TEST REPORT

APPLICANT	:	D-Link Corporation
PRODUCT NAME	:	4G LTE AX300 Wi-Fi 6 USB Adapter
MODEL NAME	:	D-LINK
BRAND NAME	:	DWM-222W
Series Model	:	DWM-222W/x, DWM-222W/xx, DWM-222W/xxx (x can be 0-9 , A-Z)
FCC ID	:	KA2WM222WB1
STANDARD(S)	:	47 CFR Part 15 Subpart C
RECEIPT DATE	:	2025.07.22
TEST DATE	:	2025.07.22~2025.09.19
ISSUE DATE	:	2025.09.19

Edited by: Zeng Xiaoying (Rapporteur)

Approved by: Shen Junsheng (Supervisor)

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REVISION HISTORY

Rev.	Issue Date	Revisions	Revised by
A0	2025.09.19	Initial Release	Shen Junsheng

DECLARATION OF REPORT

1. The device has been tested by Morlab, and the test results show that the equipment under test (EUT) is in compliance with the requirements of 47 CFR 15.247. And it is applicable only to the tested sample identified in the report.

2. This report shall not be reproduced except in full, without the written approval of Morlab, this document only be altered or revised by Morlab, personal only, and shall be noted in the revision of the document.

3. The general information of EUT in this report is provided by the customer or manufacture, Morlab is only responsible for the test data but not for the information provided by the customer or manufacture.

4. The results in this report is only apply to the sample as tested under conditions. The customer or manufacturer is responsible for ensuring that the additional production units of this model have the same electrical and mechanical components.

5. In this report, '☐' indicates that EUT does not support content after '☐', and '☑' indicates that it supports content after '☑'

SUMMARY OF TEST RESULT

Report Section	Standard Section	Test Item	Judgment	Remark
3.1	47 CFR 15.247(b)(3)	Maximum Peak Conducted Output Power	PASS	--
3.2	--	Duty Cycle	Report only	--
3.3	47 CFR 15.247(a)(2)	6dB Bandwidth	PASS	--
	--	99% Bandwidth	Report only	--
3.4	47 CFR 15.247(e)	Power Spectral Density	PASS	--
3.5	47 CFR 15.247(d)	Conducted Band Edge	PASS	--
3.6	47 CFR 15.247(d)	Conducted Spurious Emission	PASS	--
3.7	47 CFR 15.247(d)/15.209(a)/15.205(a)	Radiated Spurious Emission and Restricted Band	PASS	--
3.8	47 CFR 15.207(a)	AC Power-Line Conducted Emission	PASS	--
3.9	47 CFR 15.203	Antenna Requirements	PASS	--

1. GENERAL DESCRIPTION

1.1. Applicant

Name : D-Link Corporation

Address : 14420 Myford Road Suite 100, Irvine, California 92606, United States

1.2. Manufacturer

Name : D-Link Corporation

Address : 14420 Myford Road Suite 100, Irvine, California 92606, United States

1.3. Factory

Name : AMIT Wireless Inc.

Address : No. 82, Gongye 2nd Rd., Annan Dist., Tainan City 709015, Taiwan, China

1.4. General Information of EUT

General Information	
Equipment Name	4G LTE AX300 Wi-Fi 6 USB Adapter
Brand Name	D-LINK
Model Name	DWM-222W
Series Model	DWM-222W/x, DWM-222W/xx, DWM-222W/xxx (x can be 0-9 , A-Z)
Model Difference	Only model name and color are different
Antenna Type	FPC Antenna
Antenna Gain	0.94dBi
Sample No:	2025071405001
Adapter	N/A
Battery	N/A
Hardware version	B1
Software version	1.00.09LA
Connecting I/O Port(s)	Refer to the remark below.

Remark:

The above information of EUT was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.5. Equipment Specification

Equipment Specification			
Frequency Range	2412MHz - 2462MHz		
Maximum Output Power To Antenna	☑802.11b:	18.16dBm (0.065W)	
	☑802.11g:	19.47dBm (0.088W)	
	☑802.11n(HT)20:	20.04dBm (0.101W)	
	☑802.11n(HT)40:	18.62dBm (0.0728W)	
	☑802.11ax(HE)20:	20.37dBm (0.109W)	
	☑802.11ax(HE)40:	19.33dBm (0.0857W)	
Type of Modulation	☑802.11b: DSSS (DBPSK/DQPSK/CCK)		
	☑802.11g/n(HT): OFDM (BPSK/QPSK/16QAM/64QAM)		
	☑802.ax(HE): OFDM (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)		
Antenna Information	☑SISO	Antenna Type:	FPC antenna
		Antenna Gain:	0.94dBi

1.6. Modification of EUT

No modifications are made to the EUT during all test items.

1.7. Laboratory Information

Laboratory Name	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone	+86 755 36698555
Facsimile	+86 755 36698525
FCC Designation Number	CN1192
FCC Test Firm Registration Number	226174

1.8. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

47 CFR Part 15 Subpart C §15.247

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

ANSI C63.10-2020

Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.

1.9. Environmental conditions

Temperature	Normal Temperature(NT):	25°C
	High Temperature(HT):	45°C
	Low Temperature(LT):	0°C
Voltage	Normal Voltage(NV):	5V
	High Voltage(HV):	5.5V
	Low Voltage(LV):	4.5V
Other	Relative Humidity	55%
	Air Pressure	101kPa

2. TEST CONFIGURATION OF EUT

2.1. Carrier Frequency Channel

Frequency Band	Channel	Frequency MHz	Channel	Frequency MHz
2400 - 2483.5 MHz	01	2412	07	2442
	02	2417	08	2447
	03	2422	09	2452
	04	2427	10	2457
	05	2432	11	2462
	06	2437		

Remark:

1. For 20 MHz Bandwidth: Low Channel: **CH 01_2412 MHz**; Middle Channel: **CH 06_2437 MHz**; High Channel: **CH 11_2462 MHz**. For 40 MHz Bandwidth: Low Channel: **CH 01_2412 MHz**; Middle Channel: **CH 06_2437 MHz**; High Channel: **CH 11_2452 MHz**.

2.2. Test Modes

Final test modes are considering the modulation and worse data rates as below table.

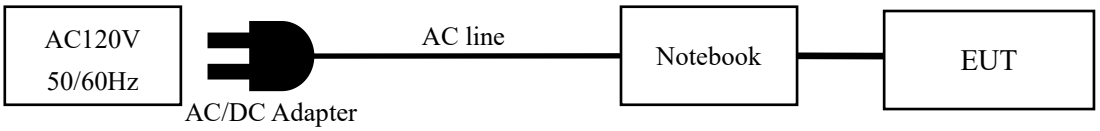
Summary Table of Test Modes			
Test Item	Mode	Data Rate	Channel
For Conducted and Radiated Test	☑802.11b:	1 Mbps	Low, Middle, High
	☑802.11g:	6 Mbps	Low, Middle, High
	☑802.11n(HT)20:	MCS 0	Low, Middle, High
	☑802.11n(HT)40:	MCS 0	Low, Middle, High
	☑802.11ax(HE)20:	MCS 0	Low, Middle, High
	☑802.11ax(HE)40:	MCS 0	Low, Middle, High
For AC Power-line Conducted Emission	802.11ax20_ 2412MHz		

Remark:

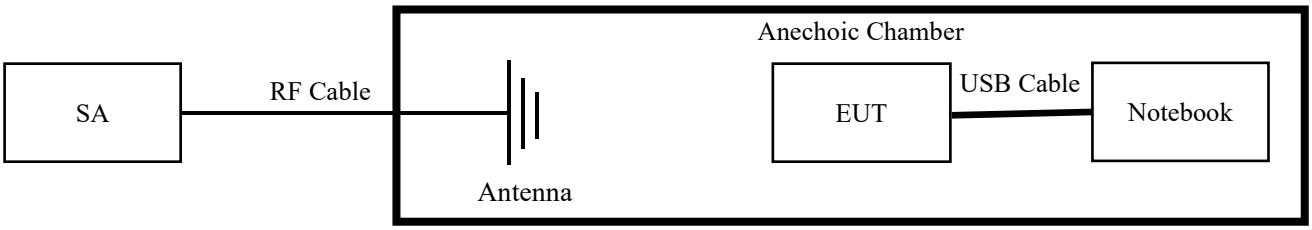
1.All the test modes of Radiated Spurious Emission (RSE) were tested at the worst data rate; only the worse data shown in report.

2.3. Block Diagram of Test System

2.3.1. For AC Power-Line Conducted Emission



2.3.2. For Radiated Spurious Emission



2.3.3. For Conducted Test

2.4. Description of Support Units

NO.	Unit	Brand	Model	Description
1	PC	Redmi	G36	for fixed frequency
2	Adapter	N/A	BS05A-0501000US	for AC Power-Line Conducted Emission

2.5. Test Software and Power Level

During the test, the channel and power control software provided by the customer is used to control the operation channel and output power level.

2.6. EUT Operating Conditions

For AC power-line conducted emission, the EUT was connected under the large package sizes transmission.

For radiated spurious emission and conducted test, the engineering test program was provided and make the EUT to continuous transmit/receive.

2.7. Equipment List

2.7.1. For AC Power-Line Conducted Emission

Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	Calibrated due until	Cal. Interval
EMI Test Receiver	R&S	ESPI	100679	2025.03.17	2026.03.16	1 year
LISN	R&S	ENV216	101300	2025.03.17	2026.03.16	1 year
LISN	R&S	ENV216	100333	2025.03.17	2026.03.16	1 year
CE Cable	Chuangcexing	2M	EMI0014	N/A	N/A	N/A
Temperature & Humidity	Deli	Deli	EMI0015	2025.08.01	2026.07.31	1 year
Testing Software	FALA	EZ-EMC(Ver.EMC-CON 3A1.1)	EMI0044	N/A	N/A	N/A

2.7.2. For Radiated Spurious Emission

Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	Calibrated due until	Cal. Interval
Signal analyzer	Agilent	N9020A	MY50200811	2025.03.17	2026.03.16	1 year
Amplifier	JPT	JPA0118-55-303A	1910001800055000	2025.03.24	2026.03.23	1 year
Amplifier	JPT	JPA-10M1G32	21010100035001	2025.03.17	2026.03.16	1 year
Antenna/Turn table Controller	Brilliant	N/A	N/A	N/A	N/A	N/A
Loop Antenna(9kHz-30 MHz)	Daze	ZN30900C	20077	2025.05.13	2026.05.12	1 year
Bilog Antenna	SCHWARZBECK	VULB 9168	01174	2025.05.20	2026.05.19	1 year
Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120D	02334	2025.05.20	2026.05.19	1 year
Horn Antenna	COM-POWER	AH-1840	10100008	2025.07.27	2026.07.26	1 year
Thermometer	DeLi	N/A	N/A	2025.08.01	2026.07.31	1 year
Test Software	FALA	EMC-RI(Ver.4A2)	N/A	N/A	N/A	N/A
Wideband radio communication tester	R&S	CMW500	101331	2025.07.28	2026.07.27	1 year
Spectrum analyzer	R&S	FSV40-N	101761	2025.07.28	2026.07.27	1 year

2.7.3. For Conducted Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	Calibrated due until	Cal. Interval
Power sensor	DARE	RPR3006W	16I00054SN016	2025.07.28	2026.07.27	1 year
Adjustable Attenuator	Agilent	8494B	MY42144015	2025.07.28	2026.07.27	1 year
Adjustable Attenuator	Agilent	8496B	MY42143776	2025.07.28	2026.07.27	1 year
Environmental Test Chamber	KSON	THS-B6C-150	9159K	2025.03.17	2026.03.16	1 year
Signal analyzer	Keysight	N9020A	MY50510136	2025.07.18	2026.07.17	1 year
Vector signal generator	Agilent	N5182A	MY48180764	2025.07.18	2026.07.17	1 year
Analog signal generator	Keysight	N5182B	MY57300196	2025.07.18	2026.07.17	1 year
Wideband radio communication tester	R&S	CMW500	101331	2025.07.28	2026.07.27	1 year
Switch Box	Cesheng	smu 1003	WCS20221215	2025.03.19	2026.03.18	1 year
Thermometer	DeLi	N/A	N/A	2025.08.01	2026.07.31	1 year
Test Software	Cesheng	WCS-WCN	N/A	N/A	N/A	N/A

2.8. Measurement Uncertainty

The reported uncertainty of measurement y±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	±0.958dB
2	Conducted spurious emissions	±2.988dB
3	All emissions, radiated 9KHz-30MHz	±0.96dB
4	All emissions, radiated 30MHz-1GHz	±2.50dB
5	All emissions, radiated 1GHz-18GHz	±3.51dB
6	Occupied bandwidth	±23.20Hz
7	Power spectral density	±0.886dB

3. TEST RESULT

3.1. Maximum conducted output power

3.1.1. Limit

47 CFR 15.247(b)(3): For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.

47 CFR 15.247(b)(4): If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

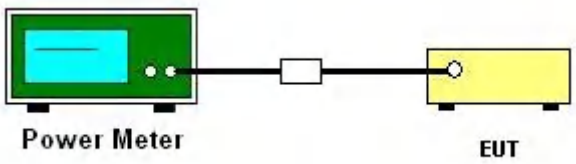
47 CFR 15.247(c)(1)(i): Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

3.1.2. Test Procedure

ANSI C63.10-2020 clause 11.9.2.3.2 Method AVGPM: Method AVGPM is a measurement using an RF average power meter, as follows:

measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at itsl maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.1.3. Test Setup



3.1.4. Test Result of Maximum Conducted Output Power

Please refer to the Appendix A1.

3.2. Duty Cycle

3.2.1. Limit

There is no limit requirement for Duty Cycle.

3.2.2. Test Procedure

ANSI C63.10-2020 clause 11.6: Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

1. A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.

2. The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

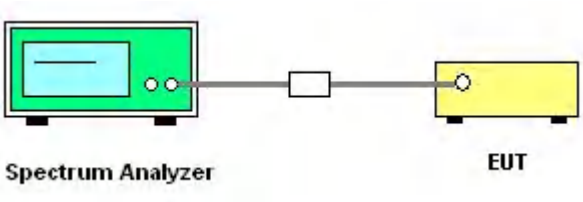
① Set the center frequency of the instrument to the center frequency of the transmission.

② Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.

③ Set VBW ≥ RBW. Set detector = peak or average.

④ The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if T ≤ 16.7 μs.)

3.2.3. Test Setup



3.2.4. Test Result of Duty Cycle

Please refer to the Appendix A2.

3.3. 6dB Bandwidth and 99% Bandwidth

3.3.1. Limit

47 CFR 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

There is no limit requirement for 99% Bandwidth.

3.3.2. Test Procedure

1. The testing of 6dB Bandwidth follows *ANSI C63.10-2020 clause 11.8.1*: The steps for the first option are as follows:

① Set RBW=shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.

② Set the VBW ≥ [3 × RBW].

③ Detector = peak.

④ Trace mode = max hold.

⑤ Sweep=No faster than coupled (auto) time.

⑥ Allow the trace to stabilize.

⑦ Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "-6 dB down amplitude". If a marker is below this "-6 dB down amplitude" value, then it shall be as close as possible to this value.

2. The testing of 99% Bandwidth follows *ANSI C63.10-2020 clause 6.9.3*: The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

① The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

② The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

③ Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in *ANSI C63.10-2020 clause 4.1.5.2*.

④ Step a) through step c) might require iteration to adjust within the specified range.

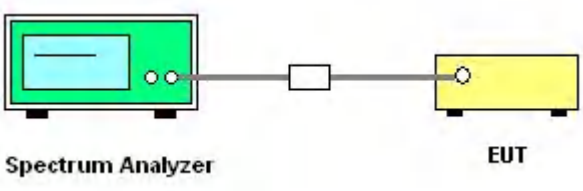
⑤ Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

⑥ Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

⑦ If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

⑧ The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

3.3.3. Test Setup



3.3.4. Test Result of 6dB Bandwidth and 99% Bandwidth

Please refer to the Appendix A3.

3.4. Power Spectral Density

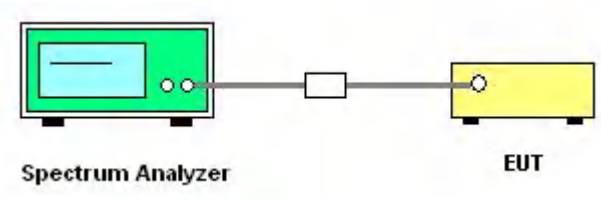
3.4.1. Limit

47 CFR 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

3.4.2. Test Procedure

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to 3 kHz.
4. Set the VBW ≥ [3 × RBW].
5. Detector =Peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.

3.4.3. Test Setup



3.4.4. Test Result of Power Spectral Density

Please refer to the Appendix A4.

3.5. Conducted Band Edge

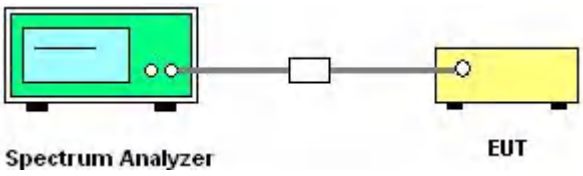
3.5.1. Limit

47 CFR 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

3.5.2. Test Procedure

1. The testing follows *ANSI C63.10-2020 clause 11.13*.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Set RBW = 100 kHz, VBW=300 kHz, RMS Detector. Conducted Band Edge measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the 100 kHz bandwidth within the band that contains the highest level of the desired power when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.
4. Measure and record the results in the test report.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.5.3. Test Setup



3.5.4. Test Result of Conducted Band Edge

Please refer to the Appendix A5.

3.6. Conducted Spurious Emission

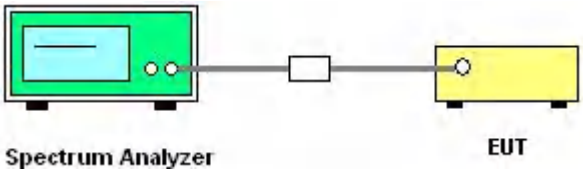
3.6.1. Limit

47 CFR 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

3.6.2. Test Procedure

1. The testing follows *ANSI C63.10-2020 clause 7.8.8*.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW = 300kHz, scan up through 10th harmonic. All harmonics / spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.6.3. Test Setup



3.6.4. Test Result of Conducted Spurious Emission

Please refer to the Appendix A5.

3.7. Radiated Spurious Emission and Restricted Band

3.7.1. Limit

47 CFR 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

47 CFR 15.205(a): Only spurious emissions are permitted in any of the frequency bands listed below:

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (MHz)
0.090-0.110	12.29-12.293	149.9-150.05	1660-1710	8.025-8.5
0.495-0.505	12.51975-12.52025	156.52475-156.52525	1718.8-1722.2	9.0-9.2
2.1735-2.1905	12.57675-12.57725	156.7-156.9	2200-2300	9.3-9.5
4.125-4.128	13.36-13.41	162.0125-167.17	2310-2390	10.6-12.7
4.17725-4.17775	16.42-16.423	167.72-173.2	2483.5-2500	13.25-13.4
4.20725-4.20775	16.69475-16.69525	240-285	2690-2900	14.47-14.5
6.215-6.218	16.80425-16.80475	322-335.4	3260-3267	15.35-16.2
6.26775-6.26825	25.5-25.67	399.9-410	3332-3339	17.7-21.4
6.31175-6.31225	37.5-38.25	608-614	3345.8-3358	22.01-23.12
8.291-8.294	73-74.6	960-1240	3600-4400	23.6-24.0
8.362-8.366	74.8-75.2	1300-1427	4500-5150	31.2-31.8
8.37625-8.38675	108-121.94	1435-1626.5	5350-5460	36.43-36.5
8.41425-8.41475	123-138	1645.5-1646.5	7250-7750	Above 38.6

47 CFR 15.209(a): The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

3.7.2. Test Procedure

1. The testing follows ANSI C63.10-2020 clause 11.11 & 11.12.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.

3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Pre-amp Factor = Level.

