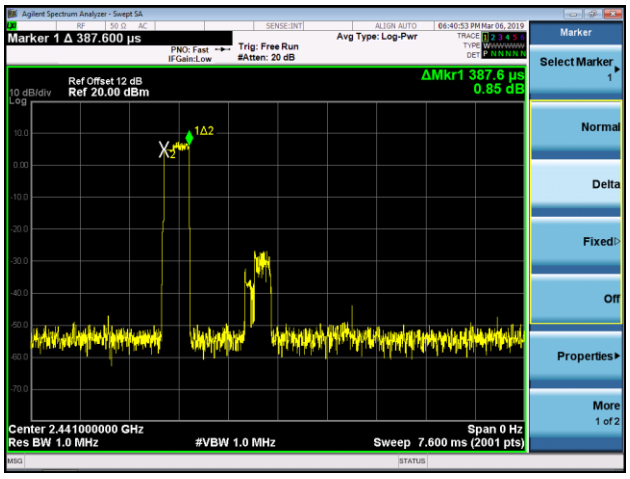
7.6.5.Test Result

Product	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	52%
Test Site	TR3	Test Date	2019/03/06

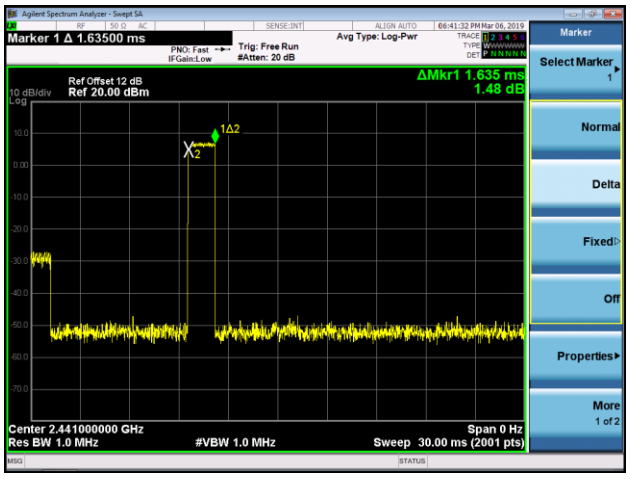
Test Mode	Channel No.	Frequency (MHz)	Hops Over Occupancy Time(Hops)	Packet Transfer Time (ms)	Time of Occupancy (ms)	Limit (ms)	Result
3DH1	39	2441	320	0.39	124.80	< 400	Pass
3DH3	39	2441	160	1.64	262.40	< 400	Pass
3DH5	39	2441	107	2.85	304.95	< 400	Pass

Packet Transfer Time

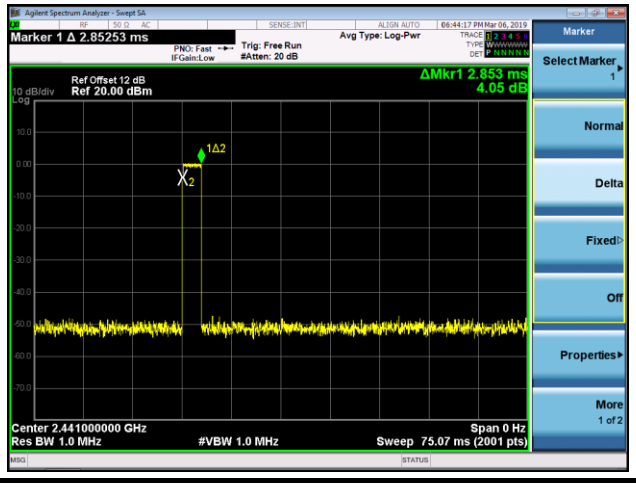
3DH1-Channel 39(2441MHz)



3DH3-Channel 39(2441MHz)



3DH5-Channel 39(2441MHz)



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

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

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

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

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

7.7. Band-edge Compliance Measurement

7.7.1.Test Limit

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

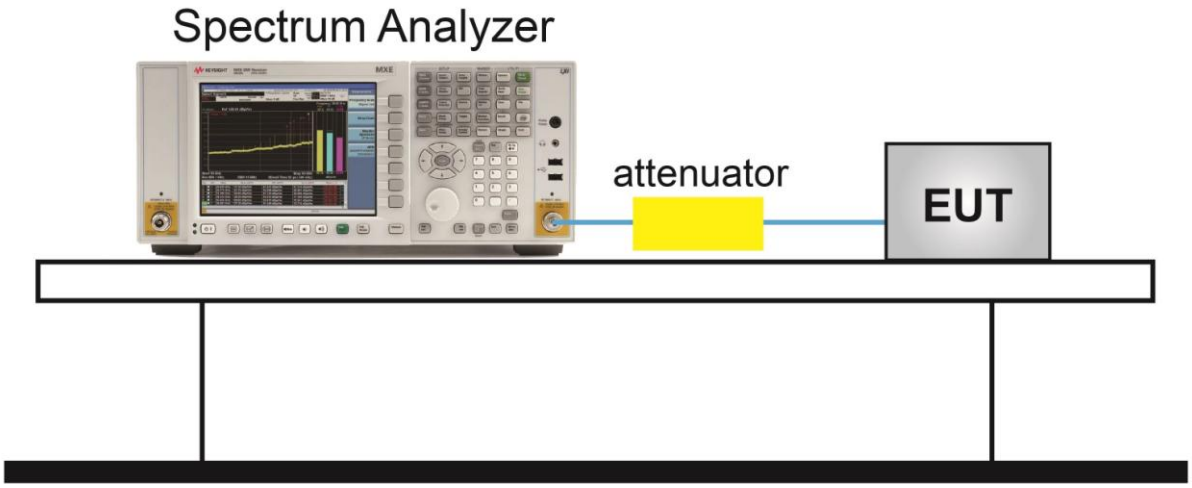
7.7.2.Test Procedure Used

ANSI C63.10-2013 - Section 6.10.4

7.7.3.Test Setting

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

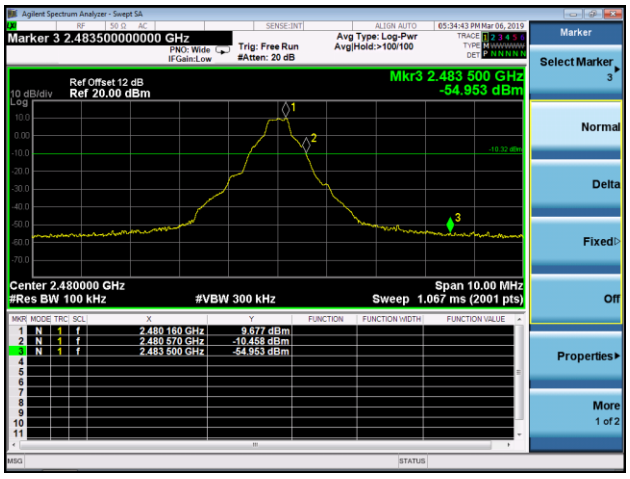
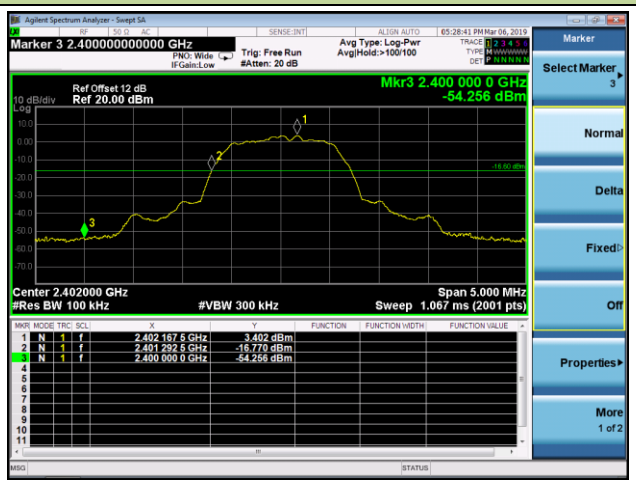
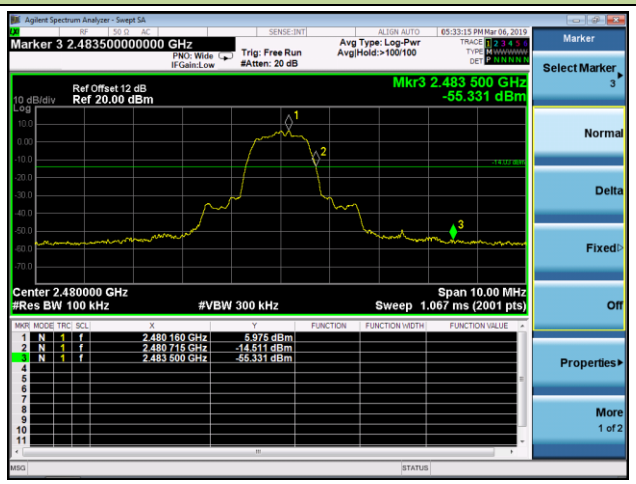
7.7.4.Test Setup

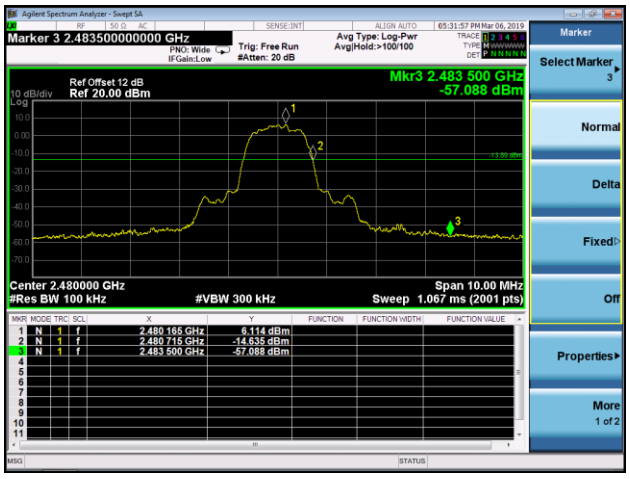
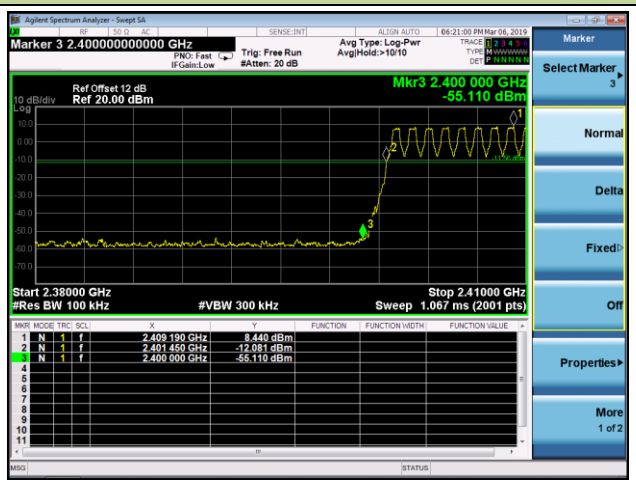
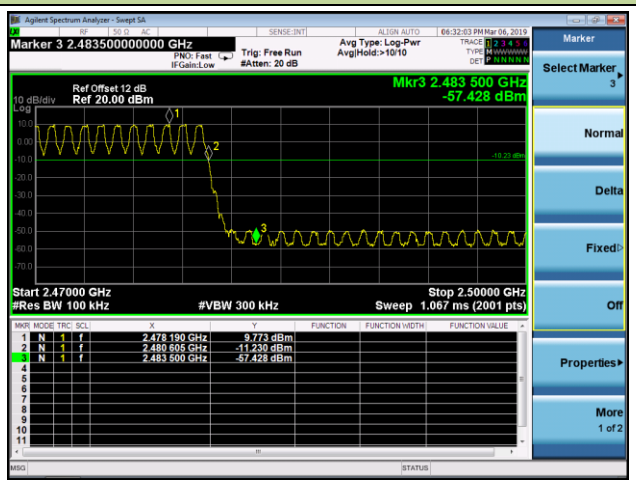
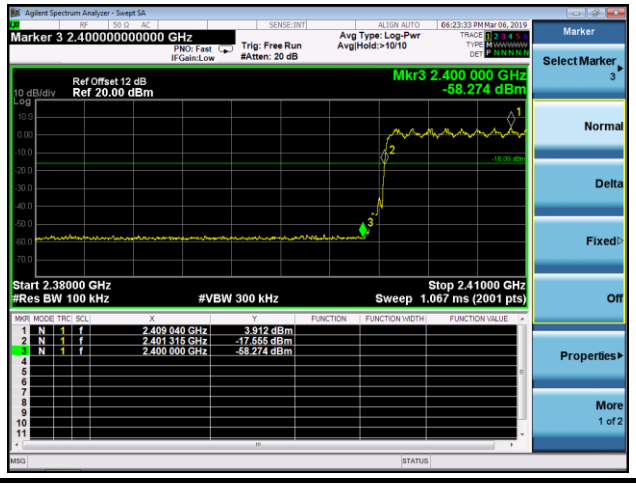
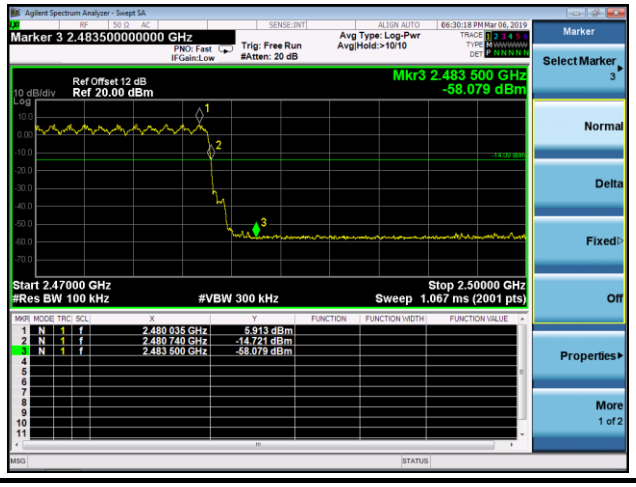


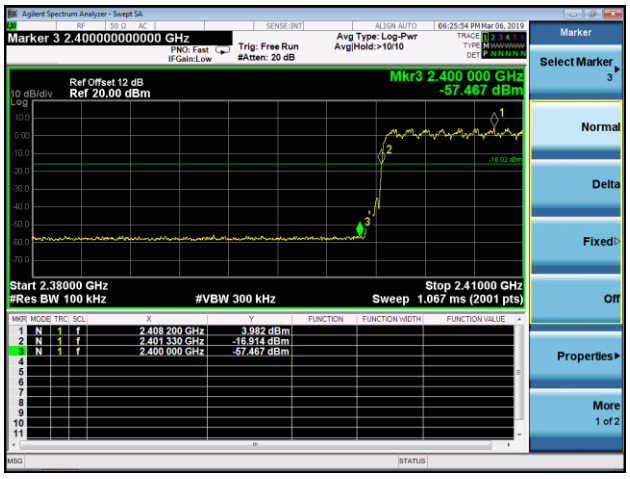
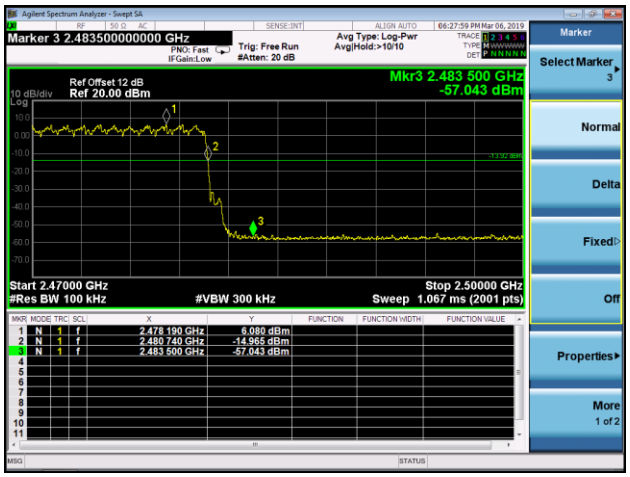
7.7.5.Test Result

