



Test Report

FCC Part15 Subpart C& RSS-247 Issue 2

Product Name : Wireless Access point
Model No. : ATOM-AP30
FCC ID : WBV-ATOM-AP30
IC : 7774A-AP30

Applicant : Aerohive Networks, Inc
Address : Aerohive Networks1011 McCarthy Boulevard
Milpitas, CA 95035 United States

Date of Receipt : Dec. 20, 2017
Test Date : Dec. 21, 2017~ Mar. 31, 2018
Issued Date : Mar. 31, 2018
Report No. : 17C2130R-RF-US-P06V03
Report Version : V 1.2

The test results relate only to the samples tested.

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

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Test Report Certification

Issued Date : Mar. 31, 2018

Report No. : 17C2130R-RF-US-P06V03



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Applicant : Aerohive Networks, Inc

Address : Aerohive Networks 1011 McCarthy Boulevard
Milpitas, CA 95035 United States

Manufacturer : Aerohive Networks, Inc

Address : Aerohive Networks 1011 McCarthy Boulevard
Milpitas, CA 95035 United States

Model No. : ATOM-AP30

FCC ID : WBV-ATOM-AP30

IC : 7774A-AP30

EUT Voltage : DC 5V/2A, 10W

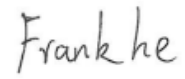
Test Voltage : AC120V/60Hz

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.
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FCC Designation Number: CN1199; ISED Lab Code: 4075B

Documented By : 
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TABLE OF CONTENTS

Description	Page
1. General Information.....	6
1.1. EUT Description.....	6
1.2. Channel List.....	7
1.3. Antenna information.....	8
1.4. Mode of Operation.....	9
1.5. Tested System Details.....	10
1.6. Configuration of Tested System.....	11
1.7. EUT Exercise Software.....	12
2. Technical Test.....	13
2.1. Summary of Test Result.....	13
2.2. Test Environment.....	15
2.3. Measurement Uncertainty.....	15
3. Conducted Emission.....	16
3.1. Test Equipment.....	16
3.2. Test Setup.....	16
3.3. Limit.....	17
3.4. Test Procedure.....	17
3.5. Test Result.....	18
4. Emissions in restricted frequency bands.....	20
4.1. Test Equipment.....	20
4.2. Test Setup.....	21
4.3. Limit.....	22
4.4. Test Procedure.....	25
4.5. Test Result.....	26
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. 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. 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.	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.	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.	Test Result.....	76
10.	Emissions in non-restricted frequency bands.....	77
10.1.	Test Equipment.....	77
10.2.	Test Setup.....	77
10.3.	Limit.....	78
10.4.	Test Procedure.....	78
10.5.	Test Result.....	79
11.	Radiated Emission Band Edge.....	80
11.1.	Test Equipment.....	80
11.2.	Test Setup.....	80
11.3.	Limit.....	81
11.4.	Test Procedure.....	81
11.5.	Duty Factor.....	82
11.6.	Test Result.....	83
12.	Antenna Requirement.....	95
12.1.	Limit.....	95
12.2.	Antenna Connector Construction.....	95

History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
17C2130R-RF-US-P06V03	V1.0	Initial Issued Report	Mar. 23, 2018
17C2130R-RF-US-P06V03	V1.1	Modified IC ID	Mar. 28, 2018
17C2130R-RF-US-P06V03	V1.2	Page 46-47, add Simultaneous transmission data. Page 52-59,update 20dB Bandwidth data.	Mar. 31, 2018

1. General Information

1.1. EUT Description

Product Name	Wireless Access point
Model No.	ATOM-AP30
EUT Voltage	DC 5V/2A, 10W
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

1.2. 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

1.3. Antenna information

Model No.	N/A					
Antenna manufacturer	PEGATRON					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	CDD		
			☐	Sectorized		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
			☐	Sectorized		
	☒	Internal	☒	PIFA		
			☐	PCB		
			☐	Ceramic Chip Antenna		
			☐	Monopole Antenna		
Ant Gain (dBi)	1.8dBi					

1.4. 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: The reading values of all the test items contain cable loss.

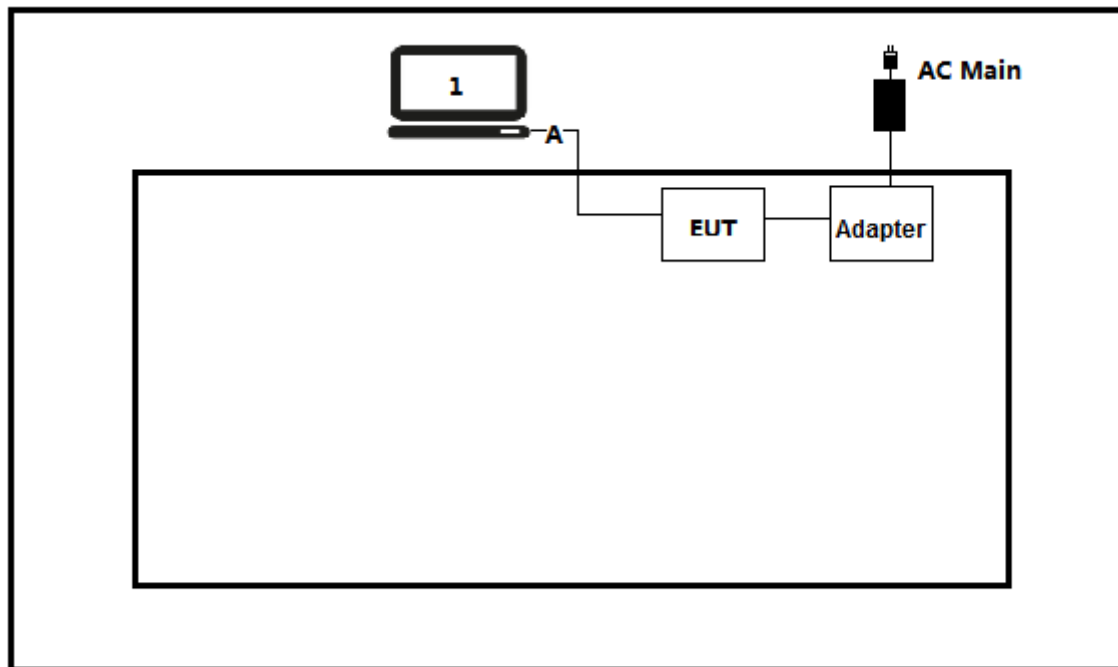
1.5. Tested System Details

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

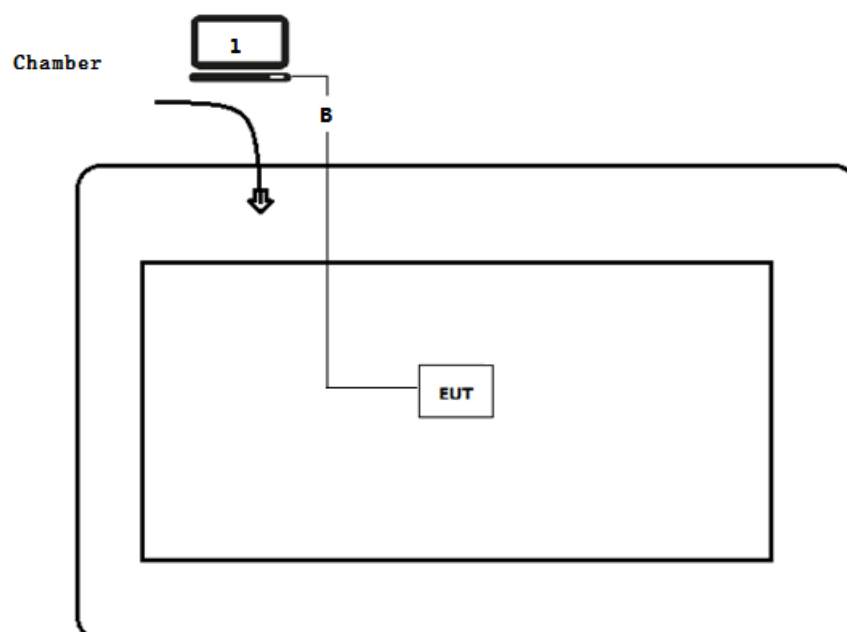
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Think Pad	2526	LV-A3285	Power by adapter
A	LAN Cable	N/A	N/A	N/A	Shield, 0.75m
B	LAN Cable	N/A	N/A	N/A	Shield, 10m

1.6. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



1.7. 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 [Mtool], and set the test mode and channel, then press OK to start to continue transmit.

2. Technical Test

2.1. Summary of Test Result

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

2.3. Measurement Uncertainty

Test Items	Uncertainty
AC Power Line Conducted Emission	$\pm 2.02\text{dB}$
Radiated Emission	Below 1GHz $\pm 3.8\text{ dB}$
	Above 1GHz $\pm 3.9\text{ dB}$
RF Antenna Port Conducted Emission	$\pm 1.27\text{dB}$
Carrier Frequency Separation	$\pm 1\text{kHz}$
Radiated Emission Band Edge	$\pm 3.9\text{dB}$
Occupied Bandwidth	$\pm 1\text{kHz}$
Time of Occupancy (Dwell Time)	$\pm 0.1\text{ us}$
Power Spectral Density	$\pm 1.27\text{ dB}$
Power	$\pm 1\text{dB}$

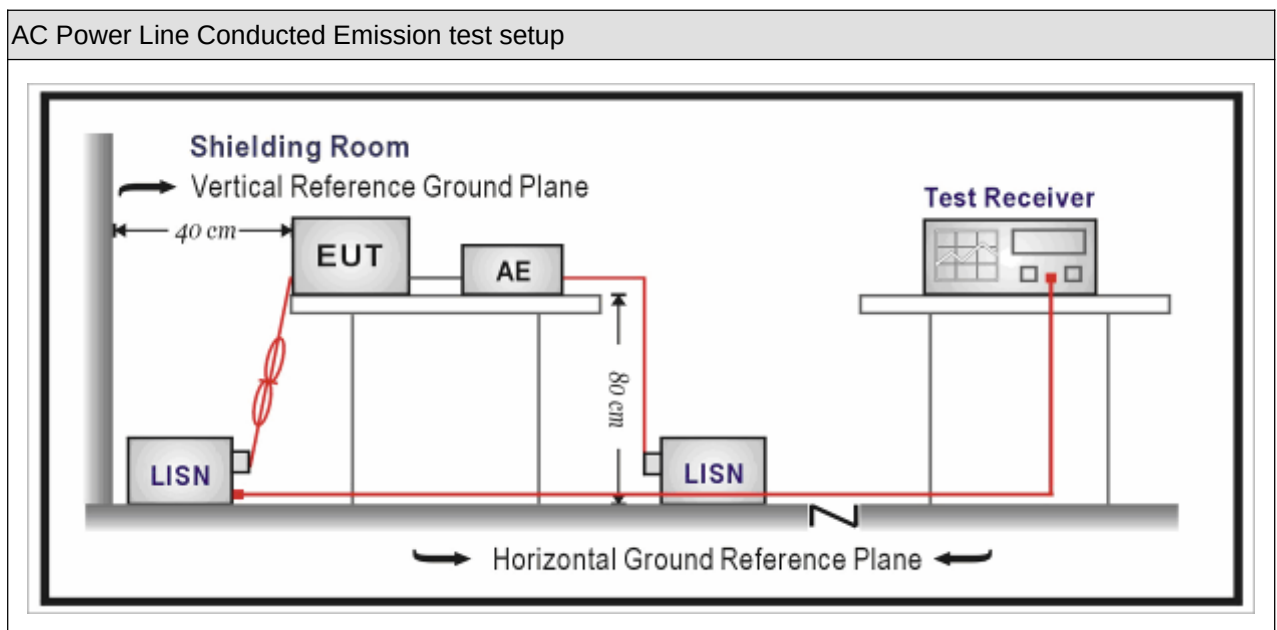
3. Conducted Emission

3.1. Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2017.03.05	2018.03.04
Two-Line V-Network	R&S	ENV 216	101189	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

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

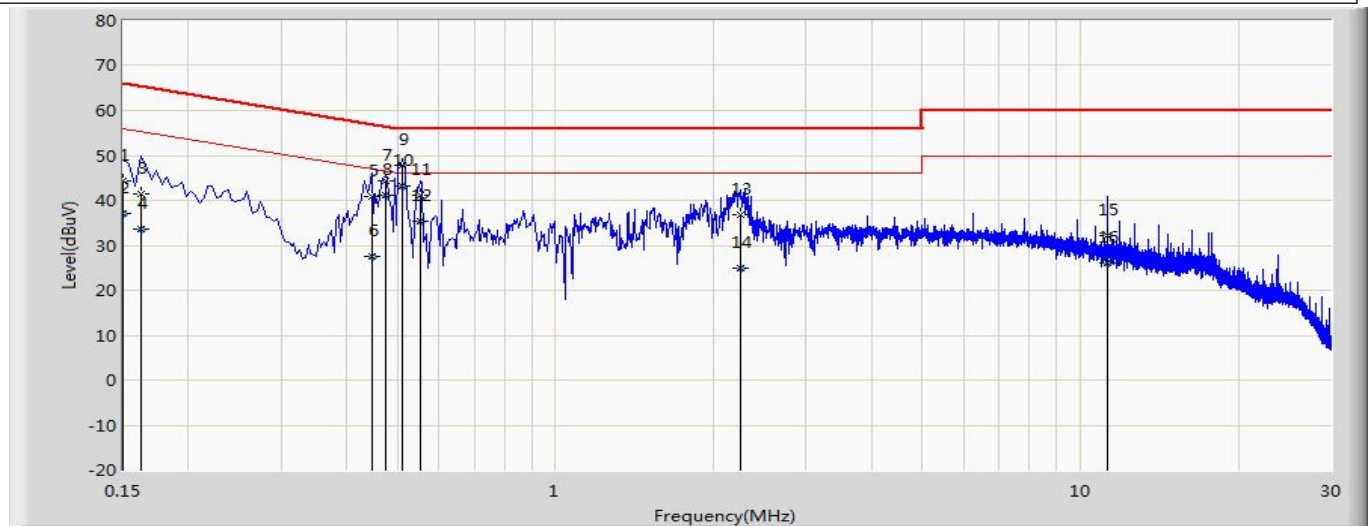
Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: The lower limit shall apply at the transition frequencies.		
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

3.4. Test Procedure

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

3.5. Test Result

Engineer: Aaron	
Site: TR1	Time: 2017/12/26
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2402MHz by DH5	

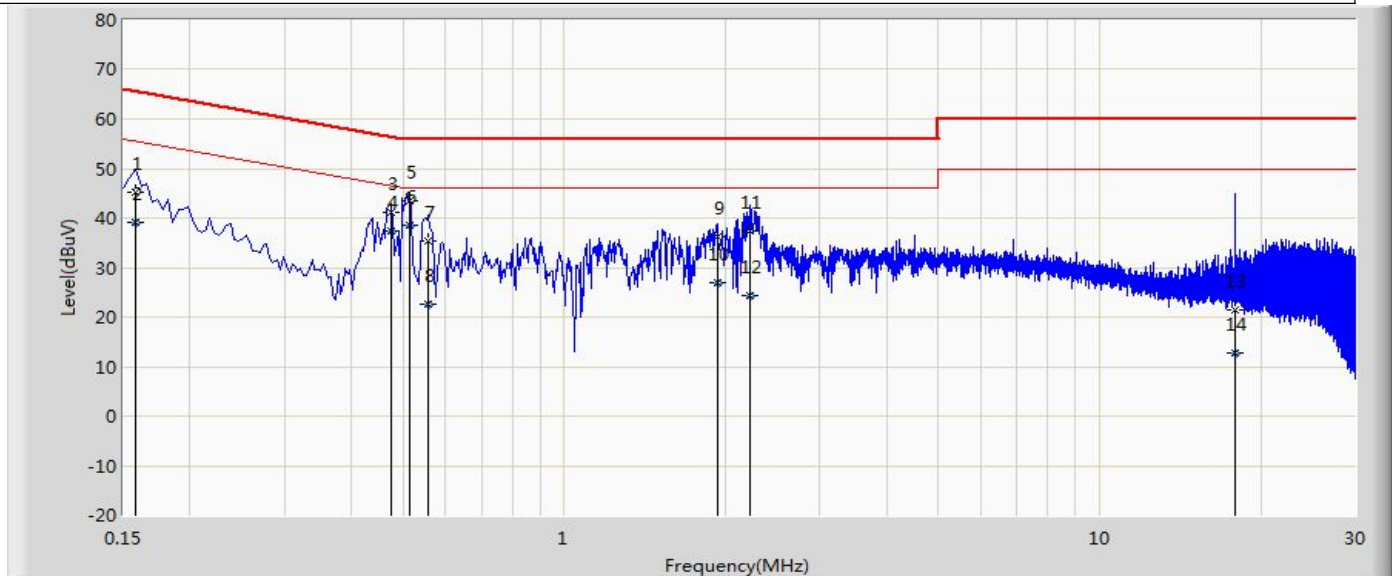


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.150	44.485	34.850	-21.515	66.000	9.610	0.025	0.000	QP
2		0.150	36.969	27.334	-19.031	56.000	9.610	0.025	0.000	AV
3		0.162	41.594	31.961	-23.767	65.361	9.607	0.026	0.000	QP
4		0.162	33.553	23.919	-21.808	55.361	9.607	0.026	0.000	AV
5		0.446	40.883	31.243	-16.066	56.949	9.600	0.041	0.000	QP
6		0.446	27.423	17.782	-19.527	46.949	9.600	0.041	0.000	AV
7		0.474	44.292	34.651	-12.152	56.444	9.600	0.041	0.000	QP
8		0.474	41.155	31.514	-5.289	46.444	9.600	0.041	0.000	AV
9		0.510	47.826	38.226	-8.174	56.000	9.600	0.000	0.000	QP
10	*	0.510	43.132	33.532	-2.868	46.000	9.600	0.000	0.000	AV
11		0.554	41.168	31.524	-14.832	56.000	9.600	0.045	0.000	QP
12		0.554	35.399	25.754	-10.601	46.000	9.600	0.045	0.000	AV
13		2.254	36.668	26.960	-19.332	56.000	9.614	0.094	0.000	QP
14		2.254	24.948	15.241	-21.052	46.000	9.614	0.094	0.000	AV
15		11.250	32.184	22.167	-27.816	60.000	9.803	0.214	0.000	QP
16		11.250	26.094	16.077	-23.906	50.000	9.803	0.214	0.000	AV

Note: 1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Aaron	
Site: TR1	Time: 2017/12/26
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Wireless Access point	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		0.158	45.075	35.457	-20.493	65.568	9.592	0.026	0.000	QP
2		0.158	39.117	29.499	-16.452	55.568	9.592	0.026	0.000	AV
3		0.474	41.116	31.484	-15.328	56.444	9.590	0.041	0.000	QP
4		0.474	37.369	27.737	-9.075	46.444	9.590	0.041	0.000	AV
5		0.514	43.535	33.901	-12.465	56.000	9.590	0.043	0.000	QP
6	*	0.514	38.546	28.913	-7.454	46.000	9.590	0.043	0.000	AV
7		0.558	35.427	25.793	-20.573	56.000	9.590	0.045	0.000	QP
8		0.558	22.687	13.052	-23.313	46.000	9.590	0.045	0.000	AV
9		1.930	36.090	26.396	-19.910	56.000	9.609	0.086	0.000	QP
10		1.930	27.001	17.306	-18.999	46.000	9.609	0.086	0.000	AV
11		2.222	37.396	27.690	-18.604	56.000	9.613	0.093	0.000	QP
12		2.222	24.356	14.650	-21.644	46.000	9.613	0.093	0.000	AV
13		17.906	21.473	11.113	-38.527	60.000	10.088	0.272	0.000	QP
14		17.906	12.729	2.369	-37.271	50.000	10.088	0.272	0.000	AV

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4. Emissions in restricted frequency bands

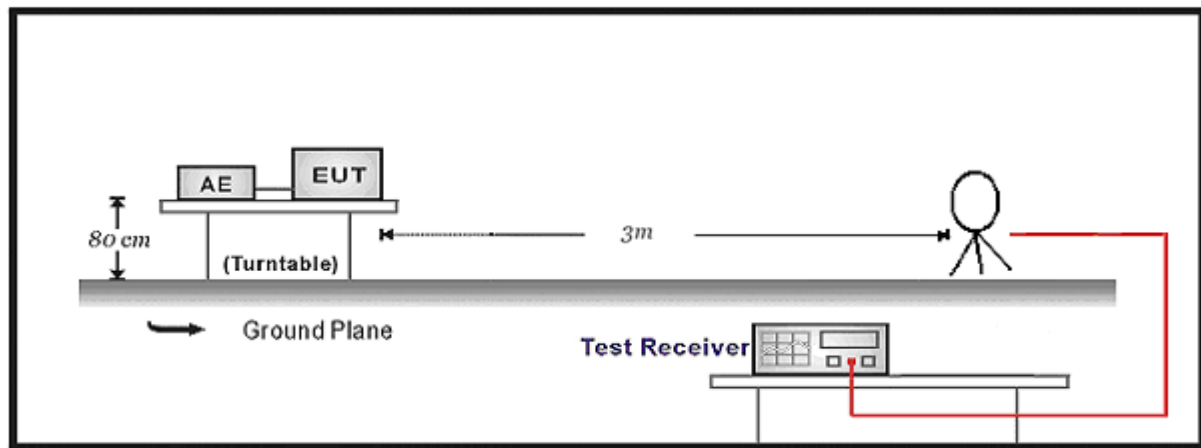
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2017.03.29	2018.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	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	2017.03.02	2018.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2018.01.03	2019.01.02
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

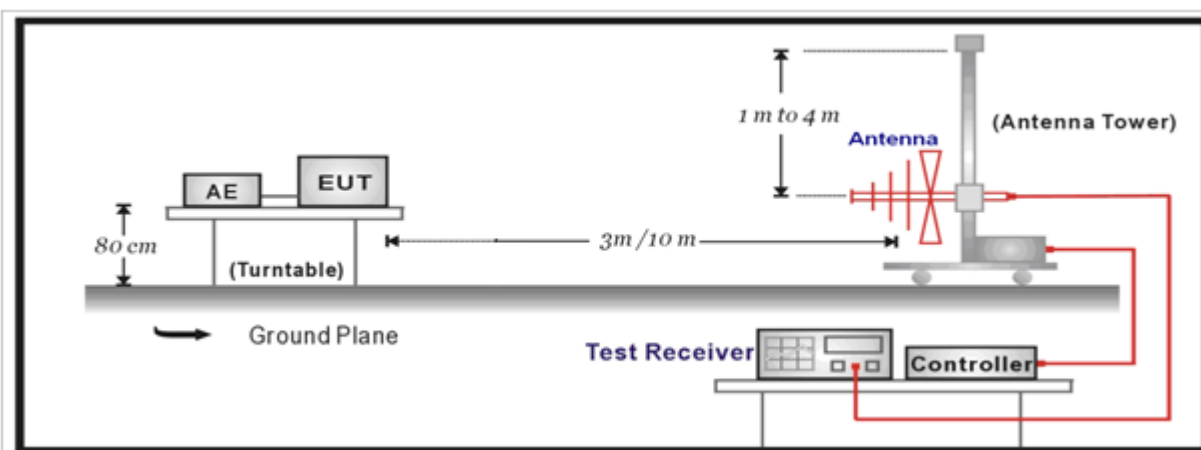
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2018.01.04	2019.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2017.05.06	2018.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2017.05.06	2018.05.05
DRG 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	2017.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2017.03.02	2018.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2017.06.10	2018.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2018.01.04	2019.01.03
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

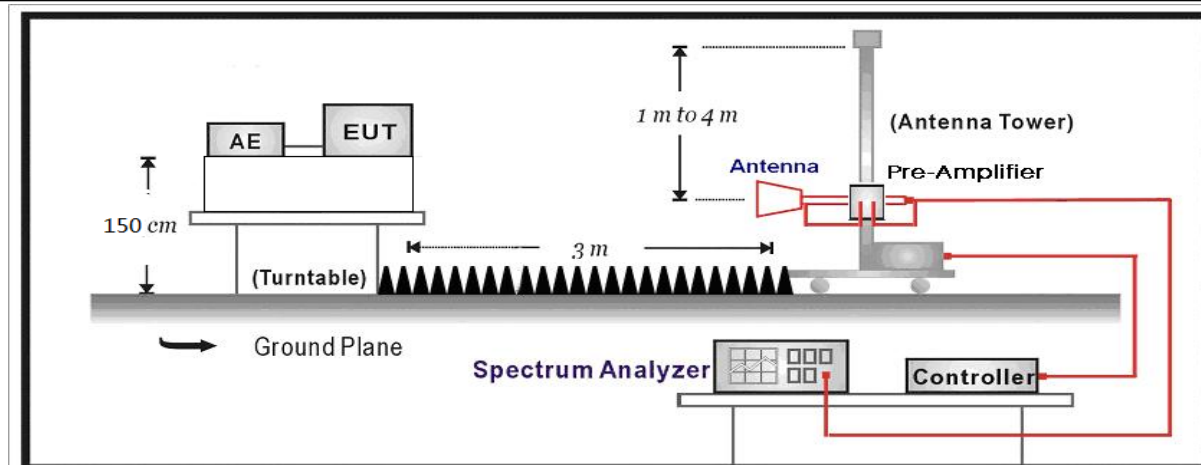
Below 30MHz Test Setup:



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 ISCED:

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 (μ V/m)	Field strength (dB μ 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).

