

## 7.8. Conducted Spurious Emissions Measurement

### 7.8.1. Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

### 7.8.2. Test Procedure Used

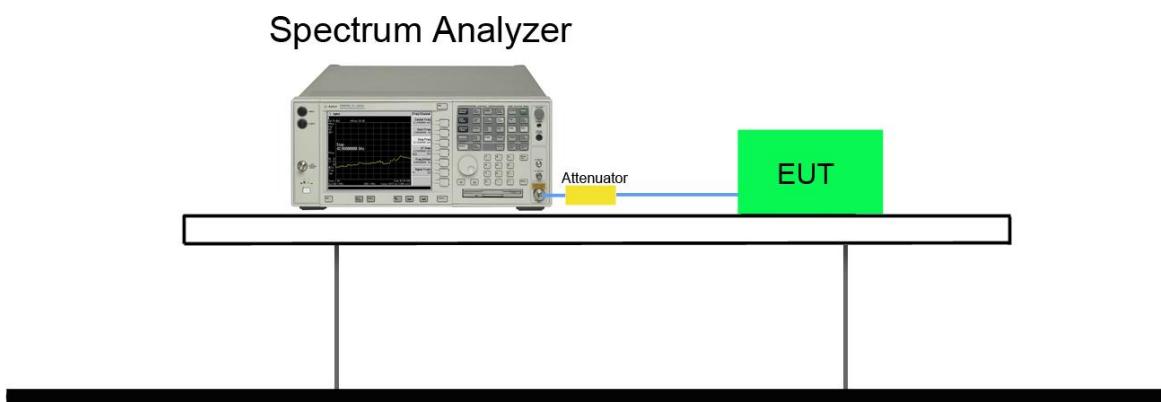
ANSI C63.10-2013 - Section 7.8.8

### 7.8.3. Test Setting

1. Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10<sup>th</sup> harmonic. Typically, several plots are required to cover this entire span.
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this section.