6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.

7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

8. Use the following spectrum analyzer settings:

① Span shall wide enough to fully capture the emission being measured;

② When frequency < 1 GHz:

• Set RBW=100 kHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;

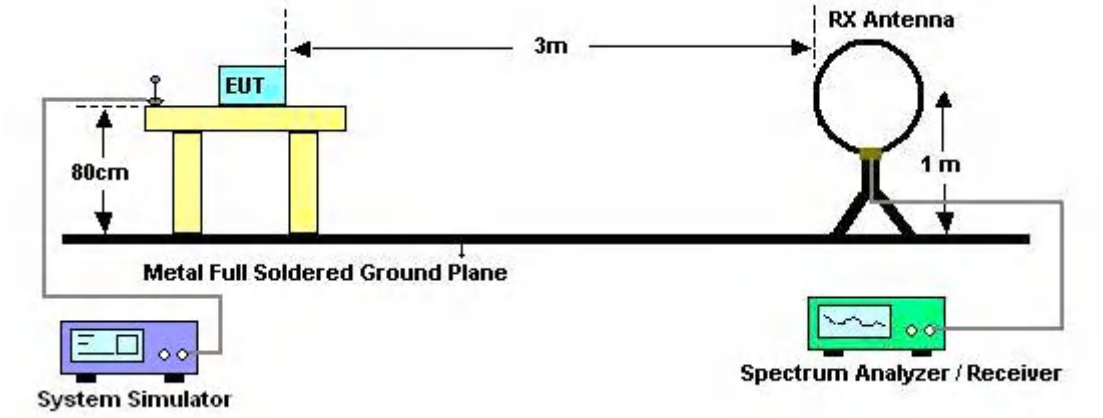
③ When frequency ≥ 1 GHz:

• Set RBW = 1 MHz; VBW = 3 MHz for peak measurement;

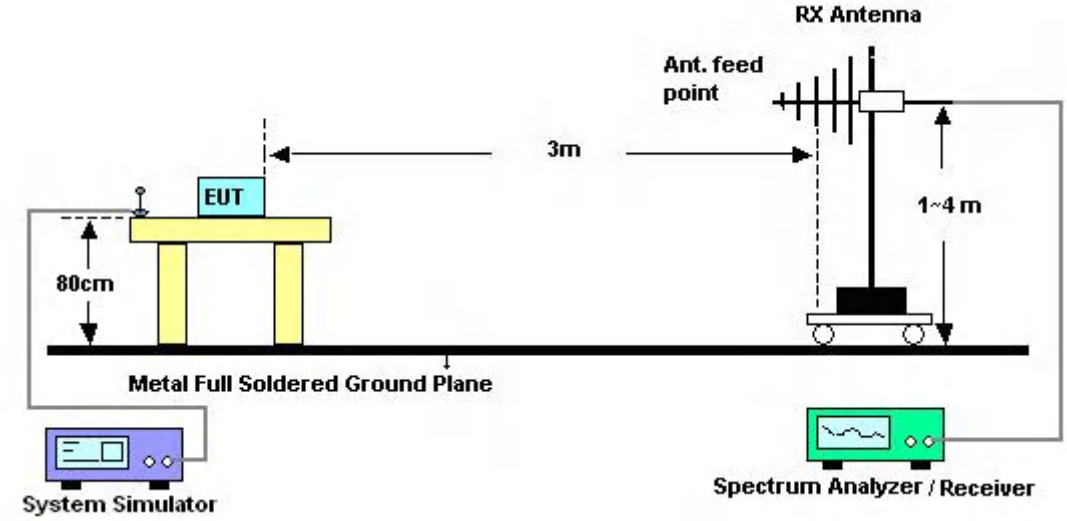
• Set RBW = 1 MHz; VBW = 10 Hz, when duty cycle is no less than 98 percent or VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.7.3. Test Setup

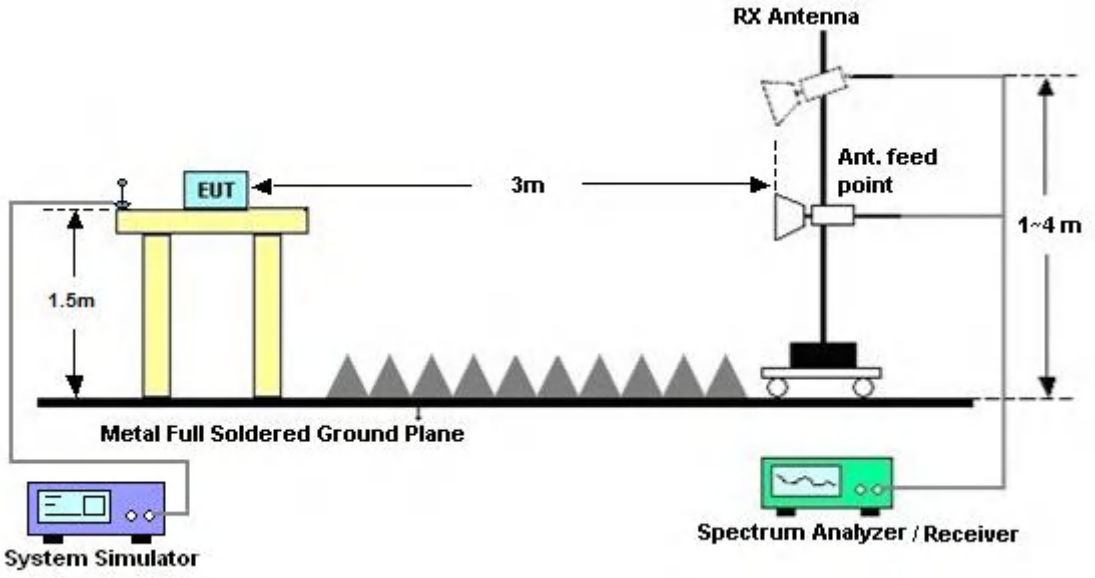
3.7.3.1. For radiated emissions below 30MHz



3.7.3.2. For radiated emissions from 30MHz to 1GHz



3.7.3.3. For radiated emissions above 1GHz



3.7.4. Test Result of Radiated Spurious Emission

For 9 kHz ~ 30 MHz

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

For 30 MHz ~ 1 GHz:

Note:

1.All modes have been tested, only worst case(802.11ax-2412MHz)mode was recorded in the test report.

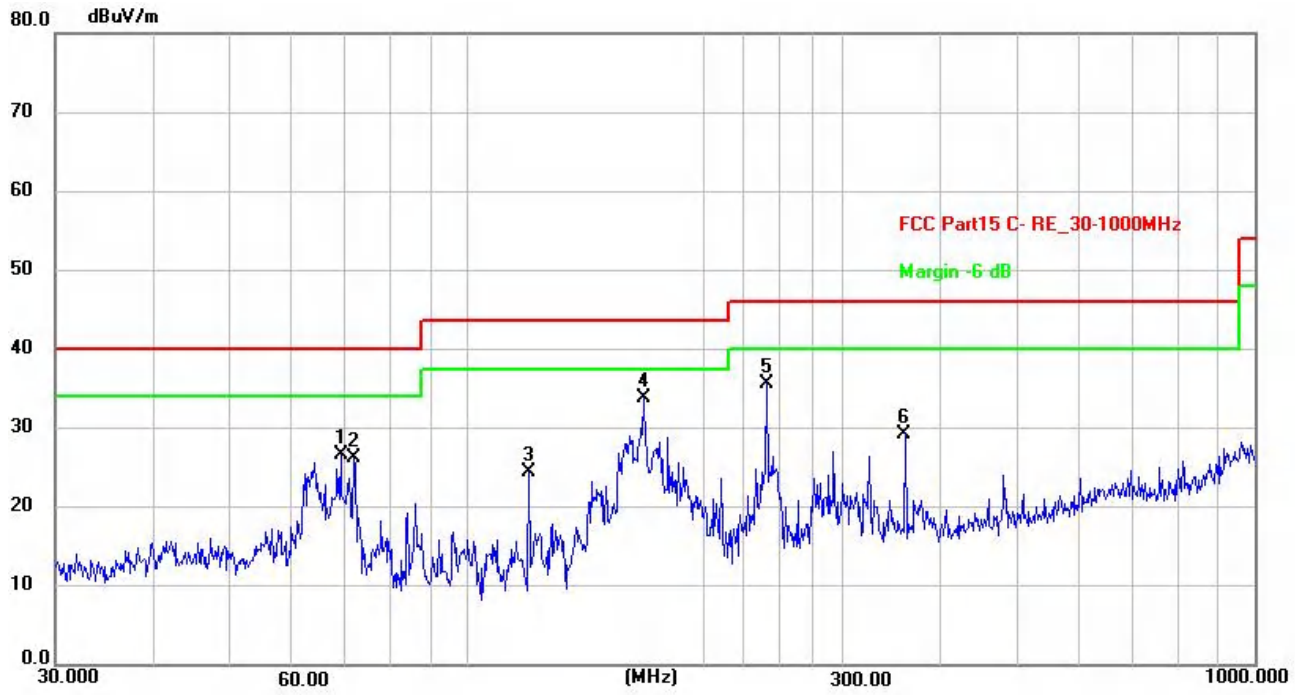
2.Emission Level = Reading Value + Correction Factor.

3.Correction Factor= Antenna Factor+ Cable Factor-Amplifier Gain.

4.The emission levels of other frequencies were less than 20dB margin against the limit.

5.Margin value = Emission level-Limit value.

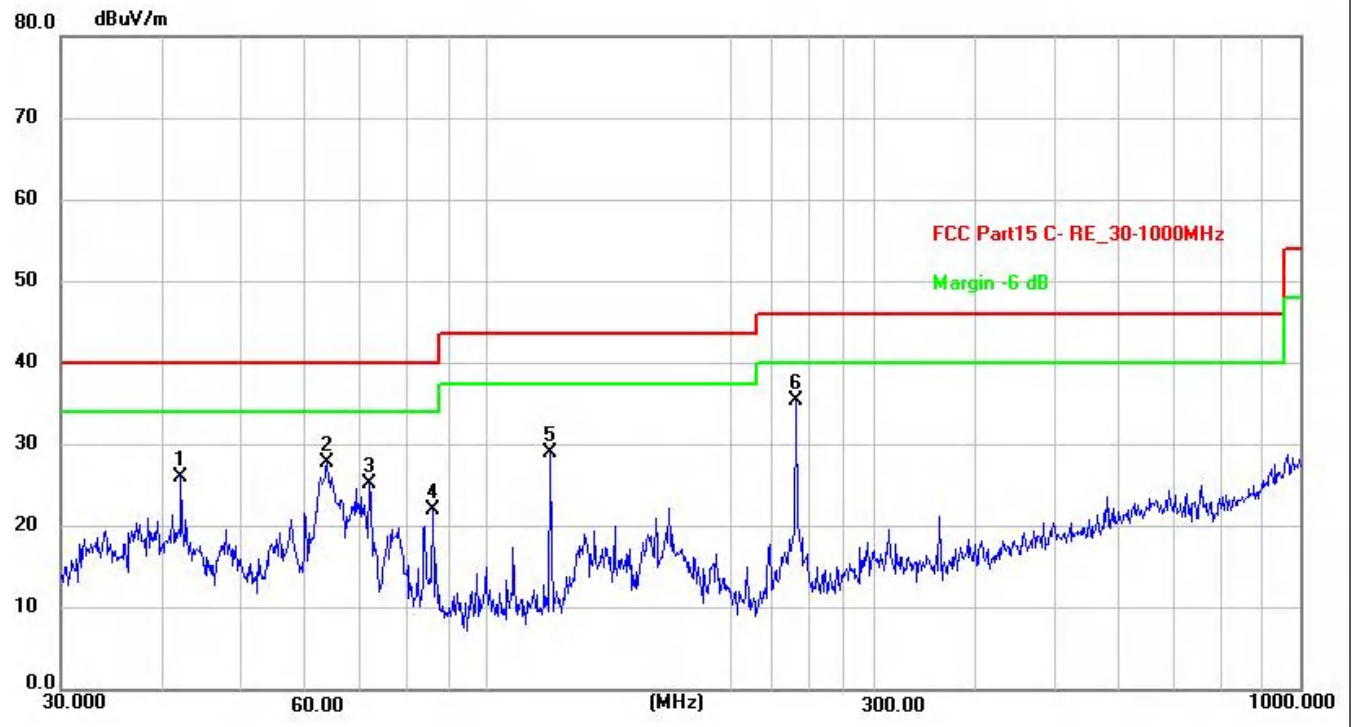
Polarization	Horizontal	Mode	11ax-2412MHz



Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
69.1141	52.58	-25.98	26.60	40.00	-13.40	peak
71.8320	52.75	-26.54	26.21	40.00	-13.79	peak
119.8556	51.07	-26.70	24.37	43.50	-19.13	peak
167.8243	58.26	-24.42	33.84	43.50	-9.66	peak

239.9874	61.16	-25.51	35.65	46.00	-10.35	peak
360.4476	50.53	-21.32	29.21	46.00	-16.79	peak

Polarization	Vertical	Mode	11ax-2412MHz



Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
42.1542	49.11	-23.17	25.94	40.00	-14.06	peak
63.7588	53.18	-25.42	27.76	40.00	-12.24	peak
71.8320	51.86	-26.54	25.32	40.00	-14.68	peak
85.8984	50.88	-28.93	21.95	40.00	-18.05	peak
119.8556	55.75	-26.70	29.05	43.50	-14.45	peak
239.9874	60.98	-25.51	35.47	46.00	-10.53	peak

Above 1GHz:

Note:

1.All data rate modes had been test, only worst case(802.11ax)mode was recorded in the test report.

2.In frequency ranges 18 ~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.

3.We used the filter to test and the main frequency was filtered out.

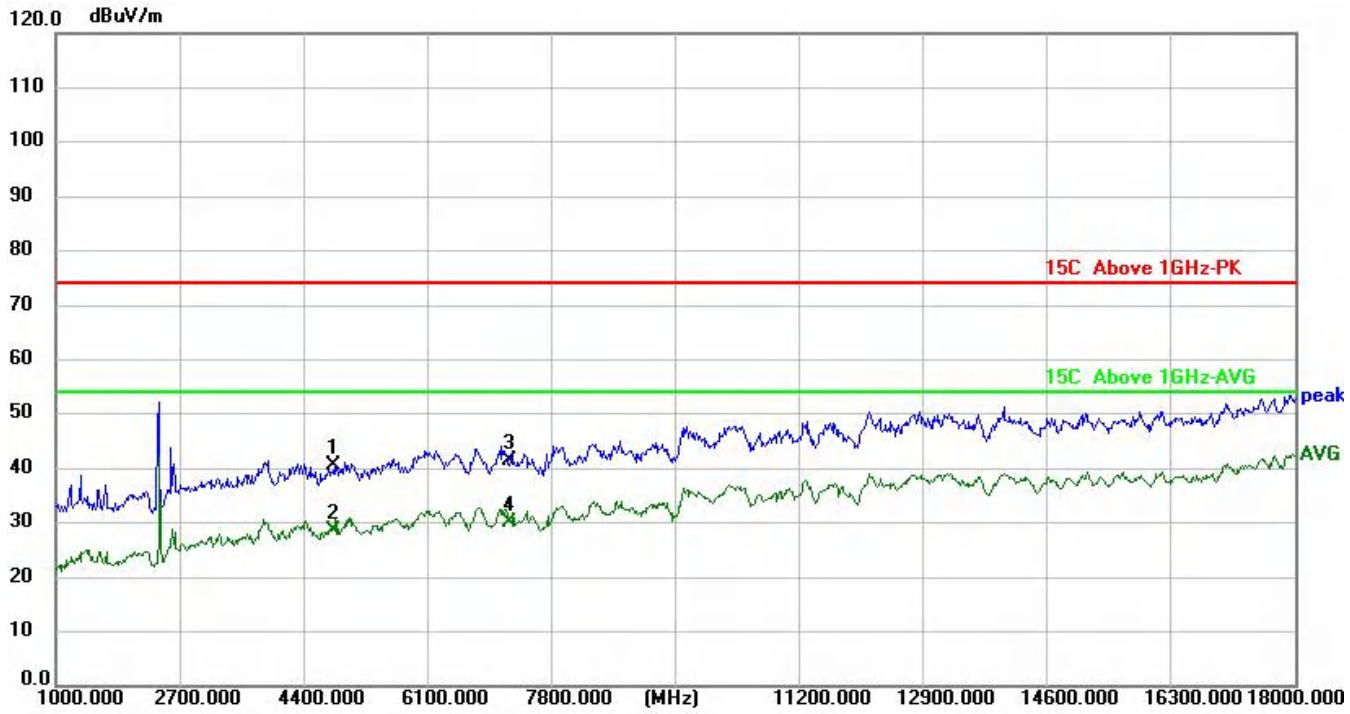
4.Emission Level= Reading Value+ Correction Factor.

5.Correction Factor= Antenna Factor+ Cable Factor-Amplifier Gain.

6.The emission levels of other frequencies were less than 20dB margin against the limit.

