

FCC RADIO TEST REPORT

FCC ID: X4YNYX2600

Product : Nyx2600-AC Dual-Band AC Wireless Router

Trade Name : NEXXT

Model Name : ARLGL174U1

Serial Model : N/A

Report No. : UNIA2018121702-1FR-02

Prepared for

NEXXT SOLUTIONS

3505 N.W. 107th AVE. MIAMI FLORIDA 33178 U.S.A

Prepared by

Shenzhen United Testing Technology Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant's name : NEXXT SOLUTIONS

Address : 3505 N.W. 107th AVE. MIAMI FLORIDA 33178 U.S.A

Manufacture's Name : YICHEN (Shenzhen) Technology Co.,LTD

Address : 6th Building, Yasen Industrial Park, Chengxin Road 8, Baolong
Industrial Estate, Longgang District, Shenzhen, China.

Product description

Product name : Nyx2600-AC Dual-Band AC Wireless Router

Trade Mark : NEXXT

Model and/or type reference : ARLGL174U1

Standards : FCC Rules and Regulations Part 15 Subpart E Section 15.407
ANSI C63.10: 2013

This device described above has been tested by Shenzhen United Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test :

Date (s) of performance of tests : Dec. 2, 2018 ~ Dec. 20, 2018

Date of Issue : Dec. 21, 2018

Test Result : Pass

Prepared by:

Kahn Yang
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Reviewer:

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1. TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

DESCRIPTION OF TEST	RESULT
CONDUCTED EMISSIONS TEST	COMPLIANT
RADIATED EMISSION TEST	COMPLIANT
BAND EDGE	COMPLIANT
OCCUPIED BANDWIDTH MEASUREMENT	COMPLIANT
POWER SPECTRAL DENSITY	COMPLIANT
PEAK OUTPUT POWER	COMPLIANT
TRANSMISSION CASE OF ABSENCE OF INFORMATION	COMPLIANT
FREQUENCY STABILITY	COMPLIANT
ANTENNA REQUIREMENT	COMPLIANT

1.2 TEST FACILITY

Test Firm : Shenzhen United Testing Technology Co., Ltd.
Address : 2F, Annex Bldg, Jiahuangyuan Tech Park, #365 Baotian 1 Rd, Tiegang Community, Xixiang Str, Bao'an District, Shenzhen, China

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19. The testing quality system of our laboratory meets with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS-LAB Code: L6494

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of testing Laboratories.

Designation Number: CN1227

Test Firm Registration Number: 674885

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files.

1.3 MEASUREMENT UNCERTAINTY

Measurement Uncertainty

Conducted Emission Expanded Uncertainty	= 2.23dB, k=2
Radiated emission expanded uncertainty(9kHz-30MHz)	= 3.08dB, k=2
Radiated emission expanded uncertainty(30MHz-1000MHz)	= 4.42dB, k=2
Radiated emission expanded uncertainty(Above 1GHz)	= 4.06dB, k=2

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Nyx2600-AC Dual-Band AC Wireless Router
Trade Mark	NEXXT
Model Name	ARLGL174U1
Serial No.	N/A
Model Difference	N/A
FCC ID	X4YNYX2600
Antenna Type	External Antenna
Antenna Gain	5.0dBi
Directional Gain	$5.0 + 10 * \log(4) = 11.02 \text{dBi}$
Frequency Range	802.11a:5180-5240MHz; 802.11ac 20:5180-5240MHz; 802.11ac 40:5190-5230MHz; 802.11ac 80:5210MHz; 802.11n40: 5190~5230MHz
Number of Channels	802.11a/ac20: 4CH; 802.11ac40:2CH; 802.11ac80:1CH; 802.11n40:2CH;
Modulation Type	OFDM, DBPSK, DAPS K, DAPS K
Battery	N/A
Power Source	DC 12V from adapter with AC 120(240)V/60Hz
Adapter Model	Manufacturer: Shenzhen Gongjin Electronics Co., Ltd. Model:S24B72-120A200-OK INPUT:AC 100-240V, 50/60Hz, 0.8A OUTPUT:DC 12V/2A

2.2 Carrier Frequency of Channels

802.11a/ac 20

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	40	5200	44	5220
48	5240	149	5745	153	5765
157	5785	161	5805	165	5825

802.11n40/ac40

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230		
151	5755	159	5795		

802.11ac 80

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	155	5775		

2.3 Operation of EUT during testing

Operating Mode

The mode is used: Transmitting mode for 802.11a(5180MHz/5200MHz/5240MHz),

802.11ac 20M(5180MHz/5200MHz/5240MHz)

802.11ac 40M(5190MHz/5230MHz); 802.11ac 80M(5210MHz)

802.11n 40M(5190MHz/5200MHz/5230MHz)

Test SW Version: MT7615 QA 0.0.1.85

2.4 DESCRIPTION OF TEST SETUP

Operation of EUT during Conducted testing:



Operation of EUT during Radiation and Above1GHz Radiation testing:



Table for auxiliary equipment:

Equipment Description	Manufacturer	Model	Calibration Due Date
N/A	N/A	N/A	N/A

2.5 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
CONDUCTED EMISSIONS TEST					
1	AMN	Schwarzbeck	NNLK8121	8121370	2019.9.9
2	AMN	ETS	3810/2	00020199	2019.9.9
3	EMI TEST RECEIVER	Rohde&Schwarz	ESCI	101210	2019.9.9
4	AAN	TESEQ	T8-Cat6	38888	2019.9.9
RADIATED EMISSION TEST					
1	Horn Antenna	Sunol	DRH-118	A101415	2019.9.29
2	BicoNILog Antenna	Sunol	JB1 Antenna	A090215	2019.9.29
3	PREAMP	HP	8449B	3008A00160	2019.9.9
4	PREAMP	HP	8447D	2944A07999	2019.9.9
5	EMI TEST RECEIVER	Rohde&Schwarz	ESR3	101891	2019.9.9
6	VECTOR Signal Generator	Rohde&Schwarz	SMU200A	101521	2019.9.28
7	Signal Generator	Agilent	E4421B	MY4335105	2019.9.28
8	MXA Signal Analyzer	Agilent	N9020A	MY50510140	2019.9.28
9	MXA Signal Analyzer	Agilent	N9020A	MY51110104	2019.9.9
10	ANT Tower&Turn table Controller	Champro	EM 1000	60764	2019.9.28
11	Anechoic Chamber	Taihe Maorui	9m*6m*6m	966A0001	2019.9.9
12	Shielding Room	Taihe Maorui	6.4m*4m*3m	643A0001	2019.9.9
13	RF Power sensor	DARE	RPR3006W	15I00041SNO88	2019.3.14
14	RF Power sensor	DARE	RPR3006W	15I00041SNO89	2019.3.14
15	RF power divider	Anritsu	K241B	992289	2019.9.28
16	Wideband radio communication tester	Rohde&Schwarz	CMW500	154987	2019.9.28
17	Biconical antenna	Schwarzbeck	VHA 9103	91032360	2019.9.8
18	Biconical antenna	Schwarzbeck	VHA 9103	91032361	2019.9.8
19	Broadband Hybrid Antennas	Schwarzbeck	VULB9163	VULB9163#958	2019.9.8
20	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	2019.1.12
21	Active Receive Loop Antenna	Schwarzbeck	FMZB 1919B	00023	2019.9.8
22	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170651	2019.03.14
23	Microwave Broadband Preamplifier	Schwarzbeck	BBV 9721	100472	2019.9.8
24	Active Loop Antenna	Com-Power	AL-130R	10160009	2019.05.10
25	Power Meter	KEYSIGHT	N1911A	MY50520168	2019.05.10
26	Frequency Meter	VICTOR	VC2000	997406086	2019.05.10
27	DC Power Source	HYELEC	HY5020E	055161818	2019.05.10
Test software					
1	E3	Audix	6.101223a	N/A	N/A