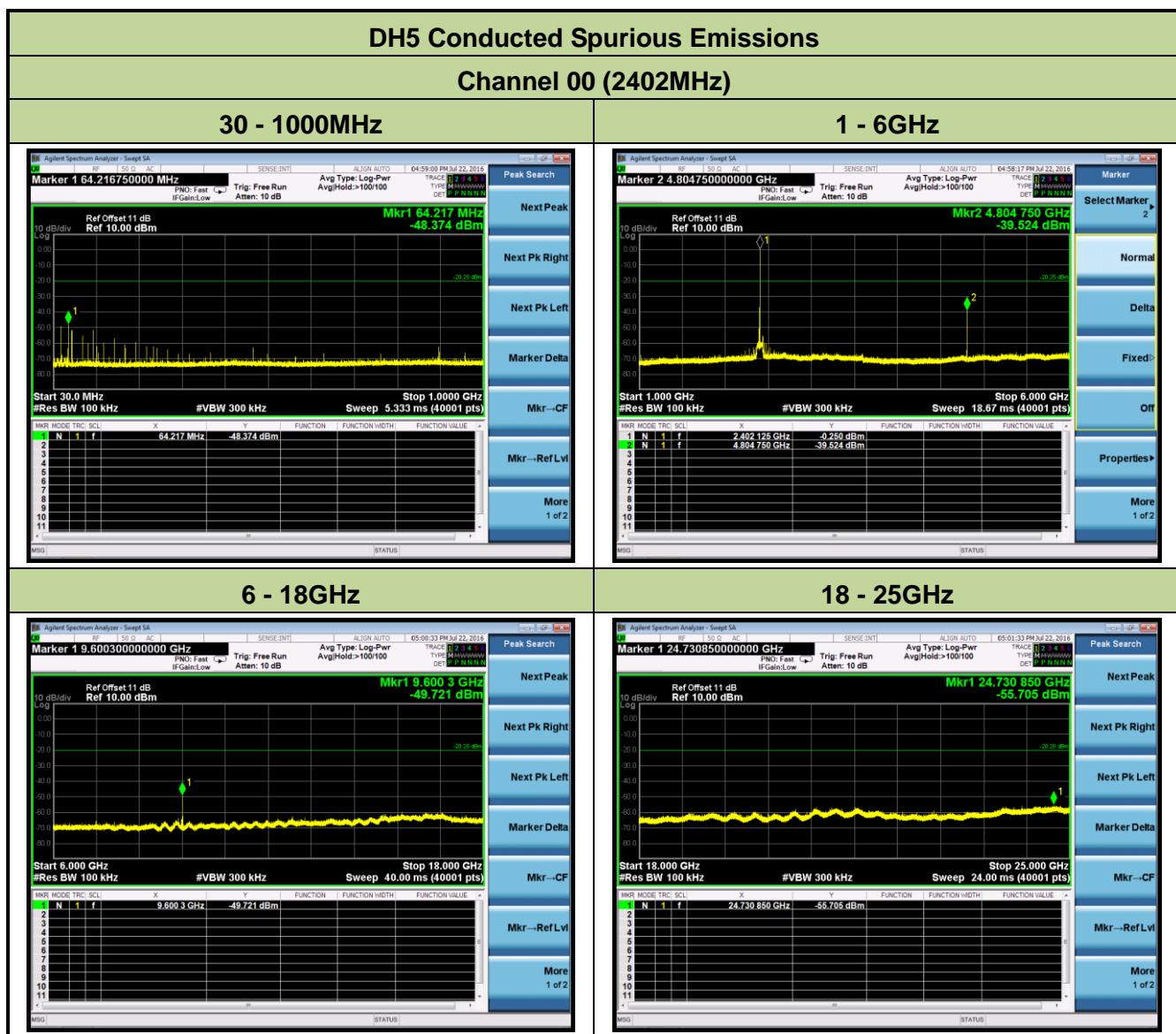
#### 7.8.4. Test Setup

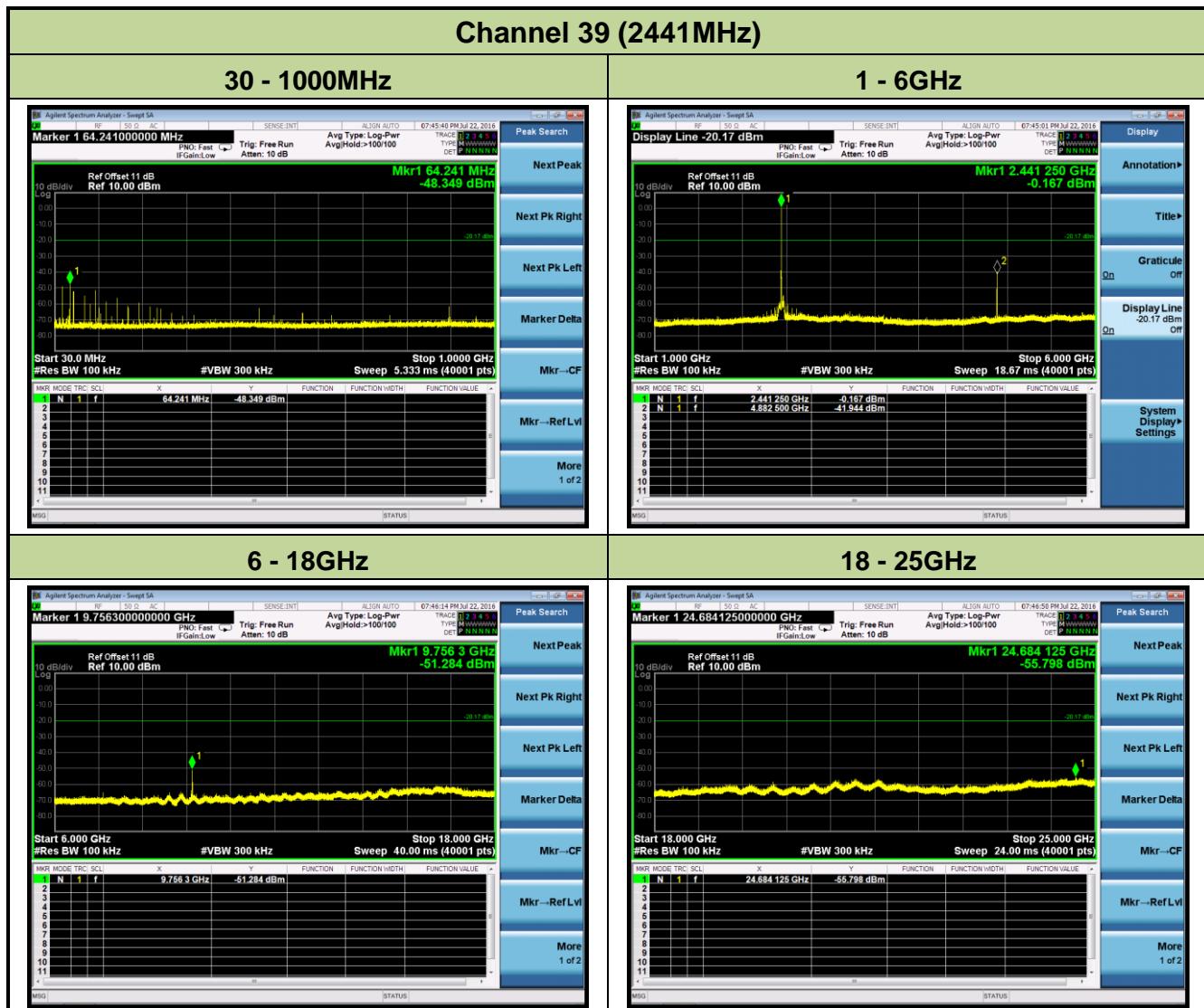


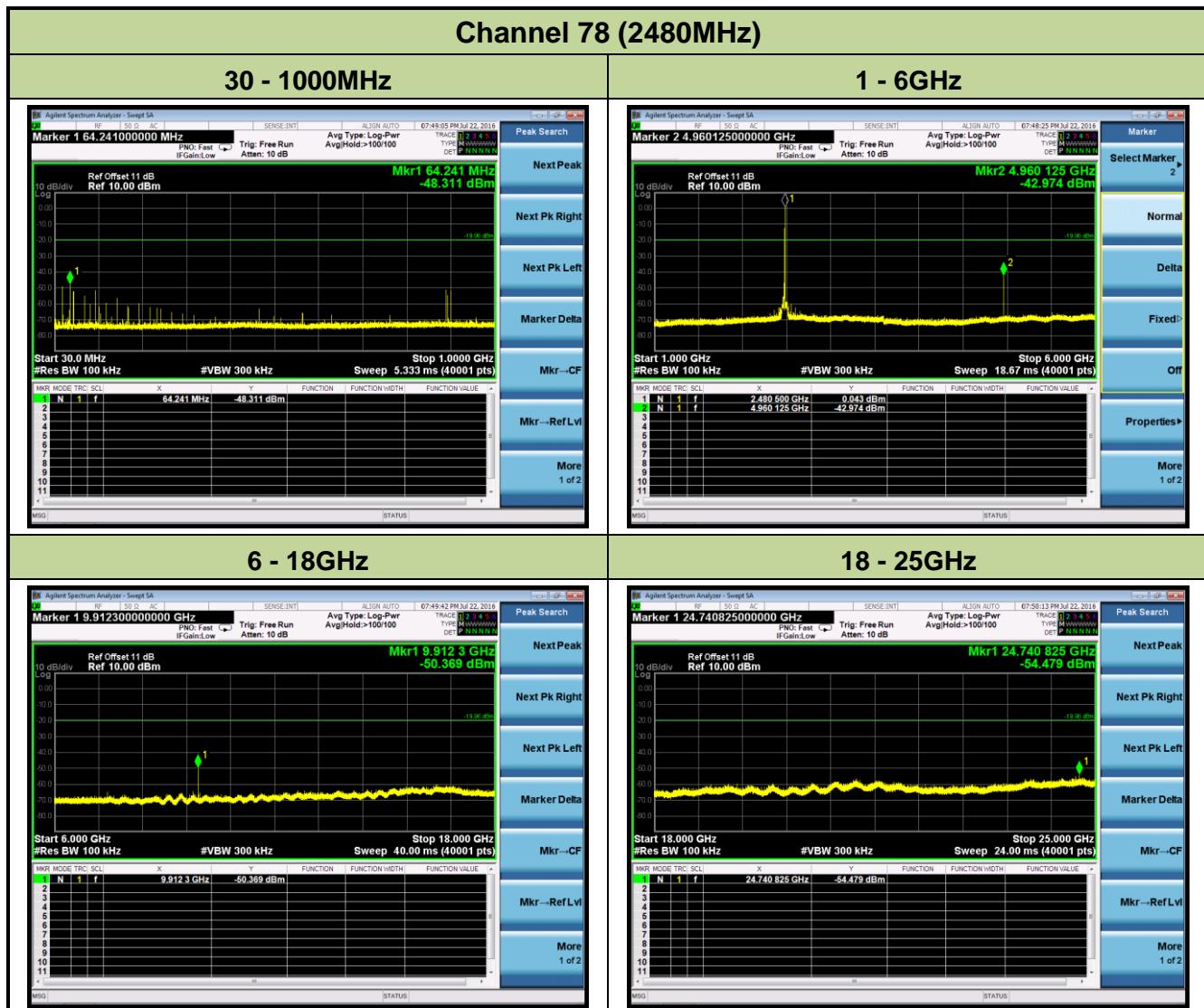
### 7.8.5. Test Result

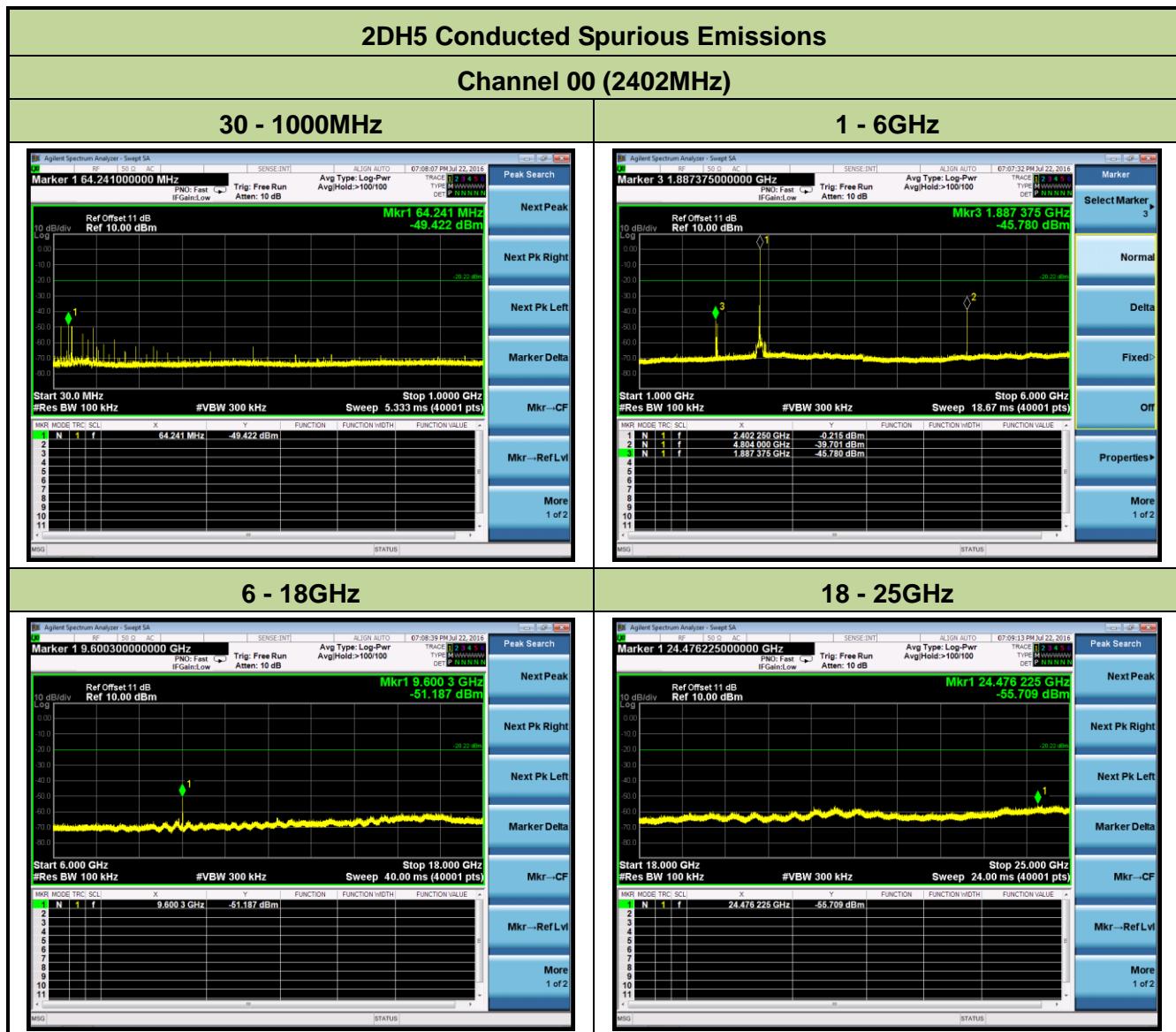
Product	Bluetooth Headset	Temperature	24°C
Test Engineer	Milo Li	Relative Humidity	52%
Test Site	TR3	Test Date	2016/07/22
Test Item	Conducted Spurious Emissions		

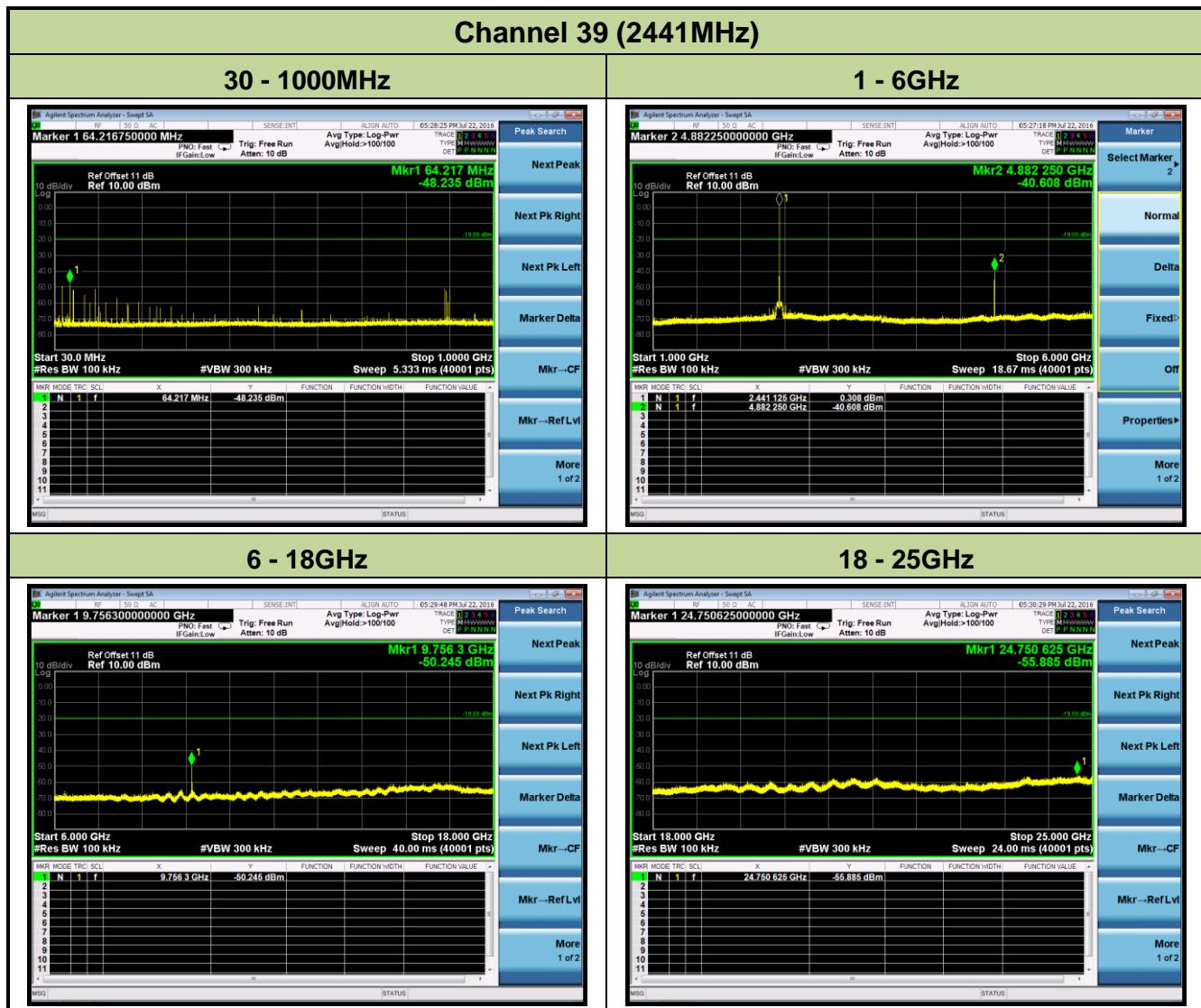
Test Mode	Channel No.	Frequency (MHz)	Limit (MHz)	Result
DH5	00	2402	< 20dBc	Pass
DH5	39	2441	< 20dBc	Pass
DH5	78	2480	< 20dBc	Pass
2DH5	00	2402	< 20dBc	Pass
2DH5	39	2441	< 20dBc	Pass
2DH5	78	2480	< 20dBc	Pass

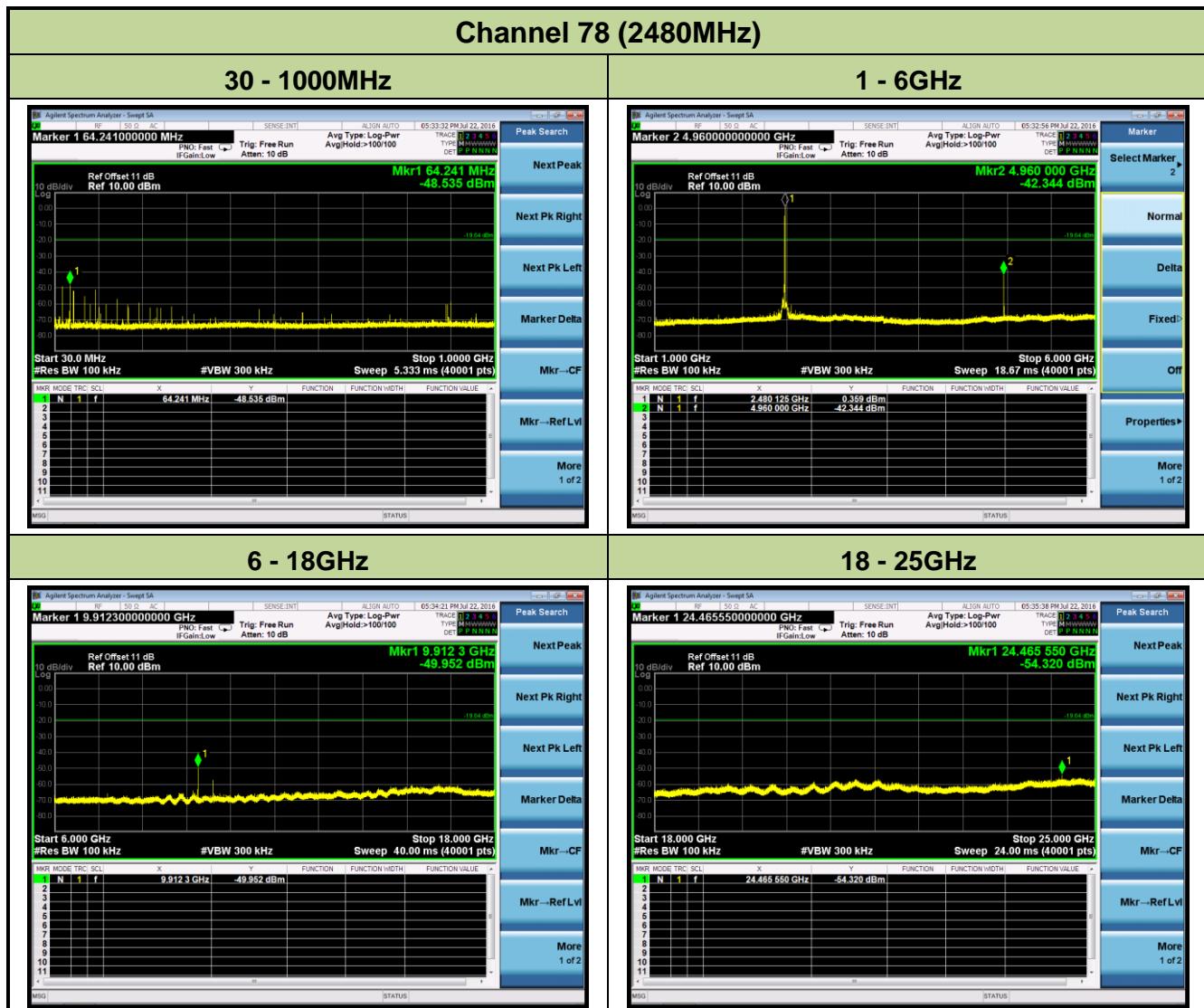












## 7.9. Radiated Spurious Emission Measurement

### 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 C63.10-2013 - Section 6.10.5

### 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 = 3 \* RBW
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**

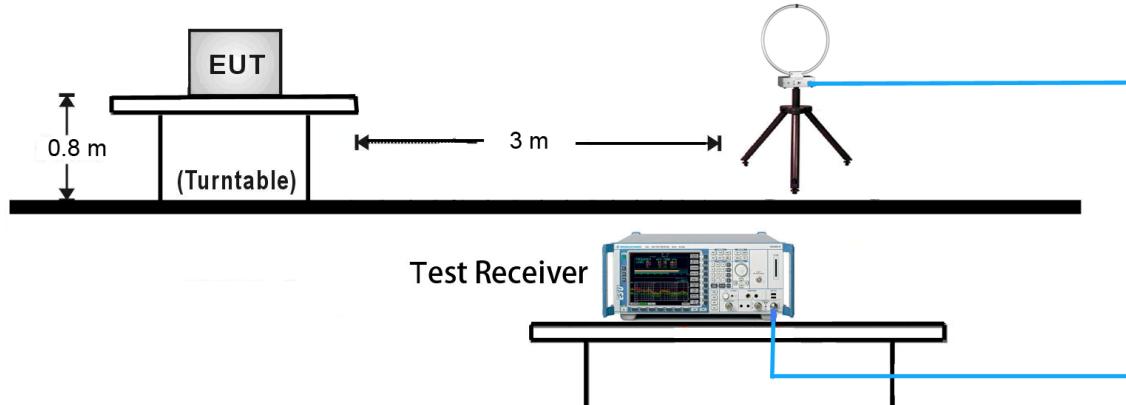
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