Product	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	52%
Test Site	TR3	Test Date	2019/03/06

Test Mode	Channel No.	Frequency (MHz)	Limit	Result
DH5	00	2402	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	78	2480	20dBc	Pass
3DH5	00	2402	20dBc	Pass
3DH5	78	2480	20dBc	Pass

DH5 Band-edge Compliance	
Channel 00 (2402MHz)	Channel 78 (2480MHz)
	
2DH5 Band-edge Compliance	
Channel 00 (2402MHz)	Channel 78 (2480MHz)
	

3DH5 Band-edge Compliance	
Channel 00 (2402MHz)	Channel 78 (2480MHz)
	
DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode	
Channel 00 (2402MHz)	Channel 78 (2480MHz)
	
2DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode	
Channel 00 (2402MHz)	Channel 78 (2480MHz)
	

3DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode	
Channel 00 (2402MHz)	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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

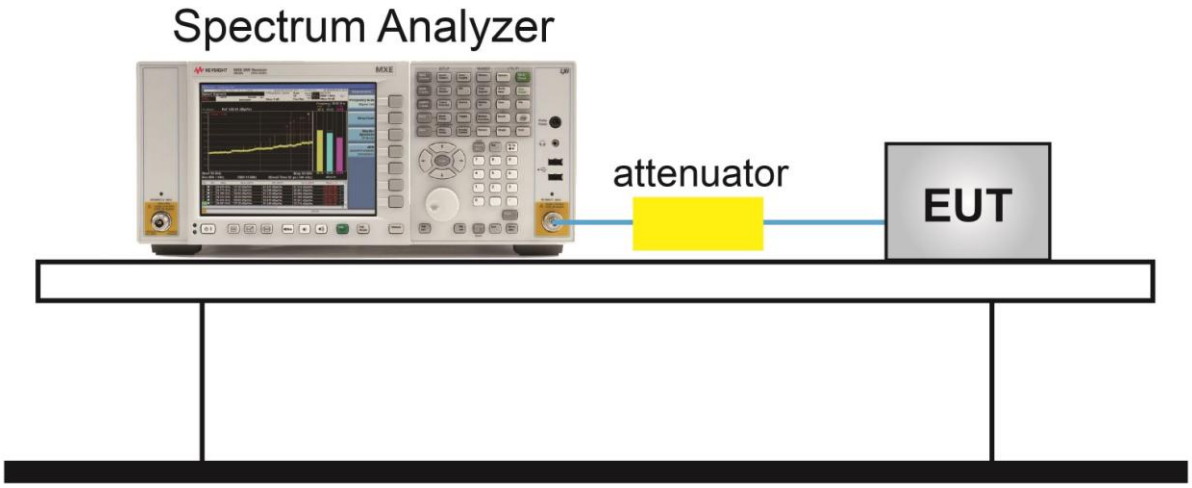
7.8.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.8

7.8.3.Test Setting

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

7.8.4.Test Setup



7.8.5.Test Result

Product	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	52%
Test Site	TR3	Test Date	2019/03/06

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 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/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

Peak Field Strength Measurements

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

Table 1 - RBW as a function of frequency

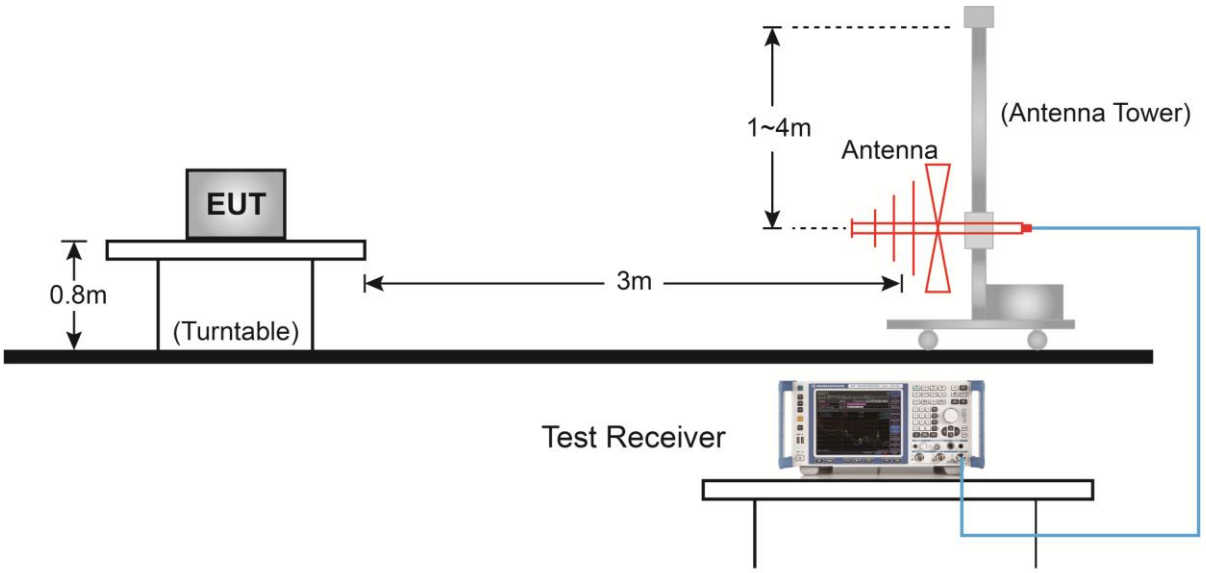
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

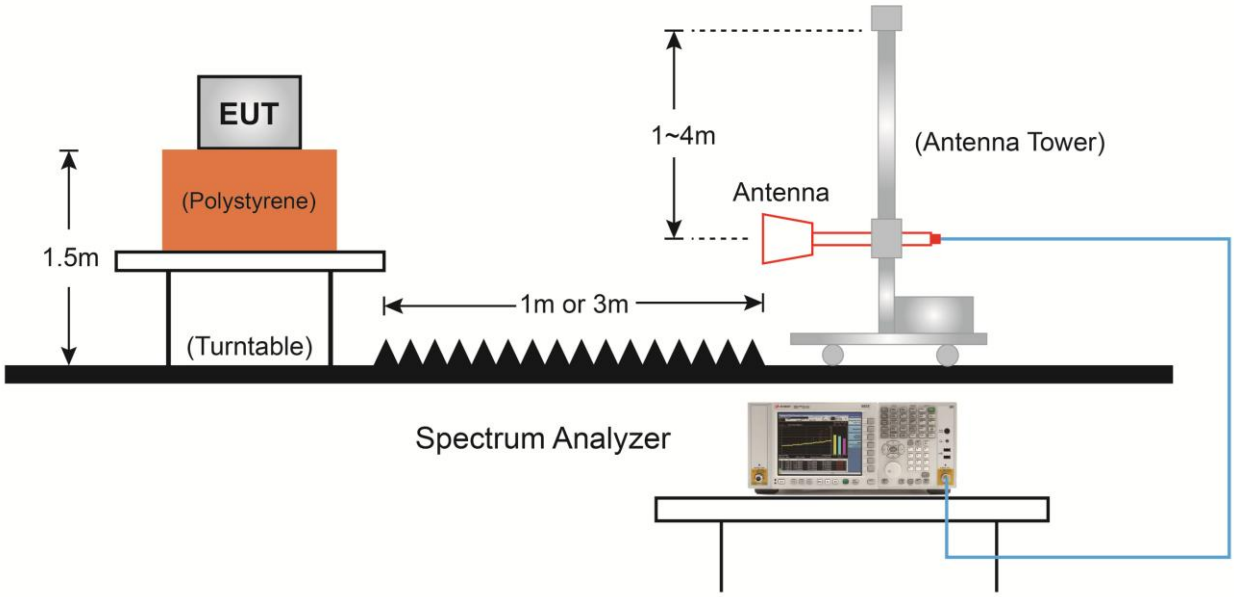
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). 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

7.9.4.Test Setup

30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



7.9.5.Test Result

Product	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	DH5	Test Channel	00
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	4451.0	38.9	4.3	43.2	83.4	-40.2	Peak	Horizontal
*	6567.5	34.3	10.7	45.0	83.4	-38.4	Peak	Horizontal
	7613.0	33.1	14.2	47.3	74.0	-26.7	Peak	Horizontal
	11463.5	31.3	20.6	51.9	74.0	-22.1	Peak	Horizontal
*	4451.0	39.5	4.3	43.8	83.4	-39.6	Peak	Vertical
*	6440.0	33.5	9.9	43.4	83.4	-40.0	Peak	Vertical
	7689.5	34.0	14.0	48.0	74.0	-26.0	Peak	Vertical
	10894.0	31.3	20.0	51.3	74.0	-22.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (103.4dBμV/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	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	DH5	Test Channel	39
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	4451.0	40.9	4.3	45.2	82.4	-37.2	Peak	Horizontal
*	6244.5	34.4	8.9	43.3	82.4	-39.1	Peak	Horizontal
	7689.5	32.7	14.0	46.7	74.0	-27.3	Peak	Horizontal
	10902.5	31.3	20.0	51.3	74.0	-22.7	Peak	Horizontal
*	4451.0	43.1	4.3	47.4	82.4	-35.0	Peak	Vertical
*	6380.5	37.1	9.3	46.4	82.4	-36.0	Peak	Vertical
	7460.0	33.0	14.2	47.2	74.0	-26.8	Peak	Vertical
	11285.0	30.5	20.6	51.1	74.0	-22.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (102.4dBμV/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	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	DH5	Test Channel	78
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	4451.0	41.3	4.3	45.6	81.4	-35.8	Peak	Horizontal
*	6661.0	33.8	10.8	44.6	81.4	-36.8	Peak	Horizontal
	7655.5	33.5	13.9	47.4	74.0	-26.6	Peak	Horizontal
	11565.5	30.9	20.8	51.7	74.0	-22.3	Peak	Horizontal
*	4451.0	41.7	4.3	46.0	81.4	-35.4	Peak	Vertical
*	6380.5	38.0	9.3	47.3	81.4	-34.1	Peak	Vertical
	7528.0	32.7	14.5	47.2	74.0	-26.8	Peak	Vertical
	11157.5	31.3	20.4	51.7	74.0	-22.3	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (101.4dBμV/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	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	2DH5	Test Channel	00
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	3201.5	47.0	0.6	47.6	80.8	-33.2	Peak	Horizontal
*	4451.0	40.7	4.3	45.0	80.8	-35.8	Peak	Horizontal
	7536.5	32.3	14.4	46.7	74.0	-27.3	Peak	Horizontal
	11166.0	30.4	20.5	50.9	74.0	-23.1	Peak	Horizontal
*	4451.0	42.1	4.3	46.4	80.8	-34.4	Peak	Vertical
*	6380.5	37.3	9.3	46.6	80.8	-34.2	Peak	Vertical
	7528.0	32.3	14.5	46.8	74.0	-27.2	Peak	Vertical
	10817.5	31.0	19.8	50.8	74.0	-23.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (100.8dBμV/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	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	2DH5	Test Channel	39
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	4451.0	41.1	4.3	45.4	80.5	-35.1	Peak	Horizontal
*	7179.5	32.9	13.9	46.8	80.5	-33.7	Peak	Horizontal
	8242.0	30.7	14.2	44.9	74.0	-29.1	Peak	Horizontal
	10817.5	31.2	19.8	51.0	74.0	-23.0	Peak	Horizontal
*	4451.0	43.0	4.3	47.3	80.5	-33.2	Peak	Vertical
*	6380.5	38.0	9.3	47.3	80.5	-33.2	Peak	Vertical
	7443.0	32.2	14.3	46.5	74.0	-27.5	Peak	Vertical
	11650.5	30.5	21.0	51.5	74.0	-22.5	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (100.5dBμV/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	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	2DH5	Test Channel	78
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	3303.5	44.4	0.4	44.8	80.3	-35.5	Peak	Horizontal
*	4451.0	41.6	4.3	45.9	80.3	-34.4	Peak	Horizontal
	7621.5	33.6	14.2	47.8	74.0	-26.2	Peak	Horizontal
	11616.5	30.7	20.8	51.5	74.0	-22.5	Peak	Horizontal
*	4451.0	41.0	4.3	45.3	80.3	-35.0	Peak	Vertical
*	6380.5	37.2	9.3	46.5	80.3	-33.8	Peak	Vertical
	7443.0	32.4	14.3	46.7	74.0	-27.3	Peak	Vertical
	11531.5	30.8	20.8	51.6	74.0	-22.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (100.3dBμV/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	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	3DH5	Test Channel	00
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	3201.5	46.5	0.6	47.1	80.9	-33.8	Peak	Horizontal
*	4451.0	40.2	4.3	44.5	80.9	-36.4	Peak	Horizontal
	7638.5	32.6	14.1	46.7	74.0	-27.3	Peak	Horizontal
	11531.5	30.6	20.8	51.4	74.0	-22.6	Peak	Horizontal
*	3201.5	45.0	0.6	45.6	80.9	-35.3	Peak	Vertical
*	4451.0	42.0	4.3	46.3	80.9	-34.6	Peak	Vertical
	7562.0	33.7	14.1	47.8	74.0	-26.2	Peak	Vertical
	11183.0	31.1	20.4	51.5	74.0	-22.5	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (100.9dBμV/m) or 15.209 which is higher.

