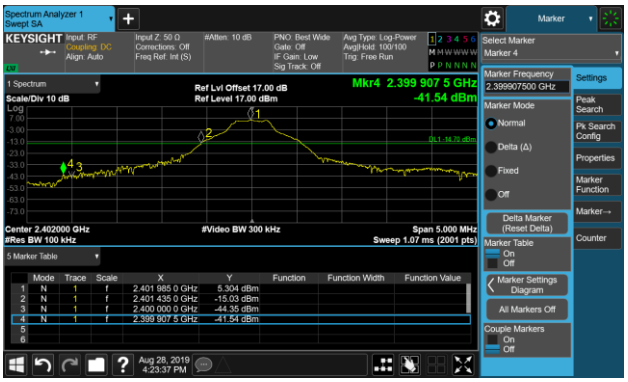
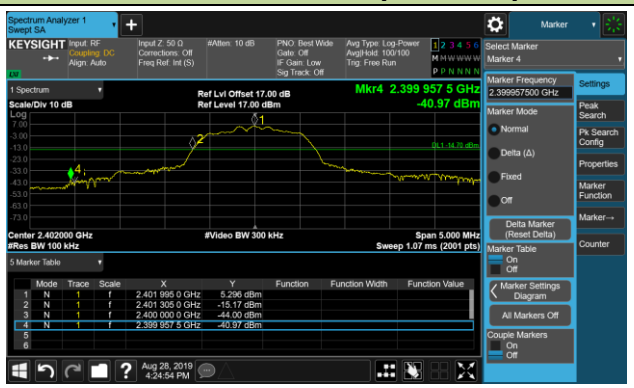
Band-edge Compliance

DH5 - Channel 00 (2402MHz)



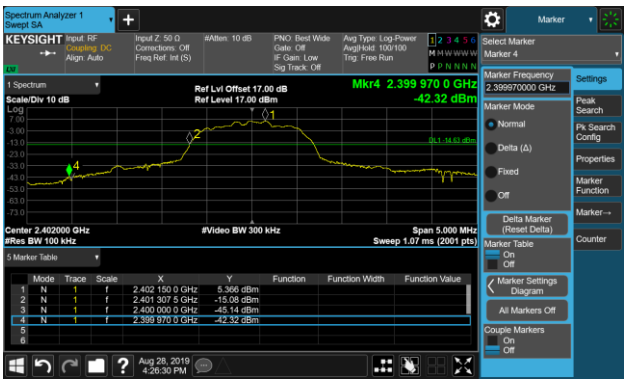
DH5 - Channel 78 (2480MHz)

2DH5 - Channel 00 (2402MHz)



2DH5 - Channel 78 (2480MHz)

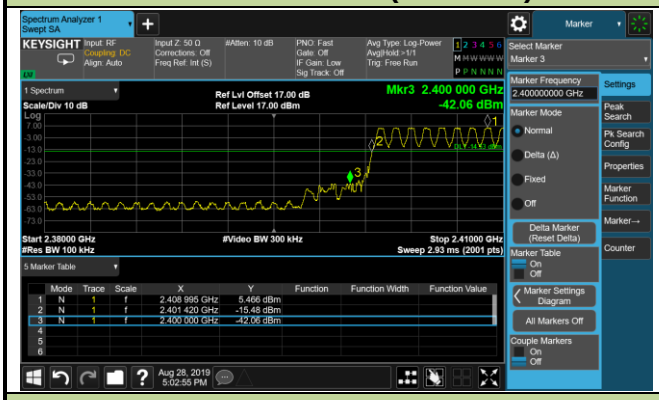
3DH5 - Channel 00 (2402MHz)



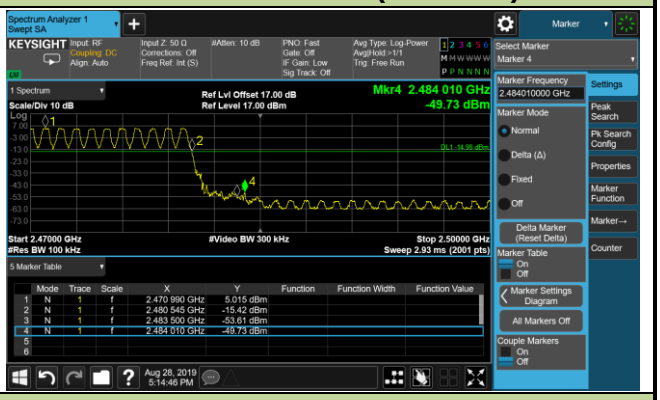
3DH5 - Channel 78 (2480MHz)

Operation Frequency Range of 20dB Bandwidth within Hopping Mode

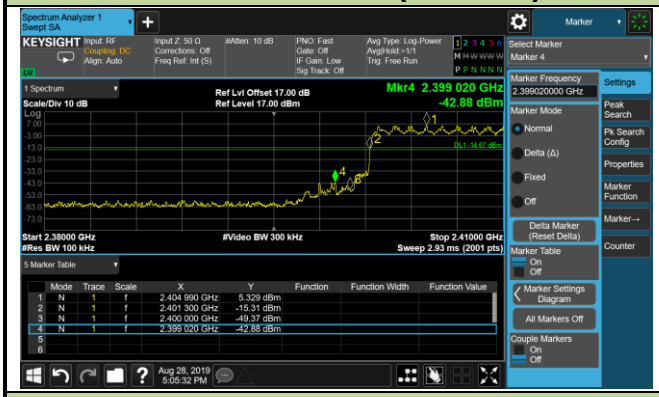
DH5 - Channel 00 (2402MHz)



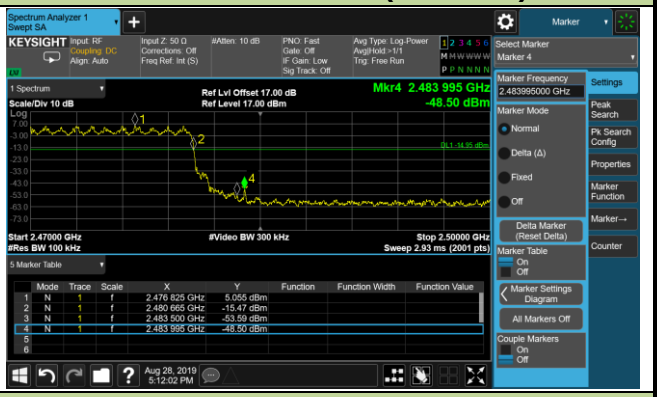
DH5 - Channel 78 (2480MHz)



2DH5 - Channel 00 (2402MHz)

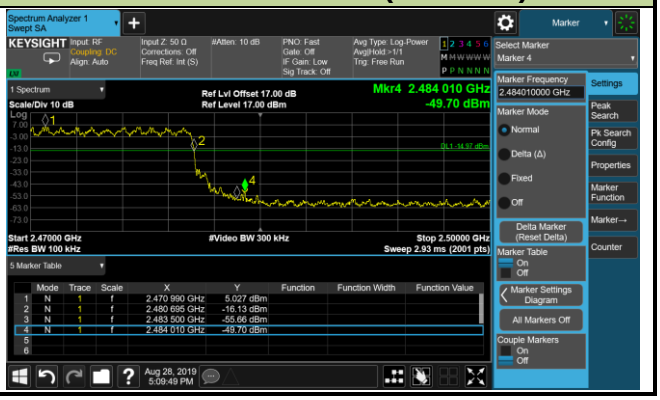


2DH5 - Channel 78 (2480MHz)



3DH5 - Channel 00 (2402MHz)

3DH5 - Channel 78 (2480MHz)



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.

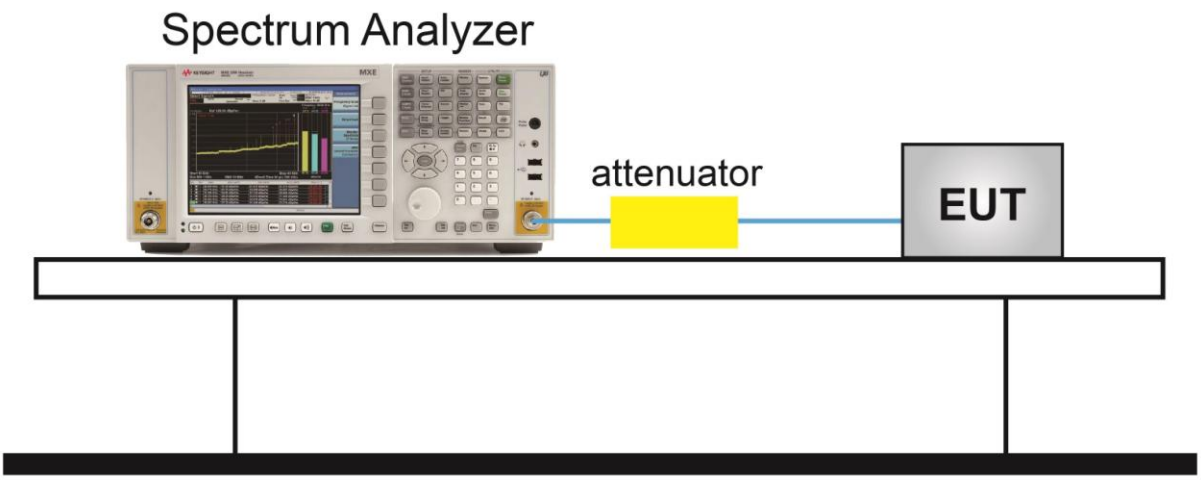
7.8.2.Test Procedure Used

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 = 100kHz
3. VBW = 300kHz
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.

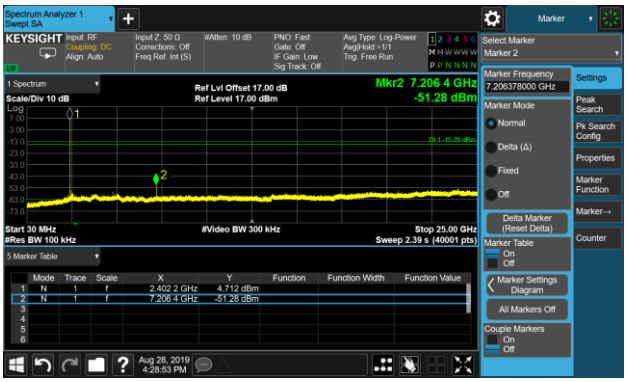
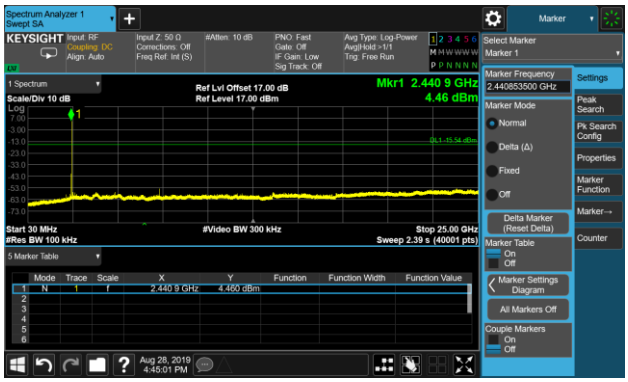
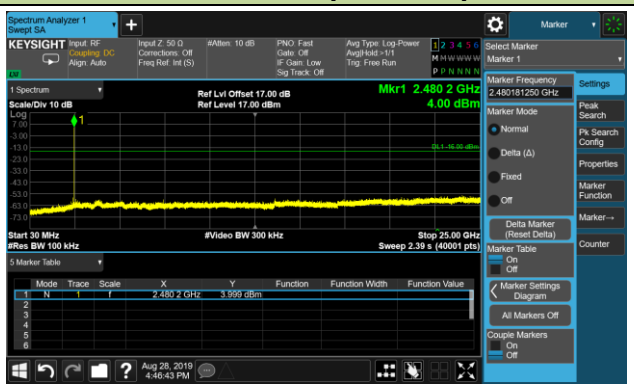
7.8.4.Test Setup



7.8.5.Test Result

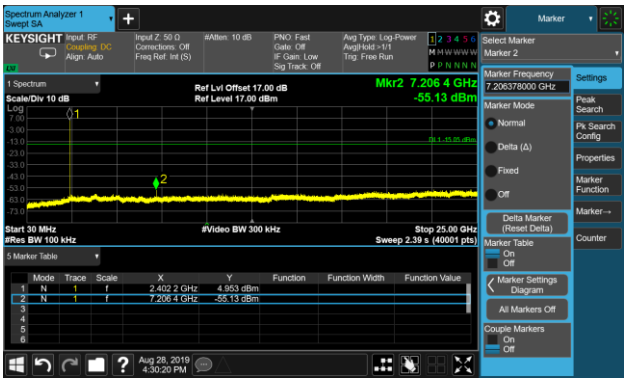
Product	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Snake Ni	Relative Humidity	52%
Test Site	TR3	Test Date	2019/08/28

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
3DH5	00	2402	20dBc	Pass
3DH5	39	2441	20dBc	Pass
3DH5	78	2480	20dBc	Pass

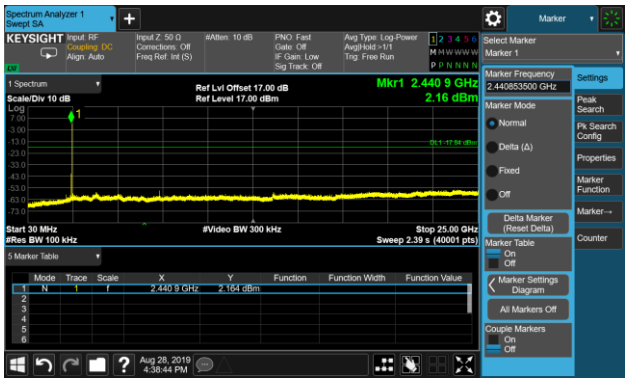
DH5 Conducted Spurious Emissions	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Channel 78 (2480MHz)	
	

