FCC Radio Test Report

FCC ID: RWO-RZ090301

This report concerns: ☒**Class II Change**

Project No.	:	1903C099
Equipment	:	WLAN and BT, 2x2 PCIe M.2 2230 adapter card
Test Model	:	AX200NGW
Series Model	:	N/A
Applicant	:	Razer Inc.
Address	:	201 3rd Street, Suite 900, San Francisco, CA 94103 USA
Date of Receipt	:	Mar. 04, 2019
Date of Test	:	Mar. 06, 2019 ~ Apr. 26, 2019
Issued Date	:	May 08, 2019
Tested by	:	BTL Inc.

Testing Engineer : Welly Zhou
(Welly Zhou)

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(Steven Lu)

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(Ethan Ma)

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Certificate #5123.02

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.
Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Apr. 26, 2019
R01	Revised report to address comments.	Apr. 30, 2019
R02	Revised report to address comments.	May 06, 2019
R03	Revised report to address comments.	May 08, 2019

1. GENERAL SUMMARY

Equipment	:	WLAN and BT, 2x2 PCIe M.2 2230 adapter card
Brand Name	:	Intel® Wi-Fi 6 AX200
Test Model	:	AX200NGW
Series Model	:	N/A
Applicant	:	Razer Inc.
Manufacturer	:	Razer Inc.
Address	:	201 3rd Street, Suite 900, San Francisco, CA 94103,USA
Date of Test	:	Mar. 06, 2019 ~ Apr. 26, 2019
Test Sample	:	Engineering Sample No.: D190302089
Standard(s)	:	FCC Part15, Subpart E(15.407) ANSI C63.10-2013

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc..
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-2-1903C099) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

Test results included in this report are only for the UNII-1, UNII-2A, UNII-2C and UNII-3 part.

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart E(15.407)				
Standard(s) Section	**Test Item**	**Test Result**	**Judgement**	**Remark**
15.407(a)	Maximum Output Power	APPENDIX F	PASS	------

Note:

(1) "N/A" denotes test is not applicable in this test report.

(2) During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. the EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

(3) For UNII-1 this device was functioned as a

☐ Access point device ☒ Client device

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
BTL's Test Firm Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150 KHz ~ 30 MHz	2.32

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9 kHz~30 MHz	V	3.79
		9 kHz~30 MHz	H	3.57
		30 MHz~200 MHz	V	3.82
		30 MHz~200 MHz	H	3.60
		200 MHz~1,000 MHz	V	3.86
		200 MHz~1,000 MHz	H	3.94
		1 GHz~18 GHz	V	3.12
		1 GHz~18 GHz	H	3.68
		18 GHz~40 GHz	V	4.15
		18 GHz~40 GHz	H	4.14

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	WLAN and BT, 2x2 PCIe M.2 2230 adapter card
Brand Name	Intel® Wi-Fi 6 AX200
Test Model	AX200NGW
Series Model	N/A
Model Difference(s)	N/A
Power Source	1# DC Voltage supplied from AC/DC adapter. Model: RC30-024801 2# Supplied from Li-ion battery Model: RC30-0248
Power Rating	1# Model: I/P:100-240V~3.6A 50/60Hz O/P:19.5V⎓11.8A 2# DC15.4V,5209mAh/80Wh
Operation Frequency	UNII-1: 5150 MHz~5250 MHz UNII-2A: 5250 MHz~5350 MHz UNII-2C: 5470 MHz~5725 MHz UNII-3: 5725 MHz~5850 MHz
Modulation Type	802.11a: OFDM 802.11n: OFDM 802.11ac: OFDM 802.11ax: OFDMA
Bit Rate of Transmitter	802.11a: 54/48/36/24/18/12/9/6 Mbps 802.11n: Up to 300Mbps 802.11ac: Up to 866.7 Mbps 802.11ax: Up to 2402 Mbps
Maximum Output Power for UNII-1	IEEE 802.11a: 18.04 dBm (0.0637 W) IEEE 802.11n (HT20): 18.47 dBm (0.0702 W) IEEE 802.11n (HT40): 17.94 dBm (0.0622 W) IEEE 802.11ac (VHT20): 18.41 dBm (0.0693W) IEEE 802.11ac (VHT40): 17.85 dBm (0.0.0609 W) IEEE 802.11ac (VHT80): 15.83 dBm (0.0383 W) IEEE 802.11ac (VHT160): 14.14 dBm (0.0259 W) IEEE 802.11ax (HE20): 18.38 dBm (0.0689 W) IEEE 802.11ax (HE40): 17.80 dBm (0.0603 W) IEEE 802.11ax (HE80): 17.80 dBm (0.0603 W) IEEE 802.11ax (HE160): 14.21 dBm (0.0263 W)
Maximum Output Power for UNII-2A	IEEE 802.11a: 17.73 dBm (0.0593 W) IEEE 802.11n (HT20): 18.46 dBm (0.0701 W) IEEE 802.11n (HT40): 17.92 dBm (0.0619 W) IEEE 802.11ac (VHT20): 18.37 dBm (0.0686 W) IEEE 802.11ac (VHT40): 17.82 dBm (0.0605 W) IEEE 802.11ac (VHT80): 17.78 dBm (0.0600 W) IEEE 802.11ax (HE20): 18.31 dBm (0.0677 W) IEEE 802.11ax (HE40): 17.86 dBm (0.0610 W) IEEE 802.11ax (HE80): 17.82 dBm (0.0605 W)

