

FCC Test Report

(Class II Permissive Change)

Product Name	Intel® Wi-Fi 6 AX201
Model No.	AX201NGW
FCC ID.	PD9AX201NG

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

Date of Receipt	Dec. 06, 2021
Issued Date	Mar 08, 2022
Report No.	21C0161R-RFUSBT2V01-A
Report Version	V1.0



The test results relate only to the samples tested.

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

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The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

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.

Test Report

Issued Date: Mar 08, 2022

Report No.: 21C0161R-RFUSBT2V01-A



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.	AX201NGW
FCC ID.	PD9AX201NG
EUT Rated Voltage	AC 100-240V / 50-60Hz
EUT Test Voltage	AC 120V / 60Hz
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

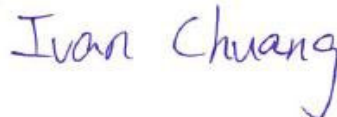
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(Senior Project Specialist / Joanne Lin)

Tested By

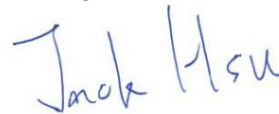
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(Senior Engineer / Ivan Chuang)

Approved By

:



(Senior Engineer / Jack Hsu)

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Revision History

Report No.	Version	Description	Issued Date
21C0161R-RFUSBT2V01-A	V1.0	Initial issue of report.	2022-03-08

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Wi-Fi 6 AX201
Trade Name	intel
Model No.	AX201NGW
FCC ID.	PD9AX201NG
Frequency Range	2402-2480MHz
Channel Number	79
Type of Modulation	FHSS: GFSK(1Mbps) / π / 4DQPSK(2Mbps) / 8DPSK(3Mbps)
Antenna Type	PIFA Antenna
Channel Control	Auto
Antenna Gain	Refer to the table “Antenna List”
Power Adapter (1)	MFR: FSP, M/N: FSP230-AJAS3-1 Input: AC 100-240V~, 3A, 50-60Hz Output: 19.5V=11.79A, 230.0W Cable Out: Non-shielded, 1.2m, with two ferrite cores bonded. Power Cord: Non-shielded, 1.8m
Power Adapter (2)	MFR: FSP, M/N: FSP180-AJBN3 Input: AC 100-240V~, 2.3A, 50-60Hz Output: 19.5V=9.23A, 180.0W Cable Out: Non-shielded, 1.75m, with one ferrite core bonded. Power Cord: Non-shielded, 1.8m

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Auden	ANTRG5D123-1801 (Main)	PIFA Antenna	5.27dBi for 2.4 GHz
	Auden	ANTRG5D123-1801 (Aux)	PIFA Antenna	3.61dBi for 2.4 GHz

Note: The antenna of EUT is conforming 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 built-in WLAN and Bluetooth transceiver, this report for Bluetooth.
2. This is to request a Class II permissive change for FCC ID: PD9AX201NG, originally granted on 01/28/2019.

The major change filed under this application is:

Change #1: Additional Chassis added, Intel Corporation, Model number: AC57.

Change #2: Addition one antennas, the antenna type is same, the antenna gain is higher than the original application.

3. 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.
4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.

Test Mode	Mode 1: Transmit - 1Mbps Mode 2: Transmit - 2Mbps Mode 3: Transmit - 3Mbps
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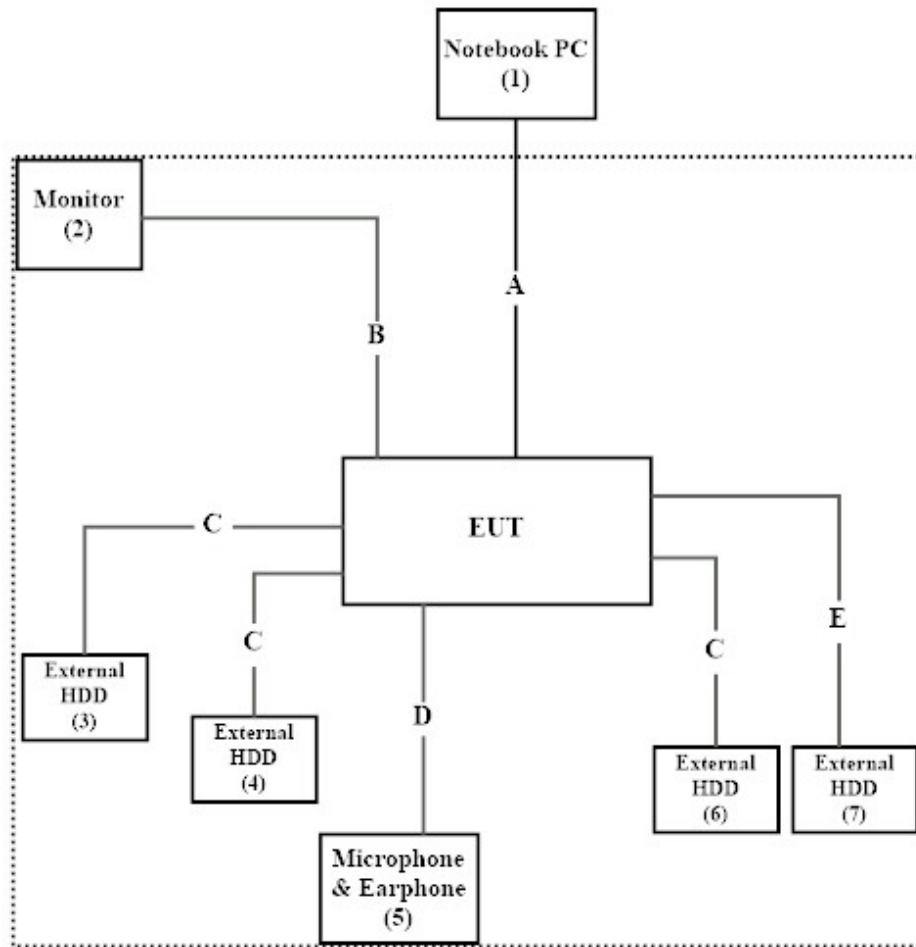
1.2. Tested System Details

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	Inspiron 15 3000	GT5JPJ2	N/A
2 Monitor	Lenovo	A21215FS0	V5DMD987	Non-Shielded, 1.8m
3 External HDD	Transcend	TS1TSJ25MC	F30467-0011	N/A
4 External HDD	Transcend	TS1TSJ25H3B	F21786-0125	N/A
5 Microphone & Earphone	Verbatim	C09024VB	N/A	N/A
6 External HDD	Transcend	TS1TSJ25H3B	F21786-0019	N/A
7 External HDD	Transcend	TS2TSJ25H3B	D67704 0082	N/A

Signal Cable Type	Signal cable Description
A LAN Cable	Non-shielded, 2m
B HDMI Cable	Shielded, 1.8m
C USB Cable	Shielded, 0.5m, three PCS.
D Microphone & Earphone Cable	Non-shielded, 1.2m
E USB Cable	Shielded, 0.5m

