



# Test Report

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

Product Name : Bluetooth Headset  
Model No. : BG810S  
FCC ID : AL8-BG810S  
IC : 457A-BG810S

Applicant : Plantronics, Inc.

Address : 345 Encinal Street, Santa Cruz, CA95060 USA

Date of Receipt : May. 18, 2018  
Test Date : May. 20, 2018~ Jun. 08, 2018  
Issued Date : Jun. 14, 2018  
Report No. : 1852036R-RF-US-P06V03  
Report Version : V 1.0

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.

This report must not be used to claim product endorsement by A2LA, TAF or any agency of the government.

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# Test Report Certification

Issued Date : Jun. 14, 2018  
Report No. : 1852036R-RF-US-P06V03



Product Name : Bluetooth Headset  
Applicant : Plantronics, Inc.  
Address : 345 Encinal Street, Santa Cruz, CA95060 USA  
Manufacturer : Plantronics, Inc.  
Address : 345 Encinal Street, Santa Cruz, CA95060 USA  
Model No. : BG810S  
FCC ID : AL8-BG810S  
IC : 457A-BG810S  
EUT Voltage : DC 3.7V  
Test Voltage : AC120V/60Hz  
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C  
KDB DA 00-705 Released March 30, 2000  
ANSI C63.10: 2013  
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 Designation Number: CN1199; ISED Lab Code: 4075B  
Documented By : *Kitty Li*  
(Adm. Specialist: Kitty Li)  
Reviewed By : *Frank He*  
(Senior Engineer: Frank He )  
Approved By : *Harry Zhao*  
(Engineering Manager: Harry Zhao )

## 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.....	48
5.1. Test Equipment.....	48
5.2. Test Setup.....	48
5.3. Limit.....	48
5.4. Test Procedure.....	49
5.5. Uncertainty.....	49
5.6. Test Result.....	50
6. Carrier Frequency Separation.....	56
6.1. Test Equipment.....	56
6.2. Test Setup.....	56
6.3. Limit.....	57
6.4. Test Procedure.....	57
6.5. Uncertainty.....	57

6.6.	Test Result.....	58
7.	Number of Hopping Frequencies.....	64
7.1.	Test Equipment.....	64
7.2.	Test Setup.....	64
7.3.	Limit.....	64
7.4.	Test Procedure.....	65
7.5.	Uncertainty.....	65
7.6.	Test Result.....	66
8.	Time of Occupancy (Dwell Time).....	69
8.1.	Test Equipment.....	69
8.2.	Test Setup.....	69
8.3.	Limit.....	69
8.4.	Test Procedure.....	70
8.5.	Uncertainty.....	70
8.6.	Test Result.....	71
9.	Peak Output Power.....	74
9.1.	Test Equipment.....	74
9.2.	Test Setup.....	74
9.3.	Limit.....	75
9.4.	Test Procedure.....	75
9.5.	Uncertainty.....	75
9.6.	Test Result.....	76
10.	Emissions in non-restricted frequency bands.....	79
10.1.	Test Equipment.....	79
10.2.	Test Setup.....	79
10.3.	Limit.....	80
10.4.	Test Procedure.....	80
10.5.	Uncertainty.....	80
10.6.	Test Result.....	81
11.	Radiated Emission Band Edge.....	82
11.1.	Test Equipment.....	82
11.2.	Test Setup.....	82
11.3.	Limit.....	83
11.4.	Test Procedure.....	83
11.5.	Uncertainty.....	83
11.6.	Duty Factor.....	84
11.7.	Test Result.....	85
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
1852036R-RF-US-P06V03	V1.0	Initial Issued Report	Jun. 14, 2018

**1. General Information**

**1.1. EUT Description**

Product Name	Bluetooth Headset
Model No.	BG810S
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"/>	Sectorized		
			<input type="checkbox"/>	Beam-forming		
Antenna Type	<input type="checkbox"/>	External	<input type="checkbox"/>	Dipole		
			<input type="checkbox"/>	Sectorized		
	<input checked="" type="checkbox"/>	Internal	<input checked="" type="checkbox"/>	PIFA		
			<input type="checkbox"/>	PCB		
			<input type="checkbox"/>	Ceramic Chip Antenna		
			<input type="checkbox"/>	Monopole Antenna		
	Antenna Technology	Ant Gain (dBi)				
	<input checked="" type="checkbox"/>	SISO	1.83			

### 1.3 Mode of Operation

DEKRA has 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.

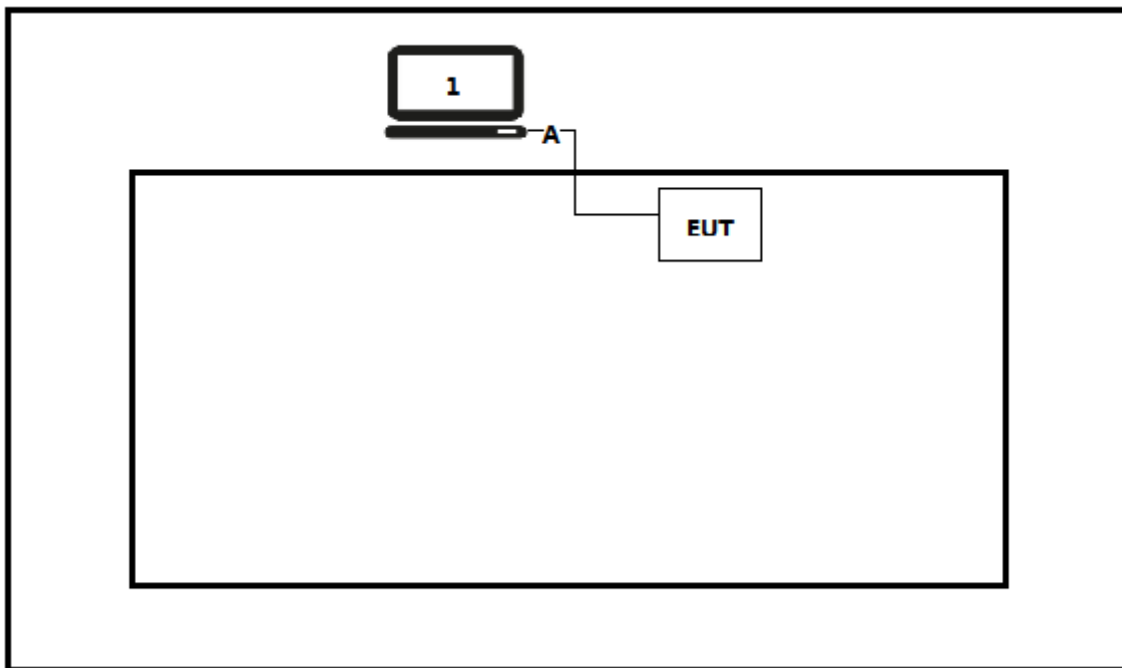
### 1.4 Tested System Details

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

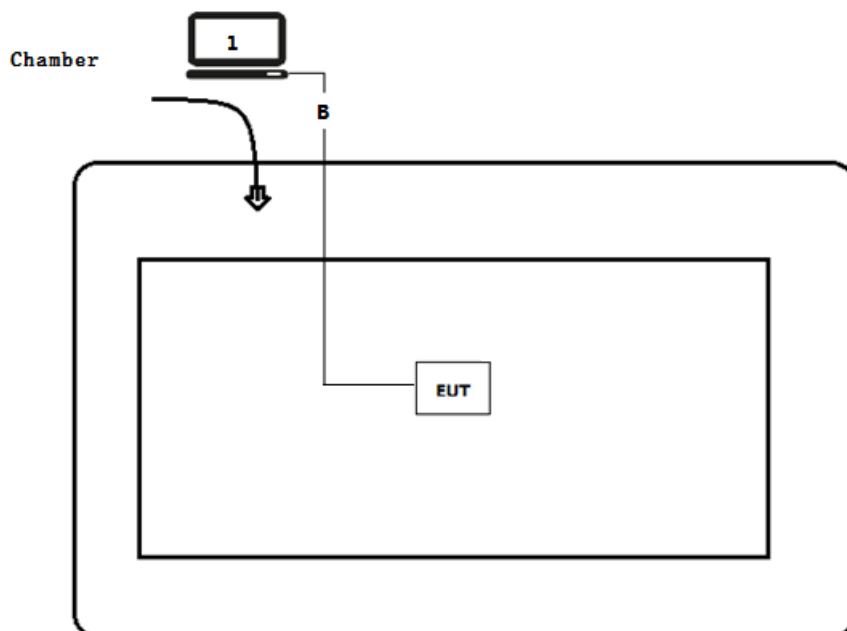
Product	Manufacturer	Model No.	Serial No.	Power Cord
1 Notebook	Think Pad	2526	LV-A3285	Power by adapter
A USB Cable	N/A	N/A	N/A	Shield, 0.5m
B USB Cable	N/A	N/A	N/A	Shield, 10m

### 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 RF software [Airoha LAB Test tool], and set the test mode and channel, then press OK to start to 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 ISED**

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



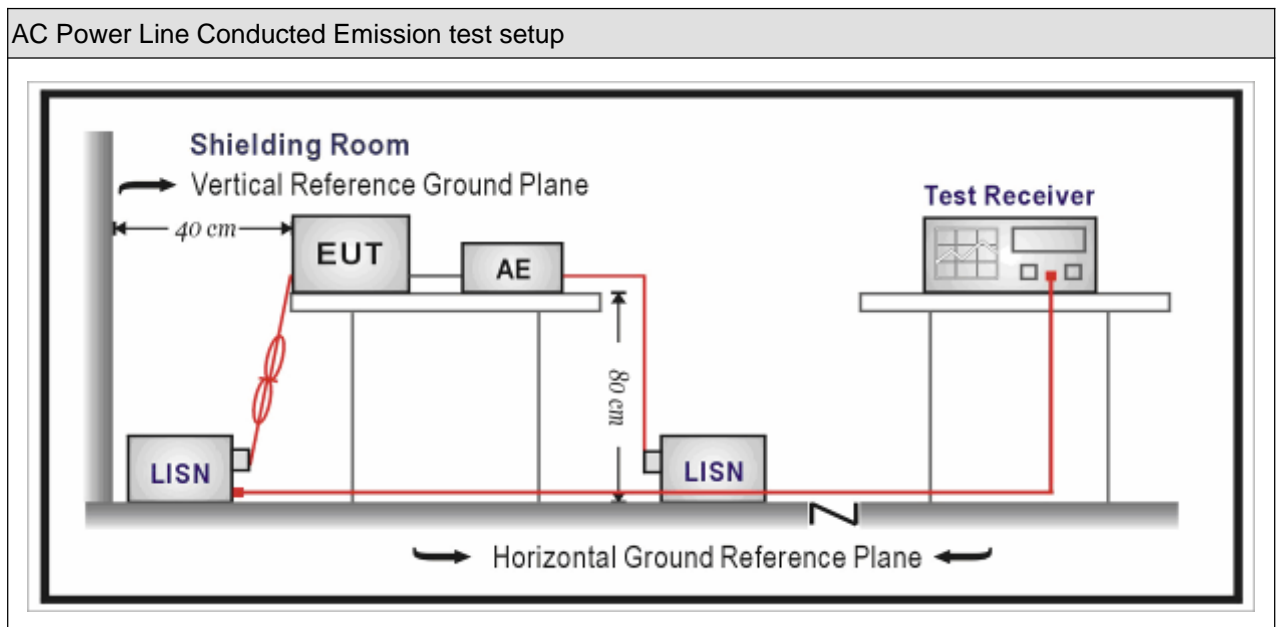
### 3. Conducted Emission

#### 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	2018.03.05	2019.03.04
Two-Line V-Network	R&S	ENV 216	101189	2017.07.16	2018.07.15
Two-Line V-Network	R&S	ENV 216	101044	2017.09.15	2018.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2017.09.15	2018.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2018.01.05	2019.01.04
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A

Note: All equipment 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

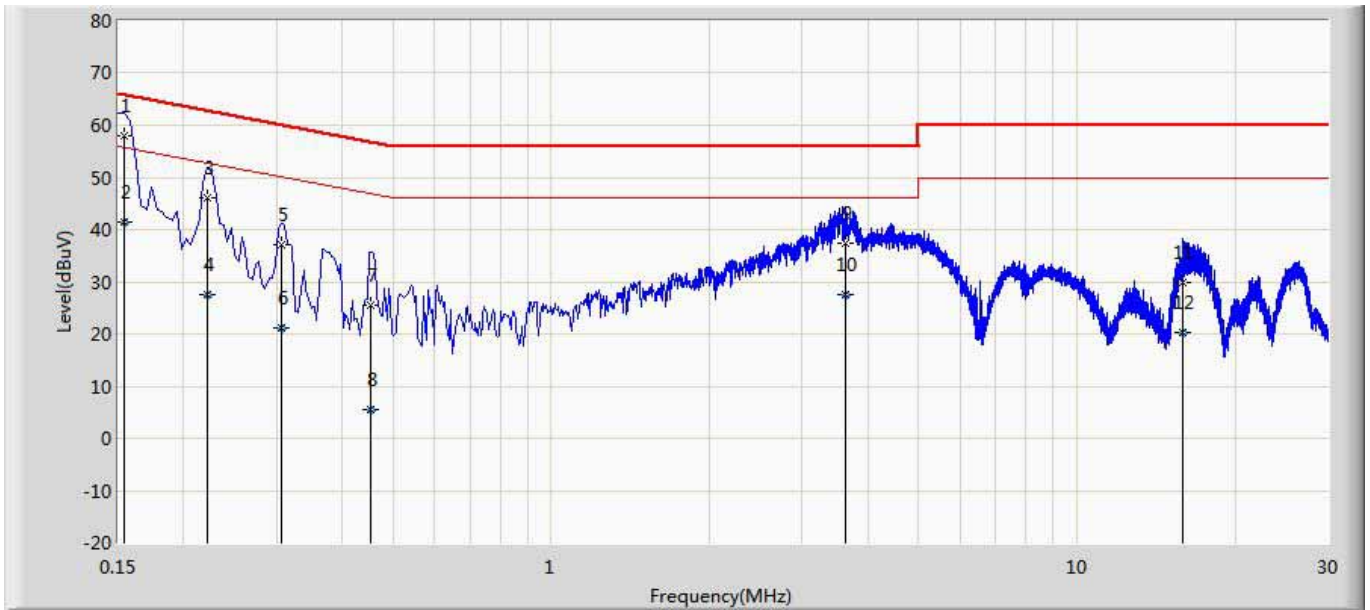
Test Method			
	References Rule	Chapter	Item
<input checked="" type="checkbox"/>	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

### 3.5. Uncertainty

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

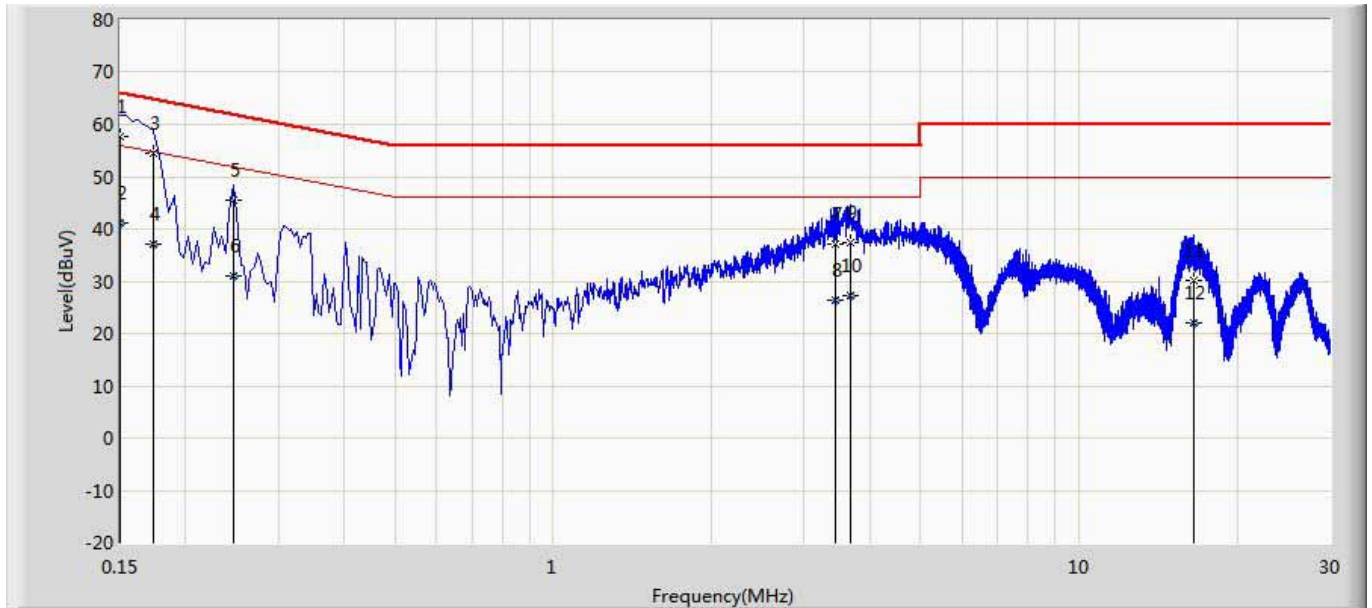
### 3.6. Test Result

Engineer: Lucas	
Site: TR1	Time: 2018/05/08
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Bluetooth headset	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.154	57.869	48.235	-7.912	65.781	9.609	0.025	0.000	QP
2		0.154	41.506	31.871	-14.276	55.781	9.609	0.025	0.000	AV
3		0.222	46.229	36.600	-16.514	62.744	9.600	0.029	0.000	QP
4		0.222	27.429	17.800	-25.314	52.744	9.600	0.029	0.000	AV
5		0.306	37.206	27.572	-22.872	60.078	9.600	0.034	0.000	QP
6		0.306	21.085	11.450	-28.994	50.078	9.600	0.034	0.000	AV
7		0.454	25.489	15.848	-31.312	56.802	9.600	0.041	0.000	QP
8		0.454	5.470	-4.171	-41.332	46.802	9.600	0.041	0.000	AV
9		3.634	37.492	27.734	-18.508	56.000	9.637	0.121	0.000	QP
10		3.634	27.395	17.637	-18.605	46.000	9.637	0.121	0.000	AV
11		15.862	29.765	19.567	-30.235	60.000	9.942	0.256	0.000	QP
12		15.862	20.361	10.163	-29.639	50.000	9.942	0.256	0.000	AV

Engineer: Lucas	
Site: TR1	Time: 2018/05/08
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Bluetooth headset	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.150	57.704	48.085	-8.296	66.000	9.594	0.025	0.000	QP
2		0.150	41.260	31.642	-14.740	56.000	9.594	0.025	0.000	AV
3		0.174	54.622	45.000	-10.145	64.767	9.595	0.027	0.000	QP
4		0.174	37.222	27.600	-17.545	54.767	9.595	0.027	0.000	AV
5		0.246	45.498	35.869	-16.394	61.891	9.598	0.031	0.000	QP
6		0.246	31.109	21.481	-20.782	51.891	9.598	0.031	0.000	AV
7		3.438	36.975	27.229	-19.025	56.000	9.629	0.117	0.000	QP
8		3.438	26.372	16.626	-19.628	46.000	9.629	0.117	0.000	AV
9		3.674	37.378	27.624	-18.622	56.000	9.632	0.122	0.000	QP
10		3.674	27.257	17.503	-18.743	46.000	9.632	0.122	0.000	AV
11		16.518	30.131	19.843	-29.869	60.000	10.026	0.261	0.000	QP
12		16.518	22.015	11.728	-27.985	50.000	10.026	0.261	0.000	AV

#### 4. Emissions in restricted frequency bands

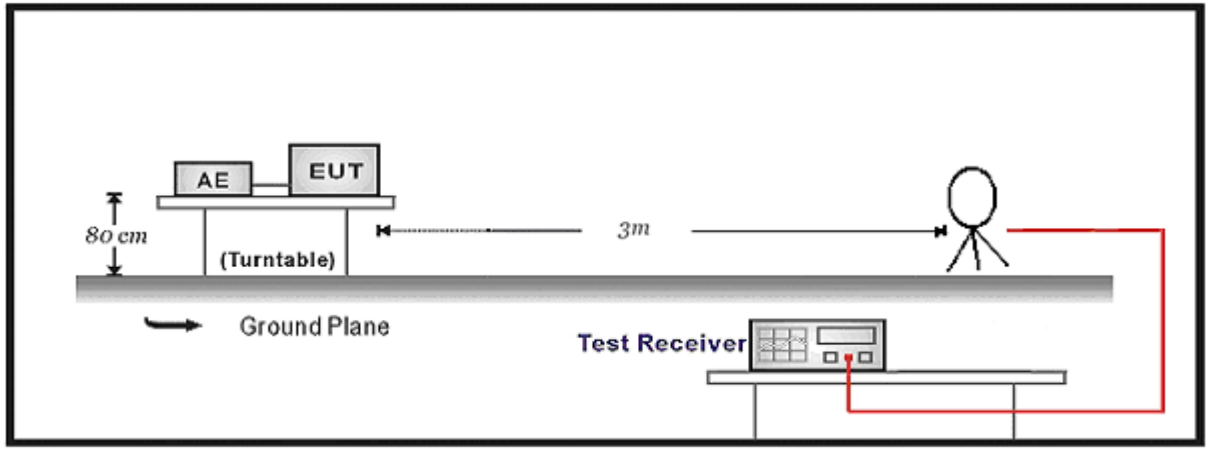
##### 4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2018.03.29	2019.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2017.11.16	2018.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2017.10.16	2018.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2018.03.02	2019.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2018.01.04	2019.01.03
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