Maximum Output Power for UNII-2C	IEEE 802.11a: 17.77 dBm (0.0598 W) IEEE 802.11n (HT20): 18.37 dBm (0.0687 W) IEEE 802.11n (HT40): 18.96 dBm (0.0787 W) IEEE 802.11ac (VHT20): 18.31 dBm (0.0678 W) IEEE 802.11ac (VHT40): 18.89 dBm (0.0774 W) IEEE 802.11ac (VHT80): 18.25 dBm (0.0668 W) IEEE 802.11ac (VHT160): 14.46 dBm (0.0279 W) IEEE 802.11ax (HE20): 18.35 dBm (0.0684 W) IEEE 802.11ax (HE40): 18.22 dBm (0.0664 W) IEEE 802.11ax (HE80): 18.26 dBm (0.0670 W) IEEE 802.11ax (HE160): 14.61 dBm (0.0289 W)
Maximum Output Power for UNII-3	IEEE 802.11a: 19.54 dBm (0.0899 W) IEEE 802.11n (HT20): 22.89 dBm (0.1944 W) IEEE 802.11n (HT40): 22.80 dBm (0.1905 W) IEEE 802.11ac (VHT20): 20.83dBm (0.1211 W) IEEE 802.11ac (VHT40): 20.83 dBm (0.1211 W) IEEE 802.11ac (VHT80): 18.42 dBm (0.0695 W) IEEE 802.11ax (HE20): 21.88 dBm (0.1542 W) IEEE 802.11ax (HE40): 21.97 dBm (0.1574 W) IEEE 802.11ax (HE80): 19.76 dBm (0.0947 W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80)	
UNII-1		UNII-1		UNII-1	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80)	
UNII-2A		UNII-2A		UNII-2A	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310		
60	5300				
64	5320				

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80)	
UNII-2C		UNII-2C		UNII-2C	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80)	
UNII-3		UNII-3		UNII-3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

802.11ac 160 MHz 802.11ax 160 MHz	
Channel	Frequency (MHz)
50	5250
114	5570

3. Table for Filed Antenna:

Ant.	Brand	P/N	Antenna Type	Connector	Gain(dBi)	Note
1	molex	2065720301	PIFA	N/A	3.48	UNII-1
1	molex	2065720301	PIFA	N/A	3.55	UNII-2A
1	molex	2065720301	PIFA	N/A	4.42	UNII-2C
1	molex	2065720301	PIFA	N/A	4.79	UNII-3
2	molex	2065720401	PIFA	N/A	3.33	UNII-1
2	molex	2065720401	PIFA	N/A	3.41	UNII-2A
2	molex	2065720401	PIFA	N/A	4.31	UNII-2C
2	molex	2065720401	PIFA	N/A	4.58	UNII-3

Note:

1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R).
2) Antenna 1 refers to antenna A also refers to aux antenna.
   Antenna 2 refers to antenna B also refers to main antenna.

4. The worst case for 2TX as follow:

Operating Mode / TX Mode	1TX	2TX
802.11a	V (Ant. 2)	-
802.11n(20MHz)	-	V (Ant. 1 + Ant. 2)
802.11n(40MHz)	-	V (Ant. 1 + Ant. 2)
802.11ac(20MHz)	-	V (Ant. 1 + Ant. 2)
802.11ac(40MHz)	-	V (Ant. 1 + Ant. 2)
802.11ac(80MHz)	-	V (Ant. 1 + Ant. 2)
802.11ax(20MHz)	-	V (Ant. 1 + Ant. 2)
802.11ax(40MHz)	-	V (Ant. 1 + Ant. 2)
802.11ax(80MHz)	-	V (Ant. 1 + Ant. 2)
802.11ac(160MHz)	-	V (Ant. 1 + Ant. 2)
802.11ax(160MHz)	-	V (Ant. 1 + Ant. 2)

