

7.9. Radiated Spurious Emission Measurement

7.9.1. Test Limit

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

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

7.9.2. Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

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

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

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

7.9.3. Test Setting

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)

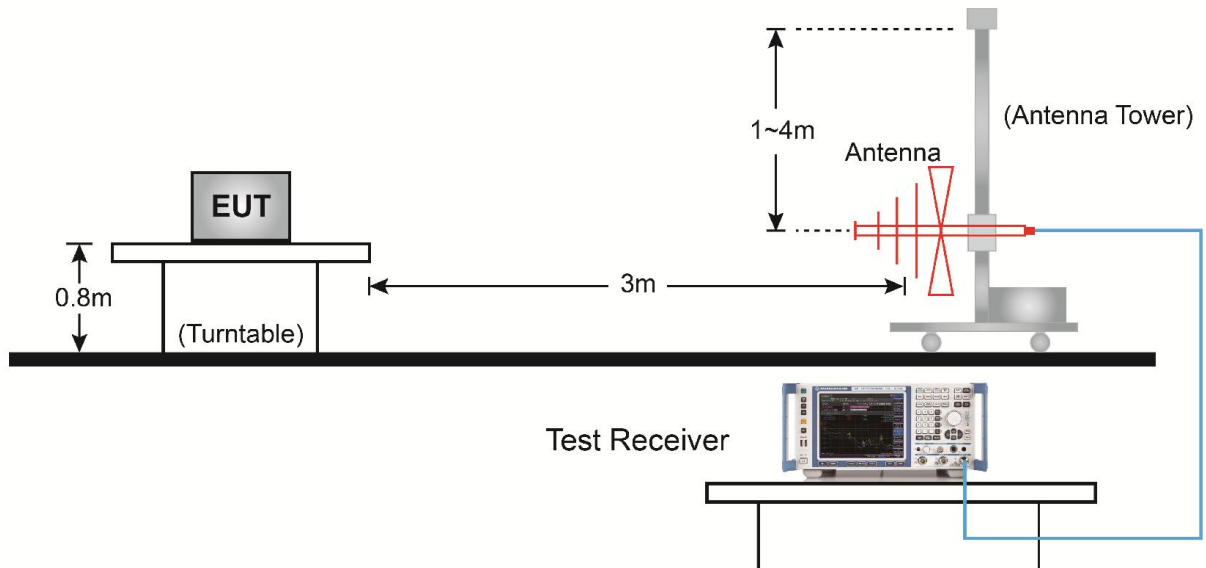
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.

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

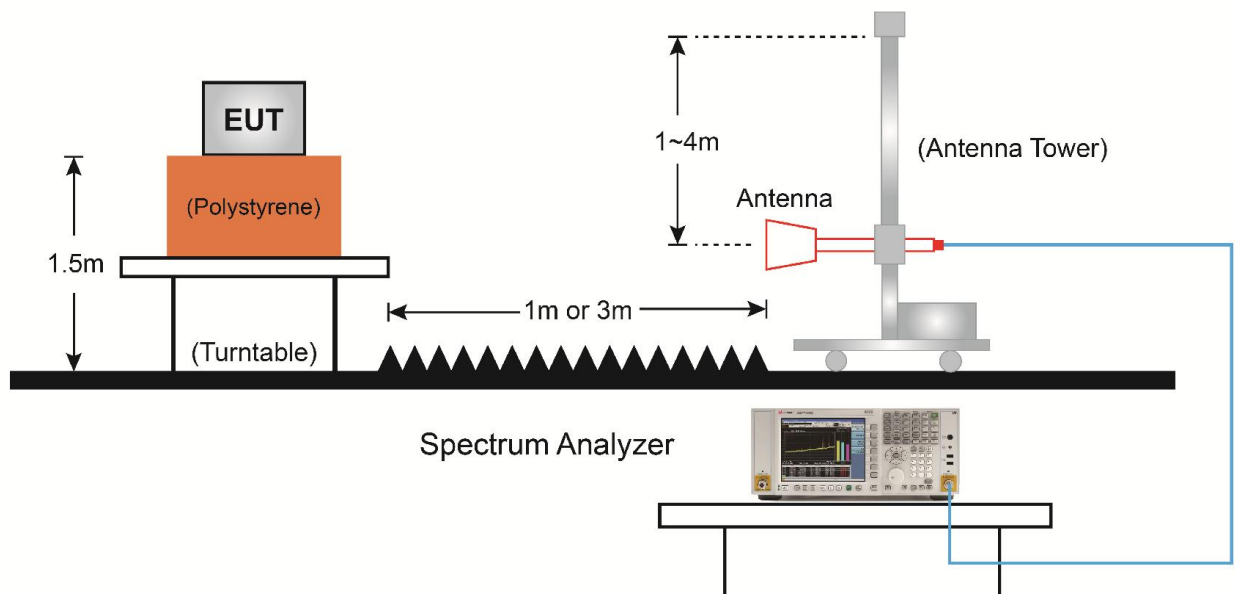
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

7.9.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



7.9.5. Test Result

Product	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4264.0	38.2	1.7	39.9	74.0	-34.1	Peak	Horizontal
*	4816.5	39.5	3.3	42.8	74.0	-31.2	Peak	Horizontal
*	6002.0	39.2	6.1	45.3	74.0	-28.7	Peak	Horizontal
	7154.0	36.3	11.7	48.0	74.0	-26.0	Peak	Horizontal
	4357.5	39.2	2.1	41.3	74.0	-32.7	Peak	Vertical
	4782.5	39.1	3.3	42.4	74.0	-31.6	Peak	Vertical
*	6032.0	37.7	6.2	43.9	74.0	-30.1	Peak	Vertical
*	7936.0	35.6	12.9	48.5	74.0	-25.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (87.3dBμV/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	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4357.5	39.2	2.1	41.3	74.0	-32.7	Peak	Horizontal
*	4782.5	39.1	3.3	42.4	74.0	-31.6	Peak	Horizontal
*	6032.0	37.7	6.2	43.9	74.0	-30.1	Peak	Horizontal
	7936.0	35.6	12.9	48.5	74.0	-25.5	Peak	Horizontal
	3915.5	40.9	0.3	41.2	74.0	-32.8	Peak	Vertical
	4799.5	38.9	3.3	42.2	74.0	-31.8	Peak	Vertical
*	6287.0	37.9	7.5	45.4	74.0	-28.6	Peak	Vertical
*	7936.0	35.6	12.9	48.5	74.0	-25.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (88.2dBμV/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	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4034.5	39.9	0.7	40.6	74.0	-33.4	Peak	Horizontal
*	4986.5	37.9	3.7	41.6	74.0	-32.4	Peak	Horizontal
*	7196.5	35.8	11.9	47.7	74.0	-26.3	Peak	Horizontal
	7944.5	35.9	12.9	48.8	74.0	-25.2	Peak	Horizontal
	4111.0	39.9	1.0	40.9	74.0	-33.1	Peak	Vertical
	4910.0	38.3	3.6	41.9	74.0	-32.1	Peak	Vertical
*	6652.5	37.4	9.4	46.8	74.0	-27.2	Peak	Vertical
*	7944.5	35.9	12.9	48.8	74.0	-25.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (88.6dBμV/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	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4119.5	39.2	1.1	40.3	74.0	-33.7	Peak	Horizontal
*	4791.0	38.5	3.3	41.8	74.0	-32.2	Peak	Horizontal
*	6559.0	37.2	8.8	46.0	74.0	-28.0	Peak	Horizontal
	7927.5	35.3	12.9	48.2	74.0	-25.8	Peak	Horizontal
	4298.0	38.9	1.8	40.7	74.0	-33.3	Peak	Vertical
	4799.5	38.2	3.3	41.5	74.0	-32.5	Peak	Vertical
*	7179.5	36.0	11.8	47.8	74.0	-26.2	Peak	Vertical
*	7927.5	35.3	12.9	48.2	74.0	-25.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (85.0dBμV/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	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4255.5	38.8	1.6	40.4	74.0	-33.6	Peak	Horizontal
*	4808.0	38.4	3.3	41.7	74.0	-32.3	Peak	Horizontal
*	7145.5	36.5	11.7	48.2	74.0	-25.8	Peak	Horizontal
	7970.0	36.1	12.9	49.0	74.0	-25.0	Peak	Horizontal
	4332.0	39.0	2.0	41.0	74.0	-33.0	Peak	Vertical
	4816.5	39.2	3.3	42.5	74.0	-31.5	Peak	Vertical
*	6533.5	36.8	8.7	45.5	74.0	-28.5	Peak	Vertical
*	7970.0	36.1	12.9	49.0	74.0	-25.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (86.8dBμV/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	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4034.5	39.1	0.7	39.8	74.0	-34.2	Peak	Horizontal
*	4927.0	39.0	3.6	42.6	74.0	-31.4	Peak	Horizontal
*	6567.5	37.5	8.9	46.4	74.0	-27.6	Peak	Horizontal
	8811.5	35.0	13.9	48.9	74.0	-25.1	Peak	Horizontal
	4816.5	39.1	3.3	42.4	74.0	-31.6	Peak	Vertical
	5063.0	39.9	3.8	43.7	74.0	-30.3	Peak	Vertical
*	6644.0	36.8	9.3	46.1	74.0	-27.9	Peak	Vertical
*	8811.5	35.0	13.9	48.9	74.0	-25.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (88.6dBμV/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	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4357.5	38.8	2.1	40.9	74.0	-33.1	Peak	Horizontal
*	4910.0	38.7	3.6	42.3	74.0	-31.7	Peak	Horizontal
*	6533.5	37.5	8.7	46.2	74.0	-27.8	Peak	Horizontal
	7213.5	36.4	11.9	48.3	74.0	-25.7	Peak	Horizontal
	4281.0	38.4	1.7	40.1	74.0	-33.9	Peak	Vertical
	4995.0	38.1	3.7	41.8	74.0	-32.2	Peak	Vertical
*	6567.5	37.3	8.9	46.2	74.0	-27.8	Peak	Vertical
*	7120.0	35.6	11.6	47.2	74.0	-26.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (85.7dBμV/m) or 15.209 which is higher.

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

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

Product	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4085.5	39.2	0.9	40.1	74.0	-33.9	Peak	Horizontal
*	4986.5	38.7	3.7	42.4	74.0	-31.6	Peak	Horizontal
*	6550.5	36.8	8.8	45.6	74.0	-28.4	Peak	Horizontal
	7953.0	36.0	12.9	48.9	74.0	-25.1	Peak	Horizontal
	4264.0	38.8	1.7	40.5	74.0	-33.5	Peak	Vertical
	4961.0	39.5	3.7	43.2	74.0	-30.8	Peak	Vertical
*	7145.5	36.1	11.7	47.8	74.0	-26.2	Peak	Vertical
*	7953.0	36.0	12.9	48.9	74.0	-25.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (85.1dBμV/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	Streaming Media Player	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2019/05/29
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
	4179.0	39.1	1.3	40.4	74.0	-33.6	Peak	Horizontal
*	4986.5	36.8	3.7	40.5	74.0	-33.5	Peak	Horizontal
*	6618.5	36.6	9.2	45.8	74.0	-28.2	Peak	Horizontal
	8582.0	36.1	13.4	49.5	74.0	-24.5	Peak	Horizontal
	4332.0	39.3	2.0	41.3	74.0	-32.7	Peak	Vertical
	4859.0	38.3	3.4	41.7	74.0	-32.3	Peak	Vertical
*	6550.5	38.3	8.8	47.1	74.0	-26.9	Peak	Vertical
*	7162.5	36.1	11.8	47.9	74.0	-26.1	Peak	Vertical

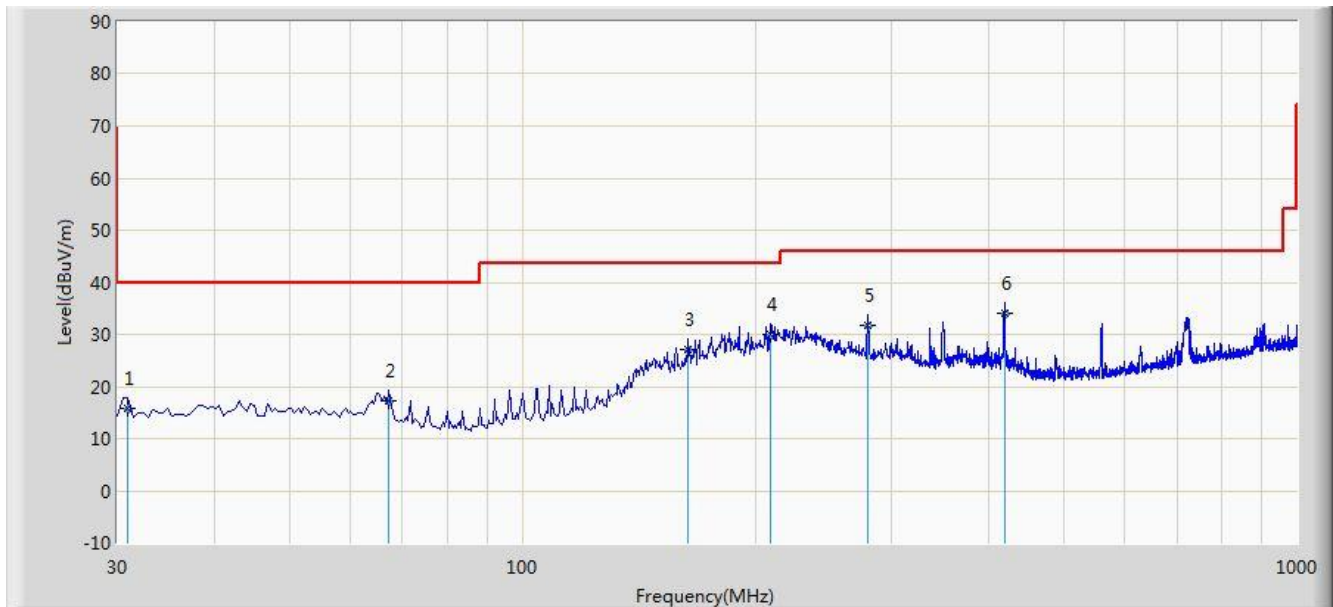
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (88.1dBμV/m) or 15.209 which is higher.