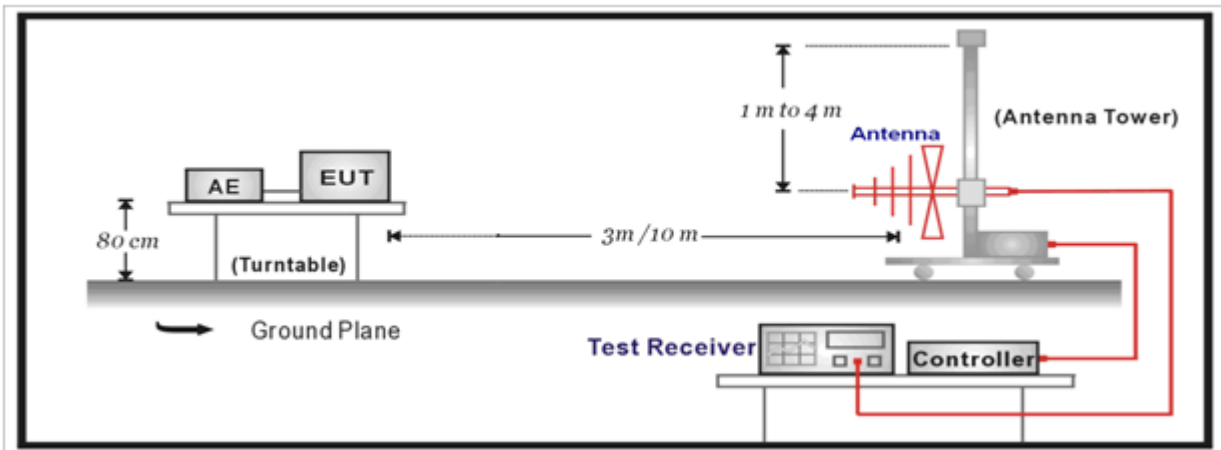
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2018.01.04	2019.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2017.05.06	2019.05.05
Preamplifier	Quietek	AP-040G	CHM-0906001	2017.05.06	2019.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2018.01.22	2019.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.11.25	2018.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2018.03.02	2019.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2018.03.02	2019.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2018.03.02	2019.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2017.06.10	2018.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2018.01.04	2019.01.03
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

### 4.2. Test Setup

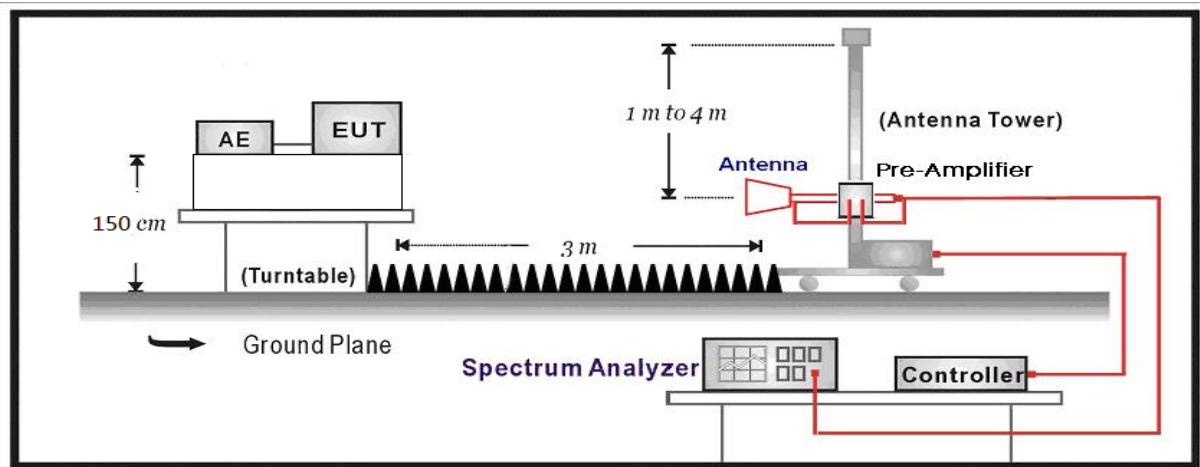
Below 30MHz Test Setup:



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 ISED:**

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

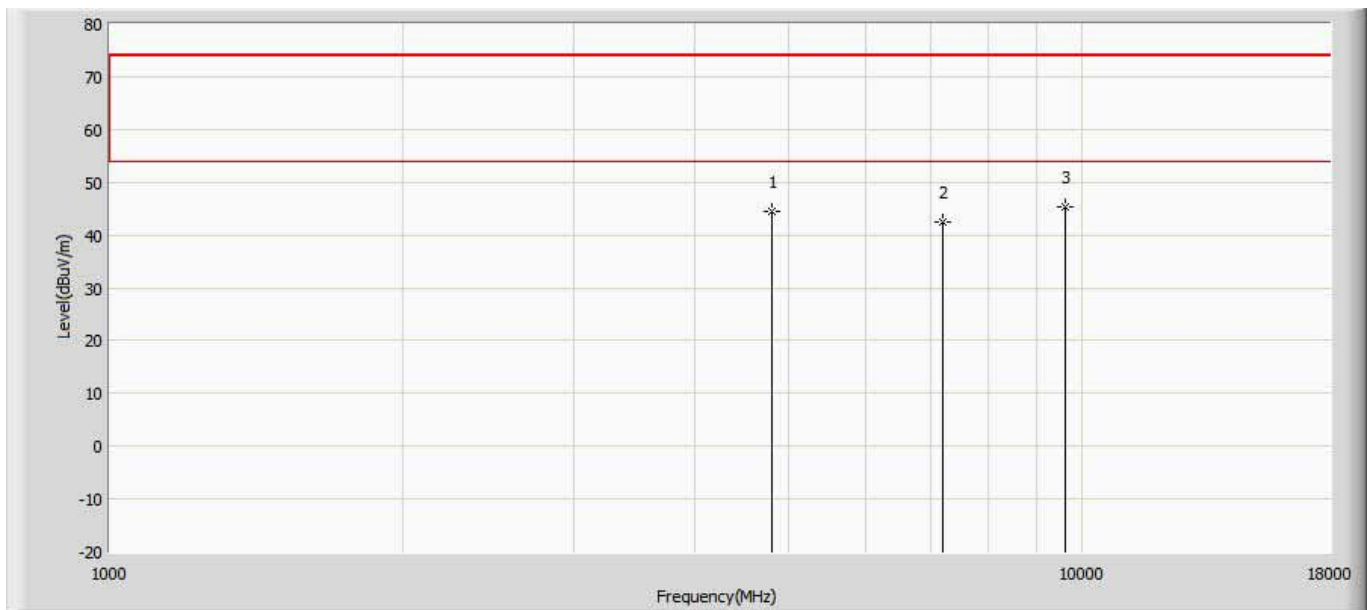
Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
<input checked="" type="checkbox"/>	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30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

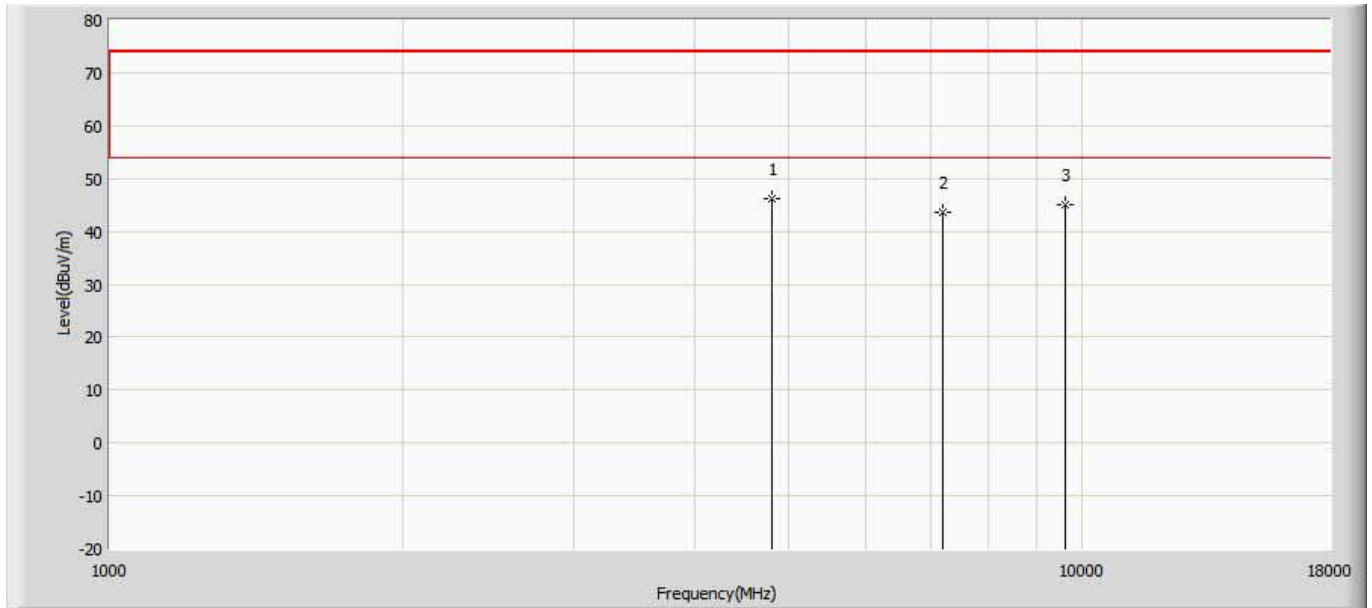
### 4.6. Test Result

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



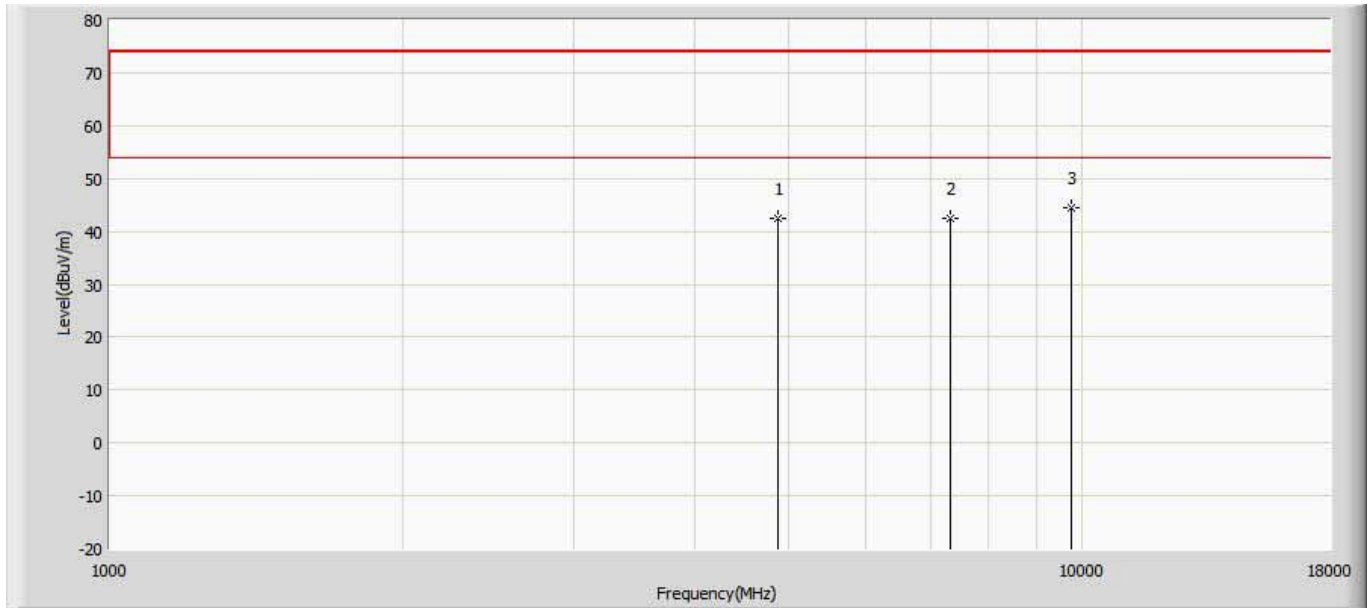
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4808.000	44.495	50.063	-29.505	74.000	-5.568	PK
2		7206.000	42.344	42.632	-31.656	74.000	-0.288	PK
3	*	9608.000	45.259	41.128	-28.741	74.000	4.131	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



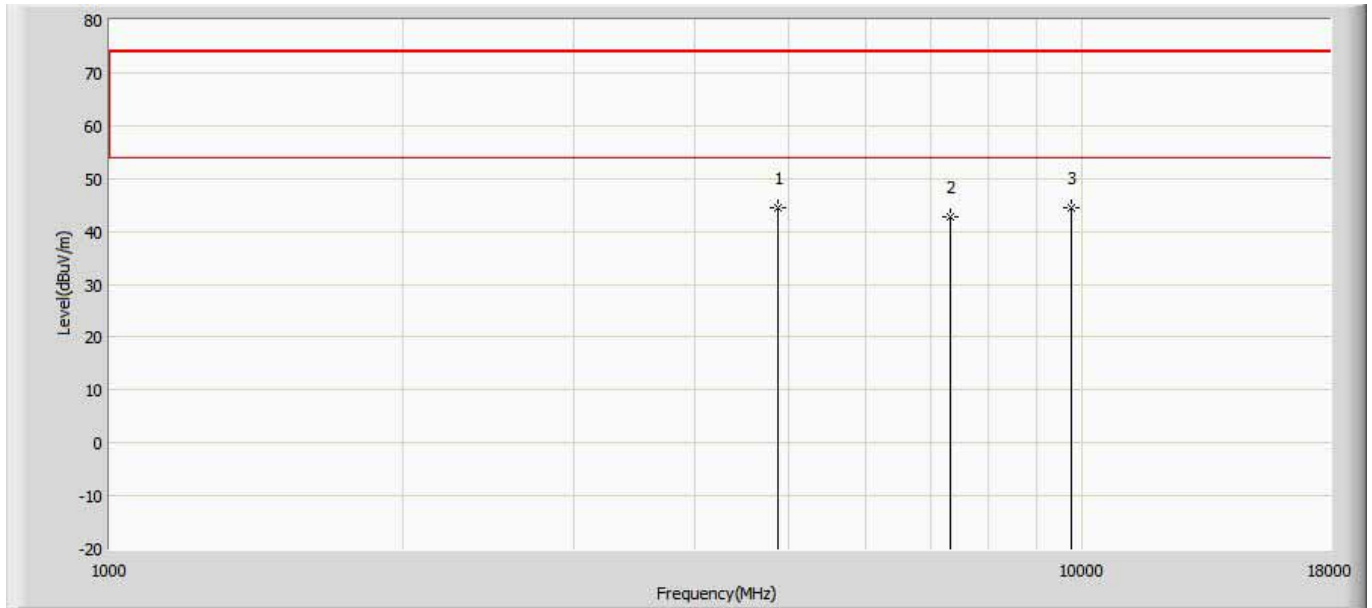
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4808.000	46.230	51.798	-27.770	74.000	-5.568	PK
2		7206.000	43.585	43.873	-30.415	74.000	-0.288	PK
3		9608.000	44.931	40.800	-29.069	74.000	4.131	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



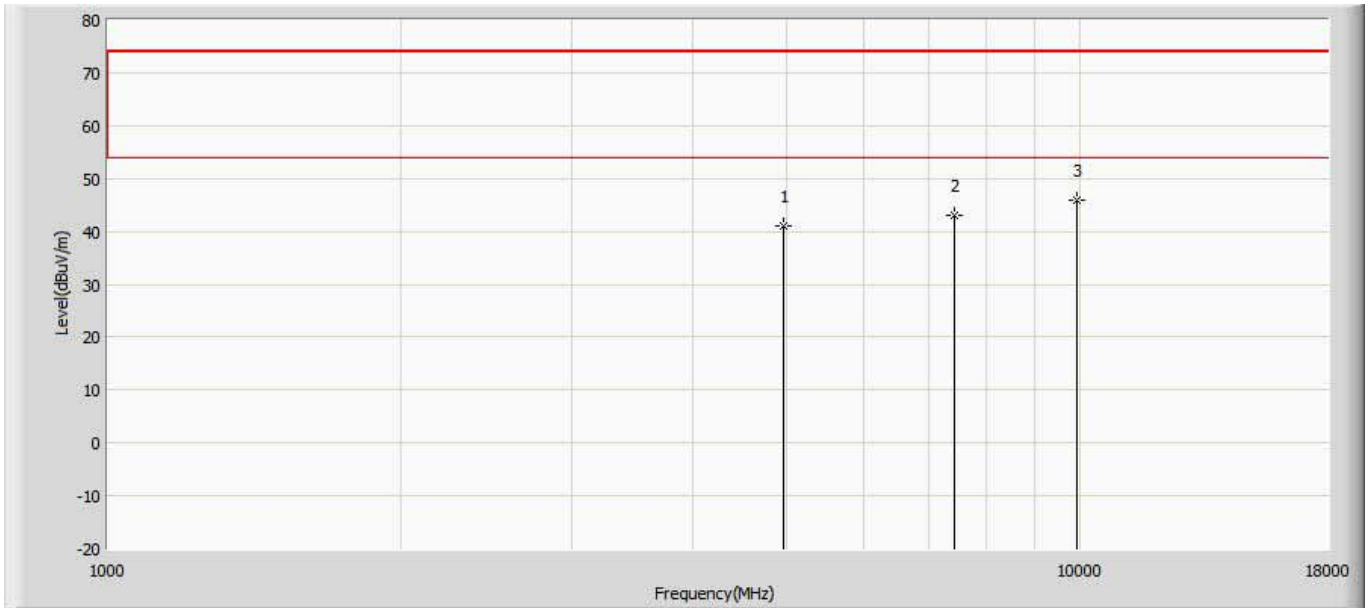
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	42.436	47.956	-31.564	74.000	-5.520	PK
2		7323.000	42.481	42.756	-31.519	74.000	-0.275	PK
3	*	9764.000	44.477	40.173	-29.523	74.000	4.304	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



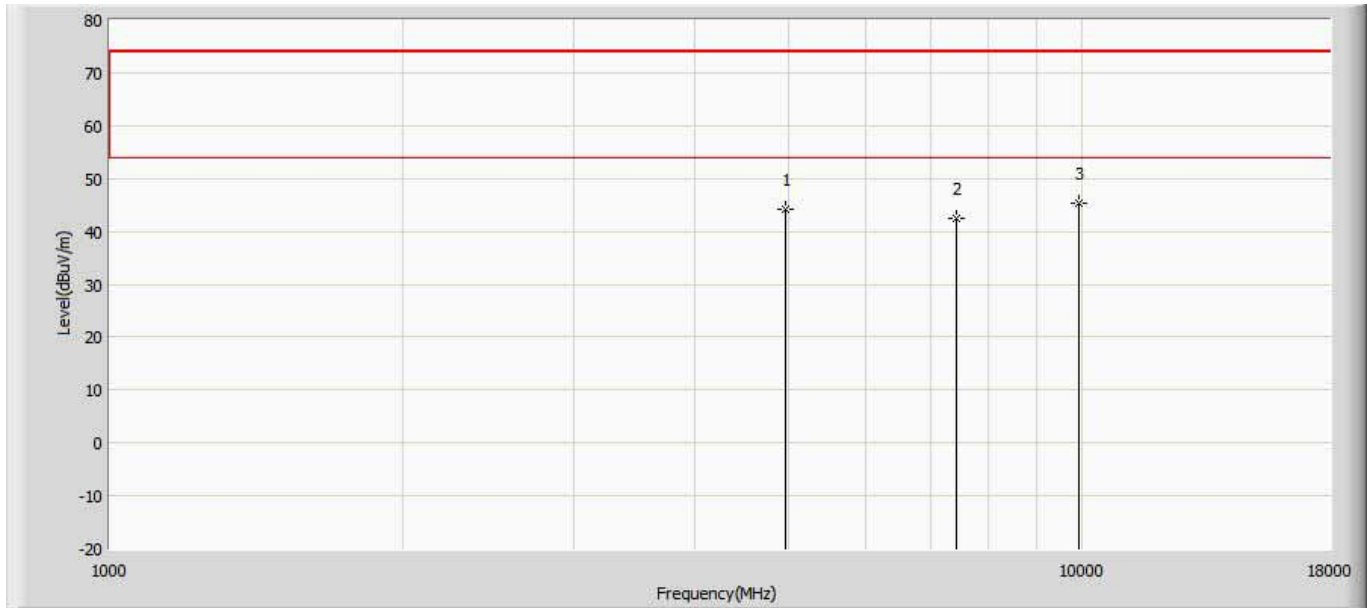
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4876.000	44.517	50.037	-29.483	74.000	-5.520	PK
2		7323.000	42.672	42.947	-31.328	74.000	-0.275	PK
3		9764.000	44.508	40.204	-29.492	74.000	4.304	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	41.174	46.401	-32.826	74.000	-5.227	PK
2		7440.000	43.047	43.226	-30.953	74.000	-0.179	PK
3	*	9920.000	46.027	41.081	-27.973	74.000	4.946	PK