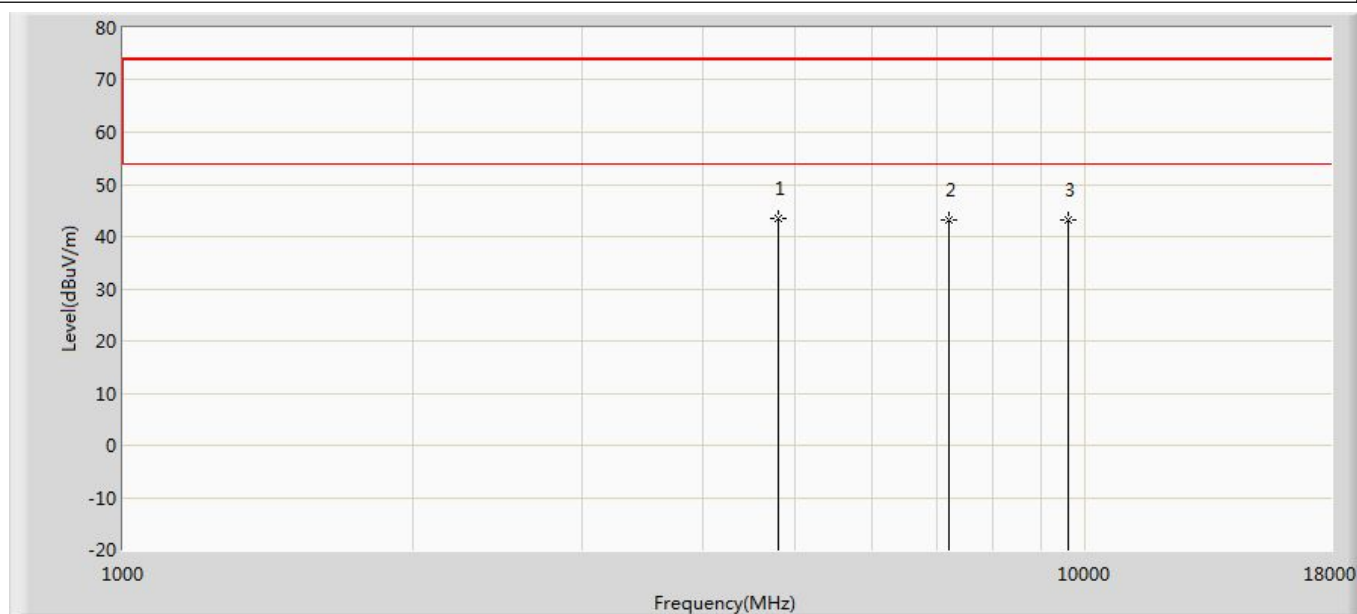
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated 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).

4.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	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

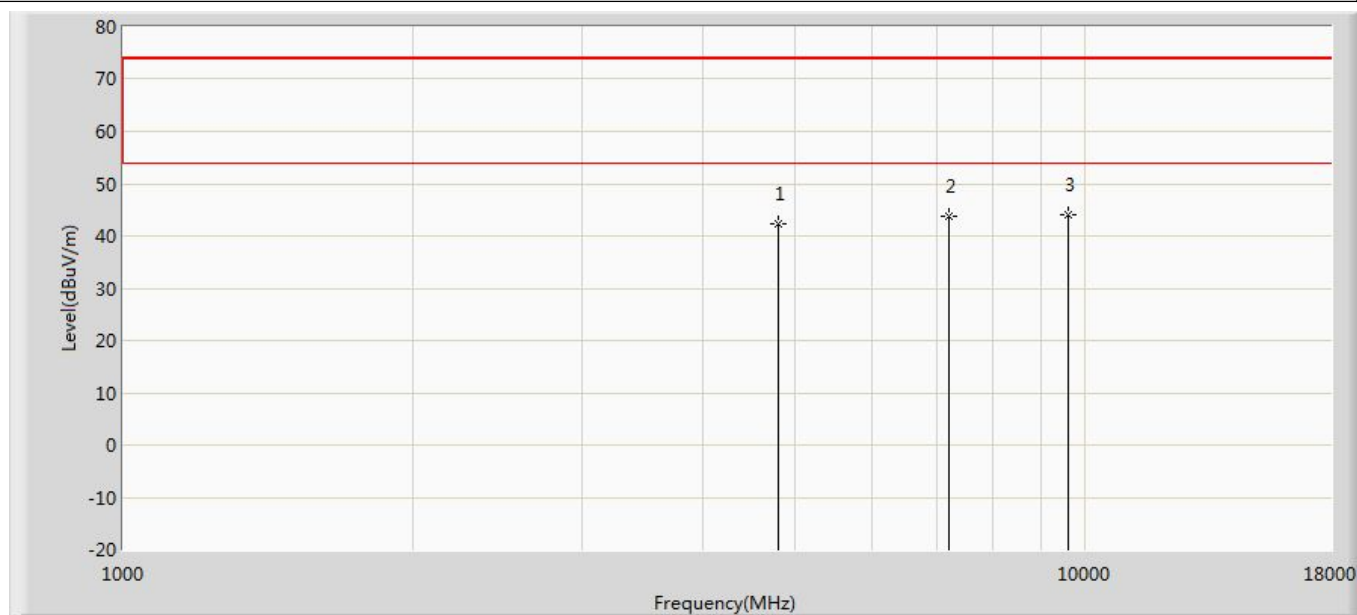
4.5. Test Result

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



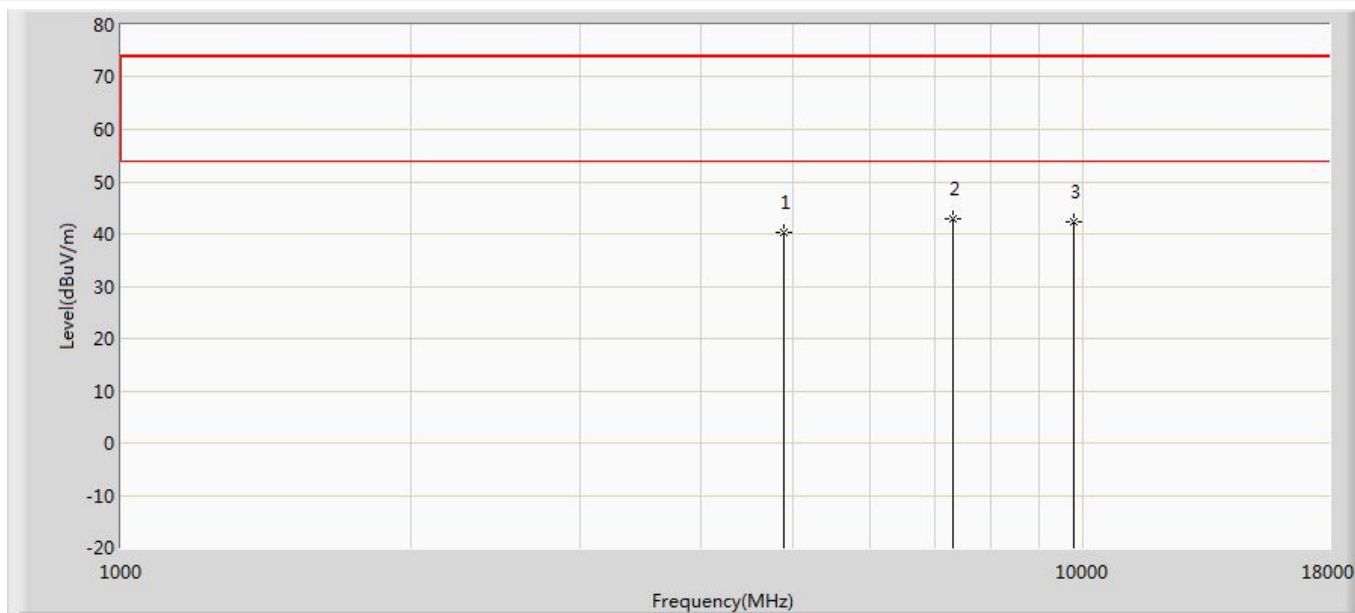
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4804.000	43.590	44.109	-30.410	74.000	-0.519	PK
2		7206.000	43.112	39.096	-30.888	74.000	4.016	PK
3		9608.000	43.186	37.368	-30.814	74.000	5.817	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



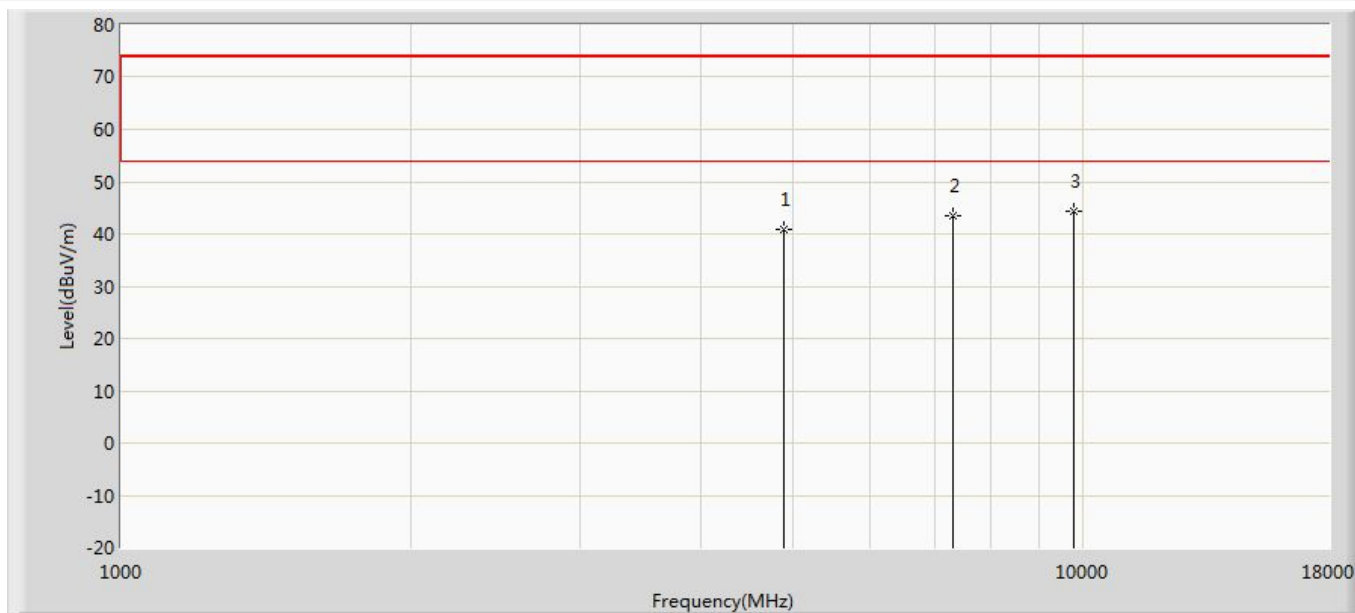
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.336	42.855	-31.664	74.000	-0.519	PK
2		7206.000	43.653	39.637	-30.347	74.000	4.016	PK
3	*	9608.000	44.119	38.301	-29.881	74.000	5.817	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



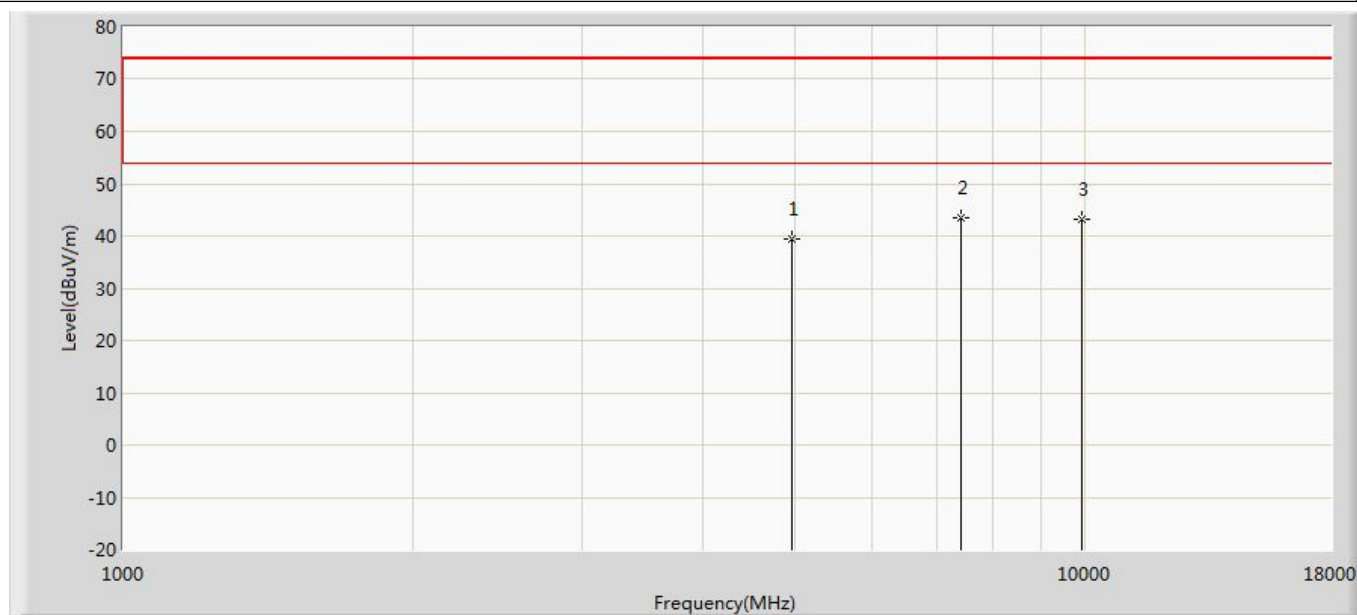
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	40.427	40.940	-33.573	74.000	-0.514	PK
2	*	7323.000	42.919	38.992	-31.081	74.000	3.927	PK
3		9764.000	42.414	37.284	-31.586	74.000	5.131	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



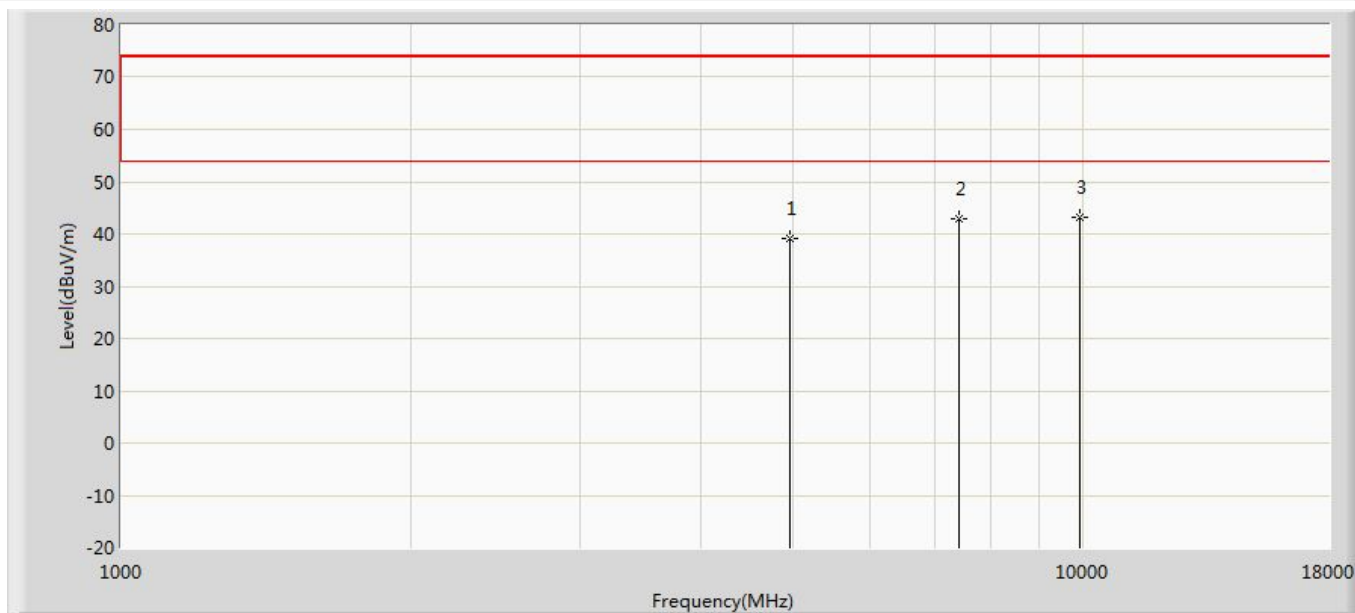
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	40.862	41.375	-33.138	74.000	-0.514	PK
2		7323.000	43.480	39.553	-30.520	74.000	3.927	PK
3	*	9764.000	44.336	39.206	-29.664	74.000	5.131	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



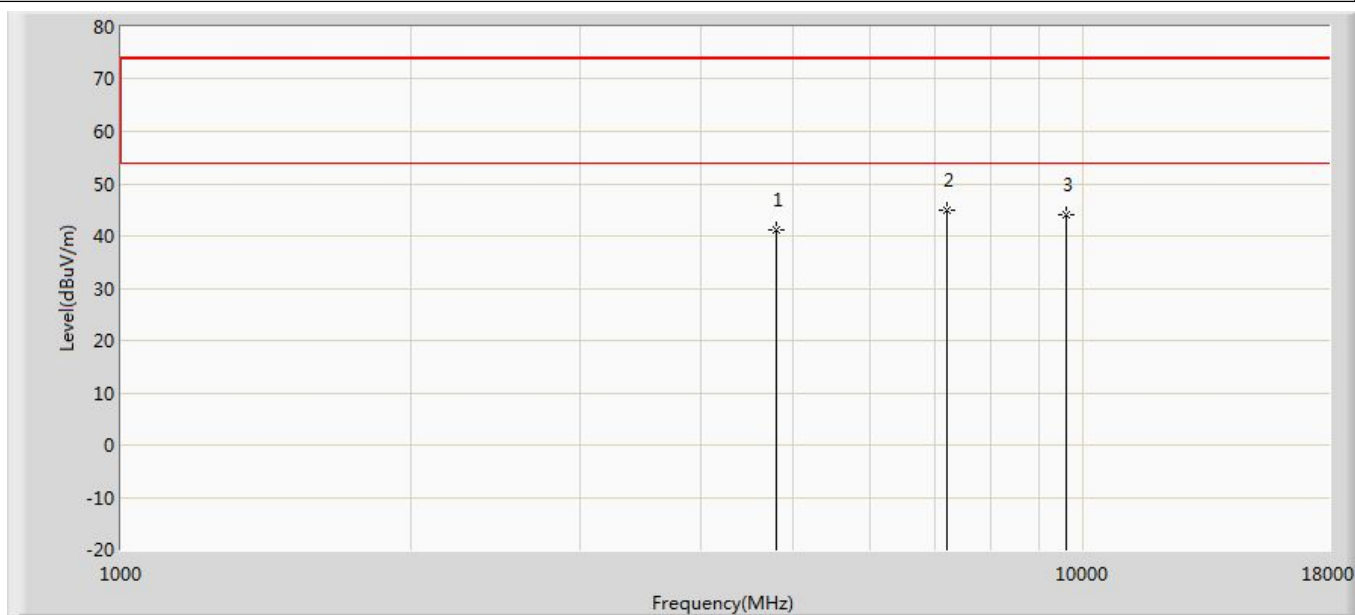
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	39.436	40.313	-34.564	74.000	-0.877	PK
2	*	7440.000	43.341	39.702	-30.659	74.000	3.638	PK
3		9920.000	43.141	37.175	-30.859	74.000	5.966	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



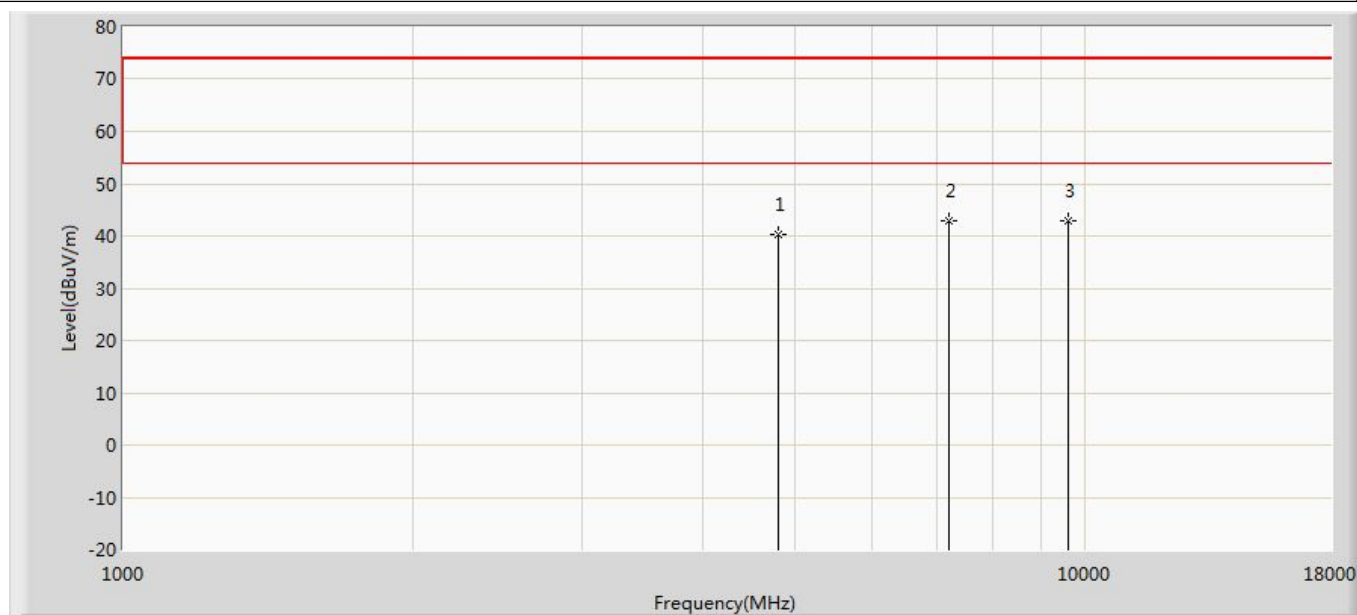
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	39.156	40.033	-34.844	74.000	-0.877	PK
2		7440.000	42.975	39.336	-31.025	74.000	3.638	PK
3	*	9920.000	43.069	37.103	-30.931	74.000	5.966	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



