



MEASUREMENT REPORT

FCC PART 15.247 / Bluetooth-LE

FCC ID: Z9G-EDF118
Applicant: Edifier International Limited
Application Type: Certification
Product: Bluetooth Stereo Headphones
Model No.: EDF200040
Brand Name: EDIFIER
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part15 Subpart C (Section 15.247)
Test Procedure(s): ANSI C63.10-2013
Test Date: November 25 ~ December 02, 2020

Reviewed By:

(Jame Yuan)

Approved By:

(Robin Wu)



The test results relate only to the samples tested.

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

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

Revision History

Report No.	Version	Description	Issue Date	Note
2011RSU058-U2	Rev. 01	Initial Report	12-02-2020	Valid

CONTENTS

Description	Page
1. General Information.....	5
1.1. Applicant.....	5
1.2. Manufacturer	5
1.3. Test Facility	5
2. PRODUCT INFORMATION	6
2.1. Feature of Equipment under Test	6
2.2. Product Specification Subjective to this Report.....	6
2.3. Working Frequencies for this Report.....	7
2.4. Test Mode	7
2.5. Duty Cycle	8
2.6. EMI Suppression Device(s)/Modifications.....	8
2.7. Description of Test Configuration.....	9
2.8. Labeling Requirements.....	9
2.9. Test Environment Condition.....	9
3. ANTENNA REQUIREMENTS.....	10
4. TEST EQUIPMENT CALIBRATION DATE	11
5. MEASUREMENT UNCERTAINTY.....	15
6. TEST RESULT	16
6.1. Summary	16
6.2. 6dB Bandwidth Measurement.....	17
6.2.1. Test Limit	17
6.2.2. Test Procedure used.....	17
6.2.3. Test Setting.....	17
6.2.4. Test Setup.....	17
6.2.5. Test Result.....	18
6.3. Output Power Measurement.....	20
6.3.1. Test Limit	20
6.3.2. Test Procedure Used	20
6.3.3. Test Setting.....	20
6.3.4. Test Setup.....	21
6.3.5. Test Result of Output Power	22
6.4. Power Spectral Density Measurement.....	23
6.4.1. Test Limit	23
6.4.2. Test Procedure Used	23

6.4.3.	Test Setting.....	23
6.4.4.	Test Setup.....	23
6.4.5.	Test Result.....	24
6.5.	Conducted Band Edge and Out-of-Band Emissions.....	26
6.5.1.	Test Limit	26
6.5.2.	Test Procedure Used	26
6.5.3.	Test Setting.....	26
6.5.4.	Test Setup.....	27
6.5.5.	Test Result.....	28
6.6.	Radiated Spurious Emission Measurement	32
6.6.1.	Test Limit	32
6.6.2.	Test Procedure Used	32
6.6.3.	Test Setting.....	32
6.6.4.	Test Setup.....	34
6.6.5.	Test Result.....	35
6.7.	Radiated Restricted Band Edge Measurement	43
6.7.1.	Test Limit	43
6.7.2.	Test Procedure Used	44
6.7.3.	Test Setting.....	44
6.7.4.	Test Setup.....	45
6.7.5.	Test Result.....	46
6.8.	AC Conducted Emissions Measurement.....	62
6.8.1.	Test Limit	62
6.8.2.	Test Setup.....	62
6.8.3.	Test Result.....	63
7.	CONCLUSION.....	65
	Appendix A - Test Setup Photograph	66
	Appendix B - EUT Photograph.....	67

1. General Information

1.1. Applicant

Edifier International Limited

P.O. Box 6264 General Post Office Hong Kong

1.2. Manufacturer

Beijing Edifier Technology Co., Ltd.

8th floor, ZuoAn Building, NO.68 BeiSiHuanXiLu, Haidian District, Beijing 100080, CHINA

1.3. Test Facility

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

2. PRODUCT INFORMATION

2.1. Feature of Equipment under Test

Product Name	Bluetooth Stereo Headphones
Model No.	EDF200040
Test Device Label No.	20201123Sample#03 (Conducted Sample) 20201123Sample#02 (Radiated Sample)
Operating Temp.	0 ~ 45°C
Rated Input	5VDC, 1A
Bluetooth Version	v5.1 dual mode
Accessories	
Li-ion Battery	Model No.: CEL503245, 503245 Capacitance: 3.7V 670mAh 2.479Wh Limited Charging Voltage: 4.2V

2.2. Product Specification Subjective to this Report

Bluetooth Frequency	2402~2480MHz
Channel Number	40
Type of modulation	GFSK
Data Rate	Up to 2Mbps
Antenna Type	PCB Antenna
Antenna Gain	2.2dBi

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

2.3. Working Frequencies for this Report

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz
03	2408 MHz	04	2410 MHz	05	2412 MHz
06	2414 MHz	07	2416 MHz	08	2418 MHz
09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz
15	2432 MHz	16	2434 MHz	17	2436 MHz
18	2438 MHz	19	2440 MHz	20	2442 MHz
21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz
27	2456 MHz	28	2458 MHz	29	2460 MHz
30	2462 MHz	31	2464 MHz	32	2466 MHz
33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz
39	2480 MHz	--	--	--	--

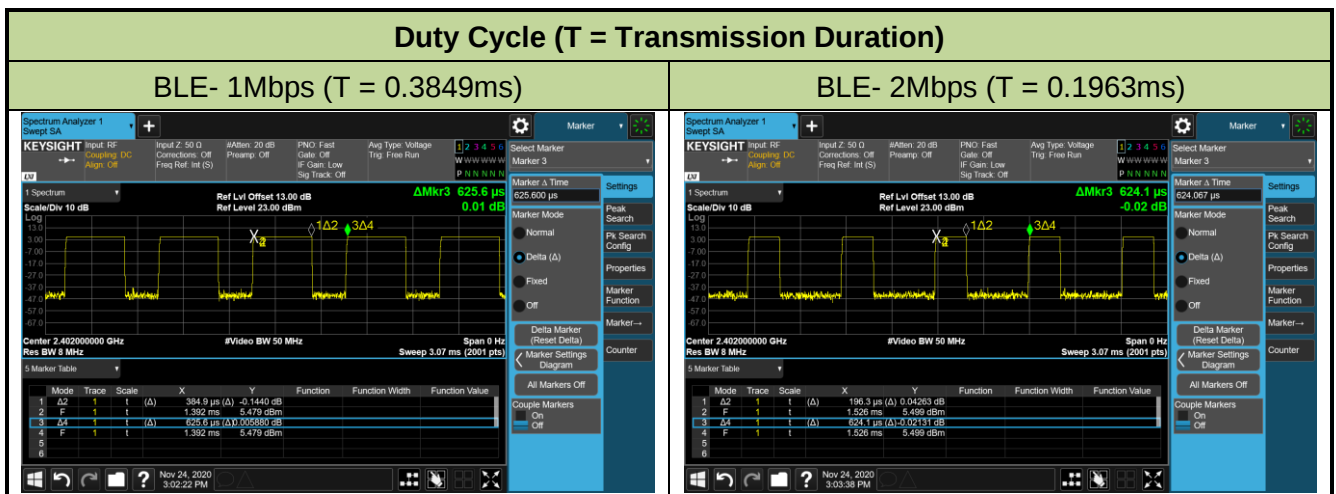
2.4. Test Mode

Test Mode	Mode 1: Transmit by BLE-1Mbps
	Mode 2: Transmit by BLE-2Mbps

2.5. Duty Cycle

The maximum achievable duty cycles were 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
BLE- 1Mbps	61.52%
BLE- 2Mbps	31.45%

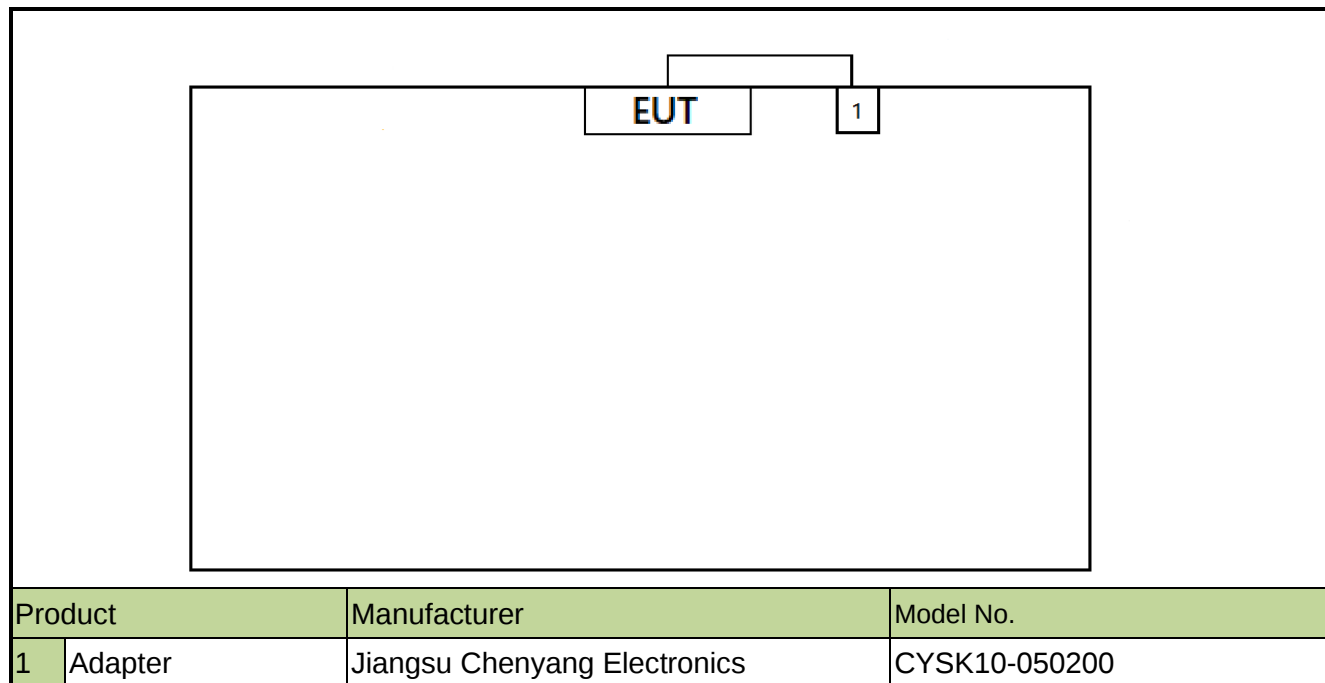


2.6. EMI Suppression Device(s)/Modifications

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

2.7. Description of Test Configuration

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



Note 1: The test utility software used during testing was “BlueTest3”, and the version was 3.1.4.

Note 2: Detail power setting refer to operation description.

Note 3: This adapter is provided by test lab, the EUT will be sold without adapter.

2.8. 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.

2.9. Test Environment Condition

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

3. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

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

Conclusion:

The unit complies with the requirement of §15.203.

4. TEST EQUIPMENT CALIBRATION DATE

Conducted Emission - (WZ-SR2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2021/01/18
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2021/09/09
Thermal Hygrometer	testo	608-H1	MRTSUE06404	1 year	2021/07/26
Shielding Room	MIX-BEP	Chamber-SR2	MRTSUE06215	N/A	N/A

Conducted Emission - (SIP-SR2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2021/07/02
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2021/09/09
Thermal Hygrometer	testo	608-H1	MRTSUE06621	1 year	2020/12/29

Radiated Emission - (WZ-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2021/01/18
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2021/08/30
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2021/08/08
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2021/09/27
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2020/12/17
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2021/11/14
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2021/06/11
Thermal Hygrometer	testo	608-H1	MRTSUE06403	1 year	2021/07/26
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2021/04/30

Radiated Emission - (WZ-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
MXE EMI Receiver	Keysight	N9038A	MRTSUE06125	1 year	2021/07/02
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2021/05/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2021/10/25
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2020/12/17
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2021/11/14
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2021/06/11
Thermal Hygrometer	Minggao	ETH529	MRTSUE06170	1 year	2020/12/15
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2021/04/30

Radiated Emission - (SIP-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2021/07/02
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06645	1 year	2021/08/30
Double Ridged Horn Antenna	R&S	HF907	MRTSUE06610	1 year	2021/08/30
Preamplifier	EMCI	EMC051845SE	MRTSUE06600	1 year	2021/11/09
Thermal Hygrometer	testo	608-H1	MRTSUE06620	1 year	2020/12/29
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2020/12/25

Radiated Emission - (SIP-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2021/07/02
MXA Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2021/09/26
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06646	1 year	2021/08/30
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06648	1 year	2020/12/17
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06599	1 year	2020/12/17
Preamplifier	EMCI	EMC051845SE	MRTSUE06644	1 year	2021/11/09
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2021/10/21
Thermal Hygrometer	testo	608-H1	MRTSUE06624	1 year	2020/12/29
Anechoic Chamber	RIKEN	SIP-AC2	MRTSUE06781	1 year	2020/12/25

Radiated Emission - (SIP-AC3)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2021/07/02
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06647	1 year	2021/08/08
Double Ridged Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2021/09/13
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06598	1 year	2020/12/17
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2021/01/16
Preamplifier	EMCI	EMC184045SE	MRTSUE06641	1 year	2021/01/16
Thermal Hygrometer	testo	608-H1	MRTSUE06622	1 year	2020/12/29
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2020/12/25

Conducted Test Equipment - (WZ-TR3)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2021/04/14
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2021/01/08
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2021/10/22
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2021/08/30
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2021/08/08
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2021/06/11
Audio Analyzer	Agilent	U8903B	MRTSUE06143	1 year	2021/06/11
Modulation Analyzer	HP	HP8901A	MRTSUE06098	1 year	2021/09/26
Attenuator	MVE	20dB	MRTSUE06547	1 year	2021/05/20
Attenuator	MVE	6dB	MRTSUE06532	1 year	2021/05/20
Attenuator	MVE	10dB	MRTSUE06540	1 year	2021/05/20
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/10/20
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2021/10/21
Thermal Hygrometer	testo	608-H1	MRTSUE06401	1 year	2021/07/26

Conducted Test Equipment - (SIP-SR5)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2021/08/30
USB wideband power sensor	Agilent	U2021XA	MRTSUE06595	1 year	2021/09/26
USB wideband power sensor	Agilent	U2021XA	MRTSUE06596	1 year	2021/09/26
Attenuator	MVE	20dB	MRTSUE06547	1 year	2021/05/20
Attenuator	MVE	6dB	MRTSUE06532	1 year	2021/05/20
Attenuator	MVE	10dB	MRTSUE06540	1 year	2021/05/20
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/10/20
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2021/06/11
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2021/03/31
Thermal Hygrometer	testo	622	MRTSUE06629	1 year	2020/12/30

Software	Version	Function
EMI Software	V3	EMI Test Software

5. MEASUREMENT UNCERTAINTY

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

AC Conducted Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.13dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.15dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.28%

6. TEST RESULT

6.1. Summary

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(a)(2)	6dB Bandwidth	$\geq 500\text{kHz}$	Conducted	Pass	Section 6.2
15.247(b)(3)	Output Power	$\leq 1\text{Watt}$		Pass	Section 6.3
15.247(e)	Power Spectral Density	$\leq 8\text{dBm} / 3\text{kHz}$		Pass	Section 6.4
15.247(d)	Band Edge / Out-of-Band Emissions	$\geq 20\text{dBc(Peak)}$		Pass	Section 6.5
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 6.6 Section 6.7
15.207	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits >	Line Conducted	Pass	Section 6.8

Notes:

- 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.
- 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.