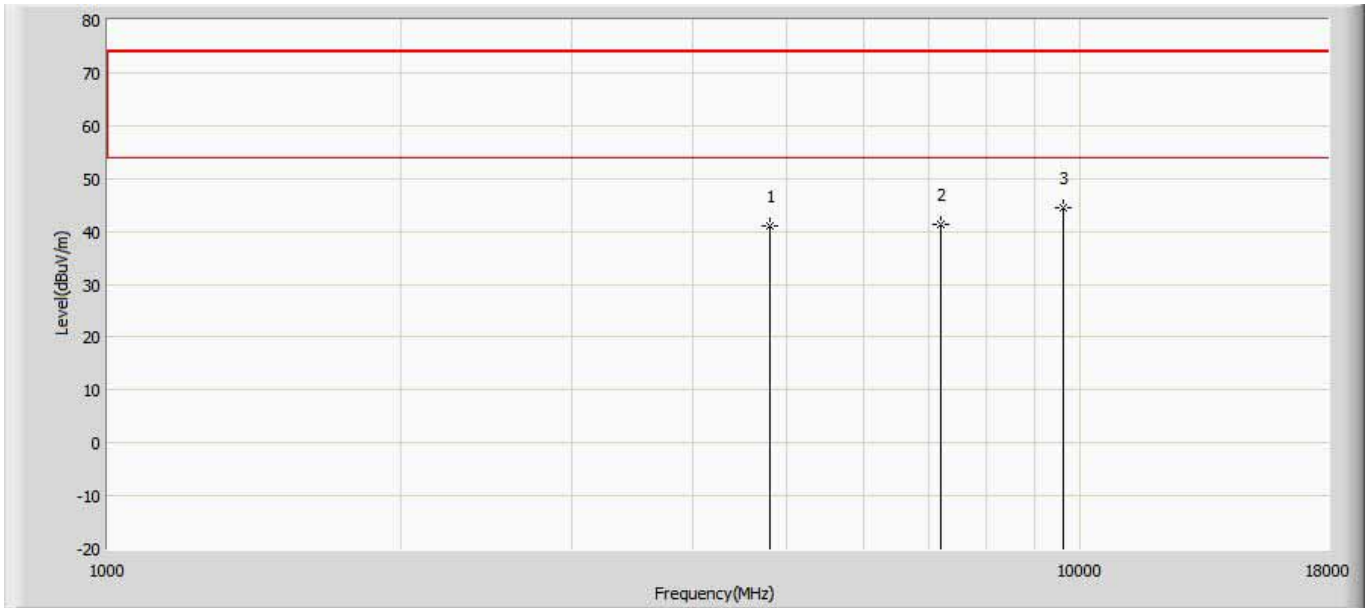
Engineer: Simon	
Site: AC5	Time: 2018/06/07 - 14:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2480MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	44.165	49.392	-29.835	74.000	-5.227	PK
2		7440.000	42.493	42.672	-31.507	74.000	-0.179	PK
3	*	9920.000	45.303	40.357	-28.697	74.000	4.946	PK

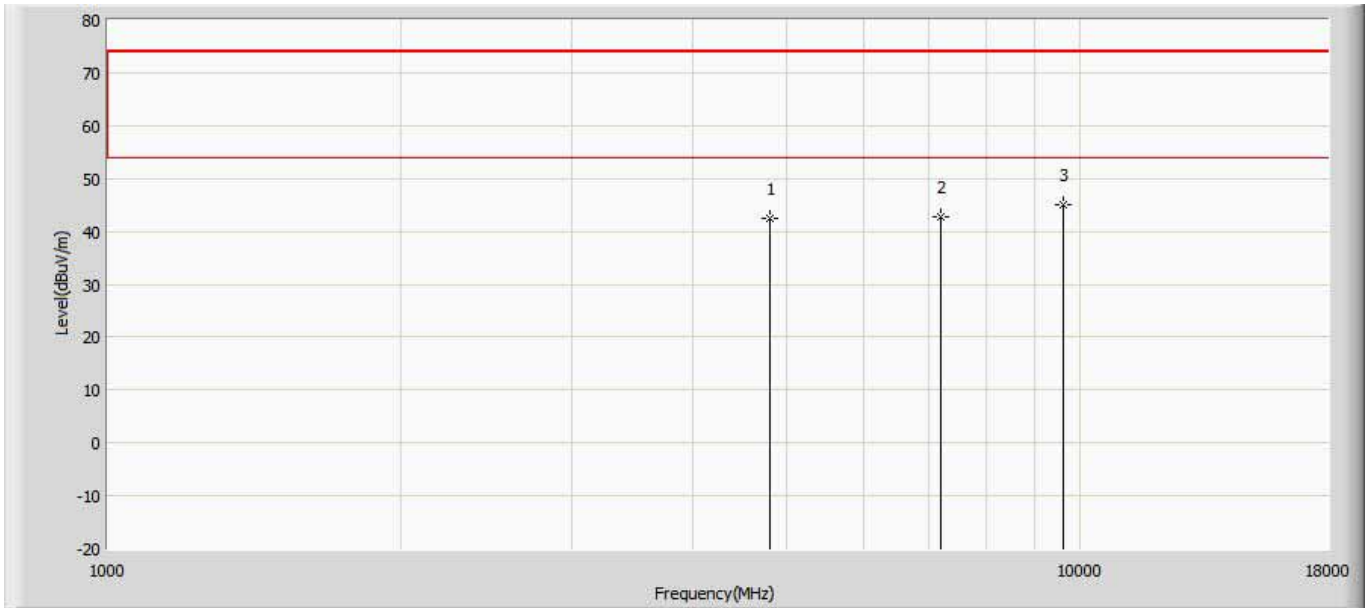


Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



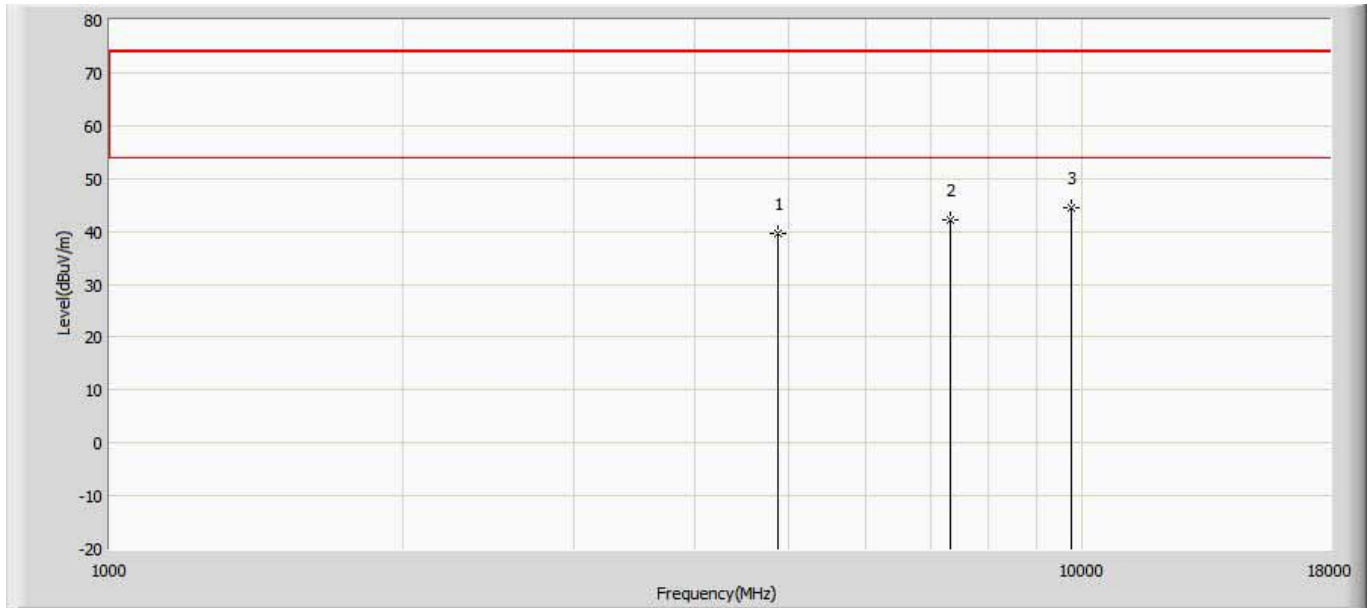
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4808.000	40.981	46.549	-33.019	74.000	-5.568	PK
2		7206.000	41.374	41.662	-32.626	74.000	-0.288	PK
3	*	9608.000	44.540	40.409	-29.460	74.000	4.131	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



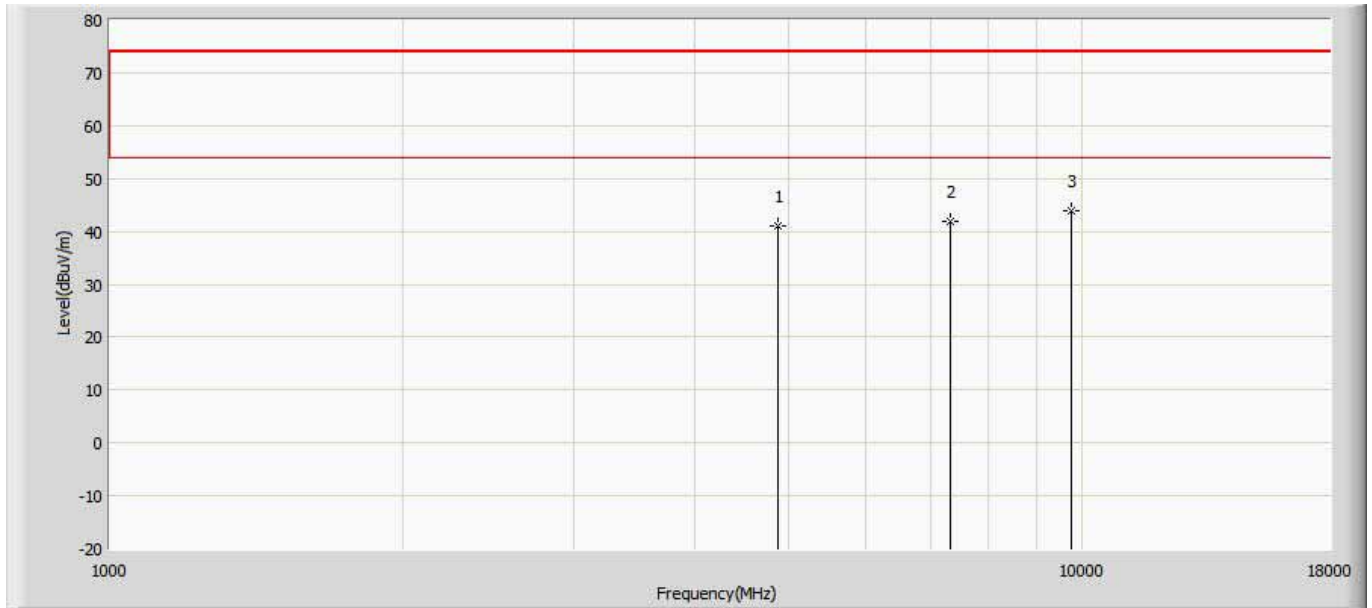
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4808.000	42.470	48.038	-31.530	74.000	-5.568	PK
2		7206.000	42.668	42.956	-31.332	74.000	-0.288	PK
3	*	9608.000	45.126	40.995	-28.874	74.000	4.131	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 2DH5	



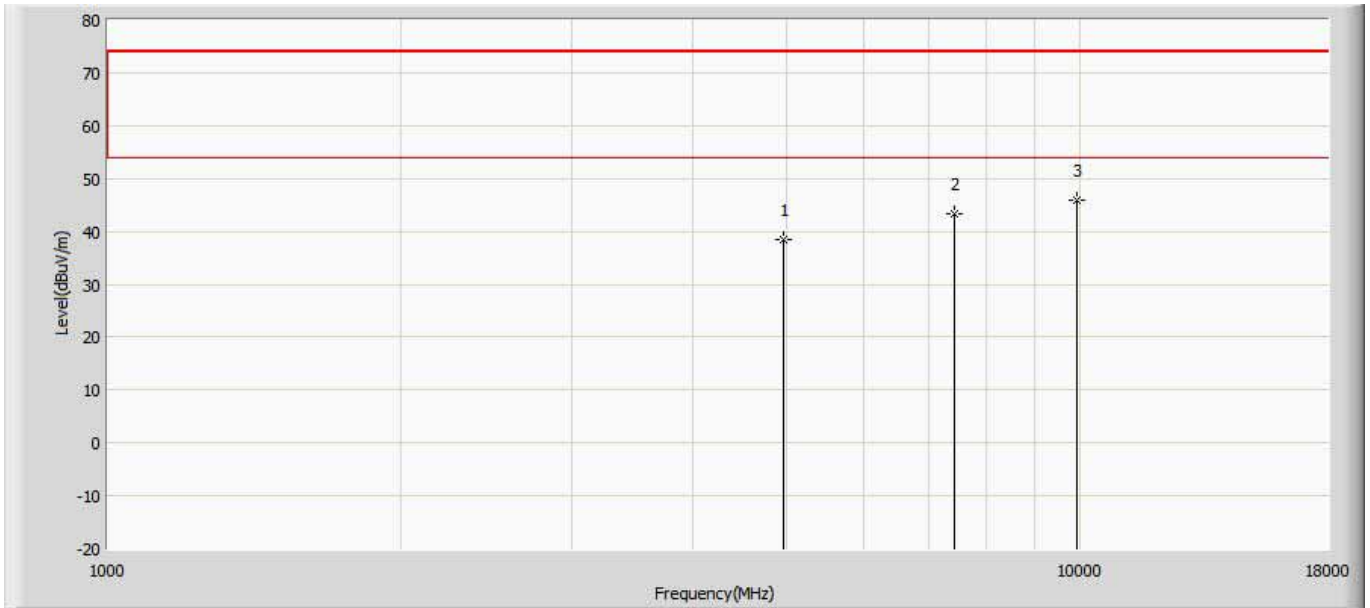
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	39.712	45.232	-34.288	74.000	-5.520	PK
2		7323.000	42.169	42.444	-31.831	74.000	-0.275	PK
3	*	9764.000	44.365	40.061	-29.635	74.000	4.304	PK

Engineer: Simon	
Site: AC5	Time: 2018/06/07 - 14:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2: Transmit at 2441MHz by 2DH5	



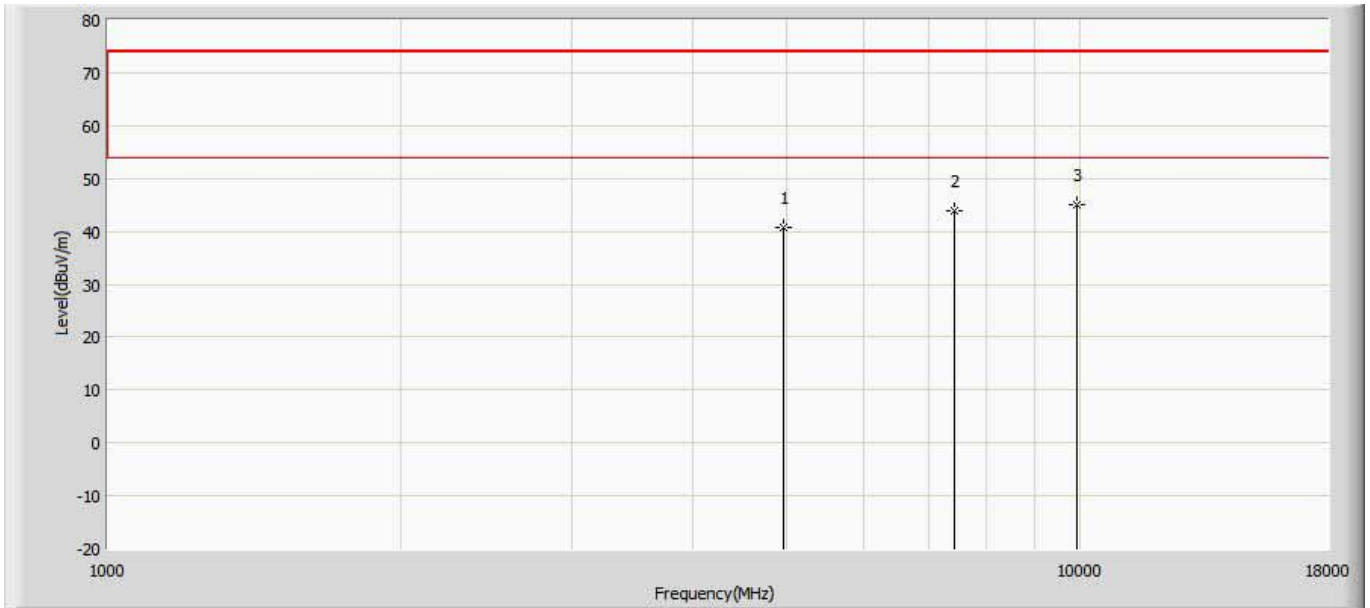
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	41.120	46.640	-32.880	74.000	-5.520	PK
2		7323.000	41.769	42.044	-32.231	74.000	-0.275	PK
3	*	9764.000	43.986	39.682	-30.014	74.000	4.304	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



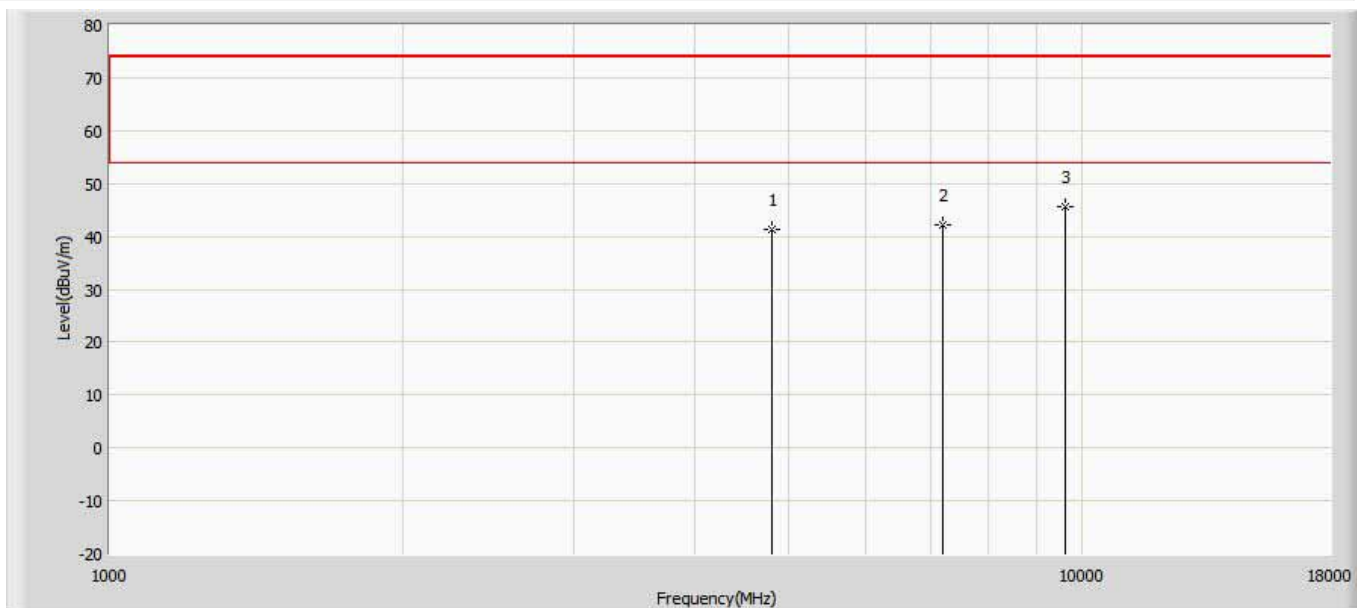
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	38.469	43.696	-35.531	74.000	-5.227	PK
2		7440.000	43.460	43.639	-30.540	74.000	-0.179	PK
3	*	9920.000	46.018	41.072	-27.982	74.000	4.946	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



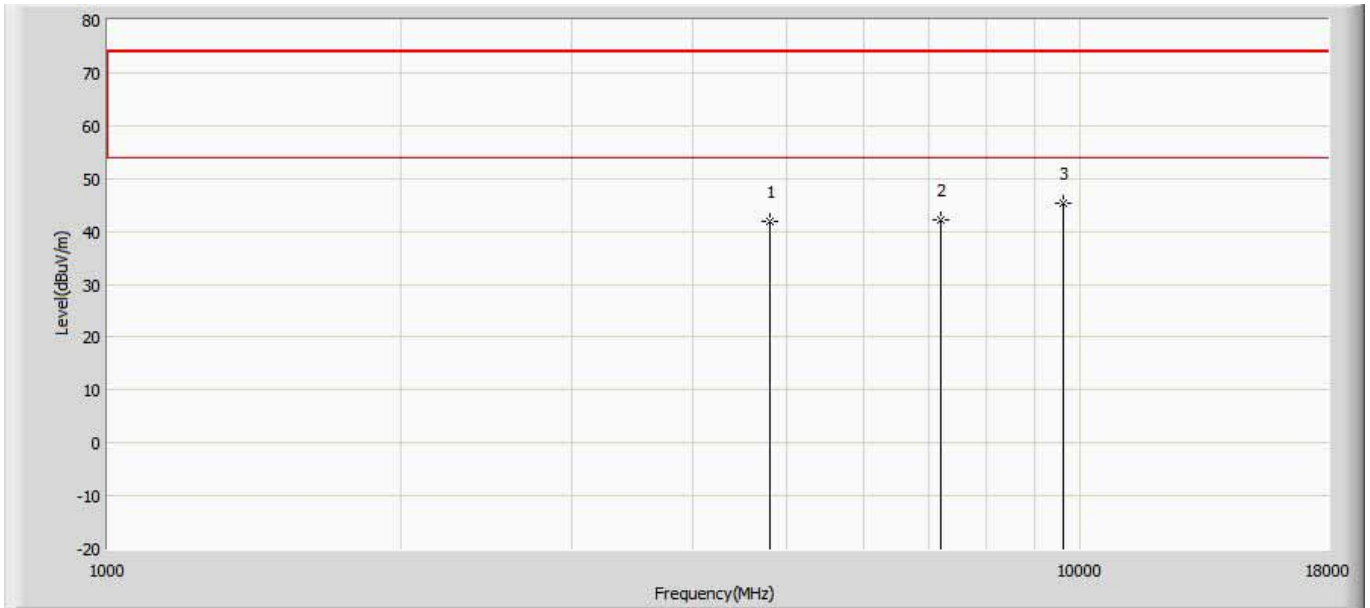
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	40.664	45.891	-33.336	74.000	-5.227	PK
2		7440.000	43.992	44.171	-30.008	74.000	-0.179	PK
3	*	9920.000	45.019	40.073	-28.981	74.000	4.946	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4808.000	41.370	46.938	-32.630	74.000	-5.568	PK
2		7206.000	42.161	42.449	-31.839	74.000	-0.288	PK
3	*	9608.000	45.480	41.349	-28.520	74.000	4.131	PK