2DH5 Conducted Spurious Emissions

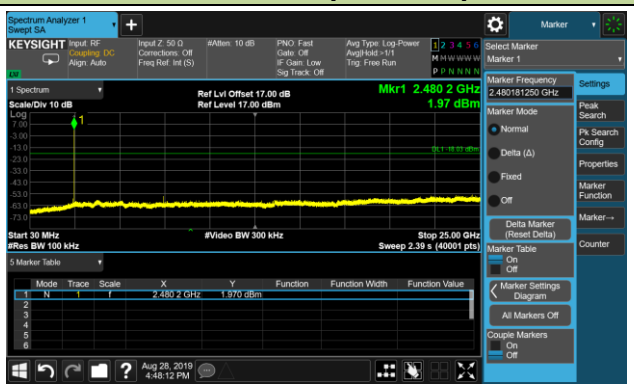
Channel 00 (2402MHz)

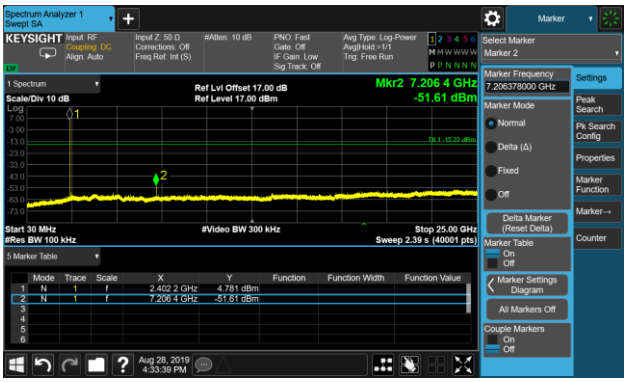
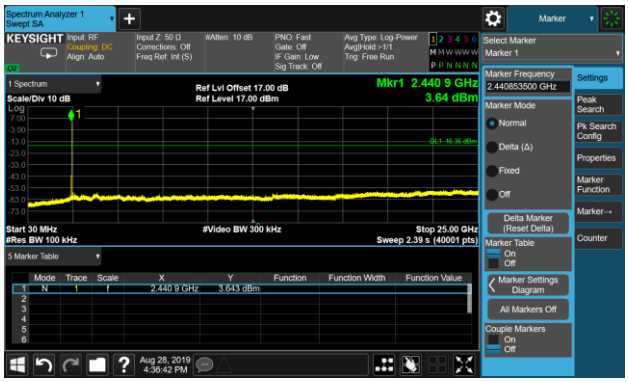
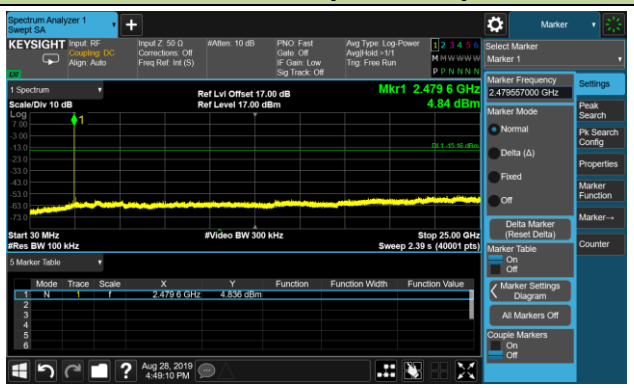


Channel 39 (2441MHz)



Channel 78 (2480MHz)



3DH5 Conducted Spurious Emissions	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Channel 78 (2480MHz)	
	

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 15.209 Limits		
Frequency (MHz)	Field Strength (μV/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

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

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

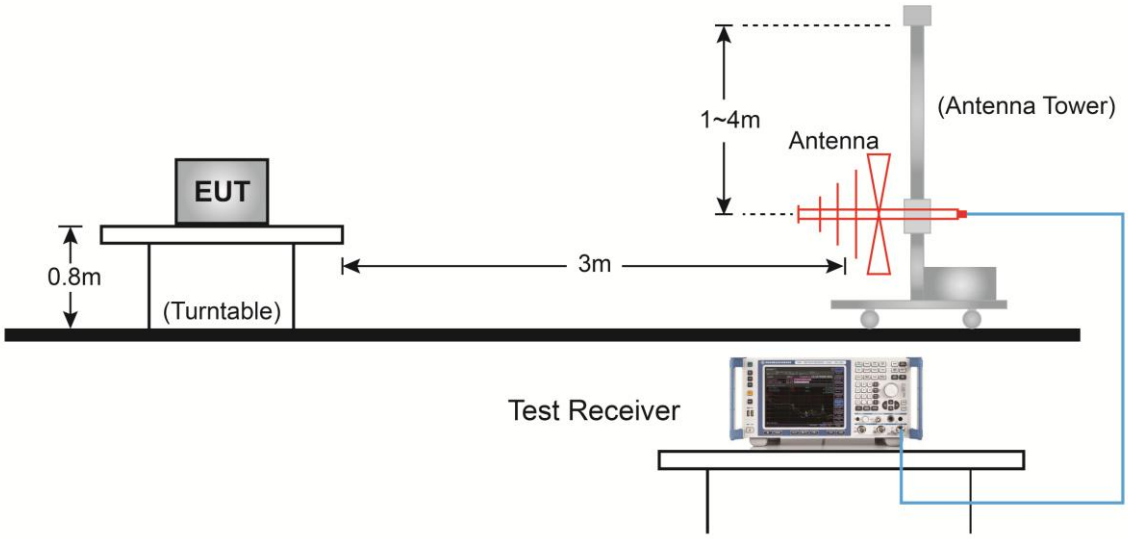
Average Measurements above 1GHz (Method VB)

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 ≥ 98%, set VBW = 10Hz

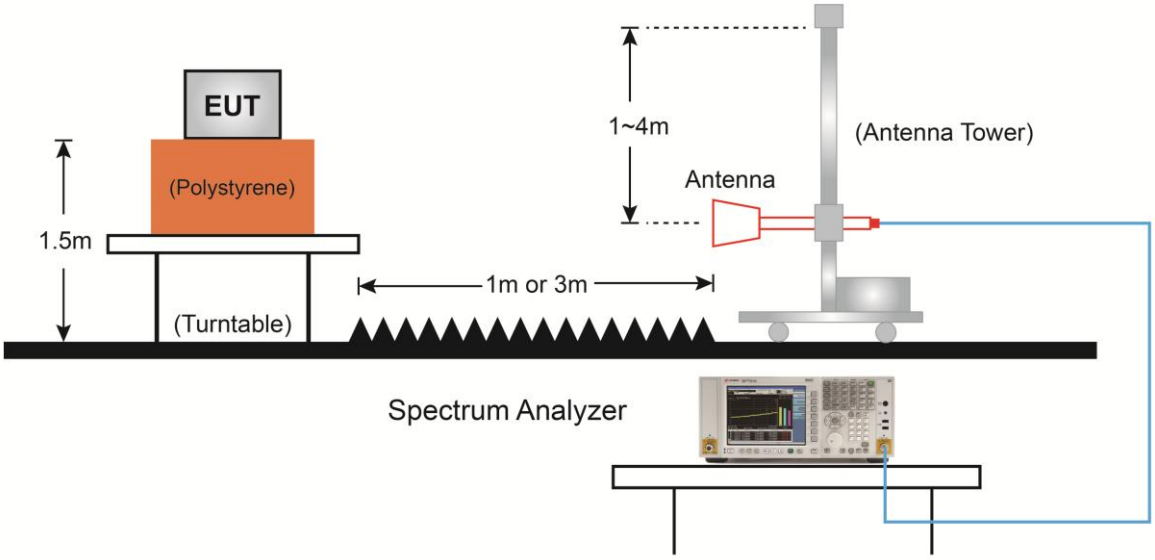
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration
4. Detector = Peak
5. Sweep time = Auto
6. Trace mode = Max hold
7. Trace was allowed to stabilize

7.9.4.Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



7.9.5.Test Result

Product	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
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
	4196.0	36.8	1.3	38.1	74.0	-35.9	Peak	Horizontal
	4808.0	49.0	3.5	52.5	74.0	-21.5	Peak	Horizontal
*	7205.0	41.7	11.7	53.4	74.0	-20.6	Peak	Horizontal
*	9610.5	38.1	13.5	51.6	74.0	-22.4	Peak	Horizontal
	4357.5	37.2	1.9	39.1	74.0	-34.9	Peak	Vertical
	4808.0	47.6	3.5	51.1	74.0	-22.9	Peak	Vertical
*	7205.0	42.0	11.7	53.7	74.0	-20.3	Peak	Vertical
*	9610.5	38.3	13.5	51.8	74.0	-22.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (90.5dBμV/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	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
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
	4884.5	49.9	3.5	53.4	74.0	-20.6	Peak	Horizontal
	7324.0	44.6	12.0	56.6	74.0	-17.4	Peak	Horizontal
	7324.0	31.9	12.0	43.9	54.0	-10.1	Average	Horizontal
*	9763.5	36.4	14.0	50.4	74.0	-23.6	Peak	Horizontal
*	13019.0	30.9	21.4	52.3	74.0	-21.7	Peak	Horizontal
	4884.5	49.5	3.5	53.0	74.0	-21.0	Peak	Vertical
	7324.0	45.4	12.0	57.4	74.0	-16.6	Peak	Vertical
	7324.0	32.3	12.0	44.3	54.0	-9.7	Average	Vertical
*	9763.5	37.5	14.0	51.5	74.0	-22.5	Peak	Vertical
*	12747.0	31.9	19.4	51.3	74.0	-22.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (92.4dBμV/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	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
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
	4961.0	51.0	3.5	54.5	74.0	-19.5	Peak	Horizontal
	4961.0	36.3	3.5	39.8	54.0	-14.2	Average	Horizontal
	7443.0	44.5	11.8	56.3	74.0	-17.7	Peak	Horizontal
	7443.0	41.1	11.8	52.9	54.0	-1.1	Average	Horizontal
*	9916.5	37.4	14.1	51.5	74.4	-22.9	Peak	Horizontal
*	13002.0	32.2	21.3	53.5	74.4	-20.9	Peak	Horizontal
	4961.0	51.4	3.5	54.9	74.0	-19.1	Peak	Vertical
	4961.0	35.7	3.5	39.2	54.0	-14.8	Average	Vertical
	7443.0	45.9	11.8	57.7	74.0	-16.3	Peak	Vertical
	7443.0	40.4	11.9	52.3	54.0	-1.7	Average	Vertical
*	9916.5	36.9	14.1	51.0	74.4	-23.4	Peak	Vertical
*	12874.5	32.3	19.9	52.2	74.4	-22.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (94.4dBμV/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	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
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
	4026.0	38.4	0.6	39.0	74.0	-35.0	Peak	Horizontal
	4808.0	48.9	3.5	52.4	74.0	-21.6	Peak	Horizontal
*	7205.0	41.6	11.7	53.3	74.0	-20.7	Peak	Horizontal
*	9610.5	36.2	13.5	49.7	74.0	-24.3	Peak	Horizontal
	4094.0	37.8	0.9	38.7	74.0	-35.3	Peak	Vertical
	4808.0	47.3	3.5	50.8	74.0	-23.2	Peak	Vertical
*	7205.0	41.8	11.7	53.5	74.0	-20.5	Peak	Vertical
*	9610.5	37.1	13.5	50.6	74.0	-23.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (91.3dBμV/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	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
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
	4884.5	49.1	3.5	52.6	74.0	-21.4	Peak	Horizontal
	7324.0	44.5	12.0	56.5	74.0	-17.5	Peak	Horizontal
	7324.0	39.2	12.0	51.2	54.0	-2.8	Average	Horizontal
*	9763.5	35.8	14.0	49.8	74.0	-24.2	Peak	Horizontal
*	12849.0	31.2	20.1	51.3	74.0	-22.7	Peak	Horizontal
	4884.5	49.1	3.5	52.6	74.0	-21.4	Peak	Vertical
	7324.0	45.7	12.0	57.7	74.0	-16.3	Peak	Vertical
	7324.0	38.6	12.0	50.6	54.0	-3.4	Average	Vertical
*	9763.5	37.3	14.0	51.3	74.0	-22.7	Peak	Vertical
*	13121.0	31.8	21.0	52.8	74.0	-21.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (93.3dBμV/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	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
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
	4961.0	49.0	3.5	52.5	74.0	-21.5	Peak	Horizontal
	7298.5	34.3	11.7	46.0	74.0	-28.0	Peak	Horizontal
*	8667.0	33.7	12.3	46.0	74.8	-28.8	Peak	Horizontal
*	10418.0	33.8	16.1	49.9	74.8	-24.9	Peak	Horizontal
	4340.5	37.0	1.7	38.7	74.0	-35.3	Peak	Vertical
	4961.0	43.4	3.5	46.9	74.0	-27.1	Peak	Vertical
*	9916.5	37.5	14.1	51.6	74.8	-23.2	Peak	Vertical
*	12781.0	31.6	19.2	50.8	74.8	-24.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (94.8dBμV/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	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
Test Mode	3DH5	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
	3898.5	38.7	0.1	38.8	74.0	-35.2	Peak	Horizontal
	4799.5	47.1	3.5	50.6	74.0	-23.4	Peak	Horizontal
*	7205.0	38.2	11.7	49.9	74.0	-24.1	Peak	Horizontal
*	9610.5	36.9	13.5	50.4	74.0	-23.6	Peak	Horizontal
	4808.0	42.5	3.5	46.0	74.0	-28.0	Peak	Vertical
	5411.5	35.3	4.1	39.4	74.0	-34.6	Peak	Vertical
*	7205.0	37.1	11.7	48.8	74.0	-25.2	Peak	Vertical
*	9610.5	39.2	13.5	52.7	74.0	-21.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (91.3dBμV/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	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
Test Mode	3DH5	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
	4884.5	48.5	3.5	52.0	74.0	-22.0	Peak	Horizontal
	7324.0	36.2	12.0	48.2	74.0	-25.8	Peak	Horizontal
*	9763.5	37.5	14.0	51.5	74.0	-22.5	Peak	Horizontal
*	12993.5	31.8	21.0	52.8	74.0	-21.2	Peak	Horizontal
	4884.5	43.1	3.5	46.6	74.0	-27.4	Peak	Vertical
	7324.0	35.2	12.0	47.2	74.0	-26.8	Peak	Vertical
*	9763.5	37.9	14.0	51.9	74.0	-22.1	Peak	Vertical
*	12993.5	31.4	21.0	52.4	74.0	-21.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (93.0dBμV/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	Monster Bluetooth Headphones	Temperature	25℃
Test Engineer	Dillon Diao	Relative Humidity	56%
Test Site	AC2	Test Date	2019/09/27
Test Mode	3DH5	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
	4111.0	37.5	0.9	38.4	74.0	-35.6	Peak	Horizontal
	4961.0	49.1	3.5	52.6	74.0	-21.4	Peak	Horizontal
*	6176.5	35.8	6.7	42.5	74.7	-32.2	Peak	Horizontal
*	8658.5	33.5	12.3	45.8	74.7	-28.9	Peak	Horizontal
	3669.0	39.7	-0.3	39.4	74.0	-34.6	Peak	Vertical
	4961.0	43.7	3.5	47.2	74.0	-26.8	Peak	Vertical
*	6593.0	35.4	8.1	43.5	74.7	-31.2	Peak	Vertical
*	9916.5	38.9	14.1	53.0	74.7	-21.7	Peak	Vertical