1.3. Configuration of Tested System



1.4. EUT Exercise Software

1. Setup the EUT as shown in Section 1.3.
2. Execute software “DRTU V22.21070.0.0-OEM.DRTU.12463” on the EUT.
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.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Radiated Emission	Temperature (°C)	10~40 °C	21.2°C
	Humidity (%RH)	10~90 %	56.7 %
Conductive	Temperature (°C)	10~40 °C	22°C
	Humidity (%RH)	10~90 %	55%

USA : FCC Registration Number: TW0033

Canada : IC Registration Number: 26930

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan
Performed Location : No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan, R.O.C.
Phone number : +886-3-275-7255
Fax number : +866-3-327-8031
Email address : info.tw@dekra.com
Website : <http://www.dekra.com.tw>

1.6. List of Test Equipment

For Conducted measurements / SH2

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
X	Spectrum Analyzer	R&S	FSV30	103466	2021.12.27	2022.12.26
X	Peak Power Analyzer	KEYSIGHT	8900B	MY51000539	2021.06.07	2022.06.06
X	Power Sensor	KEYSIGHT	N1923A	MY59240002	2021.05.17	2022.05.16
X	Power Sensor	KEYSIGHT	N1923A	MY59240003	2021.05.17	2022.05.16

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 / 966-3

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
X	Loop Antenna	AMETEK	HLA6121	56736	2021.04.14	2022.04.13
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-675	2021.08.10	2022.08.10
	Horn Antenna	ETS-Lindgren	3117	00201259	2021.11.09	2022.11.08
	Horn Antenna	Com-Power	AH-840	101087	2021.06.16	2022.06.15
X	Pre-Amplifier	SGH	SGH0301-9	20211007-10	2022.02.22	2023.02.21
	Pre-Amplifier	EMCI	EMC051835SE	980313	2021.11.24	2022.11.23
	Pre-Amplifier	EMCI	EMC05820SE	980310	2021.07.07	2022.07.06
	Pre-Amplifier	EMCI	EMC184045SE	980369		
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314	2021.04.27	2022.04.26
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
	Filter	MICRO TRONICS	BRM50702	G251	2021.09.16	2022.09.15
	Filter	MICRO TRONICS	BRM50716	G188	2021.09.16	2022.09.15
X	EMI Test Receiver	R&S	ESR	102793	2021.12.15	2022.12.14
X	Spectrum Analyzer	R&S	FSV3044	101113	2022.01.25	2023.02.24
X	Coaxial Cable	SGH	HA800	GD20110222-3	2022.01.05	2023.01.04
	Coaxial Cable	SGH	SGH18	20110223-1		
	Coaxial Cable	SGH	SGH18	2021005-3		
	Coaxial Cable	SGH	SGH18	2021001-18		

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: AUDIX e3 V9.

For Radiated measurements / 966-4

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
	Loop Antenna	AMETEK	HLA6121	56736	2021.04.14	2022.04.13
	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-0678	2021.01.29	2022.01.28
X	Horn Antenna	ETS-Lindgren	3117	00228113	2021.06.23	2022.06.22
X	Horn Antenna	Com-Power	AH-840	101100	2021.10.04	2022.10.03
	Pre-Amplifier	SGH	EM330	060736	2021.08.11	2022.08.10
X	Pre-Amplifier	SGH	PRAMP118	20200701	2021.08.11	2022.08.10
	Pre-Amplifier	SGH	PRAMP0510	20200703	2021.08.11	2022.08.10
	Pre-Amplifier	EMCI	EMC184045SE	980369	2021.04.27	2022.04.26
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314		
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
X	Filter	MICRO TRONICS	BRM50702	G251	2021.09.16	2022.09.15
	Filter	MICRO TRONICS	BRM50716	G188	2021.09.16	2022.09.15
X	Spectrum Analyzer	R&S	FSV3044	101113	2022.01.25	2023.02.24
X	Coaxial Cable	SGH	HA800	GD20110222-6	2021.10.04	2022.10.03
	Coaxial Cable	SGH	SGH18	2021001-20		
	Coaxial Cable	EMCI	EMCCFD400	160214		

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 : AUDIX e3 V9.

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.

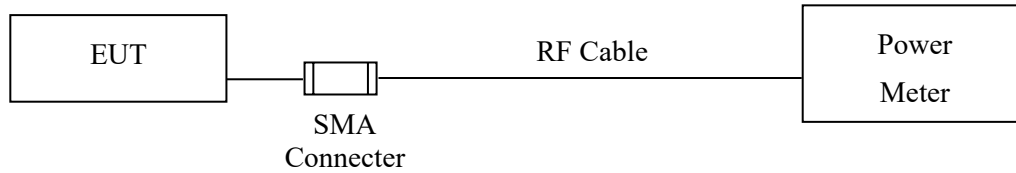
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

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.

Test item	Uncertainty	
Peak Power Output	± 0.91 dB	
Radiated Emission	Under 1GHz ± 4.06 dB	Above 1GHz ± 3.73 dB
Band Edge	Under 1GHz ± 4.06 dB	Above 1GHz ± 3.73 dB
Duty Cycle	± 2.31 ms	

2. Peak Power Output

2.1. Test Setup



2.2. Limit

The maximum peak power shall be less 1 Watt.

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. 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 : 2021/12/21

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	8.72	1 Watt= 30 dBm	Pass
Channel 39	2441.00	8.87	1 Watt= 30 dBm	Pass
Channel 78	2480.00	8.81	1 Watt= 30 dBm	Pass

Product : Intel® Wi-Fi 6 AX201
Test Item : Peak Power Output
Test Mode : Mode 2: Transmit - 2Mbps
Test Date : 2021/12/21

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	8.48	1 Watt= 30 dBm	Pass
Channel 39	2441.00	8.97	1 Watt= 30 dBm	Pass
Channel 78	2480.00	8.81	1 Watt= 30 dBm	Pass

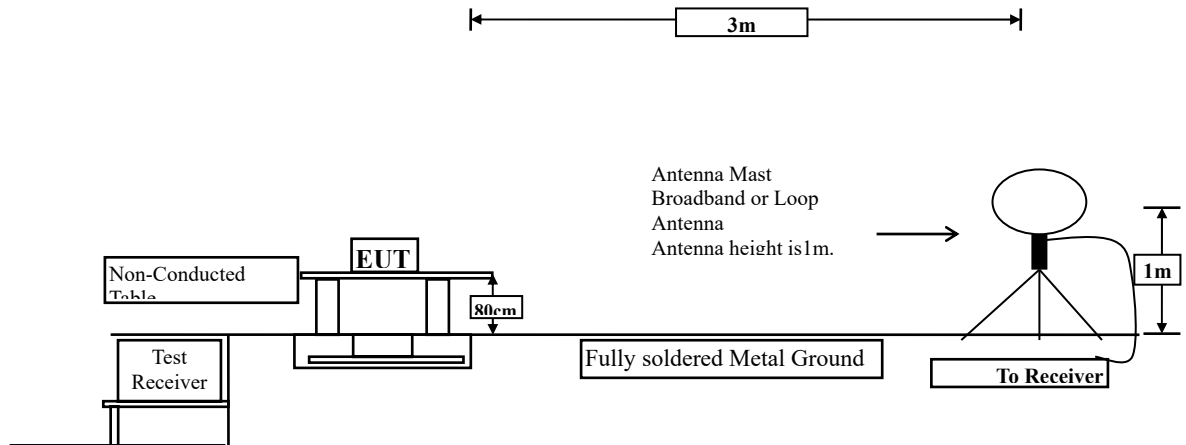
Product : Intel® Wi-Fi 6 AX201
Test Item : Peak Power Output
Test Mode : Mode 3: Transmit - 3Mbps
Test Date : 2021/12/21

