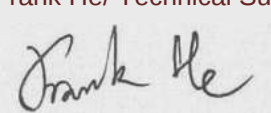
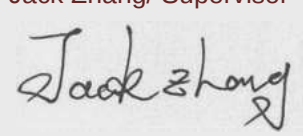


Test report No:
2050534R-RF-US-P06V01

FCC TEST REPORT & ISED TEST REPORT

Product Name	Bluetooth headset
Trademark	Plantronics
Model and /or type reference	VFOCUS2
FCC ID	AL8-VFOCUS2
IC ID	457A-VFOCUS2
Applicant's name / address	Plantronics, Inc. 345 Encinal Street, Santa Cruz, CA95060 USA
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 KD558074 D01 15.247 Meas Guidance v05r02 RSS-Gen Issue 5 / RSS-247 Issue 2
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Kitty Li/Project Assistant 
Reviewed by (name / position & signature)	Frank He/ Technical Supervisor 
Approved by (name / position & signature)	Jack Zhang/ Supervisor 
Date of issue	2020-07-27
Report template No	Template_FCC 15.247-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	May. 22, 2020
Date (start test)	May. 23, 2020
Date (finish test)	Jun. 18, 2020

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
T_x	: Transmitter
R_x	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2050534R-RF-US-P06V01	V1.0	Initial issue of report.	2020-06-19
2050534R-RF-US-P06V01	V1.1	P60, modified the test data of Peak Output Power	2020-07-27

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247, RSS-Gen Issue 5, RSS-247 Issue 2.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result, unless the specification, standard or customer have special requirements.
4. The test results presented in this report relate only to the object tested.
5. The test results relate only to the samples tested.
6. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
7. This report will not be used for social proof function in China market.

USED EQUIPMENT

AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100906	2020.04.20	2021.04.19
Two-Line V-Network	R&S	ENV216	101190	2019.12.28	2020.12.27
Two-Line V-Network	R&S	ENV216	101044	2019.12.28	2020.12.27
Current Probe	R&S	EZ-17	100678	2020.03.12	2021.04.11
50ohm Termination	SHX	TF2	07081402	2019.09.02	2020.09.01
50ohm Termination	SHX	TF2	07081403	2019.09.02	2020.09.01
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2019.08.21	2020.08.20
Coaxial Cable	Suhner	RG 223	TR1-C1	2019.08.25	2020.08.24
Coaxial Cable	Suhner	RG 223	TR1-C2	2019.08.25	2020.08.24
Dekra test software	Dekra	-	-	-	-

Emissions in non-restricted frequency bands/ Occupied Bandwidth/ Fundamental emission output power Power Spectral Density / TR8

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.09.28	2020.09.27
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.08.30	2020.08.29
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2019.08.12	2020.08.11
Power Sensor	Anritsu	MA2411B	0846014	2019.08.12	2020.08.11
Coaxial Cable	Woken	SFL402	F02-150410-044	2020.01.01	2020.12.31
Dekra test software	Dekra	-	-	-	-

Radiated Emission(30MHz-1GHz) / AC3

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2020.03.03	2021.03.02
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2019.09.23	2020.09.22
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2019.09.02	2020.09.01
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2020.04.13	2021.04.12
Dekra test software	Dekra	-	-	-	-

Radiated Emission / AC5(1GHz-40GHz)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2020.05.08	2021.05.07
Preamplifier	Miteq	NSP1800-25	1364185	2020.05.06	2021.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2020.05.06	2021.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2020.01.22	2021.01.21
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2019.09.02	2020.09.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2020.04.13	2021.04.12
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2020.04.13	2021.04.12
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2020.04.13	2021.04.12
Dekra test software	Dekra	-	-	-	-

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%. The Uncertainties comply with standard required as below.

Test item	Uncertainty
Conducted Emission	± 2.02 dB
Emissions in restricted frequency bands	above 1G : ± 3.9 dB below 1G is : ± 3.8 dB
20dB Bandwidth	± 1 kHz
Carrier Frequency Separation	± 1 kHz
Number of Hopping Frequencies	± 1 kHz
Time of Occupancy (Dwell Time)	± 0.1 μ s
Peak Output Power	± 1.0 dB
Emissions in non-restricted frequency bands	± 1.0 dB
Radiated Emission Band Edge	above 1G : ± 3.9 dB below 1G : ± 3.8 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name	Bluetooth headset
Model No.	VFOCUS2
Trademark	Plantronics
FCC ID	AL8-VFOCUS2
IC	457A-VFOCUS2
Manufacturer	Plantronics, Inc.
Manufacturer Address	345 Encinal Street, Santa Cruz, CA95060 USA

Wireless specification	Bluetooth				
Bluetooth Specification	V3.0				
Operating frequency range(s)	2400~2483.5MHz				
Type of Modulation	GFSK				
PHYs	☒	GFSK	☒	Pi/4 DQPSK	☒ 8DPSK
Data Rate	☒	1Mbit/s	☒	2Mbit/s	☒ 3Mbit/s
Number of channel	79				
Operating Temperature Range	0°C – 45 °C				

Rated power supply	Voltage and Frequency				
	☐	AC: 220 – 240 V, 50/60 Hz			
	☐	AC: 100 – 240 V, 50/60 Hz			
	☒	DC: 3.2~4.2 Vdc			
	☐	Battery:			
Mounting position	☐	Table top equipment			
	☐	Wall/Ceiling mounted equipment			
	☐	Floor standing equipment			
	☒	Head-mounted equipment			
	☐	Other: RF module			

1.2 Antenna Information

Antenna model / type number	N/A			
Antenna serial number	N/A			
Antenna Delivery	☒	1TX + 1RX		
	☐	2TX + 2RX		
Antenna technology	☒	SISO		
	☐	MIMO	☐	CDD
			☐	Beam-forming
Antenna Type	☐	External	☐	Dipole
			☐	Sectorized
	☒	Internal	☐	PIFA
			☒	PCB
			☐	Metal Monopole Antenna
			☐	Ceramic chip
			☐	Others.....
Antenna Gain	3.59 dBi			

1.3 Channel 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

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

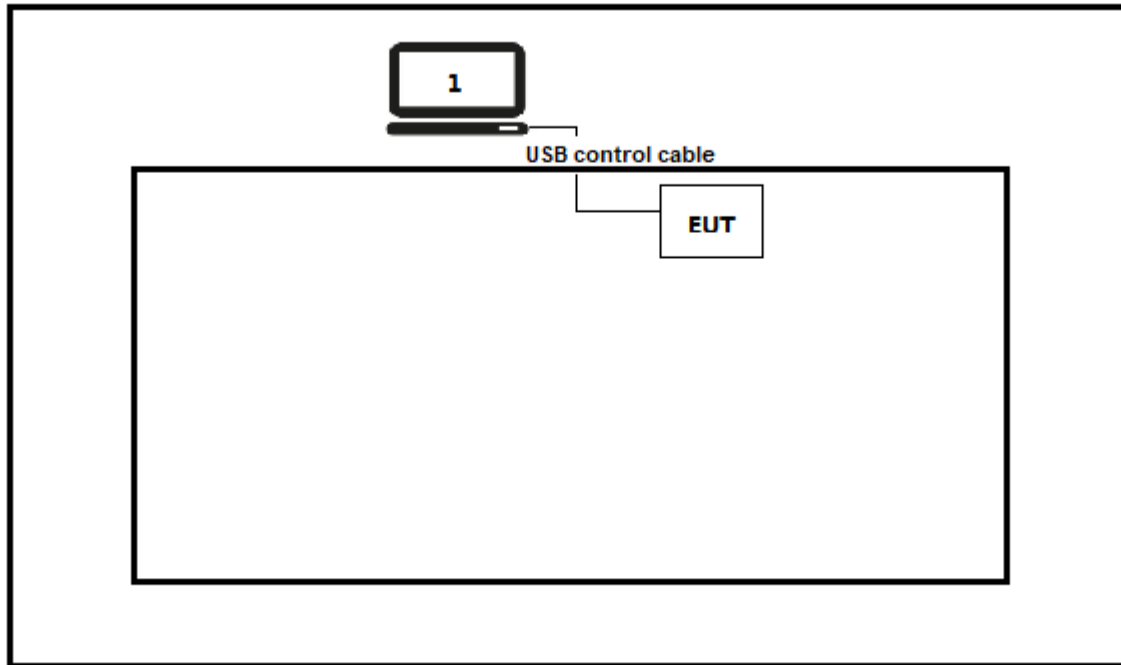
Test Mode For Bluetooth	Mode 1: Transmitter-1Mbps(GFSK_DH5)
	Mode 2: Transmitter-2Mbps(Pi/4 DQPSK_DH5)
	Mode 3: Transmitter-3Mbps(8DPSK_DH5)
	Mode 4: Transmitter-Hopping

2.2 Auxiliary equipment / Test software for the EUT

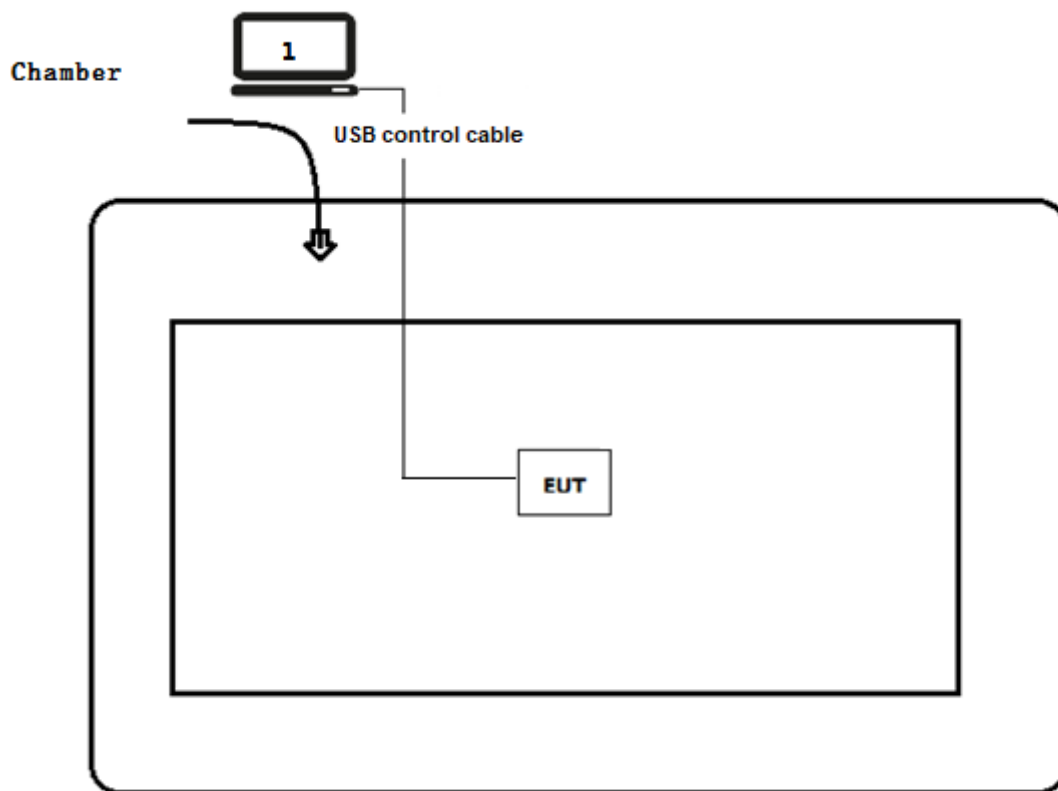
Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
Software	Type / Version	Manufacturer	Supplied by
BlueTest3	N/A	N/A	N/A

2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Execute “BlueTest3” software.
3	Configure the test mode, the test channel, and the data rate.
4	Verify that the EUT works properly.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2019	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 v05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247
RSS-Gen Issue 5 Amendment 1	2019	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 2	2017	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

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 Section 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 5 Section 8.8	Yes	No
Radiated Emission	RSS-Gen Issue 5 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 5 Section 8.10	Yes	No
Antenna Requirement	RSS-Gen Issue 5 Section 8.3	Yes	No

3.4 Test Facility

USA	:	FCC Designation Number: CN1199
CA	:	ISED CAB identifier: CN0040

4 TEST RESULTS

4.1 Conducted Emission

VERDICT: PASS

4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207	
Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾]	Limit: AV [dB(μV) ¹⁾]
0,15 - 0,50	66 - 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

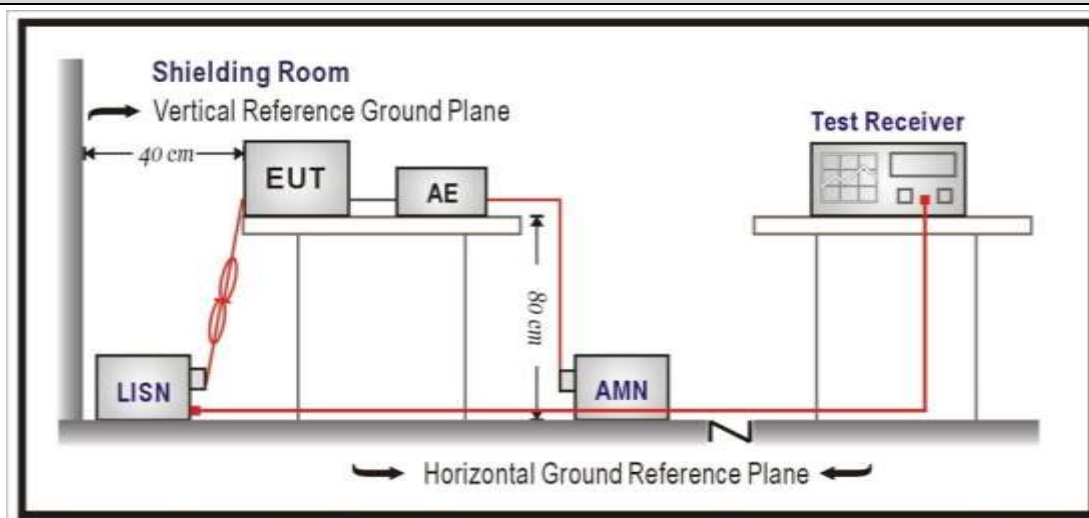
¹⁾ At the transition frequency, the lower limit applies.

²⁾ The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.1.2 Test Setup

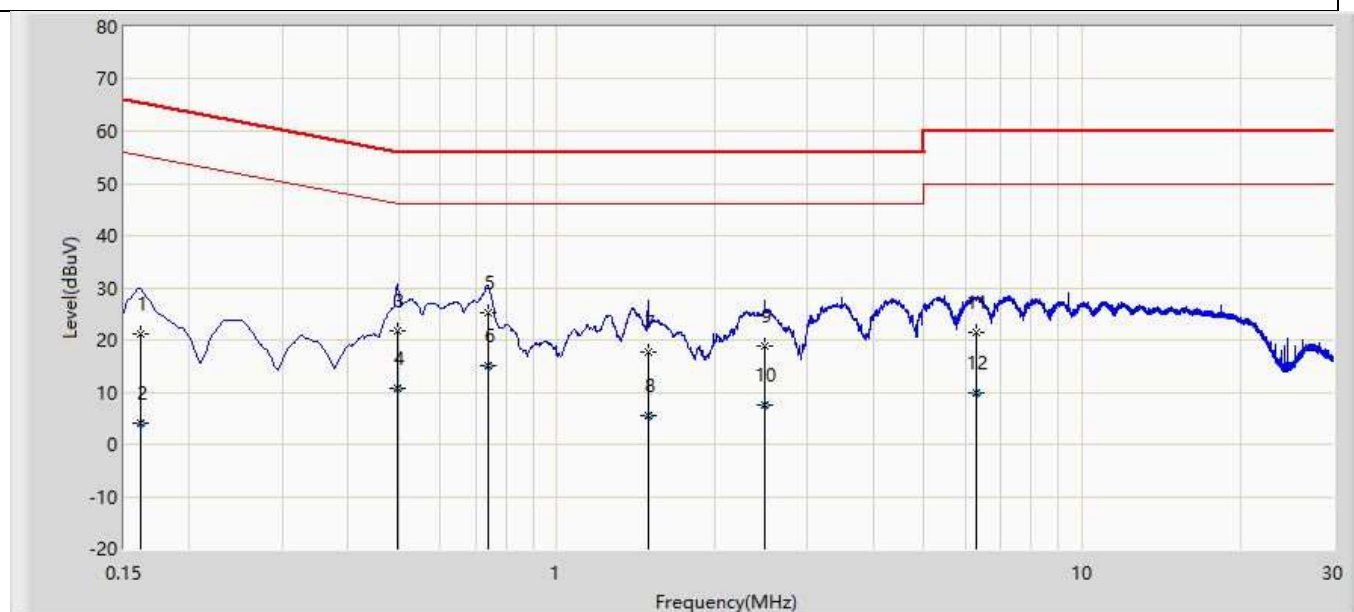


4.1.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

4.1.4 Test Data

Site: TR1	Time: 2020/05/29 - 13:25
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Bluetooth headset	Power: AC 120V/60Hz
Note: Mode 1	

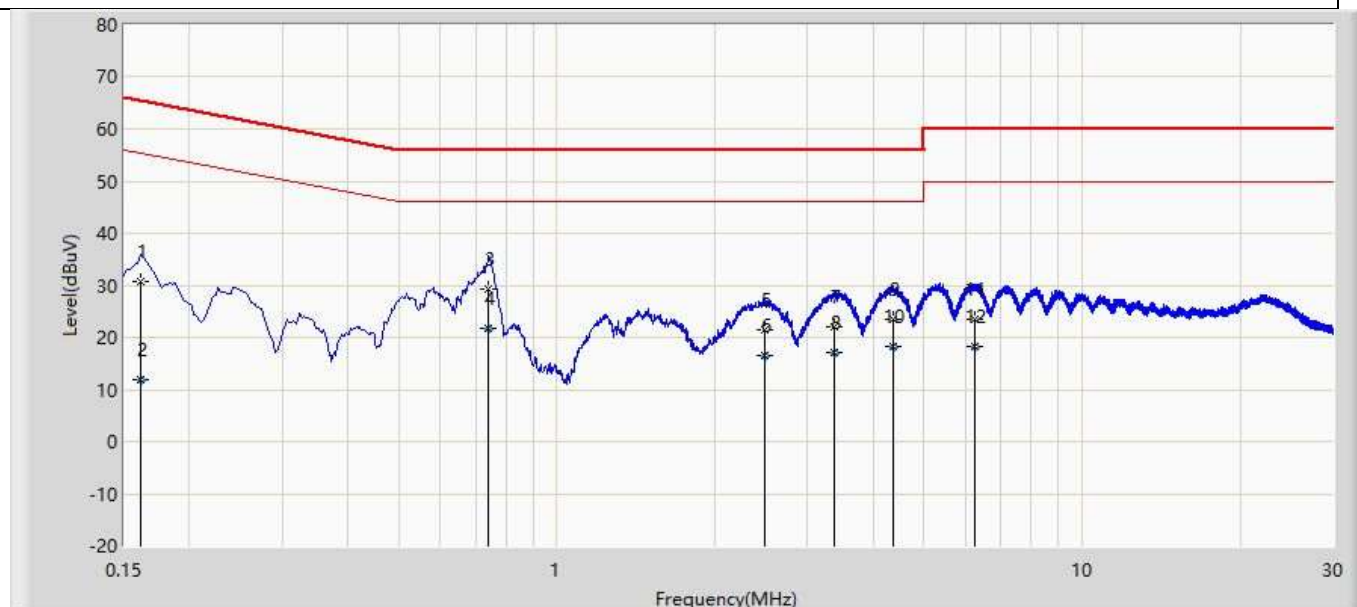


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.161	21.268	11.665	-44.131	65.399	9.575	0.029	0.000	QP
2		0.161	4.038	-5.566	-51.362	55.399	9.575	0.029	0.000	AV
3		0.496	21.805	12.152	-34.253	56.058	9.610	0.043	0.000	QP
4		0.496	10.724	1.071	-35.334	46.058	9.610	0.043	0.000	AV
5	*	0.742	25.322	15.650	-30.678	56.000	9.621	0.051	0.000	QP
6		0.742	15.123	5.451	-30.877	46.000	9.621	0.051	0.000	AV
7		1.491	17.679	7.970	-38.321	56.000	9.635	0.074	0.000	QP
8		1.491	5.587	-4.122	-40.413	46.000	9.635	0.074	0.000	AV
9		2.486	18.854	9.104	-37.146	56.000	9.652	0.098	0.000	QP
10		2.486	7.556	-2.194	-38.444	46.000	9.652	0.098	0.000	AV
11		6.286	21.394	11.485	-38.606	60.000	9.748	0.160	0.000	QP
12		6.286	9.913	0.004	-40.087	50.000	9.748	0.160	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: 2020/05/29 - 13:24
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	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		0.161	30.699	21.096	-34.700	65.399	9.575	0.029	0.000	QP
2		0.161	12.023	2.419	-43.377	55.399	9.575	0.029	0.000	AV
3		0.742	29.297	19.625	-26.703	56.000	9.621	0.051	0.000	QP
4	*	0.742	21.620	11.948	-24.380	46.000	9.621	0.051	0.000	AV
5		2.483	21.387	11.646	-34.613	56.000	9.642	0.098	0.000	QP
6		2.483	16.546	6.805	-29.454	46.000	9.642	0.098	0.000	AV
7		3.370	21.968	12.187	-34.032	56.000	9.666	0.115	0.000	QP
8		3.370	17.232	7.451	-28.768	46.000	9.666	0.115	0.000	AV
9		4.378	23.490	13.663	-32.510	56.000	9.694	0.133	0.000	QP
10		4.378	18.334	8.507	-27.666	46.000	9.694	0.133	0.000	AV
11		6.256	23.462	13.548	-36.538	60.000	9.754	0.160	0.000	QP
12		6.256	18.272	8.358	-31.728	50.000	9.754	0.160	0.000	AV

Note:

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

4.2 Emissions in restricted frequency bands**VERDICT: PASS****4.2.1 Limit****Standard** FCC Part 15 Subpart C Paragraph 15.209

Restricted Bands of operation for FCC

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			

Restricted Bands of operation for ISCED

0.090 - 0.110	13.36 - 13.41	960 - 1427	9.0 - 9.2
0.495 - 0.505	16.42 - 16.423	1435 - 1626.5	9.3 - 9.5
2.1735 - 2.1905	16.69475 - 16.69525	1645.5 - 1646.5	10.6 - 12.7
3.020 - 3.026	16.80425 - 16.80475	1660 - 1710	13.25 - 13.4
4.125 - 4.128	25.5 - 25.67	1718.8 - 1722.2	14.47 - 14.5
4.17725 - 4.17775	37.5 - 38.25	2200 - 2300	15.35 - 16.2
4.20725 - 4.20775	73 - 74.6	2310 - 2390	17.7 - 21.4
5.677 - 5.683	74.8 - 75.2	2483.5 - 2500	22.01 - 23.12
6.215 - 6.218	108 - 138	2655 - 2900	23.6 - 24.0
6.26775 - 6.26825	149.9 - 150.05	3260 - 3267	31.2 - 31.8
6.31175 - 6.31225	156.52475 - 156.52525	3332 - 3339	36.43 - 36.5
8.291 - 8.294	156.7 - 156.9	3345.8 - 3358	Above 38.6
8.362 - 8.366	162.0125 - 167.17	3500 - 4400	
8.37625 - 8.38675	167.72 - 173.2	4500 - 5150	
8.41425 - 8.41475	240 - 285	5350 - 5460	
12.29 - 12.293	322 - 335.4	7250 - 7750	
12.51975 - 12.52025	399.9 - 410	8025 - 8500	
12.57675 - 12.57725	608 - 614	--	

Restricted Band Emissions Limit

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

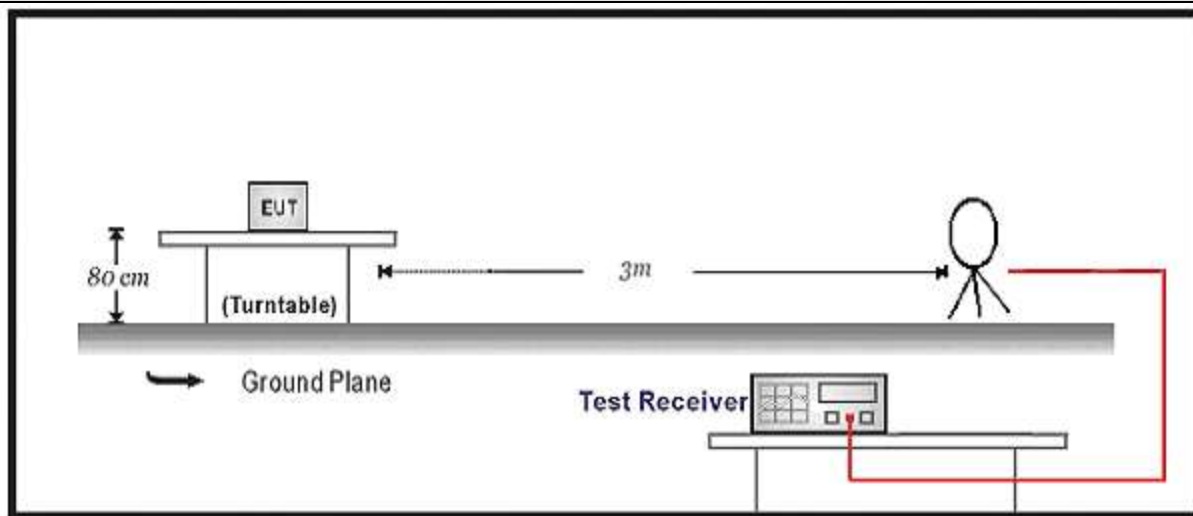
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed 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.