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

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

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/06/06 - 18:52
Limit: FCC_Part15.209_RSE(3m)	Engineer: Kevin Ker
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Test Mode: There is the worst case within frequency range 30MHz~1GHz.	



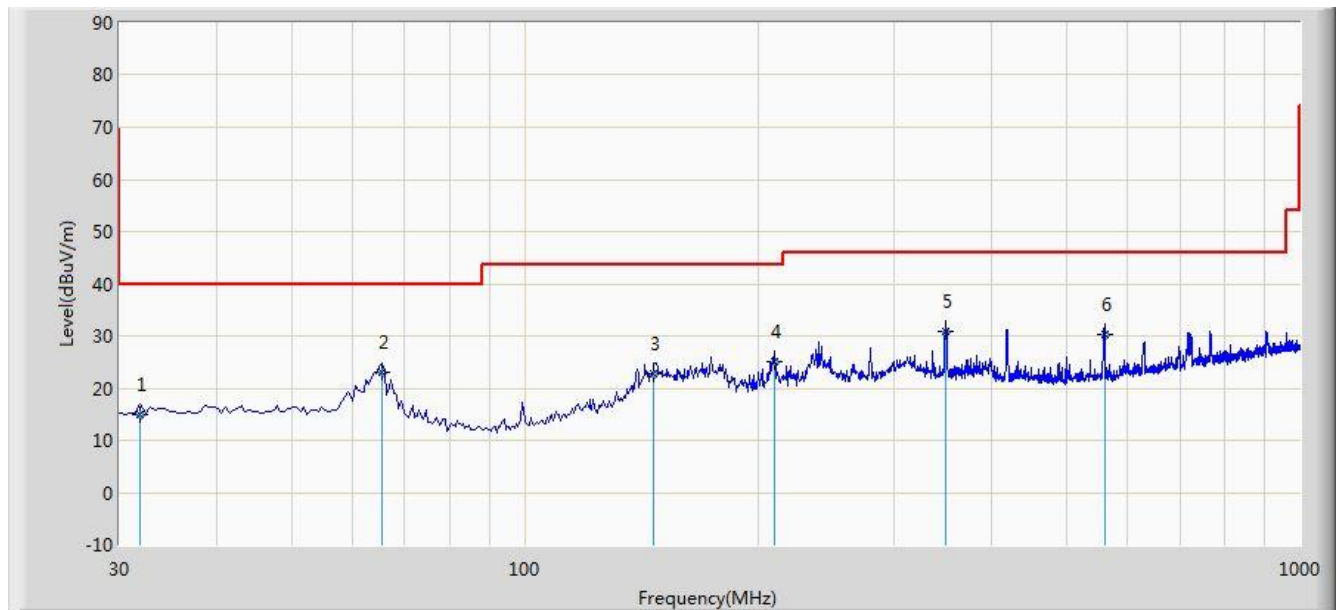
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			30.970	15.875	2.066	-24.125	40.000	13.808	QP
2			67.345	17.184	5.030	-22.816	40.000	12.155	QP
3			163.860	27.240	12.181	-16.260	43.500	15.059	QP
4			209.450	29.973	18.454	-13.527	43.500	11.519	QP
5			278.805	31.693	17.685	-14.307	46.000	14.008	QP
6		*	419.940	34.140	16.864	-11.860	46.000	17.276	QP

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

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

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

Site: AC1	Time: 2019/06/06 - 18:56
Limit: FCC_Part15.209_RSE(3m)	Engineer: Kevin Ker
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Test Mode: There is the worst case within frequency range 30MHz~1GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			31.940	14.885	1.013	-25.115	40.000	13.872	QP
2			65.405	23.060	10.541	-16.940	40.000	12.519	QP
3			146.685	22.626	7.463	-20.874	43.500	15.163	QP
4			210.420	25.011	13.461	-18.489	43.500	11.550	QP
5		*	349.615	30.971	15.282	-15.029	46.000	15.689	QP
6			559.620	30.232	10.181	-15.768	46.000	20.051	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + 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 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

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

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

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

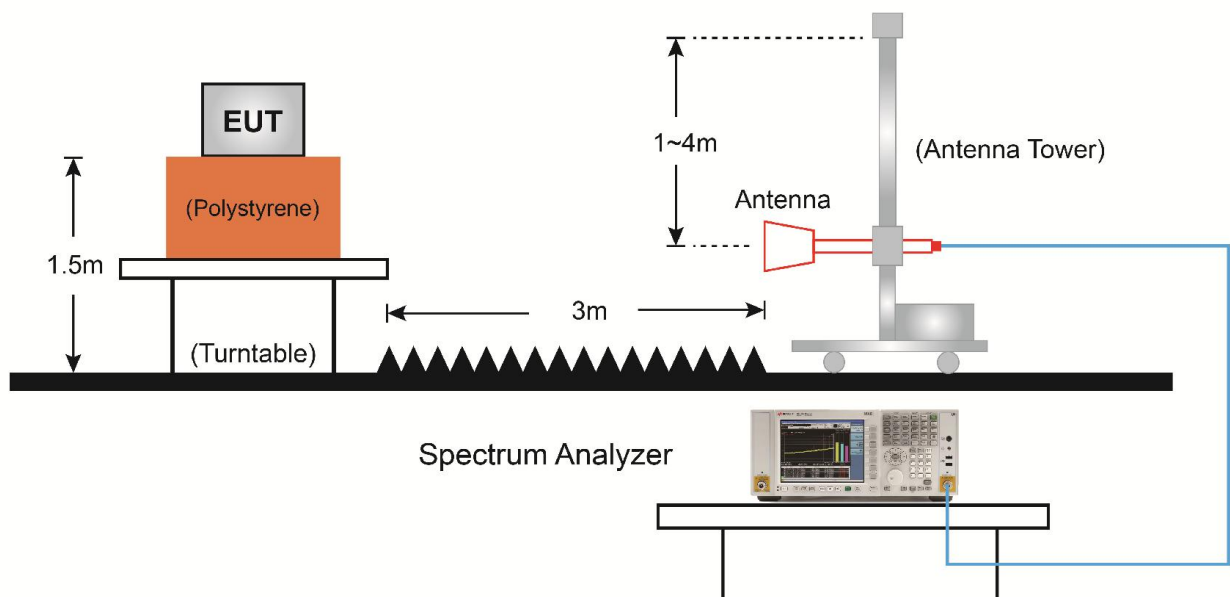
Peak Field Strength Measurements

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)

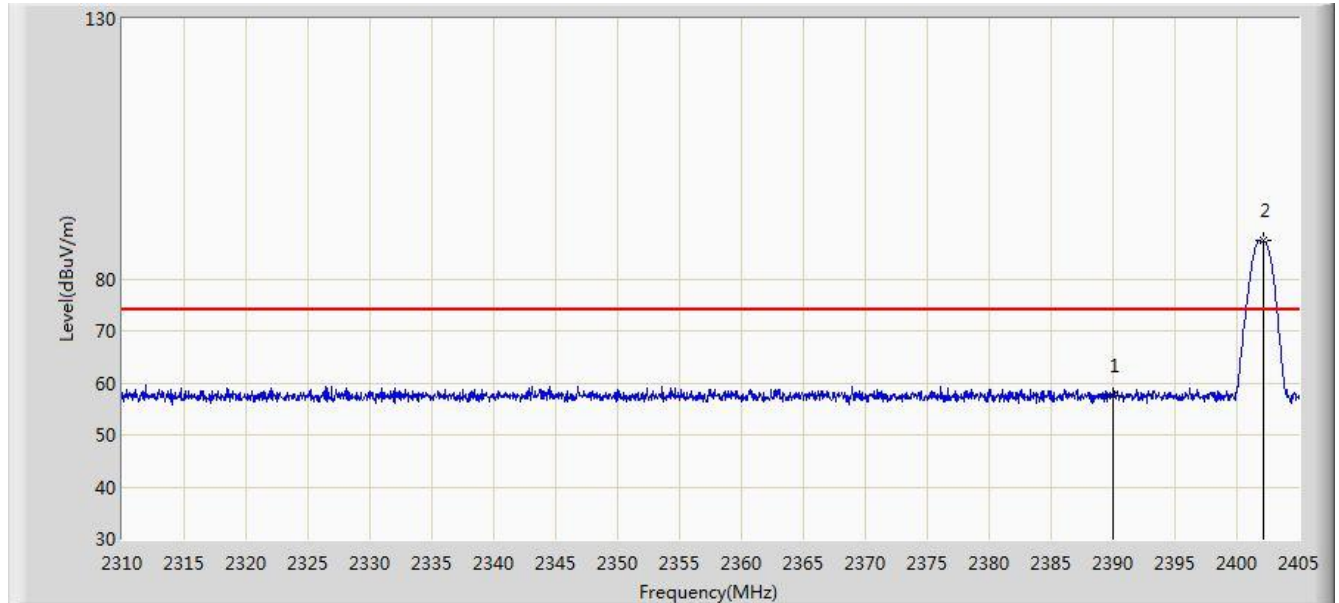
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4.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

7.10.4.Test Setup



7.10.5.Test Result

Site: AC1	Time: 2019/05/29 - 03:10
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by DH5 at Channel 2402MHz	

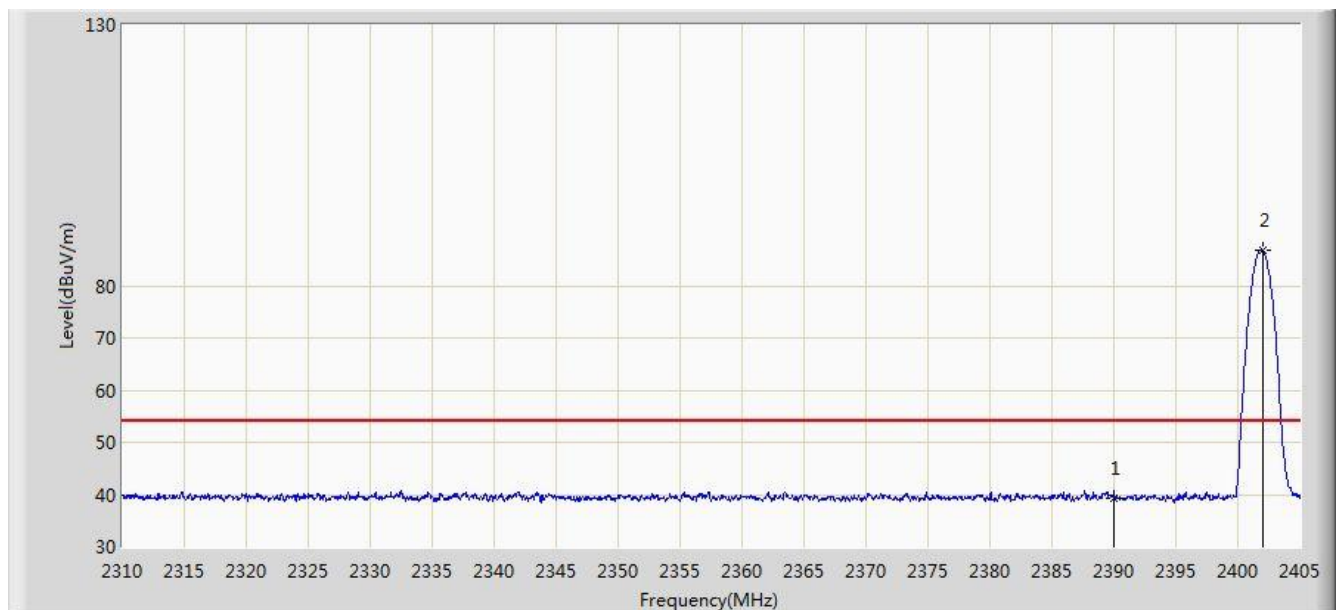


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	57.516	24.998	-16.484	74.000	32.518	PK
2		*	2402.198	87.325	54.756	N/A	N/A	32.570	PK