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	8.42	1 Watt= 30 dBm	Pass
Channel 39	2441.00	8.46	1 Watt= 30 dBm	Pass
Channel 78	2480.00	8.48	1 Watt= 30 dBm	Pass

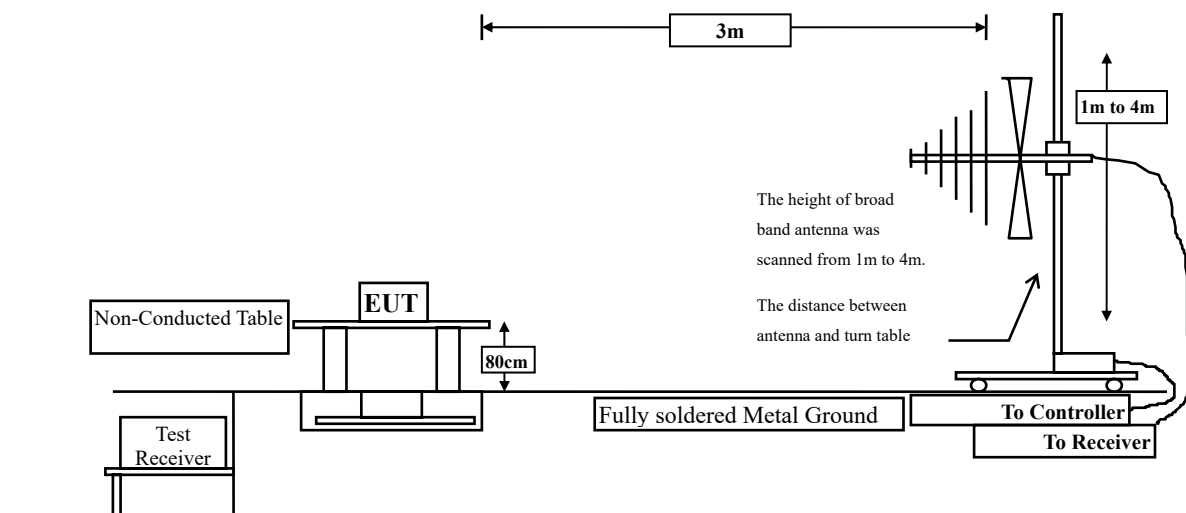
3. Radiated Emission

3.1. Test Setup

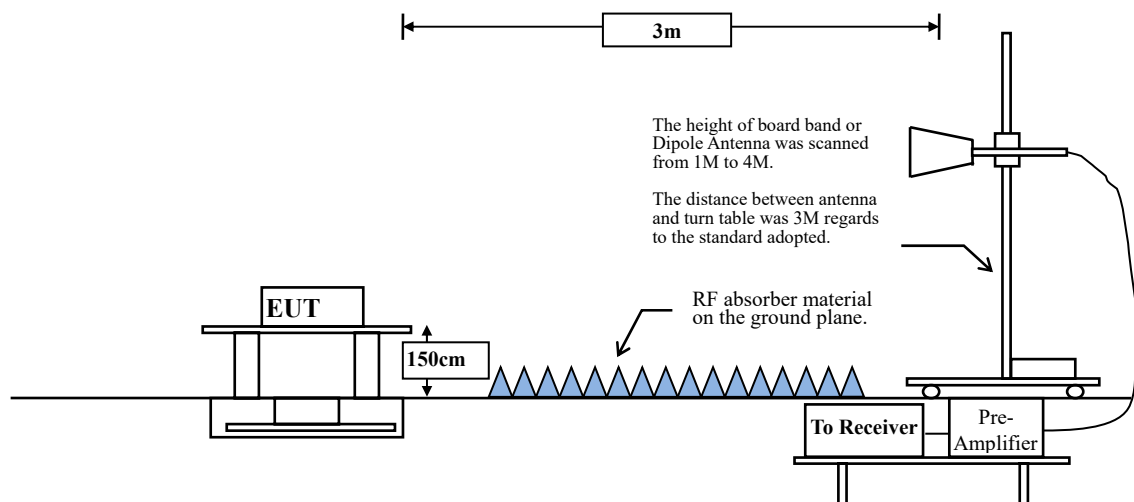
Radiated Emission Under 30MHz



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.

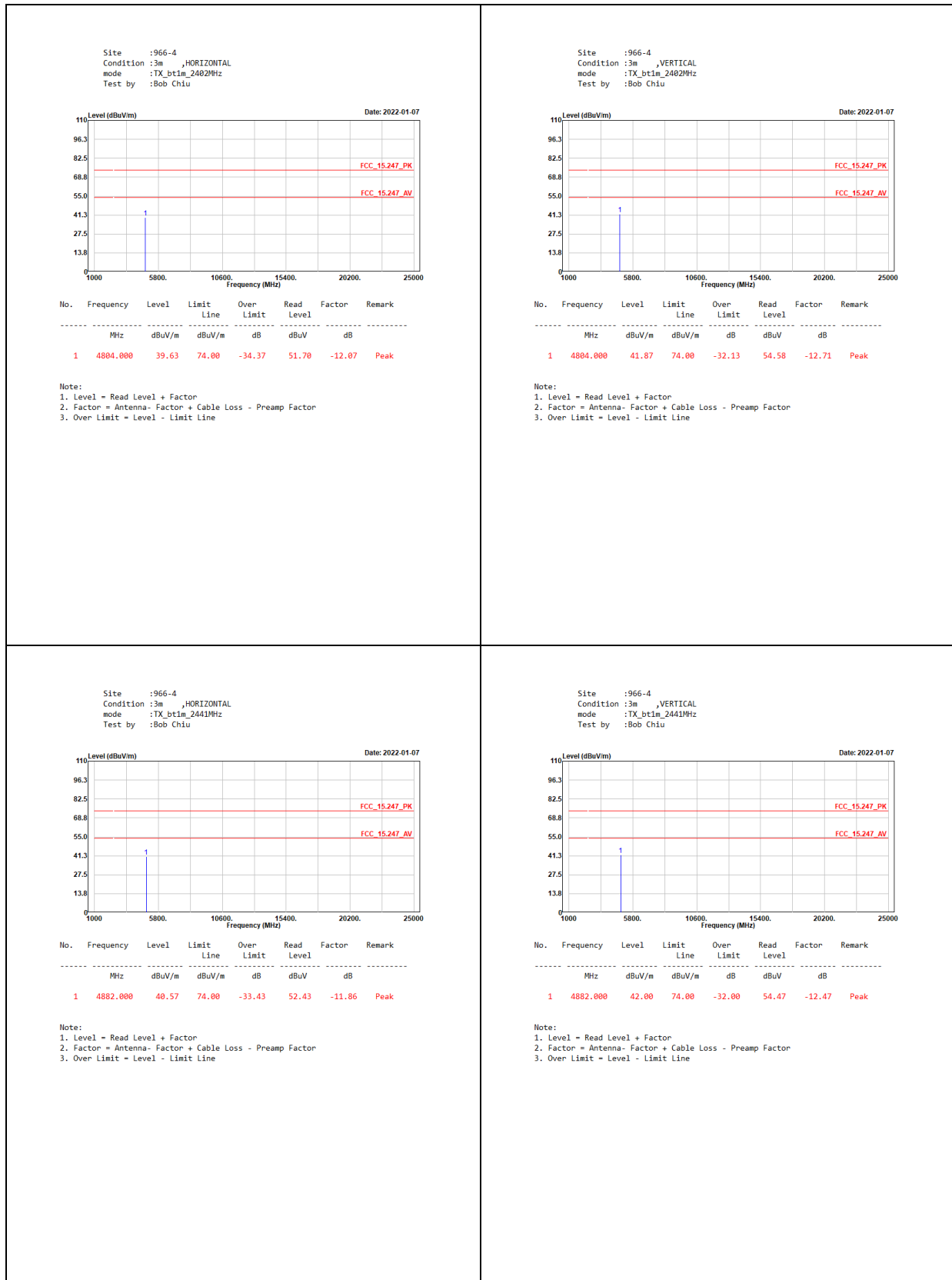
Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