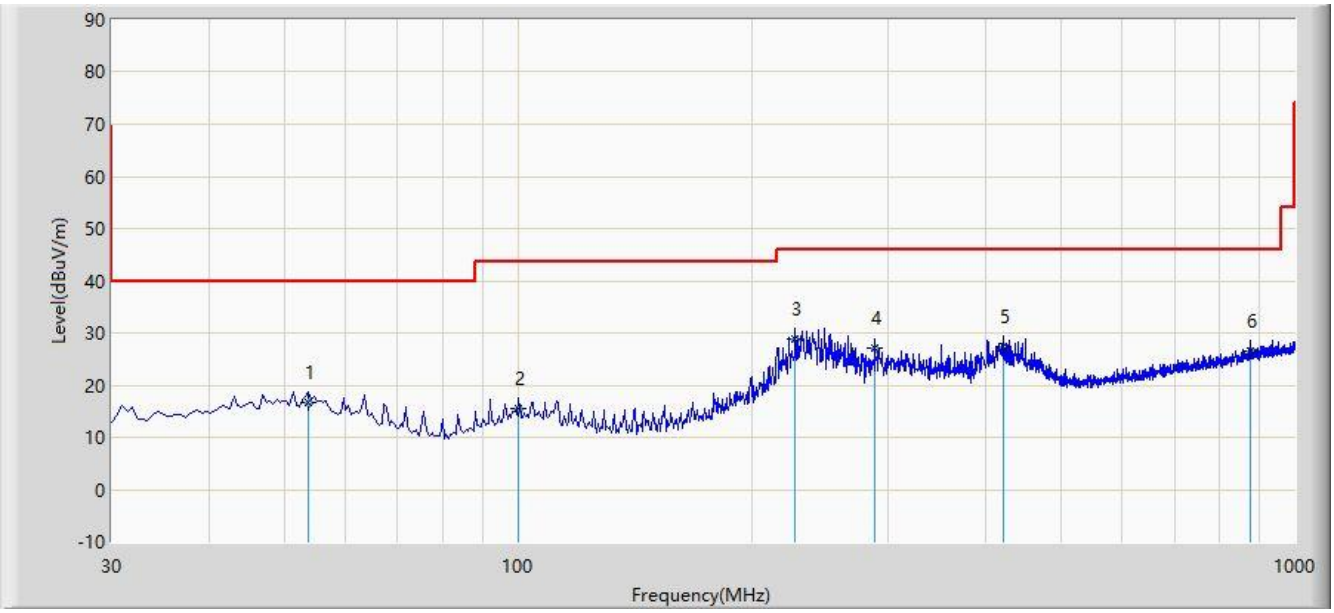
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (94.7dBμV/m) or 15.209 which is higher.

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

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

The Worst Case of Radiated Emission below 1GHz:

Site: AC2	Time: 2019/10/09 - 22:02
Limit: FCC_Part15.209_RSE(3m)	Engineer: David Lv
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2441MHz	



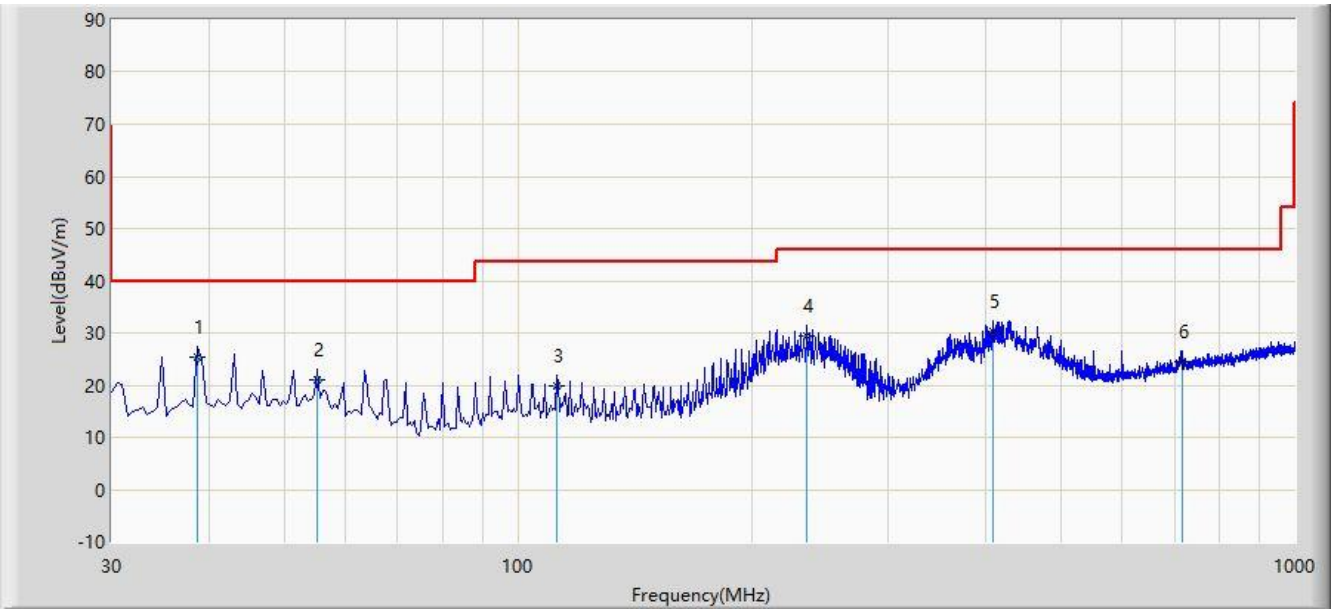
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	53.765	16.752	1.980	-23.248	40.000	14.772	QP
2			100.325	15.527	2.634	-27.973	43.500	12.892	QP
3			227.395	28.804	16.054	-17.196	46.000	12.750	QP
4			288.020	26.982	12.900	-19.018	46.000	14.082	QP
5			421.392	27.365	10.639	-18.635	46.000	16.726	QP
6			874.870	26.661	3.242	-19.339	46.000	23.419	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: AC2	Time: 2019/10/09 - 22:04
Limit: FCC_Part15.209_RSE(3m)	Engineer: David Lv
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2441MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	38.730	25.337	11.790	-14.663	40.000	13.547	QP
2			55.220	20.909	6.359	-19.091	40.000	14.550	QP
3			112.450	19.785	7.419	-23.715	43.500	12.365	QP
4			235.640	29.548	16.487	-16.452	46.000	13.061	QP
5			409.755	30.224	13.644	-15.776	46.000	16.580	QP
6			715.305	24.616	3.226	-21.384	46.000	21.390	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

7.10.1. 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 15.209 Limits		
Frequency (MHz)	Field Strength (μV/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

7.10.2.Test Procedure Used

ANSI C63.10 - Section 6.3 (General Requirements)

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

7.10.3.Test Setting

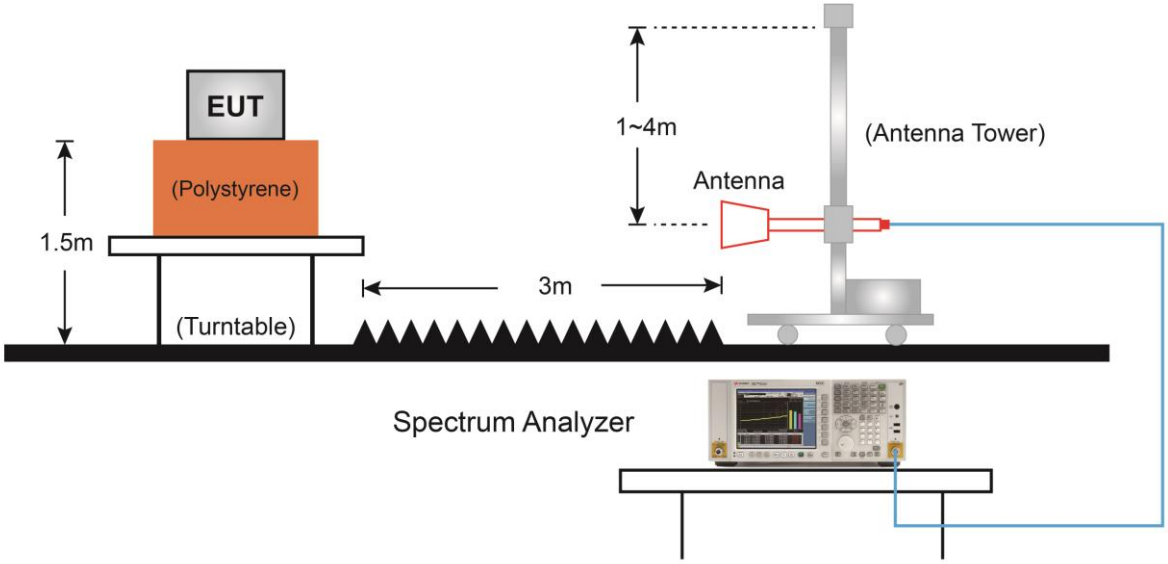
Peak Field Strength Measurements

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 Measurements above 1GHz (Method VB)

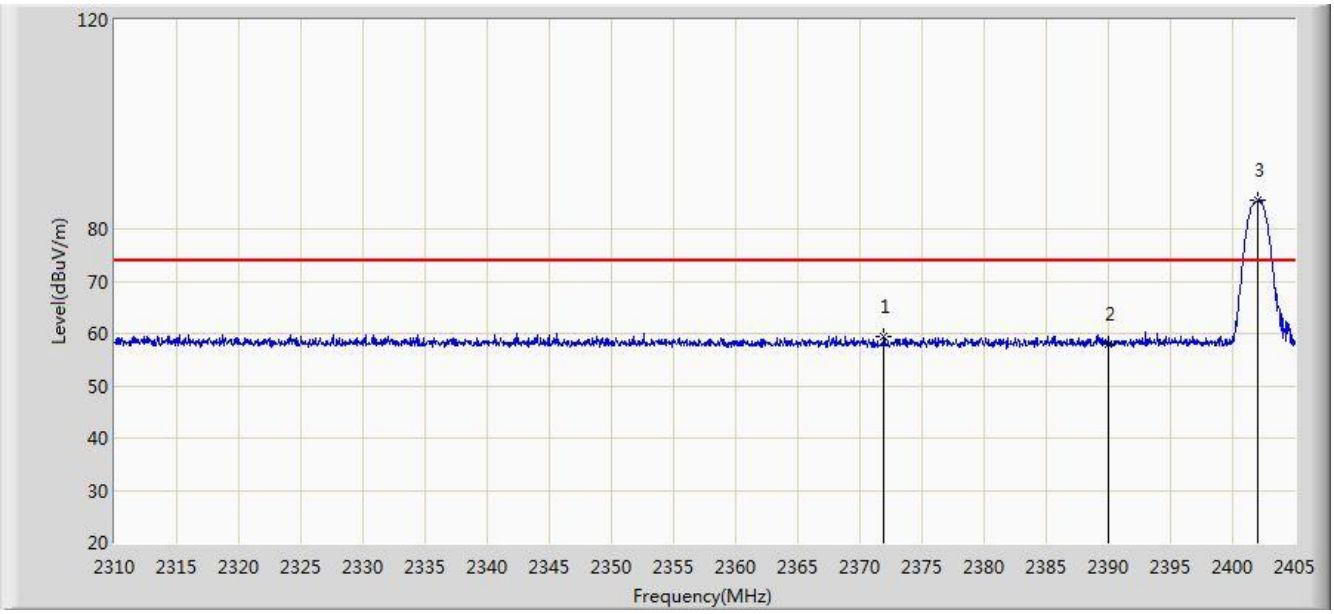
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10Hz
4. If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration
5. Detector = Peak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

