FCC Test Report

(Class II Permissive Change)

Product Name	Intel® Wi-Fi 6 AX201
Model No.	AX201D2W
FCC ID.	PD9AX201D2

Applicant	Intel Corporation
Address	100 Center Point Circle Suite 200 Columbia, South Carolina 29210, United States

Date of Receipt	Mar. 30, 2019
Issued Date	Oct. 02, 2019
Report No.	1930505R-RFUSP23V00
Report Version	V1.0

Testing Laboratory
3023

Test Report

Issued Date: Oct. 02, 2019
Report No.: 1930505R-RFUSP23V00

Product Name	Intel® Wi-Fi 6 AX201
Applicant	Intel Corporation
Address	100 Center Point Circle Suite 200 Columbia, South Carolina 29210, United States
Manufacturer	INTEL MOBILE COMMUNICATIONS
Model No.	AX201D2W
FCC ID.	PD9AX201D2
EUT Rated Voltage	DC 3.3V
EUT Test Voltage	DC 3.3V (Power By Test Fixture)
Trade Name	Intel
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.4: 2014, ANSI C63.10: 2013
Test Result	Complied

Documented By : Ida Tung

(Adm. Assistant / Ida Tung)

Tested By : Nova chu

(Engineer / Nova Chu)

Approved By :

(Director / Vincent Lin)

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Wi-Fi 6 AX201
Trade Name	Intel
Model No.	AX201D2W
FCC ID.	PD9AX201D2
Frequency Range	2402-2480MHz
Channel Number	79
Type of Modulation	FHSS: GFSK(1Mbps) / π /4DQPSK(2Mbps) / 8DPSK(3Mbps)
Antenna Type	Dipole Antenna
Channel Control	Auto
Antenna Gain	Refer to the table “Antenna List”

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	WIESON	GY121HT0321-003-H / GY121C888-001-H	Dipole Antenna	2.89dBi for 2.4GHz

Note: The antenna of EUT conforms to FCC 15.203.

Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 20:	2422 MHz	Channel 40:	2442 MHz	Channel 60:	2462 MHz
Channel 01:	2403 MHz	Channel 21:	2423 MHz	Channel 41:	2443 MHz	Channel 61:	2463 MHz
Channel 02:	2404 MHz	Channel 22:	2424 MHz	Channel 42:	2444 MHz	Channel 62:	2464 MHz
Channel 03:	2405 MHz	Channel 23:	2425 MHz	Channel 43:	2445 MHz	Channel 63:	2465 MHz
Channel 04:	2406 MHz	Channel 24:	2426 MHz	Channel 44:	2446 MHz	Channel 64:	2466 MHz
Channel 05:	2407 MHz	Channel 25:	2427 MHz	Channel 45:	2447 MHz	Channel 65:	2467 MHz
Channel 06:	2408 MHz	Channel 26:	2428 MHz	Channel 46:	2448 MHz	Channel 66:	2468 MHz
Channel 07:	2409 MHz	Channel 27:	2429 MHz	Channel 47:	2449 MHz	Channel 67:	2469 MHz
Channel 08:	2410 MHz	Channel 28:	2430 MHz	Channel 48:	2450 MHz	Channel 68:	2470 MHz
Channel 09:	2411 MHz	Channel 29:	2431 MHz	Channel 49:	2451 MHz	Channel 69:	2471 MHz
Channel 10:	2412 MHz	Channel 30:	2432 MHz	Channel 50:	2452 MHz	Channel 70:	2472 MHz
Channel 11:	2413 MHz	Channel 31:	2433 MHz	Channel 51:	2453 MHz	Channel 71:	2473 MHz
Channel 12:	2414 MHz	Channel 32:	2434 MHz	Channel 52:	2454 MHz	Channel 72:	2474 MHz
Channel 13:	2415 MHz	Channel 33:	2435 MHz	Channel 53:	2455 MHz	Channel 73:	2475 MHz
Channel 14:	2416 MHz	Channel 34:	2436 MHz	Channel 54:	2456 MHz	Channel 74:	2476 MHz
Channel 15:	2417 MHz	Channel 35:	2437 MHz	Channel 55:	2457 MHz	Channel 75:	2477 MHz
Channel 16:	2418 MHz	Channel 36:	2438 MHz	Channel 56:	2458 MHz	Channel 76:	2478 MHz
Channel 17:	2419 MHz	Channel 37:	2439 MHz	Channel 57:	2459 MHz	Channel 77:	2479 MHz
Channel 18:	2420 MHz	Channel 38:	2440 MHz	Channel 58:	2460 MHz	Channel 78:	2480 MHz
Channel 19:	2421 MHz	Channel 39:	2441 MHz	Channel 59:	2461 MHz		

Note:

1. The EUT is an Intel® Wi-Fi 6 AX201 with a built-in WLAN (802.11a/b/g/n/ac/ax) with Bluetooth (5.0 and V3.0+HS, V2.1+EDR) transceiver, this report for Bluetooth V3.0+HS, V2.1+EDR.
2. These tests were conducted on a sample for the purpose of demonstrating compliance of transmitter with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
4. This is to request a Class II permissive change for FCC ID: AX201D2W, originally granted on 11/20/2018. The major change filed under this application is:
   Change #1: Addition a Dipole Antenna, the antenna type is different with the original application.

Test Mode	Mode 1: Transmit - 1Mbps Mode 2: Transmit - 2Mbps Mode 3: Transmit - 3Mbps

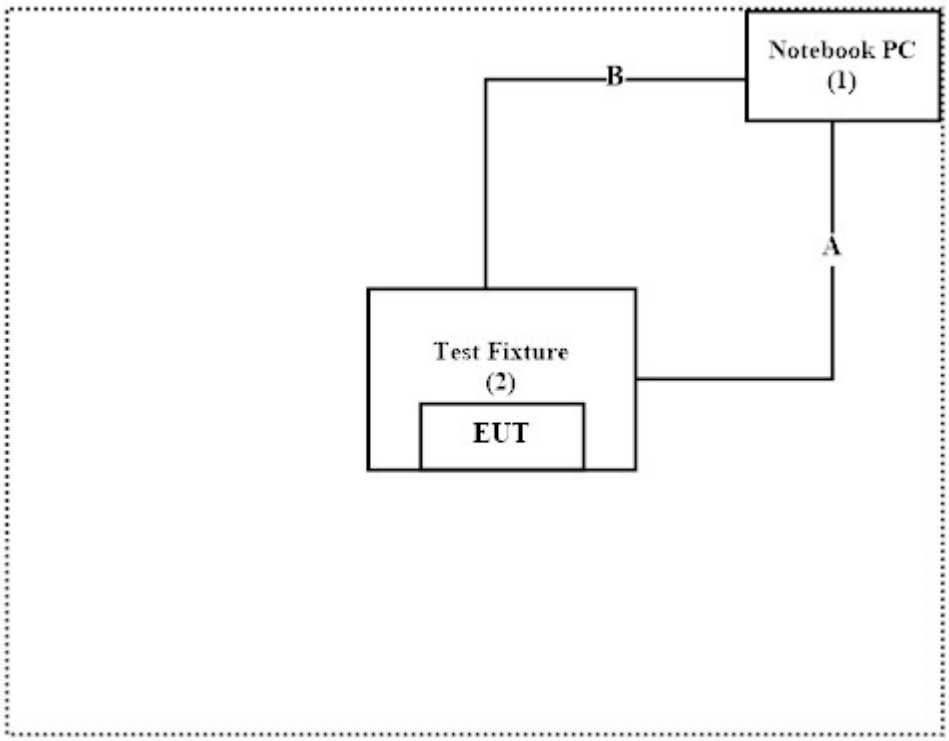
1.3. Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	P62G	9TSGJC2	N/A
2	Test Fixture	Intel	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
A	Test Fixture Line Cable	Non-shielded, 1m
B	USB Cable	Shielded, 1.8m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1. Setup the EUT as shown in Section 1.4.
2. Execute software " DRTU (Ver 11.1850.0-08900)" on the Notebook PC.
3. Configure the test mode, the test channel, and the data rate.
4. Press "OK" to start the continuous Transmit.
5. Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10~40 ℃	25 ℃
	Humidity (%RH)	10~90 %	57 %
Radiated Emission	Temperature (°C)	10~40 ℃	25 ℃
	Humidity (%RH)	10~90 %	57 %
Conductive	Temperature (°C)	10~40 ℃	25 ℃
	Humidity (%RH)	10~90 %	57 %

USA : FCC Registration Number: TW0023

Canada : IC Registration Number: 4075A

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No.159, Sec. 2, Wenhua 1st Rd., Linkou Dist.,
New Taipei City 24457, Taiwan, R.O.C.
Phone number : 886-2-2602-7968
Fax number : 866-2-2602-3286
Email address : info.tw@dekra.com
Website : http://www.dekra.com.tw

1.7. List of Test Equipment

For Conducted measurements /ASR2

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSV30	103464	2019.01.25	2020.01.24
X	Power Meter	Anritsu	ML2496A	1548003	2018.12.19	2019.12.18
X	Power Sensor	Anritsu	MA2411B	1531024	2018.12.19	2019.12.18
X	Power Sensor	Anritsu	MA2411B	1531025	2018.12.19	2019.12.18
	Bluetooth Tester	R&S	CBT	101238	2019.01.21	2020.01.20

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with “X” are used to measure the final test results.
3. Test Software version : DEKRA Conduction Test System V9.0.5

For Radiated measurements /ACB1

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Loop Antenna	AMETEK	HLA6121	49611	2019.02.22	2020.02.21
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-674	2019.04.23	2020.04.22
X	Horn Antenna	ETS-Lindgren	3117	00203800	2018.12.11	2019.12.10
X	Horn Antenna	Com-Power	AH-840	101087	2019.05.30	2020.05.29
X	Pre-Amplifier	EMCI	EMC001330	980316	2019.06.14	2020.06.13
X	Pre-Amplifier	EMCI	EMC051835SE	980311	2019.06.13	2020.06.12
X	Pre-Amplifier	EMCI	EMC05820SE	980310	2019.06.24	2020.06.23
X	Pre-Amplifier	EMCI	EMC184045SE	980314	2019.05.28	2020.05.27
X	Filter	MICRO TRONICS	BRM50702	G251	2019.09.03	2020.09.02
	Filter	MICRO TRONICS	BRM50716	G188	2019.09.03	2020.09.02
X	EMI Test Receiver	R&S	ESR7	101602	2018.12.17	2019.12.16
X	Spectrum Analyzer	R&S	FSV40	101148	2019.02.20	2020.02.19
X	Coaxial Cable	SUHNER	SUCOFLEX 106	RF002	2019.05.25	2020.05.24
X	Mircoflex Cable	HUBER SUHNER	SUCOFLEX 102	MY3381/2	2019.05.28	2020.05.27

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with “X” are used to measure the final test results.
3. Test Software version : QuieTek EMI 2.0 V2.1.113

1.8. Uncertainty

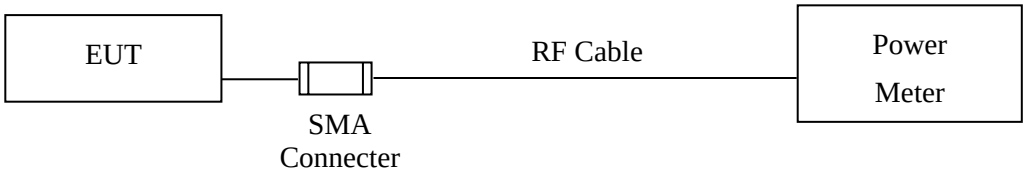
Uncertainties have been calculated according to the DEKRA internal document, and is described in each test chapter of this report.

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

2. Peak Power Output

2.1. Test Setup



2.2. Limit

The maximum peak power shall be less 1Watt.

2.3. Test Procedure

Tested according to FHSS test procedure of KDB 558074 section 9 (b for compliance to FCC 47CFR 15.247 requirements.

2.4. Uncertainty

±0.86 dB

2.5. Test Result of Peak Power Output

Product : Intel® Wi-Fi 6 AX201
Test Item : Peak Power Output
Test Mode : Mode 1: Transmit - 1Mbps
Test Date : 2019/08/20

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	9.11	1 Watt= 30 dBm	Pass
Channel 39	2441.00	9.89	1 Watt= 30 dBm	Pass
Channel 78	2480.00	10.22	1 Watt= 30 dBm	Pass

Product : Intel® Wi-Fi 6 AX201
Test Item : Peak Power Output
Test Mode : Mode 2: Transmit - 2Mbps
Test Date : 2019/08/20

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	8.61	1 Watt= 30 dBm	Pass
Channel 39	2441.00	9.25	1 Watt= 30 dBm	Pass
Channel 78	2480.00	9.26	1 Watt= 30 dBm	Pass

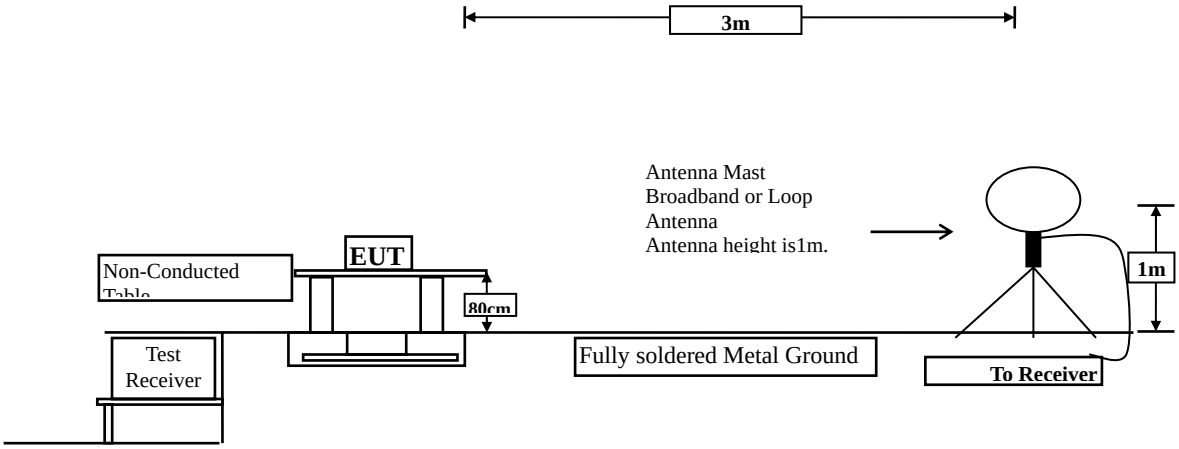
Product : Intel® Wi-Fi 6 AX201
Test Item : Peak Power Output
Test Mode : Mode 3: Transmit - 3Mbps
Test Date : 2019/08/20

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	8.61	1 Watt= 30 dBm	Pass
Channel 39	2441.00	9.36	1 Watt= 30 dBm	Pass
Channel 78	2480.00	9.56	1 Watt= 30 dBm	Pass