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

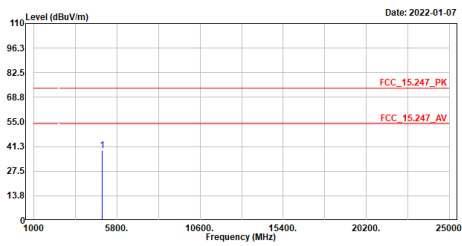
The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the 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 from 9kHz - 10th Harmonic of fundamental was investigated.

3.4. Test Result of Radiated Emission



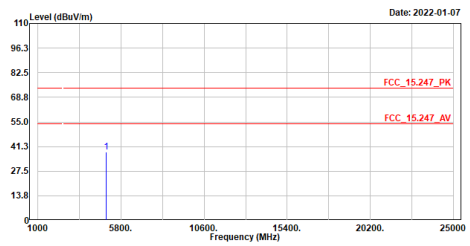
Site :966-4
Condition :3m ,HORIZONTAL
mode :TX_bt1m_2480MHz
Test by :Bob Chiu



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	4960.000	38.98	74.00	-35.02	50.64	-11.66	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna- Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

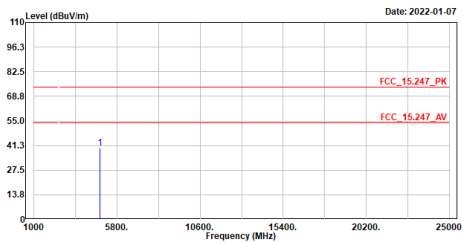
Site :966-4
Condition :3m ,VERTICAL
mode :TX_bt1m_2480MHz
Test by :Bob Chiu



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	4960.000	38.15	74.00	-35.85	50.38	-12.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna- Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

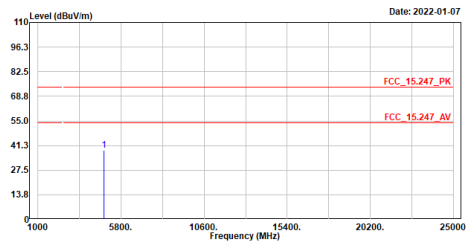
Site :966-4
Condition :3m ,HORIZONTAL
mode :TX_bt3m_2482MHz
Test by :Bob Chiu



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	4804.000	39.00	74.00	-34.20	51.87	-12.07	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna- Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

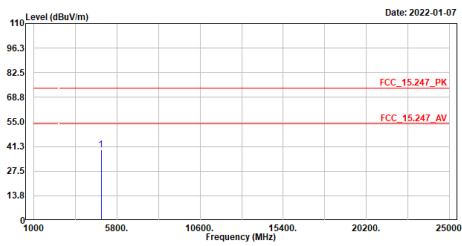
Site :966-4
Condition :3m ,VERTICAL
mode :TX_bt3m_2482MHz
Test by :Bob Chiu



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	4804.000	38.43	74.00	-35.57	51.14	-12.71	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna- Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

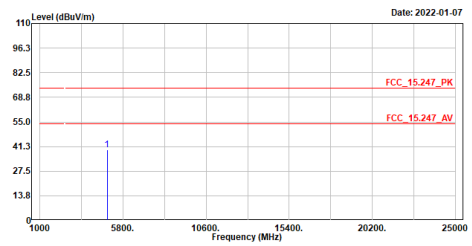
Site :966-4
Condition :3m ,HORIZONTAL
mode :TX_bt3m_2441MHz
Test by :Bob Chiu



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	4882.000	39.41	74.00	-34.59	51.27	-11.86	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna- Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

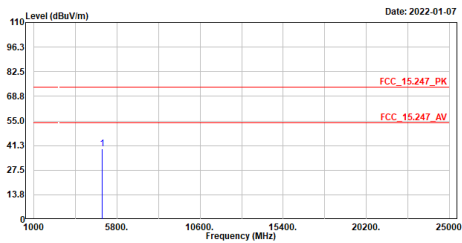
Site :966-4
Condition :3m ,VERTICAL
mode :TX_bt3m_2441MHz
Test by :Bob Chiu



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	4882.000	39.24	74.00	-34.76	51.71	-12.47	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna- Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

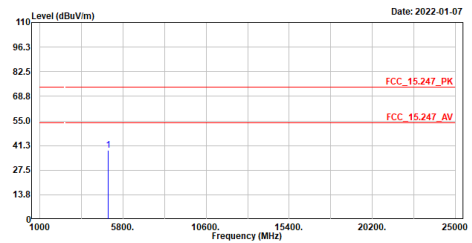
Site :966-4
Condition :3m ,HORIZONTAL
mode :TX_bt3m_2480MHz
Test by :Bob Chiu



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	4960.000	39.47	74.00	-34.53	51.13	-11.66	Peak