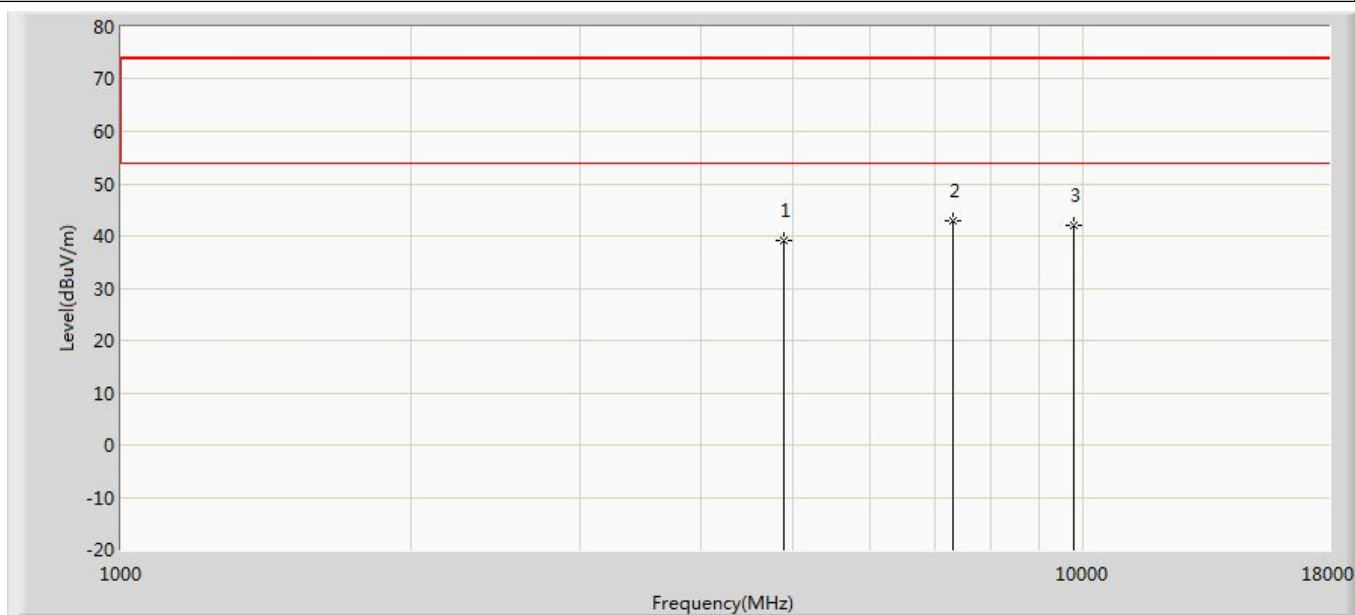
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.229	41.748	-32.771	74.000	-0.519	PK
2	*	7206.000	44.874	40.858	-29.126	74.000	4.016	PK
3		9608.000	44.187	38.369	-29.813	74.000	5.817	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



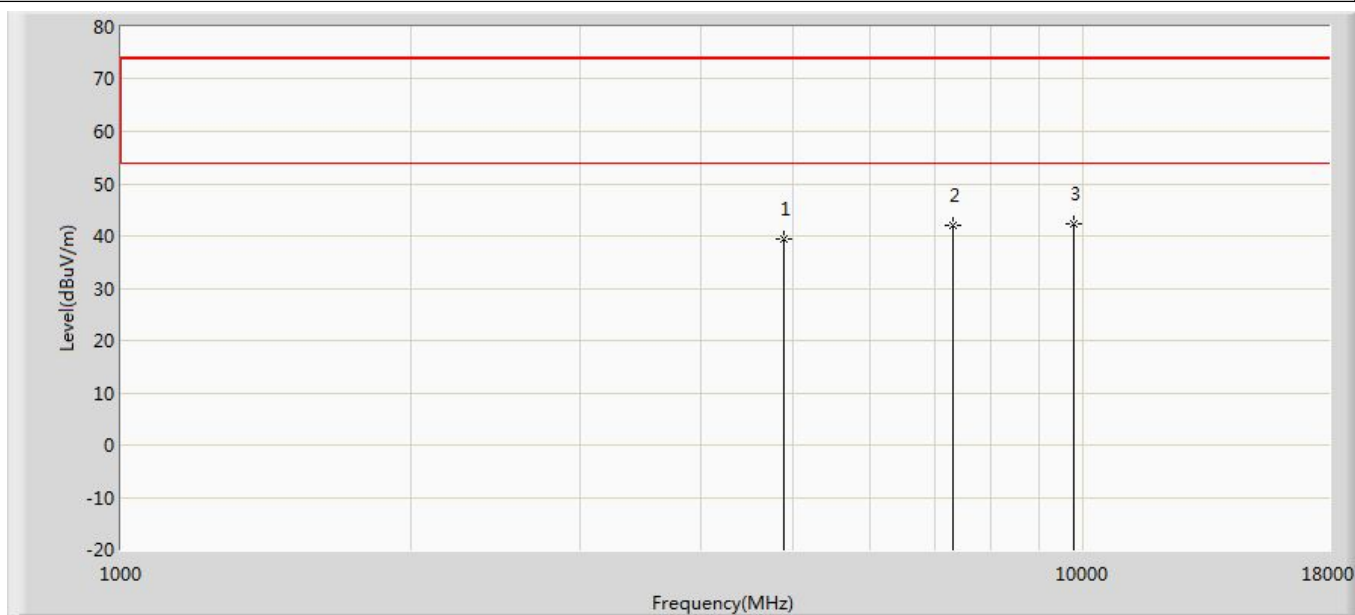
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	40.311	40.830	-33.689	74.000	-0.519	PK
2		7206.000	42.765	38.749	-31.235	74.000	4.016	PK
3	*	9608.000	42.915	37.097	-31.085	74.000	5.817	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 2DH5	



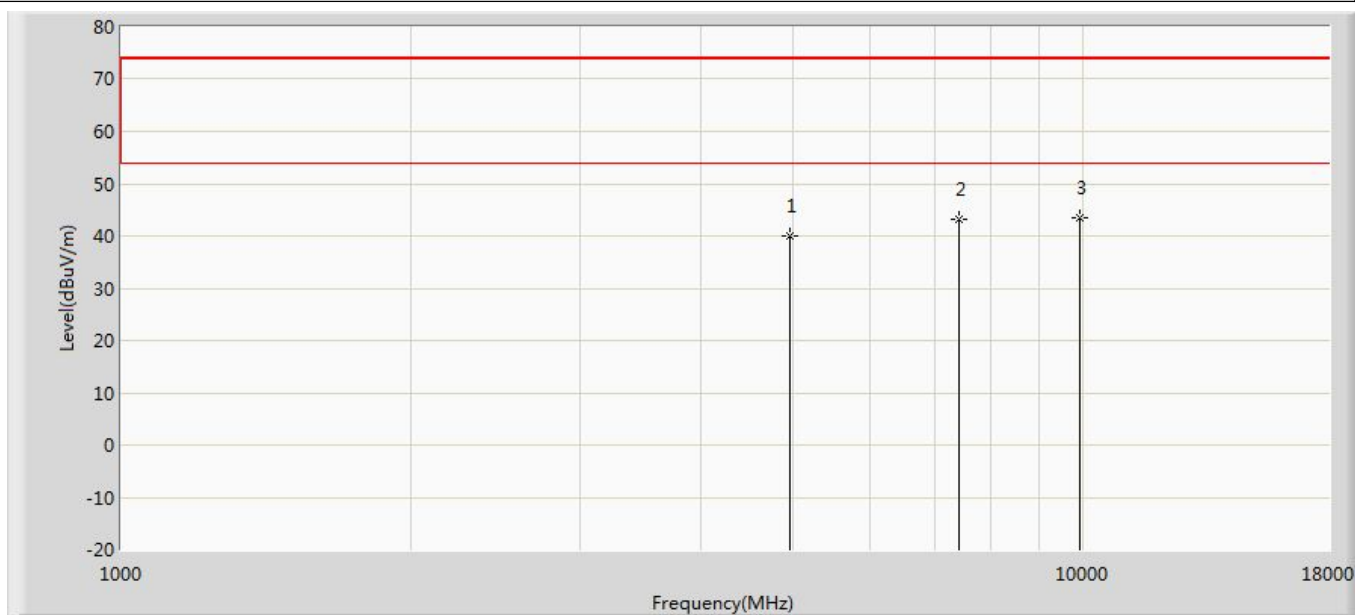
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	39.086	39.599	-34.914	74.000	-0.514	PK
2	*	7323.000	42.850	38.923	-31.150	74.000	3.927	PK
3		9764.000	42.151	37.021	-31.849	74.000	5.131	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 2DH5	



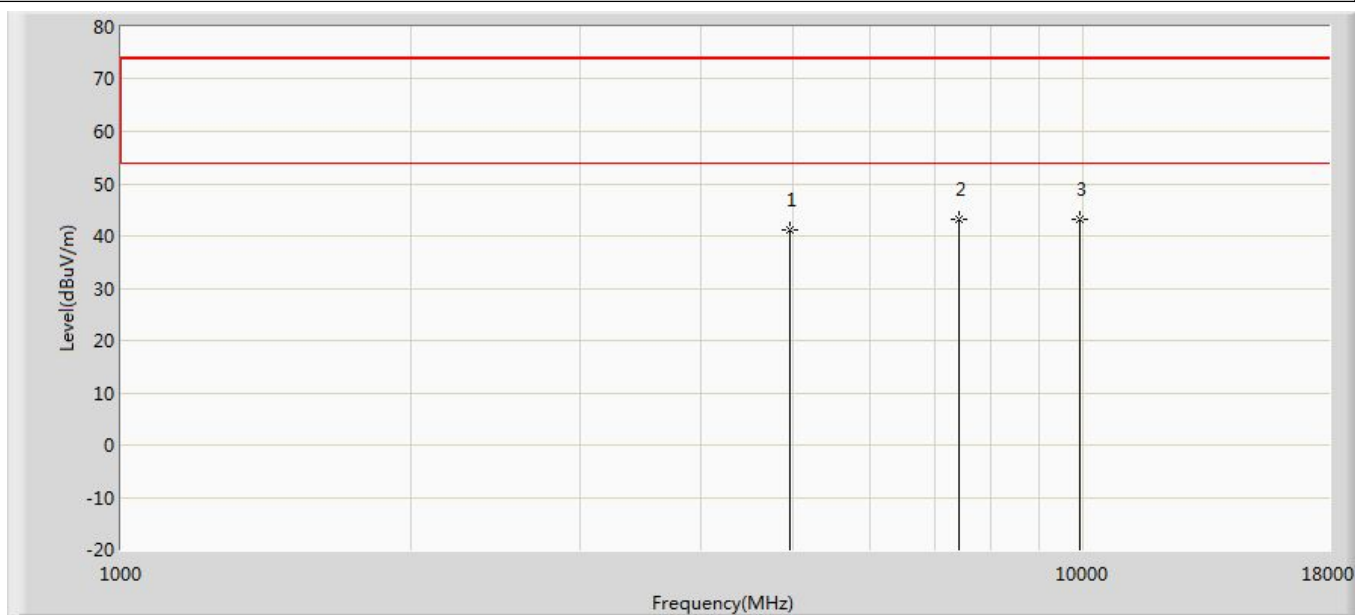
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	39.440	39.953	-34.560	74.000	-0.514	PK
2		7323.000	42.002	38.075	-31.998	74.000	3.927	PK
3	*	9764.000	42.180	37.050	-31.820	74.000	5.131	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



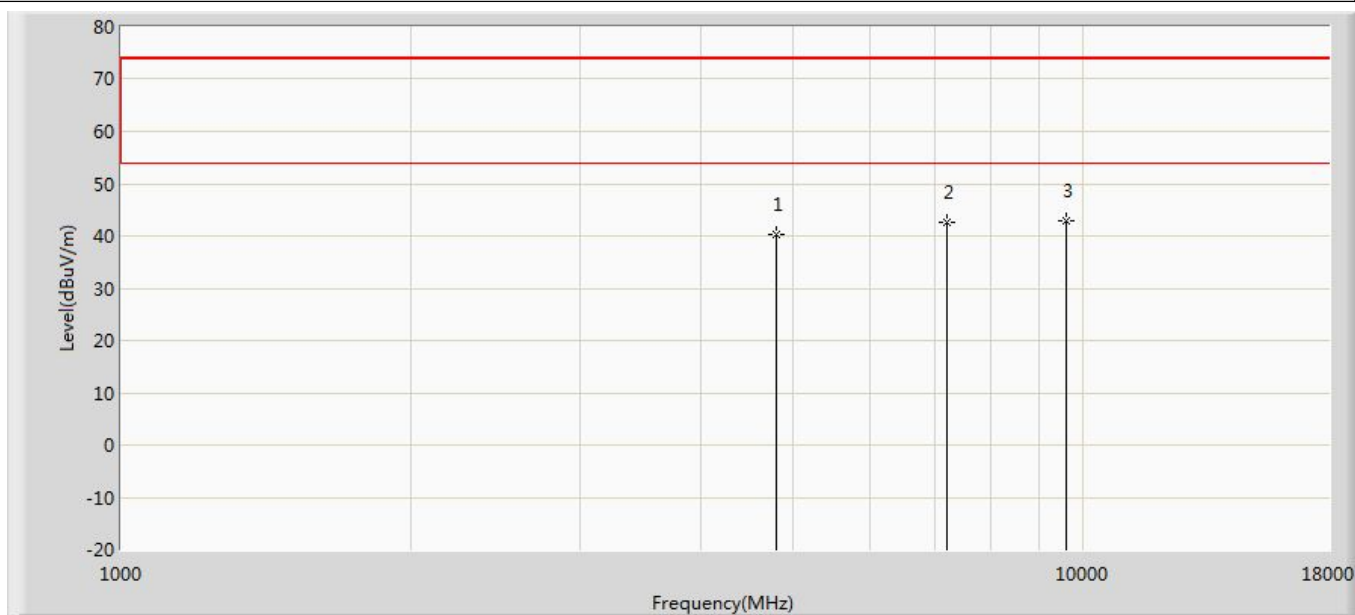
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	40.115	40.992	-33.885	74.000	-0.877	PK
2		7440.000	43.083	39.444	-30.917	74.000	3.638	PK
3	*	9920.000	43.542	37.576	-30.458	74.000	5.966	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



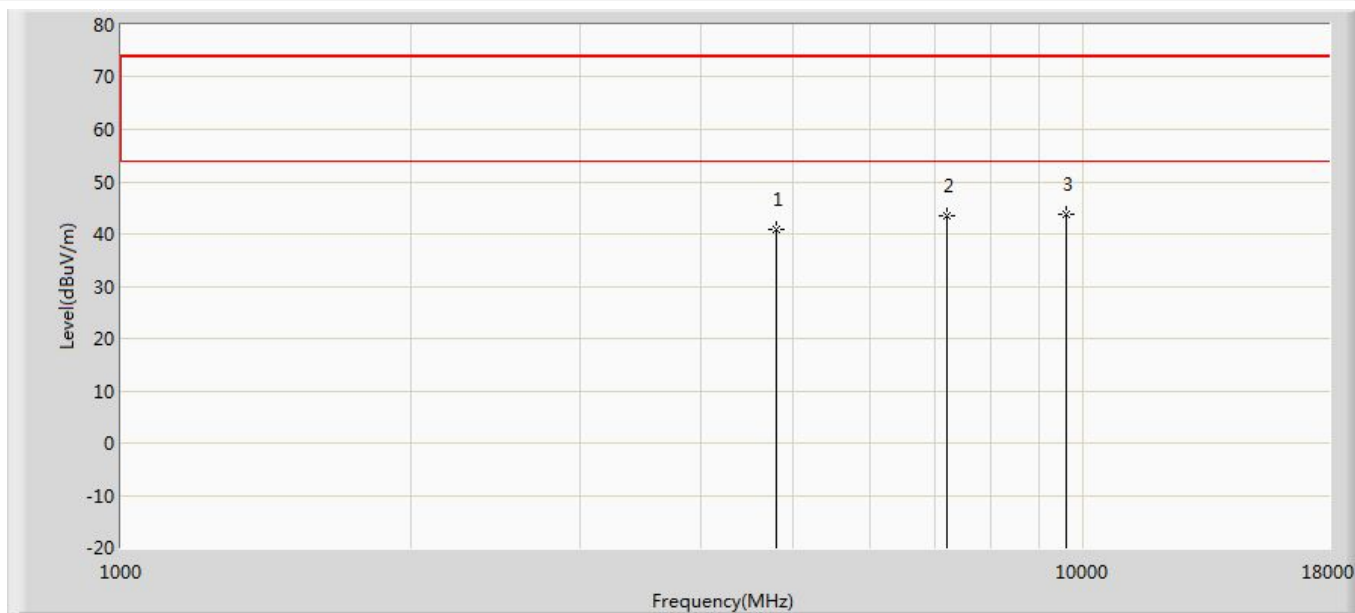
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.278	42.155	-32.722	74.000	-0.877	PK
2	*	7440.000	43.165	39.526	-30.835	74.000	3.638	PK
3		9920.000	43.073	37.107	-30.927	74.000	5.966	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



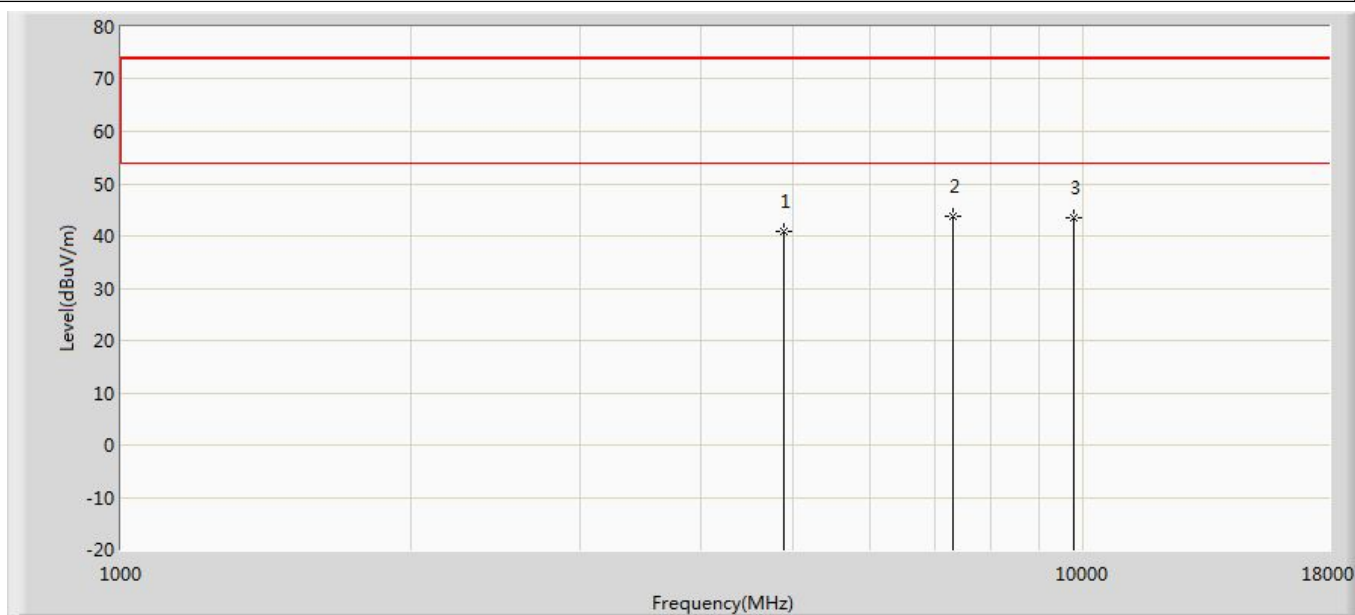
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	40.226	40.745	-33.774	74.000	-0.519	PK
2		7206.000	42.647	38.631	-31.353	74.000	4.016	PK
3	*	9608.000	42.885	37.067	-31.115	74.000	5.817	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



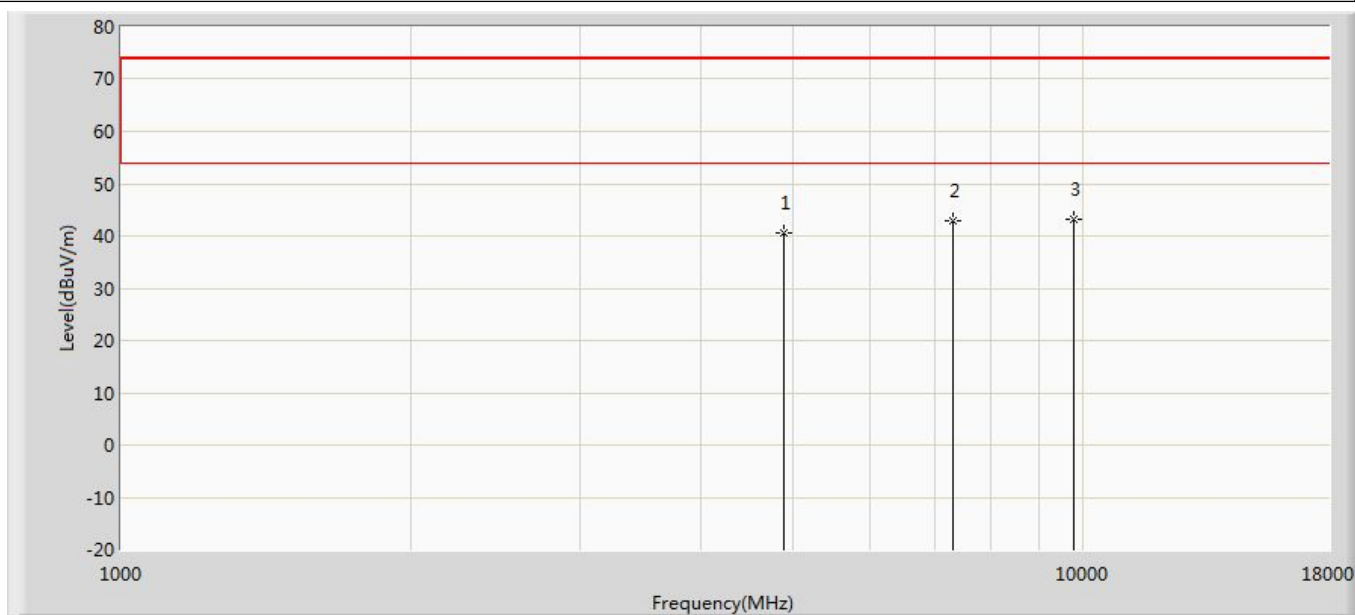
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	40.777	41.296	-33.223	74.000	-0.519	PK
2		7206.000	43.570	39.554	-30.430	74.000	4.016	PK
3	*	9608.000	43.848	38.030	-30.152	74.000	5.817	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2441MHz by 3DH5	