7.10.4.Test Setup



7.10.5.Test Result

Site: AC2	Time: 2019/09/27 - 22:07
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2402MHz	

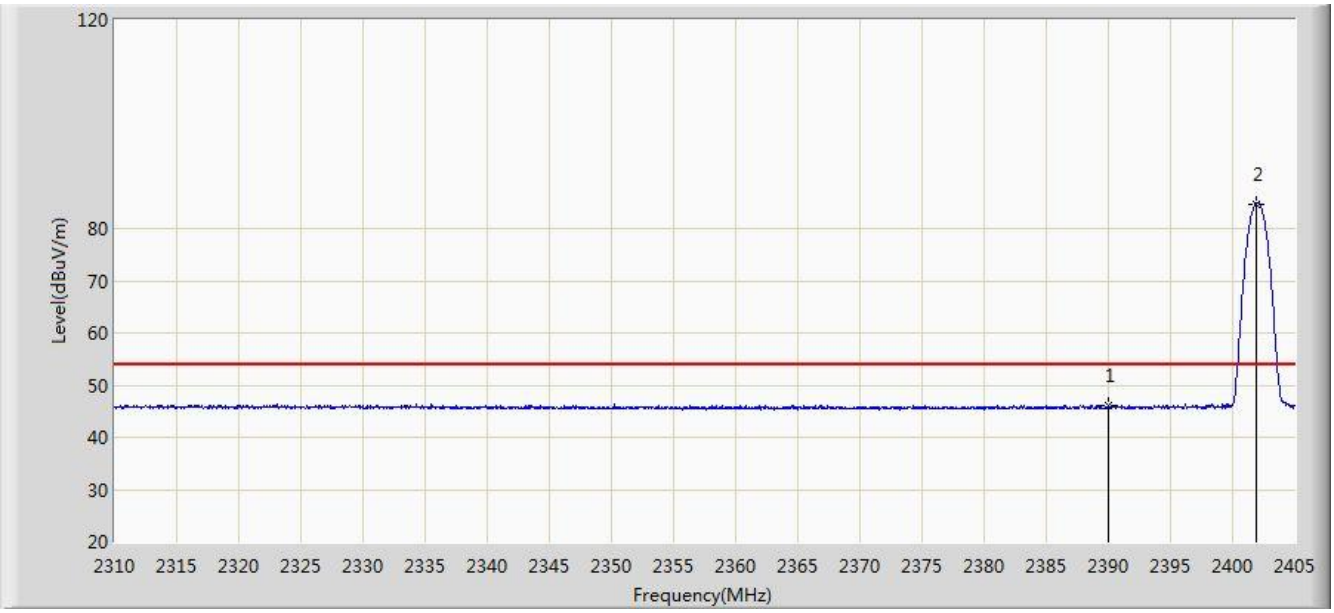


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2371.940	59.529	28.074	-14.471	74.000	31.455	PK
2			2390.000	58.056	26.607	-15.944	74.000	31.449	PK
3		*	2402.055	85.413	53.992	N/A	N/A	31.421	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:12
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2402MHz	

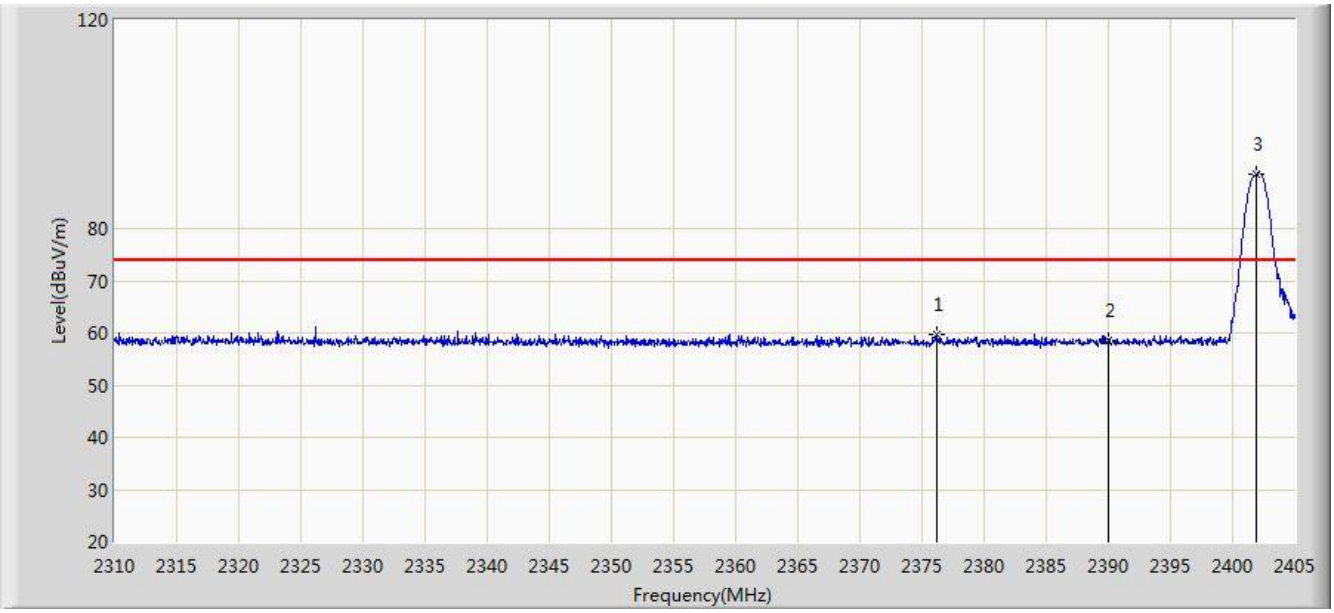


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.951	14.502	-8.049	54.000	31.449	AV
2		*	2401.865	84.772	53.350	N/A	N/A	31.422	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:15
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2402MHz	

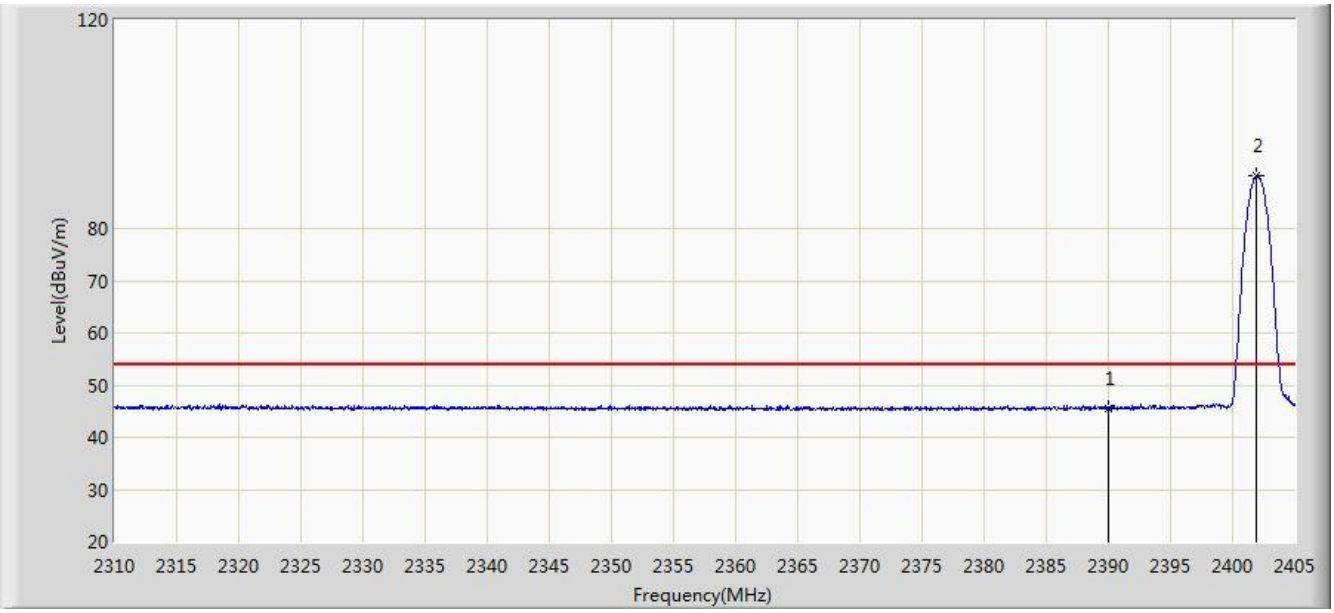


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2376.167	59.742	28.294	-14.258	74.000	31.448	PK
2			2390.000	58.482	27.033	-15.518	74.000	31.449	PK
3		*	2401.960	90.450	59.028	N/A	N/A	31.422	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:17
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2402MHz	

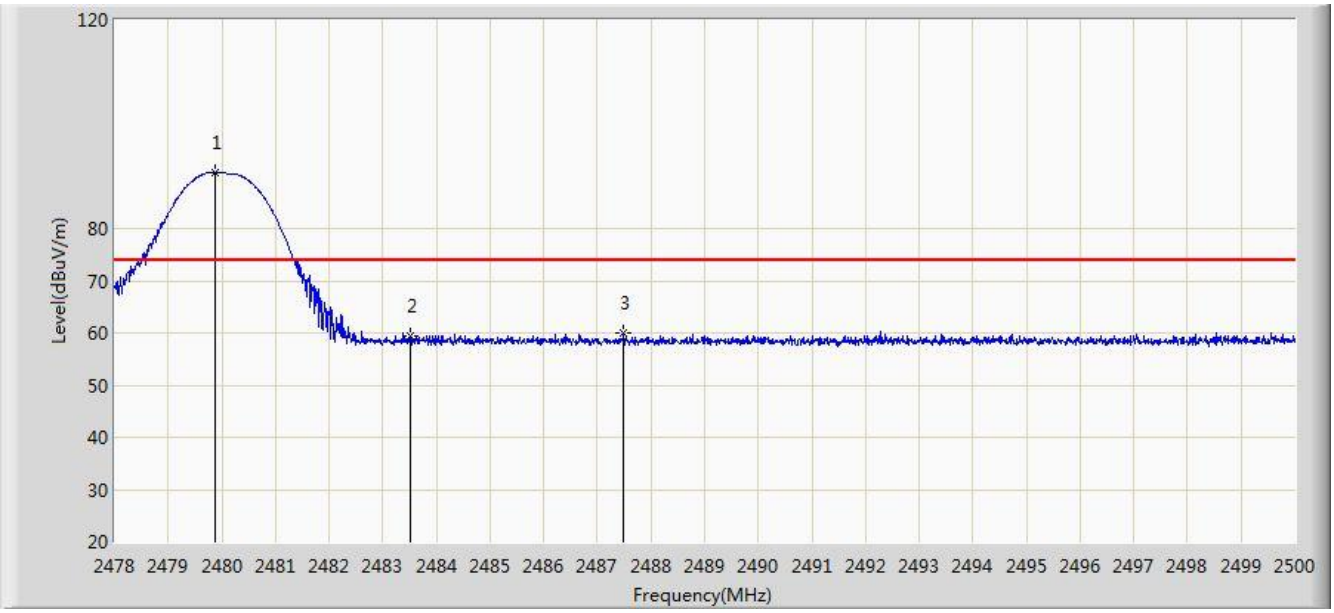


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.437	13.988	-8.563	54.000	31.449	AV
2		*	2401.913	90.035	58.613	N/A	N/A	31.422	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:18
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2480MHz	

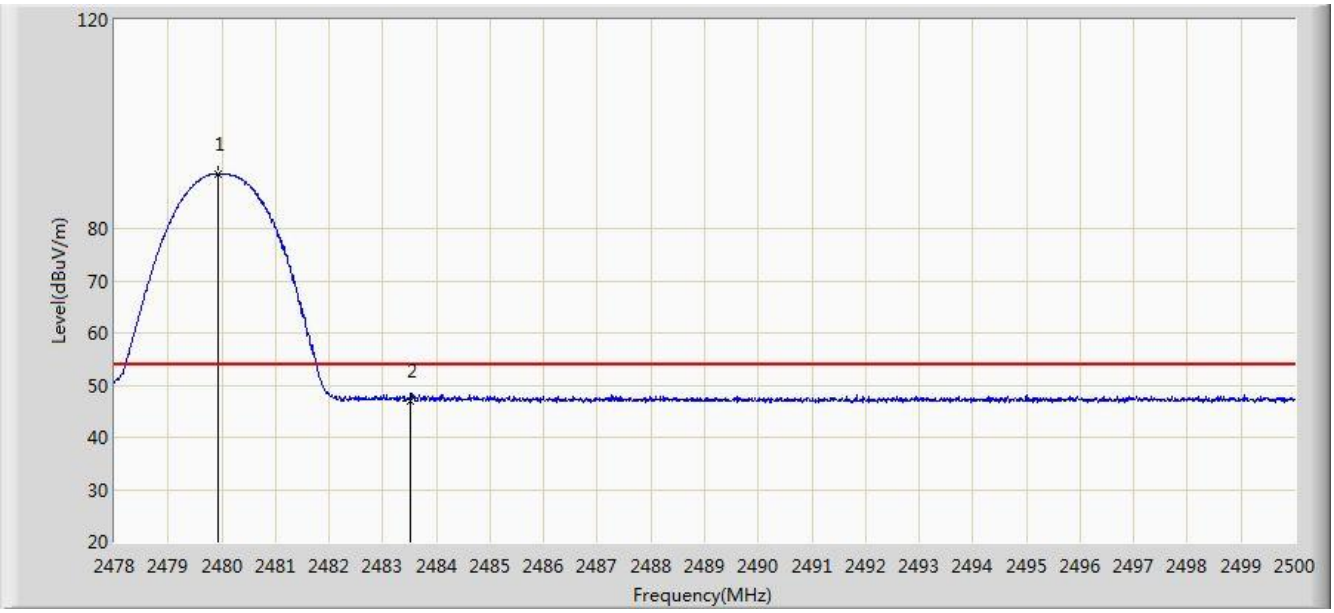


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.870	90.739	59.349	N/A	N/A	31.390	PK
2			2483.500	59.405	28.002	-14.595	74.000	31.403	PK
3			2487.493	60.121	28.705	-13.879	74.000	31.416	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:21
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2480MHz	