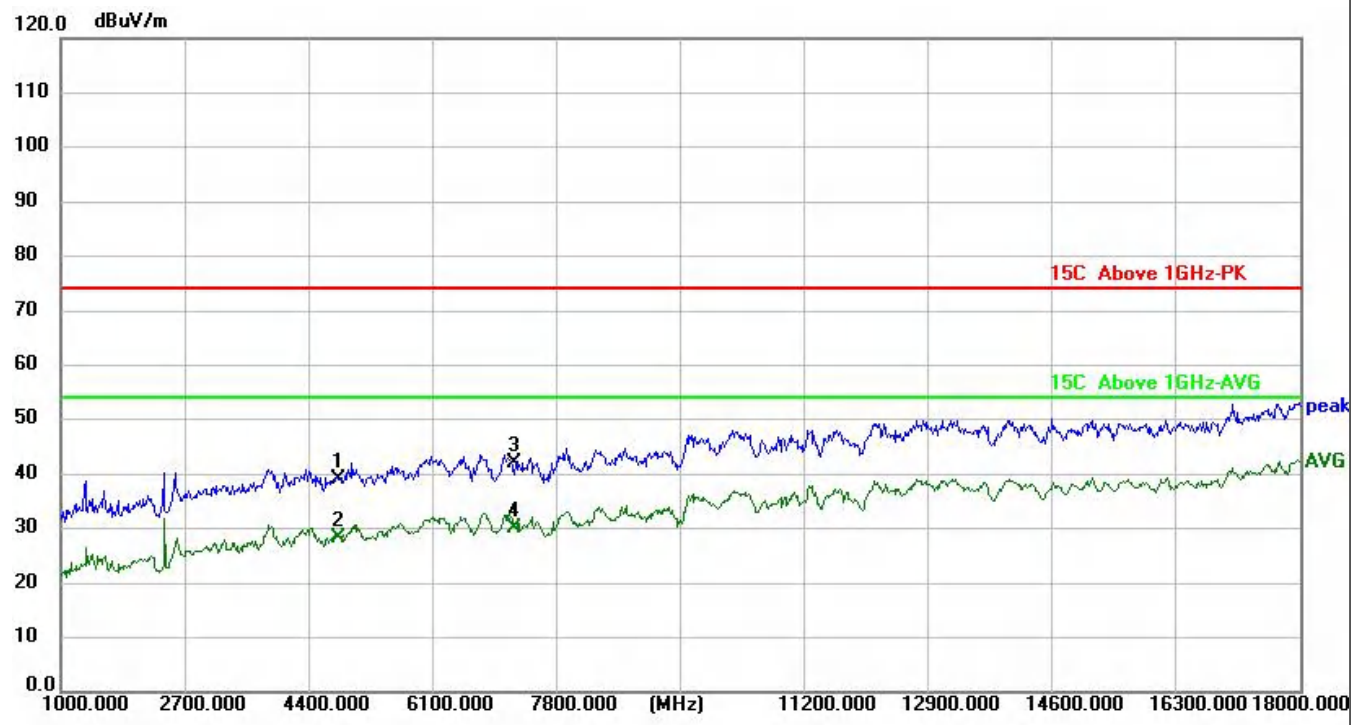
7.Margin value = Emission level-Limit value.

Polarization	Horizontal	Mode	11ax20-2412MHz



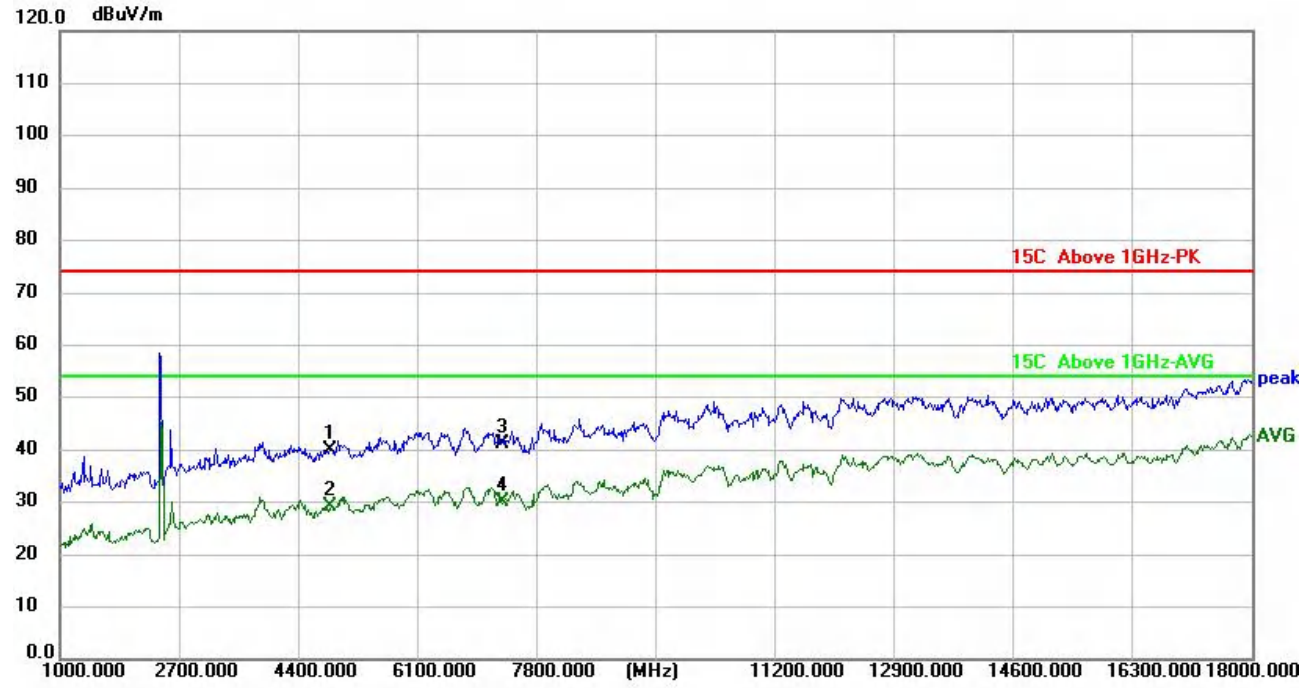
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4824.000	48.68	-5.81	42.87	74.00	-31.13	peak
4824.000	34.16	-5.81	28.35	54.00	-25.65	AVG
7236.000	41.45	-0.29	41.16	74.00	-32.84	peak
7236.000	30.33	-0.29	30.04	54.00	-23.96	AVG
4824.000	48.68	-5.81	42.87	74.00	-31.13	peak
4824.000	34.16	-5.81	28.35	54.00	-25.65	AVG

Polarization	Vertical	Mode	11ax20-2412MHz



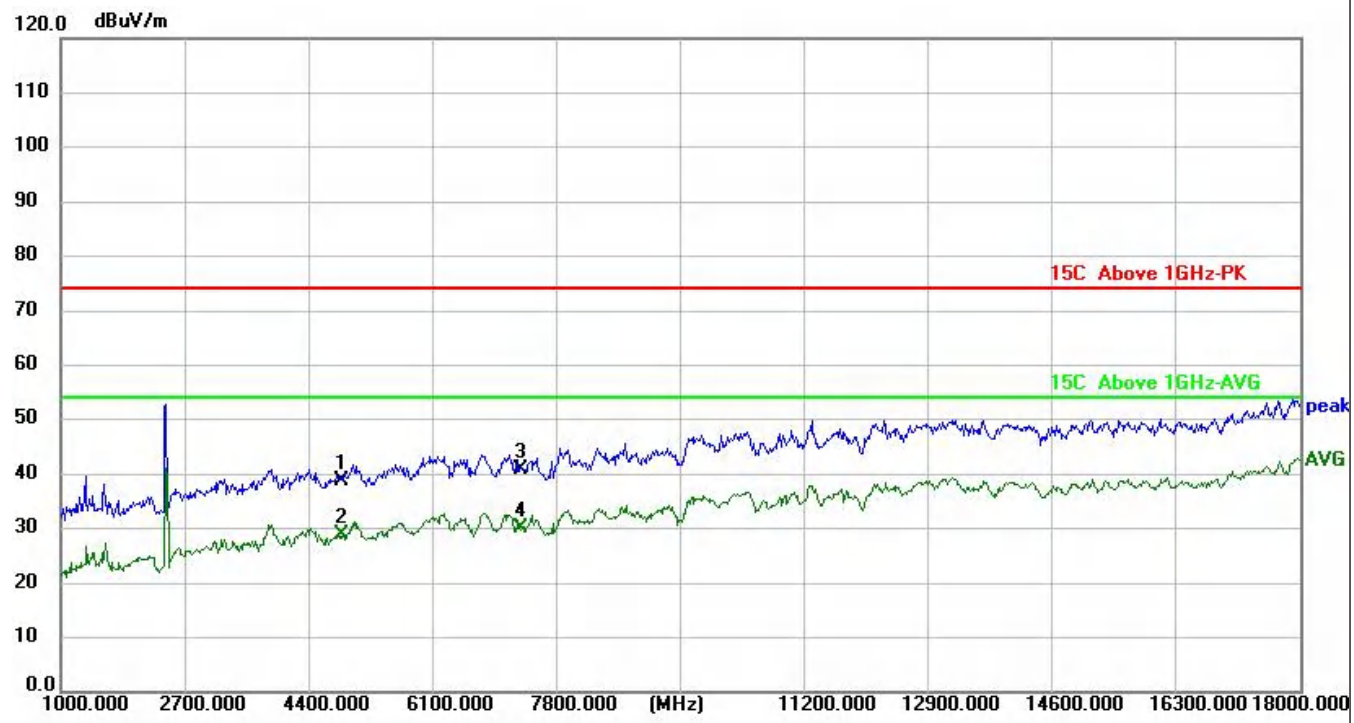
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4824.000	44.98	-5.81	39.17	74.00	-34.83	peak
4824.000	34.04	-5.81	28.23	54.00	-25.77	AVG
7236.000	42.30	-0.29	42.01	74.00	-31.99	peak
7236.000	30.27	-0.29	29.98	54.00	-24.02	AVG

Polarization	Horizontal	Mode	11ax20-2437MHz



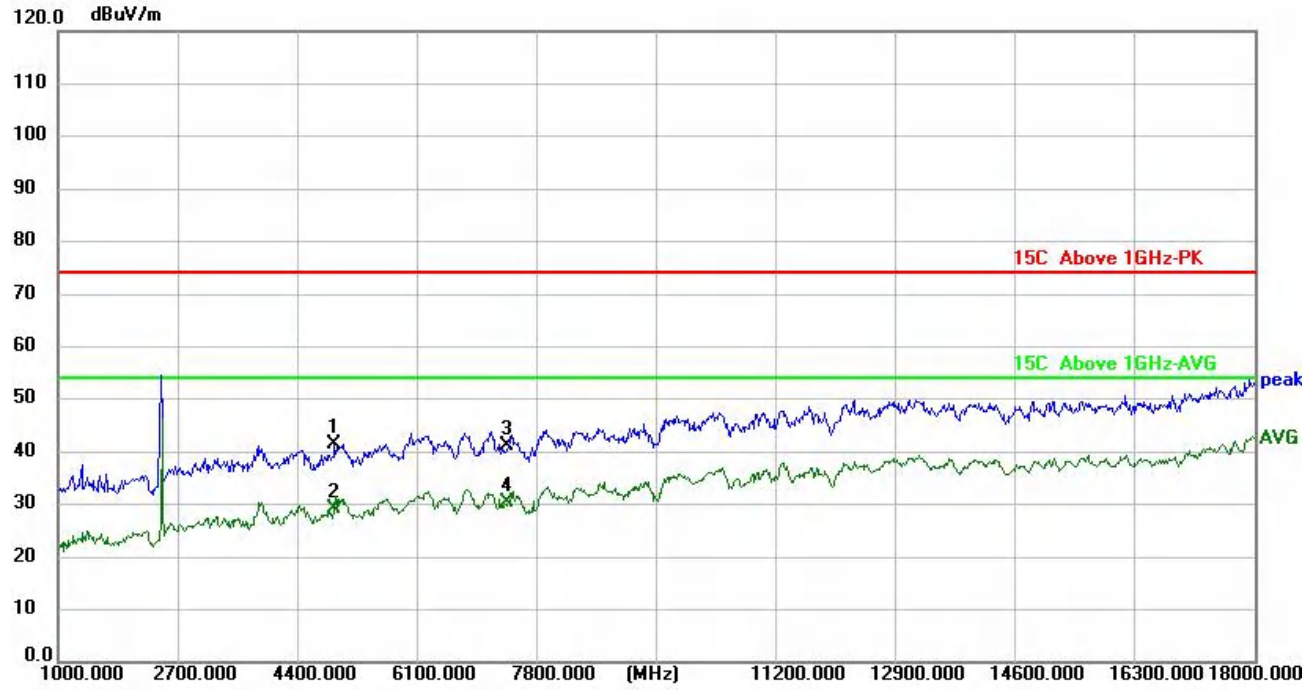
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4874.000	45.49	-5.63	39.86	74.00	-34.14	peak
4874.000	34.68	-5.63	29.05	54.00	-24.95	AVG
7311.000	41.50	-0.32	41.18	74.00	-32.82	peak
7311.000	30.39	-0.32	30.07	54.00	-23.93	AVG

Polarization	Vertical	Mode	11ax20-2437MHz



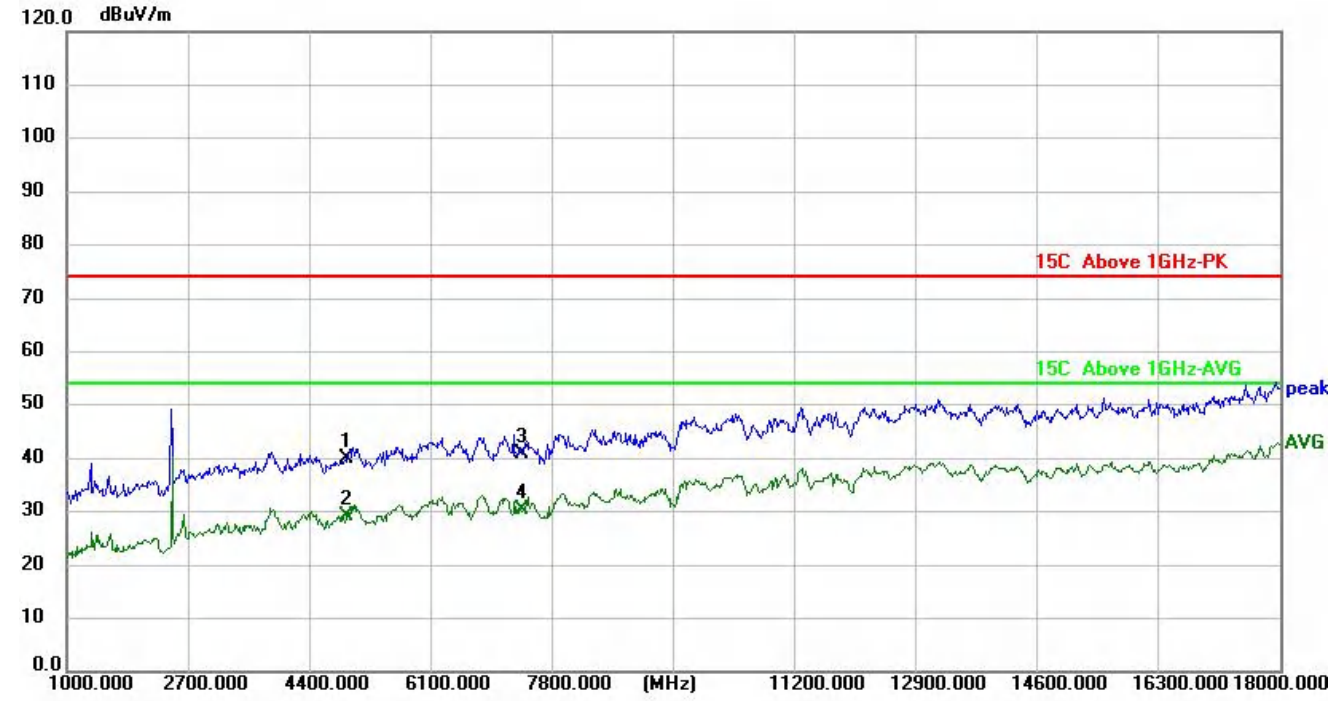
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4874.000	44.36	-5.63	38.73	74.00	-35.27	peak
4874.000	34.64	-5.63	29.01	54.00	-24.99	AVG
7311.000	41.24	-0.32	40.92	74.00	-33.08	peak
7311.000	30.29	-0.32	29.97	54.00	-24.03	AVG

Polarization	Horizontal	Mode	11ax20-2462MHz



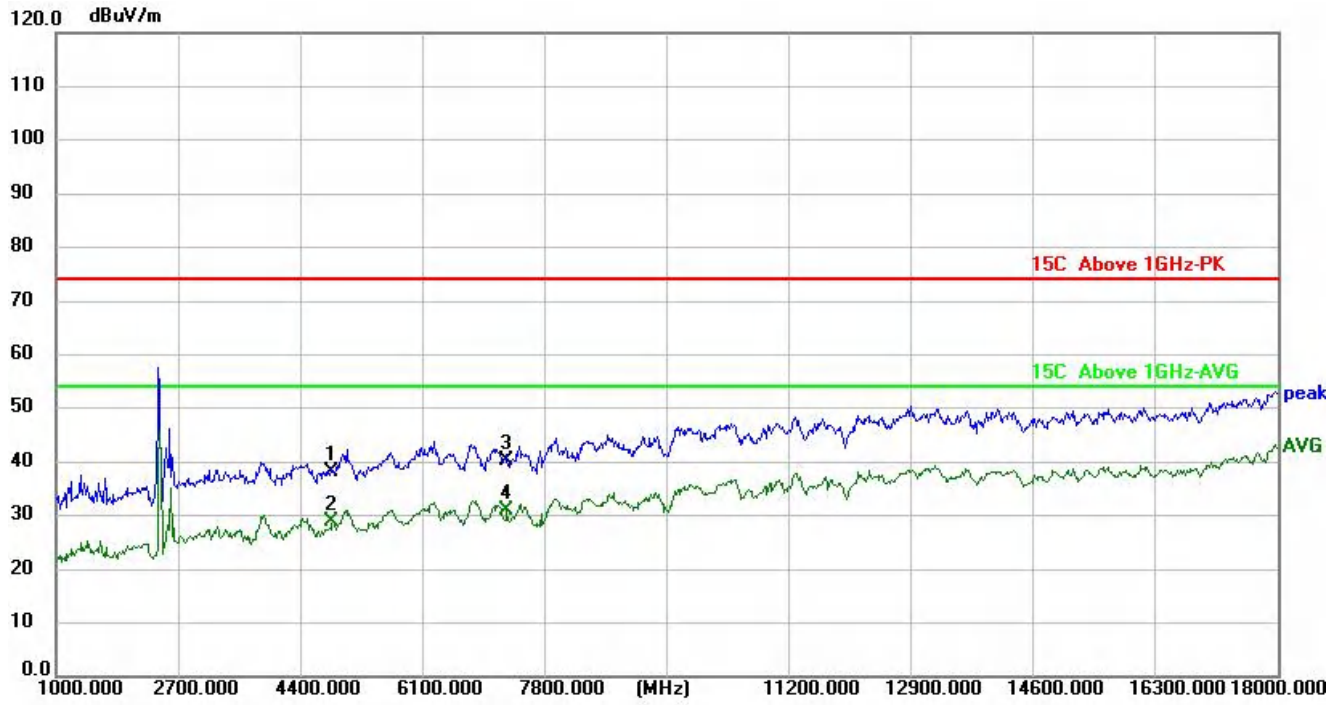
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4924.000	47.05	-5.46	41.59	74.00	-32.41	peak
4924.000	34.62	-5.46	29.16	54.00	-24.84	AVG
7386.000	41.42	-0.35	41.07	74.00	-32.93	peak
7386.000	30.60	-0.35	30.25	54.00	-23.75	AVG