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

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

Product	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	3DH5	Test Channel	39
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	3252.5	44.0	0.5	44.5	80.7	-36.2	Peak	Horizontal
*	4451.0	40.7	4.3	45.0	80.7	-35.7	Peak	Horizontal
	7502.5	32.3	14.2	46.5	74.0	-27.5	Peak	Horizontal
	11676.0	30.5	20.7	51.2	74.0	-22.8	Peak	Horizontal
*	3252.5	41.9	0.5	42.4	80.7	-38.3	Peak	Vertical
*	4451.0	41.4	4.3	45.7	80.7	-35.0	Peak	Vertical
	7460.0	33.0	14.2	47.2	74.0	-26.8	Peak	Vertical
	10970.5	31.3	20.0	51.3	74.0	-22.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (100.7dBμV/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	WIFI+BT Combo Module	Temperature	25°C
Test Engineer	Cloud Guo	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/04
Test Mode	3DH5	Test Channel	78
Remark	1. Average measurement was not performed if peak level lower than average limit (54dBμV/m). 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
*	3303.5	44.7	0.4	45.1	80.6	-35.5	Peak	Horizontal
*	4451.0	41.9	4.3	46.2	80.6	-34.4	Peak	Horizontal
	7655.5	33.4	13.9	47.3	74.0	-26.7	Peak	Horizontal
	11667.5	30.7	20.8	51.5	74.0	-22.5	Peak	Horizontal
*	4451.0	40.9	4.3	45.2	80.6	-35.4	Peak	Vertical
*	6380.5	37.5	9.3	46.8	80.6	-33.8	Peak	Vertical
	7536.5	33.1	14.4	47.5	74.0	-26.5	Peak	Vertical
	11480.5	31.1	20.6	51.7	74.0	-22.3	Peak	Vertical

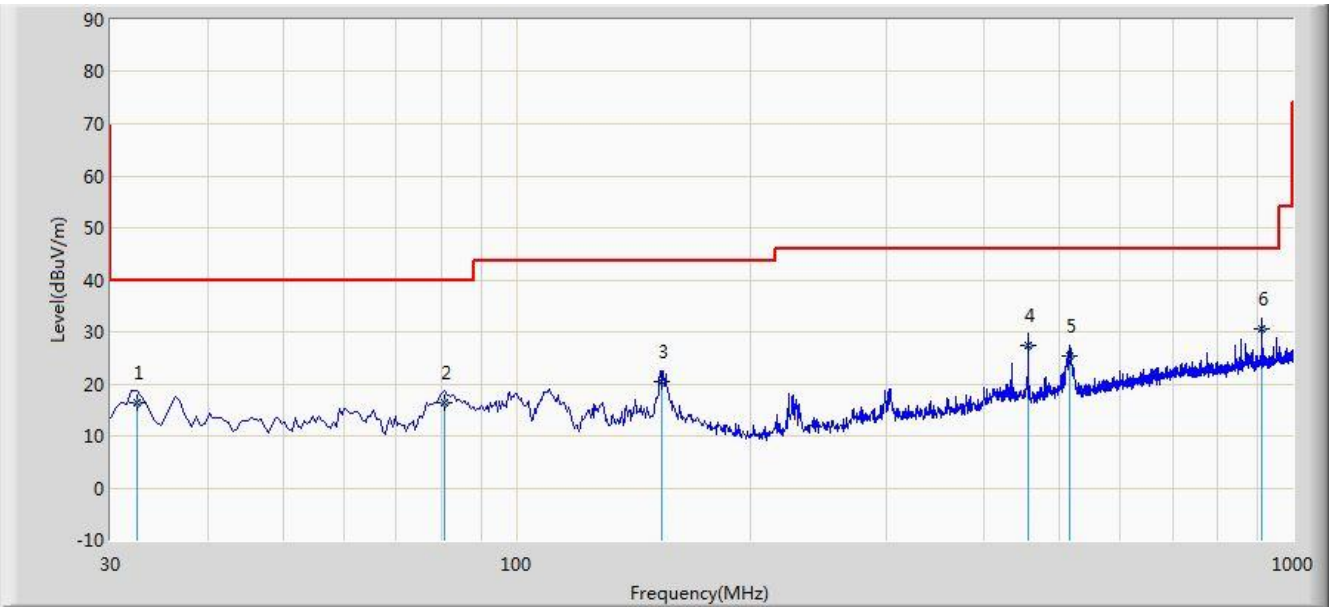
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (100.6dBμV/m) or 15.209 which is higher.

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

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

The worst case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/03/13 - 03:23
Limit: FCC_Part15.209_RSE(3m)	Engineer: Messiah Li
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Worst Case Mode: There is the worst case within frequency range 30MHz~1GHz.	



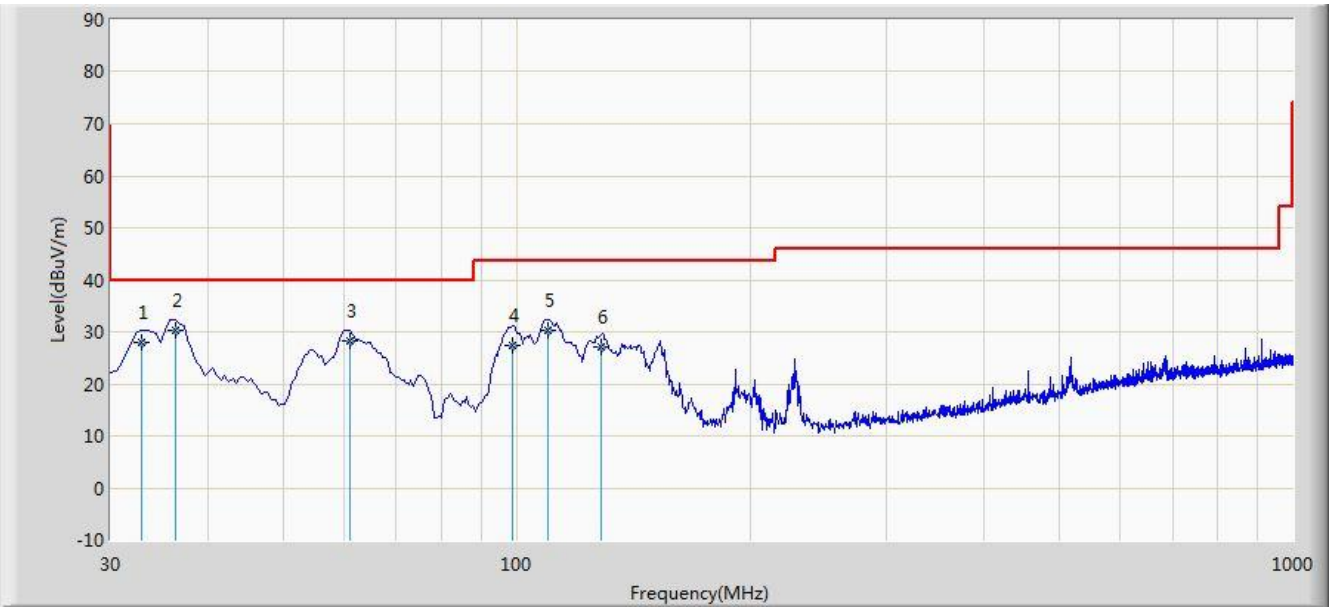
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		32.410	16.411	2.580	-23.589	40.000	13.831	QP
2		80.640	16.392	6.230	-23.608	40.000	10.162	QP
3		153.640	20.434	5.140	-23.066	43.500	15.294	QP
4		455.840	27.405	9.410	-18.595	46.000	17.995	QP
5		516.820	25.259	6.350	-20.741	46.000	18.909	QP
6	*	912.450	30.722	6.120	-15.278	46.000	24.602	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: 2019/03/13 - 03:24
Limit: FCC_Part15.209_RSE(3m)	Engineer: Messiah Li
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Worst Case Mode: There is the worst case within frequency range 30MHz~1GHz.	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		32.840	28.099	14.250	-11.901	40.000	13.848	QP
2	*	36.310	30.266	16.140	-9.734	40.000	14.126	QP
3		61.030	28.124	14.870	-11.876	40.000	13.255	QP
4		98.740	27.452	16.480	-16.048	43.500	10.972	QP
5		110.020	30.338	18.240	-13.162	43.500	12.098	QP
6		128.650	27.014	13.260	-16.486	43.500	13.754	QP

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

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

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

7.10. Radiated Restricted Band Edge Measurement

For 15.205 requirement:

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

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1] 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 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 [V/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For RSS-Gen Section 8.10 requirement:

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

Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.009 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.525225	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	--
8.37625 - 8.38675	1718.8 -1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 -2390	
12.51975 - 12.52025	2655 - 2900	
12.57675 - 12.57725	3260 - 3267	
13.36 -13.41	3332 -3339	
16.42 - 16.423	334.5 - 3358	
16.69475 - 16.69525	3500 - 4400	
16.80425 - 16.80475	4500 - 5150	
25.5 - 25.67	5350 - 5460	
37.5 - 38.25	7250 - 7750	
73 - 74.6	8025 - 8500	
74.8 - 75.2	--	
108 - 138		

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

RSS-Gen Section 8.9		
Frequency [MHz]	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

7.10.1. Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

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

7.10.2. Test Setting

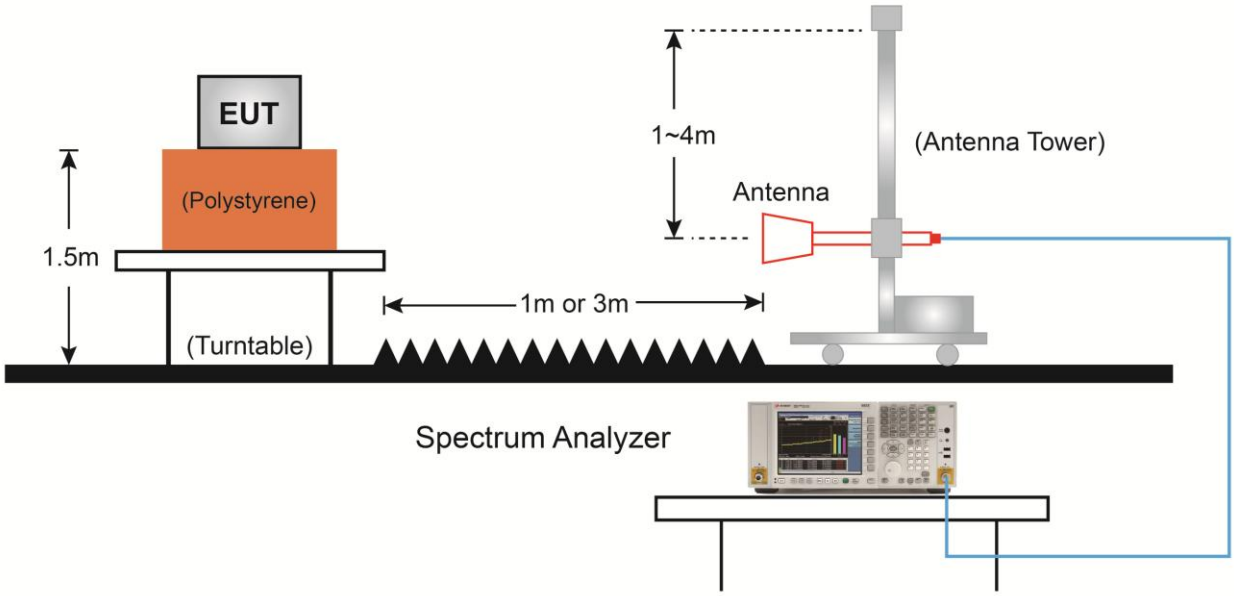
Peak Field Strength Measurements

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

Average Measurements above 1GHz (Method VB)

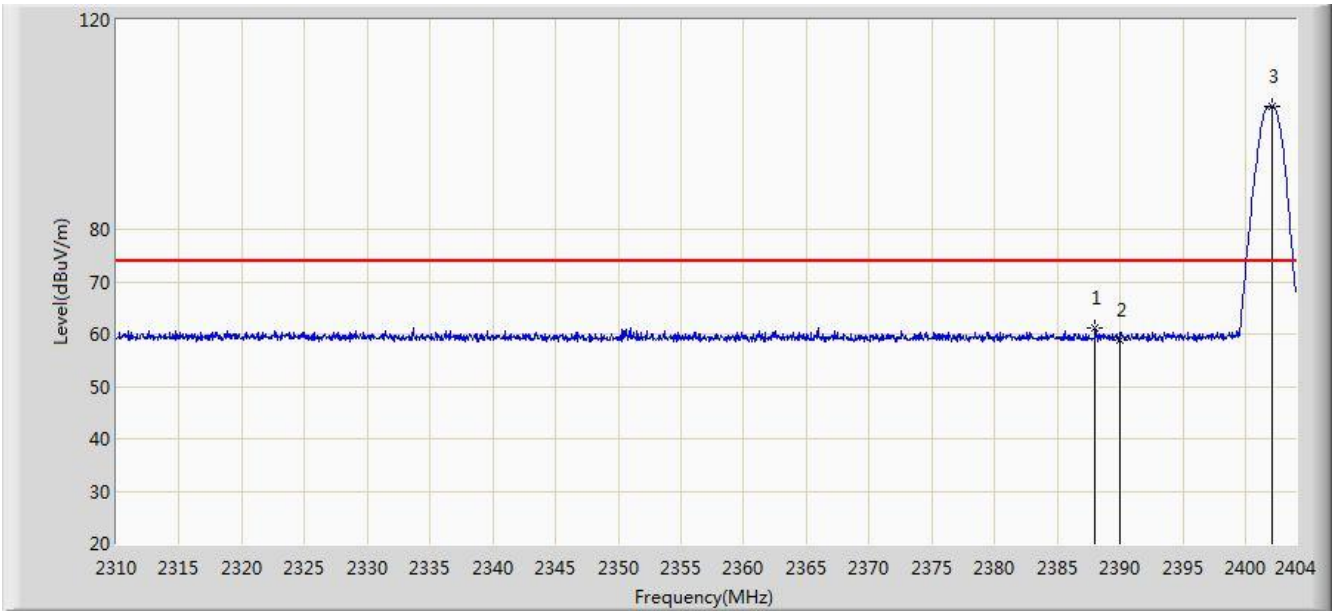
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). 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

7.10.3. Test Setup



7.10.4. Test Result

Site: AC2	Time: 2019/03/07 - 00:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth DH5 at Channel 2402MHz	

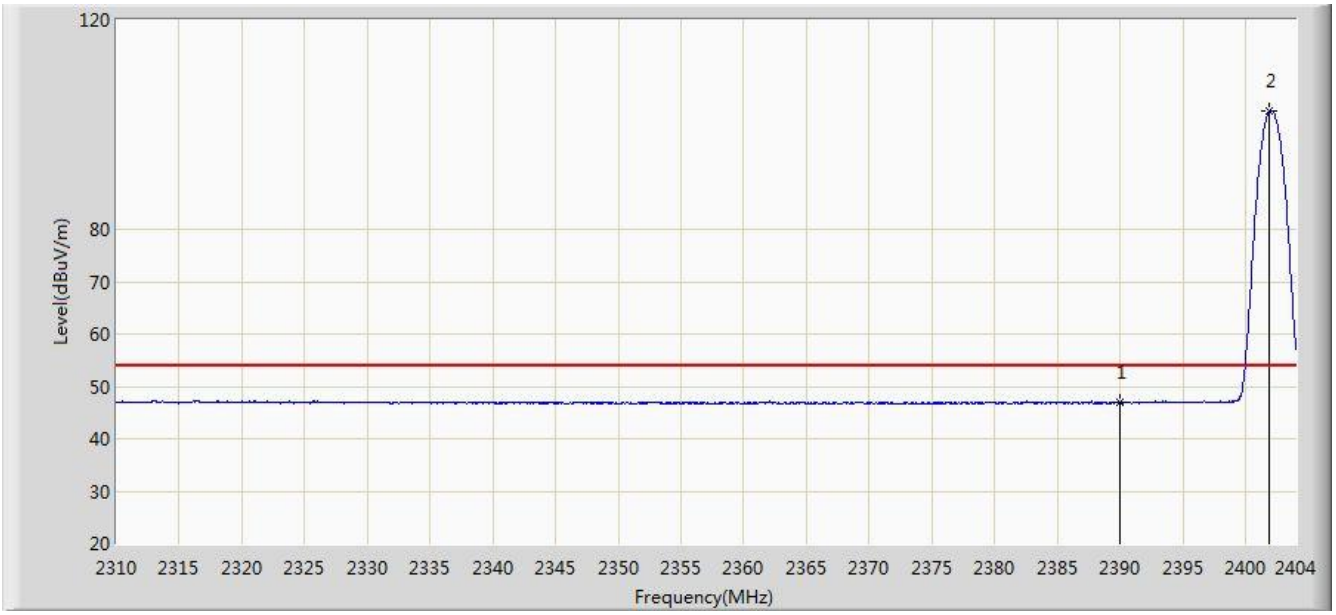


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.020	61.173	28.595	-12.827	74.000	32.578	PK
2			2390.000	58.864	26.289	-15.136	74.000	32.575	PK
3		*	2402.120	103.420	70.861	N/A	N/A	32.558	PK