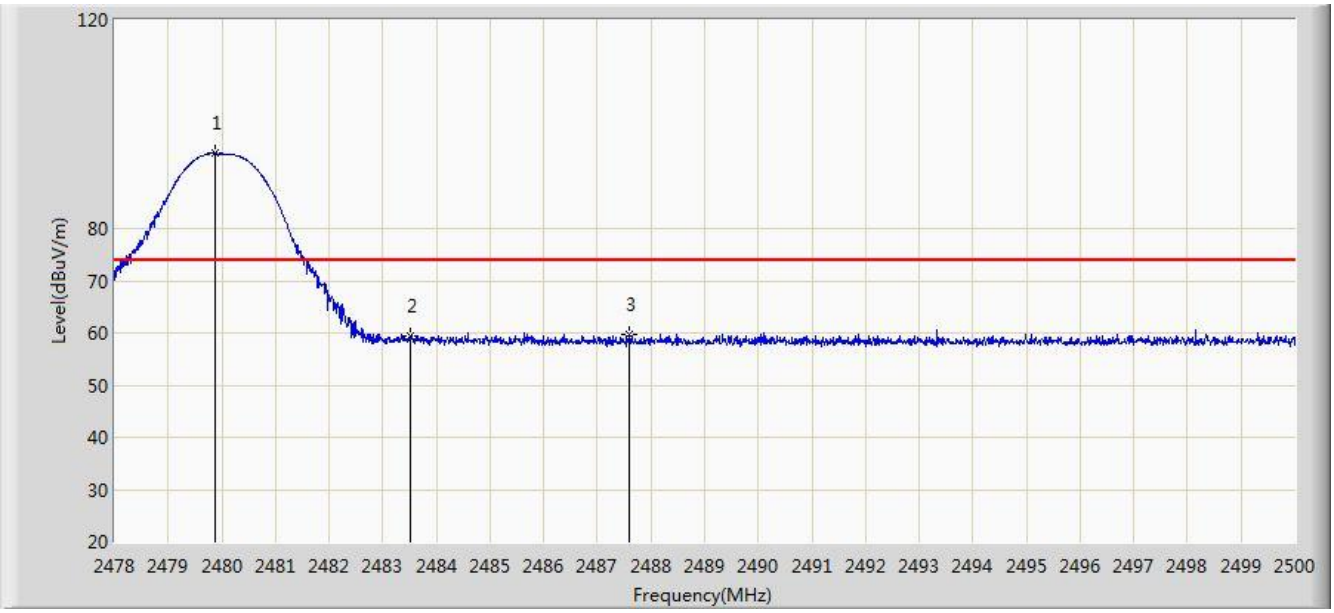


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.936	90.469	59.078	N/A	N/A	31.390	AV
2			2483.500	47.092	15.689	-6.908	54.000	31.403	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:23
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2480MHz	

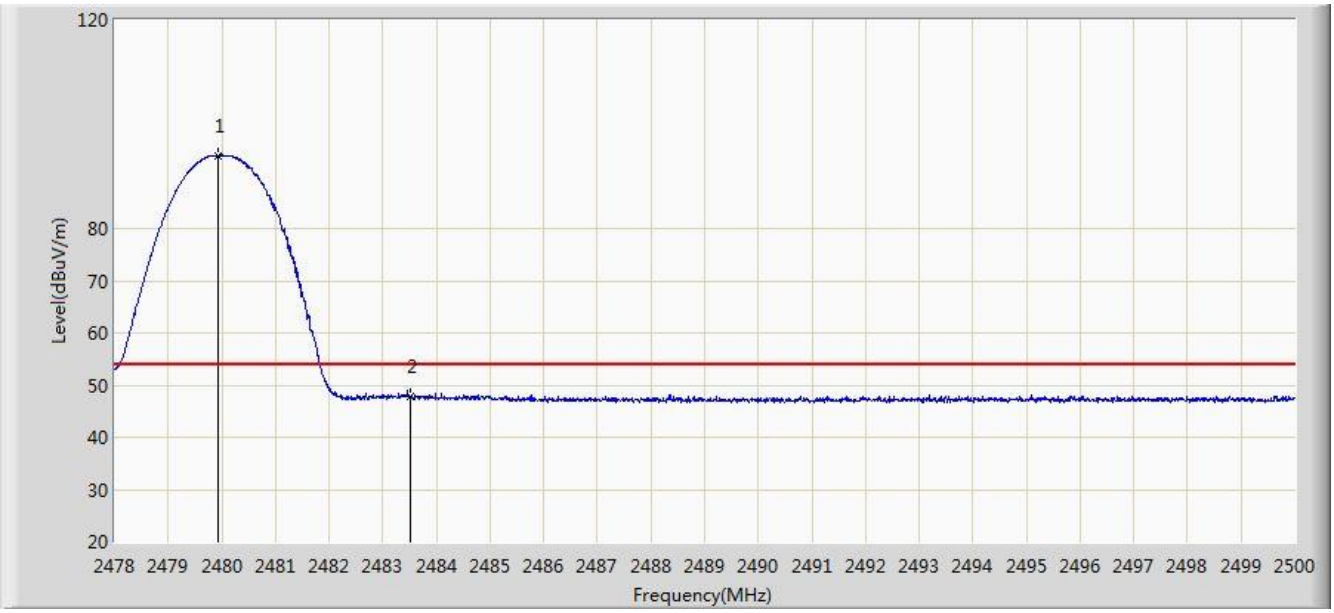


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.870	94.385	62.995	N/A	N/A	31.390	PK
2			2483.500	59.282	27.879	-14.718	74.000	31.403	PK
3			2487.603	59.617	28.200	-14.383	74.000	31.417	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:25
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by DH5 at Channel 2480MHz	

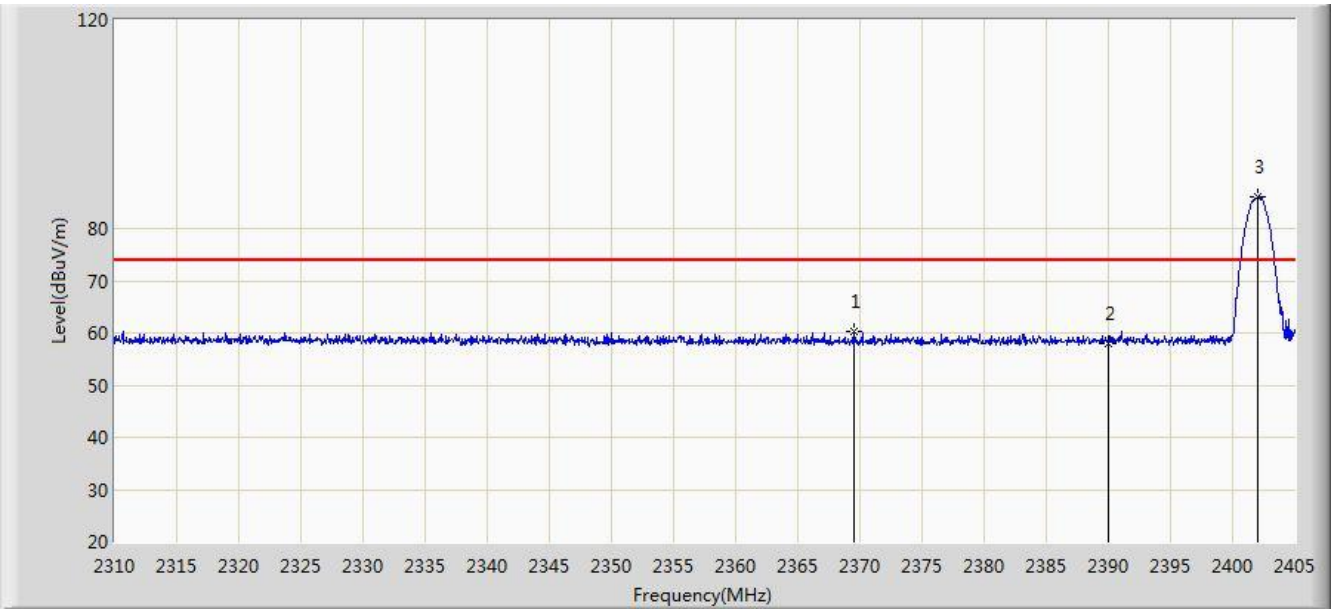


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.936	94.023	62.632	N/A	N/A	31.390	AV
2			2483.500	47.704	16.301	-6.296	54.000	31.403	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:28
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 2DH5 at Channel 2402MHz	

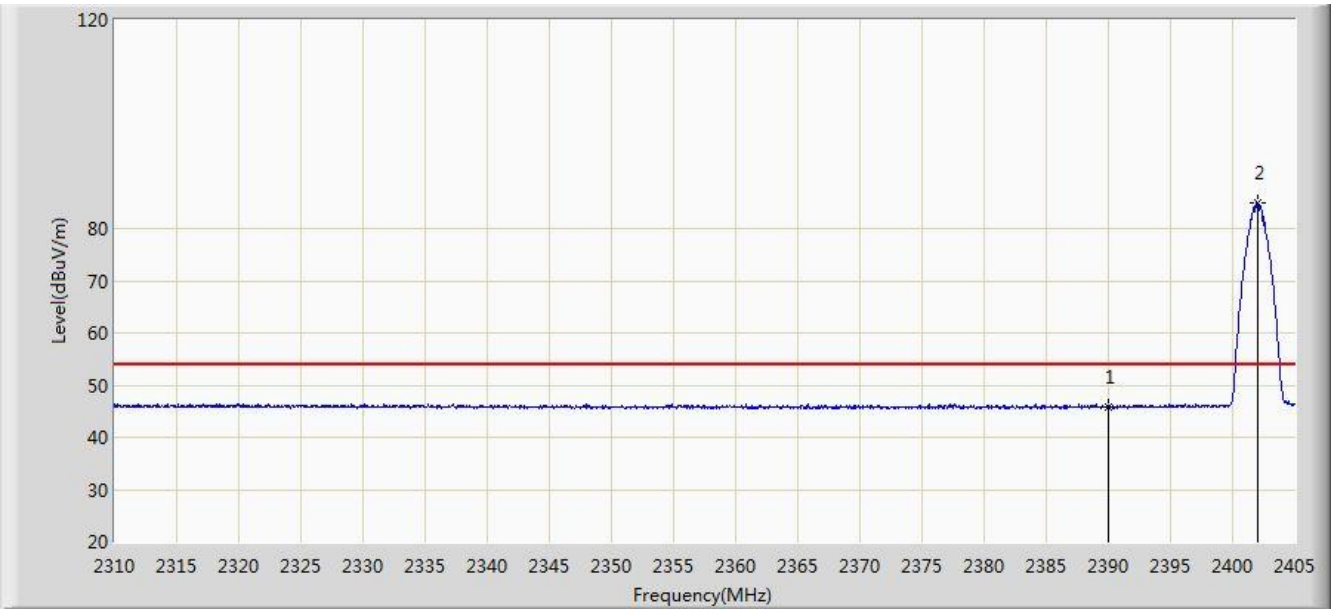


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2369.470	60.270	28.811	-13.730	74.000	31.458	PK
2			2390.000	57.920	26.471	-16.080	74.000	31.449	PK
3		*	2402.008	86.055	54.633	N/A	N/A	31.422	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:31
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 2DH5 at Channel 2402MHz	

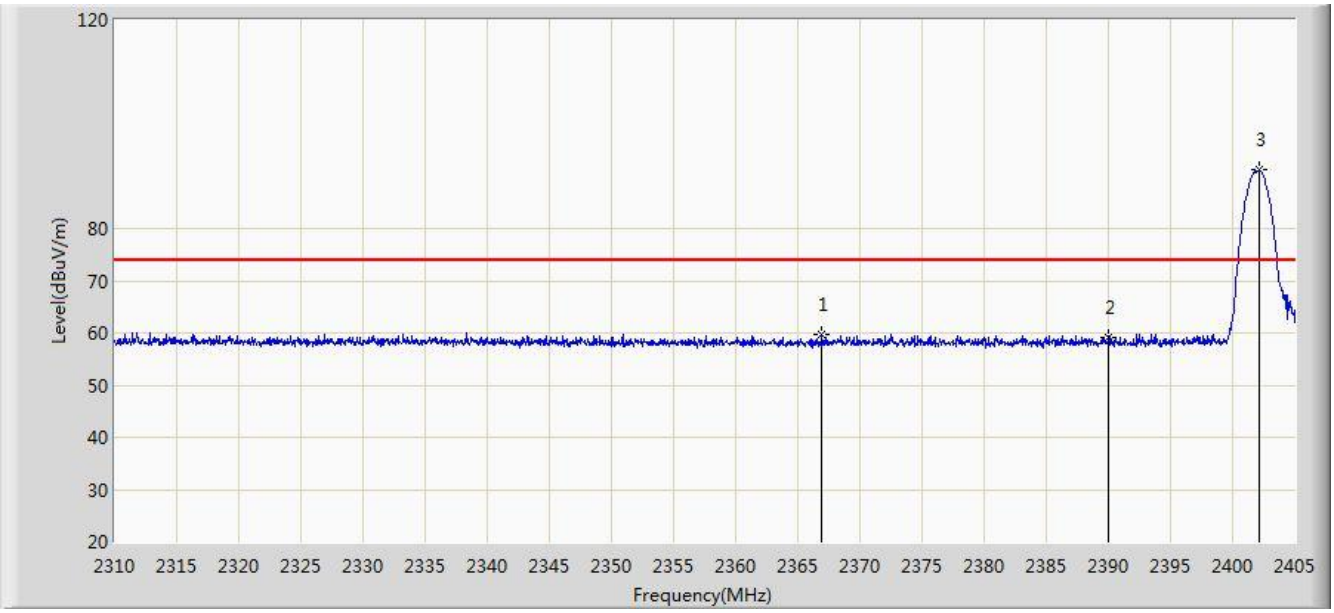


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.798	14.349	-8.202	54.000	31.449	AV
2		*	2402.008	84.965	53.543	N/A	N/A	31.422	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:33
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 2DH5 at Channel 2402MHz	