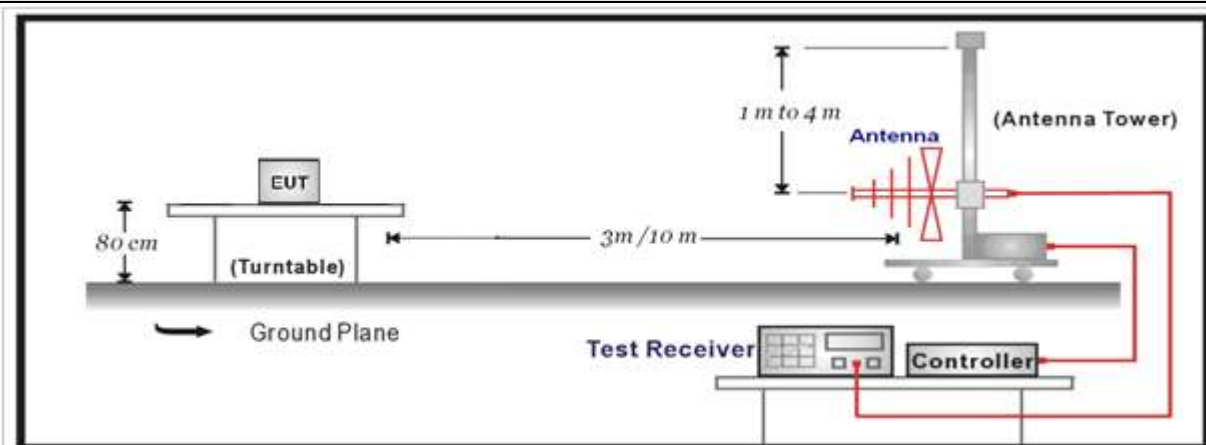
Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.2.2 Test Setup

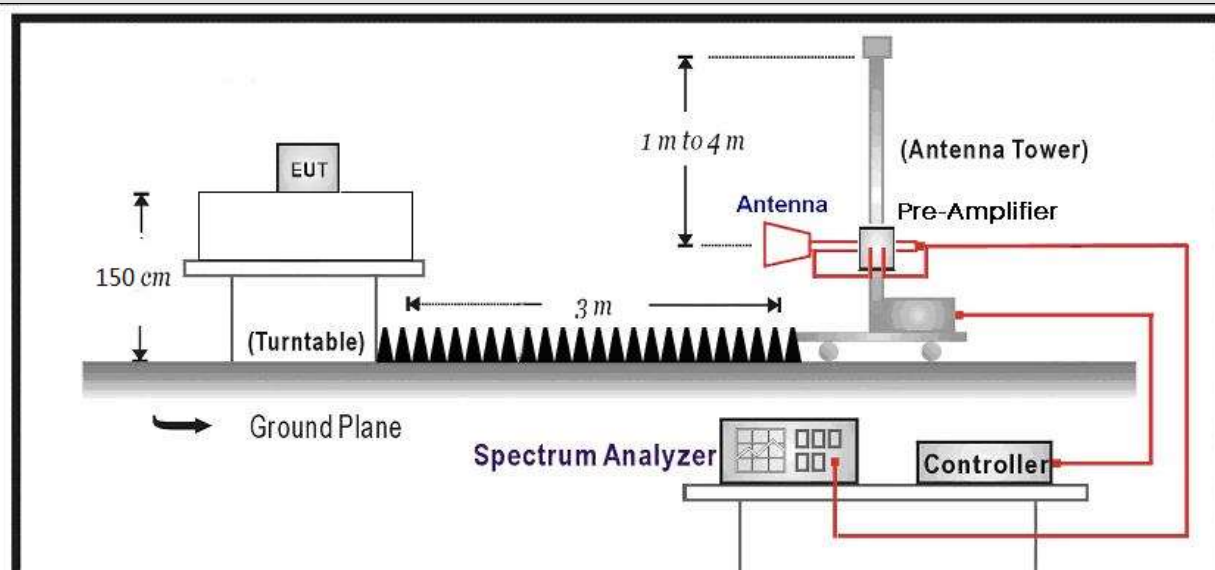
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:

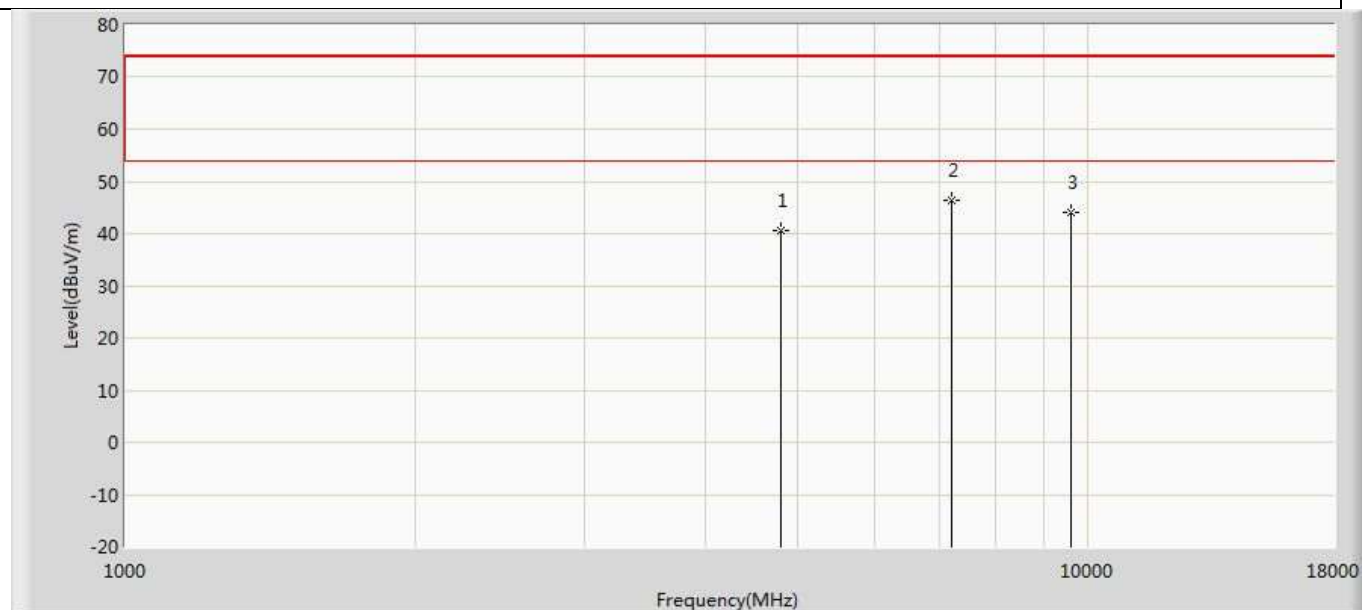


4.2.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	11.12.2.7	Radiated spurious emission test
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

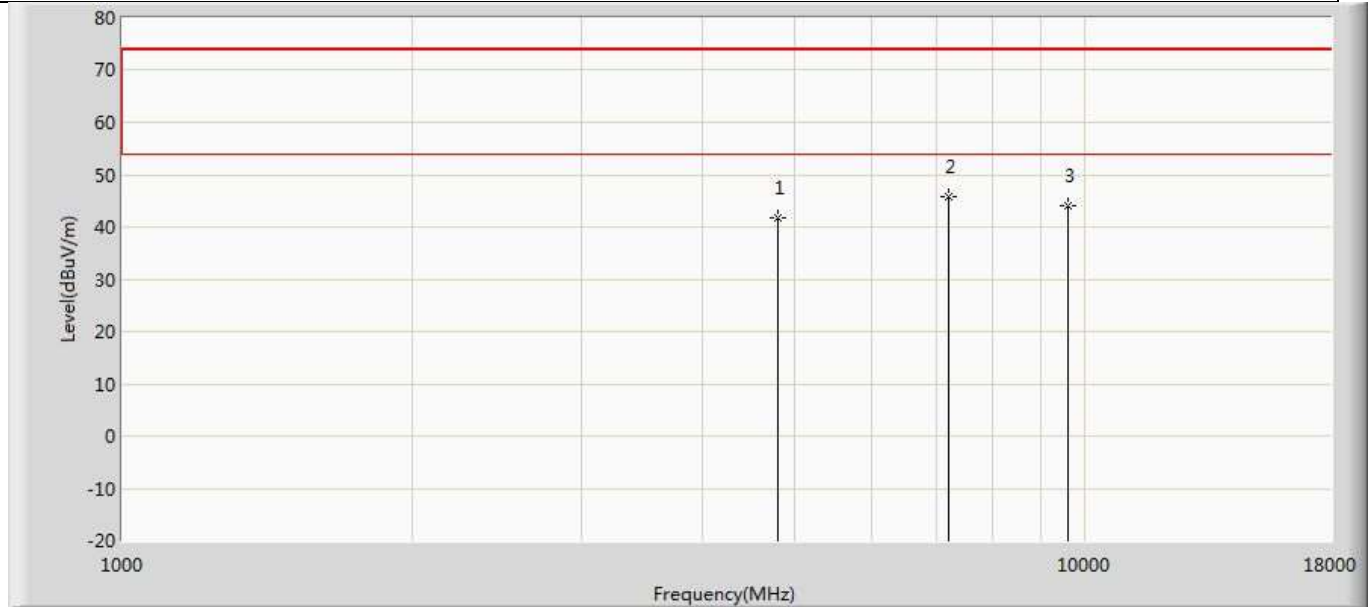
4.2.4 Test Data

Profile: 2050534R	Page No.: 71
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



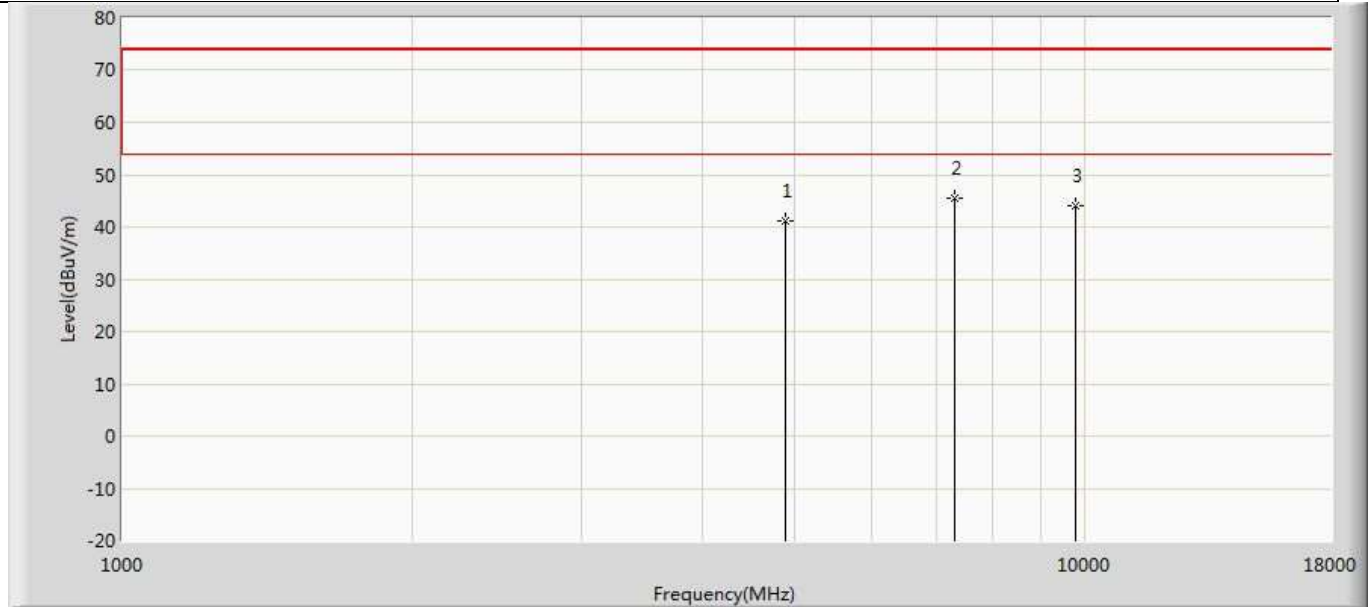
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	40.583	36.922	-33.417	74.000	3.662	PK
2	*	7206.000	46.516	39.853	-27.484	74.000	6.663	PK
3		9608.000	44.073	35.937	-29.927	74.000	8.137	PK

Profile: 2050534R	Page No.: 72
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



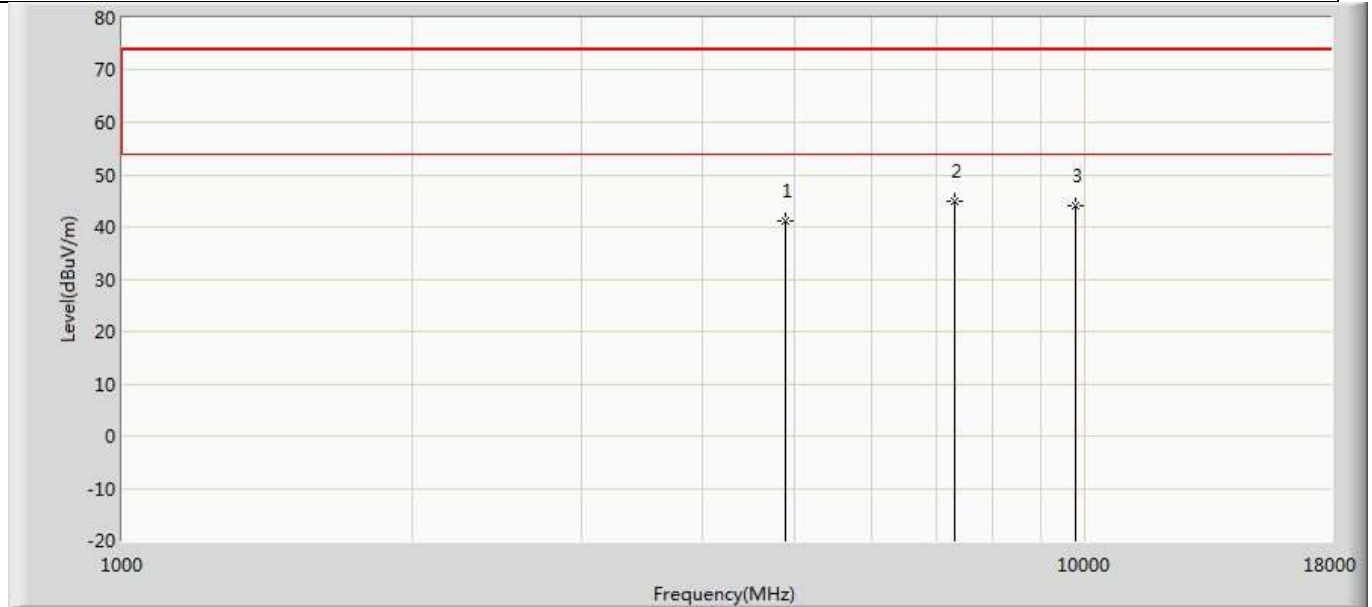
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.832	38.171	-32.168	74.000	3.662	PK
2	*	7206.000	45.666	39.003	-28.334	74.000	6.663	PK
3		9608.000	44.095	35.959	-29.905	74.000	8.137	PK

Profile: 2050534R	Page No.: 73
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



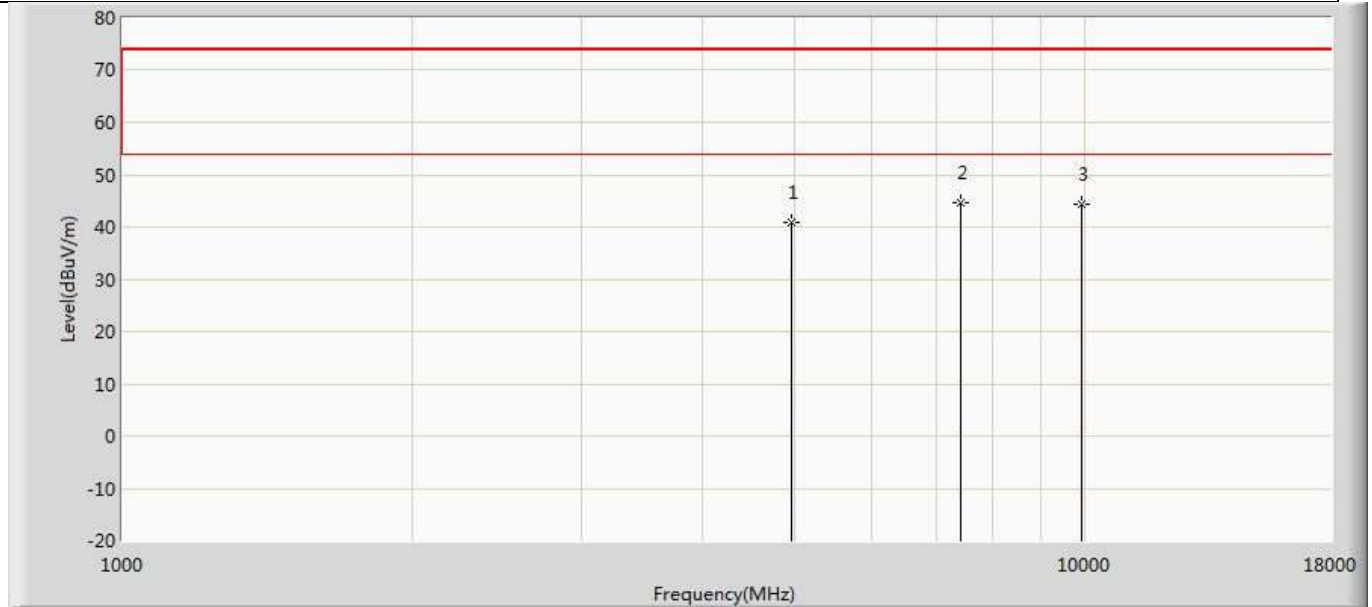
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	41.181	37.563	-32.819	74.000	3.619	PK
2	*	7323.000	45.413	38.710	-28.587	74.000	6.702	PK
3		9764.000	43.989	35.221	-30.011	74.000	8.767	PK

Profile: 2050534R	Page No.: 74
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



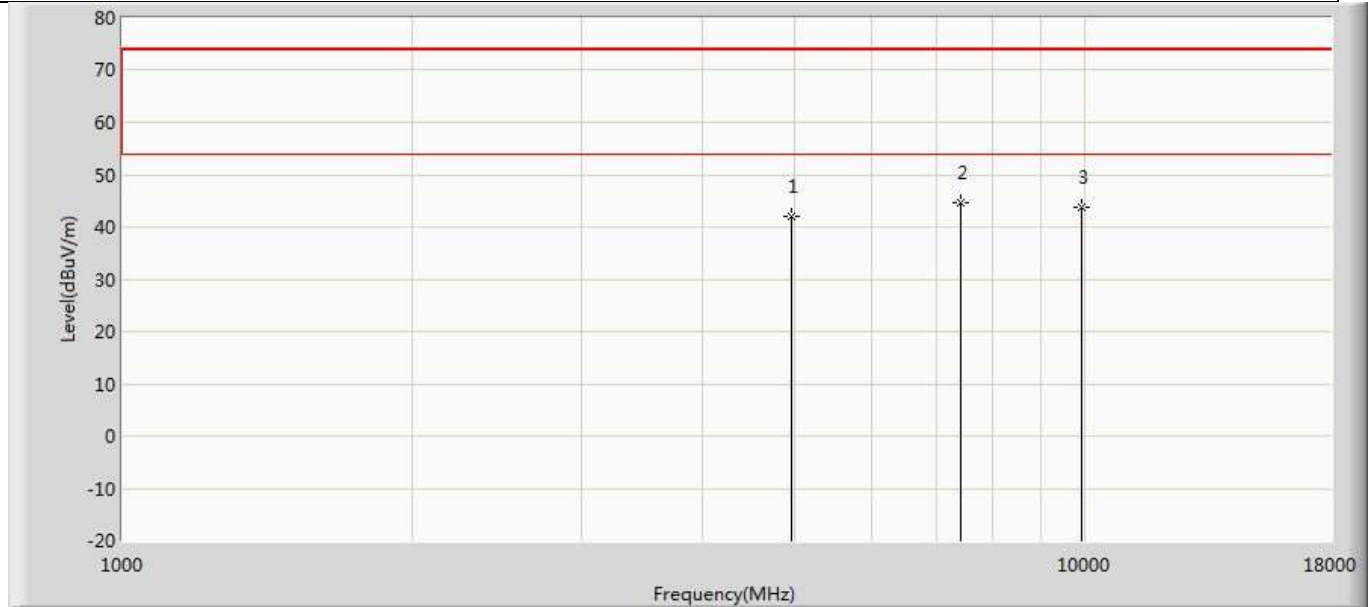
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	41.106	37.488	-32.894	74.000	3.619	PK
2	*	7323.000	44.888	38.185	-29.112	74.000	6.702	PK
3		9764.000	44.057	35.289	-29.943	74.000	8.767	PK

Profile: 2050534R	Page No.: 75
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



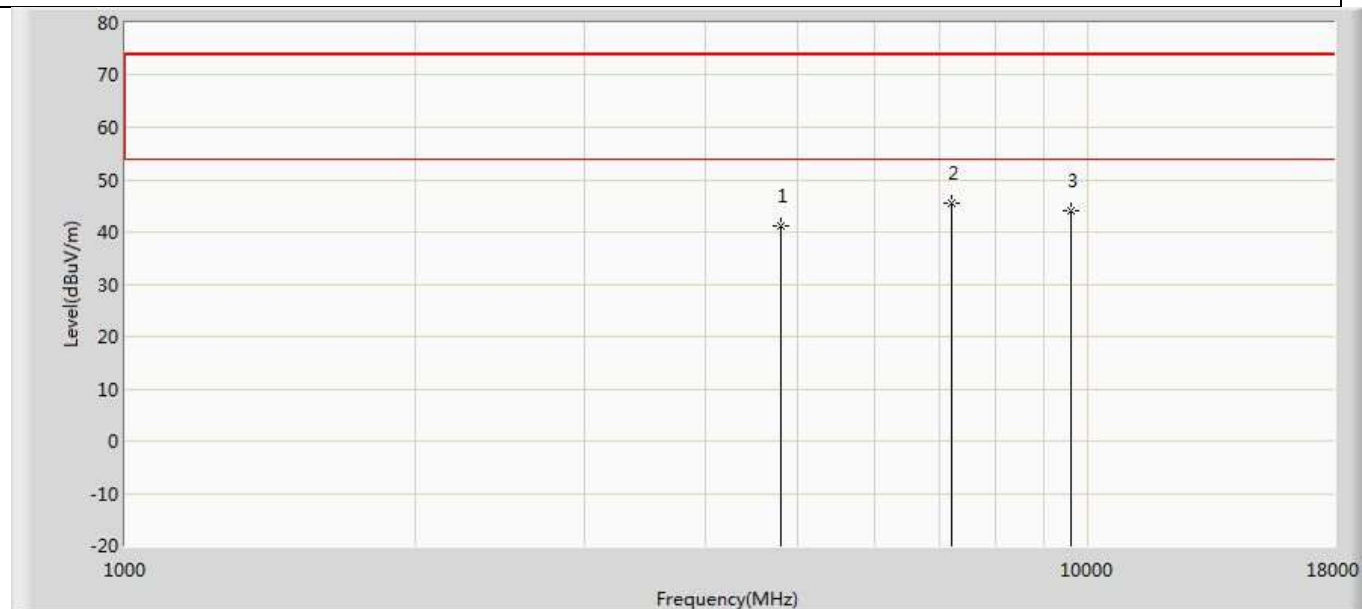
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	40.808	37.197	-33.192	74.000	3.611	PK
2	*	7440.000	44.675	38.090	-29.325	74.000	6.585	PK
3		9920.000	44.229	35.504	-29.771	74.000	8.725	PK

Profile: 2050534R	Page No.: 76
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



