



中国认可  
国际互认  
检测  
TESTING  
CNAS L5313



# Test Report

## FCC Part15 Subpart C& Industry Canada RSS-247 Issue 2

Product Name : Bluetooth Headset  
Model No. : B8200  
FCC ID : AL8-V8200  
IC : 457A-B8200

Applicant : Plantronics, Inc.

Address : 345 Encinal Street, Santa Cruz, CA95060 USA

Date of Receipt : Jul. 13, 2018

Issued Date : Sep. 05, 2018

Report No. : 1872097R-RF-US-P06V02

Report Version : V 1.0

Note: This report is based on 1732089R.

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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# Test Report Certification

Issued Date : Sep. 05, 2018

Report No. : 1872097R-RF-US-P06V02



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Applicant : Plantronics, Inc.

Address : 345 Encinal Street, Santa Cruz, CA95060 USA

Manufacturer : Plantronics, Inc.

Address : 345 Encinal Street, Santa Cruz, CA95060 USA

Model No. : B8200

FCC ID : AL8-V8200

IC : 457A-B8200

EUT Voltage : DC 3.7V

Test Voltage : AC120V/60Hz

Brand Name : Plantronics

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C: 2015  
KDB DA 00-705 Released March 30, 2000  
ANSI C63.4: 2014; ANSI C63.10: 2013  
Industry Canada RSS-Gen Issue 4/RSS-247 Issue 2

Test Result : Complied

Performed Location : DEKRA Testing & Certification (Suzhou) Co., Ltd.  
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,  
Jiangsu, China  
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098  
FCC Registration Number: 800392; IC Lab Code: 4075B

Documented By : Kitty Li  
( Adm. Specialist: Kitty Li )

Reviewed By : Frank He  
(Senior Project Manager: Frank He )

Approved By : Jack Zhang  
(Engineering Supervisor: Jack Zhang )

## TABLE OF CONTENTS

Description	Page
1. General Information.....	7
1.1. EUT Description.....	7
1.2. Antenna information.....	9
1.3. Mode of Operation.....	10
1.4. Tested System Details.....	11
1.5. Configuration of Tested System.....	12
1.6. EUT Exercise Software.....	13
2. Technical Test.....	14
2.1. Summary of Test Result.....	14
2.2. Test Environment.....	16
3. Conducted Emission.....	17
3.1. Test Equipment.....	17
3.2. Test Setup.....	17
3.3. Limit.....	18
3.4. Test Procedure.....	18
3.5. Uncertainty.....	18
3.6. Test Result.....	19
4. Emissions in restricted frequency bands.....	19
4.1. Test Equipment.....	21
4.2. Test Setup.....	22
4.3. Limit.....	23
4.4. Test Procedure.....	26
4.5. Uncertainty.....	26
4.6. Test Result.....	27
5. 20dB Bandwidth.....	35
5.1. Test Equipment.....	35
5.2. Test Setup.....	35
5.3. Limit.....	35
5.4. Test Procedure.....	36
5.5. Uncertainty.....	36
5.6. Test Result.....	37
6. Carrier Frequency Separation.....	43
6.1. Test Equipment.....	43
6.2. Test Setup.....	43
6.3. Limit.....	44
6.4. Test Procedure.....	44
6.5. Uncertainty.....	44

6.6.	Test Result.....	45
7.	Number of Hopping Frequencies.....	51
7.1.	Test Equipment.....	51
7.2.	Test Setup.....	51
7.3.	Limit.....	51
7.4.	Test Procedure.....	52
7.5.	Uncertainty.....	52
7.6.	Test Result.....	53
8.	Time of Occupancy (Dwell Time).....	56
8.1.	Test Equipment.....	56
8.2.	Test Setup.....	56
8.3.	Limit.....	56
8.4.	Test Procedure.....	57
8.5.	Uncertainty.....	57
8.6.	Test Result.....	58
9.	Peak Output Power.....	61
9.1.	Test Equipment.....	61
9.2.	Test Setup.....	61
9.3.	Limit.....	62
9.4.	Test Procedure.....	62
9.5.	Uncertainty.....	62
9.6.	Test Result.....	63
10.	Emissions in non-restricted frequency bands.....	66
10.1.	Test Equipment.....	66
10.2.	Test Setup.....	66
10.3.	Limit.....	67
10.4.	Test Procedure.....	67
10.5.	Uncertainty.....	67
10.6.	Test Result.....	68
11.	Radiated Emission Band Edge.....	69
11.1.	Test Equipment.....	69
11.2.	Test Setup.....	70
11.3.	Limit.....	70
11.4.	Test Procedure.....	70
11.5.	Uncertainty.....	71
11.6.	Duty Factor.....	72
11.7.	Test Result.....	73
12.	Antenna Requirement.....	97

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12.1. Limit.....	97
12.2. Antenna Connector Construction.....	97

### History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1872097R-RF-US-P06V02	V1.0	Initial Issued Report	Sep. 05, 2018

## 1. General Information

### 1.1. EUT Description

Product Name	Bluetooth Headset
Model No.	B8200
Working Voltage	DC 3.7V
Test Voltage	AC120V/60Hz
Bluetooth Specification	V3.0
Frequency Range	2402- 2480 MHz
Channel Number	V3.0: 79
Channel Separation	V3.0: 1MHz
Type of Modulation	V3.0: GFSK, Pi/4 DQPSK, 8DPSK
Data Rate	V3.0: 1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps(8DPSK)
Antenna Type	Reference to Antenna List
Peak Antenna Gain	Reference to Antenna List

Bluetooth Working Frequency of Each Channel: (For V3.0)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz	03	2405 MHz
04	2406 MHz	05	2407 MHz	06	2408 MHz	07	2409 MHz
08	2410 MHz	09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz	15	2417 MHz
16	2418 MHz	17	2419 MHz	18	2420 MHz	19	2421 MHz
20	2422 MHz	21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz	27	2429 MHz
28	2430 MHz	29	2431 MHz	30	2432 MHz	31	2433 MHz
32	2434 MHz	33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz	39	2441 MHz
40	2442 MHz	41	2443 MHz	42	2444 MHz	43	2445 MHz
44	2446 MHz	45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz	51	2453 MHz
52	2454 MHz	53	2455 MHz	54	2456 MHz	55	2457 MHz
56	2458 MHz	57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz	63	2465 MHz
64	2466 MHz	65	2467 MHz	66	2468 MHz	67	2469 MHz
68	2470 MHz	69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz	75	2477 MHz
76	2478 MHz	77	2479 MHz	78	2480 MHz	N/A	N/A



### 1.2 Antenna information

Model No.	N/A		
Antenna manufacturer	N/A		
Antenna Delivery	<input checked="" type="checkbox"/> 1*TX+1*RX	<input type="checkbox"/> 2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna technology	<input checked="" type="checkbox"/> SISO		
	<input type="checkbox"/> MIMO	<input type="checkbox"/> Basic	
		<input type="checkbox"/> CDD	
		<input type="checkbox"/> Beam-forming	
Antenna Type	<input type="checkbox"/> External	<input type="checkbox"/> Dipole	
	<input checked="" type="checkbox"/> Internal	<input type="checkbox"/> PIFA	
		<input checked="" type="checkbox"/> PCB	
		<input type="checkbox"/> Ceramic Chip Antenna	
		<input type="checkbox"/> Metal plate type F antenna	
Antenna Gain	2.3dBi		

### 1.3 Mode of Operation

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmitter-1Mbps(GFSK_DH5)
Mode 2: Transmitter-2Mbps(Pi/4 DQPSK_DH5)
Mode 3: Transmitter-3Mbps(8DPSK_DH5)
Mode 4: Transmitter-Hopping

Note:

1. For portable device, radiated spurious emission was verified over X, Y, Z Axis, and shown the worst case on this report.
2. Regards to the frequency band operation for systems using FHSS modulation: normal operation (hopping) was selected to test for conducted spurious test.
3. The extreme test condition for voltage and temperature were declared by the manufacturer.
4. The reading values of all the test items contain cable loss.

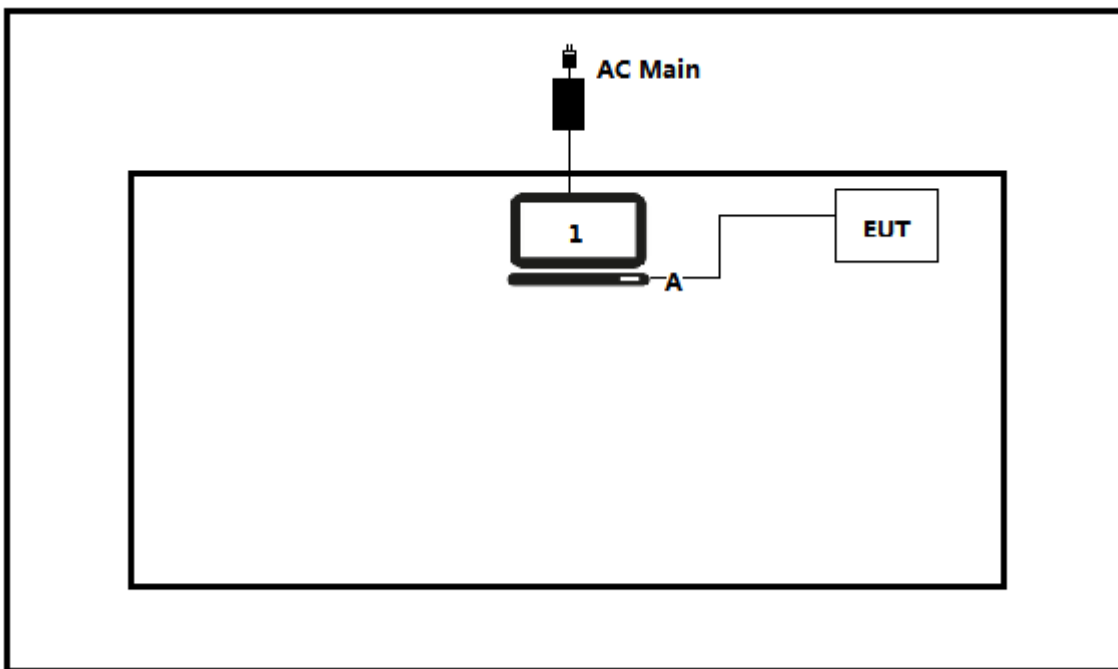
#### 1.4 Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

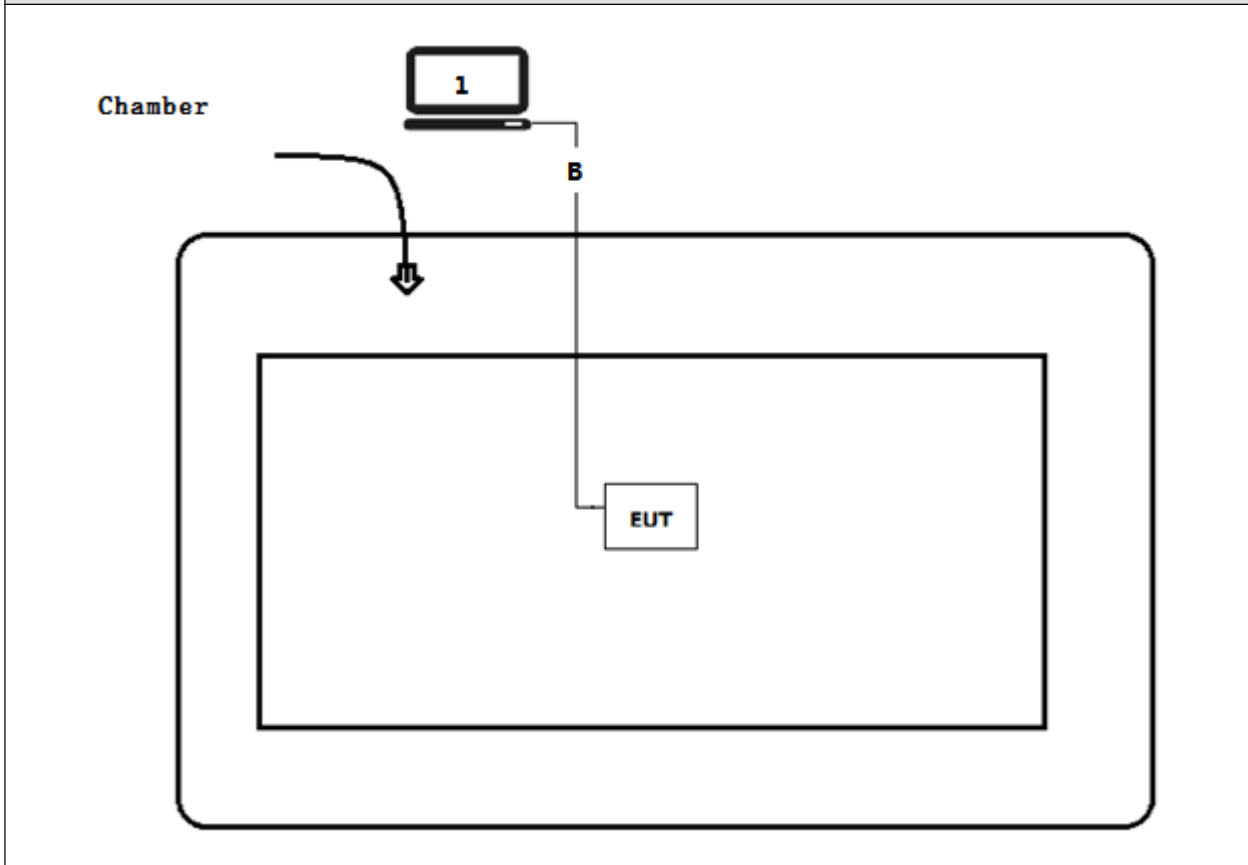
Product	Manufacturer	Model No.	Serial No.	Power Cord
1 Notebook	Think Pad	2526	LV-A3285	Power by adapter
A USB Cable	N/A	N/A	N/A	Shield, 0.75m
B USB Cable	N/A	N/A	N/A	Shield, 10m

### 1.5 Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



## 1.6 EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	Run the Bluetest3 software, and set the test mode and channel, then press OK to start continue Transmit.

## 2. Technical Test

### 2.1. Summary of Test Result

- No deviations from the test standards  
 Deviations from the test standards as below description:

#### For FCC

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.207	Yes	No
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	Yes	No
20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)	Yes	No
Carrier Frequency Separation	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)	Yes	No
Number of Hopping Frequencies	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)(iii)	Yes	No
Time of Occupancy (Dwell Time)	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)(iii)	Yes	No
Peak Output Power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(1)	Yes	No
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.215(c), 15.247(d)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	Yes	No
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.203	Yes	No

**For IC**

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	RSS-Gen Issue 4 Section 8.8	Yes	No
Radiated Emission	RSS-Gen Issue 4 Section 8.9	Yes	No
20dB Bandwidth	RSS-247 Issue 2 Section 5.1	Yes	No
Carrier Frequency Separation	RSS-247 Issue 2 Section 5.1	Yes	No
Number of Hopping Frequencies	RSS-247 Issue 2 Section 5.1	Yes	No
Time of Occupancy (Dwell Time)	RSS-247 Issue 2 Section 5.1	Yes	No
Peak Output Power	RSS-247 Issue 2 Section 5.4	Yes	No
Emissions in non-restricted frequency bands	RSS-247 Issue 2 Section 5.5	Yes	No
Radiated Emission Band Edge	RSS-Gen Issue 4 Section 8.10	Yes	No
Antenna Requirement	RSS-Gen Issue 4 Section 8.3	Yes	No

## 2.2. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000



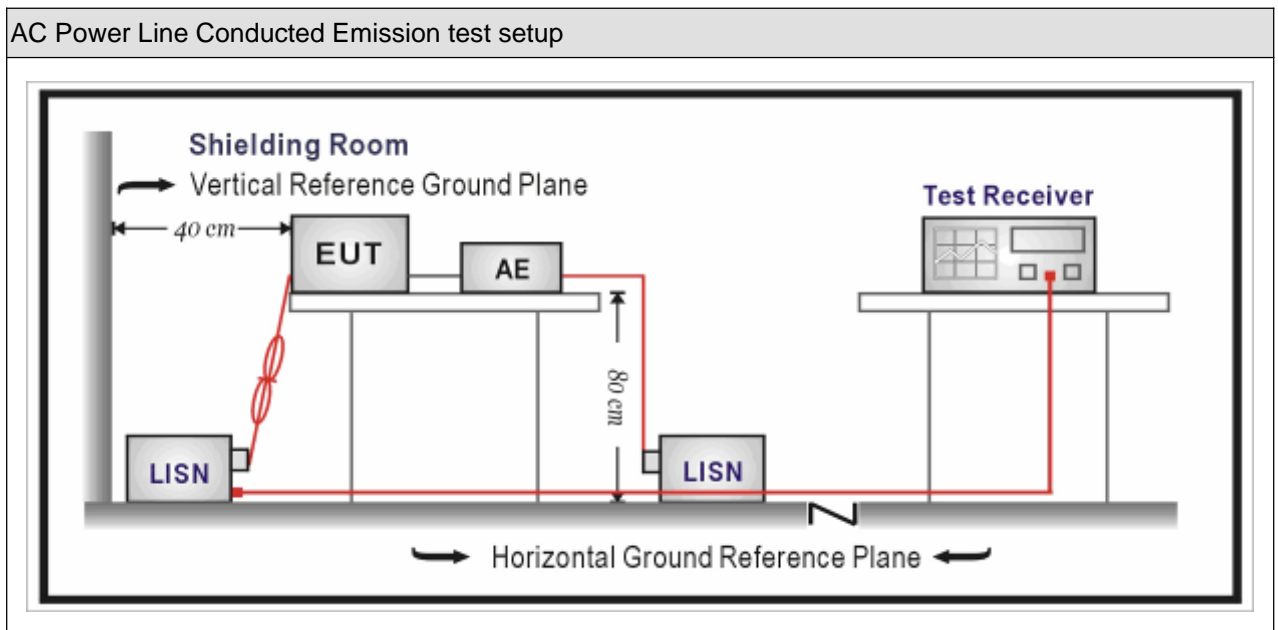
### 3. Conducted Emission

#### 3.1. Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2017.03.05	2018.03.04
Two-Line V-Network	R&S	ENV 216	101189	2016.07.16	2017.07.15
Two-Line V-Network	R&S	ENV 216	101044	2016.09.15	2017.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2016.09.15	2017.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2017.01.05	2018.01.04

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

#### 3.2. Test Setup



### 3.3. Limit

Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dB $\mu$ V)	Average (dB $\mu$ V)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	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 0.15 MHz to 0.5 MHz.		

### 3.4. Test Procedure

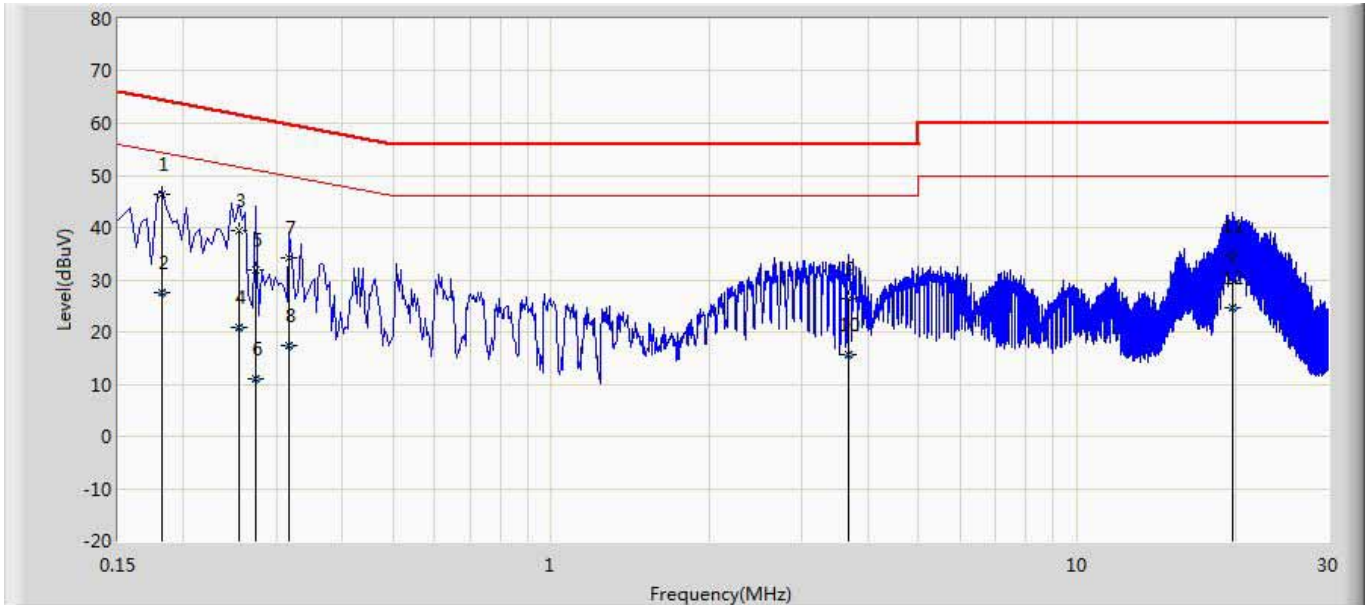
Test Method			
	References Rule	Chapter	Item
<input checked="" type="checkbox"/>	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices
<input checked="" type="checkbox"/>	ANSI C63.4-2014	7	AC power-line conducted emission measurements

### 3.5. Uncertainty

The measurement uncertainty is defined as  $\pm 2.02$  dB

### 3.6. Test Result

Site: TR1	Time: 2017/03/29
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216-L1	Polarity: Line
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1	

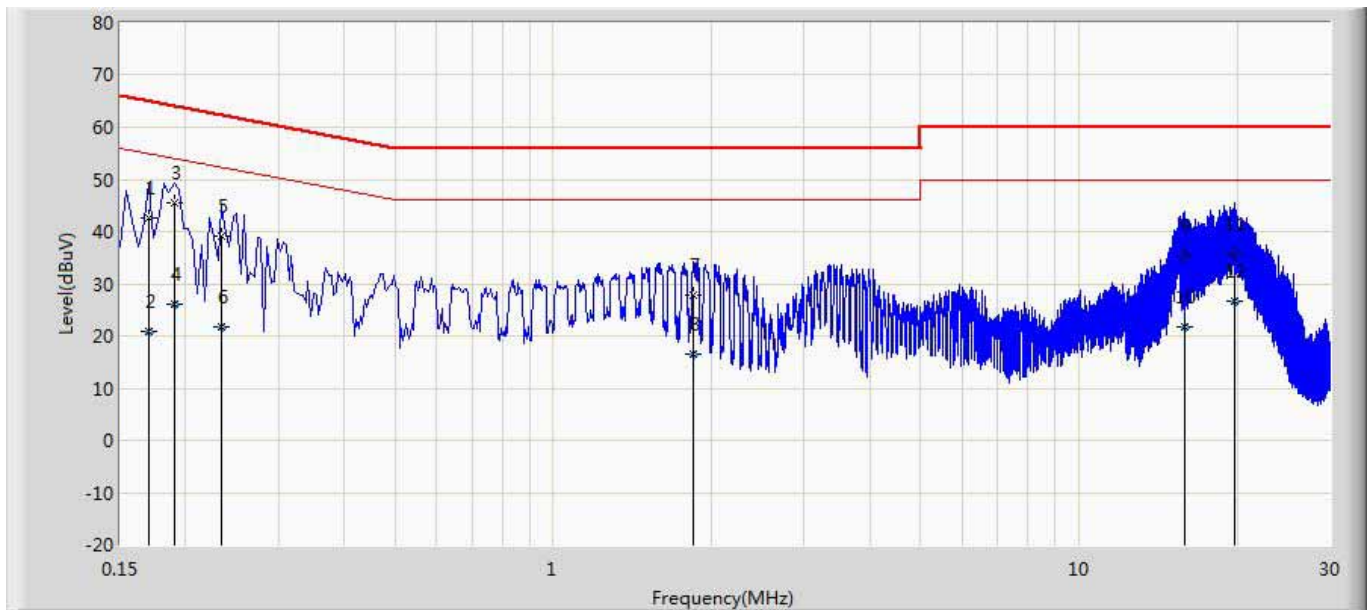


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.182	46.313	36.598	-18.081	64.394	9.655	0.060	0.000	QP
2		0.182	27.447	17.732	-26.947	54.394	9.655	0.060	0.000	AV
3		0.254	39.359	29.651	-22.266	61.625	9.648	0.060	0.000	QP
4		0.254	20.852	11.144	-30.773	51.625	9.648	0.060	0.000	AV
5		0.274	31.760	22.058	-29.236	60.996	9.642	0.060	0.000	QP
6		0.274	11.054	1.352	-39.942	50.996	9.642	0.060	0.000	AV
7		0.318	34.152	24.452	-25.607	59.759	9.640	0.060	0.000	QP
8		0.318	17.312	7.612	-32.447	49.759	9.640	0.060	0.000	AV
9		3.666	26.272	16.482	-29.728	56.000	9.660	0.130	0.000	QP
10		3.666	15.544	5.754	-30.456	46.000	9.660	0.130	0.000	AV
11		19.782	34.351	24.151	-25.649	60.000	9.730	0.470	0.000	QP
12		19.782	24.585	14.385	-25.415	50.000	9.730	0.470	0.000	AV

**Note:**

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: TR1	Time: 2017/03/29
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216-N	Polarity: Neutral
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.170	42.526	32.800	-22.434	64.960	9.666	0.060	0.000	QP
2		0.170	20.940	11.214	-34.020	54.960	9.666	0.060	0.000	AV
3	*	0.190	45.615	35.895	-18.422	64.037	9.660	0.060	0.000	QP
4		0.190	26.064	16.344	-27.973	54.037	9.660	0.060	0.000	AV
5		0.234	39.087	29.367	-23.220	62.307	9.660	0.060	0.000	QP
6		0.234	21.872	12.152	-30.435	52.307	9.660	0.060	0.000	AV
7		1.846	27.956	18.218	-28.044	56.000	9.640	0.098	0.000	QP
8		1.846	16.586	6.848	-29.414	46.000	9.640	0.098	0.000	AV
9		15.834	35.305	25.075	-24.695	60.000	9.840	0.390	0.000	QP
10		15.834	21.857	11.627	-28.143	50.000	9.840	0.390	0.000	AV
11		19.794	35.758	25.438	-24.242	60.000	9.850	0.470	0.000	QP
12		19.794	26.672	16.352	-23.328	50.000	9.850	0.470	0.000	AV

**Note:**

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable+Amp).

