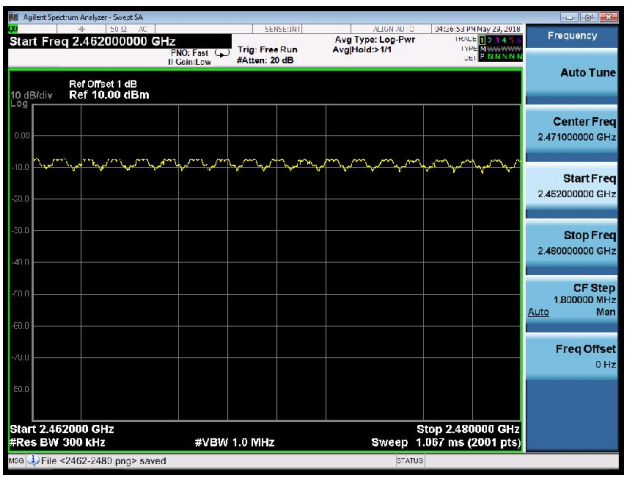


2442 ~ 2461MHz



2462 ~ 2480MHz



2DH5 Number of Hopping Channels	
2402 ~ 2421MHz	**2422 ~ 2441MHz**
	
2442 ~ 2461MHz	**2462 ~ 2480MHz**
	

7.6. Time of Occupancy Measurement

7.6.1.Test Limit

The maximum permissible time of occupancy is 400ms within a period of 400ms multiplied by the number of hopping channels employed.

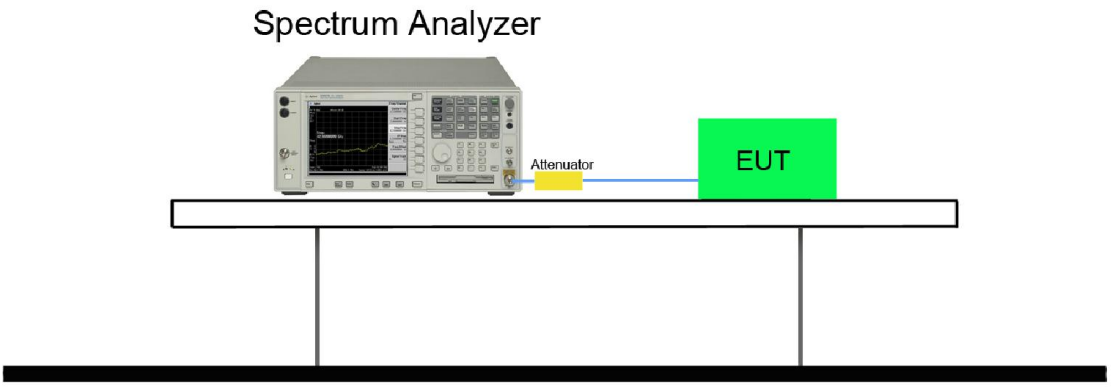
7.6.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.4

7.6.3.Test Settitng

1. Span = zero span, centered on a hopping channel.
2. RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel.
3. VBW ≥ RBW
4. Sweep time = as necessary to capture the entire dwell time per hopping channel
5. Detector = Peak
6. Trace mode = max hold
7. Use the marker-delta function to determine the transmit time per hop. If this value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in transmit time. An oscilloscope may be used instead of a spectrum analyzer. The EUT shall show compliance with the appropriate regulatory limit for the number of hopping channels. A plot of the data shall be included in the test report.

7.6.4.Test Setup



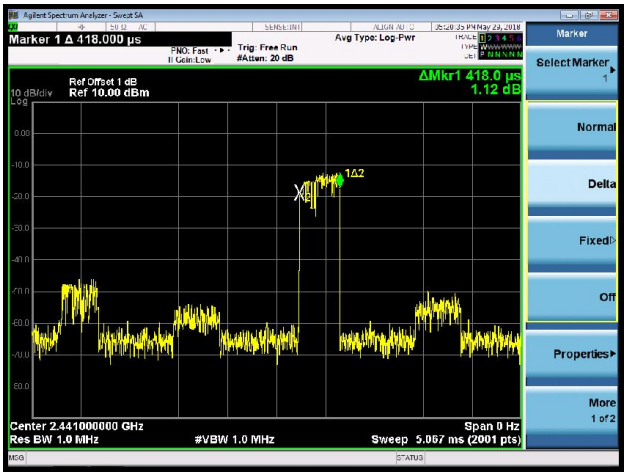
7.6.5.Test Result

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Hunk Li	Relative Humidity	52%
Test Site	TR3	Test Date	2018/05/29

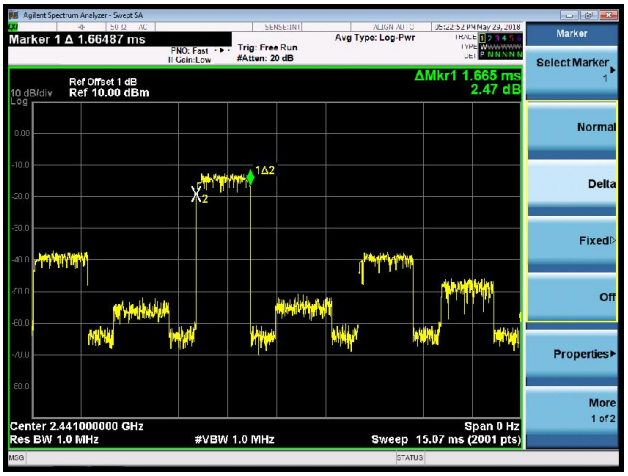
Test Mode	Channel No.	Frequency (MHz)	Hops Over Occupancy Time(Hops)	Packet Transfer Time (ms)	Time of Occupancy (ms)	Limit (ms)	Result
3DH1	39	2441	320	0.42	134.4	≤ 400	Pass
3DH3	39	2441	160	1.67	267.2	≤ 400	Pass
3DH5	39	2441	107	2.91	311.4	≤ 400	Pass

Packet Transfer Time

2DH1 - Channel 39 (2441MHz)



2DH3 - Channel 39 (2441MHz)



2DH5 - Channel 39 (2441MHz)

Note 1: According the Bluetooth Standard Specification, the nominal hop rate is 1600 hops/s. All Bluetooth unit participating in the piconet are time and hop synchronized to the channel.

Hops Over Occupancy Time in 31.6s for 3DH1 = 1600 / 2 / 79 * 31.6 = 320.

Hops Over Occupancy Time in 31.6s for 3DH3 = 1600 / 4 / 79 * 31.6 = 160.

Hops Over Occupancy Time in 31.6s for 3DH5 = 1600 / 6 / 79 * 31.6 = 107.

Note 2: Time of Occupancy = Packet Transfer Time * Hops Over Occupancy Time in 31.6s.

7.7. Band-edge Compliance Measurement

7.7.1.Test Limit

The maximum permissible emission level is 20dBc. Any emissions were lying outside of the emission bandwidth and in authorized band edges to a field strength limit specified in Section 15.209 of the Title 47 CFR.

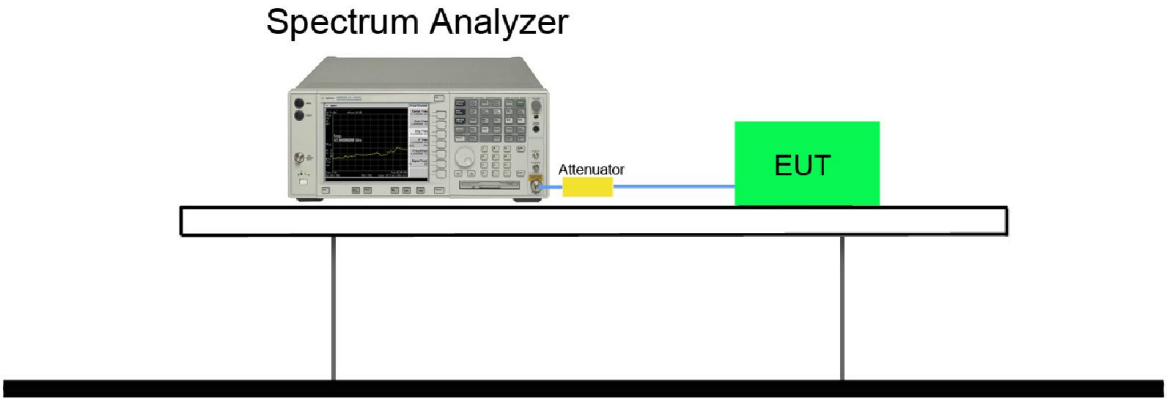
7.7.2.Test Procedure Used

ANSI C63.10-2013 - Section 6.10.4

7.7.3.Test Setting

1. Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize
8. Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, than use the marker-to-peak function to move the marker to the peak of the in-band emission.

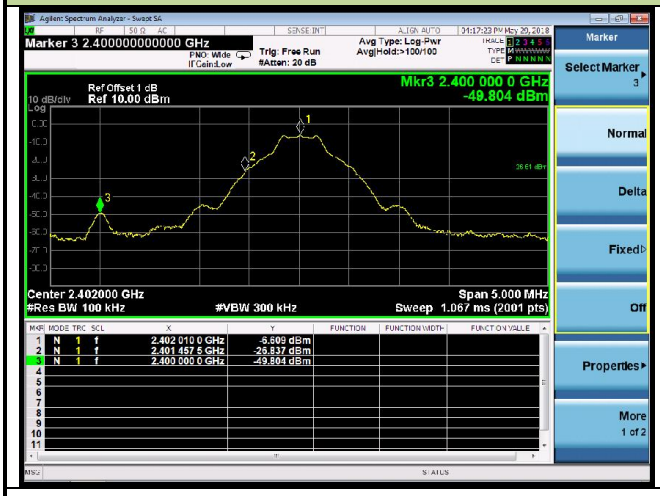
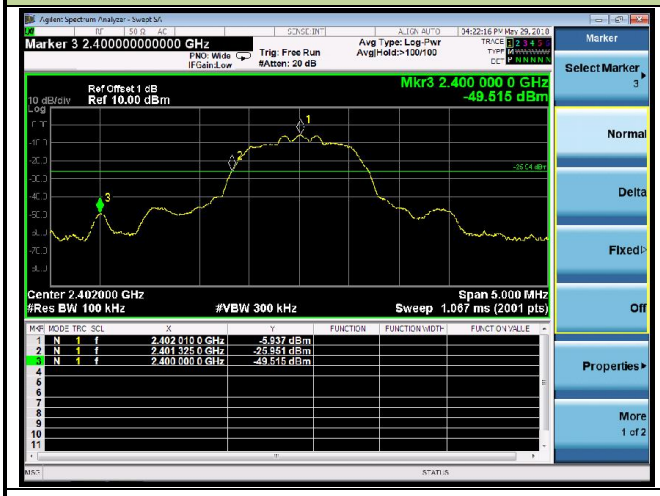
7.7.4.Test Setup

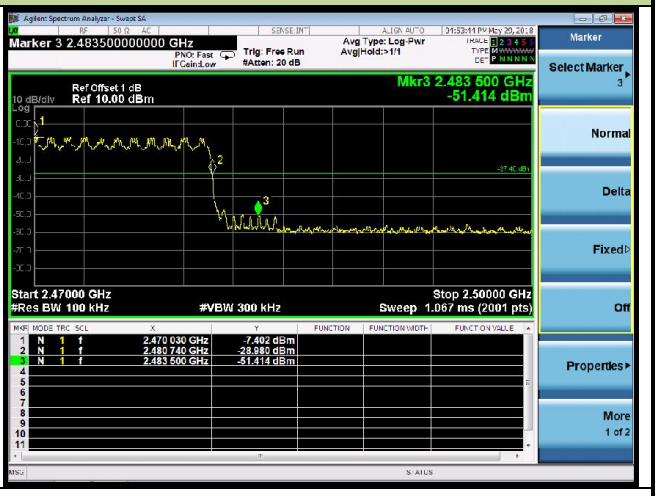
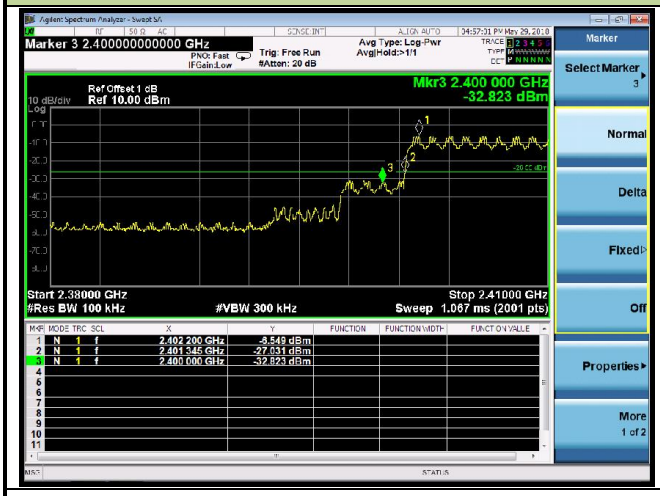
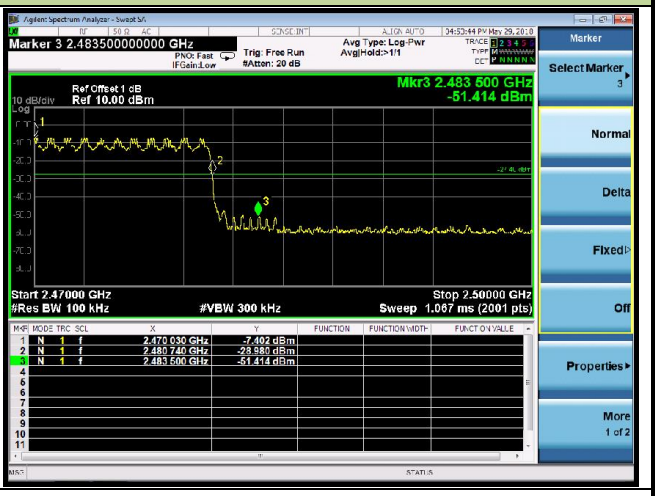


