



Test Report

FCC Part15 Subpart C & RSS-247 Issue 2

Product Name : Wireless Access Point

Model No. : AP305CX

FCC ID : QXO-AP305C

IC : 4141B-AP305C

Applicant : Extreme Networks, Inc

Address : Extreme Networks, 6480 Via Del Oro / San
Jose, CA 95119 U.S.A.

Date of Receipt : Oct. 14, 2020

Test Date : Oct. 14, 2020~ Dec. 01, 2020

Issued Date : Dec. 02, 2020

Report No. : 20A0241R-RF-US-P06V01

Report Version : V1.0

The test results presented in this report relate only to the object tested.

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.

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Test Report Certification

Issued Date: Dec. 02, 2020

Report No. : 20A0241R-RF-US-P06V01



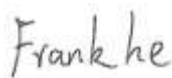
Product Name : Wireless Access Point
Applicant : Extreme Networks, Inc
Address : Extreme Networks, 6480 Via Del Oro / San Jose, CA 95119
U.S.A.
Manufacturer : Extreme Networks, Inc
Address : Extreme Networks, 6480 Via Del Oro / San Jose, CA 95119
U.S.A.
Model No. : AP305CX
Brand : Extreme Networks
FCC ID : QXO-AP305C
IC : 4141B-AP305C
EUT Voltage : POE 48V
Test Voltage : AC 120V/60Hz
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C
ANSI C63.10:2013;
KDB 558074 D01v05r02
KDB 662911 D01 Multiple Transmitter Output v02r01
RSS-Gen Issue 5 / RSS-247 Issue 2
Test Result : Complied
Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,
Jiangsu, China
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
FCC Designation Number: CN1199
ISED CAB identifier: CN0040

Documented By :



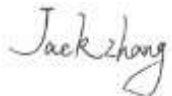
(Adm. Specialist: Kitty Li)

Reviewed By :



(Senior Engineer: Frank He)

Approved By :



(Engineer Supervisor: Jack Zhang)

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
20A0241R-RF-US-P06V01	V1.0	Initial Issued Report	Dec. 02, 2020

1. General Information

1.1. EUT Description

Product Name	Wireless Access Point
Model No.	AP305CX
EUT Voltage	POE 48V
Frequency Range	For 2.4GHz Band 802.11b/g/n/ac/ax(20MHz): 2412~2462MHz
Channel Number	For 2.4GHz Band 802.11b/g/n(20MHz): 11
Type of Modulation	802.11b: DSSS-DBPSK, DQPSK, CCK 802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Data Rate	802.11b: 1/2/5.5/11 Mbps 802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11n: up to 144.4 Mbps 802.11ac: up to 173.4 Mbps 802.11ax: up to 286 Mbps
Channel Control	Auto

Note:

1. The product AP305CX adds 4 antennas based on the Dekra report: 1962097R-RF-US-P06V01. There are 3 antennas of the same type but different gains, and 1 separate Sector antenna. We evaluate the antenna with the largest antenna gain and the Sector antenna. The conducted power is less than the original reported power. We only evaluated the Output power, Band Edge, Emissions in restricted frequency bands, and Power Spectral Density to meet the consistency.
2. The device contains two 5GHz modules, and called Radio 0 and Radio 1, Radio 1 can work separately and Radio 0 can only transmit with Radio 1 which at 5150~5350MHz and Radio 1 work at 5470~5850MHz. So Radio 1 test all the frequency bands and Radio 0 only test 5150~5350MHz.

2.2. Working Frequency of Each Channel:

802.11b/g/n Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A

2.3. Antenna information

ML-2452-PTA2M2-036:

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	☒	1*TX+1*RX	☒	2*TX+2*RX	☐ 3*TX+3*RX
Antenna Technology	☒	SISO			
	☒	MIMO	☐	Basic methodology	
			☐	Sectorized antenna systems	
			☐	Cross-polarized antennas	
			☐	Unequal antenna gains, with equal transmit powers	
			☒	Spatial Multiplexing	
			☒	Cyclic Delay Diversity (CDD)	
Antenna Type	OMNI				
Categorization	Correlated				
Antenna Gain					
Antenna Technology			Ant Gain(Radio 0) (dBi)		
☒	SISO	☒	Ant1	4	
		☒	Ant2	4	
☒	CDD		4dBi for Power; 7.01dBi for PSD		
☒	Beam-forming		7.01dBi for Power; 7.01dBi for PSD		

ML-2452-PTA4M4-036:

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	☒	1*TX+1*RX	☒	2*TX+2*RX	☐ 3*TX+3*RX
Antenna Technology	☒	SISO			
	☒	MIMO	☐	Basic methodology	
			☐	Sectorized antenna systems	
			☐	Cross-polarized antennas	
			☐	Unequal antenna gains, with equal transmit powers	
			☒	Spatial Multiplexing	
			☒	Cyclic Delay Diversity (CDD)	
Antenna Type	OMNI				
Categorization	Correlated				
Antenna Gain					
Antenna Technology	Ant Gain(Radio 0) (dBi)				
☒ SISO	☒	Ant1	5		
	☒	Ant2	5		
☒ CDD	5dBi for Power; 8.01dBi for PSD				
☒ Beam-forming	8.01dBi for Power; 8.01dBi for PSD				

AI-DQ04360S:

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	☒	1*TX+1*RX	☒	2*TX+2*RX	☐ 3*TX+3*RX
Antenna Technology	☒	SISO			
	☒	MIMO	☐	Basic methodology	
			☐	Sectorized antenna systems	
			☐	Cross-polarized antennas	
			☐	Unequal antenna gains, with equal transmit powers	
			☒	Spatial Multiplexing	
			☒	Cyclic Delay Diversity (CDD)	
Antenna Type	OMNI				
Categorization	Correlated				
Antenna Gain					
Antenna Technology	Ant Gain(Radio 0) (dBi)				
☒ SISO	☒	Ant1	5.5		
	☒	Ant2	5.5		
☒ CDD	5.5dBi for Power; 8.51dBi for PSD				
☒ Beam-forming	8.51dBi for Power; 8.51dBi for PSD				

ML-2452-SEC6M4-036:

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	☒	1*TX+1*RX	☒	2*TX+2*RX	☐ 3*TX+3*RX
Antenna Technology	☒	SISO			
	☒	MIMO	☐	Basic methodology	
			☐	Sectorized antenna systems	
			☐	Cross-polarized antennas	
			☐	Unequal antenna gains, with equal transmit powers	
			☒	Spatial Multiplexing	
			☒	Cyclic Delay Diversity (CDD)	
Antenna Type	Sector				
Categorization	Correlated				
Antenna Gain					
Antenna Technology		Ant Gain(Radio 0) (dBi)			
☒	SISO	☒	Ant1	6.9	
		☒	Ant2	6.9	
☒	CDD		6.9dBi for Power; 9.91dBi for PSD		
☒	Beam-forming		9.91dBi for Power; 9.91dBi for PSD		

2.4. Mode of Operation

Test Modes List
Mode 1: Transmit by 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11n(20MHz)
Mode 4: Transmit by 802.11ax(20MHz)

Note 1: Regards to the frequency band operation: the lowest, middle and highest frequency channel were selected to perform the test, then shown on this report.

Note 2: For portable device, radiated tests was verified over X, Y, Z axis, and shown the worst case on this report.

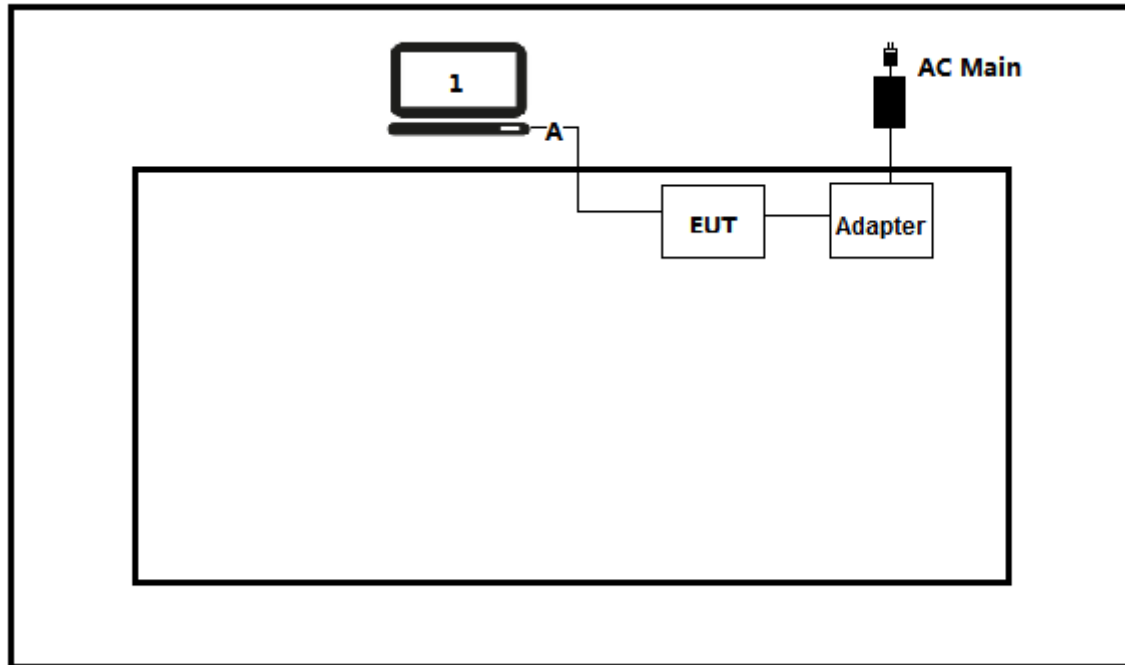
2.5. Tested System Details

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

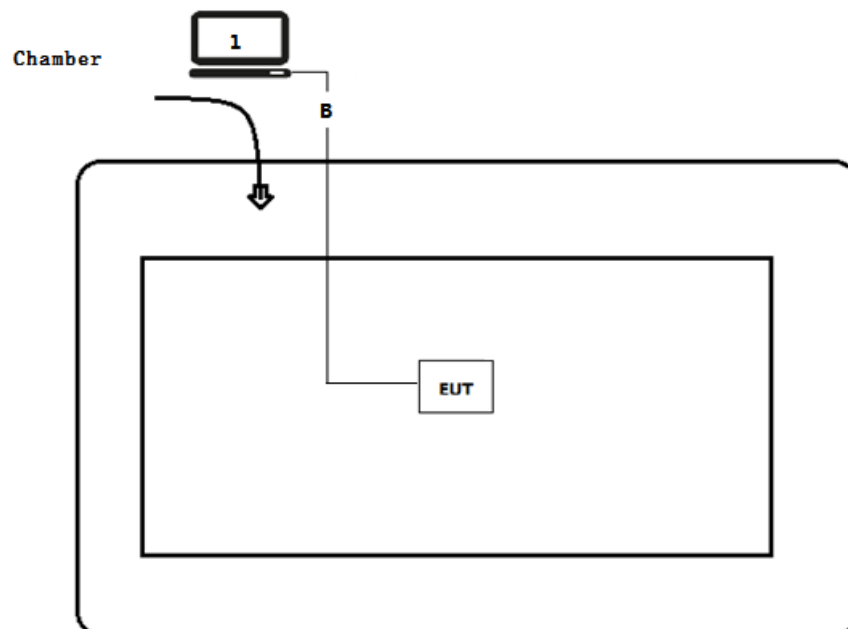
No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
A	LAN cable	N/A	N/A	N/A	Shielded, 0.5m
B	LAN cable	N/A	N/A	N/A	Shielded, 10m

2.6. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



2.7. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Run RF software [MTool], and set the test mode and channel, then press OK to start to continue transmit.

3. Technical Test

2.1. Summary of Test Result

For FCC rule:

Performed Test Item	Normative References	Limit	Result
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: Section 15.207	FCC 15.207	PASS
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: Section 15.209	FCC 15.209	PASS
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(d)	$\geq 30\text{dBc}$	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 15.247(d)	FCC 15.209	PASS
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(a)(2)	$\geq 500\text{kHz}$	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(b)(3)	$\leq 30\text{dBm}$	PASS
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(e)	$\leq 8\text{dBm}/3\text{kHz}$	PASS
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: Section 15.203	FCC 15.203	PASS

For ISED rule:

Performed Test Item	Normative References	Limit	Result
AC Power Line Conducted Emission	RSS-Gen Issue 5 Section 8.8	RSS-Gen	PASS
Emissions in restricted frequency bands	RSS-Gen Issue 5 Section 8.9	RSS-Gen	PASS
Emissions in non-restricted frequency bands	RSS-247 Issue 2 Section A5.5	$\geq 30\text{dBc}$	PASS
Radiated Emission Band Edge	RSS-247 Issue 2 Section A5.5	RSS-247	PASS
Occupied Bandwidth	RSS-Gen Issue 5 Section 6.6 RSS-247 Issue 2 Section A5.2(1)	$\geq 500\text{kHz}$	PASS
Fundamental emission output power	RSS-247 Issue 2 Section A5.4(4)	$\leq 30\text{dBm}$	PASS
Power Spectral Density	RSS-247 Issue 2 Section A5.2(2)	$\leq 8\text{dBm}/3\text{kHz}$	PASS
Antenna Requirement	RSS-Gen Issue 5 Section 8.3	RSS-Gen Issue 5	PASS

2.2. Test Frequency configuration:

Modulation Mode	Channel	Frequency	Channel	Frequency	Channel	Frequency
802.11b	01	2412 MHz	06	2437MHz	11	2462MHz
802.11g	01	2412 MHz	06	2437MHz	11	2462MHz
802.11n(20MHz)	01	2412 MHz	06	2437MHz	11	2462MHz
802.11ac(20MHz)	01	2412 MHz	06	2437MHz	11	2462MHz
802.11ax(20MHz)	01	2412 MHz	06	2437MHz	11	2462MHz

2.3. Power vs Data Rate

MCS Index for 802.11n	Spatial Streams (Note1)	Data Rate (Mbps)			
		802.11b	802.11g	20MHz Bandwidth	
				800ns GI	400ns GI
0	1	1	6	6.5	7.2
1	1	2	9	13.0	14.4
2	1	5.5	12	19.5	21.7
3	1	11	18	26.0	28.9
4	1	---	24	39.0	43.3
5	1	---	36	52.0	57.8
6	1	---	48	58.5	65.0
7	1	---	54	65.0	72.2
8	2	---	---	13.0	14.4
9	2	---	---	26.0	28.9
10	2	---	---	39.0	43.3
11	2	---	---	52.0	57.8
12	2	---	---	78.0	86.7
13	2	---	---	104.0	115.6
14	2	---	---	117.0	130.0
15	2	---	---	130.0	144.0

Note 1: The EUT supports all data rate above. The blue form is the maximum power data rate

Note 2: The EUT has two spatial Streams

MCS Index	Spatial Streams (Note1)	Modulation type	Coding rate	Data Rate(Mb/s)	
				20MHz	
				Guard Interval	
				800ns	400ns
0	1	BPSK	1/2	6.5	7.2
1	1	QPSK	1/2	13	14.4
2	1	QPSK	3/4	19.5	21.7
3	1	16-QAM	1/2	26	28.9
4	1	16-QAM	3/4	39	43.3
5	1	64-QAM	2/3	52	57.8
6	1	64-QAM	3/4	58.5	65
7	1	64-QAM	5/6	65	72.2
8	1	256-QAM	3/4	78	86.7
9	1	256-QAM	5/6	N/A	N/A
10	2	BPSK	1/2	13.0	14.4
11	2	QPSK	1/2	26.0	28.8
12	2	QPSK	3/4	39.0	43.4
13	2	16-QAM	1/2	52.0	57.8
14	2	16-QAM	3/4	78.0	86.6
15	2	64-QAM	2/3	104.0	115.6
16	2	64-QAM	3/4	117.0	130.0
17	2	64-QAM	5/6	130.0	144.4
18	2	256-QAM	3/4	156.0	173.4
19	2	256-QAM	5/6	N/A	N/A

Note 1: The EUT supports all data rate above. The blue form is the maximum power data rate

Note 2: The EUT has two spatial Streams

MCS Index	Spatial Streams (Note1)	Modulation type	Coding rate	Data Rate(Mb/s)	
				20MHz	
				Guard Interval	
				1600 ns GI	800 ns GI
0	1	BPSK	1/2	8	8
1	1	QPSK	1/2	16	17
2	1	QPSK	3/4	24	26
3	1	16-QAM	1/2	33	34
4	1	16-QAM	3/4	49	52
5	1	64-QAM	2/3	65	69
6	1	64-QAM	3/4	73	77
7	1	64-QAM	5/6	81	86
8	1	256-QAM	3/4	98	103
9	1	256-QAM	5/6	108	115
10	1	1024-QAM	3/4	122	129
11	1	1024-QAM	5/6	135	143
12	2	BPSK	1/2	16	16
13	2	QPSK	1/2	32	34
14	2	QPSK	3/4	48	52
15	2	16-QAM	1/2	66	68
16	2	16-QAM	3/4	98	104
17	2	64-QAM	2/3	130	138
18	2	64-QAM	3/4	146	154
19	2	64-QAM	5/6	162	172
20	2	256-QAM	3/4	196	206
21	2	256-QAM	5/6	216	230
22	2	1024-QAM	3/4	244	258
23	2	1024-QAM	5/6	270	286

Note 1: The EUT supports all data rate above. The blue form is the maximum power data rate

Note 2: The EUT has two spatial Streams

2.4. 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

2.5. 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	$\pm 1.27\text{dB}$
Radiated Emission Band Edge	$\pm 3.9\text{dB}$
Occupied Bandwidth	$\pm 1\text{kHz}$
Power Spectral Density	$\pm 1.27\text{dB}$

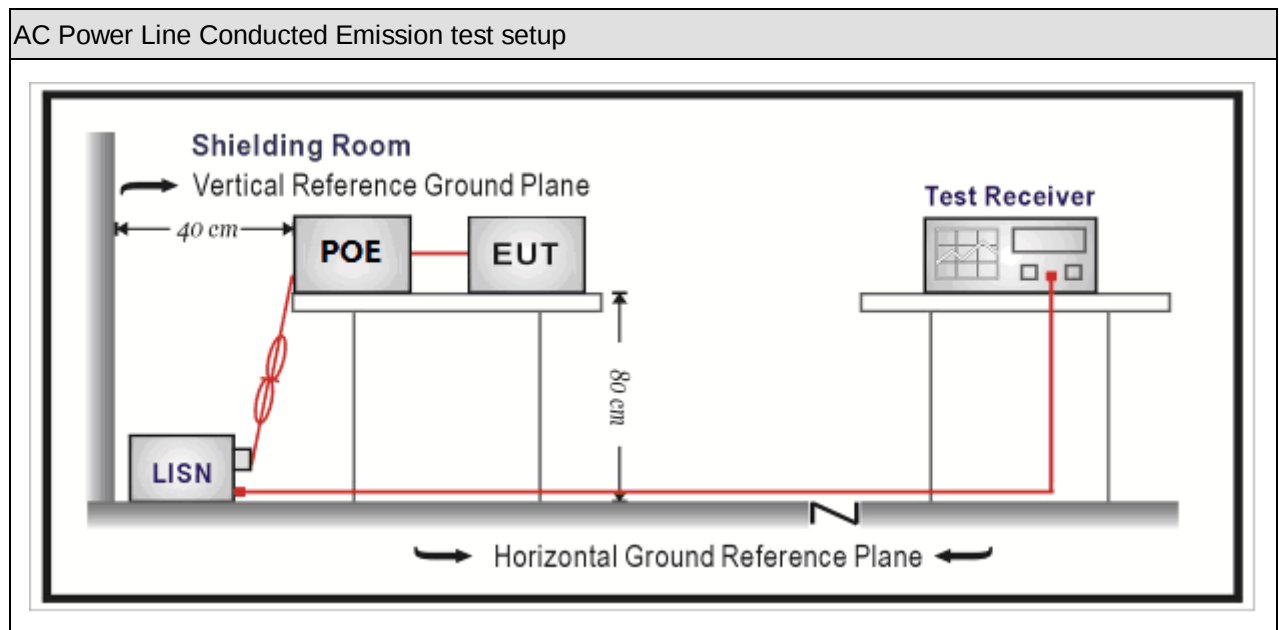
3. AC Power Line Conducted Emission

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	100726	2020.11.03	2021.11.02
Two-Line V-Network	R&S	ENV 216	101189	2020.08.15	2021.08.14
Two-Line V-Network	R&S	ENV 216	101044	2020.04.18	2021.04.17
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081403	2020.09.23	2021.09.22
Temperature/Humidity Meter	zhichen	ZC1-2	TR1-TH	2020.08.13	2021.08.12

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

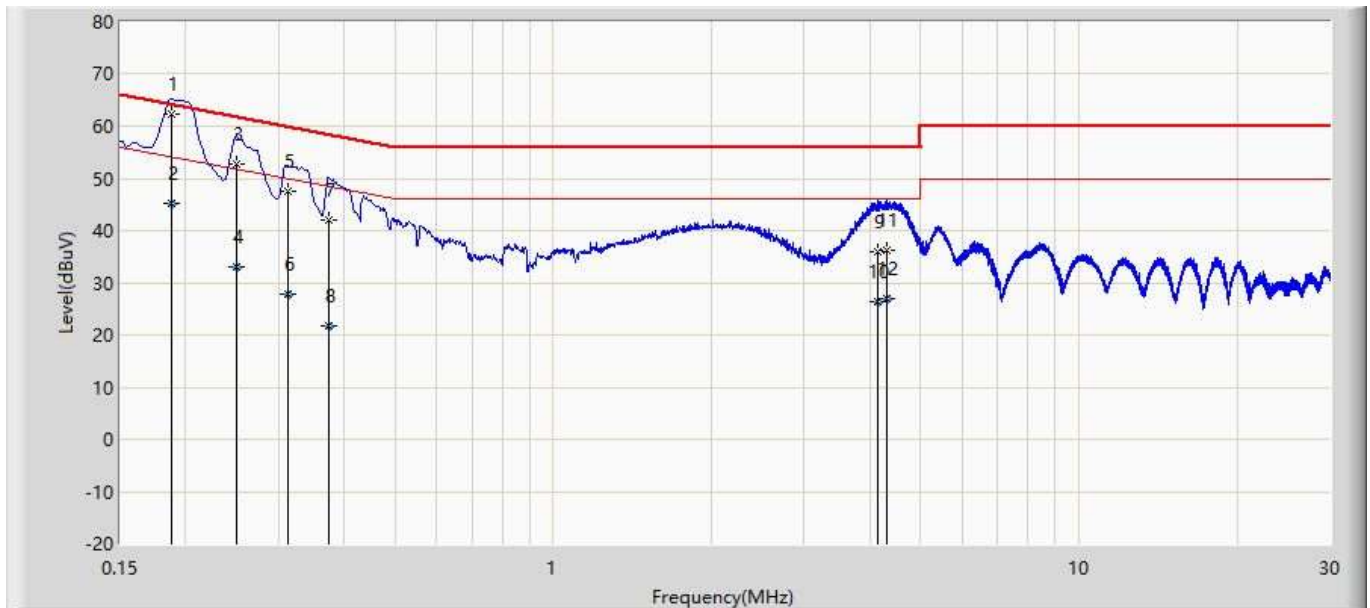
Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dBμV)	Average(dBμV)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: The lower limit shall apply at the transition frequencies.		
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

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

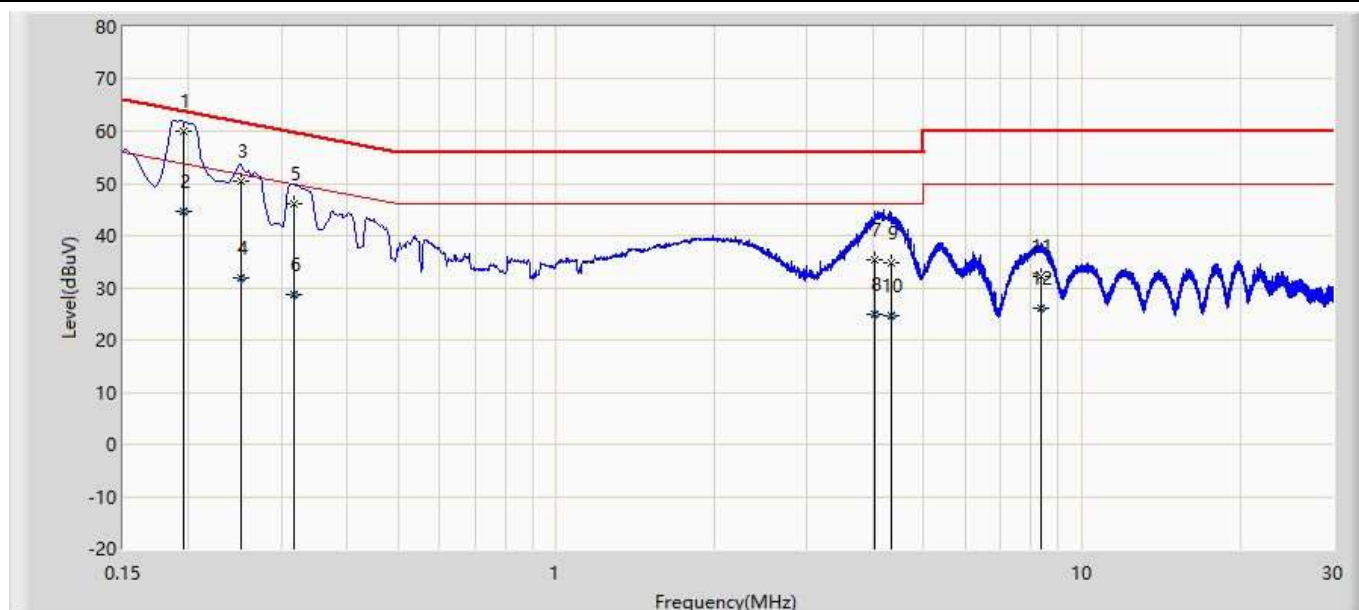
3.5. Test Result

Profile: 20A0241R	Page No.: 1
Engineer: Jun	
Site: TR1	Time: 2020/07/03 - 01:51
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	0.188	62.300	52.621	-1.813	64.113	9.680	0	0	QP
2		0.188	45.307	35.628	-8.806	54.113	9.680	0	0	AV
3		0.249	52.800	43.089	-8.991	61.790	9.711	0	0	QP
4		0.249	32.971	23.260	-18.819	51.790	9.711	0	0	AV
5		0.312	47.642	37.899	-12.275	59.917	9.743	0	0	QP
6		0.312	27.878	18.136	-22.039	49.917	9.743	0	0	AV
7		0.375	41.900	32.127	-16.489	58.389	9.773	0	0	QP
8		0.375	21.846	12.073	-26.544	48.389	9.773	0	0	AV
9		4.135	35.976	25.861	-20.024	56.000	10.115	0	0	QP
10		4.135	26.434	16.319	-19.566	46.000	10.115	0	0	AV
11		4.303	36.334	26.214	-19.666	56.000	10.119	0	0	QP
12		4.303	27.030	16.910	-18.970	46.000	10.119	0	0	AV

Profile: 20A0241R	Page No.: 2
Engineer: Jun	
Site: TR1	Time: 2020/12/02 - 21:11
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	0.195	59.950	50.187	-3.871	63.821	9.763	0	0	QP
2		0.195	44.760	34.997	-9.061	53.821	9.763	0	0	AV
3		0.251	50.491	40.710	-11.225	61.716	9.780	0	0	QP
4		0.251	31.819	22.038	-19.896	51.716	9.780	0	0	AV
5		0.317	46.171	36.372	-13.627	59.798	9.799	0	0	QP
6		0.317	28.791	18.993	-21.007	49.798	9.799	0	0	AV
7		4.040	35.360	25.338	-20.640	56.000	10.022	0	0	QP
8		4.040	25.027	15.005	-20.973	46.000	10.022	0	0	AV
9		4.330	34.888	24.857	-21.112	56.000	10.032	0	0	QP
10		4.330	24.679	14.648	-21.321	46.000	10.032	0	0	AV
11		8.347	32.109	21.924	-27.891	60.000	10.185	0	0	QP
12		8.347	26.045	15.860	-23.955	50.000	10.185	0	0	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

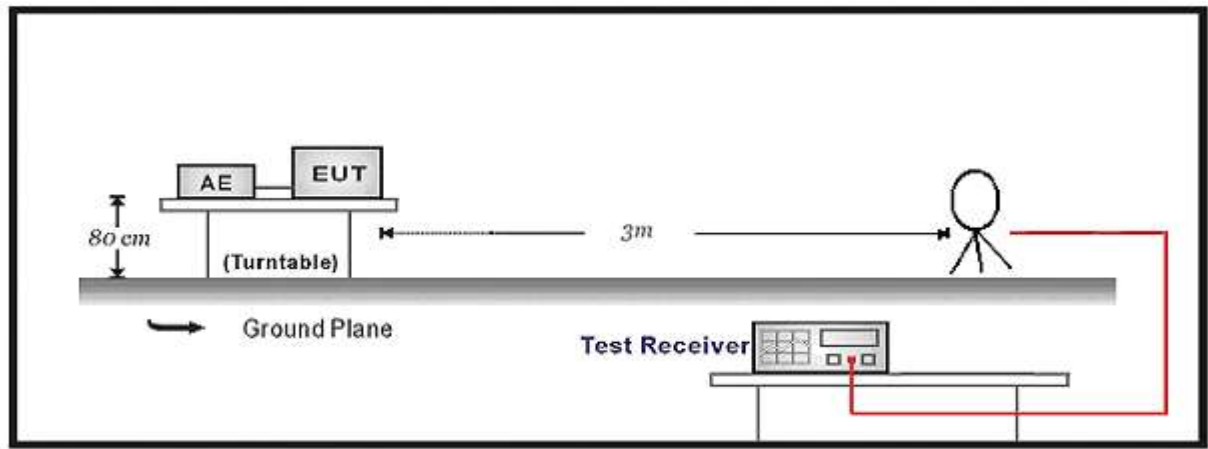
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2019.12.28	2020.12.27
Loop Antenna	R&S	HFH2-Z2	833799/003	2020.02.17	2021.02.16
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2020.09.23	2021.09.22
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2020.04.05	2021.04.04
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2020.08.13	2021.08.12
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

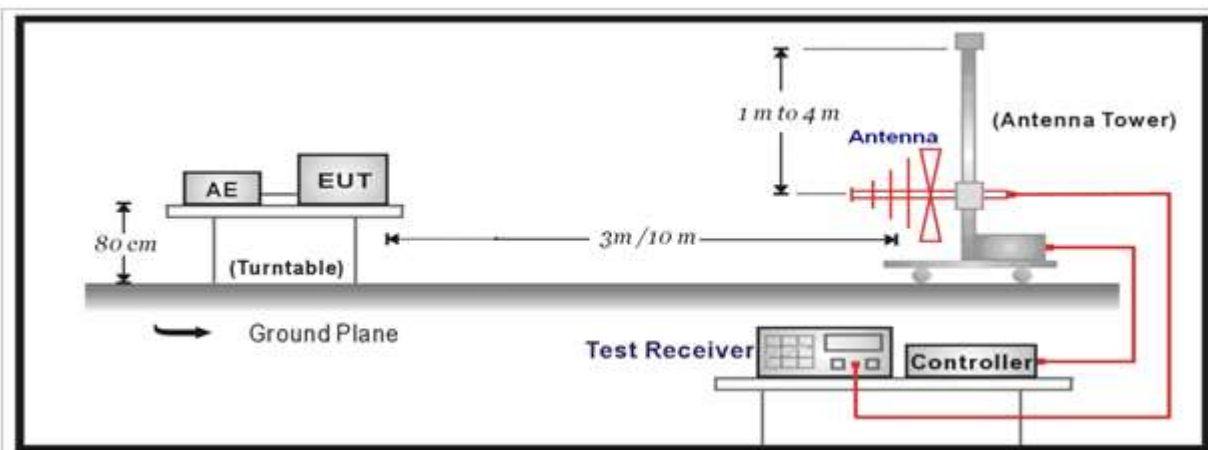
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2020.01.02	2021.01.01
Preamplifier	Miteq	NSP1800-25	1364185	2020.05.03	2021.05.02
Preamplifier	QuieTek	AP-040G	CHM-0906001	2020.05.03	2021.05.02
DRG Horn	ETS-Lindgren	3117	00123988	2020.09.21	2021.09.20
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2020.03.23	2021.03.22
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2020.04.05	2021.04.04
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G	2020.04.18	2021.04.17
EMI Receiver	Agilent	N9038A	MY51210196	2020.04.18	2021.04.17
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2020.08.13	2021.08.12
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

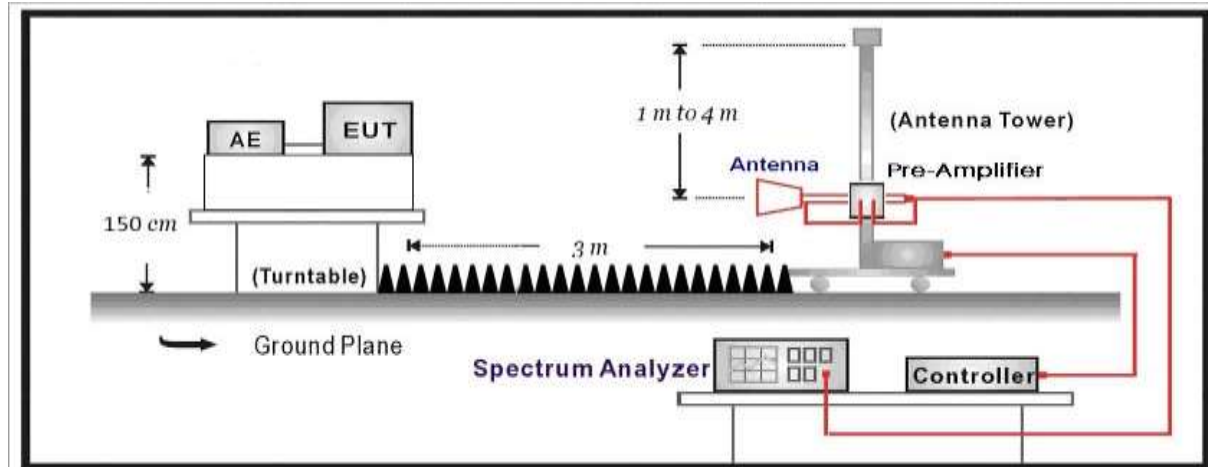
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

For FCC

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975 – 12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675 – 12.57725	322 – 335.4	3600 – 4400	
13.36 – 13.41			

For ISED:

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

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)

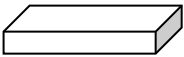
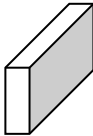
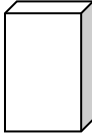
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed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