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

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

Site: AC2	Time: 2019/03/07 - 00:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth DH5 at Channel 2402MHz	

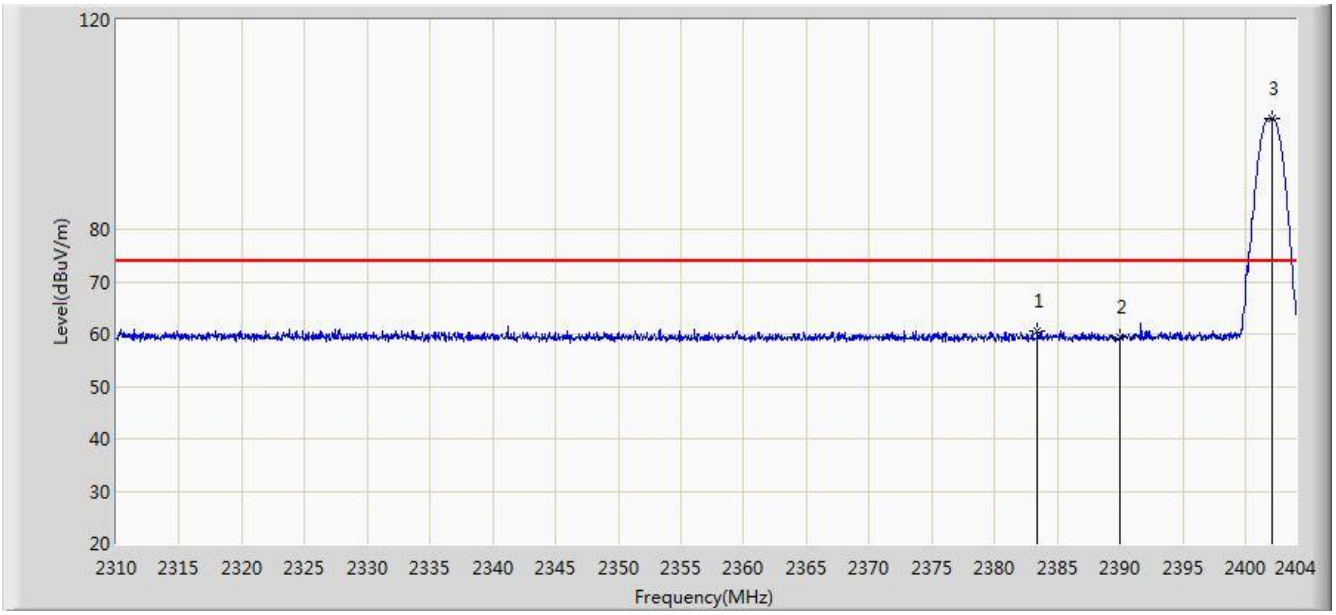


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.830	14.255	-7.170	54.000	32.575	AV
2		*	2401.932	102.495	69.936	N/A	N/A	32.559	AV

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

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

Site: AC2	Time: 2019/03/07 - 00:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth DH5 at Channel 2402MHz	

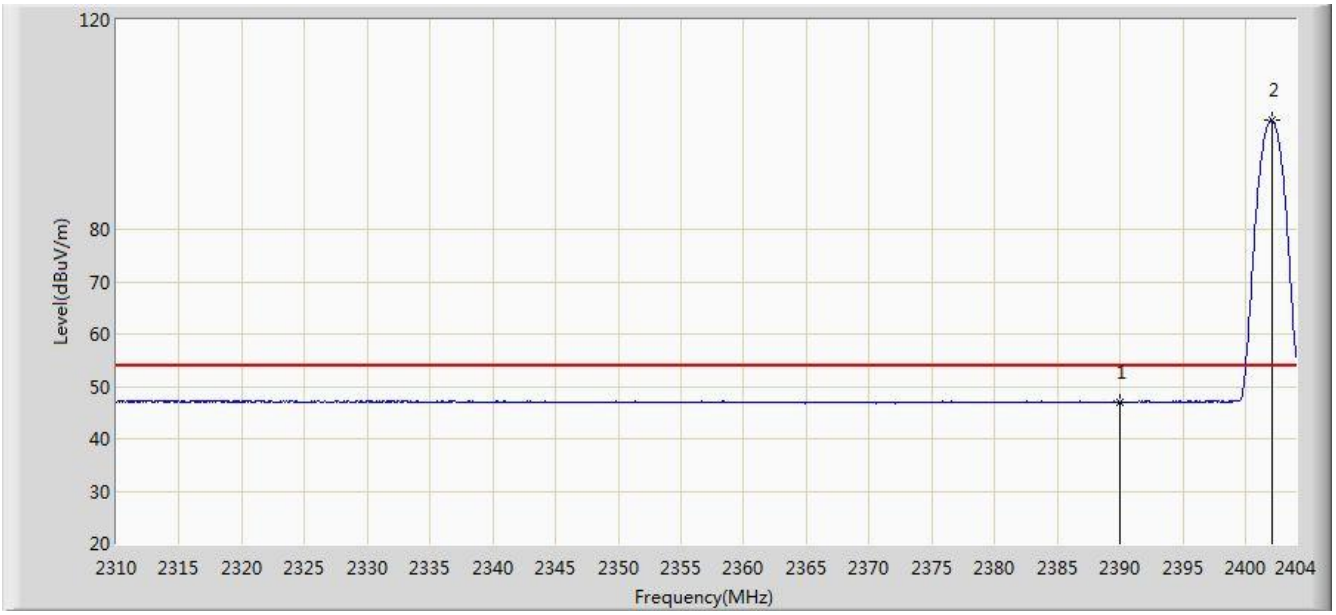


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2383.414	60.585	27.999	-13.415	74.000	32.586	PK
2			2390.000	59.327	26.752	-14.673	74.000	32.575	PK
3		*	2402.073	101.084	68.525	N/A	N/A	32.558	PK

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

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

Site: AC2	Time: 2019/03/07 - 00:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth DH5 at Channel 2402MHz	

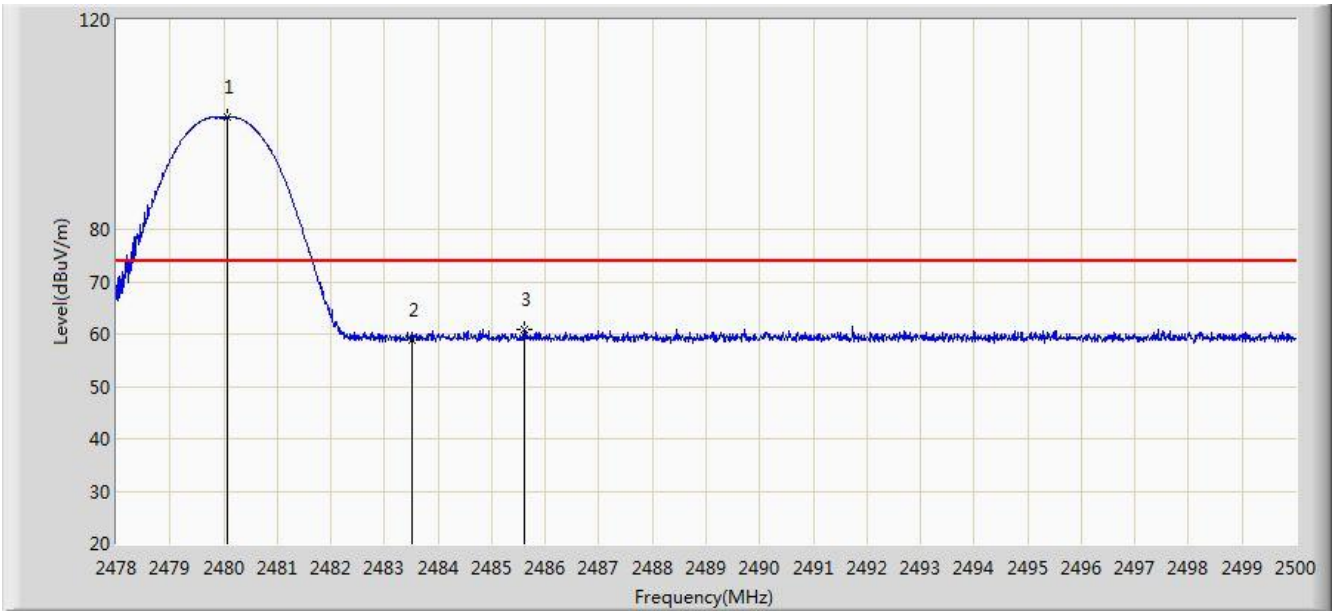


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.936	14.361	-7.064	54.000	32.575	AV
2		*	2402.073	100.814	68.255	N/A	N/A	32.558	AV

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

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

Site: AC2	Time: 2019/03/07 - 00:40
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth DH5 at Channel 2480MHz	

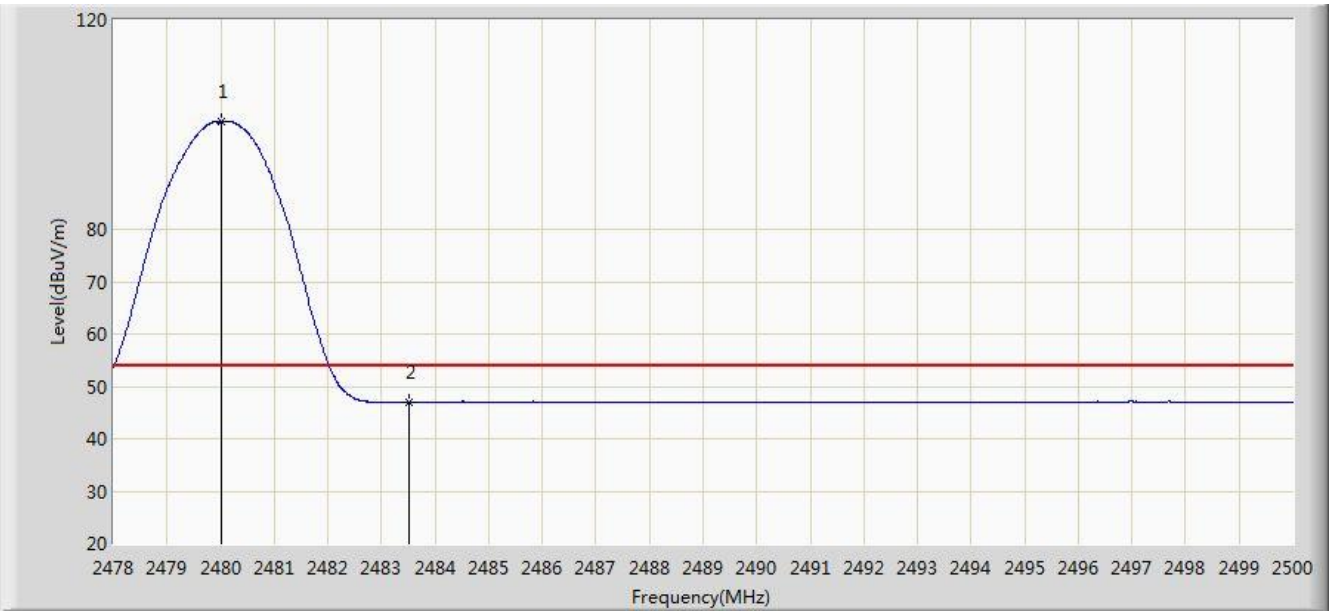


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.079	101.384	68.797	N/A	N/A	32.587	PK
2			2483.500	58.787	26.191	-15.213	74.000	32.596	PK
3			2485.612	60.863	28.262	-13.137	74.000	32.601	PK

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

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

Site: AC2	Time: 2019/03/07 - 00:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth DH5 at Channel 2480MHz	

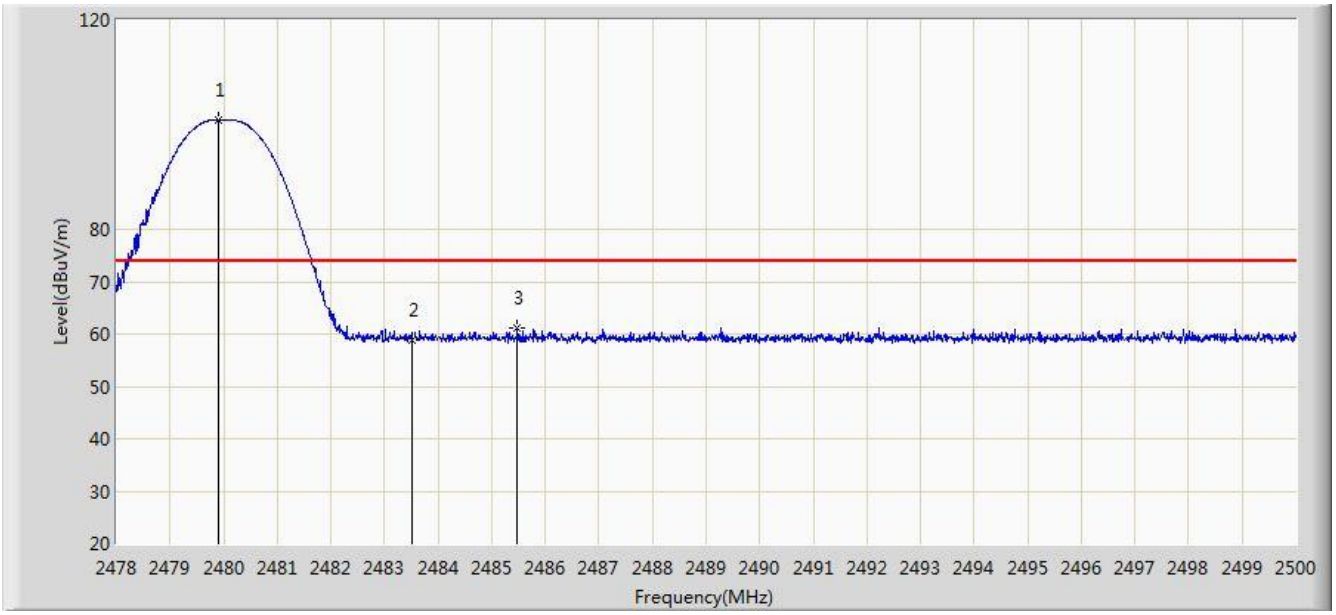


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.024	100.612	68.025	N/A	N/A	32.587	AV
2			2483.500	46.946	14.350	-7.054	54.000	32.596	AV