6.2. 6dB Bandwidth Measurement

6.2.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

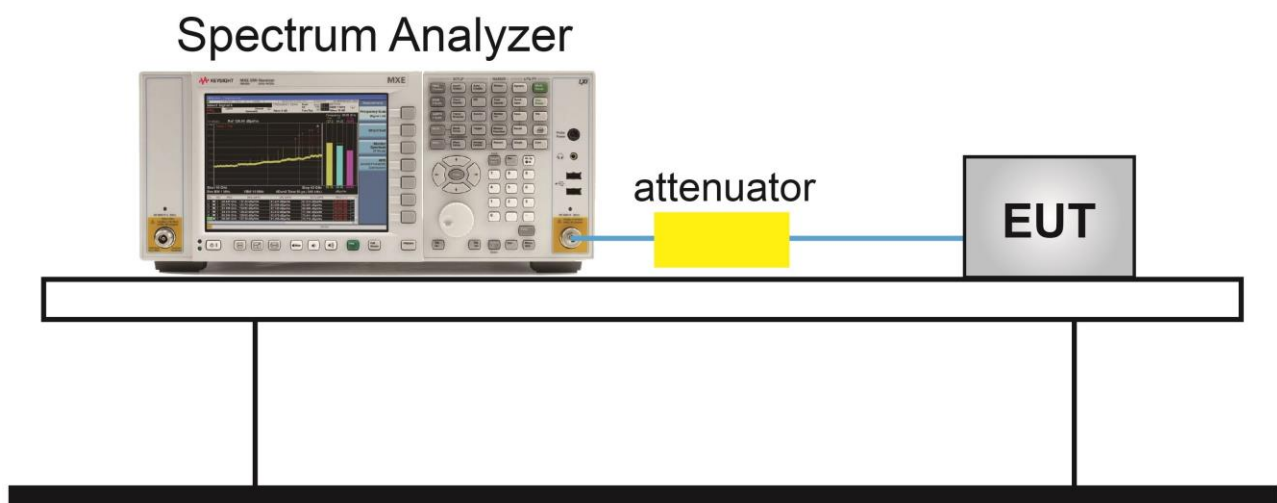
6.2.2. Test Procedure used

ANSI C63.10-2013 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. $VBW \geq 3 \times RBW$
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace was allowed to stabilize

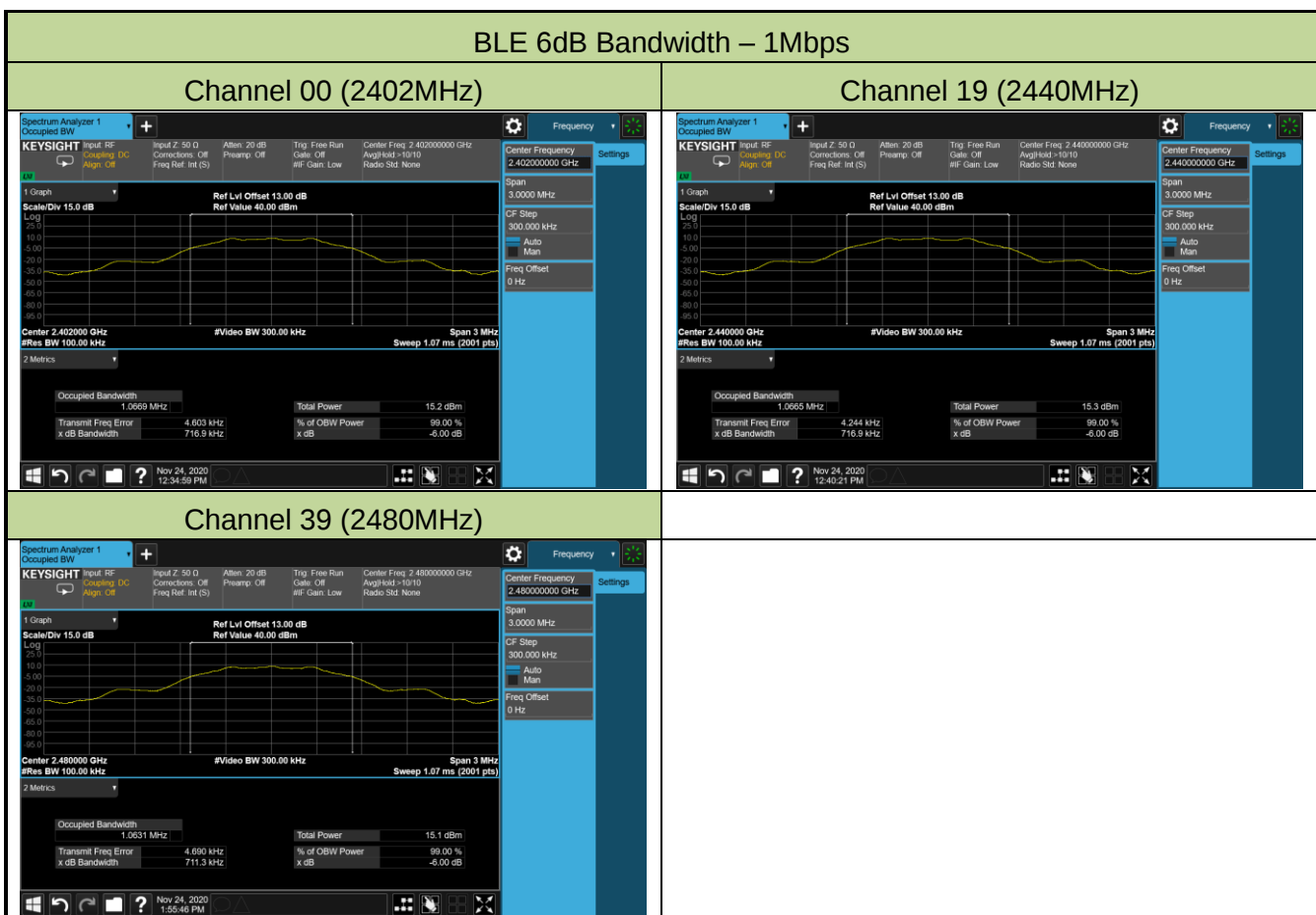
6.2.4. Test Setup



6.2.5. Test Result

Product	Bluetooth Stereo Headphones	Test Engineer	Amy Zhang
Test Site	WZ-TR3	Test Date	2020/11/24

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
BLE	1	00	2402	0.717	≥ 0.5	Pass
BLE	1	19	2440	0.717	≥ 0.5	Pass
BLE	1	39	2480	0.711	≥ 0.5	Pass
BLE	2	00	2402	1.211	≥ 0.5	Pass
BLE	2	19	2440	1.208	≥ 0.5	Pass
BLE	2	39	2480	1.207	≥ 0.5	Pass



BLE 6dB Bandwidth – 2Mbps

Channel 00 (2402MHz)



Channel 19 (2440MHz)



Channel 39 (2480MHz)



6.3. Output Power Measurement

6.3.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

6.3.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.9.1.3

ANSI C63.10-2013 - Section 11.9.2.3.2

6.3.3. Test Setting

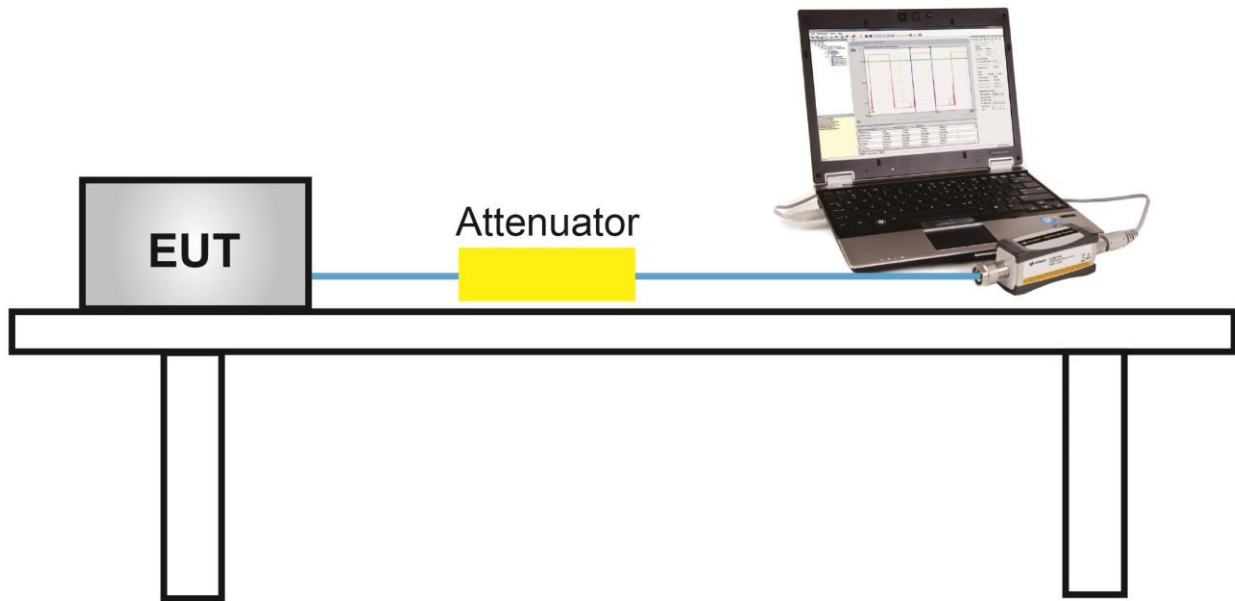
Method PKPM1 (Peak Power Measurement)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

Method AVGP-M (Measurement using a gated RF average-reading power meter)

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

6.3.4. Test Setup



6.3.5. Test Result of Output Power

Product	Bluetooth Stereo Headphones	Test Engineer	Amy Zhang
Test Site	WZ-TR3	Test Date	2020/11/24

Test Result of Peak Output Power

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1	00	2402	8.87	≤ 30.00	Pass
BLE	1	19	2440	8.85	≤ 30.00	Pass
BLE	1	39	2480	8.63	≤ 30.00	Pass
BLE	2	00	2402	8.84	≤ 30.00	Pass
BLE	2	19	2440	8.87	≤ 30.00	Pass
BLE	2	39	2480	8.71	≤ 30.00	Pass

Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Average Power (dBm)	Limit (dBm)	Result
BLE	1	00	2402	8.41	≤ 30.00	Pass
BLE	1	19	2440	8.43	≤ 30.00	Pass
BLE	1	39	2480	8.23	≤ 30.00	Pass
BLE	2	00	2402	8.42	≤ 30.00	Pass
BLE	2	19	2440	8.44	≤ 30.00	Pass
BLE	2	39	2480	8.29	≤ 30.00	Pass

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

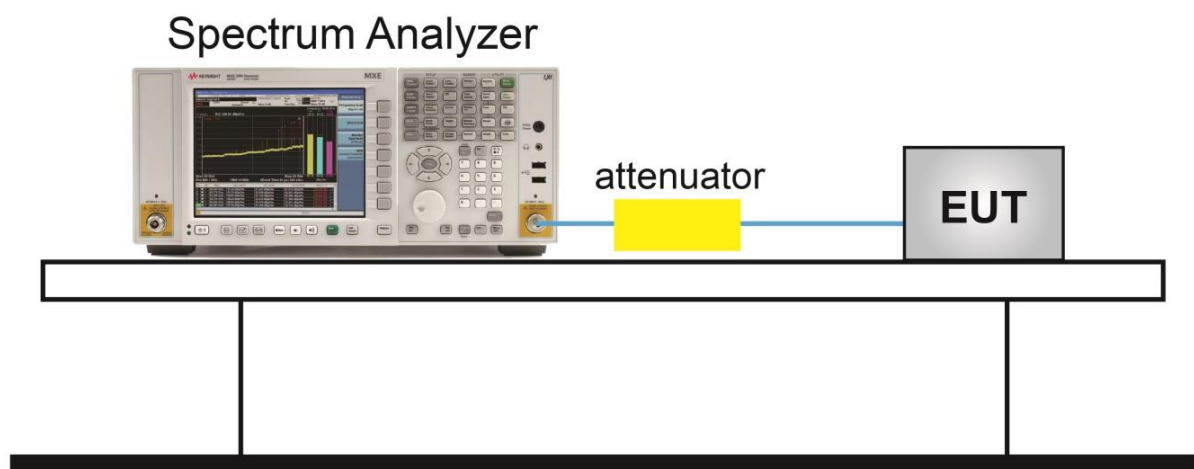
6.4.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.10.2

6.4.3. Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the OBW
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = Peak
6. Sweep time = Auto couple
7. Trace mode = Max hold
8. Trace was allowed to stabilize

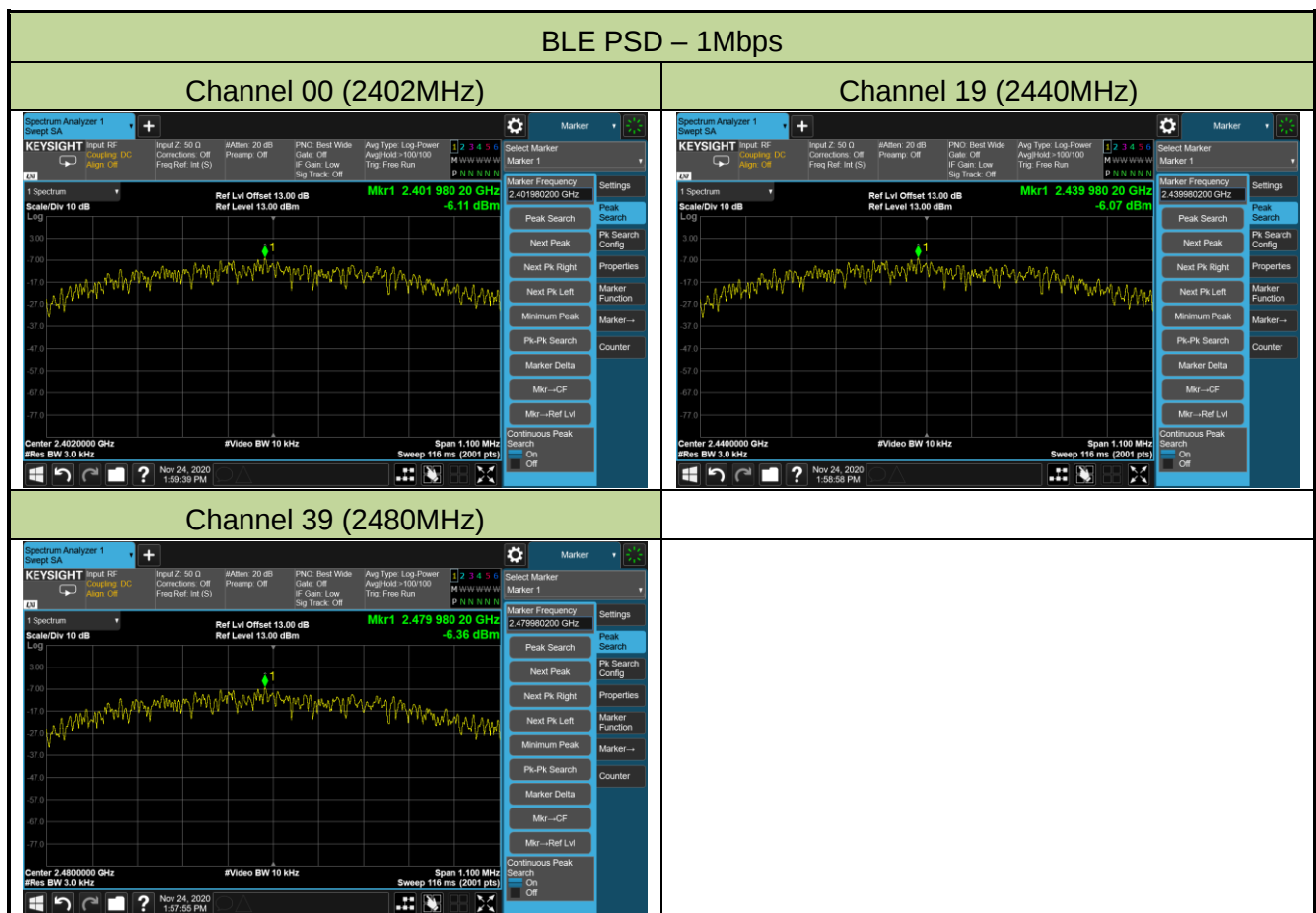
6.4.4. Test Setup



6.4.5. Test Result

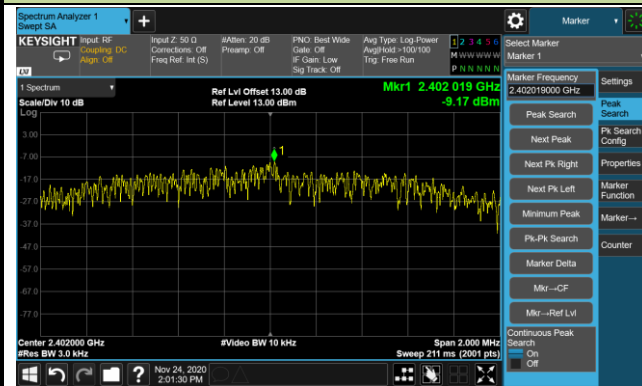
Product	Bluetooth Stereo Headphones	Test Engineer	Amy Zhang
Test Site	WZ-TR3	Test Date	2020/11/24