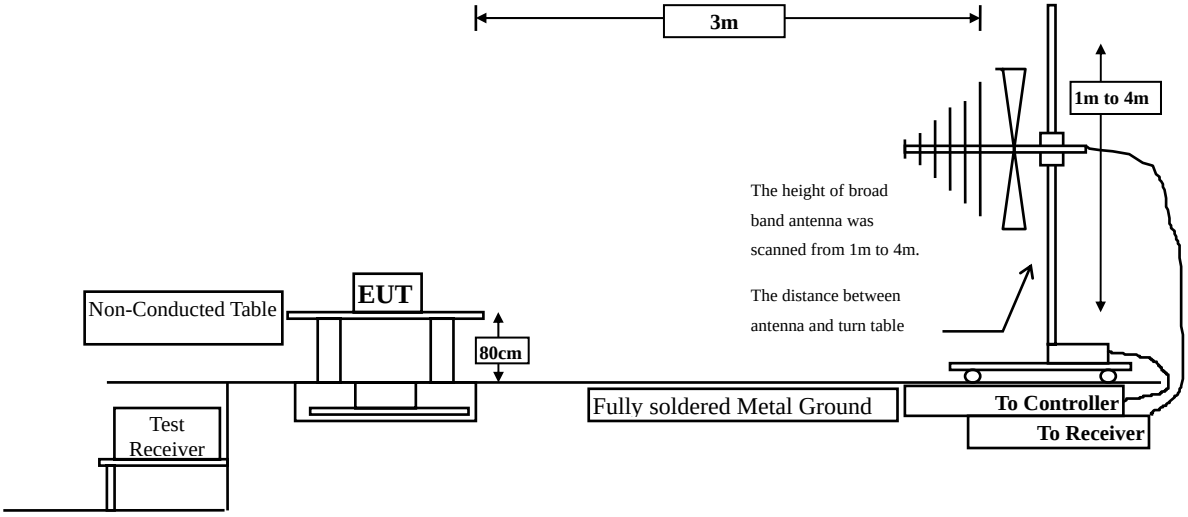
3. Radiated Emission

3.1. Test Setup

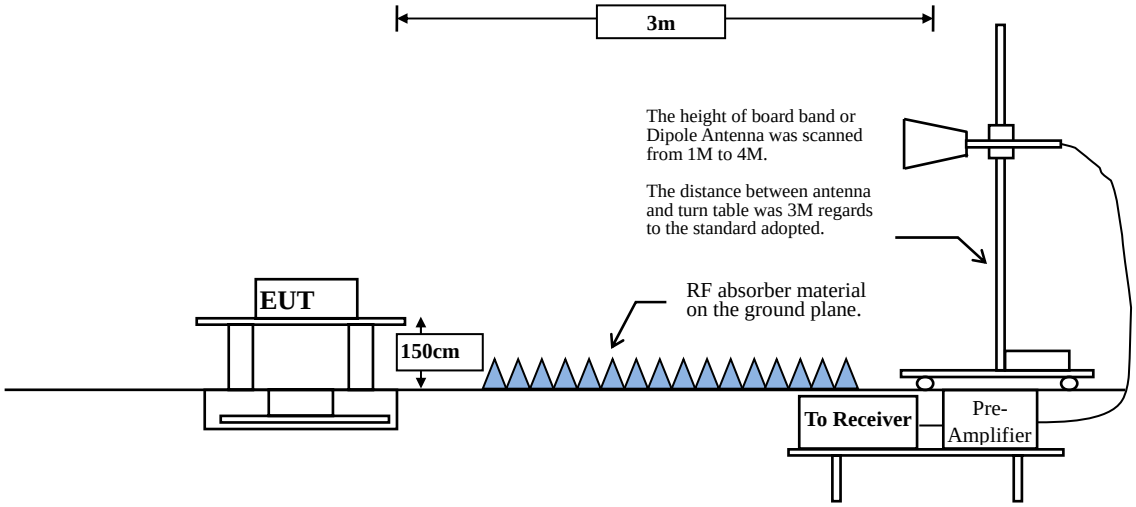
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



3.2. Limits

➢ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

3.4. Uncertainty

Horizontal polarization：

30-300MHz: ±4.08dB；300M-1GHz: ±3.86dB；1-18GHz: ±3.77dB；18-40GHz: ±3.98dB

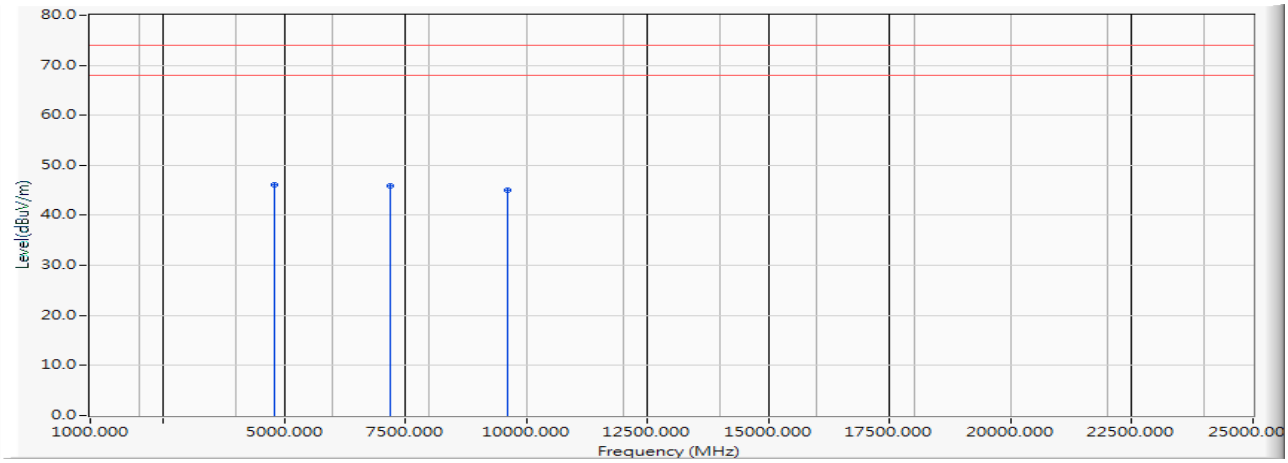
Vertical polarization：

30-300MHz: ±4.81dB；300M-1GHz: ±3.87dB；1-18GHz：±3.83dB；18-40GHz: ±3.98dB

3.5. Test Result of Radiated Emission

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 1: Transmit - 1Mbps (2402MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4804.000	-6.081	52.150	46.069	-27.931	74.000	PEAK
2		7206.000	-3.033	49.020	45.987	-28.013	74.000	PEAK
3		9608.000	-0.774	45.890	45.117	-28.883	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

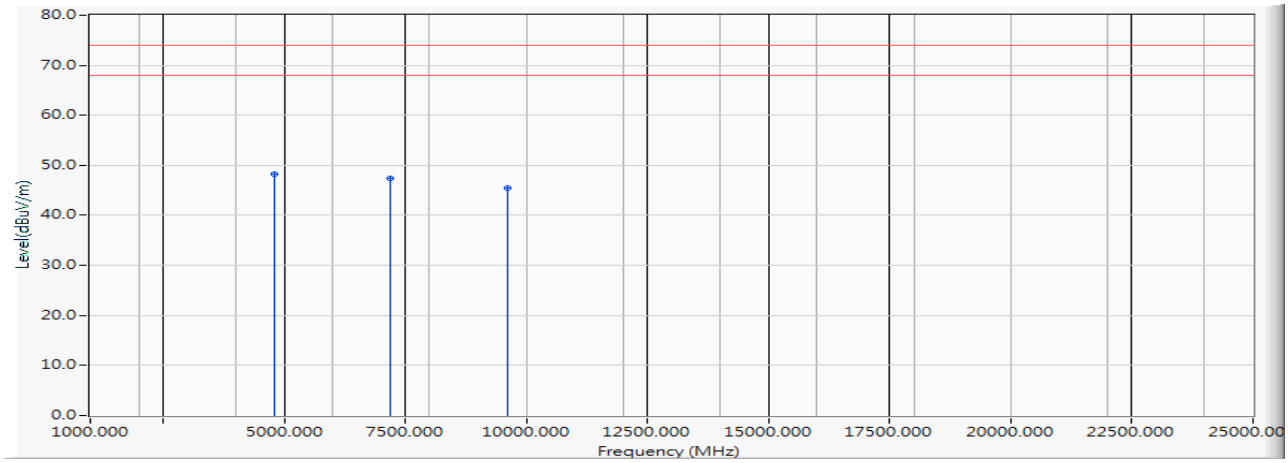
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 1: Transmit - 1Mbps (2402MHz)
Test Date : 2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4804.000	-6.081	54.250	48.169	-25.831	74.000	PEAK
2		7206.000	-3.033	50.390	47.357	-26.643	74.000	PEAK
3		9608.000	-0.774	46.200	45.427	-28.573	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

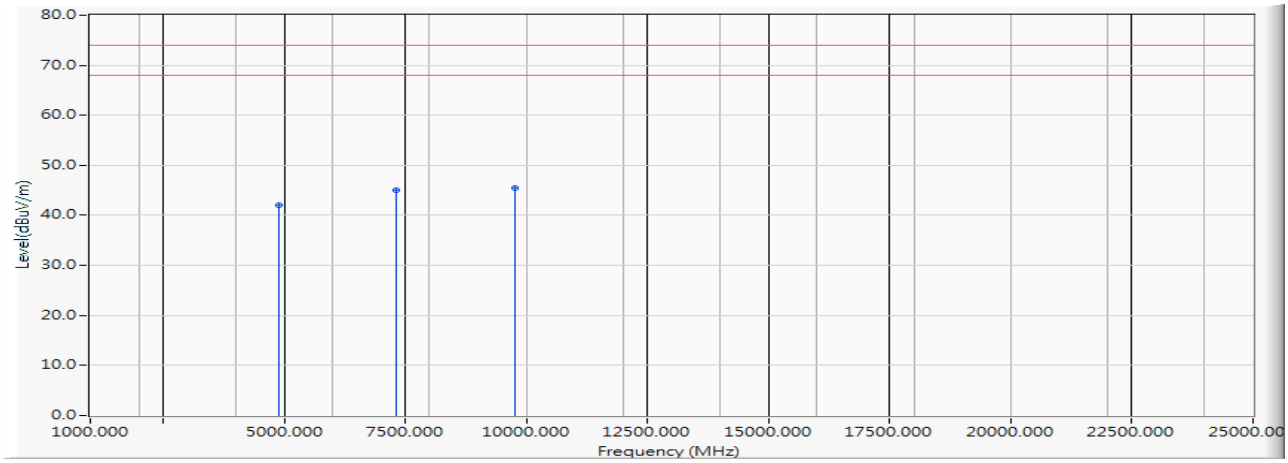
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	-6.042	48.020	41.978	-32.022	74.000	PEAK
2		7323.000	-2.954	48.040	45.086	-28.914	74.000	PEAK
3	*	9764.000	-0.487	46.040	45.553	-28.447	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

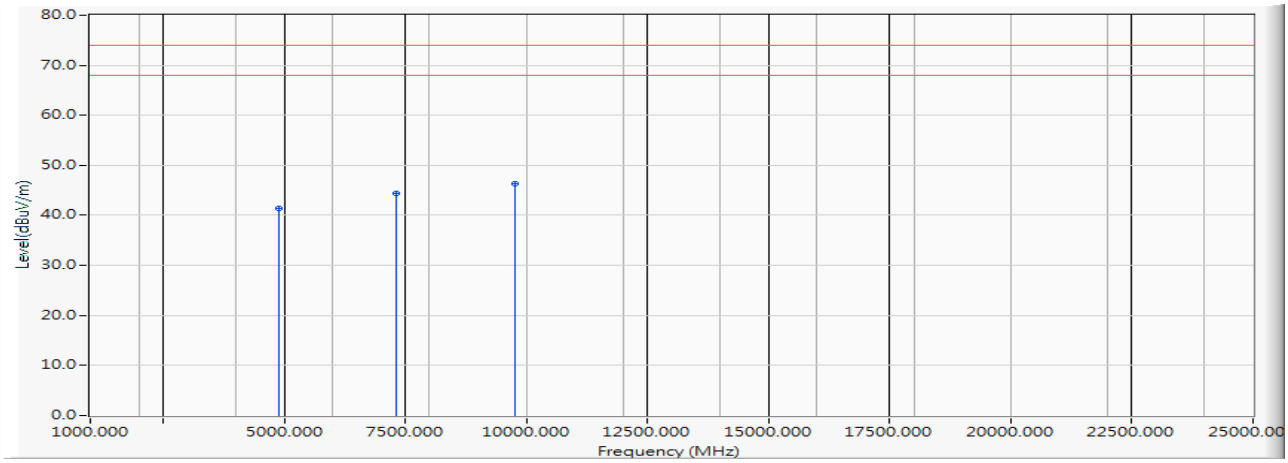
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)
Test Date : 2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	-6.042	47.530	41.488	-32.512	74.000	PEAK
2		7323.000	-2.954	47.330	44.376	-29.624	74.000	PEAK
3	*	9764.000	-0.487	46.790	46.303	-27.697	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

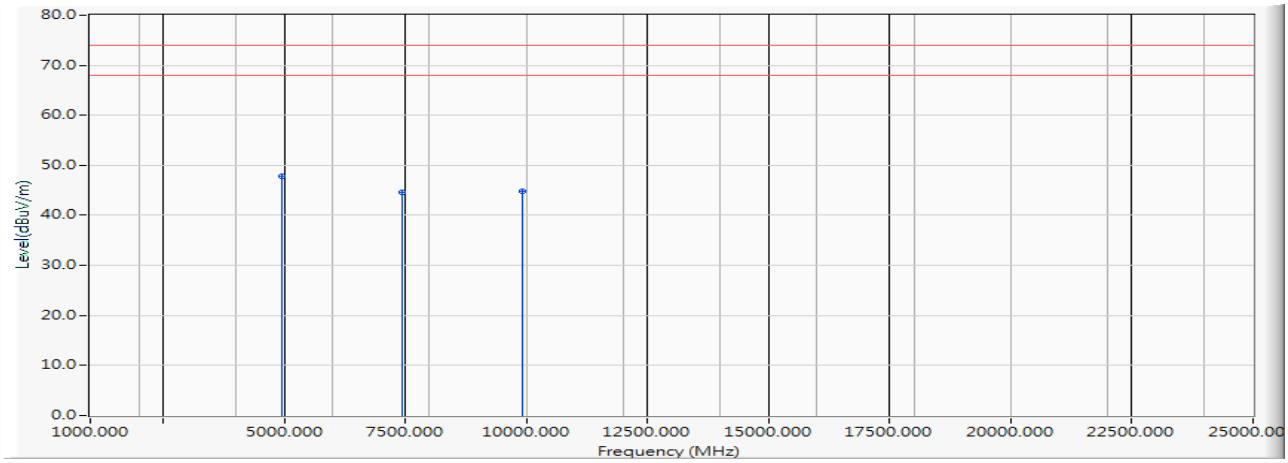
Frequency	Peak Measurement	Duty Cycle Factor	Average Measurement	Margin	Peak Limit	Average Limit
MHz	dBµV/m	dB	dBµV/m	dB	dBµV/m	dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 1: Transmit - 1Mbps (2480MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4960.000	-6.041	53.870	47.829	-26.171	74.000	PEAK
2		7440.000	-2.805	47.380	44.575	-29.425	74.000	PEAK
3		9920.000	-0.260	45.170	44.910	-29.090	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