3. CONDUCTED EMISSIONS TEST

3.1 Conducted Power Line Emission Limit

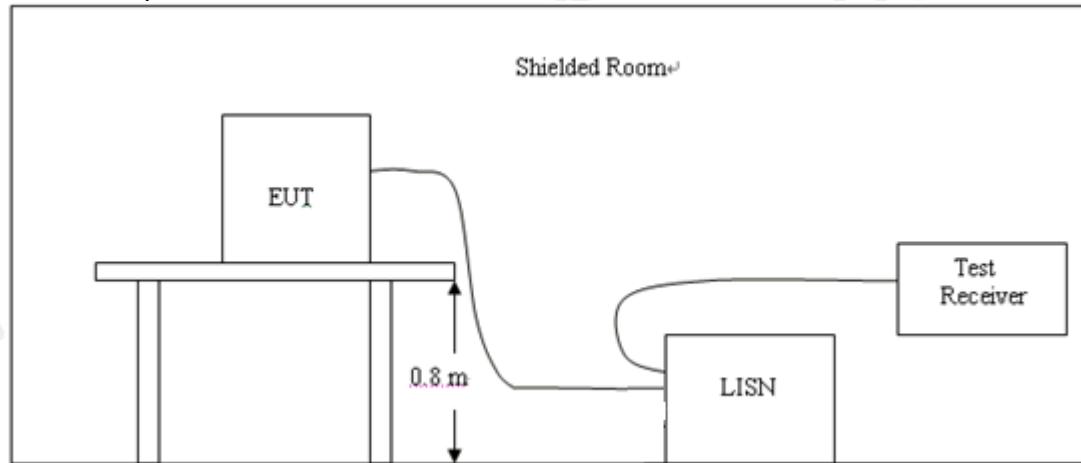
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following

Frequency (MHz)	Maximum RF Line Voltage(dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15~0.50	79	66	66~56*	56~46*
0.50~5.00	73	60	56	46
5.00~30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

3.2 Test Setup



3.3 Test Procedure

- 1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. A wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
- 2, Support equipment, if needed, was placed as per ANSI C63.10.
- 3, All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4, If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5, All support equipments received AC power from a second LISN, if any.
- 6, The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7, Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

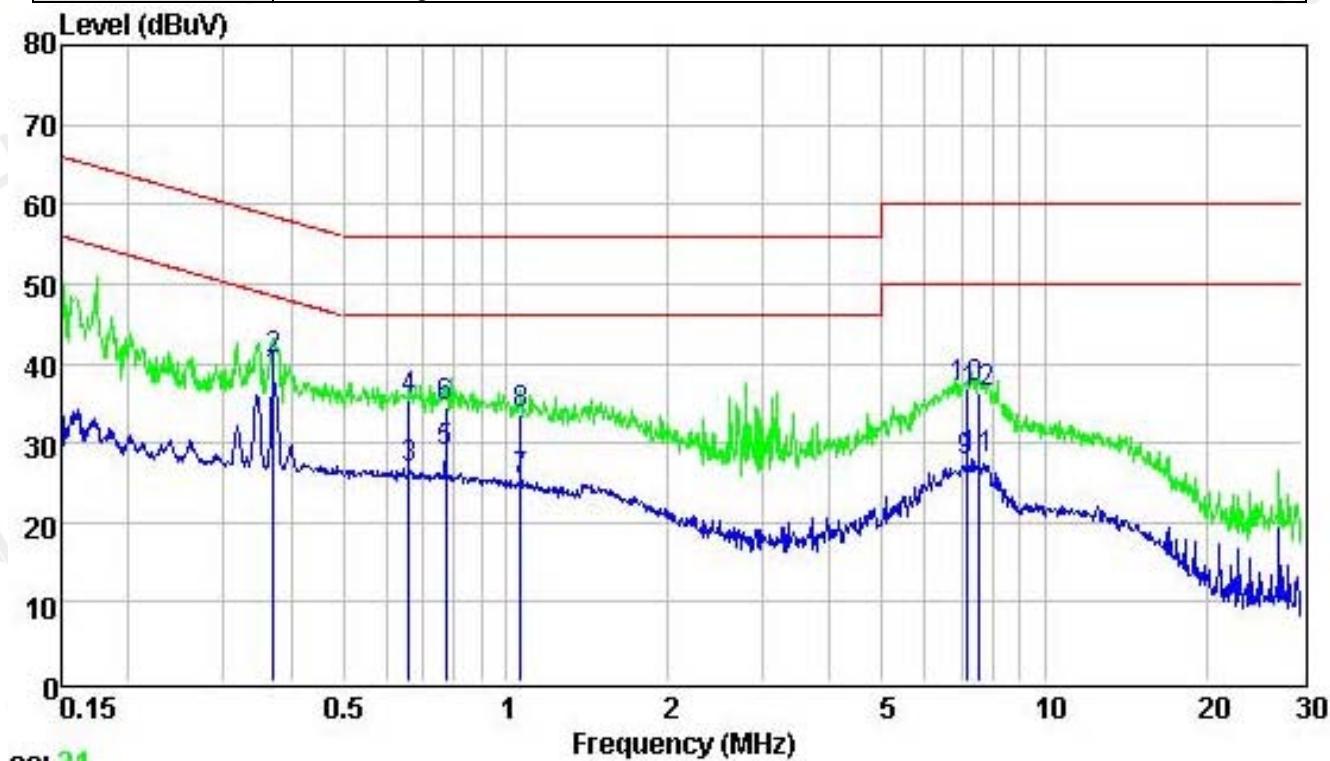
3.4 Test Result

Pass

Remark:

1. All modes were tested at AC 120V and 240V, only the worst result of AC 120V was reported.
2. Remark: We tested at 802.11b/802.11a/802.11ac/802.11ac40/802.11ac80/802.11n (40M) mode at the antenna single and antenna combination, and recorded the worst data at 802.11a mode of Antenna B in the report.