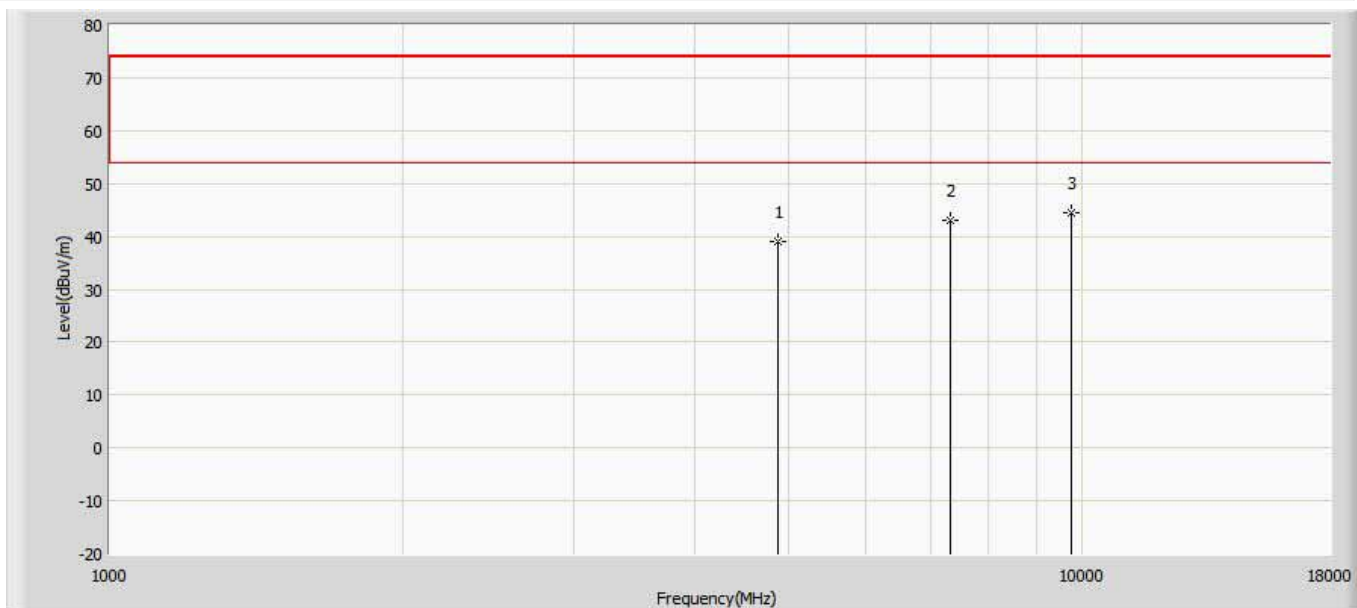
Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4808.000	42.029	47.597	-31.971	74.000	-5.568	PK
2		7206.000	42.290	42.578	-31.710	74.000	-0.288	PK
3	*	9608.000	45.363	41.232	-28.637	74.000	4.131	PK

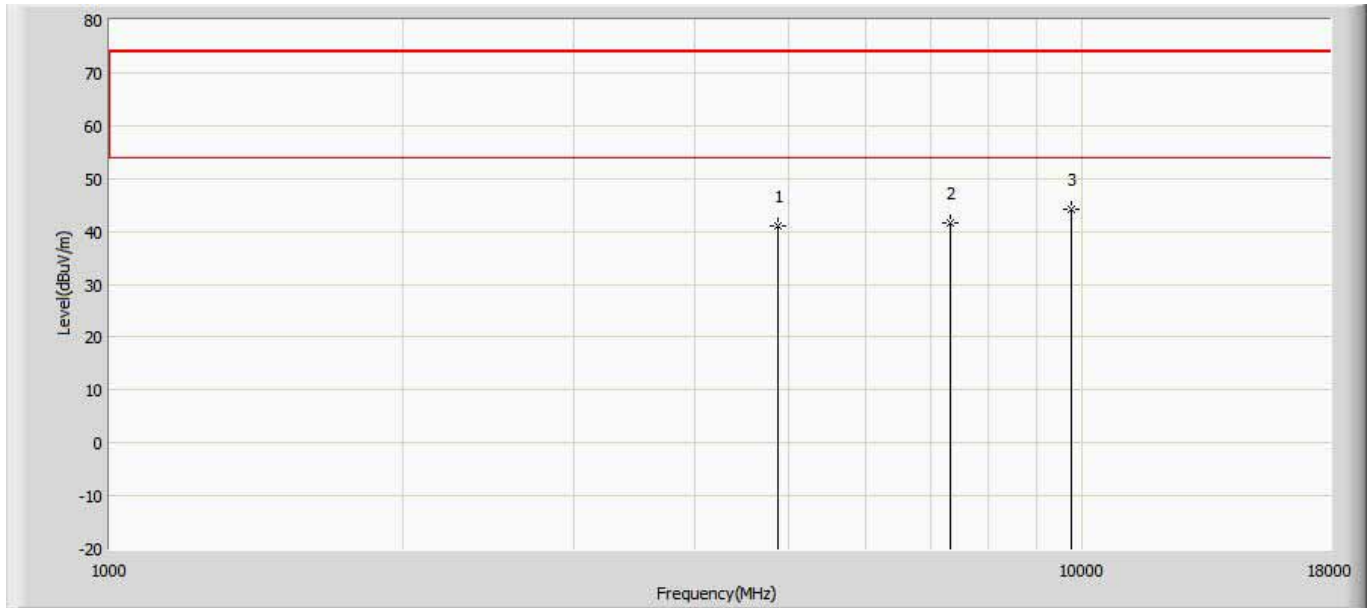


Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2441MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	38.934	44.454	-35.066	74.000	-5.520	PK
2		7323.000	43.127	43.402	-30.873	74.000	-0.275	PK
3	*	9764.000	44.354	40.050	-29.646	74.000	4.304	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2441MHz by 3DH5	



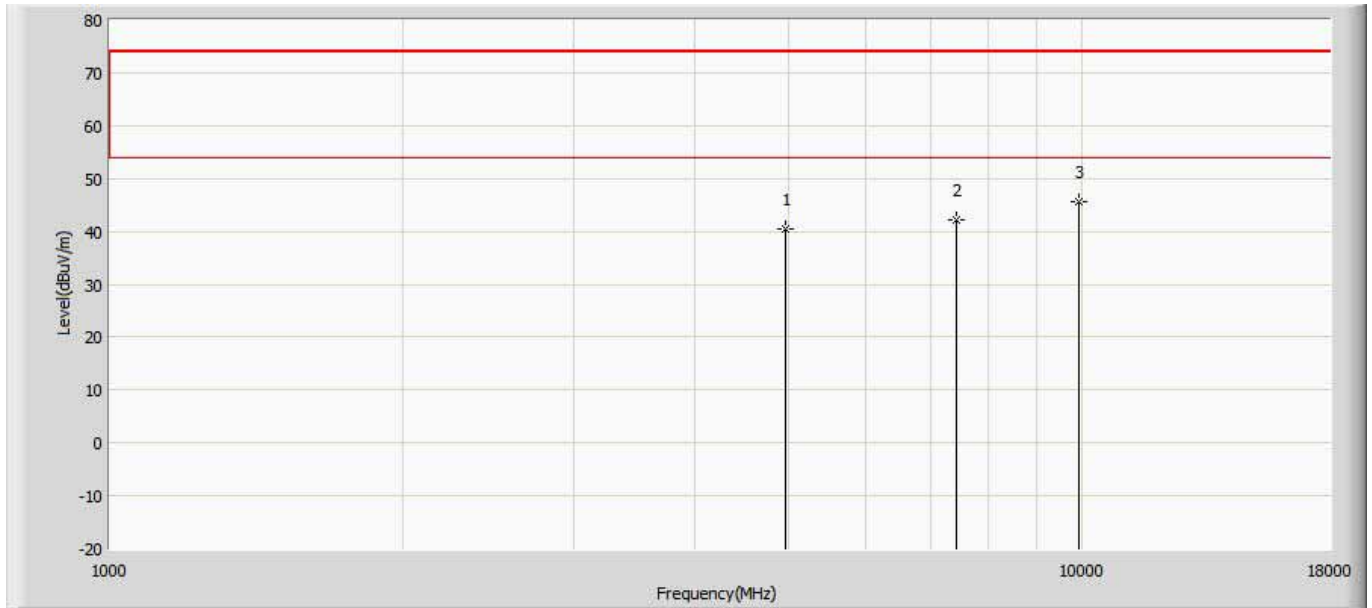
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	41.161	46.681	-32.839	74.000	-5.520	PK
2		7323.000	41.723	41.998	-32.277	74.000	-0.275	PK
3	*	9764.000	44.058	39.754	-29.942	74.000	4.304	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	38.317	43.544	-35.683	74.000	-5.227	PK
2		7440.000	42.878	43.057	-31.122	74.000	-0.179	PK
3	*	9920.000	45.360	40.414	-28.640	74.000	4.946	PK

Engineer: Simon	
Site:AC5	Time: 2018/06/07 - 14:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



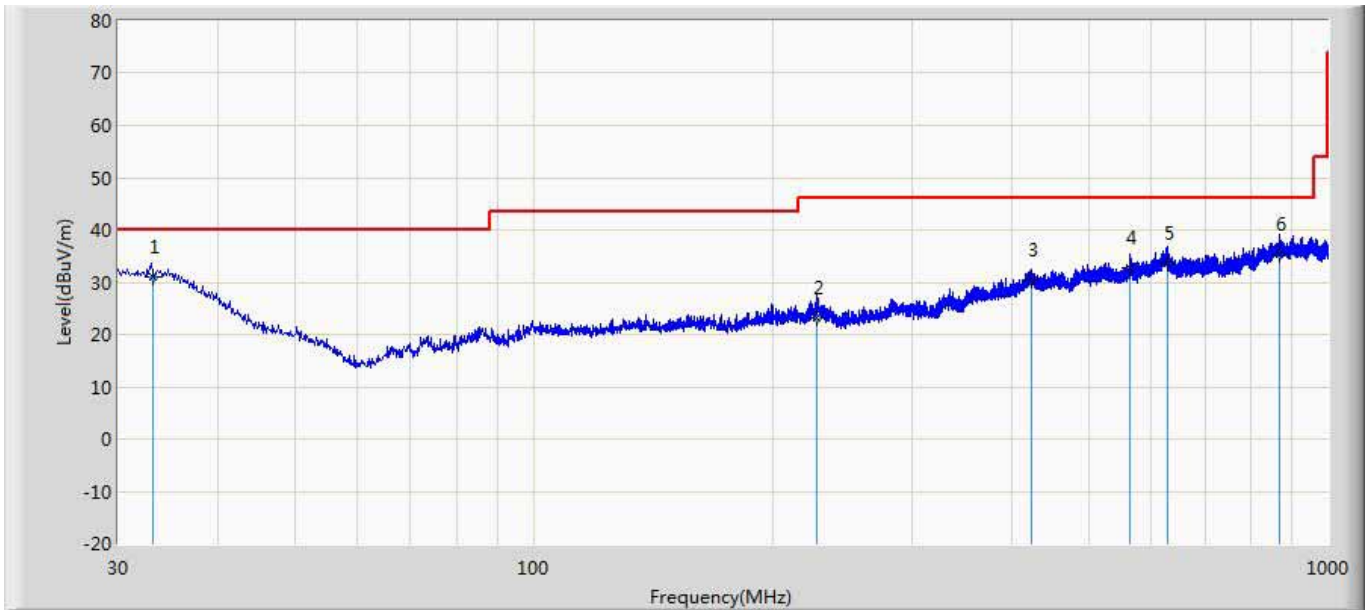
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	40.430	45.657	-33.570	74.000	-5.227	PK
2		7440.000	42.182	42.361	-31.818	74.000	-0.179	PK
3	*	9920.000	45.630	40.684	-28.370	74.000	4.946	PK

**Radiated Emission above 18GHz:**

Note : The peak value of Radiated Emission above 18GHz is negligible, so this test item is not shown in the report.

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

Engineer: Nino	
Site: AC2	Time: 2018/05/10
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402MHz by DH5	

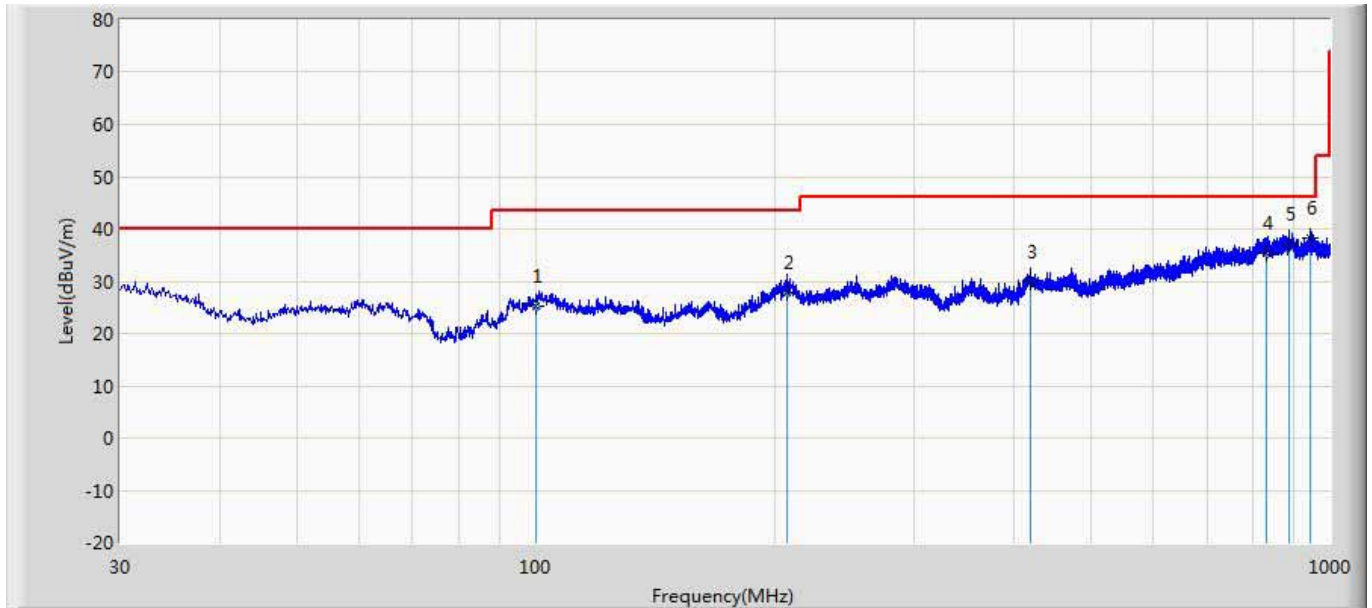


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	33.214	30.966	3.600	-9.034	40.000	20.713	6.653	0.000	100	141	QP
2		227.358	23.095	4.900	-22.905	46.000	10.729	7.466	0.000	100	228	QP
3		423.325	30.360	3.100	-15.640	46.000	19.289	7.970	0.000	100	48	QP
4		562.352	32.773	4.100	-13.227	46.000	20.342	8.331	0.000	100	114	QP
5		628.258	33.672	3.200	-12.328	46.000	21.895	8.577	0.000	100	185	QP
6		870.256	35.320	2.300	-10.680	46.000	23.841	9.178	0.000	100	214	QP

**Note:**

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

Engineer: Nino	
Site: AC2	Time: 2018/05/10
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402MHz by DH5	



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		100.258	25.220	3.200	-18.280	43.500	15.147	6.873	0.000	100	149	QP
2		207.541	27.693	4.200	-15.807	43.500	16.118	7.375	0.000	100	211	QP
3		419.584	29.853	3.100	-16.147	46.000	18.786	7.967	0.000	100	18	QP
4		830.254	35.437	2.600	-10.563	46.000	23.755	9.082	0.000	100	141	QP
5		889.325	37.001	3.600	-8.999	46.000	24.177	9.224	0.000	100	174	QP
6	*	943.251	38.226	4.200	-7.774	46.000	24.690	9.336	0.000	100	188	QP

**Note:**

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

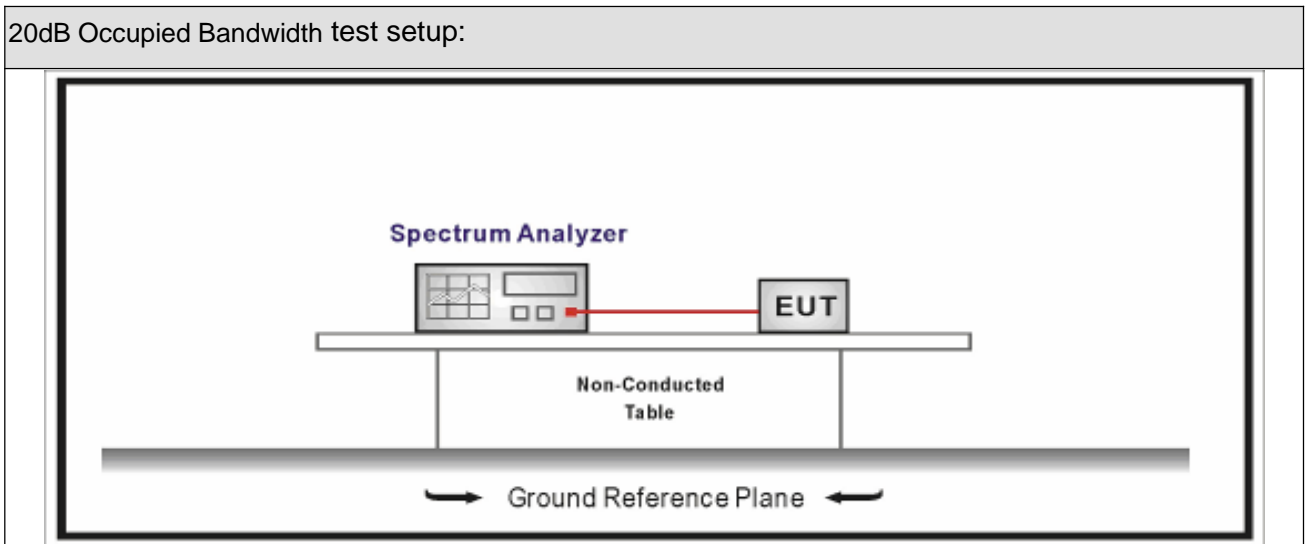
## 5. 20dB Bandwidth

### 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	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

Note: All equipment 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

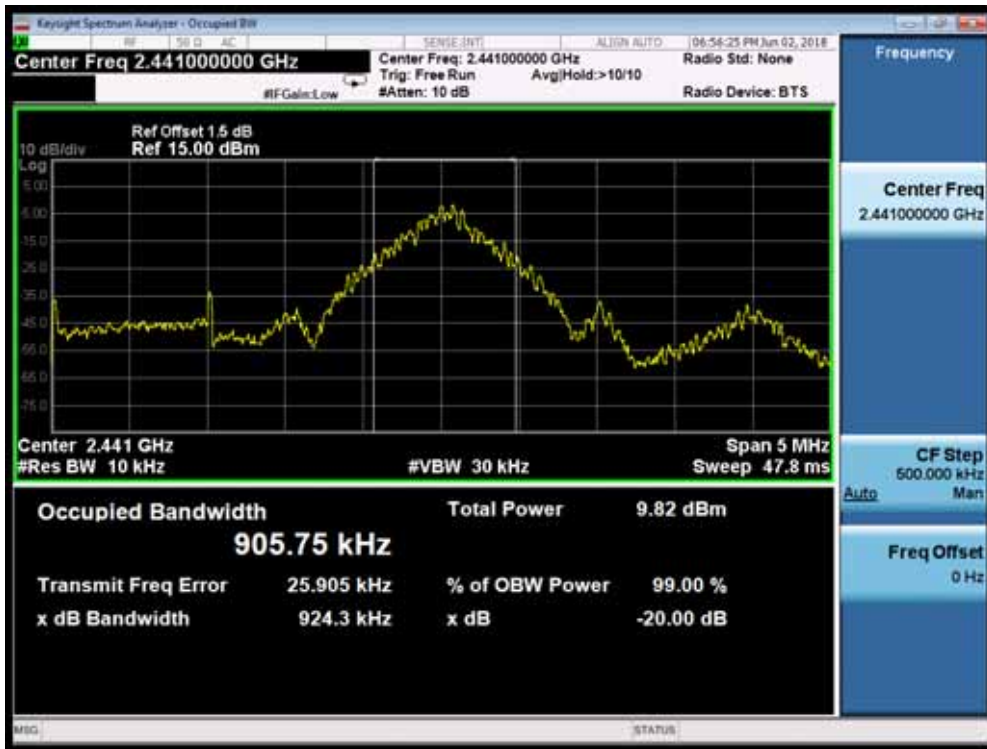
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.06.02	Test Engineer	: Simon