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

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

Site: AC1	Time: 2019/05/29 - 03:16
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by DH5 at Channel 2402MHz	

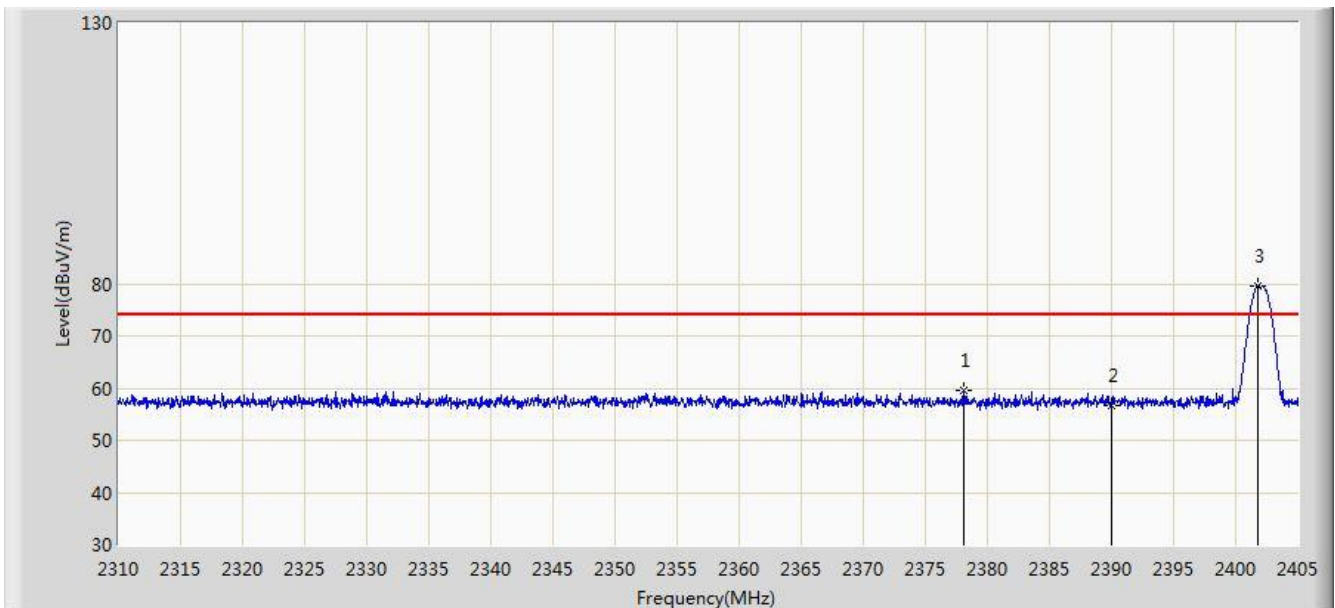


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	39.288	6.770	-14.712	54.000	32.518	AV
2		*	2402.008	86.811	54.243	N/A	N/A	32.568	AV

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

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

Site: AC1	Time: 2019/05/29 - 03:17
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by DH5 at Channel 2402MHz	

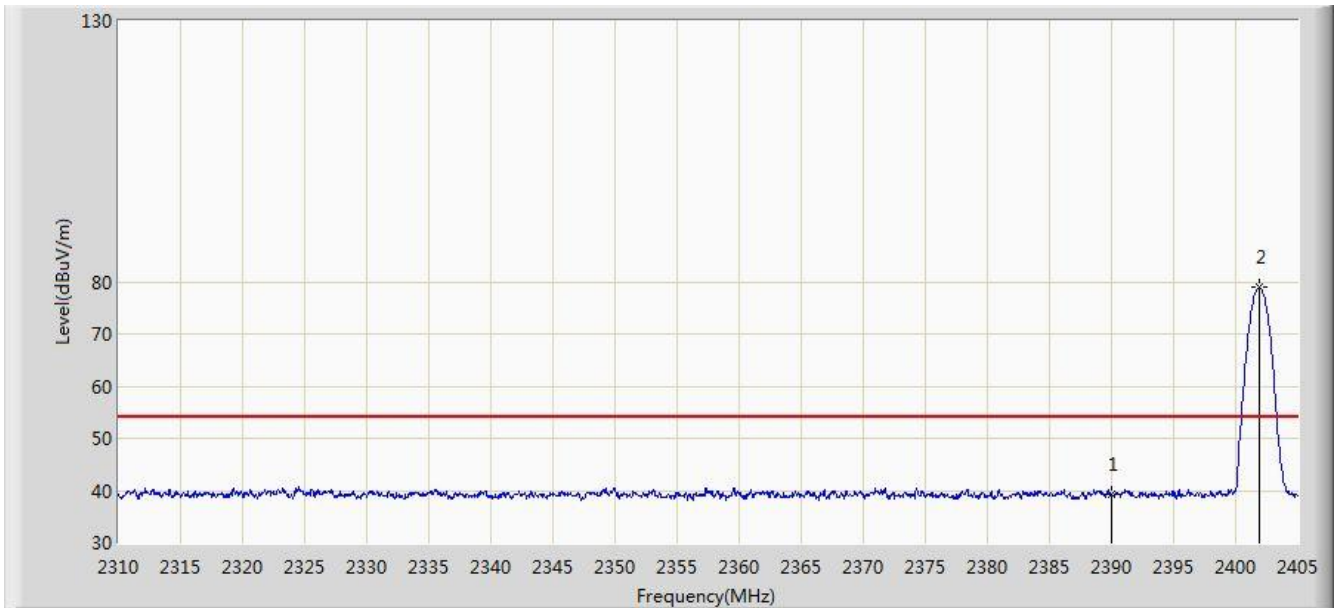


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2378.115	59.427	26.959	-14.573	74.000	32.468	PK
2			2390.000	56.551	24.033	-17.449	74.000	32.518	PK
3		*	2401.770	79.556	46.989	N/A	N/A	32.567	PK

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

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

Site: AC1	Time: 2019/05/29 - 03:20
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by DH5 at Channel 2402MHz	

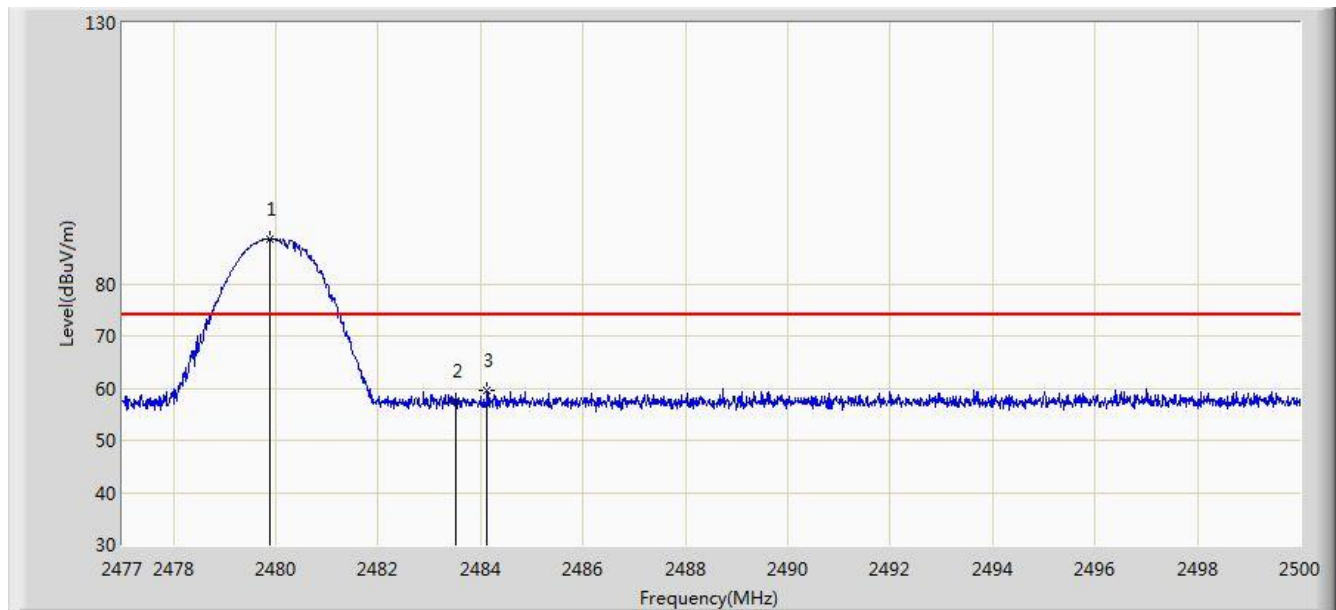


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	39.268	6.750	-14.732	54.000	32.518	AV
2		*	2401.865	78.871	46.303	N/A	N/A	32.568	AV

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

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

Site: AC1	Time: 2019/05/29 - 03:23
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by DH5 at Channel 2480MHz	

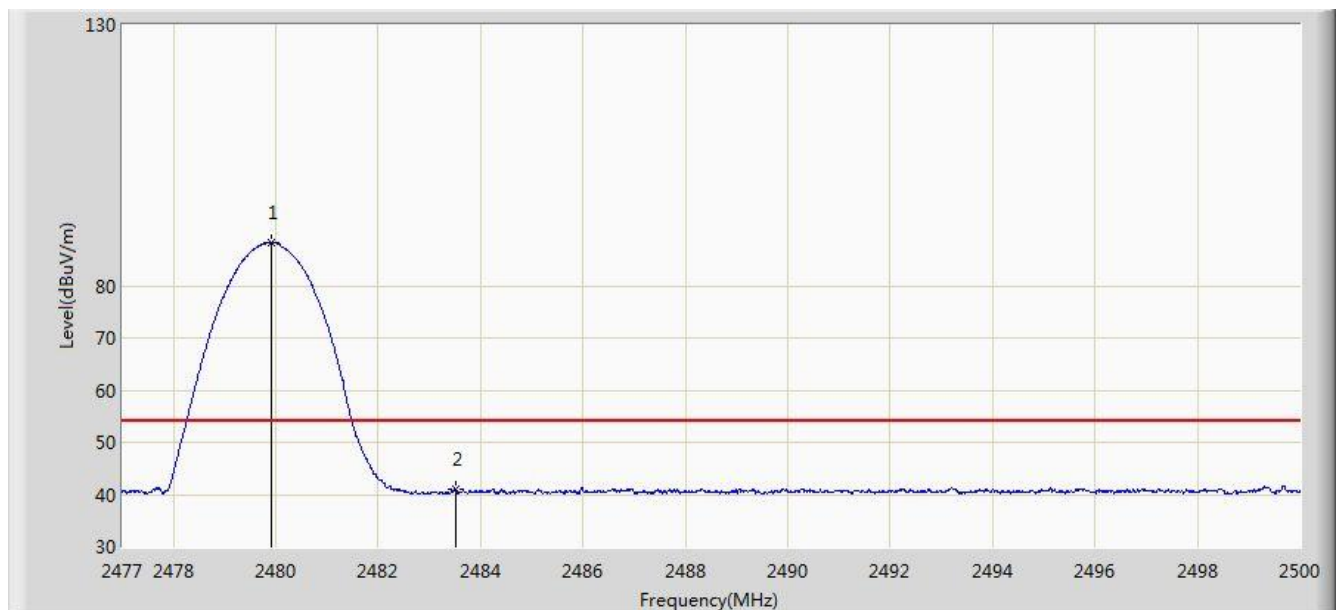


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.886	88.646	56.238	N/A	N/A	32.408	PK
2			2483.500	57.621	25.206	-16.379	74.000	32.416	PK
3			2484.130	59.578	27.161	-14.422	74.000	32.417	PK