Temperature:	24°C	Relative Humidity:	48%
Test Date:	Dec. 5, 2018	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Line
Test Mode:	Transmitting 802.11ac20 mode for Antenna B		

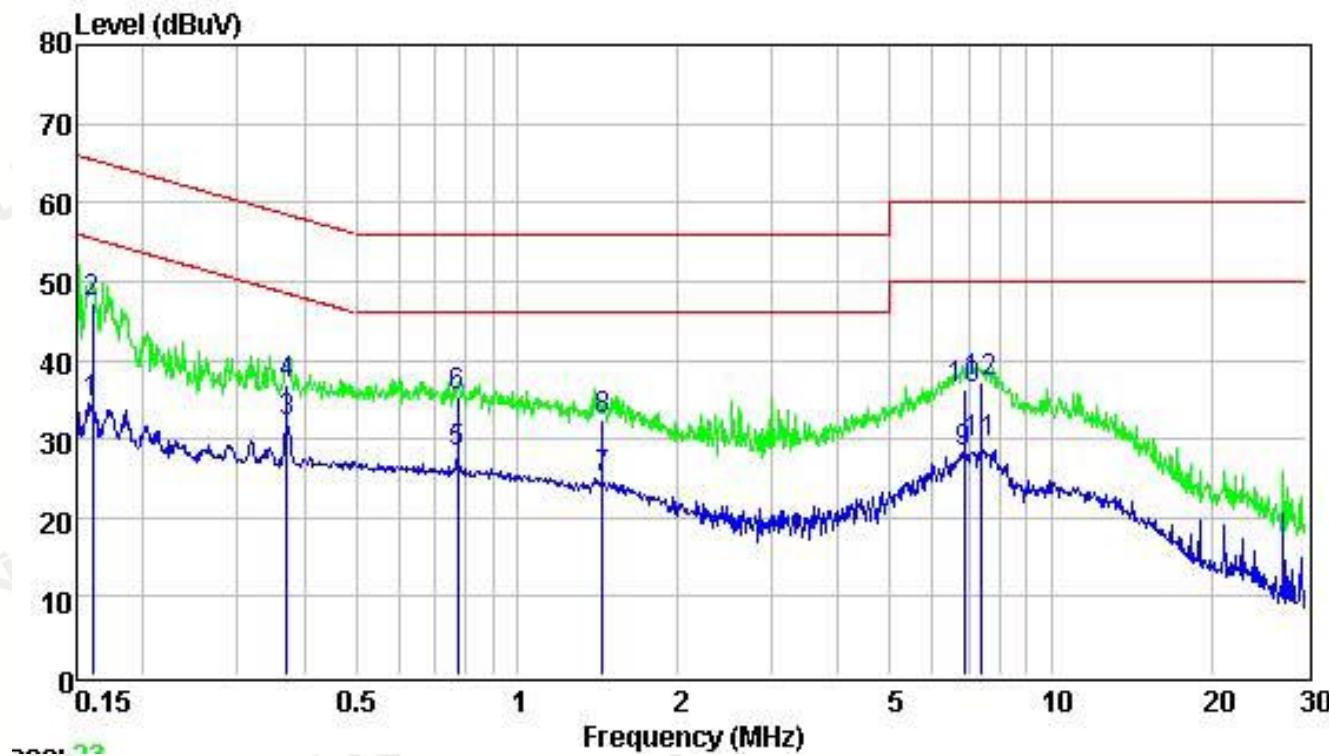


	Read Freq	LISN Level	Cable Factor	Limit Loss	Line Level	Over Limit	Over Remark
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	Freq MHz	Level dBuV	Factor dB	Loss dB	Level dBuV	Line dBuV	Margin dB	Remark
1	0.371	28.24	9.60	0.25	38.09	48.47	-10.38	Average
2	0.371	30.51	9.60	0.25	40.36	58.47	-18.11	QP
3	0.661	16.88	9.60	0.25	26.73	46.00	-19.27	Average
4	0.661	25.41	9.60	0.25	35.26	56.00	-20.74	QP
5	0.775	19.09	9.60	0.26	28.95	46.00	-17.05	Average
6	0.775	24.67	9.60	0.26	34.53	56.00	-21.47	QP
7	1.065	15.57	9.59	0.26	25.42	46.00	-20.58	Average
8	1.065	23.68	9.59	0.26	33.53	56.00	-22.47	QP
9	7.137	17.56	9.66	0.34	27.56	50.00	-22.44	Average
10	7.137	26.86	9.66	0.34	36.86	60.00	-23.14	QP
11	7.566	17.97	9.66	0.35	27.98	50.00	-22.02	Average
12	7.566	26.41	9.66	0.35	36.42	60.00	-23.58	QP

Remark: Factor = Insertion Loss + Cable Loss, Result = Reading + Factor, Margin = Result – Limit.

Temperature:	24°C	Relative Humidity:	48%
Test Date:	Dec. 5, 2018	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Neutral
Test Mode:	Transmitting 802.11ac20 mode for Antenna B		



	Read Freq	LISN Level	Cable Factor	Loss	Level	Limit Line	Over Limit	Over Remark
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	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.161	24.89	9.48	0.24	34.61	55.43	-20.82	Average
2	0.161	37.64	9.48	0.24	47.36	65.43	-18.07	QP
3	0.371	22.23	9.58	0.25	32.06	48.47	-16.41	Average
4	0.371	27.19	9.58	0.25	37.02	58.47	-21.45	QP
5	0.775	18.52	9.60	0.26	28.38	46.00	-17.62	Average
6	0.775	25.40	9.60	0.26	35.26	56.00	-20.74	QP
7	1.449	15.18	9.58	0.27	25.03	46.00	-20.97	Average
8	1.449	22.71	9.58	0.27	32.56	56.00	-23.44	QP
9	6.878	18.26	9.66	0.33	28.25	50.00	-21.75	Average
10	6.878	26.36	9.66	0.33	36.35	60.00	-23.65	QP
11	7.407	19.50	9.66	0.35	29.51	50.00	-20.49	Average
12	7.407	27.25	9.66	0.35	37.26	60.00	-22.74	QP

Remark: Factor = Insertion Loss + Cable Loss, Result = Reading + Factor, Margin = Result – Limit.

4. RADIATED EMISSION TEST

4.1 Radiation Limit

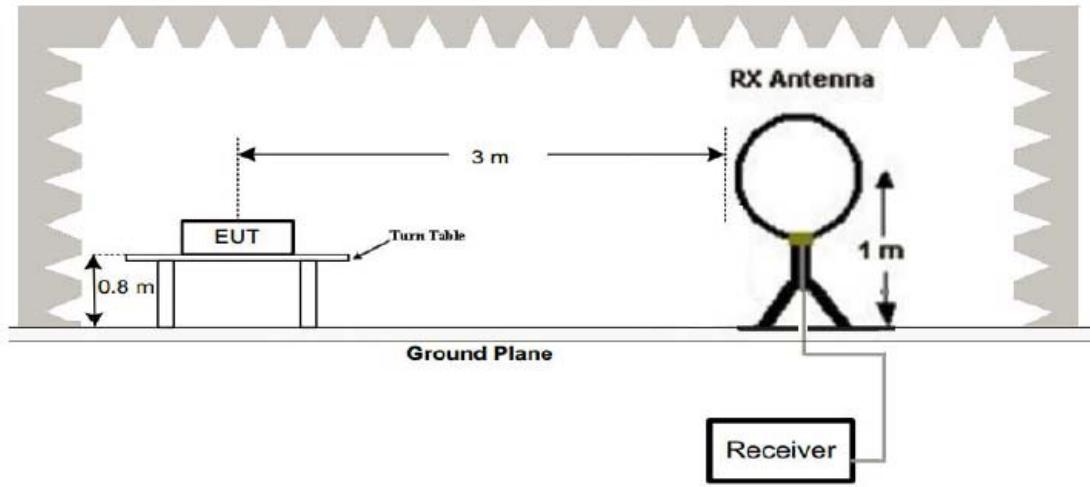
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance (Meters)	Radiated (dB μ V/m)	Radiated (μ V/m)
30-88	3	40	100
88-216	3	43.5	150
216-960	3	46	200
Above 960	3	54	500