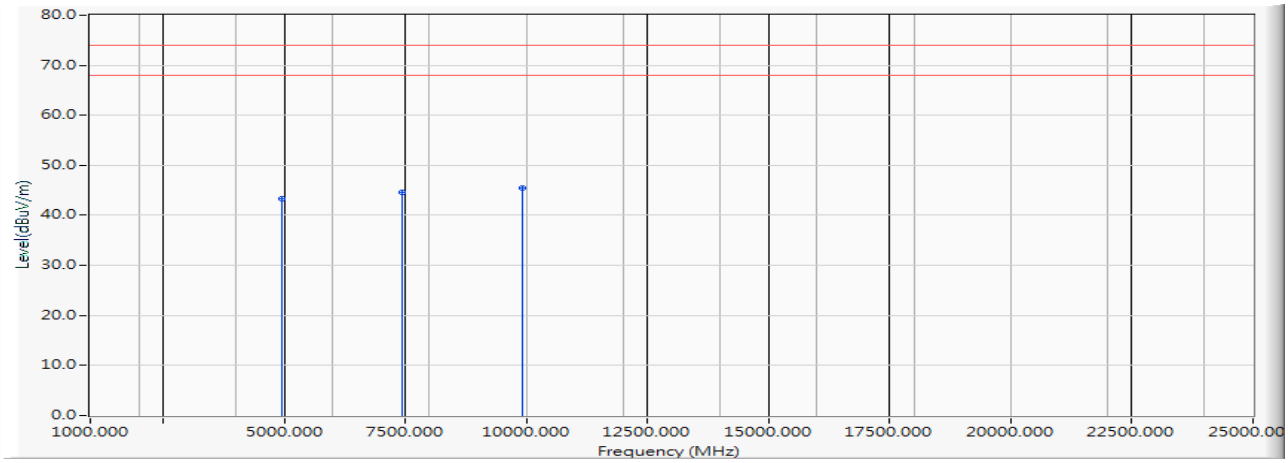
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product	:	Intel® Wi-Fi 6 AX201
Test Item	:	Harmonic Radiated Emission
Test Mode	:	Mode 1: Transmit - 1Mbps (2480MHz)
Test Date	:	2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	-6.041	49.270	43.229	-30.771	74.000	PEAK
2		7440.000	-2.805	47.360	44.555	-29.445	74.000	PEAK
3	*	9920.000	-0.260	45.700	45.440	-28.560	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

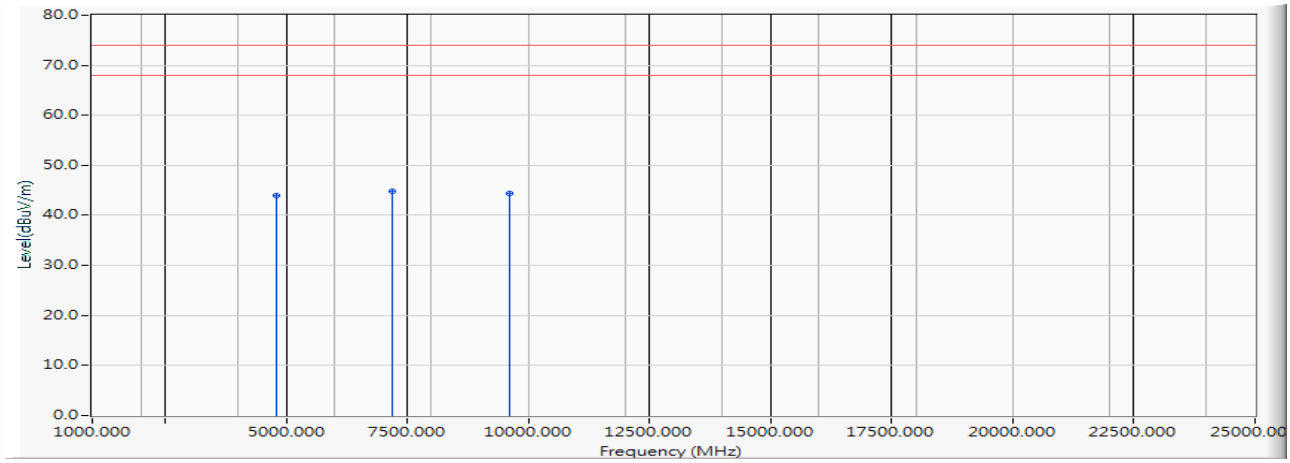
Frequency	Peak Measurement	Duty Cycle Factor	Average Measurement	Margin	Peak Limit	Average Limit
MHz	dBµV/m	dB	dBµV/m	dB	dBµV/m	dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 2: Transmit - 2Mbps (2402MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4804.000	-6.081	50.040	43.959	-30.041	74.000	PEAK
2	*	7206.000	-3.033	47.830	44.797	-29.203	74.000	PEAK
3		9608.000	-0.774	45.250	44.477	-29.523	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

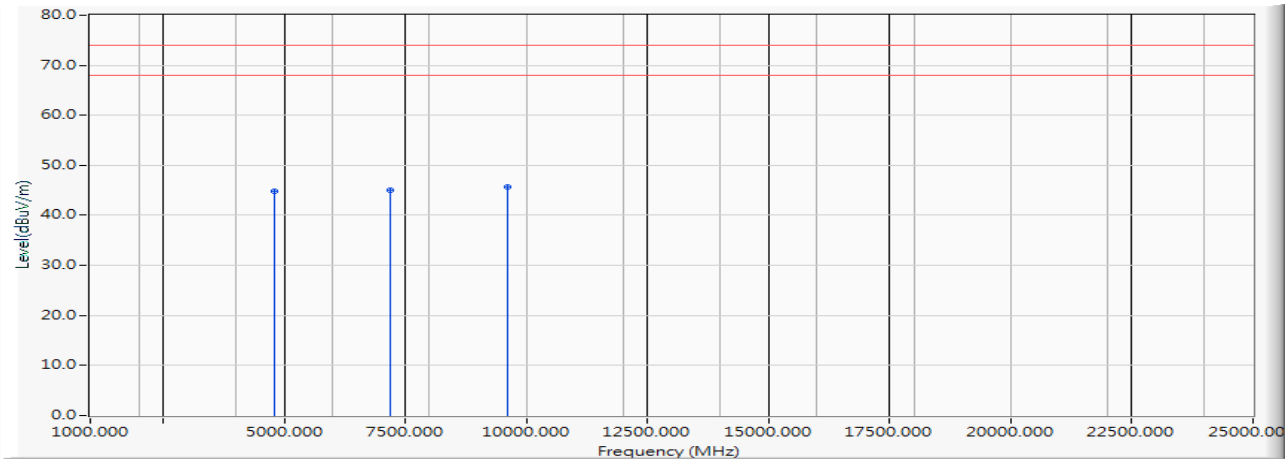
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 2: Transmit - 2Mbps (2402MHz)
Test Date : 2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4804.000	-6.081	50.800	44.719	-29.281	74.000	PEAK
2		7206.000	-3.033	48.060	45.027	-28.973	74.000	PEAK
3	*	9608.000	-0.774	46.370	45.597	-28.403	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

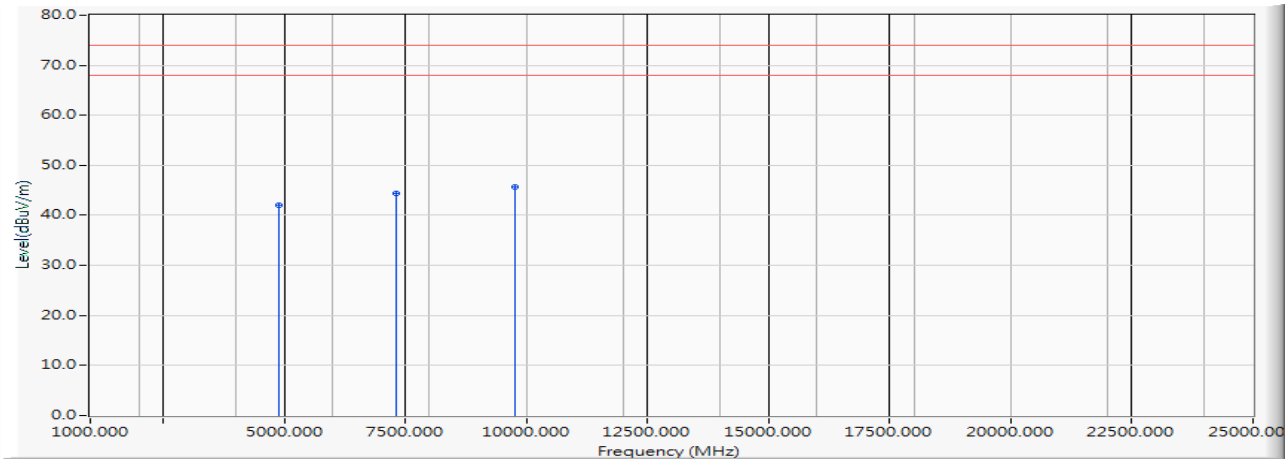
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 2: Transmit - 2Mbps (2441MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	-6.042	48.090	42.048	-31.952	74.000	PEAK
2		7323.000	-2.954	47.330	44.376	-29.624	74.000	PEAK
3	*	9764.000	-0.487	46.070	45.583	-28.417	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

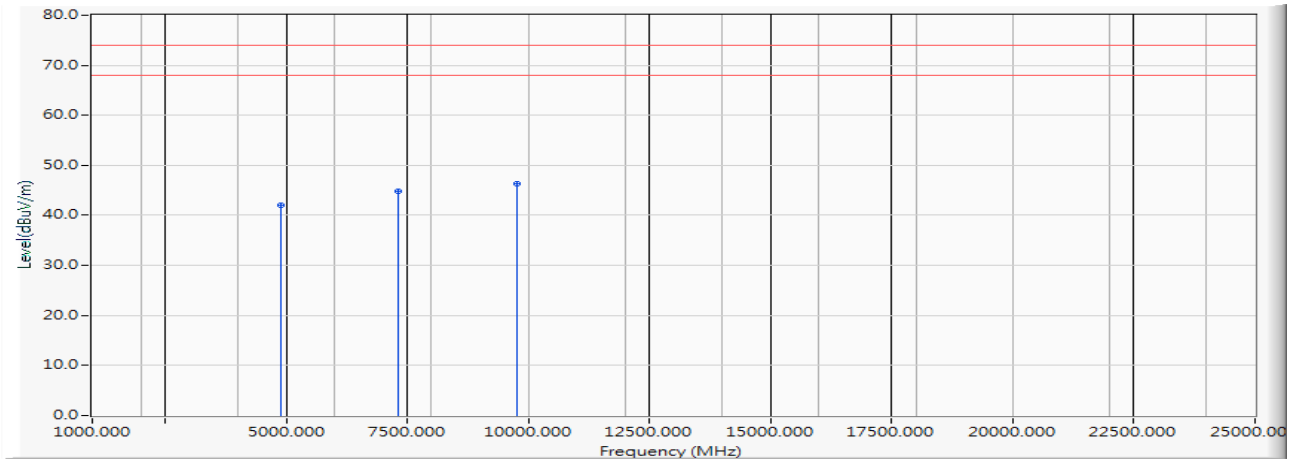
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 2: Transmit - 2Mbps (2441MHz)
Test Date : 2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	-6.042	47.990	41.948	-32.052	74.000	PEAK
2		7323.000	-2.954	47.680	44.726	-29.274	74.000	PEAK
3	*	9764.000	-0.487	46.750	46.263	-27.737	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

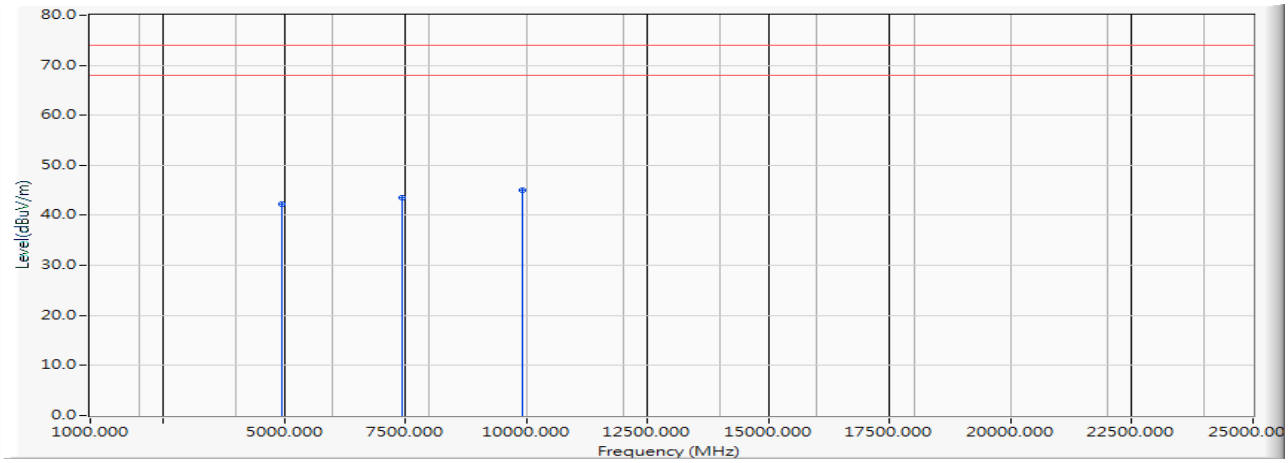
Frequency	Peak Measurement	Duty Cycle Factor	Average Measurement	Margin	Peak Limit	Average Limit
MHz	dBµV/m	dB	dBµV/m	dB	dBµV/m	dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 2: Transmit - 2Mbps (2480MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	-6.041	48.260	42.219	-31.781	74.000	PEAK
2		7440.000	-2.805	46.310	43.505	-30.495	74.000	PEAK
3	*	9920.000	-0.260	45.370	45.110	-28.890	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