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	928.2	904.14
39	2441	924.3	905.75
78	2480	929.2	917.04

#### 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	: 2018.06.02	Test Engineer	: Simon

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	1287	1192.9
39	2441	1288	1199.3
78	2480	1317	1221.3

**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	: 2018.06.02	Test Engineer	: Simon

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	1279	1183.1
39	2441	1283	1189.8
78	2480	1283	1201.1

**Channel 00 (2402MHz)**



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)



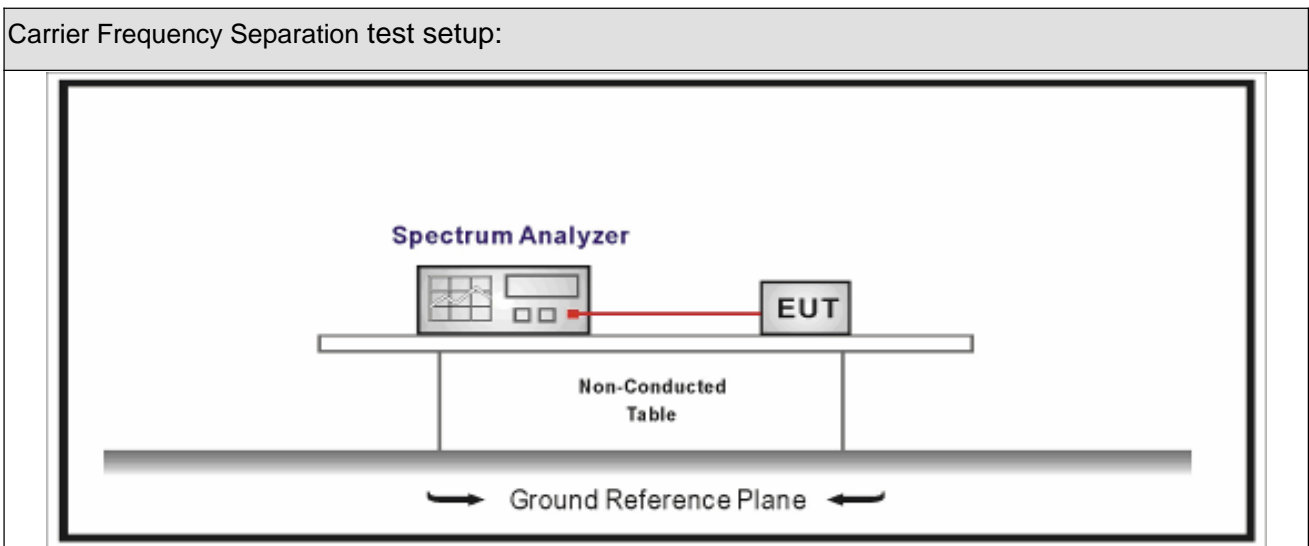
## 6. Carrier Frequency Separation

### 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	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

Note: All equipment 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

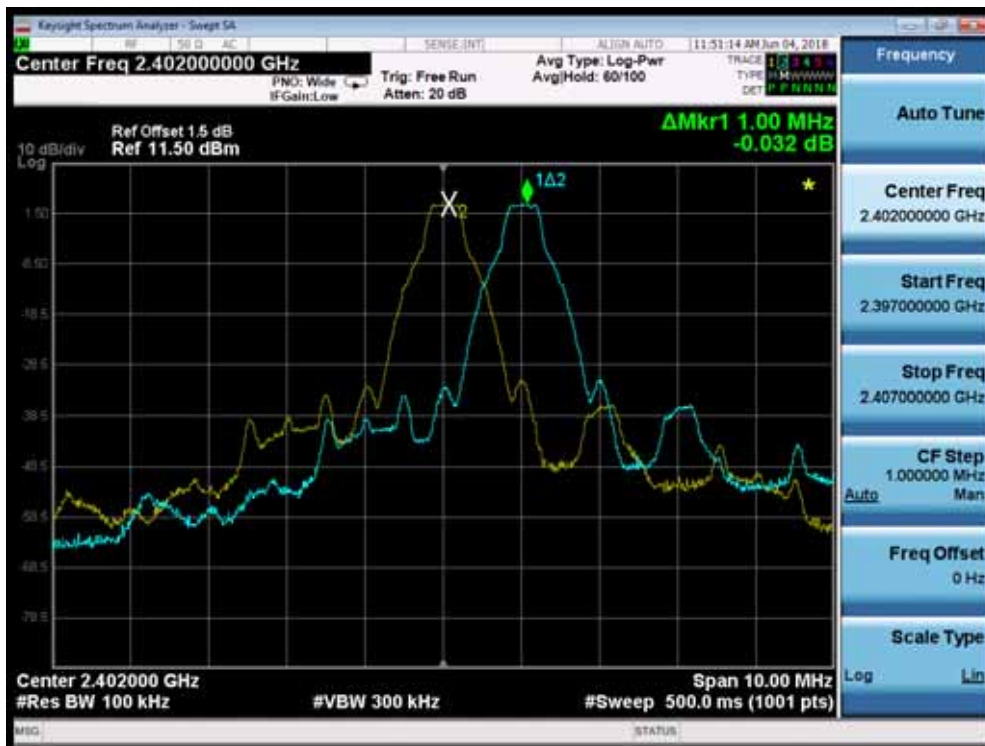
The measurement uncertainty is defined as  $\pm 1$  kHz

### 6.6. Test Result

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.06.04	Test Engineer	: Simon

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	618.8	Pass
39	2441	1000	616.2	Pass
78	2480	1000	619.4	Pass

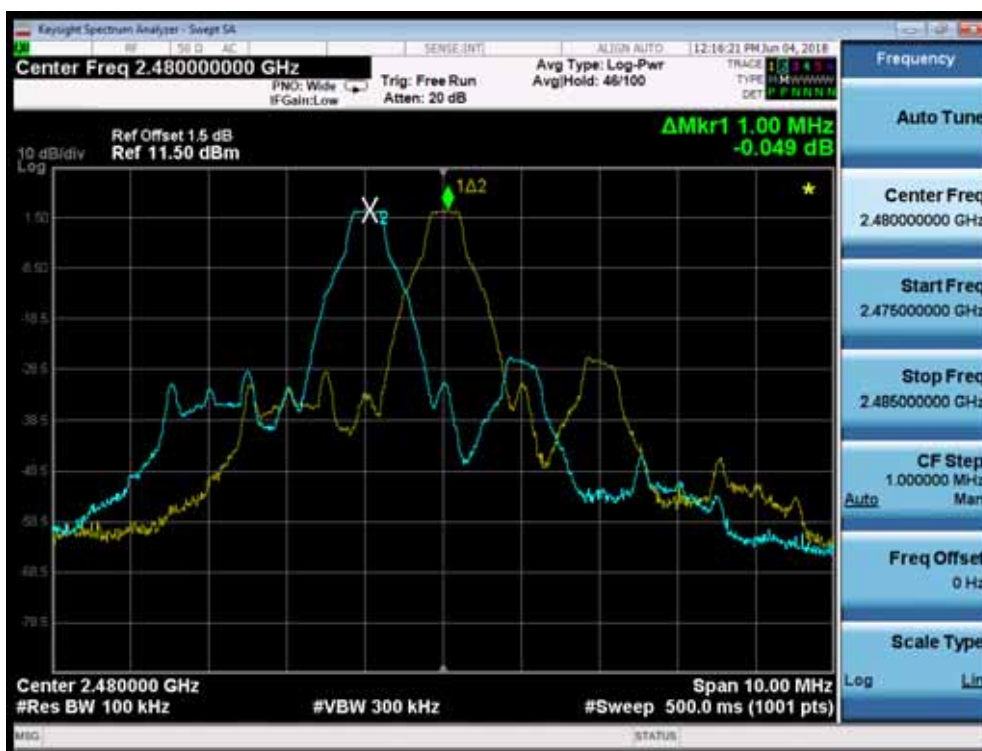
Channel 00 (2402MHz)



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)



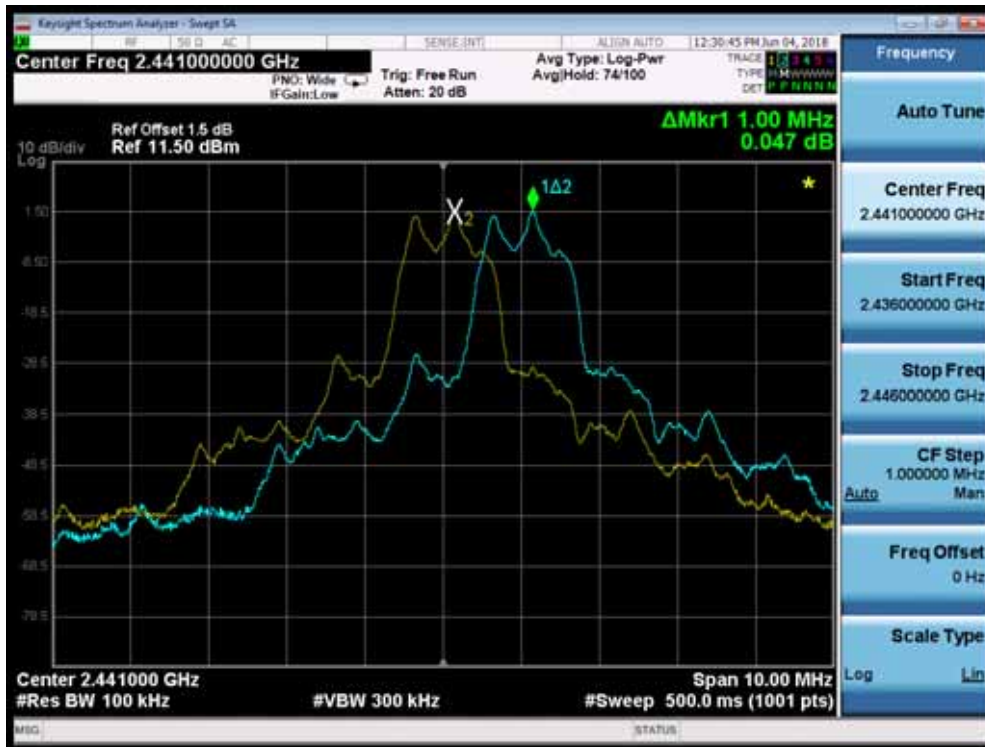
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2018.06.04	Test Engineer	: Simon

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	858	Pass
39	2441	1000	855.3	Pass
78	2480	1000	878	Pass

**Channel 00 (2402MHz)**



### Channel 39 (2441MHz)



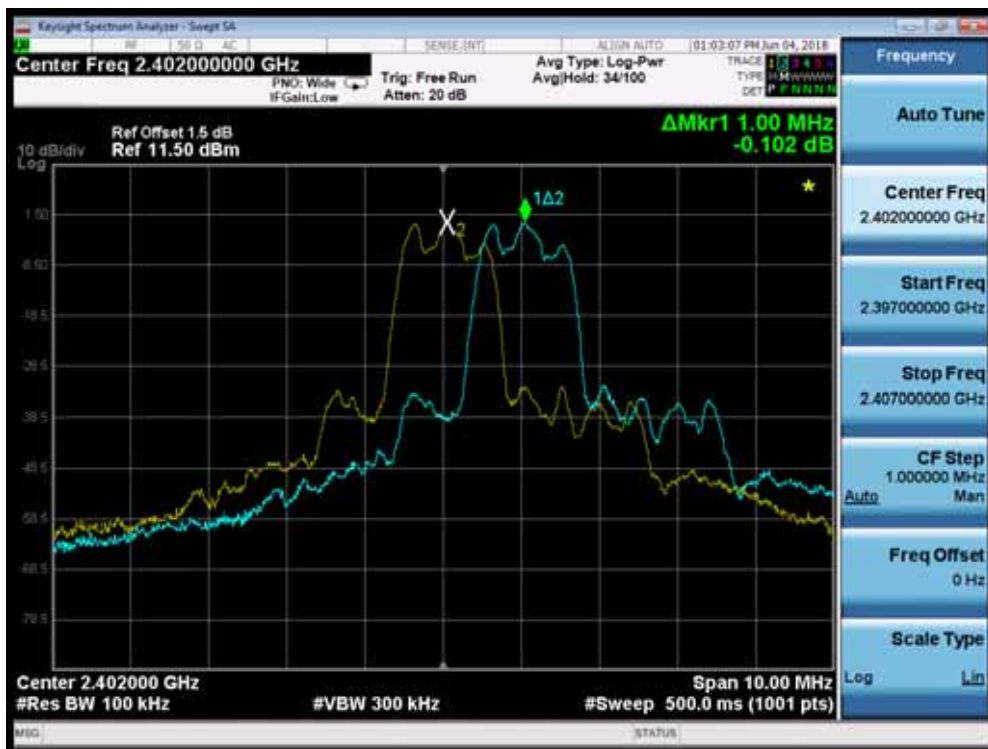
### Channel 78 (2480MHz)



Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2018.06.04	Test Engineer	: Simon

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	852.7	Pass
39	2441	1000	855.3	Pass
78	2480	1000	855.3	Pass

**Channel 00 (2402MHz)**



### Channel 39 (2441MHz)



### Channel 78 (2480MHz)



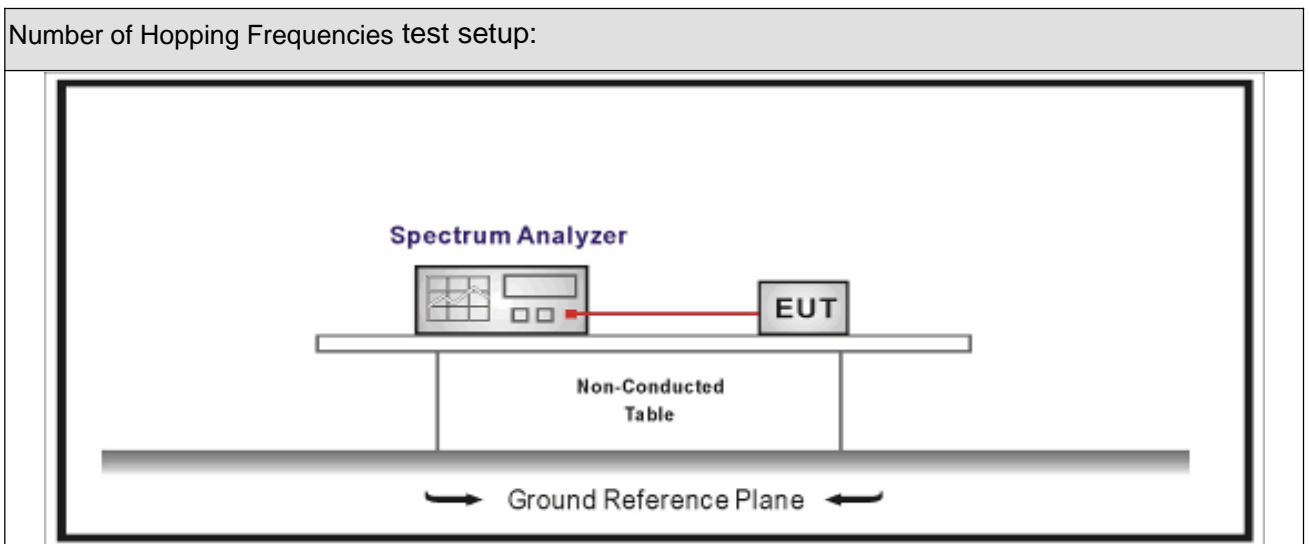
## 7. Number of Hopping Frequencies

### 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	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

Note: All equipment 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

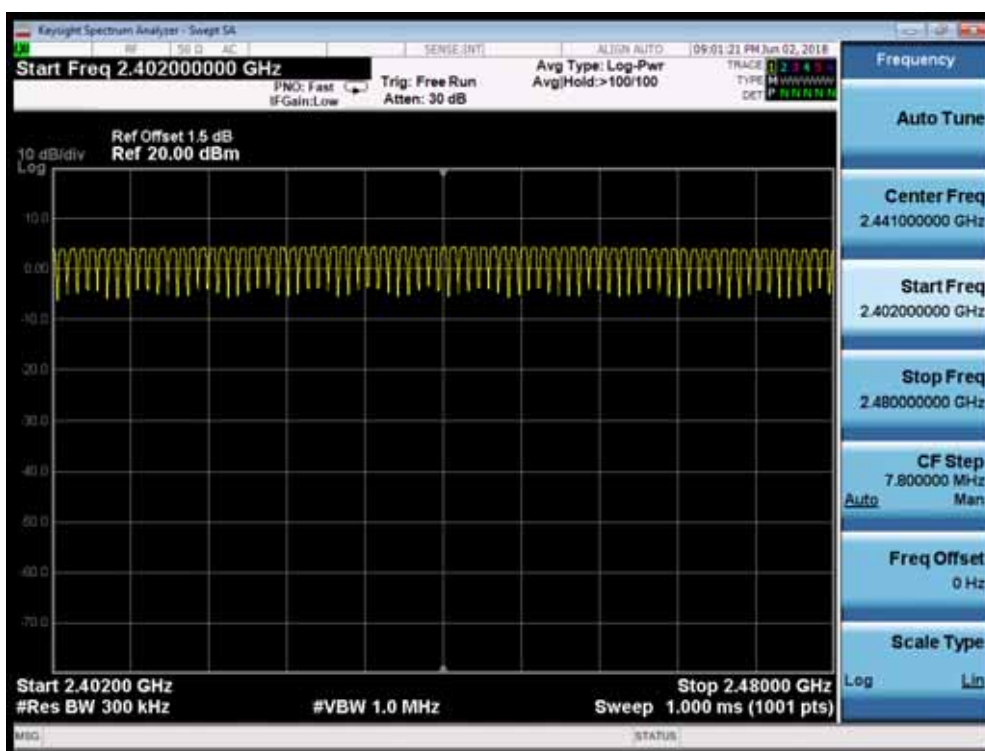
The measurement uncertainty is defined as  $\pm 1$  kHz

### 7.6. Test Result

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.06.02	Test Engineer	: Simon

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

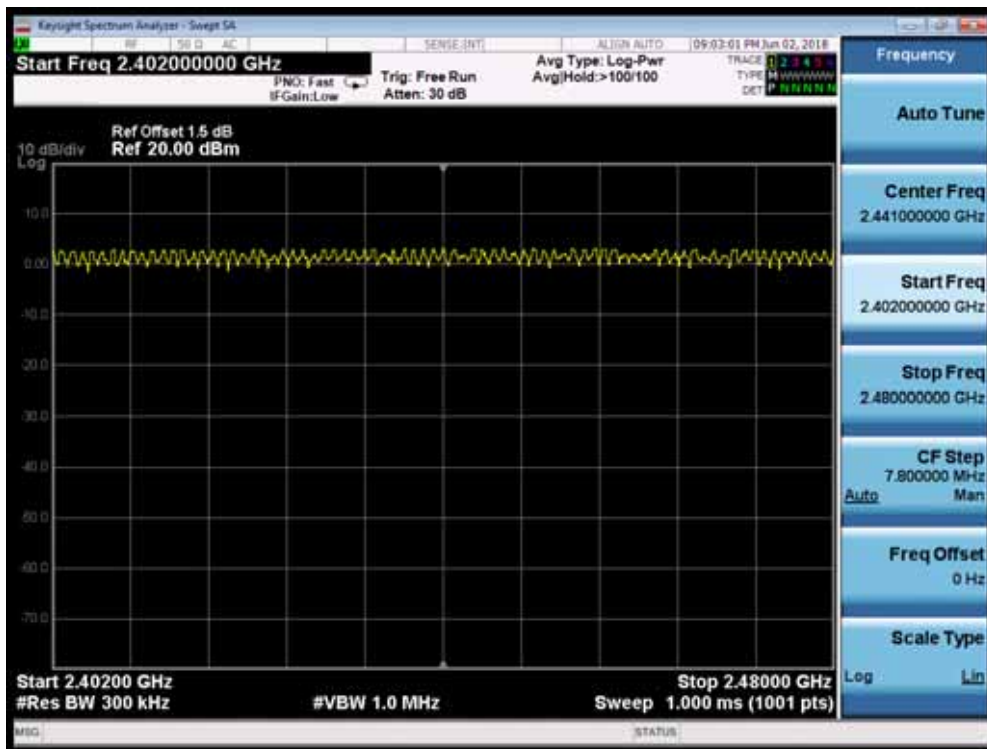
#### 2402 - 2480MHz



Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2018.06.02	Test Engineer	: Simon