#### 4. Emissions in restricted frequency bands

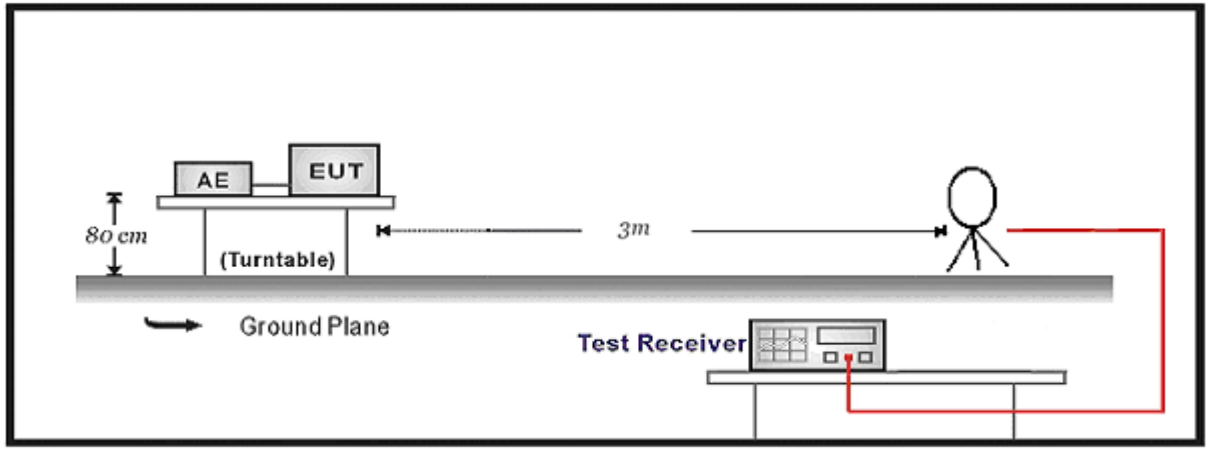
##### 4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2017.03.29	2018.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2016.11.16	2017.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2016.10.16	2017.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2017.03.02	2018.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2017.01.04	2018.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

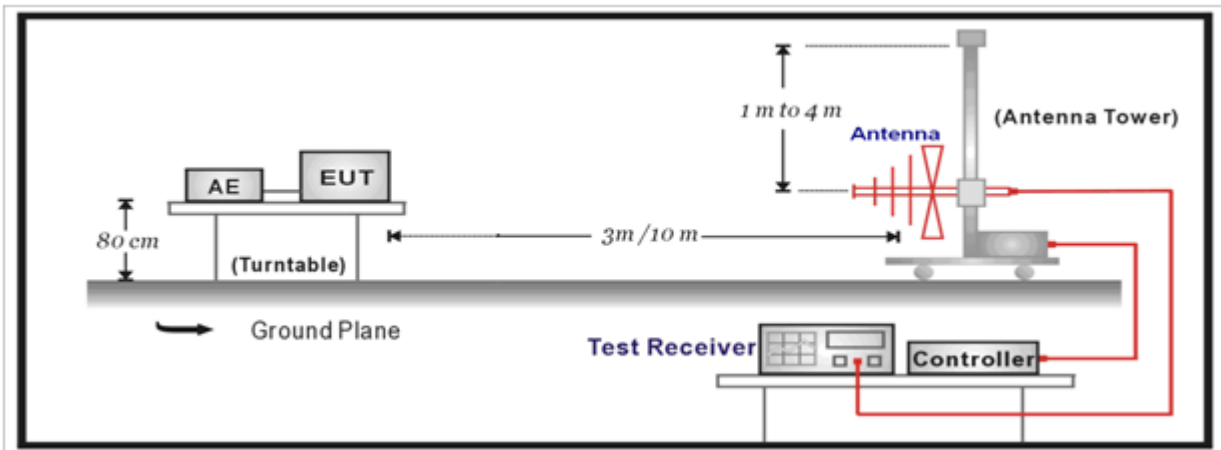
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.04	2018.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2016.05.06	2017.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2017.01.22	2018.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.11.25	2017.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2017.03.02	2018.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2016.06.10	2017.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.04	2018.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

### 4.2. Test Setup

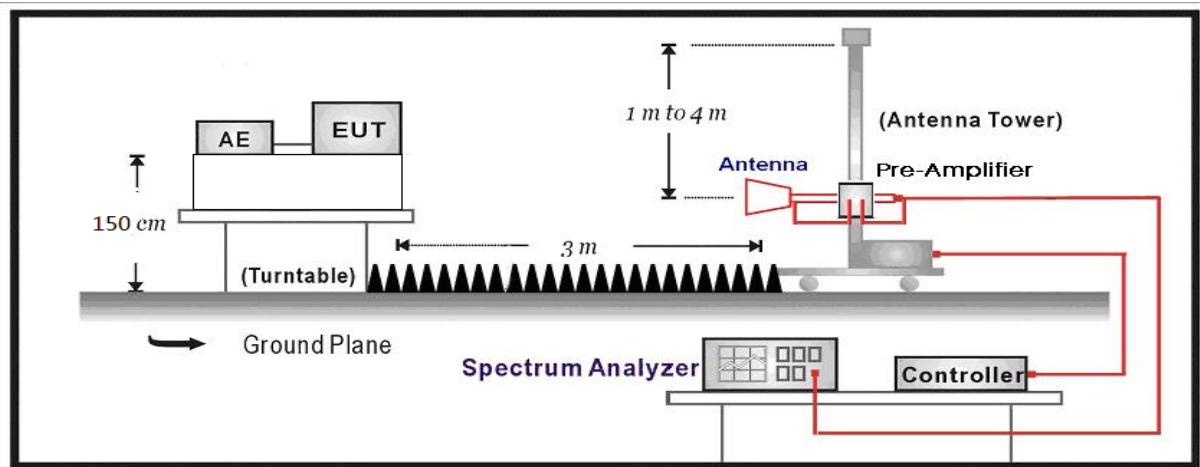
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



**4.3. Limit**

**For FCC:**

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	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	
13.36 – 13.41			

**For IC:**

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	13.36-13.41	1645.5-1646.5	13.25-13.4
2.1735-2.1905	16.42-16.423	1660-1710	14.47-14.5
3.020-3.026	16.69475-16.69525	1718.8-1722.2	15.35-16.2
4.125-4.128	16.80425-16.80475	2200-2300	17.7-21.4
4.17725-4.17775	25.5-25.67	2310-2390	22.01-23.12
4.20725-4.20775	37.5-38.25	2655-2900	23.6-24.0
5.677-5.683	73-74.6	3260-3267	31.2-31.8
6.215-6.218	74.8-75.2	3332-3339	36.43-36.5
6.26775-6.26825	108-138	3345.8-3358	Above 38.6
6.31175-6.31225	156.52475-156.52525	3500-4400	
8.291-8.294	156.7-156.9	4500-5150	
8.362-8.366	240-285	5350-5460	
8.37625-8.38675	322-335.4	7250-7750	
8.41425-8.41475	399.9-410	8025-8500	
12.29-12.293	608-614	9.0-9.2	
12.51975-12.52025	960-1427	9.3-9.5	
12.57675-12.57725	1435-1626.5	10.6-12.7	



Restricted Band Emissions Limit			
Frequency (MHz)	Field strength ( $\mu$ V/m)	Field strength (dB $\mu$ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 <sub>(Note 1)</sub>
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 <sub>(Note 1)</sub>
1.705 - 30	30	29.5	30 <sub>(Note 1)</sub>
30 - 88	100	40	3 <sub>(Note 2)</sub>
88 - 216	150	43.5	3 <sub>(Note 2)</sub>
216 - 960	200	46	3 <sub>(Note 2)</sub>
Above 960	500	54	3 <sub>(Note 2)</sub>

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

#### 4.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
<input checked="" type="checkbox"/>	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
<input checked="" type="checkbox"/>	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

#### 4.5. Uncertainty

The measurement uncertainty above 1G is defined as  $\pm 3.9$  dB  
 below 1G is defined as  $\pm 3.8$  dB

**4.6. Test Result**

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1(X Axis)	Test Site	: AC-5
Test Date	: 2017.03.24		

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector
00	H	4804.000	43.172	4.954	48.126	54(Note3)	-5.874	PK
	V	4808.000	41.843	4.929	46.772	54(Note3)	-7.228	PK
	H	7206.000	38.125	9.096	47.221	54(Note3)	-6.779	PK
	V	7206.000	36.335	9.096	45.431	54(Note3)	-8.569	PK
	H	9608.000	33.222	11.569	44.791	54(Note3)	-9.209	PK
	V	9608.000	33.615	11.569	45.184	54(Note3)	-8.816	PK
39	H	4884.500	42.012	5.169	47.181	54(Note3)	-6.819	PK
	V	4884.500	41.964	5.169	47.133	54(Note3)	-6.867	PK
	H	7324.000	39.036	9.345	48.381	54(Note3)	-5.619	PK
	V	7323.000	36.420	9.315	45.735	54(Note3)	-8.265	PK
	H	9764.000	33.402	12.007	45.408	54(Note3)	-8.592	PK
	V	9764.000	32.650	12.007	44.656	54(Note3)	-9.344	PK
78	H	4960.000	40.882	5.359	46.242	54(Note3)	-7.758	PK
	V	4960.000	39.999	5.359	45.359	54(Note3)	-8.641	PK
	H	7440.000	37.475	9.792	47.267	54(Note3)	-6.733	PK
	V	7440.000	36.152	9.792	45.944	54(Note3)	-8.056	PK
	H	9920.000	33.084	11.792	44.877	54(Note3)	-9.123	PK
	V	9920.000	33.332	11.792	45.125	54(Note3)	-8.875	PK

Note 1: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.

2: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

3: Measure Level = Reading Level + Factor.

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1(Z Axis)	Test Site	: AC-5
Test Date	: 2017.03.24		

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector
00	H	4804.000	43.595	4.954	48.549	54(Note3)	-5.451	PK
	V	4808.000	43.739	4.954	48.693	54(Note3)	-5.307	PK
	H	7206.000	37.903	9.096	46.999	54(Note3)	-7.001	PK
	V	7206.000	39.059	9.096	48.155	54(Note3)	-5.845	PK
	H	9608.000	35.607	11.569	47.176	54(Note3)	-6.824	PK
	V	9608.000	35.083	11.569	46.652	54(Note3)	-7.348	PK
39	H	4884.500	40.785	5.183	45.968	54(Note3)	-8.032	PK
	V	4884.500	42.603	5.169	47.772	54(Note3)	-6.228	PK
	H	7324.000	36.107	9.315	45.422	54(Note3)	-8.578	PK
	V	7323.000	36.955	9.315	46.270	54(Note3)	-7.730	PK
	H	9764.000	35.295	12.006	47.301	54(Note3)	-6.699	PK
	V	9764.000	34.768	12.006	46.774	54(Note3)	-7.226	PK
78	H	4960.000	40.706	5.360	46.066	54(Note3)	-7.934	PK
	V	4960.000	41.642	5.360	47.002	54(Note3)	-6.998	PK
	H	7440.000	36.795	9.792	46.587	54(Note3)	-7.413	PK
	V	7440.000	37.163	9.792	46.955	54(Note3)	-7.045	PK
	H	9920.000	35.163	11.793	46.956	54(Note3)	-7.044	PK
	V	9920.000	35.541	11.793	47.334	54(Note3)	-6.666	PK

Note 1: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.

2: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

3: Measure Level = Reading Level + Factor.

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2(X Axis)	Test Site	: AC-5
Test Date	: 2017.03.24		

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector
00	H	4804.000	39.692	4.954	44.646	54(Note3)	-9.354	PK
	V	4804.000	40.679	4.954	45.633	54(Note3)	-8.367	PK
	H	7206.000	35.721	9.096	44.817	54(Note3)	-9.183	PK
	V	7206.000	34.385	9.096	43.481	54(Note3)	-10.519	PK
	H	9608.000	32.536	11.569	44.105	54(Note3)	-9.895	PK
	V	9608.000	33.119	11.569	44.688	54(Note3)	-9.312	PK
39	H	4882.000	39.074	5.183	44.257	54(Note3)	-9.743	PK
	V	4882.000	38.691	5.183	43.874	54(Note3)	-10.126	PK
	H	7323.000	35.732	9.315	45.047	54(Note3)	-8.953	PK
	V	7323.000	34.975	9.315	44.290	54(Note3)	-9.710	PK
	H	9764.000	34.109	12.007	46.115	54(Note3)	-7.885	PK
	V	9764.000	33.040	12.007	45.046	54(Note3)	-8.954	PK
78	H	4960.000	38.976	5.359	44.336	54(Note3)	-9.664	PK
	V	4960.000	38.725	5.359	44.085	54(Note3)	-9.915	PK
	H	7440.000	35.656	9.792	45.448	54(Note3)	-8.552	PK
	V	7440.000	34.874	9.792	44.666	54(Note3)	-9.334	PK
	H	9920.000	32.603	11.792	44.396	54(Note3)	-9.604	PK
	V	9920.000	33.274	11.792	45.067	54(Note3)	-8.933	PK

Note 1: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.

2: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

3: Measure Level = Reading Level + Factor.

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2(Z Axis)	Test Site	: AC-5
Test Date	: 2017.03.24		

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector
00	H	4804.000	41.225	4.954	46.179	54(Note3)	-7.821	PK
	V	4804.000	41.716	4.954	46.670	54(Note3)	-7.330	PK
	H	7206.000	36.473	9.096	45.569	54(Note3)	-8.431	PK
	V	7206.000	36.758	9.096	45.854	54(Note3)	-8.146	PK
	H	9608.000	35.241	11.569	46.810	54(Note3)	-7.190	PK
	V	9608.000	35.285	11.569	46.854	54(Note3)	-7.146	PK
39	H	4882.000	40.684	5.183	45.867	54(Note3)	-8.133	PK
	V	4882.000	41.140	5.183	46.323	54(Note3)	-7.677	PK
	H	7323.000	37.349	9.315	46.664	54(Note3)	-7.336	PK
	V	7323.000	36.912	9.315	46.227	54(Note3)	-7.773	PK
	H	9764.000	35.332	12.006	47.338	54(Note3)	-6.662	PK
	V	9764.000	35.294	12.006	47.300	54(Note3)	-6.700	PK
78	H	4960.000	41.434	5.360	46.794	54(Note3)	-7.206	PK
	V	4960.000	40.820	5.360	46.180	54(Note3)	-7.820	PK
	H	7440.000	36.618	9.792	46.410	54(Note3)	-7.590	PK
	V	7440.000	37.339	9.792	47.131	54(Note3)	-6.869	PK
	H	9920.000	35.969	11.793	47.762	54(Note3)	-6.238	PK
	V	9920.000	35.686	11.793	47.479	54(Note3)	-6.521	PK

Note 1: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.

2: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

3: Measure Level = Reading Level + Factor.

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3(X Axis)	Test Site	: AC-5
Test Date	: 2017.03.24		

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector
00	H	4804.000	40.021	4.954	44.975	54(Note3)	-9.025	PK
	V	4804.000	40.037	4.954	44.991	54(Note3)	-9.009	PK
	H	7206.000	35.878	9.096	44.974	54(Note3)	-9.026	PK
	V	7206.000	34.467	9.096	43.563	54(Note3)	-10.437	PK
	H	9608.000	32.845	11.569	44.414	54(Note3)	-9.586	PK
	V	9608.000	32.939	11.569	44.508	54(Note3)	-9.492	PK
39	H	4882.000	38.593	5.183	43.776	54(Note3)	-10.224	PK
	V	4882.000	38.241	5.183	43.424	54(Note3)	-10.576	PK
	H	7323.000	35.177	9.315	44.492	54(Note3)	-9.508	PK
	V	7323.000	35.019	9.315	44.334	54(Note3)	-9.666	PK
	H	9764.000	33.459	12.007	45.465	54(Note3)	-8.535	PK
	V	9764.000	32.471	12.007	44.477	54(Note3)	-9.523	PK
78	H	4960.000	39.375	5.359	44.735	54(Note3)	-9.265	PK
	V	4960.000	39.829	5.359	45.189	54(Note3)	-8.811	PK
	H	7440.000	35.727	9.792	45.519	54(Note3)	-8.481	PK
	V	7440.000	34.952	9.792	44.744	54(Note3)	-9.256	PK
	H	9920.000	33.056	11.792	44.849	54(Note3)	-9.151	PK
	V	9920.000	33.303	11.792	45.096	54(Note3)	-8.904	PK

Note 1: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.

2: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

3: Measure Level = Reading Level + Factor.

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3(Z Axis)	Test Site	: AC-5
Test Date	: 2017.03.24		

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector
00	H	4804.000	41.496	4.954	46.450	54(Note3)	-7.550	PK
	V	4804.000	41.659	4.954	46.613	54(Note3)	-7.387	PK
	H	7206.000	36.875	9.096	45.971	54(Note3)	-8.029	PK
	V	7206.000	36.341	9.096	45.437	54(Note3)	-8.563	PK
	H	9608.000	35.006	11.569	46.575	54(Note3)	-7.425	PK
	V	9608.000	35.070	11.569	46.639	54(Note3)	-7.361	PK
39	H	4882.000	41.383	5.183	46.566	54(Note3)	-7.434	PK
	V	4882.000	40.519	5.183	45.702	54(Note3)	-8.298	PK
	H	7323.000	38.751	9.315	48.066	54(Note3)	-5.934	PK
	V	7323.000	37.311	9.315	46.626	54(Note3)	-7.374	PK
	H	9764.000	36.020	12.006	48.026	54(Note3)	-5.974	PK
	V	9764.000	35.626	12.006	47.632	54(Note3)	-6.368	PK
78	H	4960.000	40.464	5.360	45.824	54(Note3)	-8.176	PK
	V	4960.000	40.963	5.360	46.323	54(Note3)	-7.677	PK
	H	7440.000	37.309	9.792	47.101	54(Note3)	-6.899	PK
	V	7440.000	36.709	9.792	46.501	54(Note3)	-7.499	PK
	H	9920.000	35.895	11.793	47.688	54(Note3)	-6.312	PK
	V	9920.000	35.505	11.793	47.298	54(Note3)	-6.702	PK

Note 1: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.

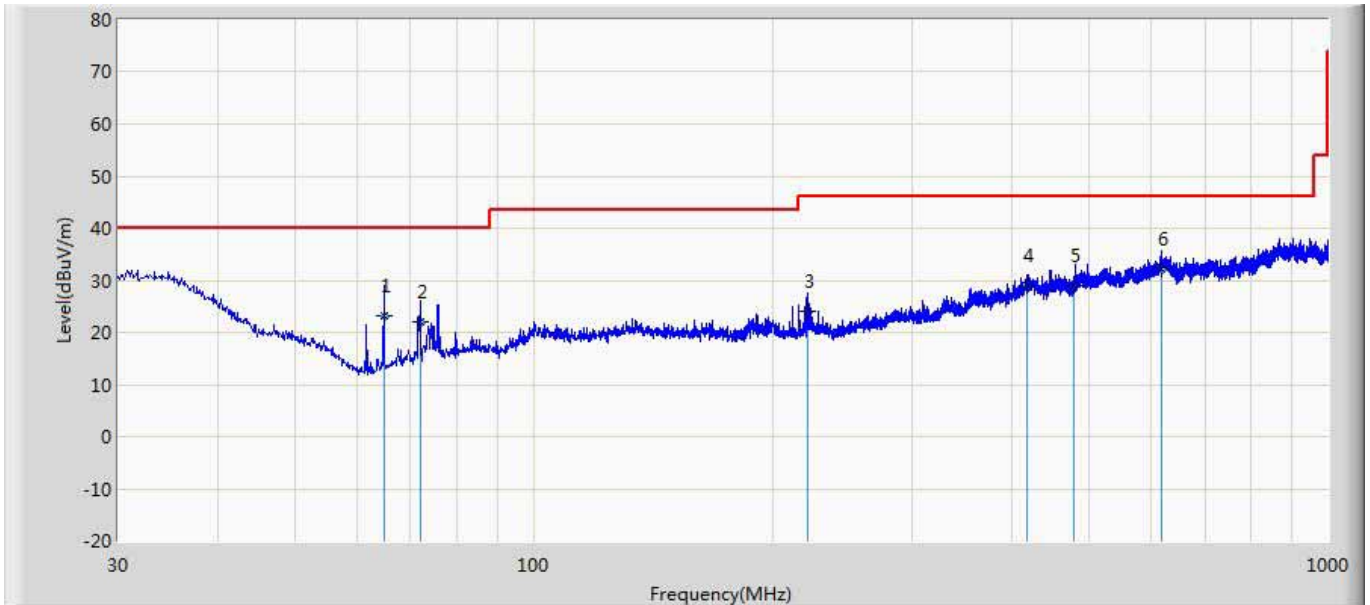
2: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

3: Measure Level = Reading Level + Factor.