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

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

Site: AC1	Time: 2019/05/29 - 03:25
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by DH5 at Channel 2480MHz	

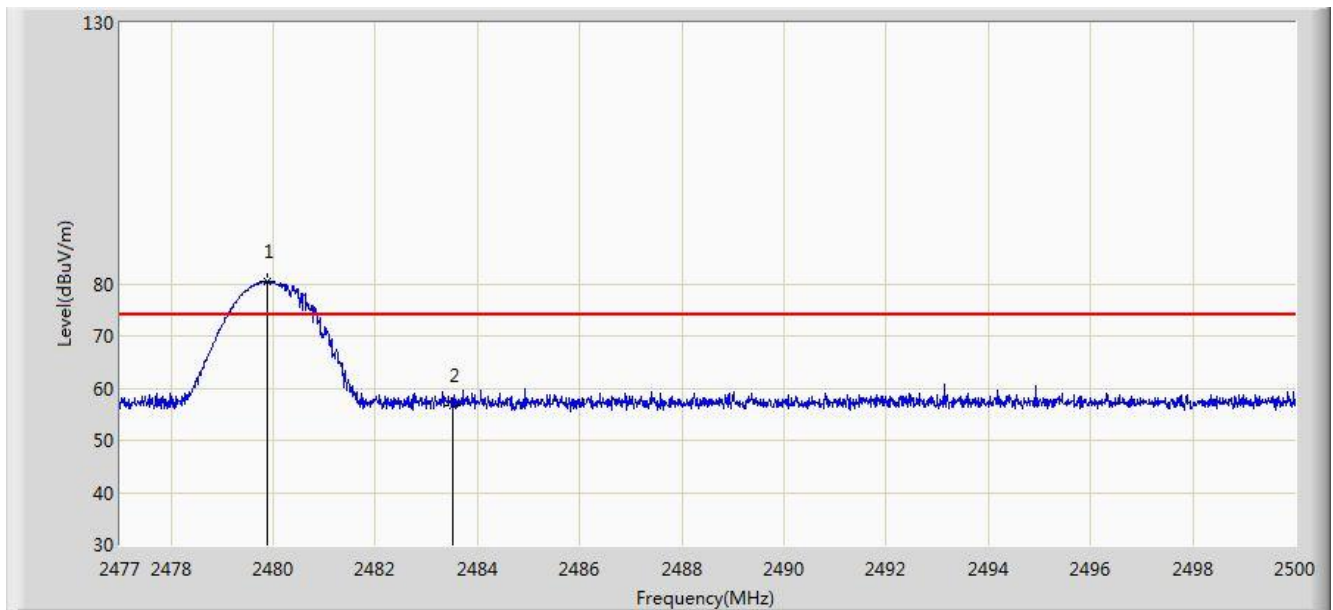


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.921	88.243	55.347	N/A	N/A	32.896	AV
2			2483.500	40.956	8.045	-13.044	54.000	32.911	AV

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

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

Site: AC1	Time: 2019/05/29 - 03:26
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by DH5 at Channel 2480MHz	

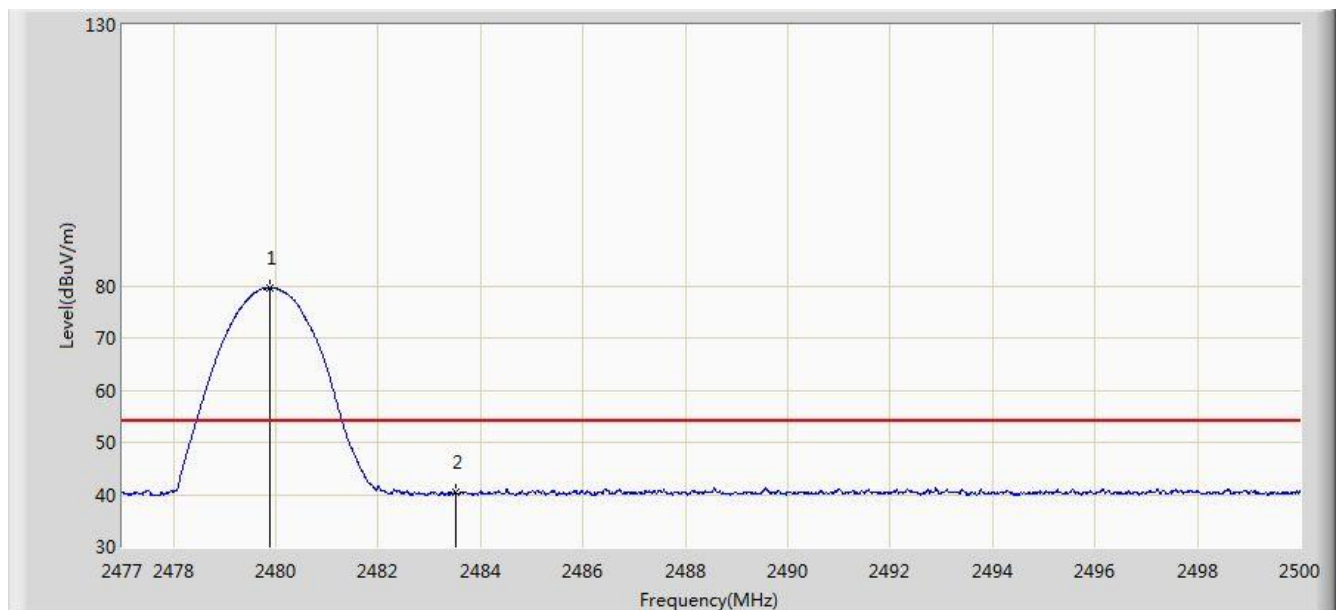


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.875	80.468	47.572	N/A	N/A	32.896	PK
2			2483.500	56.727	23.816	-17.273	74.000	32.911	PK

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

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

Site: AC1	Time: 2019/05/29 - 03:27
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by DH5 at Channel 2480MHz	

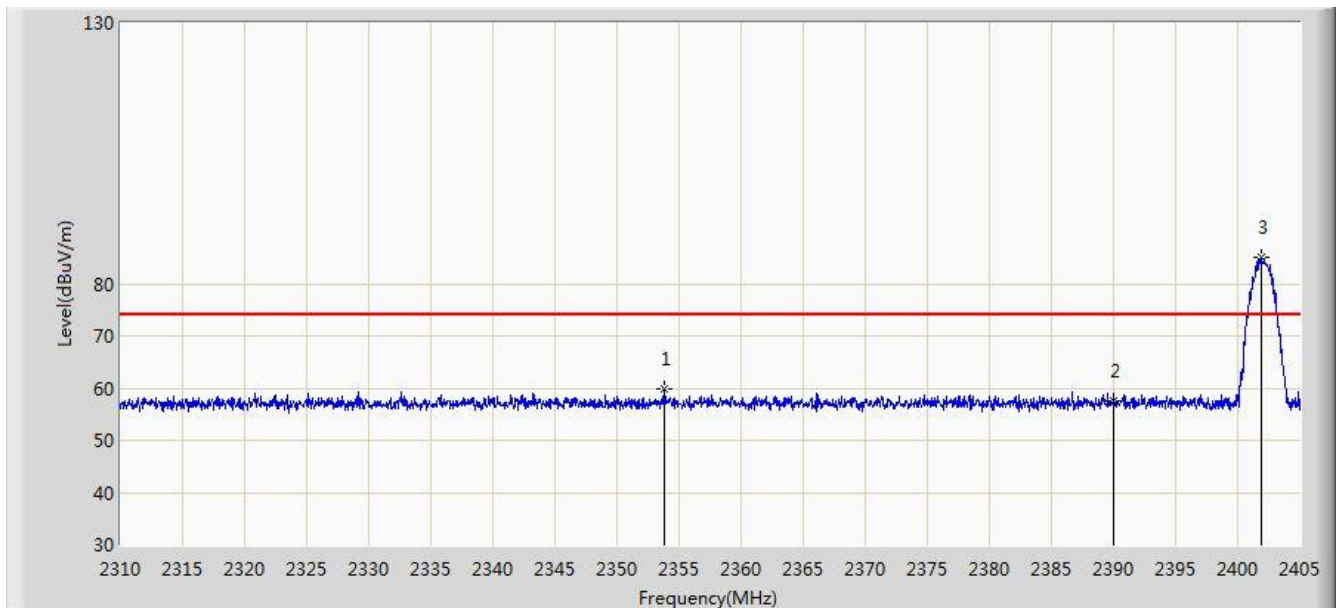


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.875	79.538	46.642	N/A	N/A	32.896	AV
2			2483.500	40.466	7.555	-13.534	54.000	32.911	AV

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

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

Site: AC1	Time: 2019/05/29 - 03:29
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 2DH5 at Channel 2402MHz	

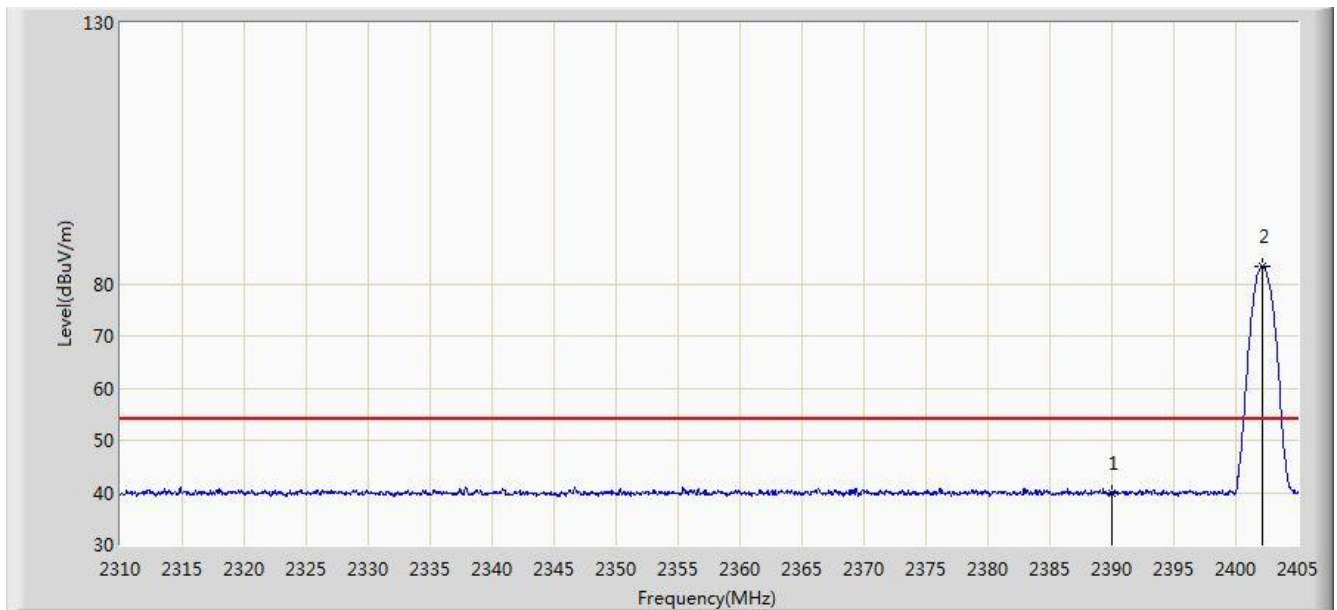


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2353.795	59.784	27.418	-14.216	74.000	32.366	PK
2			2390.000	57.402	24.884	-16.598	74.000	32.518	PK
3		*	2401.865	84.976	52.408	N/A	N/A	32.568	PK

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

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

Site: AC1	Time: 2019/05/29 - 03:44
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 2DH5 at Channel 2402MHz	