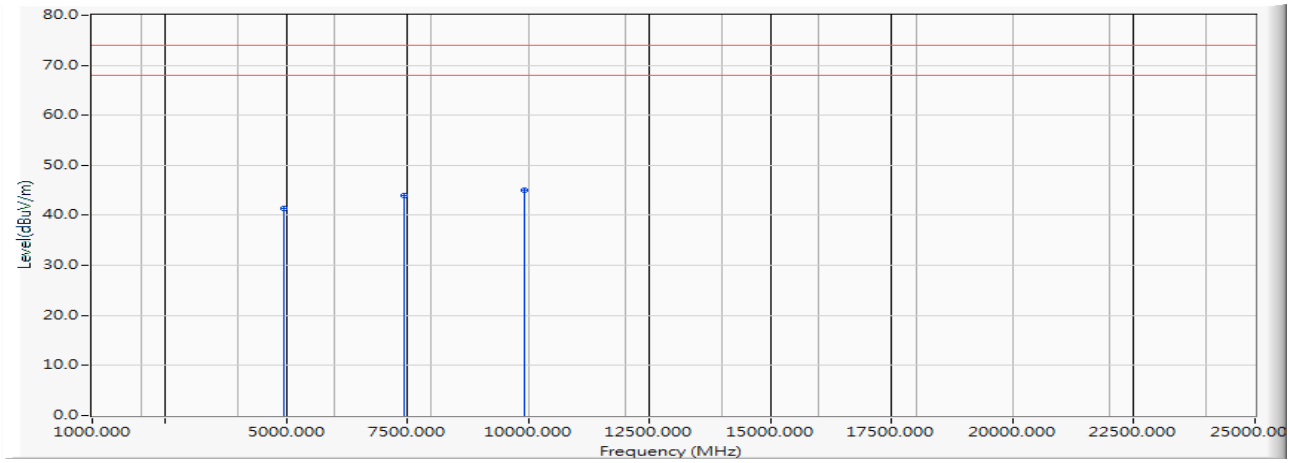
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 2: Transmit - 2Mbps (2480MHz)
Test Date : 2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	-6.041	47.390	41.349	-32.651	74.000	PEAK
2		7440.000	-2.805	46.790	43.985	-30.015	74.000	PEAK
3	*	9920.000	-0.260	45.380	45.120	-28.880	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

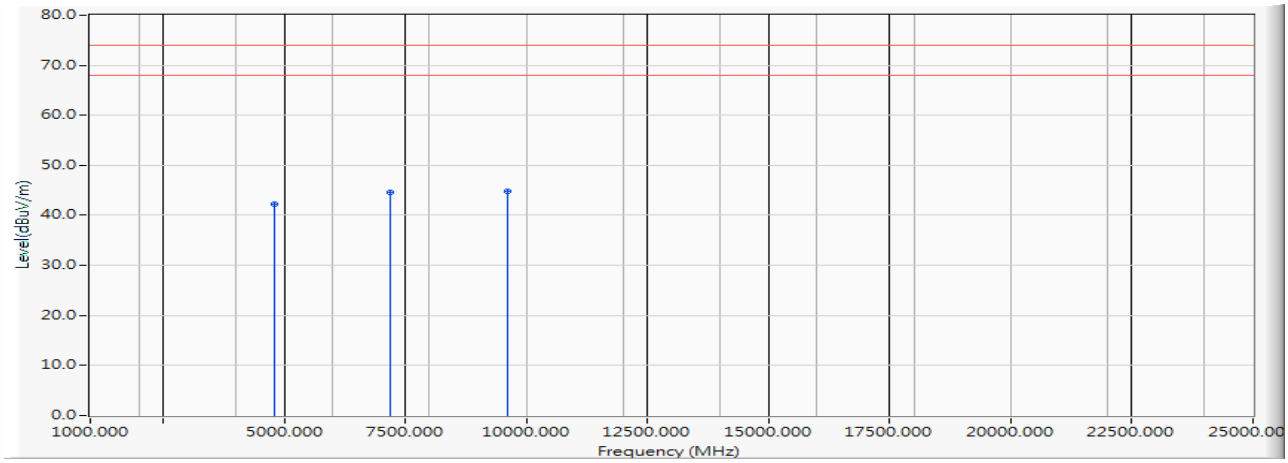
Frequency	Peak Measurement	Duty Cycle Factor	Average Measurement	Margin	Peak Limit	Average Limit
MHz	dBµV/m	dB	dBµV/m	dB	dBµV/m	dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 3: Transmit - 3Mbps (2402MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4804.000	-6.081	48.430	42.349	-31.651	74.000	PEAK
2		7206.000	-3.033	47.610	44.577	-29.423	74.000	PEAK
3	*	9608.000	-0.774	45.510	44.737	-29.263	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

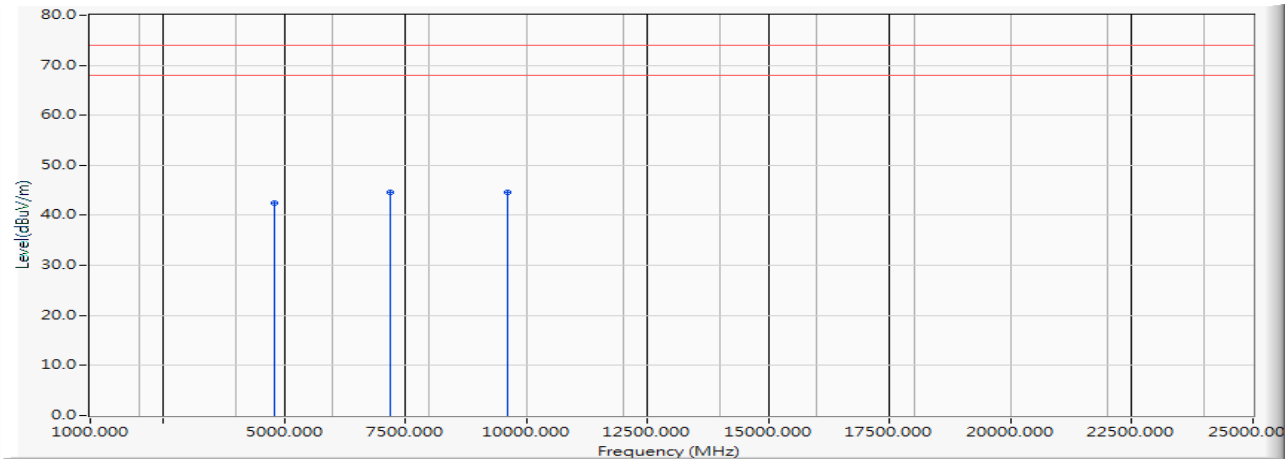
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 3: Transmit - 3Mbps (2402MHz)
Test Date : 2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4804.000	-6.081	48.490	42.409	-31.591	74.000	PEAK
2	*	7206.000	-3.033	47.720	44.687	-29.313	74.000	PEAK
3		9608.000	-0.774	45.380	44.607	-29.393	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

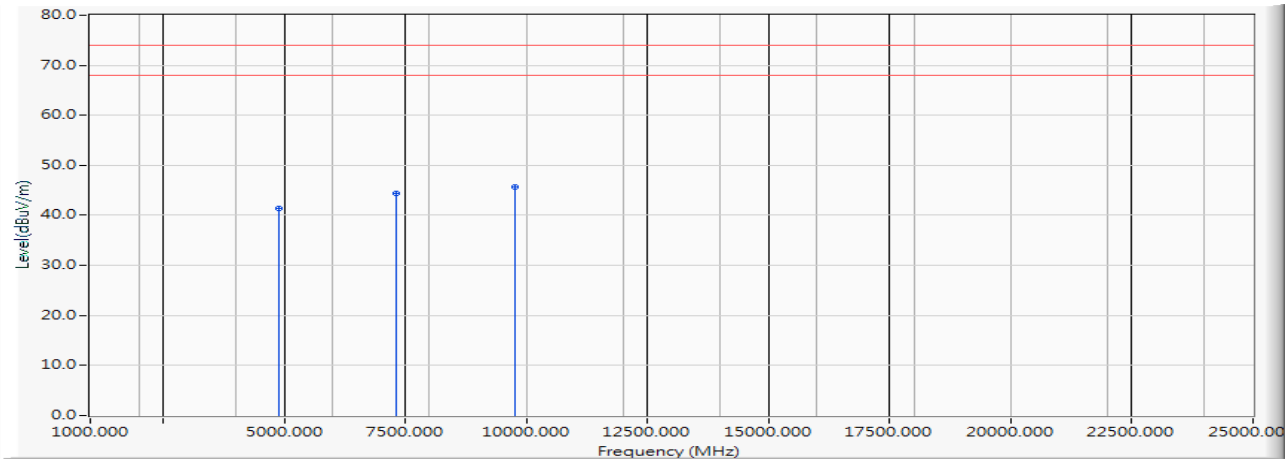
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 3: Transmit - 3Mbps (2441MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	-6.042	47.540	41.498	-32.502	74.000	PEAK
2		7323.000	-2.954	47.290	44.336	-29.664	74.000	PEAK
3	*	9764.000	-0.487	46.210	45.723	-28.277	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

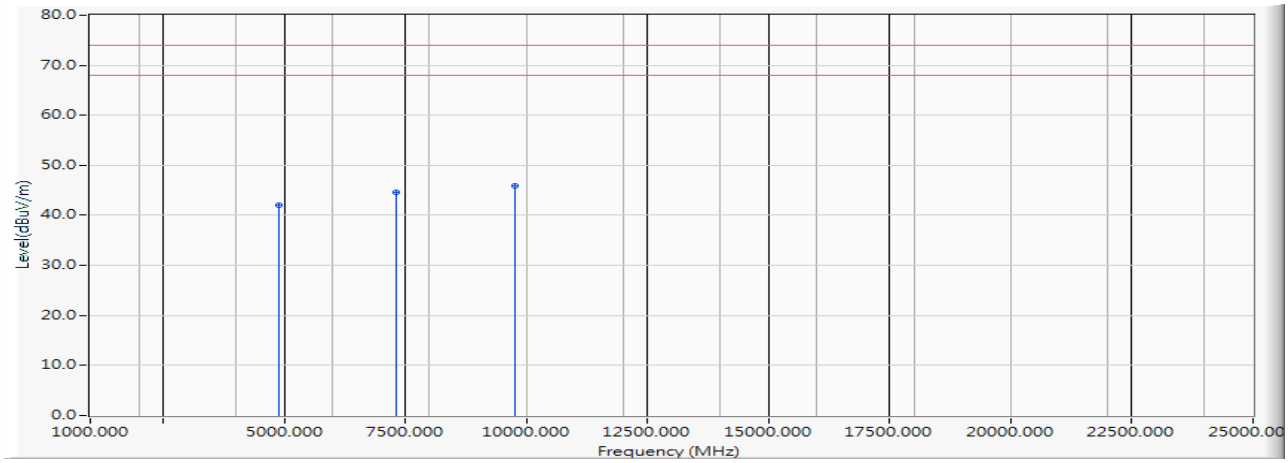
Frequency	Peak Measurement	Duty Cycle Factor	Average Measurement	Margin	Peak Limit	Average Limit
MHz	dBµV/m	dB	dBµV/m	dB	dBµV/m	dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 3: Transmit - 3Mbps (2441MHz)
Test Date : 2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	-6.042	48.060	42.018	-31.982	74.000	PEAK
2		7323.000	-2.954	47.520	44.566	-29.434	74.000	PEAK
3	*	9764.000	-0.487	46.390	45.903	-28.097	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

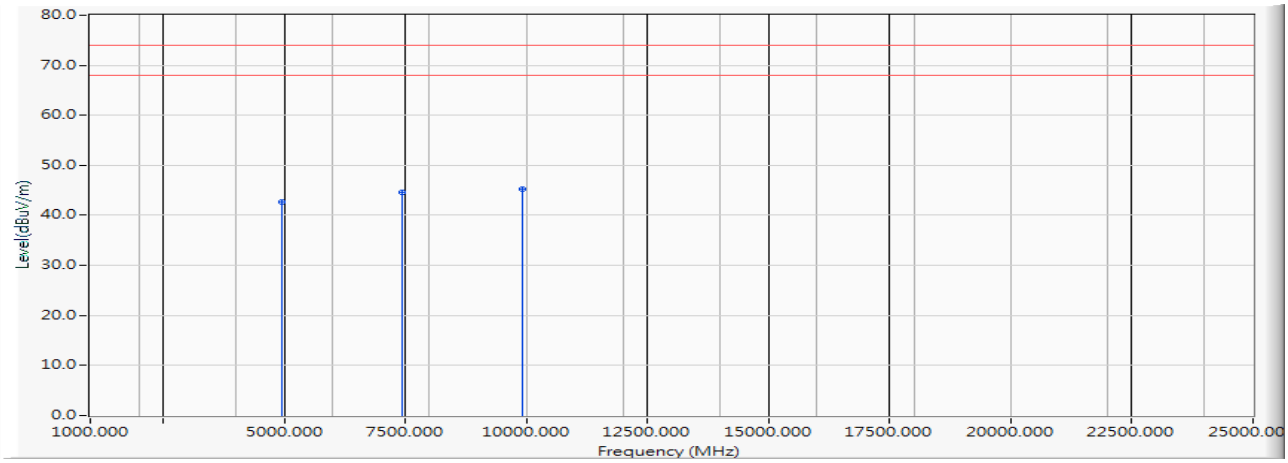
Frequency MHz	Peak Measurement dBµV/m	Duty Cycle Factor dB	Average Measurement dBµV/m	Margin dB	Peak Limit dBµV/m	Average Limit dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 3: Transmit - 3Mbps (2480MHz)
Test Date : 2019/08/22

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	-6.041	48.690	42.649	-31.351	74.000	PEAK
2		7440.000	-2.805	47.390	44.585	-29.415	74.000	PEAK
3	*	9920.000	-0.260	45.430	45.170	-28.830	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

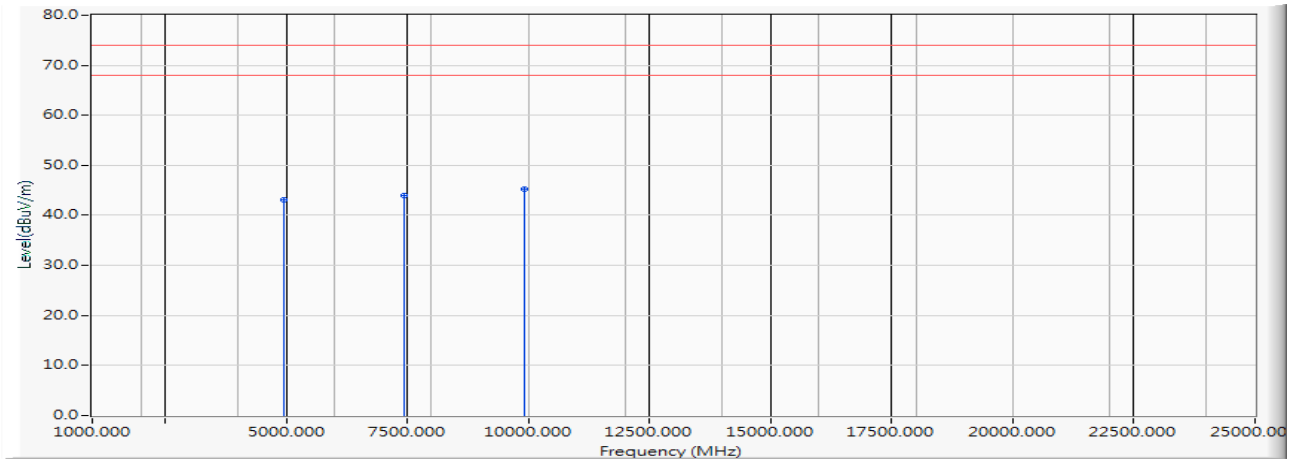
Frequency	Peak Measurement	Duty Cycle Factor	Average Measurement	Margin	Peak Limit	Average Limit
MHz	dBµV/m	dB	dBµV/m	dB	dBµV/m	dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Harmonic Radiated Emission
Test Mode : Mode 3: Transmit - 3Mbps (2480MHz)
Test Date : 2019/08/22