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

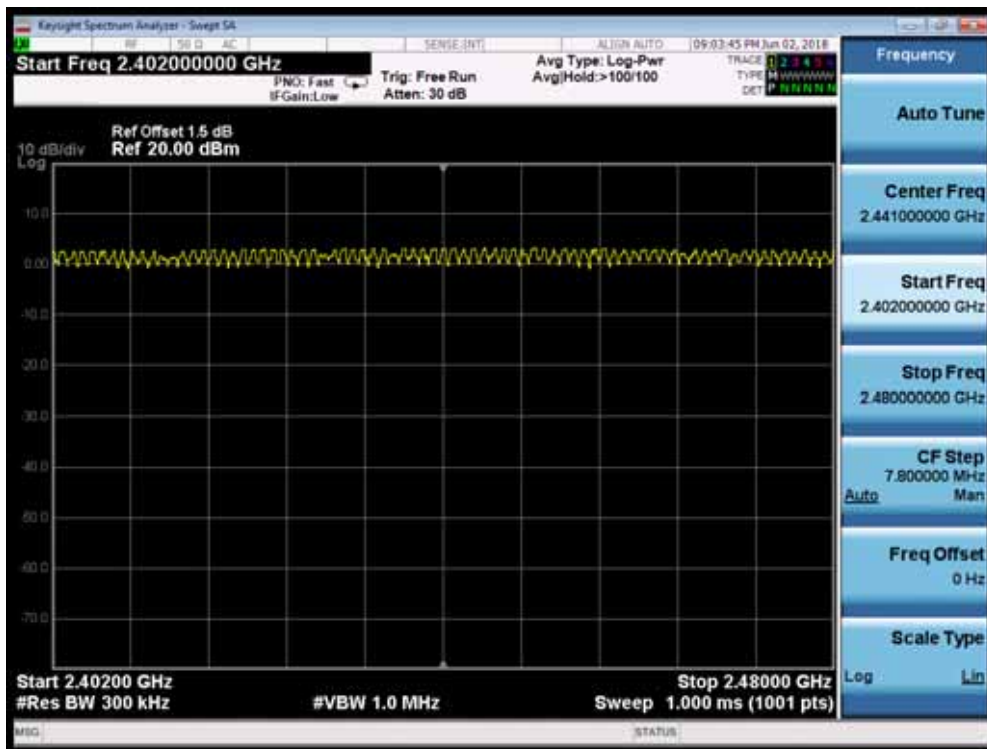
**2402 - 2480 MHz**



Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2018.06.02	Test Engineer	: Simon

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

**2402 - 2480 MHz**



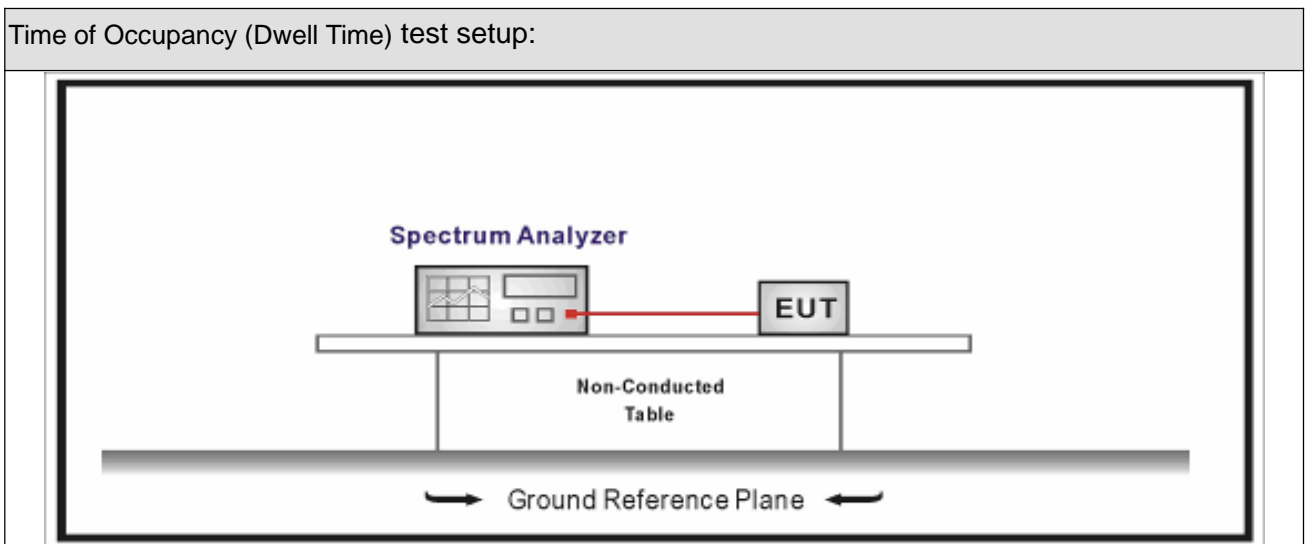
## 8. Time of Occupancy (Dwell Time)

### 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	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

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

### 8.2. Test Setup



### 8.3. Limit

Time of Occupancy (Dwell Time)	
<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	: 2018.05.24	Test Engineer	: Simon

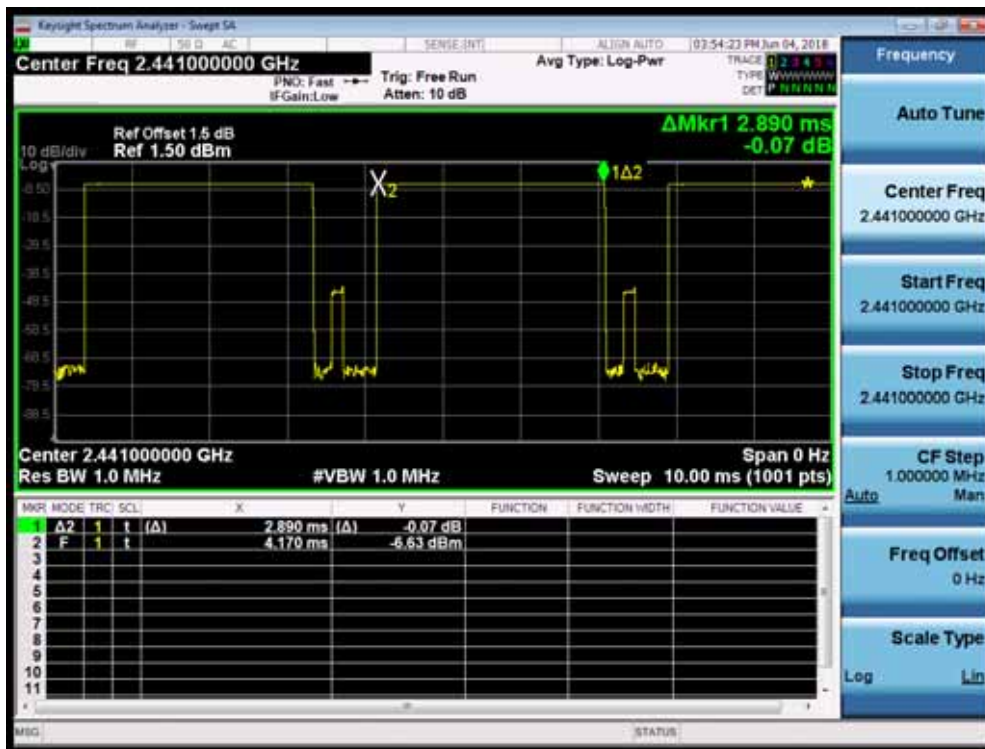
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	308.27	< 400	Pass

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

Note2: Time of Occupancy =  $2.89 * (1600 / (6 * 79)) * 31.6 = 308.27 \text{ms}$

Note3: We have evaluated different packet type, shown in the report is the worst data.

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



Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1(GFSK_DH3)	Test Site	: TR-8
Test Date	: 2018.05.24	Test Engineer	: Simon

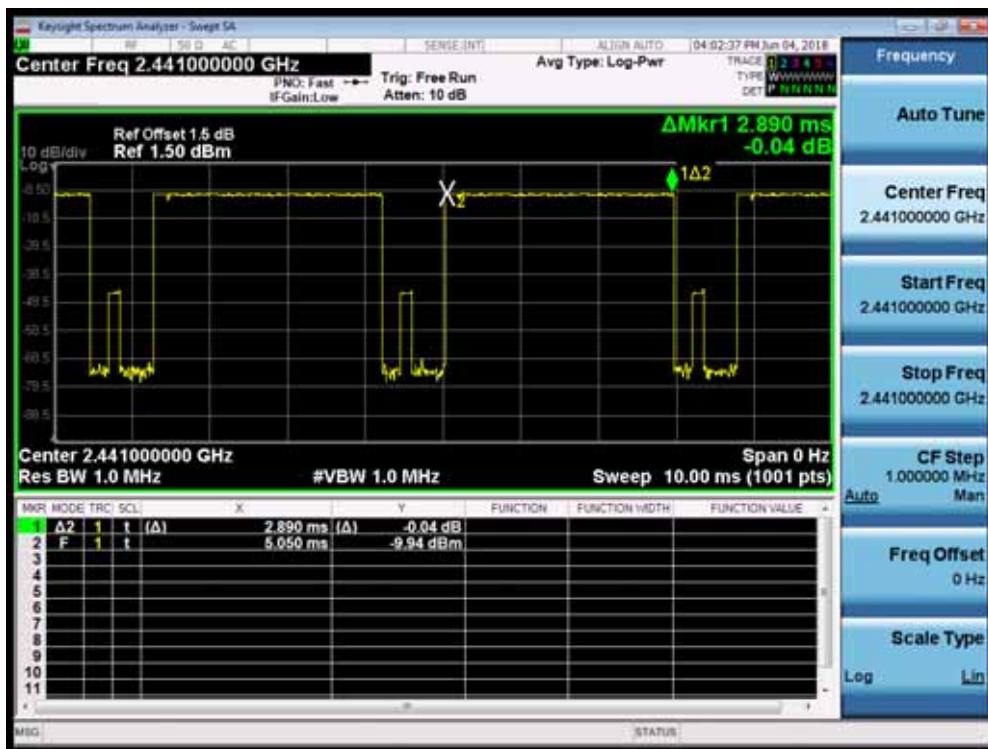
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	308.27	< 400	Pass

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

Note2: Time of Occupancy =  $2.89 \times (1600 / (6 \times 79)) \times 31.6 = 308.27$ ms

Note3: We have evaluated different packet type, shown in the report is the worst data.

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





Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1(GFSK_DH5)	Test Site	: TR-8
Test Date	: 2018.05.24	Test Engineer	: Simon

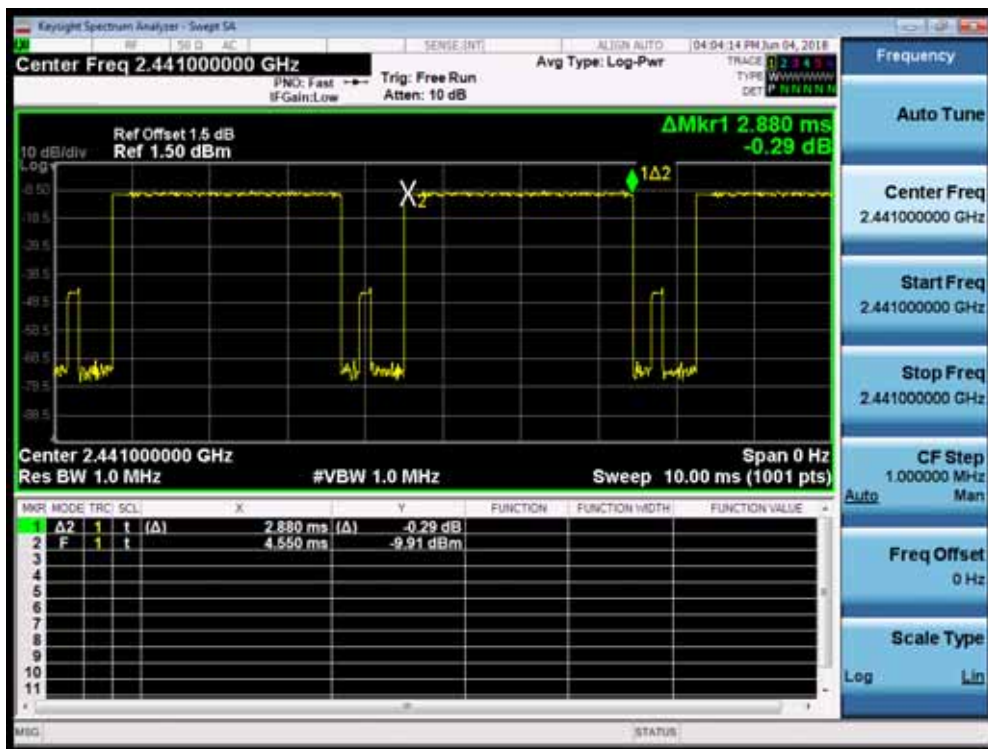
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	307.2	< 400	Pass

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

Note2: Time of Occupancy =  $2.88 \times (1600 / (6 \times 79)) \times 31.6 = 307.2 \text{ ms}$

Note3: We have evaluated different packet type, shown in the report is the worst data.

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



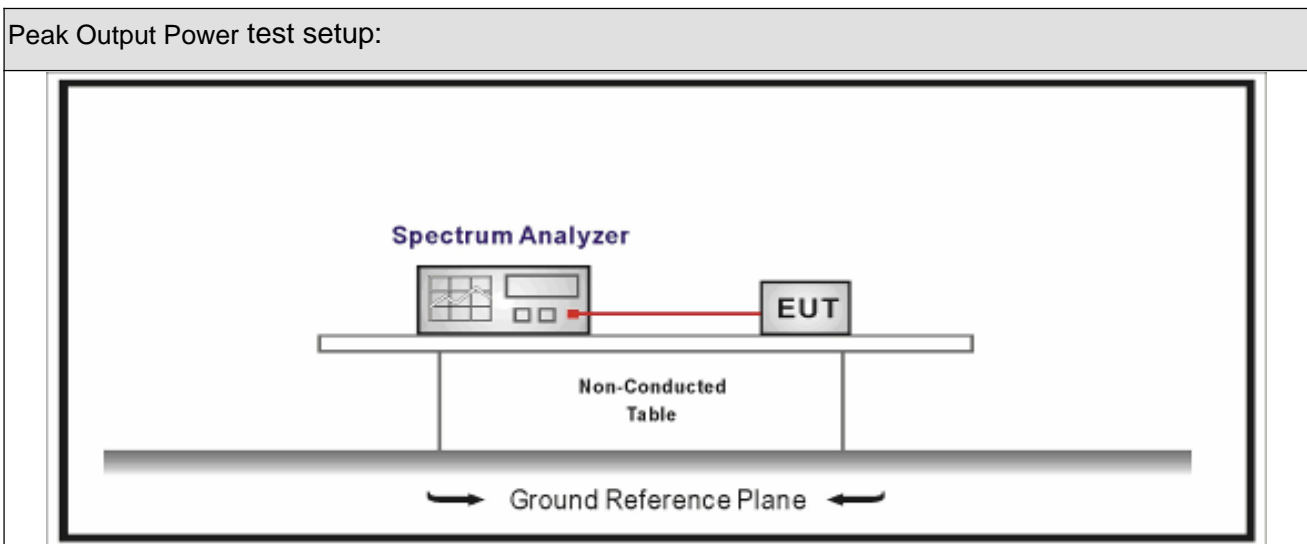
## 9. Peak Output Power

### 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	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

Note: All equipment 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	: 2018.06.02	Test Engineer	: Simon

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	4.29	21.00	Pass
39	2441	4.68	21.00	Pass
78	2480	4.31	21.00	Pass

Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2018.06.02	Test Engineer	: Simon

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	4.11	21.00	Pass
39	2441	4.51	21.00	Pass
78	2480	4.13	21.00	Pass



Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2018.06.02	Test Engineer	: Simon

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	4.09	21.00	Pass
39	2441	4.52	21.00	Pass
78	2480	4.13	21.00	Pass

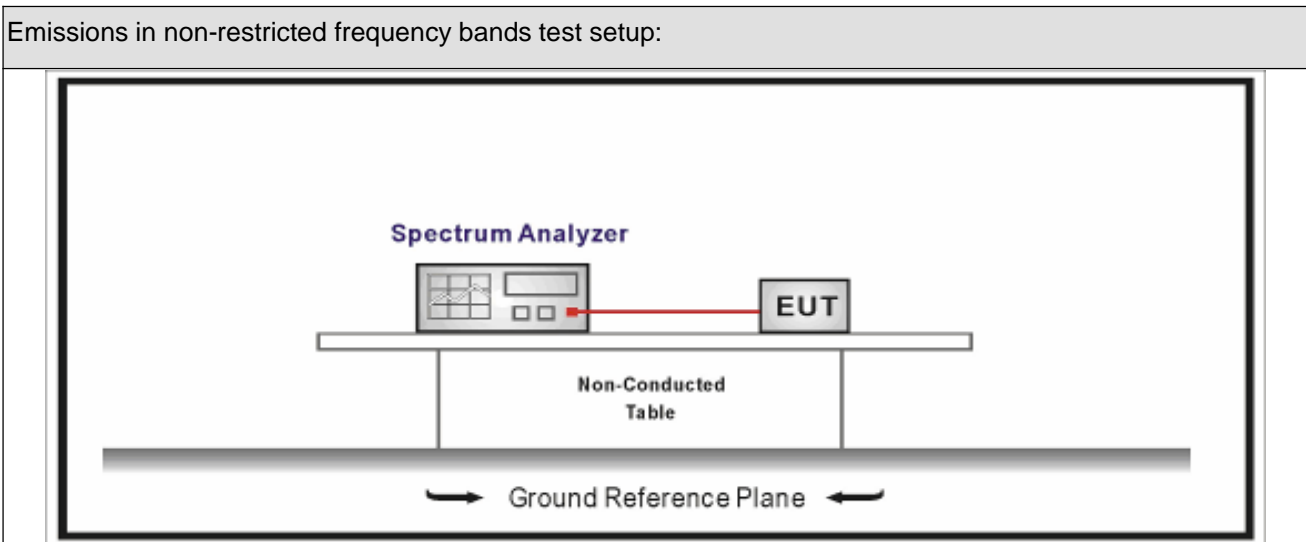
## 10. Emissions in non-restricted frequency bands

### 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	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

Note: All equipment 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

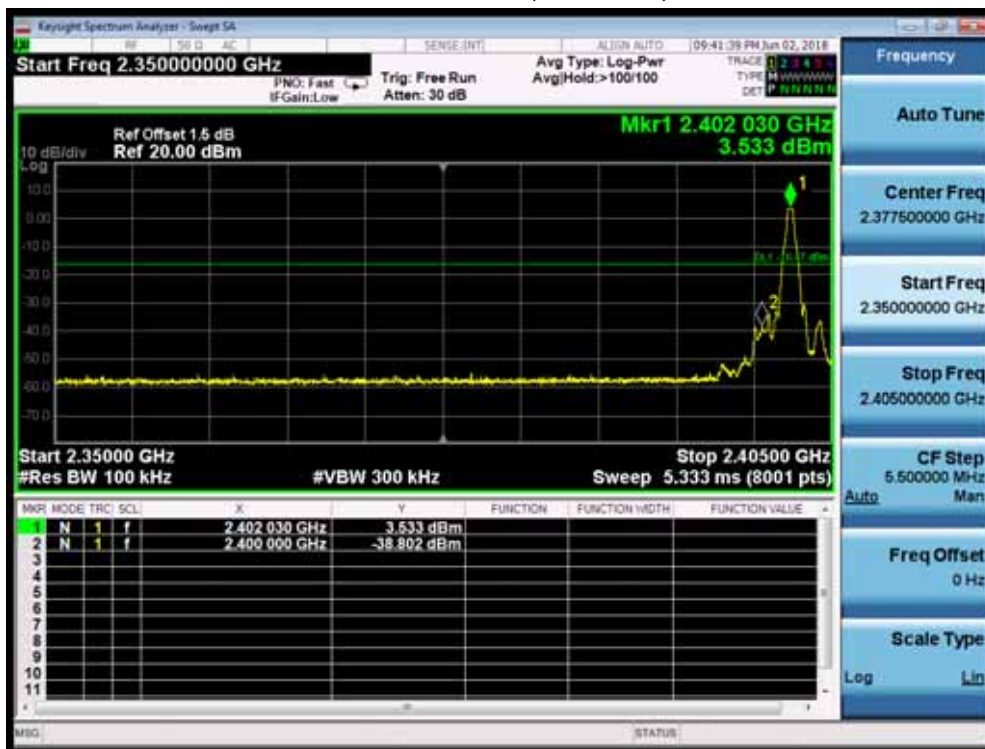
Product Name	: Bluetooth Headset	Power	: AC 120V/60Hz
Test Mode	: Mode 1~4	Test Site	: TR-8
Test Date	: 2018.06.02	Test Engineer	: Simon

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	3.533	2400.00	-38.802	42.335	>20	Pass
1	78	2480	3.269	2500.00	-59.094	62.363	>20	Pass
2	00	2402	1.033	2400.00	-47.108	48.141	>20	Pass
2	78	2480	1.409	2500.00	-58.801	60.210	>20	Pass
3	00	2402	0.507	2400.00	-48.574	49.081	>20	Pass
3	78	2480	0.927	2500.00	-58.887	59.814	>20	Pass
4	00~78	00~78	0.825	2400.00	-47.154	47.979	>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.