Polarization	Vertical	Mode	11ax20-2462MHz



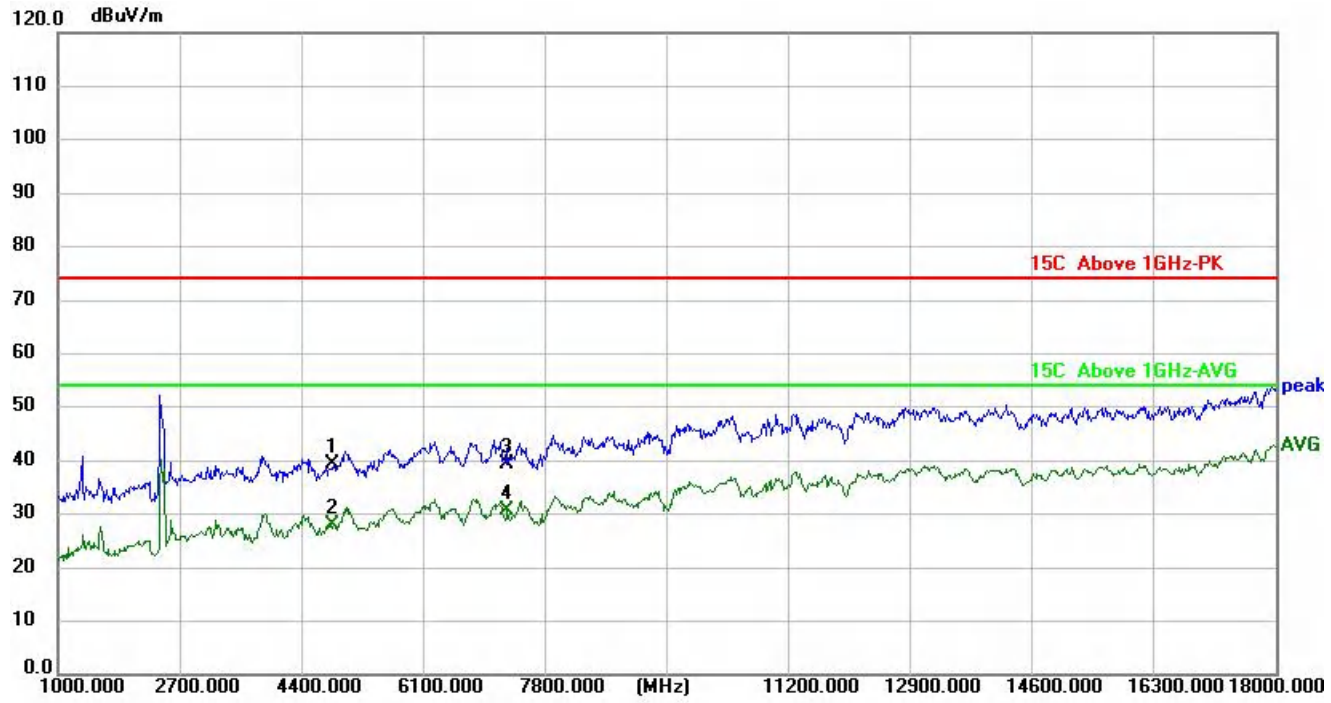
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4924.000	45.30	-5.46	39.84	74.00	-34.16	peak
4924.000	34.59	-5.46	29.13	54.00	-24.87	AVG
7386.000	41.23	-0.35	40.88	74.00	-33.12	peak
7386.000	30.63	-0.35	30.28	54.00	-23.72	AVG

Polarization	Horizontal	Mode	11ax40-2422MHz



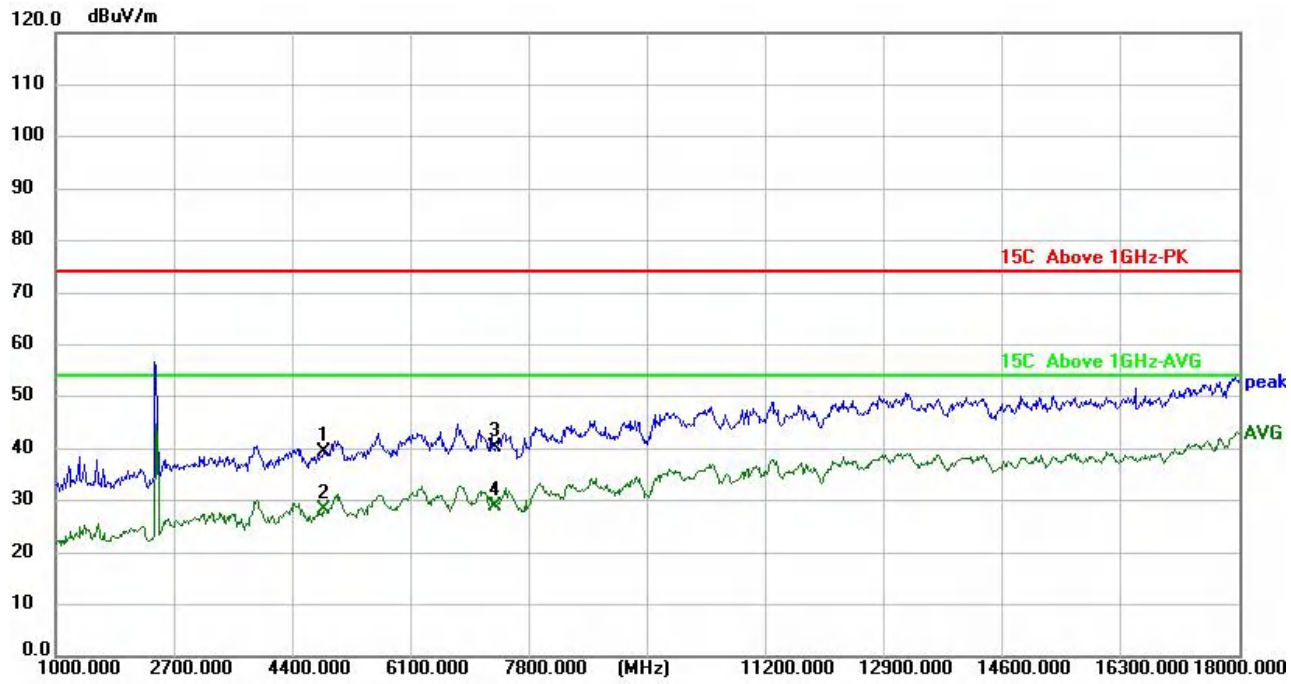
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4844.000	44.01	-5.74	38.27	74.00	-35.73	peak
4844.000	34.55	-5.74	28.81	54.00	-25.19	AVG
7266.000	40.56	-0.31	40.25	74.00	-33.75	peak
7266.000	31.23	-0.31	30.92	54.00	-23.08	AVG

Polarization	Vertical	Mode	11ax40-2422MHz



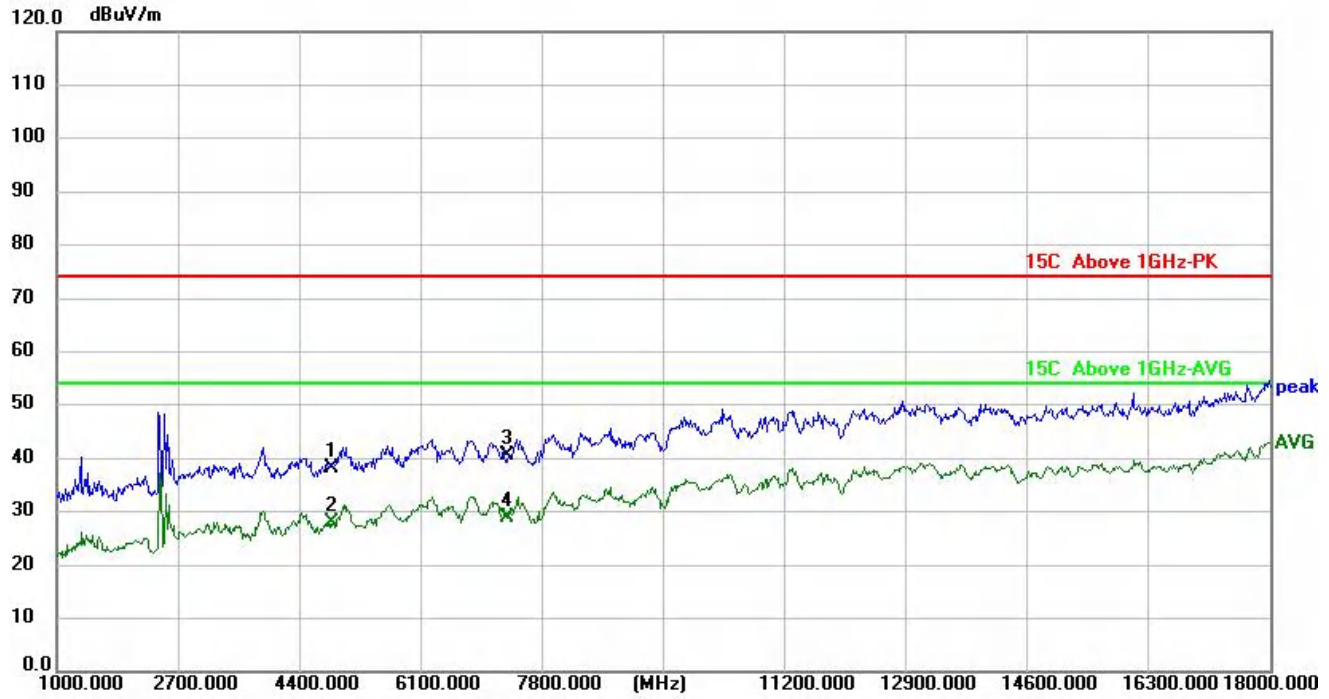
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4844.000	44.95	-5.74	39.21	74.00	-34.79	peak
4844.000	33.67	-5.74	27.93	54.00	-26.07	AVG
7266.000	39.62	-0.31	39.31	74.00	-34.69	peak
7266.000	31.03	-0.31	30.72	54.00	-23.28	AVG

Polarization	Horizontal	Mode	11ax40-2437MHz



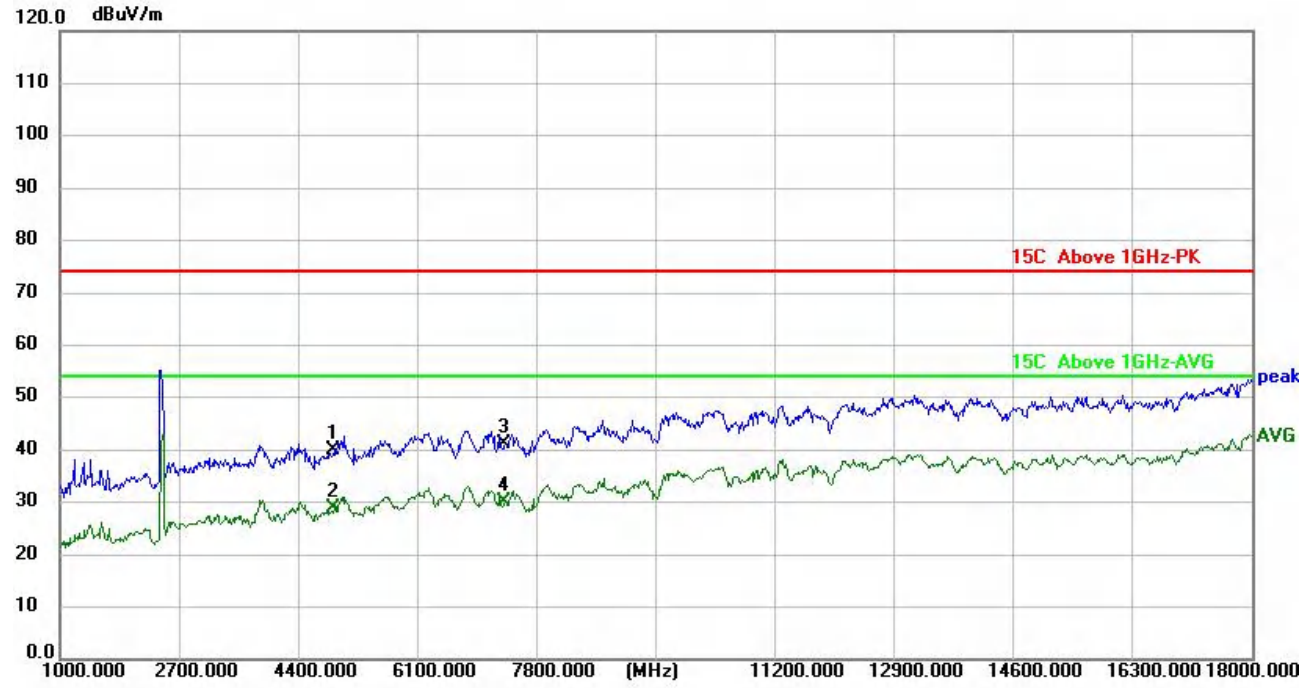
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4874.000	44.84	-5.63	39.21	74.00	-34.79	peak
4874.000	33.94	-5.63	28.31	54.00	-25.69	AVG
7311.000	40.54	-0.32	40.22	74.00	-33.78	peak
7311.000	29.34	-0.32	29.02	54.00	-24.98	AVG

Polarization	Vertical	Mode	11ax40-2437MHz



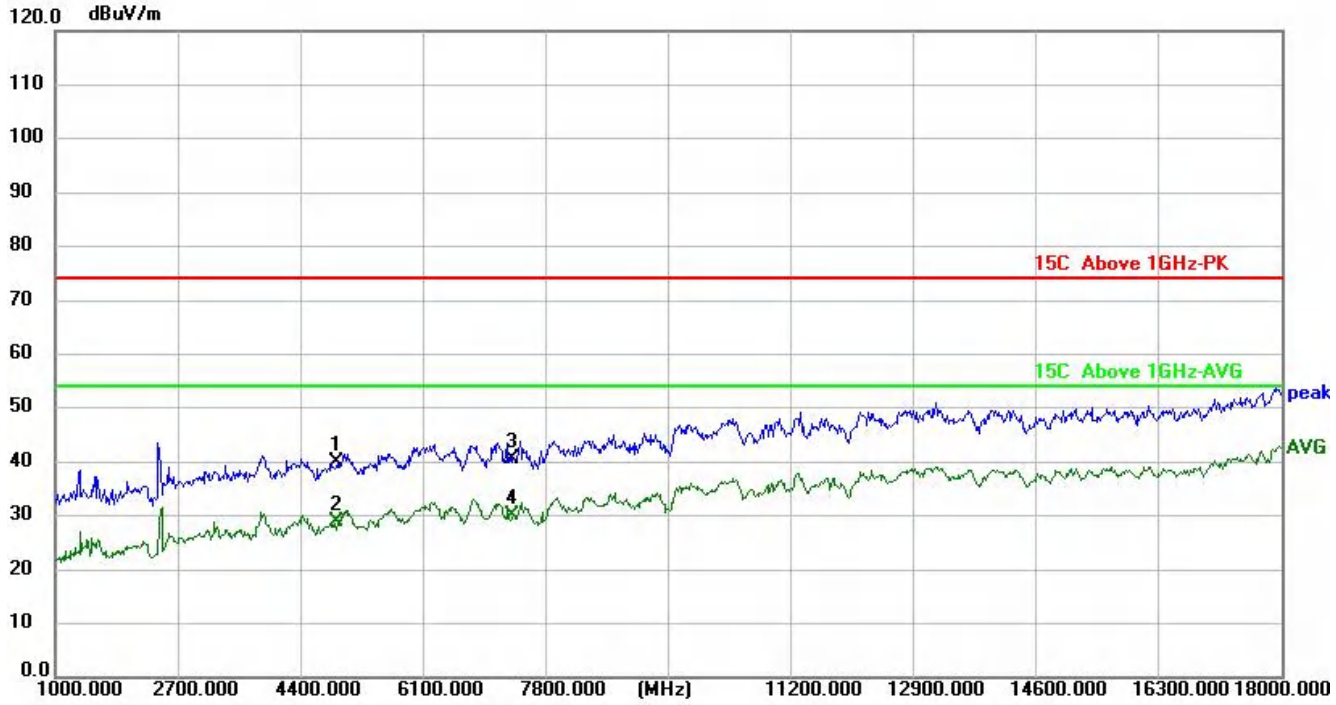
Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4874.000	43.80	-5.63	38.17	74.00	-35.83	peak
4874.000	33.56	-5.63	27.93	54.00	-26.07	AVG
7311.000	41.01	-0.32	40.69	74.00	-33.31	peak
7311.000	29.34	-0.32	29.02	54.00	-24.98	AVG

Polarization	Horizontal	Mode	11ax40-2452MHz



Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4904.000	45.48	-5.53	39.95	74.00	-34.05	peak
4904.000	34.47	-5.53	28.94	54.00	-25.06	AVG
7356.000	41.34	-0.34	41.00	74.00	-33.00	peak
7356.000	30.52	-0.34	30.18	54.00	-23.82	AVG

Polarization	Vertical	Mode	11ax40-2452MHz



Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV)	Margin (dB)	Det.
4904.000	45.34	-5.53	39.81	74.00	-34.19	peak
4904.000	34.30	-5.53	28.77	54.00	-25.23	AVG
7356.000	40.97	-0.34	40.63	74.00	-33.37	peak
7356.000	30.37	-0.34	30.03	54.00	-23.97	AVG

3.7.5. Test Result of Restricted Band

Note:

1.All data rate modes had been test, only worst case(802.11ax)mode was recorded in the test report.

2.Emission Level= Reading Value+ Correction Factor.

3.Correction Factor= Antenna Factor+ Cable Factor-Amplifier Gain.

4.The emission levels of other frequencies were less than 20dB margin against the limit.

5.Margin value = Emission level-Limit value.