**Average Field Strength Measurements**

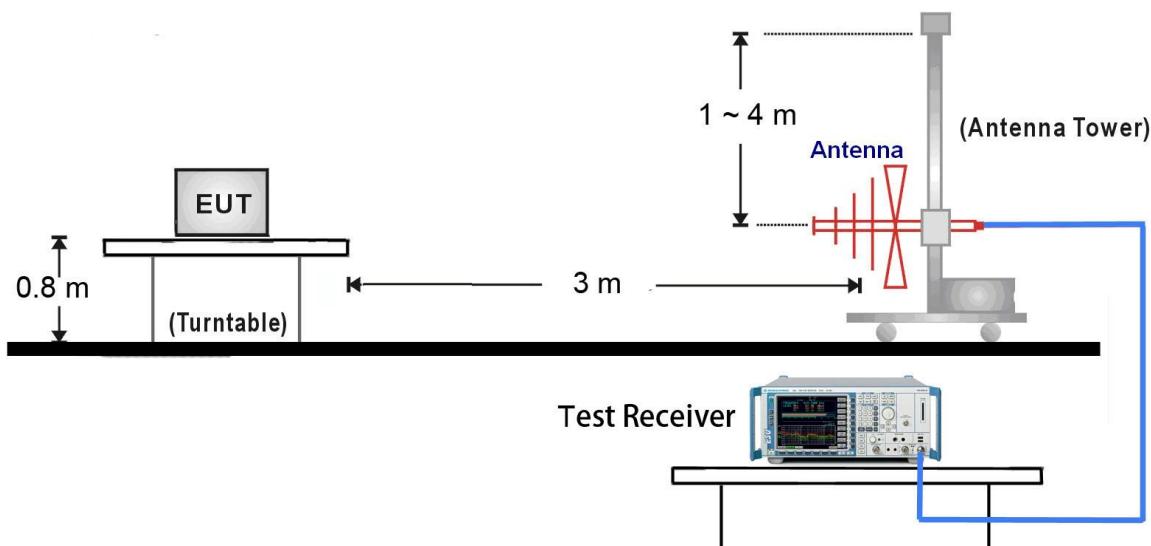
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW  $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB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

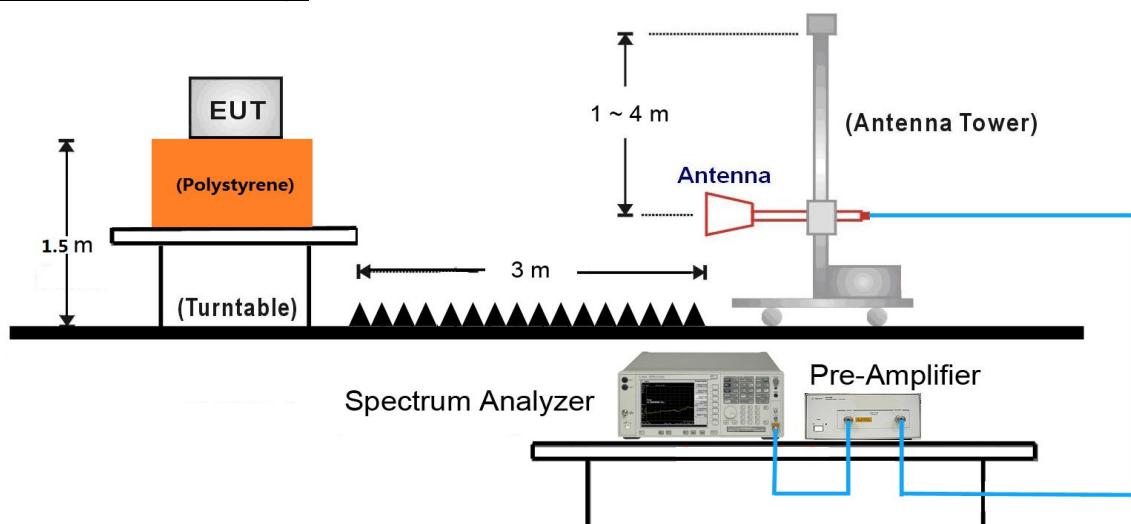
#### 7.9.4. Test Setup

##### 9kHz ~ 30MHz Test Setup:



##### 30MHz ~ 1GHz Test Setup:



1GHz ~ 25GHz Test Setup:

### 7.9.5. Test Result

Test Mode:	DH5	Test Site:	AC2
Test Channel:	00	Test Engineer:	Lewis Huang
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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	4230.0	37.5	0.6	38.1	74.0	-35.9	Peak	Horizontal
	4799.5	47.9	2.8	50.7	74.0	-23.3	Peak	Horizontal
*	6321.0	35.6	6.3	41.9	75.7	-33.8	Peak	Horizontal
*	9602.0	34.5	12.6	47.1	75.7	-28.6	Peak	Horizontal
	4281.0	37.5	0.8	38.3	74.0	-35.7	Peak	Horizontal
	4799.5	43.2	2.8	46.0	74.0	-28.0	Peak	Vertical
*	6491.0	34.8	7.3	42.1	75.7	-33.6	Peak	Vertical
*	9602.0	35.9	12.6	48.5	75.7	-27.2	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 20dBc of the fundamental emission level (95.7dB $\mu$ V/m) or 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	DH5	Test Site:	AC2
Test Channel:	39	Test Engineer:	Lewis Huang
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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	4315.0	37.0	1.0	38.0	74.0	-36.0	Peak	Horizontal
	4884.5	47.2	2.7	49.9	74.0	-24.1	Peak	Horizontal
*	7001.0	33.9	9.4	43.3	76.2	-32.9	Peak	Horizontal
*	9763.5	35.5	12.8	48.3	76.2	-27.9	Peak	Horizontal
	4332.0	36.7	1.1	37.8	74.0	-36.2	Peak	Vertical
	4884.5	44.8	2.7	47.5	74.0	-26.5	Peak	Vertical
*	6474.0	34.7	7.1	41.8	76.2	-34.4	Peak	Vertical
*	9755.0	36.3	13.0	49.3	76.2	-26.9	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 20dBc of the fundamental emission level (96.2dB $\mu$ V/m) or 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	DH5	Test Site:	AC2
Test Channel:	79	Test Engineer:	Lewis Huang
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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	3966.5	38.3	-0.6	37.7	74.0	-36.3	Peak	Horizontal
	4961.0	45.7	2.7	48.4	74.0	-25.6	Peak	Horizontal
*	5700.5	36.6	3.9	40.5	75.6	-35.1	Peak	Horizontal
*	9959.0	34.1	13.4	47.5	75.6	-28.1	Peak	Horizontal
	4281.0	37.4	0.8	38.2	74.0	-35.8	Peak	Vertical
	4961.0	45.1	2.7	47.8	74.0	-26.2	Peak	Vertical
*	7188.0	33.7	10.6	44.3	75.6	-31.3	Peak	Vertical
*	9908.0	36.7	13.5	50.2	75.6	-25.4	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 20dBc of the fundamental emission level (95.6dB $\mu$ V/m) or 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	2DH5	Test Site:	AC2
Test Channel:	00	Test Engineer:	Lewis Huang
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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	3975.0	38.0	-0.5	37.5	74.0	-36.5	Peak	Horizontal
	4799.5	47.8	2.8	50.6	74.0	-23.4	Peak	Horizontal
*	7179.5	34.1	10.6	44.7	76.1	-31.4	Peak	Horizontal
*	9602.0	35.2	12.6	47.8	76.1	-28.3	Peak	Horizontal
	3966.5	37.5	-0.6	36.9	74.0	-37.1	Peak	Horizontal
	4799.5	43.5	2.8	46.3	74.0	-27.7	Peak	Vertical
*	7179.5	34.1	10.6	44.7	76.1	-31.4	Peak	Vertical
*	9602.0	36.4	12.6	49.0	76.1	-27.1	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 20dBc of the fundamental emission level (96.1dB $\mu$ V/m) or 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	2DH5	Test Site:	AC2
Test Channel:	39	Test Engineer:	Lewis Huang
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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	4162.0	37.0	0.6	37.6	74.0	-36.4	Peak	Horizontal
	4884.5	47.1	2.7	49.8	74.0	-24.2	Peak	Horizontal
*	6329.5	35.5	6.2	41.7	76.8	-35.1	Peak	Horizontal
*	9755.0	35.8	13.0	48.8	76.8	-28.0	Peak	Horizontal
	4281.0	37.5	0.8	38.3	74.0	-35.7	Peak	Vertical
	4884.5	44.7	2.7	47.4	74.0	-26.6	Peak	Vertical
*	7817.0	34.2	10.4	44.6	76.8	-32.2	Peak	Vertical
*	9755.0	36.9	13.0	49.9	76.8	-26.9	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 20dBc of the fundamental emission level (96.8dB $\mu$ V/m) or 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	2DH5	Test Site:	AC2
Test Channel:	79	Test Engineer:	Lewis Huang
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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	4332.0	36.6	1.1	37.7	74.0	-36.3	Peak	Horizontal
	4961.0	47.6	2.7	50.3	74.0	-23.7	Peak	Horizontal
*	5692.0	36.0	4.0	40.0	75.9	-35.9	Peak	Horizontal
*	7171.0	33.9	10.5	44.4	75.9	-31.5	Peak	Horizontal
	4621.0	36.7	2.3	39.0	74.0	-35.0	Peak	Vertical
	4961.0	44.9	2.7	47.6	74.0	-26.4	Peak	Vertical
*	6916.0	35.3	8.5	43.8	75.9	-32.1	Peak	Vertical
*	9908.0	36.4	13.5	49.9	75.9	-26.0	Peak	Vertical

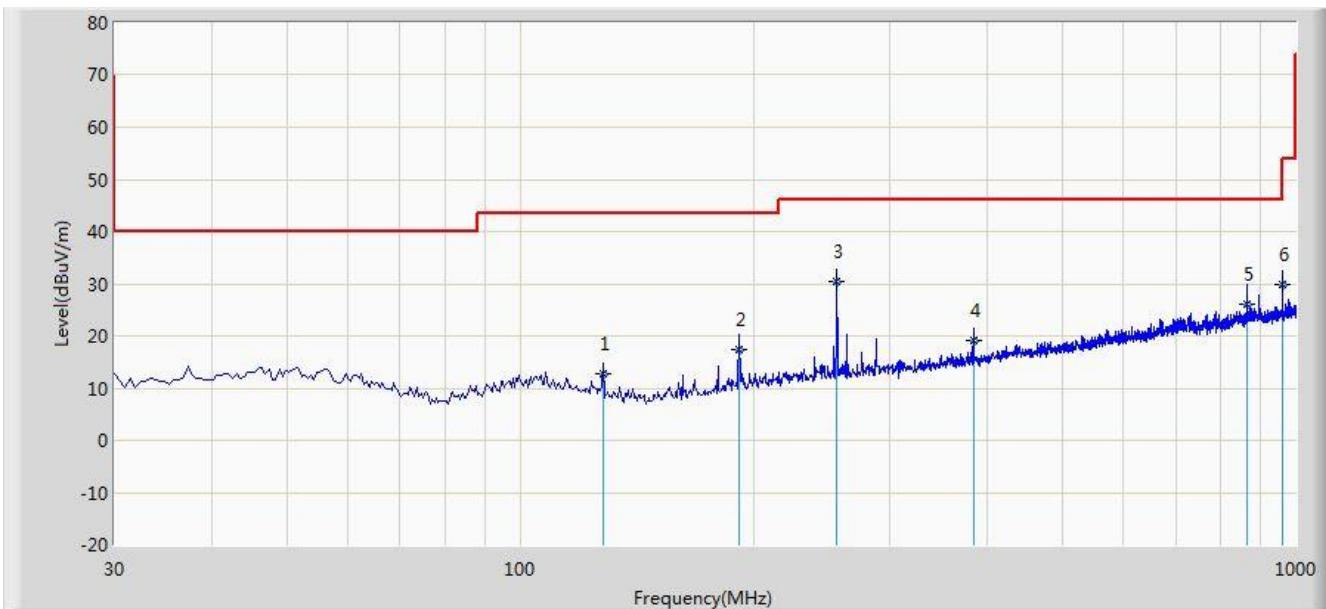
Note 1: “\*” is not in restricted band, its limit is 20dBc of the fundamental emission level (95.9dB $\mu$ V/m) or 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

**The worst case of Radiated Emission 9KHz ~ 1GHz and 18GHz ~ 25GHz:**

Site: AC2	Time: 2016/07/26 - 19:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
<b>Worst Case Mode:</b> Transmit by 2DH5 at Channel 2402MHz	

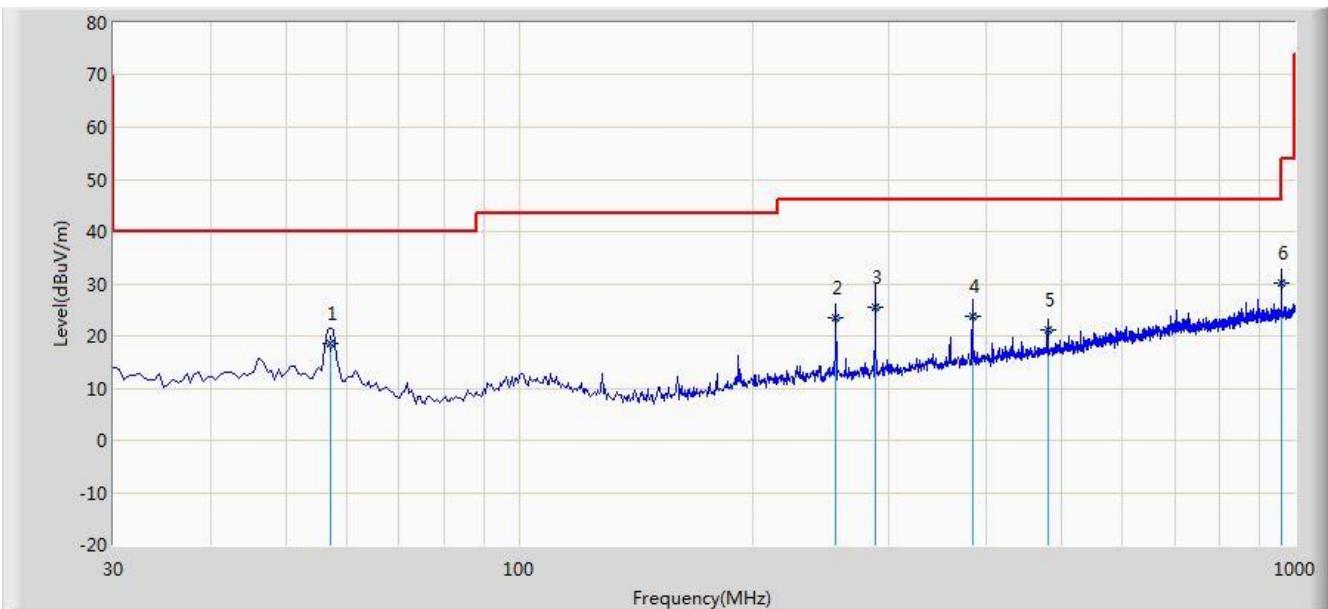


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			127.970	12.865	2.610	-30.635	43.500	10.255	QP
2			191.990	17.307	5.390	-26.193	43.500	11.918	QP
3		*	256.010	30.409	16.590	-15.591	46.000	13.819	QP
4			384.050	19.069	2.680	-26.931	46.000	16.389	QP
5			864.200	26.205	2.360	-19.795	46.000	23.845	QP
6			960.230	29.966	5.360	-24.034	54.000	24.606	QP