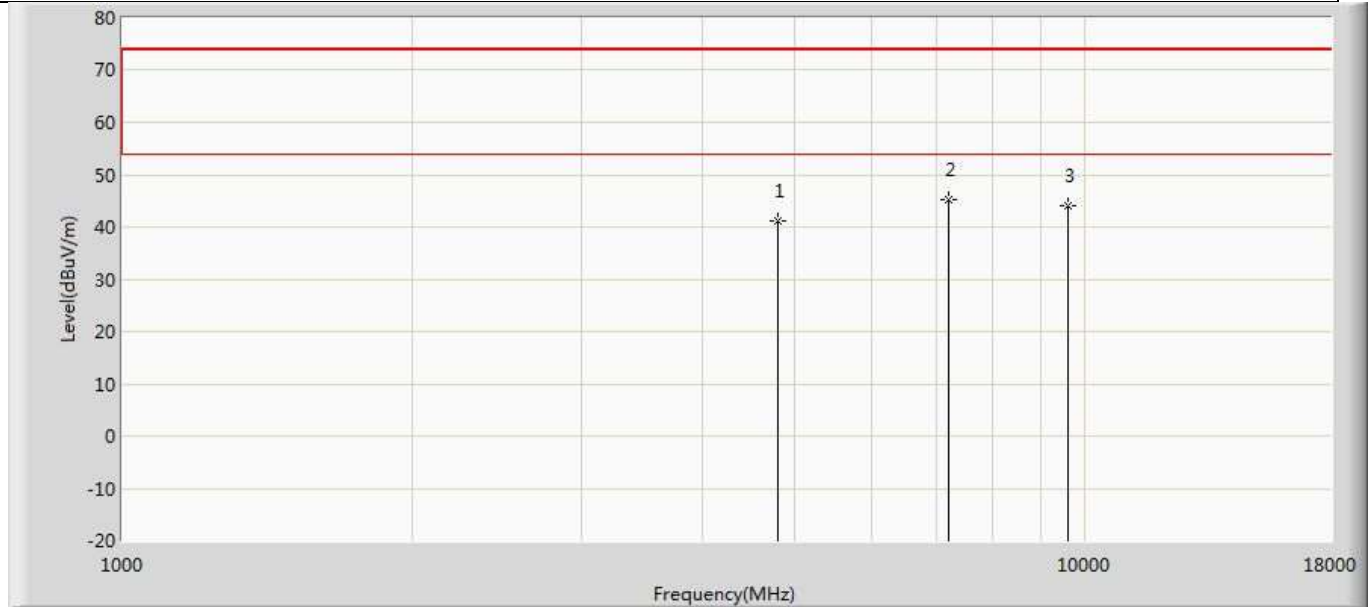
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	42.031	38.420	-31.969	74.000	3.611	PK
2	*	7440.000	44.682	38.097	-29.318	74.000	6.585	PK
3		9920.000	43.701	34.976	-30.299	74.000	8.725	PK

Profile: 2050534R	Page No.: 77
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



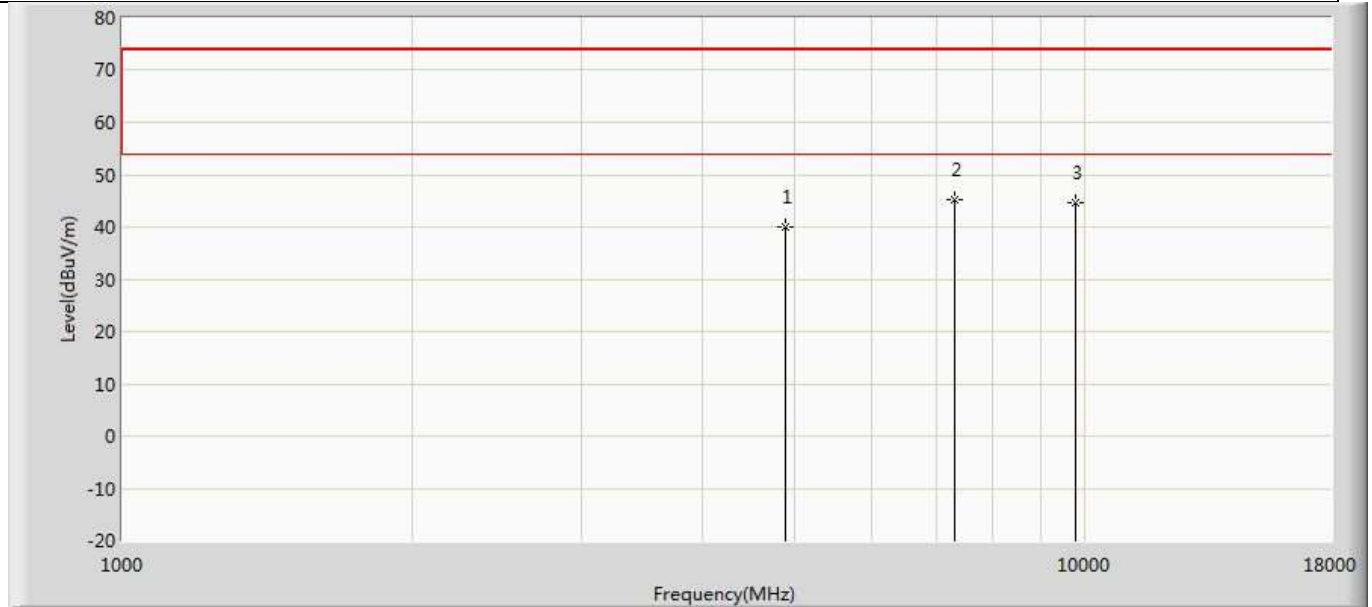
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.213	37.552	-32.787	74.000	3.662	PK
2	*	7206.000	45.579	38.916	-28.421	74.000	6.663	PK
3		9608.000	44.082	35.946	-29.918	74.000	8.137	PK

Profile: 2050534R	Page No.: 78
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



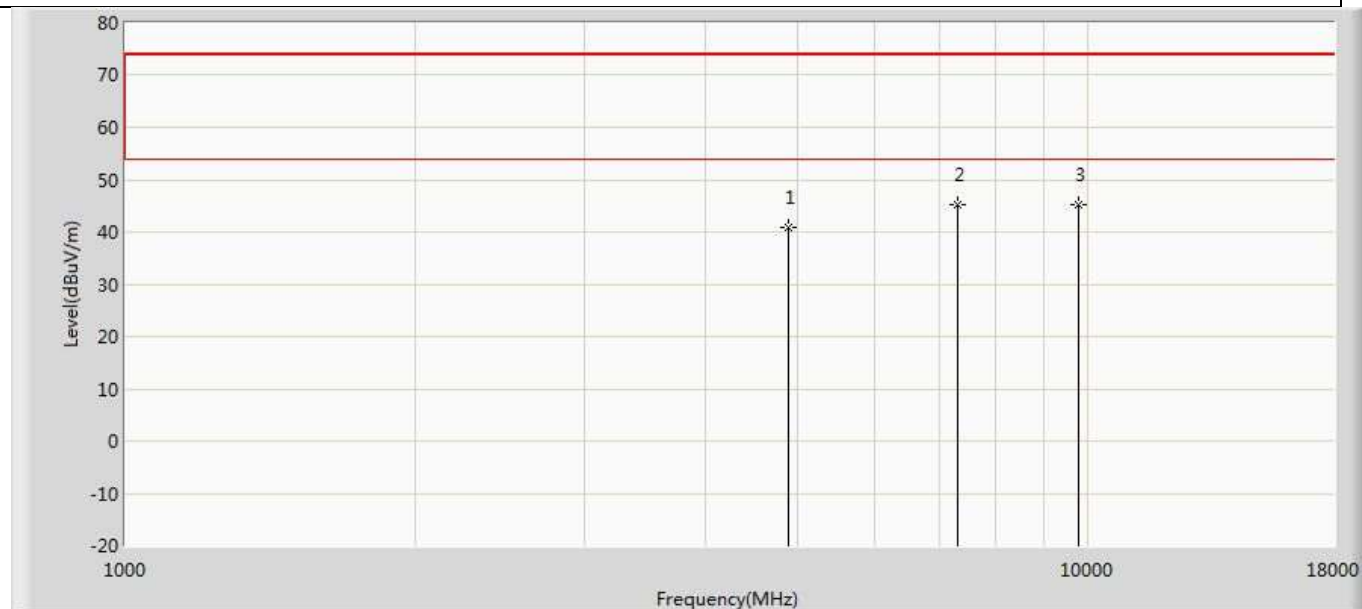
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.094	37.433	-32.906	74.000	3.662	PK
2	*	7206.000	45.343	38.680	-28.657	74.000	6.663	PK
3		9608.000	44.006	35.870	-29.994	74.000	8.137	PK

Profile: 2050534R	Page No.: 79
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



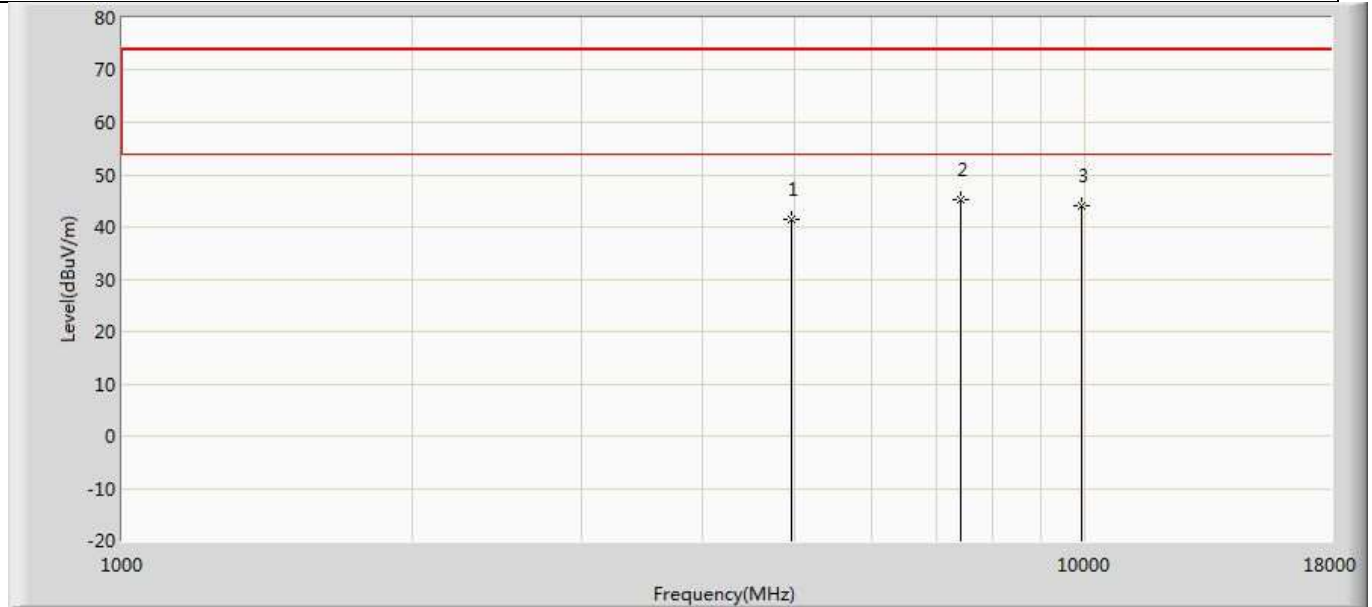
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	40.144	36.526	-33.856	74.000	3.619	PK
2	*	7323.000	45.119	38.416	-28.881	74.000	6.702	PK
3		9764.000	44.635	35.867	-29.365	74.000	8.767	PK

Profile: 2050534R	Page No.: 80
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



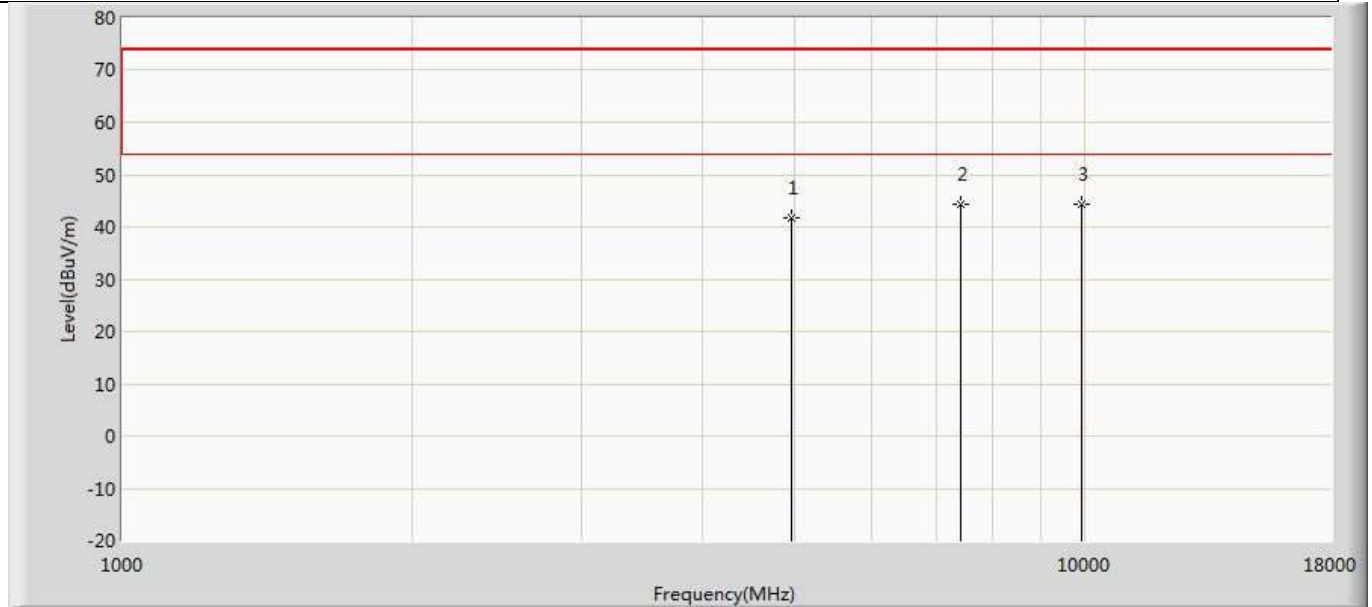
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	40.727	37.109	-33.273	74.000	3.619	PK
2		7323.000	45.108	38.405	-28.892	74.000	6.702	PK
3	*	9764.000	45.336	36.568	-28.664	74.000	8.767	PK

Profile: 2050534R	Page No.: 81
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



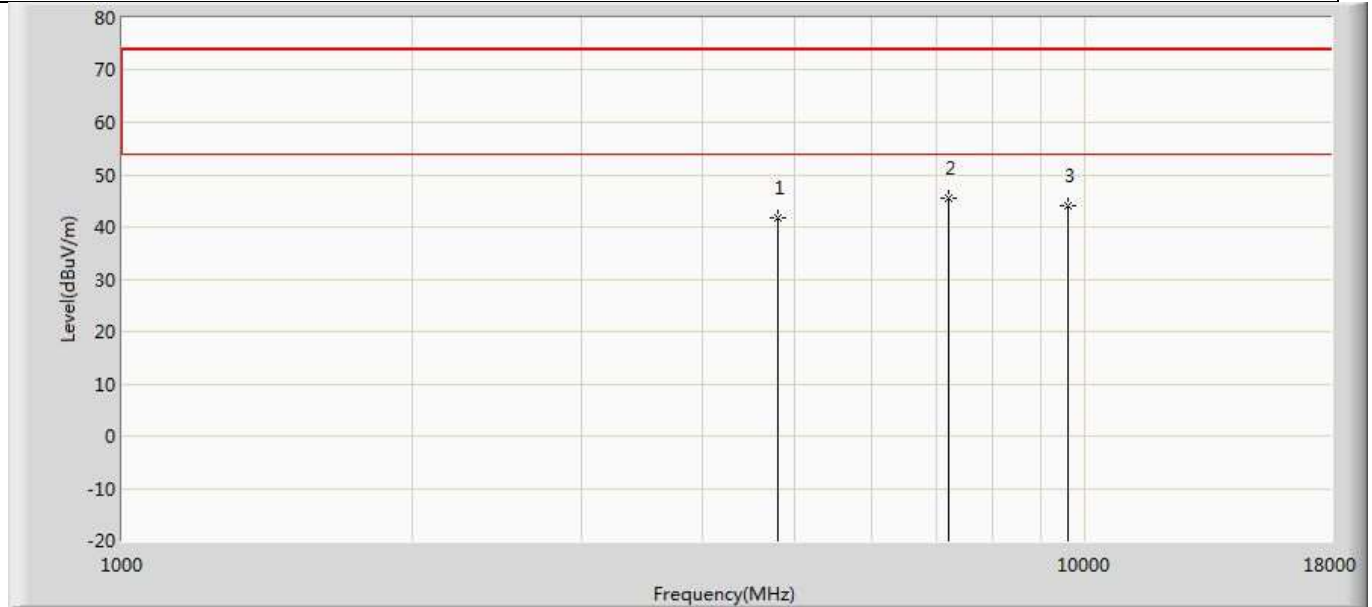
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.316	37.705	-32.684	74.000	3.611	PK
2	*	7440.000	45.176	38.591	-28.824	74.000	6.585	PK
3		9920.000	44.169	35.444	-29.831	74.000	8.725	PK

Profile: 2050534R	Page No.: 82
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:38
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	



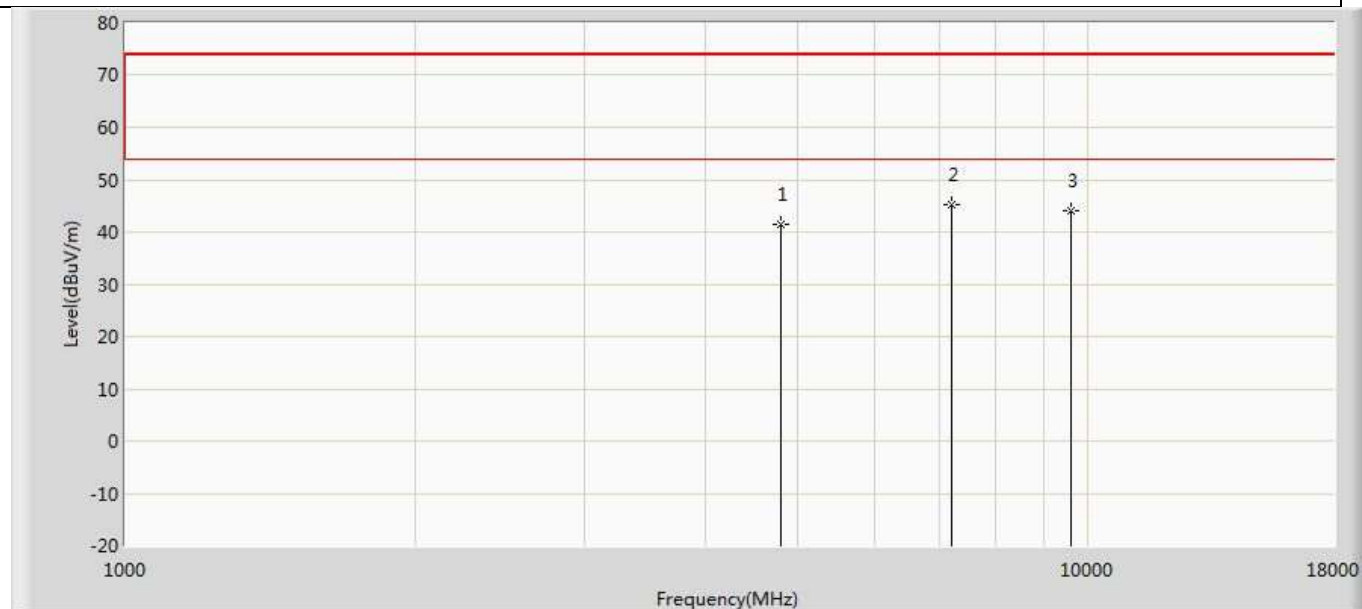
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.817	38.206	-32.183	74.000	3.611	PK
2		7440.000	44.338	37.753	-29.662	74.000	6.585	PK
3	*	9920.000	44.472	35.747	-29.528	74.000	8.725	PK

Profile: 2050534R	Page No.: 83
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:39
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 3:Transmit at 2402MHz by 3DH5	



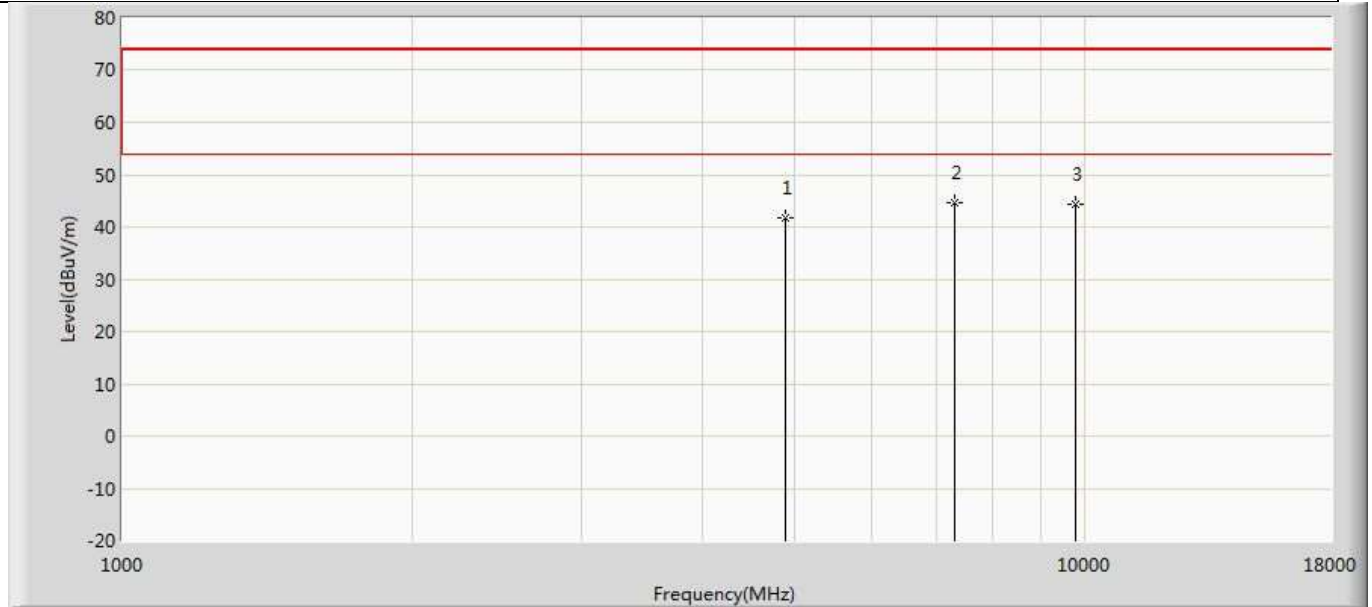
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.689	38.028	-32.311	74.000	3.662	PK
2	*	7206.000	45.641	38.978	-28.359	74.000	6.663	PK
3		9608.000	44.161	36.025	-29.839	74.000	8.137	PK

Profile: 2050534R	Page No.: 84
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:39
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	



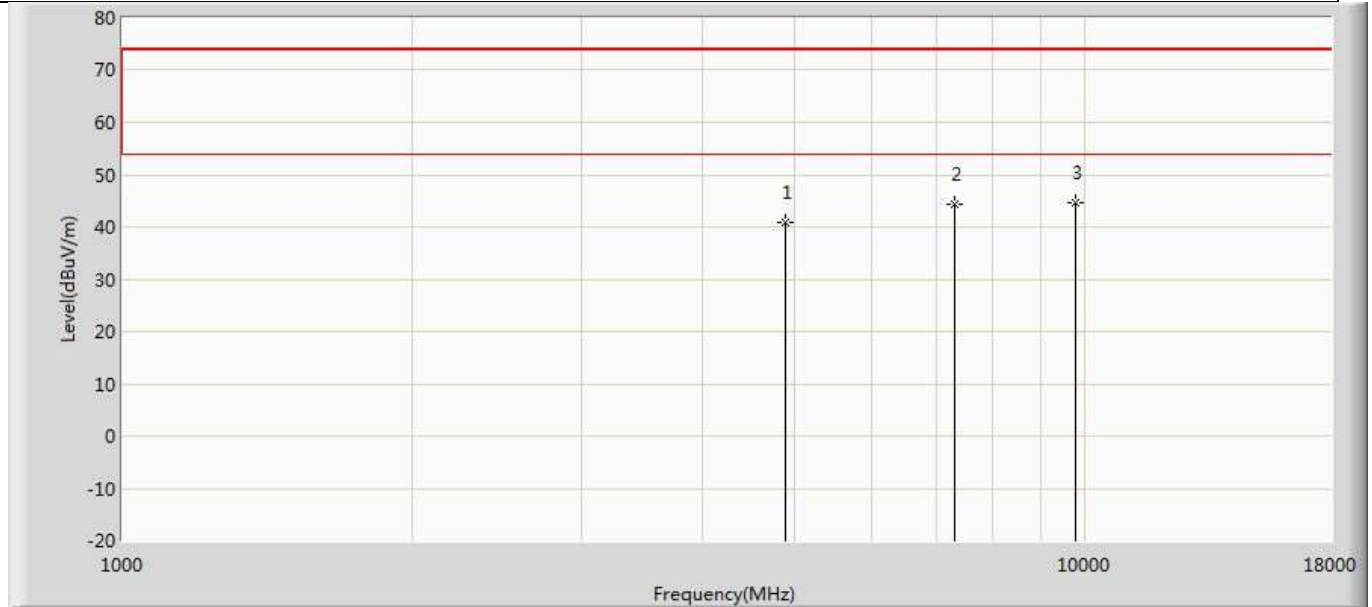
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.365	37.704	-32.635	74.000	3.662	PK
2	*	7206.000	45.138	38.475	-28.862	74.000	6.663	PK
3		9608.000	44.090	35.954	-29.910	74.000	8.137	PK