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	PSD Result (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
BLE	1	00	2402	-6.11	≤ 8.00	Pass
BLE	1	19	2440	-6.07	≤ 8.00	Pass
BLE	1	39	2480	-6.36	≤ 8.00	Pass
BLE	2	00	2402	-9.17	≤ 8.00	Pass
BLE	2	19	2440	-9.06	≤ 8.00	Pass
BLE	2	39	2480	-9.21	≤ 8.00	Pass

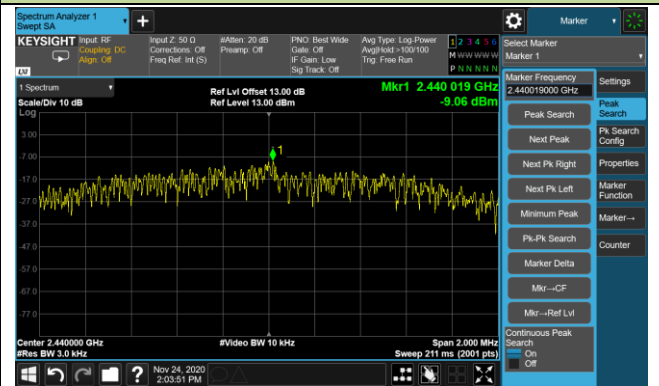


BLE PSD – 2Mbps

Channel 00 (2402MHz)



Channel 19 (2440MHz)



Channel 39 (2480MHz)



6.5. Conducted Band Edge and Out-of-Band Emissions

6.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100kHz bandwidth per the PSD procedure.

6.5.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.11

6.5.3. Test Setting

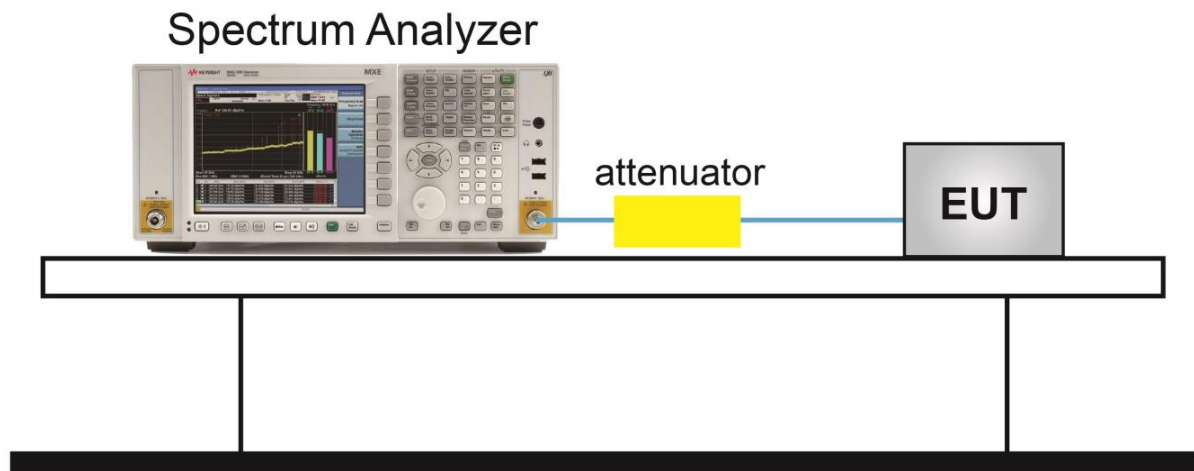
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW $\geq 3 \times$ RBW
5. Detector = Peak
6. Sweep time = Auto couple
7. Trace mode = Max hold
8. Allow trace to fully stabilize

Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep time = Auto couple
7. The trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

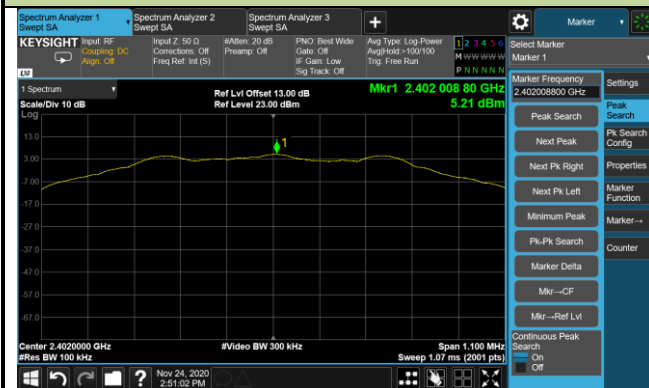
Product	Bluetooth Stereo Headphones	Test Engineer	Amy Zhang
Test Site	WZ-TR3	Test Date	2020/11/24

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit	Result
BLE	1	00	2402	20dBc	Pass
BLE	1	19	2440	20dBc	Pass
BLE	1	39	2480	20dBc	Pass
BLE	2	00	2402	20dBc	Pass
BLE	2	19	2440	20dBc	Pass
BLE	2	39	2480	20dBc	Pass

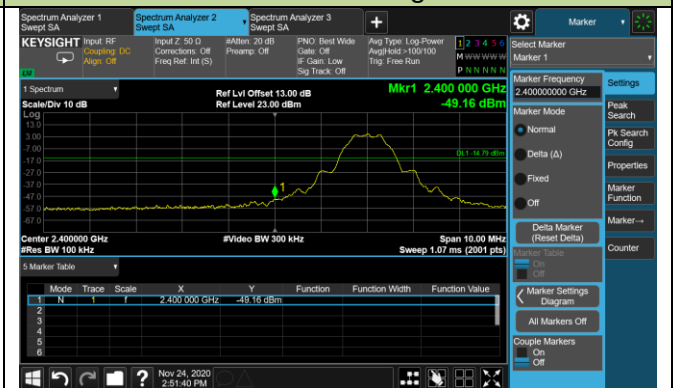
BLE Out-of-Band Emissions – 1Mbps

Channel 00 (2402MHz)

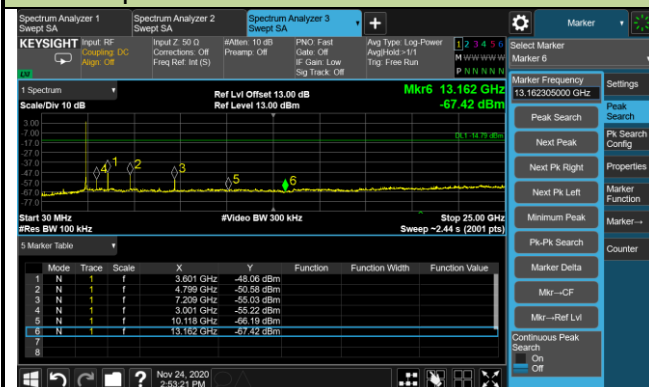
100kHz PSD reference Level



Low Band Edge

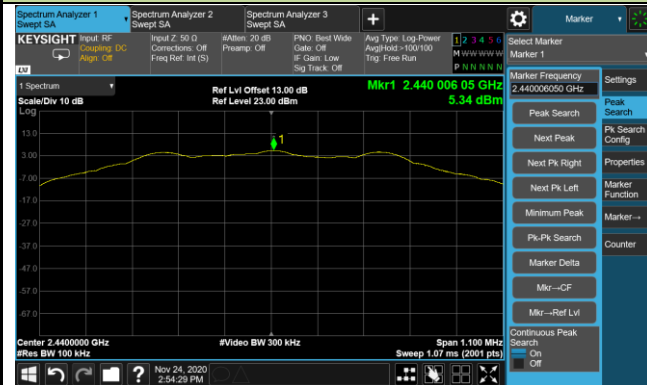


Spurious Emission 30MHz ~ 25GHz

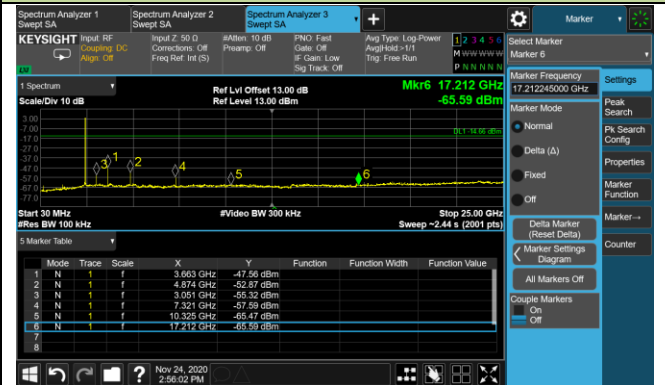


Channel 19 (2440MHz)

100kHz PSD reference Level

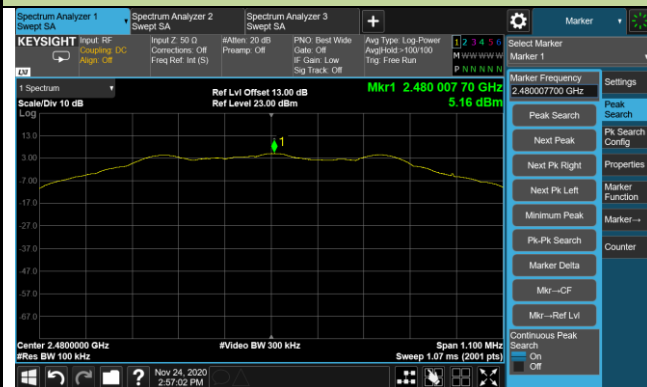


Spurious Emission 30MHz ~ 25GHz

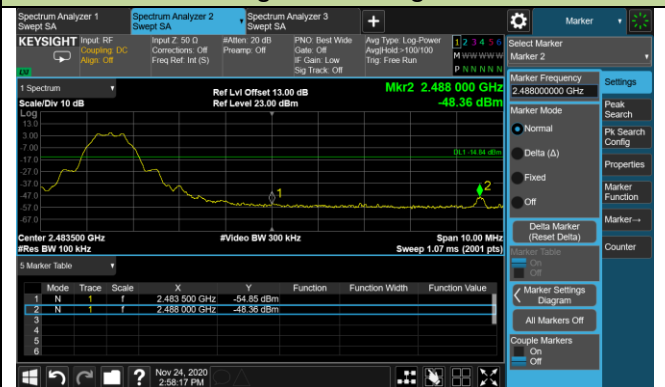


Channel 39 (2480MHz)

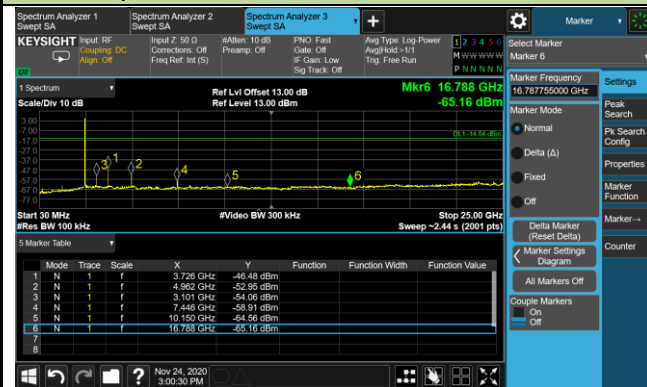
100kHz PSD reference Level



High Band Edge



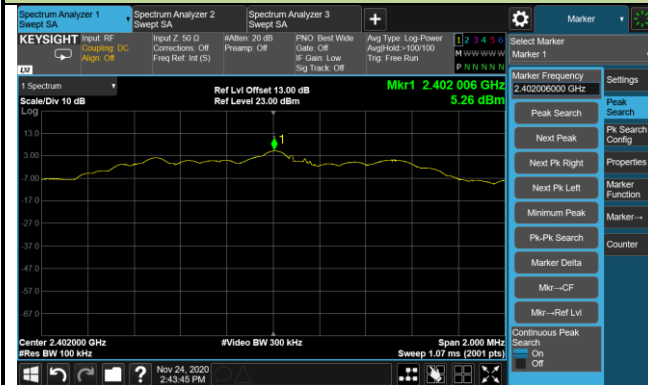
Spurious Emission 30MHz ~ 25GHz



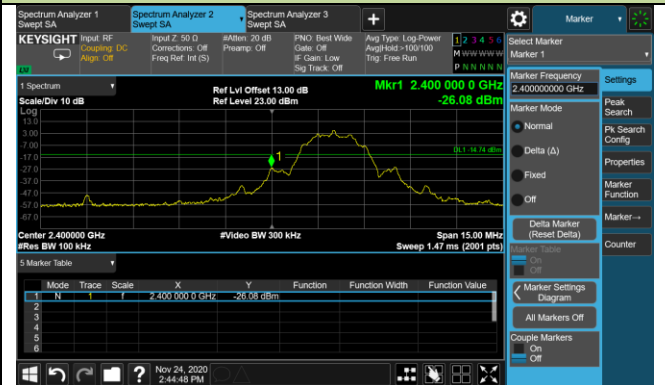
BLE Out-of-Band Emissions – 2Mbps

Channel 00 (2402MHz)

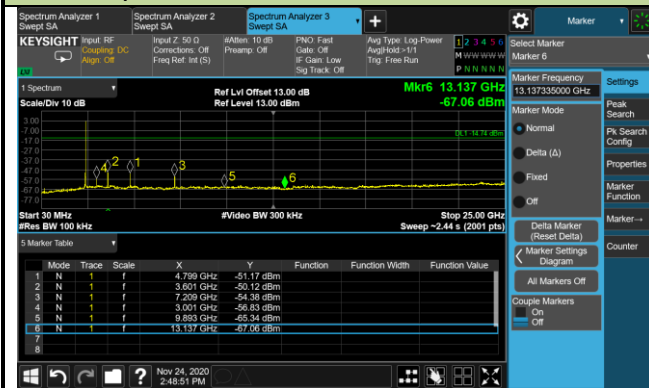
100kHz PSD reference Level



Low Band Edge

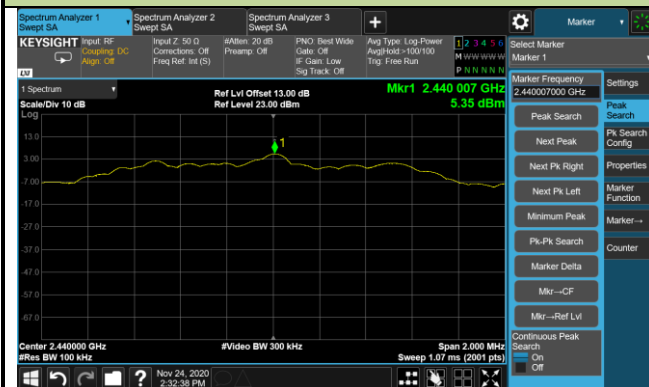


Spurious Emission 30MHz ~ 25GHz

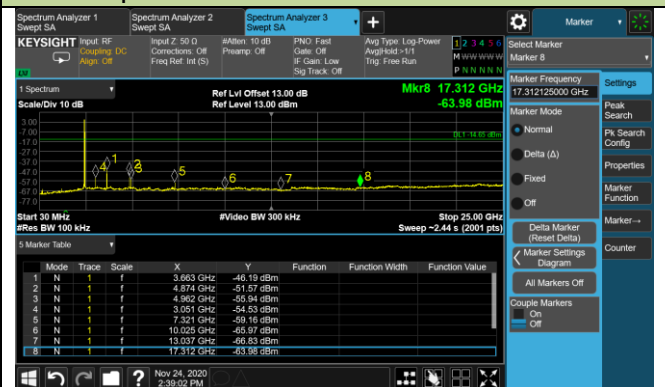


Channel 19 (2440MHz)