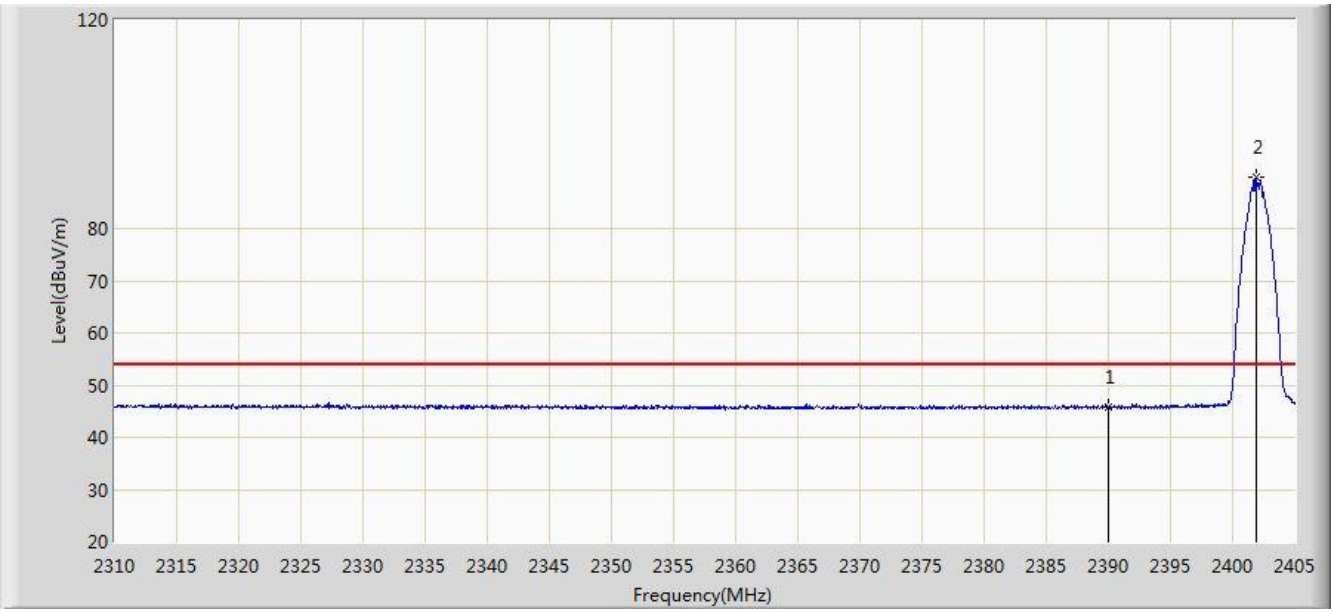


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2366.952	59.791	28.328	-14.209	74.000	31.463	PK
2			2390.000	59.274	27.825	-14.726	74.000	31.449	PK
3		*	2402.103	91.339	59.918	N/A	N/A	31.421	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:35
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 2DH5 at Channel 2402MHz	

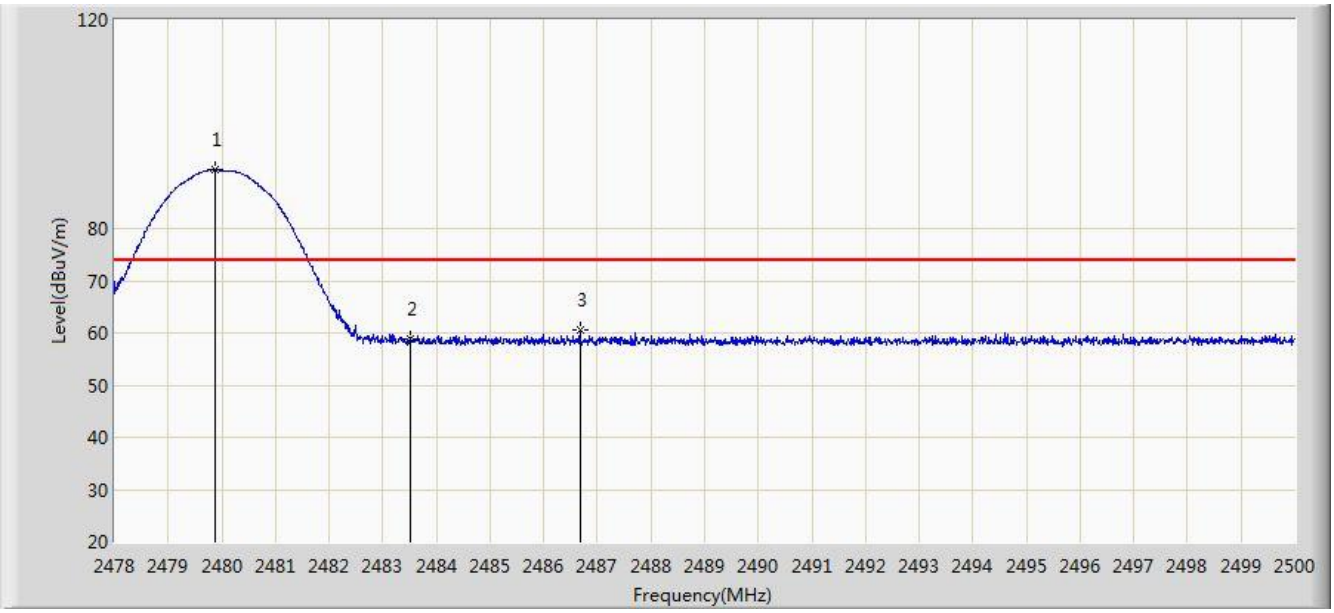


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.708	14.259	-8.292	54.000	31.449	AV
2		*	2401.913	89.825	58.403	N/A	N/A	31.422	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:36
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 2DH5 at Channel 2480MHz	

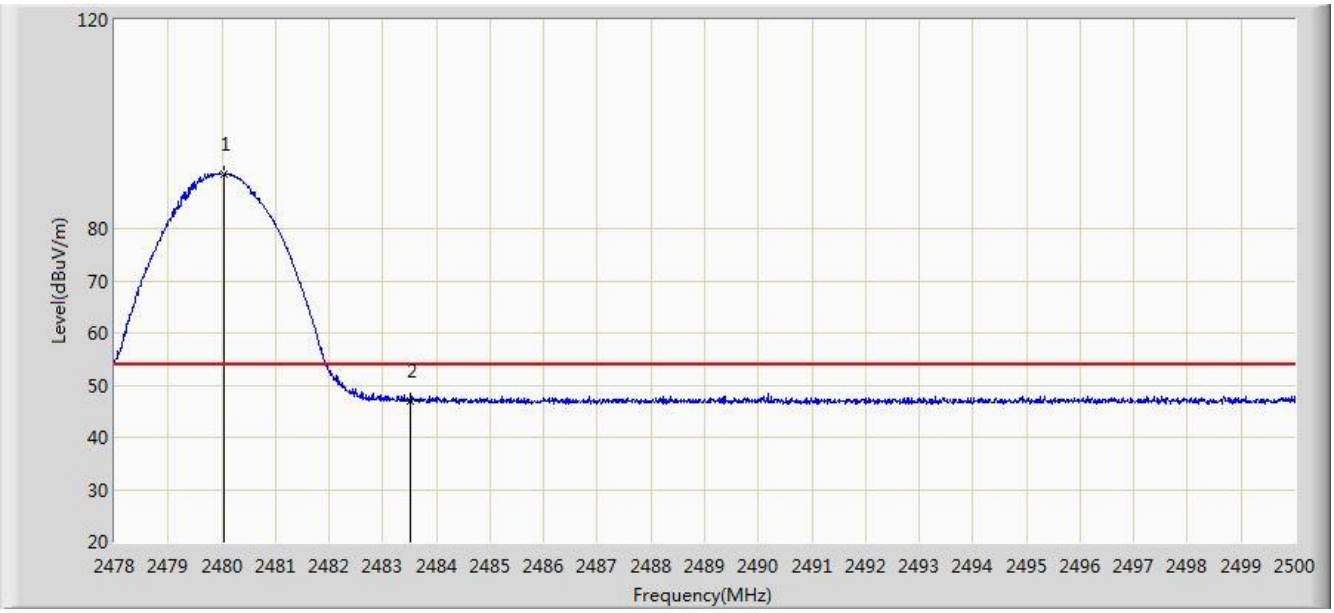


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.881	91.276	59.886	N/A	N/A	31.390	PK
2			2483.500	58.864	27.461	-15.136	74.000	31.403	PK
3			2486.679	60.577	29.163	-13.423	74.000	31.413	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:38
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 2DH5 at Channel 2480MHz	

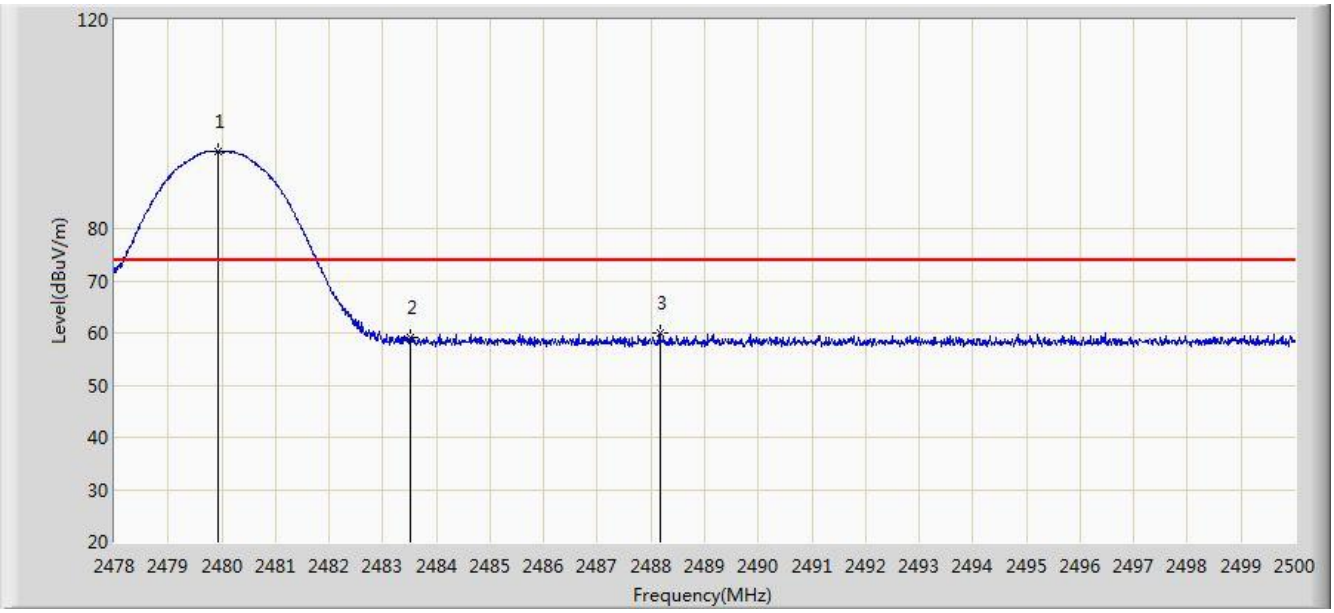


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.046	90.562	59.171	N/A	N/A	31.391	AV
2			2483.500	46.916	15.513	-7.084	54.000	31.403	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:39
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 2DH5 at Channel 2480MHz	