Profile: 2050534R	Page No.: 85
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:39
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 3:Transmit at 2441MHz by 3DH5	



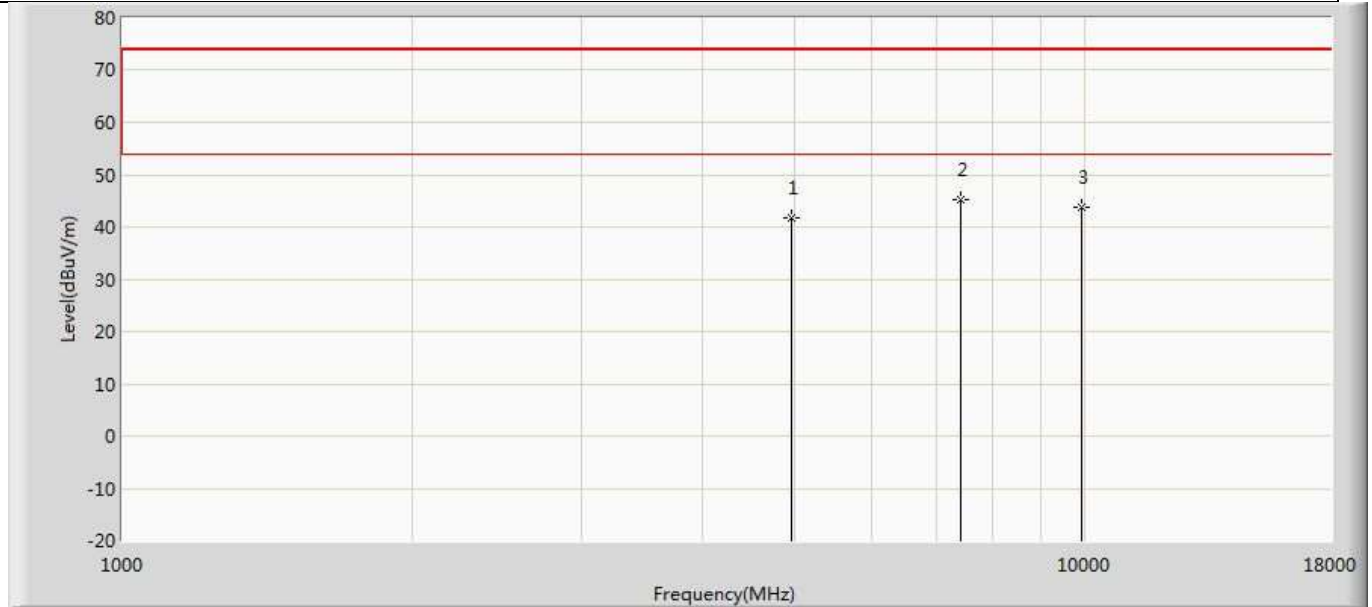
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	41.880	38.262	-32.120	74.000	3.619	PK
2	*	7323.000	44.569	37.866	-29.431	74.000	6.702	PK
3		9764.000	44.298	35.530	-29.702	74.000	8.767	PK

Profile: 2050534R	Page No.: 86
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:39
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	



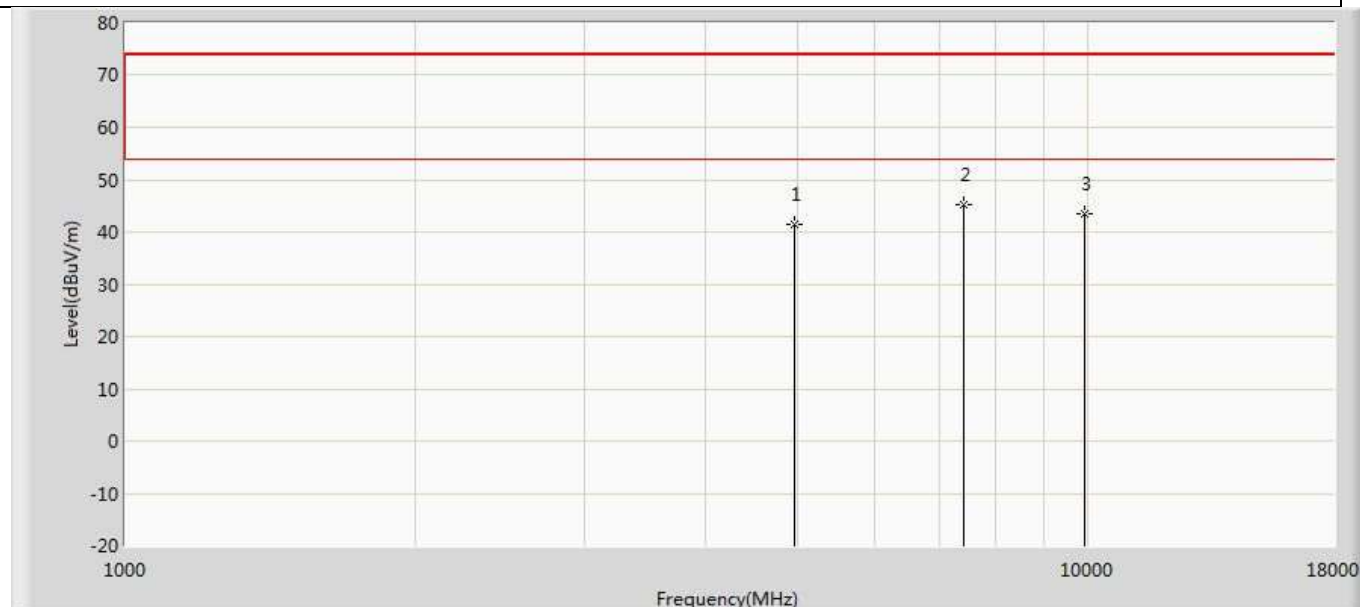
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	40.739	37.121	-33.261	74.000	3.619	PK
2		7323.000	44.340	37.637	-29.660	74.000	6.702	PK
3	*	9764.000	44.504	35.736	-29.496	74.000	8.767	PK

Profile: 2050534R	Page No.: 87
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:39
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 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		4960.000	41.623	38.012	-32.377	74.000	3.611	PK
2	*	7440.000	45.153	38.568	-28.847	74.000	6.585	PK
3		9920.000	43.859	35.134	-30.141	74.000	8.725	PK

Profile: 2050534R	Page No.: 88
Engineer: YULIU	
Site: AC5	Time: 2020/06/08 - 19:39
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	



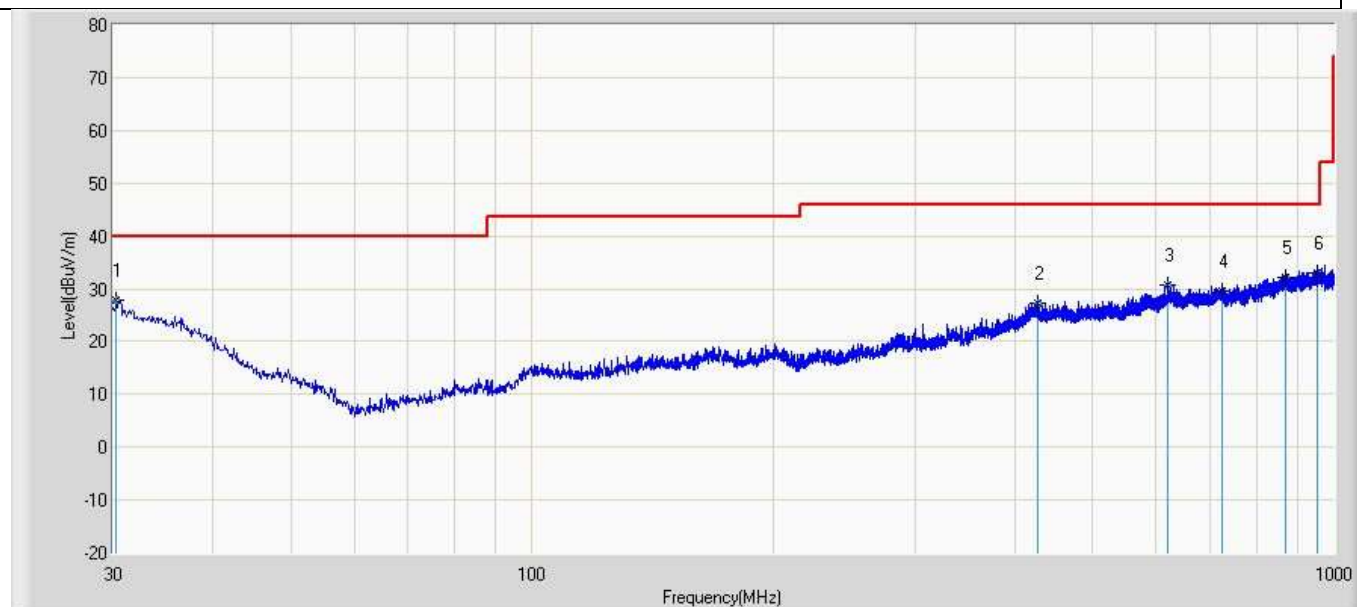
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.317	37.706	-32.683	74.000	3.611	PK
2	*	7440.000	45.199	38.614	-28.801	74.000	6.585	PK
3		9920.000	43.621	34.896	-30.379	74.000	8.725	PK

Note:

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~26GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
3. 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.
4. As the radiated emission was performed, so conducted emission was not tested.

The worst case of Radiated Emission below 1GHz:

Site: AC3	Time: 2020/05/29 - 10:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: Bluetooth headset	Power: AC 120V/60Hz
Note: Mode 1	

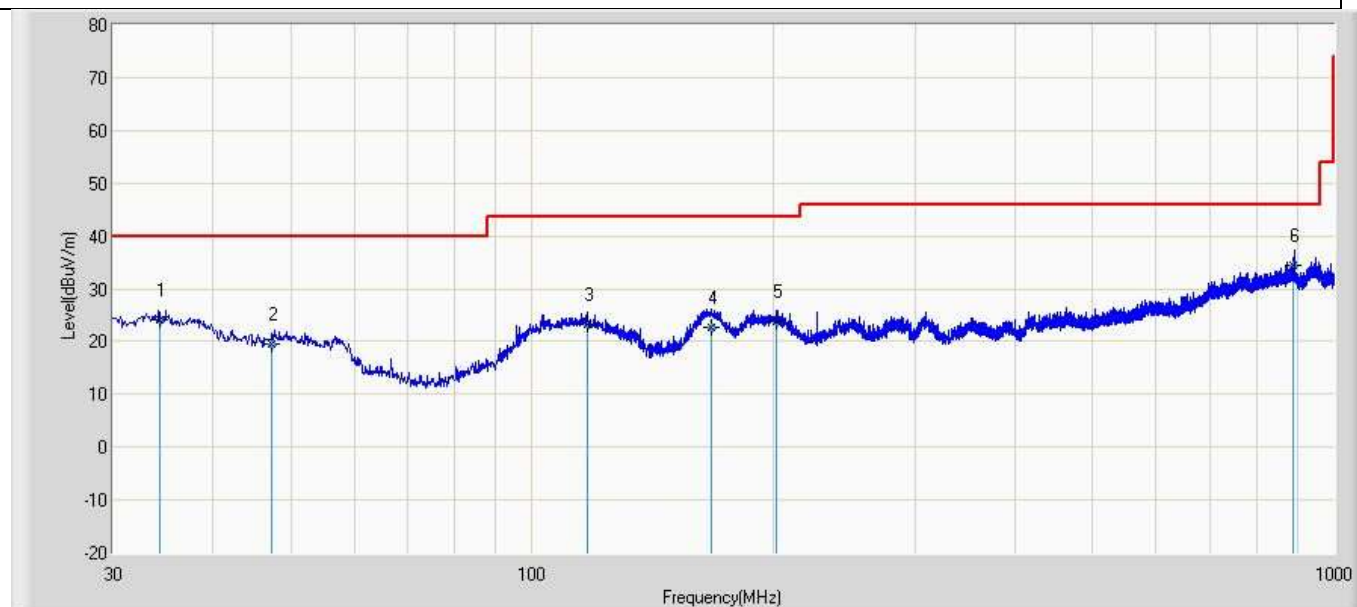


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	30.265	27.943	0.125	-12.057	40.000	27.818	QP
2		426.235	27.376	0.125	-18.624	46.000	27.252	QP
3		620.235	30.614	1.058	-15.386	46.000	29.557	QP
4		725.236	29.703	0.265	-16.297	46.000	29.438	QP
5		870.265	32.089	0.265	-13.911	46.000	31.825	QP
6		955.236	33.043	0.265	-12.957	46.000	32.778	QP

Note:

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

Site: AC3	Time: 2020/05/29 - 10:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: Bluetooth headset	Power: AC 120V/60Hz
Note: Mode 1	



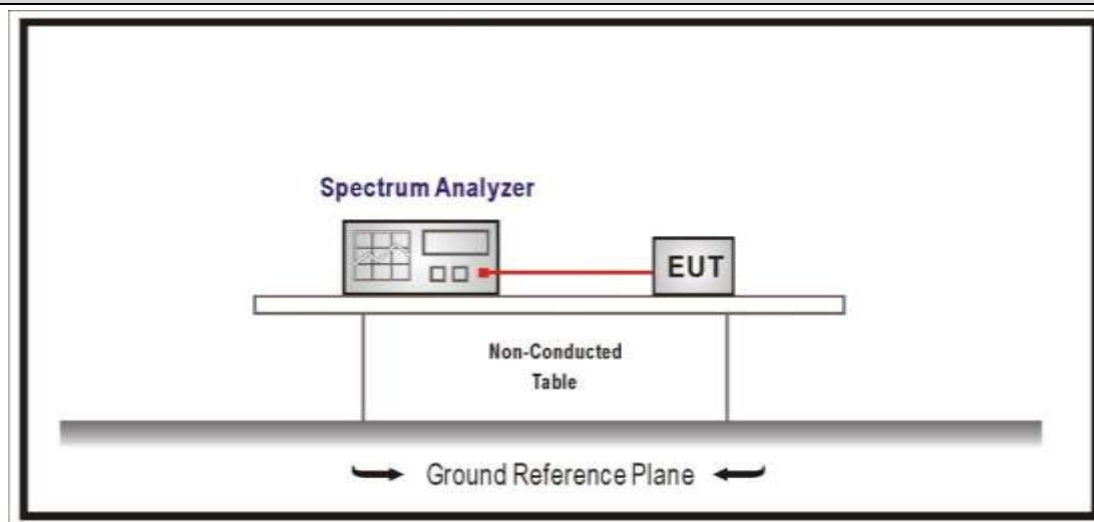
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		34.265	23.996	1.265	-16.004	40.000	22.731	QP
2		47.265	19.579	1.265	-20.421	40.000	18.314	QP
3		117.265	23.334	2.236	-20.166	43.500	21.098	QP
4		167.265	22.715	4.236	-20.785	43.500	18.479	QP
5		201.265	23.882	1.265	-19.618	43.500	22.617	QP
6	*	891.265	34.534	1.235	-11.466	46.000	33.299	QP

Note:

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

4.3 20dB Bandwidth**VERDICT: PASS****4.3.1 Limit**

Standard		FCC Part 15 Subpart C Paragraph 15.247(a)
☒	For frequency hopping systems operating in 2400-2483.5 MHz band, within frequency range.	
☐	For frequency hopping systems operating in 902-928 MHz band, the maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.	
☐	For frequency hopping systems operating in 5725-5850 MHz band, the maximum 20 dB bandwidth of the hopping channel is 1 MHz.	

4.3.2 Test Setup**4.3.3 Test Procedure**

References Rule		Chapter	Description
☒	ANSI C63.10	6.9	Occupied bandwidth tests
☒	ANSI C63.10	6.9.2	Occupied bandwidth—relative measurement procedure

4.3.4 Test Data

Mode	Channel	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
1	00	2402	931.0	867.94
	39	2441	929.4	870.22
	79	2480	927.2	864.97
2	00	2402	1331	1214.5
	39	2441	1336	1219.1
	79	2480	1335	1209.2
3	00	2402	1339	1218.5
	39	2441	1340	1222.9
	79	2480	1336	1215.8

Note 1: The worst data plot as below:

Mode3/CH00/2402MHz



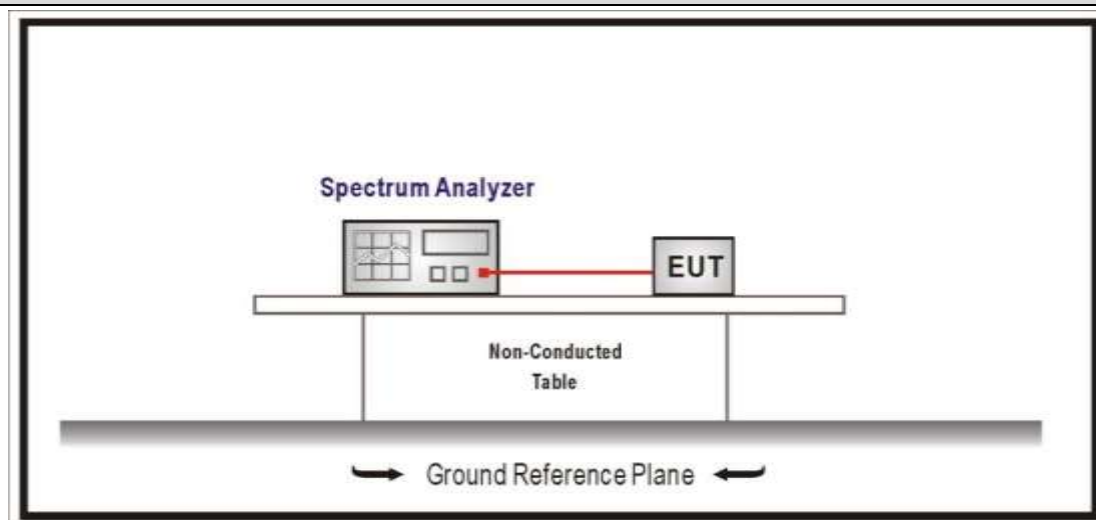
4.4 Carrier Frequency Separation

VERDICT: PASS

4.4.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(a)
☐	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.
☒	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.
☐	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
☐	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
☐	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.

4.4.2 Test Setup



4.4.3 Test Procedure

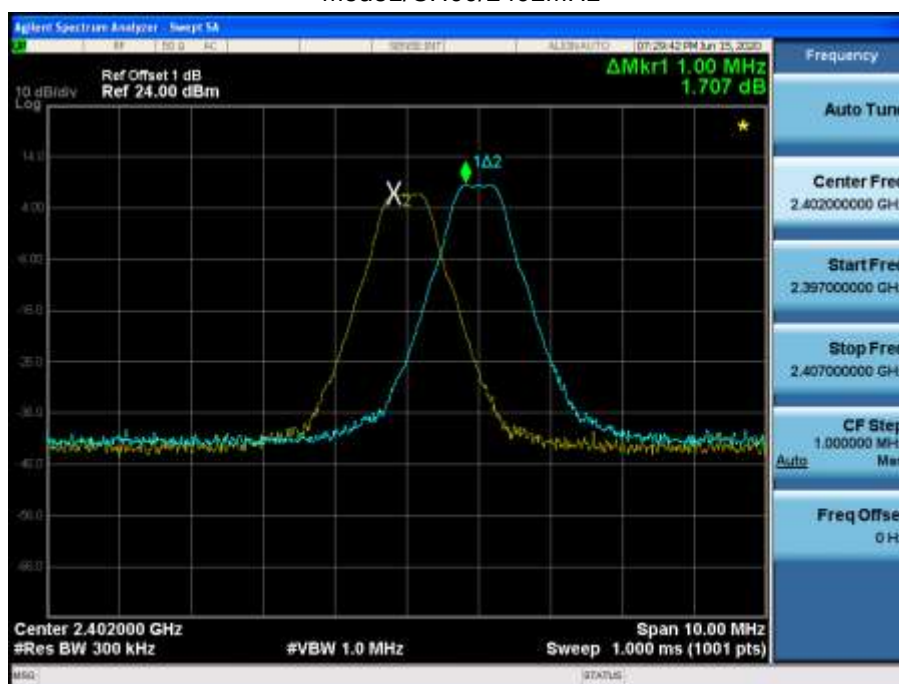
References Rule	Chapter	Description
☒ ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
☒ ANSI C63.10	7.8.2	Carrier frequency separation

4.4.4 Test Data

Mode	Channel	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
1	00	2402	1000	931.0	Pass
	39	2441	1000	929.4	Pass
	78	2480	1000	927.2	Pass
2	00	2402	1000	887.3	Pass
	39	2441	1000	890.7	Pass
	78	2480	1000	890.0	Pass
3	00	2402	1000	892.7	Pass
	39	2441	1000	893.3	Pass
	78	2480	1000	890.7	Pass

Note 1: The worst data plot as below:

Mode1/CH00/2402MHz



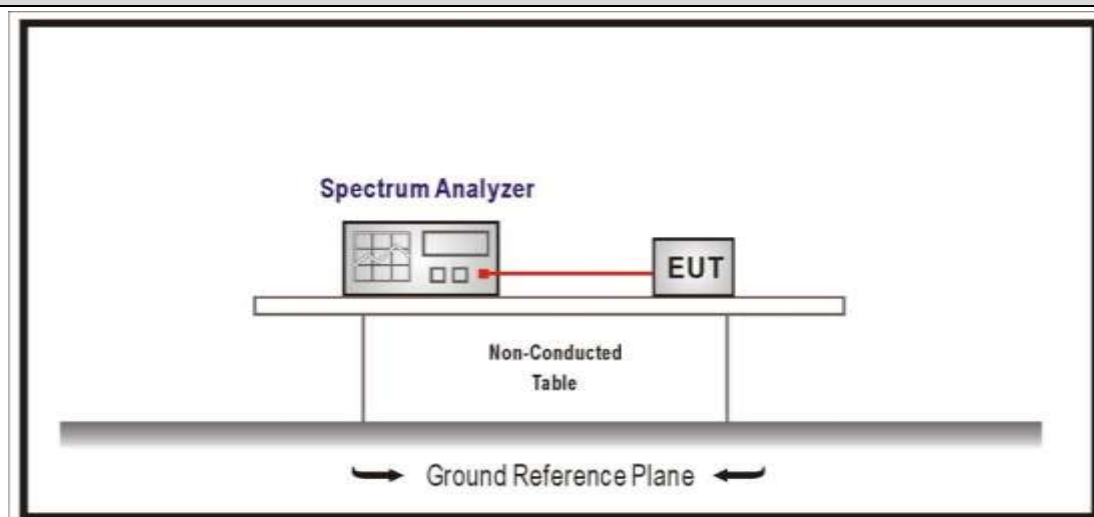
4.5 Number of hopping Frequencies

VERDICT: PASS

4.5.1 Limit

Standard		FCC Part 15 Subpart C Paragraph 15.247(a)
☒	For frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies.	
☐	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.	
☐	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.	
☐	For frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies.	