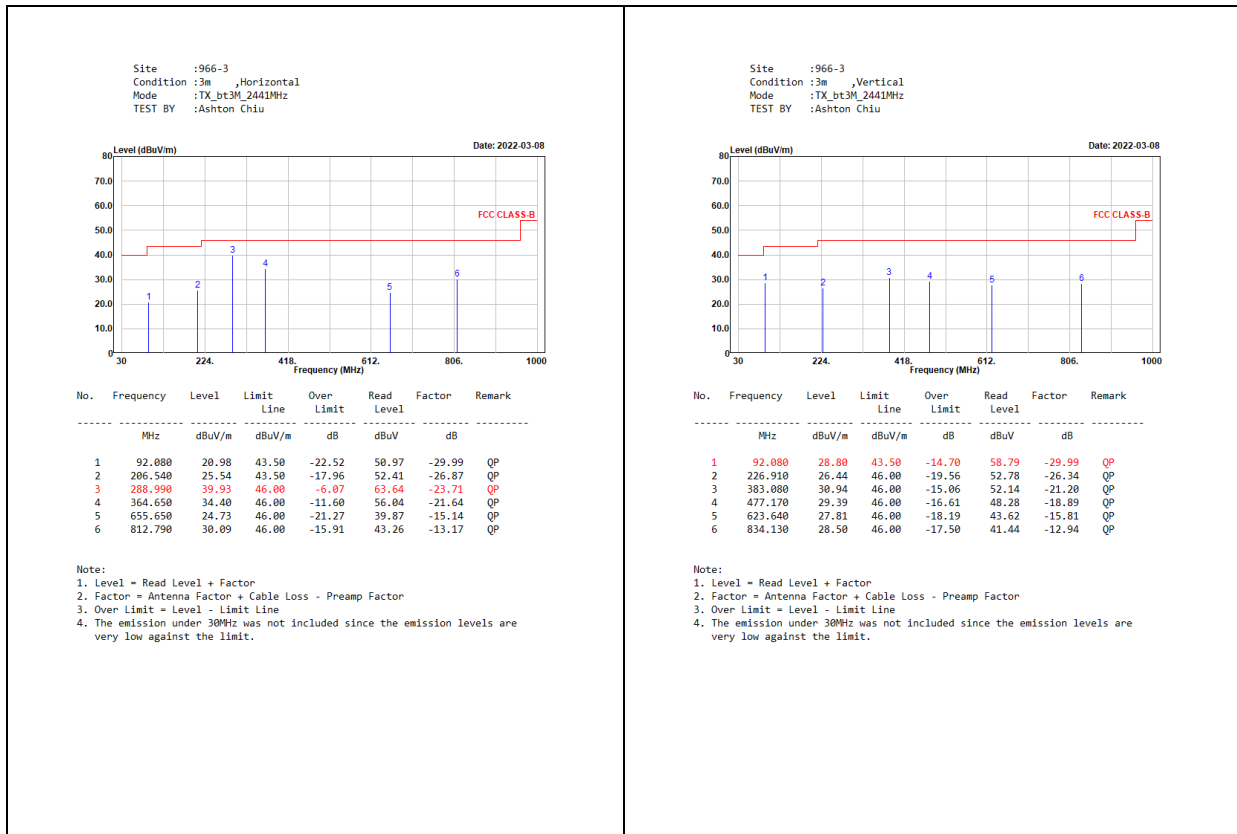
Note:
1. Level = Read Level + Factor
2. Factor = Antenna- Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Site :966-4
Condition :3m ,VERTICAL
mode :TX_bt3m_2480MHz
Test by :Bob Chiu



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	4960.000	38.48	74.00	-35.52	50.71	-12.23	Peak

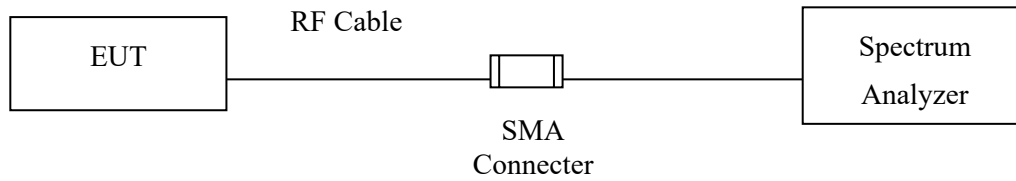
Note:
1. Level = Read Level + Factor
2. Factor = Antenna- Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line



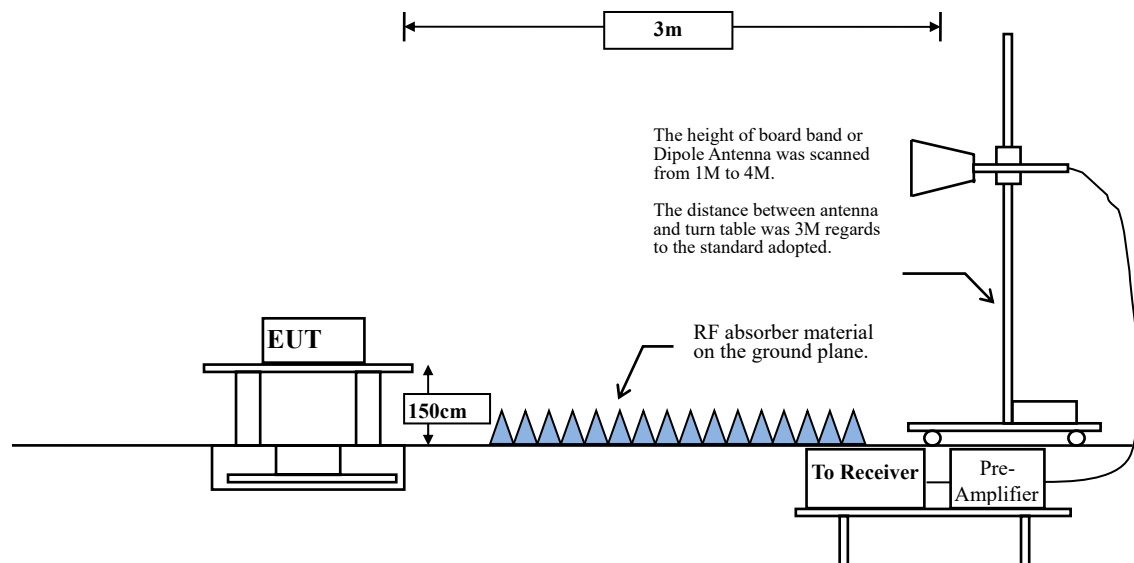
4. Band Edge

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.

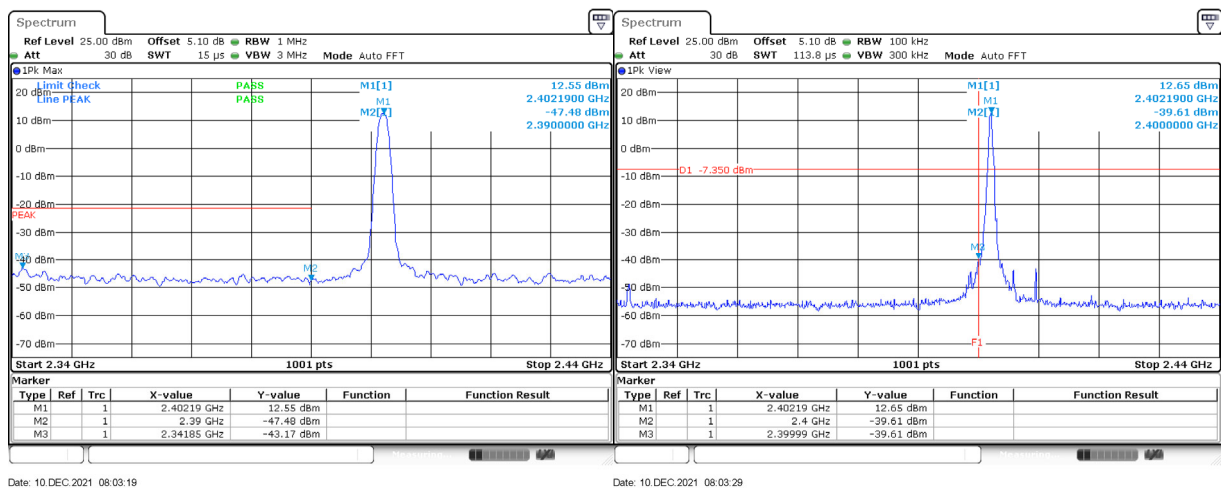
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