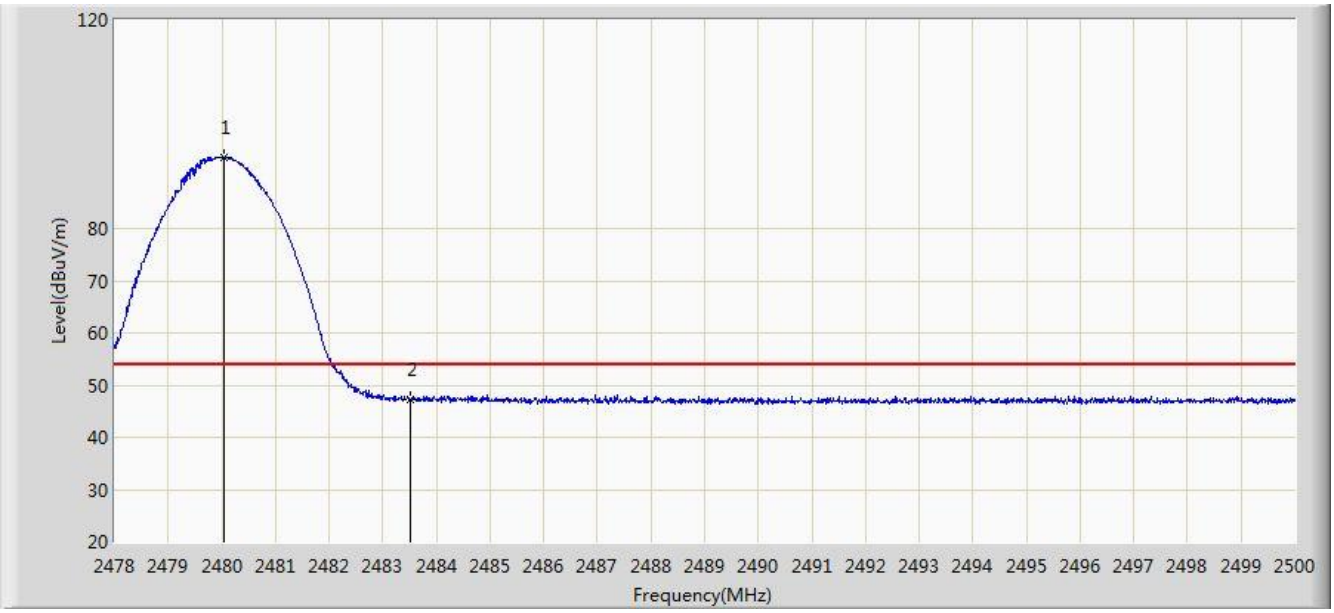


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.936	94.792	63.401	N/A	N/A	31.390	PK
2			2483.500	59.079	27.676	-14.921	74.000	31.403	PK
3			2488.175	59.938	28.519	-14.062	74.000	31.419	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:41
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 2DH5 at Channel 2480MHz	

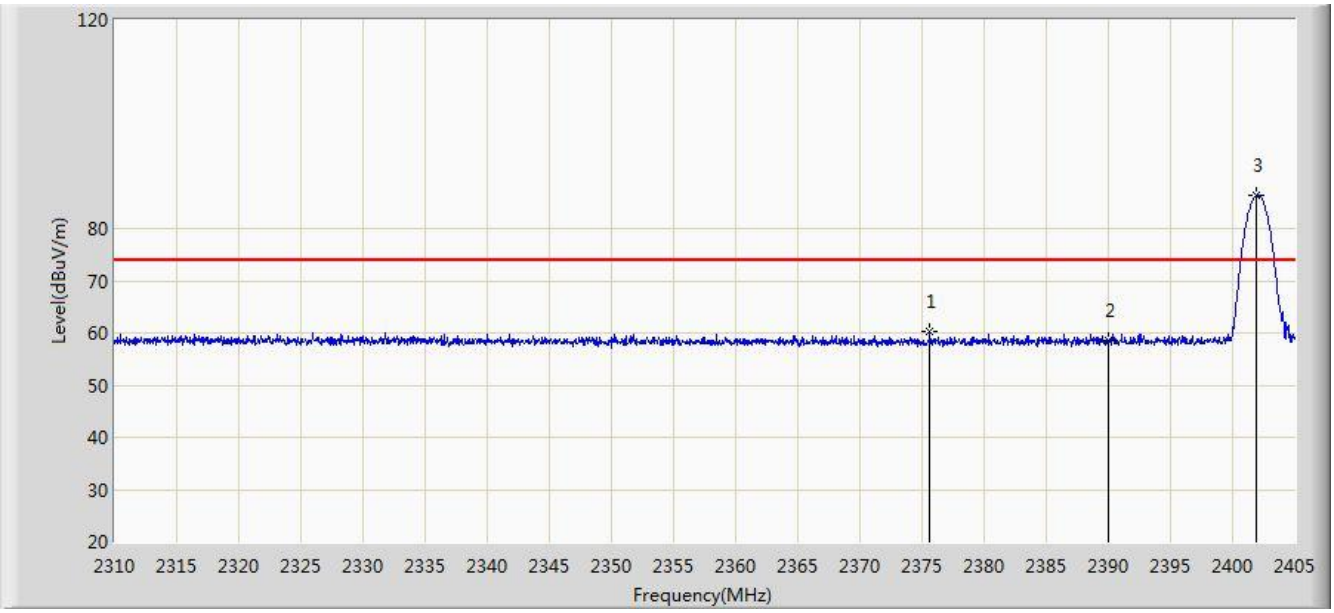


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.046	93.523	62.132	N/A	N/A	31.391	AV
2			2483.500	47.140	15.737	-6.860	54.000	31.403	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:42
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 3DH5 at Channel 2402MHz	

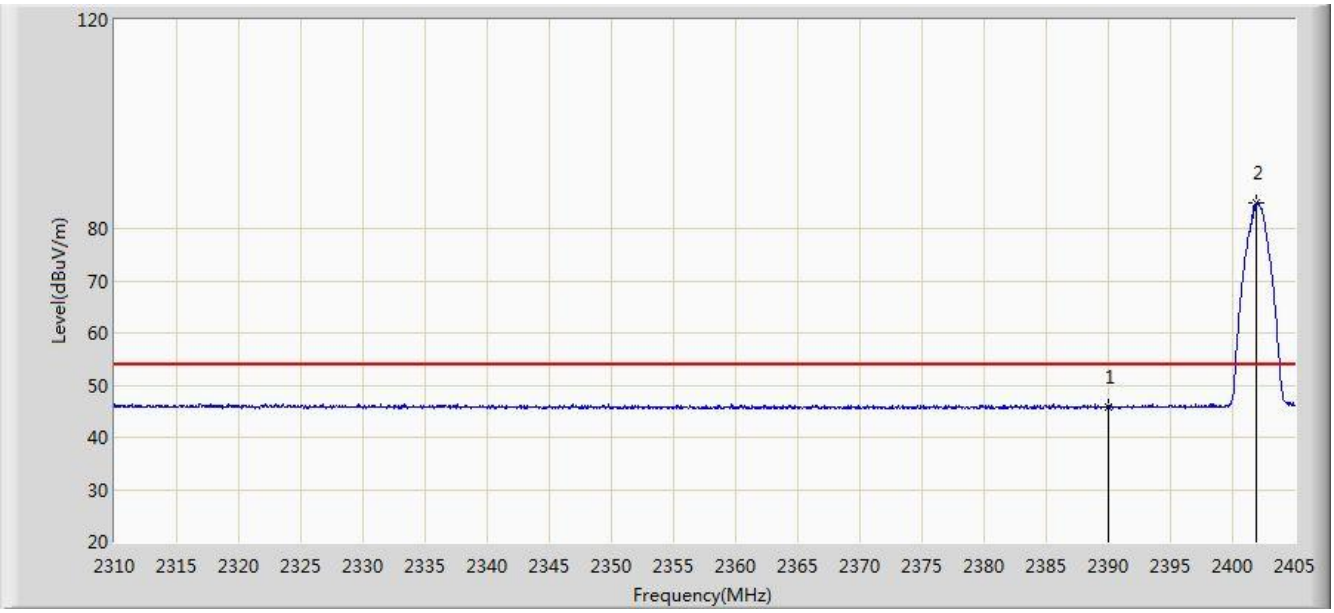


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2375.645	60.277	28.828	-13.723	74.000	31.449	PK
2			2390.000	58.423	26.974	-15.577	74.000	31.449	PK
3		*	2401.913	86.505	55.083	N/A	N/A	31.422	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:44
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 3DH5 at Channel 2402MHz	

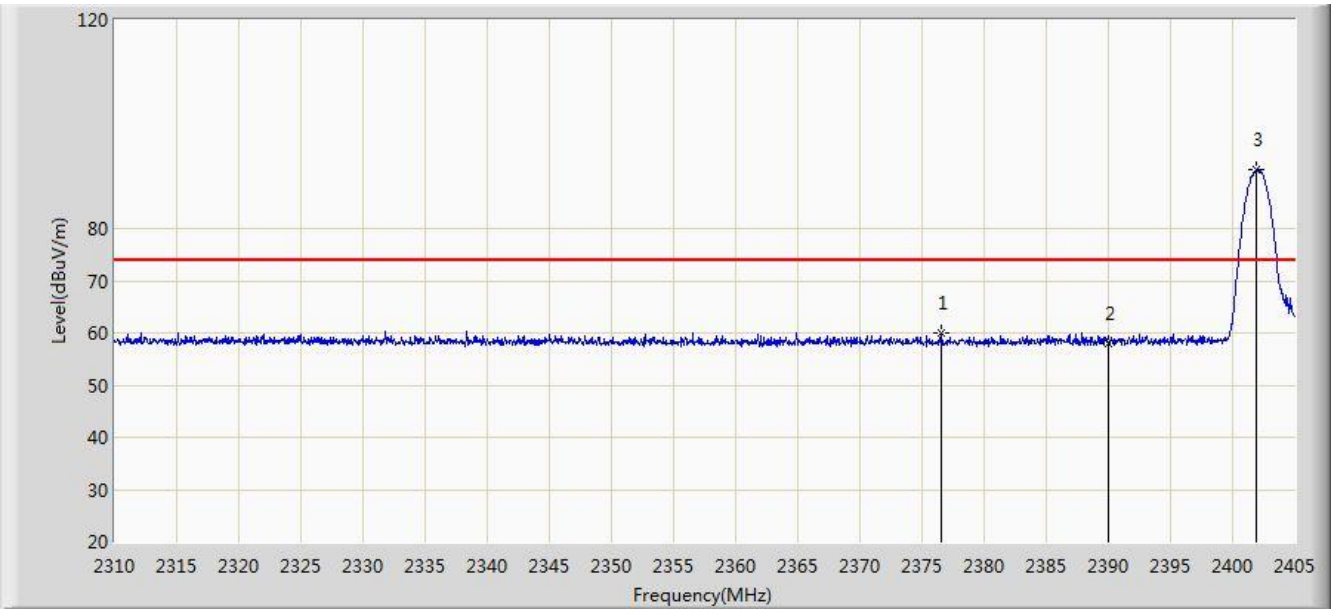


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.772	14.323	-8.228	54.000	31.449	AV
2		*	2401.960	84.960	53.538	N/A	N/A	31.422	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:45
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 3DH5 at Channel 2402MHz	

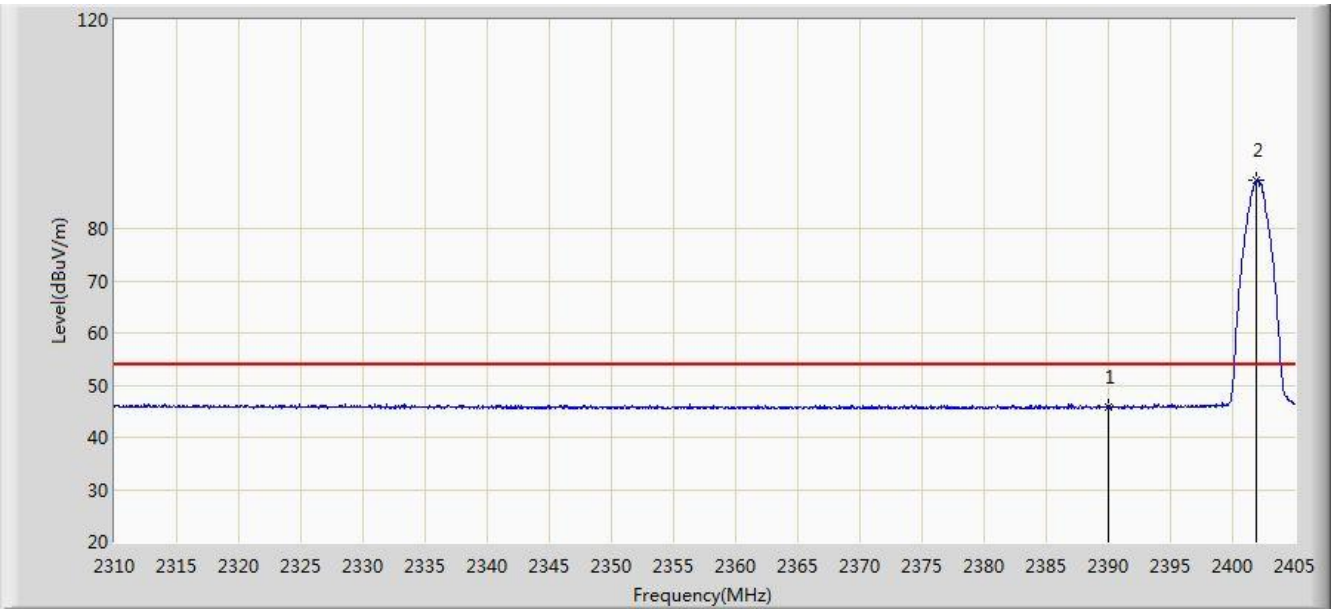


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2376.500	60.144	28.697	-13.856	74.000	31.447	PK
2			2390.000	58.044	26.595	-15.956	74.000	31.449	PK
3		*	2401.913	91.311	59.889	N/A	N/A	31.422	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:48
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 3DH5 at Channel 2402MHz	