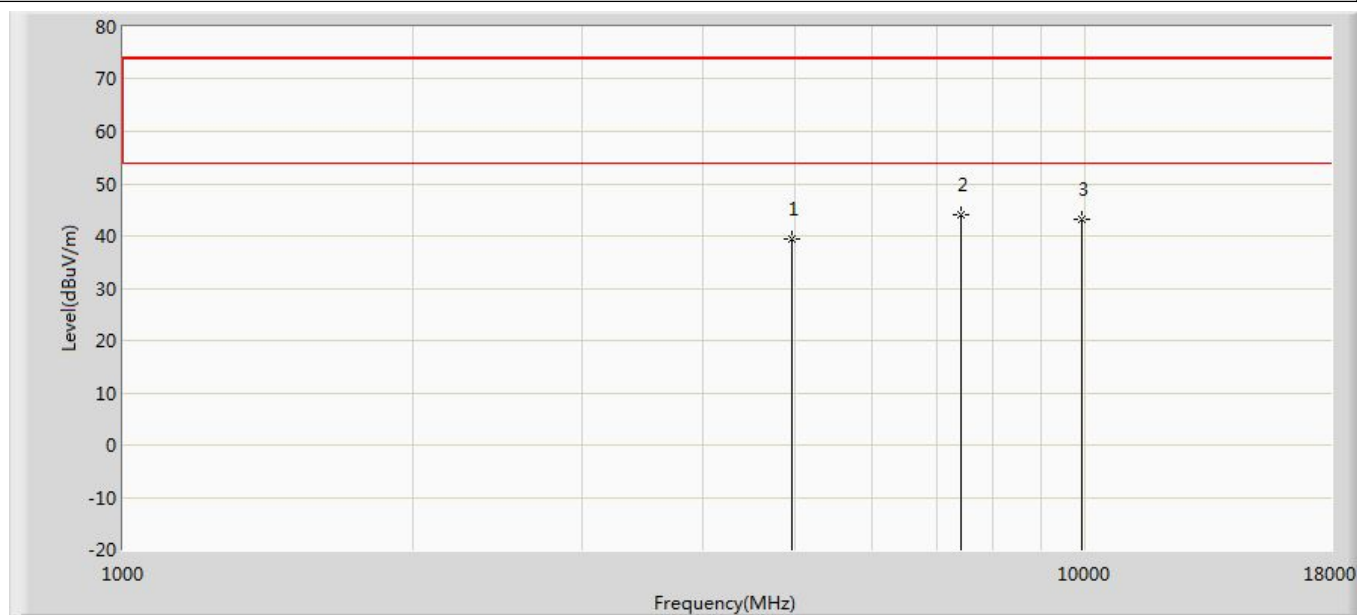
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	40.812	41.325	-33.188	74.000	-0.514	PK
2	*	7323.000	43.828	39.901	-30.172	74.000	3.927	PK
3		9764.000	43.428	38.298	-30.572	74.000	5.131	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2441MHz by 3DH5	



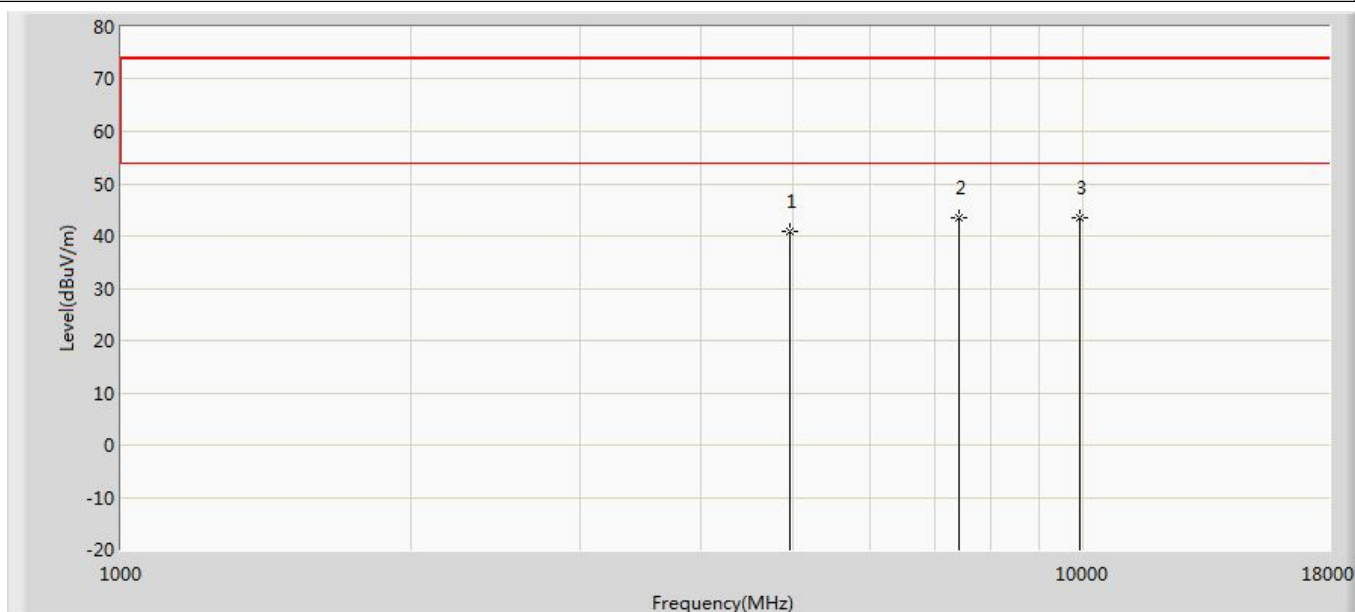
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	40.709	41.222	-33.291	74.000	-0.514	PK
2		7323.000	42.883	38.956	-31.117	74.000	3.927	PK
3	*	9764.000	43.155	38.025	-30.845	74.000	5.131	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	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	39.386	40.263	-34.614	74.000	-0.877	PK
2	*	7440.000	44.021	40.382	-29.979	74.000	3.638	PK
3		9920.000	43.323	37.357	-30.677	74.000	5.966	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	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	40.766	41.643	-33.234	74.000	-0.877	PK
2		7440.000	43.463	39.824	-30.537	74.000	3.638	PK
3	*	9920.000	43.611	37.645	-30.389	74.000	5.966	PK

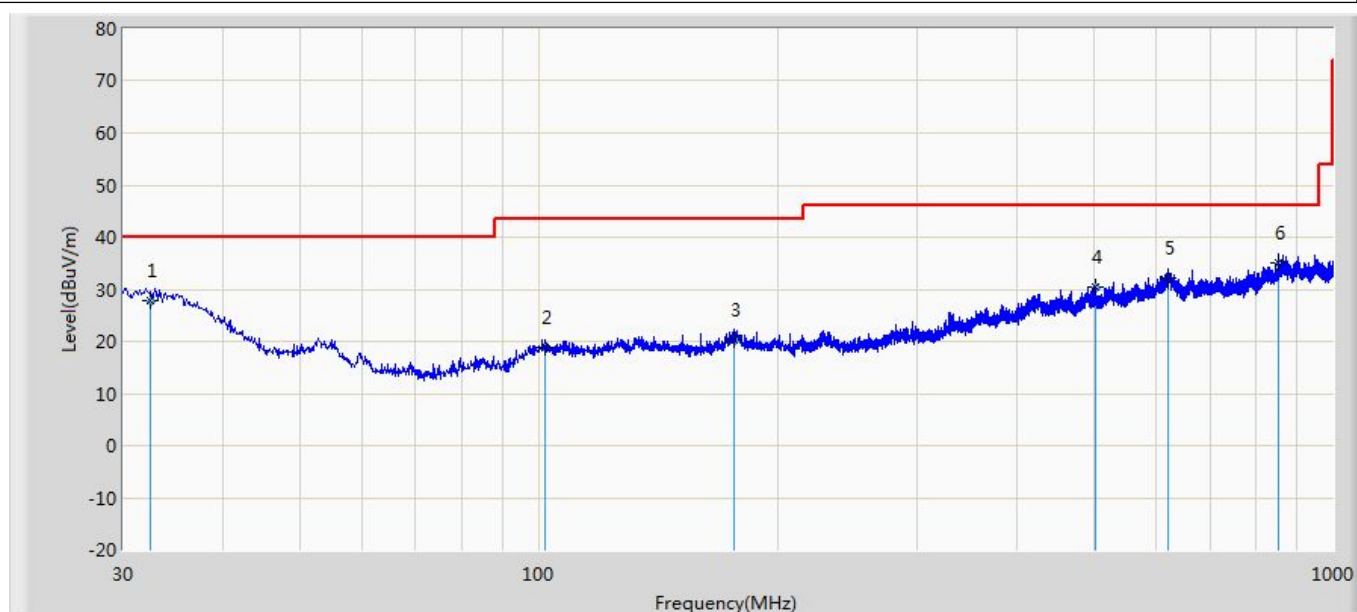
Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 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.

The worst case of Radiated Emission below 1GHz:

Engineer: CptJack	
Site: AC2	Time: 2017/12/05
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402MHz by DH5	

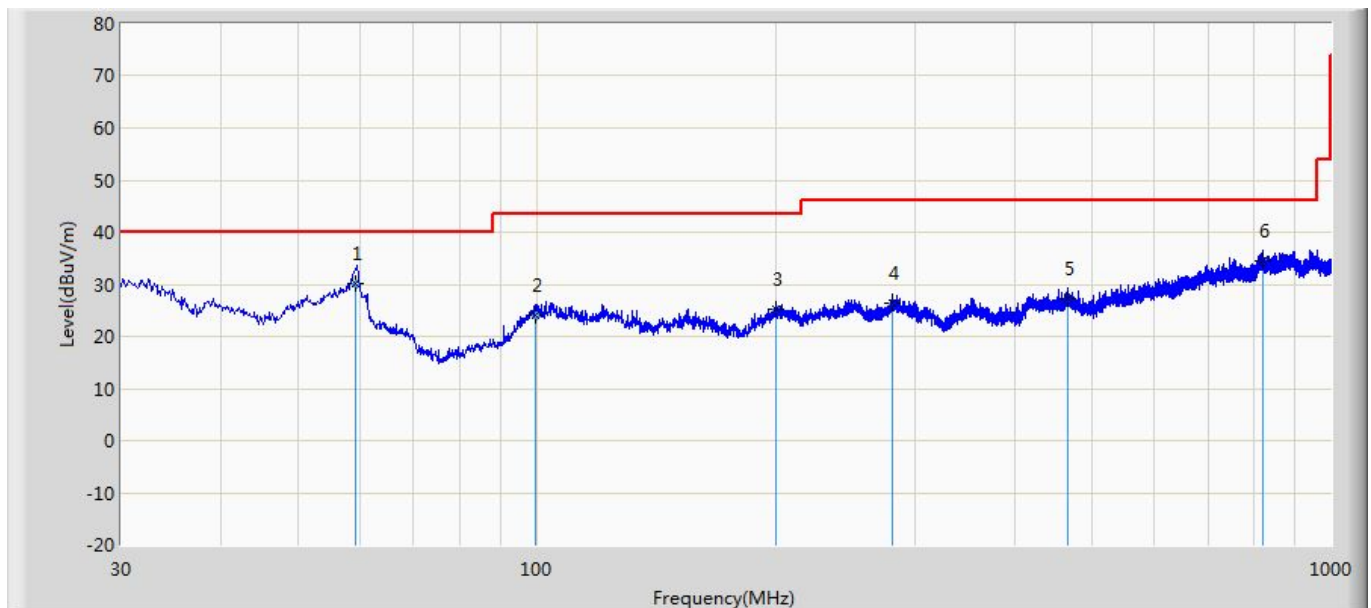


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		32.472	27.877	0.500	-12.123	40.000	20.731	6.645	0.000	100	355	QP
2		101.842	18.739	1.600	-24.761	43.500	10.252	6.886	0.000	200	66	QP
3		175.885	20.284	3.100	-23.216	43.500	9.896	7.289	0.000	187	360	QP
4		501.621	30.568	3.000	-15.432	46.000	19.522	8.046	0.000	100	5	QP
5		621.034	32.033	1.200	-13.967	46.000	22.273	8.560	0.000	200	149	QP
6	*	854.610	34.950	2.600	-11.050	46.000	23.210	9.140	0.000	100	124	QP

Note:

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

Engineer: CptJack	
Site: AC2	Time: 2017/12/05
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402MHz by DH5	



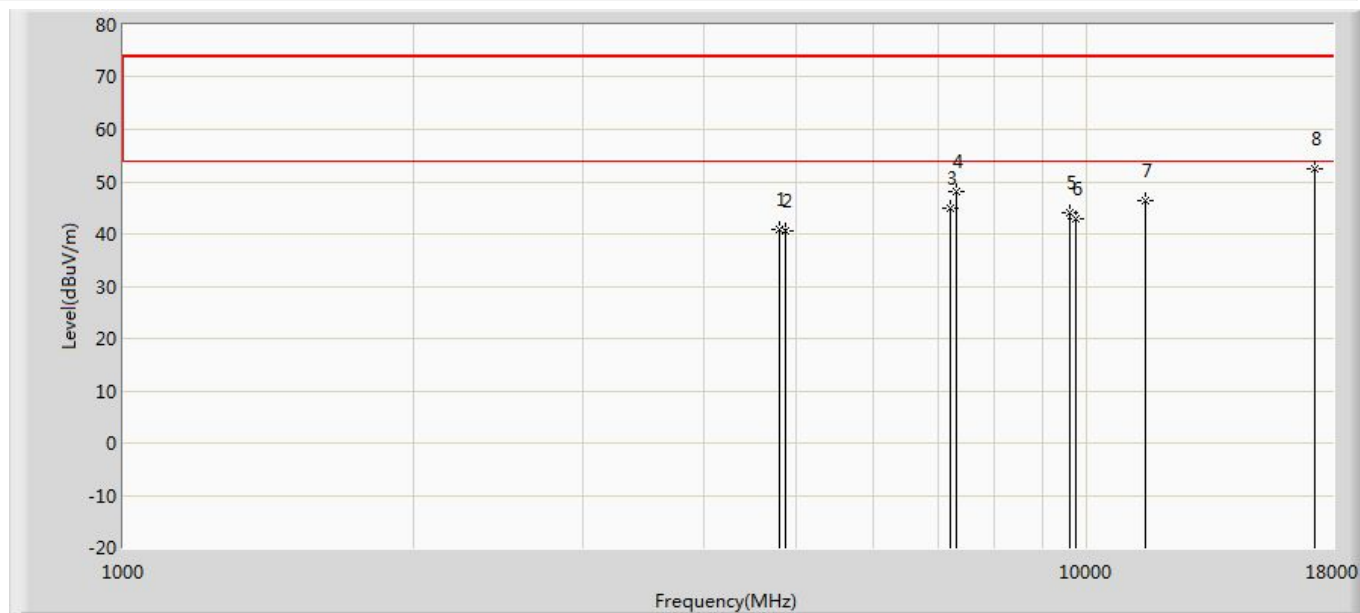
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	59.154	30.152	13.600	-9.848	40.000	9.848	6.704	0.000	100	59	QP
2		99.719	23.958	2.056	-19.542	43.500	15.036	6.867	0.000	200	204	QP
3		200.114	25.294	1.724	-18.206	43.500	16.229	7.342	0.000	100	195	QP
4		280.987	26.247	1.158	-19.753	46.000	17.489	7.601	0.000	200	354	QP
5		466.621	27.342	0.600	-18.658	46.000	18.733	8.009	0.000	100	113	QP
6		822.732	34.529	1.743	-11.471	46.000	23.722	9.064	0.000	100	251	QP

Note:

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

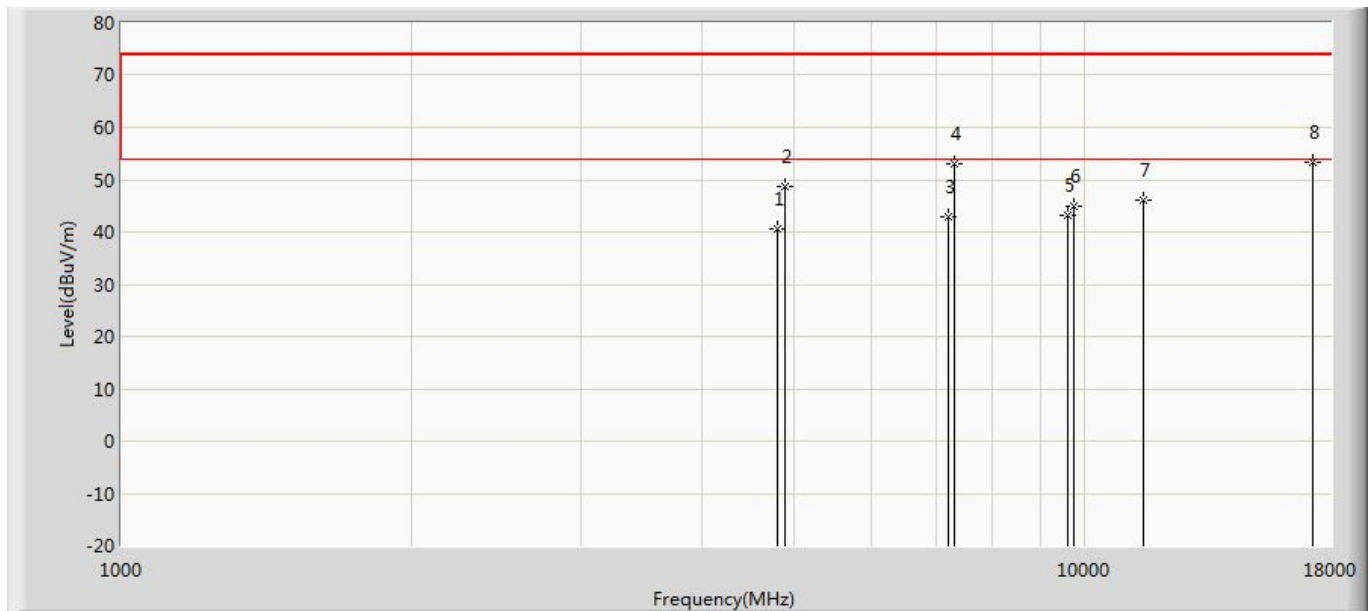
The worst case of Simultaneous transmission:

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 14:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Simultaneous transmission with WIFI(2.4G+5G)+BT	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.001	41.520	-32.999	74.000	-0.519	PK
2		4874.000	40.691	41.133	-33.309	74.000	-0.442	PK
3		7206.000	44.986	40.970	-29.014	74.000	4.016	PK
4		7315.000	48.078	44.187	-25.922	74.000	3.891	PK
5		9608.000	43.940	38.122	-30.060	74.000	5.817	PK
6		9748.000	42.862	37.861	-31.138	74.000	5.002	PK
7		11490.000	46.293	36.567	-27.707	74.000	9.726	PK
8	*	17235.000	52.597	34.178	-21.403	74.000	18.419	PK

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 14:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Simultaneous transmission with WIFI(2.4G+5G)+BT	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	40.501	41.020	-33.499	74.000	-0.519	PK
2		4876.000	48.570	48.980	-25.430	74.000	-0.410	PK
3		7206.000	42.896	38.880	-31.104	74.000	4.016	PK
4		7315.000	53.001	49.110	-20.999	74.000	3.891	PK
5		9608.000	43.328	37.510	-30.672	74.000	5.817	PK
6		9748.000	45.061	40.060	-28.939	74.000	5.002	PK
7		11490.000	46.096	36.370	-27.904	74.000	9.726	PK
8	*	17235.000	53.245	34.826	-20.755	74.000	18.419	PK

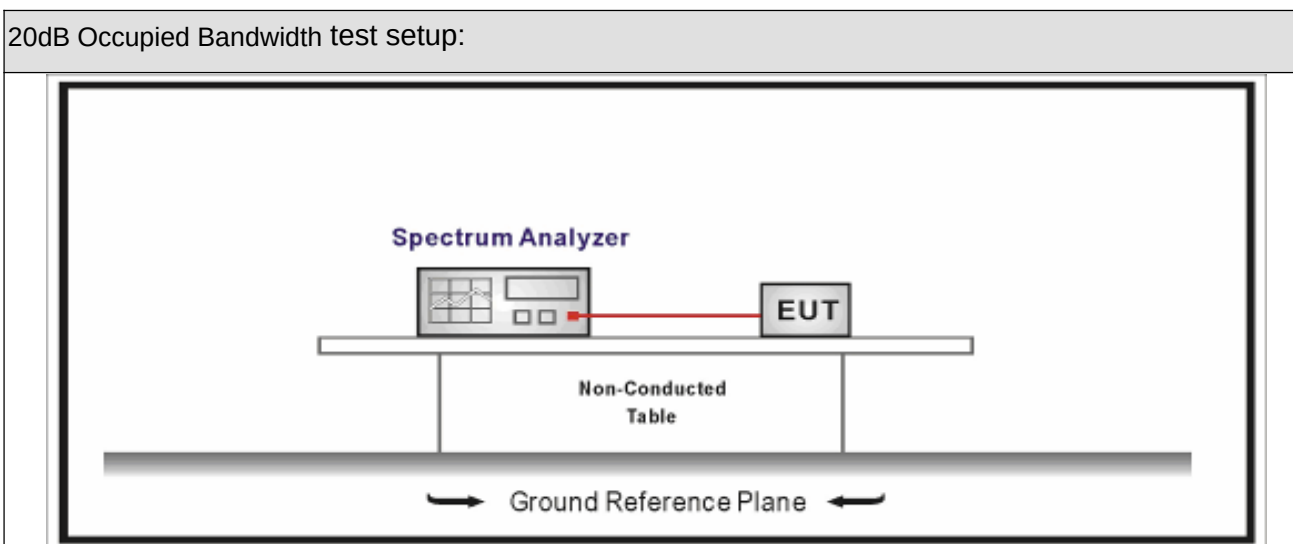
5. 20dB Bandwidth

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	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All 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	
☒	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.