**The worst case of Radiated Emission below 1GHz:**

Site: AC2	Time: 2017/04/07
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_(30-1G)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1(Z Axis)	

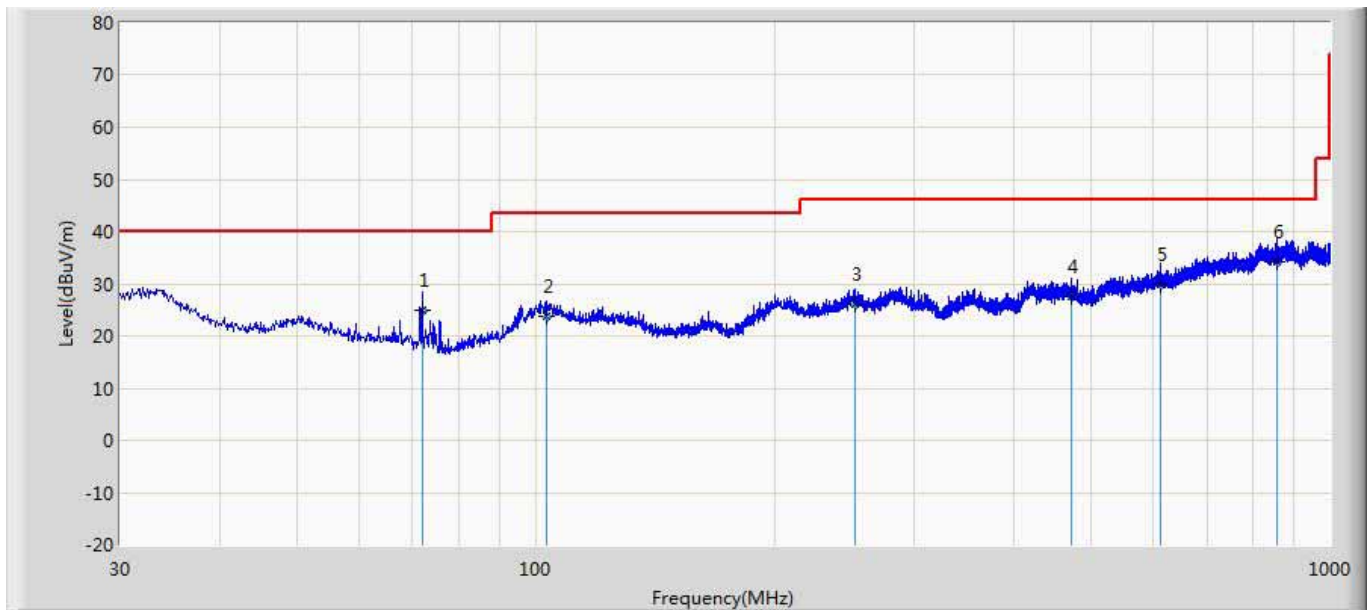


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		64.782	23.308	39.085	-16.692	40.000	6.405	0.869	23.050	100	135	QP
2		71.954	21.995	37.725	-18.005	40.000	6.437	0.913	23.080	100	210	QP
3		221.245	24.162	36.367	-21.838	46.000	9.425	1.610	23.240	200	359	QP
4		418.543	28.925	33.244	-17.075	46.000	16.371	2.250	22.940	100	290	QP
5		479.873	29.103	32.005	-16.897	46.000	17.478	2.380	22.760	200	360	QP
6	*	616.126	32.267	33.184	-13.733	46.000	19.000	2.720	22.637	100	170	QP

**Note:**

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: AC2	Time: 2017/04/07
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_(30-1G)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		71.972	24.862	40.591	-15.138	40.000	6.438	0.913	23.080	200	101	QP
2		103.213	23.739	34.378	-19.761	43.500	11.421	1.100	23.160	100	210	QP
3		252.365	25.985	34.638	-20.015	46.000	12.954	1.710	23.318	100	350	QP
4		472.543	27.616	30.663	-18.384	46.000	17.361	2.362	22.770	100	188	QP
5		611.284	29.994	30.979	-16.006	46.000	19.000	2.710	22.695	200	260	QP
6	*	859.343	34.248	33.169	-11.752	46.000	20.419	3.230	22.570	100	360	QP

Note:

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

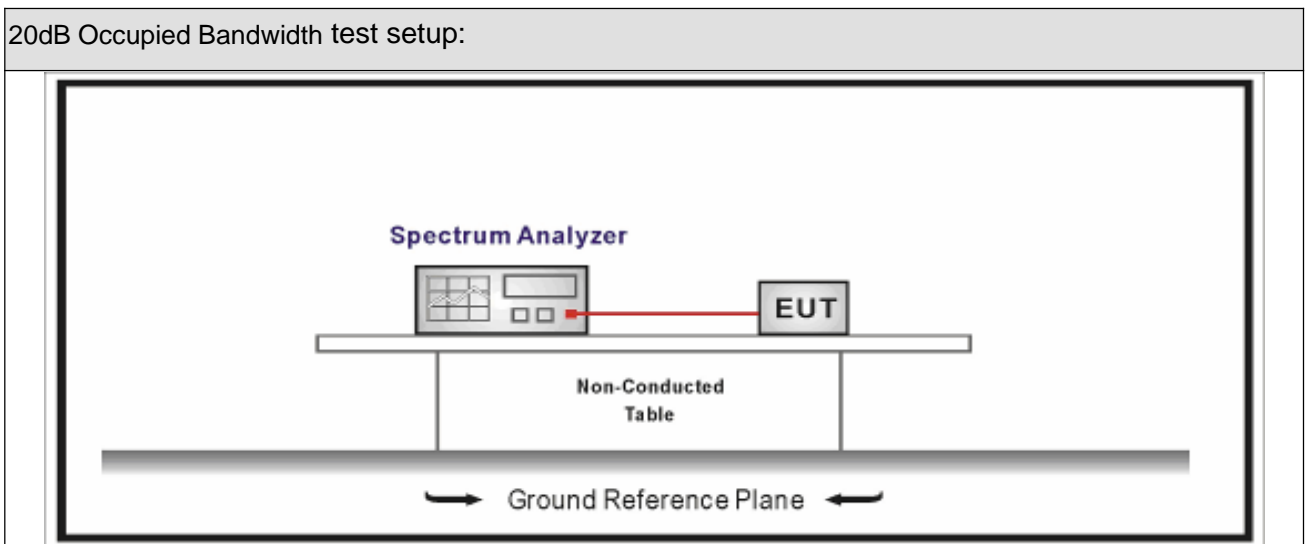
## 5. 20dB Bandwidth

### 5.1 Test Equipment

20dB Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 5.2 Test Setup



### 5.3 Limit

Carrier Frequency Separation	
<input checked="" type="checkbox"/>	For frequency hopping systems operating in 2400-2483.5 MHz band, within frequency range.
<input type="checkbox"/>	For frequency hopping systems operating in 902-928 MHz band, the maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
<input type="checkbox"/>	For frequency hopping systems operating in 5725-5850 MHz band, the maximum 20 dB bandwidth of the hopping channel is 1 MHz.

## 5.4 Test Procedure

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	DA 00-705	N/A	20 dB Bandwidth

## 5.5 Uncertainty

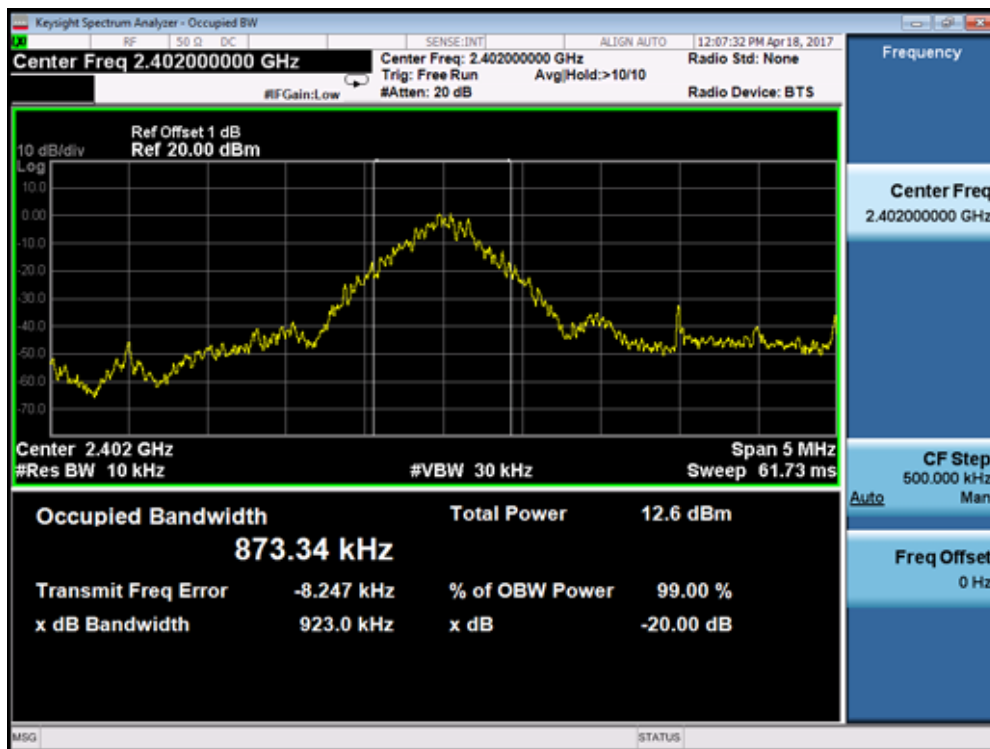
The measurement uncertainty is defined as  $\pm 1$  kHz

### 5.6 Test Result

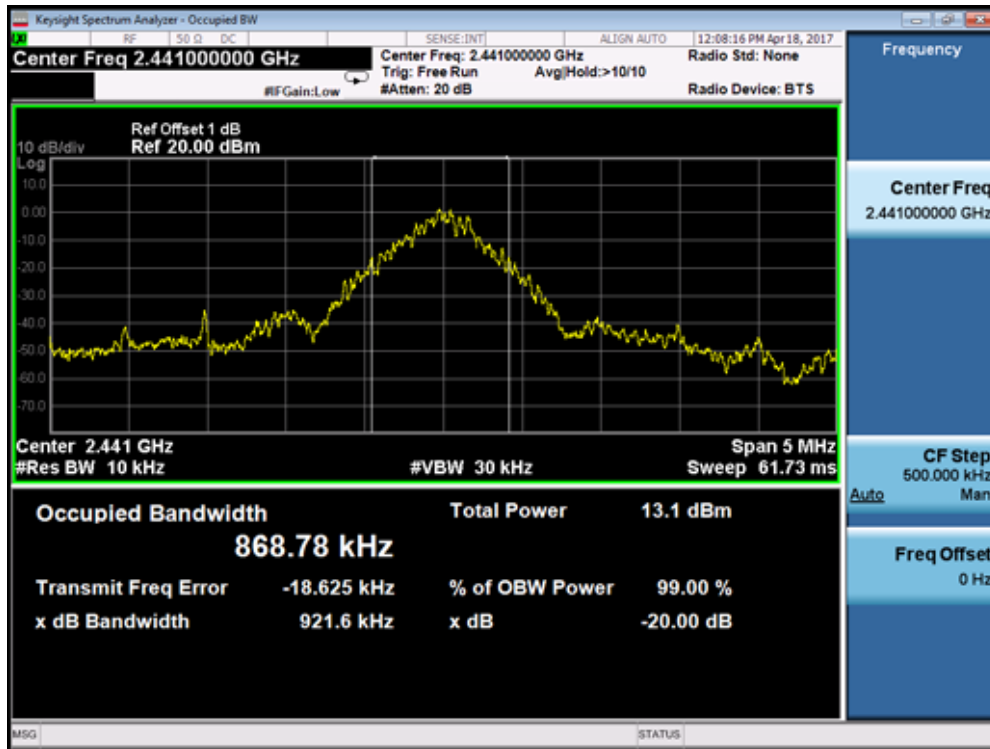
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	923.0	873.34
39	2441	921.6	868.78
78	2480	919.7	870.12

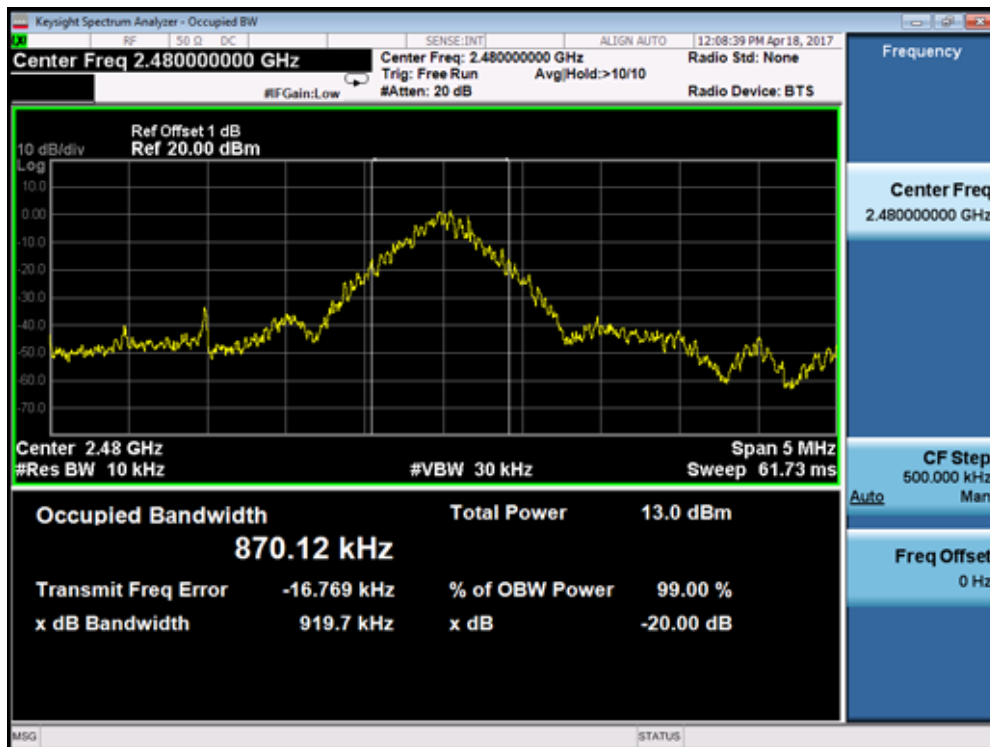
Channel 00 (2402MHz)



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)



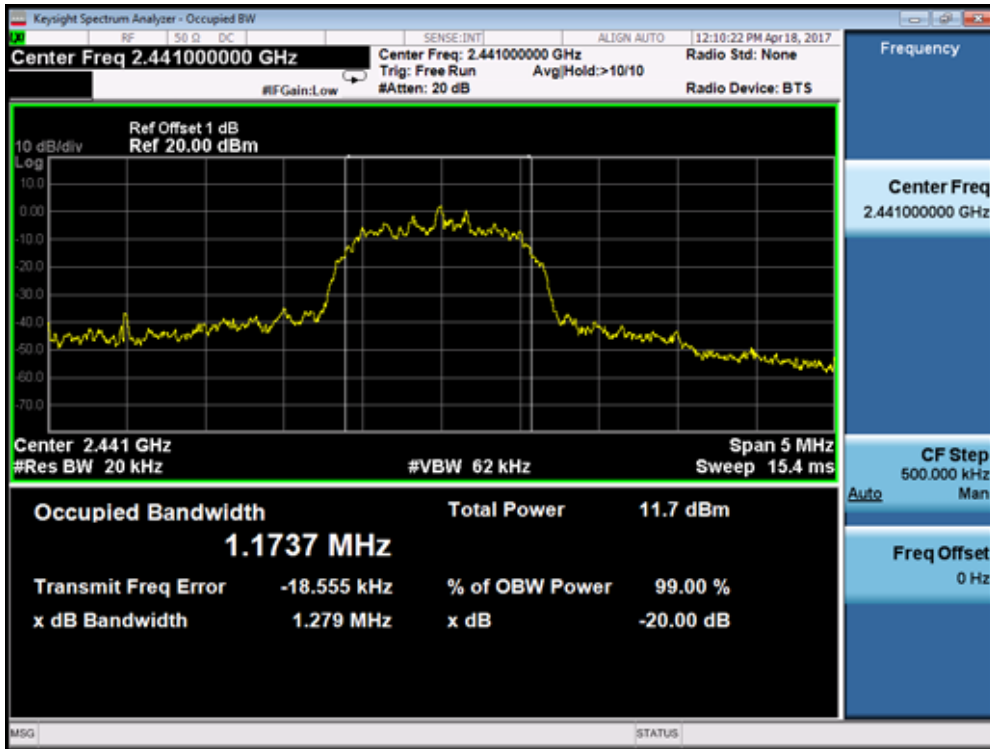
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	1235	1170.6
39	2441	1279	1173.7
78	2480	1272	1179.9

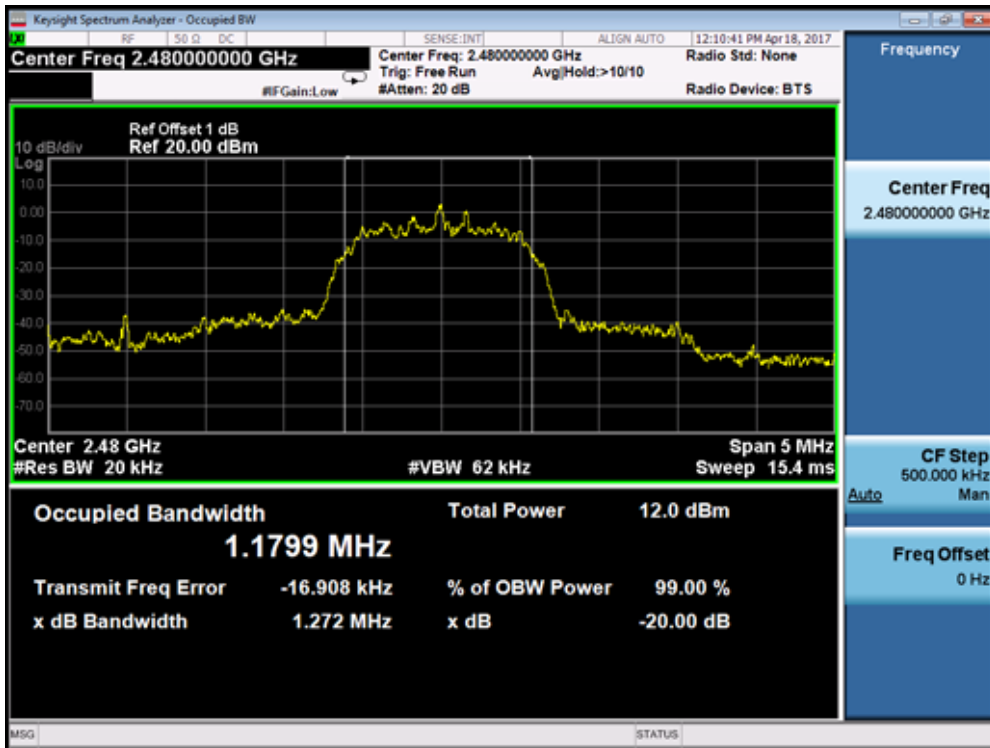
### Channel 00 (2402MHz)



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)





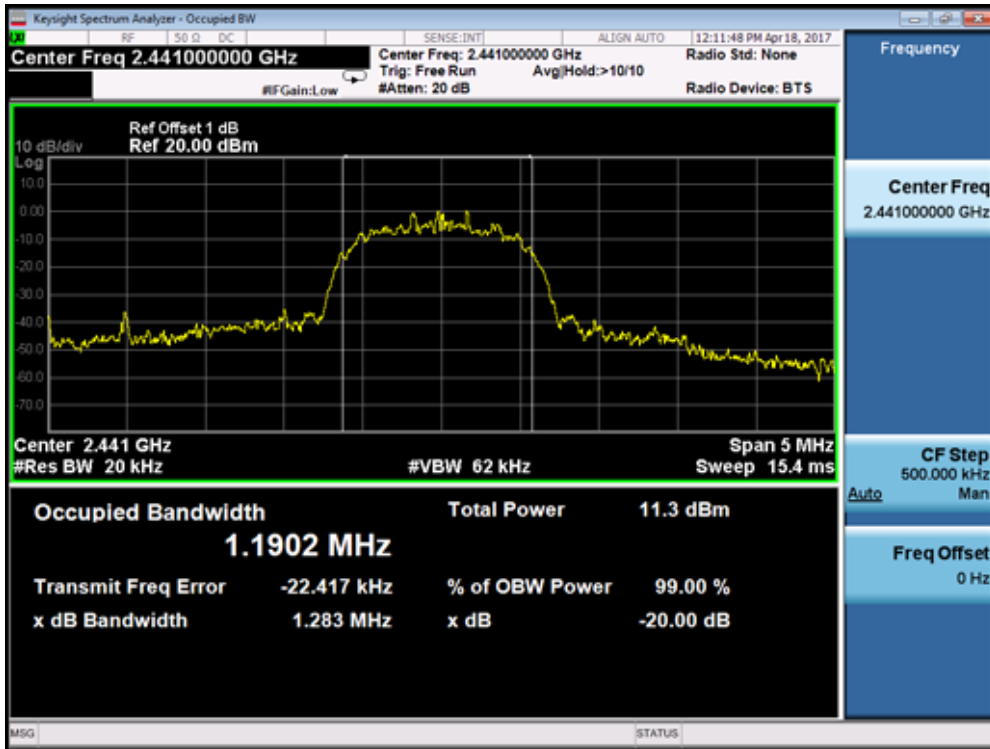
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2017.02.24		

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	1255	1171.8
39	2441	1283	1190.2
78	2480	1262	1191.4

**Channel 00 (2402MHz)**



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)



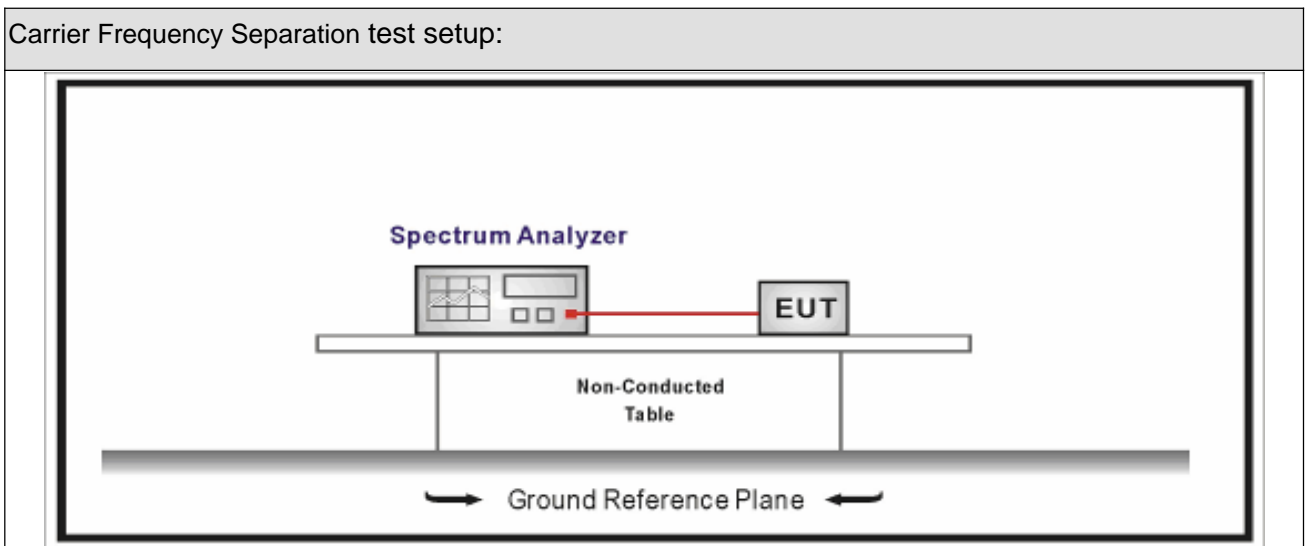
## 6. Carrier Frequency Separation

### 6.1. Test Equipment

Carrier Frequency Separation / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 6.2. Test Setup



### 6.3. Limit

Carrier Frequency Separation	
<input type="checkbox"/>	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.
<input checked="" type="checkbox"/>	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel.
<input type="checkbox"/>	The 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period;
<input type="checkbox"/>	The 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
<input type="checkbox"/>	Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz.