7.7.5.Test Result

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Hunk Li	Relative Humidity	52%
Test Site	TR3	Test Date	2018/05/29

Test Mode	Channel No.	Frequency (MHz)	Limit	Result
DH5	00	2402	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	78	2480	20dBc	Pass

Band-edge Compliance	
DH5 - Channel 00 (2402MHz)	**DH5 - Channel 78 (2480MHz)**
	
Note: The Value of the Display Line is -26.61dBm	Note: The Value of the Display Line is -27.75dBm
2DH5 - Channel 00 (2402MHz)	**2DH5 - Channel 78 (2480MHz)**
	
Note: The Value of the Display Line is -25.94dBm	Note: The Value of the Display Line is -27.68dBm

Operation Frequency Range of 20dB Bandwidth within Hopping Mode	
DH5 - Channel 00 (2402MHz)	**DH5 - Channel 78 (2480MHz)**
	
Note: The Value of the Display Line is -26.55dBm	Note: The Value of the Display Line is -27.40dBm
2DH5 - Channel 00 (2402MHz)	**2DH5 - Channel 78 (2480MHz)**
	
Note: The Value of the Display Line is -26.55dBm	Note: The Value of the Display Line is -27.40dBm

7.8. Conducted Spurious Emissions Measurement

7.8.1.Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

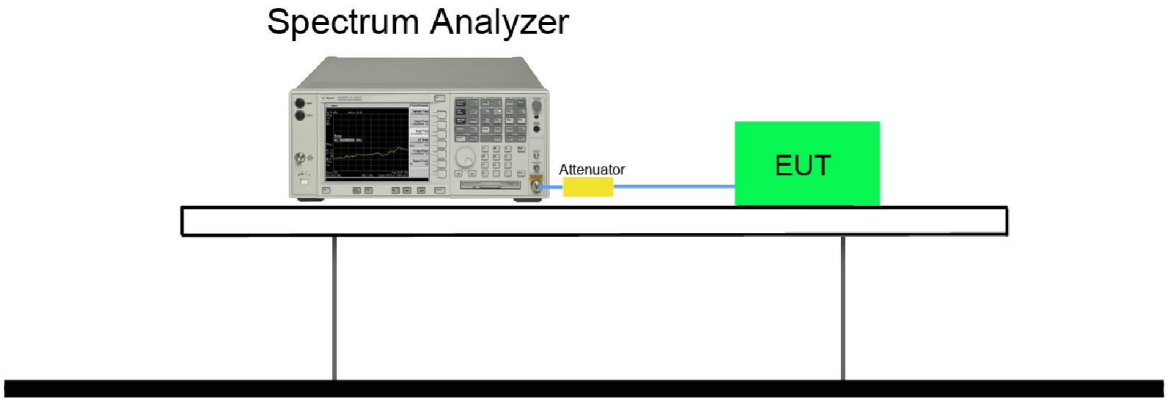
7.8.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.8

7.8.3.Test Setting

1. Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
2. RBW = 100 KHz
3. VBW ≥ RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize
8. Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this section.

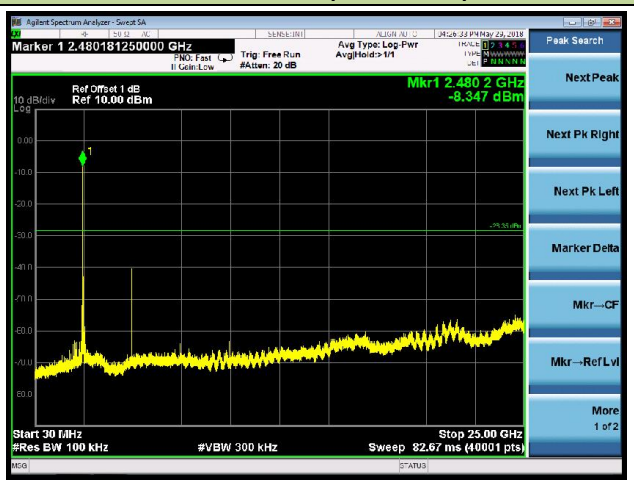
7.8.4.Test Setup

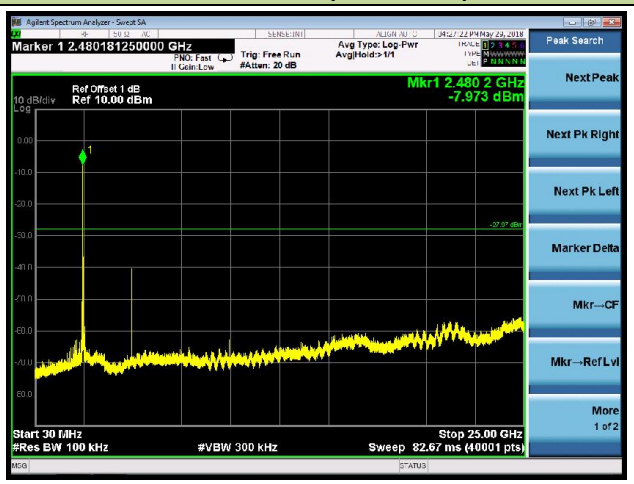


7.8.5.Test Result

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Hunk Li	Relative Humidity	52%
Test Site	TR3	Test Date	2018/05/29

Test Mode	Channel No.	Frequency (MHz)	Limit (MHz)	Result
DH5	00	2402	20dBc	Pass
DH5	39	2441	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	39	2441	20dBc	Pass
2DH5	78	2480	20dBc	Pass

DH5 Conducted Spurious Emissions	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Note: The Value of the Display Line is -26.46dBm	Note: The Value of the Display Line is -27.55dBm
Channel 78 (2480MHz)	
	
Note: The Value of the Display Line is -28.35dBm	

2DH5 Conducted Spurious Emissions	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Note: The Value of the Display Line is -26.90dBm	Note: The Value of the Display Line is -26.90dBm
Channel 78 (2480MHz)	
	
Note: The Value of the Display Line is -27.97dBm	

7.9. Radiated Spurious Emission Measurement

7.9.1.Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47

CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.9.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.9.3.Test Setting

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Peak Measurements above 1GHz

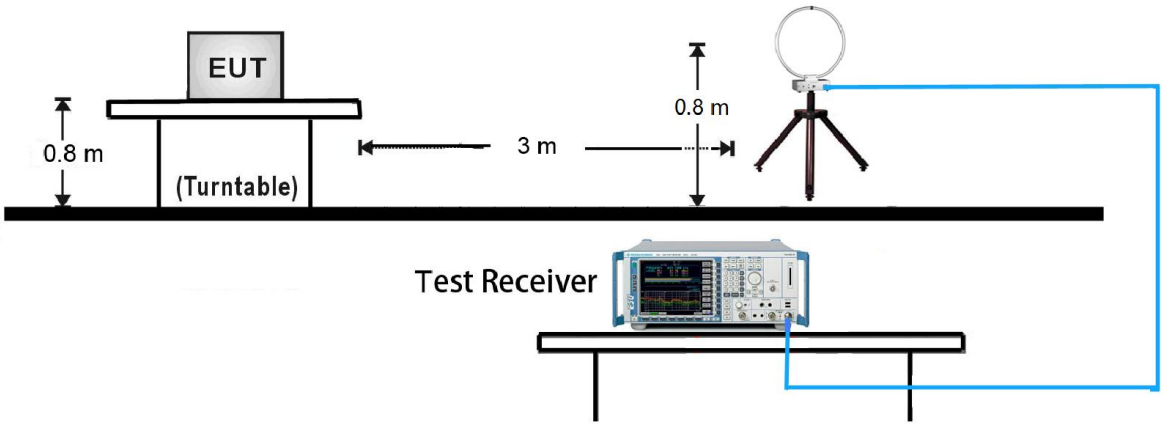
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

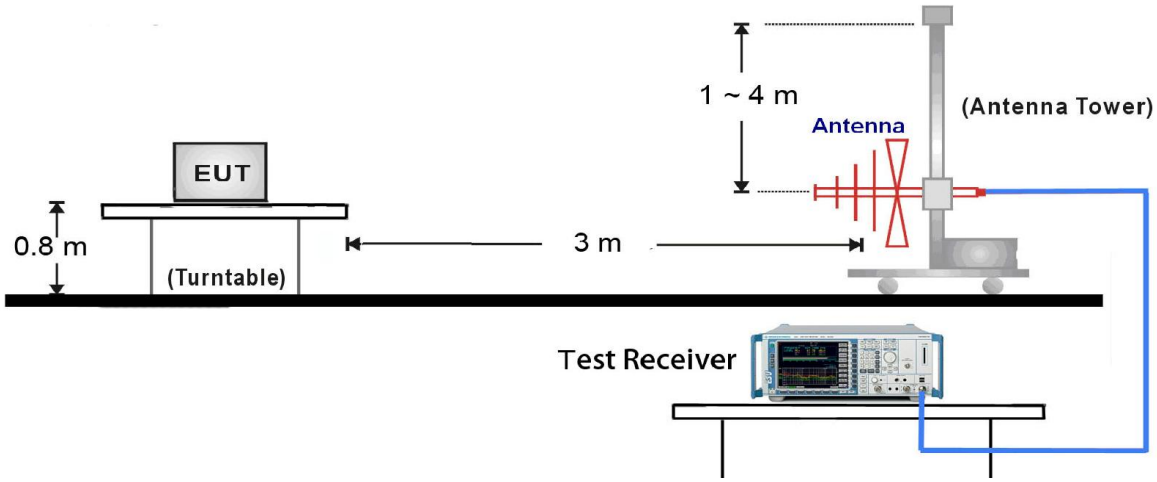
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

7.9.4.Test Setup

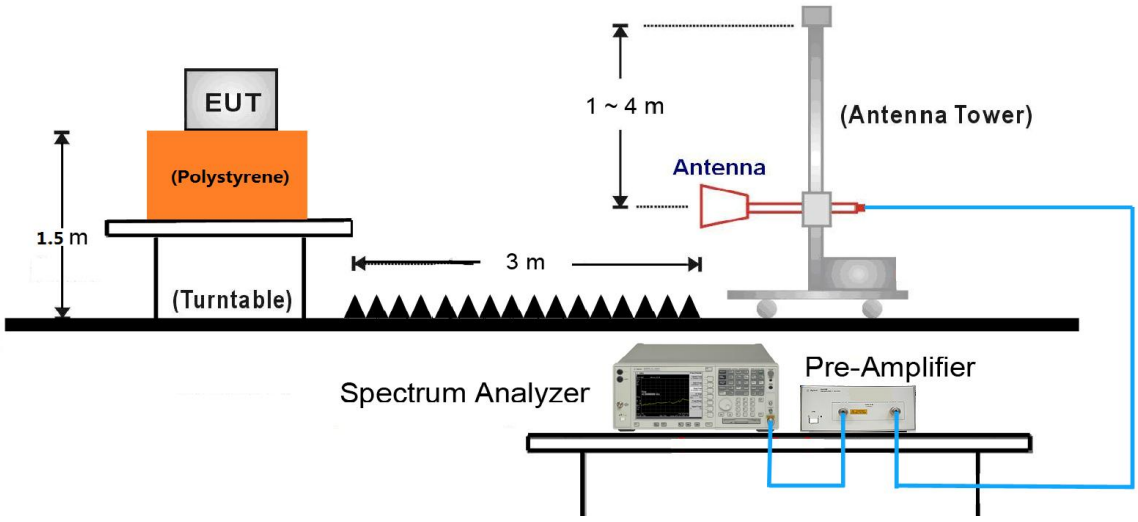
9kHz ~ 30MHz Test Setup:



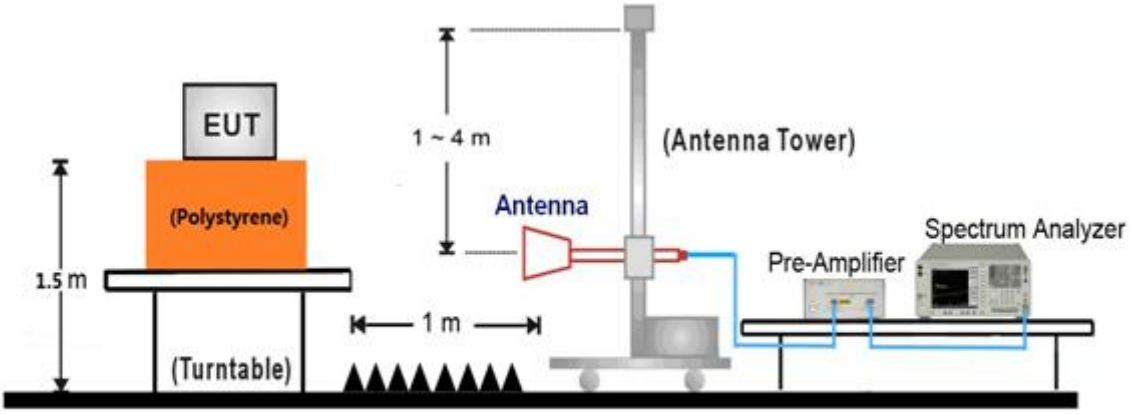
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~25GHz Test Setup:



7.9.5.Test Result

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Hunk Li	Relative Humidity	56%
Test Site	AC1	Test Date	2018/05/21
Test Mode:	DH5	Test Channel:	00
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3813.5	12.8	29.6	42.4	74.0	-31.6	Peak	Horizontal
	4808.0	18.0	31.5	49.5	74.0	-24.5	Peak	Horizontal
*	6601.5	11.8	34.6	46.4	68.2	-21.8	Peak	Horizontal
*	7936.0	13.9	37.1	51.0	68.2	-17.2	Peak	Horizontal
	3626.5	13.1	29.2	42.2	74.0	-31.8	Peak	Vertical
	4808.0	13.6	31.5	45.2	74.0	-28.8	Peak	Vertical
*	6193.5	12.8	33.2	45.9	68.2	-22.3	Peak	Vertical
*	8012.5	12.9	37.3	50.2	68.2	-18.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (87.5dBμV/m) or 15.209 which is higher.

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

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

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Cat Hu	Relative Humidity	56%
Test Site	AC1	Test Date	2018/05/21
Test Mode:	DH5	Test Channel:	39
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3992.0	12.6	29.9	42.4	74.0	-31.6	Peak	Horizontal
	4882.0	40.7	6.0	46.7	54.0	-7.3	Average	Horizontal
	4884.5	47.0	6.0	53.0	74.0	-21.0	Peak	Horizontal
*	6610.0	12.1	34.6	46.6	68.2	-21.6	Peak	Horizontal
*	9916.5	13.5	38.7	52.2	68.2	-16.0	Peak	Horizontal
	3983.5	12.6	29.8	42.5	74.0	-31.5	Peak	Vertical
	4884.5	16.2	31.6	47.8	74.0	-26.2	Peak	Vertical
*	6559.0	11.8	34.6	46.4	68.2	-21.8	Peak	Vertical
*	9959.0	13.4	38.6	52.0	68.2	-16.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (88.9dBμV/m) or 15.209 which is higher.

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

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

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Cat Hu	Relative Humidity	56%
Test Site	AC1	Test Date	2018/05/21
Test Mode:	DH5	Test Channel:	78
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3771.0	12.6	29.5	42.0	74.0	-32.0	Peak	Horizontal
	4960.0	41.0	6.1	47.1	54.0	-6.9	Average	Horizontal
	4961.0	47.4	6.1	53.5	74.0	-20.5	Peak	Horizontal
*	6635.5	11.9	34.5	46.4	68.2	-21.8	Peak	Horizontal
*	7978.5	13.2	37.2	50.4	68.2	-17.8	Peak	Horizontal
	4068.5	12.5	30.0	42.5	74.0	-31.5	Peak	Vertical
	4961.0	16.7	31.7	48.4	74.0	-25.6	Peak	Vertical
*	7162.5	12.4	36.4	48.8	68.2	-19.4	Peak	Vertical
*	9942.0	13.1	38.6	51.7	68.2	-16.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (88.8dBμV/m) or 15.209 which is higher.

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

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

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Cat Hu	Relative Humidity	56%
Test Site	AC1	Test Date	2018/05/21
Test Mode:	2DH5	Test Channel:	00
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4043.0	12.1	29.9	42.0	74.0	-32.0	Peak	Horizontal
	4799.5	44.6	5.8	50.5	74.0	-23.5	Peak	Horizontal
*	6890.5	11.9	35.0	46.9	68.2	-21.3	Peak	Horizontal
*	8854.0	11.9	36.9	48.9	68.2	-19.3	Peak	Horizontal
	4051.5	12.2	29.9	42.2	74.0	-31.8	Peak	Vertical
	4808.0	16.5	31.5	48.1	74.0	-25.9	Peak	Vertical
*	7137.0	12.9	36.3	49.1	68.2	-19.1	Peak	Vertical
*	9925.0	13.0	38.7	51.7	68.2	-16.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (90.0dBμV/m) or 15.209 which is higher.

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

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

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Cat Hu	Relative Humidity	56%
Test Site	AC1	Test Date	2018/05/21
Test Mode:	2DH5	Test Channel:	39
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4068.5	12.1	30.0	42.1	74.0	-31.9	Peak	Horizontal
	4882.0	37.2	6.0	43.2	54.0	-10.8	Average	Horizontal
	4884.5	47.0	6.0	53.0	74.0	-21.0	Peak	Horizontal
*	6661.0	11.9	34.5	46.3	68.2	-21.9	Peak	Horizontal
*	9959.0	13.4	38.6	52.1	68.2	-16.1	Peak	Horizontal
	3830.5	12.3	29.6	41.9	74.0	-32.1	Peak	Vertical
	4884.5	15.8	31.6	47.4	74.0	-26.6	Peak	Vertical
*	6559.0	11.3	34.6	45.9	68.2	-22.3	Peak	Vertical
*	7910.5	13.2	37.0	50.2	68.2	-18.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (90.7dBμV/m) or 15.209 which is higher.

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

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

Product	Bluetooth Speaker	Temperature	25°C
Test Engineer	Cat Hu	Relative Humidity	56%
Test Site	AC1	Test Date	2018/05/21
Test Mode:	2DH5	Test Channel:	78
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4009.0	12.2	29.9	42.1	74.0	-31.9	Peak	Horizontal
	4960.0	37.8	6.1	43.9	54.0	-10.1	Average	Horizontal
	4961.0	46.0	6.1	52.1	74.0	-21.9	Peak	Horizontal
*	7162.5	12.1	36.4	48.5	68.2	-19.7	Peak	Horizontal
*	8675.5	12.0	36.9	48.9	68.2	-19.3	Peak	Horizontal
	3813.5	12.5	29.6	42.0	74.0	-32.0	Peak	Vertical
	4961.0	15.0	31.7	46.7	74.0	-27.3	Peak	Vertical
*	7987.0	13.3	37.2	50.5	68.2	-17.7	Peak	Vertical
*	9644.5	13.4	38.1	51.6	68.2	-16.6	Peak	Vertical

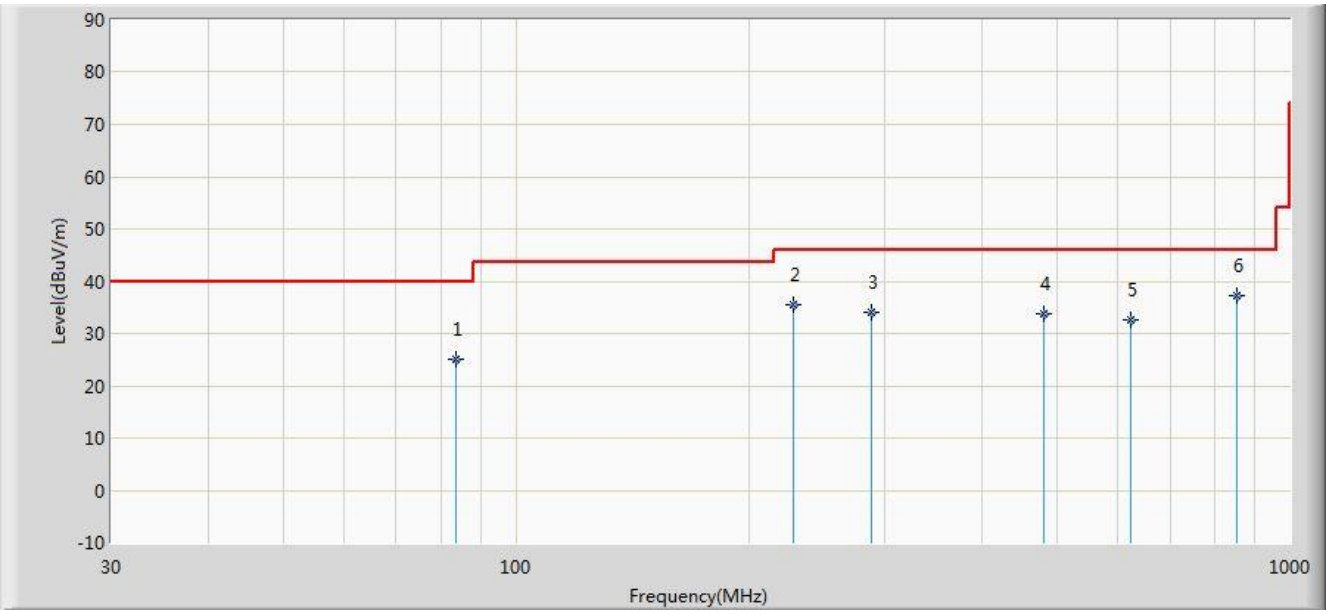
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (89.5dBμV/m) or 15.209 which is higher.