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

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

Site: AC2	Time: 2019/03/07 - 00:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth DH5 at Channel 2480MHz	

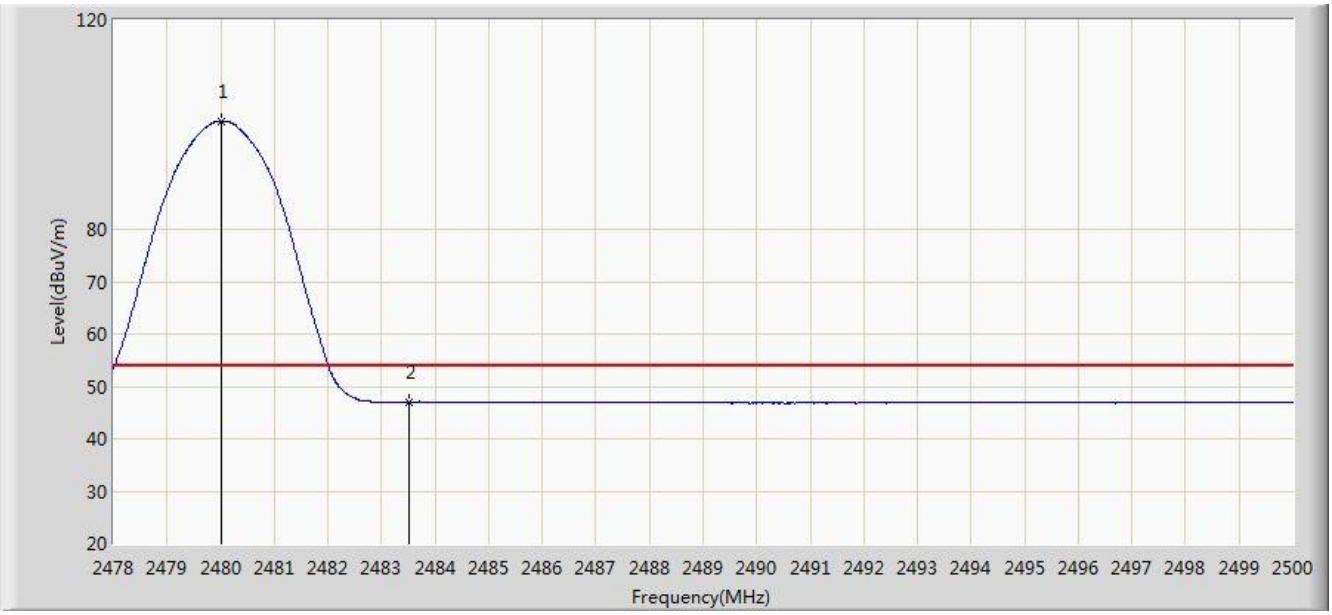


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.903	100.824	68.237	N/A	N/A	32.587	PK
2			2483.500	58.896	26.300	-15.104	74.000	32.596	PK
3			2485.480	61.244	28.643	-12.756	74.000	32.601	PK

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

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

Site: AC2	Time: 2019/03/07 - 00:56
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth DH5 at Channel 2480MHz	

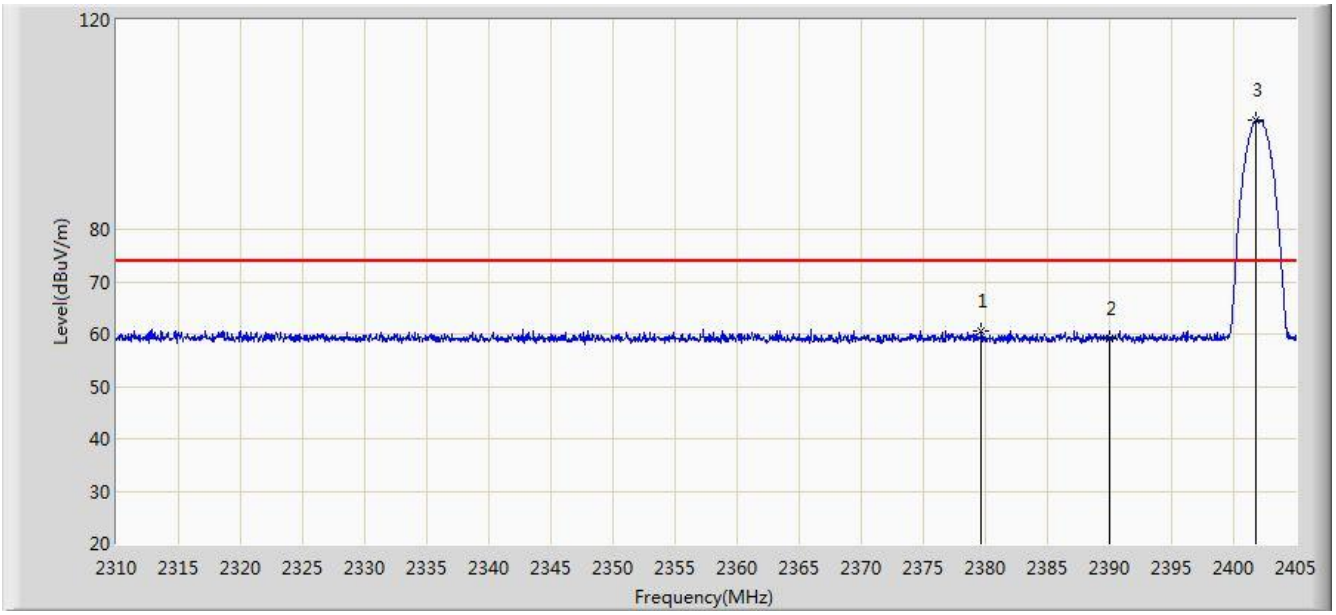


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.002	100.708	68.121	N/A	N/A	32.587	AV
2			2483.500	46.985	14.389	-7.015	54.000	32.596	AV

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

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

Site: AC2	Time: 2019/03/07 - 01:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 2DH5 at Channel 2402MHz	

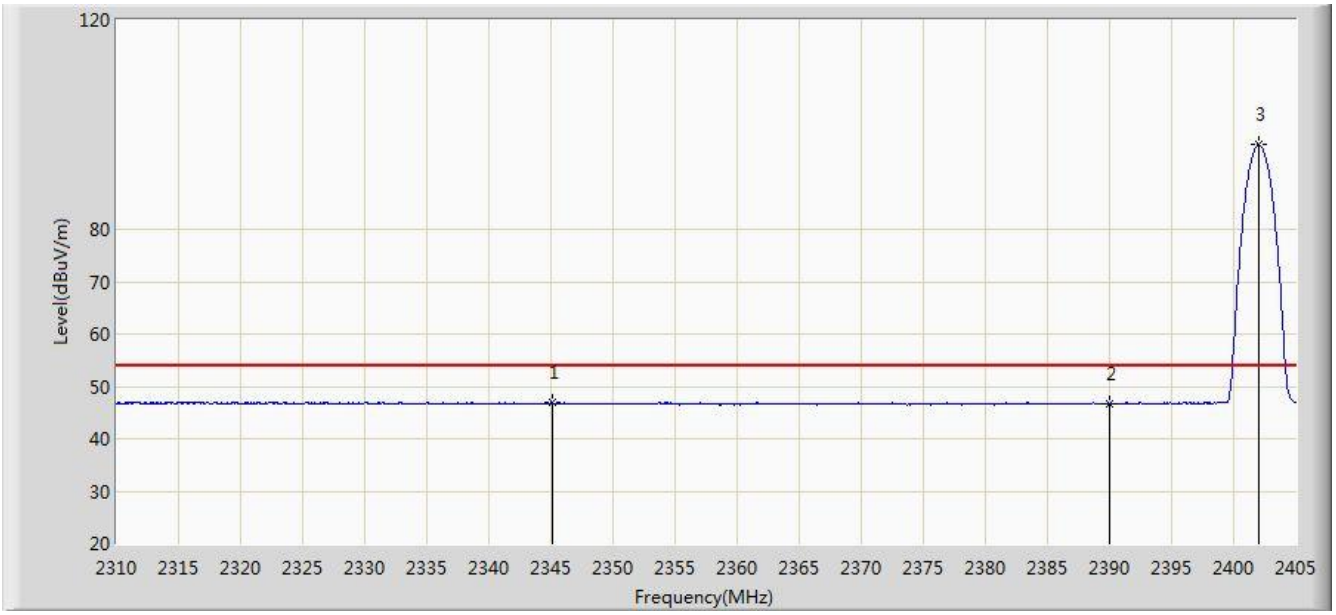


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2379.683	60.594	28.001	-13.406	74.000	32.593	PK
2			2390.000	59.207	26.632	-14.793	74.000	32.575	PK
3		*	2401.817	100.797	68.238	N/A	N/A	32.559	PK

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

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

Site: AC2	Time: 2019/03/07 - 01:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 2DH5 at Channel 2402MHz	

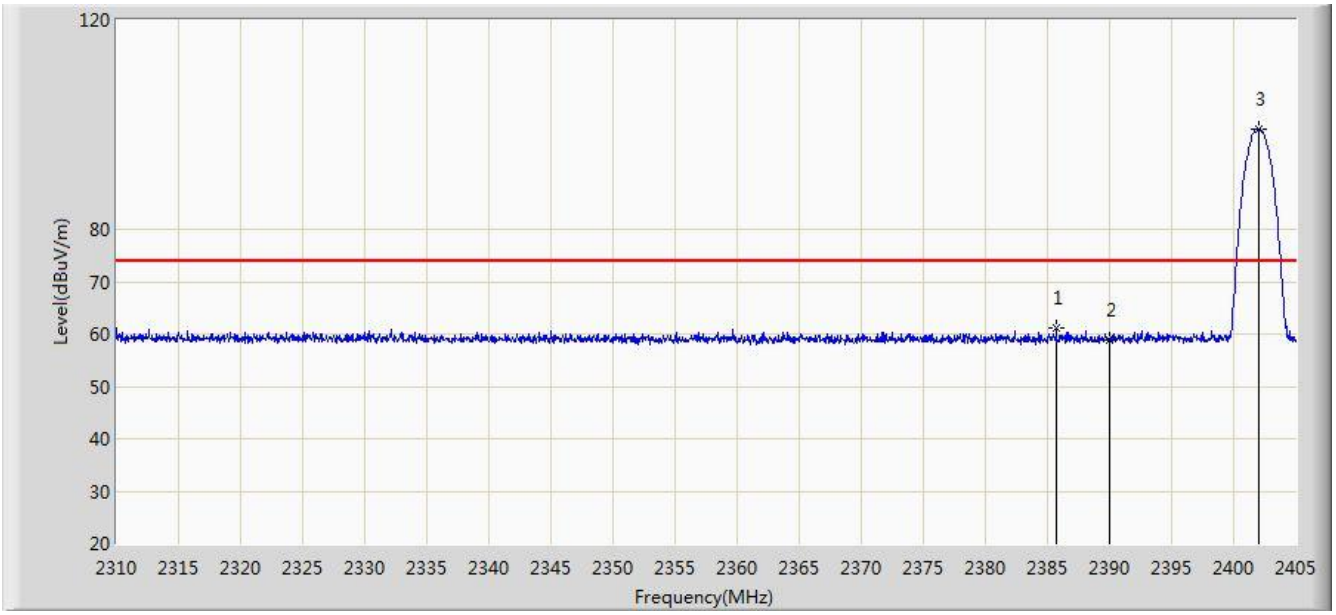


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2345.103	46.919	14.254	-7.081	54.000	32.665	AV
2			2390.000	46.679	14.104	-7.321	54.000	32.575	AV
3		*	2402.008	96.112	63.553	N/A	N/A	32.559	AV

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

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

Site: AC2	Time: 2019/03/07 - 01:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 2DH5 at Channel 2402MHz	

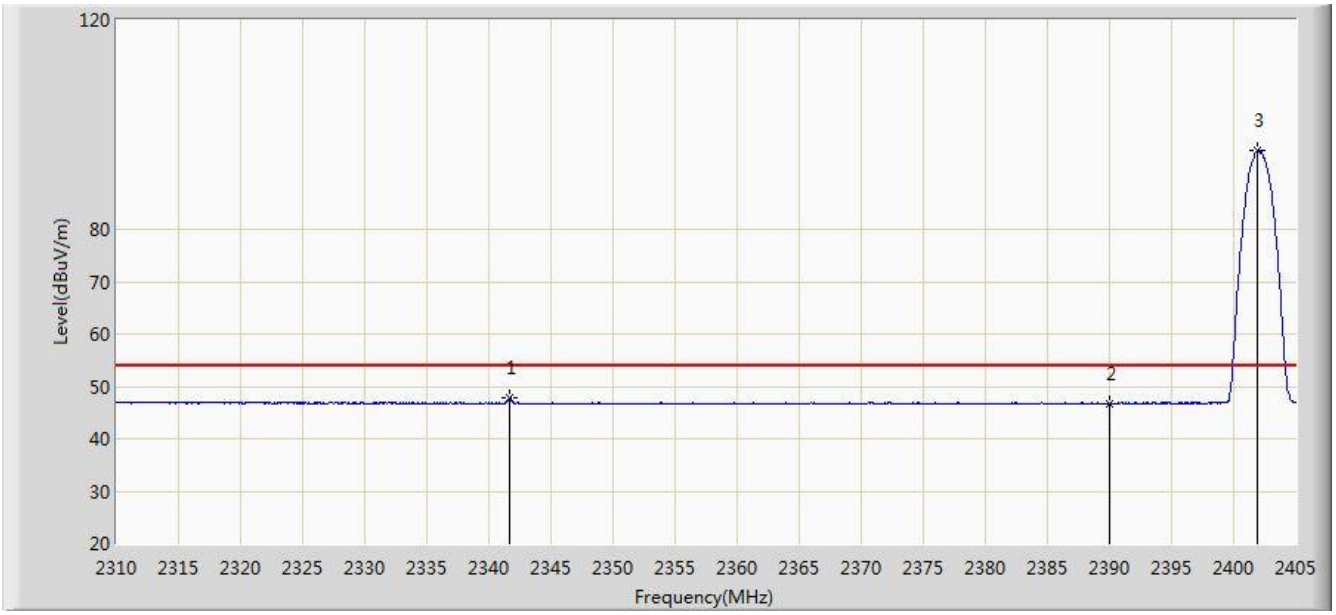


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2385.715	61.250	28.668	-12.750	74.000	32.582	PK
2			2390.000	58.906	26.331	-15.094	74.000	32.575	PK
3		*	2402.008	99.204	66.645	N/A	N/A	32.559	PK

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

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

Site: AC2	Time: 2019/03/07 - 01:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 2DH5 at Channel 2402MHz	