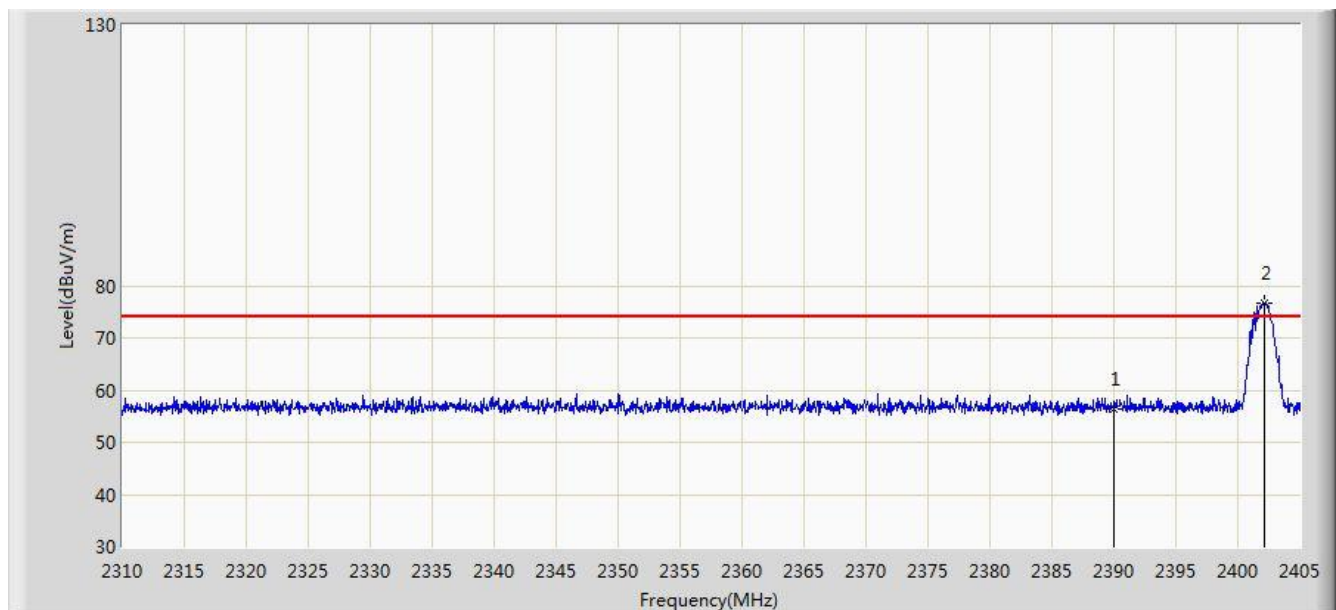


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	39.837	7.319	-14.163	54.000	32.518	AV
2		*	2402.103	83.361	50.792	N/A	N/A	32.568	AV

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

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

Site: AC1	Time: 2019/05/29 - 03:47
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 2DH5 at Channel 2402MHz	

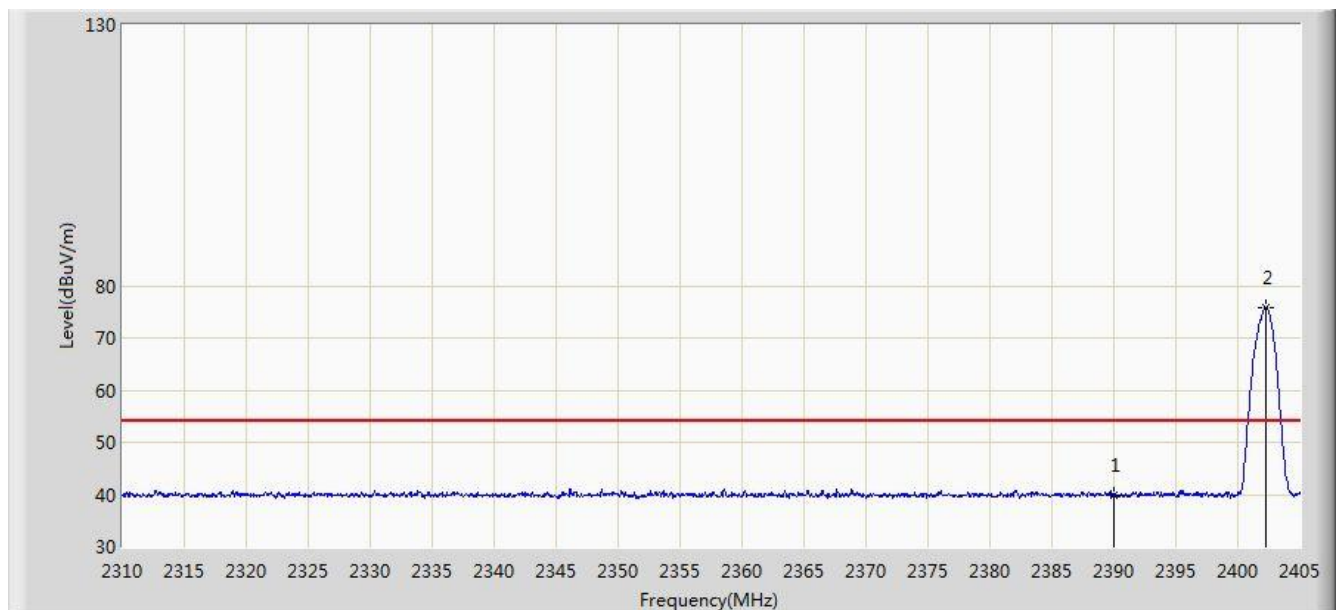


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	56.234	23.716	-17.766	74.000	32.518	PK
2		*	2402.198	76.741	44.172	N/A	N/A	32.570	PK

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

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

Site: AC1	Time: 2019/05/29 - 03:47
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 2DH5 at Channel 2402MHz	

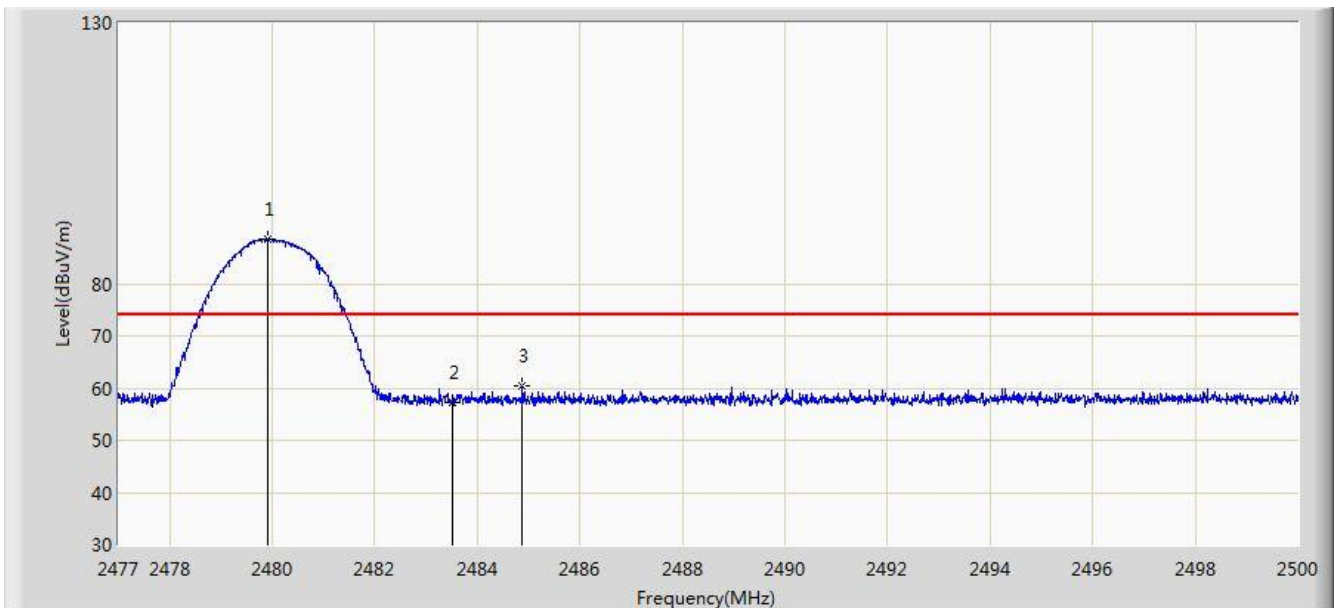


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	39.736	7.218	-14.264	54.000	32.518	AV
2		*	2402.292	75.712	43.142	N/A	N/A	32.570	AV

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

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

Site: AC1	Time: 2019/05/29 - 03:51
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 2DH5 at Channel 2480MHz	

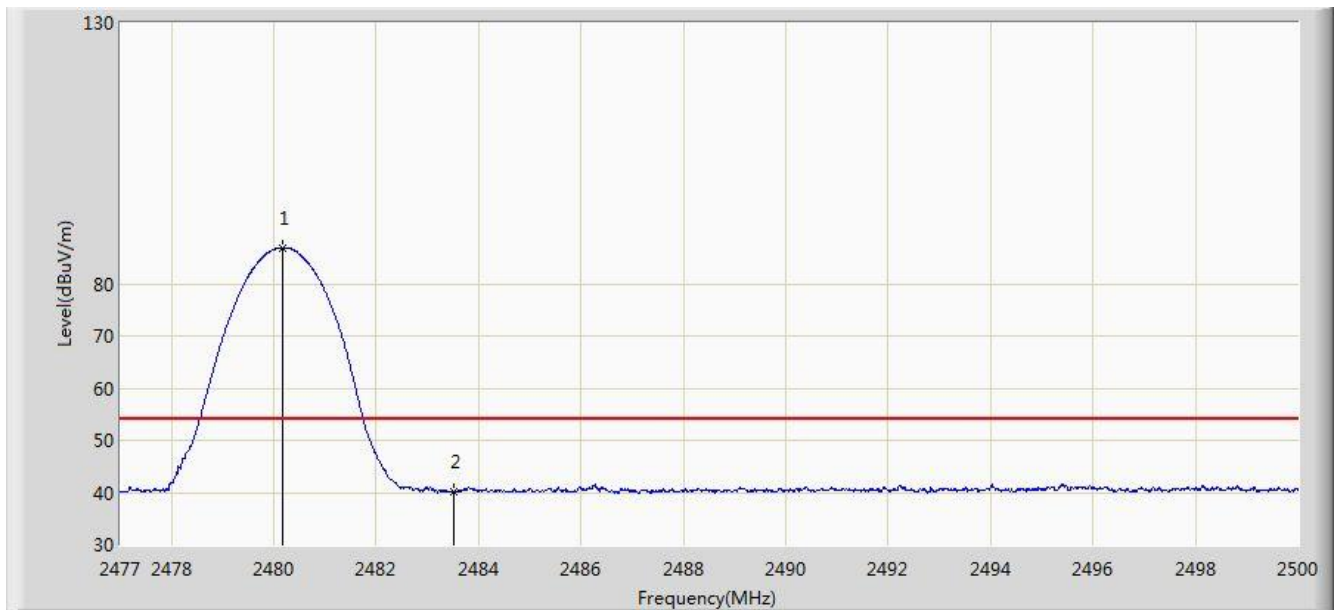


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.921	88.615	55.719	N/A	N/A	32.896	PK
2			2483.500	57.282	24.371	-16.718	74.000	32.911	PK
3			2484.877	60.380	27.463	-13.620	74.000	32.917	PK

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

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

Site: AC1	Time: 2019/05/29 - 03:57
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 2DH5 at Channel 2480MHz	

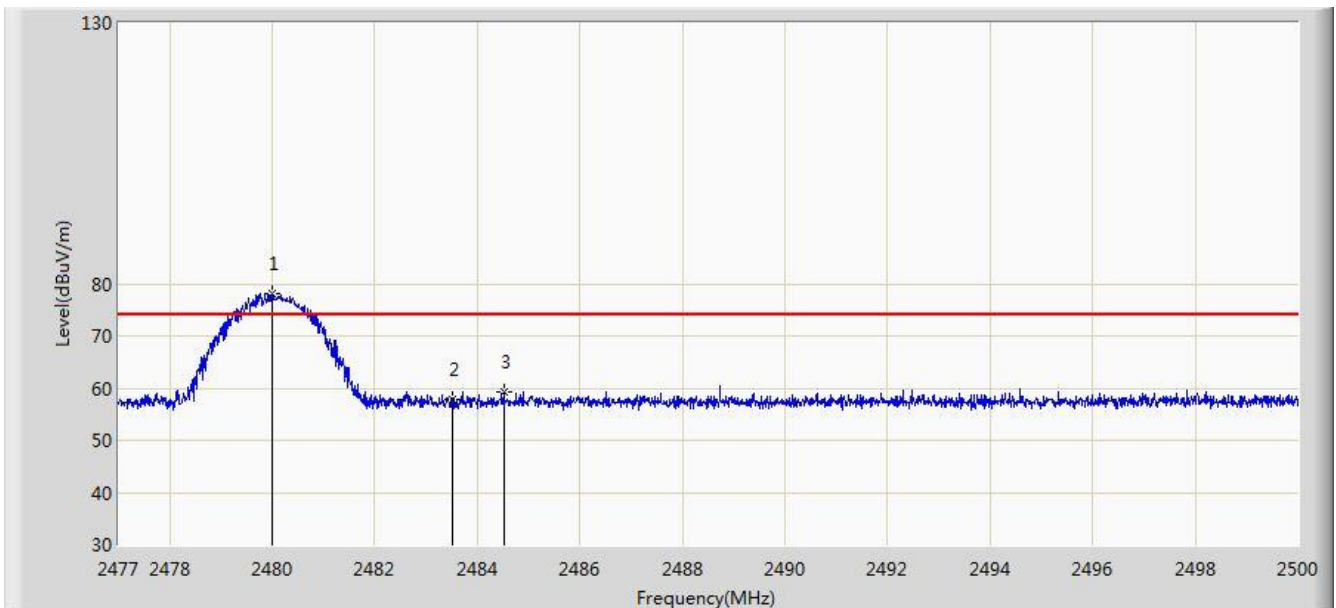


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.174	86.915	54.018	N/A	N/A	32.897	AV
2			2483.500	40.203	7.292	-13.797	54.000	32.911	AV