4.4. Test Procedure

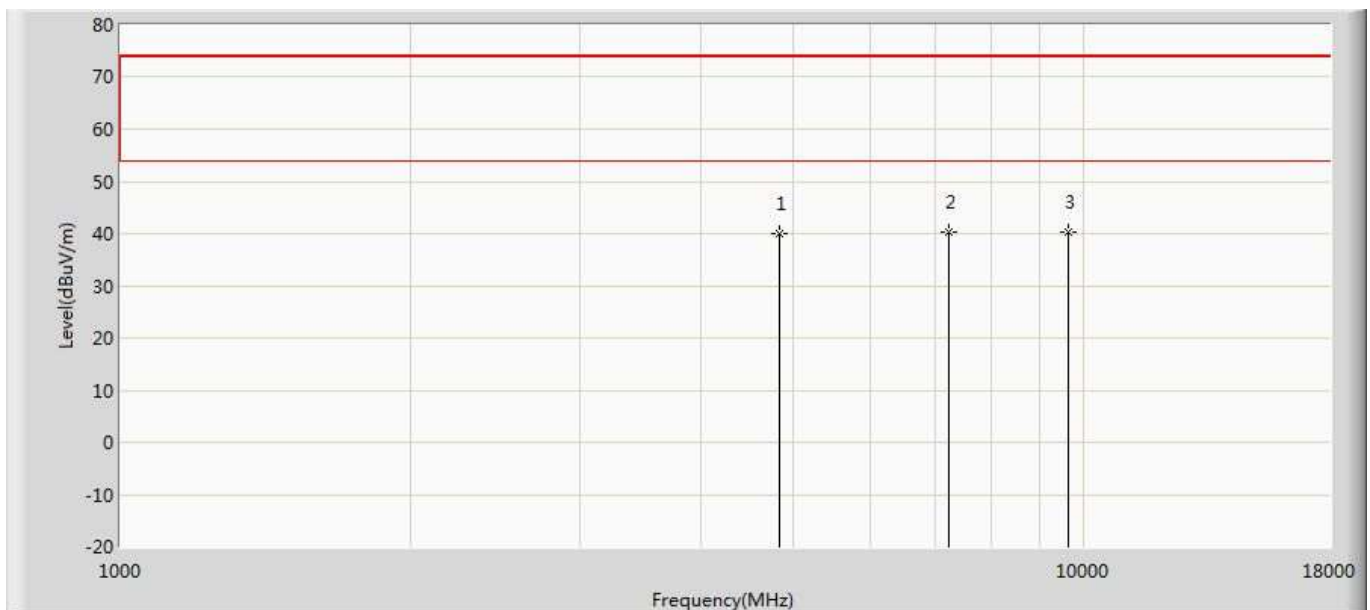
Test Method						
	References Rule			Chapter	Description	
	☐		ANSI C63.10	11.11	Emissions in non-restricted frequency bands	
	☐	ANSI C63.10		11.11.2	Reference level measurement	
	☐	ANSI C63.10		11.11.3	Emission level measurement	
	☒		ANSI C63.10	11.12	Emissions in restricted frequency bands	
	☒	ANSI 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	
	☐	ANSI C63.10		11.12.2	Antenna-port conducted measurements	
		☐	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure	
		☐	ANSI C63.10	11.12.2.4	Peak power measurement procedure	
		☐	ANSI C63.10	11.12.2.5	Average power measurement procedures	
			☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
			☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
☐			ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold	

4.5. EUT test Axis definition

Item	Emissions in restricted frequency bands			
Device Category	☐	Fixed point-to-point		
	☐	Emit multiple directional beams, simultaneously or sequentially		
	☒	Other cases		
Test mode	Mode 1~5			
Test method	☒	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☒	Worst Axis ☐	Worst Axis ☐
	☐	Conducted		
	☐	Chain 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

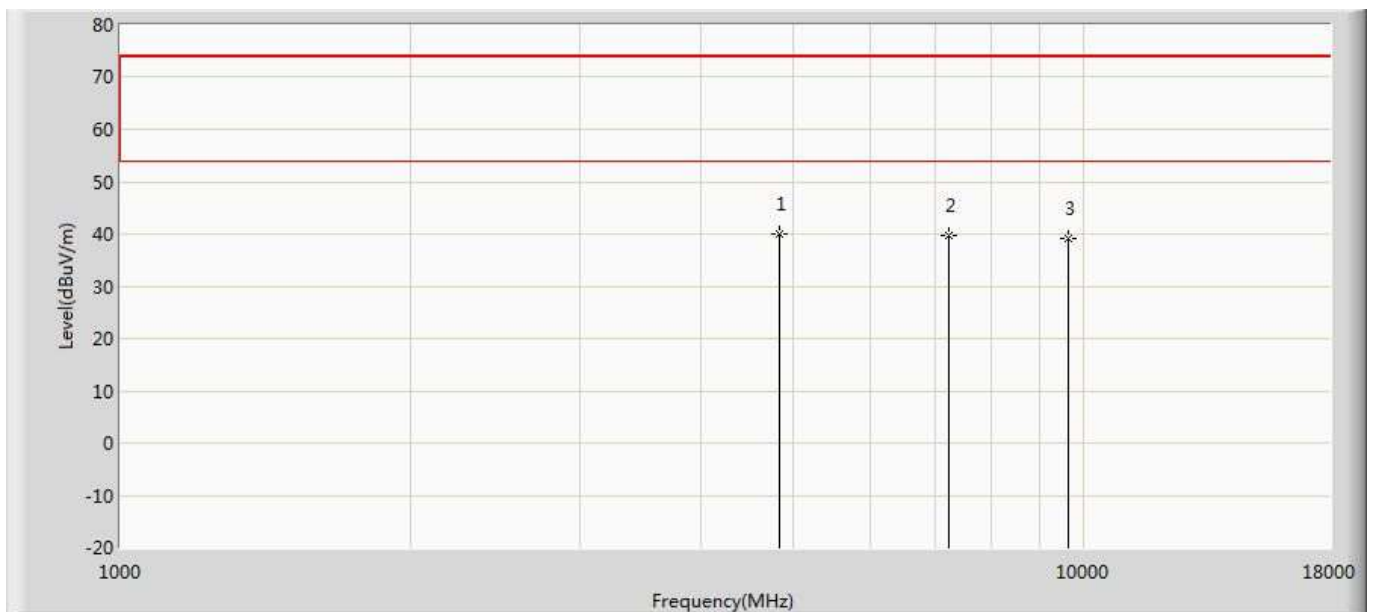
4.6. Test Result

Profile: 20A0241R	Page No.: 25
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:11
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:Transmint at 2412MHz by 802.11b ANT 1	



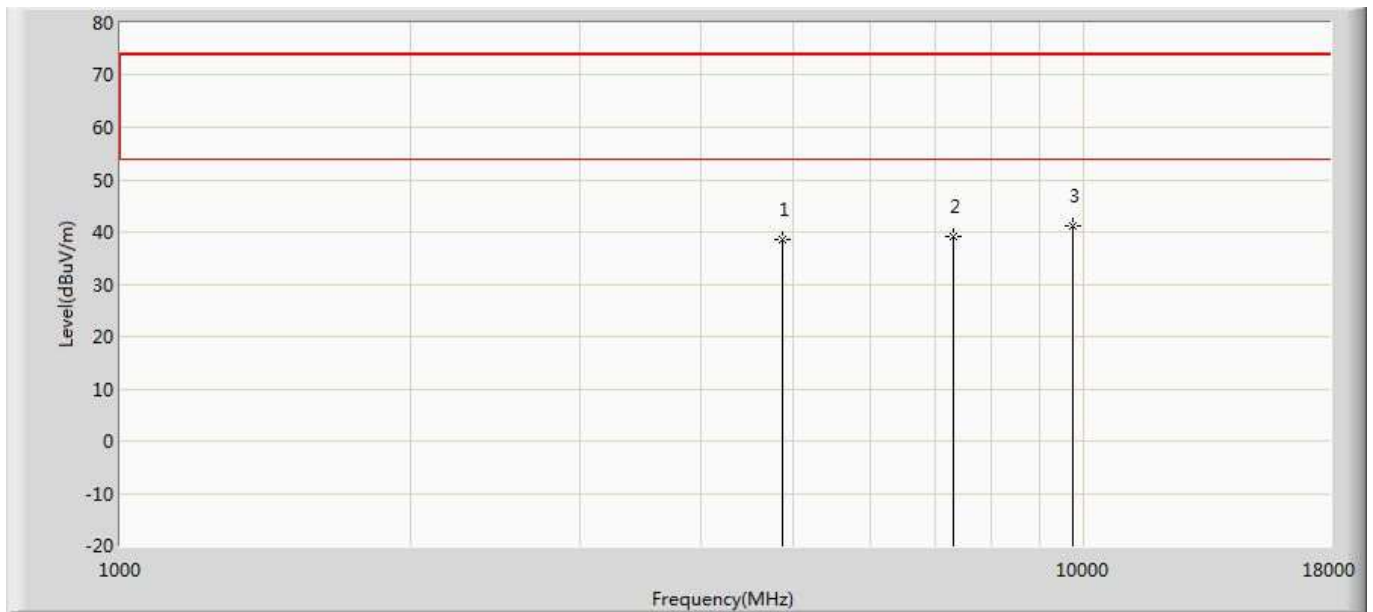
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	40.142	46.038	-33.858	74.000	-5.896	PK
2		7236.000	40.365	43.322	-33.635	74.000	-2.957	PK
3	*	9648.000	40.406	41.901	-33.594	74.000	-1.495	PK

Profile: 20A0241R	Page No.: 26
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:11
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:Transmint at 2412MHz by 802.11b ANT 1	



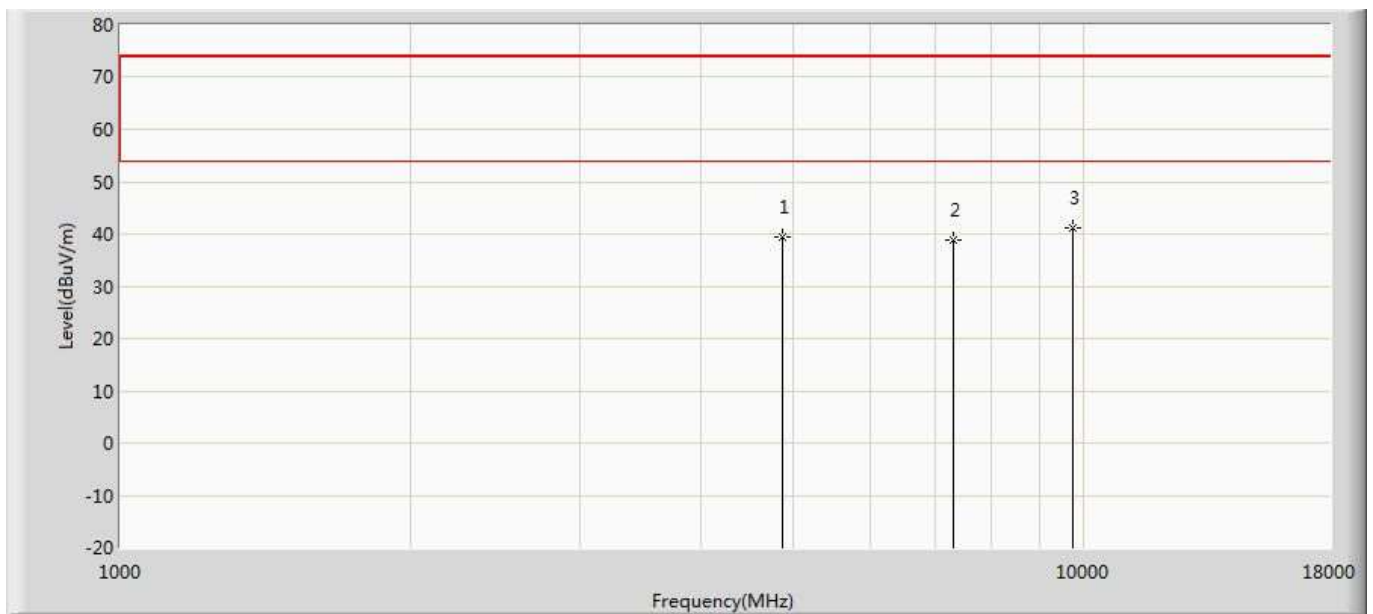
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4824.000	39.927	45.823	-34.073	74.000	-5.896	PK
2		7236.000	39.685	42.642	-34.315	74.000	-2.957	PK
3		9648.000	39.190	40.685	-34.810	74.000	-1.495	PK

Profile: 20A0241R	Page No.: 27
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:11
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:Transmint at 2437MHz by 802.11b ANT 1	



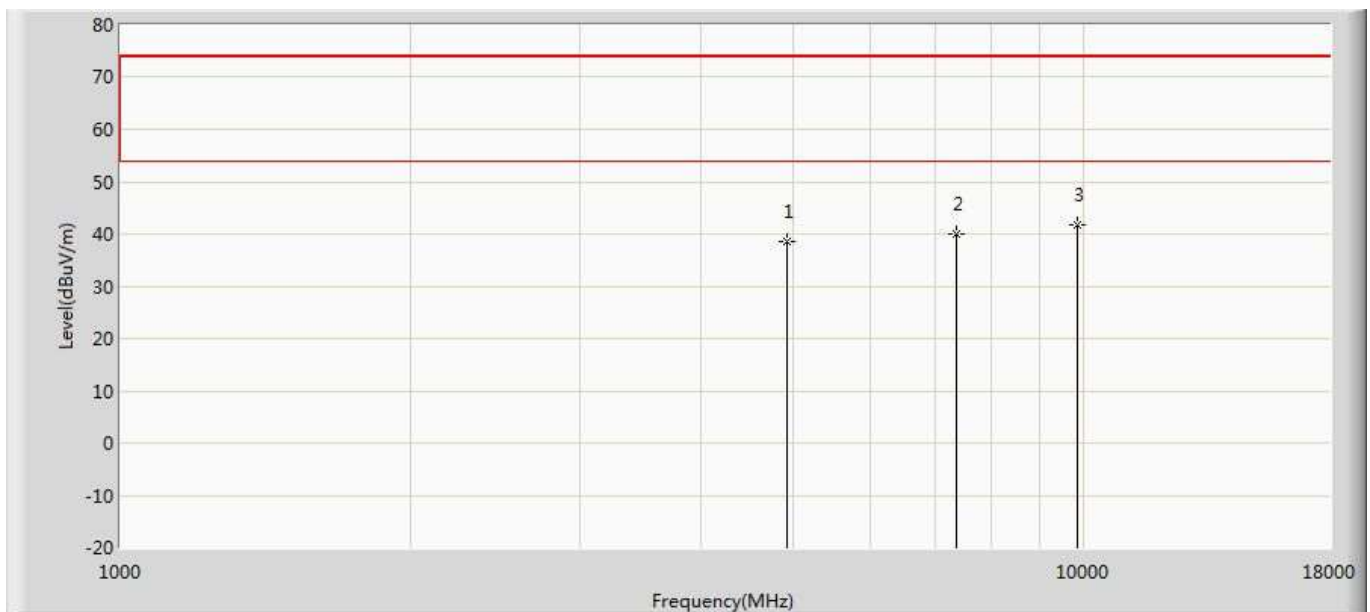
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.503	44.382	-35.497	74.000	-5.879	PK
2		7311.000	39.087	42.140	-34.913	74.000	-3.054	PK
3	*	9748.000	41.127	42.221	-32.873	74.000	-1.095	PK

Profile: 20A0241R	Page No.: 28
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:11
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:Transmint at 2437MHz by 802.11b ANT 1	



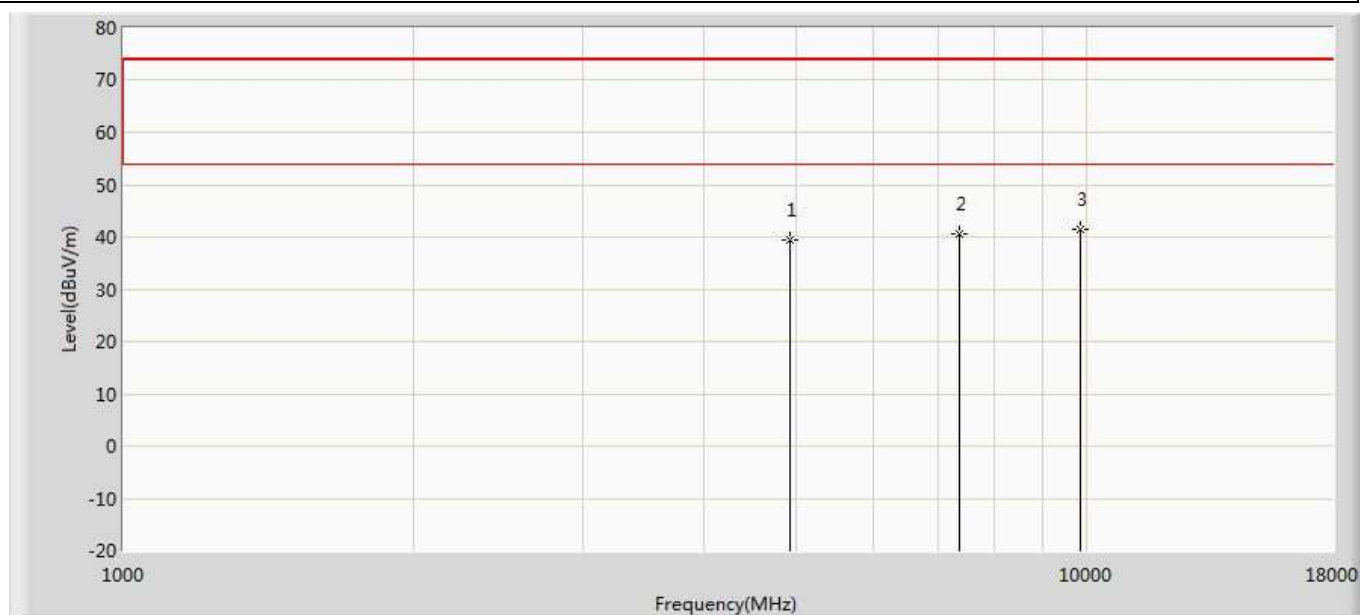
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	39.503	45.382	-34.497	74.000	-5.879	PK
2		7311.000	38.842	41.895	-35.158	74.000	-3.054	PK
3	*	9748.000	41.210	42.304	-32.790	74.000	-1.095	PK

Profile: 20A0241R	Page No.: 29
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:11
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:Transmint at 2462MHz by 802.11b ANT 1	



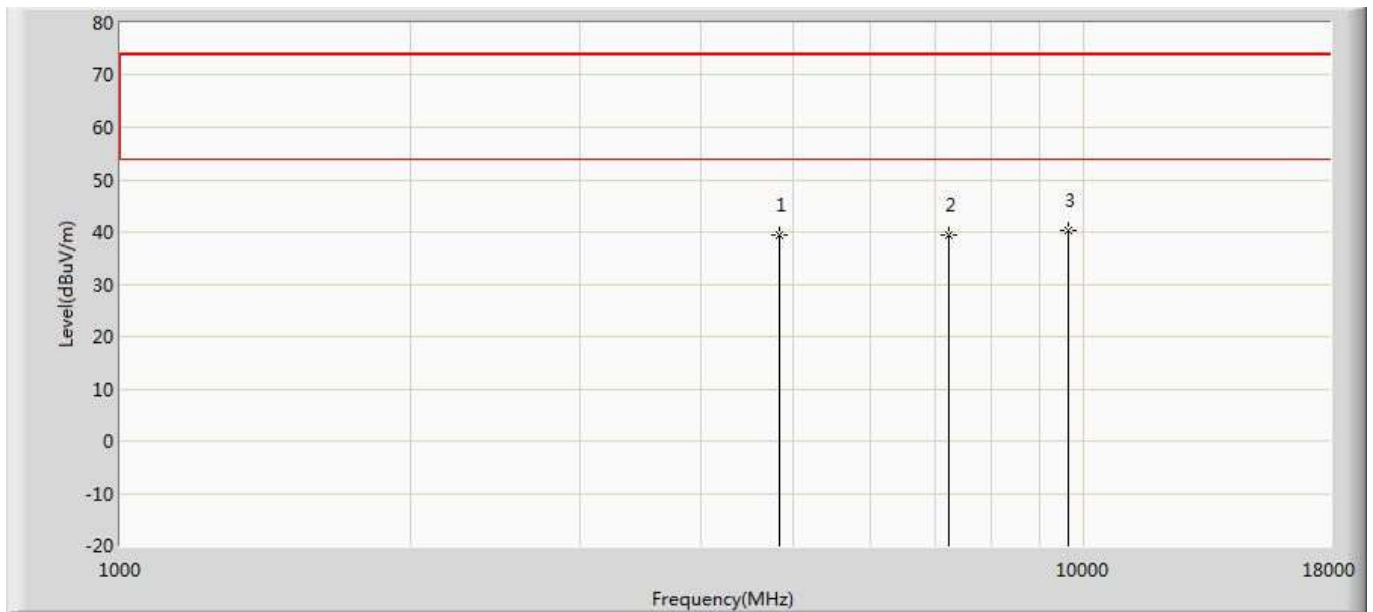
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.580	44.507	-35.420	74.000	-5.927	PK
2		7386.000	39.999	43.034	-34.001	74.000	-3.035	PK
3	*	9848.000	41.659	42.343	-32.341	74.000	-0.684	PK

Profile: 20A0241R	Page No.: 30
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:11
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:Transmint at 2462MHz by 802.11b ANT 1	



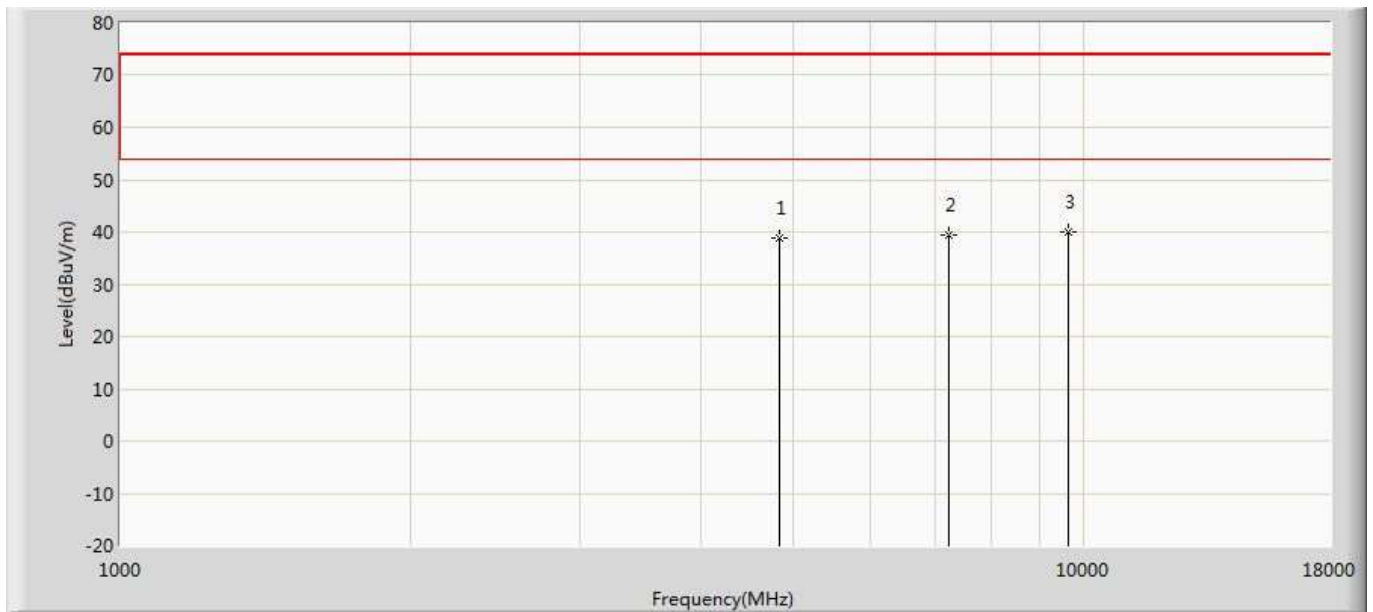
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	39.301	45.228	-34.699	74.000	-5.927	PK
2		7386.000	40.468	43.503	-33.532	74.000	-3.035	PK
3	*	9848.000	41.594	42.278	-32.406	74.000	-0.684	PK

Profile: 20A0241R	Page No.: 31
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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 2:Transmint at 2412MHz by 802.11g ANT 1	



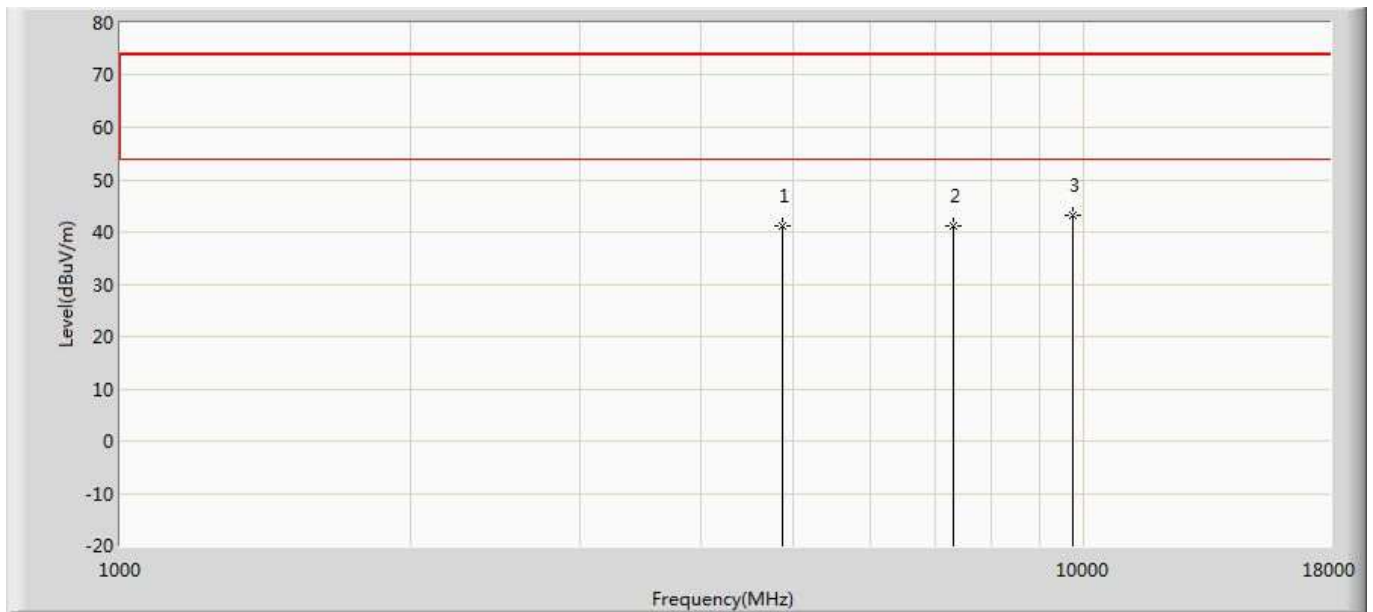
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	39.421	45.317	-34.579	74.000	-5.896	PK
2		7236.000	39.390	42.347	-34.610	74.000	-2.957	PK
3	*	9648.000	40.268	41.763	-33.732	74.000	-1.495	PK

Profile: 20A0241R	Page No.: 32
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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:Transmint at 2412MHz by 802.11g ANT 1	



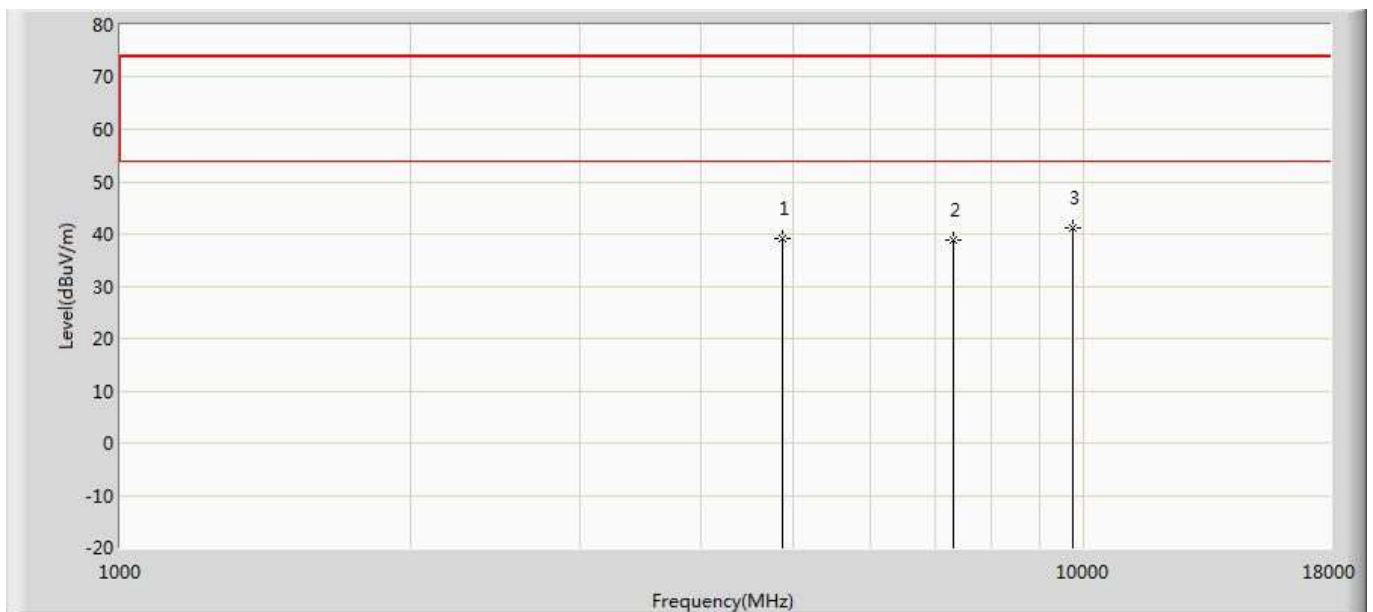
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	38.795	44.691	-35.205	74.000	-5.896	PK
2		7236.000	39.386	42.343	-34.614	74.000	-2.957	PK
3	*	9648.000	40.006	41.501	-33.994	74.000	-1.495	PK

Profile: 20A0241R	Page No.: 33
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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 2:Transmint at 2437MHz by 802.11g ANT 1	



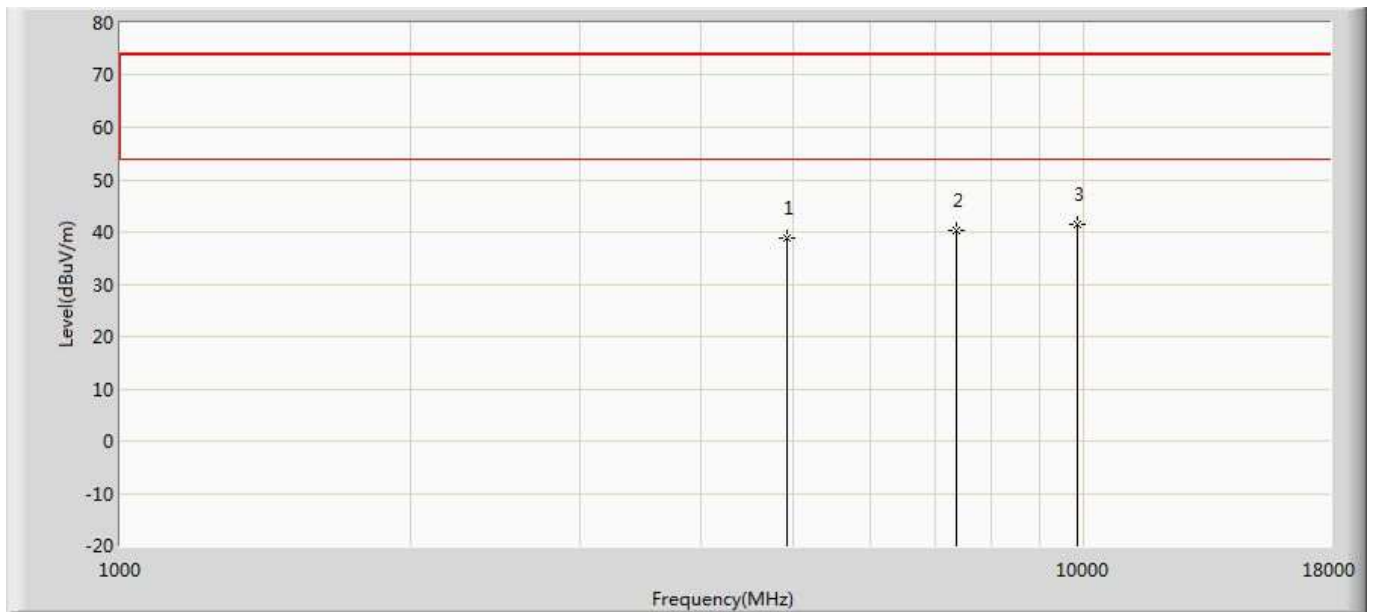
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	41.191	47.070	-32.809	74.000	-5.879	PK
2		7311.000	41.283	44.336	-32.717	74.000	-3.054	PK
3	*	9748.000	43.199	44.293	-30.801	74.000	-1.095	PK

Profile: 20A0241R	Page No.: 34
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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:Transmint at 2437MHz by 802.11g ANT 1	



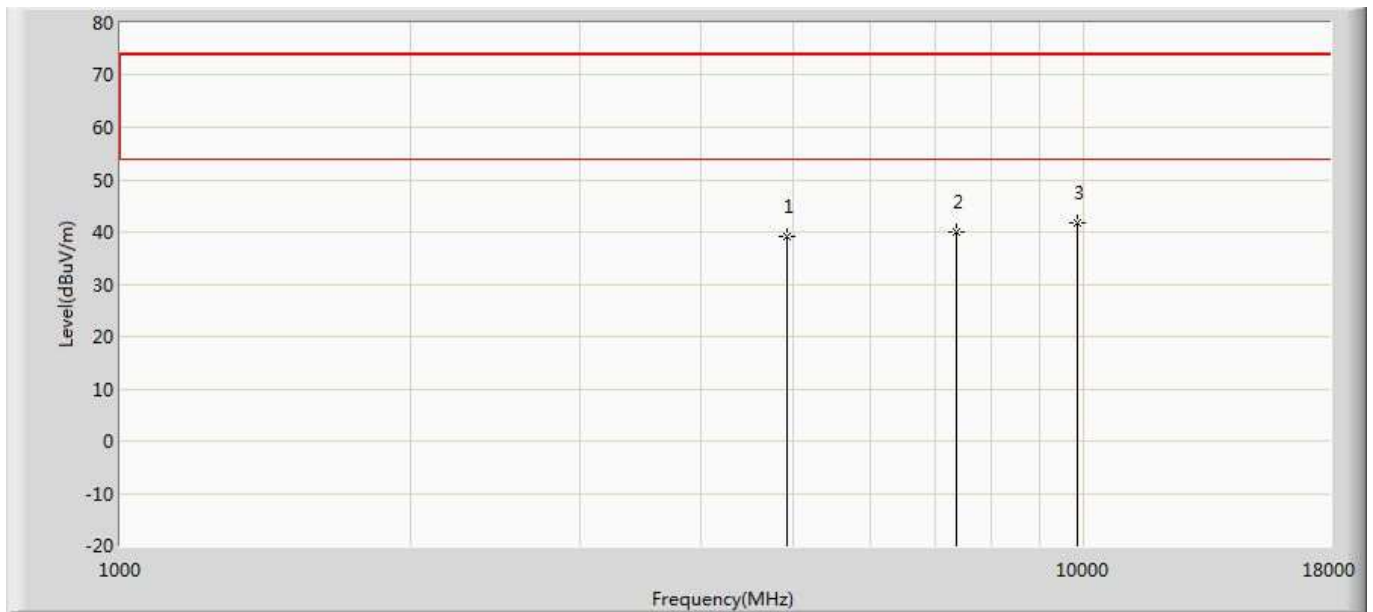
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	39.063	44.942	-34.937	74.000	-5.879	PK
2		7311.000	38.932	41.985	-35.068	74.000	-3.054	PK
3	*	9748.000	41.293	42.387	-32.707	74.000	-1.095	PK