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

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

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2018/05/21 - 17:51
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Bruce Wang
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Bluetooth Speaker	Power: By USB
Worst Case Mode: Transmit by 2DH5 at Channel 2402MHz	



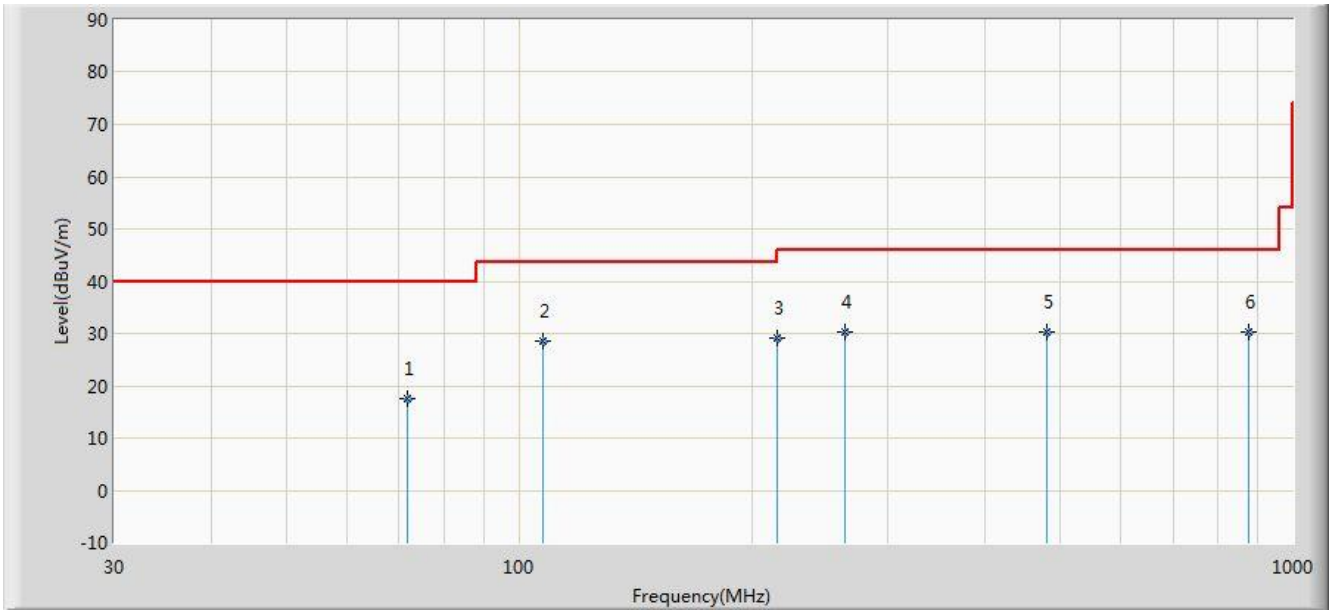
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			83.835	25.210	15.020	-14.790	40.000	10.190	QP
2			227.880	35.578	23.100	-10.422	46.000	12.478	QP
3			288.050	34.202	20.100	-11.798	46.000	14.102	QP
4			480.080	33.883	15.600	-12.117	46.000	18.283	QP
5			624.125	32.672	11.588	-13.328	46.000	21.084	QP
6		*	852.560	37.321	13.540	-8.679	46.000	23.781	QP

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

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

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2018/05/21 - 17:52
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Bruce Wang
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: Bluetooth Speaker	Power: By USB
Worst Case Mode: Transmit by 2DH5 at Channel 2402MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			71.710	17.522	6.186	-22.478	40.000	11.337	QP
2			107.600	28.685	16.840	-14.815	43.500	11.845	QP
3		*	215.755	29.199	17.450	-14.301	43.500	11.749	QP
4			263.770	30.222	16.840	-15.778	46.000	13.382	QP
5			480.080	30.383	12.100	-15.617	46.000	18.283	QP
6			876.325	30.230	6.150	-15.770	46.000	24.080	QP

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

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

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

7.10. Radiated Restricted Band Edge Measurement

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1] 0.495 - 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	8.25 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 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 - 156.525	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	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For RSS-Gen Section 8.10 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 8.10 of RSS-Gen, must also comply with the radiated emission limits specified in Section 8.9.

Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.009 - 0.110	149.9 -150.5	9.0 - 9.2
0.495 -0.505	156.52475 - 156.525225	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	--
8.37625 - 8.38675	1718.8 -1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 -2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 -13.41	3260 - 3267	
16.42 - 16.423	3332 -3339	
16.69475 - 16.69525	334.5 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

All out of band emissions appearing in a restricted band as specified in Section 8.10 of the RSS-Gen must not exceed the limits shown in Table per Section 8.9.

RSS-Gen Section 8.9			
Frequency [MHz]	Magnetic field strength (H-Field) [uA/m]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	6.37/F(F in kHz)	N/A	300
0.490 - 1.705	63.7/F(F in kHz)	N/A	30
1.705 - 30	0.08	N/A	30
30 - 88	N/A	100	3
88 - 216	N/A	150	3
216 - 960	N/A	200	3
Above 960	N/A	500	3

7.10.1.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.10.2.Test Setting

Peak Field Strength Measurements

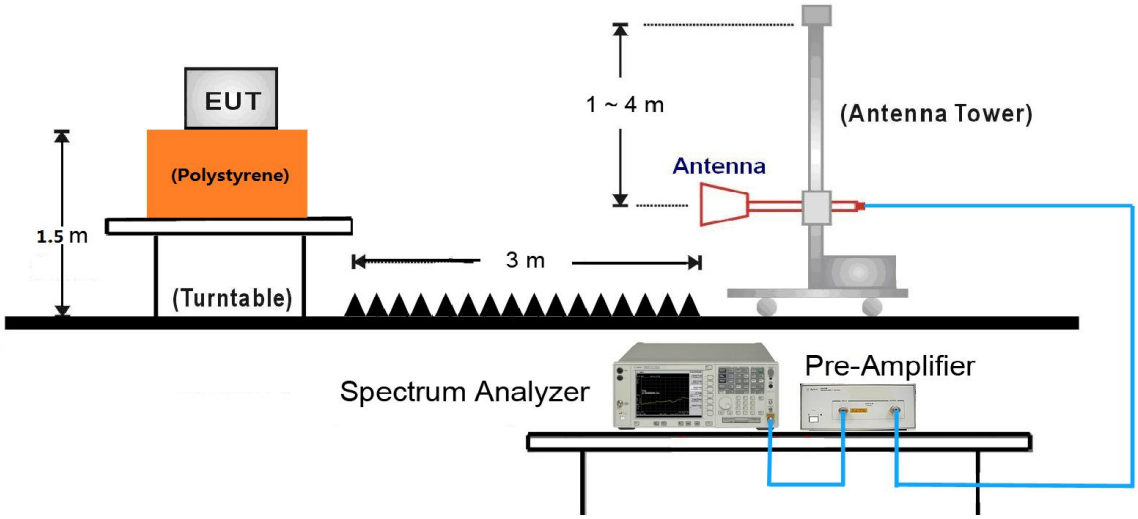
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.

   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

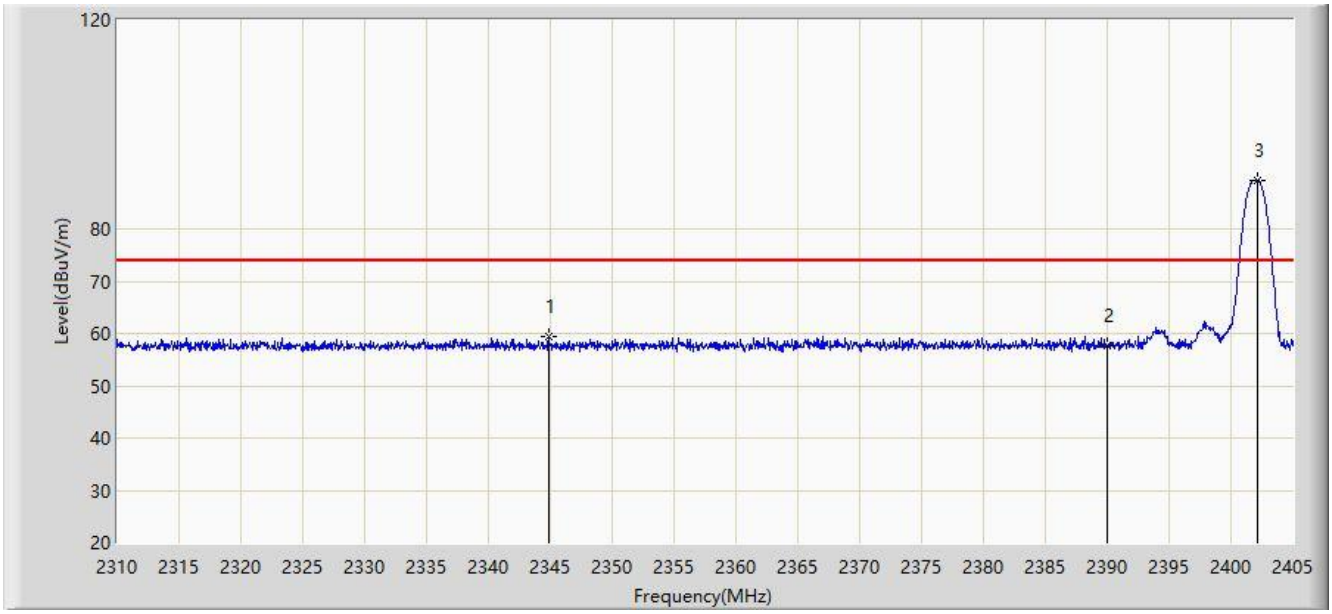
7.10.3.Test Setup



Note: This item was performed with the WIFI antenna connected.

7.10.4.Test Result

Site: AC1	Time: 2018/05/21 - 16:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by DH5 at channel 2402MHz	

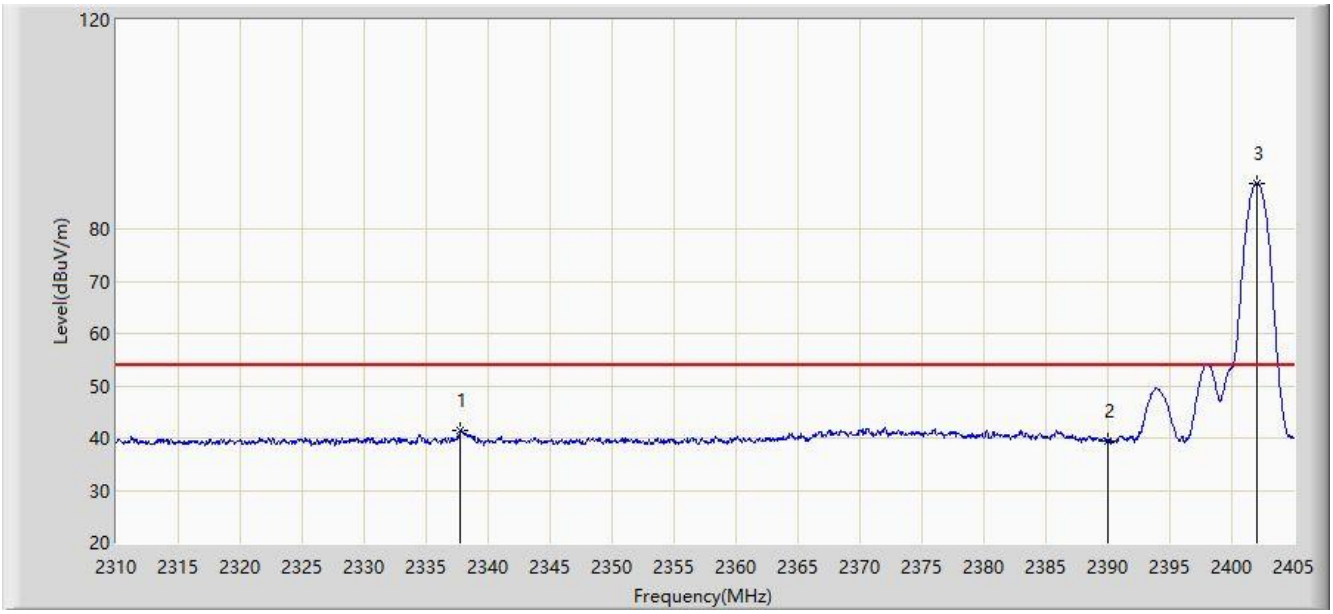


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2344.865	59.322	26.907	-14.678	74.000	32.415	PK
2			2390.000	57.623	25.296	-16.377	74.000	32.327	PK
3		*	2402.150	89.293	56.989	15.293	74.000	32.304	PK

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

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

Site: AC1	Time: 2018/05/21 - 16:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by DH5 at channel 2402MHz	

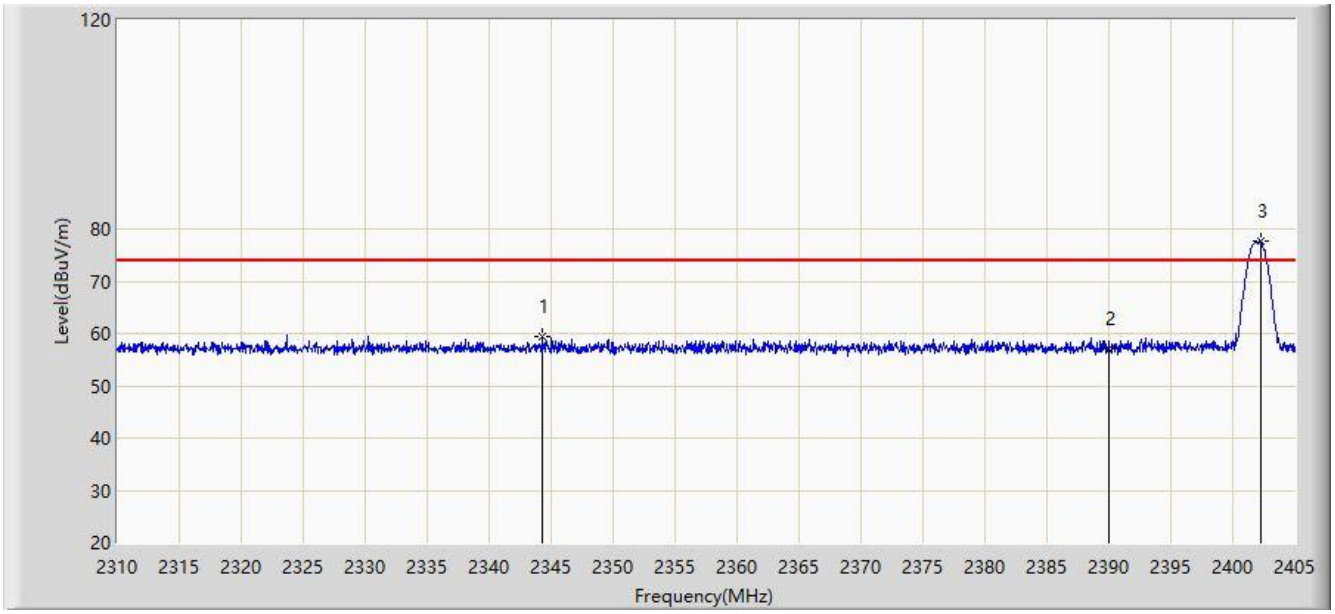


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2337.788	41.465	9.025	-12.535	54.000	32.440	AV
2			2390.000	39.437	7.110	-14.563	54.000	32.327	AV
3		*	2402.008	88.769	56.465	34.769	54.000	32.305	AV