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/26 - 19:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
<b>Worst Case Mode:</b> Transmit by 2DH5 at Channel 2402MHz	

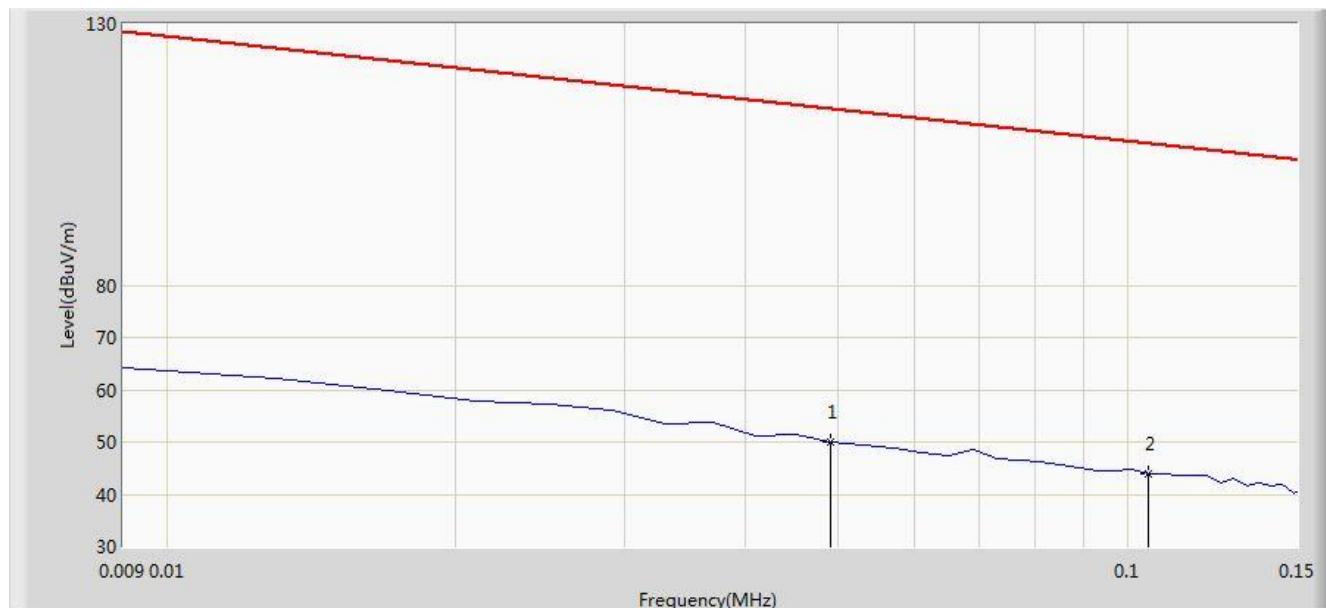


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			57.160	18.576	4.260	-21.424	40.000	14.316	QP
2			256.010	23.499	9.680	-22.501	46.000	13.819	QP
3		*	288.020	25.584	11.250	-20.416	46.000	14.334	QP
4			384.050	23.879	7.490	-22.121	46.000	16.389	QP
5			480.080	21.257	3.260	-24.743	46.000	17.997	QP
6			960.230	30.286	5.680	-23.714	54.000	24.606	QP

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/06/26 - 13:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: FMZB1519_0.009-30MHz	Polarity: Face On
EUT: Bluetooth Headset	Power: By Battery
<b>Note:</b> There is the ambient noise within frequency range 9kHz~30MHz.	



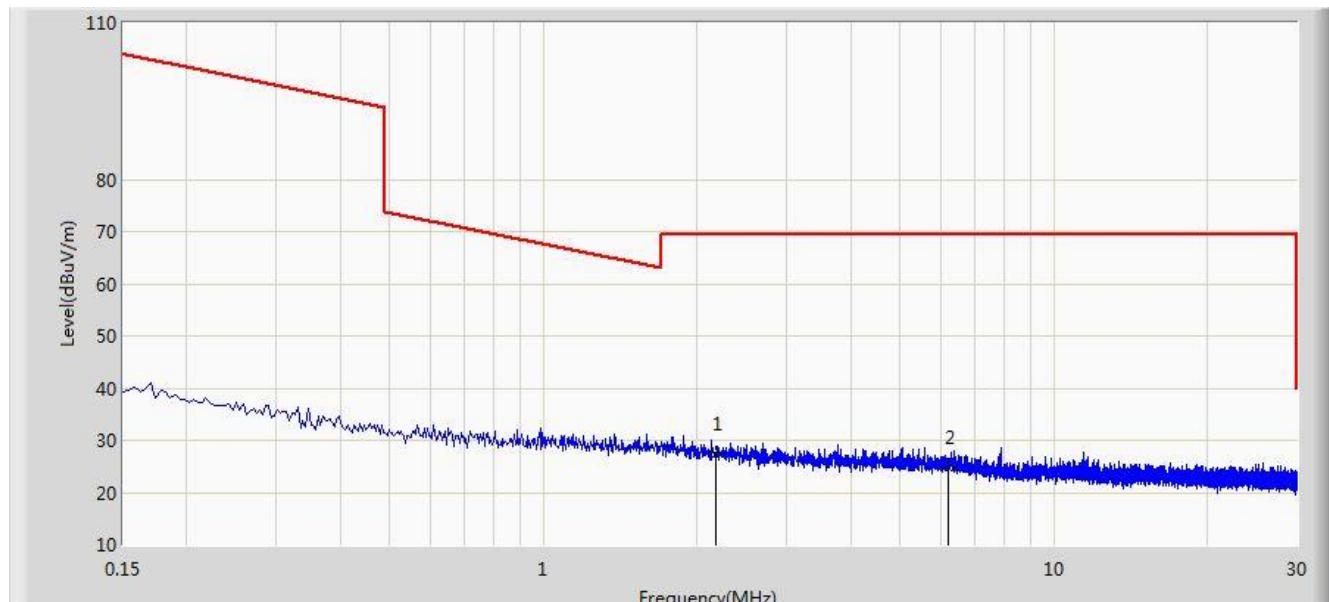
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.049	50.112	29.552	-63.688	113.800	20.560	AV
2		*	0.105	44.043	23.845	-63.137	107.180	20.198	QP

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Limit@3m =  $20 \cdot \log((2400/49)\mu\text{V}/\text{m}) + 40 \cdot \log(300\text{m}/3\text{m}) = 113.800\text{dB}\mu\text{v}/\text{m}$  (Average detector)

Site: AC2	Time: 2016/06/26 - 13:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: FMZB1519_0.009-30MHz	Polarity: Face On
EUT: Bluetooth Headset	Power: By Battery
<b>Note:</b> There is the ambient noise within frequency range 9kHz~30MHz.	

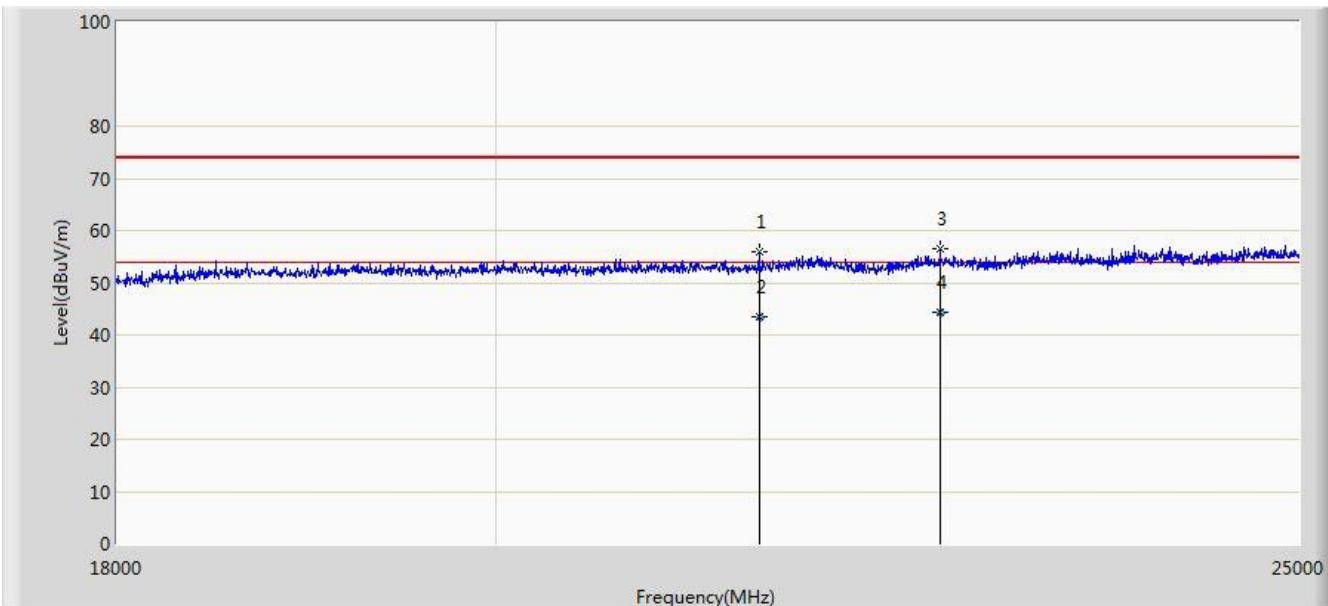


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2.175	27.371	6.960	-42.129	69.500	20.412	QP
2			6.216	24.786	4.701	-44.714	69.500	20.085	QP

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/06/26 - 13:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By Battery
<b>Note: There is the ambient noise within frequency range 18GHz~25GHz.</b>	

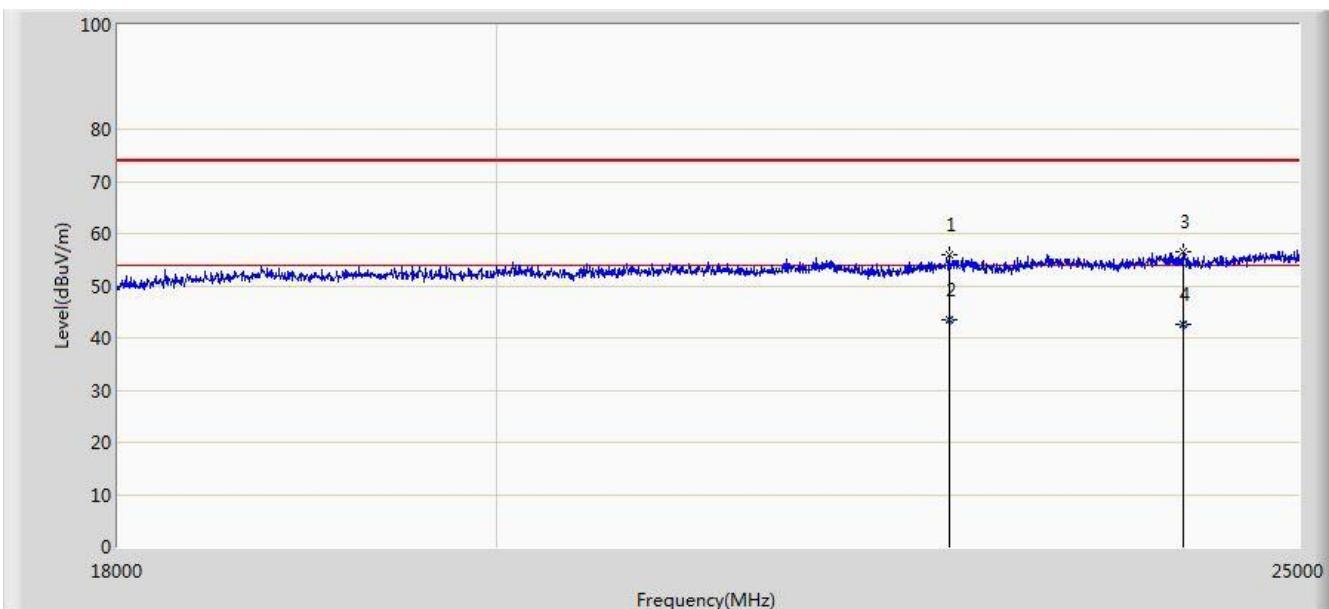


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			21517.500	55.869	17.883	-18.131	74.000	37.986	PK
2			21517.650	43.351	5.365	-10.649	54.000	37.986	AV
3			22630.500	56.509	18.223	-17.491	74.000	38.286	PK
4	*		22630.540	44.310	6.024	-9.690	54.000	38.286	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC2	Time: 2016/06/26 - 13:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By Battery
<b>Note: There is the ambient noise within frequency range 18GHz~25GHz.</b>	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			22686.500	55.811	17.457	-18.189	74.000	38.354	PK
2			22686.540	43.598	5.244	-10.402	54.000	38.354	AV
3			24205.500	56.430	17.607	-17.570	74.000	38.823	PK
4	*		24205.658	42.518	3.695	-11.482	54.000	38.823	AV