Test Mode: 802.11ax20

Test Channel: Lowest channel, Test Polarization: Vertical

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.000	49.26	-16.09	33.17	74.00	-40.83	peak	Pass
2310.000	38.50	-16.09	22.41	54.00	-31.59	AVG	Pass
2390.000	48.76	-15.88	32.88	74.00	-41.12	peak	Pass
2390.000	38.77	-15.88	22.89	54.00	-31.11	AVG	Pass

Test Channel: Lowest channel, Test Polarization: Horizontal

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.000	49.27	-16.09	33.18	74.00	-40.82	peak	Pass
2310.000	38.54	-16.09	22.45	54.00	-31.55	AVG	Pass
2390.000	51.11	-15.88	35.23	74.00	-38.77	peak	Pass
2390.000	38.90	-15.88	23.02	54.00	-30.98	AVG	Pass

Test Channel: Highest channel, Test Polarization: Vertical

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.500	49.75	-15.30	34.45	74.00	-39.55	peak	Pass
2483.500	38.44	-15.30	23.14	54.00	-30.86	AVG	Pass
2500.000	49.49	-15.19	34.30	74.00	-39.70	peak	Pass
2500.000	39.37	-15.19	24.18	54.00	-29.82	AVG	Pass

Test Channel: Highest channel, Test Polarization: Horizontal

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.500	49.30	-15.30	34.00	74.00	-40.00	peak	Pass
2483.500	38.44	-15.30	23.14	54.00	-30.86	AVG	Pass
2500.000	49.88	-15.19	34.69	74.00	-39.31	peak	Pass

2500.000	39.47	-15.19	24.28	54.00	-29.72	AVG	Pass

Test Mode: 802.11ax40

Test Channel: Lowest channel, Test Polarization: Vertical

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.000	49.04	-16.09	32.95	74.00	-41.05	peak	Pass
2310.000	38.52	-16.09	22.43	54.00	-31.57	AVG	Pass
2390.000	49.56	-15.88	33.68	74.00	-40.32	peak	Pass
2390.000	38.81	-15.88	22.93	54.00	-31.07	AVG	Pass

Test Channel: Lowest channel, Test Polarization: Horizontal

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.000	49.00	-16.09	32.91	74.00	-41.09	peak	Pass
2310.000	38.69	-16.09	22.60	54.00	-31.40	AVG	Pass
2390.000	49.23	-15.88	33.35	74.00	-40.65	peak	Pass
2390.000	38.73	-15.88	22.85	54.00	-31.15	AVG	Pass

Test Channel: Highest channel, Test Polarization: Vertical

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.500	49.60	-15.30	34.30	74.00	-39.70	peak	Pass
2483.500	38.42	-15.30	23.12	54.00	-30.88	AVG	Pass
2500.000	50.27	-15.19	35.08	74.00	-38.92	peak	Pass
2500.000	39.49	-15.19	24.30	54.00	-29.70	AVG	Pass

Test Channel: Highest channel, Test Polarization: Horizontal

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.500	48.41	-15.30	33.11	74.00	-40.89	peak	Pass
2483.500	38.46	-15.30	23.16	54.00	-30.84	AVG	Pass
2500.000	49.93	-15.19	34.74	74.00	-39.26	peak	Pass
2500.000	39.44	-15.19	24.25	54.00	-29.75	AVG	Pass

3.8. AC Power-Line Conducted Emission

3.8.1. Limit

47 CFR 15.207(a): For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table:

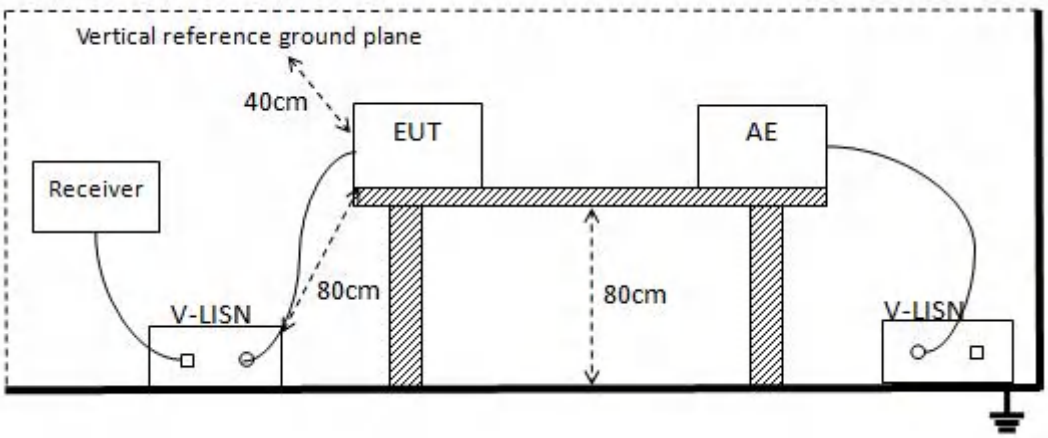
Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

3.8.2. Test Procedure

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9 kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.8.3. Test Setup

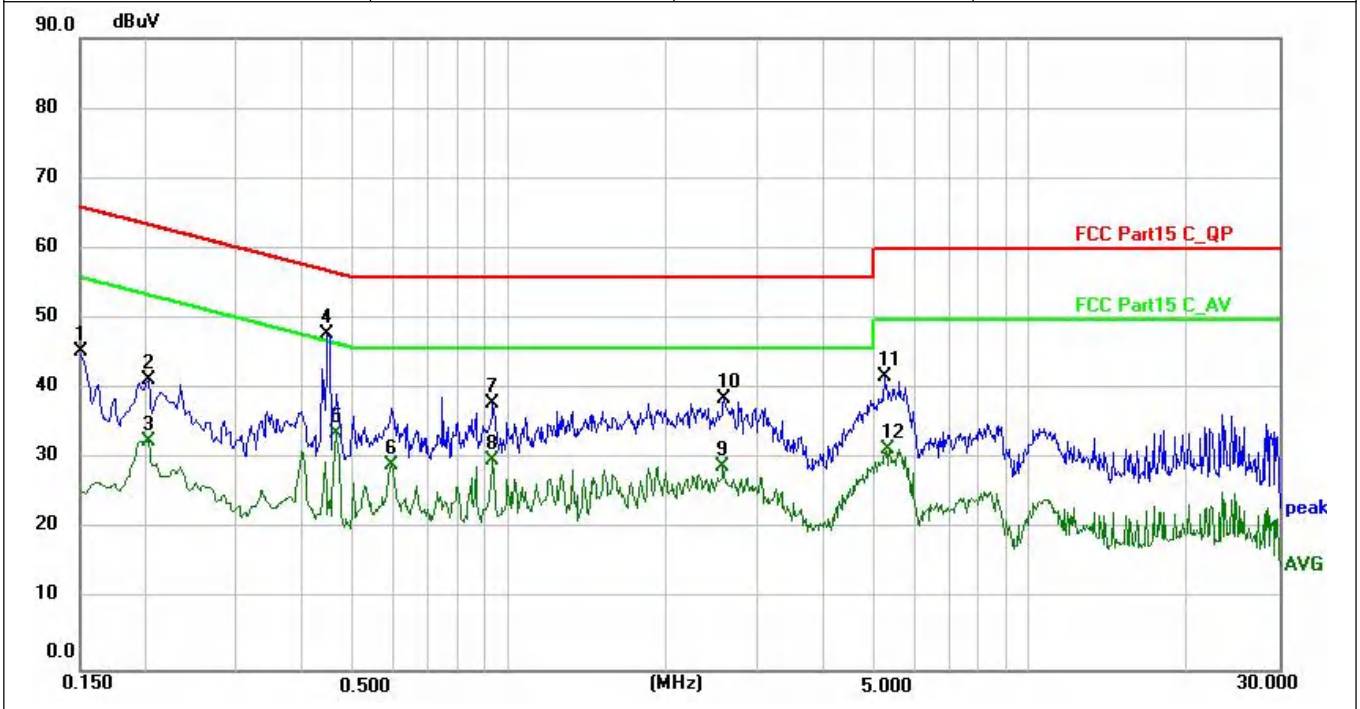


3.8.4. Test Result of AC Power-Line Conducted Emission

Note:

1.All modes have been tested, only worst case(802.11ax20 2412MHz)mode was recorded in the test report.
2.Emission Level = Reading Value+ Correction Factor.
3.Correction Factor= Insertion loss + Cable loss.
4.The emission levels of other frequencies were less than 20dB margin against the limit.
5.Margin value = Emission level-Limit value.

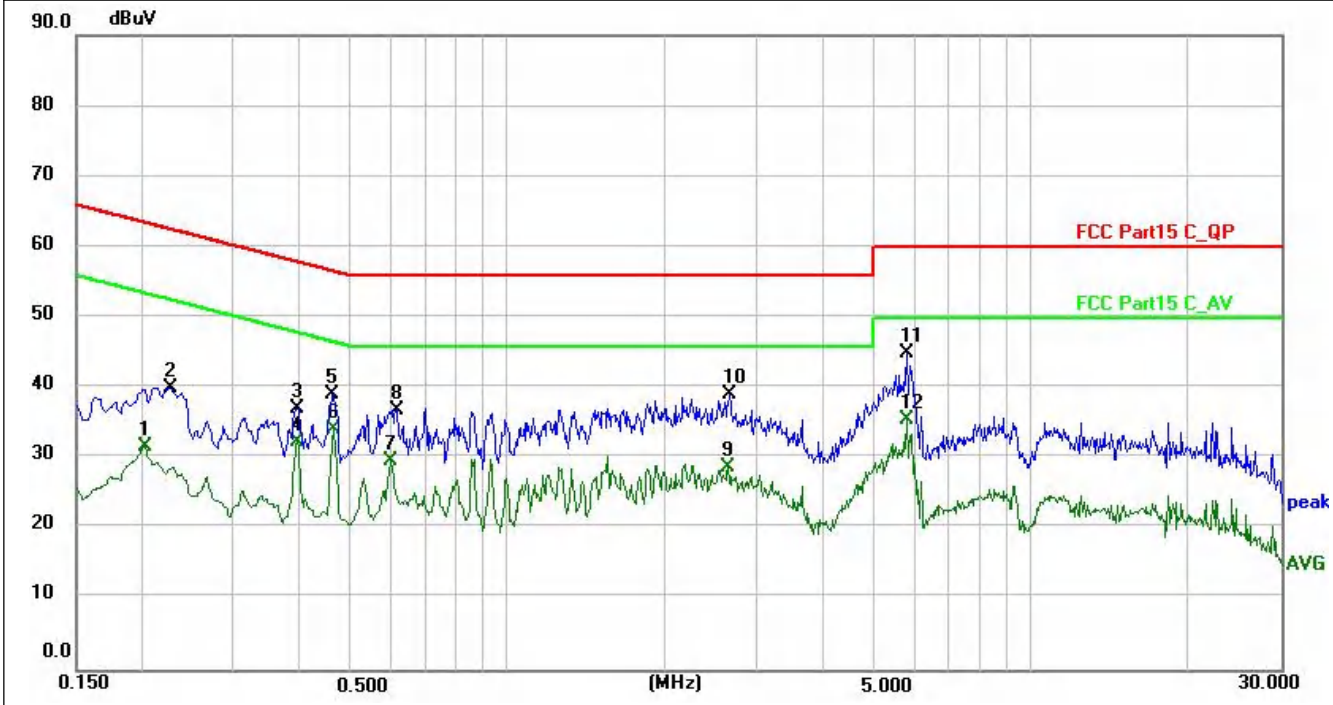
Polarization	L	Mode	11ax-2412



Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Det.
0.1500	26.13	19.35	45.48	66.00	-20.52	peak
0.2020	21.99	19.32	41.31	63.53	-22.22	peak
0.2020	13.38	19.32	32.70	53.53	-20.83	AVG
0.4460	28.46	19.39	47.85	56.95	-9.10	peak
0.4660	14.38	19.37	33.75	46.58	-12.83	AVG
0.5940	9.83	19.40	29.23	46.00	-16.77	AVG
0.9300	18.66	19.39	38.05	56.00	-17.95	peak
0.9300	10.53	19.39	29.92	46.00	-16.08	AVG
2.5700	9.61	19.47	29.08	46.00	-16.92	AVG
2.5860	19.15	19.47	38.62	56.00	-17.38	peak

5.2700	22.46	19.51	41.97	60.00	-18.03	peak
5.3659	12.05	19.50	31.55	50.00	-18.45	AVG

Polarization	N	Mode	11ax-2412



Frequency (MHz)	Read_Level (dBuV)	Factor (dB)	Level (dBuV	Limit (dBuV)	Margin (dB)	Det.
0.2020	12.48	19.32	31.80	53.53	-21.73	AVG
0.2260	20.83	19.33	40.16	62.60	-22.44	peak
0.3940	17.86	19.39	37.25	57.98	-20.73	peak
0.3940	13.07	19.39	32.46	47.98	-15.52	AVG
0.4620	19.86	19.38	39.24	56.66	-17.42	peak
0.4660	14.88	19.37	34.25	46.58	-12.33	AVG
0.5980	10.36	19.40	29.76	46.00	-16.24	AVG
0.6140	17.63	19.40	37.03	56.00	-18.97	peak
2.6380	9.27	19.46	28.73	46.00	-17.27	AVG
2.6580	19.61	19.46	39.07	56.00	-16.93	peak
5.7980	25.42	19.51	44.93	60.00	-15.07	peak
5.7980	15.97	19.51	35.48	50.00	-14.52	AVG

3.9. Antenna Requirement

3.9.1. Standard Requirement

According to *47 CFR 15.203*, 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.

3.9.2. EUT Antenna

The antenna used for the EUT is FPC Antenna, which meets the antenna requirements.

4. Test Setup Photographs

Please refer to the Appendix F.

5. External And Internal Photos of The EUT

External Please refer to the Appendix G.

Internal Please refer to the Appendix H.

Appendix A of data

A1.Maximum conducted output power

Test Result

Conducted output power

Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	18.16	≤30	PASS
	6	15.11	≤30	PASS
	11	16.43	≤30	PASS
IEEE 802.11g	1	19.47	≤30	PASS
	6	15.66	≤30	PASS
	11	17.36	≤30	PASS
IEEE 802.11n_20	1	20.04	≤30	PASS
	6	15.90	≤30	PASS
	11	17.95	≤30	PASS
IEEE 802.11n_40	3	18.62	≤30	PASS
	6	16.68	≤30	PASS
	9	16.29	≤30	PASS
IEEE 802.11ax_20	1	**20.37**	≤30	PASS
	6	16.27	≤30	PASS
	11	18.14	≤30	PASS
IEEE 802.11ax_40	3	19.33	≤30	PASS
	6	15.20	≤30	PASS
	9	16.98	≤30	PASS

A2.Duty Cycle

Test Result

Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)
IEEE 802.11b	1	1	0	8.416	18.496	45.50	0.4550	3.4199
		6		8.416	18.493	45.51	0.4551	3.4189
		11		8.416	18.496	45.50	0.4550	3.4199
IEEE 802.11g	6	1		1.421	11.485	12.37	0.1237	9.0763
		6		1.421	11.485	12.37	0.1237	9.0763
		11		1.421	11.485	12.37	0.1237	9.0763
IEEE 802.11n_20	MCS 0	1		5.114	15.348	33.32	0.3332	4.773
		6		5.120	15.361	33.33	0.3333	4.7716
		11		5.127	15.352	33.40	0.3340	4.7625
IEEE 802.11n_40		3		4.923	15.157	32.48	0.3248	4.8838
		6		4.935	15.170	32.53	0.3253	4.8772
		9		4.935	15.159	32.55	0.3255	4.8745
IEEE 802.11ax_20		1		3.896	14.137	27.56	0.2756	5.5972
		6		3.903	14.144	27.60	0.2760	5.5909
		11		3.903	14.144	27.60	0.2760	5.5909
IEEE 802.11ax_40		3		3.896	14.137	27.56	0.2756	5.5972
		6		3.896	14.137	27.56	0.2756	5.5972
		9		3.896	14.137	27.56	0.2756	5.5972

A3.6dB Bandwidth and 99% Bandwidth

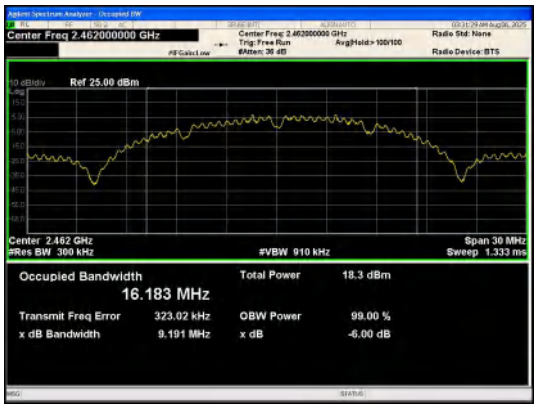
6dB Bandwidth

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	9.140	≥0.5	PASS
	6		2437	10.20		PASS
	11		2462	9.190		PASS
IEEE 802.11g	1		2412	13.54		PASS
	6		2437	16.05		PASS
	11		2462	15.43		PASS
IEEE 802.11n_20	1		2412	14.50		PASS
	6		2437	17.29		PASS
	11		2462	16.30		PASS
IEEE 802.11n_40	3		2422	24.69		PASS
	6		2437	35.41		PASS
	9		2452	35.83		PASS
IEEE 802.11ax_20	1		2412	16.15		PASS
	6		2437	18.63		PASS
	11		2462	16.38		PASS
IEEE 802.11ax_40	3		2422	24.74		PASS
	6		2437	24.12		PASS
	9		2452	37.39		PASS

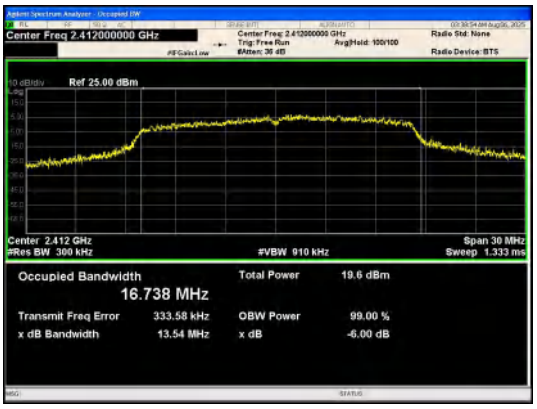
Test Graphs

IEEE 802.11b_Channel 1_20MHz_Antenna 0

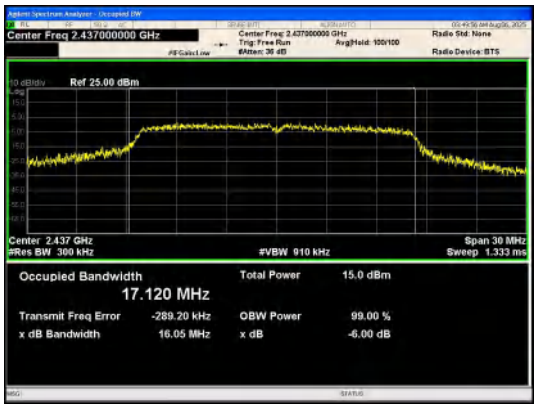
IEEE 802.11b_Channel 6_20MHz_Antenna 0



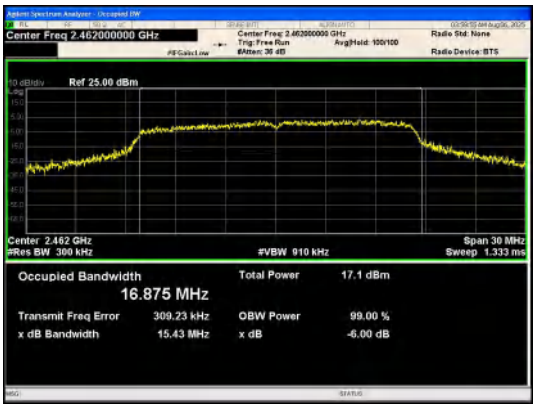
IEEE 802.11b_Channel 11_20MHz_Antenna 0



IEEE 802.11g_Channel 1_20MHz_Antenna 0

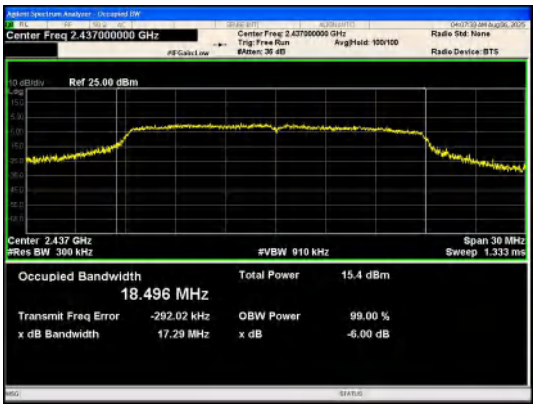


IEEE 802.11g_Channel 6_20MHz_Antenna 0

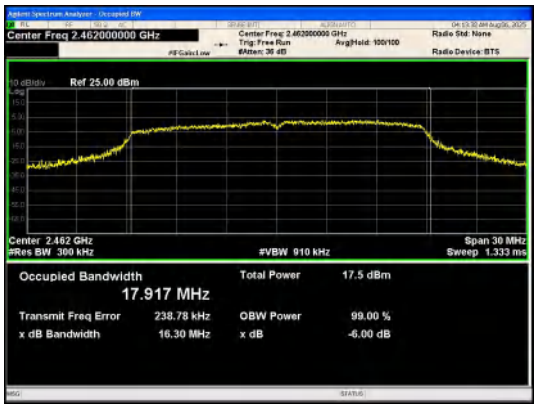


IEEE 802.11g_Channel 11_20MHz_Antenna 0

IEEE 802.11n_Channel 1_20MHz_Antenna 0



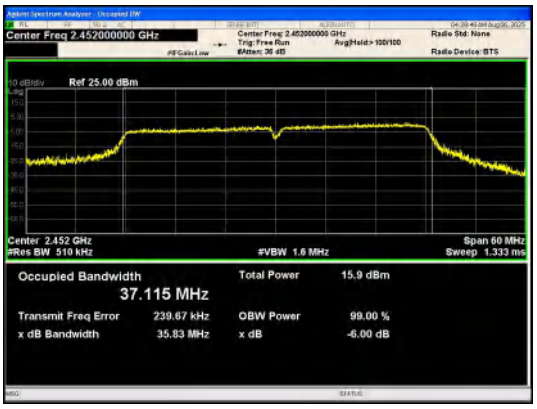
IEEE 802.11n_Channel 6_20MHz_Antenna 0



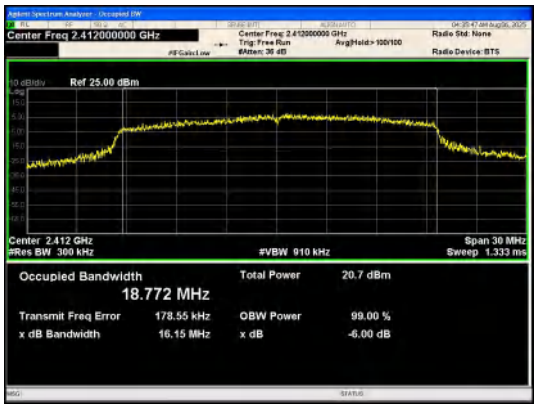
IEEE 802.11n_Channel 11_20MHz_Antenna 0

IEEE 802.11n_Channel 3_40MHz_Antenna 0

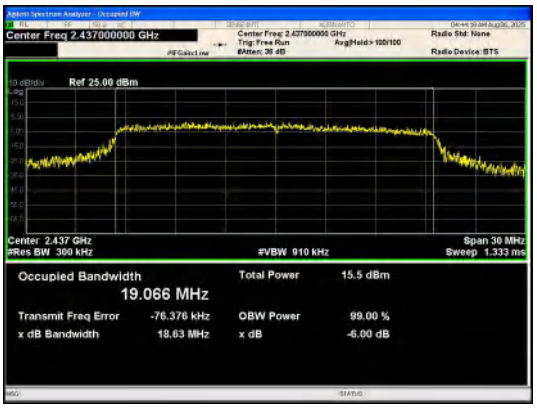
IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