### 6.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.2	Carrier frequency separation

### 6.5. Uncertainty

The measurement uncertainty is defined as  $\pm 1$  kHz

### 6.6. Test Result

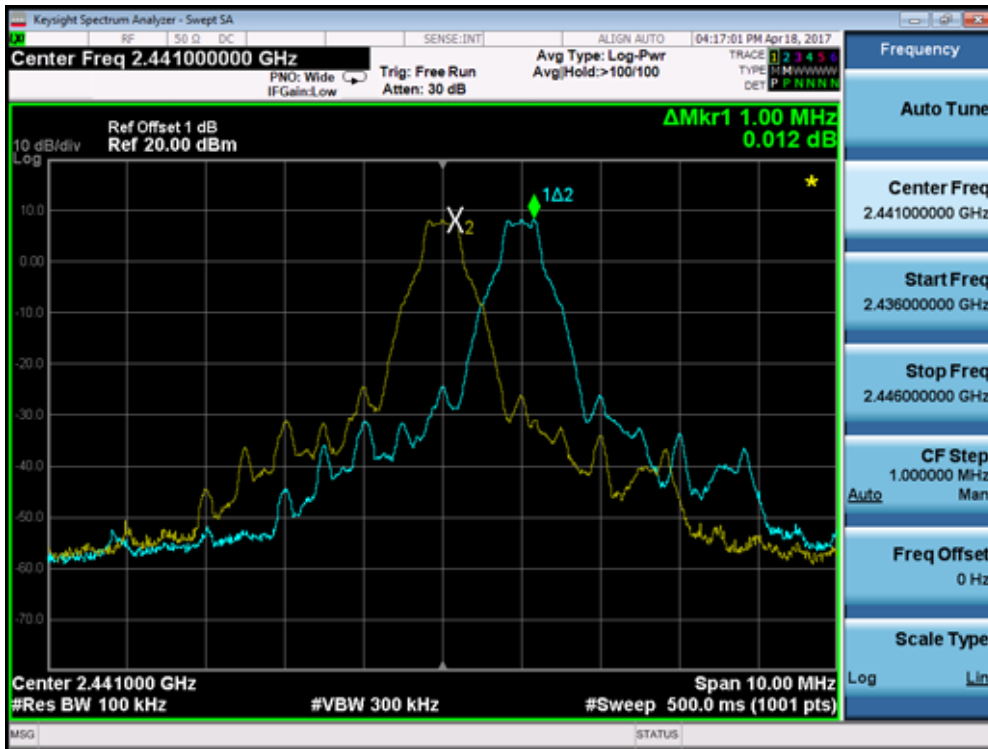
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	615.3	Pass
39	2441	1000	614.4	Pass
78	2480	1000	613.1	Pass

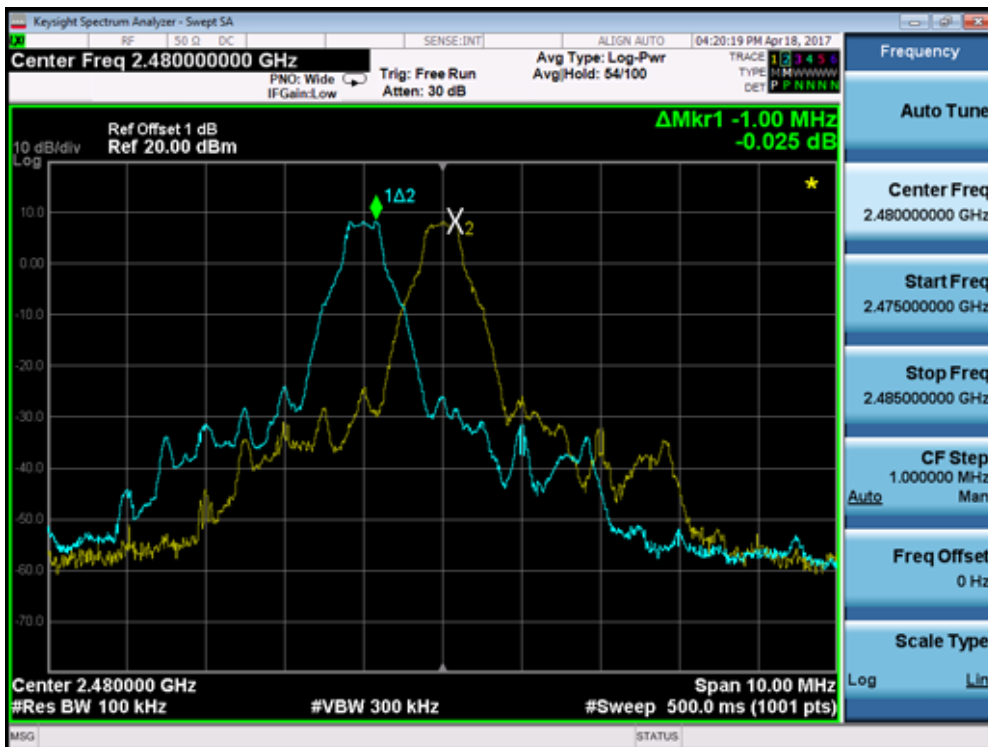
Channel 00 (2402MHz)



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)



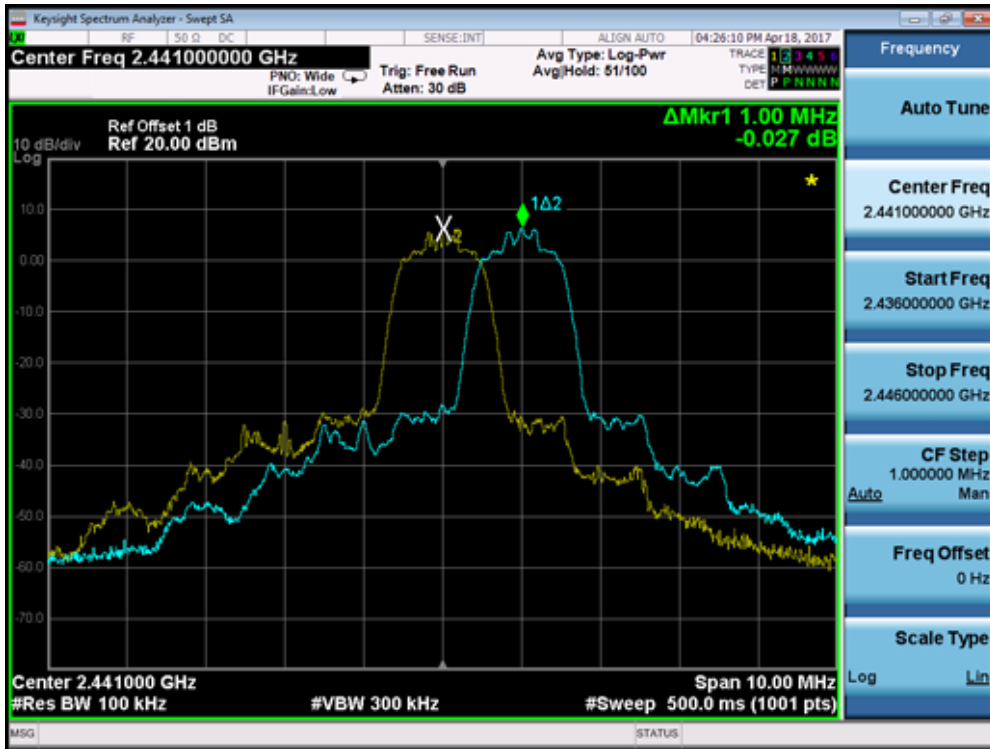
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	823.3	Pass
39	2441	1000	852.7	Pass
78	2480	1000	848.0	Pass

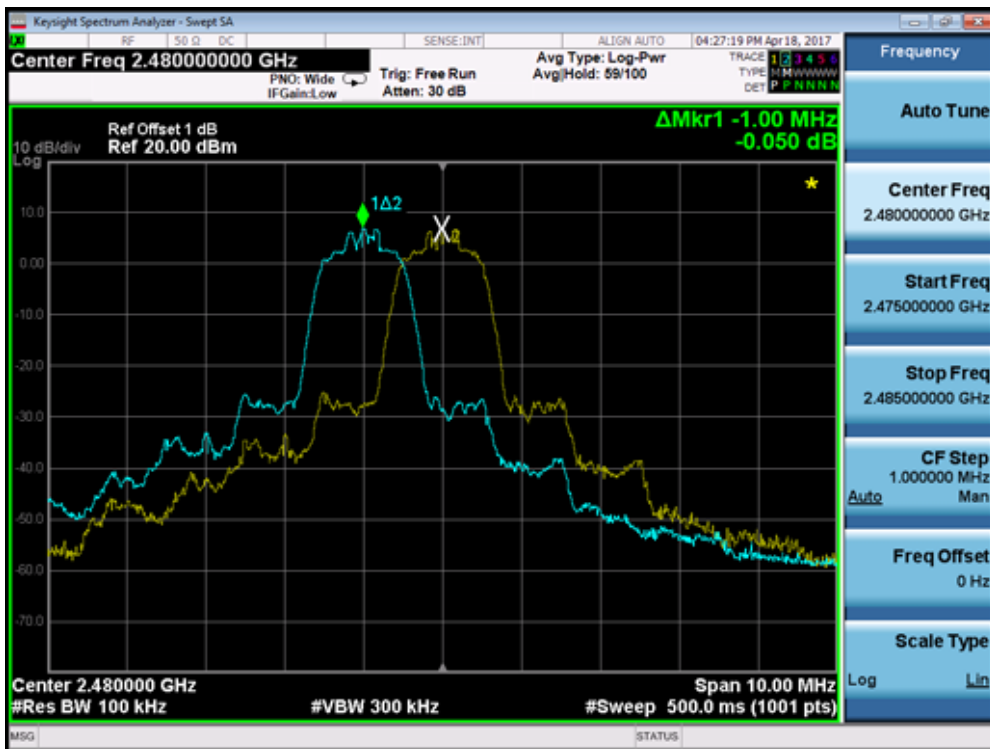
**Channel 00 (2402MHz)**



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)

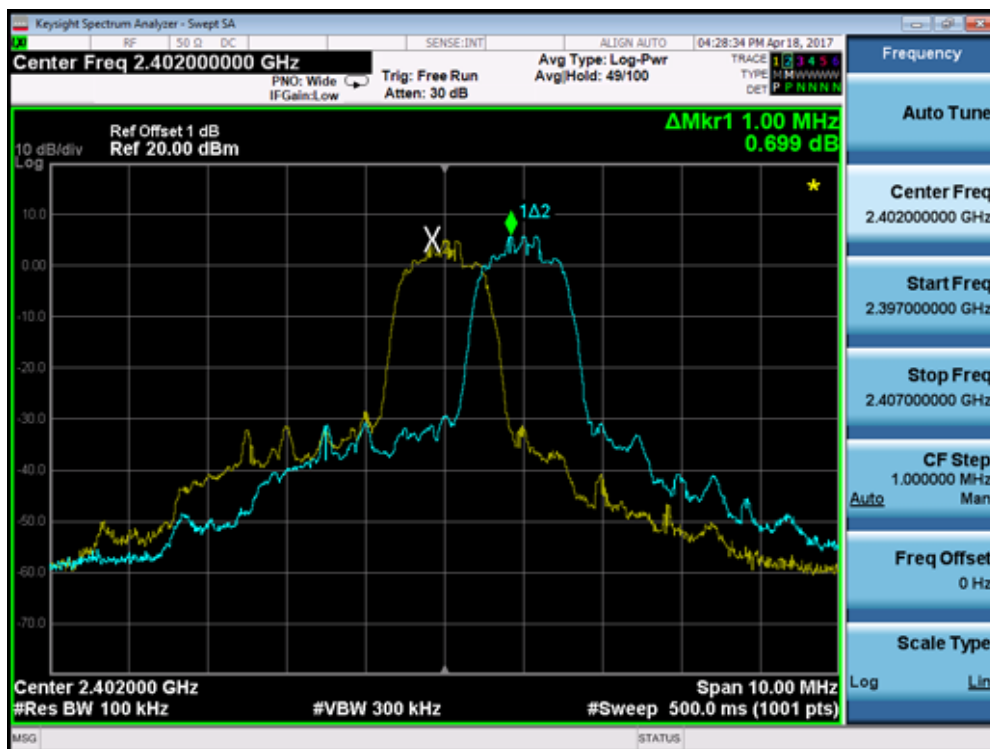




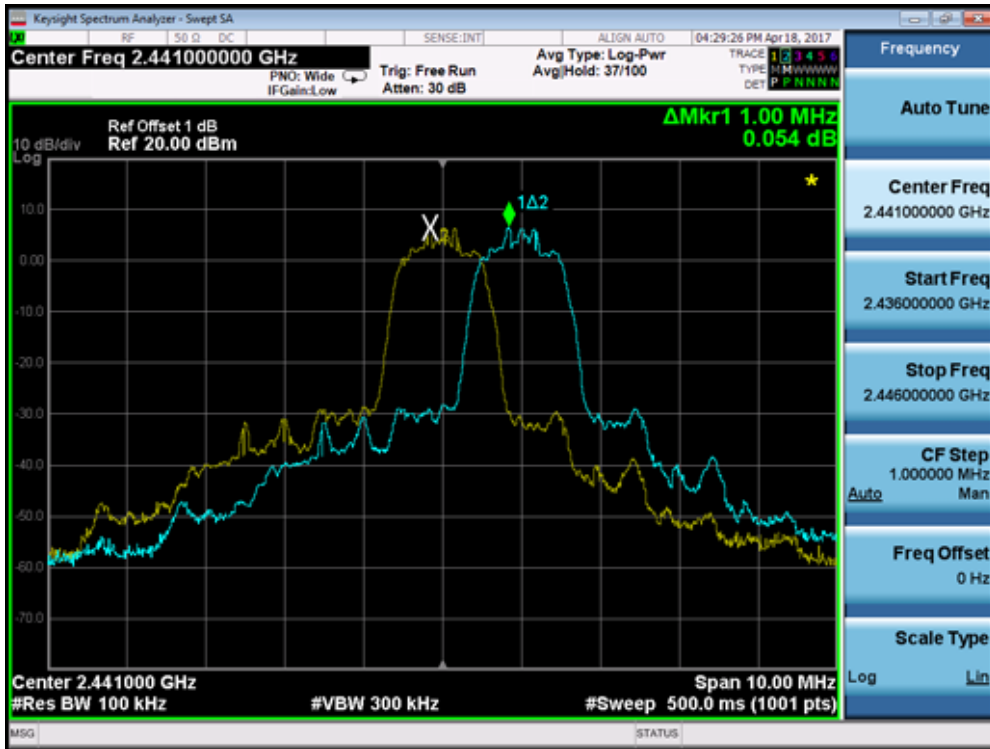
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	836.7	Pass
39	2441	1000	855.3	Pass
78	2480	1000	841.3	Pass

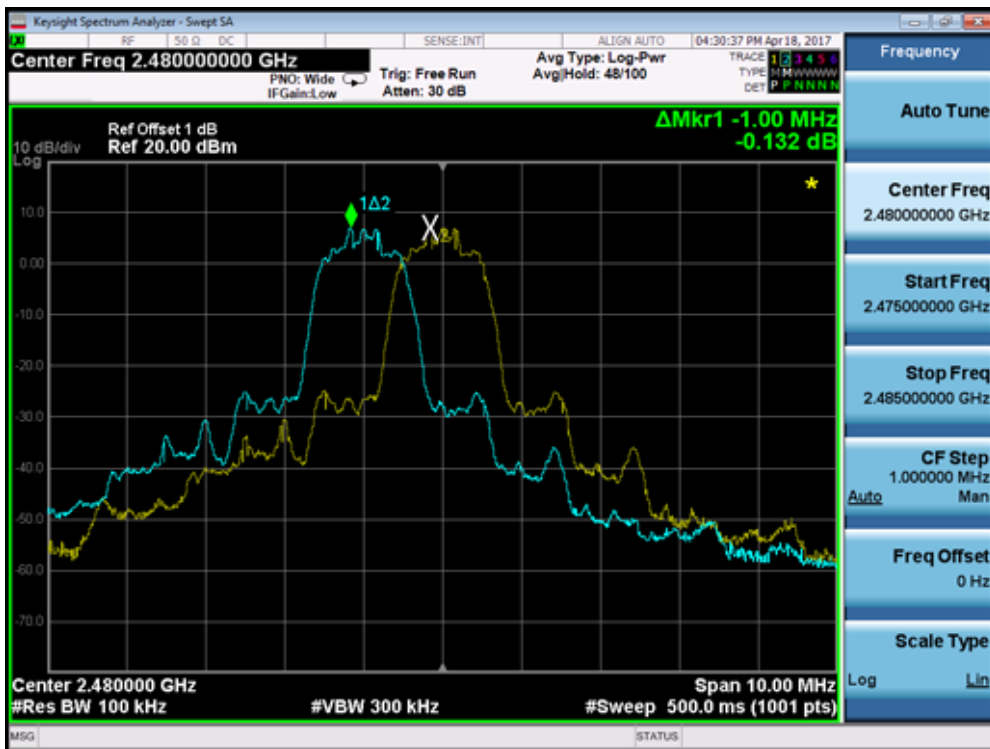
**Channel 00 (2402MHz)**



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)



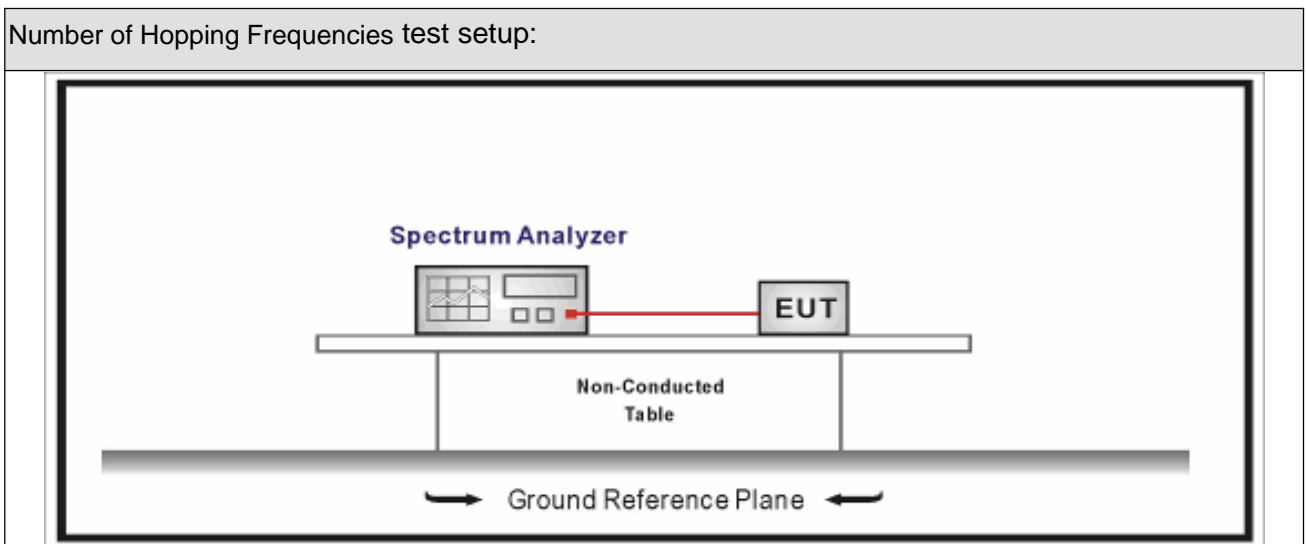
## 7. Number of Hopping Frequencies

### 7.1. Test Equipment

Number of Hopping Frequencies / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 7.2. Test Setup



### 7.3. Limit

Carrier Frequency Separation	
<input checked="" type="checkbox"/>	For frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies.
<input type="checkbox"/>	For frequency hopping systems operating in 902-928 MHz band, if the 20 dB bandwidth of the hopping channel is less than 250 kHz, shall use at least 50 hopping frequencies.
<input type="checkbox"/>	For frequency hopping systems operating in 902-928 MHz band, if the 20 dB bandwidth of the hopping channel is higher than 250 kHz, shall use at least 25 hopping frequencies.
<input type="checkbox"/>	For frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies.

### 7.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.3	Number of Hopping Frequencies

### 7.5. Uncertainty

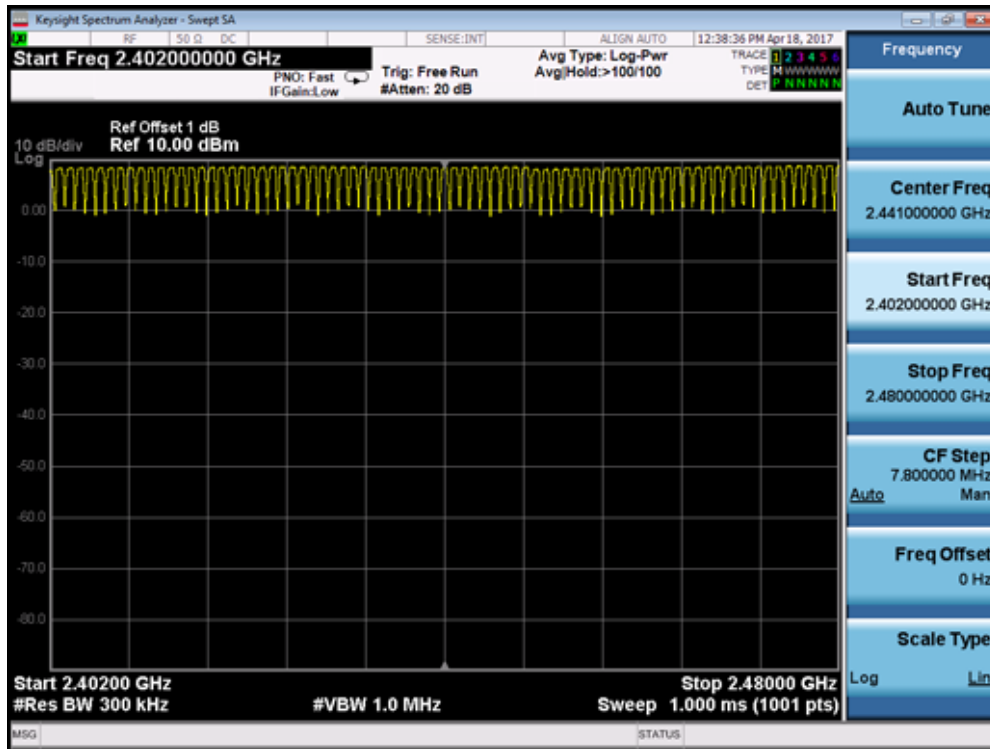
The measurement uncertainty is defined as  $\pm 1$  kHz

### 7.6. Test Result

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.03.24		

Frequency Band (MHz)	Number of Hopping Frequencies	Limit	Result
2400 - 2483.5	79	>15	Pass

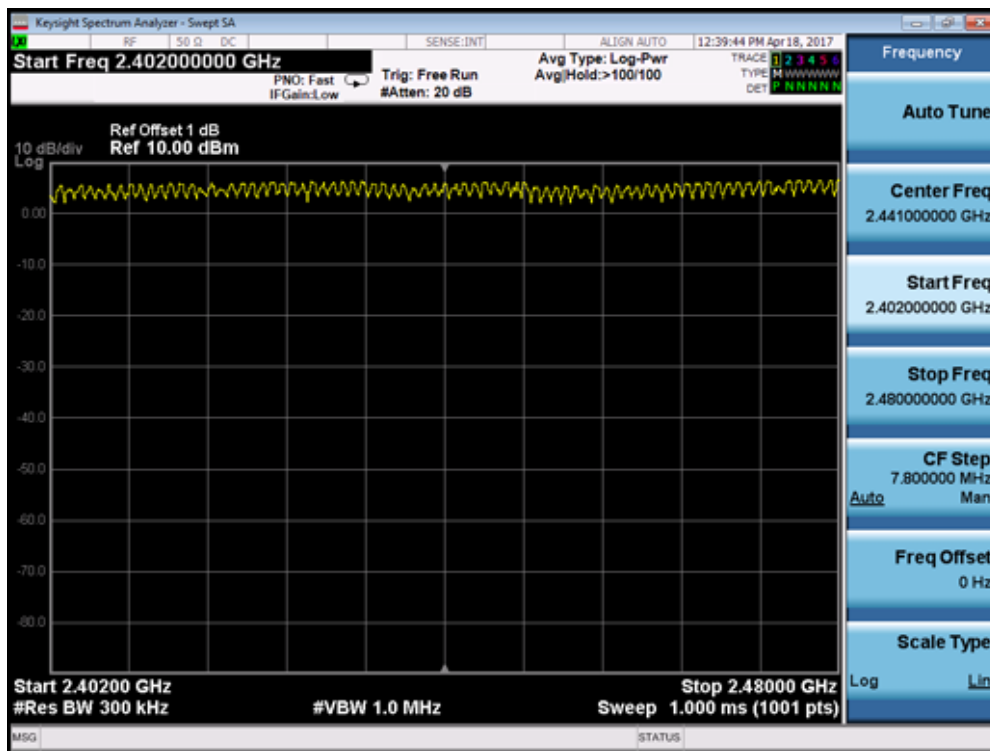
#### 2402 - 2480MHz



Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2017.03.24		

Frequency Band (MHz)	Number of Hopping Frequencies	Limit	Result
2400 - 2483.5	79	>15	Pass