Mode1 CH00(2402MHz)

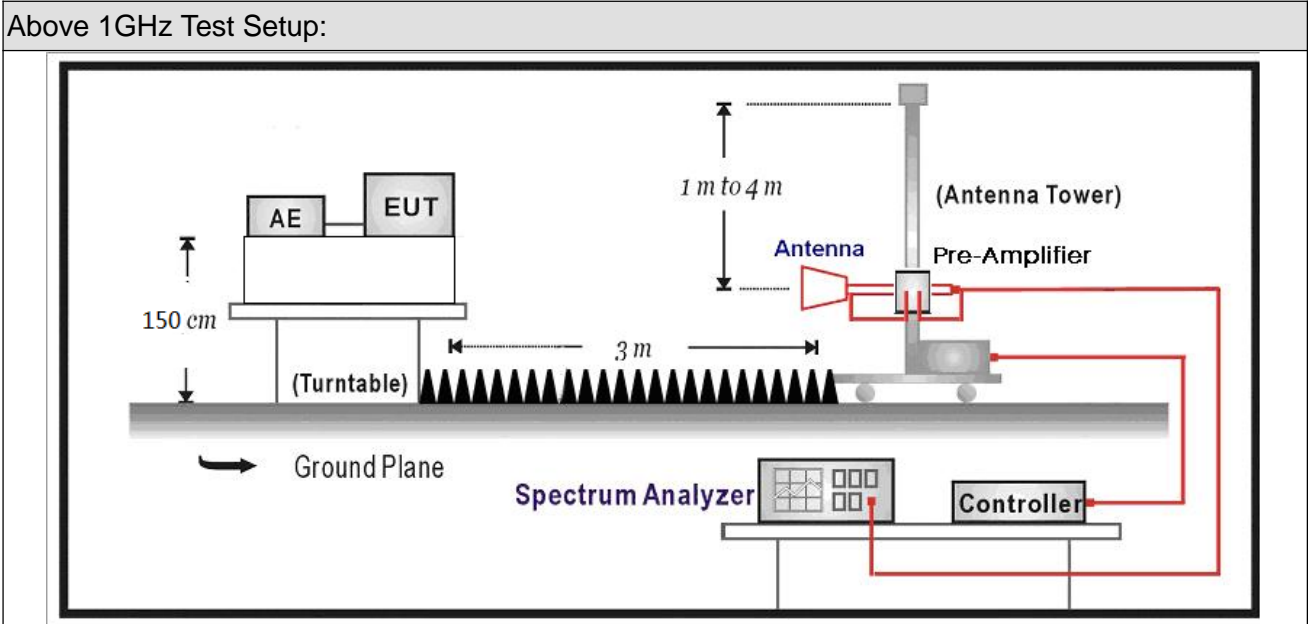


## 11. Radiated Emission Band Edge

### 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	2017.07.16	2018.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2017.05.03	2019.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2017.07.12	2018.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.09.18	2018.09.17
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2018.02.28	2019.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2018.02.28	2019.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2018.01.05	2019.01.04

### 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

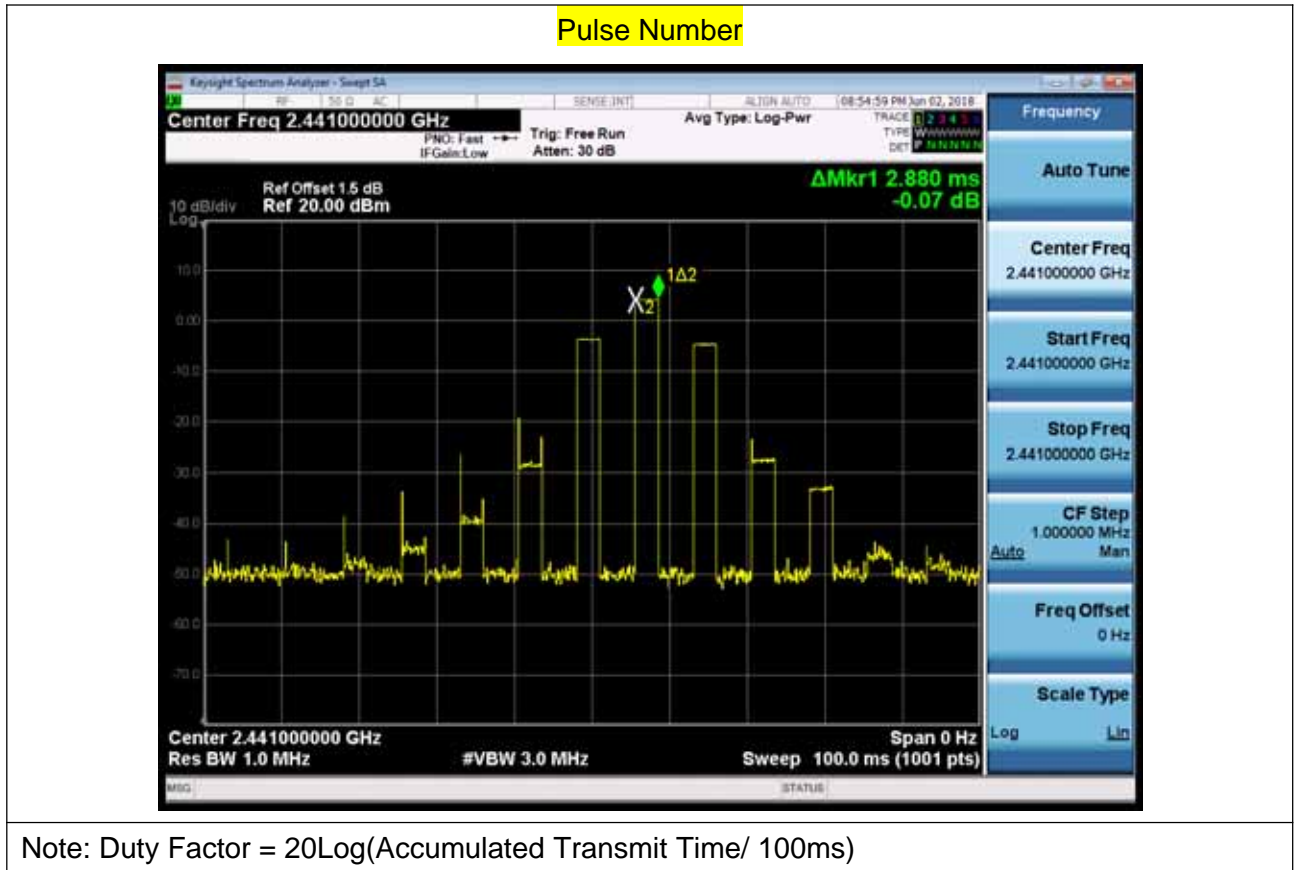
Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	DA 00-705	N/A	duty cycle correction factor
<input checked="" type="checkbox"/>	ANSI C63.10	6.10	Band-edge testing
	<input checked="" type="checkbox"/> ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	<input 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

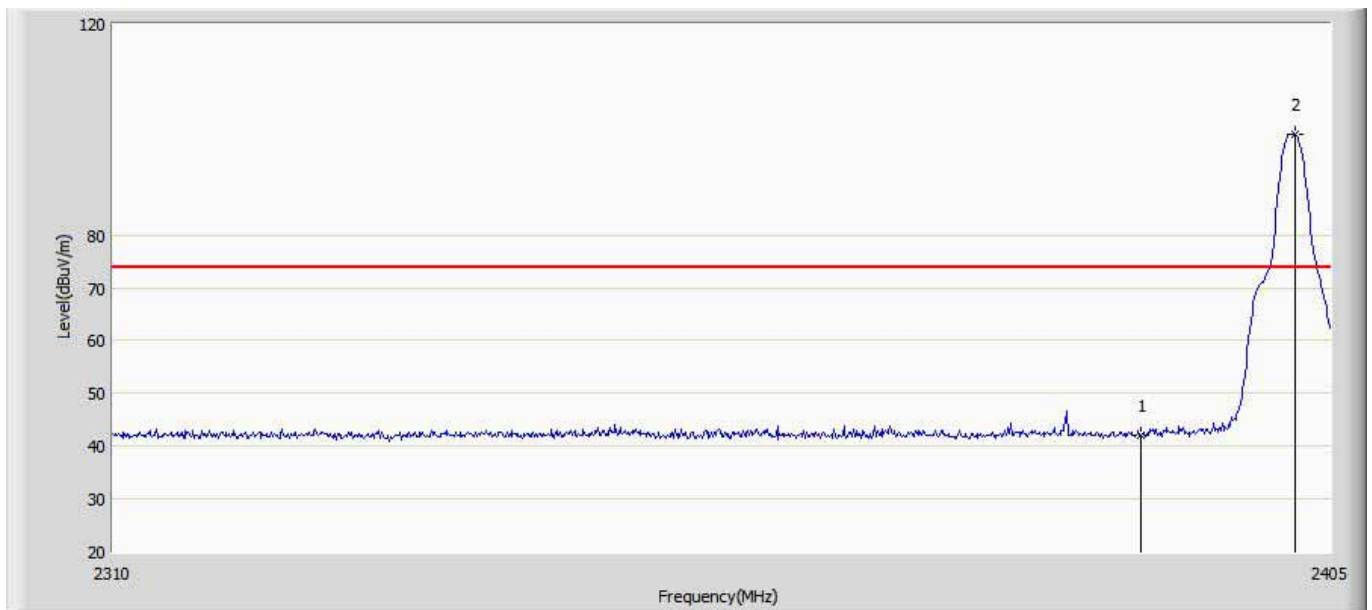
### 11.6. Duty Factor

Test Mode	Pluse Time (ms)	Pluse Number	Accumulated Transmit Time (ms)	Duty Factor (dB)
Mode 4	2.880	1	2.880	-30.782



### 11.7. Test Result

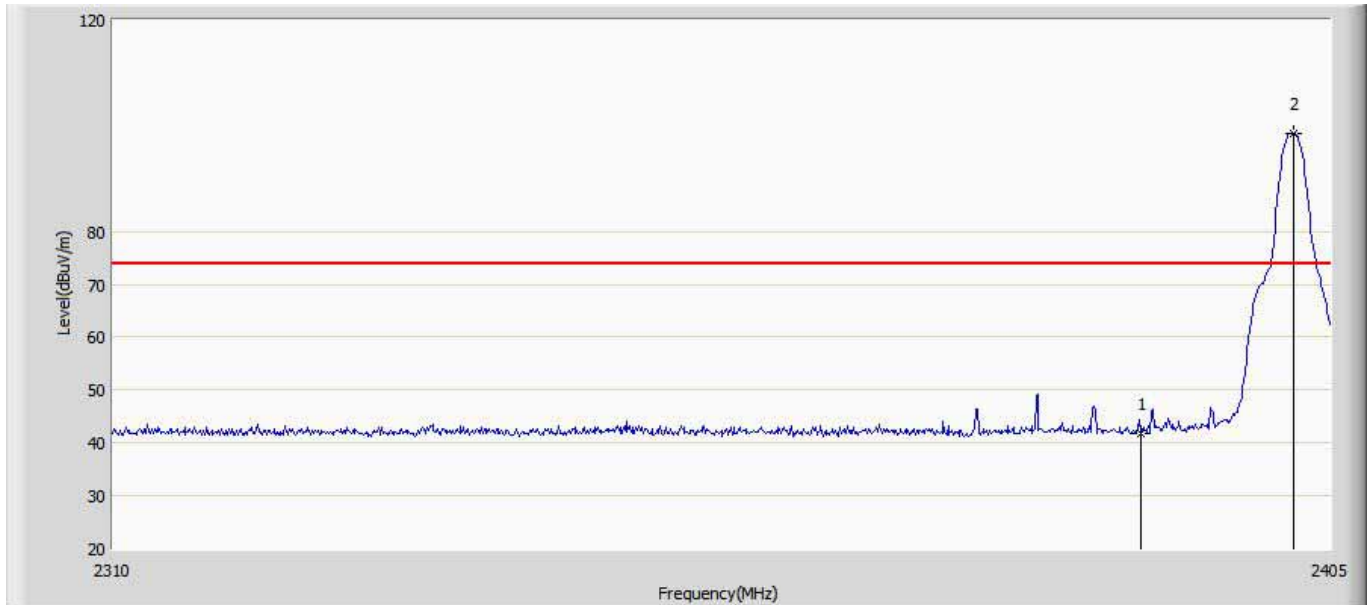
Engineer: Simon	
Site: AC5	Time: 2018/06/06 - 18:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.934	7.222	-32.066	74.000	34.712	PK
2	*	2402.245	99.062	64.243	N/A	N/A	34.819	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	11.152	41.934	-42.848	54.000	-30.782	AV
2	*	2402.245	68.280	99.062	N/A	N/A	-30.782	AV

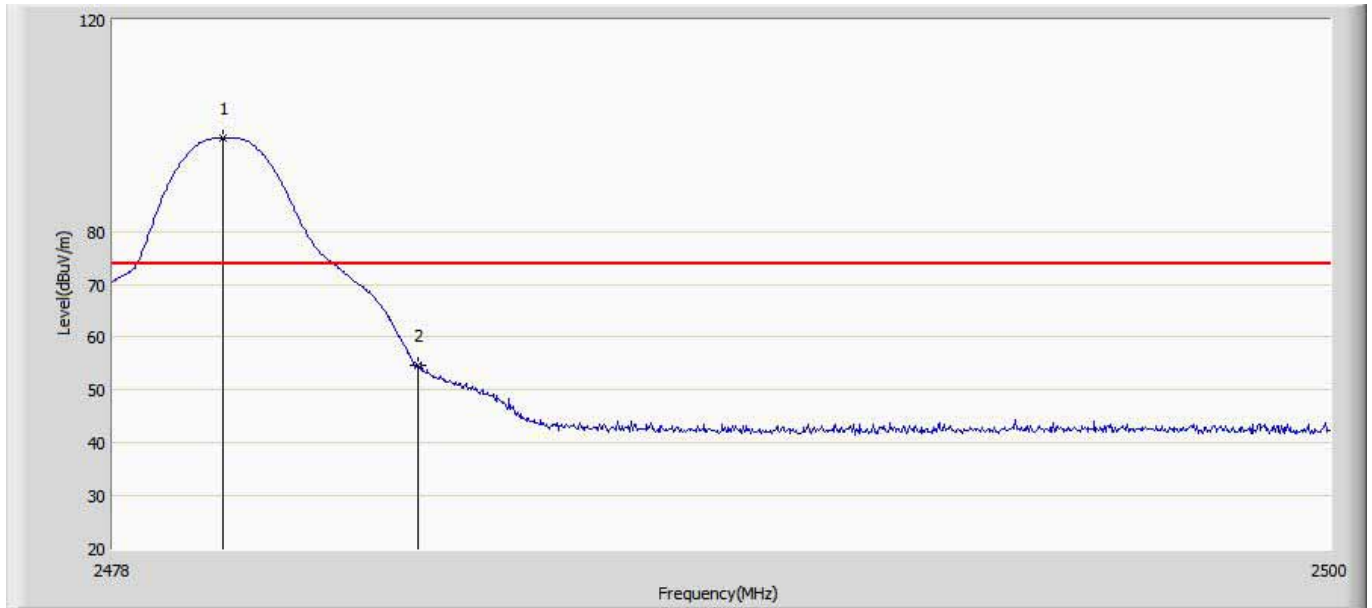
Engineer: Simon	
Site: AC5	Time: 2018/06/06 - 20:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.850	7.138	-32.150	74.000	34.712	PK
2	*	2402.055	98.468	63.651	N/A	N/A	34.817	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	11.068	41.850	-42.932	54.000	-30.782	AV
2	*	2402.055	67.686	98.468	N/A	N/A	-30.782	AV

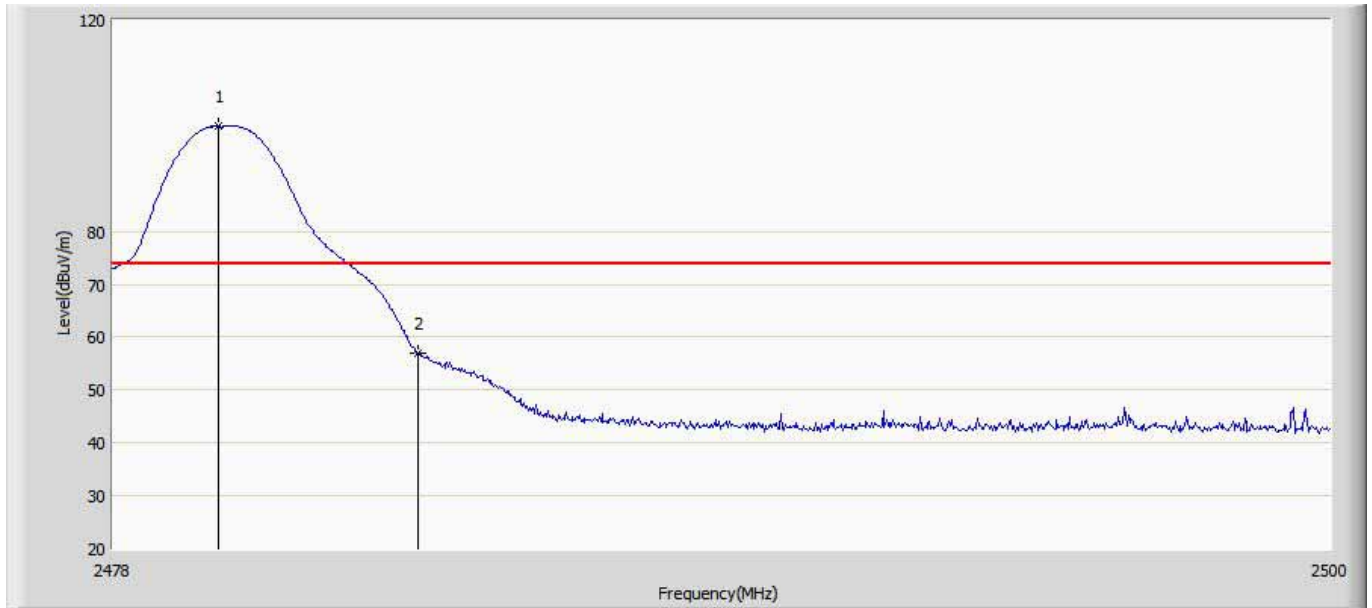
Engineer: Simon	
Site: AC5	Time: 2018/06/06 - 20:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.980	97.548	62.370	N/A	N/A	35.178	PK
2		2483.500	54.567	19.418	-19.433	74.000	35.149	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.980	66.766	97.548	N/A	N/A	-30.782	AV
2		2483.500	23.785	54.567	-30.215	54.000	-30.782	AV

Engineer: Simon	
Site: AC5	Time: 2018/06/06 - 20:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	

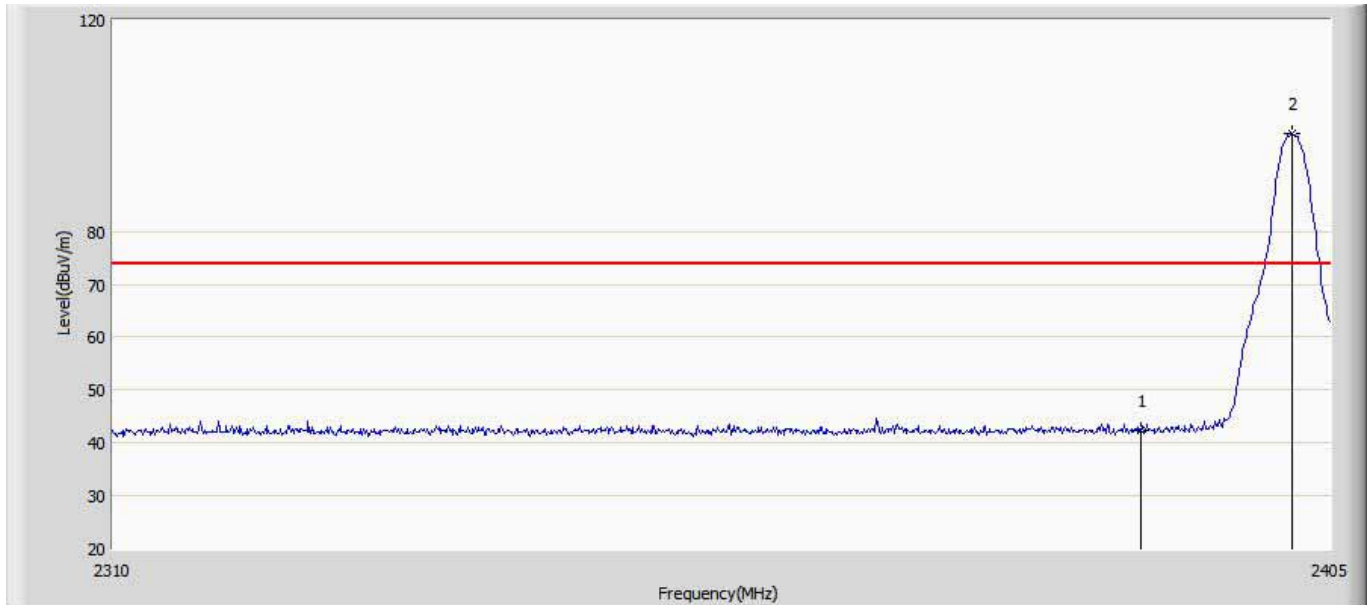


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.914	99.825	64.646	N/A	N/A	35.179	PK
2		2483.500	56.929	21.780	-17.071	74.000	35.149	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.914	69.043	99.825	N/A	N/A	-30.782	AV
2		2483.500	26.147	56.929	-27.853	54.000	-30.782	AV