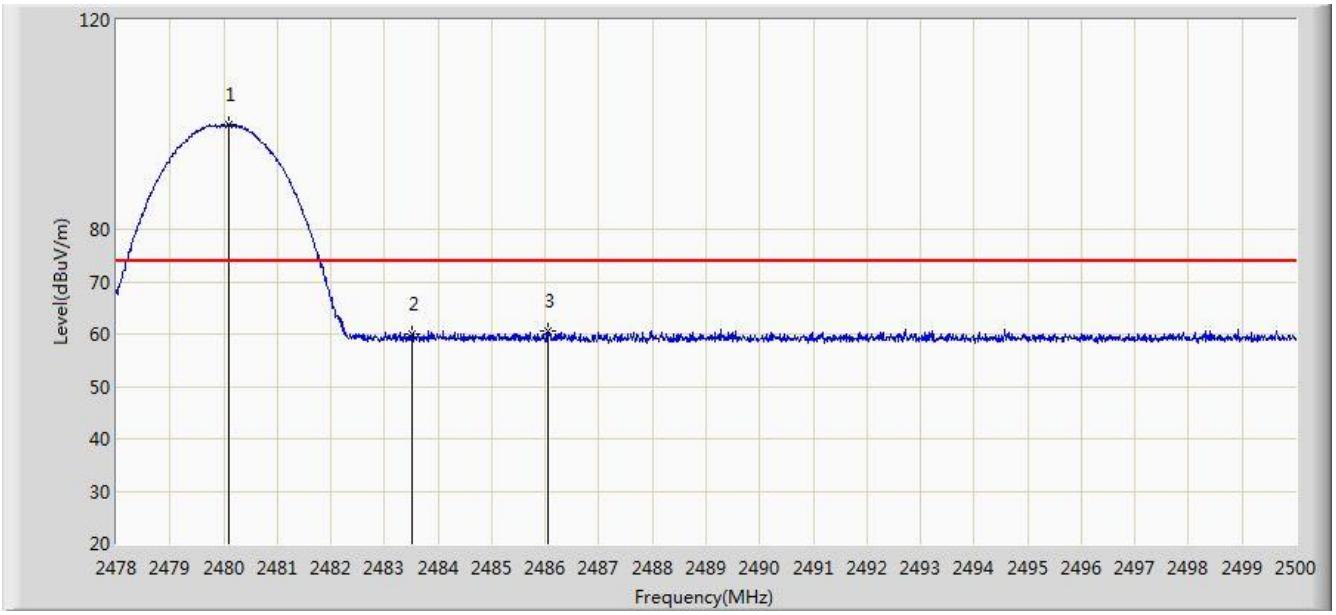


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2341.683	47.820	15.143	-6.180	54.000	32.676	AV
2			2390.000	46.722	14.147	-7.278	54.000	32.575	AV
3		*	2401.865	95.077	62.518	N/A	N/A	32.559	AV

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

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

Site: AC2	Time: 2019/03/07 - 01:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 2DH5 at Channel 2480MHz	

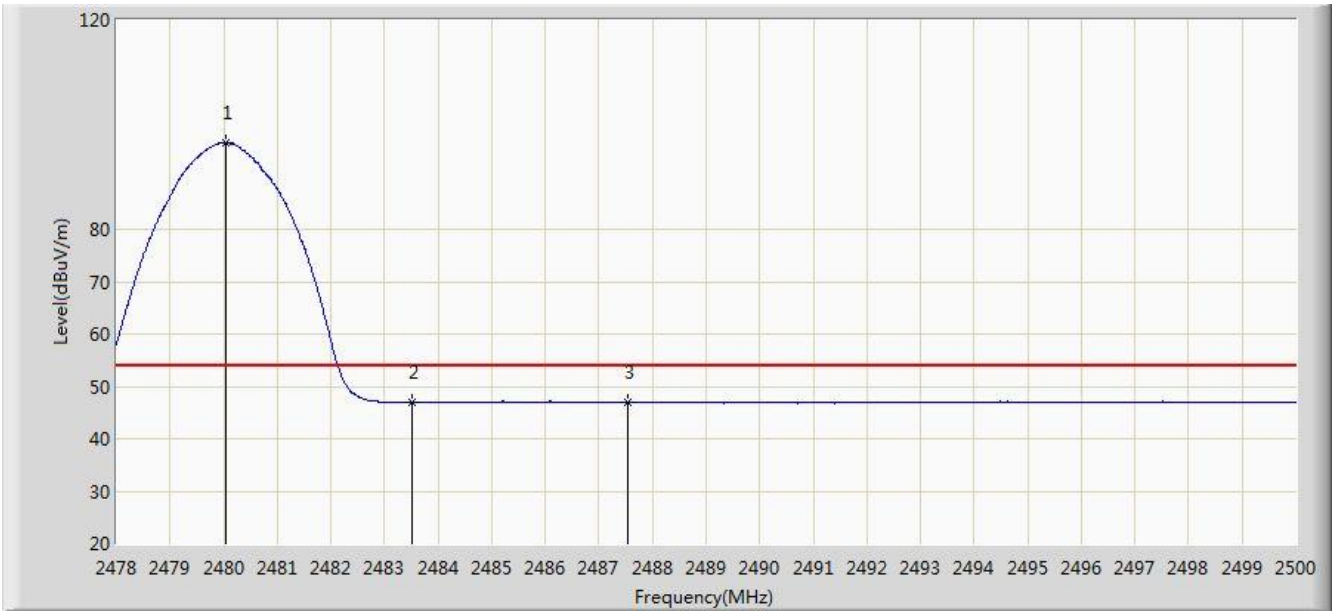


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.090	100.020	67.433	N/A	N/A	32.587	PK
2			2483.500	60.034	27.438	-13.966	74.000	32.596	PK
3			2486.041	60.599	27.997	-13.401	74.000	32.602	PK

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

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

Site: AC2	Time: 2019/03/07 - 01:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 2DH5 at Channel 2480MHz	

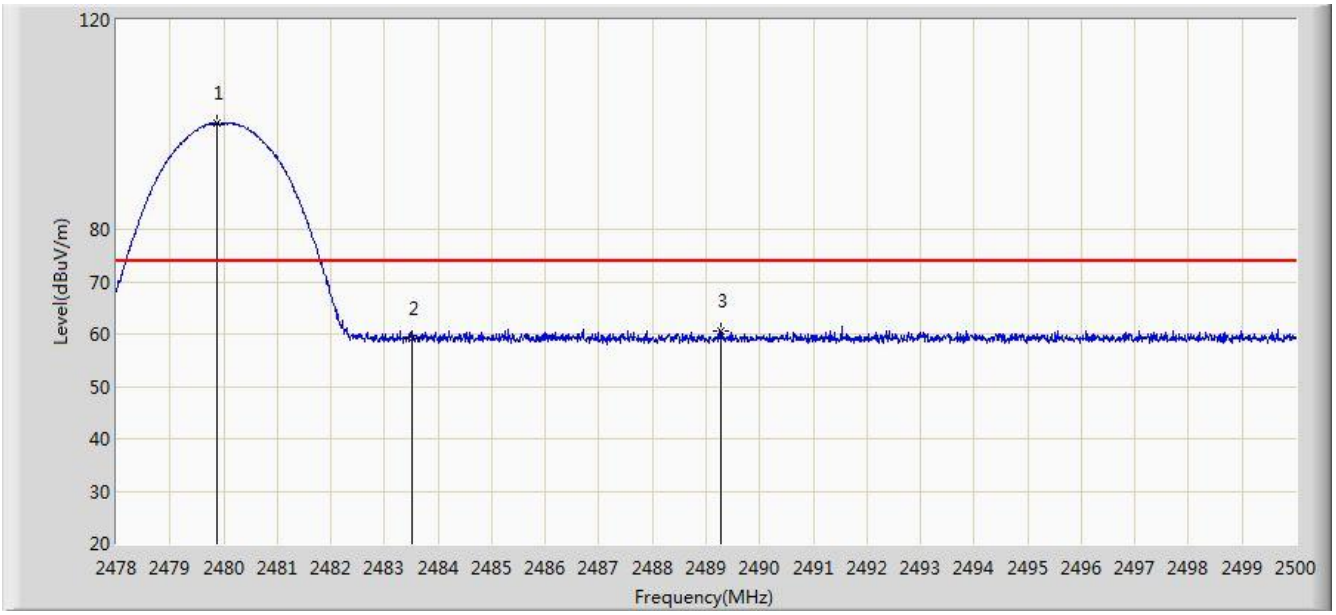


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.046	96.423	63.836	N/A	N/A	32.587	AV
2			2483.500	46.897	14.301	-7.103	54.000	32.596	AV
3			2487.537	46.900	14.294	-7.100	54.000	32.606	AV

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

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

Site: AC2	Time: 2019/03/07 - 01:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 2DH5 at Channel 2480MHz	

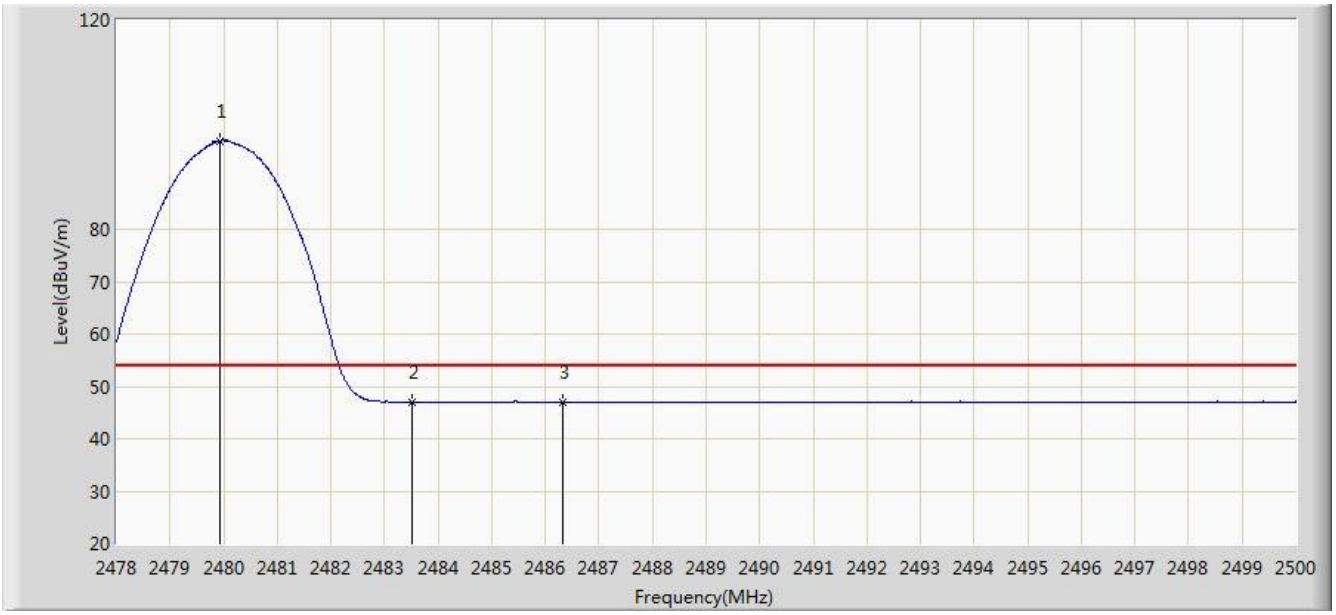


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.870	100.300	67.713	N/A	N/A	32.587	PK
2			2483.500	59.038	26.442	-14.962	74.000	32.596	PK
3			2489.286	60.679	28.069	-13.321	74.000	32.610	PK

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

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

Site: AC2	Time: 2019/03/07 - 01:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 2DH5 at Channel 2480MHz	

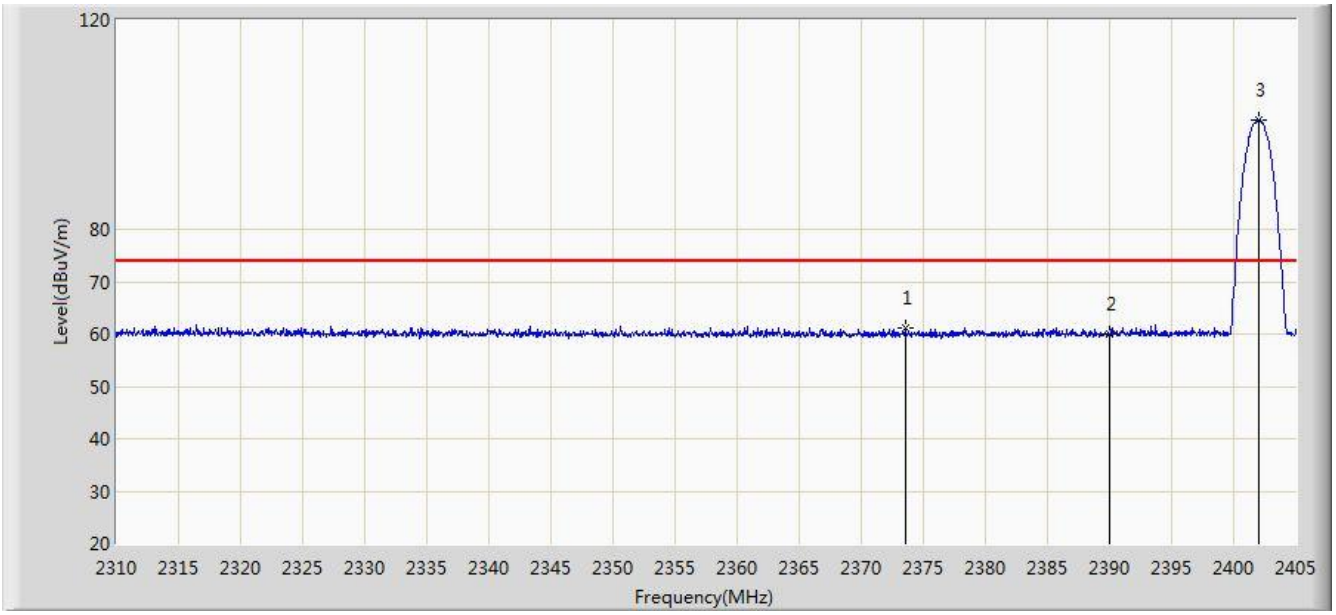


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.936	96.930	64.343	N/A	N/A	32.587	AV
2			2483.500	46.934	14.338	-7.066	54.000	32.596	AV
3			2486.338	46.938	14.335	-7.062	54.000	32.603	AV

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

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

Site: AC2	Time: 2019/03/07 - 01:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 3DH5 at Channel 2402MHz	