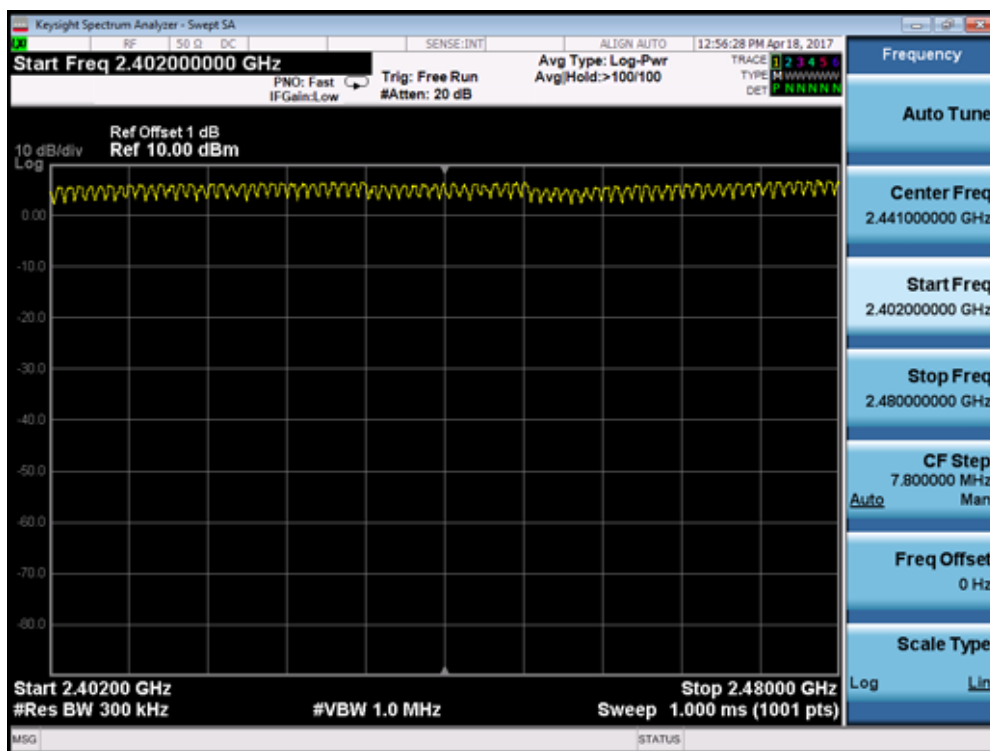
### 2402 - 2480 MHz



Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2017.03.24		

Frequency Band (MHz)	Number of Hopping Frequencies	Limit	Result
2400 - 2483.5	79	>15	Pass

### 2402 - 2480 MHz



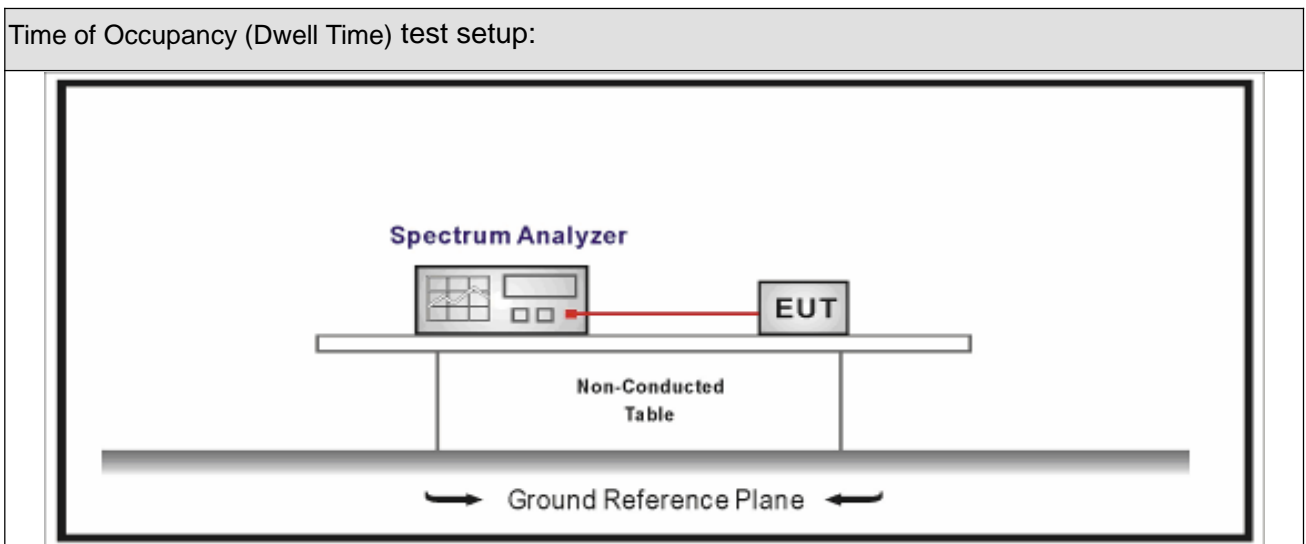
## 8. Time of Occupancy (Dwell Time)

### 8.1. Test Equipment

Time of Occupancy (Dwell Time) / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 8.2. Test Setup



### 8.3. Limit

Carrier Frequency Separation	
<input checked="" type="checkbox"/>	Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.
<input type="checkbox"/>	For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period
<input type="checkbox"/>	For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping



	frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.
<input type="checkbox"/>	Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

**8.4. Test Procedure**

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.4	Time of Occupancy (Dwell Time)

**8.5. Uncertainty**

The measurement uncertainty is defined as  $\pm 0.1 \text{ us}$

### 8.6. Test Result

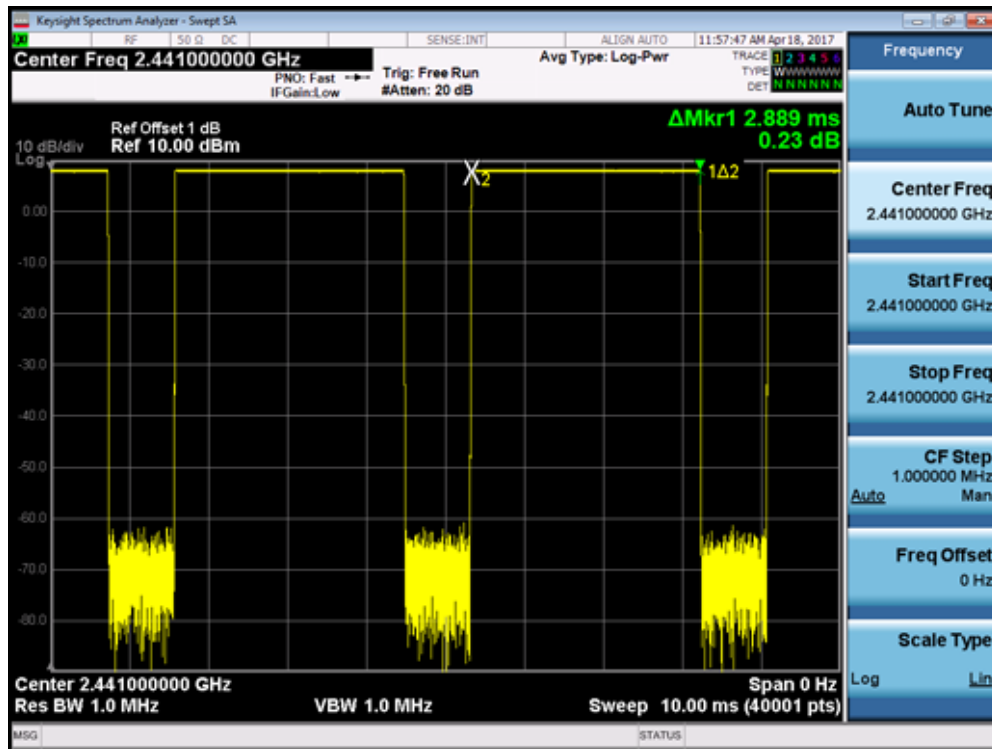
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1(GFSK_DH1)	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	924.48	< 400	Pass

Note1: Test Time Period:  $0.4 \times 79 = 31.6 \text{sec}$

Note2: Time of Occupancy = pulse time \*  $(1600 / (2 \times 79)) \times 31.6$

#### Channel 39 (2441MHz)-(DH1)



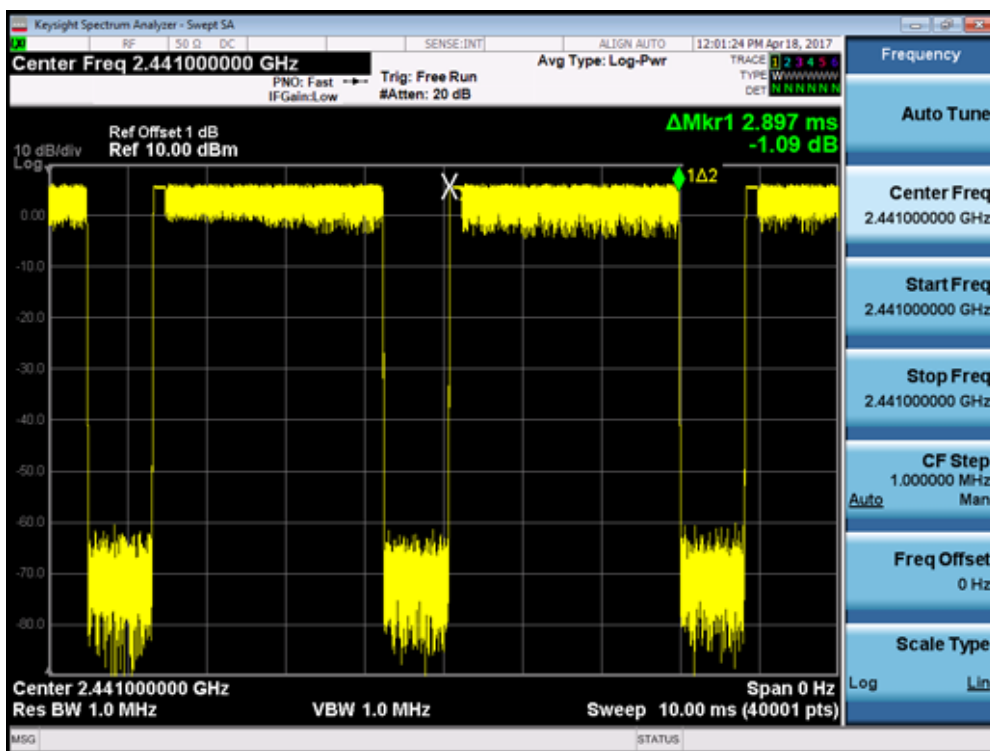
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1(GFSK_DH3)	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	463.52	< 400	Pass

Note1: Test Time Period:  $0.4 \times 79 = 31.6$ sec

Note2: Time of Occupancy = pulse time \*  $(1600 / (4 \times 79)) \times 31.6$

### Channel 39 (2441MHz) - (DH3)



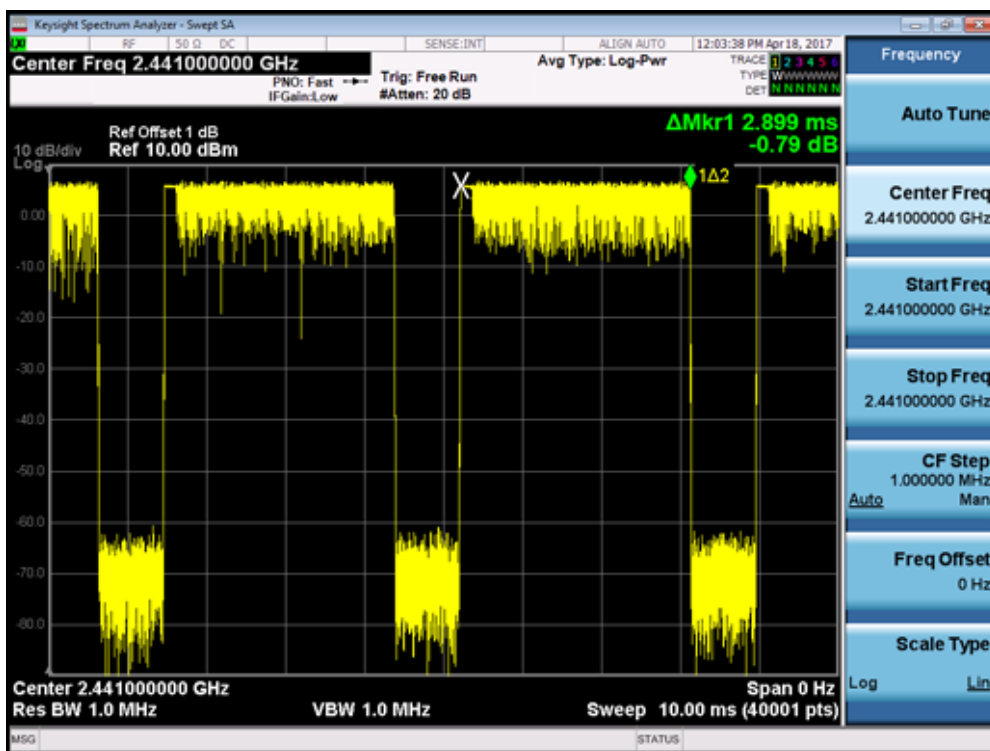
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1(GFSK_DH5)	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	309.23	< 400	Pass

Note1: Test Time Period:  $0.4 \times 79 = 31.6 \text{sec}$

Note2: Time of Occupancy = pulse time \*  $(1600 / (6 \times 79)) \times 31.6$

**Channel 39 (2441MHz) - (DH5)**



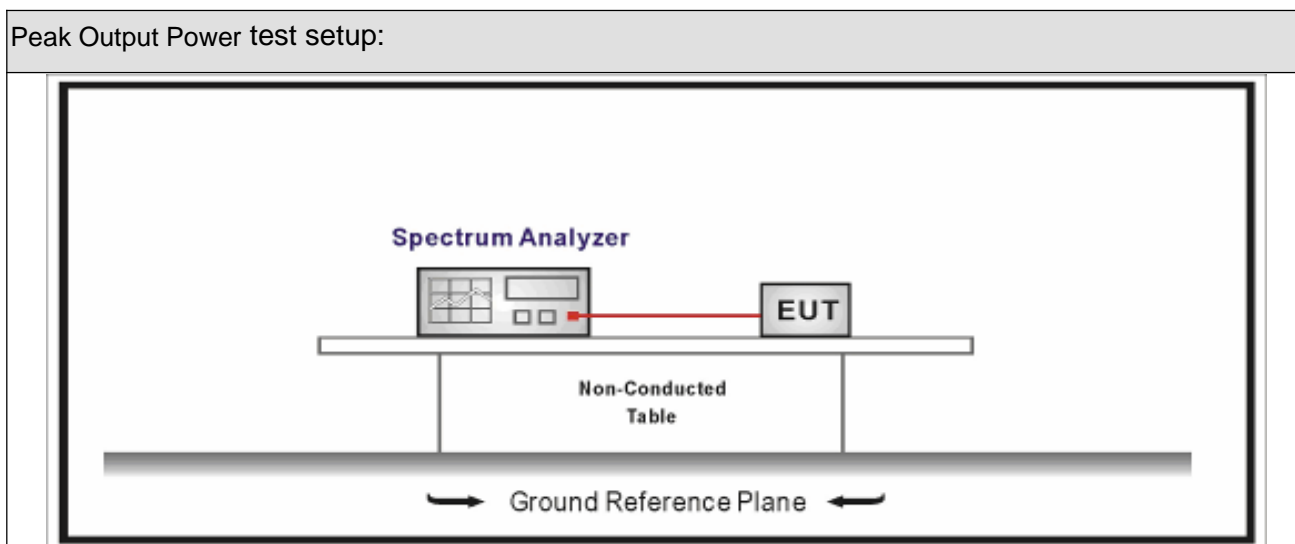
## 9. Peak Output Power

### 9.1. Test Equipment

Peak Output Power / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 9.2. Test Setup



**9.3. Limit**

Peak Output Power	
<input type="checkbox"/>	Frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
<input checked="" type="checkbox"/>	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
<input type="checkbox"/>	For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels

**9.4. Test Procedure**

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

**9.5. Uncertainty**

The measurement uncertainty is defined as  $\pm 1.0$  dB

**9.6. Test Result**

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	7.94	21.00	Pass
39	2441	8.39	21.00	Pass
78	2480	8.56	21.00	Pass

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	6.16	21.00	Pass
39	2441	7.23	21.00	Pass
78	2480	7.64	21.00	Pass



Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2017.03.24		

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	6.37	21.00	Pass
39	2441	7.38	21.00	Pass
78	2480	7.72	21.00	Pass

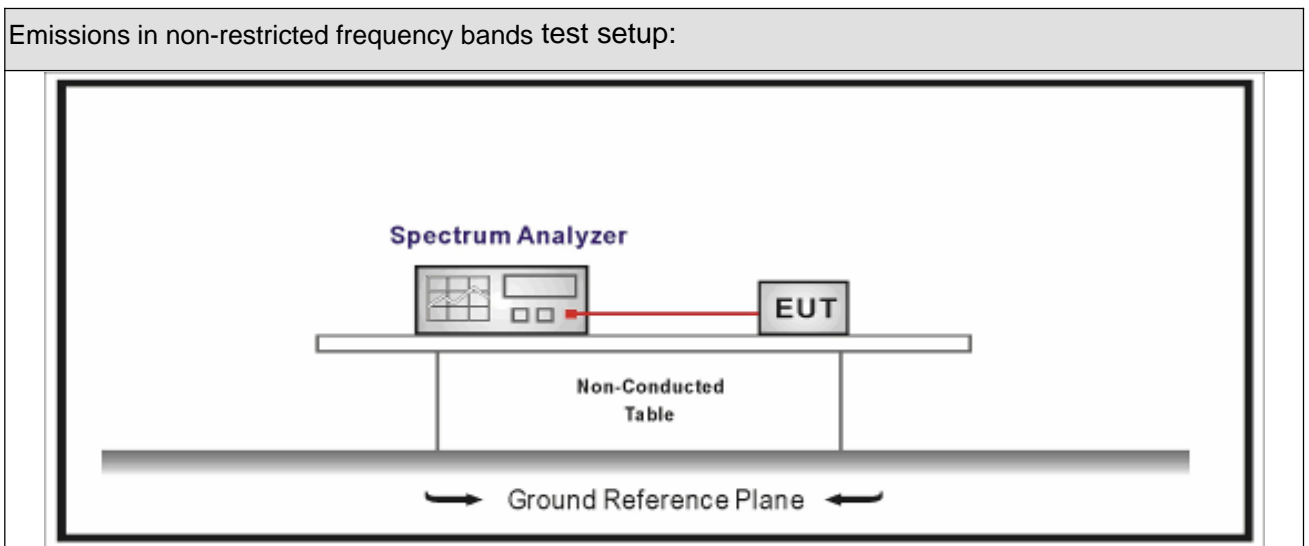
## 10. Emissions in non-restricted frequency bands

### 10.1. Test Equipment

Emissions in non-restricted frequency bands / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 10.2. Test Setup



**10.3. Limit**

Un-Restricted Band Emissions Limit	
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30c(Note1)
RF Output power(PK detector)	20c(Note2)
<p>Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).</p> <p>Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).</p>	

**10.4. Test Procedure**

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.6	Band-edge Compliance of RF Conducted Emissions

**10.5. Uncertainty**

The measurement uncertainty is defined as  $\pm 1.0$  dB

### 10.6. Test Result

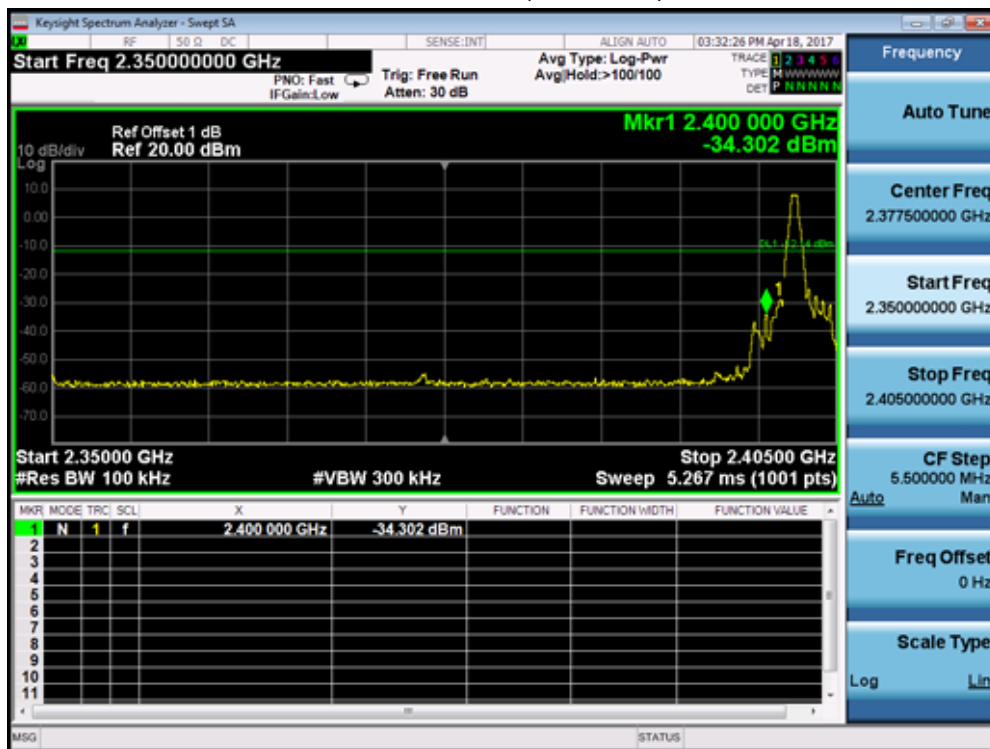
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1~4	Test Site	: TR-8
Test Date	: 2017.03.24		

Mode	Channel	Test Frequency (MHz)	In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	00	2402	8.104	2400.00	-34.302	42.406	>20	Pass
1	78	2480	8.104	2505.98	-54.349	62.453	>20	Pass
2	00	2402	7.436	2400.00	-31.462	38.898	>20	Pass
2	78	2480	7.436	2505.69	-55.678	63.114	>20	Pass
3	00	2402	6.718	2400.00	-31.337	38.055	>20	Pass
3	78	2480	6.718	2506.15	-56.034	62.752	>20	Pass
4	00~78	00~78	8.132	2400.00	-34.423	42.555	>20	Pass

Note1: The worst case of Emissions in non-restricted frequency bands as below:

2: Mode 1-3, The In-Band PSD is the highest PSD of All channels.