3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX N (HT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX N (HT40) Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC (VHT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 5	TX AC (VHT40) Mode / CH38, CH46 (UNII-1)
Mode 6	TX AC (VHT80) Mode / CH42 (UNII-1)
Mode 7	TX AC (VHT160) Mode / CH50 (UNII-1)
Mode 8	TX AX (HE20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 9	TX AX (HE40) Mode / CH38, CH46 (UNII-1)
Mode 10	TX AX (HE80) Mode / CH42 (UNII-1)
Mode 11	TX AX (HE160) Mode / CH50 (UNII-1)
Mode 12	TX A Mode / CH52, CH60, CH64 (UNII-2A)
Mode 13	TX N (HT20) Mode / CH52, CH60, CH64 (UNII-2A)
Mode 14	TX N (HT40) Mode / CH54, CH62 (UNII-2A)
Mode 15	TX AC (VHT20) Mode / CH52, CH60, CH64 (UNII-2A)
Mode 16	TX AC (VHT40) Mode / CH54, CH62 (UNII-2A)
Mode 17	TX AC (VHT80) Mode / CH58 (UNII-2A)
Mode 18	TX AX (HE20) Mode / CH52, CH60, CH64 (UNII-2A)
Mode 19	TX AX (HE40) Mode / CH54, CH62 (UNII-2A)
Mode 20	TX AX (HE80) Mode / CH58 (UNII-2A)
Mode 21	TX A Mode / CH100, CH116, CH140 (UNII-2C)
Mode 22	TX N (HT20) Mode / CH100, CH116, CH140, CH144 (UNII-2C)
Mode 23	TX N (HT40) Mode / CH102, CH110, CH134, CH142 (UNII-2C)
Mode 24	TX AC (VHT20) Mode / CH100, CH116, CH140 (UNII-2C)
Mode 25	TX AC (VHT40) Mode / CH102, CH110, CH134 (UNII-2C)
Mode 26	TX AC (VHT80) Mode / CH106, CH122 (UNII-2C)
Mode 27	TX AC (VHT160) Mode / CH114 (UNII-2C)
Mode 28	TX AX (HE20) Mode / CH100, CH116, CH140, CH144 (UNII-2C)
Mode 29	TX AX (HE40) Mode / CH102, CH110, CH134, CH142 (UNII-2C)
Mode 30	TX AX (HE80) Mode / CH106, CH138 (UNII-2C)
Mode 31	TX AX (HE160) Mode / CH 114 (UNII-2C)
Mode 32	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 33	TX N (HT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 34	TX N (HT40) Mode / CH151,CH159 (UNII-3)

Mode 35	TX AC (VHT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 36	TX AC (VHT40) Mode / CH151,CH159 (UNII-3)
Mode 37	TX AC (VHT80) Mode / CH155 (UNII-3)
Mode 38	TX AX (HE20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 39	TX AX (HE40) Mode / CH151,CH159 (UNII-3)
Mode 40	TX AX (HE80) Mode / CH155 (UNII-3)

Following mode(s) as (were) found to be the worst case(s) and selected for the final test.

Maximum Output Power test	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX N (HT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX N (HT40) Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC (VHT20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 5	TX AC (VHT40) Mode / CH38, CH46 (UNII-1)
Mode 6	TX AC (VHT80) Mode / CH42 (UNII-1)
Mode 7	TX AC (VHT160) Mode / CH50 (UNII-1)
Mode 8	TX AX (HE20) Mode / CH36, CH40, CH48 (UNII-1)
Mode 9	TX AX (HE40) Mode / CH38, CH46 (UNII-1)
Mode 10	TX AX (HE80) Mode / CH42 (UNII-1)
Mode 11	TX AX (HE160) Mode / CH50 (UNII-1)
Mode 12	TX A Mode / CH52, CH60, CH64 (UNII-2A)
Mode 13	TX N (HT20) Mode / CH52, CH60, CH64 (UNII-2A)
Mode 14	TX N (HT40) Mode / CH54, CH62 (UNII-2A)
Mode 15	TX AC (VHT20) Mode / CH52, CH60, CH64 (UNII-2A)
Mode 16	TX AC (VHT40) Mode / CH54, CH62 (UNII-2A)
Mode 17	TX AC (VHT80) Mode / CH58 (UNII-2A)
Mode 18	TX AX (HE20) Mode / CH52, CH60, CH64 (UNII-2A)
Mode 19	TX AX (HE40) Mode / CH54, CH62 (UNII-2A)
Mode 20	TX AX (HE80) Mode / CH58 (UNII-2A)
Mode 21	TX A Mode / CH100, CH116, CH140 (UNII-2C)
Mode 22	TX N (HT20) Mode / CH100, CH116, CH140, CH144 (UNII-2C)
Mode 23	TX N (HT40) Mode / CH102, CH110, CH134, CH142 (UNII-2C)
Mode 24	TX AC (VHT20) Mode / CH100, CH116, CH140 (UNII-2C)
Mode 25	TX AC (VHT40) Mode / CH102, CH110, CH134 (UNII-2C)
Mode 26	TX AC (VHT80) Mode / CH106, CH122 (UNII-2C)
Mode 27	TX AC (VHT160) Mode / CH114 (UNII-2C)