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	-6.041	49.160	43.119	-30.881	74.000	PEAK
2		7440.000	-2.805	46.680	43.875	-30.125	74.000	PEAK
3		9920.000	-0.260	45.440	45.180	-28.820	74.000	PEAK
4	*	9920.000	-0.260	45.620	45.360	-28.640	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

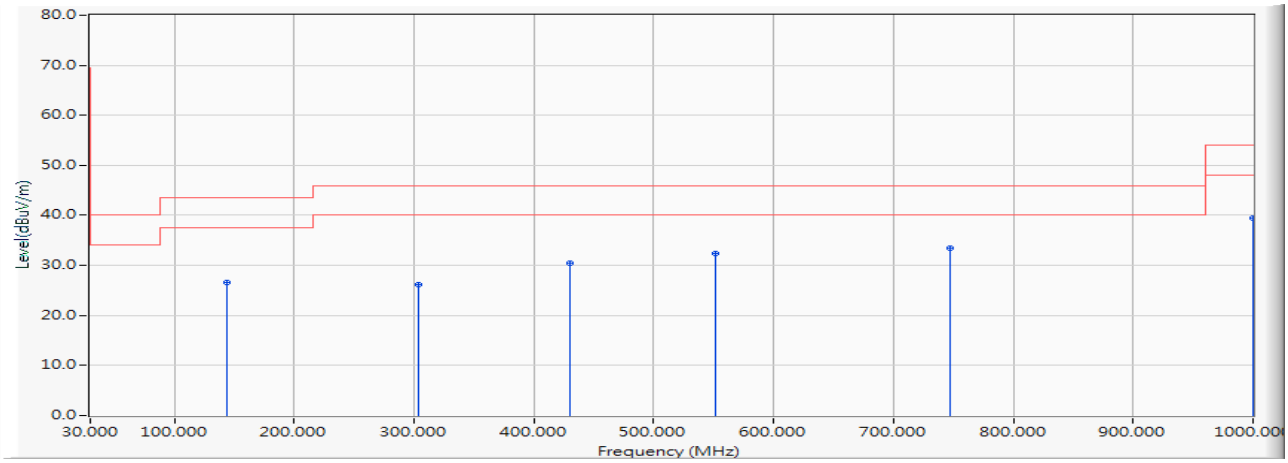
Frequency	Peak Measurement	Duty Cycle Factor	Average Measurement	Margin	Peak Limit	Average Limit
MHz	dBµV/m	dB	dBµV/m	dB	dBµV/m	dBµV/m
Average Detector:						
--	--	--	--	--	74.000	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : General Radiated Emission
Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)
Test Date : 2019/09/24

Horizontal



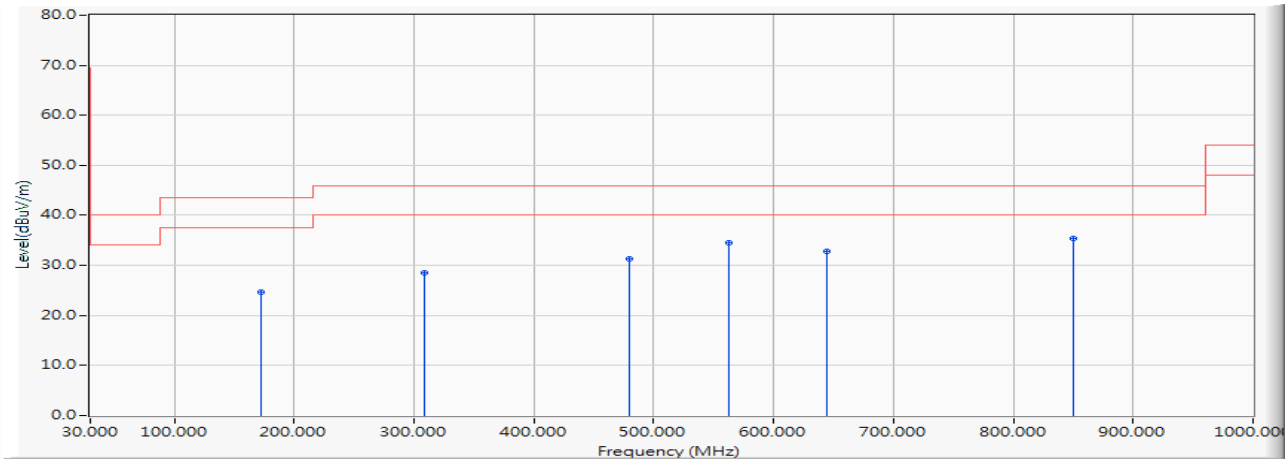
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		143.870	-11.295	37.930	26.636	-16.864	43.500	QUASIPEAK
2		304.130	-10.242	36.411	26.168	-19.832	46.000	QUASIPEAK
3		430.652	-7.275	37.825	30.550	-15.450	46.000	QUASIPEAK
4		551.551	-5.142	37.424	32.282	-13.718	46.000	QUASIPEAK
5	*	746.957	-2.082	35.638	33.556	-12.444	46.000	QUASIPEAK
6		1000.000	1.007	38.374	39.381	-14.619	54.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Wi-Fi 6 AX201
Test Item : General Radiated Emission
Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)
Test Date : 2019/09/24

Vertical



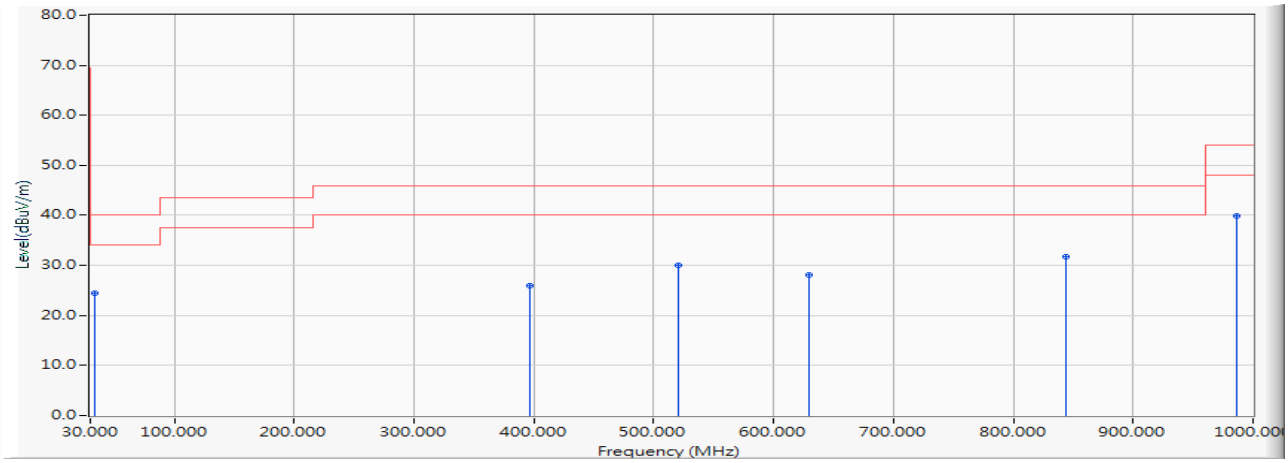
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		171.986	-11.447	36.191	24.744	-18.756	43.500	QUASIPEAK
2		308.348	-10.143	38.723	28.580	-17.420	46.000	QUASIPEAK
3		479.855	-6.292	37.576	31.284	-14.716	46.000	QUASIPEAK
4		562.797	-4.878	39.372	34.495	-11.505	46.000	QUASIPEAK
5		644.333	-3.731	36.633	32.902	-13.098	46.000	QUASIPEAK
6	*	849.580	-0.884	36.243	35.360	-10.640	46.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Wi-Fi 6 AX201
Test Item : General Radiated Emission
Test Mode : Mode 2: Transmit - 2Mbps (2441MHz)
Test Date : 2019/09/26

Horizontal



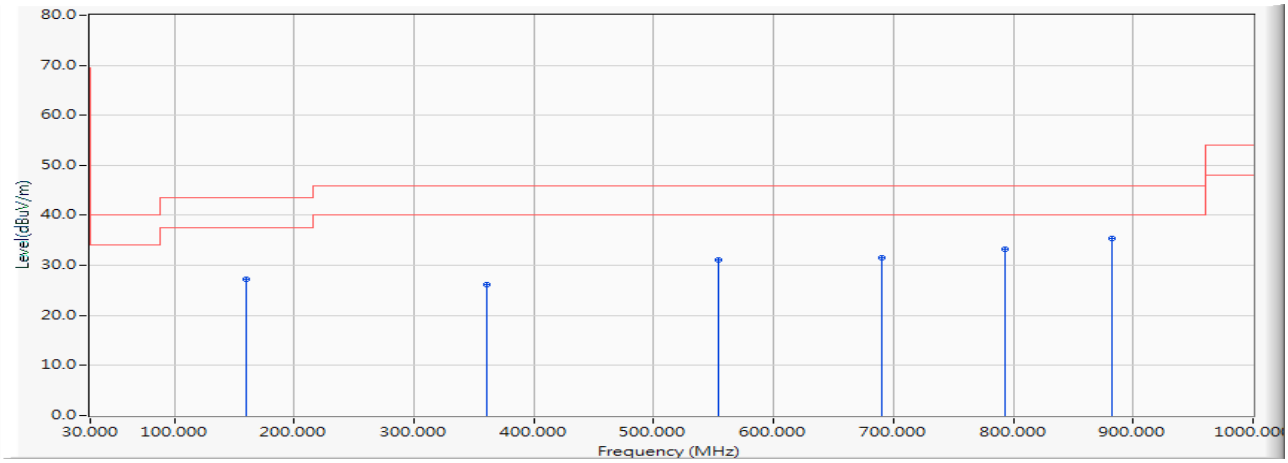
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		34.274	-11.892	36.379	24.487	-15.513	40.000	QUASIPEAK
2		396.084	-8.125	34.039	25.914	-20.086	46.000	QUASIPEAK
3		519.971	-5.645	35.607	29.962	-16.038	46.000	QUASIPEAK
4		629.248	-3.825	31.902	28.077	-17.923	46.000	QUASIPEAK
5	*	844.012	-0.970	32.788	31.818	-14.182	46.000	QUASIPEAK
6		986.268	0.828	38.967	39.796	-14.204	54.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Wi-Fi 6 AX201
Test Item : General Radiated Emission
Test Mode : Mode 2: Transmit - 2Mbps (2441MHz)
Test Date : 2019/09/26

Vertical



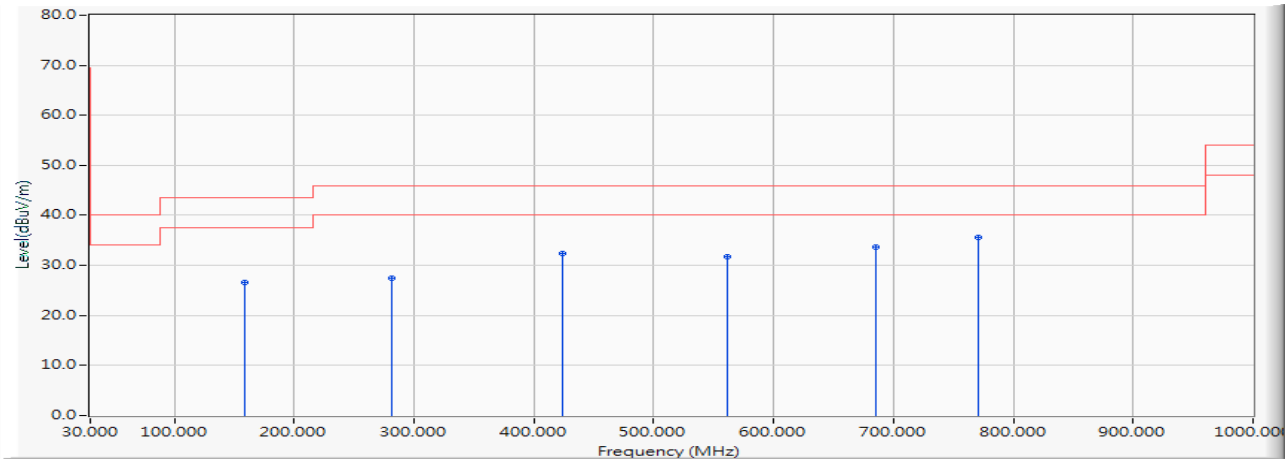
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		160.041	-10.830	38.169	27.339	-16.161	43.500	QUASIPEAK
2		360.467	-8.940	35.067	26.127	-19.873	46.000	QUASIPEAK
3		553.527	-5.096	36.183	31.086	-14.914	46.000	QUASIPEAK
4		689.721	-3.136	34.628	31.492	-14.508	46.000	QUASIPEAK
5		792.632	-1.713	34.918	33.205	-12.795	46.000	QUASIPEAK
6	*	881.721	-0.447	35.757	35.309	-10.691	46.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Wi-Fi 6 AX201
Test Item : General Radiated Emission
Test Mode : Mode 3: Transmit - 3Mbps (2441MHz)
Test Date : 2019/09/24