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

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

Site: AC1	Time: 2018/05/21 - 17:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by DH5 at channel 2402MHz	

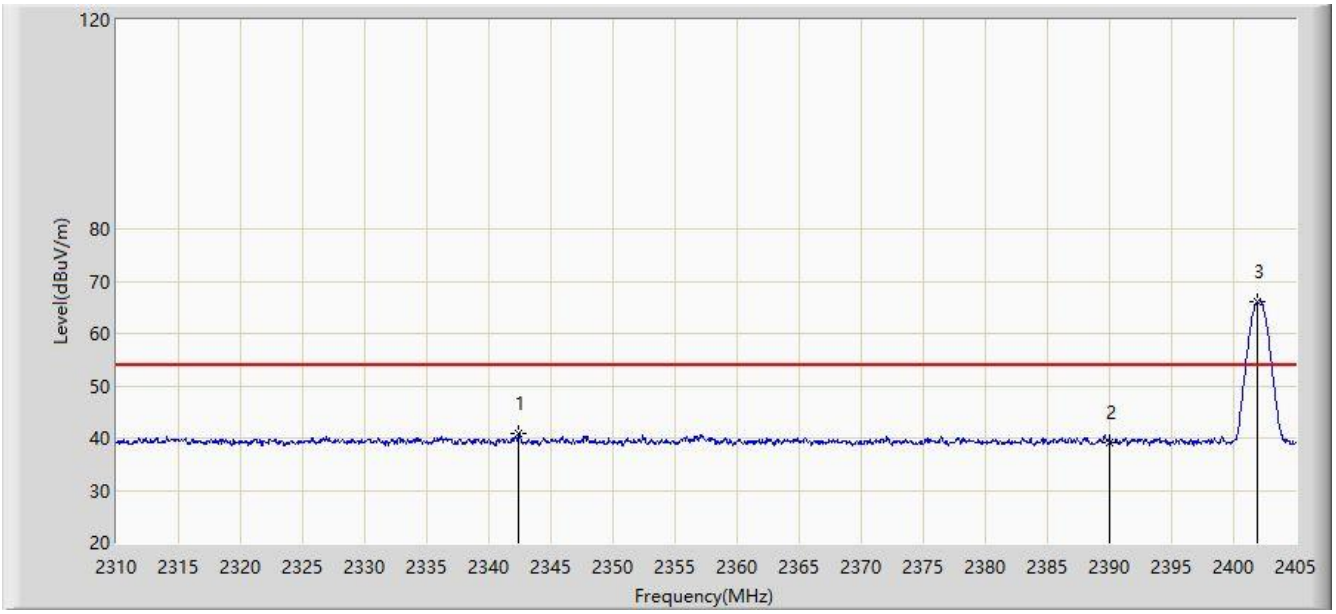


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2344.343	59.521	27.105	-14.479	74.000	32.416	PK
2			2390.000	57.110	24.783	-16.890	74.000	32.327	PK
3		*	2402.245	77.553	45.249	3.553	74.000	32.304	PK

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

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

Site: AC1	Time: 2018/05/21 - 17:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by DH5 at channel 2402MHz	

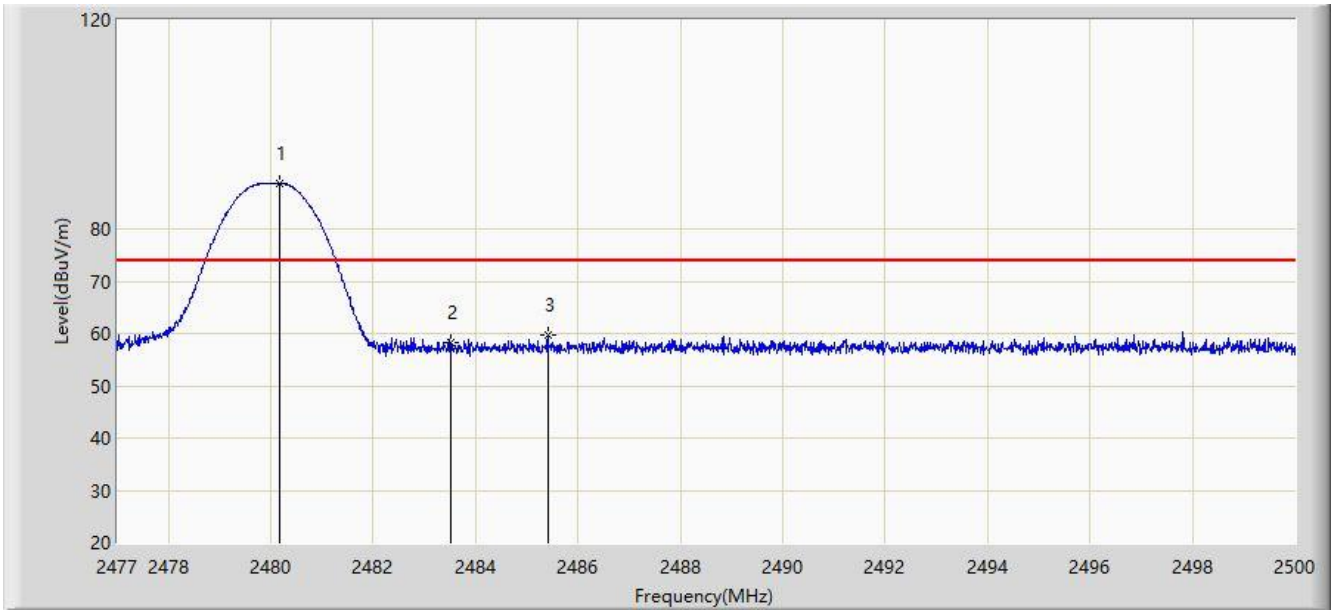


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2342.395	40.891	8.469	-13.109	54.000	32.422	AV
2			2390.000	39.142	6.815	-14.858	54.000	32.327	AV
3		*	2401.913	66.151	33.846	12.151	54.000	32.305	AV

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

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

Site: AC1	Time: 2018/05/21 - 17:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by DH5 at channel 2480MHz	

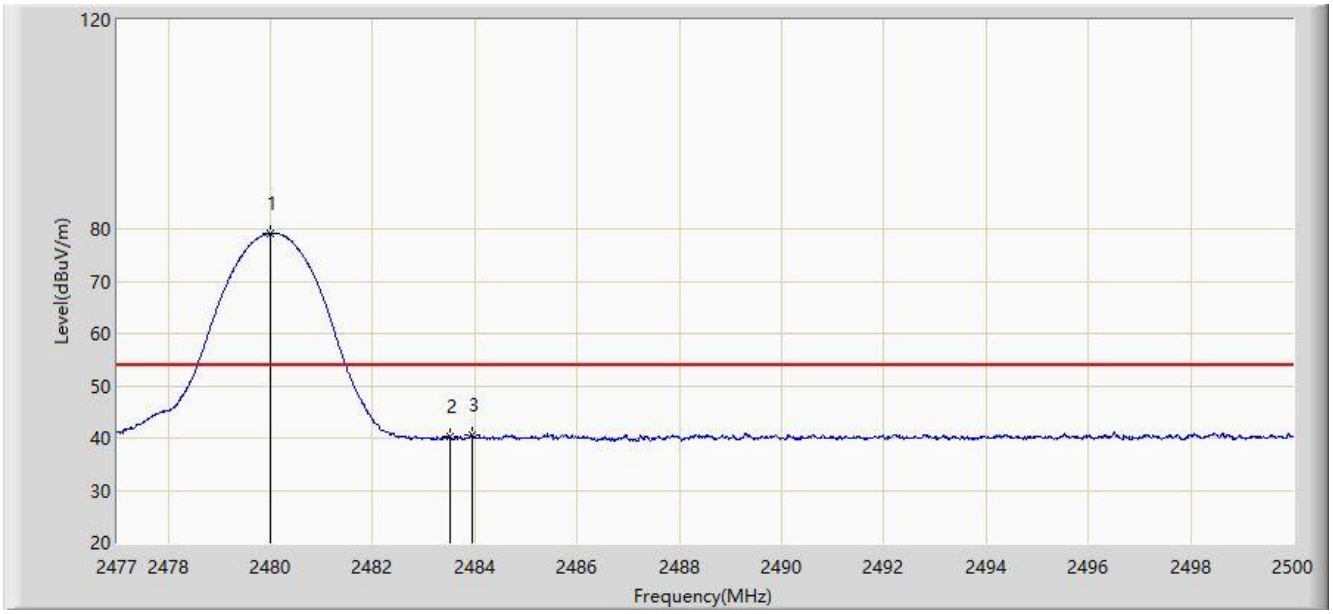


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2480.163	88.790	56.464	14.790	74.000	32.326	PK
2			2483.500	58.254	25.915	-15.746	74.000	32.340	PK
3			2485.406	59.813	27.466	-14.187	74.000	32.347	PK

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

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

Site: AC1	Time: 2018/05/21 - 17:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by DH5 at channel 2480MHz	

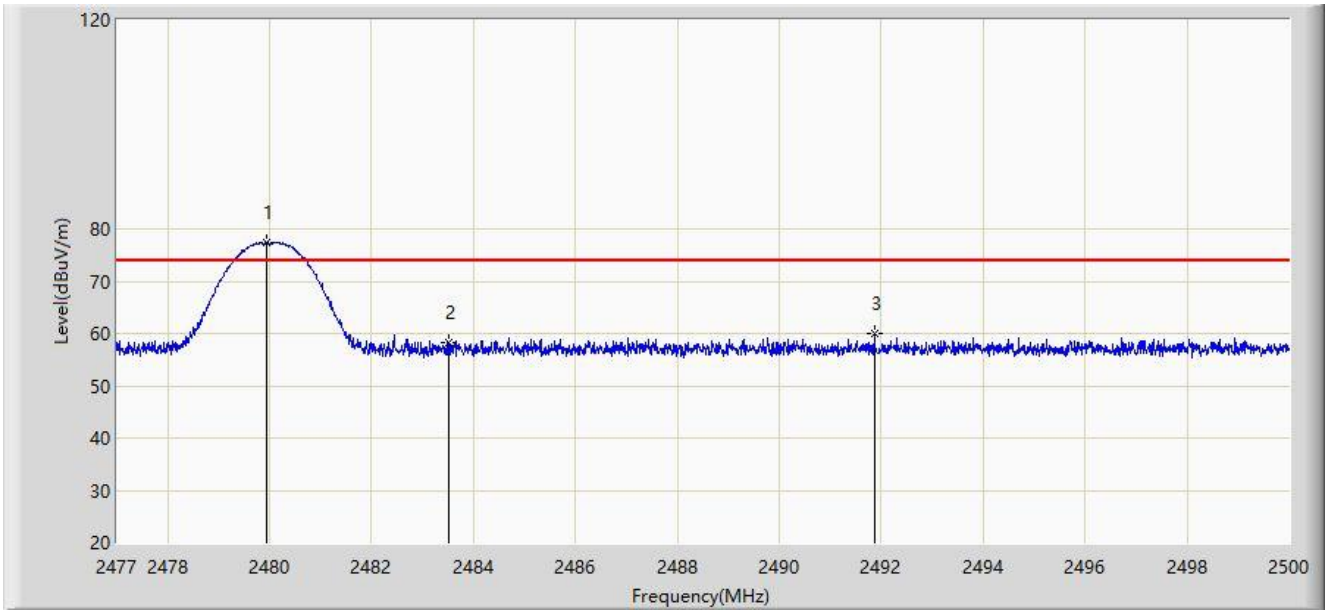


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2479.990	79.190	46.865	25.190	54.000	32.325	AV
2			2483.500	40.279	7.940	-13.721	54.000	32.340	AV
3			2483.935	40.658	8.317	-13.342	54.000	32.340	AV