5.4 Test Procedure

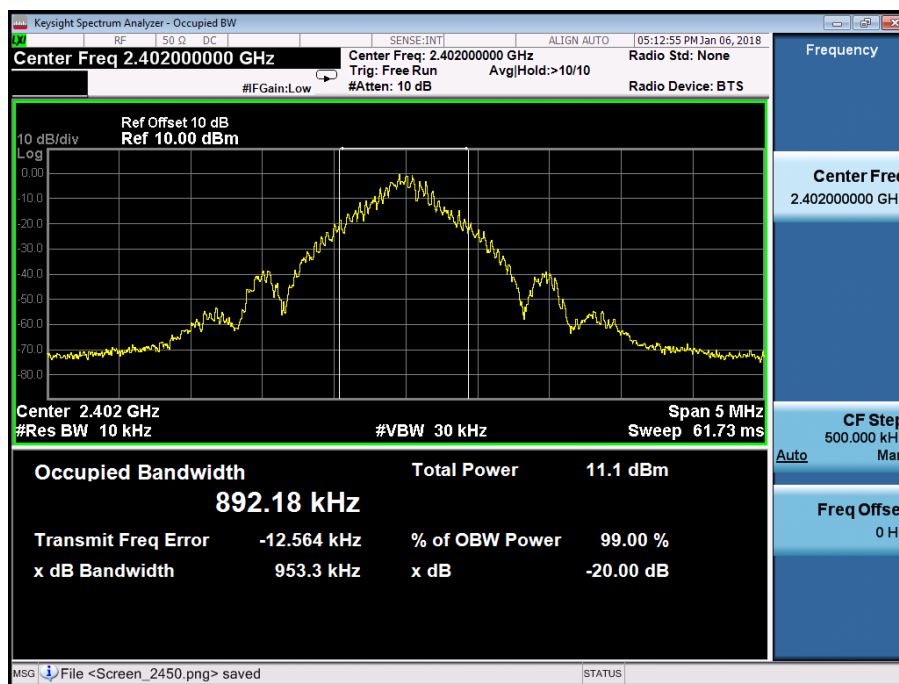
Test Method			
	References Rule	Chapter	Description
☒	DA 00-705	N/A	20 dB Bandwidth

5.5 Test Result

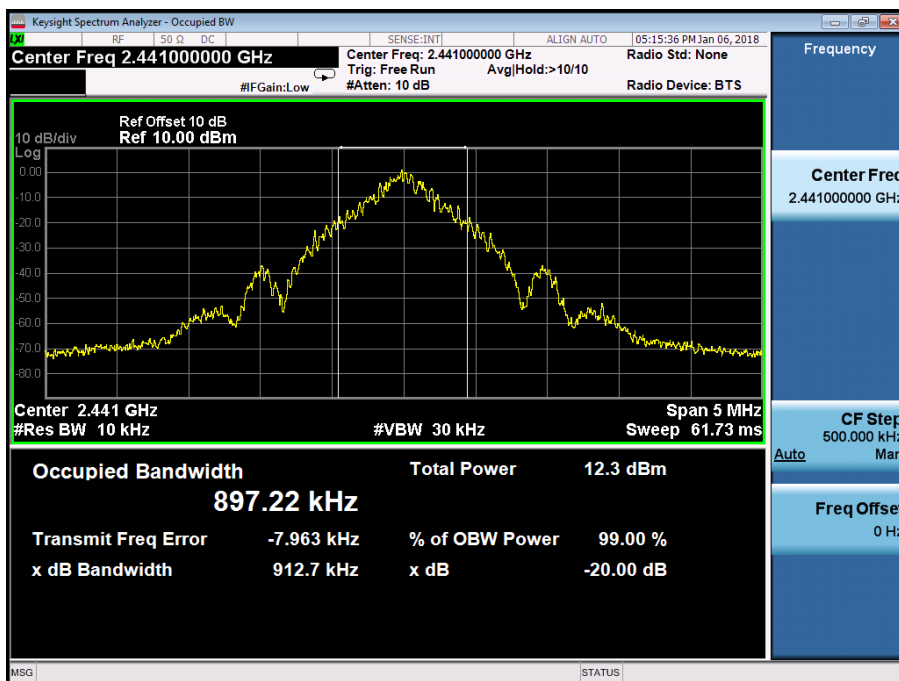
Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	953.3	892.18
39	2441	912.7	897.22
78	2480	956.6	904.57

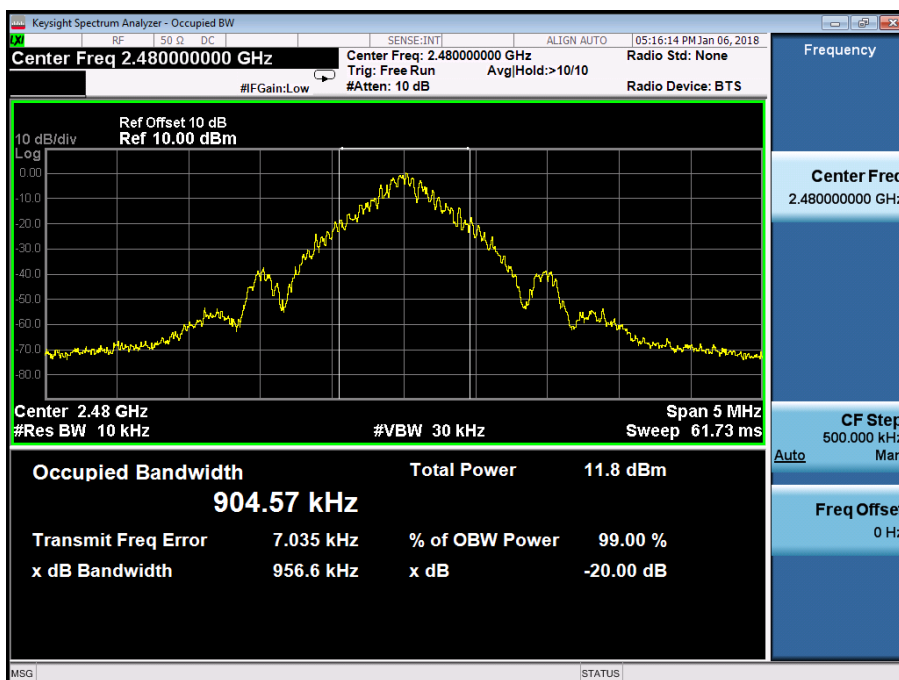
Channel 00 (2402MHz)



Channel 39 (2441MHz)



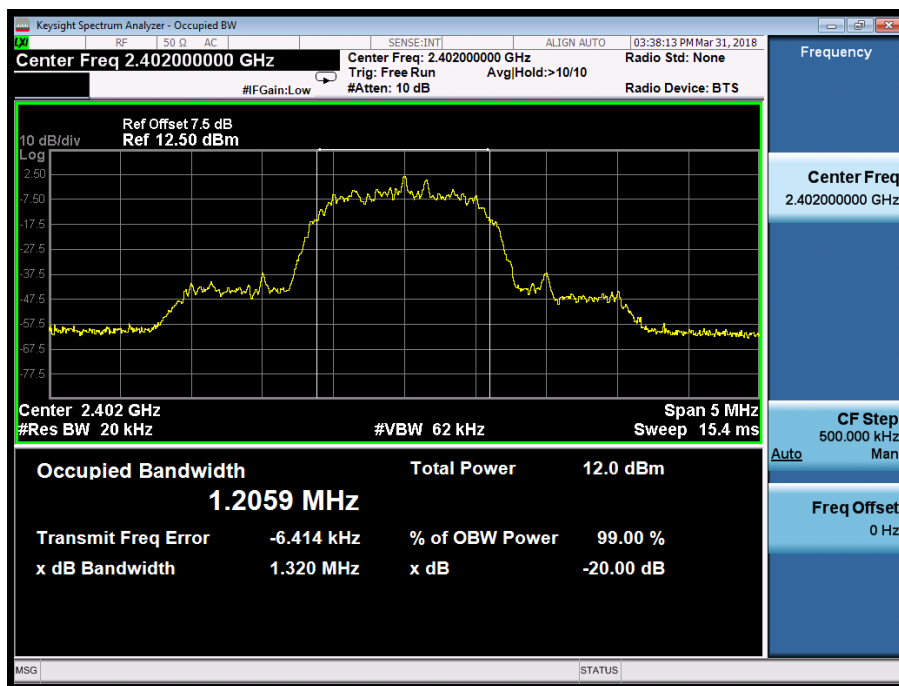
Channel 78 (2480MHz)



Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2018.03.31	Test Engineer	: Eric

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	1320	1205.9
39	2441	1322	1208.2
78	2480	1320	1208.2

Channel 00 (2402MHz)



Channel 39 (2441MHz)



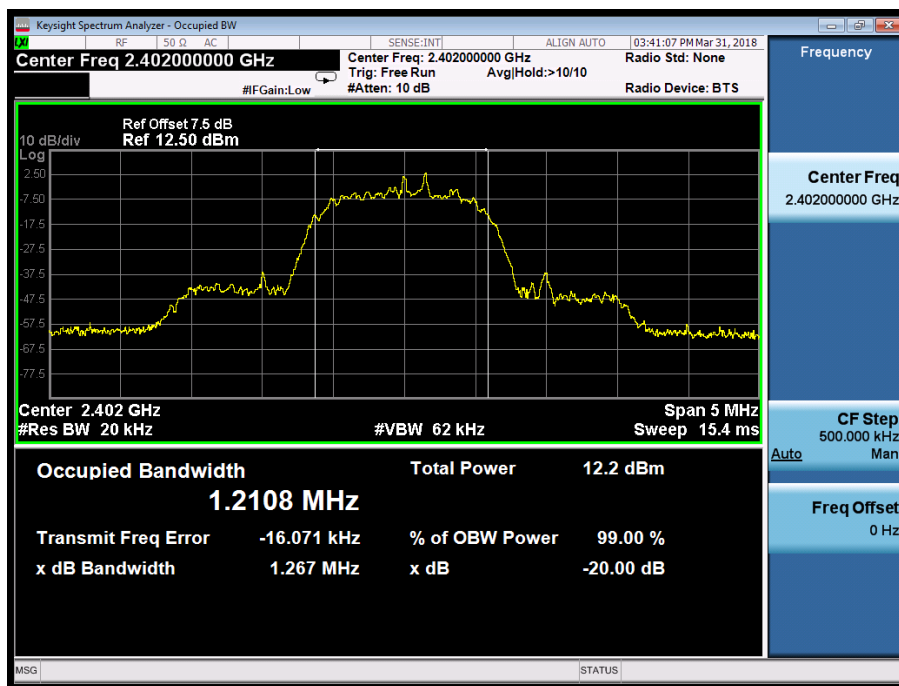
Channel 78 (2480MHz)



Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2018.03.31	Test Engineer	: Eric

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	1267	1210.8
39	2441	1270	1209.2
78	2480	1267	1211.2

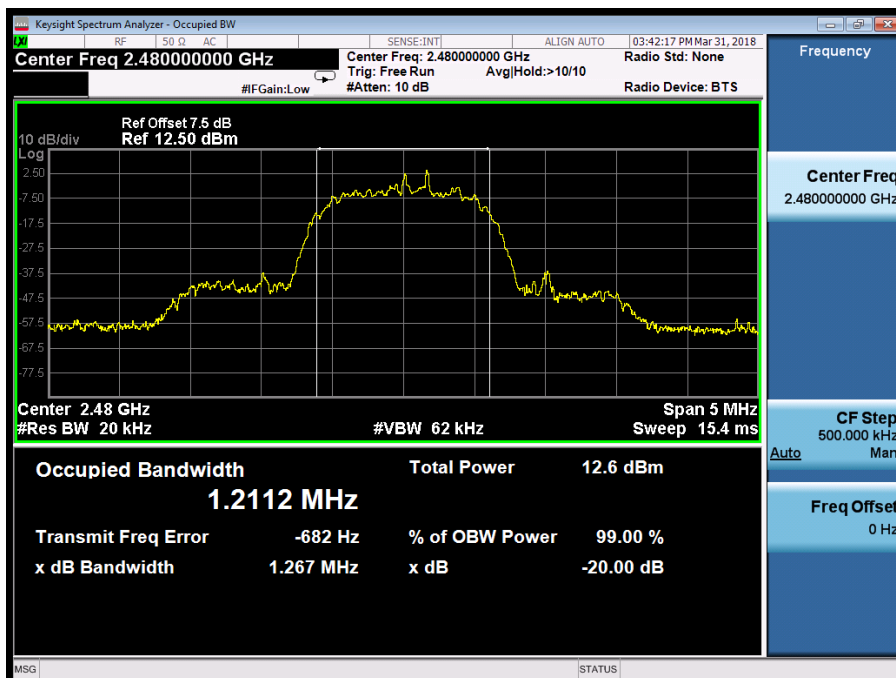
Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)



6. Carrier Frequency Separation

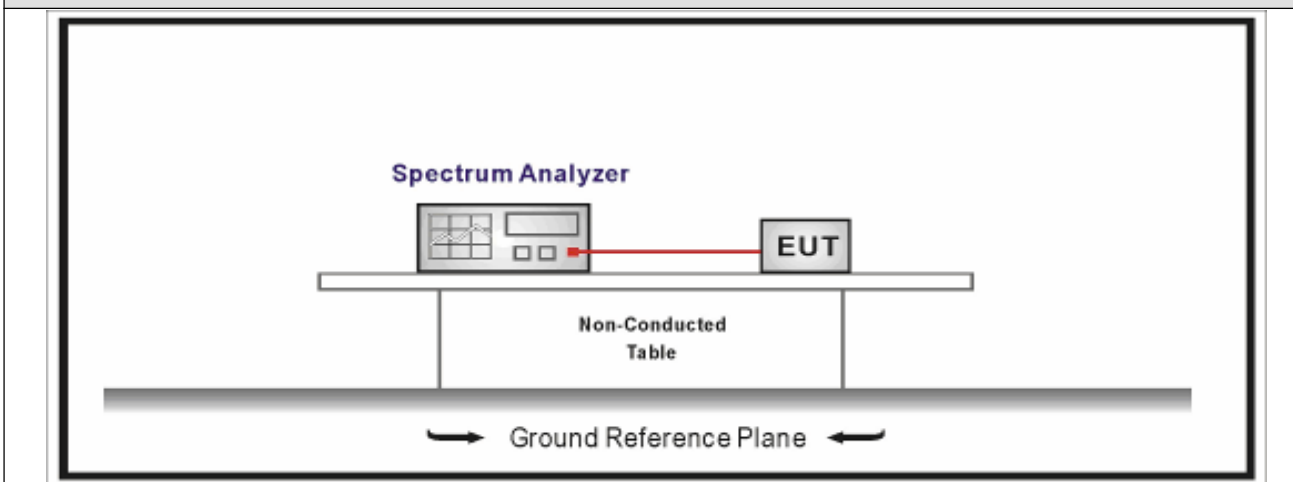
6.1. Test Equipment

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

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

6.2. Test Setup

Carrier Frequency Separation test setup:



6.3. Limit

Carrier Frequency Separation	
☒	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 seconds within a 20 second period;
☐	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.
☐	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

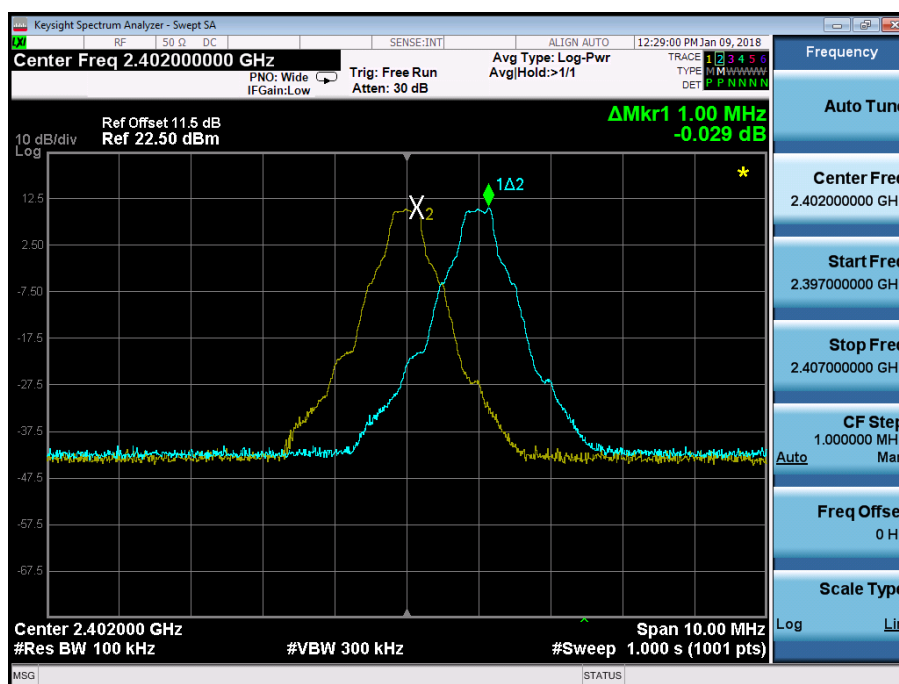
Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.2	Carrier frequency separation

6.5. Test Result

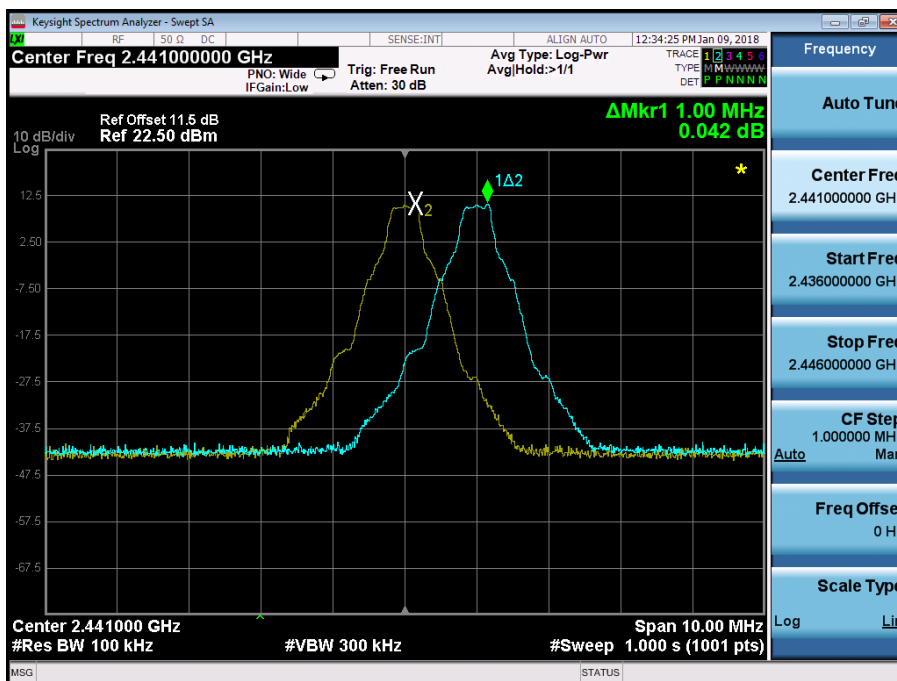
Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	635.5	Pass
39	2441	1000	608.0	Pass
78	2480	1000	637.7	Pass

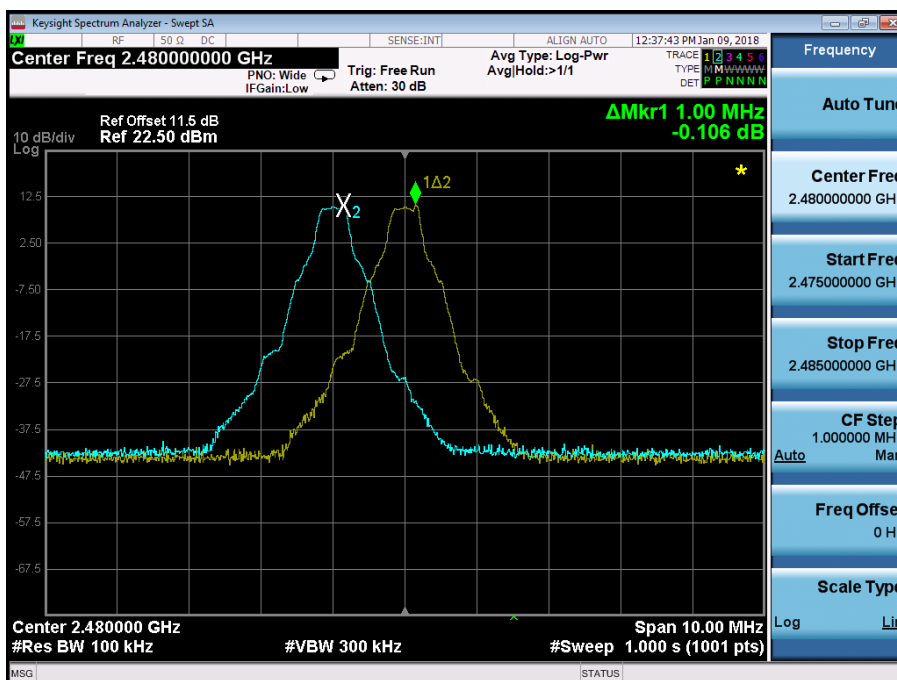
Channel 00 (2402MHz)



Channel 39 (2441MHz)



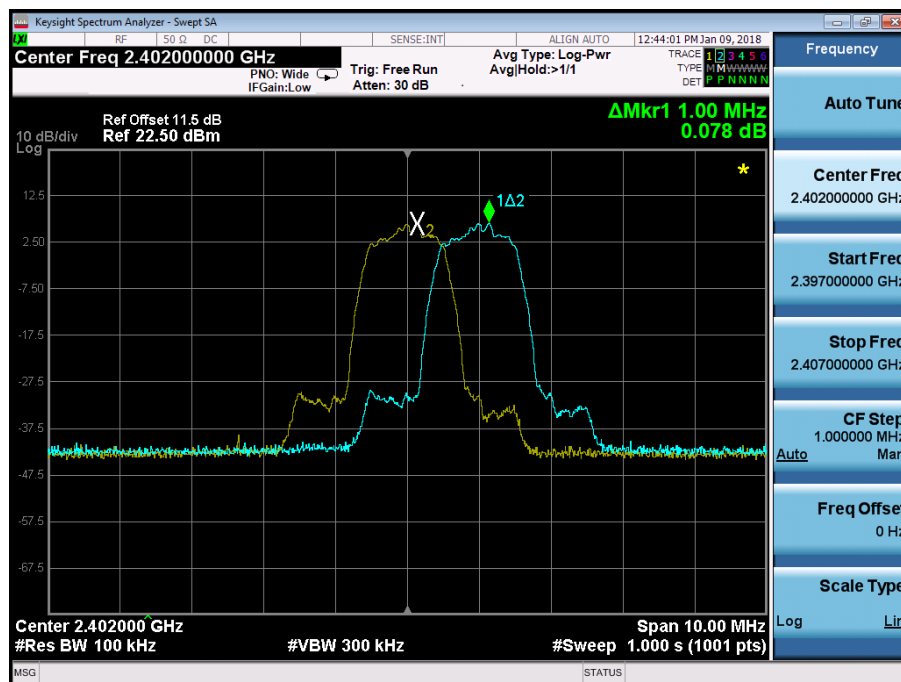
Channel 78 (2480MHz)



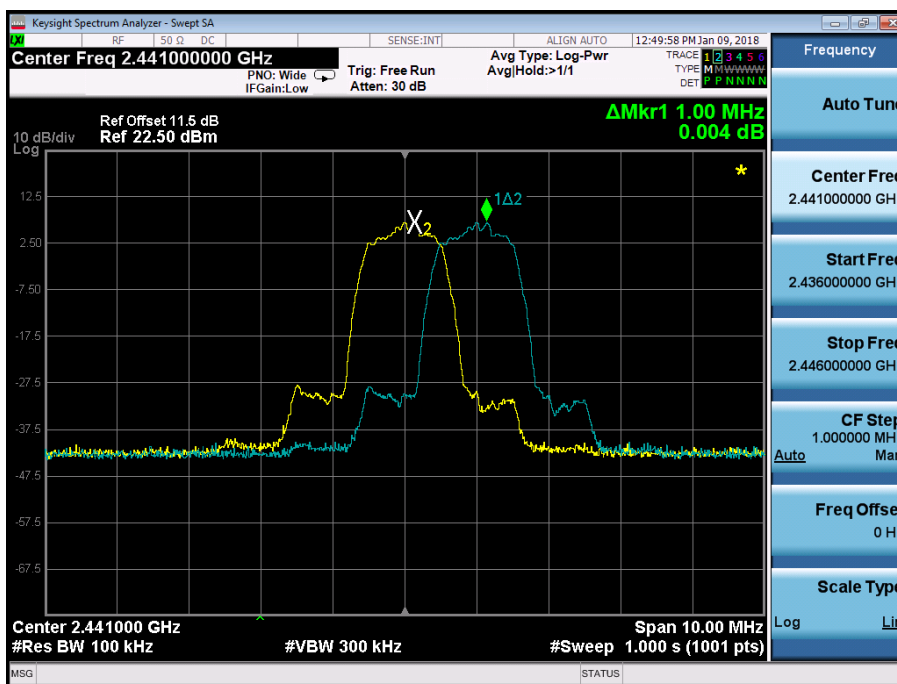
Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2018.01.09	Test Engineer	: Eric

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	880	Pass
39	2441	1000	881.3	Pass
78	2480	1000	880	Pass