4.5.2 Test Setup



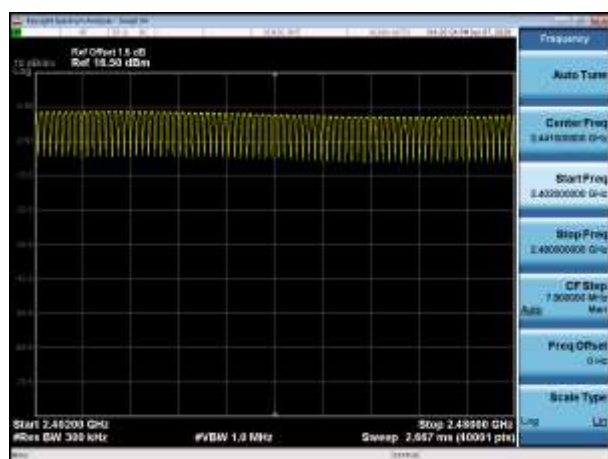
4.5.3 Test Procedure

References Rule		Chapter	Description
☒	ANSI C63.10	7.8.	Evaluation of frequency-hopping device parameters
☒	ANSI C63.10	7.8.3	Number of Hopping Frequencies

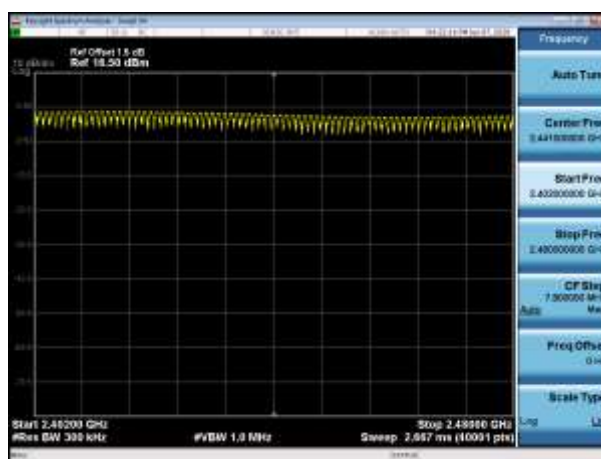
4.5.4 Test Data

Mode	Number of Hopping Frequencies	Limit	Result
1	79	>15	Pass
2	79	>15	Pass
3	79	>15	Pass

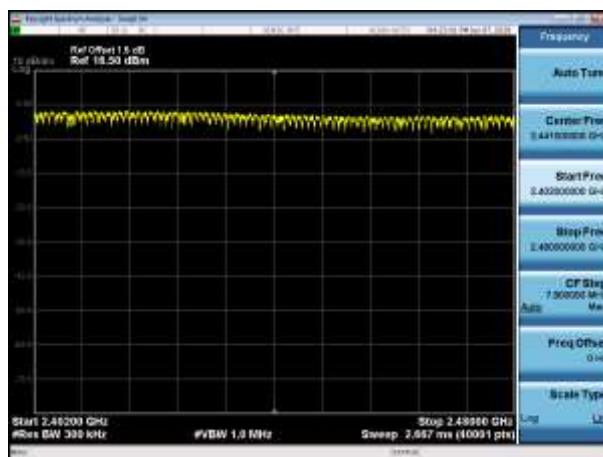
Mode 1



Mode 2

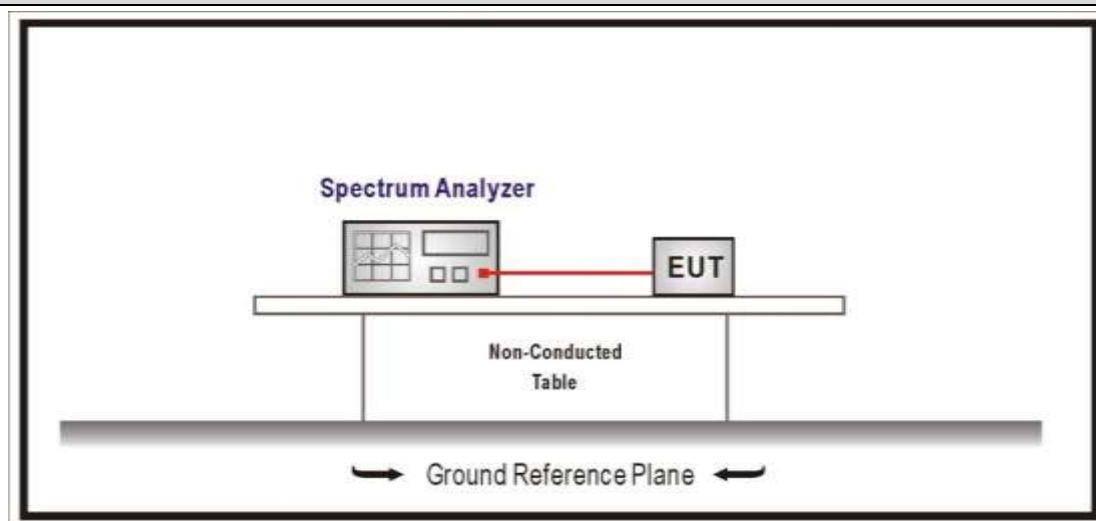


Mode 3



4.6 Time of Occupancy(Dwell Time)**VERDICT: PASS****4.6.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247(a)
☒	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.
☐	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
☐	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.
☐	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.

4.6.2 Test Setup**4.6.3 Test Procedure**

References Rule	Chapter	Description
☒ ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
☒ ANSI C63.10	7.8.4	Time of occupancy (dwell time)

4.6.4 Test Data

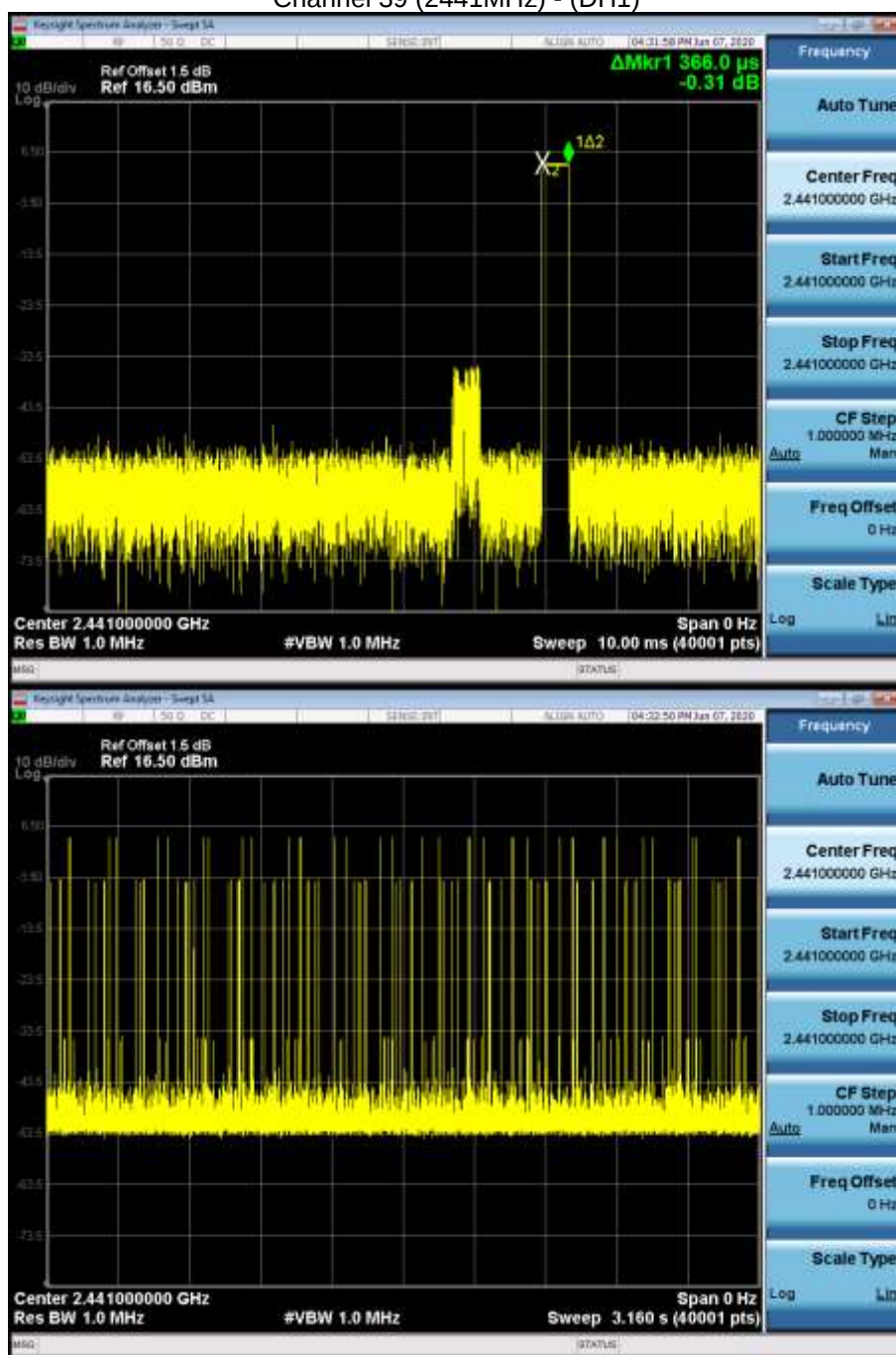
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	109.8	< 400	Pass

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

Note2: Time of Occupancy = $0.366 \times 30 \times 31.6 / 3.16 = 109.8 \text{ ms}$

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

Channel 39 (2441MHz) - (DH1)



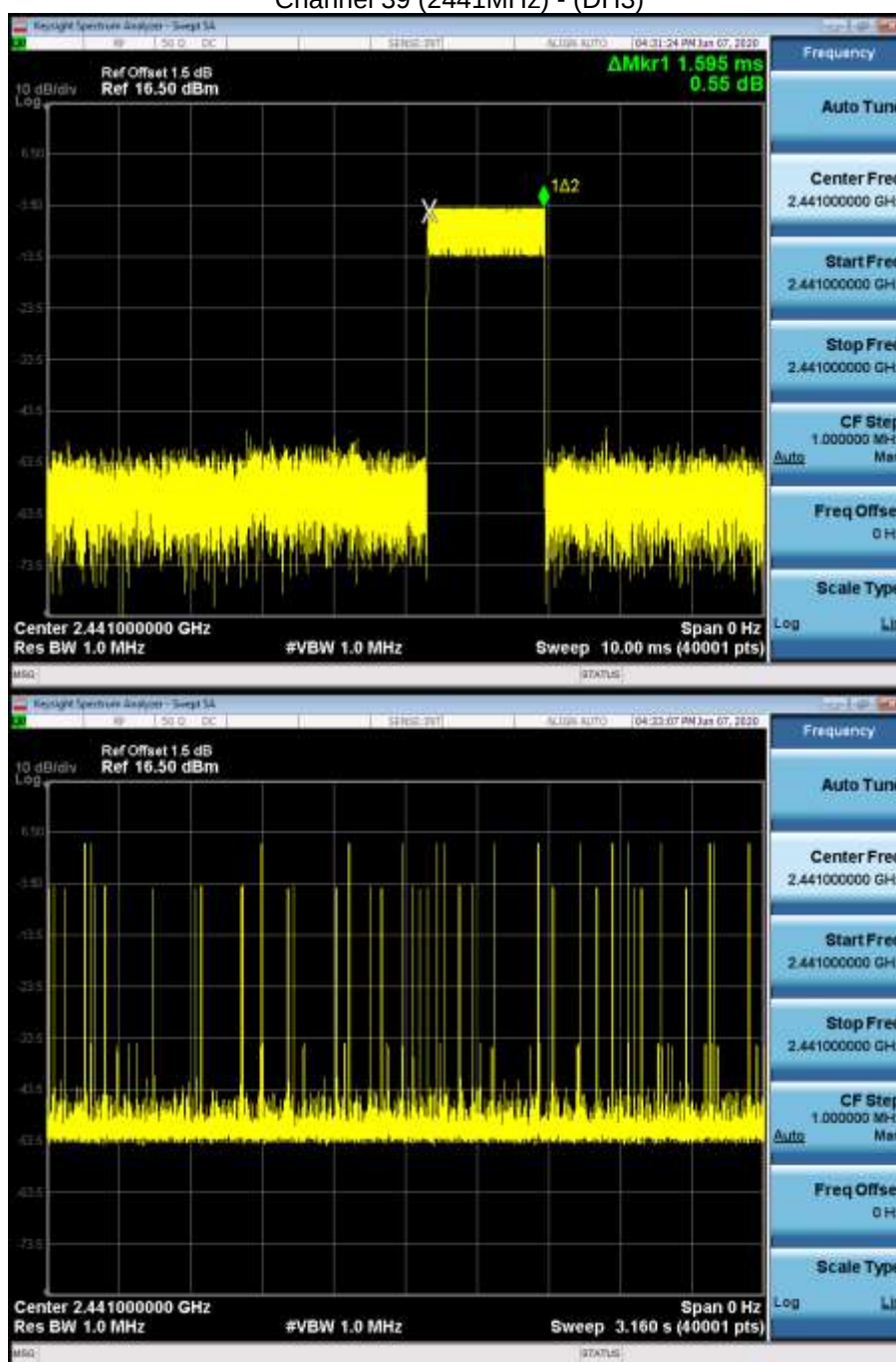
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	255.2	< 400	Pass

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

Note2: Time of Occupancy = $1.595 \times 16 \times 31.6 / 3.16 = 255.2 \text{ ms}$

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

Channel 39 (2441MHz) - (DH3)



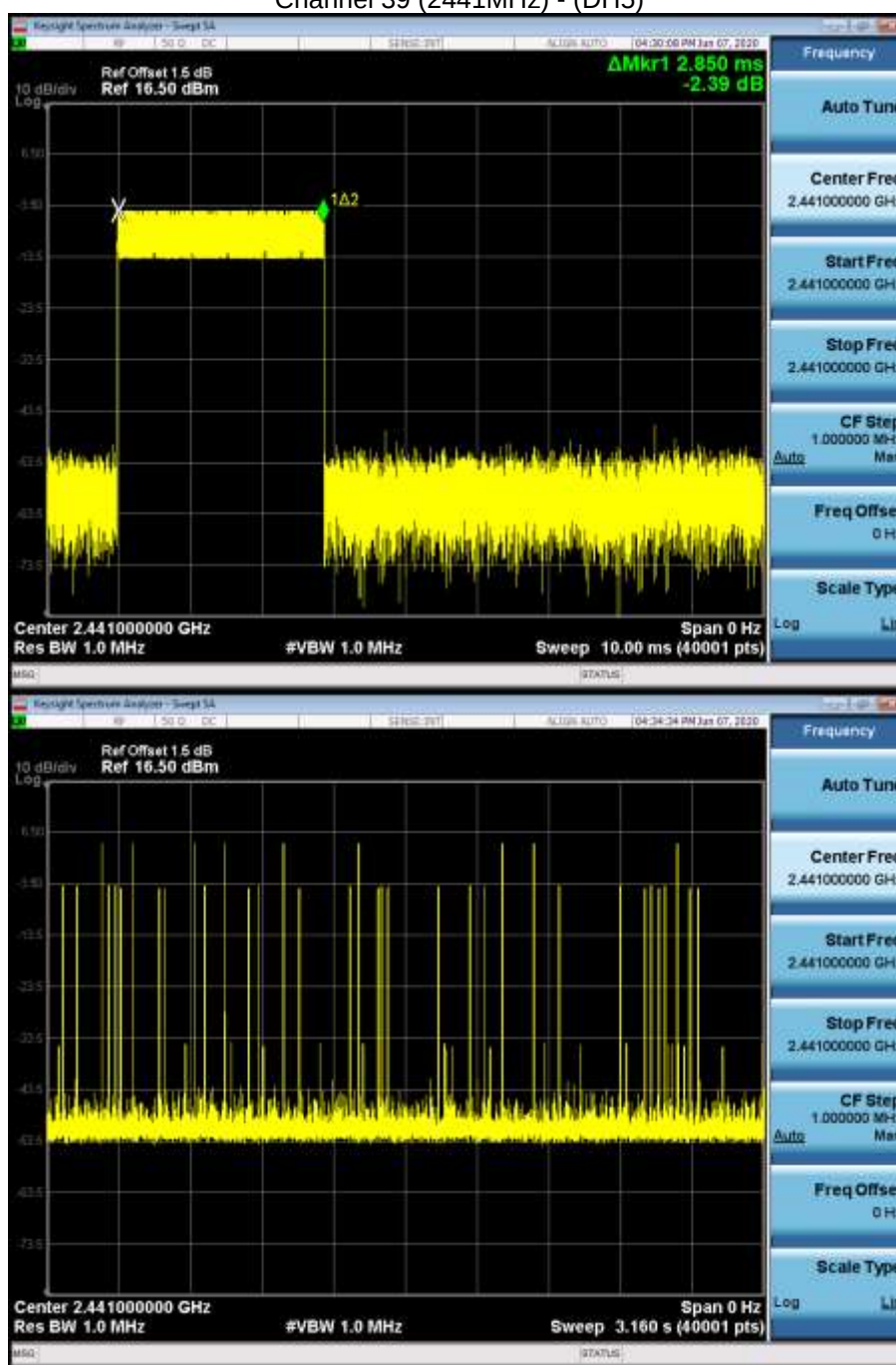
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	256.5	< 400	Pass

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

Note2: Time of Occupancy = $2.85 \times 9 \times 31.6 / 3.16 = 256.5 \text{ ms}$

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

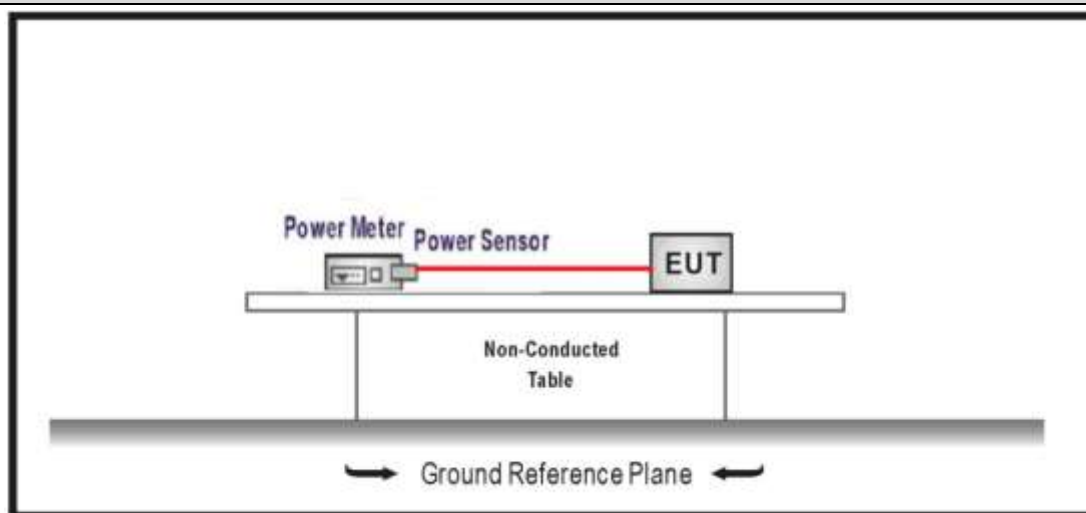
Channel 39 (2441MHz) - (DH5)



Note: The packet time of AFH mode is same as normal mode, due to the packet time of AFH mode multiply with lesser factor is dwell time of $0.4 \times 20 = 8 \text{ S}$, the dwell time of AFH mode comply with the limit.

4.7 Peak Output Power**VERDICT: PASS****4.7.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(1)
☒	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.
☒	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.
☐	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

4.7.2 Test Setup

4.7.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		7.8	Evaluation of frequency-hopping device parameters
	☒	ANSI C63.10	7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Peak Conducted Power Output (dBm)	Limit (dBm)	Peak EIRP Power Output (dBm)	EIRP Limit (dBm)	Result
Mode 1	00	2402	8.81	≤30	12.40	≤36	Pass
	39	2441	8.83	≤30	12.42	≤36	Pass
	78	2480	8.85	≤30	12.44	≤36	Pass
Mode 2	00	2402	8.45	≤21	12.04	≤36	Pass
	39	2441	8.57	≤21	12.16	≤36	Pass
	78	2480	8.59	≤21	12.18	≤36	Pass
Mode 3	00	2402	8.62	≤21	12.21	≤36	Pass
	39	2441	8.55	≤21	12.14	≤36	Pass
	78	2480	8.40	≤21	11.99	≤36	Pass

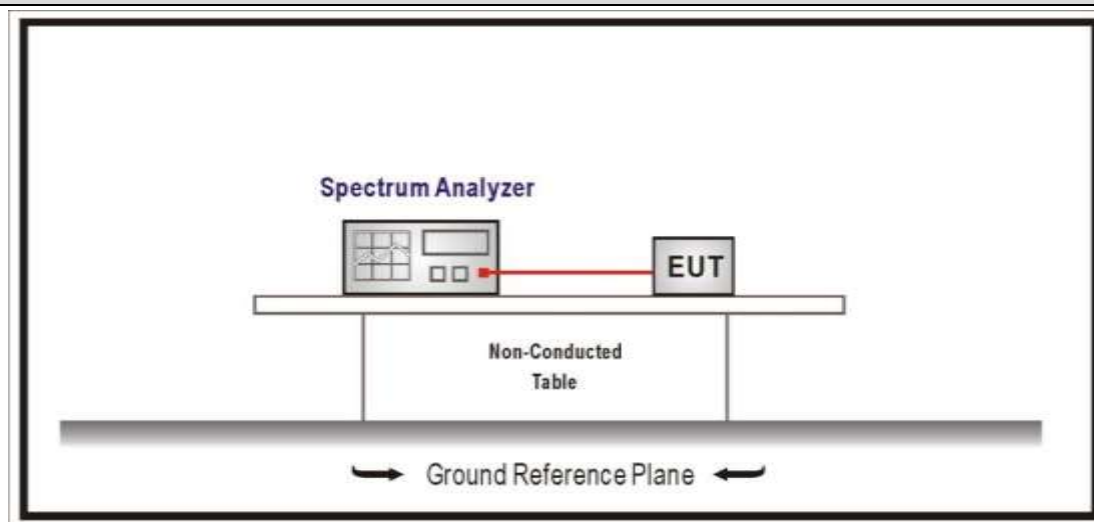
Mode	Channel	Test Frequency (MHz)	Average Conducted Power Output (dBm)	Limit (dBm)	Average EIRP Power Output (dBm)	EIRP Limit (dBm)	Result
Mode 1	00	2402	8.63	≤30	12.22	≤36	Pass
	39	2441	8.57	≤30	12.16	≤36	Pass
	78	2480	8.51	≤30	12.10	≤36	Pass
Mode 2	00	2402	8.23	≤21	11.82	≤36	Pass
	39	2441	8.21	≤21	11.80	≤36	Pass
	78	2480	8.17	≤21	11.76	≤36	Pass
Mode 3	00	2402	8.41	≤21	12.00	≤36	Pass
	39	2441	8.24	≤21	11.83	≤36	Pass
	78	2480	8.17	≤21	11.76	≤36	Pass

4.8 Emissions in non-restricted frequency band**VERDICT: PASS****4.8.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247(d)
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30dBc(Note1)
RF Output power(PK detector)	20dBc(Note2)

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).

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).

4.8.2 Test Setup**4.8.3 Test Procedure**

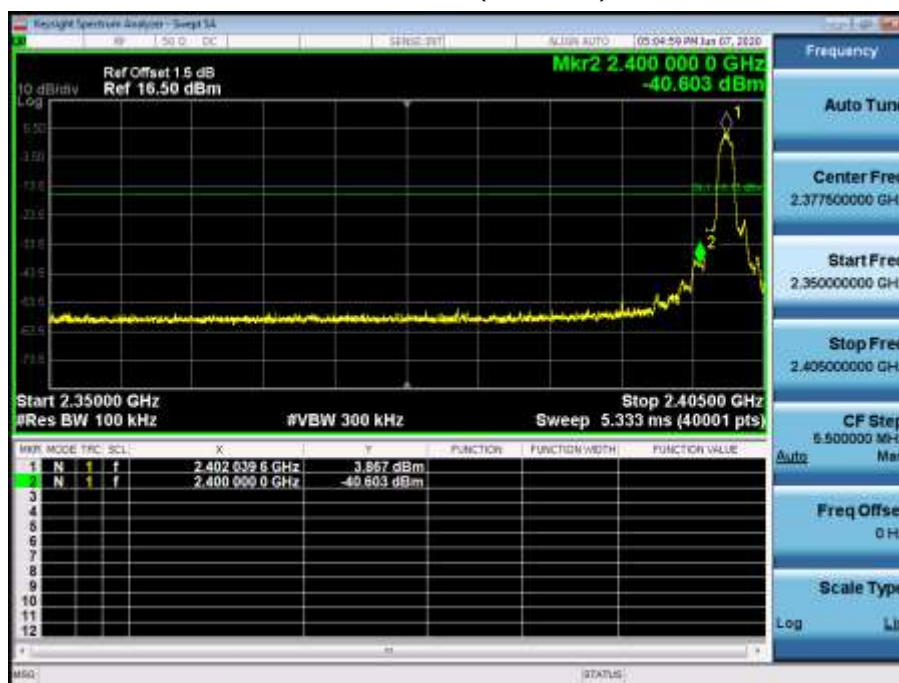
References Rule	Chapter	Description
☒ ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
☒ ANSI C63.10	7.8.6	Band-edge measurements for RF conducted emissions

4.8.4 Test Data

Mode	Channel	Test Frequency (MHz)	Maximum In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	00	2402	4.709	2400	-52.224	56.933	>20	Pass
	78	2480	3.769	2500	-59.192	62.961	>20	Pass
2	00	2402	4.335	2400	-42.131	46.466	>20	Pass
	78	2480	3.543	2500	-58.160	61.703	>20	Pass
3	00	2402	3.867	2400	-40.603	44.470	>20	Pass
	78	2480	2.782	2500	-59.838	62.620	>20	Pass

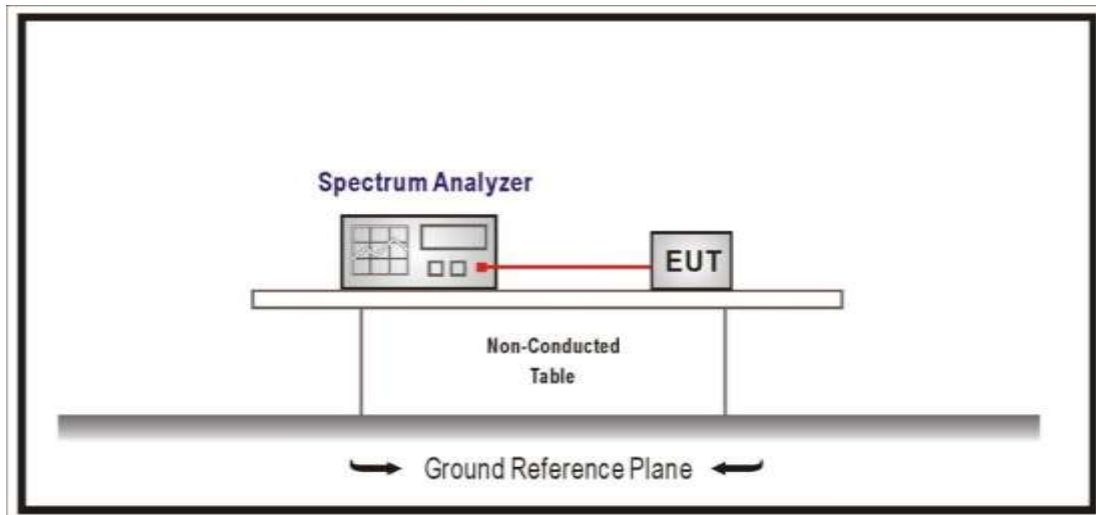
Note: The worst data as shown in below:

Mode 3 CH00(2402MHz)



4.9 Duty cycle**VERDICT: PASS****4.9.1 Limit**

N/A

4.9.2 Test Setup**4.9.3 Test Procedure**

References Rule		Chapter	Description
☒	ANSI C63.10	11.6	Duty cycle (D), transmission duration (T), and maximum power control level

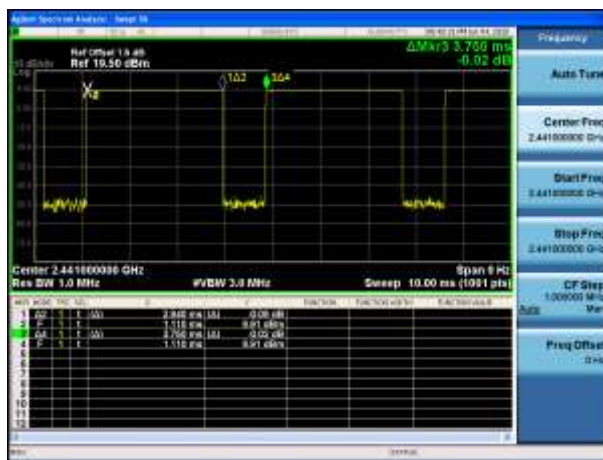
4.9.4 Test Data

Test Mode	Tx On (ms)	Tx Off (ms)	VBW (Hz)	Tx On + Tx Off (ms)	Duty Cycle (%)
Mode 1	2.84	0.91	360	3.75	75.7
Mode 2	2.85	0.90	360	3.75	76.0
Mode 3	2.85	0.91	360	3.76	75.8

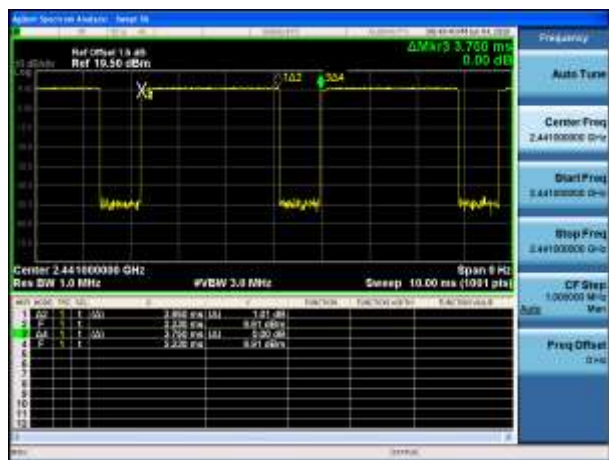
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Note 2: According to KDB 558074, when test for Radiated Emission Band Edge and Radiated Emission, for average detector set: $VBW \geq 1/T$ will be used.