Profile: 20A0241R	Page No.: 35
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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 2:Transmint at 2462MHz by 802.11g ANT 1	



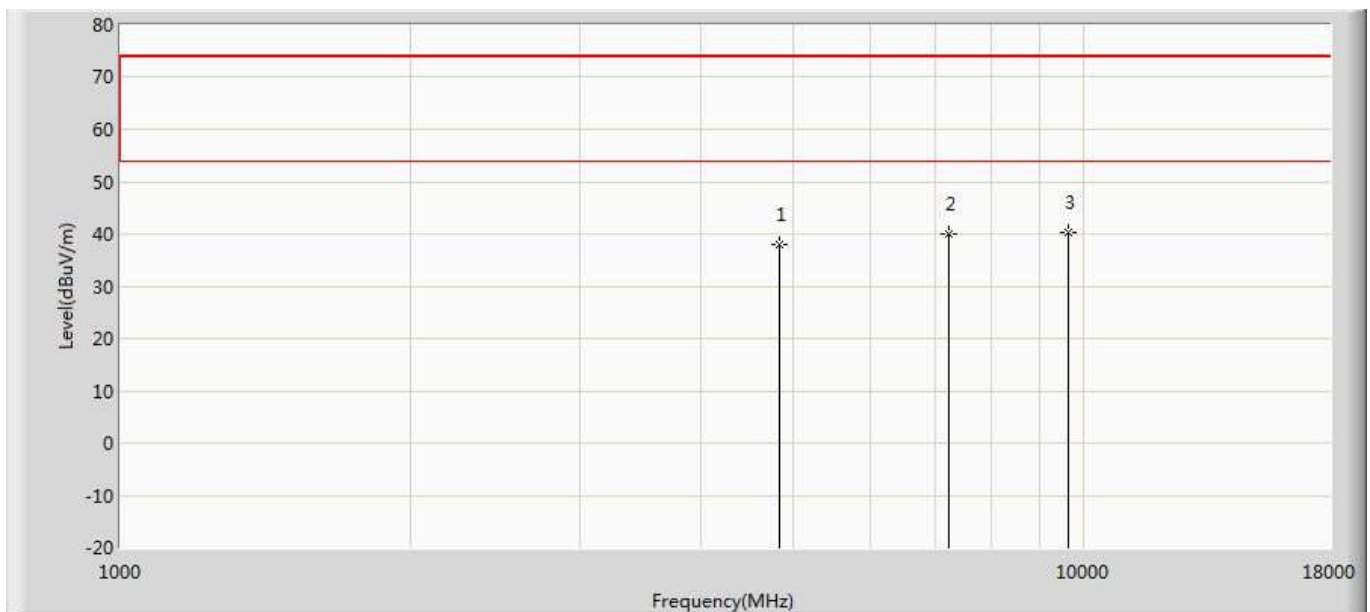
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.835	44.762	-35.165	74.000	-5.927	PK
2		7386.000	40.378	43.413	-33.622	74.000	-3.035	PK
3	*	9848.000	41.384	42.068	-32.616	74.000	-0.684	PK

Profile: 20A0241R	Page No.: 36
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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:Transmint at 2462MHz by 802.11g ANT 1	



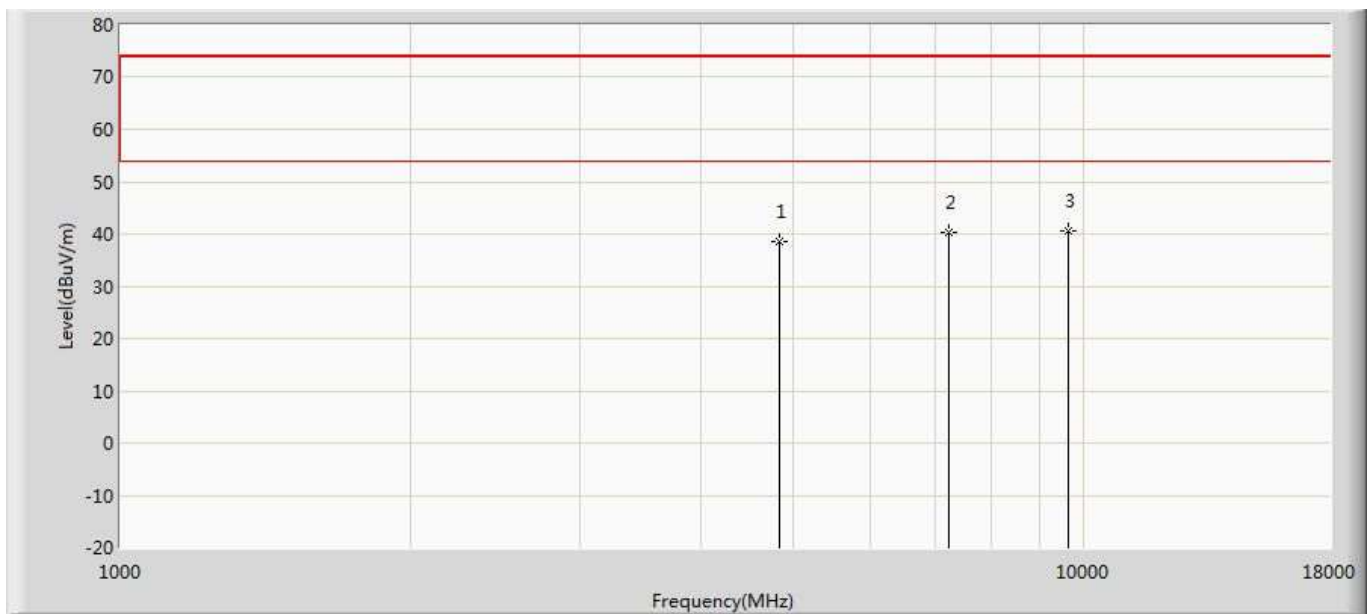
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	39.133	45.060	-34.867	74.000	-5.927	PK
2		7386.000	40.034	43.069	-33.966	74.000	-3.035	PK
3	*	9848.000	41.881	42.565	-32.119	74.000	-0.684	PK

Profile: 20A0241R	Page No.: 37
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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 3:Transmint at 2412MHz by 802.11n20 ANT 1	



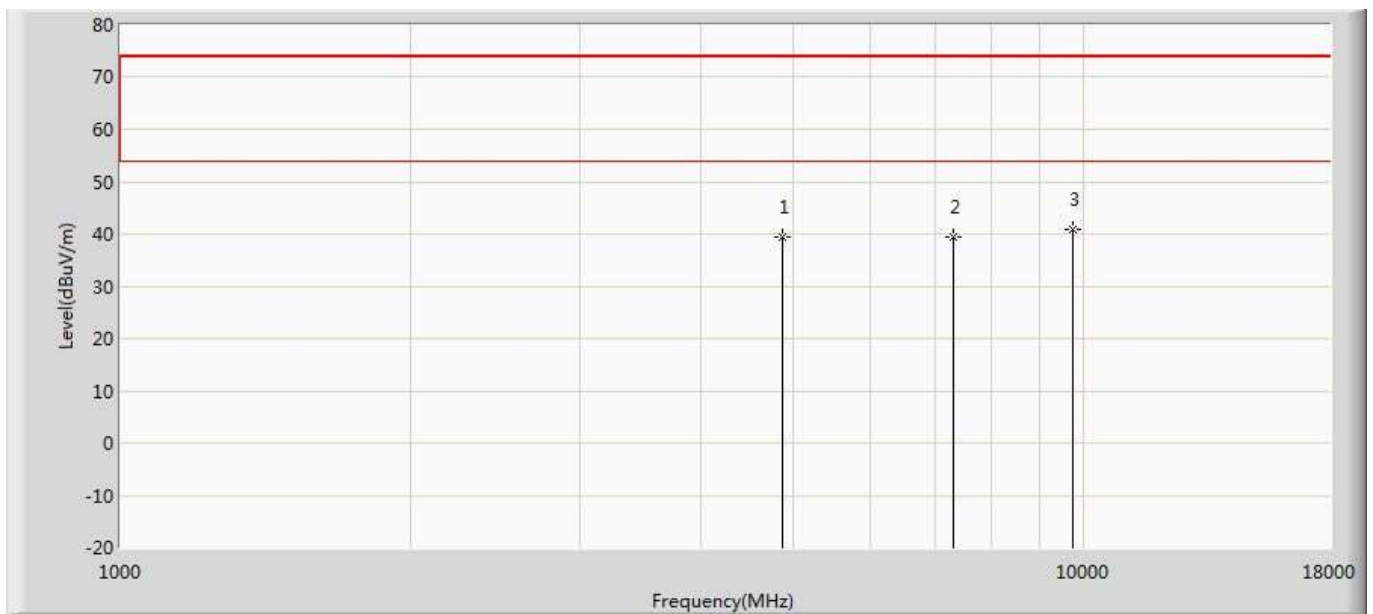
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	37.891	43.787	-36.109	74.000	-5.896	PK
2		7236.000	40.013	42.970	-33.987	74.000	-2.957	PK
3	*	9648.000	40.182	41.677	-33.818	74.000	-1.495	PK

Profile: 20A0241R	Page No.: 38
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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:Transmint at 2412MHz by 802.11n20 ANT 1	



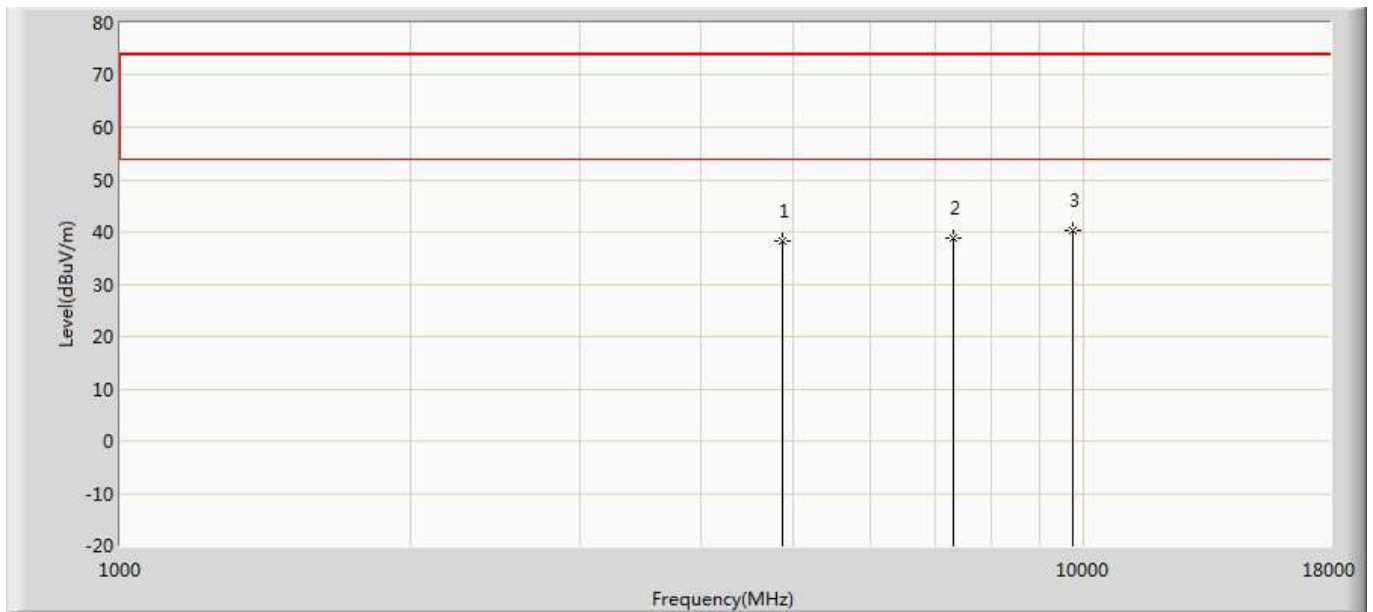
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	38.420	44.316	-35.580	74.000	-5.896	PK
2		7236.000	40.209	43.166	-33.791	74.000	-2.957	PK
3	*	9648.000	40.591	42.086	-33.409	74.000	-1.495	PK

Profile: 20A0241R	Page No.: 39
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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 3:Transmint at 2437MHz by 802.11n20 ANT 1	



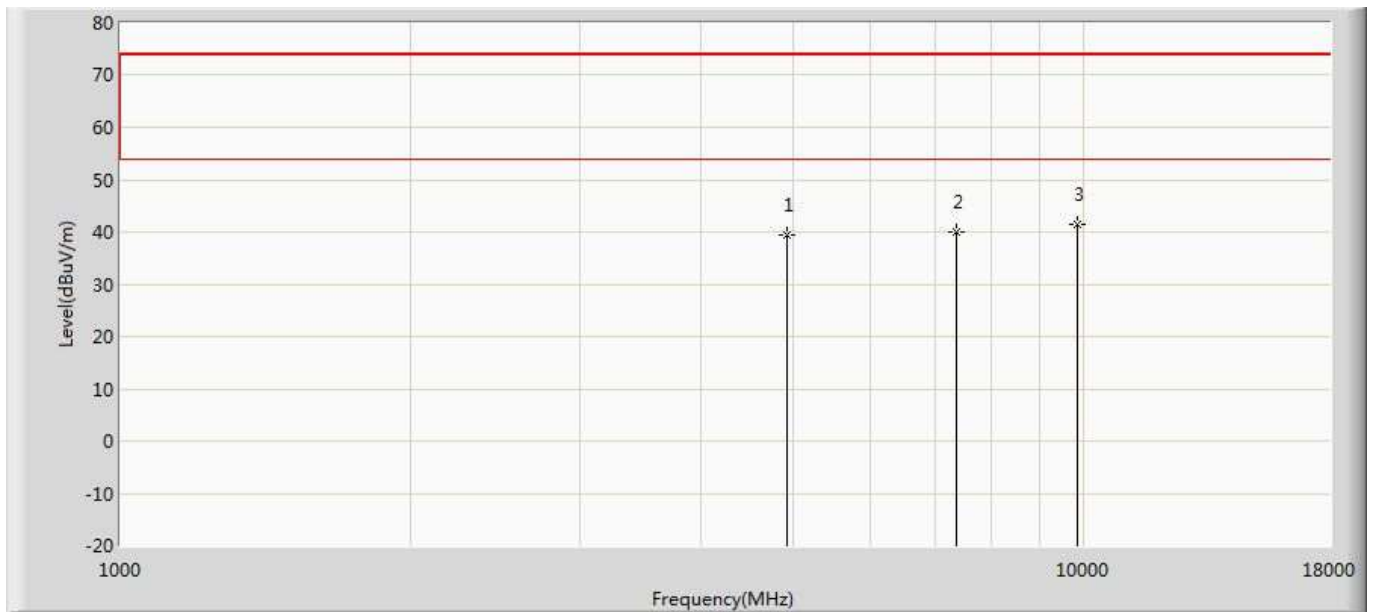
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	39.337	45.216	-34.663	74.000	-5.879	PK
2		7311.000	39.318	42.371	-34.682	74.000	-3.054	PK
3	*	9748.000	40.967	42.061	-33.033	74.000	-1.095	PK

Profile: 20A0241R	Page No.: 40
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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:Transmint at 2437MHz by 802.11n20 ANT 1	



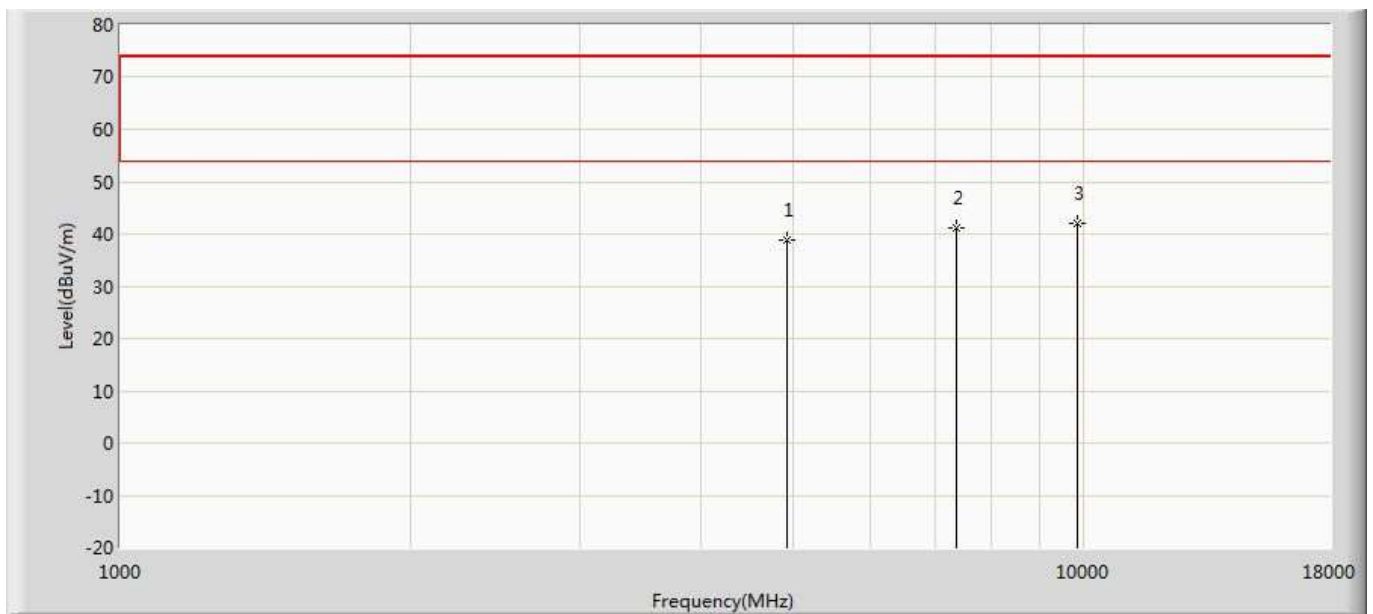
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.296	44.175	-35.704	74.000	-5.879	PK
2		7311.000	38.839	41.892	-35.161	74.000	-3.054	PK
3	*	9748.000	40.318	41.412	-33.682	74.000	-1.095	PK

Profile: 20A0241R	Page No.: 41
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:12
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 3:Transmint at 2462MHz by 802.11n20 ANT 1	



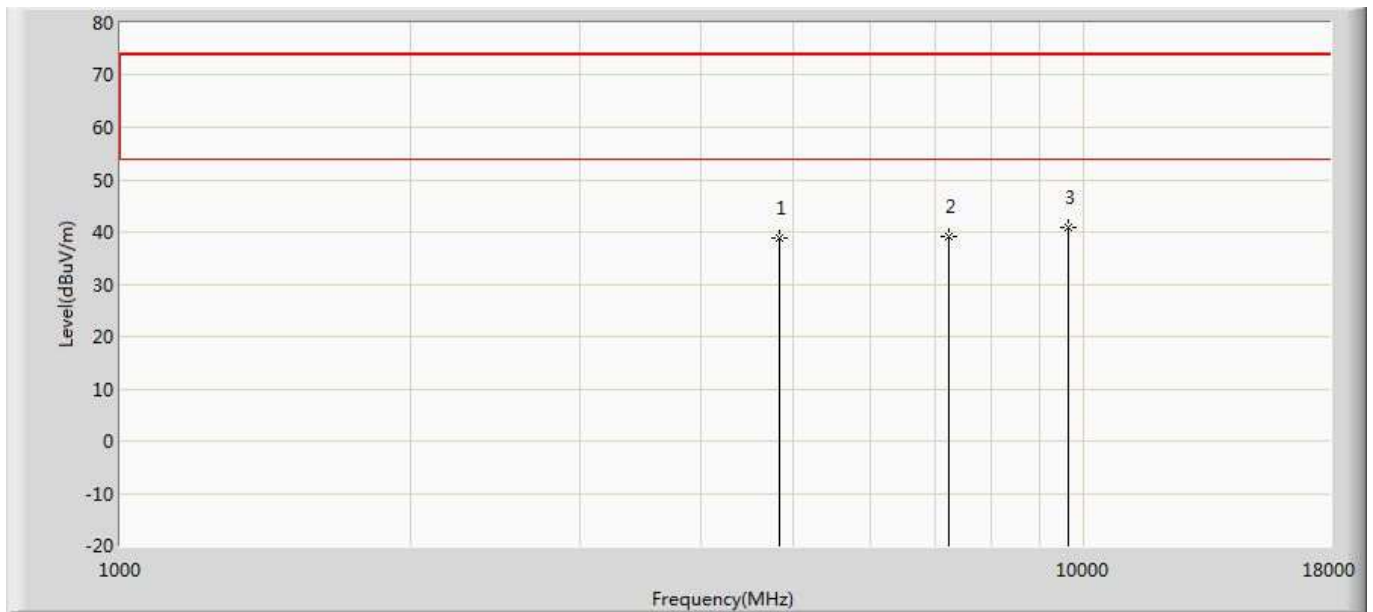
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	39.360	45.287	-34.640	74.000	-5.927	PK
2		7386.000	40.070	43.105	-33.930	74.000	-3.035	PK
3	*	9848.000	41.584	42.268	-32.416	74.000	-0.684	PK

Profile: 20A0241R	Page No.: 42
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:13
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 3:Transmint at 2462MHz by 802.11n20 ANT 1	



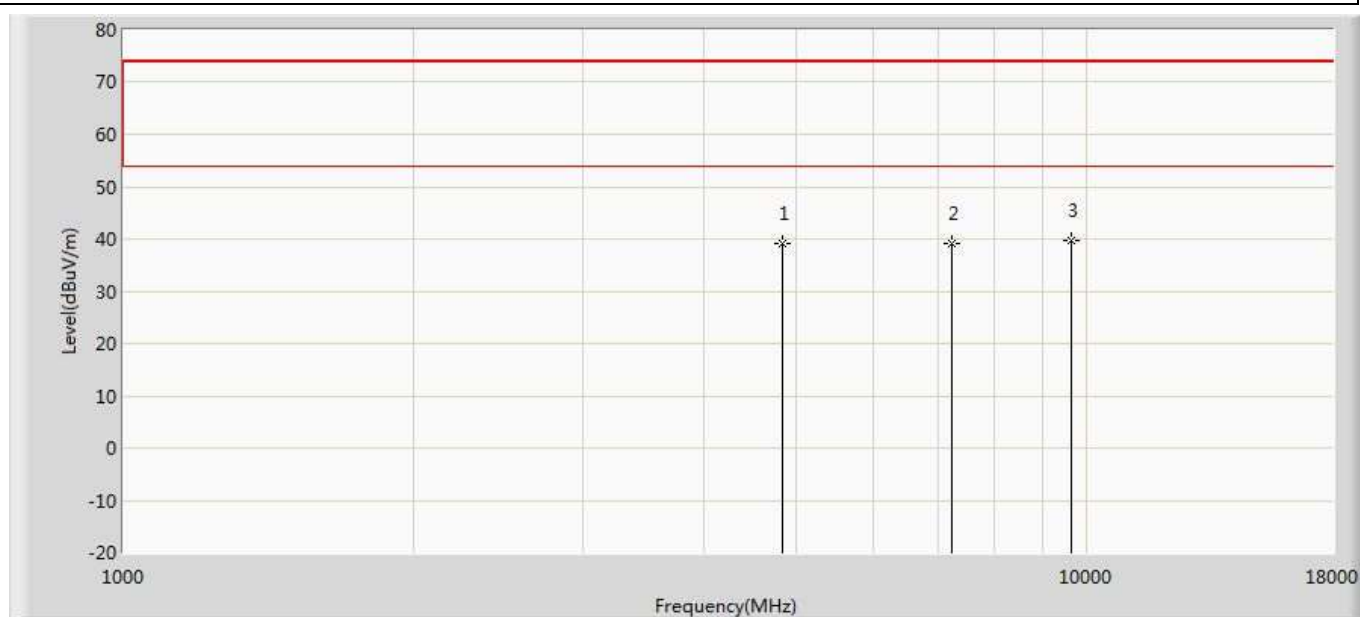
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.730	44.657	-35.270	74.000	-5.927	PK
2		7386.000	41.257	44.292	-32.743	74.000	-3.035	PK
3	*	9848.000	42.047	42.731	-31.953	74.000	-0.684	PK

Profile: 20A0241R	Page No.: 43
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:13
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 4:Transmint at 2412MHz by 802.11ax20 ANT 1	



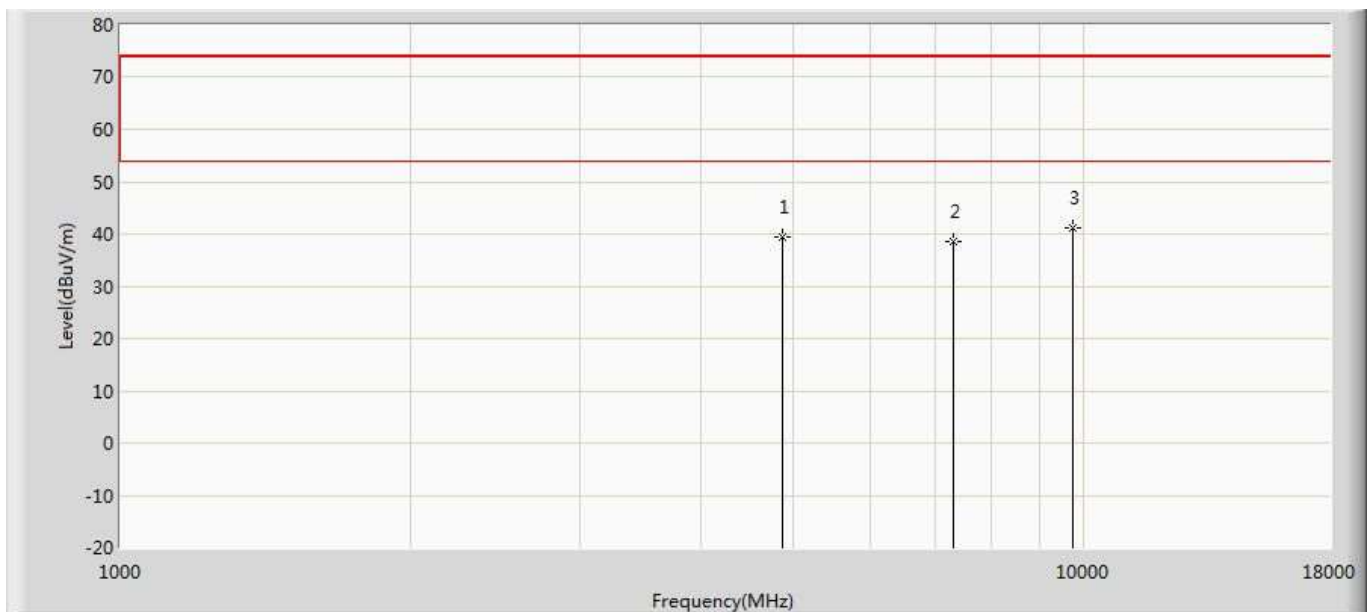
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	38.794	44.690	-35.206	74.000	-5.896	PK
2		7236.000	38.989	41.946	-35.011	74.000	-2.957	PK
3	*	9648.000	40.848	42.343	-33.152	74.000	-1.495	PK

Profile: 20A0241R	Page No.: 44
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:13
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 4:Transmint at 2412MHz by 802.11ax20 ANT 1	



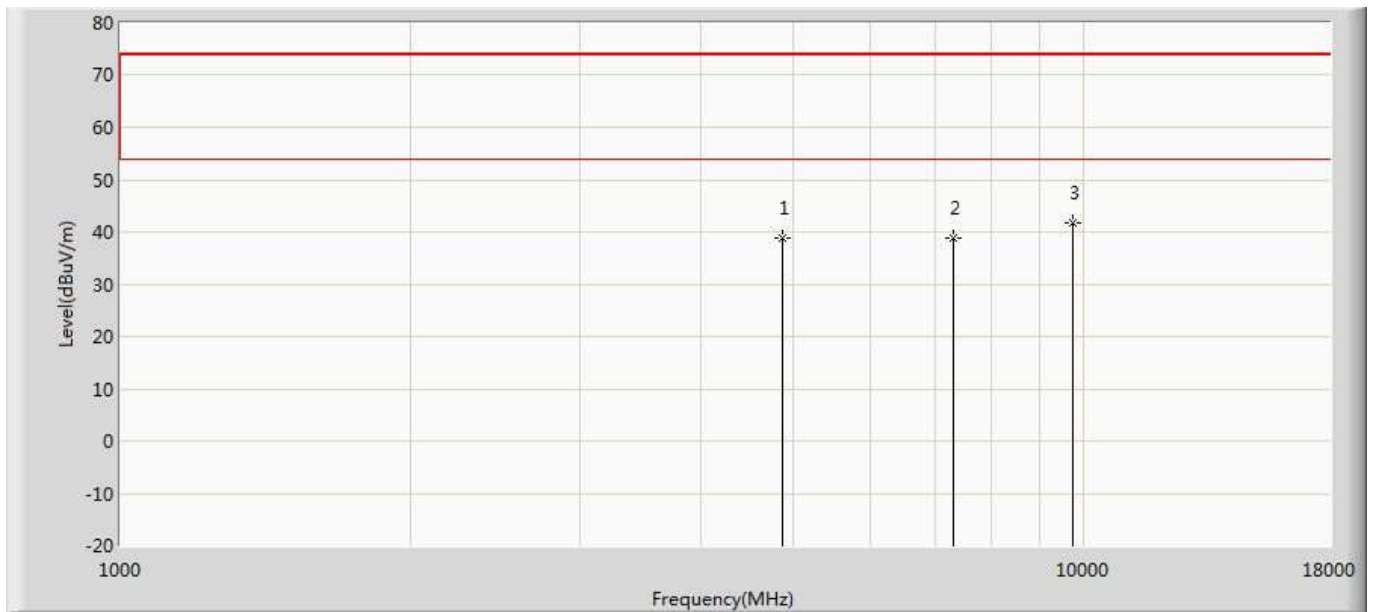
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	39.014	44.910	-34.986	74.000	-5.896	PK
2		7236.000	39.005	41.962	-34.995	74.000	-2.957	PK
3	*	9648.000	39.607	41.102	-34.393	74.000	-1.495	PK

Profile: 20A0241R	Page No.: 45
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:13
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 4:Transmint at 2437MHz by 802.11ax20 ANT 1	



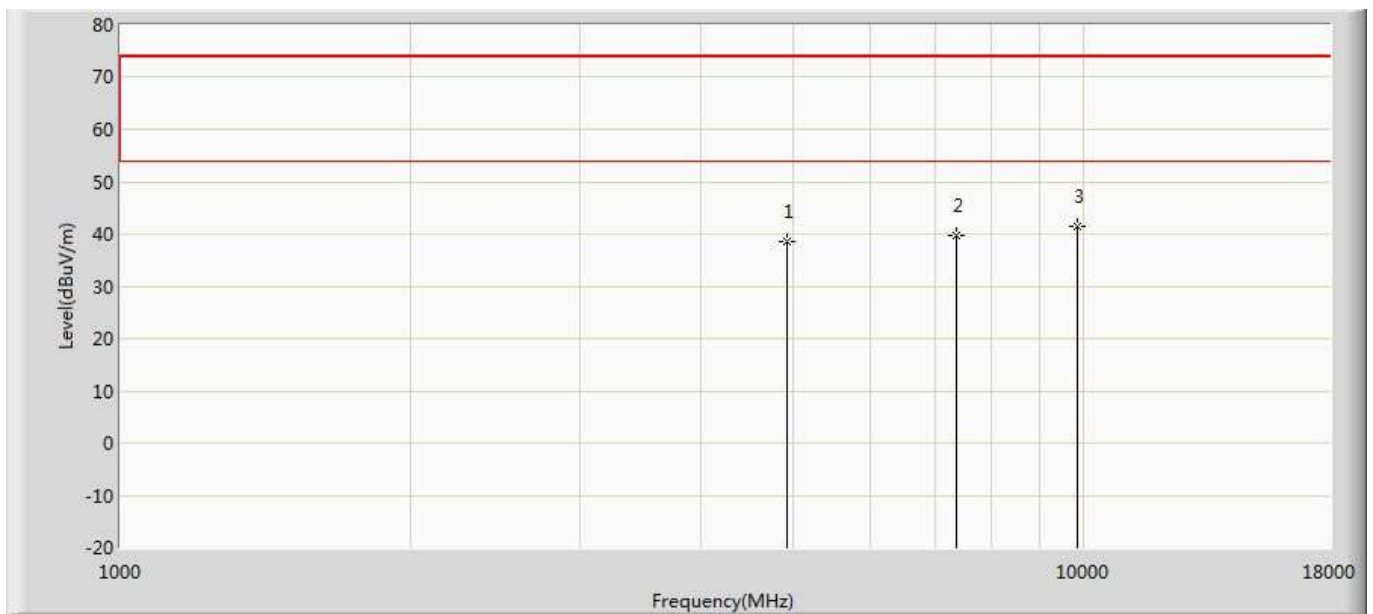
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	39.563	45.442	-34.437	74.000	-5.879	PK
2		7311.000	38.687	41.740	-35.313	74.000	-3.054	PK
3	*	9748.000	41.230	42.324	-32.770	74.000	-1.095	PK

Profile: 20A0241R	Page No.: 46
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:13
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 4:Transmint at 2437MHz by 802.11ax20 ANT 1	



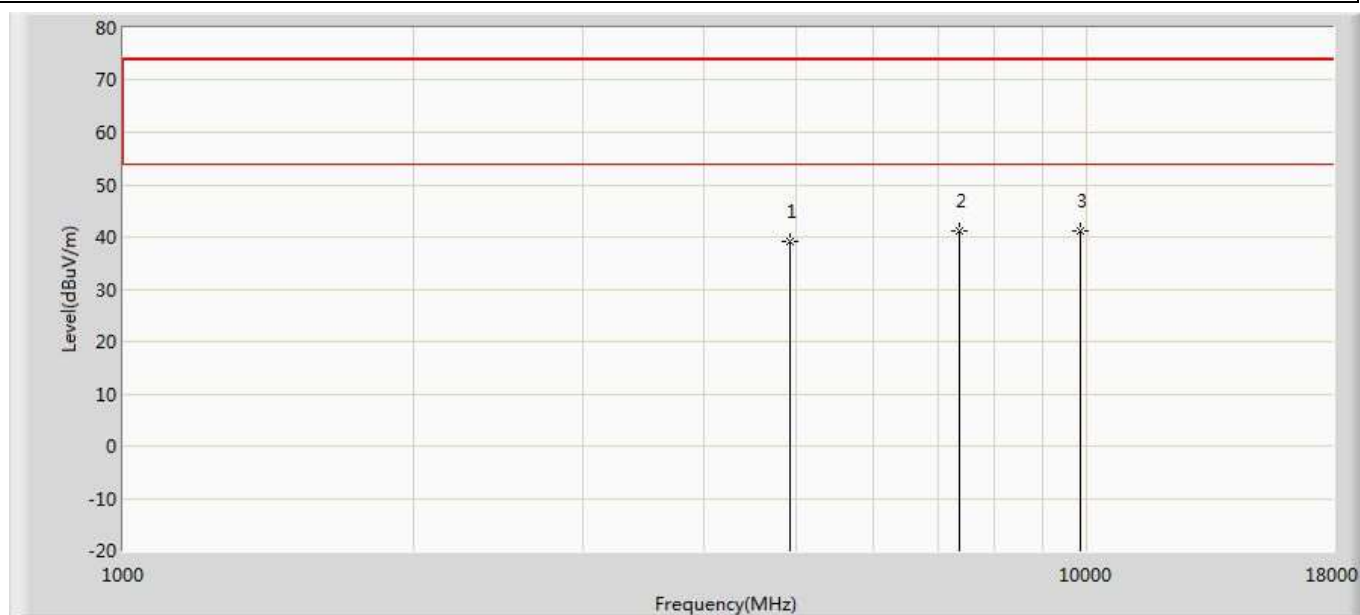
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.941	44.820	-35.059	74.000	-5.879	PK
2		7311.000	38.843	41.896	-35.157	74.000	-3.054	PK
3	*	9748.000	41.786	42.880	-32.214	74.000	-1.095	PK

Profile: 20A0241R	Page No.: 47
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:13
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 4:Transmint at 2462MHz by 802.11ax20 ANT 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.496	44.423	-35.504	74.000	-5.927	PK
2		7386.000	39.686	42.721	-34.314	74.000	-3.035	PK
3	*	9848.000	41.373	42.057	-32.627	74.000	-0.684	PK

Profile: 20A0241R	Page No.: 48
Engineer: Jun	
Site: AC5	Time: 2020/11/07 - 16:13
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 4:Transmint at 2462MHz by 802.11ax20 ANT 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	39.028	44.955	-34.972	74.000	-5.927	PK
2		7386.000	41.040	44.075	-32.960	74.000	-3.035	PK
3	*	9848.000	41.091	41.775	-32.909	74.000	-0.684	PK

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

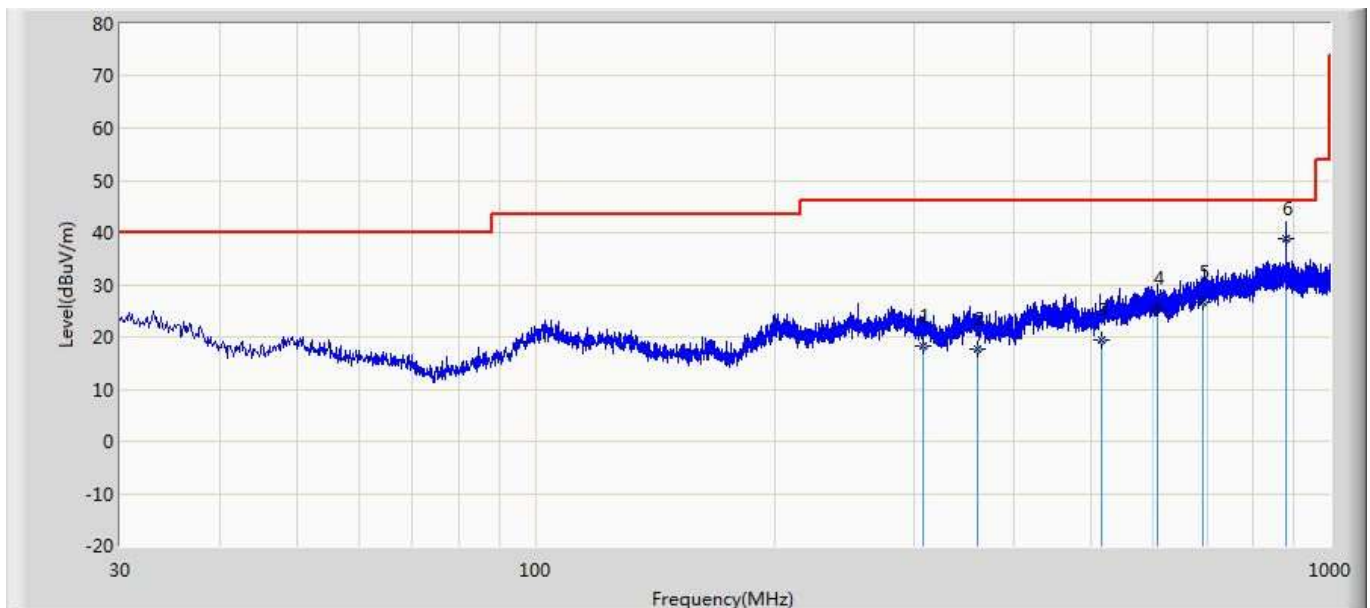
Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

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.