Mode 1 CH00(2402MHz)

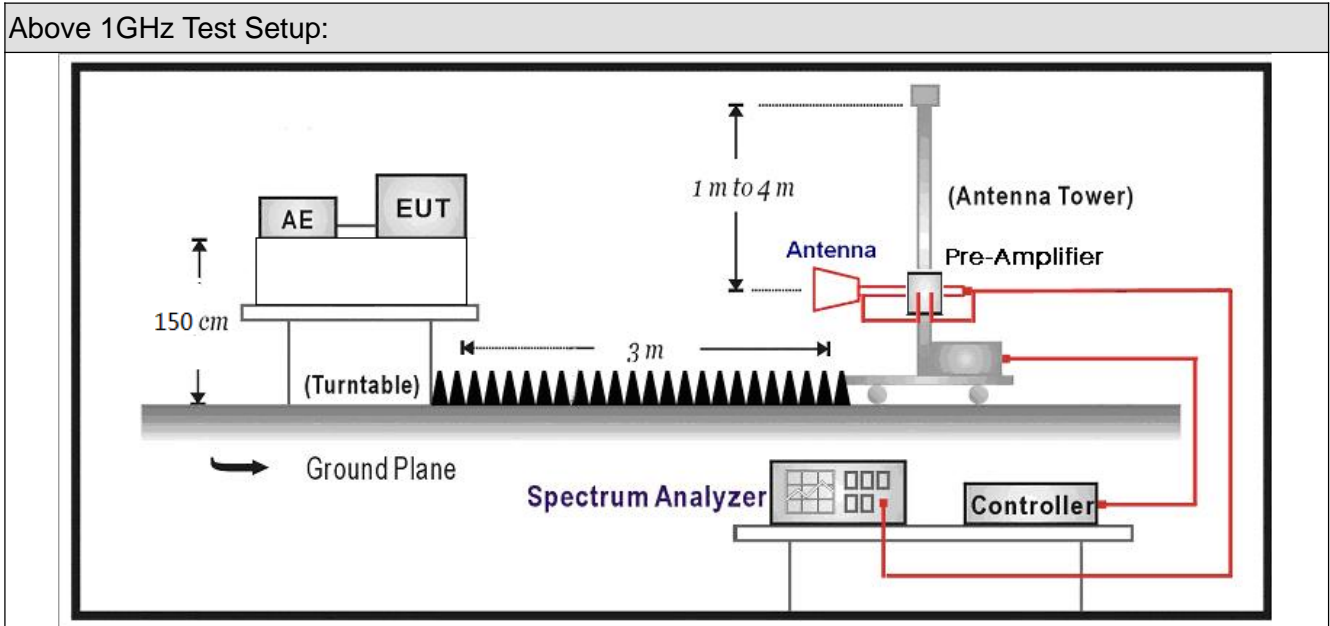


## 11. Radiated Emission Band Edge

### 11.1. Test Equipment

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Receiver	Agilent	N9038A	MY51210196	2016.07.16	2017.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2016.05.03	2017.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2016.07.12	2017.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.09.18	2017.09.17
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.02.28	2018.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2018.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.05	2018.01.04

### 11.2. Test Setup



### 11.3. Limit

Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB $\mu$ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits

### 11.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	DA 00-705	N/A	duty cycle correction factor
<input checked="" type="checkbox"/>	ANSI C63.10	6.10	Band-edge testing
	<input checked="" type="checkbox"/> ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	<input type="checkbox"/> ANSI C63.10	6.10.6	Marker-delta method
<input type="checkbox"/>	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz

<input type="checkbox"/>	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
<input checked="" type="checkbox"/>	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

### 11.5. Uncertainty

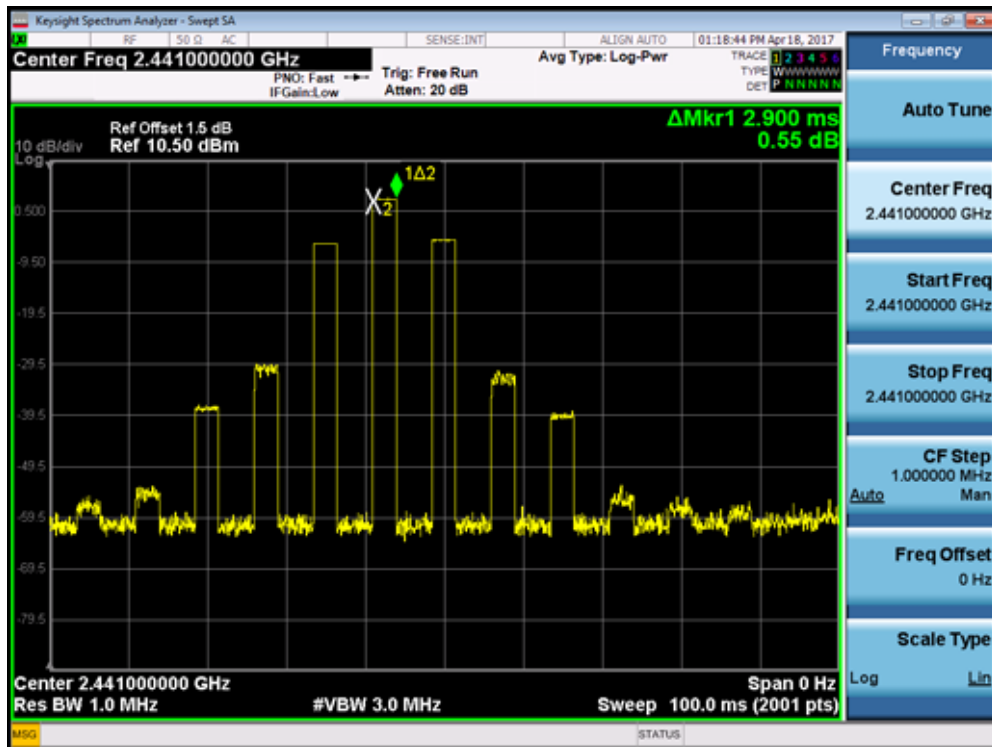
The measurement uncertainty above 1G is defined as  $\pm 3.9$  dB

below 1G is defined as  $\pm 3.8$  dB

### 11.6. Duty Factor

Test Mode	Pluse Time (ms)	Pluse Number	Accumulated Transmit Time (ms)	Duty Factor (dB)
Mode 4	2.9	1	2.9	-30.75

Pulse Number

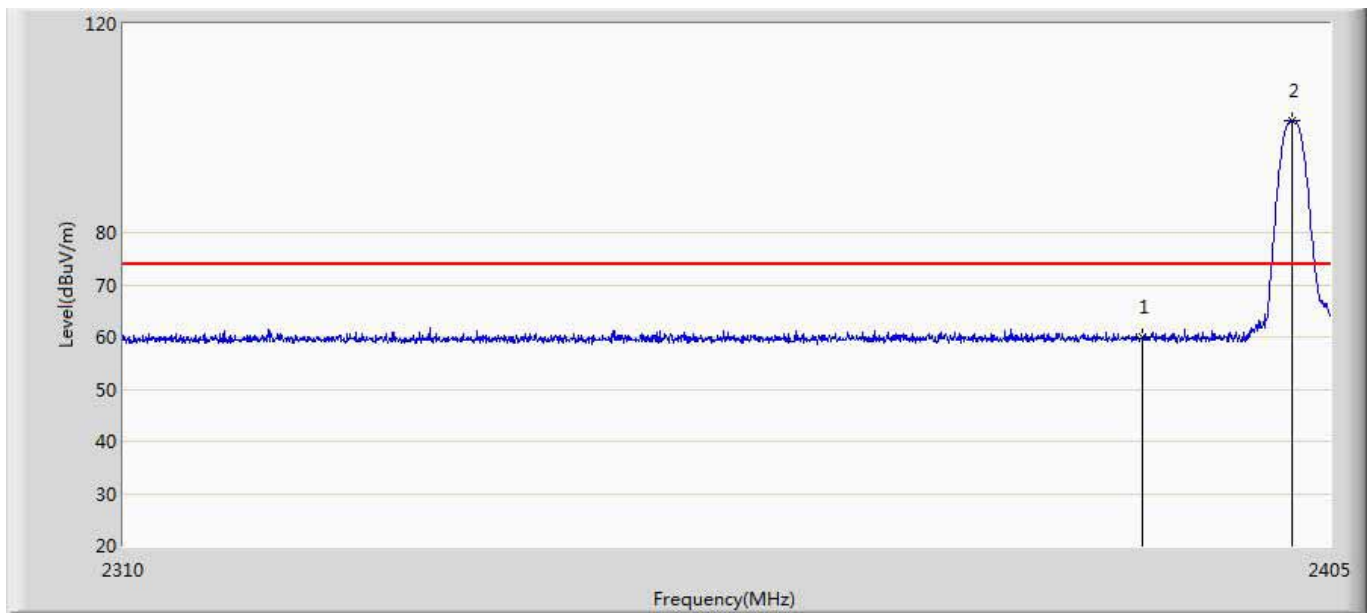


Note: Duty Fcator =  $20\text{Log}(\text{Accumulated Transmit Time} / 100\text{ms})$



### 11.7. Test Result

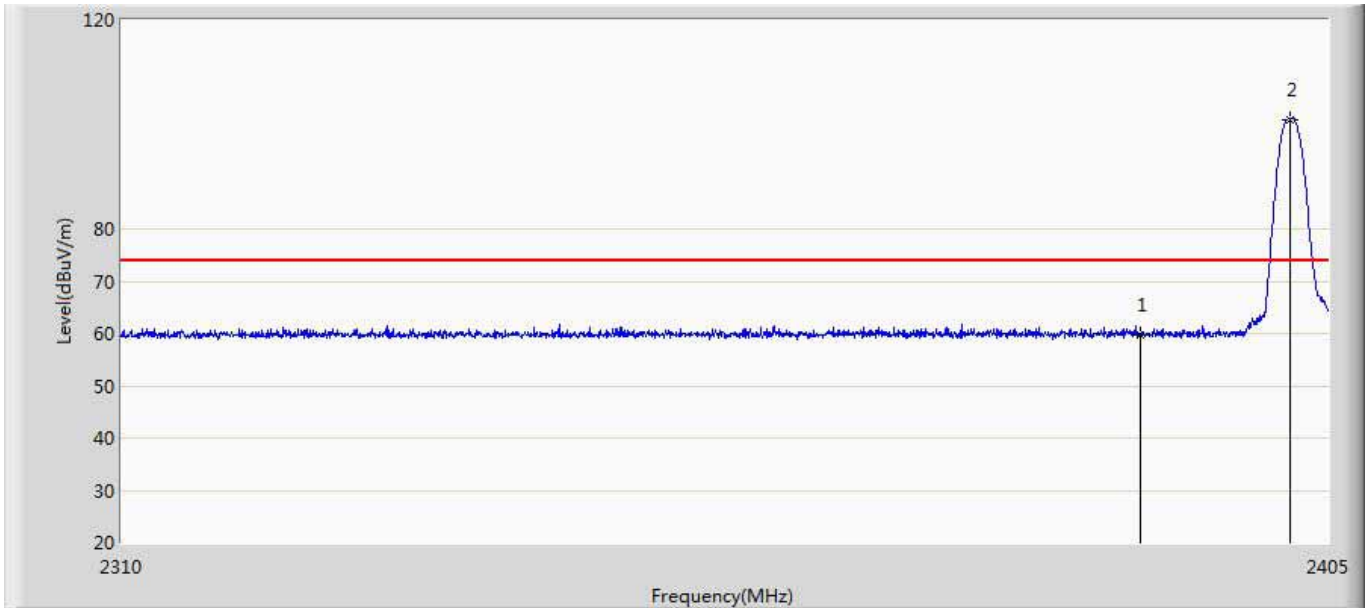
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 16:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.927	24.245	-14.073	74.000	35.682	PK
2	*	2402.000	101.326	65.613	27.326	74.000	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.927	35.135	-18.865	54.000	-24.792	AV
2	*	2402.000	101.326	76.536	22.536	54.000	-24.790	AV

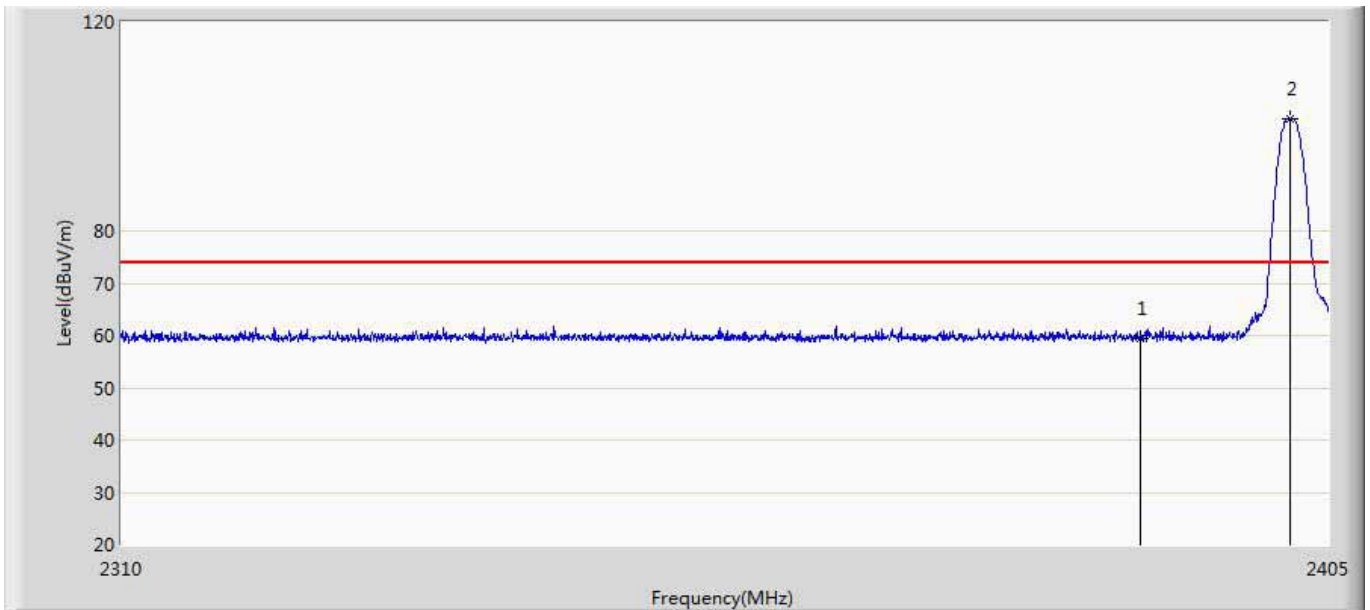
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 16:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.782	24.100	-14.218	74.000	35.682	PK
2	*	2402.000	101.000	65.287	27.000	74.000	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.782	34.990	-19.010	54.000	-24.792	AV
2	*	2402.000	101.000	76.210	22.210	54.000	-24.790	AV

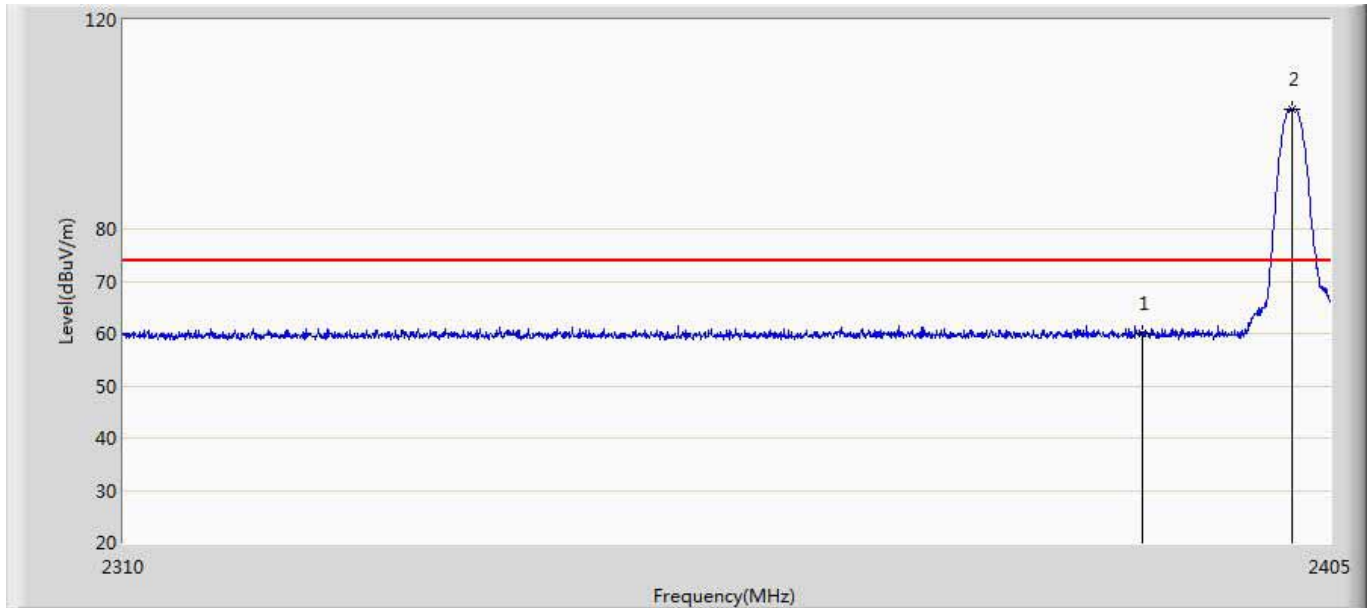
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 16:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.379	23.697	-14.621	74.000	35.682	PK
2	*	2402.000	101.565	65.852	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.379	34.587	-19.413	54.000	-24.792	AV
2	*	2402.000	101.565	76.775	N/A	N/A	-24.790	AV

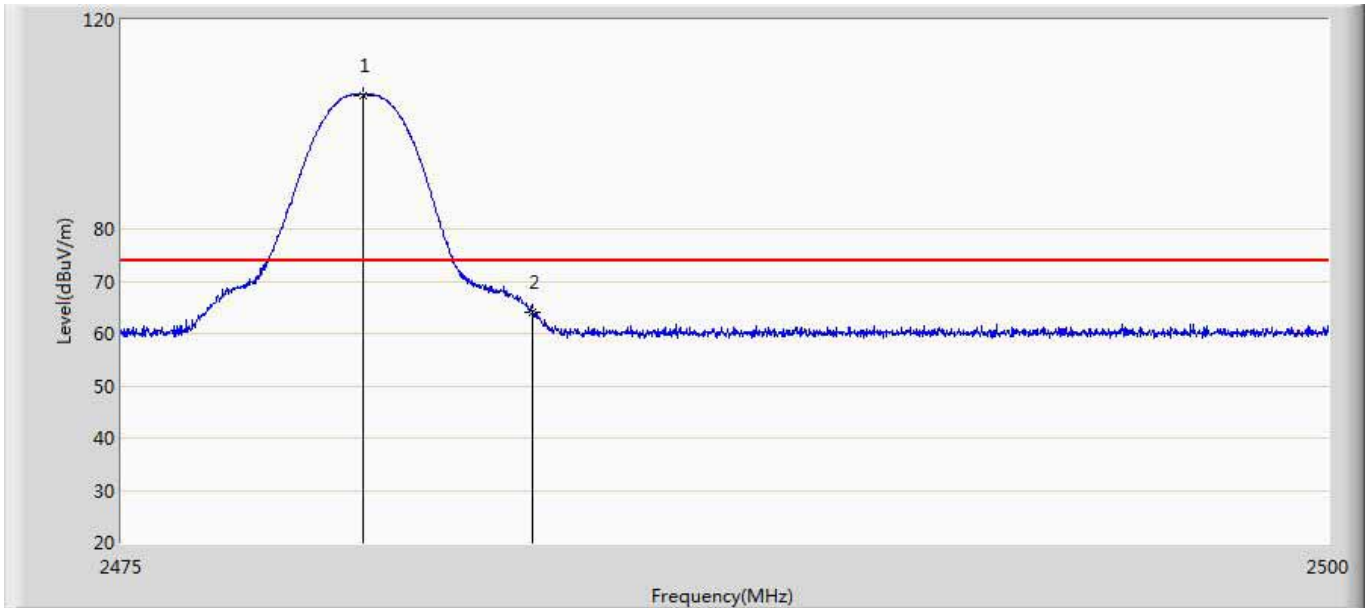
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 16:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.913	24.231	-14.087	74.000	35.682	PK
2	*	2402.000	102.882	67.169	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.913	35.121	-18.879	54.000	-24.792	AV
2	*	2402.000	102.882	78.092	N/A	N/A	-24.790	AV

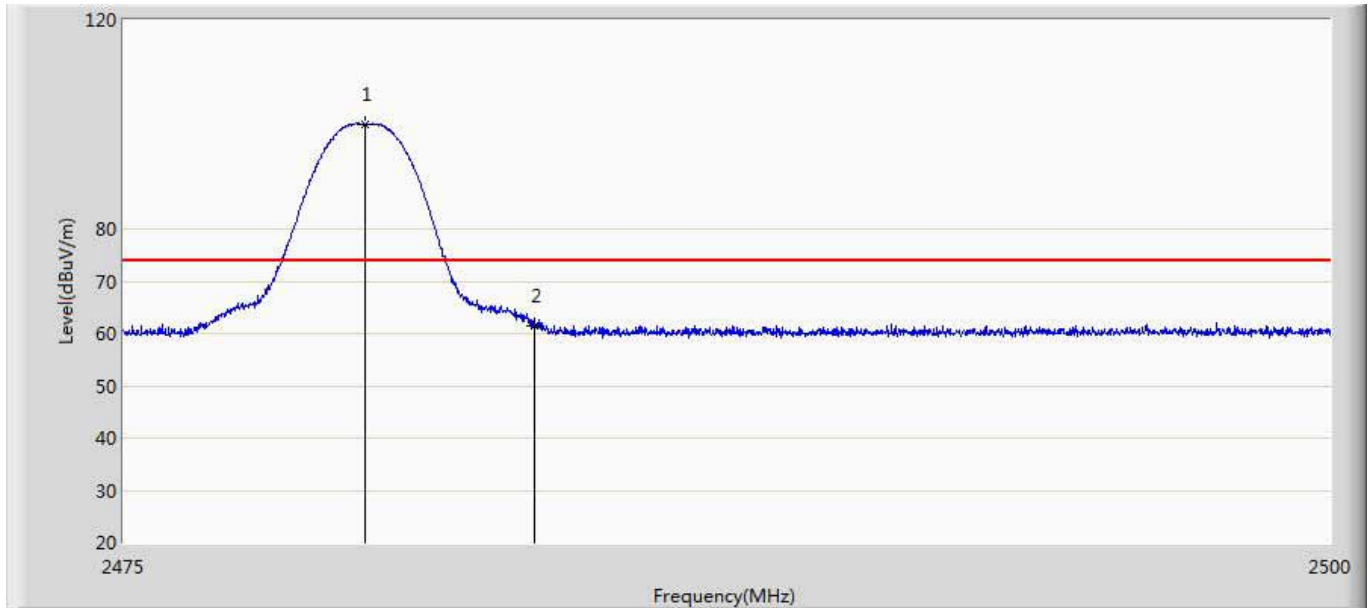
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	105.516	69.650	31.516	74.000	35.866	PK
2		2483.500	64.179	28.287	-9.821	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	105.516	80.724	26.724	54.000	-24.792	AV
2		2483.500	64.179	39.389	-14.611	54.000	-24.790	AV

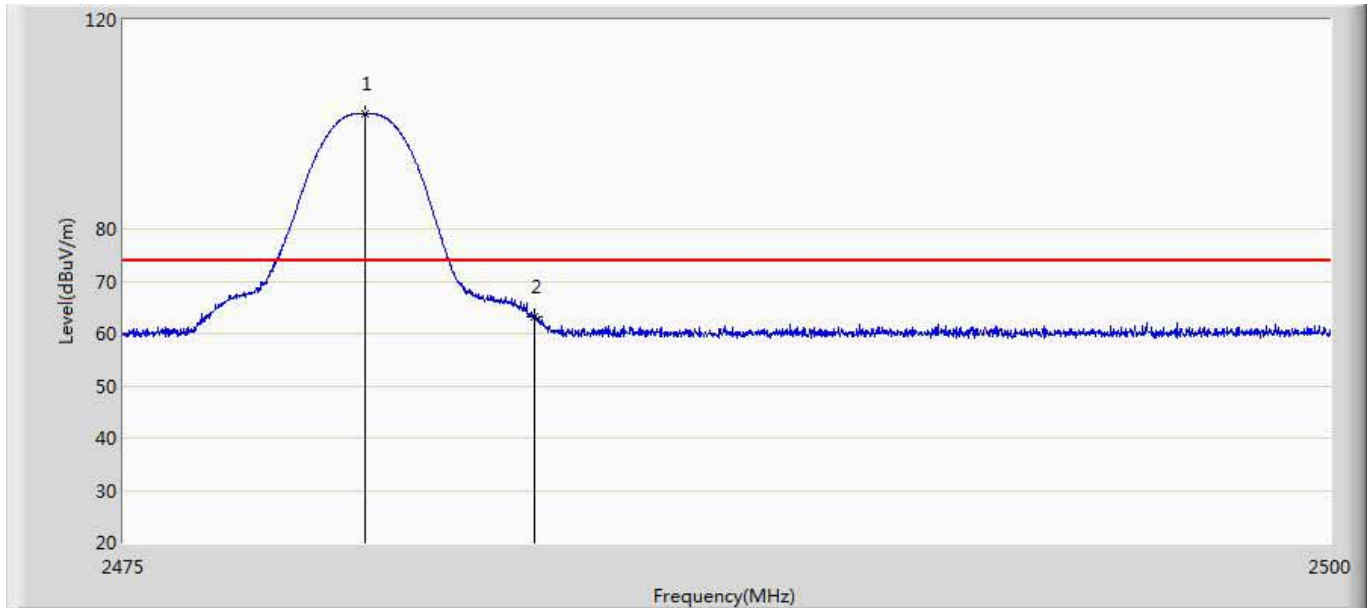
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	100.100	64.234	26.100	74.000	35.866	PK
2		2483.500	61.466	25.574	-12.534	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	100.100	75.308	21.308	54.000	-24.792	AV
2		2483.500	61.466	36.676	-17.324	54.000	-24.790	AV