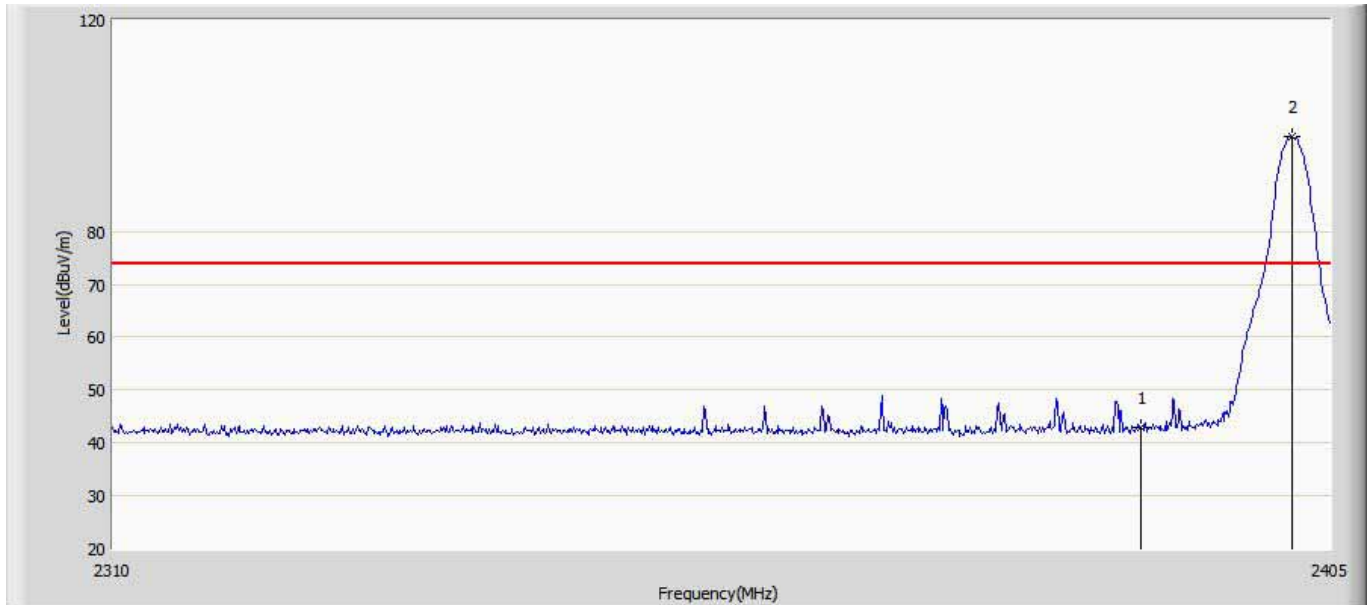
Engineer: Simon	
Site: AC5	Time: 2018/06/06 - 20:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.317	7.605	-31.683	74.000	34.712	PK
2	*	2401.960	98.428	63.613	N/A	N/A	34.815	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	11.535	42.317	-42.465	54.000	-30.782	AV
2	*	2401.960	67.646	98.428	N/A	N/A	-30.782	AV

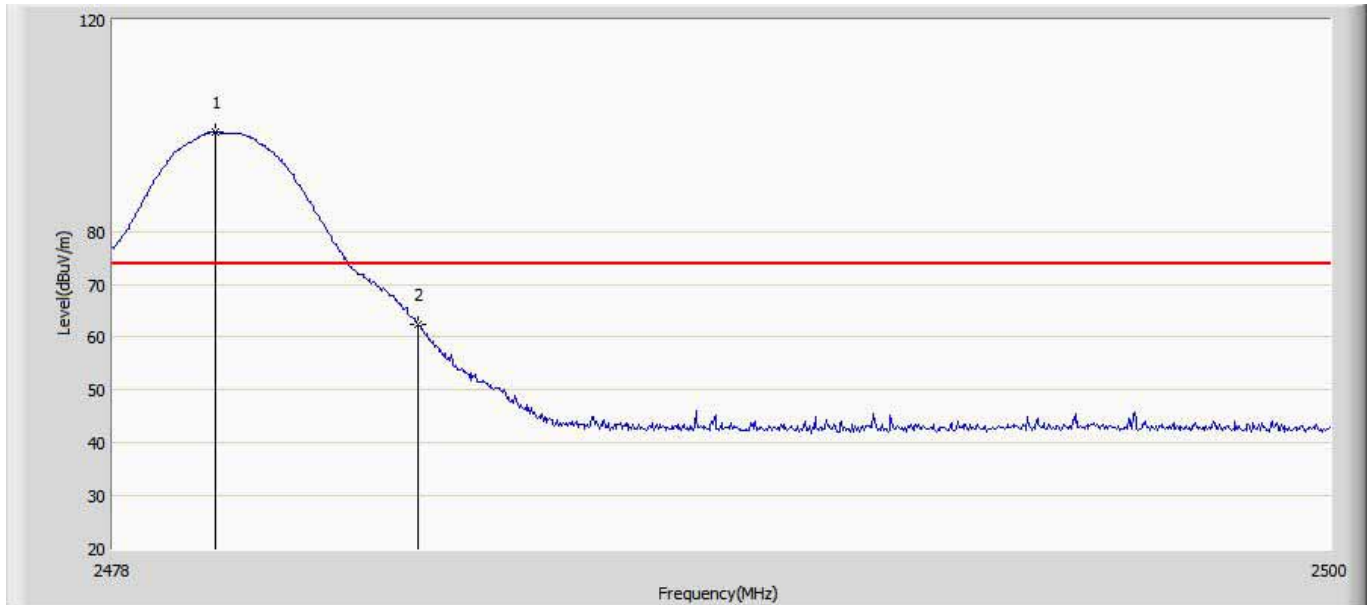
Engineer: Simon	
Site: AC5	Time: 2018/06/06 - 20:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.812	8.100	-31.188	74.000	34.712	PK
2	*	2401.960	97.816	63.001	N/A	N/A	34.815	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	12.030	42.812	-41.970	54.000	-30.782	AV
2	*	2401.960	67.034	97.816	N/A	N/A	-30.782	AV

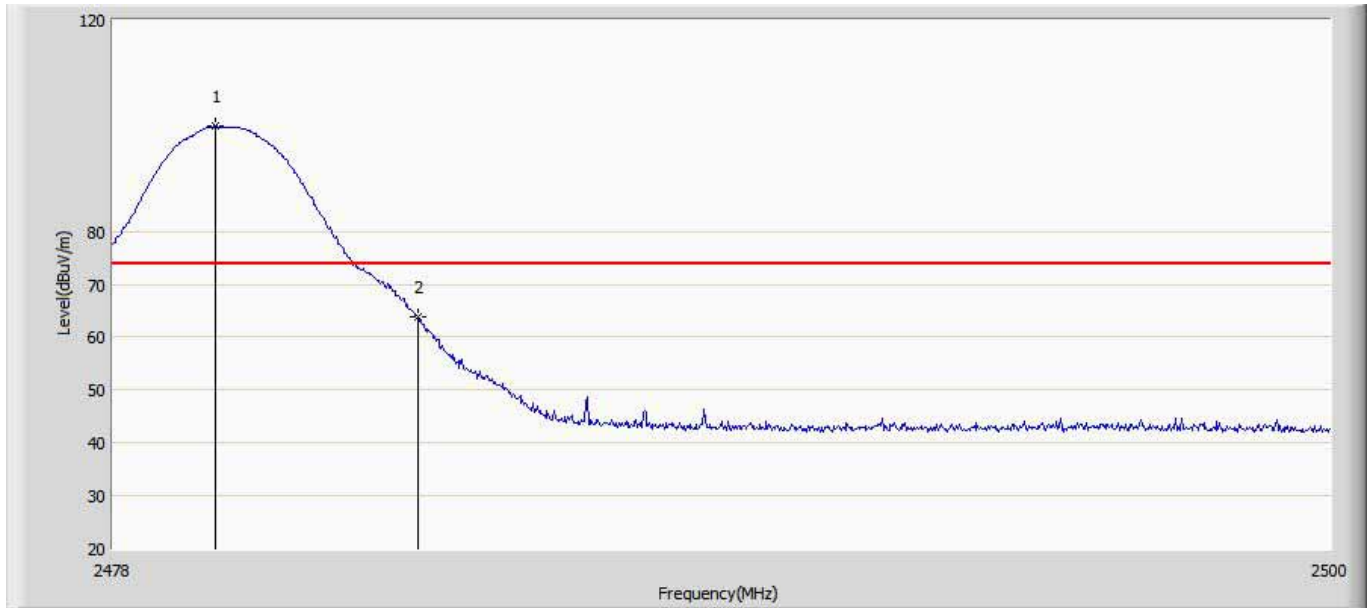
Engineer: Simon	
Site: AC5	Time: 2018/06/07 - 10:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.848	98.733	63.554	N/A	N/A	35.179	PK
2		2483.500	62.482	27.333	-11.518	74.000	35.149	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.848	67.951	98.733	N/A	N/A	-30.782	AV
2		2483.500	31.700	62.482	-22.300	54.000	-30.782	AV

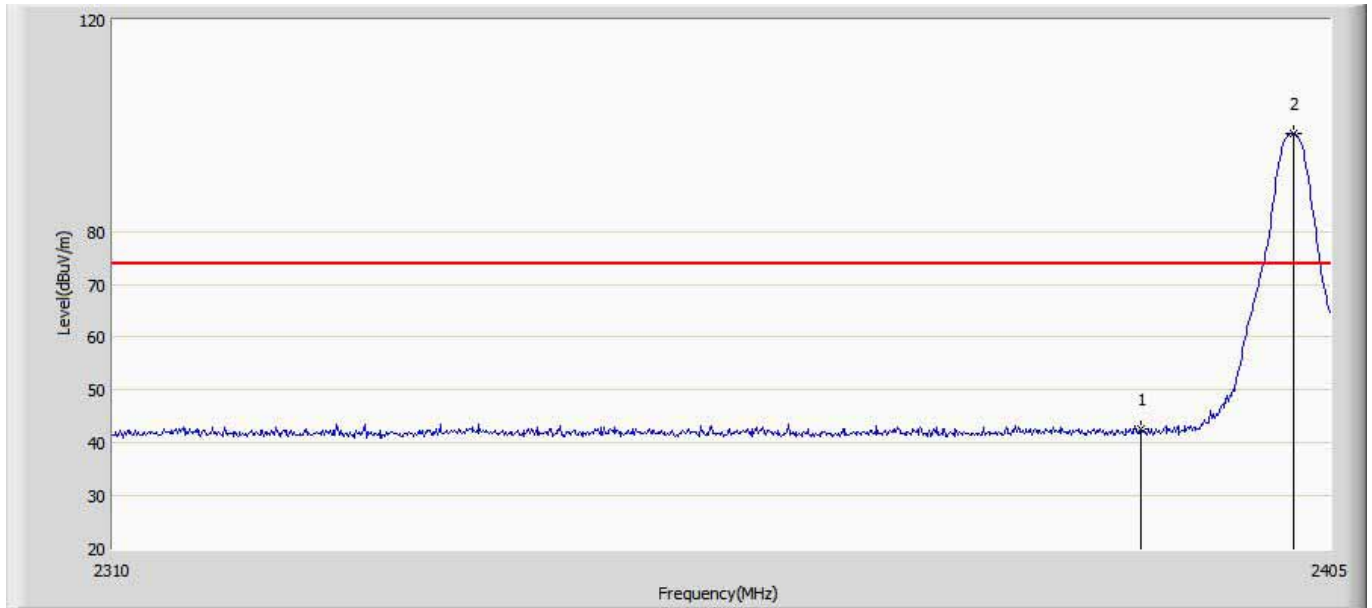
Engineer: Simon	
Site: AC5	Time: 2018/06/07 - 10:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.848	99.817	64.638	N/A	N/A	35.179	PK
2		2483.500	63.840	28.691	-10.160	74.000	35.149	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.848	69.035	99.817	N/A	N/A	-30.782	AV
2		2483.500	33.058	63.840	-20.942	54.000	-30.782	AV

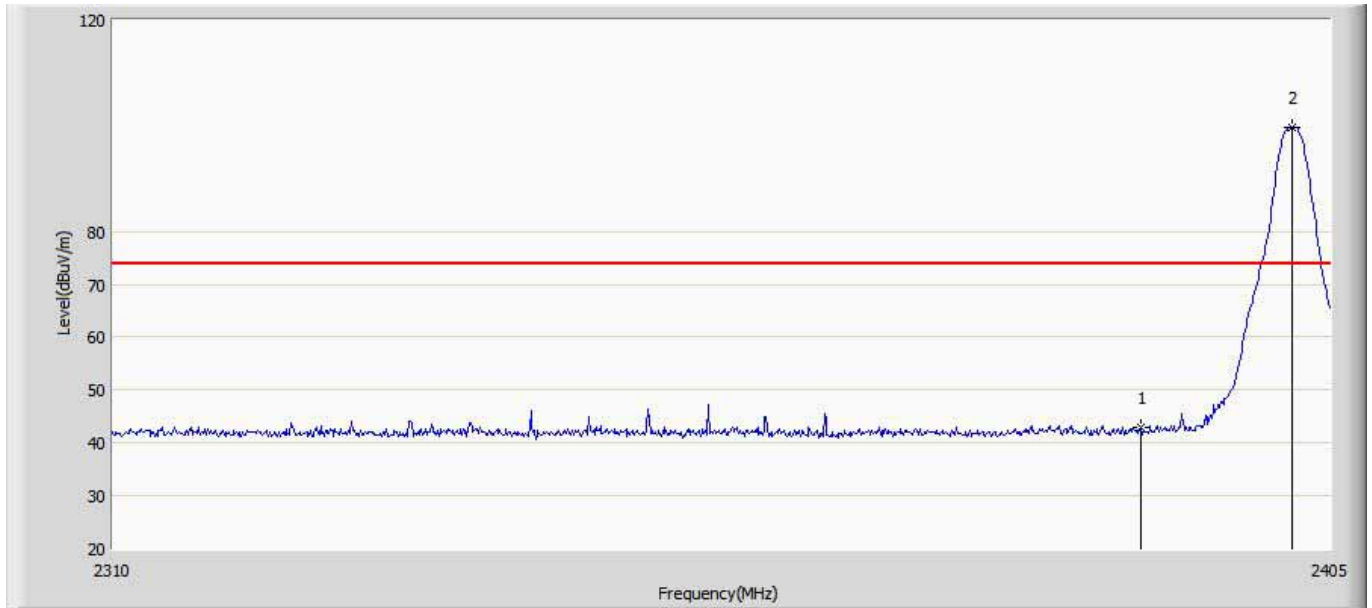
Engineer: Simon	
Site: AC5	Time: 2018/06/07 - 10:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.674	7.962	-31.326	74.000	34.712	PK
2	*	2402.150	98.429	63.611	N/A	N/A	34.818	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	11.892	42.674	-42.108	54.000	-30.782	AV
2	*	2402.150	67.647	98.429	N/A	N/A	-30.782	AV

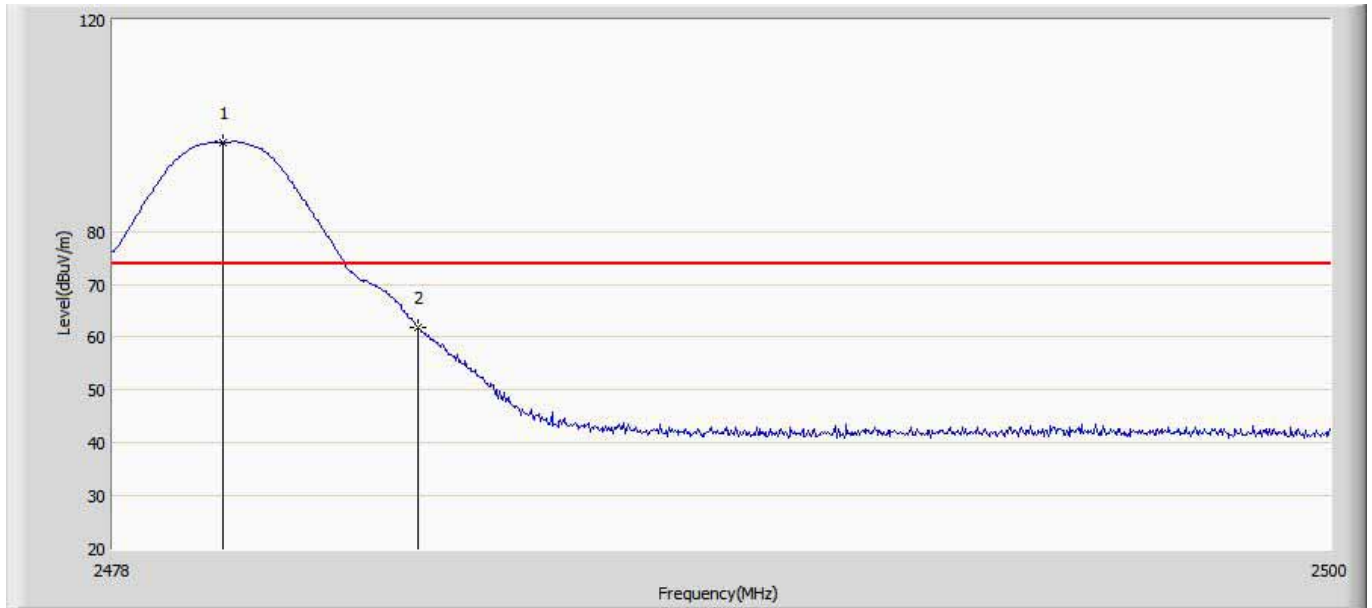
Engineer: Simon	
Site: AC5	Time: 2018/06/07 - 10:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.837	8.125	-31.163	74.000	34.712	PK
2	*	2401.960	99.749	64.934	N/A	N/A	34.815	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	12.055	42.837	-41.945	54.000	-30.782	AV
2	*	2401.960	68.967	99.749	N/A	N/A	-30.782	AV

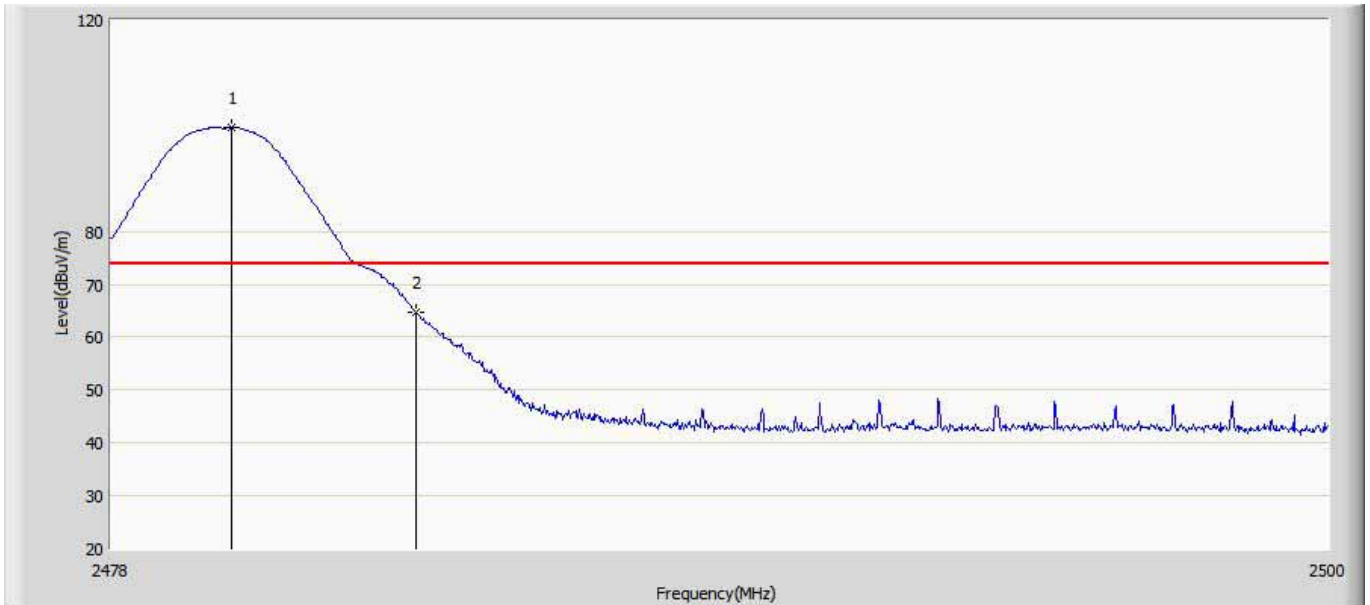
Engineer: Simon	
Site: AC5	Time: 2018/06/07 - 10:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Horizontal
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.980	96.865	61.687	N/A	N/A	35.178	PK
2		2483.500	61.796	26.647	-12.204	74.000	35.149	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.980	66.083	96.865	N/A	N/A	-30.782	AV
2		2483.500	31.014	61.796	-22.986	54.000	-30.782	AV

Engineer: Simon	
Site: AC5	Time: 2018/06/07 - 10:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055 (1-18GHz)	Polarity: Vertical
EUT: Bluetooth Headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.178	99.667	64.491	N/A	N/A	35.176	PK
2		2483.500	64.818	29.669	-9.182	74.000	35.149	PK

No	Mark	Frequency (MHz)	AV Level (dBuV/m)	PK Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.178	68.885	99.667	N/A	N/A	-30.782	AV
2		2483.500	34.036	64.818	-19.964	54.000	-30.782	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 \_\_\_\_\_