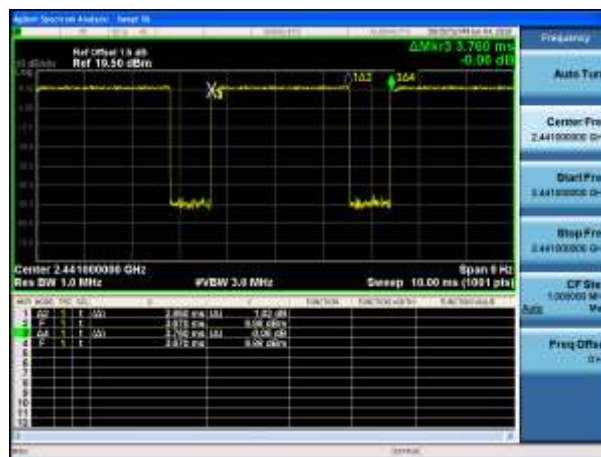
Mode 1 CH39 2441MHz



Mode 2 CH39 2441MHz



Mode 3 CH39 2441MHz



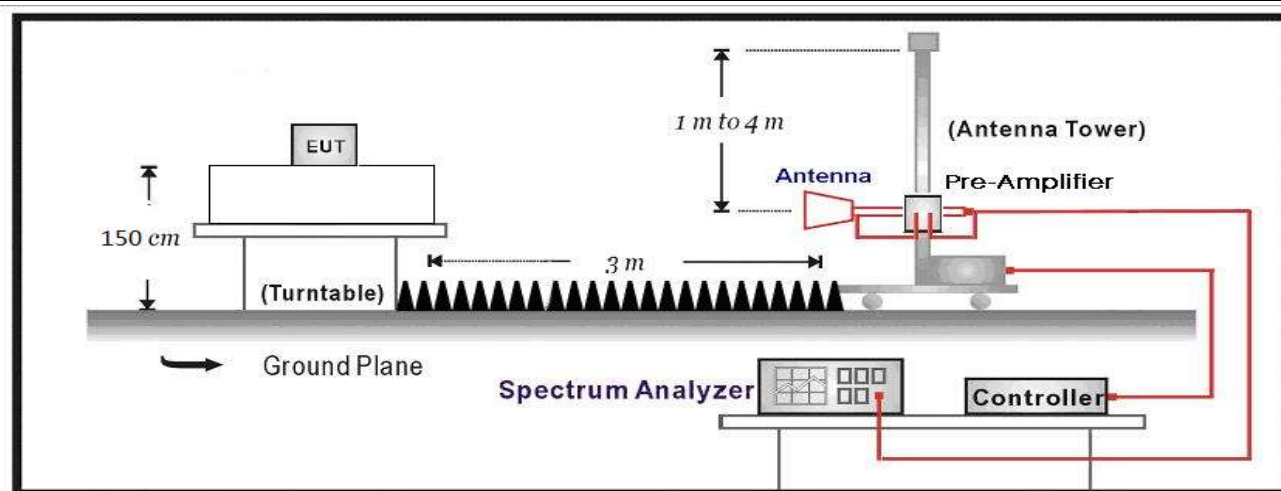
4.10 Radiated Emission Band Edge**VERDICT: PASS****4.10.1 Limit**

Standard		FCC Part 15 Subpart C Paragraph 15.247(d) , 15.209		
Frequency bands (MHz)	Detector	Limit (dB μ 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.

4.10.2 Test Setup

Above 1GHz Test Setup:

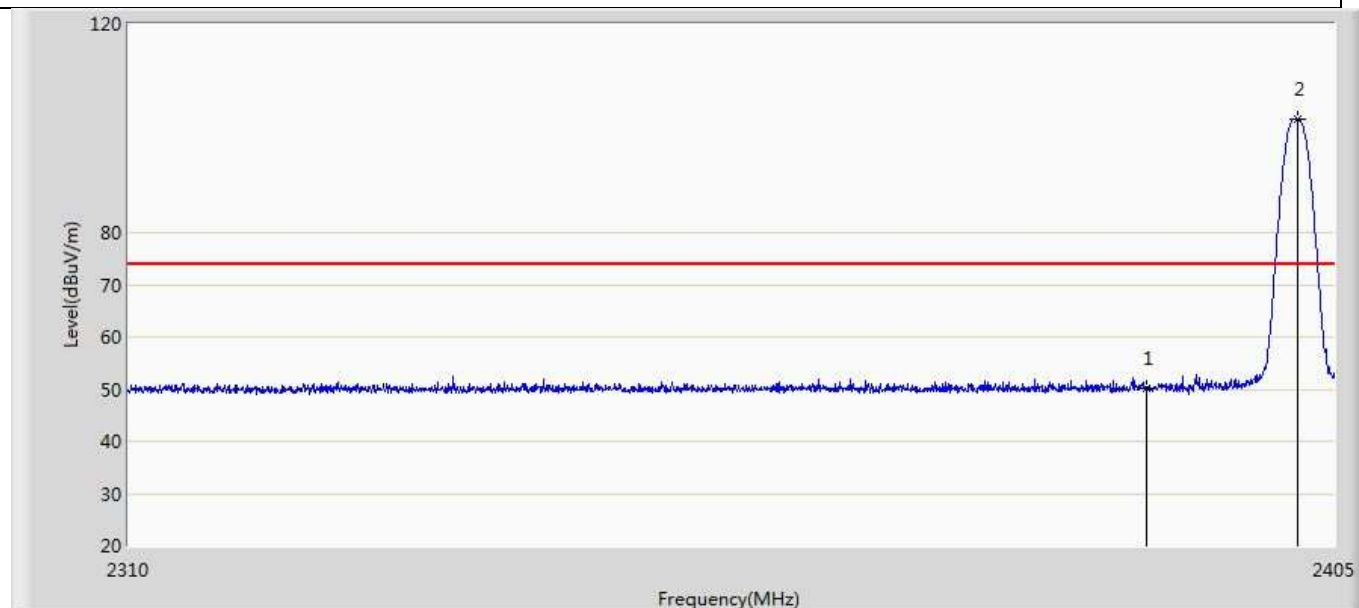
**4.10.3 Test Procedure**

Test Method

	References Rule	Chapter	Description
☐	DA 00-705	N/A	duty cycle correction factor
☒	ANSI C63.10	6.10	Band-edge testing
☒	ANSI C63.10	6.10.5	Restricted-band band-edge measurements
☐	ANSI C63.10	6.10.6	Marker-delta method
☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

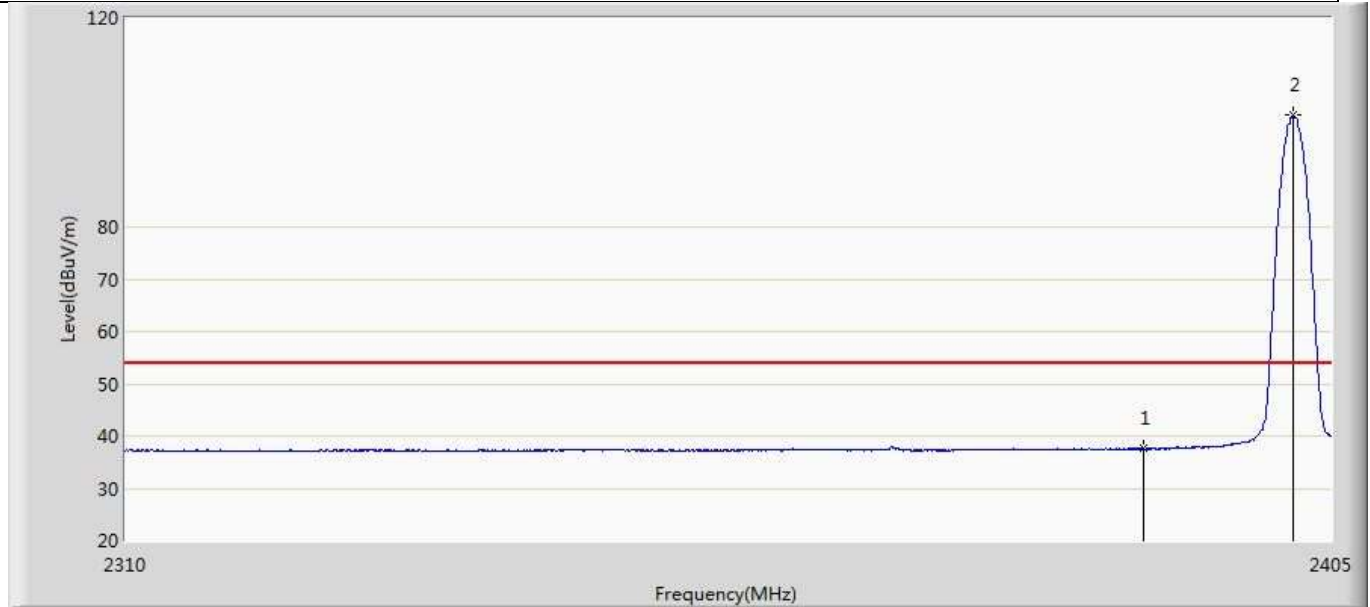
4.10.4 Test Data

Profile: 2050534R	Page No.: 1
Engineer: YULIU	
Site: AC5	Time: 2020/03/12 - 00:39
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	



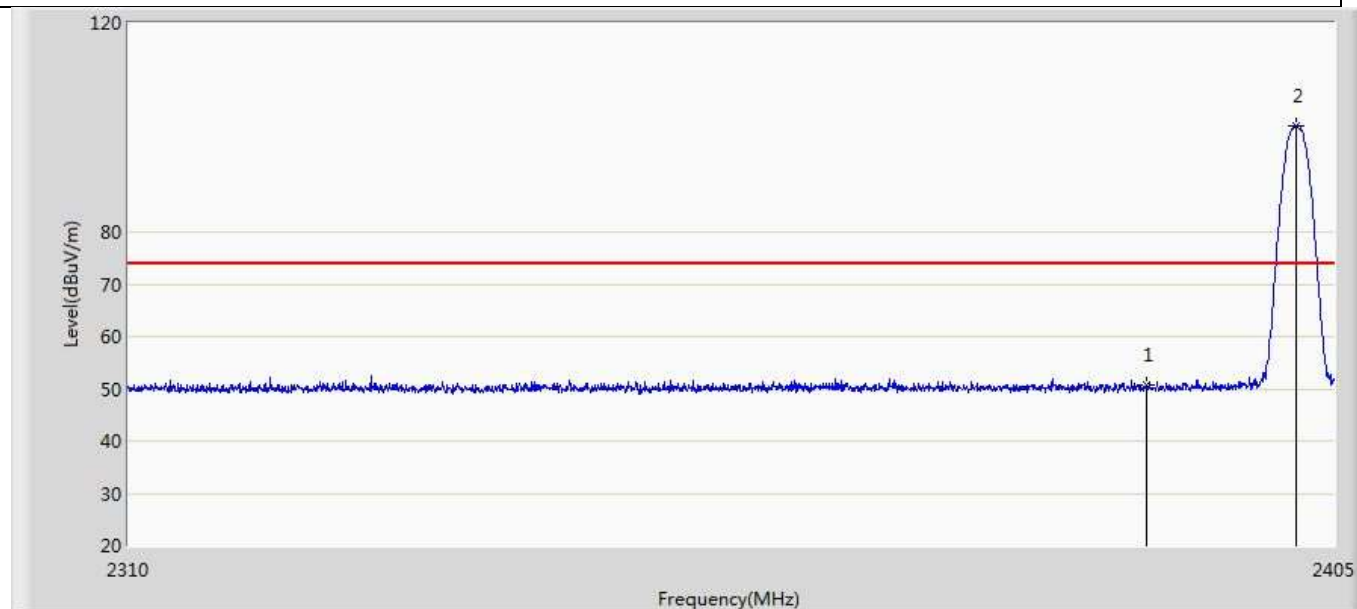
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.029	14.714	-23.971	74.000	35.315	PK
2	*	2402.055	101.774	66.462	N/A	N/A	35.312	PK

Profile: 2050534R	Page No.: 2
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 14:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth headset	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



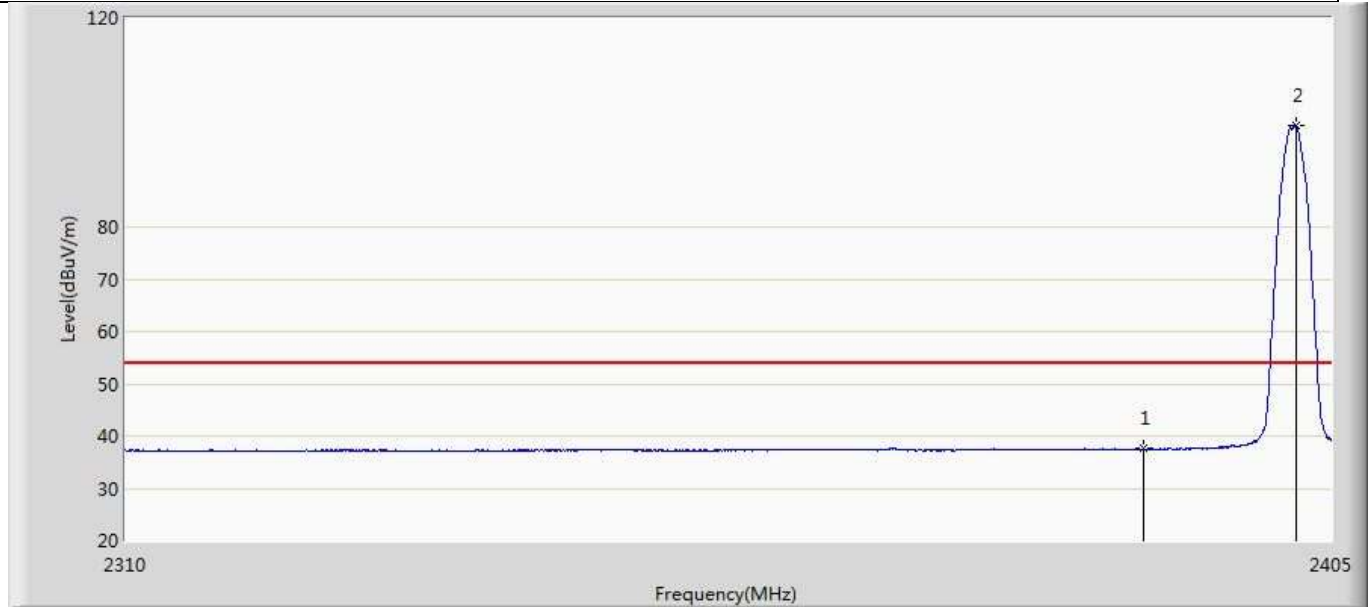
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.556	2.241	-16.444	54.000	35.315	AV
2	*	2401.960	101.345	66.033	N/A	N/A	35.312	AV

Profile: 2050534R	Page No.: 3
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 14:53
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	



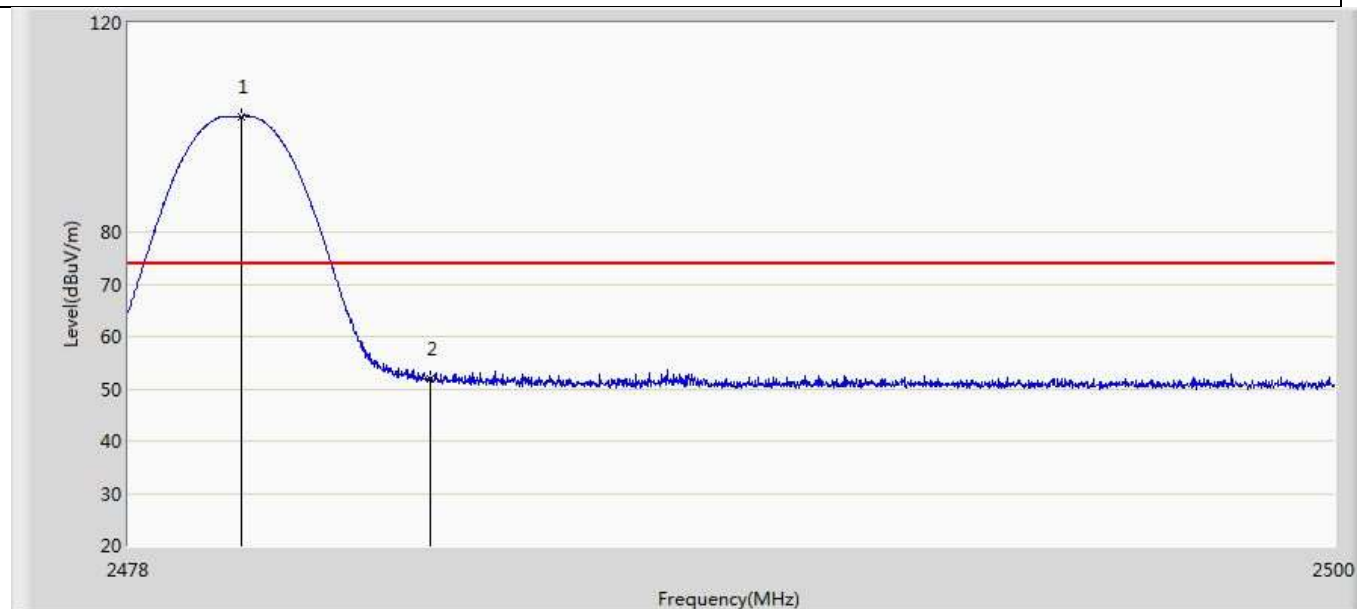
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.696	15.381	-23.304	74.000	35.315	PK
2	*	2401.913	100.190	64.877	N/A	N/A	35.312	PK

Profile: 2050534R	Page No.: 4
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 14:56
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	



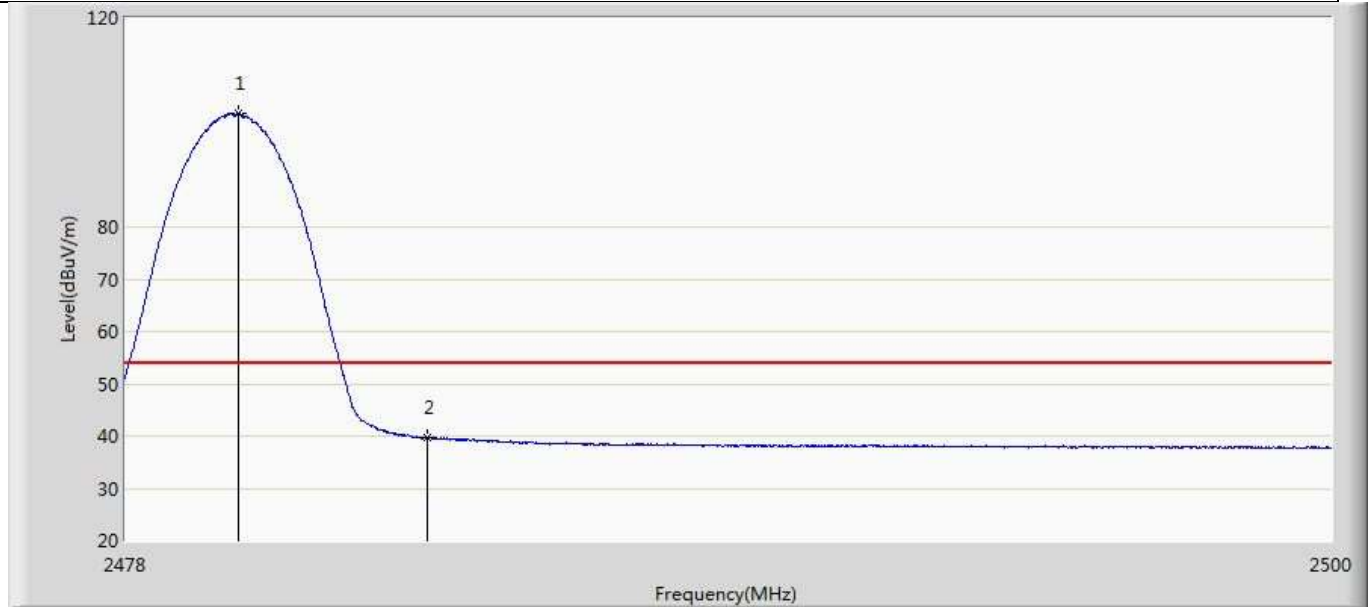
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.550	2.235	-16.450	54.000	35.315	AV
2	*	2402.150	99.422	64.110	N/A	N/A	35.312	AV

Profile: 2050534R	Page No.: 5
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 14:59
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	



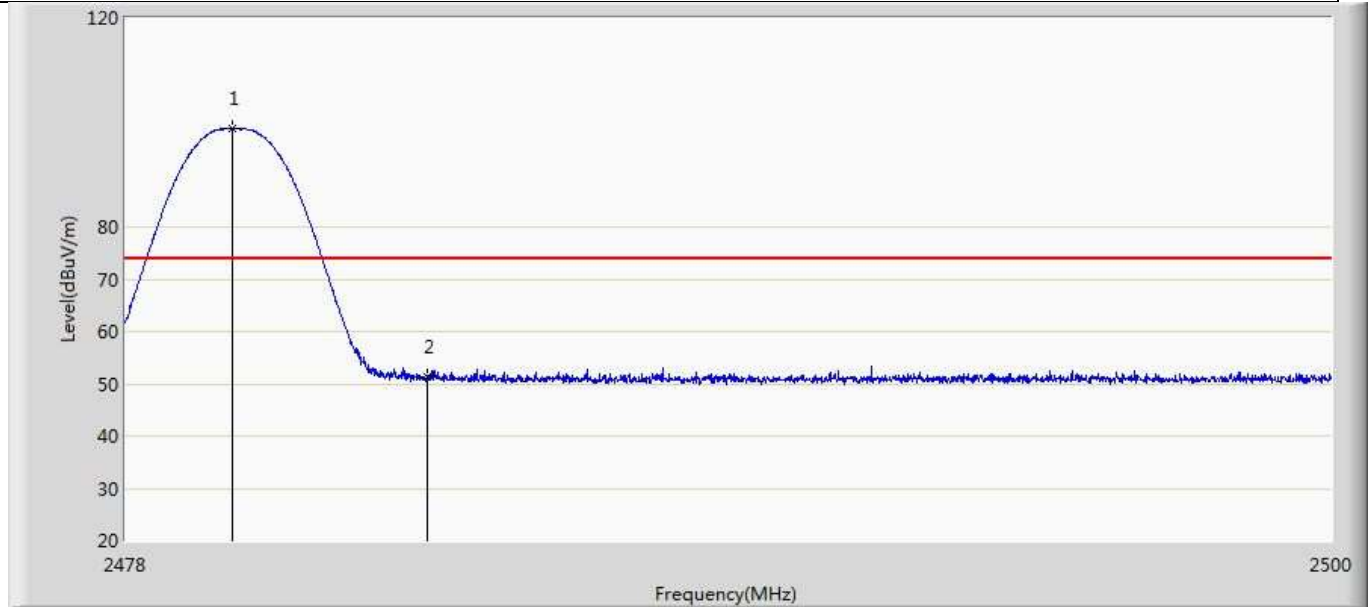
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.057	102.157	66.858	N/A	N/A	35.299	PK
2		2483.500	51.951	16.653	-22.049	74.000	35.297	PK