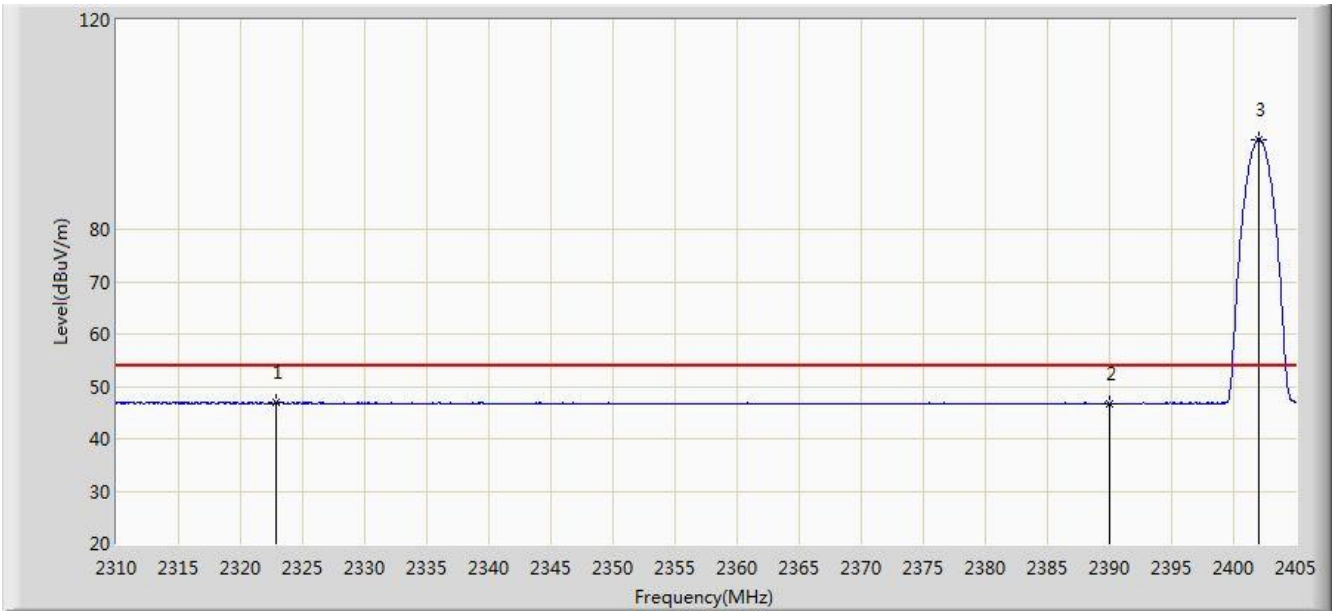


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2373.555	61.053	28.450	-12.947	74.000	32.603	PK
2			2390.000	59.953	27.378	-14.047	74.000	32.575	PK
3		*	2402.008	100.902	68.343	N/A	N/A	32.559	PK

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

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

Site: AC2	Time: 2019/03/07 - 02:24
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 3DH5 at Channel 2402MHz	

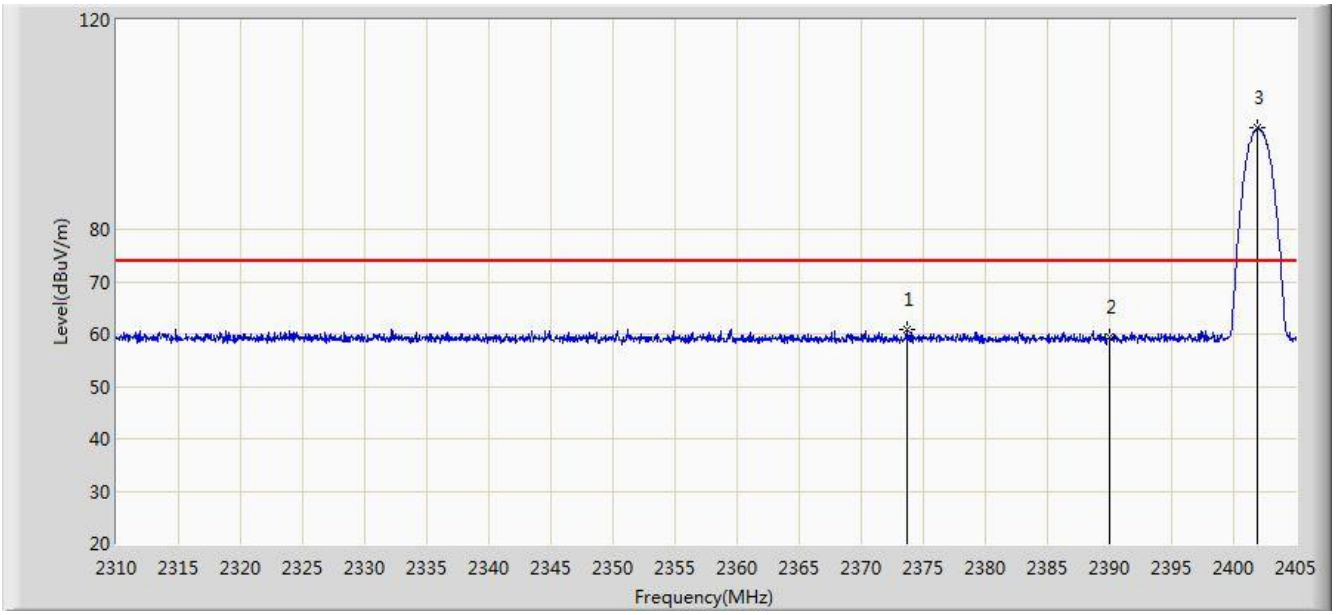


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2322.825	46.911	14.149	-7.089	54.000	32.762	AV
2			2390.000	46.701	14.126	-7.299	54.000	32.575	AV
3		*	2402.008	97.224	64.665	N/A	N/A	32.559	AV

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

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

Site: AC2	Time: 2019/03/07 - 02:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 3DH5 at Channel 2402MHz	

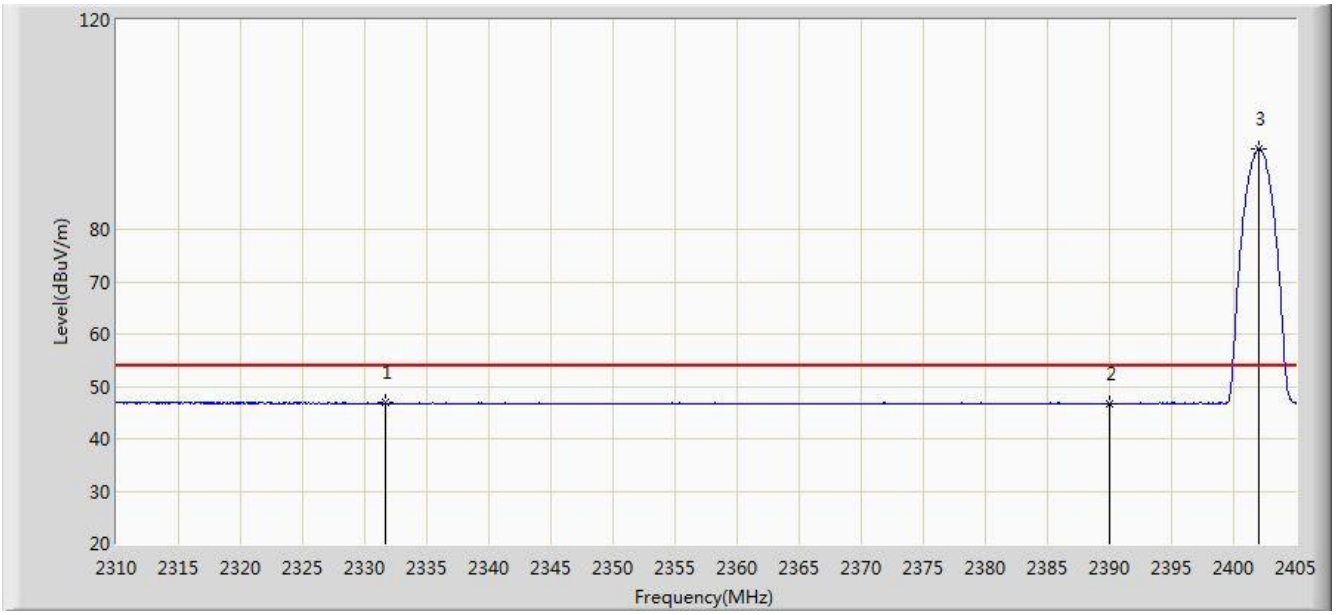


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2373.650	60.937	28.334	-13.063	74.000	32.602	PK
2			2390.000	59.348	26.773	-14.652	74.000	32.575	PK
3		*	2401.913	99.458	66.899	N/A	N/A	32.559	PK

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

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

Site: AC2	Time: 2019/03/07 - 02:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 3DH5 at Channel 2402MHz	

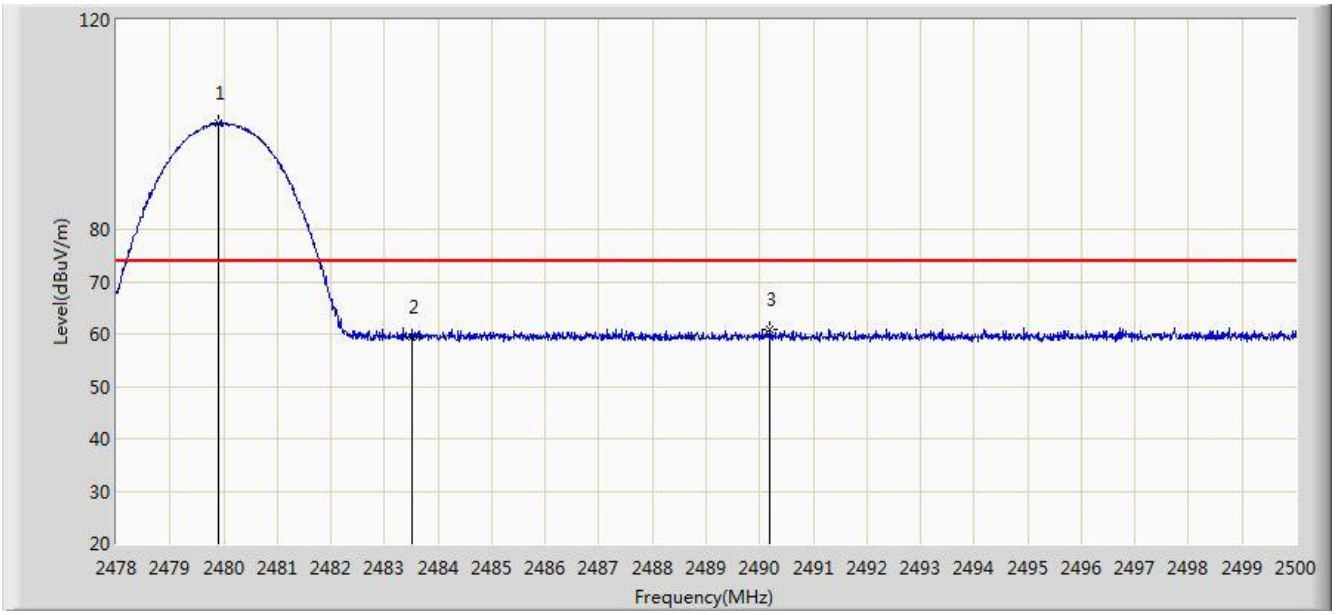


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2331.613	46.870	14.147	-7.130	54.000	32.722	AV
2			2390.000	46.667	14.092	-7.333	54.000	32.575	AV
3		*	2402.008	95.350	62.791	N/A	N/A	32.559	AV

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

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

Site: AC2	Time: 2019/03/07 - 02:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 3DH5 at Channel 2480MHz	

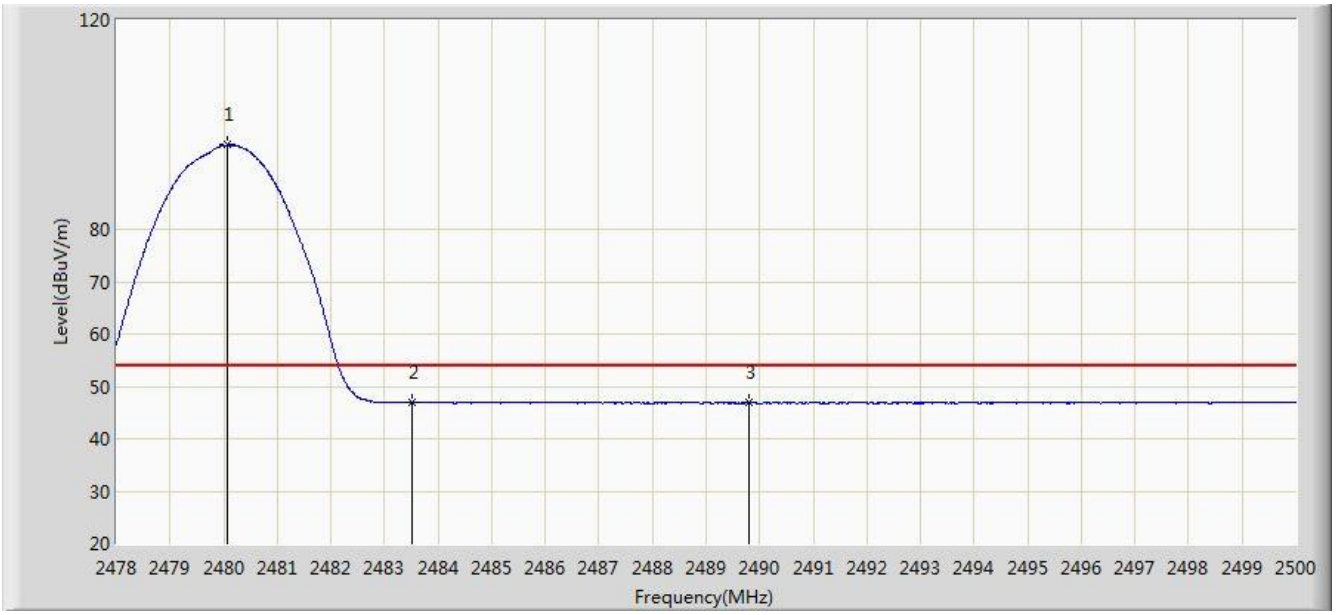


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.903	100.340	67.753	N/A	N/A	32.587	PK
2			2483.500	59.323	26.727	-14.677	74.000	32.596	PK
3			2490.177	60.865	28.252	-13.135	74.000	32.613	PK

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

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

Site: AC2	Time: 2019/03/07 - 02:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 3DH5 at Channel 2480MHz	