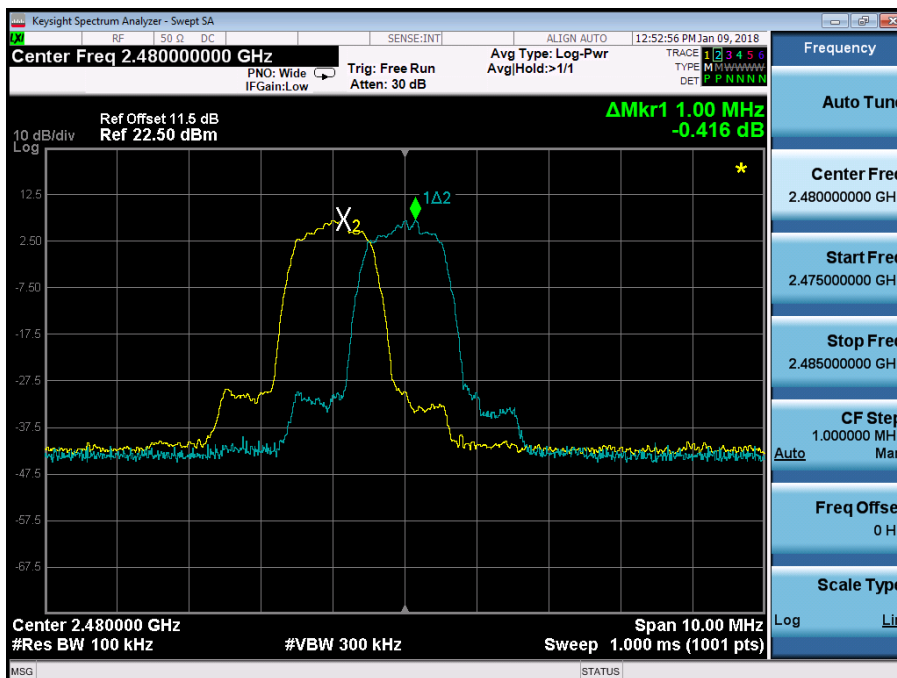
Channel 00 (2402MHz)



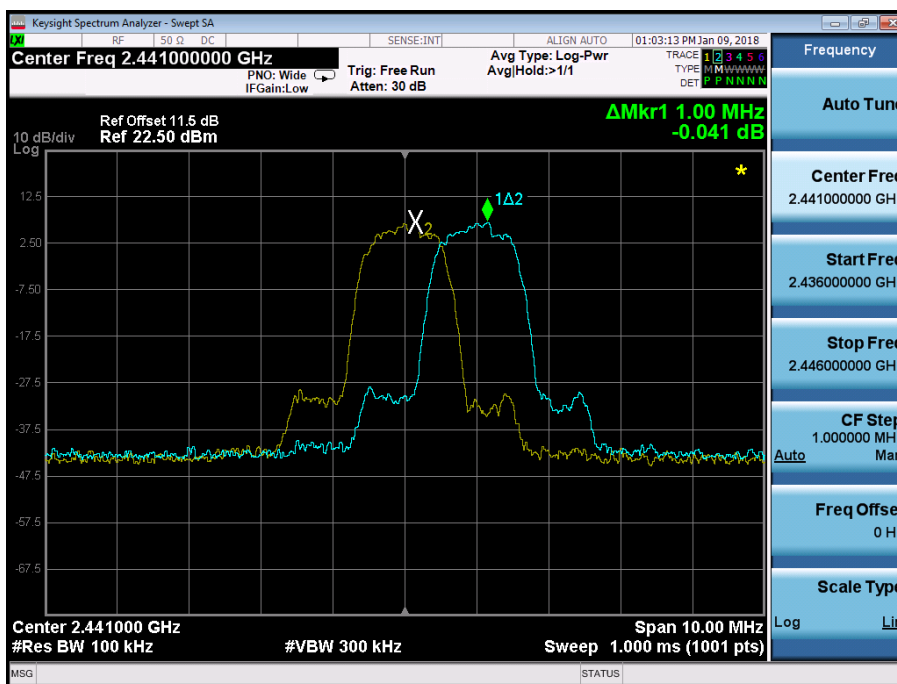
Channel 39 (2441MHz)



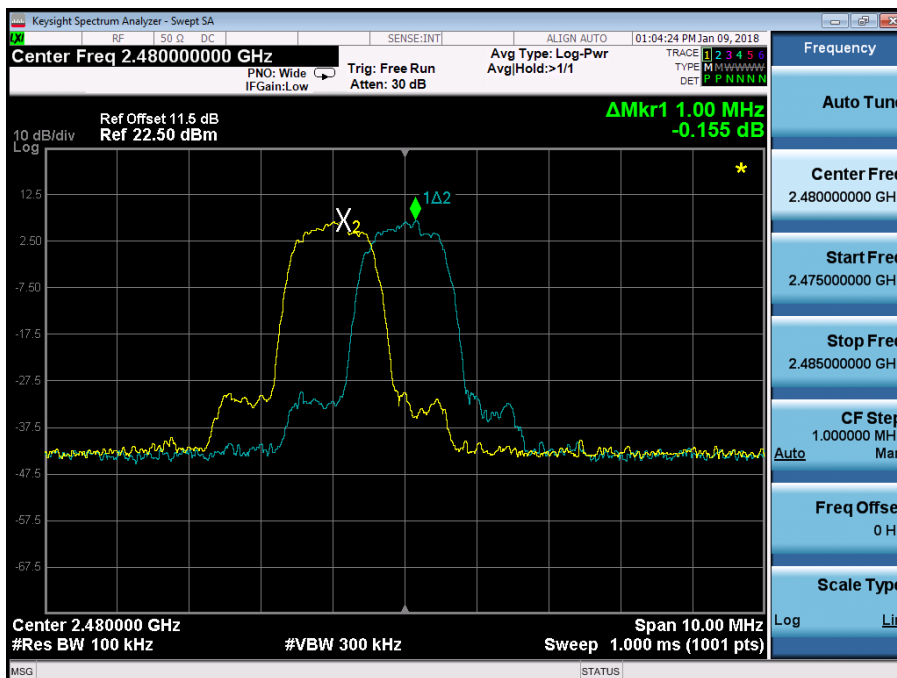
Channel 78 (2480MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)

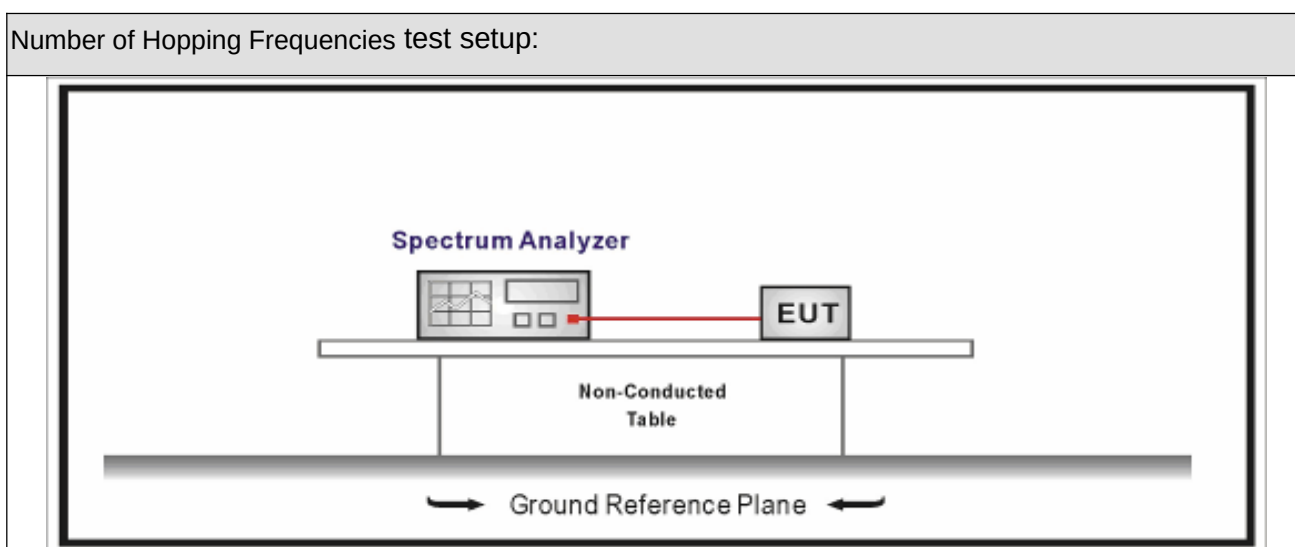


7. Number of Hopping Frequencies

7.1. Test Equipment

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

7.4. Test Procedure

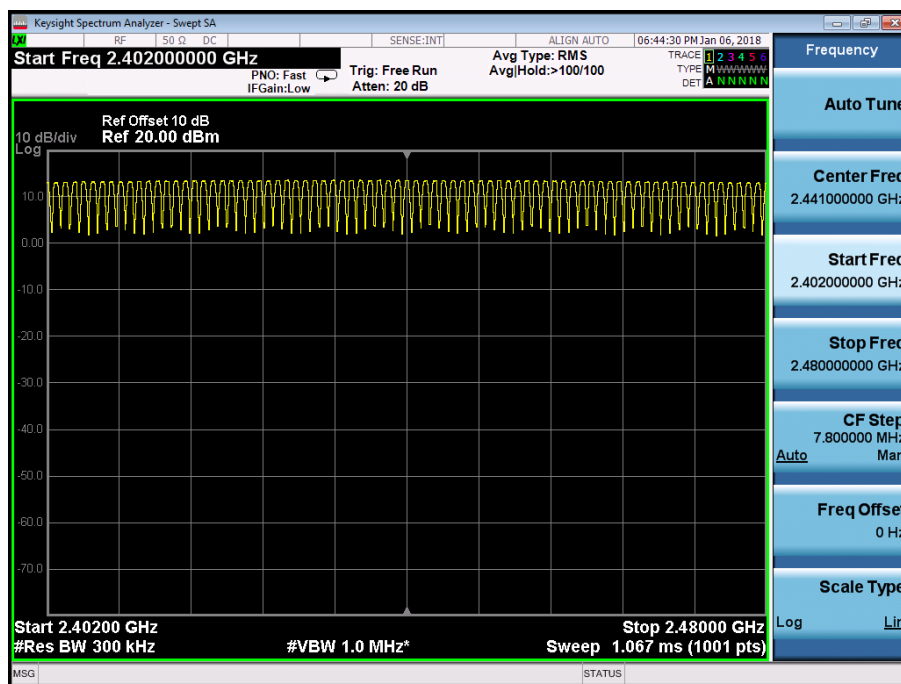
Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.3	Number of Hopping Frequencies

7.5. Test Result

Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

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

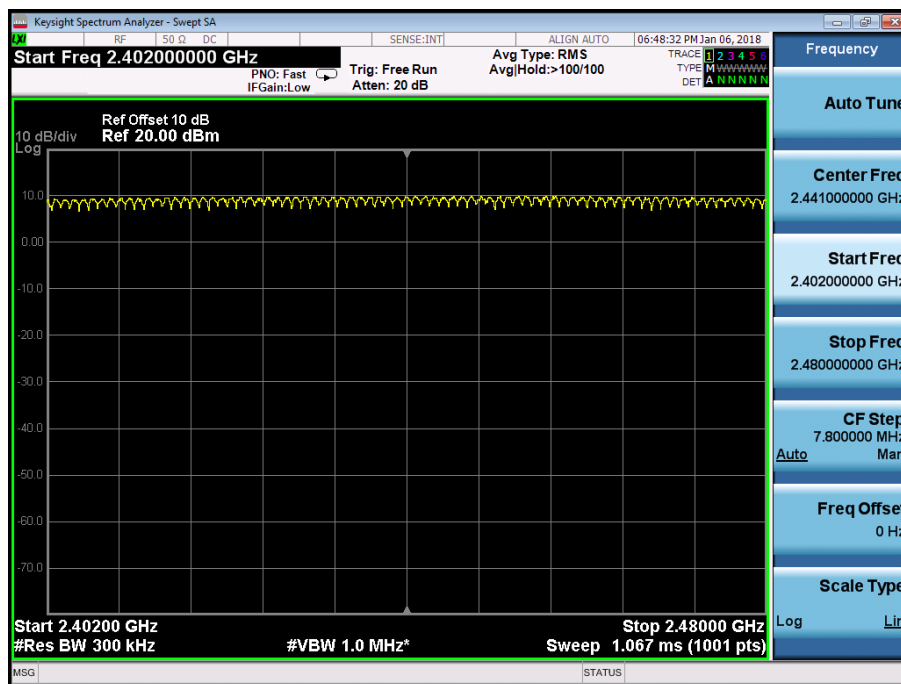
2402 - 2480MHz



Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

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

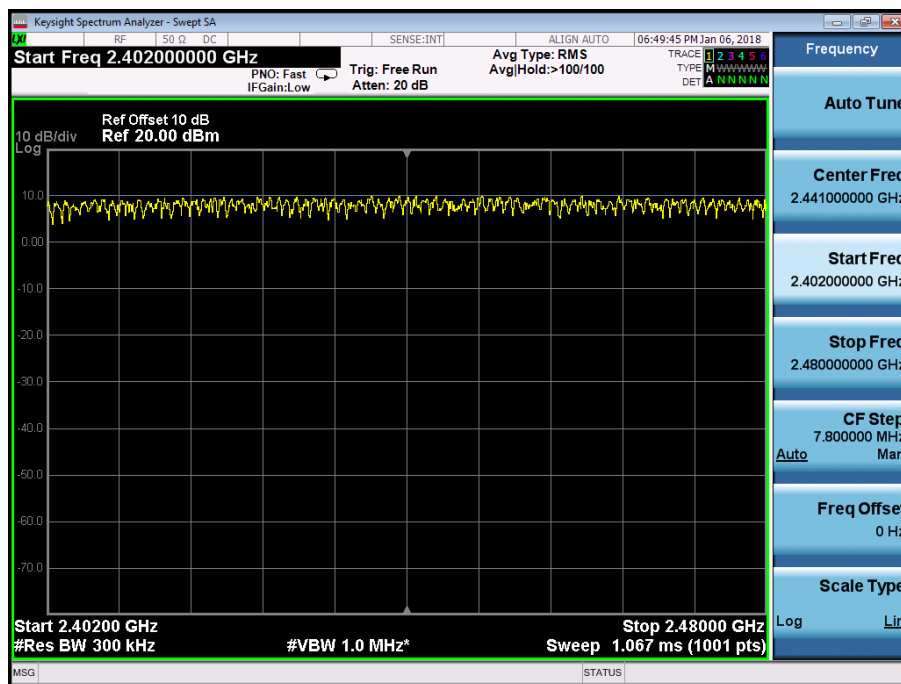
2402 - 2480 MHz



Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

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

2402 - 2480 MHz

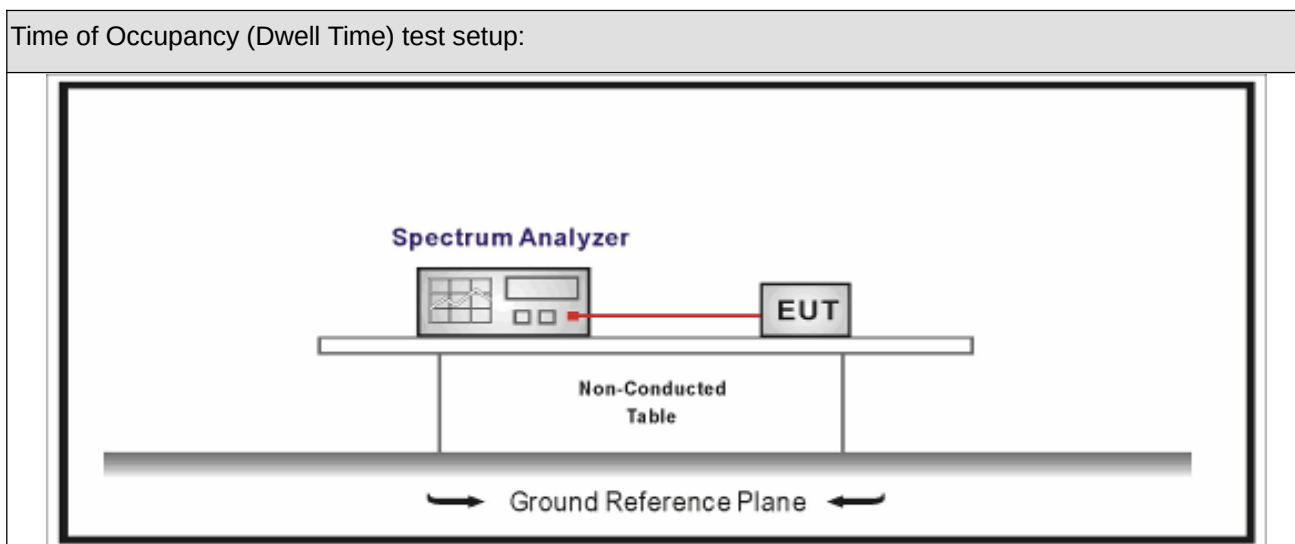


8. Time of Occupancy (Dwell Time)

8.1. Test Equipment

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

8.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.4	Time of Occupancy (Dwell Time)

8.5. Test Result

Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 1(GFSK_DH5)	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

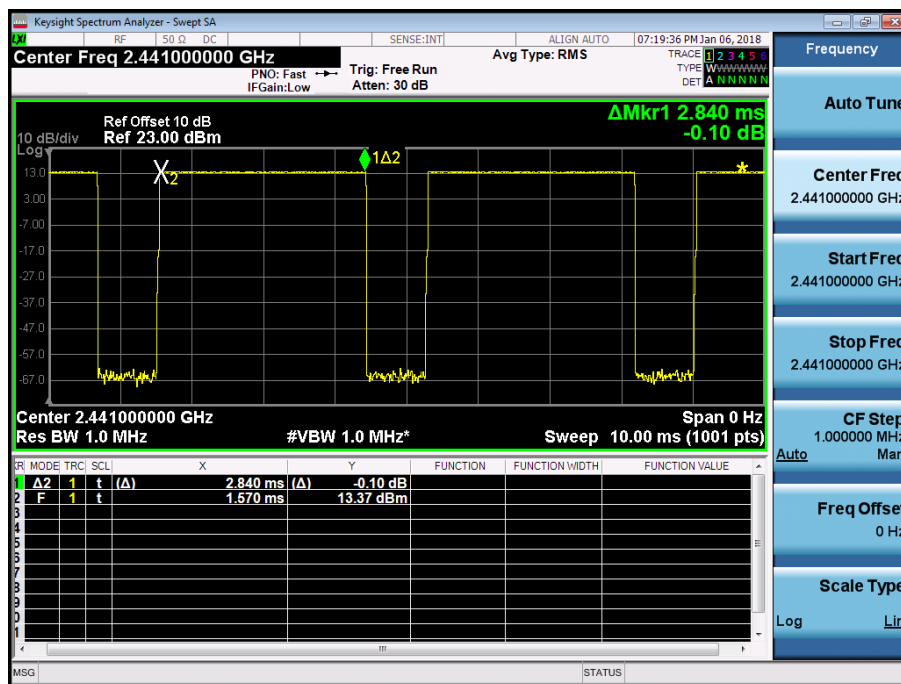
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	302.9	< 400	Pass

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

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

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

Channel 39 (2441MHz)-(DH5)



Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 2(Pi/4 DQPSK_DH5)	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

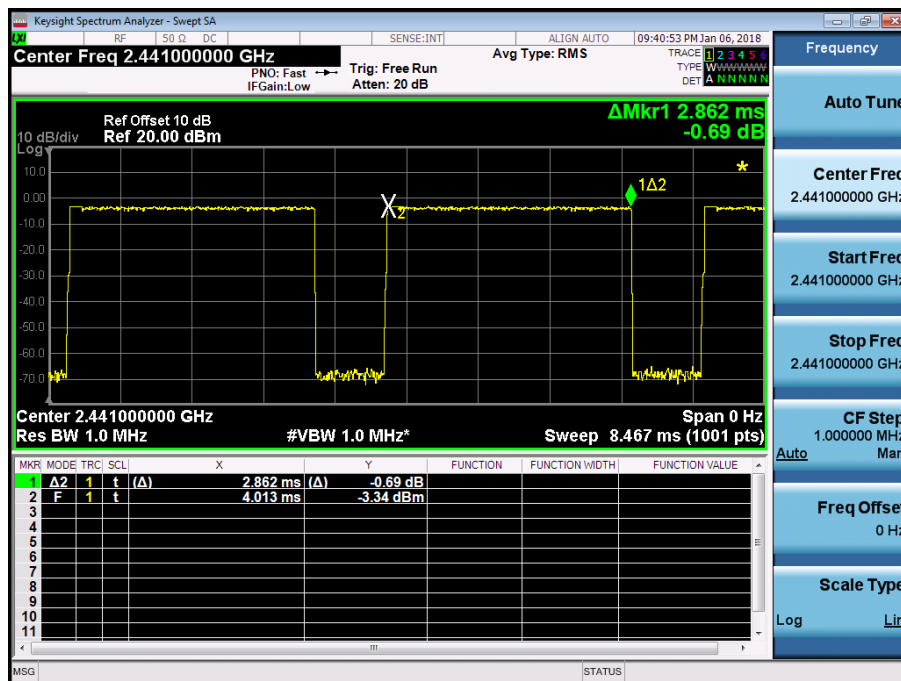
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	305.3	< 400	Pass

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

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

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

Channel 39 (2441MHz) - (2DH5)



Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 3(8DPSK_DH5)	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

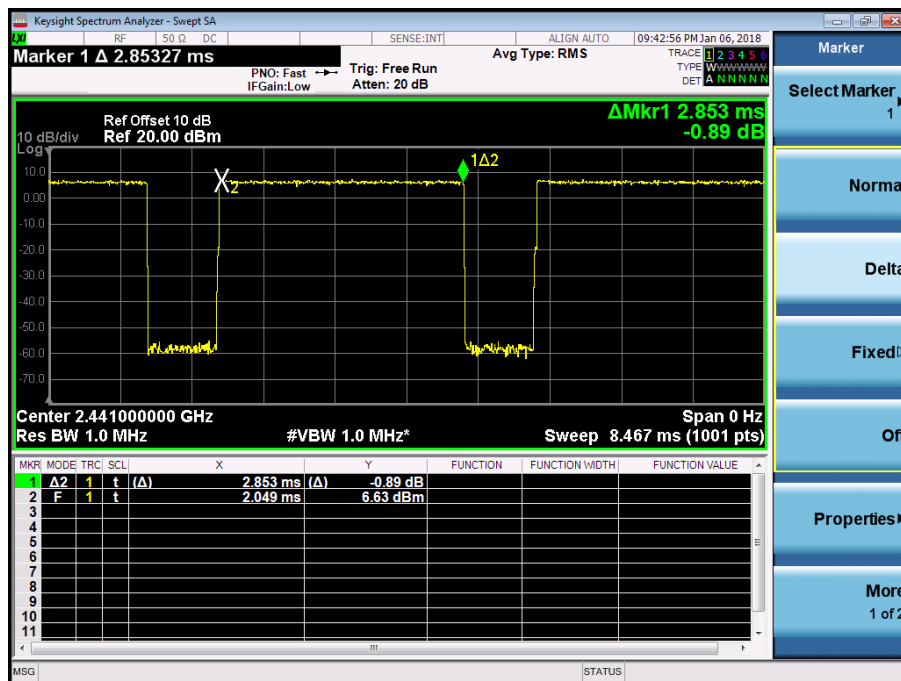
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	304.3	< 400	Pass

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

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

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

Channel 39 (2441MHz) - (3DH5)