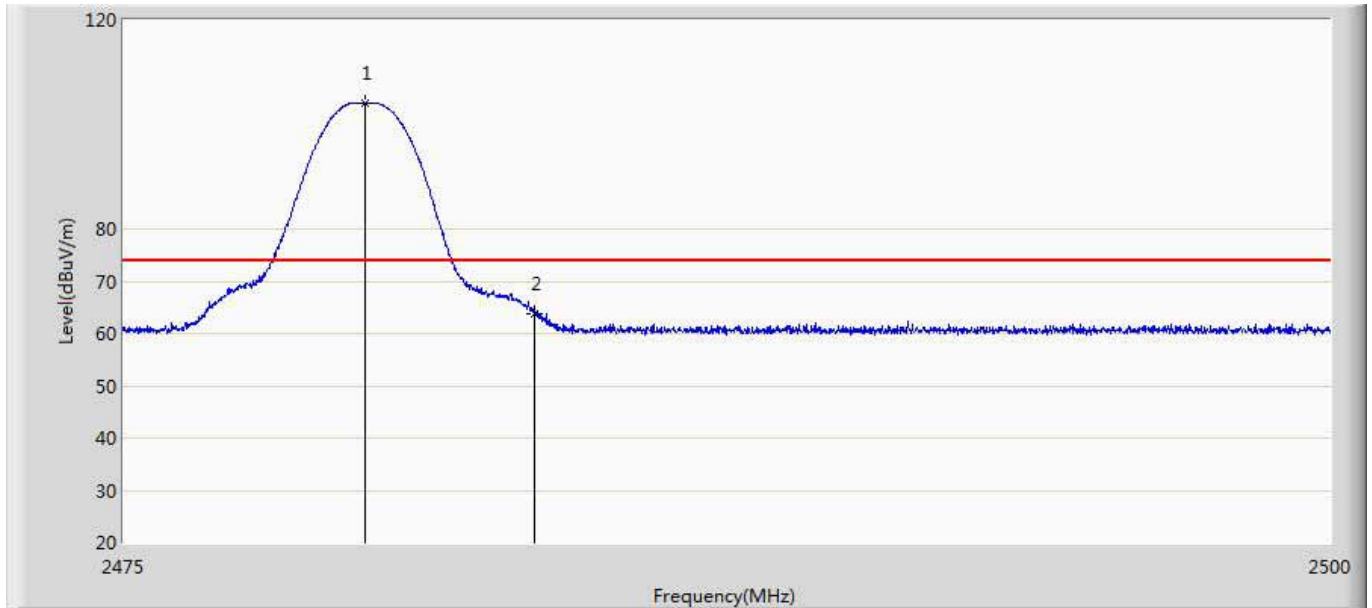
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	101.946	66.080	N/A	N/A	35.866	PK
2		2483.500	63.064	27.172	-10.936	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	101.946	77.154	N/A	N/A	-24.792	AV
2		2483.500	63.064	38.274	-15.726	54.000	-24.790	AV

Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by DH5(Z Axis)	

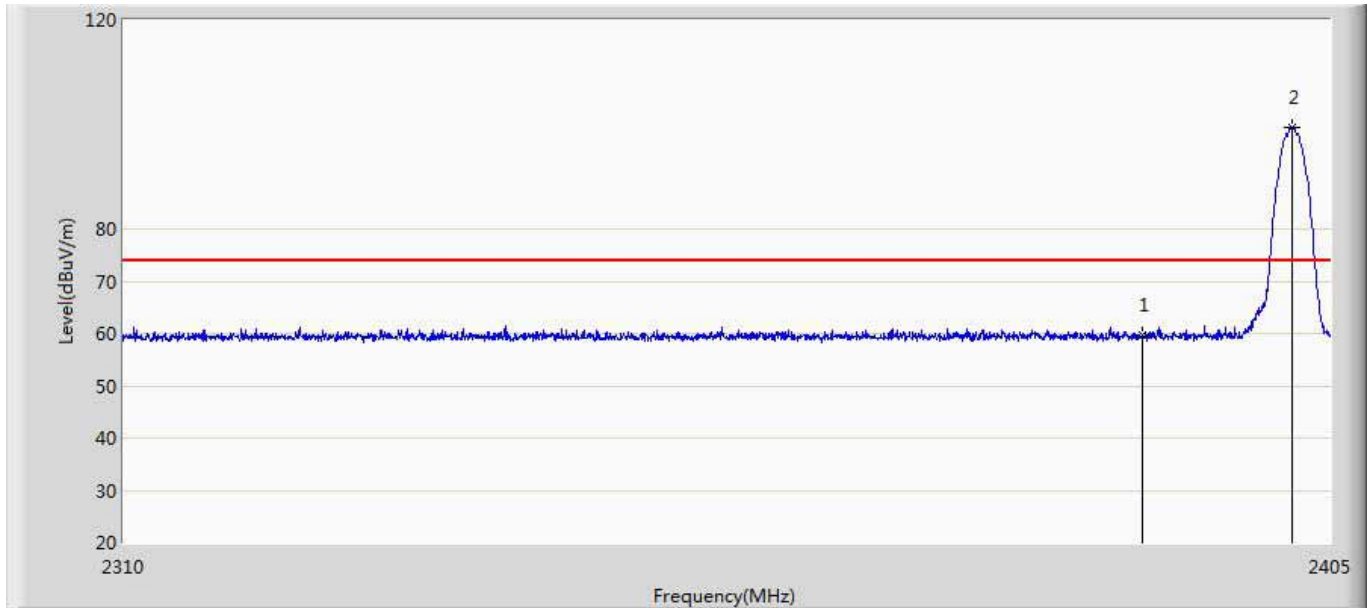


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	104.096	68.230	N/A	N/A	35.866	PK
2		2483.500	63.731	27.839	-10.269	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	104.096	79.304	N/A	N/A	-24.792	AV
2		2483.500	63.731	38.941	-15.059	54.000	-24.790	AV



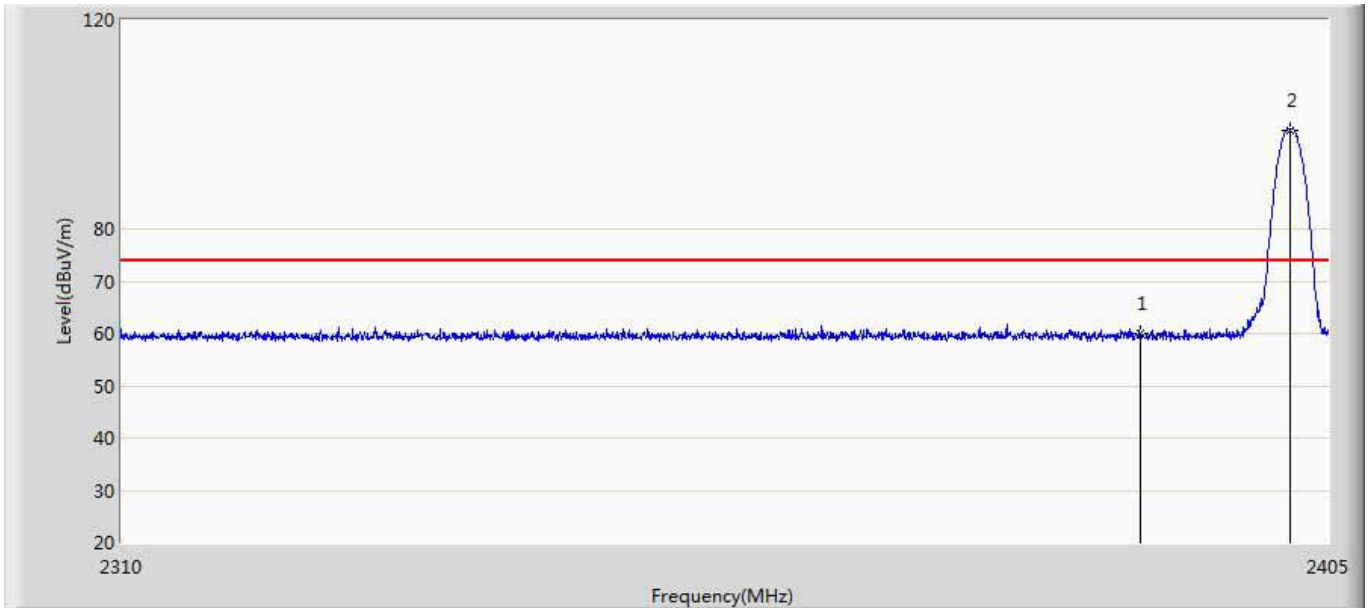
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by 2DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.645	23.963	-14.355	74.000	35.682	PK
2	*	2402.000	99.285	63.572	25.285	74.000	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.645	34.853	-19.147	54.000	-24.792	AV
2	*	2402.000	99.285	74.495	20.495	54.000	-24.790	AV

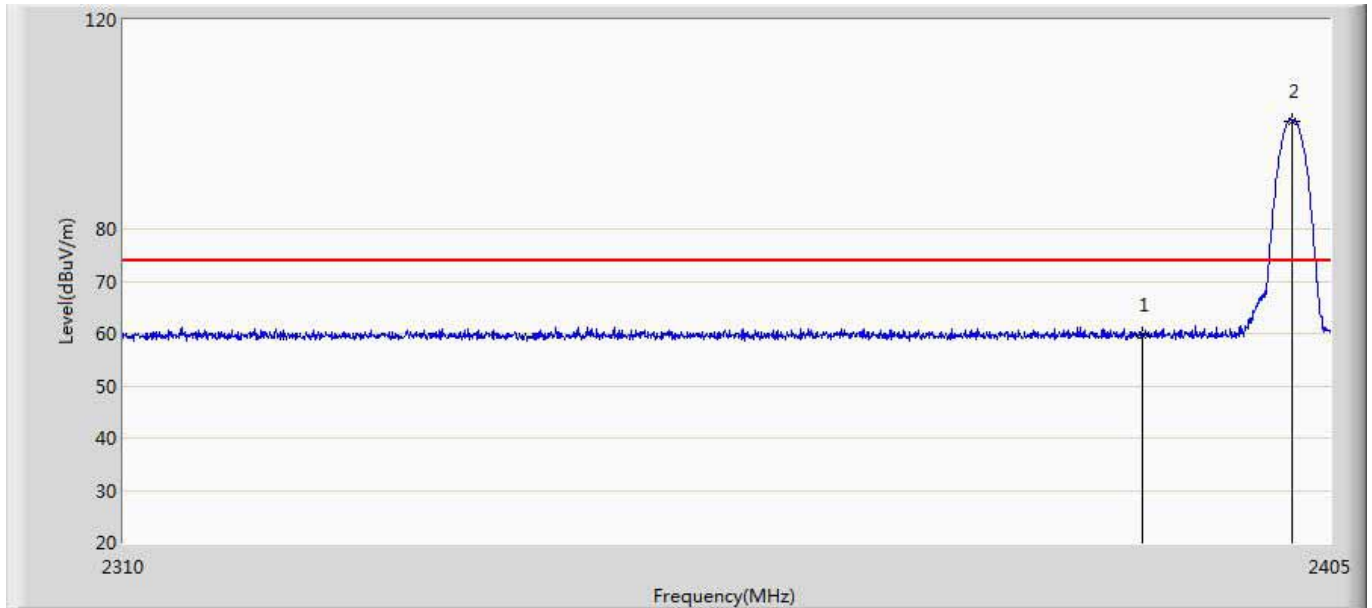
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by 2DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.902	24.220	-14.098	74.000	35.682	PK
2	*	2402.000	98.923	63.210	24.923	74.000	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.902	35.110	-18.890	54.000	-24.792	AV
2	*	2402.000	98.923	74.133	20.133	54.000	-24.790	AV

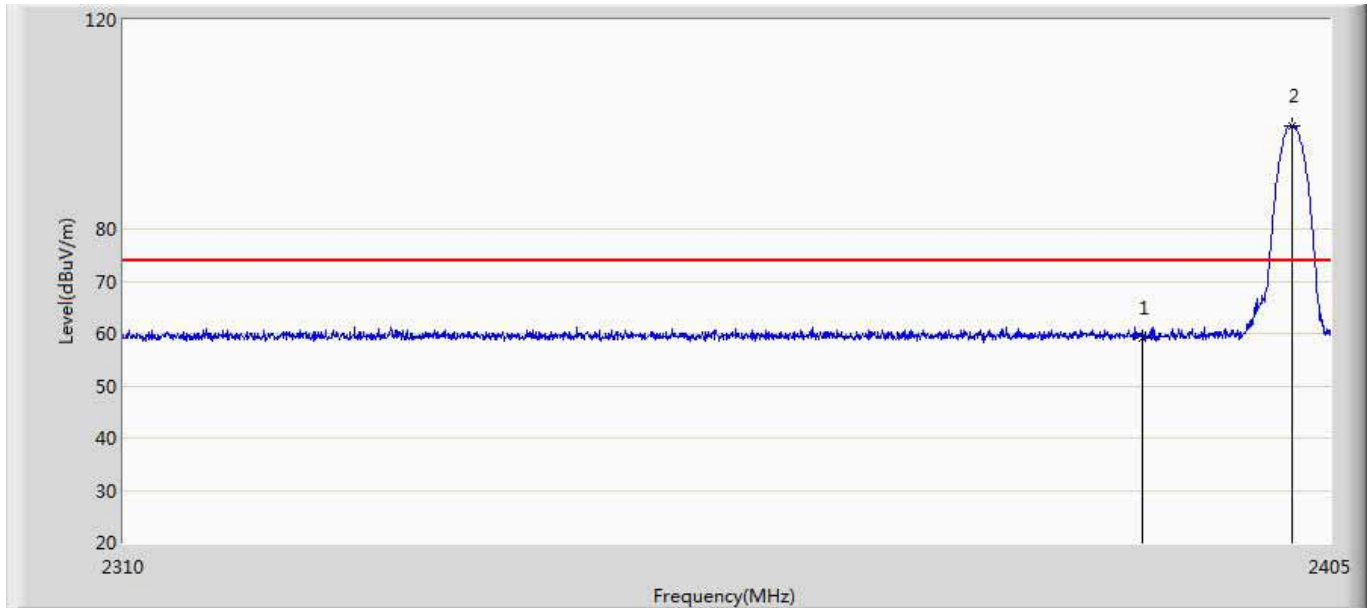
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by 2DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.583	23.901	-14.417	74.000	35.682	PK
2	*	2402.000	100.617	64.904	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.583	34.791	-19.209	54.000	-24.792	AV
2	*	2402.000	100.617	75.827	N/A	N/A	-24.790	AV

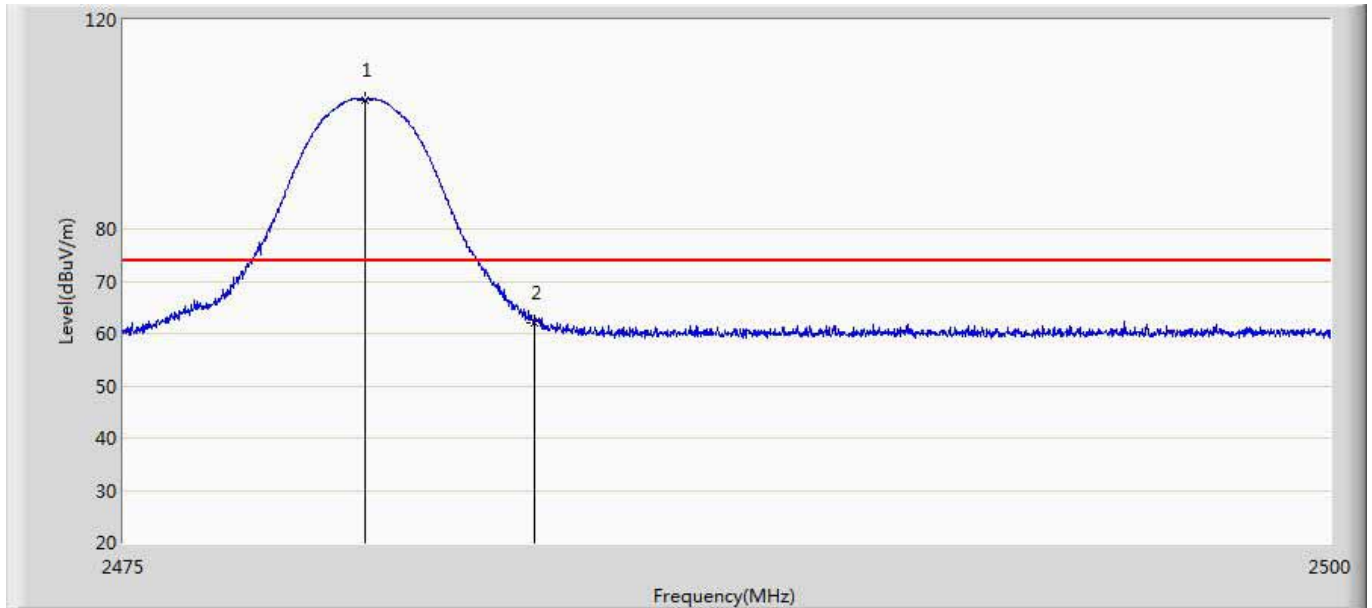
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by 2DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.266	23.584	-14.734	74.000	35.682	PK
2	*	2402.000	99.660	63.947	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.266	34.474	-19.526	54.000	-24.792	AV
2	*	2402.000	99.660	74.870	N/A	N/A	-24.790	AV

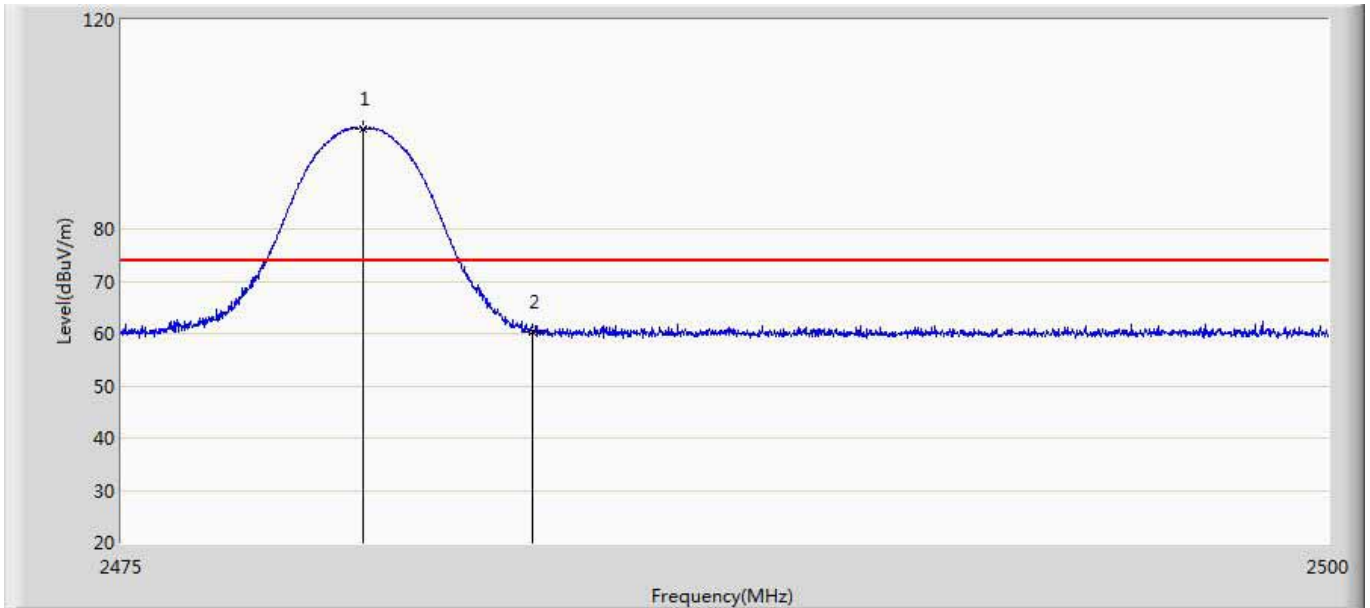
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by 2DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	104.618	68.752	30.618	74.000	35.866	PK
2		2483.500	62.051	26.159	-11.949	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	104.618	79.826	25.826	54.000	-24.792	AV
2		2483.500	62.051	37.261	-16.739	54.000	-24.790	AV

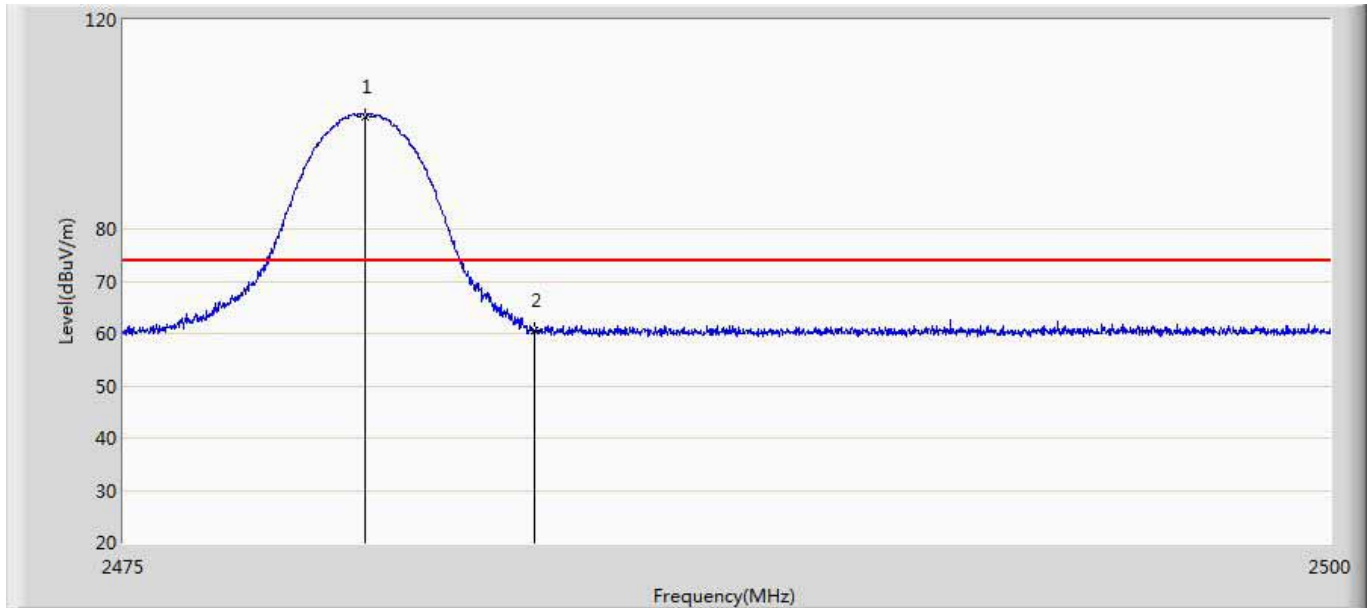
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by 2DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	99.170	63.304	25.170	74.000	35.866	PK
2		2483.500	60.183	24.291	-13.817	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	99.170	74.378	20.378	54.000	-24.792	AV
2		2483.500	60.183	35.393	-18.607	54.000	-24.790	AV

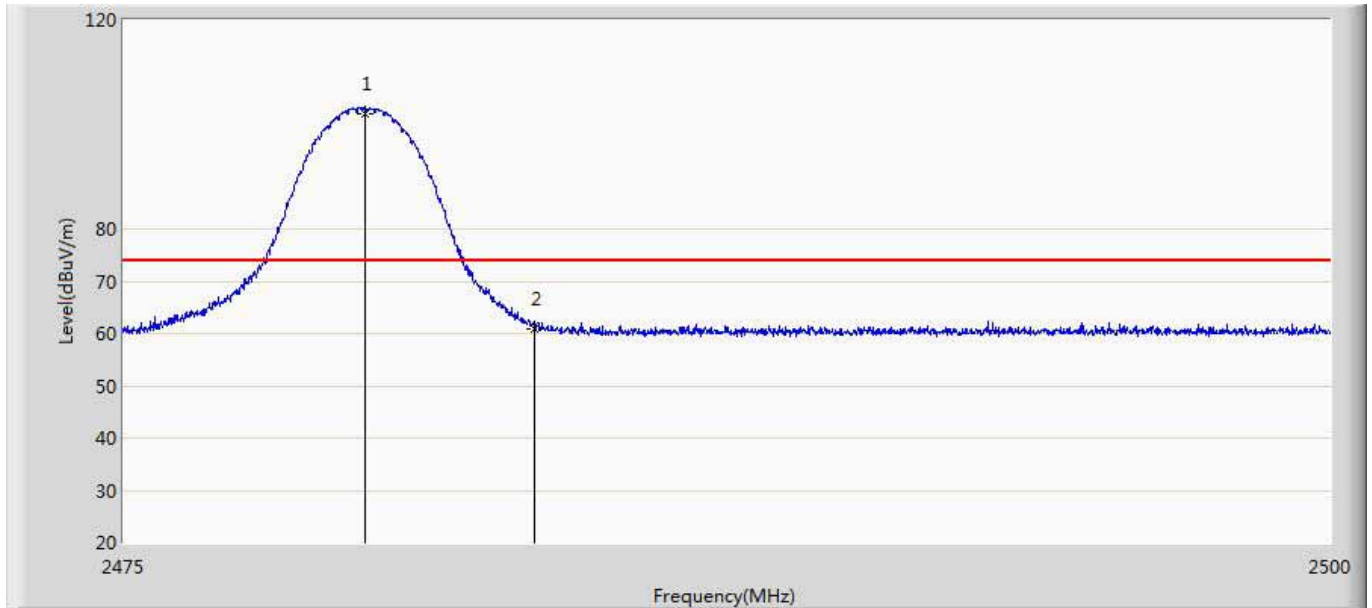
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by 2DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	101.491	65.625	N/A	N/A	35.866	PK
2		2483.500	60.496	24.604	-13.504	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	101.491	76.699	N/A	N/A	-24.792	AV
2		2483.500	60.496	35.706	-18.294	54.000	-24.790	AV

Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by 2DH5(Z Axis)	

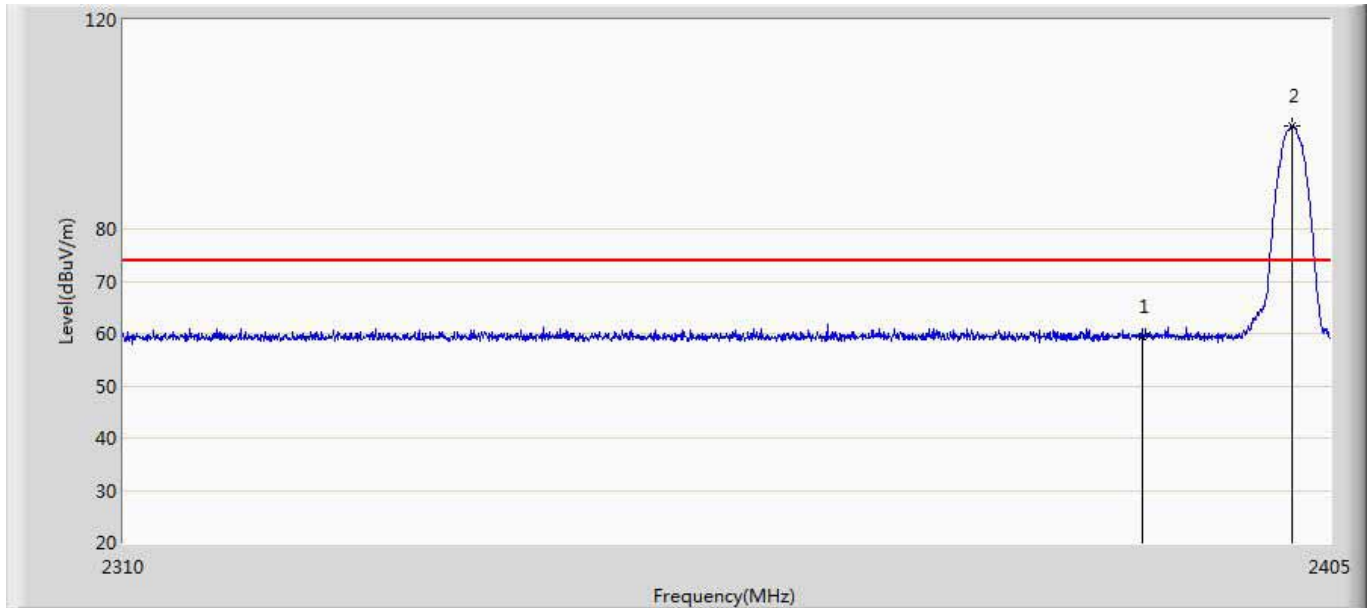


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	102.154	66.288	N/A	N/A	35.866	PK
2		2483.500	61.005	25.113	-12.995	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	102.154	77.362	N/A	N/A	-24.792	AV
2		2483.500	61.005	36.215	-17.785	54.000	-24.790	AV



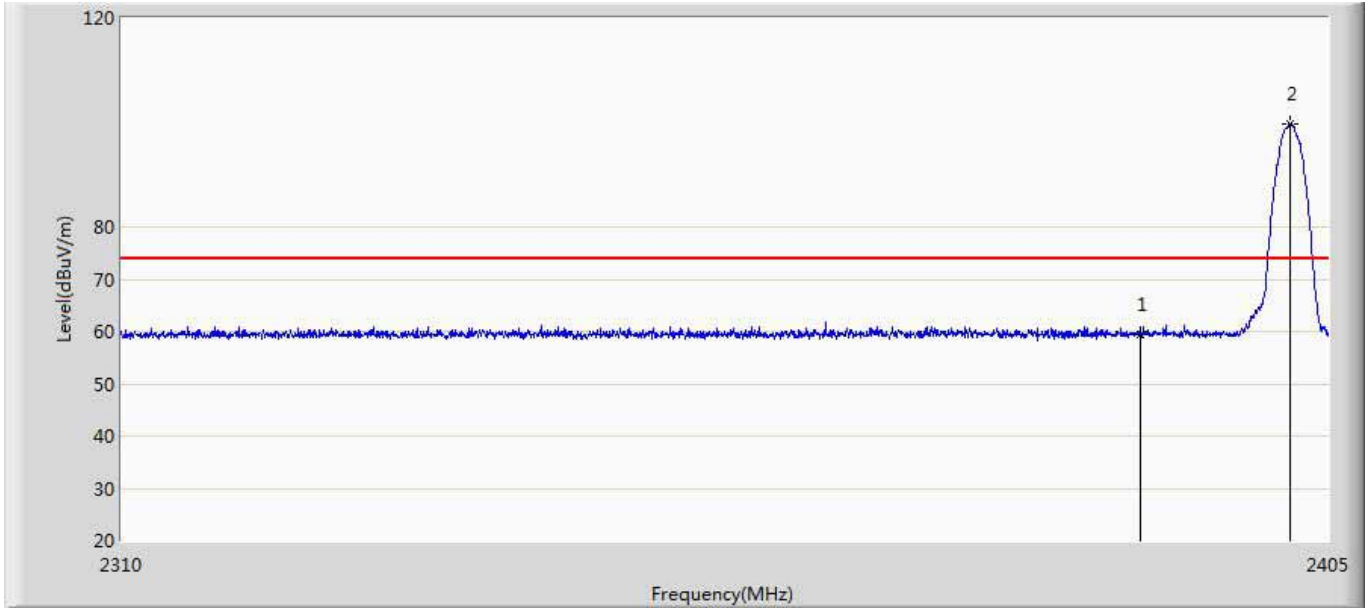
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by 3DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	46.965	11.283	-27.035	74.000	35.682	PK
2	*	2402.000	95.871	60.158	21.871	74.000	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	46.965	22.173	-31.827	54.000	-24.792	AV
2	*	2402.000	95.871	71.081	17.081	54.000	-24.790	AV

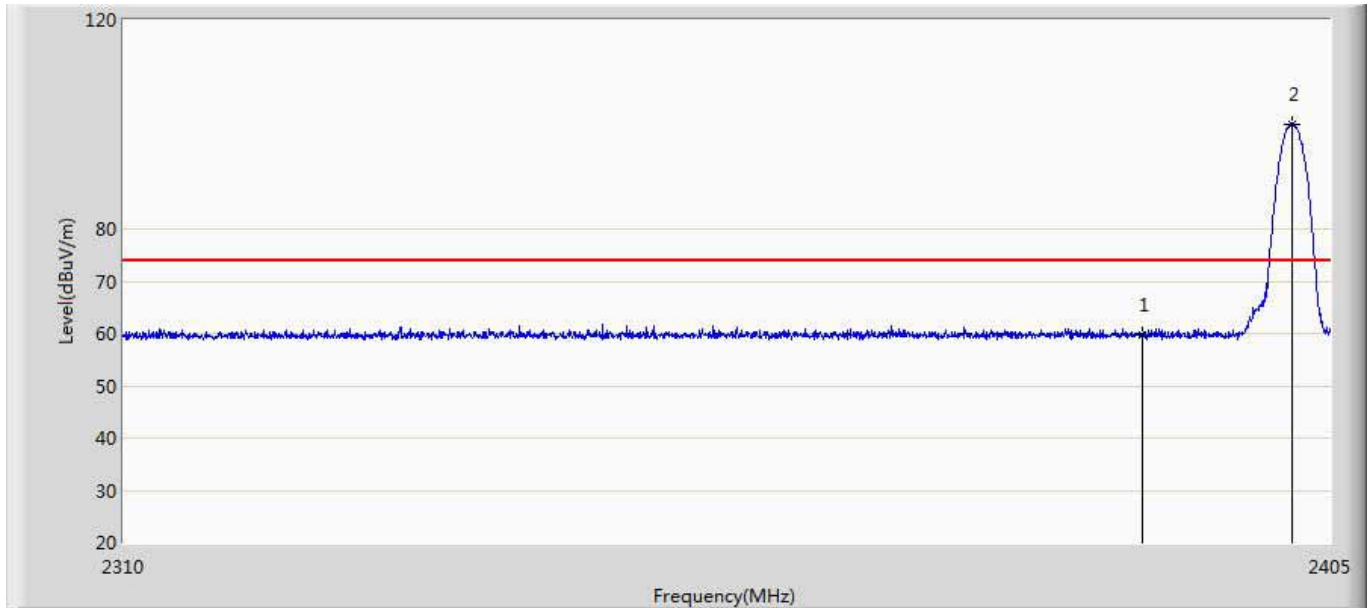
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by 3DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.422	23.740	-14.578	74.000	35.682	PK
2	*	2402.000	99.598	63.885	25.598	74.000	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.422	34.630	-19.370	54.000	-24.792	AV
2	*	2402.000	99.598	74.808	20.808	54.000	-24.790	AV

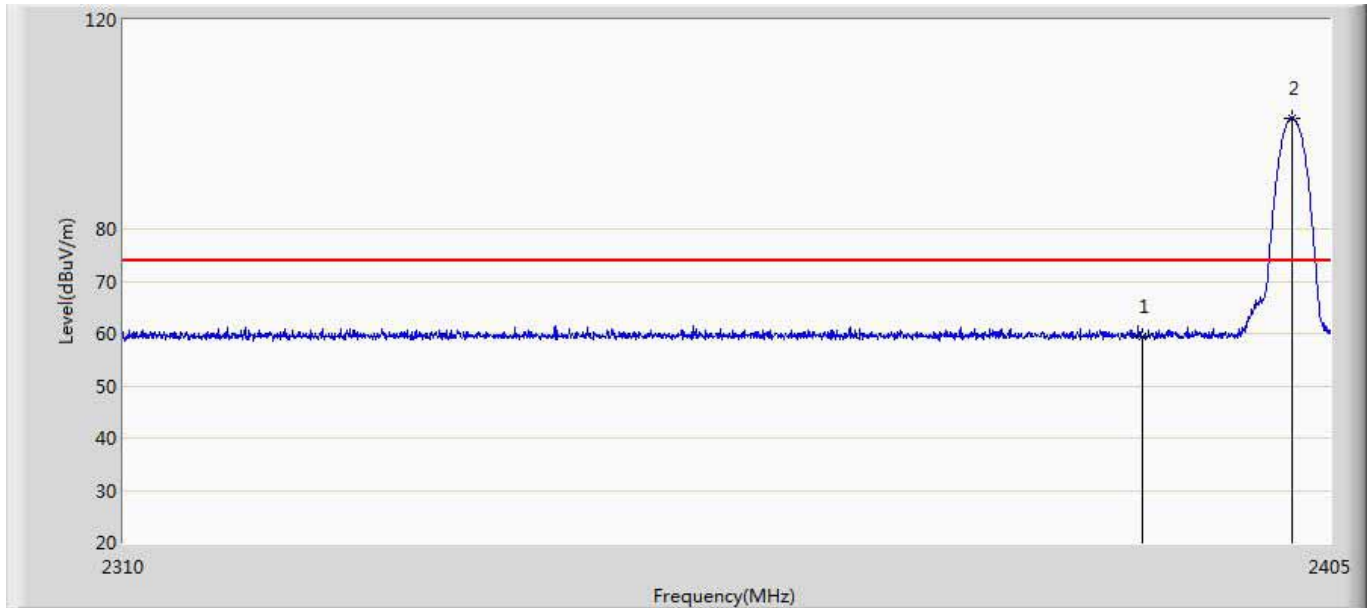
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by 3DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.775	24.093	-14.225	74.000	35.682	PK
2	*	2402.000	99.917	64.204	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.775	34.983	-19.017	54.000	-24.792	AV
2	*	2402.000	99.917	75.127	N/A	N/A	-24.790	AV

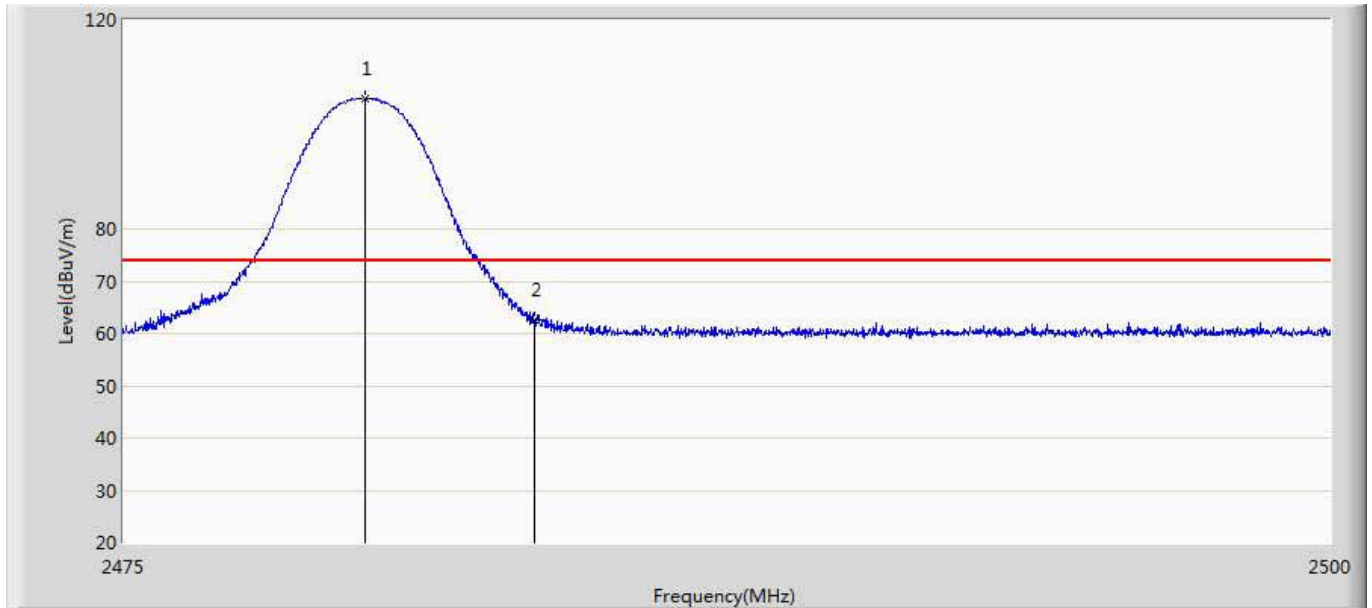
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2402MHz by 3DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.430	23.748	-14.570	74.000	35.682	PK
2	*	2402.000	101.082	65.369	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.430	34.638	-19.362	54.000	-24.792	AV
2	*	2402.000	101.082	76.292	N/A	N/A	-24.790	AV

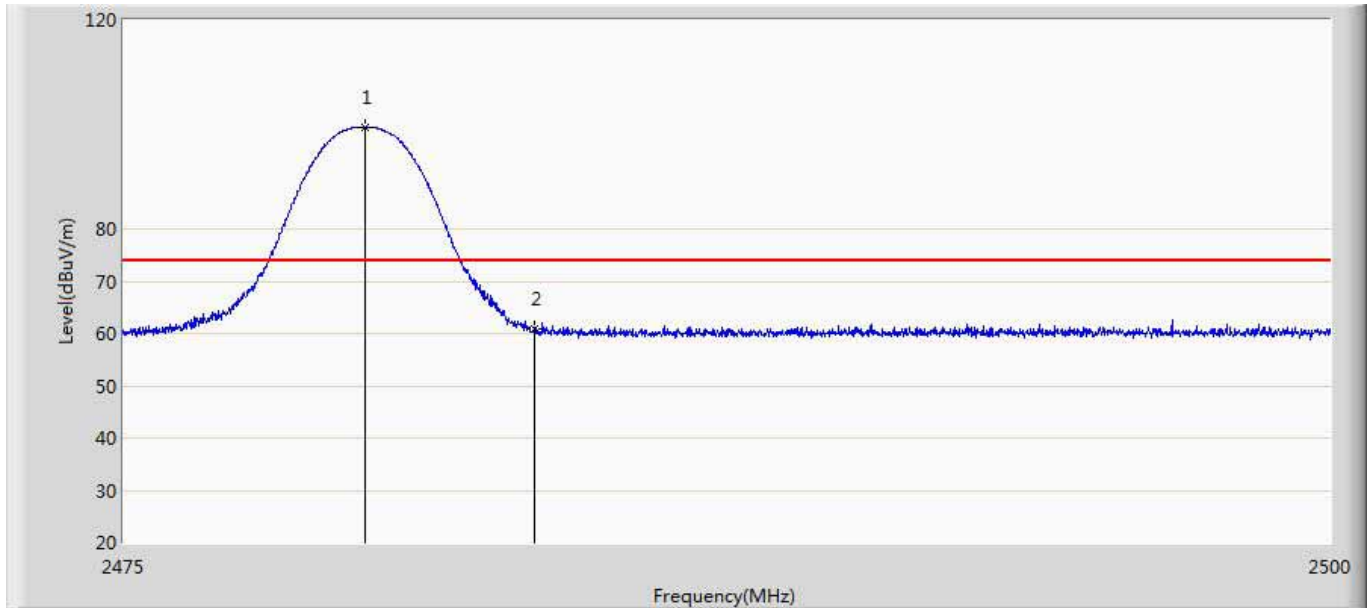
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by 3DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	104.920	69.054	30.920	74.000	35.866	PK
2		2483.500	62.752	26.860	-11.248	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	104.920	80.128	26.128	54.000	-24.792	AV
2		2483.500	62.752	37.962	-16.038	54.000	-24.790	AV

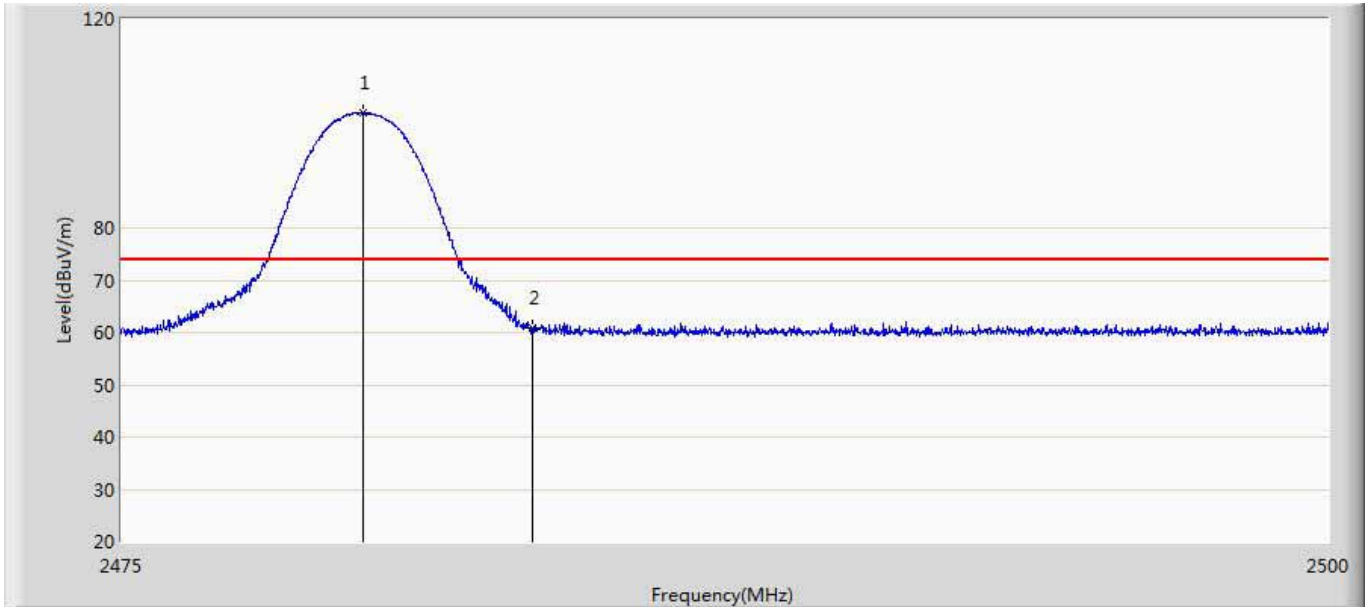
Engineer: Vic	
Site: AC5	Time: 2017/04/17 - 17:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by 3DH5(X Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	99.532	63.666	25.532	74.000	35.866	PK
2		2483.500	60.744	24.852	-13.256	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	99.532	74.740	20.740	54.000	-24.792	AV
2		2483.500	60.744	35.954	-18.046	54.000	-24.790	AV

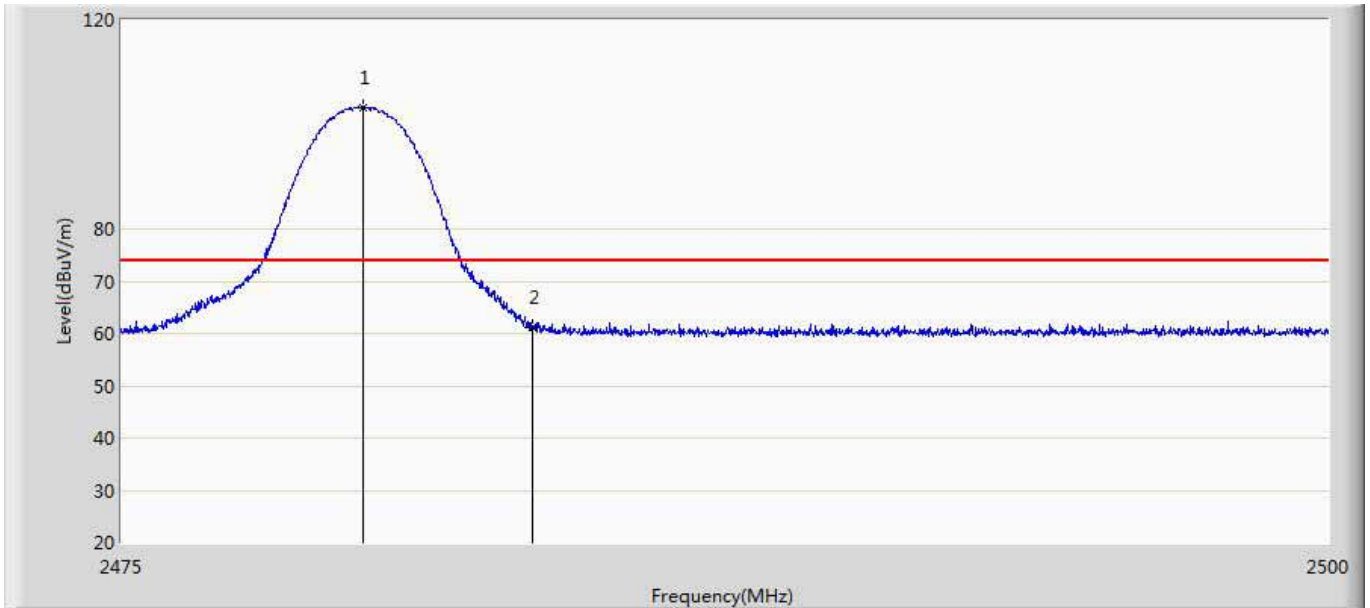
Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by 3DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	102.069	66.203	N/A	N/A	35.866	PK
2		2483.500	60.964	25.072	-13.036	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	102.069	77.277	N/A	N/A	-24.792	AV
2		2483.500	60.964	36.174	-17.826	54.000	-24.790	AV

Engineer: Vic	
Site: AC5	Time: 2017/05/12 - 17:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode1:Transmit 2480MHz by 3DH5(Z Axis)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	103.260	67.394	N/A	N/A	35.866	PK
2		2483.500	61.060	25.168	-12.940	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	103.260	78.468	N/A	N/A	-24.792	AV
2		2483.500	61.060	36.270	-17.73	54.000	-24.790	AV



## 12. Antenna Requirement

### 12.1. Limit

Antenna Requirement Limit
<p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.</p>

### 12.2. Antenna Connector Construction

Antenna Connector Construction	
<input checked="" type="checkbox"/>	The use of a permanently attached antenna
<input type="checkbox"/>	The antenna use of a unique coupling to the intentional radiator
<input type="checkbox"/>	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document "Internal Photograph" to show the antenna connector.	

\_\_\_\_\_ The End \_\_\_\_\_