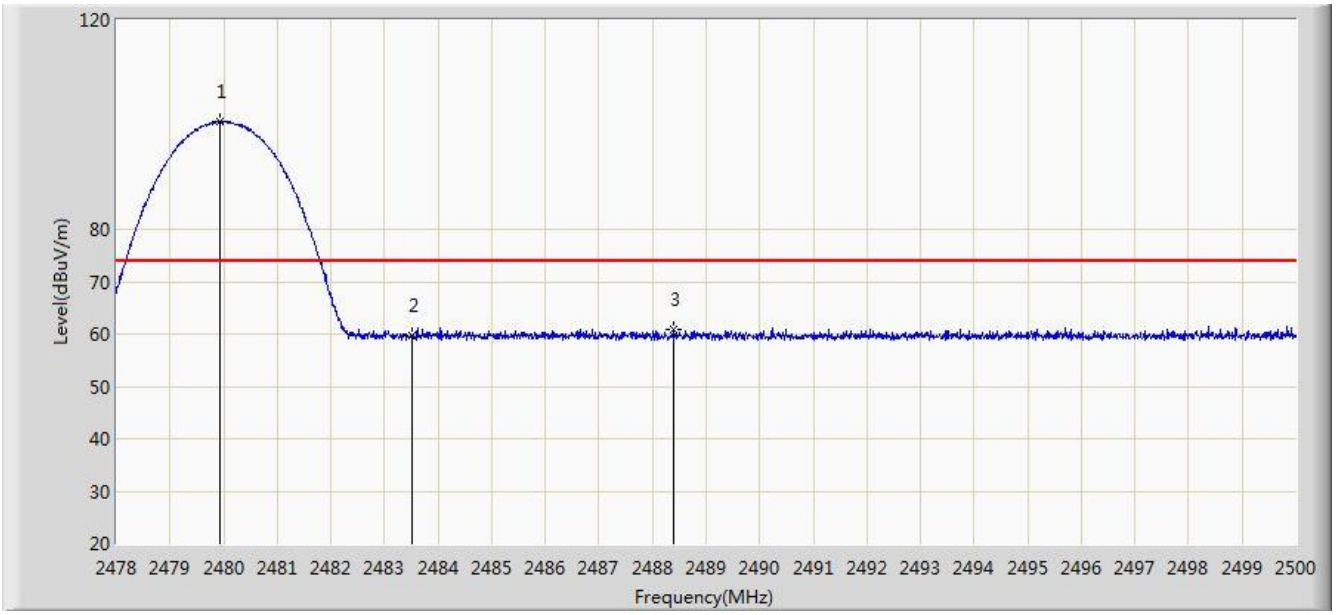


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.079	96.114	63.527	N/A	N/A	32.587	AV
2			2483.500	46.872	14.276	-7.128	54.000	32.596	AV
3			2489.792	46.961	14.349	-7.039	54.000	32.612	AV

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

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

Site: AC2	Time: 2019/03/07 - 02:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 3DH5 at Channel 2480MHz	

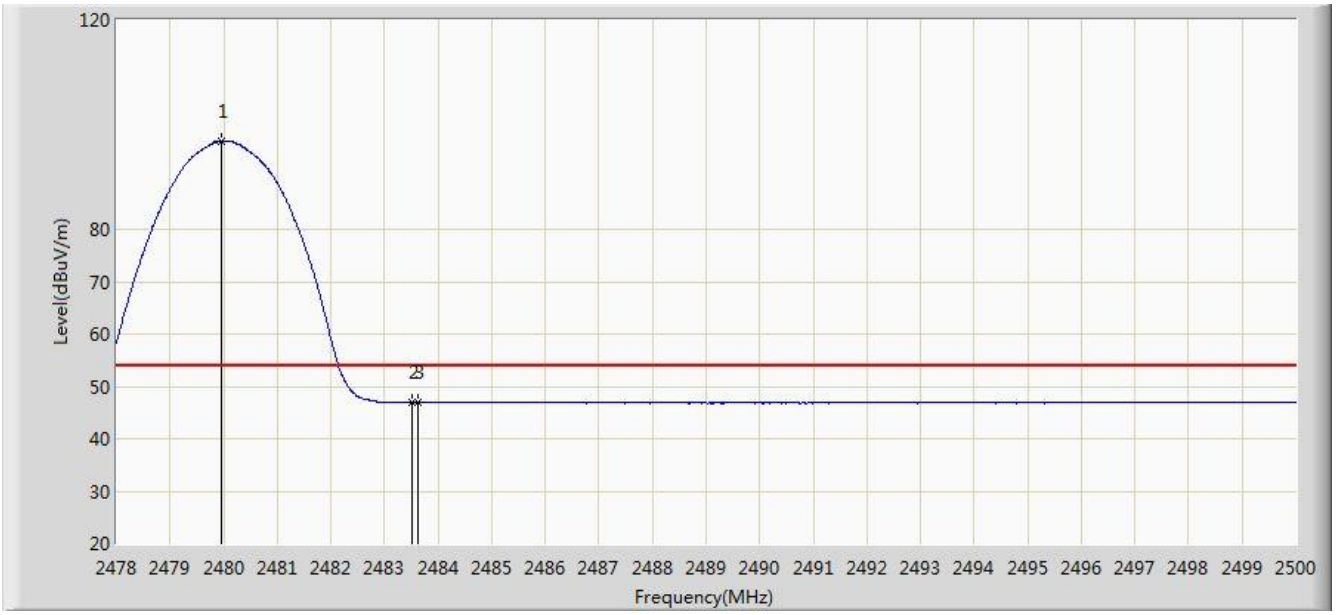


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.936	100.630	68.043	N/A	N/A	32.587	PK
2			2483.500	59.678	27.082	-14.322	74.000	32.596	PK
3			2488.384	60.848	28.240	-13.152	74.000	32.608	PK

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

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

Site: AC2	Time: 2019/03/07 - 02:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Transmit by Bluetooth 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		*	2479.969	96.868	64.281	N/A	N/A	32.587	AV
2			2483.500	46.908	14.312	-7.092	54.000	32.596	AV
3			2483.621	46.948	14.352	-7.052	54.000	32.596	AV

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

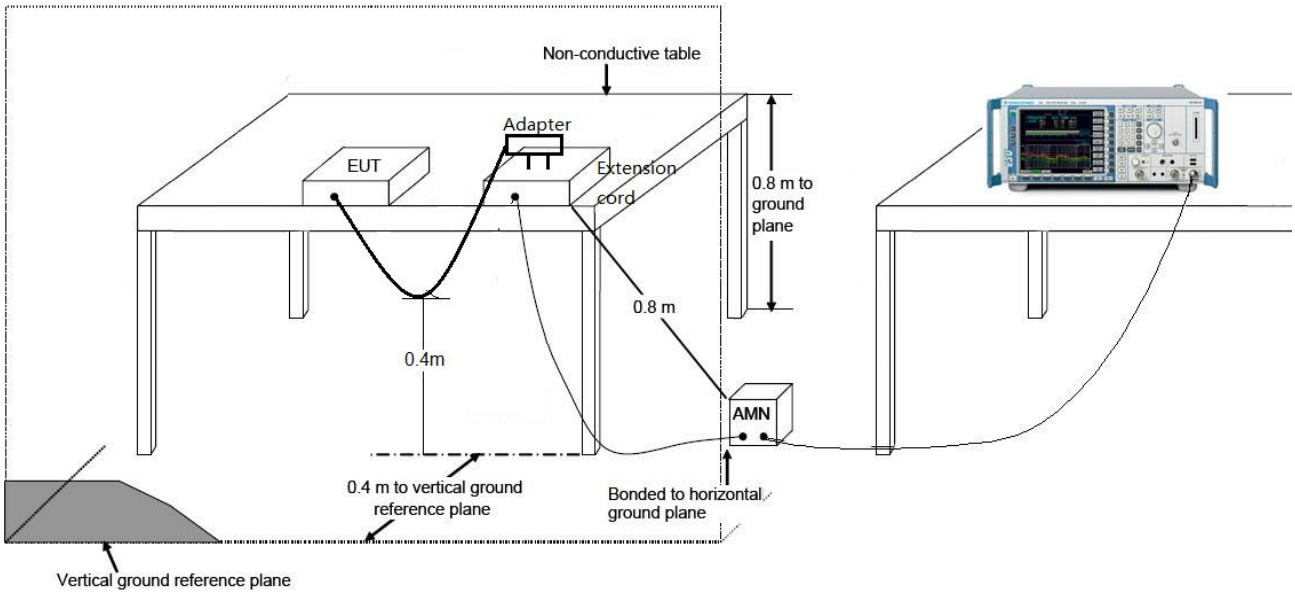
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

7.11. AC Conducted Emissions Measurement

7.11.1. Test Limit

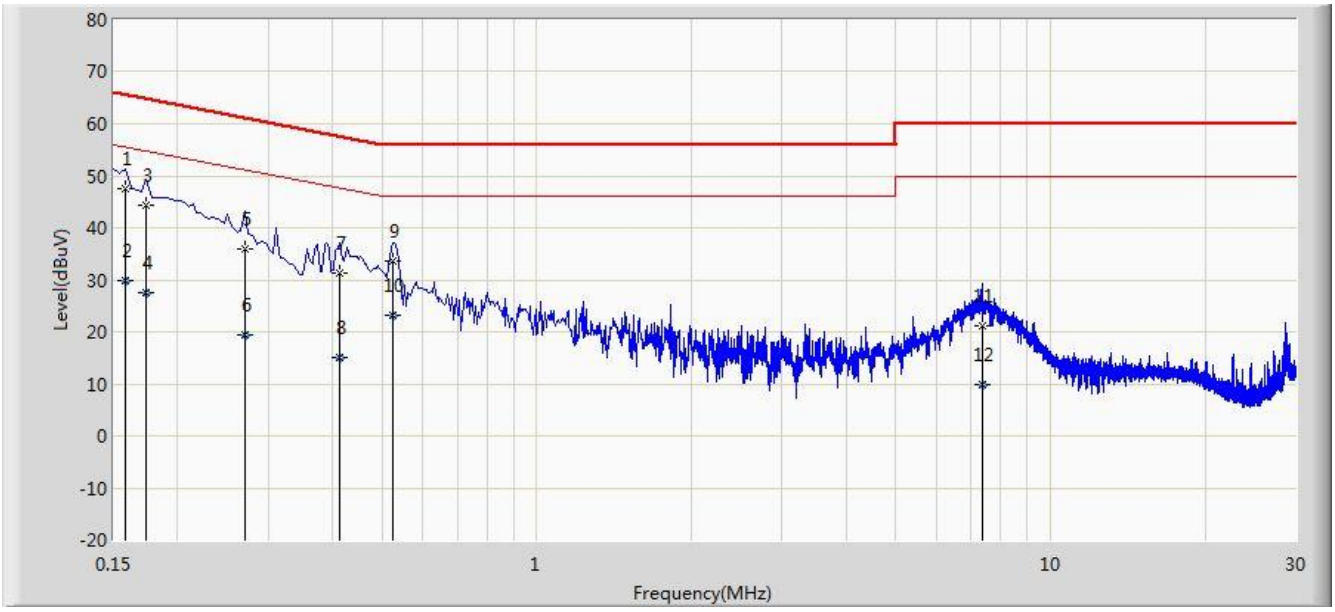
FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 ~ 0.50	66 ~ 56	56 ~ 46
0.50 ~ 5.0	56	46
5.0 ~ 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.		

7.11.2. Test Setup



7.11.3. Test Result

Site: SR2	Time: 2019/03/12 - 18:48
Limit: FCC_Part15.207_CE_AC Power	Engineer: Liz Yuan
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Worst Case (DH5)	

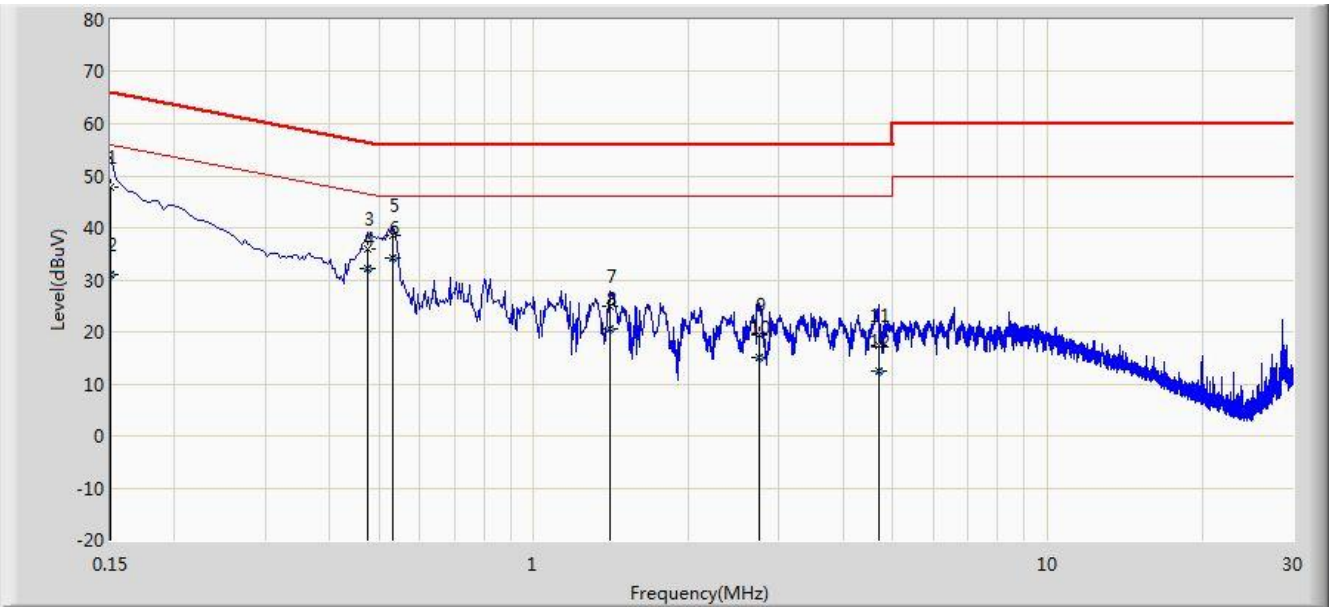


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.158	47.587	37.298	-17.981	65.568	10.290	QP
2			0.158	29.782	19.493	-25.786	55.568	10.290	AV
3			0.174	44.450	34.393	-20.318	64.767	10.057	QP
4			0.174	27.439	17.383	-27.328	54.767	10.057	AV
5			0.270	35.947	25.931	-25.171	61.118	10.016	QP
6			0.270	19.407	9.391	-31.711	51.118	10.016	AV
7			0.414	31.189	21.066	-26.379	57.568	10.123	QP
8			0.414	15.160	5.037	-32.407	47.568	10.123	AV
9			0.526	33.659	23.488	-22.341	56.000	10.172	QP
10			0.526	23.047	12.875	-22.953	46.000	10.172	AV
11			7.374	21.038	10.856	-38.962	60.000	10.182	QP
12			7.374	9.892	-0.290	-40.108	50.000	10.182	AV

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

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

Site: SR2	Time: 2019/03/12 - 18:53
Limit: FCC_Part15.207_CE_AC Power	Engineer: Liz Yuan
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: WIFI+BT Combo Module	Power: AC 120V/60Hz
Test Mode: Worst Case (DH5)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	47.949	36.781	-18.051	66.000	11.168	QP
2			0.150	30.900	19.732	-25.100	56.000	11.168	AV
3			0.474	35.829	25.683	-20.615	56.444	10.145	QP
4			0.474	32.088	21.943	-14.355	46.444	10.145	AV
5			0.530	38.530	28.379	-17.470	56.000	10.151	QP
6		*	0.530	34.292	24.141	-11.708	46.000	10.151	AV
7			1.410	24.997	15.105	-31.003	56.000	9.892	QP
8			1.410	20.571	10.679	-25.429	46.000	9.892	AV
9			2.750	19.305	9.456	-36.695	56.000	9.849	QP
10			2.750	15.054	5.205	-30.946	46.000	9.849	AV
11			4.690	17.334	7.328	-38.666	56.000	10.006	QP
12			4.690	12.513	2.507	-33.487	46.000	10.006	AV

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

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

8. CONCLUSION

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

The End

Appendix A - Test Setup Photograph

Refer to “1902RSU013-UT” file.

Appendix B - EUT Photograph

Refer to “1902RSU013-UE” file.