100kHz PSD reference Level

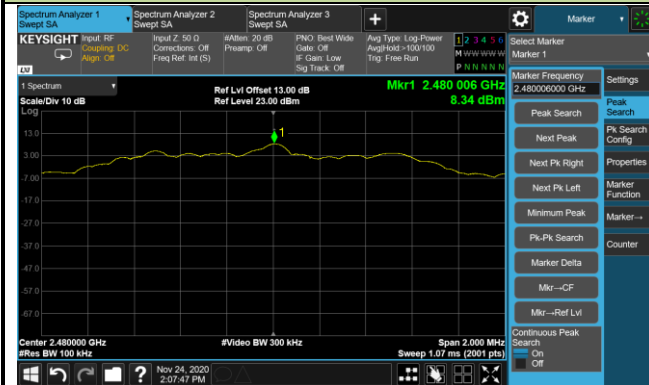


Spurious Emission 30MHz ~ 25GHz

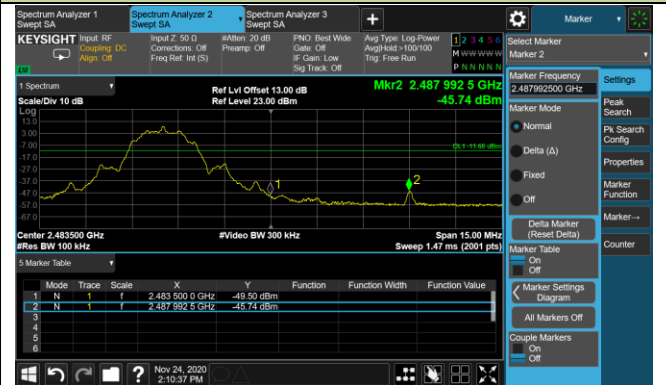


Channel 39 (2480MHz)

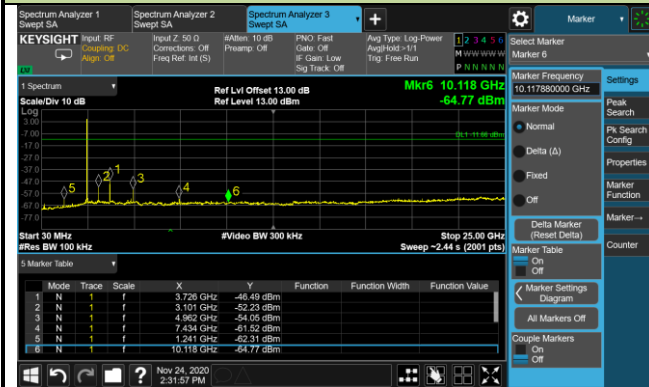
100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



6.6. Radiated Spurious Emission Measurement

6.6.1. 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 ($\mu\text{V/m}$)	Measured Distance (m)
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

6.6.2. Test Procedure Used

ANSI C63.10-2013 - Section 6.3 & 6.4 & 6.5 & 6.6

6.6.3. Test Setting

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

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

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)

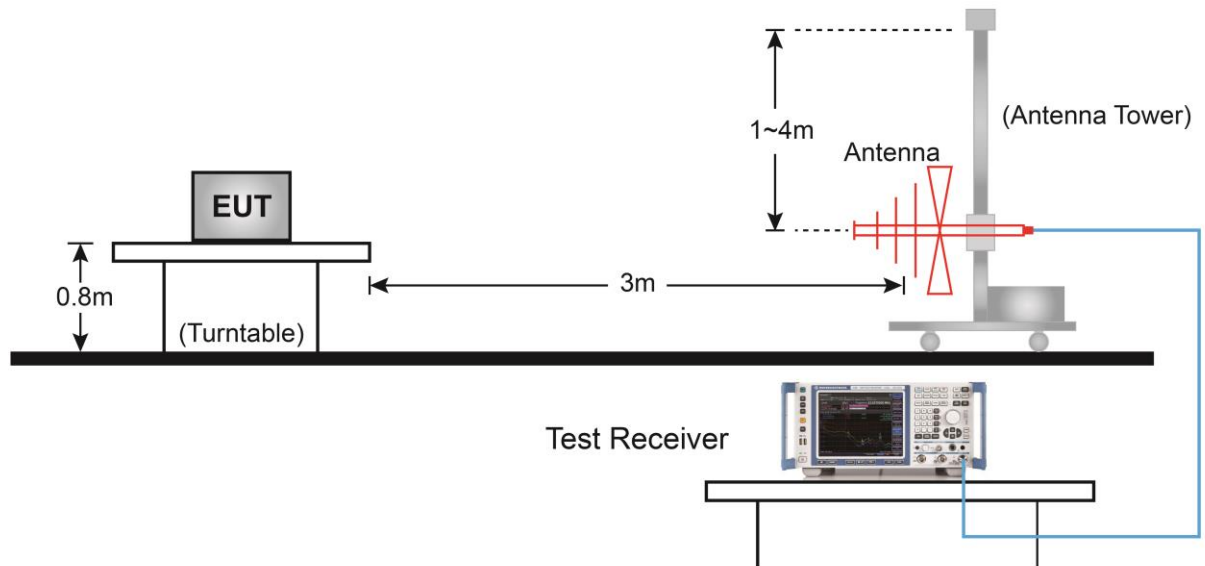
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10Hz

If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration

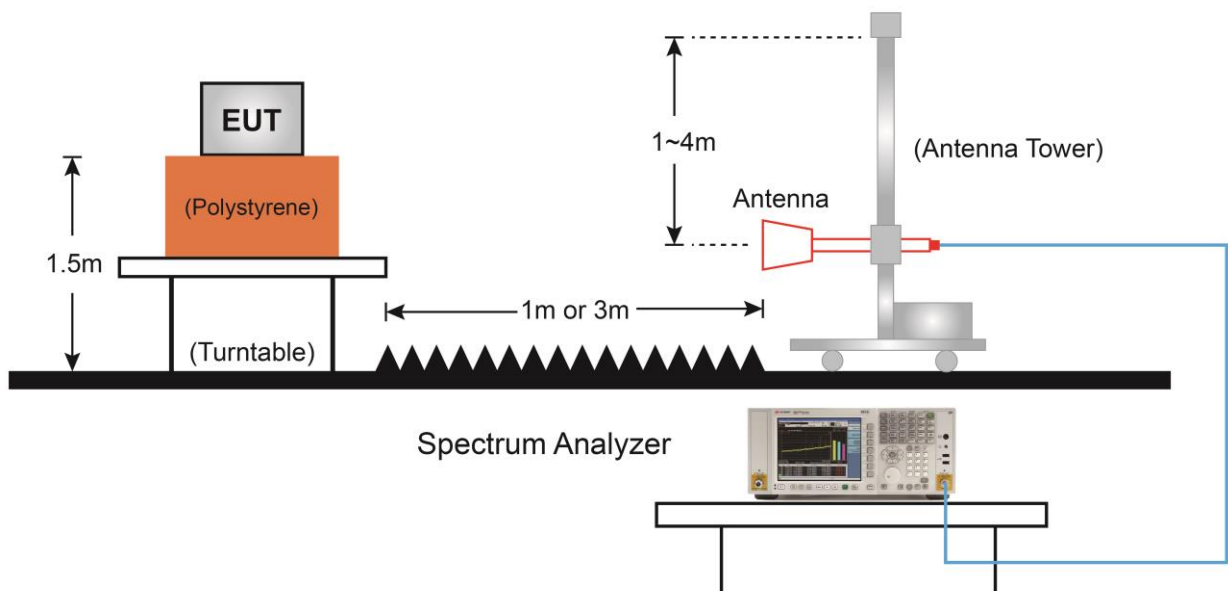
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

6.6.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.6.5. Test Result

Product	Bluetooth Stereo Headphones	Test Engineer	Buter Shi
Test Site	WZ-AC2	Test Date	2020/11/26
Test Mode	BLE - 1Mbps	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
	5003.5	42.5	3.3	45.8	74.0	-28.2	Peak	Horizontal
	7494.0	36.2	10.8	47.0	74.0	-27.0	Peak	Horizontal
*	8616.0	33.0	12.0	45.0	74.0	-29.0	Peak	Horizontal
*	10333.0	33.3	15.5	48.8	74.0	-25.2	Peak	Horizontal
	4808.0	43.3	3.8	47.1	74.0	-26.9	Peak	Vertical
	4995.0	41.8	3.2	45.0	74.0	-29.0	Peak	Vertical
	7205.0	40.8	10.9	51.7	54.0	-2.3	Average	Vertical
*	7205.0	43.9	10.9	54.8	74.0	-19.2	Peak	Vertical
*	10435.0	32.9	15.4	48.3	74.0	-25.7	Peak	Vertical

Note 1: "*" means test frequency didn't fall into restricted band.

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 Stereo Headphones	Test Engineer	Buter Shi
Test Site	WZ-AC2	Test Date	2020/11/26
Test Mode	BLE - 1Mbps	Test Channel:	19
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
	4995.0	42.5	3.2	45.7	74.0	-28.3	Peak	Horizontal
	7315.5	42.2	11.1	53.3	74.0	-20.7	Peak	Horizontal
*	8616.0	33.2	12.0	45.2	74.0	-28.8	Peak	Horizontal
*	10290.5	33.3	15.3	48.6	74.0	-25.4	Peak	Horizontal
	4884.5	41.5	3.3	44.8	74.0	-29.2	Peak	Vertical
	7320.2	43.6	11.1	54.7	74.0	-19.3	Peak	Vertical
	7320.2	40.1	11.1	51.2	54.0	-2.8	Average	Vertical
*	8760.5	32.5	12.6	45.1	74.0	-28.9	Peak	Vertical
*	10231.0	32.5	14.4	46.9	74.0	-27.1	Peak	Vertical

Note 1: "*" means test frequency didn't fall into restricted band.

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 Stereo Headphones	Test Engineer	Buter Shi
Test Site	WZ-AC2	Test Date	2020/11/26
Test Mode	BLE - 1Mbps	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
	4986.5	43.3	5.8	49.1	74.0	-24.9	Peak	Horizontal
	7443.0	42.9	10.1	53.0	74.0	-21.0	Peak	Horizontal
*	7876.5	37.8	10.7	48.5	74.0	-25.5	Peak	Horizontal
*	8735.0	37.9	11.9	49.8	74.0	-24.2	Peak	Horizontal
	4995.0	39.5	3.2	42.7	74.0	-31.3	Peak	Vertical
	7443.0	40.8	10.9	51.7	54.0	-2.3	Average	Vertical
	7443.0	44.6	11.0	55.6	74.0	-18.4	Peak	Vertical
*	8658.5	31.7	12.0	43.7	74.0	-30.3	Peak	Vertical
*	10486.0	31.8	15.5	47.3	74.0	-26.7	Peak	Vertical

Note 1: "*" means test frequency didn't fall into restricted band.

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 Stereo Headphones	Test Engineer	Buter Shi
Test Site	WZ-AC2	Test Date	2020/11/26
Test Mode	BLE - 2Mbps	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
	4094.0	39.5	3.2	42.7	74.0	-31.3	Peak	Horizontal
	4799.5	45.6	5.6	51.2	74.0	-22.8	Peak	Horizontal
*	6372.0	38.8	7.7	46.5	74.0	-27.5	Peak	Horizontal
*	7205.0	41.3	10.1	51.4	74.0	-22.6	Peak	Horizontal
	4799.5	41.9	3.8	45.7	74.0	-28.3	Peak	Vertical
	4995.0	40.0	3.2	43.2	74.0	-30.8	Peak	Vertical
	7205.0	40.3	10.9	51.2	54.0	-2.8	Average	Vertical
*	7205.0	43.6	10.9	54.5	74.0	-19.5	Peak	Vertical
*	8616.0	32.4	12.0	44.4	74.0	-29.6	Peak	Vertical

Note 1: "*" means test frequency didn't fall into restricted band.

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 Stereo Headphones	Test Engineer	Buter Shi
Test Site	WZ-AC2	Test Date	2020/11/26
Test Mode	BLE - 2Mbps	Test Channel:	19
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
	4876.0	42.8	5.2	48.0	74.0	-26.0	Peak	Horizontal
	7315.5	41.7	10.1	51.8	74.0	-22.2	Peak	Horizontal
*	7842.5	37.7	10.4	48.1	74.0	-25.9	Peak	Horizontal
*	8811.5	37.8	12.3	50.1	74.0	-23.9	Peak	Horizontal
	4884.5	40.7	3.3	44.0	74.0	-30.0	Peak	Vertical
	7318.6	44.7	11.1	55.8	74.0	-18.2	Peak	Vertical
	7318.6	40.4	11.1	51.5	54.0	-2.5	Average	Vertical
*	8871.0	28.4	13.9	42.3	74.0	-31.7	Peak	Vertical
*	9772.0	31.4	13.1	44.5	74.0	-29.5	Peak	Vertical

Note 1: "*" means test frequency didn't fall into restricted band.

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 Stereo Headphones	Test Engineer	Buter Shi
Test Site	WZ-AC2	Test Date	2020/11/26
Test Mode	BLE - 2Mbps	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
	4986.5	41.6	5.8	47.4	74.0	-26.6	Peak	Horizontal
	7443.0	43.2	10.1	53.3	74.0	-20.7	Peak	Horizontal
	7443.0	37.8	10.1	47.9	54.0	-6.1	Average	Horizontal
*	7876.5	36.9	10.7	47.6	74.0	-26.4	Peak	Horizontal
*	8735.0	36.5	11.9	48.4	74.0	-25.6	Peak	Horizontal
	4986.5	39.9	3.2	43.1	74.0	-30.9	Peak	Vertical
	7441.1	44.0	10.9	54.9	74.0	-19.1	Peak	Vertical
	7441.1	39.7	11.0	50.7	54.0	-3.3	Average	Vertical
*	8599.0	32.4	11.7	44.1	74.0	-29.9	Peak	Vertical
*	9729.5	32.4	13.4	45.8	74.0	-28.2	Peak	Vertical

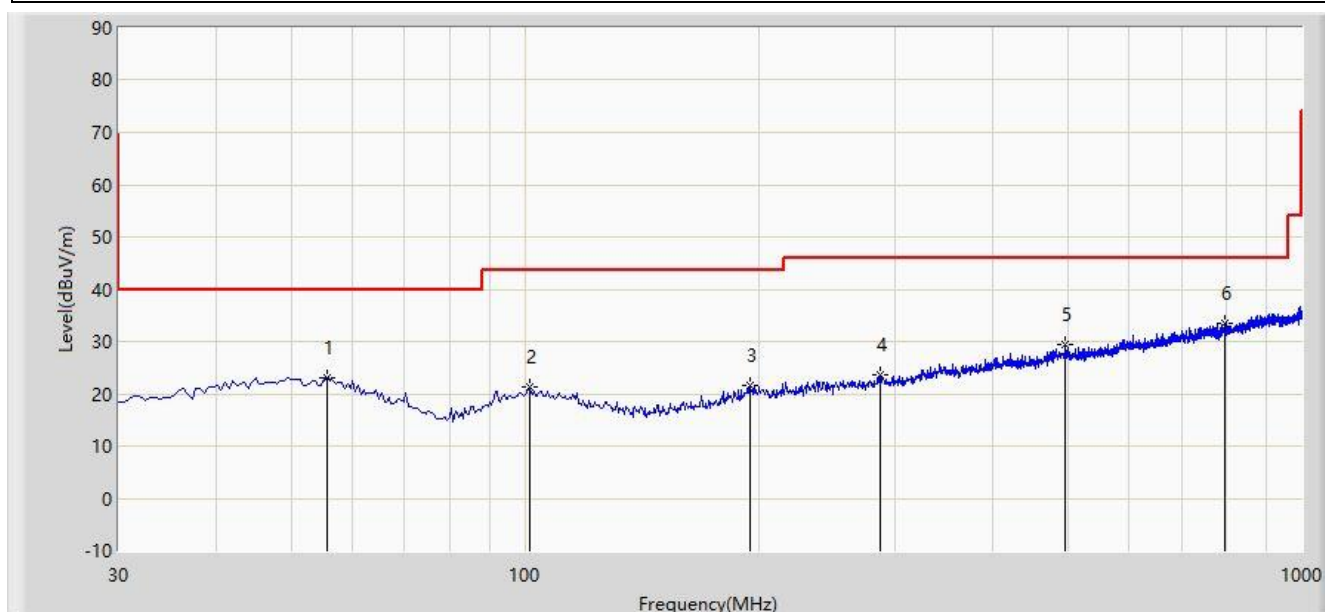
Note 1: "*" means test frequency didn't fall into restricted band.