Mode 28	TX AX (HE20) Mode / CH100, CH116, CH140, CH144 (UNII-2C)
Mode 29	TX AX (HE40) Mode / CH102, CH110, CH134, CH142 (UNII-2C)
Mode 30	TX AX (HE80) Mode / CH106, CH138 (UNII-2C)
Mode 31	TX AX (HE160) Mode / CH 114 (UNII-2C)
Mode 32	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 33	TX N (HT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 34	TX N (HT40) Mode / CH151,CH159 (UNII-3)
Mode 35	TX AC (VHT20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 36	TX AC (VHT40) Mode / CH151,CH159 (UNII-3)
Mode 37	TX AC (VHT80) Mode / CH155 (UNII-3)
Mode 38	TX AX (HE20) Mode / CH149,CH157,CH165 (UNII-3)
Mode 39	TX AX (HE40) Mode / CH151,CH159 (UNII-3)
Mode 40	TX AX (HE80) Mode / CH155 (UNII-3)

Note:
The measurements for Maximum Output Power of 802.11ax mode were tested during full bandwidth resource unit, it was the worst case.

3.3 PARAMETERS OF TEST SOFTWARE

UNII-1			
Test Software	DRTU		
Test Frequency (MHz)	5180	5200	5240
IEEE 802.11a	17.75	17.75	12.25
IEEE 802.11n (HT20)	14.75/15	14.75/14.75	9.5/9.5
IEEE 802.11ac (VHT20)	14.75/15	14.75/14.75	9.5/9.5
IEEE 802.11ax (HE20)	14.75/14.75	14.75/14.75	9.5/9.5
Test Frequency (MHz)	5190	5230	
IEEE 802.11n (HT40)	14.25/14.25	12.25/14.25	
IEEE 802.11ac (VHT40)	14.25/14.25	12.25/14.25	
IEEE 802.11ax (HE40)	14.25/14.25	14.25/14.25	
Test Frequency (MHz)	5210		
IEEE 802.11ac (VHT80)	12.5/12.5		
IEEE 802.11ax (HE80)	14.5/14.5		
Test Frequency (MHz)	5250		
IEEE 802.11ac (VHT160)	11.5/11.5		
IEEE 802.11ax (HE160)	11.5/11.5		

UNII-2A			
Test Software	DRTU		
Test Frequency (MHz)	5260	5300	5320
IEEE 802.11a	17.75	17.75	17.75
IEEE 802.11n (HT20)	15/15	15/15	14.5/14.75
IEEE 802.11ac (VHT20)	14.75/15	14.75/15	14.5/14.75
IEEE 802.11ax (HE20)	15/15	14.75/14.75	14.75/14.75
Test Frequency (MHz)	5270	5310	
IEEE 802.11n (HT40)	14.25/14.5	13.25/13.25	
IEEE 802.11ac (VHT40)	14.25/14.5	13.25/13.25	
IEEE 802.11ax (HE40)	14.25/14.5	13.25/13.25	
Test Frequency (MHz)	5290		
IEEE 802.11ac (VHT80)	14.25/14.5		
IEEE 802.11ax (HE80)	14.25/14.5		

UNII-2C				
Test Software	DRTU			
Test Frequency (MHz)	5500	5580	5700	5720
IEEE 802.11a	18	17.5	16.5	
IEEE 802.11n (HT20)	15/15.25	15.25/15.25	15/15.25	10.5/10.5
IEEE 802.11ac (VHT20)	14.75/15.25	15.25/15.25	15/15.25	10.5/10.5
IEEE 802.11ax (HE20)	15/15	15.25/14.25	15/15	10.5/10.5
Test Frequency (MHz)	5510	5550	5670	5710
IEEE 802.11n (HT40)	15/15	15.5/15.25	16/15.75	15.0/15.25
IEEE 802.11ac (VHT40)	14.75/15	14.5/14.25	15.5/15.25	15/15.25
IEEE 802.11ax (HE40)	17/17	17/17	17/17	15.25/15
Test Frequency (MHz)	5530	5610	5690	
IEEE 802.11ac (VHT80)	15/15.258	15/15.25	15.25/15	
IEEE 802.11ax (HE80)	15/15.25	15/15.25	15.25/15	
Test Frequency (MHz)	5570			
IEEE 802.11ac (VHT160)	11.75/11.75			
IEEE 802.11ax (HE160)	11.75/11.75			