Horizontal



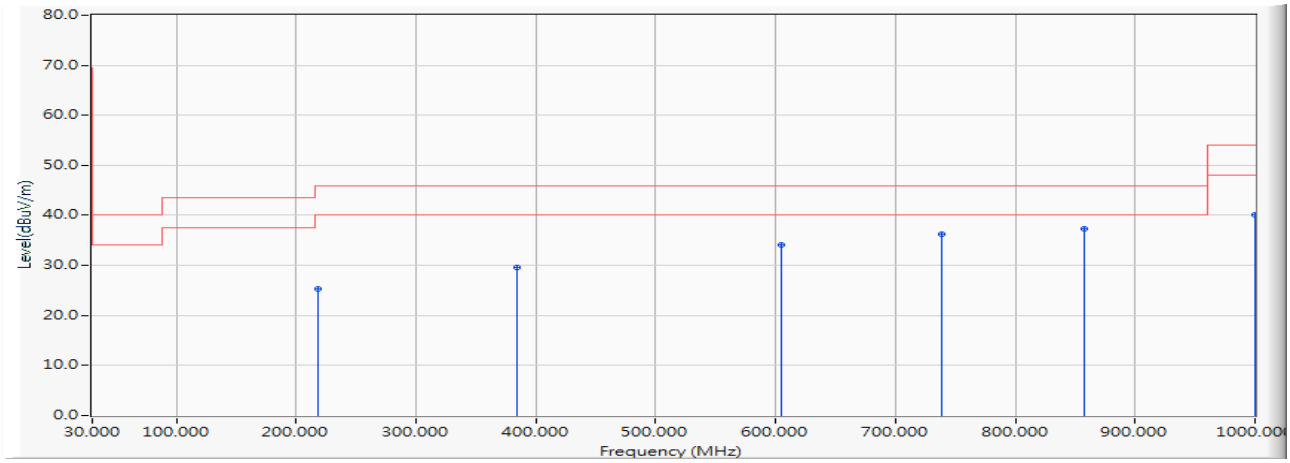
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		159.333	-10.845	37.364	26.519	-16.981	43.500	QUASIPEAK
2		281.638	-10.853	38.379	27.526	-18.474	46.000	QUASIPEAK
3		423.623	-7.448	39.785	32.337	-13.663	46.000	QUASIPEAK
4		561.391	-4.911	36.729	31.818	-14.182	46.000	QUASIPEAK
5		685.101	-3.201	36.915	33.714	-12.286	46.000	QUASIPEAK
6	*	770.855	-1.876	37.372	35.496	-10.504	46.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product	:	Intel® Wi-Fi 6 AX201
Test Item	:	General Radiated Emission
Test Mode	:	Mode 3: Transmit - 3Mbps (2441MHz)
Test Date	:	2019/09/24

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		218.377	-13.307	38.625	25.318	-20.682	46.000	QUASIPEAK
2		384.261	-8.395	37.887	29.491	-16.509	46.000	QUASIPEAK
3		604.971	-3.974	38.033	34.059	-11.941	46.000	QUASIPEAK
4		738.522	-2.246	38.543	36.298	-9.702	46.000	QUASIPEAK
5	*	858.014	-0.767	37.985	37.218	-8.782	46.000	QUASIPEAK
6		1000.000	1.007	39.128	40.135	-13.865	54.000	QUASIPEAK

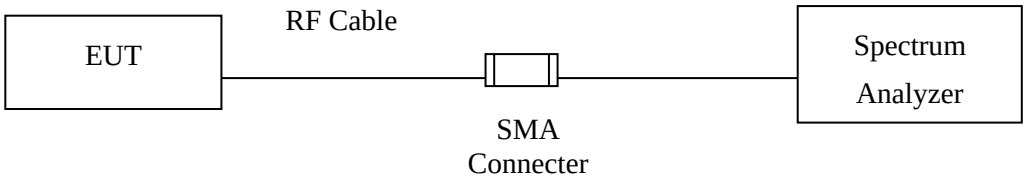
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

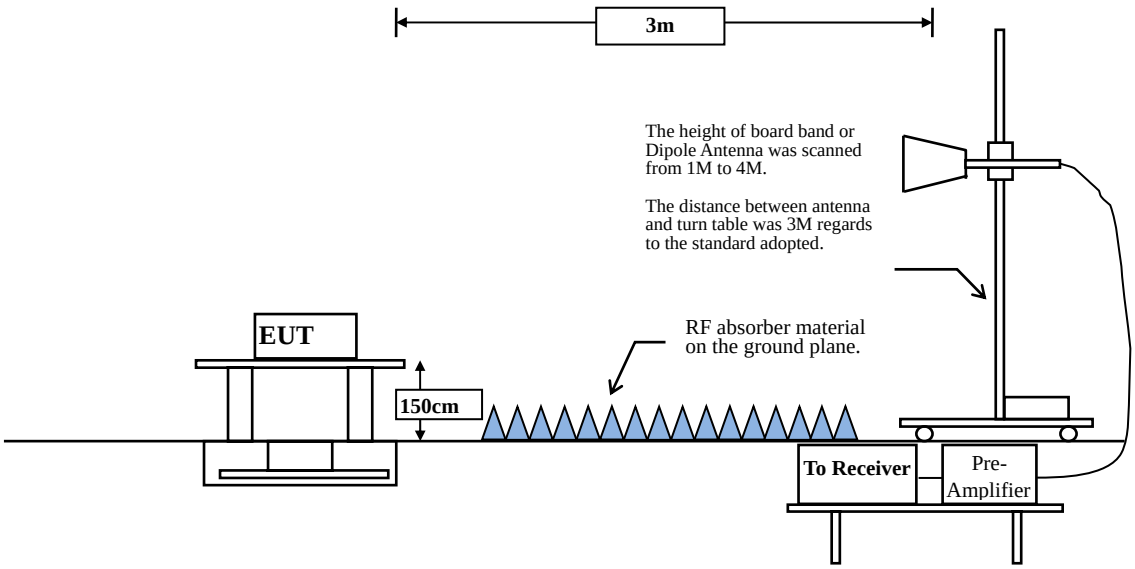
4. Band Edge

4.1. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



4.2. Limit

According to FCC Section 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 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, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

4.3. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.
The bandwidth setting below 1GHz and above 1GHz on the field strength meter is 120 kHz and 1MHz, respectively.

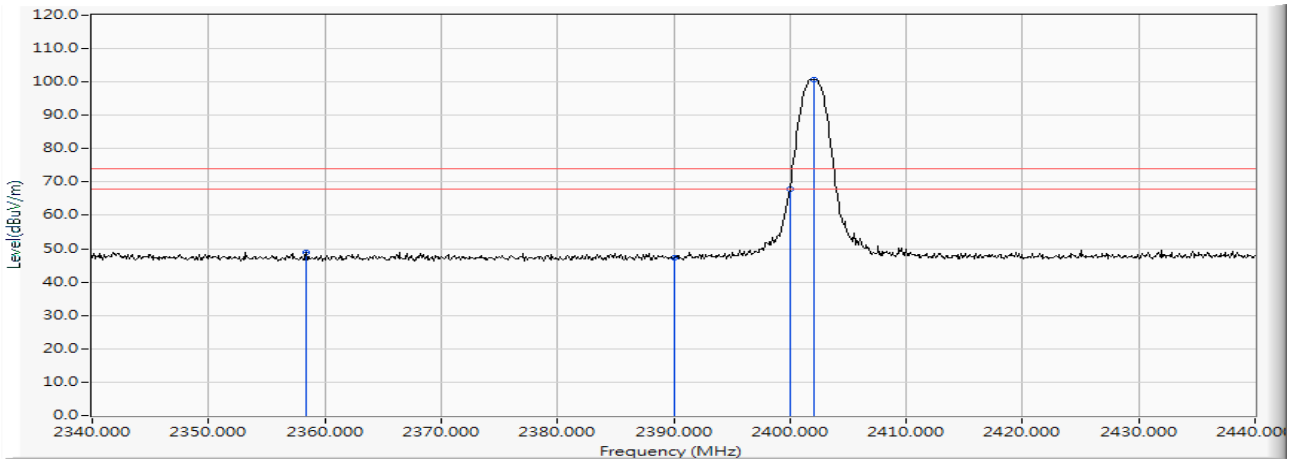
4.4. Uncertainty

Conducted: ±1.23dB
Radiated:
Horizontal polarization：1-18GHz: ±3.77dB
Vertical polarization：1-18GHz : ±3.83dB

4.5. Test Result of Band Edge

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 1: Transmit - 1Mbps (2402MHz)
Test Date : 2019/08/02

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2358.400	10.133	38.912	49.045	-24.955	74.000	PEAK
2		2390.000	10.262	36.986	47.248	-26.752	74.000	PEAK
3		2400.000	10.304	57.666	67.969	--	--	PEAK
4	*	2402.100	10.312	90.472	100.784	--	--	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

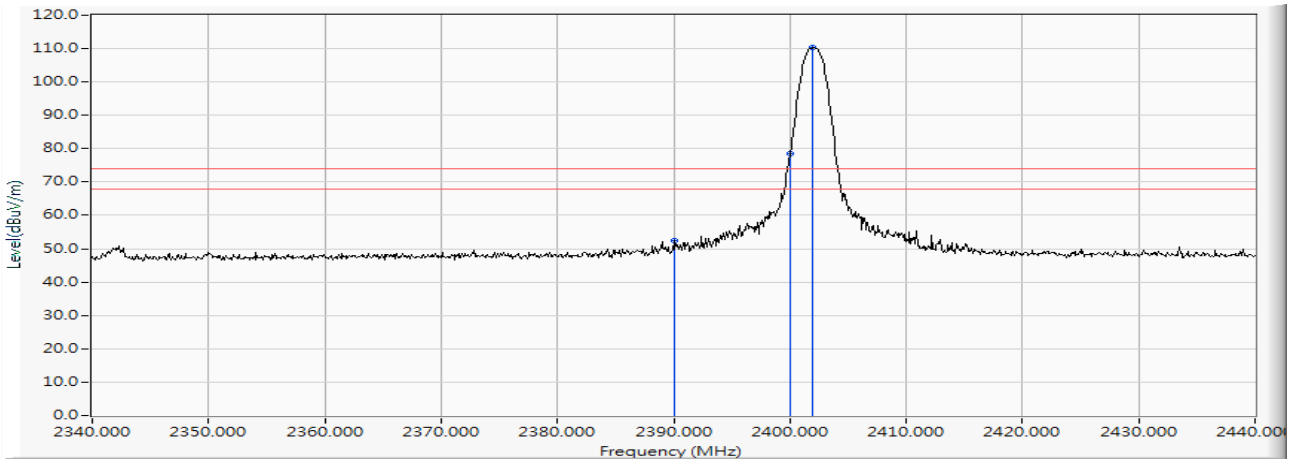
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
00 (Average)	2358.4	40.045	-21.257	18.788	-35.212	54.000	Pass
00 (Average)	2390	47.248	-21.257	25.991	-28.009	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 1: Transmit - 1Mbps (2402MHz)
Test Date : 2019/08/02

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	10.262	42.112	52.374	-21.626	74.000	PEAK
2		2400.000	10.304	68.085	78.388	--	--	PEAK
3	*	2402.000	10.311	99.934	110.246	--	--	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

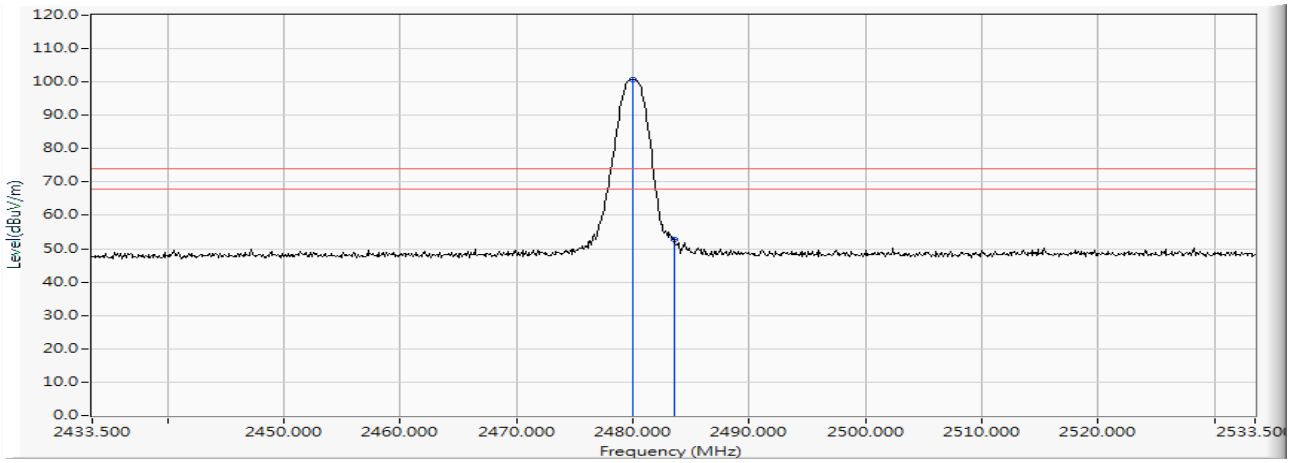
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
00 (Average)	2390	52.374	-21.257	31.117	-22.883	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 1: Transmit - 1Mbps (2480MHz)
Test Date : 2019/08/02

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2480.000	10.628	90.166	100.794	--	--	PEAK
2		2483.500	10.640	41.965	52.606	-21.394	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

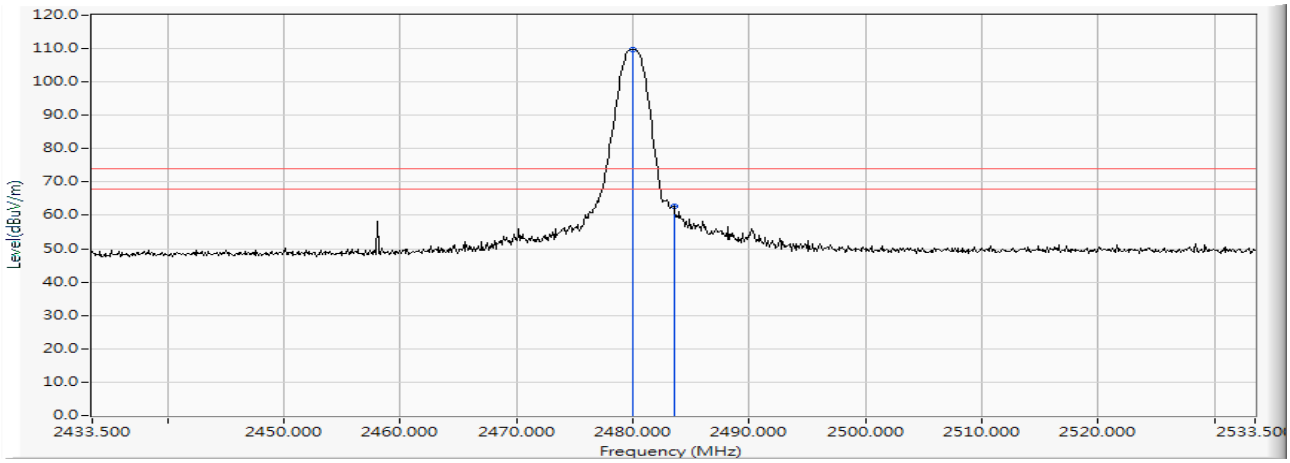
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
78 (Average)	2483.5	52.606	-21.257	31.349	-22.651	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 1: Transmit - 1Mbps (2480MHz)
Test Date : 2019/08/02

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2480.000	10.628	99.116	109.744	--	--	PEAK
2		2483.500	10.640	52.210	62.851	-11.149	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