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 Result of Radiated Emission below 1GHz:

Site: WZ-AC2	Time: 2020/11/27 - 00:56
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: WZ-AC2_VULB9162_0.03-7GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2440MHz	



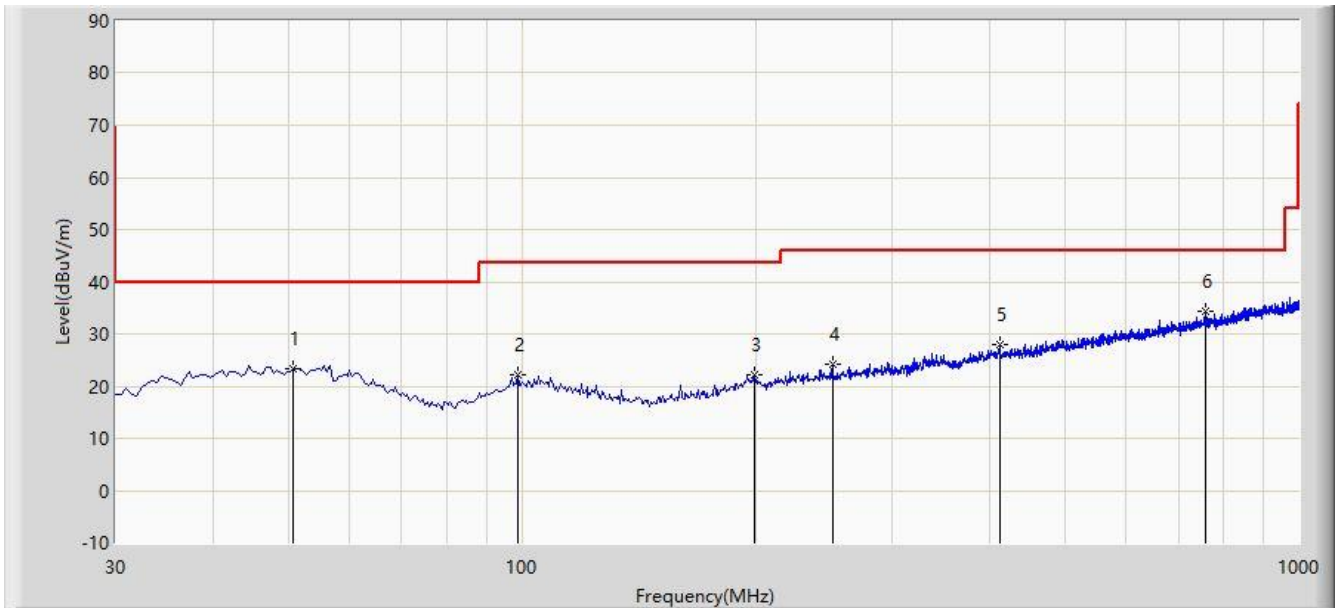
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			55.705	23.107	2.982	-16.893	40.000	20.126	PK
2			101.295	21.436	2.820	-22.064	43.500	18.616	PK
3			194.900	21.649	2.864	-21.851	43.500	18.784	PK
4			286.565	23.521	2.697	-22.479	46.000	20.824	PK
5			496.570	29.335	3.968	-16.665	46.000	25.367	PK
6		*	795.330	33.355	3.445	-12.645	46.000	29.910	PK

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

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

Note 2: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: AC2	Time: 2020/11/27 - 00:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: WZ-AC2_VULB9162_0.03-7GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2440MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			50.855	23.402	2.671	-16.598	40.000	20.731	PK
2			98.870	22.265	3.767	-21.235	43.500	18.498	PK
3			199.265	22.185	3.196	-21.315	43.500	18.989	PK
4			251.160	24.120	4.055	-21.880	46.000	20.065	PK
5			411.695	27.920	4.029	-18.080	46.000	23.891	PK
6		*	757.500	34.277	4.536	-11.723	46.000	29.741	PK

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

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

Note 2: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

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	8.025 - 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 - 156.52525	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	--	--	--

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

6.7.2.Test Procedure Used

ANSI C63.10-2013 - Section 6.3 & 6.6 & 11.13

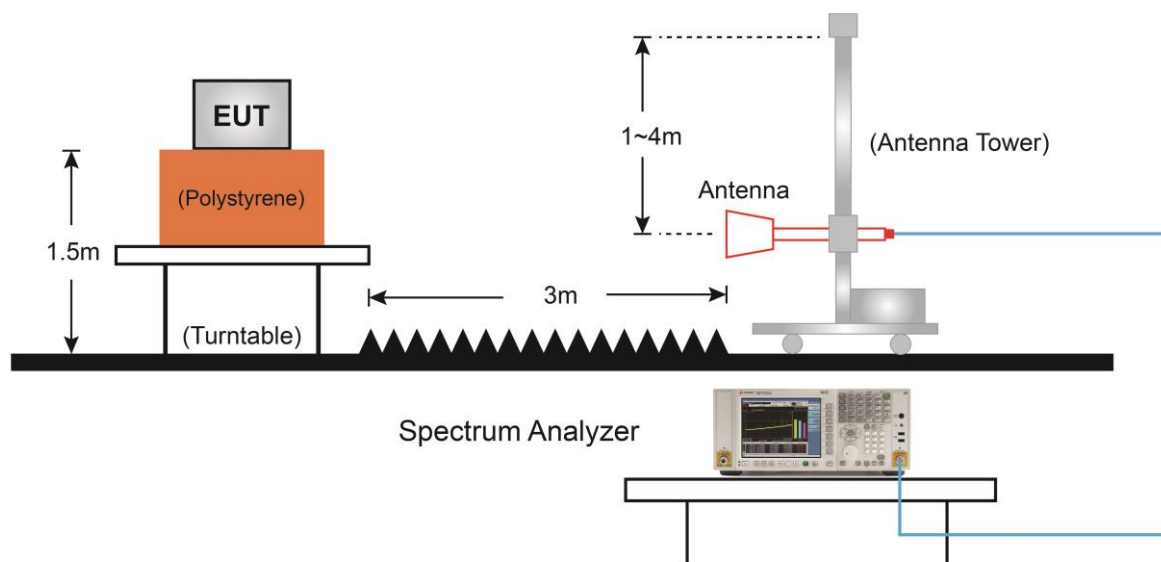
6.7.3.Test Setting

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

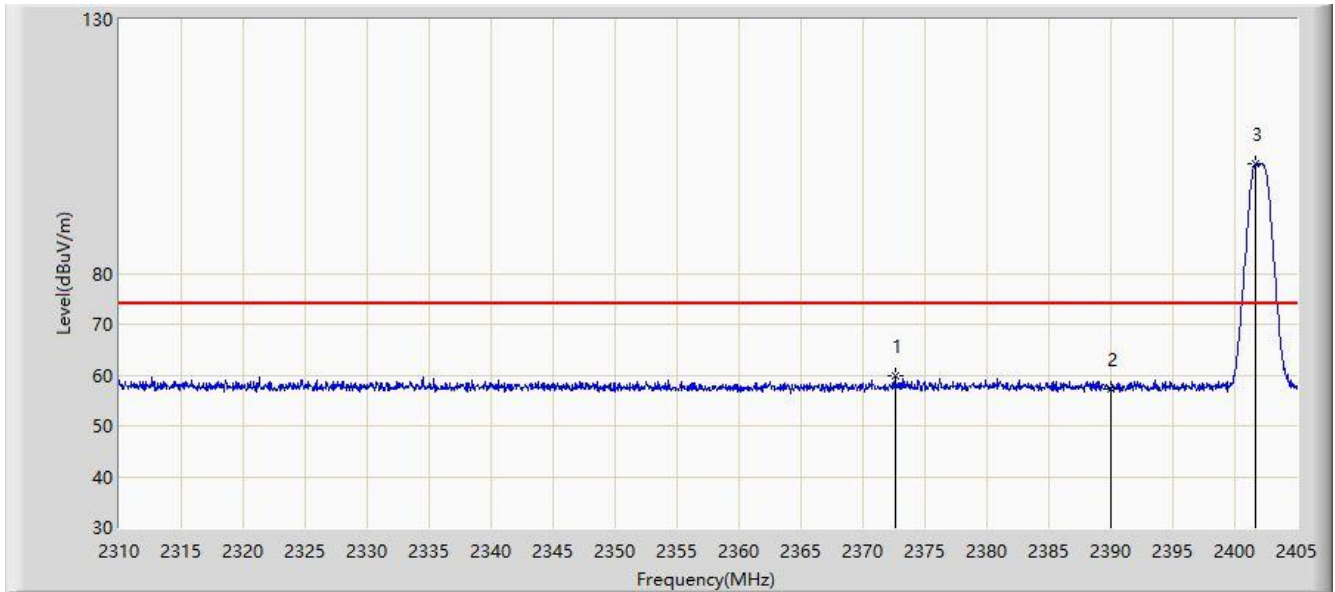
Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.7.4. Test Setup

6.7.5.Test Result

Site: WZ-AC2	Time: 2020/11/24 - 22:52
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2402MHz	

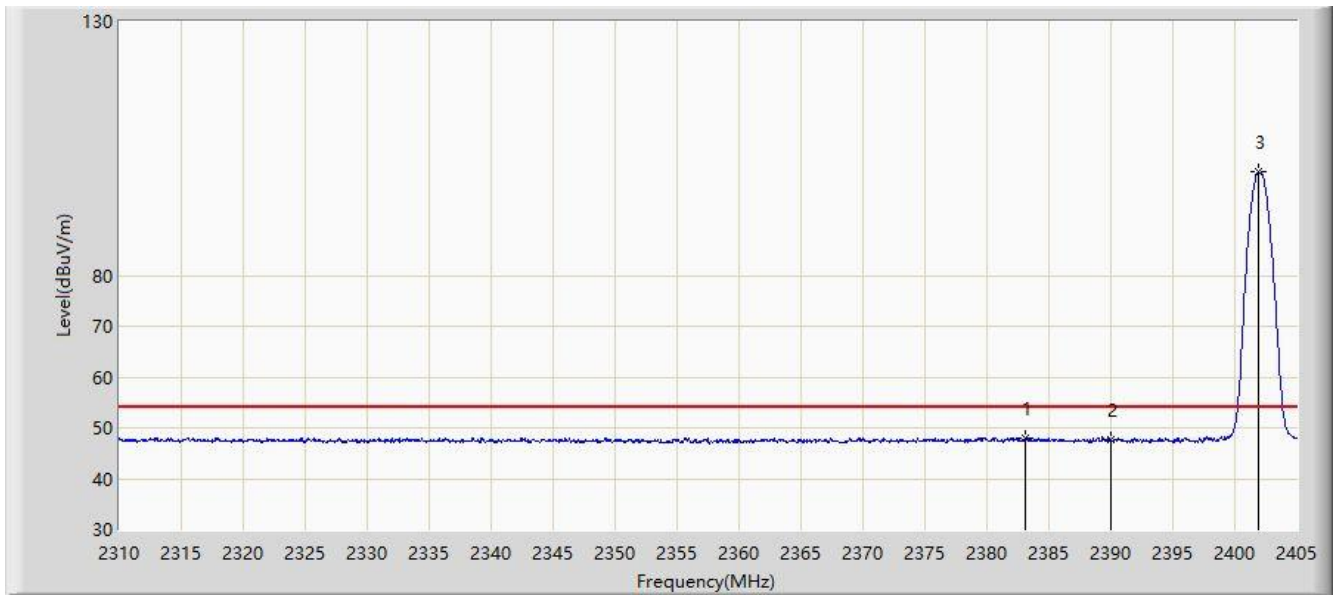


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2372.605	59.769	26.990	-14.231	74.000	32.779	PK
2			2390.000	57.238	24.577	-16.762	74.000	32.660	PK
3		*	2401.722	101.479	68.916	N/A	N/A	32.562	PK

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:00
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2402MHz	

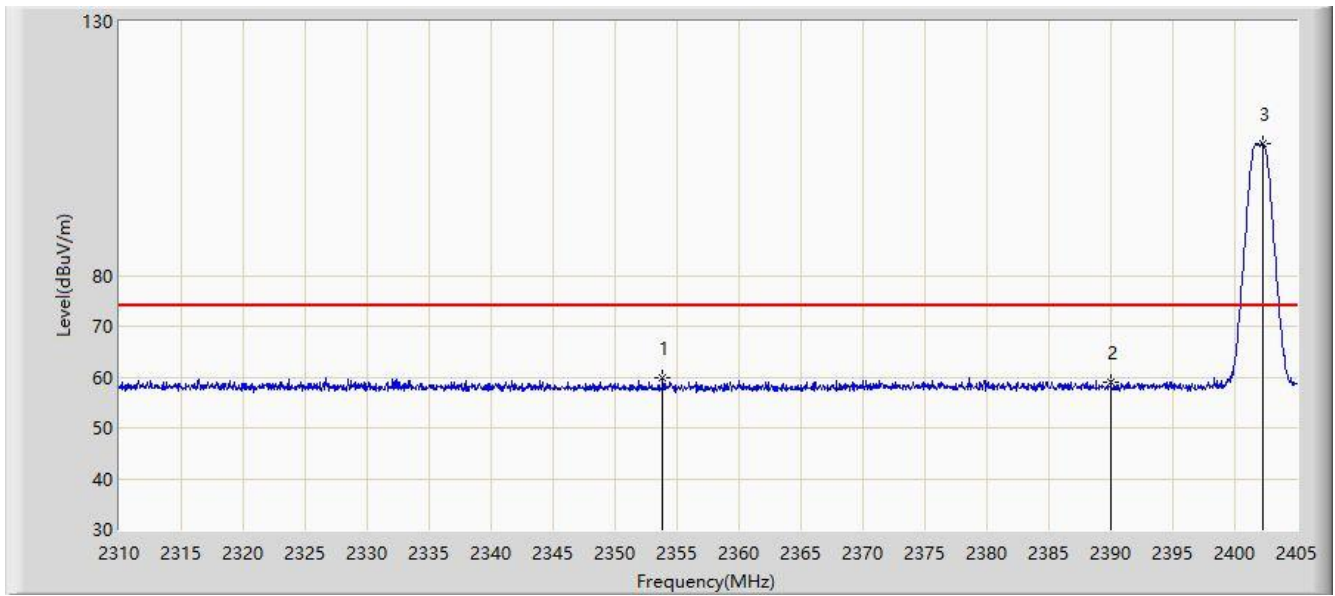


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2383.150	47.982	15.180	-6.018	54.000	32.802	AV
2			2390.000	47.573	14.912	-6.427	54.000	32.660	AV
3		*	2401.913	100.437	67.872	N/A	N/A	32.565	AV