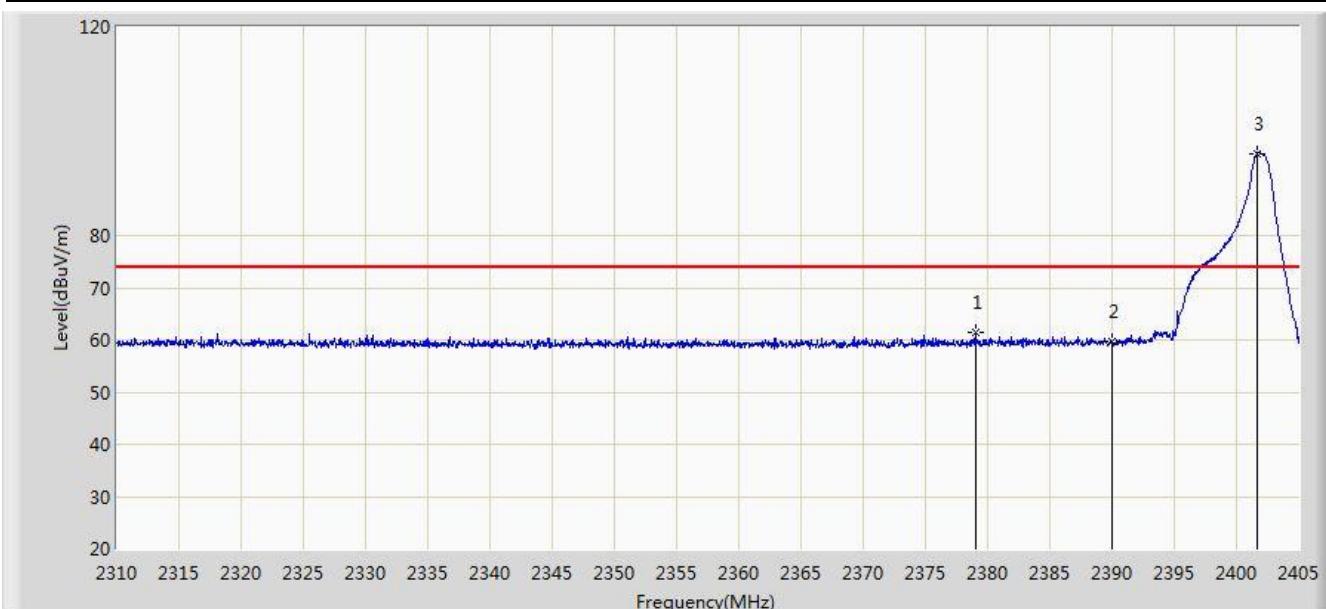
Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

## 7.10. Radiated Restricted Band Edge Measurement

### 7.10.1. Test Result

Site: AC2	Time: 2016/07/25 - 11:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by DH5 at Channel 2402MHz	

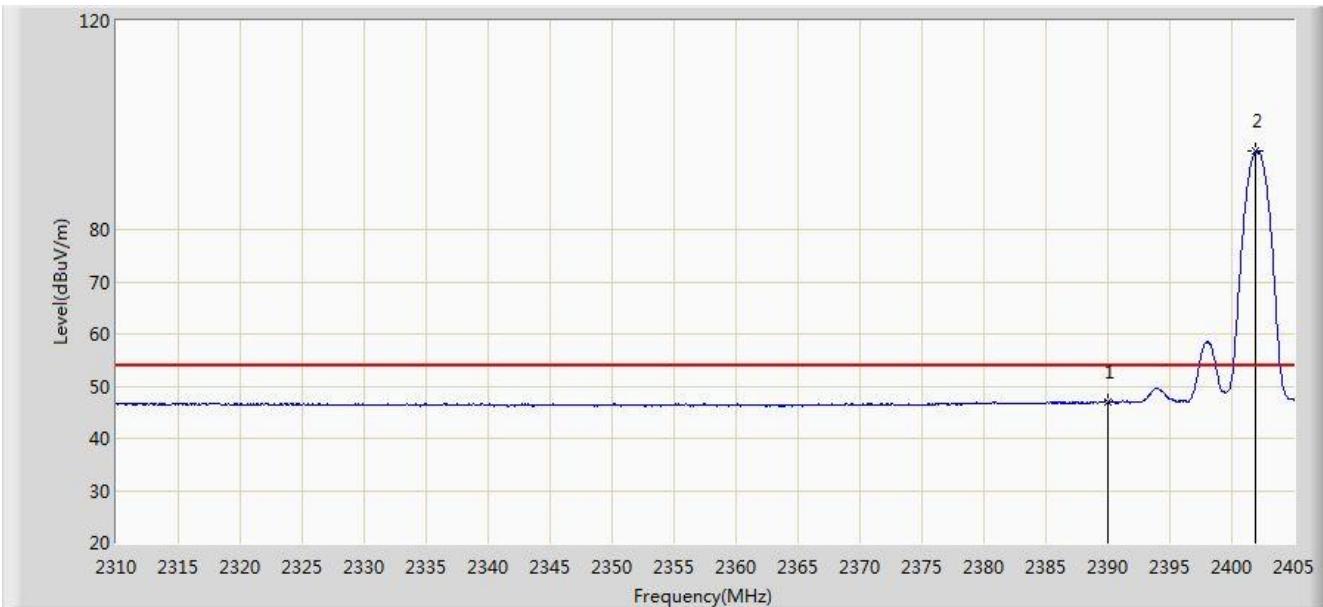


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			2379.018	61.346	29.129	-12.654	74.000	32.217	PK
2			2390.000	59.792	27.514	-14.208	74.000	32.278	PK
3	*	*	2401.675	95.662	63.387	N/A	N/A	32.274	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 11:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by DH5 at Channel 2402MHz	

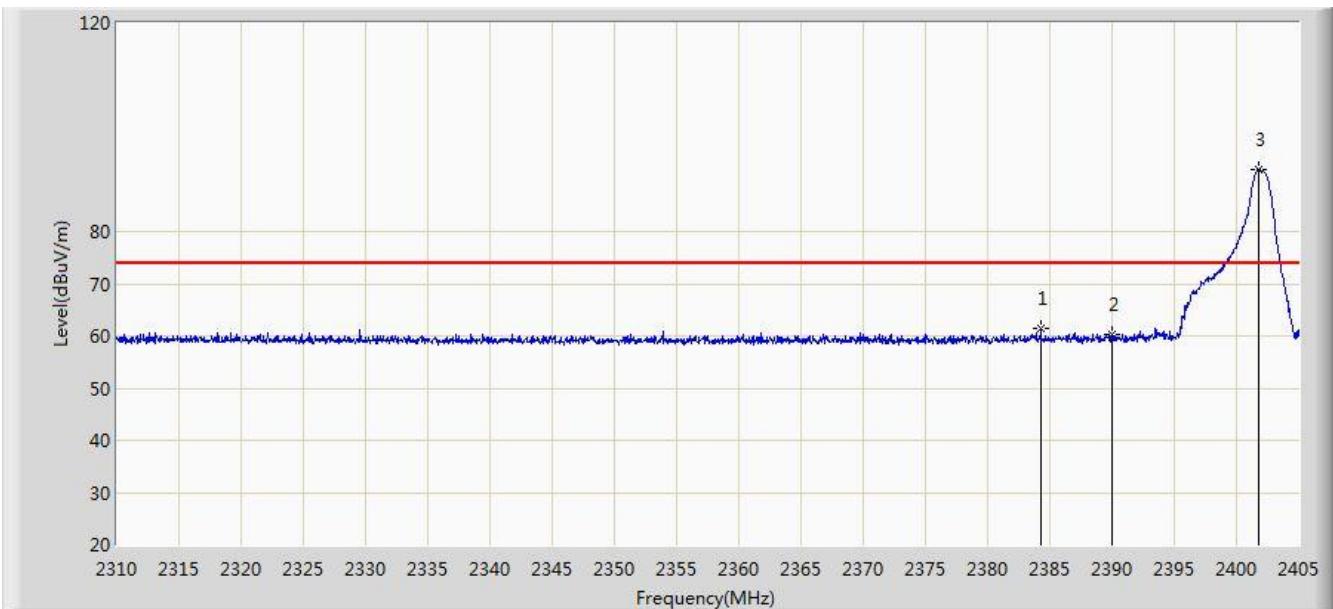


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			2390.000	46.887	14.609	-7.113	54.000	32.278	AV
2		*	2401.960	95.046	62.772	N/A	N/A	32.274	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 11:46
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by DH5 at Channel 2402MHz	

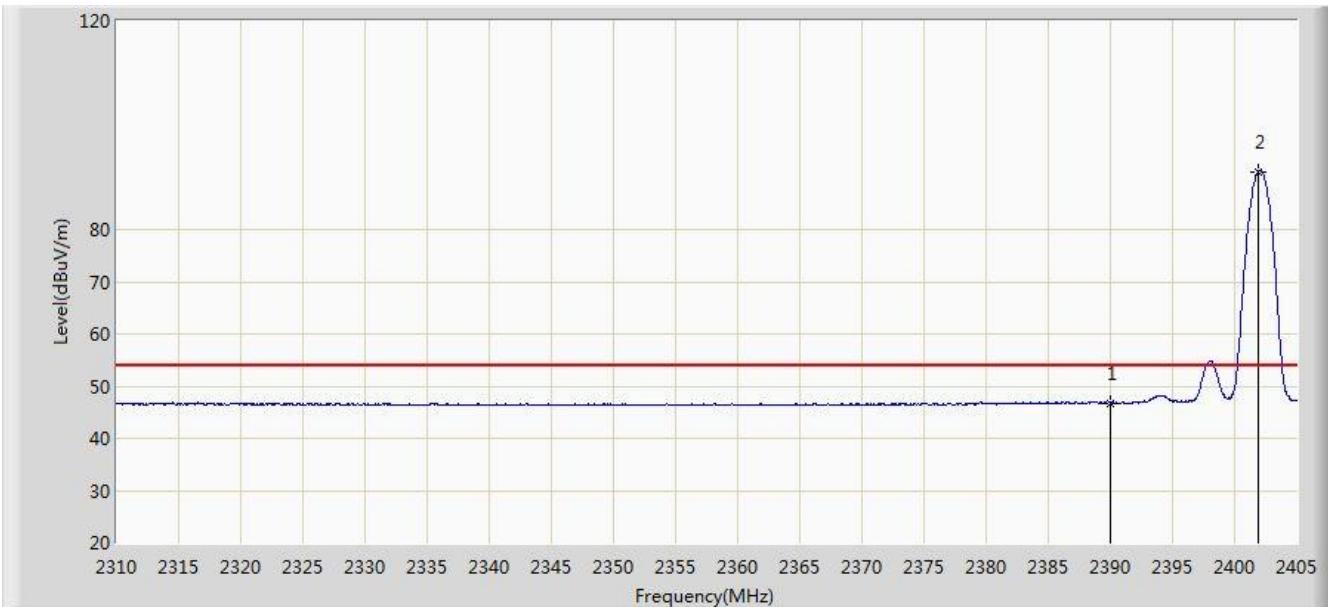


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2384.290	61.380	29.134	-12.620	74.000	32.247	PK
2			2390.000	60.202	27.924	-13.798	74.000	32.278	PK
3	*	*	2401.770	91.902	59.627	N/A	N/A	32.274	PK

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

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

Site: AC2	Time: 2016/07/25 - 11:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by DH5 at Channel 2402MHz	

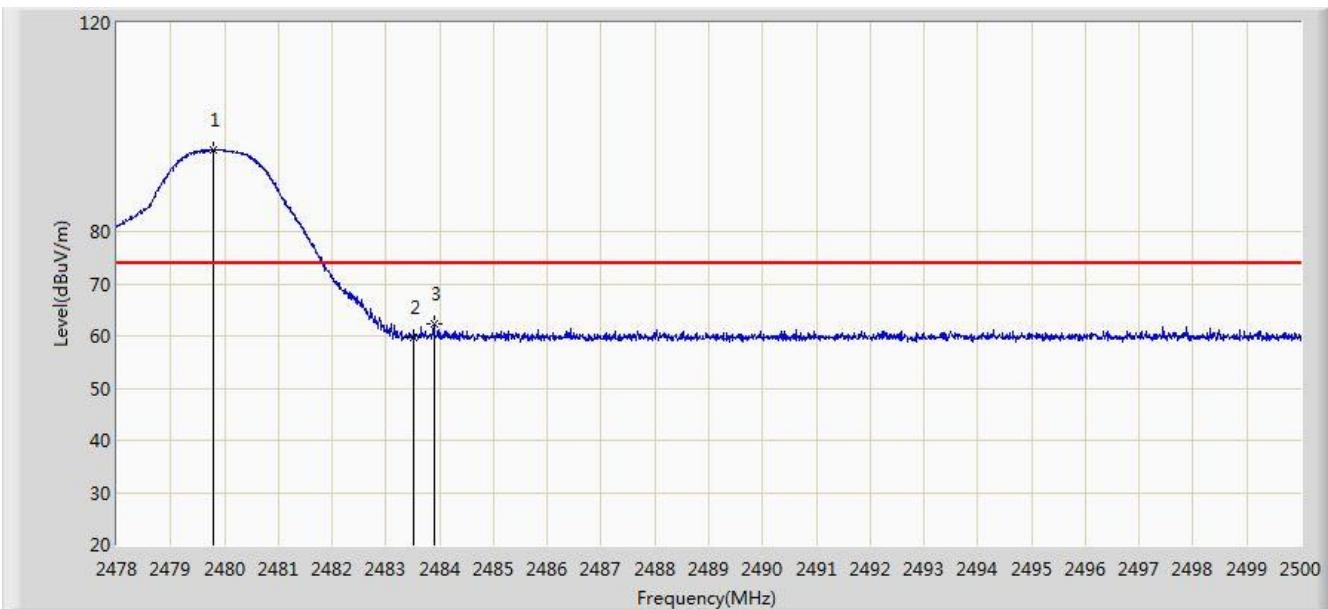


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.759	14.481	-7.241	54.000	32.278	AV
2		*	2401.913	91.074	58.800	N/A	N/A	32.274	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 13:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by DH5 at Channel 2480MHz	