Note: 4. We have evaluated all modes, channels, bandwidths and different antennas, shown in the report is the worst data.

The worst case of Radiated Emission below 1GHz:

Profile: 20A0241R	Page No.: 9
Engineer: Jun	
Site: AC2	Time: 2020/12/02 - 19:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Mode 1	

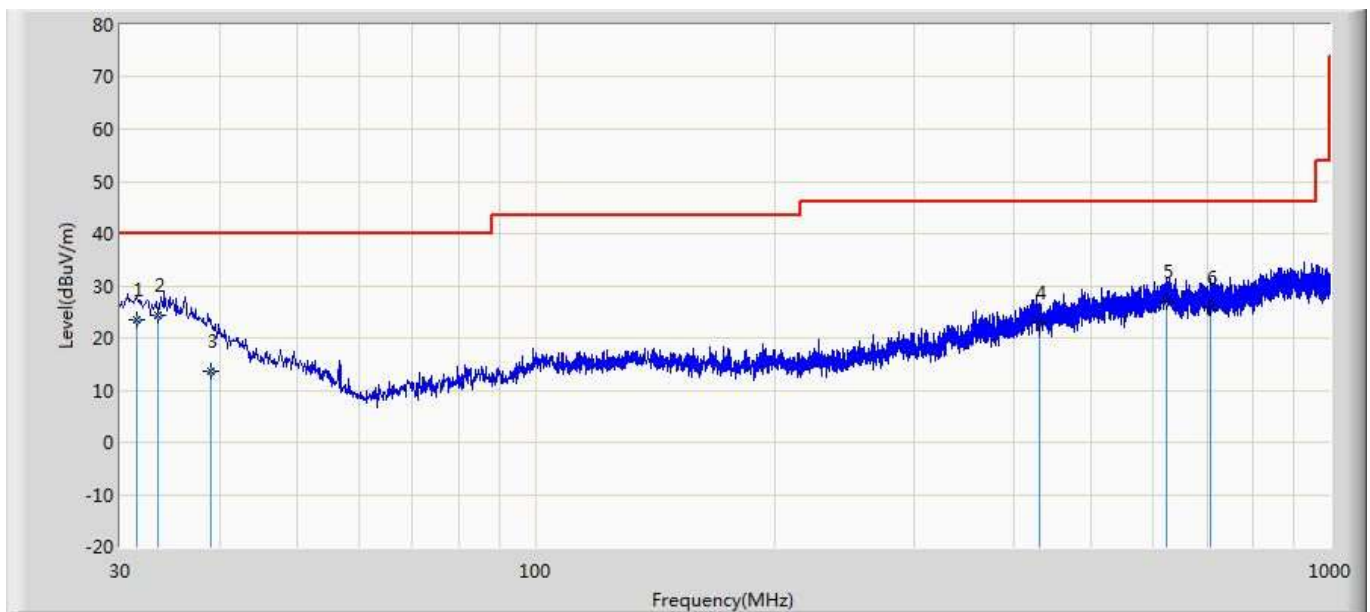


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		307.520	18.287	-5.852	-27.713	46.000	24.139	100	152	QP
2		360.422	17.711	-6.750	-28.289	46.000	24.461	110	152	QP
3		515.520	19.293	-6.820	-26.707	46.000	26.113	100	74	QP
4		607.852	25.515	-2.471	-20.485	46.000	27.986	100	42	QP
5		691.820	26.770	-3.400	-19.230	46.000	30.170	100	85	QP
6	*	880.740	38.875	5.525	-7.125	46.000	33.350	100	93	QP

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Profile: 20A0241R	Page No.: 10
Engineer: Jun	
Site: AC2	Time: 2020/12/02 - 19:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Mode 1	



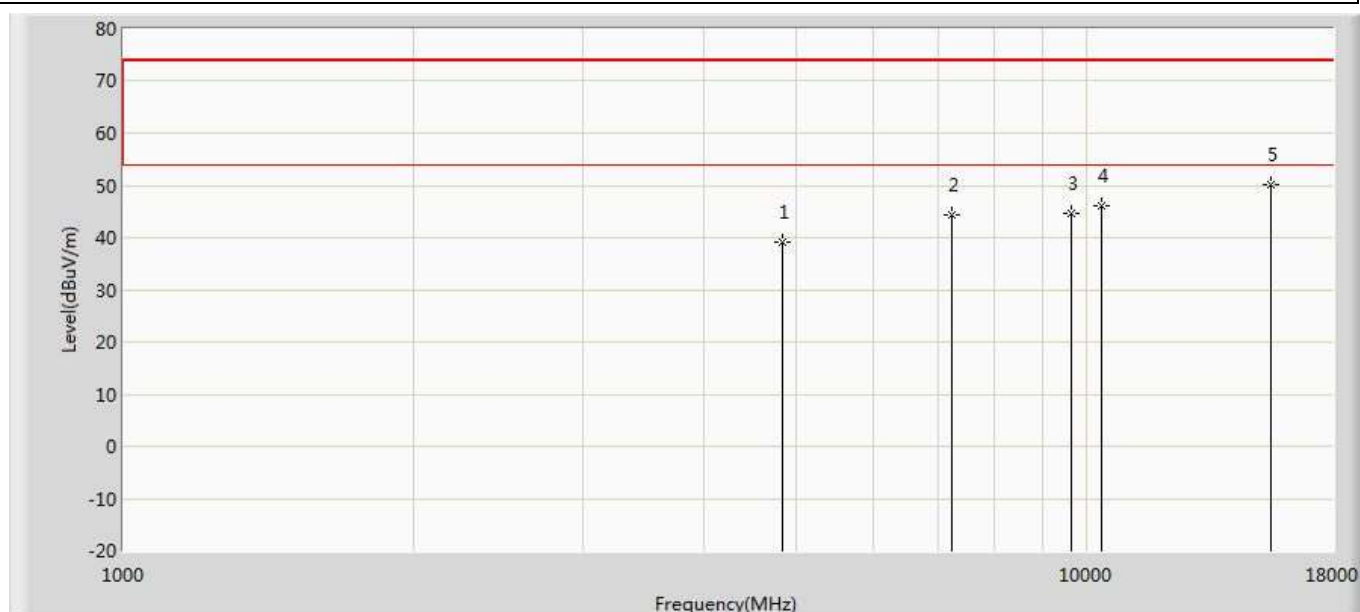
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		31.500	23.618	-3.520	-16.382	40.000	27.137	100	42	QP
2	*	33.520	24.234	-2.800	-15.766	40.000	27.034	100	54	QP
3		38.960	13.676	-9.520	-26.324	40.000	23.196	100	42	QP
4		431.520	22.791	-3.520	-23.209	46.000	26.310	100	142	QP
5		623.520	26.967	-3.630	-19.033	46.000	30.597	100	152	QP
6		708.850	25.781	-3.520	-20.219	46.000	29.301	100	41	QP

Note:

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

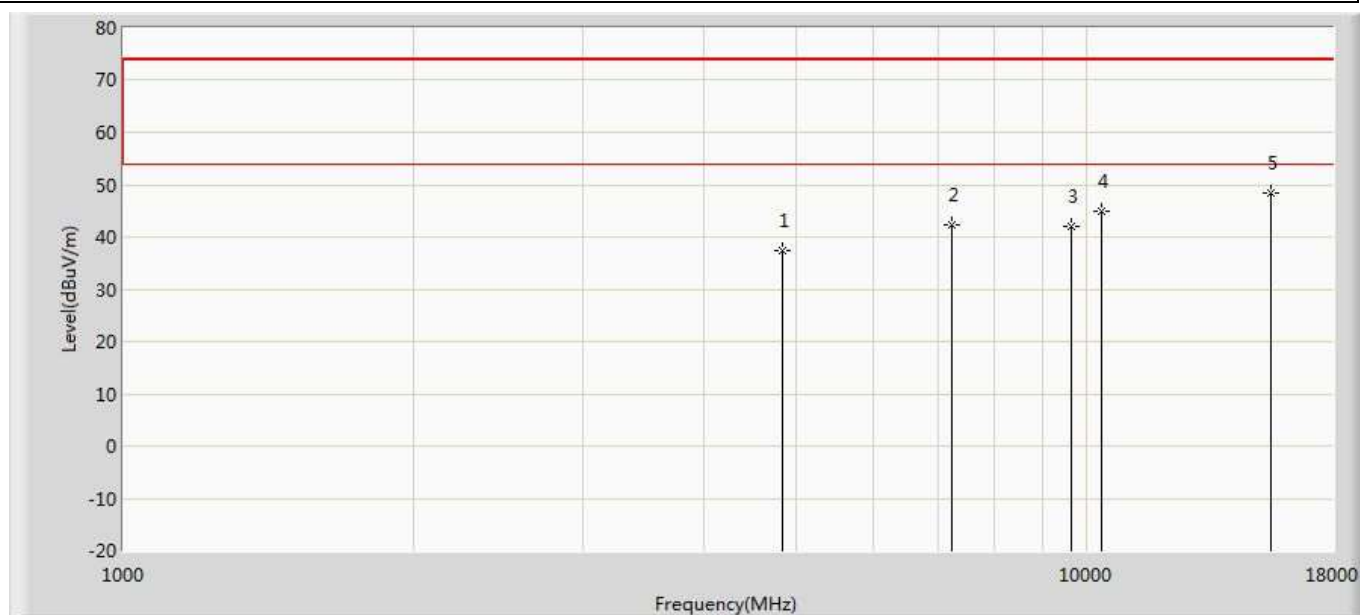
The worst case of Simultaneous Radiated Emission:

Profile: 20A2041R	Page No.: 5
Engineer: Jun	
Site: AC5	Time: 2020/12/02 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AP305CX	Power: AC 120V/60Hz
Note: Mode 1:Transmint at 5180MHz by 802.11a ant1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	39.098	44.994	-34.902	74.000	-5.896	PK
2		7236.000	44.314	47.271	-29.686	74.000	-2.957	PK
3		9648.000	44.620	46.115	-29.380	74.000	-1.495	PK
4		10360.000	46.066	45.205	-27.934	74.000	0.860	PK
5	*	15540.000	50.142	43.504	-23.858	74.000	6.637	PK

Profile: 20A2041R	Page No.: 6
Engineer: Jun	
Site: AC5	Time: 2020/12/02 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AP305CX	Power: AC 120V/60Hz
Note: Mode 1:Transmint at 5180MHz by 802.11a ant1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	37.527	43.423	-36.473	74.000	-5.896	PK
2		7236.000	42.387	45.344	-31.613	74.000	-2.957	PK
3		9648.000	42.156	43.651	-31.844	74.000	-1.495	PK
4		10360.000	44.939	44.078	-29.061	74.000	0.860	PK
5	*	15540.000	48.425	41.787	-25.575	74.000	6.637	PK

Note:

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

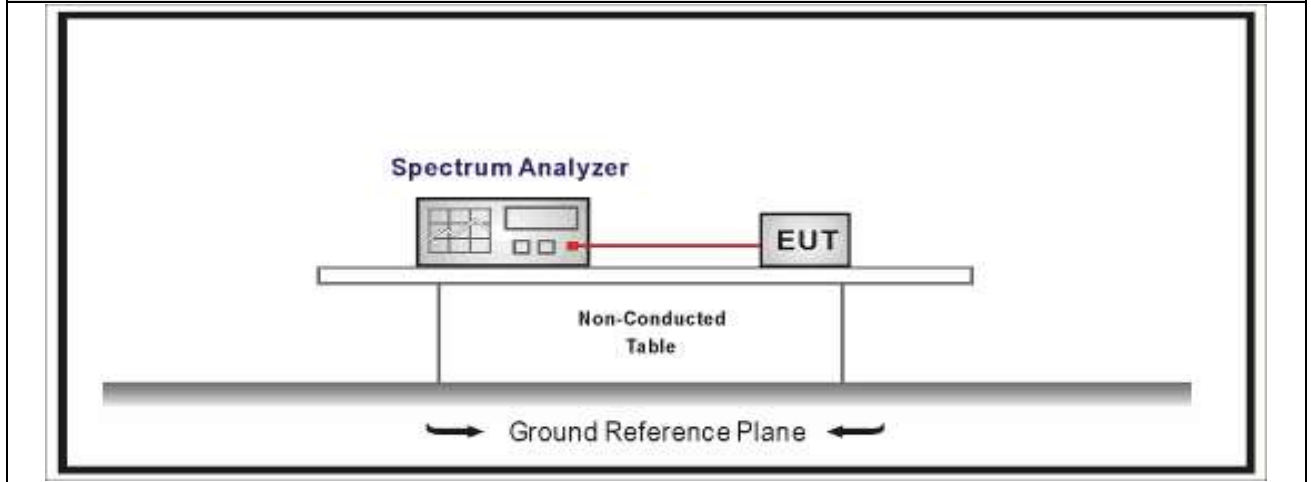
5. Emissions in non-restricted frequency bands

5.1. 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	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2020.09.02	2021.09.01
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup

Emissions in non-restricted frequency bands



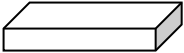
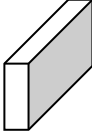
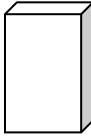
5.3. Limit

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).	

5.4. Test Procedure

Test Method					
	References Rule		Chapter	Description	
☒	ANSI C63.10		11.11	Emissions in non-restricted frequency bands	
	☒	ANSI C63.10	11.11.2	Reference level measurement	
	☒	ANSI C63.10	11.11.3	Emission level measurement	
☐	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	
	☐	ANSI C63.10		11.12.2	Antenna-port conducted measurements
		☐	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
		☐	ANSI C63.10	11.12.2.4	Peak power measurement procedure
		☐	ANSI C63.10	11.12.2.5	Average power measurement procedures
		☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
		☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
		☐	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

5.5. EUT test Axis definition

Item	Emissions in non-restricted frequency bands			
Device Category	☐	Fixed point-to-point		
	☐	Emit multiple directional beams, simultaneously or sequentially		
	☒	Other cases		
Test mode	Mode 1~5			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 1		
				
	☒	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

5.6. Test Result

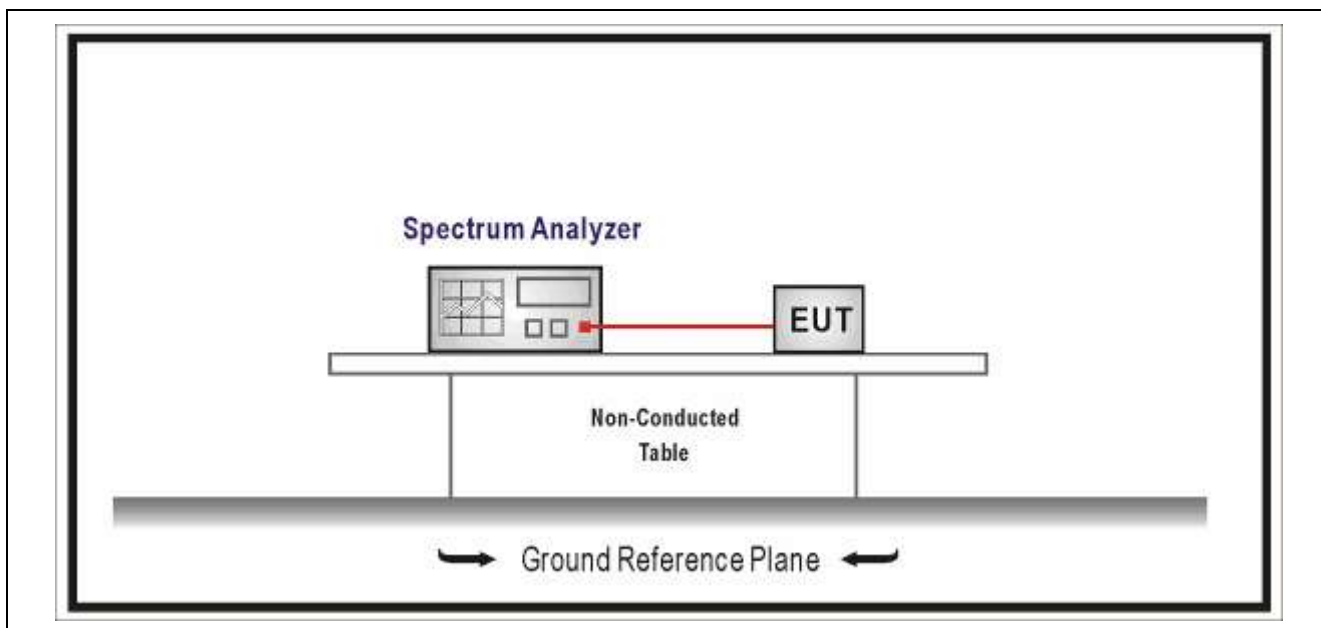
N/A

6. Band Edge

6.1. 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	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2020.09.02	2021.09.01
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

6.2. Test Setup



6.3. Limit

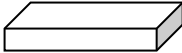
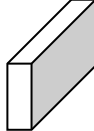
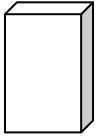
Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

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

6.4. Test Procedure

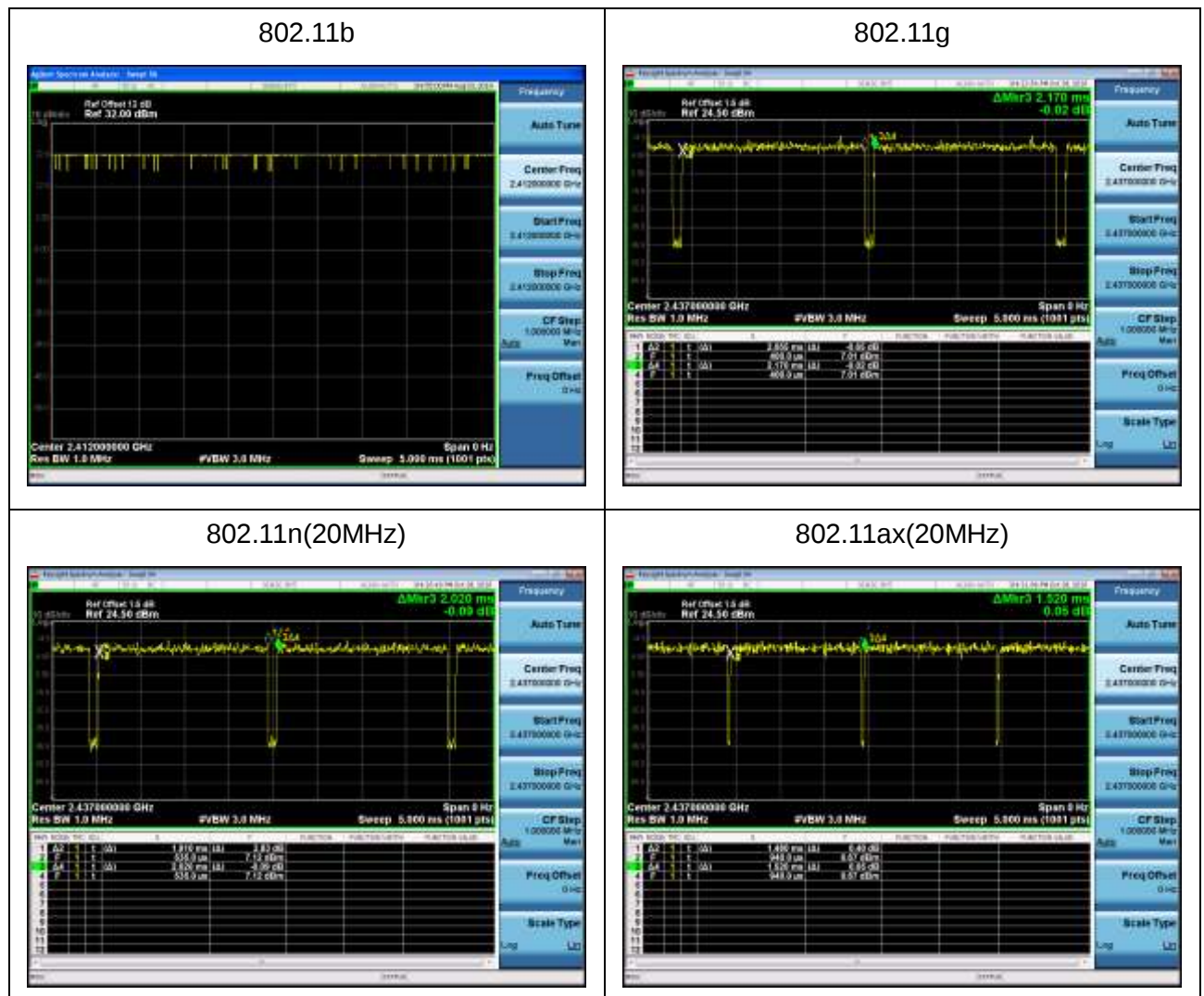
Test Method				
	References Rule		Chapter	Description
☒	ANSI C63.10		6.10	Band-edge testing
	☒	ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	☐	ANSI C63.10	6.10.6	Marker-delta method
☐	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☐	ANSI C63.10	11.12.1	Radiated emission measurements
	☐	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
	☒	ANSI C63.10	11.12.2	Antenna-port conducted measurements
	☐	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
		ANSI C63.10	11.12.2.4	Peak power measurement procedure
		ANSI C63.10	11.12.2.5	Average power measurement procedures
	☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
		ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
		ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

6.5. EUT test definition

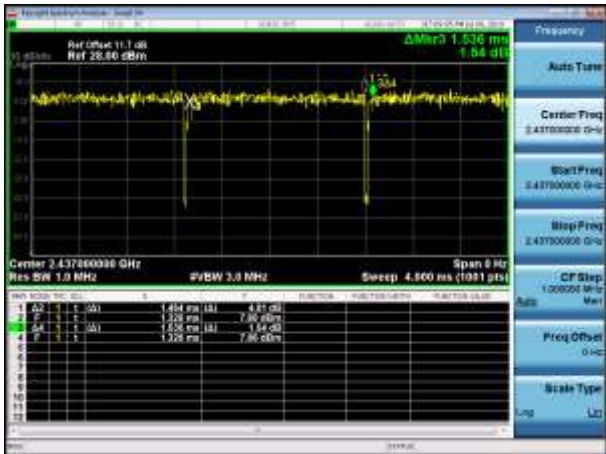
Item	Radiated Emission Band Edge			
Device Category	☐	Fixed point-to-point		
	☐	Emit multiple directional beams, simultaneously or sequentially		
	☒	Other cases		
Test mode	Mode 1~5			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

6.6. Duty Cycle

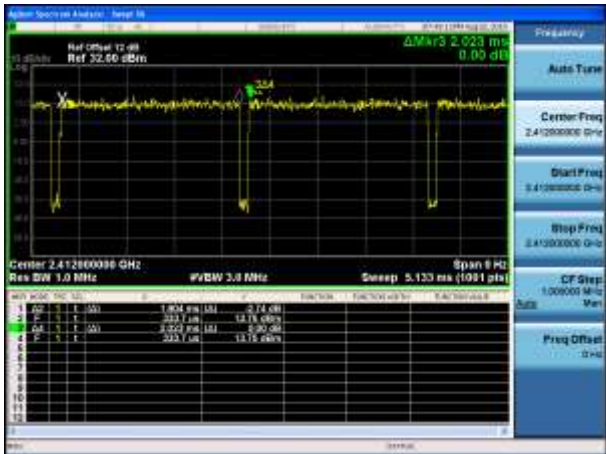
Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11b	N/A	N/A	10 Hz	N/A	100.00
802.11g	2.055	0.115	49 Hz	2.170	94.70
802.11n(20MHz)	1.910	0.11	52 Hz	2.020	94.55
802.11ax(20MHz)	1.480	0.04	68 Hz	1.520	97.37
802.11n(20MHz) with Beamforming	1.915	0.11	52 Hz	2.025	94.57
802.11ax(20MHz) with Beamforming	1.475	0.04	68 Hz	1.515	97.36



802.11n(20MHz) with Beamforming



802.11ax(20MHz) with Beamforming



6.7. Test Result

OMNI Antenna:

SISO PK Limit=74dBuV/m-95.2-5.5(Antenna Gain)=-26.70dBm

SISO AV Limit=54dBuV/m-95.2-5.5(Antenna Gain)=-46.70dBm

CDD PK Limit=74dBuV/m-95.2-10lg2(2Tx)-8.51(Directional Gain)=-32.72dBm

CDD AV Limit=54dBuV/m-95.2-10lg2(2Tx)-8.51(Directional Gain)=-52.72dBm

Beamforming PK Limit=74dBuV/m-95.2-10lg2(2Tx)-8.51(Directional Gain)=-32.72dBm

Beamforming AV Limit=54dBuV/m-95.2-10lg2(2Tx)-8.51(Directional Gain)=-52.72dBm

Sector Antenna:

SISO PK Limit=74dBuV/m-95.2-6.9(Antenna Gain)=-28.10dBm

SISO AV Limit=54dBuV/m-95.2-6.9(Antenna Gain)=-48.10dBm

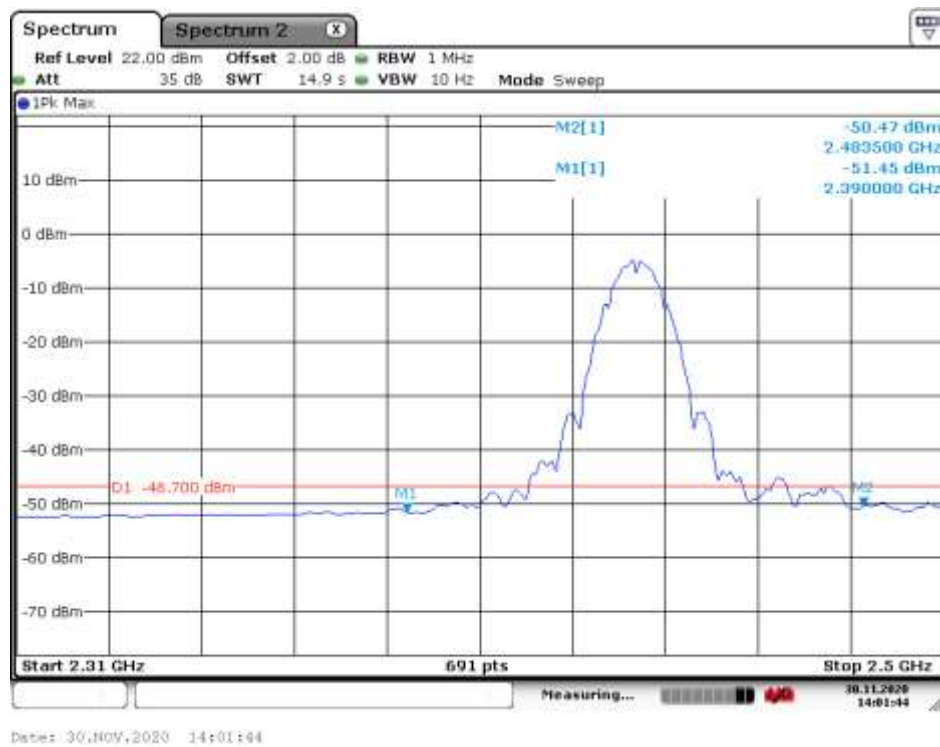
CDD PK Limit=74dBuV/m-95.2-10lg2(2Tx)-9.91(Directional Gain)=-34.12dBm

CDD AV Limit=54dBuV/m-95.2-10lg2(2Tx)-9.91(Directional Gain)=-54.12dBm

Beamforming PK Limit=74dBuV/m-95.2-10lg2(2Tx)-9.91(Directional Gain)=-34.12dBm

Beamforming AV Limit=54dBuV/m-95.2-10lg2(2Tx)-9.91(Directional Gain)=-54.12dBm

AV Limit-SISO:**2412MHz by 802.11b:****2417MHz by 802.11b:**

2437MHz by 802.11b:**2457MHz by 802.11b:**

2462MHz by 802.11b:

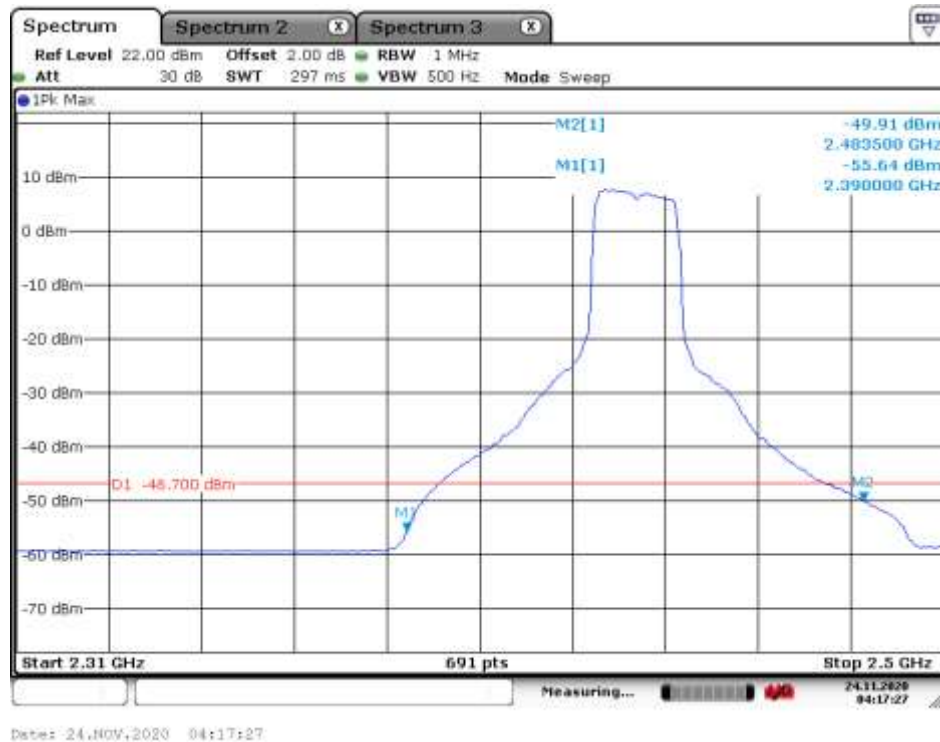
Date: 30.NOV.2020 14:18:10

2412MHz by 802.11g:



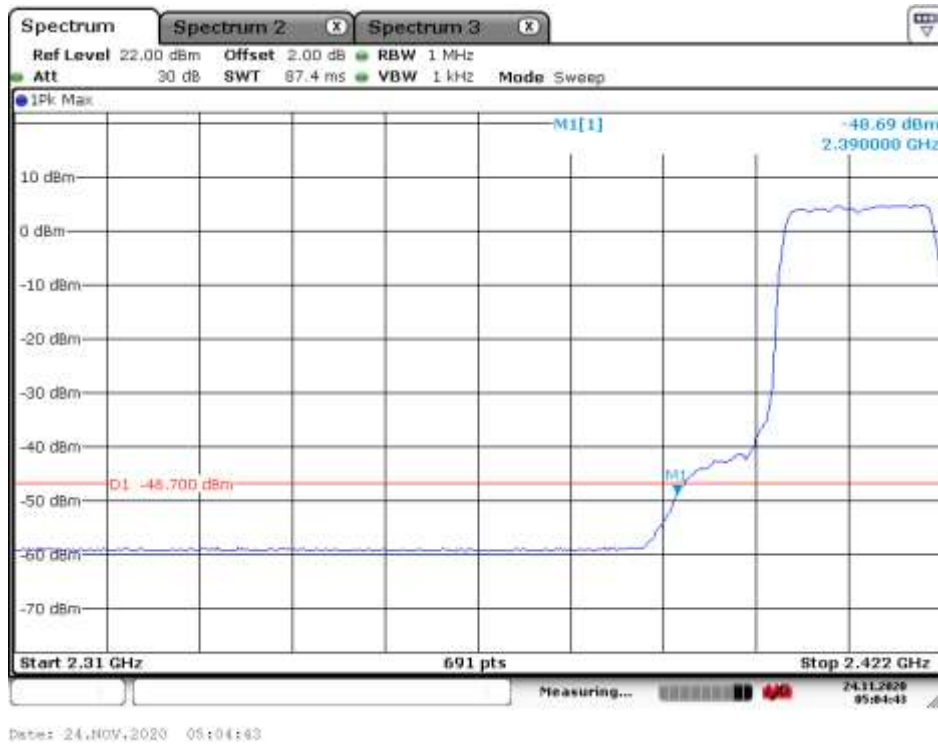
2417MHz by 802.11g:

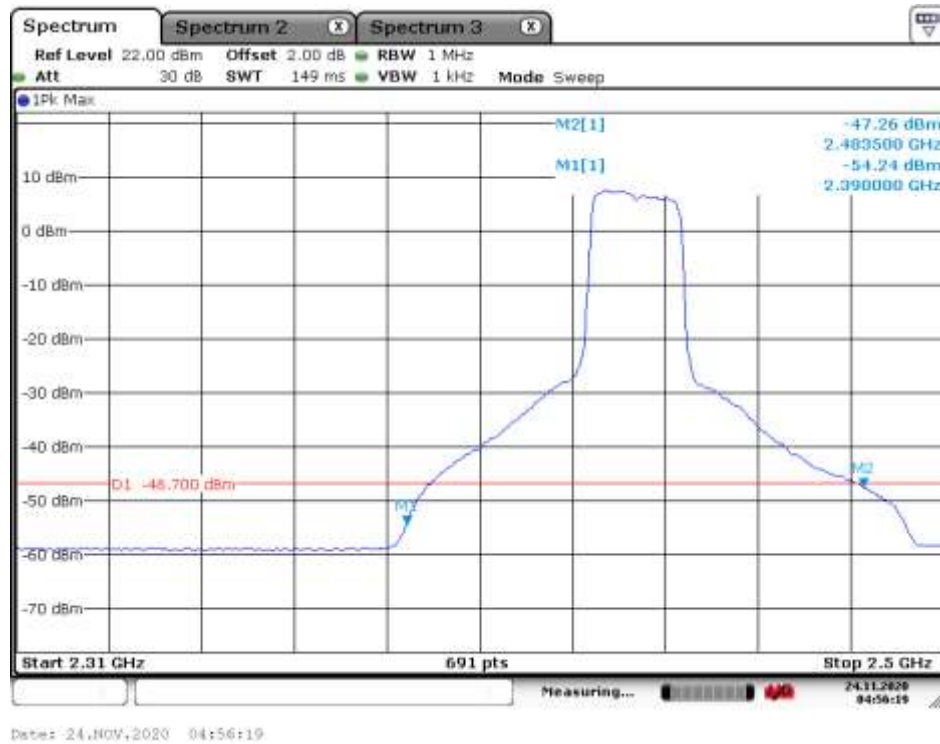


2437MHz by 802.11g:**2457MHz by 802.11g:**

2462MHz by 802.11g:

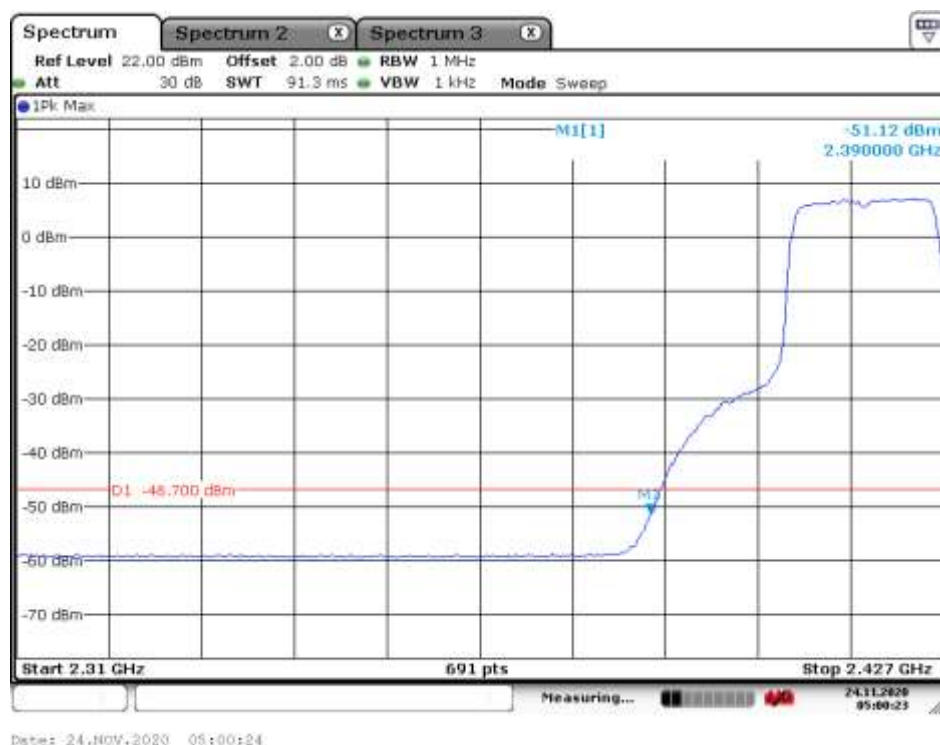
Date: 24.11.2020 04:29:19

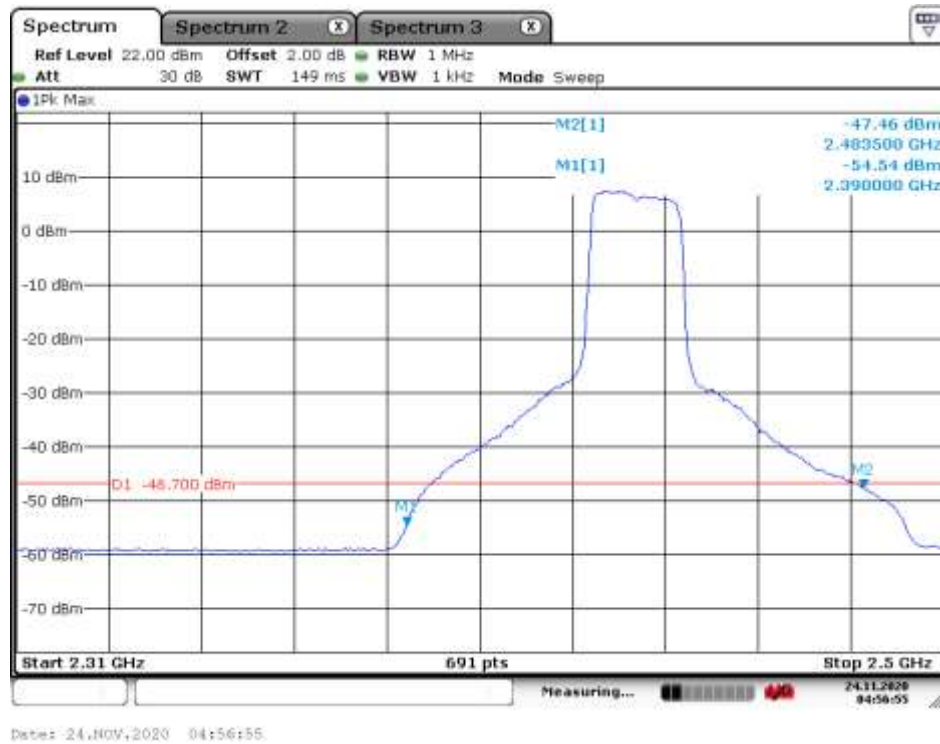
2412MHz by 802.11n(20MHz):**2417MHz by 802.11n(20MHz):**

2437MHz by 802.11n(20MHz):**2457MHz by 802.11n(20MHz):**

2462MHz by 802.11n(20MHz):

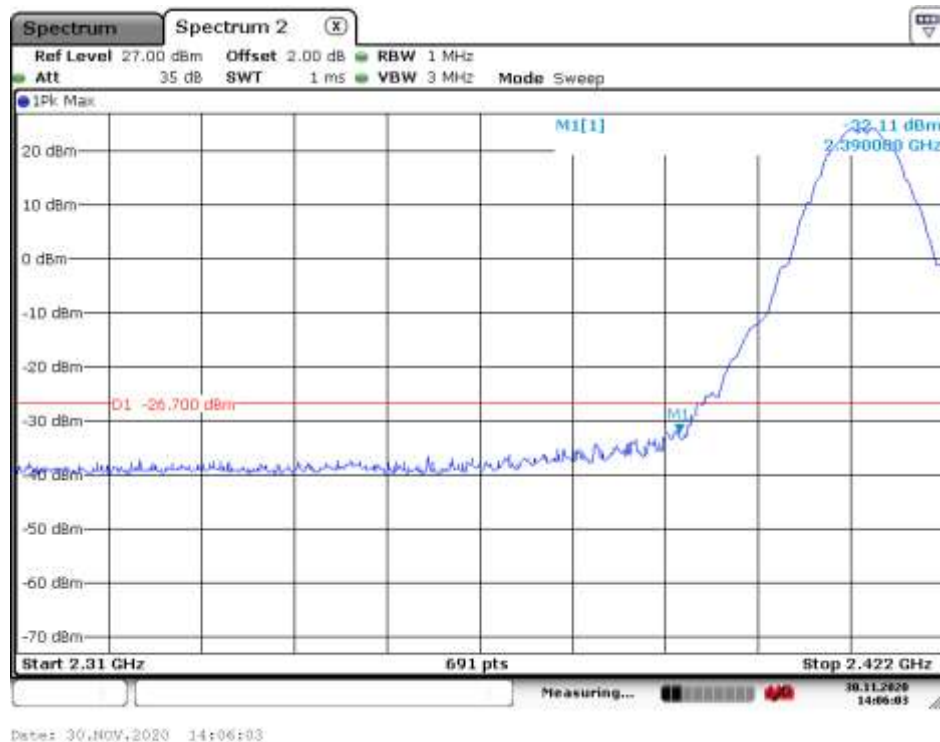
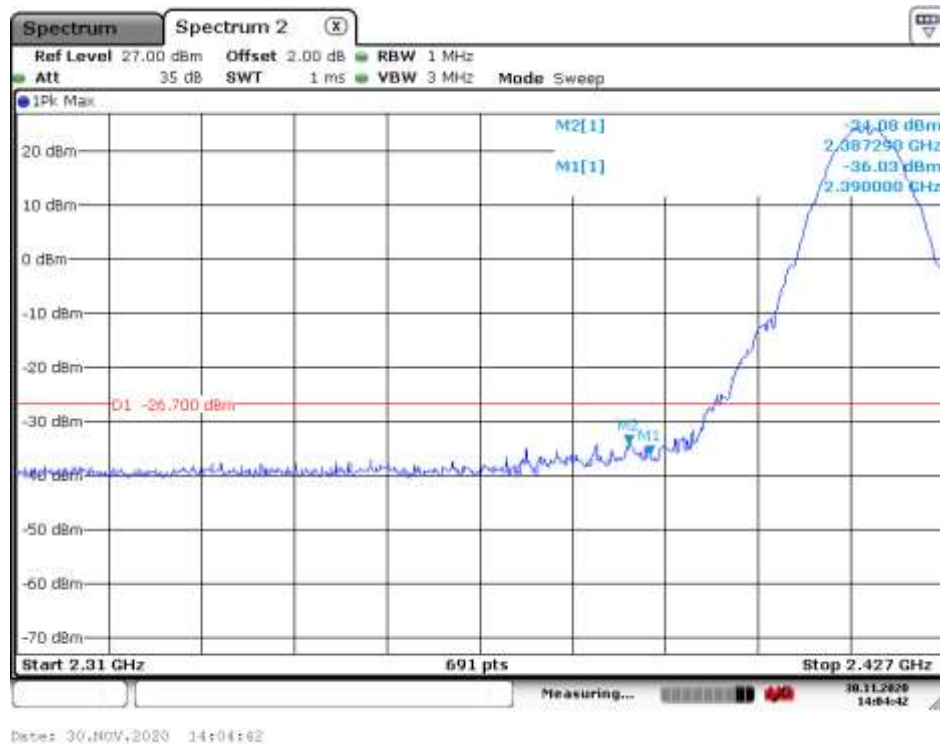
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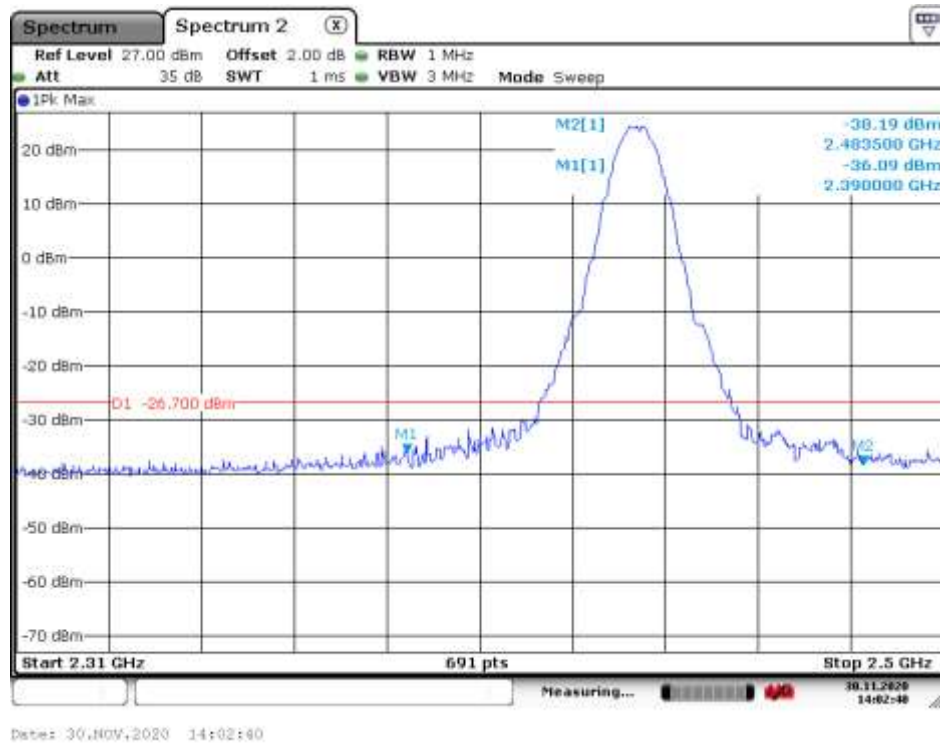
2412MHz by 802.11ax(20MHz):**2417MHz by 802.11ax(20MHz):**

2437MHz by 802.11ax(20MHz):**2457MHz by 802.11ax(20MHz):**

2462MHz by 802.11ax(20MHz):

Date: 24.11.2020 04:36:40

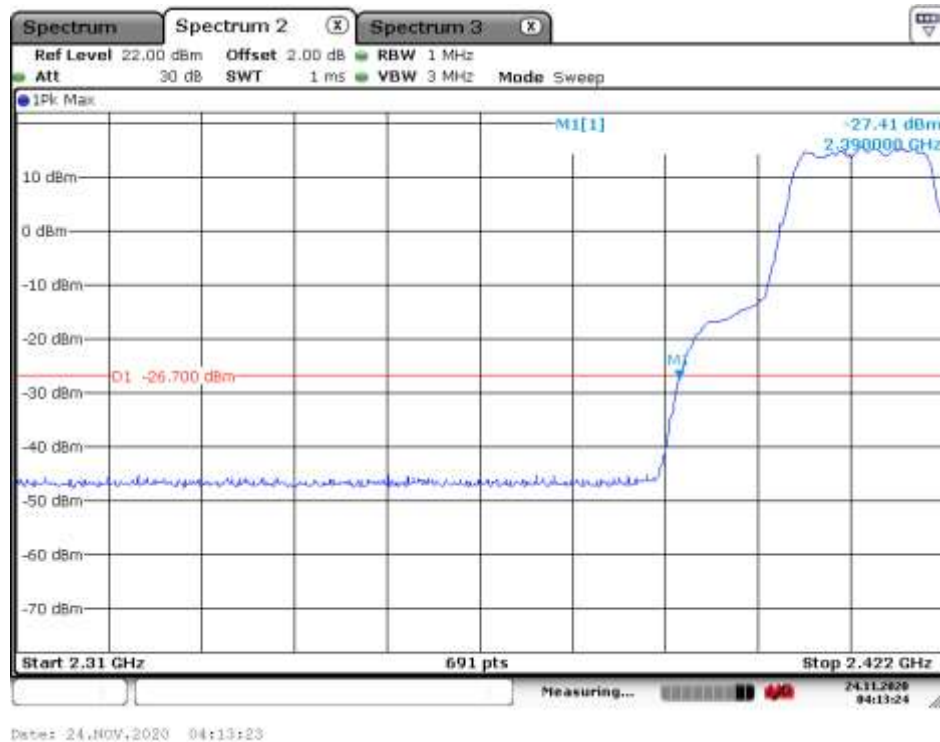
PK Limit-SISO:**2412MHz by 802.11b:****2417MHz by 802.11b:**

2437MHz by 802.11b:**2457MHz by 802.11b:**

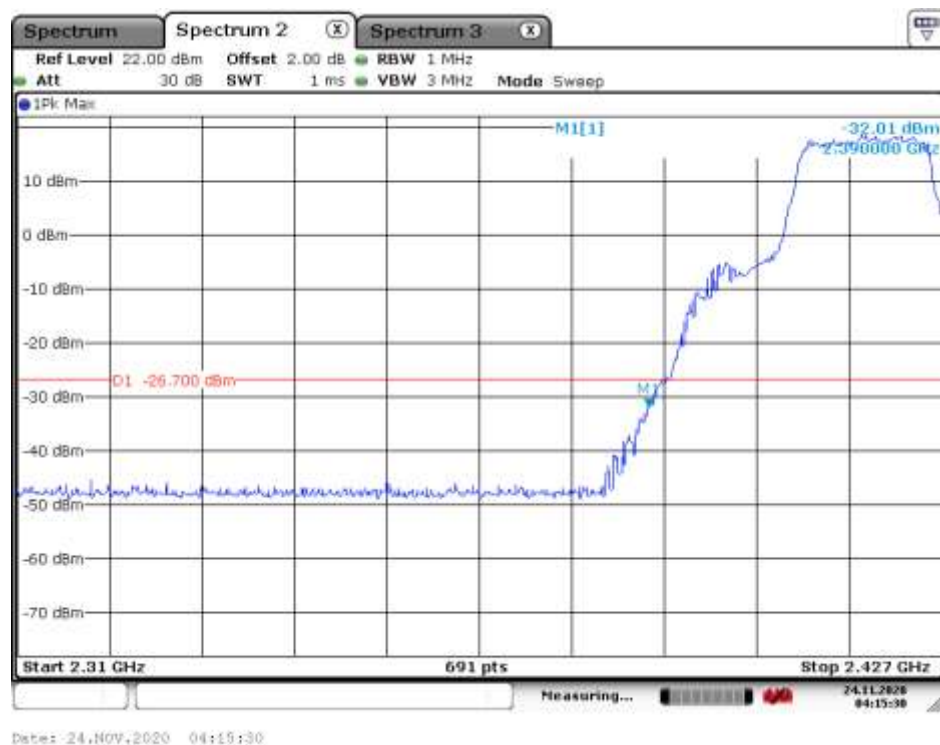
2462MHz by 802.11b:

Date: 30.11.2020 14:18:43

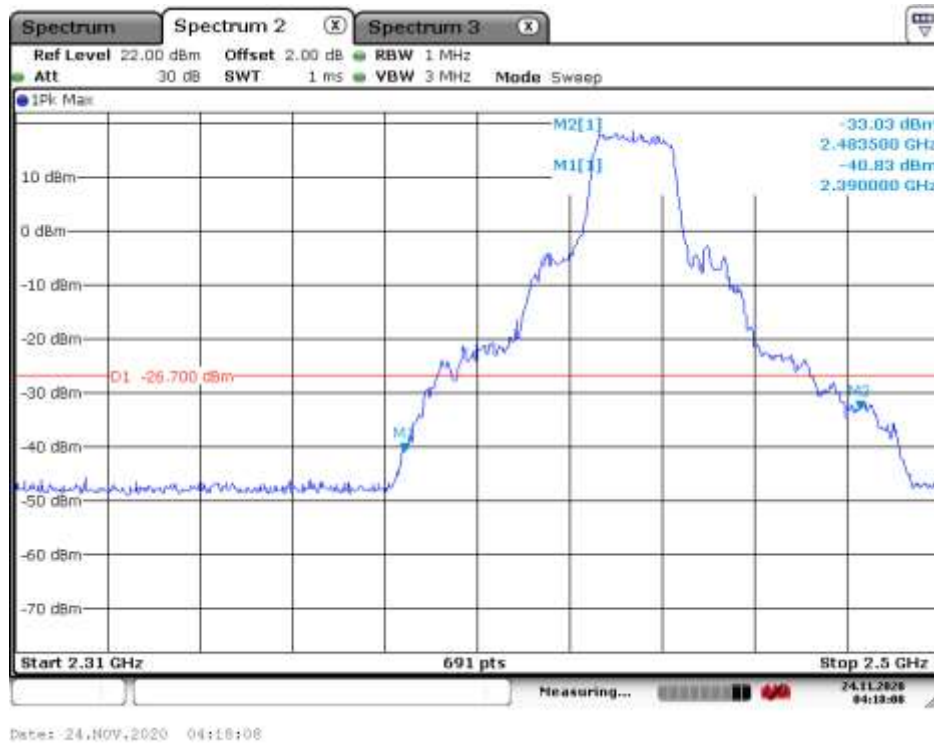
2412MHz by 802.11g:



2417MHz by 802.11g:



2437MHz by 802.11g:

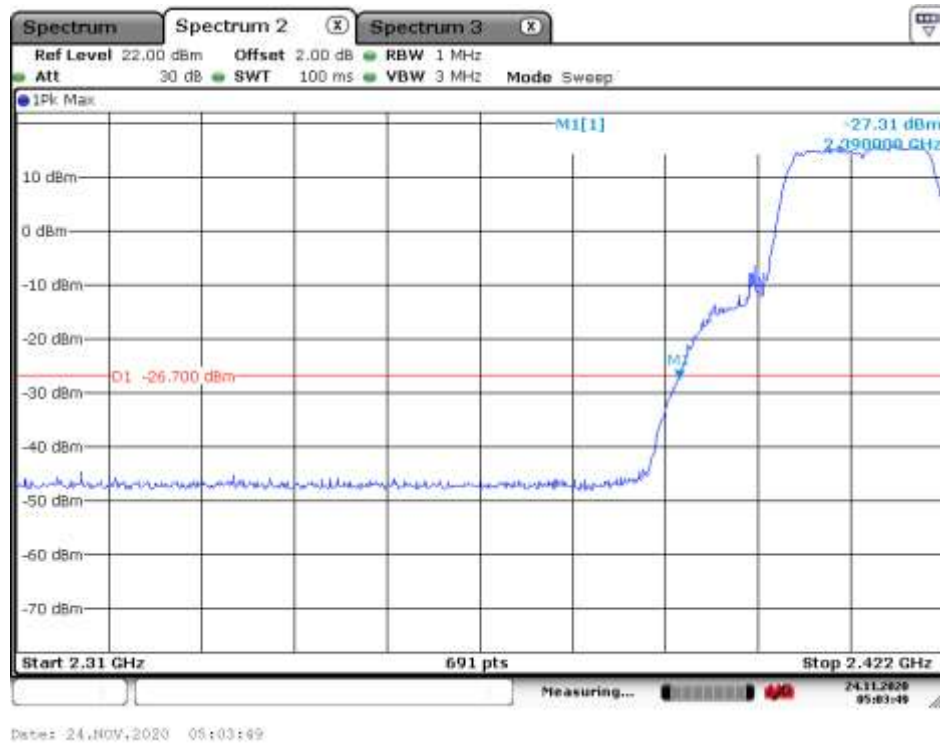
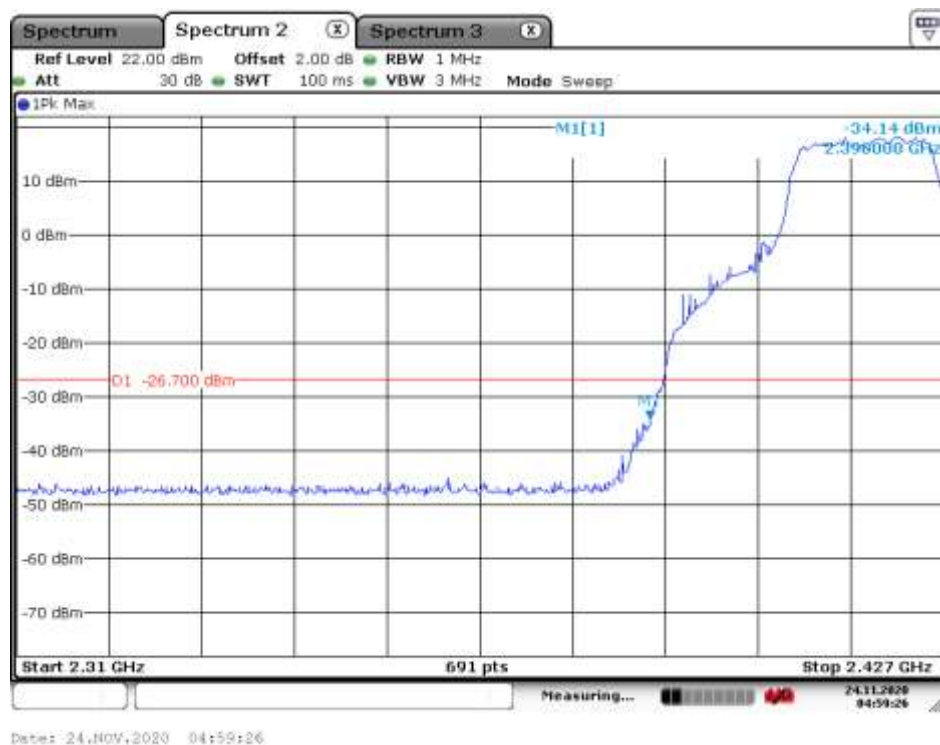


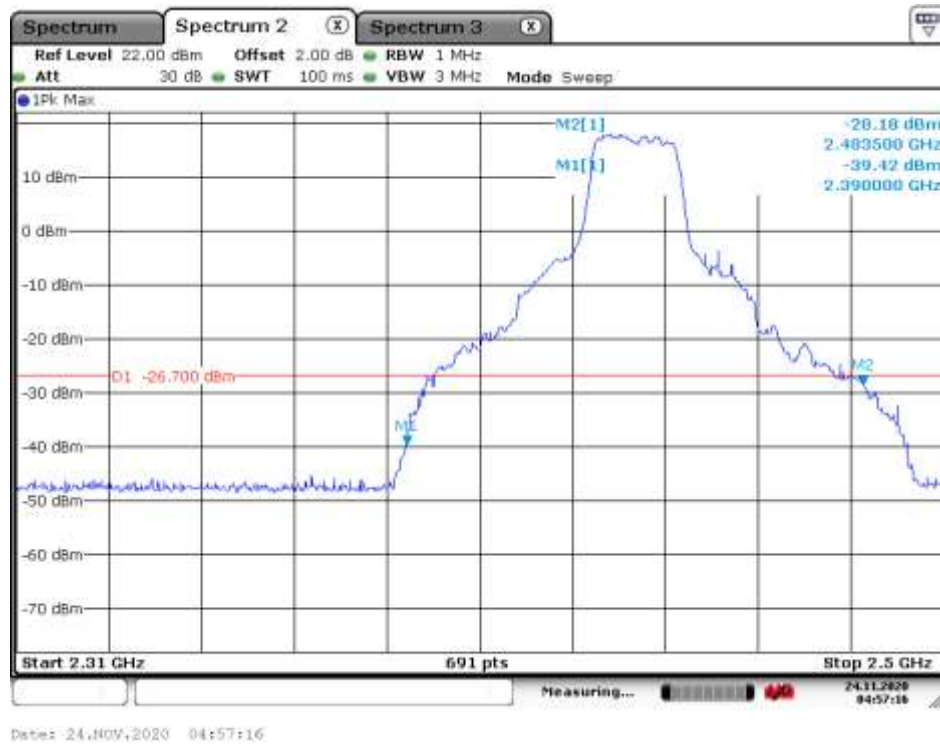
2457MHz by 802.11g:



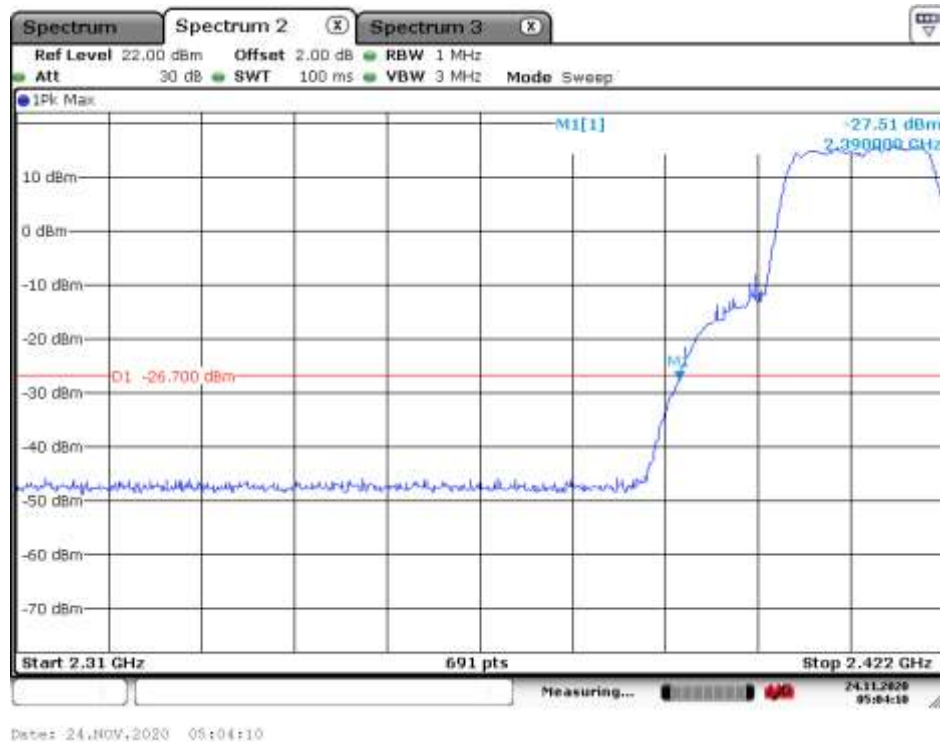
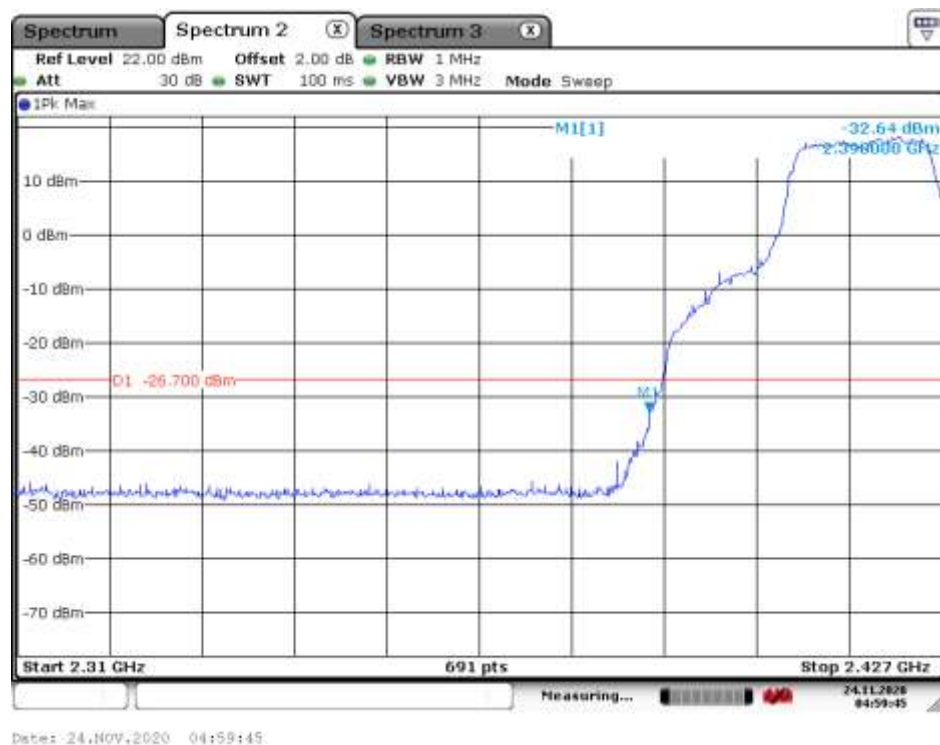
2462MHz by 802.11g:



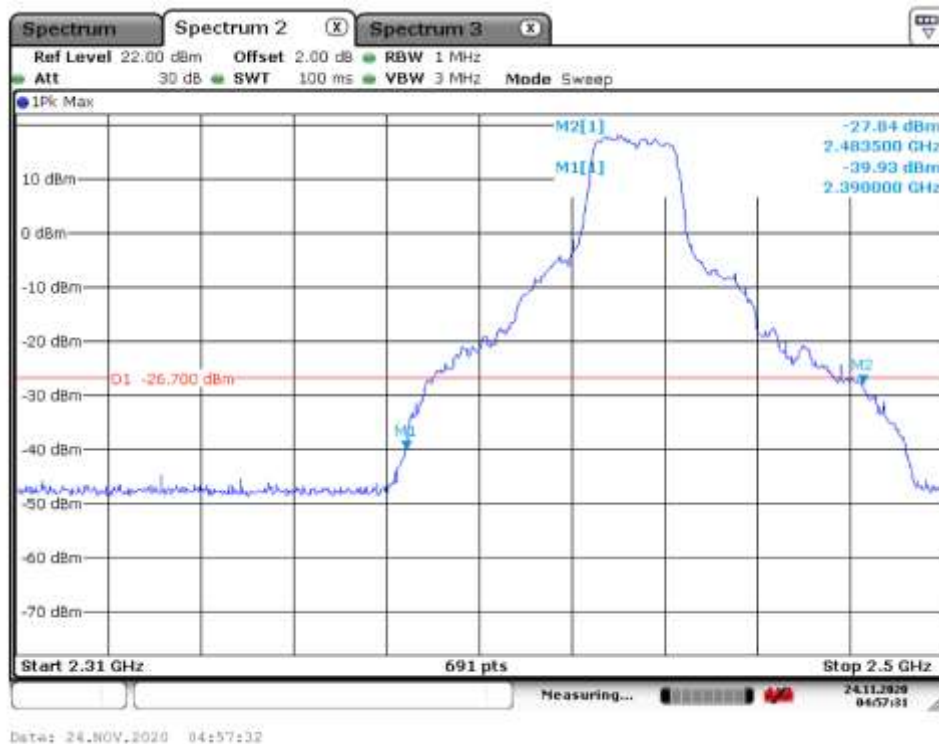
2412MHz by 802.11n(20MHz):**2417MHz by 802.11n(20MHz):**