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

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

Site: AC1	Time: 2019/05/29 - 03:59
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 2DH5 at Channel 2480MHz	

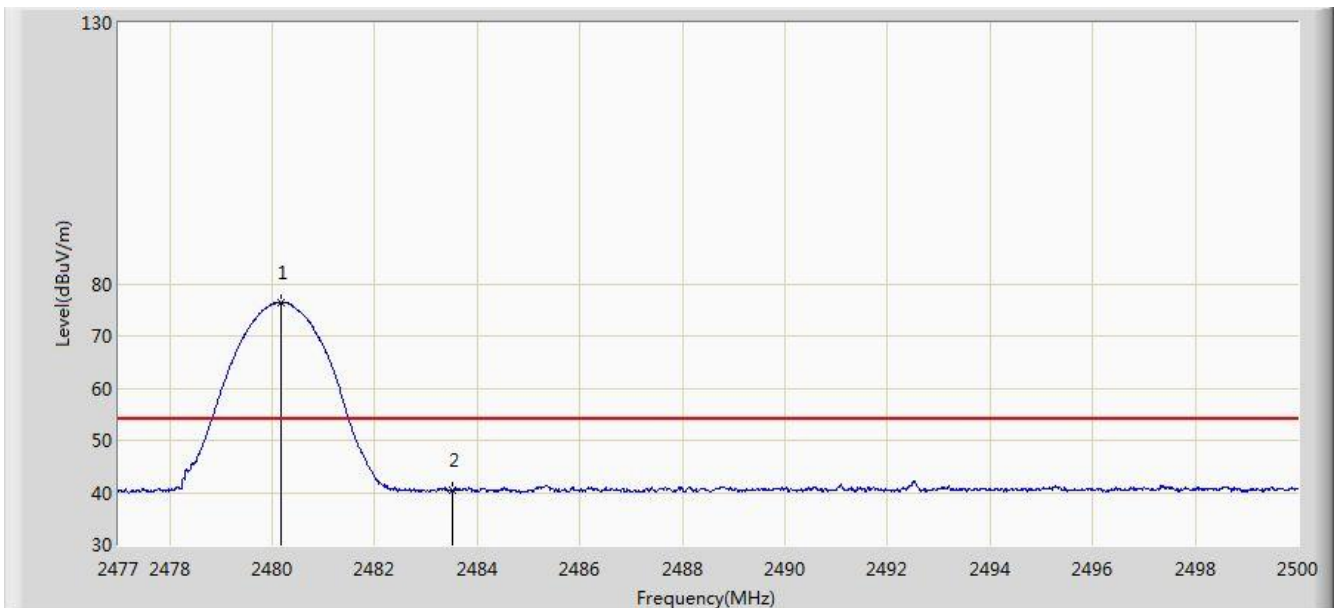


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.001	77.978	45.082	N/A	N/A	32.896	PK
2			2483.500	57.723	24.812	-16.277	74.000	32.911	PK
3			2484.510	59.297	26.382	-14.703	74.000	32.916	PK

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

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

Site: AC1	Time: 2019/05/29 - 03:59
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 2DH5 at Channel 2480MHz	

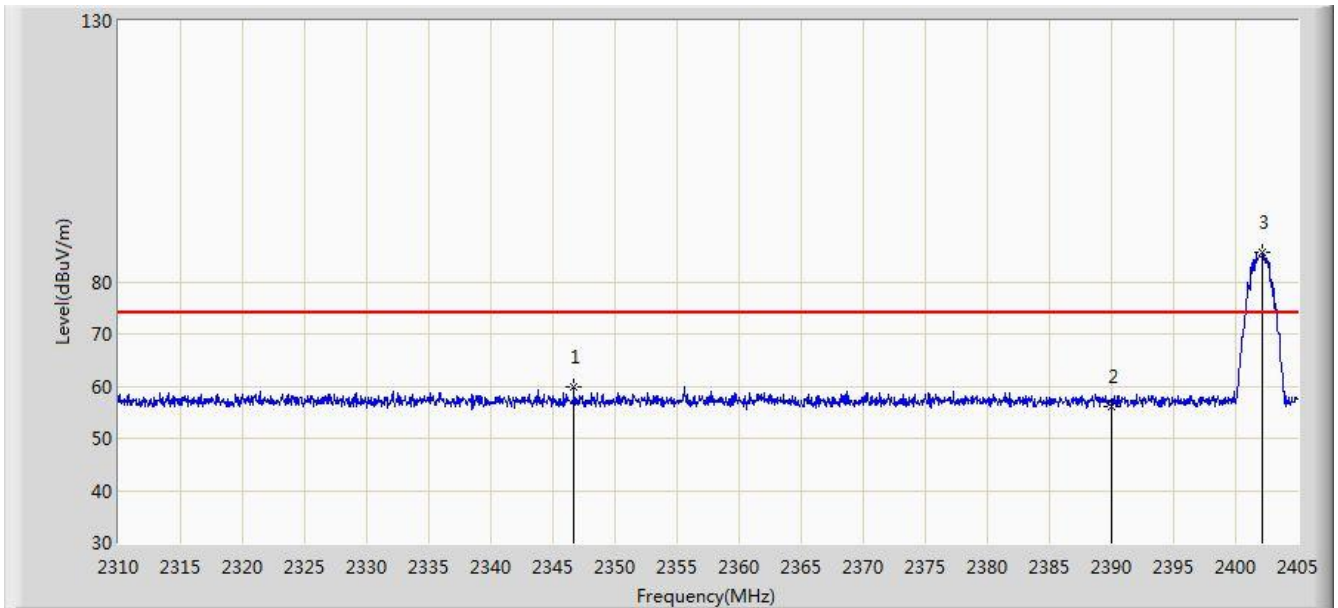


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.174	76.363	43.466	N/A	N/A	32.897	AV
2			2483.500	40.496	7.585	-13.504	54.000	32.911	AV

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

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

Site: AC1	Time: 2019/05/29 - 04:03
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 3DH5 at Channel 2402MHz	

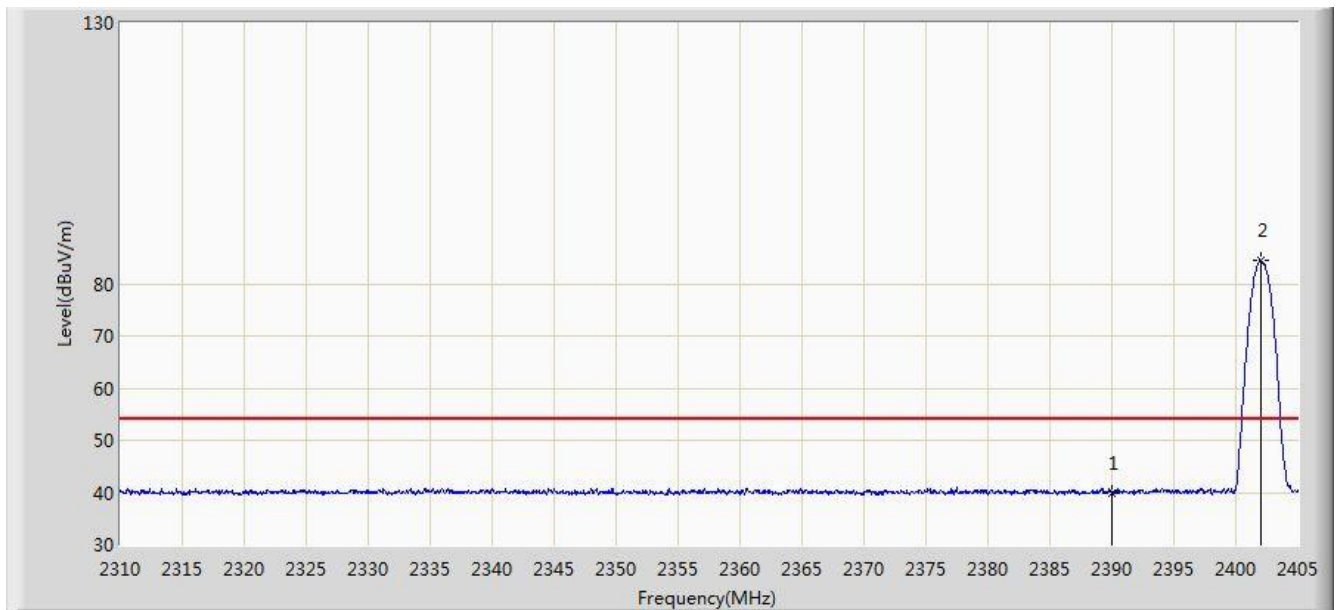


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2346.718	59.891	27.555	-14.109	74.000	32.336	PK
2			2390.000	56.100	23.582	-17.900	74.000	32.518	PK
3		*	2402.150	85.700	53.131	N/A	N/A	32.568	PK

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

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

Site: AC1	Time: 2019/05/29 - 04:06
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 3DH5 at Channel 2402MHz	

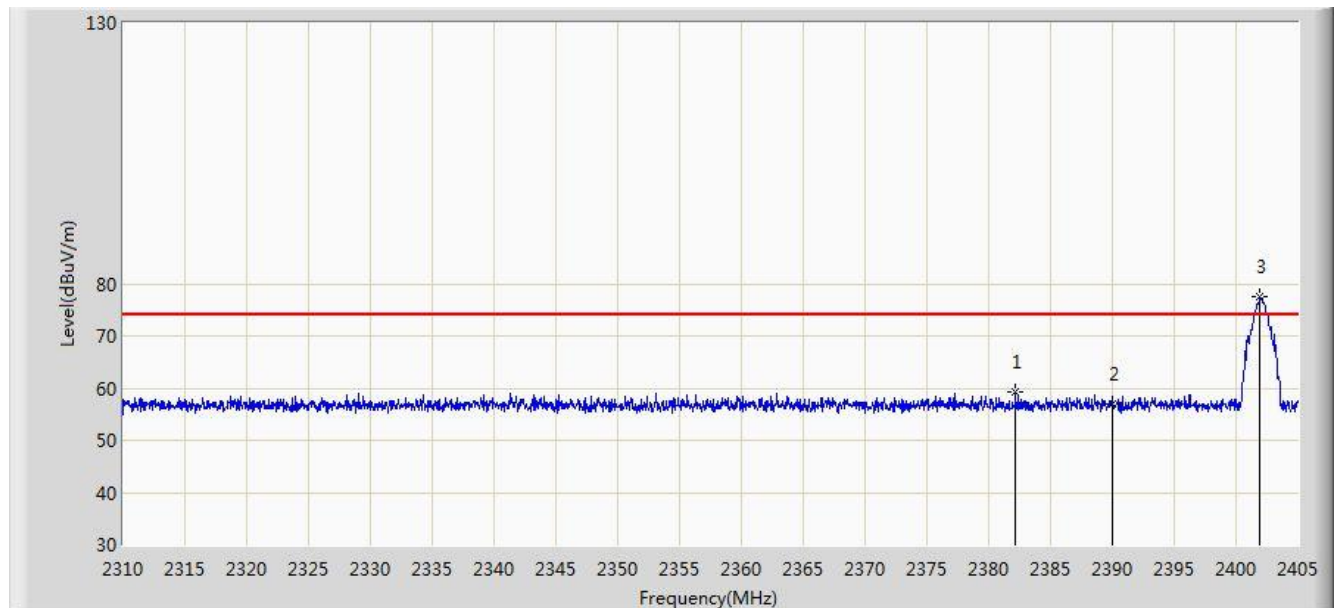


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	39.995	7.477	-14.005	54.000	32.518	AV
2		*	2402.008	84.489	51.921	N/A	N/A	32.568	AV

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

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

Site: AC1	Time: 2019/05/29 - 04:09
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 3DH5 at Channel 2402MHz	