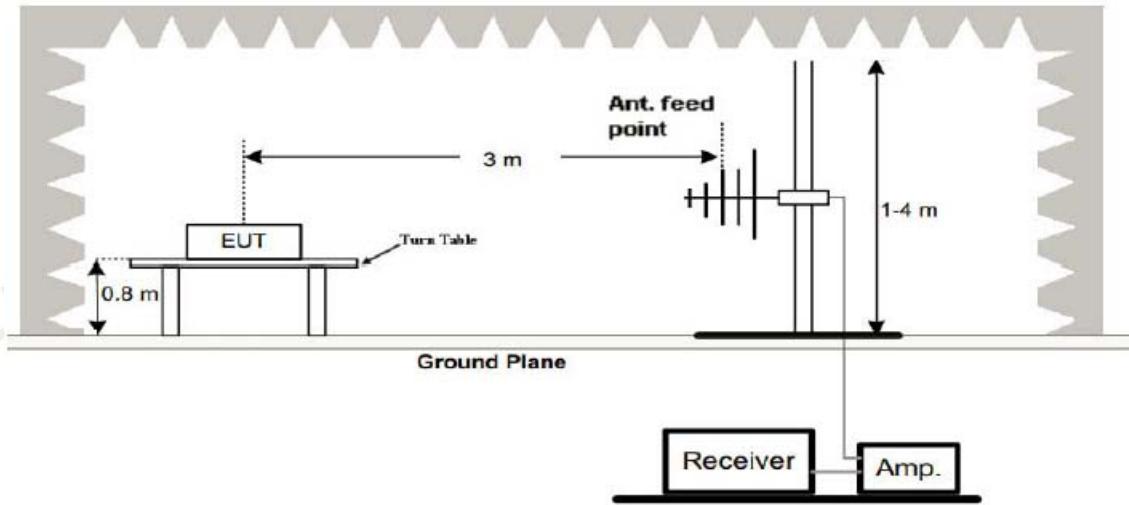
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

4.2 Test Setup

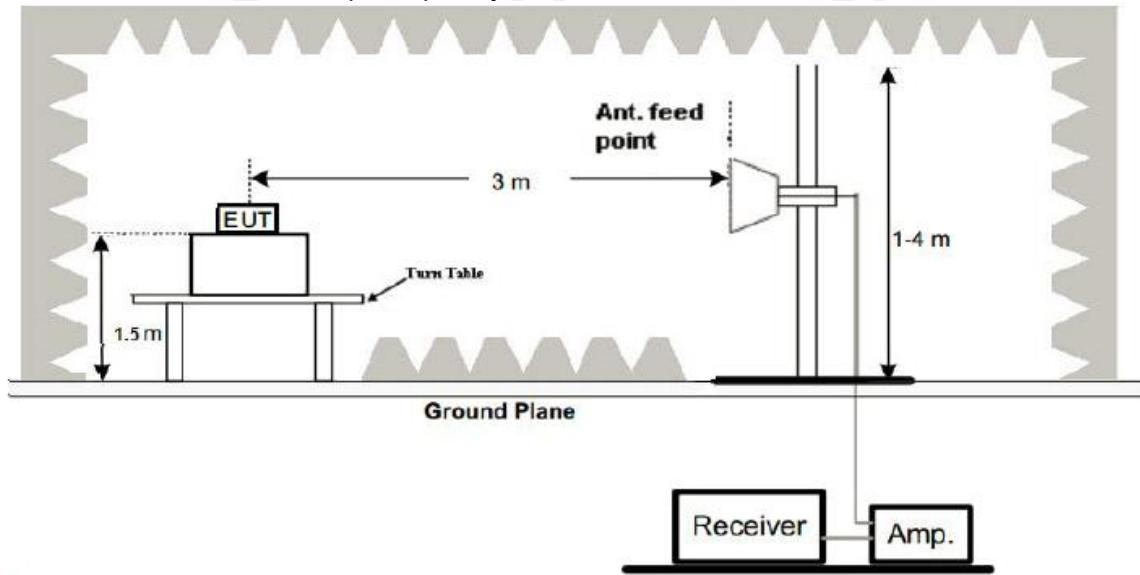
1. Radiated Emission Test-Up Frequency Below 30MHz



2. Radiated Emission Test-Up Frequency 30MHz~1GHz



3. Radiated Emission Test-Up Frequency Above 1GHz



4.3 Test Procedure

1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The test frequency range from 9KHz to 25GHz per FCC PART 15.33(a).
8. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Bilog Antenna	3
1GHz-18GHz	Horn Antenna	3
18GHz-40GHz	Horn Antenna	1

Note:

For battery operated equipment, the equipment tests shall be performed using a new battery.

4.4 Test Result

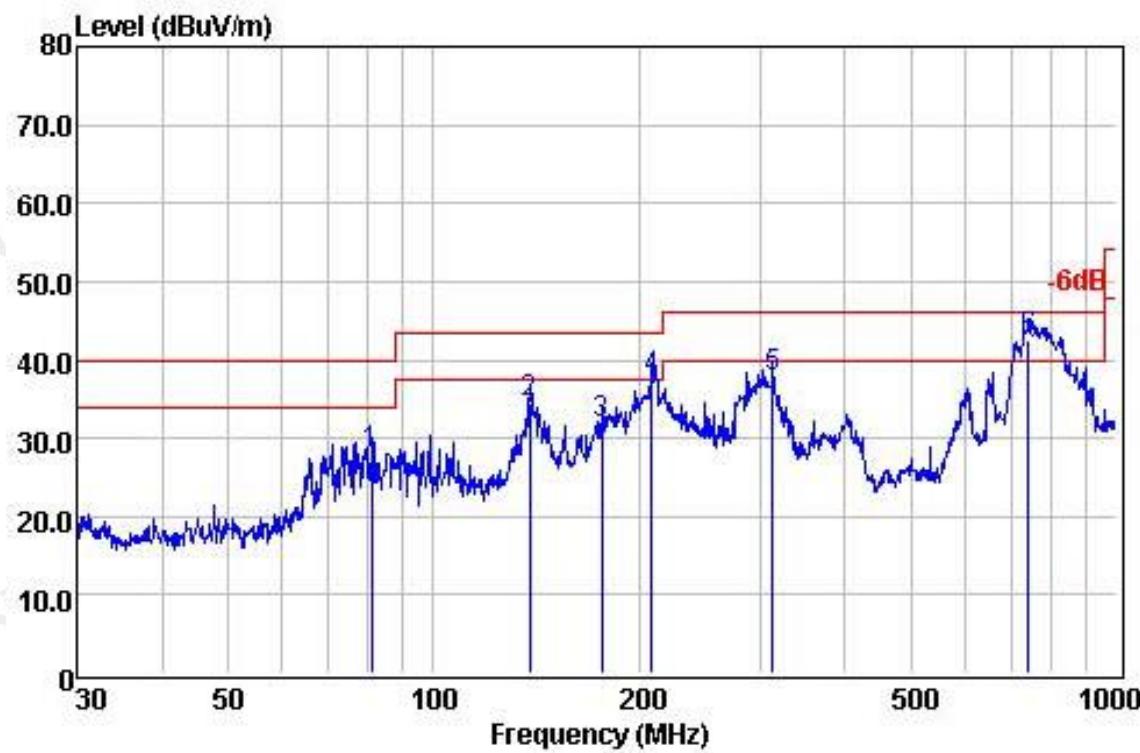
PASS

Remark:

1. All modes of 802.11b/g/n20 were test at Low, Middle, and High channel, only the worst result of 802.11a Low Channel was reported for below 1GHz test.
2. Remark: We tested at 802.11a/802.11ac/802.11ac40/802.11ac80/802.11n(40M) mode at the antenna single and antenna combination.and record the worst data at 802.11a mode of Antenna B in the report.

Below 1GHz Test Results:

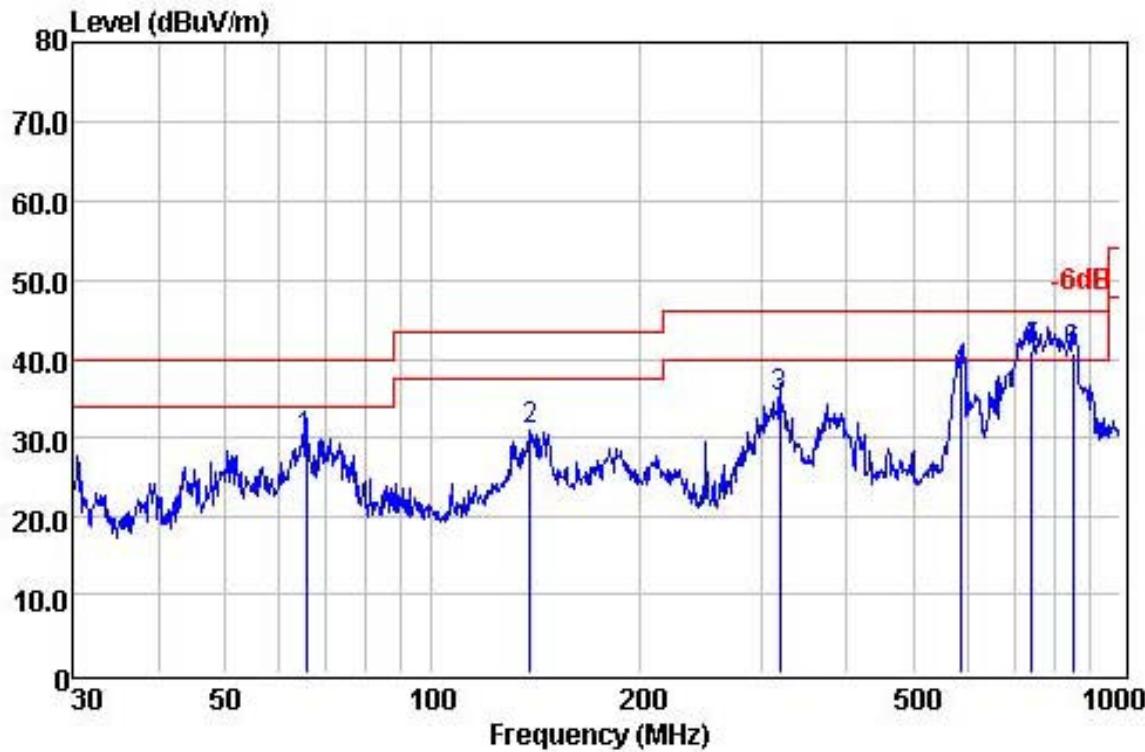
Temperature:	22°C	Relative Humidity:	48%
Test Date:	Dec. 5, 2018	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Polarization:	Horizontal
Test Mode:	Transmitting 802.11ac20 mode for Antenna B		



Freq	Read	Antenna	Cable	Limit	Over	Remark		
	Freq	Level	Factor	Loss	Level	Line	Limit	
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
1	81.21	14.84	13.02	0.15	28.01	40.00	-11.99	QP
2	138.39	19.31	15.00	0.23	34.54	43.50	-8.96	QP
3	176.27	18.45	13.23	0.24	31.92	43.50	-11.58	QP
4	208.58	25.65	11.44	0.35	37.44	43.50	-6.06	QP
5	314.38	24.07	13.12	0.68	37.87	46.00	-8.13	QP
6 !	742.26	21.51	19.87	1.29	42.67	46.00	-3.33	QP

Remark: Absolute Level = Reading Level + Factor, Margin = Absolute Level – Limit
 Factor = Ant. Factor + Cable Loss – Pre-amplifier

Temperature:	22°C	Relative Humidity:	48%
Test Date:	Dec. 5, 2018	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Polarization:	Vertical
Test Mode:	Transmitting 802.11ac20 mode for Antenna B		



Freq	Read	Antenna	Cable	Limit	Over	Line	Limit	Remark
	Freq	Level	Factor					
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
1	65.57	17.88	11.84	0.14	29.86	40.00	-10.14	QP
2	138.87	15.68	15.07	0.23	30.98	43.50	-12.52	QP
3	319.94	21.10	13.21	0.70	35.01	46.00	-10.99	QP
4	586.84	19.78	17.45	1.14	38.37	46.00	-7.63	QP
5 !	744.87	21.20	18.41	1.30	40.91	46.00	-5.09	QP
6 !	854.02	17.60	21.49	1.53	40.62	46.00	-5.38	QP

Remark: Absolute Level = Reading Level + Factor, Margin = Absolute Level – Limit

Factor = Ant. Factor + Cable Loss – Pre-amplifier

Remark:

- (1) Measuring frequencies from 9 KHz to the 1 GHz, Radiated emission test from 9KHz to 30MHz was verified, and no any emission was found except system noise floor.
- (2) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (3) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.

Above 1 GHz Test Results:

Record the worst test data for Antenna B in report.