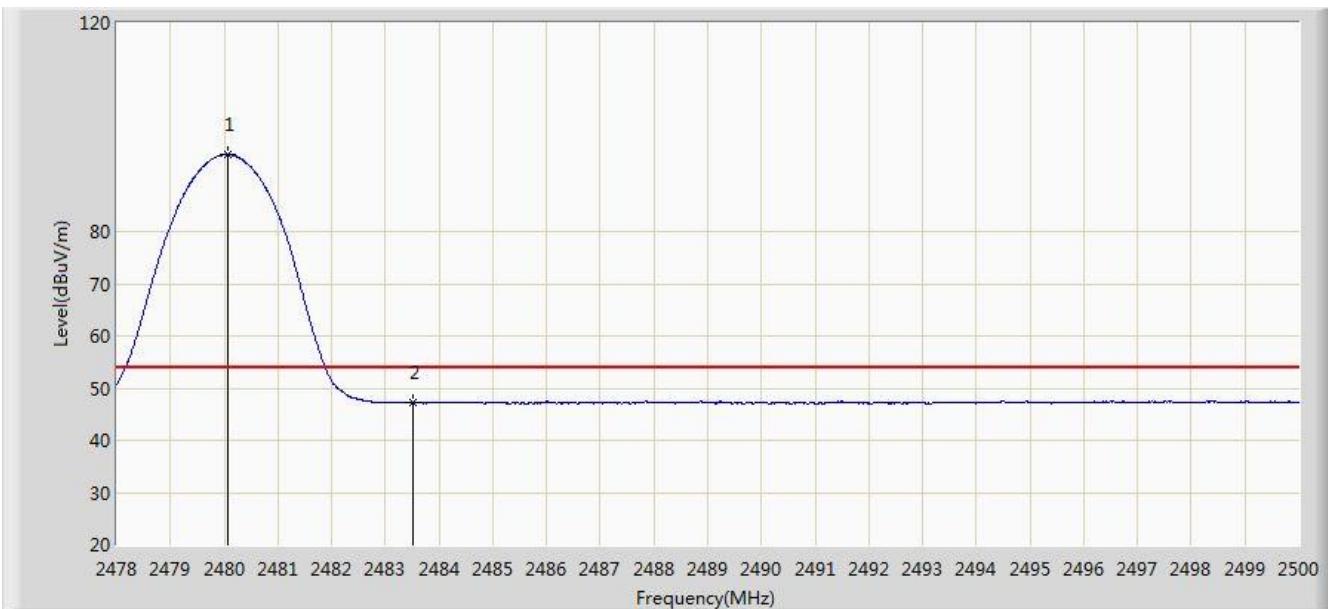


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.804	95.627	63.359	N/A	N/A	32.269	PK
2			2483.500	59.738	27.457	-14.262	74.000	32.282	PK
3			2483.896	62.187	29.904	-11.813	74.000	32.282	PK

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

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

Site: AC2	Time: 2016/07/25 - 13:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by DH5 at Channel 2480MHz	

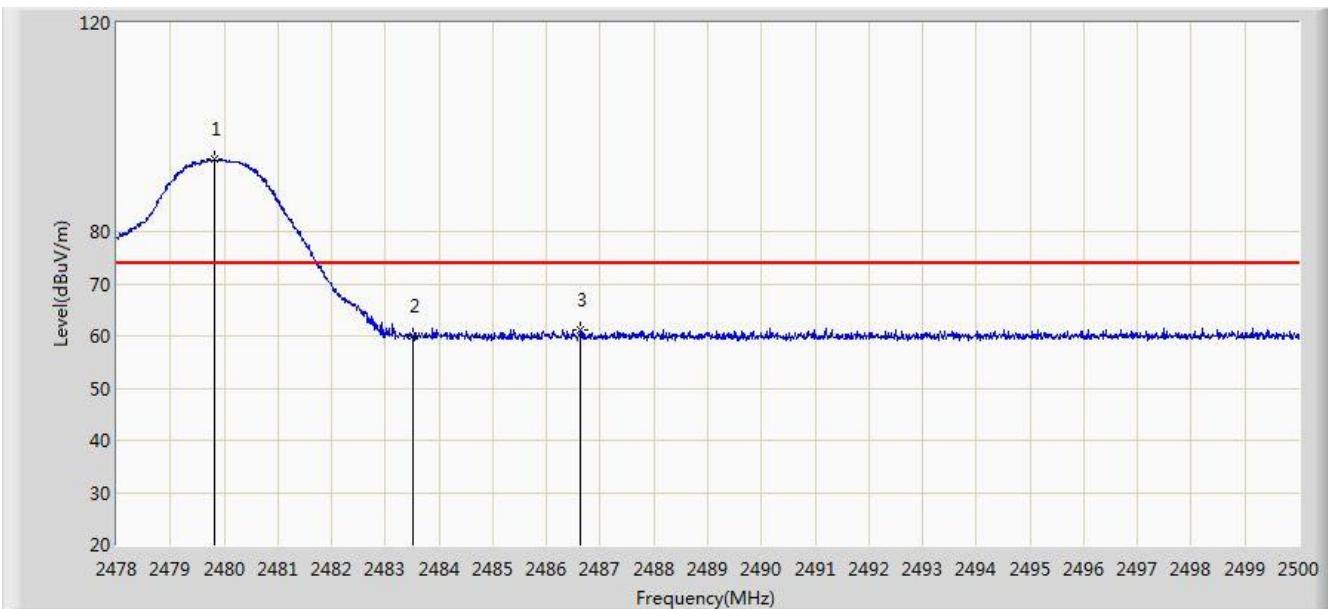


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.079	94.705	62.436	N/A	N/A	32.269	AV
2			2483.500	47.231	14.950	-6.769	54.000	32.282	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 13:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by DH5 at Channel 2480MHz	

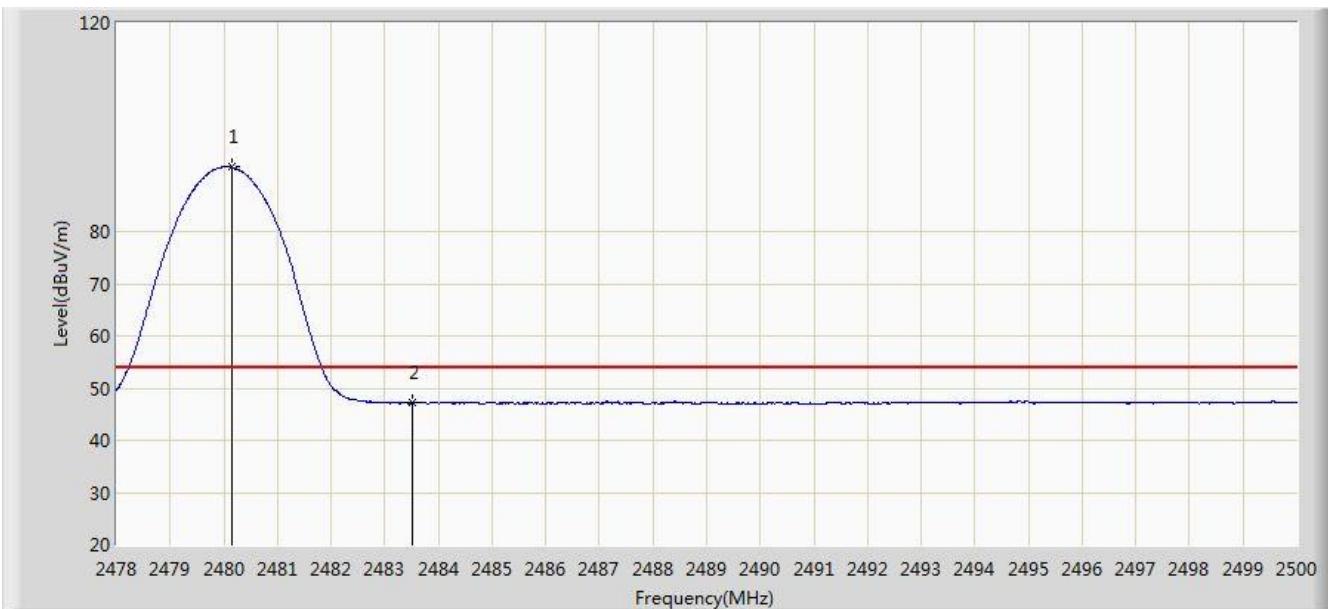


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.815	93.770	61.502	N/A	N/A	32.269	PK
2			2483.500	60.054	27.773	-13.946	74.000	32.282	PK
3			2486.635	61.197	28.905	-12.803	74.000	32.292	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 13:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by DH5 at Channel 2480MHz	

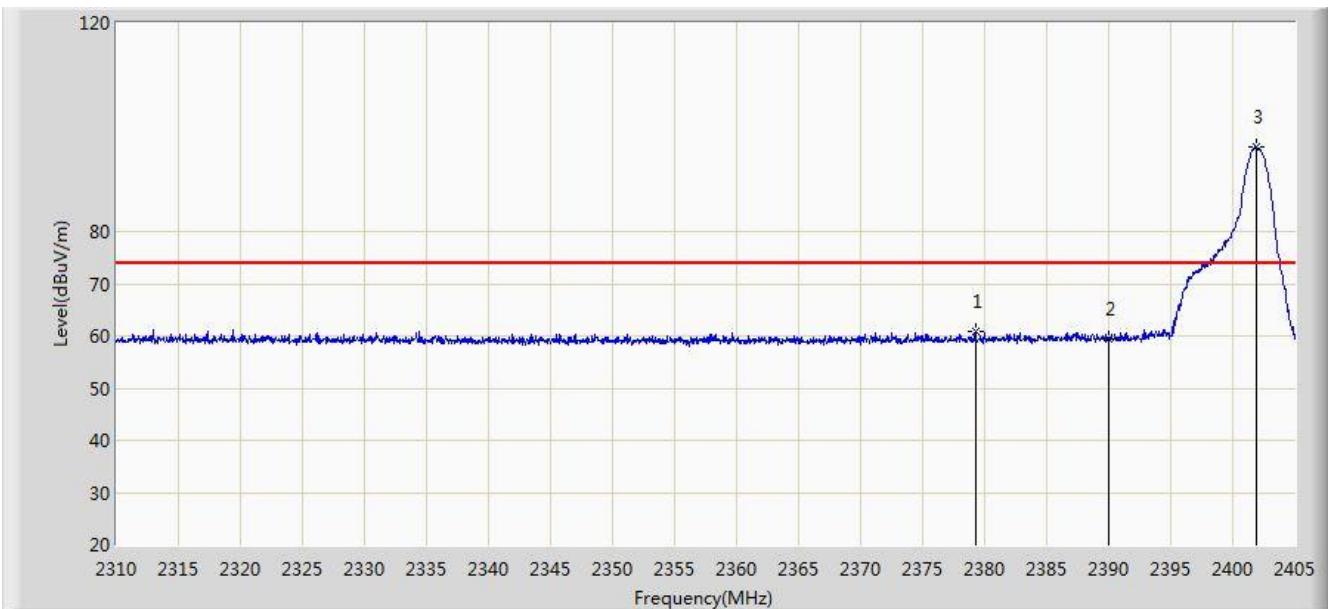


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.145	92.327	60.057	N/A	N/A	32.270	AV
2			2483.500	47.128	14.847	-6.872	54.000	32.282	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 13:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by 2DH5 at Channel 2402MHz	

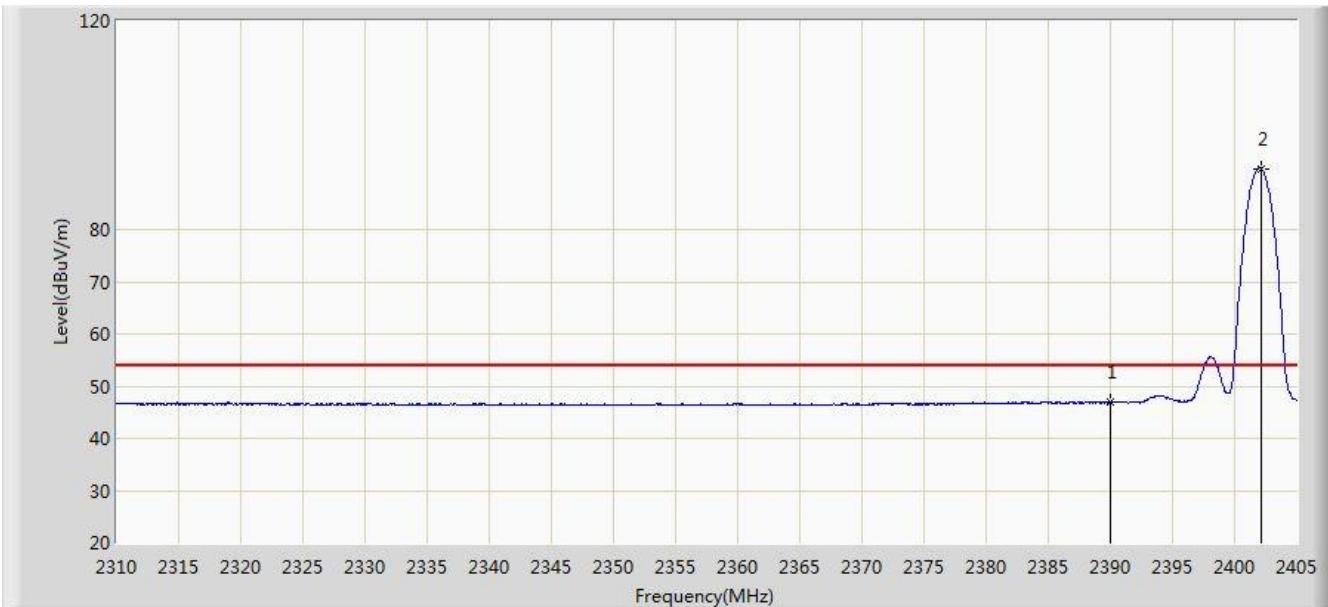


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2379.255	60.751	28.533	-13.249	74.000	32.218	PK
2			2390.000	59.564	27.286	-14.436	74.000	32.278	PK
3	*		2401.865	96.142	63.868	N/A	N/A	32.274	PK