UNII-3			
Test Software	DRTU		
Test Frequency (MHz)	5745	5785	5825
IEEE 802.11a	20.5	20.5	20.5
IEEE 802.11n (HT20)	17.5/18.25	17.5/18.25	17.5/18.25
IEEE 802.11ac (VHT20)	17.5/18.25	17.5/18.25	17.5/18.25
IEEE 802.11ax (HE20)	20/20	20/20	20/20
Test Frequency (MHz)	5755	5795	
IEEE 802.11n (HT40)	20/20	20.5/20.5	
IEEE 802.11ac (VHT40)	17.5/17.5	17.5/17.5	
IEEE 802.11ax (HE40)	20/20	20/20	
Test Frequency (MHz)	5775		
IEEE 802.11ac (VHT80)	15/15.75		
IEEE 802.11ax (HE80)	15.5/16		

4. MAXIMUM OUTPUT POWER TEST

4.1 LIMIT

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Maximum Output Power	AP device: 1 Watt (30 dBm) Client device: 250 mW (24 dBm)	5150-5250
		250 mW (24 dBm)	5250-5350
		250 mW (24 dBm)	5470-5725
		1 Watt (30dBm)	5725-5850

Note:

a. For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

b. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB Bandwidth in megahertz.

4.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.

b. Used spectrum analyzer band power measurement function.

c. Spectrum Setting

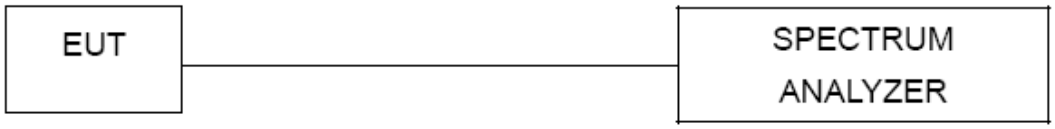
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	= 1 MHz.
VBW	≥ 3 MHz.
Sweep points	≥ 2 x span / RBW
Detector	RMS
Trace	Trace average at least 100 traces in power averaging(rms) mode.
Sweep Time	auto

d. Test test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 EUT TEST CONDITIONS

Temperature: 23°C Relative Humidity: 62% Test Voltage: AC 230V/50Hz

4.7 TEST RESULTS

Please refer to the APPENDIX A.

5. MEASUREMENT INSTRUMENTS LIST

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 11, 2019

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

APPENDIX A - MAXIMUM OUTPUT POWER

Test Mode	UNII-1_TX A Mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	17.94	0.0622	24.00	0.25	Complies
40	5200	18.04	0.0637	24.00	0.25	Complies
48	5240	12.38	0.0173	24.00	0.25	Complies

Test Mode	UNII-1_TX N (HT20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	15.48	0.0353	24.00	0.25	Complies
40	5200	15.31	0.0340	24.00	0.25	Complies
48	5240	9.89	0.0097	24.00	0.25	Complies

Test Mode	UNII-1_TX N (HT20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	15.43	0.0349	24.00	0.25	Complies
40	5200	15.24	0.0334	24.00	0.25	Complies
48	5240	9.88	0.0097	24.00	0.25	Complies

Test Mode	UNII-1_TX N (HT20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	18.47	0.0702	24.00	0.25	Complies
40	5200	18.29	0.0674	24.00	0.25	Complies
48	5240	12.90	0.0195	24.00	0.25	Complies

Test Mode	UNII-1_TX N (HT40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	14.96	0.0313	24.00	0.25	Complies
46	5230	14.91	0.0310	24.00	0.25	Complies

Test Mode	UNII-1_TX N (HT40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	14.89	0.0308	24.00	0.25	Complies
46	5230	14.82	0.0303	24.00	0.25	Complies

Test Mode	UNII-1_TX N (HT40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	17.94	0.0622	24.00	0.25	Complies
46	5230	17.88	0.0613	24.00	0.25	Complies

Test Mode	UNII-2A_TX A Mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	17.73	0.0593	24.00	0.25	Complies
60	5300	17.57	0.0571	24.00	0.25	Complies
64	5320	17.45	0.0556	24.00	0.25	Complies

Test Mode	UNII-2A_TX N (HT20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	15.46	0.0352	24.00	0.25	Complies
60	5300	15.42	0.0348	24.00	0.25	Complies
64	5320	14.85	0.0305	24.00	0.25	Complies

Test Mode	UNII-2A_TX N (HT20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	15.43	0.0349	24.00	0.25	Complies
60	5300	15.26	0.0336	24.00	0.25	Complies
64	5320	14.93	0.0311	24.00	0.25	Complies

Test Mode	UNII-2A_TX N (HT20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	18.46	0.0701	24.00	0.25	Complies
60	5300	18.35	0.0684	24.00	0.25	Complies
64	5320	17.90	0.0617	24.00	0.25	Complies

Test Mode	UNII-2A_TX N (HT40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	14.89	0.0308	24.00	0.25	Complies
62	5310	14.23	0.0265	24.00	0.25	Complies