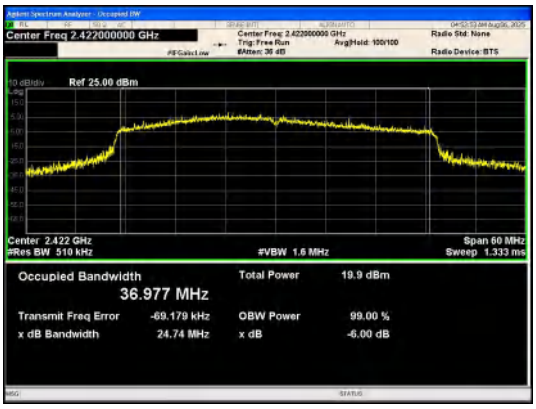


IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU



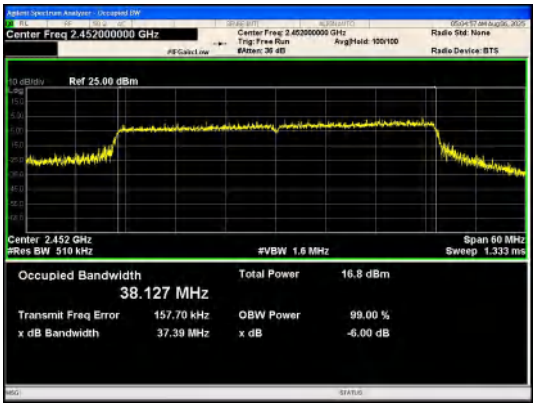
IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU

IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU



IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU

IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index SU



IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU

99% Bandwidth

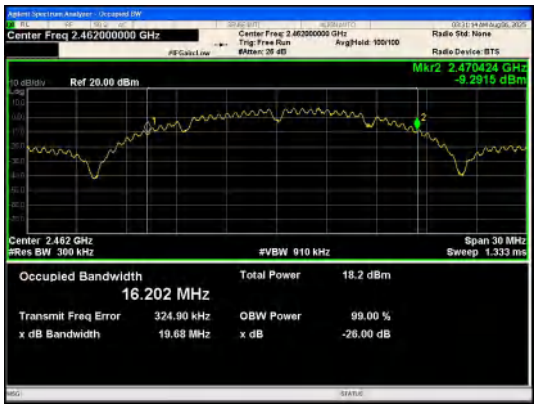
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	13.844
	6		2437	16.649
	11		2462	16.202
IEEE 802.11g	1		2412	16.545
	6		2437	16.818
	11		2462	16.788
IEEE 802.11n_20	1		2412	17.676
	6		2437	18.126
	11		2462	17.830
IEEE 802.11n_40	3		2422	35.556

	6		2437	37.767
	9		2452	36.749
IEEE 802.11ax_20	1		2412	18.706
	6		2437	19.040
	11		2462	18.834
IEEE 802.11ax_40	3		2422	36.941
	6		2437	37.980
	9		2452	37.969

Test Graphs

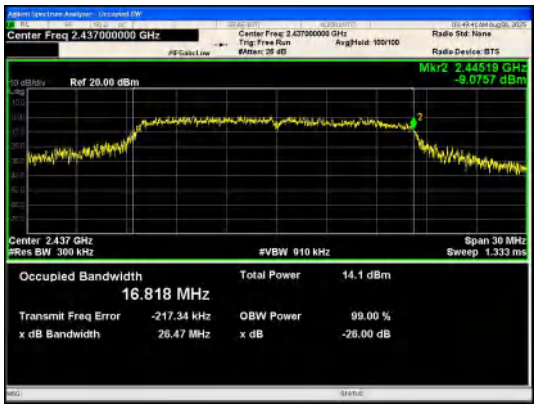
IEEE 802.11b_Channel 1_20MHz_Antenna 0

IEEE 802.11b_Channel 6_20MHz_Antenna 0

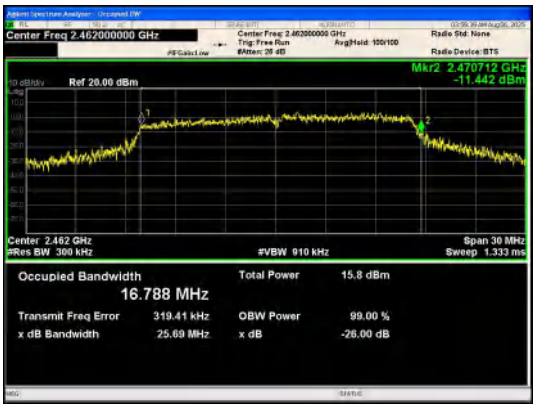


IEEE 802.11b_Channel 11_20MHz_Antenna 0

IEEE 802.11g_Channel 1_20MHz_Antenna 0



IEEE 802.11g_Channel 6_20MHz_Antenna 0



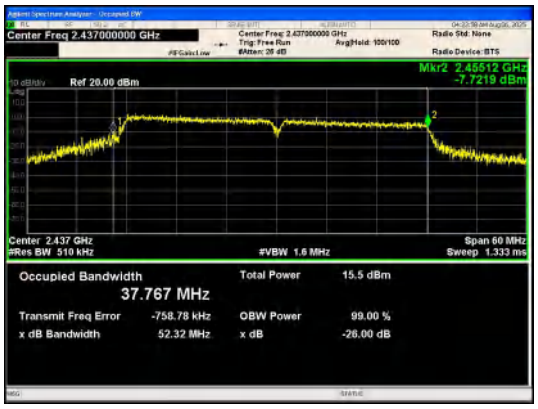
IEEE 802.11g_Channel 11_20MHz_Antenna 0

IEEE 802.11n_Channel 1_20MHz_Antenna 0

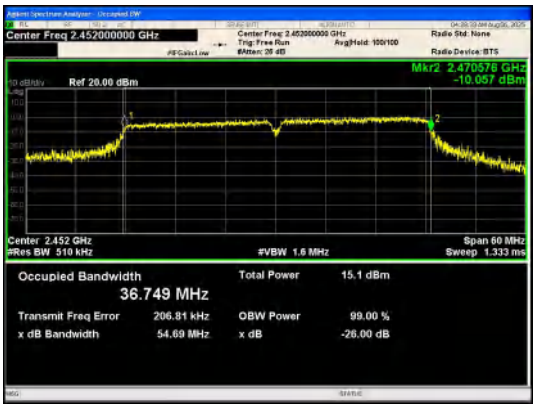
IEEE 802.11n_Channel 6_20MHz_Antenna 0

IEEE 802.11n_Channel 11_20MHz_Antenna 0

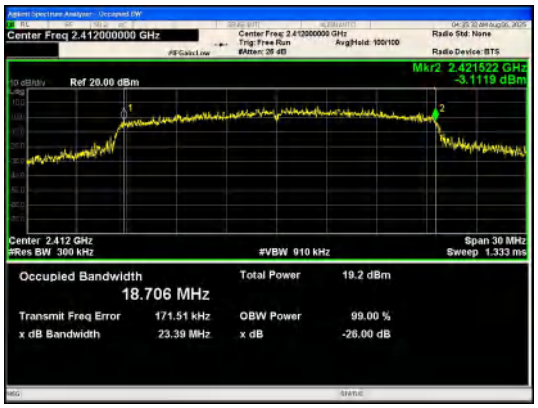
IEEE 802.11n_Channel 3_40MHz_Antenna 0



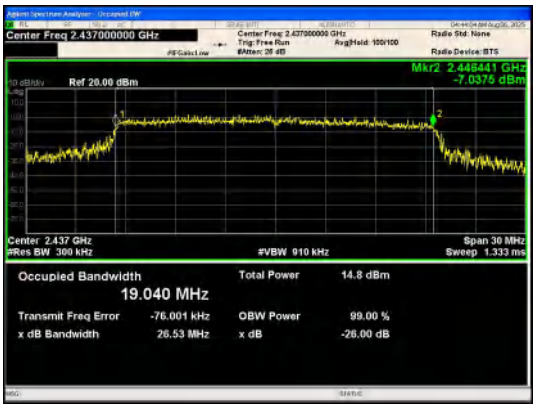
IEEE 802.11n_Channel 6_40MHz_Antenna 0



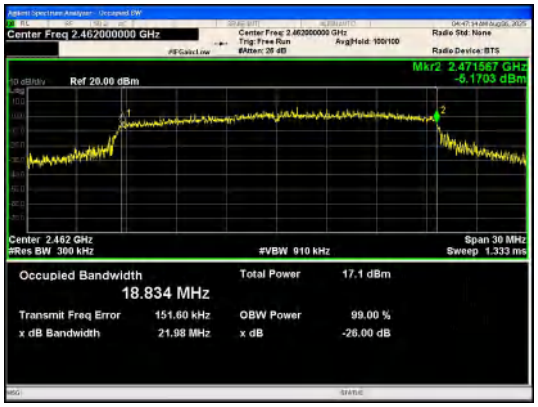
IEEE 802.11n_Channel 9_40MHz_Antenna 0



IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU



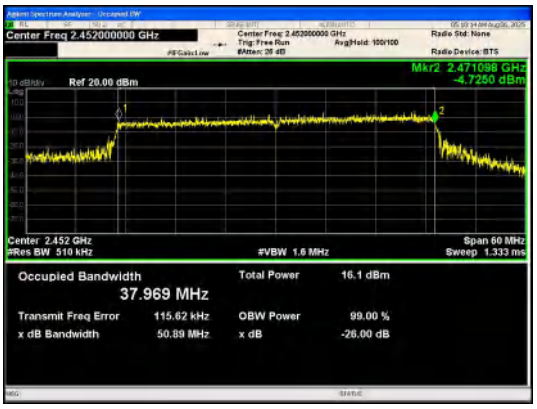
IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU



IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU

IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU

IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index SU



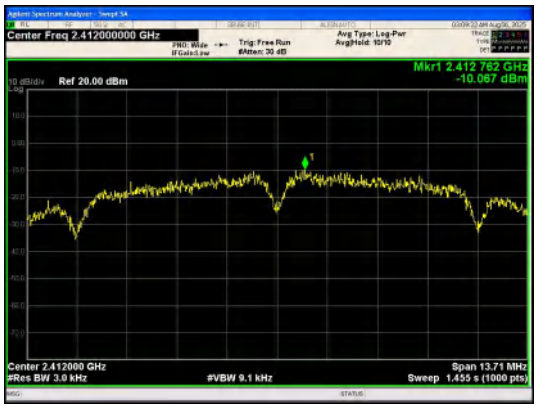
IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU

A4.Power Spectral Density

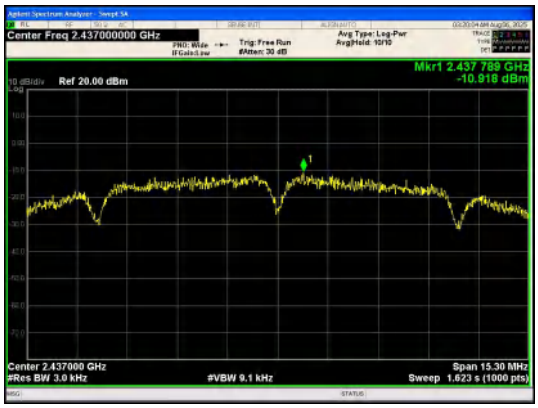
Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-10.070	≤8	PASS
	6	-10.920		PASS
	11	-8.230		PASS
IEEE 802.11g	1	-10.020		PASS
	6	-14.390		PASS
	11	-11.970		PASS
IEEE 802.11n_20	1	-9.550		PASS
	6	-15.280		PASS
	11	-12.920		PASS
IEEE 802.11n_40	3	-14.000		PASS
	6	-19.130		PASS
	9	-15.910		PASS
IEEE 802.11ax_20	1	-10.440		PASS
	6	-16.310		PASS
	11	-14.570		PASS
IEEE 802.11ax_40	3	-14.770		PASS
	6	-19.210		PASS
	9	-17.710		PASS