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

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

Site: AC2	Time: 2016/07/25 - 13:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by 2DH5 at Channel 2402MHz	

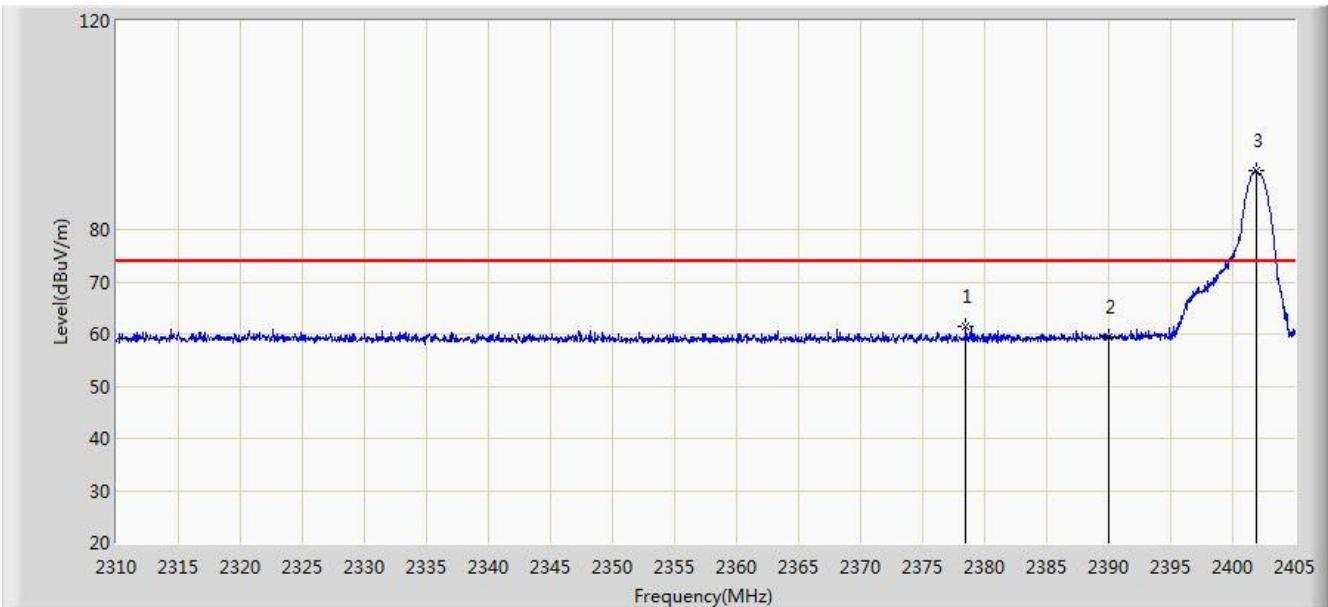


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.923	14.645	-7.077	54.000	32.278	AV
2	*	*	2402.150	91.697	59.424	N/A	N/A	32.273	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 14:01
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by 2DH5 at Channel 2402MHz	

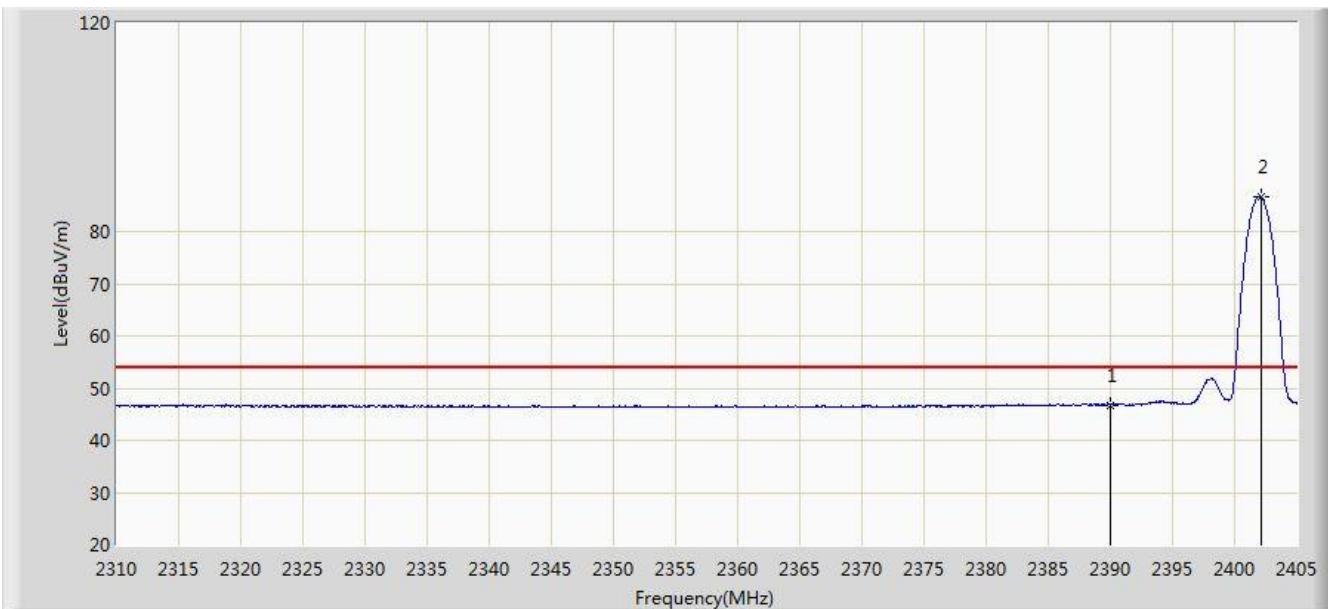


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2378.495	61.348	29.134	-12.652	74.000	32.214	PK
2			2390.000	59.344	27.066	-14.656	74.000	32.278	PK
3	*	*	2401.865	91.283	59.009	N/A	N/A	32.274	PK

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

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

Site: AC2	Time: 2016/07/25 - 14:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by 2DH5 at Channel 2402MHz	

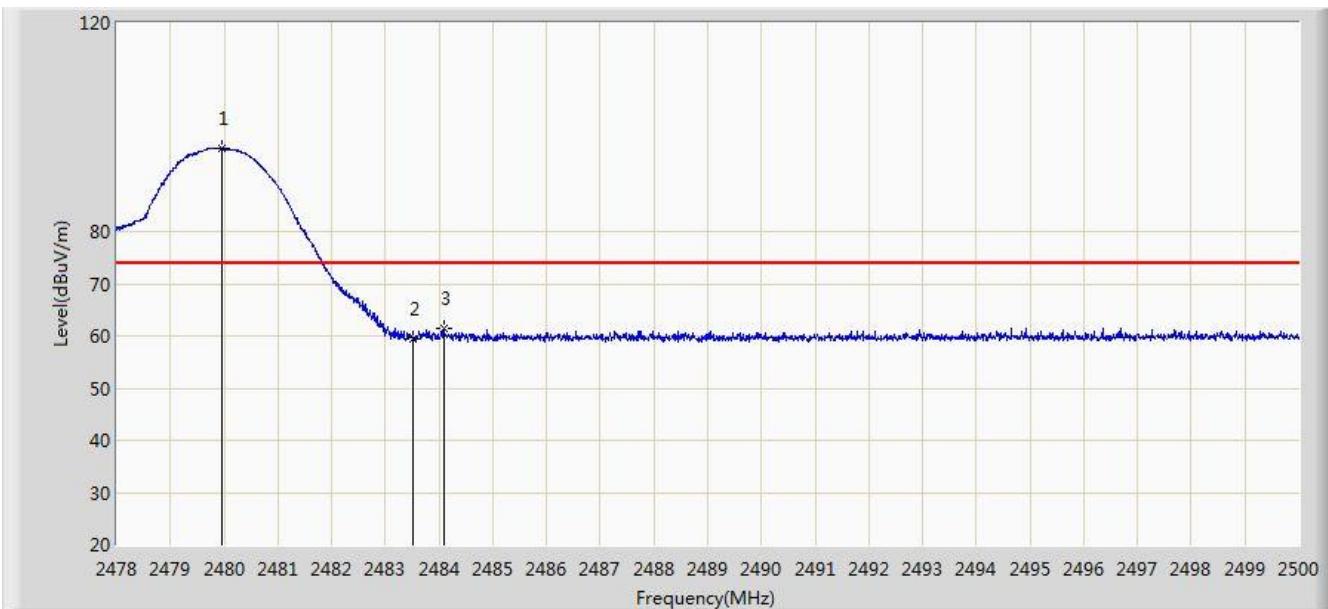


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			2390.000	46.791	14.513	-7.209	54.000	32.278	AV
2		*	2402.150	86.622	54.349	N/A	N/A	32.273	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 14:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by 2DH5 at Channel 2480MHz	

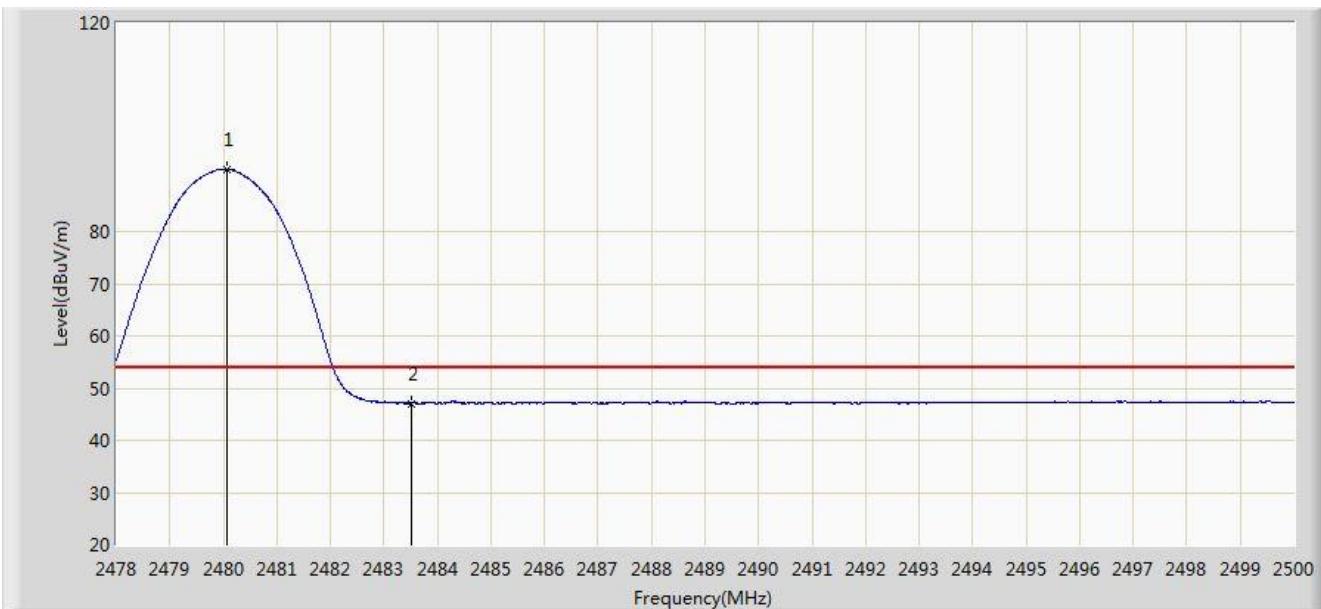


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.969	95.933	63.664	N/A	N/A	32.269	PK
2			2483.500	59.549	27.268	-14.451	74.000	32.282	PK
3			2484.083	61.482	29.199	-12.518	74.000	32.284	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 14:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by 2DH5 at Channel 2480MHz	

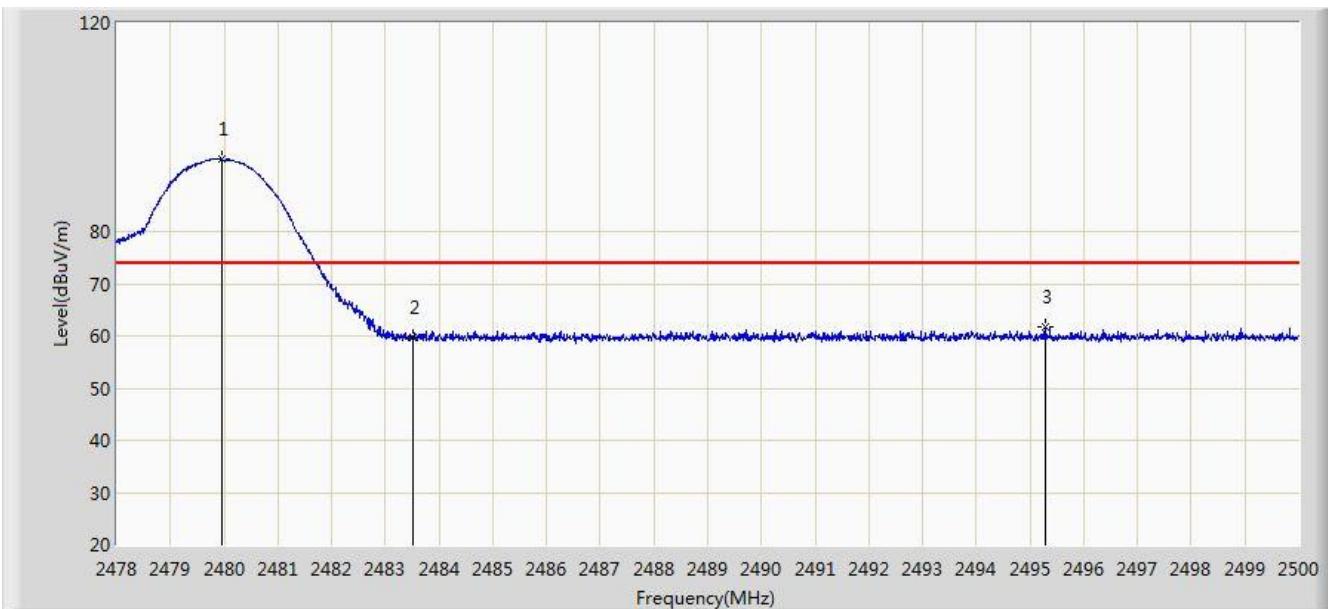


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1		*	2480.079	91.938	59.669	N/A	N/A	32.269	AV
2			2483.500	47.085	14.804	-6.915	54.000	32.282	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 14:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by 2DH5 at Channel 2480MHz	