Test Mode	UNII-2A_TX N (HT40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	14.92	0.0310	24.00	0.25	Complies
62	5310	14.16	0.0261	24.00	0.25	Complies

Test Mode	UNII-2A_TX N (HT40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	17.92	0.0619	24.00	0.25	Complies
62	5310	17.21	0.0525	24.00	0.25	Complies

Test Mode	UNII-2C_TX A Mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	17.77	0.0598	24.00	0.25	Complies
116	5580	17.18	0.0522	24.00	0.25	Complies
140	5700	16.56	0.0453	24.00	0.25	Complies

Test Mode	UNII-2C_TX N (HT20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	15.37	0.0344	24.00	0.25	Complies
116	5580	15.34	0.0342	24.00	0.25	Complies
140	5700	15.36	0.0344	24.00	0.25	Complies
144	5720	10.15	0.0104	24.00	0.25	Complies

Test Mode	UNII-2C_TX N (HT20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	15.32	0.0340	24.00	0.25	Complies
116	5580	15.38	0.0345	24.00	0.25	Complies
140	5700	15.35	0.0343	24.00	0.25	Complies
144	5720	10.24	0.0106	24.00	0.25	Complies

Test Mode	UNII-2C_TX N (HT20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	18.36	0.0685	24.00	0.25	Complies
116	5580	18.37	0.0687	24.00	0.25	Complies
140	5700	18.37	0.0687	24.00	0.25	Complies
144	5720	13.21	0.0209	24.00	0.25	Complies

Test Mode	UNII-2C_TX N (HT40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	15.78	0.0378	24.00	0.25	Complies
110	5550	15.72	0.0373	24.00	0.25	Complies
134	5670	16.05	0.0403	24.00	0.25	Complies
142	5710	15.12	0.0325	24.00	0.25	Complies

Test Mode	UNII-2C_TX N (HT40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	15.99	0.0397	24.00	0.25	Complies
110	5550	15.89	0.0388	24.00	0.25	Complies
134	5670	15.85	0.0385	24.00	0.25	Complies
142	5710	15.25	0.0335	24.00	0.25	Complies

Test Mode	UNII-2C_TX N (HT40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	18.90	0.0776	24.00	0.25	Complies
110	5550	18.82	0.0761	24.00	0.25	Complies
134	5670	18.96	0.0787	24.00	0.25	Complies
142	5710	18.20	0.0661	24.00	0.25	Complies

Test Mode	UNII-3_TX A Mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	19.38	0.0867	30.00	1.00	Complies
157	5785	19.54	0.0899	30.00	1.00	Complies
165	5825	19.53	0.0897	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	19.96	0.0991	30.00	1.00	Complies
157	5785	20.07	0.1016	30.00	1.00	Complies
165	5825	19.95	0.0989	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	19.49	0.0889	30.00	1.00	Complies
157	5785	19.53	0.0897	30.00	1.00	Complies
165	5825	19.80	0.0955	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	22.74	0.1880	30.00	1.00	Complies
157	5785	22.82	0.1914	30.00	1.00	Complies
165	5825	22.89	0.1944	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	19.66	0.0925	30.00	1.00	Complies
159	5795	19.96	0.0991	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	19.36	0.0863	30.00	1.00	Complies
159	5795	19.61	0.0914	30.00	1.00	Complies

Test Mode	UNII-3_TX N (HT40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	22.52	0.1788	30.00	1.00	Complies
159	5795	22.80	0.1905	30.00	1.00	Complies

Test Mode	UNII-1_TX AC (VHT20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	15.42	0.0348	24.00	0.25	Complies
40	5200	15.28	0.0337	24.00	0.25	Complies
48	5240	9.86	0.0097	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	15.37	0.0344	24.00	0.25	Complies
40	5200	15.18	0.0330	24.00	0.25	Complies
48	5240	9.79	0.0095	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	18.41	0.0693	24.00	0.25	Complies
40	5200	18.24	0.0667	24.00	0.25	Complies
48	5240	12.84	0.0192	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	14.84	0.0305	24.00	0.25	Complies
46	5230	12.79	0.0190	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	14.83	0.0304	24.00	0.25	Complies
46	5230	12.78	0.0190	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	17.85	0.0609	24.00	0.25	Complies
46	5230	15.80	0.0380	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT80) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	12.88	0.0194	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	12.76	0.0189	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT80) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	15.83	0.0383	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT160) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
50	5250	11.13	0.0130	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT160) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
50	5250	11.12	0.0129	24.00	0.25	Complies