Profile: 2050534R	Page No.: 6
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:04
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	



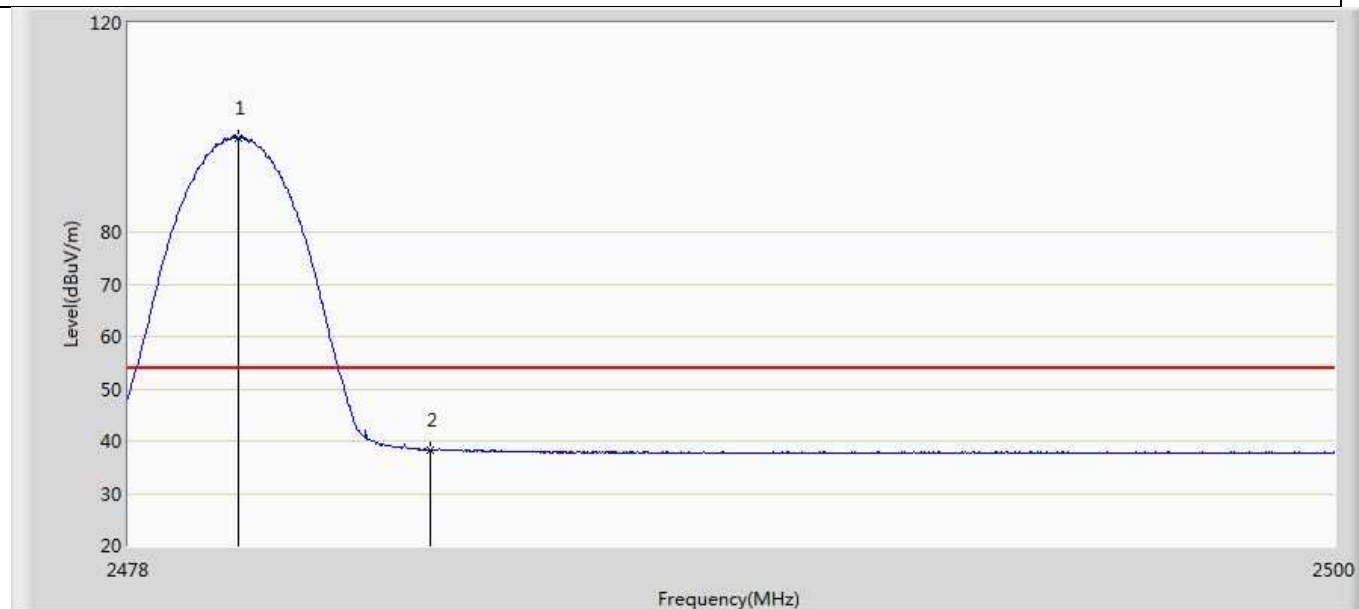
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	101.737	66.438	N/A	N/A	35.299	AV
2		2483.500	39.733	4.435	-14.267	54.000	35.297	AV

Profile: 2050534R	Page No.: 7
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:08
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	



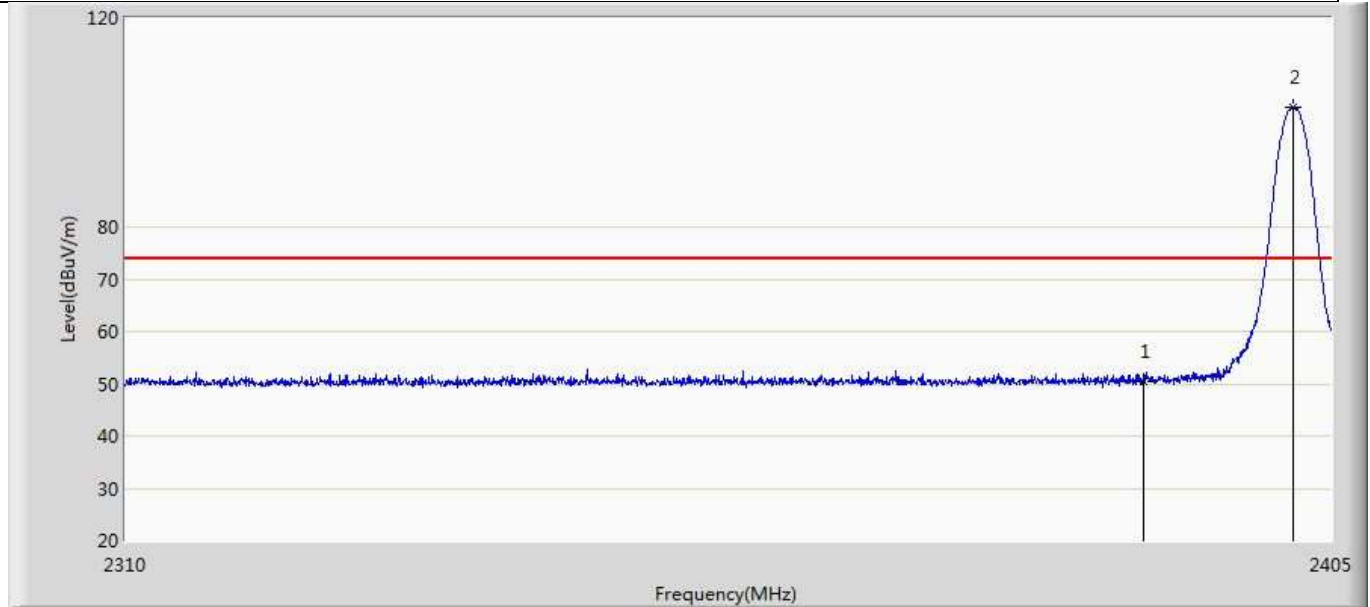
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.947	98.758	63.459	N/A	N/A	35.299	PK
2		2483.500	51.331	16.033	-22.669	74.000	35.297	PK

Profile: 2050534R	Page No.: 8
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:12
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	



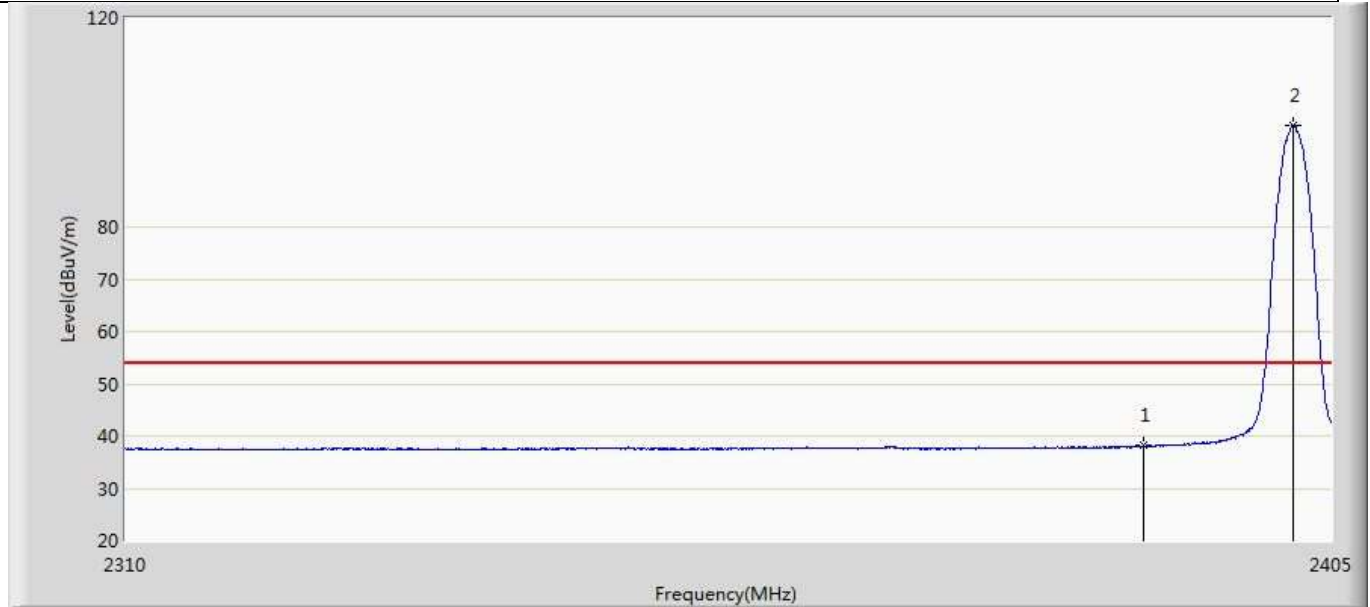
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	98.036	62.737	N/A	N/A	35.299	AV
2		2483.500	38.292	2.994	-15.708	54.000	35.297	AV

Profile: 2050534R	Page No.: 9
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:18
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	



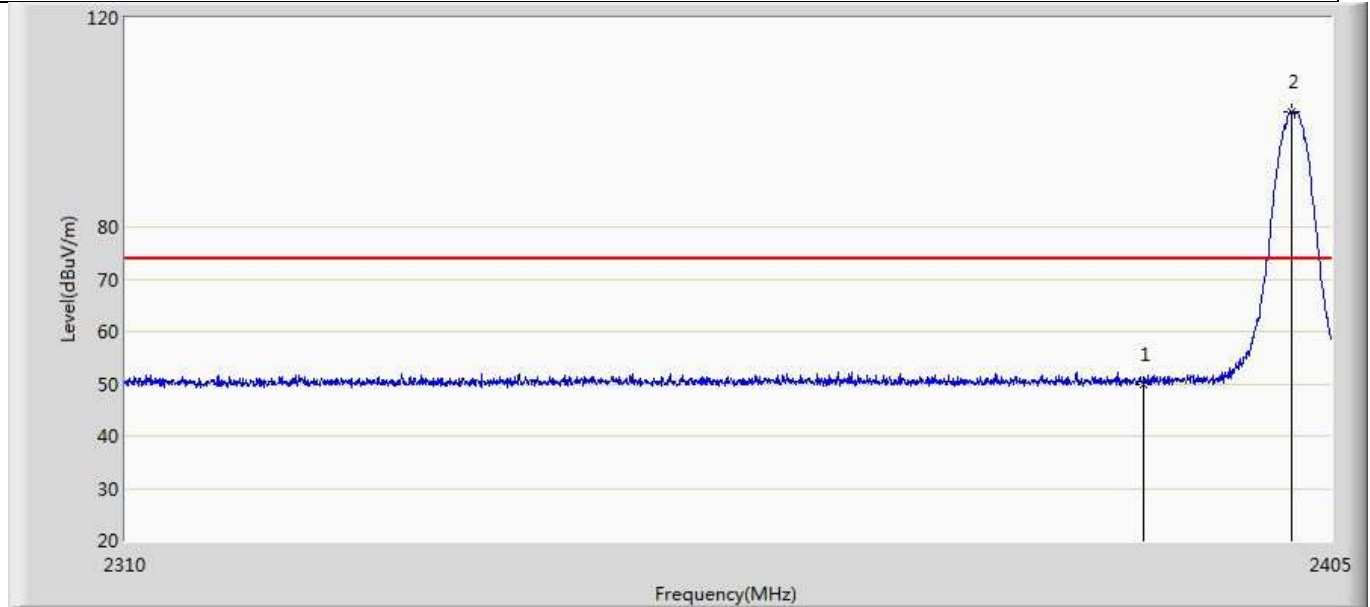
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.353	15.038	-23.647	74.000	35.315	PK
2	*	2401.913	102.923	67.610	N/A	N/A	35.312	PK

Profile: 2050534R	Page No.: 10
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:21
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	



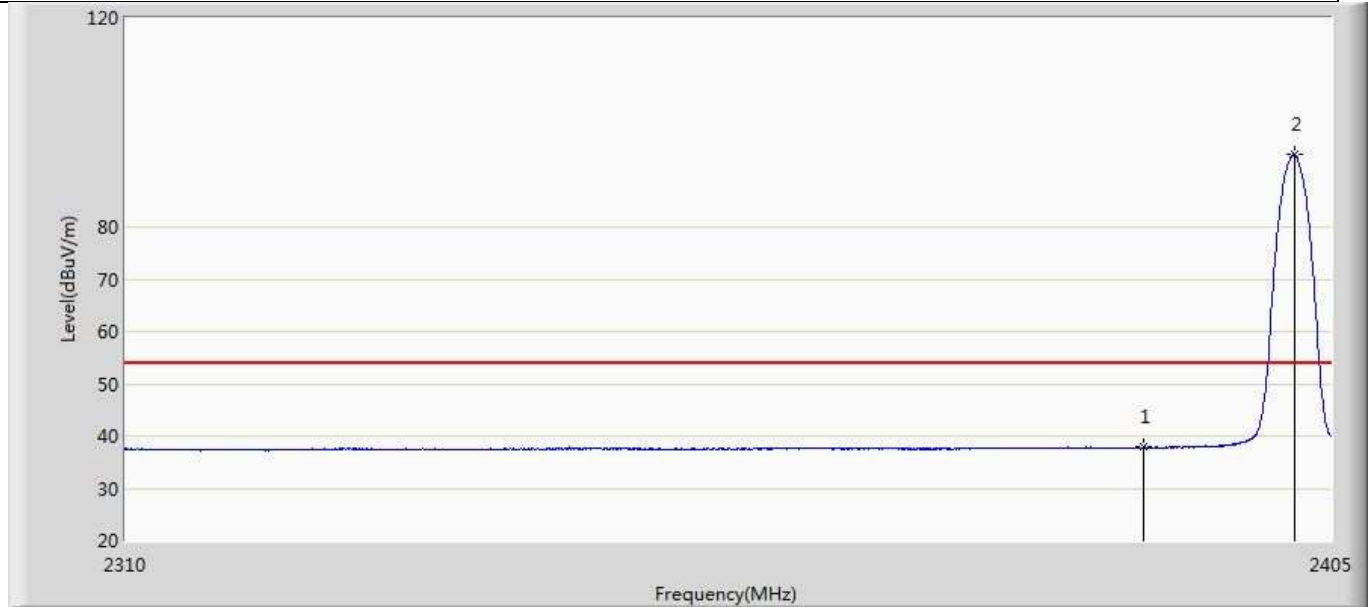
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	38.160	2.845	-15.840	54.000	35.315	AV
2	*	2401.913	99.401	64.088	N/A	N/A	35.312	AV

Profile: 2050534R	Page No.: 11
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:22
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	



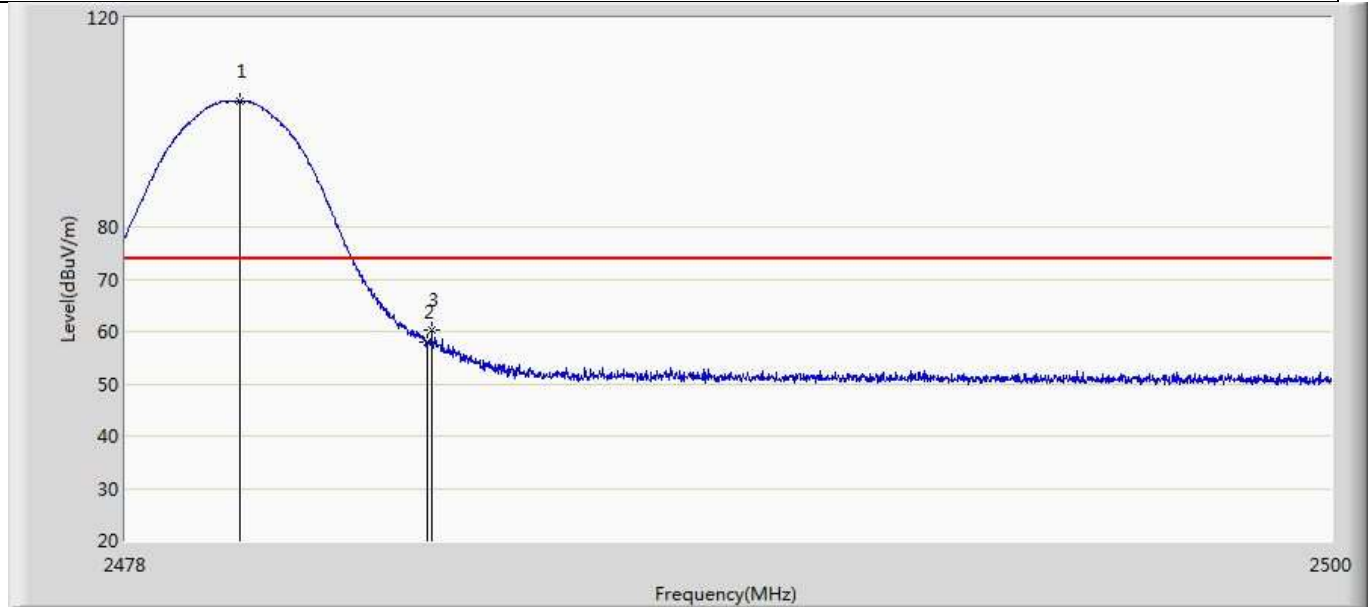
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.872	14.557	-24.128	74.000	35.315	PK
2	*	2401.865	102.165	66.852	N/A	N/A	35.312	PK

Profile: 2050534R	Page No.: 12
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:25
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	



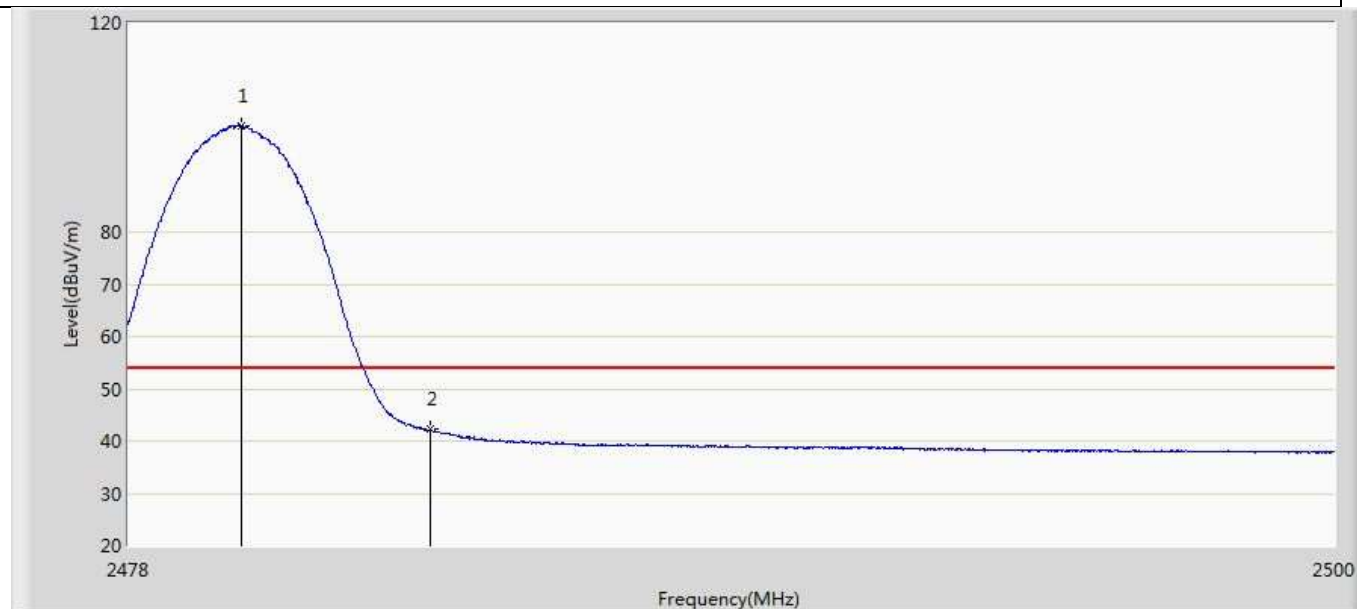
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.856	2.541	-16.144	54.000	35.315	AV
2	*	2402.055	93.770	58.458	N/A	N/A	35.312	AV

Profile: 2050534R	Page No.: 13
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Bluetooth headset	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



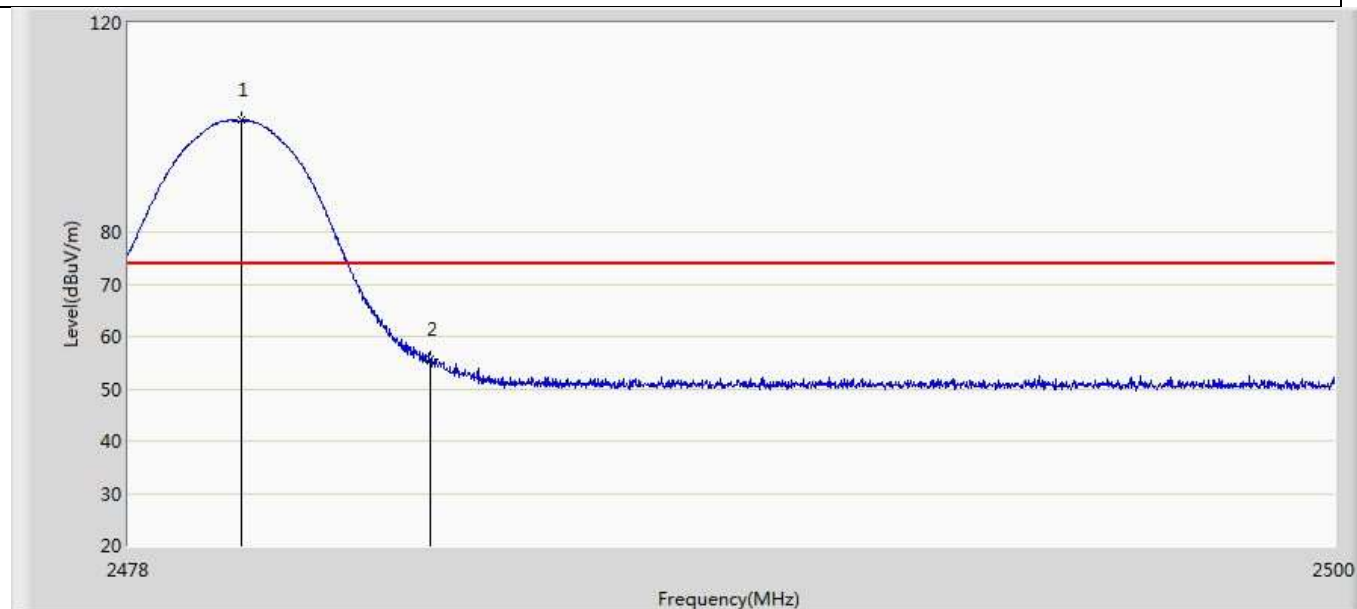
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.079	104.081	68.782	N/A	N/A	35.299	PK
2		2483.500	57.888	22.590	-16.112	74.000	35.297	PK
3		2483.577	60.178	24.880	-13.822	74.000	35.297	PK

Profile: 2050534R	Page No.: 14
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:30
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 2480MHz by 2DH5	