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

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

Site: AC1	Time: 2018/05/21 - 17:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by DH5 at channel 2480MHz	

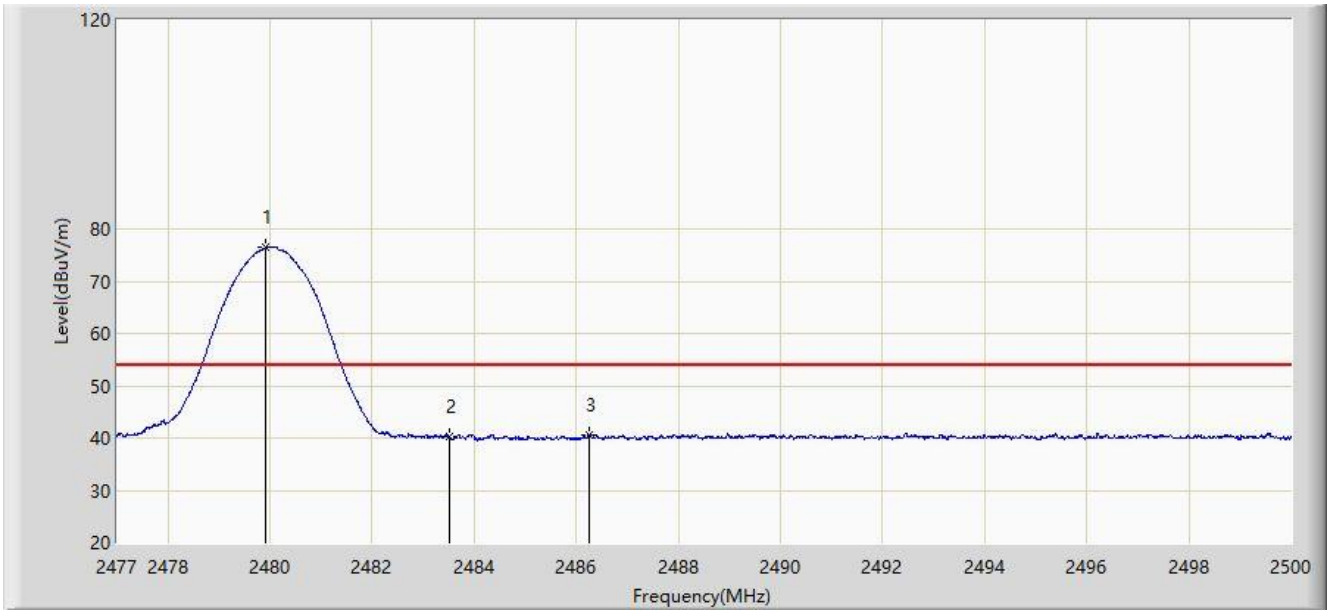


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2479.944	77.465	45.140	3.465	74.000	32.325	PK
2			2483.500	58.155	25.816	-15.845	74.000	32.340	PK
3			2491.858	59.864	27.492	-14.136	74.000	32.372	PK

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

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

Site: AC1	Time: 2018/05/21 - 17:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by DH5 at channel 2480MHz	

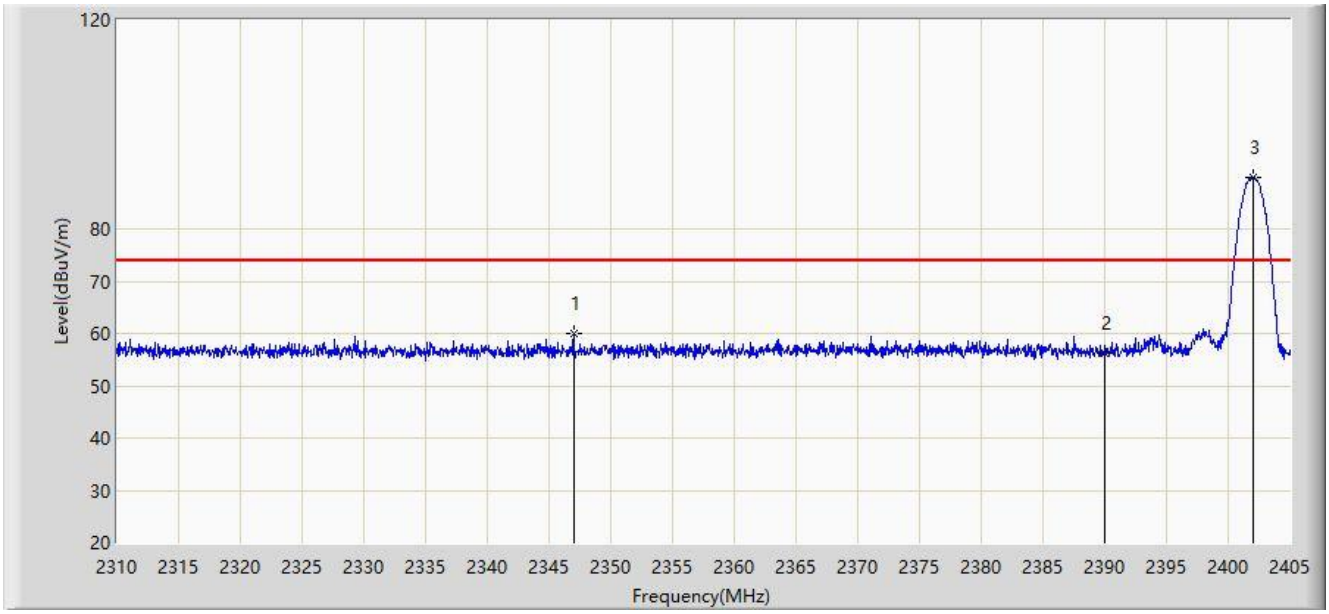


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2479.921	76.383	44.058	22.383	54.000	32.325	AV
2			2483.500	40.283	7.944	-13.717	54.000	32.340	AV
3			2486.258	40.711	8.361	-13.289	54.000	32.350	AV

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

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

Site: AC1	Time: 2018/05/21 - 17:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by 2DH5 at channel 2402MHz	

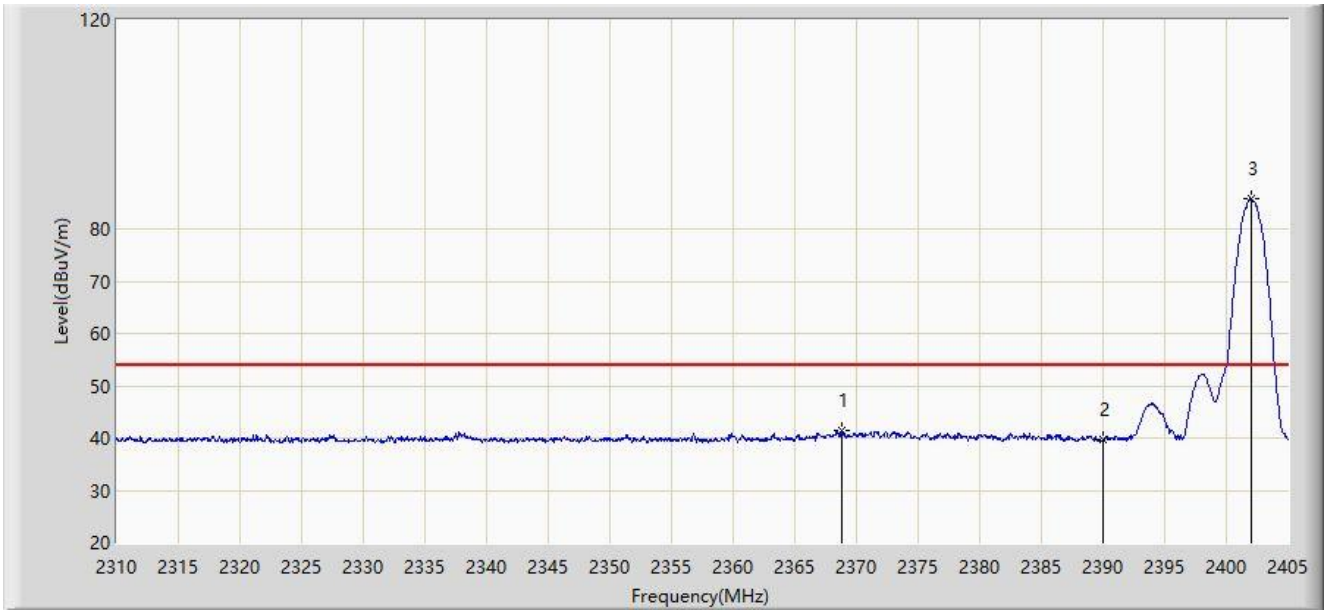


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2347.002	59.962	27.553	-14.038	74.000	32.409	PK
2			2390.000	56.108	23.781	-17.892	74.000	32.327	PK
3		*	2402.055	89.982	57.678	15.982	74.000	32.304	PK

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

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

Site: AC1	Time: 2018/05/21 - 17:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by 2DH5 at channel 2402MHz	

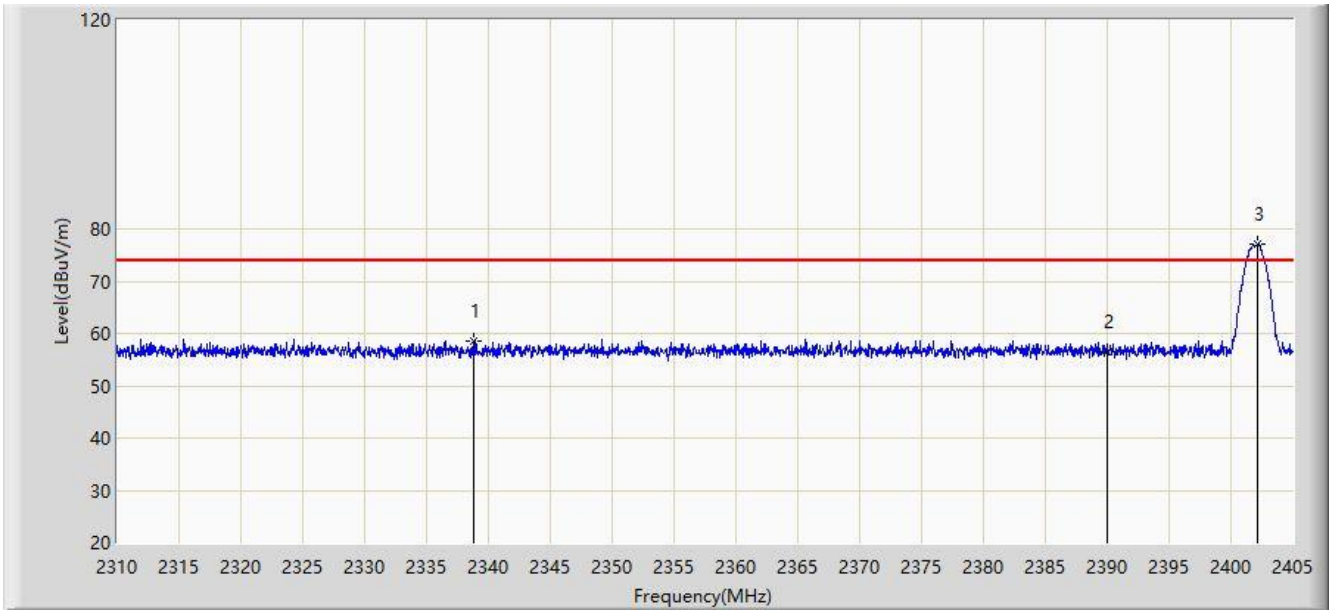


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2368.805	41.344	8.984	-12.656	54.000	32.360	AV
2			2390.000	39.746	7.419	-14.254	54.000	32.327	AV
3		*	2402.008	85.914	53.610	31.914	54.000	32.305	AV

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

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

Site: AC1	Time: 2018/05/21 - 17:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by 2DH5 at channel 2402MHz	