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:02
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2402MHz	

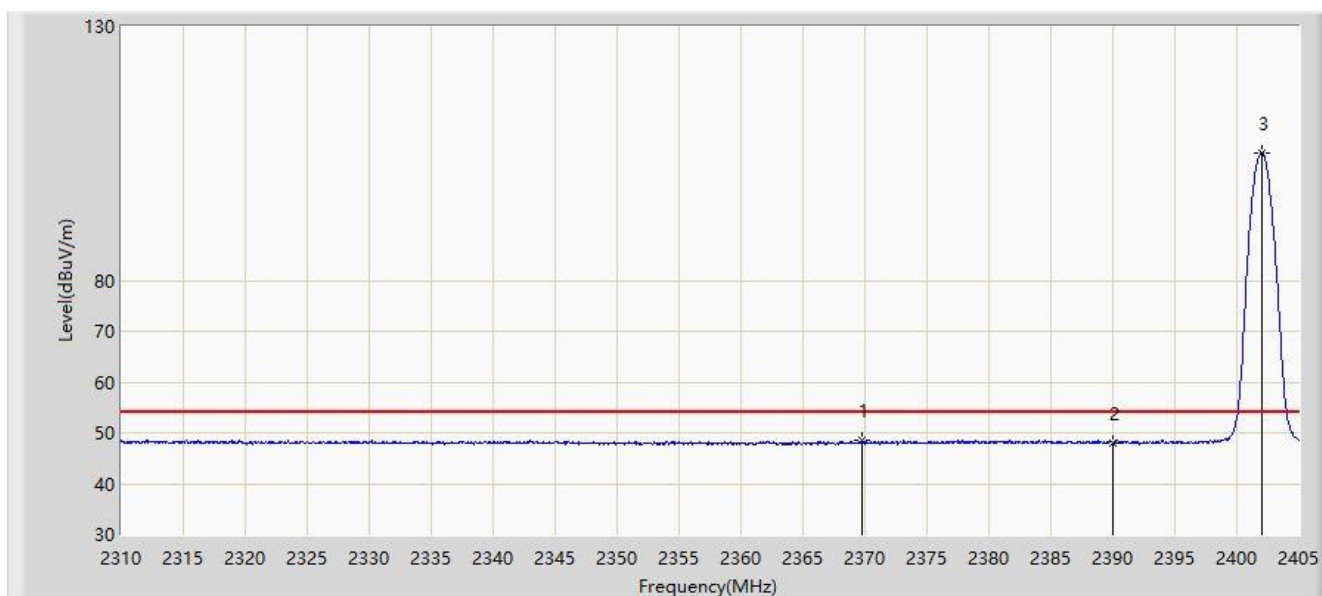


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2353.843	59.727	27.027	-14.273	74.000	32.700	PK
2			2390.000	59.106	26.445	-14.894	74.000	32.660	PK
3		*	2402.292	105.875	73.305	N/A	N/A	32.571	PK

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:07
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2402MHz	

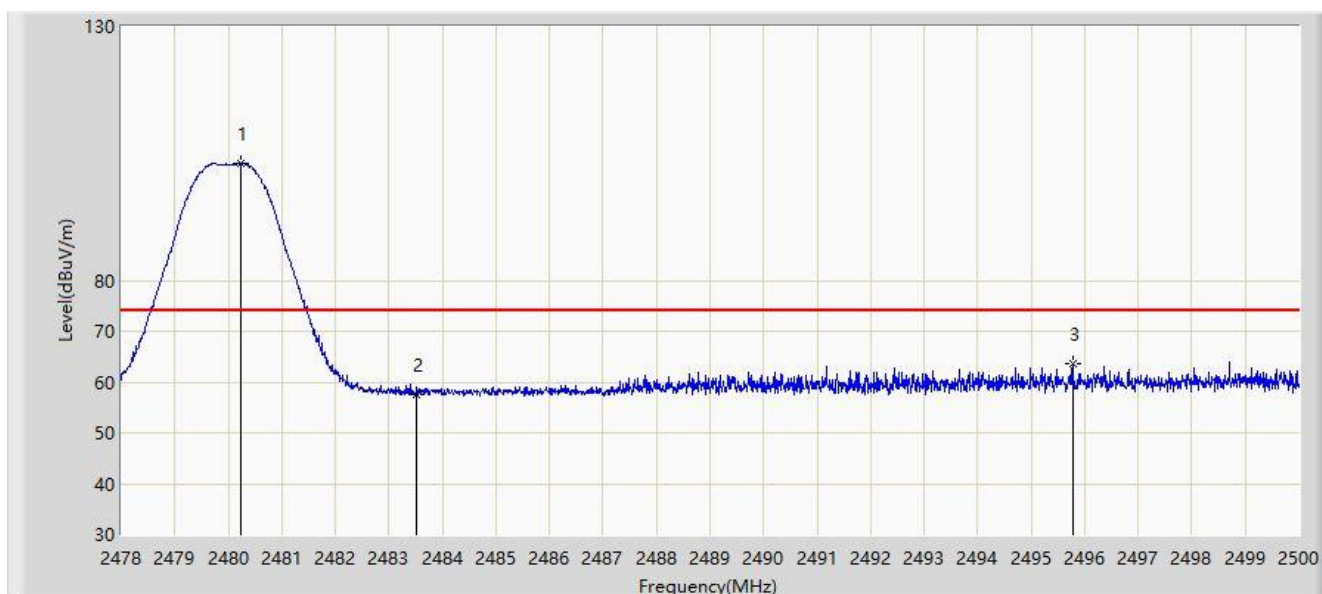


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2369.708	48.498	15.756	-5.502	54.000	32.742	AV
2			2390.000	48.032	15.371	-5.968	54.000	32.660	AV
3		*	2402.008	105.112	72.545	N/A	N/A	32.566	AV

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2480MHz	

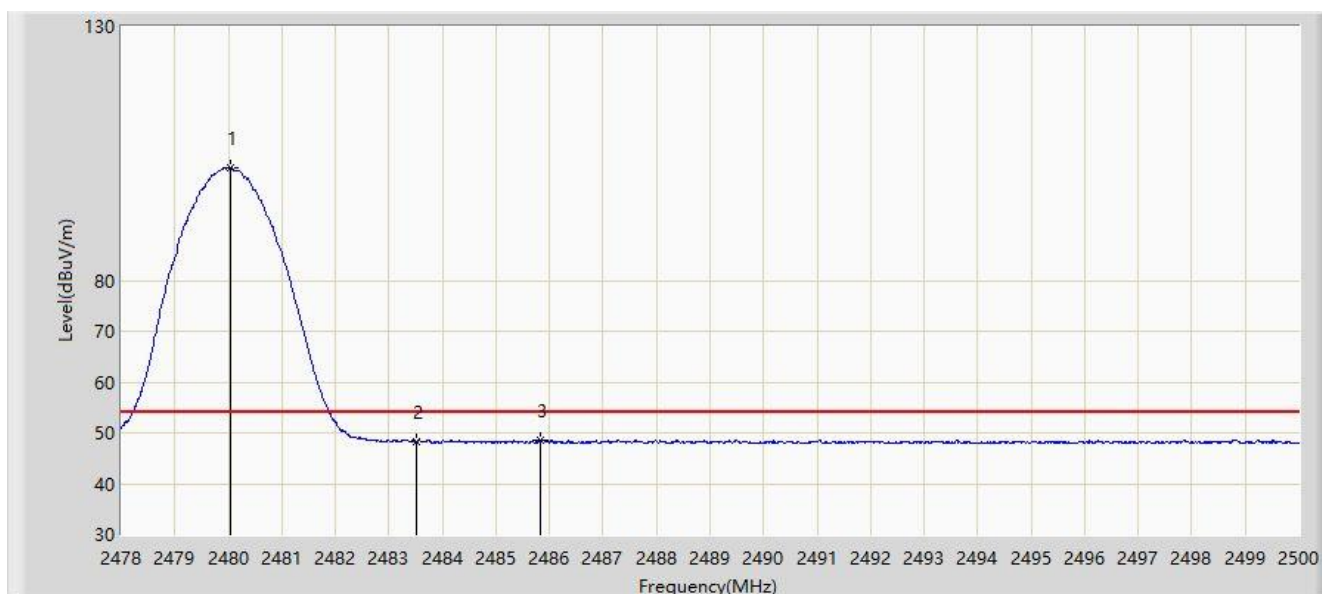


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.244	103.006	70.351	N/A	N/A	32.655	PK
2			2483.500	57.427	24.726	-16.573	74.000	32.701	PK
3			2495.776	63.625	30.933	-10.375	74.000	32.692	PK

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2480MHz	

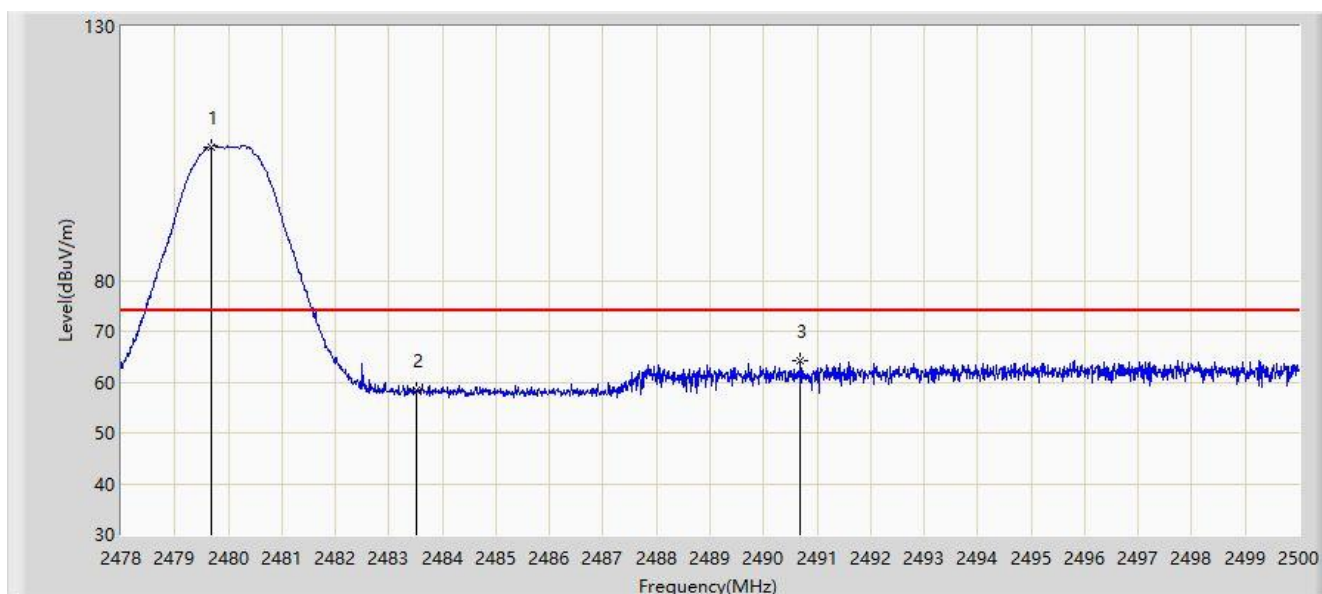


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.035	102.207	69.555	N/A	N/A	32.652	AV
2			2483.500	48.185	15.484	-5.815	54.000	32.701	AV
3			2485.843	48.527	15.794	-5.473	54.000	32.733	AV

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2480MHz	

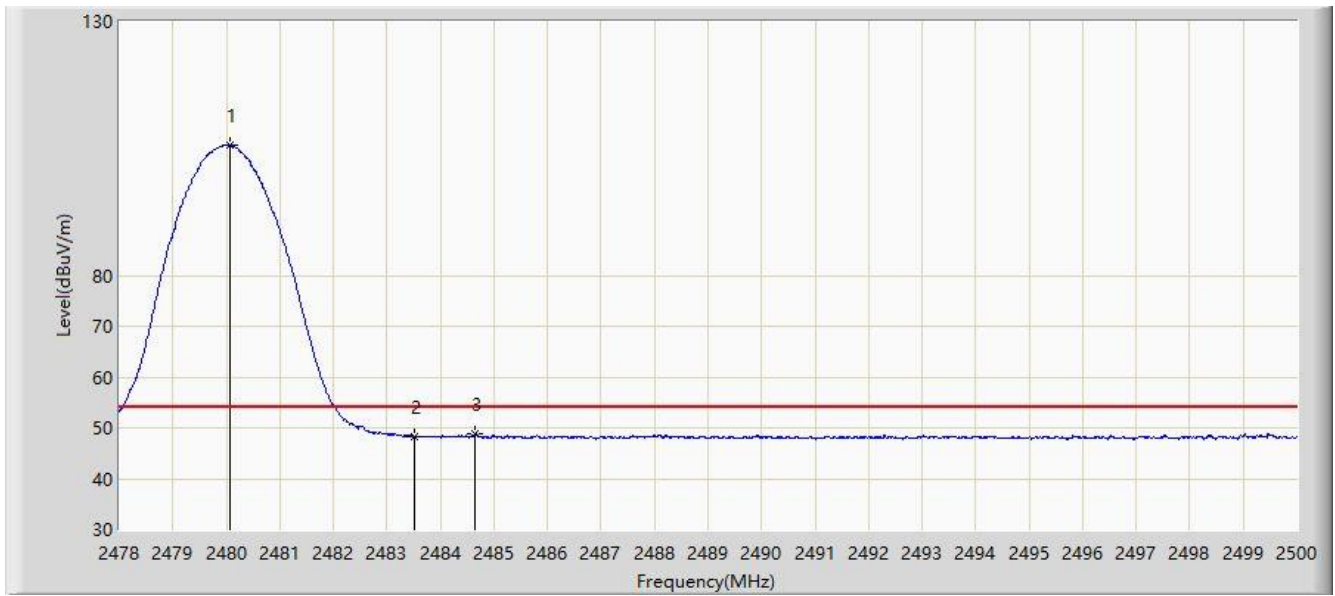


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.683	106.290	73.643	N/A	N/A	32.647	PK
2			2483.500	58.418	25.717	-15.582	74.000	32.701	PK
3			2490.683	64.337	31.604	-9.663	74.000	32.732	PK

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2480MHz	

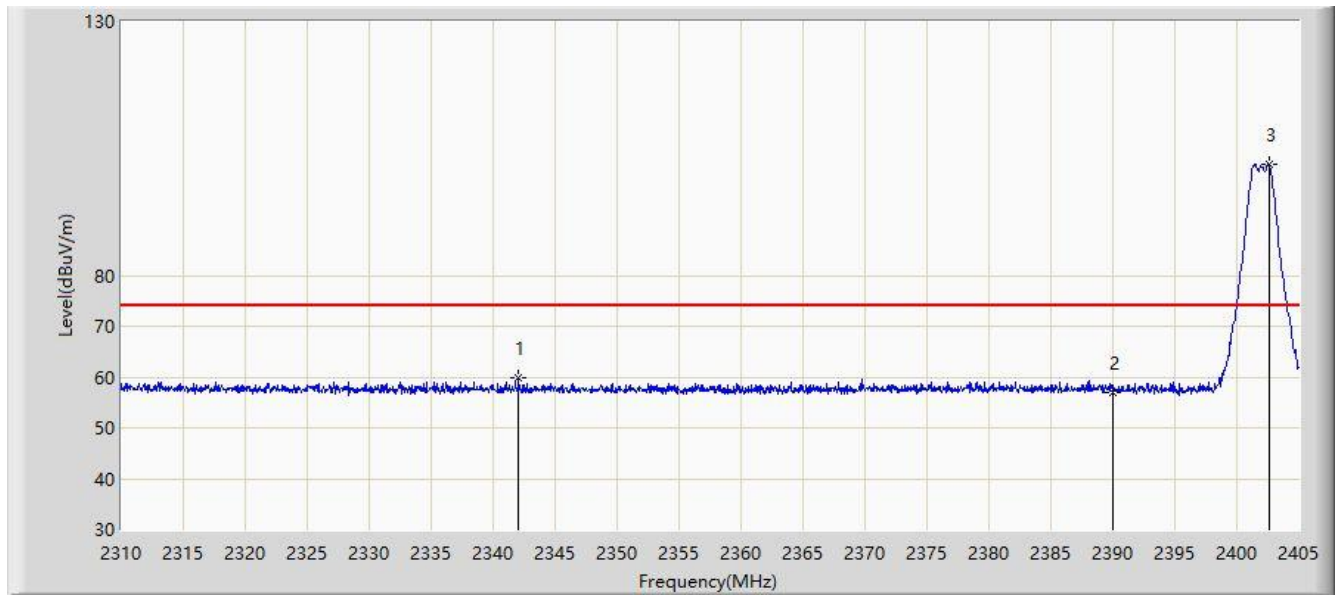


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.079	105.674	73.021	N/A	N/A	32.653	AV
2			2483.500	48.341	15.640	-5.659	54.000	32.701	AV
3			2484.655	48.709	15.992	-5.291	54.000	32.716	AV