802.11a Mode (5180MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10360.00	60.02	-3.64	56.38	74	-17.62	PK
10360.00	48.23	-3.64	44.59	54	-9.41	AV
15540.00	58.33	-0.95	57.38	74	-16.62	PK
15540.00	45.26	-0.95	44.31	54	-9.69	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10360.00	62.34	-3.64	58.7	74	-15.3	PK
10360.00	48.56	-3.64	44.92	54	-9.08	AV
15540.00	58.34	-0.95	57.39	74	-16.61	PK
15540.00	49.36	-0.95	48.41	54	-5.59	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

802.11a Mode (5200MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
15720.00	60.41	-3.51	56.9	74	-17.1	PK
15720.00	50.26	-3.51	46.75	54	-7.25	AV
25450.00	56.46	-0.82	55.64	74	-18.36	PK
25450.00	46.86	-0.82	46.04	54	-7.96	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10480.00	59.16	-3.51	55.65	74	-18.35	PK
10480.00	50.34	-3.51	46.83	54	-7.17	AV
25950.00	57.26	-0.82	56.44	74	-17.56	PK
25950.00	47.26	-0.82	46.44	54	-7.56	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

802.11a Mode (5240MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10360.00	60.48	-3.43	57.05	74	-16.95	PK
10360.00	50.31	-3.43	46.88	54	-7.12	AV
15540.00	56.26	-0.75	55.51	74	-18.49	PK
15540.00	47.07	-0.75	46.32	54	-7.68	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10360.00	59.97	-3.43	56.54	74	-17.46	PK
10360.00	50.91	-3.43	47.48	54	-6.52	AV
15540.00	57.34	-0.75	56.59	74	-17.41	PK
15540.00	47.43	-0.75	46.68	54	-7.32	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Remark :

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dB μ V/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dB μ V/m(PK Value) <54 dB μ V/m(AV Limit), the Average Detected not need to completed.

Record the worst test data for Combination of Antenna A, Antenna B, Antenna C and Antenna D in the report.

802.11ac 20M Mode (5180MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10360.00	60.41	-3.64	56.77	74	-17.23	PK
10360.00	51.23	-3.64	47.59	54	-6.41	AV
15540.00	57.37	-0.95	56.42	74	-17.58	PK
15540.00	46.93	-0.95	45.98	54	-8.02	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10360.00	61.22	-3.64	57.58	74	-16.42	PK
10360.00	51.84	-3.64	48.2	54	-5.8	AV
15540.00	57.26	-0.95	56.31	74	-17.69	PK
15540.00	48.16	-0.95	47.21	54	-6.79	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

802.11ac 20M Mode (5200MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10400.00	60.93	-3.51	57.42	74	-16.58	PK
10400.00	51.37	-3.51	47.86	54	-6.14	AV
15600.00	57.66	-0.82	56.84	74	-17.16	PK
15600.00	48.26	-0.82	47.44	54	-6.56	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10400.00	61.26	-3.51	57.75	74	-16.25	PK
10400.00	51.26	-3.51	47.75	54	-6.25	AV
15600.00	57.23	-0.82	56.41	74	-17.59	PK
15600.00	47.21	-0.82	46.39	54	-7.61	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

802.11ac 20M Mode (5240MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10480.00	60.63	-3.43	57.2	74	-16.8	PK
10480.00	51.23	-3.43	47.8	54	-6.2	AV
15720.00	57.33	-0.75	56.58	74	-17.42	PK
15720.00	48.12	-0.75	47.37	54	-6.63	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10480.00	60.66	-3.43	57.23	74	-16.77	PK
10480.00	52.72	-3.43	49.29	54	-4.71	AV
15720.00	56.23	-0.75	55.48	74	-18.52	PK
15720.00	47.27	-0.75	46.52	54	-7.48	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Remark :

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dB μ V/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dB μ V/m(PK Value) <54 dB μ V/m(AV Limit), the Average Detected not need to completed.

Record the worst test data for Combination of Antenna A, Antenna B, Antenna C and Antenna D in the report.

802.11ac 40M Mode (5190MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10380.00	59.43	-3.64	55.79	74	-18.21	PK
10380.00	51.33	-3.64	47.69	54	-6.31	AV
15570.00	57.26	-0.95	56.31	74	-17.69	PK
15570.00	46.15	-0.95	45.2	54	-8.8	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10380.00	60.56	-3.64	56.92	74	-17.08	PK
10380.00	49.36	-3.64	45.72	54	-8.28	AV
15570.00	59.22	-0.95	58.27	74	-15.73	PK
15570.00	48.21	-0.95	47.26	54	-6.74	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

802.11ac 40M Mode (5230MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10460.00	60.11	-3.51	56.6	74	-17.4	PK
10460.00	50.13	-3.51	46.62	54	-7.38	AV
15690.00	58.25	-0.82	57.43	74	-16.57	PK
15690.00	47.37	-0.82	46.55	54	-7.45	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10460.00	60.36	-3.51	56.85	74	-17.15	PK
10460.00	50.63	-3.51	47.12	54	-6.88	AV
15690.00	58.18	-0.82	57.36	74	-16.64	PK
15690.00	47.16	-0.82	46.34	54	-7.66	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Record the worst test data for Combination of Antenna A, Antenna B, Antenna C and Antenna D in the report.

802.11ac 80M Mode (5210MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10420.00	60.97	-3.43	57.54	74	-16.46	PK
10420.00	51.45	-3.43	48.02	54	-5.98	AV
15630.00	56.33	-0.75	55.58	74	-18.42	PK
15630.00	47.72	-0.75	46.97	54	-7.03	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10420.00	60.55	-3.43	57.12	74	-16.88	PK
10420.00	49.83	-3.43	46.4	54	-7.6	AV
15630.00	58.46	-0.75	57.71	74	-16.29	PK
15630.00	46.96	-0.75	46.21	54	-7.79	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Remark :

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dB μ V/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dB μ V/m(PK Value) <54 dB μ V/m(AV Limit), the Average Detected not need to completed.

Record the worst test data for Combination of Antenna A, Antenna B, Antenna C and Antenna D in the report.

802.11n 40M Mode (5190MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
11490.00	59.14	-3.64	55.5	74	-18.5	PK
11490.00	49.42	-3.64	45.78	54	-8.22	AV
17235.00	56.24	-0.95	55.29	74	-18.71	PK
17235.00	48.36	-0.95	47.41	54	-6.59	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
11490.00	60.29	-3.64	56.65	74	-17.35	PK
11490.00	50.04	-3.64	46.4	54	-7.6	AV
17235.00	58.44	-0.95	57.49	74	-16.51	PK
17235.00	46.92	-0.95	45.97	54	-8.03	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

802.11n 40M Mode (5230MHz)

Horizontal:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
11650.00	59.02	-3.43	55.59	74	-18.41	PK
11650.00	50.41	-3.43	46.98	54	-7.02	AV
17475.00	56.83	-0.75	56.08	74	-17.92	PK
17475.00	45.43	-0.75	44.68	54	-9.32	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Vertical:

Frequency (MHz)	Reading Result (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
11650.00	59.87	-3.43	56.44	74	-17.56	PK
11650.00	48.42	-3.43	44.99	54	-9.01	AV
17475.00	58.47	-0.75	57.72	74	-16.28	PK
17475.00	45.05	-0.75	44.3	54	-9.7	AV

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Margin = Absolute Level – Limit

Remark :

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dB μ V/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dB μ V/m(PK Value) <54 dB μ V/m(AV Limit), the Average Detected not need to completed.

5. BAND EDGE COMPLIANCE TEST

5.1 Limits

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

5.2 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.
we test all antennas, the antenna 1 was worst mode and the data recording in the report.