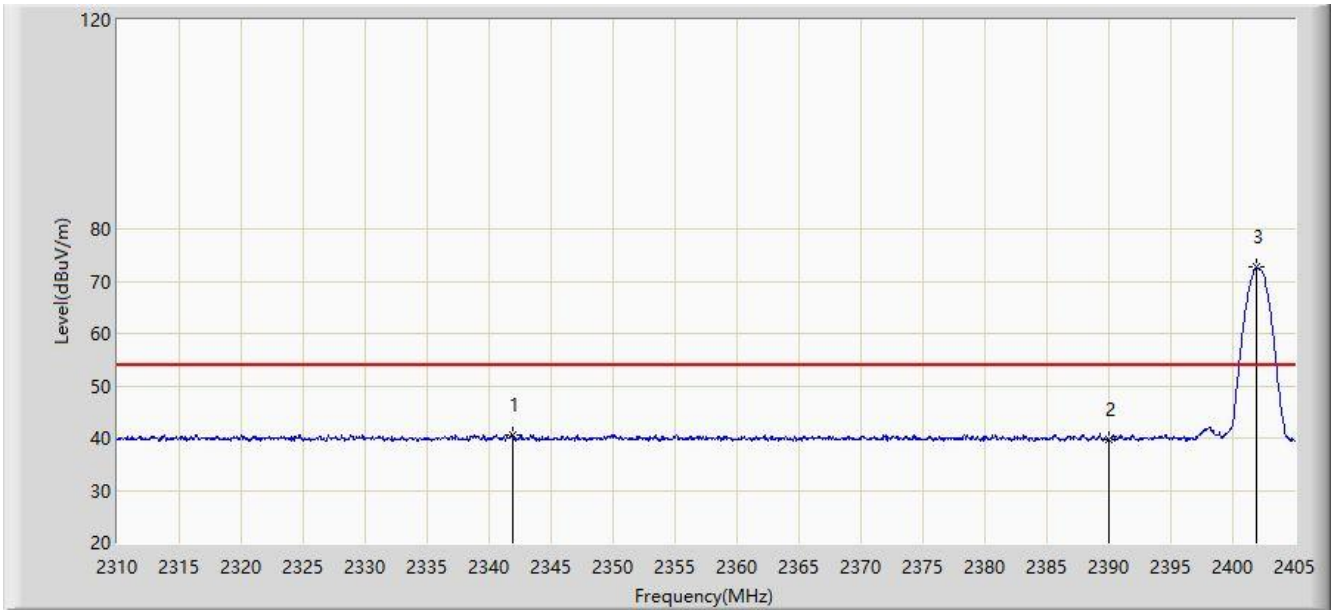


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2338.785	58.678	26.242	-15.322	74.000	32.436	PK
2			2390.000	56.471	24.144	-17.529	74.000	32.327	PK
3		*	2402.103	77.050	44.746	3.050	74.000	32.304	PK

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

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

Site: AC1	Time: 2018/05/21 - 17:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by 2DH5 at channel 2402MHz	

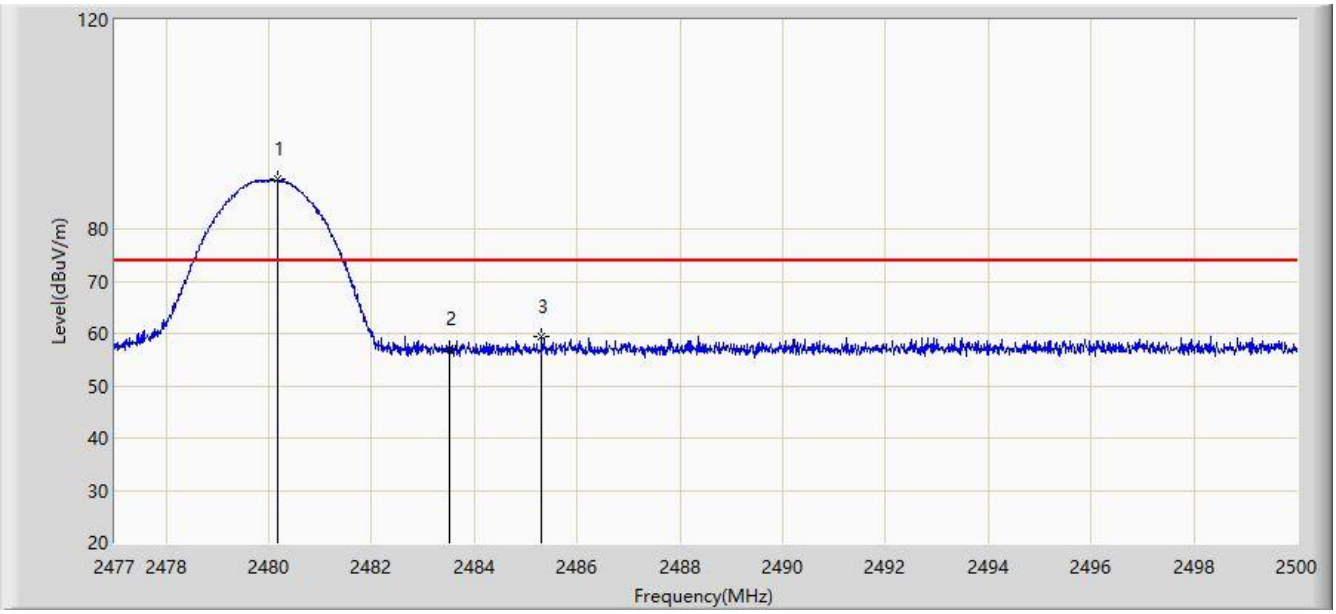


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2341.873	40.668	8.244	-13.332	54.000	32.424	AV
2			2390.000	39.706	7.379	-14.294	54.000	32.327	AV
3		*	2401.960	72.782	40.477	18.782	54.000	32.305	AV

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

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

Site: AC1	Time: 2018/05/21 - 17:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by 2DH5 at channel 2480MHz	

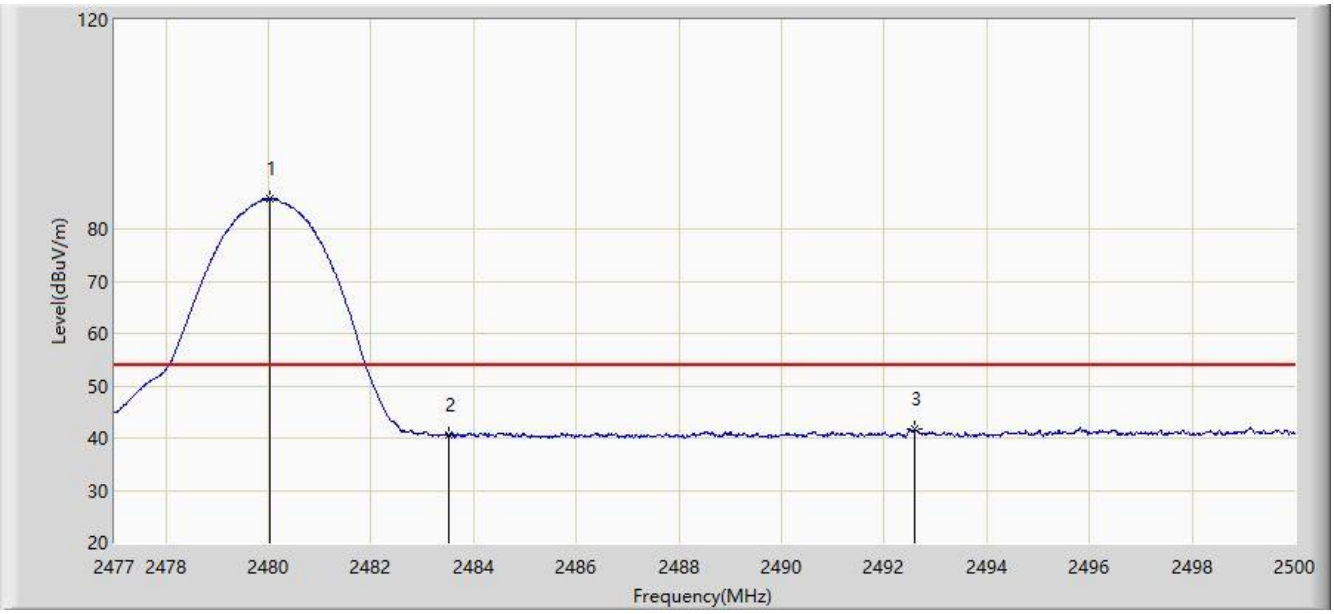


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2480.163	89.505	57.179	15.505	74.000	32.326	PK
2			2483.500	57.238	24.899	-16.762	74.000	32.340	PK
3			2485.303	59.329	26.983	-14.671	74.000	32.346	PK

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

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

Site: AC1	Time: 2018/05/21 - 17:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by 2DH5 at channel 2480MHz	

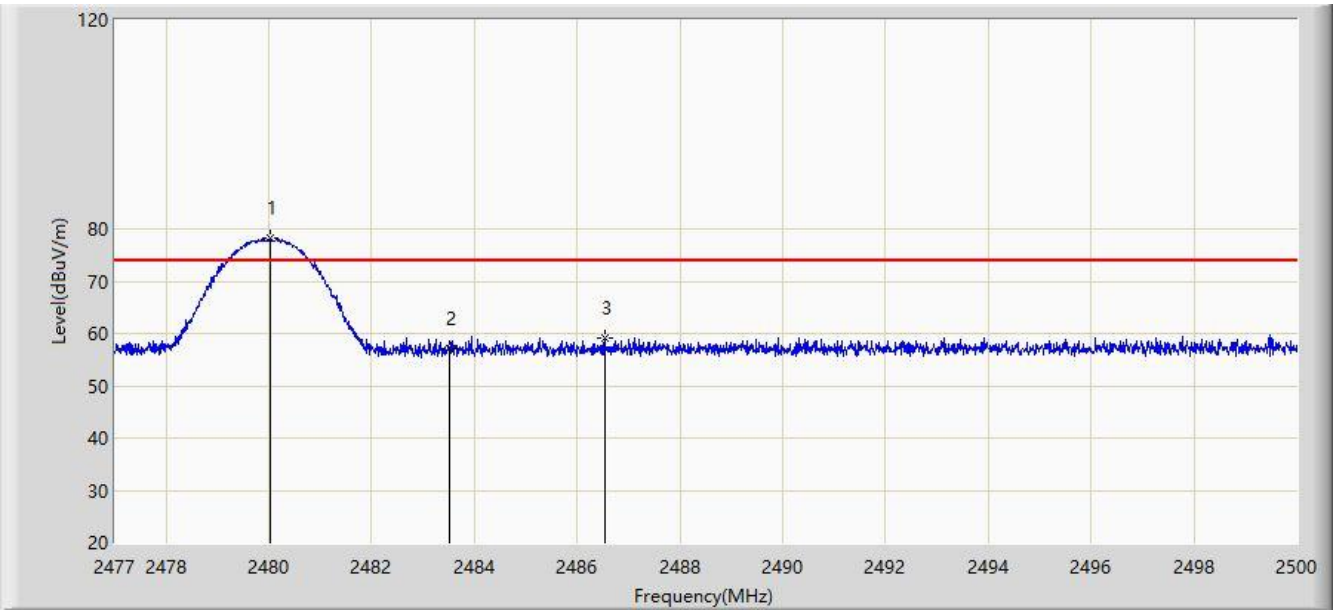


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2480.013	85.748	53.423	31.748	54.000	32.325	AV
2			2483.500	40.586	8.247	-13.414	54.000	32.340	AV
3			2492.583	41.743	9.368	-12.257	54.000	32.375	AV

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

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

Site: AC1	Time: 2018/05/21 - 17:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by 2DH5 at channel 2480MHz	