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at Channel 2402MHz	

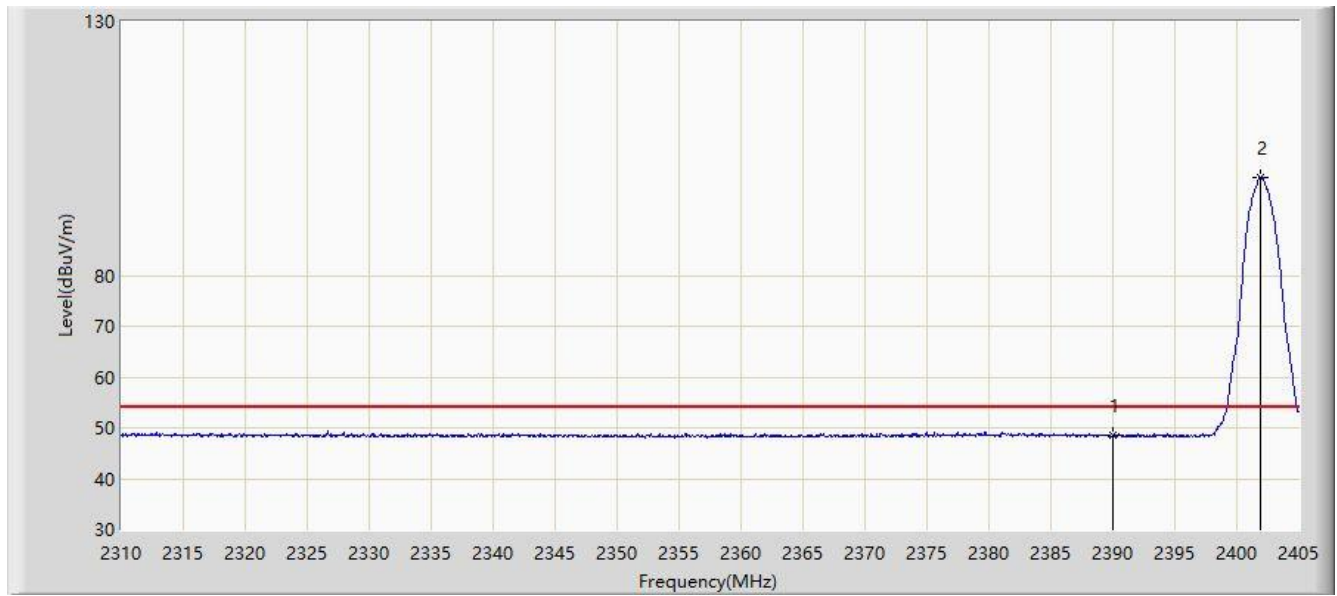


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2342.015	59.751	26.975	-14.249	74.000	32.775	PK
2			2390.000	57.030	24.369	-16.970	74.000	32.660	PK
3		*	2402.577	101.754	69.180	N/A	N/A	32.574	PK

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at Channel 2402MHz	

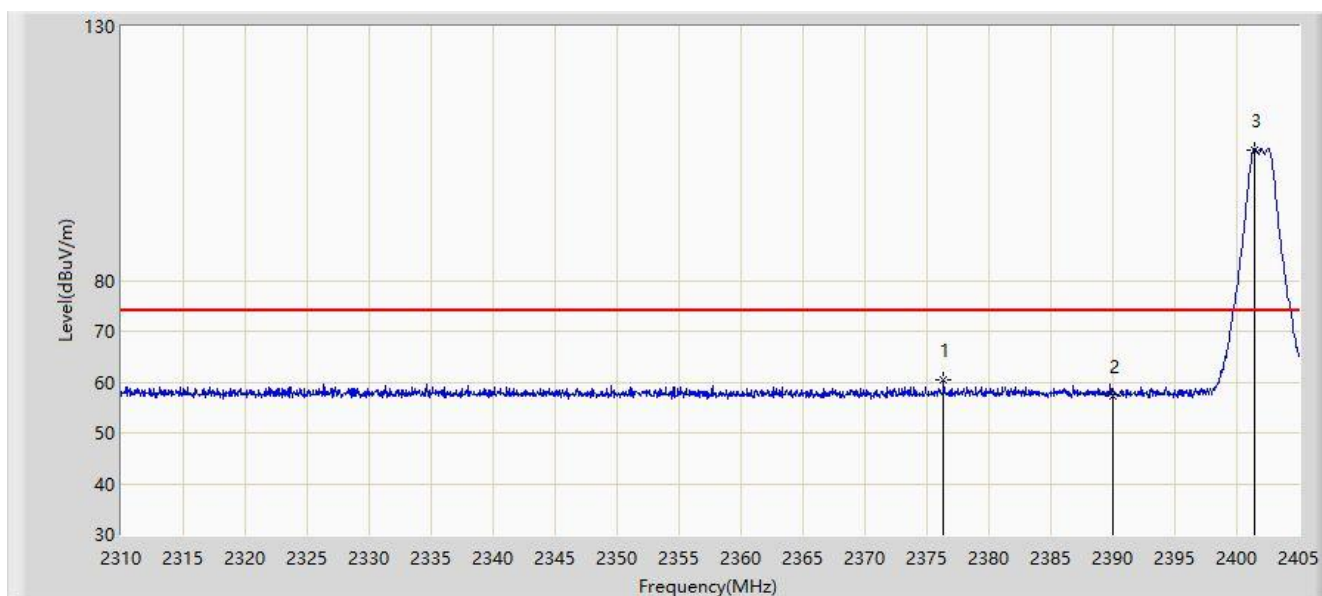


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	48.602	15.941	-5.398	54.000	32.660	AV
2		*	2401.913	99.412	66.847	N/A	N/A	32.565	AV

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at Channel 2402MHz	

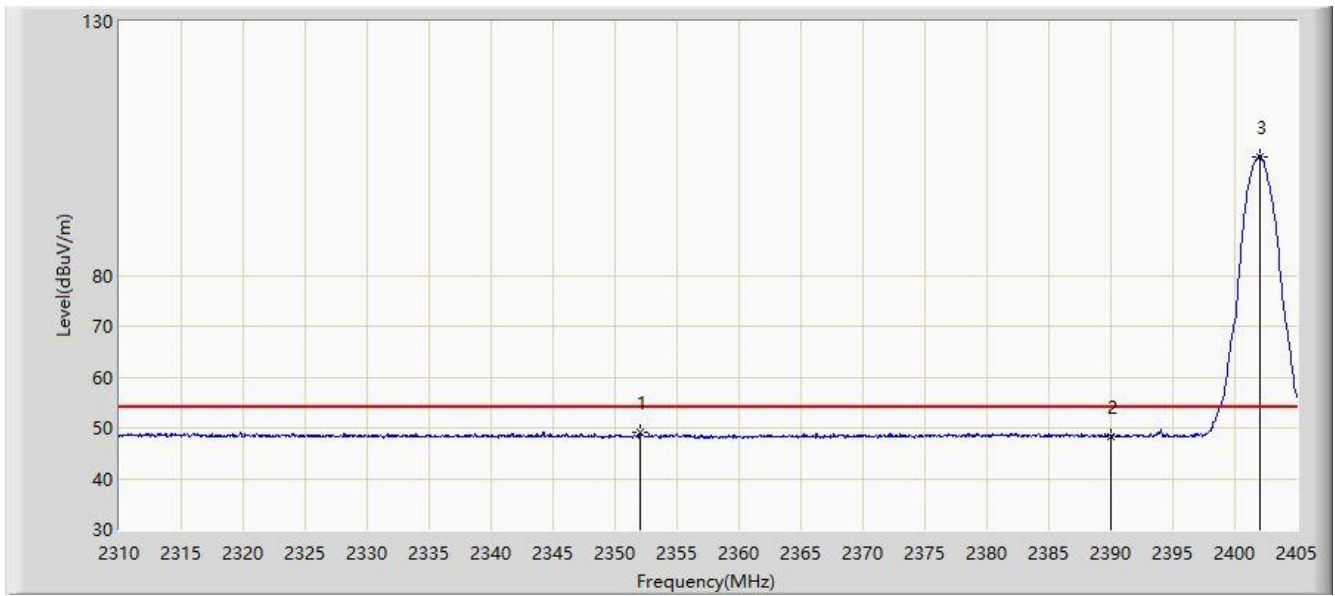


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2376.357	60.354	27.527	-13.646	74.000	32.827	PK
2			2390.000	57.155	24.494	-16.845	74.000	32.660	PK
3		*	2401.390	105.731	73.173	N/A	N/A	32.558	PK

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

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

Site: WZ-AC2	Time: 2020/11/24 - 23:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at Channel 2402MHz	

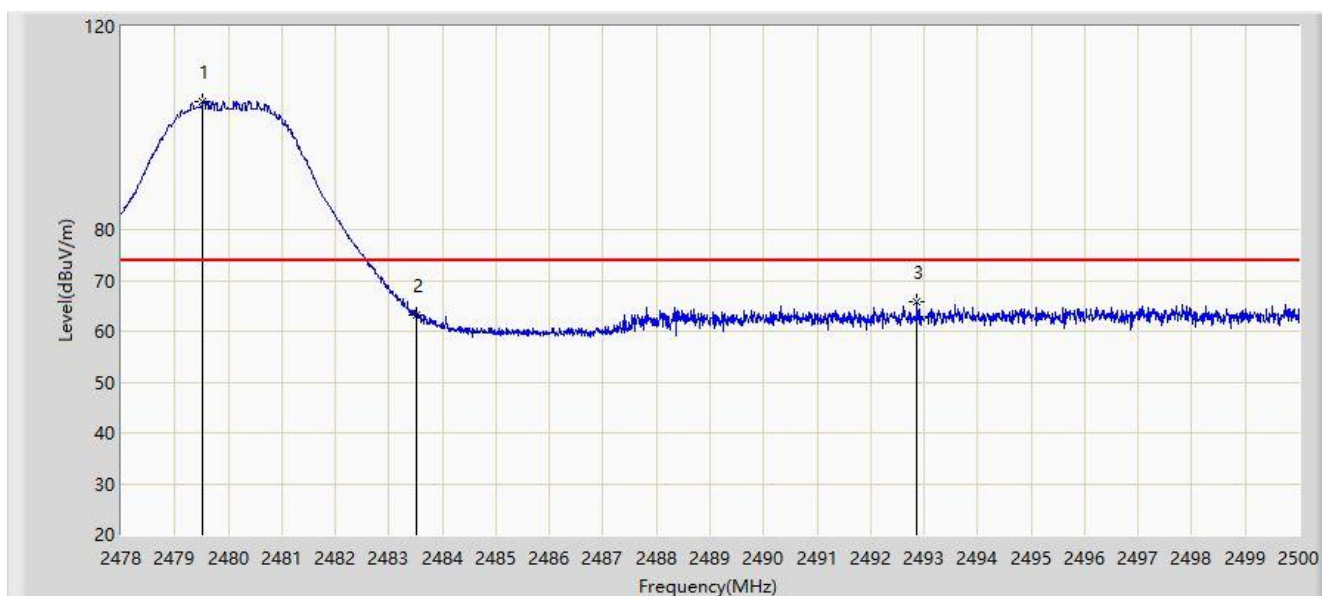


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2351.990	49.004	16.290	-4.996	54.000	32.714	AV
2			2390.000	48.370	15.709	-5.630	54.000	32.660	AV
3		*	2402.008	103.472	70.905	N/A	N/A	32.566	AV

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

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

Site: WZ-AC1	Time: 2020/11/30 - 14:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at Channel 2480MHz	

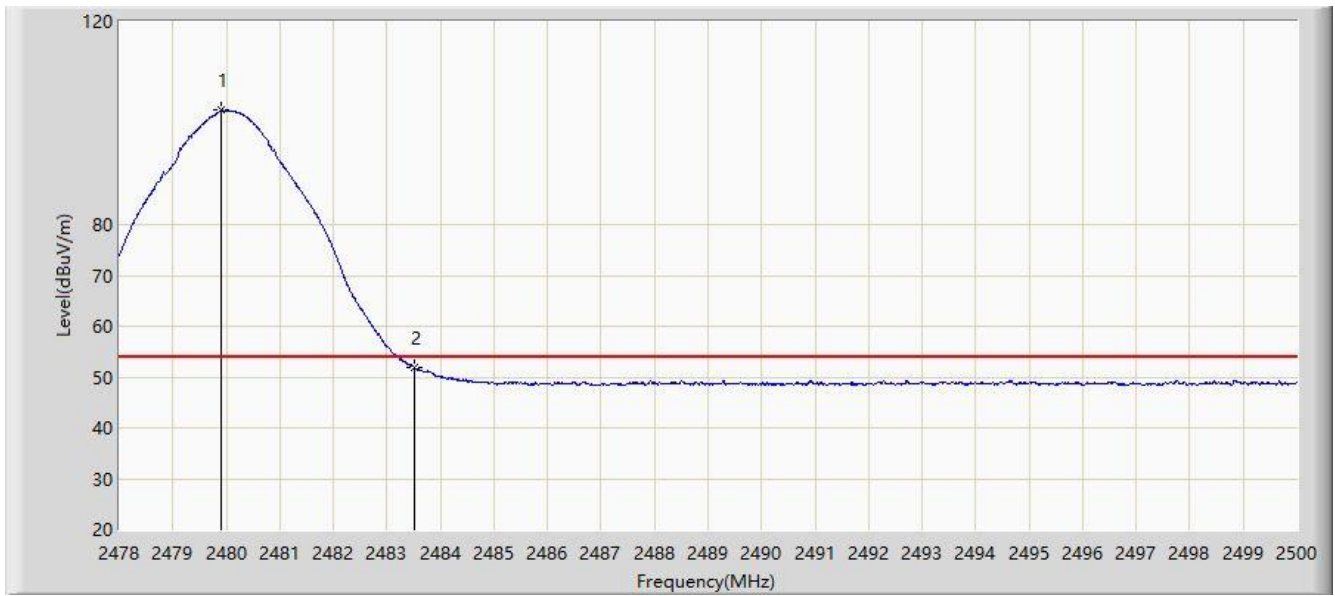


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.529	105.273	72.821	N/A	N/A	32.453	PK
2			2483.500	63.321	30.892	-10.679	74.000	32.429	PK
3			2492.872	65.864	33.443	-8.136	74.000	32.421	PK

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

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

Site: WZ-AC1	Time: 2020/11/30 - 14:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at Channel 2480MHz	