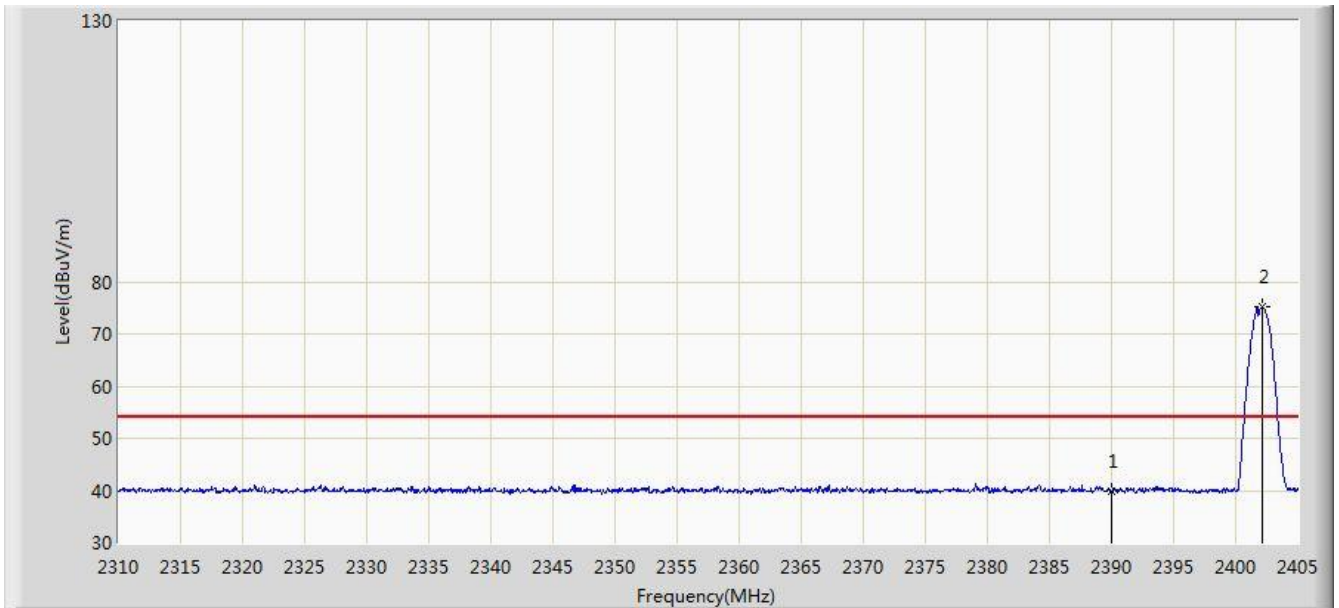


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2382.153	59.387	26.902	-14.613	74.000	32.485	PK
2			2390.000	56.899	24.381	-17.101	74.000	32.518	PK
3		*	2401.913	77.533	44.965	N/A	N/A	32.568	PK

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

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

Site: AC1	Time: 2019/05/29 - 04:09
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 3DH5 at Channel 2402MHz	

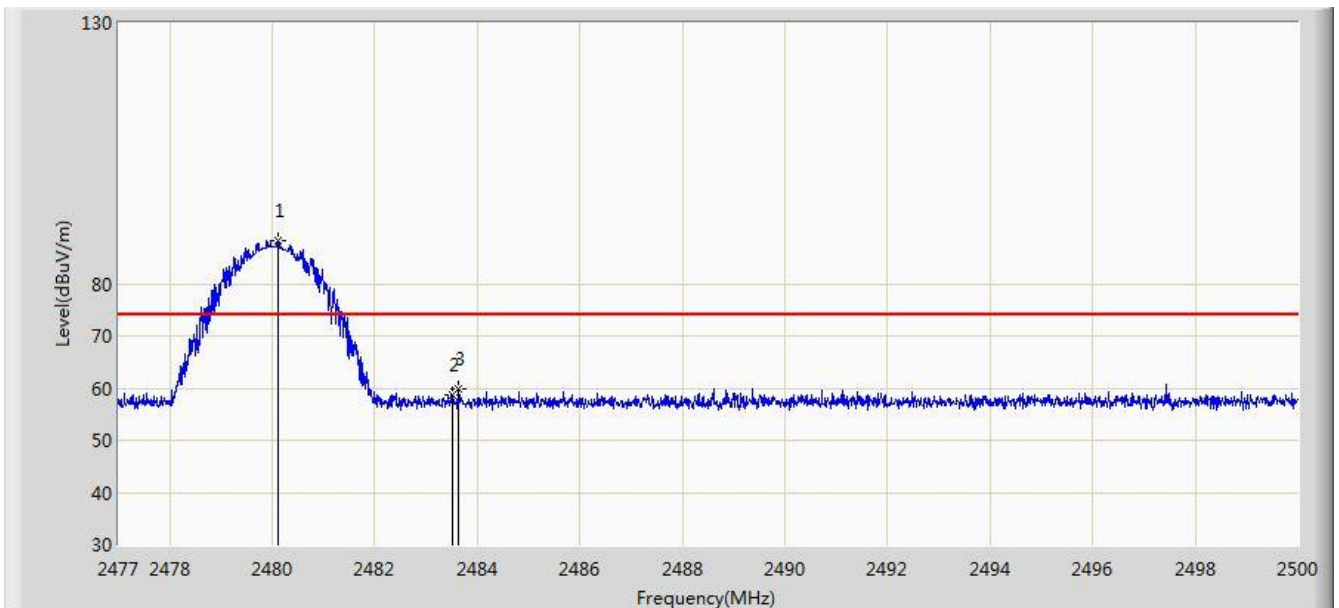


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	39.716	7.198	-14.284	54.000	32.518	AV
2		*	2402.150	75.096	42.527	N/A	N/A	32.568	AV

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

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

Site: AC1	Time: 2019/05/29 - 04:13
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 3DH5 at Channel 2480MHz	

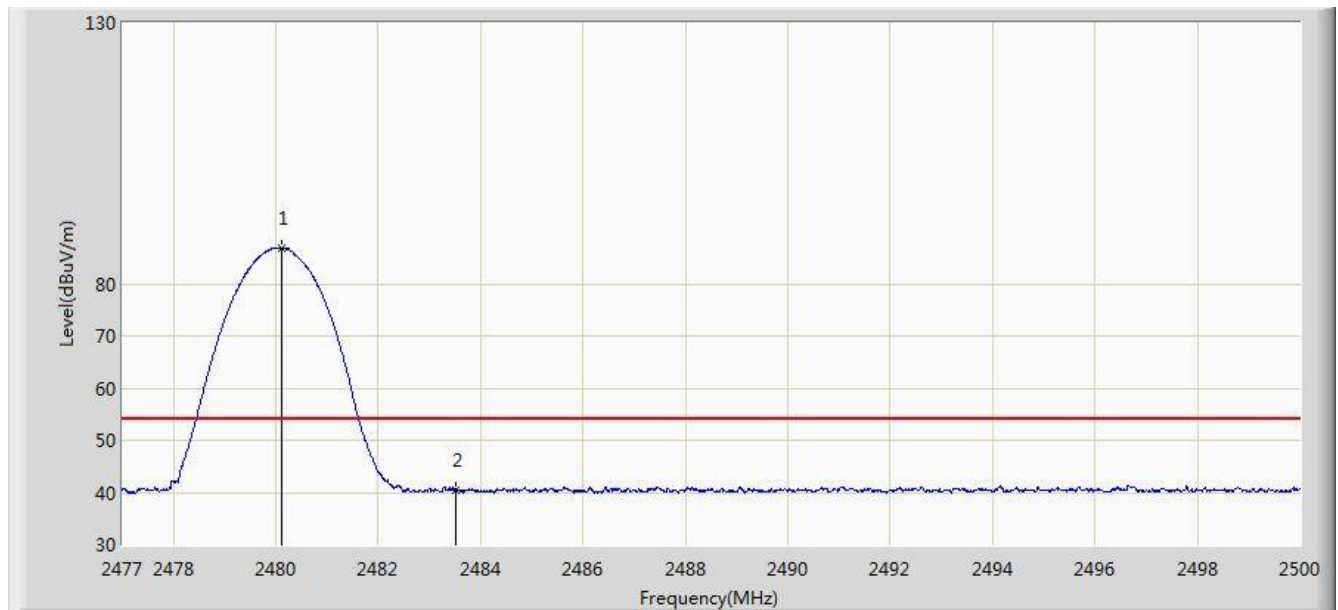


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.105	88.129	55.232	N/A	N/A	32.896	PK
2			2483.500	58.689	25.778	-15.311	74.000	32.911	PK
3			2483.615	59.924	27.013	-14.076	74.000	32.912	PK

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

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

Site: AC1	Time: 2019/05/29 - 04:16
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Horizontal
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 3DH5 at Channel 2480MHz	

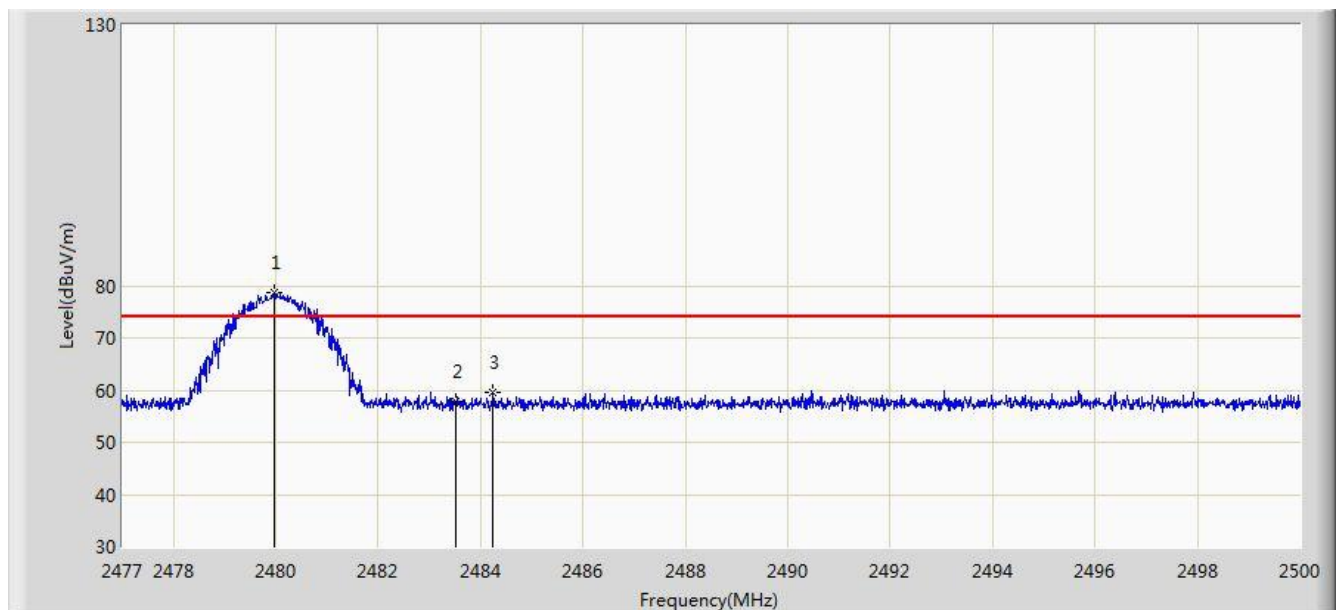


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.105	86.896	53.999	N/A	N/A	32.896	AV
2			2483.500	40.570	7.659	-13.430	54.000	32.911	AV

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

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

Site: AC1	Time: 2019/05/29 - 04:17
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: Transmit by 3DH5 at Channel 2480MHz	