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. Test Result of Band Edge

Product : Intel® Wi-Fi 6 AX201
 Test Item : Band Edge
 Test Mode : Mode 1: Transmit - 1Mbps (2402MHz)
 Test Date : 2021/12/10

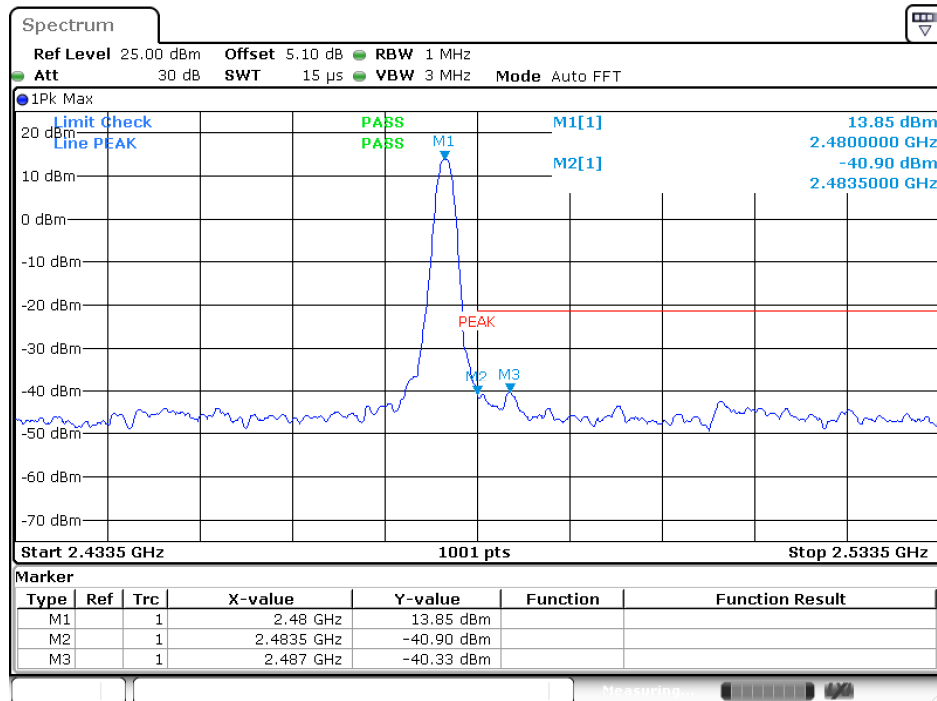


Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)	Result
2431.850	-43.170	-24.731	-67.901	-26.671	-41.230	Pass
2390.000	-47.480	-24.731	-72.211	-30.981	-41.230	Pass
2402.190	12.550	-24.731	-12.181	--	--	Pass

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 : 2021/12/10



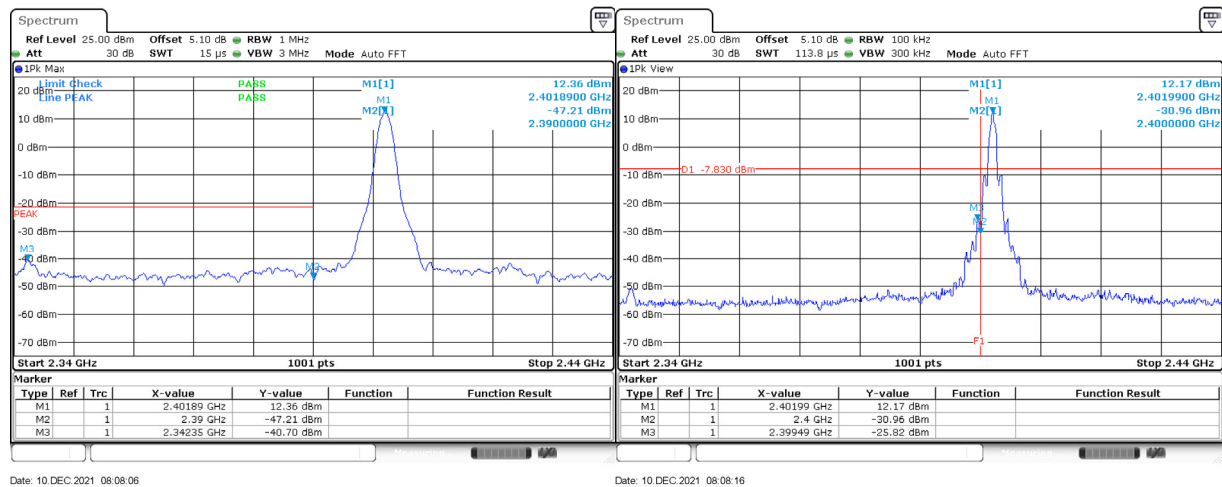
Date: 10 DEC 2021 08:05:29

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)	Result
2480.030	13.850	-24.731	-10.881	--	--	Pass
2483.500	-40.900	-24.731	-65.631	-24.401	-41.230	Pass
2487.000	-40.330	-24.731	-65.061	-23.831	-41.230	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 : 2021/12/10



Date: 10 DEC 2021 08:08:06

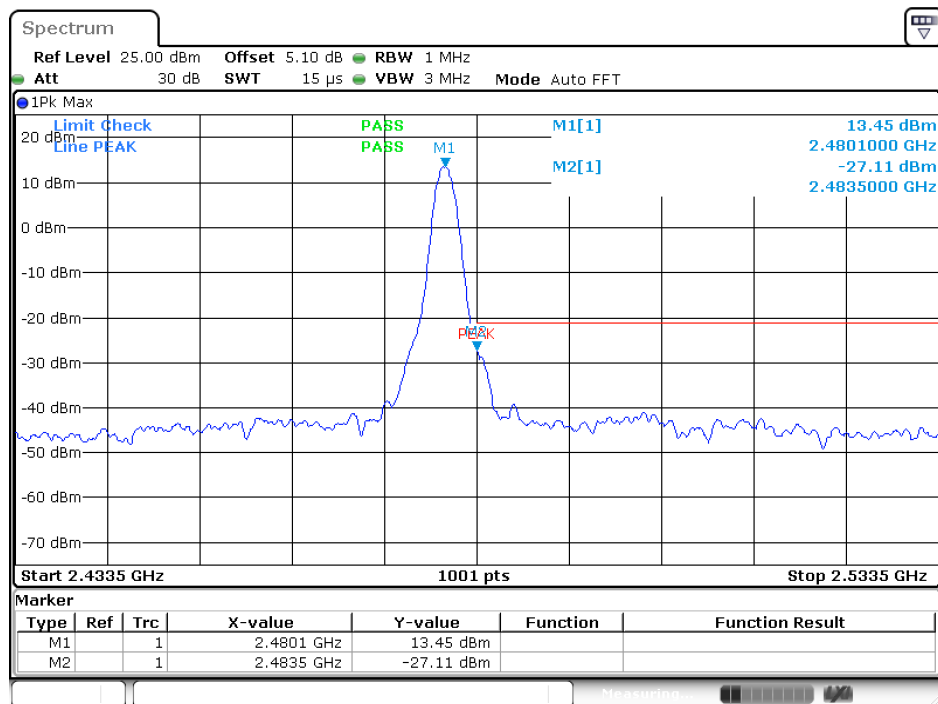
Date: 10 DEC 2021 08:08:16

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)	Result
2342.350	-40.700	-24.731	-65.431	-24.201	-41.230	Pass
2390.000	-47.210	-24.731	-71.941	-30.711	-41.230	Pass
2401.890	12.360	-24.731	-12.371	--	--	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 : 2021/12/10