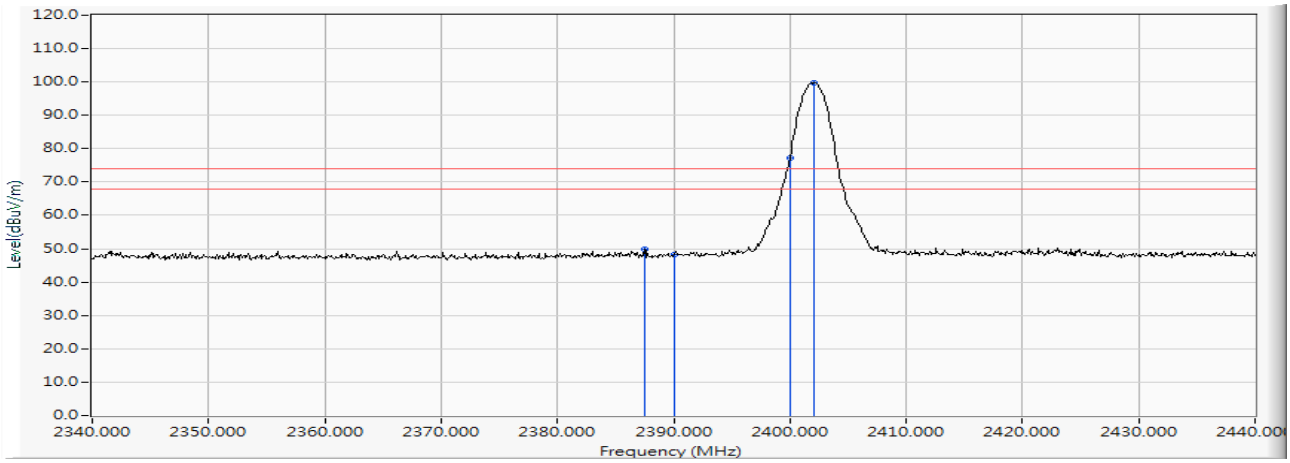
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
78 (Average)	2483.5	62.851	-21.257	41.594	-12.406	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 2: Transmit - 2Mbps (2402MHz)
Test Date : 2019/08/02

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2387.500	10.251	39.583	49.835	-24.165	74.000	PEAK
2		2390.000	10.262	37.986	48.248	-25.752	74.000	PEAK
3		2400.000	10.304	67.018	77.321	--	--	PEAK
4	*	2402.100	10.312	89.312	99.624	--	--	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

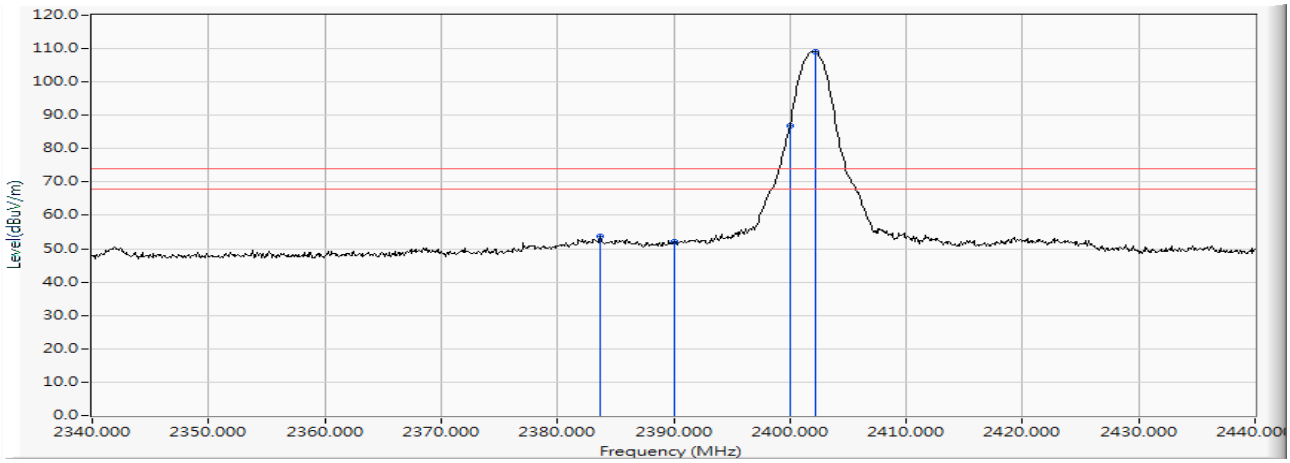
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
00 (Average)	2387.5	49.835	-21.216	28.619	-25.381	54.000	Pass
00 (Average)	2390	48.248	-21.216	27.032	-26.968	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 2: Transmit - 2Mbps (2402MHz)
Test Date : 2019/08/02

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2383.700	10.236	43.398	53.634	-20.366	74.000	PEAK
2		2390.000	10.262	41.796	52.058	-21.942	74.000	PEAK
3		2400.000	10.304	76.519	86.822	--	--	PEAK
4	*	2402.200	10.312	98.749	109.062	--	--	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

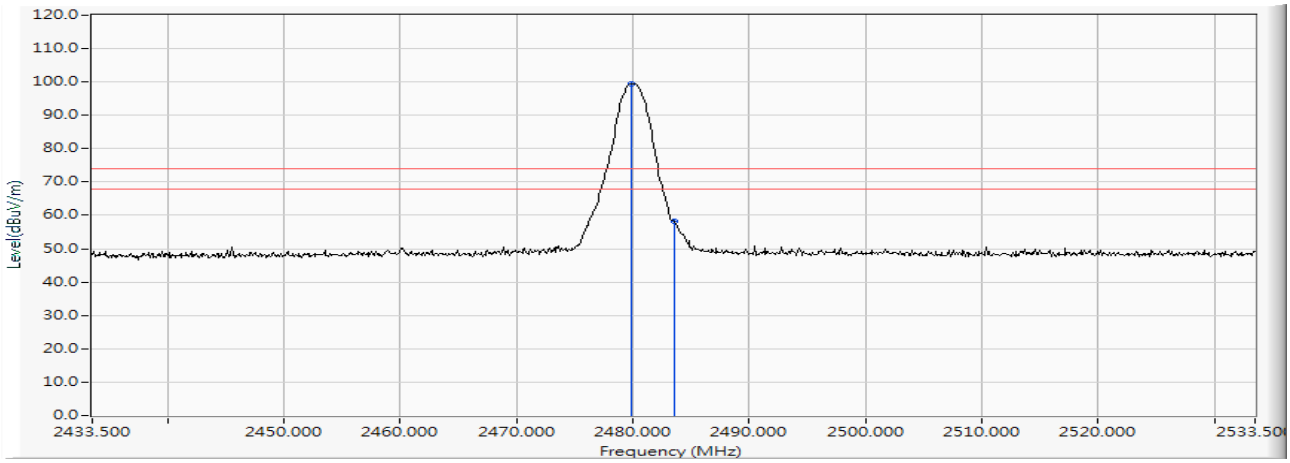
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
00 (Average)	2383.7	53.634	-21.216	32.418	-21.582	54.000	Pass
00 (Average)	2390	52.058	-21.216	30.842	-23.158	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 2: Transmit - 2Mbps (2480MHz)
Test Date : 2019/08/02

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2479.900	10.628	88.903	99.530	--	--	PEAK
2		2483.500	10.640	47.460	58.101	-15.899	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

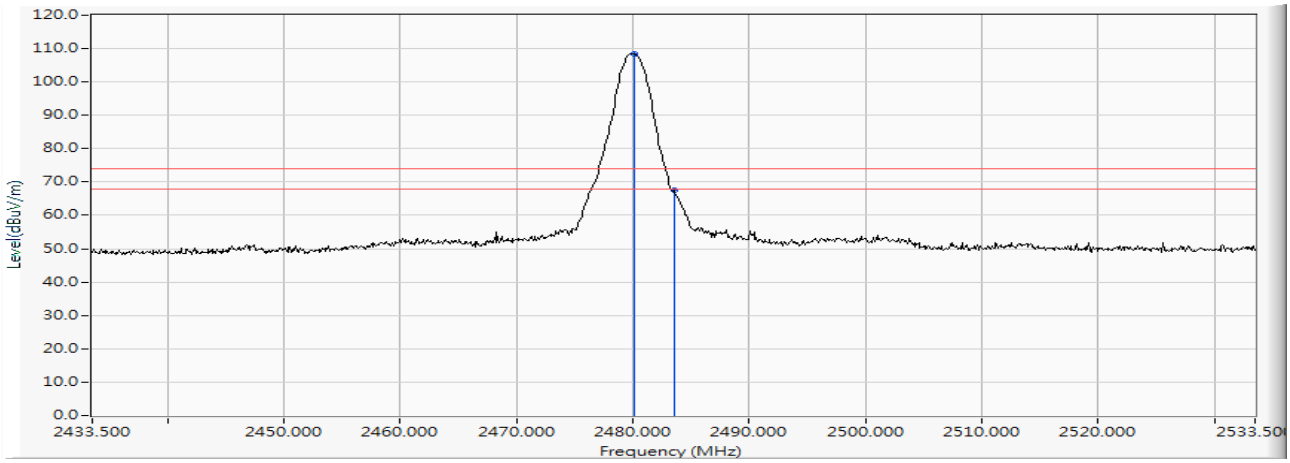
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
78 (Average)	2483.5	58.101	-21.216	36.885	-17.115	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 2: Transmit - 2Mbps (2480MHz)
Test Date : 2019/08/02

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2480.100	10.628	97.815	108.443	--	--	PEAK
2		2483.500	10.640	56.831	67.472	-6.528	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

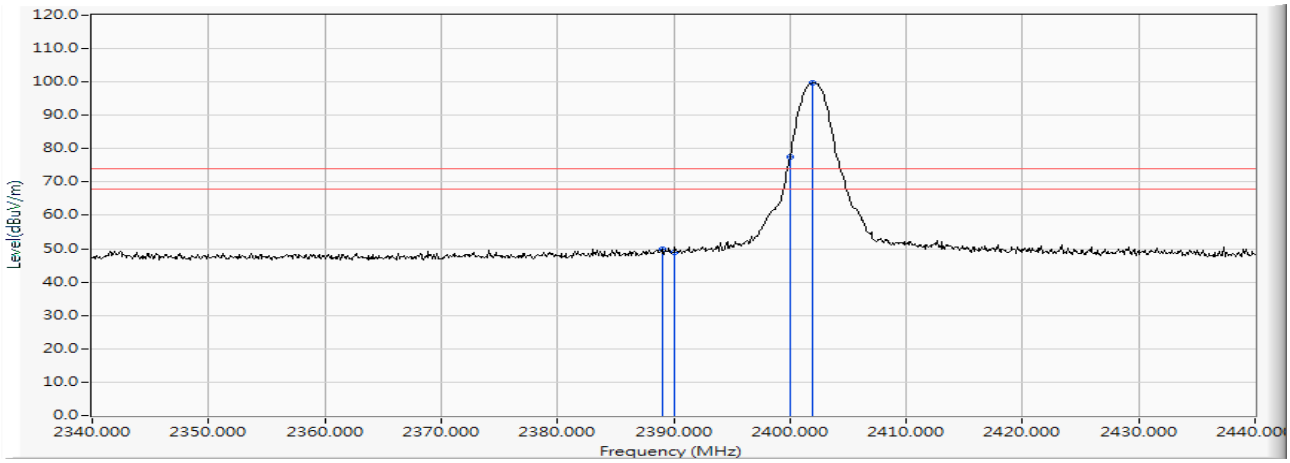
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
78 (Average)	2483.5	67.472	-21.216	46.256	-7.744	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 3: Transmit - 3Mbps (2402MHz)
Test Date : 2019/08/02

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2389.000	10.258	39.704	49.962	-24.038	74.000	PEAK
2		2390.000	10.262	38.523	48.785	-25.215	74.000	PEAK
3		2400.000	10.304	67.121	77.424	--	--	PEAK
4	*	2402.000	10.311	89.413	99.725	--	--	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

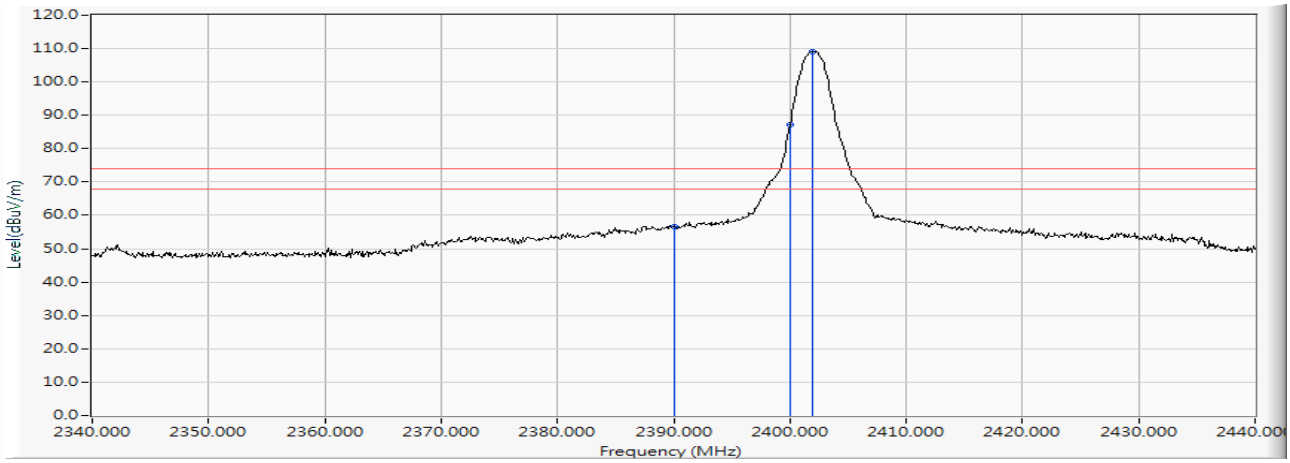
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
00 (Average)	2389	49.962	-21.214	78.511	-15.489	54.000	Pass
00 (Average)	2390	48.785	-21.214	74.626	-19.374	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 3: Transmit - 3Mbps (2402MHz)
Test Date : 2019/08/02

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	10.262	46.295	56.557	-17.443	74.000	PEAK
2		2400.000	10.304	76.743	87.046	--	--	PEAK
3	*	2402.000	10.311	98.876	109.188	--	--	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