Test Mode	UNII-1_TX AC (VHT160) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
50	5250	14.14	0.0259	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	15.42	0.0348	24.00	0.25	Complies
40	5200	15.34	0.0342	24.00	0.25	Complies
48	5240	9.87	0.0097	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	15.32	0.0340	24.00	0.25	Complies
40	5200	15.31	0.0340	24.00	0.25	Complies
48	5240	9.74	0.0094	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	18.38	0.0689	24.00	0.25	Complies
40	5200	18.34	0.0682	24.00	0.25	Complies
48	5240	12.82	0.0191	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	14.85	0.0305	24.00	0.25	Complies
46	5230	14.23	0.0265	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	14.73	0.0297	24.00	0.25	Complies
46	5230	14.63	0.0290	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	17.80	0.0603	24.00	0.25	Complies
46	5230	17.44	0.0555	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	14.75	0.0299	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	14.82	0.0303	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE80) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	17.80	0.0603	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE160) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
50	5250	11.21	0.0132	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE160) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
50	5250	11.18	0.0131	24.00	0.25	Complies

Test Mode	UNII-1_TX AX (HE160) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
50	5250	14.21	0.0263	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	15.35	0.0343	24.00	0.25	Complies
60	5300	15.29	0.0338	24.00	0.25	Complies
64	5320	14.16	0.0261	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	15.36	0.0344	24.00	0.25	Complies
60	5300	15.17	0.0329	24.00	0.25	Complies
64	5320	14.78	0.0301	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	18.37	0.0686	24.00	0.25	Complies
60	5300	18.24	0.0667	24.00	0.25	Complies
64	5320	17.49	0.0561	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	14.77	0.0300	24.00	0.25	Complies
62	5310	13.83	0.0242	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	14.85	0.0305	24.00	0.25	Complies
62	5310	13.88	0.0244	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	17.82	0.0605	24.00	0.25	Complies
62	5310	16.87	0.0486	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT80) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	14.76	0.0299	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	14.78	0.0301	24.00	0.25	Complies

Test Mode	UNII-2A_TX AC (VHT80) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	17.78	0.0600	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	15.27	0.0337	24.00	0.25	Complies
60	5300	15.33	0.0341	24.00	0.25	Complies
64	5320	15.23	0.0333	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	15.31	0.0340	24.00	0.25	Complies
60	5300	15.26	0.0336	24.00	0.25	Complies
64	5320	15.16	0.0328	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	18.30	0.0676	24.00	0.25	Complies
60	5300	18.31	0.0677	24.00	0.25	Complies
64	5320	18.21	0.0662	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	14.82	0.0303	24.00	0.25	Complies
62	5310	13.78	0.0239	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	14.87	0.0307	24.00	0.25	Complies
62	5310	13.91	0.0246	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	17.86	0.0610	24.00	0.25	Complies
62	5310	16.86	0.0485	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE80) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	14.79	0.0301	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	14.83	0.0304	24.00	0.25	Complies

Test Mode	UNII-2A_TX AX (HE80) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	17.82	0.0605	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	15.36	0.0344	24.00	0.25	Complies
116	5580	15.28	0.0337	24.00	0.25	Complies
140	5700	15.31	0.0340	24.00	0.25	Complies
144	5720	10.12	0.0103	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	15.23	0.0333	24.00	0.25	Complies
116	5580	15.32	0.0340	24.00	0.25	Complies
140	5700	15.29	0.0338	24.00	0.25	Complies
144	5720	10.16	0.0104	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	18.31	0.0678	24.00	0.25	Complies
116	5580	18.31	0.0678	24.00	0.25	Complies
140	5700	18.31	0.0678	24.00	0.25	Complies
144	5720	13.15	0.0207	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	15.36	0.0344	24.00	0.25	Complies
110	5550	15.63	0.0366	24.00	0.25	Complies
134	5670	15.91	0.0390	24.00	0.25	Complies
142	5710	15.08	0.0322	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	15.31	0.0340	24.00	0.25	Complies
110	5550	15.78	0.0378	24.00	0.25	Complies
134	5670	15.84	0.0384	24.00	0.25	Complies
142	5710	15.14	0.0327	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	18.35	0.0683	24.00	0.25	Complies
110	5550	18.72	0.0744	24.00	0.25	Complies
134	5670	18.89	0.0774	24.00	0.25	Complies
142	5710	18.12	0.0649	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT80) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	15.25	0.0335	24.00	0.25	Complies
122	5610	15.17	0.0329	24.00	0.25	Complies
138	5690	15.23	0.0333	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	15.23	0.0333	24.00	0.25	Complies
122	5610	15.14	0.0327	24.00	0.25	Complies
138	5690	15.11	0.0324	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT80) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	18.25	0.0668	24.00	0.25	Complies
122	5610	18.17	0.0655	24.00	0.25	Complies
138	5690	18.18	0.0658	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT160) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
114	5570	11.37	0.0137	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT160) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
114	5570	11.52	0.0142	24.00	0.25	Complies