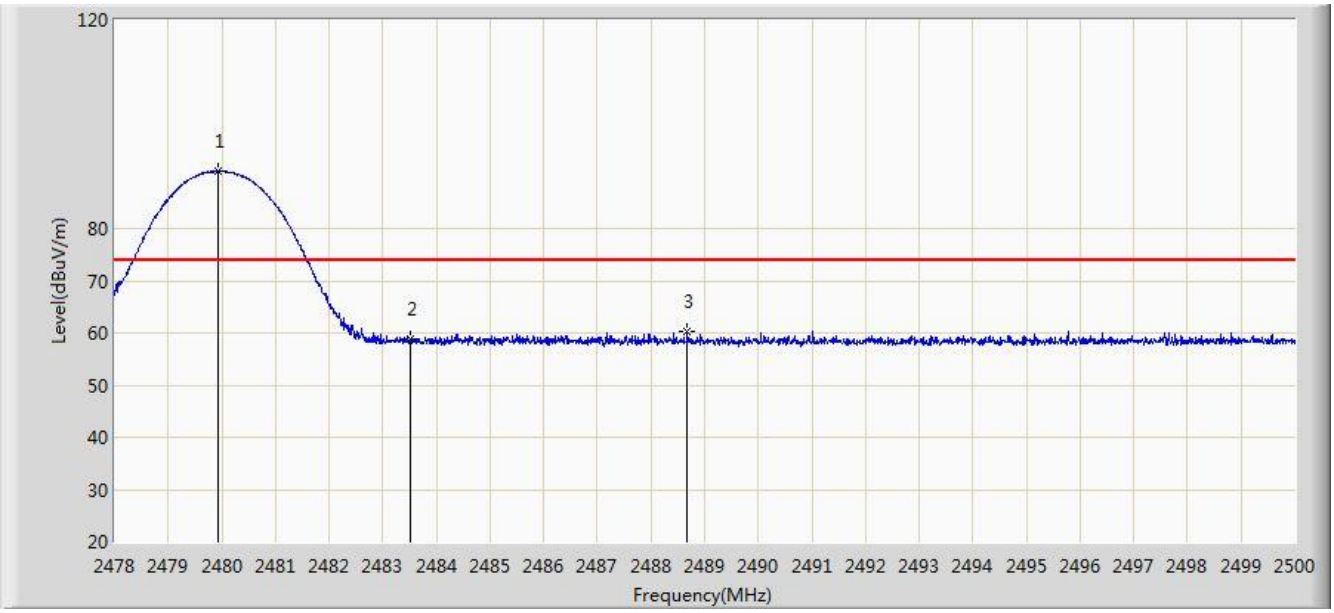


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.798	14.349	-8.202	54.000	31.449	AV
2		*	2401.913	89.192	57.770	N/A	N/A	31.422	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:49
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 3DH5 at Channel 2480MHz	

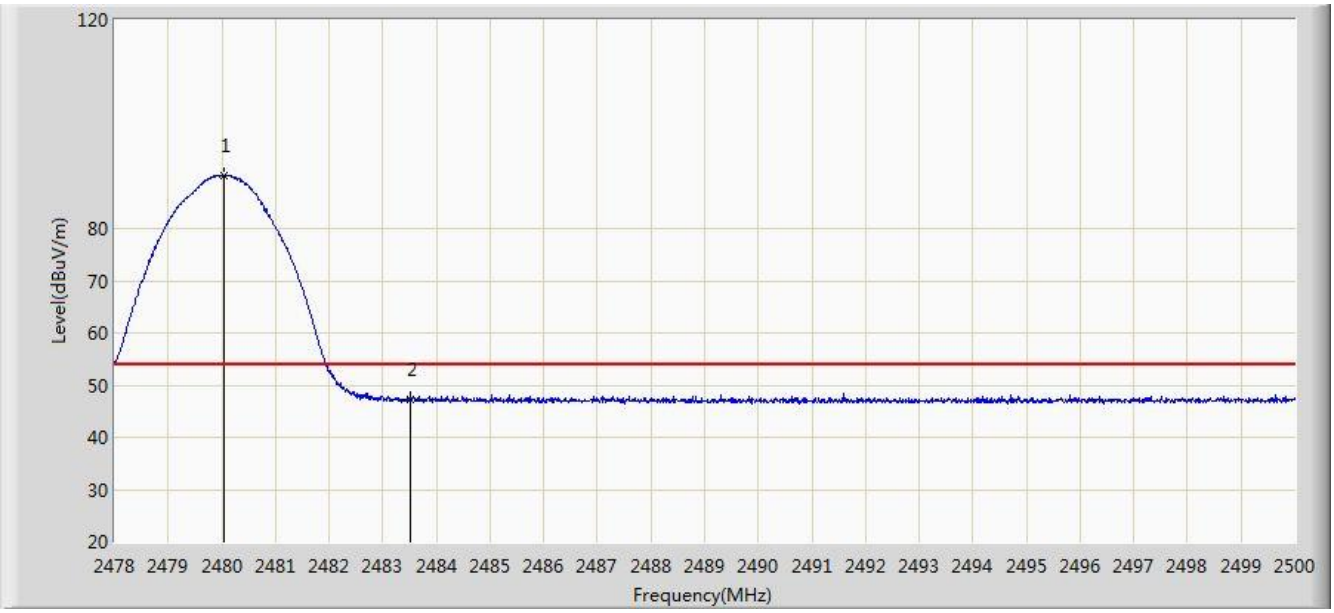


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.925	90.976	59.585	N/A	N/A	31.390	PK
2			2483.500	58.859	27.456	-15.141	74.000	31.403	PK
3			2488.670	60.186	28.766	-13.814	74.000	31.420	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:52
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 3DH5 at Channel 2480MHz	

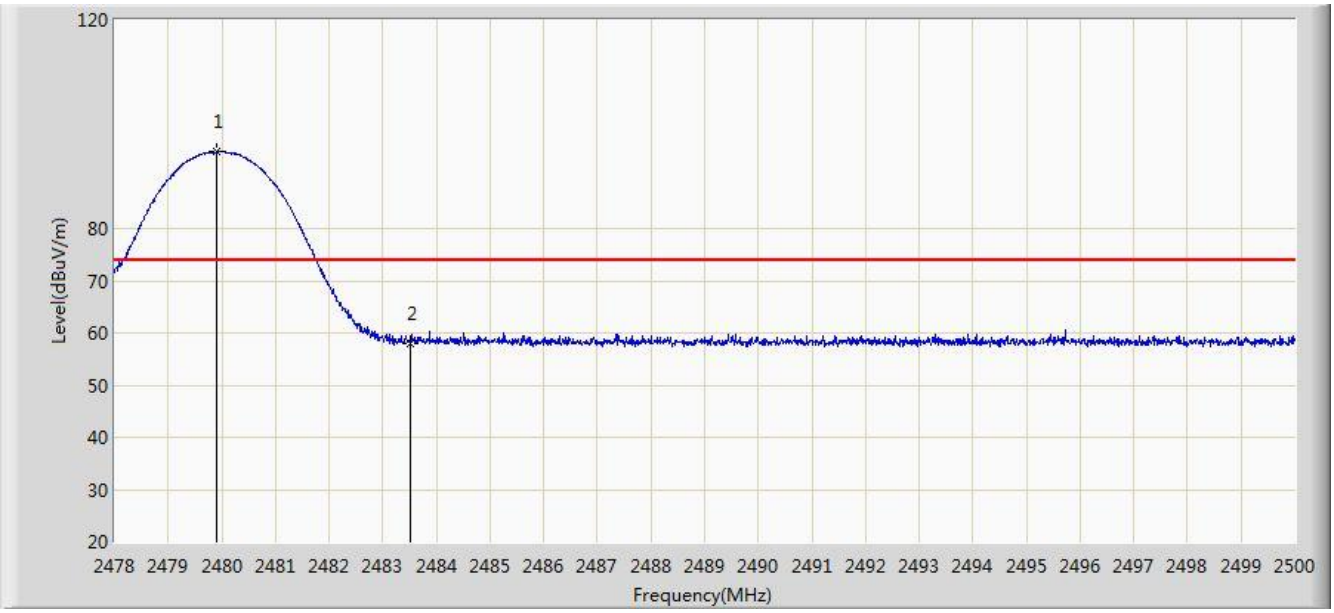


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.046	90.173	58.782	N/A	N/A	31.391	AV
2			2483.500	47.238	15.835	-6.762	54.000	31.403	AV

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

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

Site: AC2	Time: 2019/09/27 - 22:53
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 3DH5 at Channel 2480MHz	

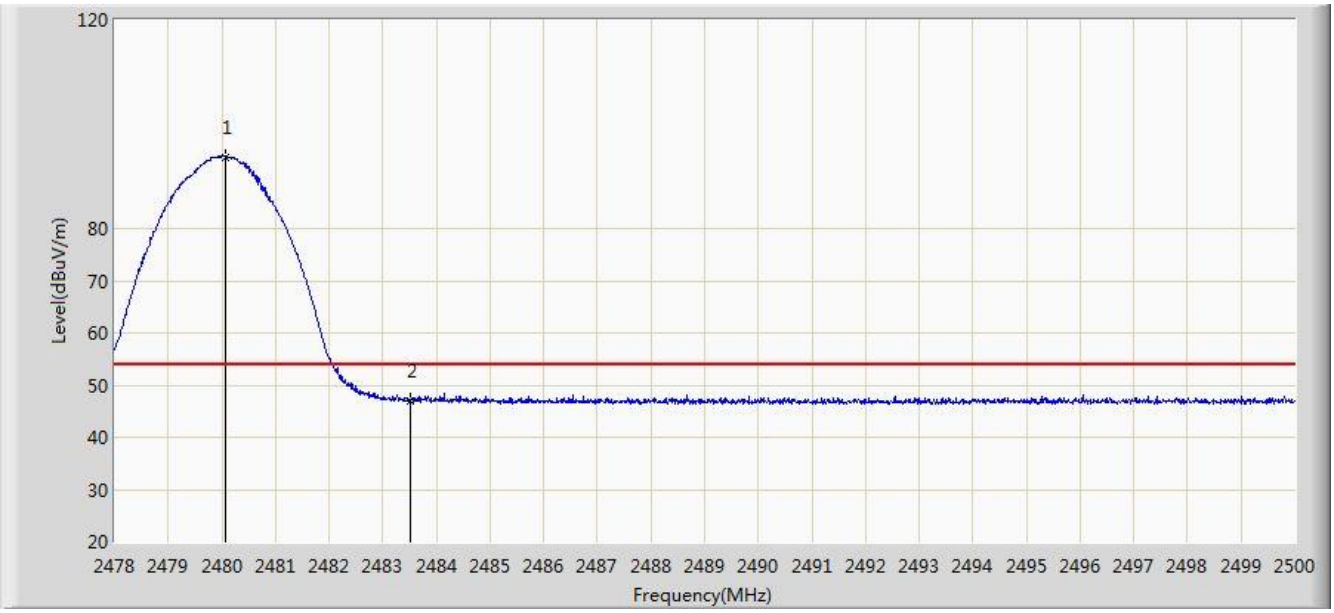


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.914	94.696	63.305	N/A	N/A	31.390	PK
2			2483.500	57.874	26.471	-16.126	74.000	31.403	PK

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

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

Site: AC2	Time: 2019/09/27 - 22:55
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dillon Diao
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Monster Bluetooth Headphones	Power: By Battery
Test Mode: Transmit by 3DH5 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	93.759	62.368	N/A	N/A	31.391	AV
2			2483.500	46.843	15.440	-7.157	54.000	31.403	AV

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

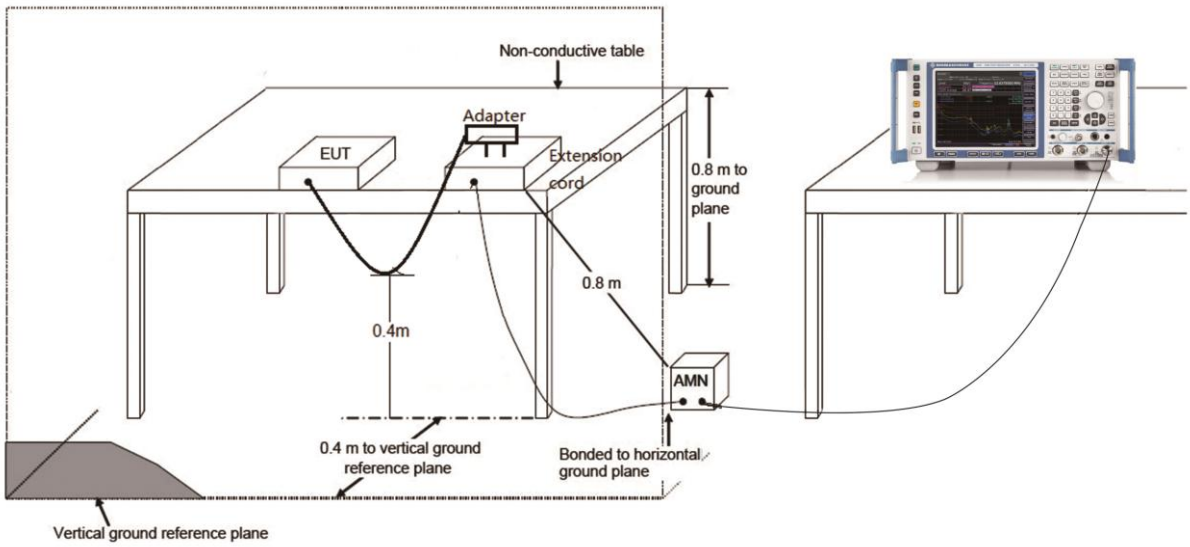
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

7.11. AC Conducted Emissions Measurement

7.11.1.Test Limit

FCC Part 15.207 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

The EUT can only be powered by the internal battery at transmit mode, so this requirement does not apply.

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.

The End

Appendix A - Test Setup Photograph

Refer to “1907RSU049-UT” file.

Appendix B - EUT Photograph

Refer to “1907RSU049-UE” file.