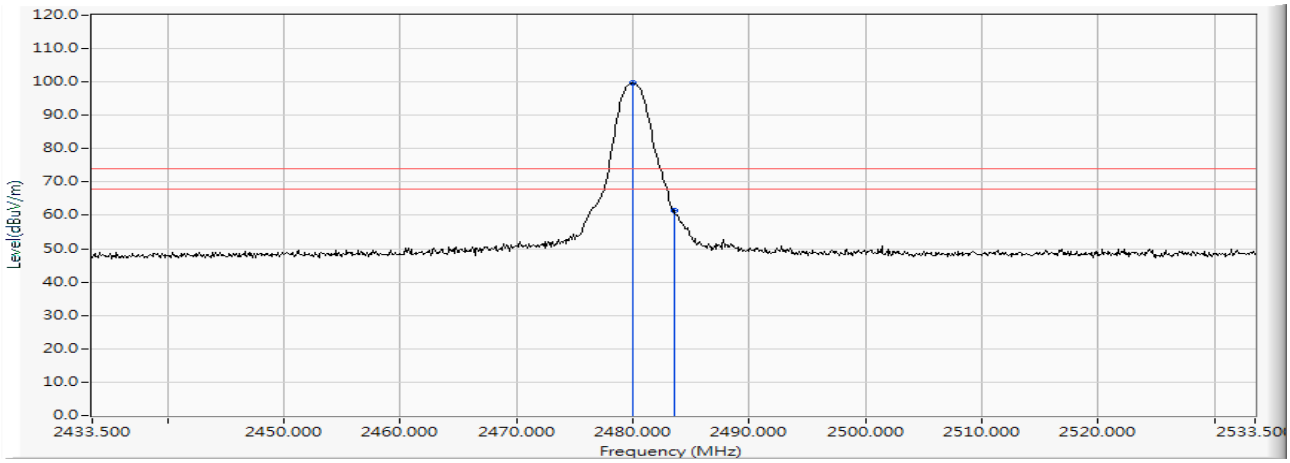
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
00 (Average)	2390	56.557	-21.214	87.974	-6.026	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 3: Transmit - 3Mbps (2480MHz)
Test Date : 2019/08/02

Horizontal



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2480.000	10.628	89.007	99.635	--	--	PEAK
2		2483.500	10.640	50.698	61.339	-12.661	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

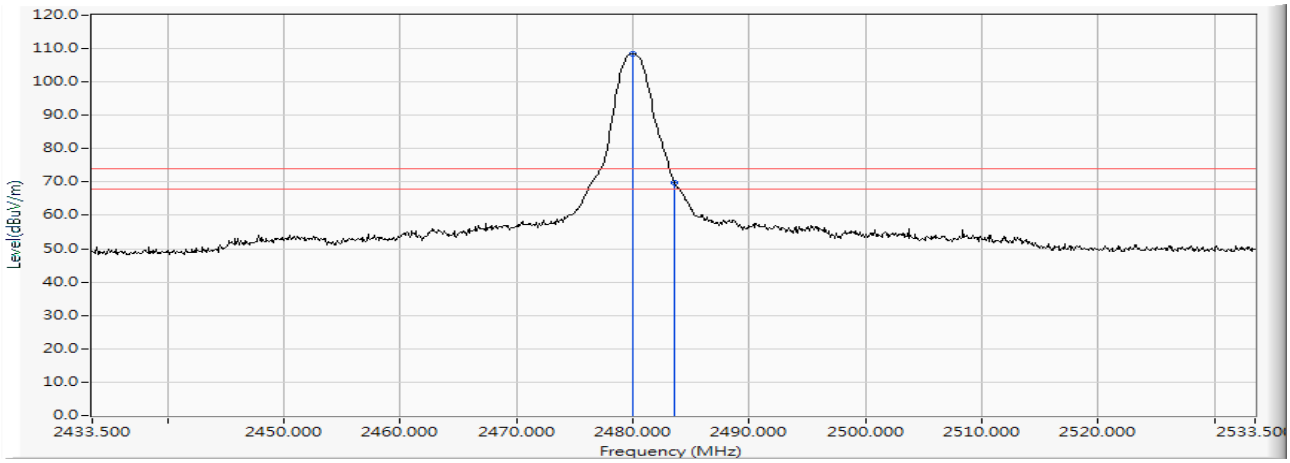
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
78 (Average)	2483.5	61.339	-21.214	78.421	-15.579	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Product : Intel® Wi-Fi 6 AX201
Test Item : Band Edge
Test Mode : Mode 3: Transmit - 3Mbps (2480MHz)
Test Date : 2019/08/02

Vertical



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2480.000	10.628	97.920	108.548	--	--	PEAK
2		2483.500	10.640	59.208	69.849	-4.151	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.

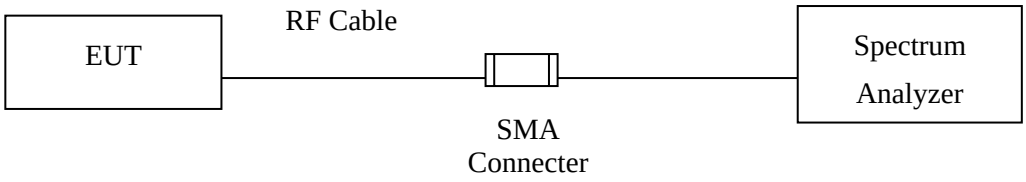
Channel No.	Frequency (MHz)	Peak Measurement (dBµV/m)	Duty Cycle Factor (dB)	Average Measurement (dBµV/m)	Margin (dB)	Average Limit (dBµV/m)	Result
78 (Average)	2483.5	69.849	-21.214	77.376	-16.624	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

5. Duty Cycle

5.1. Test Setup

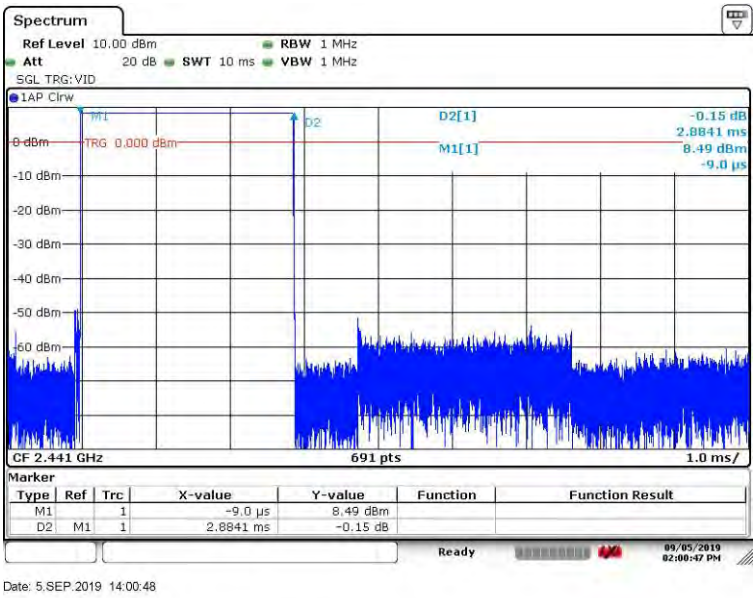


5.2. Uncertainty

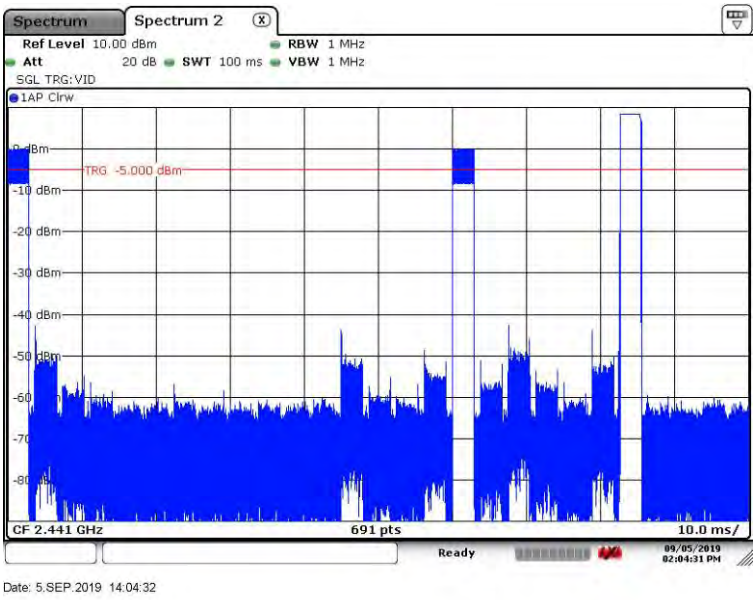
± 2.31ms

5.3. Test Result of Duty Cycle

Product : Intel® Wi-Fi 6 AX201
Test Item : Duty Cycle Data
Test Mode : Mode 1: Transmit - 1Mbps



Date: 5.SEP.2019 14:00:48



Date: 5.SEP.2019 14:04:32

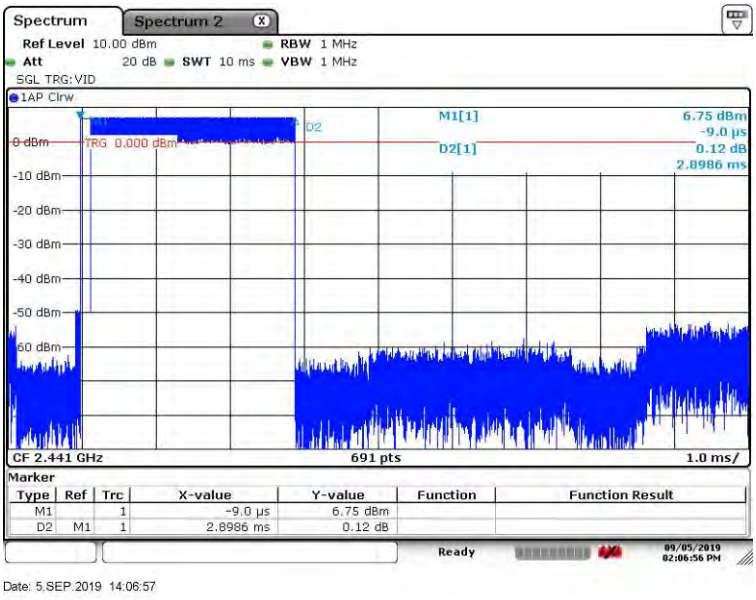
Time on of 100ms= 2.884ms*3= 8.652ms

Duty Cycle=8.652ms / 100ms= 0.08652

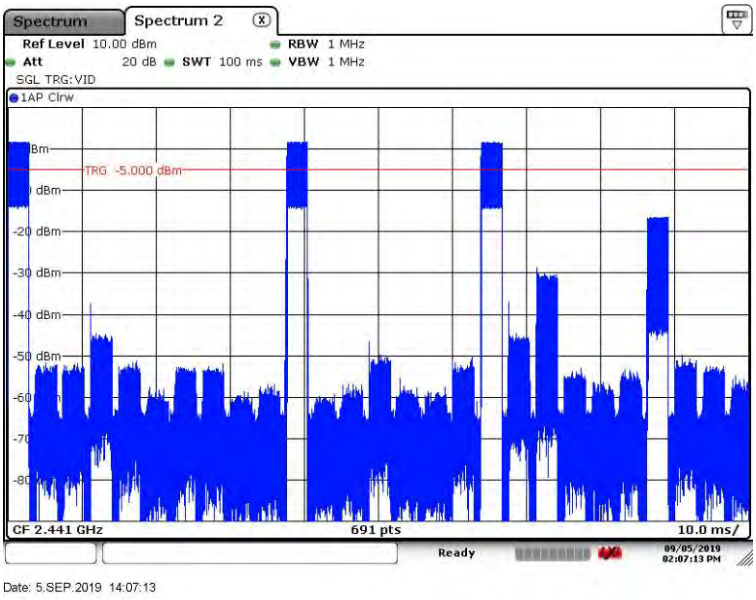
Duty Cycle correction factor= 20 LOG 0. 08652= -21.2571 dB

Duty Cycle correction factor	**-21.257**	**dB**

Product : Intel® Wi-Fi 6 AX201
Test Item : Duty Cycle Data
Test Mode : Mode 1: Transmit - 2Mbps



Date: 5.SEP.2019 14:06:57



Date: 5.SEP.2019 14:07:13

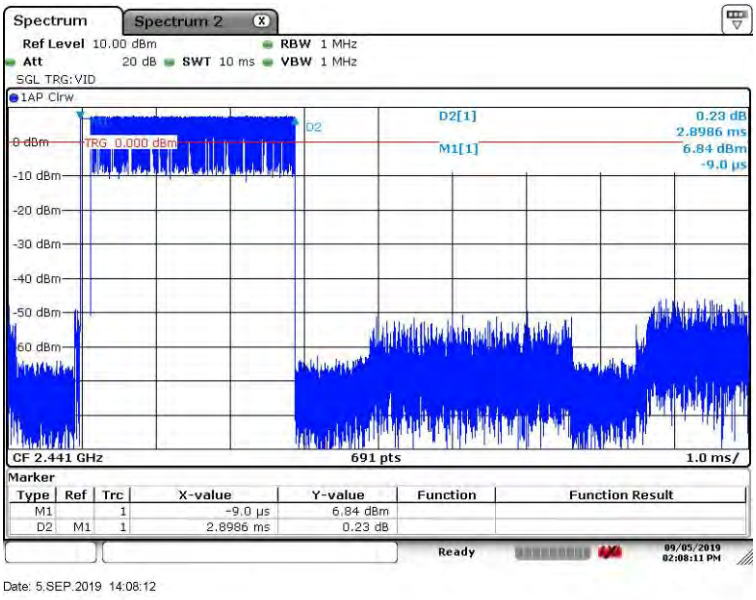
Time on of 100ms= 2.898ms*3=8.694ms

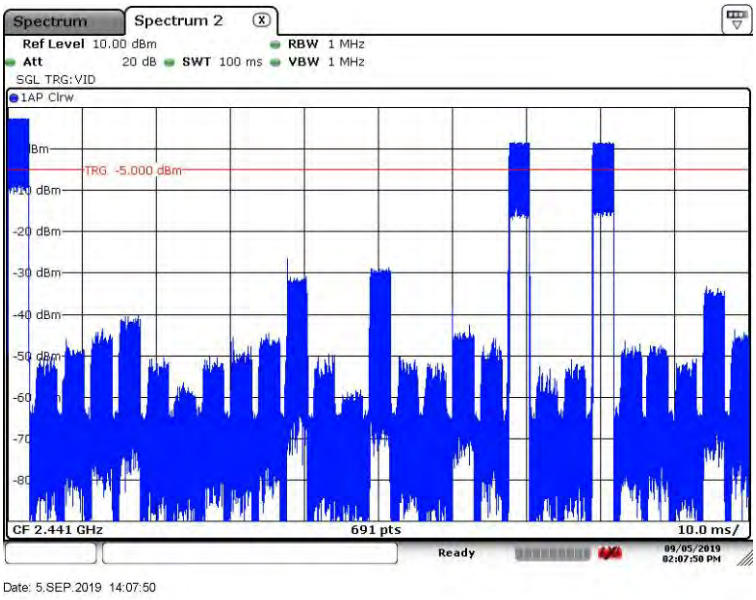
Duty Cycle=8.694ms / 100ms= 0.08694

Duty Cycle correction factor= 20 LOG 0.08694= -21.216 dB

Duty Cycle correction factor	**-21.216**	**dB**

Product : Intel® Wi-Fi 6 AX201
Test Item : Duty Cycle Data
Test Mode : Mode 1: Transmit - 3Mbps





Time on of 100ms= 2.89ms*3= 8.694ms

Duty Cycle=8.694ms / 100ms= 0.08694

Duty Cycle correction factor= 20 LOG 0.08694= -21.216 dB

Duty Cycle correction factor	**-21.216**	**dB**

6. EMI Reduction Method During Compliance Testing

No modification was made during testing.