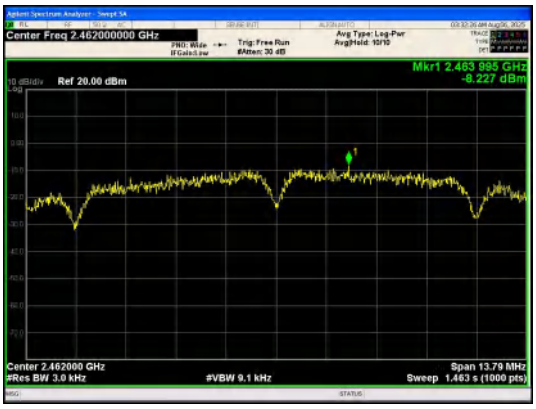
Test Graphs



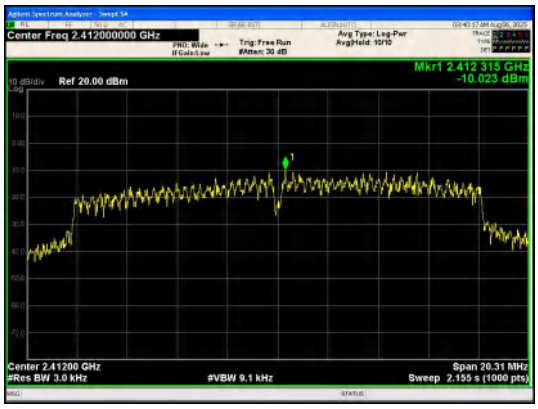
IEEE 802.11b_Channel 1_20MHz_Antenna 0



IEEE 802.11b_Channel 6_20MHz_Antenna 0

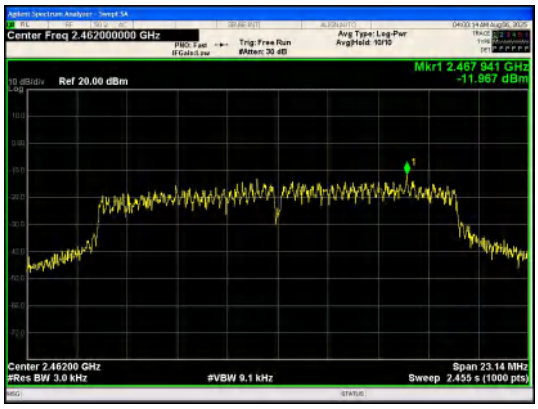


IEEE 802.11b_Channel 11_20MHz_Antenna 0

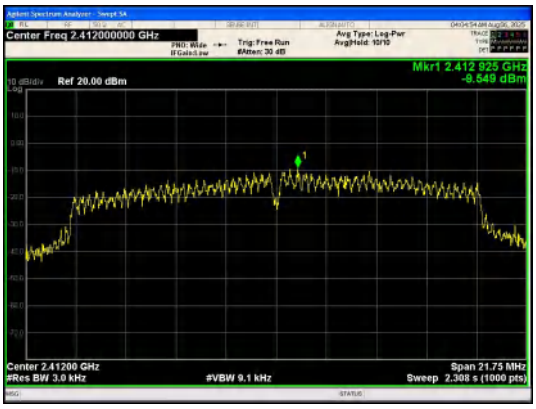


IEEE 802.11g_Channel 1_20MHz_Antenna 0

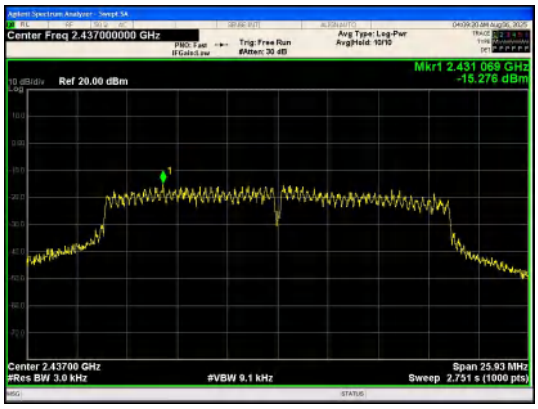
IEEE 802.11g_Channel 6_20MHz_Antenna 0



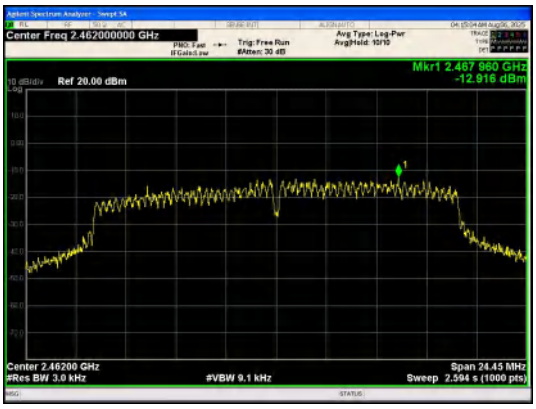
IEEE 802.11g_Channel 11_20MHz_Antenna 0



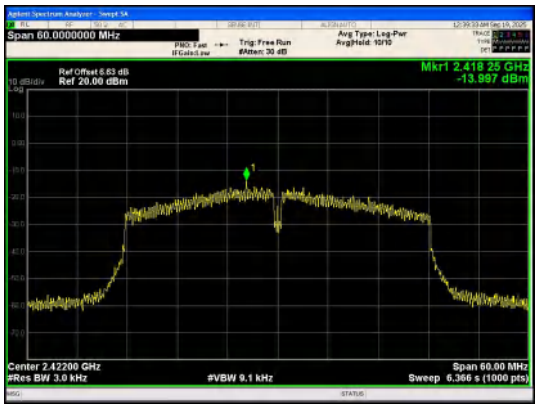
IEEE 802.11n_Channel 1_20MHz_Antenna 0



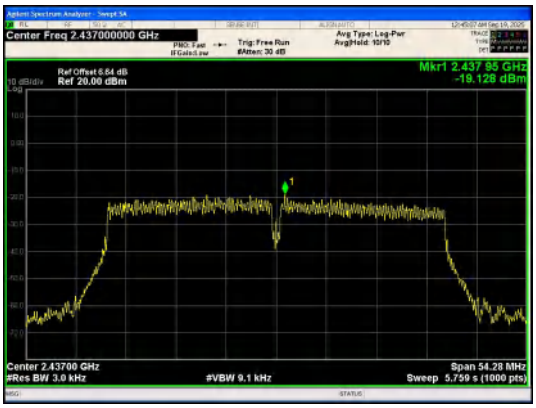
IEEE 802.11n_Channel 6_20MHz_Antenna 0



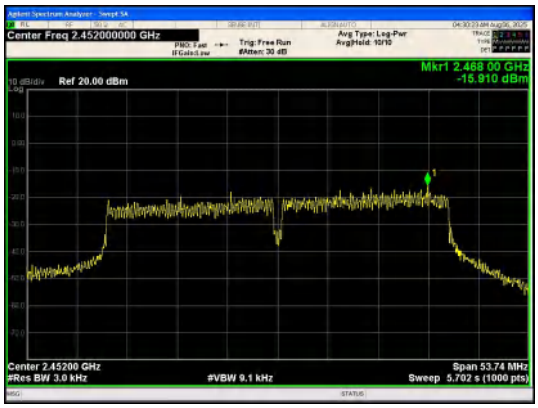
IEEE 802.11n_Channel 11_20MHz_Antenna 0



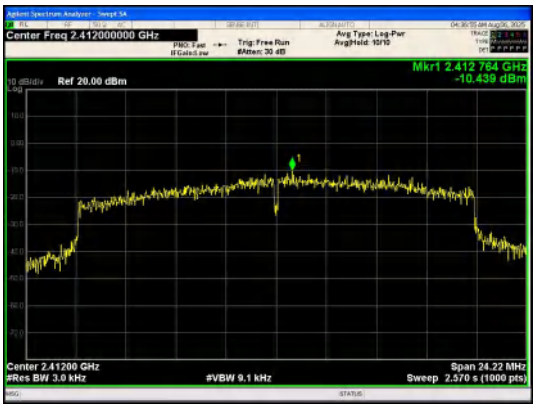
IEEE 802.11n_Channel 3_40MHz_Antenna 0



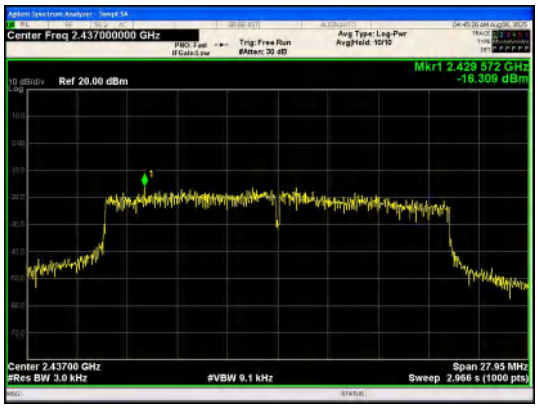
IEEE 802.11n_Channel 6_40MHz_Antenna 0



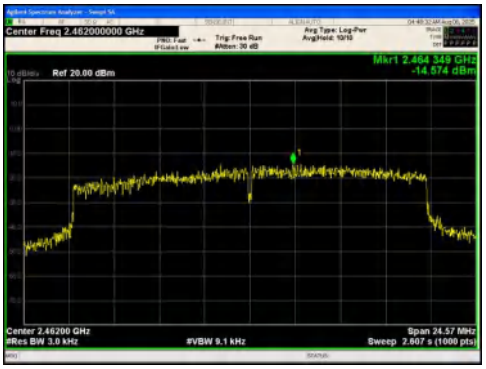
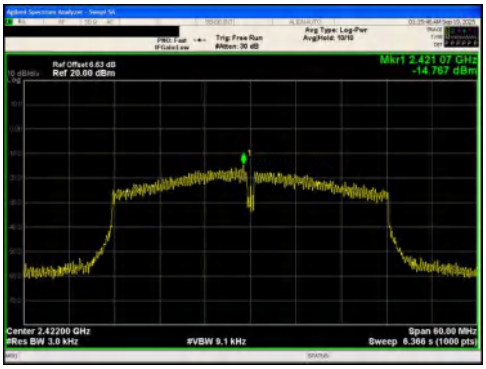
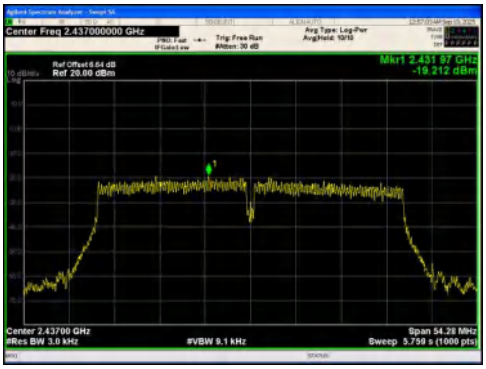
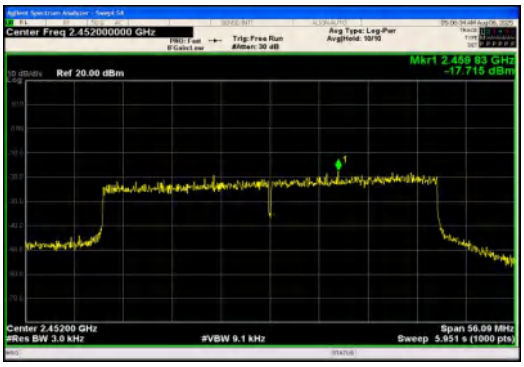
IEEE 802.11n_Channel 9_40MHz_Antenna 0



IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU



IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU

	
IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU	IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU
	
IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index SU	IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU

A5.Conducted Band Edge and Conducted Spurious Emission

Test Result

Mode	Channel	RU & Index	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	N/A	0	2398.92	-42.528	-15.32	-27.208	PASS
				2400.00	-44.710	-15.32	-29.390	PASS
				4816.10	-54.050	-15.32	-38.730	PASS
				7225.70	-52.803	-15.32	-37.483	PASS
				9640.30	-53.337	-15.32	-38.017	PASS
				24876.4	-39.845	-15.32	-24.525	PASS
	6			4880.42	-53.354	-16.41	-36.944	PASS
				7306.88	-52.954	-16.41	-36.544	PASS
				9732.72	-54.441	-16.41	-38.031	PASS
				24920.7	-38.854	-16.41	-22.444	PASS
	11			2483.50	-51.090	-14.84	-36.250	PASS
				4922.25	-54.429	-14.84	-39.589	PASS
				7381.79	-53.396	-14.84	-38.556	PASS
				9861.94	-52.887	-14.84	-38.047	PASS
				24853.9	-39.700	-14.84	-24.860	PASS
IEEE 802.11g	1			2397.62	-27.863	-16.71	-11.153	PASS
				2400.00	-28.550	-16.71	-11.840	PASS
				4812.40	-54.266	-16.71	-37.556	PASS
				7241.30	-52.696	-16.71	-35.986	PASS
				9644.10	-53.609	-16.71	-36.899	PASS
				24902.6	-39.240	-16.71	-22.530	PASS
	6			4888.54	-53.536	-20.85	-32.686	PASS
				7311.25	-50.204	-20.85	-29.354	PASS
				9733.34	-53.204	-20.85	-32.354	PASS
				24905.7	-39.458	-20.85	-18.608	PASS
	11			2483.50	-46.370	-18.26	-28.110	PASS
				4931.61	-53.925	-18.26	-35.665	PASS
				7370.56	-52.033	-18.26	-33.773	PASS
				9845.08	-53.460	-18.26	-35.200	PASS
				24875.2	-39.895	-18.26	-21.635	PASS
IEEE 802.11n_20	1			2398.53	-26.131	-14.72	-11.411	PASS
				2400.00	-27.110	-14.72	-12.390	PASS
				4837.30	-54.159	-14.72	-39.439	PASS

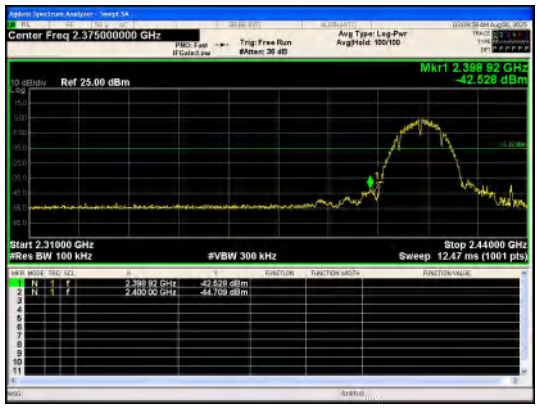
				7238.20	-52.899	-14.72	-38.179	PASS
				9631.00	-53.909	-14.72	-39.189	PASS
				24946.3	-39.331	-14.72	-24.611	PASS
	6			4881.67	-54.285	-20.63	-33.655	PASS
				7300.64	-51.840	-20.63	-31.210	PASS
				9745.20	-52.215	-20.63	-31.585	PASS
				24896.4	-40.120	-20.63	-19.490	PASS
	11			2483.50	-44.730	-18.3	-26.430	PASS
				4941.60	-53.923	-18.3	-35.623	PASS
				7369.93	-52.472	-18.3	-34.172	PASS
				9863.81	-52.854	-18.3	-34.554	PASS
				2397.62	-36.962	-21.09	-15.872	PASS
IEEE 802.11n_40	3			2400.00	-39.256	-21.09	-18.166	PASS
				4844.20	-58.339	-21.09	-37.249	PASS
				7278.20	-57.932	-21.09	-36.842	PASS
				9657.80	-58.735	-21.09	-37.645	PASS
				24880.8	-44.624	-21.09	-23.534	PASS
	6			4891.03	-58.755	-25.36	-33.395	PASS
				7334.97	-57.287	-25.36	-31.927	PASS
				9732.72	-58.492	-25.36	-33.132	PASS
				24880.1	-39.226	-21.56	-17.666	PASS
	9			2483.50	-41.460	-22.59	-18.870	PASS
				4940.35	-53.012	-22.59	-30.422	PASS
				7345.59	-51.945	-22.59	-29.355	PASS
				9837.59	-52.575	-22.59	-29.985	PASS
				24836.4	-39.425	-22.59	-16.835	PASS
IEEE 802.11ax_20	1	SU		2397.88	-27.612	-14.46	-13.152	PASS
				2400.00	-28.020	-14.46	-13.560	PASS
				4821.70	-53.273	-14.46	-38.813	PASS
				7219.50	-53.547	-14.46	-39.087	PASS
				9647.80	-53.647	-14.46	-39.187	PASS
				24844.6	-38.175	-14.46	-23.715	PASS
	6			4879.17	-54.180	-21.76	-32.420	PASS
				7296.27	-52.305	-21.76	-30.545	PASS
				9757.06	-53.767	-21.76	-32.007	PASS
				24957.6	-39.278	-21.76	-17.518	PASS
	11			2483.50	-42.670	-17.51	-25.160	PASS
				4909.76	-53.729	-17.51	-36.219	PASS
				7376.80	-51.756	-17.51	-34.246	PASS

				9828.23	-53.653	-17.51	-36.143	PASS
				24865.8	-43.728	-25.36	-18.368	PASS
IEEE 802.11ax_40	3			2389.17	-36.611	-21.07	-15.541	PASS
				2400.00	-38.694	-21.07	-17.624	PASS
				4836.10	-58.286	-21.07	-37.216	PASS
				7261.90	-57.152	-21.07	-36.082	PASS
				9666.50	-58.583	-21.07	-37.513	PASS
				24973.8	-43.882	-21.07	-22.812	PASS
	6			4857.95	-58.867	-25.26	-33.607	PASS
				7315.62	-57.233	-25.26	-31.973	PASS
				9757.06	-58.650	-25.26	-33.390	PASS
				24887.0	-43.342	-25.26	-18.082	PASS
	9			2483.50	-41.990	-23.48	-18.510	PASS
				4894.16	-53.535	-23.48	-30.055	PASS
				7360.57	-52.499	-23.48	-29.019	PASS
				9785.78	-53.155	-23.48	-29.675	PASS
				24913.2	-39.291	-23.48	-15.811	PASS