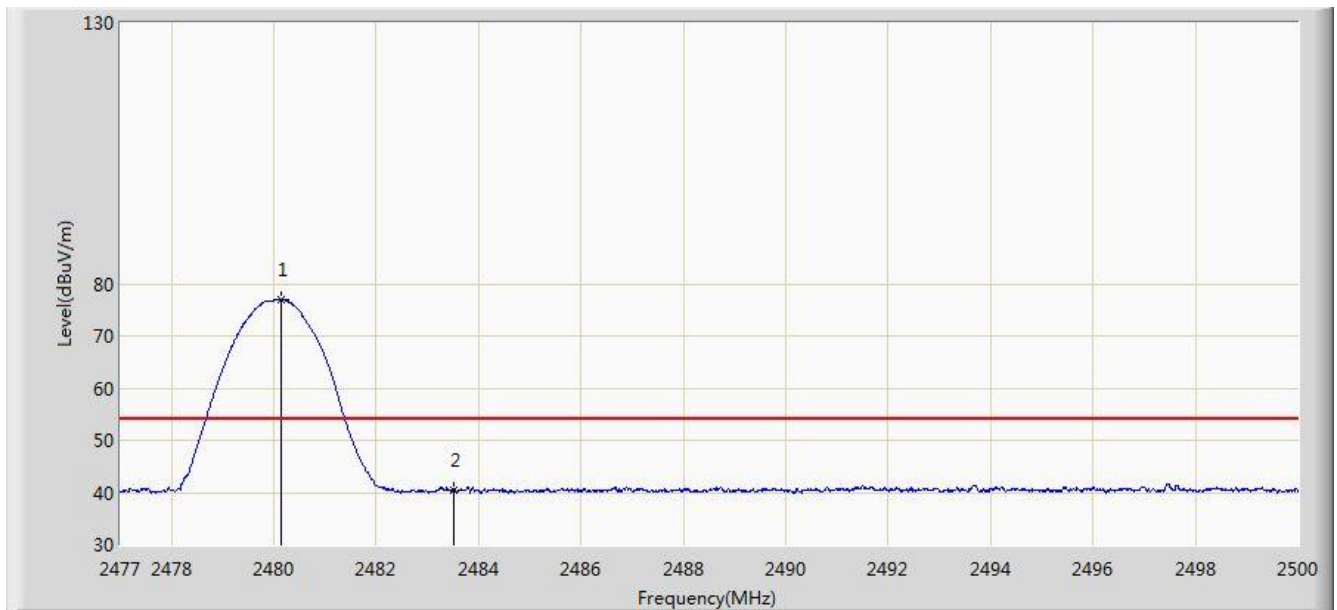


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.979	78.643	45.747	N/A	N/A	32.896	PK
2			2483.500	57.686	24.775	-16.314	74.000	32.911	PK
3			2484.245	59.458	26.544	-14.542	74.000	32.914	PK

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

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

Site: AC1	Time: 2019/05/29 - 04:18
Limit: FCC_Part15.209_RSE(3m)	Engineer: Peter Xu
Probe: BBHA 9120D_1-18GHz	Polarity: Vertical
EUT: Streaming Media Player	Power: By USB
Note: 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		*	2480.139	76.948	44.051	N/A	N/A	32.896	AV
2			2483.500	40.440	7.529	-13.560	54.000	32.911	AV

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

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

7.11.AC Conducted Emissions Measurement

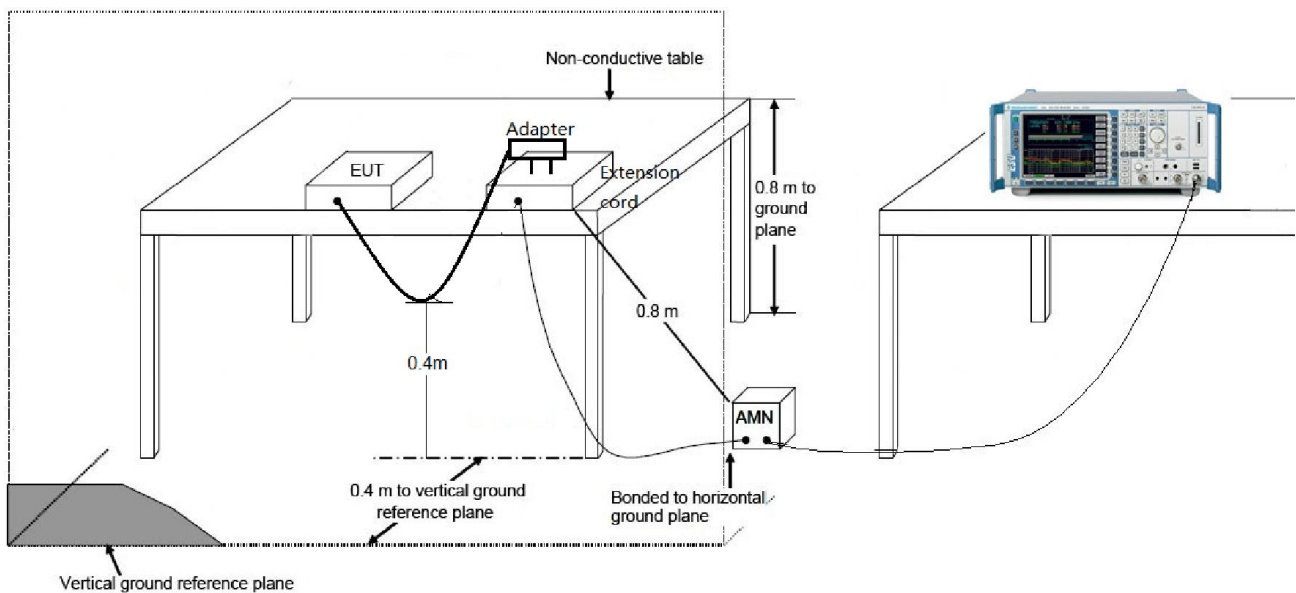
7.11.1.Test Limit

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

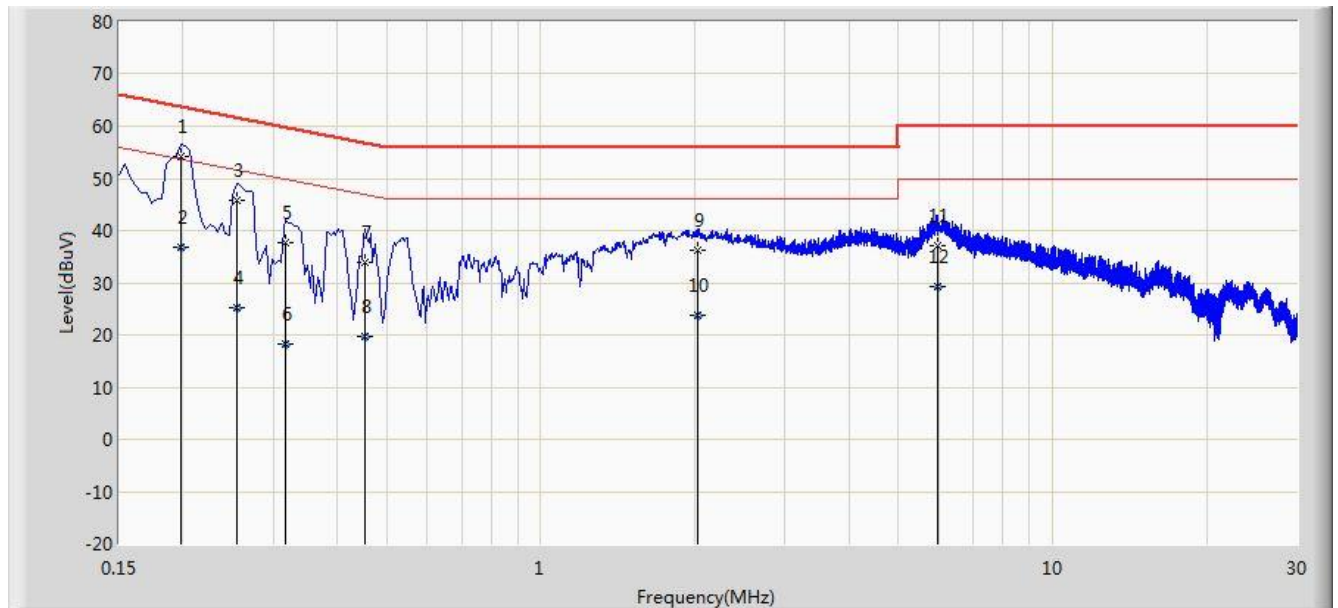
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.11.2.Test Setup



7.11.3.Test Result

Site: SR2	Time: 2019/06/11 - 19:23
Limit: FCC_Part15.207_CE_AC Power	Engineer: Kevin Ker
Probe: ENV216 (Filter On)	Polarity: Line
EUT: Streaming Media Player	Power: AC 120V/60Hz
Test Mode: Transmit by DH5 at Channel 2402MHz	

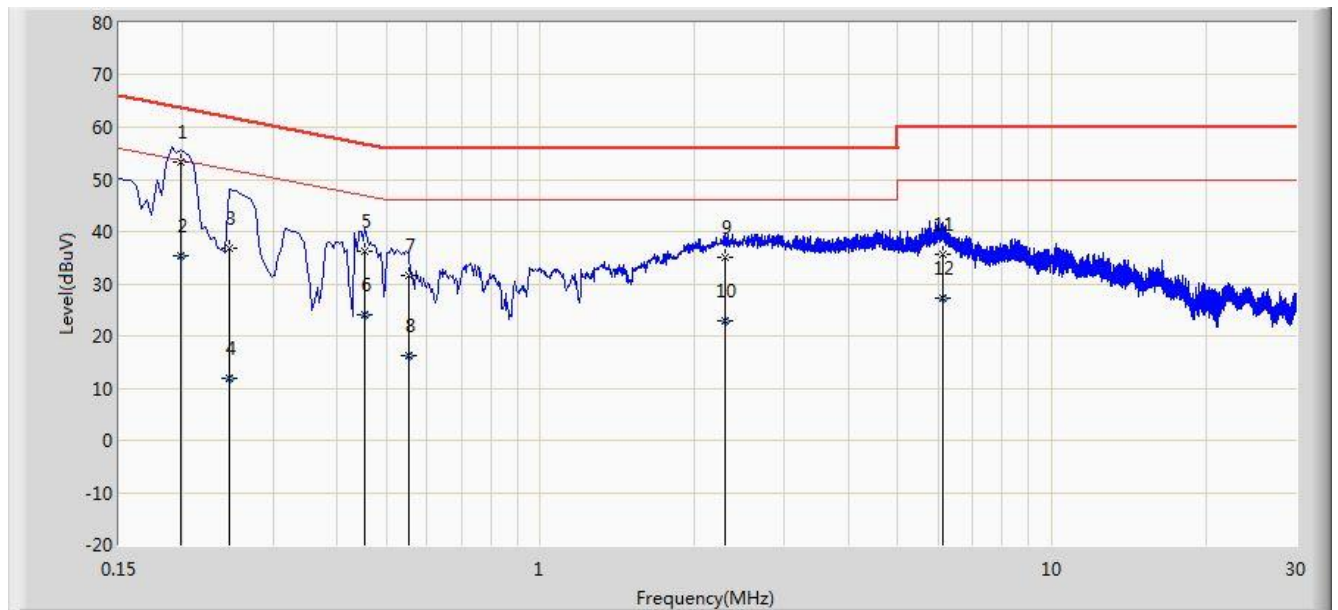


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.198	54.198	44.179	-9.496	63.694	10.019	QP
2			0.198	36.706	26.687	-16.988	53.694	10.019	AV
3			0.254	45.767	35.810	-15.858	61.625	9.957	QP
4			0.254	25.345	15.388	-26.280	51.625	9.957	AV
5			0.318	37.705	27.708	-22.054	59.759	9.997	QP
6			0.318	18.373	8.377	-31.385	49.759	9.997	AV
7			0.454	33.997	23.915	-22.805	56.802	10.082	QP
8			0.454	19.804	9.722	-26.997	46.802	10.082	AV
9			2.030	36.295	26.431	-19.705	56.000	9.864	QP
10			2.030	23.901	14.037	-22.099	46.000	9.864	AV
11			5.978	37.111	27.333	-22.889	60.000	9.778	QP
12			5.978	29.167	19.389	-20.833	50.000	9.778	AV

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

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

Site: SR2	Time: 2019/06/11 - 19:31
Limit: FCC_Part15.207_CE_AC Power	Engineer: Kevin Ker
Probe: ENV216 (Filter On)	Polarity: Neutral
EUT: Streaming Media Player	Power: AC 120V/60Hz
Test Mode: Transmit by DH5 at Channel 2402MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.198	53.295	43.304	-10.399	63.694	9.992	QP
2			0.198	35.428	25.437	-18.266	53.694	9.992	AV
3			0.246	36.879	26.957	-25.012	61.891	9.922	QP
4			0.246	11.988	2.066	-39.904	51.891	9.922	AV
5			0.454	36.099	26.007	-20.702	56.802	10.092	QP
6			0.454	24.087	13.995	-22.715	46.802	10.092	AV
7			0.554	31.489	21.384	-24.511	56.000	10.104	QP
8			0.554	16.302	6.198	-29.698	46.000	10.104	AV
9			2.294	34.999	25.154	-21.001	56.000	9.845	QP
10			2.294	23.024	13.179	-22.976	46.000	9.845	AV
11			6.102	35.614	25.857	-24.386	60.000	9.757	QP
12			6.102	27.338	17.581	-22.662	50.000	9.757	AV

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

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

8. CONCLUSION

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

_____ The End _____

Appendix A - Test Setup Photograph

Refer to “1905TW0109-UT” file.

Appendix B - EUT Photograph

Refer to “ 1905TW0109-UE” file.