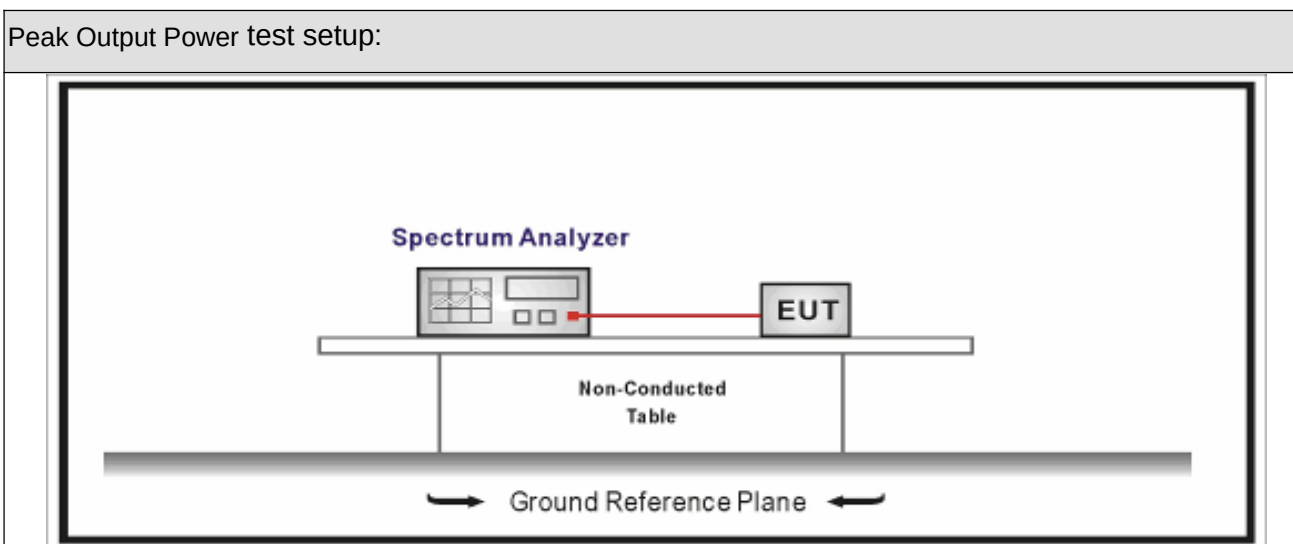


9. Peak Output Power

9.1. Test Equipment

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

9.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

9.5. Test Result

Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.01.10	Test Engineer	: Eric

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	10.57	30.00	Pass
39	2441	10.98	30.00	Pass
78	2480	10.79	30.00	Pass

Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2018.01.10	Test Engineer	: Eric

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	8.64	21.00	Pass
39	2441	9.10	21.00	Pass
78	2480	9.27	21.00	Pass

Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2018.01.10	Test Engineer	: Eric

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	8.94	21.00	Pass
39	2441	9.38	21.00	Pass
78	2480	9.62	21.00	Pass

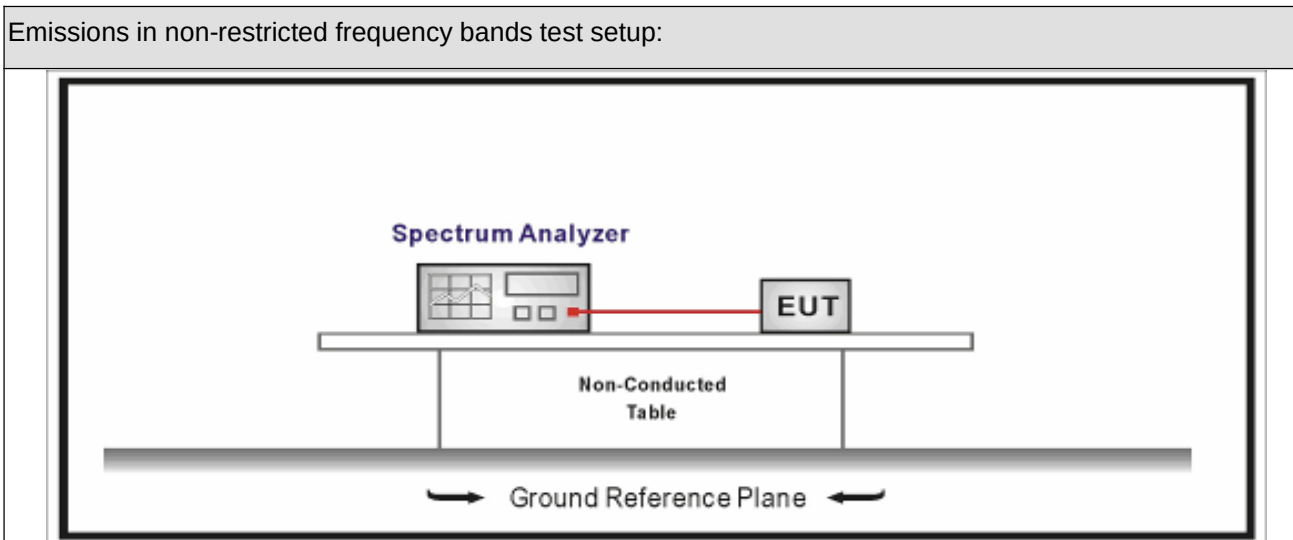
10. Emissions in non-restricted frequency bands

10.1. Test Equipment

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

Note: All 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)
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).	

10.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.6	Band-edge Compliance of RF Conducted Emissions

10.5. Test Result

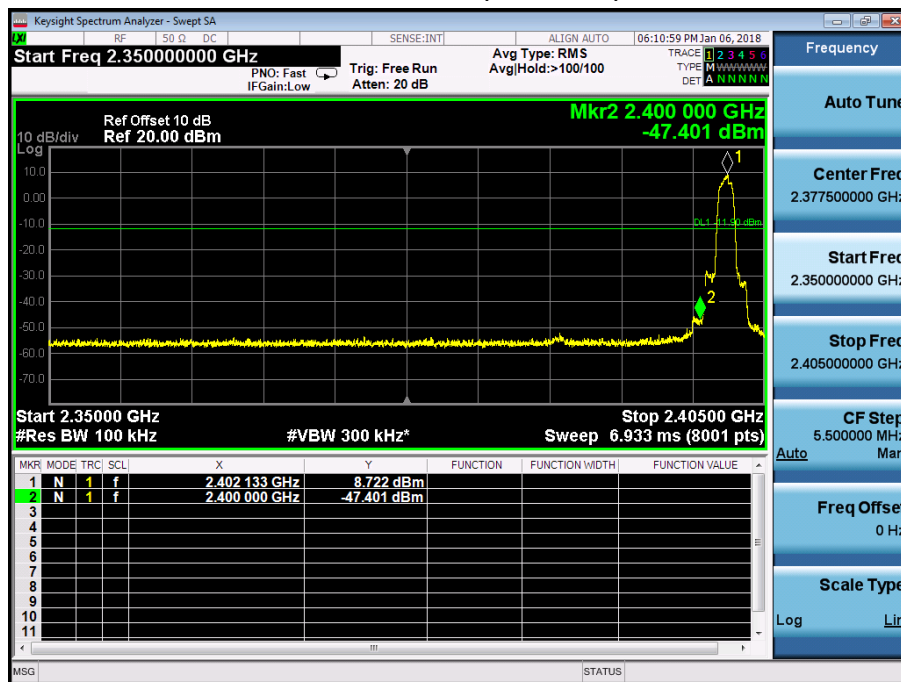
Product Name	: Wireless Access point	Power	: AC 120V/60Hz
Test Mode	: Mode 1~4	Test Site	: TR-8
Test Date	: 2018.01.06	Test Engineer	: Eric

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	12.920	2400.00	-43.952	56.872	>20	Pass
1	78	2480	11.880	2500.00	-45.911	57.791	>20	Pass
2	00	2402	8.722	2400.00	-47.401	56.123	>20	Pass
2	78	2480	8.830	2500.00	-54.771	63.601	>20	Pass
3	00	2402	8.701	2400.00	-47.788	56.489	>20	Pass
3	78	2480	8.583	2500.00	-52.374	60.957	>20	Pass
4	00~78	00~78	8.564	2400.00	-50.528	59.092	>20	Pass

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

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

Mode 2 CH00(2402MHz)



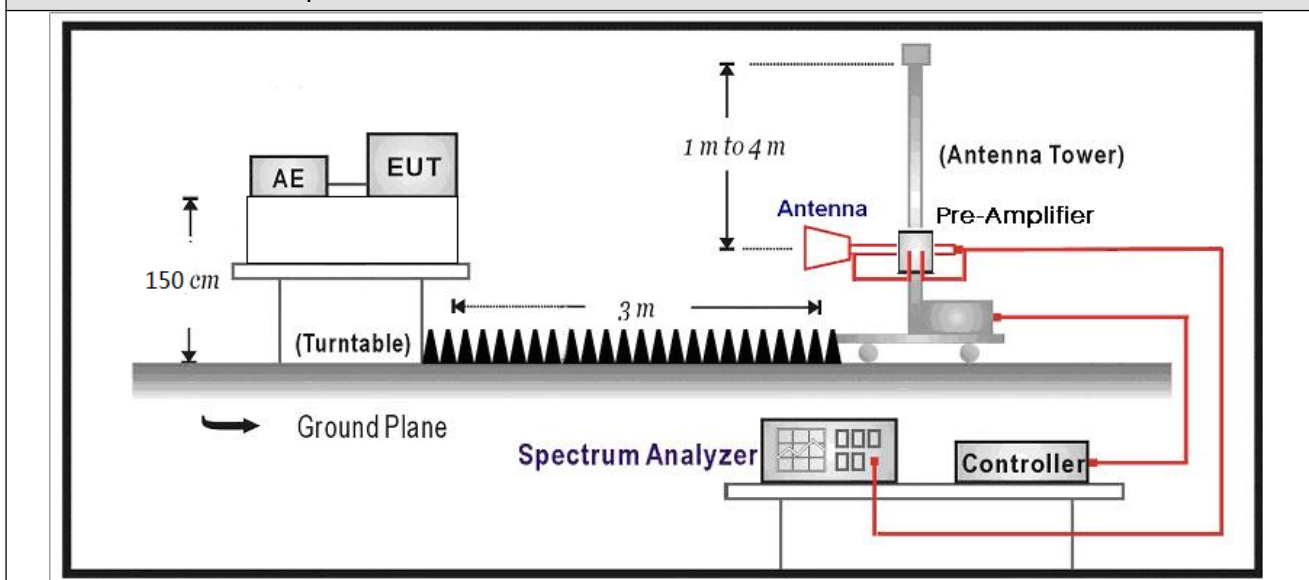
11. Radiated Emission Band Edge

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	2018.05.02
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	2017.02.28	2018.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2018.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2018.01.05	2019.01.04

11.2. Test Setup

Above 1GHz Test Setup:



11.3. Limit

Band edge Limit				
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.

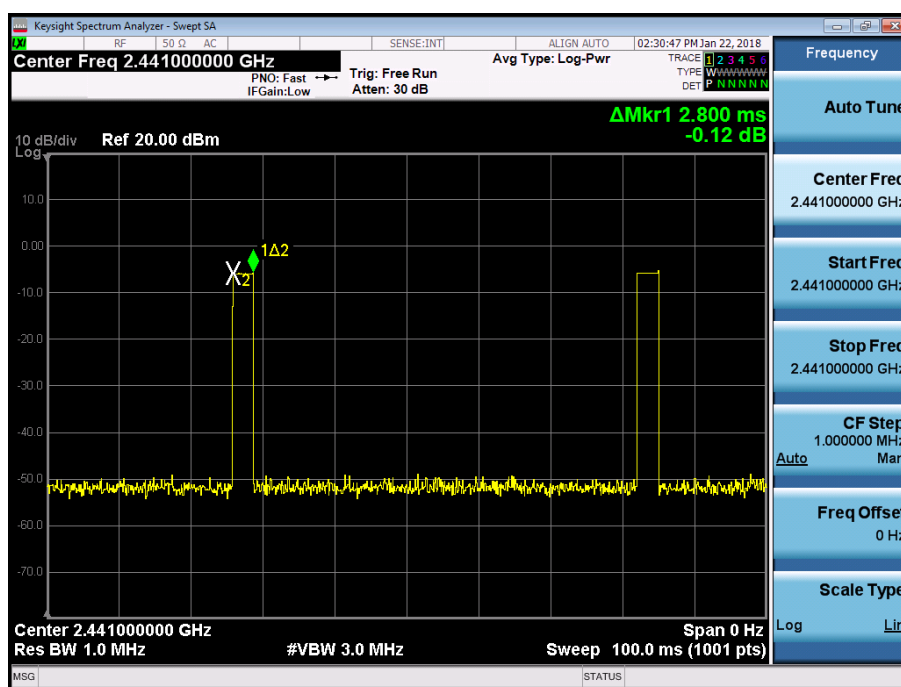
11.4. Test Procedure

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

11.5. Duty Factor

Test Mode	Pluse Time (ms)	Pluse Number	Accumulated Transmit Time (ms)	Duty Factor (dB)
Mode 4	2.8	2	5.6	-24.036

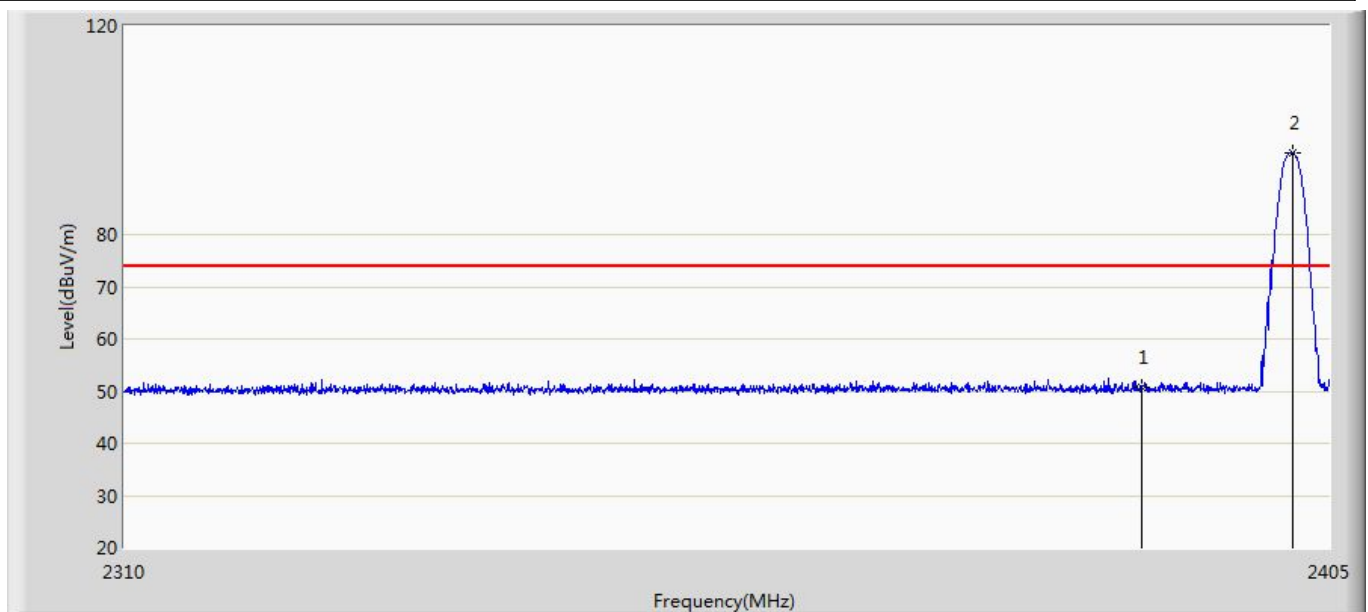
Pulse Number



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

11.6. Test Result

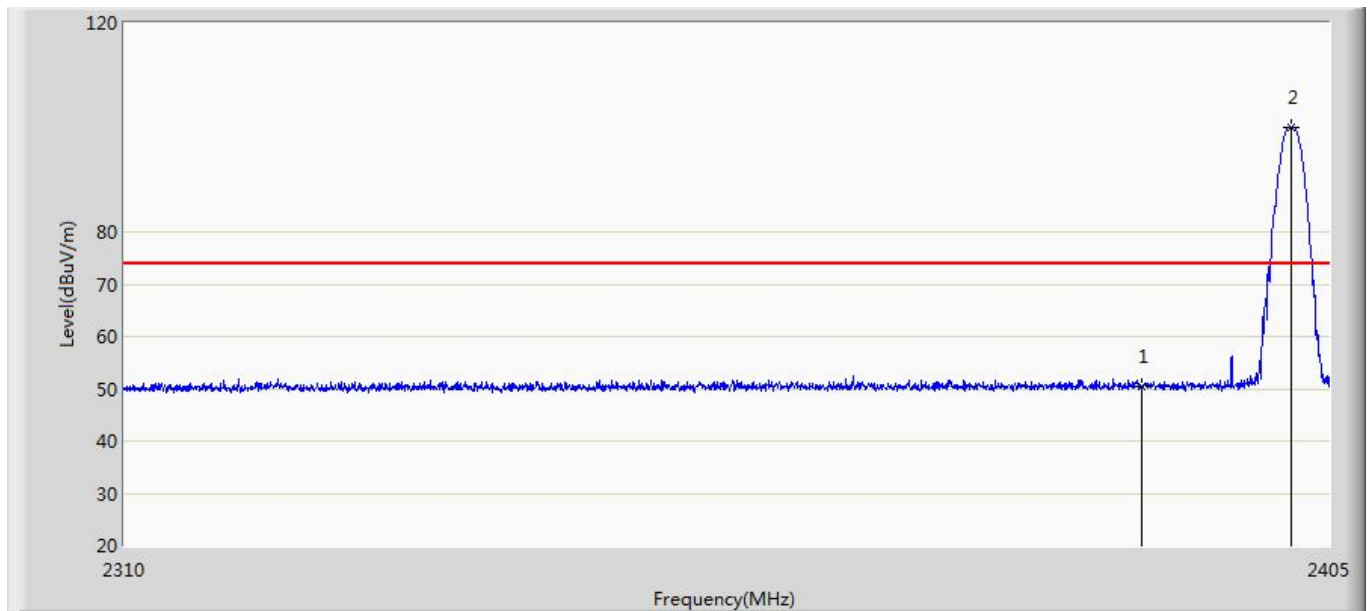
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.639	14.957	-23.361	74.000	35.682	PK
2	*	2402.055	95.627	59.914	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	50.639	25.603	-28.297	54.000	-25.036	AV
2	*	2402.055	95.627	76.294	N/A	N/A	-25.036	AV

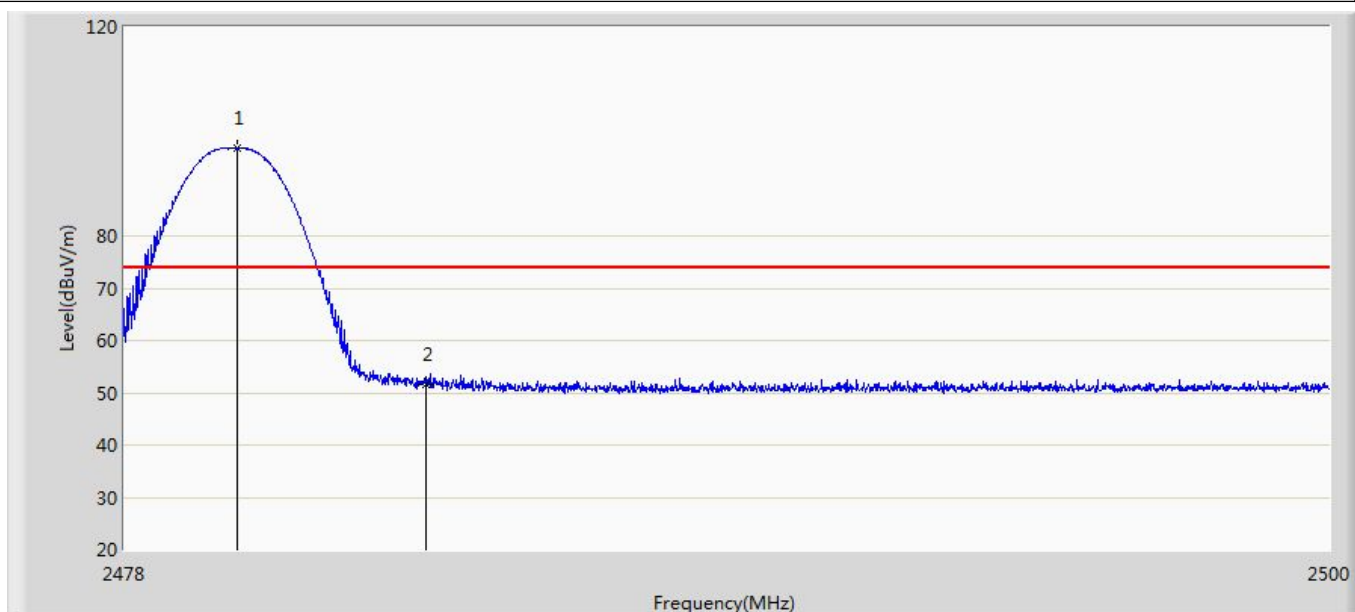
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.325	14.643	-23.675	74.000	35.682	PK
2	*	2401.913	100.026	64.314	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	50.325	25.289	-28.711	54.000	-25.036	AV
2	*	2401.913	100.026	74.99	N/A	N/A	-25.036	AV

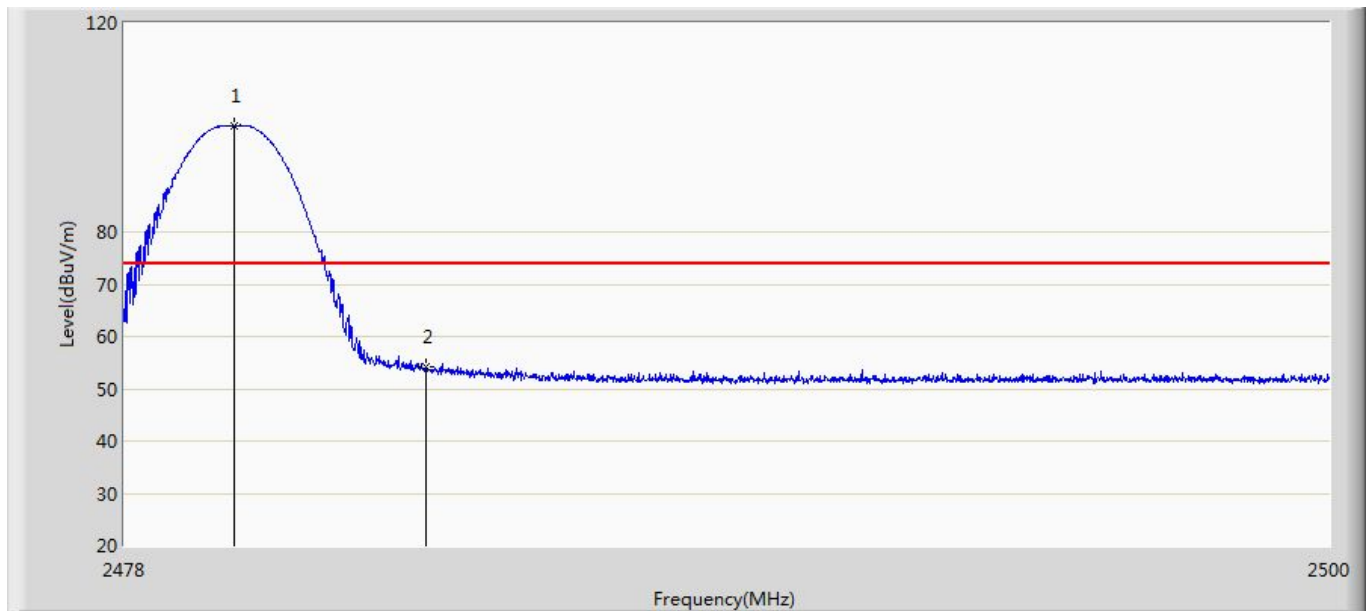
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	96.804	60.937	N/A	N/A	35.866	PK
2		2483.500	51.633	15.741	-22.367	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2480.046	96.804	71.768	N/A	N/A	-25.036	AV
2	*	2483.500	51.633	26.597	-27.403	54.000	-25.036	AV