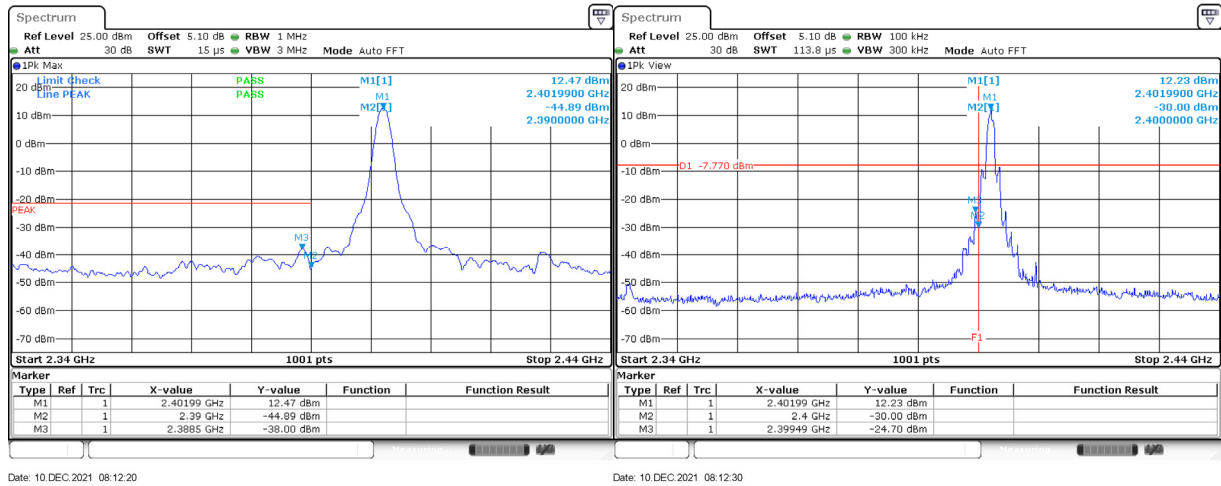
Date: 10.DEC.2021 08:09:28

Frequency (MHz)	Peak Measurement (dB μ V/m)	Duty Cycle Factor (dB)	Average Measurement (dB μ V/m)	Margin (dB)	Average Limit (dB μ V/m)	Result
2480.100	13.450	-24.731	-11.281	--	--	Pass
2483.500	-27.110	-24.731	-51.841	-10.611	-41.230	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 : 2021/12/10

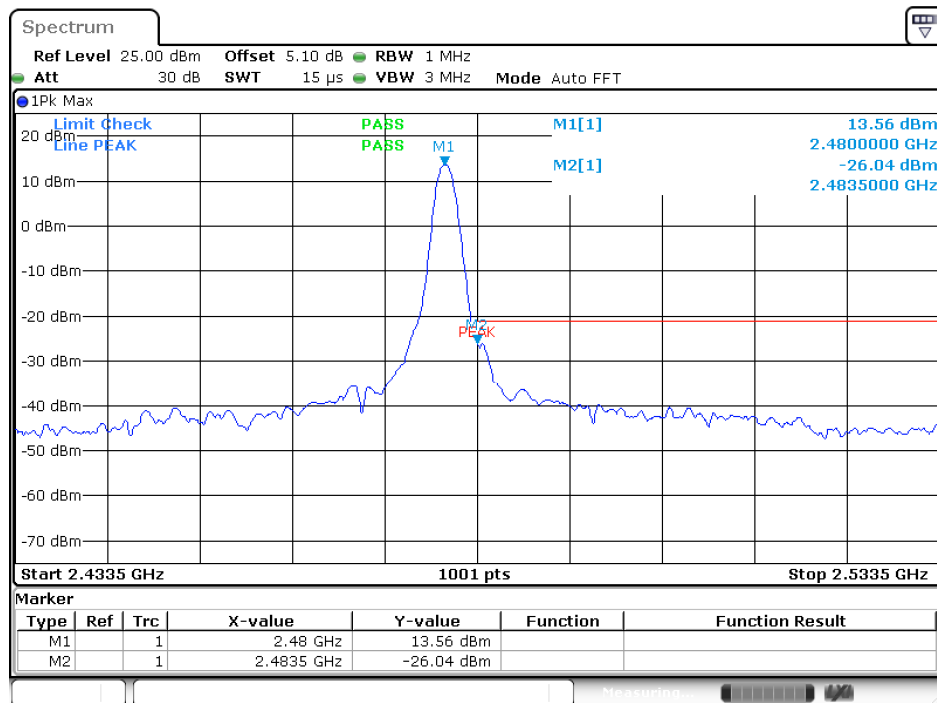


Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)	Result
2388.500	-38.000	-24.731	-62.731	-21.501	-41.230	Pass
2390.000	-44.890	-24.731	-69.621	-28.391	-41.230	Pass
2401.990	12.470	-24.731	-12.261	--	--	Pass

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 : 2021/12/10



Date: 10.DEC.2021 08:13:48

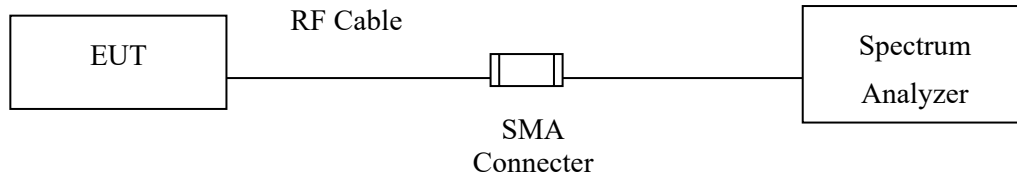
Frequency (MHz)	Peak Measurement (dB μ V/m)	Duty Cycle Factor (dB)	Average Measurement (dB μ V/m)	Margin (dB)	Average Limit (dB μ V/m)	Result
2480.000	13.560	-24.731	-11.171	--	--	Pass
2483.500	-26.040	-24.731	-50.771	-9.541	-41.230	Pass