5.3 Test Result

PASS

Please see data as below:

802.11a, worst case at Antenna B

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	50.75	PK	H	68.2	17.45	56.16	27.49	3.32	36.22	-5.41
5150	40.96	AV	H	54	13.04	46.37	27.49	3.32	36.22	-5.41
5350	49.9	PK	H	68.2	18.3	55.41	27.45	3.38	36.34	-5.51
5350	40.83	AV	H	54	13.17	46.34	27.45	3.38	36.34	-5.51

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	48.82	PK	V	68.2	19.38	54.23	27.49	3.32	36.22	-5.41
5150	37.96	AV	V	54	16.04	43.37	27.49	3.32	36.22	-5.41
5350	47.71	PK	V	68.2	20.49	53.22	27.45	3.38	36.34	-5.51
5350	38.83	AV	V	54	15.17	44.34	27.45	3.38	36.34	-5.51

REMARKS:

Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)

Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier

Margin value = Limit value - Emission level.



802.11ac 20 Combined Antenna A,B,C and D

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	48.83	PK	H	68.2	19.37	54.24	27.49	3.32	36.22	-5.41
5150	37.75	AV	H	54	16.25	43.16	27.49	3.32	36.22	-5.41
5350	48.9	PK	H	68.2	19.3	54.41	27.45	3.38	36.34	-5.51
5350	40.72	AV	H	54	13.28	46.23	27.45	3.38	36.34	-5.51

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	47.92	PK	V	68.2	20.28	53.33	27.49	3.32	36.22	-5.41
5150	36.75	AV	V	54	17.25	42.16	27.49	3.32	36.22	-5.41
5350	45.6	PK	V	68.2	22.6	51.11	27.45	3.38	36.34	-5.51
5350	37.97	AV	V	54	16.03	43.48	27.45	3.38	36.34	-5.51

REMARKS:

Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)

Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier

Margin value = Limit value - Emission level.

802.11ac 40 Combined Antenna A,B,C and D

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	50.11	PK	H	68.2	18.09	55.52	27.49	3.32	36.22	-5.41
5150	40.01	AV	H	54	13.99	45.42	27.49	3.32	36.22	-5.41
5350	48.75	PK	H	68.2	19.45	54.26	27.45	3.38	36.34	-5.51
5350	41.23	AV	H	54	12.77	46.74	27.45	3.38	36.34	-5.51

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	50.22	PK	V	68.2	17.98	55.63	27.49	3.32	36.22	-5.41
5150	37.84	AV	V	54	16.16	43.25	27.49	3.32	36.22	-5.41
5350	47.75	PK	V	68.2	20.45	53.26	27.45	3.38	36.34	-5.51
5350	37.02	AV	V	54	16.98	42.53	27.45	3.38	36.34	-5.51

REMARKS:

Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)

Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier

Margin value = Limit value - Emission level.



802.11ac 80 Combined Antenna A,B,C and D

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	47.52	PK	H	68.2	20.68	52.93	27.49	3.32	36.22	-5.41
5150	41.88	AV	H	54	12.12	47.29	27.49	3.32	36.22	-5.41
5350	48.32	PK	H	68.2	19.88	53.83	27.45	3.38	36.34	-5.51
5350	36.87	AV	H	54	17.13	42.38	27.45	3.38	36.34	-5.51

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	47.85	PK	V	68.2	20.35	53.26	27.49	3.32	36.22	-5.41
5150	41.03	AV	V	54	12.97	46.44	27.49	3.32	36.22	-5.41
5350	46.96	PK	V	68.2	21.24	52.47	27.45	3.38	36.34	-5.51
5350	35.85	AV	V	54	18.15	41.36	27.45	3.38	36.34	-5.51

REMARKS:

Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)

Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier

Margin value = Limit value - Emission level.



802.11n 40 Combined Antenna A,B,C and D

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	48.48	PK	H	68.2	19.72	53.89	27.49	3.32	36.22	-5.41
5150	40.94	AV	H	54	13.06	46.35	27.49	3.32	36.22	-5.41
5350	46.95	PK	H	68.2	21.25	52.46	27.45	3.38	36.34	-5.51
5350	35.85	AV	H	54	18.15	41.36	27.45	3.38	36.34	-5.51

Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
5150	50.45	PK	V	68.2	17.75	55.86	27.49	3.32	36.22	-5.41
5150	40.52	AV	V	54	13.48	45.93	27.49	3.32	36.22	-5.41
5350	48.46	PK	V	68.2	19.74	53.97	27.45	3.38	36.34	-5.51
5350	38.35	AV	V	54	15.65	43.86	27.45	3.38	36.34	-5.51

REMARKS:

Emission level (dBuV/m) = Raw Value (dBuV)+ Correction Factor (dB/m)

Correction Factor (dB/m) = Antenna Factor (dB/m)+ Cable Factor (dB)- Pre-amplifier

Margin value = Limit value- Emission level.

6. OCCUPIED BANDWIDTH MEASUREMENT

6.1 Test Limit

The bandwidth at 26 dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum power control level, as defined in KDB 789033, at the appropriate frequencies.

The spectrum analyzer's bandwidth measurement function is configured to measure the 26 dB bandwidth.

The 26 dB bandwidth is used to determine the conducted power limits.

6.2 Test Procedure

a) Set RBW = approximately 1% of the emission bandwidth.

b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.

Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW \geq 3*RBW

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

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

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

Same as Radiated Emission Measurement

6.3 Test Result

PASS

26dB bandwidth

	Frequency (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)			
		ANT A	ANT B	ANT C	ANT D	ANT A	ANT B	ANT C	ANT D
802.11a	5180	19.86	19.78	19.84	19.73	16.574	16.592	16.768	16.594
	5200	19.78	19.72	19.81	19.71	16.559	16.588	16.746	16.567
	5240	19.67	19.81	19.78	19.76	16.576	16.615	16.789	16.550
802.11ac (20M)	5180	20.05	20.82	20.27	19.87	17.546	17.792	17.650	17.504
	5200	20.00	20.46	20.41	20.02	17.544	17.769	17.664	17.543
	5240	20.03	20.50	20.27	20.02	17.557	17.772	17.647	17.532
802.11ac (40M)	5190	38.95	39.92	39.91	39.35	36.001	35.946	35.933	36.027
	5230	39.55	39.82	39.49	39.31	36.024	35.944	35.901	36.003
802.11ac (80M)	5210	78.62	79.70	79.42	79.68	75.084	75.105	75.020	75.085
802.11n (40M)	5190	39.39	39.83	39.61	39.85	36.028	35.935	35.936	35.989
	5230	39.14	39.83	39.83	39.90	36.034	35.948	35.910	35.981

