2437MHz by 802.11n(20MHz):**2457MHz by 802.11n(20MHz):**

2462MHz by 802.11n(20MHz):

2412MHz by 802.11ax(20MHz):**2417MHz by 802.11ax(20MHz):**

2437MHz by 802.11ax(20MHz):



2457MHz by 802.11ax(20MHz):



2462MHz by 802.11ax(20MHz):

AV Limit-CDD:**2412MHz by 802.11b:****2417MHz by 802.11b:**

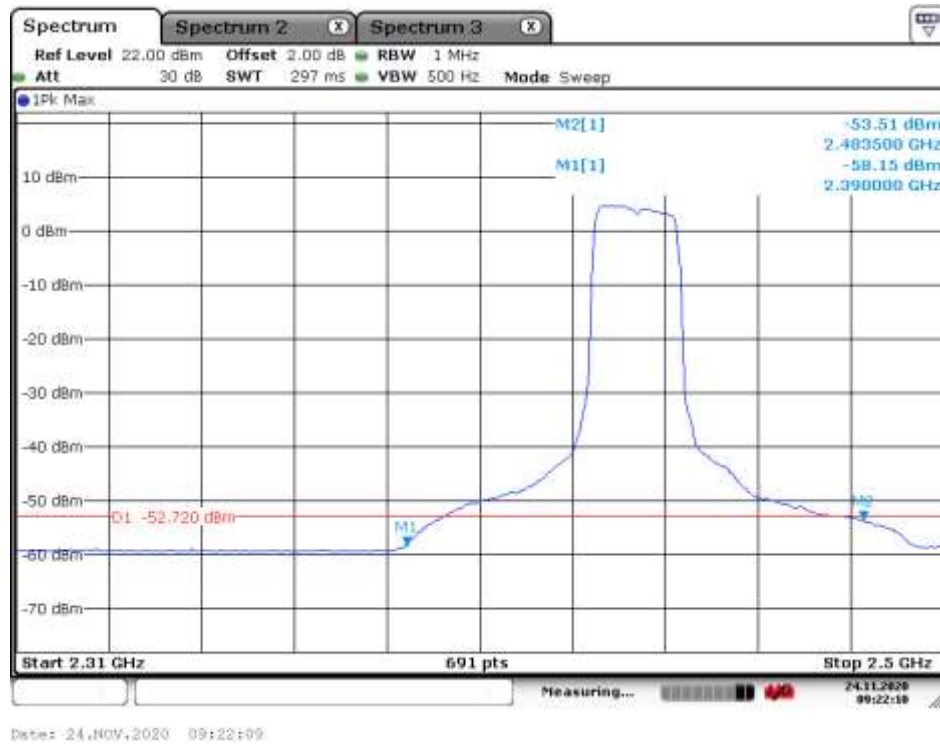
2437MHz by 802.11b:**2457MHz by 802.11b:**

2462MHz by 802.11b:

Date: 30.NOV.2020 14:20:32

2412MHz by 802.11g:**2417MHz by 802.11g:**

2437MHz by 802.11g:



2457MHz by 802.11g:

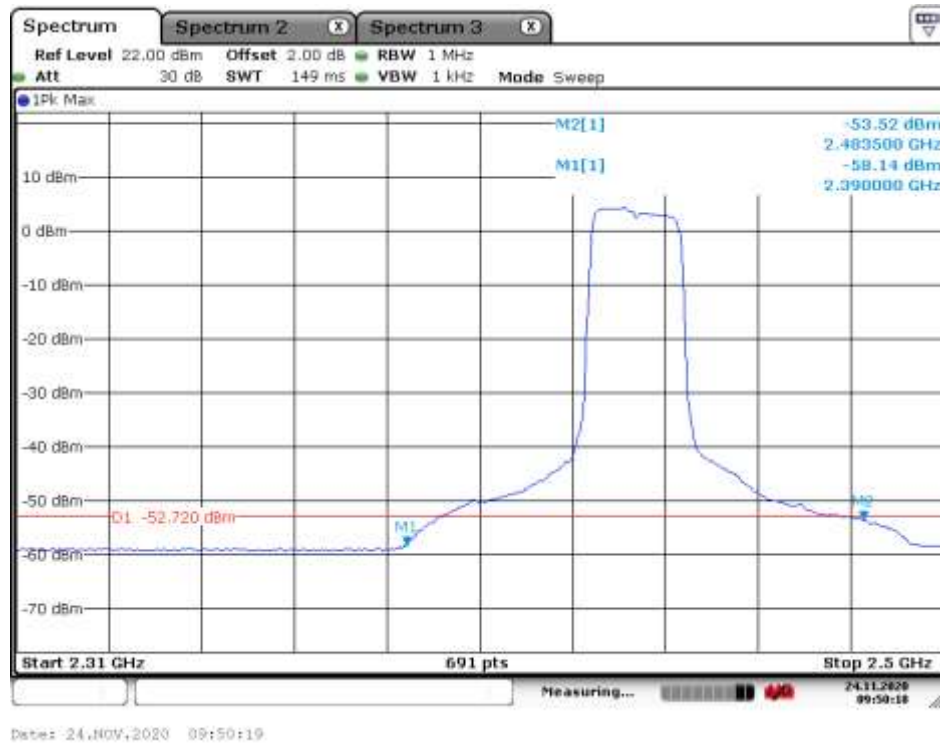


2462MHz by 802.11g:

Date: 24.11.2020 10:11:50

2412MHz by 802.11n(20MHz):**2417MHz by 802.11n(20MHz):**

2437MHz by 802.11n(20MHz):



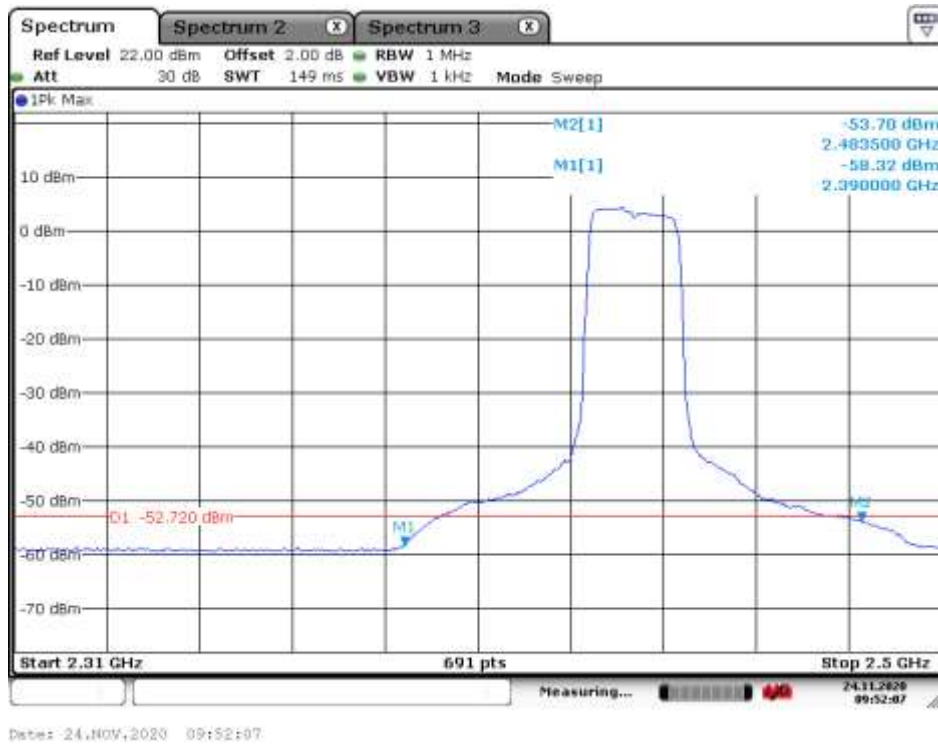
2457MHz by 802.11n(20MHz):



2462MHz by 802.11n(20MHz):

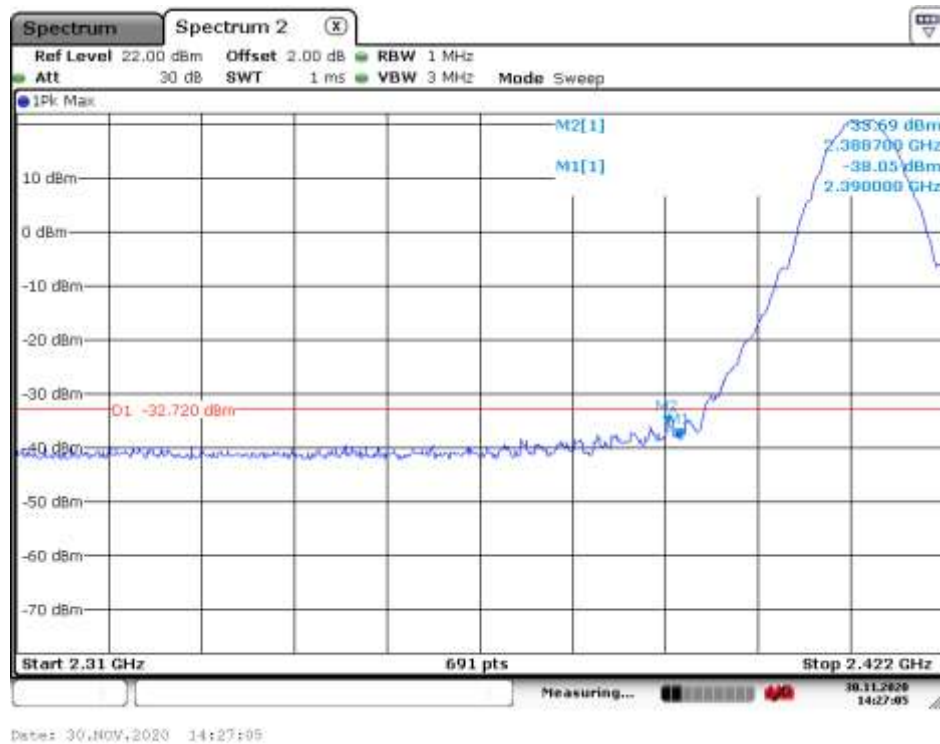
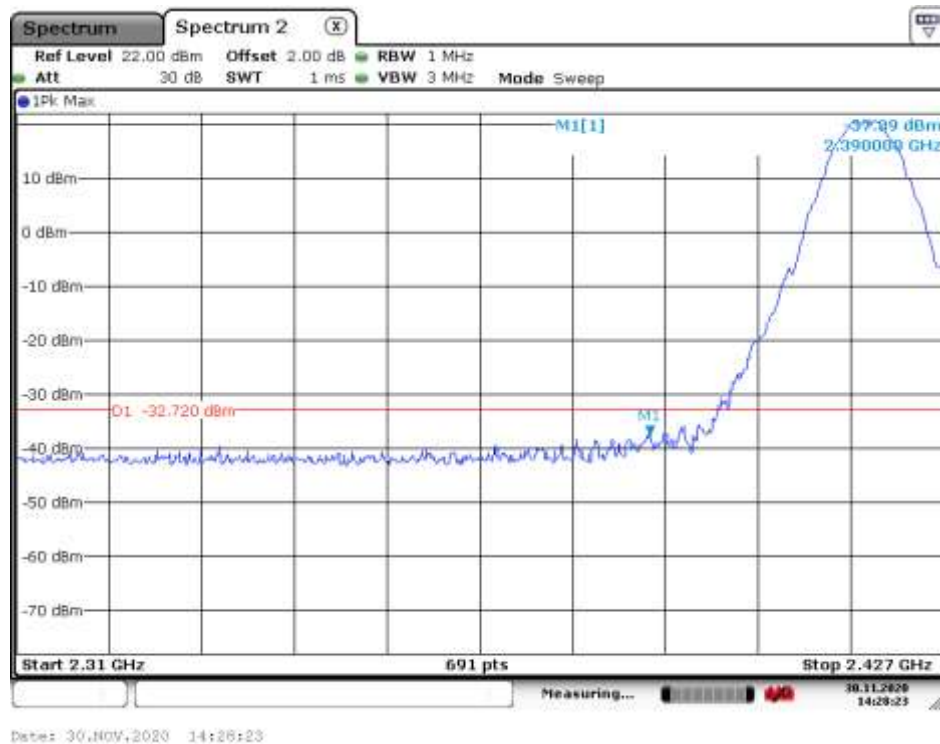
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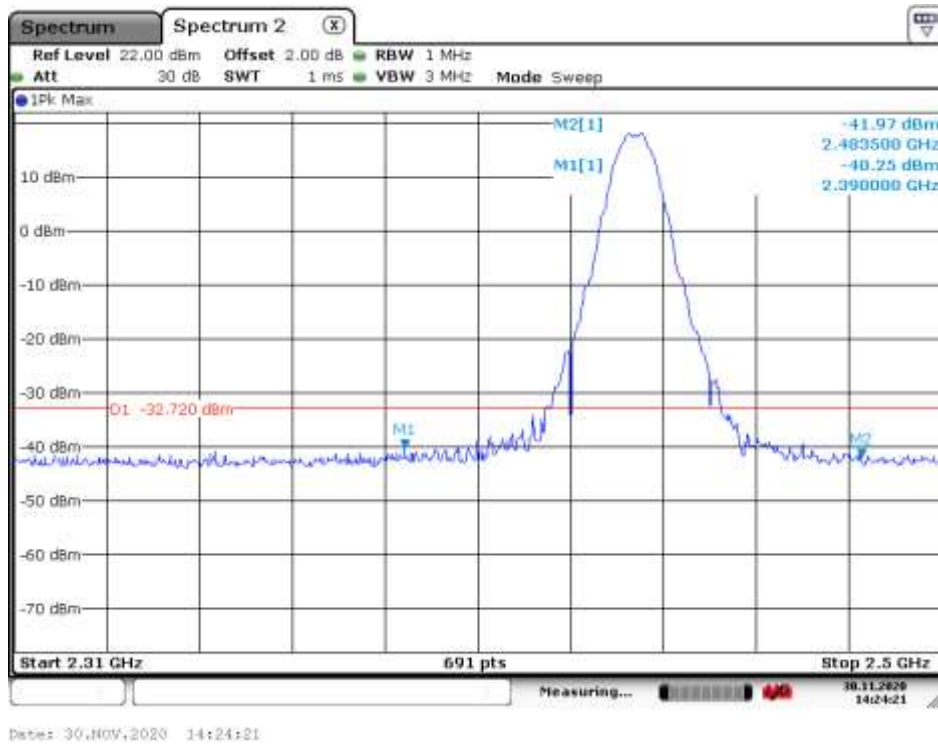
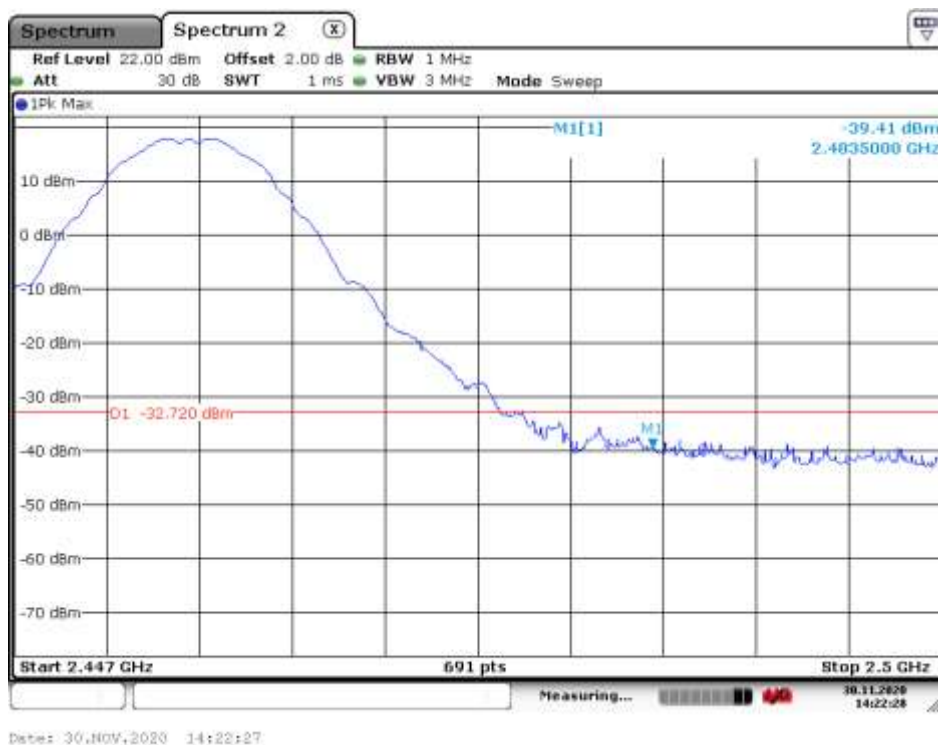
2412MHz by 802.11ax(20MHz):**2417MHz by 802.11ax(20MHz):**

2437MHz by 802.11ax(20MHz):**2457MHz by 802.11ax(20MHz):**

2462MHz by 802.11ax(20MHz):

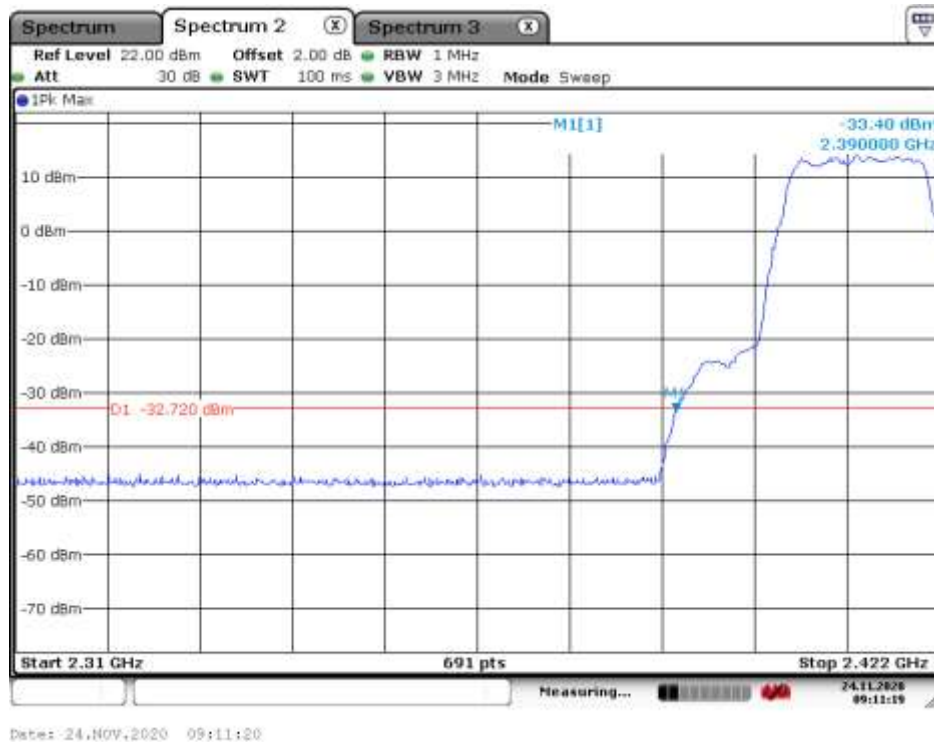
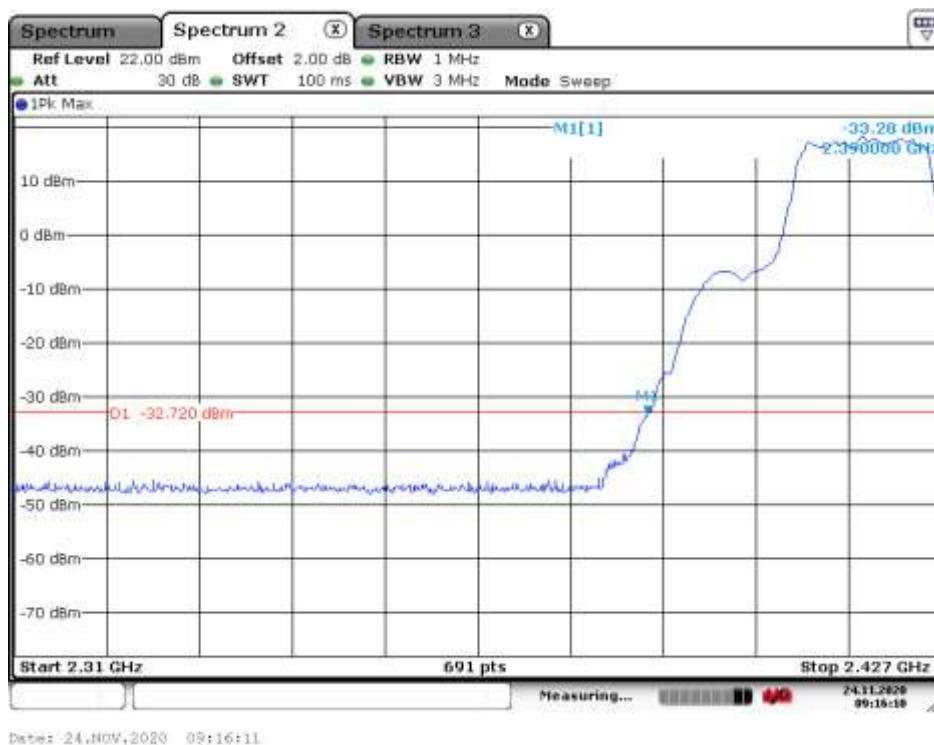
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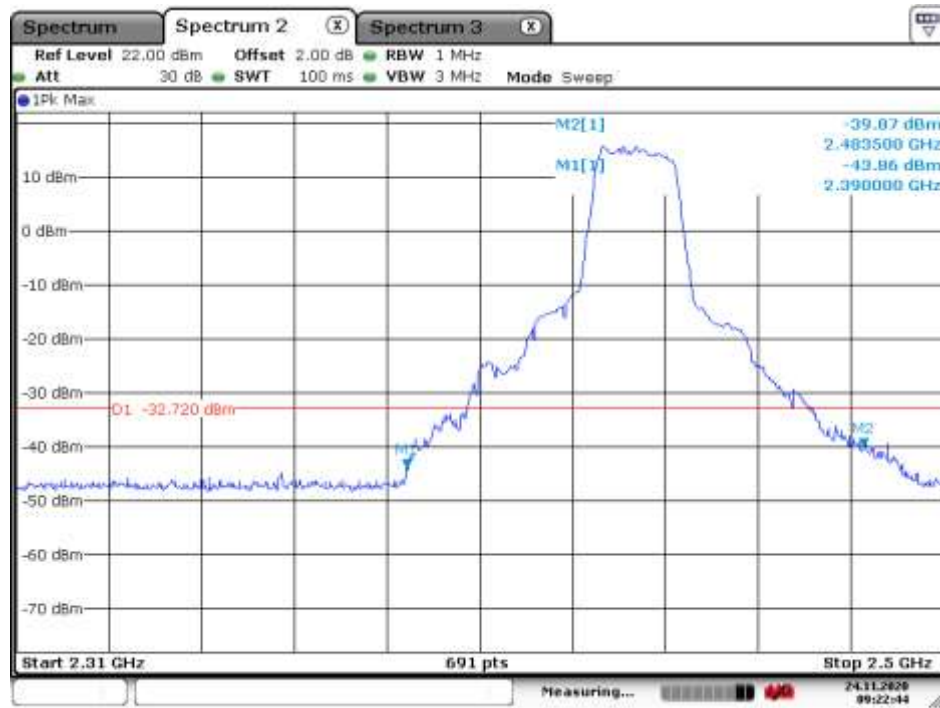
PK Limit-CDD:**2412MHz by 802.11b:****2417MHz by 802.11b:**

2437MHz by 802.11b:**2457MHz by 802.11b:**

2462MHz by 802.11b:

Date: 30.NOV.2020 14:21:10

2412MHz by 802.11g:**2417MHz by 802.11g:**

2437MHz by 802.11g:

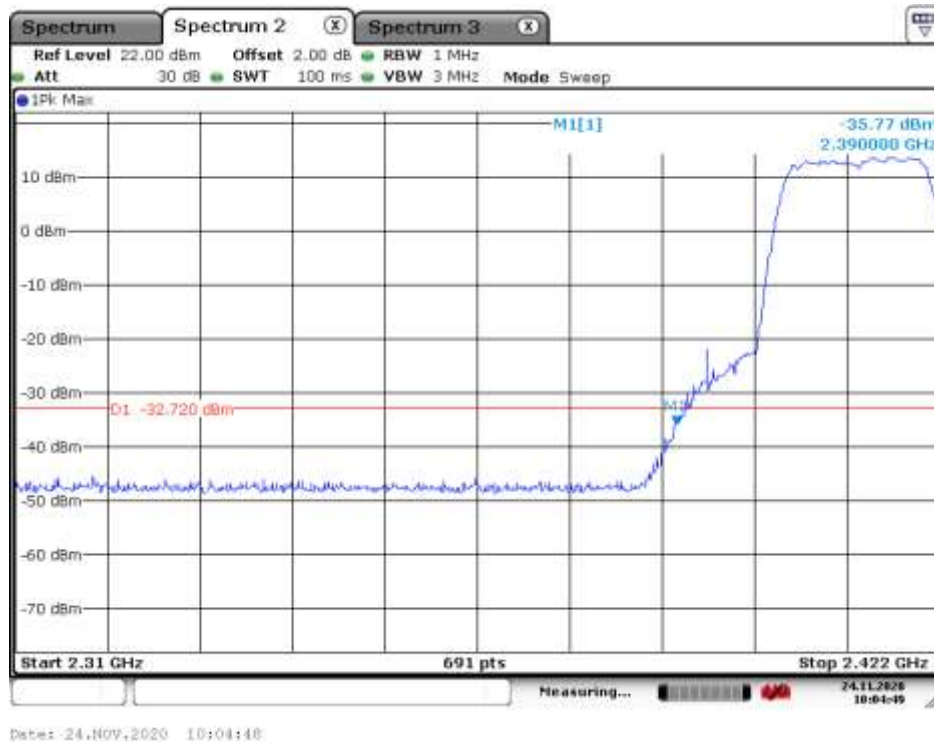
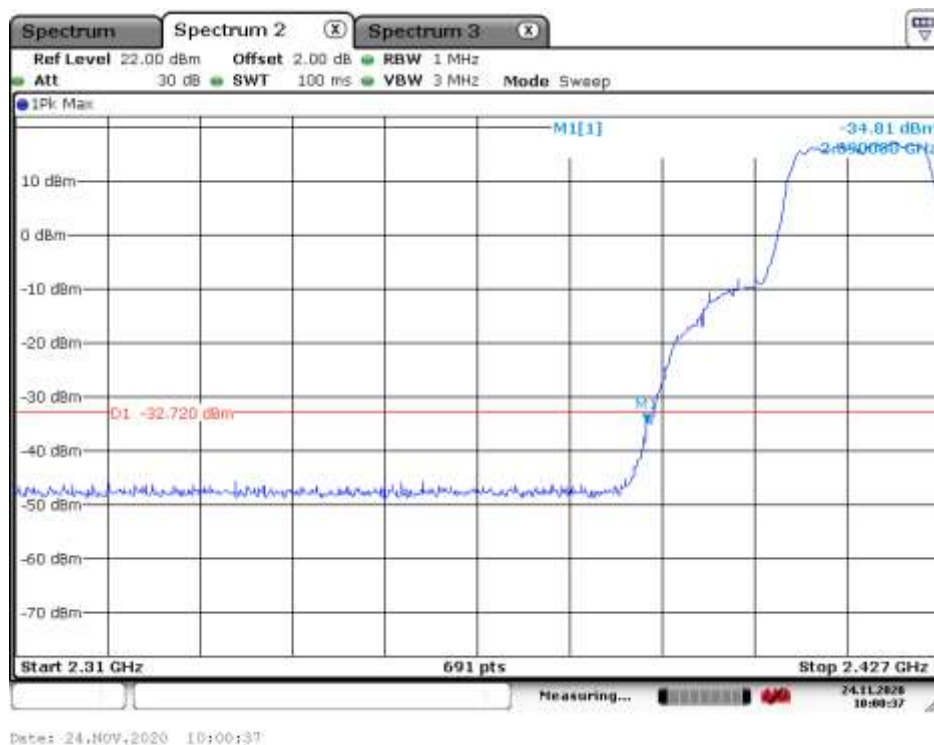
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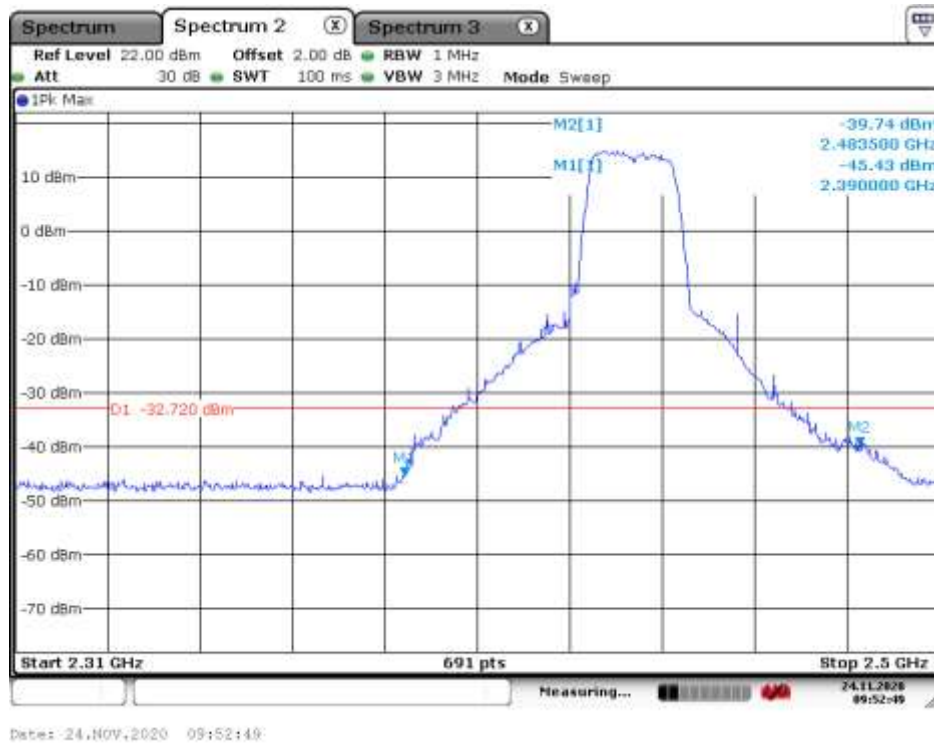
2457MHz by 802.11g:

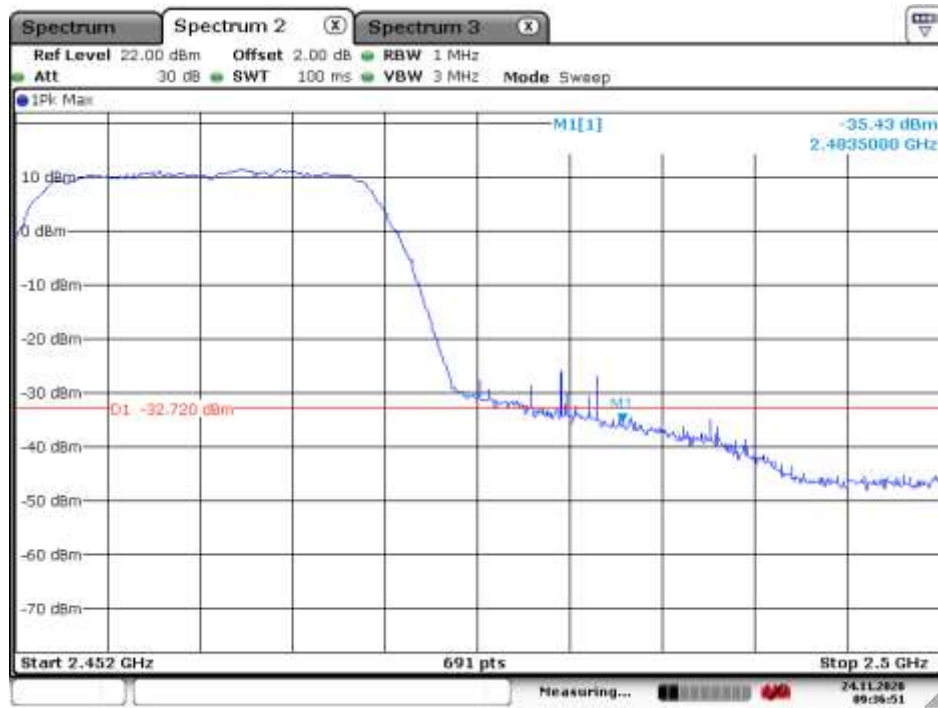
Date: 24.NOV.2020 10:09:36

2462MHz by 802.11g:

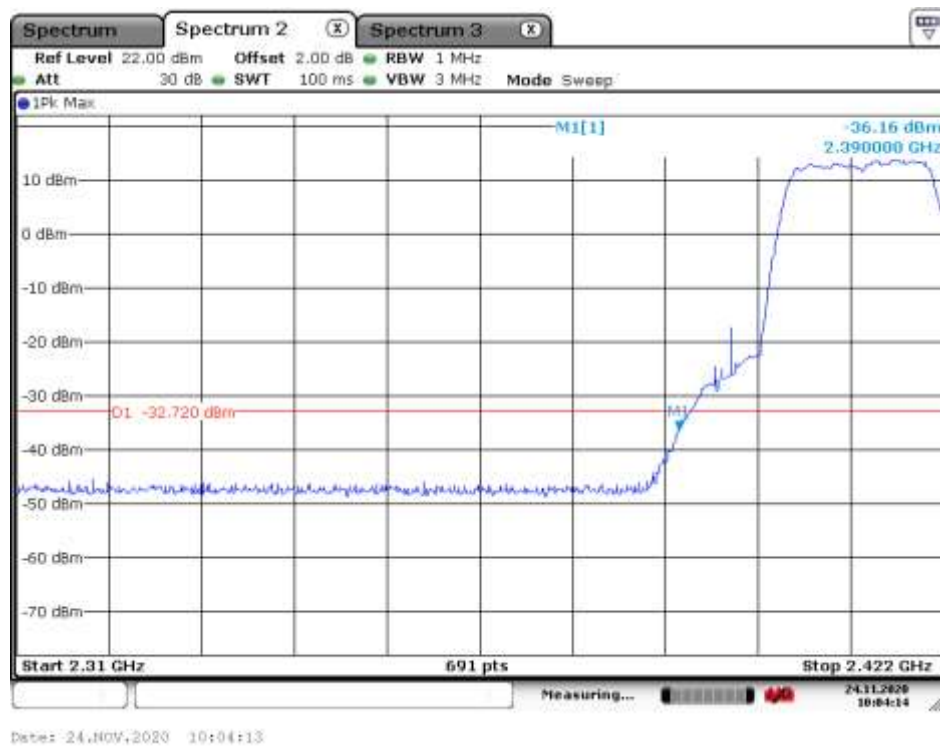
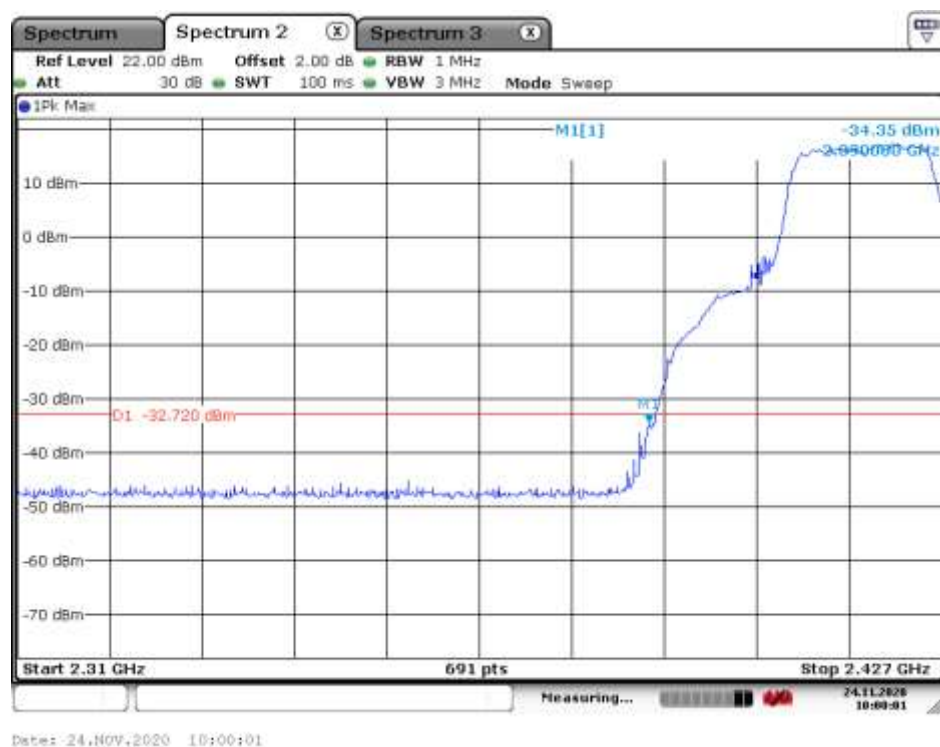
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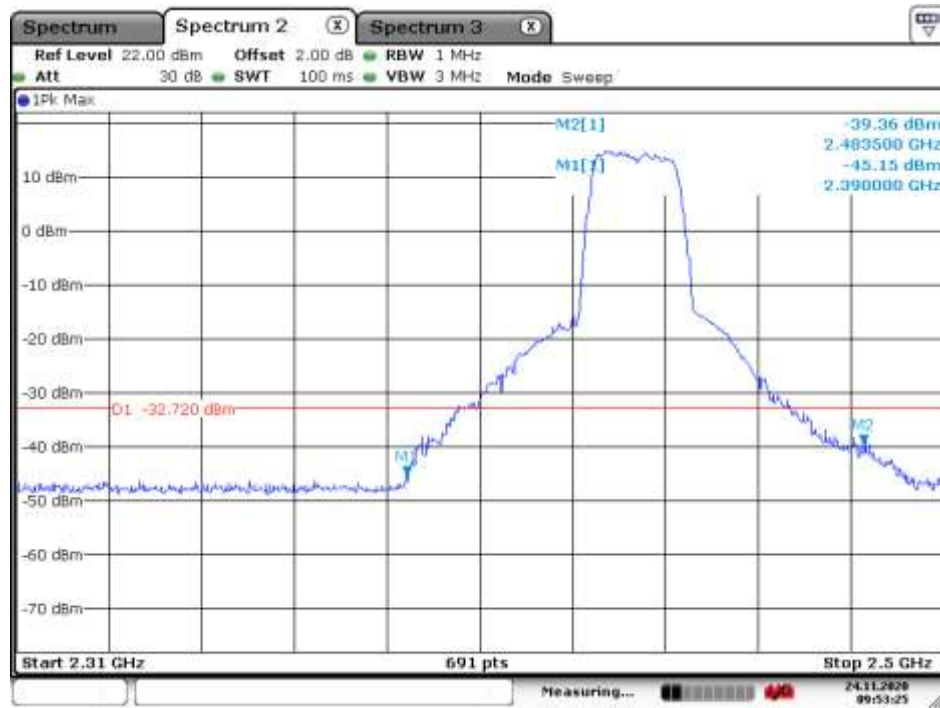
2412MHz by 802.11n(20MHz):**2417MHz by 802.11n(20MHz):**

2437MHz by 802.11n(20MHz):**2457MHz by 802.11n(20MHz):**

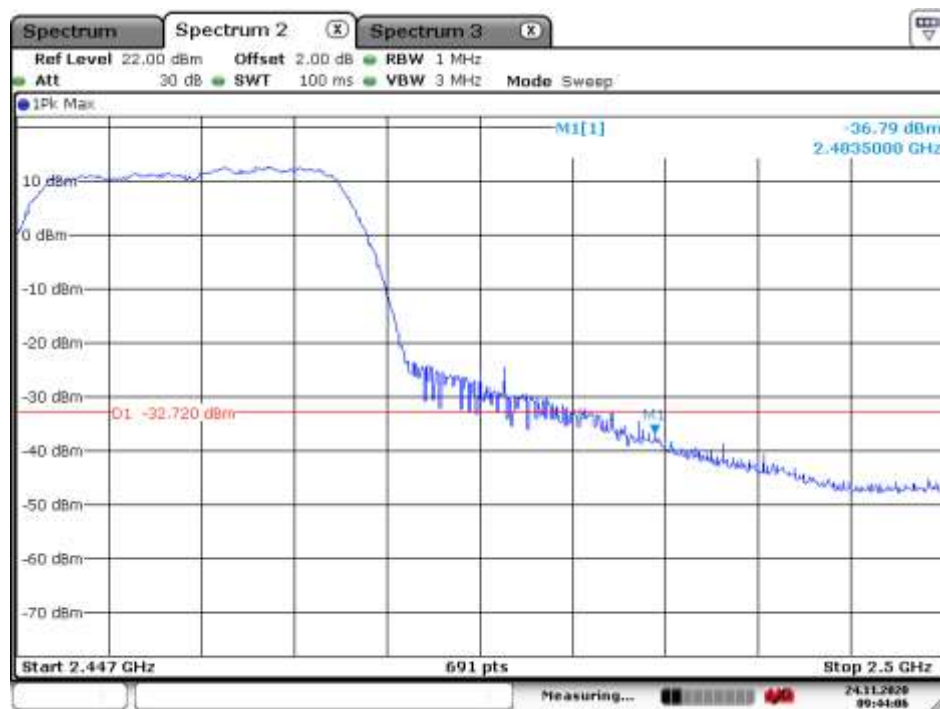
2462MHz by 802.11n(20MHz):

Date: 24.NOV.2020 09:36:51

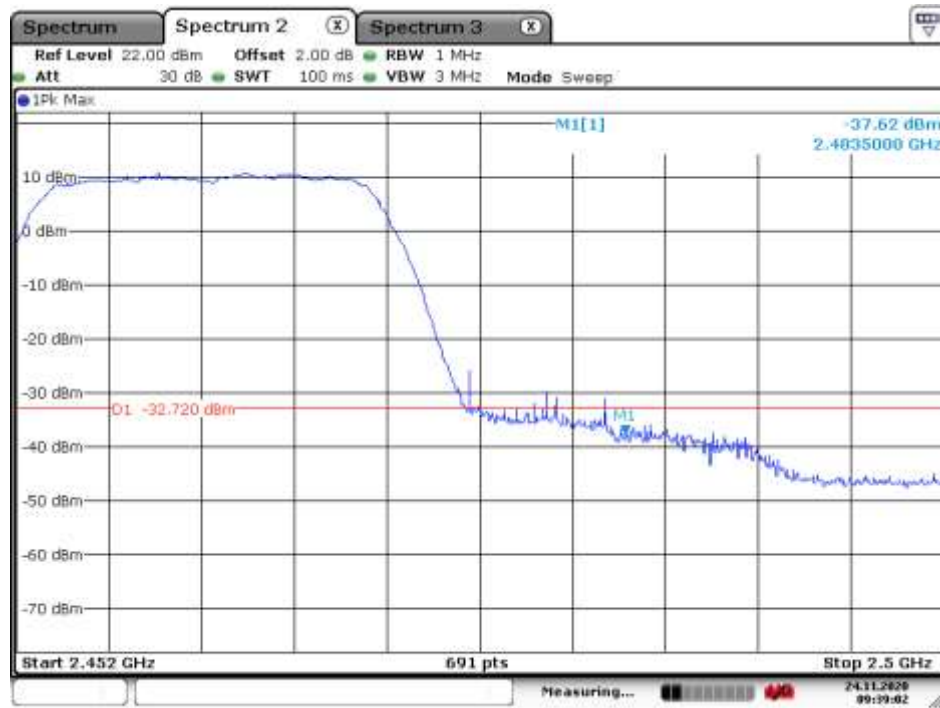
2412MHz by 802.11ax(20MHz):**2417MHz by 802.11ax(20MHz):**

2437MHz by 802.11ax(20MHz):

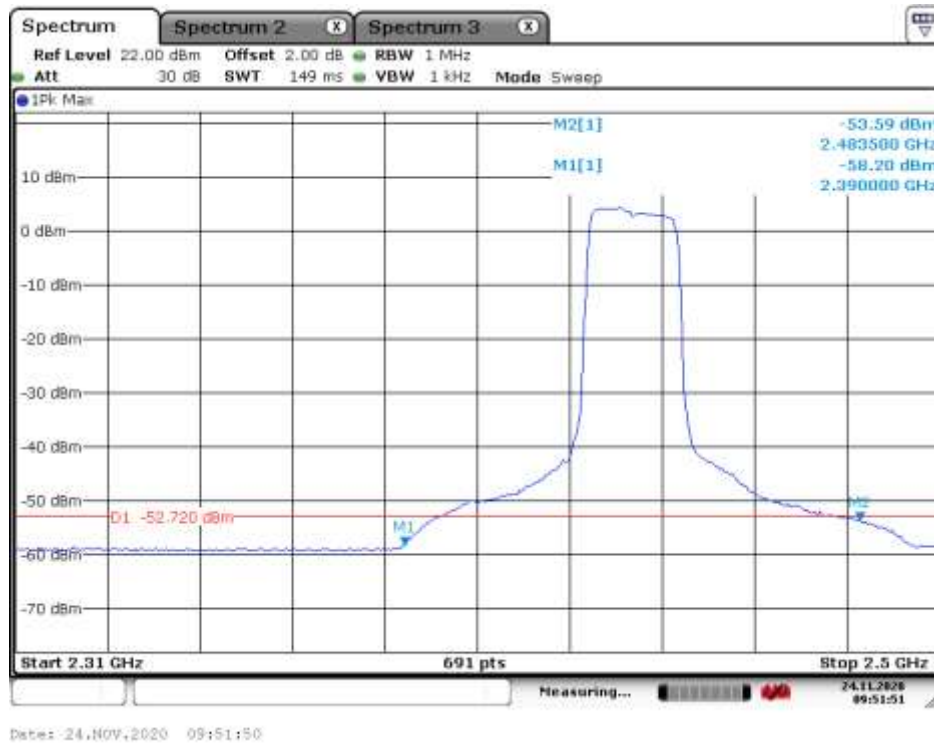
Date: 24.NOV.2020 09:53:25

2457MHz by 802.11ax(20MHz):

Date: 24.NOV.2020 09:54:07

2462MHz by 802.11ax(20MHz):

AV Limit-Beamforming:**2412MHz by 802.11n(20MHz):****2417MHz by 802.11n(20MHz):**

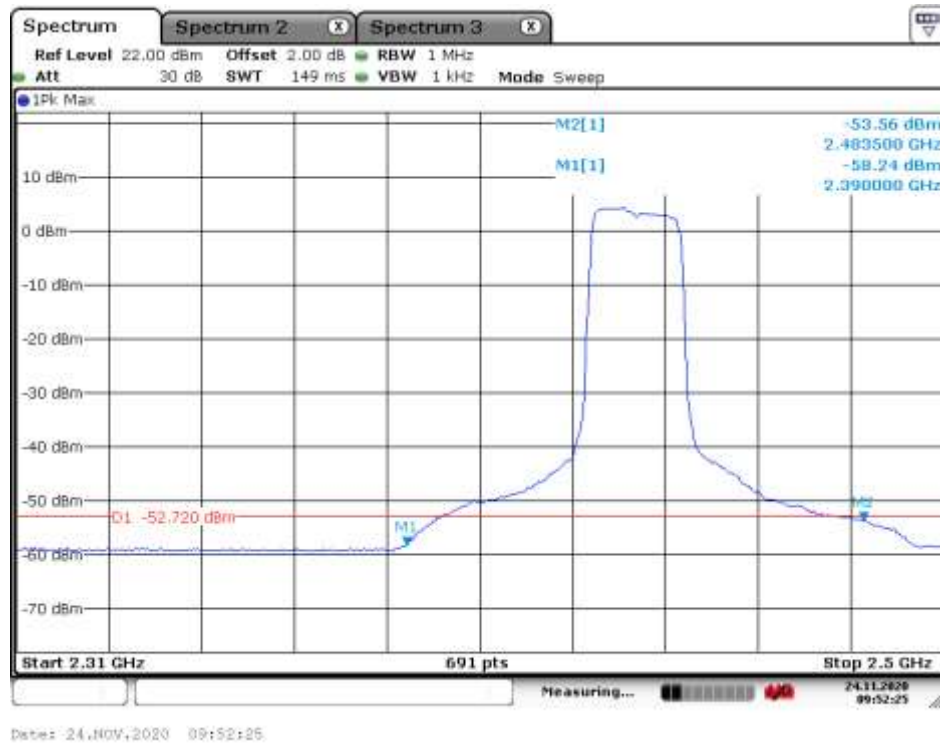
2437MHz by 802.11n(20MHz):**2457MHz by 802.11n(20MHz):**

2462MHz by 802.11n(20MHz):

Date: 24.NOV.2020 09:32:49

2412MHz by 802.11ax(20MHz):**2417MHz by 802.11ax(20MHz):**

2437MHz by 802.11ax(20MHz):

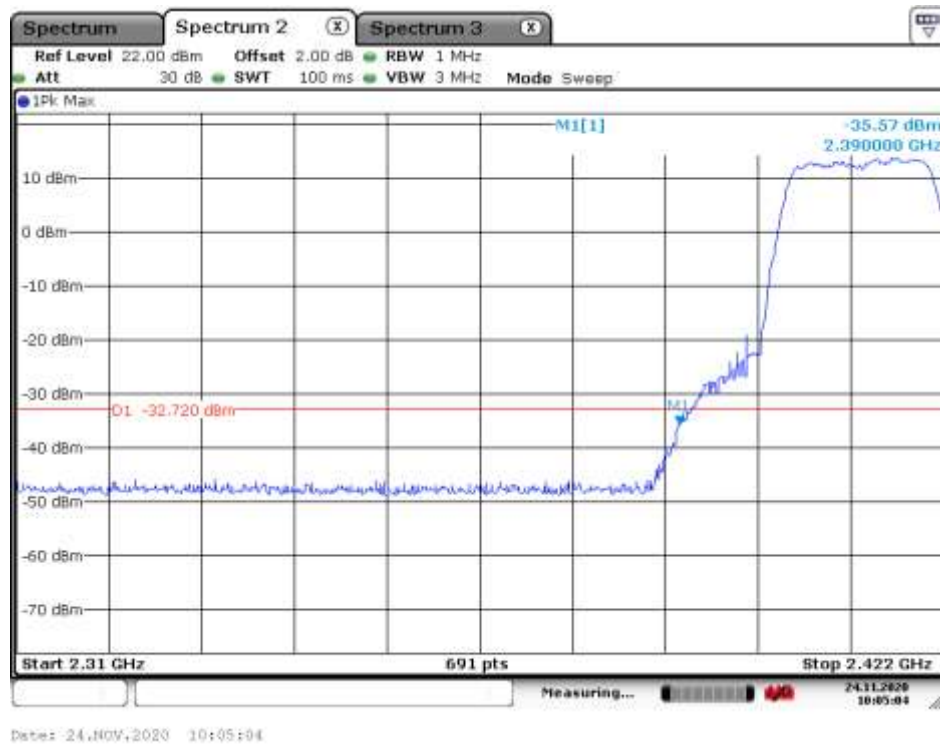
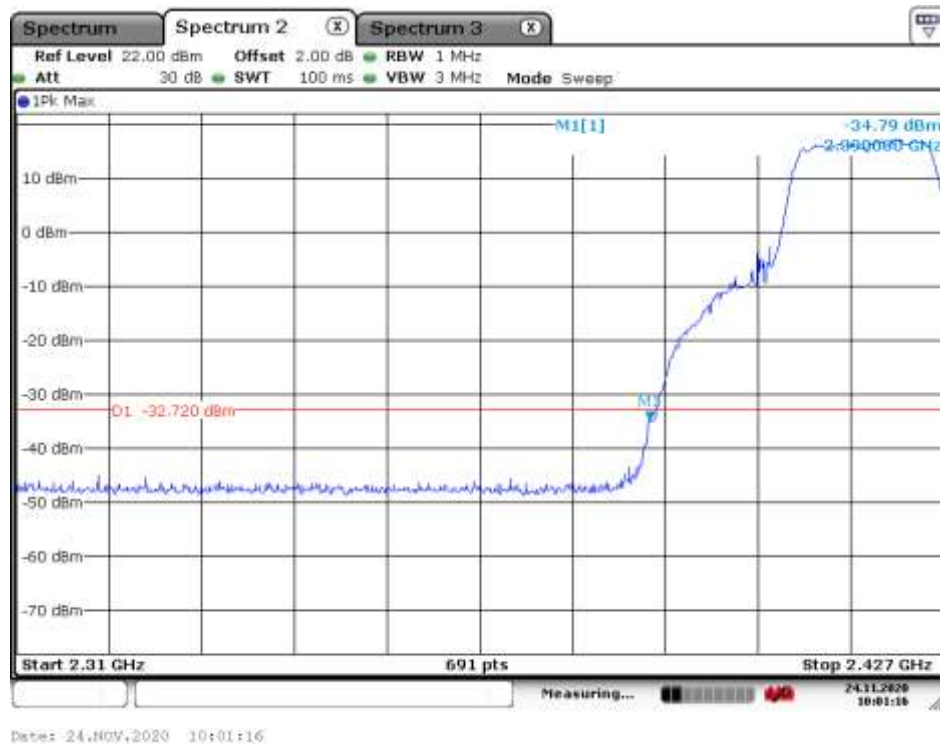


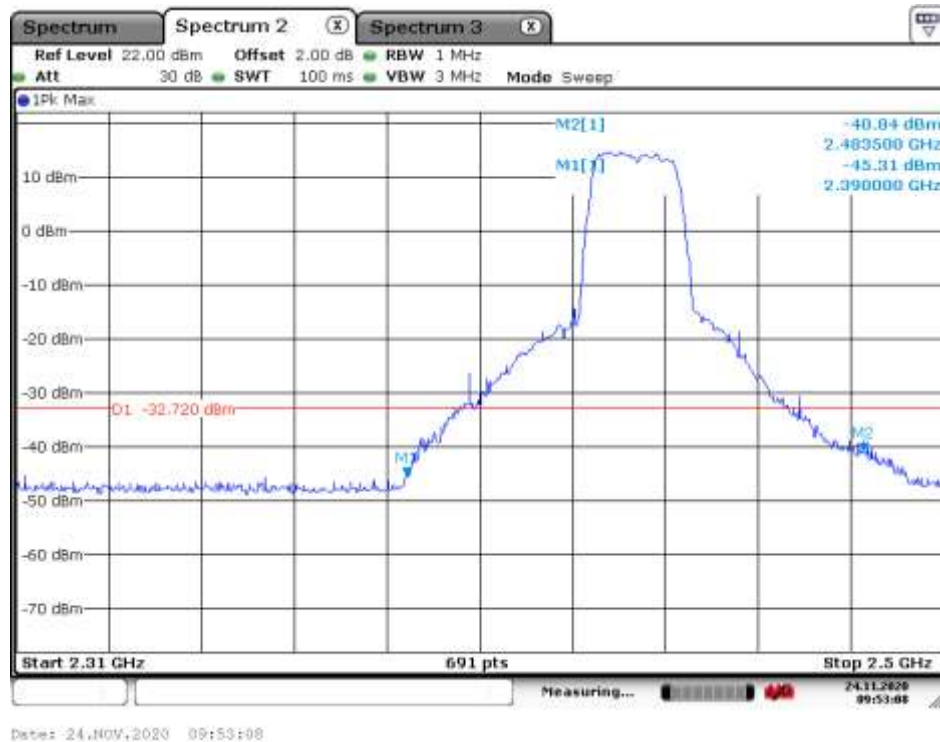
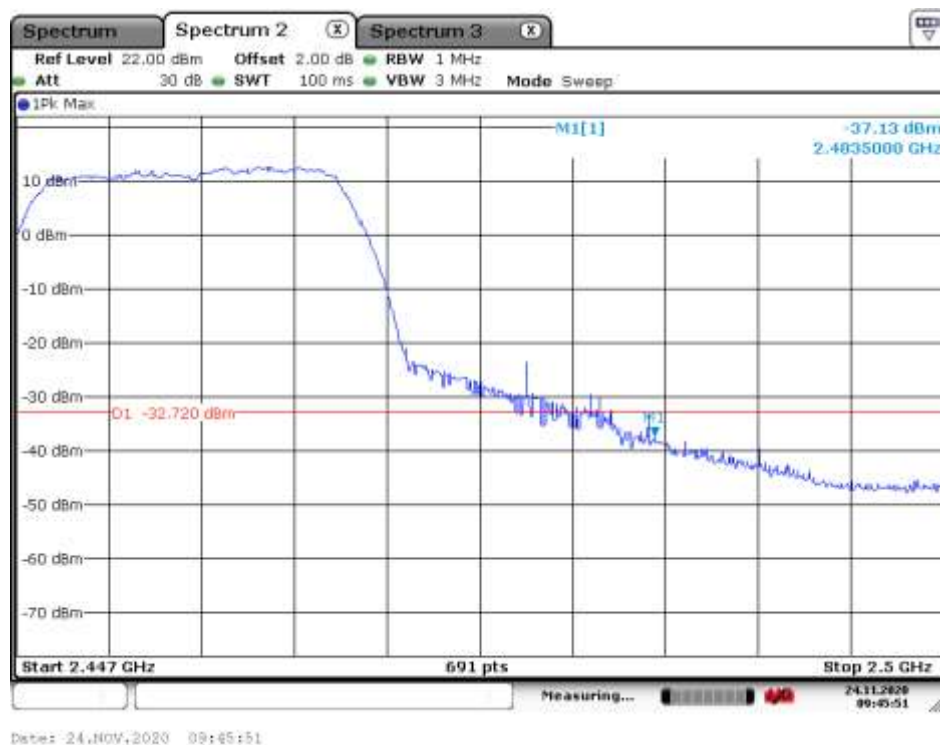
2457MHz by 802.11ax(20MHz):

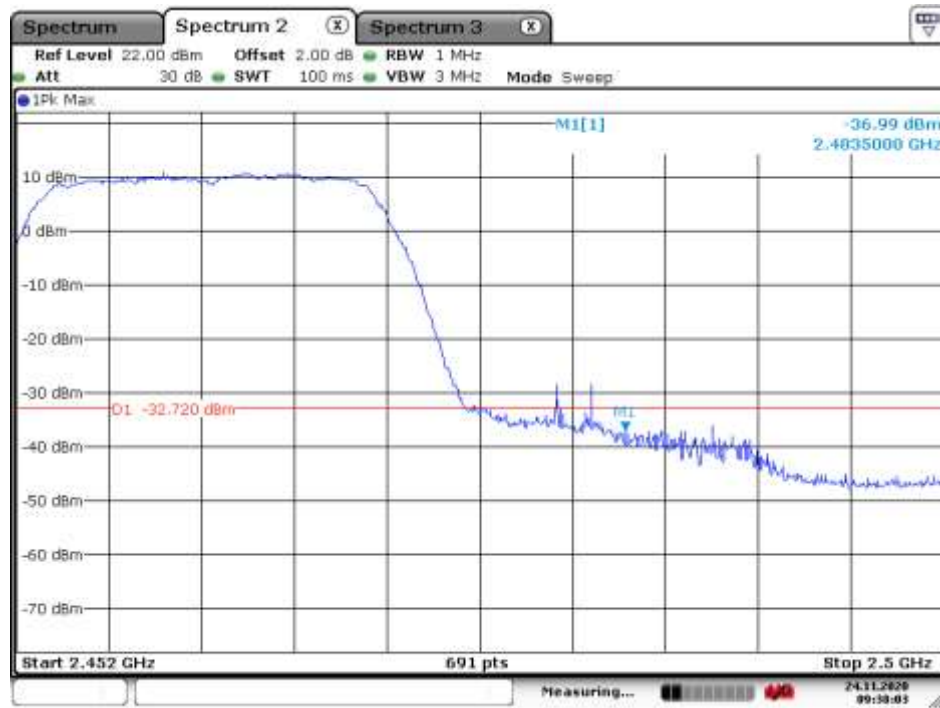


2462MHz by 802.11ax(20MHz):

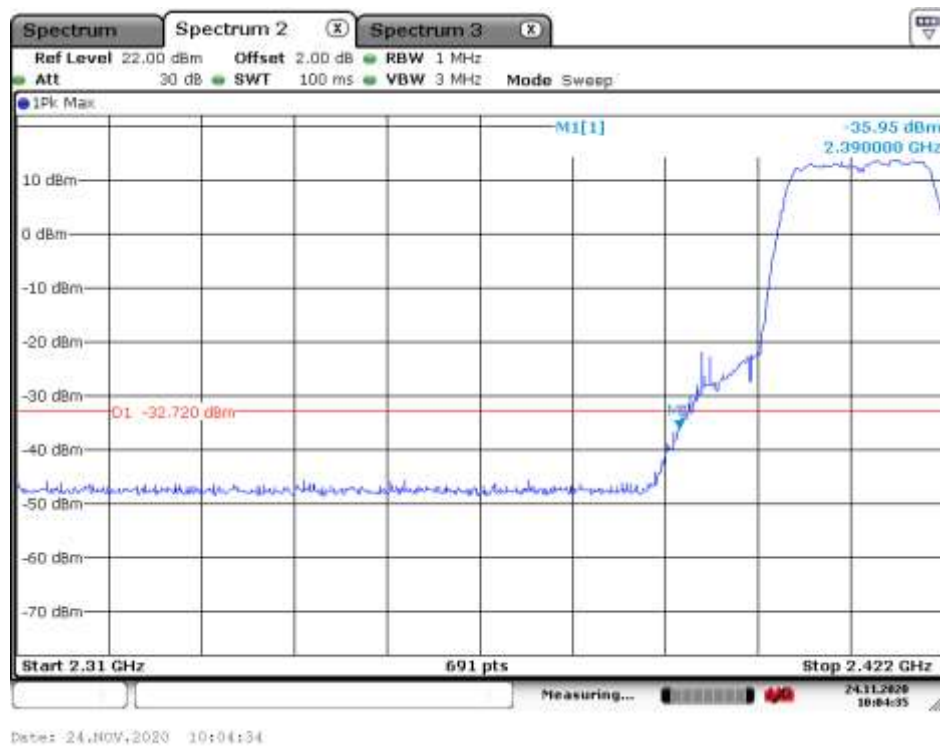
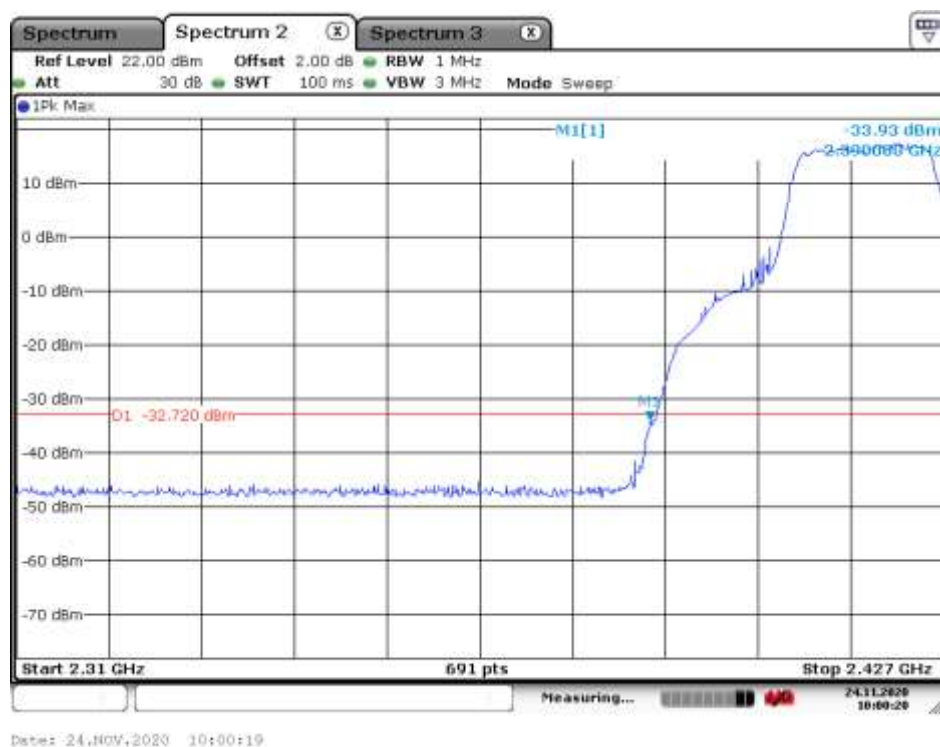
Date: 24.NOV.2020 09:33:22

PK Limit-Beamforming**2412MHz by 802.11n(20MHz):****2417MHz by 802.11n(20MHz):**

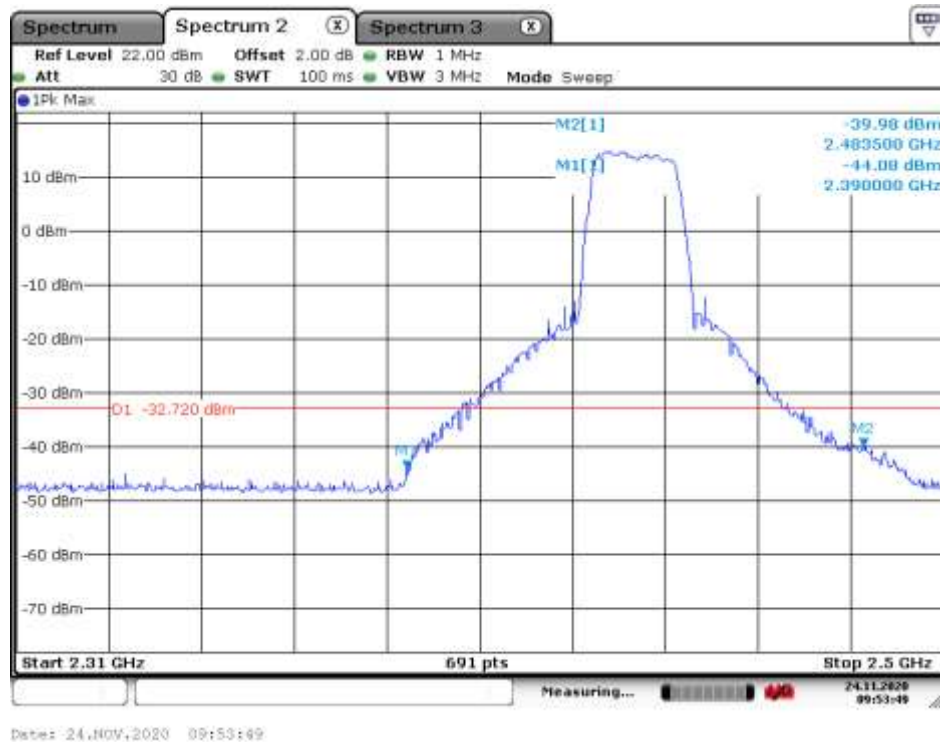
2437MHz by 802.11n(20MHz):**2457MHz by 802.11n(20MHz):**

2462MHz by 802.11n(20MHz):

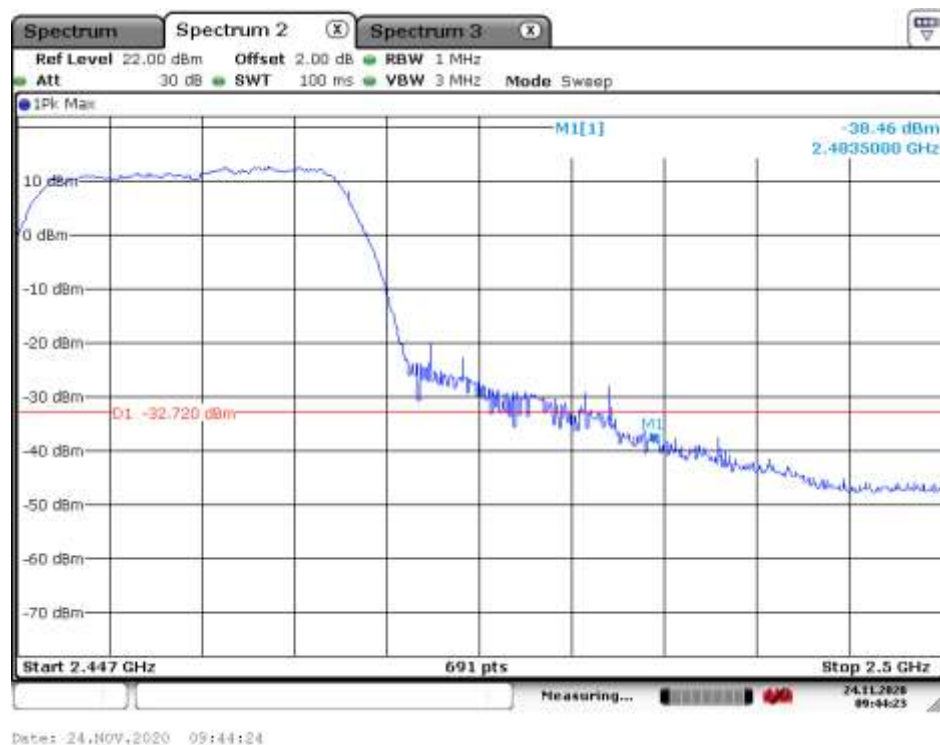
Date: 24.NOV.2020 09:38:04

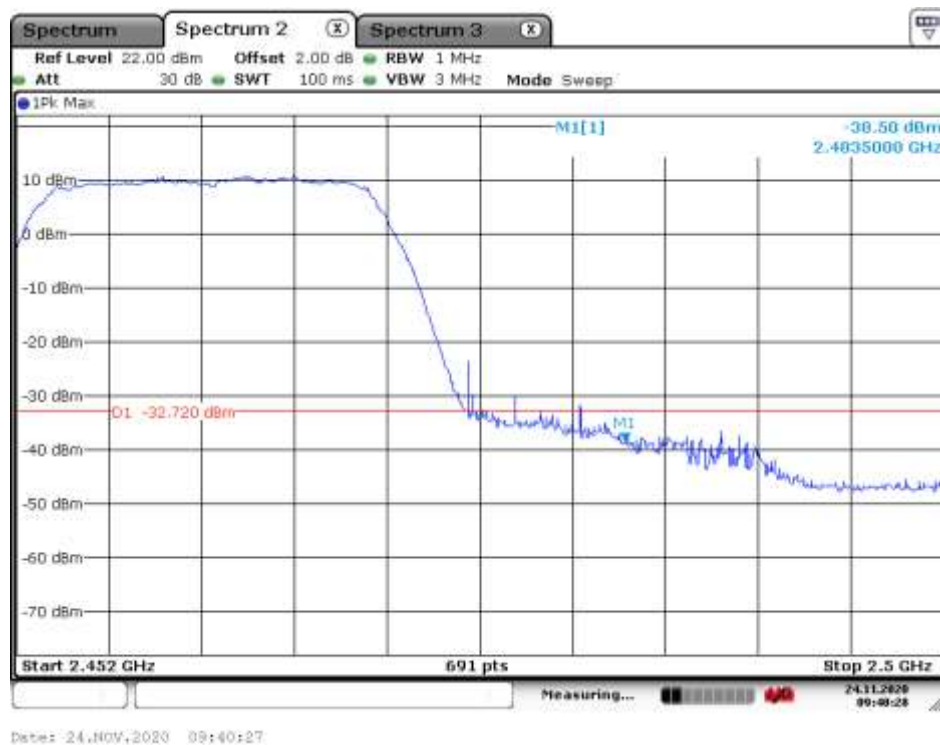
2412MHz by 802.11ax(20MHz):**2417MHz by 802.11ax(20MHz):**

2437MHz by 802.11ax(20MHz):



2457MHz by 802.11ax(20MHz):



2462MHz by 802.11ax(20MHz):

Note: 1. We have evaluated both CDD and Beamforming mode, shown in the report is the worst data.