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

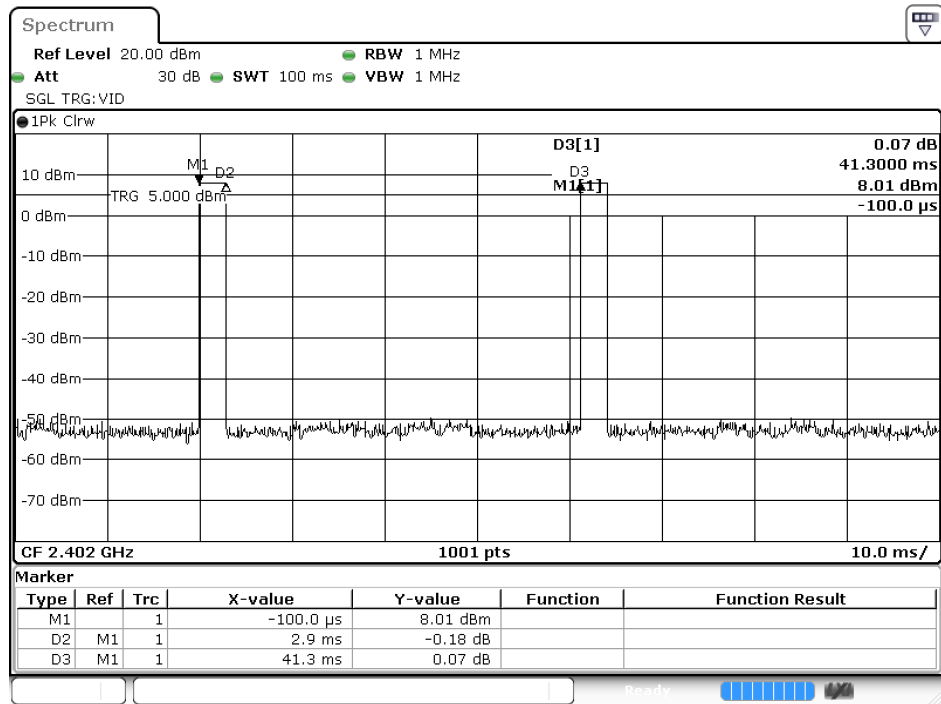


5.2. Test Procedure

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

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: 10.DEC.2021 08:35:43

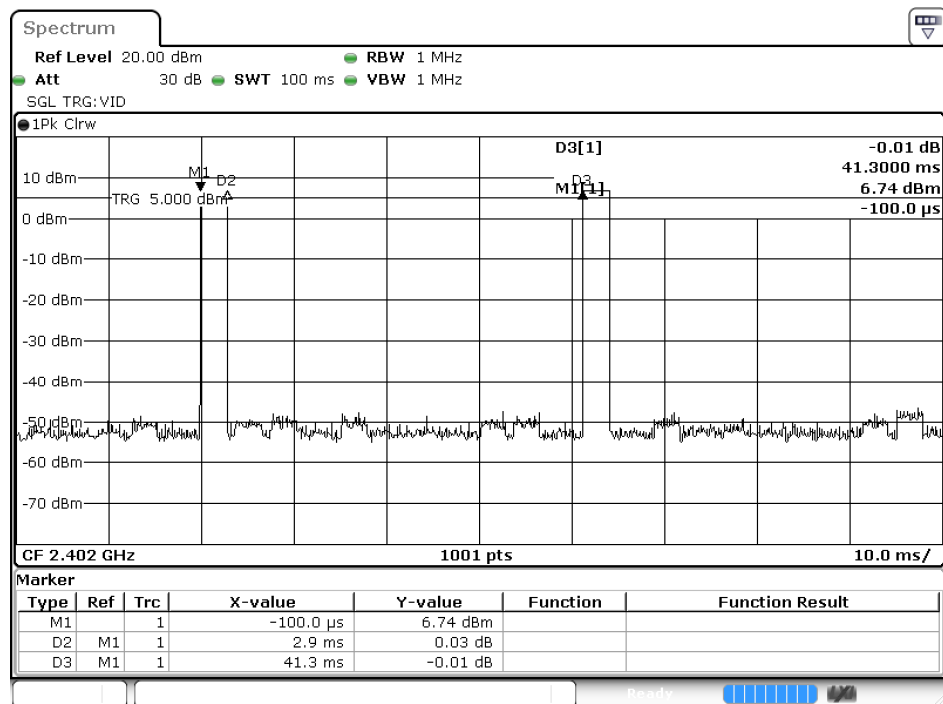
Time on of 100ms= 2.9ms*2= 5.8000ms

Duty Cycle=5.8ms / 100ms= 0.058

Duty Cycle correction factor= 20 LOG 0.058= -24.731 dB

Duty Cycle correction factor	-24.731dB
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Product : Intel® Wi-Fi 6 AX201
 Test Item : Duty Cycle Data
 Test Mode : Mode 2: Transmit - 2Mbps



Date: 10.DEC.2021 08:34:48

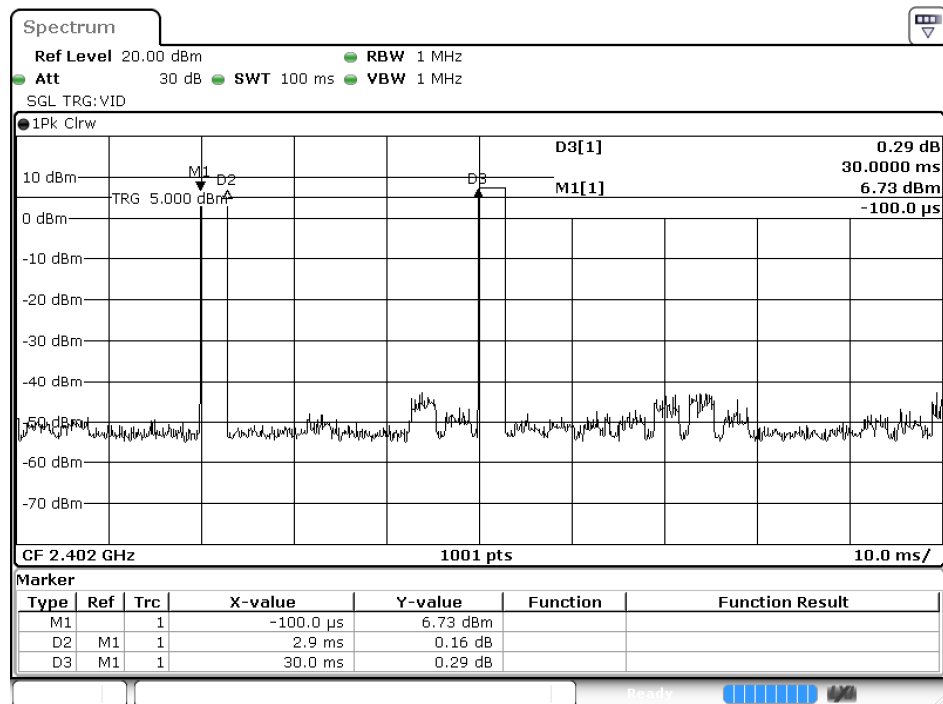
Time on of 100ms= 2.9ms*2= 5.8000ms

Duty Cycle=5.8ms / 100ms= 0.058

Duty Cycle correction factor= 20 LOG 0.058= -24.731 dB

Duty Cycle correction factor	-24.731dB
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Product : Intel® Wi-Fi 6 AX201
 Test Item : Duty Cycle Data
 Test Mode : Mode 3: Transmit - 3Mbps



Date: 10.DEC.2021 08:36:54

Time on of 100ms= 2.9ms*2= 5.8000ms

Duty Cycle=5.8ms / 100ms= 0.058

Duty Cycle correction factor= 20 LOG 0.058= -24.731 dB

Duty Cycle correction factor	-24.731dB
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6. EMI Reduction Method During Compliance Testing

No modification was made during testing.