6dB bandwidth

	Frequency (MHz)	6dB Bandwidth (MHz)				99% Bandwidth (MHz)			
		ANT A	ANT B	ANT C	ANT D	ANT A	ANT B	ANT C	ANT D
802.11a	5180	16.56	16.66	16.37	16.52	16.750	17.079	16.741	16.553
	5200	16.52	16.63	16.37	16.51	16.571	17.084	16.746	16.553
	5240	16.55	16.51	16.36	16.48	16.578	17.076	16.767	16.558
802.11ac (20M)	5180	17.44	17.67	17.38	17.37	17.550	17.797	17.653	17.530
	5200	17.31	17.64	17.53	17.32	17.501	17.757	17.659	17.541
	5240	17.51	17.66	17.58	17.47	17.555	17.773	17.659	17.528
802.11ac (40M)	5190	35.90	36.25	36.25	35.76	36.029	35.940	35.929	36.028
	5230	36.16	36.26	36.04	35.97	36.032	35.931	35.909	36.014
802.11ac (80M)	5210	75.22	75.28	75.69	75.38	75.073	75.032	75.116	75.111
802.11n (40M)	5190	36.11	36.23	36.22	36.26	36.036	35.943	35.934	35.969
	5230	36.13	36.20	36.24	36.27	36.026	35.922	35.933	35.987

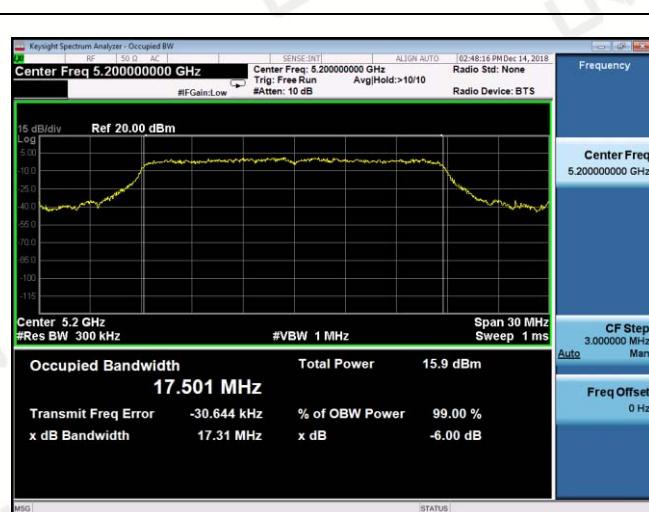
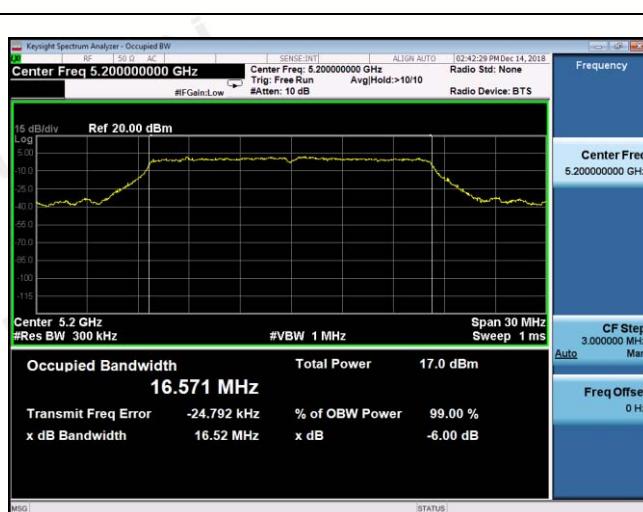
ANT A 802.11a

ANT A 802.11ac (20M)



5180

5180



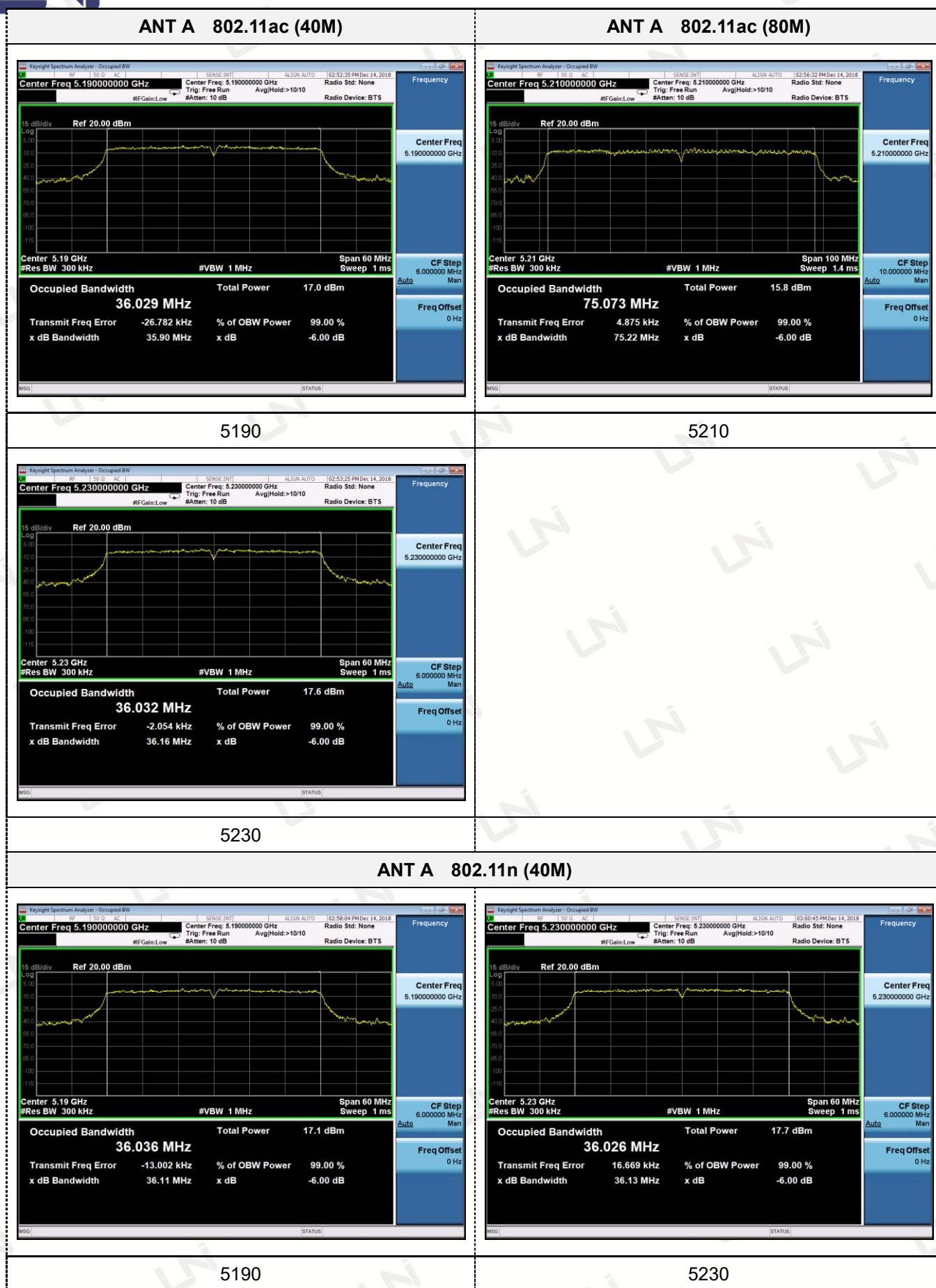
5200

5200



5240

5240



ANT B 802.11a

ANT B 802.11ac (20M)



5180

5180



5200

5200



5240

5240