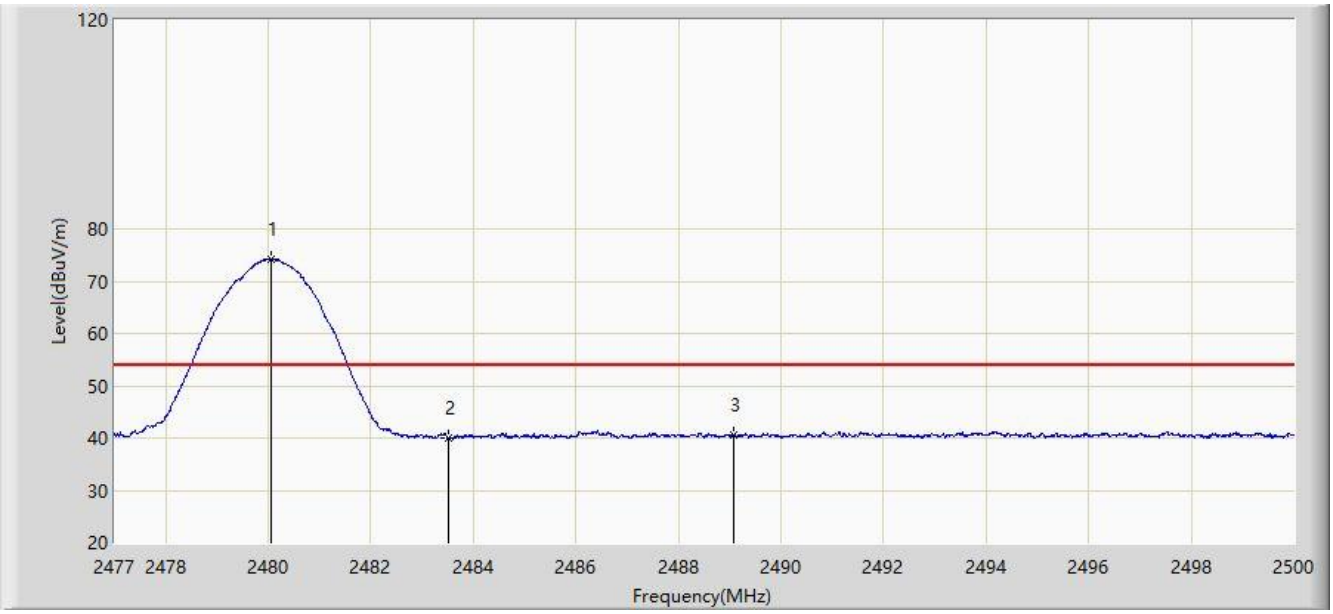


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2480.013	78.343	46.018	4.343	74.000	32.325	PK
2			2483.500	57.044	24.705	-16.956	74.000	32.340	PK
3			2486.533	59.129	26.778	-14.871	74.000	32.351	PK

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

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

Site: AC1	Time: 2018/05/21 - 17:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: BLUETOOTH SPEAKER	Power: By USB
Test Mode: Transmit by 2DH5 at channel 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2480.048	74.151	41.825	20.151	54.000	32.325	AV
2			2483.500	40.109	7.770	-13.891	54.000	32.340	AV
3			2489.063	40.708	8.347	-13.292	54.000	32.361	AV

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

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

7.11. AC Conducted Emissions Measurement

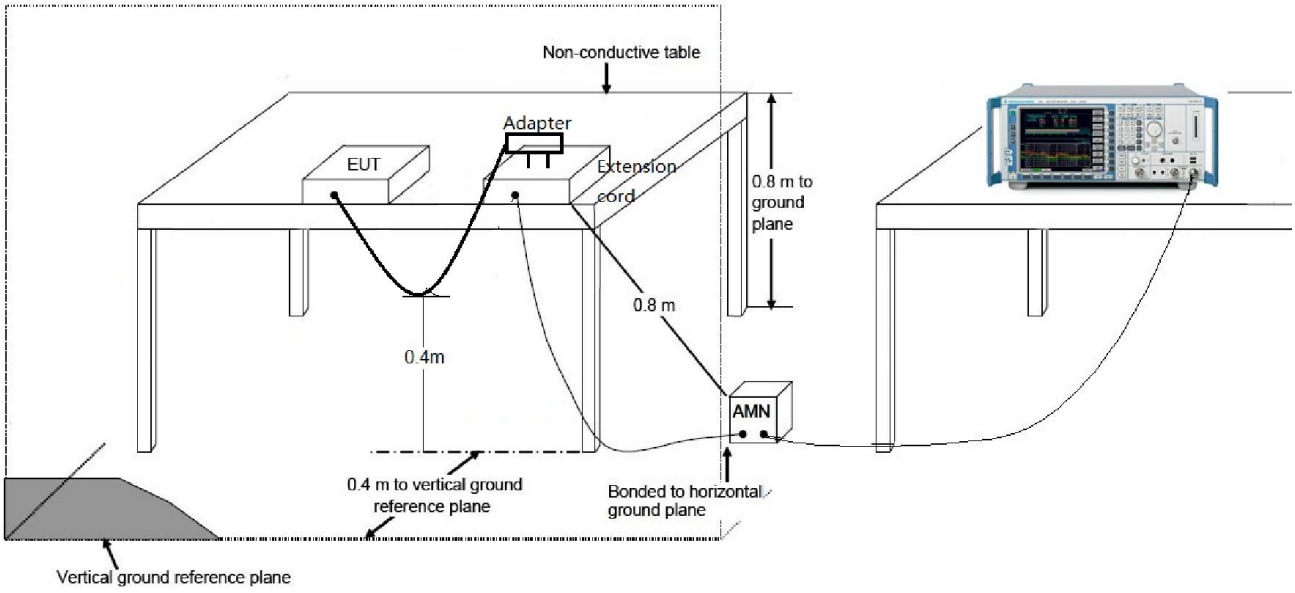
7.11.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBμV)	Average (dBμV)
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.

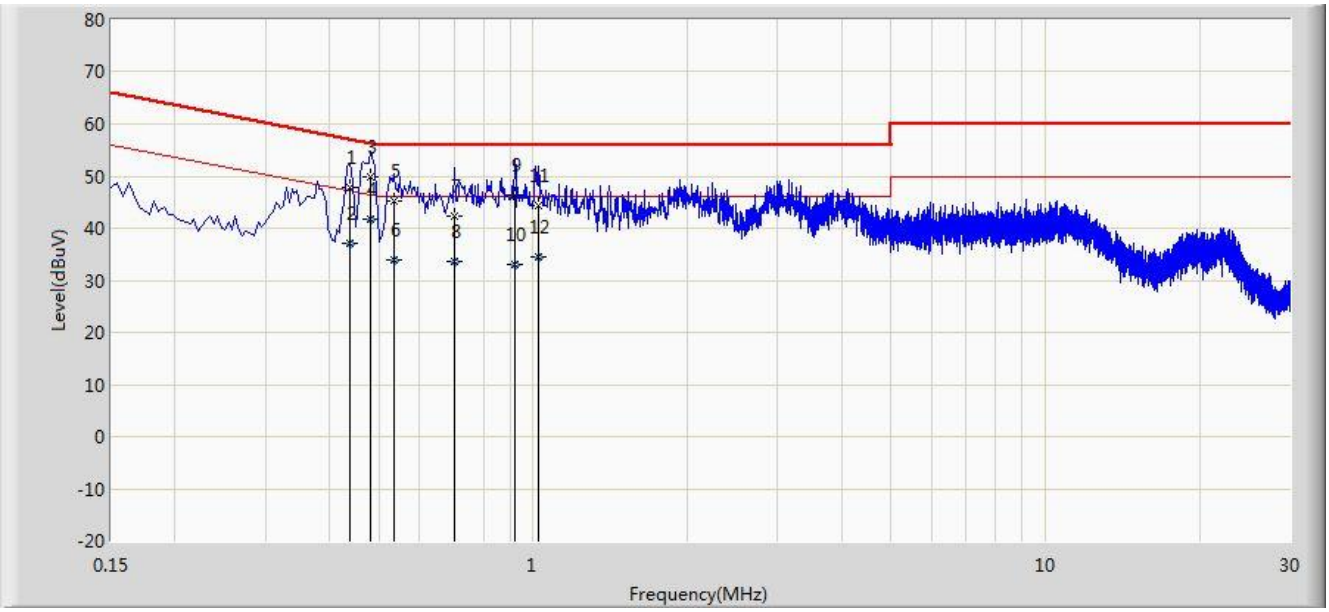
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.11.2. Test Setup



7.11.3.Test Result

Site: SR2	Time: 2018/06/13 - 11:13
Limit: FCC_Part15.207_CE_AC Power	Engineer: Jone Zhang
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: BLUETOOTH SPEAKER	Power: AC 120V/60Hz
Worst Case Mode: Transmit by 2DH5 at Channel 2402MHz	

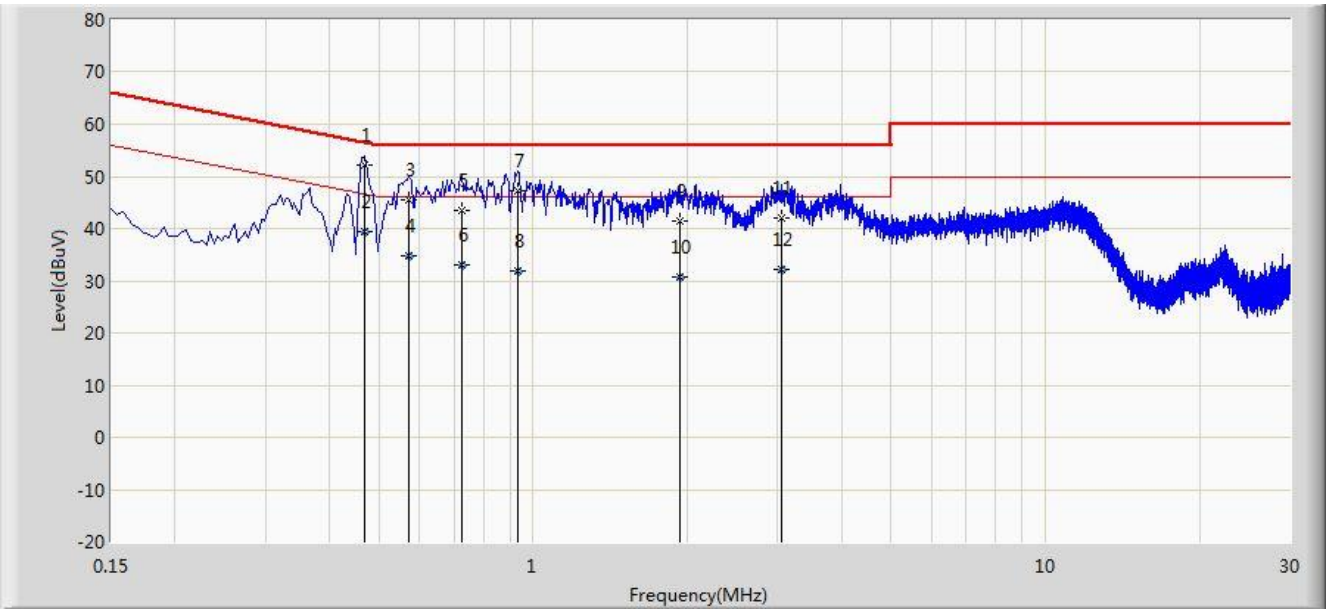


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.438	47.917	37.800	-9.183	57.100	10.117	QP
2			0.438	37.117	27.000	-9.983	47.100	10.117	AV
3			0.482	49.952	39.800	-6.353	56.305	10.152	QP
4			0.482	41.652	31.500	-4.653	46.305	10.152	AV
5			0.534	45.099	34.950	-10.901	56.000	10.149	QP
6			0.534	33.886	23.737	-12.114	46.000	10.149	AV
7			0.702	42.462	32.400	-13.538	56.000	10.062	QP
8			0.702	33.562	23.500	-12.438	46.000	10.062	AV
9			0.918	46.351	36.400	-9.649	56.000	9.951	QP
10			0.918	32.951	23.000	-13.049	46.000	9.951	AV
11			1.026	44.208	34.300	-11.792	56.000	9.908	QP
12			1.026	34.508	24.600	-11.492	46.000	9.908	AV

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

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

Site: SR2	Time: 2018/06/13 - 11:22
Limit: FCC_Part15.207_CE_AC Power	Engineer: Jone Zhang
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: BLUETOOTH SPEAKER	Power: AC 120V/60Hz
Worst Case Mode: Transmit by 2DH5 at Channel 2402MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.470	52.064	41.900	-4.449	56.514	10.164	QP
2			0.470	39.364	29.200	-7.149	46.514	10.164	AV
3			0.570	45.548	35.400	-10.452	56.000	10.148	QP
4			0.570	34.748	24.600	-11.252	46.000	10.148	AV
5			0.726	43.579	33.519	-12.421	56.000	10.060	QP
6			0.726	33.015	22.955	-12.985	46.000	10.060	AV
7			0.934	47.245	37.300	-8.755	56.000	9.945	QP
8			0.934	31.845	21.900	-14.155	46.000	9.945	AV
9			1.934	41.381	31.506	-14.619	56.000	9.876	QP
10			1.934	30.812	20.936	-15.188	46.000	9.876	AV
11			3.046	41.925	32.058	-14.075	56.000	9.867	QP
12			3.046	32.221	22.354	-13.779	46.000	9.867	AV

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

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

8. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with Part 15C of the FCC rules and RSS rules.

The End