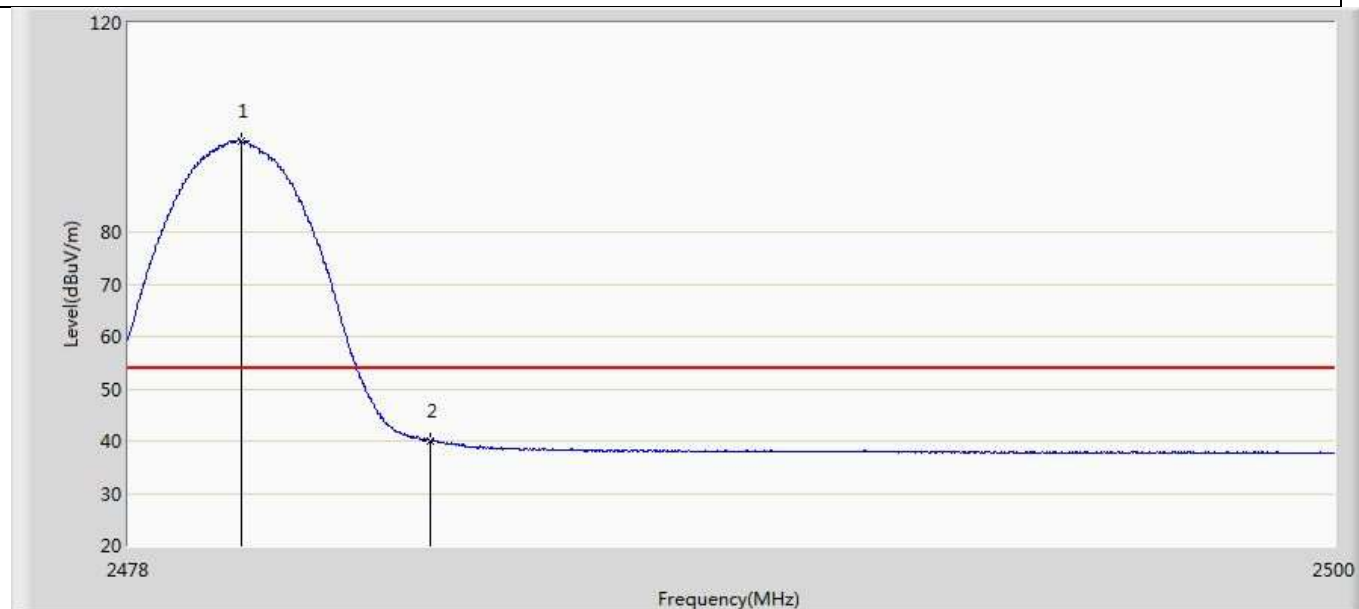
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	100.389	65.090	N/A	N/A	35.299	AV
2		2483.500	42.235	6.937	-11.765	54.000	35.297	AV

Profile: 2050534R	Page No.: 15
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:35
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 2:Transmit at 2480MHz by 2DH5	



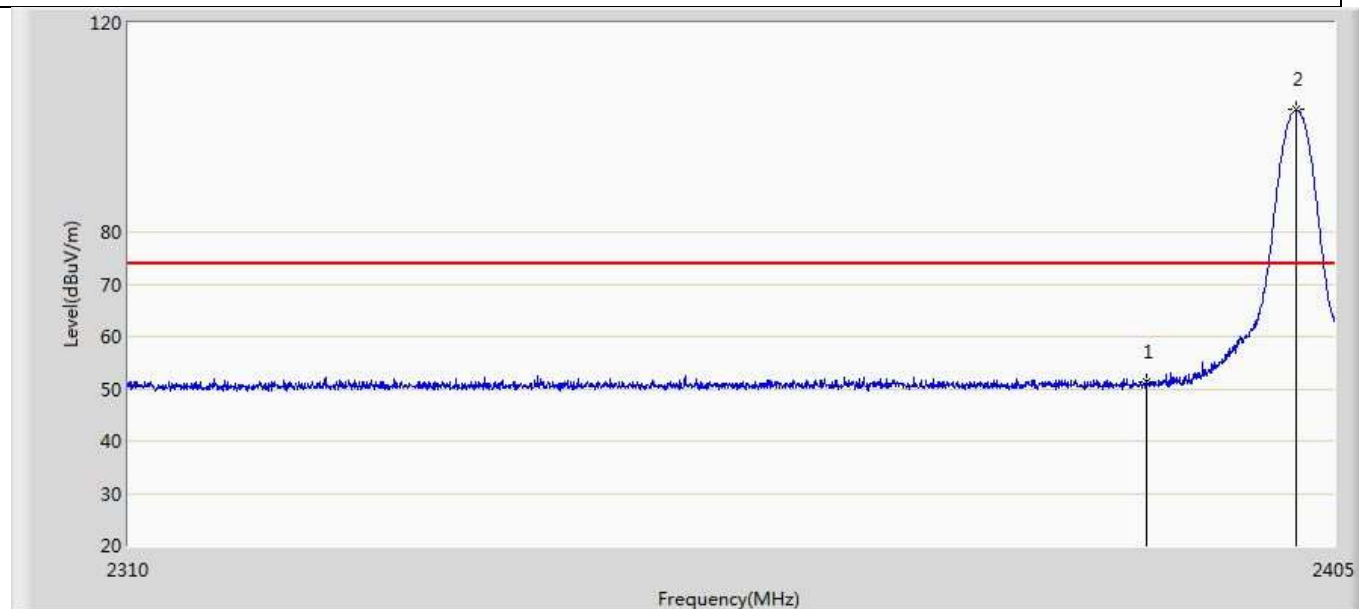
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	101.339	66.040	N/A	N/A	35.299	PK
2		2483.500	55.517	20.219	-18.483	74.000	35.297	PK

Profile: 2050534R	Page No.: 16
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:38
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	



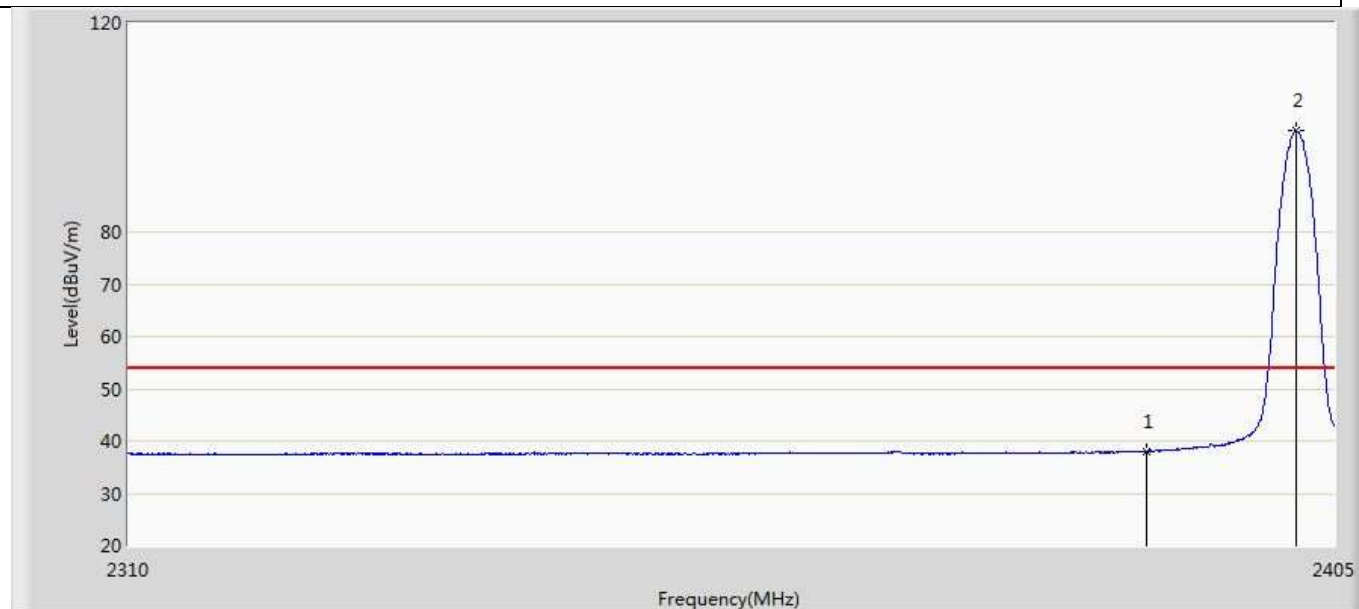
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.057	97.488	62.189	N/A	N/A	35.299	AV
2		2483.500	40.004	4.706	-13.996	54.000	35.297	AV

Profile: 2050534R	Page No.: 17
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:42
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	



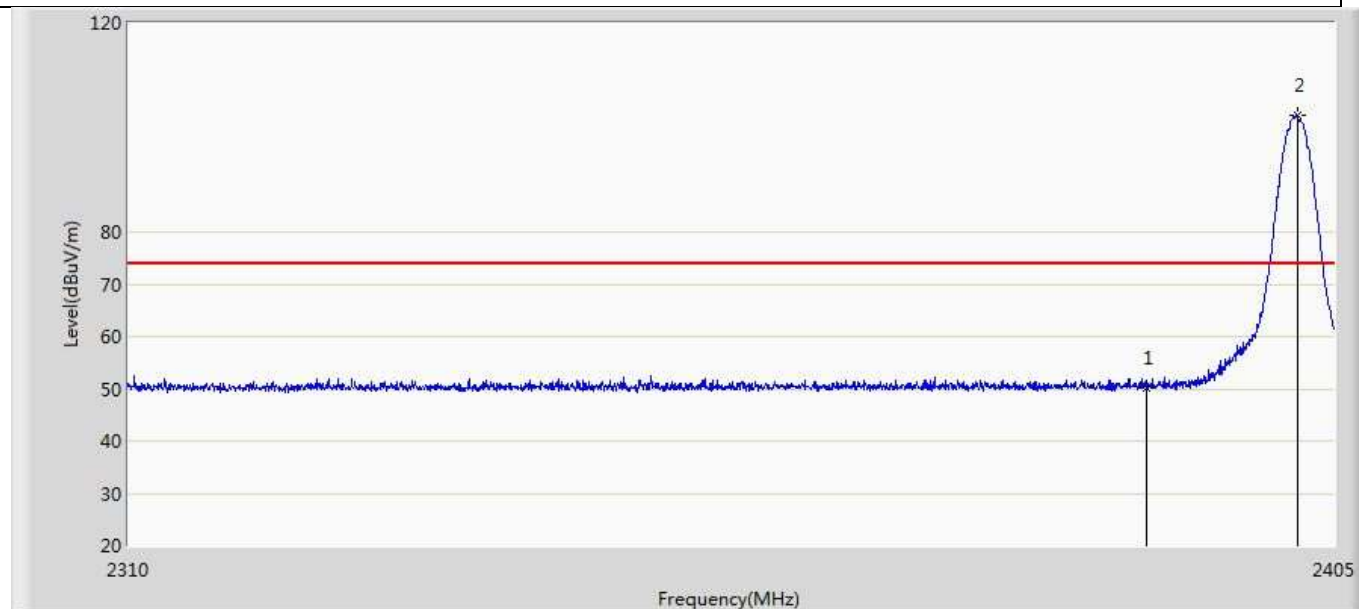
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.436	16.121	-22.564	74.000	35.315	PK
2	*	2401.960	103.385	68.073	N/A	N/A	35.312	PK

Profile: 2050534R	Page No.: 18
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:47
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	



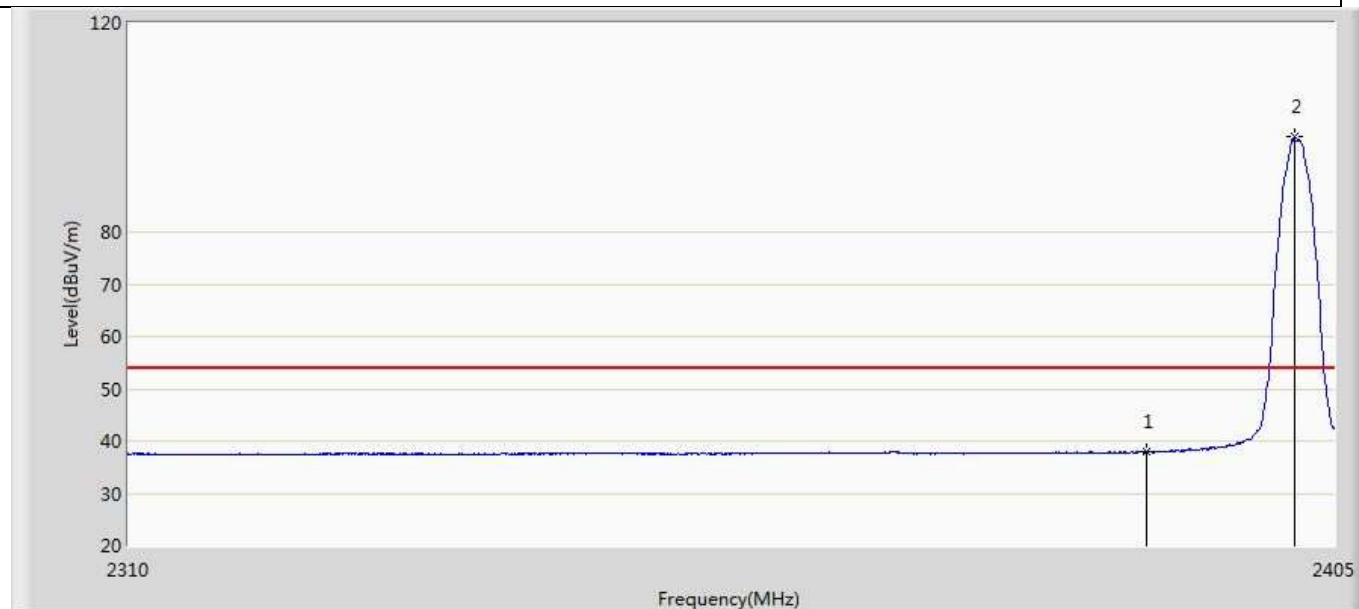
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.963	2.648	-16.037	54.000	35.315	AV
2	*	2401.913	99.382	64.069	N/A	N/A	35.312	AV

Profile: 2050534R	Page No.: 19
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Bluetooth headset	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



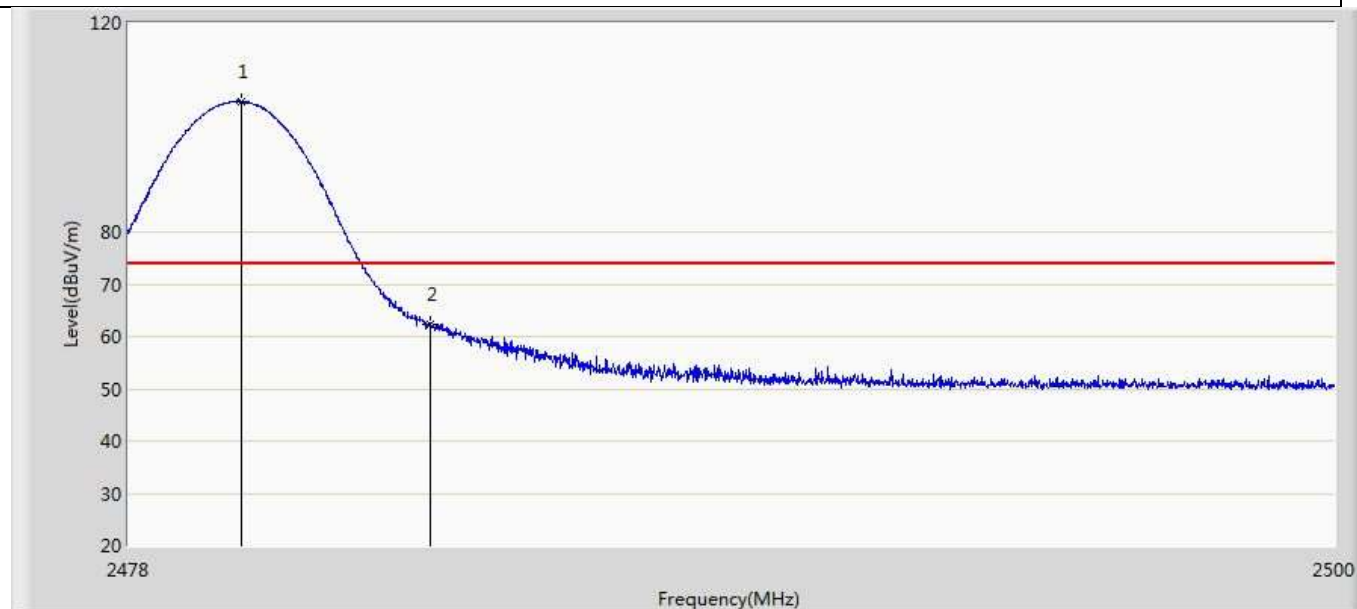
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.085	14.770	-23.915	74.000	35.315	PK
2	*	2402.055	102.271	66.959	N/A	N/A	35.312	PK

Profile: 2050534R	Page No.: 20
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:51
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 3:Transmit at 2402MHz by 3DH5	



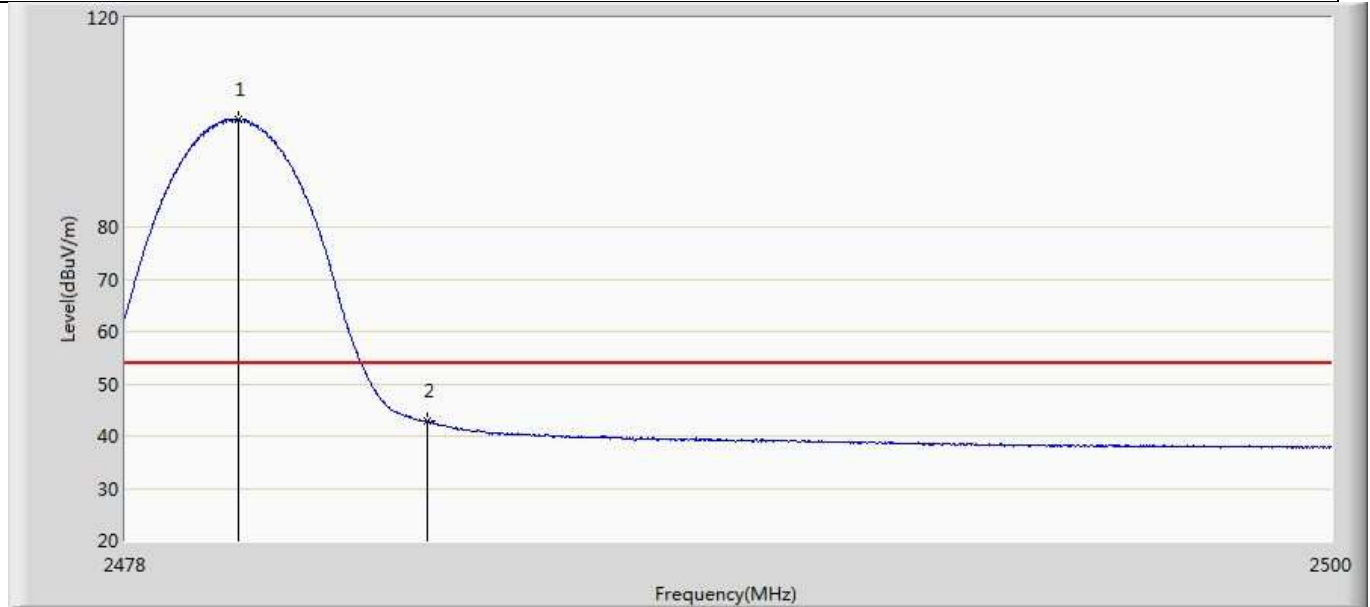
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.857	2.542	-16.143	54.000	35.315	AV
2	*	2401.817	98.127	62.814	N/A	N/A	35.312	AV

Profile: 2050534R	Page No.: 21
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:54
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 3:Transmit at 2480MHz by 3DH5	



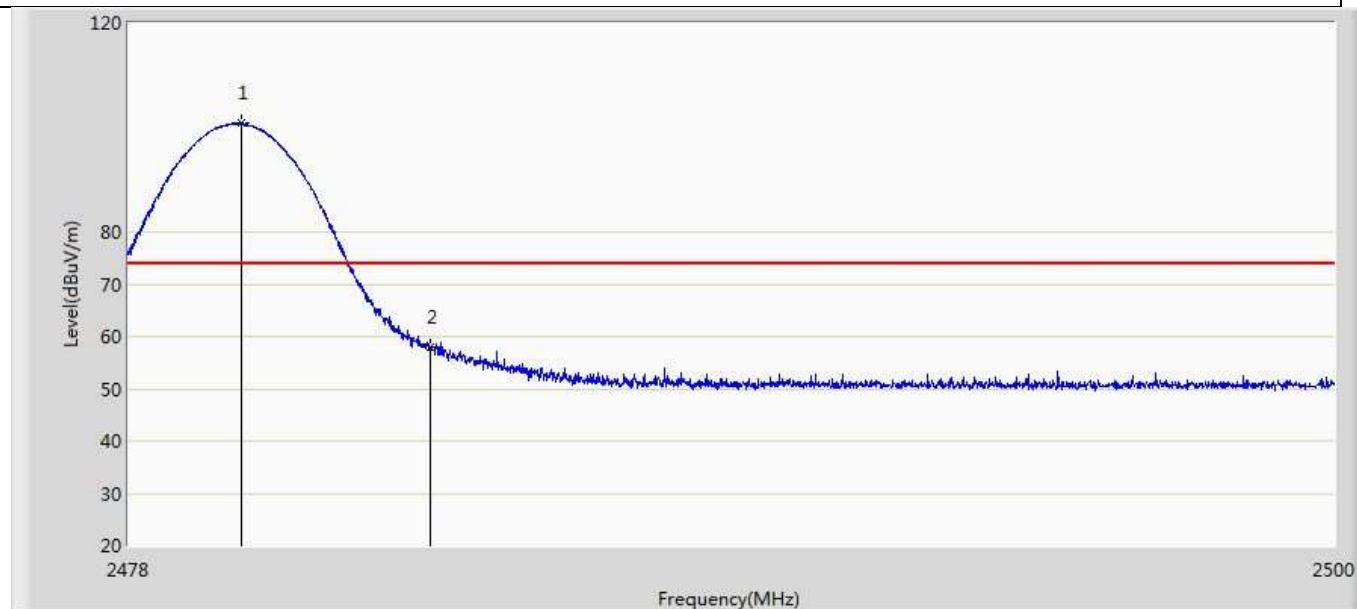
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	105.071	69.772	N/A	N/A	35.299	PK
2		2483.500	62.457	27.159	-11.543	74.000	35.297	PK

Profile: 2050534R	Page No.: 22
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 15:57
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	



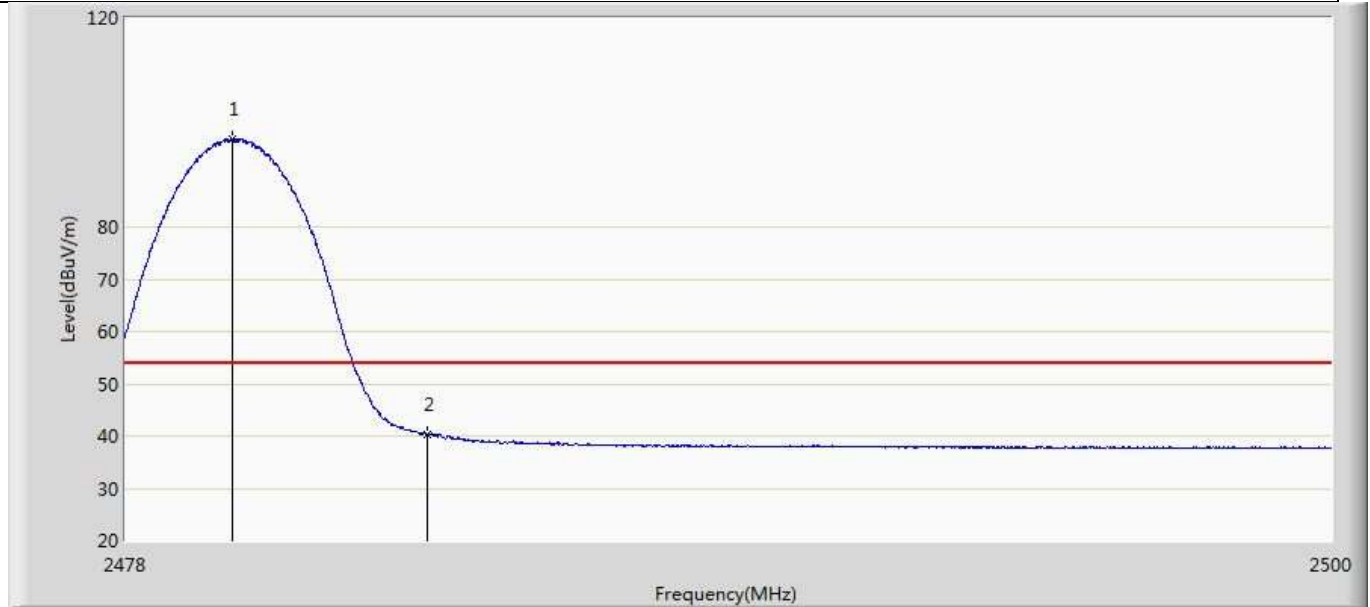
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	100.715	65.416	N/A	N/A	35.299	AV
2		2483.500	42.772	7.474	-11.228	54.000	35.297	AV

Profile: 2050534R	Page No.: 23
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 16:00
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	*	2480.046	100.801	65.502	N/A	N/A	35.299	PK
2		2483.500	58.011	22.713	-15.989	74.000	35.297	PK

Profile: 2050534R	Page No.: 24
Engineer: YULIU	
Site: AC5	Time: 2020/06/07 - 16:02
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	*	2479.958	96.919	61.620	N/A	N/A	35.299	AV
2		2483.500	40.312	5.014	-13.688	54.000	35.297	AV

4.11 Antenna Requirement**VERDICT: PASS****4.11.1 Limit:**

Standard	FCC Part 15 Subpart C Paragraph 15.203
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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.

4.11.2 Antenna Connector Construction:

- | | |
|-------------------------------------|--|
| ☒ | The use of a permanently attached antenna |
| ☐ | The antenna use of a unique coupling to the intentional radiator |
| ☐ | The use of a nonstandard antenna jack or electrical connector |

Please refer to the attached document "Internal Photograph" to show the antenna connector.

5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

_____ The End _____