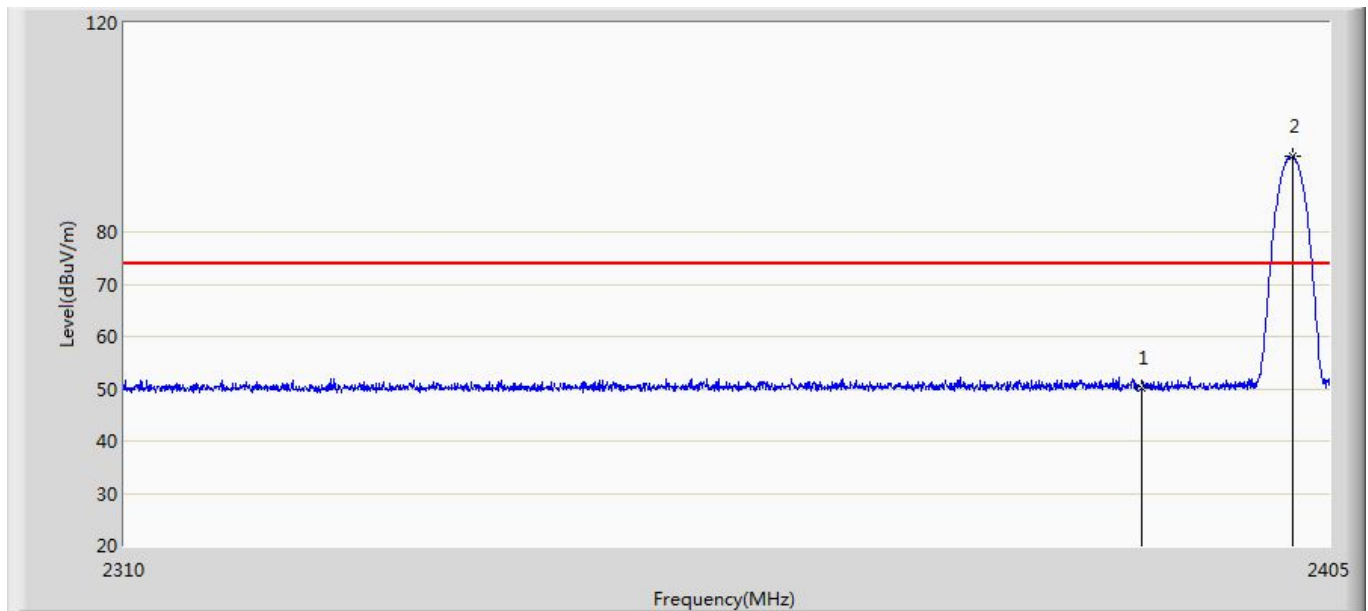
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	100.348	64.482	N/A	N/A	35.866	PK
2		2483.500	54.144	18.252	-19.856	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2480.013	100.348	75.312	N/A	N/A	-25.036	AV
2	*	2483.500	54.144	29.108	-24.892	54.000	-25.036	AV

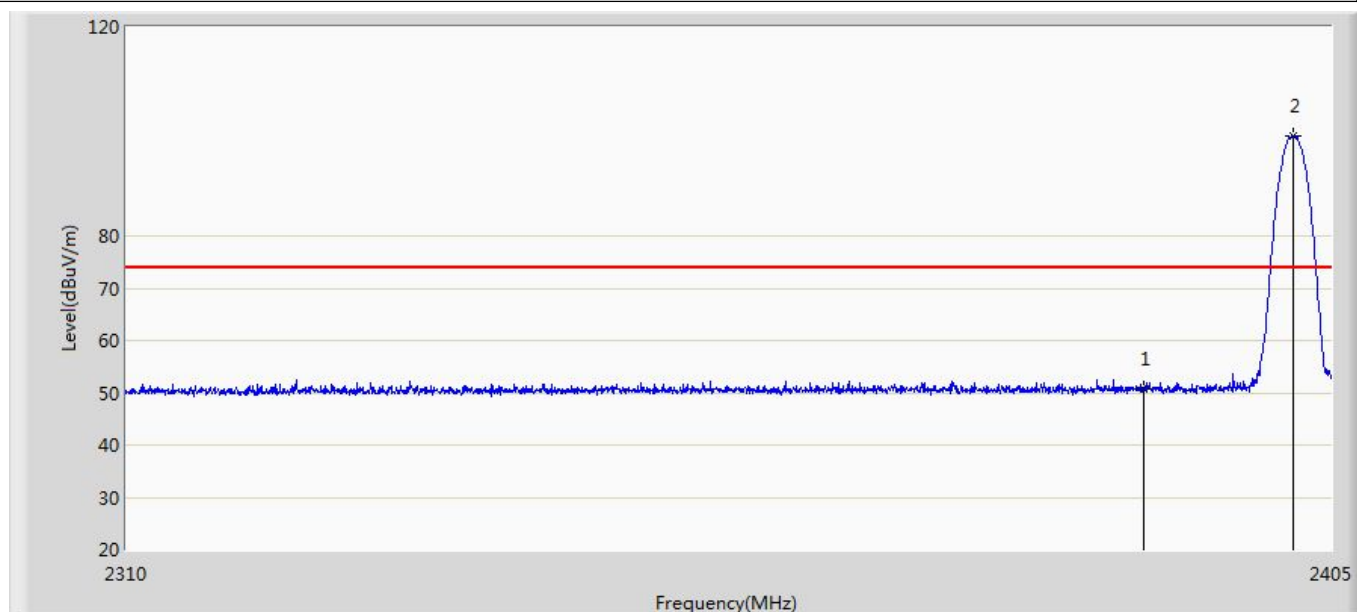
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.171	14.489	-23.829	74.000	35.682	PK
2	*	2402.103	94.429	58.716	N/A	N/A	35.713	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	50.171	25.135	-28.865	54.000	-25.036	AV
2	*	2402.103	94.429	69.393	N/A	N/A	-25.036	AV

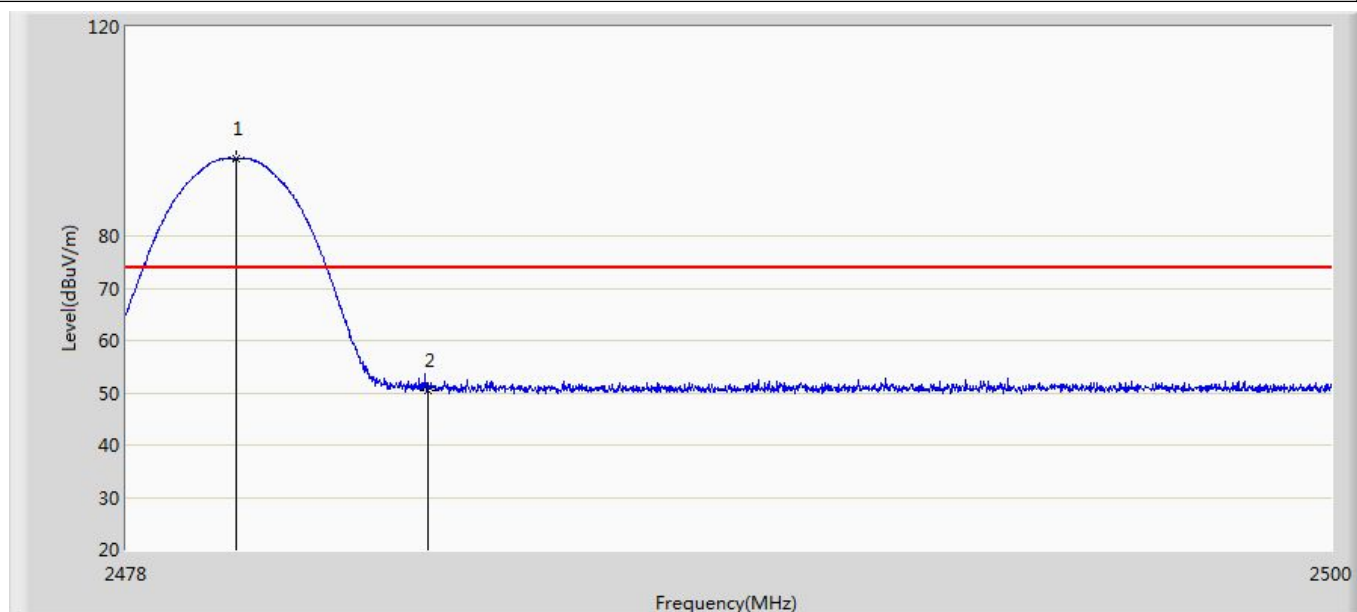
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.581	14.899	-23.419	74.000	35.682	PK
2	*	2401.913	99.209	63.497	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	50.581	25.545	-28.455	54.000	-25.036	AV
2	*	2401.913	99.209	74.173	N/A	N/A	-25.036	AV

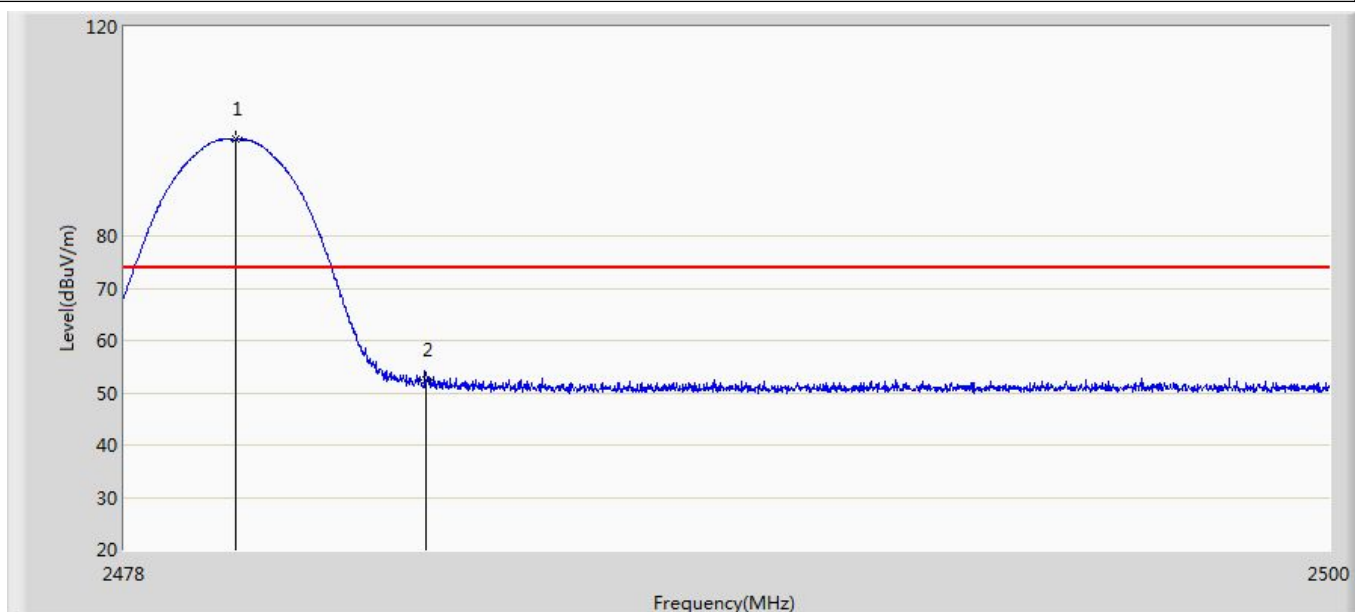
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	94.755	58.889	N/A	N/A	35.866	PK
2		2483.500	50.330	14.438	-23.670	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2480.013	94.755	69.719	N/A	N/A	-25.036	AV
2	*	2483.500	50.330	25.294	-28.706	54.000	-25.036	AV

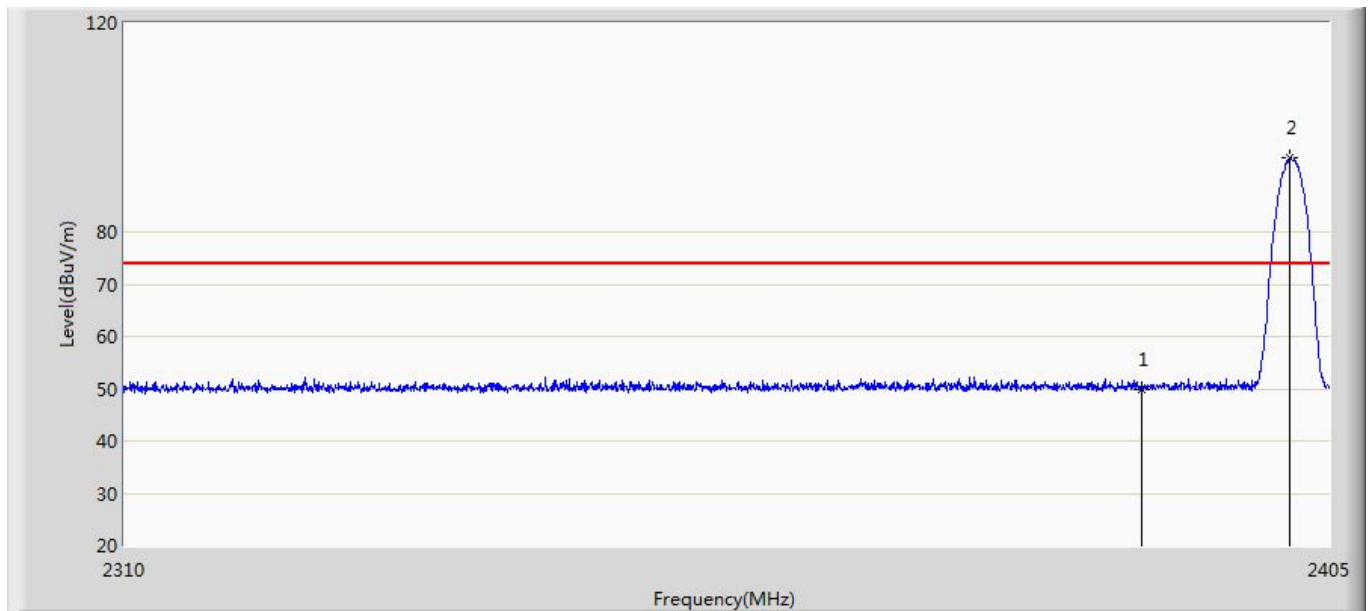
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.035	98.440	62.573	N/A	N/A	35.866	PK
2		2483.500	52.504	16.612	-21.496	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2480.035	98.440	73.404	N/A	N/A	-25.036	AV
2	*	2483.500	52.504	27.468	-26.532	54.000	-25.036	AV

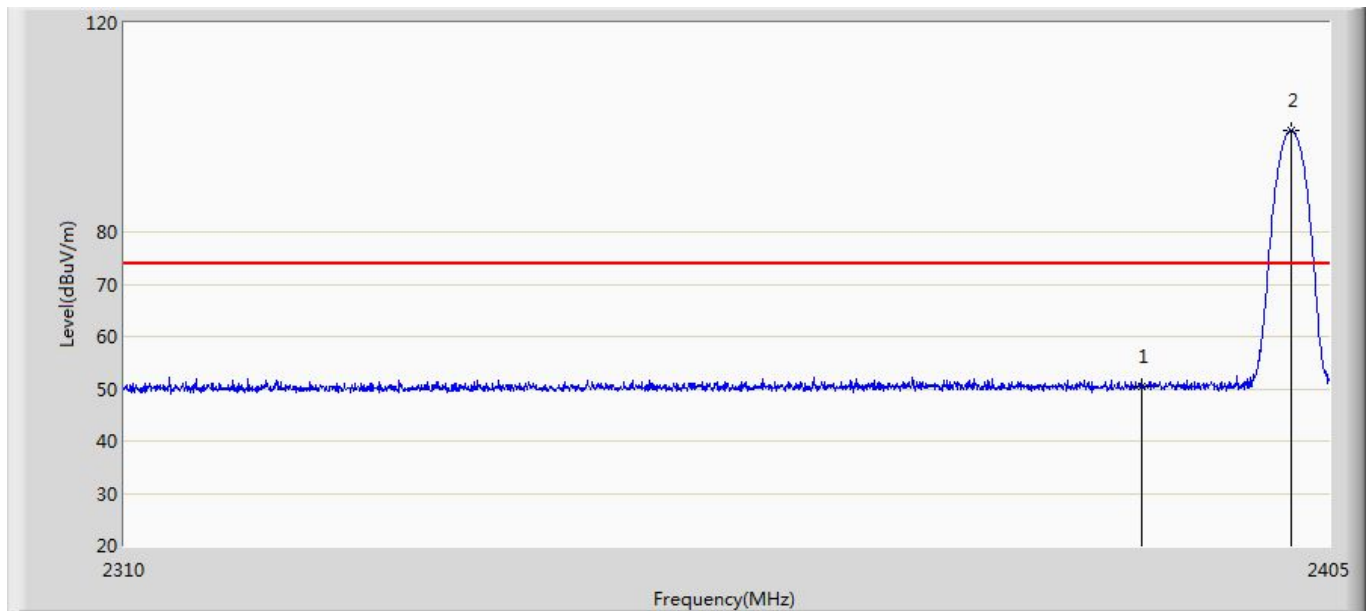
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.785	14.103	-24.215	74.000	35.682	PK
2	*	2401.865	94.221	58.509	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	49.785	24.749	-29.251	54.000	-25.036	AV
2	*	2401.865	94.221	69.185	N/A	N/A	-25.036	AV

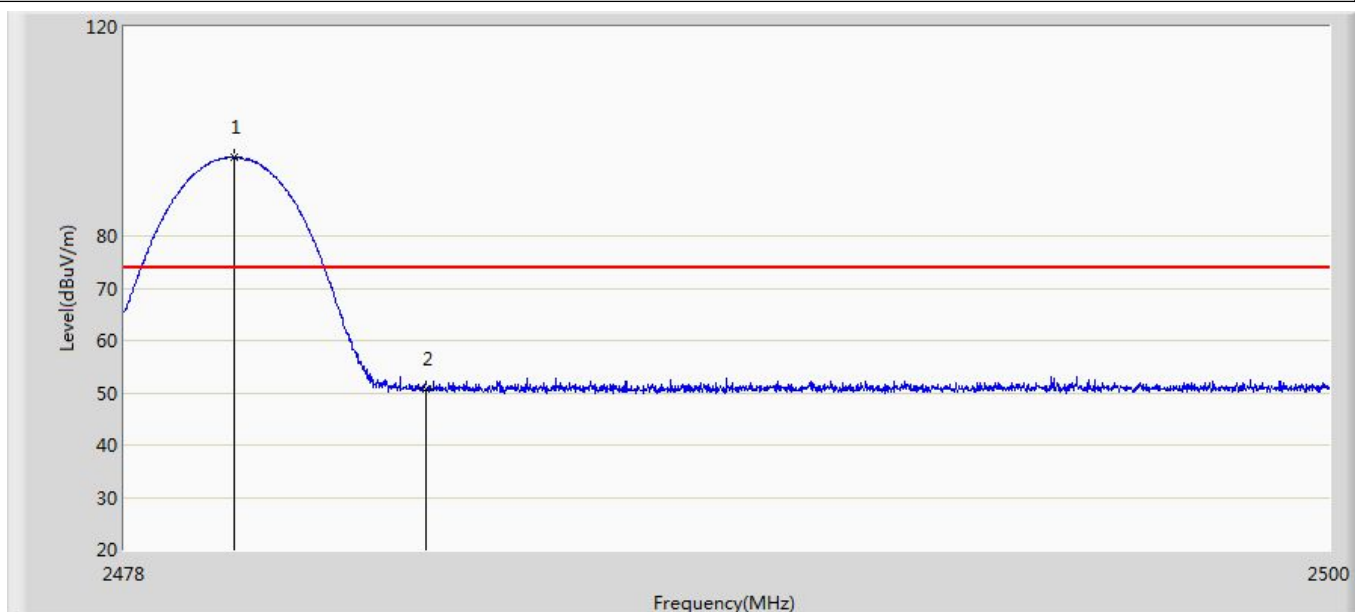
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 19:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.344	14.662	-23.656	74.000	35.682	PK
2	*	2401.913	99.415	63.703	N/A	N/A	35.712	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	50.344	25.308	-28.692	54.000	-25.036	AV
2	*	2401.913	99.415	74.379	N/A	N/A	-25.036	AV

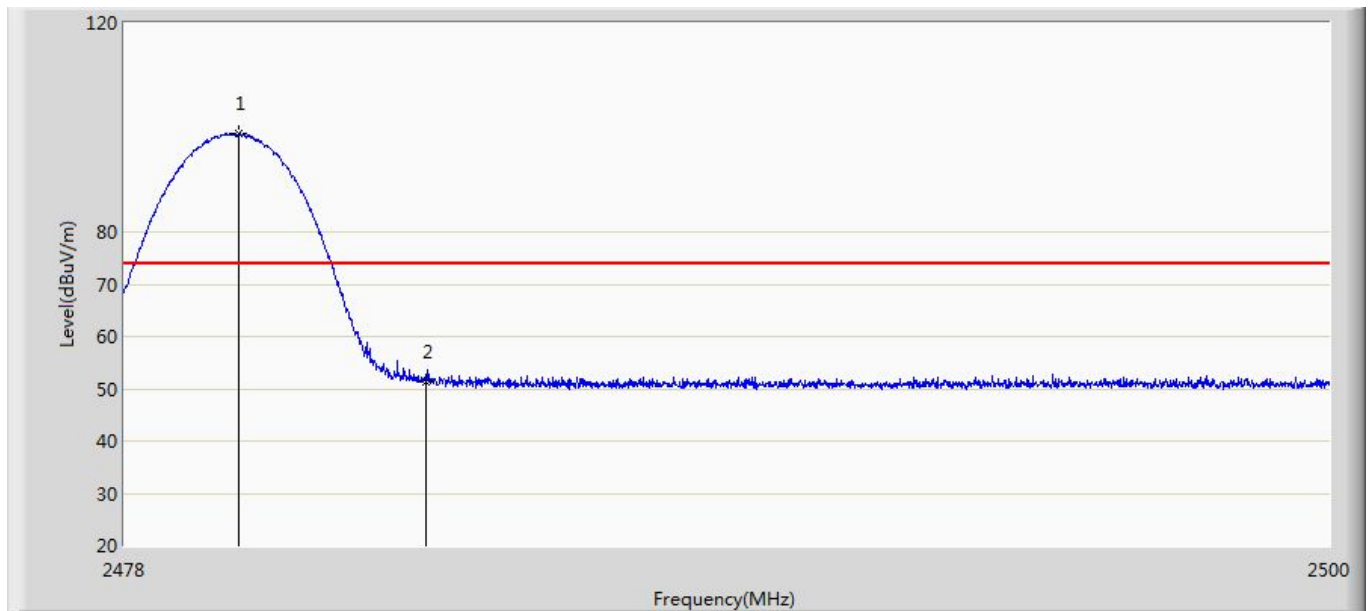
Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 20:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	95.097	59.231	N/A	N/A	35.866	PK
2		2483.500	50.696	14.804	-23.304	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2480.013	95.097	70.061	N/A	N/A	-25.036	AV
2	*	2483.500	50.696	25.66	-28.340	54.000	-25.036	AV

Engineer: Eric	
Site: AC5	Time: 2018/01/04 - 20:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access point	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	*	2480.079	98.832	62.965	N/A	N/A	35.867	PK
2		2483.500	51.402	15.510	-22.598	74.000	35.891	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2480.079	98.832	73.796	N/A	N/A	-25.036	AV
2	*	2483.500	51.402	26.366	-27.634	54.000	-25.036	AV

12. Antenna Requirement

12.1. Limit

Antenna Requirement Limit	
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.	

12.2. Antenna Connector Construction

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.	

_____ The End _____