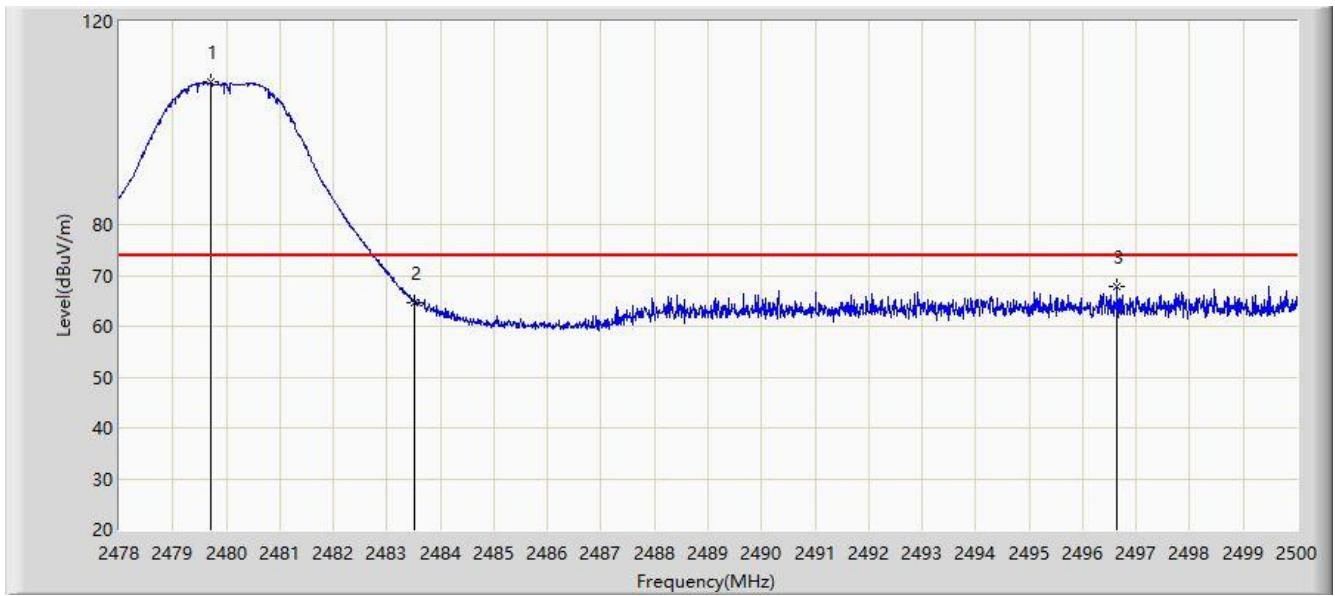


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.914	102.528	70.078	N/A	N/A	32.450	AV
2			2483.500	51.999	19.570	-2.001	54.000	32.429	AV

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

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

Site: WZ-AC1	Time: 2020/11/30 - 14:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at Channel 2480MHz	

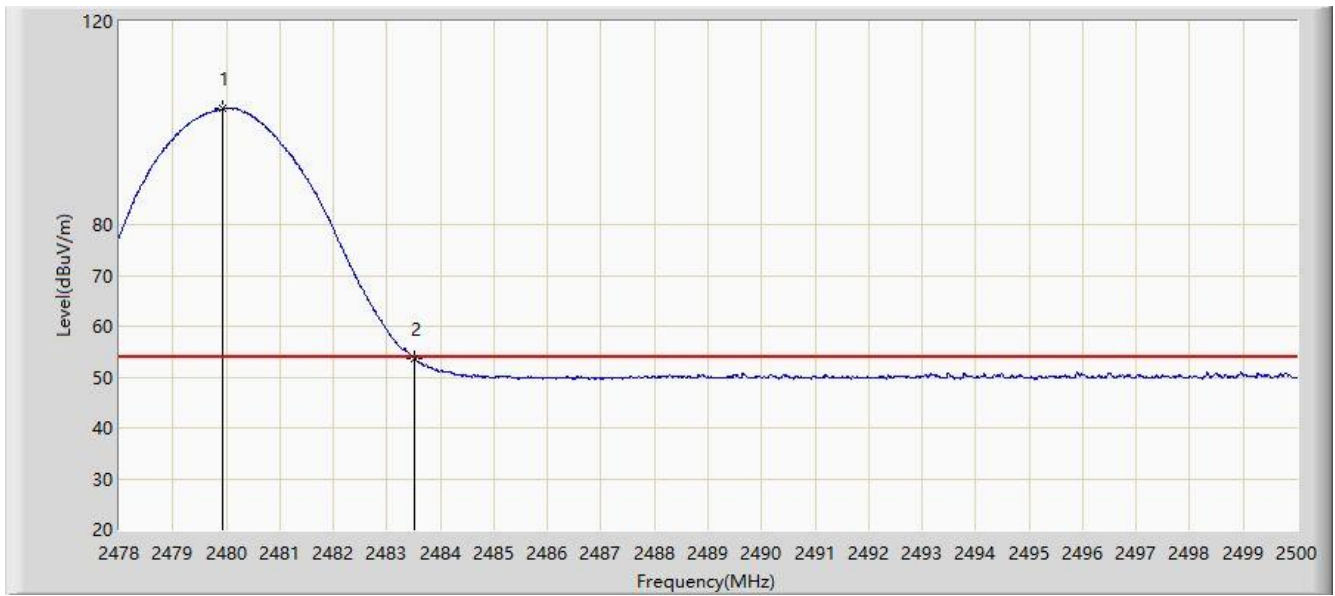


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.705	107.983	75.532	N/A	N/A	32.451	PK
2			2483.500	64.748	32.319	-9.252	74.000	32.429	PK
3			2496.645	67.843	35.411	-6.157	74.000	32.432	PK

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

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

Site: WZ-AC1	Time: 2020/11/30 - 16:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at Channel 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.925	102.776	70.326	N/A	N/A	32.450	AV
2			2483.500	53.734	21.305	-0.266	54.000	32.429	AV

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

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

6.8. AC Conducted Emissions Measurement

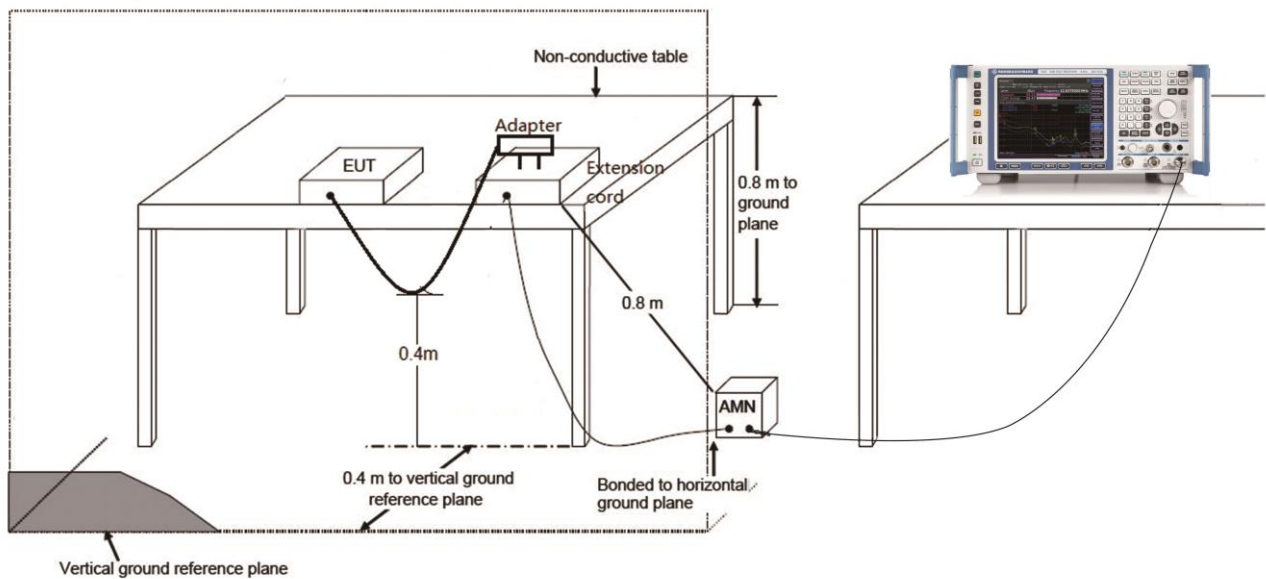
6.8.1. Test Limit

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

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

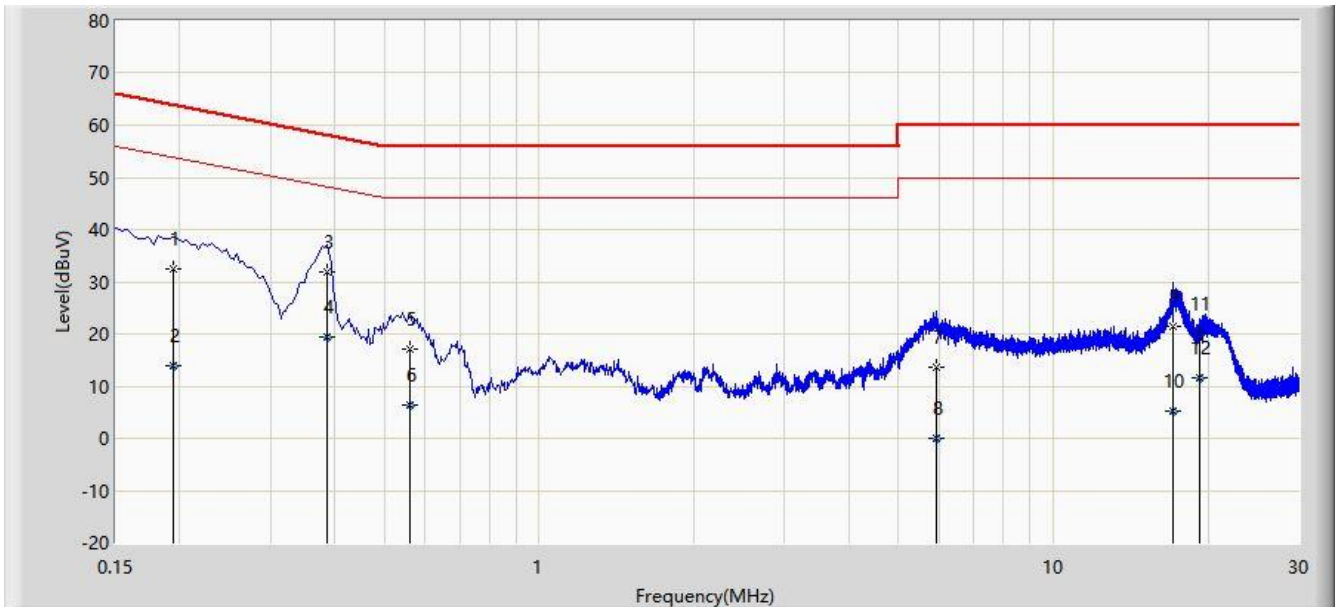
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.8.2. Test Setup



6.8.3.Test Result

Site: WZ-SR2	Time: 2020/12/02 - 13:26
Limit: FCC_Part15.207_CE_AC Power	Engineer: Dillon Diao
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2480MHz	

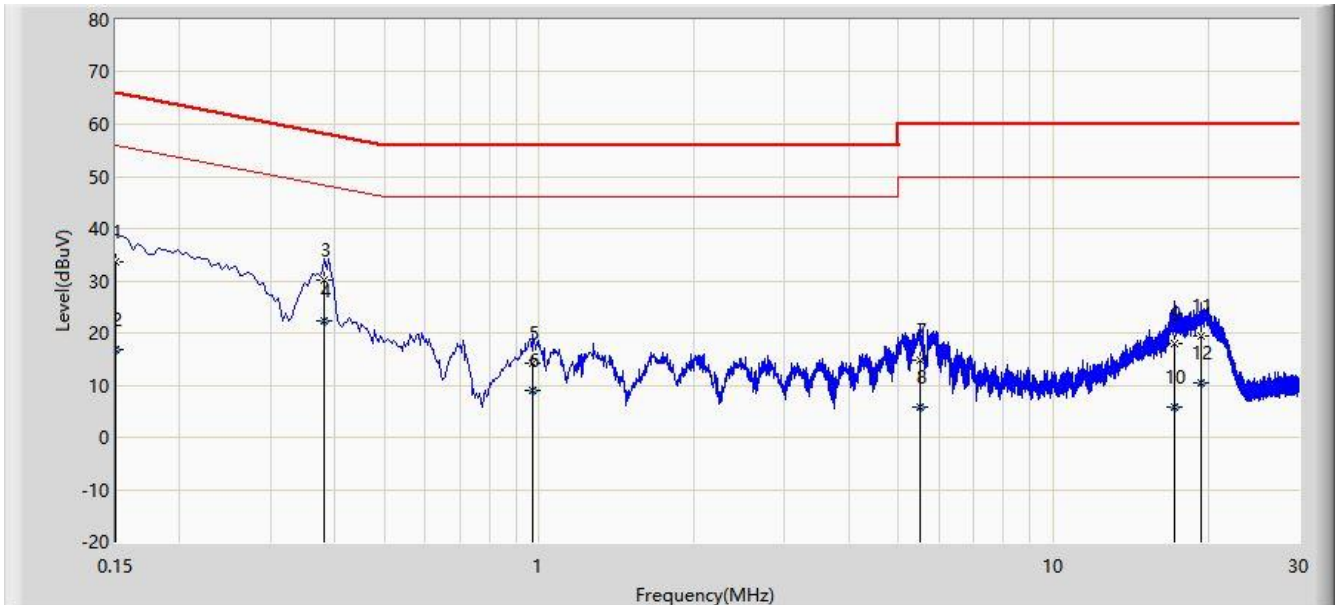


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.194	32.349	22.714	-31.515	63.864	9.635	QP
2			0.194	13.955	4.321	-39.908	53.864	9.635	AV
3		*	0.386	31.817	22.137	-26.332	58.149	9.680	QP
4			0.386	19.465	9.785	-28.685	48.149	9.680	AV
5			0.562	17.132	7.432	-38.868	56.000	9.700	QP
6			0.562	6.395	-3.305	-39.605	46.000	9.700	AV
7			5.906	13.530	3.620	-46.470	60.000	9.910	QP
8			5.906	-0.117	-10.027	-50.117	50.000	9.910	AV
9			17.114	21.386	11.116	-38.614	60.000	10.270	QP
10			17.114	5.202	-5.068	-44.798	50.000	10.270	AV
11			19.218	19.870	9.520	-40.130	60.000	10.350	QP
12			19.218	11.590	1.240	-38.410	50.000	10.350	AV

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

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

Site: WZ-SR2	Time: 2020/12/02 - 13:35
Limit: FCC_Part15.207_CE_AC Power	Engineer: Dillon Diao
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Bluetooth Stereo Headphones	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at Channel 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	33.719	24.119	-32.281	66.000	9.600	QP
2			0.150	16.713	7.113	-39.287	56.000	9.600	AV
3			0.382	30.067	20.397	-28.169	58.236	9.670	QP
4		*	0.382	22.260	12.590	-25.975	48.236	9.670	AV
5			0.974	14.109	4.369	-41.891	56.000	9.740	QP
6			0.974	9.120	-0.620	-36.880	46.000	9.740	AV
7			5.518	14.793	4.913	-45.207	60.000	9.880	QP
8			5.518	5.725	-4.155	-44.275	50.000	9.880	AV
9			17.218	17.875	7.635	-42.125	60.000	10.240	QP
10			17.218	5.874	-4.366	-44.126	50.000	10.240	AV
11			19.434	19.343	9.073	-40.657	60.000	10.270	QP
12			19.434	10.314	0.044	-39.686	50.000	10.270	AV

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

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

7. CONCLUSION

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

The End

Appendix A - Test Setup Photograph

Refer to “2011RSU058-UT” file.

Appendix B - EUT Photograph

Refer to "2011RSU058-UE" file.