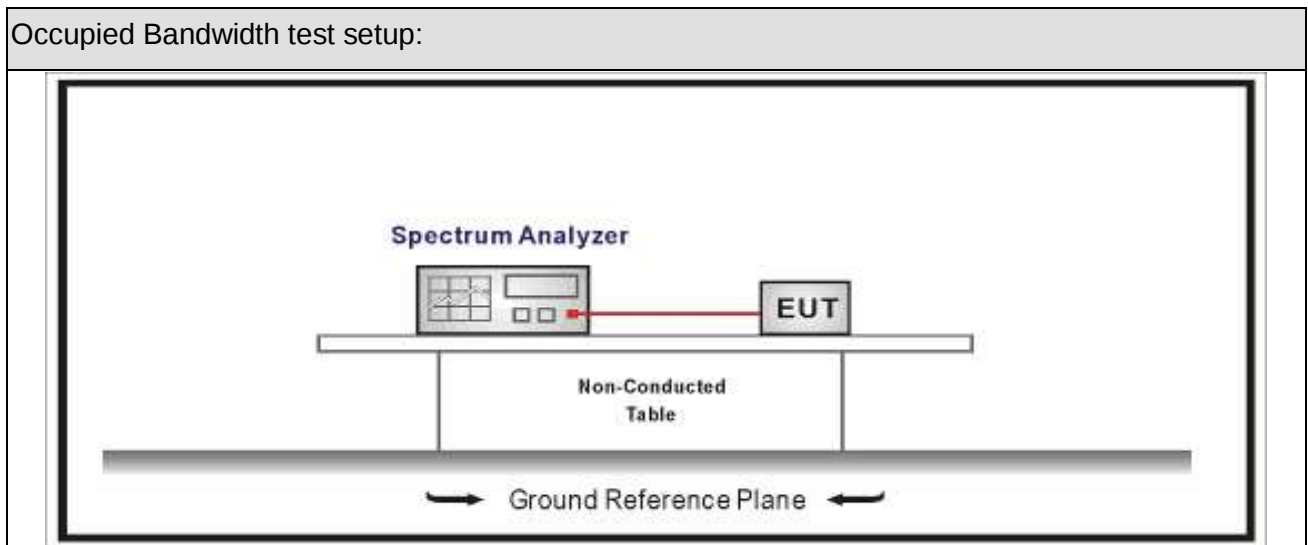
Note: 2. We have evaluated all modes, channels, bandwidths and different antennas, shown in the report is the worst data.

7. Occupied Bandwidth

7.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2020.09.02	2021.09.01
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

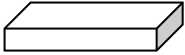
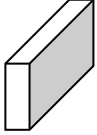
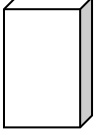
Occupied Bandwidth

Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz

7.4. Test Procedure

Test Method				
	Reference Rule		Chapter	Description
☒	ANSI C63.10		11.8	DTS bandwidth
	☐	ANSI C63.10	11.8.1	Option 1
	☒	ANSI C63.10	11.8.2	Option 2

7.5. EUT test definition

Item	Occupied Bandwidth			
Device Category	☐	Fixed point-to-point		
	☐	Emit multiple directional beams, simultaneously or sequentially		
	☒	Other cases		
Test mode	Mode 1~5			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 1		
				
	☒	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

7.6. Test Result

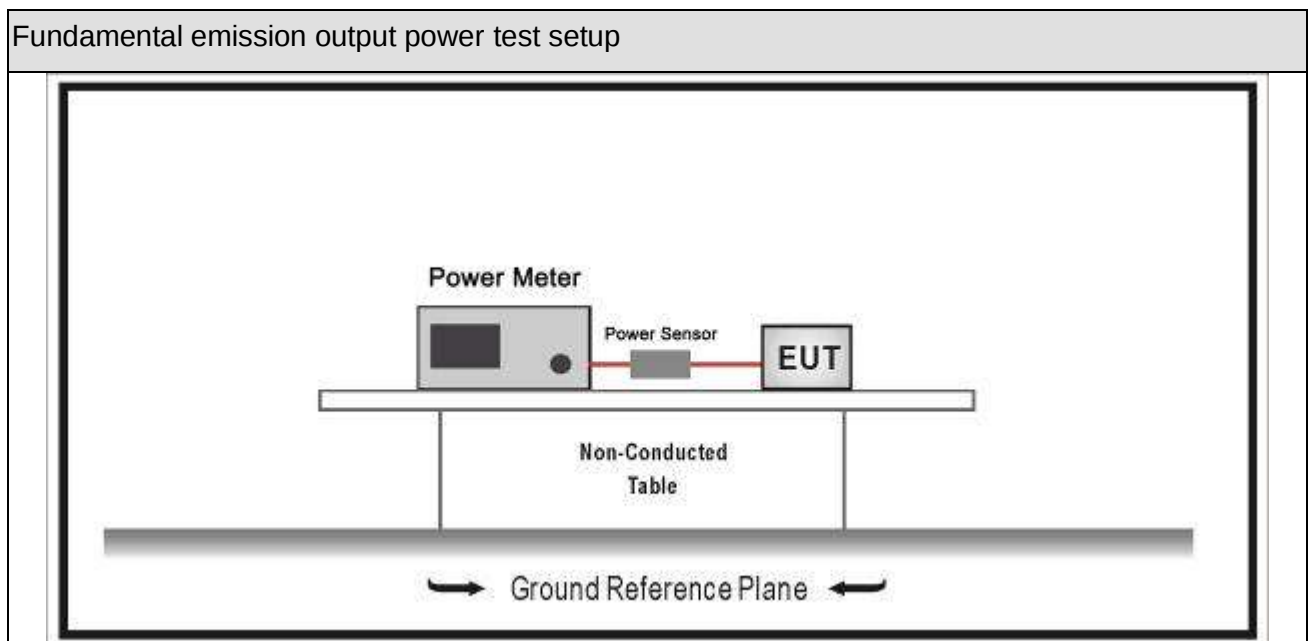
N/A

8. Fundamental emission output power

8.1. Test Equipment

Fundamental emission output power / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2020.09.02	2021.09.01
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

Fundamental emission output power Limit		
☒	$G_{TX} < 6\text{dBi}$	$P_{out} \leq 30\text{dBm}$
☐	$G_{TX} > 6\text{dBi}$	
☐	Non-Fix point-point	$P_{out} \leq 30 - (G_{TX} - 6)$
☐	Fix point-point	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	Point-to-multipoint	$P_{out} \leq 30 - (G_{TX} - 6)$
☐	Overlap Beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	Aggregate power transmitted simultaneously on all beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	single directional beam	$P_{out} \leq 30 - [(G_{TX} - 6)]/3 + 8\text{dB}$

Note 1 : G_{TX} directional gain of transmitting antennas.

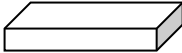
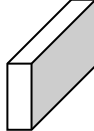
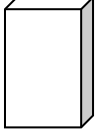
Note 2 : P_{out} is maximum peak conducted output power .

8.4. Test Procedure

Fundamental emission output power Test Method							
	References Rule			Chapter	Description		
☒	ANSI C63.10			11.9	Fundamental emission output power		
	☐	ANSI C63.10			11.9.1	Maximum peak conducted output power	
		☐	ANSI C63.10	11.9.1.1	RBW ≥ DTS bandwidth		
		☐	ANSI C63.10	11.9.1.2	Integrated band power method		
		☐	ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method		
	☒	ANSI C63.10			11.9.2	Maximum conducted (average) output power	
		☐	ANSI C63.10			11.9.2.2	Measurement using a spectrum analyzer (SA)
			☐	ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle ≥ 98%)	
			☐	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle ≥ 98%)	
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle ≤ 98%)	
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle ≤ 98%)	
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-3	
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-3A	
		☒	ANSI C63.10			11.9.2.3	Measurement using a power meter (PM)
			☒	ANSI C63.10	11.9.2.3.1	Method AVGPM	
			☐	ANSI C63.10	11.9.2.3.2	Method AVGPM-G	

Directional Gain Calculations for In-Band test method				
	References Rule		Chapter	Description
☐	KDB 662911		F2)a)	Basic methodology
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☐	KDB 662911		F2)e)	Spatial Multiplexing
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☒	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☐	KDB 662911	F2)f) (i)	Antennas have the same gain
	☒	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

8.5. EUT test definition

Item	Fundamental emission output power			
Device Category	☐	Fixed point-to-point		
	☐	Emit multiple directional beams, simultaneously or sequentially		
	☒	Other cases		
Test mode	Mode 1~5			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 1		
				
	☒	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

8.6. Test Result

Product Name	:	Wireless Access Point	Power	:	AC 120V/60Hz
Test Mode	:	Mode1~4	Test Site	:	TR8
Test Date	:	2020.11.30	Test Engineer	:	Jun
Antenna	:	OMNI Antenna			

SISO:

Mode	Channel	Test Frequency (MHz)	Conducted Power Output (dBm)		Limit (dBm)	Result
			Ant 1	Ant 2		
1	01	2412	18.15	18.42	30	Pass
1	02	2417	18.57	18.40	30	Pass
1	06	2437	18.82	18.23	30	Pass
1	10	2457	18.50	18.41	30	Pass
1	11	2462	18.47	18.50	30	Pass
2	01	2412	17.20	17.74	30	Pass
2	02	2417	17.79	19.15	30	Pass
2	06	2437	18.18	19.18	30	Pass
2	10	2457	18.66	19.12	30	Pass
2	11	2462	16.05	15.89	30	Pass
3	01	2412	16.26	17.66	30	Pass
3	02	2417	18.14	19.70	30	Pass
3	06	2437	18.62	19.55	30	Pass
3	10	2457	17.18	18.87	30	Pass
3	11	2462	16.56	15.14	30	Pass

4	01	2412	16.07	17.48	30	Pass
4	02	2417	18.52	19.91	30	Pass
4	06	2437	18.98	19.83	30	Pass
4	10	2457	17.62	17.87	30	Pass
4	11	2462	16.55	16.06	30	Pass

Mode	Channel	Test Frequency (MHz)	E.I.R.P (dBm)		Limit (dBm)	Result
			Ant 1	Ant 2		
1	01	2412	23.65	23.92	36	Pass
1	02	2417	24.07	23.90	36	Pass
1	06	2437	24.32	23.73	36	Pass
1	10	2457	24.00	23.91	36	Pass
1	11	2462	23.97	24.00	36	Pass
2	01	2412	22.70	23.24	36	Pass
2	02	2417	23.29	24.65	36	Pass
2	06	2437	23.68	24.68	36	Pass
2	10	2457	24.16	24.62	36	Pass
2	11	2462	21.55	21.39	36	Pass
3	01	2412	21.76	23.16	36	Pass
3	02	2417	23.64	25.20	36	Pass
3	06	2437	24.12	25.05	36	Pass
3	10	2457	22.68	24.37	36	Pass
3	11	2462	22.06	20.64	36	Pass
4	01	2412	21.57	22.98	36	Pass
4	02	2417	24.02	25.41	36	Pass
4	06	2437	24.48	25.33	36	Pass
4	10	2457	23.12	23.37	36	Pass

4	11	2462	22.05	21.56	36	Pass
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CDD:

Mode	Channel	Test Frequency (MHz)	Conducted Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
			Ant 1	Ant 2			
1	01	2412	18.26	18.38	21.33	30	Pass
1	02	2417	18.23	18.47	21.36	30	Pass
1	06	2437	18.85	18.18	21.54	30	Pass
1	10	2457	18.39	18.59	21.50	30	Pass
1	11	2462	18.24	18.14	21.20	30	Pass
2	01	2412	15.20	16.71	19.03	30	Pass
2	02	2417	17.72	19.03	21.43	30	Pass
2	06	2437	18.25	19.16	21.74	30	Pass
2	10	2457	15.98	16.57	19.30	30	Pass
2	11	2462	13.91	15.23	17.63	30	Pass
3	01	2412	15.64	16.96	19.36	30	Pass
3	02	2417	17.65	19.17	21.49	30	Pass
3	06	2437	18.15	19.07	21.64	30	Pass
3	10	2457	15.74	16.99	19.42	30	Pass
3	11	2462	14.06	15.00	17.57	30	Pass
4	01	2412	15.93	17.36	19.71	30	Pass
4	02	2417	18.19	19.50	21.90	30	Pass
4	06	2437	19.01	19.84	22.46	30	Pass

4	10	2457	16.09	17.47	19.84	30	Pass
4	11	2462	13.98	15.27	17.68	30	Pass

Mode	Channel	Test Frequency (MHz)	E.I.R.P (dBm)	Limit (dBm)	Result
1	01	2412	26.83	36	Pass
1	02	2417	26.86	36	Pass
1	06	2437	27.04	36	Pass
1	10	2457	27.00	36	Pass
1	11	2462	26.70	36	Pass
2	01	2412	24.53	36	Pass
2	02	2417	26.93	36	Pass
2	06	2437	27.24	36	Pass
2	10	2457	24.80	36	Pass
2	11	2462	23.13	36	Pass
3	01	2412	24.86	36	Pass
3	02	2417	26.99	36	Pass
3	06	2437	27.14	36	Pass
3	10	2457	24.92	36	Pass
3	11	2462	23.07	36	Pass
4	01	2412	25.21	36	Pass
4	02	2417	27.40	36	Pass
4	06	2437	27.96	36	Pass
4	10	2457	25.34	36	Pass

4	11	2462	23.18	36	Pass
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Beamforming:

Mode	Channel	Test Frequency (MHz)	Peak Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
			Ant 1	Ant 2			
3	01	2412	15.33	16.77	19.12	27.49	Pass
3	02	2417	17.45	18.90	21.25	27.49	Pass
3	06	2437	17.94	18.78	21.39	27.49	Pass
3	10	2457	15.49	16.73	19.16	27.49	Pass
3	11	2462	13.82	14.69	17.29	27.49	Pass
4	01	2412	15.66	17.14	19.47	27.49	Pass
4	02	2417	17.88	19.20	21.60	27.49	Pass
4	06	2437	18.71	19.63	22.20	27.49	Pass
4	10	2457	15.79	17.26	19.60	27.49	Pass
4	11	2462	13.70	15.01	17.41	27.49	Pass

Mode	Channel	Test Frequency (MHz)	E.I.R.P (dBm)	Limit (dBm)	Result
3	01	2412	27.63	36	Pass
3	02	2417	29.76	36	Pass
3	06	2437	29.90	36	Pass
3	10	2457	27.67	36	Pass
3	11	2462	25.80	36	Pass
4	01	2412	27.98	36	Pass
4	02	2417	30.11	36	Pass
4	06	2437	30.71	36	Pass
4	10	2457	28.11	36	Pass
4	11	2462	25.92	36	Pass

Product Name	:	Wireless Access Point	Power	:	AC 120V/60Hz
Test Mode	:	Mode1~4	Test Site	:	TR8
Test Date	:	2020.11.30	Test Engineer	:	Jun
Antenna	:	Sector Antenna			

SISO:

Mode	Channel	Test Frequency (MHz)	Conducted Power Output (dBm)		Limit (dBm)	Result
			Ant 1	Ant 2		
1	01	2412	18.22	18.51	29.1	Pass
1	02	2417	18.62	18.49	29.1	Pass
1	06	2437	18.85	18.36	29.1	Pass
1	10	2457	18.56	18.57	29.1	Pass
1	11	2462	18.57	18.58	29.1	Pass
2	01	2412	17.29	17.83	29.1	Pass
2	02	2417	17.82	19.23	29.1	Pass
2	06	2437	18.26	19.28	29.1	Pass
2	10	2457	18.72	19.24	29.1	Pass
2	11	2462	16.21	16.01	29.1	Pass
3	01	2412	16.32	17.72	29.1	Pass
3	02	2417	18.25	19.75	29.1	Pass
3	06	2437	18.76	19.69	29.1	Pass
3	10	2457	17.28	18.96	29.1	Pass
3	11	2462	16.63	15.30	29.1	Pass

4	01	2412	16.17	17.55	29.1	Pass
4	02	2417	18.64	20.05	29.1	Pass
4	06	2437	19.12	19.87	29.1	Pass
4	10	2457	17.76	17.97	29.1	Pass
4	11	2462	16.61	16.16	29.1	Pass

Mode	Channel	Test Frequency (MHz)	E.I.R.P (dBm)		Limit (dBm)	Result
			Ant 1	Ant 2		
1	01	2412	26.10	26.39	36	Pass
1	02	2417	26.50	26.37	36	Pass
1	06	2437	26.73	26.24	36	Pass
1	10	2457	26.44	26.45	36	Pass
1	11	2462	26.45	26.46	36	Pass
2	01	2412	24.19	24.73	36	Pass
2	02	2417	24.72	26.13	36	Pass
2	06	2437	25.16	26.18	36	Pass
2	10	2457	25.62	26.14	36	Pass
2	11	2462	23.11	22.91	36	Pass
3	01	2412	23.22	24.62	36	Pass
3	02	2417	25.15	26.65	36	Pass
3	06	2437	25.66	26.59	36	Pass
3	10	2457	24.18	25.86	36	Pass
3	11	2462	23.53	22.20	36	Pass
4	01	2412	23.07	24.45	36	Pass
4	02	2417	25.54	26.95	36	Pass
4	06	2437	26.02	26.77	36	Pass
4	10	2457	24.66	24.87	36	Pass

4	11	2462	23.51	23.06	36	Pass
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CDD:

Mode	Channel	Test Frequency (MHz)	Conducted Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
			Ant 1	Ant 2			
1	01	2412	18.42	18.49	21.47	29.1	Pass
1	02	2417	18.31	18.56	21.45	29.1	Pass
1	06	2437	18.88	18.30	21.61	29.1	Pass
1	10	2457	18.45	18.71	21.59	29.1	Pass
1	11	2462	18.36	18.27	21.33	29.1	Pass
2	01	2412	15.28	16.85	19.15	29.1	Pass
2	02	2417	17.86	19.18	21.58	29.1	Pass
2	06	2437	18.32	19.25	21.82	29.1	Pass
2	10	2457	16.11	16.71	19.43	29.1	Pass
2	11	2462	14.03	15.29	17.72	29.1	Pass
3	01	2412	15.69	17.06	19.44	29.1	Pass
3	02	2417	17.76	19.22	21.56	29.1	Pass
3	06	2437	18.19	19.18	21.72	29.1	Pass
3	10	2457	15.79	17.13	19.52	29.1	Pass
3	11	2462	14.10	15.16	17.67	29.1	Pass
4	01	2412	16.08	17.49	19.85	29.1	Pass
4	02	2417	18.23	19.65	22.01	29.1	Pass
4	06	2437	19.14	19.91	22.55	29.1	Pass

4	10	2457	16.19	17.50	19.90	29.1	Pass
4	11	2462	14.03	15.38	17.77	29.1	Pass

Mode	Channel	Test Frequency (MHz)	E.I.R.P (dBm)	Limit (dBm)	Result
1	01	2412	29.35	36	Pass
1	02	2417	29.33	36	Pass
1	06	2437	29.49	36	Pass
1	10	2457	29.47	36	Pass
1	11	2462	29.21	36	Pass
2	01	2412	26.05	36	Pass
2	02	2417	28.48	36	Pass
2	06	2437	28.72	36	Pass
2	10	2457	26.33	36	Pass
2	11	2462	24.62	36	Pass
3	01	2412	26.34	36	Pass
3	02	2417	28.46	36	Pass
3	06	2437	28.62	36	Pass
3	10	2457	26.42	36	Pass
3	11	2462	24.57	36	Pass
4	01	2412	26.75	36	Pass
4	02	2417	28.91	36	Pass
4	06	2437	29.45	36	Pass
4	10	2457	26.80	36	Pass

4	11	2462	24.67	36	Pass
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Beamforming:

Mode	Channel	Test Frequency (MHz)	Peak Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
			Ant 1	Ant 2			
3	01	2412	15.38	16.75	19.13	26.09	Pass
3	02	2417	17.35	18.85	21.17	26.09	Pass
3	06	2437	17.76	18.76	21.30	26.09	Pass
3	10	2457	15.36	16.71	19.10	26.09	Pass
3	11	2462	13.68	14.83	17.30	26.09	Pass
4	01	2412	15.66	17.14	19.47	26.09	Pass
4	02	2417	17.89	19.33	21.68	26.09	Pass
4	06	2437	18.80	19.50	22.17	26.09	Pass
4	10	2457	15.77	17.17	19.54	26.09	Pass
4	11	2462	13.64	15.07	17.42	26.09	Pass

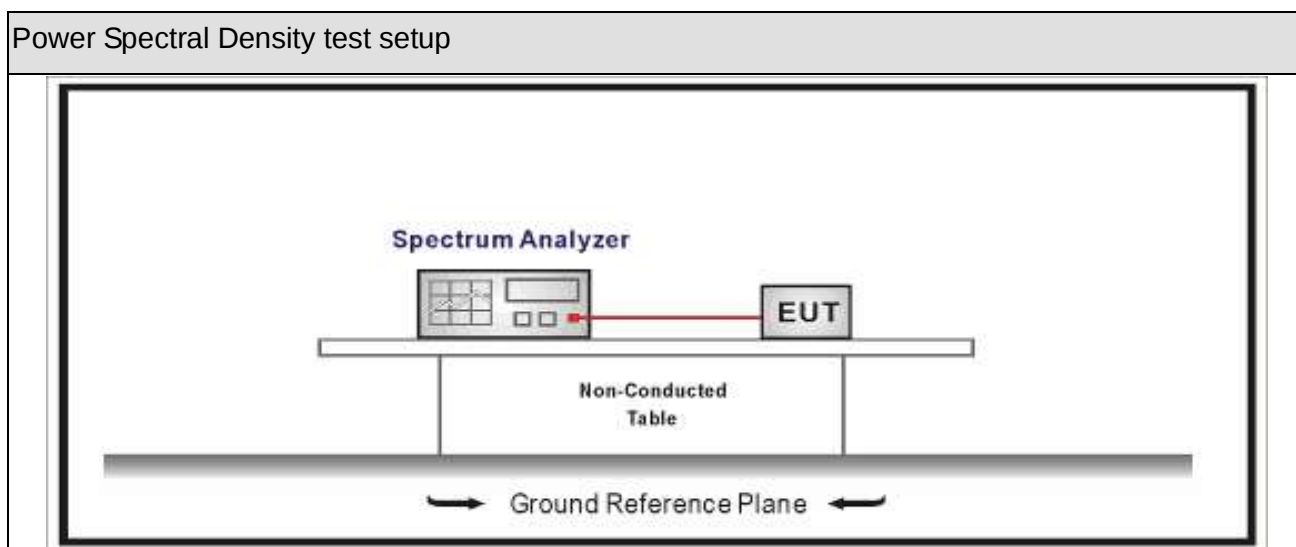
Mode	Channel	Test Frequency (MHz)	E.I.R.P (dBm)	Limit (dBm)	Result
3	01	2412	26.03	36	Pass
3	02	2417	28.07	36	Pass
3	06	2437	28.20	36	Pass
3	10	2457	26.00	36	Pass
3	11	2462	24.20	36	Pass
4	01	2412	26.37	36	Pass
4	02	2417	28.58	36	Pass
4	06	2437	29.07	36	Pass
4	10	2457	26.44	36	Pass
4	11	2462	24.32	36	Pass

9. Power Spectral Density

9.1. Test Equipment

Power Spectral Density / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2020.09.02	2021.09.01
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

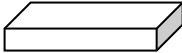
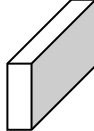
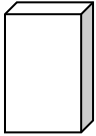
Power Spectral Density Limit
Power Spectral Density $\leq 8\text{dBm}/3\text{kHz}$

9.4. Test Procedure

Power Spectral Density Test Method				
	References Rule		Chapter	Description
☒	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
	☐	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	☒	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle $\geq$ 98%)
	☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle $\geq$ 98%)
	☒	ANSI C63.10	11.10.5	Method AVGPSD-2(Duty cycle $<$ 98%)
	☐	ANSI C63.10	11.10.6	Method AVGPSD-2A(Duty cycle $<$ 98%)
	☐	ANSI C63.10	11.10.7	Method AVGPSD-3
	☐	ANSI C63.10	11.10.8	Method AVGPSD-3A

Directional Gain Calculations for In-Band test method				
	Referred Rule		Chapter	Description
☐	KDB 662911		F2)a)	Basic methodology
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☒	KDB 662911		F2)e)	Spatial Multiplexing
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☒	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☐	KDB 662911	F2)f) (i)	Antennas have the same gain
	☒	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

9.5. EUT test definition

Item	Power Spectral Density Test Method			
Device Category	☐	Fixed point-to-point		
	☐	Emit multiple directional beams, simultaneously or sequentially		
	☒	Other cases		
Test mode	Mode 1~5			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 1		
				
	☒	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

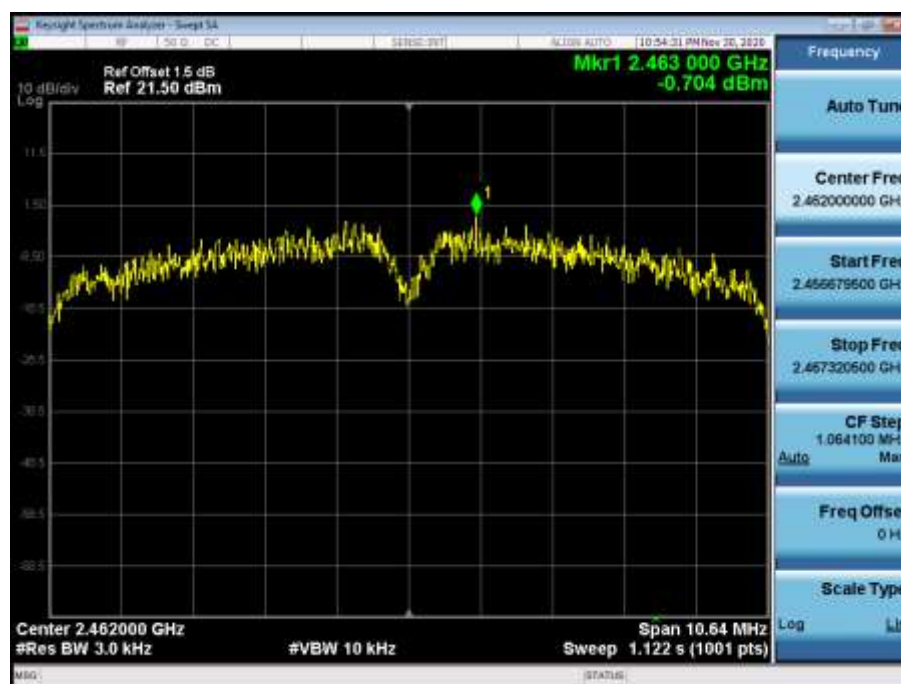
9.6. Test Result

Product Name	: Wireless Access Point	Power	: AC 120V/60Hz
Test Mode	: Mode1~4	Test Site	: TR8
Test Date	: 2020.11.30	Test Engineer	: Jun
Antenna	: OMNI Antenna		

SISO

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Duty factor	Limit (dBm/3kHz)	Result
			Ant 1			
1	01	2412	-1.888	0.0	8.0	Pass
1	06	2437	-1.527	0.0	8.0	Pass
1	11	2462	-0.704	0.0	8.0	Pass
2	01	2412	-6.862	0.24	8.0	Pass
2	06	2437	-6.803	0.24	8.0	Pass
2	11	2462	-6.853	0.24	8.0	Pass
3	01	2412	-7.124	0.24	8.0	Pass
3	06	2437	-6.271	0.24	8.0	Pass
3	11	2462	-6.679	0.24	8.0	Pass
4	01	2412	-7.696	0.11	8.0	Pass
4	06	2437	-6.493	0.11	8.0	Pass
4	11	2462	-5.163	0.11	8.0	Pass

Mode 1 CH11(2462MHz) Ant 1



CDD

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Duty Factor	Total Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
			Ant 1				
1	01	2412	-2.156	0.0	0.854	5.49	Pass
1	06	2437	-2.224	0.0	0.786	5.49	Pass
1	11	2462	-2.344	0.0	0.666	5.49	Pass
2	01	2412	-6.704	0.24	-3.454	5.49	Pass
2	06	2437	-6.945	0.24	-3.695	5.49	Pass
2	11	2462	-6.716	0.24	-3.466	5.49	Pass
3	01	2412	-7.233	0.24	-3.983	5.49	Pass
3	06	2437	-6.447	0.24	-3.197	5.49	Pass
3	11	2462	-6.589	0.24	-3.339	5.49	Pass
4	01	2412	-7.265	0.11	-4.145	5.49	Pass
4	06	2437	-6.357	0.11	-3.237	5.49	Pass
4	11	2462	-6.655	0.11	-3.535	5.49	Pass

Mode 1 CH01(2462MHz) Ant 1



Note: 1: Both of two chains are tested and only the worst chain of the PSD was showed.

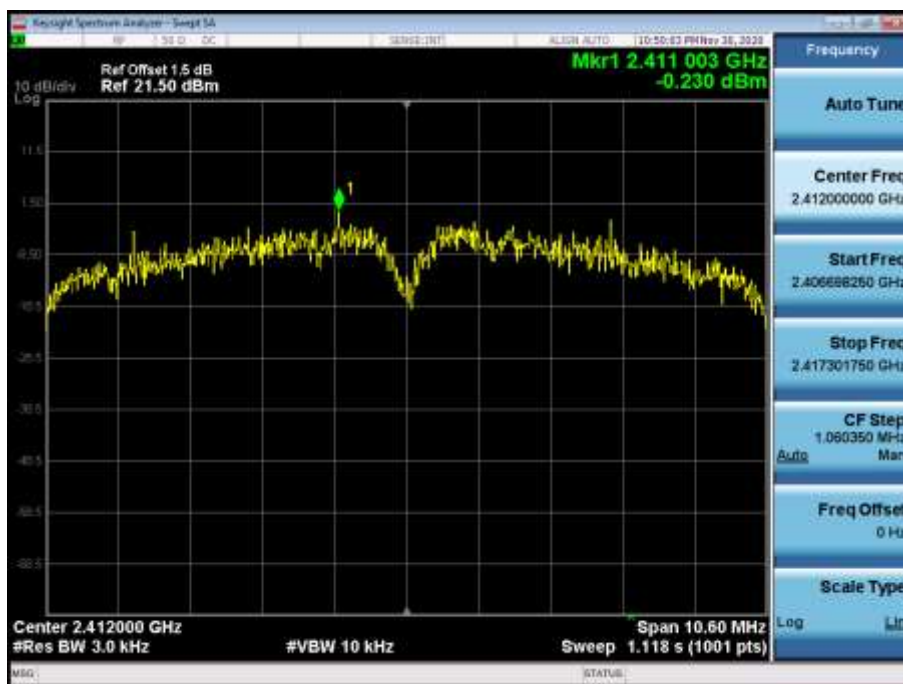
2: PSD limit = 8dBm/3kHz – (directional gain- 6)

Product Name	: Wireless Access Point	Power	: AC 120V/60Hz
Test Mode	: Mode1~4	Test Site	: TR8
Test Date	: 2020.11.30	Test Engineer	: Jun
Antenna	: Sector Antenna		

SISO

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Duty factor	Limit (dBm/3kHz)	Result
			Ant 1			
1	01	2412	-0.230	0.0	7.1	Pass
1	06	2437	-1.927	0.0	7.1	Pass
1	11	2462	-1.901	0.0	7.1	Pass
2	01	2412	-3.465	0.24	7.1	Pass
2	06	2437	-4.045	0.24	7.1	Pass
2	11	2462	-6.724	0.24	7.1	Pass
3	01	2412	-5.927	0.24	7.1	Pass
3	06	2437	-5.143	0.24	7.1	Pass
3	11	2462	-6.128	0.24	7.1	Pass
4	01	2412	-4.524	0.11	7.1	Pass
4	06	2437	-3.135	0.11	7.1	Pass
4	11	2462	-7.313	0.11	7.1	Pass

Mode 1 CH01(2412MHz) Ant 1



CDD

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Duty Factor	Total Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
			Ant 1				
1	01	2412	-1.205	0.0	1.805	7.1	Pass
1	06	2437	-0.622	0.0	2.388	7.1	Pass
1	11	2462	-2.035	0.0	0.975	7.1	Pass
2	01	2412	-5.137	0.24	-1.887	7.1	Pass
2	06	2437	-3.927	0.24	-0.677	7.1	Pass
2	11	2462	-6.262	0.24	-3.012	7.1	Pass
3	01	2412	-6.398	0.24	-3.148	7.1	Pass
3	06	2437	-5.338	0.24	-2.088	7.1	Pass
3	11	2462	-8.736	0.24	-5.486	7.1	Pass
4	01	2412	-5.648	0.11	-2.528	7.1	Pass
4	06	2437	-3.339	0.11	-0.219	7.1	Pass
4	11	2462	-7.250	0.11	-4.130	7.1	Pass

Mode 1 CH06(2437MHz) Ant 1



Note: 1: Both of two chains are tested and only the worst chain of the PSD was showed.

Note: 2: PSD limit = 8dBm/3kHz– (directional gain- 6)

Note: 2: We have evaluated both CDD and Beamforming mode, shown in the report is the worst data.

10. Antenna Requirement

10.1. 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.	

10.2. 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 _____