Test Mode	UNII-2C_TX AC (VHT160) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
114	5570	14.46	0.0279	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	15.34	0.0342	24.00	0.25	Complies
116	5580	15.25	0.0335	24.00	0.25	Complies
140	5700	15.33	0.0341	24.00	0.25	Complies
144	5720	10.34	0.0108	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	15.27	0.0337	24.00	0.25	Complies
116	5580	15.41	0.0348	24.00	0.25	Complies
140	5700	15.35	0.0343	24.00	0.25	Complies
144	5720	10.19	0.0104	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	18.32	0.0678	24.00	0.25	Complies
116	5580	18.34	0.0683	24.00	0.25	Complies
140	5700	18.35	0.0684	24.00	0.25	Complies
144	5720	13.28	0.0213	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	14.44	0.0278	24.00	0.25	Complies
110	5550	14.64	0.0291	24.00	0.25	Complies
134	5670	14.82	0.0303	24.00	0.25	Complies
142	5710	15.29	0.0338	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	14.92	0.0310	24.00	0.25	Complies
110	5550	14.81	0.0303	24.00	0.25	Complies
134	5670	14.92	0.0310	24.00	0.25	Complies
142	5710	15.12	0.0325	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	17.70	0.0588	24.00	0.25	Complies
110	5550	17.74	0.0594	24.00	0.25	Complies
134	5670	17.88	0.0614	24.00	0.25	Complies
142	5710	18.22	0.0664	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE80) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	15.29	0.0338	24.00	0.25	Complies
122	5610	15.21	0.0332	24.00	0.25	Complies
138	5690	15.34	0.0342	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	15.31	0.0340	24.00	0.25	Complies
122	5610	15.18	0.0330	24.00	0.25	Complies
138	5690	15.16	0.0328	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE80) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	18.31	0.0678	24.00	0.25	Complies
122	5610	18.21	0.0662	24.00	0.25	Complies
138	5690	18.26	0.0670	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE160) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
114	5570	11.51	0.0142	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE160) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
114	5570	11.68	0.0147	24.00	0.25	Complies

Test Mode	UNII-2C_TX AX (HE160) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
114	5570	14.61	0.0289	24.00	0.25	Complies

Test Mode	UNII-3_TX AC (VHT20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	17.76	0.0597	30.00	1.00	Complies
157	5785	17.86	0.0611	30.00	1.00	Complies
165	5825	17.75	0.0596	30.00	1.00	Complies

Test Mode	UNII-3_TX AC (VHT20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	17.75	0.0596	30.00	1.00	Complies
157	5785	17.77	0.0598	30.00	1.00	Complies
165	5825	17.82	0.0605	30.00	1.00	Complies

Test Mode	UNII-3_TX AC (VHT20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	20.77	0.1193	30.00	1.00	Complies
157	5785	20.83	0.1211	30.00	1.00	Complies
165	5825	20.80	0.1201	30.00	1.00	Complies

Test Mode	UNII-3_TX AC (VHT40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	17.86	0.0611	30.00	1.00	Complies
159	5795	17.88	0.0614	30.00	1.00	Complies

Test Mode	UNII-3_TX AC (VHT40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	17.78	0.0600	30.00	1.00	Complies
159	5795	17.76	0.0597	30.00	1.00	Complies

Test Mode	UNII-3_TX AC (VHT40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	20.83	0.1211	30.00	1.00	Complies
159	5795	20.83	0.1211	30.00	1.00	Complies

Test Mode	UNII-3_TX AC (VHT80) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	15.48	0.0353	30.00	1.00	Complies

Test Mode	UNII-3_TX AC (VHT80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	15.34	0.0342	30.00	1.00	Complies

Test Mode	UNII-3_TX AC (VHT80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	18.42	0.0695	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	18.83	0.0764	30.00	1.00	Complies
157	5785	19.03	0.0800	30.00	1.00	Complies
165	5825	18.97	0.0789	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	18.52	0.0711	30.00	1.00	Complies
157	5785	18.56	0.0718	30.00	1.00	Complies
165	5825	18.77	0.0753	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	21.69	0.1475	30.00	1.00	Complies
157	5785	21.81	0.1518	30.00	1.00	Complies
165	5825	21.88	0.1542	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	18.94	0.0783	30.00	1.00	Complies
159	5795	19.18	0.0828	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	18.56	0.0718	30.00	1.00	Complies
159	5795	18.73	0.0746	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	21.76	0.1501	30.00	1.00	Complies
159	5795	21.97	0.1574	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_ANT1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	16.84	0.0483	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_ANT2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	16.66	0.0463	30.00	1.00	Complies

Test Mode	UNII-3_TX AX (HE80) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	19.76	0.0947	30.00	1.00	Complies

End of Test Report