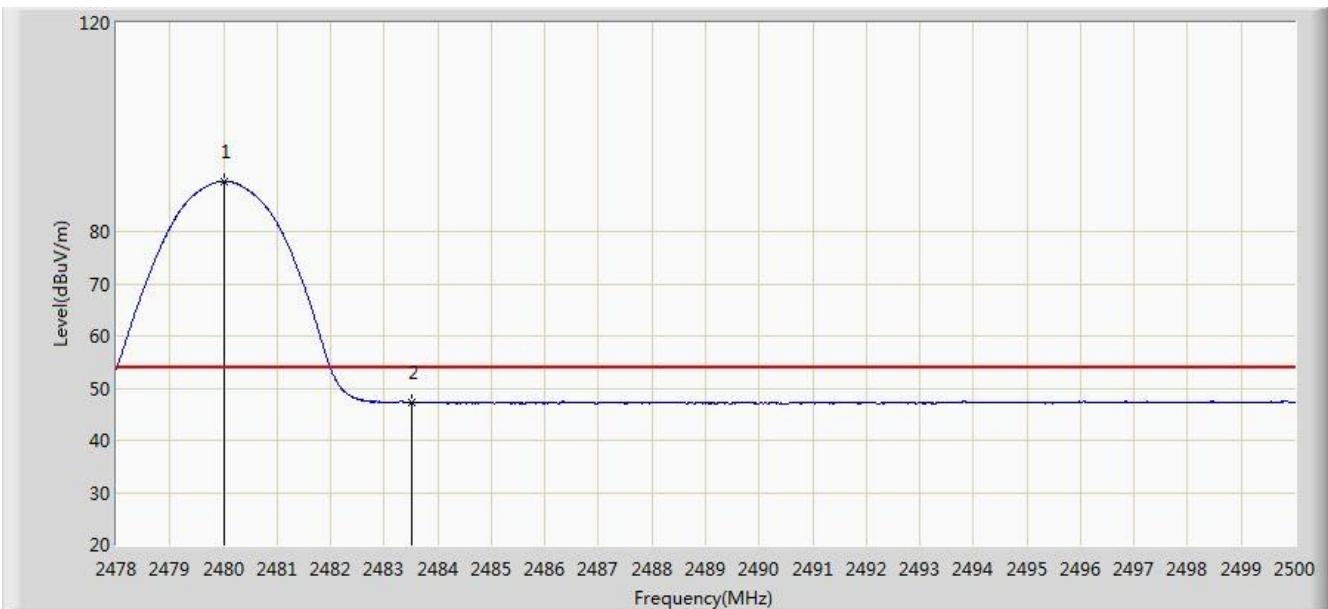


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.969	93.791	61.522	N/A	N/A	32.269	PK
2			2483.500	59.814	27.533	-14.186	74.000	32.282	PK
3			2495.292	61.822	29.500	-12.178	74.000	32.322	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: AC2	Time: 2016/07/25 - 14:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Bluetooth Headset	Power: By battery
Test Mode: Transmit by 2DH5 at Channel 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.002	89.675	57.406	N/A	N/A	32.269	AV
2			2483.500	47.285	15.004	-6.715	54.000	32.282	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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

## 7.11. AC Conducted Emissions Measurement

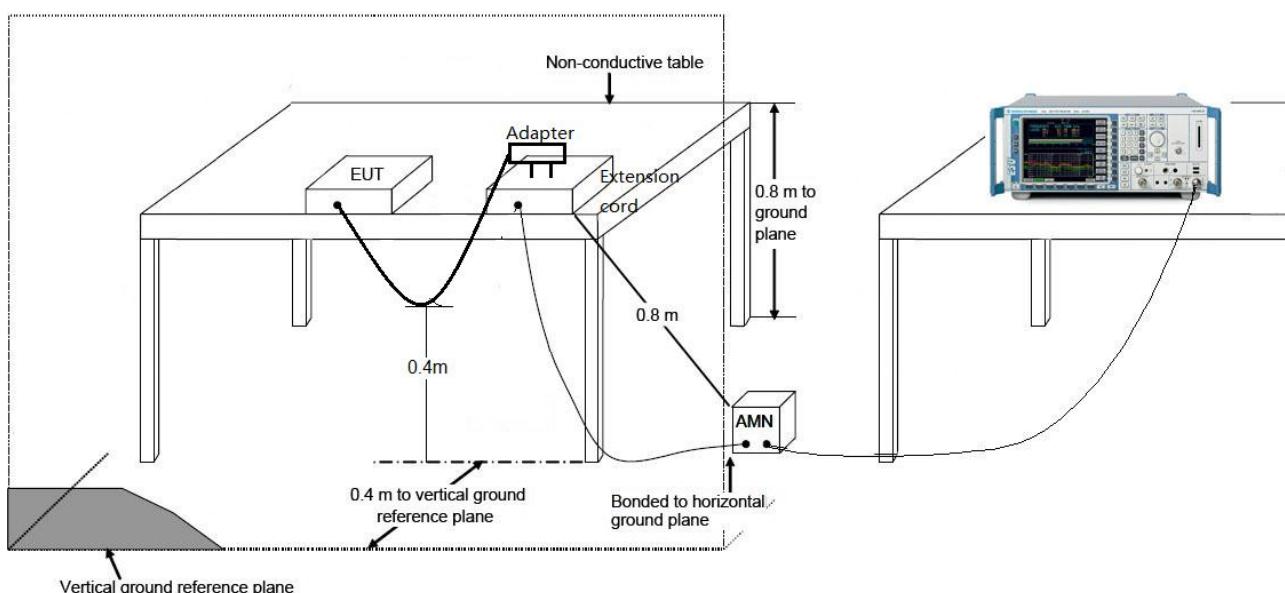
### 7.11.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dB $\mu$ V)	Average (dB $\mu$ 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.

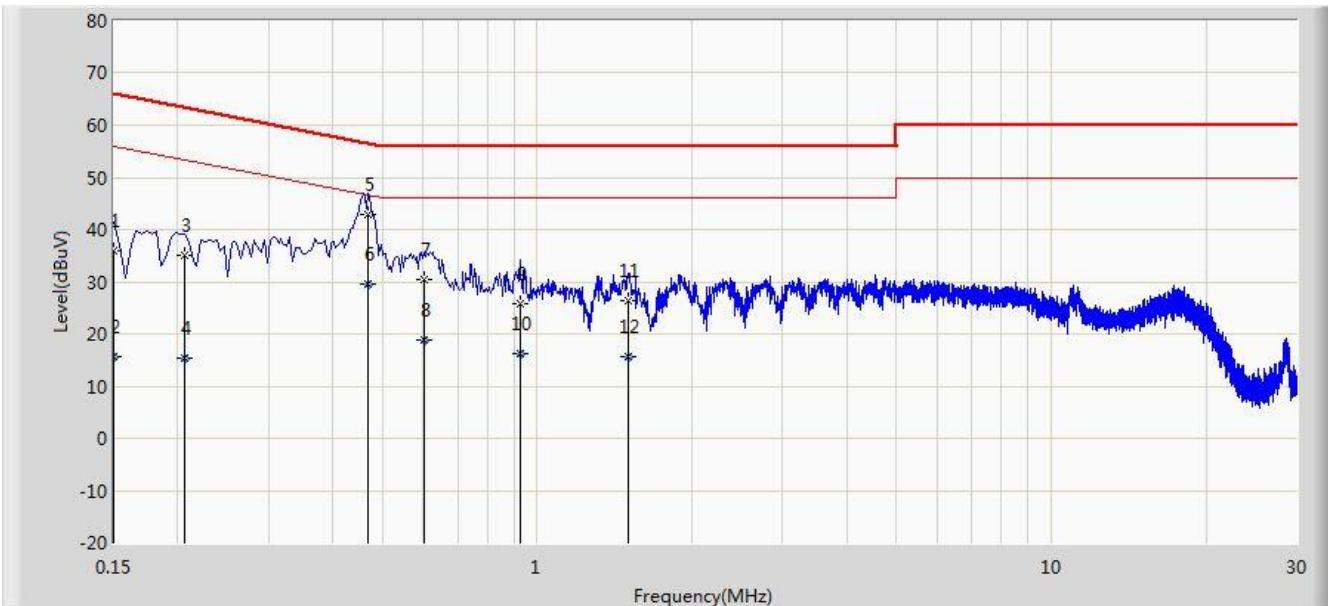
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

### 7.11.2. Test Setup



### 7.11.3. Test Result

Site: SR2	Time: 2016/07/28 - 10:38
Limit: FCC_Part15.207_CE_AC Power	Engineer: Dandy Li
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Test Mode: Transmit by DH5 at Channel 2402MHz	

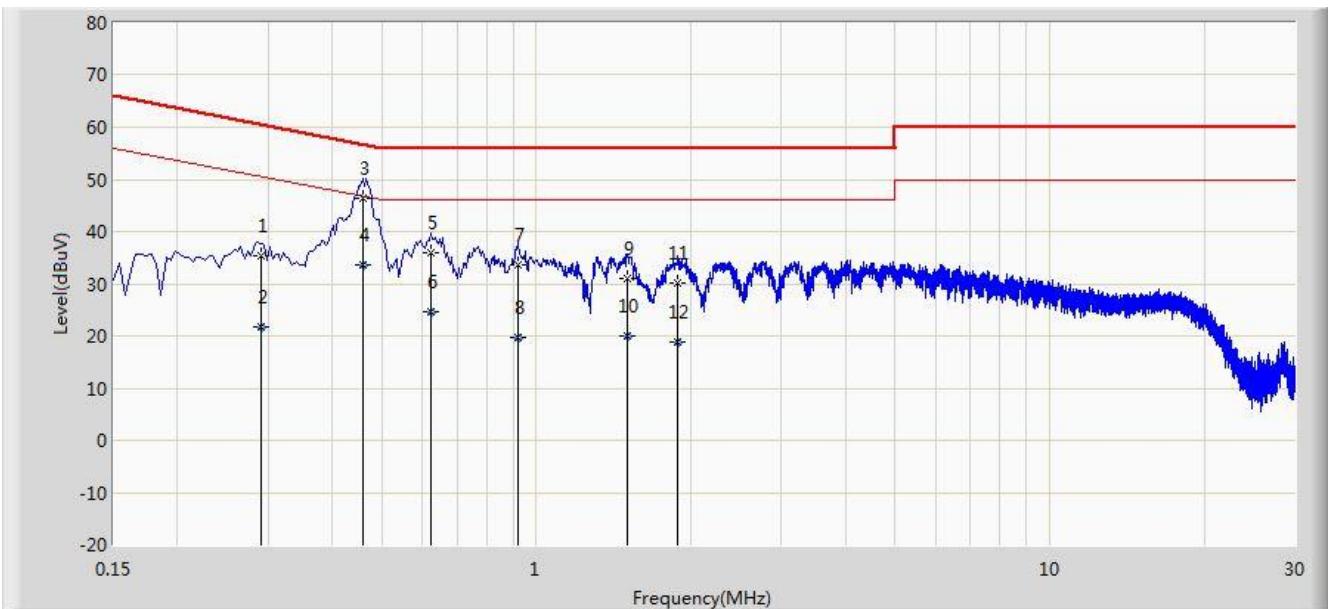


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	35.833	24.665	-30.167	66.000	11.168	QP
2			0.150	15.753	4.585	-40.247	56.000	11.168	AV
3			0.206	35.136	25.156	-28.229	63.365	9.981	QP
4			0.206	15.441	5.460	-37.924	53.365	9.981	AV
5	*		0.470	42.851	32.709	-13.663	56.514	10.142	QP
6			0.470	29.518	19.376	-16.996	46.514	10.142	AV
7			0.602	30.549	20.435	-25.451	56.000	10.114	QP
8			0.602	18.832	8.718	-27.168	46.000	10.114	AV
9			0.926	25.917	15.971	-30.083	56.000	9.946	QP
10			0.926	16.189	6.243	-29.811	46.000	9.946	AV
11			1.502	26.261	16.373	-29.739	56.000	9.889	QP
12			1.502	15.629	5.740	-30.371	46.000	9.889	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB)

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

Site: SR2	Time: 2016/07/28 - 10:44
Limit: FCC_Part15.207_CE_AC Power	Engineer: Dandy Li
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Test Mode: Transmit by DH5 at Channel 2402MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.290	35.225	25.195	-25.299	60.524	10.030	QP
2			0.290	21.762	11.731	-28.763	50.524	10.030	AV
3		*	0.458	46.305	36.149	-10.424	56.729	10.156	QP
4			0.458	33.594	23.438	-13.135	46.729	10.156	AV
5			0.622	36.056	25.937	-19.944	56.000	10.119	QP
6			0.622	24.752	14.633	-21.248	46.000	10.119	AV
7			0.918	33.552	23.598	-22.448	56.000	9.954	QP
8			0.918	19.792	9.838	-26.208	46.000	9.954	AV
9			1.506	31.127	21.237	-24.873	56.000	9.890	QP
10			1.506	19.926	10.036	-26.074	46.000	9.890	AV
11			1.882	30.235	20.358	-25.765	56.000	9.877	QP
12			1.882	18.814	8.937	-27.186	46.000	9.877	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + 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 **Bluetooth Headset FCC ID: 2AIWF-L1** is in compliance with Part 15C of the FCC Rules.

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The End

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