Test Graphs

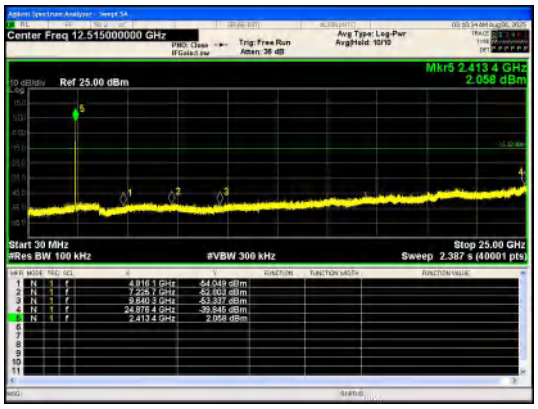
In-Band Reference Level

IEEE 802.11b_Channel 1_20MHz_Antenna 0



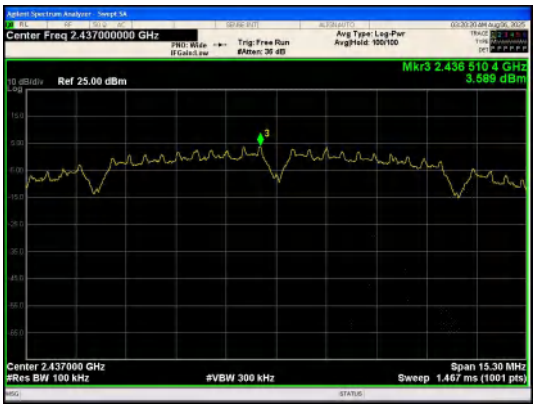
Out Of Band Emission

IEEE 802.11b_Channel 1_20MHz_Antenna 0



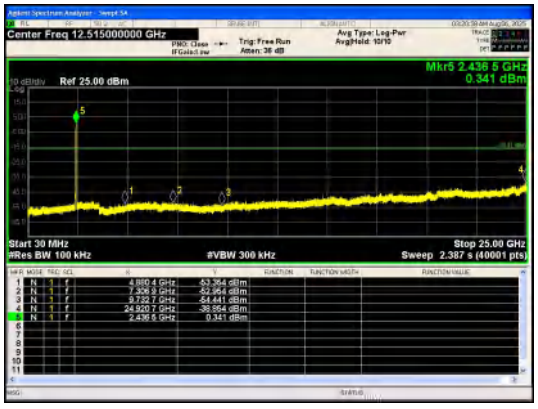
30.0 MHz - 25000.0 MHz

IEEE 802.11b_Channel 1_20MHz_Antenna 0



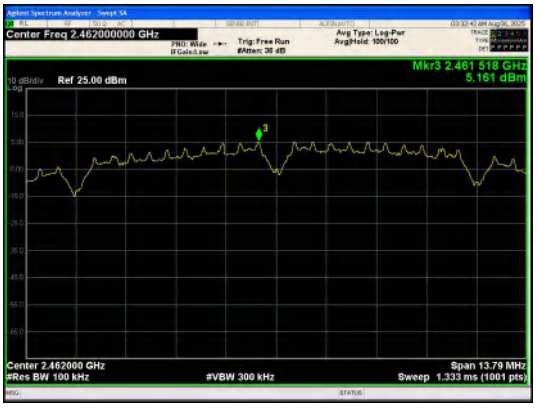
In-Band Reference Level

IEEE 802.11b_Channel 6_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz

IEEE 802.11b_Channel 6_20MHz_Antenna 0

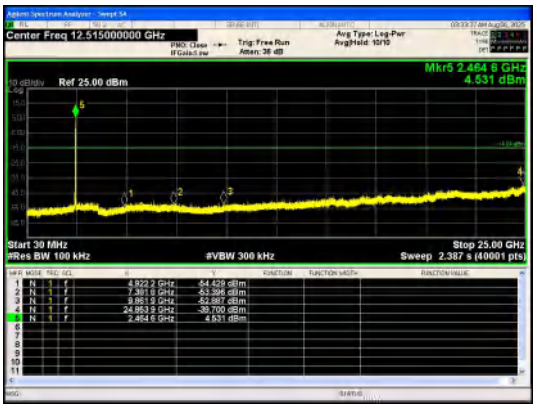


In-Band Reference Level

IEEE 802.11b_Channel 11_20MHz_Antenna 0

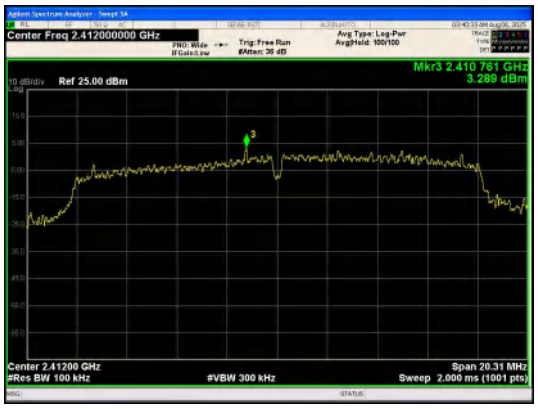
Out Of Band Emission

IEEE 802.11b_Channel 11_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz

IEEE 802.11b_Channel 11_20MHz_Antenna 0

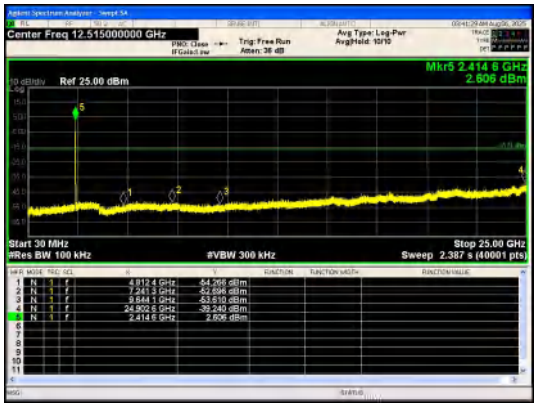


In-Band Reference Level

IEEE 802.11g_Channel 1_20MHz_Antenna 0

Out Of Band Emission

IEEE 802.11g_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz

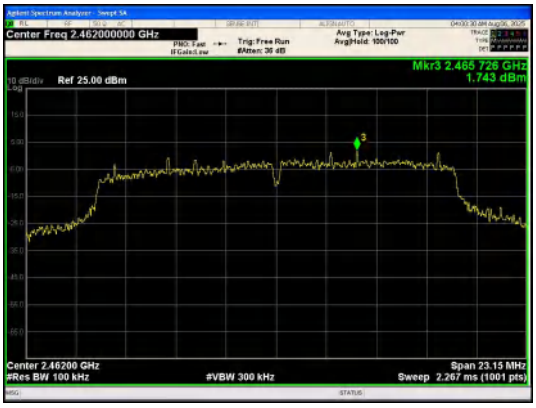
IEEE 802.11g_Channel 1_20MHz_Antenna 0

In-Band Reference Level

IEEE 802.11g_Channel 6_20MHz_Antenna 0

30.0 MHz - 25000.0 MHz

IEEE 802.11g_Channel 6_20MHz_Antenna 0

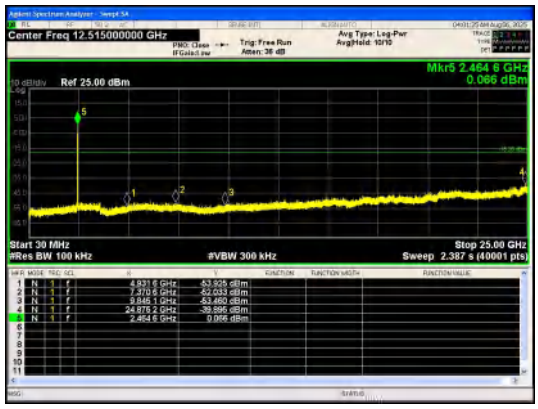


In-Band Reference Level

IEEE 802.11g_Channel 11_20MHz_Antenna 0

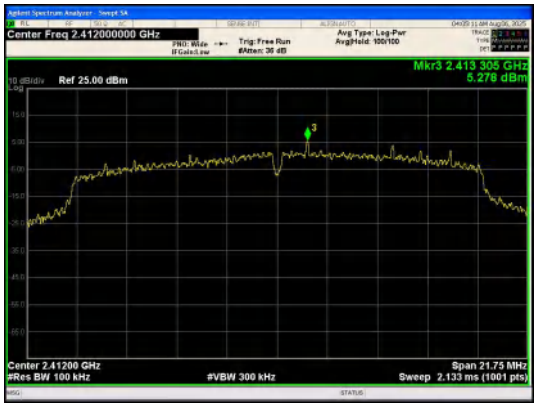
Out Of Band Emission

IEEE 802.11g_Channel 11_20MHz_Antenna 0



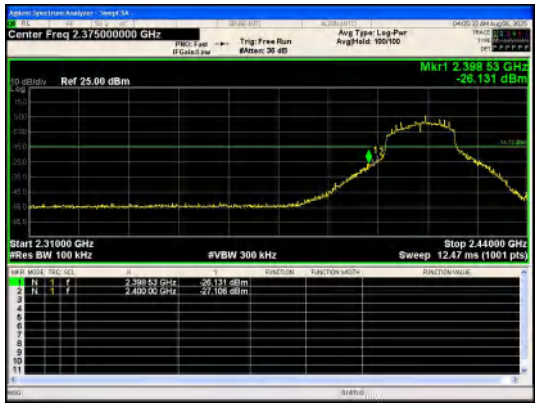
30.0 MHz - 25000.0 MHz

IEEE 802.11g_Channel 11_20MHz_Antenna 0



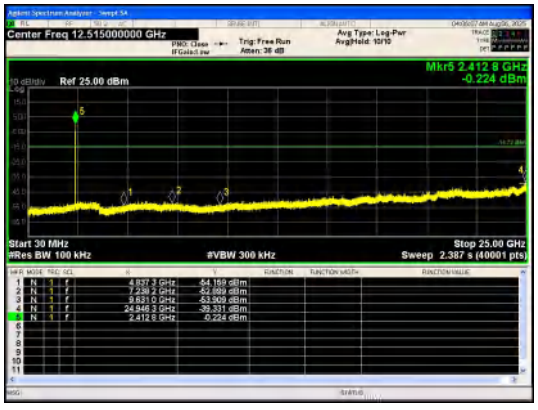
In-Band Reference Level

IEEE 802.11n_Channel 1_20MHz_Antenna 0



Out Of Band Emission

IEEE 802.11n_Channel 1_20MHz_Antenna 0

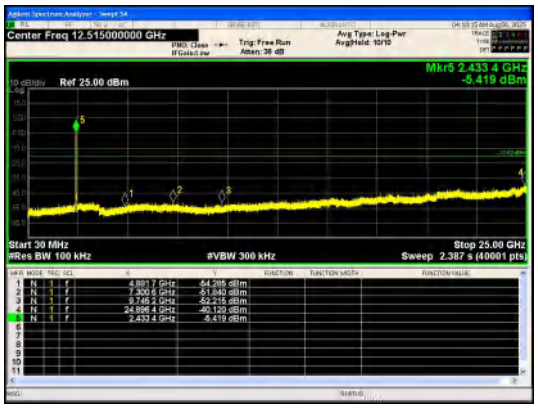


30.0 MHz - 25000.0 MHz

IEEE 802.11n_Channel 1_20MHz_Antenna 0

In-Band Reference Level

IEEE 802.11n_Channel 6_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz

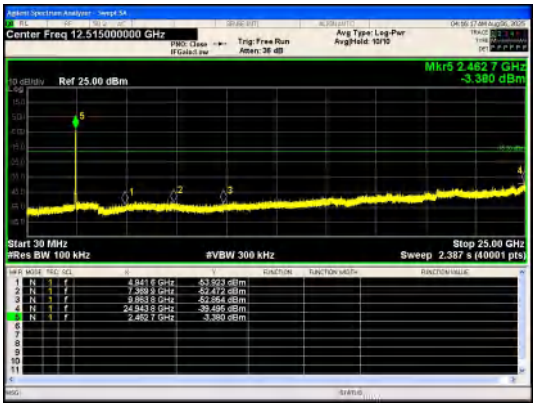
IEEE 802.11n_Channel 6_20MHz_Antenna 0

In-Band Reference Level

IEEE 802.11n_Channel 11_20MHz_Antenna 0

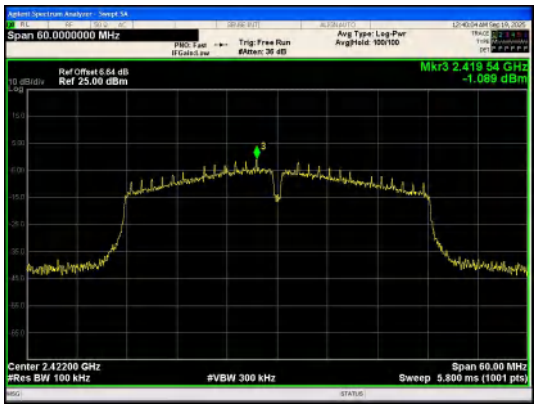
Out Of Band Emission

IEEE 802.11n_Channel 11_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz

IEEE 802.11n_Channel 11_20MHz_Antenna 0

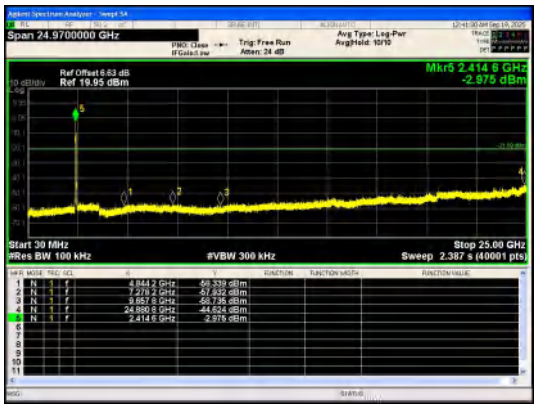


In-Band Reference Level

IEEE 802.11n_Channel 3_40MHz_Antenna 0

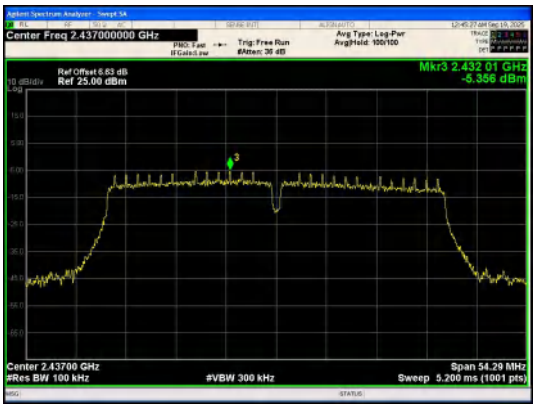
Out Of Band Emission

IEEE 802.11n_Channel 3_40MHz_Antenna 0



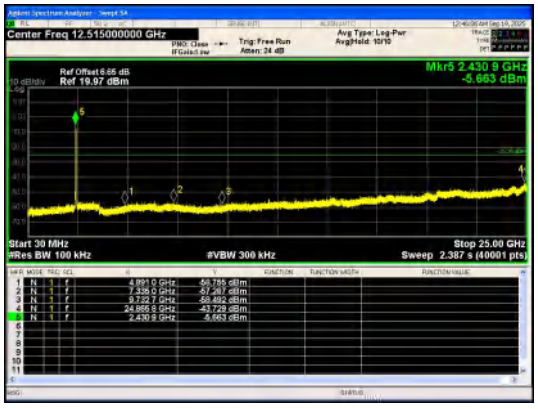
30.0 MHz - 25000.0 MHz

IEEE 802.11n_Channel 3_40MHz_Antenna 0



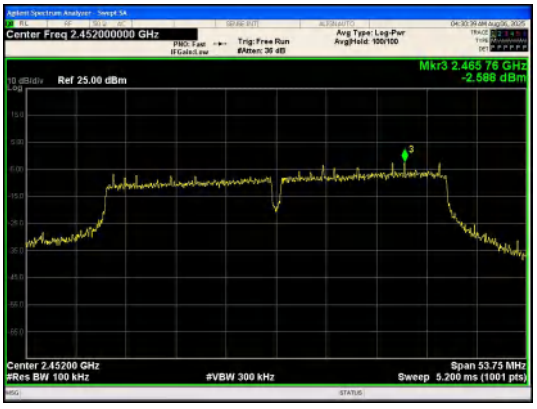
In-Band Reference Level

IEEE 802.11n_Channel 6_40MHz_Antenna 0



30.0 MHz - 25000.0 MHz

IEEE 802.11n_Channel 6_40MHz_Antenna 0

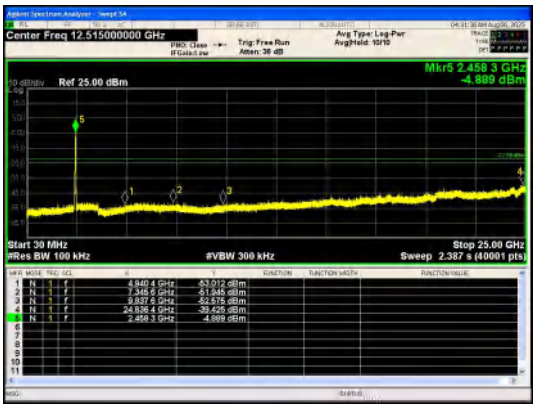


In-Band Reference Level

IEEE 802.11n_Channel 9_40MHz_Antenna 0

Out Of Band Emission

IEEE 802.11n_Channel 9_40MHz_Antenna 0

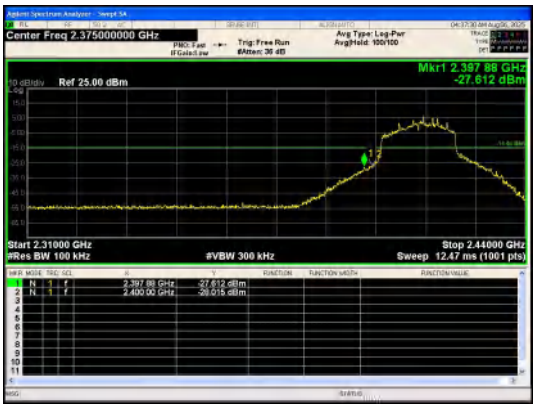


30.0 MHz - 25000.0 MHz

IEEE 802.11n_Channel 9_40MHz_Antenna 0

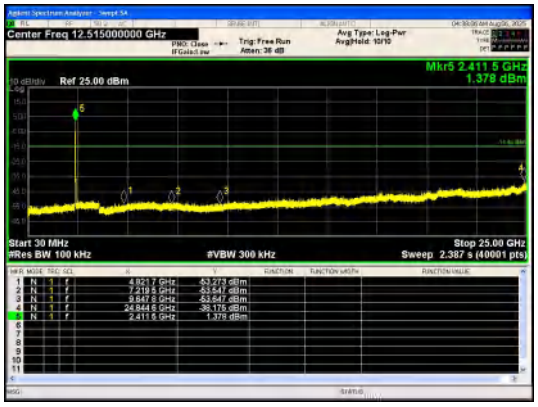
In-Band Reference Level

IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU



Out Of Band Emission

IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU

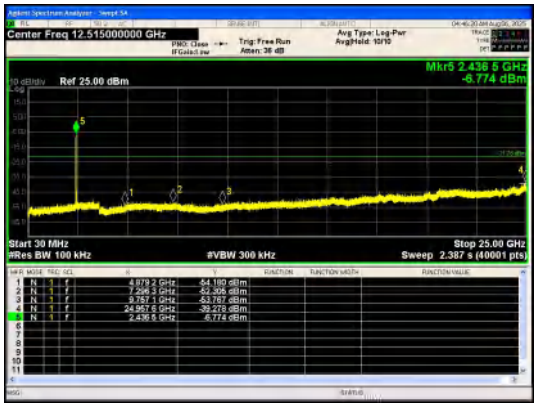


30.0 MHz - 25000.0 MHz

IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU

In-Band Reference Level

IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU



30.0 MHz - 25000.0 MHz

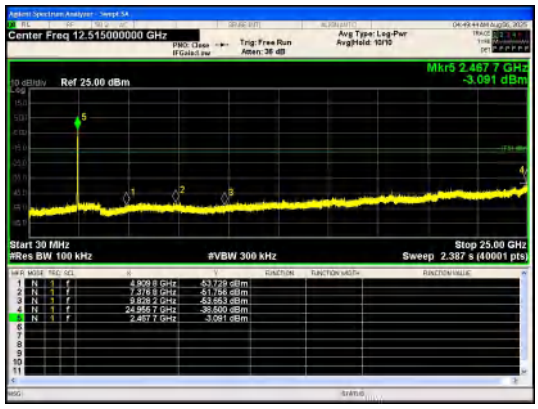
IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU

In-Band Reference Level

IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU

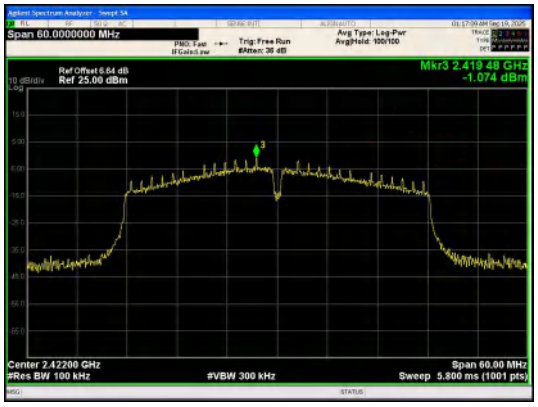
Out Of Band Emission

IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU



30.0 MHz - 25000.0 MHz

IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU

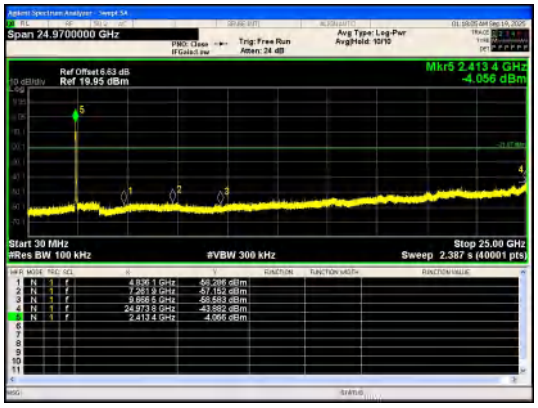


In-Band Reference Level

IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU

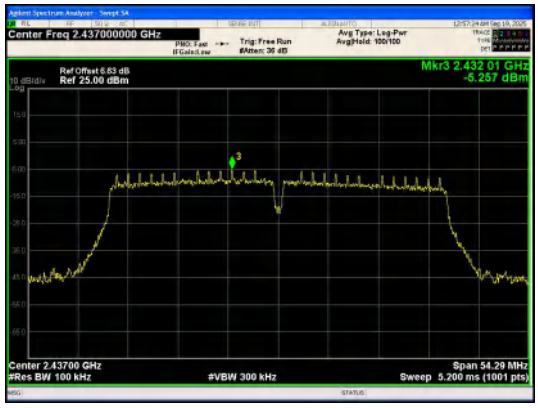
Out Of Band Emission

IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU



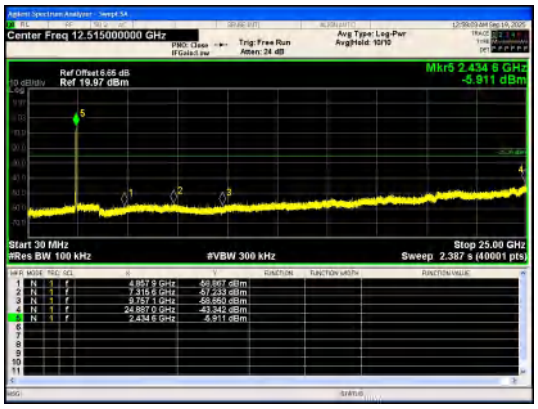
30.0 MHz - 25000.0 MHz

IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU



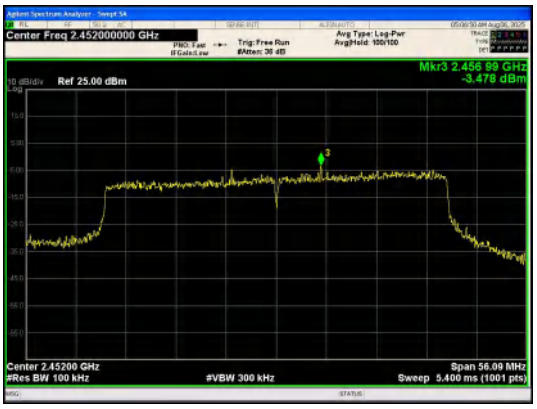
In-Band Reference Level

IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index SU



30.0 MHz - 25000.0 MHz

IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index SU



In-Band Reference Level

IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU

Out Of Band Emission

IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU

30.0 MHz - 25000.0 MHz

IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU

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